LONGHORN ARMY AMMUNITION PLANT KARNACK, TEXAS

ADMINISTRATIVE RECORD

Volume 30

2020

Bate Stamp Numbers
01000911 – 01002778

Prepared for

Department of the Army
Longhorn Army Ammunition Plant

1976–2020

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

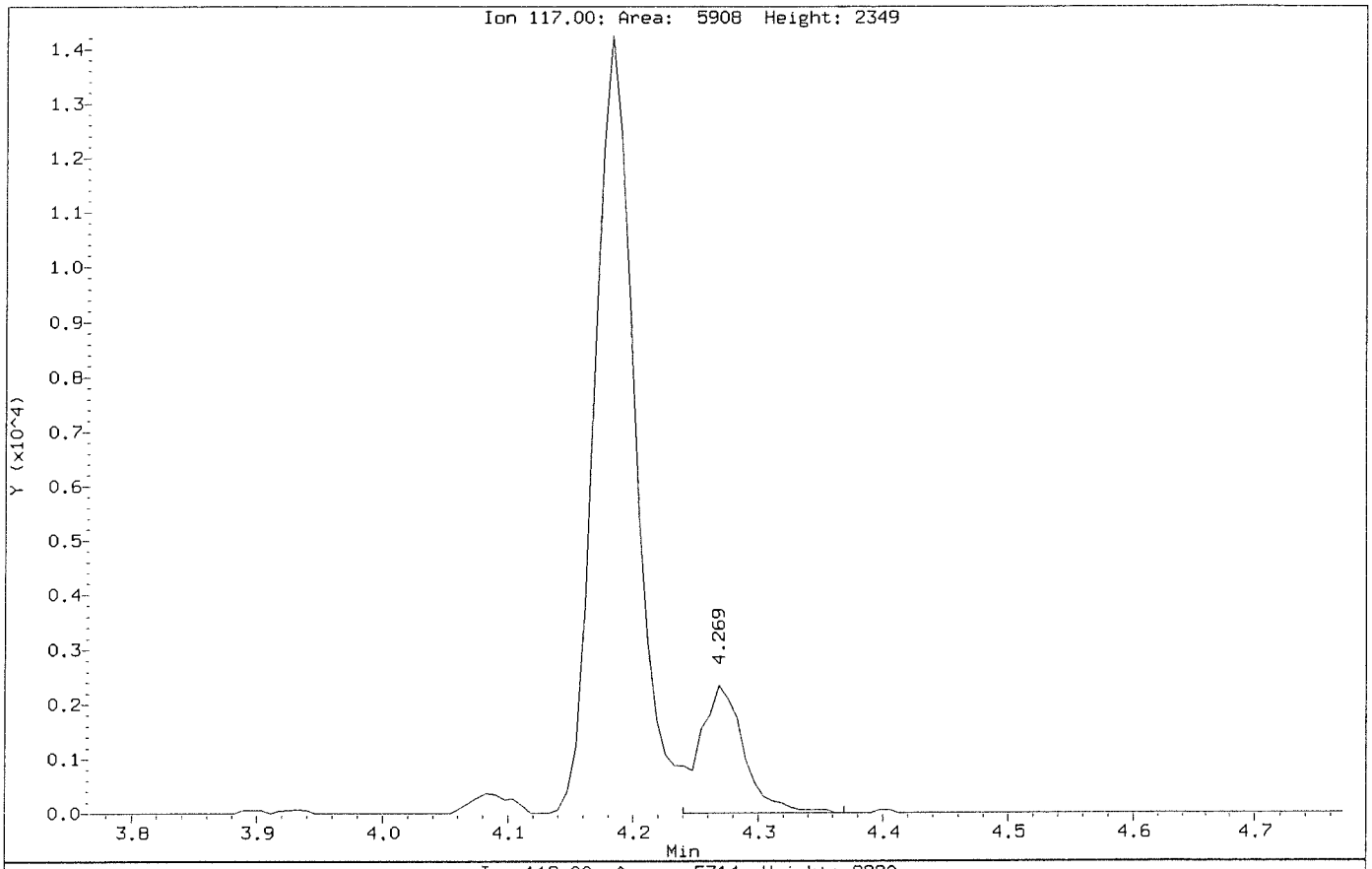
VOLUME 30

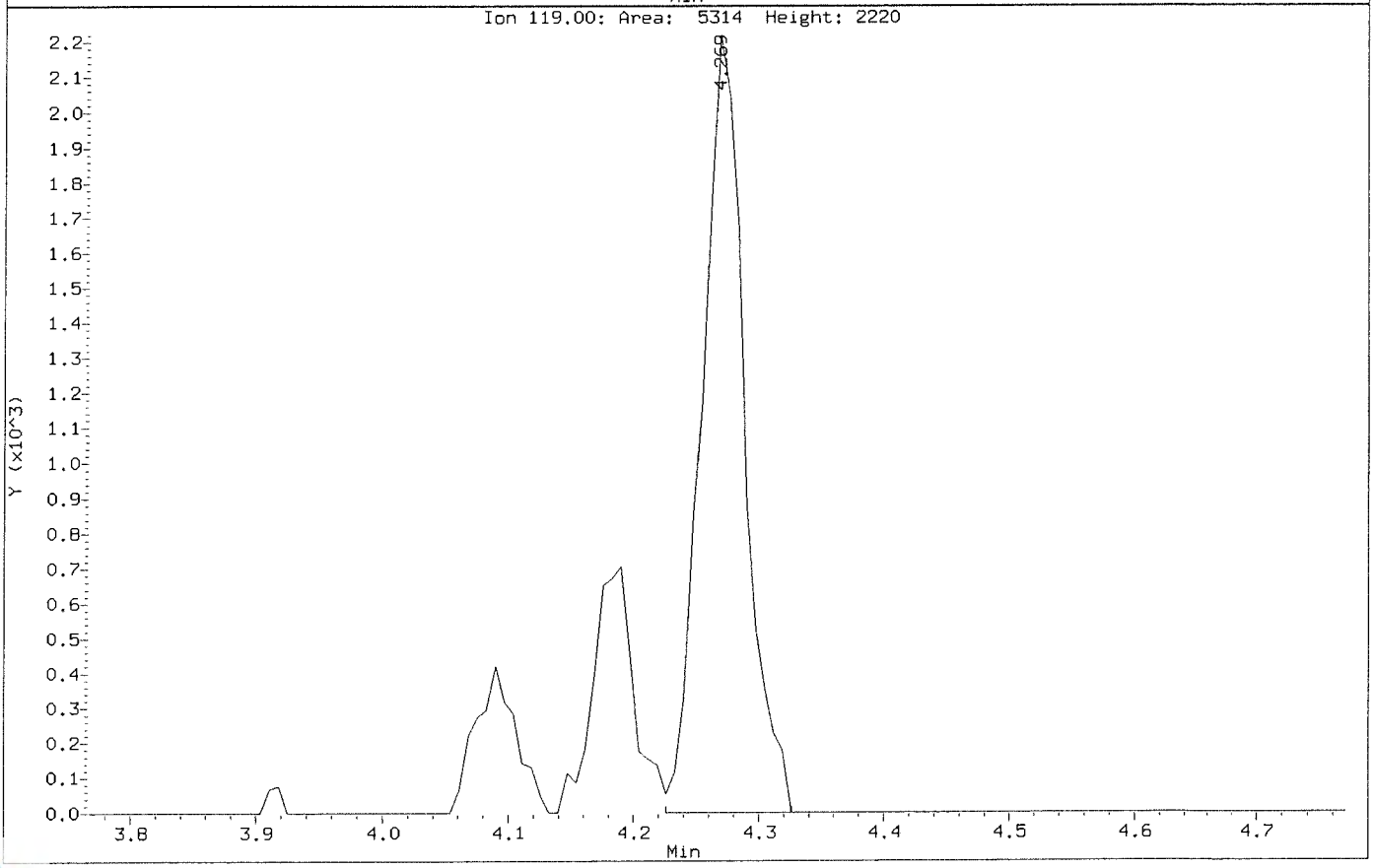
2020

A. Title: (cont'd) Report – Appendix F Lab Results to Draft Final 6th Annual Remedial Action Operations Report (September 2018-August 2019), LHAAP-35A (58), Shops Area, Longhorn Army Ammunition Plant, Karnack, Texas, December 2020
Author(s): Department of the Army
Recipient: U.S. Environmental Protection Agency and Texas Commission on Environmental Quality
Date: December 9, 2020
Bate Stamp: 01000911 – 01002778

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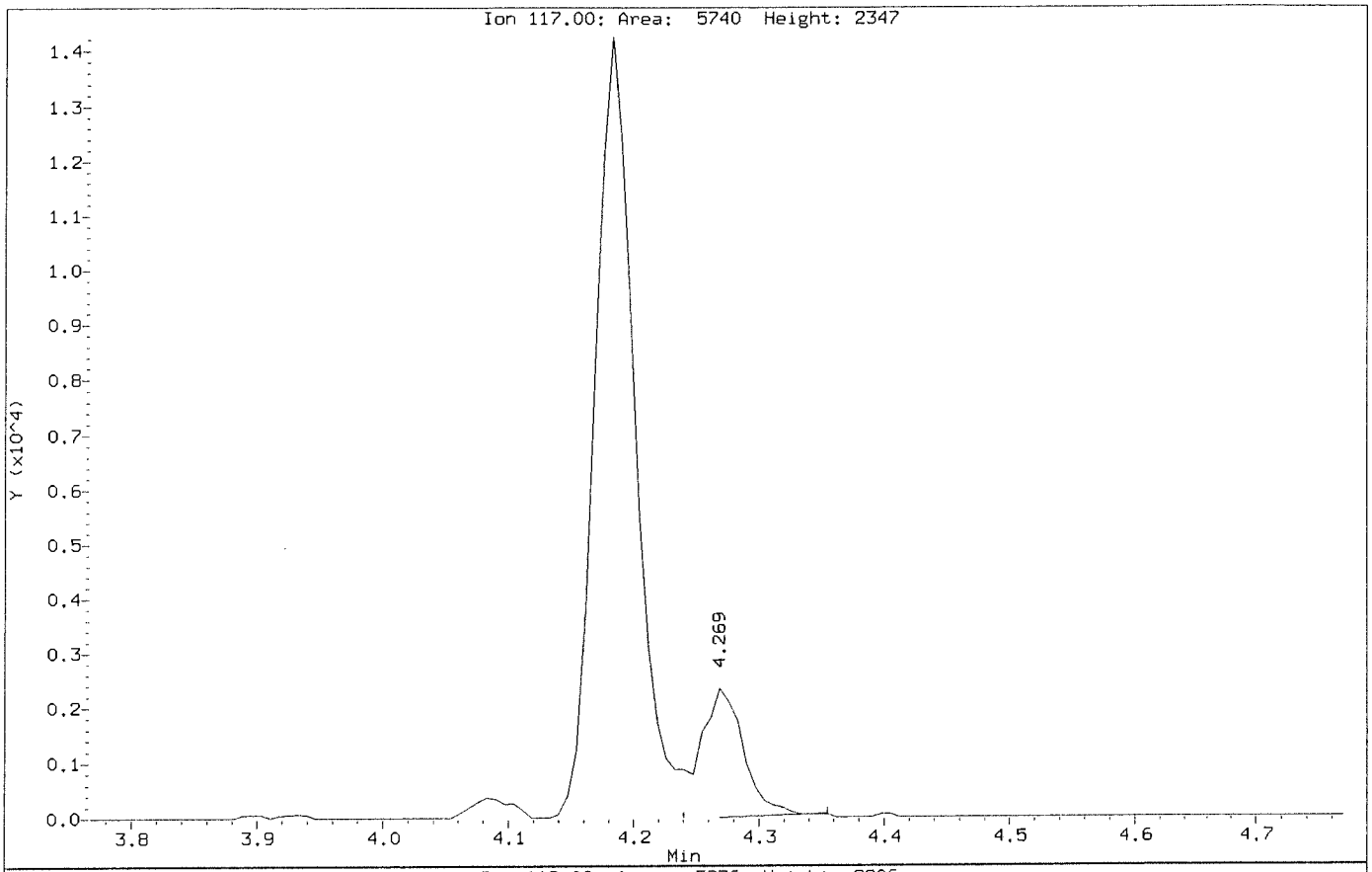
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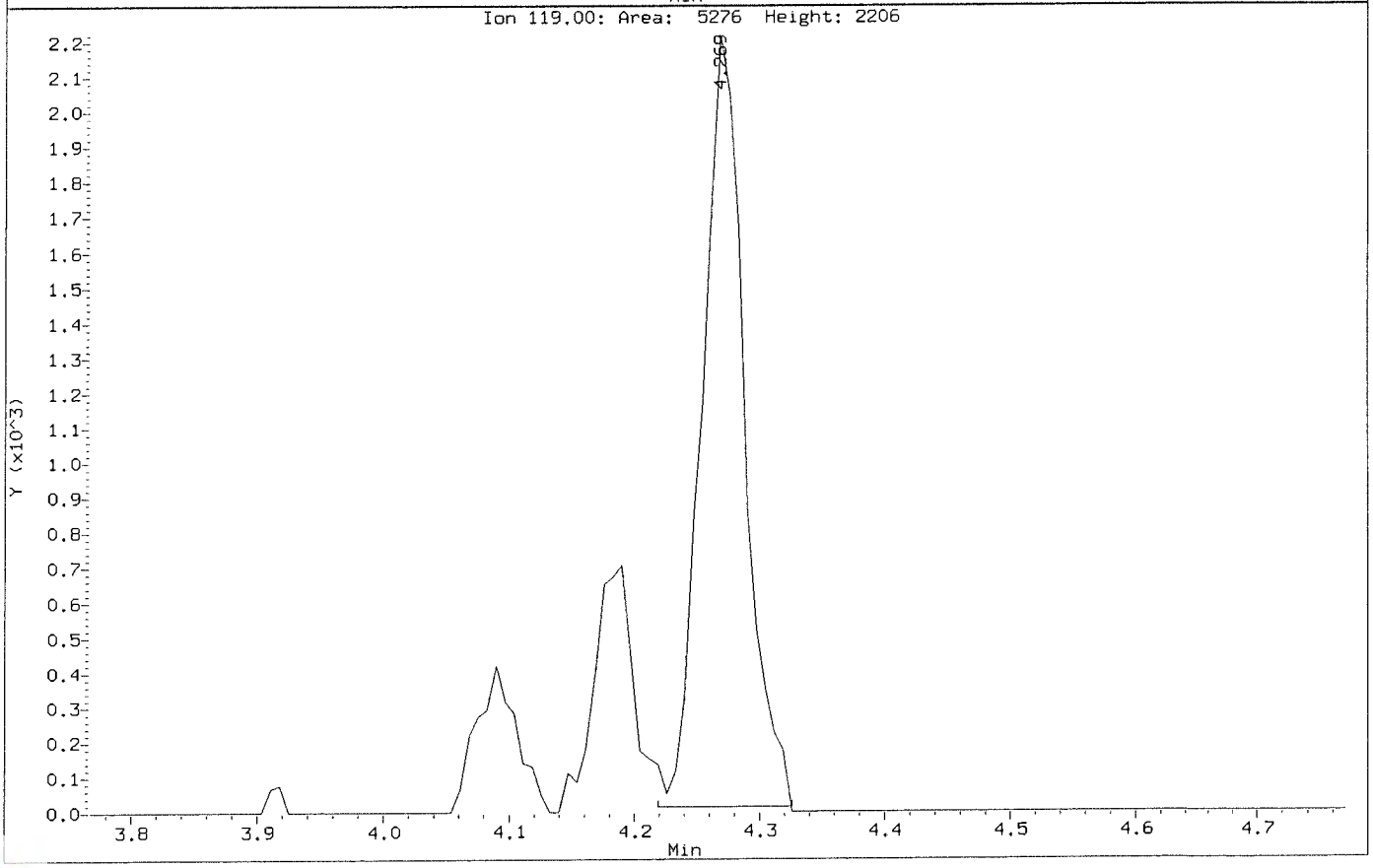




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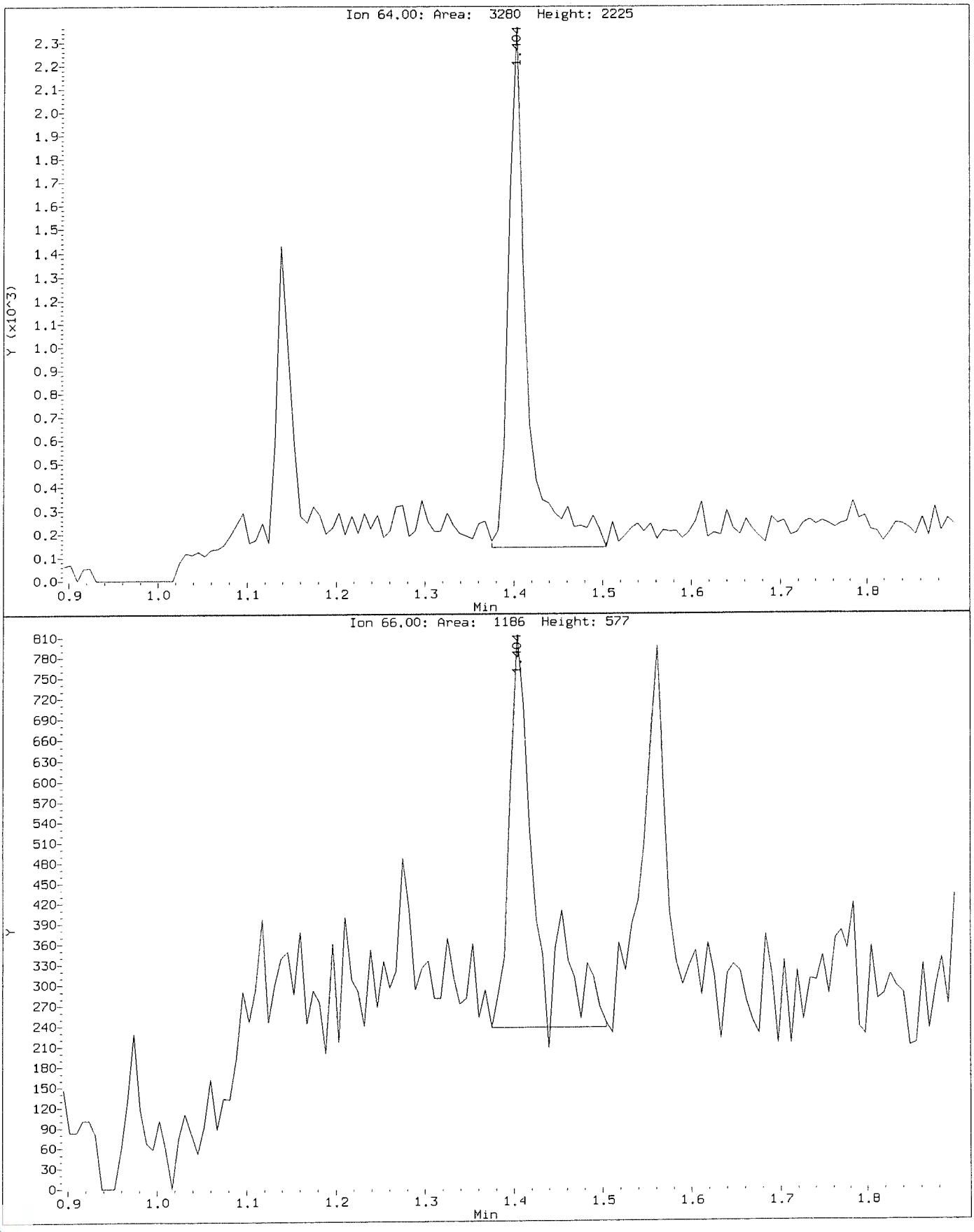
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CAS Number: 56-23-5





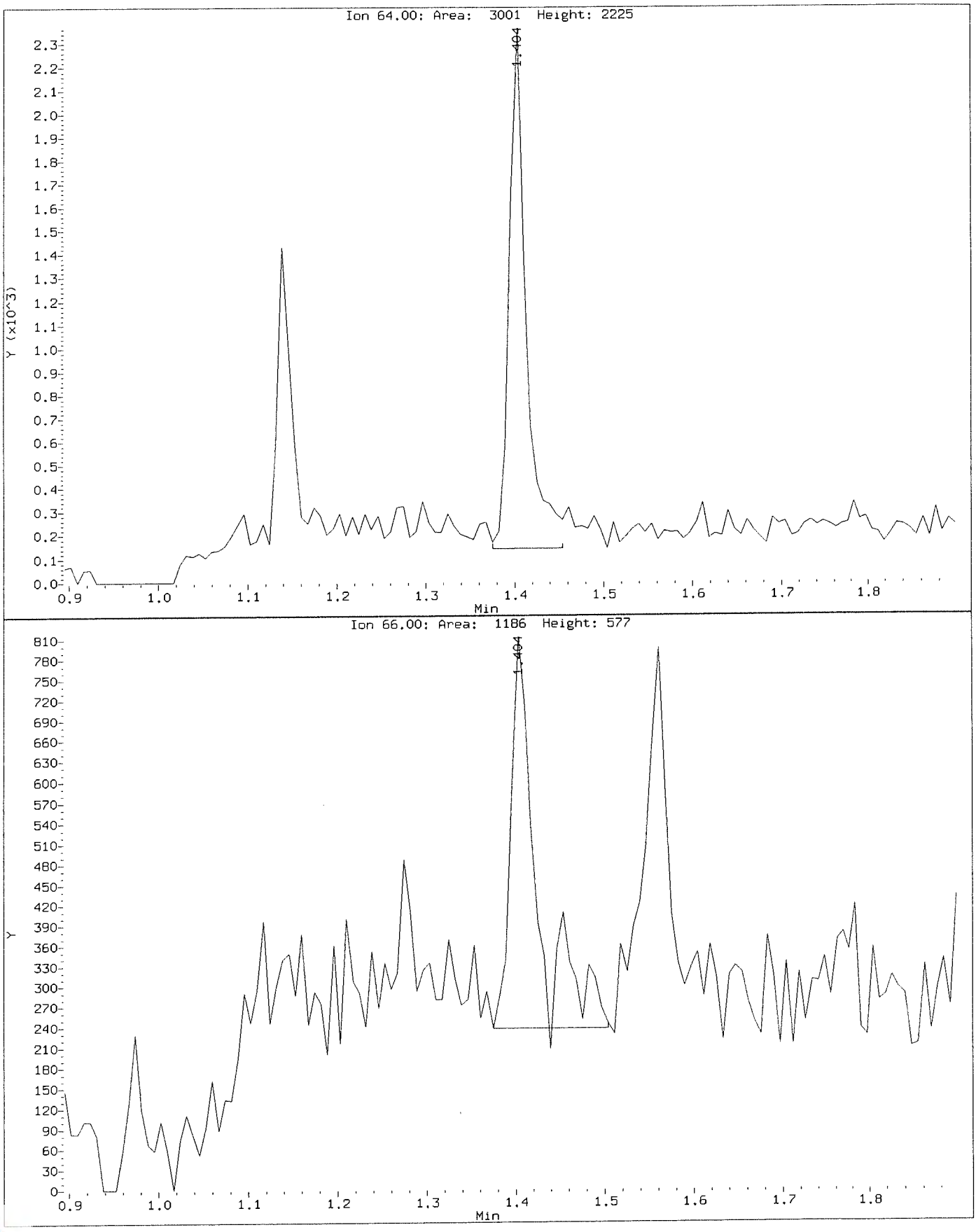
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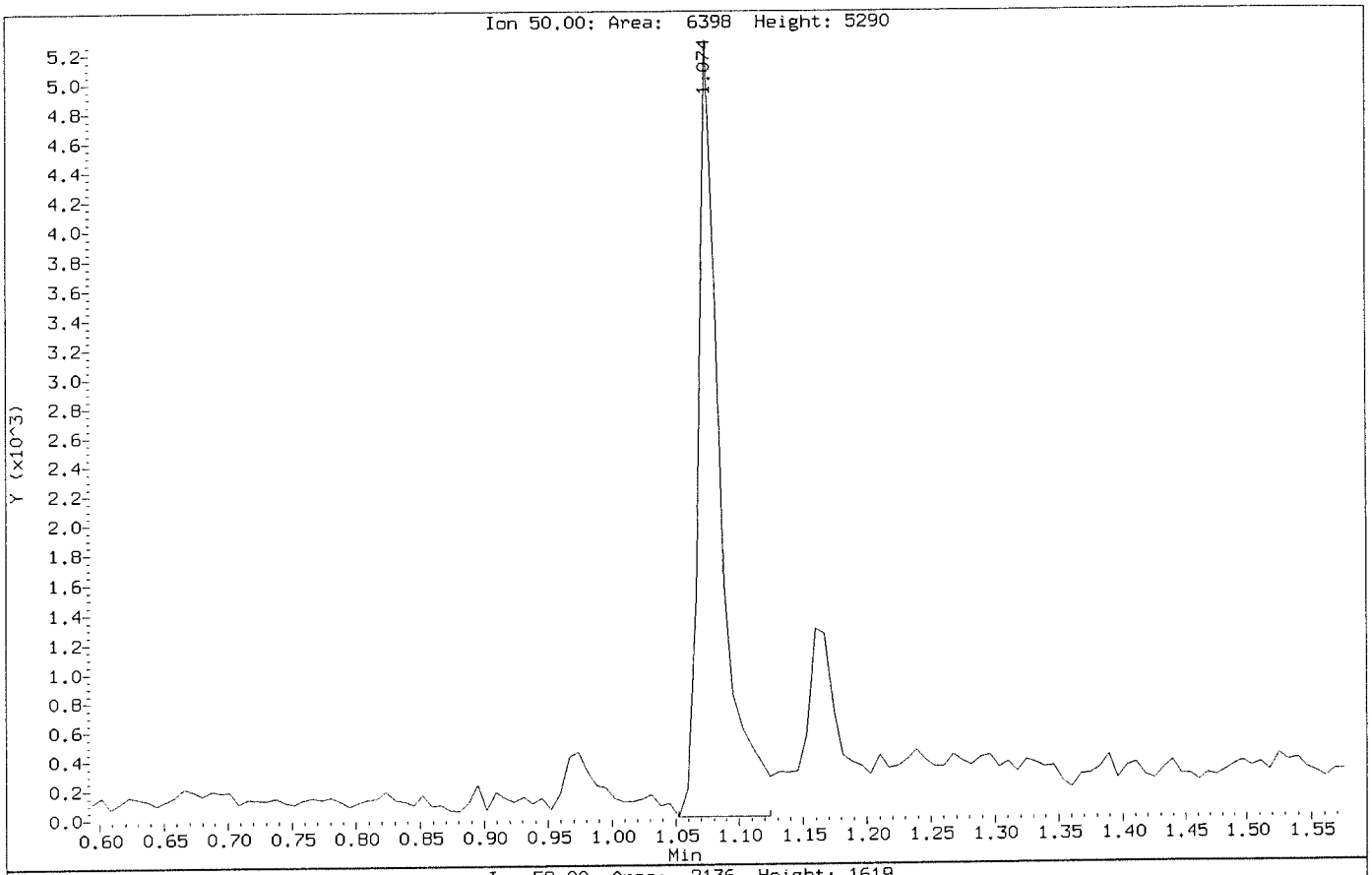
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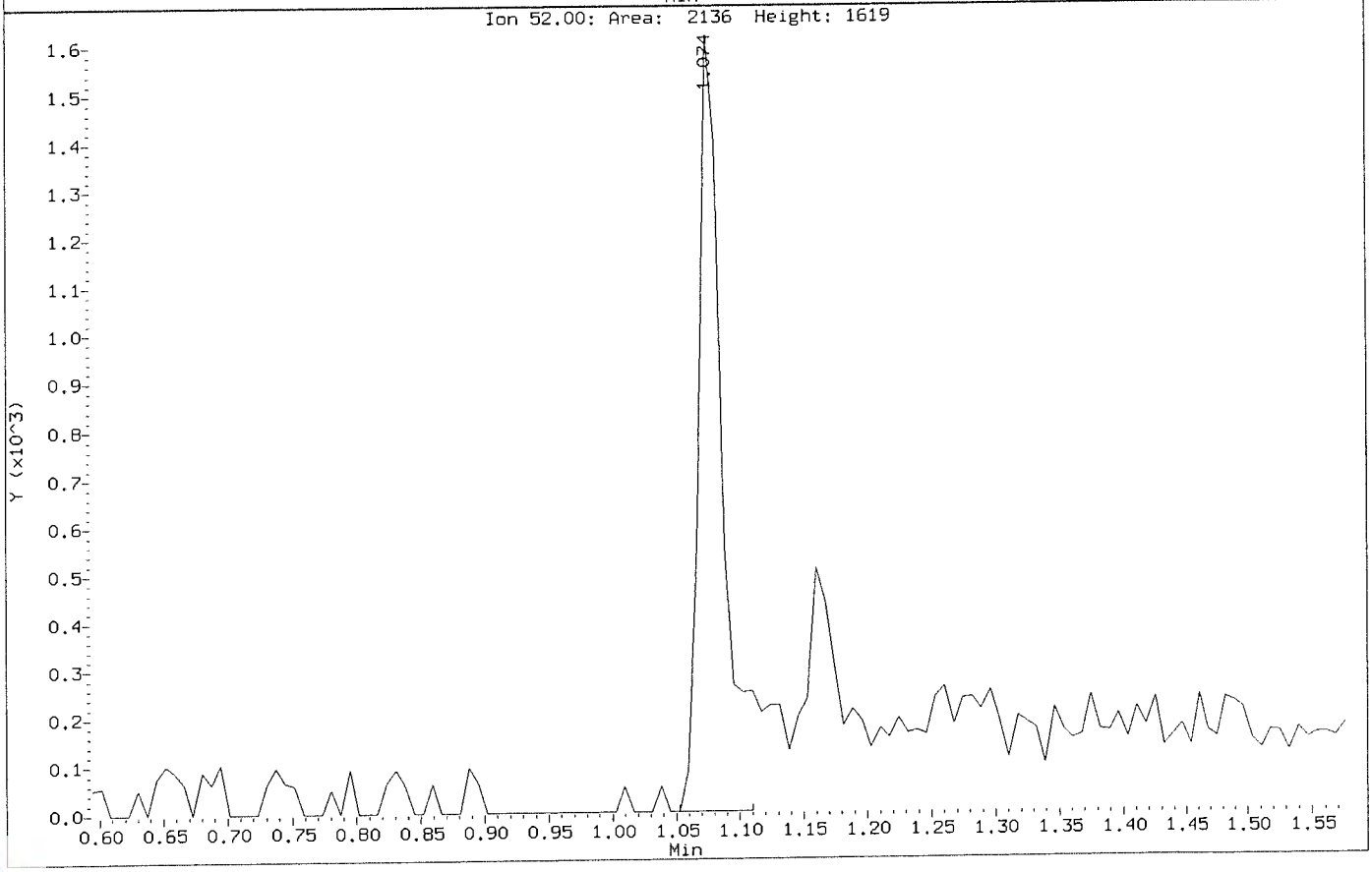
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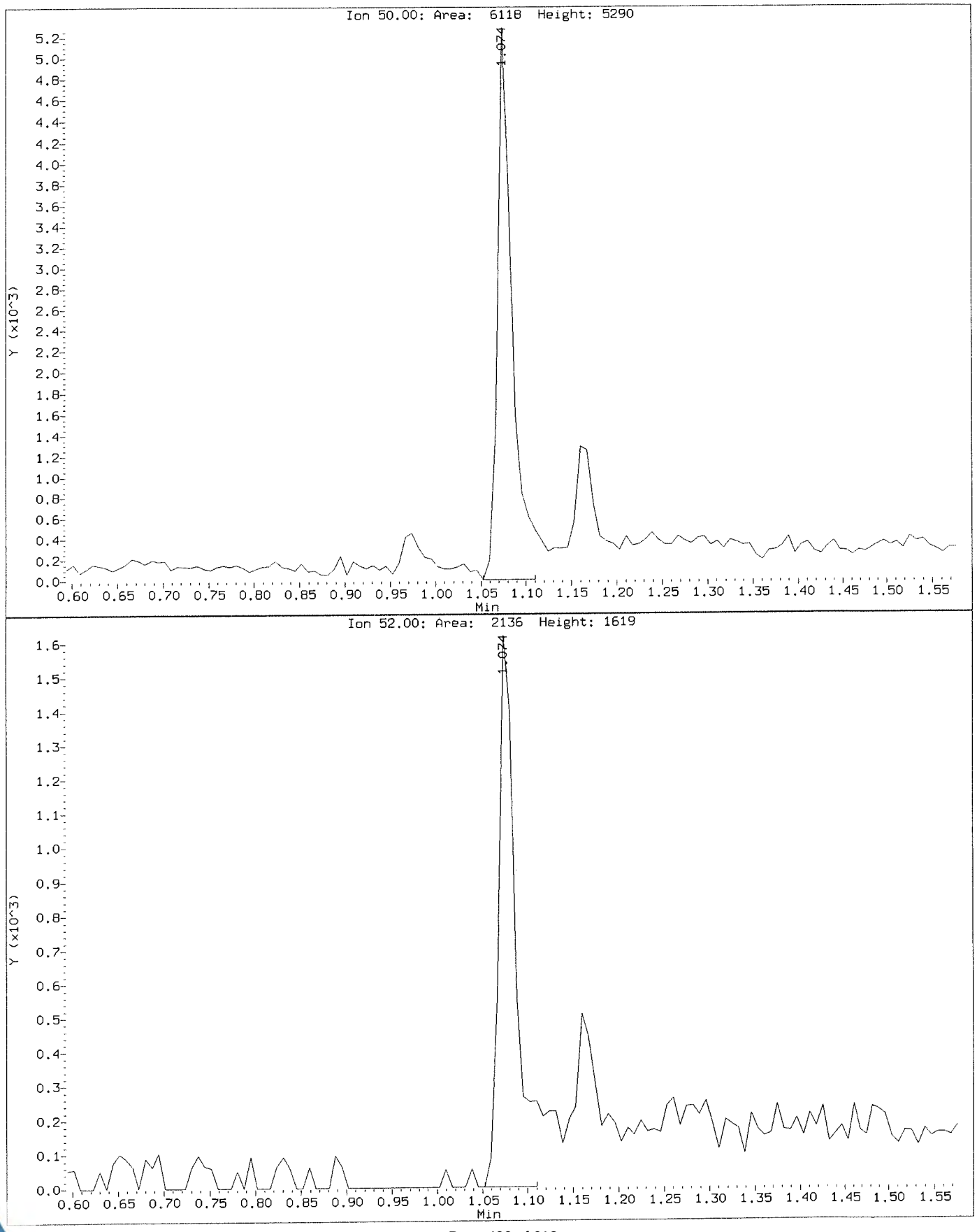
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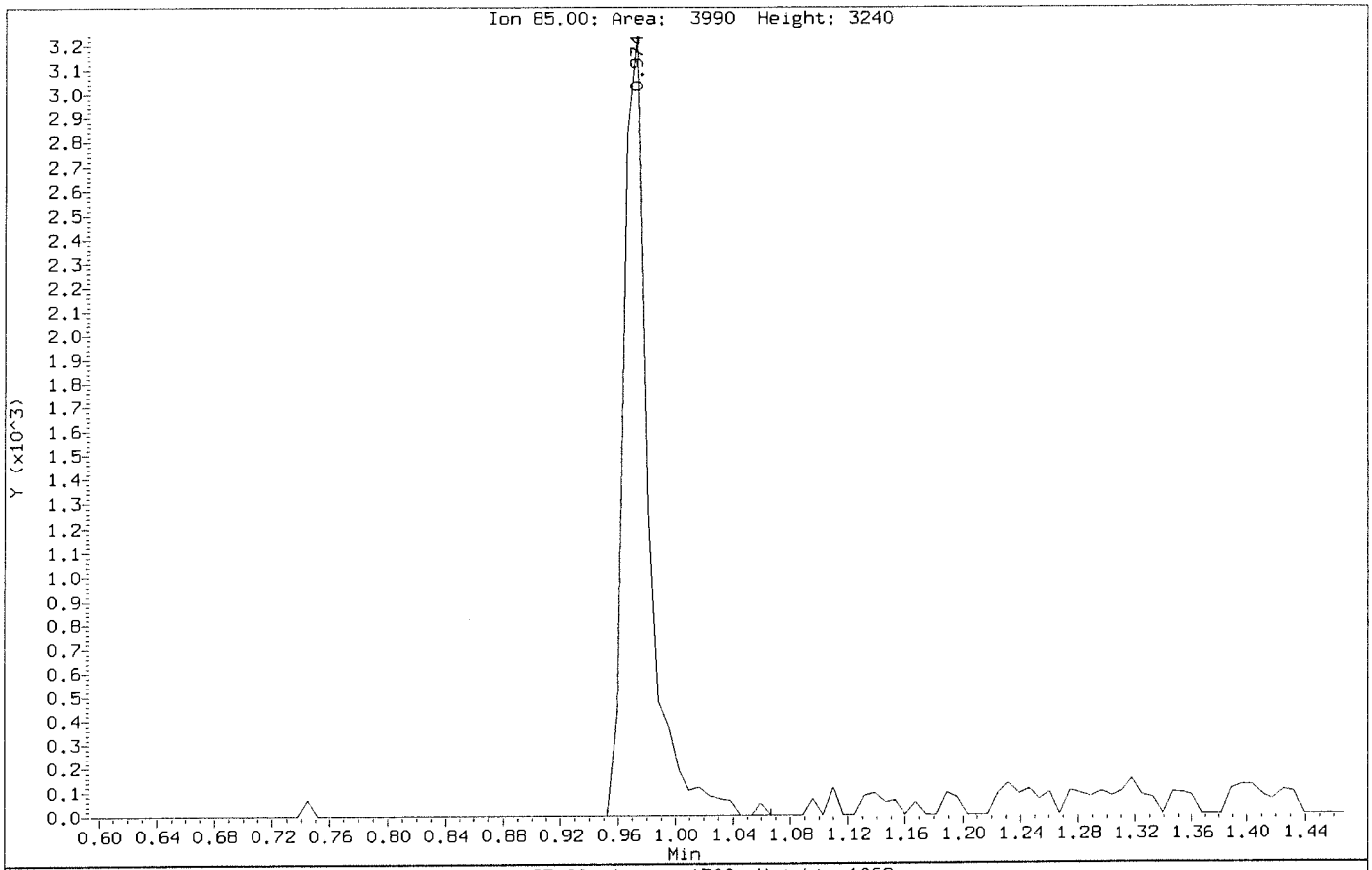
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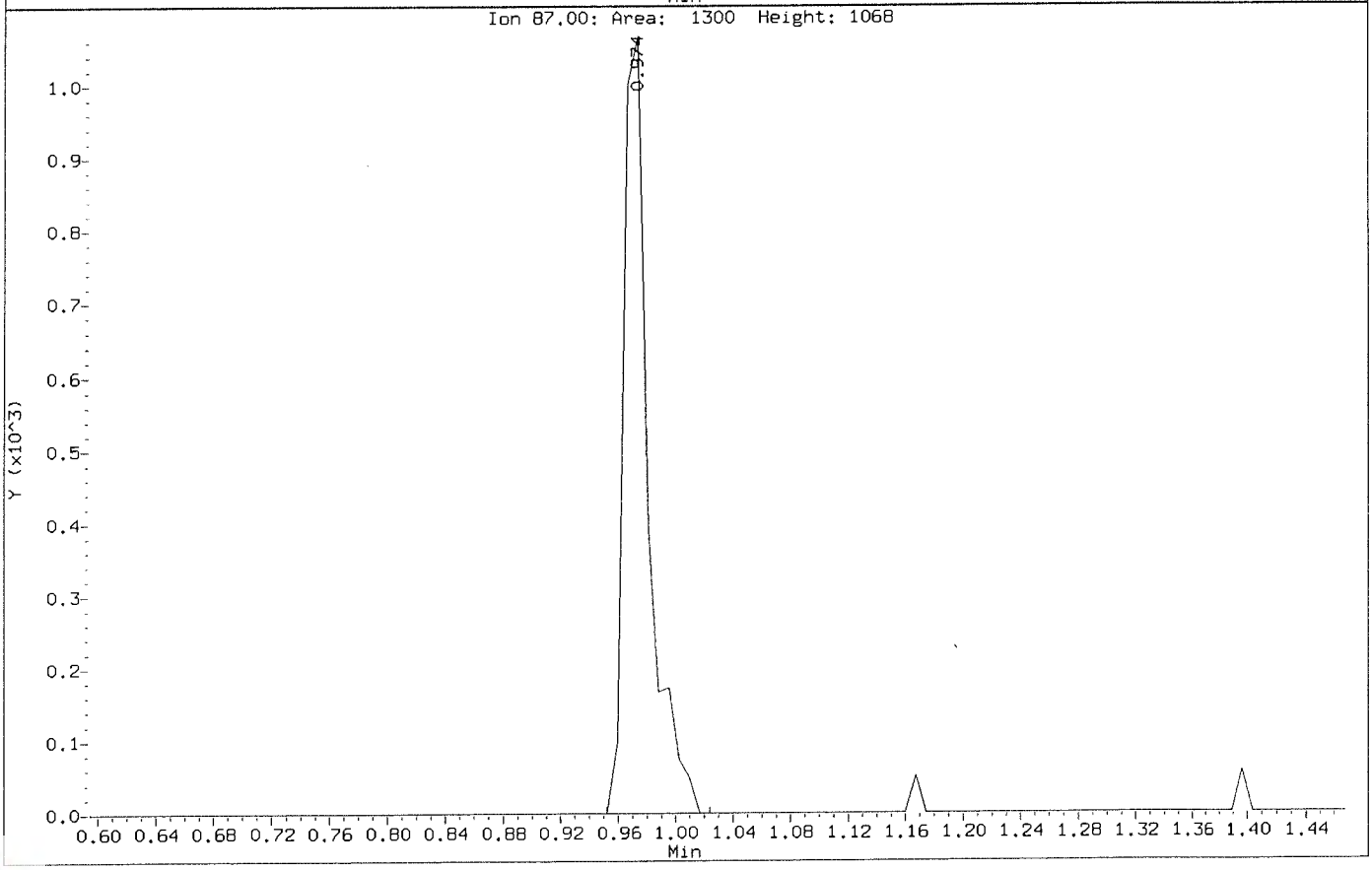
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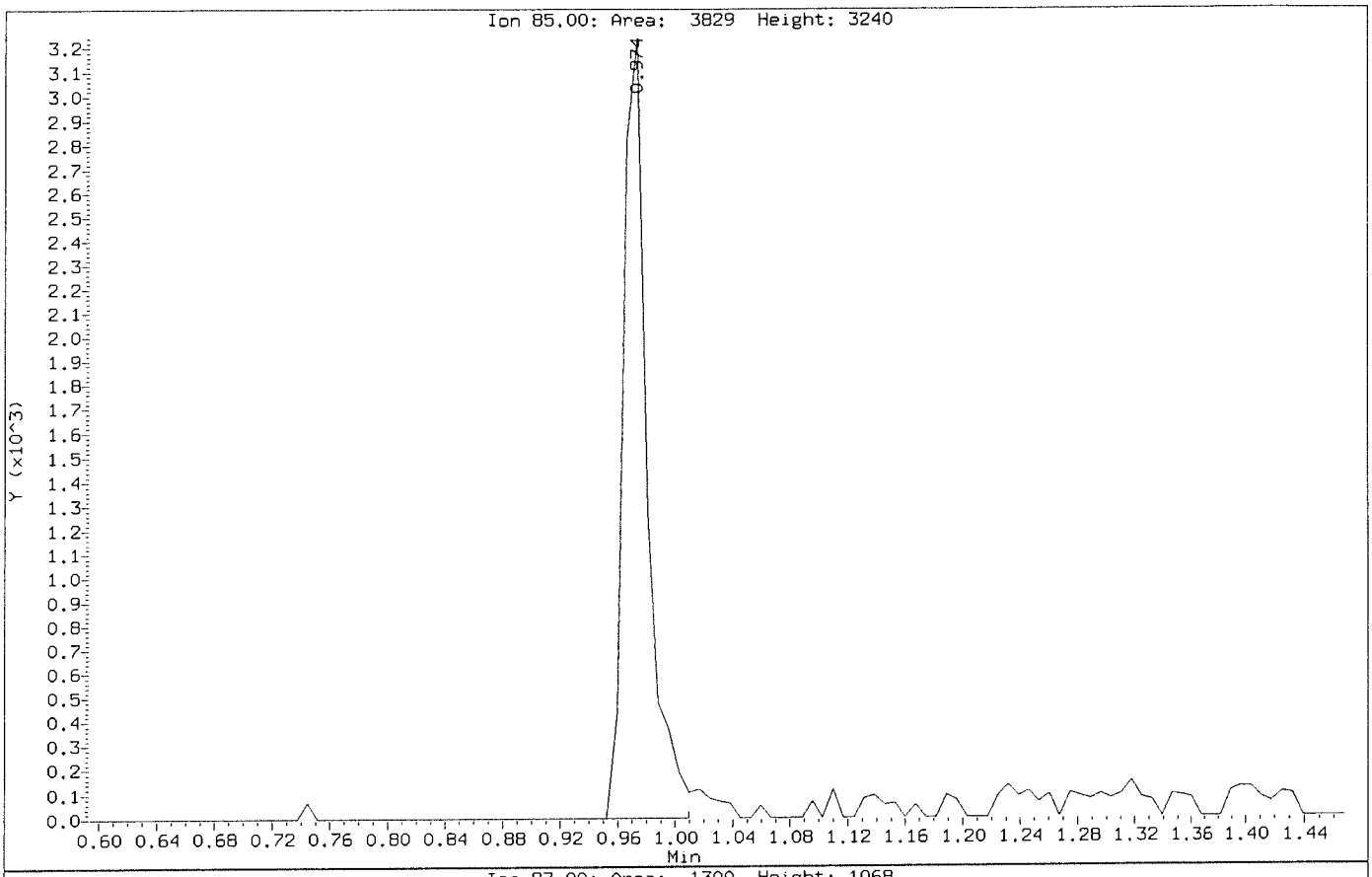
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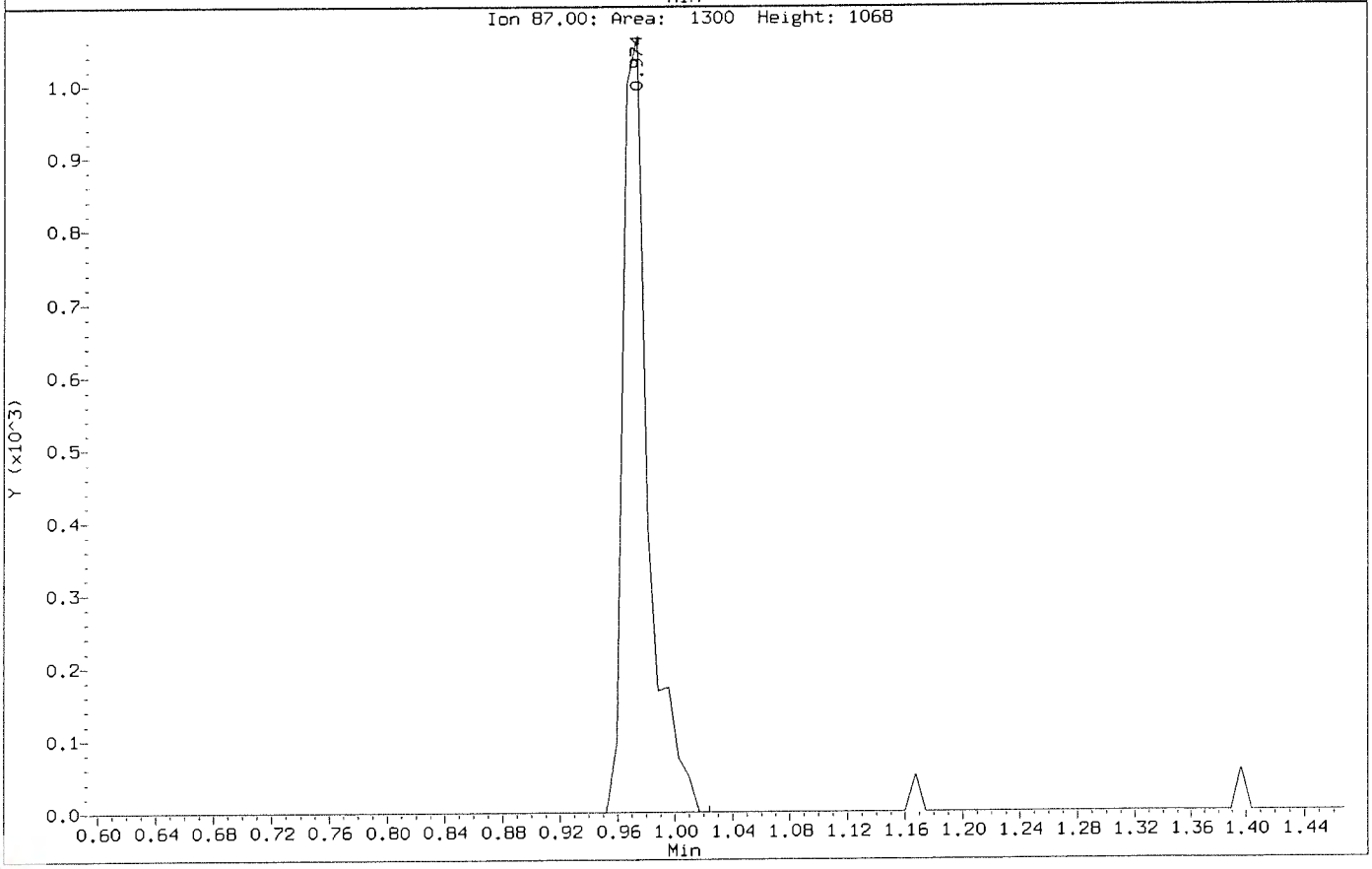




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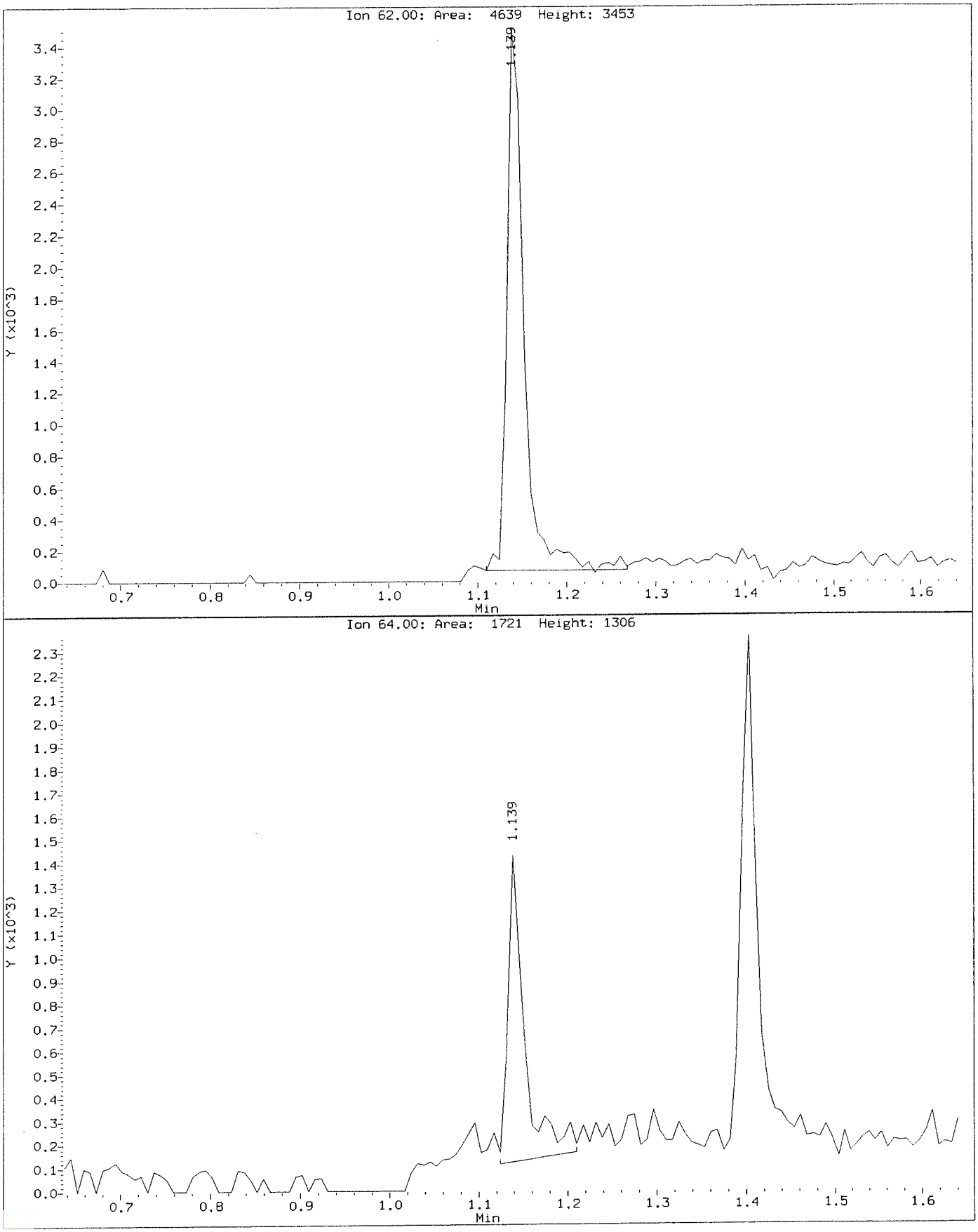
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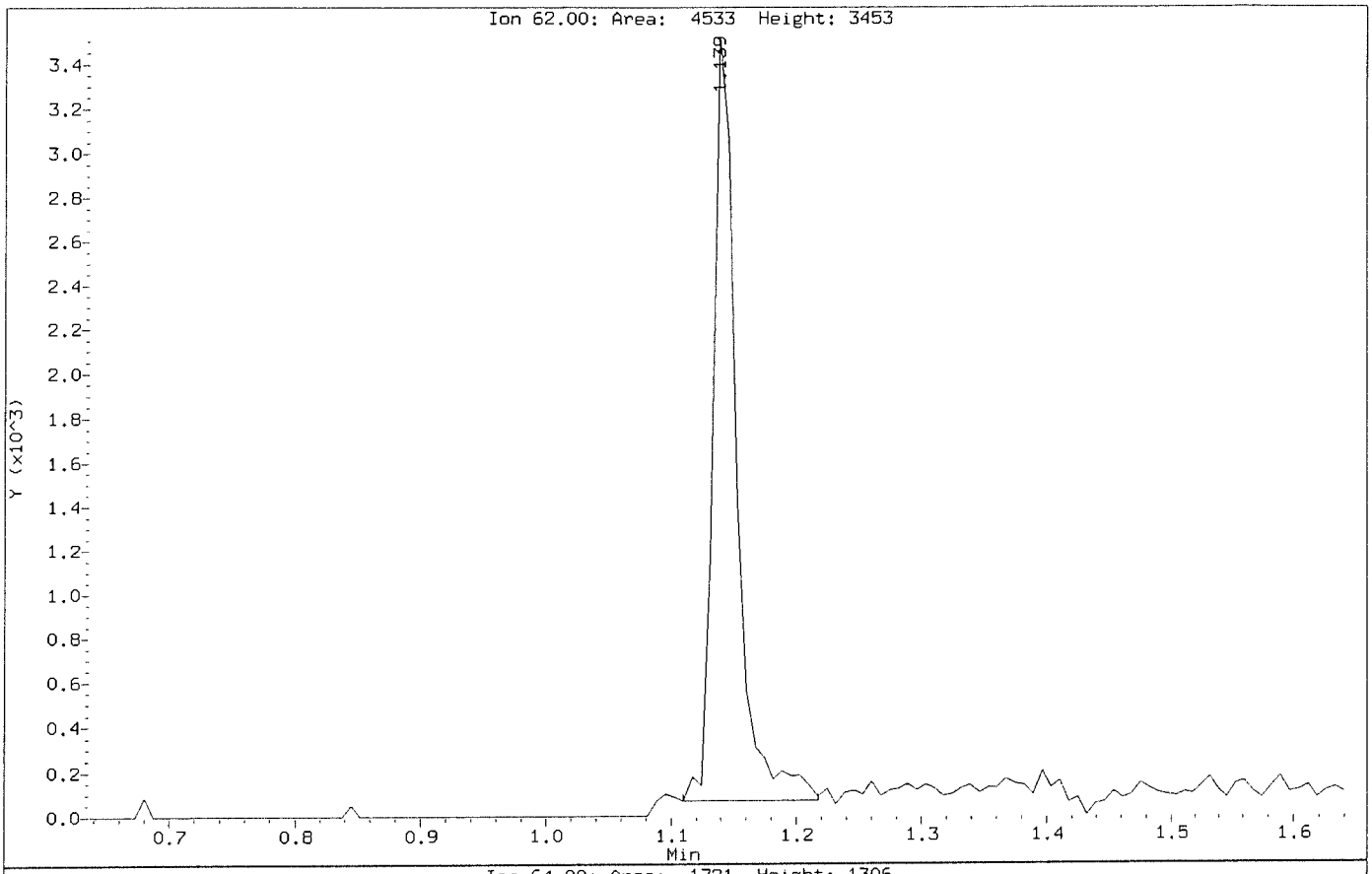
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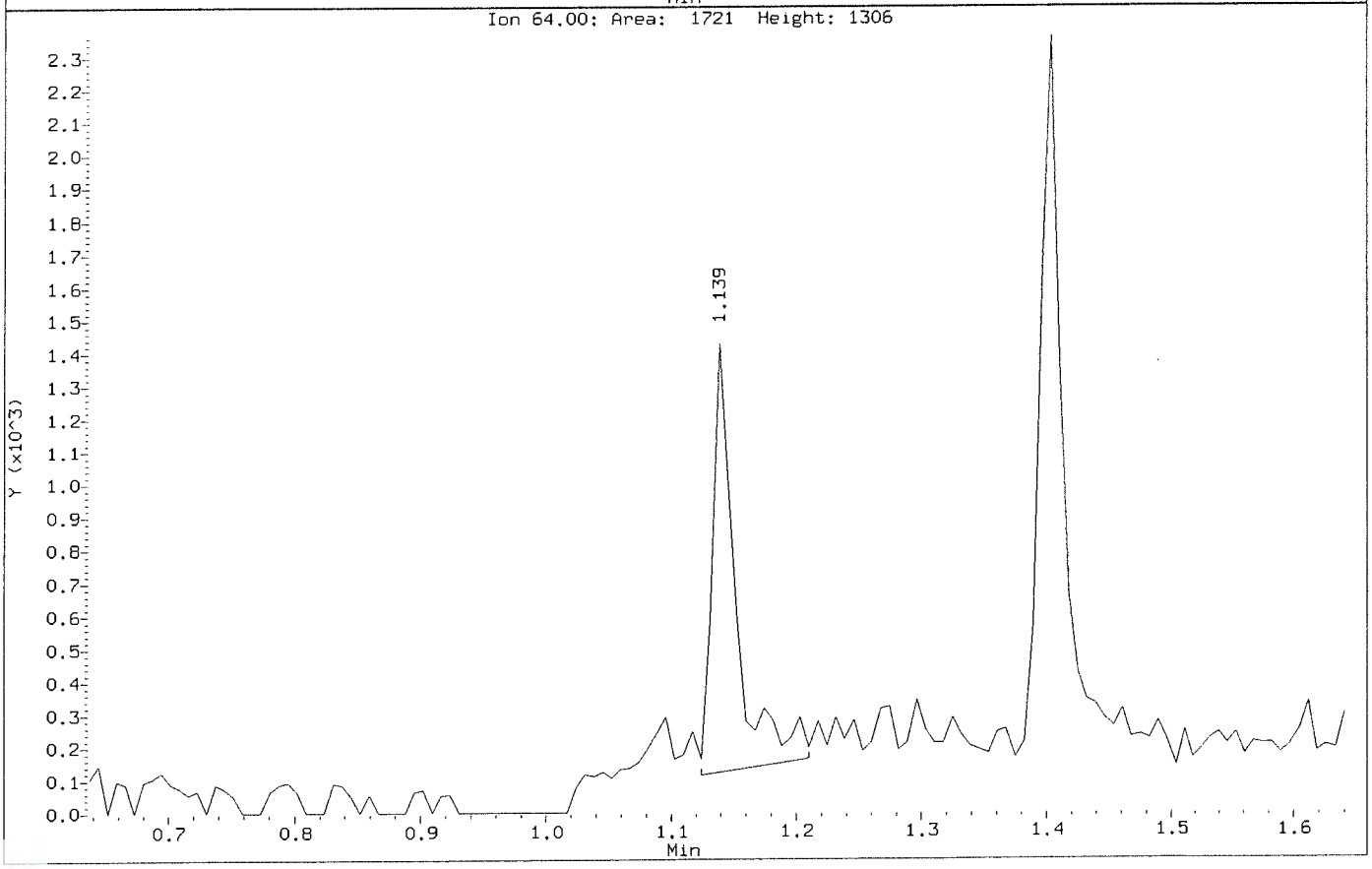
Compound: Vinyl Chloride
CAS Number: 75-01-4



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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\X191118.b\X111805.D
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Meth Date : 22-Dec-2019 16:31 voa6.i Quant Type: ISTD
Cal Date : 18-NOV-2019 15:23 Cal File: X111805.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14

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

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

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	415277	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	574320	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	519547	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	278615	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	8127	2.00000	2.50(a)
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	8034	2.00000	2.76(a)
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	28201	2.00000	2.06(a)
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	10468	2.00000	2.56(a)
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	7788	2.00000	2.06(a)
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	12006	2.00000	2.14(a)
68 1,1,2,2-Tetrachloroethane	83	8.838	8.845	(0.914)	8194	2.00000	2.09(a)
53 1,1,2-Trichloroethane	83	6.840	6.847	(0.892)	5924	2.00000	2.18(a)
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	12973	2.00000	2.14(a)
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	7795	2.00000	2.21(a)
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	10135	2.00000	2.18(a)
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	2753	2.00000	1.85(a)
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	7810	2.00000	2.35(aM)
90 1,2,4-Trichlorobenzene	180	11.345	11.338	(1.173)	5184	2.00000	2.20(a)
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	27218	2.00000	2.05(a)
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.102)	859	2.00000	1.65(a)
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	7900	2.00000	2.16(a)
88 1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	15931	2.00000	2.15(a)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	9378	2.00000	2.05(a)

Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111805.D Page 2
Report Date: 22-Dec-2019 16:31

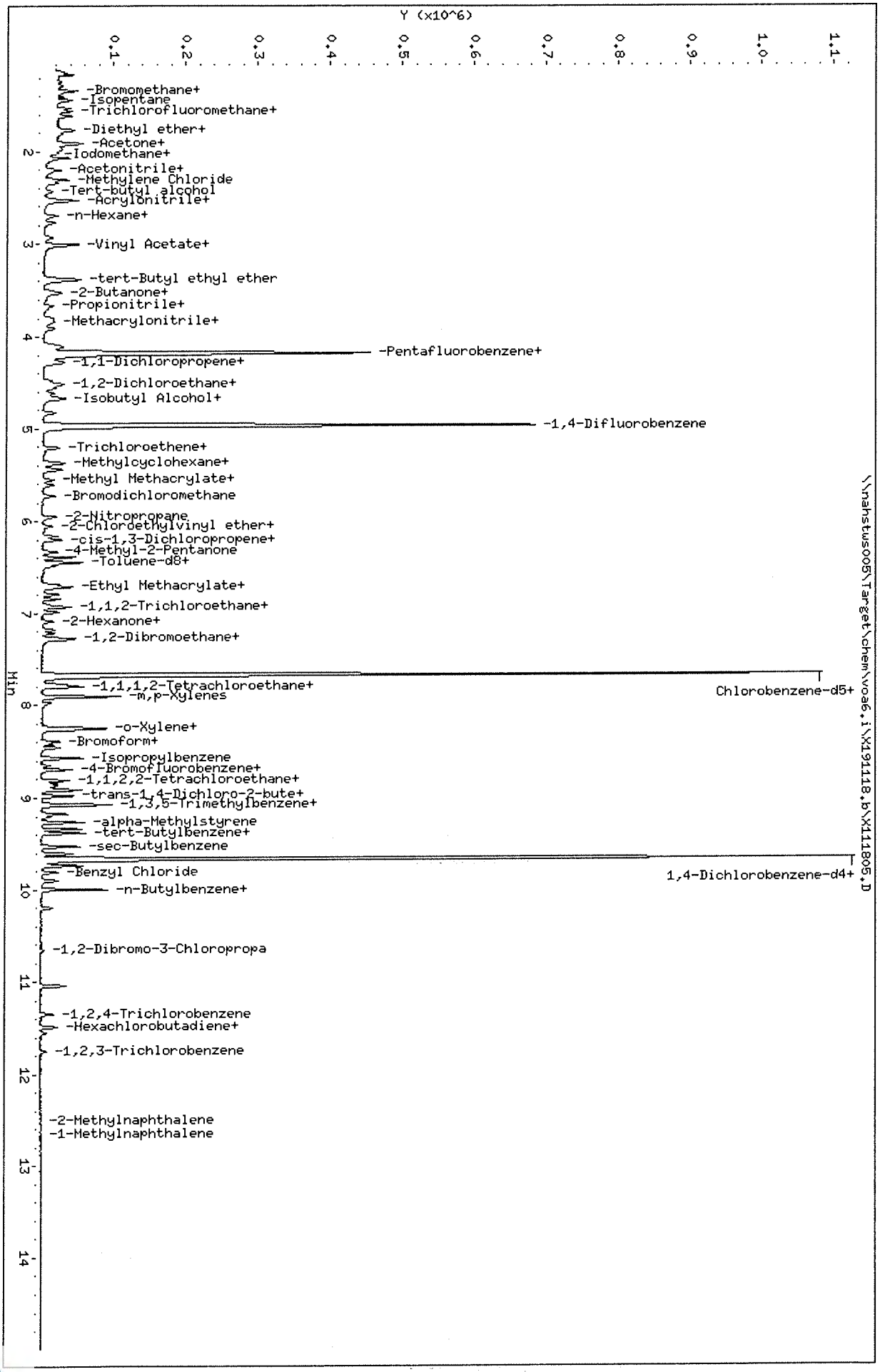
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	7169	2.00000	2.08(aM)
75	1,3,5-Trimethylbenzene	105	9.067	9.074	(0.938)	26432	2.00000	2.08(a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	17183	2.00000	2.15(a)
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	11850	2.00000	2.14(a)
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	17620	2.00000	2.17(a)
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	11201	2.00000	2.04(a)
24	2-Butanone	43	3.588	3.580	(0.858)	5067	4.00000	3.97(a)
76	2-Chlorotoluene	91	8.974	8.981	(0.928)	21210	2.00000	2.11(a)
52	2-Hexanone	43	7.090	7.090	(0.924)	8468	4.00000	3.96(a)
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	24759	2.00000	2.03(a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	28289	2.00000	2.07(a)
45	4-Methyl-2-Pentanone	43	6.324	6.331	(0.824)	13007	4.00000	4.27(a)
10	Acetone	43	1.976	1.976	(0.473)	7954	4.00000	3.82(a)
37	Benzene	78	4.519	4.512	(0.909)	28031	2.00000	2.13(a)
74	Bromobenzene	156	8.809	8.809	(0.911)	10482	2.00000	2.16(a)
29	Bromochloromethane	128	3.795	3.795	(0.908)	5128	2.00000	2.27(a)
39	Bromodichloromethane	83	5.729	5.729	(1.153)	9742	2.00000	2.04(a)
66	Bromoform	173	8.415	8.415	(1.097)	5989	2.00000	2.89(a)
6	Bromomethane	94	1.338	1.331	(0.320)	12041	2.00000	0.69(a)
19	Carbon Disulfide	76	2.069	2.069	(0.495)	40384	4.00000	4.21(a)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	11097	2.00000	2.18(aM)
59	Chlorobenzene	112	7.699	7.699	(1.004)	21369	2.00000	2.10(a)
7	Chloroethane	64	1.403	1.396	(0.336)	5731	2.00000	2.19(a)
28	Chloroform	83	3.910	3.910	(0.935)	14792	2.00000	2.19(a)
3	Chloromethane	50	1.073	1.073	(0.257)	10461	2.00000	2.49(a)
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	8197	2.00000	2.08(a)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	11415	2.00000	2.03(a)
55	Dibromochloromethane	129	7.176	7.183	(0.936)	8154	2.00000	2.06(a)
44	Dibromomethane	93	5.557	5.557	(1.118)	5355	2.00000	2.20(a)
2	Dichlorodifluoromethane	85	0.973	0.966	(0.233)	7335	2.00000	2.78(a)
61	Ethylbenzene	106	7.799	7.807	(1.017)	10700	2.00000	2.04(a)
91	Hexachlorobutadiene	225	11.488	11.488	(1.188)	4522	2.00000	1.82(a)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	32629	2.00000	2.10(a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	26786	4.00000	4.23(a)
17	Methylene Chloride	84	2.305	2.305	(0.551)	8025	2.00000	2.13(a)
87	n-Butylbenzene	91	9.998	9.998	(1.034)	22333	2.00000	1.96(a)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	35573	2.00000	2.06(a)
92	Naphthalene	128	11.553	11.546	(1.195)	6733	2.00000	2.23(a)
63	o-Xylene	106	8.244	8.244	(1.075)	13637	2.00000	2.18(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	31860	2.00000	2.12(a)
64	Styrene	104	8.265	8.265	(1.078)	22366	2.00000	2.06(a)
78	tert-Butylbenzene	119	9.339	9.339	(0.966)	22956	2.00000	2.11(a)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	8185	2.00000	2.24(a)
50	Toluene	91	6.453	6.453	(0.841)	31139	2.00000	2.11(a)
20	trans-1,2-Dichloroethene	96	2.535	2.527	(0.606)	7239	2.00000	2.11(a)
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	10523	2.00000	2.06(a)
38	Trichloroethene	130	5.214	5.206	(1.049)	8894	2.00000	2.21(a)
8	Trichlorofluoromethane	101	1.560	1.553	(0.373)	13581	2.00000	2.10(a)
5	Vinyl Chloride	62	1.138	1.138	(0.272)	9073	2.00000	2.14(a)

QC Flag Legend

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

QC Flag Legend

M - Compound response manually integrated.

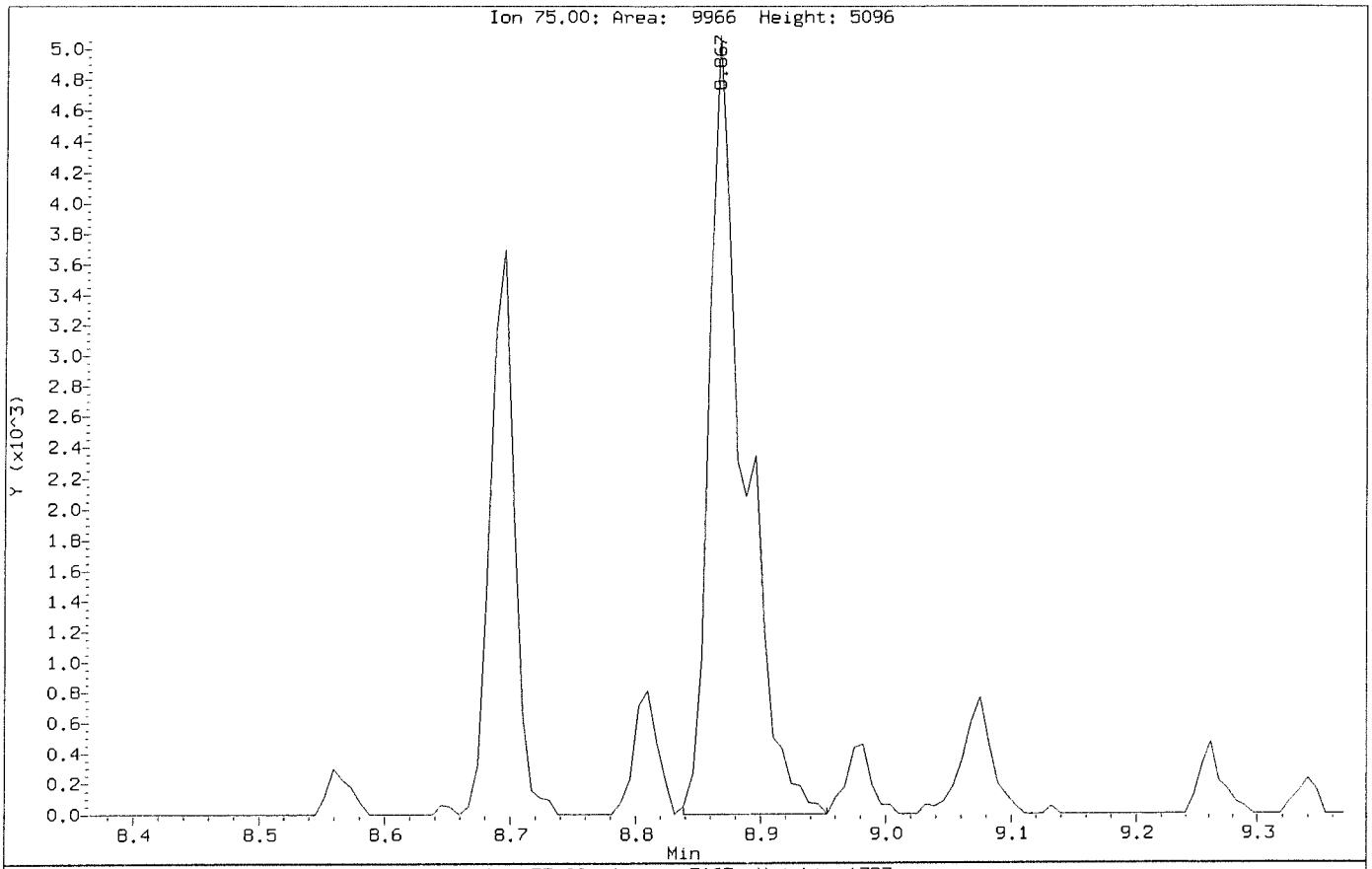


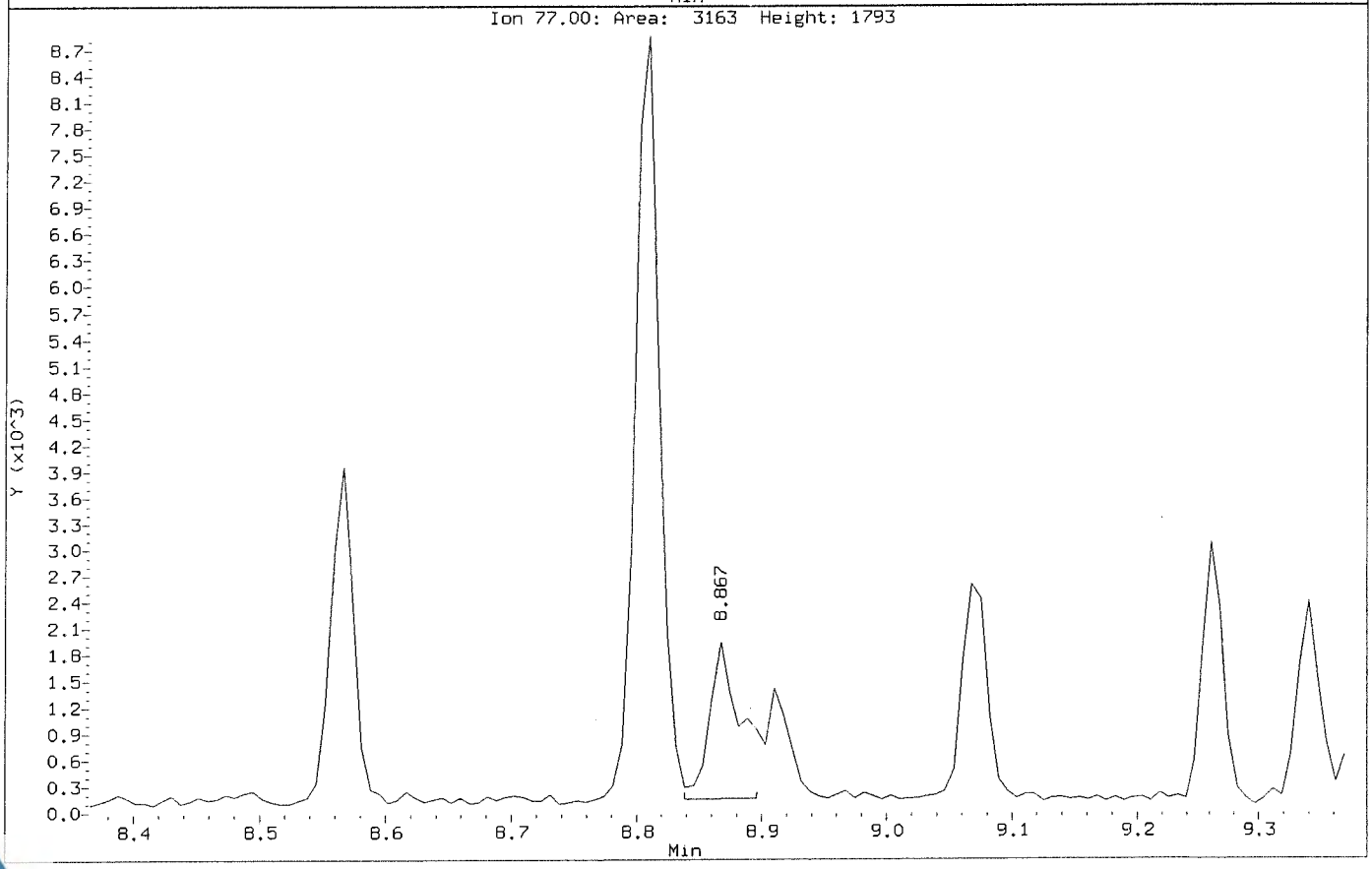
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Column phase: DB624

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

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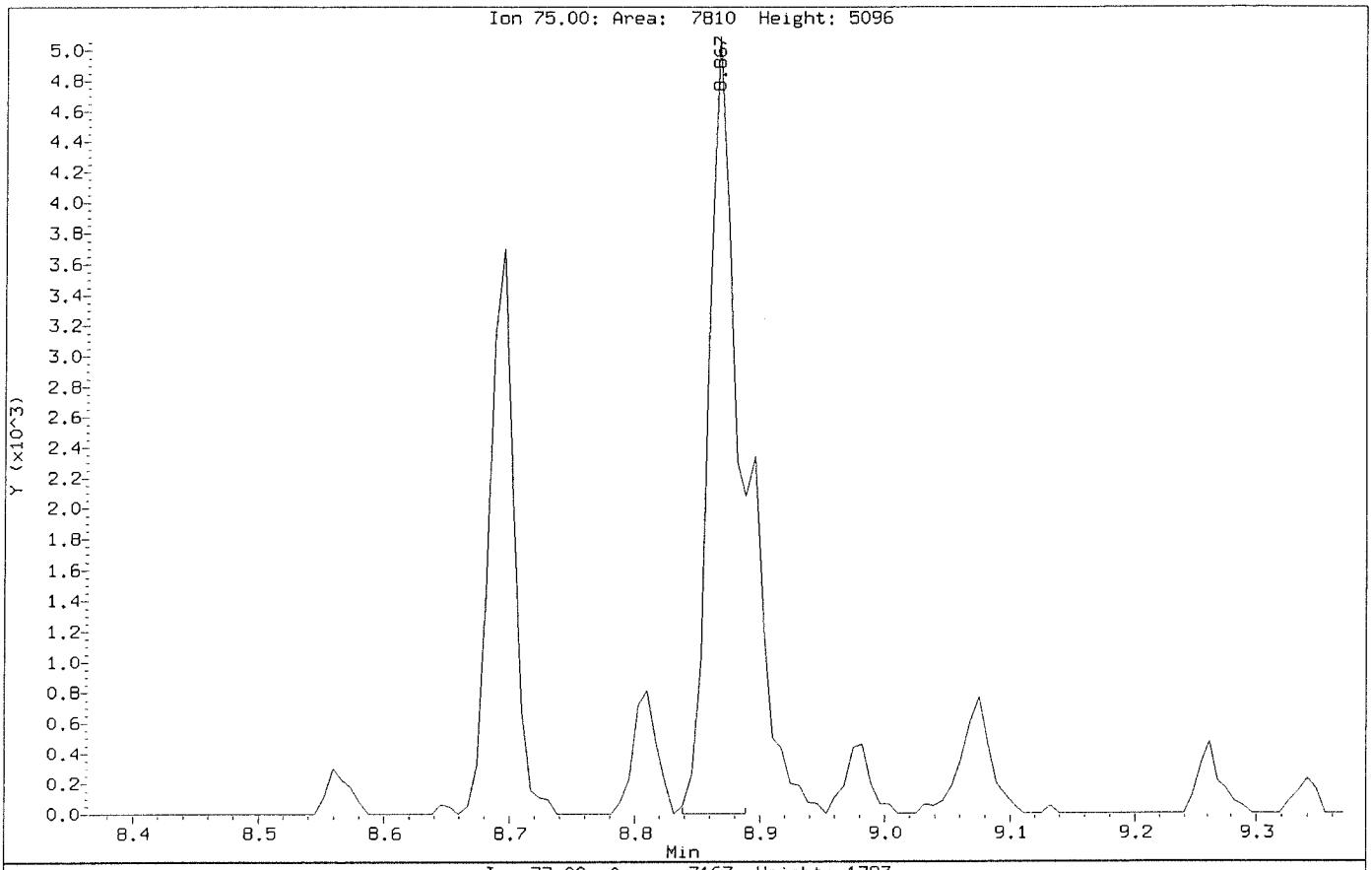
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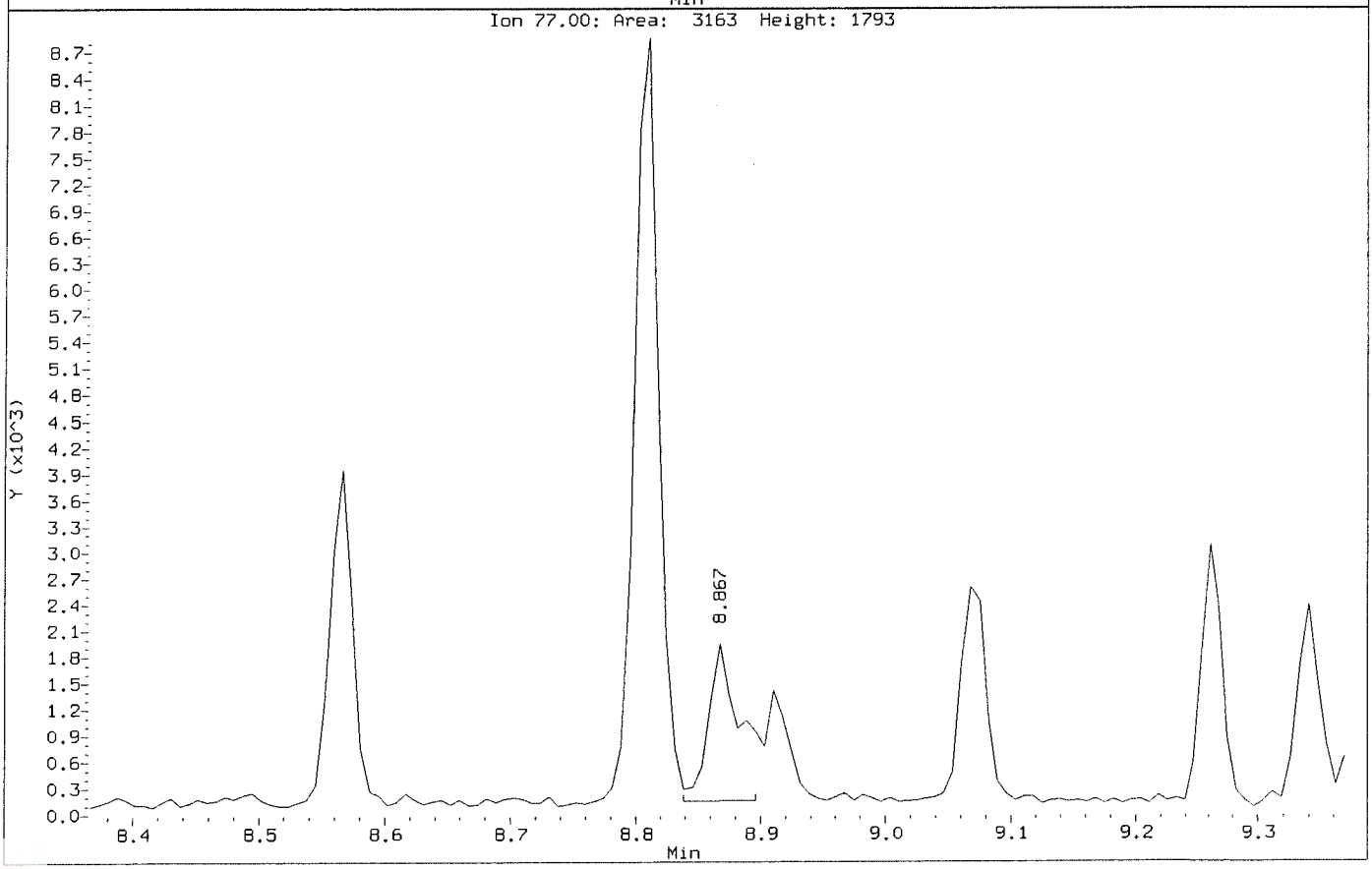




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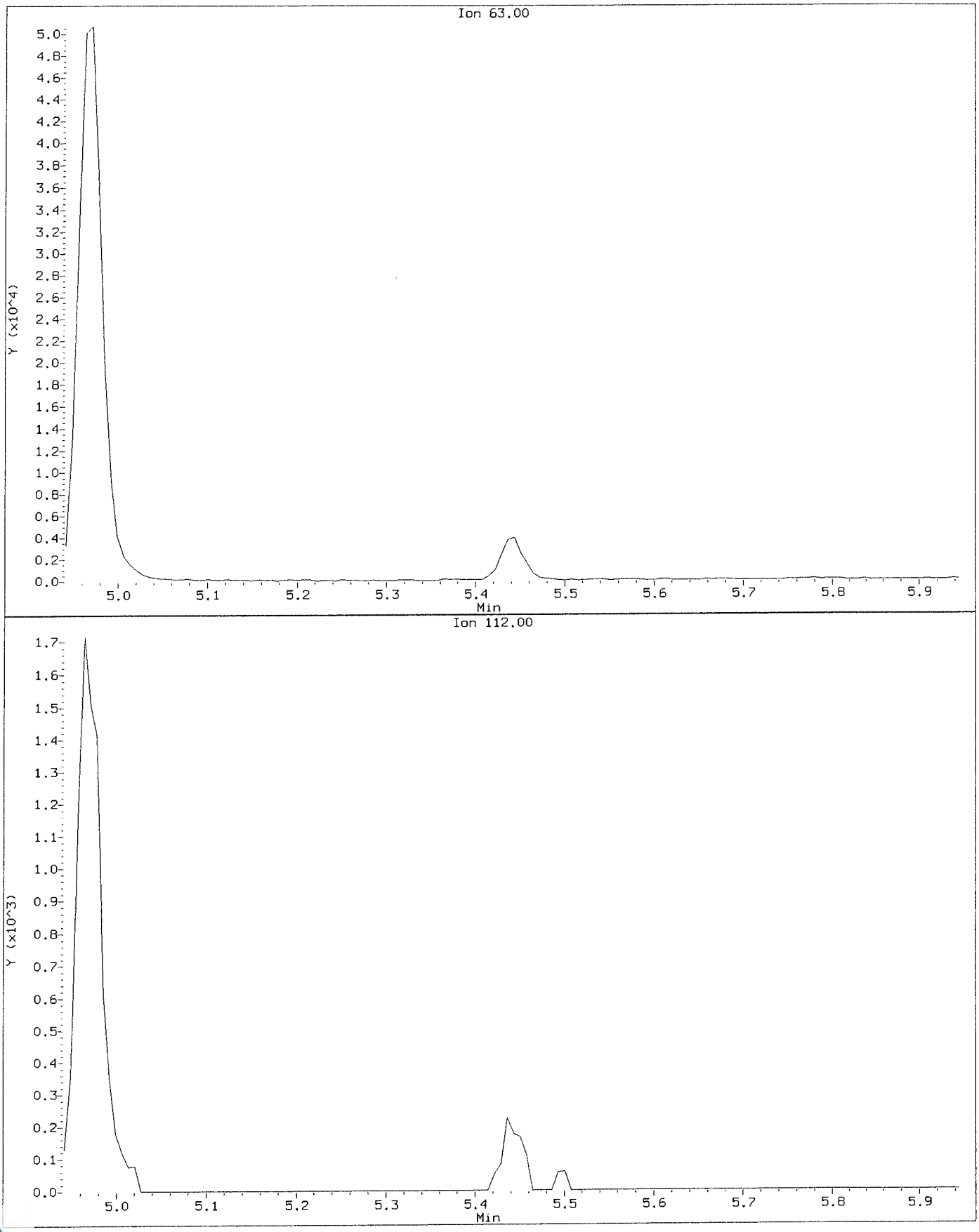
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CAS Number: 96-18-4





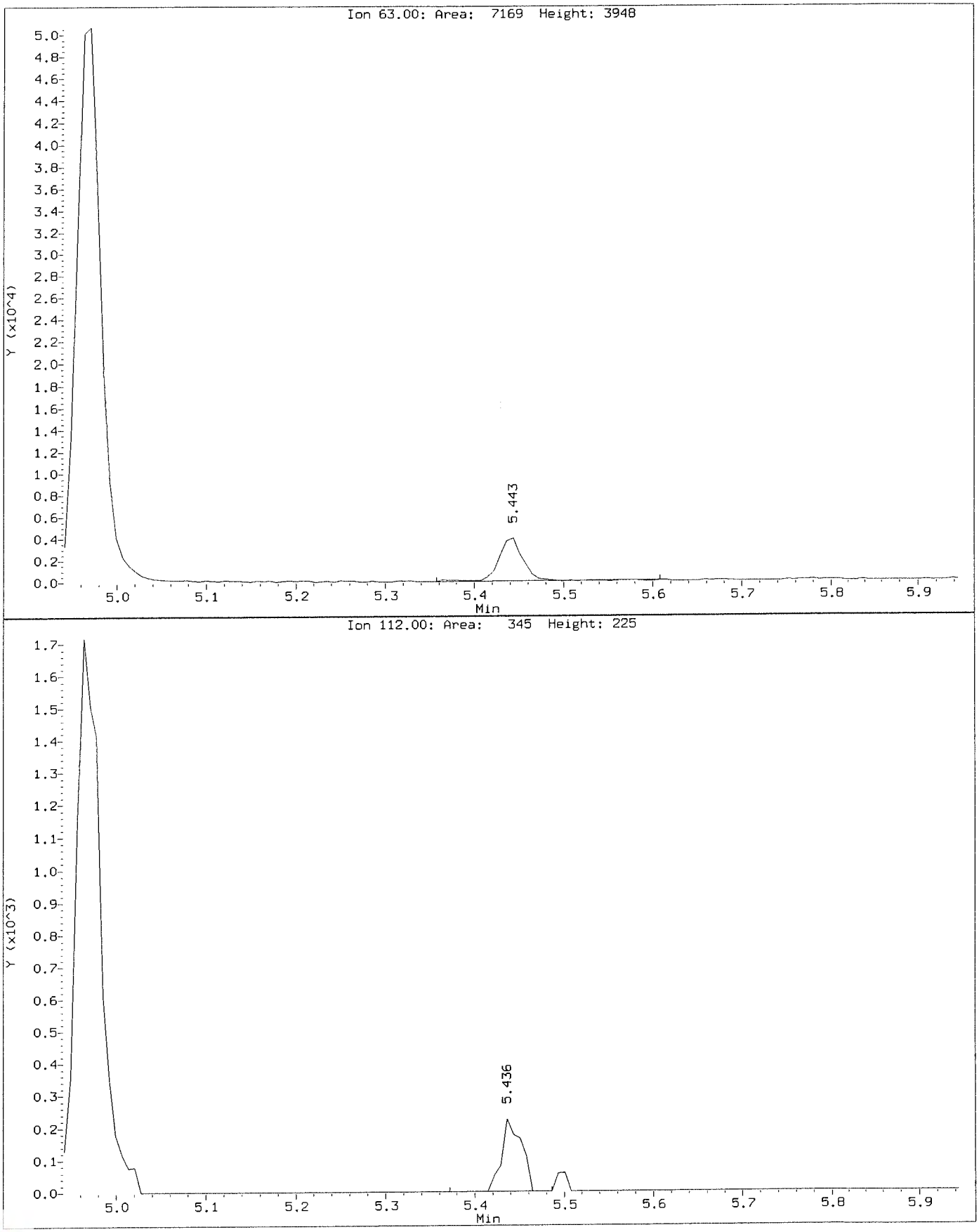
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Instrument: voa6.i
Client Sample ID: VSTD002

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



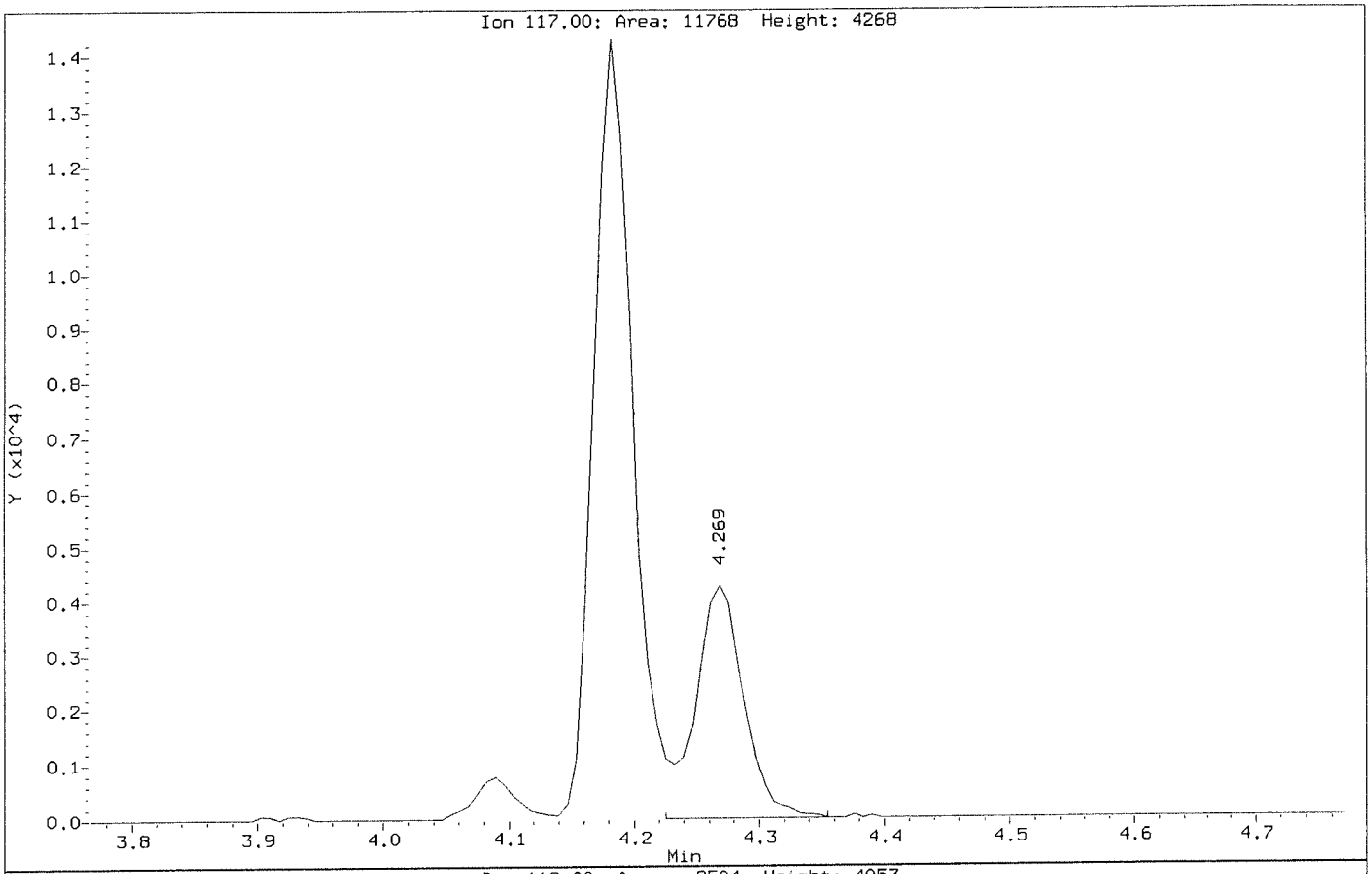
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Injection Date: 18-NOV-2019 15:23
Instrument: voa6.i
Client Sample ID: VSTD002

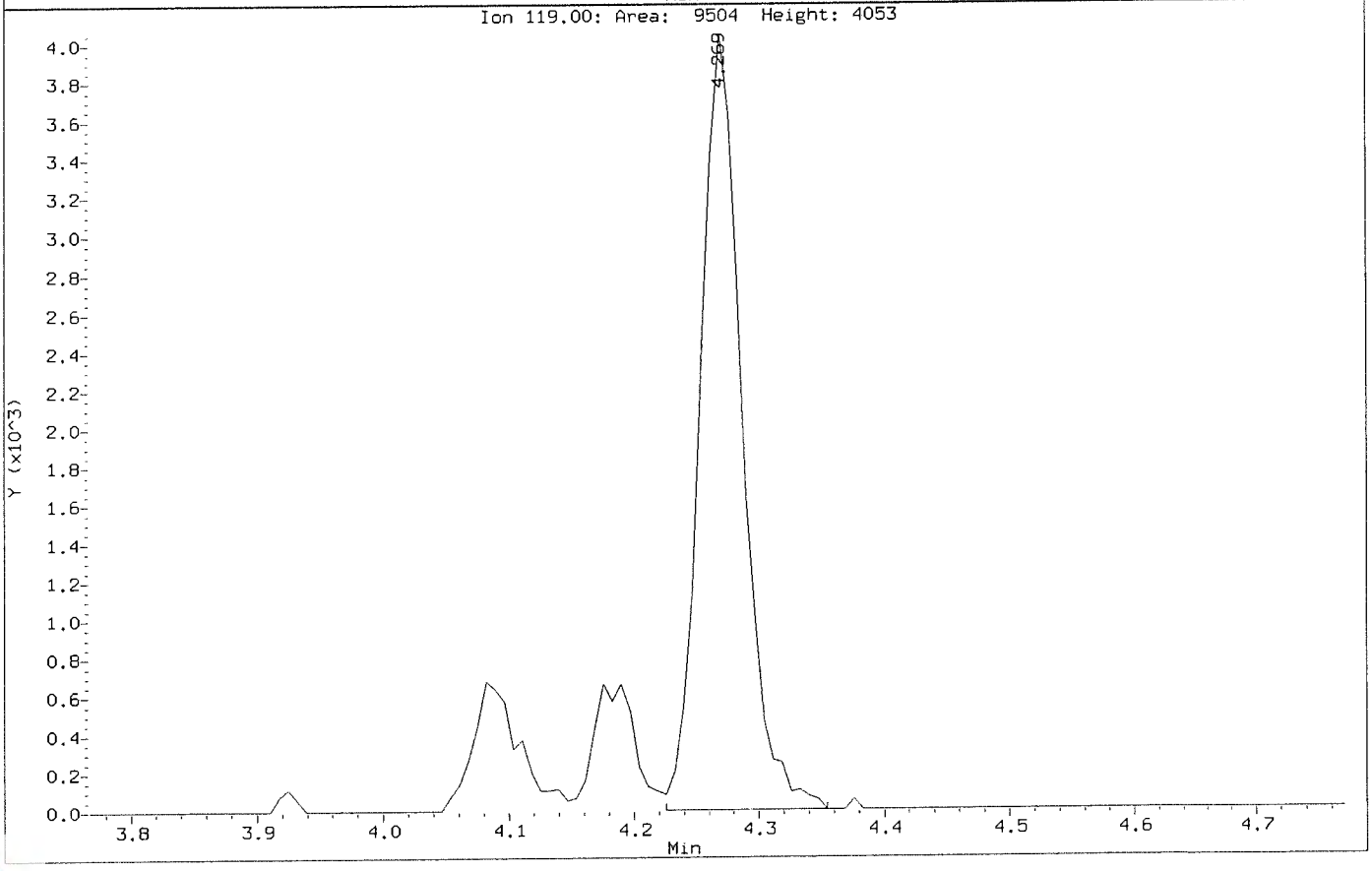
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5



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Instrument: voa6.i
Client Sample ID: VSTD002

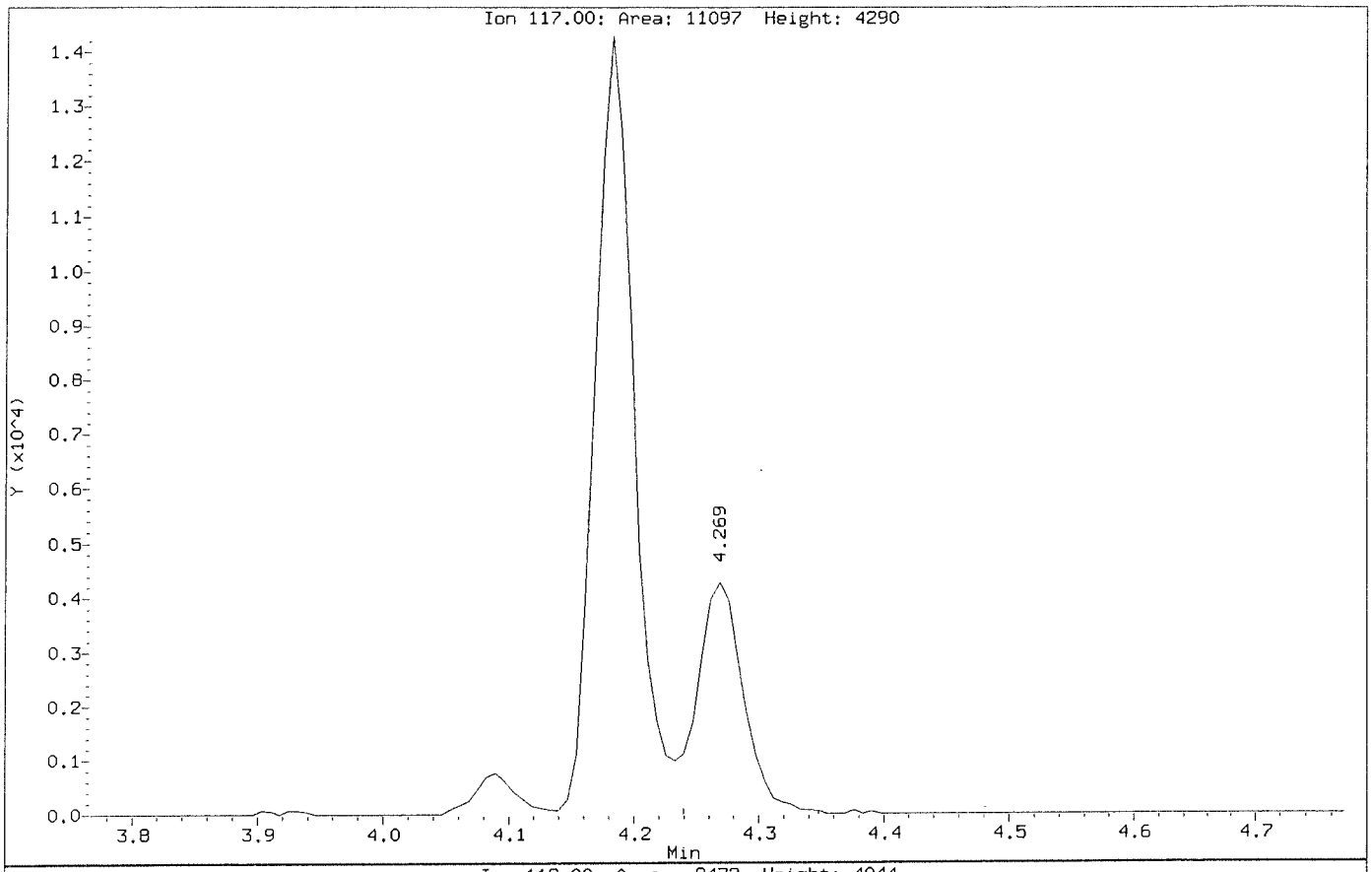
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

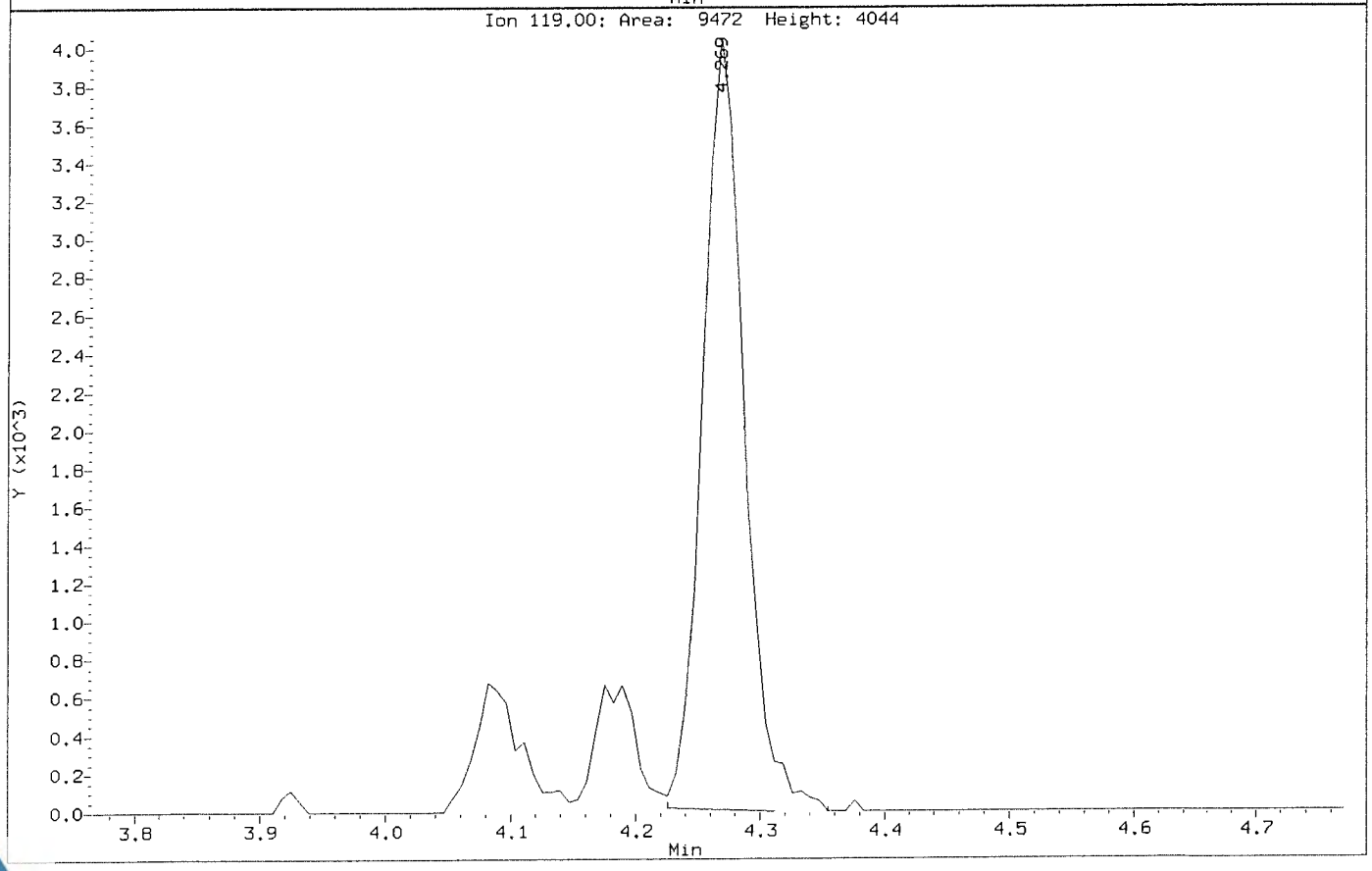




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Instrument: voa6.i
Client Sample ID: VSTD002

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





Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111806.D Page 1
Report Date: 22-Dec-2019 16:31

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X191118.b\X111806.D
Lab Smp Id: VSTD005 Client Smp ID: VSTD005
Inj Date : 18-NOV-2019 15:47
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\X191118.b\8260W.m
Meth Date : 22-Dec-2019 16:31 voa6.i Quant Type: ISTD
Cal Date : 18-NOV-2019 15:47 Cal File: X111806.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14

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

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

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	410845	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	563063	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	510927	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	277846	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	20237	5.00000	5.74
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	20921	5.00000	6.06
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	69936	5.00000	5.19
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	25804	5.00000	5.80
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	20728	5.00000	5.59
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	29459	5.00000	5.31
68 1,1,2,2-Tetrachloroethane	83	8.838	8.845	(0.914)	22230	5.00000	5.68
53 1,1,2-Trichloroethane	83	6.840	6.847	(0.892)	15003	5.00000	5.61
22 1,1-Dichloroethane	63	2.922	2.921	(0.699)	32313	5.00000	5.40
11 1,1-Dichloroethene	96	1.912	1.911	(0.457)	19077	5.00000	5.47
32 1,1-Dichloropropene	75	4.283	4.282	(0.862)	24310	5.00000	5.35
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	6553	5.00000	5.62
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	18403	5.00000	5.55(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	14399	5.00000	6.15
79 1,2,4-Trimethylbenzene	105	9.383	9.382	(0.970)	71210	5.00000	5.40
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.657	(1.102)	2641	5.00000	5.82
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	20565	5.00000	5.73
88 1,2-Dichlorobenzene	146	9.999	9.998	(1.034)	41602	5.00000	5.64
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	24346	5.00000	5.44

Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111806.D Page 2
Report Date: 22-Dec-2019 16:31

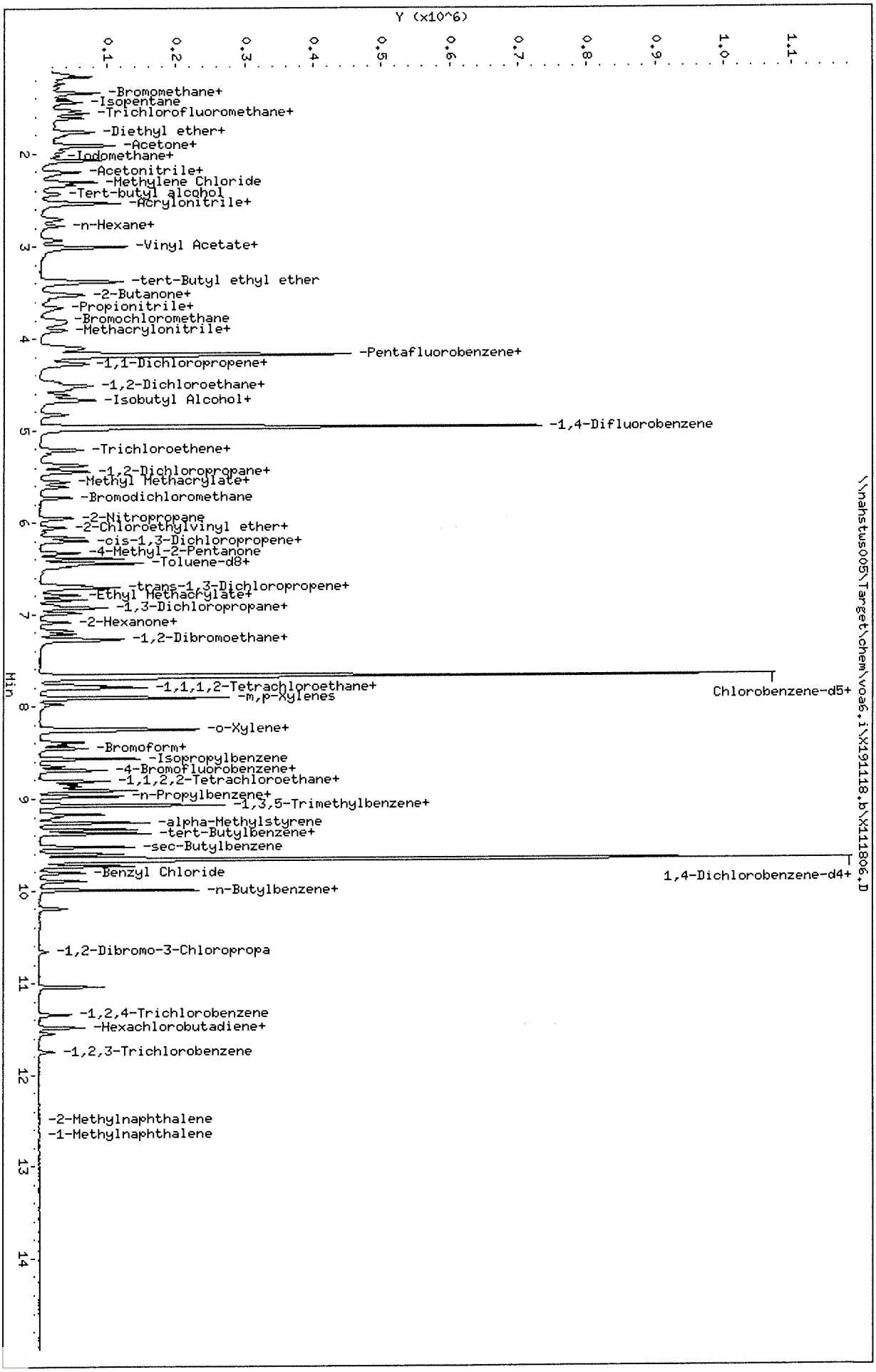
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
42	1,2-Dichloropropane	63	5.436	5.443	(1.094)	19076	5.00000	5.67
75	1,3,5-Trimethylbenzene	105	9.067	9.074	(0.938)	68944	5.00000	5.45
83	1,3-Dichlorobenzene	146	9.605	9.612	(0.993)	45064	5.00000	5.65
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	29776	5.00000	5.49
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	44703	5.00000	5.52
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	28965	5.00000	5.33
24	2-Butanone	43	3.581	3.580	(0.856)	13522	10.0000	10.72
76	2-Chlorotoluene	91	8.974	8.981	(0.928)	56464	5.00000	5.64
52	2-Hexanone	43	7.090	7.090	(0.924)	23980	10.0000	11.42
77	4-Chlorotoluene	91	9.075	9.074	(0.939)	66074	5.00000	5.45
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	71485	5.00000	5.25
45	4-Methyl-2-Pentanone	43	6.324	6.331	(0.824)	33803	10.0000	11.29
10	Acetone	43	1.969	1.976	(0.471)	15992	10.0000	11.75
37	Benzene	78	4.512	4.512	(0.908)	72584	5.00000	5.63
74	Bromobenzene	156	8.810	8.809	(0.911)	27619	5.00000	5.71
29	Bromochloromethane	128	3.795	3.795	(0.908)	11669	5.00000	5.24
39	Bromodichloromethane	83	5.729	5.729	(1.153)	26638	5.00000	5.71
66	Bromoform	173	8.416	8.415	(1.097)	16084	5.00000	6.17
6	Bromomethane	94	1.338	1.331	(0.320)	28671	5.00000	4.99(a)
19	Carbon Disulfide	76	2.069	2.069	(0.495)	103008	10.0000	10.87
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	26931	5.00000	5.41(M)
59	Chlorobenzene	112	7.699	7.699	(1.004)	55668	5.00000	5.58
7	Chloroethane	64	1.403	1.396	(0.336)	13261	5.00000	5.12
28	Chloroform	83	3.910	3.910	(0.935)	34944	5.00000	5.25
3	Chloromethane	50	1.073	1.073	(0.257)	24949	5.00000	5.75
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	22227	5.00000	5.70
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	31191	5.00000	5.68
55	Dibromochloromethane	129	7.176	7.183	(0.936)	21920	5.00000	5.64
44	Dibromomethane	93	5.558	5.557	(1.118)	13775	5.00000	5.78
2	Dichlorodifluoromethane	85	0.973	0.966	(0.233)	18346	5.00000	5.69
61	Ethylbenzene	106	7.800	7.807	(1.017)	29424	5.00000	5.70
91	Hexachlorobutadiene	225	11.489	11.488	(1.188)	11525	5.00000	5.47
67	Isopropylbenzene	105	8.566	8.566	(1.117)	81869	5.00000	5.36
62	m,p-Xylenes	106	7.907	7.907	(1.031)	69325	10.0000	11.14
17	Methylene Chloride	84	2.306	2.305	(0.551)	20180	5.00000	5.43
87	n-Butylbenzene	91	9.999	9.998	(1.034)	57498	5.00000	5.08
73	n-Propylbenzene	91	8.917	8.917	(0.922)	92937	5.00000	5.41
92	Naphthalene	128	11.546	11.546	(1.194)	17063	5.00000	5.68
63	o-Xylene	106	8.244	8.244	(1.075)	33646	5.00000	5.48
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	78149	5.00000	5.23
64	Styrene	104	8.258	8.265	(1.077)	58650	5.00000	5.49
78	tert-Butylbenzene	119	9.340	9.339	(0.966)	59074	5.00000	5.45
56	Tetrachloroethene	164	6.933	6.933	(0.904)	20334	5.00000	5.66
50	Toluene	91	6.446	6.453	(0.840)	80201	5.00000	5.53
20	trans-1,2-Dichloroethene	96	2.535	2.527	(0.606)	18086	5.00000	5.35
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	28395	5.00000	5.67
38	Trichloroethene	130	5.207	5.206	(1.048)	22280	5.00000	5.65
8	Trichlorofluoromethane	101	1.561	1.553	(0.373)	33411	5.00000	5.24
5	Vinyl Chloride	62	1.138	1.138	(0.272)	20691	5.00000	4.94(a)

QC Flag Legend

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

QC Flag Legend

M - Compound response manually integrated.

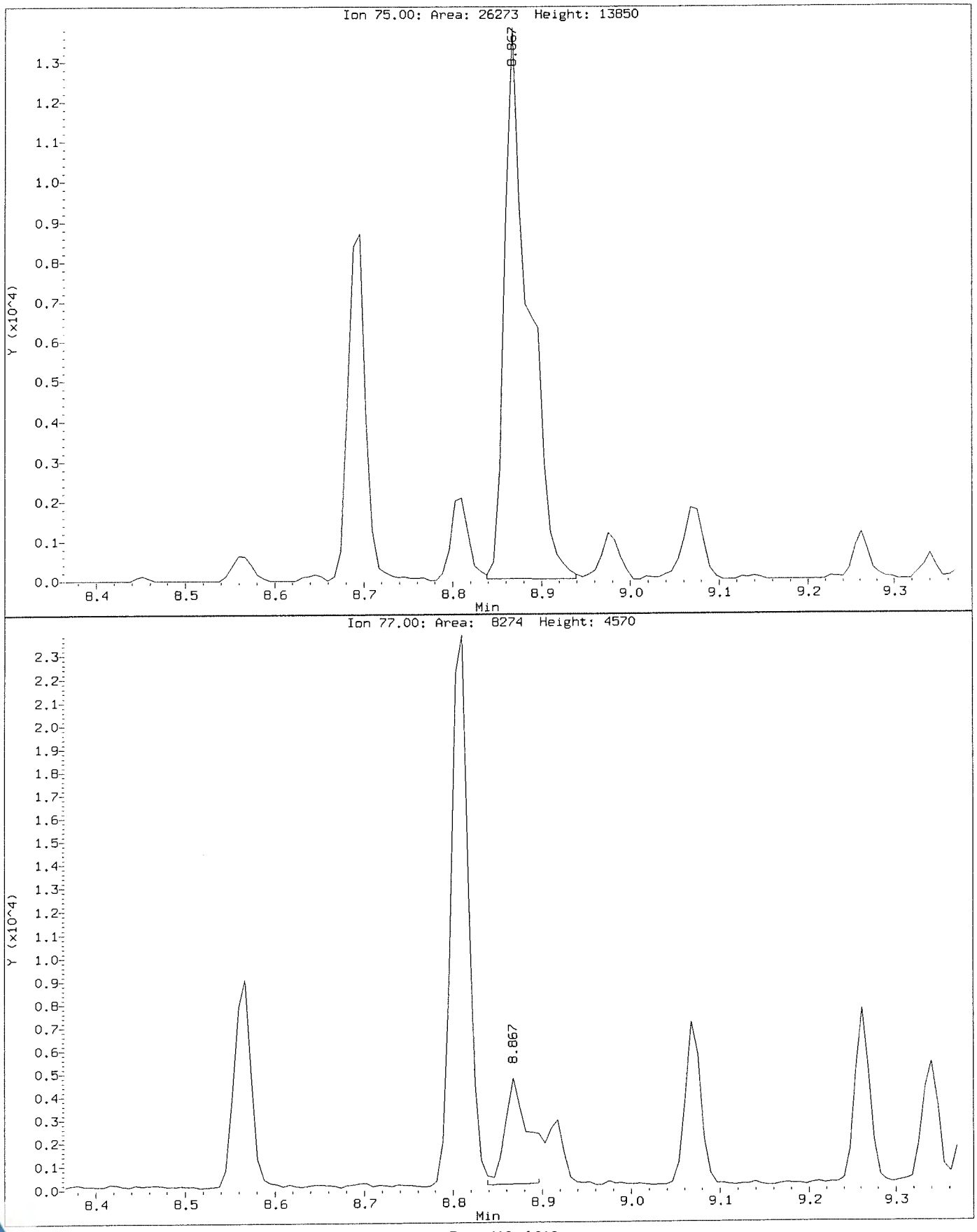


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Date : 18-NOV-2019 15:47
Client ID: VSTD005
Sample Info: VSTD005;VSTD005;1;5;
Purge Volume: 5.0
Column phase: DB624

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

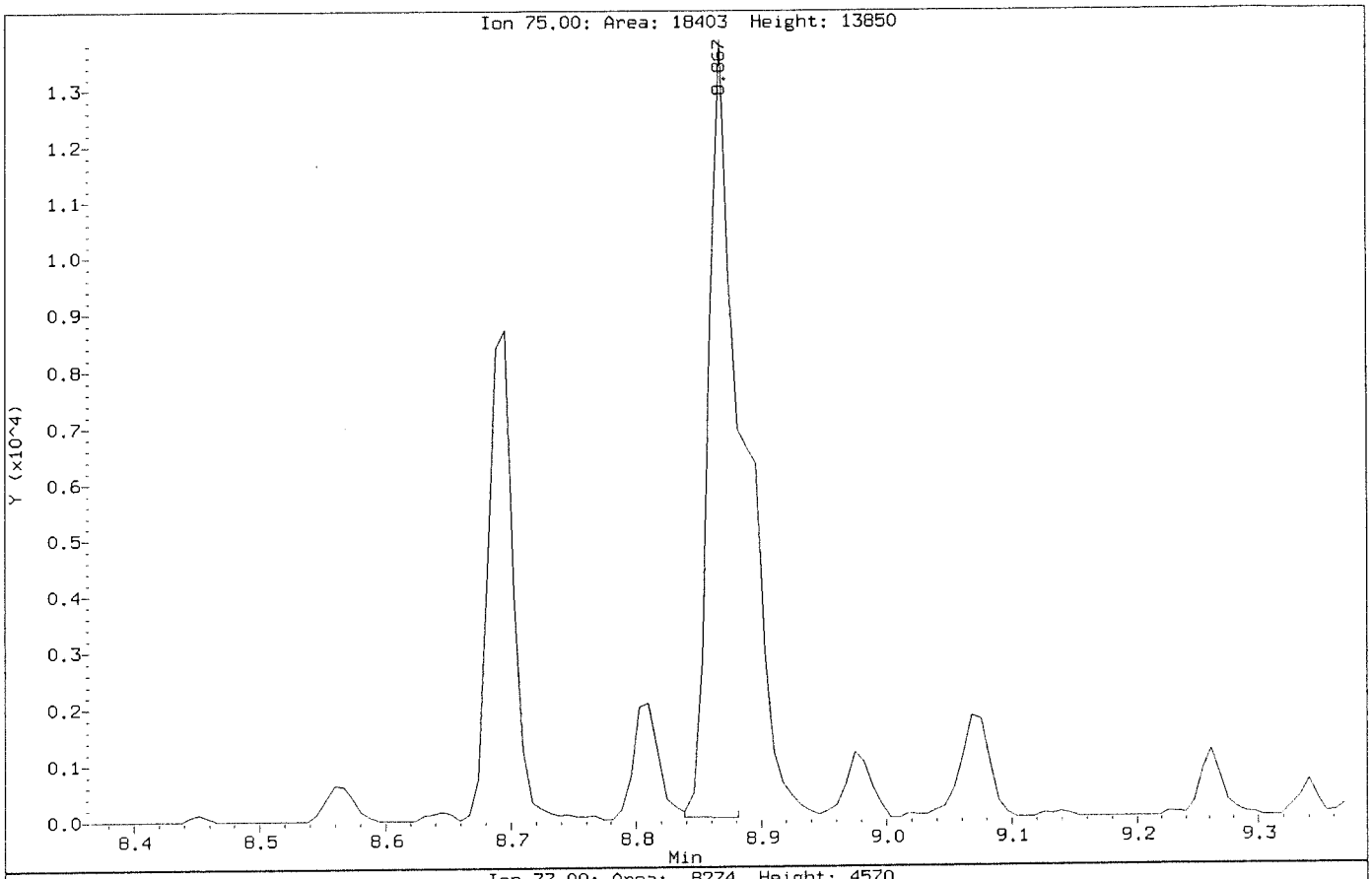
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Injection Date: 18-NOV-2019 15:47
Instrument: voa6.i
Client Sample ID: VSTD005

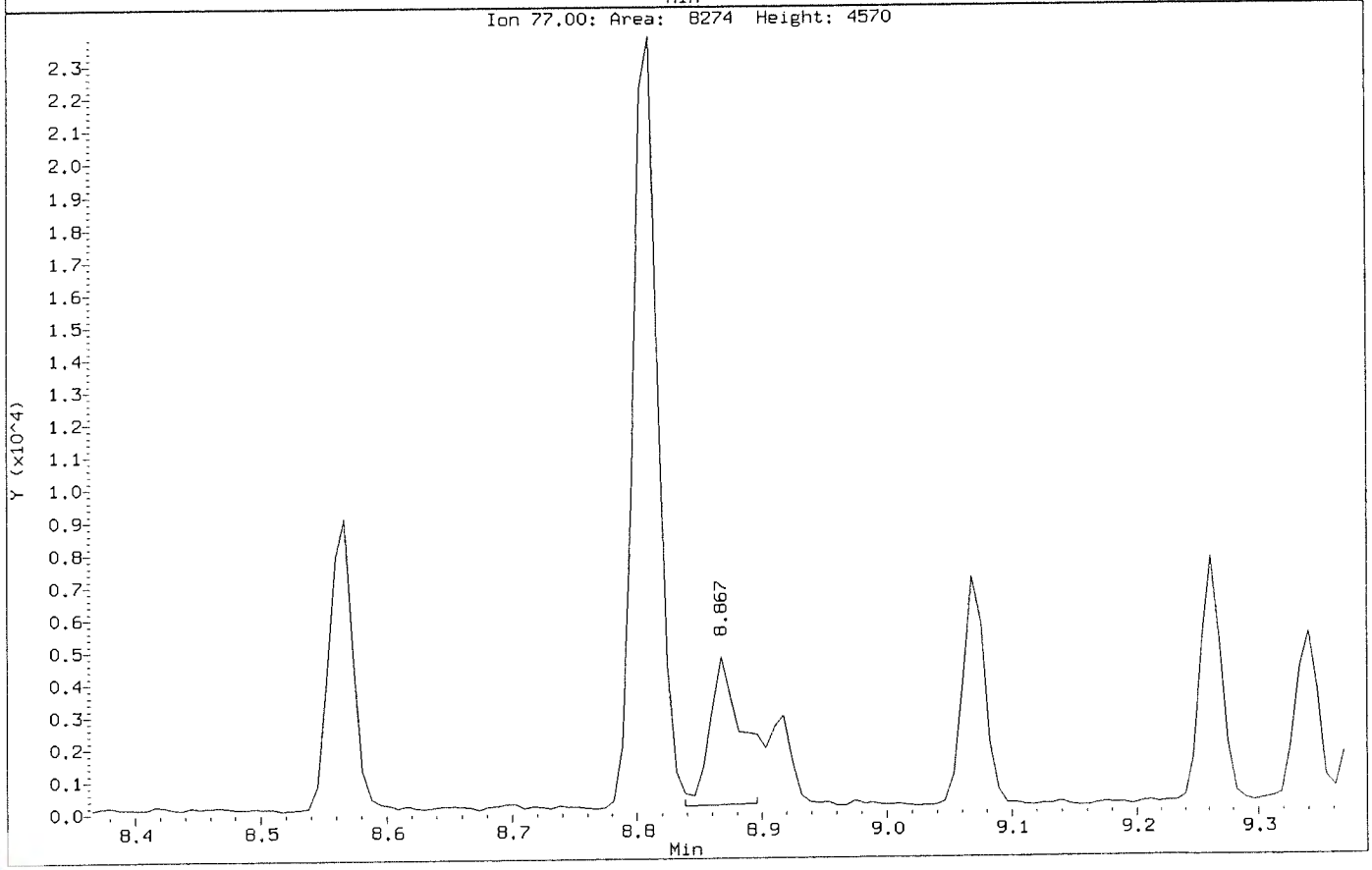
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111806.D
Injection Date: 18-NOV-2019 15:47
Instrument: voa6.i
Client Sample ID: VSTD005

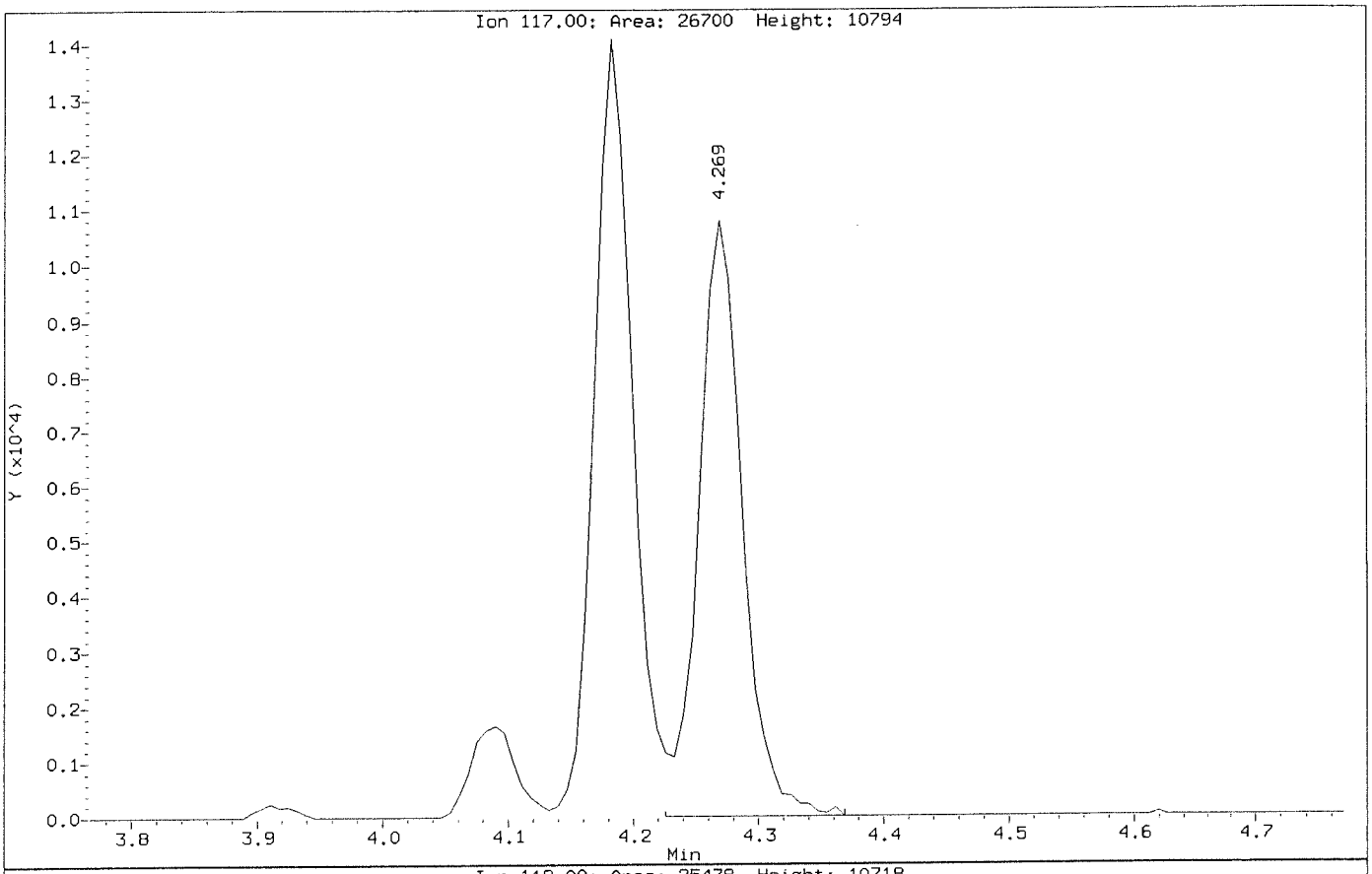
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

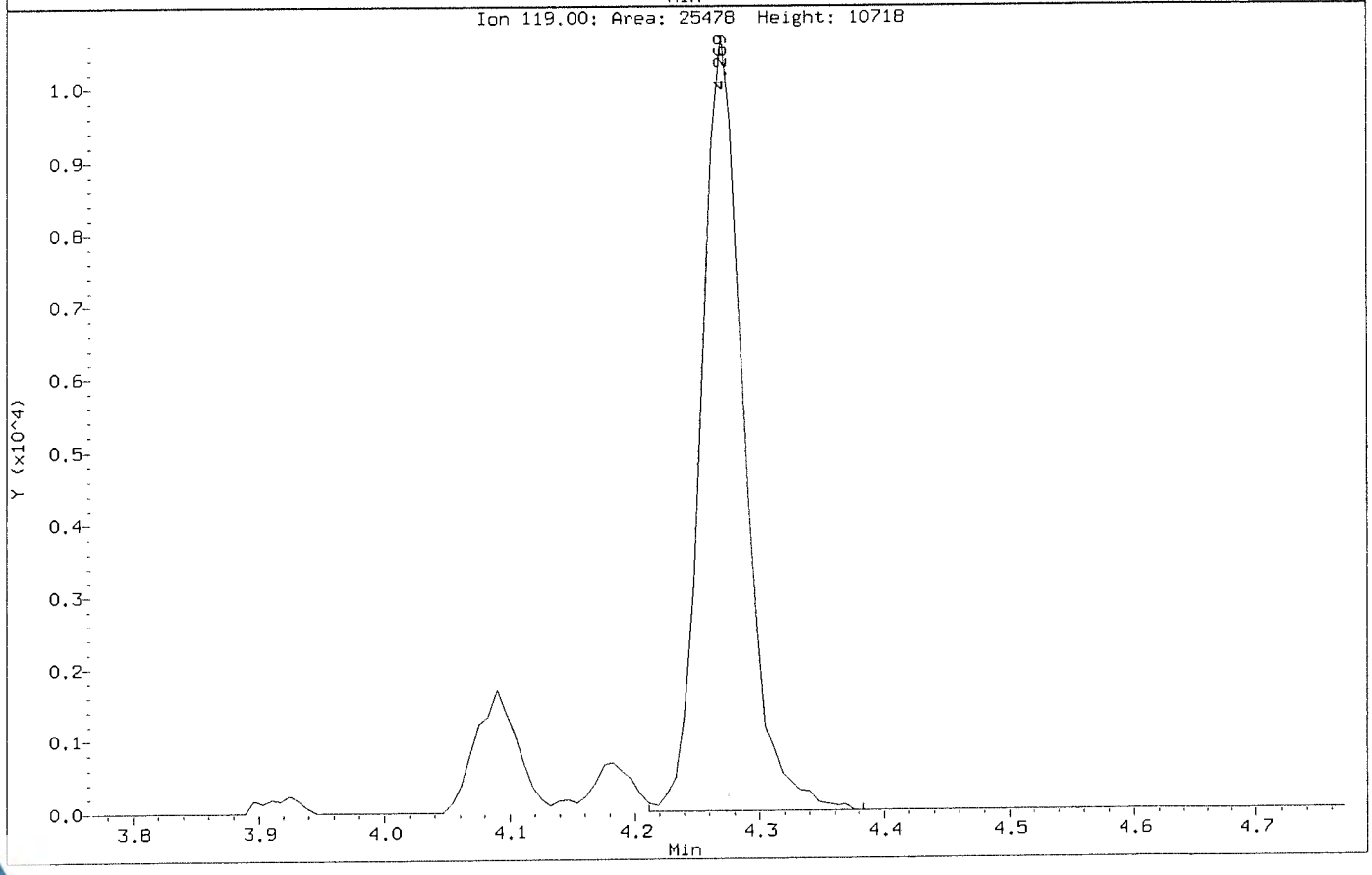




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Injection Date: 18-NOV-2019 15:47
Instrument: voa6.i
Client Sample ID: VSTD005

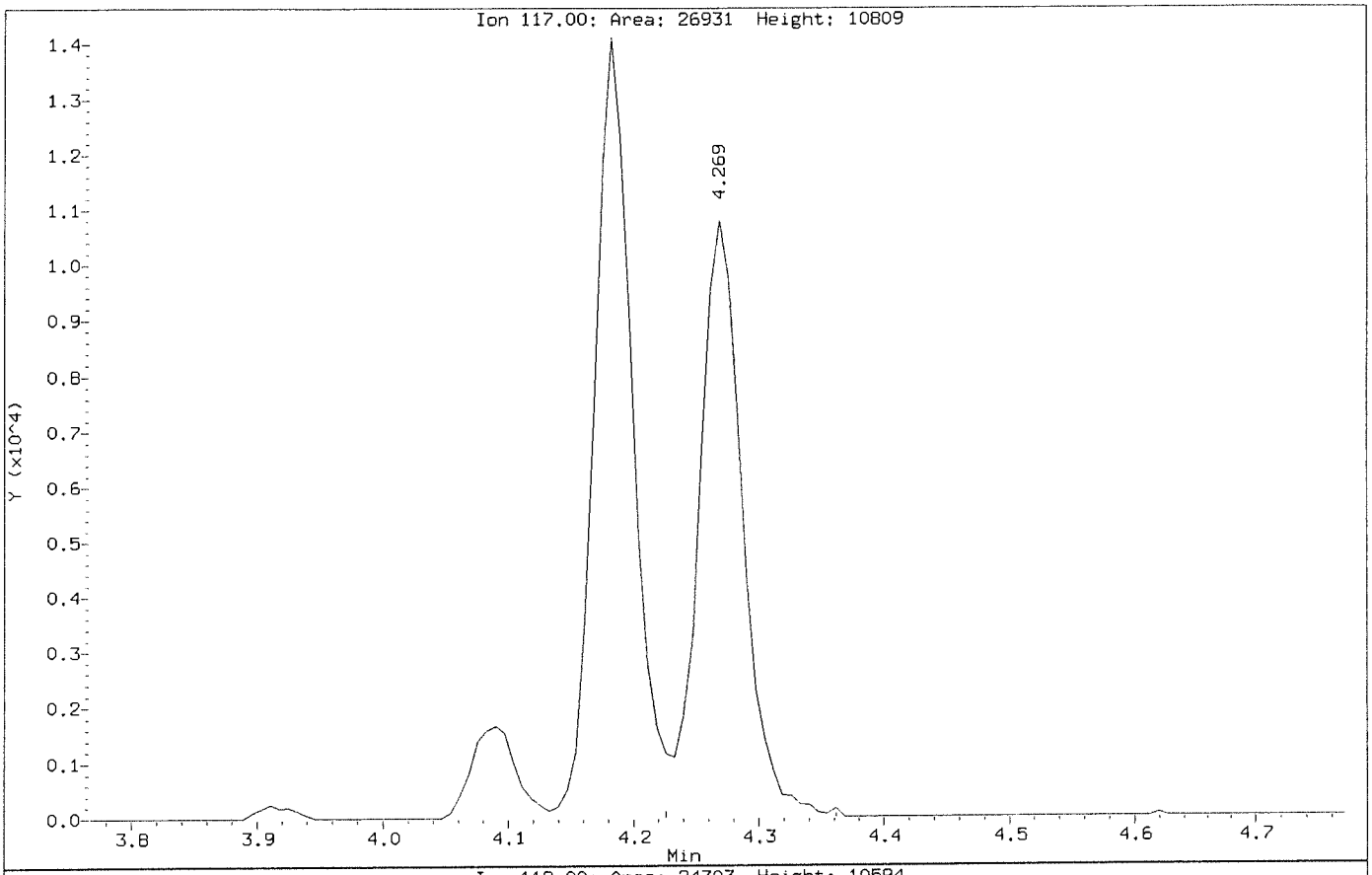
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

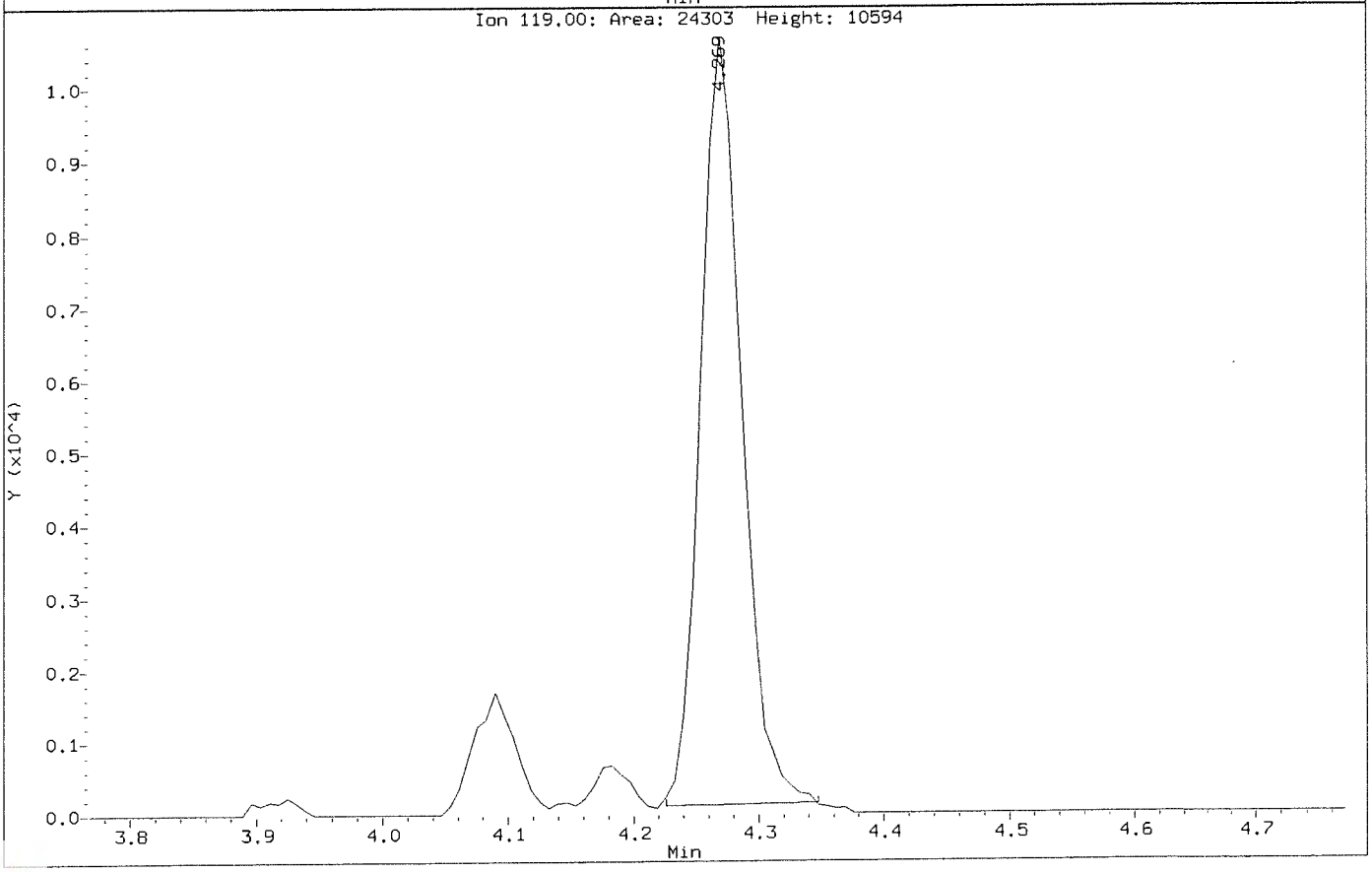




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Injection Date: 18-NOV-2019 15:47
Instrument: voa6.i
Client Sample ID: VSTD005

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





Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111807.D Page 1
Report Date: 22-Dec-2019 16:31

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X191118.b\X111807.D
Lab Smp Id: VSTD020 Client Smp ID: VSTD020
Inj Date : 18-NOV-2019 16:11
Operator : PC Inst ID: voa6.i
Smp Info : VSTD020;VSTD020;1;6;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X191118.b\8260W.m
Meth Date : 22-Dec-2019 16:31 voa6.i Quant Type: ISTD
Cal Date : 18-NOV-2019 16:11 Cal File: X111807.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14

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

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

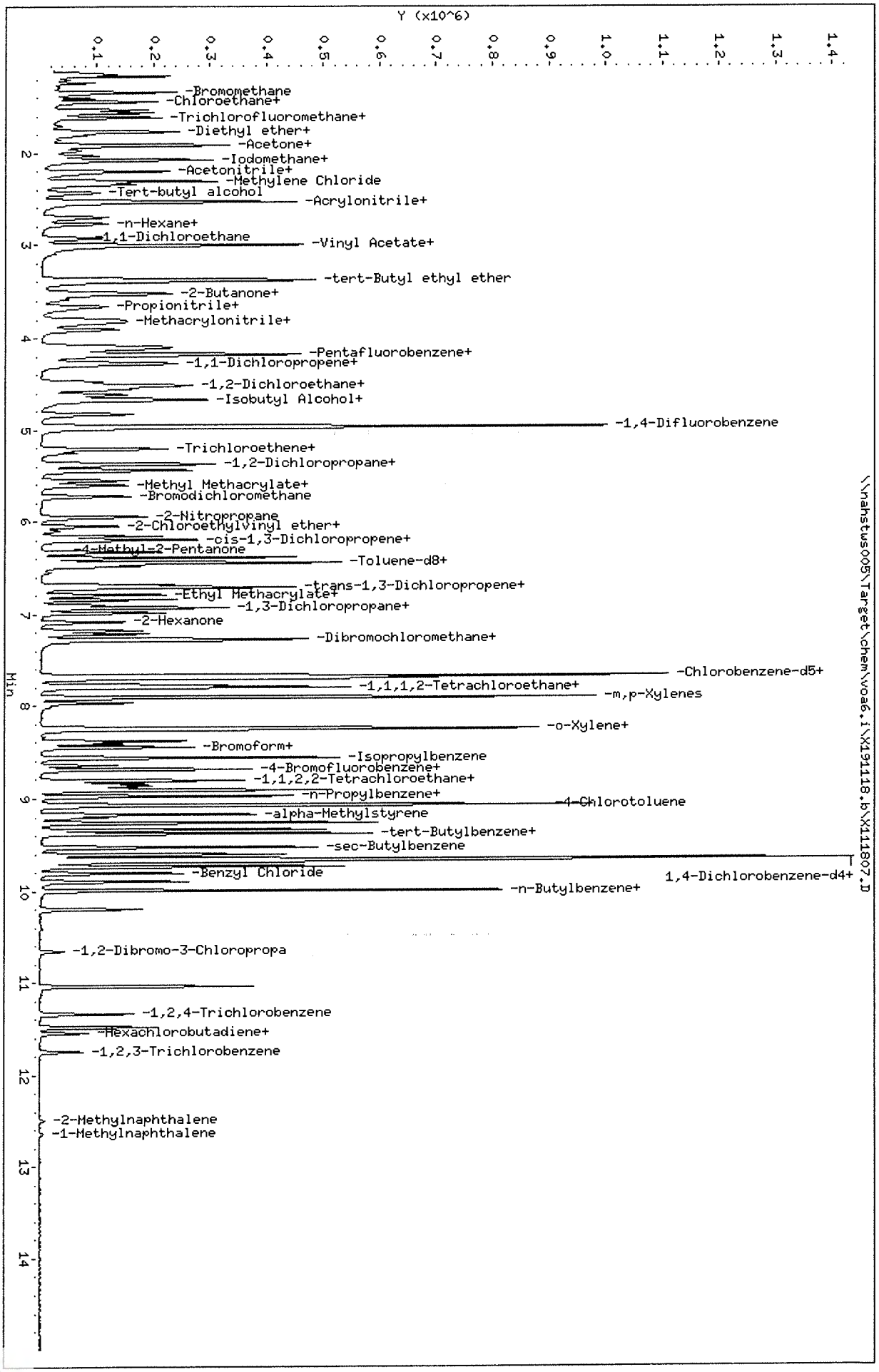
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	411693	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	563792	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	515046	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.669	(1.000)	278890	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	75094	20.0000	20.28
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	75813	20.0000	20.02
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	260273	20.0000	19.17
$ 69 4-Bromofluorobenzene	95	8.688	8.695	(1.133)	94194	20.0000	19.91
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	73347	20.0000	19.62
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	105363	20.0000	18.97
68 1,1,2,2-Tetrachloroethane	83	8.838	8.845	(0.915)	75821	20.0000	19.33
53 1,1,2-Trichloroethane	83	6.840	6.847	(0.892)	52184	20.0000	19.38
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	113669	20.0000	18.97
11 1,1-Dichloroethene	96	1.919	1.911	(0.459)	64160	20.0000	18.38
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	84000	20.0000	18.47
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	21856	20.0000	20.64
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	64689	20.0000	19.46 (M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	46623	20.0000	19.84
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	254992	20.0000	19.26
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.103)	8805	20.0000	20.13
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	71738	20.0000	19.85
88 1,2-Dichlorobenzene	146	9.998	9.998	(1.035)	144121	20.0000	19.47
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	88277	20.0000	19.72

Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111807.D Page 2
Report Date: 22-Dec-2019 16:31

	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)	64004	20.0000	19.00
75	1,3,5-Trimethylbenzene	105	9.067	9.074	(0.938)	247054	20.0000	19.45
83	1,3-Dichlorobenzene	146	9.605	9.612	(0.994)	157428	20.0000	19.68
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	105400	20.0000	19.28
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	158049	20.0000	19.44
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	100376	20.0000	18.46
24	2-Butanone	43	3.580	3.580	(0.856)	48098	40.0000	38.07
76	2-Chlorotoluene	91	8.974	8.981	(0.929)	193547	20.0000	19.28
52	2-Hexanone	43	7.083	7.090	(0.923)	78795	40.0000	37.24
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	231980	20.0000	19.07
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	257377	20.0000	18.86
45	4-Methyl-2-Pentanone	43	6.324	6.331	(0.824)	115695	40.0000	38.33
10	Acetone	43	1.976	1.976	(0.473)	43200	40.0000	38.23
37	Benzene	78	4.512	4.512	(0.908)	250181	20.0000	19.39
74	Bromobenzene	156	8.809	8.809	(0.912)	97394	20.0000	20.09
29	Bromochloromethane	128	3.795	3.795	(0.908)	41933	20.0000	18.80
39	Bromodichloromethane	83	5.729	5.729	(1.153)	89170	20.0000	19.11
66	Bromoform	173	8.415	8.415	(1.097)	56416	20.0000	19.02
6	Bromomethane	94	1.338	1.331	(0.320)	93456	20.0000	21.54
19	Carbon Disulfide	76	2.069	2.069	(0.495)	362755	40.0000	38.21
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	90839	20.0000	18.23 (M)
59	Chlorobenzene	112	7.699	7.699	(1.004)	192384	20.0000	19.13
7	Chloroethane	64	1.403	1.396	(0.336)	46616	20.0000	17.98
28	Chloroform	83	3.910	3.910	(0.935)	121141	20.0000	18.16
3	Chloromethane	50	1.073	1.073	(0.257)	85402	20.0000	19.21
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	74754	20.0000	19.14
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	107408	20.0000	19.53
55	Dibromochloromethane	129	7.176	7.183	(0.936)	76215	20.0000	19.48
44	Dibromomethane	93	5.557	5.557	(1.118)	46676	20.0000	19.58
2	Dichlorodifluoromethane	85	0.973	0.966	(0.233)	63810	20.0000	17.59
61	Ethylbenzene	106	7.799	7.807	(1.017)	101554	20.0000	19.54
91	Hexachlorobutadiene	225	11.481	11.488	(1.188)	37789	20.0000	19.03
67	Isopropylbenzene	105	8.566	8.566	(1.117)	293670	20.0000	19.08
62	m,p-Xylenes	106	7.907	7.907	(1.031)	243460	40.0000	38.83
17	Methylene Chloride	84	2.305	2.305	(0.551)	66846	20.0000	17.95
87	n-Butylbenzene	91	9.998	9.998	(1.035)	210608	20.0000	18.54
73	n-Propylbenzene	91	8.917	8.917	(0.923)	331965	20.0000	19.25
92	Naphthalene	128	11.546	11.546	(1.195)	57138	20.0000	18.96
63	o-Xylene	106	8.244	8.244	(1.075)	119876	20.0000	19.37
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	278964	20.0000	18.62
64	Styrene	104	8.258	8.265	(1.077)	206802	20.0000	19.22
78	tert-Butylbenzene	119	9.339	9.339	(0.967)	208031	20.0000	19.13
56	Tetrachloroethene	164	6.933	6.933	(0.904)	68625	20.0000	18.96
50	Toluene	91	6.446	6.453	(0.840)	280019	20.0000	19.17
20	trans-1,2-Dichloroethene	96	2.535	2.527	(0.606)	63600	20.0000	18.77
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	100272	20.0000	20.00
38	Trichloroethene	130	5.206	5.206	(1.048)	77608	20.0000	19.68
8	Trichlorofluoromethane	101	1.560	1.553	(0.373)	116474	20.0000	18.23
5	Vinyl Chloride	62	1.138	1.138	(0.272)	74818	20.0000	17.83

QC Flag Legend

M - Compound response manually integrated.

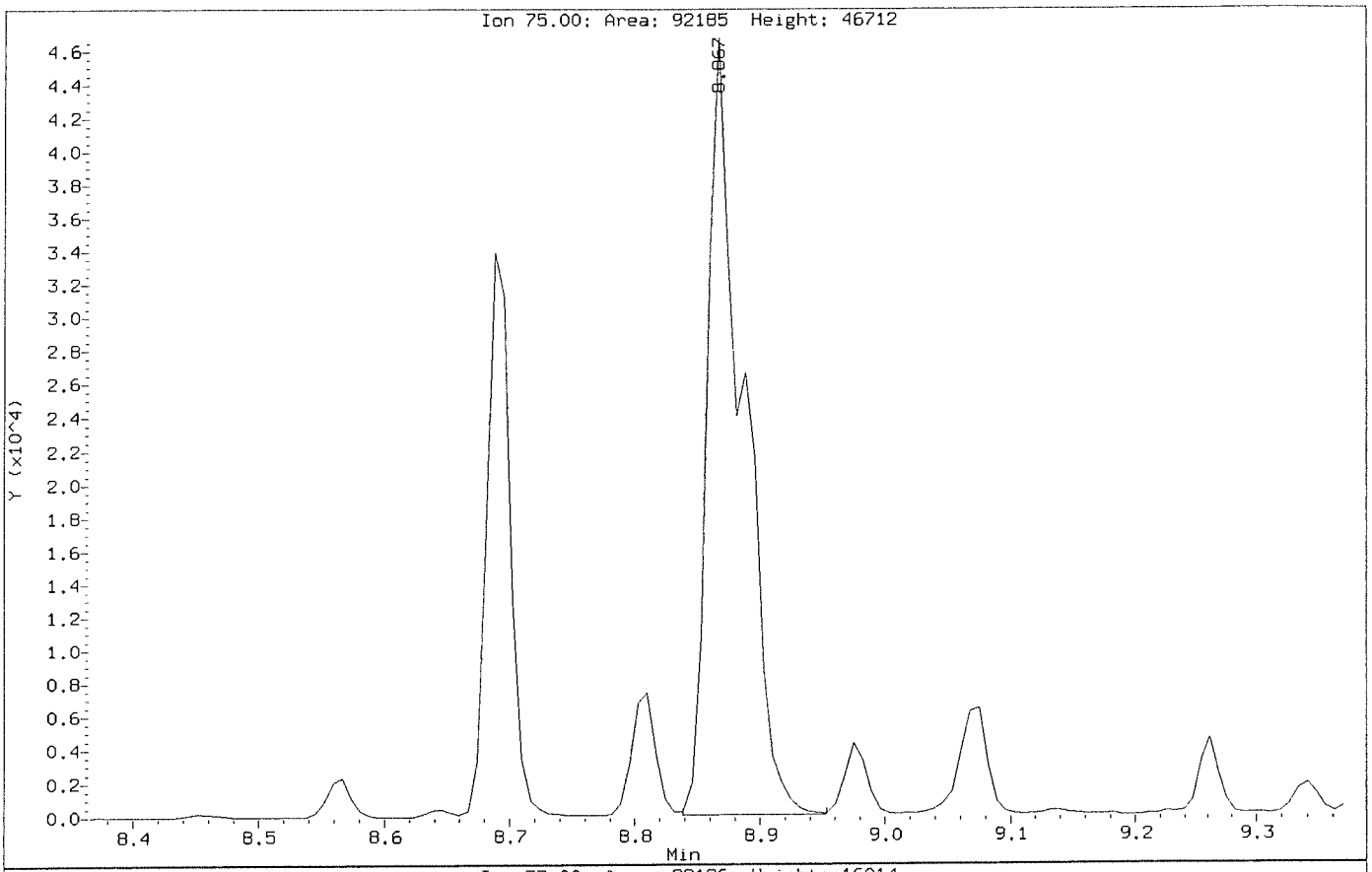


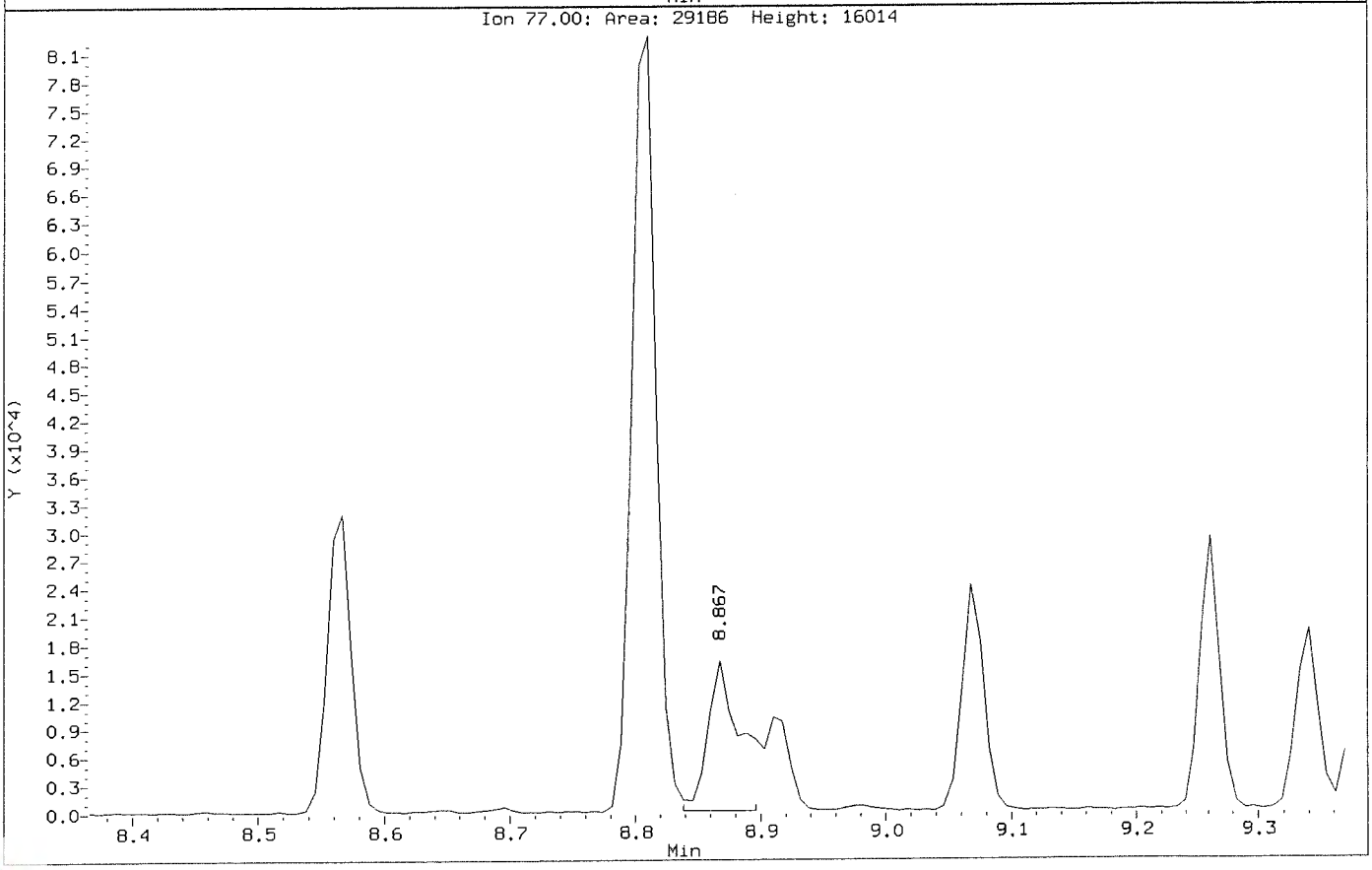
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Purge Volume: 5.0
Column phase: DB624

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

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Instrument: voa6.i
Client Sample ID: VSTD020

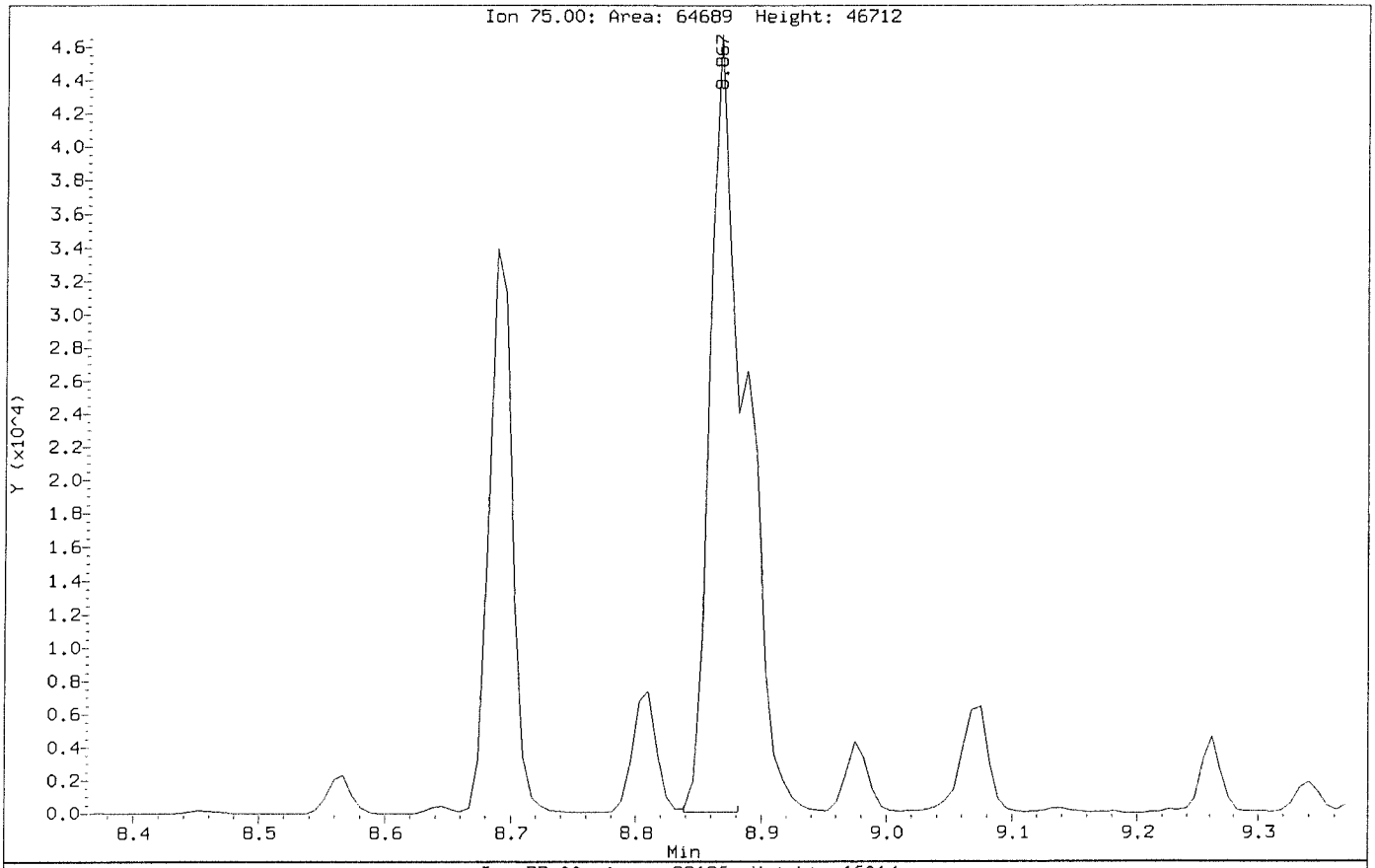
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

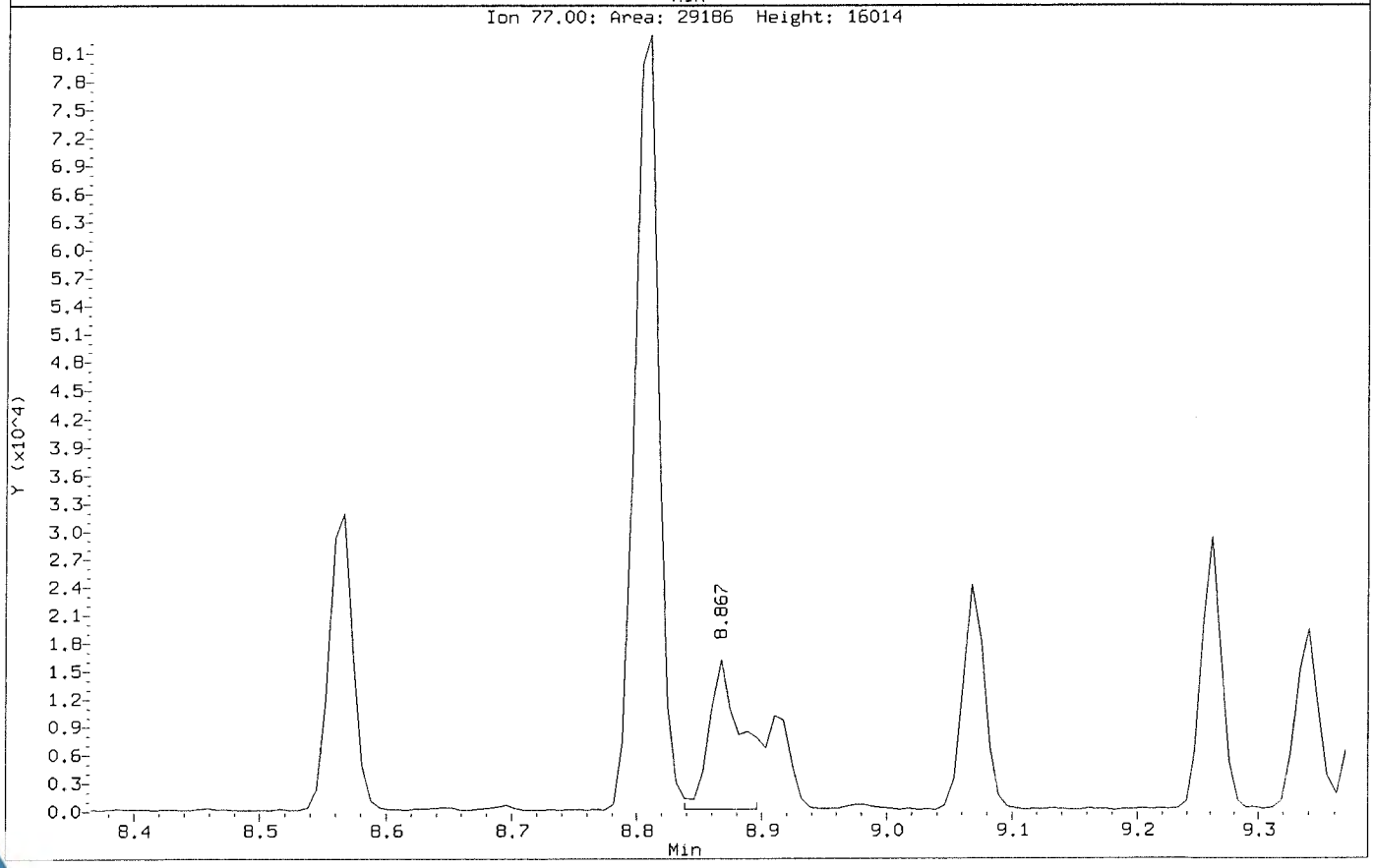




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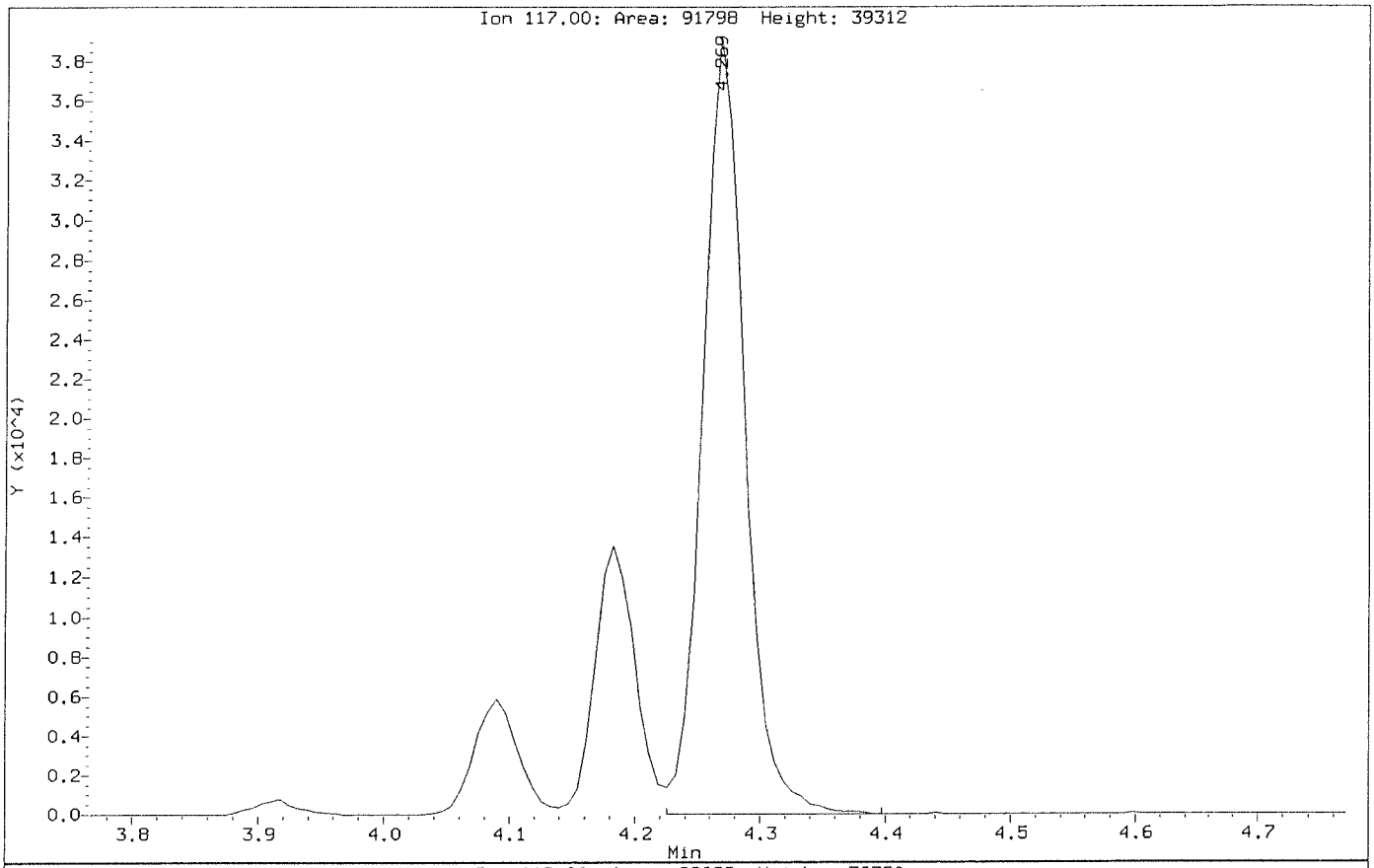
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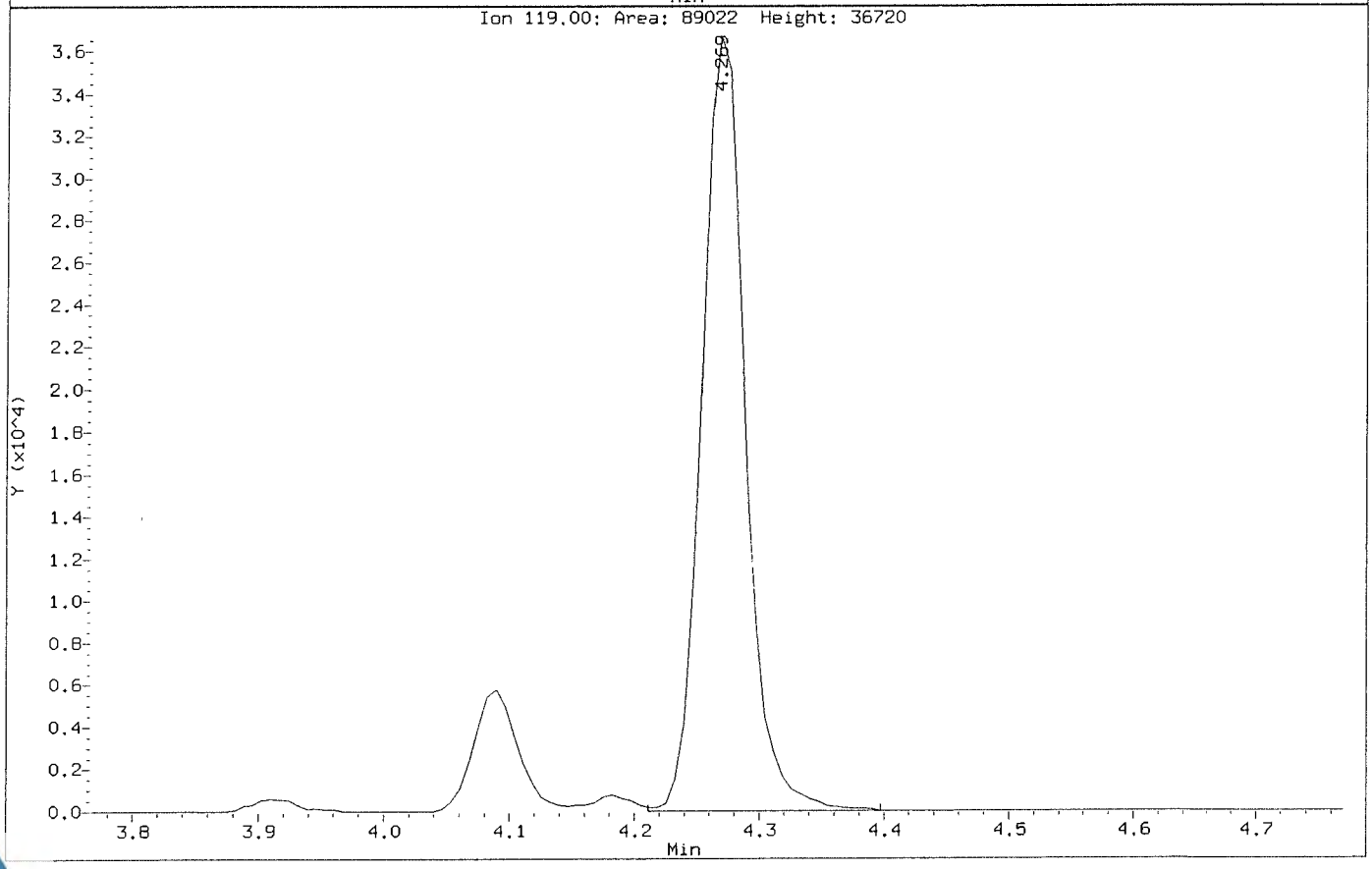




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Instrument: voa6.i
Client Sample ID: VSTD020

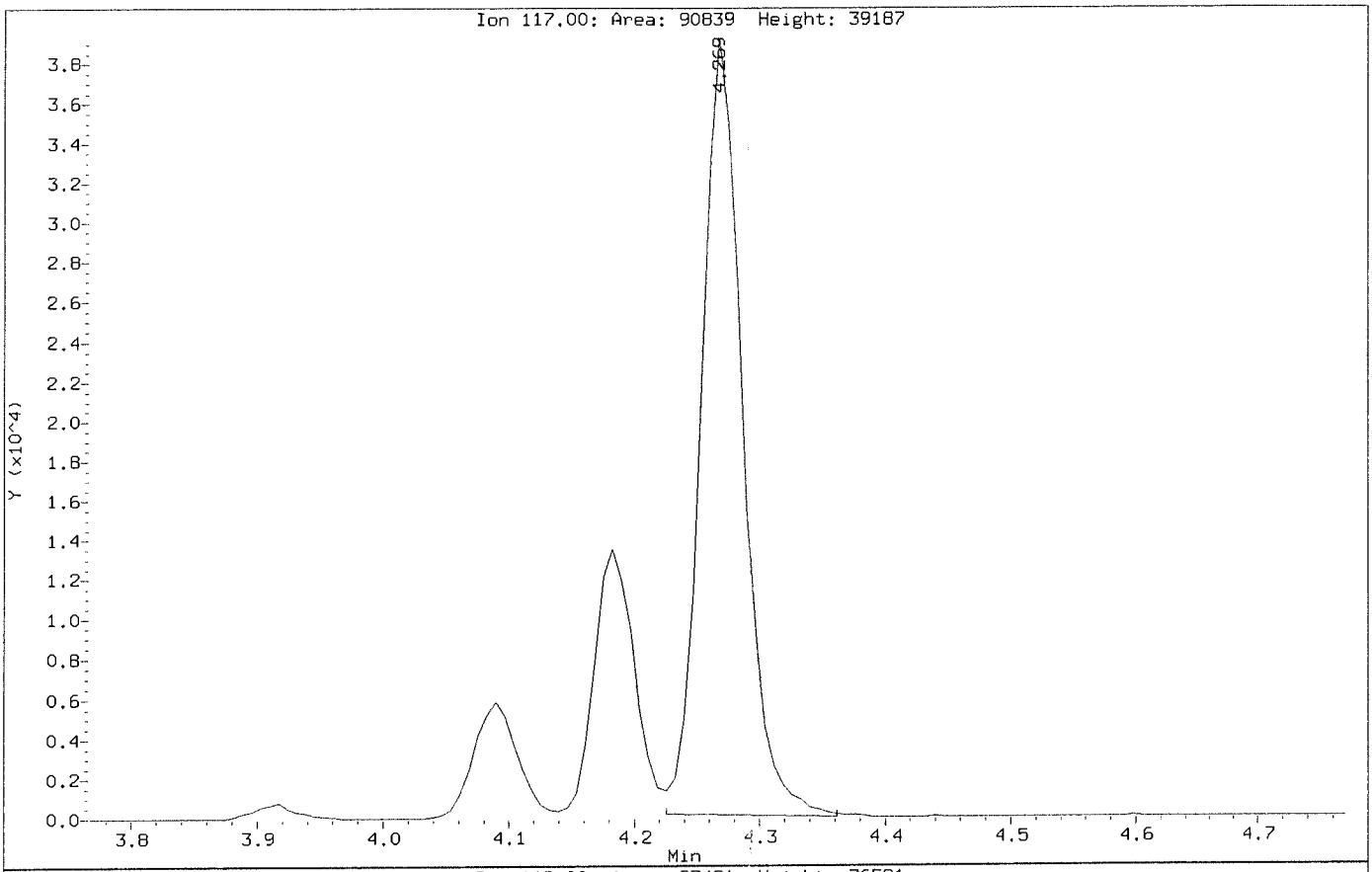
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

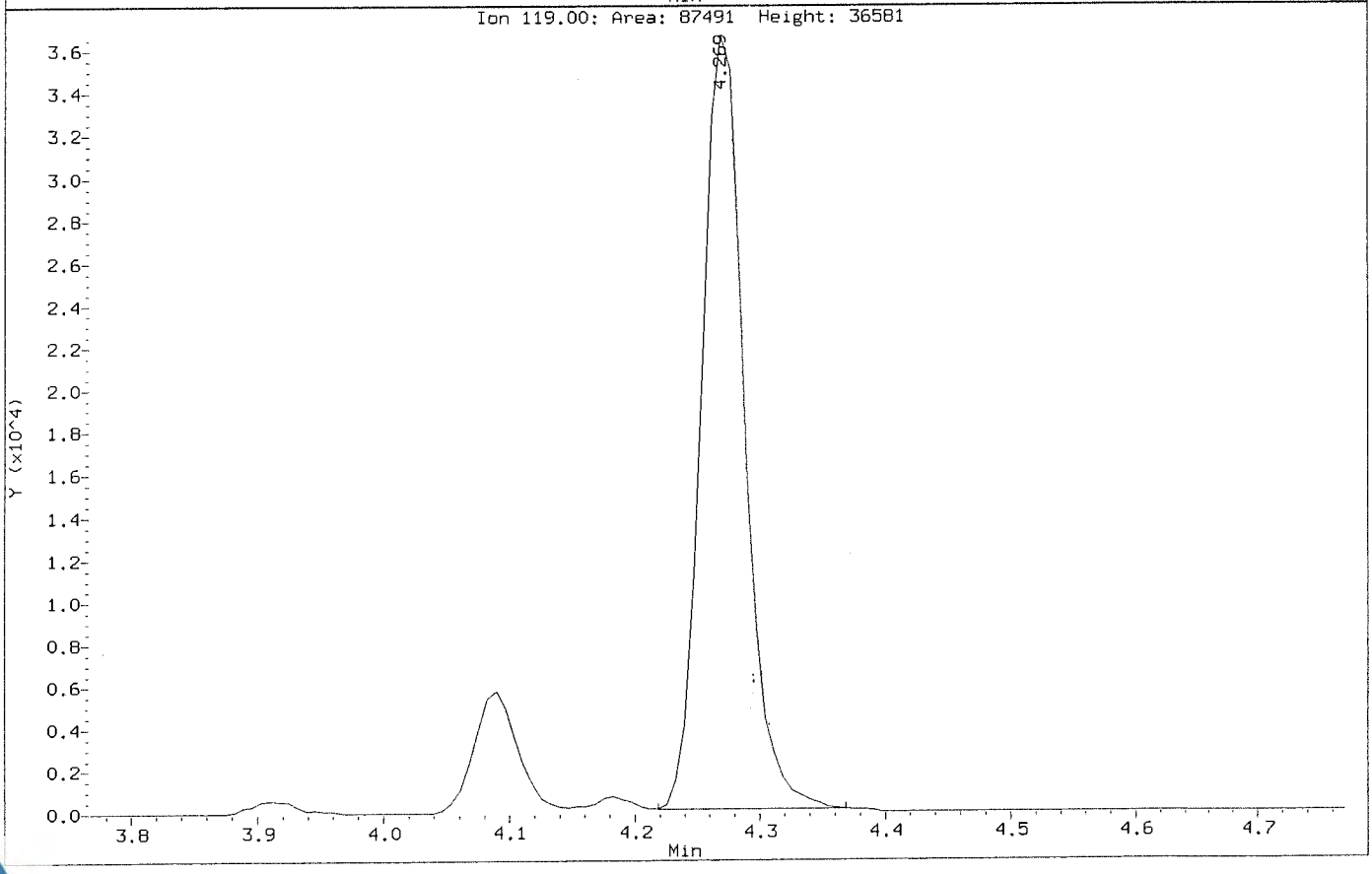




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Injection Date: 18-NOV-2019 16:11
Instrument: voa6.i
Client Sample ID: VSTD020

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





Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111808.D Page 1
Report Date: 22-Dec-2019 16:31

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X191118.b\X111808.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 18-NOV-2019 16:35
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\X191118.b\8260W.m
Meth Date : 22-Dec-2019 16:31 voa6.i Quant Type: ISTD
Cal Date : 18-NOV-2019 16:35 Cal File: X111808.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14

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

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

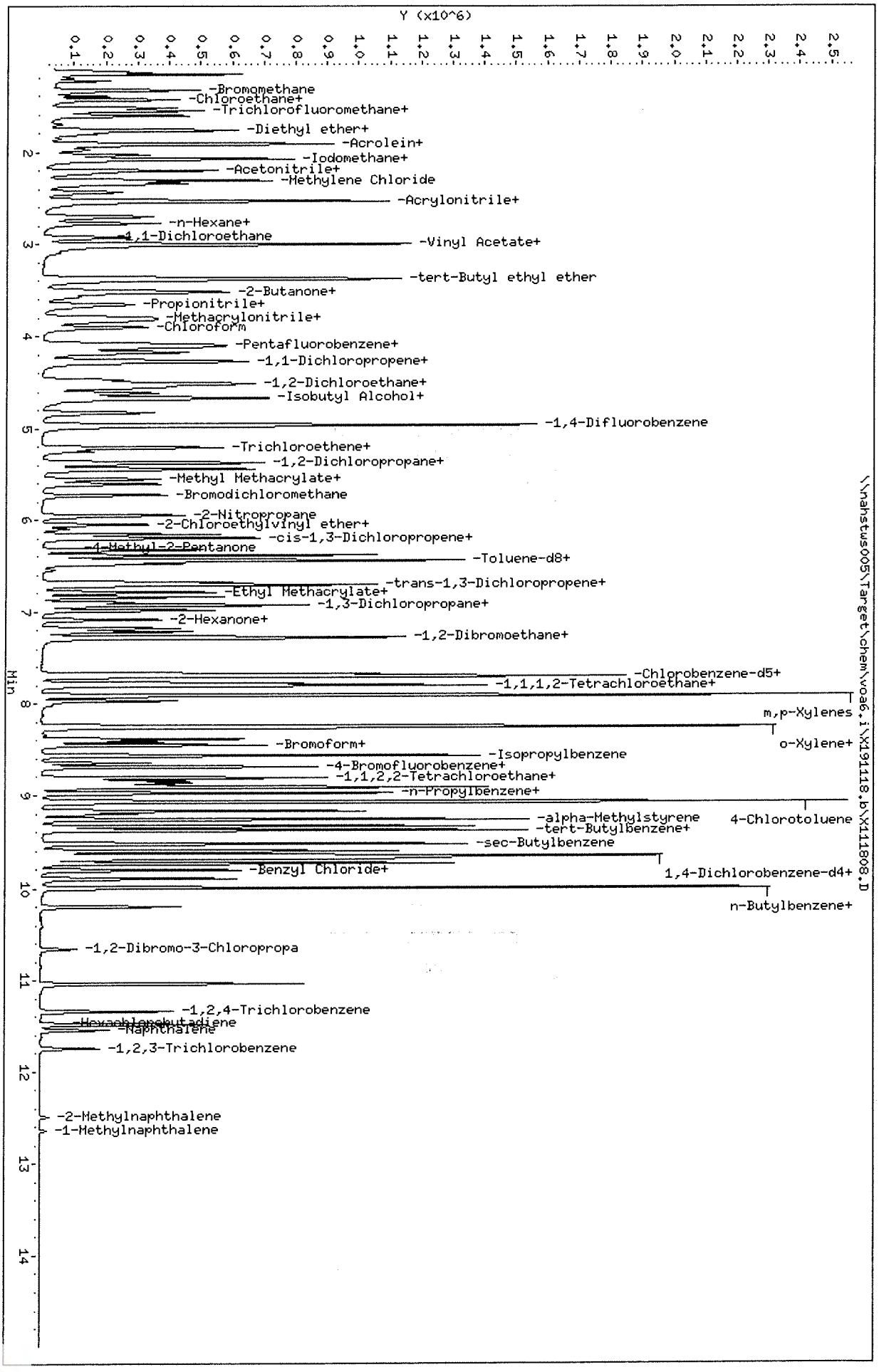
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	399282	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	548073	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	502523	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	273444	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	173990	50.0000	47.93
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	178006	50.0000	47.42
$	48 Toluene-d8	98	6.388	6.388	(0.833)	608955	50.0000	45.99
$	69 4-Bromofluorobenzene	95	8.688	8.695	(1.133)	222328	50.0000	47.57
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	184913	50.0000	50.72
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	268813	50.0000	49.90
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	183844	50.0000	47.81
	53 1,1,2-Trichloroethane	83	6.840	6.847	(0.892)	128481	50.0000	48.90
	22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	283343	50.0000	48.77
	11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	171500	50.0000	50.68
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	220463	50.0000	49.86
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	52554	50.0000	51.69
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	157820	50.0000	48.44 (M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	115181	50.0000	50.00
	79 1,2,4-Trimethylbenzene	105	9.383	9.382	(0.970)	661580	50.0000	50.99
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.657	(1.102)	21800	50.0000	51.36
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	174730	50.0000	49.57
	88 1,2-Dichlorobenzene	146	9.999	9.998	(1.034)	363670	50.0000	50.11
	33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	219760	50.0000	50.51

Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111808.D Page 2
Report Date: 22-Dec-2019 16:31

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)	161607	50.0000	49.36
75 1,3,5-Trimethylbenzene	105	9.067	9.074	(0.938)	647527	50.0000	52.01
83 1,3-Dichlorobenzene	146	9.605	9.612	(0.993)	398343	50.0000	50.79
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	259218	50.0000	48.60
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	400593	50.0000	50.27
26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	257082	50.0000	48.75
24 2-Butanone	43	3.573	3.580	(0.854)	116745	100.000	95.28
76 2-Chlorotoluene	91	8.974	8.981	(0.928)	506692	50.0000	51.50
52 2-Hexanone	43	7.090	7.090	(0.924)	193251	100.000	93.61
77 4-Chlorotoluene	91	9.075	9.074	(0.939)	603806	50.0000	50.63
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	703086	50.0000	52.54
45 4-Methyl-2-Pentanone	43	6.324	6.331	(0.824)	284508	100.000	96.62
10 Acetone	43	1.976	1.976	(0.473)	103091	100.000	99.72
37 Benzene	78	4.512	4.512	(0.908)	637799	50.0000	50.87
74 Bromobenzene	156	8.809	8.809	(0.911)	240153	50.0000	50.53
29 Bromochloromethane	128	3.795	3.795	(0.908)	105150	50.0000	48.61
39 Bromodichloromethane	83	5.729	5.729	(1.153)	226127	50.0000	49.85
66 Bromoform	173	8.416	8.415	(1.097)	143798	50.0000	48.09
6 Bromomethane	94	1.338	1.331	(0.320)	215480	50.0000	54.47
19 Carbon Disulfide	76	2.069	2.069	(0.495)	951783	100.000	103.39
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	247524	50.0000	51.11(M)
59 Chlorobenzene	112	7.699	7.699	(1.004)	485055	50.0000	49.44
7 Chloroethane	64	1.403	1.396	(0.336)	124291	50.0000	49.44
28 Chloroform	83	3.910	3.910	(0.935)	300015	50.0000	46.39
3 Chloromethane	50	1.073	1.073	(0.257)	215753	50.0000	49.75
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	187629	50.0000	49.55
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	273432	50.0000	51.15
55 Dibromochloromethane	129	7.176	7.183	(0.936)	191497	50.0000	50.17
44 Dibromomethane	93	5.557	5.557	(1.118)	115707	50.0000	49.94
2 Dichlorodifluoromethane	85	0.973	0.966	(0.233)	186161	50.0000	51.14
61 Ethylbenzene	106	7.799	7.807	(1.017)	257283	50.0000	50.75
91 Hexachlorobutadiene	225	11.488	11.488	(1.188)	99881	50.0000	52.17
67 Isopropylbenzene	105	8.566	8.566	(1.117)	765390	50.0000	50.97
62 m,p-Xylenes	106	7.907	7.907	(1.031)	625932	100.000	102.32
17 Methylene Chloride	84	2.305	2.305	(0.551)	168044	50.0000	46.54
87 n-Butylbenzene	91	9.999	9.998	(1.034)	591076	50.0000	53.08
73 n-Propylbenzene	91	8.917	8.917	(0.922)	884464	50.0000	52.32
92 Naphthalene	128	11.546	11.546	(1.194)	142473	50.0000	48.22
63 o-Xylene	106	8.244	8.244	(1.075)	301622	50.0000	49.96
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	772064	50.0000	52.58
64 Styrene	104	8.258	8.265	(1.077)	530825	50.0000	50.56
78 tert-Butylbenzene	119	9.340	9.339	(0.966)	550071	50.0000	51.60
56 Tetrachloroethene	164	6.933	6.933	(0.904)	176674	50.0000	50.03
50 Toluene	91	6.446	6.453	(0.840)	709296	50.0000	49.77
20 trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	163591	50.0000	49.79
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	247921	50.0000	50.89
38 Trichloroethene	130	5.206	5.206	(1.048)	196625	50.0000	51.29
8 Trichlorofluoromethane	101	1.560	1.553	(0.373)	328789	50.0000	53.08
5 Vinyl Chloride	62	1.138	1.138	(0.272)	201503	50.0000	49.51

QC Flag Legend

M - Compound response manually integrated.

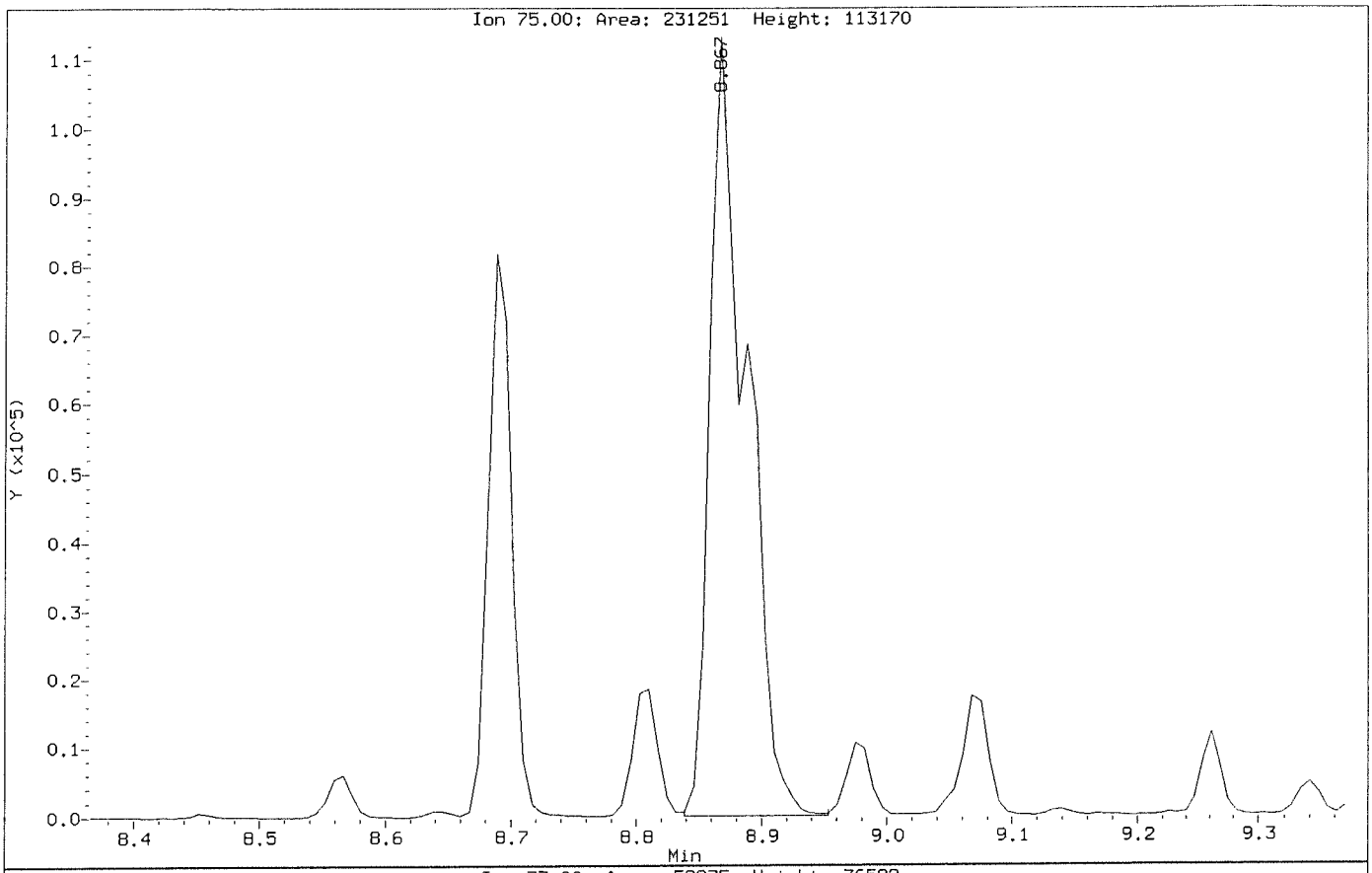


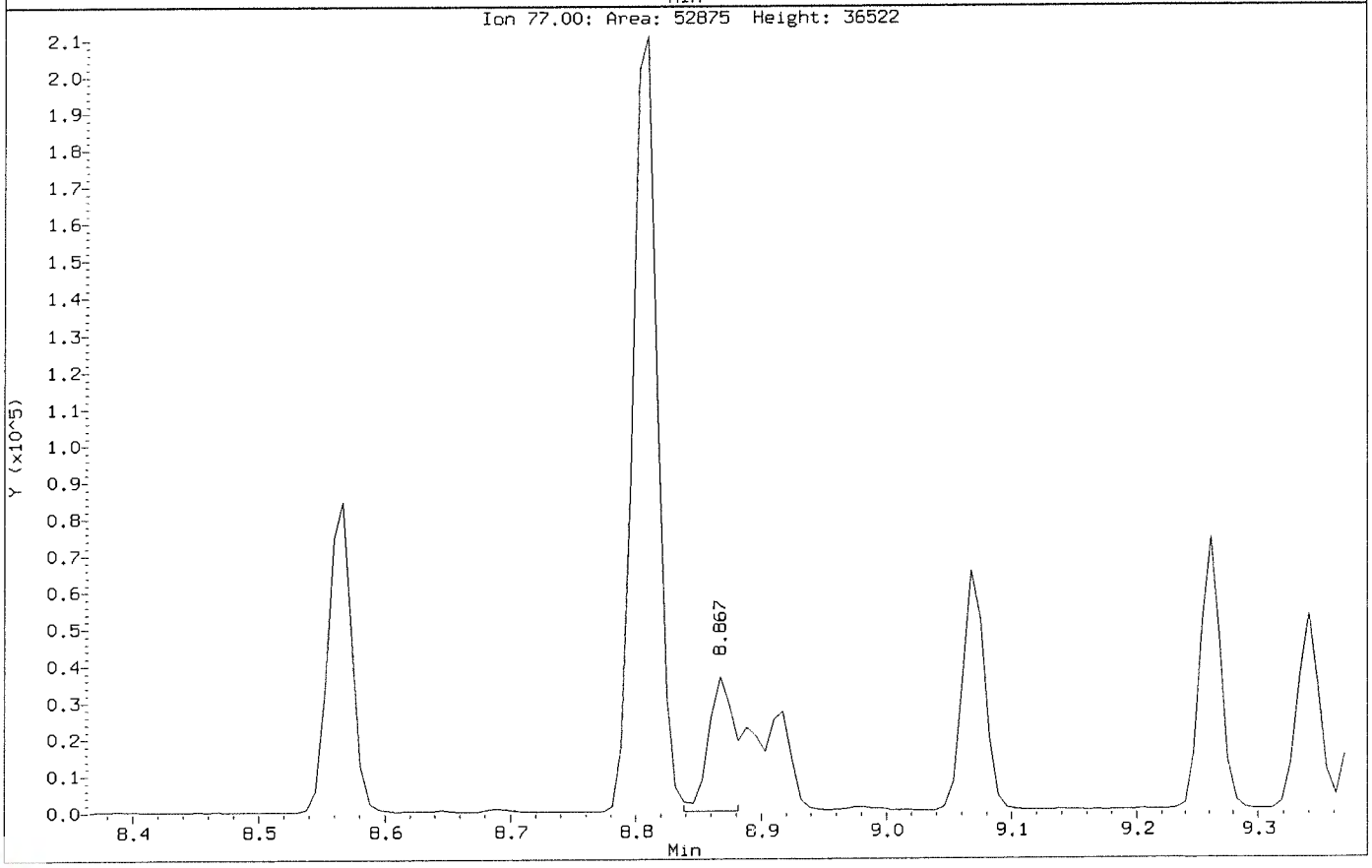
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Sample Info: VSTD050;VSTD050;1;7;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\Before2\X111808.D
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Client Sample ID: VSTD050

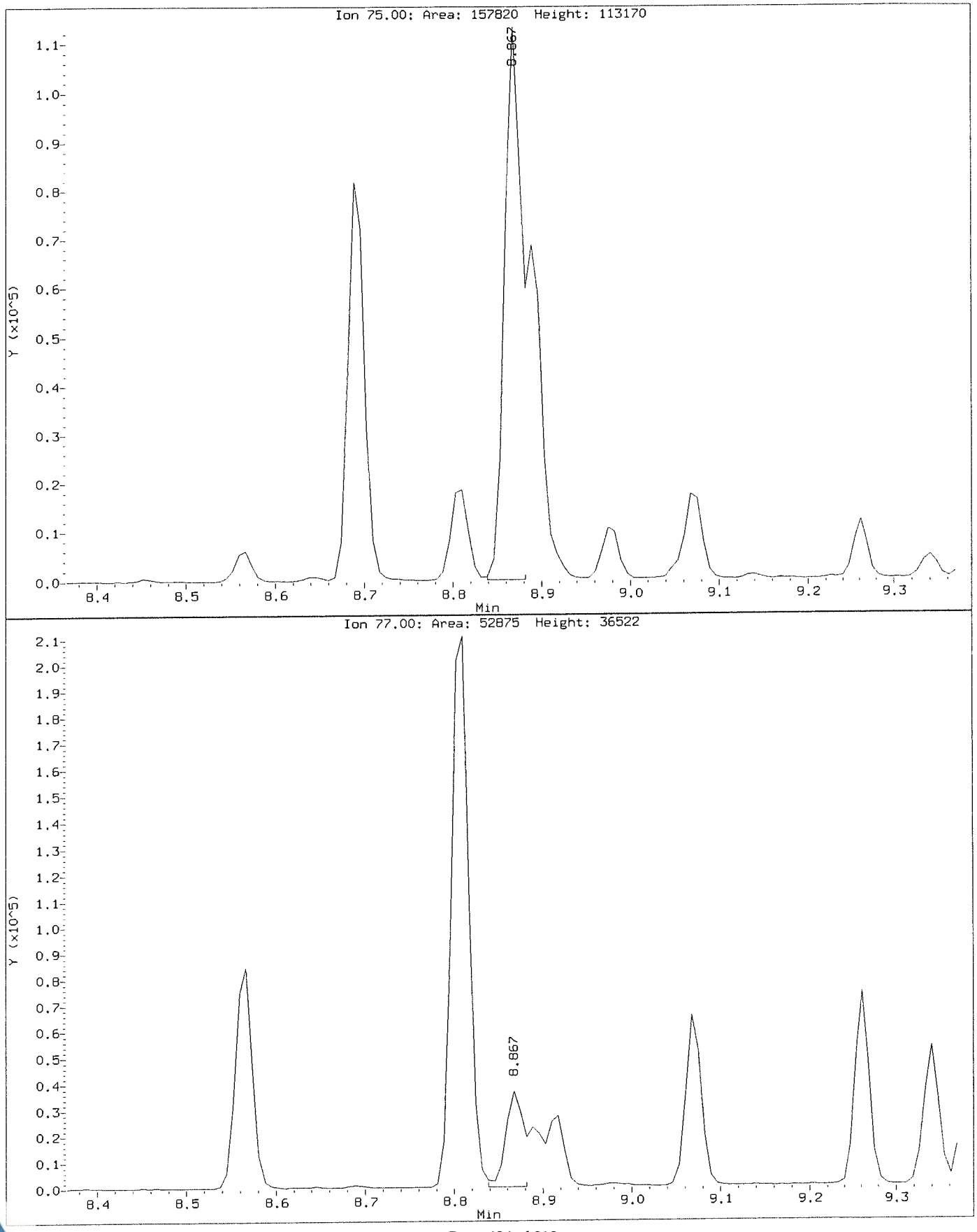
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CAS Number: 96-18-4





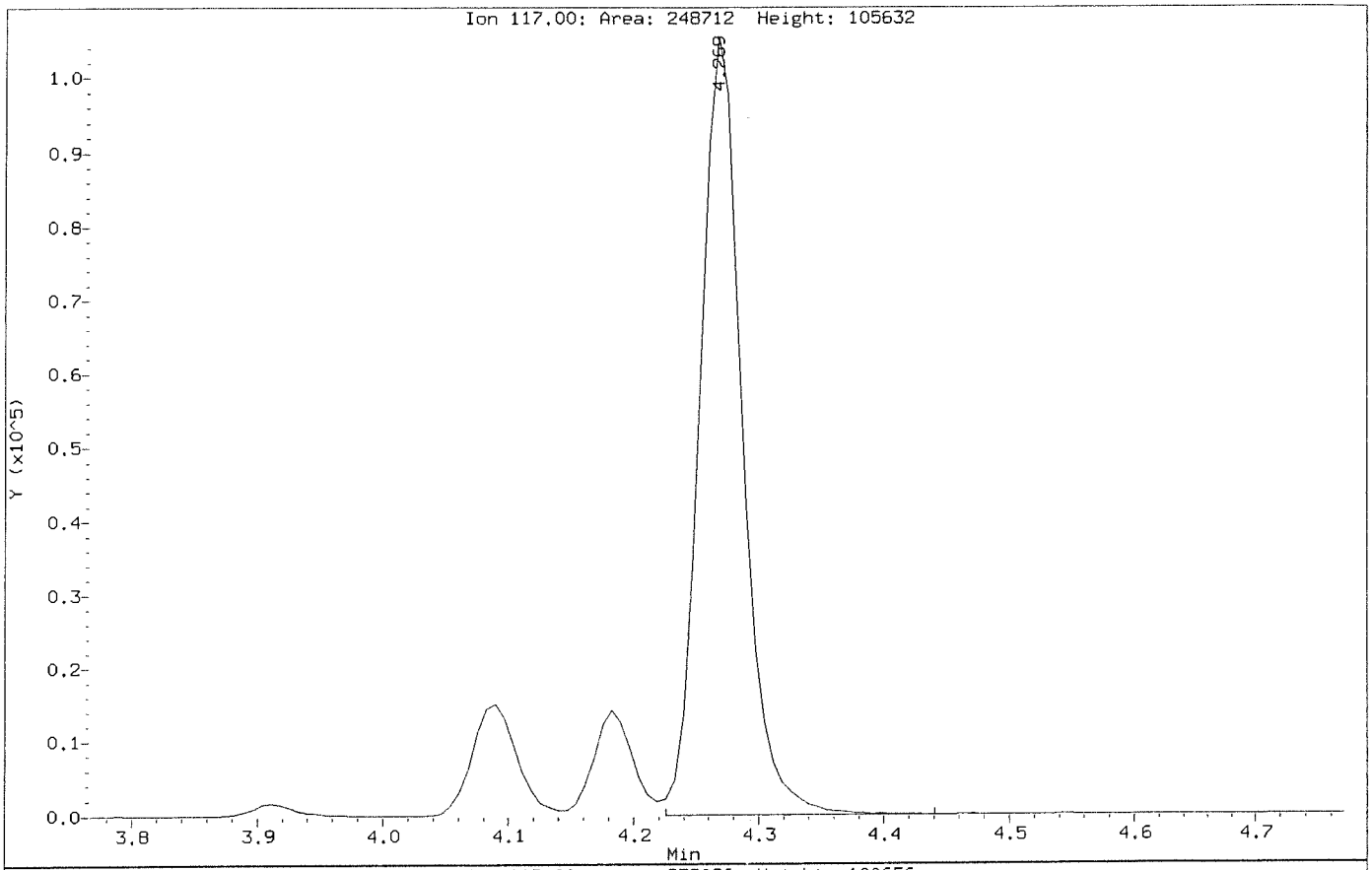
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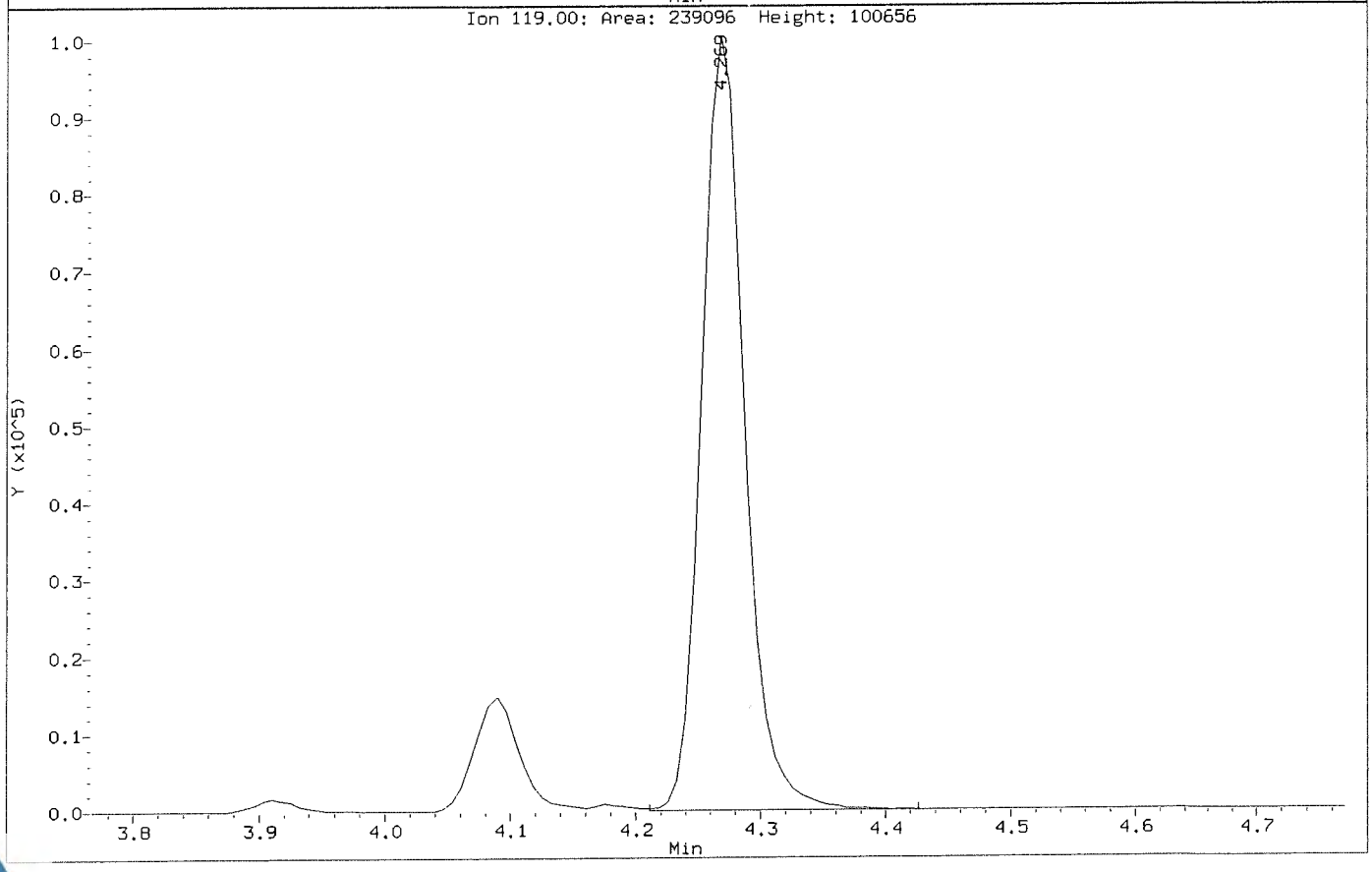
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



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Instrument: voa6.i
Client Sample ID: VSTD050

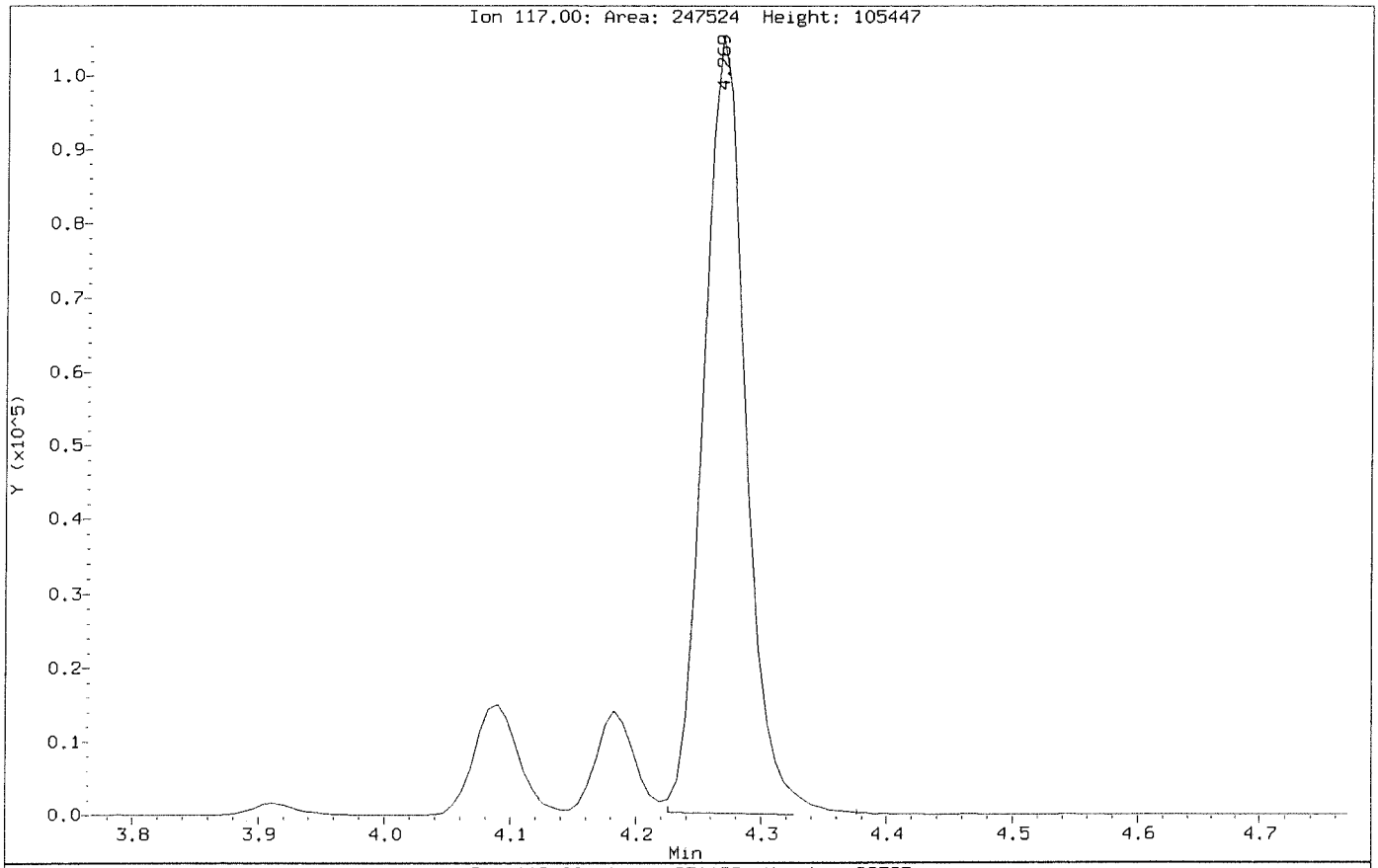
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

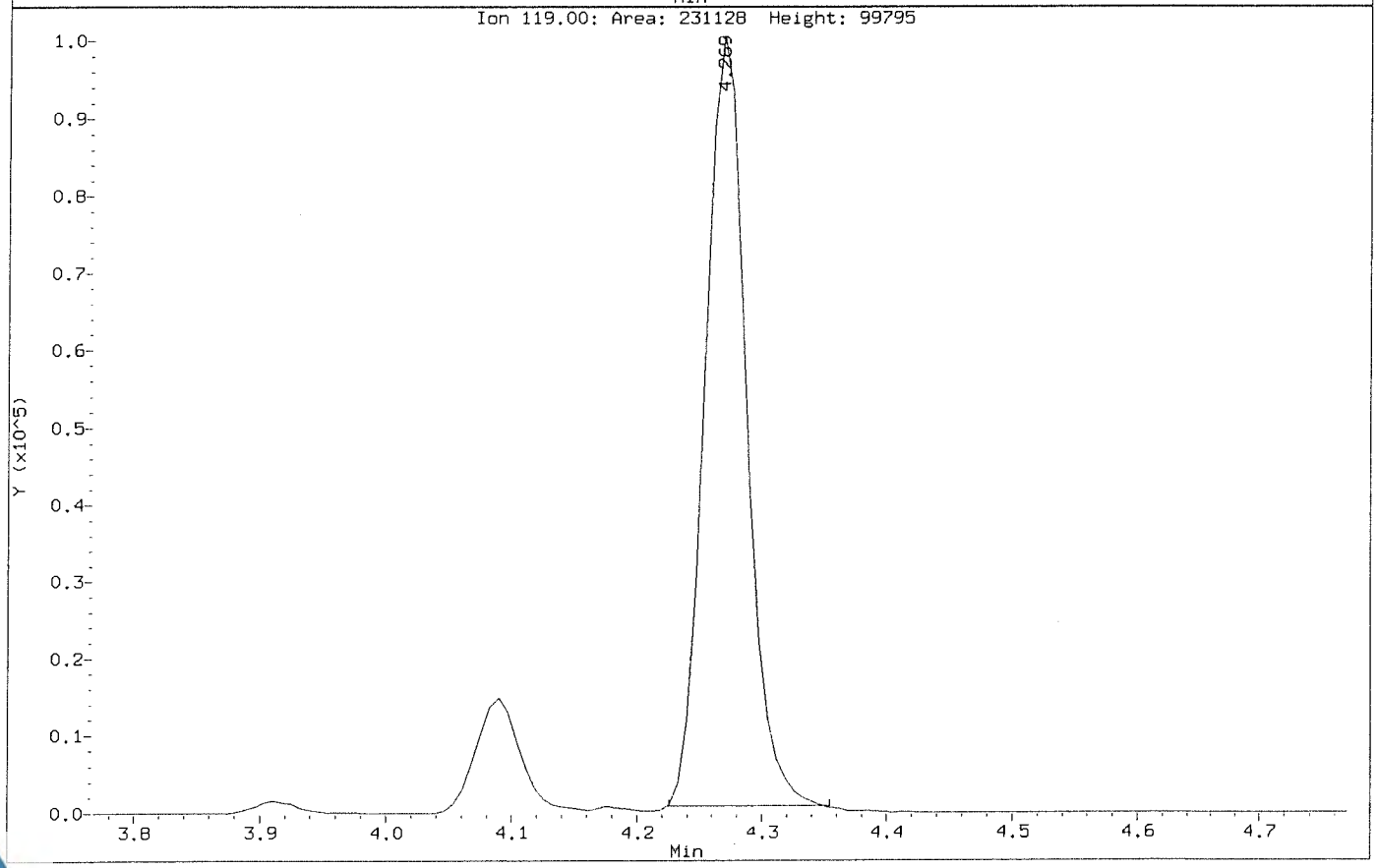




Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111808.D
Injection Date: 18-NOV-2019 16:35
Instrument: voa6.i
Client Sample ID: VSTD050

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





Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111809.D Page 1
Report Date: 22-Dec-2019 16:31

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X191118.b\X111809.D
Lab Smp Id: VSTD100 Client Smp ID: VSTD100
Inj Date : 18-NOV-2019 16:59
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\X191118.b\8260W.m
Meth Date : 22-Dec-2019 16:31 voa6.i Quant Type: ISTD
Cal Date : 18-NOV-2019 16:59 Cal File: X111809.D
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14

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

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

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	392699	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	554744	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	502006	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	278931	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	354918	100.000	99.03
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	364646	100.000	97.98
$	48 Toluene-d8	98	6.388	6.388	(0.833)	1251601	100.000	94.62
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	465570	100.000	99.26
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	370675	100.000	101.77
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	531073	100.000	100.24
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	374065	100.000	95.36
	53 1,1,2-Trichloroethane	83	6.840	6.847	(0.892)	259169	100.000	98.76
	22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	562516	100.000	98.44
	11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	336639	100.000	101.15
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	435155	100.000	97.24
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	102660	100.000	99.24
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	314678	100.000	94.68(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	224252	100.000	95.44
	79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	1360930	100.000	102.82
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.657	(1.102)	42468	100.000	98.40
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	348356	100.000	98.94
	88 1,2-Dichlorobenzene	146	9.999	9.998	(1.034)	740257	100.000	99.99
	33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	440676	100.000	100.06

Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111809.D Page 2
Report Date: 22-Dec-2019 16:31

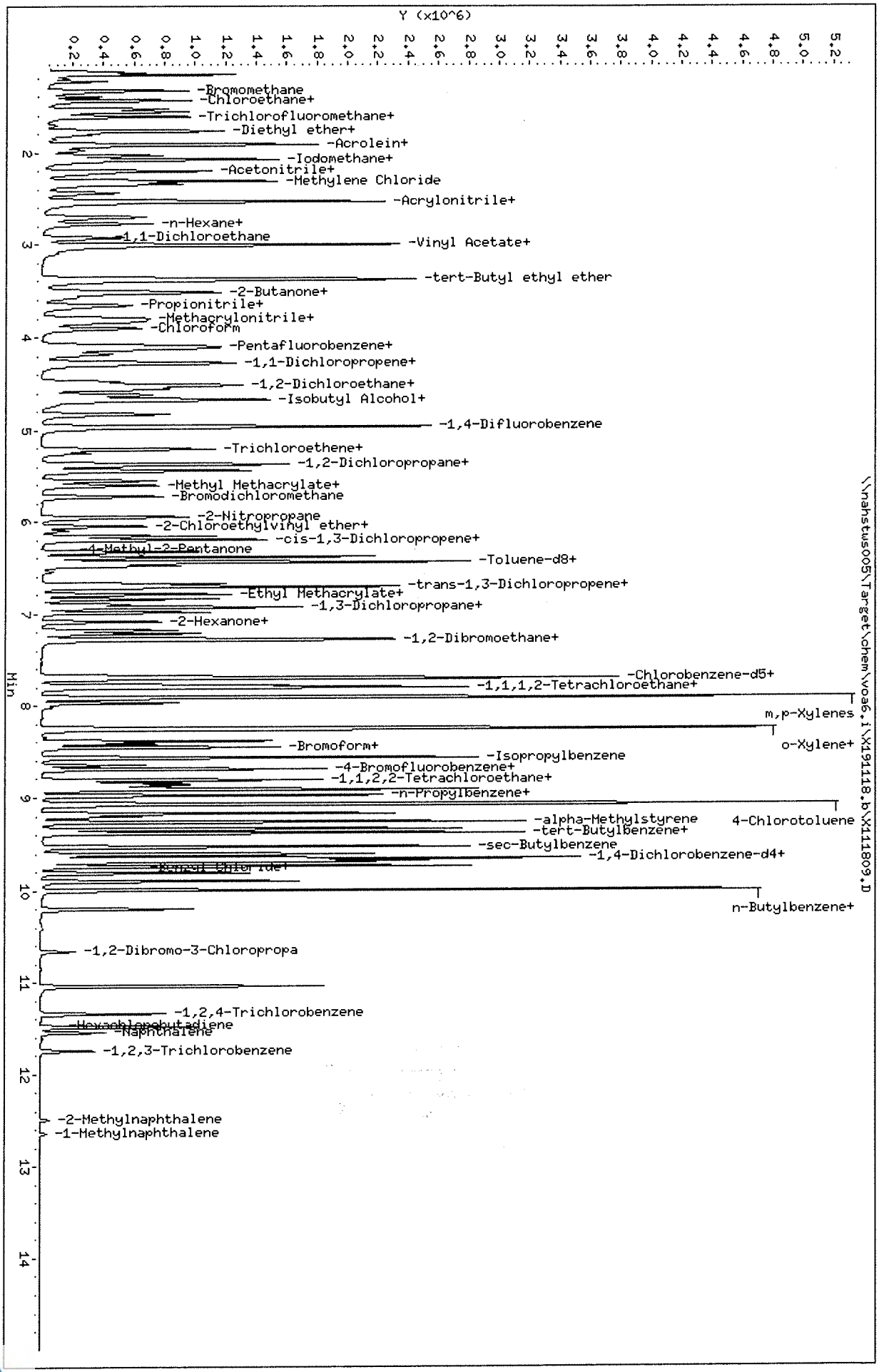
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	322033	100.000	97.17
75 1,3,5-Trimethylbenzene	105	9.067	9.074	(0.938)	1326043	100.000	104.41
83 1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	793024	100.000	99.13
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	523367	100.000	98.23
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	805891	100.000	99.14
26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	505741	100.000	97.52
24 2-Butanone	43	3.580	3.580	(0.856)	231090	200.000	191.78
76 2-Chlorotoluene	91	8.974	8.981	(0.928)	1019206	100.000	101.56
52 2-Hexanone	43	7.090	7.090	(0.924)	404339	200.000	196.07
77 4-Chlorotoluene	91	9.074	9.074	(0.939)	1244013	100.000	102.27
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	1420650	100.000	104.09
45 4-Methyl-2-Pentanone	43	6.324	6.331	(0.824)	584699	200.000	198.78
10 Acetone	43	1.976	1.976	(0.473)	202207	200.000	202.71(A)
37 Benzene	78	4.519	4.512	(0.909)	1259183	100.000	99.22
74 Bromobenzene	156	8.809	8.809	(0.911)	477901	100.000	98.58
29 Bromochloromethane	128	3.795	3.795	(0.908)	204995	100.000	96.36
39 Bromodichloromethane	83	5.729	5.729	(1.153)	453036	100.000	98.68
66 Bromoform	173	8.415	8.415	(1.097)	293256	100.000	97.14
6 Bromomethane	94	1.331	1.331	(0.318)	396733	100.000	104.04
19 Carbon Disulfide	76	2.069	2.069	(0.495)	1866170	200.000	206.12(A)
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	490954	100.000	100.15(H)
59 Chlorobenzene	112	7.699	7.699	(1.004)	969904	100.000	98.96
7 Chloroethane	64	1.396	1.396	(0.334)	244234	100.000	98.78
28 Chloroform	83	3.910	3.910	(0.935)	592217	100.000	93.11
3 Chloromethane	50	1.073	1.073	(0.257)	420936	100.000	98.51
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	373378	100.000	100.25
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	548280	100.000	101.34
55 Dibromochloromethane	129	7.176	7.183	(0.936)	387071	100.000	101.53
44 Dibromomethane	93	5.557	5.557	(1.118)	228649	100.000	97.50
2 Dichlorodifluoromethane	85	0.973	0.966	(0.233)	359790	100.000	99.65
61 Ethylbenzene	106	7.799	7.807	(1.017)	511284	100.000	100.96
91 Hexachlorobutadiene	225	11.488	11.488	(1.188)	192455	100.000	99.01
67 Isopropylbenzene	105	8.566	8.566	(1.117)	1550450	100.000	103.37
62 m,p-Xylenes	106	7.907	7.907	(1.031)	1262031	200.000	206.53(A)
17 Methylene Chloride	84	2.305	2.305	(0.551)	333987	100.000	94.05
87 n-Butylbenzene	91	9.999	9.998	(1.034)	1214189	100.000	106.90
73 n-Propylbenzene	91	8.917	8.917	(0.922)	1771664	100.000	102.75
92 Naphthalene	128	11.546	11.546	(1.194)	281768	100.000	93.49
63 o-Xylene	106	8.244	8.244	(1.075)	610719	100.000	101.26
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	1561099	100.000	104.22
64 Styrene	104	8.258	8.265	(1.077)	1077784	100.000	102.77
78 tert-Butylbenzene	119	9.340	9.339	(0.966)	1121644	100.000	103.15
56 Tetrachloroethene	164	6.933	6.933	(0.904)	341567	100.000	96.83
50 Toluene	91	6.446	6.453	(0.840)	1413996	100.000	99.32
20 trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	324394	100.000	100.39
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	504686	100.000	102.35
38 Trichloroethene	130	5.206	5.206	(1.048)	388311	100.000	100.09
8 Trichlorofluoromethane	101	1.560	1.553	(0.373)	647137	100.000	106.23
5 Vinyl Chloride	62	1.138	1.138	(0.272)	400884	100.000	100.16

QC Flag Legend

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

QC Flag Legend

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

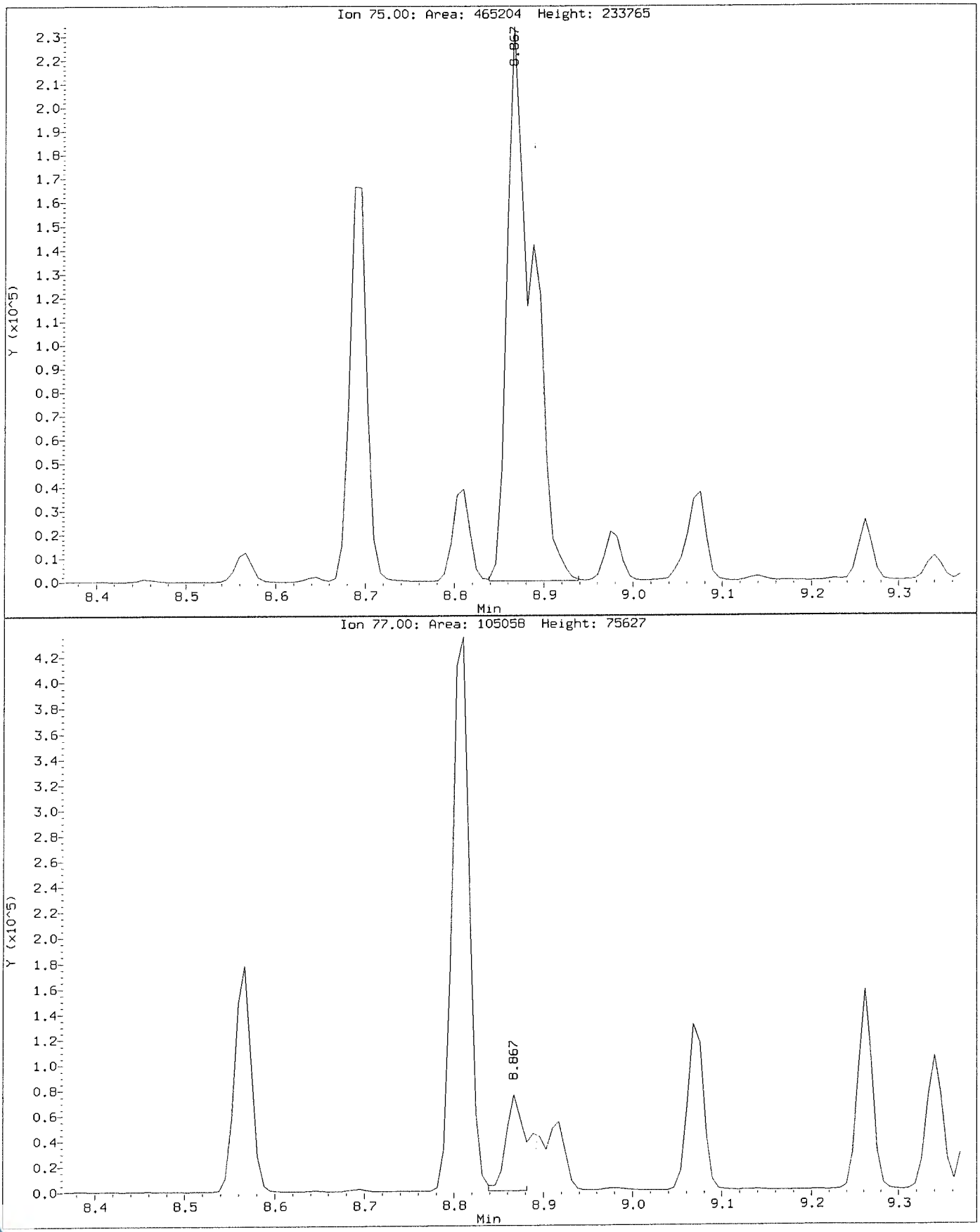


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Date : 18-NOV-2019 16:59
Client ID: VSTD100
Sample Info: VSTD100;VSTD100;1;8;
Purge Volume: 5.0
Column phase: DB624

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

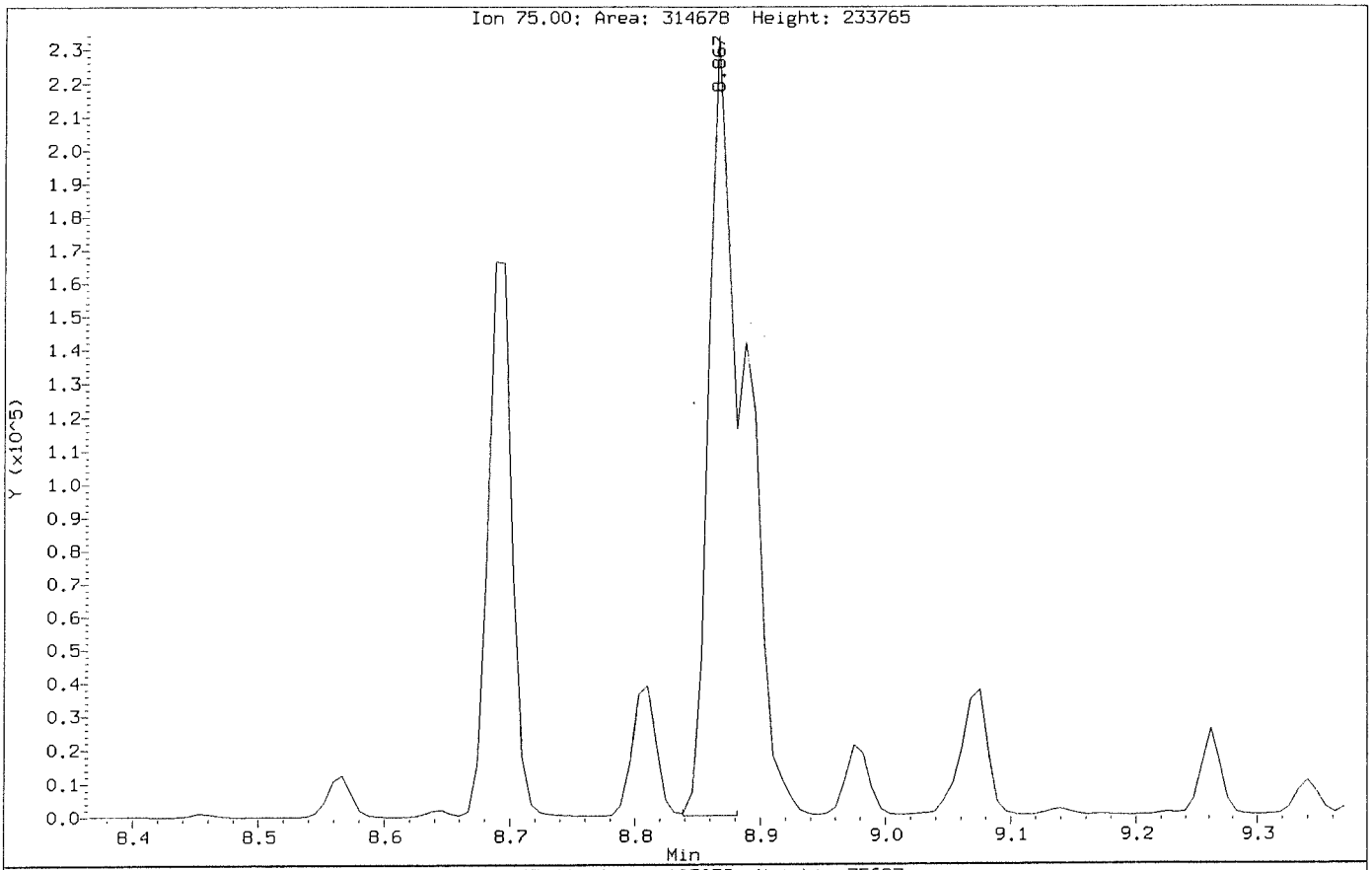
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Injection Date: 18-NOV-2019 16:59
Instrument: voa6.i
Client Sample ID: VSTD100

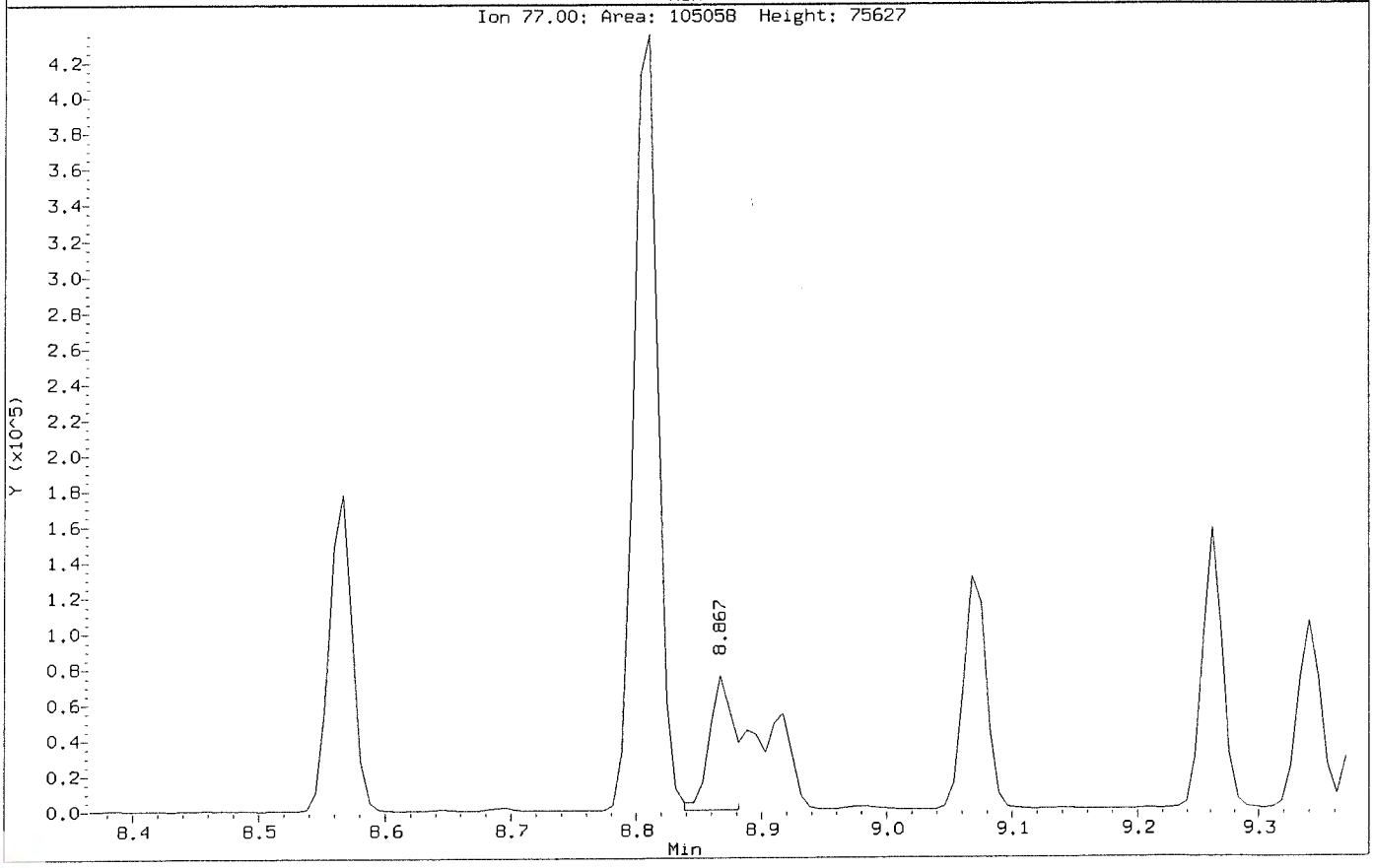
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



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Injection Date: 18-NOV-2019 16:59
Instrument: voa6.i
Client Sample ID: VSTD100

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





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X191118.b\X111810.D
Lab Smp Id: VSTD150 Client Smp ID: VSTD150
Inj Date : 18-NOV-2019 17:22
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\X191118.b\8260W.m
Meth Date : 22-Dec-2019 16:31 voa6.i Quant Type: ISTD
Cal Date : 18-NOV-2019 17:22 Cal File: X111810.D
Als bottle: 11 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14

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

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

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	378157	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	542191	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	494760	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	282310	50.0000	
$ 30 Dibromofluoromethane	113	4.104	4.103	(0.981)	514854	150.000	148.99
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	532181	150.000	148.11
$ 48 Toluene-d8	98	6.389	6.388	(0.833)	1815269	150.000	139.25
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	688600	150.000	148.76
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	548257	150.000	152.74
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	768782	150.000	150.69
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	560927	150.000	141.29
53 1,1,2-Trichloroethane	83	6.840	6.847	(0.892)	380298	150.000	147.04
22 1,1-Dichloroethane	63	2.922	2.921	(0.699)	825788	150.000	150.08
11 1,1-Dichloroethene	96	1.912	1.911	(0.457)	483391	150.000	150.83
32 1,1-Dichloropropene	75	4.283	4.282	(0.862)	635821	150.000	145.37
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	156391	150.000	148.93
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	465353	150.000	138.34(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	338737	150.000	142.44
79 1,2,4-Trimethylbenzene	105	9.383	9.382	(0.970)	2030171	150.000	151.55
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.657	(1.102)	65470	150.000	150.06
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	518766	150.000	149.49
88 1,2-Dichlorobenzene	146	9.999	9.998	(1.034)	1121580	150.000	149.69
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	645436	150.000	149.95

Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111810.D Page 2
Report Date: 22-Dec-2019 16:31

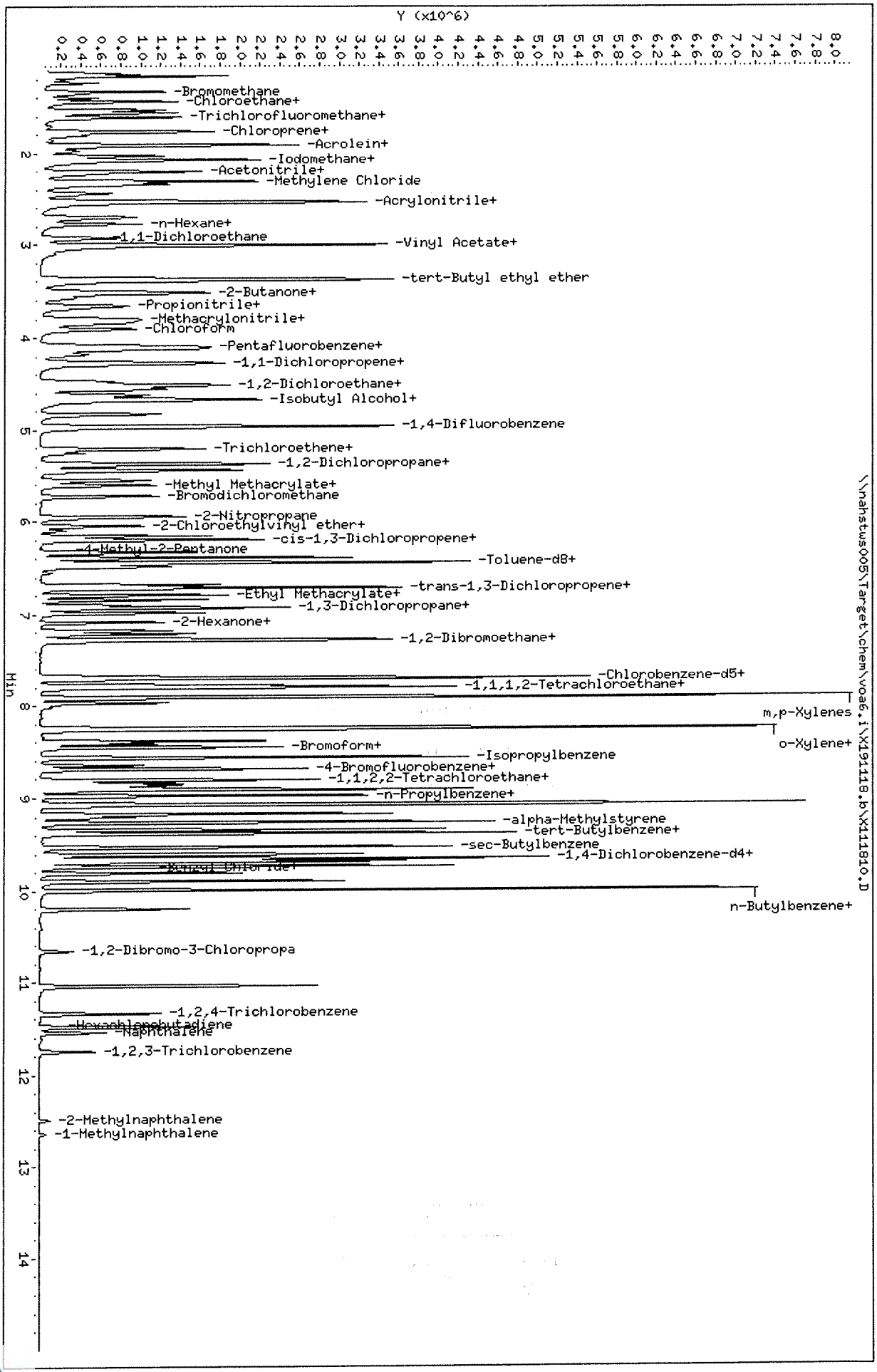
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	471959	150.000	145.71
75 1,3,5-Trimethylbenzene	105	9.067	9.074	(0.938)	1980658	150.000	154.09
83 1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	1183710	150.000	146.20
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	763789	150.000	145.46
84 1,4-Dichlorobenzene	146	9.684	9.683	(1.001)	1195790	150.000	145.34
26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	732900	150.000	146.75
24 2-Butanone	43	3.573	3.580	(0.854)	346972	300.000	299.02(A)
76 2-Chlorotoluene	91	8.982	8.981	(0.929)	1513395	150.000	149.00
52 2-Hexanone	43	7.090	7.090	(0.924)	606144	300.000	298.23(A)
77 4-Chlorotoluene	91	9.075	9.074	(0.939)	1867848	150.000	151.71
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	2100293	150.000	152.04
45 4-Methyl-2-Pentanone	43	6.324	6.331	(0.824)	884349	300.000	305.06(A)
10 Acetone	43	1.976	1.976	(0.473)	284604	300.000	298.06(A)
37 Benzene	78	4.512	4.512	(0.908)	1843665	150.000	148.64
74 Bromobenzene	156	8.810	8.809	(0.911)	709083	150.000	144.52
29 Bromochloromethane	128	3.795	3.795	(0.908)	294445	150.000	143.73
39 Bromodichloromethane	83	5.730	5.729	(1.153)	669356	150.000	149.18
66 Bromoform	173	8.416	8.415	(1.097)	447981	150.000	150.02
6 Bromomethane	94	1.331	1.331	(0.318)	529714	150.000	145.16
19 Carbon Disulfide	76	2.069	2.069	(0.495)	2705391	300.000	310.30(A)
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	707541	150.000	147.68(H)
59 Chlorobenzene	112	7.699	7.699	(1.004)	1445648	150.000	149.66
7 Chloroethane	64	1.396	1.396	(0.334)	351927	150.000	147.81
28 Chloroform	83	3.910	3.910	(0.935)	863467	150.000	140.99
3 Chloromethane	50	1.074	1.073	(0.257)	613254	150.000	148.94
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	542390	150.000	151.24
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	808388	150.000	152.88
55 Dibromochloromethane	129	7.176	7.183	(0.936)	573494	150.000	152.63
44 Dibromomethane	93	5.558	5.557	(1.118)	338759	150.000	147.80
2 Dichlorodifluoromethane	85	0.966	0.966	(0.231)	504807	150.000	144.79
61 Ethylbenzene	106	7.800	7.807	(1.017)	751250	150.000	150.52
91 Hexachlorobutadiene	225	11.489	11.488	(1.188)	279881	150.000	142.49
67 Isopropylbenzene	105	8.566	8.566	(1.117)	2283588	150.000	154.47
62 m,p-Xylenes	106	7.907	7.907	(1.031)	1861660	300.000	309.12(A)
17 Methylene Chloride	84	2.306	2.305	(0.551)	485622	150.000	142.02
87 n-Butylbenzene	91	9.999	9.998	(1.034)	1823176	150.000	158.59
73 n-Propylbenzene	91	8.917	8.917	(0.922)	2616190	150.000	149.92
92 Naphthalene	128	11.546	11.546	(1.194)	435593	150.000	142.81
63 o-Xylene	106	8.244	8.244	(1.075)	906786	150.000	152.56
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	2308597	150.000	152.28
64 Styrene	104	8.258	8.265	(1.077)	1622659	150.000	156.99
78 tert-Butylbenzene	119	9.340	9.339	(0.966)	1665732	150.000	151.35
56 Tetrachloroethene	164	6.933	6.933	(0.904)	493485	150.000	141.95
50 Toluene	91	6.446	6.453	(0.840)	2107838	150.000	150.23
20 trans-1,2-Dichloroethene	96	2.528	2.527	(0.604)	472385	150.000	151.82
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	741568	150.000	153.87
38 Trichloroethene	130	5.207	5.206	(1.048)	566006	150.000	149.27
8 Trichlorofluoromethane	101	1.553	1.553	(0.372)	922117	150.000	157.19
5 Vinyl Chloride	62	1.138	1.138	(0.272)	578026	150.000	149.97

QC Flag Legend

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

QC Flag Legend

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

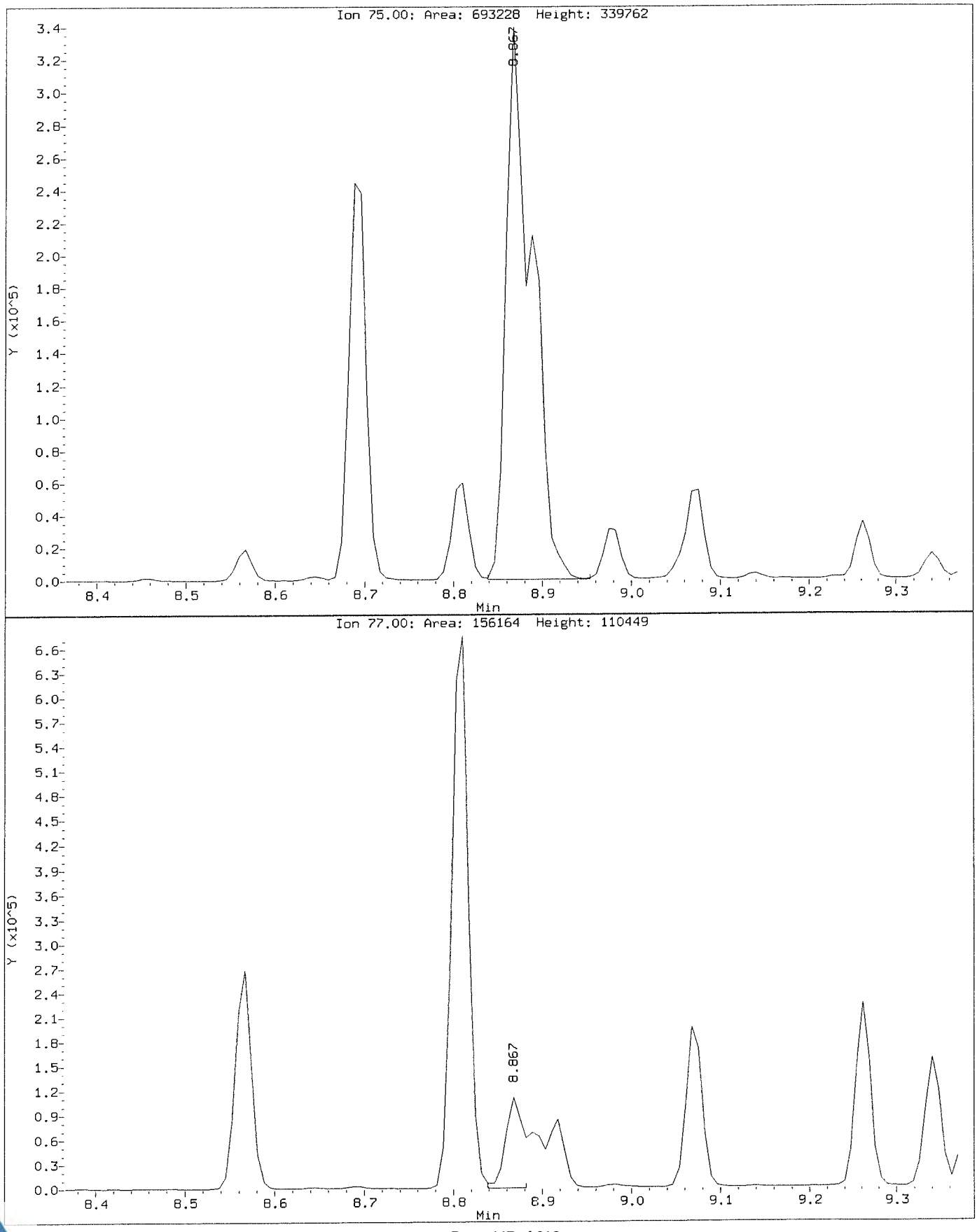


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Date : 18-NOV-2019 17:22
Client ID: VSTD150
Sample Info: VSTD150;VSTD150;1;9;
Purge Volume: 5.0
Column phase: DB624

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

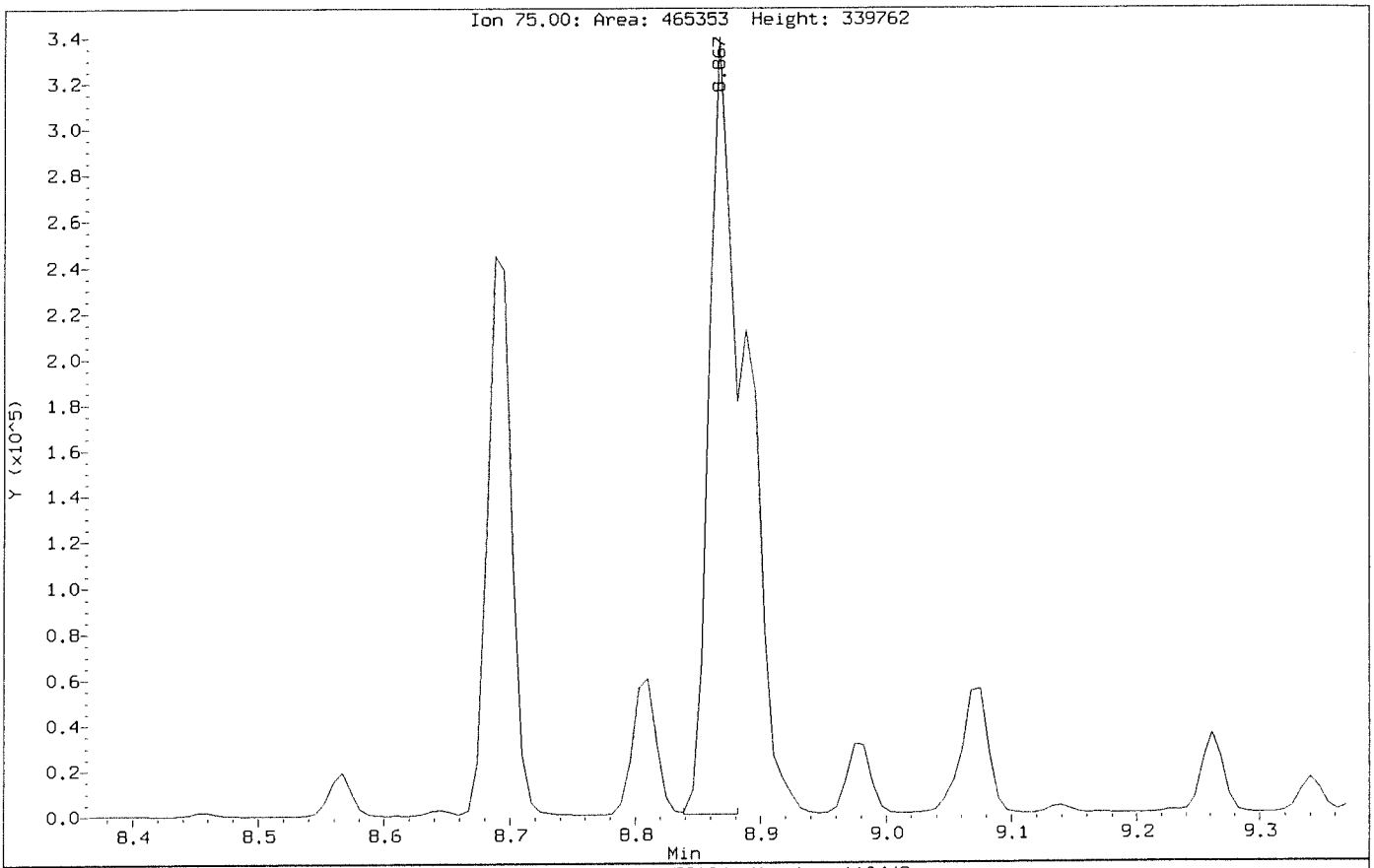
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Injection Date: 18-NOV-2019 17:22
Instrument: voa6.i
Client Sample ID: VSTD150

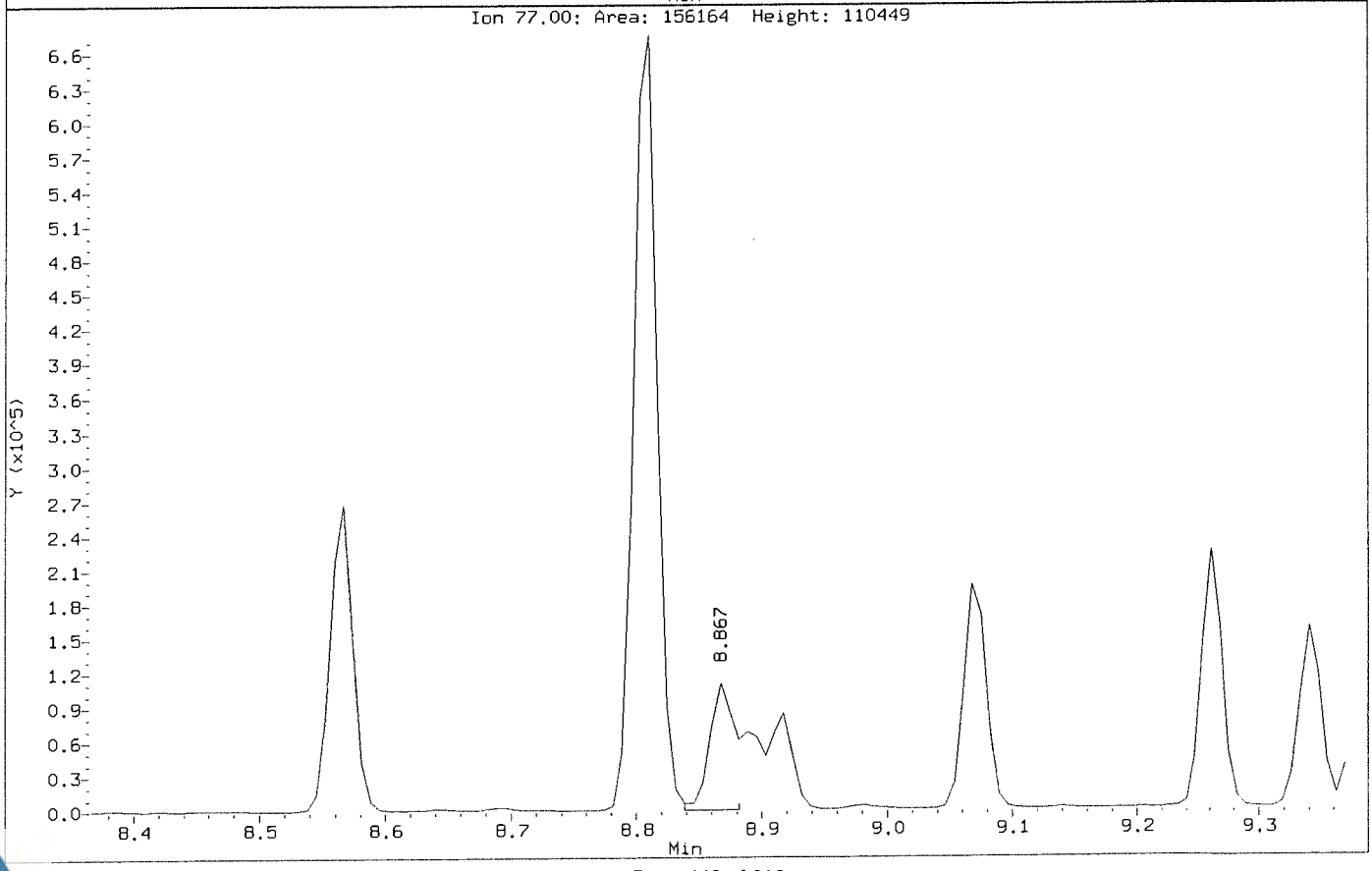
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111810.D
Injection Date: 18-NOV-2019 17:22
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\X191118.b\X111811.D
Lab Smp Id: VSTD200 Client Smp ID: VSTD200
Inj Date : 18-NOV-2019 17:46
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\X191118.b\8260W.m
Meth Date : 22-Dec-2019 16:31 voa6.i Quant Type: ISTD
Cal Date : 18-NOV-2019 17:46 Cal File: X111811.D
Als bottle: 12 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14

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

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

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	369517	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	542684	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	493817	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	280605	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	681300	200.000	201.64(A)
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	713282	200.000	202.89(A)
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	2431773	200.000	186.90
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	933083	200.000	201.81(A)
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	731912	200.000	204.29(A)
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	1030058	200.000	206.62(A)
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	742176	200.000	188.09
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	511936	200.000	198.31
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	1089650	200.000	202.66(A)
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	641291	200.000	204.78(A)
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	849992	200.000	194.17
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	210414	200.000	200.64(A)
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	609450	200.000	182.28(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	455609	200.000	192.75
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	2745695	200.000	206.21(A)
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.102)	86827	200.000	200.34(A)
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	693307	200.000	200.18(A)
88 1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	1508205	200.000	202.51(A)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	865099	200.000	200.81(A)

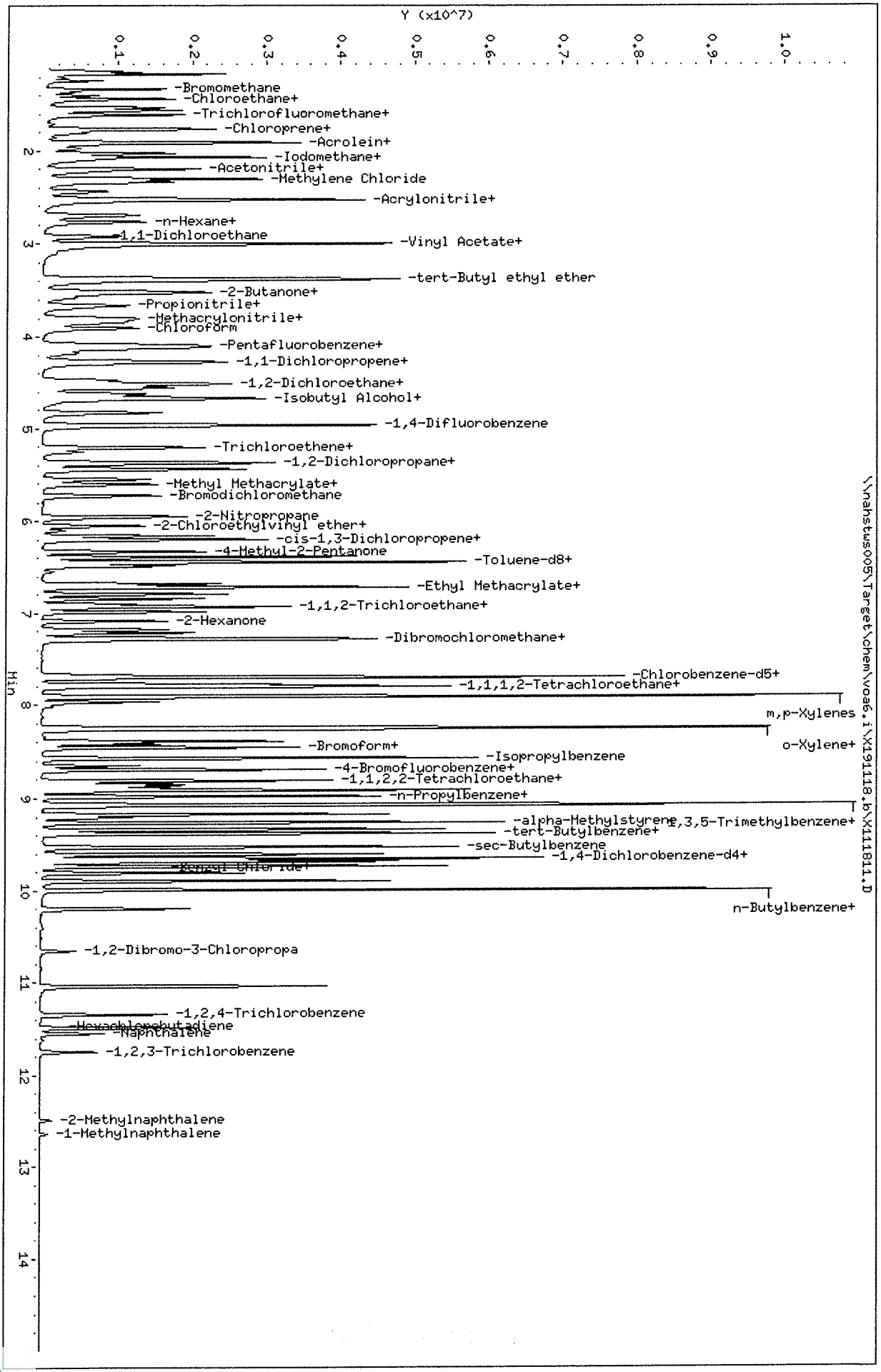
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	629023	200.000	194.03
75	1,3,5-Trimethylbenzene	105	9.074	9.074	(0.939)	2668415	200.000	208.86(A)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	1590132	200.000	197.60
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	1018788	200.000	194.39
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	1621999	200.000	198.35
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	972273	200.000	199.24
24	2-Butanone	43	3.580	3.580	(0.856)	437867	400.000	386.18(A)
76	2-Chlorotoluene	91	8.981	8.981	(0.929)	2019887	200.000	200.07(A)
52	2-Hexanone	43	7.090	7.090	(0.924)	806375	400.000	397.51(A)
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	2525879	200.000	206.41(A)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	2843849	200.000	207.12(A)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	1178590	400.000	407.33(A)
10	Acetone	43	1.976	1.976	(0.473)	372223	400.000	400.25(A)
37	Benzene	78	4.512	4.512	(0.908)	2449808	200.000	197.34
74	Bromobenzene	156	8.809	8.809	(0.911)	958177	200.000	196.47
29	Bromochloromethane	128	3.795	3.795	(0.908)	376537	200.000	188.10
39	Bromodichloromethane	83	5.729	5.729	(1.153)	893499	200.000	198.95
66	Bromoform	173	8.415	8.415	(1.097)	602595	200.000	201.83(A)
6	Bromomethane	94	1.331	1.331	(0.318)	631015	200.000	177.48(M)
19	Carbon Disulfide	76	2.069	2.069	(0.495)	3628864	400.000	425.96(A)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	954439	200.000	199.03(H)
59	Chlorobenzene	112	7.699	7.699	(1.004)	1940751	200.000	201.30(A)
7	Chloroethane	64	1.396	1.396	(0.334)	459143	200.000	197.35
28	Chloroform	83	3.910	3.910	(0.935)	1152726	200.000	192.62
3	Chloromethane	50	1.073	1.073	(0.257)	811388	200.000	201.60(A)
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	721487	200.000	205.88(A)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	1069987	200.000	202.17(A)
55	Dibromochloromethane	129	7.183	7.183	(0.937)	764698	200.000	203.91(A)
44	Dibromomethane	93	5.557	5.557	(1.118)	451528	200.000	196.82
2	Dichlorodifluoromethane	85	0.966	0.966	(0.231)	695305	200.000	203.74(A)
61	Ethylbenzene	106	7.807	7.807	(1.018)	1011964	200.000	203.15(A)
91	Hexachlorobutadiene	225	11.488	11.488	(1.188)	373475	200.000	191.48
67	Isopropylbenzene	105	8.566	8.566	(1.117)	3082382	200.000	208.91(A)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	2525960	400.000	420.22(A)
17	Methylene Chloride	84	2.305	2.305	(0.551)	644942	200.000	193.02
87	n-Butylbenzene	91	9.998	9.998	(1.034)	2465783	200.000	215.80(A)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	3540988	200.000	204.15(A)
92	Naphthalene	128	11.546	11.546	(1.194)	574298	200.000	189.43
63	o-Xylene	106	8.244	8.244	(1.075)	1231007	200.000	207.50(A)
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	3131997	200.000	207.86(A)
64	Styrene	104	8.265	8.265	(1.078)	2199171	200.000	213.18(A)
78	tert-Butylbenzene	119	9.339	9.339	(0.966)	2240944	200.000	204.85(A)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	660581	200.000	190.38
50	Toluene	91	6.453	6.453	(0.841)	2834294	200.000	202.39(A)
20	trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	630988	200.000	207.54(A)
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	1000892	200.000	207.50(A)
38	Trichloroethene	130	5.206	5.206	(1.048)	754871	200.000	198.90
8	Trichlorofluoromethane	101	1.553	1.553	(0.371)	1241567	200.000	216.59(A)
5	Vinyl Chloride	62	1.138	1.138	(0.272)	773023	200.000	205.26(A)

QC Flag Legend

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

QC Flag Legend

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

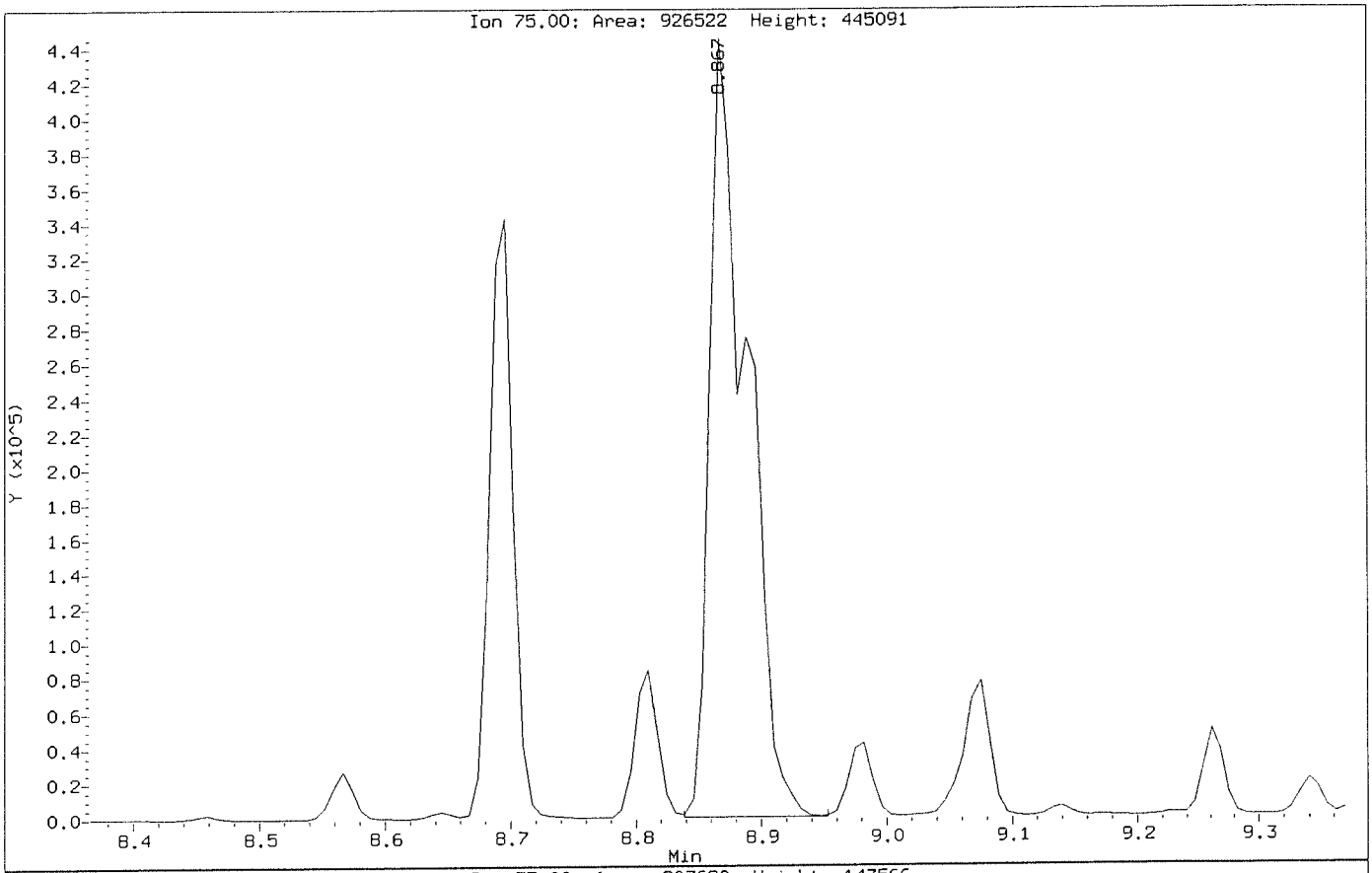


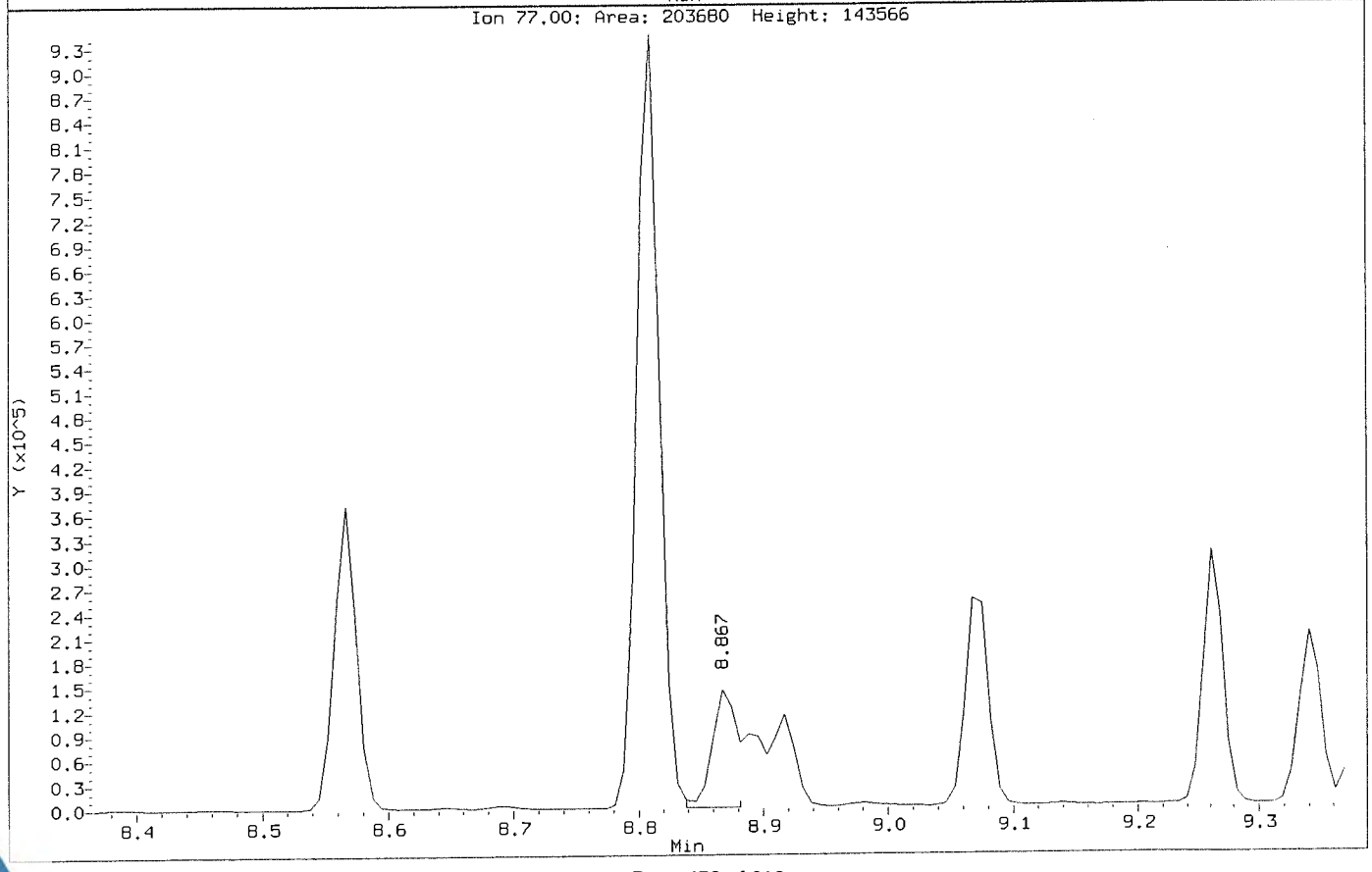
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Client ID: VSTD200
Sample Info: VSTD200;VSTD200;1;10;
Purge Volume: 5.0
Column phase: DB624

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

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Client Sample ID: VSTD200

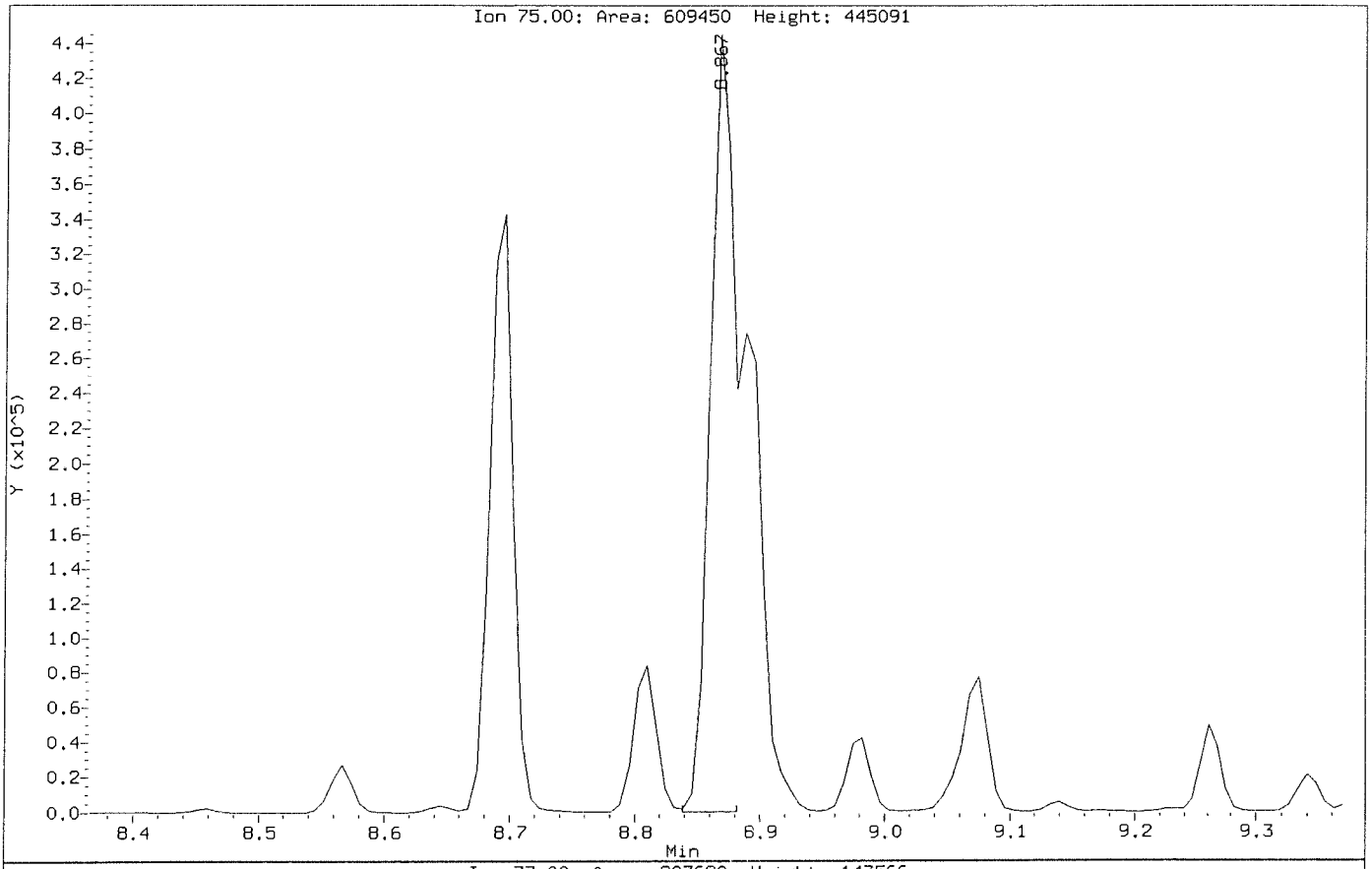
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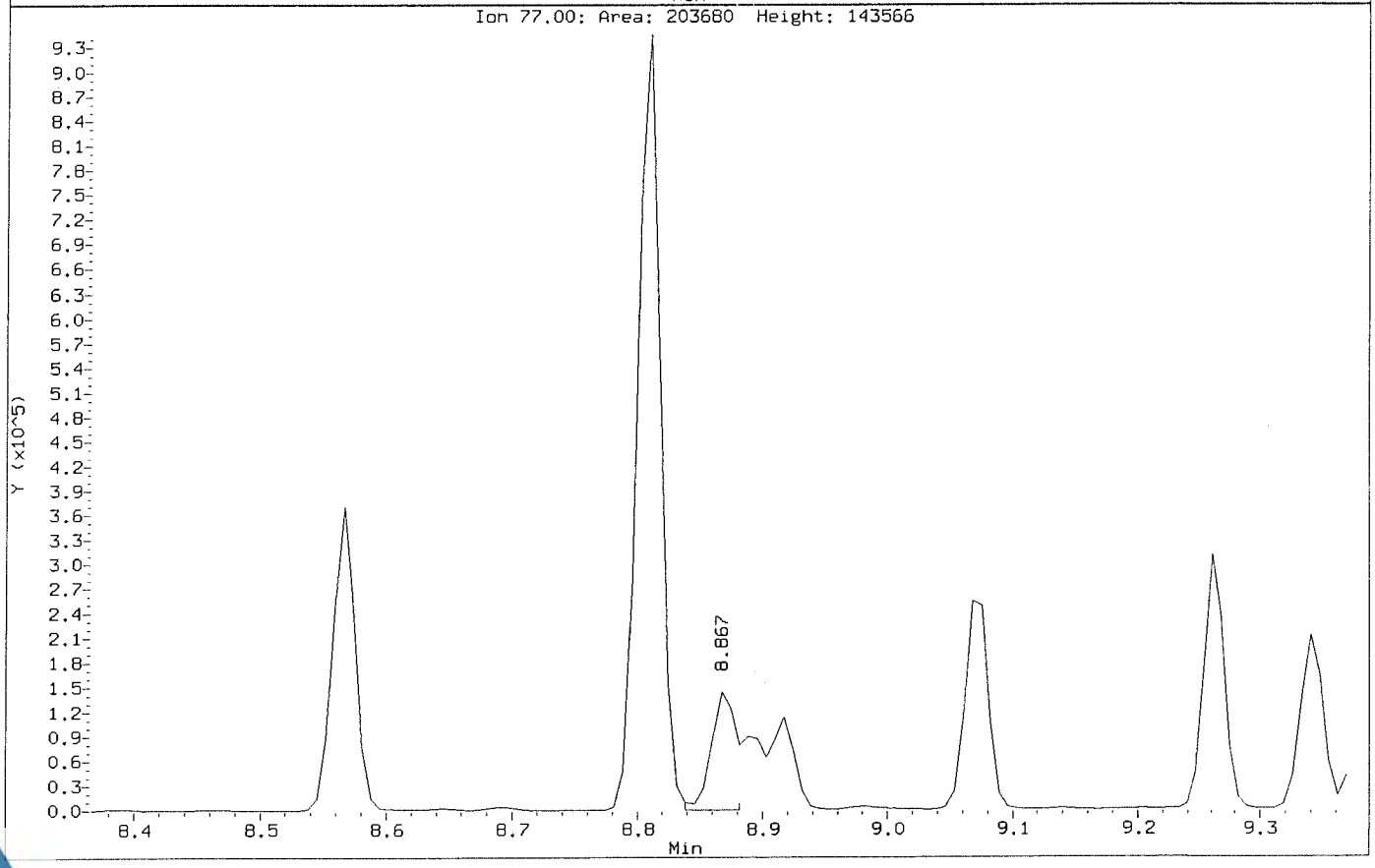




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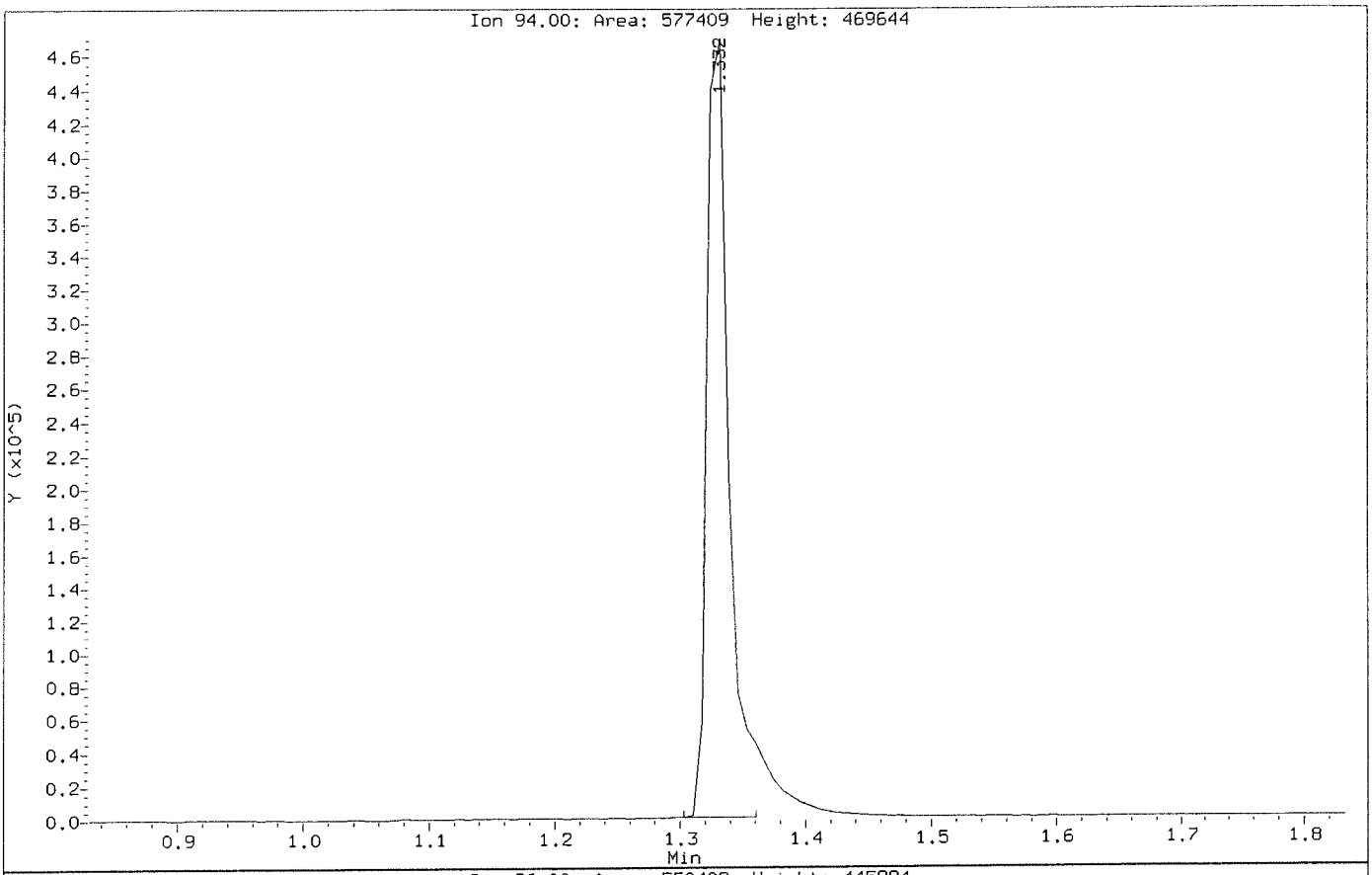
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CAS Number: 96-18-4

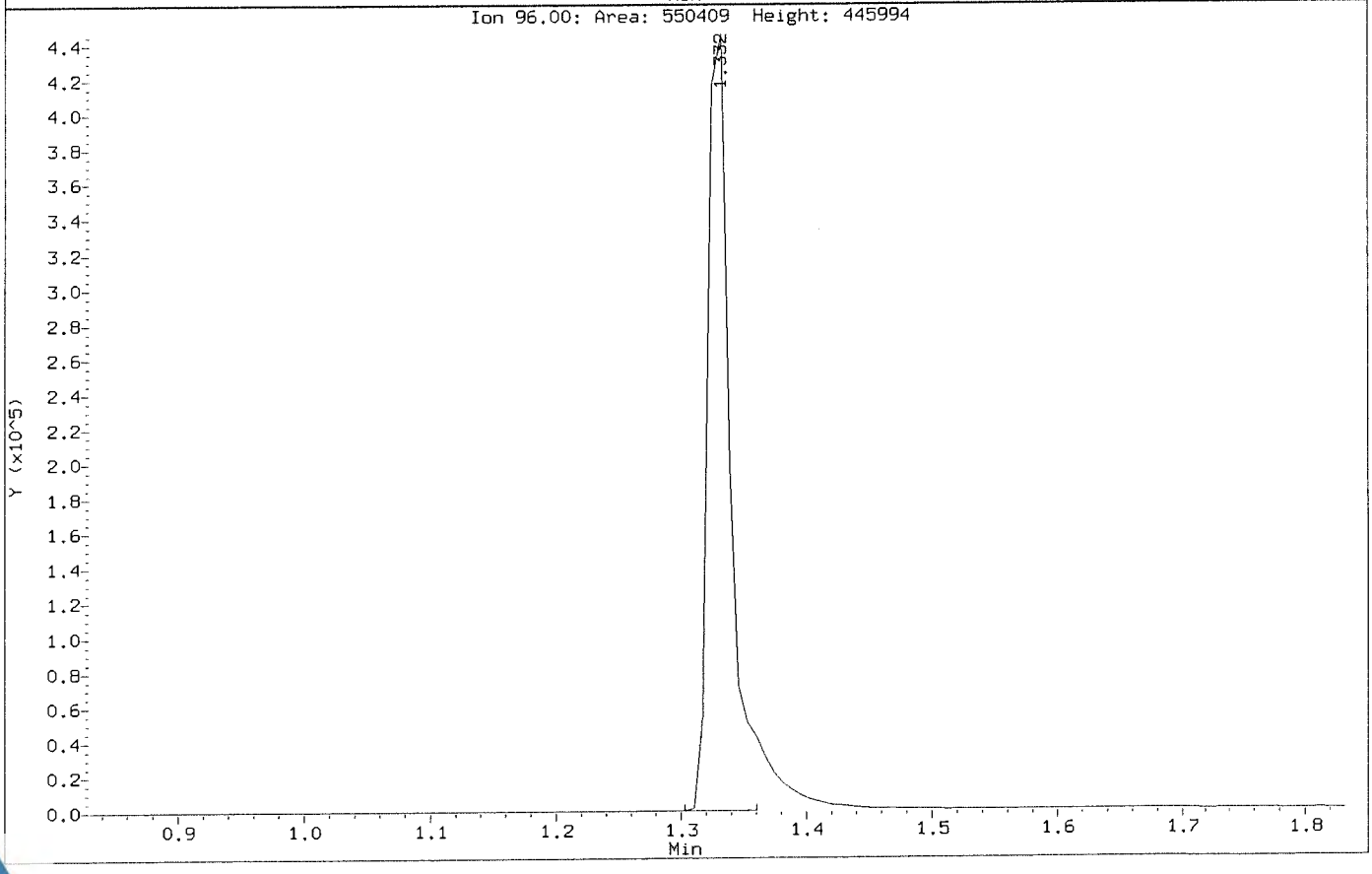




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Instrument: voa6.i
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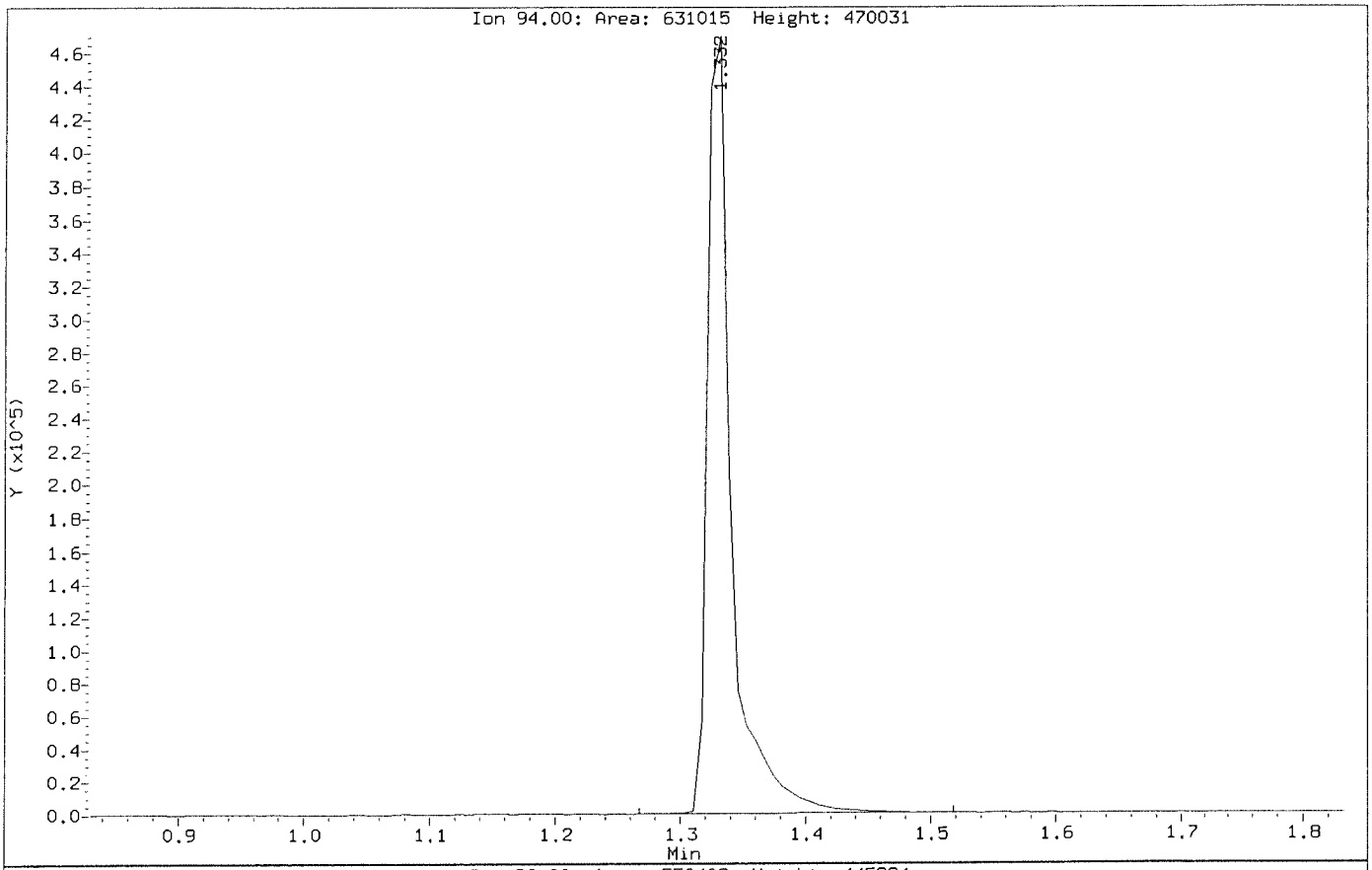
Compound: Bromomethane
CAS Number: 74-83-9

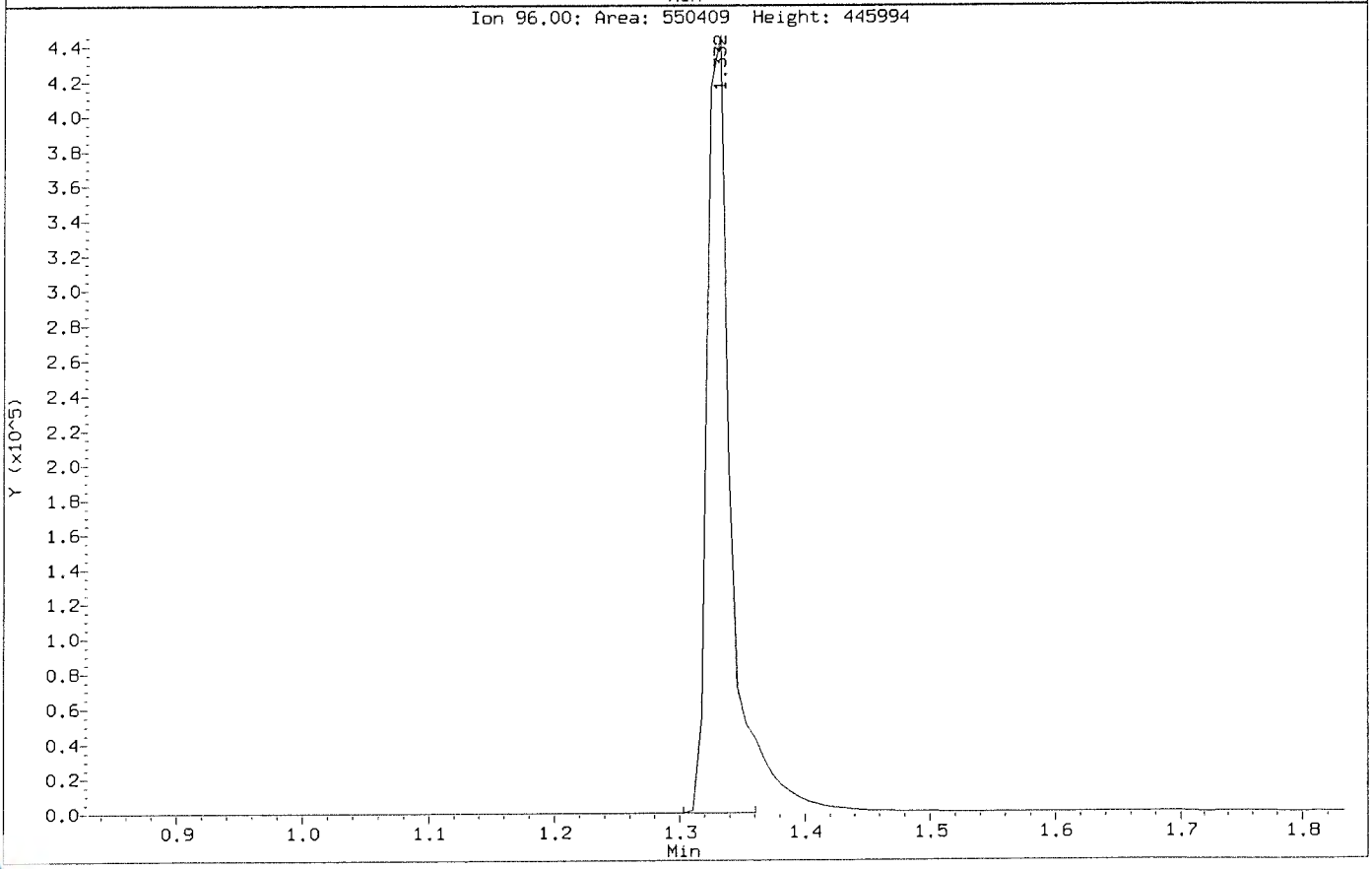




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Injection Date: 18-NOV-2019 17:46
Instrument: voa6.i
Client Sample ID: VSTD200

Compound: Bromomethane
CAS Number: 74-83-9





Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111814.D Page 1
Report Date: 22-Dec-2019 16:32

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X191118.b\X111814.D
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 18-NOV-2019 18:58
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\X191118.b\8260W.m
Meth Date : 22-Dec-2019 16:31 voa6.i Quant Type: ISTD
Cal Date : 18-NOV-2019 17:46 Cal File: X111811.D
Als bottle: 15 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14

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

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

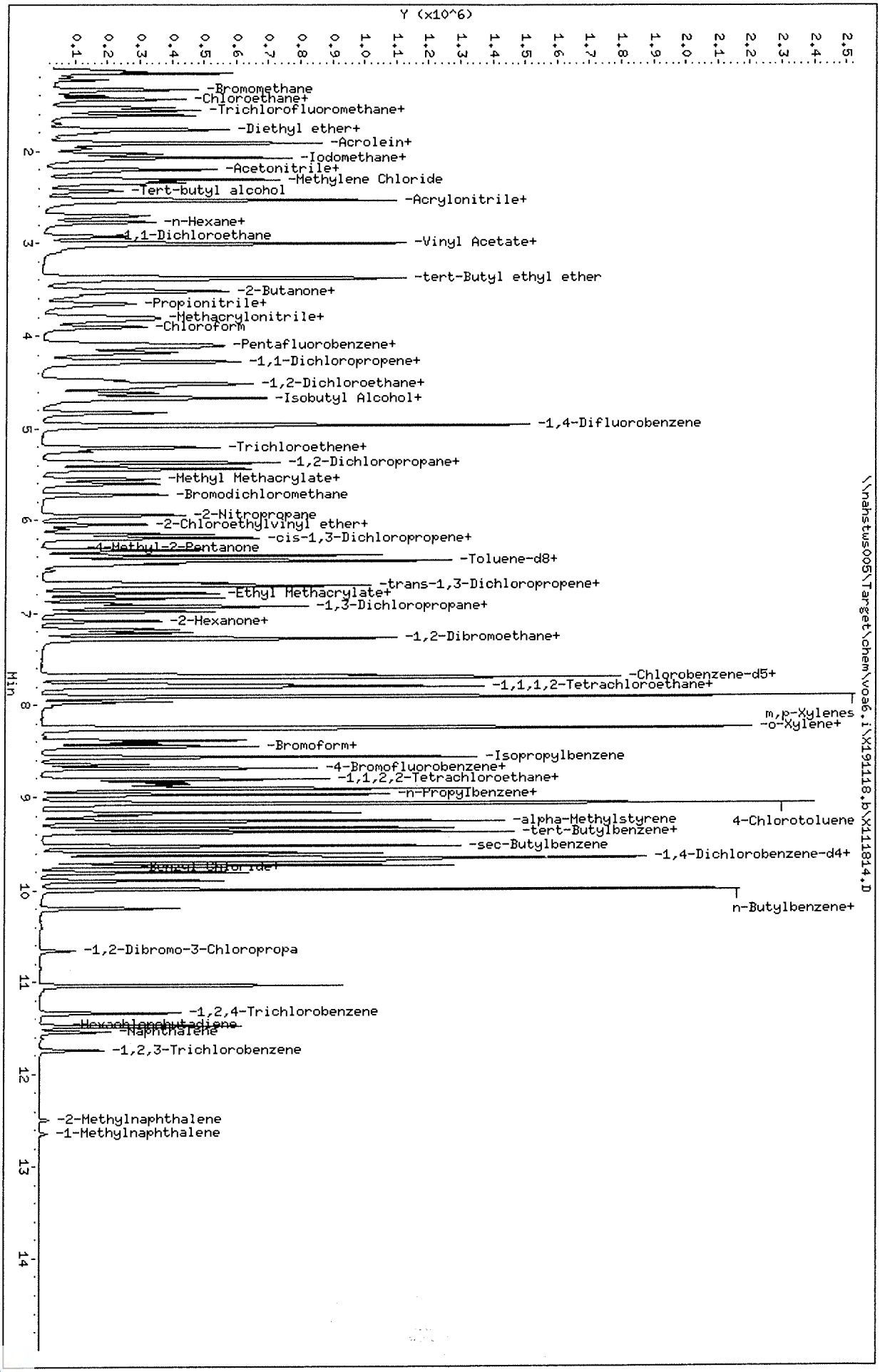
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	365284	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	526230	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	487659	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	262170	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	172534	51.9307	51.93
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	177715	51.6875	51.68
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	603087	46.9372	46.93
$ 69 4-Bromofluorobenzene	95	8.688	8.695	(1.133)	217553	47.9674	47.96
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	181751	51.3728	51.37
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	259914	52.7430	52.74
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	183157	49.6822	49.68
53 1,1,2-Trichloroethane	83	6.840	6.847	(0.892)	125473	49.2205	49.22
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	273555	51.4692	51.46
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	164159	53.0287	53.02
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	211745	49.8829	49.88
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	56746	58.2884	58.28
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	154338	49.4088	49.40(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	122229	55.3465	55.34
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	627033	50.4058	50.40
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.102)	20914	51.3981	51.39
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	171012	50.0005	50.00
88 1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	343886	49.4226	49.42
33 1,2-Dichloroethane	62	4.555	4.562	(0.916)	214666	51.3880	51.38

Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111814.D Page 2
Report Date: 22-Dec-2019 16:32

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
42 1,2-Dichloropropane	63	5.436	5.443	(1.094)	155619	49.5052	49.50
75 1,3,5-Trimethylbenzene	105	9.067	9.074	(0.938)	621241	52.0454	52.04
83 1,3-Dichlorobenzene	146	9.604	9.612	(0.993)	380305	50.5823	50.58
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	254579	49.1895	49.18
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	379206	49.6335	49.63
26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	252567	52.3575	52.35
24 2-Butanone	43	3.573	3.580	(0.854)	117980	105.260	105.25
76 2-Chlorotoluene	91	8.974	8.981	(0.928)	475545	50.4166	50.41
52 2-Hexanone	43	7.090	7.090	(0.924)	192493	96.0902	96.09
77 4-Chlorotoluene	91	9.074	9.074	(0.939)	578291	50.5814	50.58
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	664137	51.7722	51.77
45 4-Methyl-2-Pentanone	43	6.324	6.331	(0.824)	279109	97.6823	97.68
10 Acetone	43	1.969	1.976	(0.471)	104925	111.376	111.37
37 Benzene	78	4.512	4.512	(0.908)	612198	50.8565	50.85
74 Bromobenzene	156	8.809	8.809	(0.911)	233126	51.1647	51.16
29 Bromochloromethane	128	3.795	3.795	(0.908)	101596	51.3407	51.34
39 Bromodichloromethane	83	5.729	5.729	(1.153)	222106	51.0024	51.00
66 Bromoform	173	8.415	8.415	(1.097)	142491	49.0895	49.08
6 Bromomethane	94	1.338	1.331	(0.320)	208417	57.7314	57.73
19 Carbon Disulfide	76	2.069	2.069	(0.495)	924383	109.763	109.76
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	237498	51.0754	51.07
59 Chlorobenzene	112	7.699	7.699	(1.004)	468418	49.2009	49.20
7 Chloroethane	64	1.403	1.396	(0.336)	118785	51.6484	51.64
28 Chloroform	83	3.910	3.910	(0.935)	292027	49.3641	49.36
3 Chloromethane	50	1.073	1.073	(0.257)	200113	50.4397	50.43
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	184183	53.1686	53.16
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	267228	52.0716	52.07
55 Dibromochloromethane	129	7.176	7.183	(0.936)	184910	49.9303	49.93
44 Dibromomethane	93	5.557	5.557	(1.118)	112351	50.5059	50.50
2 Dichlorodifluoromethane	85	0.973	0.966	(0.233)	176572	52.9949	52.99
61 Ethylbenzene	106	7.799	7.807	(1.017)	247055	50.2234	50.22
91 Hexachlorobutadiene	225	11.481	11.488	(1.187)	113053	61.6918	61.69(R)
67 Isopropylbenzene	105	8.566	8.566	(1.117)	730633	50.1455	50.14
62 m,p-Xylenes	106	7.907	7.907	(1.031)	603641	101.692	101.69
17 Methylene Chloride	84	2.305	2.305	(0.551)	164000	49.6528	49.65
87 n-Butylbenzene	91	9.998	9.998	(1.034)	555875	52.0702	52.07
73 n-Propylbenzene	91	8.917	8.917	(0.922)	841108	51.9034	51.90
92 Naphthalene	128	11.546	11.546	(1.194)	144573	51.0408	51.04
63 o-Xylene	106	8.243	8.244	(1.075)	291303	49.7239	49.72
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	728868	51.7743	51.77
64 Styrene	104	8.258	8.265	(1.077)	512981	50.3548	50.35
78 tert-Butylbenzene	119	9.339	9.339	(0.966)	525095	51.3776	51.37
56 Tetrachloroethene	164	6.933	6.933	(0.904)	169030	49.3314	49.33
50 Toluene	91	6.446	6.453	(0.840)	685240	49.5512	49.55
20 trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	157233	52.3156	52.31
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	242451	51.8354	51.83
38 Trichloroethene	130	5.206	5.206	(1.048)	190582	51.7868	51.78
8 Trichlorofluoromethane	101	1.560	1.553	(0.373)	314898	55.5726	55.57
5 Vinyl Chloride	62	1.138	1.138	(0.272)	193522	51.9818	51.98

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

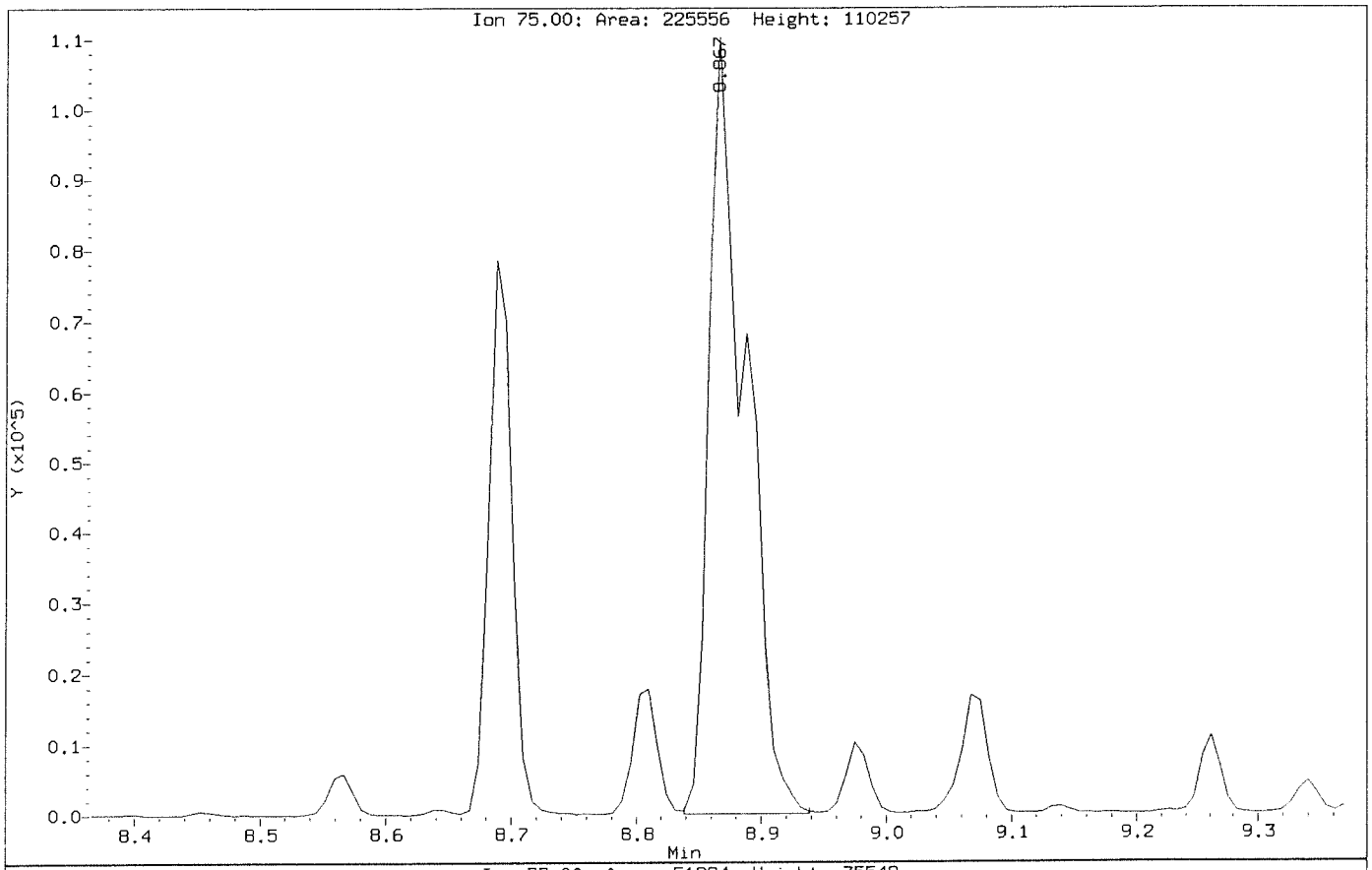


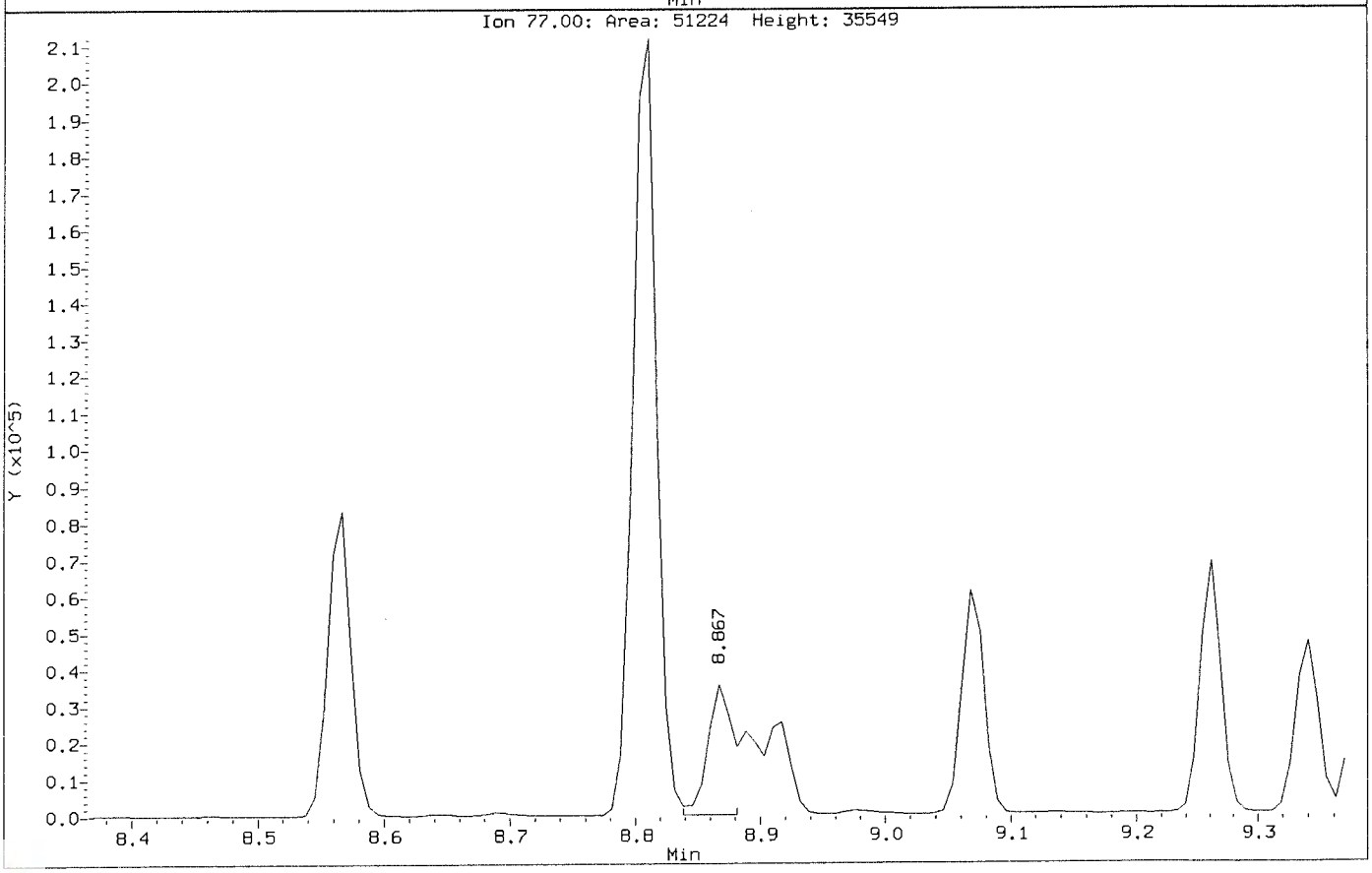
Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111814.D
Date : 18-NOV-2019 18:58
Client ID: ICV
Sample Info: CCV;CCV;2;;ICV
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\Before2\X111814.D
Injection Date: 18-NOV-2019 18:58
Instrument: voa6.i
Client Sample ID: ICV

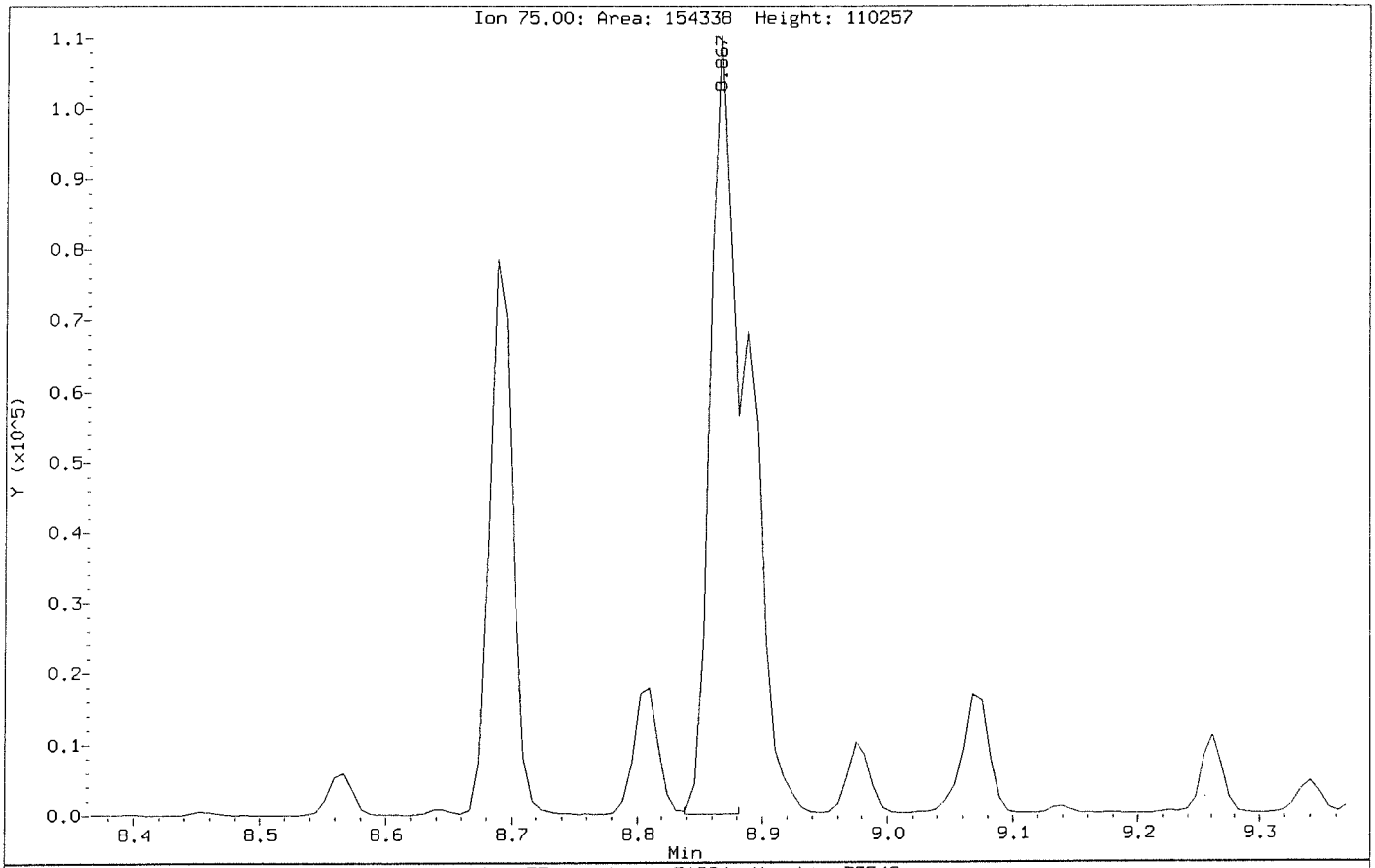
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

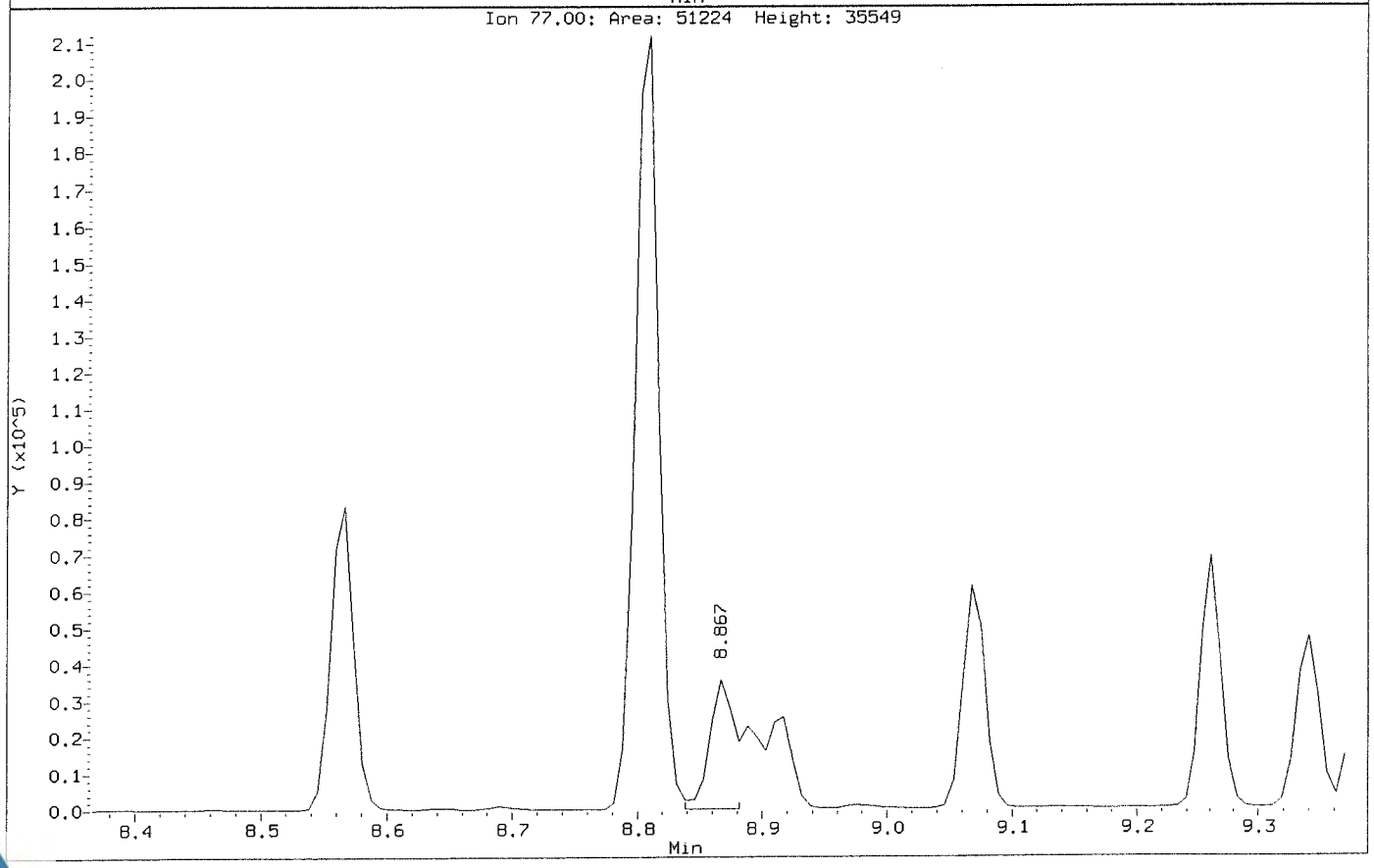




Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111814.D
Injection Date: 18-NOV-2019 18:58
Instrument: voa6.i
Client Sample ID: ICV

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





MSVOA06 -Logbook

Batch: 39110 **Analyst:** Presenta Cabascango

Date: 01-02-2020 **Reviewer:**

Method: 8260 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	01-02-2020 09:59 am	1.00	50 mL	50 mL	X010201.D	Liquid	Y	NA
2	CCV	CCV	01-02-2020 10:23 am	1.00	50 mL	50 mL	X010202.D	Liquid	Y	NA
3	BLANK	SAMP	01-02-2020 10:47 am	1.00	50 mL	50 mL	X010203.D	Liquid	Y	NA
4	BLANK	SAMP	01-02-2020 11:09 am	1.00	50 mL	50 mL	X010204.D	Liquid	Y	NA
5	CCB	SAMP	01-02-2020 11:34 am	1.00	50 mL	50 mL	X010205.D	Liquid	Y	NA
6	VLCSW-200102	LCS	01-02-2020 11:58 am	1.00	50 mL	50 mL	X010206.D	Liquid	Y	NA
7	BLK	SAMP	01-02-2020 12:22 pm	1.00	50 mL	50 mL	X010207.D	Liquid	Y	NA
8	VBLKW-200102	MBLK	01-02-2020 12:46 pm	1.00	50 mL	50 mL	X010208.D	Liquid	Y	NA
9	HS19121155-09	SAMP	01-02-2020 01:10 pm	1.00	50 mL	50 mL	X010209.D	Liquid	Y	NA
10	HS19121155-01	SAMP	01-02-2020 01:34 pm	1.00	50 mL	50 mL	X010210.D	Liquid	Y	NA
11	HS19121155-02	SAMP	01-02-2020 01:58 pm	1.00	50 mL	50 mL	X010211.D	Liquid	Y	NA
12	HS19121155-04	SAMP	01-02-2020 02:22 pm	1.00	50 mL	50 mL	X010212.D	Liquid	Y	NA
13	HS19121155-05	SAMP	01-02-2020 02:46 pm	1.00	50 mL	50 mL	X010213.D	Liquid	Y	NA
14	HS19121155-06	SAMP	01-02-2020 03:10 pm	1.00	50 mL	50 mL	X010214.D	Liquid	Y	NA
15	HS19121155-07	SAMP	01-02-2020 03:34 pm	1.00	50 mL	50 mL	X010215.D	Liquid	Y	NA
16	HS19121155-08	SAMP	01-02-2020 03:58 pm	1.00	50 mL	50 mL	X010216.D	Liquid	Y	NA
17	HS19121257-01	SAMP	01-02-2020 04:22 pm	1.00	50 mL	50 mL	X010217.D	Liquid	Y	NA
18	HS19121155-03	SAMP	01-02-2020 04:46 pm	10.00	5 mL	50 mL	X010218.D	Liquid	Y	NA
19	HS19121257-01MS	MS	01-02-2020 05:11 pm	1.00	50 mL	50 mL	X010219.D	Liquid	Y	NA
20	HS19121257-01MSD	MSD	01-02-2020 05:35 pm	1.00	50 mL	50 mL	X010220.D	Liquid	Y	NA
21	HS19121155-03	SAMP	01-02-2020 05:59 pm	100.0(	500 µL	50 mL	X010221.D	Liquid	Y	NA
22	HS19121155-04	SAMP	01-02-2020 06:23 pm	1.00	50 mL	50 mL	X010222.D	Liquid	Y	NA
23	HS19121155-05	SAMP	01-02-2020 06:47 pm	1.00	50 mL	50 mL	X010223.D	Liquid	Y	NA
24	HS19121155-06	SAMP	01-02-2020 07:11 pm	1.00	50 mL	50 mL	X010224.D	Liquid	Y	NA
25	HS19121155-07	SAMP	01-02-2020 07:35 pm	1.00	50 mL	50 mL	X010225.D	Liquid	Y	NA
26	HS19121257-02	SAMP	01-02-2020 07:59 pm	1.00	50 mL	50 mL	X010226.D	Liquid	Y	NA
27	HS19121257-03	SAMP	01-02-2020 08:23 pm	1.00	50 mL	50 mL	X010227.D	Liquid	Y	NA
28	HS19121257-04	SAMP	01-02-2020 08:47 pm	1.00	50 mL	50 mL	X010228.D	Liquid	Y	NA
29	CCV-END	CCV	01-02-2020 09:11 pm	1.00	50 mL	50 mL	X010229.D	Liquid	Y	NA

Chemical	Value
SURR SPK ID	31106-04-03
IS ID	31106-04-04
LCS/MS ID	30603-95-01
CAL STD ID	31106-08-01/02
BFB ID	31106-04-03
pH Paper	634-64-11

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ALS HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS19121155

	CLIENT SAMPLE NO.	SMC1 (DCE) #	SMC2 #	SMC3 (TOL) #	OTHER #	TOT OUT
01	VLCSW-200102	104	102	98	104	0
02	VBLKW-200102	94	96	103	101	0
03	HS19121155-09	93	95	103	101	0
04	HS19121155-01	93	94	103	101	0
05	HS19121155-02	91	94	103	89	0
06	HS19121155-08	85	83	104	102	0
07	HS19121155-03	98	98	103	101	0
08	HS19121155-03	100	98	104	101	0
09	HS19121155-04	98	98	103	103	0
10	HS19121155-05	99	98	102	102	0
11	HS19121155-06	100	98	102	104	0
12	HS19121155-07	98	98	101	100	0
13						
14						
15						
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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 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKW-200102

Lab Name: ALS HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS19121155

Lab File ID: X010208 Lab Sample ID: VBLKW-200102

Date Analyzed: 01/02/20 Time Analyzed: 1246

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-200102	VLCSW-200102	X010206	1158
02	HS19121155-0	HS19121155-09	X010209	1310
03	HS19121155-0	HS19121155-01	X010210	1334
04	HS19121155-0	HS19121155-02	X010211	1358
05	HS19121155-0	HS19121155-08	X010216	1558
06	HS19121155-0	HS19121155-03	X010218	1646
07	HS19121257-0	HS19121257-01M	X010219	1711
08	HS19121257-0	HS19121257-01M	X010220	1735
09	HS19121155-0	HS19121155-03	X010221	1759
10	HS19121155-0	HS19121155-04	X010222	1823
11	HS19121155-0	HS19121155-05	X010223	1847
12	HS19121155-0	HS19121155-06	X010224	1911
13	HS19121155-0	HS19121155-07	X010225	1935
14				
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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.: HS19121155

Lab File ID: X010201 BFB Injection Date: 01/02/20

Instrument ID: VOA6 BFB Injection Time: 0959

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.3
75	30.0 - 60.0% of mass 95	46.7
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.6
173	Less than 2.0% of mass 174	0.5 (0.7)1
174	Greater than 50.0% of mass 95	74.8
175	5.0 - 9.0% of mass 174	5.8 (7.7)1
176	95.0 - 101.0% of mass 174	72.5 (96.9)1
177	5.0 - 9.0% of mass 176	5.0 (6.9)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	CCV	CCV	X010202	01/02/20	1023
02	VLCSW-200102	VLCSW-200102	X010206	01/02/20	1158
03	VBLKW-200102	VBLKW-200102	X010208	01/02/20	1246
04	HS19121155-0	HS19121155-09	X010209	01/02/20	1310
05	HS19121155-0	HS19121155-01	X010210	01/02/20	1334
06	HS19121155-0	HS19121155-02	X010211	01/02/20	1358
07	HS19121155-0	HS19121155-08	X010216	01/02/20	1558
08	HS19121155-0	HS19121155-03	X010218	01/02/20	1646
09	HS19121257-0	HS19121257-01M	X010219	01/02/20	1711
10	HS19121257-0	HS19121257-01M	X010220	01/02/20	1735
11	HS19121155-0	HS19121155-03	X010221	01/02/20	1759
12	HS19121155-0	HS19121155-04	X010222	01/02/20	1823
13	HS19121155-0	HS19121155-05	X010223	01/02/20	1847
14	HS19121155-0	HS19121155-06	X010224	01/02/20	1911
15	HS19121155-0	HS19121155-07	X010225	01/02/20	1935
16	CCV-END	CCV-END	X010229	01/02/20	2111
17					
18					
19					
20					
21					
22					

FORM V VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS19121155

Instrument ID: VOA6 Calibration Date: 01/02/20 Time: 1023

Lab File ID: X010202 Init. Calib. Date(s): 11/18/19 11/18/19

Init. Calib. Times: 1347 1746

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	0.4880000	0.5587290	0.5587290	0.2	-14.49	20.00	AVRG	
trans-1,3-Dichloropropene	0.4440000	0.4873763	0.4873763	0.1	-9.77	20.00	AVRG	
1,3-Dichlorobenzene	1.4340000	1.5300989	1.5300989	0.6	-6.70	20.00	AVRG	
2,2-Dichloropropane	0.6600000	0.7232591	0.7232591	0.1	-9.58	20.00	AVRG	
1,1-Dichloropropene	0.4030000	0.4410618	0.4410618	0.1	-9.44	20.00	AVRG	
Dibromomethane	0.2110000	0.2185891	0.2185891	0.1	-3.60	20.00	AVRG	
1,2-Dibromoethane	0.3510000	0.3550625	0.3550625	0.1	-1.16	20.00	AVRG	
trans-1,2-Dichloroethene	0.4110000	0.4645477	0.4645477	0.1	-13.03	20.00	AVRG	
1,1,1,2-Tetrachloroethane	0.3630000	0.3737056	0.3737056	0.1	-2.95	20.00	AVRG	
1,1,1-Trichloroethane	0.6740000	0.7113666	0.7113666	0.1	-5.54	20.00	AVRG	
1,1,2,2-Tetrachloroethane	0.7030000	0.7595193	0.7595193	0.3	-8.04	20.00	AVRG	
1,1,2-Trichloroethane	0.2610000	0.2741704	0.2741704	0.1	-5.05	20.00	AVRG	
1,1-Dichloroethane	0.7270000	0.8471362	0.8471362	0.2	-16.52	20.00	AVRG	
1,1-Dichloroethene	0.4240000	0.3965926	0.3965926	0.1	6.46	20.00	AVRG	
Trichloroethene	0.3500000	0.3761997	0.3761997	0.2	-7.48	20.00	AVRG	
1,2,3-Trichlorobenzene	59.436274	50.000000	0.2206769	0.1	-18.87	20.00	2RDR	
Trichlorofluoromethane	0.7760000	0.7281538	0.7281538	0.1	6.16	20.00	AVRG	
1,2,4-Trichlorobenzene	0.4210000	0.4391052	0.4391052	0.2	-4.30	20.00	AVRG	
1,2,4-Trimethylbenzene	2.3720000	2.6362972	2.6362972	0.1	-11.14	20.00	AVRG	
Tetrachloroethene	0.3510000	0.3370255	0.3370255	0.2	3.98	20.00	AVRG	
1,2-Dichlorobenzene	1.3270000	1.3808585	1.3808585	0.4	-4.06	20.00	AVRG	
1,2-Dichloroethane	0.3970000	0.4124367	0.4124367	0.1	-3.89	20.00	AVRG	
1,2-Dichloropropane	0.2990000	0.3324046	0.3324046	0.1	-11.17	20.00	AVRG	
1,3,5-Trimethylbenzene	2.2760000	2.5855656	2.5855656	0.1	-13.60	20.00	AVRG	
1,3-Dichloropropane	0.5310000	0.5633717	0.5633717	0.1	-6.10	20.00	AVRG	
1,4-Dichlorobenzene	1.4570000	1.5310765	1.5310765	0.4	-5.08	20.00	AVRG	
Toluene	1.4180000	1.5158113	1.5158113	0.4	-6.90	20.00	AVRG	
2-Butanone	0.1530000	0.1774479	0.1774479	0.1	-15.98	20.00	AVRG	
2-Chlorotoluene	1.7990000	2.0956397	2.0956397	0.1	-16.49	20.00	AVRG	
2-Hexanone	0.2050000	0.2163217	0.2163217	0.1	-5.52	20.00	AVRG	
4-Chlorotoluene	2.1800000	2.4427692	2.4427692	0.1	-12.05	20.00	AVRG	
tert-Butylbenzene	1.9490000	2.1564028	2.1564028	0.1	-10.64	20.00	AVRG	
4-Methyl-2-Pentanone	0.2930000	0.3080025	0.3080025	0.1	-5.12	20.00	AVRG	
Acetone	116.98223	100.00000	0.1506087	0.1	-16.98	20.00	LINR	
Benzene	1.1440000	1.3079976	1.3079976	0.5	-14.34	20.00	AVRG	
Bromobenzene	0.8690000	0.9266295	0.9266295	0.1	-6.63	20.00	AVRG	
Bromochloromethane	0.2710000	0.2860139	0.2860139	0.1	-5.54	20.00	AVRG	
Bromodichloromethane	0.4140000	0.4400959	0.4400959	0.2	-6.30	20.00	AVRG	
Bromoform	48.689201	50.000000	0.2897616	0.1	2.62	20.00	LINR	
Bromomethane	40.042440	50.000000	0.4026006	0.1	19.92	20.00	LINR	
Carbon Disulfide	1.1530000	1.3930478	1.3930478	0.1	-20.82	20.00	AVRG	<-
Carbon Tetrachloride	0.4420000	0.4457899	0.4457899	0.1	-0.86	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.: HS1912115

Instrument ID: VOA6 Calibration Date: 01/02/20 Time: 1023

Lab File ID: X010202 Init. Calib. Date(s): 11/18/19 11/18/19

Init. Calib. Times: 1347 1746

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Chlorobenzene	0.9760000	1.0007913	1.0007913	0.5	-2.54	20.00	AVRG
Chloroethane	0.3150000	0.2924637	0.2924637	0.1	7.15	20.00	AVRG
Chloroform	0.8100000	0.8329484	0.8329484	0.2	-2.83	20.00	AVRG
Chloromethane	47.749011	50.000000	0.5184958	0.1	4.50	20.00	LINR
cis-1,2-Dichloroethene	0.4740000	0.5370934	0.5370934	0.1	-13.31	20.00	AVRG
Dibromochloromethane	0.3800000	0.3955947	0.3955947	0.1	-4.10	20.00	AVRG
Dichlorodifluoromethane	55.691637	50.000000	0.5083965	0.1	-11.38	20.00	LINR
Ethylbenzene	0.5040000	0.5403491	0.5403491	0.1	-7.21	20.00	AVRG
Hexachlorobutadiene	0.4020000	0.3451572	0.3451572	0.1	14.14	20.00	AVRG
Isopropylbenzene	1.4940000	1.5618392	1.5618392	0.1	-4.54	20.00	AVRG
m,p-Xylenes	0.6080000	0.6442453	0.6442453	0.1	-5.96	20.00	AVRG
Methylene Chloride	0.4520000	0.4915605	0.4915605	0.1	-8.75	20.00	AVRG
n-Butylbenzene	2.0360000	2.2462658	2.2462658	0.5	-10.33	20.00	AVRG
n-Propylbenzene	3.0900000	3.4921193	3.4921193	0.1	-13.01	20.00	AVRG
Naphthalene	0.5400000	0.5991550	0.5991550	0.2	-10.95	20.00	AVRG
o-Xylene	0.6000000	0.6324244	0.6324244	0.3	-5.40	20.00	AVRG
sec-Butylbenzene	2.6850000	3.0050880	3.0050880	0.1	-11.92	20.00	AVRG
Styrene	1.0440000	1.0975209	1.0975209	0.3	-5.13	20.00	AVRG
Vinyl Chloride	0.5100000	0.5571055	0.5571055	0.1	-9.24	20.00	AVRG
1,2,3-Trichloropropane	0.5960000	0.6576610	0.6576610	0.1	-10.34	20.00	AVRG
p-Isopropyltoluene	2.4460000	2.7241539	2.7241539	0.1	-11.37	20.00	AVRG
1,2-Dibromo-3-Chloropropane	55.384089	50.000000	8.59e-002	0.05	-10.77	20.00	LINR
1,2-Dichloroethane-d4	52.516669	50.000000	0.4944296	0.1	-5.03	20.00	LINR
Dibromofluoromethane	51.934838	50.000000	0.4723661	0.1	-3.87	20.00	LINR
Toluene-d8	1.3170000	1.3093377	1.3093377	0.1	0.58	20.00	AVRG
4-Bromofluorobenzene	52.797666	50.000000	0.4914349	0.1	-5.60	20.00	LINR

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS19121155

Instrument ID: VOA6 Calibration Date: 01/02/20 Time: 2111

Lab File ID: X010229 Init. Calib. Date(s): 11/18/19 11/18/19

Init. Calib. Times: 1347 1746

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	0.4880000	0.2344275	0.2344275	0.2	51.96	50.00	AVRG	<-
trans-1,3-Dichloropropene	0.4440000	0.2068232	0.2068232	0.1	53.42	50.00	AVRG	<-
1,3-Dichlorobenzene	1.4340000	0.6951980	0.6951980	0.6	51.52	50.00	AVRG	<-
2,2-Dichloropropane	0.6600000	0.2870167	0.2870167	0.1	56.51	50.00	AVRG	<-
1,1-Dichloropropene	0.4030000	0.1832894	0.1832894	0.1	54.52	50.00	AVRG	<-
Dibromomethane	0.2110000	9.41e-002	9.41e-002	0.1	55.40	50.00	AVRG	<-
1,2-Dibromoethane	0.3510000	0.1589444	0.1589444	0.1	54.72	50.00	AVRG	<-
trans-1,2-Dichloroethene	0.4110000	0.1988631	0.1988631	0.1	51.61	50.00	AVRG	<-
1,1,1,2-Tetrachloroethane	0.3630000	0.1633787	0.1633787	0.1	54.99	50.00	AVRG	<-
1,1,1-Trichloroethane	0.6740000	0.2996029	0.2996029	0.1	55.55	50.00	AVRG	<-
1,1,2,2-Tetrachloroethane	0.7030000	0.3568860	0.3568860	0.3	49.23	50.00	AVRG	
1,1,2-Trichloroethane	0.2610000	0.1231601	0.1231601	0.1	52.81	50.00	AVRG	<-
1,1-Dichloroethane	0.7270000	0.3666741	0.3666741	0.2	49.56	50.00	AVRG	
1,1-Dichloroethene	0.4240000	0.1712591	0.1712591	0.1	59.61	50.00	AVRG	<-
Trichloroethene	0.3500000	0.1544426	0.1544426	0.2	55.87	50.00	AVRG	<-
1,2,3-Trichlorobenzene	30.143914	50.000000	0.1130961	0.1	39.71	50.00	2RDR	
Trichlorofluoromethane	0.7760000	0.3087919	0.3087919	0.1	60.21	50.00	AVRG	<-
1,2,4-Trichlorobenzene	0.4210000	0.2271244	0.2271244	0.2	46.05	50.00	AVRG	
1,2,4-Trimethylbenzene	2.3720000	1.1711937	1.1711937	0.1	50.62	50.00	AVRG	<-
Tetrachloroethene	0.3510000	0.1430483	0.1430483	0.2	59.24	50.00	AVRG	<-
1,2-Dichlorobenzene	1.3270000	0.6222863	0.6222863	0.4	53.10	50.00	AVRG	<-
1,2-Dichloroethane	0.3970000	0.1825836	0.1825836	0.1	54.01	50.00	AVRG	<-
1,2-Dichloropropane	0.2990000	0.1443569	0.1443569	0.1	51.72	50.00	AVRG	<-
1,3,5-Trimethylbenzene	2.2760000	1.1440332	1.1440332	0.1	49.73	50.00	AVRG	
1,3-Dichloropropane	0.5310000	0.2539148	0.2539148	0.1	52.18	50.00	AVRG	<-
1,4-Dichlorobenzene	1.4570000	0.6819103	0.6819103	0.4	53.20	50.00	AVRG	<-
Toluene	1.4180000	0.6611158	0.6611158	0.4	53.38	50.00	AVRG	<-
2-Butanone	0.1530000	7.4e-002	7.4e-002	0.1	51.63	50.00	AVRG	<-
2-Chlorotoluene	1.7990000	0.9508230	0.9508230	0.1	47.15	50.00	AVRG	
2-Hexanone	0.2050000	9.42e-002	9.42e-002	0.1	54.05	50.00	AVRG	<-
4-Chlorotoluene	2.1800000	1.0951755	1.0951755	0.1	49.76	50.00	AVRG	
tert-Butylbenzene	1.9490000	0.9545607	0.9545607	0.1	51.02	50.00	AVRG	<-
4-Methyl-2-Pentanone	0.2930000	0.1407297	0.1407297	0.1	51.97	50.00	AVRG	<-
Acetone	38.848484	100.00000	5.32e-002	0.1	61.15	50.00	LINR	<-
Benzene	1.1440000	0.5547910	0.5547910	0.5	51.50	50.00	AVRG	<-
Bromobenzene	0.8690000	0.4268815	0.4268815	0.1	50.88	50.00	AVRG	<-
Bromochloromethane	0.2710000	0.1228479	0.1228479	0.1	54.67	50.00	AVRG	<-
Bromodichloromethane	0.4140000	0.1883852	0.1883852	0.2	54.50	50.00	AVRG	<-
Bromoform	21.364566	50.000000	0.1237407	0.1	57.27	50.00	LINR	<-
Bromomethane	13.472991	50.000000	0.1503177	0.1	73.05	50.00	LINR	<-
Carbon Disulfide	1.1530000	0.5804151	0.5804151	0.1	49.66	50.00	AVRG	
Carbon Tetrachloride	0.4420000	0.1829124	0.1829124	0.1	58.62	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.: HS1912115

Instrument ID: VOA6 Calibration Date: 01/02/20 Time: 2111

Lab File ID: X010229 Init. Calib. Date(s): 11/18/19 11/18/19

Init. Calib. Times: 1347 1746

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Chlorobenzene	0.9760000	0.4373845	0.4373845	0.5	55.19	50.00	AVRG	<-
Chloroethane	0.3150000	0.1318281	0.1318281	0.1	58.15	50.00	AVRG	<-
Chloroform	0.8100000	0.3616362	0.3616362	0.2	55.35	50.00	AVRG	<-
Chloromethane	21.349764	50.000000	0.2307028	0.1	57.30	50.00	LINR	<-
cis-1,2-Dichloroethene	0.4740000	0.2315220	0.2315220	0.1	51.16	50.00	AVRG	<-
Dibromochloromethane	0.3800000	0.1739182	0.1739182	0.1	54.23	50.00	AVRG	<-
Dichlorodifluoromethane	23.779821	50.000000	0.2123949	0.1	52.44	50.00	LINR	<-
Ethylbenzene	0.5040000	0.2277206	0.2277206	0.1	54.82	50.00	AVRG	<-
Hexachlorobutadiene	0.4020000	0.1724027	0.1724027	0.1	57.11	50.00	AVRG	<-
Isopropylbenzene	1.4940000	0.6565621	0.6565621	0.1	56.05	50.00	AVRG	<-
m,p-Xylenes	0.6080000	0.2743054	0.2743054	0.1	54.88	50.00	AVRG	<-
Methylene Chloride	0.4520000	0.2125709	0.2125709	0.1	52.97	50.00	AVRG	<-
n-Butylbenzene	2.0360000	0.9652293	0.9652293	0.5	52.59	50.00	AVRG	<-
n-Propylbenzene	3.0900000	1.5630683	1.5630683	0.1	49.42	50.00	AVRG	
Naphthalene	0.5400000	0.2752271	0.2752271	0.2	49.03	50.00	AVRG	
o-Xylene	0.6000000	0.2709613	0.2709613	0.3	54.84	50.00	AVRG	<-
sec-Butylbenzene	2.6850000	1.2998331	1.2998331	0.1	51.59	50.00	AVRG	<-
Styrene	1.0440000	0.4789005	0.4789005	0.3	54.13	50.00	AVRG	<-
Vinyl Chloride	0.5100000	0.2451700	0.2451700	0.1	51.93	50.00	AVRG	<-
1,2,3-Trichloropropane	0.5960000	0.3123992	0.3123992	0.1	47.58	50.00	AVRG	
p-Isopropyltoluene	2.4460000	1.1706806	1.1706806	0.1	52.14	50.00	AVRG	<-
1,2-Dibromo-3-Chloropropane	24.374206	50.000000	3.81e-002	0.05	51.25	50.00	LINR	<-
1,2-Dichloroethane-d4	51.000679	50.000000	0.4799539	0.1	-2.00	50.00	LINR	
Dibromofluoromethane	50.435190	50.000000	0.4586289	0.1	-0.87	50.00	LINR	
Toluene-d8	1.3170000	1.3127833	1.3127833	0.1	0.32	50.00	AVRG	
4-Bromofluorobenzene	50.601435	50.000000	0.4708295	0.1	-1.20	50.00	LINR	

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS19121155

Lab File ID (Standard): X010202 Date Analyzed: 01/02/20

Instrument ID: VOA6 Time Analyzed: 1023

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	458722	7.67	502111	4.97	235258	9.66
	UPPER LIMIT	917444	8.17	1004222	5.47	470516	10.16
	LOWER LIMIT	229361	7.17	251056	4.47	117629	9.16
	CLIENT SAMPLE NO.						
01	VLCSW-200102	484500	7.67	543397	4.97	248490	9.67
02	VBLKW-200102	576824	7.67	665875	4.97	283964	9.67
03	HS19121155-09	586514	7.67	685539	4.97	287656	9.67
04	HS19121155-01	572431	7.67	673922	4.97	283623	9.67
05	HS19121155-02	554247	7.67	660876	4.97	234566	9.67
06	HS19121155-08	609997	7.67	501177	4.96	310119	9.66
07	HS19121155-03	614898	7.67	723996	4.97	299162	9.67
08	HS19121257-01	585783	7.67	685546	4.97	286860	9.67
09	HS19121257-01	587766	7.67	683266	4.97	287693	9.67
10	HS19121155-03	595743	7.67	704302	4.97	293126	9.67
11	HS19121155-04	616428	7.67	716432	4.97	308135	9.67
12	HS19121155-05	637326	7.67	733589	4.97	314681	9.67
13	HS19121155-06	643891	7.67	741109	4.97	326365	9.67
14	HS19121155-07	648548	7.67	748958	4.97	319248	9.67
15							
16							
17							
18							
19							
20							

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

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

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

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS19121155

Lab File ID (Standard): X010202 Date Analyzed: 01/02/20

Instrument ID: VOA6 Time Analyzed: 1023

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

		IS4 AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	348539	4.18				
	UPPER LIMIT	697078	4.68				
	LOWER LIMIT	174270	3.68				
	CLIENT SAMPLE NO.						
01	VLCSW-200102	373826	4.18				
02	VBLKW-200102	472706	4.18				
03	HS19121155-09	492964	4.18				
04	HS19121155-01	481027	4.18				
05	HS19121155-02	472621	4.18				
06	HS19121155-08	287118	4.18				
07	HS19121155-03	505240	4.18				
08	HS19121257-01	482225	4.18				
09	HS19121257-01	480311	4.18				
10	HS19121155-03	491620	4.18				
11	HS19121155-04	504999	4.18				
12	HS19121155-05	512453	4.18				
13	HS19121155-06	522900	4.18				
14	HS19121155-07	529651	4.18				
15							
16							
17							
18							
19							
20							

IS4 = Pentafluorobenzene

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

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

FORM VIII VOA

Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010201.D

Date : 02-JAN-2020 09:59

Client ID: BFB

Instrument: voa6.i

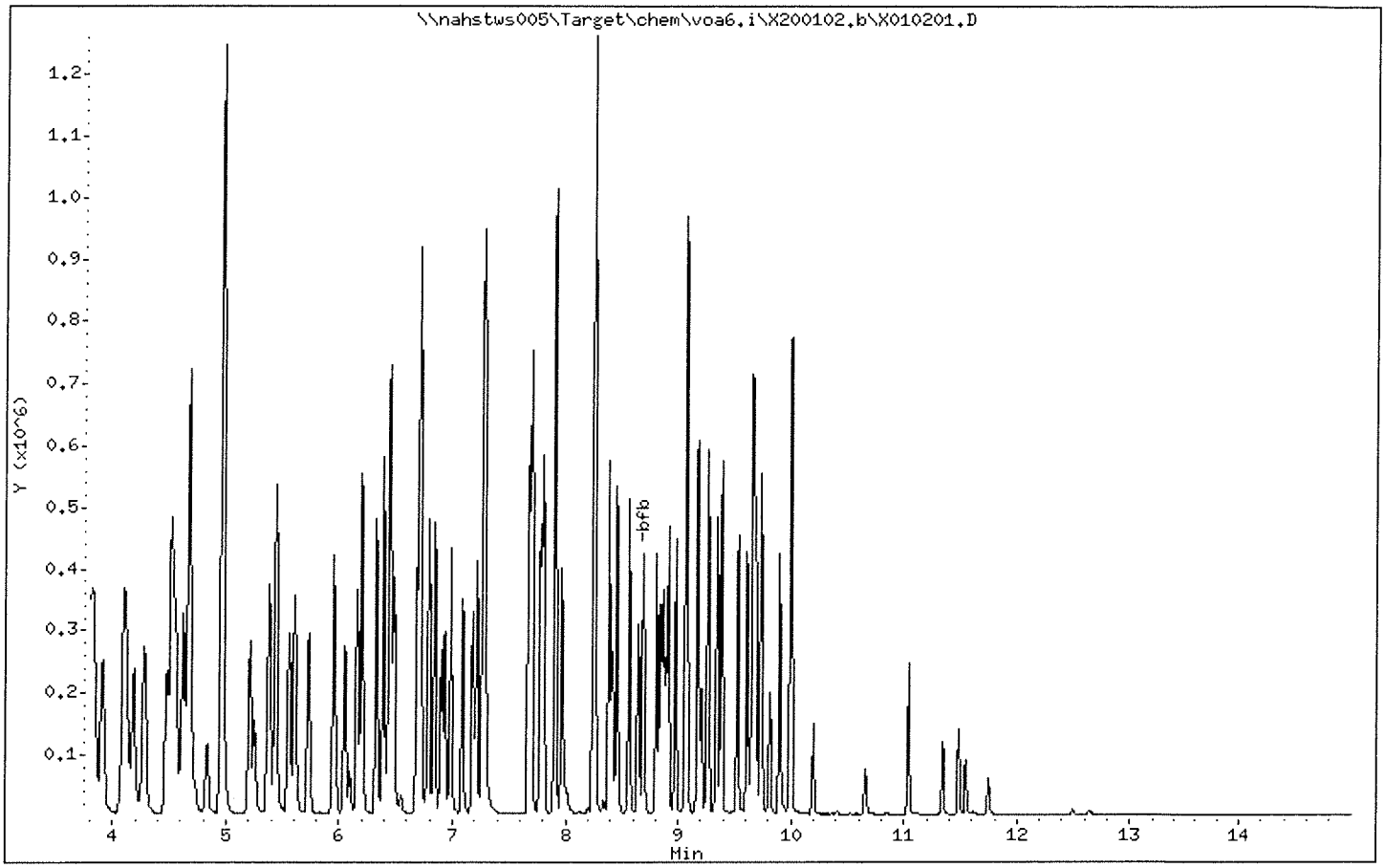
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010201.D

Date : 02-JAN-2020 09:59

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

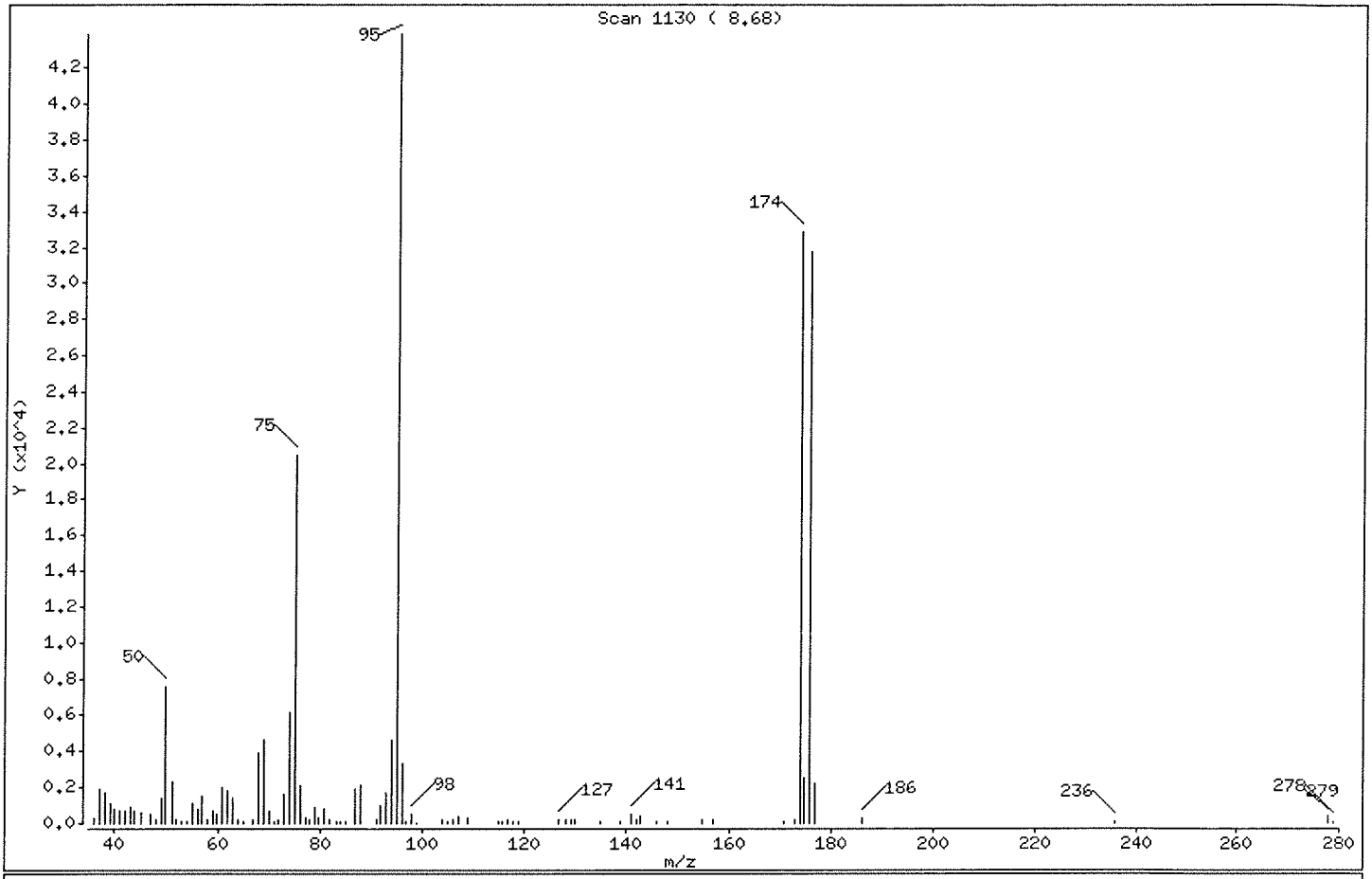
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.27
75	30.00 - 60.00% of mass 95	46.72
96	5.00 - 9.00% of mass 95	7.63
173	Less than 2.00% of mass 174	0.54 (0.73)
174	Greater than 50.00% of mass 95	74.84
175	5.00 - 9.00% of mass 174	5.76 (7.70)
176	95.00 - 101.00% of mass 174	72.49 (96.86)
177	5.00 - 9.00% of mass 176	5.03 (6.95)

Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010201.D Page 3

Date : 02-JAN-2020 09:59

Client ID: BFB Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0 Operator: PC

Column phase: DB624 Column diameter: 0.25

Data File: X010201.D
Spectrum: Scan 1130 (8.68)
Location of Maximum: 95.00
Number of points: 92

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.90	286	61.00	1979	86.90	1957	129.80	187
37.10	1929	62.00	1801	88.00	2103	135.00	68
38.00	1666	63.00	1402	91.00	208	138.70	51
39.00	1092	64.00	184	92.00	1020	140.90	481
40.00	799	65.10	103	93.00	1677	142.10	196
41.10	700	67.00	180	94.00	4633	142.90	357
42.10	672	68.00	3941	95.00	43856	146.00	70
43.00	880	69.00	4604	96.00	3346	147.90	70
43.90	675	70.00	749	97.00	120	154.80	205
45.10	654	71.10	89	98.00	552	157.00	191
47.10	518	72.00	211	98.90	50	171.00	126
48.10	210	73.00	1613	103.90	205	173.00	238
49.00	1437	74.10	6156	104.90	143	173.90	32824
50.00	7573	75.00	20488	105.90	172	174.90	2528
51.10	2275	76.10	2073	107.00	408	175.90	31792
52.10	178	77.10	310	109.00	339	176.90	2208
53.20	52	77.90	238	115.00	85	186.00	284
54.00	113	79.00	869	115.70	116	235.70	75
55.10	1101	79.80	283	116.90	222	278.00	365
56.10	801	80.90	805	117.90	136	279.10	66
57.00	1531	81.90	233	119.00	108		
58.00	152	83.20	123	126.80	246		
59.00	709	83.90	121	128.00	243		
59.90	455	85.10	54	129.10	167		

Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010202.D Page 1
Report Date: 26-Jan-2020 12:07

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200102.b\X010202.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 02-JAN-2020 10:23
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200102.b\8260W.m
Meth Date : 26-Jan-2020 12:07 voa6.i Quant Type: ISTD
Cal Date : 18-NOV-2019 16:35 Cal File: X111808.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

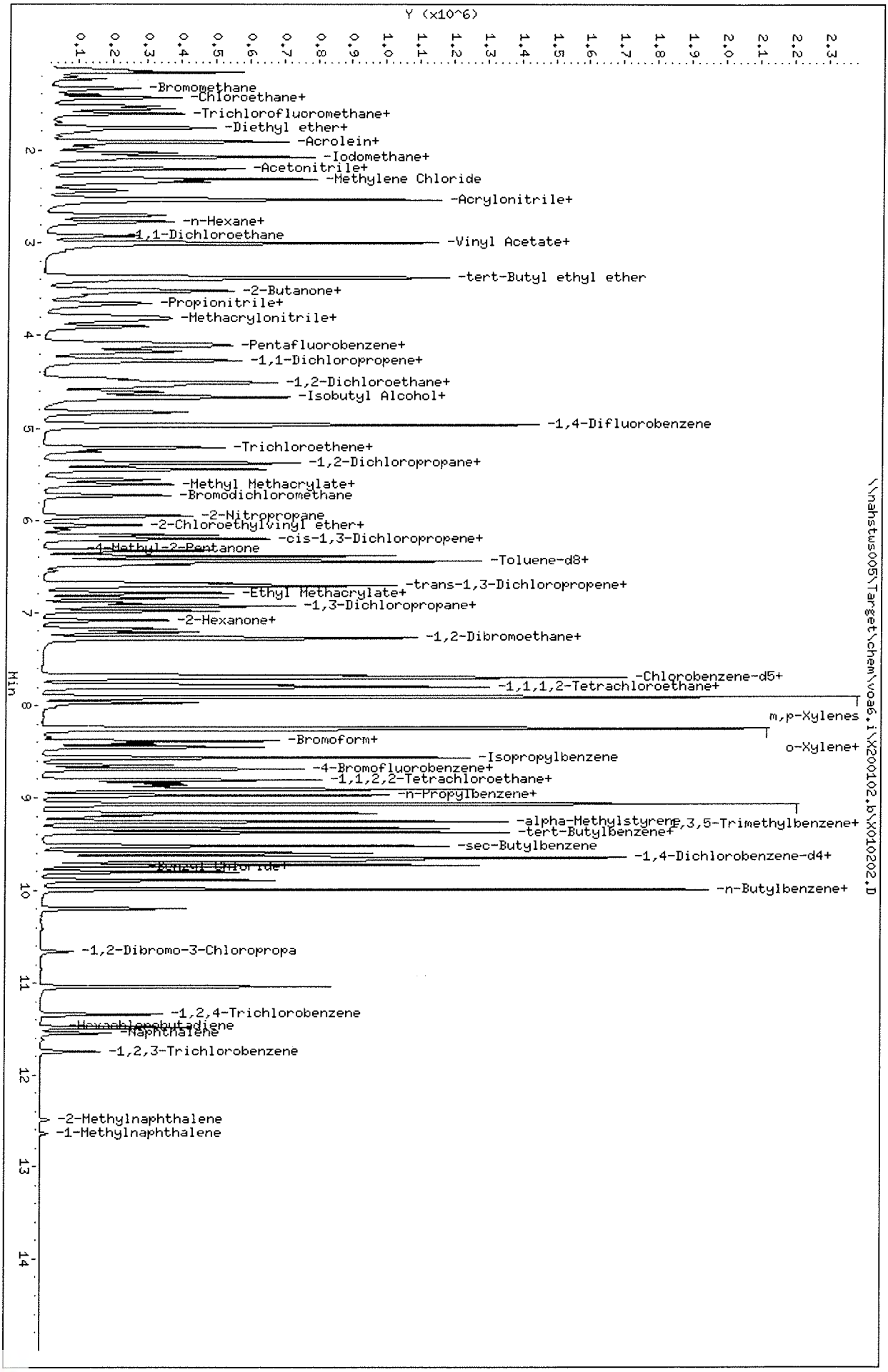
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	348539	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	502111	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	458722	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	235258	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	164638	50.0000	51.93
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	172328	50.0000	52.51
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	600622	50.0000	49.69
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	225432	50.0000	52.79
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	171427	50.0000	51.51
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	247939	50.0000	52.73
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	178683	50.0000	54.01
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	125768	50.0000	52.44
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	295260	50.0000	58.22
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	138228	50.0000	46.79
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	221462	50.0000	54.67
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	51916	50.0000	59.43
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	154720	50.0000	55.19(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	103303	50.0000	52.12
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	620210	50.0000	55.56
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.103)	20213	50.0000	55.38
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	162875	50.0000	50.62
88 1,2-Dichlorobenzene	146	9.998	9.998	(1.035)	324858	50.0000	52.02

Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010202.D Page 2
Report Date: 26-Jan-2020 12:07

	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)	207089	50.0000	51.95
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	166904	50.0000	55.64
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	608275	50.0000	56.78
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	359968	50.0000	53.35
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	258431	50.0000	53.08
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	360198	50.0000	52.53
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	252084	50.0000	54.76
24	2-Butanone	43	3.573	3.573	(0.854)	123695	100.000	115.66
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	493016	50.0000	58.24
52	2-Hexanone	43	7.083	7.083	(0.923)	198463	100.000	105.31
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	574681	50.0000	56.01
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	640879	50.0000	55.67
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	282575	100.000	105.13
10	Acetone	43	1.969	1.969	(0.471)	104986	100.000	116.98
37	Benzene	78	4.512	4.512	(0.908)	656760	50.0000	57.17
74	Bromobenzene	156	8.809	8.809	(0.912)	217997	50.0000	53.31
29	Bromochloromethane	128	3.795	3.795	(0.908)	99687	50.0000	52.79
39	Bromodichloromethane	83	5.729	5.729	(1.153)	220977	50.0000	53.18
66	Bromoform	173	8.415	8.415	(1.097)	132920	50.0000	48.68
6	Bromomethane	94	1.338	1.338	(0.320)	140322	50.0000	40.04(M)
19	Carbon Disulfide	76	2.069	2.069	(0.495)	971063	100.000	120.84
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	223836	50.0000	50.44
59	Chlorobenzene	112	7.699	7.699	(1.004)	459085	50.0000	51.26
7	Chloroethane	64	1.403	1.403	(0.336)	101935	50.0000	46.45
28	Chloroform	83	3.910	3.910	(0.935)	290315	50.0000	51.43
3	Chloromethane	50	1.073	1.073	(0.257)	180716	50.0000	47.74
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	187198	50.0000	56.63
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	280544	50.0000	57.29
55	Dibromochloromethane	129	7.176	7.176	(0.936)	181468	50.0000	52.09
44	Dibromomethane	93	5.557	5.557	(1.118)	109756	50.0000	51.70
2	Dichlorodifluoromethane	85	0.966	0.966	(0.231)	177196	50.0000	55.69
61	Ethylbenzene	106	7.799	7.799	(1.017)	247870	50.0000	53.56
91	Hexachlorobutadiene	225	11.488	11.488	(1.189)	81201	50.0000	42.94
67	Isopropylbenzene	105	8.566	8.566	(1.117)	716450	50.0000	52.27
62	m,p-Xylenes	106	7.907	7.907	(1.031)	591059	100.000	105.85
17	Methylene Chloride	84	2.305	2.305	(0.551)	171328	50.0000	54.36
87	n-Butylbenzene	91	9.998	9.998	(1.035)	528452	50.0000	55.16
73	n-Propylbenzene	91	8.917	8.917	(0.923)	821549	50.0000	56.49
92	Naphthalene	128	11.546	11.546	(1.195)	140956	50.0000	55.45
63	o-Xylene	106	8.244	8.244	(1.075)	290107	50.0000	52.64
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	706971	50.0000	55.96
64	Styrene	104	8.258	8.258	(1.077)	503457	50.0000	52.53
78	tert-Butylbenzene	119	9.339	9.339	(0.967)	507311	50.0000	55.31
56	Tetrachloroethene	164	6.933	6.933	(0.904)	154601	50.0000	47.96
50	Toluene	91	6.446	6.446	(0.840)	695336	50.0000	53.45
20	trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	161913	50.0000	56.46
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	244717	50.0000	54.83
38	Trichloroethene	130	5.206	5.206	(1.048)	188894	50.0000	53.79
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	253790	50.0000	46.94
5	Vinyl Chloride	62	1.138	1.138	(0.272)	194173	50.0000	54.66

QC Flag Legend

M - Compound response manually integrated.

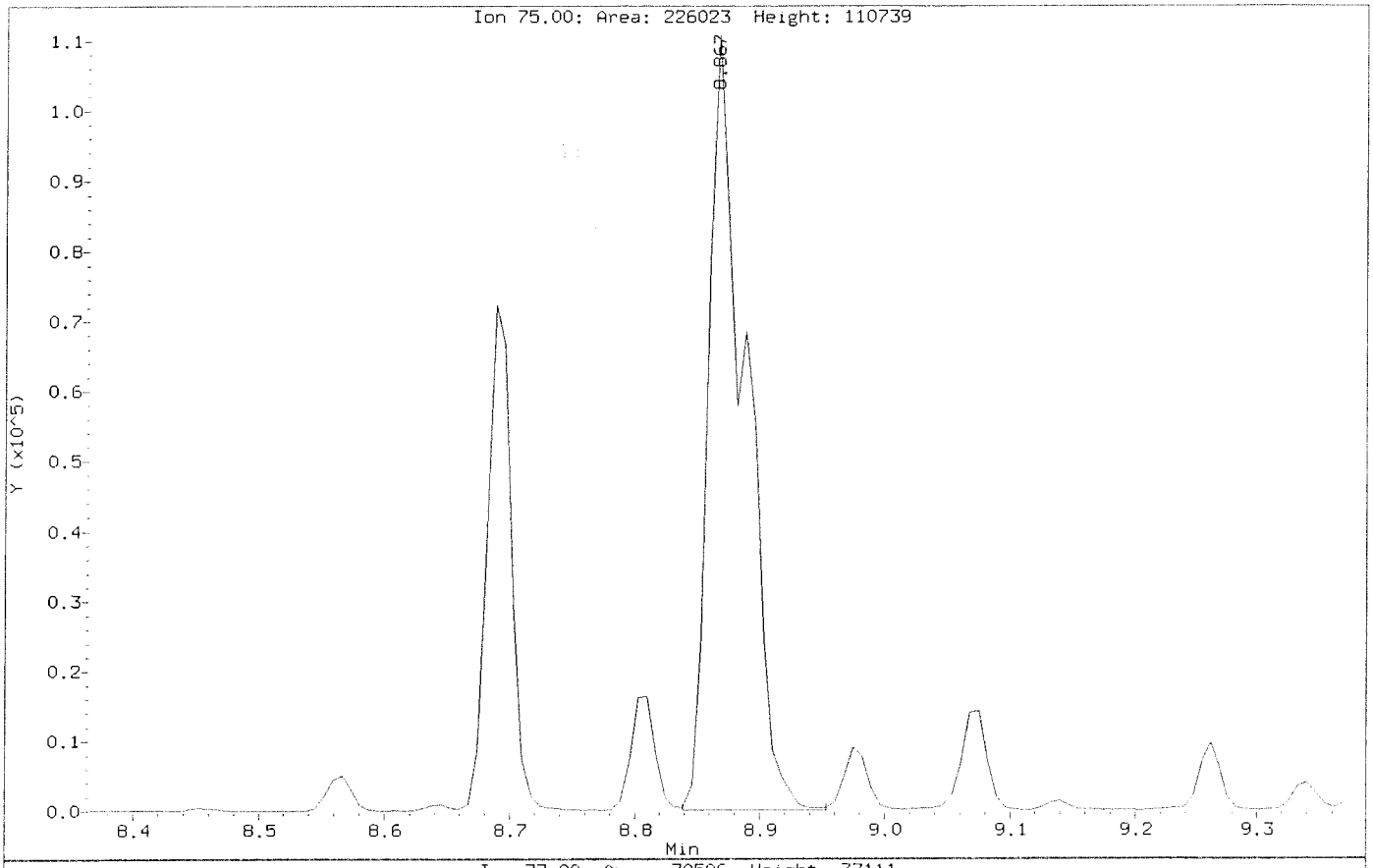


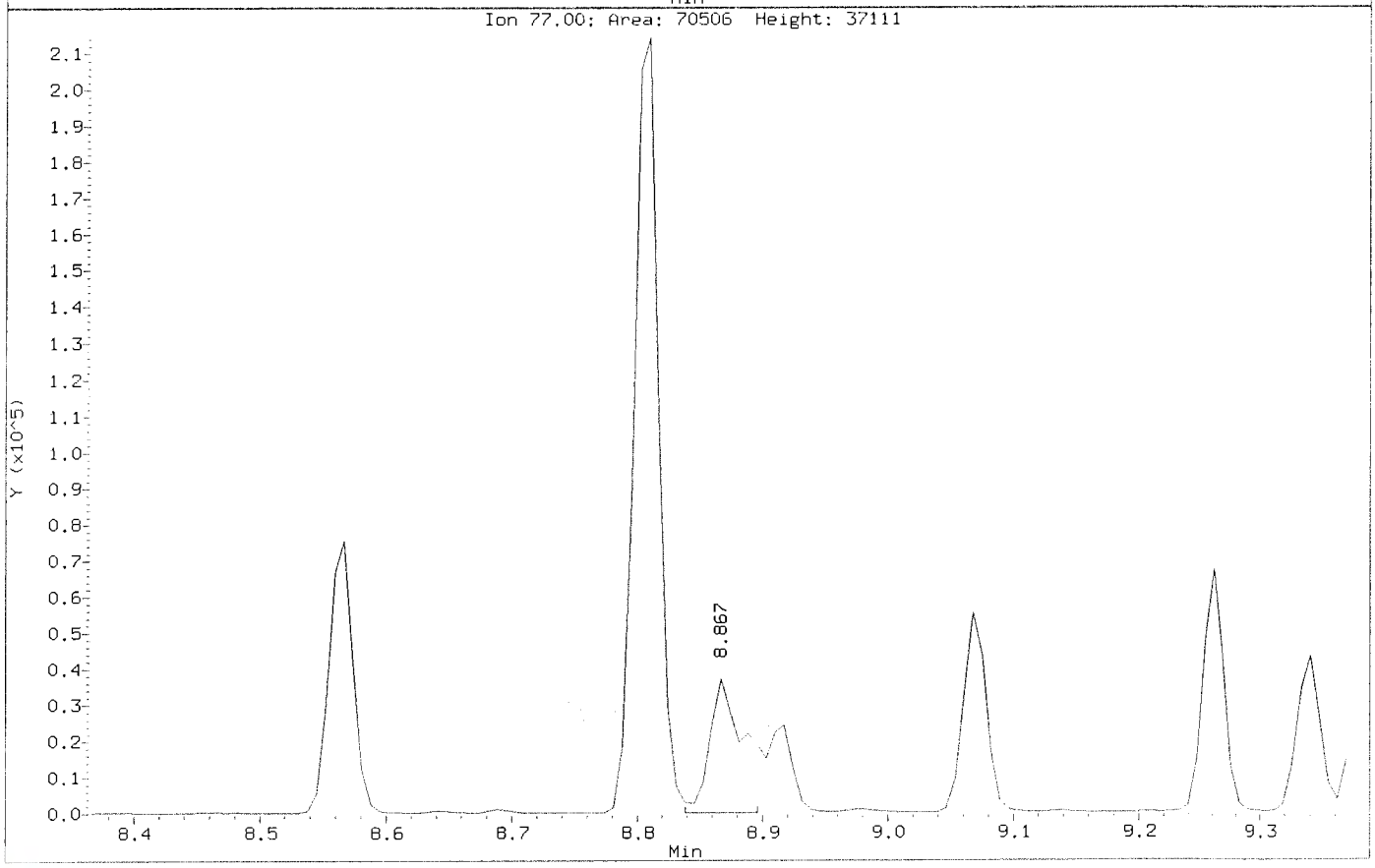
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Client ID: CCV
Sample Info: CCV;CCV;2;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\Before\X010202.D
Injection Date: 02-JAN-2020 10:23
Instrument: voa6.i
Client Sample ID: CCV

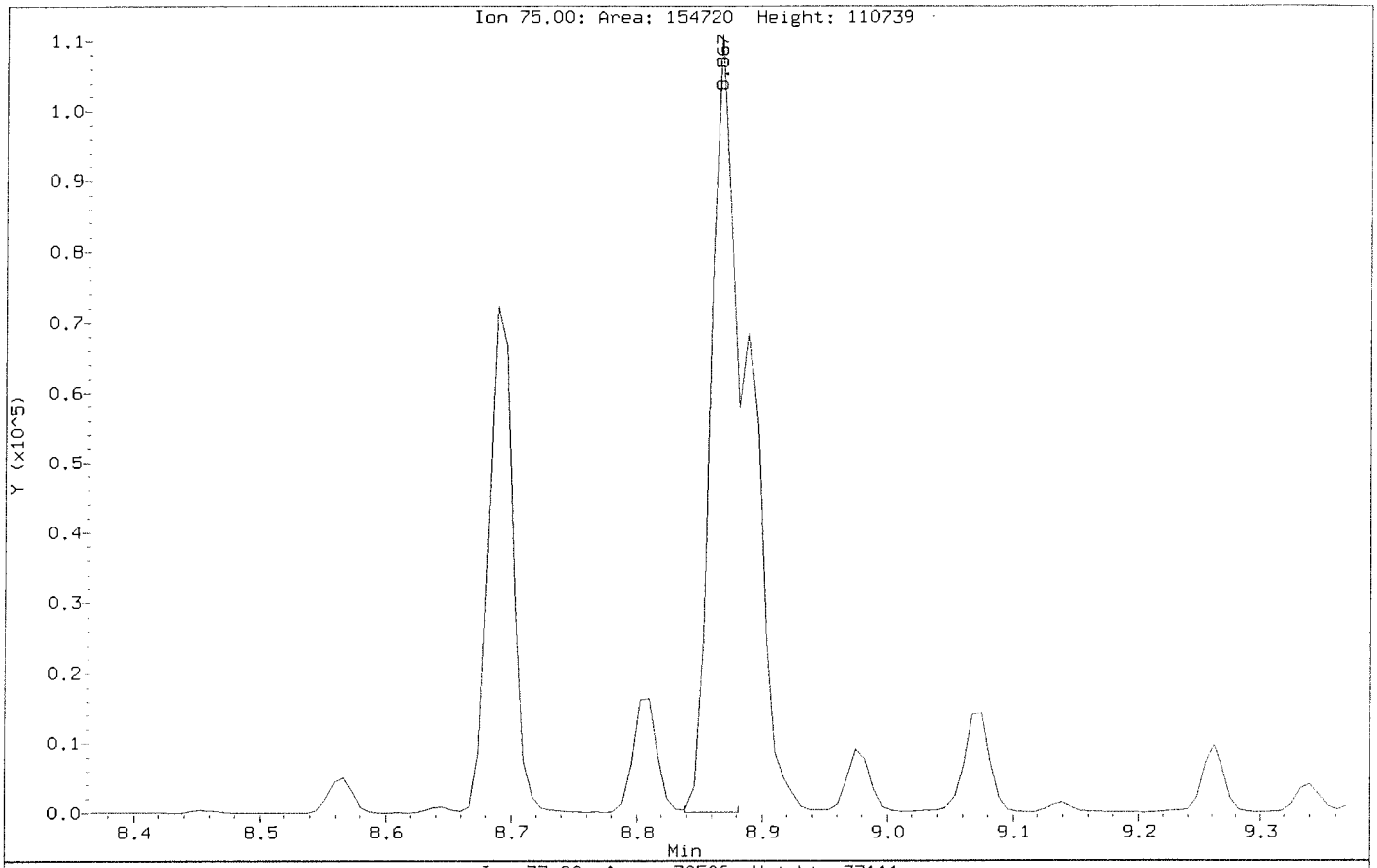
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

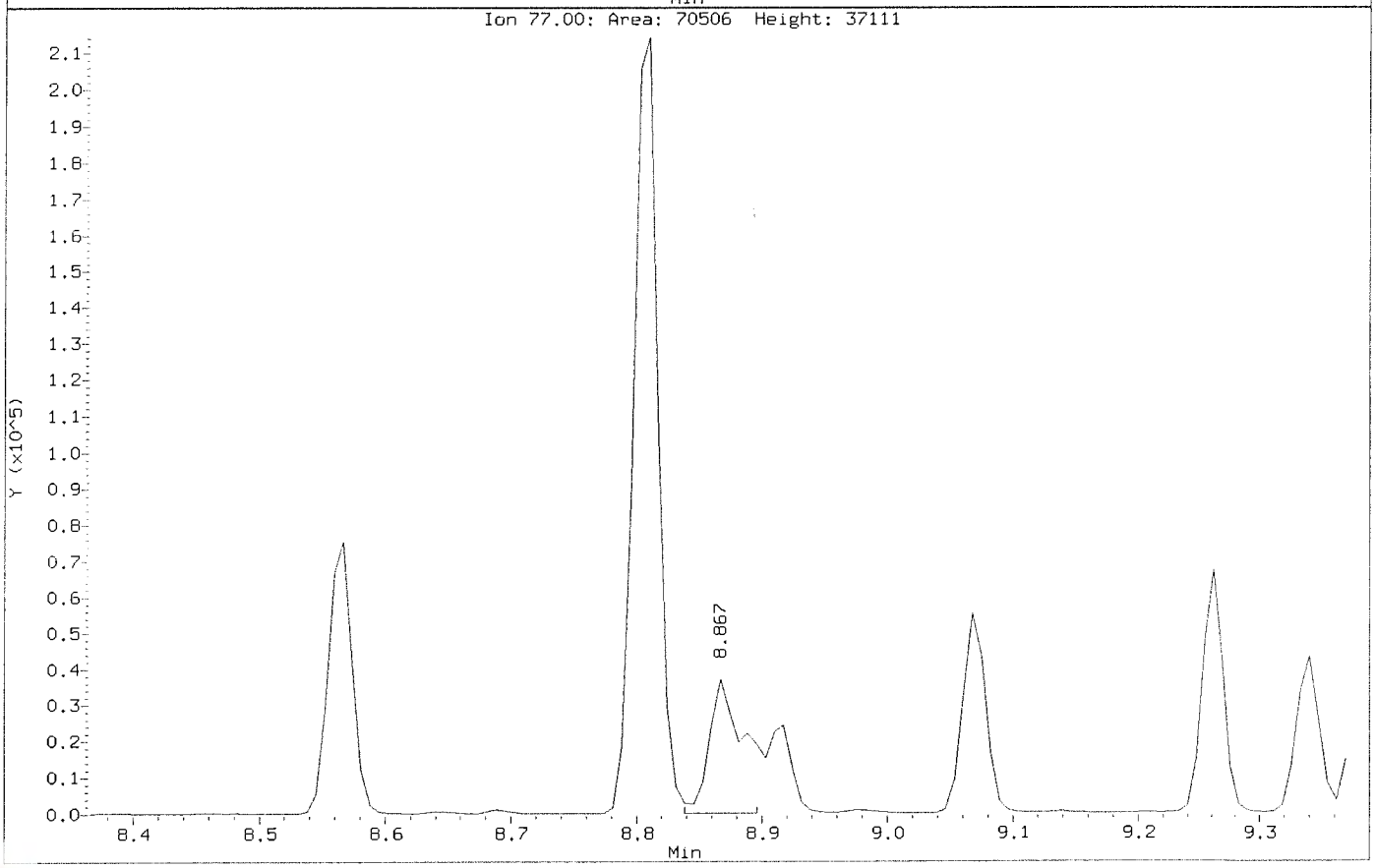




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Instrument: voa6.i
Client Sample ID: CCV

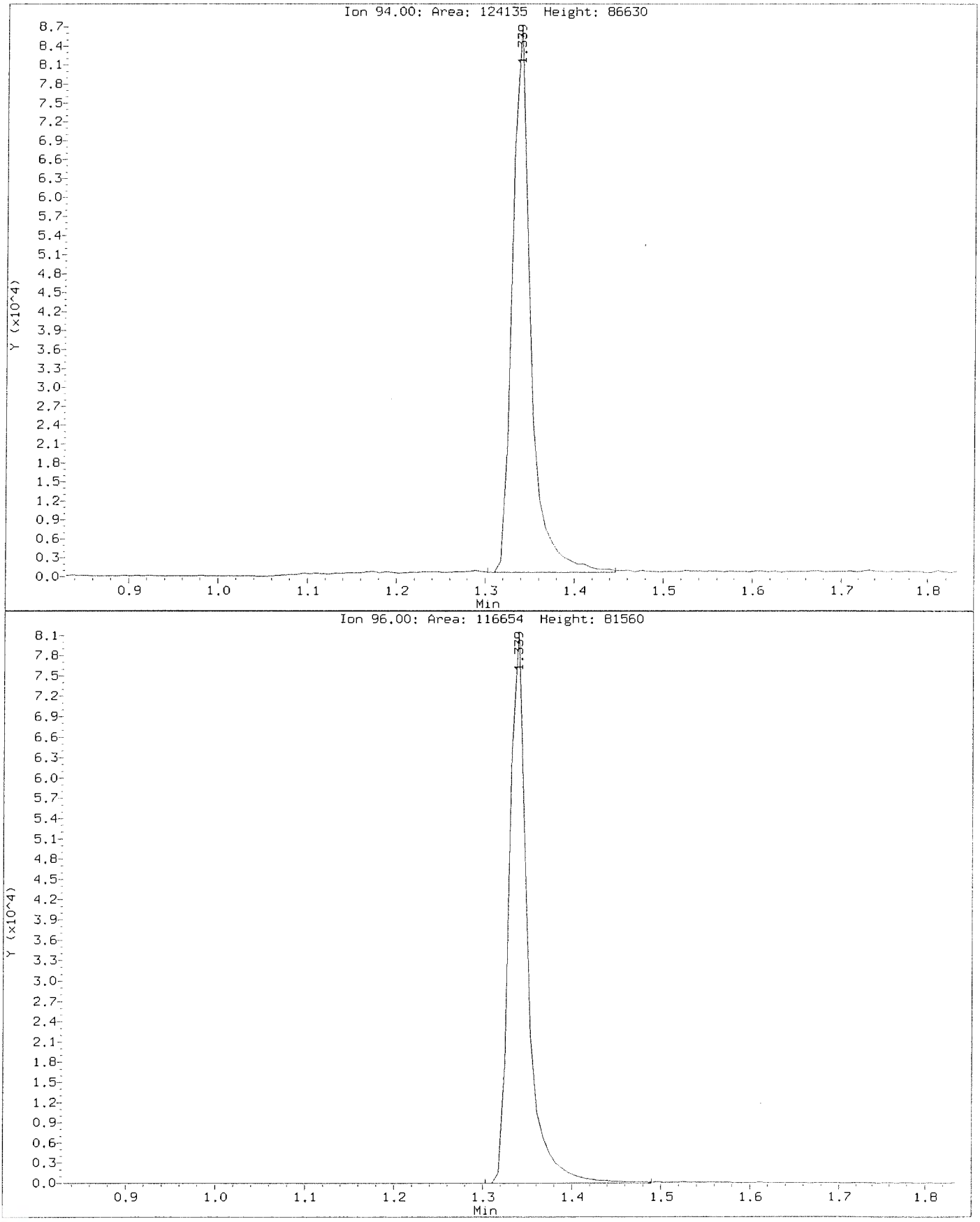
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CAS Number: 96-18-4





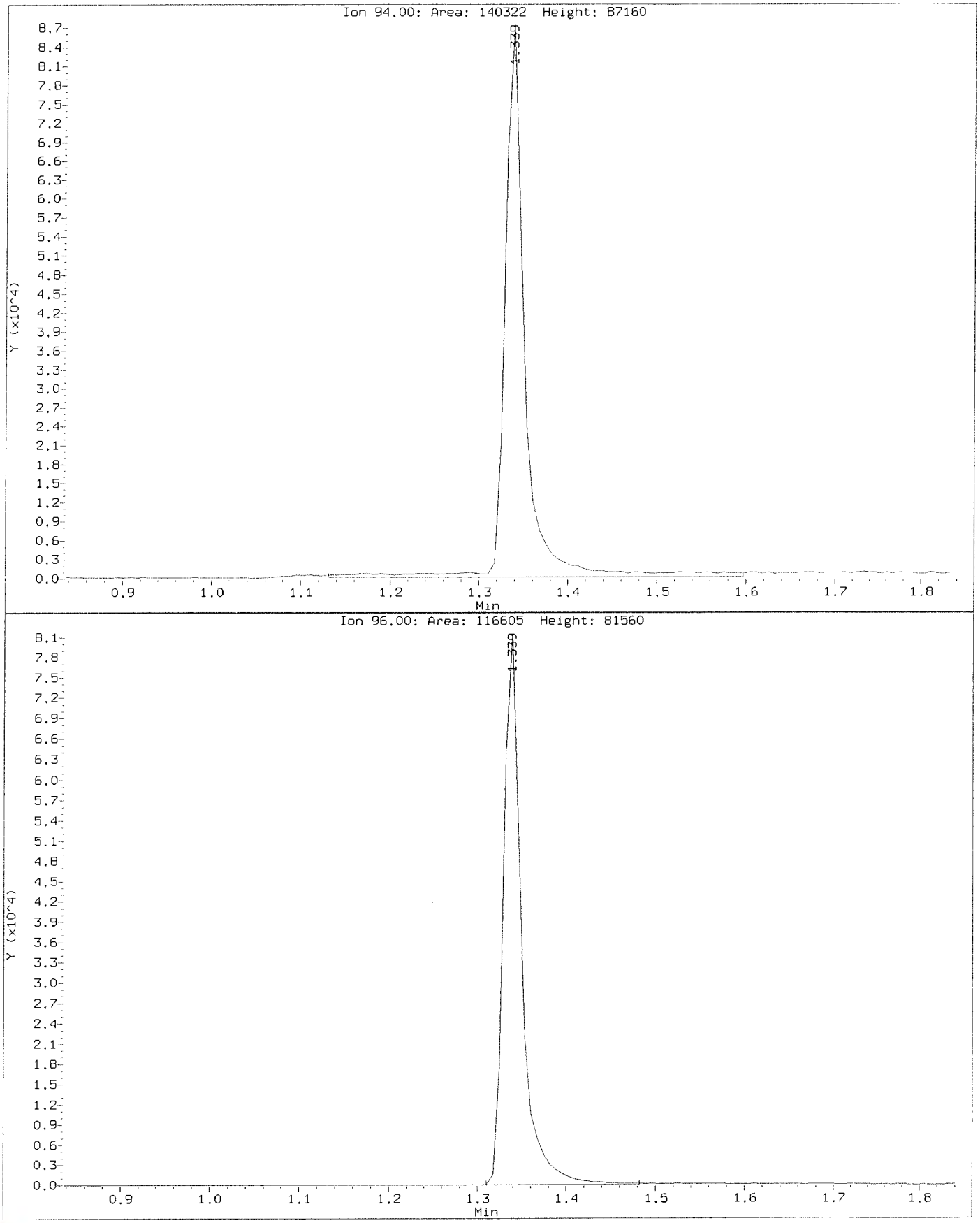
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Injection Date: 02-JAN-2020 10:23
Instrument: voa6.i
Client Sample ID: CCV

Compound: Bromomethane
CAS Number: 74-83-9



Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010202.D
Injection Date: 02-JAN-2020 10:23
Instrument: voa6.i
Client Sample ID: CCV

Compound: Bromomethane
CAS Number: 74-83-9



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200102.b\X010206.D
Lab Smp Id: VLCSW-200102 Client Smp ID: VLCSW-200102
Inj Date : 02-JAN-2020 11:58
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-200102;VLCSW-200102;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200102.b\8260W.m
Meth Date : 26-Jan-2020 12:07 voa6.i Quant Type: ISTD
Cal Date : 18-NOV-2019 16:35 Cal File: X111808.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

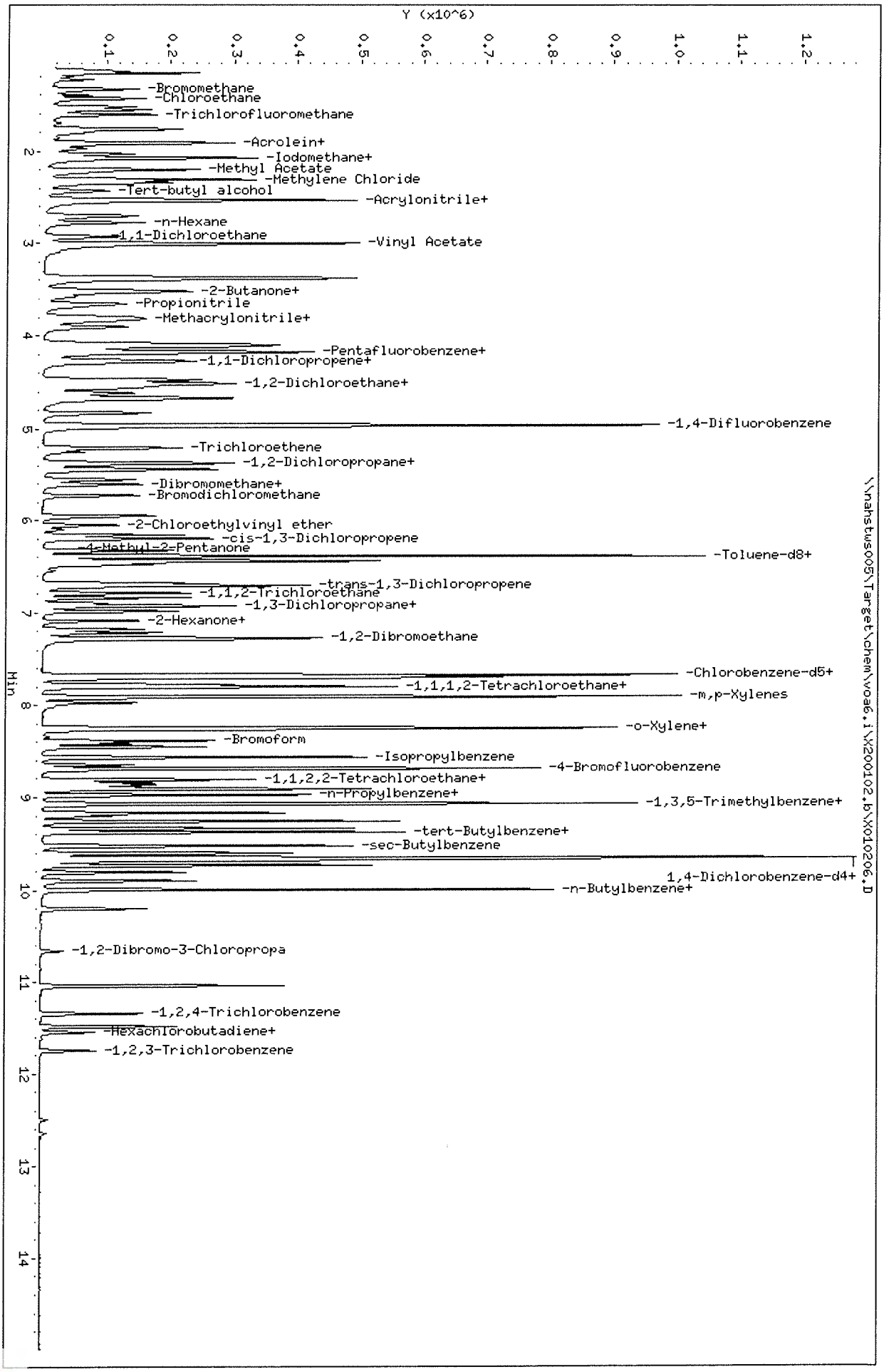
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	373826	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	543397	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	484500	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	248490	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	173969	51.1716	51.17
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	183388	52.1125	52.11
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	625807	49.0230	49.02
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	234114	51.9207	51.92
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	72080	20.5066	20.50
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	104786	20.7778	20.77
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	76104	21.7801	21.78
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	53506	21.1261	21.12
22 1,1-Dichloroethane	63	2.922	2.921	(0.699)	127306	23.4052	23.40
11 1,1-Dichloroethene	96	1.912	1.911	(0.457)	58603	18.4981	18.49
32 1,1-Dichloropropene	75	4.283	4.282	(0.862)	93029	21.2234	21.22
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	25051	26.7868	26.78
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	65645	22.1721	22.17(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	48435	23.1393	23.13
79 1,2,4-Trimethylbenzene	105	9.383	9.382	(0.970)	259832	22.0372	22.03
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.657	(1.102)	8089	20.7724	20.77
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	69626	20.4900	20.48
88 1,2-Dichlorobenzene	146	9.999	9.998	(1.034)	135811	20.5930	20.59

Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010206.D Page 2
Report Date: 26-Jan-2020 12:07

	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	4.555	(0.918)	88045	20.4109	20.41
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	71052	21.8889	21.88
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	254278	22.4753	22.47
83	1,3-Dichlorobenzene	146	9.612	9.605	(0.994)	148852	20.8879	20.88
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	110866	21.5611	21.56
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	148860	20.5566	20.55
26	2,2-Dichloropropane	77	3.509	3.516	(0.839)	104120	21.0910	21.09
24	2-Butanone	43	3.581	3.573	(0.856)	51658	45.0354	45.03
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	209237	23.4043	23.40
52	2-Hexanone	43	7.083	7.083	(0.923)	82434	41.4184	41.41
77	4-Chlorotoluene	91	9.075	9.074	(0.939)	239529	22.1043	22.10
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	264858	21.7834	21.78
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	117906	41.5337	41.53
10	Acetone	43	1.969	1.969	(0.471)	45861	45.3577	45.35
37	Benzene	78	4.512	4.512	(0.908)	283976	22.8452	22.84
74	Bromobenzene	156	8.810	8.809	(0.911)	90854	21.0377	21.03
29	Bromochloromethane	128	3.795	3.795	(0.908)	43616	21.5374	21.53
39	Bromodichloromethane	83	5.729	5.729	(1.153)	93101	20.7035	20.70
66	Bromoform	173	8.416	8.415	(1.097)	54415	19.4835	19.48
6	Bromomethane	94	1.339	1.338	(0.320)	61896	15.0798	15.07
19	Carbon Disulfide	76	2.069	2.069	(0.495)	411285	47.7208	47.72
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	91844	19.1276	19.12
59	Chlorobenzene	112	7.699	7.699	(1.004)	192357	20.3362	20.33
7	Chloroethane	64	1.403	1.403	(0.336)	45670	19.4038	19.40
28	Chloroform	83	3.910	3.910	(0.935)	124022	20.4856	20.48
3	Chloromethane	50	1.074	1.073	(0.257)	77002	19.0823	19.08
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	80113	22.5980	22.59
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	116658	22.0136	22.01
55	Dibromochloromethane	129	7.176	7.176	(0.936)	74932	20.3654	20.36
44	Dibromomethane	93	5.558	5.557	(1.118)	47017	20.4681	20.46
2	Dichlorodifluoromethane	85	0.966	0.966	(0.231)	71221	21.4214	21.42
61	Ethylbenzene	106	7.800	7.799	(1.017)	103284	21.1334	21.13
91	Hexachlorobutadiene	225	11.489	11.488	(1.188)	41550	20.8064	20.80
67	Isopropylbenzene	105	8.566	8.566	(1.117)	299947	20.7205	20.72
62	m,p-Xylenes	106	7.907	7.907	(1.031)	247816	42.0206	42.02
17	Methylene Chloride	84	2.306	2.305	(0.551)	74439	22.0223	22.02
87	n-Butylbenzene	91	9.999	9.998	(1.034)	219188	21.6622	21.66
73	n-Propylbenzene	91	8.917	8.917	(0.922)	346190	22.5389	22.53
92	Naphthalene	128	11.546	11.546	(1.194)	57624	21.4638	21.46
63	o-Xylene	106	8.244	8.244	(1.075)	121578	20.8880	20.88
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	292069	21.8889	21.88
64	Styrene	104	8.258	8.258	(1.077)	212668	21.0118	21.01
78	tert-Butylbenzene	119	9.340	9.339	(0.966)	212797	21.9672	21.96
56	Tetrachloroethene	164	6.933	6.933	(0.904)	65795	19.3275	19.32
50	Toluene	91	6.446	6.446	(0.840)	297076	21.6223	21.62
20	trans-1,2-Dichloroethene	96	2.528	2.527	(0.604)	69098	22.4654	22.46
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	104502	21.6364	21.63
38	Trichloroethene	130	5.207	5.206	(1.048)	78184	20.5738	20.57
8	Trichlorofluoromethane	101	1.561	1.560	(0.373)	106637	18.3891	18.38
5	Vinyl Chloride	62	1.138	1.138	(0.272)	82946	21.7710	21.77

QC Flag Legend

M - Compound response manually integrated.

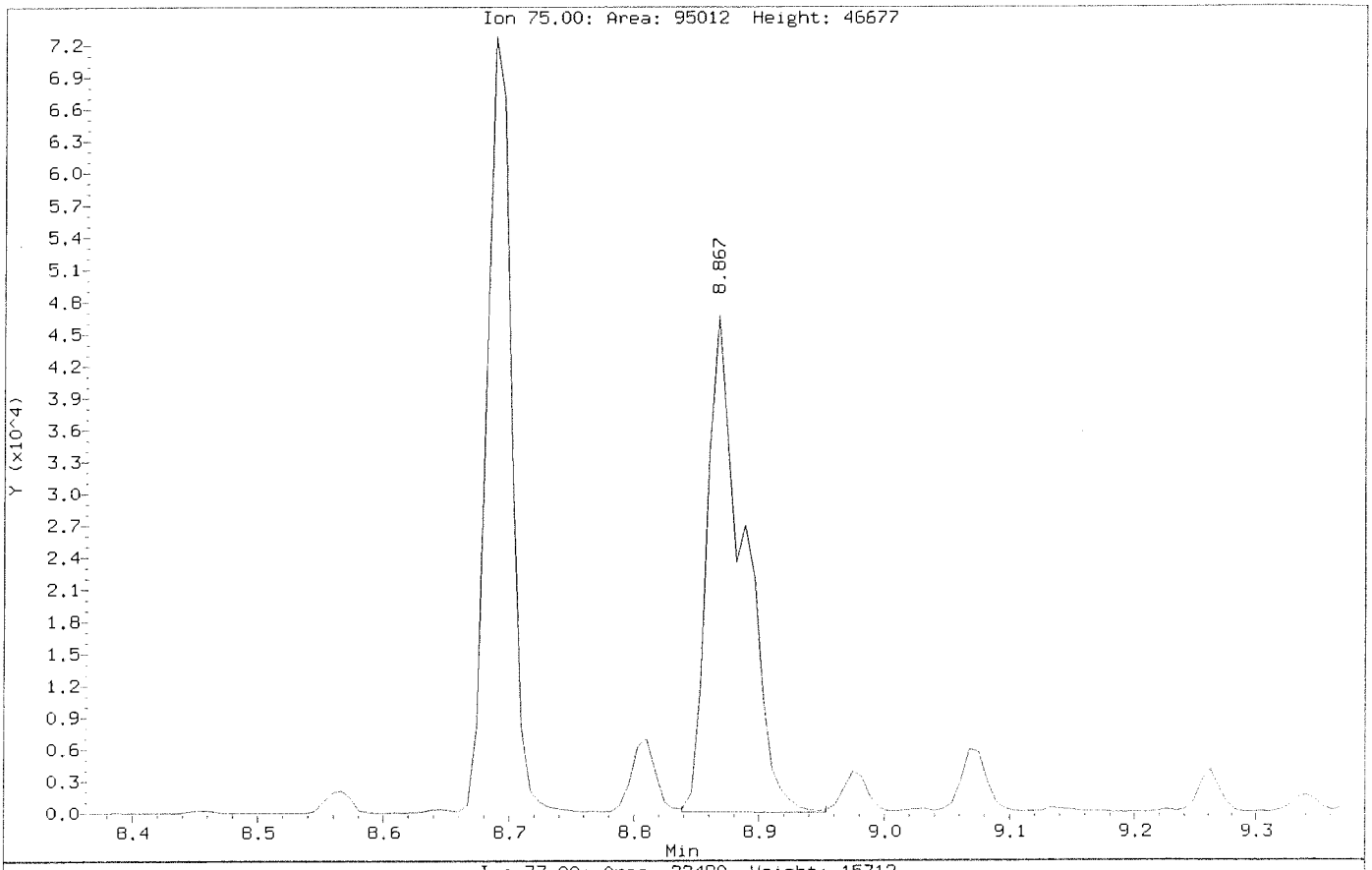


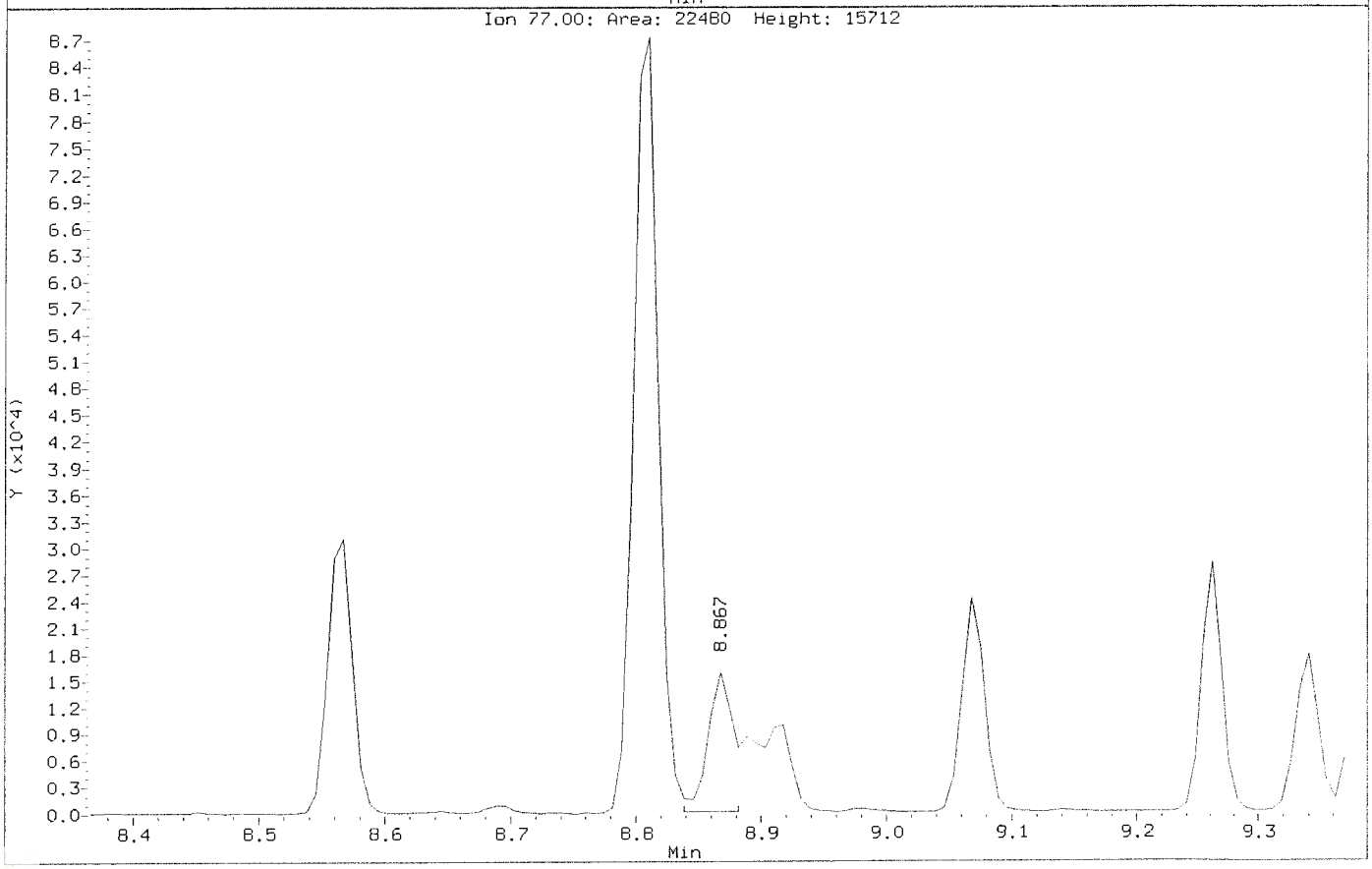
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Sample Info: VLCSW-200102;VLCSW-200102;3;;LCS
Purge Volume: 5.0
Column phase: DB624

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

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Injection Date: 02-JAN-2020 11:58
Instrument: voa6.i
Client Sample ID: VLCSW-200102

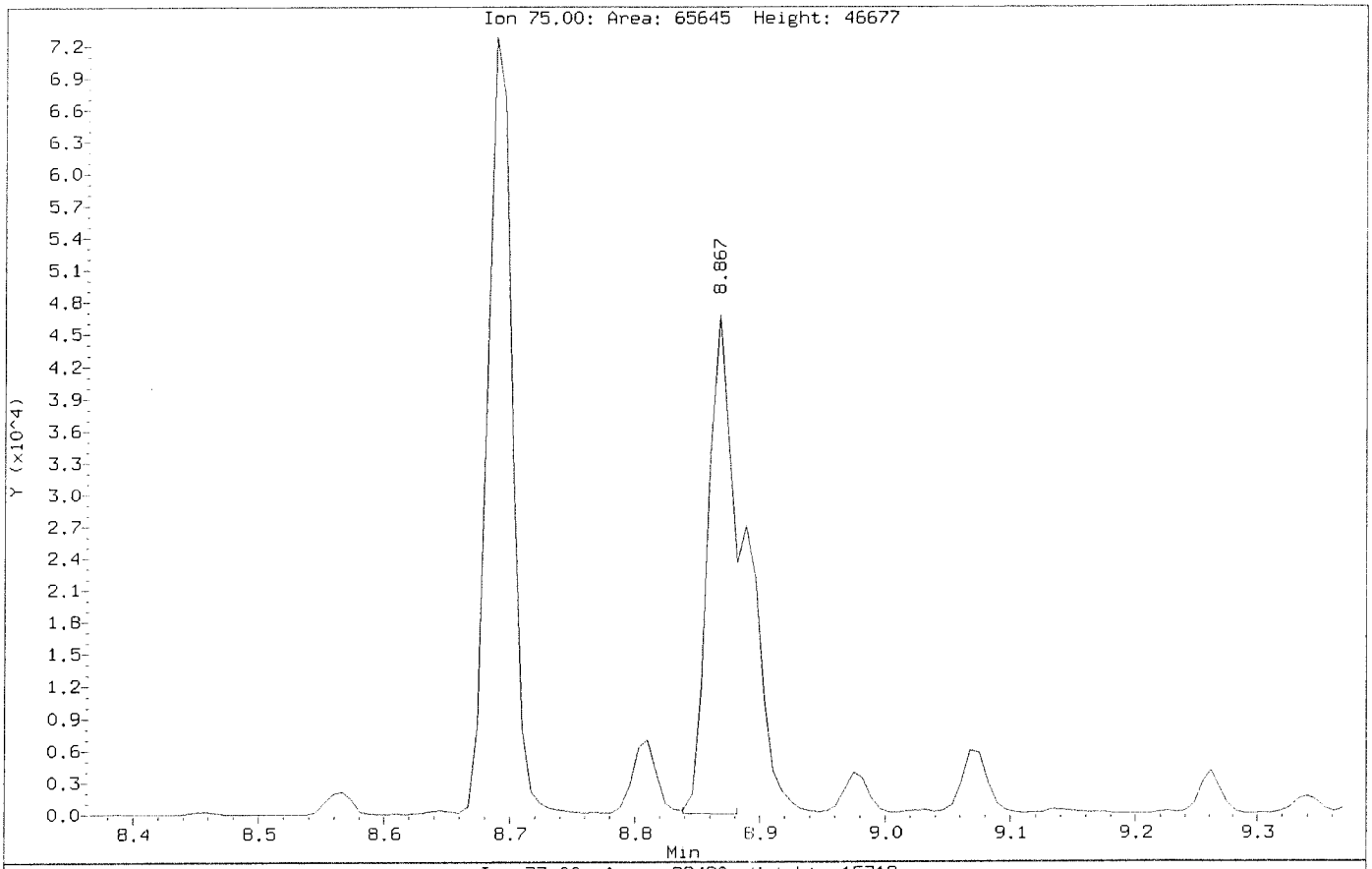
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

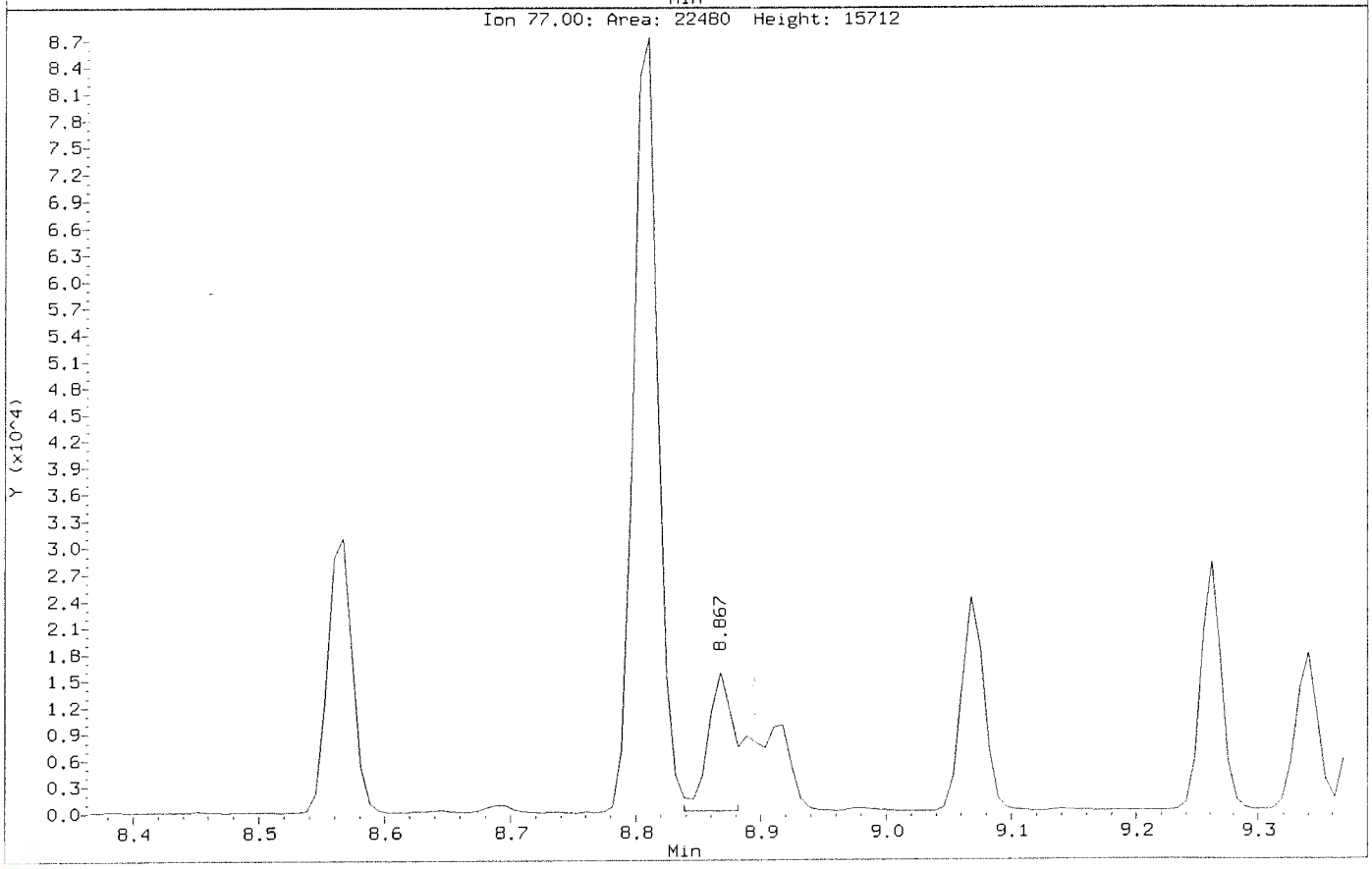




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Injection Date: 02-JAN-2020 11:58
Instrument: voa6.i
Client Sample ID: VLCSW-200102

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





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200102.b\X010208.D
Lab Smp Id: VBLKW-200102 Client Smp ID: VBLKW-200102
Inj Date : 02-JAN-2020 12:46
Operator : PC Inst ID: voa6.i
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Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200102.b\8260W.m
Meth Date : 26-Jan-2020 12:07 voa6.i Quant Type: ISTD
Cal Date : 18-NOV-2019 16:35 Cal File: X111808.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

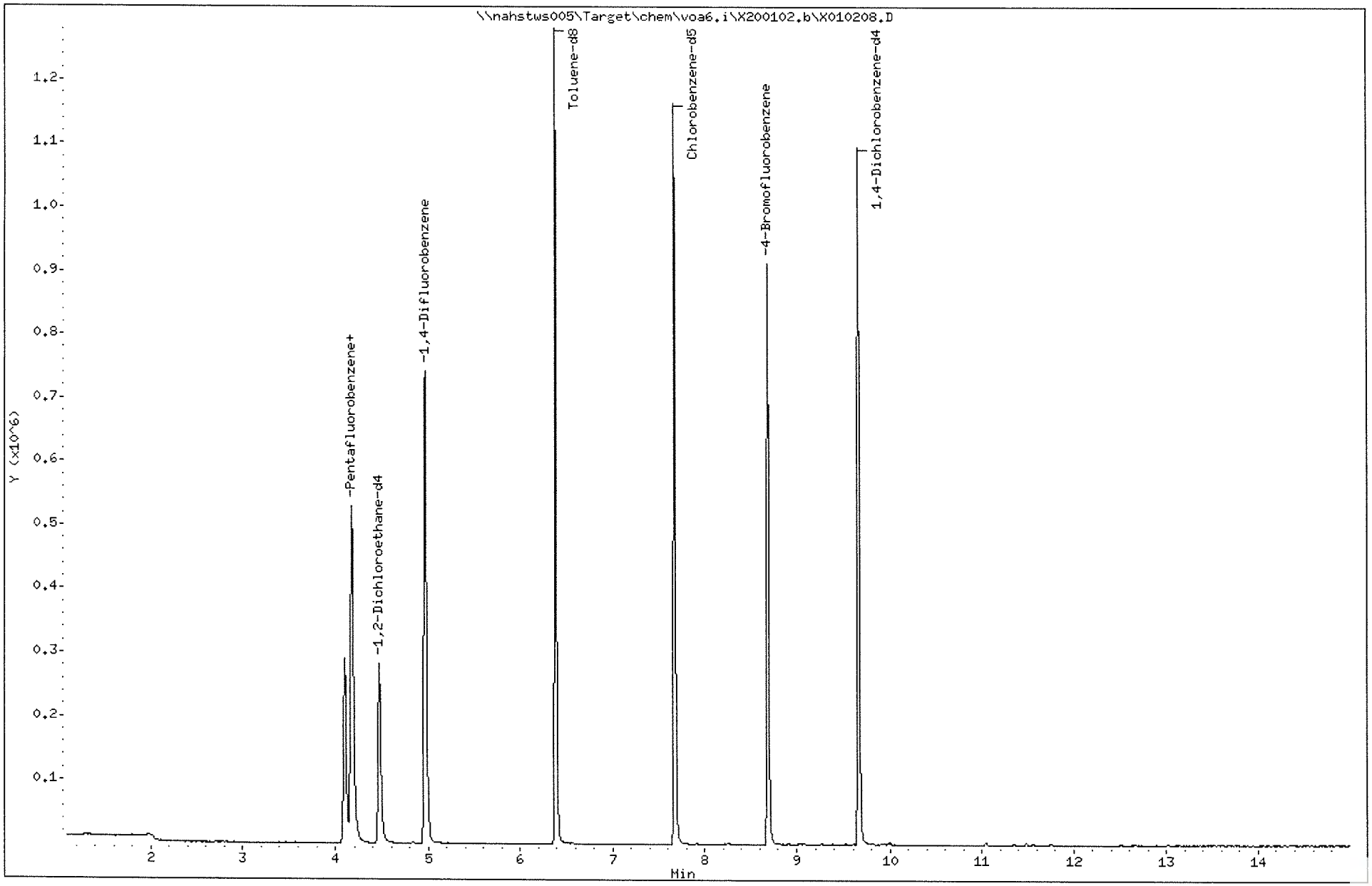
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	472706	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	665875	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	576824	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	283964	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	205622	47.8545	47.85
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	208579	46.9468	46.94
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	780114	51.3296	51.32
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	271591	50.6024	50.60

Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010208.D
Date : 02-JAN-2020 12:46
Client ID: VBLKW-200102
Sample Info: VBLKW-200102;VBLKW-200102;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\X200102.b\X010209.D
Lab Smp Id: HS19121155-09 Client Smp ID: HS19121155-09
Inj Date : 02-JAN-2020 13:10
Operator : PC Inst ID: voa6.i
Smp Info : HS19121155-09;HS19121155-09;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200102.b\8260W.m
Meth Date : 29-Jan-2020 17:34 DevakG Quant Type: ISTD
Cal Date : 18-NOV-2019 16:35 Cal File: X111808.D
Als bottle: 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	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	492964	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	685539	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	586514	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	287656	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	212820	47.4971	47.49
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	215643	46.5485	46.54
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	797766	51.6238	51.62
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	275015	50.3955	50.39

Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010209.D

Date : 02-JAN-2020 13:10

Client ID: HS19121155-09

Instrument: voa6.i

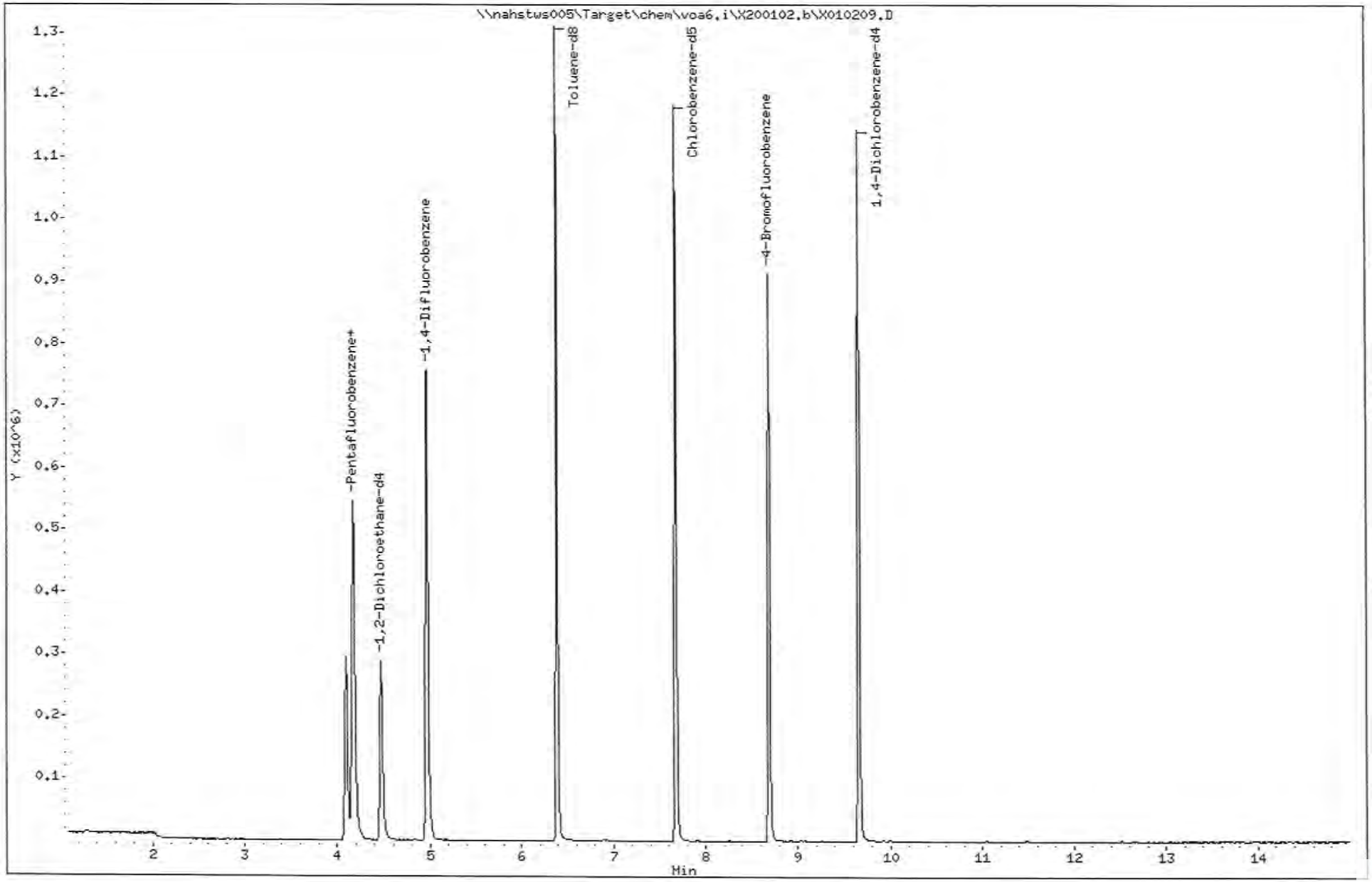
Sample Info: HS19121155-09;HS19121155-09;;;

Purge Volume: 5.0

Operator: PC

Column phase: DB624

Column diameter: 0.18



Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010210.D Page 1
Report Date: 29-Jan-2020 17:37

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200102.b\X010210.D
Lab Smp Id: HS19121155-01 Client Smp ID: HS19121155-01
Inj Date : 02-JAN-2020 13:34
Operator : PC Inst ID: voa6.i
Smp Info : HS19121155-01;HS19121155-01;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200102.b\8260W.m
Meth Date : 29-Jan-2020 17:34 DevakG Quant Type: ISTD
Cal Date : 18-NOV-2019 16:35 Cal File: X111808.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

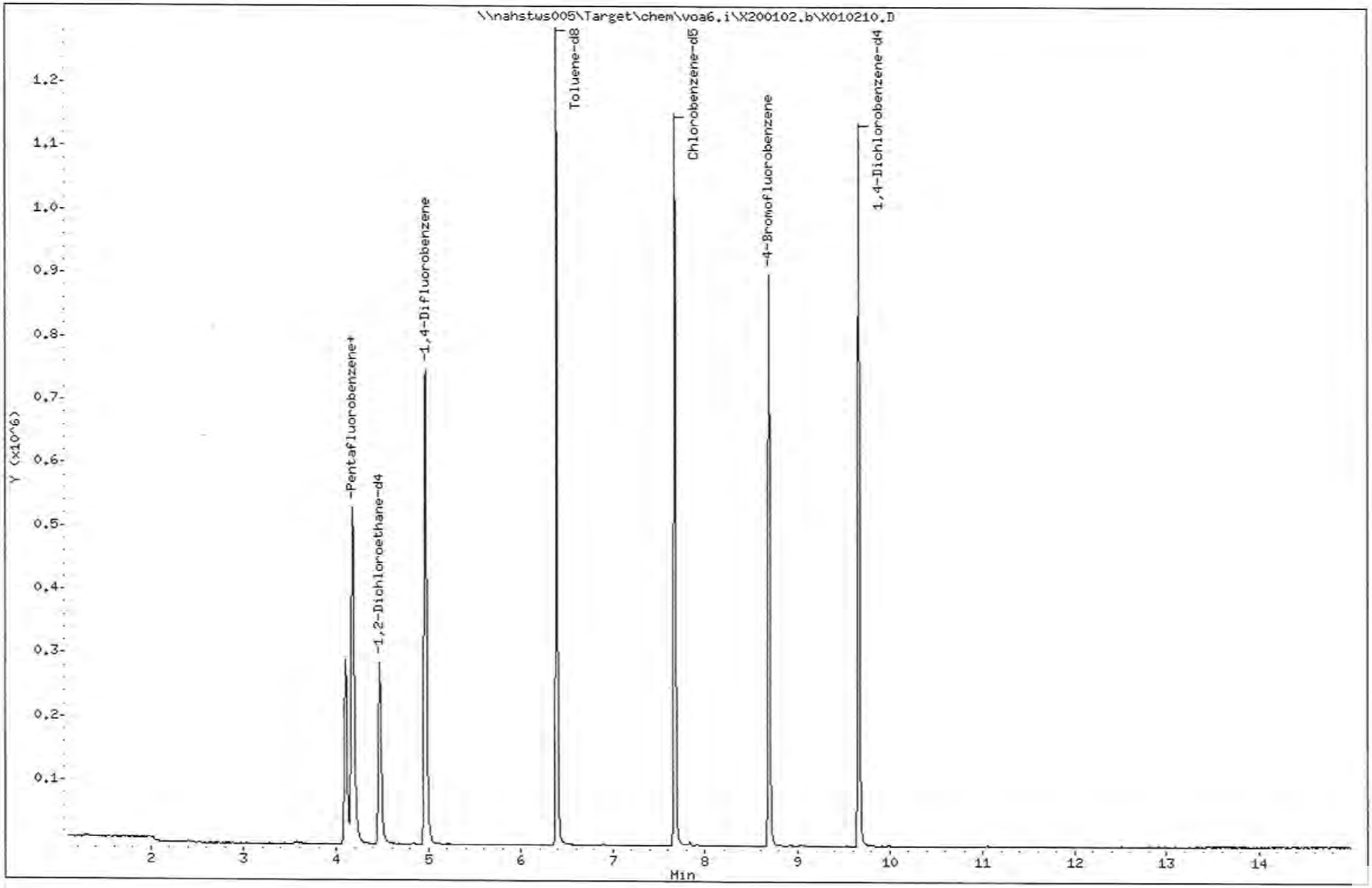
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	481027	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	673922	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	572431	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	283623	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	206117	47.1454	47.14
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	209991	46.4548	46.45
$	48 Toluene-d8	98	6.388	6.388	(0.833)	778940	51.6457	51.64
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	269218	50.5457	50.54

Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010210.D
Date : 02-JAN-2020 13:34
Client ID: HS19121155-01
Sample Info: HS19121155-01;HS19121155-01;;;
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\X200102.b\X010211.D
Lab Smp Id: HS19121155-02 Client Smp ID: HS19121155-02
Inj Date : 02-JAN-2020 13:58
Operator : PC Inst ID: voa6.i
Smp Info : HS19121155-02;HS19121155-02;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200102.b\8260W.m
Meth Date : 29-Jan-2020 17:34 DevakG Quant Type: ISTD
Cal Date : 18-NOV-2019 16:35 Cal File: X111808.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	472621	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	660876	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	554247	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	234566	50.0000	
$ 30 Dibromofluoromethane	113	4.104	4.103	(0.981)	202410	47.1211	47.12
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	202783	45.6708	45.67
$ 48 Toluene-d8	98	6.389	6.388	(0.833)	755227	51.7163	51.71
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	230502	44.7449	44.74

Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010211.D

Date : 02-JAN-2020 13:58

Client ID: HS19121155-02

Instrument: voa6.i

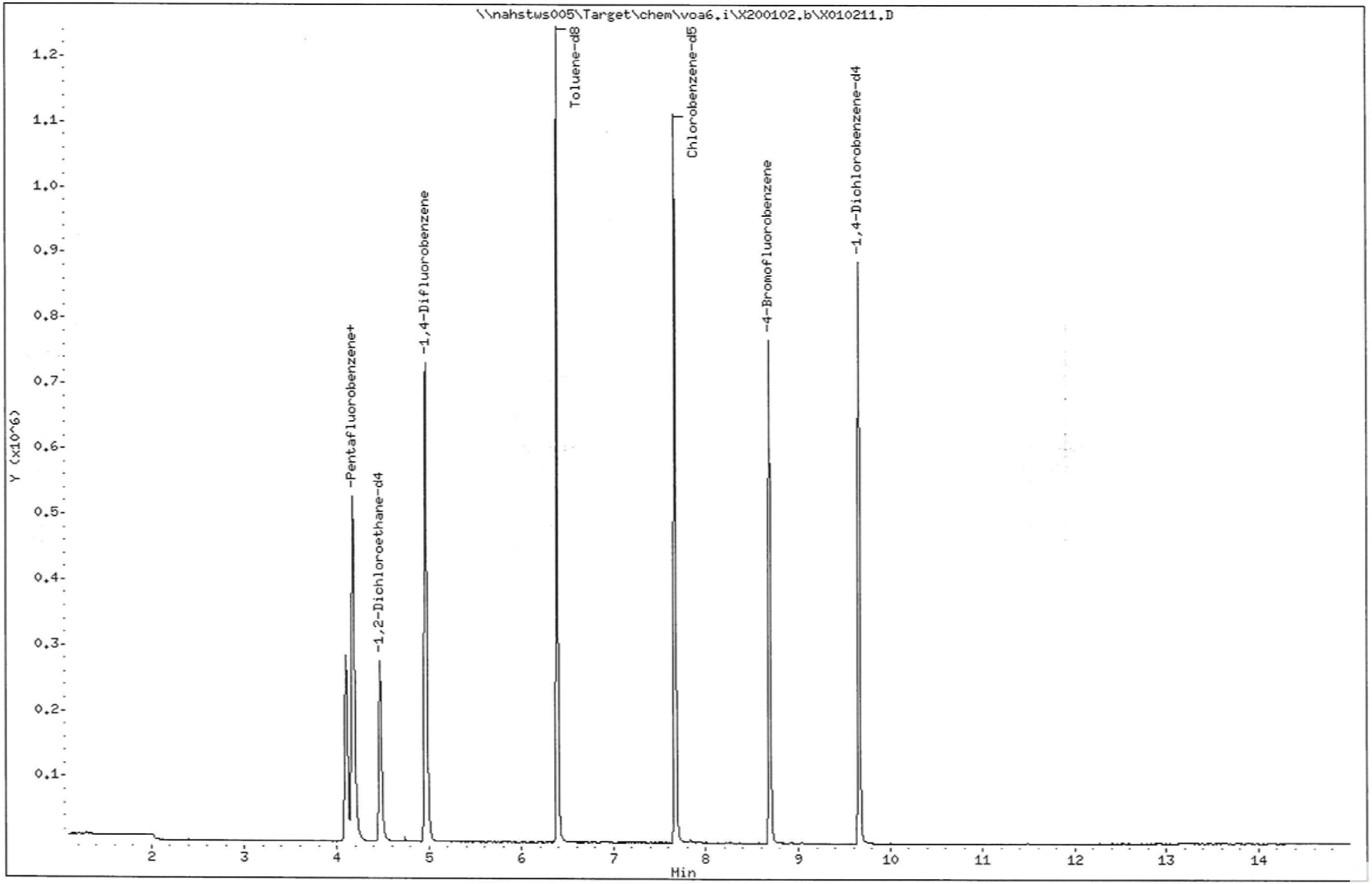
Sample Info: HS19121155-02;HS19121155-02;;;

Purge Volume: 5.0

Operator: PC

Column phase: DB624

Column diameter: 0.18



Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010216.D Page 1
Report Date: 29-Jan-2020 17:37

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200102.b\X010216.D
Lab Smp Id: HS19121155-08 Client Smp ID: HS19121155-08
Inj Date : 02-JAN-2020 15:58
Operator : PC Inst ID: voa6.i
Smp Info : HS19121155-08;HS19121155-08;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200102.b\8260W.m
Meth Date : 29-Jan-2020 17:34 DevakG Quant Type: ISTD
Cal Date : 18-NOV-2019 16:35 Cal File: X111808.D
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

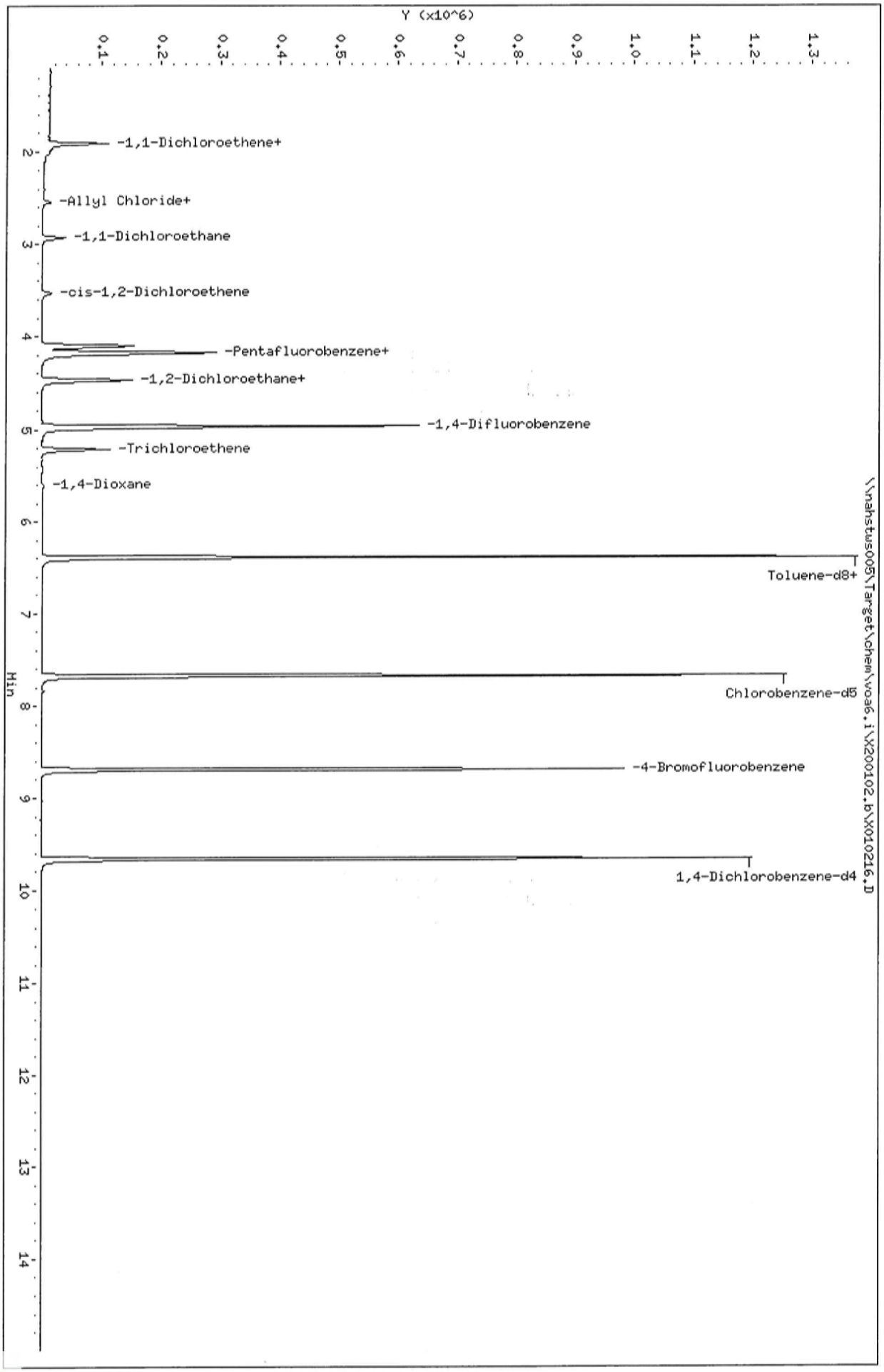
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	287118	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.970	(1.000)	501177	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	609997	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.669	(1.000)	310119	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.103	(0.979)	108622	41.6679	41.66
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	114322	42.4358	42.43
$ 48 Toluene-d8	98	6.389	6.388	(0.833)	837579	52.1136	52.11
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	288802	50.8805	50.88
22 1,1-Dichloroethane	63	2.922	2.921	(0.699)	37915	9.07578	9.07
11 1,1-Dichloroethene	96	1.912	1.911	(0.457)	37539	15.4276	15.42
33 1,2-Dichloroethane	62	4.562	4.555	(0.919)	669	0.16815	0.16(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	10070	3.69833	3.69(a)
38 Trichloroethene	130	5.207	5.206	(1.049)	38012	10.8453	10.84
5 Vinyl Chloride	62	1.138	1.138	(0.272)	2204	0.75319	0.75(a)

QC Flag Legend

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

Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010216.D
Date : 02-JAN-2020 15:58
Client ID: HS19121155-08
Sample Info: HS19121155-08;HS19121155-08;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010216.D

Date : 02-JAN-2020 15:58

Client ID: HS19121155-08

Instrument: voa6.i

Sample Info: HS19121155-08;HS19121155-08;;;

Purge Volume: 5.0

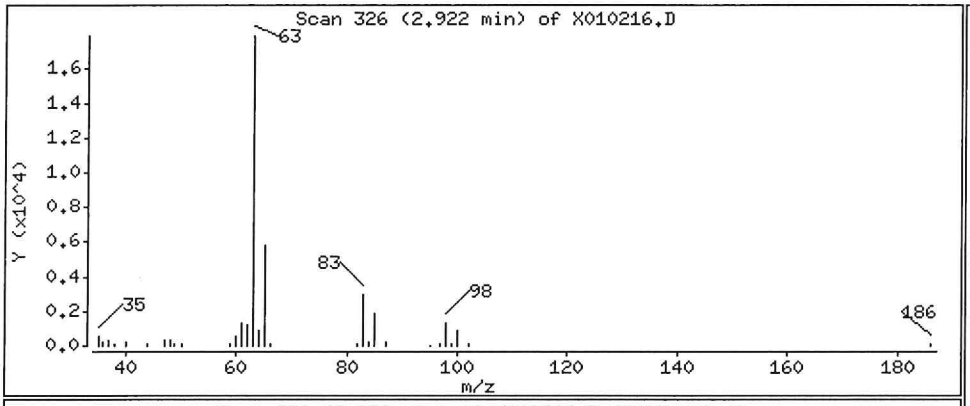
Operator: PC

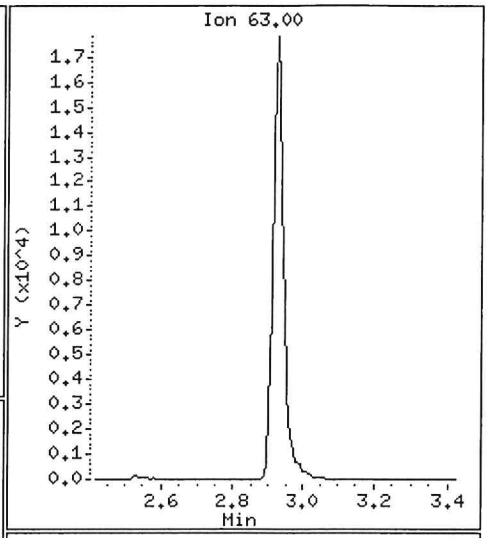
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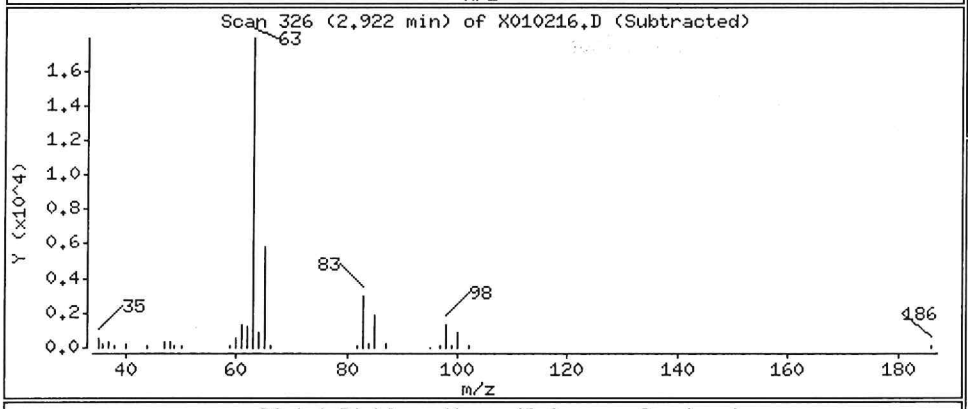
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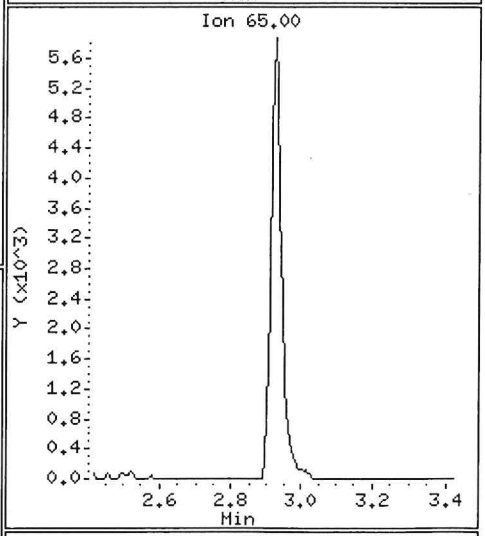
22 1,1-Dichloroethane

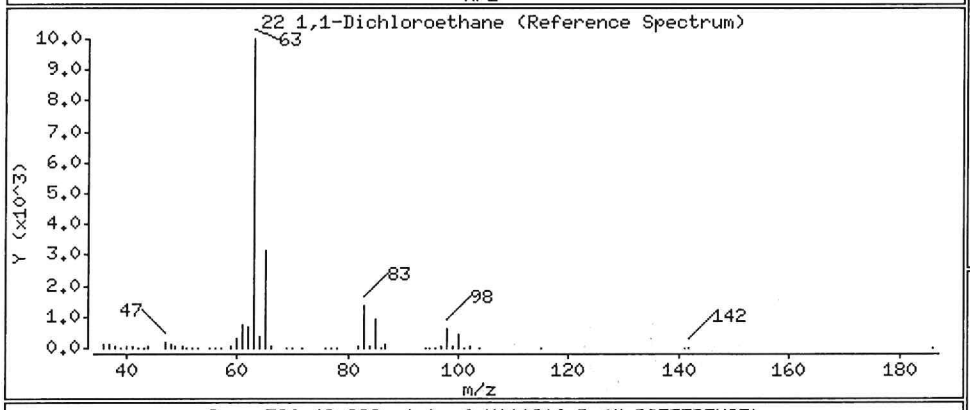
Concentration: 9.07 ug/l

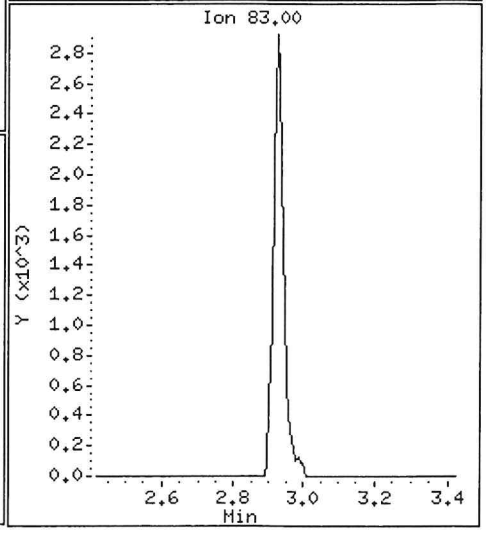


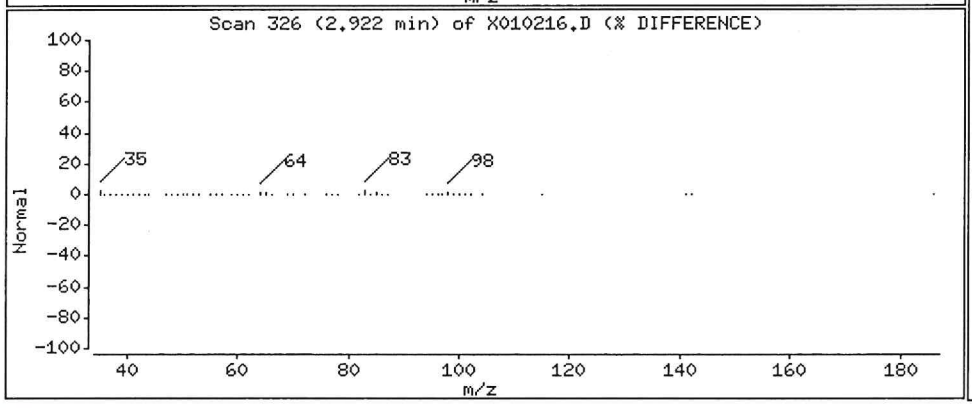












Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010216.D

Date : 02-JAN-2020 15:58

Client ID: HS19121155-08

Instrument: voa6.i

Sample Info: HS19121155-08;HS19121155-08;;;

Purge Volume: 5.0

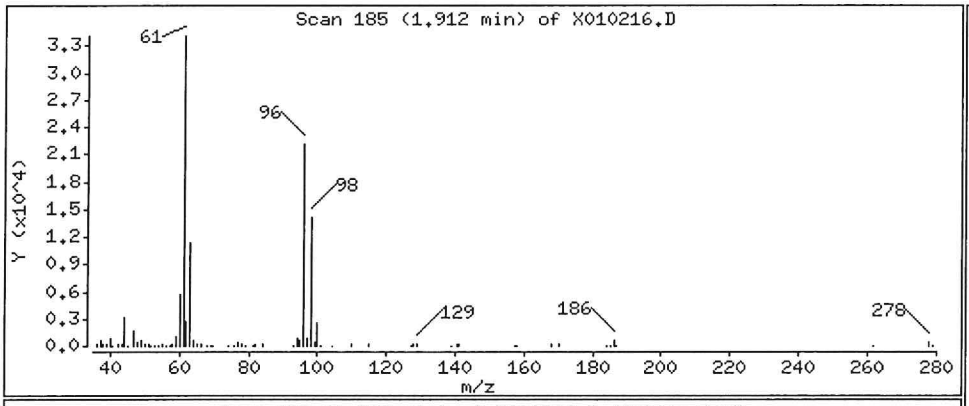
Operator: PC

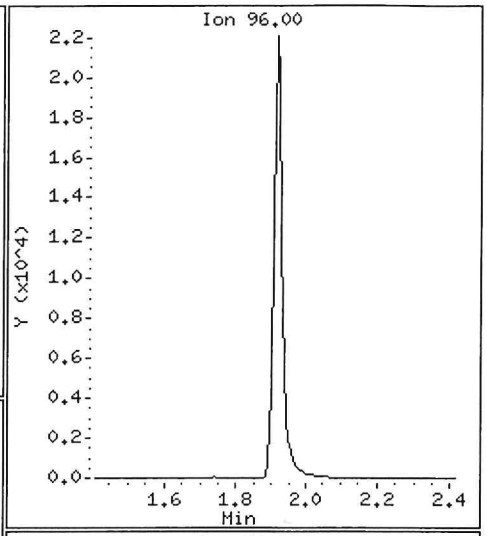
Column phase: DB624

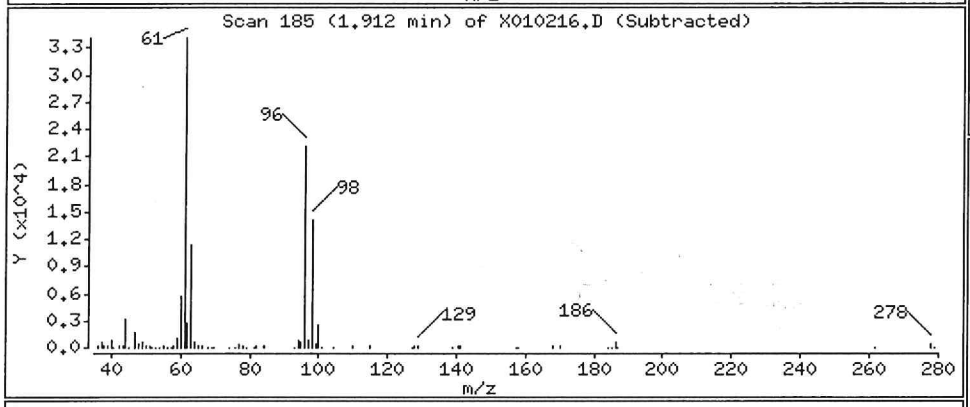
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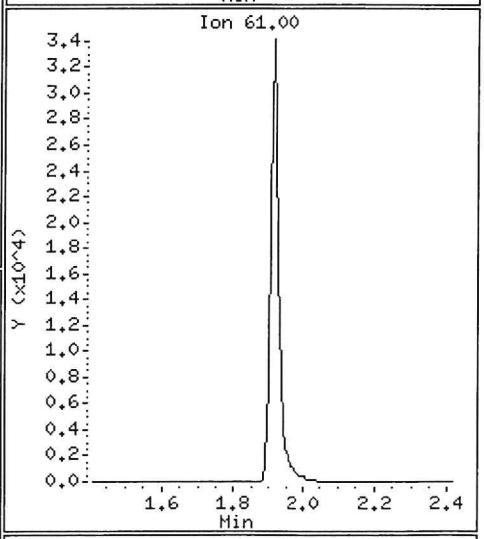
11 1,1-Dichloroethene

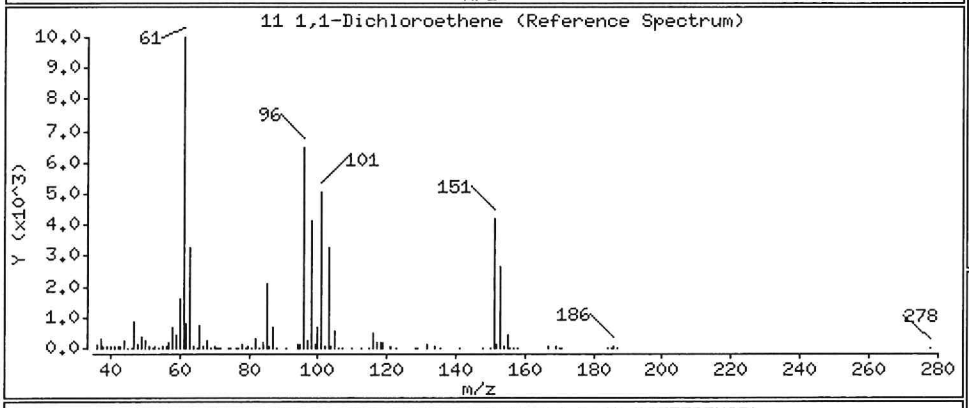
Concentration: 15.42 ug/l

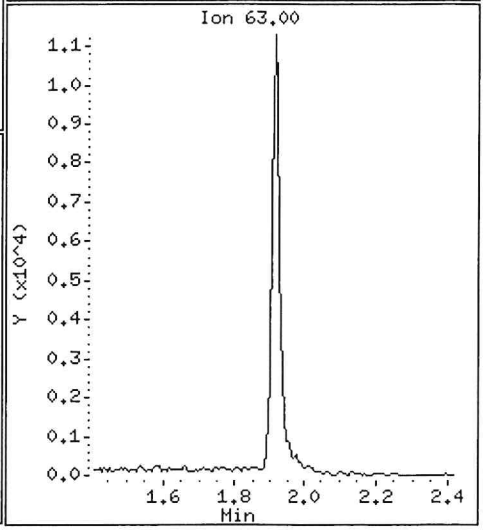


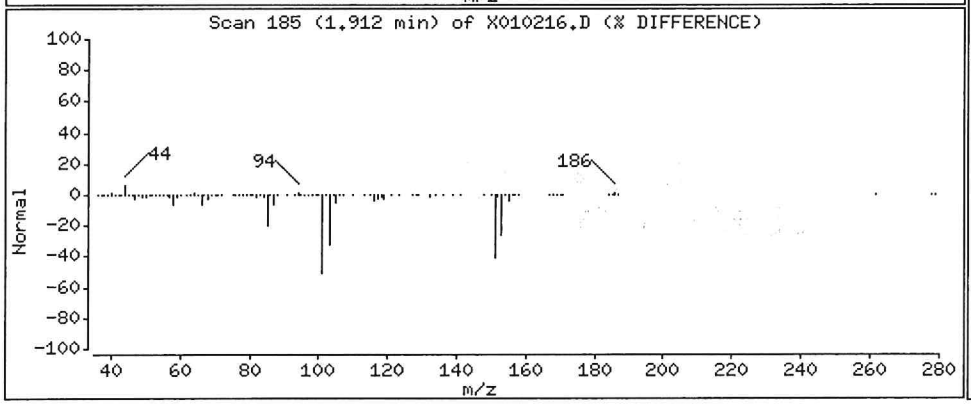












Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010216.D Page 5

Date : 02-JAN-2020 15:58

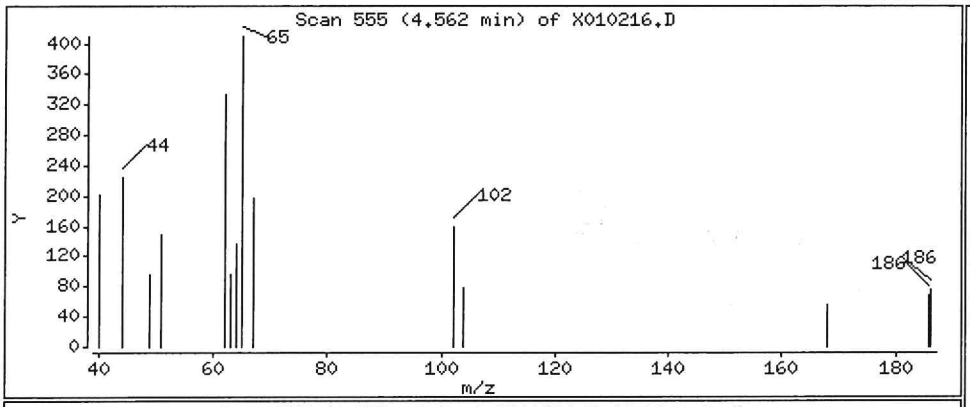
Client ID: HS19121155-08 Instrument: voa6.i

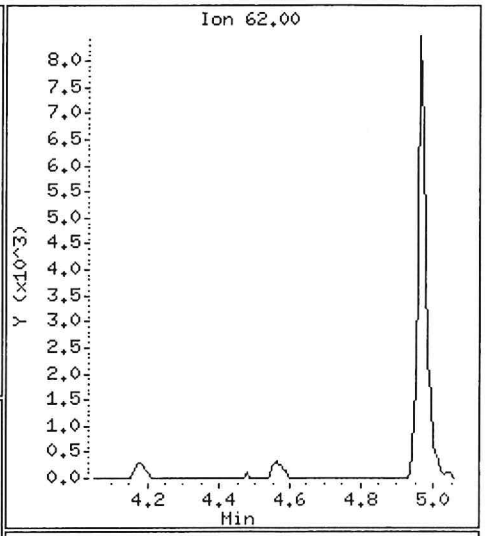
Sample Info: HS19121155-08;HS19121155-08;;;

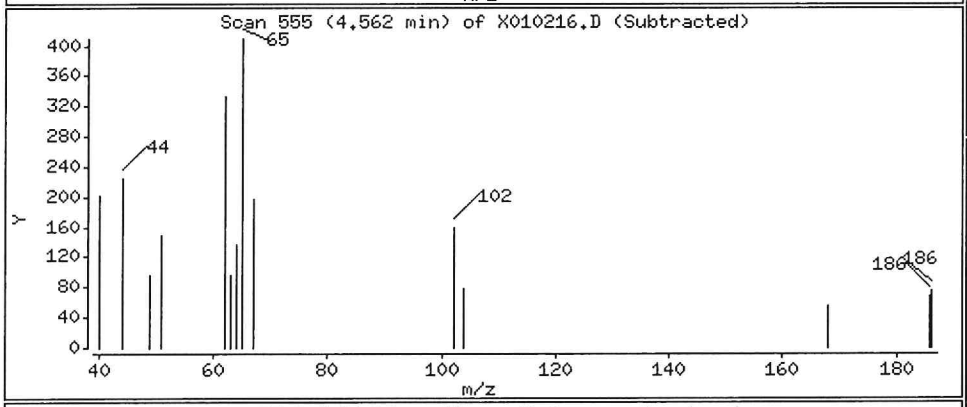
Purge Volume: 5.0 Operator: PC

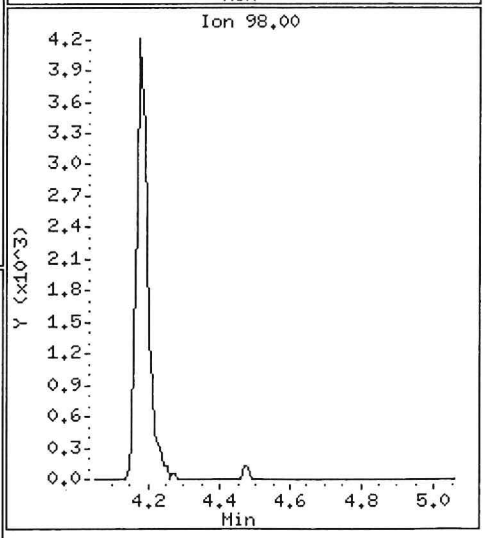
Column phase: DB624 Column diameter: 0.18

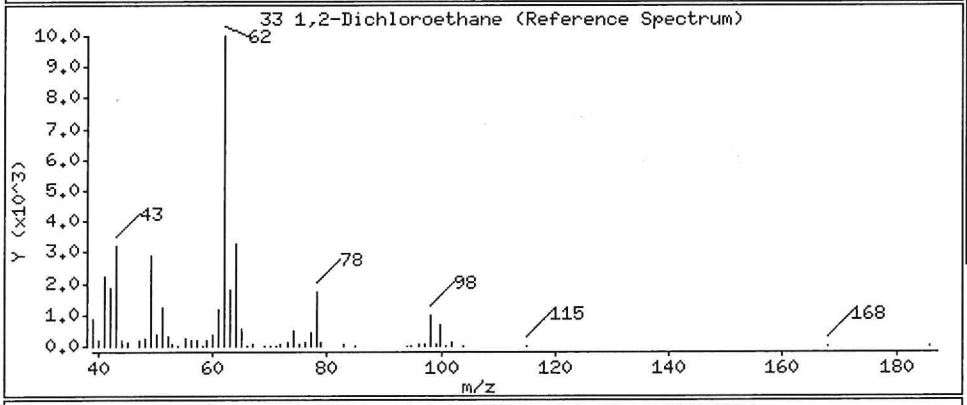
33 1,2-Dichloroethane Concentration: 0.16 ug/l

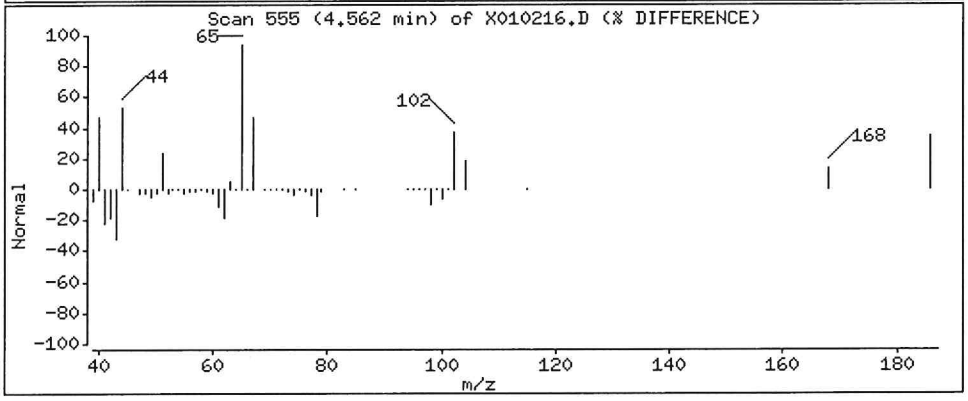












Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010216.D

Date : 02-JAN-2020 15:58

Client ID: HS19121155-08

Instrument: voa6.i

Sample Info: HS19121155-08;HS19121155-08;;;

Purge Volume: 5.0

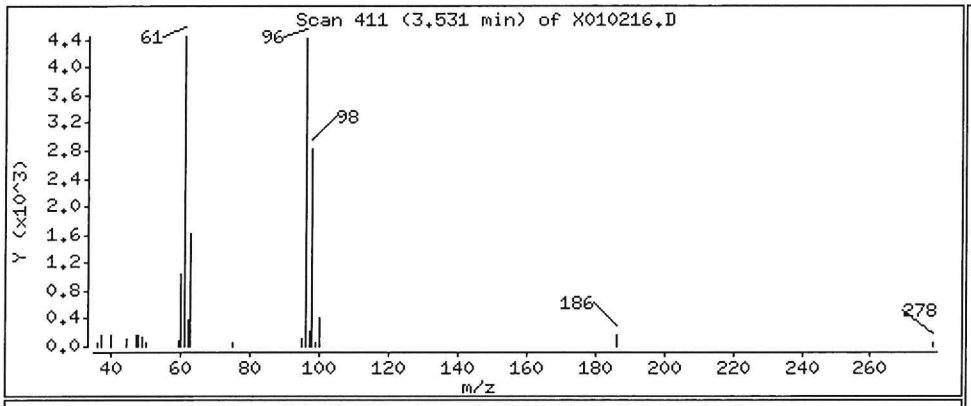
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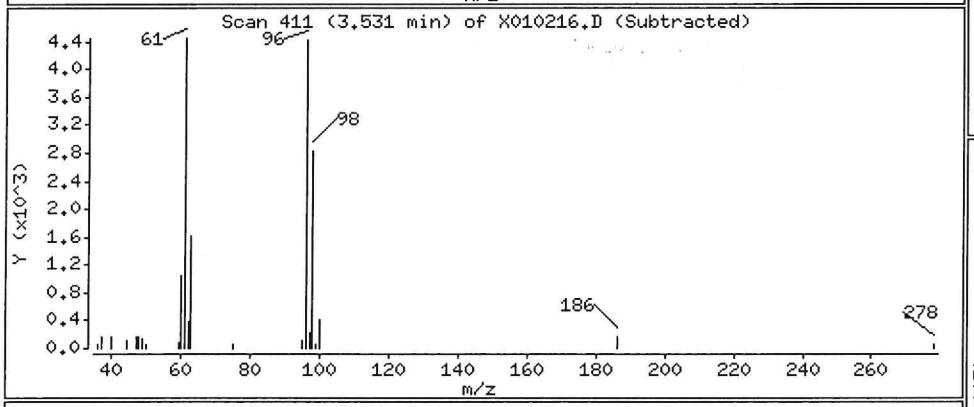
Column phase: DB624

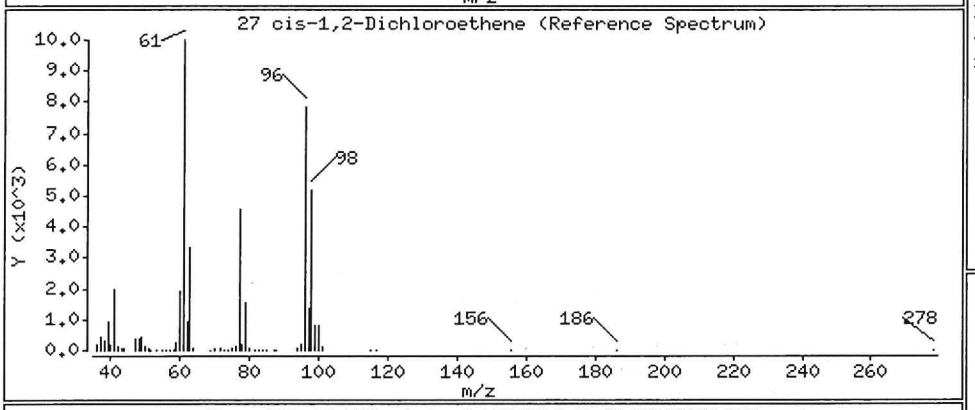
Column diameter: 0.18

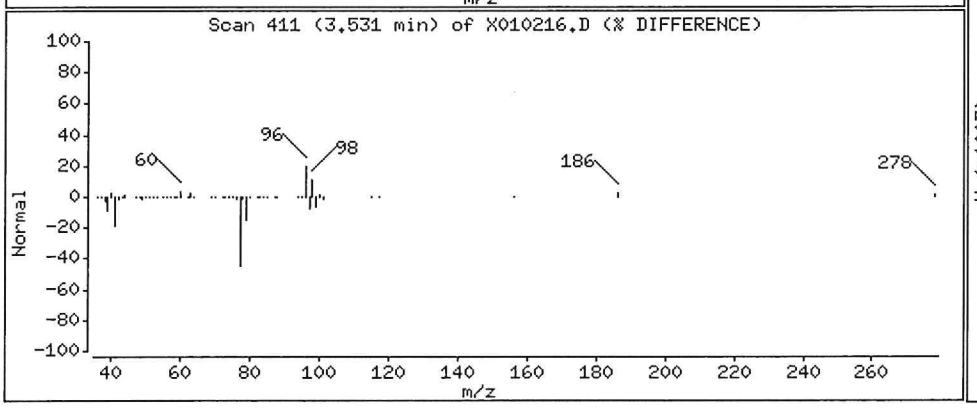
27 cis-1,2-Dichloroethene

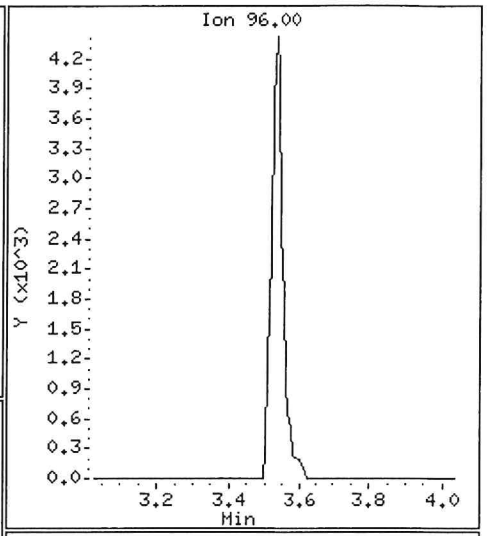
Concentration: 3.69 ug/l

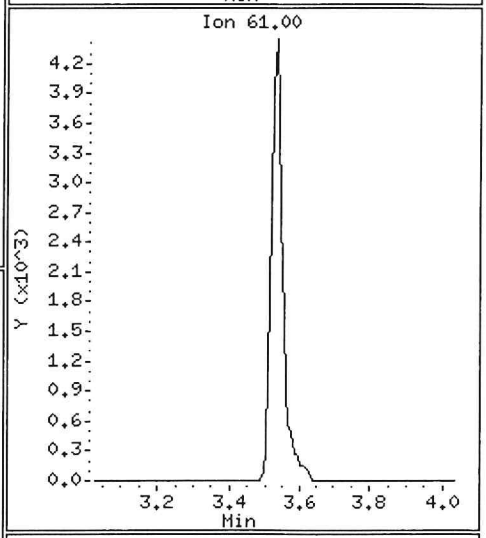


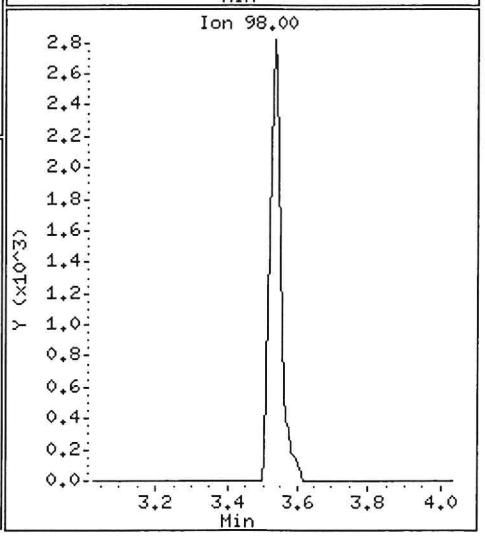












Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010216.D

Date : 02-JAN-2020 15:58

Client ID: HS19121155-08

Instrument: voa6.i

Sample Info: HS19121155-08;HS19121155-08;;;

Purge Volume: 5.0

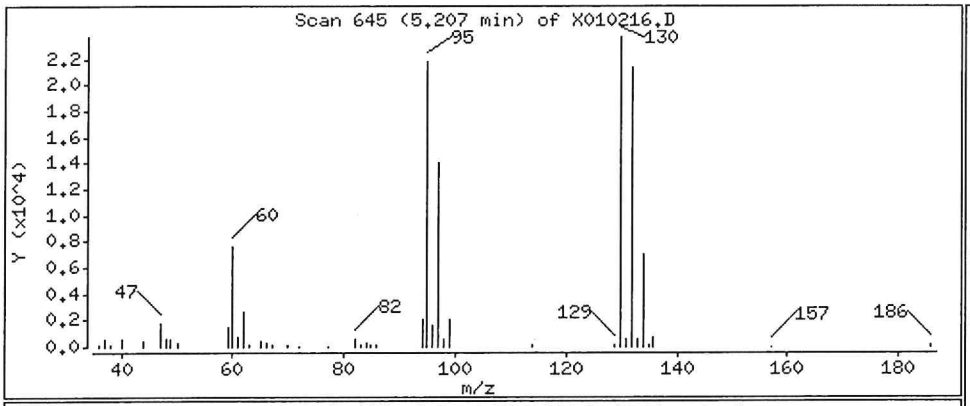
Operator: PC

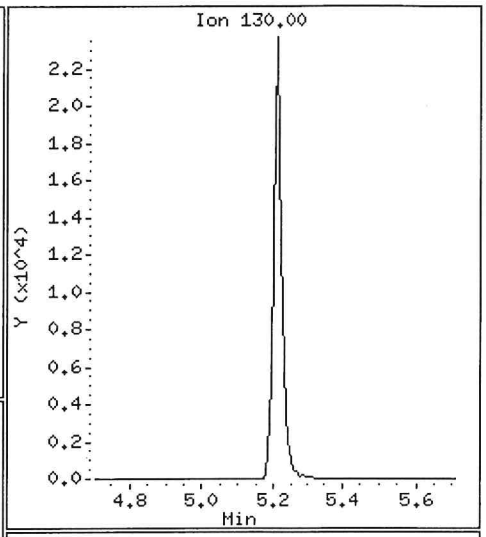
Column phase: DB624

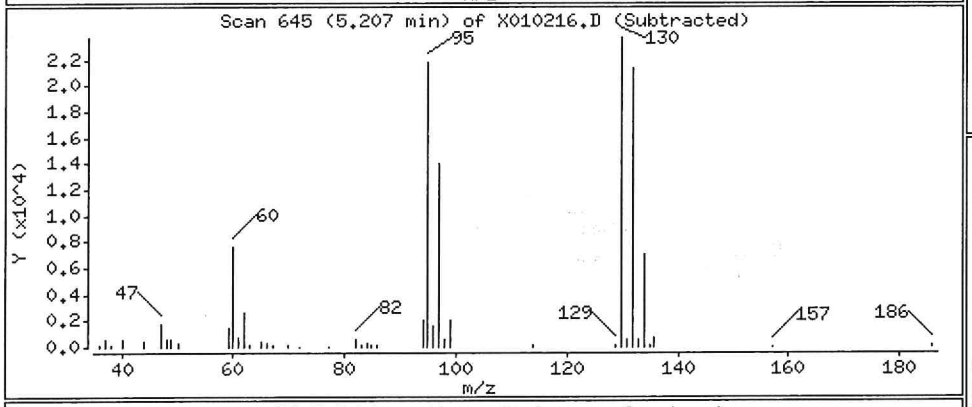
Column diameter: 0.18

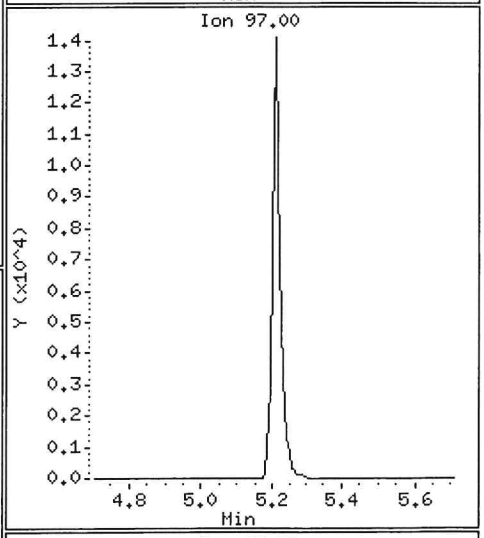
38 Trichloroethene

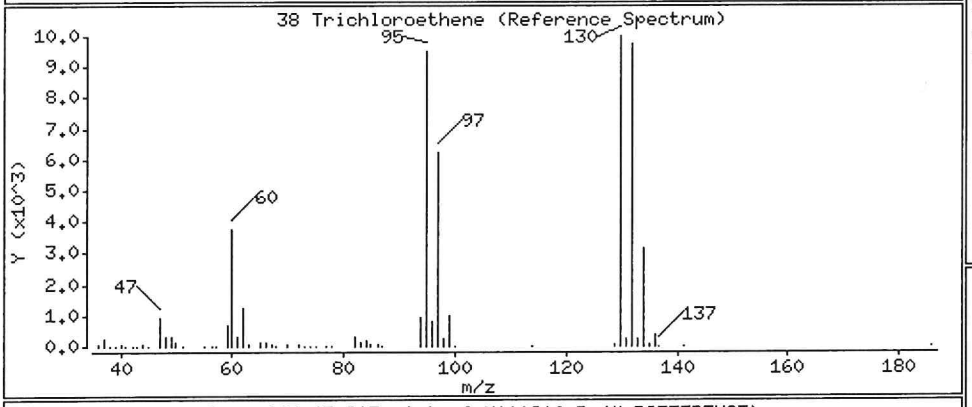
Concentration: 10.84 ug/l

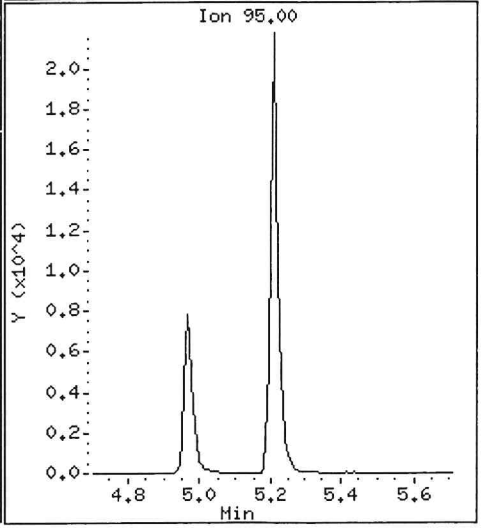


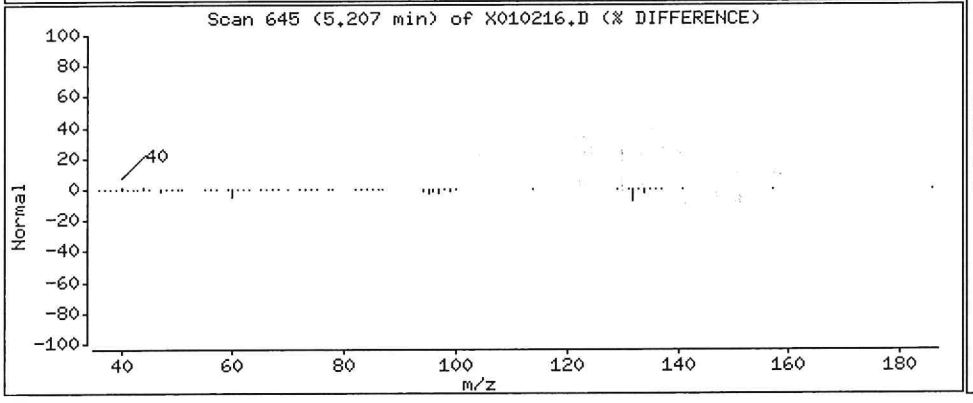












Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010216.D

Date : 02-JAN-2020 15:58

Client ID: HS19121155-08

Instrument: voa6.i

Sample Info: HS19121155-08;HS19121155-08;;;

Purge Volume: 5.0

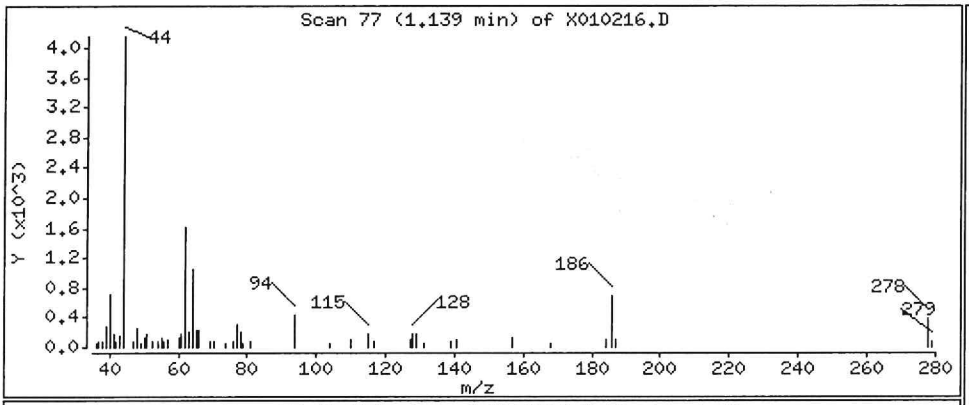
Operator: PC

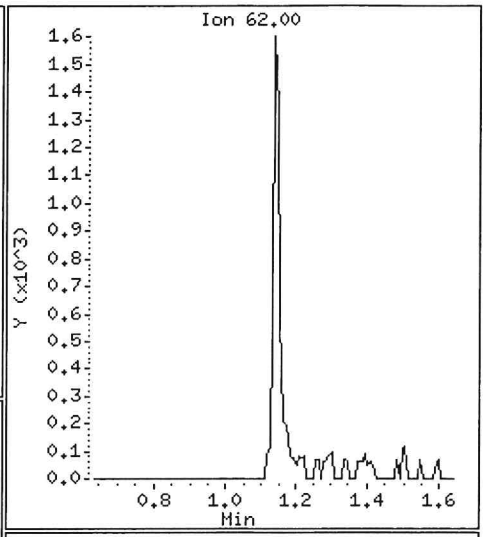
Column phase: DB624

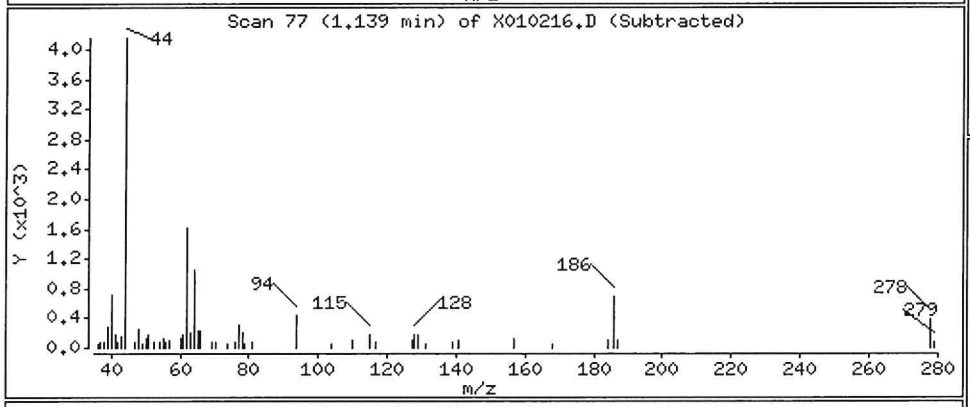
Column diameter: 0.18

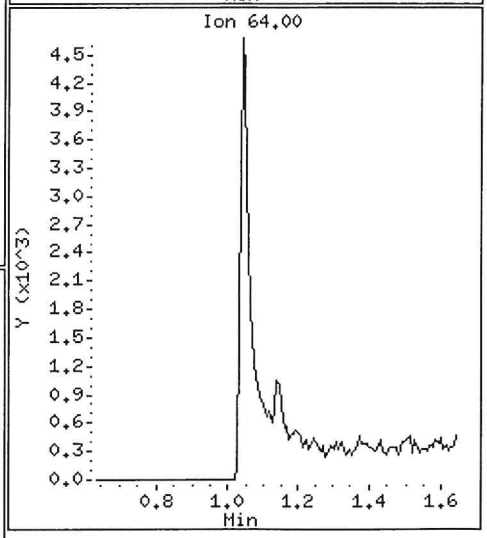
5 Vinyl Chloride

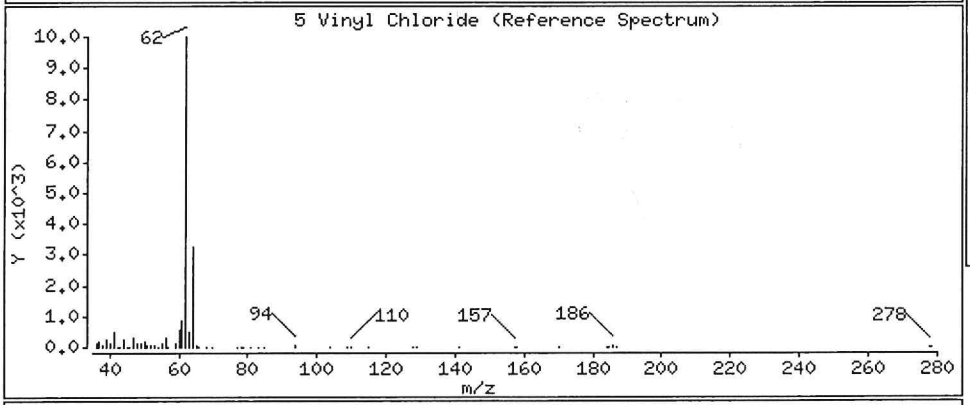
Concentration: 0.75 ug/l

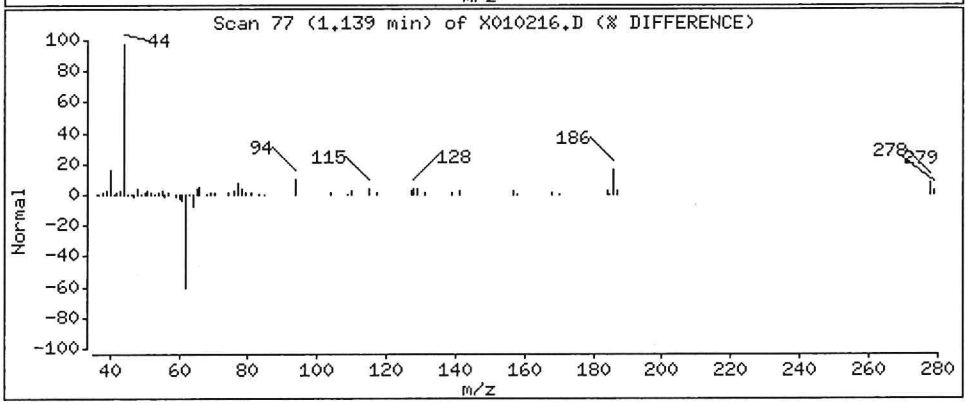












Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010218.D Page 1
Report Date: 29-Jan-2020 17:37

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200102.b\X010218.D
Lab Smp Id: HS19121155-03 Client Smp ID: HS19121155-03
Inj Date : 02-JAN-2020 16:46
Operator : PC Inst ID: voa6.i
Smp Info : HS19121155-03;HS19121155-03;;;
Misc Info : HS18090001;WATER;0;10;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200102.b\8260W.m
Meth Date : 29-Jan-2020 17:34 DevakG Quant Type: ISTD
Cal Date : 18-NOV-2019 16:35 Cal File: X111808.D
Als bottle: 18
Dil Factor: 10.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

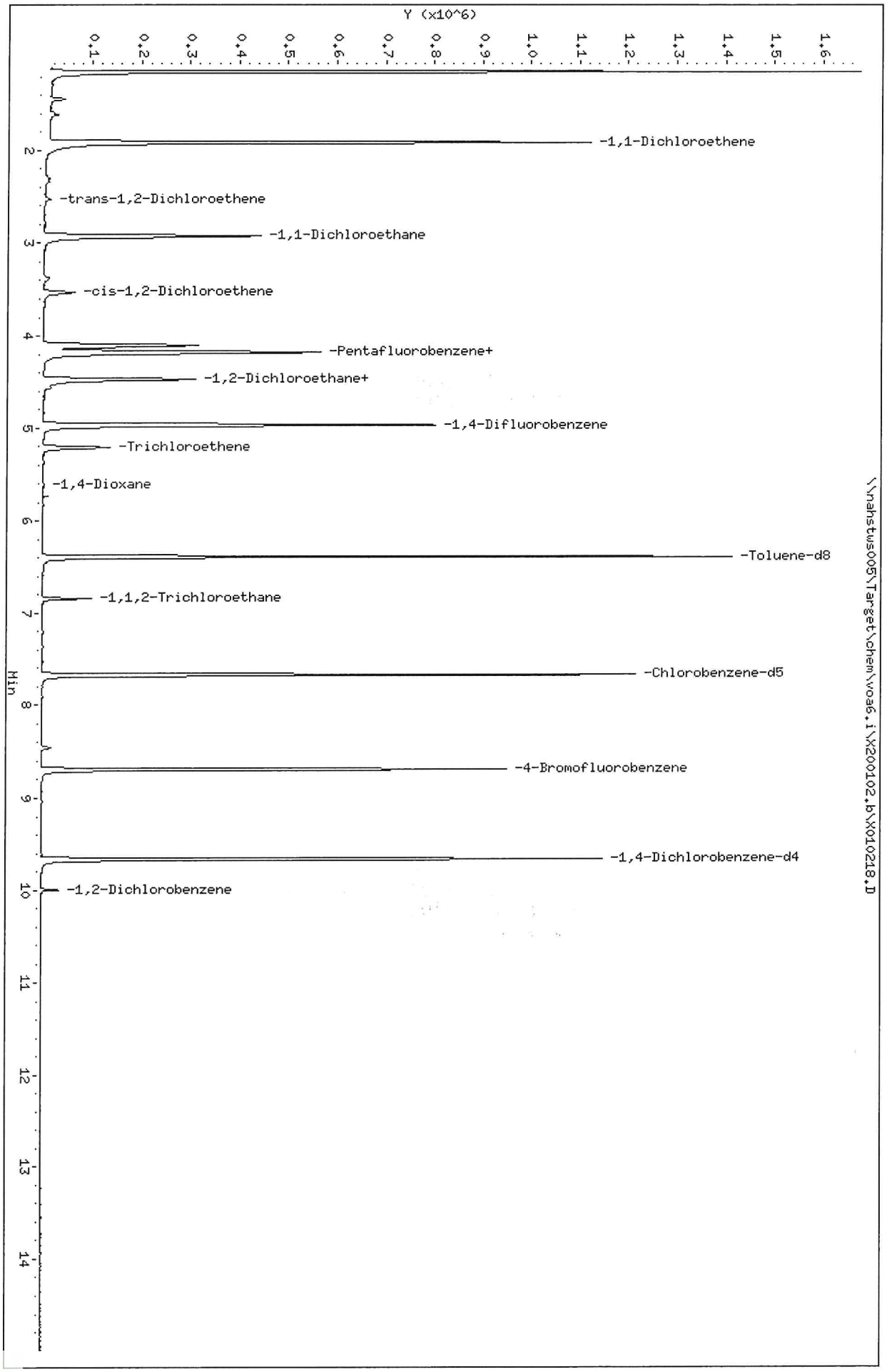
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.182	4.182	(1.000)	505240	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	723996	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	614898	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	299162	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	223981	48.7635	48.76
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	233319	49.0993	49.09
$	48 Toluene-d8	98	6.388	6.388	(0.833)	836770	51.6483	51.64
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	289551	50.6082	50.60
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	24107	7.49984	74.99
	22 1,1-Dichloroethane	63	2.922	2.921	(0.699)	469849	63.9137	639.13
	11 1,1-Dichloroethene	96	1.912	1.911	(0.457)	413521	96.5777	965.77
	88 1,2-Dichlorobenzene	146	9.999	9.991	(1.034)	13807	1.73895	17.38(a)
	33 1,2-Dichloroethane	62	4.562	4.555	(0.918)	10804	1.87985	18.79(a)
	37 Benzene	78	4.519	4.512	(0.909)	14921	0.90093	9.00(a)
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	33380	6.96667	69.66
	20 trans-1,2-Dichloroethene	96	2.535	2.528	(0.606)	3788	0.91123	9.11(a)
	38 Trichloroethene	130	5.207	5.206	(1.048)	50263	9.92717	99.27
	5 Vinyl Chloride	62	1.138	1.138	(0.272)	1220754	237.073	2370.73(A)

QC Flag Legend

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



Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010218.D
Date : 02-JAN-2020 16:46
Client ID: HS19121155-03
Sample Info: HS19121155-03;HS19121155-03;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010218.D

Date : 02-JAN-2020 16:46

Client ID: HS19121155-03

Instrument: voa6.i

Sample Info: HS19121155-03;HS19121155-03;;;

Purge Volume: 5.0

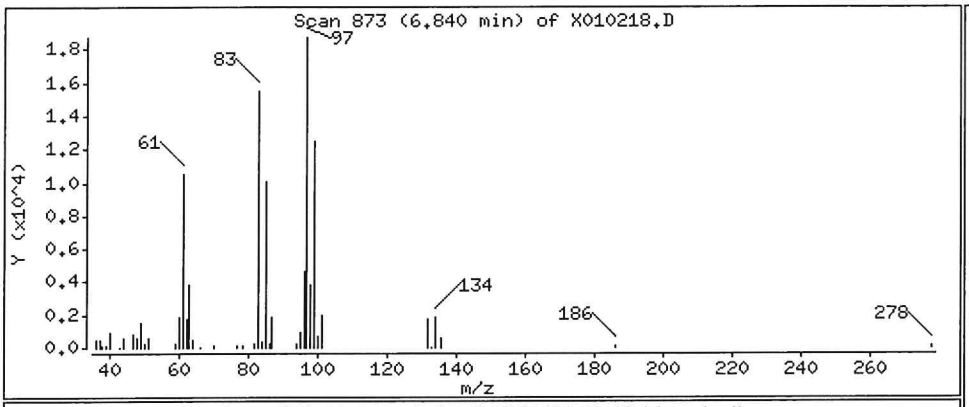
Operator: PC

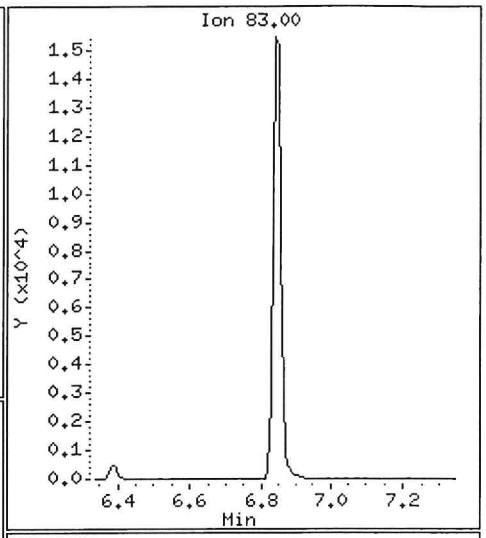
Column phase: DB624

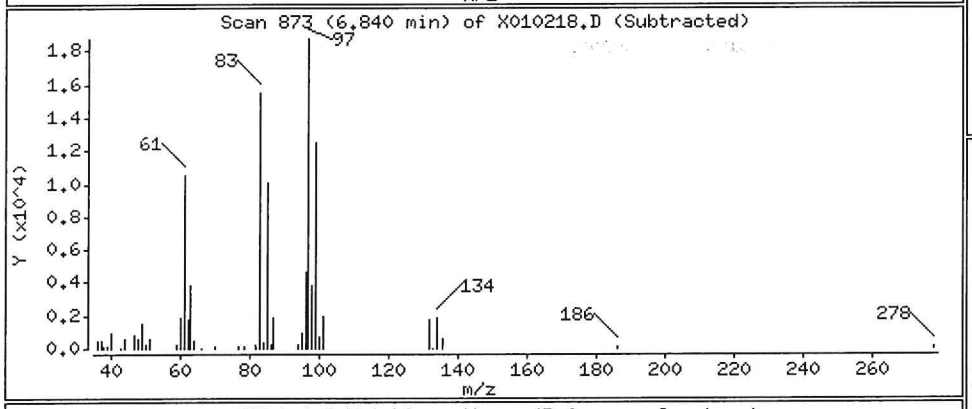
Column diameter: 0.18

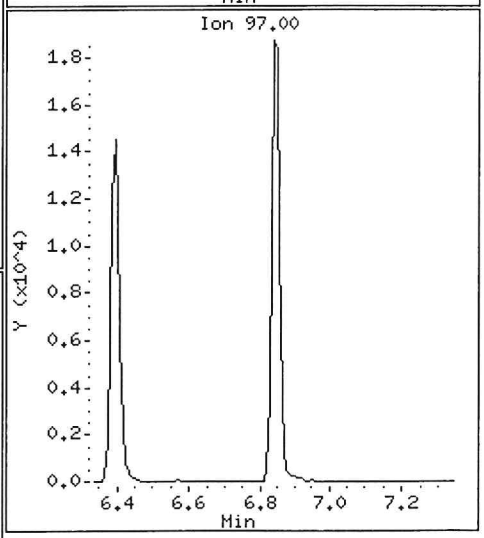
53 1,1,2-Trichloroethane

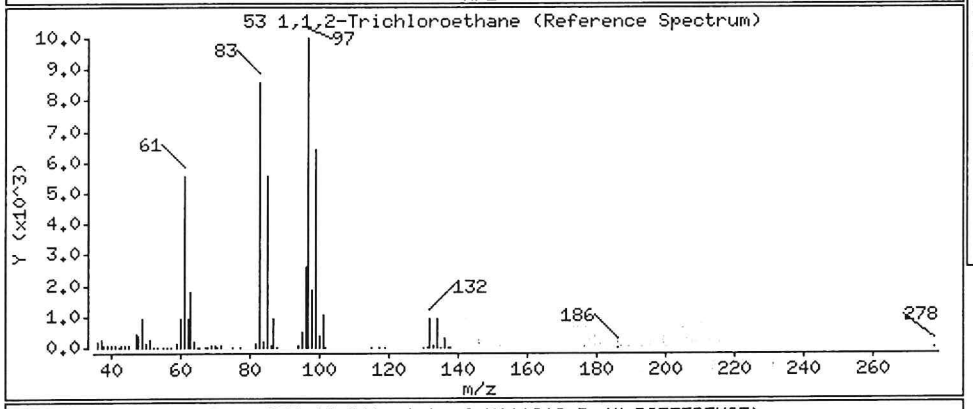
Concentration: 74.99 ug/l

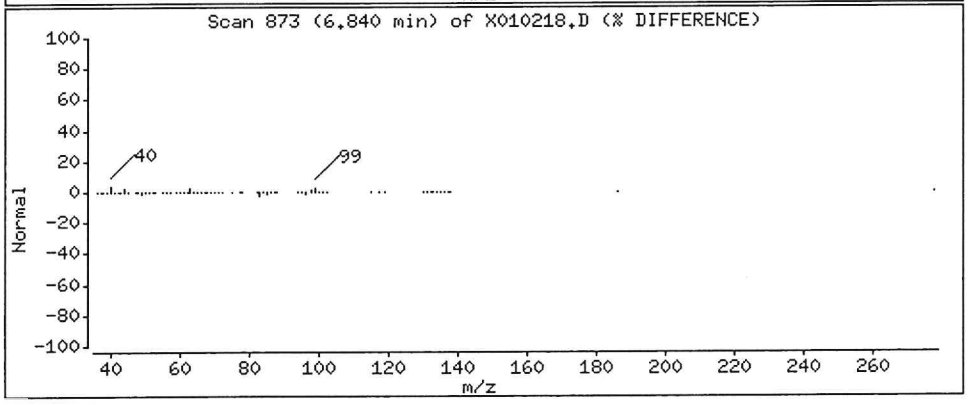












Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010218.D

Date : 02-JAN-2020 16:46

Client ID: HS19121155-03

Instrument: voa6.i

Sample Info: HS19121155-03;HS19121155-03;;;

Purge Volume: 5.0

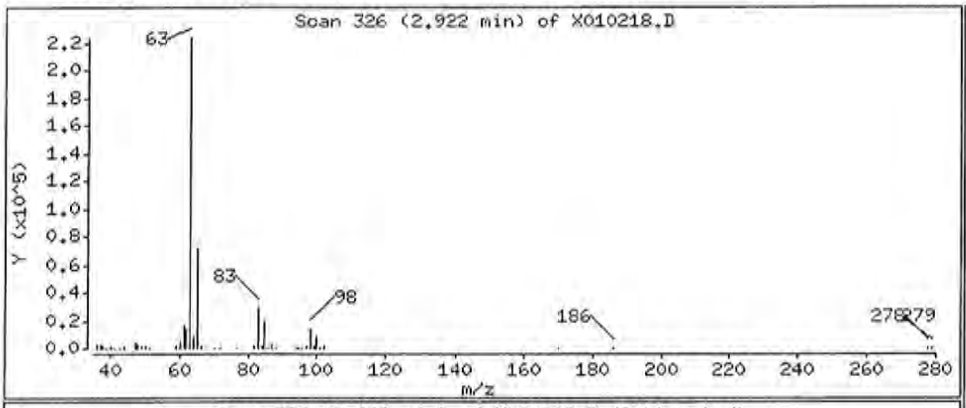
Operator: PC

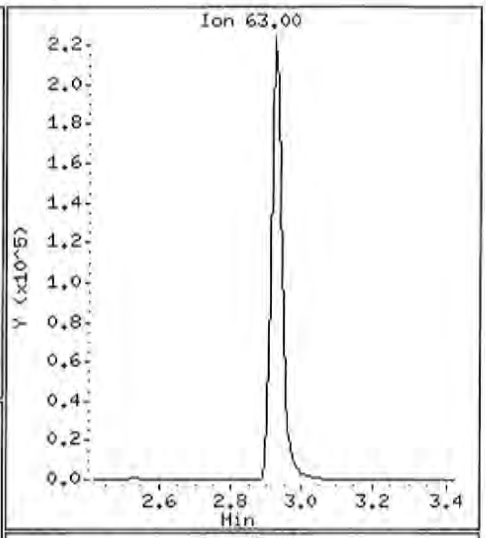
Column phase: DB624

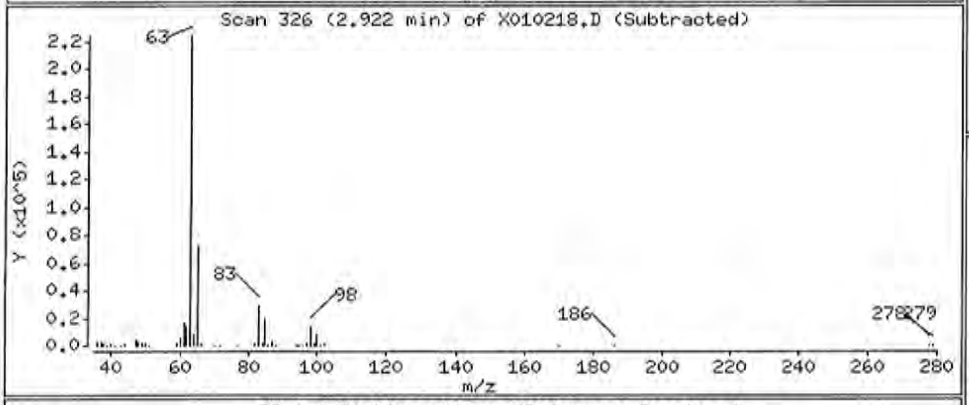
Column diameter: 0.18

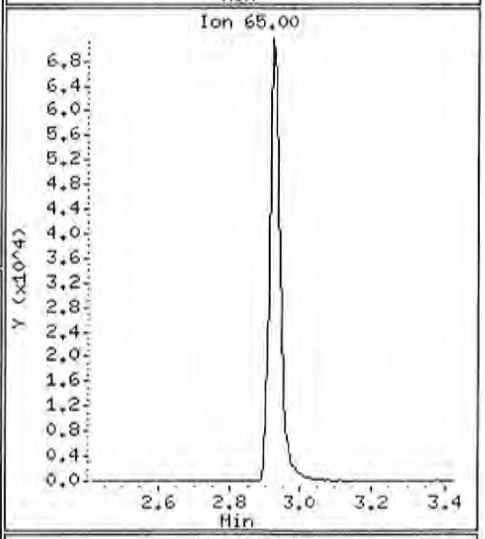
22 1,1-Dichloroethane

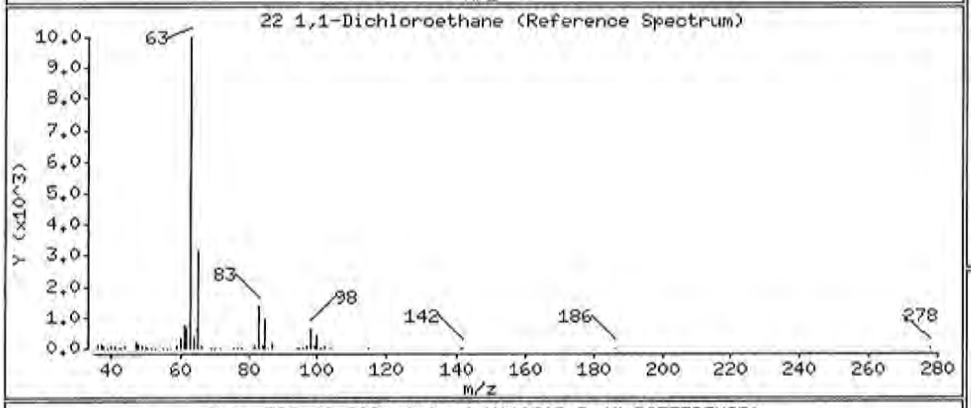
Concentration: 639.13 ug/l

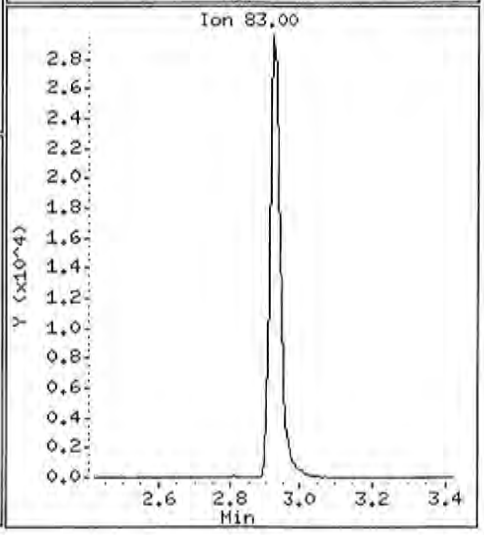


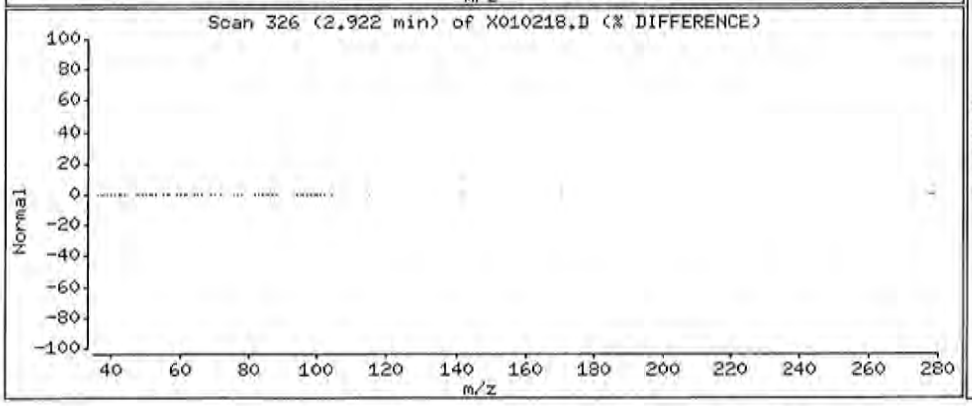












Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010218.D

Date : 02-JAN-2020 16:46

Client ID: HS19121155-03

Instrument: voa6.i

Sample Info: HS19121155-03;HS19121155-03;;;

Purge Volume: 5.0

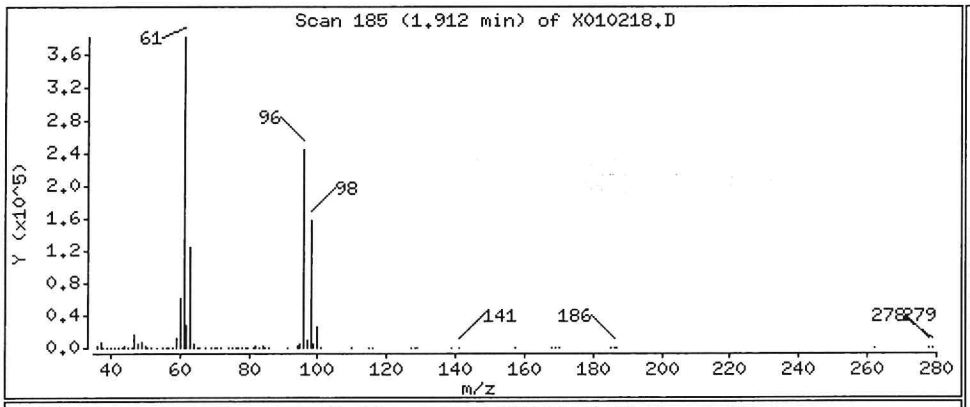
Operator: PC

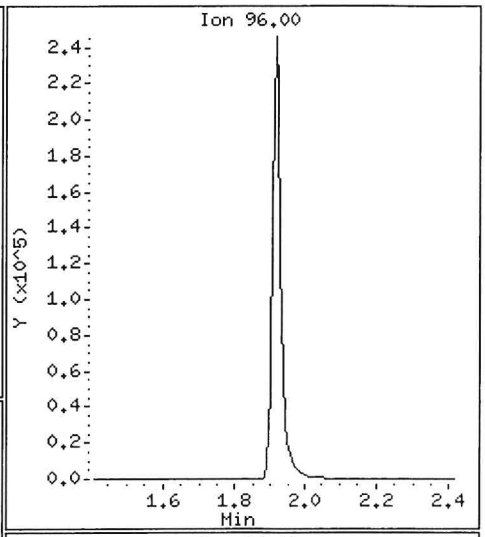
Column phase: DB624

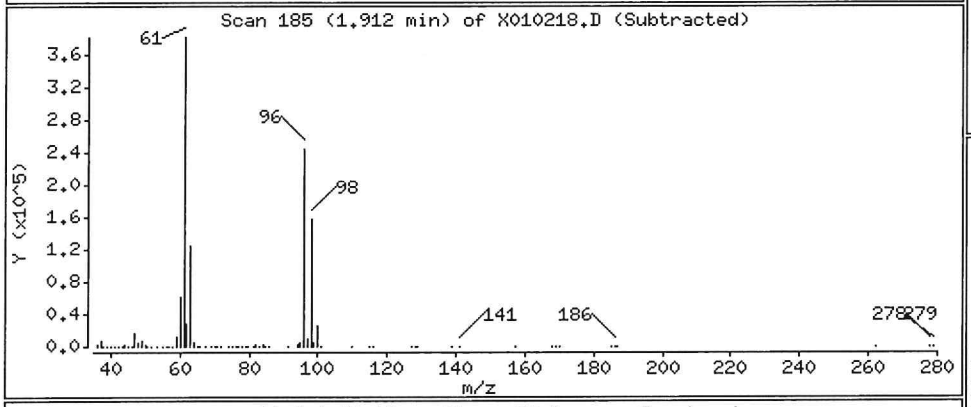
Column diameter: 0.18

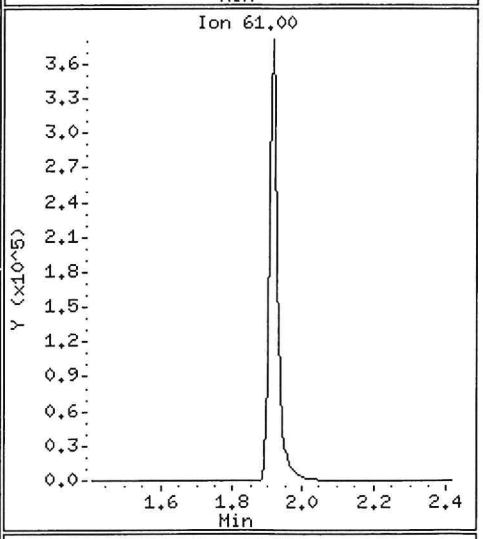
11 1,1-Dichloroethene

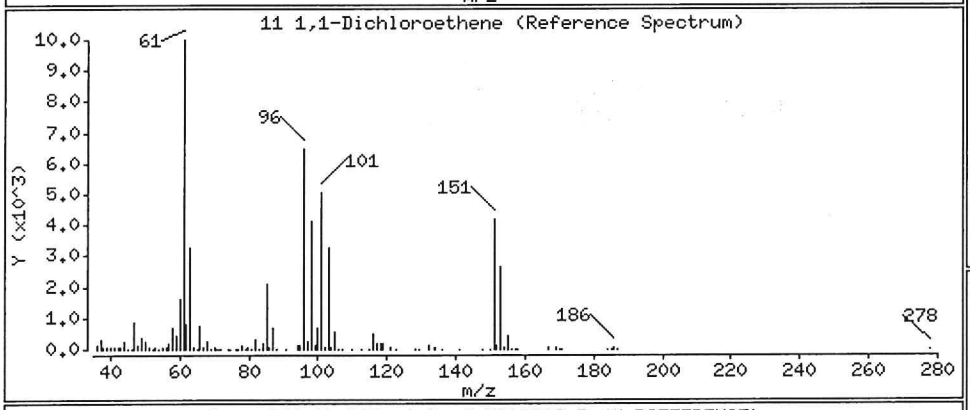
Concentration: 965.77 ug/l

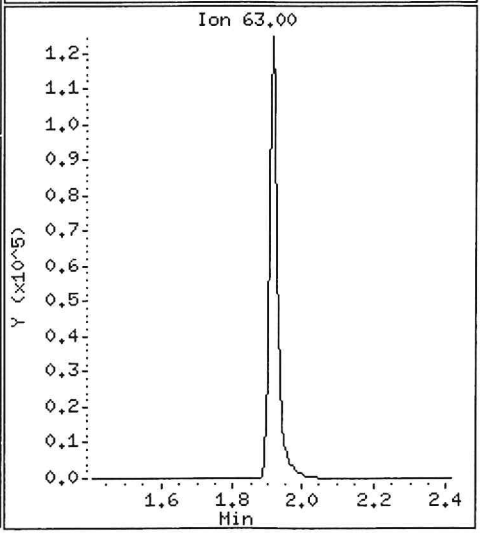


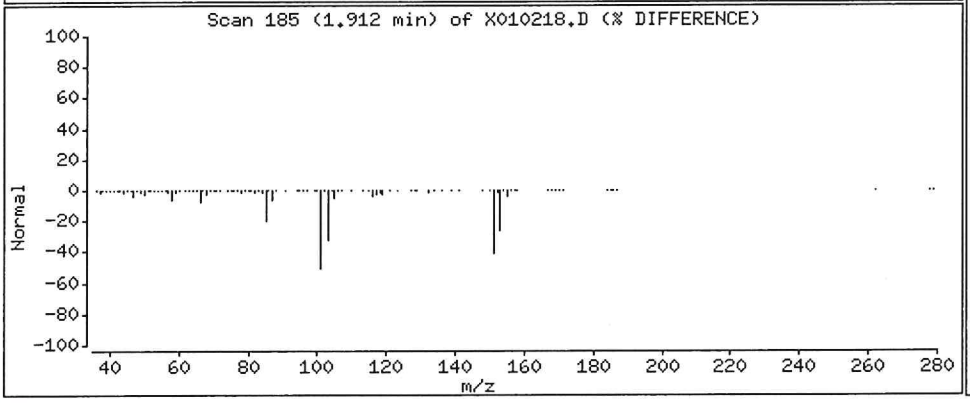












Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010218.D

Date : 02-JAN-2020 16:46

Client ID: HS19121155-03

Instrument: voa6.i

Sample Info: HS19121155-03;HS19121155-03;;;

Purge Volume: 5.0

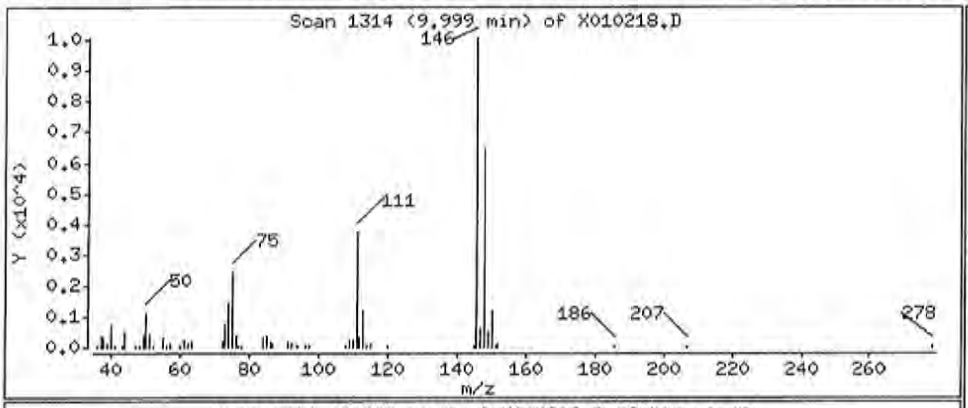
Operator: PC

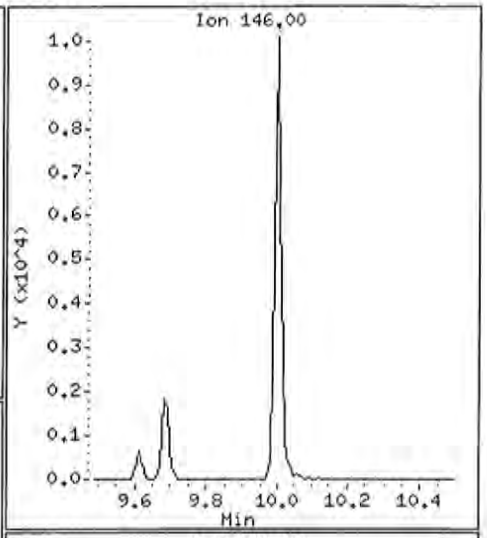
Column phase: DB624

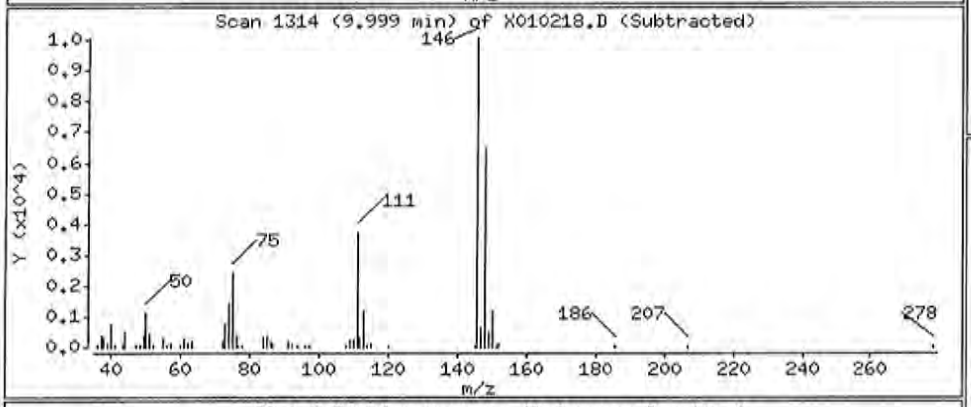
Column diameter: 0.18

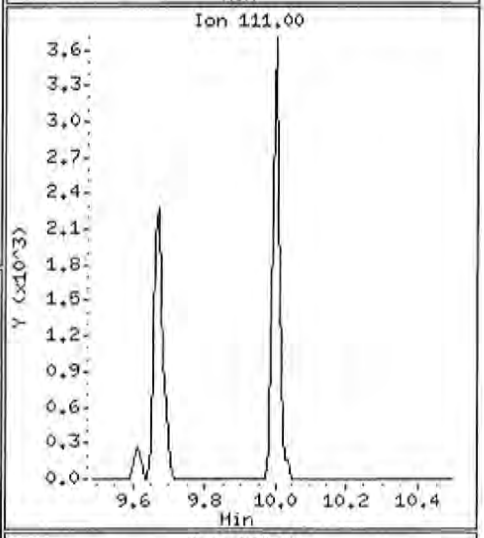
88 1,2-Dichlorobenzene

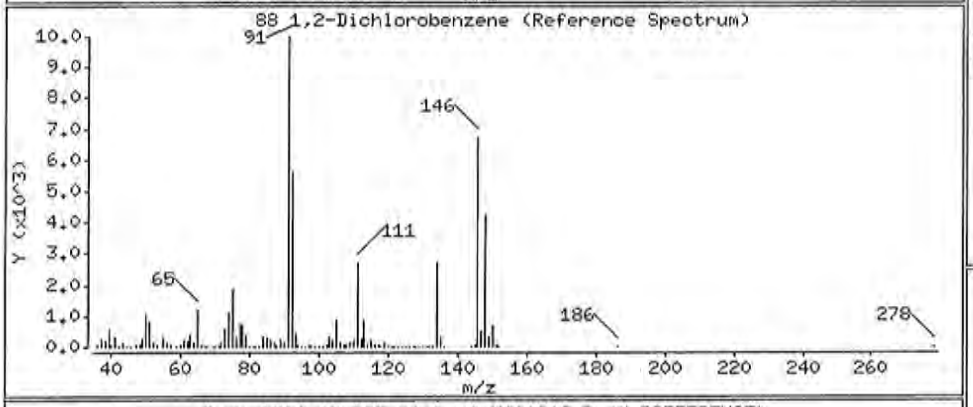
Concentration: 17.38 ug/l

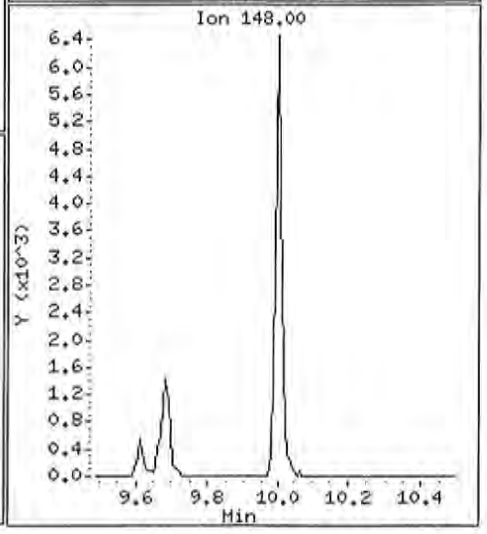


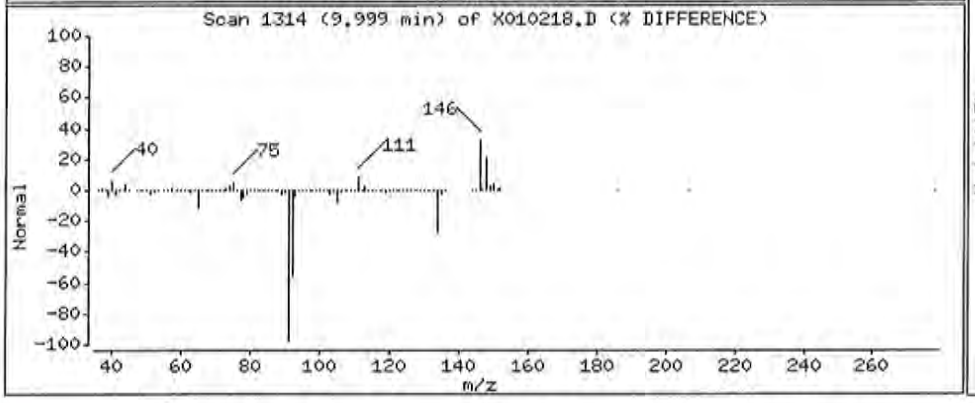












Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010218.D

Date : 02-JAN-2020 16:46

Client ID: HS19121155-03

Instrument: voa6.i

Sample Info: HS19121155-03;HS19121155-03;;;

Purge Volume: 5.0

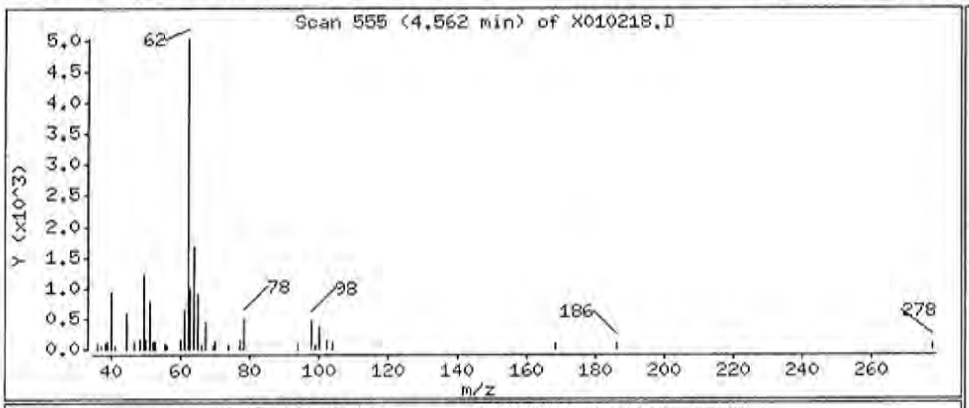
Operator: PC

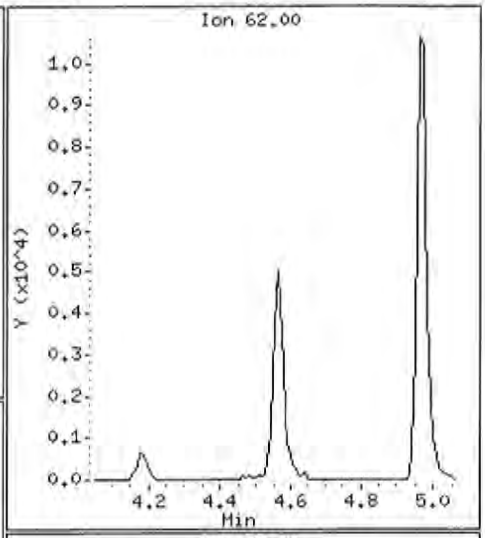
Column phase: DB624

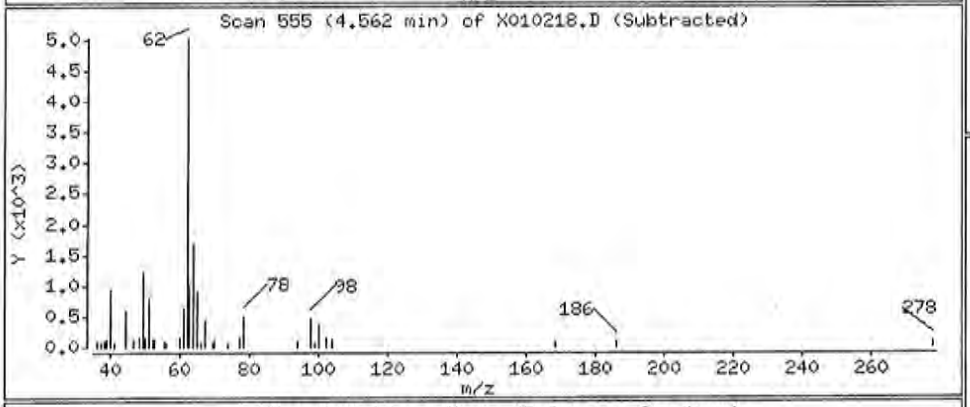
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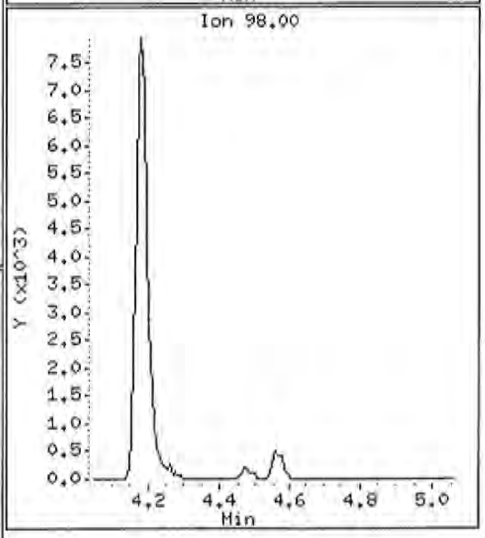
33 1,2-Dichloroethane

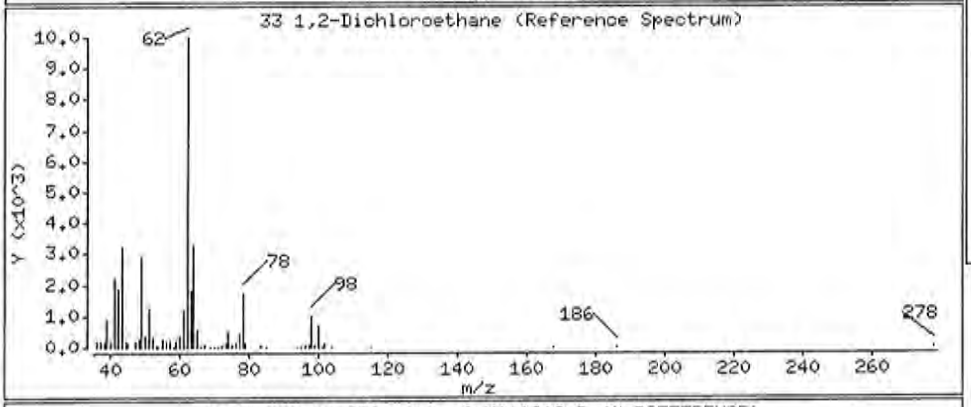
Concentration: 18.79 ug/l

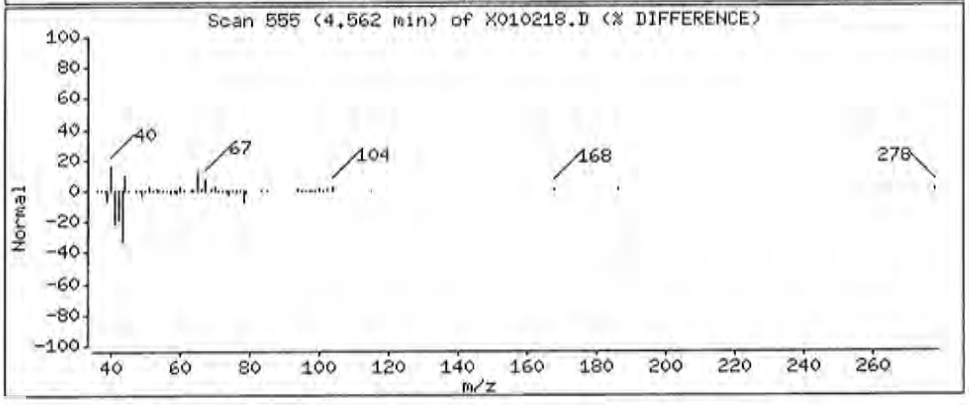












Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010218.D

Date : 02-JAN-2020 16:46

Client ID: HS19121155-03

Instrument: voa6.i

Sample Info: HS19121155-03;HS19121155-03;;;

Purge Volume: 5.0

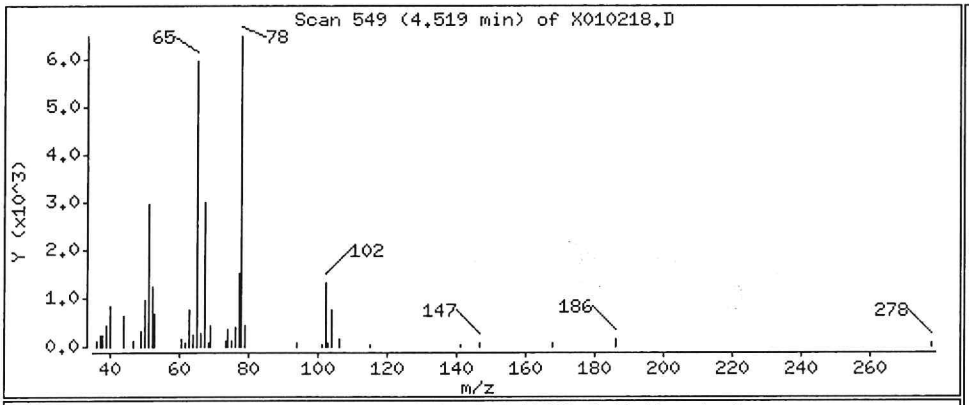
Operator: PC

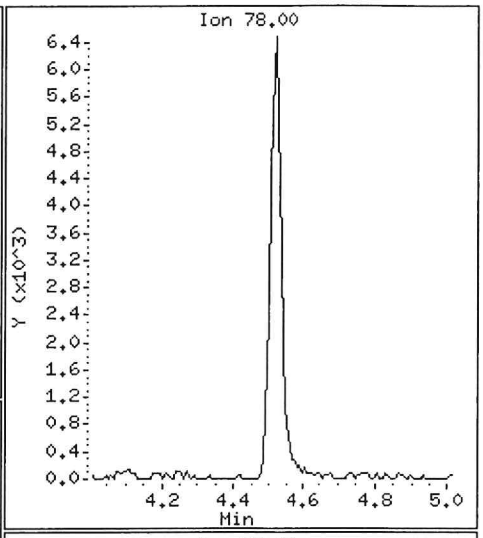
Column phase: DB624

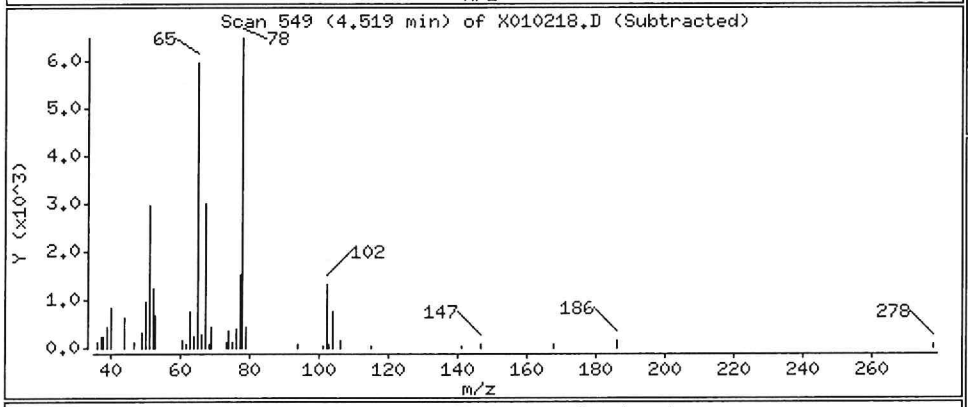
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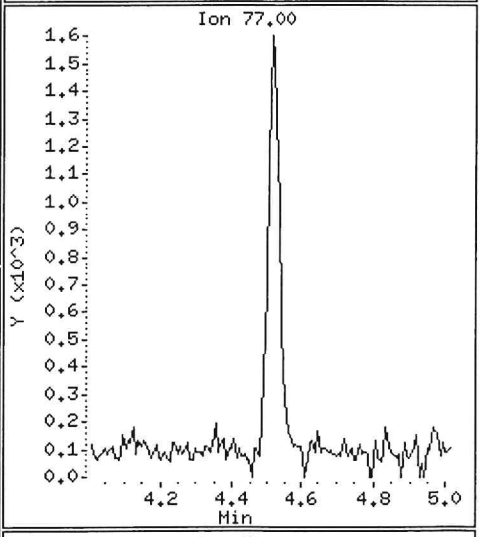
37 Benzene

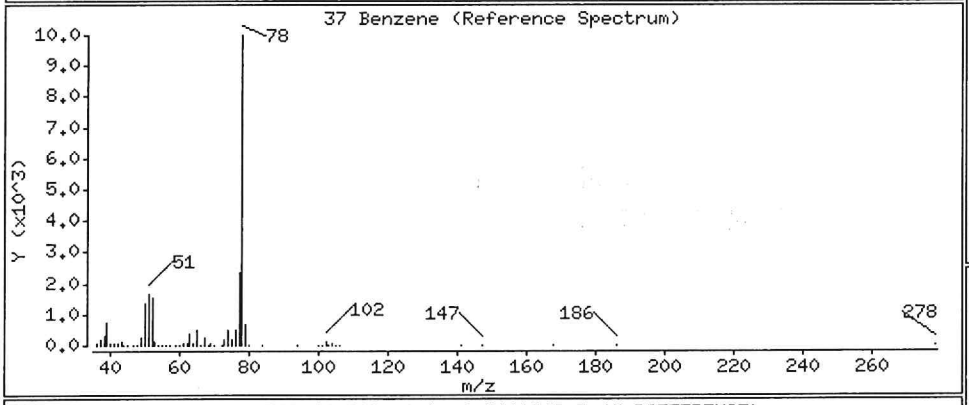
Concentration: 9.00 ug/l

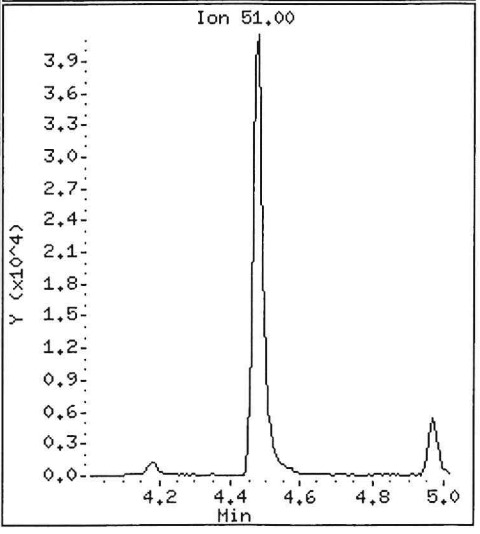


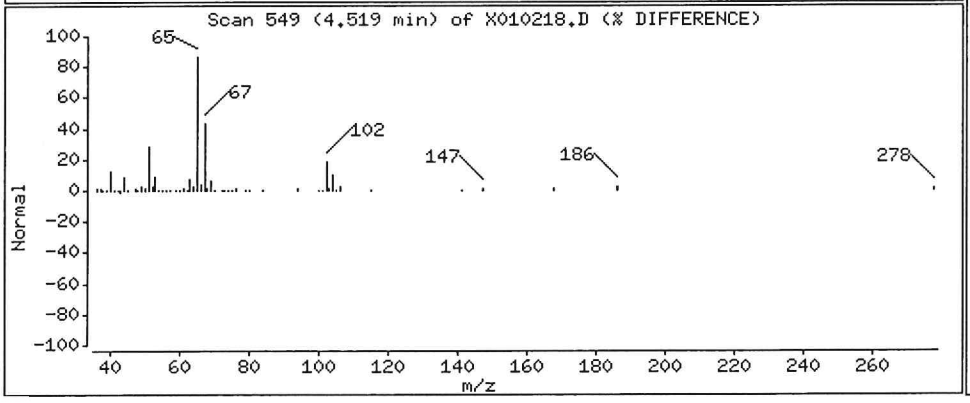












Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010218.D

Date : 02-JAN-2020 16:46

Client ID: HS19121155-03

Instrument: voa6.i

Sample Info: HS19121155-03;HS19121155-03;;;

Purge Volume: 5.0

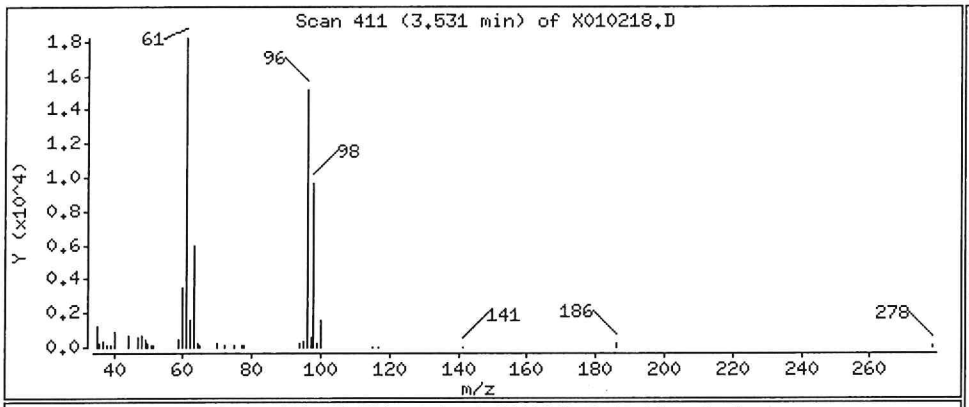
Operator: PC

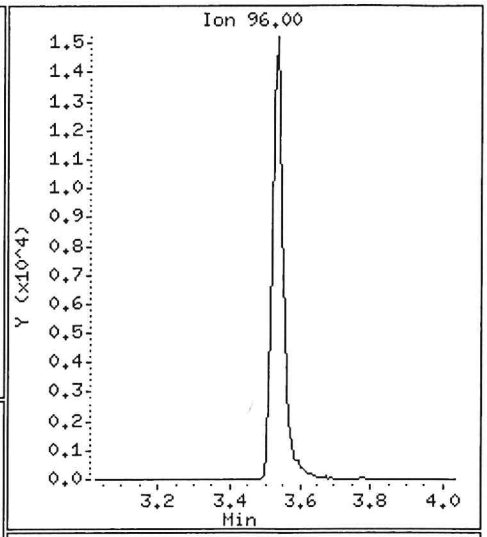
Column phase: DB624

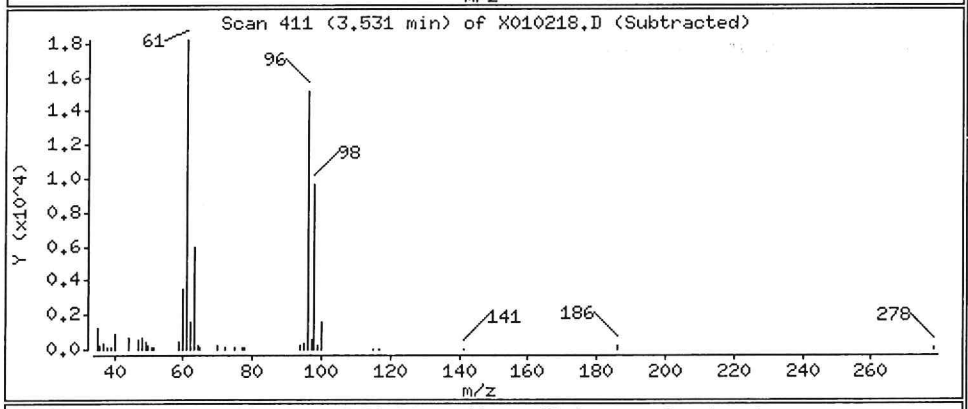
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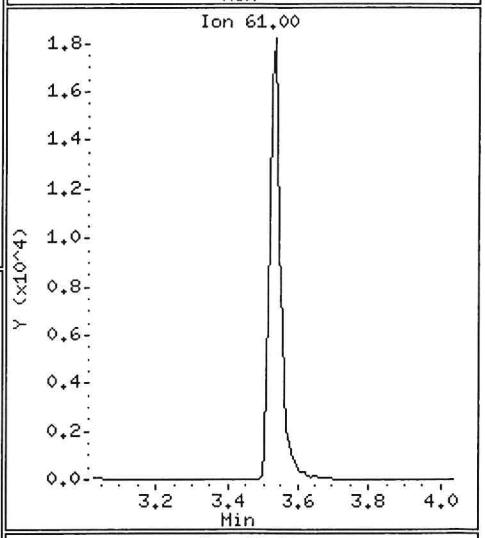
27 cis-1,2-Dichloroethene

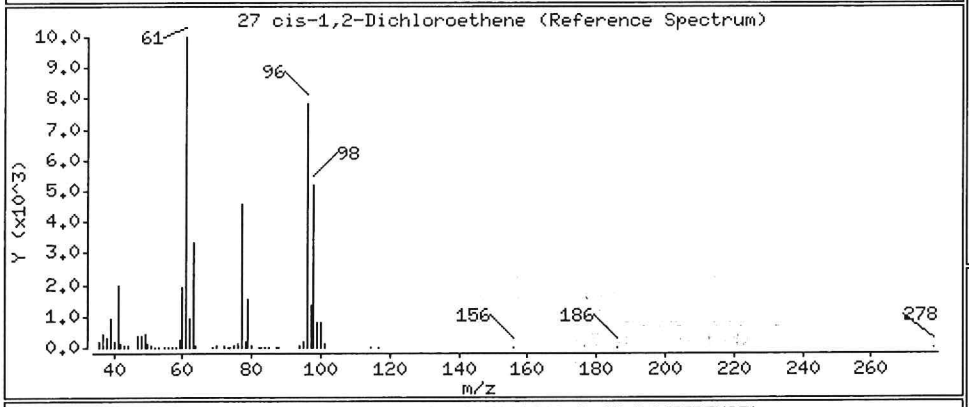
Concentration: 69.66 ug/l

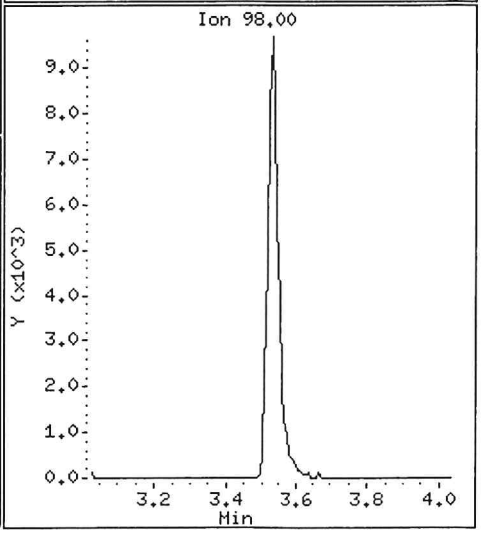


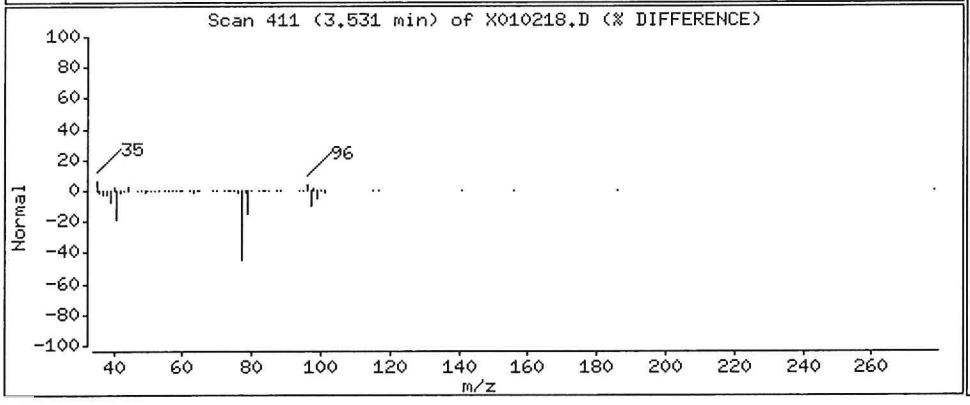












Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010218.D

Date : 02-JAN-2020 16:46

Client ID: HS19121155-03

Instrument: voa6.i

Sample Info: HS19121155-03;HS19121155-03;;;

Purge Volume: 5.0

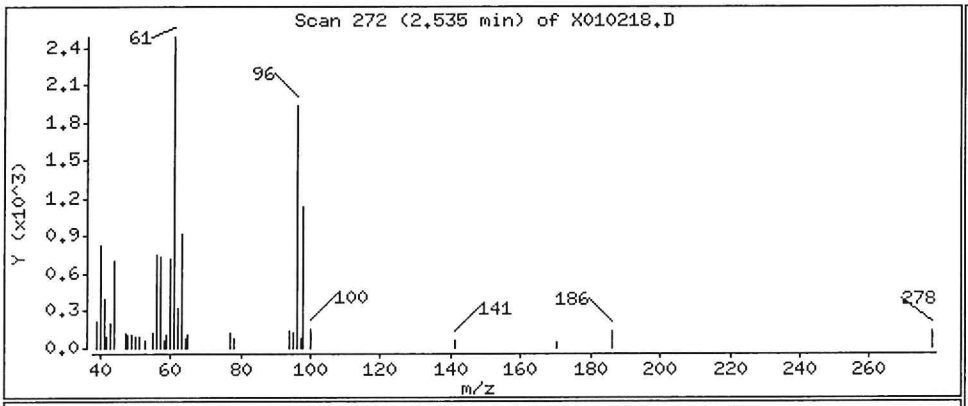
Operator: PC

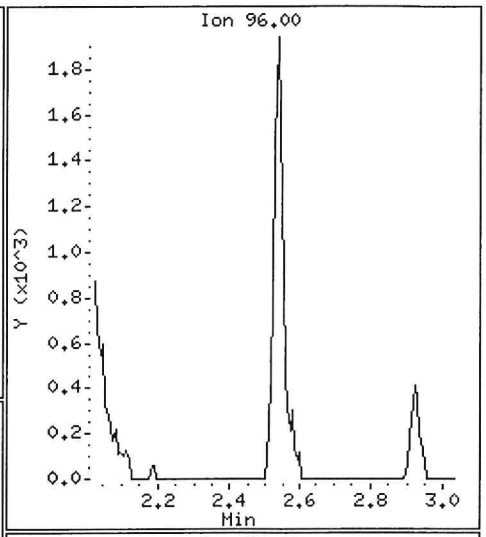
Column phase: DB624

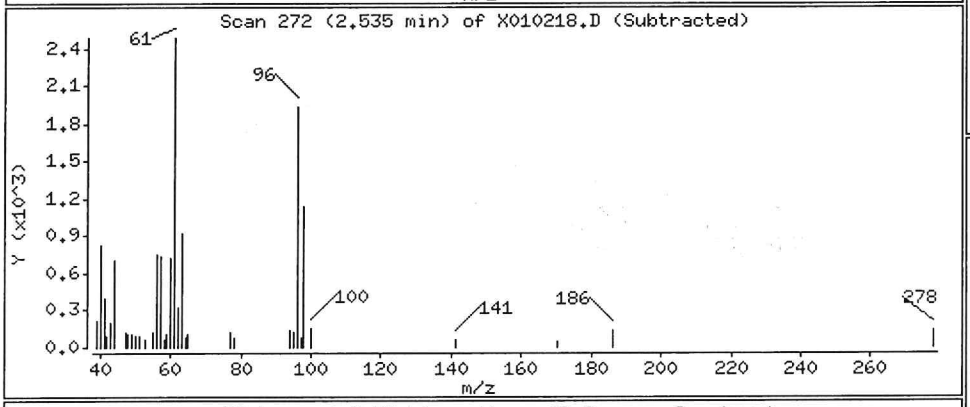
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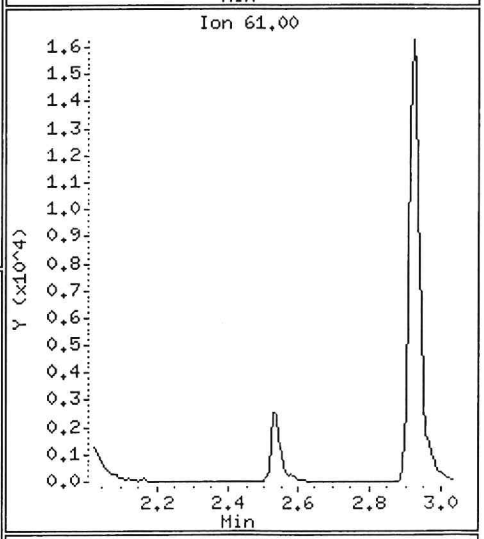
20 trans-1,2-Dichloroethene

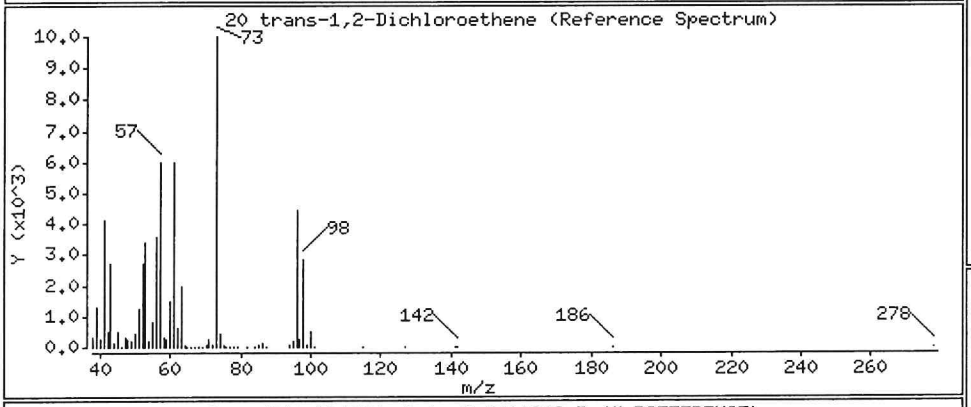
Concentration: 9.11 ug/l

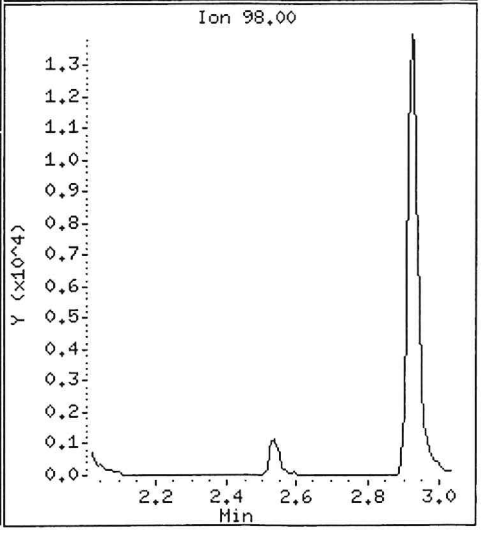


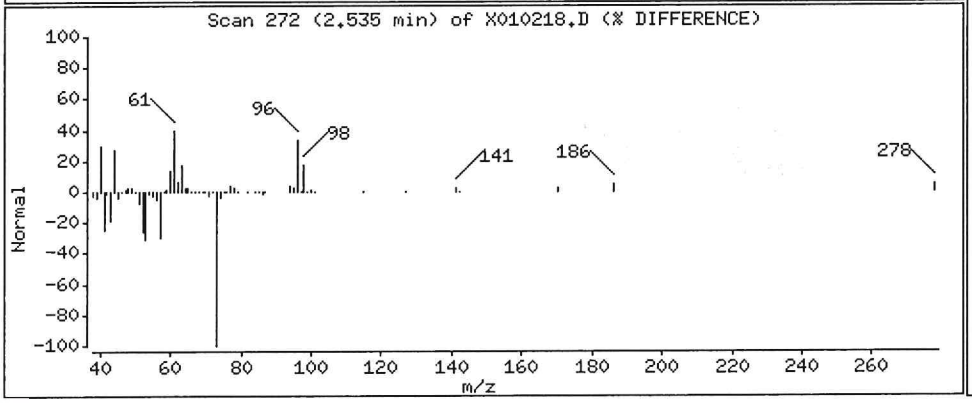












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Date : 02-JAN-2020 16:46

Client ID: HS19121155-03

Instrument: voa6.i

Sample Info: HS19121155-03;HS19121155-03;;;

Purge Volume: 5.0

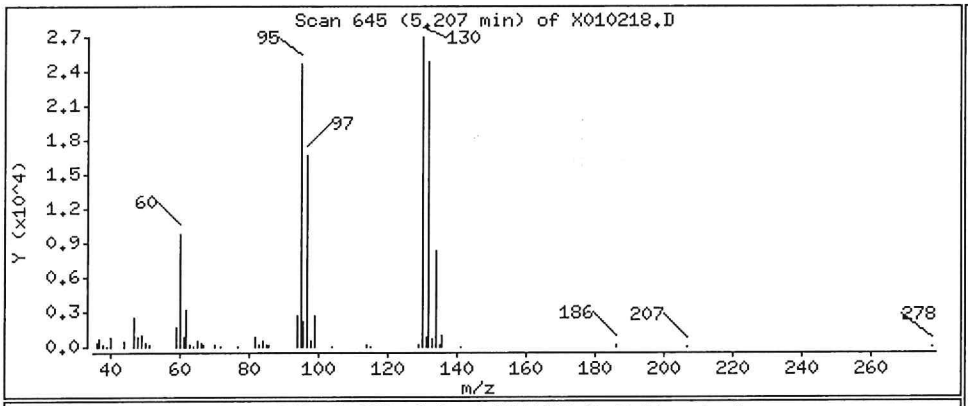
Operator: PC

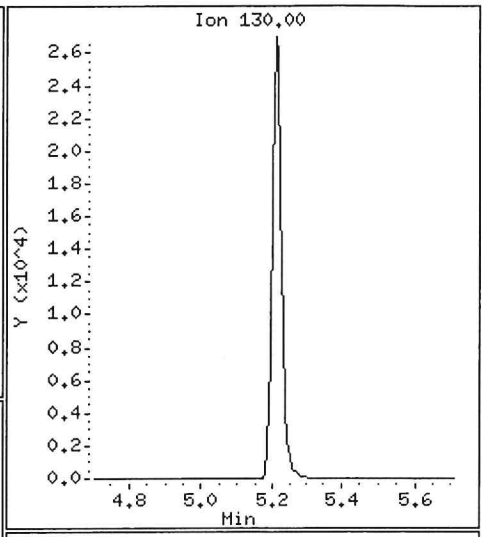
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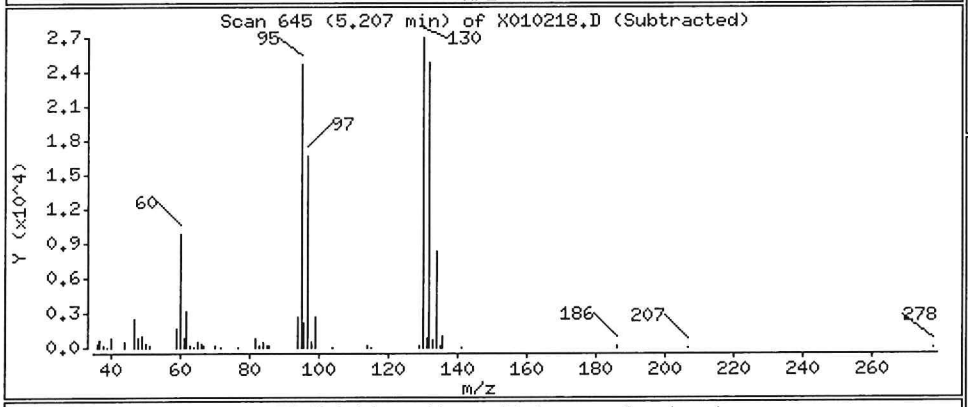
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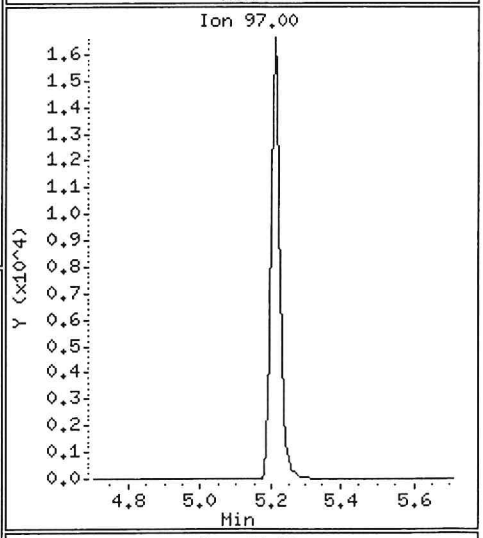
38 Trichloroethene

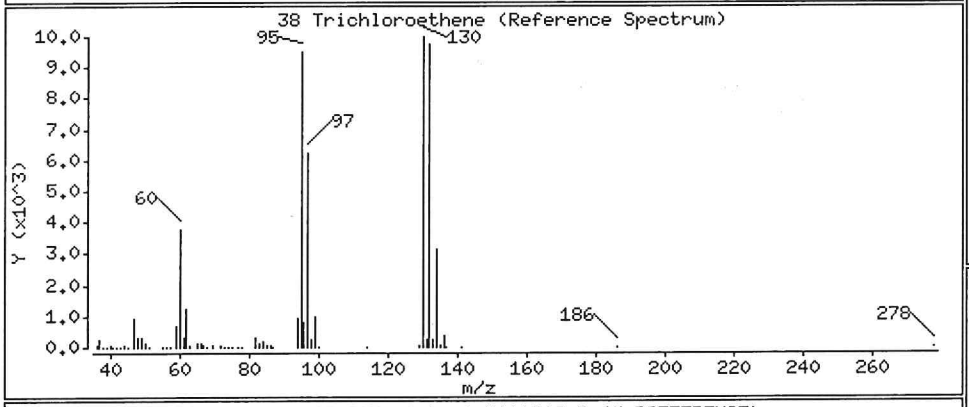
Concentration: 99.27 ug/l

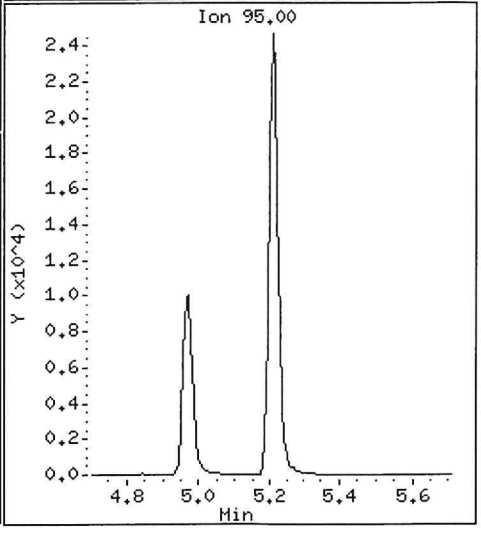


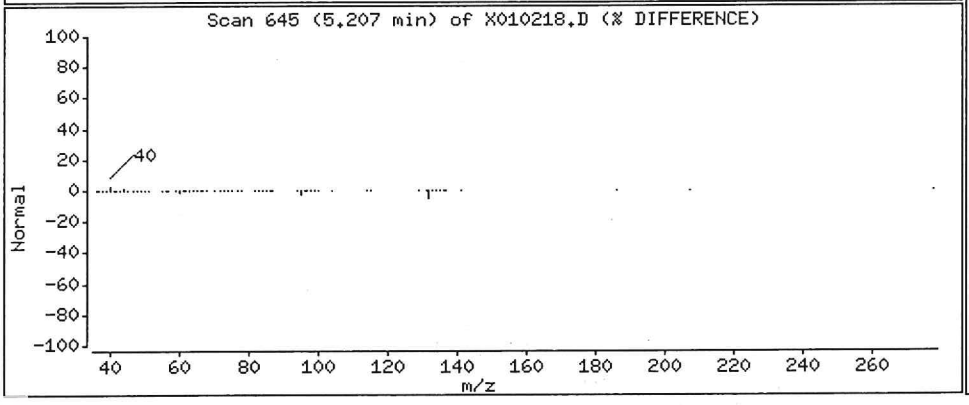












Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010218.D

Date : 02-JAN-2020 16:46

Client ID: HS19121155-03

Instrument: voa6.i

Sample Info: HS19121155-03;HS19121155-03;;;

Purge Volume: 5.0

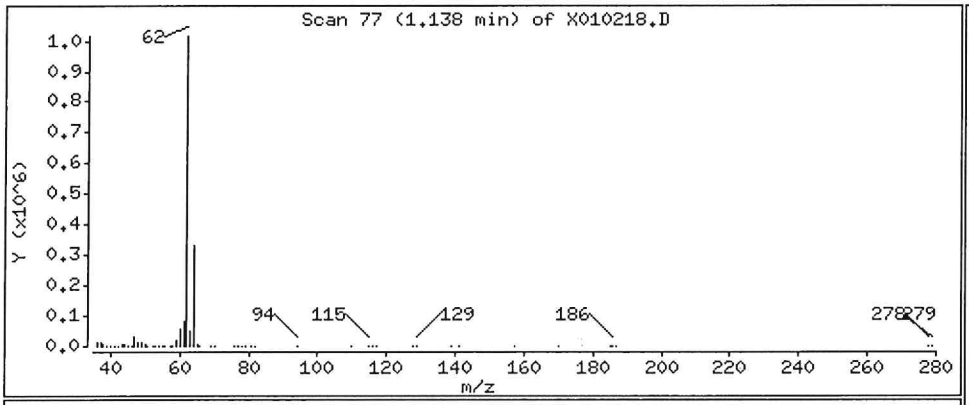
Operator: PC

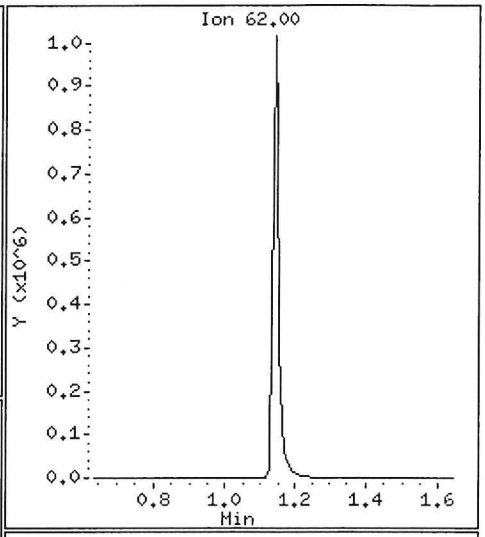
Column phase: DB624

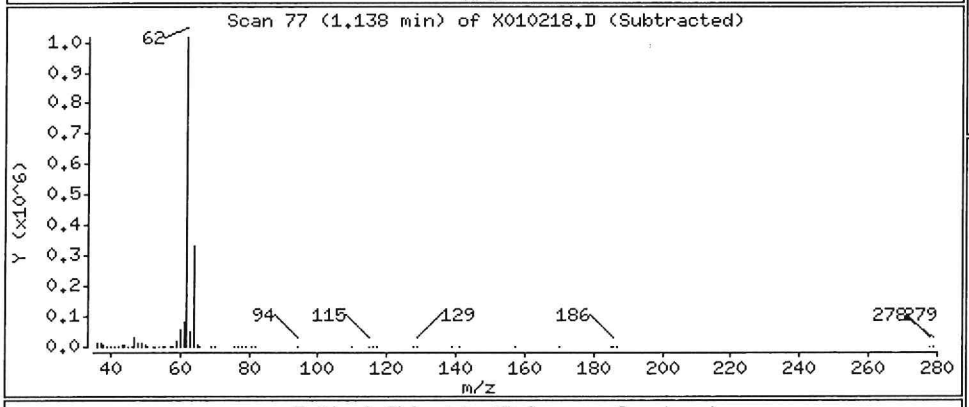
Column diameter: 0.18

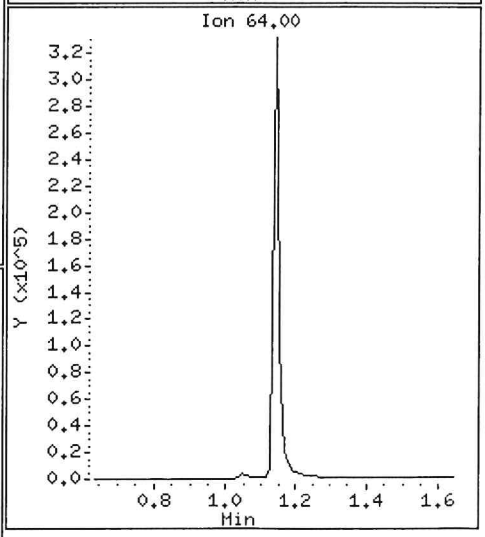
5 Vinyl Chloride

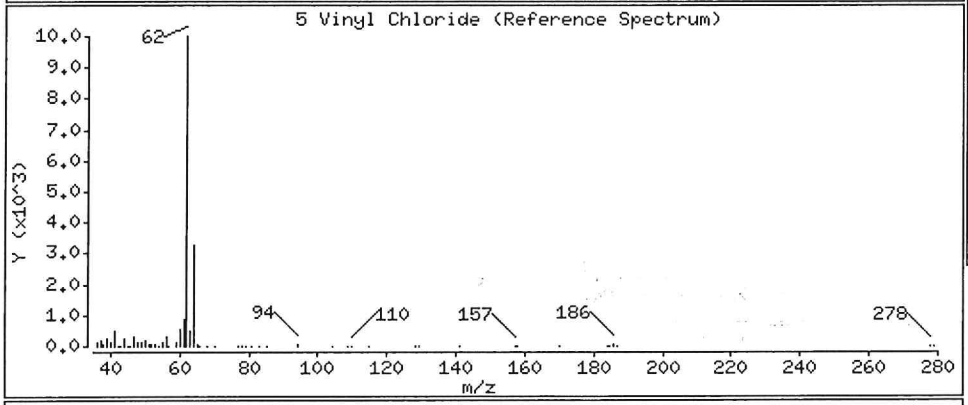
Concentration: 2370.73 ug/l

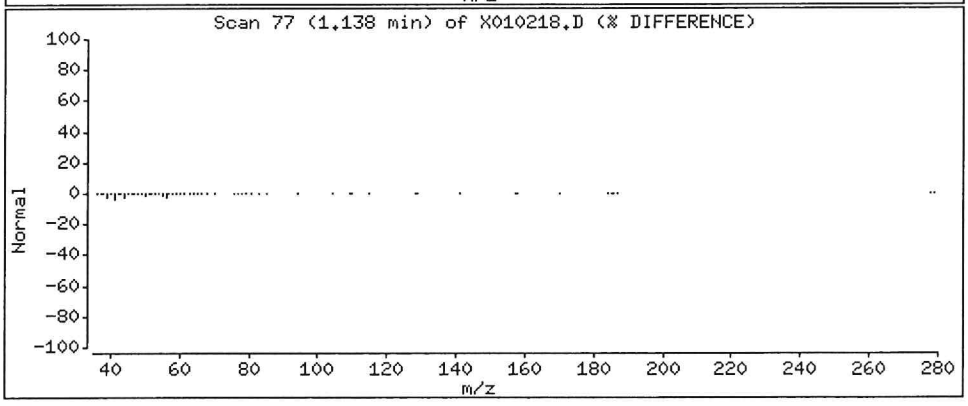












Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010219.D Page 1
Report Date: 26-Jan-2020 12:07

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200102.b\X010219.D
Lab Smp Id: HS19121257-01MS Client Smp ID: HS19121257-01MS
Inj Date : 02-JAN-2020 17:11
Operator : PC Inst ID: voa6.i
Smp Info : HS19121257-01MS;HS19121257-01MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X200102.b\8260W.m
Meth Date : 26-Jan-2020 12:07 voa6.i Quant Type: ISTD
Cal Date : 18-NOV-2019 16:35 Cal File: X111808.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

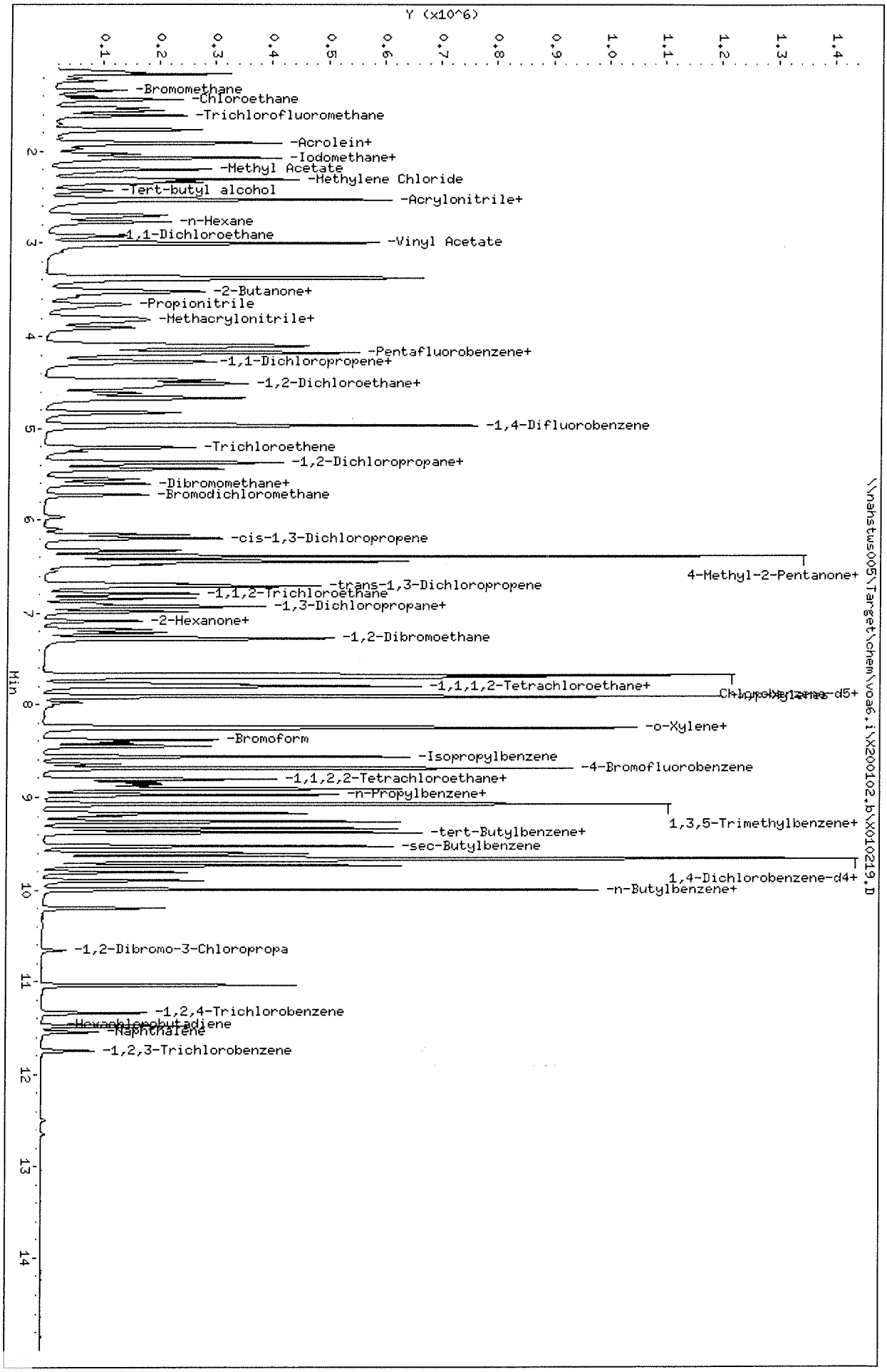
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	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)	482225	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	685546	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	585783	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	286860	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	213722	48.7508	48.75
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	219355	48.3749	48.37
$	48 Toluene-d8	98	6.388	6.388	(0.833)	797356	51.6617	51.66
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	276637	50.7530	50.75
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	84351	19.8484	19.84
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	129446	19.8978	19.89
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.838	(0.915)	87147	21.6044	21.60
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	62768	20.4981	20.49
	22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	151263	21.5584	21.55
	11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	74432	18.2132	18.21
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	116149	21.0036	21.00
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	27618	25.5465	25.54
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	75069	21.9637	21.96(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	55198	22.8430	22.84
	79 1,2,4-Trimethylbenzene	105	9.383	9.382	(0.970)	310003	22.7755	22.77
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.657	(1.102)	9304	20.6954	20.69
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	80410	19.5721	19.57
	88 1,2-Dichlorobenzene	146	9.999	9.998	(1.034)	156898	20.6083	20.60

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
33	1,2-Dichloroethane	62	4.555	4.555	(0.916)	103902	19.0924	19.09
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	85401	20.8540	20.85
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	305209	23.3686	23.36
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	178094	21.6486	21.64
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	128552	20.6780	20.67
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	174530	20.8777	20.87
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	128205	20.1321	20.13
24	2-Butanone	43	3.580	3.573	(0.856)	55828	37.7301	37.73
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	251452	24.3641	24.36
52	2-Hexanone	43	7.090	7.083	(0.924)	94187	39.1412	39.14
77	4-Chlorotoluene	91	9.075	9.074	(0.939)	287032	22.9450	22.94
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	325135	23.1641	23.16
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	144064	41.9737	41.97
10	Acetone	43	1.969	1.969	(0.471)	37927	27.6940	27.69
37	Benzene	78	4.512	4.512	(0.908)	336701	21.4703	21.47
74	Bromobenzene	156	8.809	8.809	(0.911)	106281	21.3181	21.31
29	Bromochloromethane	128	3.795	3.795	(0.908)	49424	18.9193	18.91
39	Bromodichloromethane	83	5.729	5.729	(1.153)	108624	19.1468	19.14
66	Bromoform	173	8.416	8.415	(1.097)	62049	18.4323	18.43
6	Bromomethane	94	1.338	1.338	(0.320)	65816	12.0161	12.01
19	Carbon Disulfide	76	2.069	2.069	(0.495)	512827	46.1270	46.12
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	117143	19.3378	19.33
59	Chlorobenzene	112	7.699	7.699	(1.004)	228208	19.9549	19.95
7	Chloroethane	64	1.403	1.403	(0.336)	55795	18.3769	18.37
28	Chloroform	83	3.910	3.910	(0.935)	147404	18.8746	18.87
3	Chloromethane	50	1.073	1.073	(0.257)	97109	18.6597	18.65
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	96261	21.0493	21.04
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	137023	20.4952	20.49
55	Dibromochloromethane	129	7.176	7.176	(0.936)	87431	19.6539	19.65
44	Dibromomethane	93	5.557	5.557	(1.118)	53918	18.6054	18.60
2	Dichlorodifluoromethane	85	0.966	0.966	(0.231)	97029	22.5741	22.57
61	Ethylbenzene	106	7.799	7.799	(1.017)	124254	21.0282	21.02
91	Hexachlorobutadiene	225	11.488	11.488	(1.188)	47684	20.6842	20.68
67	Isopropylbenzene	105	8.566	8.566	(1.117)	368920	21.0787	21.07
62	m,p-Xylenes	106	7.907	7.907	(1.031)	298633	41.8820	41.88
17	Methylene Chloride	84	2.305	2.305	(0.551)	86596	19.8600	19.85
87	n-Butylbenzene	91	9.999	9.998	(1.034)	271648	23.2558	23.25
73	n-Propylbenzene	91	8.917	8.917	(0.922)	425449	23.9941	23.99
92	Naphthalene	128	11.546	11.546	(1.194)	65490	21.1309	21.13
63	o-Xylene	106	8.244	8.244	(1.075)	143695	20.4193	20.41
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	365783	23.7466	23.74
64	Styrene	104	8.258	8.258	(1.077)	245749	20.0822	20.08
78	tert-Butylbenzene	119	9.340	9.339	(0.966)	263808	23.5905	23.59
56	Tetrachloroethene	164	6.933	6.933	(0.904)	80944	19.6663	19.66
50	Toluene	91	6.446	6.446	(0.840)	356920	21.4863	21.48
20	trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	84280	21.2419	21.24
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	120633	19.7974	19.79
38	Trichloroethene	130	5.206	5.206	(1.048)	94726	19.7581	19.75
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	138062	18.4564	18.45
5	Vinyl Chloride	62	1.138	1.138	(0.272)	108439	22.0642	22.06

QC Flag Legend

M - Compound response manually integrated.

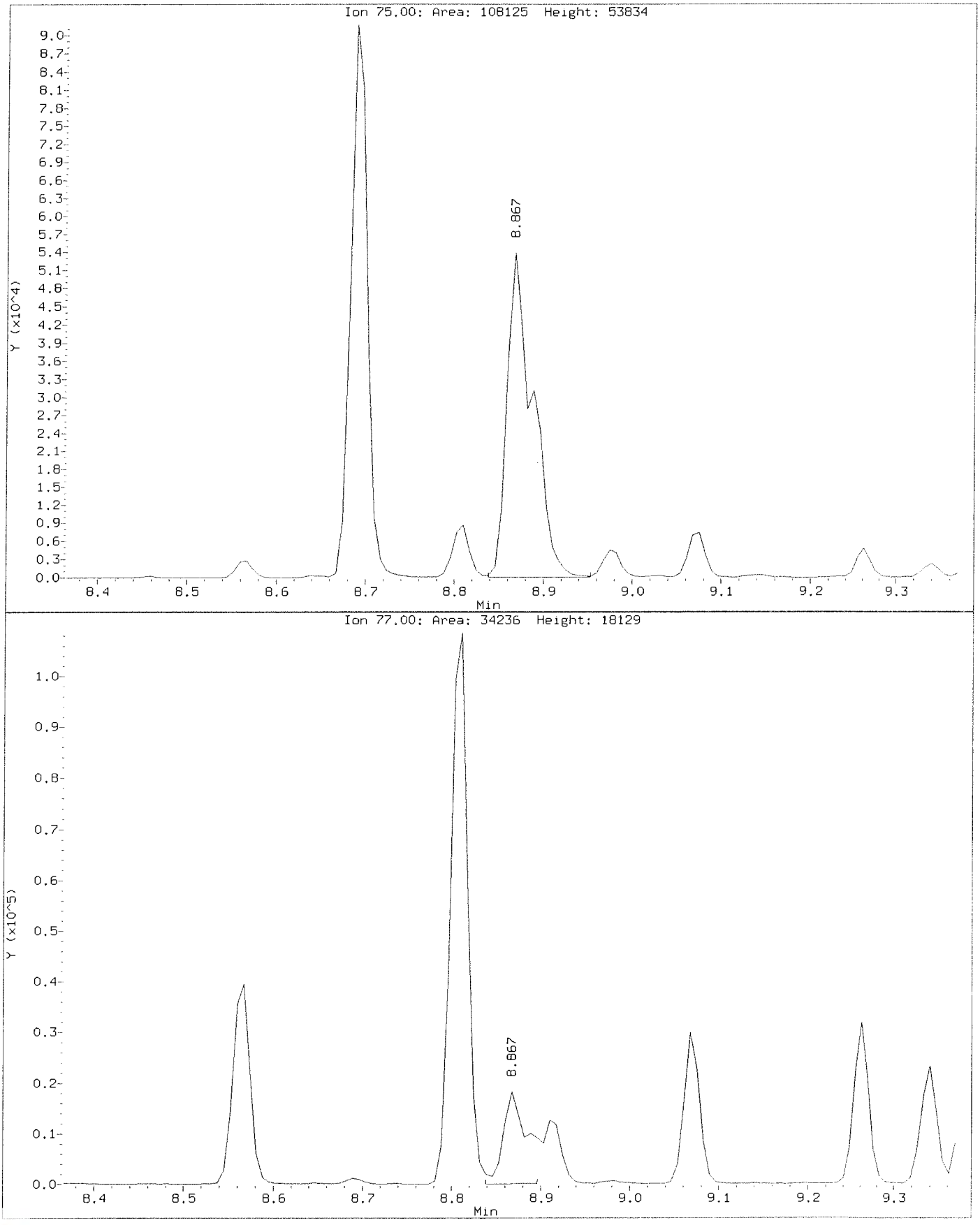


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Sample Info: HS19121257-01MS;HS19121257-01MS;3;;NS
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Column phase: DB624

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

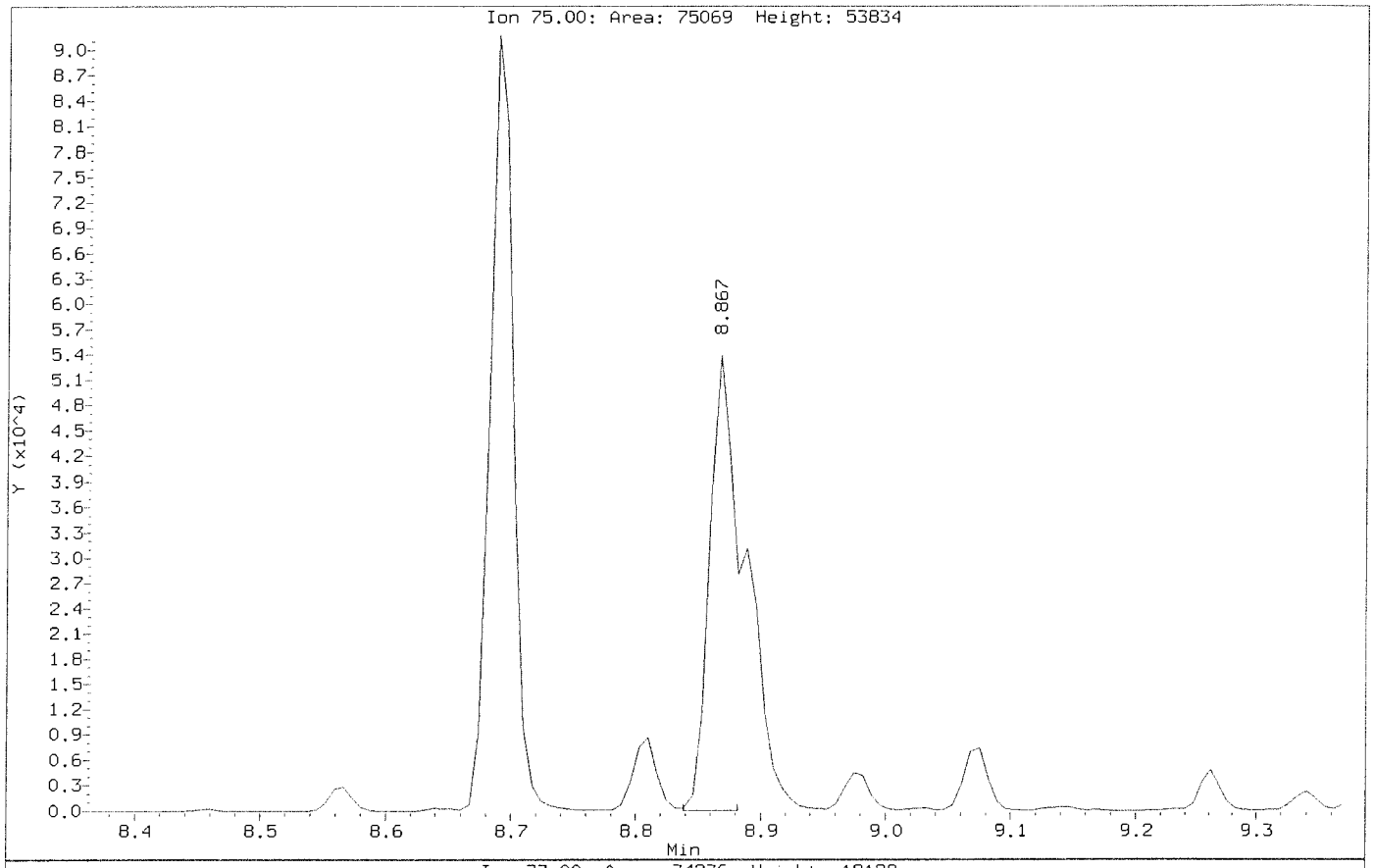
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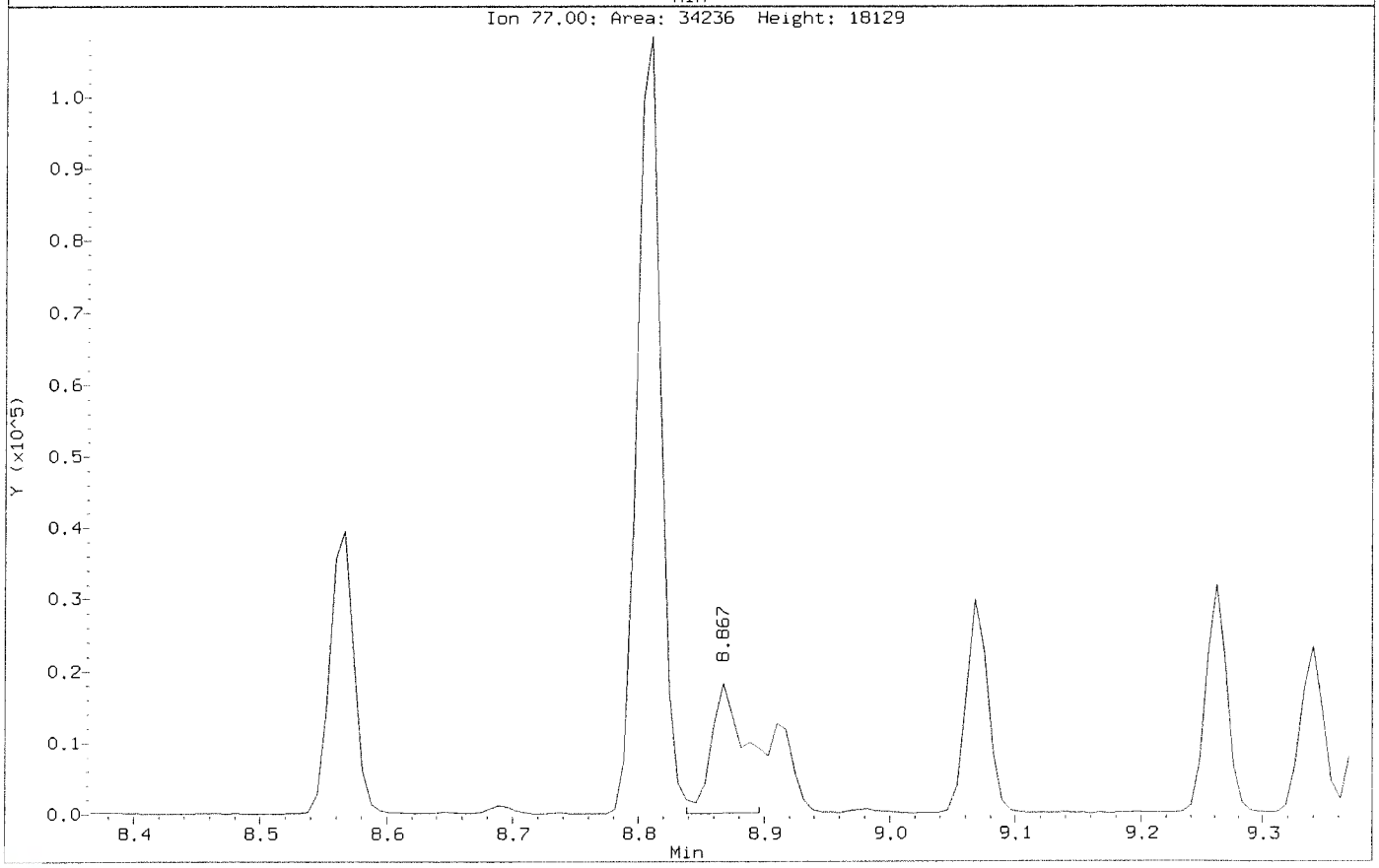
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



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Injection Date: 02-JAN-2020 17:11
Instrument: voa6.i
Client Sample ID: HS19121257-01MS

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





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200102.b\X010220.D
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Inj Date : 02-JAN-2020 17:35
Operator : PC Inst ID: voa6.i
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Misc Info : HS18090001;WATER;0;1;
Comment :
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Meth Date : 26-Jan-2020 12:07 voa6.i Quant Type: ISTD
Cal Date : 18-NOV-2019 16:35 Cal File: X111808.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
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Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

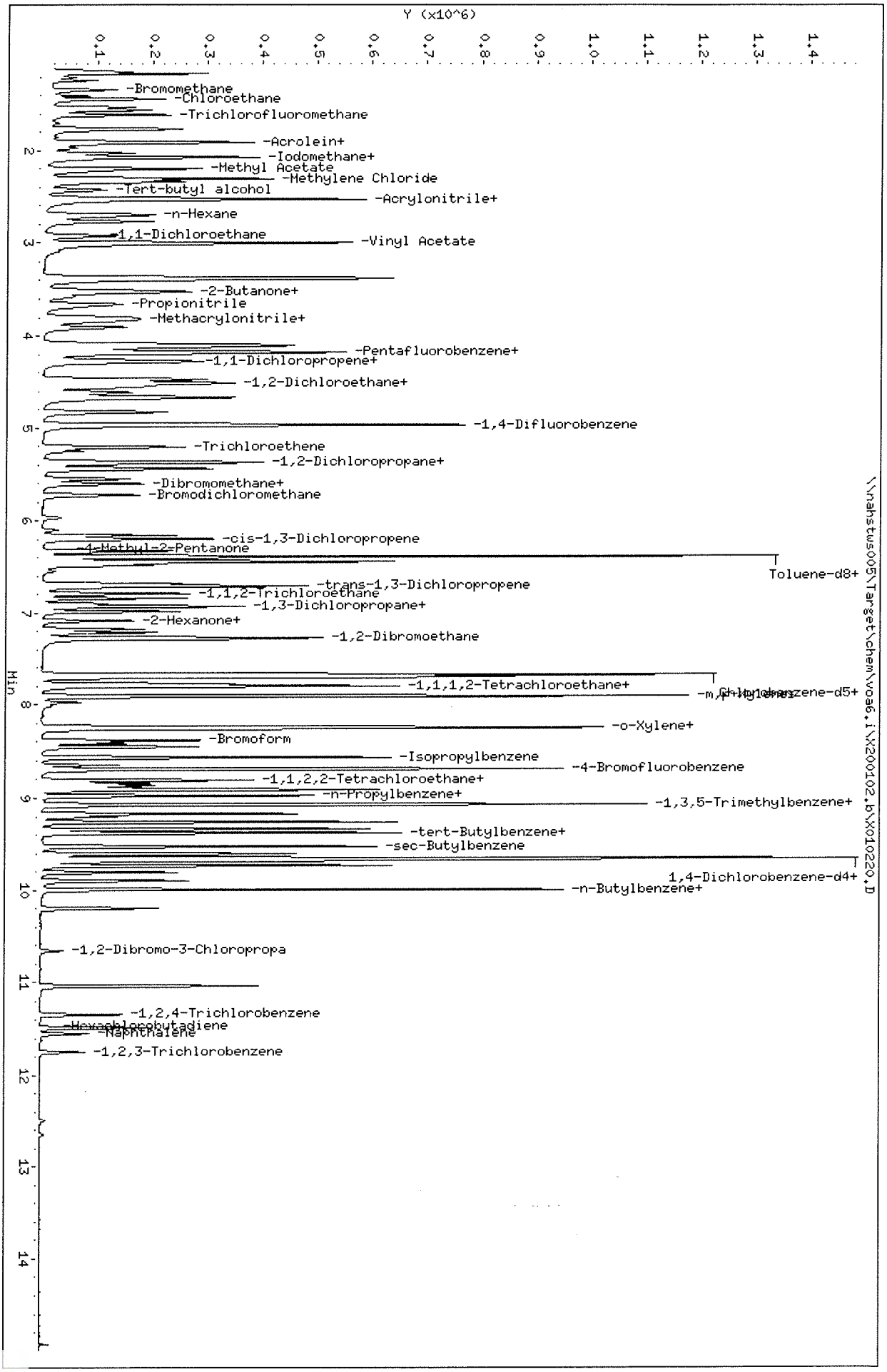
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	480311	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	683266	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	587766	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	287693	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	211892	48.5277	48.52
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	217036	48.0591	48.05
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	797018	51.4656	51.46
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	276647	50.5850	50.58
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	83267	19.5272	19.52
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	124425	19.2022	19.20
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	85810	21.2114	21.21
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	61076	19.8782	19.87
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	145191	20.7754	20.77
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	70406	17.2967	17.29
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	110433	20.0366	20.03
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	23362	21.4224	21.42
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	73587	21.4677	21.46(M)
90 1,2,4-Trichlorobenzene	180	11.345	11.338	(1.173)	46241	19.0808	19.08
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	302923	22.1909	22.19
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.657	(1.102)	8548	18.9302	18.93
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	79107	19.1900	19.18
88 1,2-Dichlorobenzene	146	9.999	9.998	(1.034)	154398	20.2212	20.22

Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010220.D Page 2
Report Date: 26-Jan-2020 12:07

	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	4.555	(0.918)	101808	18.7701	18.77
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	81800	20.0414	20.04
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	299589	22.8719	22.87
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	172095	20.8588	20.85
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	127133	20.3807	20.38
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	170912	20.3857	20.38
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	122324	19.2851	19.28
24	2-Butanone	43	3.580	3.573	(0.856)	54171	36.7561	36.75
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	244958	23.6661	23.66
52	2-Hexanone	43	7.090	7.083	(0.924)	92312	38.2326	38.23
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	281777	22.4597	22.45
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	314645	22.3518	22.35
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	141821	41.1808	41.18
10	Acetone	43	1.969	1.969	(0.471)	35813	26.0540	26.05
37	Benzene	78	4.512	4.512	(0.908)	322111	20.6085	20.60
74	Bromobenzene	156	8.809	8.809	(0.911)	105527	21.1056	21.10
29	Bromochloromethane	128	3.795	3.795	(0.908)	47986	18.4420	18.44
39	Bromodichloromethane	83	5.729	5.729	(1.153)	107050	18.9323	18.93
66	Bromoform	173	8.415	8.415	(1.097)	60603	17.9686	17.96
6	Bromomethane	94	1.338	1.338	(0.320)	64096	11.6962	11.69
19	Carbon Disulfide	76	2.069	2.069	(0.495)	481265	43.4607	43.46
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	112185	18.5811	18.58
59	Chlorobenzene	112	7.699	7.699	(1.004)	221408	19.2950	19.29
7	Chloroethane	64	1.403	1.403	(0.336)	54010	17.8599	17.85
28	Chloroform	83	3.910	3.910	(0.935)	143226	18.4127	18.41
3	Chloromethane	50	1.073	1.073	(0.257)	91858	17.7305	17.73
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	90960	19.9694	19.96
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	131816	19.7821	19.78
55	Dibromochloromethane	129	7.176	7.176	(0.936)	85240	19.0967	19.09
44	Dibromomethane	93	5.557	5.557	(1.118)	52719	18.2523	18.25
2	Dichlorodifluoromethane	85	0.966	0.966	(0.231)	89151	20.8923	20.89
61	Ethylbenzene	106	7.799	7.799	(1.017)	121666	20.5208	20.52
91	Hexachlorobutadiene	225	11.488	11.488	(1.188)	38338	16.5819	16.58
67	Isopropylbenzene	105	8.566	8.566	(1.117)	359295	20.4595	20.45
62	m,p-Xylenes	106	7.907	7.907	(1.031)	292340	40.8611	40.86
17	Methylene Chloride	84	2.305	2.305	(0.551)	82739	19.0510	19.05
87	n-Butylbenzene	91	9.999	9.998	(1.034)	263599	22.5014	22.50
73	n-Propylbenzene	91	8.917	8.917	(0.922)	413516	23.2536	23.25
92	Naphthalene	128	11.546	11.546	(1.194)	60132	19.3459	19.34
63	o-Xylene	106	8.244	8.244	(1.075)	141786	20.0801	20.08
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	356529	23.0788	23.07
64	Styrene	104	8.258	8.258	(1.077)	243345	19.8186	19.81
78	tert-Butylbenzene	119	9.340	9.339	(0.966)	254961	22.7333	22.73
56	Tetrachloroethene	164	6.933	6.933	(0.904)	78337	18.9687	18.96
50	Toluene	91	6.446	6.446	(0.840)	345543	20.7312	20.73
20	trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	79241	20.0514	20.05
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	118223	19.4666	19.46
38	Trichloroethene	130	5.206	5.206	(1.048)	91774	19.2063	19.20
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	129903	17.4349	17.43
5	Vinyl Chloride	62	1.138	1.138	(0.272)	98857	20.1947	20.19

QC Flag Legend

M - Compound response manually integrated.

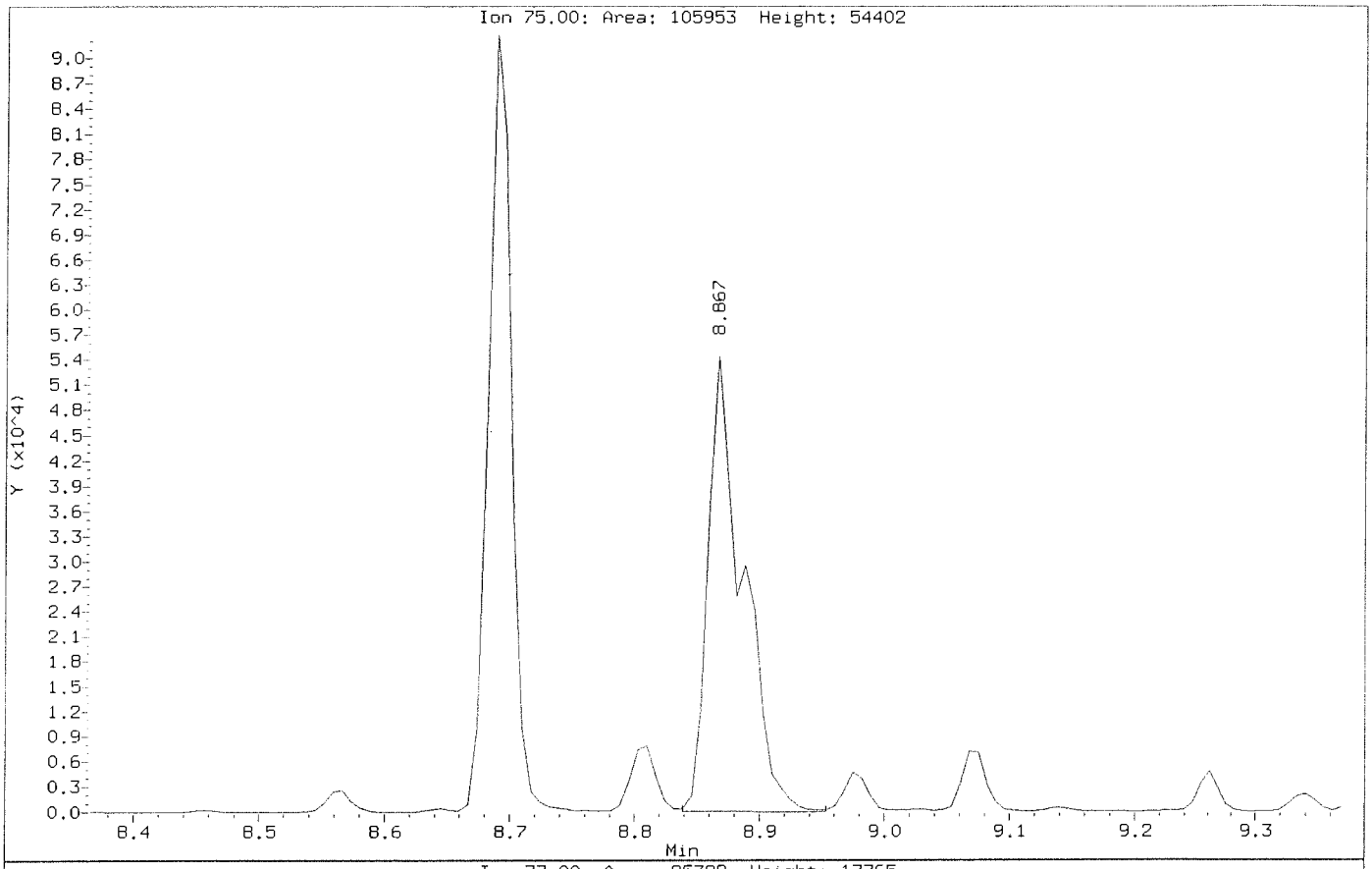


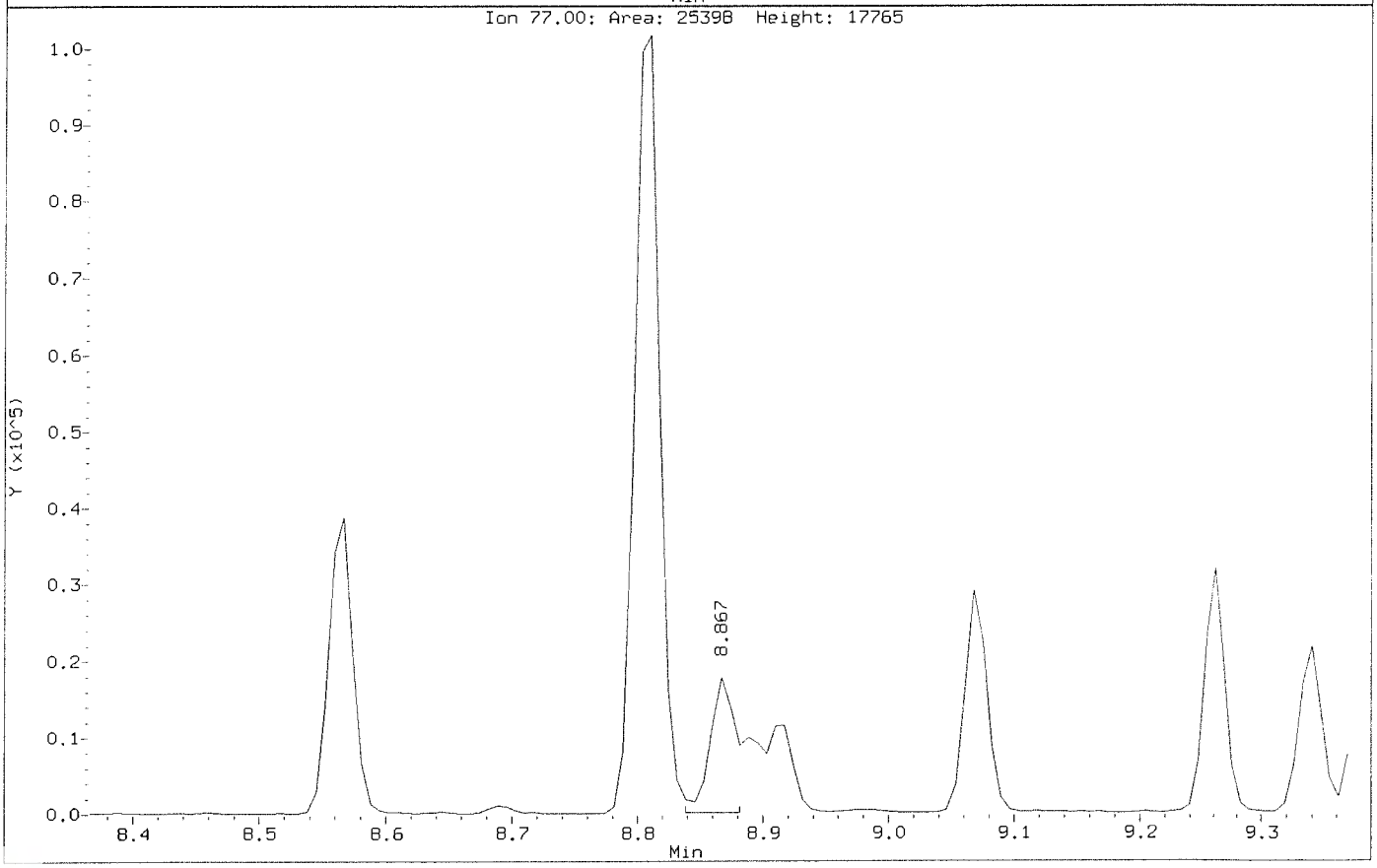
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Column phase: DB624

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

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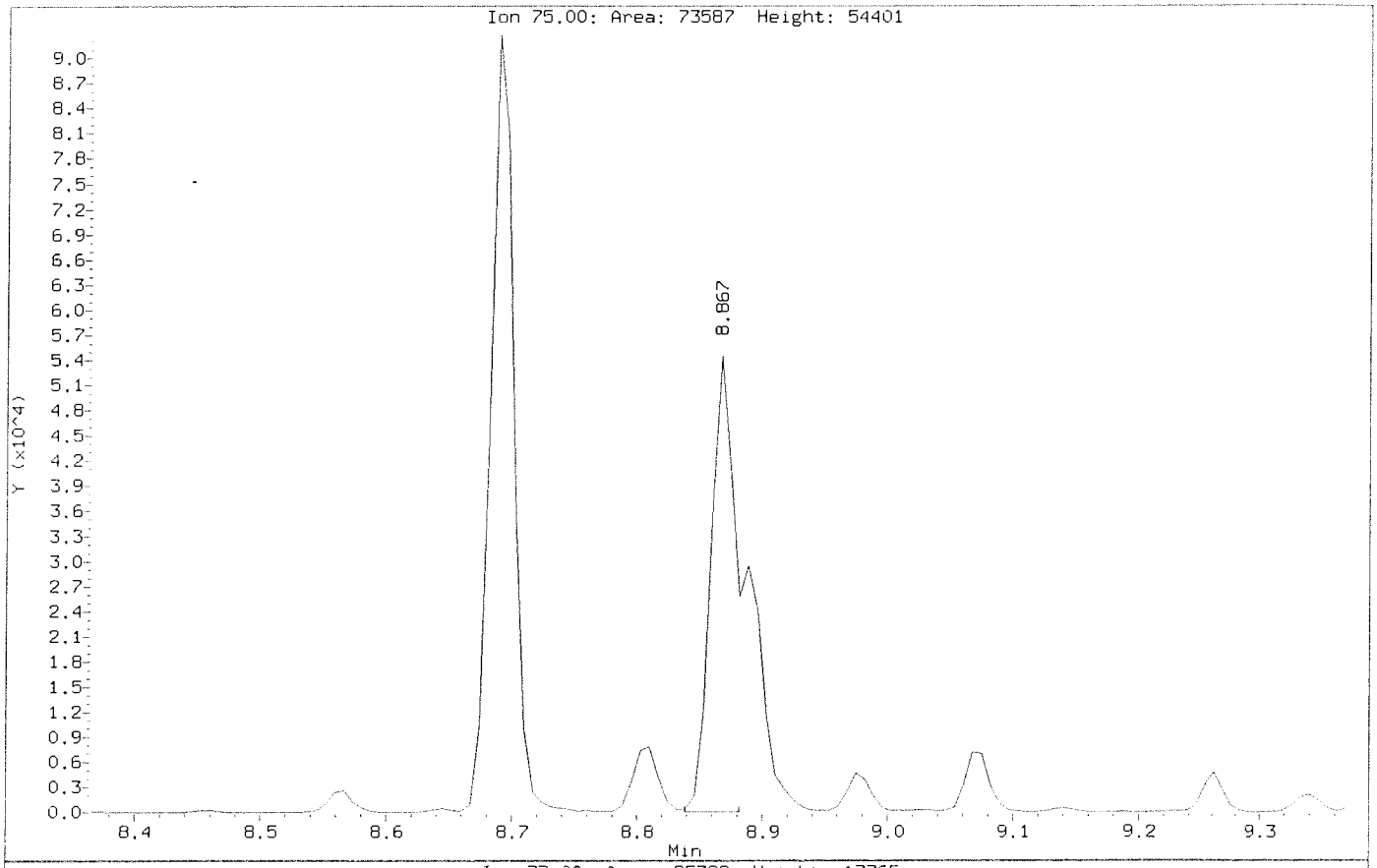
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CAS Number: 96-18-4

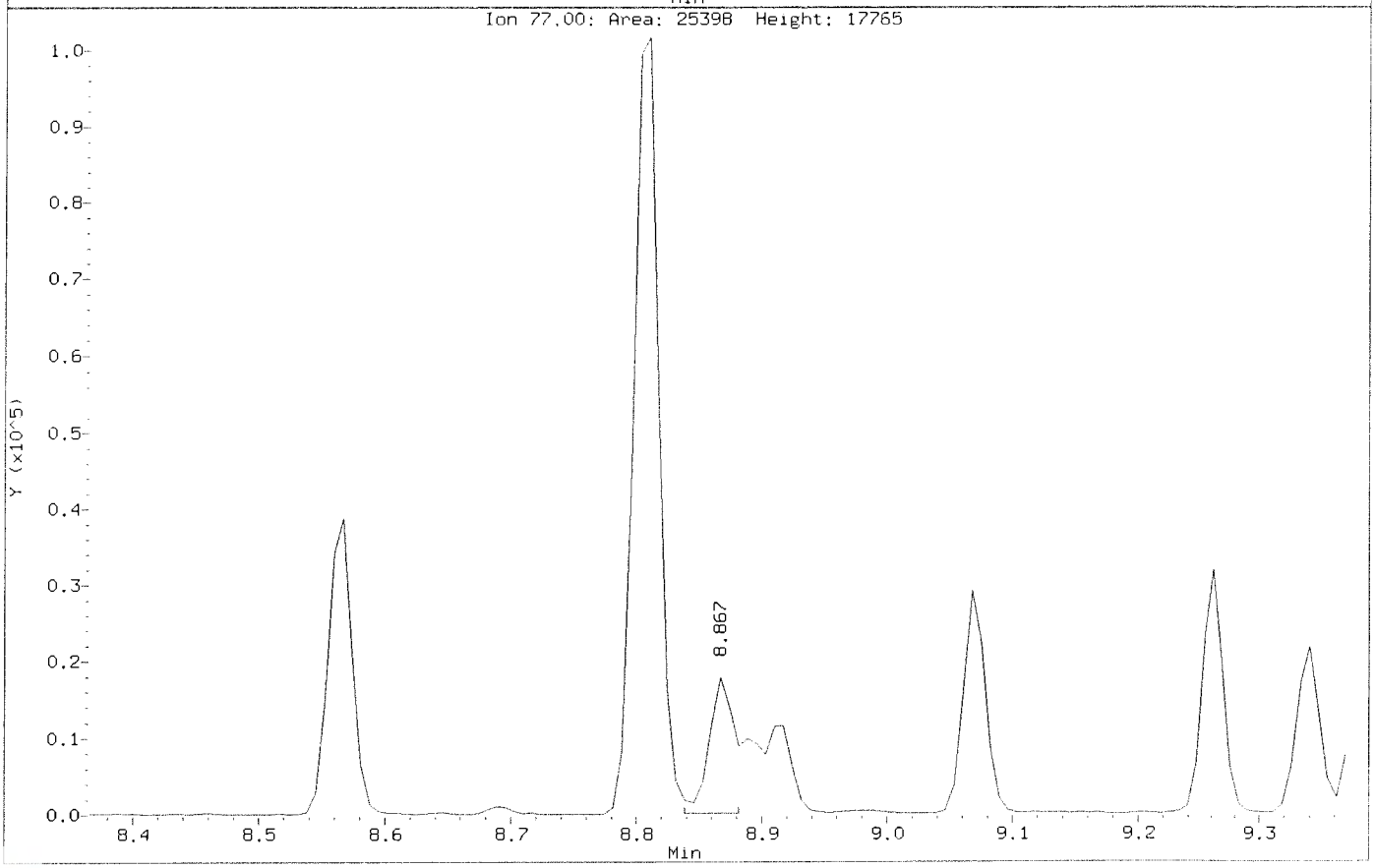




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Injection Date: 02-JAN-2020 17:35
Instrument: voa6.i
Client Sample ID: HS19121257-01MSD

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





ALS Laboratory Group

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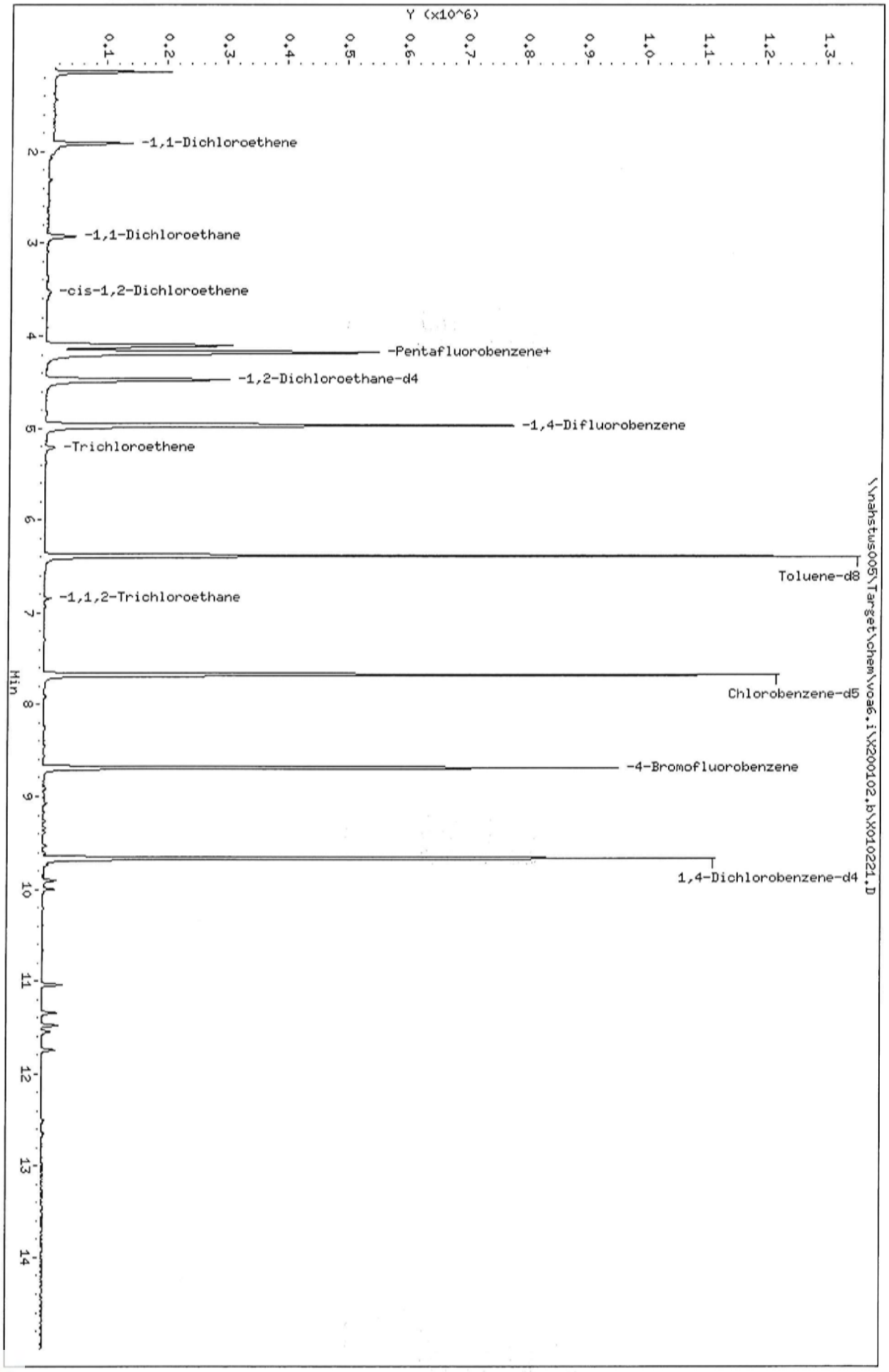
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	100.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	491620	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	704302	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	595743	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	293126	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	220074	49.2367	49.23
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	230634	49.8672	49.86
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	813627	51.8346	51.83
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	281297	50.7452	50.74
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	2568	0.82461	82.46(a)
22 1,1-Dichloroethane	63	2.922	2.921	(0.699)	50546	7.06627	706.62
11 1,1-Dichloroethene	96	1.912	1.911	(0.457)	48925	11.7430	1174.29
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	3712	0.79619	79.61(a)
38 Trichloroethene	130	5.214	5.206	(1.049)	5882	1.19421	119.42(a)
5 Vinyl Chloride	62	1.138	1.138	(0.272)	142271	28.3948	2839.48

QC Flag Legend

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



Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010221.D
Date : 02-JAN-2020 17:59
Client ID: HS19121155-03
Sample Info: HS19121155-03;HS19121155-03;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010221.D

Date : 02-JAN-2020 17:59

Client ID: HS19121155-03

Instrument: voa6.i

Sample Info: HS19121155-03;HS19121155-03;;;

Purge Volume: 5.0

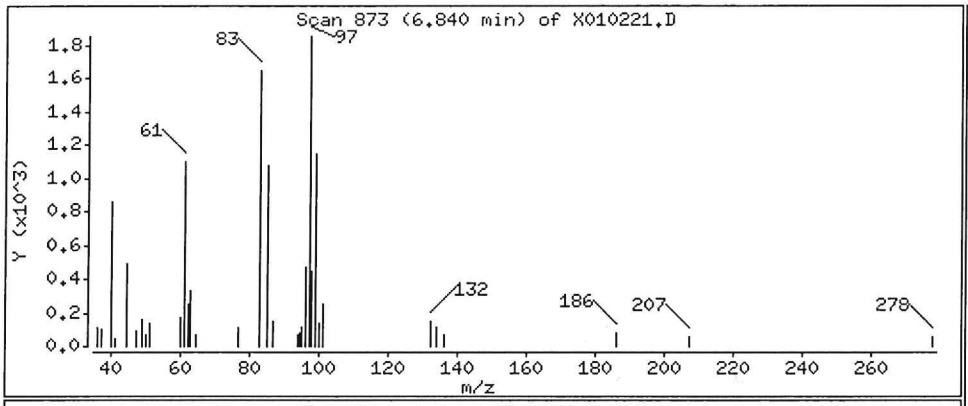
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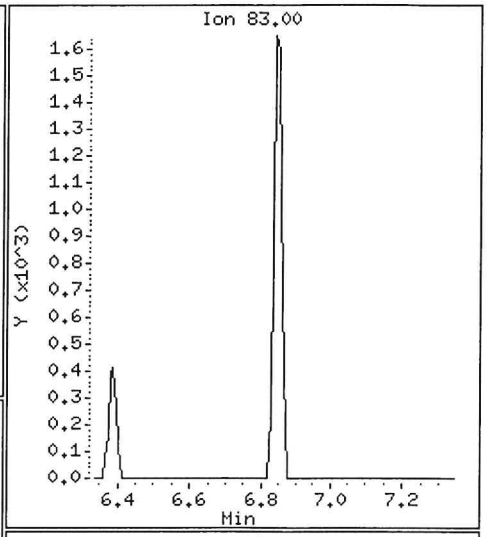
Column phase: DB624

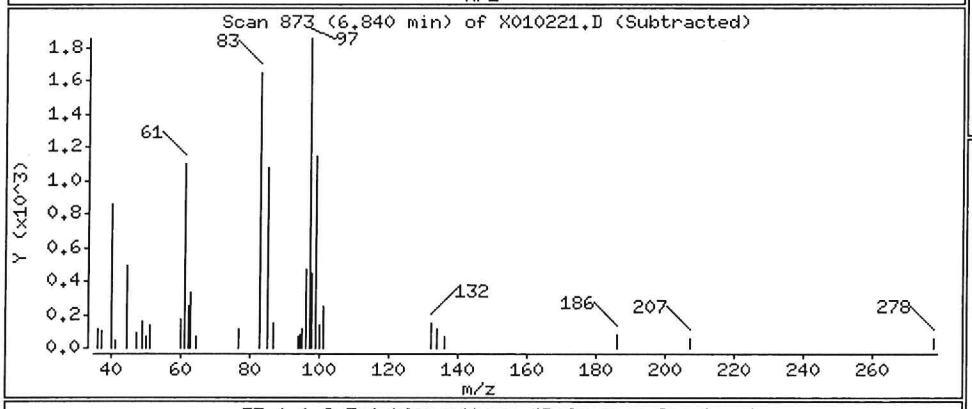
Column diameter: 0.18

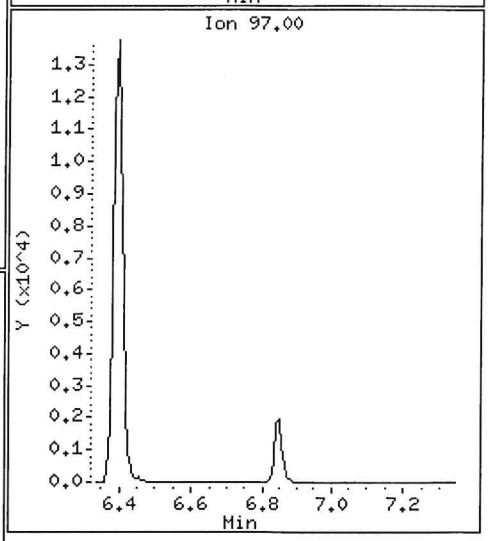
53 1,1,2-Trichloroethane

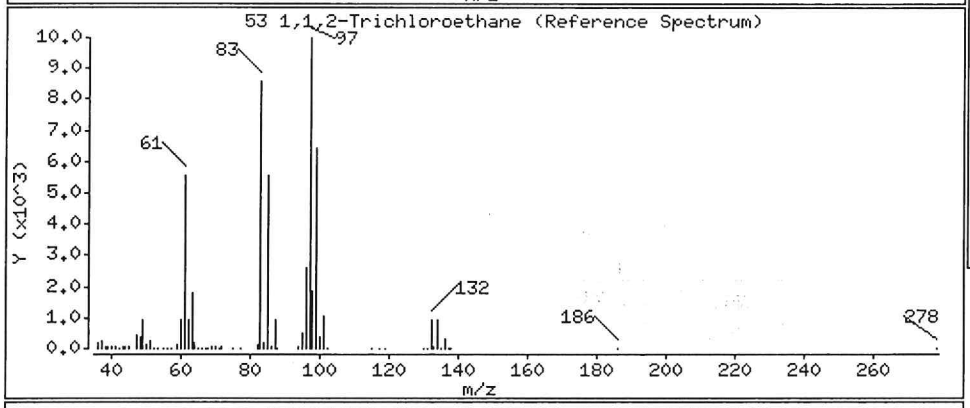
Concentration: 82.46 ug/l

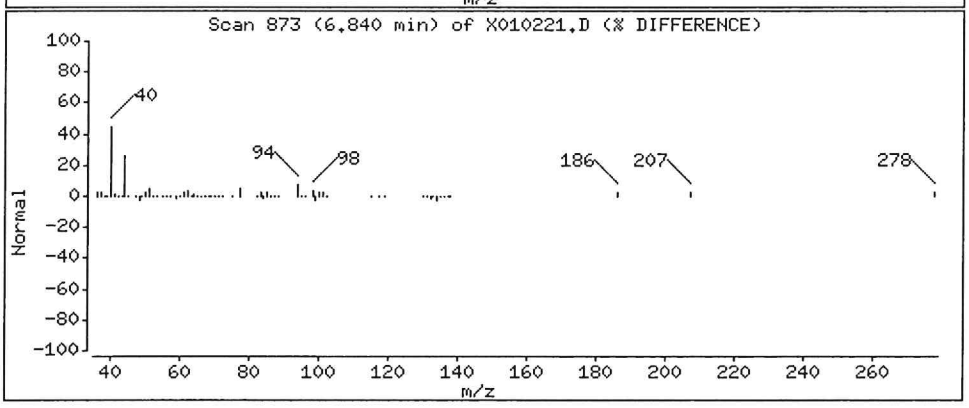












Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010221.D

Date : 02-JAN-2020 17:59

Client ID: HS19121155-03

Instrument: voa6.i

Sample Info: HS19121155-03;HS19121155-03;;;

Purge Volume: 5.0

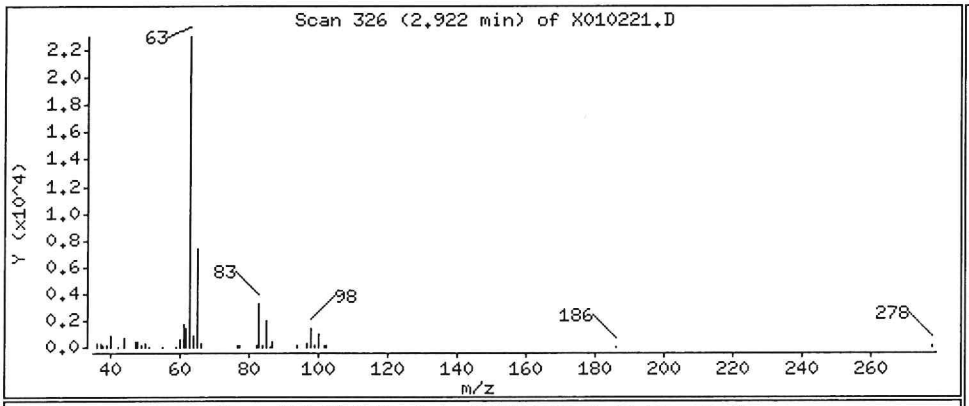
Operator: PC

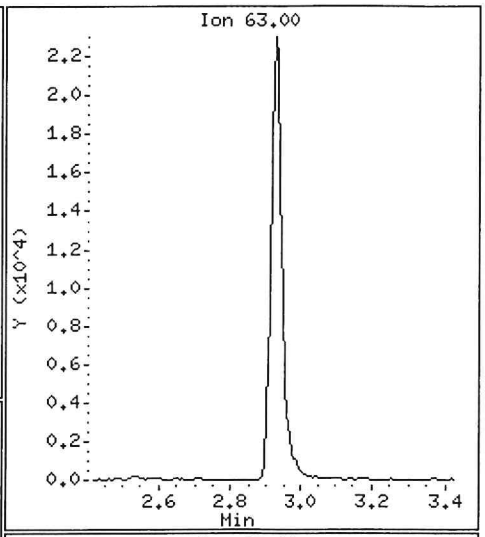
Column phase: DB624

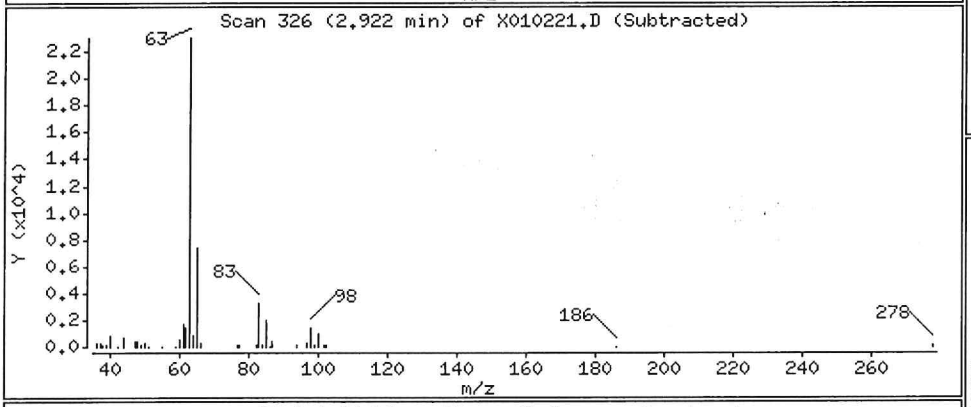
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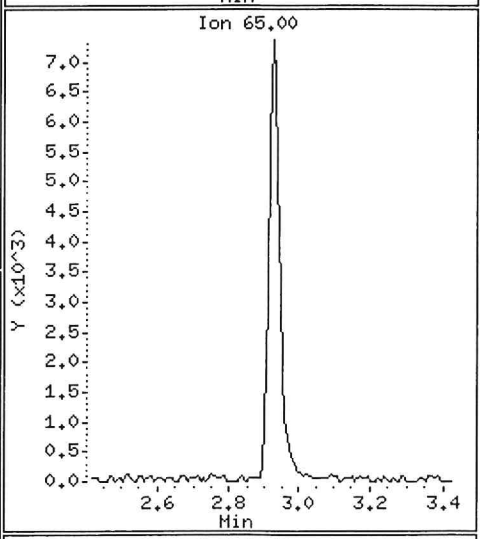
22 1,1-Dichloroethane

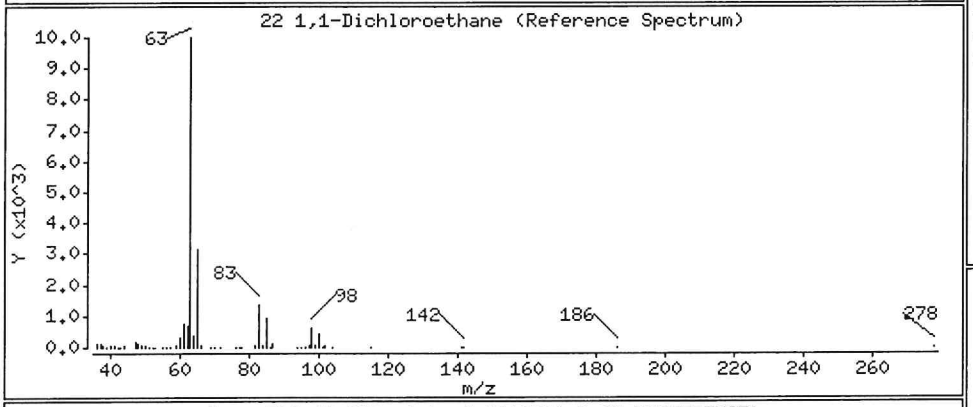
Concentration: 706.62 ug/l

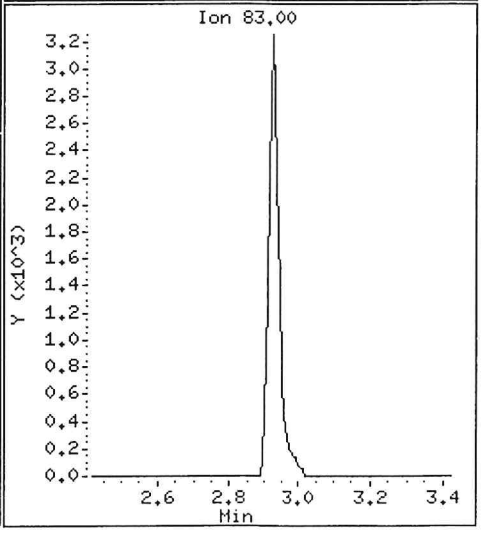


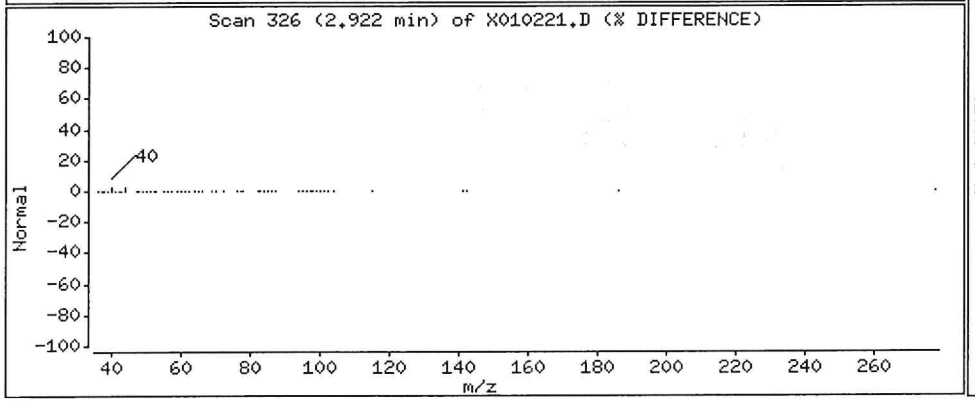












Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010221.D

Date : 02-JAN-2020 17:59

Client ID: HS19121155-03

Instrument: voa6.i

Sample Info: HS19121155-03;HS19121155-03;;;

Purge Volume: 5.0

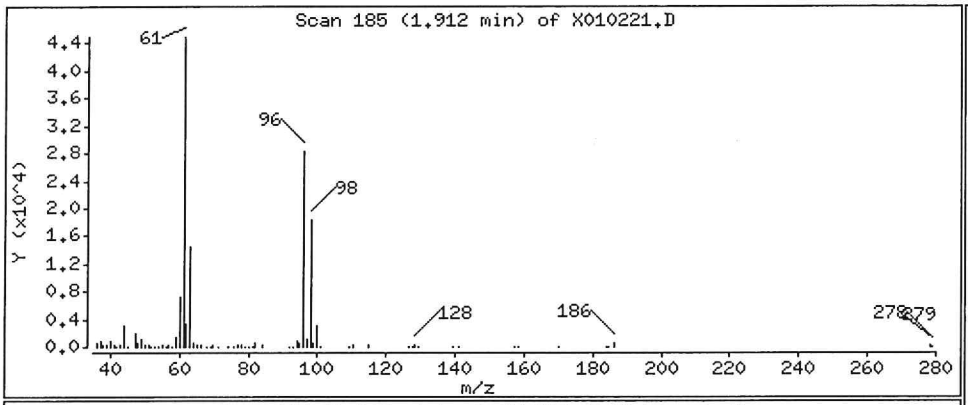
Operator: PC

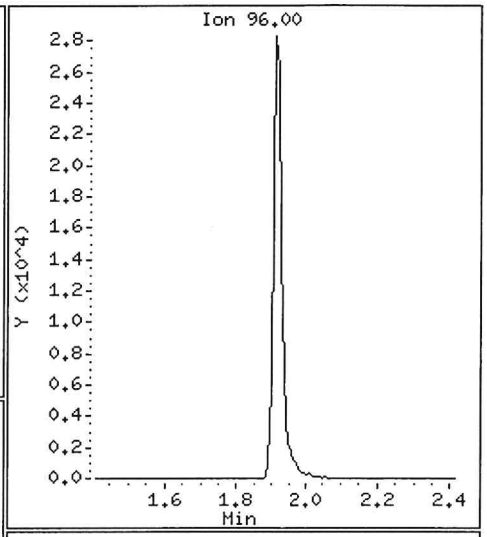
Column phase: DB624

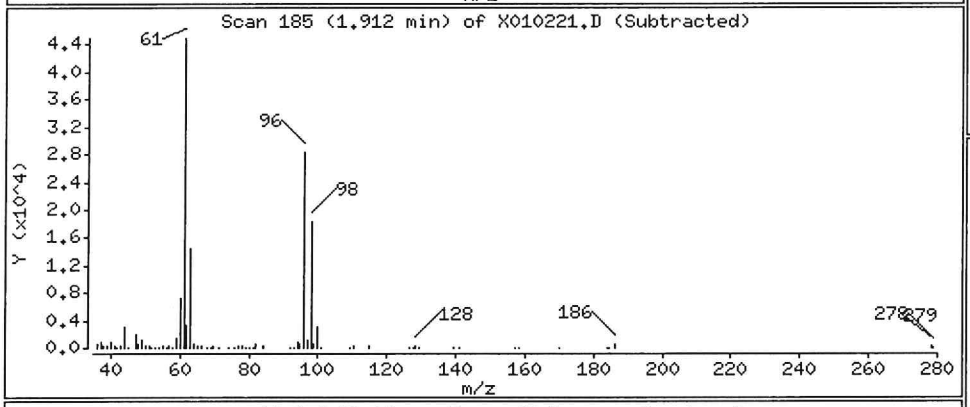
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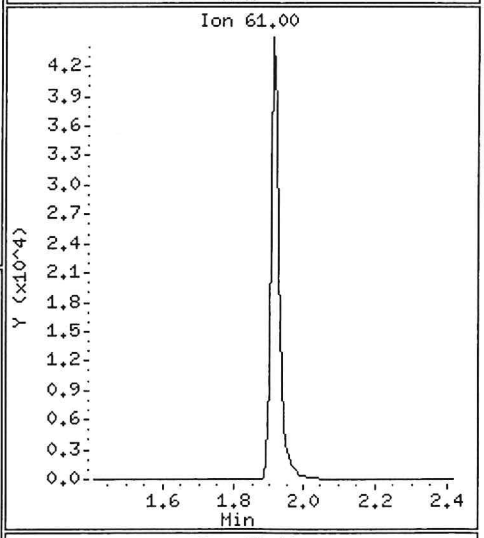
11 1,1-Dichloroethene

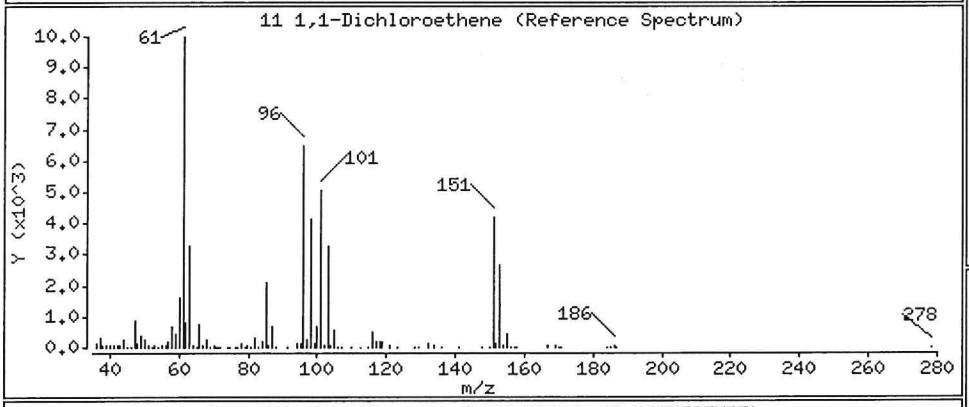
Concentration: 1174.29 ug/l

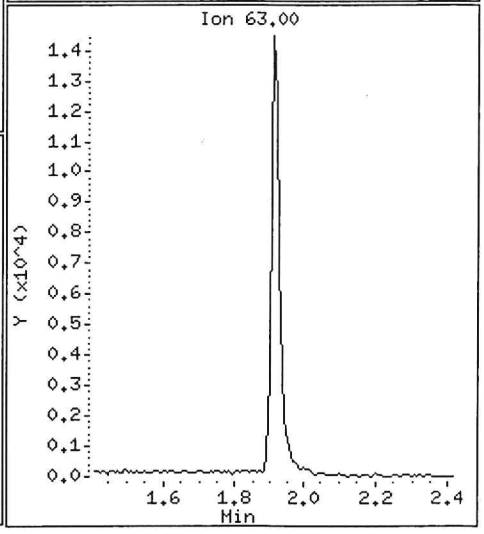


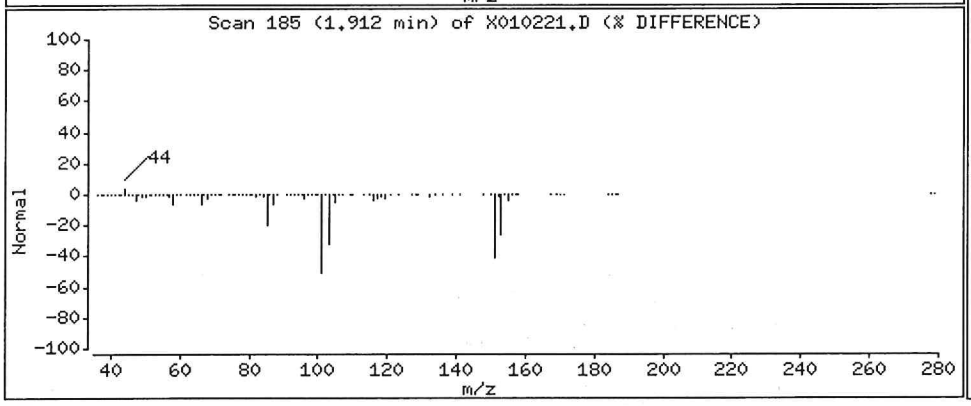












Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010221.D

Date : 02-JAN-2020 17:59

Client ID: HS19121155-03

Instrument: voa6.i

Sample Info: HS19121155-03;HS19121155-03;;;

Purge Volume: 5.0

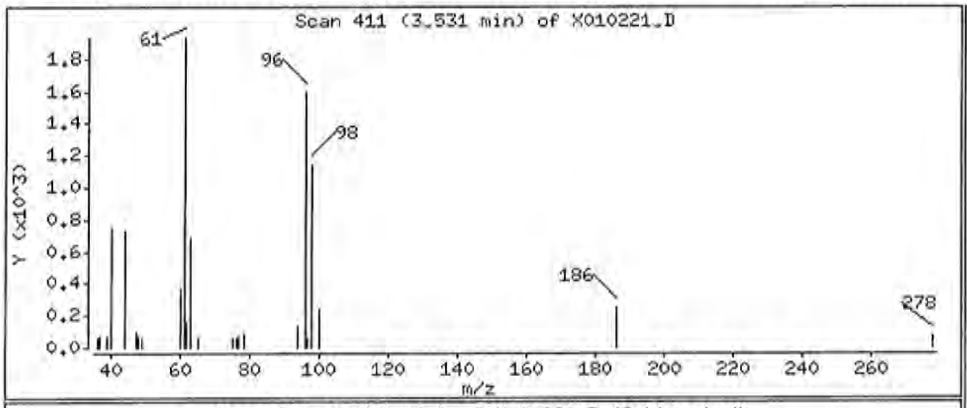
Operator: PC

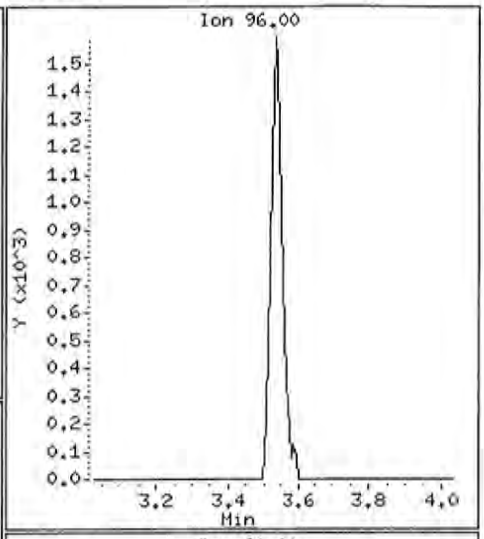
Column phase: DB624

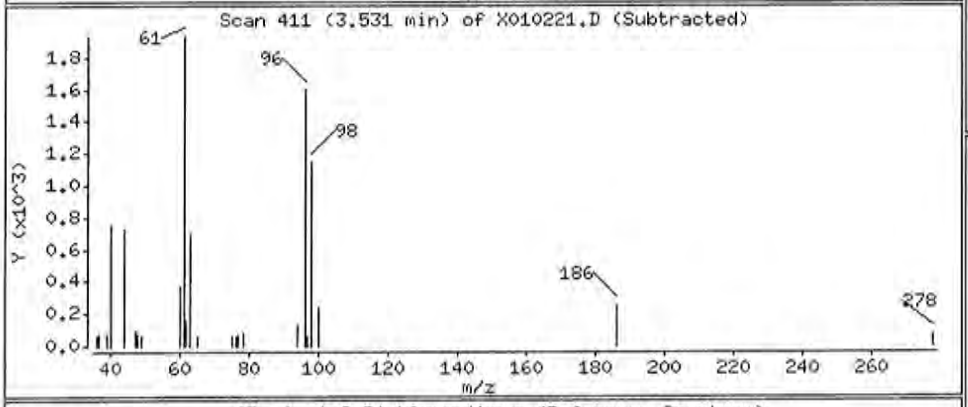
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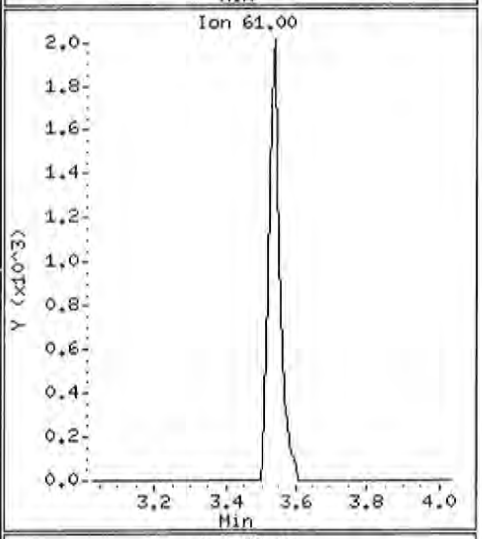
27 cis-1,2-Dichloroethene

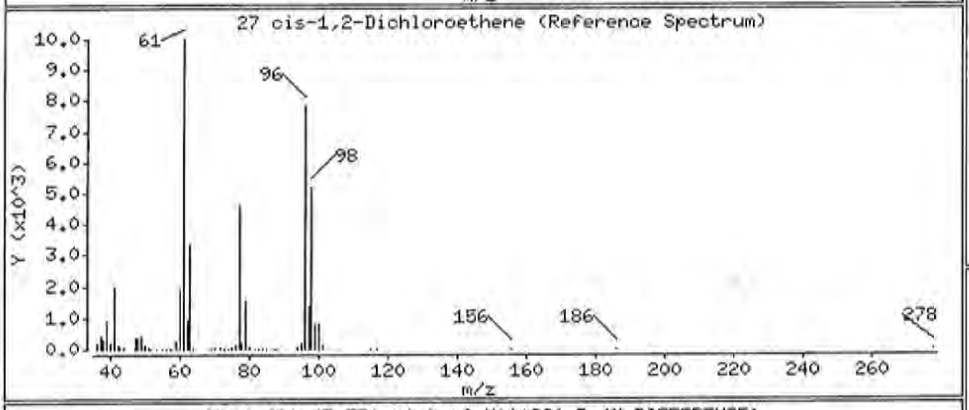
Concentration: 79.61 ug/l

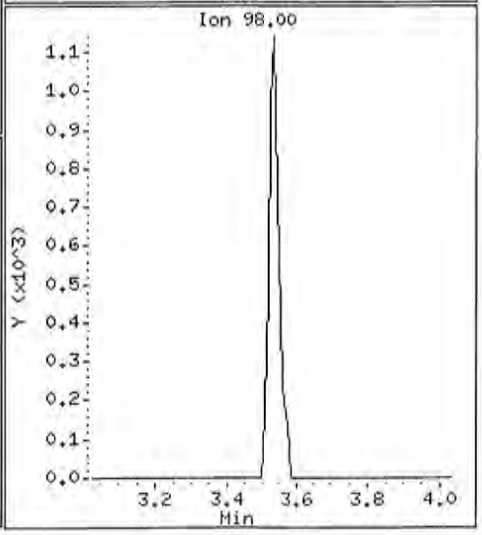


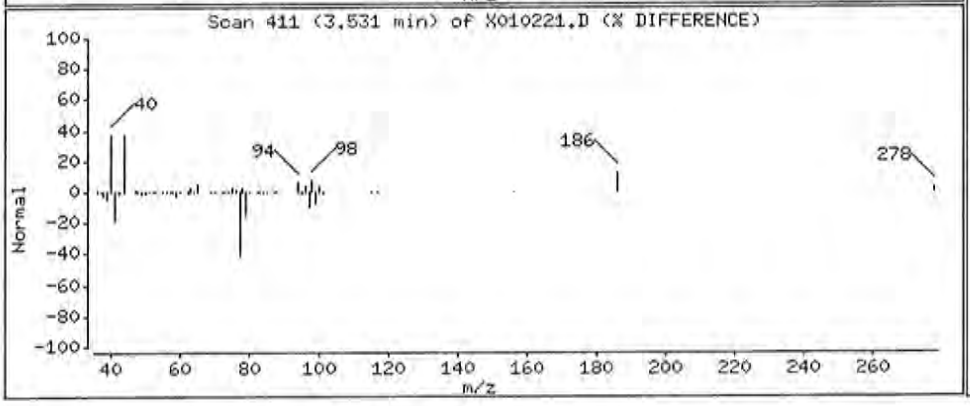












Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010221.D Page 7

Date : 02-JAN-2020 17:59

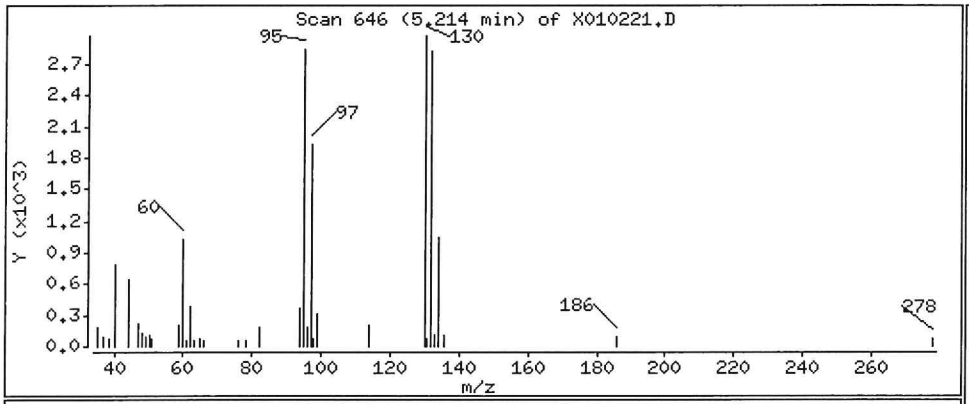
Client ID: HS19121155-03 Instrument: voa6.i

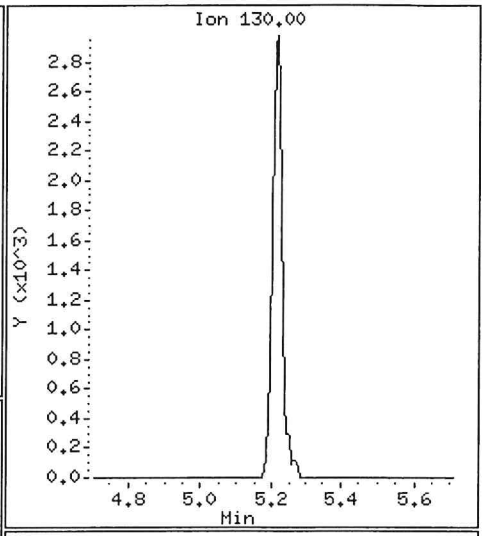
Sample Info: HS19121155-03;HS19121155-03;;;

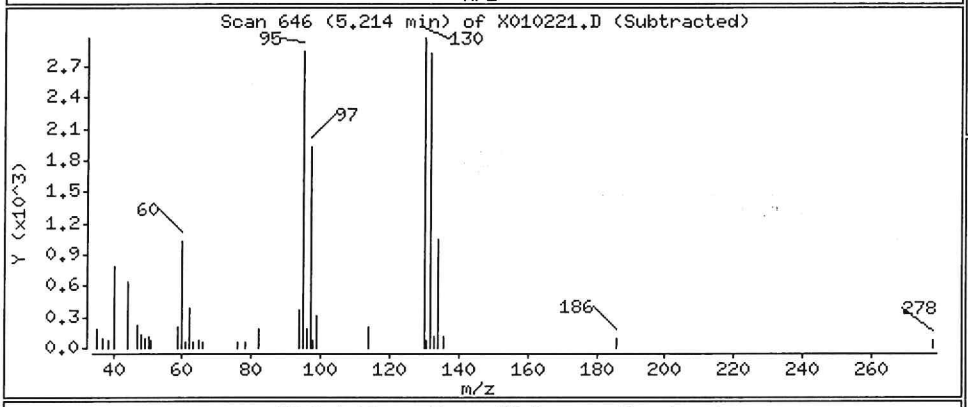
Purge Volume: 5.0 Operator: PC

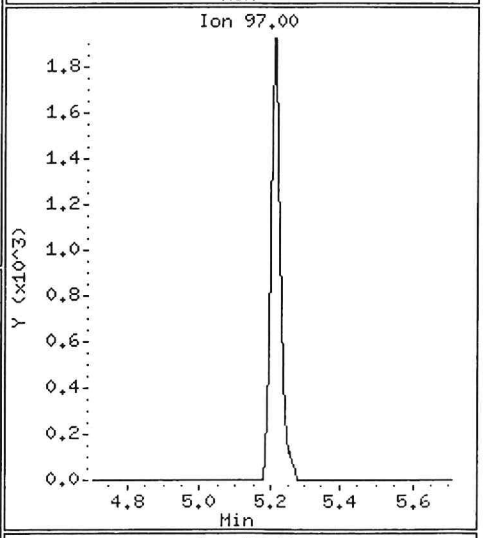
Column phase: DB624 Column diameter: 0.18

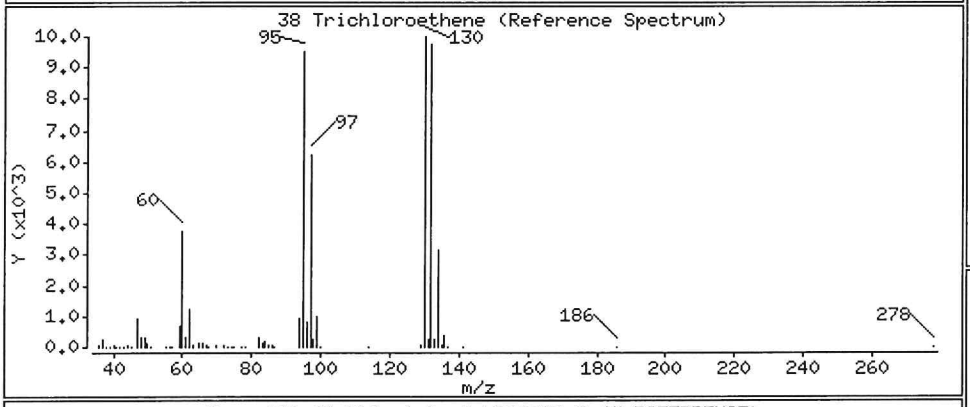
38 Trichloroethene Concentration: 119.42 ug/l

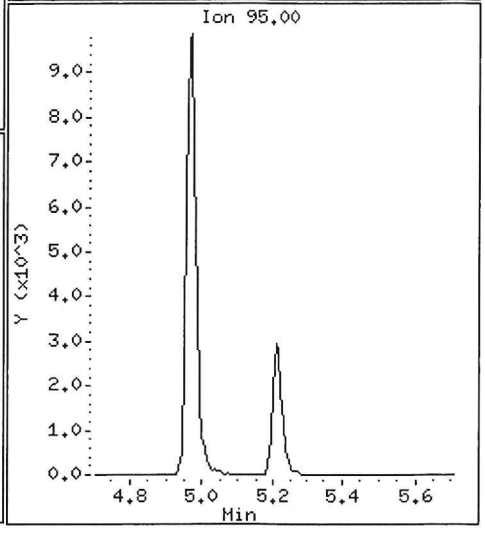


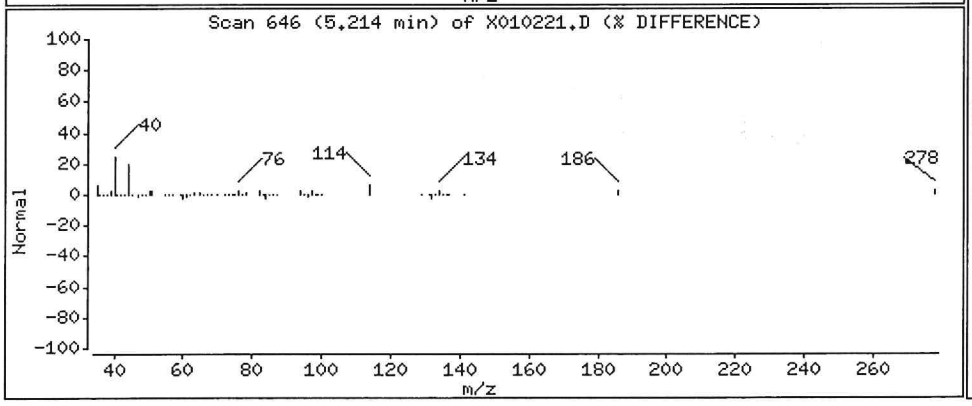












Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010221.D

Date : 02-JAN-2020 17:59

Client ID: HS19121155-03

Instrument: voa6.i

Sample Info: HS19121155-03;HS19121155-03;;;

Purge Volume: 5.0

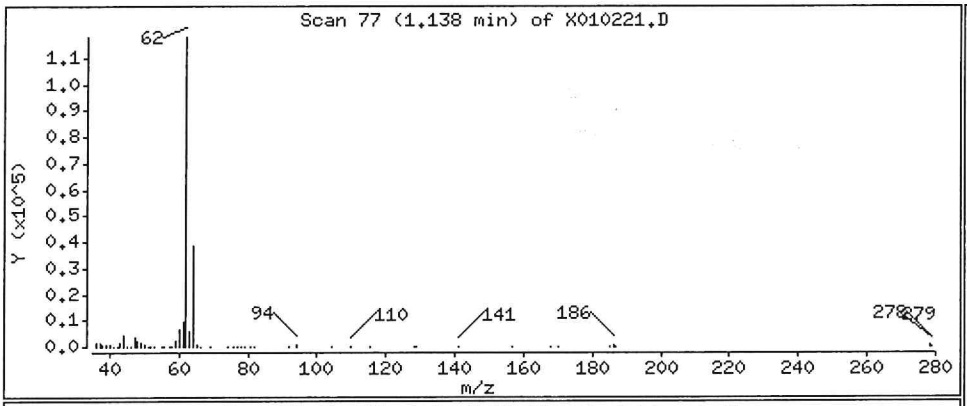
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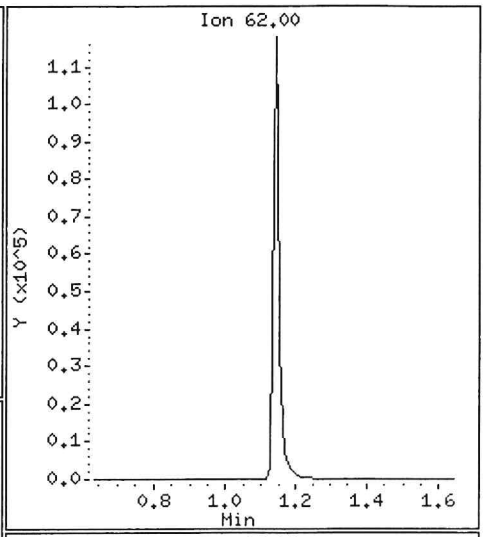
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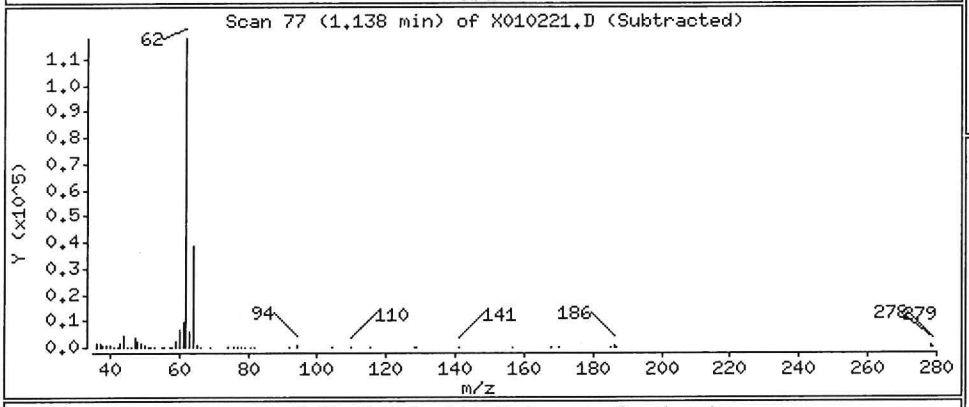
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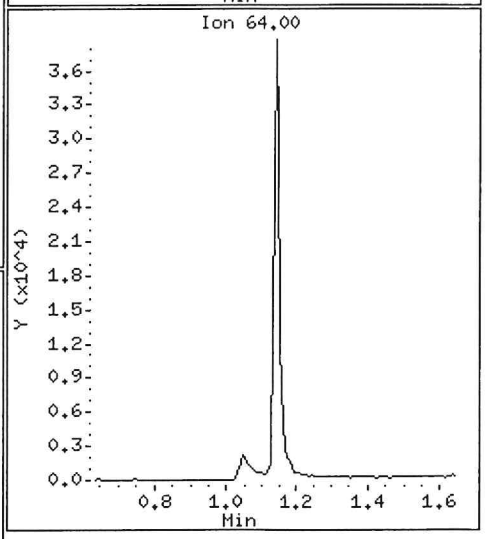
5 Vinyl Chloride

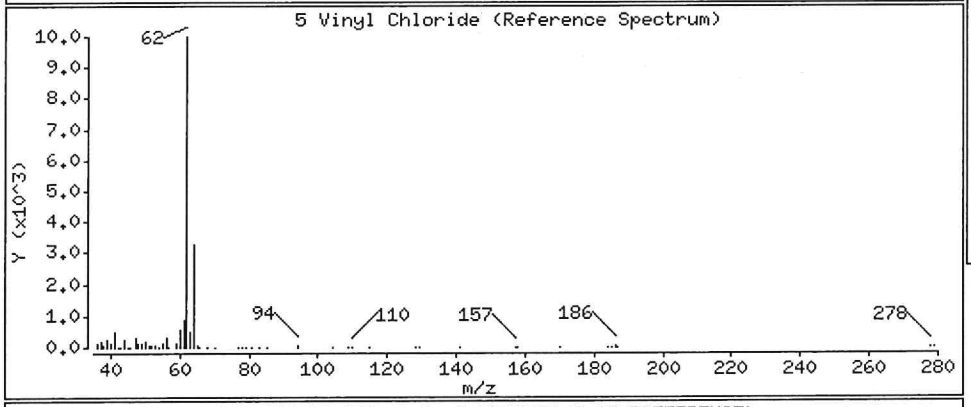
Concentration: 2839.48 ug/l

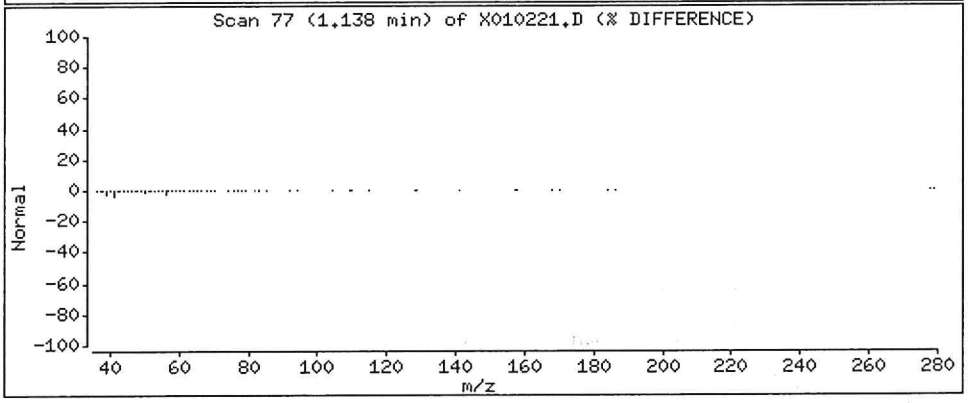












Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010222.D Page 1
Report Date: 29-Jan-2020 17:37

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200102.b\X010222.D
Lab Smp Id: HS19121155-04 Client Smp ID: HS19121155-04
Inj Date : 02-JAN-2020 18:23
Operator : PC Inst ID: voa6.i
Smp Info : HS19121155-04;HS19121155-04;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200102.b\8260W.m
Meth Date : 29-Jan-2020 17:34 DevakG Quant Type: ISTD
Cal Date : 18-NOV-2019 16:35 Cal File: X111808.D
Als bottle: 21
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

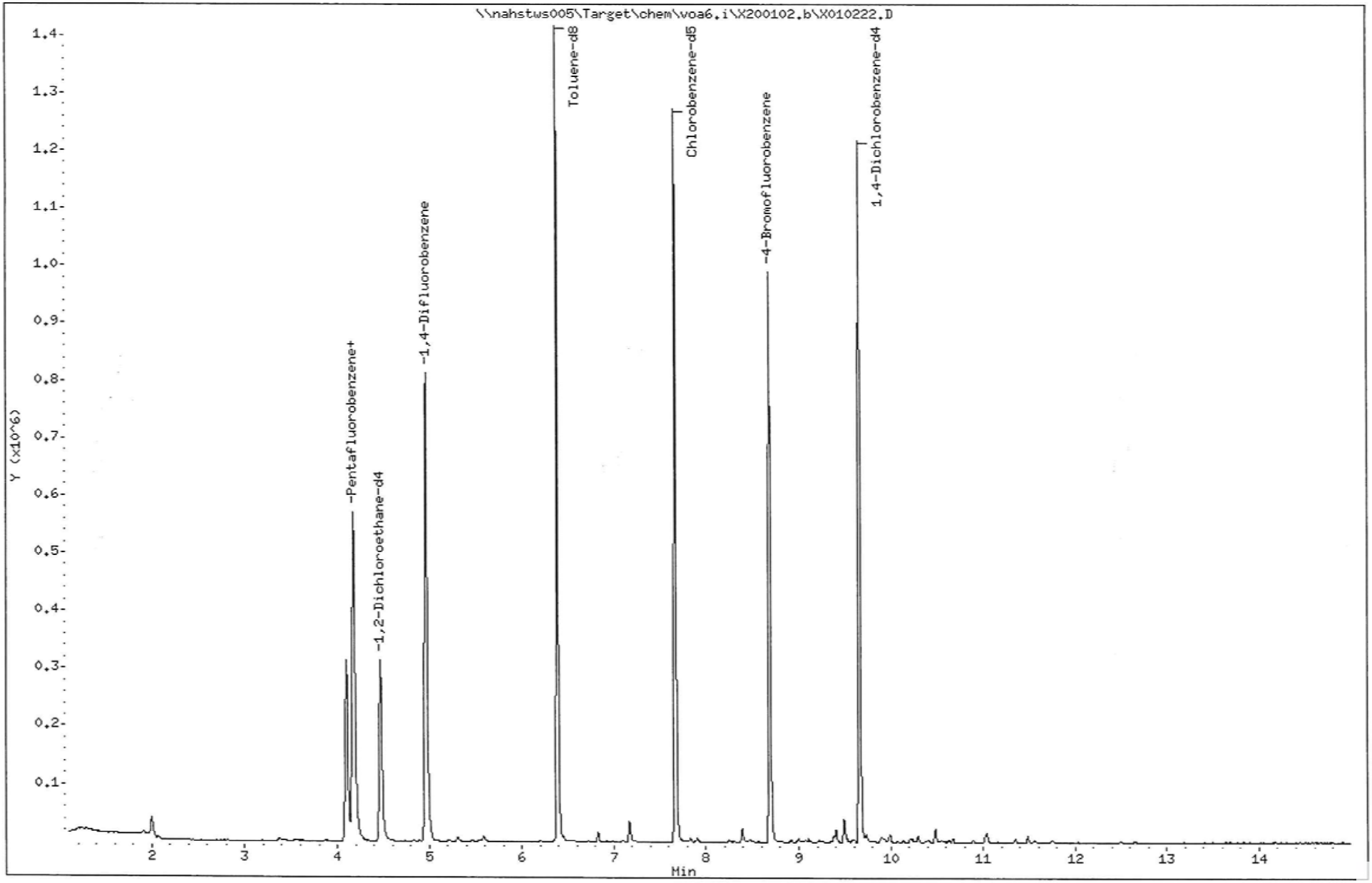
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	504999	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	716432	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	616428	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	308135	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	224012	48.7933	48.79
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	233605	49.1817	49.18
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	834915	51.4059	51.40
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	294827	51.3959	51.39

Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010222.D
Date : 02-JAN-2020 18:23
Client ID: HS19121155-04
Sample Info: HS19121155-04;HS19121155-04;;;
Purge Volume: 5.0
Column phase: DB624

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



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200102.b\X010223.D
Lab Smp Id: HS19121155-05 Client Smp ID: HS19121155-05
Inj Date : 02-JAN-2020 18:47
Operator : PC Inst ID: voa6.i
Smp Info : HS19121155-05;HS19121155-05;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200102.b\8260W.m
Meth Date : 29-Jan-2020 17:34 DevakG Quant Type: ISTD
Cal Date : 18-NOV-2019 16:35 Cal File: X111808.D
Als bottle: 22
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

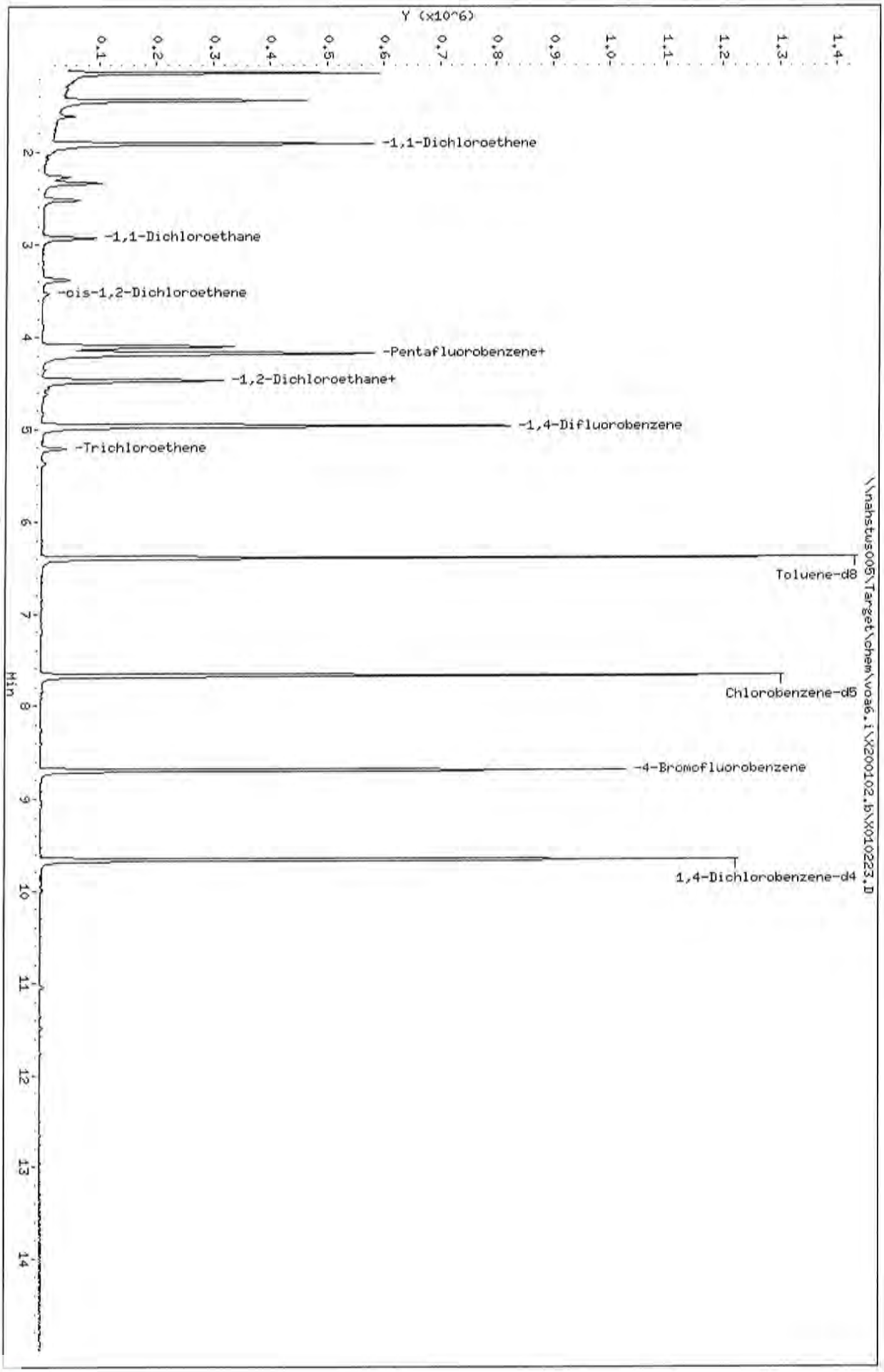
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.182	4.182	(1.000)	512453	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	733589	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	637326	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	314681	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	228618	49.0702	49.07
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	237642	49.3020	49.30
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	854511	50.8873	50.88
$ 69 4-Bromofluorobenzene	95	8.695	8.688	(1.134)	302892	51.0731	51.07
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	99779	13.3819	13.38
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	200910	46.2620	46.26
33 1,2-Dichloroethane	62	4.562	4.555	(0.918)	3731	0.64069	0.64(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	5742	1.18153	1.18(a)
38 Trichloroethene	130	5.214	5.206	(1.049)	15708	3.06183	3.06(a)
5 Vinyl Chloride	62	1.138	1.138	(0.272)	219103	41.9514	41.95

QC Flag Legend

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



Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010223.D
Date : 02-JAN-2020 18:47
Client ID: HS191211155-05
Sample Info: HS191211155-05;HS191211155-05;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010223.D

Date : 02-JAN-2020 18:47

Client ID: HS19121155-05

Instrument: voa6.i

Sample Info: HS19121155-05;HS19121155-05;;;

Purge Volume: 5.0

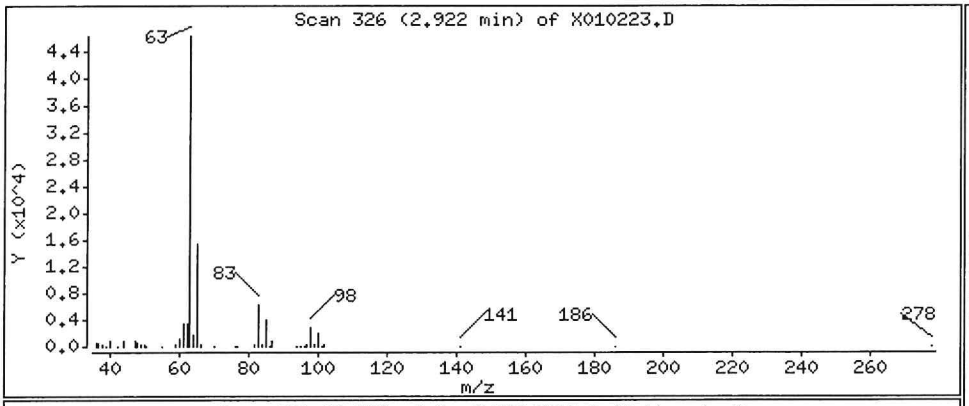
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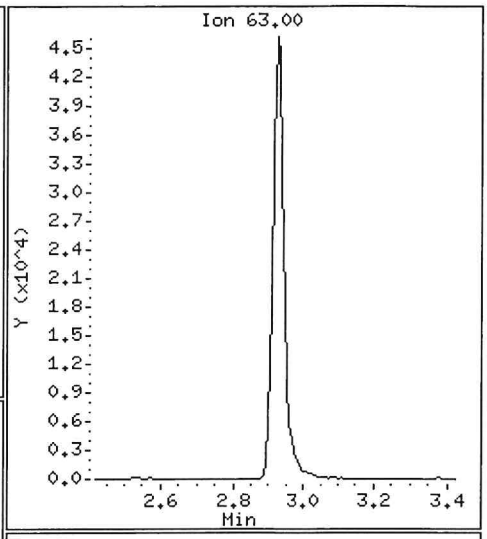
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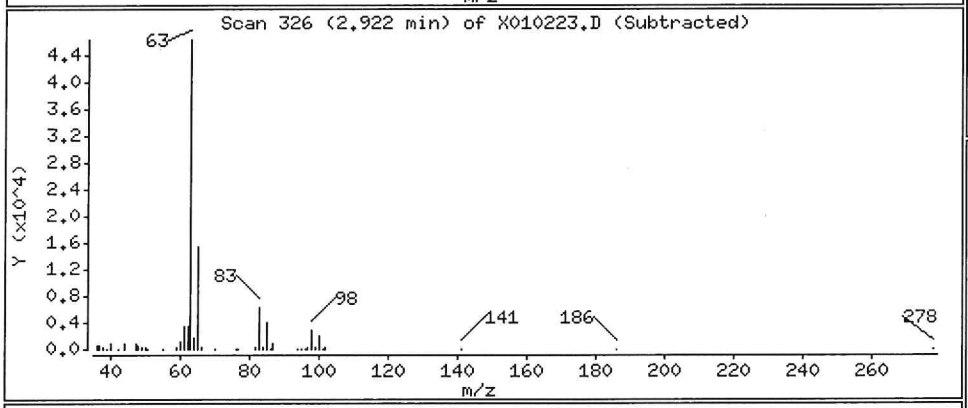
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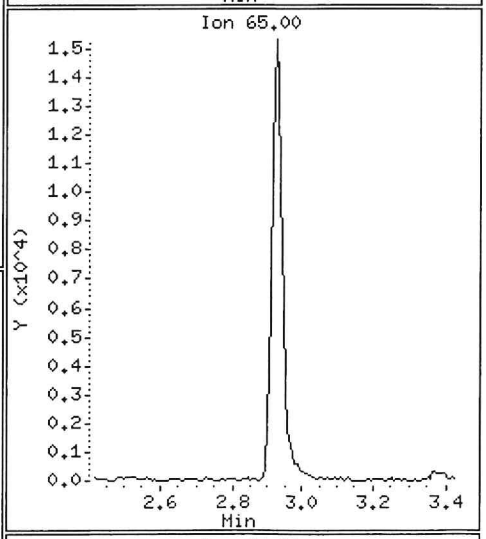
22 1,1-Dichloroethane

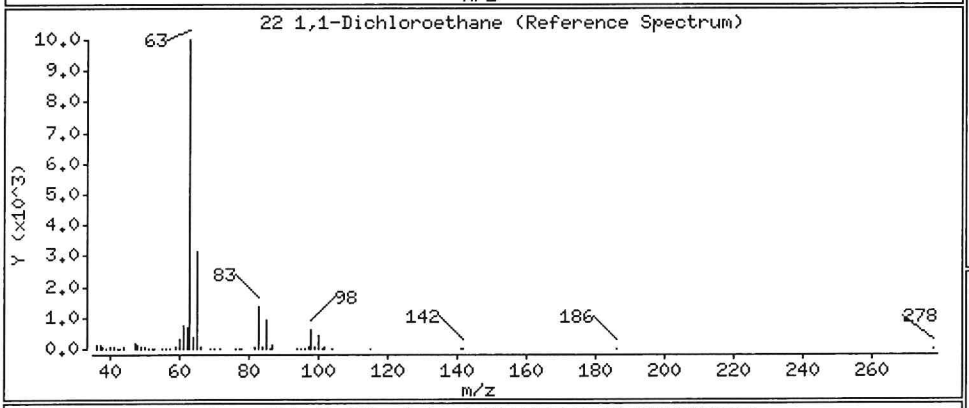
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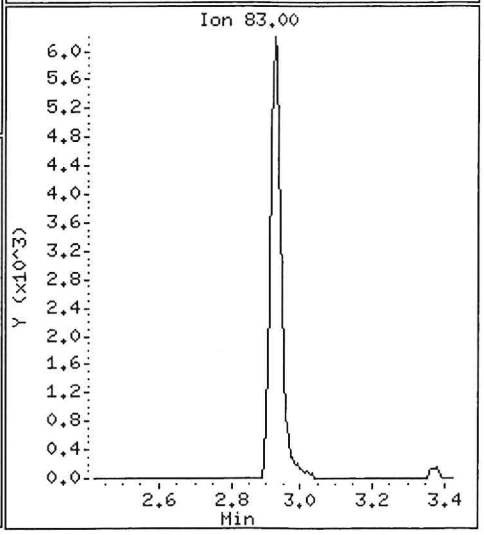


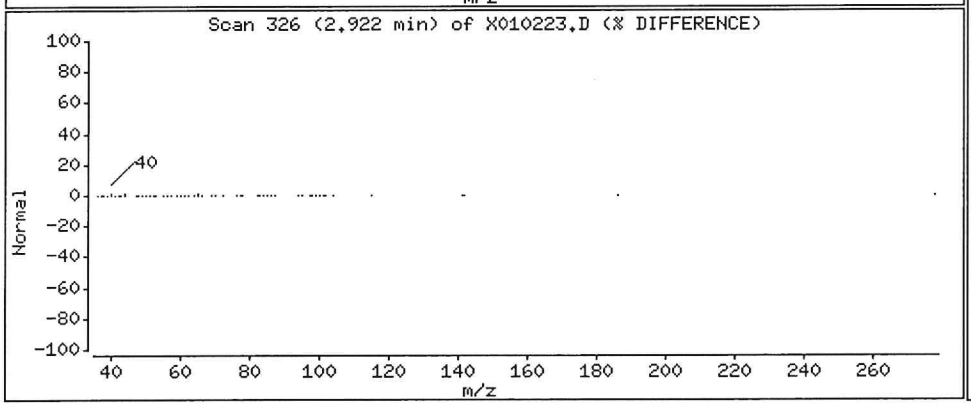












Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010223.D

Date : 02-JAN-2020 18:47

Client ID: HS19121155-05

Instrument: voa6.i

Sample Info: HS19121155-05;HS19121155-05;;;

Purge Volume: 5.0

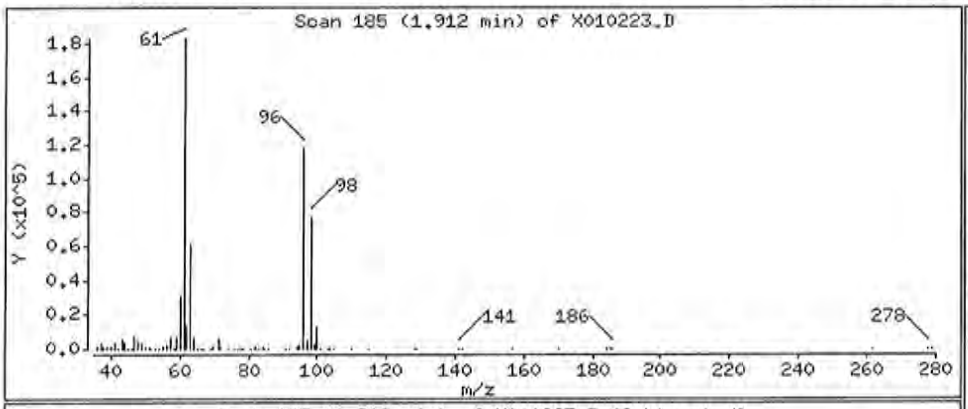
Operator: PC

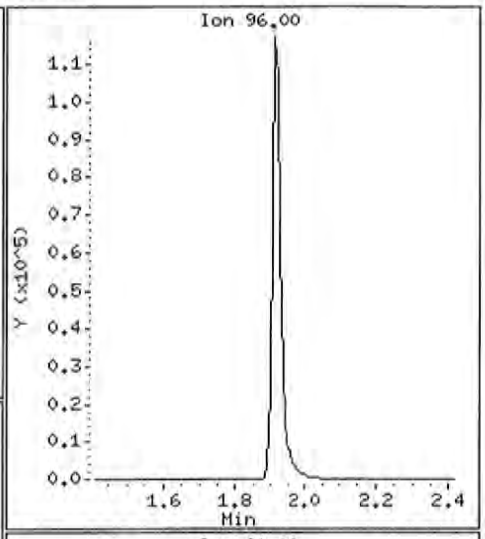
Column phase: DB624

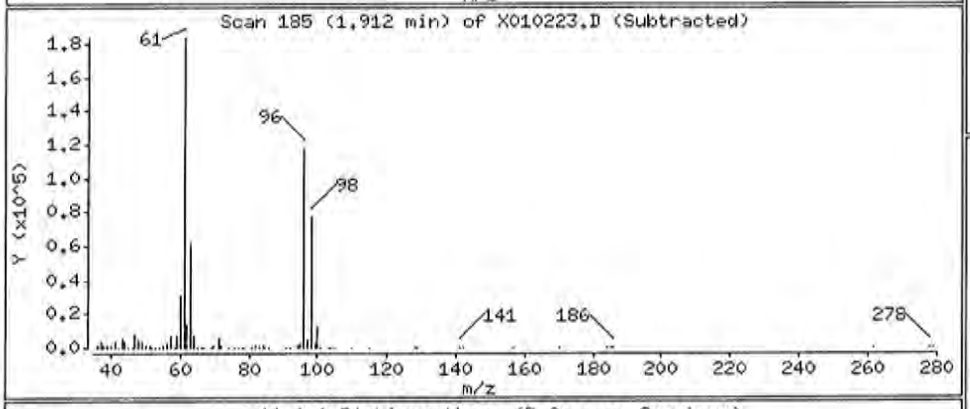
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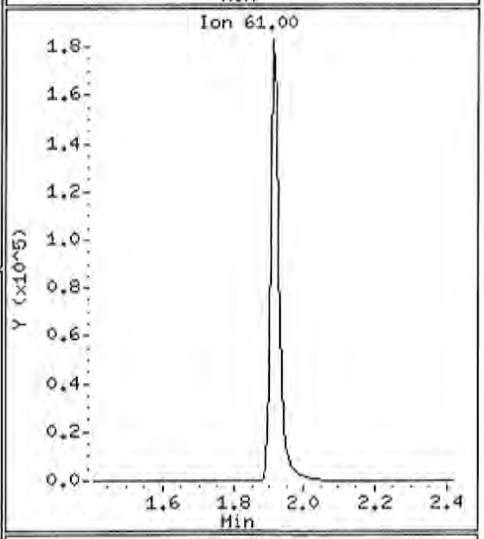
11 1,1-Dichloroethene

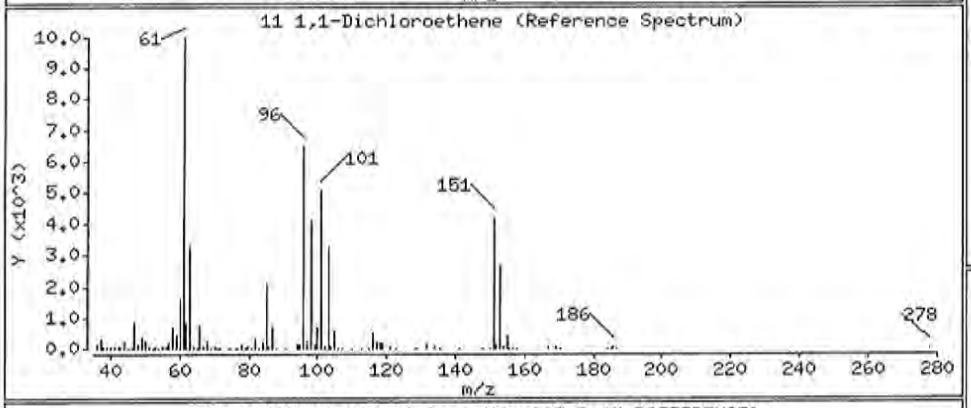
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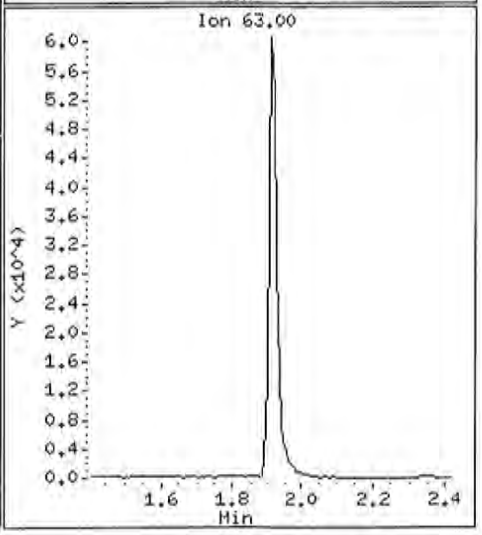


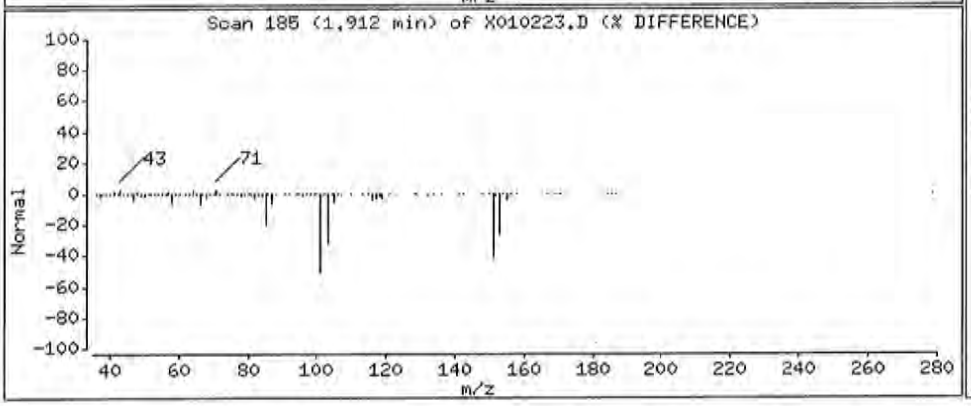












Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010223.D

Date : 02-JAN-2020 18:47

Client ID: HS19121155-05

Instrument: voa6.i

Sample Info: HS19121155-05;HS19121155-05;;;

Purge Volume: 5.0

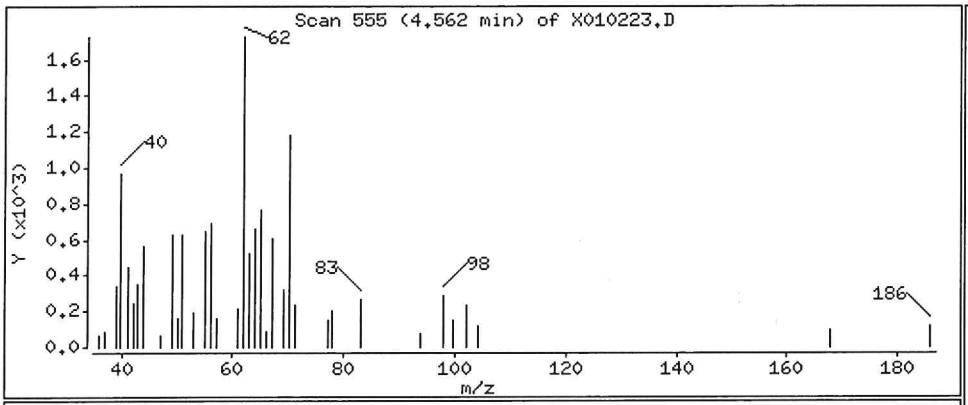
Operator: PC

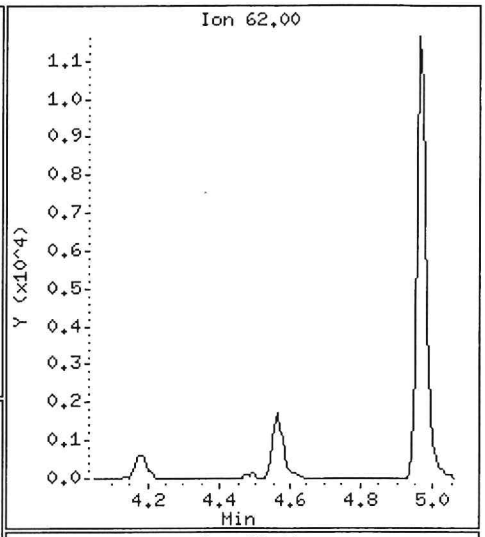
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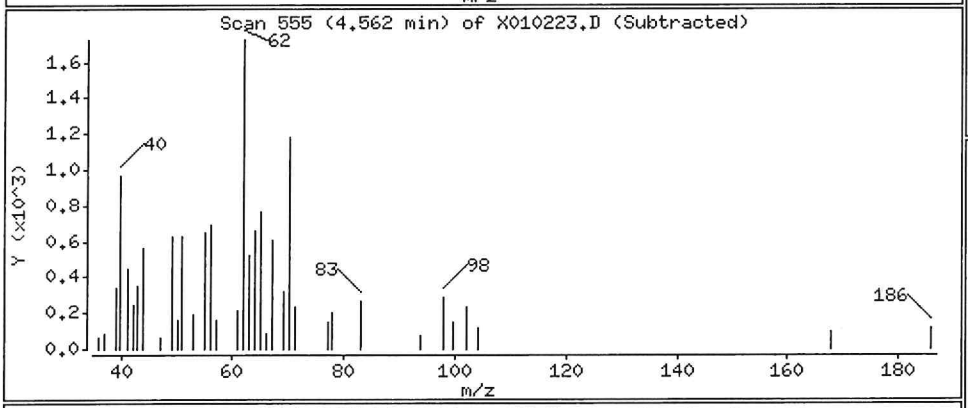
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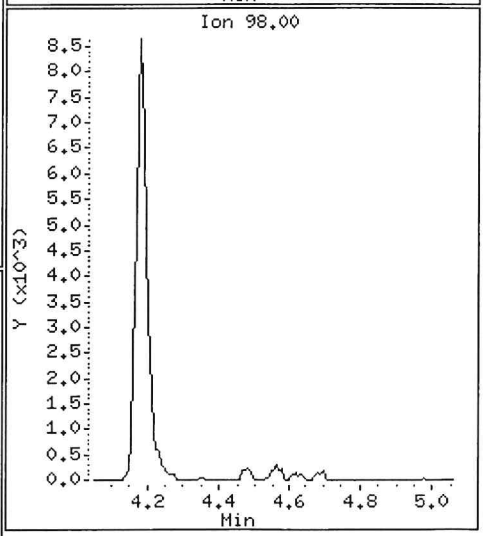
33 1,2-Dichloroethane

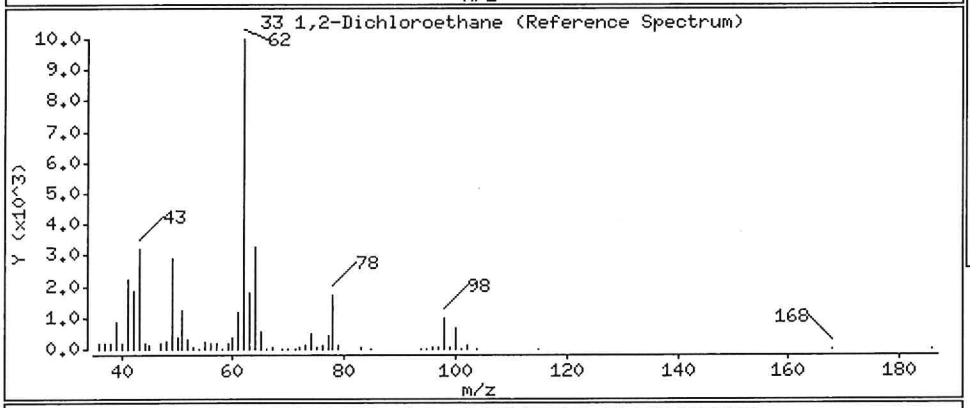
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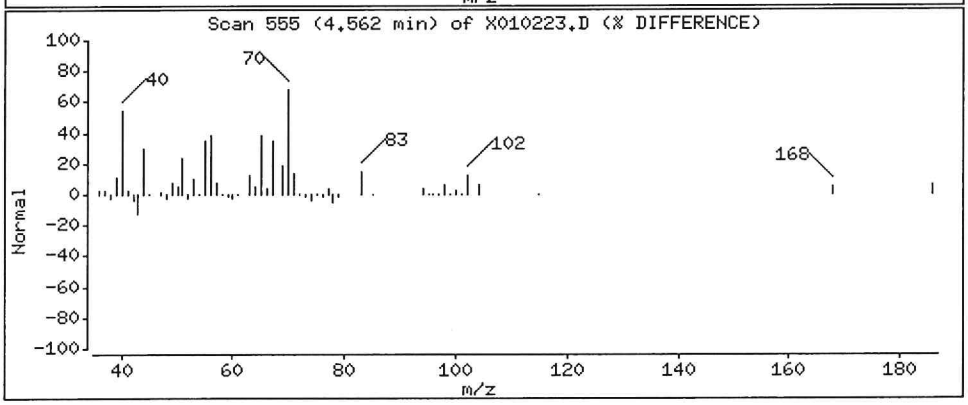












Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010223.D

Date : 02-JAN-2020 18:47

Client ID: HS19121155-05

Instrument: voa6.i

Sample Info: HS19121155-05;HS19121155-05;;;

Purge Volume: 5.0

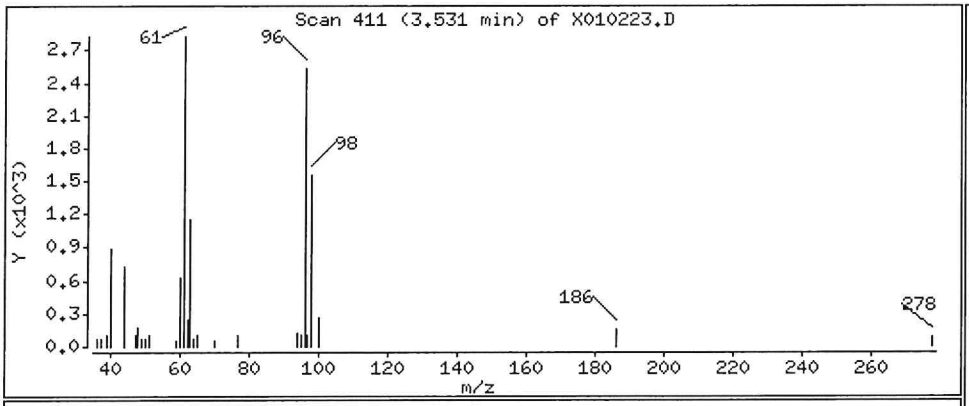
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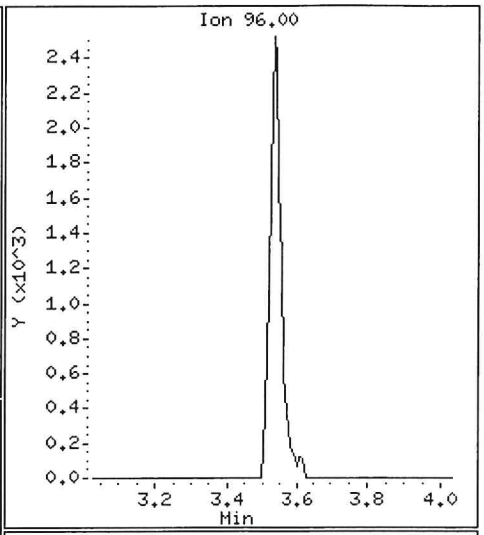
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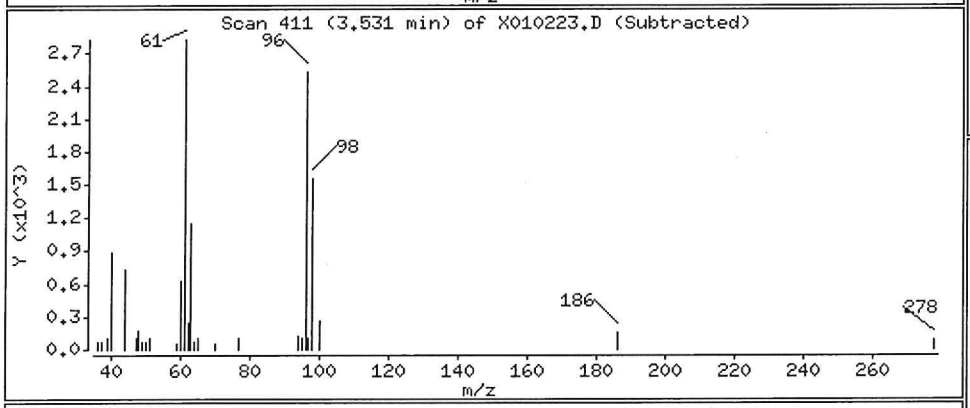
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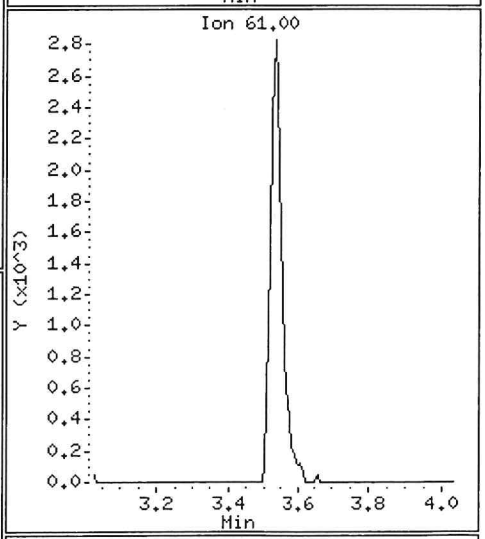
27 cis-1,2-Dichloroethene

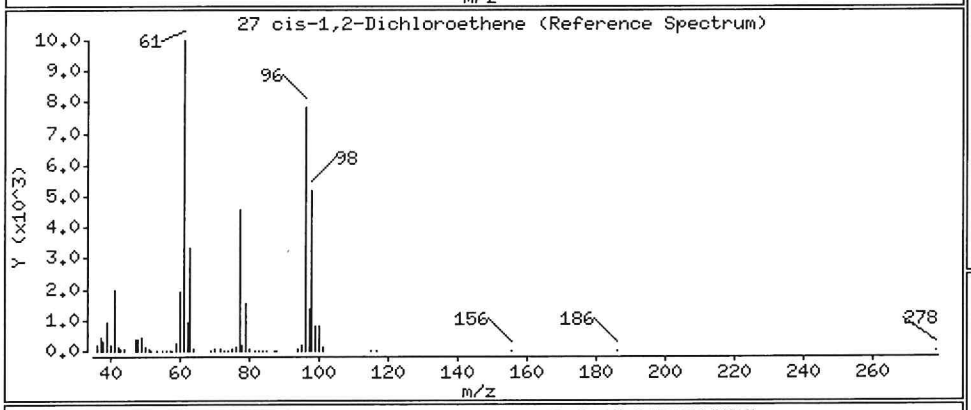
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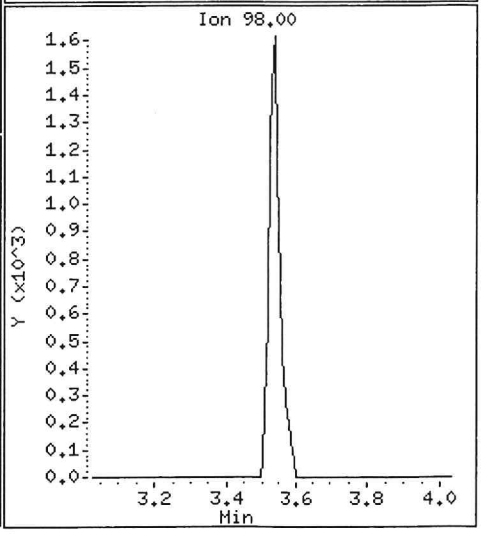


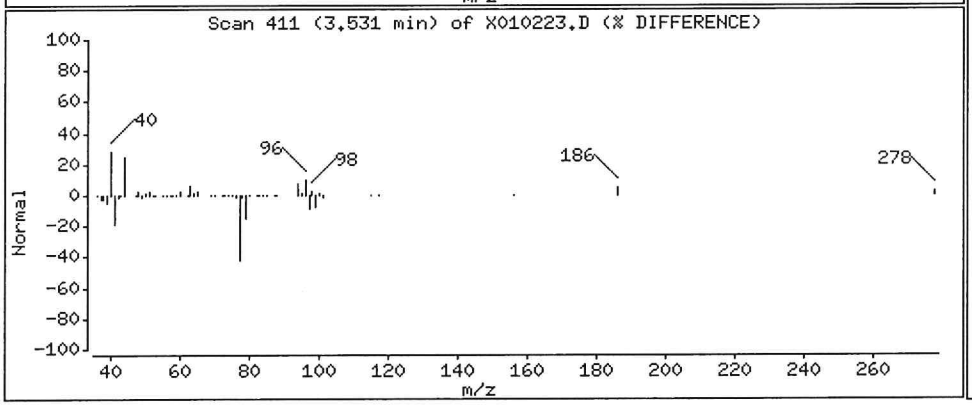












Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010223.D

Date : 02-JAN-2020 18:47

Client ID: HS19121155-05

Instrument: voa6.i

Sample Info: HS19121155-05;HS19121155-05;;;

Purge Volume: 5.0

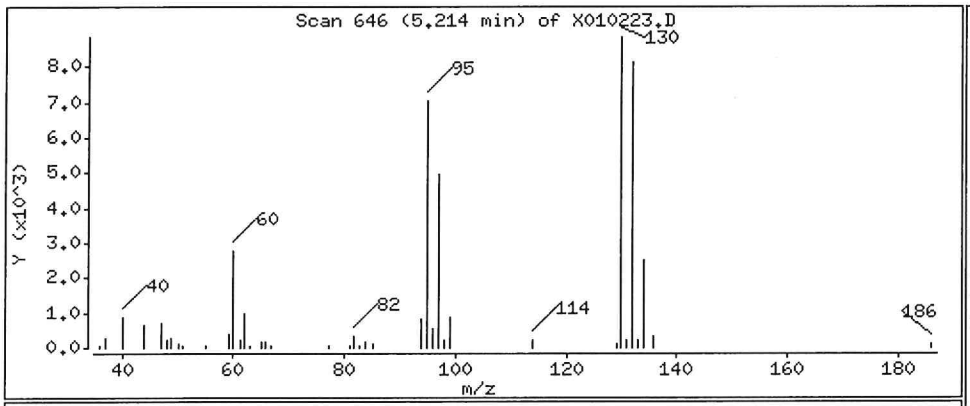
Operator: PC

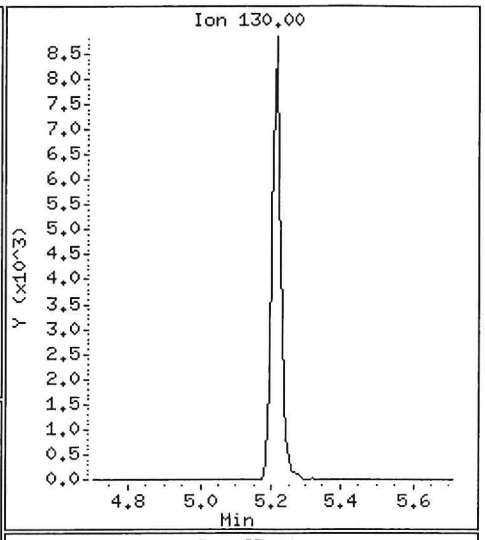
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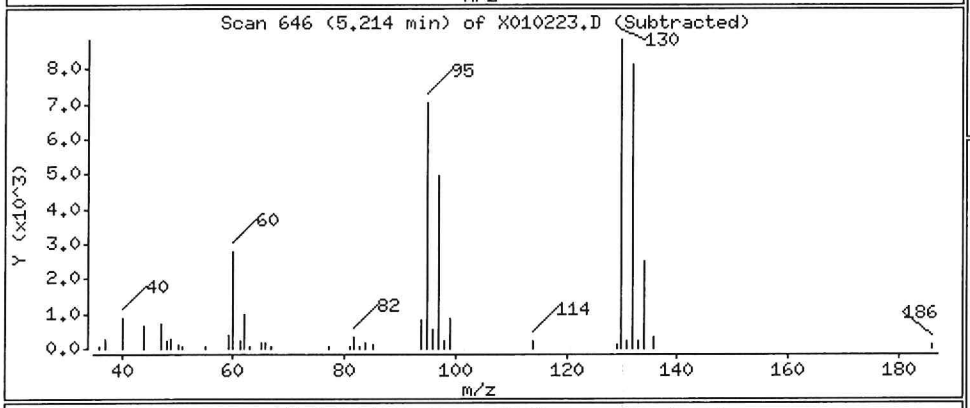
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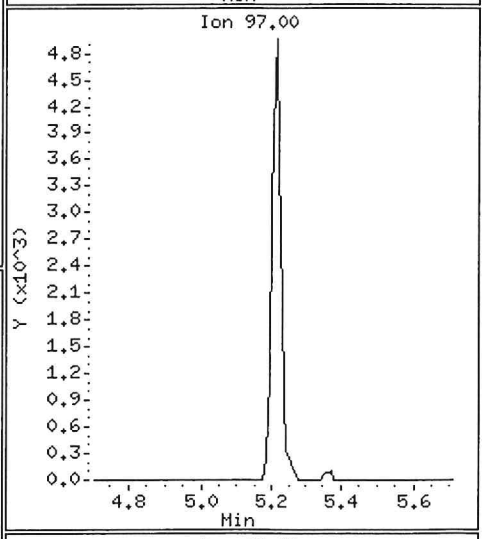
38 Trichloroethene

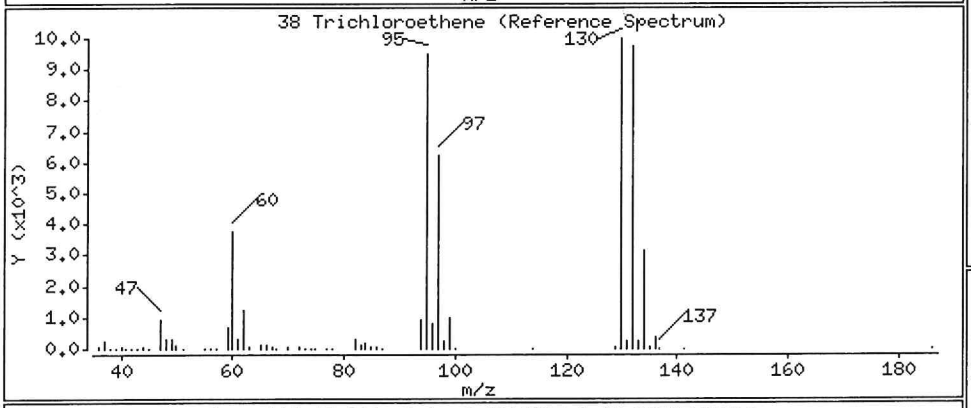
Concentration: 3.06 ug/l

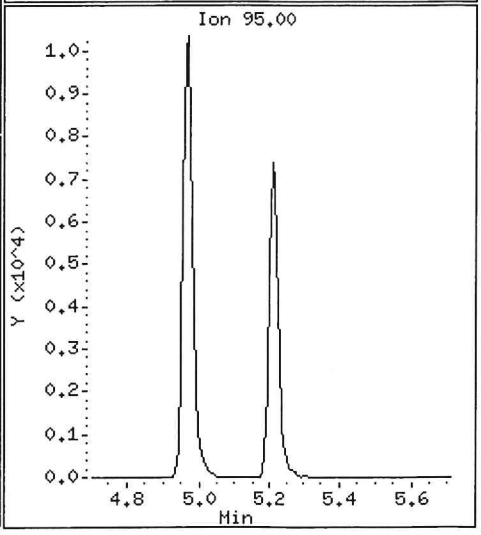


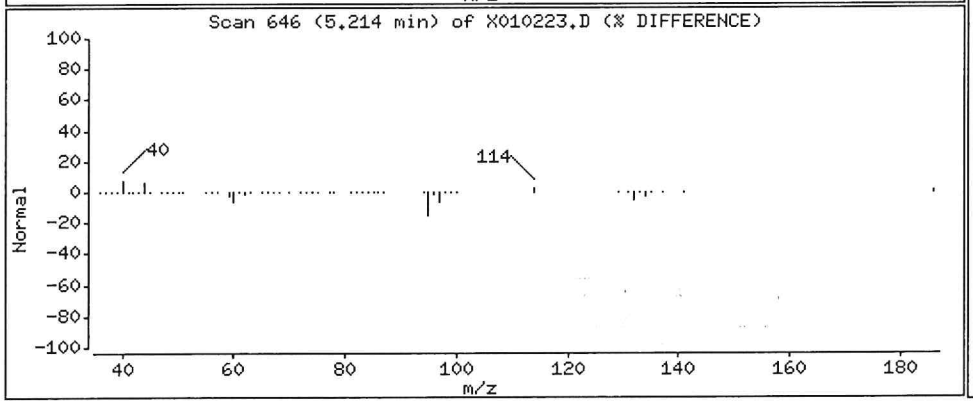












Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010223.D

Date : 02-JAN-2020 18:47

Client ID: HS19121155-05

Instrument: voa6.i

Sample Info: HS19121155-05;HS19121155-05;;;

Purge Volume: 5.0

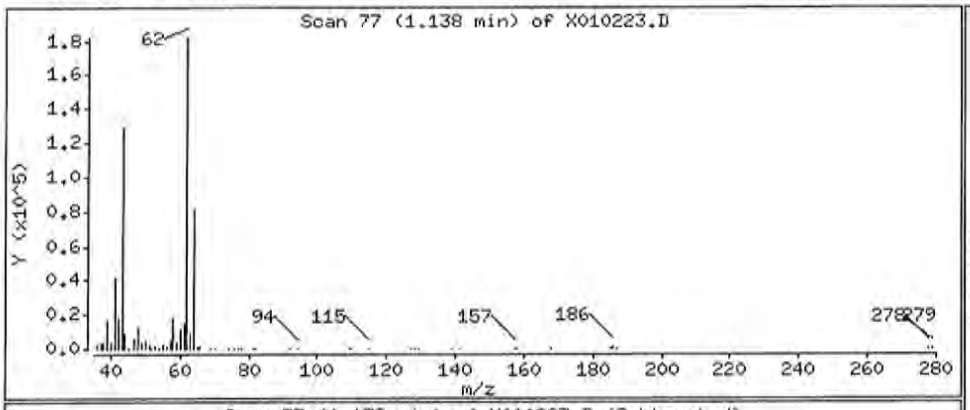
Operator: PC

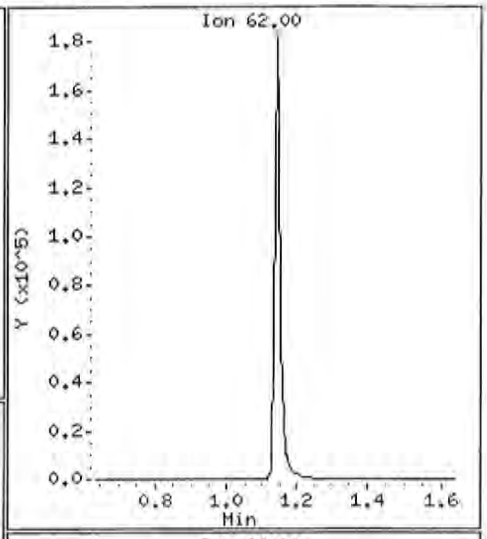
Column phase: DB624

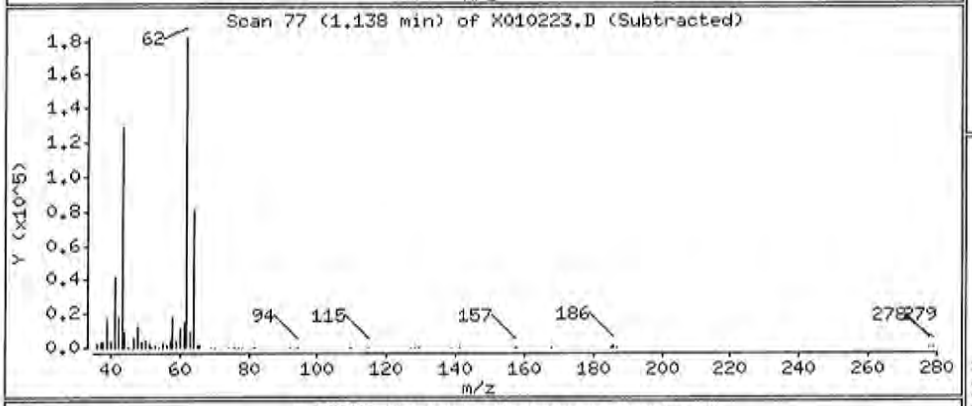
Column diameter: 0.18

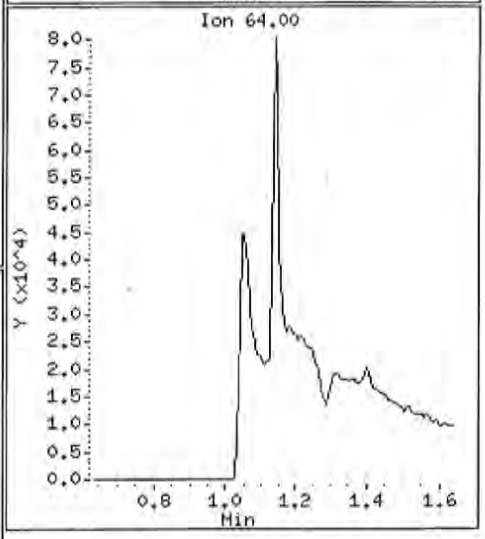
5 Vinyl Chloride

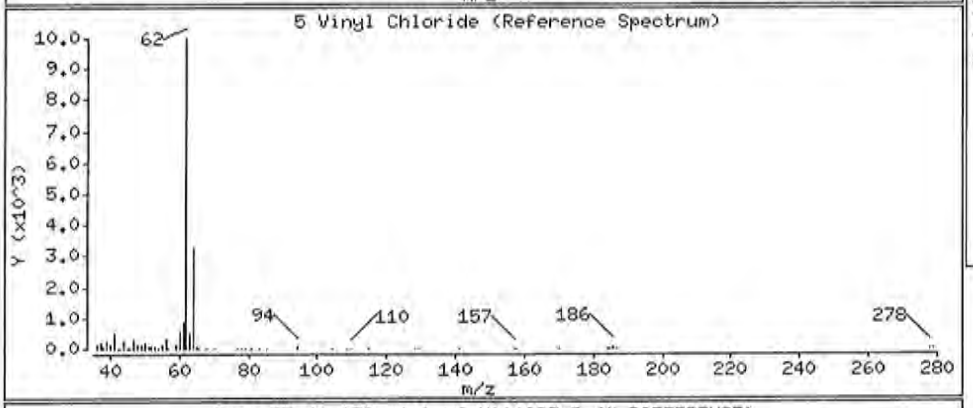
Concentration: 41.95 ug/l

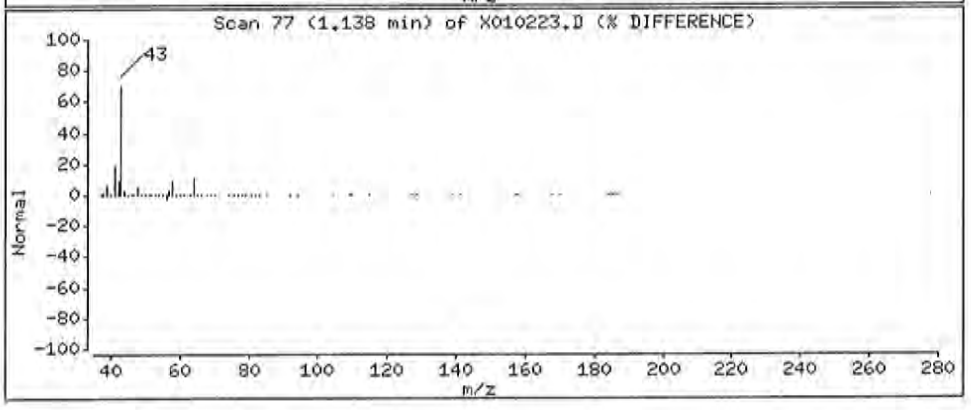












ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200102.b\X010224.D
Lab Smp Id: HS19121155-06 Client Smp ID: HS19121155-06
Inj Date : 02-JAN-2020 19:11
Operator : PC Inst ID: voa6.i
Smp Info : HS19121155-06;HS19121155-06;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200102.b\8260W.m
Meth Date : 29-Jan-2020 17:34 DevakG Quant Type: ISTD
Cal Date : 18-NOV-2019 16:35 Cal File: X111808.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

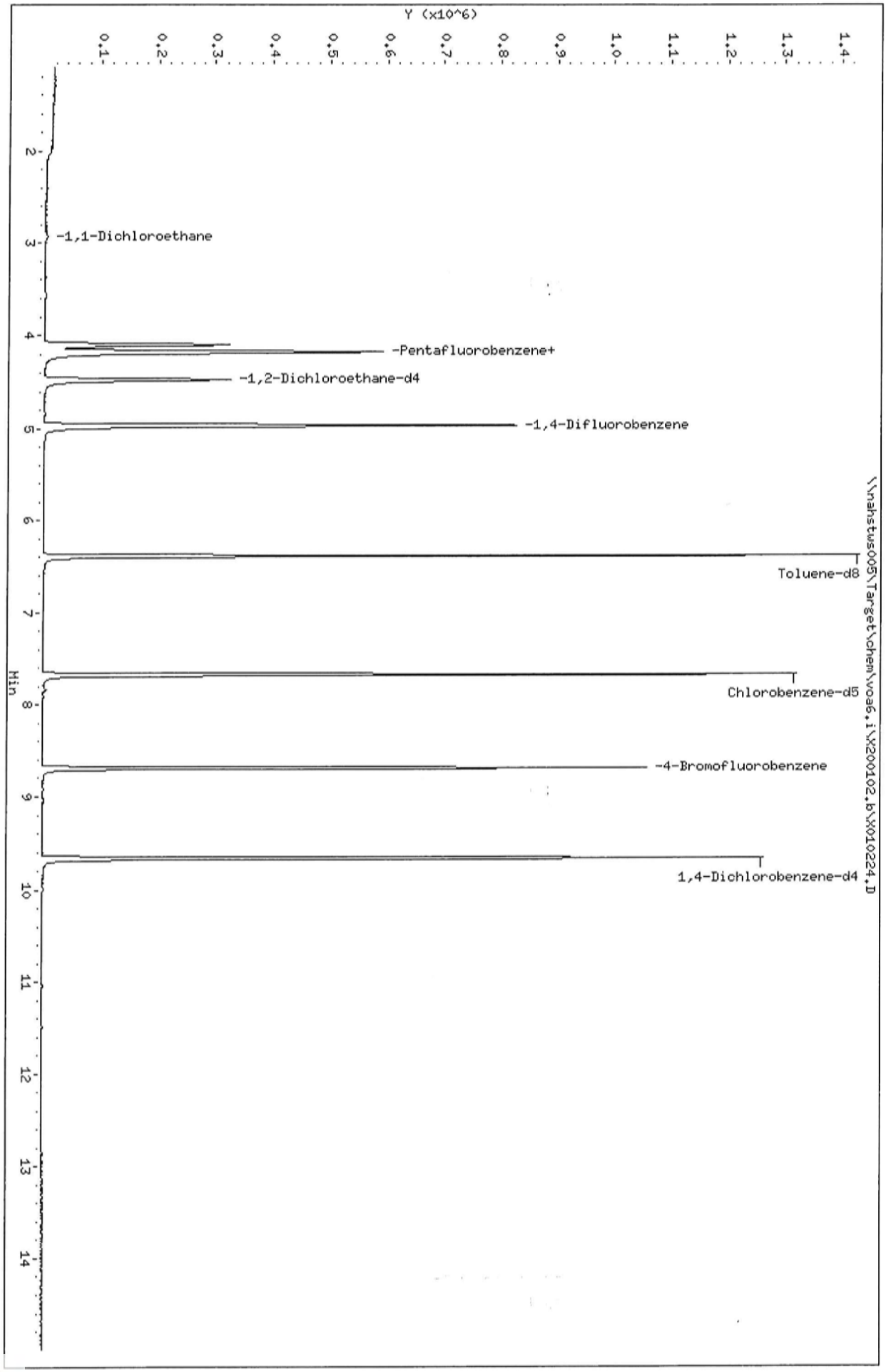
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	522900	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	741109	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	643891	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	326365	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	232446	48.8963	48.89
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	245114	49.8283	49.82
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	861622	50.7876	50.78
$ 69 4-Bromofluorobenzene	95	8.695	8.688	(1.134)	310794	51.8646	51.86
22 1,1-Dichloroethane	63	2.929	2.921	(0.700)	4933	0.64837	0.64(a)

QC Flag Legend

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

Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010224.D
Date : 02-JAN-2020 19:11
Client ID: HS191211155-06
Sample Info: HS191211155-06;HS191211155-06;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010224.D

Date : 02-JAN-2020 19:11

Client ID: HS19121155-06

Instrument: voa6.i

Sample Info: HS19121155-06;HS19121155-06;;;

Purge Volume: 5.0

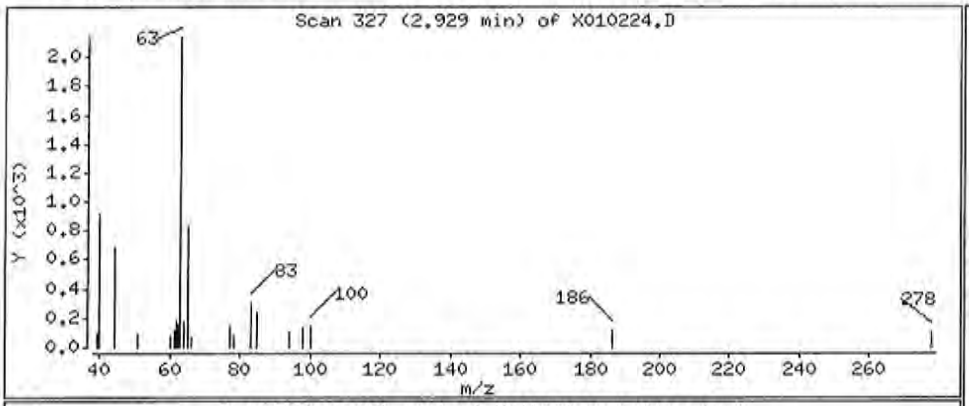
Operator: PC

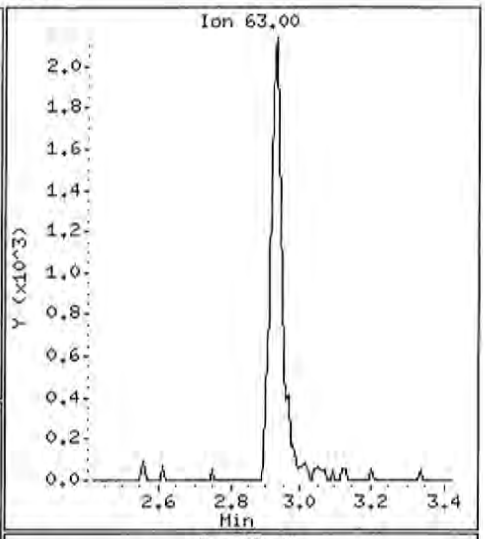
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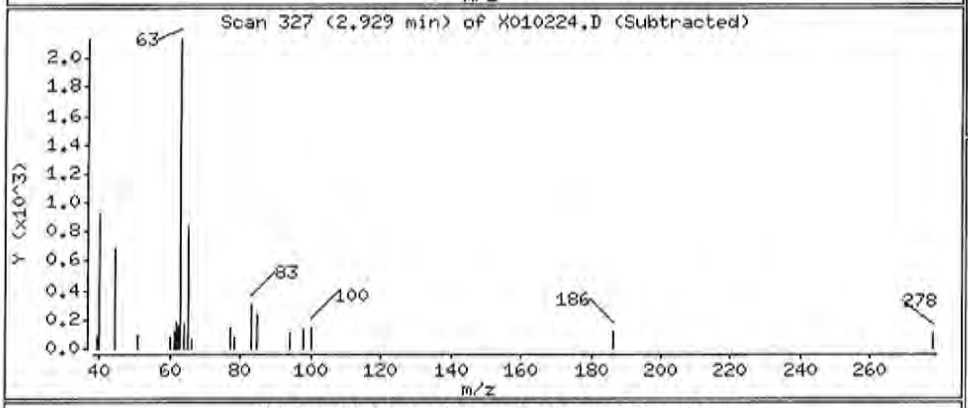
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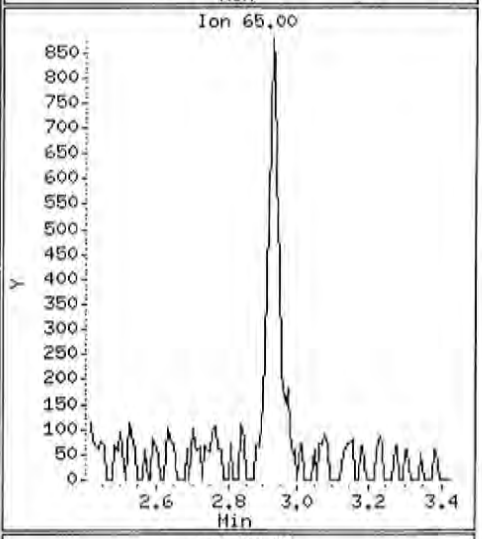
22 1,1-Dichloroethane

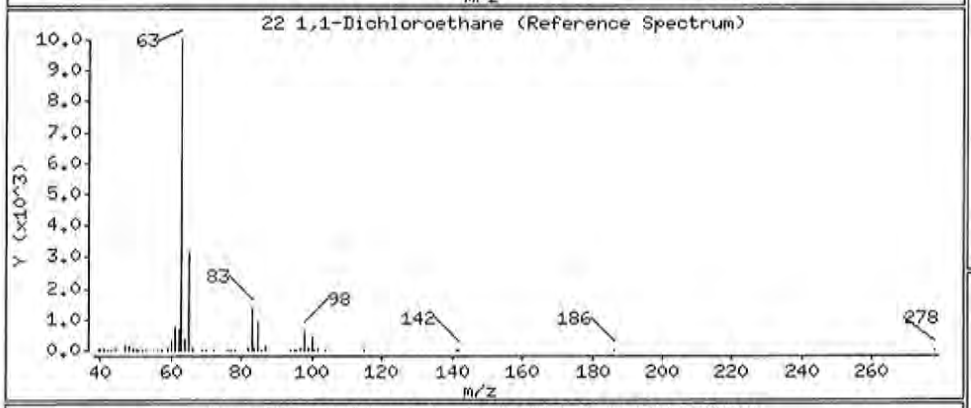
Concentration: 0.64 ug/l

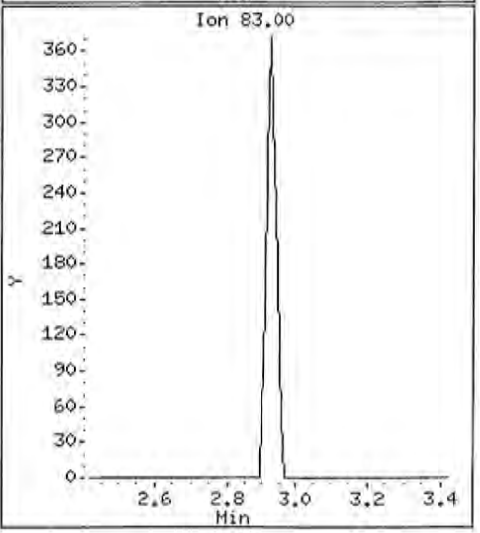


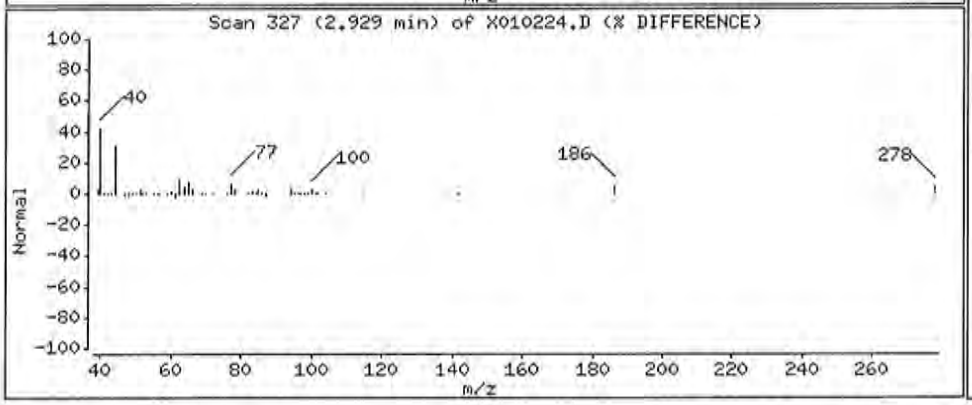












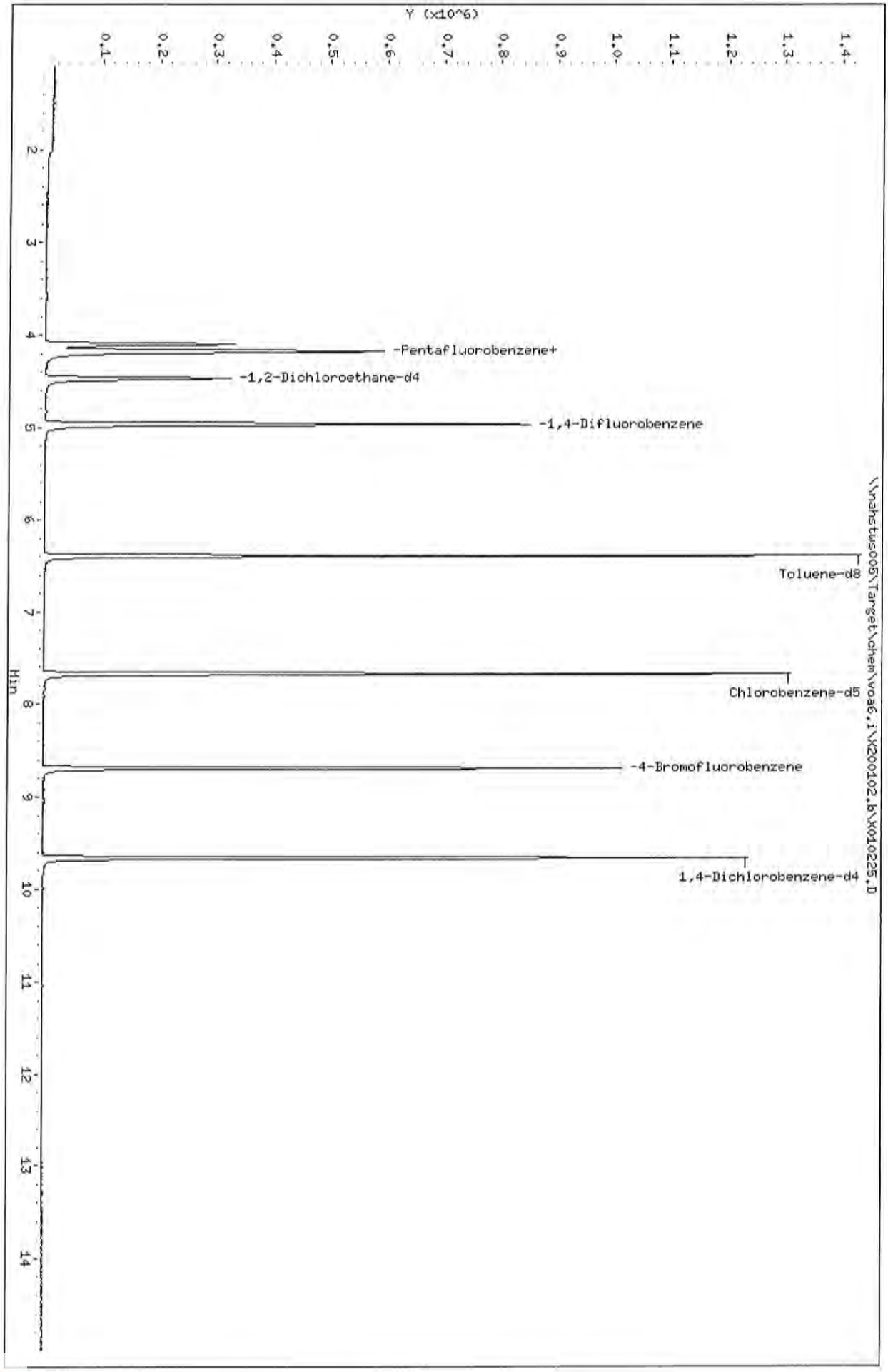
ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200102.b\X010225.D
Lab Smp Id: HS19121155-07 Client Smp ID: HS19121155-07
Inj Date : 02-JAN-2020 19:35
Operator : PC Inst ID: voa6.i
Smp Info : HS19121155-07;HS19121155-07;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200102.b\8260W.m
Meth Date : 29-Jan-2020 17:34 DevakG Quant Type: ISTD
Cal Date : 18-NOV-2019 16:35 Cal File: X111808.D
Als bottle: 24
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)	529651	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	748958	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	648548	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	319248	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	236026	49.0156	49.01
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	245448	49.2686	49.26
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	864308	50.5801	50.58
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	301768	50.0118	50.01



Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010225.D
Date : 02-JAN-2020 19:35
Client ID: HS191211155-07
Sample Info: HS191211155-07;HS191211155-07;;;
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\X200102.b\X010229.D
Lab Smp Id: CCV-END Client Smp ID: CCV-END
Inj Date : 02-JAN-2020 21:11
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\X200102.b\8260W.m
Meth Date : 26-Jan-2020 12:07 voa6.i Quant Type: ISTD
Cal Date : 18-NOV-2019 16:35 Cal File: X111808.D
Als bottle: 28 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

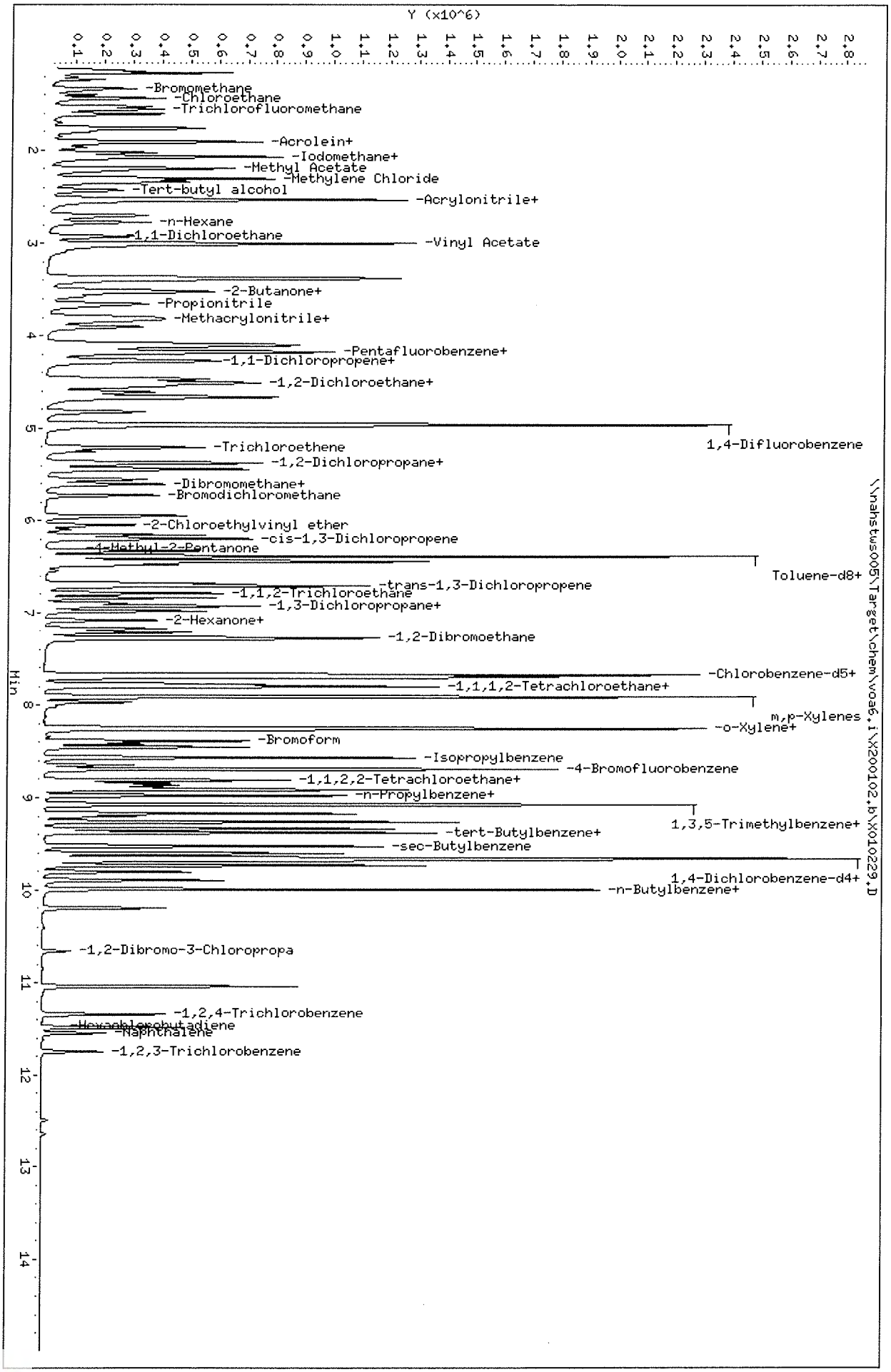
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	886283	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	1265163	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	1114484	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	541778	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	406475	50.0000	50.43
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	425375	50.0000	51.00
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1463076	50.0000	49.82
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	524732	50.0000	50.60
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	182083	50.0000	22.51
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	265533	50.0000	22.20
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	193353	50.0000	25.37
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	137260	50.0000	23.56
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	324977	50.0000	25.20
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	151784	50.0000	20.20
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	231891	50.0000	22.72
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	61273	50.0000	30.14
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	169251	50.0000	26.21(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	123051	50.0000	26.96
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	634527	50.0000	24.68
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	20645	50.0000	24.37
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	177141	50.0000	22.66
88 1,2-Dichlorobenzene	146	9.991	9.991	(1.033)	337141	50.0000	23.44

Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010229.D Page 2
Report Date: 26-Jan-2020 12:07

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)	230998	50.0000	23.00
42 1,2-Dichloropropane	63	5.436	5.436	(1.094)	182635	50.0000	24.16
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	619812	50.0000	25.12
83 1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	376643	50.0000	24.24
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	282984	50.0000	23.92
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	369444	50.0000	23.39
26 2,2-Dichloropropane	77	3.509	3.509	(0.839)	254378	50.0000	21.73
24 2-Butanone	43	3.573	3.573	(0.854)	131118	100.000	48.21
76 2-Chlorotoluene	91	8.974	8.974	(0.928)	515135	50.0000	26.42
52 2-Hexanone	43	7.083	7.083	(0.923)	210031	100.000	45.87
77 4-Chlorotoluene	91	9.075	9.075	(0.939)	593342	50.0000	25.11
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	634249	50.0000	23.92
45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	313682	100.000	48.03
10 Acetone	43	1.969	1.969	(0.471)	94349	100.000	38.84
37 Benzene	78	4.512	4.512	(0.908)	701901	50.0000	24.25
74 Bromobenzene	156	8.809	8.809	(0.911)	231275	50.0000	24.56
29 Bromochloromethane	128	3.795	3.795	(0.908)	108878	50.0000	22.67
39 Bromodichloromethane	83	5.729	5.729	(1.153)	238338	50.0000	22.76
66 Bromoform	173	8.416	8.416	(1.097)	137907	50.0000	21.36
6 Bromomethane	94	1.331	1.331	(0.318)	133224	50.0000	13.47
19 Carbon Disulfide	76	2.069	2.069	(0.495)	1028824	100.000	50.35
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	231414	50.0000	20.70
59 Chlorobenzene	112	7.699	7.699	(1.004)	487458	50.0000	22.40
7 Chloroethane	64	1.396	1.396	(0.334)	116837	50.0000	20.93
28 Chloroform	83	3.910	3.910	(0.935)	320512	50.0000	22.33
3 Chloromethane	50	1.073	1.073	(0.257)	204468	50.0000	21.34
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	205194	50.0000	24.41
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	296589	50.0000	24.03
55 Dibromochloromethane	129	7.176	7.176	(0.936)	193829	50.0000	22.90
44 Dibromomethane	93	5.550	5.550	(1.117)	119088	50.0000	22.26
2 Dichlorodifluoromethane	85	0.966	0.966	(0.231)	188242	50.0000	23.77
61 Ethylbenzene	106	7.800	7.800	(1.017)	253791	50.0000	22.57
91 Hexachlorobutadiene	225	11.481	11.481	(1.187)	93404	50.0000	21.45
67 Isopropylbenzene	105	8.566	8.566	(1.117)	731728	50.0000	21.97
62 m,p-Xylenes	106	7.907	7.907	(1.031)	611418	100.000	45.07
17 Methylene Chloride	84	2.305	2.305	(0.551)	188398	50.0000	23.50
87 n-Butylbenzene	91	9.999	9.999	(1.034)	522940	50.0000	23.70
73 n-Propylbenzene	91	8.917	8.917	(0.922)	846836	50.0000	25.28
92 Naphthalene	128	11.546	11.546	(1.194)	149112	50.0000	25.47
63 o-Xylene	106	8.244	8.244	(1.075)	301982	50.0000	22.55
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	704221	50.0000	24.20
64 Styrene	104	8.258	8.258	(1.077)	533727	50.0000	22.92
78 tert-Butylbenzene	119	9.340	9.340	(0.966)	517160	50.0000	24.48
56 Tetrachloroethene	164	6.933	6.933	(0.904)	159425	50.0000	20.35
50 Toluene	91	6.446	6.446	(0.840)	736803	50.0000	23.31
20 trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	176249	50.0000	24.16
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	261665	50.0000	23.26
38 Trichloroethene	130	5.206	5.206	(1.048)	195395	50.0000	22.08
8 Trichlorofluoromethane	101	1.561	1.561	(0.373)	273677	50.0000	19.90
5 Vinyl Chloride	62	1.138	1.138	(0.272)	217290	50.0000	24.05

QC Flag Legend

M - Compound response manually integrated.

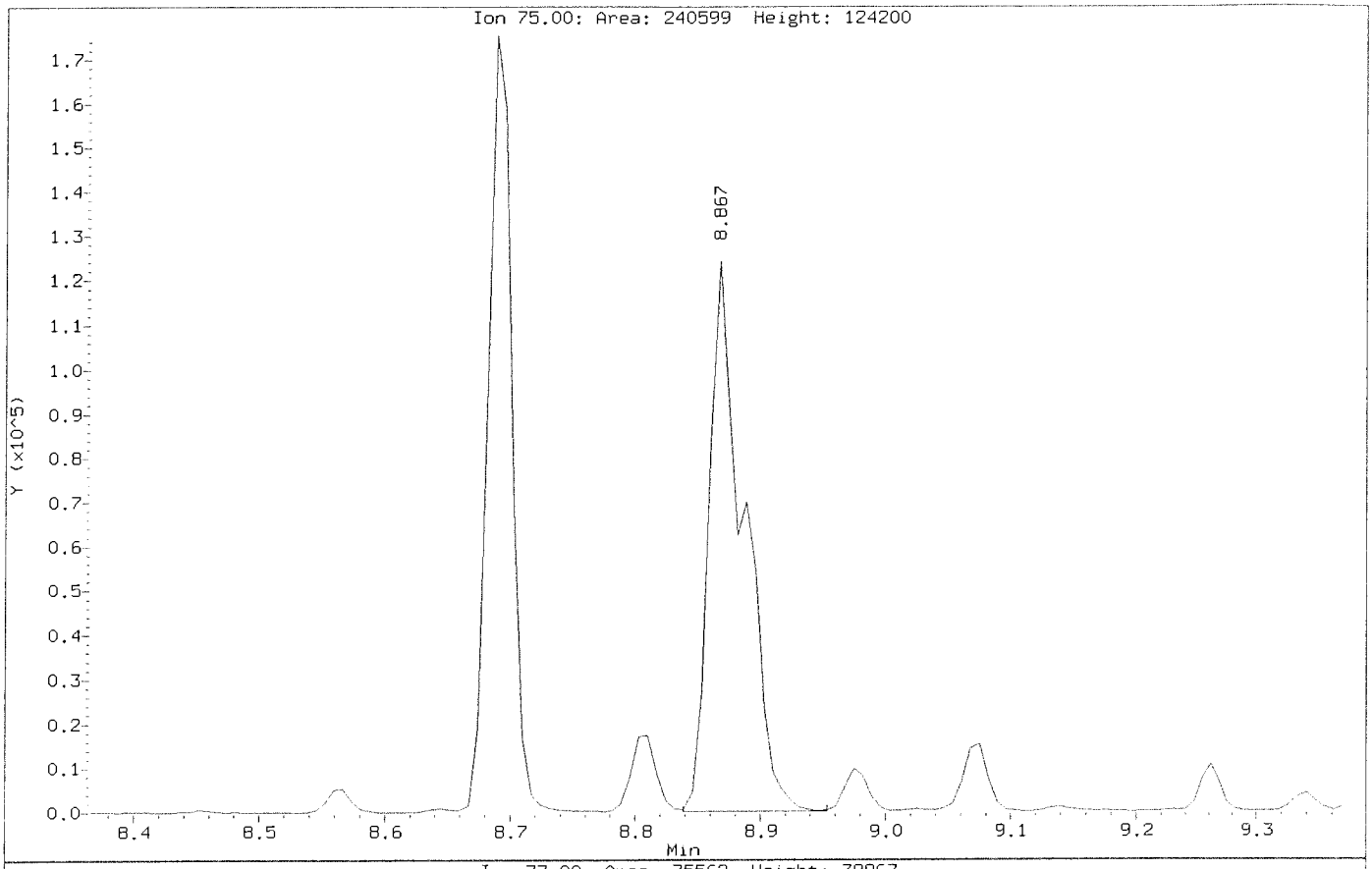


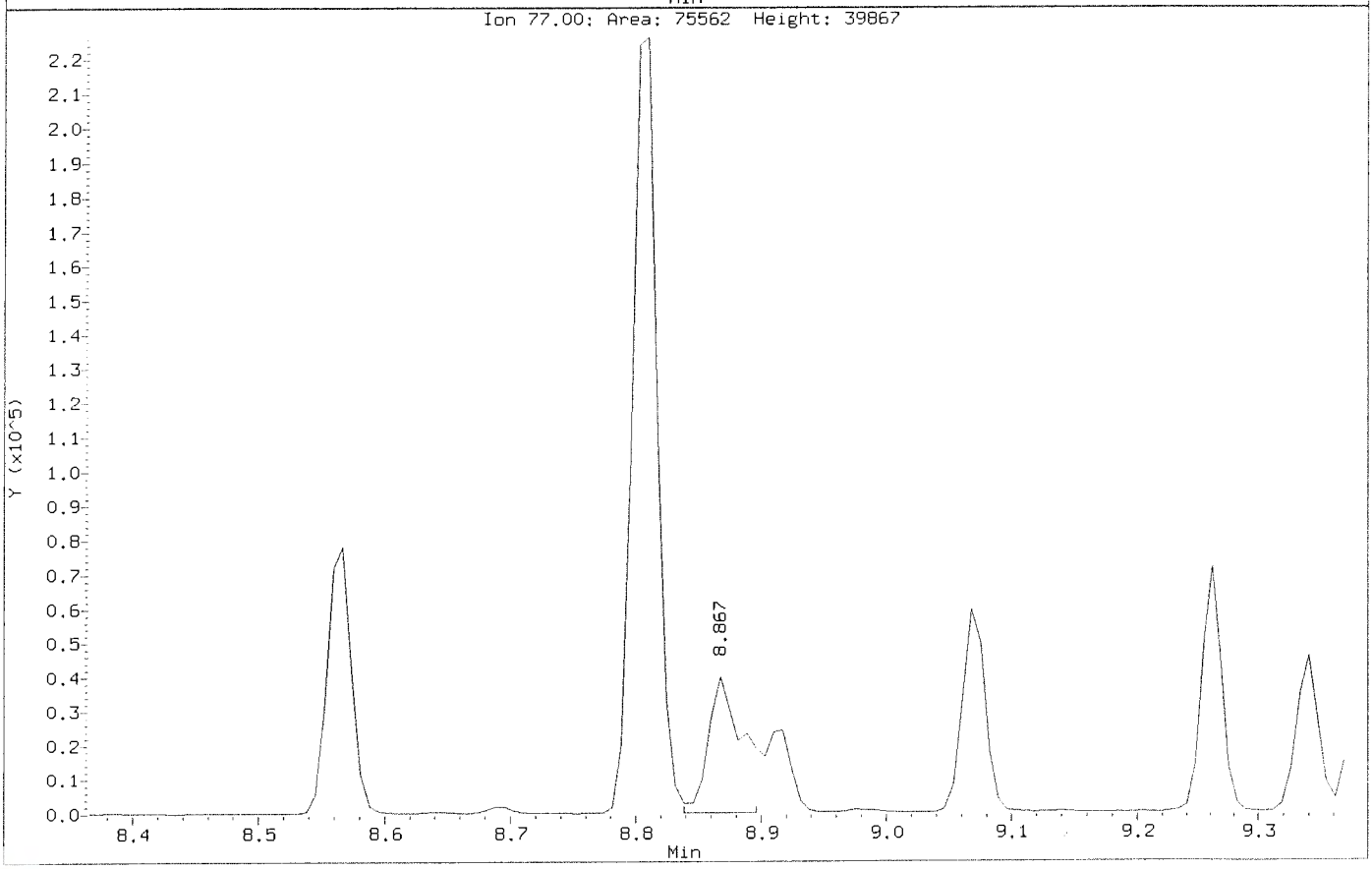
Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010229.D
Date : 02-JAN-2020 21:11
Client ID: CCV-END
Sample Info: CCV-END;CCV-END;2;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\Before\X010229.D
Injection Date: 02-JAN-2020 21:11
Instrument: voa6.i
Client Sample ID: CCV-END

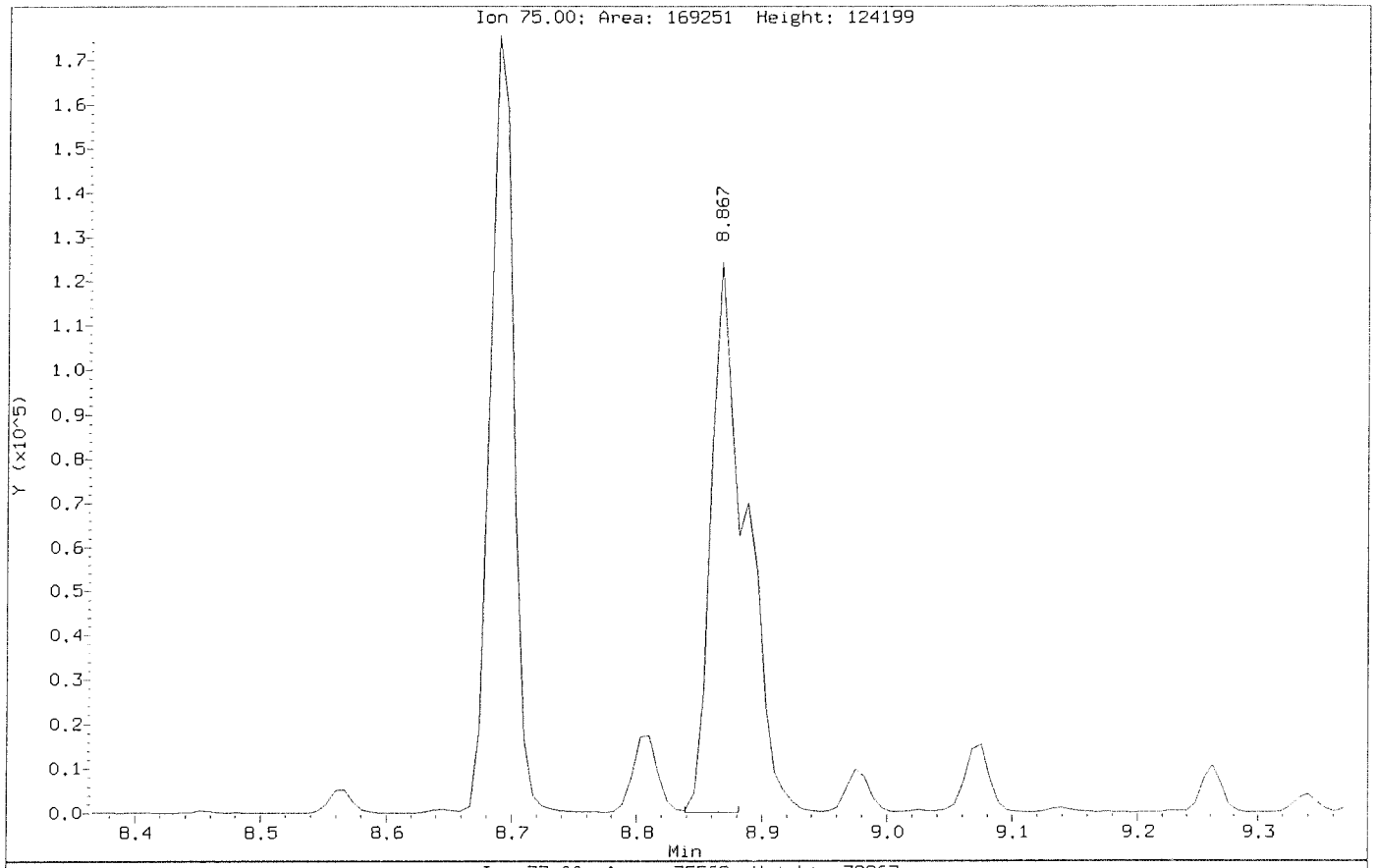
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

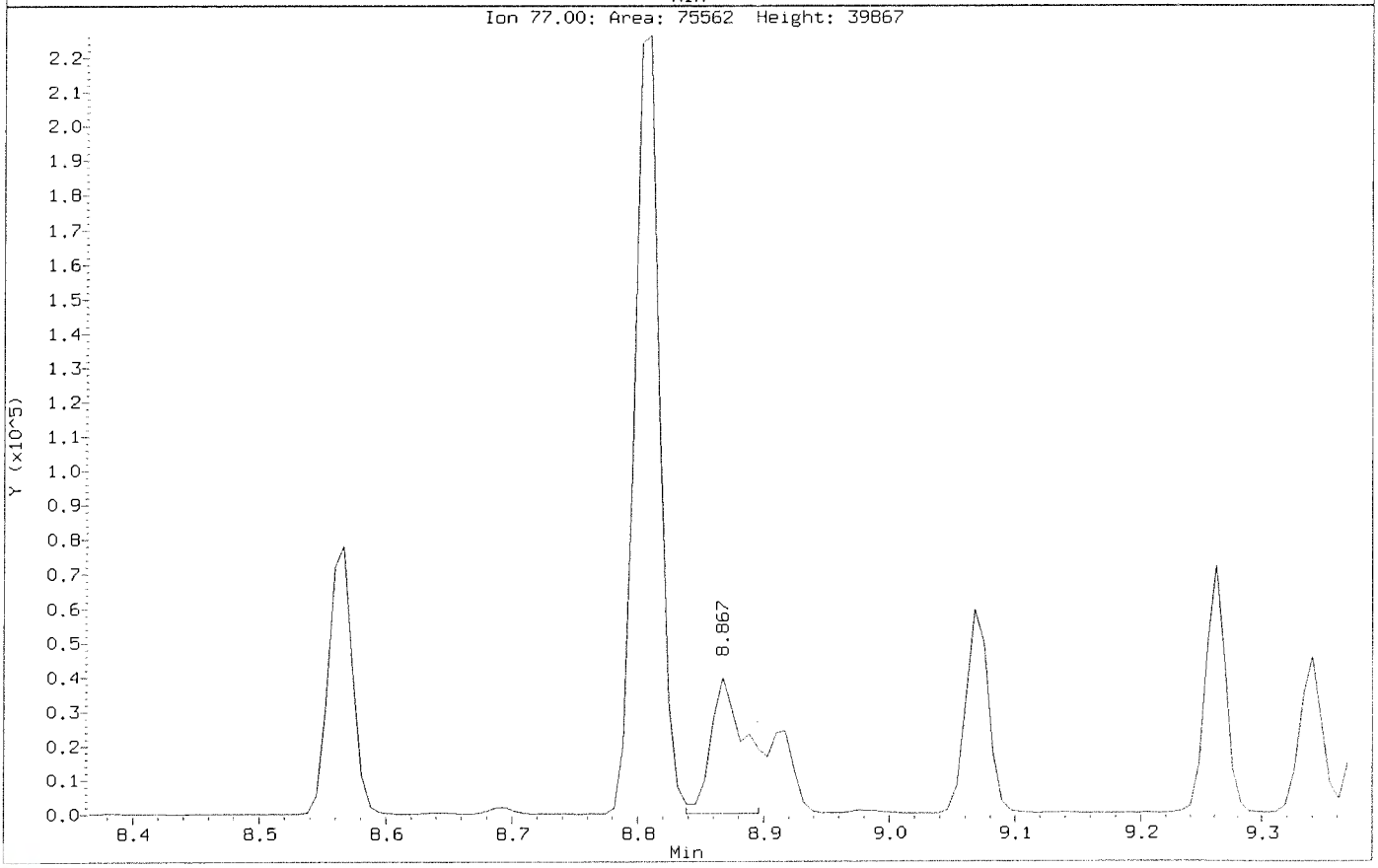




Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010229.D
Injection Date: 02-JAN-2020 21:11
Instrument: voa6.i
Client Sample ID: CCV-END

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





HS19121155 Wet Chem Raw Data

ALS WO# HS19121155

Sequence: 010220
Last Update Operator: alshs.nouser

HS19121155

CD	Name	Comment	Type	Position	Dilution	Level	Instrument Method	ng	me	Status	Inject Time
	CCV		Unknown	BA5	1.0000		Anions Pro	Anions Pr	5.0	Finished	1/4/2020 6:06:01 PM -06:00
	CCB		Unknown	BA6	1.0000		Anions Pro	Anions Pr	5.0	Finished	1/4/2020 6:22:37 PM -06:00
	WBLKW3-010320	9056_W	Unknown	RA1	1.0000		Anions Pro	Anions Pr	5.0	Finished	1/4/2020 6:39:20 PM -06:00
	WLCSW3-010320		Unknown	RA2	1.0000		Anions Pro	Anions Pr	5.0	Finished	1/4/2020 6:55:55 PM -06:00
	WLCSDW3-010320		Unknown	RA3	1.0000		Anions Pro	Anions Pr	5.0	Finished	1/4/2020 7:12:30 PM -06:00
	HS19121121-01		Unknown	RA4	1.0000		Anions Pro	Anions Pr	5.0	Finished	1/4/2020 7:29:07 PM -06:00
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	HS19121121-03DF500		Unknown	RA8	500.0000		Anions Pro	Anions Pr	5.0	Finished	1/4/2020 8:35:31 PM -06:00
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	HS19121121-05DF500		Unknown	RB2	500.0000		Anions Pro	Anions Pr	5.0	Finished	1/4/2020 9:08:45 PM -06:00
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	CCB		Unknown	BA8	1.0000		Anions Pro	Anions Pr	5.0	Finished	1/4/2020 9:41:56 PM -06:00
	HS19121121-06DF500		Unknown	RB3	500.0000		Anions Pro	Anions Pr	5.0	Finished	1/4/2020 9:58:33 PM -06:00
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	HS19121092-06DF50		Unknown	RC3	50.0000		Anions Pro	Anions Pr	5.0	Finished	1/5/2020 12:11:27 AM -06:00
	HS19121155-01		Unknown	RC4	1.0000		Anions Pro	Anions Pr	5.0	Finished	1/5/2020 12:28:03 AM -06:00
	CCV		Unknown	BA5	1.0000		Anions Pro	Anions Pr	5.0	Finished	1/5/2020 12:44:42 AM -06:00
	CCB		Unknown	BA6	1.0000		Anions Pro	Anions Pr	5.0	Finished	1/5/2020 1:01:17 AM -06:00
	HS19121155-02		Unknown	RC5	1.0000		Anions Pro	Anions Pr	5.0	Finished	1/5/2020 1:17:55 AM -06:00
	HS19121155-03DF20		Unknown	RC6	20.0000		Anions Pro	Anions Pr	5.0	Finished	1/5/2020 1:34:30 AM -06:00
	HS19121155-04DF20		Unknown	RC7	20.0000		Anions Pro	Anions Pr	5.0	Finished	1/5/2020 1:51:05 AM -06:00
	HS19121155-05DF50		Unknown	RC8	50.0000		Anions Pro	Anions Pr	5.0	Finished	1/5/2020 2:07:40 AM -06:00
	CCV1		Unknown	BA7	1.0000		Anions Pro	Anions Pr	5.0	Finished	1/5/2020 2:24:19 AM -06:00
	CCB		Unknown	BA8	1.0000		Anions Pro	Anions Pr	5.0	Finished	1/5/2020 2:40:54 AM -06:00

Sequence: 010220
Injection #6: STD6

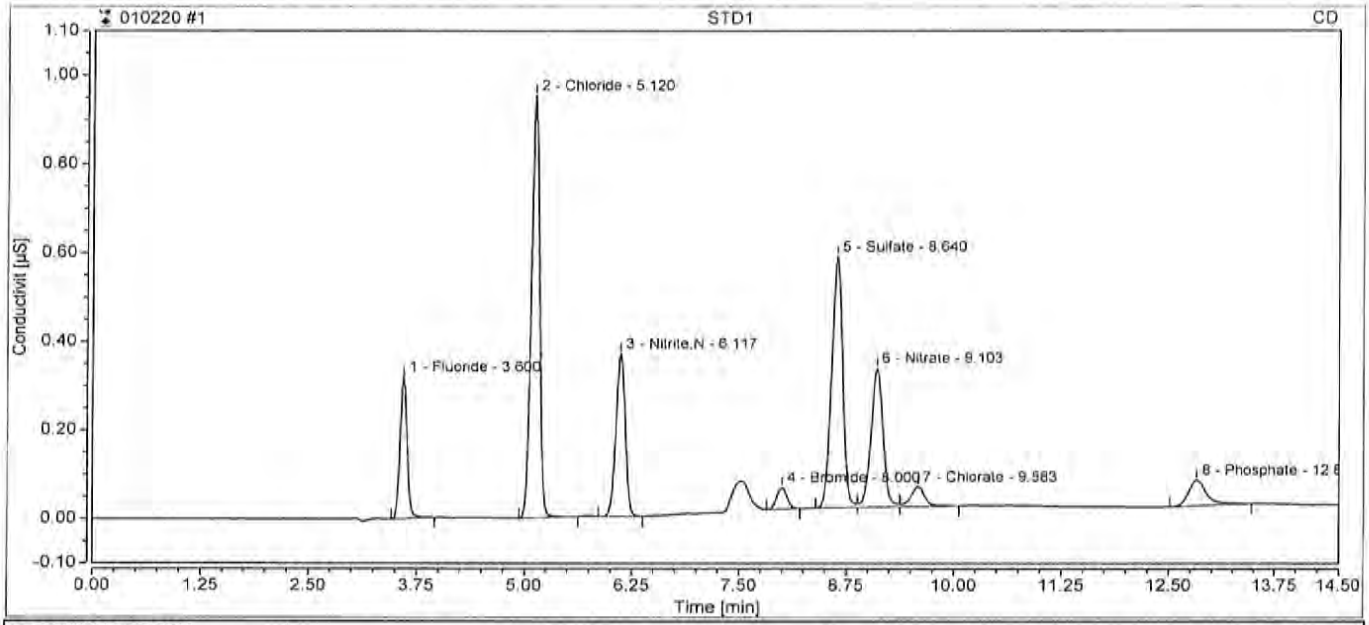
Calibration

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/x*	*Area*	*5*	*10.1532*	*0.99927*	*-0.0056*	*0.3716*	*0.0000*
2	Chloride	Lin, WithOffset, 1/x	Area	6	0.2804	1.00000	-0.0135	0.2355	0.0000
3	Nitrite,N	Lin, WithOffset, 1/x	Area	5	15.1147	0.99824	0.0003	0.5120	0.0000
4	Bromide	Lin, WithOffset, 1/x	Area	6	14.0217	0.99919	-0.0052	0.1009	0.0000
5	Sulfate	Lin, WithOffset, 1/x	Area	6	1.1258	0.99999	-0.0022	0.1717	0.0000
6	Nitrate	Lin, WithOffset, 1/x	Area	6	2.2249	0.99998	-0.0102	0.5876	0.0000
7	Chlorate	Lin, WithOffset, 1/x	Area	6	10.0265	0.99953	-0.0024	0.0944	0.0000
8	Phosphate	Lin, WithOffset, 1/x	Area	6	6.6198	0.99981	-0.0110	0.2321	0.0000
Maximum					**15.1147**	1.00000			
Minimum					0.2804	**0.99824**			

1 STD1

Sample Name:	**STD1**	*Injection Volume:*	**5.00**
Vial Number:	**GA1**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 08092019**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time	**08/12/2019 14:08**	*Sample Weight:*	**1.0000**

Run Time:



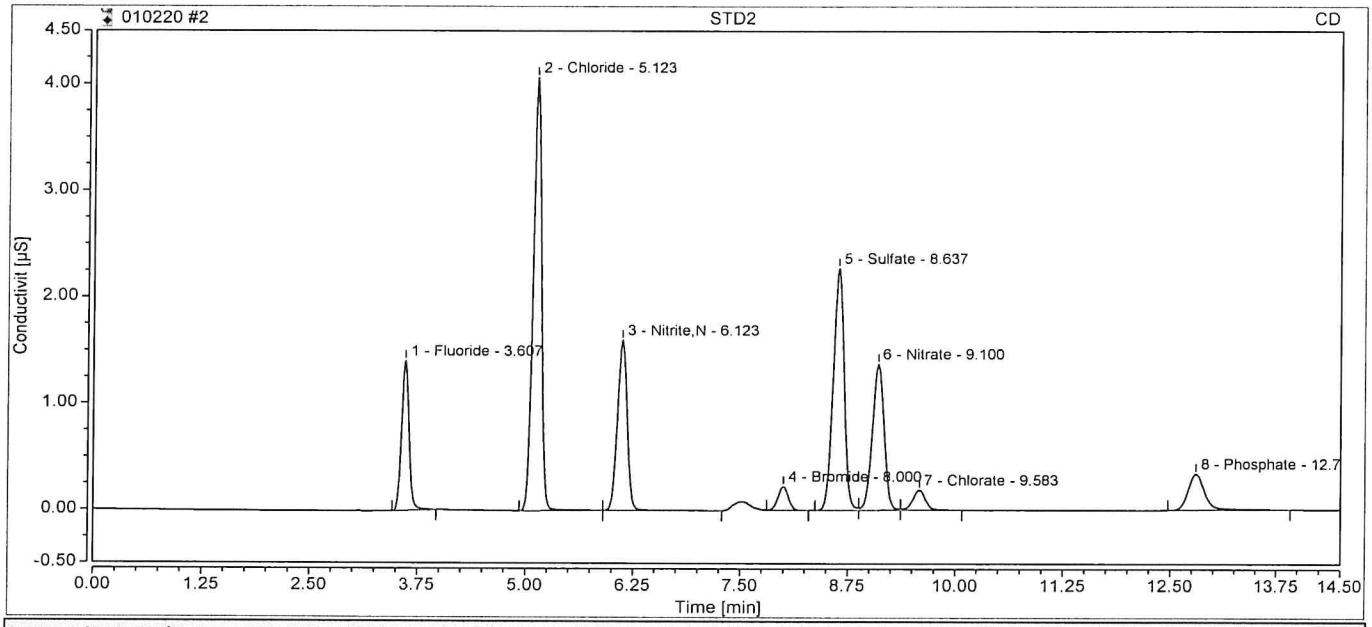
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.60	Fluoride	BMB	0.031	0.0973	0.0973	1.0000
2	5.12	Chloride	BMB	0.105	0.5026	0.5026	1.0000
3	6.12	Nitrite,N	BMB	0.046	0.0893	0.0893	1.0000
4	8.00	Bromide	BMB	0.007	0.1192	0.1192	1.0000
5	8.64	Sulfate	BM	0.084	0.5042	0.5042	1.0000
6	9.10	Nitrate	M	0.051	0.1034	0.1034	1.0000
7	9.58	Chlorate	MB	0.008	0.1143	0.1143	1.0000
8	12.83	Phosphate	BMB	0.014	0.1085	0.1085	1.0000
Total:			**0.000**	**0.346**		**1.64**	

2 STD2

Sample Name:	**STD2**	*Injection Volume:*	**5.00**
Vial Number:	**GA2**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 08092019**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**08/12/2019 14:24**	*Sample Weight:*	**1.0000**

Run Time:

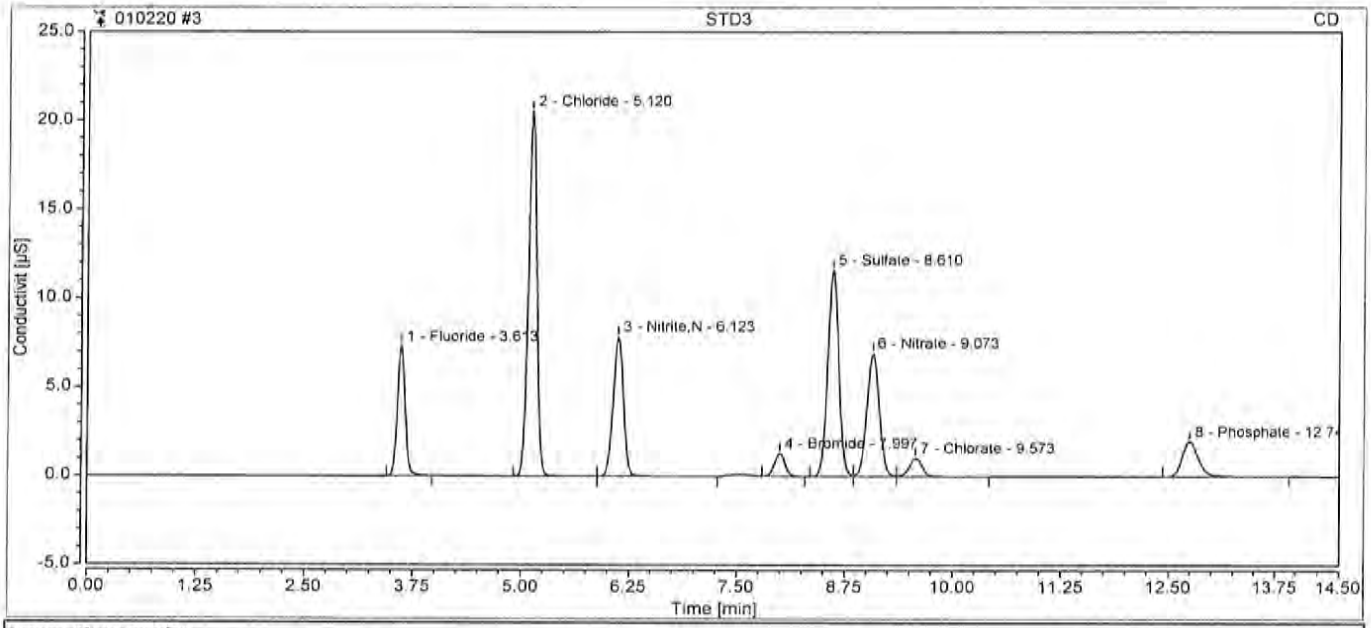


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.61	Fluoride	BMB	0.140	0.3929	0.3929	1.0000
2	5.12	Chloride	BMB	0.456	1.9918	1.9918	1.0000
3	6.12	Nitrite,N	BMB	0.211	0.4119	0.4119	1.0000
4	8.00	Bromide	BMB	0.031	0.3593	0.3593	1.0000
5	8.64	Sulfate	BM	0.337	1.9733	1.9733	1.0000
6	9.10	Nitrate	M	0.220	0.3917	0.3917	1.0000
7	9.58	Chlorate	MB	0.033	0.3704	0.3704	1.0000
8	12.80	Phosphate	BMB	0.078	0.3841	0.3841	1.0000
Total:			**0.000**	**1.506**		**6.28**	

3 STD3

Sample Name:	**STD3**	*Injection Volume:*	**5.00**
Vial Number:	**GA3**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength*	**210**
Control Program:	**Anions Program 08092019**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**08/12/2019 14:41**	*Sample Weight:*	**1.0000**
Run Time:			

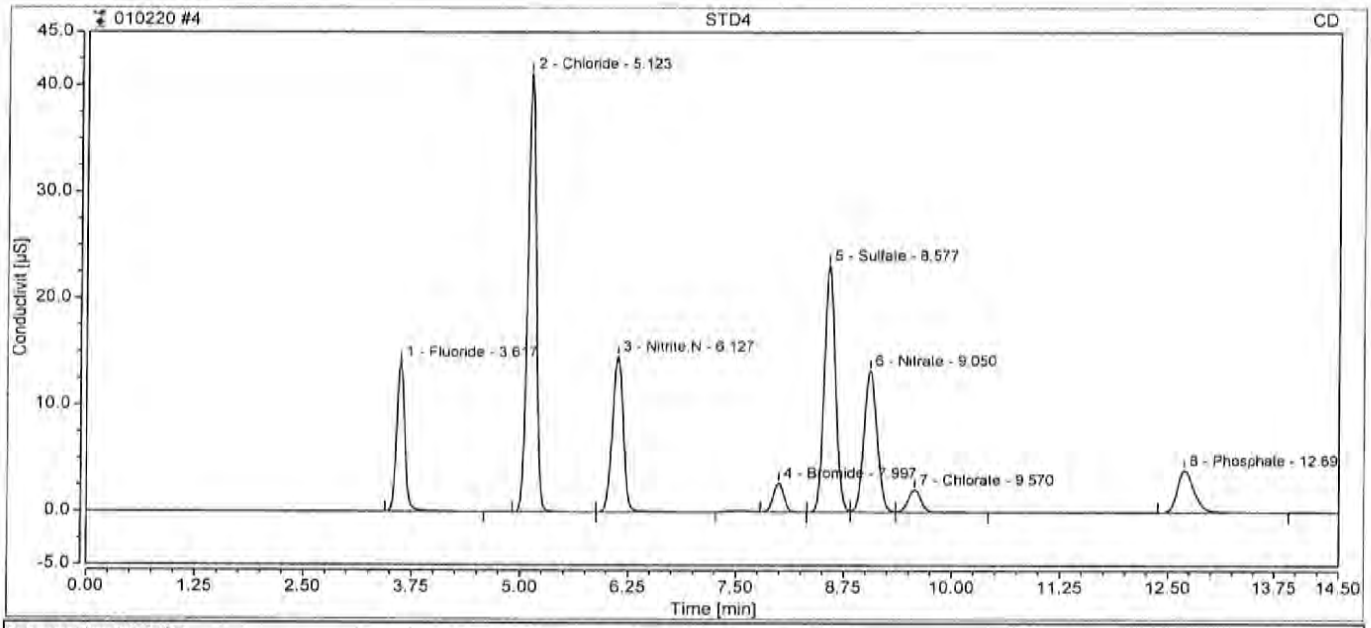


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.61	Fluoride	BMB	0.758	2.0551	2.0551	1.0000
2	5.12	Chloride	BMB	2.339	9.9888	9.9888	1.0000
3	6.12	Nitrite,N	BMB	1.091	2.1305	2.1305	1.0000
4	8.00	Bromide	BMB	0.182	1.8590	1.8590	1.0000
5	8.61	Sulfate	BM	1.715	10.0007	10.0007	1.0000
6	9.07	Nitrate	M	1.153	1.9792	1.9792	1.0000
7	9.57	Chlorate	MB	0.176	1.8940	1.8940	1.0000
8	12.75	Phosphate	BMB	0.436	1.9269	1.9269	1.0000
Total:			**0.000**	**7.851**		**31.83**	

4 STD4

Sample Name:	STD4	Injection Volume:	5.00
Vial Number:	GA4	Channel:	CD
Sample Type:	Calibration Standard	Wavelength:	210
Control Program:	Anions Program 08092019	Bandwidth:	n.a.
Quantif. Method:	Anions Processing Method	Dilution Factor:	1.0000
Recording Time	08/12/2019 14:57	Sample Weight:	1.0000
Run Time:			



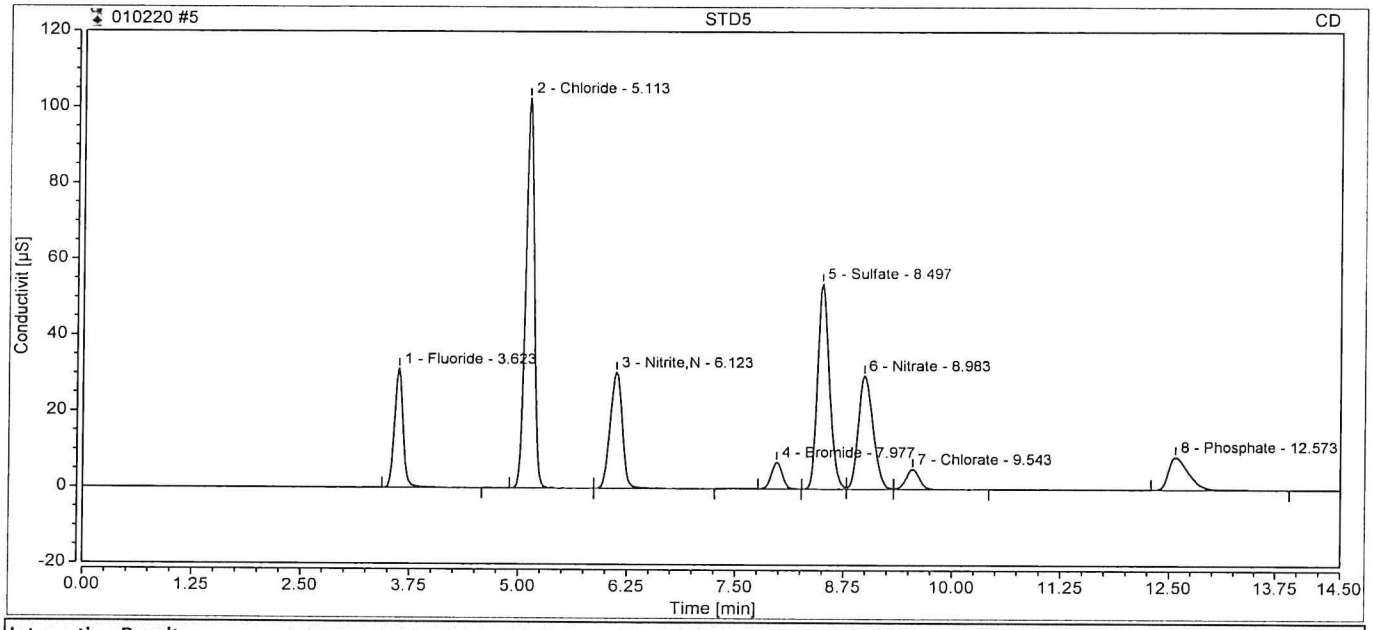
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.62	Fluoride	BMB	1.535	4.1457	4.1457	1.0000
2	5.12	Chloride	BMB	4.695	19.9948	19.9948	1.0000
3	6.13	Nitrite,N	BMB	2.133	4.1659	4.1659	1.0000
4	8.00	Bromide	BMB	0.385	3.8642	3.8642	1.0000
5	8.58	Sulfate	BM	3.451	20.1082	20.1082	1.0000
6	9.05	Nitrate	M	2.330	3.9823	3.9823	1.0000
7	9.57	Chlorate	MB	0.365	3.8956	3.8956	1.0000
8	12.69	Phosphate	BMB	0.903	3.9395	3.9395	1.0000
Total:			**0.000**	**15.798**		**64.10**	

5 STD5

Sample Name:	**STD5**	*Injection Volume:*	**5.00**
Vial Number:	**GA5**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 08092019**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**08/12/2019 15:14**	*Sample Weight:*	**1.0000**

Run Time:



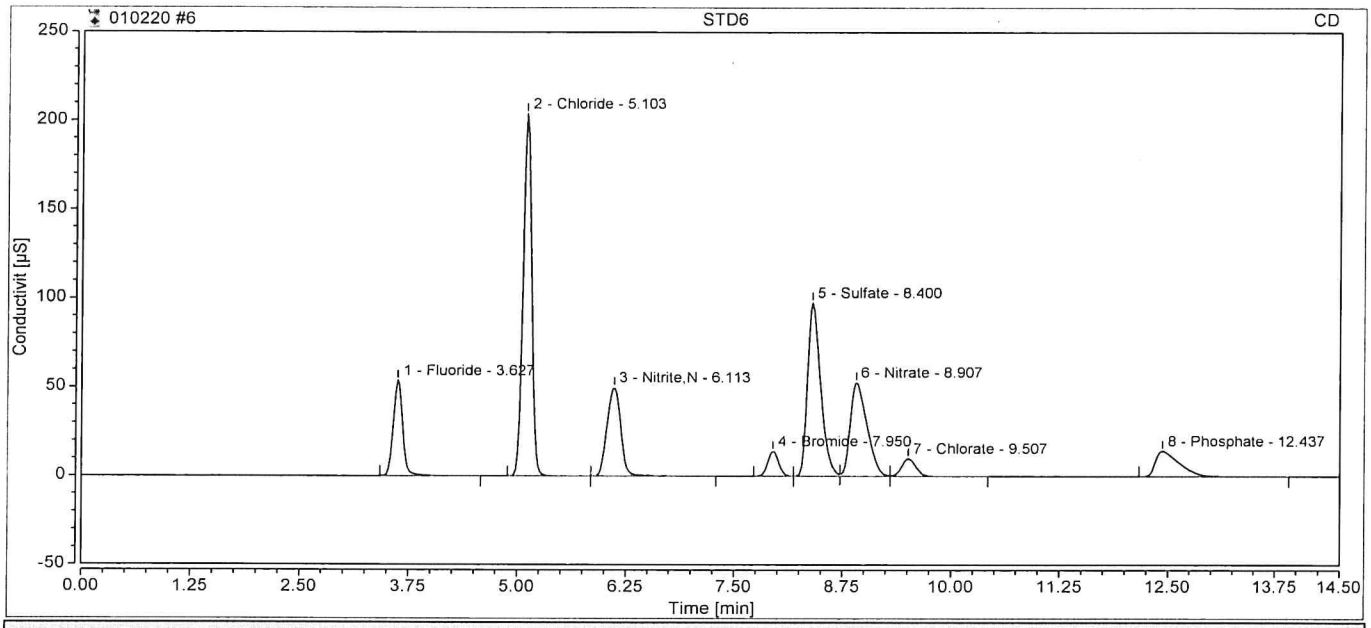
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.62	Fluoride	BMB	3.639	9.8090	9.8090	1.0000
2	5.11	Chloride	BMB	11.762	49.9996	49.9996	1.0000
3	6.12	Nitrite,N	BMB	4.968	9.7023	9.7023	1.0000
4	7.98	Bromide	BMB	1.001	9.9786	9.9786	1.0000
5	8.50	Sulfate	BM	8.590	50.0271	50.0271	1.0000
6	8.98	Nitrate	M	5.854	9.9805	9.9805	1.0000
7	9.54	Chlorate	MB	0.939	9.9670	9.9670	1.0000
8	12.57	Phosphate	BMB	2.305	9.9803	9.9803	1.0000
Total:			**0.000**	**39.057**		**159.44**	

6 STD6

Sample Name:	**STD6**	*Injection Volume:*	**5.00**
Vial Number:	**GB8**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 08092019**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**08/12/2019 18:37**	*Sample Weight:*	**1.0000**

Run Time:

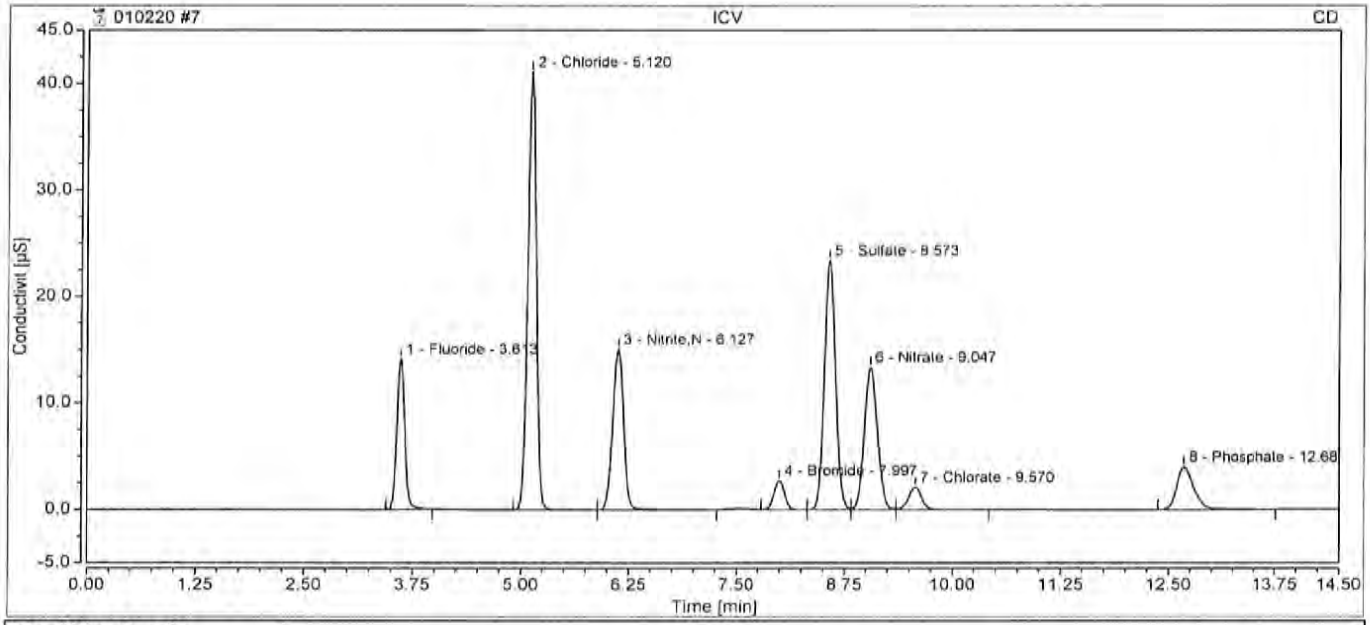


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.63	Fluoride	BMB	6.773	18.2418	18.2418	1.0000
2	5.10	Chloride	BMB	23.542	100.0224	100.0224	1.0000
3	6.11	Nitrite,N	BMB	9.157	17.8850	17.8850	1.0000
4	7.95	Bromide	BM	2.045	20.3197	20.3197	1.0000
5	8.40	Sulfate	M	17.153	99.8863	99.8863	1.0000
6	8.91	Nitrate	M	11.778	20.0629	20.0629	1.0000
7	9.51	Chlorate	MB	1.910	20.2586	20.2586	1.0000
8	12.44	Phosphate	BMB	4.668	20.1606	20.1606	1.0000
Total:			**0.000**	**77.025**		**316.84**	

7 ICV

Sample Name:	ICV	Injection Volume:	5.00
Vial Number:	GA7	Channel:	CD
Sample Type:	Unknown	Wavelength:	210
Control Program:	Anions Program 08092019	Bandwidth:	n.a.
Quantif. Method:	Anions Processing Method	Dilution Factor:	1.0000
Recording Time:	08/12/2019 18:54	Sample Weight:	1.0000
Run Time:			



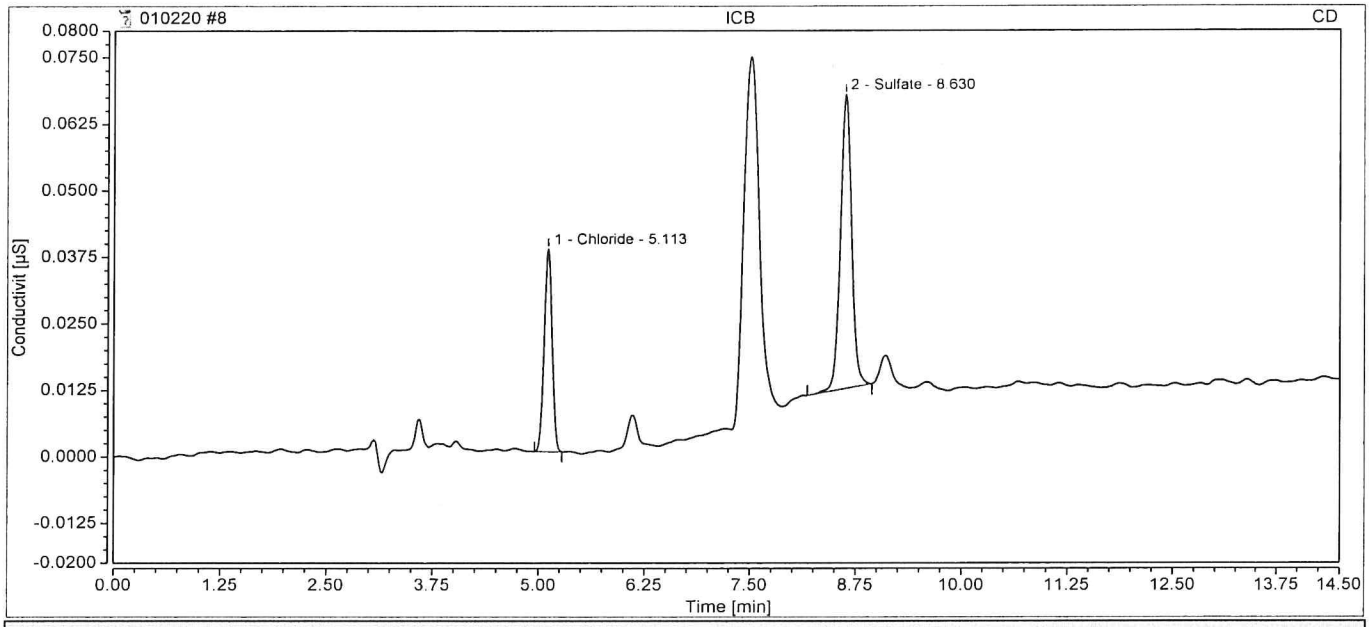
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.61	Fluoride	BMB	1.495	4.0374	4.0374	1.0000
2	5.12	Chloride	BMB	4.681	19.9333	19.9333	1.0000
3	6.13	Nitrite,N	BMB	2.195	4.2858	4.2858	1.0000
4	8.00	Bromide	BMB	0.384	3.8585	3.8585	1.0000
5	8.57	Sulfate	BM	3.469	20.2132	20.2132	1.0000
6	9.05	Nitrate	M	2.340	3.9993	3.9993	1.0000
7	9.57	Chlorate	MB	0.367	3.9104	3.9104	1.0000
8	12.68	Phosphate	BMB	0.911	3.9732	3.9732	1.0000
Total:			**0.000**	**15.841**		**64.21**	

8 ICB

Sample Name:	**ICB**	*Injection Volume:*	**5.00**
Vial Number:	**GB8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 08092019**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**08/12/2019 19:29**	*Sample Weight:*	**1.0000**

Run Time:

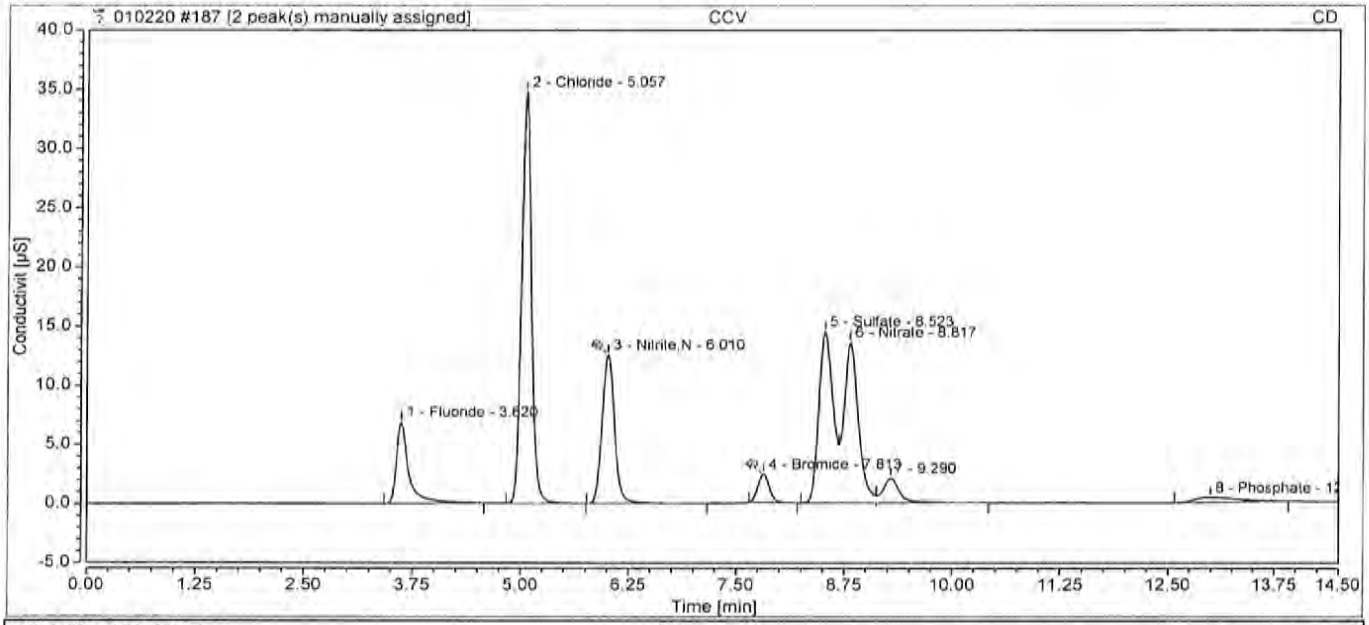


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.11	Chloride	BMB	0.004	0.0748	0.0748	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
2	8.63	Sulfate	BMB	0.008	0.0618	0.0618	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.013**		**0.14**	

187 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**BA5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 08092019**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**01/04/2020 18:06**	*Sample Weight:*	**1.0000**
Run Time:			

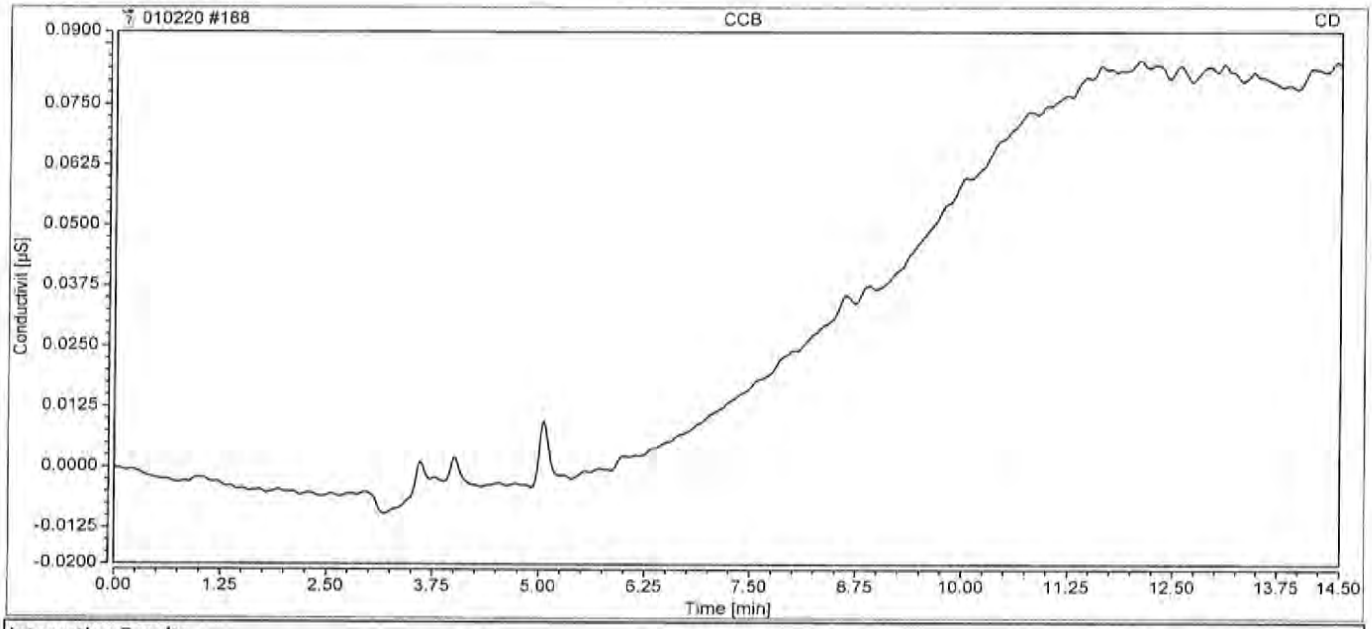


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.62	Fluoride	BMB	1.154	3.1218	3.1218	1.0000
2	5.06	Chloride	BMB	4.581	19.5095	19.5095	1.0000
3	6.01	Nitrite,N	BMB^	2.076	4.0542	4.0542	1.0000
4	7.81	Bromide	BMB^	0.367	3.6922	3.6922	1.0000
5	8.52	Sulfate	BM	2.733	15.9243	15.9243	1.0000
6	8.82	Nitrate	M	2.662	4.5476	4.5476	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
8	13.00	Phosphate	BMB	0.252	1.1353	1.1353	1.0000
Total:			**0.000**	**13.826**		**51.98**	

188 CCB

Sample Name:	CCB	Injection Volume:	5.00
Vial Number:	BA6	Channel:	CD
Sample Type:	Unknown	Wavelength:	210
Control Program:	Anions Program 08092019	Bandwidth:	n.a.
Quantif. Method:	Anions Processing Method	Dilution Factor:	1.0000
Recording Time:	01/04/2020 18:22	Sample Weight:	1.0000
Run Time:			

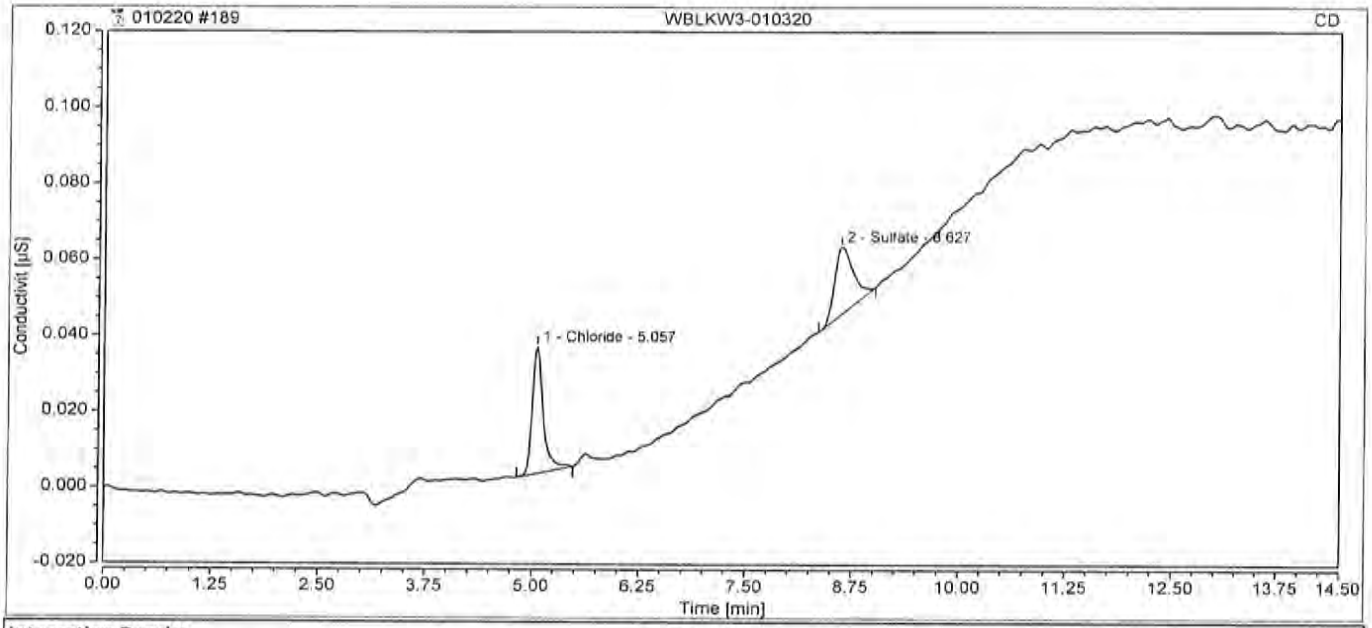


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	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	

189 WBLKW3-010320

Sample Name:	**WBLKW3-010320**	*Injection Volume:*	**5.00**
Vial Number:	**RA1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 08092019**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**01/04/2020 18:39**	*Sample Weight:*	**1.0000**
Run Time:			

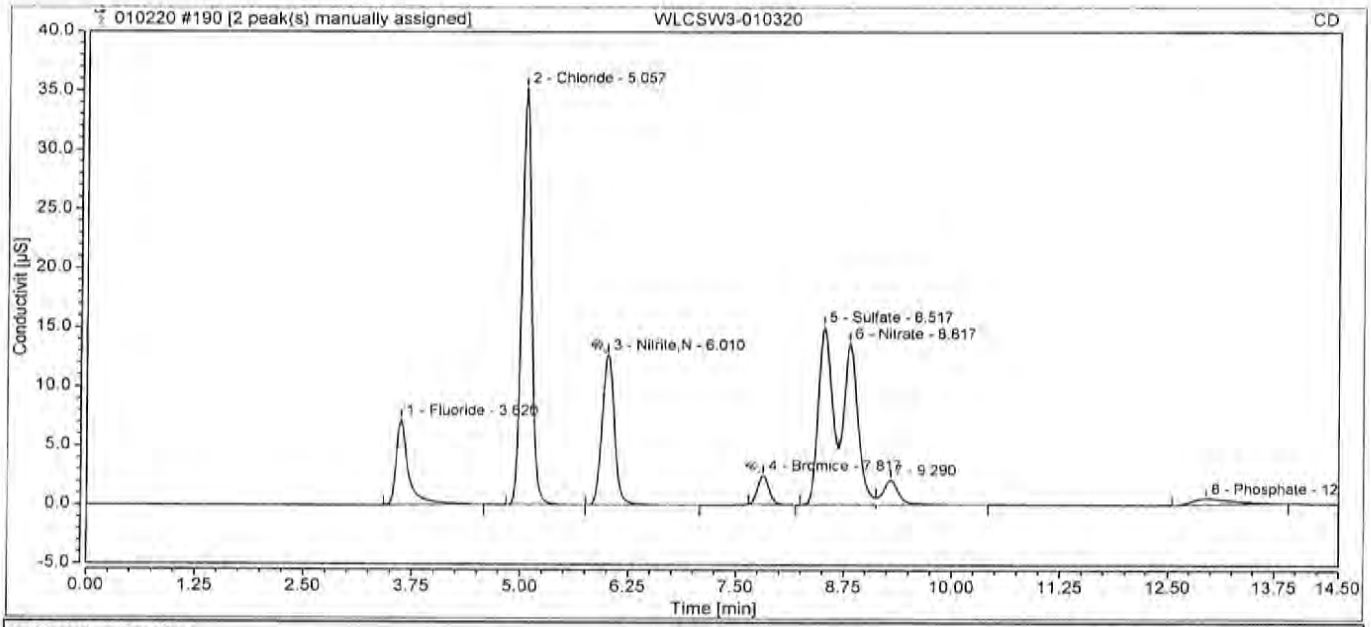


Integration Results

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	5.06	Chloride	BMB	0.005	0.0783	0.0783	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
2	8.63	Sulfate	BMB	0.004	0.0382	0.0382	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.009**		**0.12**	

190 WLCSW3-010320

Sample Name:	WLCSW3-010320	Injection Volume:	5.00
Vial Number:	RA2	Channel:	CD
Sample Type:	Unknown	Wavelength:	210
Control Program:	Anions Program 08092019	Bandwidth:	n.a.
Quantif. Method:	Anions Processing Method	Dilution Factor:	1.0000
Recording Time:	01/04/2020 18:55	Sample Weight:	1.0000
Run Time:			



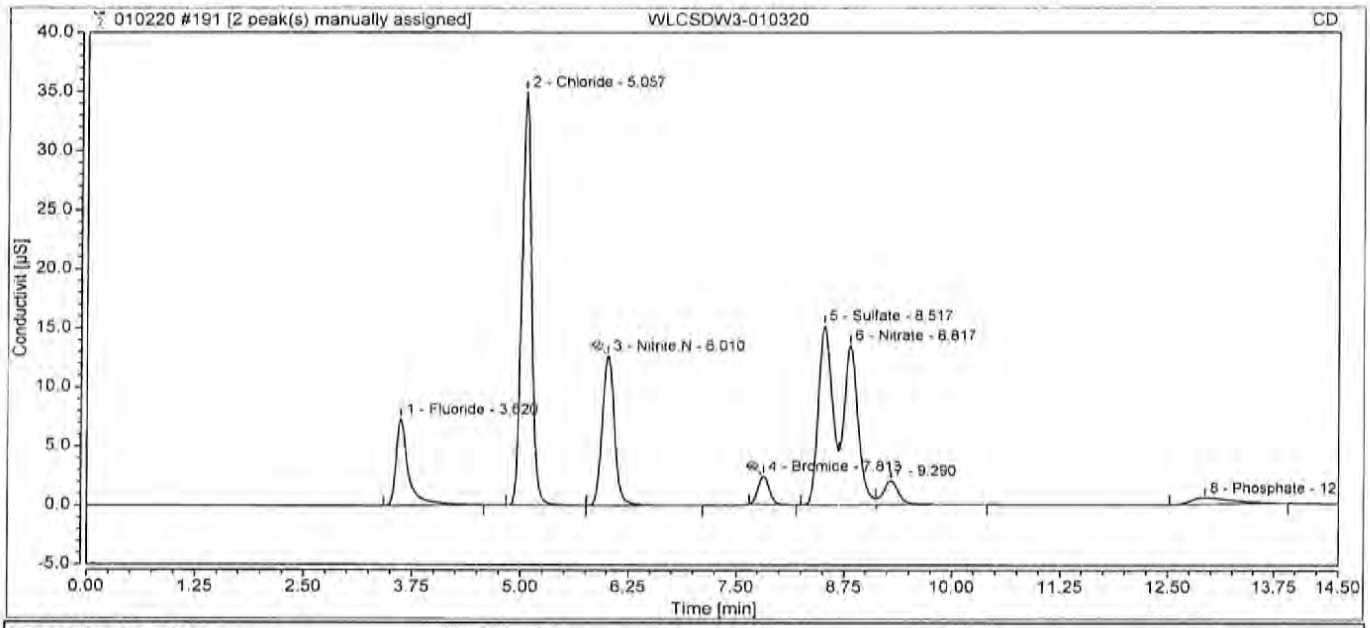
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.62	Fluoride	BMB	1.196	3.2325	3.2325	1.0000
2	5.06	Chloride	BMB	4.639	19.7557	19.7557	1.0000
3	6.01	Nitrite,N	BMB^	2.102	4.1055	4.1055	1.0000
4	7.82	Bromide	BMB^	0.371	3.7331	3.7331	1.0000
5	8.52	Sulfate	BM	2.833	16.5078	16.5078	1.0000
6	8.82	Nitrate	M	2.653	4.5331	4.5331	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
8	12.95	Phosphate	BMB	0.287	1.2862	1.2862	1.0000
Total:			**0.000**	**14.082**		**53.15**	

191 WLCSDW3-010320

Sample Name:	WLCSDW3-010320	Injection Volume:	5.00
Vial Number:	RA3	Channel:	CD
Sample Type:	Unknown	Wavelength:	210
Control Program:	Anions Program 08092019	Bandwidth:	n.a.
Quantif. Method:	Anions Processing Method	Dilution Factor:	1.0000
Recording Time:	01/04/2020 19:12	Sample Weight:	1.0000

Run Time:

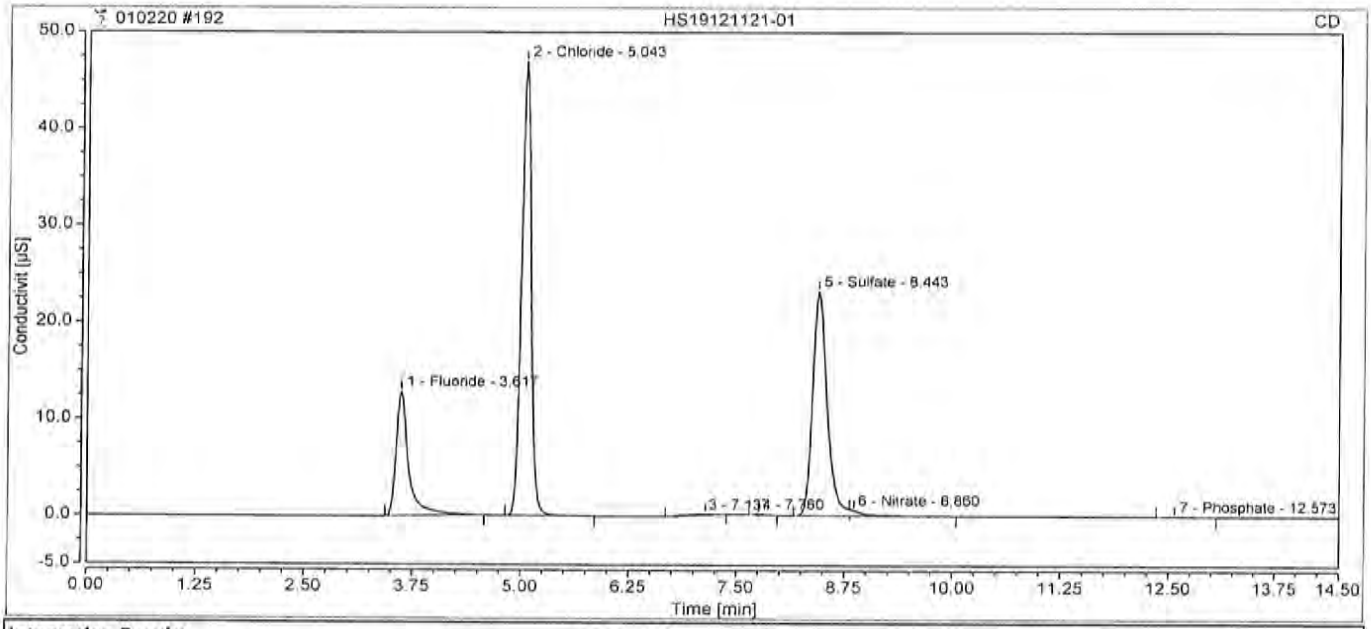


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.62	Fluoride	BMB	1.207	3.2627	3.2627	1.0000
2	5.06	Chloride	BMB	4.589	19.5435	19.5435	1.0000
3	6.01	Nitrite,N	BMB^	2.082	4.0665	4.0665	1.0000
4	7.81	Bromide	BMB^	0.367	3.6882	3.6882	1.0000
5	8.52	Sulfate	BM	2.859	16.6566	16.6566	1.0000
6	8.82	Nitrate	M	2.598	4.4387	4.4387	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
8	12.93	Phosphate	BMB	0.318	1.4189	1.4189	1.0000
Total:			**0.000**	**14.020**		**53.08**	

192 HS19121121-01

Sample Name:	**HS19121121-01**	*Injection Volume:*	**5.00**
Vial Number:	**RA4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 08092019**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**01/04/2020 19:29**	*Sample Weight:*	**1.0000**
Run Time:			



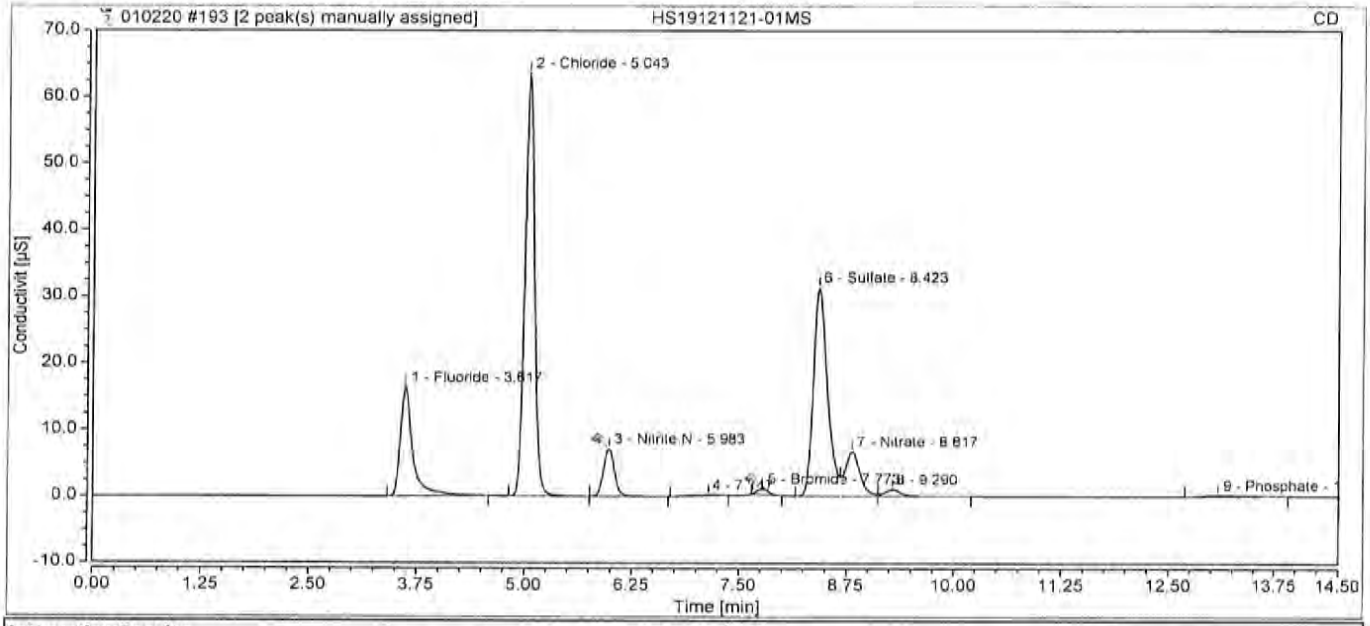
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.62	Fluoride	BMB	2.188	5.9026	5.9026	1.0000
2	5.04	Chloride	BMB	6.070	25.8311	25.8311	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
5	8.44	Sulfate	BM	4.527	26.3734	26.3734	1.0000
6	8.86	Nitrate	MB	0.112	0.2072	0.2072	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
7	12.57	Phosphate	BMB	0.005	0.0695	0.0695	1.0000
Total:			**0.000**	**12.901**		**58.38**	

193 HS19121121-01MS

Sample Name:	**HS19121121-01MS**	*Injection Volume:*	**5.00**
Vial Number:	**RA5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 08092019**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**01/04/2020 19:45**	*Sample Weight:*	**1.0000**

Run Time:

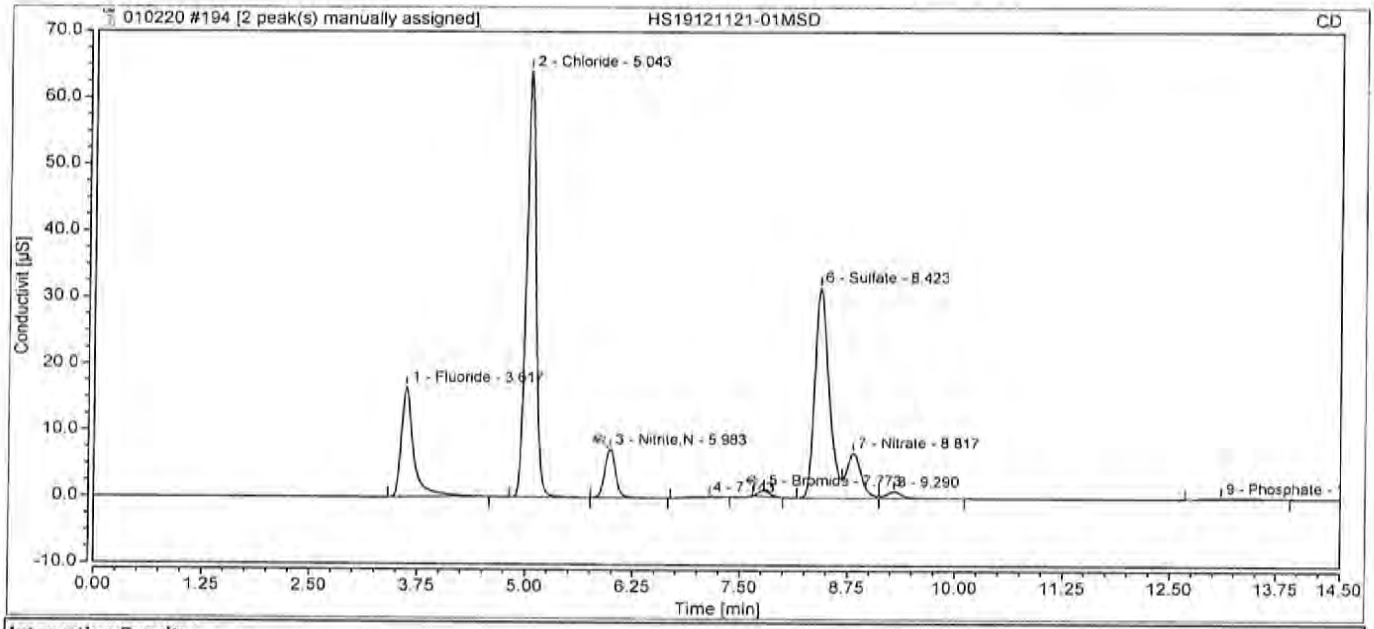


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.62	Fluoride	BMB	2.762	7.4481	7.4481	1.0000
2	5.04	Chloride	BMB	8.252	35.0966	35.0966	1.0000
3	5.98	Nitrite,N	BMB^	1.054	2.0588	2.0588	1.0000
5	7.77	Bromide	BMB^	0.139	1.4339	1.4339	1.0000
6	8.42	Sulfate	BM	5.930	34.5411	34.5411	1.0000
7	8.82	Nitrate	M	1.357	2.3278	2.3278	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
9	13.08	Phosphate	BMB	0.099	0.4733	0.4733	1.0000
Total:			**0.000**	**19.594**		**83.38**	

194 HS19121121-01MSD

Sample Name:	HS19121121-01MSD	Injection Volume:	5.00
Vial Number:	RA6	Channel:	CD
Sample Type:	Unknown	Wavelength:	210
Control Program:	Anions Program 08092019	Bandwidth:	n.a.
Quantif. Method:	Anions Processing Method	Dilution Factor:	1.0000
Recording Time:	01/04/2020 20:02	Sample Weight:	1.0000
Run Time:			



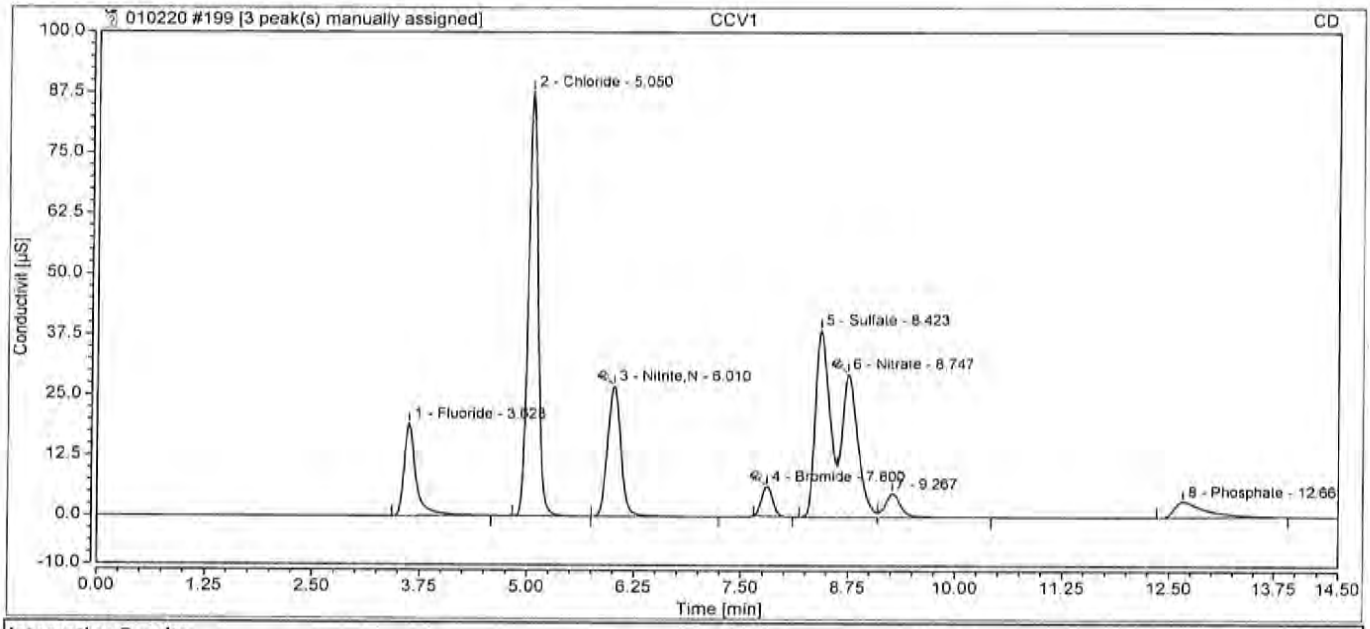
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.62	Fluoride	BMB	2.792	7.5300	7.5300	1.0000
2	5.04	Chloride	BMB	8.291	35.2642	35.2642	1.0000
3	5.98	Nitrite,N	BMB^	1.070	2.0894	2.0894	1.0000
5	7.77	Bromide	BMB^	0.141	1.4483	1.4483	1.0000
6	8.42	Sulfate	BM	5.990	34.8874	34.8874	1.0000
7	8.82	Nitrate	M	1.364	2.3395	2.3395	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
9	13.10	Phosphate	BMB	0.108	0.5132	0.5132	1.0000
Total:			0.000	19.757		84.07	

199 CCV1

Sample Name:	CCV1	Injection Volume:	5.00
Vial Number:	BA7	Channel:	CD
Sample Type:	Unknown	Wavelength:	210
Control Program:	Anions Program 08092019	Bandwidth:	n.a.
Quantif. Method:	Anions Processing Method	Dilution Factor:	1.0000
Recording Time:	01/04/2020 21:25	Sample Weight:	1.0000

Run Time:

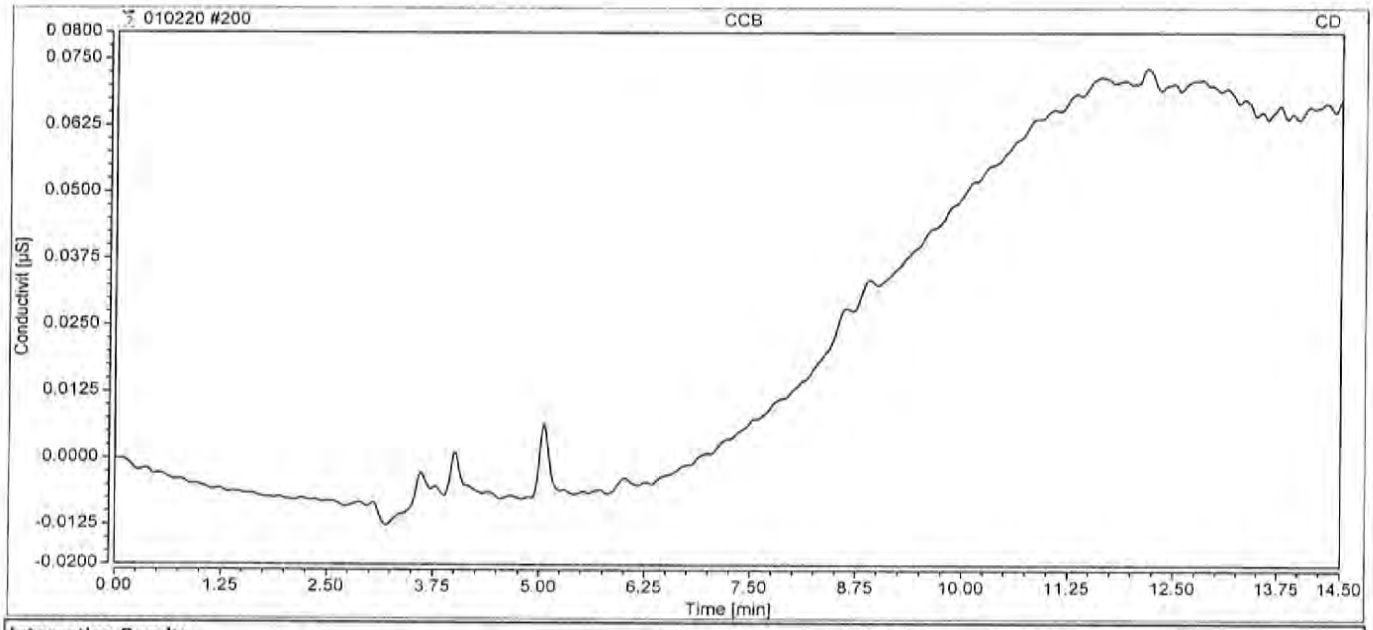


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.62	Fluoride	BMB	3.125	8.4260	8.4260	1.0000
2	5.05	Chloride	BMB	11.525	48.9944	48.9944	1.0000
3	6.01	Nitrite,N	BMB^	4.878	9.5263	9.5263	1.0000
4	7.80	Bromide	BMB^	0.927	9.2380	9.2380	1.0000
5	8.42	Sulfate	BM	7.491	43.6302	43.6302	1.0000
6	8.75	Nitrate	M ^	6.416	10.9378	10.9378	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
8	12.66	Phosphate	BMB	1.452	6.3043	6.3043	1.0000
Total:			**0.000**	**35.814**		**137.06**	

200 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 08092019**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**01/04/2020 21:41**	*Sample Weight:*	**1.0000**
Run Time:			



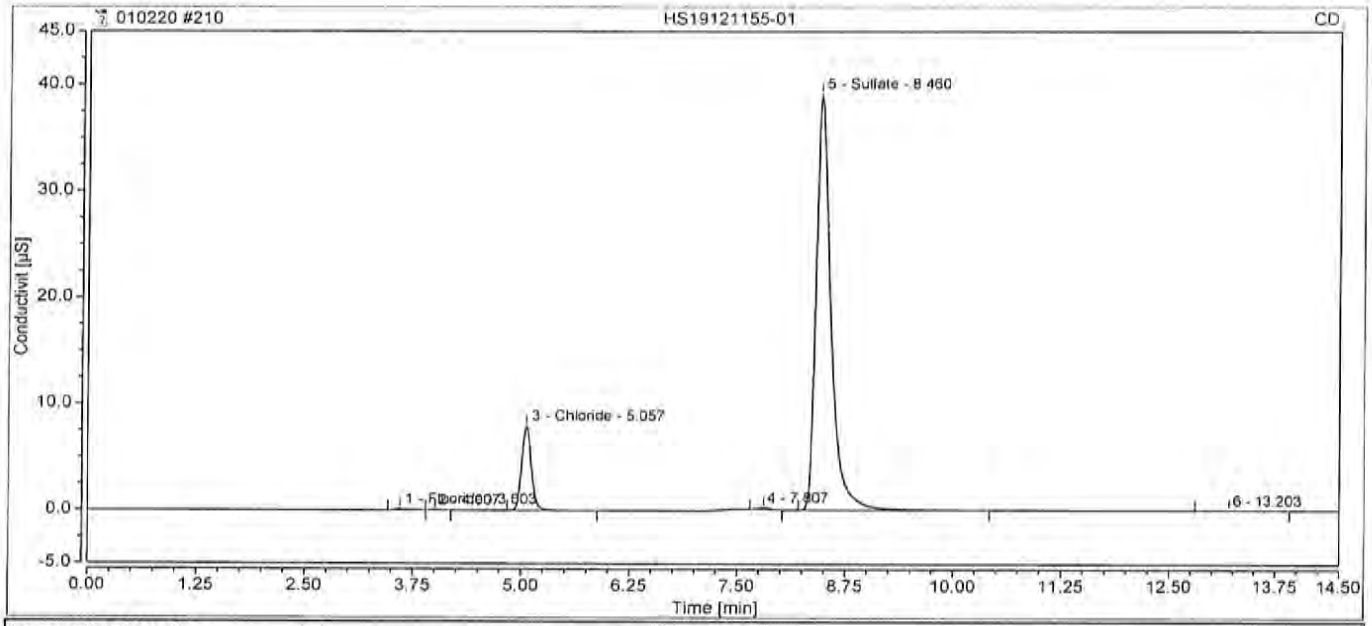
Integration Results

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**	

210 HS19121155-01

Sample Name:	**HS19121155-01**	*Injection Volume:*	**5.00**
Vial Number:	**RC4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 08092019**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**01/05/2020 00:28**	*Sample Weight:*	**1.0000**

Run Time:



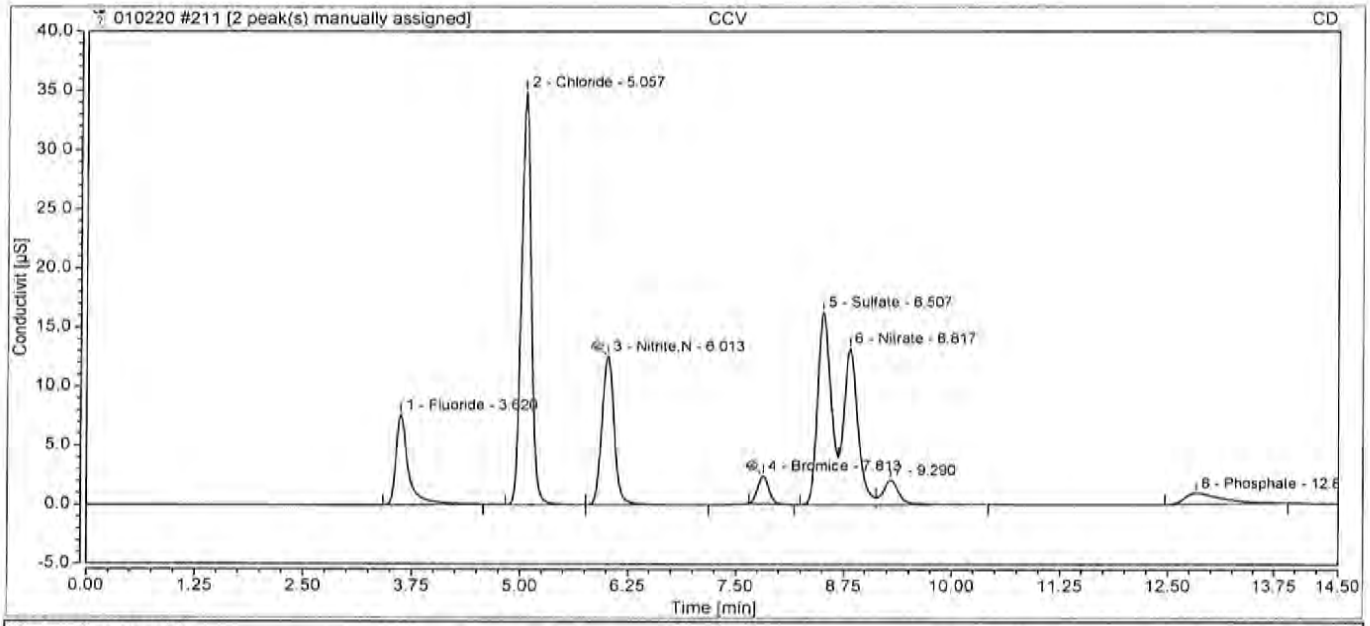
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.60	Fluoride	BMB	0.020	0.0696	0.0696	1.0000
3	5.06	Chloride	BMB	1.036	4.4560	4.4560	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
5	8.46	Sulfate	BMB	7.840	45.6645	45.6645	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**	**8.897**		**50.19**	

211 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**BA5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 08092019**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**01/05/2020 00:44**	*Sample Weight:*	**1.0000**

Run Time:

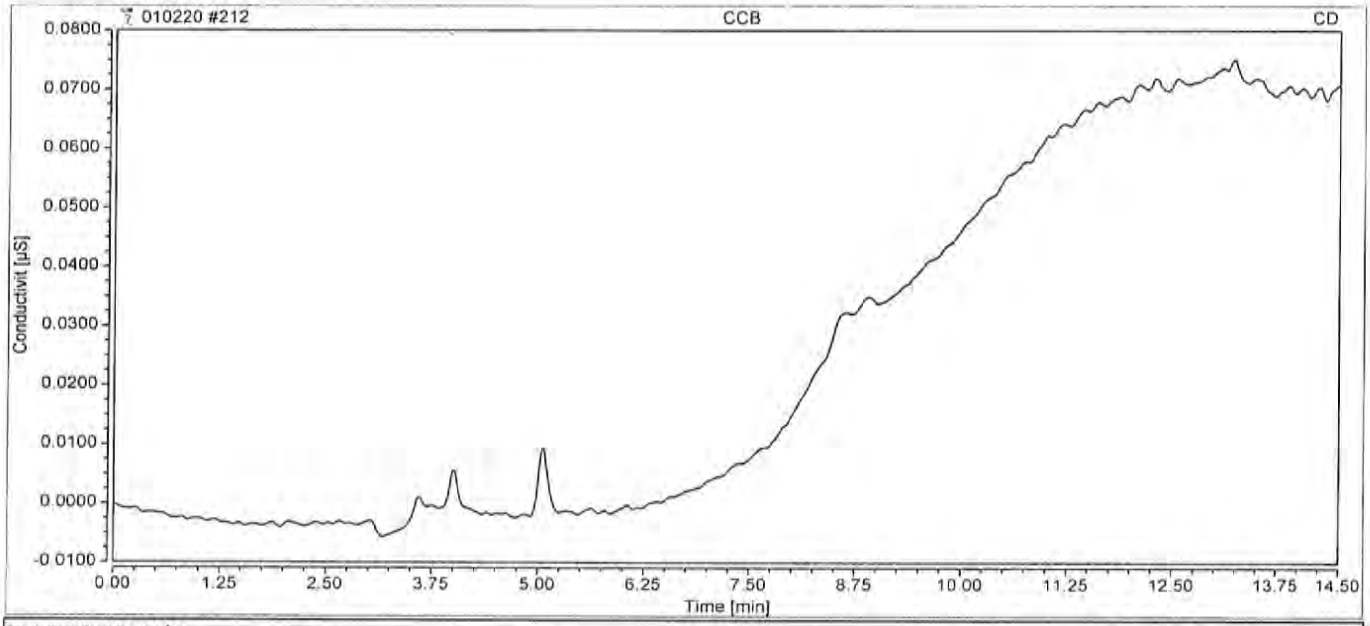


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.62	Fluoride	BMB	1.258	3.4008	3.4008	1.0000
2	5.06	Chloride	BMB	4.588	19.5408	19.5408	1.0000
3	6.01	Nitrite,N	BMB^	2.071	4.0451	4.0451	1.0000
4	7.81	Bromide	BMB^	0.360	3.6228	3.6228	1.0000
5	8.51	Sulfate	BM	2.940	17.1318	17.1318	1.0000
6	8.82	Nitrate	M	2.562	4.3776	4.3776	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
8	12.83	Phosphate	BMB	0.470	2.0746	2.0746	1.0000
Total:			**0.000**	**14.251**		**54.19**	

212 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA6**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 08092019**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**01/05/2020 01:01**	*Sample Weight:*	**1.0000**
Run Time:			

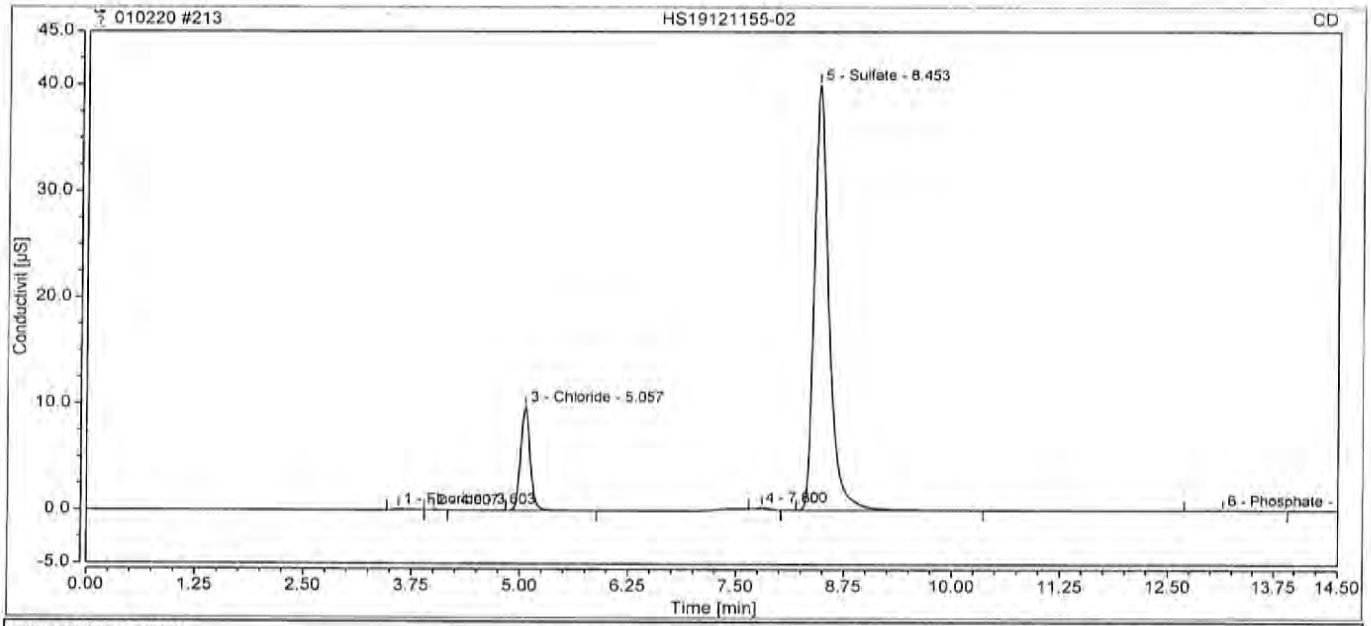


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
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**	

213 HS19121155-02

Sample Name:	HS19121155-02	Injection Volume:	5.00
Vial Number:	RC5	Channel:	CD
Sample Type:	Unknown	Wavelength:	210
Control Program:	Anions Program 08092019	Bandwidth:	n.a.
Quantif. Method:	Anions Processing Method	Dilution Factor:	1.0000
Recording Time:	01/05/2020 01:17	Sample Weight:	1.0000
Run Time:			



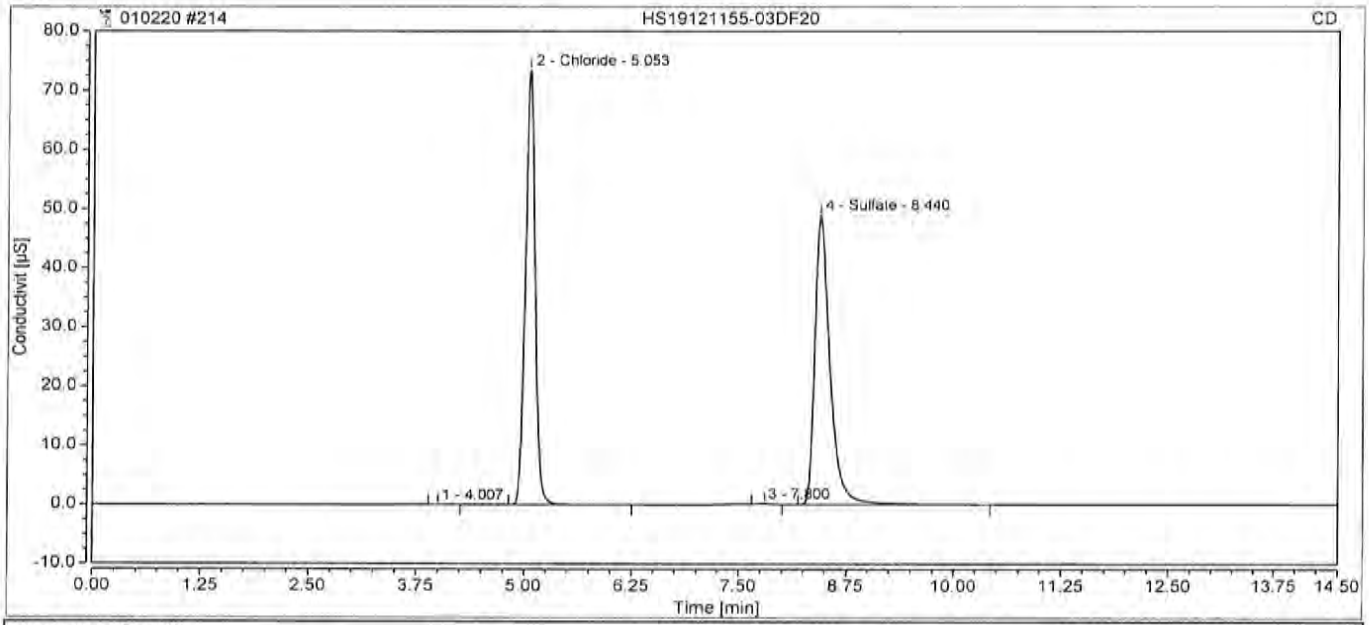
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.60	Fluoride	BMB	0.020	0.0686	0.0686	1.0000
3	5.06	Chloride	BMB	1.265	5.4305	5.4305	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
5	8.45	Sulfate	BMB	7.881	45.9011	45.9011	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
6	13.14	Phosphate	BMB	0.017	0.1199	0.1199	1.0000
Total:			**0.000**	**9.183**		**51.52**	

214 HS19121155-03DF20

Sample Name:	HS19121155-03DF20	Injection Volume:	5.00
Vial Number:	RC6	Channel:	CD
Sample Type:	Unknown	Wavelength:	210
Control Program:	Anions Program 08092019	Bandwidth:	n.a.
Quantif. Method:	Anions Processing Method	Dilution Factor:	20.0000
Recording Time:	01/05/2020 01:34	Sample Weight:	1.0000

Run Time:

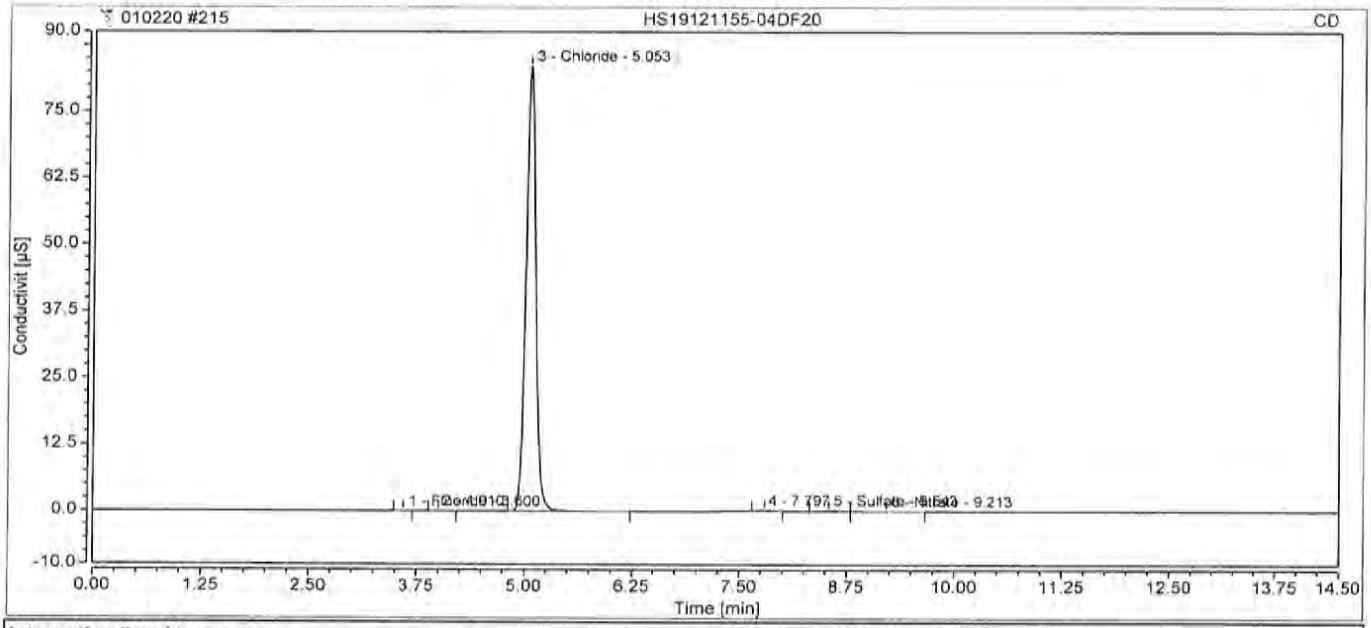


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	20.0000
2	5.05	Chloride	BMB	9.658	41.0687	821.3731	20.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	20.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	20.0000
4	8.44	Sulfate	BMB	9.996	58.2143	1164.2869	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**	**19.654**		**1985.66**	

215 HS19121155-04DF20

Sample Name:	HS19121155-04DF20	Injection Volume:	5.00
Vial Number:	RC7	Channel:	CD
Sample Type:	Unknown	Wavelength:	210
Control Program:	Anions Program 08092019	Bandwidth:	n.a.
Quantif. Method:	Anions Processing Method	Dilution Factor:	20.0000
Recording Time:	01/05/2020 01:51	Sample Weight:	1.0000
Run Time:			



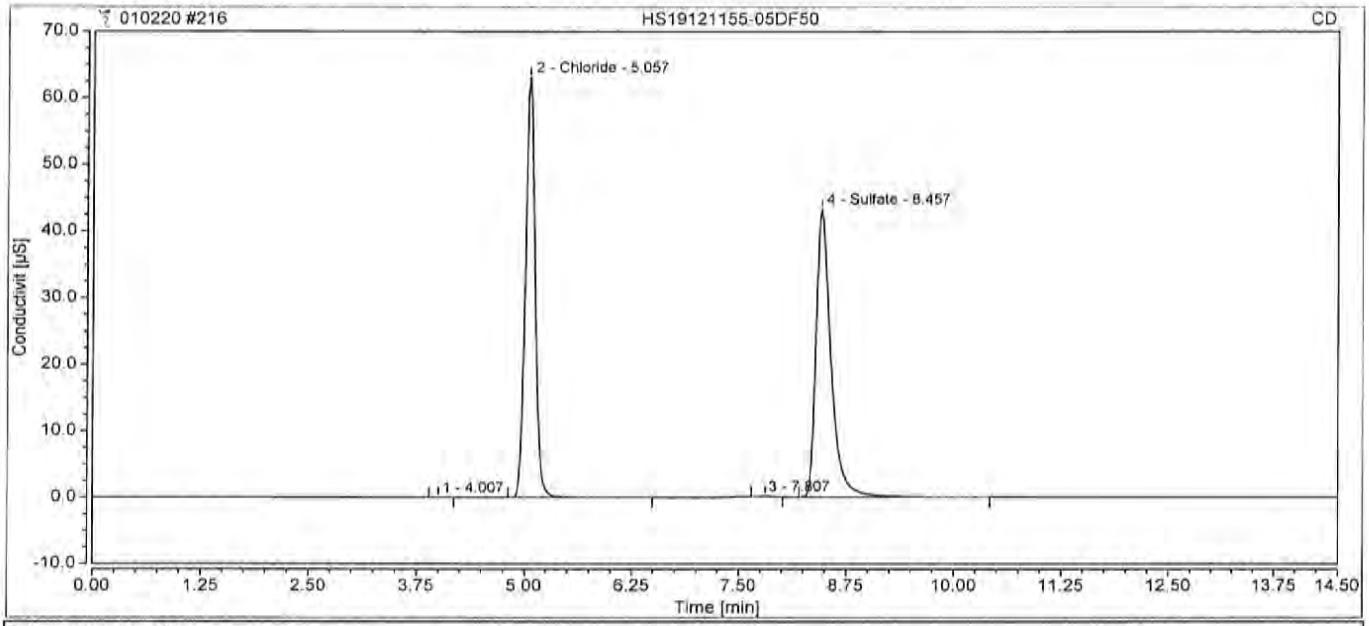
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.60	Fluoride	BMB	0.002	0.0206	0.4117	20.0000
3	5.05	Chloride	BMB	10.993	46.7367	934.7338	20.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	20.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	20.0000
5	8.54	Sulfate	BM	0.032	0.1973	3.9464	20.0000
6	9.21	Nitrate	MB	0.010	0.0338	0.6751	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**	**11.036**		**939.77**	

216 HS19121155-05DF50

Sample Name:	HS19121155-05DF50	Injection Volume:	5.00
Vial Number:	RC8	Channel:	CD
Sample Type:	Unknown	Wavelength:	210
Control Program:	Anions Program 08092019	Bandwidth:	n.a.
Quantif. Method:	Anions Processing Method	Dilution Factor:	50.0000
Recording Time:	01/05/2020 02:07	Sample Weight:	1.0000

Run Time:



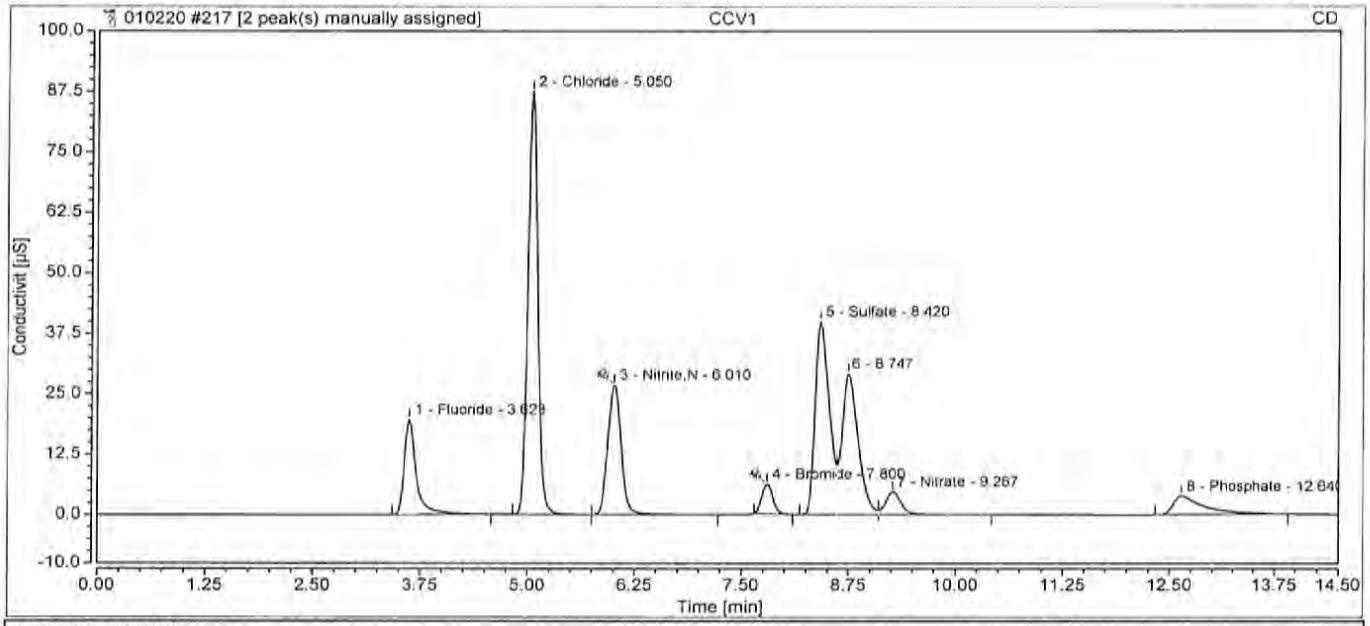
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	50.0000
2	5.06	Chloride	BMB	8.318	35.3766	1768.8313	50.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	50.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	50.0000
4	8.46	Sulfate	BMB	8.713	50.7455	2537.2740	50.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	50.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	50.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	50.0000
Total:			**0.000**	**17.031**		**4306.11**	

217 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**BA7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 08092019**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**01/05/2020 02:24**	*Sample Weight:*	**1.0000**

Run Time:



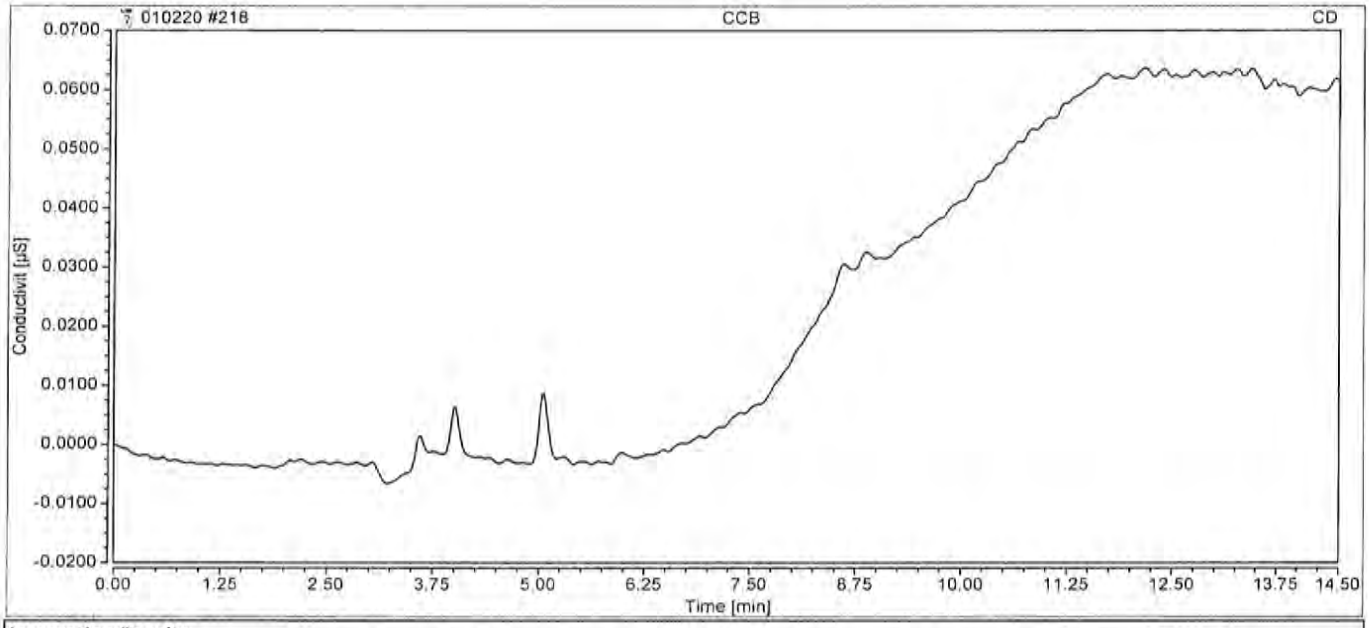
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.62	Fluoride	BMB	3.217	8.6732	8.6732	1.0000
2	5.05	Chloride	BMB	11.533	49.0284	49.0284	1.0000
3	6.01	Nitrite,N	BMB^	4.880	9.5304	9.5304	1.0000
4	7.80	Bromide	BMB^	0.922	9.1940	9.1940	1.0000
5	8.42	Sulfate	BM	7.580	44.1480	44.1480	1.0000
7	9.27	Nitrate	MB	1.009	1.7341	1.7341	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
8	12.64	Phosphate	BMB	1.624	7.0472	7.0472	1.0000
Total:			**0.000**	**30.765**		**129.36**	

218 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 08092019**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**01/05/2020 02:40**	*Sample Weight:*	**1.0000**

Run Time:



Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
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**	

Sequence: 010220
Last Update Operator: alshs.nouser

HS19121155

CD	Name	Comment	Type	Position	Dilution	Level	Instrument Method	ng	me	Status	Inject Time
	STD1	2970209205	Calibration	GA1	1.0000	1	Anions Pro	Anions Pr	5.0	Finished	8/12/2019 2:08:06 PM -05:00
	STD2		Calibration	GA2	1.0000	2	Anions Pro	Anions Pr	5.0	Finished	8/12/2019 2:24:42 PM -05:00
	STD3		Calibration	GA3	1.0000	3	Anions Pro	Anions Pr	5.0	Finished	8/12/2019 2:41:19 PM -05:00
	STD4		Calibration	GA4	1.0000	4	Anions Pro	Anions Pr	5.0	Finished	8/12/2019 2:57:54 PM -05:00
	STD5		Calibration	GA5	1.0000	5	Anions Pro	Anions Pr	5.0	Finished	8/12/2019 3:14:30 PM -05:00
	STD6	F, NO2 MAX 10PPM	Calibration	GB8	1.0000	6	Anions Pro	Anions Pr	5.0	Finished	8/12/2019 6:37:32 PM -05:00
	ICV	2970209123	Unknown	GA7	1.0000		Anions Pro	Anions Pr	5.0	Finished	8/12/2019 6:54:07 PM -05:00
	ICB		Unknown	GB8	1.0000		Anions Pro	Anions Pr	5.0	Finished	8/12/2019 7:29:52 PM -05:00
	CCV1		Unknown	BA7	1.0000		Anions Pro	Anions Pr	5.0	Finished	1/6/2020 10:48:48 AM -06:00
	CCB		Unknown	BA6	1.0000		Anions Pro	Anions Pr	5.0	Finished	1/6/2020 11:05:27 AM -06:00
	WBLKW3-010320	9056_W	Unknown	RA1	1.0000		Anions Pro	Anions Pr	5.0	Finished	1/6/2020 11:22:08 AM -06:00
	WLCSW3-010320	RERUN BATCH	Unknown	RA2	1.0000		Anions Pro	Anions Pr	5.0	Finished	1/6/2020 11:38:47 AM -06:00
	WLCSDW3-010320		Unknown	RA3	1.0000		Anions Pro	Anions Pr	5.0	Finished	1/6/2020 11:55:24 AM -06:00
	HS19121121-01		Unknown	RA4	1.0000		Anions Pro	Anions Pr	5.0	Finished	1/6/2020 12:11:59 PM -06:00
	HS19121121-01MS		Unknown	RA5	1.0000		Anions Pro	Anions Pr	5.0	Finished	1/6/2020 12:28:35 PM -06:00
	HS19121121-01MSD		Unknown	RA6	1.0000		Anions Pro	Anions Pr	5.0	Finished	1/6/2020 12:45:11 PM -06:00
	HS19121092-01DF50		Unknown	RB6	50.0000		Anions Pro	Anions Pr	5.0	Finished	1/6/2020 1:01:48 PM -06:00
	HS19121092-06DF50		Unknown	RC3	50.0000		Anions Pro	Anions Pr	5.0	Finished	1/6/2020 1:18:24 PM -06:00
	HS19121155-05DF50		Unknown	RC8	50.0000		Anions Pro	Anions Pr	5.0	Finished	1/6/2020 1:34:59 PM -06:00
	HS19121142-06DF100		Unknown	BD3	100.0000		Anions Pro	Anions Pr	5.0	Finished	1/6/2020 1:51:39 PM -06:00
	CCV		Unknown	BA5	1.0000		Anions Pro	Anions Pr	5.0	Finished	1/6/2020 2:08:17 PM -06:00
	CCB		Unknown	BA6	1.0000		Anions Pro	Anions Pr	5.0	Finished	1/6/2020 2:24:53 PM -06:00
	HS19121142-07DF200		Unknown	RD2	200.0000		Anions Pro	Anions Pr	5.0	Finished	1/6/2020 2:41:29 PM -06:00
	HS19121142-09DF100		Unknown	RD3	100.0000		Anions Pro	Anions Pr	5.0	Finished	1/6/2020 2:58:05 PM -06:00
	HS19121142-10DF200		Unknown	RD4	200.0000		Anions Pro	Anions Pr	5.0	Finished	1/6/2020 3:14:42 PM -06:00
	HS19121142-11DF200		Unknown	RD5	200.0000		Anions Pro	Anions Pr	5.0	Finished	1/6/2020 3:31:18 PM -06:00
	CCV1		Unknown	BA7	1.0000		Anions Pro	Anions Pr	5.0	Finished	1/6/2020 3:47:53 PM -06:00
	CCB		Unknown	BA6	1.0000		Anions Pro	Anions Pr	5.0	Finished	1/6/2020 4:04:29 PM -06:00
	HS19121186-01DF20		Unknown	BE1	20.0000		Anions Pro	Anions Pr	5.0	Finished	1/6/2020 4:21:11 PM -06:00
	HS19121186-02DF5		Unknown	RD1	5.0000		Anions Pro	Anions Pr	5.0	Finished	1/6/2020 4:37:54 PM -06:00
	CCV		Unknown	BA5	1.0000		Anions Pro	Anions Pr	5.0	Finished	1/6/2020 5:16:23 PM -06:00
	CCB		Unknown	BA6	1.0000		Anions Pro	Anions Pr	5.0	Finished	1/6/2020 5:32:59 PM -06:00

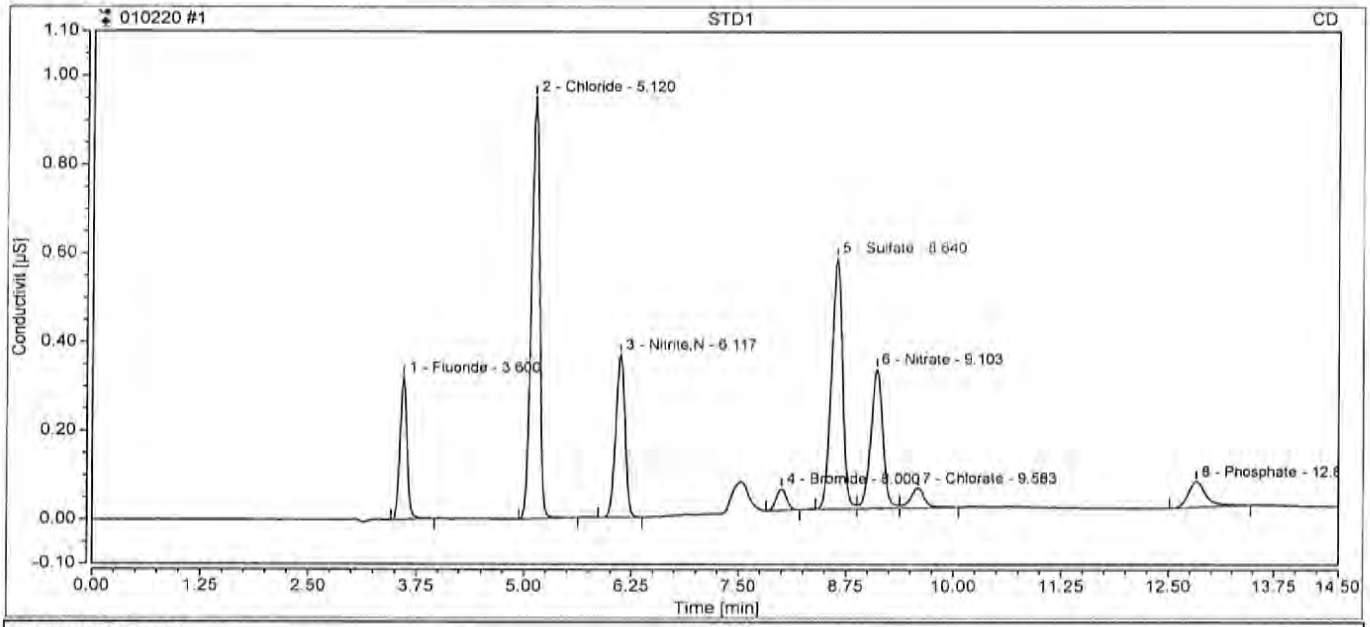
Sequence: 010220
Injection #6: STD6

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*	*5*	*10.1532*	*0.99927*	*-0.0056*	*0.3716*	*0.0000*
2	Chloride	Lin, WithOffset, 1/	Area	6	0.2804	1.00000	-0.0135	0.2355	0.0000
3	Nitrite,N	Lin, WithOffset, 1/	Area	5	15.1147	0.99824	0.0003	0.5120	0.0000
4	Bromide	Lin, WithOffset, 1/	Area	6	14.0217	0.99919	-0.0052	0.1009	0.0000
5	Sulfate	Lin, WithOffset, 1/	Area	6	1.1258	0.99999	-0.0022	0.1717	0.0000
6	Nitrate	Lin, WithOffset, 1/	Area	6	2.2249	0.99998	-0.0102	0.5876	0.0000
7	Chlorate	Lin, WithOffset, 1/	Area	6	10.0265	0.99953	-0.0024	0.0944	0.0000
8	Phosphate	Lin, WithOffset, 1/	Area	6	6.6198	0.99981	-0.0110	0.2321	0.0000
Maximum					**15.1147**	1.00000			
Minimum					0.2804	**0.99824**			

1 STD1

Sample Name:	STD1	Injection Volume:	5.00
Vial Number:	GA1	Channel:	CD
Sample Type:	Calibration Standard	Wavelength:	210
Control Program:	Anions Program 08092019	Bandwidth:	n.a.
Quantif. Method:	Anions Processing Method	Dilution Factor:	1.0000
Recording Time:	08/12/2019 14:08	Sample Weight:	1.0000
Run Time:			



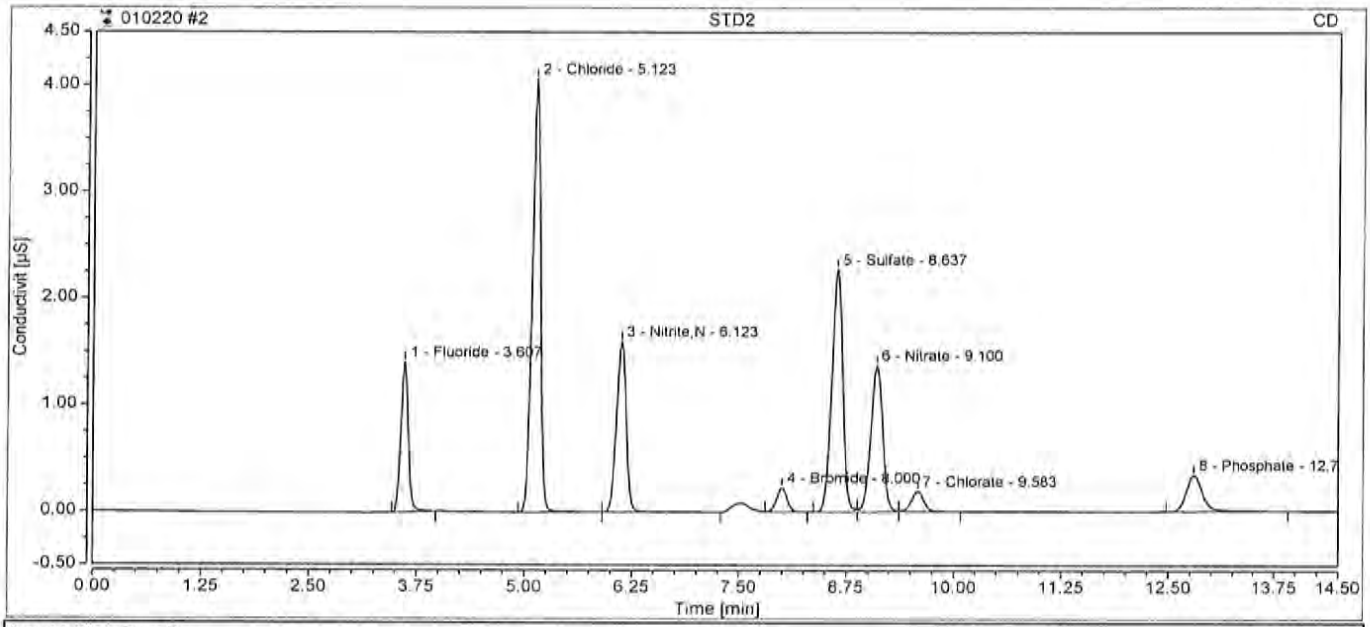
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.60	Fluoride	BMB	0.031	0.0973	0.0973	1.0000
2	5.12	Chloride	BMB	0.105	0.5026	0.5026	1.0000
3	6.12	Nitrite,N	BMB	0.046	0.0893	0.0893	1.0000
4	8.00	Bromide	BMB	0.007	0.1192	0.1192	1.0000
5	8.64	Sulfate	BM	0.084	0.5042	0.5042	1.0000
6	9.10	Nitrate	M	0.051	0.1034	0.1034	1.0000
7	9.58	Chlorate	MB	0.008	0.1143	0.1143	1.0000
8	12.83	Phosphate	BMB	0.014	0.1085	0.1085	1.0000
Total:			**0.000**	**0.346**		**1.64**	

2 STD2

Sample Name:	**STD2**	*Injection Volume:*	**5.00**
Vial Number:	**GA2**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 08092019**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**08/12/2019 14:24**	*Sample Weight:*	**1.0000**

Run Time:

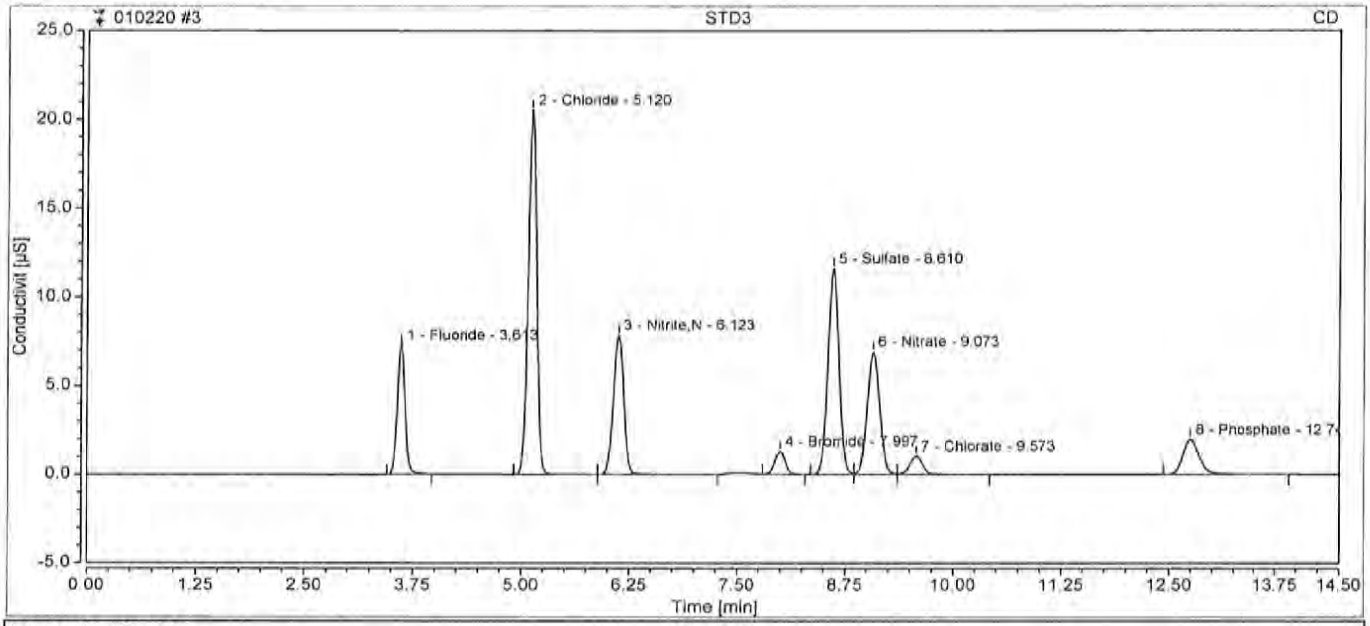


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.61	Fluoride	BMB	0.140	0.3929	0.3929	1.0000
2	5.12	Chloride	BMB	0.456	1.9918	1.9918	1.0000
3	6.12	Nitrite,N	BMB	0.211	0.4119	0.4119	1.0000
4	8.00	Bromide	BMB	0.031	0.3593	0.3593	1.0000
5	8.64	Sulfate	BM	0.337	1.9733	1.9733	1.0000
6	9.10	Nitrate	M	0.220	0.3917	0.3917	1.0000
7	9.58	Chlorate	MB	0.033	0.3704	0.3704	1.0000
8	12.80	Phosphate	BMB	0.078	0.3841	0.3841	1.0000
Total:			**0.000**	**1.506**		**6.28**	

3 STD3

Sample Name:	**STD3**	*Injection Volume:*	**5.00**
Vial Number:	**GA3**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 08092019**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**08/12/2019 14:41**	*Sample Weight:*	**1.0000**
Run Time:			

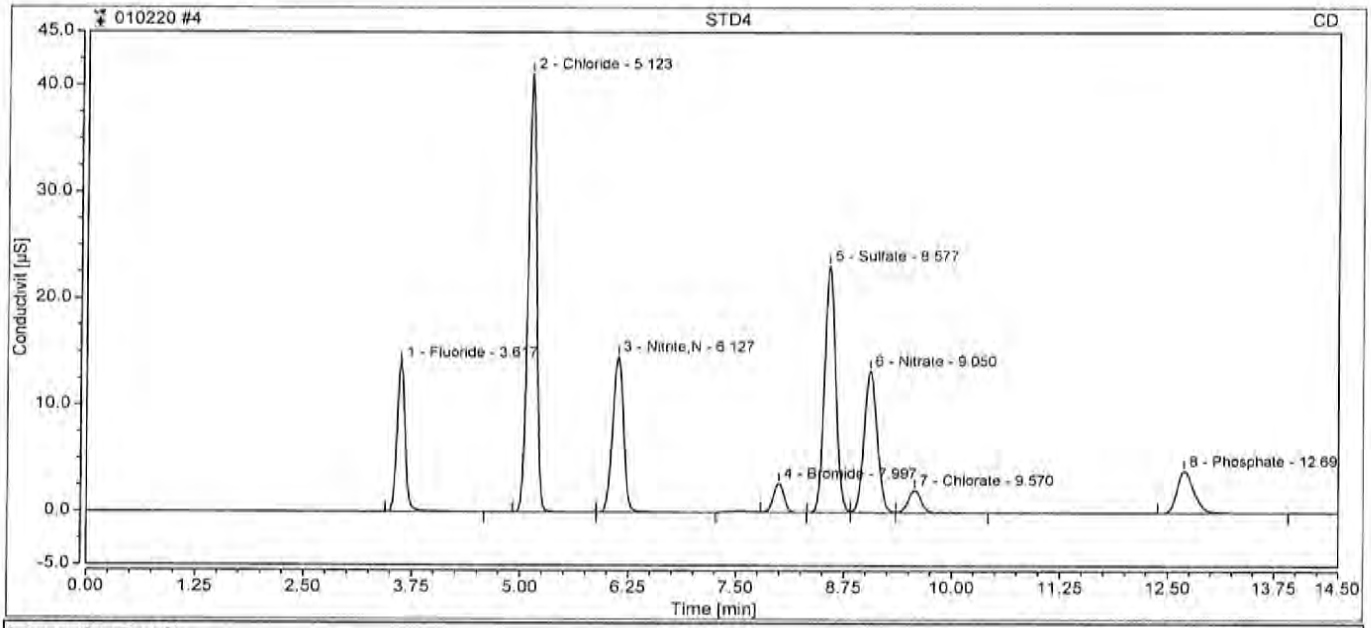


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.61	Fluoride	BMB	0.758	2.0551	2.0551	1.0000
2	5.12	Chloride	BMB	2.339	9.9888	9.9888	1.0000
3	6.12	Nitrite,N	BMB	1.091	2.1305	2.1305	1.0000
4	8.00	Bromide	BMB	0.182	1.8590	1.8590	1.0000
5	8.61	Sulfate	BM	1.715	10.0007	10.0007	1.0000
6	9.07	Nitrate	M	1.153	1.9792	1.9792	1.0000
7	9.57	Chlorate	MB	0.176	1.8940	1.8940	1.0000
8	12.75	Phosphate	BMB	0.436	1.9269	1.9269	1.0000
Total:			**0.000**	**7.851**		**31.83**	

4 STD4

Sample Name:	STD4	Injection Volume:	5.00
Vial Number:	GA4	Channel:	CD
Sample Type:	Calibration Standard	Wavelength:	210
Control Program:	Anions Program 08092019	Bandwidth:	n.a.
Quantif. Method:	Anions Processing Method	Dilution Factor:	1.0000
Recording Time:	08/12/2019 14:57	Sample Weight:	1.0000
Run Time:			

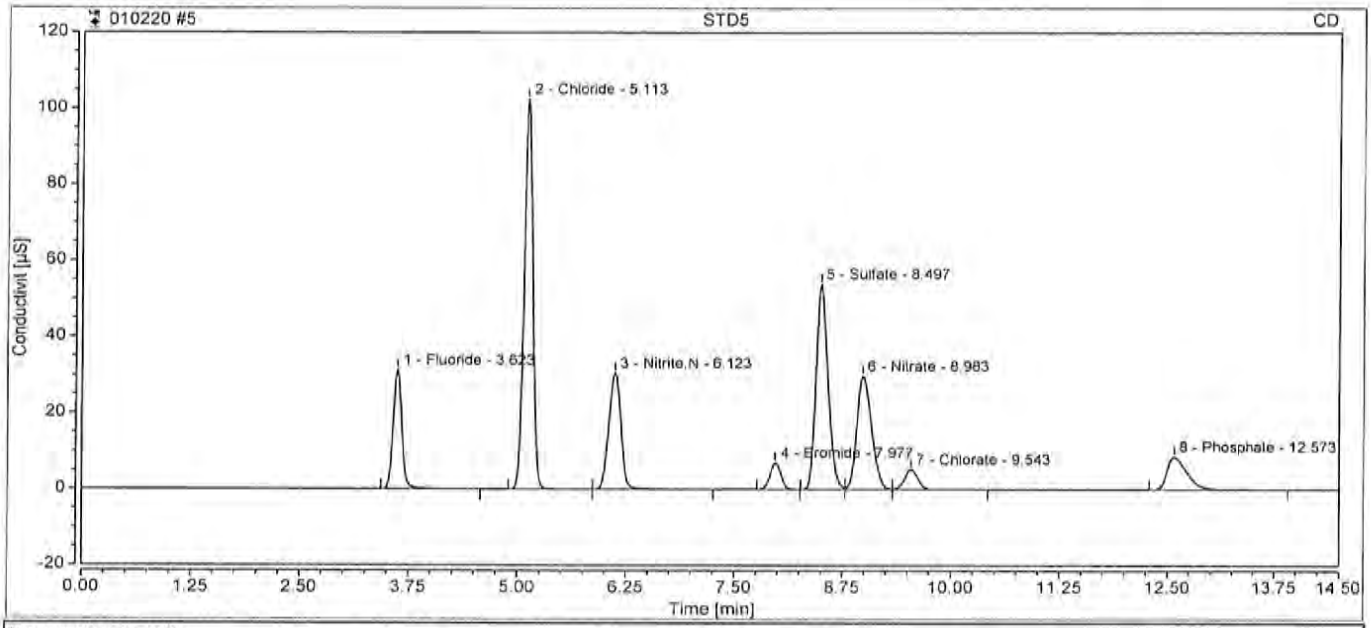


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.62	Fluoride	BMB	1.535	4.1457	4.1457	1.0000
2	5.12	Chloride	BMB	4.695	19.9948	19.9948	1.0000
3	6.13	Nitrite,N	BMB	2.133	4.1659	4.1659	1.0000
4	8.00	Bromide	BMB	0.385	3.8642	3.8642	1.0000
5	8.58	Sulfate	BM	3.451	20.1082	20.1082	1.0000
6	9.05	Nitrate	M	2.330	3.9823	3.9823	1.0000
7	9.57	Chlorate	MB	0.365	3.8956	3.8956	1.0000
8	12.69	Phosphate	BMB	0.903	3.9395	3.9395	1.0000
Total:			**0.000**	**15.798**		**64.10**	

5 STD5

Sample Name:	STD5	Injection Volume:	5.00
Vial Number:	GA5	Channel:	CD
Sample Type:	Calibration Standard	Wavelength:	210
Control Program:	Anions Program 08092019	Bandwidth:	n.a.
Quantif. Method:	Anions Processing Method	Dilution Factor:	1.0000
Recording Time:	08/12/2019 15:14	Sample Weight:	1.0000
Run Time:			

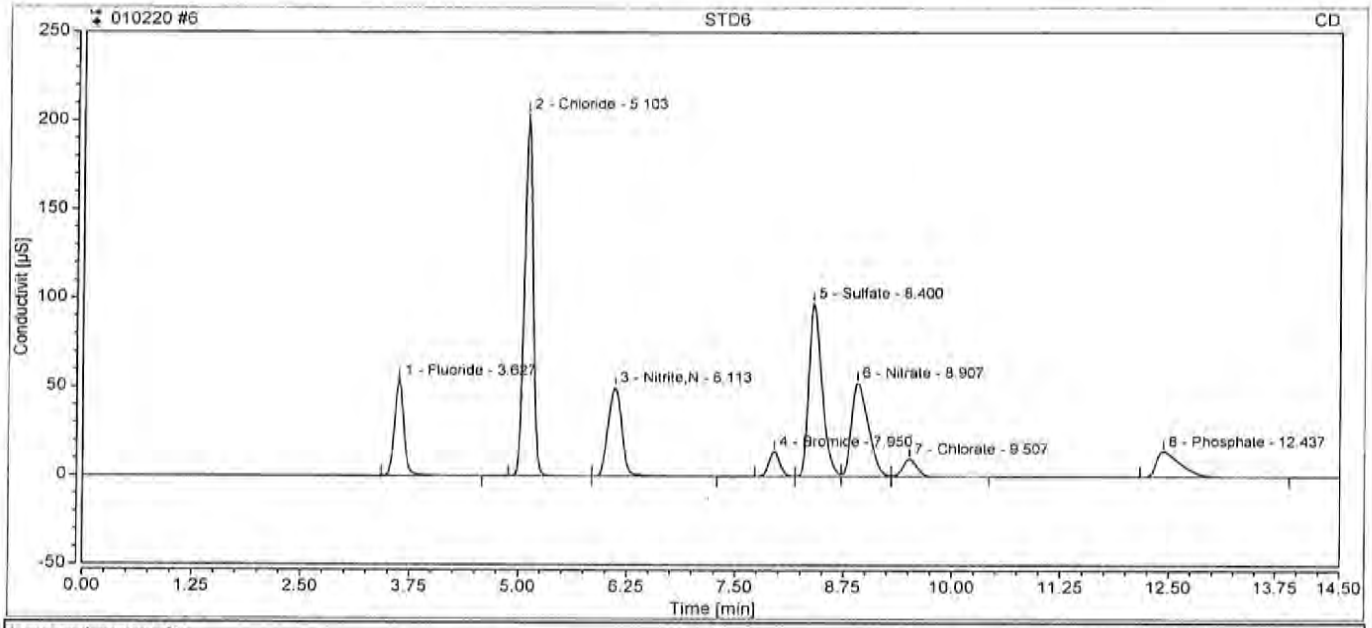


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.62	Fluoride	BMB	3.639	9.8090	9.8090	1.0000
2	5.11	Chloride	BMB	11.762	49.9996	49.9996	1.0000
3	6.12	Nitrite,N	BMB	4.968	9.7023	9.7023	1.0000
4	7.98	Bromide	BMB	1.001	9.9786	9.9786	1.0000
5	8.50	Sulfate	BM	8.590	50.0271	50.0271	1.0000
6	8.98	Nitrate	M	5.854	9.9805	9.9805	1.0000
7	9.54	Chlorate	MB	0.939	9.9670	9.9670	1.0000
8	12.57	Phosphate	BMB	2.305	9.9803	9.9803	1.0000
Total:			**0.000**	**39.057**		**159.44**	

6 STD6

Sample Name:	**STD6**	*Injection Volume:*	**5.00**
Vial Number:	**GB8**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 08092019**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**08/12/2019 18:37**	*Sample Weight:*	**1.0000**
Run Time:			



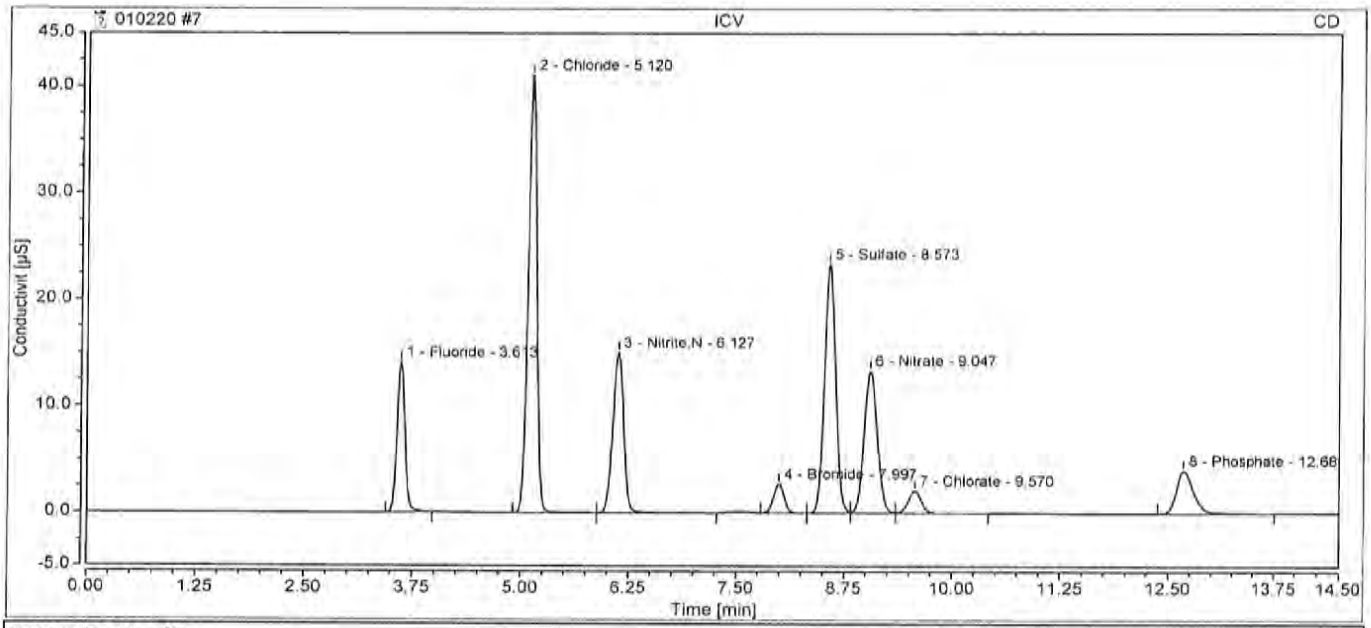
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.63	Fluoride	BMB	6.773	18.2418	18.2418	1.0000
2	5.10	Chloride	BMB	23.542	100.0224	100.0224	1.0000
3	6.11	Nitrite,N	BMB	9.157	17.8850	17.8850	1.0000
4	7.95	Bromide	BM	2.045	20.3197	20.3197	1.0000
5	8.40	Sulfate	M	17.153	99.8863	99.8863	1.0000
6	8.91	Nitrate	M	11.778	20.0629	20.0629	1.0000
7	9.51	Chlorate	MB	1.910	20.2586	20.2586	1.0000
8	12.44	Phosphate	BMB	4.668	20.1606	20.1606	1.0000
Total:			**0.000**	**77.025**		**316.84**	

7 ICV

Sample Name:	ICV	*Injection Volume:*	5.00
Vial Number:	GA7	*Channel:*	CD
Sample Type:	Unknown	*Wavelength:*	210
Control Program:	Anions Program 08092019	*Bandwidth:*	n.a.
Quantif. Method:	Anions Processing Method	*Dilution Factor:*	1.0000
Recording Time:	08/12/2019 18:54	*Sample Weight:*	1.0000

Run Time:

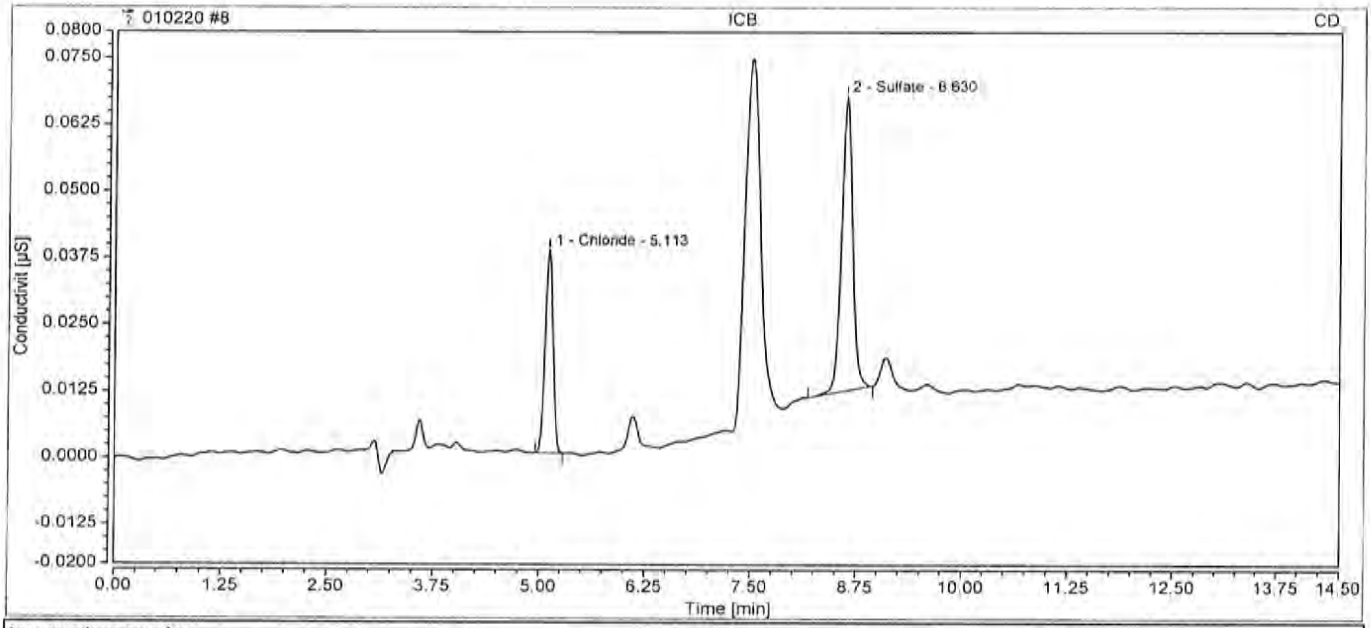


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.61	Fluoride	BMB	1.495	4.0374	4.0374	1.0000
2	5.12	Chloride	BMB	4.681	19.9333	19.9333	1.0000
3	6.13	Nitrite,N	BMB	2.195	4.2858	4.2858	1.0000
4	8.00	Bromide	BMB	0.384	3.8585	3.8585	1.0000
5	8.57	Sulfate	BM	3.469	20.2132	20.2132	1.0000
6	9.05	Nitrate	M	2.340	3.9993	3.9993	1.0000
7	9.57	Chlorate	MB	0.367	3.9104	3.9104	1.0000
8	12.68	Phosphate	BMB	0.911	3.9732	3.9732	1.0000
Total:			0.000	**15.841**		**64.21**	

8 ICB

Sample Name:	ICB	Injection Volume:	5.00
Vial Number:	GB8	Channel:	CD
Sample Type:	Unknown	Wavelength:	210
Control Program:	Anions Program 08092019	Bandwidth:	n.a.
Quantif. Method:	Anions Processing Method	Dilution Factor:	1.0000
Recording Time:	08/12/2019 19:29	Sample Weight:	1.0000
Run Time:			

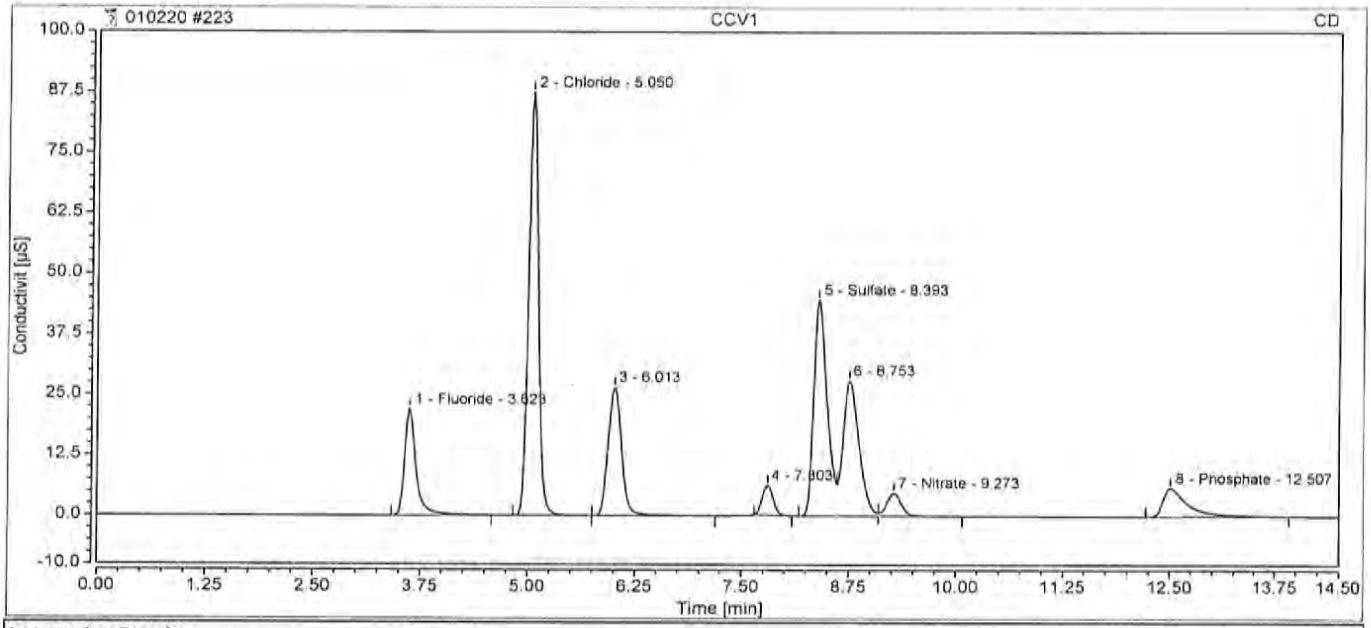


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.11	Chloride	BMB	0.004	0.0748	0.0748	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
2	8.63	Sulfate	BMB	0.008	0.0618	0.0618	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.013**		**0.14**	

223 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**BA7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 08092019**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**01/06/2020 10:48**	*Sample Weight:*	**1.0000**
Run Time:			



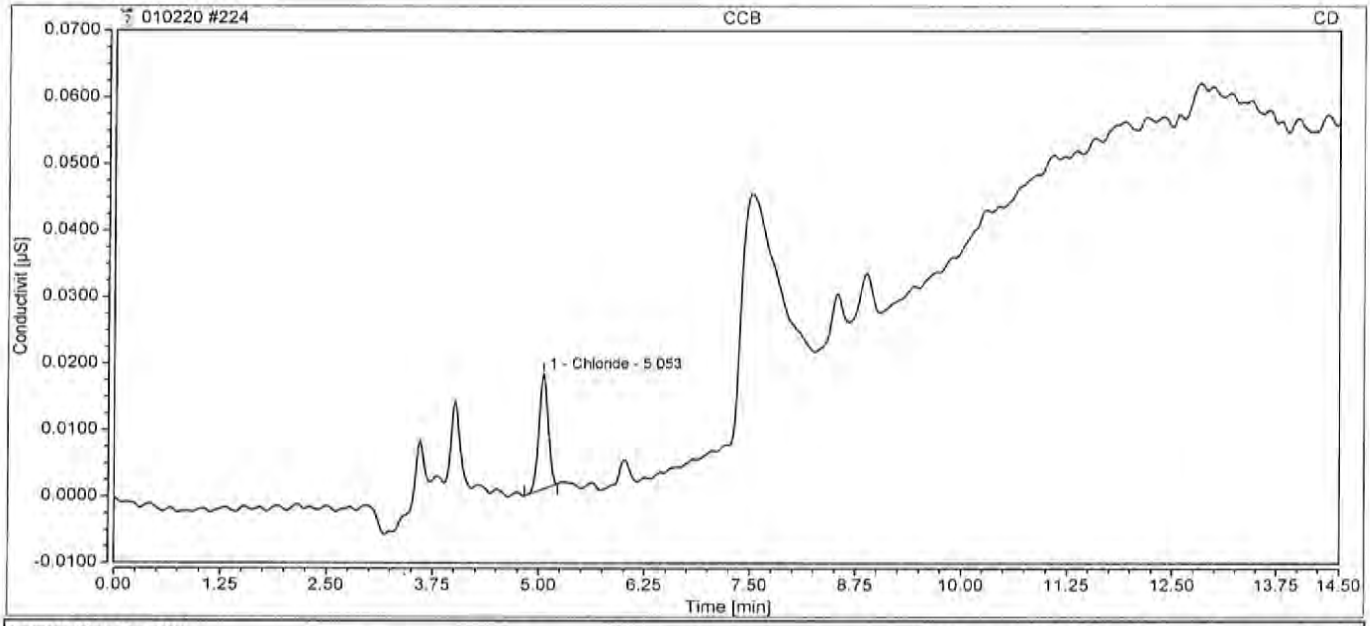
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.62	Fluoride	BMB	3.401	9.1686	9.1686	1.0000
2	5.05	Chloride	BMB	11.482	48.8122	48.8122	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
5	8.39	Sulfate	BM	7.992	46.5484	46.5484	1.0000
7	9.27	Nitrate	MB	0.954	1.6405	1.6405	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
8	12.51	Phosphate	BMB	1.997	8.6532	8.6532	1.0000
Total:			**0.000**	**25.826**		**114.82**	

224 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA6**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 08092019**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**01/06/2020 11:05**	*Sample Weight:*	**1.0000**

Run Time:



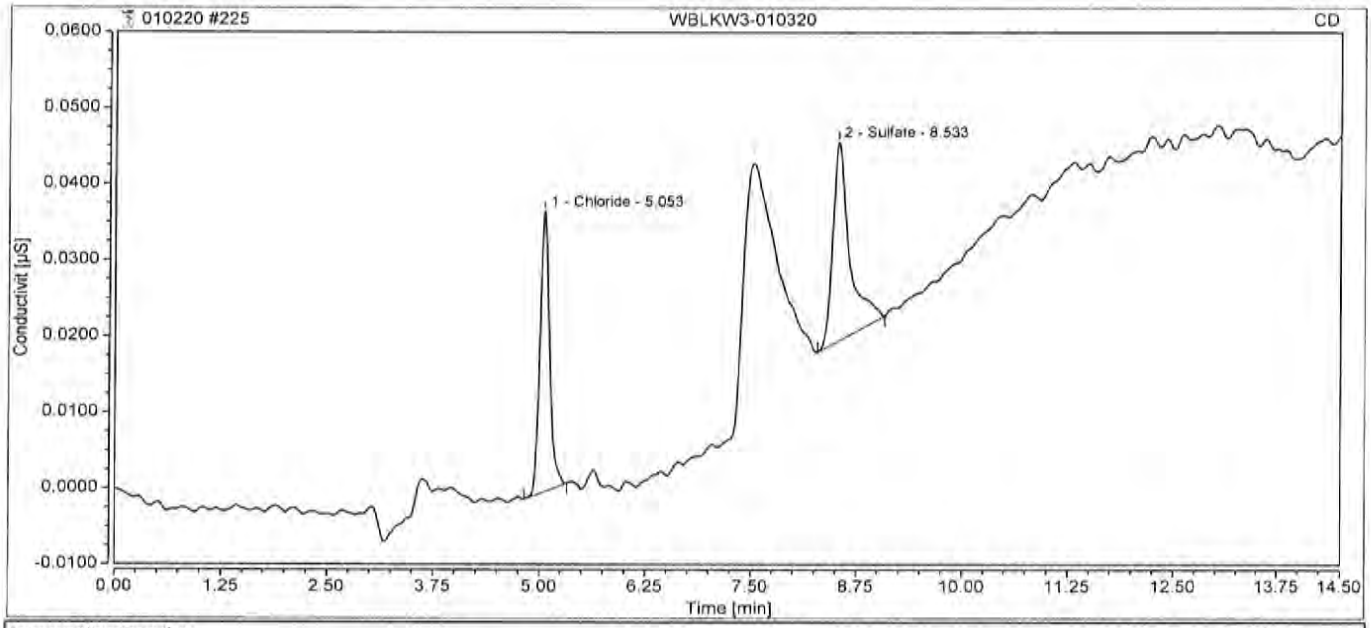
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.05	Chloride	BMB	0.002	0.0666	0.0666	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.002**		**0.07**	

225 WBLKW3-010320

Sample Name:	**WBLKW3-010320**	*Injection Volume:*	**5.00**
Vial Number:	**RA1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 08092019**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**01/06/2020 11:22**	*Sample Weight:*	**1.0000**

Run Time:

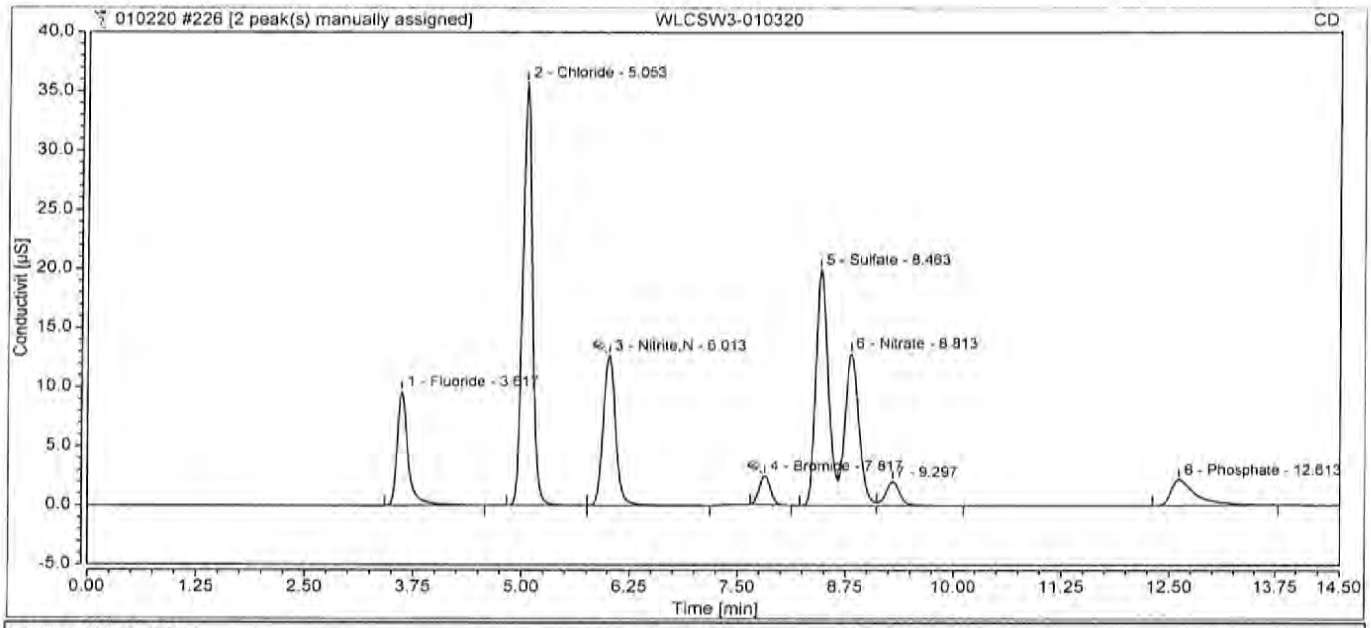


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.05	Chloride	BMB	0.005	0.0779	0.0779	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
2	8.53	Sulfate	BMB	0.006	0.0479	0.0479	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**	**0.011**		**0.13**	

226 WLCSW3-010320

Sample Name:	WLCSW3-010320	Injection Volume:	5.00
Vial Number:	RA2	Channel:	CD
Sample Type:	Unknown	Wavelength:	210
Control Program:	Anions Program 08092019	Bandwidth:	n.a.
Quantif. Method:	Anions Processing Method	Dilution Factor:	1.0000
Recording Time:	01/06/2020 11:38	Sample Weight:	1.0000
Run Time:			

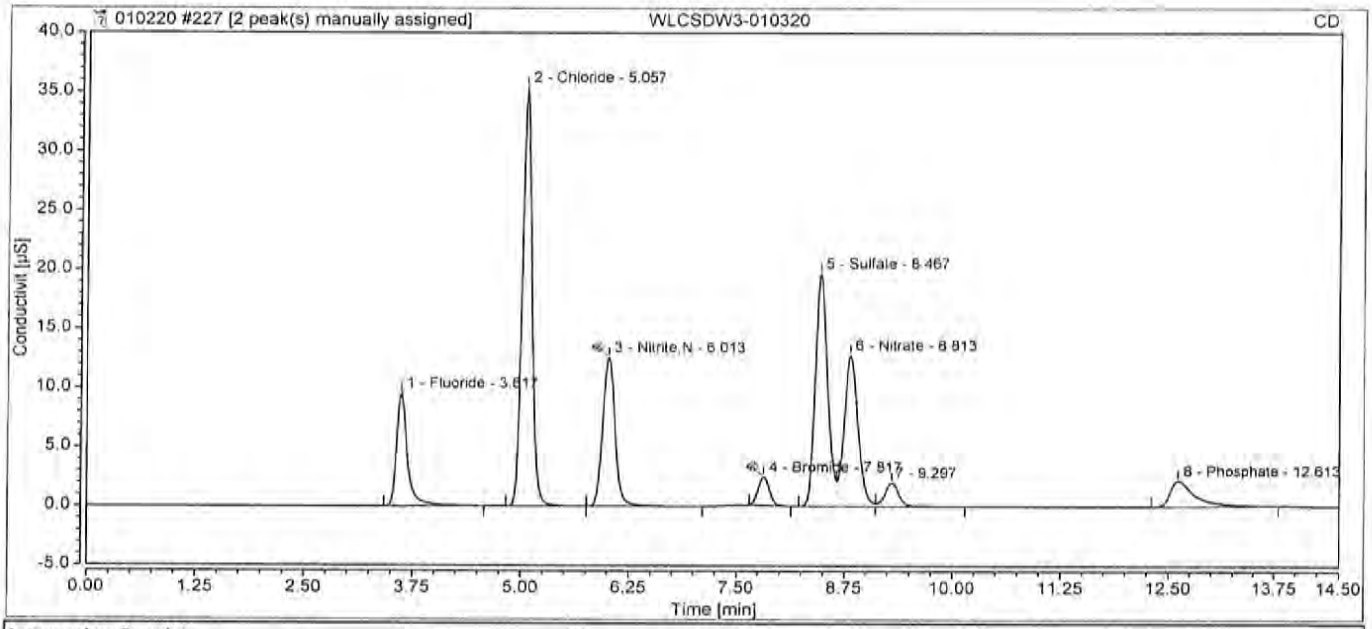


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.62	Fluoride	BMB	1.408	3.8043	3.8043	1.0000
2	5.05	Chloride	BMB	4.676	19.9109	19.9109	1.0000
3	6.01	Nitrite,N	BMB^	2.108	4.1162	4.1162	1.0000
4	7.82	Bromide	BMB^	0.368	3.7020	3.7020	1.0000
5	8.46	Sulfate	BM	3.313	19.3001	19.3001	1.0000
6	8.81	Nitrate	M	2.420	4.1357	4.1357	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
8	12.61	Phosphate	BMB	0.744	3.2542	3.2542	1.0000
Total:			**0.000**	**15.036**		**58.22**	

227 *WLCSDW3-010320*

Sample Name:	**WLCSDW3-010320**	*Injection Volume:*	**5.00**
Vial Number:	**RA3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 08092019**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**01/06/2020 11:55**	*Sample Weight:*	**1.0000**
Run Time:			

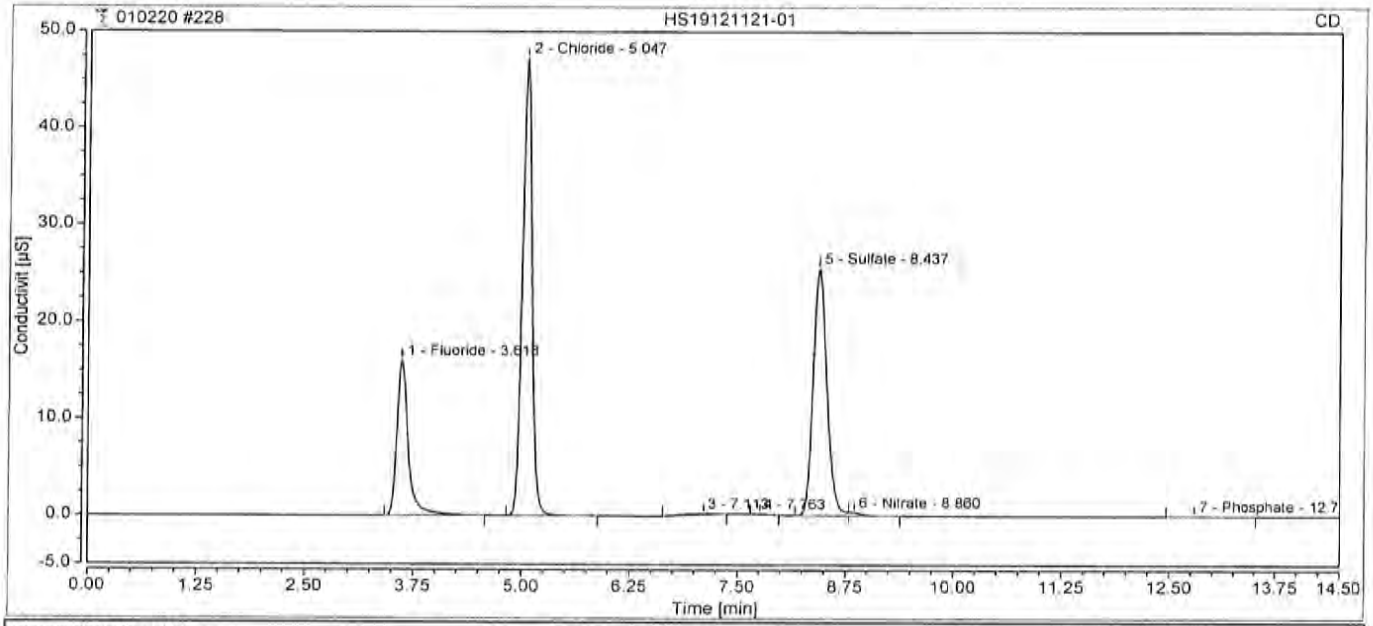


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.62	Fluoride	BMB	1.391	3.7577	3.7577	1.0000
2	5.06	Chloride	BMB	4.627	19.7044	19.7044	1.0000
3	6.01	Nitrite,N	BMB^	2.084	4.0704	4.0704	1.0000
4	7.82	Bromide	BMB^	0.364	3.6568	3.6568	1.0000
5	8.47	Sulfate	BM	3.267	19.0328	19.0328	1.0000
6	8.81	Nitrate	M	2.391	4.0875	4.0875	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
8	12.61	Phosphate	BMB	0.743	3.2508	3.2508	1.0000
Total:			**0.000**	**14.867**		**57.56**	

228 HS19121121-01

Sample Name:	**HS19121121-01**	*Injection Volume:*	**5.00**
Vial Number:	**RA4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 08092019**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**01/06/2020 12:11**	*Sample Weight:*	**1.0000**
Run Time:			

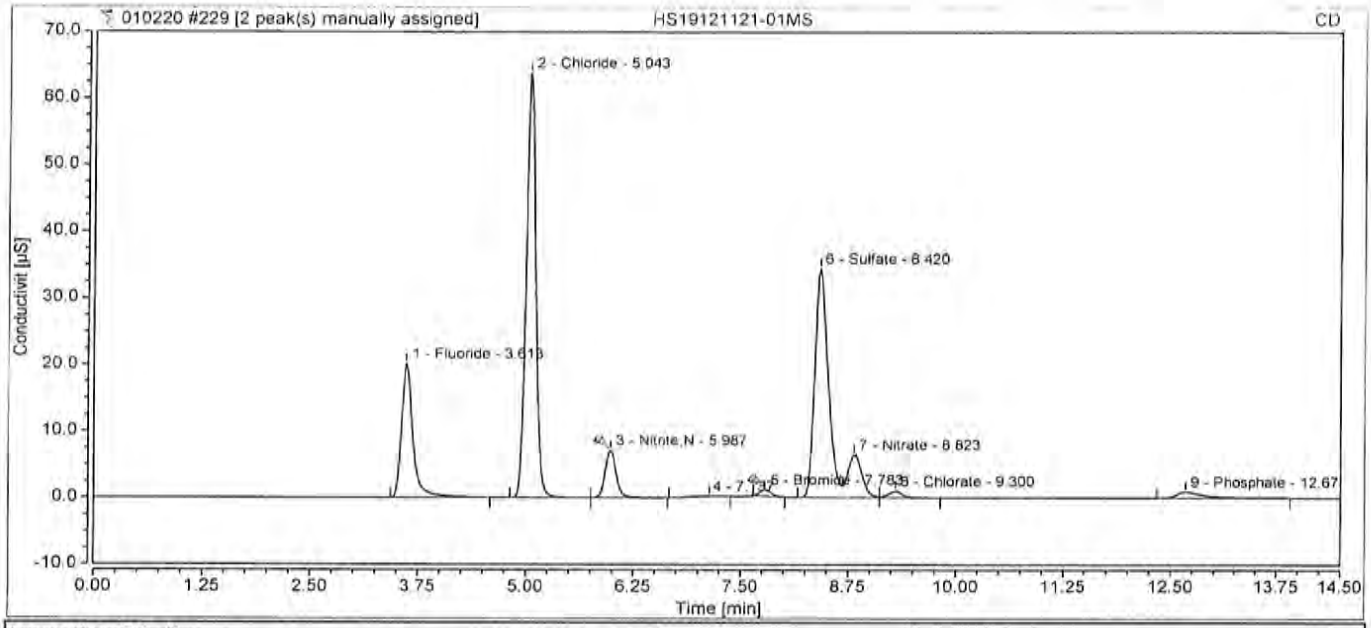


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.61	Fluoride	BMB	2.459	6.6331	6.6331	1.0000
2	5.05	Chloride	BMB	6.098	25.9506	25.9506	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
5	8.44	Sulfate	BM	4.664	27.1707	27.1707	1.0000
6	8.86	Nitrate	MB	0.055	0.1106	0.1106	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
7	12.79	Phosphate	BMB	0.010	0.0913	0.0913	1.0000
Total:			**0.000**	**13.286**		**59.96**	

229 HS19121121-01MS

Sample Name:	HS19121121-01MS	Injection Volume:	5.00
Vial Number:	RA5	Channel:	CD
Sample Type:	Unknown	Wavelength:	210
Control Program:	Anions Program 08092019	Bandwidth:	n.a.
Quantif. Method:	Anions Processing Method	Dilution Factor:	1.0000
Recording Time:	01/06/2020 12:28	Sample Weight:	1.0000
Run Time:			

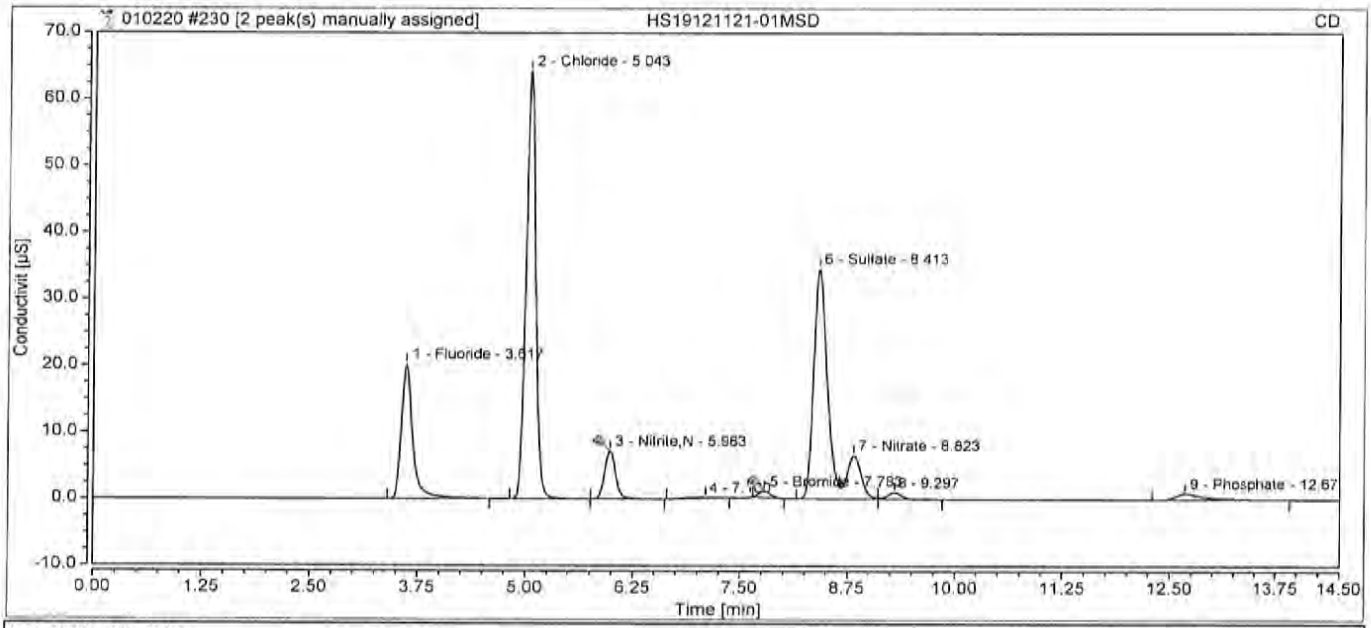


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.61	Fluoride	BMB	3.090	8.3299	8.3299	1.0000
2	5.04	Chloride	BMB	8.268	35.1653	35.1653	1.0000
3	5.99	Nitrite,N	BMB^	1.050	2.0511	2.0511	1.0000
5	7.78	Bromide	BMB^	0.145	1.4893	1.4893	1.0000
6	8.42	Sulfate	BM	6.187	36.0372	36.0372	1.0000
7	8.82	Nitrate	M	1.238	2.1250	2.1250	1.0000
8	9.30	Chlorate	MB	0.186	1.9967	1.9967	1.0000
9	12.67	Phosphate	BMB	0.347	1.5447	1.5447	1.0000
Total:			0.000	20.512		88.74	

230 HS19121121-01MSD

Sample Name:	HS19121121-01MSD	Injection Volume:	5.00
Vial Number:	RA6	Channel:	CD
Sample Type:	Unknown	Wavelength:	210
Control Program:	Anions Program 08092019	Bandwidth:	n.a.
Quantif. Method:	Anions Processing Method	Dilution Factor:	1.0000
Recording Time:	01/06/2020 12:45	Sample Weight:	1.0000
Run Time:			

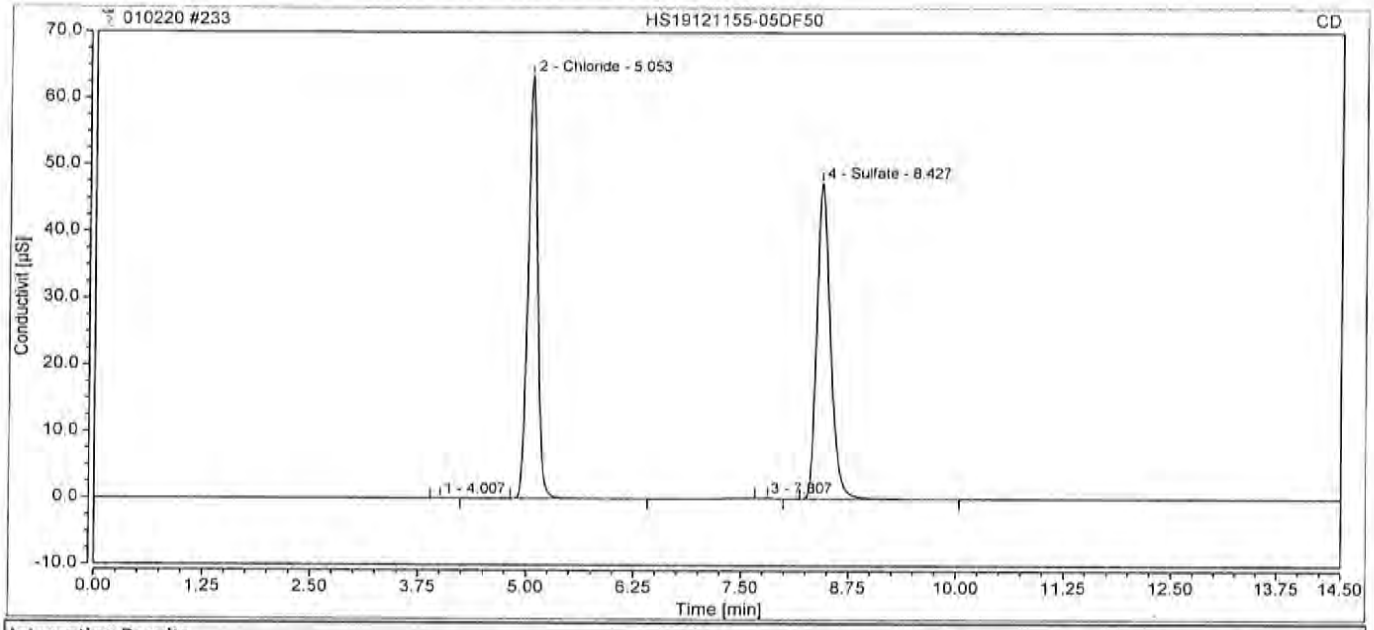


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.62	Fluoride	BMB	3.110	8.3859	8.3859	1.0000
2	5.04	Chloride	BMB	8.318	35.3782	35.3782	1.0000
3	5.98	Nitrite,N	BMB^	1.067	2.0827	2.0827	1.0000
5	7.78	Bromide	BMB^	0.147	1.5088	1.5088	1.0000
6	8.41	Sulfate	BM	6.226	36.2665	36.2665	1.0000
7	8.82	Nitrate	M	1.261	2.1631	2.1631	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
9	12.68	Phosphate	BMB	0.352	1.5658	1.5658	1.0000
Total:			0.000	20.482		87.35	

233 HS19121155-05DF50

Sample Name:	HS19121155-05DF50	Injection Volume:	5.00
Vial Number:	RC8	Channel:	CD
Sample Type:	Unknown	Wavelength:	210
Control Program:	Anions Program 08092019	Bandwidth:	n.a.
Quantif. Method:	Anions Processing Method	Dilution Factor:	50.0000
Recording Time:	01/06/2020 13:34	Sample Weight:	1.0000
Run Time:			

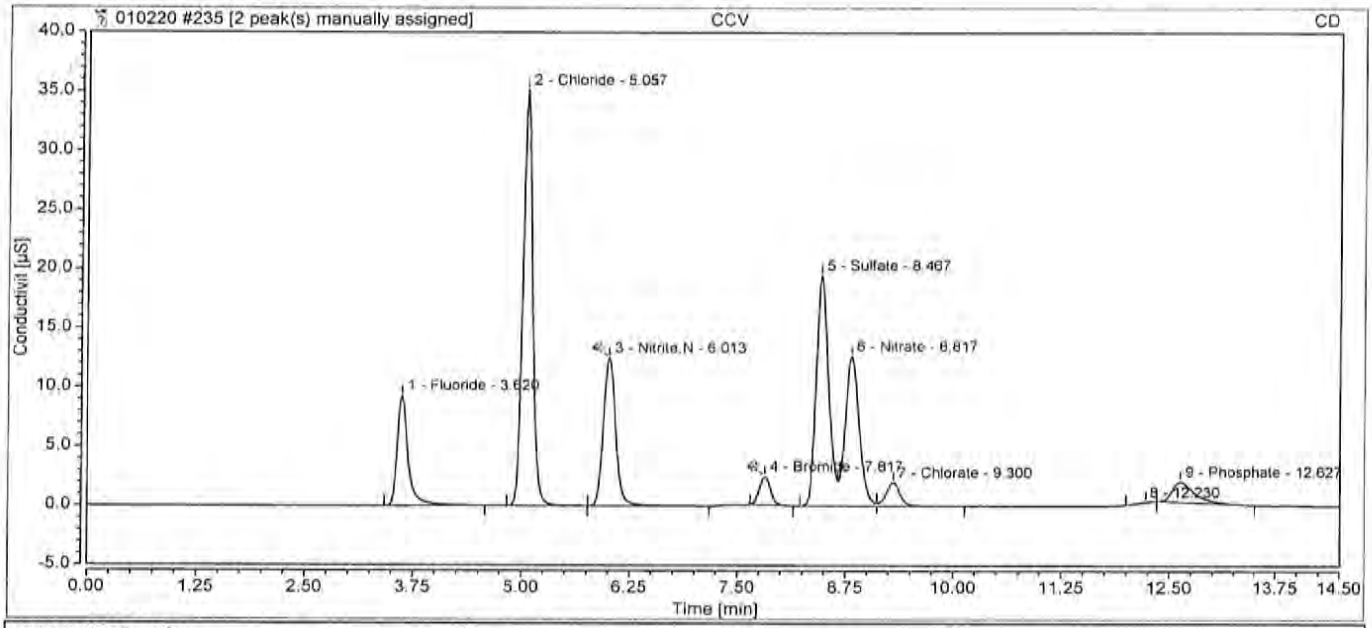


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	50.0000
2	5.05	Chloride	BMB	8.304	35.3201	1766.0065	50.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	50.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	50.0000
4	8.43	Sulfate	BMB	8.796	51.2282	2561.4124	50.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	50.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	50.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	50.0000
Total:			**0.000**	**17.100**		**4327.42**	

235 CCV

Sample Name:	CCV	Injection Volume:	5.00
Vial Number:	BA5	Channel:	CD
Sample Type:	Unknown	Wavelength:	210
Control Program:	Anions Program 08092019	Bandwidth:	n.a.
Quantif. Method:	Anions Processing Method	Dilution Factor:	1.0000
Recording Time:	01/06/2020 14:08	Sample Weight:	1.0000
Run Time:			

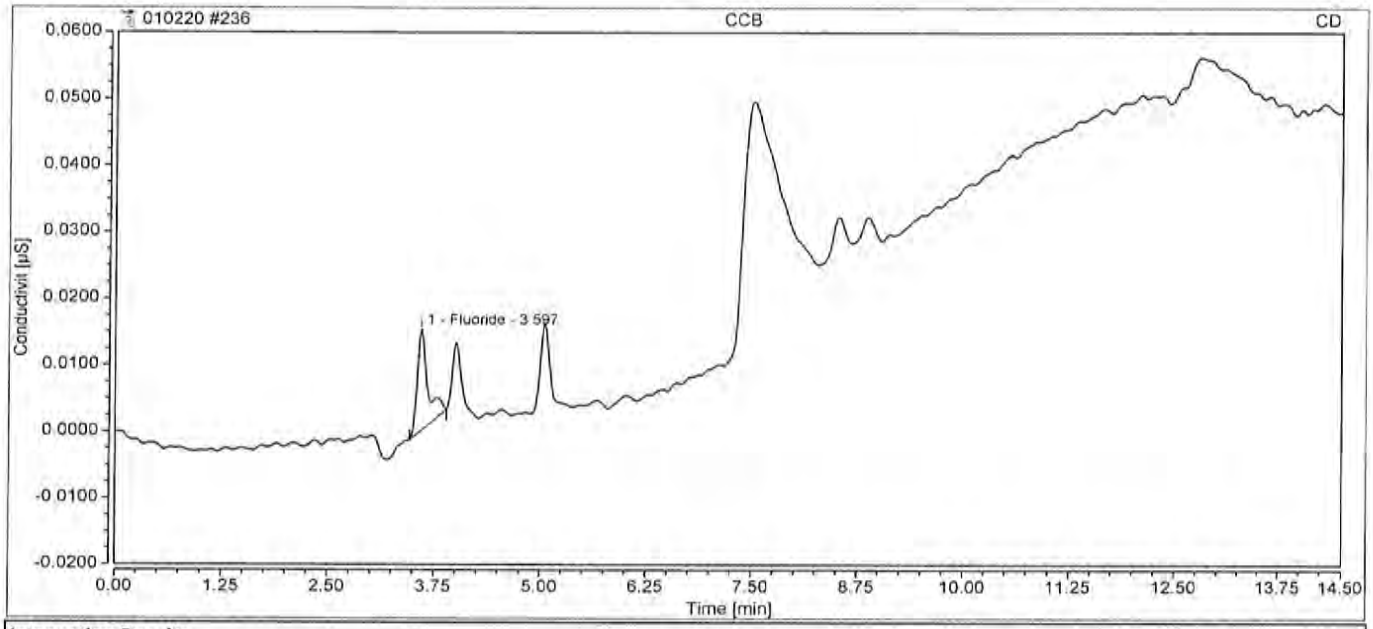


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.62	Fluoride	BMB	1.370	3.7007	3.7007	1.0000
2	5.06	Chloride	BMB	4.584	19.5211	19.5211	1.0000
3	6.01	Nitrite,N	BMB^	2.072	4.0460	4.0460	1.0000
4	7.82	Bromide	BMB^	0.360	3.6232	3.6232	1.0000
5	8.47	Sulfate	BM	3.235	18.8464	18.8464	1.0000
6	8.82	Nitrate	M	2.382	4.0715	4.0715	1.0000
7	9.30	Chlorate	MB	0.378	4.0283	4.0283	1.0000
9	12.63	Phosphate	BMB	0.516	2.2815	2.2815	1.0000
Total:				0.000	14.898	60.12	

236 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA6**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 08092019**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**01/06/2020 14:24**	*Sample Weight:*	**1.0000**
Run Time:			



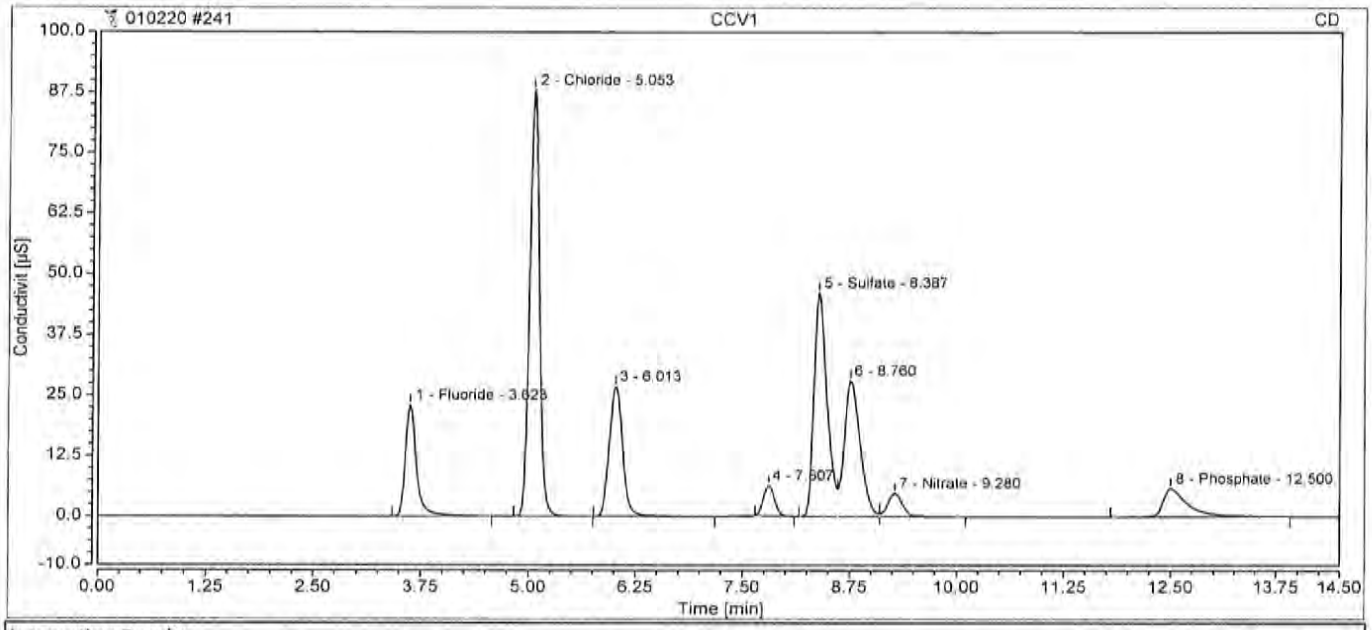
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.60	Fluoride	BMB	0.002	0.0209	0.0209	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**	**0.002**		**0.02**	

241 CCV1

Sample Name:	CCV1	Injection Volume:	5.00
Vial Number:	BA7	Channel:	CD
Sample Type:	Unknown	Wavelength:	210
Control Program:	Anions Program 08092019	Bandwidth:	n.a.
Quantif. Method:	Anions Processing Method	Dilution Factor:	1.0000
Recording Time:	01/06/2020 15:47	Sample Weight:	1.0000

Run Time:

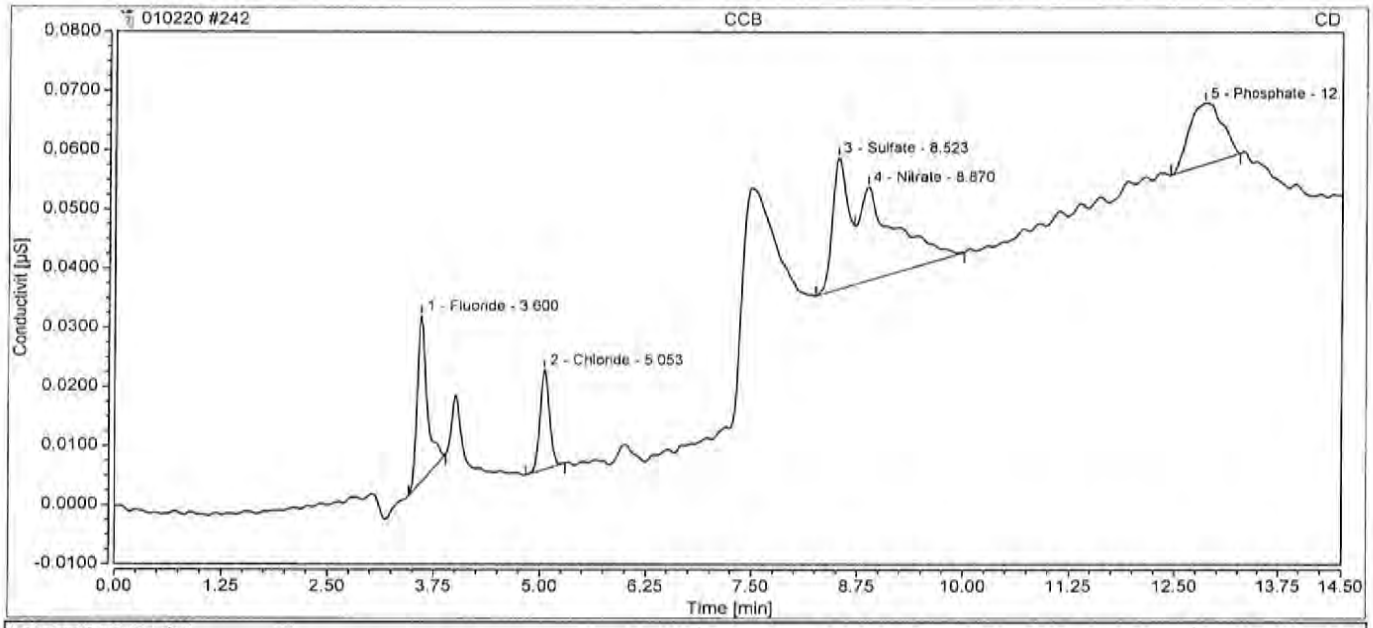


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.62	Fluoride	BMB	3.473	9.3603	9.3603	1.0000
2	5.05	Chloride	BMB	11.583	49.2399	49.2399	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
5	8.39	Sulfate	BM	8.221	47.8815	47.8815	1.0000
7	9.28	Nitrate	MB	0.965	1.6599	1.6599	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
8	12.50	Phosphate	BMB	1.998	8.6578	8.6578	1.0000
Total:			**0.000**	**26.240**		**116.80**	

242 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA6**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 08092019**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**01/06/2020 16:04**	*Sample Weight:*	**1.0000**
Run Time:			

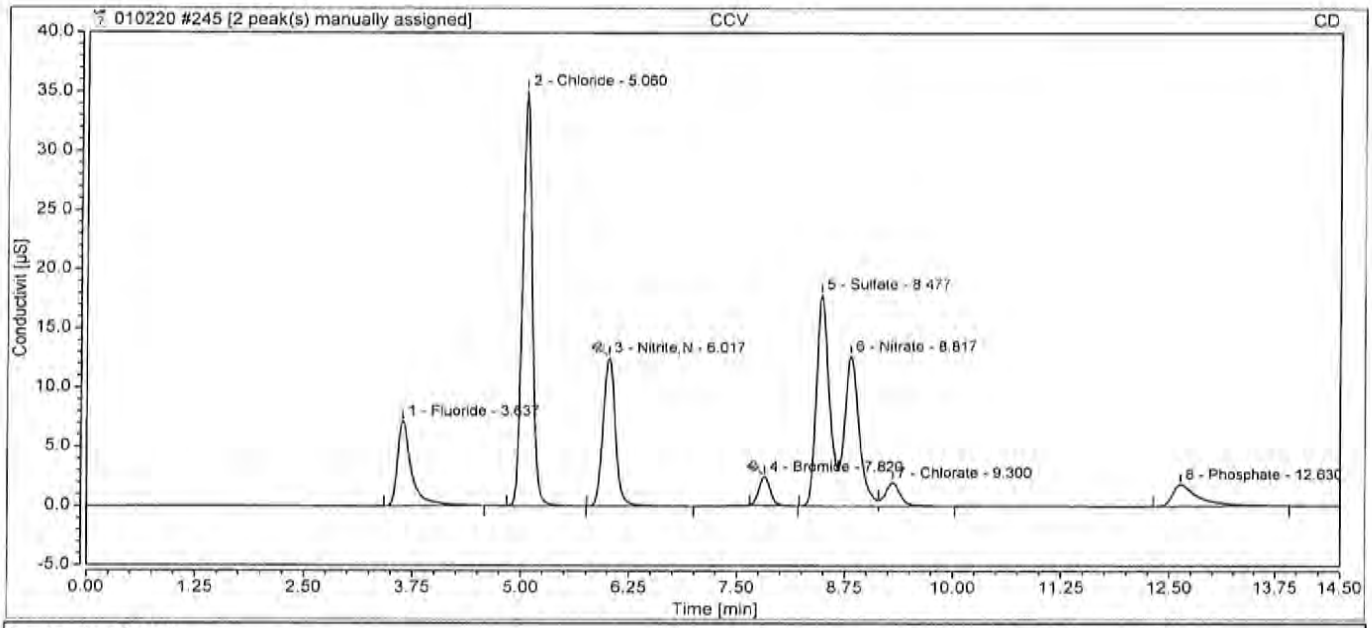


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.60	Fluoride	BMB	0.004	0.0253	0.0253	1.0000
2	5.05	Chloride	BMB	0.002	0.0665	0.0665	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	8.52	Sulfate	BM	0.005	0.0415	0.0415	1.0000
4	8.87	Nitrate	MB	0.008	0.0310	0.0310	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
5	12.85	Phosphate	BMB	0.005	0.0678	0.0678	1.0000
Total:			**0.000**	**0.024**		**0.23**	

245 CCV

Sample Name:	CCV	Injection Volume:	5.00
Vial Number:	BA5	Channel:	CD
Sample Type:	Unknown	Wavelength:	210
Control Program:	Anions Program 08092019	Bandwidth:	n.a.
Quantif. Method:	Anions Processing Method	Dilution Factor:	1.0000
Recording Time:	01/06/2020 17:16	Sample Weight:	1.0000
Run Time:			

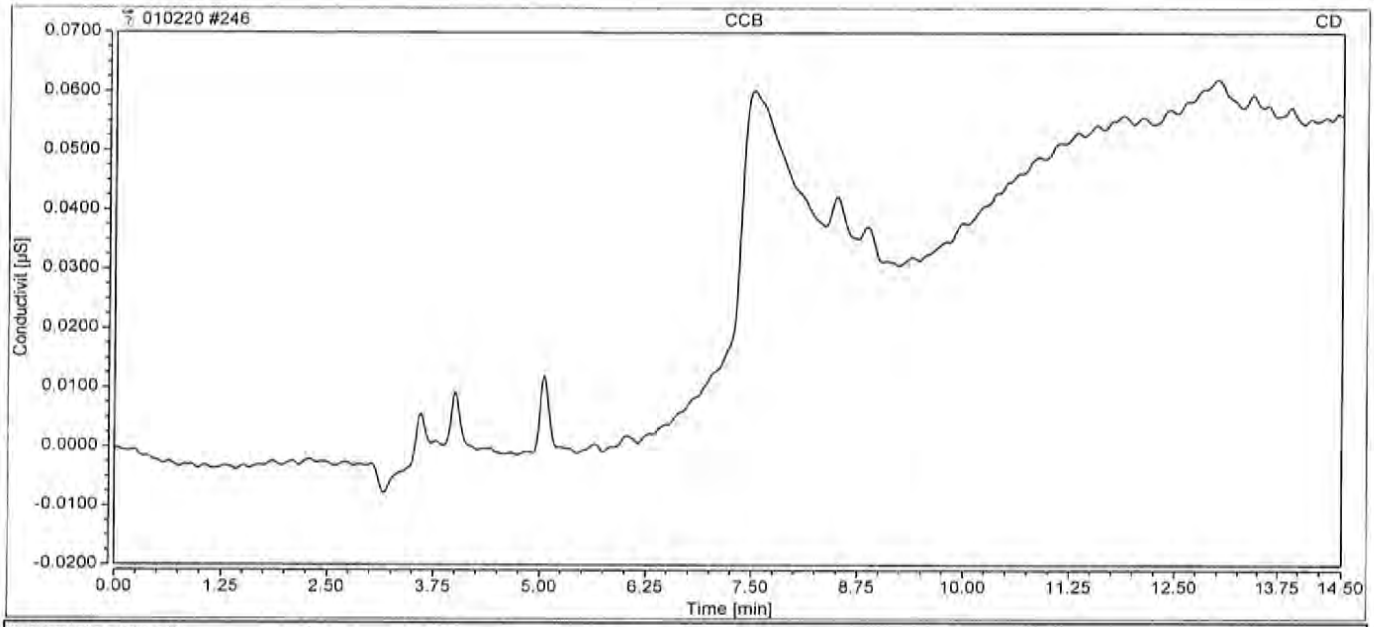


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.64	Fluoride	BMB	1.338	3.6169	3.6169	1.0000
2	5.06	Chloride	BMB	4.615	19.6526	19.6526	1.0000
3	6.02	Nitrite,N	BMB^	2.076	4.0537	4.0537	1.0000
4	7.82	Bromide	BMB^	0.372	3.7352	3.7352	1.0000
5	8.48	Sulfate	BM	3.097	18.0440	18.0440	1.0000
6	8.82	Nitrate	M	2.502	4.2754	4.2754	1.0000
7	9.30	Chlorate	MB	0.400	4.2600	4.2600	1.0000
8	12.63	Phosphate	BMB	0.674	2.9531	2.9531	1.0000
Total:			**0.000**	**15.073**		**60.59**	

246 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA6**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 08092019**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**01/06/2020 17:32**	*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**	

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WorkOrder: HS19121257

LHAAP/SITE58

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

30-Jan-2020

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HS19121257 LHAAPSITE58 Final

ALS WO# HS19121257

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January 08, 2020

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

Work Order: **HS19121257**

Laboratory Results for: **LHAAP/SITE58**

Dear Marcia,

ALS Environmental received 7 sample(s) on Dec 21, 2019 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: 08-Jan-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
Work Order: HS19121257

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS19121257-01	35AWW01_122019	Groundwater		20-Dec-2019 08:35	21-Dec-2019 10:10	☐
HS19121257-02	LHSMW06_122019	Groundwater		20-Dec-2019 09:25	21-Dec-2019 10:10	☐
HS19121257-03	LHSMW06_122019_a	Groundwater		20-Dec-2019 09:25	21-Dec-2019 10:10	☐
HS19121257-04	35AWW15_122019	Groundwater		20-Dec-2019 08:50	21-Dec-2019 10:10	☐
HS19121257-05	35AWW21_122019	Groundwater		20-Dec-2019 10:25	21-Dec-2019 10:10	☐
HS19121257-06	35AWW21_122019_a	Groundwater		20-Dec-2019 10:25	21-Dec-2019 10:10	☐
HS19121257-07	Trip Blank	Water		20-Dec-2019 00:00	21-Dec-2019 10:10	☐

ALS Houston, US Date: 08-Jan-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
Work Order: HS19121257

CASE NARRATIVE

GCMS Volatiles by Method SW8260

Batch ID: R353818

Sample ID: CCV

- 1,2,3_Trichlorobenzene and 2_Butanone exceeded %D limits for CCV. Samples are ND for these compounds.

Sample ID: VLCSW-200103

- 1,2,3_Trichlorobenzene is also high for LCS.

Sample ID: HS19121484-01MS

- MS and MSD are for an unrelated sample

Batch ID: R353734

Sample ID: CCV

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

Sample ID: CCV-END

- The internal standard amount was 2 times our normal added amount due to auto addition from the autosampler, causing low compound recoveries

Sample ID: VLCSW-200102

- 1,2,3_Trichlorobenzene exceeded QC limits for LCS. CCV is OK.

Sample ID: 35AWW01_122019 (HS19121257-01MSD)

- MS/MSD RPD recovered above upper control limits Hexachlorobutadiene

Metals by Method SW6020

Batch ID: 149161

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

ALS Houston, US Date: 08-Jan-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
Sample ID: 35AWW01_122019
Collection Date: 20-Dec-2019 08:35

ANALYTICAL REPORT
WorkOrder:HS19121257
Lab ID:HS19121257-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 16:22
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 16:22
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	02-Jan-2020 16:22
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 16:22
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 16:22
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 16:22
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 16:22
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	02-Jan-2020 16:22
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	02-Jan-2020 16:22
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	02-Jan-2020 16:22
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 16:22
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 16:22
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 16:22
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	02-Jan-2020 16:22
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 16:22
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	02-Jan-2020 16:22
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 16:22
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	02-Jan-2020 16:22
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 16:22
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	02-Jan-2020 16:22
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 16:22
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	02-Jan-2020 16:22
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 16:22
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	02-Jan-2020 16:22
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	02-Jan-2020 16:22
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 16:22
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	02-Jan-2020 16:22
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	02-Jan-2020 16:22
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 16:22
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	02-Jan-2020 16:22
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 16:22
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 16:22
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	02-Jan-2020 16:22
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	02-Jan-2020 16:22
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	02-Jan-2020 16:22
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	UG/L	1	02-Jan-2020 16:22
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 16:22
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 16:22
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 16:22

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

ALS Houston, US Date: 08-Jan-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
Sample ID: 35AWW01_122019
Collection Date: 20-Dec-2019 08:35

ANALYTICAL REPORT
WorkOrder:HS19121257
Lab ID:HS19121257-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 16:22
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 16:22
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	02-Jan-2020 16:22
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 16:22
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 16:22
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 16:22
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 16:22
Hexachlorobutadiene	0.50	U	1.0	0.50	1.0	UG/L	1	02-Jan-2020 16:22
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 16:22
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	02-Jan-2020 16:22
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	02-Jan-2020 16:22
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	02-Jan-2020 16:22
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 16:22
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 16:22
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 16:22
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 16:22
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 16:22
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 16:22
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 16:22
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 16:22
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 16:22
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 16:22
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 16:22
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 16:22
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 16:22
Surr: 1,2-Dichloroethane-d4	*96.5*			**0**	*81-118*	*%REC*	*1*	*02-Jan-2020 16:22*
Surr: 4-Bromofluorobenzene	*101*			**0**	*85-114*	*%REC*	*1*	*02-Jan-2020 16:22*
Surr: Dibromofluoromethane	*97.0*			**0**	*80-119*	*%REC*	*1*	*02-Jan-2020 16:22*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*1*	*02-Jan-2020 16:22*

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

ALS Houston, US Date: 08-Jan-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
Sample ID: LHSMW06_122019
Collection Date: 20-Dec-2019 09:25

ANALYTICAL REPORT
WorkOrder:HS19121257
Lab ID:HS19121257-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 19:59
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 19:59
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	02-Jan-2020 19:59
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 19:59
1,1-Dichloroethane	**8.4**		**0.20**	**0.50**	**1.0**	**UG/L**	1	02-Jan-2020 19:59
1,1-Dichloroethene	**19**		**0.20**	**0.50**	**1.0**	**UG/L**	1	02-Jan-2020 19:59
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 19:59
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	02-Jan-2020 19:59
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	02-Jan-2020 19:59
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	02-Jan-2020 19:59
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 19:59
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 19:59
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 19:59
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	02-Jan-2020 19:59
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 19:59
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	02-Jan-2020 19:59
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 19:59
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	02-Jan-2020 19:59
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 19:59
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	02-Jan-2020 19:59
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 19:59
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	02-Jan-2020 19:59
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 19:59
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	02-Jan-2020 19:59
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	02-Jan-2020 19:59
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 19:59
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	02-Jan-2020 19:59
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	02-Jan-2020 19:59
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 19:59
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	02-Jan-2020 19:59
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 19:59
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 19:59
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	02-Jan-2020 19:59
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	02-Jan-2020 19:59
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	02-Jan-2020 19:59
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	UG/L	1	02-Jan-2020 19:59
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 19:59
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 19:59
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 19:59

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

ALS Houston, US Date: 08-Jan-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
Sample ID: LHSMW06_122019
Collection Date: 20-Dec-2019 09:25

ANALYTICAL REPORT
WorkOrder:HS19121257
Lab ID:HS19121257-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 19:59
cis-1,2-Dichloroethene	**68**		**0.20**	**0.50**	**1.0**	**UG/L**	1	02-Jan-2020 19:59
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	02-Jan-2020 19:59
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 19:59
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 19:59
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 19:59
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 19:59
Hexachlorobutadiene	0.50	U	1.0	0.50	1.0	UG/L	1	02-Jan-2020 19:59
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 19:59
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	02-Jan-2020 19:59
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	02-Jan-2020 19:59
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	02-Jan-2020 19:59
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 19:59
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 19:59
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 19:59
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 19:59
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 19:59
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 19:59
Tetrachloroethene	**1.9**		**0.30**	**0.50**	**1.0**	**UG/L**	1	02-Jan-2020 19:59
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 19:59
trans-1,2-Dichloroethene	**1.4**		**0.20**	**0.50**	**1.0**	**UG/L**	1	02-Jan-2020 19:59
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 19:59
Trichloroethene	**17**		**0.20**	**0.50**	**1.0**	**UG/L**	1	02-Jan-2020 19:59
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 19:59
Vinyl chloride	**5.7**		**0.20**	**0.50**	**1.0**	**UG/L**	1	02-Jan-2020 19:59
Surr: 1,2-Dichloroethane-d4	*99.5*			**0**	*81-118*	*%REC*	*1*	*02-Jan-2020 19:59*
Surr: 4-Bromofluorobenzene	*101*			**0**	*85-114*	*%REC*	*1*	*02-Jan-2020 19:59*
Surr: Dibromofluoromethane	*97.5*			**0**	*80-119*	*%REC*	*1*	*02-Jan-2020 19:59*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*02-Jan-2020 19:59*
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 27-Dec-2019		Analyst: JHD
Arsenic	0.000500	U	0.000400	0.000500	0.00500	mg/L	1	03-Jan-2020 12:52

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

ALS Houston, US Date: 08-Jan-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
Sample ID: LHSMW06_122019_a
Collection Date: 20-Dec-2019 09:25

ANALYTICAL REPORT
WorkOrder:HS19121257
Lab ID:HS19121257-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:23
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 20:23
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	02-Jan-2020 20:23
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:23
1,1-Dichloroethane	**8.4**		**0.20**	**0.50**	**1.0**	**UG/L**	1	02-Jan-2020 20:23
1,1-Dichloroethene	**20**		**0.20**	**0.50**	**1.0**	**UG/L**	1	02-Jan-2020 20:23
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:23
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	02-Jan-2020 20:23
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	02-Jan-2020 20:23
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	02-Jan-2020 20:23
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:23
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 20:23
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 20:23
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	02-Jan-2020 20:23
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 20:23
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	02-Jan-2020 20:23
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:23
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	02-Jan-2020 20:23
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:23
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	02-Jan-2020 20:23
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 20:23
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	02-Jan-2020 20:23
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:23
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	02-Jan-2020 20:23
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	02-Jan-2020 20:23
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:23
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	02-Jan-2020 20:23
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	02-Jan-2020 20:23
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 20:23
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	02-Jan-2020 20:23
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 20:23
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 20:23
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	02-Jan-2020 20:23
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	02-Jan-2020 20:23
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	02-Jan-2020 20:23
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	UG/L	1	02-Jan-2020 20:23
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:23
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:23
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 20:23

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

ALS Houston, US Date: 08-Jan-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
Sample ID: LHSMW06_122019_a
Collection Date: 20-Dec-2019 09:25

ANALYTICAL REPORT
WorkOrder:HS19121257
Lab ID:HS19121257-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 20:23
cis-1,2-Dichloroethene	**68**		**0.20**	**0.50**	**1.0**	**UG/L**	1	02-Jan-2020 20:23
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	02-Jan-2020 20:23
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:23
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 20:23
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:23
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:23
Hexachlorobutadiene	0.50	U	1.0	0.50	1.0	UG/L	1	02-Jan-2020 20:23
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:23
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	02-Jan-2020 20:23
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	02-Jan-2020 20:23
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	02-Jan-2020 20:23
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:23
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:23
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:23
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:23
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:23
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:23
Tetrachloroethene	**1.9**		**0.30**	**0.50**	**1.0**	**UG/L**	1	02-Jan-2020 20:23
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 20:23
trans-1,2-Dichloroethene	**1.5**		**0.20**	**0.50**	**1.0**	**UG/L**	1	02-Jan-2020 20:23
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 20:23
Trichloroethene	**17**		**0.20**	**0.50**	**1.0**	**UG/L**	1	02-Jan-2020 20:23
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:23
Vinyl chloride	**5.6**		**0.20**	**0.50**	**1.0**	**UG/L**	1	02-Jan-2020 20:23
Surr: 1,2-Dichloroethane-d4	*99.4*			**0**	*81-118*	*%REC*	*1*	*02-Jan-2020 20:23*
Surr: 4-Bromofluorobenzene	*101*			**0**	*85-114*	*%REC*	*1*	*02-Jan-2020 20:23*
Surr: Dibromofluoromethane	*97.0*			**0**	*80-119*	*%REC*	*1*	*02-Jan-2020 20:23*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*1*	*02-Jan-2020 20:23*
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 27-Dec-2019		Analyst: JHD
Arsenic	0.000500	U	0.000400	0.000500	0.00500	mg/L	1	03-Jan-2020 15:52

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

ALS Houston, US Date: 08-Jan-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
Sample ID: 35AWW15_122019
Collection Date: 20-Dec-2019 08:50

ANALYTICAL REPORT
WorkOrder:HS19121257
Lab ID:HS19121257-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:47
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 20:47
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	02-Jan-2020 20:47
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:47
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 20:47
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 20:47
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:47
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	02-Jan-2020 20:47
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	02-Jan-2020 20:47
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	02-Jan-2020 20:47
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:47
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 20:47
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 20:47
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	02-Jan-2020 20:47
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 20:47
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	02-Jan-2020 20:47
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:47
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	02-Jan-2020 20:47
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:47
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	02-Jan-2020 20:47
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 20:47
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	02-Jan-2020 20:47
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:47
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	02-Jan-2020 20:47
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	02-Jan-2020 20:47
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:47
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	02-Jan-2020 20:47
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	02-Jan-2020 20:47
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 20:47
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	02-Jan-2020 20:47
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 20:47
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 20:47
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	02-Jan-2020 20:47
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	02-Jan-2020 20:47
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	02-Jan-2020 20:47
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	UG/L	1	02-Jan-2020 20:47
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:47
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:47
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 20:47

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

ALS Houston, US Date: 08-Jan-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
Sample ID: 35AWW15_122019
Collection Date: 20-Dec-2019 08:50

ANALYTICAL REPORT
WorkOrder:HS19121257
Lab ID:HS19121257-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 20:47
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 20:47
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	02-Jan-2020 20:47
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:47
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 20:47
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:47
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:47
Hexachlorobutadiene	0.50	U	1.0	0.50	1.0	UG/L	1	02-Jan-2020 20:47
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:47
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	02-Jan-2020 20:47
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	02-Jan-2020 20:47
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	02-Jan-2020 20:47
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:47
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:47
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:47
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:47
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:47
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:47
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:47
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 20:47
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 20:47
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 20:47
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 20:47
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	02-Jan-2020 20:47
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	02-Jan-2020 20:47
Surr: 1,2-Dichloroethane-d4	*101*			**0**	*81-118*	*%REC*	*1*	*02-Jan-2020 20:47*
Surr: 4-Bromofluorobenzene	*101*			**0**	*85-114*	*%REC*	*1*	*02-Jan-2020 20:47*
Surr: Dibromofluoromethane	*97.9*			**0**	*80-119*	*%REC*	*1*	*02-Jan-2020 20:47*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*1*	*02-Jan-2020 20:47*

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

ALS Houston, US Date: 08-Jan-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
Sample ID: 35AWW21_122019
Collection Date: 20-Dec-2019 10:25

ANALYTICAL REPORT
WorkOrder:HS19121257
Lab ID:HS19121257-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:58
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 15:58
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	03-Jan-2020 15:58
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:58
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 15:58
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 15:58
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:58
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	03-Jan-2020 15:58
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	03-Jan-2020 15:58
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	03-Jan-2020 15:58
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:58
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 15:58
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 15:58
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	03-Jan-2020 15:58
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 15:58
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	03-Jan-2020 15:58
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:58
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	03-Jan-2020 15:58
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:58
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	03-Jan-2020 15:58
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 15:58
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	03-Jan-2020 15:58
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:58
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	03-Jan-2020 15:58
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	03-Jan-2020 15:58
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:58
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	03-Jan-2020 15:58
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	03-Jan-2020 15:58
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 15:58
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	03-Jan-2020 15:58
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 15:58
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 15:58
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	03-Jan-2020 15:58
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	03-Jan-2020 15:58
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	03-Jan-2020 15:58
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	UG/L	1	03-Jan-2020 15:58
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:58
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:58
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 15:58

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

ALS Houston, US Date: 08-Jan-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
Sample ID: 35AWW21_122019
Collection Date: 20-Dec-2019 10:25

ANALYTICAL REPORT
WorkOrder:HS19121257
Lab ID:HS19121257-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 15:58
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 15:58
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	03-Jan-2020 15:58
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:58
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 15:58
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:58
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:58
Hexachlorobutadiene	0.50	U	1.0	0.50	1.0	UG/L	1	03-Jan-2020 15:58
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:58
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	03-Jan-2020 15:58
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	03-Jan-2020 15:58
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	03-Jan-2020 15:58
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:58
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:58
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:58
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:58
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:58
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:58
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:58
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 15:58
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 15:58
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 15:58
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 15:58
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:58
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 15:58
Surr: 1,2-Dichloroethane-d4	*99.7*			**0**	*81-118*	*%REC*	*1*	*03-Jan-2020 15:58*
Surr: 4-Bromofluorobenzene	*101*			**0**	*85-114*	*%REC*	*1*	*03-Jan-2020 15:58*
Surr: Dibromofluoromethane	*97.4*			**0**	*80-119*	*%REC*	*1*	*03-Jan-2020 15:58*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*03-Jan-2020 15:58*

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

ALS Houston, US Date: 08-Jan-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
Sample ID: 35AWW21_122019_a
Collection Date: 20-Dec-2019 10:25

ANALYTICAL REPORT
WorkOrder:HS19121257
Lab ID:HS19121257-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 16:22
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 16:22
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	03-Jan-2020 16:22
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 16:22
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 16:22
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 16:22
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 16:22
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	03-Jan-2020 16:22
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	03-Jan-2020 16:22
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	03-Jan-2020 16:22
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 16:22
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 16:22
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 16:22
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	03-Jan-2020 16:22
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 16:22
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	03-Jan-2020 16:22
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 16:22
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	03-Jan-2020 16:22
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 16:22
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	03-Jan-2020 16:22
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 16:22
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	03-Jan-2020 16:22
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 16:22
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	03-Jan-2020 16:22
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	03-Jan-2020 16:22
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 16:22
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	03-Jan-2020 16:22
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	03-Jan-2020 16:22
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 16:22
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	03-Jan-2020 16:22
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 16:22
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 16:22
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	03-Jan-2020 16:22
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	03-Jan-2020 16:22
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	03-Jan-2020 16:22
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	UG/L	1	03-Jan-2020 16:22
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 16:22
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 16:22
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 16:22

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

ALS Houston, US Date: 08-Jan-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
Sample ID: 35AWW21_122019_a
Collection Date: 20-Dec-2019 10:25

ANALYTICAL REPORT
WorkOrder:HS19121257
Lab ID:HS19121257-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 16:22
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 16:22
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	03-Jan-2020 16:22
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 16:22
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 16:22
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 16:22
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 16:22
Hexachlorobutadiene	0.50	U	1.0	0.50	1.0	UG/L	1	03-Jan-2020 16:22
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 16:22
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	03-Jan-2020 16:22
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	03-Jan-2020 16:22
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	03-Jan-2020 16:22
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 16:22
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 16:22
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 16:22
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 16:22
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 16:22
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 16:22
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 16:22
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 16:22
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 16:22
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 16:22
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 16:22
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 16:22
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 16:22
Surr: 1,2-Dichloroethane-d4	*99.7*			**0**	*81-118*	*%REC*	*1*	*03-Jan-2020 16:22*
Surr: 4-Bromofluorobenzene	*101*			**0**	*85-114*	*%REC*	*1*	*03-Jan-2020 16:22*
Surr: Dibromofluoromethane	*97.3*			**0**	*80-119*	*%REC*	*1*	*03-Jan-2020 16:22*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*1*	*03-Jan-2020 16:22*

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

ALS Houston, US Date: 08-Jan-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
Sample ID: Trip Blank
Collection Date: 20-Dec-2019 00:00

ANALYTICAL REPORT
WorkOrder:HS19121257
Lab ID:HS19121257-07
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:34
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 15:34
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	03-Jan-2020 15:34
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:34
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 15:34
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 15:34
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:34
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	03-Jan-2020 15:34
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	03-Jan-2020 15:34
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	03-Jan-2020 15:34
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:34
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 15:34
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 15:34
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	03-Jan-2020 15:34
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 15:34
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	03-Jan-2020 15:34
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:34
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	03-Jan-2020 15:34
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:34
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	03-Jan-2020 15:34
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 15:34
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	03-Jan-2020 15:34
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:34
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	03-Jan-2020 15:34
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	03-Jan-2020 15:34
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:34
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	03-Jan-2020 15:34
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	03-Jan-2020 15:34
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 15:34
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	03-Jan-2020 15:34
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 15:34
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 15:34
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	03-Jan-2020 15:34
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	03-Jan-2020 15:34
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	03-Jan-2020 15:34
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	UG/L	1	03-Jan-2020 15:34
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:34
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:34
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 15:34

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

ALS Houston, US Date: 08-Jan-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
Sample ID: Trip Blank
Collection Date: 20-Dec-2019 00:00

ANALYTICAL REPORT
WorkOrder:HS19121257
Lab ID:HS19121257-07
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 15:34
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 15:34
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	03-Jan-2020 15:34
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:34
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 15:34
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:34
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:34
Hexachlorobutadiene	0.50	U	1.0	0.50	1.0	UG/L	1	03-Jan-2020 15:34
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:34
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	03-Jan-2020 15:34
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	03-Jan-2020 15:34
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	03-Jan-2020 15:34
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:34
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:34
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:34
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:34
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:34
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:34
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:34
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 15:34
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 15:34
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 15:34
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 15:34
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	03-Jan-2020 15:34
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	03-Jan-2020 15:34
Surr: 1,2-Dichloroethane-d4	*99.1*			**0**	*81-118*	*%REC*	*1*	*03-Jan-2020 15:34*
Surr: 4-Bromofluorobenzene	*101*			**0**	*85-114*	*%REC*	*1*	*03-Jan-2020 15:34*
Surr: Dibromofluoromethane	*97.6*			**0**	*80-119*	*%REC*	*1*	*03-Jan-2020 15:34*
Surr: Toluene-d8	*101*			**0**	*89-112*	*%REC*	*1*	*03-Jan-2020 15:34*

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

Weight / Prep Log

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
WorkOrder: HS19121257

Batch ID: 149161 **Start Date:** 27 Dec 2019 09:00 **End Date:** 27 Dec 2019 13:00
Method: WATER - SW3010A **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS19121257-02		10 (mL)	10 (mL)	1
HS19121257-03		10 (mL)	10 (mL)	1

ALS Houston, US Date: 08-Jan-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
WorkOrder: HS19121257

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 149161 (0)	**Test Name :** METALS BY ICPMS BY SW6020A				**Matrix:** Groundwater	
HS19121257-02	LHSMW06_122019	20 Dec 2019 09:25		27 Dec 2019 13:00	03 Jan 2020 12:52	1
HS19121257-03	LHSMW06_122019_a	20 Dec 2019 09:25		27 Dec 2019 13:00	03 Jan 2020 15:52	1
Batch ID: R353734 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Groundwater	
HS19121257-01	35AWW01_122019	20 Dec 2019 08:35			02 Jan 2020 16:22	1
HS19121257-02	LHSMW06_122019	20 Dec 2019 09:25			02 Jan 2020 19:59	1
HS19121257-03	LHSMW06_122019_a	20 Dec 2019 09:25			02 Jan 2020 20:23	1
HS19121257-04	35AWW15_122019	20 Dec 2019 08:50			02 Jan 2020 20:47	1
Batch ID: R353818 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS19121257-07	Trip Blank	20 Dec 2019 00:00			03 Jan 2020 15:34	1
Batch ID: R353818 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Groundwater	
HS19121257-05	35AWW21_122019	20 Dec 2019 10:25			03 Jan 2020 15:58	1
HS19121257-06	35AWW21_122019_a	20 Dec 2019 10:25			03 Jan 2020 16:22	1

ALS Houston, US Date: 08-Jan-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
WorkOrder: HS19121257

QC BATCH REPORT

Batch ID: 149161 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

MBLK Sample ID: **MBLK-149161** Units: **mg/L** Analysis Date: **03-Jan-2020 12:00**
Client ID: Run ID: **ICPMS05_353764** SeqNo: **5423038** PrepDate: **27-Dec-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.000500	0.00500								U

LCS Sample ID: **LCS-149161** Units: **mg/L** Analysis Date: **03-Jan-2020 12:03**
Client ID: Run ID: **ICPMS05_353764** SeqNo: **5423039** PrepDate: **27-Dec-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.05072	0.00500	0.05	0	101	84 - 116				

MS Sample ID: **HS19121036-01MS** Units: **mg/L** Analysis Date: **03-Jan-2020 12:14**
Client ID: Run ID: **ICPMS05_353764** SeqNo: **5423044** PrepDate: **27-Dec-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.04954	0.00500	0.05	0	99.1	84 - 116				

MSD Sample ID: **HS19121036-01MSD** Units: **mg/L** Analysis Date: **03-Jan-2020 12:17**
Client ID: Run ID: **ICPMS05_353764** SeqNo: **5423045** PrepDate: **27-Dec-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.04823	0.00500	0.05	0	96.5	84 - 116	0.04954	2.68	20	

PDS Sample ID: **HS19121036-01PDS** Units: **mg/L** Analysis Date: **03-Jan-2020 12:19**
Client ID: Run ID: **ICPMS05_353764** SeqNo: **5423046** PrepDate: **27-Dec-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.09811	0.00500	0.1	0	98.1	80 - 120				

SD Sample ID: **HS19121036-01SD** Units: **mg/L** Analysis Date: **03-Jan-2020 12:12**
Client ID: Run ID: **ICPMS05_353764** SeqNo: **5423043** PrepDate: **27-Dec-2019** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Arsenic	0.00250	0.0250					0.000238	0	10	U

The following samples were analyzed in this batch: HS19121257-02 HS19121257-03

ALS Houston, US Date: 08-Jan-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
WorkOrder: HS19121257

QC BATCH REPORT

Batch ID: R353734 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-200102** Units: **UG/L** Analysis Date: **02-Jan-2020 12:46**
Client ID: Run ID: **VOA6_353734** SeqNo: **5421202** 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	0.50	1.0								U
1,1,2-Trichloroethane	0.50	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	0.50	1.0								U
1,2,3-Trichlorobenzene	0.50	1.0								U
1,2,3-Trichloropropane	0.50	1.0								U
1,2,4-Trichlorobenzene	0.50	1.0								U
1,2,4-Trimethylbenzene	0.50	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	0.50	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	0.50	1.0								U
1,3,5-Trimethylbenzene	0.50	1.0								U
1,3-Dichlorobenzene	0.50	1.0								U
1,3-Dichloropropane	0.50	1.0								U
1,4-Dichlorobenzene	0.50	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	0.50	1.0								U
2-Hexanone	1.0	2.0								U
4-Chlorotoluene	0.50	1.0								U
4-Isopropyltoluene	0.50	1.0								U
4-Methyl-2-pentanone	1.0	2.0								U
Acetone	1.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	0.50	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	0.50	1.0								U
Bromomethane	0.50	1.0								U

ALS Houston, US Date: 08-Jan-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
WorkOrder: HS19121257

QC BATCH REPORT

Batch ID: R353734 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-200102** Units: **UG/L** Analysis Date: **02-Jan-2020 12:46**
Client ID: Run ID: **VOA6_353734** SeqNo: **5421202** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	1.0	2.0								U
Carbon tetrachloride	0.50	1.0								U
Chlorobenzene	0.50	1.0								U
Chloroethane	0.50	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	0.50	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	0.50	1.0								U
Ethylbenzene	0.50	1.0								U
Hexachlorobutadiene	0.50	1.0								U
Isopropylbenzene	0.50	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	1.0	2.0								U
Naphthalene	0.50	1.0								U
n-Butylbenzene	0.50	1.0								U
n-Propylbenzene	0.50	1.0								U
o-Xylene	0.50	1.0								U
sec-Butylbenzene	0.50	1.0								U
Styrene	0.50	1.0								U
tert-Butylbenzene	0.50	1.0								U
Tetrachloroethene	0.50	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*46.95*	*1.0*	*50*	*0*	*93.9*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*50.6*	*1.0*	*50*	*0*	*101*	*85 - 114*				
Surr: Dibromofluoromethane	*47.85*	*1.0*	*50*	*0*	*95.7*	*80 - 119*				
Surr: Toluene-d8	*51.33*	*1.0*	*50*	*0*	*103*	*89 - 112*				

ALS Houston, US Date: 08-Jan-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
WorkOrder: HS19121257

QC BATCH REPORT

Batch ID: R353734 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-200102** Units: **UG/L** Analysis Date: **02-Jan-2020 11:58**
Client ID: Run ID: **VOA6_353734** SeqNo: **5421201** 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	20.51	1.0	20	0	103	78 - 124				
1,1,1-Trichloroethane	20.78	1.0	20	0	104	74 - 131				
1,1,2,2-Tetrachloroethane	21.78	1.0	20	0	109	71 - 121				
1,1,2-Trichloroethane	21.13	1.0	20	0	106	80 - 119				
1,1-Dichloroethane	23.41	1.0	20	0	117	77 - 125				
1,1-Dichloroethene	18.5	1.0	20	0	92.5	71 - 131				
1,1-Dichloropropene	21.22	1.0	20	0	106	78 - 125				
1,2,3-Trichlorobenzene	26.79	1.0	20	0	134	69 - 129				S
1,2,3-Trichloropropane	22.17	1.0	20	0	111	73 - 122				
1,2,4-Trichlorobenzene	23.14	1.0	20	0	116	69 - 130				
1,2,4-Trimethylbenzene	22.04	1.0	20	0	110	76 - 124				
1,2-Dibromo-3-chloropropane	20.77	1.0	20	0	104	62 - 128				
1,2-Dibromoethane	20.49	1.0	20	0	102	77 - 121				
1,2-Dichlorobenzene	20.59	1.0	20	0	103	80 - 119				
1,2-Dichloroethane	20.41	1.0	20	0	102	73 - 128				
1,2-Dichloropropane	21.89	1.0	20	0	109	78 - 122				
1,3,5-Trimethylbenzene	22.48	1.0	20	0	112	75 - 124				
1,3-Dichlorobenzene	20.89	1.0	20	0	104	80 - 119				
1,3-Dichloropropane	21.56	1.0	20	0	108	80 - 119				
1,4-Dichlorobenzene	20.56	1.0	20	0	103	79 - 118				
2,2-Dichloropropane	21.09	1.0	20	0	105	60 - 139				
2-Butanone	45.04	2.0	40	0	113	56 - 143				
2-Chlorotoluene	23.4	1.0	20	0	117	79 - 122				
2-Hexanone	41.42	2.0	40	0	104	57 - 139				
4-Chlorotoluene	22.1	1.0	20	0	111	78 - 122				
4-Isopropyltoluene	21.78	1.0	20	0	109	77 - 127				
4-Methyl-2-pentanone	41.53	2.0	40	0	104	67 - 130				
Acetone	45.36	2.0	40	0	113	39 - 160				
Benzene	22.85	1.0	20	0	114	79 - 120				
Bromobenzene	21.04	1.0	20	0	105	80 - 120				
Bromochloromethane	21.54	1.0	20	0	108	78 - 123				
Bromodichloromethane	20.7	1.0	20	0	104	79 - 125				
Bromoform	19.48	1.0	20	0	97.4	66 - 130				
Bromomethane	15.08	1.0	20	0	75.4	53 - 141				

ALS Houston, US Date: 08-Jan-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
WorkOrder: HS19121257

QC BATCH REPORT

Batch ID: R353734 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-200102** Units: **UG/L** Analysis Date: **02-Jan-2020 11:58**
Client ID: Run ID: **VOA6_353734** SeqNo: **5421201** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	47.72	2.0	40	0	119	64 - 133				
Carbon tetrachloride	19.13	1.0	20	0	95.6	72 - 136				
Chlorobenzene	20.34	1.0	20	0	102	82 - 118				
Chloroethane	19.4	1.0	20	0	97.0	60 - 138				
Chloroform	20.49	1.0	20	0	102	79 - 124				
Chloromethane	19.08	1.0	20	0	95.4	50 - 139				
cis-1,2-Dichloroethene	22.6	1.0	20	0	113	78 - 123				
cis-1,3-Dichloropropene	22.01	1.0	20	0	110	75 - 124				
Dibromochloromethane	20.37	1.0	20	0	102	74 - 126				
Dibromomethane	20.47	1.0	20	0	102	79 - 123				
Dichlorodifluoromethane	21.42	1.0	20	0	107	32 - 152				
Ethylbenzene	21.13	1.0	20	0	106	79 - 121				
Hexachlorobutadiene	20.81	1.0	20	0	104	66 - 134				
Isopropylbenzene	20.72	1.0	20	0	104	72 - 131				
m,p-Xylene	42.02	2.0	40	0	105	80 - 121				
Methylene chloride	22.02	2.0	20	0	110	74 - 124				
Naphthalene	21.46	1.0	20	0	107	61 - 128				
n-Butylbenzene	21.66	1.0	20	0	108	75 - 128				
n-Propylbenzene	22.54	1.0	20	0	113	76 - 126				
o-Xylene	20.89	1.0	20	0	104	78 - 122				
sec-Butylbenzene	21.89	1.0	20	0	109	77 - 126				
Styrene	21.01	1.0	20	0	105	78 - 123				
tert-Butylbenzene	21.97	1.0	20	0	110	78 - 124				
Tetrachloroethene	19.33	1.0	20	0	96.6	74 - 129				
Toluene	21.62	1.0	20	0	108	80 - 121				
trans-1,2-Dichloroethene	22.47	1.0	20	0	112	75 - 124				
trans-1,3-Dichloropropene	21.64	1.0	20	0	108	73 - 127				
Trichloroethene	20.57	1.0	20	0	103	79 - 123				
Trichlorofluoromethane	18.39	1.0	20	0	91.9	65 - 141				
Vinyl chloride	21.77	1.0	20	0	109	58 - 137				
Surr: 1,2-Dichloroethane-d4	*52.11*	*1.0*	*50*	*0*	*104*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*51.92*	*1.0*	*50*	*0*	*104*	*85 - 114*				
Surr: Dibromofluoromethane	*51.17*	*1.0*	*50*	*0*	*102*	*80 - 119*				
Surr: Toluene-d8	*49.02*	*1.0*	*50*	*0*	*98.0*	*89 - 112*				

ALS Houston, US Date: 08-Jan-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
WorkOrder: HS19121257

QC BATCH REPORT

Batch ID: R353734 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS19121257-01MS** Units: **UG/L** Analysis Date: **02-Jan-2020 17:11**
Client ID: **35AWW01_122019** Run ID: **VOA6_353734** SeqNo: **5422710** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.85	1.0	20	0	99.2	78 - 124				
1,1,1-Trichloroethane	19.9	1.0	20	0	99.5	74 - 131				
1,1,2,2-Tetrachloroethane	21.6	1.0	20	0	108	71 - 121				
1,1,2-Trichloroethane	20.5	1.0	20	0	102	80 - 119				
1,1-Dichloroethane	21.56	1.0	20	0	108	77 - 125				
1,1-Dichloroethene	18.21	1.0	20	0	91.1	71 - 131				
1,1-Dichloropropene	21	1.0	20	0	105	78 - 125				
1,2,3-Trichlorobenzene	25.55	1.0	20	0	128	69 - 129				
1,2,3-Trichloropropane	21.96	1.0	20	0	110	73 - 122				
1,2,4-Trichlorobenzene	22.84	1.0	20	0	114	69 - 130				
1,2,4-Trimethylbenzene	22.78	1.0	20	0	114	76 - 124				
1,2-Dibromo-3-chloropropane	20.7	1.0	20	0	103	62 - 128				
1,2-Dibromoethane	19.57	1.0	20	0	97.9	77 - 121				
1,2-Dichlorobenzene	20.61	1.0	20	0	103	80 - 119				
1,2-Dichloroethane	19.09	1.0	20	0	95.5	73 - 128				
1,2-Dichloropropane	20.85	1.0	20	0	104	78 - 122				
1,3,5-Trimethylbenzene	23.37	1.0	20	0	117	75 - 124				
1,3-Dichlorobenzene	21.65	1.0	20	0	108	80 - 119				
1,3-Dichloropropane	20.68	1.0	20	0	103	80 - 119				
1,4-Dichlorobenzene	20.88	1.0	20	0	104	79 - 118				
2,2-Dichloropropane	20.13	1.0	20	0	101	60 - 139				
2-Butanone	37.73	2.0	40	0	94.3	56 - 143				
2-Chlorotoluene	24.36	1.0	20	0	122	79 - 122				
2-Hexanone	39.14	2.0	40	0	97.9	57 - 139				
4-Chlorotoluene	22.94	1.0	20	0	115	78 - 122				
4-Isopropyltoluene	23.16	1.0	20	0	116	77 - 127				
4-Methyl-2-pentanone	41.97	2.0	40	0	105	67 - 130				
Acetone	27.69	2.0	40	0	69.2	39 - 160				
Benzene	21.47	1.0	20	0	107	79 - 120				
Bromobenzene	21.32	1.0	20	0	107	80 - 120				
Bromochloromethane	18.92	1.0	20	0	94.6	78 - 123				
Bromodichloromethane	19.15	1.0	20	0	95.7	79 - 125				
Bromoform	18.43	1.0	20	0	92.2	66 - 130				
Bromomethane	12.02	1.0	20	0	60.1	53 - 141				

ALS Houston, US Date: 08-Jan-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
WorkOrder: HS19121257

QC BATCH REPORT

Batch ID: R353734 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS19121257-01MS** Units: **UG/L** Analysis Date: **02-Jan-2020 17:11**
Client ID: **35AWW01_122019** Run ID: **VOA6_353734** SeqNo: **5422710** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	46.13	2.0	40	0	115	64 - 133				
Carbon tetrachloride	19.34	1.0	20	0	96.7	72 - 136				
Chlorobenzene	19.95	1.0	20	0	99.8	82 - 118				
Chloroethane	18.38	1.0	20	0	91.9	60 - 138				
Chloroform	18.87	1.0	20	0	94.4	79 - 124				
Chloromethane	18.66	1.0	20	0	93.3	50 - 139				
cis-1,2-Dichloroethene	21.05	1.0	20	0	105	78 - 123				
cis-1,3-Dichloropropene	20.5	1.0	20	0	102	75 - 124				
Dibromochloromethane	19.65	1.0	20	0	98.3	74 - 126				
Dibromomethane	18.61	1.0	20	0	93.0	79 - 123				
Dichlorodifluoromethane	22.57	1.0	20	0	113	32 - 152				
Ethylbenzene	21.03	1.0	20	0	105	79 - 121				
Hexachlorobutadiene	20.68	1.0	20	0	103	66 - 134				
Isopropylbenzene	21.08	1.0	20	0	105	72 - 131				
m,p-Xylene	41.88	2.0	40	0	105	80 - 121				
Methylene chloride	19.86	2.0	20	0	99.3	74 - 124				
Naphthalene	21.13	1.0	20	0	106	61 - 128				
n-Butylbenzene	23.26	1.0	20	0	116	75 - 128				
n-Propylbenzene	23.99	1.0	20	0	120	76 - 126				
o-Xylene	20.42	1.0	20	0	102	78 - 122				
sec-Butylbenzene	23.75	1.0	20	0	119	77 - 126				
Styrene	20.08	1.0	20	0	100	78 - 123				
tert-Butylbenzene	23.59	1.0	20	0	118	78 - 124				
Tetrachloroethene	19.67	1.0	20	0	98.3	74 - 129				
Toluene	21.49	1.0	20	0	107	80 - 121				
trans-1,2-Dichloroethene	21.24	1.0	20	0	106	75 - 124				
trans-1,3-Dichloropropene	19.8	1.0	20	0	99.0	73 - 127				
Trichloroethene	19.76	1.0	20	0	98.8	79 - 123				
Trichlorofluoromethane	18.46	1.0	20	0	92.3	65 - 141				
Vinyl chloride	22.06	1.0	20	0	110	58 - 137				
Surr: 1,2-Dichloroethane-d4	*48.37*	*1.0*	*50*	*0*	*96.7*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*50.75*	*1.0*	*50*	*0*	*102*	*85 - 114*				
Surr: Dibromofluoromethane	*48.75*	*1.0*	*50*	*0*	*97.5*	*80 - 119*				
Surr: Toluene-d8	*51.66*	*1.0*	*50*	*0*	*103*	*89 - 112*				

ALS Houston, US Date: 08-Jan-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
WorkOrder: HS19121257

QC BATCH REPORT

Batch ID: R353734 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS19121257-01MSD** Units: **UG/L** Analysis Date: **02-Jan-2020 17:35**
Client ID: **35AWW01_122019** Run ID: **VOA6_353734** SeqNo: **5422711** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.53	1.0	20	0	97.6	78 - 124	19.85	1.63	20	
1,1,1-Trichloroethane	19.2	1.0	20	0	96.0	74 - 131	19.9	3.56	20	
1,1,2,2-Tetrachloroethane	21.21	1.0	20	0	106	71 - 121	21.6	1.84	20	
1,1,2-Trichloroethane	19.88	1.0	20	0	99.4	80 - 119	20.5	3.07	20	
1,1-Dichloroethane	20.78	1.0	20	0	104	77 - 125	21.56	3.7	20	
1,1-Dichloroethene	17.3	1.0	20	0	86.5	71 - 131	18.21	5.16	20	
1,1-Dichloropropene	20.04	1.0	20	0	100	78 - 125	21	4.71	20	
1,2,3-Trichlorobenzene	21.42	1.0	20	0	107	69 - 129	25.55	17.6	20	
1,2,3-Trichloropropane	21.47	1.0	20	0	107	73 - 122	21.96	2.28	20	
1,2,4-Trichlorobenzene	19.08	1.0	20	0	95.4	69 - 130	22.84	17.9	20	
1,2,4-Trimethylbenzene	22.19	1.0	20	0	111	76 - 124	22.78	2.6	20	
1,2-Dibromo-3-chloropropane	18.93	1.0	20	0	94.7	62 - 128	20.7	8.91	20	
1,2-Dibromoethane	19.19	1.0	20	0	95.9	77 - 121	19.57	1.97	20	
1,2-Dichlorobenzene	20.22	1.0	20	0	101	80 - 119	20.61	1.9	20	
1,2-Dichloroethane	18.77	1.0	20	0	93.9	73 - 128	19.09	1.7	20	
1,2-Dichloropropane	20.04	1.0	20	0	100	78 - 122	20.85	3.97	20	
1,3,5-Trimethylbenzene	22.87	1.0	20	0	114	75 - 124	23.37	2.15	20	
1,3-Dichlorobenzene	20.86	1.0	20	0	104	80 - 119	21.65	3.72	20	
1,3-Dichloropropane	20.38	1.0	20	0	102	80 - 119	20.68	1.45	20	
1,4-Dichlorobenzene	20.39	1.0	20	0	102	79 - 118	20.88	2.38	20	
2,2-Dichloropropane	19.29	1.0	20	0	96.4	60 - 139	20.13	4.3	20	
2-Butanone	36.76	2.0	40	0	91.9	56 - 143	37.73	2.62	20	
2-Chlorotoluene	23.67	1.0	20	0	118	79 - 122	24.36	2.91	20	
2-Hexanone	38.23	2.0	40	0	95.6	57 - 139	39.14	2.35	20	
4-Chlorotoluene	22.46	1.0	20	0	112	78 - 122	22.94	2.14	20	
4-Isopropyltoluene	22.35	1.0	20	0	112	77 - 127	23.16	3.57	20	
4-Methyl-2-pentanone	41.18	2.0	40	0	103	67 - 130	41.97	1.91	20	
Acetone	26.05	2.0	40	0	65.1	39 - 160	27.69	6.1	20	
Benzene	20.61	1.0	20	0	103	79 - 120	21.47	4.1	20	
Bromobenzene	21.11	1.0	20	0	106	80 - 120	21.32	1	20	
Bromochloromethane	18.44	1.0	20	0	92.2	78 - 123	18.92	2.55	20	
Bromodichloromethane	18.93	1.0	20	0	94.7	79 - 125	19.15	1.13	20	
Bromoform	17.97	1.0	20	0	89.8	66 - 130	18.43	2.55	20	
Bromomethane	11.7	1.0	20	0	58.5	53 - 141	12.02	2.7	20	

ALS Houston, US Date: 08-Jan-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
WorkOrder: HS19121257

QC BATCH REPORT

Batch ID: R353734 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS19121257-01MSD** Units: **UG/L** Analysis Date: **02-Jan-2020 17:35**
Client ID: **35AWW01_122019** Run ID: **VOA6_353734** SeqNo: **5422711** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	43.46	2.0	40	0	109	64 - 133	46.13	5.95	20	
Carbon tetrachloride	18.58	1.0	20	0	92.9	72 - 136	19.34	3.99	20	
Chlorobenzene	19.29	1.0	20	0	96.5	82 - 118	19.95	3.36	20	
Chloroethane	17.86	1.0	20	0	89.3	60 - 138	18.38	2.85	20	
Chloroform	18.41	1.0	20	0	92.1	79 - 124	18.87	2.48	20	
Chloromethane	17.73	1.0	20	0	88.7	50 - 139	18.66	5.11	20	
cis-1,2-Dichloroethene	19.97	1.0	20	0	99.8	78 - 123	21.05	5.27	20	
cis-1,3-Dichloropropene	19.78	1.0	20	0	98.9	75 - 124	20.5	3.54	20	
Dibromochloromethane	19.1	1.0	20	0	95.5	74 - 126	19.65	2.88	20	
Dibromomethane	18.25	1.0	20	0	91.3	79 - 123	18.61	1.92	20	
Dichlorodifluoromethane	20.89	1.0	20	0	104	32 - 152	22.57	7.74	20	
Ethylbenzene	20.52	1.0	20	0	103	79 - 121	21.03	2.44	20	
Hexachlorobutadiene	16.58	1.0	20	0	82.9	66 - 134	20.68	22	20	R
Isopropylbenzene	20.46	1.0	20	0	102	72 - 131	21.08	2.98	20	
m,p-Xylene	40.86	2.0	40	0	102	80 - 121	41.88	2.47	20	
Methylene chloride	19.05	2.0	20	0	95.3	74 - 124	19.86	4.16	20	
Naphthalene	19.35	1.0	20	0	96.7	61 - 128	21.13	8.82	20	
n-Butylbenzene	22.5	1.0	20	0	113	75 - 128	23.26	3.3	20	
n-Propylbenzene	23.25	1.0	20	0	116	76 - 126	23.99	3.13	20	
o-Xylene	20.08	1.0	20	0	100	78 - 122	20.42	1.68	20	
sec-Butylbenzene	23.08	1.0	20	0	115	77 - 126	23.75	2.85	20	
Styrene	19.82	1.0	20	0	99.1	78 - 123	20.08	1.32	20	
tert-Butylbenzene	22.73	1.0	20	0	114	78 - 124	23.59	3.7	20	
Tetrachloroethene	18.97	1.0	20	0	94.8	74 - 129	19.67	3.61	20	
Toluene	20.73	1.0	20	0	104	80 - 121	21.49	3.58	20	
trans-1,2-Dichloroethene	20.05	1.0	20	0	100	75 - 124	21.24	5.77	20	
trans-1,3-Dichloropropene	19.47	1.0	20	0	97.3	73 - 127	19.8	1.68	20	
Trichloroethene	19.21	1.0	20	0	96.0	79 - 123	19.76	2.83	20	
Trichlorofluoromethane	17.43	1.0	20	0	87.2	65 - 141	18.46	5.69	20	
Vinyl chloride	20.19	1.0	20	0	101	58 - 137	22.06	8.85	20	
Surr: 1,2-Dichloroethane-d4	*48.06*	*1.0*	*50*	*0*	*96.1*	*81 - 118*	*48.37*	*0.655*	*20*	
Surr: 4-Bromofluorobenzene	*50.59*	*1.0*	*50*	*0*	*101*	*85 - 114*	*50.75*	*0.332*	*20*	
Surr: Dibromofluoromethane	*48.53*	*1.0*	*50*	*0*	*97.1*	*80 - 119*	*48.75*	*0.459*	*20*	
Surr: Toluene-d8	*51.47*	*1.0*	*50*	*0*	*103*	*89 - 112*	*51.66*	*0.38*	*20*	

ALS Houston, US Date: 08-Jan-20

Client:	Bhate Environmental Associates, Inc.
Project:	LHAAP/SITE58
WorkOrder:	HS19121257

QC BATCH REPORT

Batch ID:	**R353734 (0)**	**Instrument:**	**VOA6**	**Method:**	**VOLATILES ORGANICS BY METHOD 8260C**

The following samples were analyzed in this batch:	HS19121257-01	HS19121257-02	HS19121257-03	HS19121257-04

ALS Houston, US Date: 08-Jan-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
WorkOrder: HS19121257

QC BATCH REPORT

Batch ID: R353818 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-200103** Units: **UG/L** Analysis Date: **03-Jan-2020 15:10**
Client ID: Run ID: **VOA6_353818** SeqNo: **5423601** 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	0.50	1.0								U
1,1,2-Trichloroethane	0.50	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	0.50	1.0								U
1,2,3-Trichlorobenzene	0.50	1.0								U
1,2,3-Trichloropropane	0.50	1.0								U
1,2,4-Trichlorobenzene	0.50	1.0								U
1,2,4-Trimethylbenzene	0.50	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	0.50	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	0.50	1.0								U
1,3,5-Trimethylbenzene	0.50	1.0								U
1,3-Dichlorobenzene	0.50	1.0								U
1,3-Dichloropropane	0.50	1.0								U
1,4-Dichlorobenzene	0.50	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	0.50	1.0								U
2-Hexanone	1.0	2.0								U
4-Chlorotoluene	0.50	1.0								U
4-Isopropyltoluene	0.50	1.0								U
4-Methyl-2-pentanone	1.0	2.0								U
Acetone	1.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	0.50	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	0.50	1.0								U
Bromomethane	0.50	1.0								U

ALS Houston, US Date: 08-Jan-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
WorkOrder: HS19121257

QC BATCH REPORT

Batch ID: R353818 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-200103** Units: **UG/L** Analysis Date: **03-Jan-2020 15:10**
Client ID: Run ID: **VOA6_353818** SeqNo: **5423601** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	1.0	2.0								U
Carbon tetrachloride	0.50	1.0								U
Chlorobenzene	0.50	1.0								U
Chloroethane	0.50	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	0.50	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	0.50	1.0								U
Ethylbenzene	0.50	1.0								U
Hexachlorobutadiene	0.50	1.0								U
Isopropylbenzene	0.50	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	1.0	2.0								U
Naphthalene	0.50	1.0								U
n-Butylbenzene	0.50	1.0								U
n-Propylbenzene	0.50	1.0								U
o-Xylene	0.50	1.0								U
sec-Butylbenzene	0.50	1.0								U
Styrene	0.50	1.0								U
tert-Butylbenzene	0.50	1.0								U
Tetrachloroethene	0.50	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*49.87*	*1.0*	*50*	*0*	*99.7*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*50.04*	*1.0*	*50*	*0*	*100*	*85 - 114*				
Surr: Dibromofluoromethane	*48.57*	*1.0*	*50*	*0*	*97.1*	*80 - 119*				
Surr: Toluene-d8	*51.27*	*1.0*	*50*	*0*	*103*	*89 - 112*				

ALS Houston, US Date: 08-Jan-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
WorkOrder: HS19121257

QC BATCH REPORT

Batch ID: R353818 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-200103** Units: **UG/L** Analysis Date: **03-Jan-2020 14:22**
Client ID: Run ID: **VOA6_353818** SeqNo: **5423600** 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	20.56	1.0	20	0	103	78 - 124				
1,1,1-Trichloroethane	21.61	1.0	20	0	108	74 - 131				
1,1,2,2-Tetrachloroethane	22.09	1.0	20	0	110	71 - 121				
1,1,2-Trichloroethane	21.64	1.0	20	0	108	80 - 119				
1,1-Dichloroethane	24.25	1.0	20	0	121	77 - 125				
1,1-Dichloroethene	19.16	1.0	20	0	95.8	71 - 131				
1,1-Dichloropropene	20.95	1.0	20	0	105	78 - 125				
1,2,3-Trichlorobenzene	26.15	1.0	20	0	131	69 - 129				S
1,2,3-Trichloropropane	22.56	1.0	20	0	113	73 - 122				
1,2,4-Trichlorobenzene	23.24	1.0	20	0	116	69 - 130				
1,2,4-Trimethylbenzene	21.52	1.0	20	0	108	76 - 124				
1,2-Dibromo-3-chloropropane	19.13	1.0	20	0	95.7	62 - 128				
1,2-Dibromoethane	20.59	1.0	20	0	103	77 - 121				
1,2-Dichlorobenzene	20.45	1.0	20	0	102	80 - 119				
1,2-Dichloroethane	21.28	1.0	20	0	106	73 - 128				
1,2-Dichloropropane	22.64	1.0	20	0	113	78 - 122				
1,3,5-Trimethylbenzene	21.98	1.0	20	0	110	75 - 124				
1,3-Dichlorobenzene	20.76	1.0	20	0	104	80 - 119				
1,3-Dichloropropane	21.88	1.0	20	0	109	80 - 119				
1,4-Dichlorobenzene	20.27	1.0	20	0	101	79 - 118				
2,2-Dichloropropane	22.09	1.0	20	0	110	60 - 139				
2-Butanone	46.15	2.0	40	0	115	56 - 143				
2-Chlorotoluene	23.3	1.0	20	0	116	79 - 122				
2-Hexanone	41.4	2.0	40	0	103	57 - 139				
4-Chlorotoluene	22.28	1.0	20	0	111	78 - 122				
4-Isopropyltoluene	20.74	1.0	20	0	104	77 - 127				
4-Methyl-2-pentanone	42.57	2.0	40	0	106	67 - 130				
Acetone	44.68	2.0	40	0	112	39 - 160				
Benzene	22.89	1.0	20	0	114	79 - 120				
Bromobenzene	21.42	1.0	20	0	107	80 - 120				
Bromochloromethane	21.42	1.0	20	0	107	78 - 123				
Bromodichloromethane	21.53	1.0	20	0	108	79 - 125				
Bromoform	19.43	1.0	20	0	97.2	66 - 130				
Bromomethane	15.71	1.0	20	0	78.6	53 - 141				

ALS Houston, US Date: 08-Jan-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
WorkOrder: HS19121257

QC BATCH REPORT

Batch ID: R353818 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-200103** Units: **UG/L** Analysis Date: **03-Jan-2020 14:22**
Client ID: Run ID: **VOA6_353818** SeqNo: **5423600** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	48.51	2.0	40	0	121	64 - 133				
Carbon tetrachloride	18.91	1.0	20	0	94.5	72 - 136				
Chlorobenzene	20.85	1.0	20	0	104	82 - 118				
Chloroethane	20.05	1.0	20	0	100	60 - 138				
Chloroform	21.85	1.0	20	0	109	79 - 124				
Chloromethane	20.12	1.0	20	0	101	50 - 139				
cis-1,2-Dichloroethene	23.63	1.0	20	0	118	78 - 123				
cis-1,3-Dichloropropene	22.76	1.0	20	0	114	75 - 124				
Dibromochloromethane	20.69	1.0	20	0	103	74 - 126				
Dibromomethane	20.72	1.0	20	0	104	79 - 123				
Dichlorodifluoromethane	20.97	1.0	20	0	105	32 - 152				
Ethylbenzene	20.85	1.0	20	0	104	79 - 121				
Hexachlorobutadiene	20.58	1.0	20	0	103	66 - 134				
Isopropylbenzene	19.64	1.0	20	0	98.2	72 - 131				
m,p-Xylene	41.2	2.0	40	0	103	80 - 121				
Methylene chloride	22.76	2.0	20	0	114	74 - 124				
Naphthalene	21.59	1.0	20	0	108	61 - 128				
n-Butylbenzene	20.84	1.0	20	0	104	75 - 128				
n-Propylbenzene	21.97	1.0	20	0	110	76 - 126				
o-Xylene	20.48	1.0	20	0	102	78 - 122				
sec-Butylbenzene	20.92	1.0	20	0	105	77 - 126				
Styrene	20.4	1.0	20	0	102	78 - 123				
tert-Butylbenzene	21.24	1.0	20	0	106	78 - 124				
Tetrachloroethene	18.52	1.0	20	0	92.6	74 - 129				
Toluene	21.67	1.0	20	0	108	80 - 121				
trans-1,2-Dichloroethene	23.26	1.0	20	0	116	75 - 124				
trans-1,3-Dichloropropene	22.17	1.0	20	0	111	73 - 127				
Trichloroethene	21.01	1.0	20	0	105	79 - 123				
Trichlorofluoromethane	17.89	1.0	20	0	89.5	65 - 141				
Vinyl chloride	22.3	1.0	20	0	111	58 - 137				
Surr: 1,2-Dichloroethane-d4	*57.35*	*1.0*	*50*	*0*	*115*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*53.88*	*1.0*	*50*	*0*	*108*	*85 - 114*				
Surr: Dibromofluoromethane	*54.72*	*1.0*	*50*	*0*	*109*	*80 - 119*				
Surr: Toluene-d8	*51.4*	*1.0*	*50*	*0*	*103*	*89 - 112*				

ALS Houston, US Date: 08-Jan-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
WorkOrder: HS19121257

QC BATCH REPORT

Batch ID: R353818 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS19121484-01MS** Units: **UG/L** Analysis Date: **03-Jan-2020 19:11**
Client ID: Run ID: **VOA6_353818** SeqNo: **5424214** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.3	1.0	20	0	96.5	78 - 124				
1,1,1-Trichloroethane	19.73	1.0	20	0	98.7	74 - 131				
1,1,2,2-Tetrachloroethane	21.21	1.0	20	0	106	71 - 121				
1,1,2-Trichloroethane	20.4	1.0	20	0	102	80 - 119				
1,1-Dichloroethane	21.08	1.0	20	0	105	77 - 125				
1,1-Dichloroethene	17.81	1.0	20	0	89.0	71 - 131				
1,1-Dichloropropene	20.63	1.0	20	0	103	78 - 125				
1,2,3-Trichlorobenzene	26.03	1.0	20	0	130	69 - 129				S
1,2,3-Trichloropropane	21.65	1.0	20	0	108	73 - 122				
1,2,4-Trichlorobenzene	22.98	1.0	20	0	115	69 - 130				
1,2,4-Trimethylbenzene	21.95	1.0	20	0	110	76 - 124				
1,2-Dibromo-3-chloropropane	20.69	1.0	20	0	103	62 - 128				
1,2-Dibromoethane	19.7	1.0	20	0	98.5	77 - 121				
1,2-Dichlorobenzene	20.38	1.0	20	0	102	80 - 119				
1,2-Dichloroethane	20.18	1.0	20	1.477	93.5	73 - 128				
1,2-Dichloropropane	20.35	1.0	20	0	102	78 - 122				
1,3,5-Trimethylbenzene	22.62	1.0	20	0	113	75 - 124				
1,3-Dichlorobenzene	20.94	1.0	20	0	105	80 - 119				
1,3-Dichloropropane	20.51	1.0	20	0	103	80 - 119				
1,4-Dichlorobenzene	20.18	1.0	20	0	101	79 - 118				
2,2-Dichloropropane	19.45	1.0	20	0	97.3	60 - 139				
2-Butanone	38.44	2.0	40	0	96.1	56 - 143				
2-Chlorotoluene	23.7	1.0	20	0	118	79 - 122				
2-Hexanone	39.88	2.0	40	0	99.7	57 - 139				
4-Chlorotoluene	22.36	1.0	20	0	112	78 - 122				
4-Isopropyltoluene	22.42	1.0	20	0	112	77 - 127				
4-Methyl-2-pentanone	41.67	2.0	40	0	104	67 - 130				
Acetone	28.87	2.0	40	0	72.2	39 - 160				
Benzene	20.83	1.0	20	0	104	79 - 120				
Bromobenzene	21.07	1.0	20	0	105	80 - 120				
Bromochloromethane	18.68	1.0	20	0	93.4	78 - 123				
Bromodichloromethane	19.05	1.0	20	0	95.2	79 - 125				
Bromoform	18.33	1.0	20	0	91.6	66 - 130				
Bromomethane	12.1	1.0	20	0	60.5	53 - 141				

ALS Houston, US Date: 08-Jan-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
WorkOrder: HS19121257

QC BATCH REPORT

Batch ID: R353818 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS19121484-01MS** Units: **UG/L** Analysis Date: **03-Jan-2020 19:11**
Client ID: Run ID: **VOA6_353818** SeqNo: **5424214** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	43.97	2.0	40	0	110	64 - 133				
Carbon tetrachloride	19.1	1.0	20	0	95.5	72 - 136				
Chlorobenzene	19.49	1.0	20	0	97.5	82 - 118				
Chloroethane	18.2	1.0	20	0	91.0	60 - 138				
Chloroform	18.52	1.0	20	0	92.6	79 - 124				
Chloromethane	17.94	1.0	20	0	89.7	50 - 139				
cis-1,2-Dichloroethene	52.56	1.0	20	32.16	102	78 - 123				
cis-1,3-Dichloropropene	19.99	1.0	20	0	99.9	75 - 124				
Dibromochloromethane	19.34	1.0	20	0	96.7	74 - 126				
Dibromomethane	18.69	1.0	20	0	93.4	79 - 123				
Dichlorodifluoromethane	21.4	1.0	20	0	107	32 - 152				
Ethylbenzene	20.8	1.0	20	0	104	79 - 121				
Hexachlorobutadiene	20.47	1.0	20	0	102	66 - 134				
Isopropylbenzene	20.73	1.0	20	0	104	72 - 131				
m,p-Xylene	40.76	2.0	40	0	102	80 - 121				
Methylene chloride	20.27	2.0	20	0	101	74 - 124				
Naphthalene	21.29	1.0	20	0	106	61 - 128				
n-Butylbenzene	22.42	1.0	20	0	112	75 - 128				
n-Propylbenzene	23.29	1.0	20	0	116	76 - 126				
o-Xylene	20.21	1.0	20	0	101	78 - 122				
sec-Butylbenzene	22.66	1.0	20	0	113	77 - 126				
Styrene	19.43	1.0	20	0	97.2	78 - 123				
tert-Butylbenzene	22.97	1.0	20	0	115	78 - 124				
Tetrachloroethene	19.33	1.0	20	0	96.6	74 - 129				
Toluene	20.94	1.0	20	0	105	80 - 121				
trans-1,2-Dichloroethene	20.28	1.0	20	0	101	75 - 124				
trans-1,3-Dichloropropene	19.34	1.0	20	0	96.7	73 - 127				
Trichloroethene	24.42	1.0	20	4.834	97.9	79 - 123				
Trichlorofluoromethane	17.97	1.0	20	0	89.9	65 - 141				
Vinyl chloride	21.43	1.0	20	0	107	58 - 137				
Surr: 1,2-Dichloroethane-d4	*49.39*	*1.0*	*50*	*0*	*98.8*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*50.59*	*1.0*	*50*	*0*	*101*	*85 - 114*				
Surr: Dibromofluoromethane	*48.45*	*1.0*	*50*	*0*	*96.9*	*80 - 119*				
Surr: Toluene-d8	*51.05*	*1.0*	*50*	*0*	*102*	*89 - 112*				

ALS Houston, US Date: 08-Jan-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
WorkOrder: HS19121257

QC BATCH REPORT

Batch ID: R353818 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS19121484-01MSD** Units: **UG/L** Analysis Date: **03-Jan-2020 19:35**
Client ID: Run ID: **VOA6_353818** SeqNo: **5424215** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	18.89	1.0	20	0	94.5	78 - 124	19.3	2.14	20	
1,1,1-Trichloroethane	18.74	1.0	20	0	93.7	74 - 131	19.73	5.18	20	
1,1,2,2-Tetrachloroethane	20.36	1.0	20	0	102	71 - 121	21.21	4.1	20	
1,1,2-Trichloroethane	19.75	1.0	20	0	98.8	80 - 119	20.4	3.23	20	
1,1-Dichloroethane	20.23	1.0	20	0	101	77 - 125	21.08	4.12	20	
1,1-Dichloroethene	16.57	1.0	20	0	82.9	71 - 131	17.81	7.19	20	
1,1-Dichloropropene	19.5	1.0	20	0	97.5	78 - 125	20.63	5.66	20	
1,2,3-Trichlorobenzene	23.55	1.0	20	0	118	69 - 129	26.03	10	20	
1,2,3-Trichloropropane	20.98	1.0	20	0	105	73 - 122	21.65	3.16	20	
1,2,4-Trichlorobenzene	20.14	1.0	20	0	101	69 - 130	22.98	13.2	20	
1,2,4-Trimethylbenzene	21.2	1.0	20	0	106	76 - 124	21.95	3.46	20	
1,2-Dibromo-3-chloropropane	19.89	1.0	20	0	99.4	62 - 128	20.69	3.97	20	
1,2-Dibromoethane	18.91	1.0	20	0	94.6	77 - 121	19.7	4.08	20	
1,2-Dichlorobenzene	19.53	1.0	20	0	97.6	80 - 119	20.38	4.29	20	
1,2-Dichloroethane	19.96	1.0	20	1.477	92.4	73 - 128	20.18	1.09	20	
1,2-Dichloropropane	20.04	1.0	20	0	100	78 - 122	20.35	1.55	20	
1,3,5-Trimethylbenzene	21.79	1.0	20	0	109	75 - 124	22.62	3.73	20	
1,3-Dichlorobenzene	20.02	1.0	20	0	100	80 - 119	20.94	4.49	20	
1,3-Dichloropropane	19.89	1.0	20	0	99.4	80 - 119	20.51	3.06	20	
1,4-Dichlorobenzene	19.77	1.0	20	0	98.9	79 - 118	20.18	2.04	20	
2,2-Dichloropropane	18.54	1.0	20	0	92.7	60 - 139	19.45	4.82	20	
2-Butanone	37.18	2.0	40	0	92.9	56 - 143	38.44	3.34	20	
2-Chlorotoluene	22.44	1.0	20	0	112	79 - 122	23.7	5.45	20	
2-Hexanone	38.07	2.0	40	0	95.2	57 - 139	39.88	4.66	20	
4-Chlorotoluene	21.47	1.0	20	0	107	78 - 122	22.36	4.08	20	
4-Isopropyltoluene	21.11	1.0	20	0	106	77 - 127	22.42	6.03	20	
4-Methyl-2-pentanone	39.31	2.0	40	0	98.3	67 - 130	41.67	5.83	20	
Acetone	27.28	2.0	40	0	68.2	39 - 160	28.87	5.68	20	
Benzene	20.01	1.0	20	0	100	79 - 120	20.83	4.04	20	
Bromobenzene	20.03	1.0	20	0	100	80 - 120	21.07	5.06	20	
Bromochloromethane	17.97	1.0	20	0	89.9	78 - 123	18.68	3.87	20	
Bromodichloromethane	18.8	1.0	20	0	94.0	79 - 125	19.05	1.3	20	
Bromoform	17.89	1.0	20	0	89.4	66 - 130	18.33	2.45	20	
Bromomethane	11.6	1.0	20	0	58.0	53 - 141	12.1	4.24	20	

ALS Houston, US Date: 08-Jan-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
WorkOrder: HS19121257

QC BATCH REPORT

Batch ID: R353818 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS19121484-01MSD** Units: **UG/L** Analysis Date: **03-Jan-2020 19:35**
Client ID: Run ID: **VOA6_353818** SeqNo: **5424215** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	40.98	2.0	40	0	102	64 - 133	43.97	7.04	20	
Carbon tetrachloride	18.29	1.0	20	0	91.5	72 - 136	19.1	4.34	20	
Chlorobenzene	18.95	1.0	20	0	94.8	82 - 118	19.49	2.83	20	
Chloroethane	16.93	1.0	20	0	84.6	60 - 138	18.2	7.22	20	
Chloroform	18.12	1.0	20	0	90.6	79 - 124	18.52	2.17	20	
Chloromethane	16.9	1.0	20	0	84.5	50 - 139	17.94	5.96	20	
cis-1,2-Dichloroethene	50.96	1.0	20	32.16	94.0	78 - 123	52.56	3.1	20	
cis-1,3-Dichloropropene	19.83	1.0	20	0	99.1	75 - 124	19.99	0.8	20	
Dibromochloromethane	18.84	1.0	20	0	94.2	74 - 126	19.34	2.62	20	
Dibromomethane	18.09	1.0	20	0	90.5	79 - 123	18.69	3.23	20	
Dichlorodifluoromethane	19.14	1.0	20	0	95.7	32 - 152	21.4	11.1	20	
Ethylbenzene	19.58	1.0	20	0	97.9	79 - 121	20.8	6.07	20	
Hexachlorobutadiene	17.71	1.0	20	0	88.5	66 - 134	20.47	14.5	20	
Isopropylbenzene	19.63	1.0	20	0	98.2	72 - 131	20.73	5.46	20	
m,p-Xylene	39.27	2.0	40	0	98.2	80 - 121	40.76	3.7	20	
Methylene chloride	19.5	2.0	20	0	97.5	74 - 124	20.27	3.84	20	
Naphthalene	20.81	1.0	20	0	104	61 - 128	21.29	2.27	20	
n-Butylbenzene	21.27	1.0	20	0	106	75 - 128	22.42	5.27	20	
n-Propylbenzene	22.13	1.0	20	0	111	76 - 126	23.29	5.1	20	
o-Xylene	19.41	1.0	20	0	97.1	78 - 122	20.21	4.02	20	
sec-Butylbenzene	21.87	1.0	20	0	109	77 - 126	22.66	3.54	20	
Styrene	19.15	1.0	20	0	95.8	78 - 123	19.43	1.45	20	
tert-Butylbenzene	21.53	1.0	20	0	108	78 - 124	22.97	6.45	20	
Tetrachloroethene	18.22	1.0	20	0	91.1	74 - 129	19.33	5.89	20	
Toluene	19.9	1.0	20	0	99.5	80 - 121	20.94	5.09	20	
trans-1,2-Dichloroethene	19.33	1.0	20	0	96.7	75 - 124	20.28	4.78	20	
trans-1,3-Dichloropropene	18.96	1.0	20	0	94.8	73 - 127	19.34	2	20	
Trichloroethene	23.31	1.0	20	4.834	92.4	79 - 123	24.42	4.66	20	
Trichlorofluoromethane	16.48	1.0	20	0	82.4	65 - 141	17.97	8.64	20	
Vinyl chloride	19.74	1.0	20	0	98.7	58 - 137	21.43	8.18	20	
Surr: 1,2-Dichloroethane-d4	*49.32*	*1.0*	*50*	*0*	*98.6*	*81 - 118*	*49.39*	*0.133*	*20*	
Surr: 4-Bromofluorobenzene	*50.47*	*1.0*	*50*	*0*	*101*	*85 - 114*	*50.59*	*0.253*	*20*	
Surr: Dibromofluoromethane	*48.39*	*1.0*	*50*	*0*	*96.8*	*80 - 119*	*48.45*	*0.127*	*20*	
Surr: Toluene-d8	*50.83*	*1.0*	*50*	*0*	*102*	*89 - 112*	*51.05*	*0.441*	*20*	

ALS Houston, US Date: 08-Jan-20

Client:	Bhate Environmental Associates, Inc.
Project:	LHAAP/SITE58
WorkOrder:	HS19121257

QC BATCH REPORT

Batch ID:	**R353818 (0)**	**Instrument:**	**VOA6**	**Method:**	**VOLATILES ORGANICS BY METHOD 8260C**

The following samples were analyzed in this batch: HS19121257-05 HS19121257-06 HS19121257-07

ALS Houston, US Date: 08-Jan-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
WorkOrder: **HS19121257**

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	19-028-0	27-Mar-2020
California	2919, 2019-2020	30-Apr-2020
Dept of Defense	ANAB L2231	20-Dec-2021
Florida	E87611-28	30-Jun-2020
Illinois	2000322019-2	09-May-2020
Kansas	E-10352 2019-2020	31-Jul-2020
Kentucky	123043, 2019-2020	30-Apr-2020
Louisiana	03087, 2019-2020	30-Jun-2020
Maryland	343, 2019-2020	30-Jun-2020
North Dakota	R-193 2019-2020	30-Apr-2020
Oklahoma	2019-067	31-Aug-2020
Texas	TX104704231-19-23	30-Apr-2020

ALS Houston, US Date: 08-Jan-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
Work Order: HS19121257

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS19121257-01	35AWW01_122019	Login	12/22/2019 3:22:16 PM	NDR	Disposed

ALS Houston, US Date: 08-Jan-20

Sample Receipt Checklist

Client Name: Bhate Environmental
Work Order: HS19121257
Date/Time Received: **21-Dec-2019 10:10**
Received by: **PMG**

Checklist completed by: *Nilesh D. Ranchod* 22-Dec-2019
eSignature | Date

Reviewed by: _____
eSignature | Date

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

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:None
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	0.5c U/C	IR25
Cooler(s)/Kit(s):	25749	
Date/Time sample(s) sent to storage:	12/21/2019 13:00	

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

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

bhate

1608 13th Avenue South, Suite 300
Birmingham Alabama 35205
Tel: 205-918-4000
Fax: 205-918-4050

Chain of Custody and Analytical Request

Page: _____ of _____

Project/Phase No: NWO1312.0150

COC Number(1): _____

LIMS Number: _____

Facility/Base I.D.: LHAAP

Project/Site Name: LHAAP / Site 58

Client Name:

Collected by: Scott Beesinger

Field Sample ID (30 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code (2)	Sample Number (3)	Sample Matrix (4)	Number of containers	VOC	MEE	TOC	Carbon Dioxide	Anions	ARSENIC	Ambient Blank Lot Control Number	Equipment Blank Lot Control Number	Trip Blank Lot Control Number	Cooler ID
35AWW01_122019	20 Dec 2019	0835	-	N		WG	3	X									
35AWW01-122019_MS	20 Dec 2019	0835	-	MS		WG	3	X									
35AWW01-122019_MSD	20 Dec 2019	0835	-	SD		WG	3	X									
LHSMW06-122019	20 Dec 2019	0925		N		WG	4	X					X				
LHSMW06_122019_a	20 Dec 2019	0925		FD		WG	4	X					X				
35AWW15_122019	20 Dec 2019	0850	-	N		WG	3	X									
35AWW21_122019	20 Dec 2019	1025	-	N		WG	3	X									
35AWW21-122019_a	20 Dec 2019	1025	-	FD		WG	3	X									
TRIP BLANK	20 Dec 2019		-	TB		W	2	X									
			-														
			-														

Sample Analysis Requested (5)

Quality Assurance Samples (6)

HS19121257

Bhate Environmental Associates, Inc.
LHAAP/SITE58

COMMENTS:

Custody Transfers Prior to Receipt by Laboratory

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
Scott Beesinger	12/20/19	12:00	1.	12/21/19	10:10
2.			2.		
3.			3.		

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: _____ Shipped No.:

Method of Shipment: _____

Fed Ex _____ Airbill Number:

Analytical Lab: ALS 19450 Stancliff Rd, Suite 210 Houston TX 77099 (281) 530-5656

ATTN: SONIA WEST Lab Recipient: Delivery Date/Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)

2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-c) Sample, FD = Field Duplicate (-a) Samples, FR = Field Replicate (-b) Samples, EB = Equipment Blank (-d) Samples, MS = Matrix Spike, SD = Matrix Spike Duplicate, AB = Ambient Blank (-e)

3.) Sample Number: Unique sample number collected from a particular location per day. (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01, if sampled again on 10/10/99 = 02, etc.)

4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc), SQ = Soil Blanks

5.) Sample Analysis Requested: Analytical method requested and number of containers provided for each.

6.) Quality assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipment Blank Lot Control

25749 0-5' #21 cl-0-5'

1608 13th Avenue South, Suite 300
Birmingham Alabama 35205
Tel: 205-918-4000
Fax: 205-918-4050

Chain of Custody and Analytical Request

Page: ____ of ____

Project/Phase No: NWO1312.0150

COC Number(1): ____

LIMS Number: ____

Facility/Base I.D.: LHAAP

Project/Site Name: LHAAP / Site 58

Client Name:

Collected by: Scott Beesinger

Sample Analysis Requested [3] | Quality Assurance Samples [6]

Field Sample ID (30 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code [2]	Sample Number [3]	Sample Matrix [4]	Number of containers	VOC	MEE	TOC	Carbon Dioxide	Anions	ARSENIC				Ambient Blank Lot Control Number	Equipment Blank Lot Control Number	Trip Blank Lot Control Number	Cooler ID
35AWW01_122019	20 Dec 2019	0835	-	N		WG	3	X												
35AWW01-122019_MS	20 Dec 2019	0835	-	MS		WG	3	X												
35AWW01-122019_MSD	20 Dec 2019	0835	-	SD		WG	3	X												
LHSMW06-122019	20 Dec 2019	0925		N		WG	4	X					X							
LHSMW06_122019_a	20 Dec 2019	0925		FD		WG	4	X					X							
35AWW15_122019	20 Dec 2019	0850	-	N		WG	3	X												
35AWW21-122019	20 Dec 2019	1025	-	N		WG	3	X												
35AWW21-122019_a	20 Dec 2019	1025	-	FD		WG	3	X												
TRIP BLANK	20 Dec 2019		-	TB		W	2	X												
			-																	
			-																	

COMMENTS: ____

Custody Transfers Prior to Receipt by Laboratory

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1. Scott Beesinger	12/20/19	12:00	1.	12/21/19	10:10
2.			2.		
3.			3.		

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: ____ Shipped ____ No.: ____

Method of Shipment: ____

Fed Ex ____ Airbill ____ Number: ____

Analytical Lab: ALS 10450 Stanglift Rd. Suite 210 Houston, TX 77099 (281) 530-5656

ATTN: SONIA WEST Lab Recipient: ____ Delivery Date/Time: ____

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)

2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-c) Sample, FD = Field Duplicate (-a) Samples, FR = Field Replicate (-b) Samples, EB = Equipment Blank (-d) Samples, MS = Matrix Spike, SD = Matrix Spike Duplicate, AB = Ambient Blank (-e)

3.) Sample Number: Unique sample number collected from a particular location per day. (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01, if sampled again on 10/10/99 = 02, etc.)

4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc), SQ = Soil Blanks

5.) Sample Analysis Requested: Analytical method requested and number of containers provided for each.

6.) Quality assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipment Blank Lot Control

25749 etc. 0.5 = 421 etc-0.5

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

25749

CUSTODY SEAL

Date: 12/20/19 Time: 1200
Name: Scott Beesinger
Company: Bhate

Seal Broken By: SM
Date: 12/21/19

25749 DEC 2 1 2019

Must Deliver Next Business Day
Time and Tempature Sensitive!

25749

ORIGIN ID:SGRA (903) 938-8233
SCOTT BEESINER
BHATE ENVIRONMENTAL ASSOCIATES
1203-B EAST GRAND AVE. PMB202

MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 21DEC19
ACTWGT: 1.00 LB MAN
CAD: 3001307/CAFE3211
DIMS: 26x14x14 IN

TO **CLIENT SERVICES**
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5656
REF: LHAAP-58- BO 68898- RJ
RMA:

FedEx Express

FedEx
TRK# 0221 1251 0292 3795

SATURDAY 12:00P
PRIORITY OVERNIGHT

77099
TX-US
IAH

X0 SGRA

FID 5990257 28DEC19 0000A 56AC2/1B00/85A2

HS19121257 8260 Raw Data

ALS WO# HS19121257

MSVOA06 -Logbook

Batch: 38366 **Analyst:** Presenta Cabascango

Date: 11-18-2019 **Reviewer:**

Method: 8260 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	11-18-2019 01:23 pm	1.00	50 mL	50 mL	X111801.D	Liquid	Y	NA
	Auto find/ purged									
2	VSTD000.25	ICAL1	11-18-2019 01:47 pm	1.00	50 mL	50 mL	X111802.D	Liquid	Y	NA
	0.10 uL cal std/100 mL DI									
3	VSTD000.5	ICAL2	11-18-2019 02:35 pm	1.00	50 mL	50 mL	X111803.D	Liquid	Y	NA
	0.10 uL cal std/50 mL DI									
4	VSTD001	ICAL3	11-18-2019 02:59 pm	1.00	50 mL	50 mL	X111804.D	Liquid	Y	NA
	0.20 uL cal std/50 mL DI									
5	VSTD002	ICAL4	11-18-2019 03:23 pm	1.00	50 mL	50 mL	X111805.D	Liquid	Y	NA
	0.40 uL cal std/50 mL DI									
6	VSTD005	ICAL5	11-18-2019 03:47 pm	1.00	50 mL	50 mL	X111806.D	Liquid	Y	NA
	1.0 uL cal std/50 mL DI									
7	VSTD020	ICAL6	11-18-2019 04:11 pm	1.00	50 mL	50 mL	X111807.D	Liquid	Y	NA
	4.0 uL cal std/50 mL DI									
8	VSTD050	ICAL7	11-18-2019 04:35 pm	1.00	50 mL	50 mL	X111808.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
9	VSTD100	ICAL8	11-18-2019 04:59 pm	1.00	50 mL	50 mL	X111809.D	Liquid	Y	NA
	20 uL cal std/50 mL DI									
10	VSTD150	ICAL9	11-18-2019 05:22 pm	1.00	50 mL	50 mL	X111810.D	Liquid	Y	NA
	30 uL cal std/50 mL DI									
11	VSTD200	ICAL	11-18-2019 05:46 pm	1.00	50 mL	50 mL	X111811.D	Liquid	Y	NA
	40 uL cal std/50 mL DI									
12	BLANK	SAMP	11-18-2019 06:10 pm	1.00	50 mL	50 mL	X111812.D	Liquid	Y	NA
13	BLANK	SAMP	11-18-2019 06:34 pm	1.00	50 mL	50 mL	X111813.D	Liquid	Y	NA
14	CCV	ICCV	11-18-2019 06:58 pm	1.00	50 mL	50 mL	X111814.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
15	BLANK	SAMP	11-18-2019 07:22 pm	1.00	50 mL	50 mL	X111815.D	Liquid	Y	NA
16	BFB	TUNE	11-18-2019 07:47 pm	1.00	50 mL	50 mL	Y111801.D	Liquid	Y	NA
	Auto find/ purged									
17	CCV	CCV	11-18-2019 08:10 pm	1.00	50 mL	50 mL	Y111802a.D	Liquid	Y	NA
	10 uL cal std/50 mL DI/ not used									
18	CCV	CCV	11-18-2019 08:34 pm	1.00	50 mL	50 mL	Y111803.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
19	CCB	SAMP	11-18-2019 08:58 pm	1.00	50 mL	50 mL	Y111804.D	Liquid	Y	NA
20	VLCSW-191118	LCS	11-18-2019 09:22 pm	1.00	50 mL	50 mL	Y111805.D	Liquid	Y	NA
	4.0 uL cal std/50 mL DI									
21	BLK	SAMP	11-18-2019 09:46 pm	1.00	50 mL	50 mL	Y111806.D	Liquid	Y	NA
22	VBLKW-191118	MBLK	11-18-2019 10:10 pm	1.00	50 mL	50 mL	Y111807.D	Liquid	Y	NA
23	HS19110861-01	SAMP	11-18-2019 10:34 pm	1.00	50 mL	50 mL	Y111808.D	Liquid	Y	NA
24	HS19110861-02	SAMP	11-18-2019 10:59 pm	1.00	50 mL	50 mL	Y111809.D	Liquid	Y	NA
25	HS19110861-03	SAMP	11-18-2019 11:23 pm	1.00	50 mL	50 mL	Y111810.D	Liquid	Y	NA
26	HS19110861-04	SAMP	11-18-2019 11:47 pm	1.00	50 mL	50 mL	Y111811.D	Liquid	Y	NA
27	HS19110861-05	SAMP	11-19-2019 12:11 am	1.00	50 mL	50 mL	Y111812.D	Liquid	Y	NA
28	HS19110861-06	SAMP	11-19-2019 12:35 am	1.00	50 mL	50 mL	Y111813.D	Liquid	Y	NA
29	HS19110829-13	SAMP	11-19-2019 12:59 am	1.00	50 mL	50 mL	Y111814.D	Liquid	Y	NA
30	HS19110829-11	SAMP	11-19-2019 01:23 am	1.00	50 mL	50 mL	Y111815.D	Liquid	Y	NA
31	HS19110829-01	SAMP	11-19-2019 01:47 am	1.00	50 mL	50 mL	Y111816.D	Liquid	Y	NA
32	HS19110829-01MS	MS	11-19-2019 02:11 am	1.00	50 mL	50 mL	Y111817.D	Liquid	Y	NA
	3.50 uL cal std/40 mL samp									

MSVOA06 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
33	HS19110829-01MSD	MSD	11-19-2019 02:35 am	1.00	50 mL	50 mL	Y111818.D	Liquid	Y	NA
	3.5 uL cal std/40 mL samp									
34	HS19110829-02	SAMP	11-19-2019 02:59 am	1.00	50 mL	50 mL	Y111819.D	Liquid	Y	NA
35	HS19110829-03	SAMP	11-19-2019 03:23 am	1.00	50 mL	50 mL	Y111820.D	Liquid	Y	NA
36	HS19110829-04	SAMP	11-19-2019 03:47 am	1.00	50 mL	50 mL	Y111821.D	Liquid	Y	NA
37	HS19110829-05	SAMP	11-19-2019 04:11 am	1.00	50 mL	50 mL	Y111822.D	Liquid	Y	NA
38	HS19110829-06	SAMP	11-19-2019 04:35 am	1.00	50 mL	50 mL	Y111823.D	Liquid	Y	NA
39	HS19110829-07	SAMP	11-19-2019 04:59 am	1.00	50 mL	50 mL	Y111824.D	Liquid	Y	NA
40	HS19110829-08	SAMP	11-19-2019 05:23 am	1.00	50 mL	50 mL	Y111825.D	Liquid	Y	NA
41	HS19110829-09	SAMP	11-19-2019 05:47 am	1.00	50 mL	50 mL	Y111826.D	Liquid	Y	NA
42	HS19110829-10	SAMP	11-19-2019 06:11 am	1.00	50 mL	50 mL	Y111827.D	Liquid	Y	NA
43	HS19110829-12	SAMP	11-19-2019 06:36 am	1.00	50 mL	50 mL	Y111828.D	Liquid	Y	NA
44	HS19110716-06	SAMP	11-19-2019 07:00 am	1.00	50 mL	50 mL	Y111829.D	Liquid	Y	NA

Chemical	Value
SURR SPK ID	31106-04-03
IS ID	31106-04-04
ICV STD ID	30603-92-01
LCS/MS ID	30603-92-01
CAL STD ID	31106-04-01/02
BFB ID	31106-04-03
pH Paper	634-64-11

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS19121257

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
cis-1,3-Dichloropropene	50.00	52.07	104	80-120
trans-1,3-Dichloroprope	50.00	51.83	104	80-120
1,3-Dichlorobenzene	50.00	50.58	101	80-120
2,2-Dichloropropane	50.00	52.35	105	80-120
1,1-Dichloropropene	50.00	49.88	100	80-120
Dibromomethane	50.00	50.50	101	80-120
1,2-Dibromoethane	50.00	50.00	100	80-120
trans-1,2-Dichloroethen	50.00	52.31	105	80-120
1,1,1,2-Tetrachloroetha	50.00	51.37	103	80-120
1,1,1-Trichloroethane	50.00	52.74	105	80-120
1,1,2,2-Tetrachloroetha	50.00	49.68	99	80-120
1,1,2-Trichloroethane	50.00	49.22	98	80-120
1,1-Dichloroethane	50.00	51.46	103	80-120
1,1-Dichloroethene	50.00	53.02	106	80-120
Trichloroethene	50.00	51.78	104	80-120
1,2,3-Trichlorobenzene	50.00	58.28	116	80-120
Trichlorofluoromethane	50.00	55.57	111	80-120
1,2,4-Trichlorobenzene	50.00	55.34	111	80-120
1,2,4-Trimethylbenzene	50.00	50.40	101	80-120
Tetrachloroethene	50.00	49.33	99	80-120
1,2-Dichlorobenzene	50.00	49.42	99	80-120
1,2-Dichloroethane	50.00	51.38	103	80-120
1,2-Dichloropropane	50.00	49.50	99	80-120
1,3,5-Trimethylbenzene	50.00	52.04	104	80-120
1,3-Dichloropropane	50.00	49.18	98	80-120
1,4-Dichlorobenzene	50.00	49.63	99	80-120
Toluene	50.00	49.55	99	80-120
2-Butanone	100.00	105.25	105	80-120

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

* Values outside of QC limits

COMMENTS: _____

_____

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS19121257

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
2-Chlorotoluene	50.00	50.41	101	80-120
2-Hexanone	100.00	96.09	96	80-120
4-Chlorotoluene	50.00	50.58	101	80-120
tert-Butylbenzene	50.00	51.37	103	80-120
4-Methyl-2-Pentanone	100.00	97.68	98	80-120
Acetone	100.00	111.37	111	80-120
Benzene	50.00	50.85	102	80-120
Bromobenzene	50.00	51.16	102	80-120
Bromochloromethane	50.00	51.34	103	80-120
Bromodichloromethane	50.00	51.00	102	80-120
Bromoform	50.00	49.08	98	80-120
Bromomethane	50.00	57.73	115	80-120
Carbon Disulfide	100.00	109.76	110	80-120
Carbon Tetrachloride	50.00	51.07	102	80-120
Chlorobenzene	50.00	49.20	98	80-120
Chloroethane	50.00	51.64	103	80-120
Chloroform	50.00	49.36	99	80-120
Chloromethane	50.00	50.43	101	80-120
cis-1,2-Dichloroethene	50.00	53.16	106	80-120
Dibromochloromethane	50.00	49.93	100	80-120
Dichlorodifluoromethane	50.00	52.99	106	80-120
Ethylbenzene	50.00	50.22	100	80-120
Hexachlorobutadiene	50.00	53.65	107	80-120
Isopropylbenzene	50.00	50.14	100	80-120
m,p-Xylenes	100.00	101.69	102	80-120
Methylene Chloride	50.00	49.65	99	80-120
n-Butylbenzene	50.00	52.07	104	80-120
n-Propylbenzene	50.00	51.90	104	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.: HS19121257

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
Naphthalene	50.00	51.04	102	80-120
o-Xylene	50.00	49.72	99	80-120
sec-Butylbenzene	50.00	51.77	104	80-120
Styrene	50.00	50.35	101	80-120
Vinyl Chloride	50.00	51.98	104	80-120
1,2,3-Trichloropropane	50.00	49.40	99	80-120
p-Isopropyltoluene	50.00	51.77	104	80-120
1,2-Dibromo-3-Chloropro	50.00	51.39	103	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.: HS19121257

Lab File ID: X111801 BFB Injection Date: 11/18/19

Instrument ID: VOA6 BFB Injection Time: 1323

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	20.9
75	30.0 - 60.0% of mass 95	54.9
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.6
173	Less than 2.0% of mass 174	0.4 (0.7)1
174	Greater than 50.0% of mass 95	65.0
175	5.0 - 9.0% of mass 174	5.8 (8.9)1
176	95.0 - 101.0% of mass 174	62.0 (95.4)1
177	5.0 - 9.0% of mass 176	5.1 (8.2)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD000.25	VSTD000.25	X111802	11/18/19	1347
02	VSTD000.5	VSTD000.5	X111803	11/18/19	1435
03	VSTD001	VSTD001	X111804	11/18/19	1459
04	VSTD002	VSTD002	X111805	11/18/19	1523
05	VSTD005	VSTD005	X111806	11/18/19	1547
06	VSTD020	VSTD020	X111807	11/18/19	1611
07	VSTD050	VSTD050	X111808	11/18/19	1635
08	VSTD100	VSTD100	X111809	11/18/19	1659
09	VSTD150	VSTD150	X111810	11/18/19	1722
10	VSTD200	VSTD200	X111811	11/18/19	1746
11	ICV	ICV	X111814	11/18/19	1858
12					
13					
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FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS19121257

Instrument ID: VOA6 Calibration Date(s): 11/18/19 11/18/19

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1347 1746

LAB FILE ID: RF0.25: X111802 RF0.5: X111803 RF1: X111804
RF2: X111805 RF5: X111806 RF20: X111807

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
cis-1,3-Dichloropropene		0.326	0.553	0.497	0.554	0.476
trans-1,3-Dichloropropene		0.304	0.464	0.458	0.504	0.445
1,3-Dichlorobenzene		1.036	1.601	1.542	1.622	1.411
2,2-Dichloropropane		0.547	0.815	0.674	0.705	0.610
1,1-Dichloropropene		0.332	0.476	0.441	0.432	0.372
Dibromomethane		0.139	0.244	0.233	0.245	0.207
1,2-Dibromoethane		0.245	0.385	0.380	0.402	0.348
trans-1,2-Dichloroethene		0.285	0.489	0.436	0.440	0.386
1,1,1,2-Tetrachloroethane		0.248	0.403	0.375	0.406	0.356
1,1,1-Trichloroethane		0.492	0.775	0.723	0.717	0.640
1,1,2,2-Tetrachloroethane		0.602	0.844	0.735	0.800	0.680
1,1,2-Trichloroethane		0.180	0.311	0.285	0.294	0.253
1,1-Dichloroethane		0.569	0.830	0.781	0.786	0.690
1,1-Dichloroethene		0.349	0.423	0.469	0.464	0.390
Trichloroethene		0.226	0.390	0.387	0.396	0.344
1,2,3-Trichlorobenzene		421	1182	2753	6553	21856
Trichlorofluoromethane		0.511	0.831	0.818	0.813	0.707
1,2,4-Trichlorobenzene		0.325	0.435	0.465	0.518	0.418
1,2,4-Trimethylbenzene		1.739	2.619	2.442	2.563	2.286
Tetrachloroethene		0.266	0.412	0.394	0.398	0.333
1,2-Dichlorobenzene		0.916	1.484	1.429	1.497	1.292
1,2-Dichloroethane		0.277	0.470	0.408	0.432	0.391
1,2-Dichloropropane		0.294	0.294	0.312	0.339	0.284
1,3,5-Trimethylbenzene		1.606	2.354	2.372	2.481	2.215
1,3-Dichloropropane		0.431	0.613	0.570	0.583	0.512
1,4-Dichlorobenzene		1.108	1.632	1.581	1.609	1.417
Toluene		1.077	1.582	1.498	1.570	1.359
2-Butanone		0.167	0.156	0.152	0.164	0.146
2-Chlorotoluene		1.263	1.990	1.903	2.032	1.735
2-Hexanone		0.180	0.237	0.204	0.235	0.191
4-Chlorotoluene		1.550	2.500	2.222	2.378	2.079
tert-Butylbenzene		1.338	2.168	2.060	2.126	1.865
4-Methyl-2-Pentanone		0.220	0.321	0.313	0.331	0.281
Acetone		4579	5956	7954	15992	43200
Benzene		0.788	1.327	1.220	1.289	1.109
Bromobenzene		0.584	1.003	0.940	0.994	0.873
Bromochloromethane		0.229	0.323	0.309	0.284	0.255
Bromodichloromethane		0.298	0.490	0.424	0.473	0.395
Bromoform		887	3197	5989	16084	56416
Bromomethane		2741	6334	12041	28671	93456
Carbon Disulfide		0.747	1.257	1.216	1.254	1.101
Carbon Tetrachloride		0.340	0.503	0.483	0.478	0.403
Chlorobenzene		0.738	1.108	1.028	1.090	0.934
Chloroethane		0.279	0.361	0.345	0.323	0.283

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS1912125

Instrument ID: VOA6 Calibration Date(s): 11/18/19 11/18/19

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1347 1746

LAB FILE ID: RF0.25: X111802 RF0.5: X111803 RF1: X111804
RF2: X111805 RF5: X111806 RF20: X111807

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
Chloroform		0.775	0.990	0.890	0.850	0.736
Chloromethane		2201	6118	10461	24949	85402
cis-1,2-Dichloroethene		0.327	0.540	0.493	0.541	0.454
Dibromochloromethane		0.253	0.433	0.392	0.429	0.370
Dichlorodifluoromethane		1269	3829	7335	18346	63810
Ethylbenzene		0.353	0.562	0.515	0.576	0.493
Hexachlorobutadiene		0.502	0.441	0.406	0.415	0.339
Isopropylbenzene		1.054	1.627	1.570	1.602	1.425
m,p-Xylenes		0.393	0.653	0.644	0.678	0.591
Methylene Chloride		0.422	0.556	0.483	0.491	0.406
n-Butylbenzene		1.620	2.055	2.004	2.069	1.888
n-Propylbenzene		2.290	3.358	3.192	3.345	2.976
Naphthalene		0.510	0.569	0.604	0.614	0.512
o-Xylene		0.390	0.677	0.656	0.658	0.582
sec-Butylbenzene		1.995	2.859	2.859	2.813	2.501
Styrene		0.702	1.134	1.076	1.148	1.004
Vinyl Chloride		0.490	0.545	0.546	0.504	0.454
1,2,3-Trichloropropane		0.455	0.730	0.701	0.662	0.580
p-Isopropyltoluene		1.839	2.630	2.538	2.573	2.307
1,2-Dibromo-3-Chloropropane		125	464	859	2641	8805
1,2-Dichloroethane-d4		2522	4458	8034	20921	75813
Dibromofluoromethane		2303	3882	8127	20237	75094
Toluene-d8		1.628	1.327	1.357	1.369	1.263
4-Bromofluorobenzene		3844	5731	10468	25804	94194

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS1912125

Instrument ID: VOA6 Calibration Date(s): 11/18/19 11/18/19

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1347 1746

LAB FILE ID: RF50: X111808 RF100: X111809 RF150: X111810
RF200: X111811

COMPOUND	RF50	RF100	RF150	RF200
cis-1,3-Dichloropropene	0.499	0.494	0.497	0.493
trans-1,3-Dichloropropene	0.452	0.455	0.456	0.461
1,3-Dichlorobenzene	1.457	1.422	1.398	1.417
2,2-Dichloropropane	0.644	0.644	0.646	0.658
1,1-Dichloropropene	0.402	0.392	0.391	0.392
Dibromomethane	0.211	0.206	0.208	0.208
1,2-Dibromoethane	0.348	0.347	0.350	0.351
trans-1,2-Dichloroethene	0.410	0.413	0.416	0.427
1,1,1,2-Tetrachloroethane	0.368	0.369	0.369	0.370
1,1,1-Trichloroethane	0.673	0.676	0.678	0.697
1,1,2,2-Tetrachloroethane	0.672	0.670	0.662	0.661
1,1,2-Trichloroethane	0.256	0.258	0.256	0.259
1,1-Dichloroethane	0.710	0.716	0.728	0.737
1,1-Dichloroethene	0.430	0.429	0.426	0.434
Trichloroethene	0.359	0.350	0.348	0.348
1,2,3-Trichlorobenzene	52554	102660	156391	210414
Trichlorofluoromethane	0.823	0.824	0.813	0.840
1,2,4-Trichlorobenzene	0.421	0.402	0.400	0.406
1,2,4-Trimethylbenzene	2.419	2.440	2.397	2.446
Tetrachloroethene	0.352	0.340	0.332	0.334
1,2-Dichlorobenzene	1.330	1.327	1.324	1.344
1,2-Dichloroethane	0.401	0.397	0.397	0.398
1,2-Dichloropropane	0.295	0.290	0.290	0.290
1,3,5-Trimethylbenzene	2.368	2.377	2.339	2.377
1,3-Dichloropropane	0.516	0.521	0.514	0.516
1,4-Dichlorobenzene	1.465	1.445	1.412	1.445
Toluene	1.411	1.408	1.420	1.435
2-Butanone	0.146	0.147	0.153	0.148
2-Chlorotoluene	1.853	1.827	1.787	1.800
2-Hexanone	0.192	0.201	0.204	0.204
4-Chlorotoluene	2.208	2.230	2.205	2.250
tert-Butylbenzene	2.012	2.011	1.967	1.996
4-Methyl-2-Pentanone	0.283	0.291	0.298	0.298
Acetone	103091	202207	284604	372223
Benzene	1.164	1.135	1.133	1.128
Bromobenzene	0.878	0.857	0.837	0.854
Bromochloromethane	0.263	0.261	0.260	0.255
Bromodichloromethane	0.412	0.408	0.412	0.412
Bromoform	143798	293256	447981	602595
Bromomethane	215480	396733	529714	
Carbon Disulfide	1.192	1.188	1.192	1.228
Carbon Tetrachloride	0.452	0.442	0.435	0.440
Chlorobenzene	0.965	0.966	0.974	0.982
Chloroethane	0.311	0.311	0.310	0.311

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS1912125

Instrument ID: VOA6 Calibration Date(s): 11/18/19 11/18/19

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1347 1746

LAB FILE ID: RF50: X111808 RF100: X111809 RF150: X111810
RF200: X111811

COMPOUND	RF50	RF100	RF150	RF200
Chloroform	0.751	0.754	0.761	0.780
Chloromethane	215753	420936	613254	811388
cis-1,2-Dichloroethene	0.470	0.475	0.478	0.488
Dibromochloromethane	0.381	0.386	0.386	0.387
Dichlorodifluoromethane	186161	359790	504807	695305
Ethylbenzene	0.512	0.509	0.506	0.512
Hexachlorobutadiene	0.365	0.345		
Isopropylbenzene	1.523	1.544	1.538	1.560
m,p-Xylenes	0.623	0.628	0.627	0.639
Methylene Chloride	0.421	0.425	0.428	0.436
n-Butylbenzene	2.162	2.176	2.153	2.197
n-Propylbenzene	3.234	3.176	3.089	3.155
Naphthalene	0.521	0.505	0.514	0.512
o-Xylene	0.600	0.608	0.611	0.623
sec-Butylbenzene	2.823	2.798	2.726	2.790
Styrene	1.056	1.073	1.093	1.113
Vinyl Chloride	0.505	0.510	0.510	0.523
1,2,3-Trichloropropane	0.577	0.564	0.549	0.543
p-Isopropyltoluene	2.571	2.546	2.480	2.534
1,2-Dibromo-3-Chloropropane	21800	42468	65470	86827
1,2-Dichloroethane-d4	178006	364646	532181	713282
Dibromofluoromethane	173990	354918	514854	681300
Toluene-d8	1.212	1.246	1.223	1.231
4-Bromofluorobenzene	222328	465570	688600	933083

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS1912125

Instrument ID: VOA6 Calibration Date(s): 11/18/19 11/18/19

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1347 1746

COMPOUND	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
cis-1,3-Dichloropropene	AVRG		0.48761342		13.630	15.000
trans-1,3-Dichloropropene	AVRG		0.44441818		12.432	15.000
1,3-Dichlorobenzene	AVRG		1.43390401		11.978	15.000
2,2-Dichloropropane	AVRG		0.66029305		11.040	15.000
1,1-Dichloropropene	AVRG		0.40332539		10.380	15.000
Dibromomethane	AVRG		0.21136309		14.886	15.000
1,2-Dibromoethane	AVRG		0.35067597		12.763	15.000
trans-1,2-Dichloroethene	AVRG		0.41138839		13.381	15.000
1,1,1,2-Tetrachloroethane	AVRG		0.36274186		12.717	15.000
1,1,1-Trichloroethane	AVRG		0.67453438		11.648	15.000
1,1,2,2-Tetrachloroethane	AVRG		0.70308768		10.825	15.000
1,1,2-Trichloroethane	AVRG		0.26137158		14.102	15.000
1,1-Dichloroethane	AVRG		0.72750643		10.197	15.000
1,1-Dichloroethene	AVRG		0.42373367		8.607	15.000
Trichloroethene	AVRG		0.34966887		14.517	15.000
1,2,3-Trichlorobenzene	2ORDR	-1.73e-002	5.50264123	-0.1707432	0.9998373	0.9900000
Trichlorofluoromethane	AVRG		0.77561874		13.736	15.000
1,2,4-Trichlorobenzene	AVRG		0.42118311		12.391	15.000
1,2,4-Trimethylbenzene	AVRG		2.37245105		10.778	15.000
Tetrachloroethene	AVRG		0.35131312		12.801	15.000
1,2-Dichlorobenzene	AVRG		1.32701574		12.905	15.000
1,2-Dichloroethane	AVRG		0.39691390		12.978	15.000
1,2-Dichloropropane	AVRG		0.29867989		5.660	15.000
1,3,5-Trimethylbenzene	AVRG		2.27648393		11.444	15.000
1,3-Dichloropropane	AVRG		0.53064503		9.928	15.000
1,4-Dichlorobenzene	AVRG		1.45709302		10.715	15.000
Toluene	AVRG		1.41788930		10.479	15.000
2-Butanone	AVRG		0.15342086		5.109	15.000
2-Chlorotoluene	AVRG		1.79889065		12.374	15.000
2-Hexanone	AVRG		0.20539492		9.225	15.000
4-Chlorotoluene	AVRG		2.18043218		12.121	15.000
tert-Butylbenzene	AVRG		1.94917789		12.586	15.000
4-Methyl-2-Pentanone	AVRG		0.29296235		10.958	15.000
Acetone	LINR	-7.72e-002	8.02348321		0.9999004	0.9900000
Benzene	AVRG		1.14377224		13.444	15.000
Bromobenzene	AVRG		0.86897432		14.186	15.000
Bromochloromethane	AVRG		0.27086566		10.835	15.000
Bromodichloromethane	AVRG		0.41377448		13.021	15.000
Bromoform	LINR	1.997e-002	3.29171060		0.9995506	0.9900000
Bromomethane	LINR	-4.72e-002	2.10632186		0.9967362	0.9900000
Carbon Disulfide	AVRG		1.15275096		13.789	15.000
Carbon Tetrachloride	AVRG		0.44181701		10.990	15.000
Chlorobenzene	AVRG		0.97614522		10.975	15.000
Chloroethane	AVRG		0.31480657		8.302	15.000

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS1912125

Instrument ID: VOA6 Calibration Date(s): 11/18/19 11/18/19

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1347 1746

COMPOUND	CURVE	COEFFICENTS A0	COEFFICENTS A1	COEFFICENTS A2	%RSD OR R^2	MAX %RSD OR R^2
Chloroform	AVRG		0.80974969		10.425	15.000
Chloromethane	LINR	3.748e-003	1.83460007		0.9998260	0.9900000
cis-1,2-Dichloroethene	AVRG		0.47416954		13.204	15.000
Dibromochloromethane	AVRG		0.37970849		13.683	15.000
Dichlorodifluoromethane	LINR	1.763e-002	2.15619239		0.9988587	0.9900000
Ethylbenzene	AVRG		0.50436028		12.486	15.000
Hexachlorobutadiene	AVRG		0.40182319		14.476	15.000
Isopropylbenzene	AVRG		1.49389834		11.672	15.000
m,p-Xylenes	AVRG		0.60861655		13.850	15.000
Methylene Chloride	AVRG		0.45210476		10.732	15.000
n-Butylbenzene	AVRG		2.03598696		9.063	15.000
n-Propylbenzene	AVRG		3.09059969		10.434	15.000
Naphthalene	AVRG		0.54020307		8.055	15.000
o-Xylene	AVRG		0.60066696		14.145	15.000
sec-Butylbenzene	AVRG		2.68486077		10.468	15.000
Styrene	AVRG		1.04451403		12.966	15.000
Vinyl Chloride	AVRG		0.50958661		5.494	15.000
1,2,3-Trichloropropane	AVRG		0.59573805		14.502	15.000
p-Isopropyltoluene	AVRG		2.44651692		10.015	15.000
1,2-Dibromo-3-Chloropropane	LINR	-6.81e-003	12.9714748		0.9998714	0.9900000
1,2-Dichloroethane-d4	LINR	1.473e-002	2.09453233		0.9994184	0.9900000
Dibromofluoromethane	LINR	7.36e-003	2.18334297		0.9997712	0.9900000
Toluene-d8	AVRG		1.31739803		9.895	15.000
4-Bromofluorobenzene	LINR	8.357e-003	2.13170980		0.9997055	0.9900000

FORM VI VOA

Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111801.D

Date : 18-NOV-2019 13:23

Client ID: BFB

Instrument: voa6.i

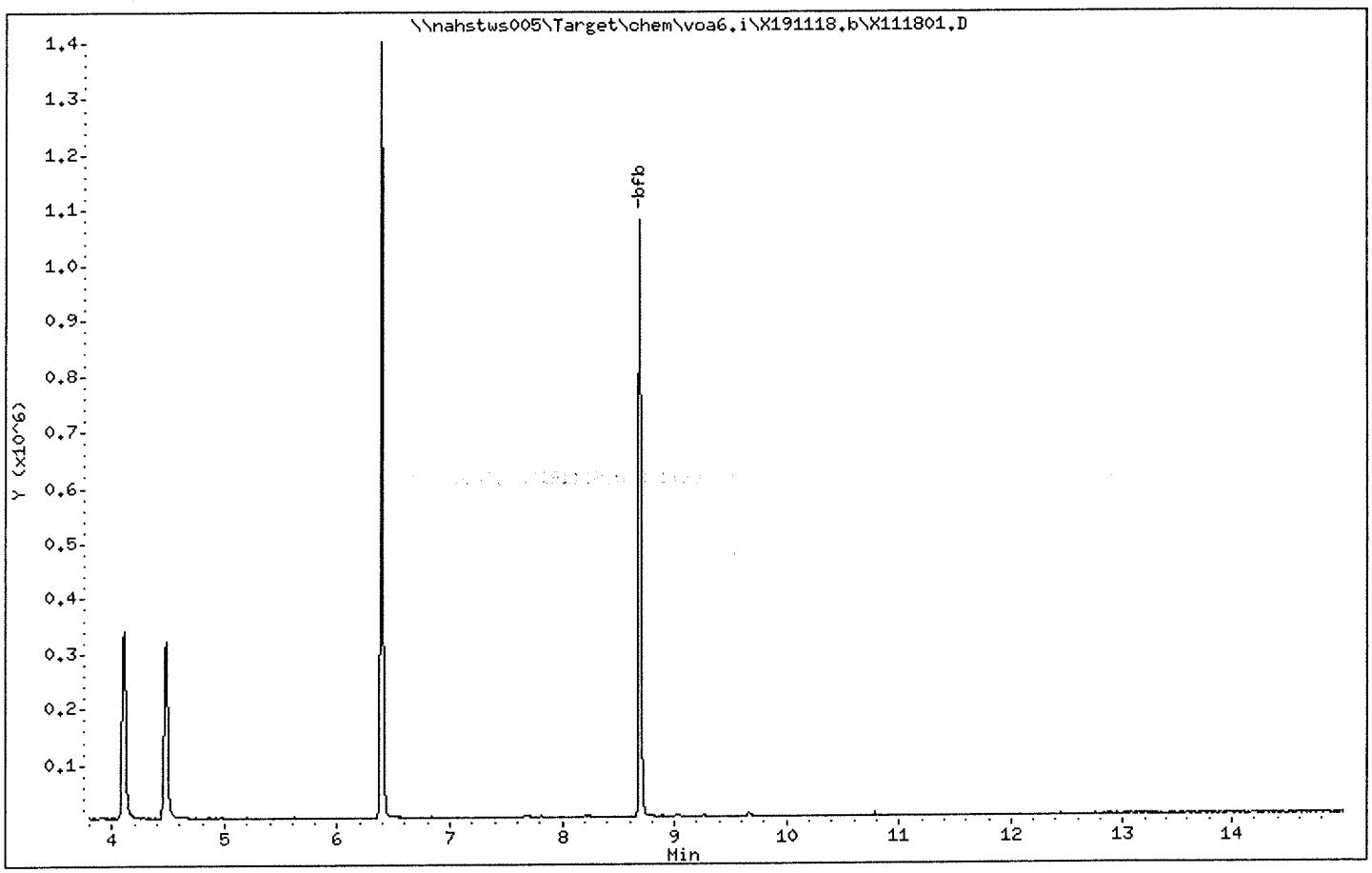
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111801.D

Date : 18-NOV-2019 13:23

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

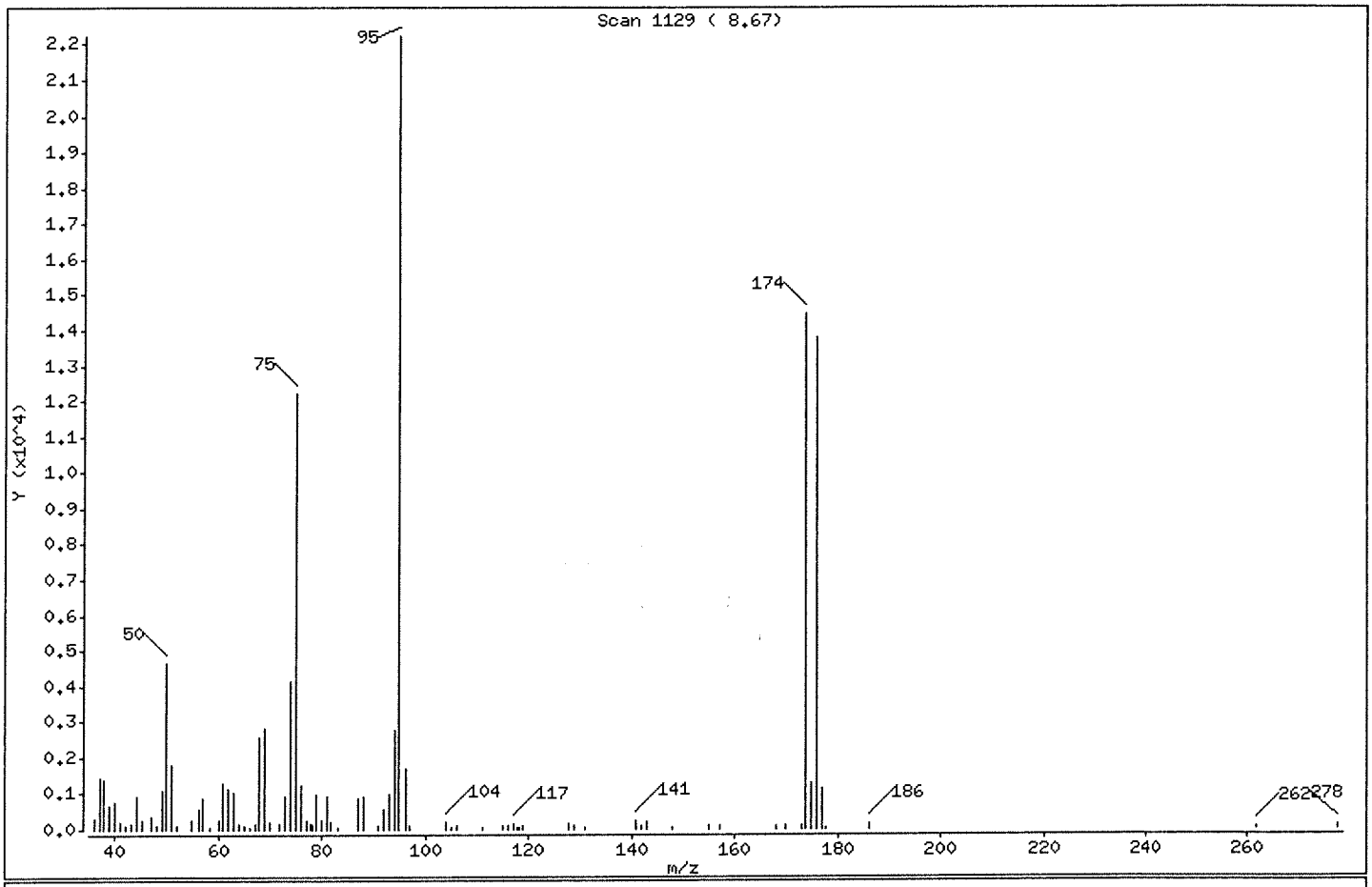
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	20.86
75	30.00 - 60.00% of mass 95	54.86
96	5.00 - 9.00% of mass 95	7.62
173	Less than 2.00% of mass 174	0.43 (0.66)
174	Greater than 50.00% of mass 95	65.03
175	5.00 - 9.00% of mass 174	5.82 (8.95)
176	95.00 - 101.00% of mass 174	62.04 (95.41)
177	5.00 - 9.00% of mass 176	5.11 (8.24)

Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111801.D

Date : 18-NOV-2019 13:23

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: X111801.D
Spectrum: Scan 1129 (8.67)
Location of Maximum: 95.00
Number of points: 83

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	329	61.00	1259	81.80	217	127.90	153
37.00	1409	62.00	1149	83.00	50	128.90	116
38.00	1370	62.90	1001	86.90	880	130.90	70
39.00	662	64.00	138	88.00	941	141.00	249
40.00	775	65.10	110	91.10	116	141.90	94
41.00	191	66.00	72	92.10	565	142.90	216
42.00	77	67.10	153	93.00	990	148.10	62
43.00	166	68.00	2578	94.00	2783	155.00	87
44.10	928	69.00	2816	95.00	22224	157.00	77
45.10	261	69.90	217	96.10	1694	168.00	85
47.00	367	71.90	143	97.00	111	170.00	86
48.10	104	73.00	931	103.90	180	172.90	96
49.00	1057	74.00	4135	105.10	52	173.90	14452
50.00	4636	75.00	12193	106.00	100	174.90	1293
51.00	1802	76.00	1227	111.10	63	175.90	13788
52.10	85	77.10	248	115.10	93	176.90	1136
55.00	269	77.80	150	116.00	100	177.80	71
56.10	539	78.10	174	117.00	158	186.00	161
56.90	843	78.90	948	117.70	74	261.90	57
58.20	60	79.90	265	118.10	74	277.90	85
60.00	231	80.90	936	119.00	127		

Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111802.D Page 1
Report Date: 22-Dec-2019 16:31

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X191118.b\X111802.D
Lab Smp Id: VSTD000.25 Client Smp ID: VSTD000.25
Inj Date : 18-NOV-2019 13:47
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\X191118.b\8260W.m
Meth Date : 22-Dec-2019 16:31 voa6.i Quant Type: ISTD
Cal Date : 18-NOV-2019 13:47 Cal File: X111802.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14

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

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

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	431958	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	586737	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	529029	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.669	(1.000)	277425	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	1295	0.25000	0.69(a)
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	1323	0.25000	1.05(Ta)
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	5247	0.25000	0.37(Ta)
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	3260	0.25000	1.07(a)
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	814	0.25000	0.21(a)
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	1177	0.25000	0.20(a)
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	861	0.25000	0.22(aM)
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	656	0.25000	0.23(aM)
22 1,1-Dichloroethane	63	2.922	2.921	(0.699)	1571	0.25000	0.24(aM)
11 1,1-Dichloroethene	96	1.919	1.911	(0.459)	909	0.25000	0.24(a)
32 1,1-Dichloropropene	75	4.283	4.282	(0.862)	1579	0.25000	0.33(a)
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	224	0.25000	(aM)
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	702	0.25000	0.21(aM)
90 1,2,4-Trichlorobenzene	180	11.345	11.338	(1.174)	320	0.25000	0.13(aM)
79 1,2,4-Trimethylbenzene	105	9.383	9.382	(0.971)	2742	0.25000	0.20(a)
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.657	(1.103)	103	0.25000	(aM)
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	708	0.25000	0.19(a)
88 1,2-Dichlorobenzene	146	9.999	9.998	(1.035)	1523	0.25000	0.20(a)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	938	0.25000	0.20(aM)

Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111802.D Page 2
Report Date: 22-Dec-2019 16:31

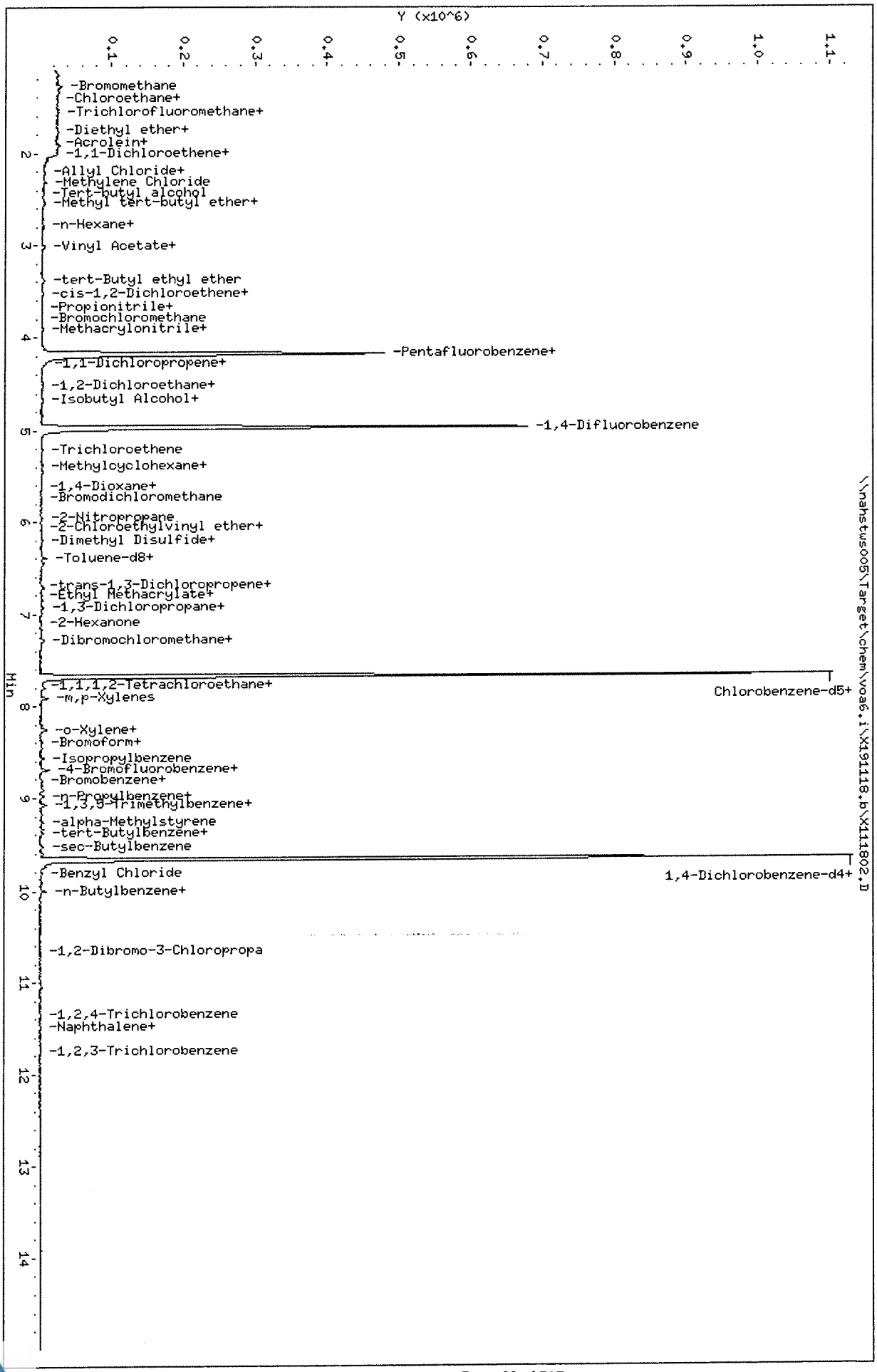
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
42 1,2-Dichloropropane	63	5.450	5.443	(1.097)	858	0.25000	0.24(aM)
75 1,3,5-Trimethylbenzene	105	9.075	9.074	(0.939)	2444	0.25000	0.19(a)
83 1,3-Dichlorobenzene	146	9.612	9.612	(0.995)	1534	0.25000	0.19(a)
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	1126	0.25000	0.20(a)
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	1760	0.25000	0.21(a)
26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	1234	0.25000	0.21(aM)
24 2-Butanone	43	3.588	3.580	(0.858)	827	0.50000	0.62(aM)
76 2-Chlorotoluene	91	8.974	8.981	(0.929)	2277	0.25000	0.22(a)
52 2-Hexanone	43	7.090	7.090	(0.924)	809	0.50000	0.37(Ta)
77 4-Chlorotoluene	91	9.075	9.074	(0.939)	2873	0.25000	0.23(a)
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	2596	0.25000	0.19(a)
45 4-Methyl-2-Pentanone	43	6.324	6.331	(0.824)	1190	0.50000	0.38(aM)
10 Acetone	43	1.969	1.976	(0.471)	3213	0.50000	(aM)
37 Benzene	78	4.519	4.512	(0.909)	3088	0.25000	0.23(a)
74 Bromobenzene	156	8.817	8.809	(0.913)	940	0.25000	0.19(a)
29 Bromochloromethane	128	3.795	3.795	(0.908)	660	0.25000	0.28(aM)
39 Bromodichloromethane	83	5.729	5.729	(1.153)	1101	0.25000	0.22(aM)
66 Bromoform	173	8.416	8.415	(1.097)	495	0.25000	1.15(aM)
6 Bromomethane	94	1.339	1.331	(0.320)	1552	0.25000	(aM)
19 Carbon Disulfide	76	2.069	2.069	(0.495)	3999	0.50000	0.40(a)
34 Carbon Tetrachloride	117	4.275	4.268	(0.860)	1084	0.25000	0.20(aM)
59 Chlorobenzene	112	7.692	7.699	(1.003)	2603	0.25000	0.25(a)
7 Chloroethane	64	1.403	1.396	(0.336)	672	0.25000	0.24(aM)
28 Chloroform	83	3.910	3.910	(0.935)	2414	0.25000	0.34(aM)
3 Chloromethane	50	1.074	1.073	(0.257)	1640	0.25000	0.53(aM)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	1103	0.25000	0.26(a)
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	1351	0.25000	0.23(aM)
55 Dibromochloromethane	129	7.184	7.183	(0.937)	883	0.25000	0.21(a)
44 Dibromomethane	93	5.558	5.557	(1.118)	573	0.25000	0.23(aM)
2 Dichlorodifluoromethane	85	0.973	0.966	(0.233)	642	0.25000	1.04(aM)
61 Ethylbenzene	106	7.800	7.807	(1.017)	1072	0.25000	0.20(a)
91 Hexachlorobutadiene	225	11.481	11.488	(1.188)	367	0.25000	(aM)
67 Isopropylbenzene	105	8.566	8.566	(1.117)	2992	0.25000	0.18(a)
62 m,p-Xylenes	106	7.907	7.907	(1.031)	2521	0.50000	0.39(a)
17 Methylene Chloride	84	2.306	2.305	(0.551)	1174	0.25000	0.30(a)
87 n-Butylbenzene	91	9.999	9.998	(1.035)	2169	0.25000	0.19(a)
73 n-Propylbenzene	91	8.917	8.917	(0.923)	3456	0.25000	0.20(a)
92 Naphthalene	128	11.553	11.546	(1.196)	764	0.25000	0.25(a)
63 o-Xylene	106	8.244	8.244	(1.075)	1221	0.25000	0.19(a)
81 sec-Butylbenzene	105	9.526	9.526	(0.986)	3012	0.25000	0.20(a)
64 Styrene	104	8.265	8.265	(1.078)	2388	0.25000	0.21(a)
78 tert-Butylbenzene	119	9.340	9.339	(0.967)	2350	0.25000	0.21(a)
56 Tetrachloroethene	164	6.933	6.933	(0.904)	914	0.25000	0.24(a)
50 Toluene	91	6.453	6.453	(0.841)	3631	0.25000	0.24(a)
20 trans-1,2-Dichloroethene	96	2.535	2.527	(0.606)	826	0.25000	0.23(aM)
51 trans-1,3-Dichloropropene	75	6.689	6.682	(1.346)	996	0.25000	0.19(a)
38 Trichloroethene	130	5.214	5.206	(1.049)	945	0.25000	0.23(a)
8 Trichlorofluoromethane	101	1.561	1.553	(0.373)	1233	0.25000	0.18(a)
5 Vinyl Chloride	62	1.138	1.138	(0.272)	1052	0.25000	0.23(a)

QC Flag Legend

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

QC Flag Legend

M - Compound response manually integrated.



Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111802.D
Date : 18-NOV-2019 13:47
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\X191118.b\X111803.D Page 1
Report Date: 22-Dec-2019 16:31

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X191118.b\X111803.D
Lab Smp Id: VSTD000.5 Client Smp ID: VSTD000.5
Inj Date : 18-NOV-2019 14:35
Operator : PC Inst ID: voa6.i
Smp Info : VSTD000.5;VSTD000.5;1;2;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X191118.b\8260W.m
Meth Date : 22-Dec-2019 16:31 voa6.i Quant Type: ISTD
Cal Date : 18-NOV-2019 14:35 Cal File: X111803.D
Als bottle: 4 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14

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

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

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	417797	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	575000	50.0000	
*	47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	520290	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	274172	50.0000	
$	30 Dibromofluoromethane	113	4.110	4.103	(0.983)	2303	0.50000	0.96(a)
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	2522	0.50000	1.36(Ta)
$	48 Toluene-d8	98	6.388	6.388	(0.833)	8468	0.50000	0.61(a)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	3844	0.50000	1.20(a)
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	1290	0.50000	0.34(a)
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	2055	0.50000	0.36(a)
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	1652	0.50000	0.42(aM)
	53 1,1,2-Trichloroethane	83	6.840	6.847	(0.892)	936	0.50000	0.34(a)
	22 1,1-Dichloroethane	63	2.928	2.921	(0.700)	2376	0.50000	0.39(Ta)
	11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	1458	0.50000	0.41(aM)
	32 1,1-Dichloropropene	75	4.289	4.282	(0.863)	1907	0.50000	0.41(a)
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	421	0.50000	(aM)
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	1248	0.50000	0.38(aM)
	90 1,2,4-Trichlorobenzene	180	11.345	11.338	(1.173)	892	0.50000	0.38(aM)
	79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	4769	0.50000	0.36(aM)
	89 1,2-Dibromo-3-Chloropropane	155	10.665	10.657	(1.103)	125	0.50000	(aM)
	57 1,2-Dibromoethane	107	7.269	7.262	(0.948)	1273	0.50000	0.34(a)
	88 1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	2511	0.50000	0.34(a)
	33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	1591	0.50000	0.34(aM)

Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111803.D Page 2
Report Date: 22-Dec-2019 16:31

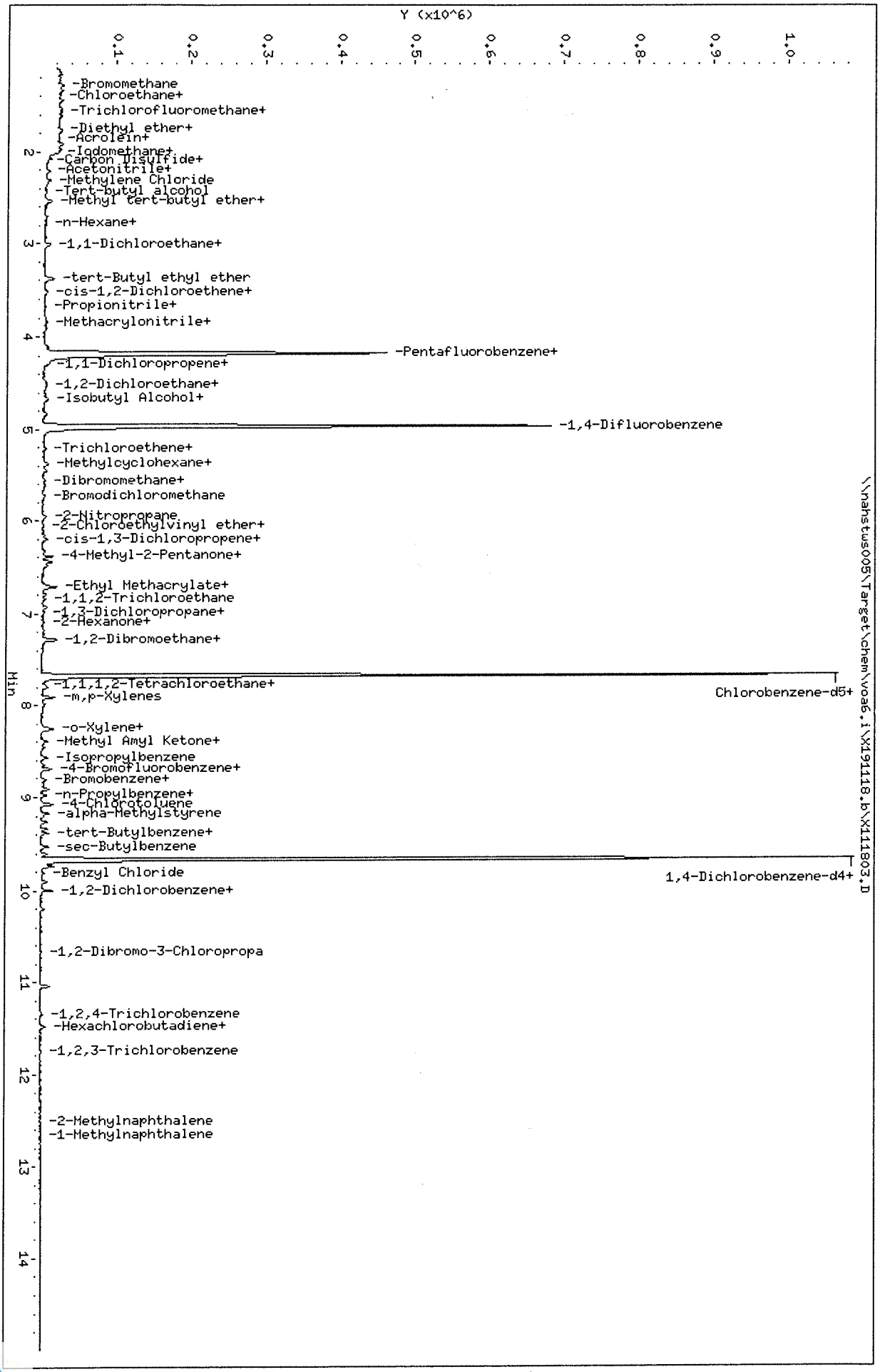
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	1693	0.50000	0.49(aM)
75 1,3,5-Trimethylbenzene	105	9.067	9.074	(0.938)	4403	0.50000	0.35(a)
83 1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	2841	0.50000	0.36(a)
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	2241	0.50000	0.40(a)
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	3038	0.50000	0.38(a)
26 2,2-Dichloropropane	77	3.523	3.516	(0.842)	2284	0.50000	0.41(aM)
24 2-Butanone	43	3.595	3.580	(0.860)	1395	1.00000	1.08(aM)
76 2-Chlorotoluene	91	8.981	8.981	(0.929)	3464	0.50000	0.35(a)
52 2-Hexanone	43	7.090	7.090	(0.924)	1875	1.00000	0.87(a)
77 4-Chlorotoluene	91	9.074	9.074	(0.939)	4251	0.50000	0.35(a)
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	5043	0.50000	0.37(a)
45 4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	2291	1.00000	0.75(a)
10 Acetone	43	1.976	1.976	(0.473)	4579	1.00000	0.53(aM)
37 Benzene	78	4.519	4.512	(0.909)	4530	0.50000	0.34(a)
74 Bromobenzene	156	8.809	8.809	(0.911)	1601	0.50000	0.33(a)
29 Bromochloromethane	128	3.802	3.795	(0.909)	956	0.50000	0.42(a)
39 Bromodichloromethane	83	5.729	5.729	(1.153)	1712	0.50000	0.35(aM)
66 Bromoform	173	8.415	8.415	(1.097)	887	0.50000	1.27(aM)
6 Bromomethane	94	1.338	1.331	(0.320)	2741	0.50000	(a)
19 Carbon Disulfide	76	2.069	2.069	(0.495)	6243	1.00000	0.64(aM)
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	1955	0.50000	0.38(aM)
59 Chlorobenzene	112	7.699	7.699	(1.004)	3839	0.50000	0.37(a)
7 Chloroethane	64	1.403	1.396	(0.336)	1164	0.50000	0.44(aM)
28 Chloroform	83	3.917	3.910	(0.937)	3238	0.50000	0.47(a)
3 Chloromethane	50	1.073	1.073	(0.257)	2201	0.50000	0.67(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	1368	0.50000	0.34(a)
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	1873	0.50000	0.33(a)
55 Dibromochloromethane	129	7.176	7.183	(0.936)	1318	0.50000	0.33(a)
44 Dibromomethane	93	5.564	5.557	(1.120)	802	0.50000	0.32(a)
2 Dichlorodifluoromethane	85	0.973	0.966	(0.233)	1269	0.50000	1.20(aM)
61 Ethylbenzene	106	7.807	7.807	(1.018)	1838	0.50000	0.35(a)
91 Hexachlorobutadiene	225	11.481	11.488	(1.187)	1376	0.50000	0.21(a)
67 Isopropylbenzene	105	8.566	8.566	(1.117)	5484	0.50000	0.35(a)
62 m,p-Xylenes	106	7.907	7.907	(1.031)	4089	1.00000	0.64(a)
17 Methylene Chloride	84	2.305	2.305	(0.551)	1764	0.50000	0.46(aM)
87 n-Butylbenzene	91	9.998	9.998	(1.034)	4442	0.50000	0.39(aM)
73 n-Propylbenzene	91	8.917	8.917	(0.922)	6280	0.50000	0.37(a)
92 Naphthalene	128	11.560	11.546	(1.196)	1399	0.50000	0.47(a)
63 o-Xylene	106	8.243	8.244	(1.075)	2028	0.50000	0.32(a)
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	5469	0.50000	0.37(a)
64 Styrene	104	8.265	8.265	(1.078)	3653	0.50000	0.33(a)
78 tert-Butylbenzene	119	9.339	9.339	(0.966)	3670	0.50000	0.34(a)
56 Tetrachloroethene	164	6.933	6.933	(0.904)	1382	0.50000	0.37(a)
50 Toluene	91	6.453	6.453	(0.841)	5603	0.50000	0.37(a)
20 trans-1,2-Dichloroethene	96	2.535	2.527	(0.606)	1192	0.50000	0.34(a)
51 trans-1,3-Dichloropropene	75	6.689	6.682	(1.346)	1749	0.50000	0.34(a)
38 Trichloroethene	130	5.206	5.206	(1.048)	1298	0.50000	0.32(a)
8 Trichlorofluoromethane	101	1.560	1.553	(0.373)	2137	0.50000	0.32(a)
5 Vinyl Chloride	62	1.138	1.138	(0.272)	2046	0.50000	0.48(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.

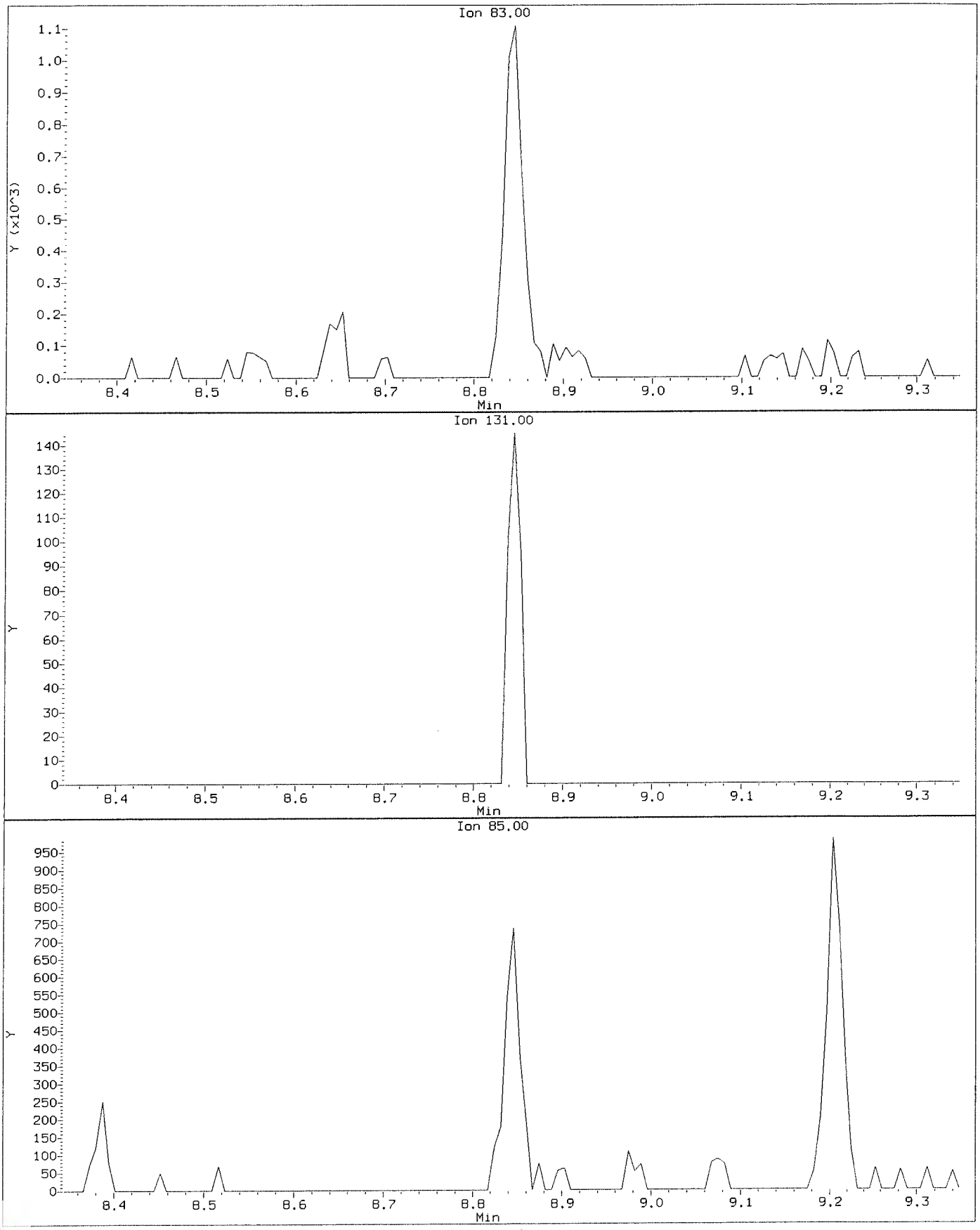


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Date : 18-NOV-2019 14:35
Client ID: VSTD000.5
Sample Info: VSTD000.5;VSTD000.5;1;2;
Purge Volume: 5.0
Column phase: DB624

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

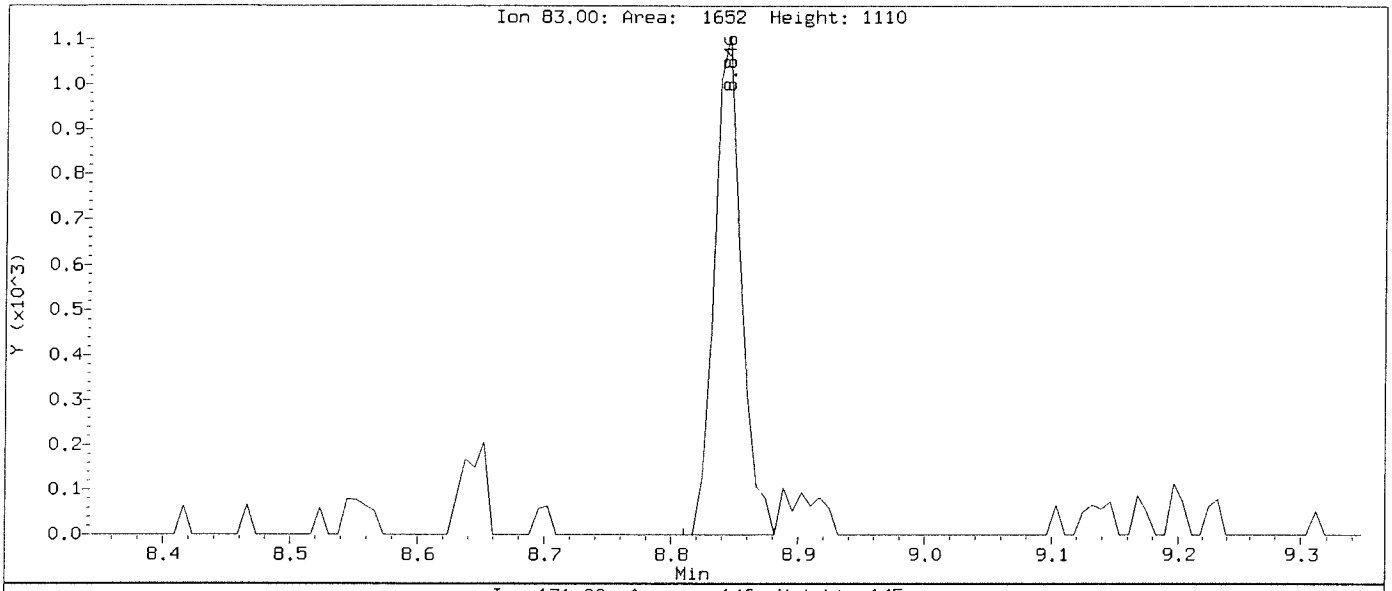
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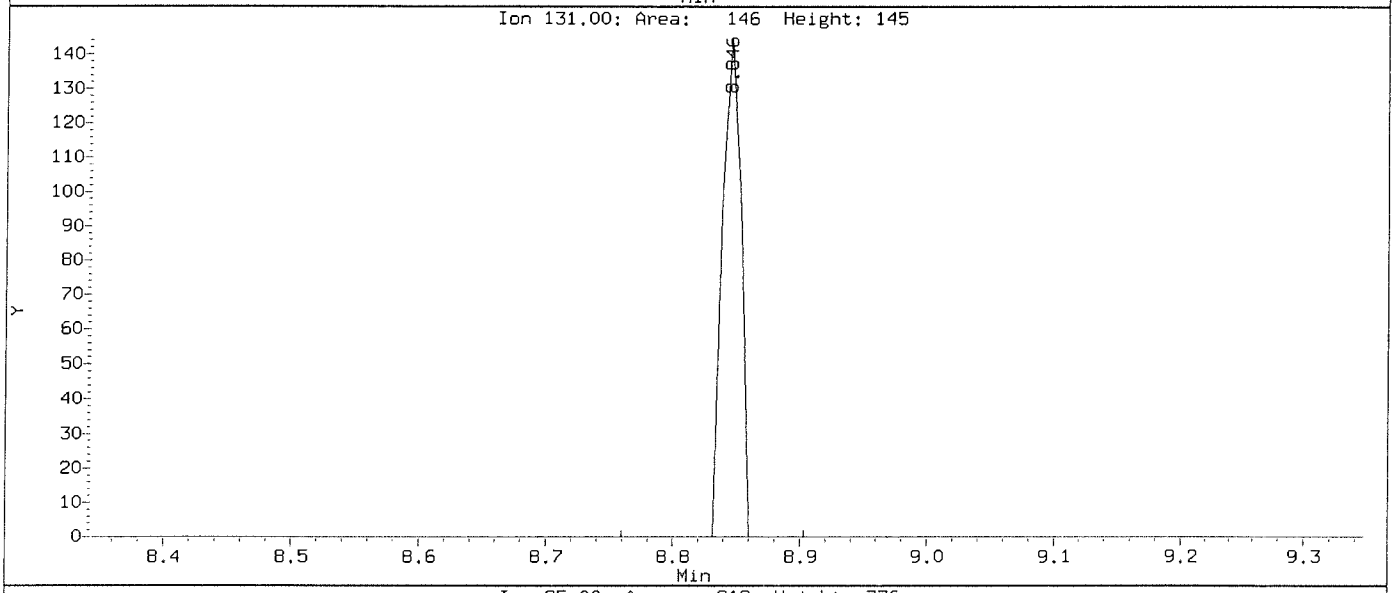
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CAS Number: 79-34-5

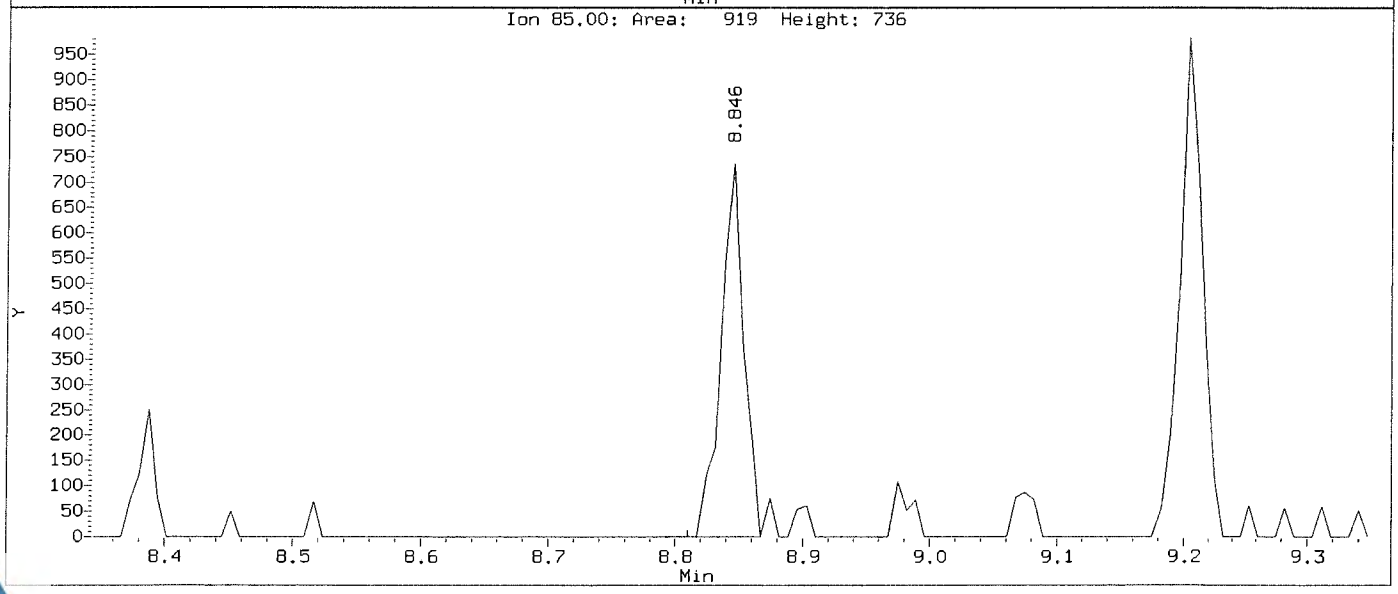


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Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5

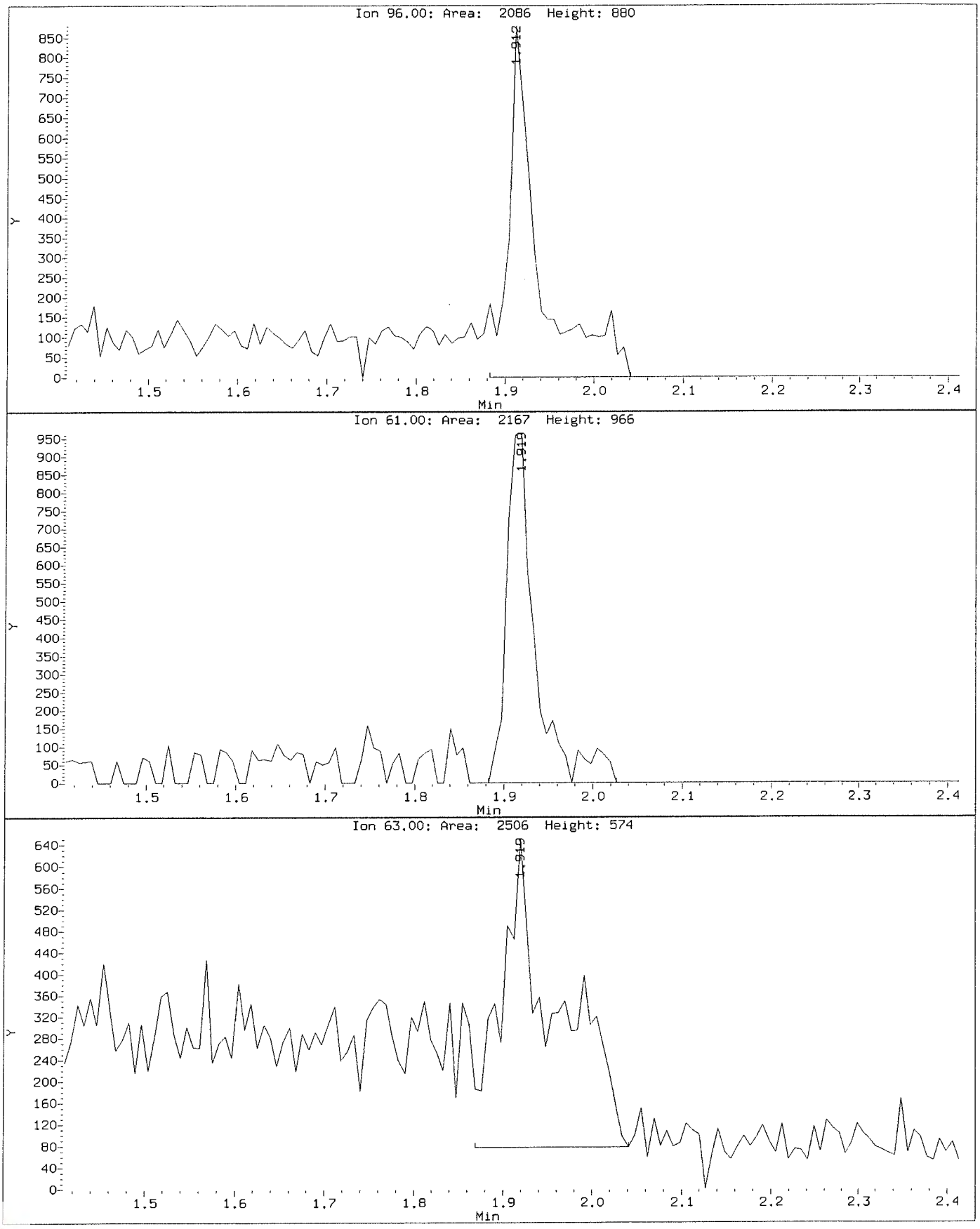






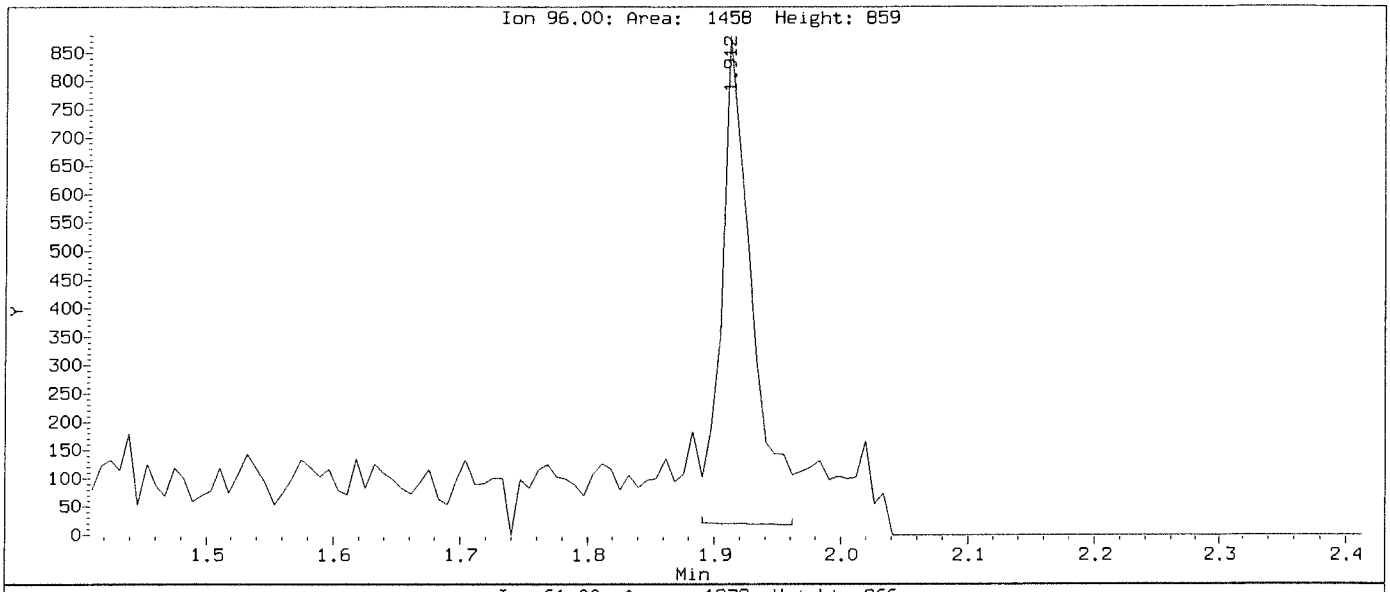
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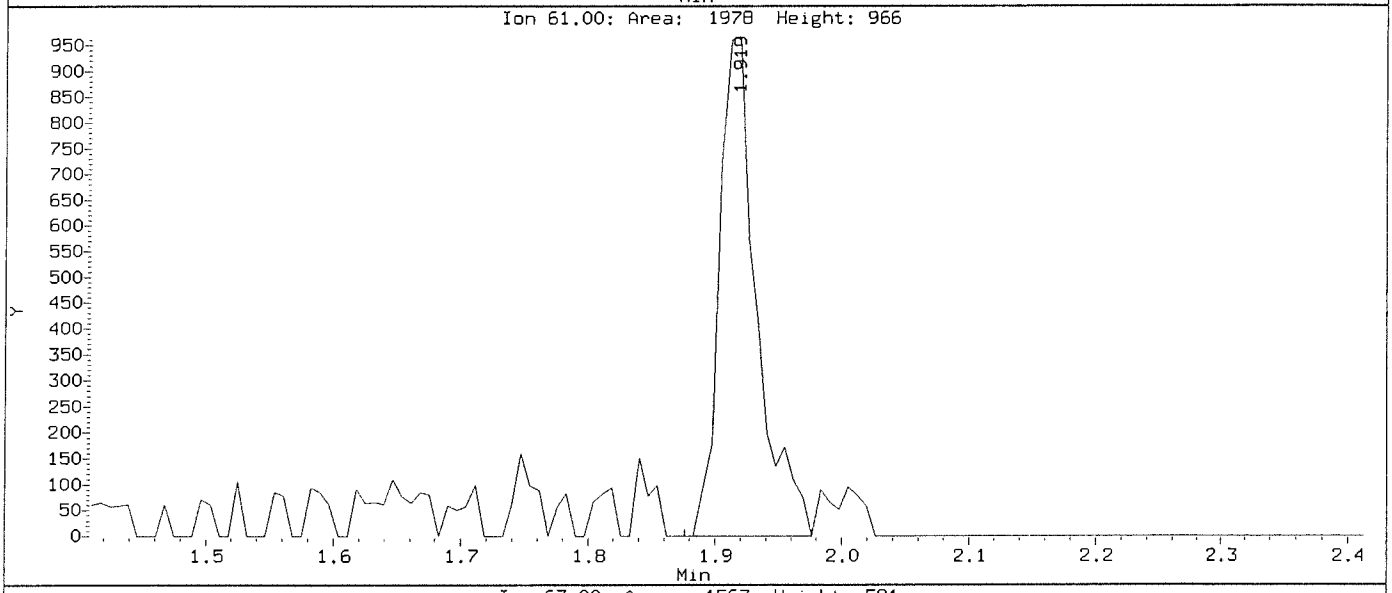
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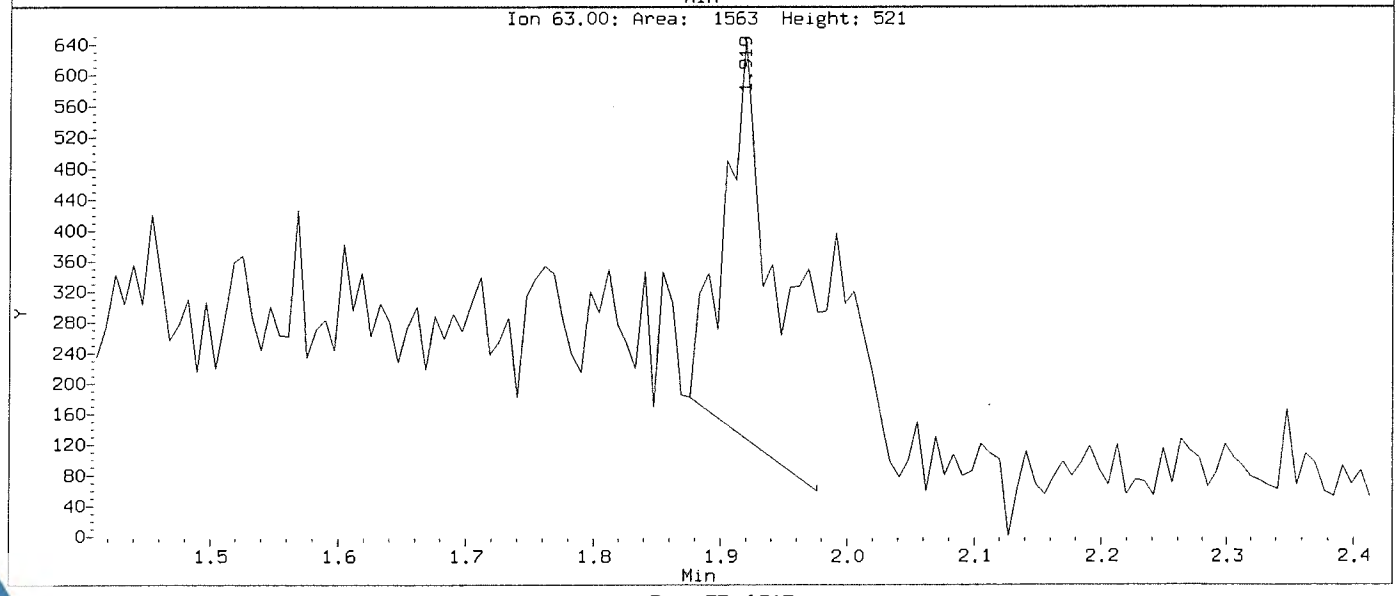


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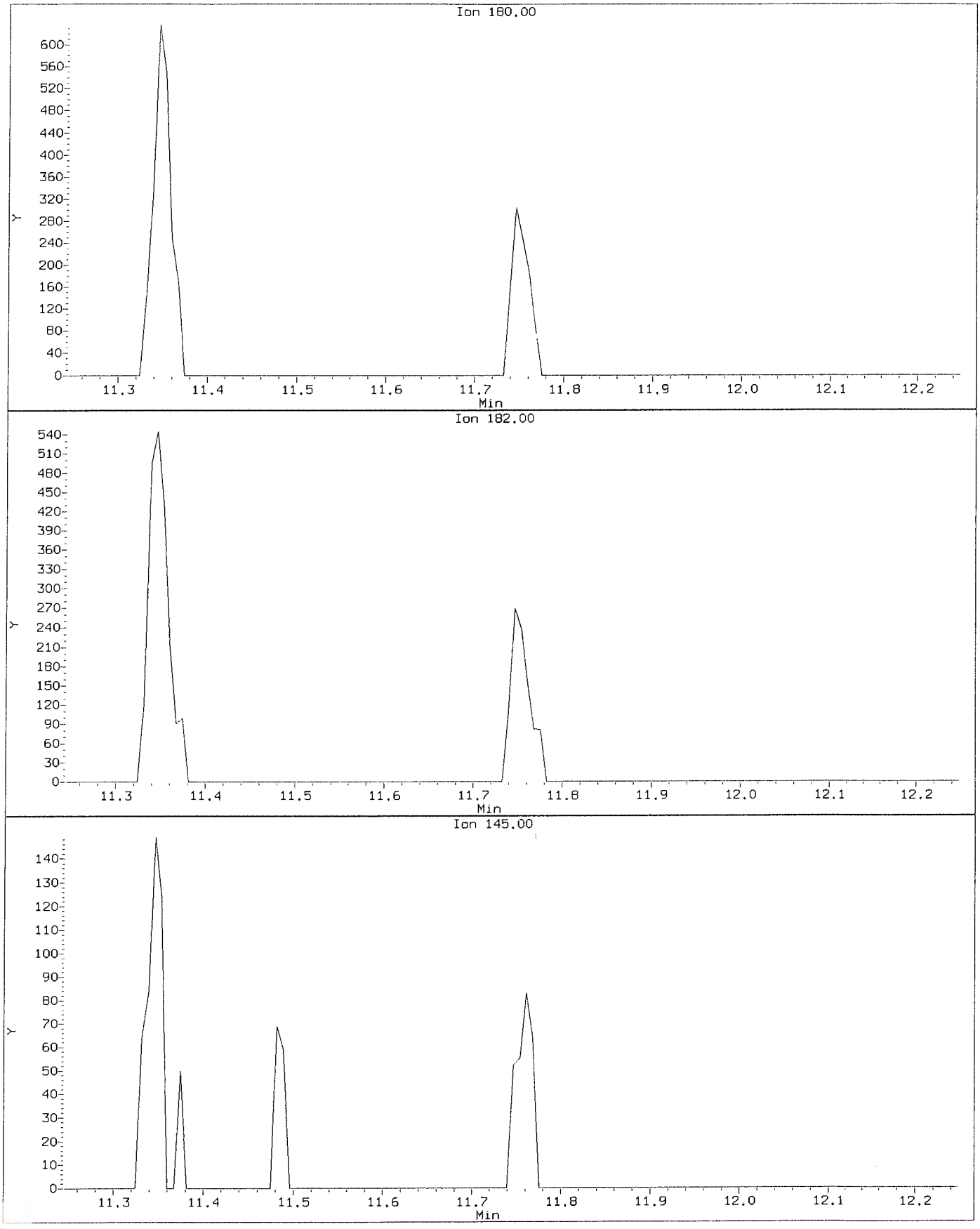






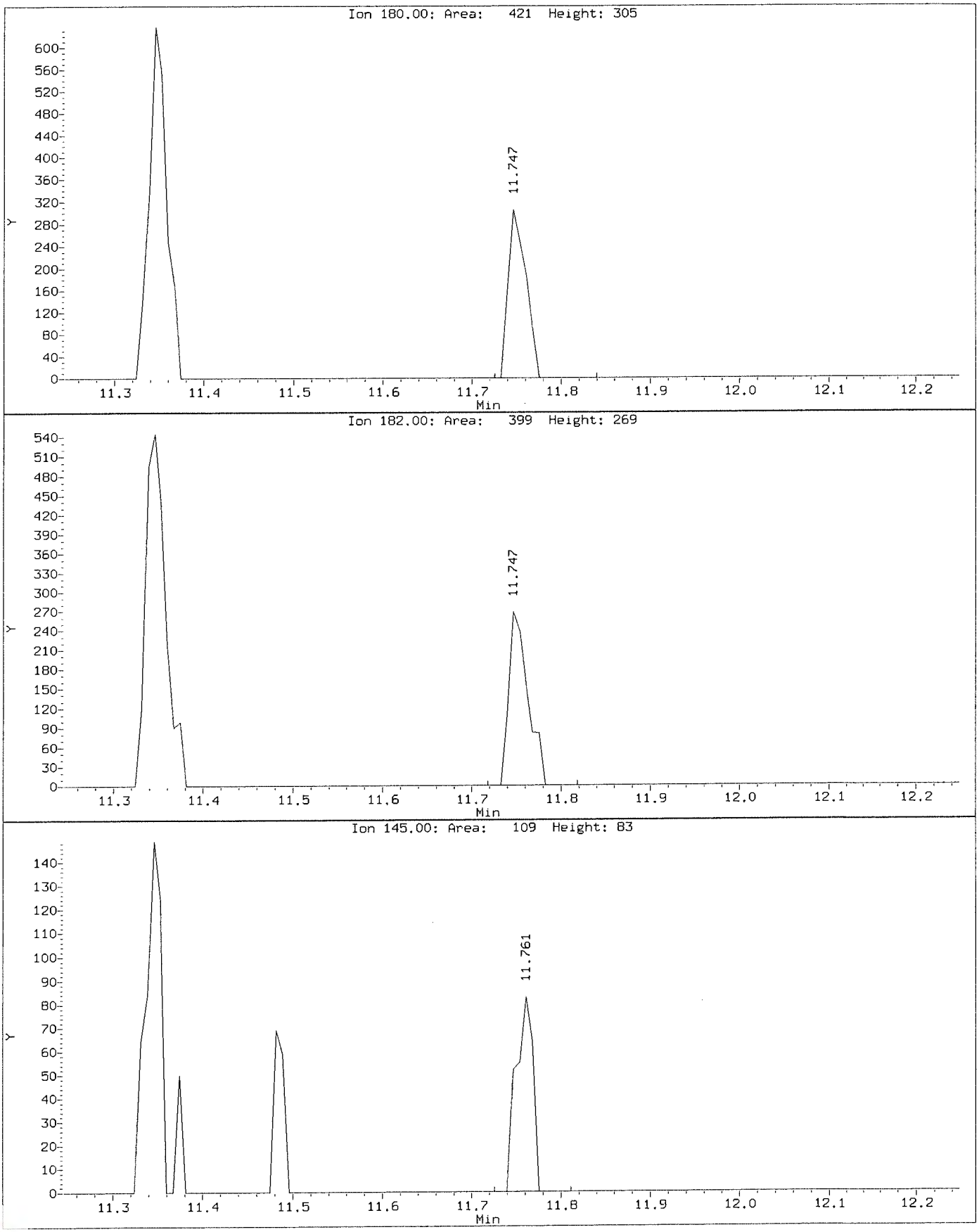
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Instrument: voa6.i
Client Sample ID: VSTD000.5

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



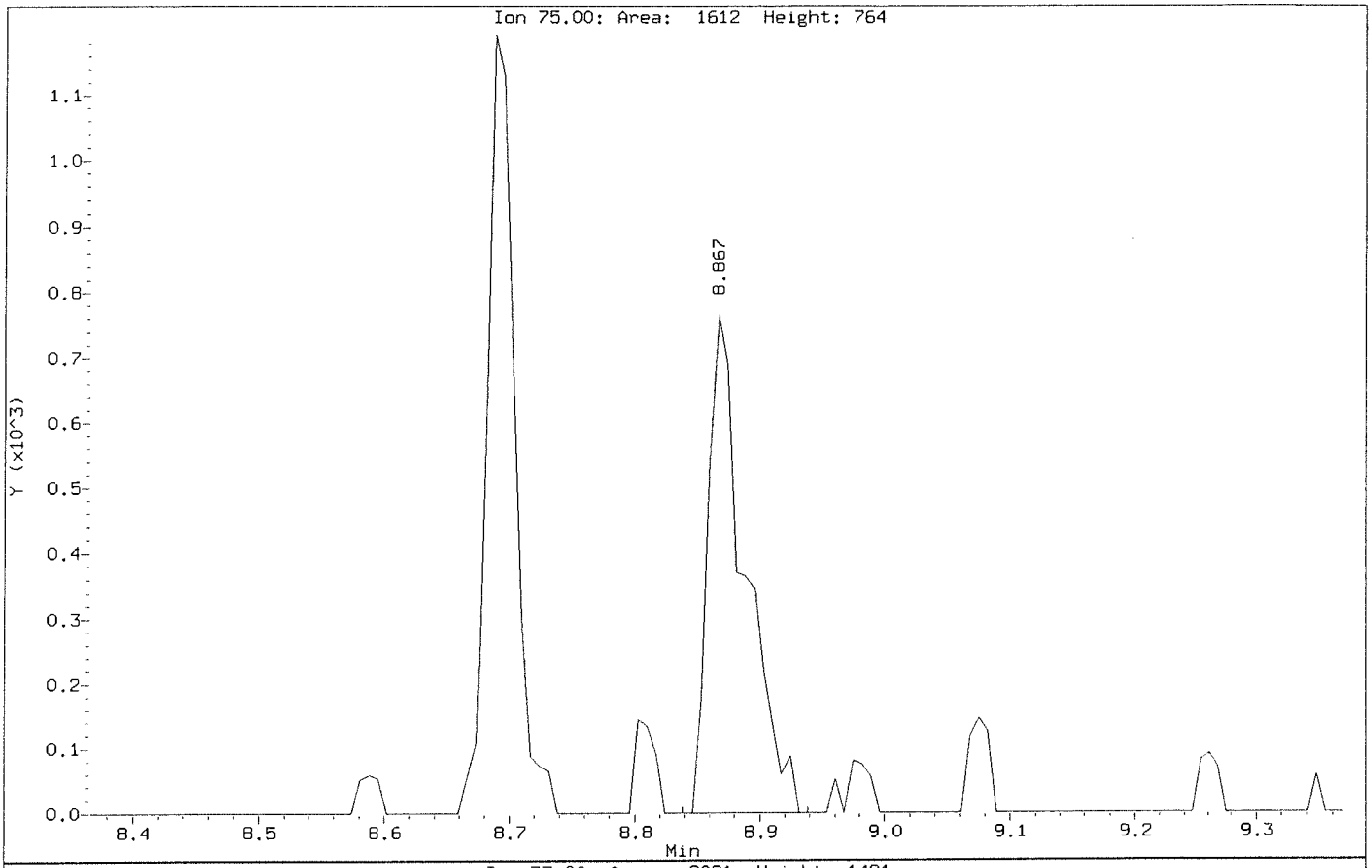
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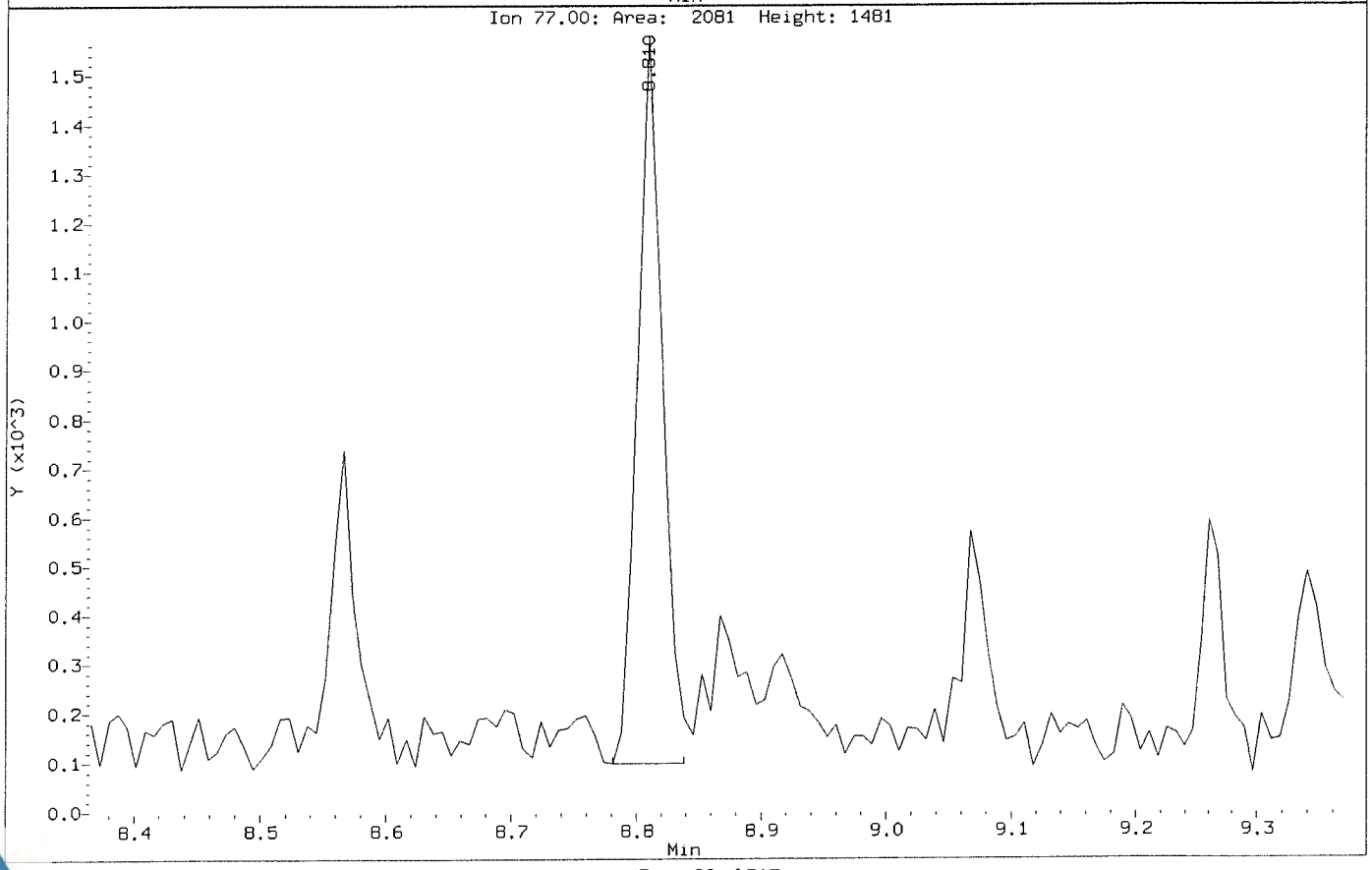
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CAS Number: 87-61-6



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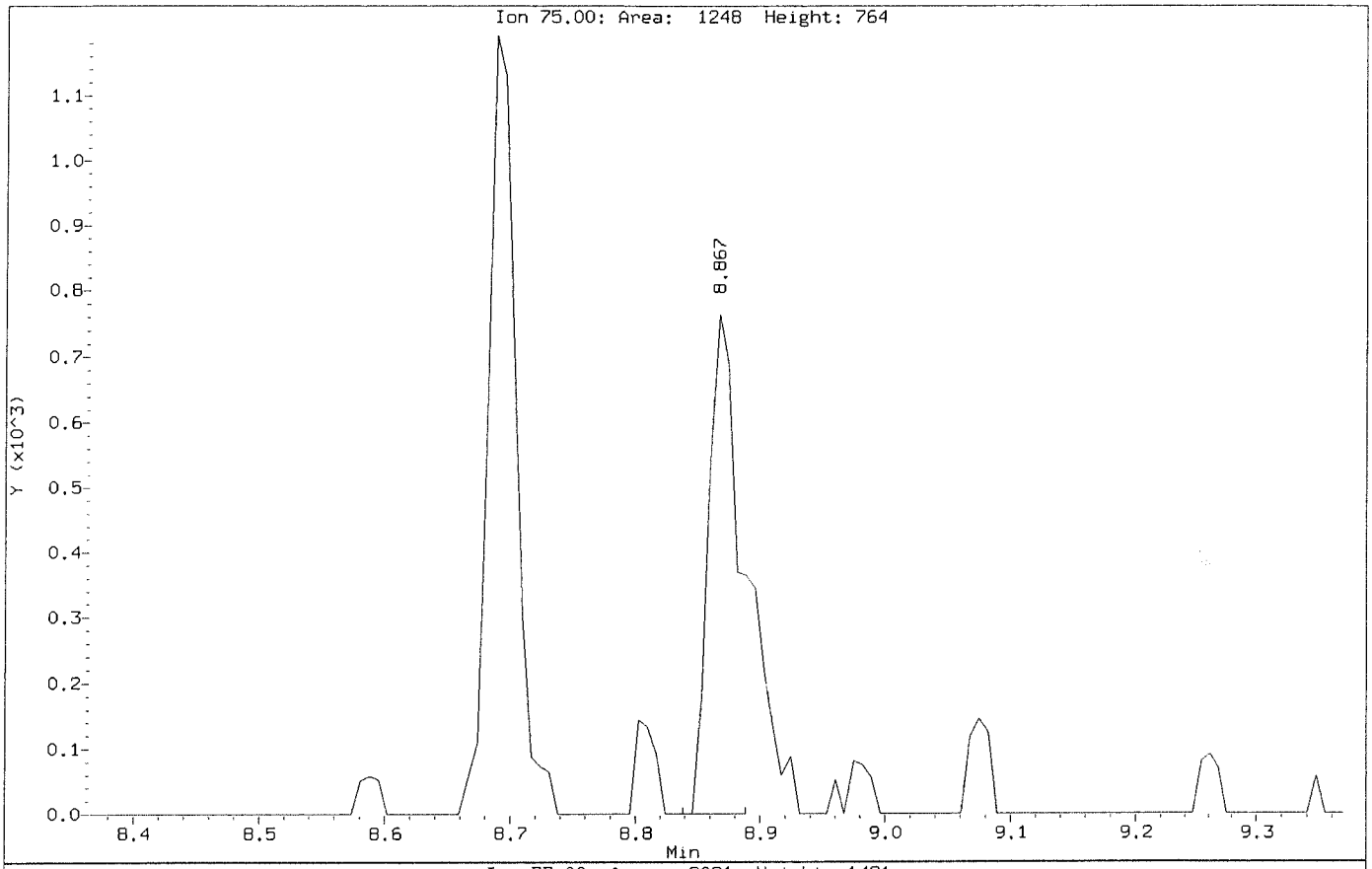
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CAS Number: 96-18-4

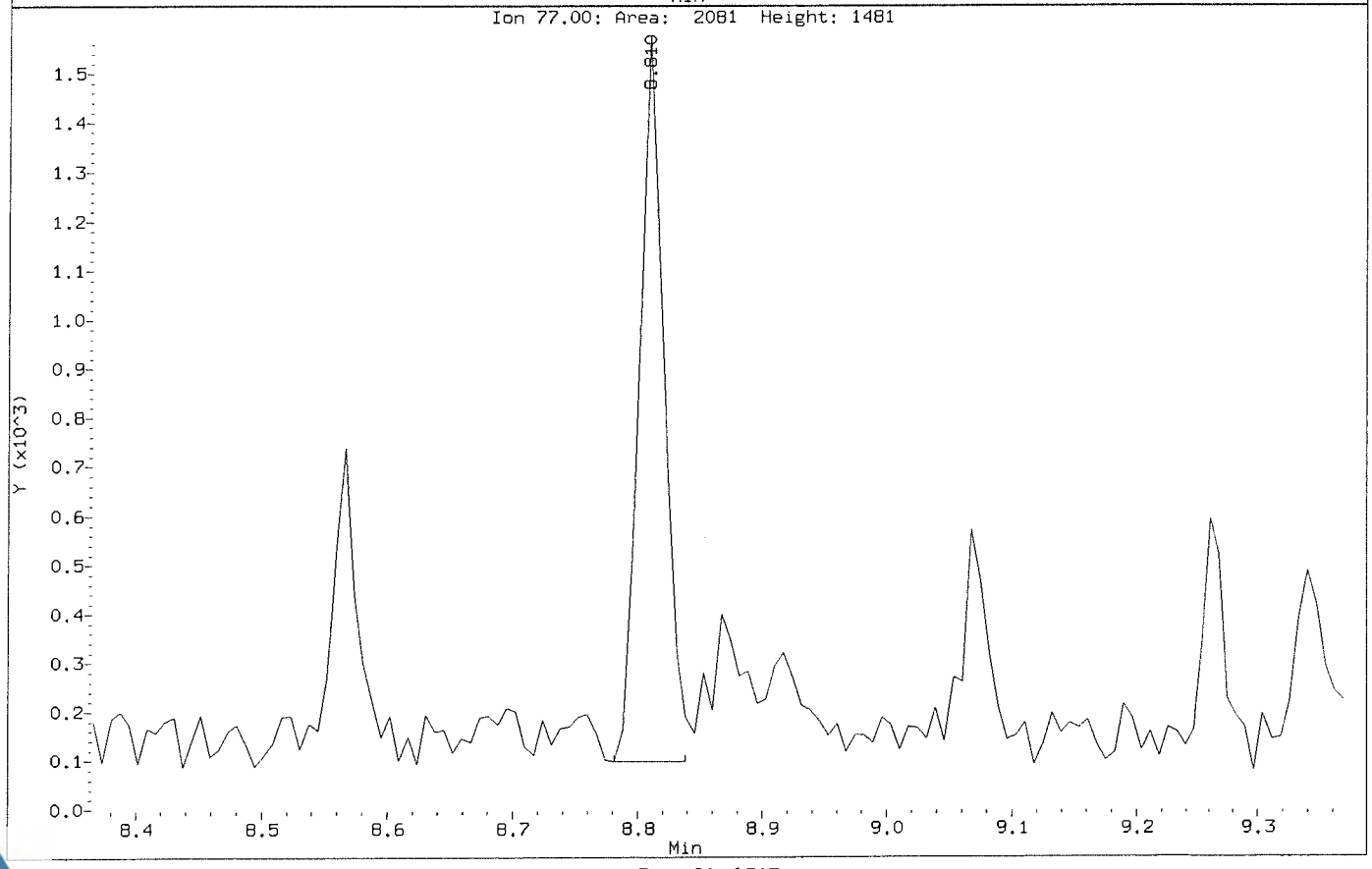




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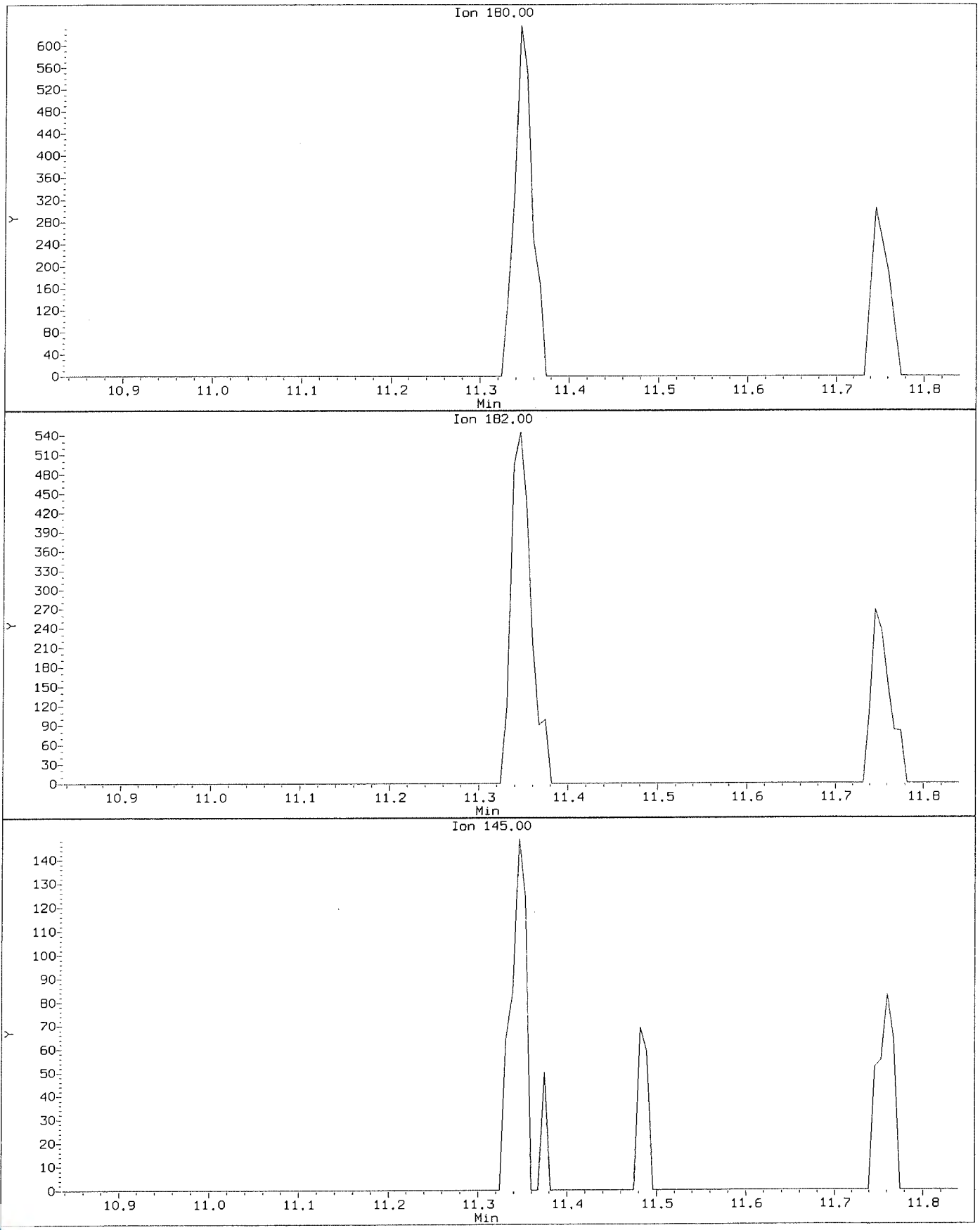
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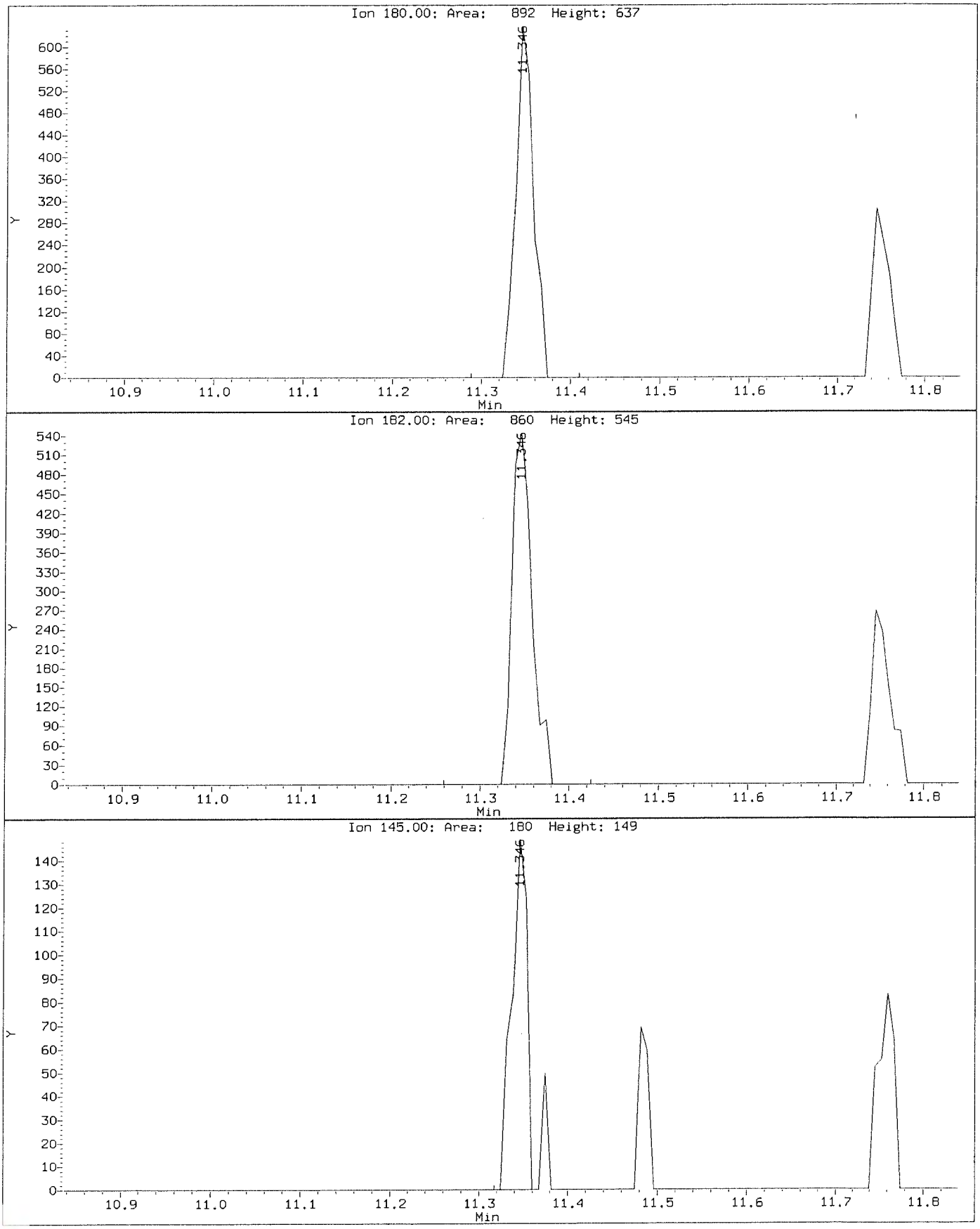
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Instrument: voa6.i
Client Sample ID: VSTD000.5

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



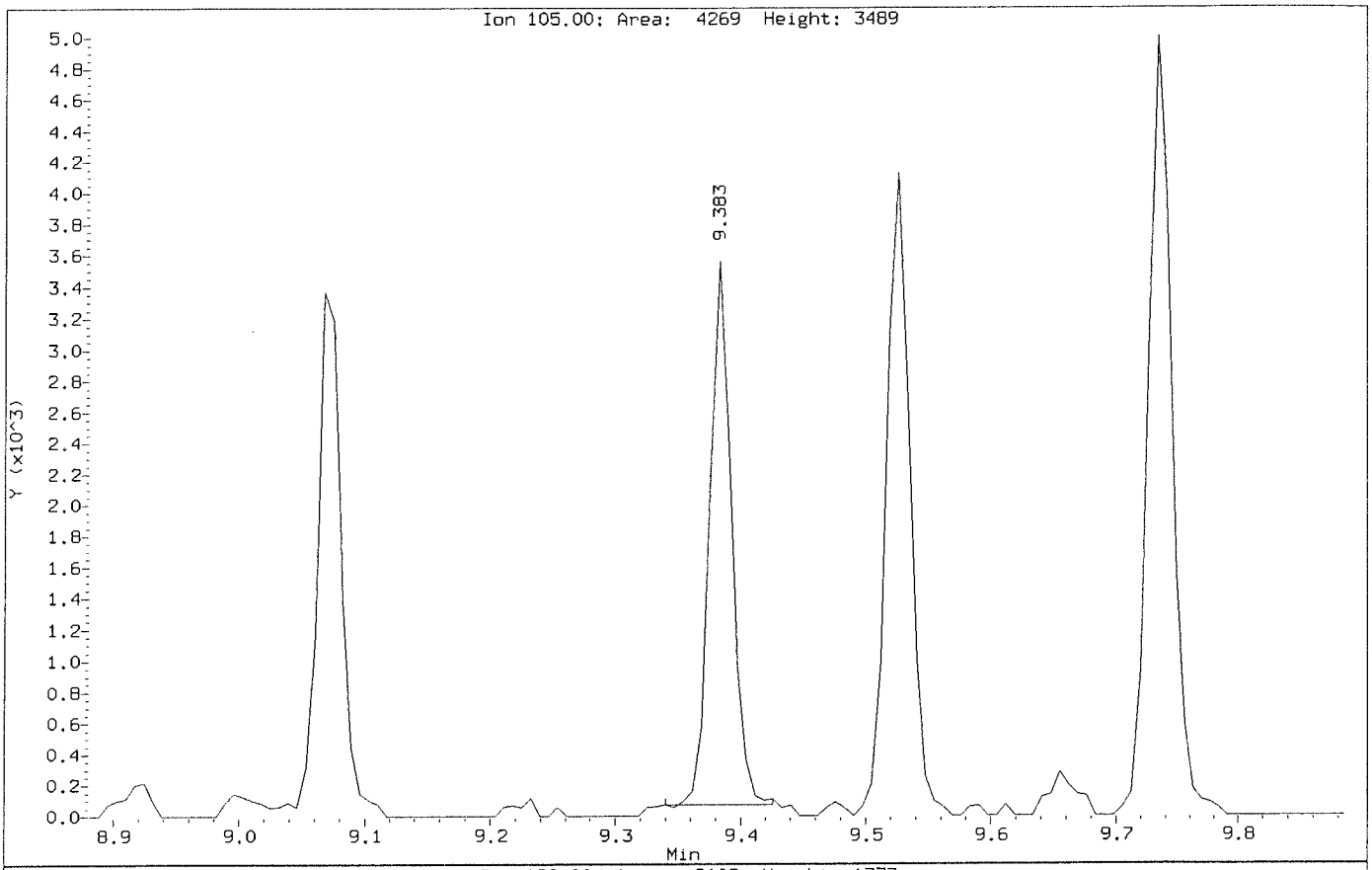
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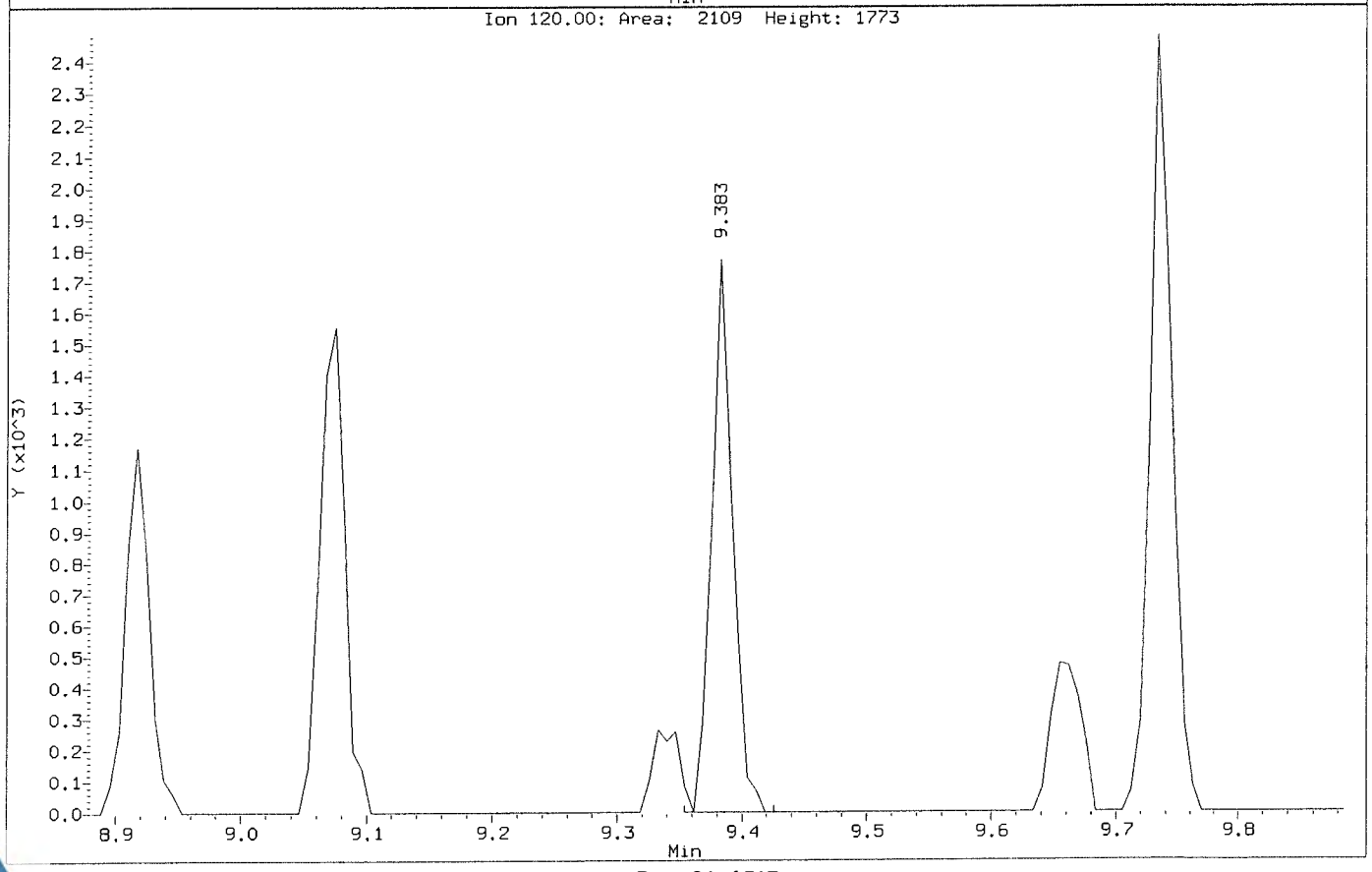
Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



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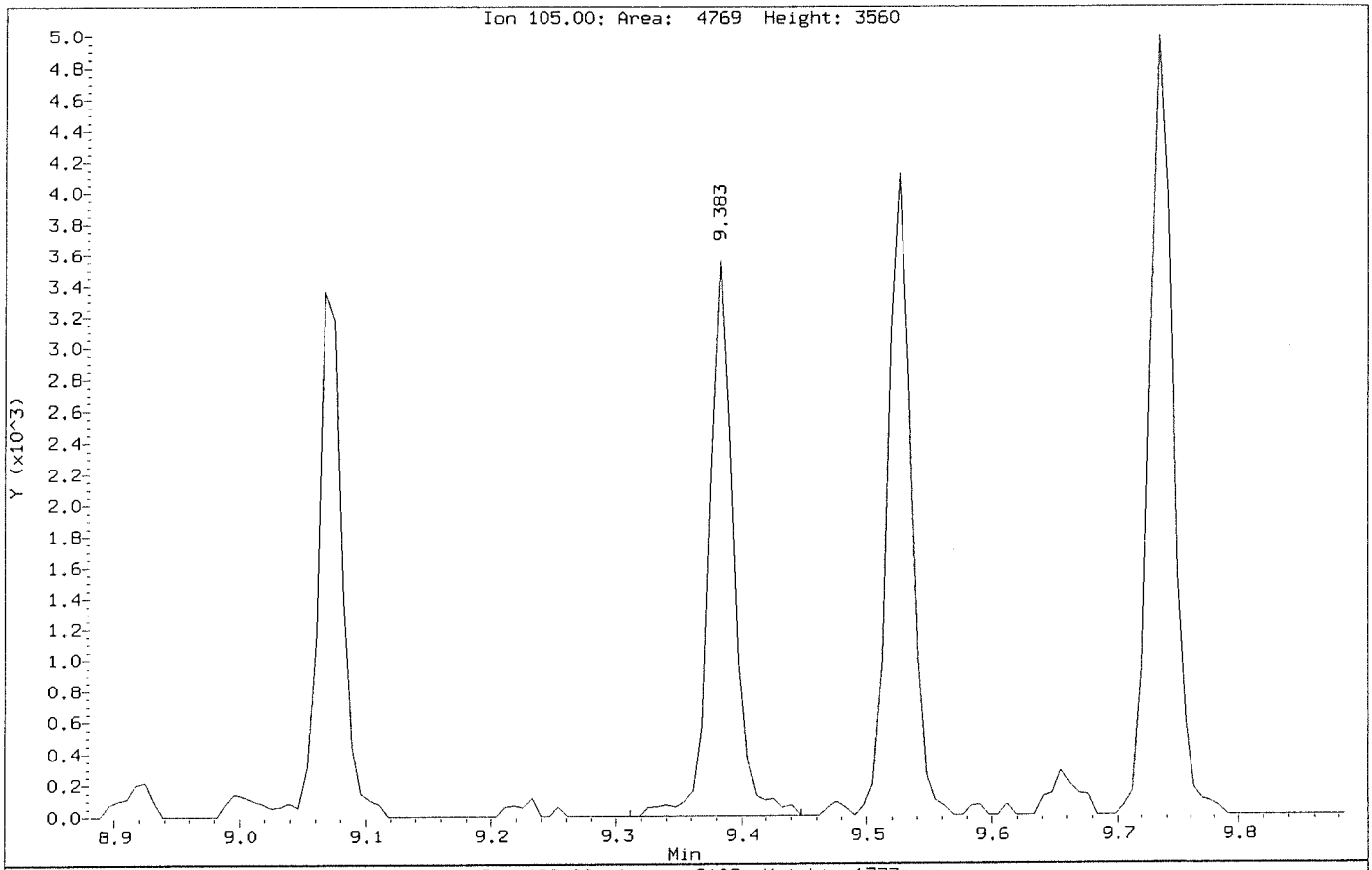
Compound: 1,2,4-Trimethylbenzene
CAS Number: 95-63-6

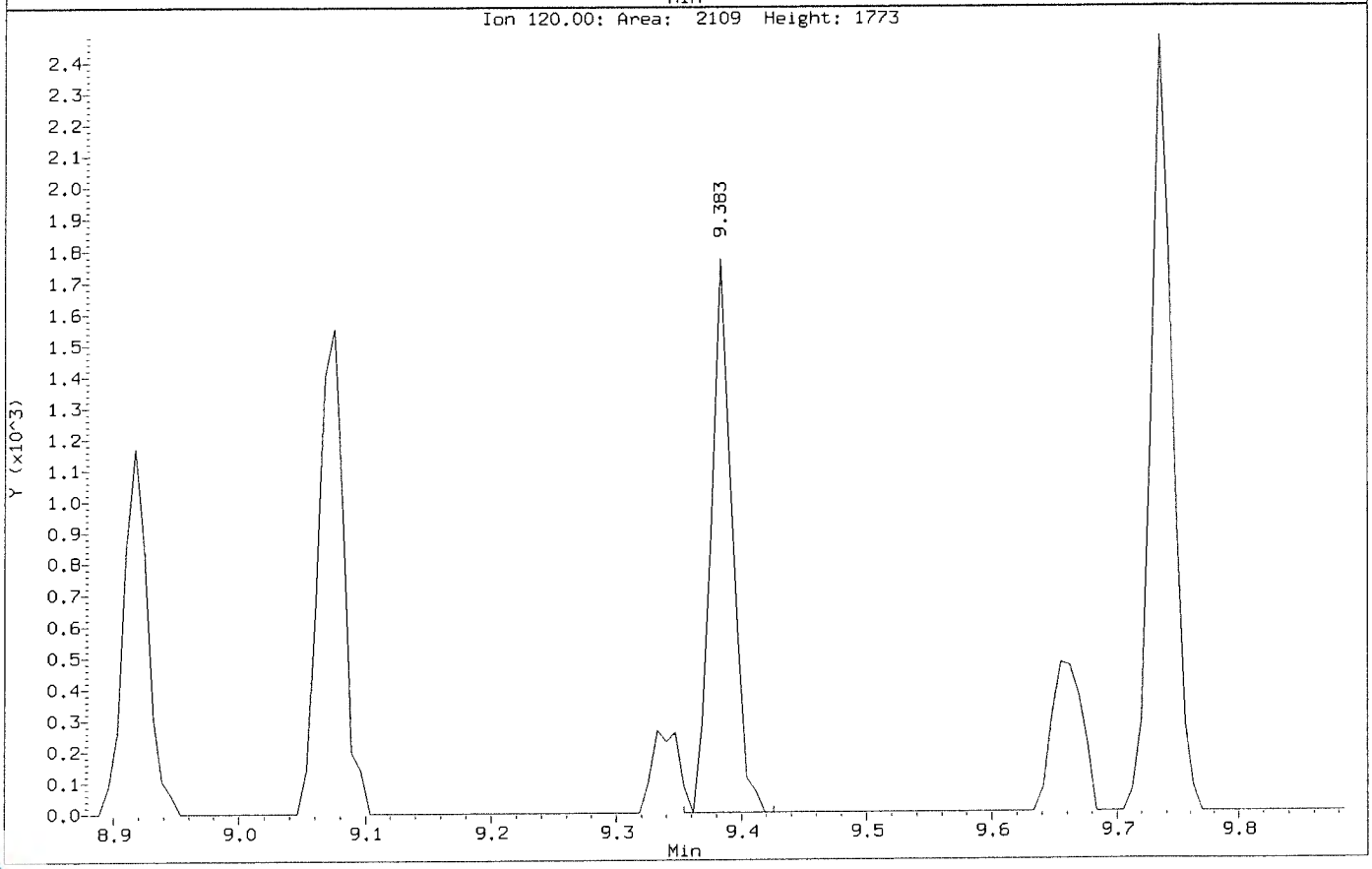




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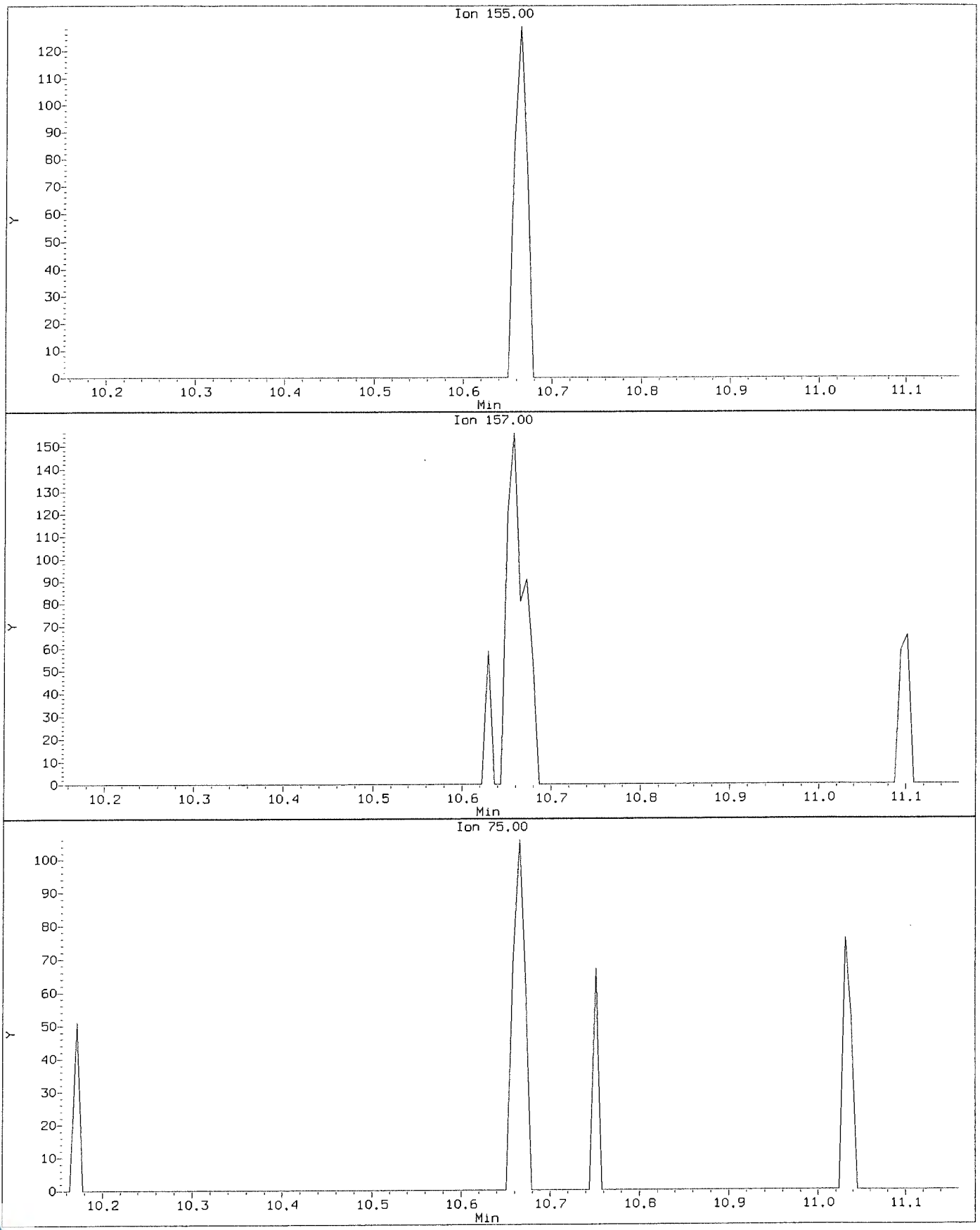
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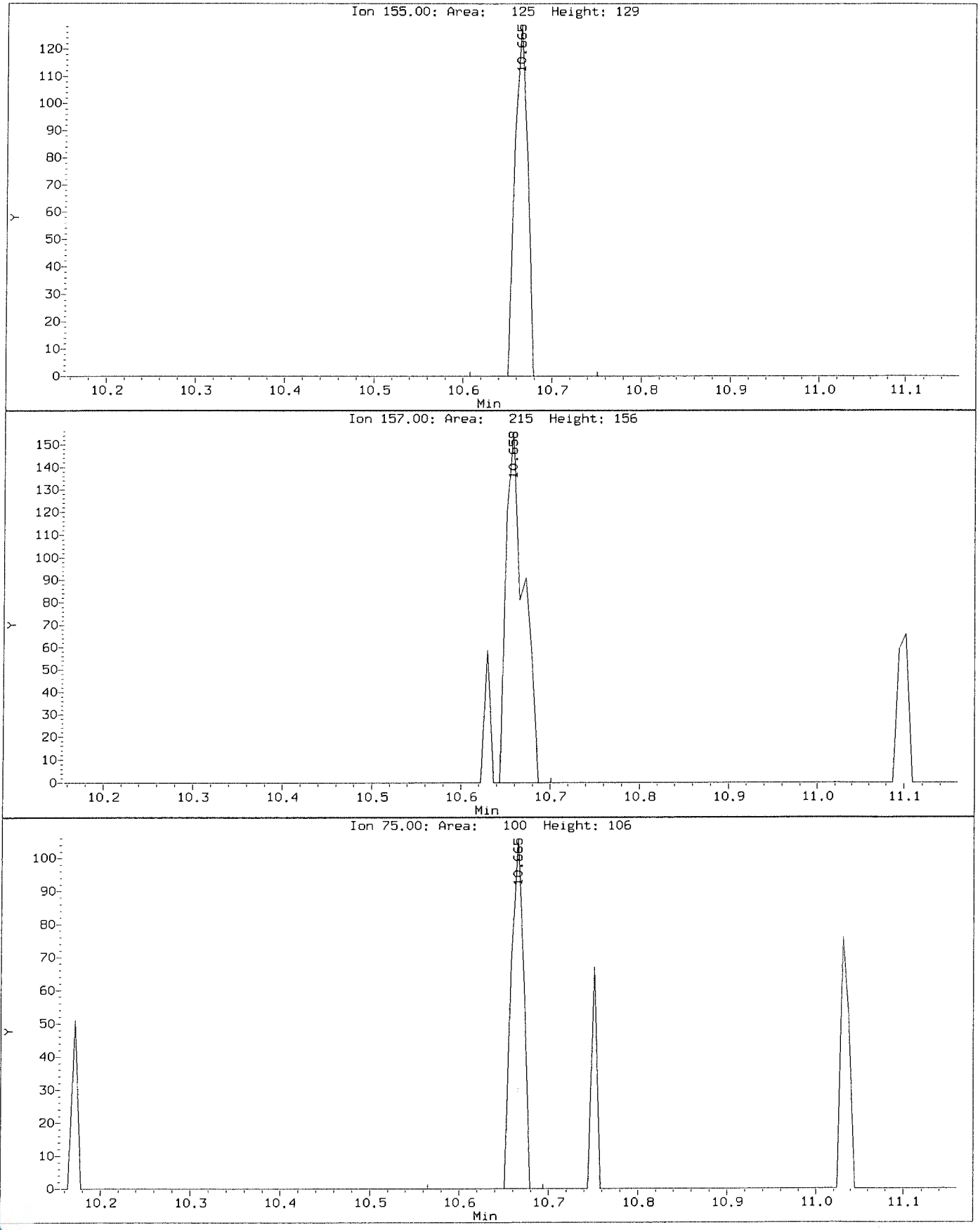
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Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



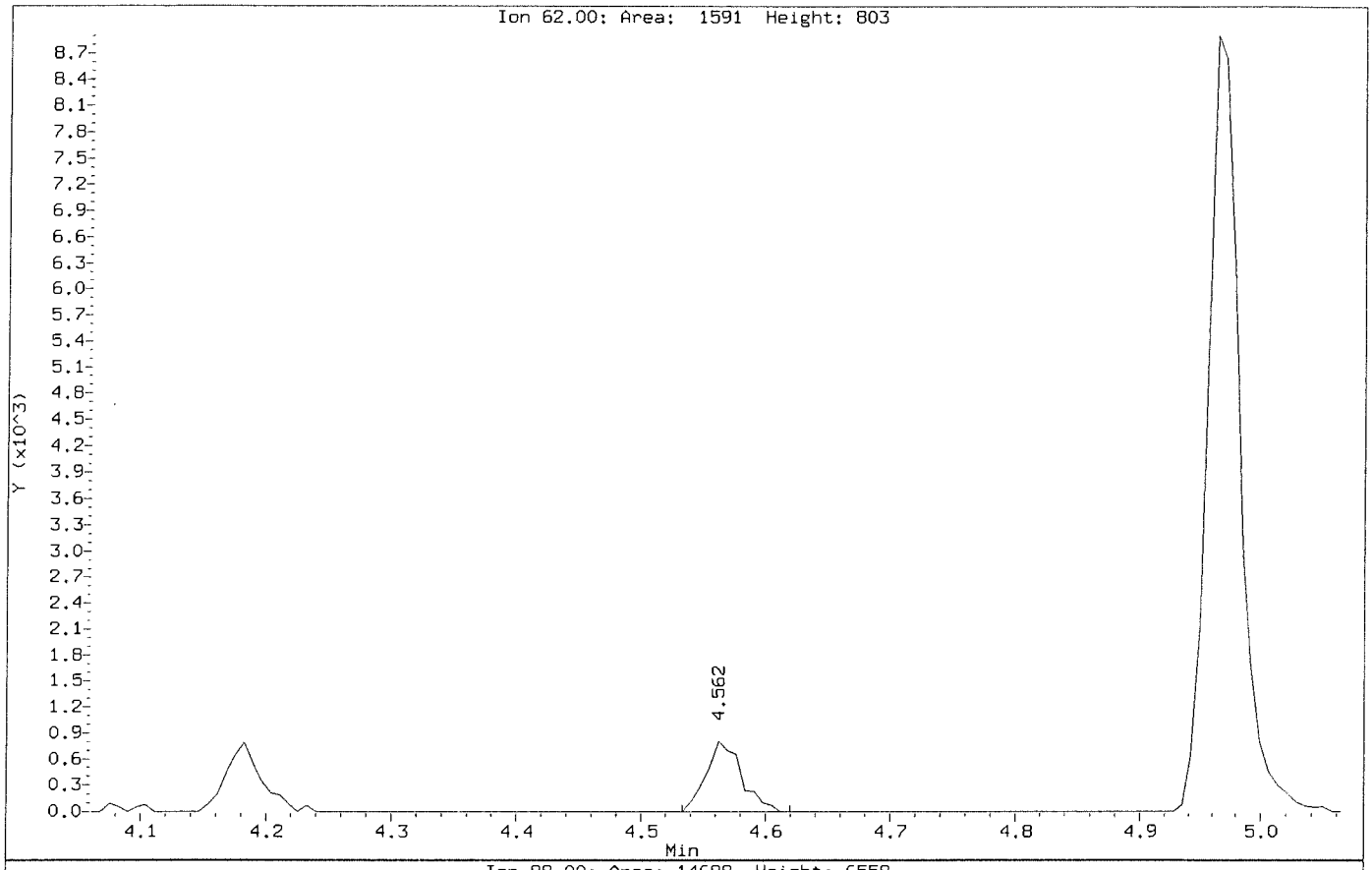
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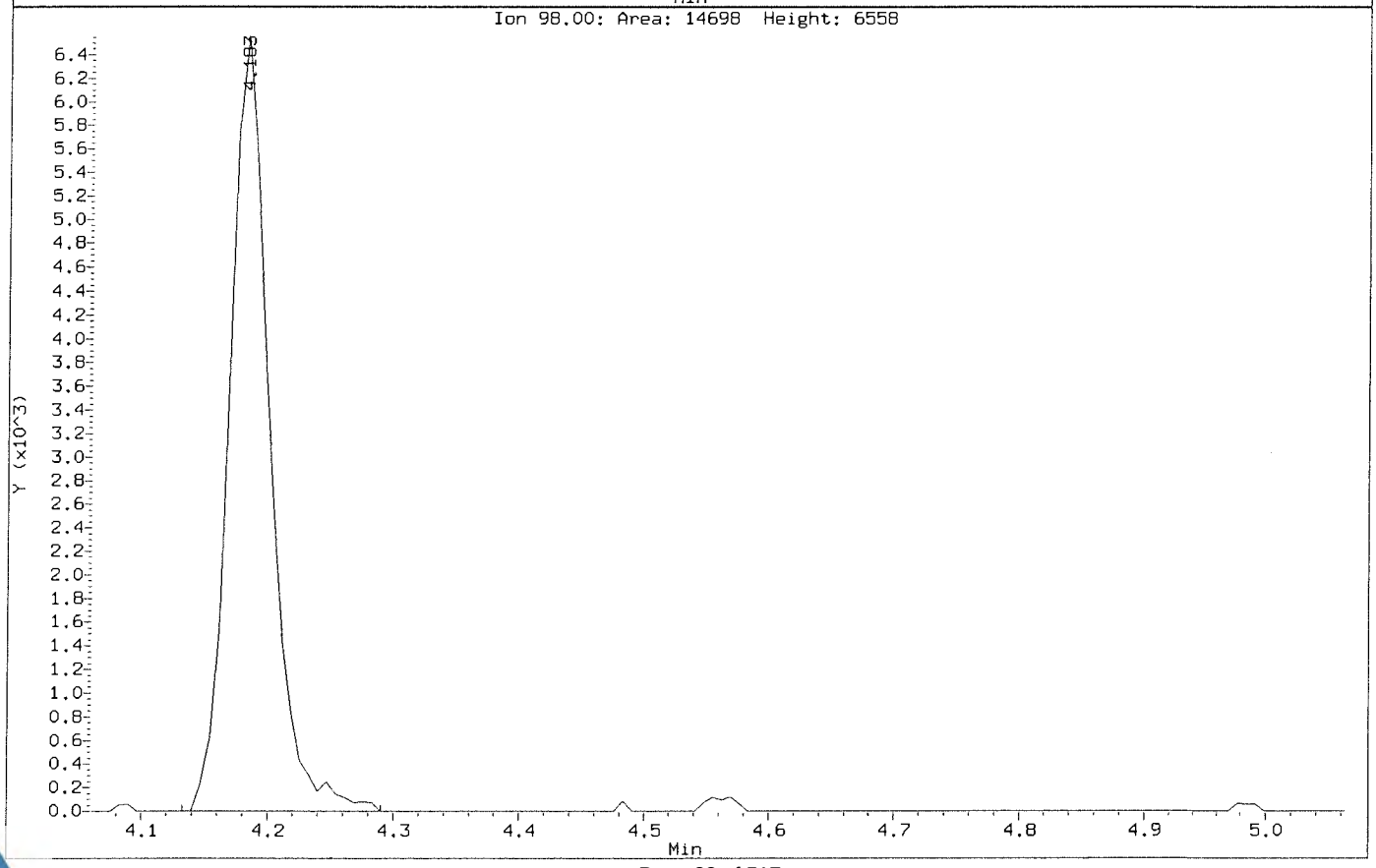
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CAS Number: 96-12-8



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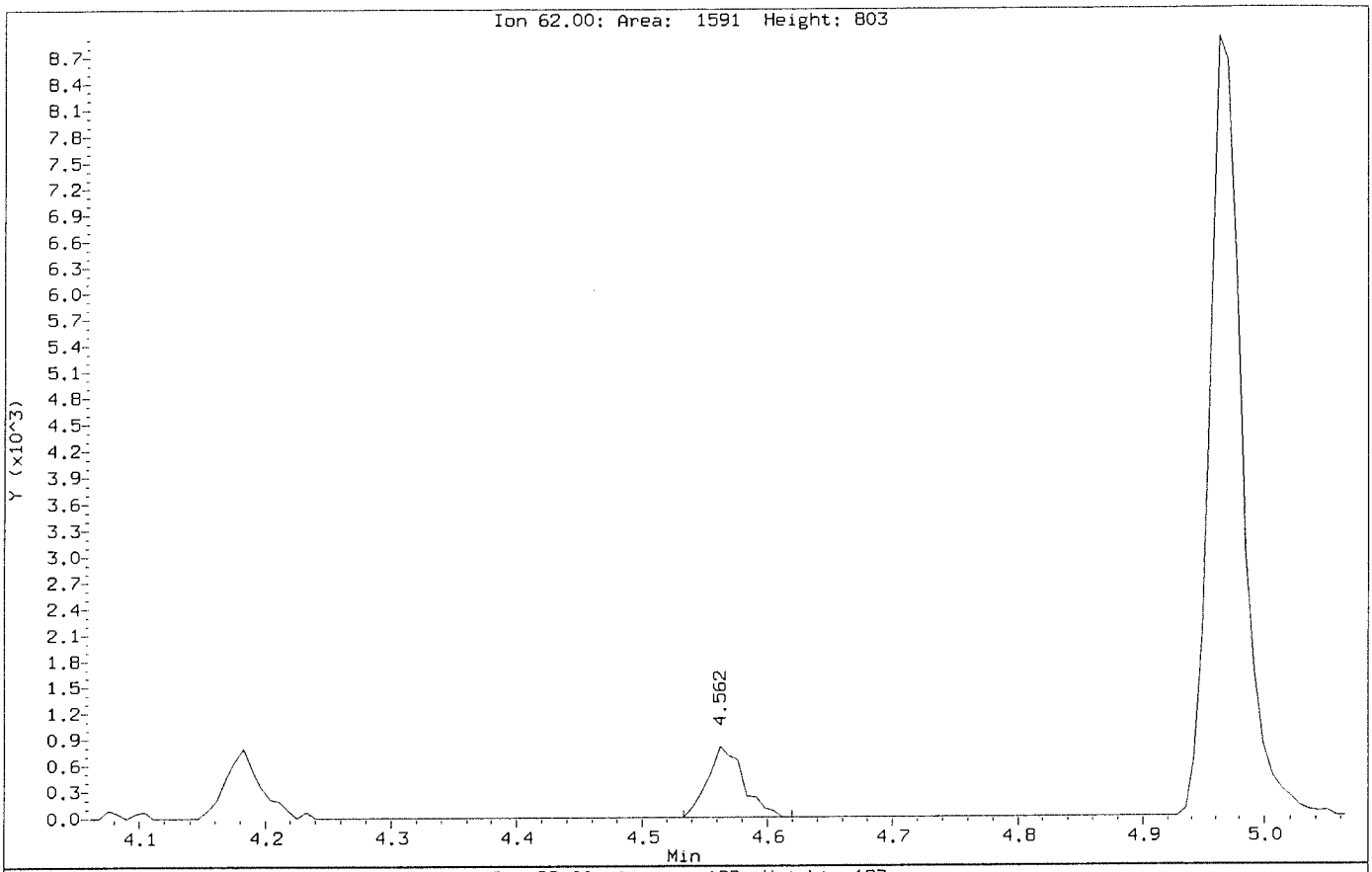
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

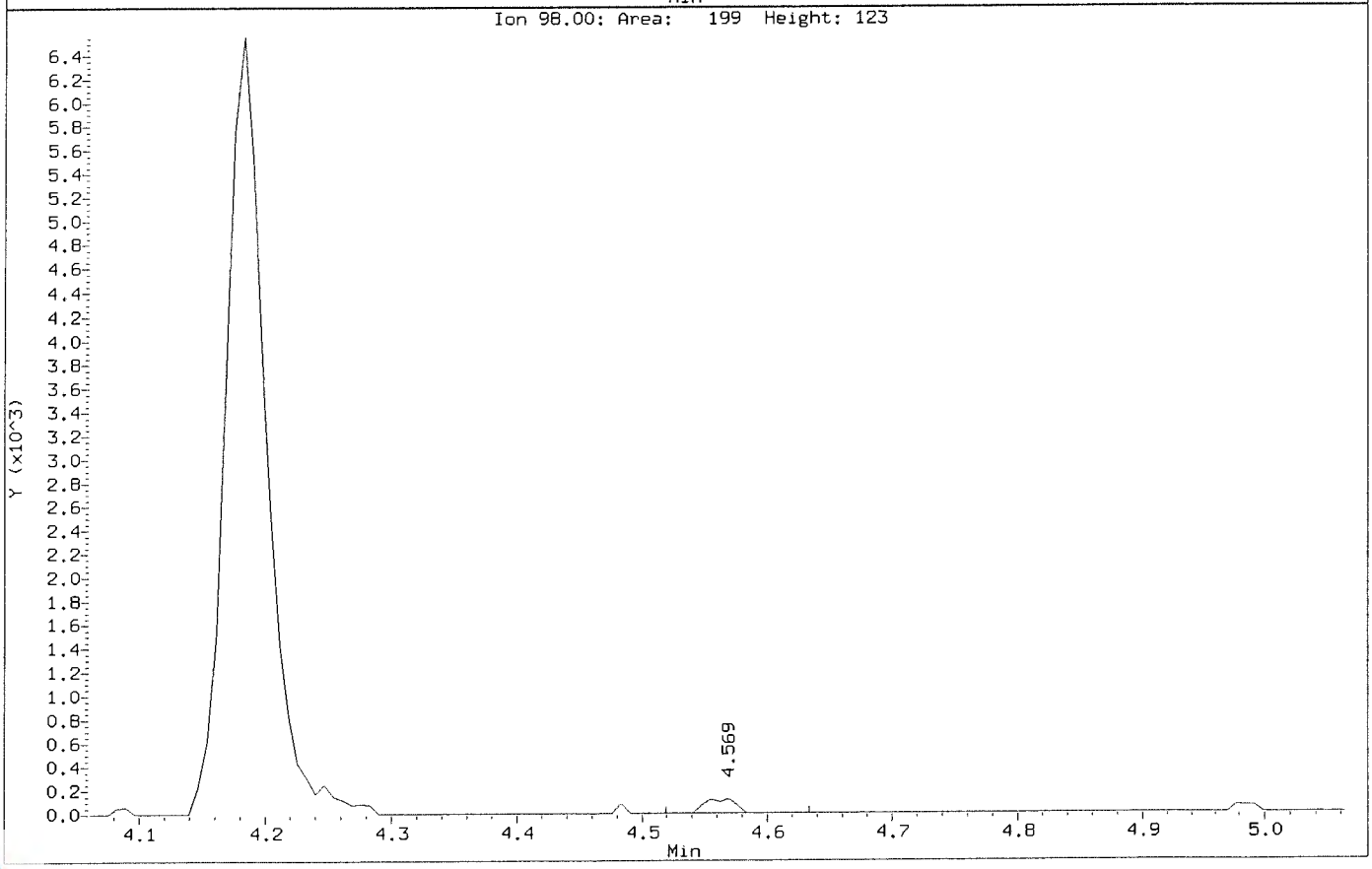




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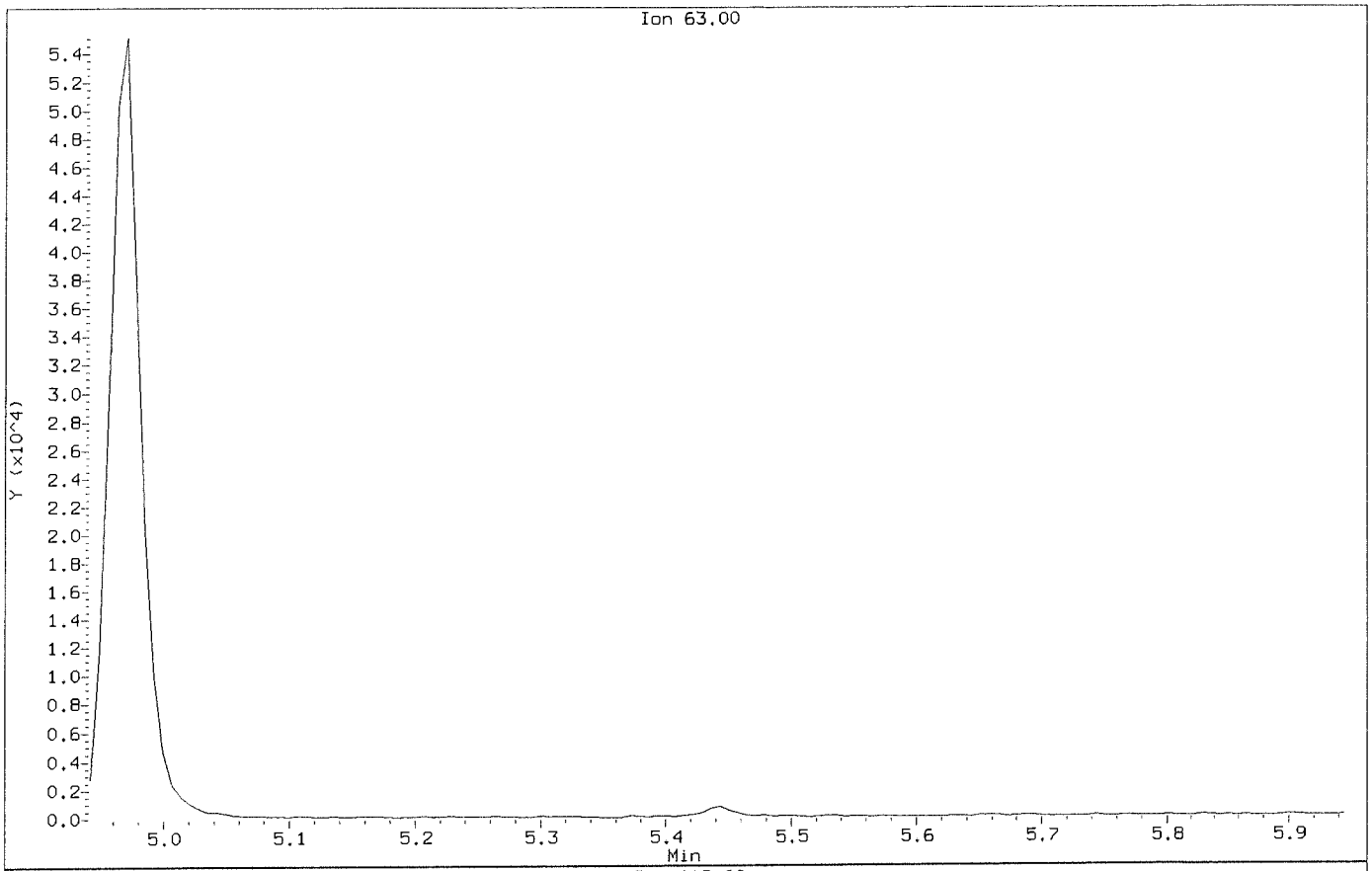
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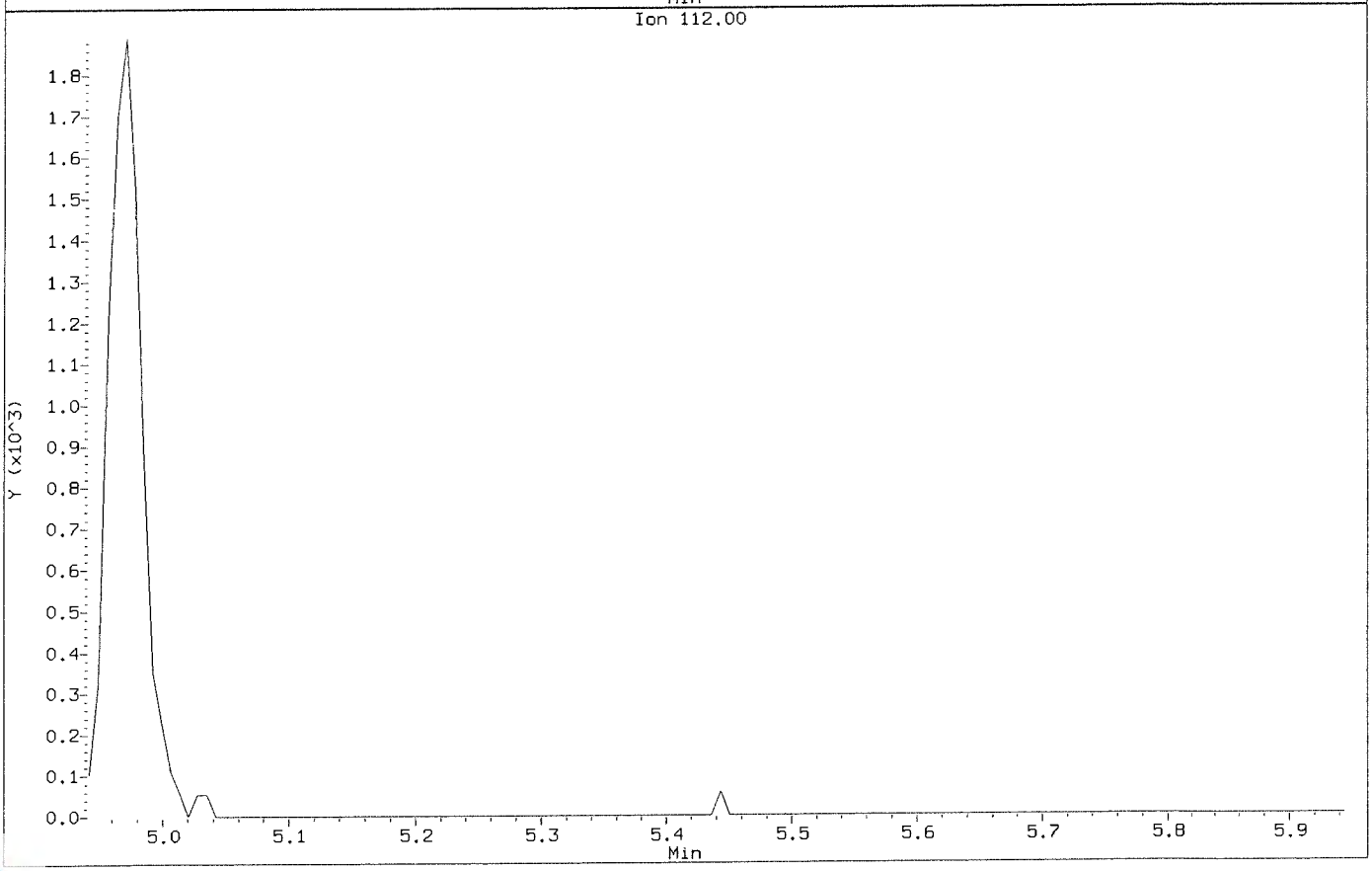




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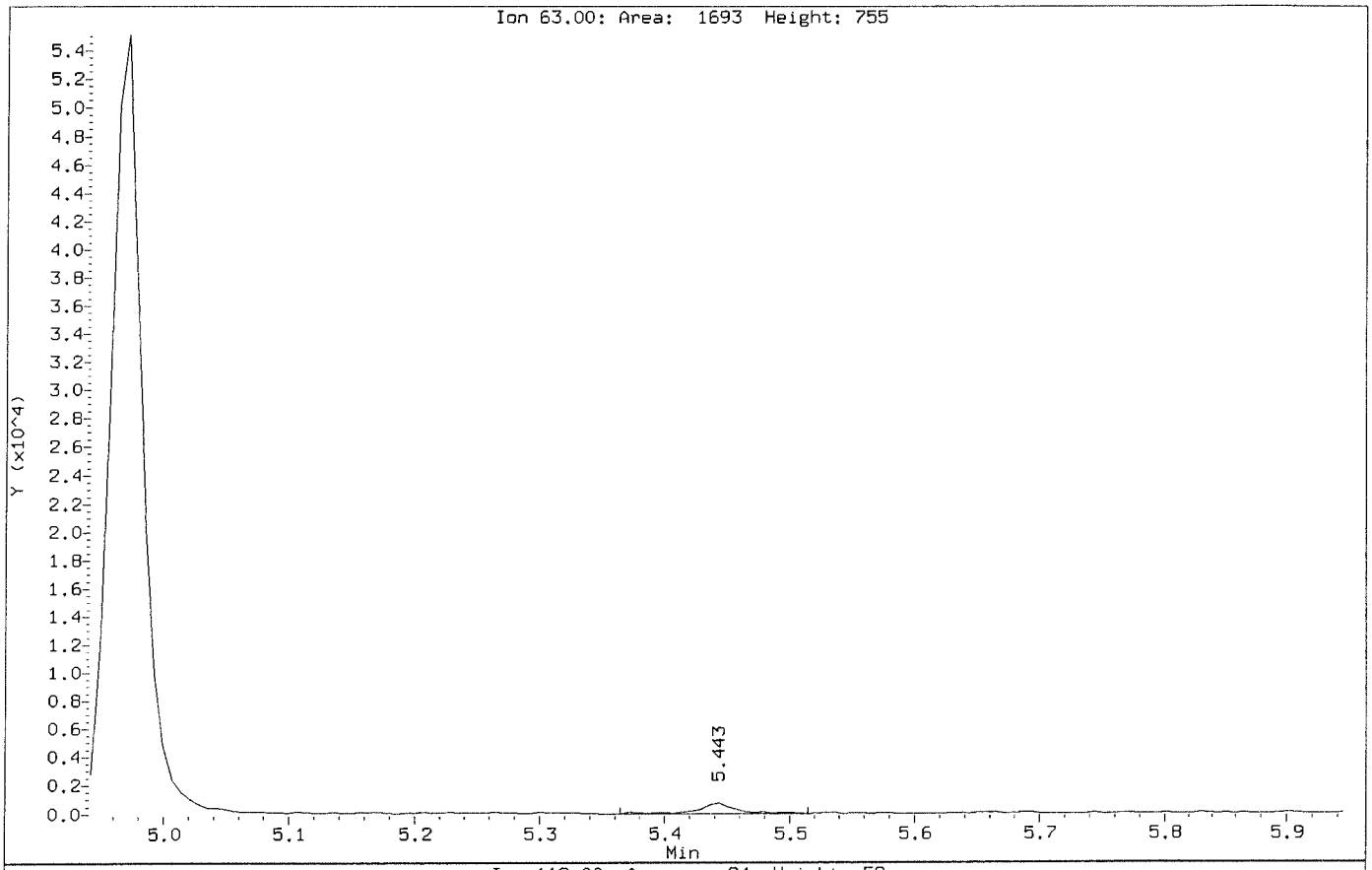
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CAS Number: 78-87-5

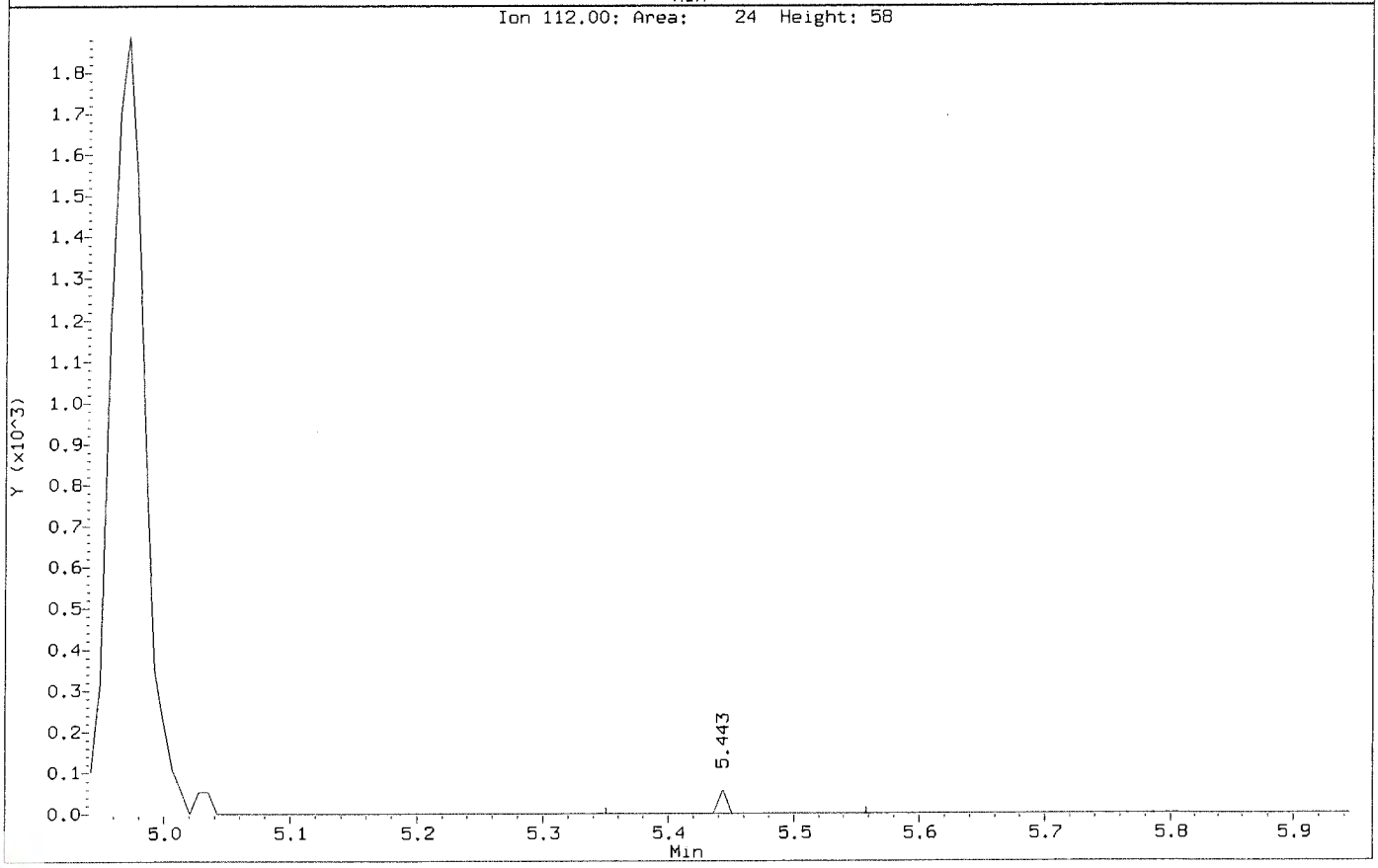




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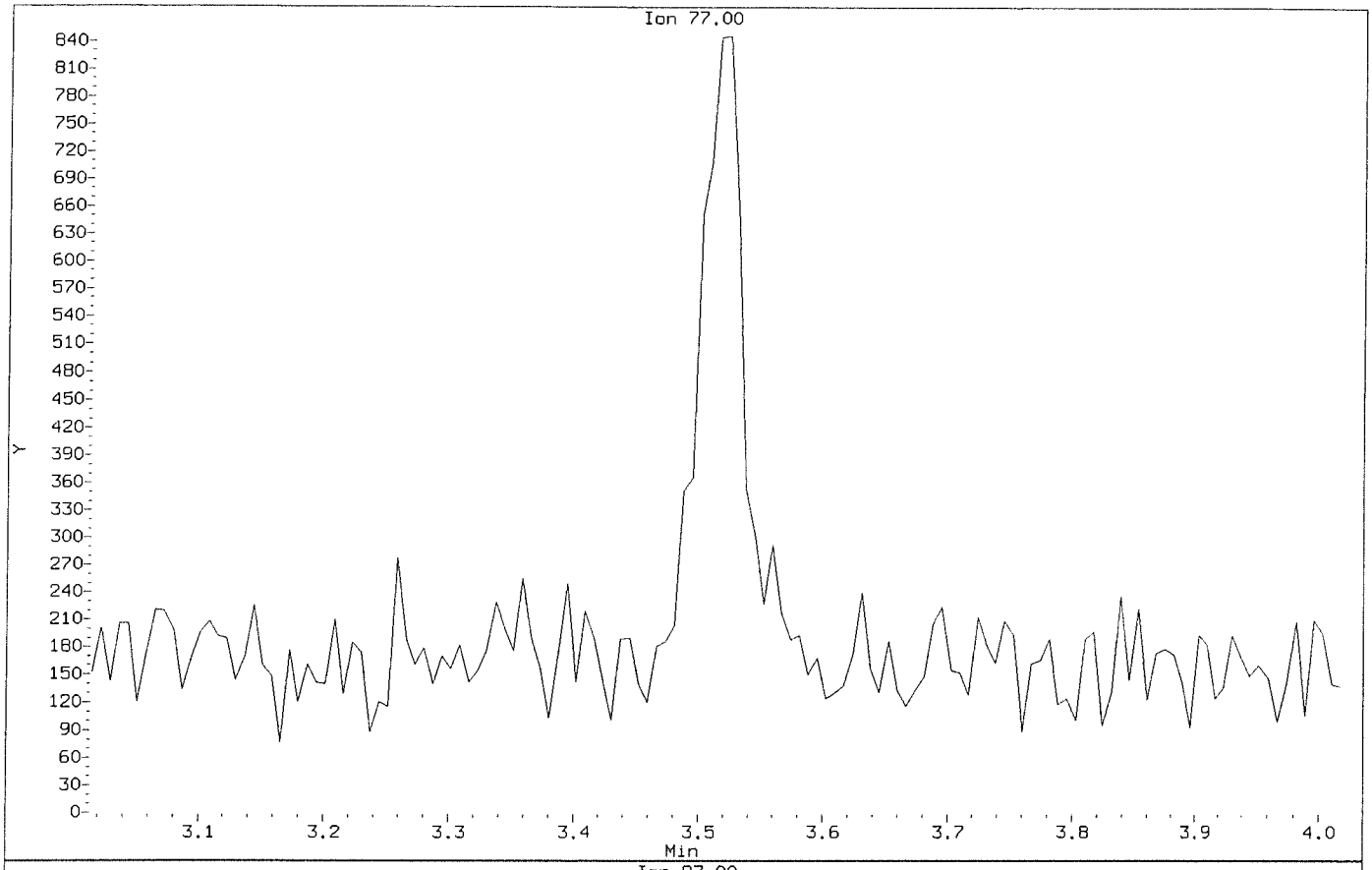
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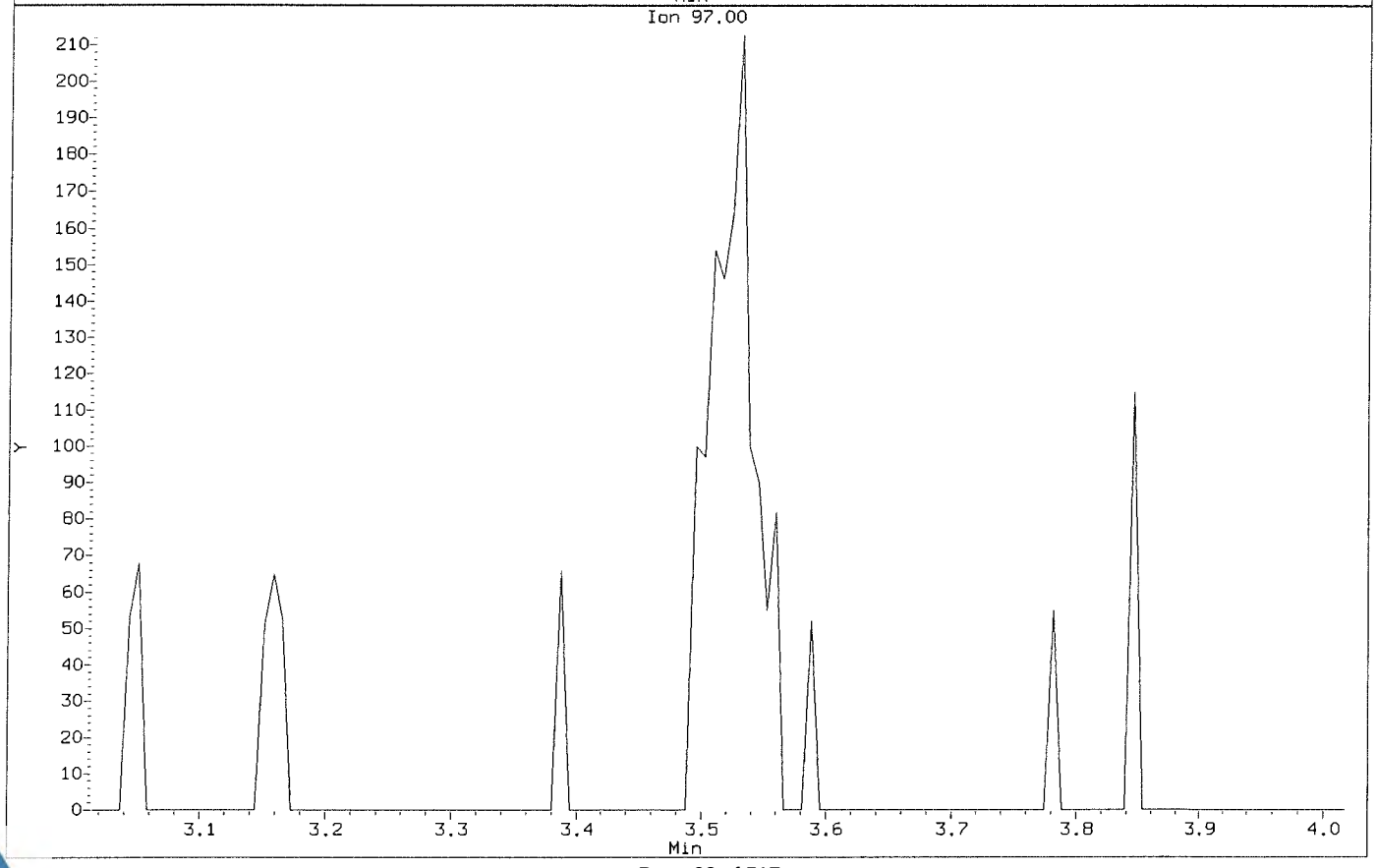




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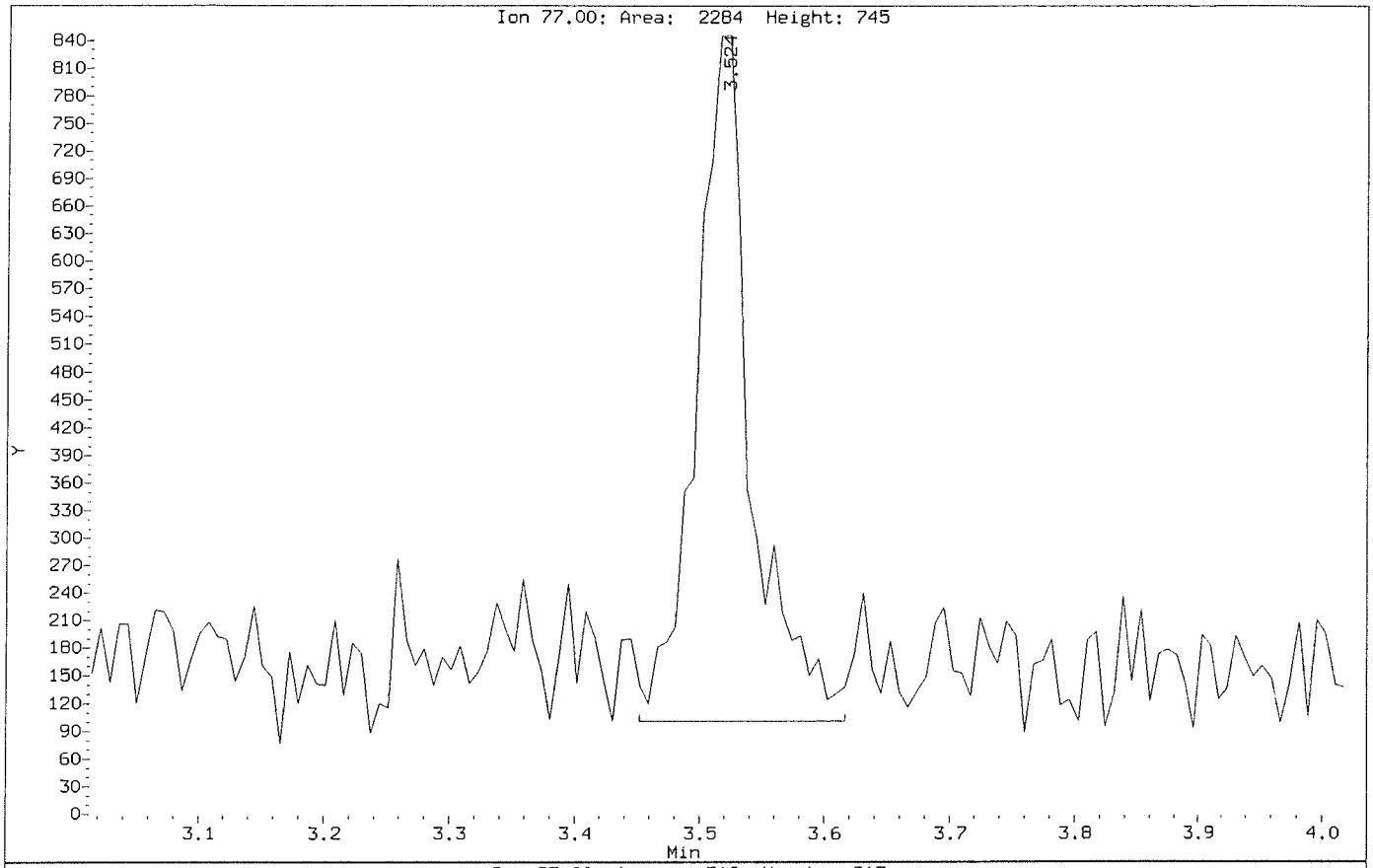
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CAS Number: 594-20-7

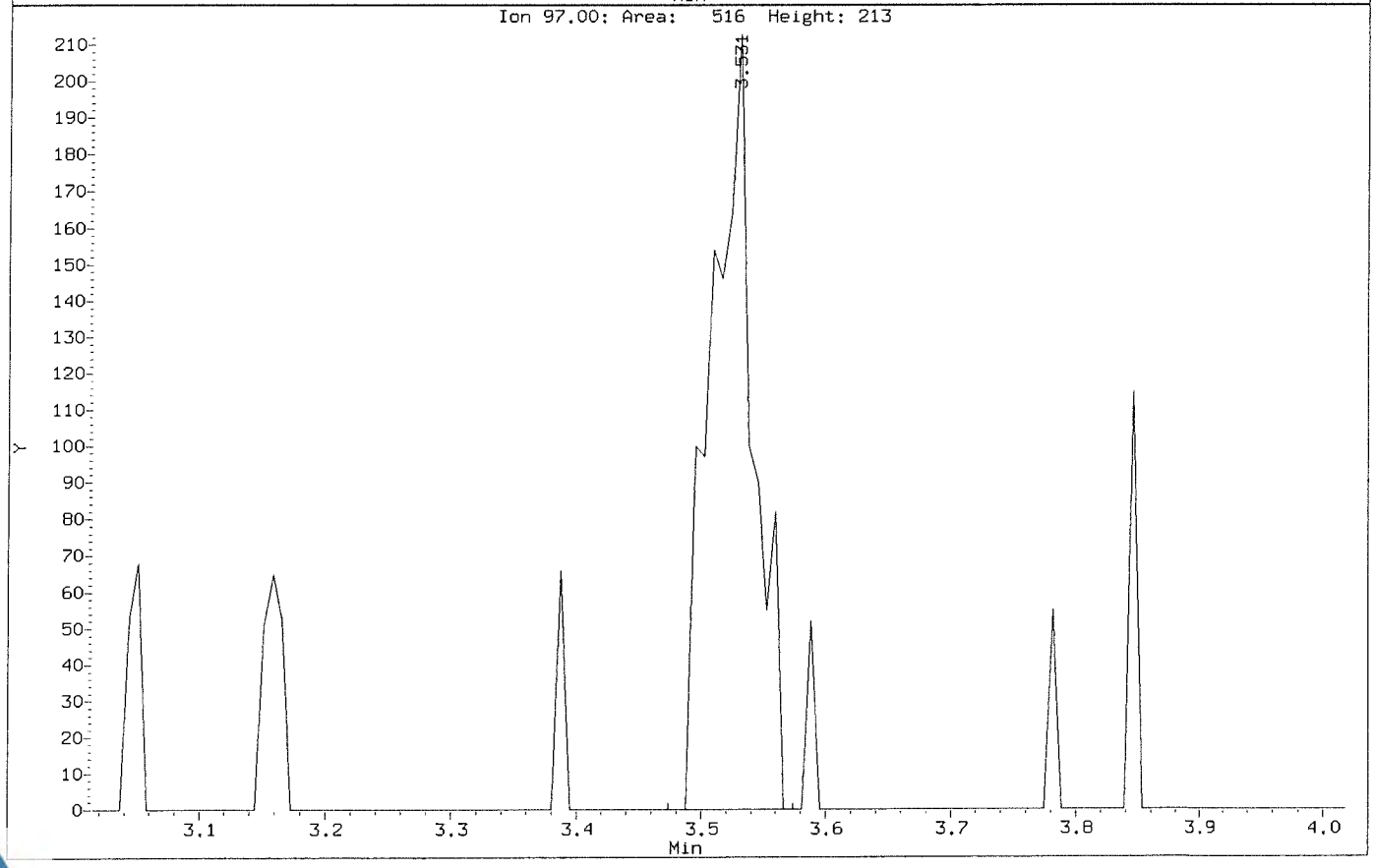




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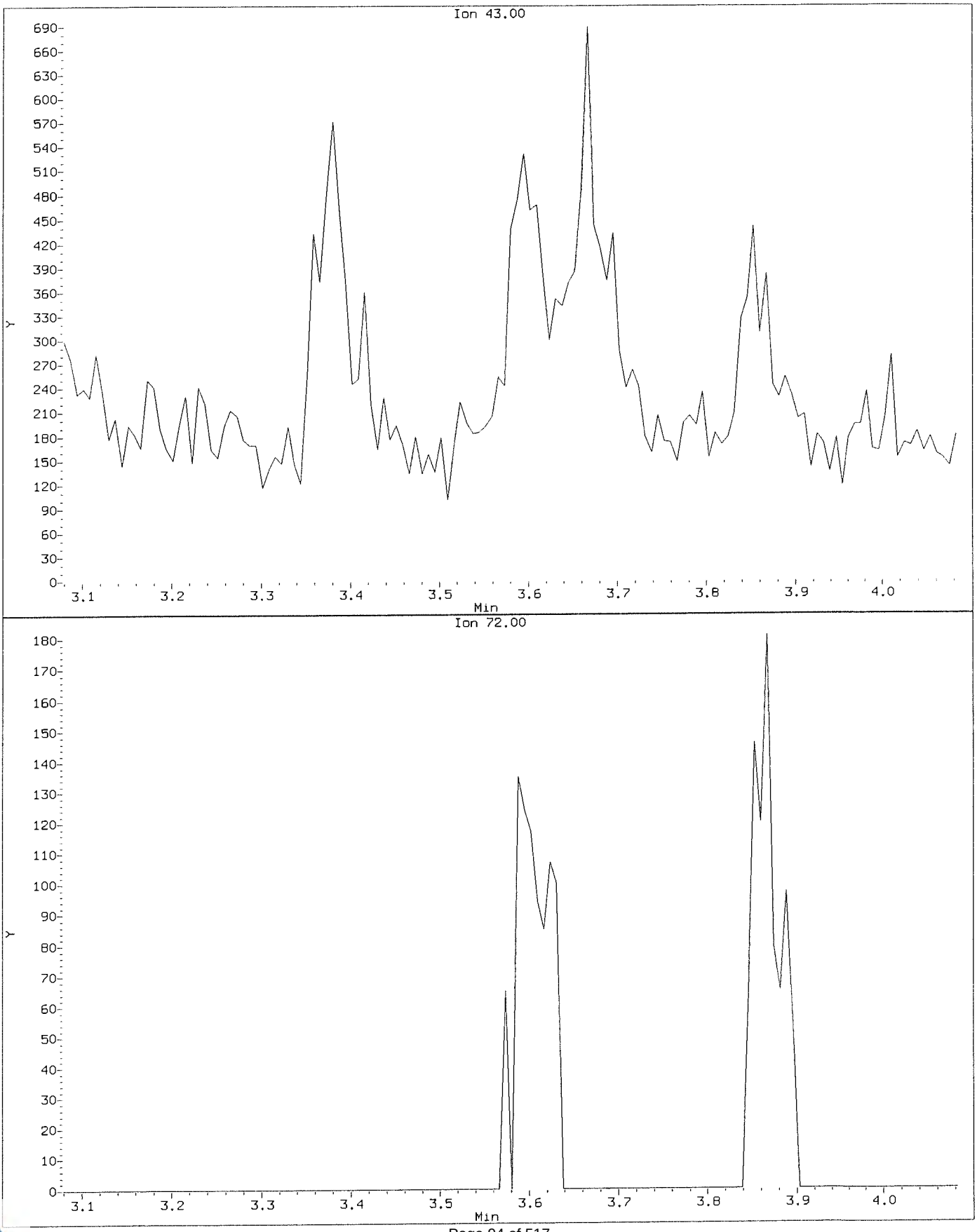
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CAS Number: 594-20-7





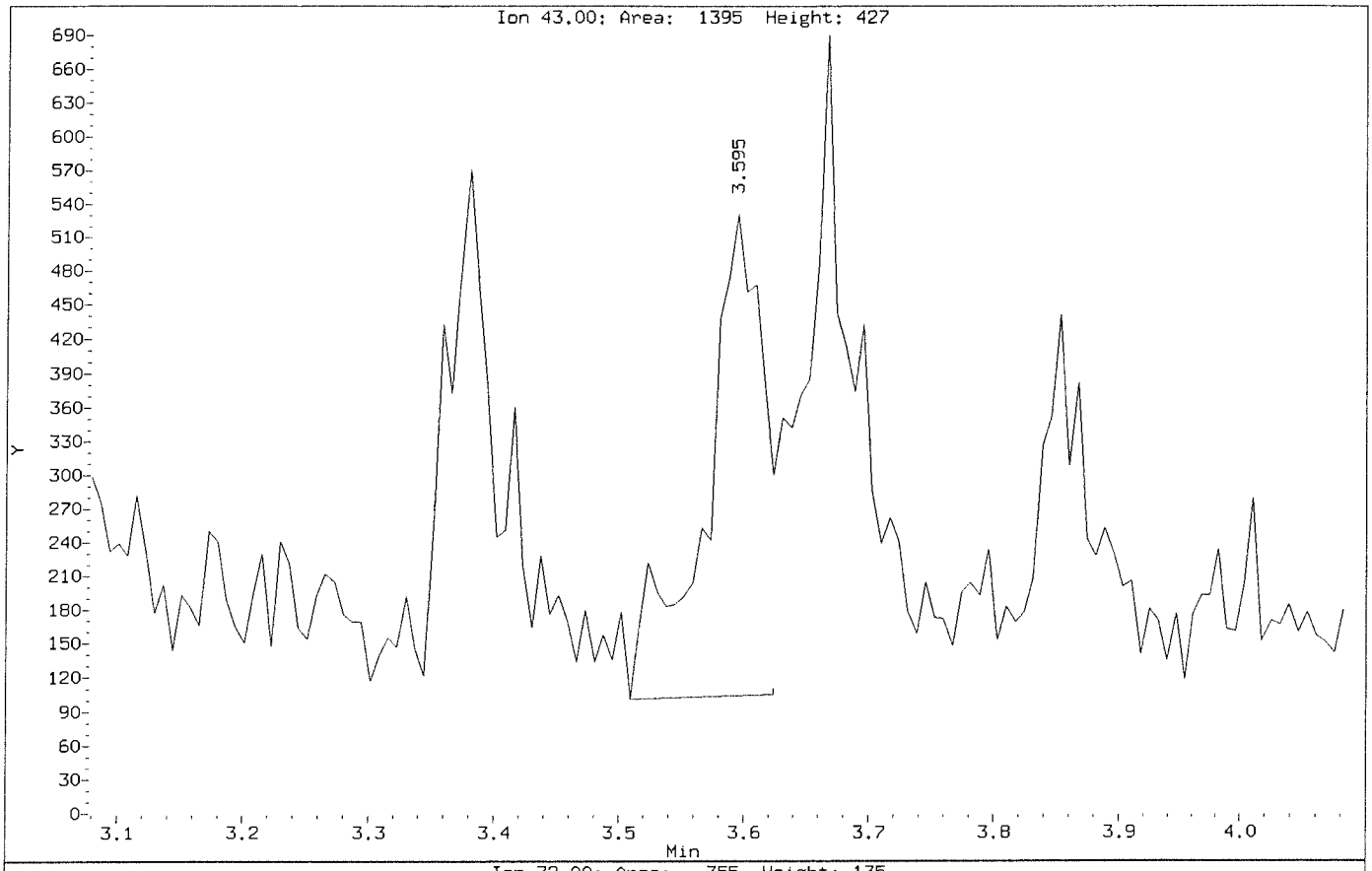
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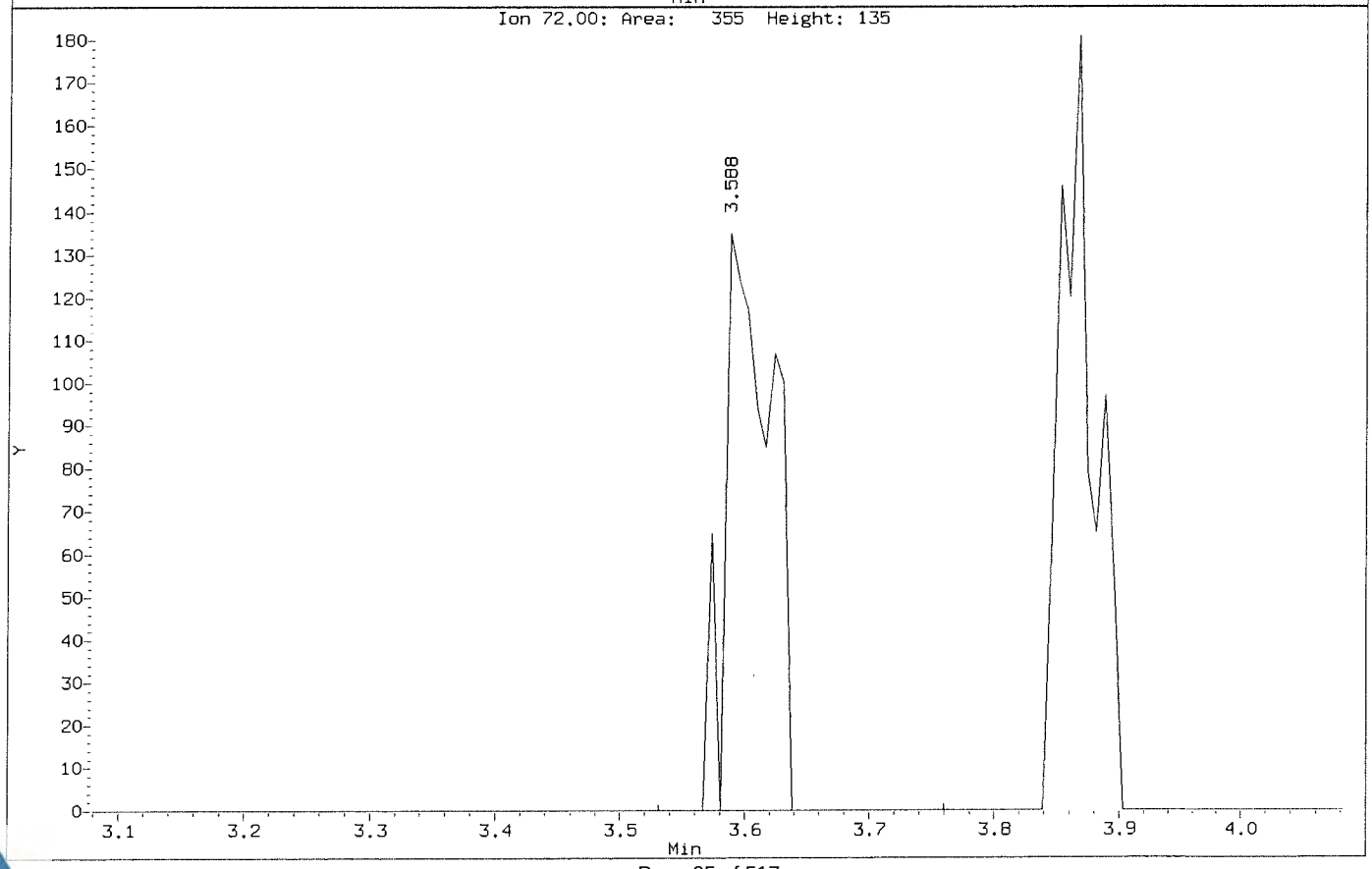
Compound: 2-Butanone
CAS Number: 78-93-3



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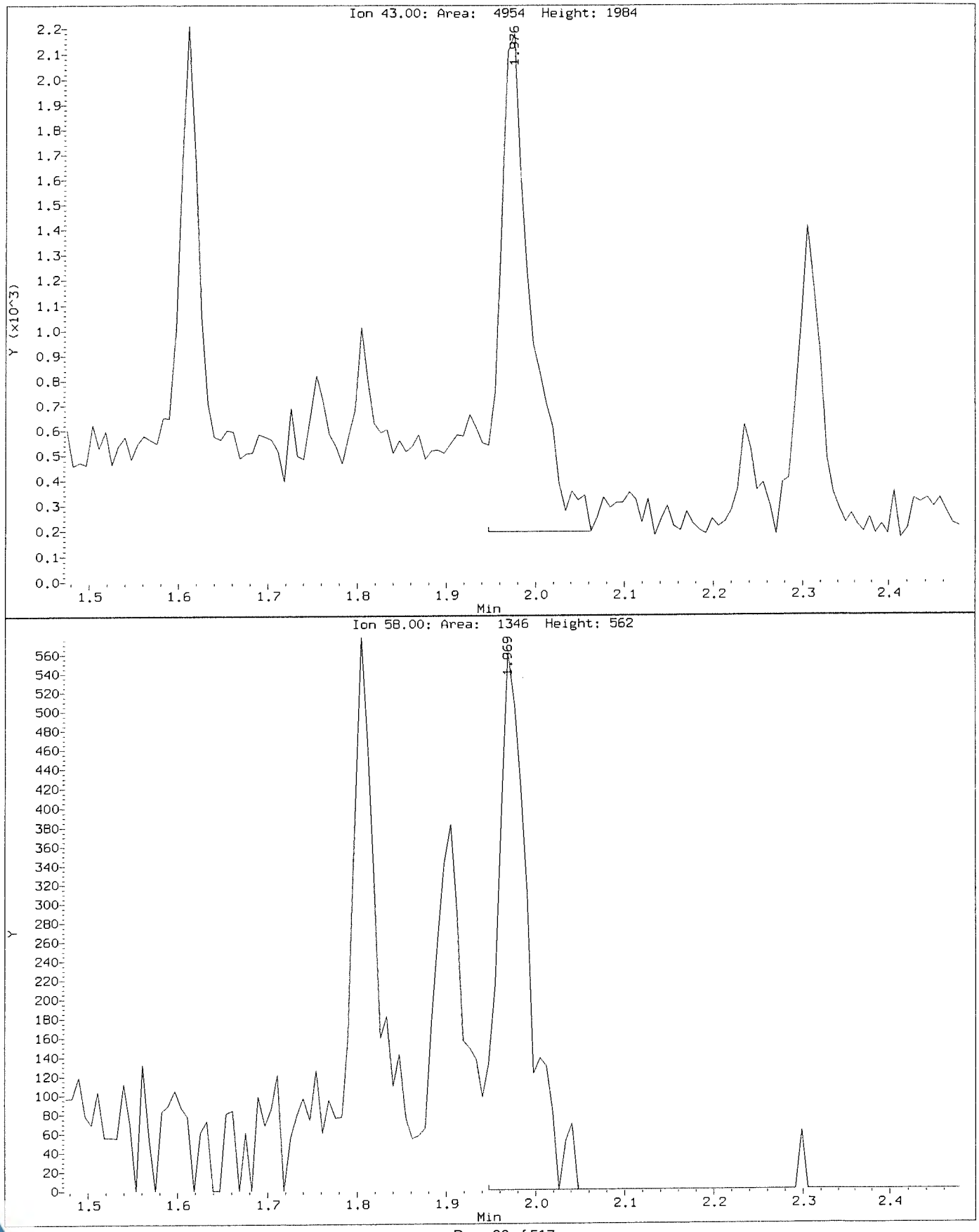
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CAS Number: 78-93-3





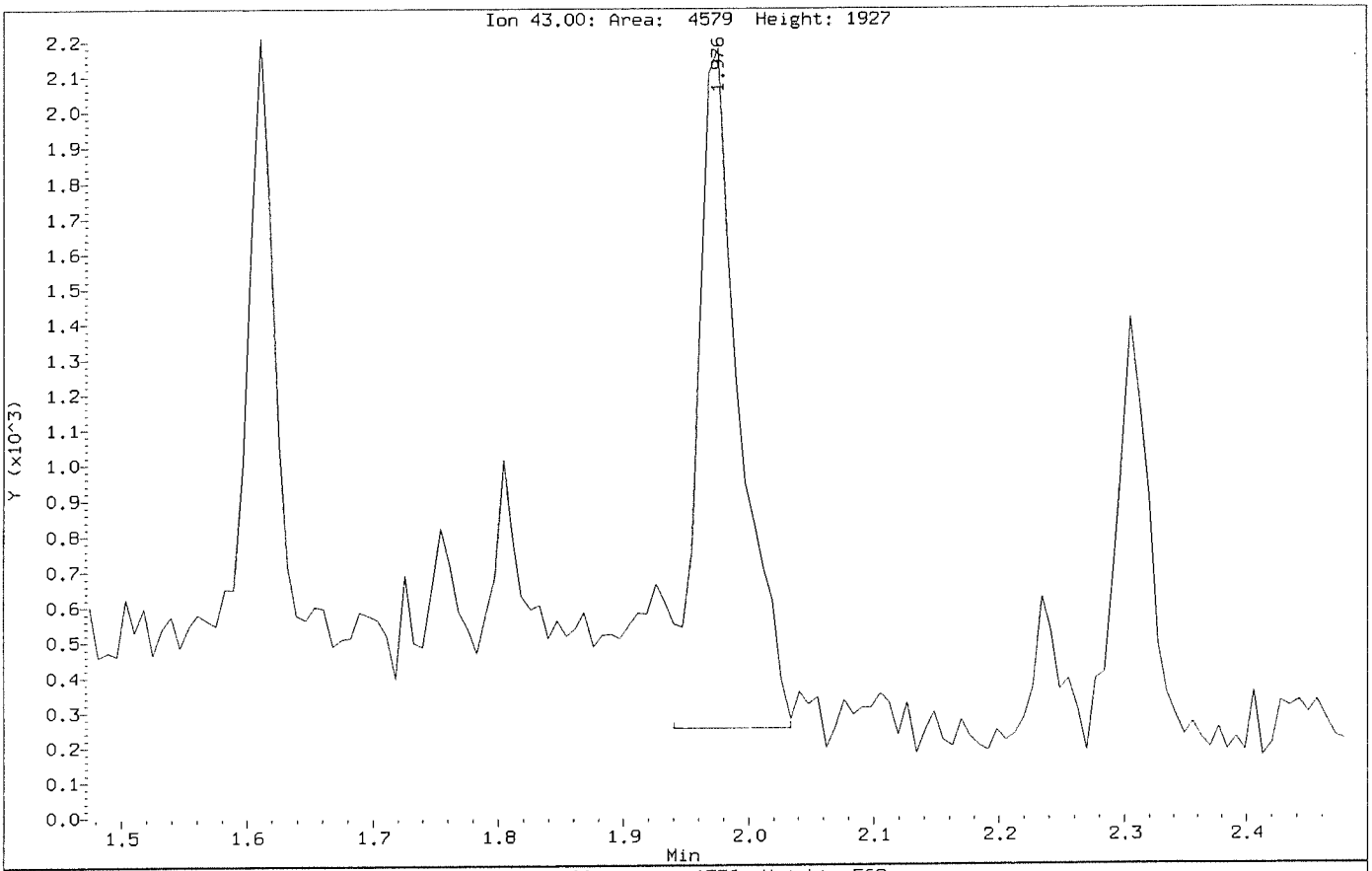
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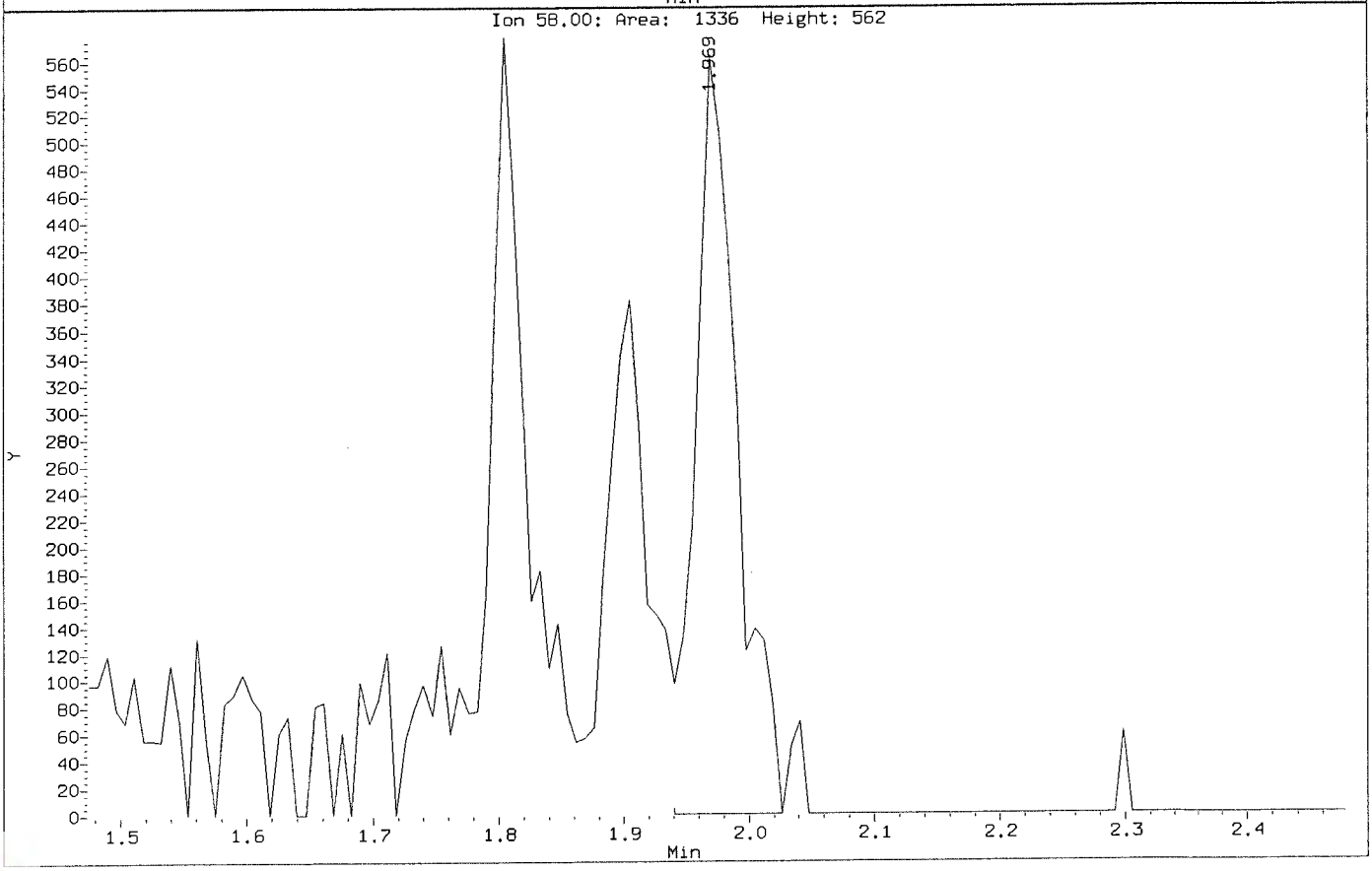
Compound: Acetone
CAS Number: 67-64-1



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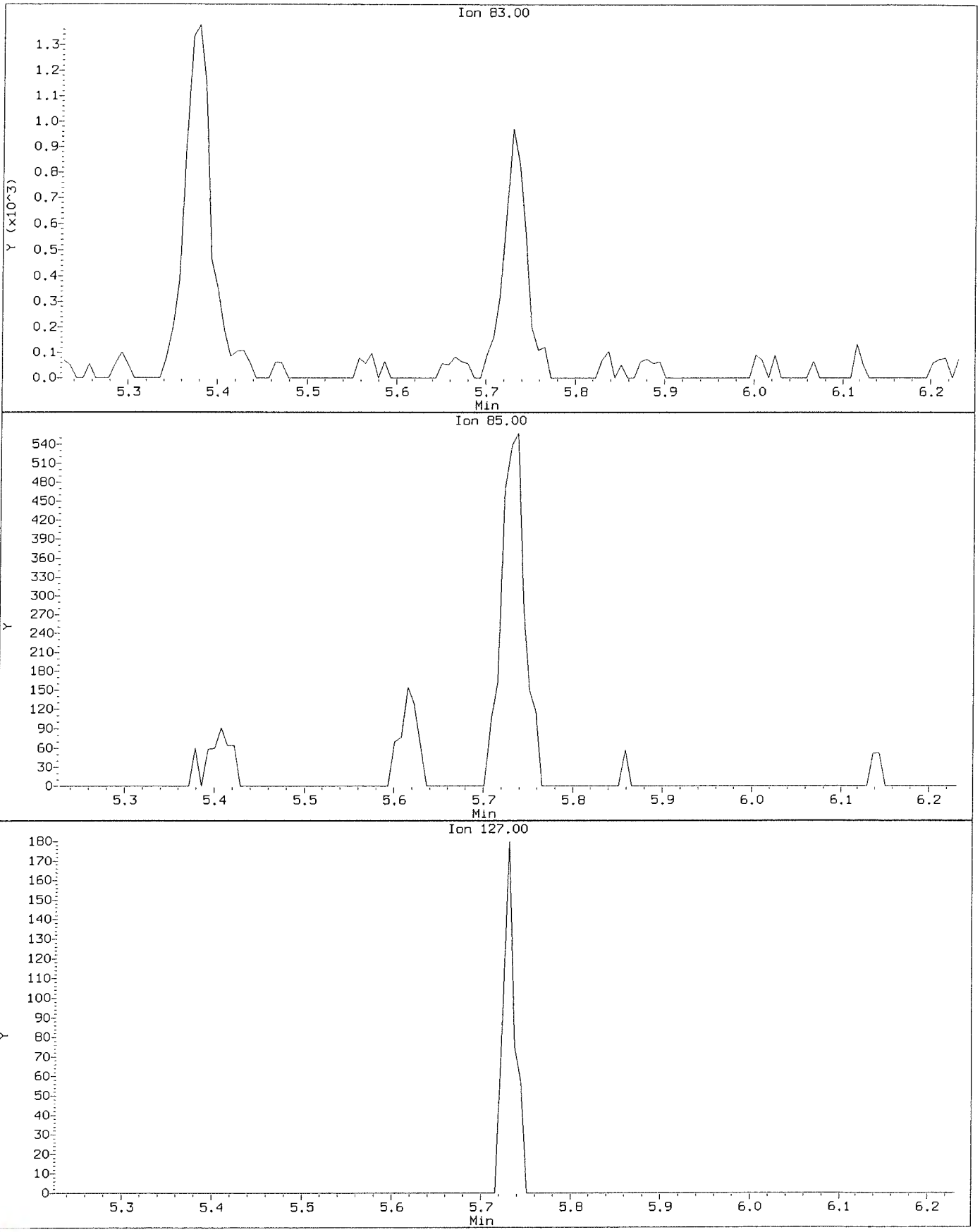
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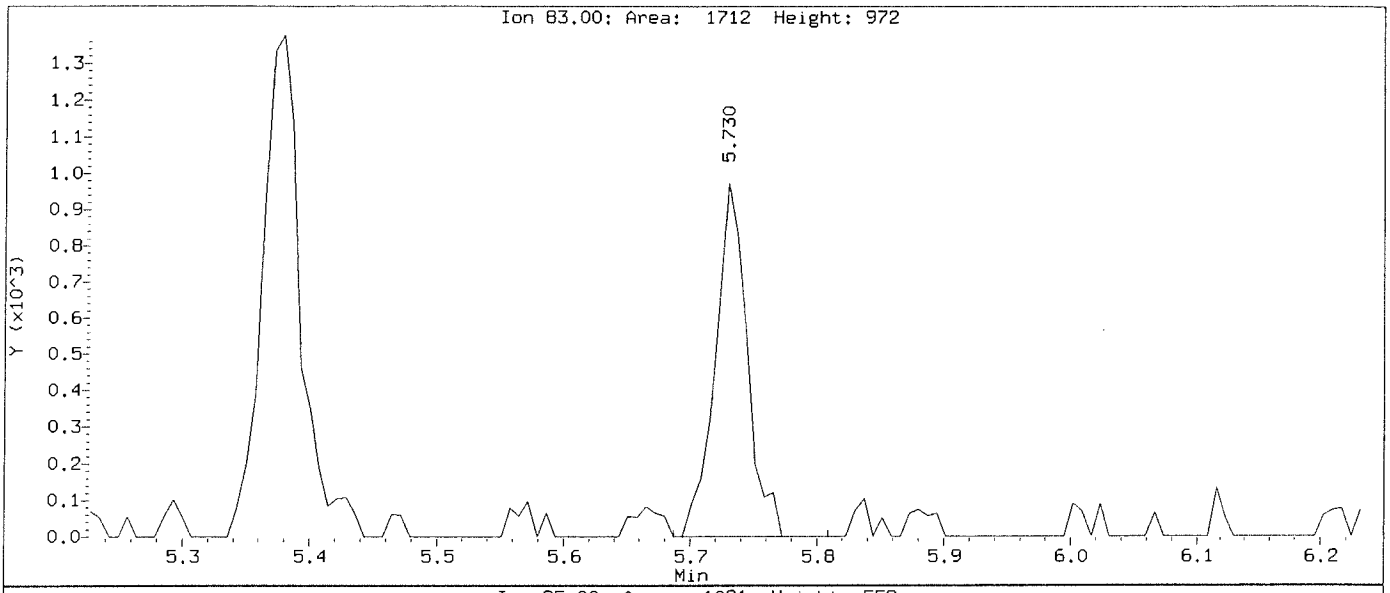
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Instrument: voa6.i
Client Sample ID: VSTD000.5

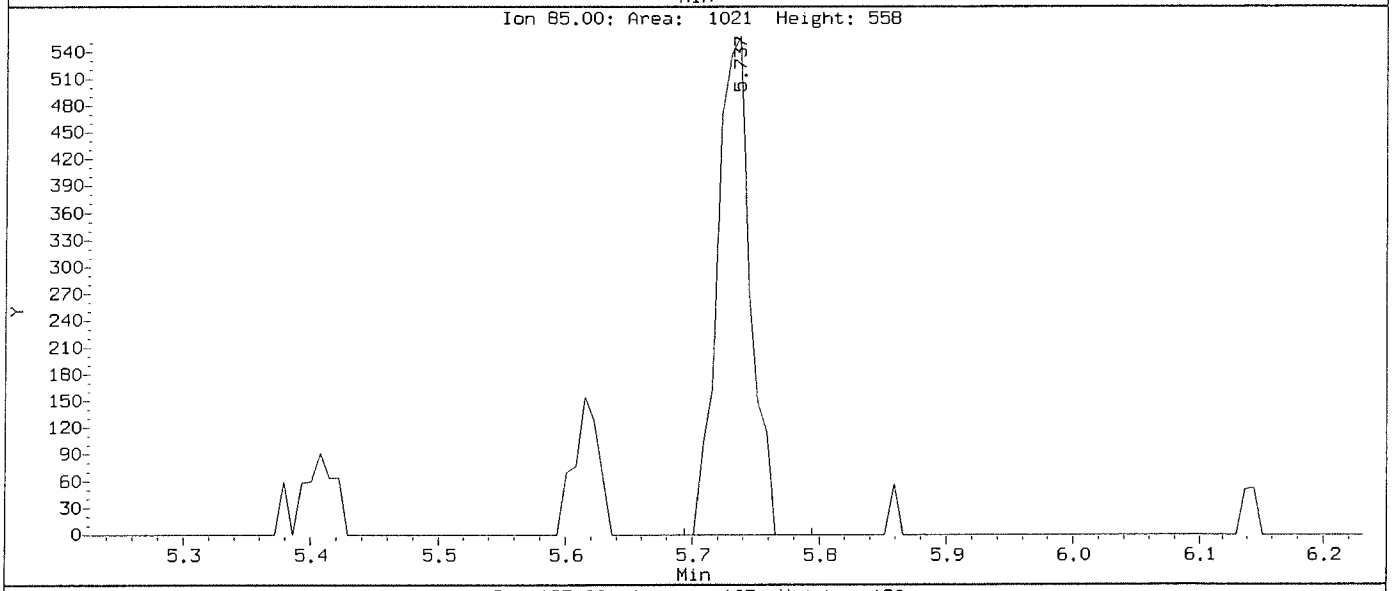
Compound: Bromodichloromethane
CAS Number: 75-27-4

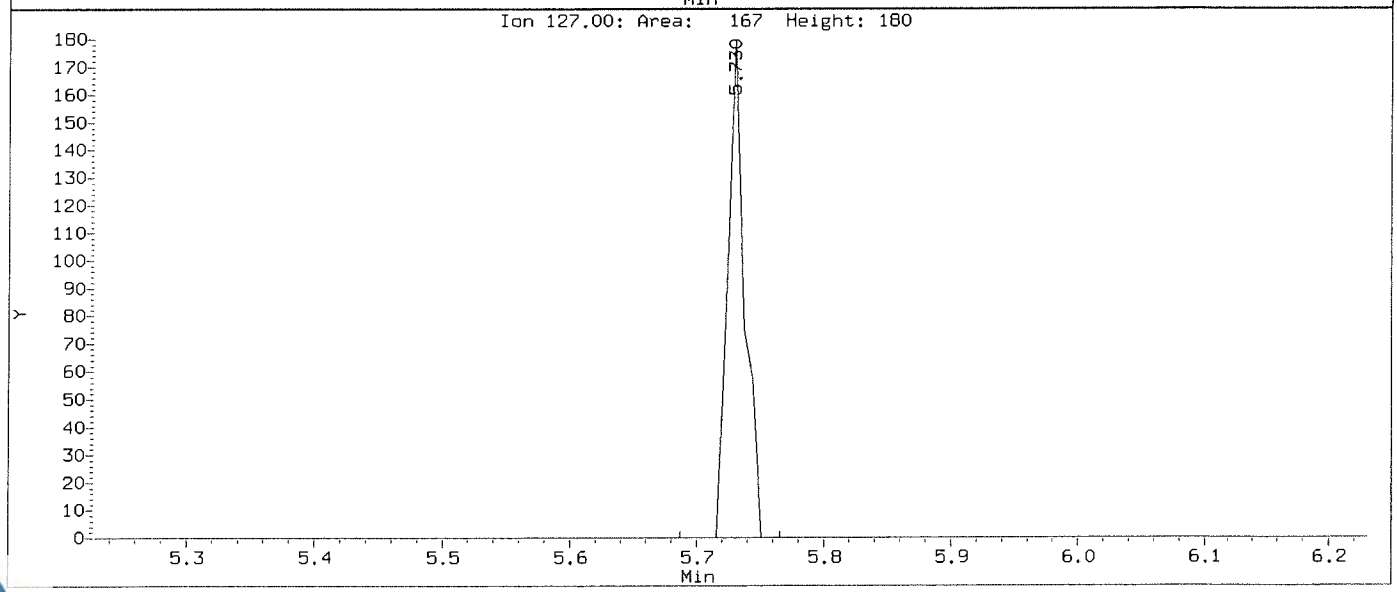


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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromodichloromethane
CAS Number: 75-27-4

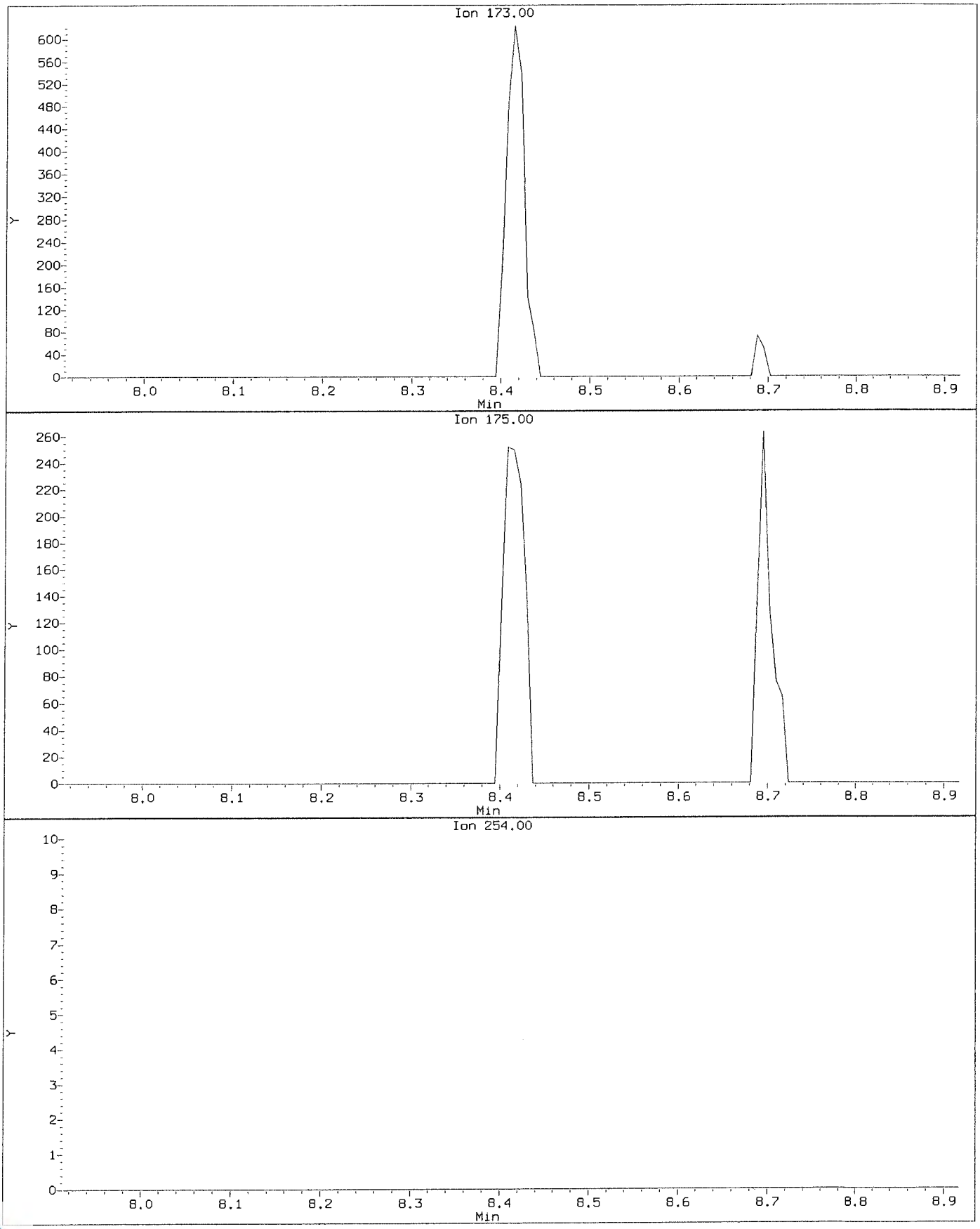






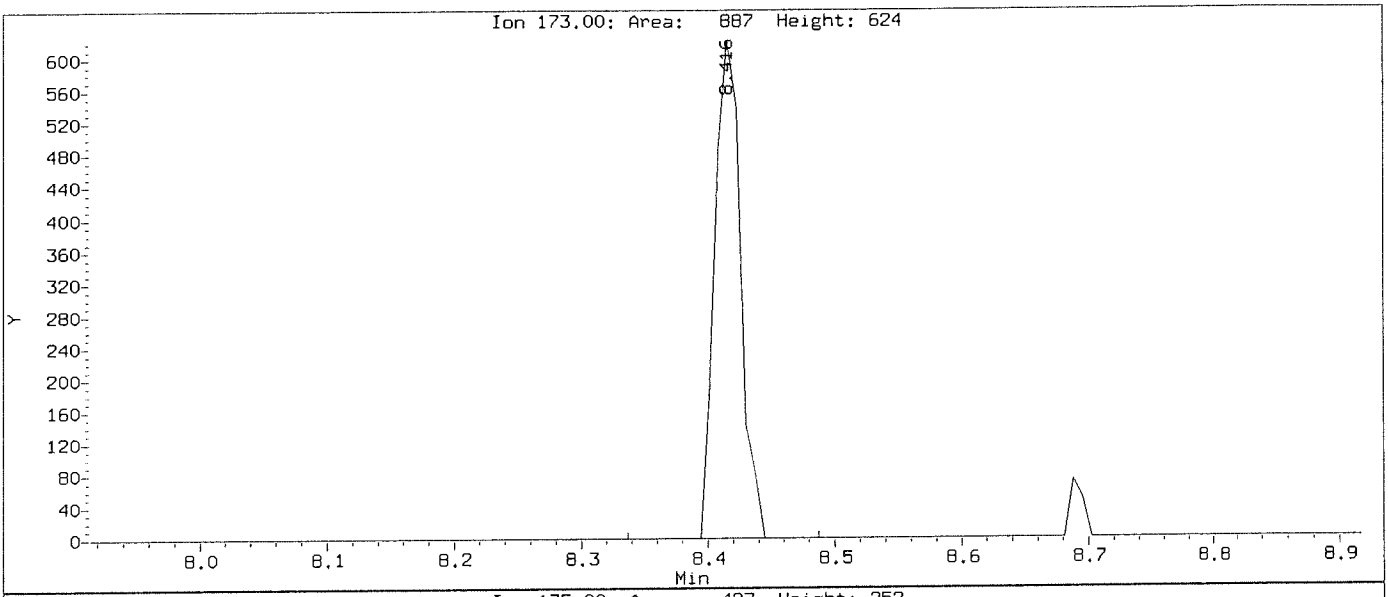
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Instrument: voa6.i
Client Sample ID: VSTD000.5

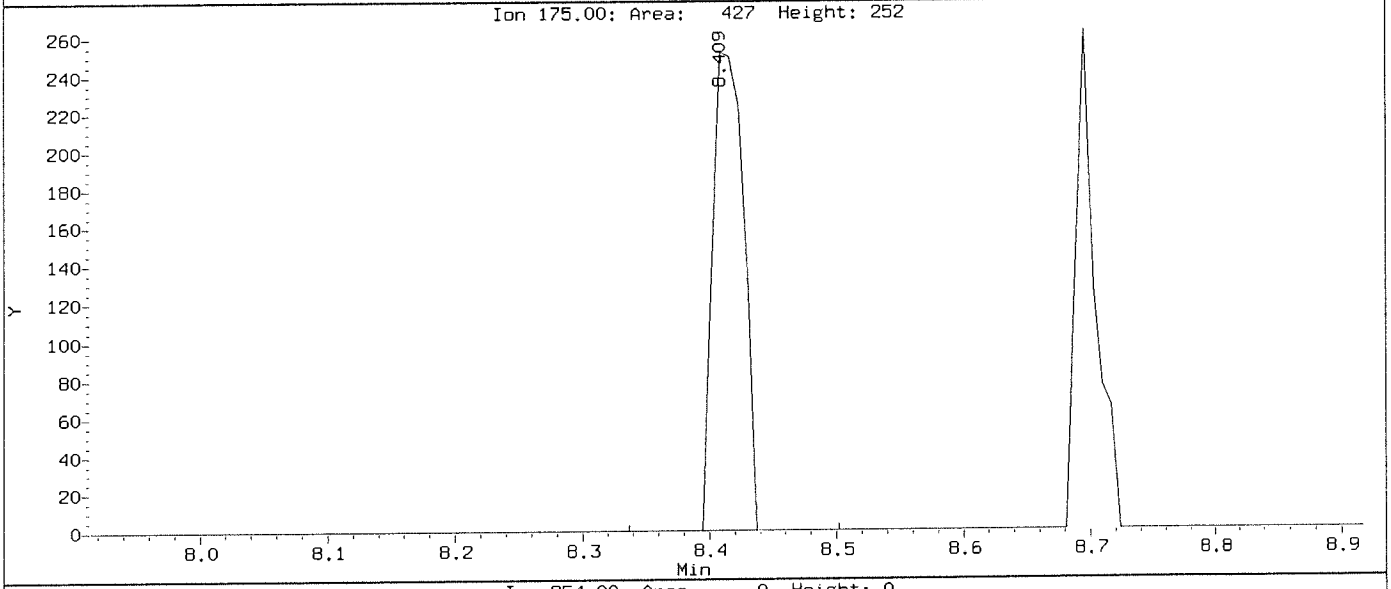
Compound: Bromoform
CAS Number: 75-25-2

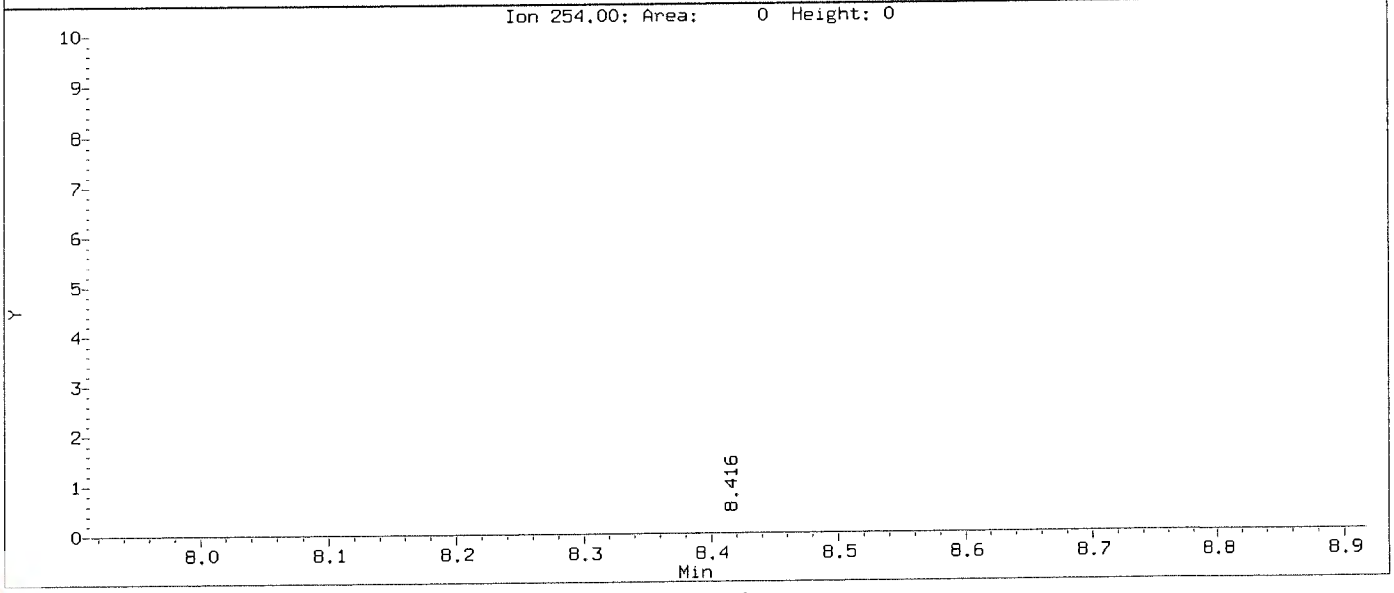


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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromoform
CAS Number: 75-25-2

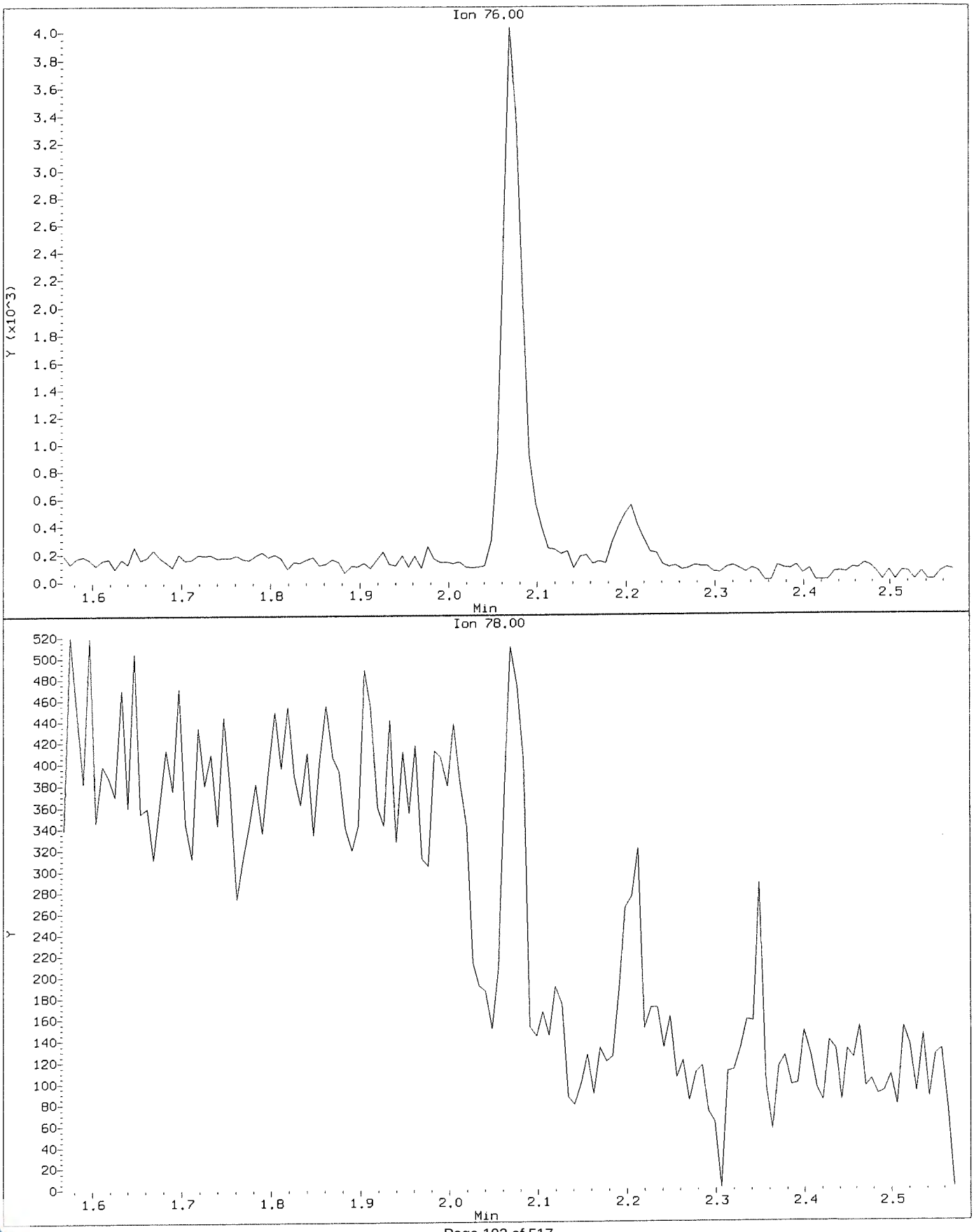






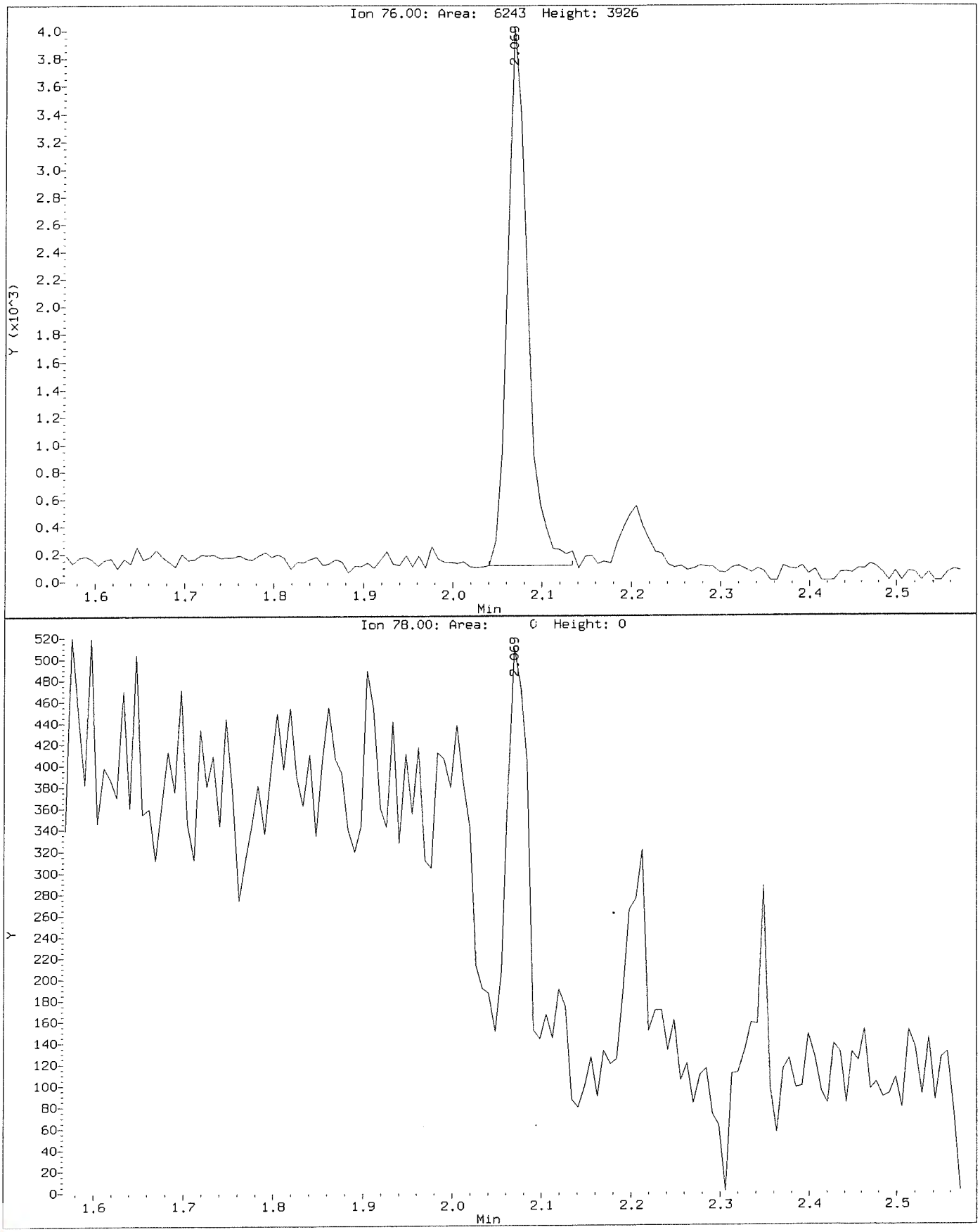
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Injection Date: 18-NOV-2019 14:35
Instrument: voa6.i
Client Sample ID: VSTD000.5

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



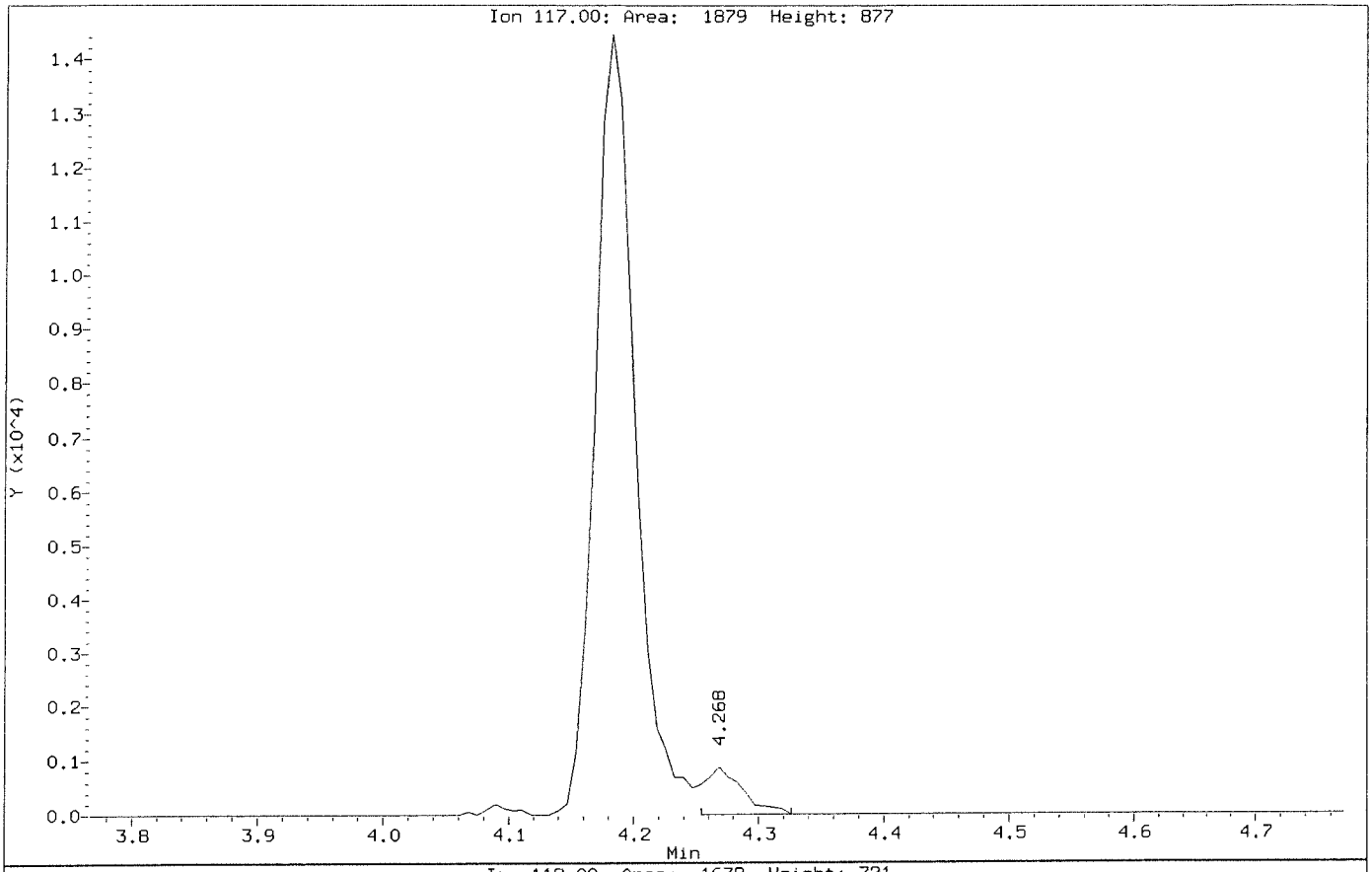
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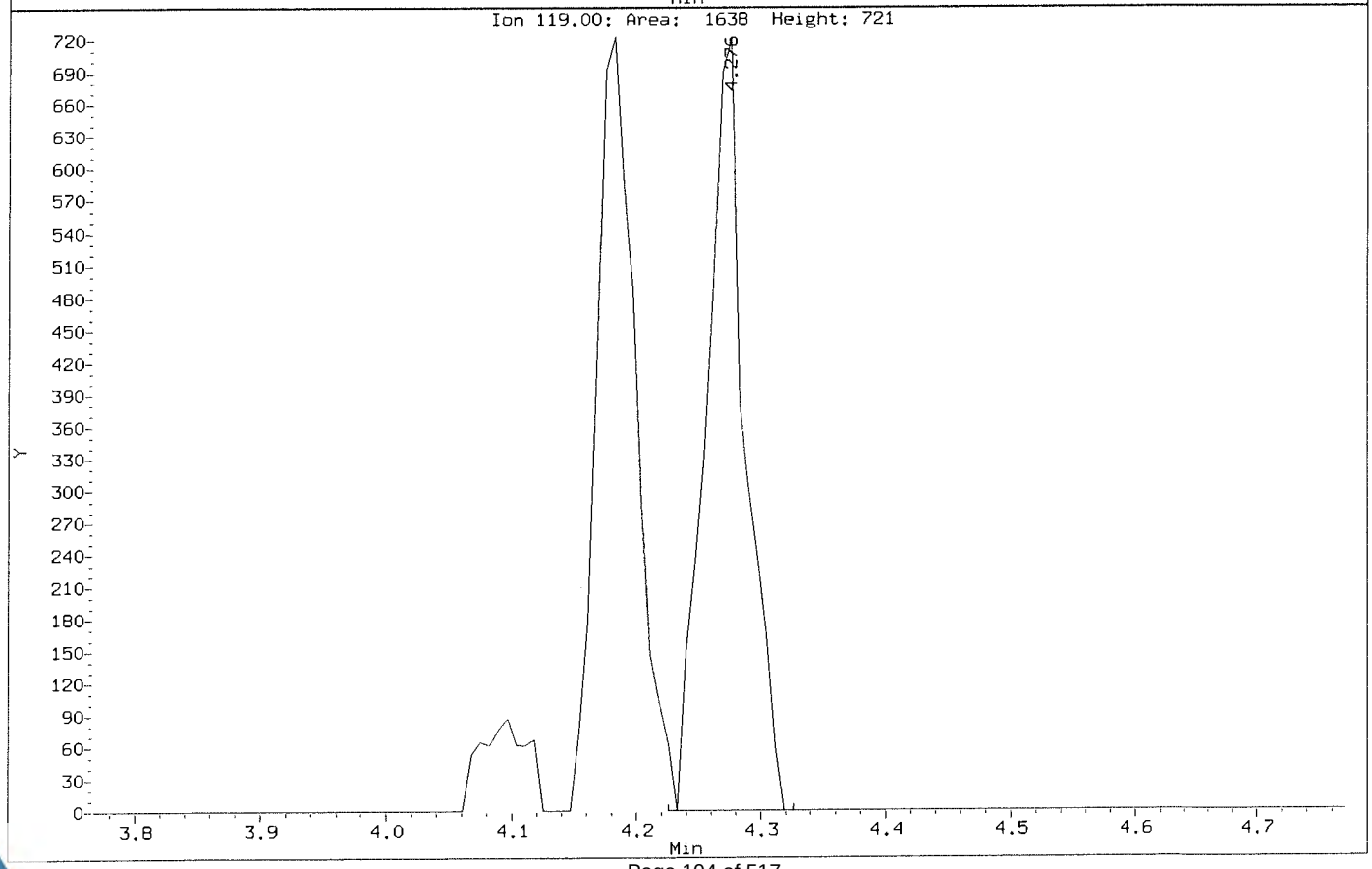
Compound: Carbon Disulfide
CAS Number: 75-15-0



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

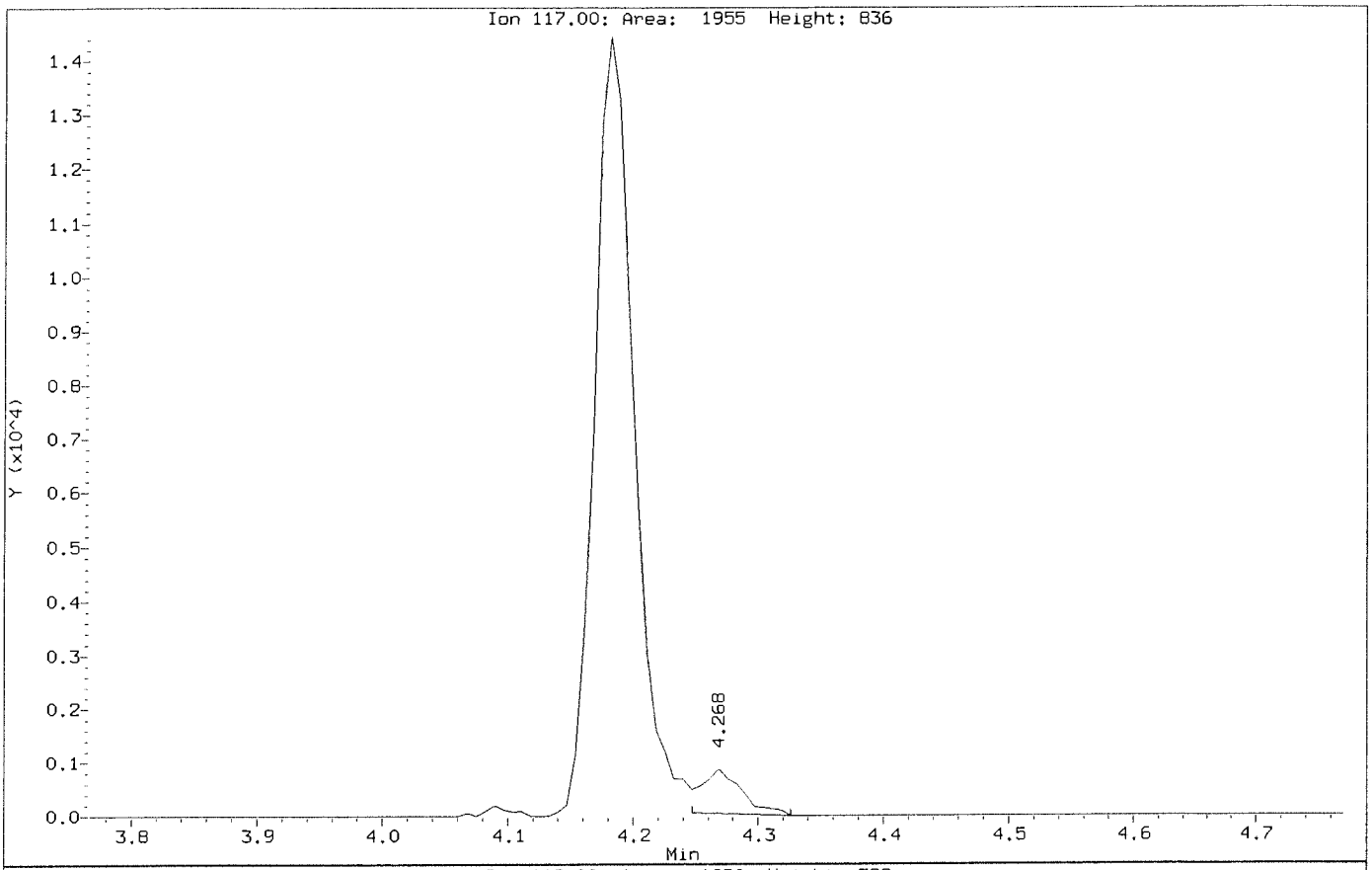
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

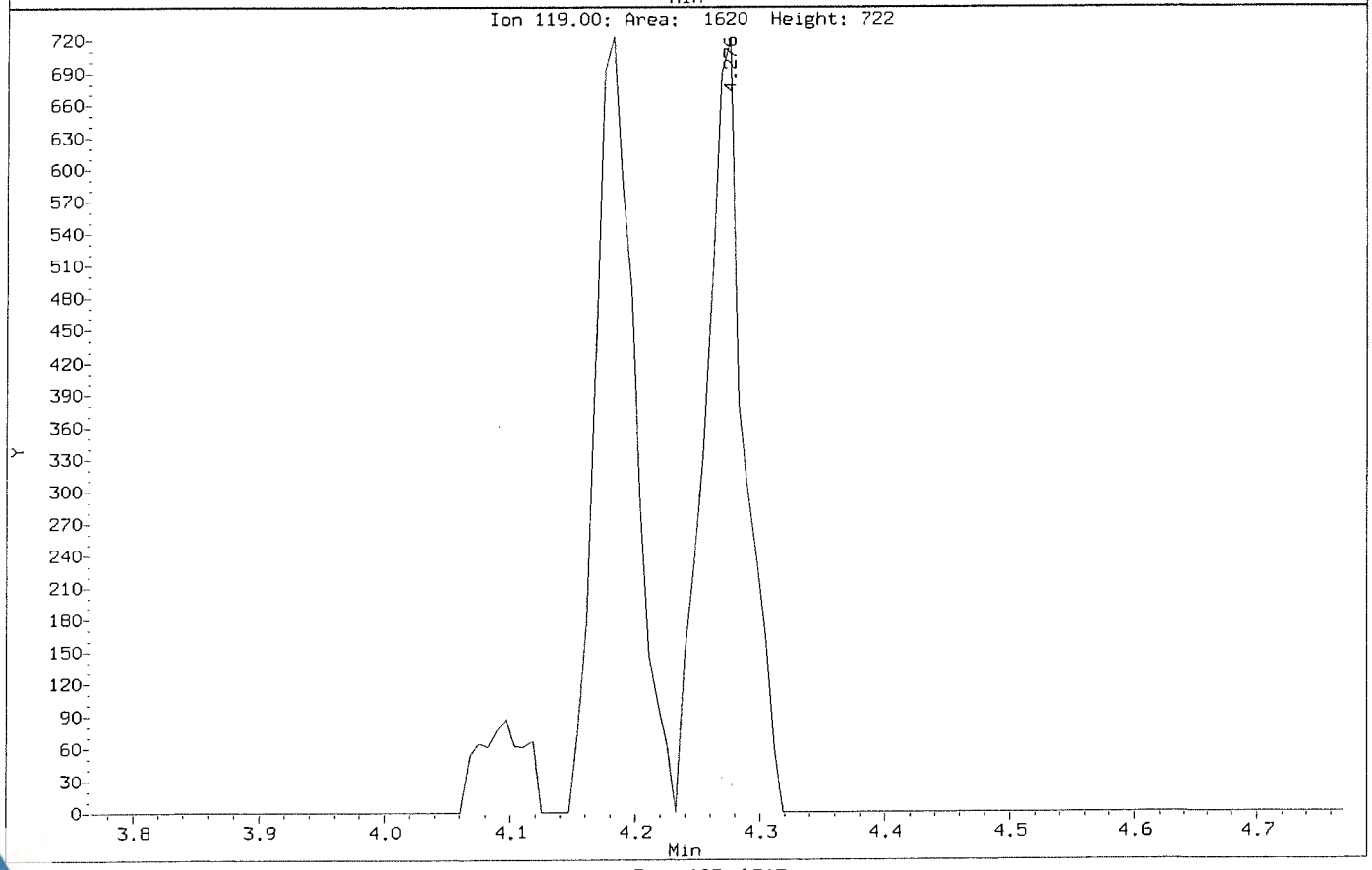




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Injection Date: 18-NOV-2019 14:35
Instrument: voa6.i
Client Sample ID: VSTD000.5

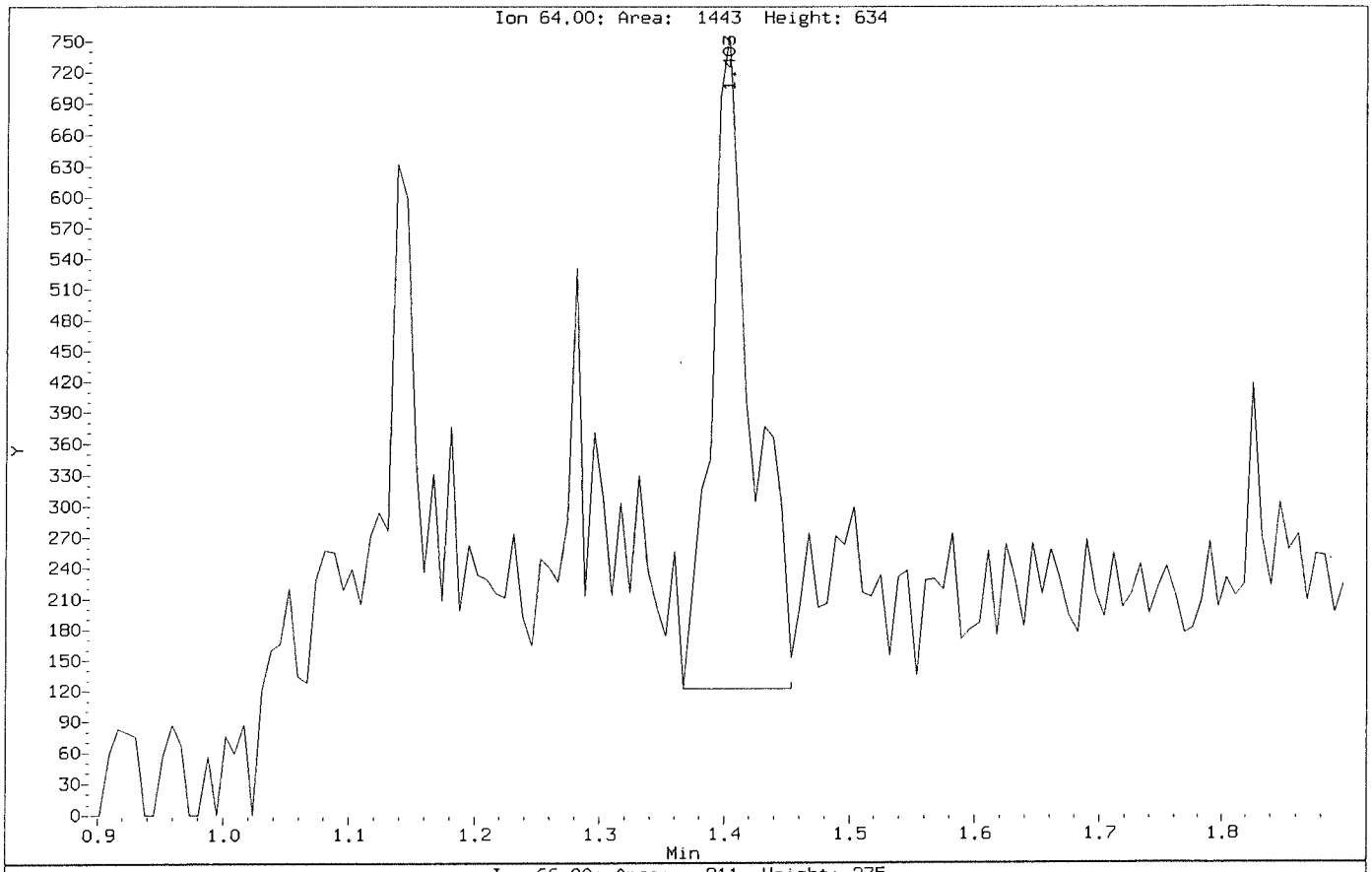
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

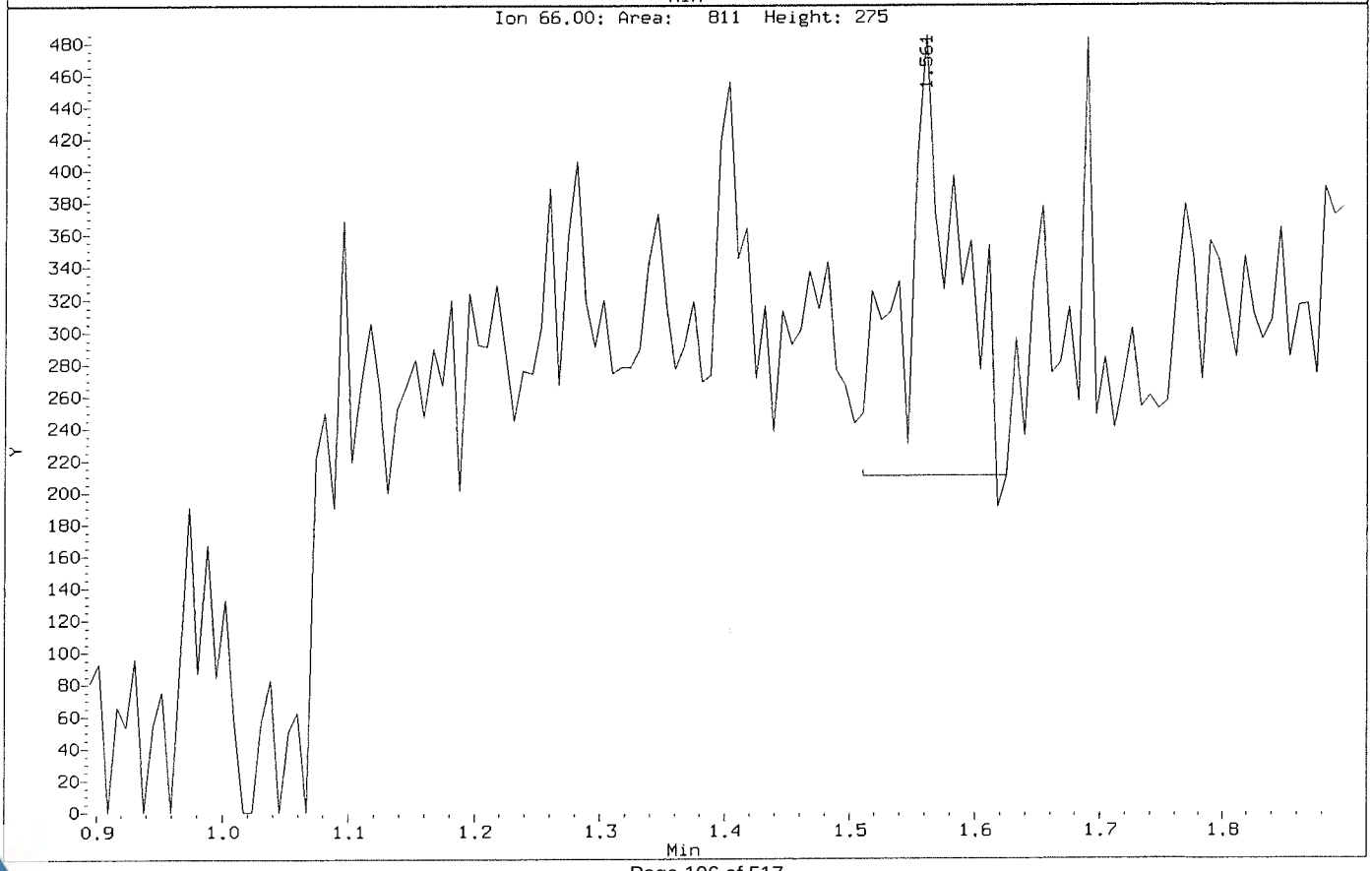




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Injection Date: 18-NOV-2019 14:35
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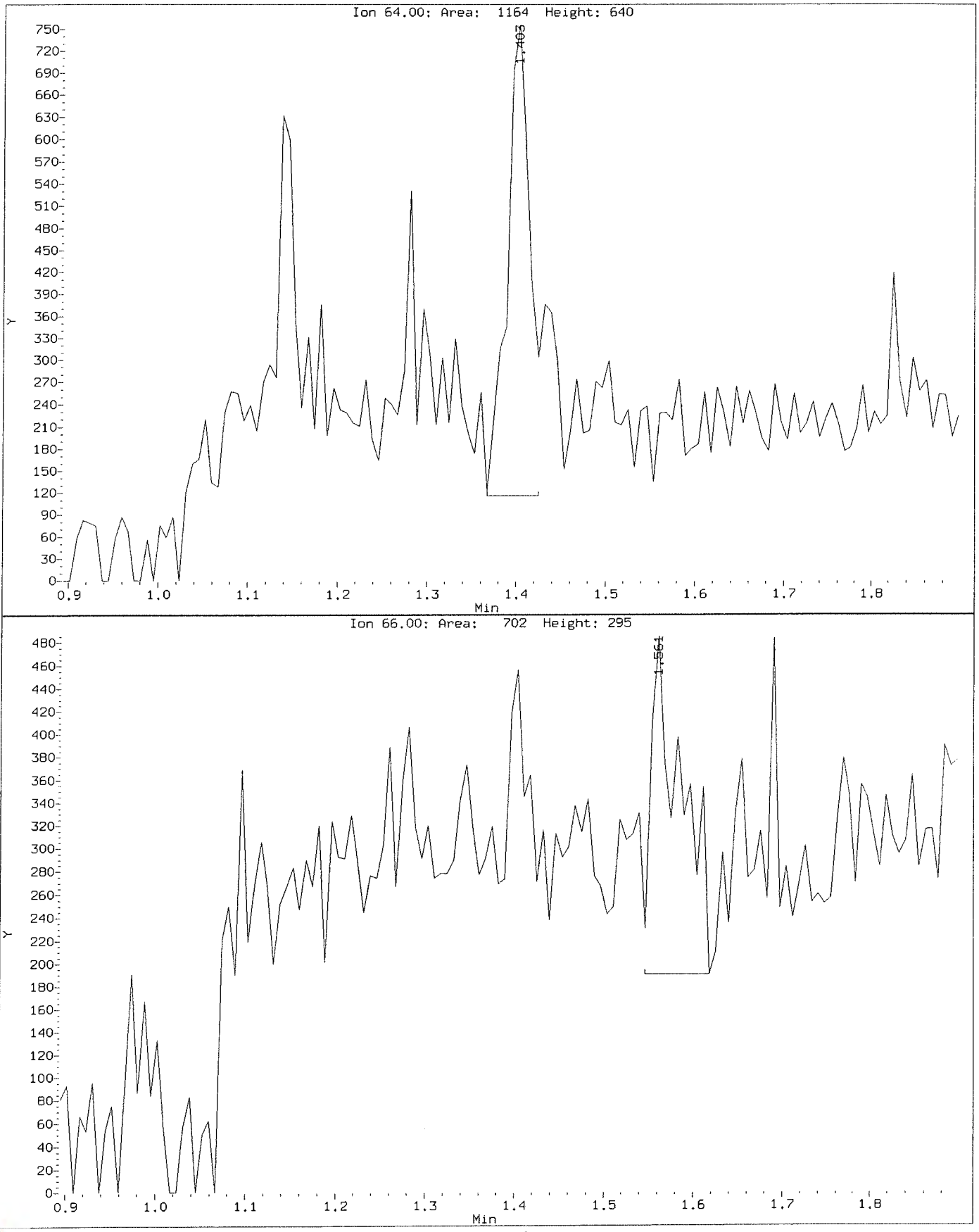
Compound: Chloroethane
CAS Number: 75-00-3





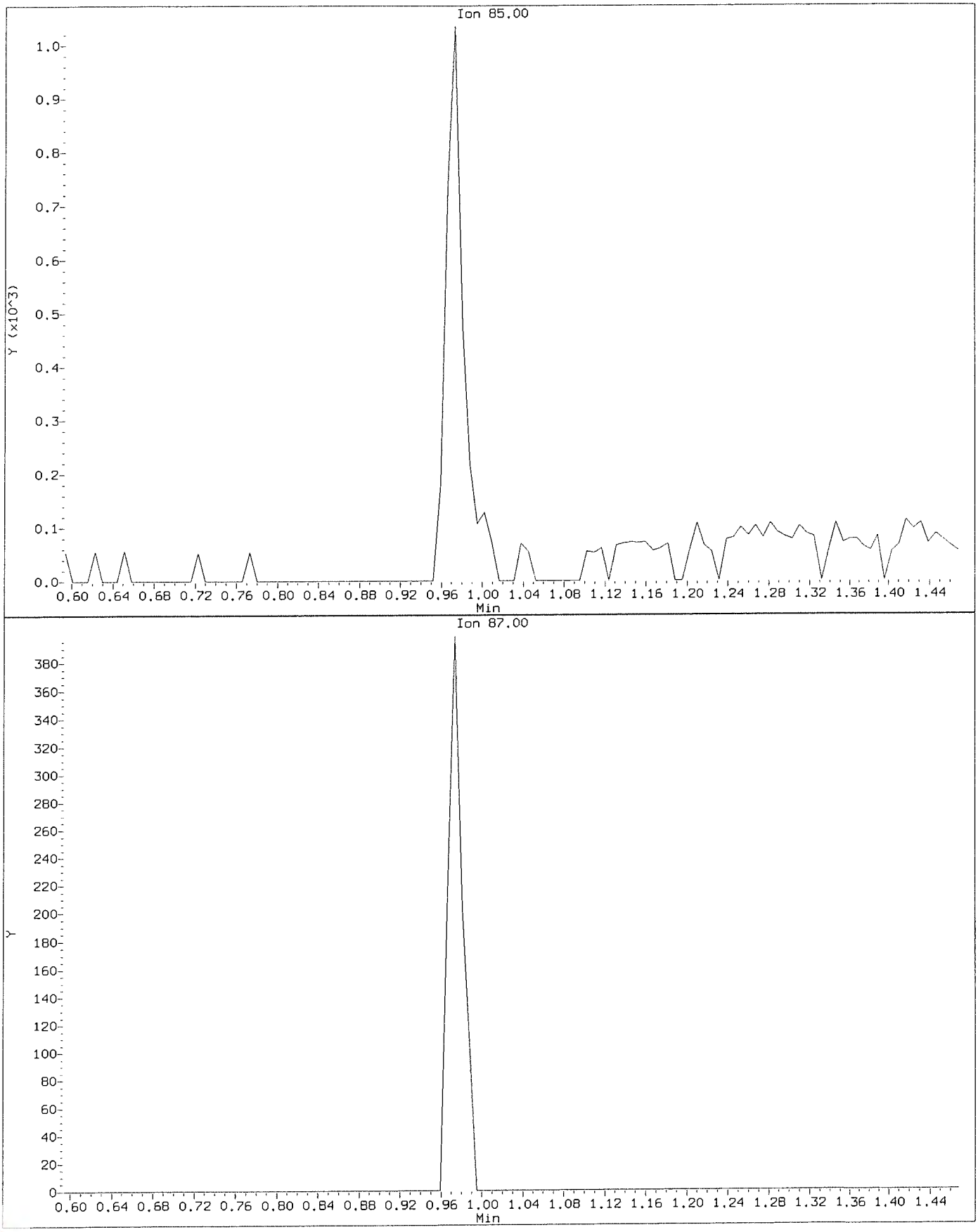
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Injection Date: 18-NOV-2019 14:35
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Chloroethane
CAS Number: 75-00-3



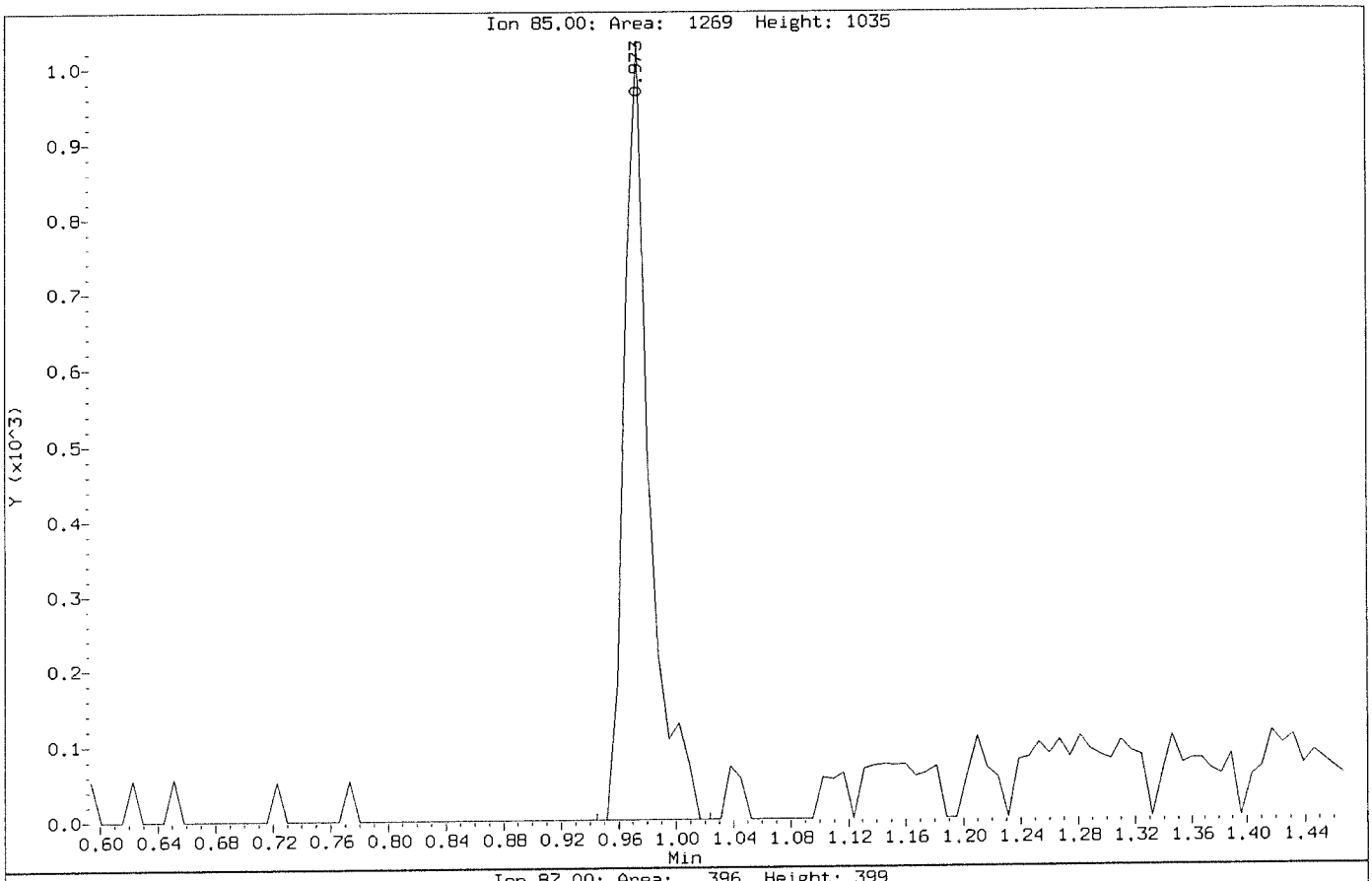
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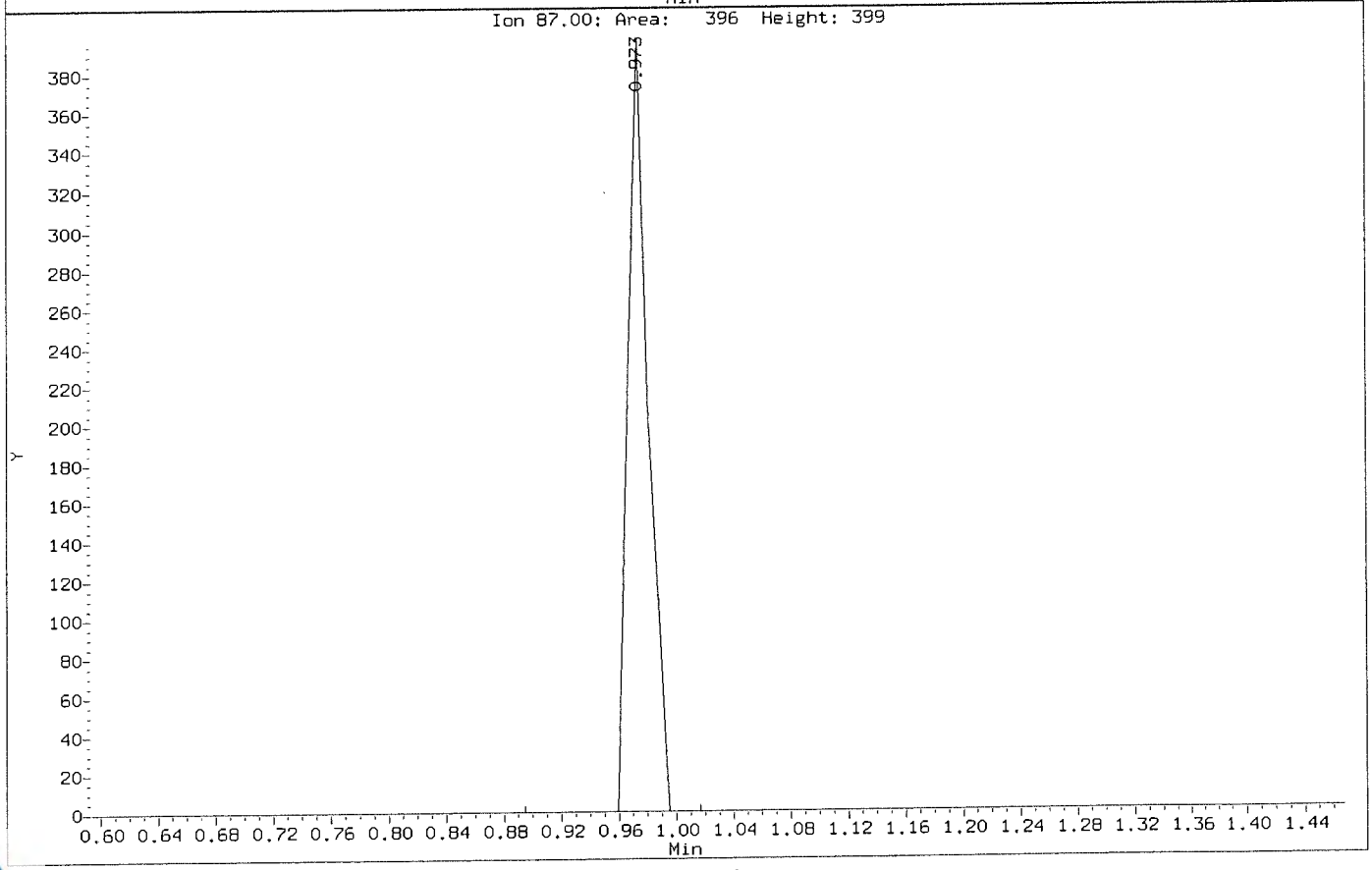
Compound: Dichlorodifluoromethane
CAS Number: 75-71-8



Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111803.D
Injection Date: 18-NOV-2019 14:35
Instrument: voa6.i
Client Sample ID: VSTD000.5

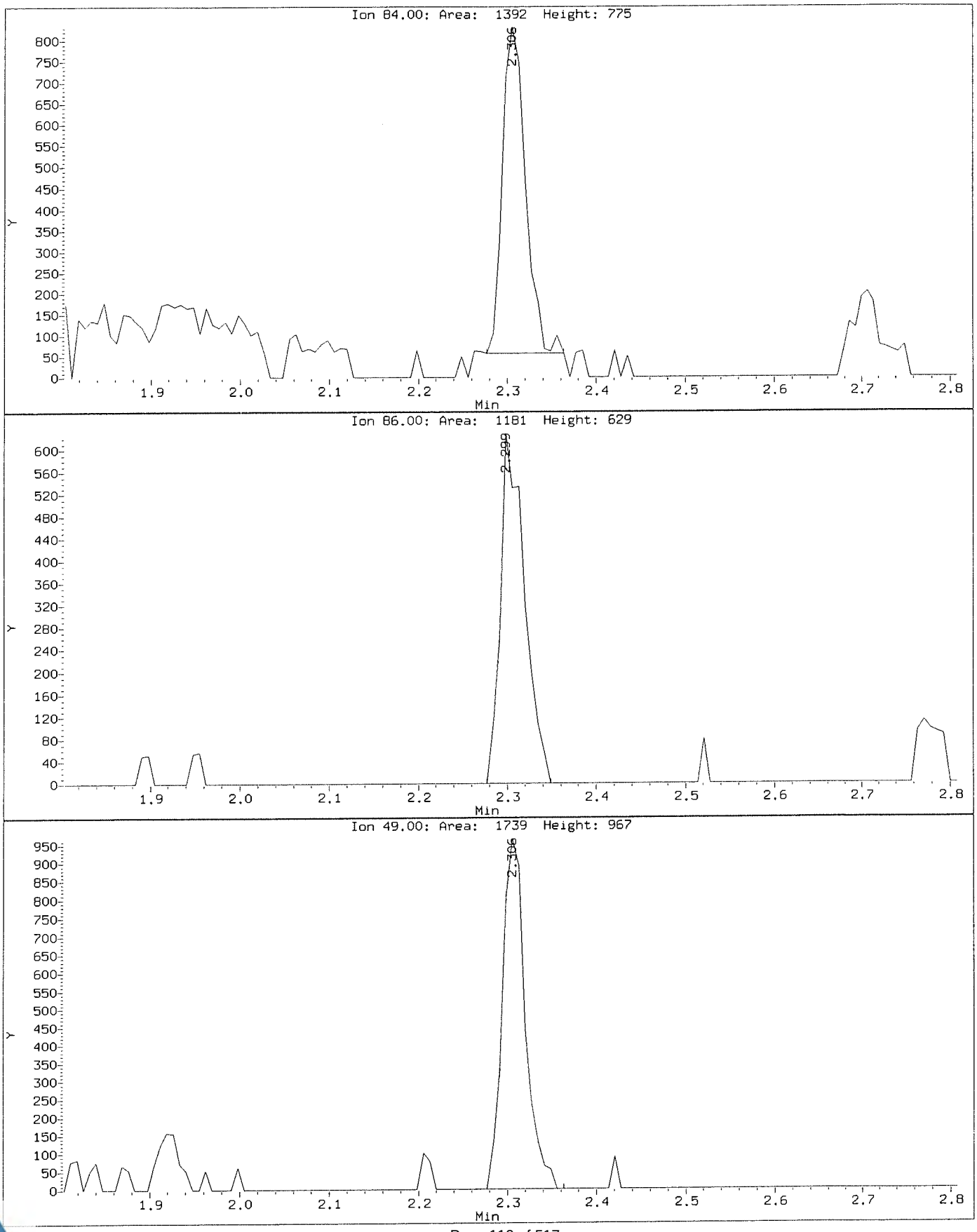
Compound: Dichlorodifluoromethane
CAS Number: 75-71-8





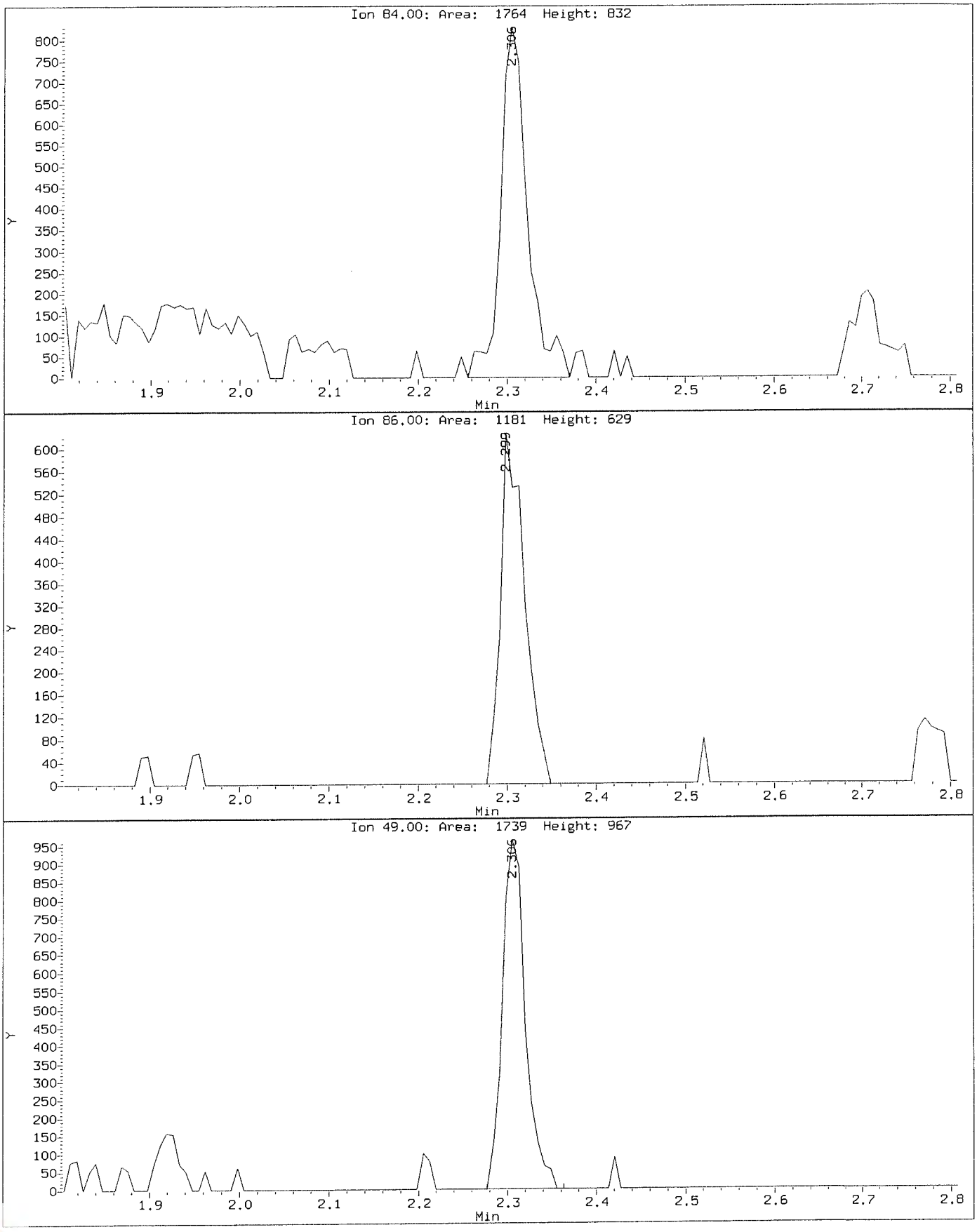
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Injection Date: 18-NOV-2019 14:35
Instrument: voa6.i
Client Sample ID: VSTD000.5

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



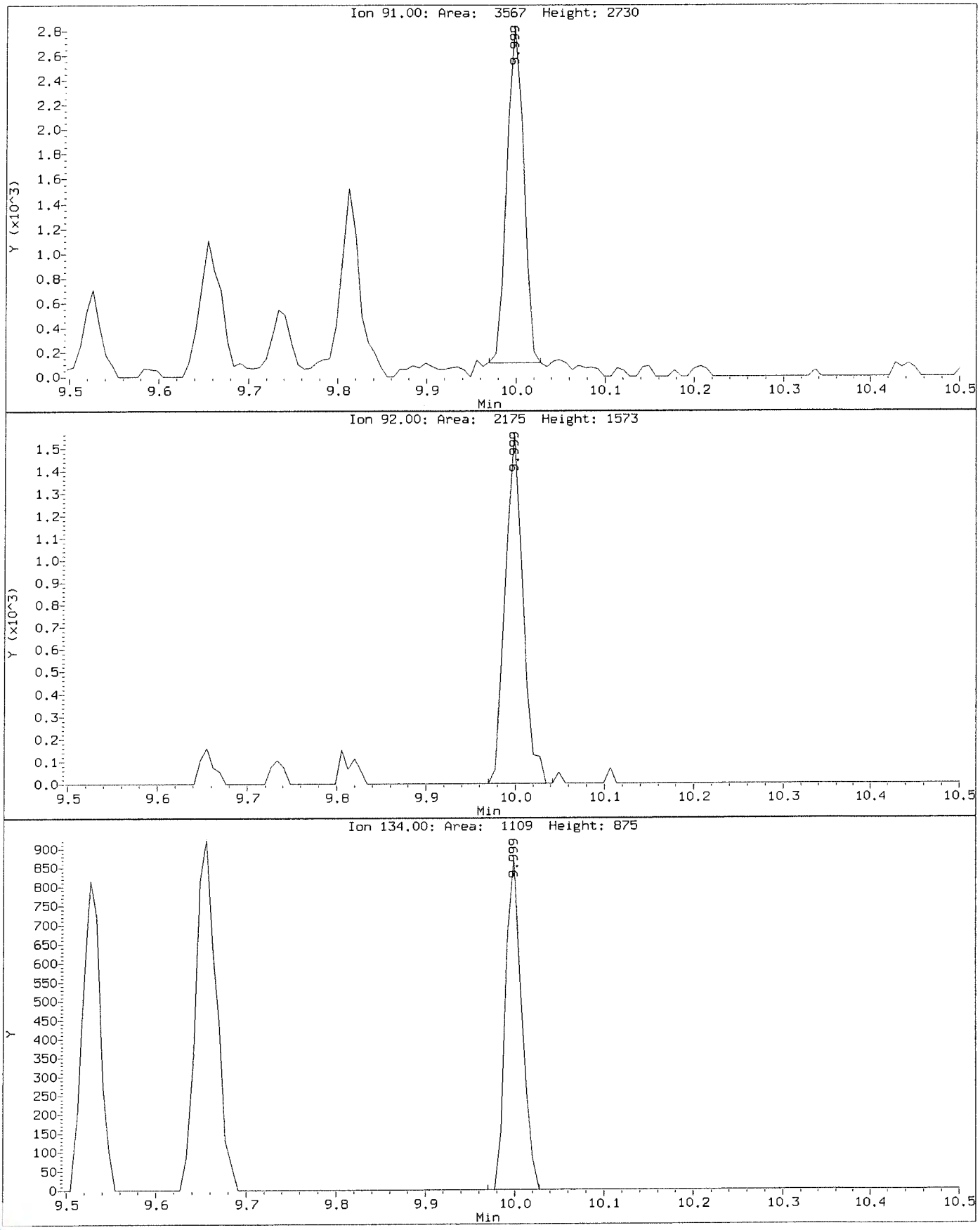
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Instrument: voa6.i
Client Sample ID: VSTD000.5

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



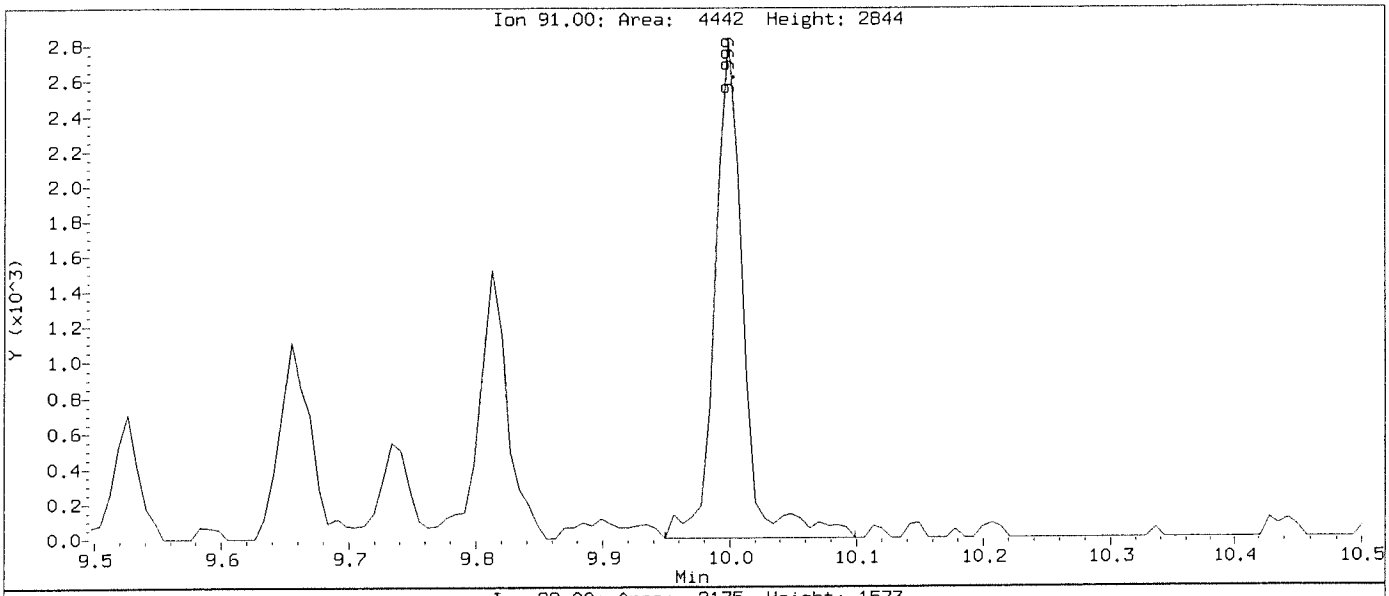
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Injection Date: 18-NOV-2019 14:35
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Client Sample ID: VSTD000.5

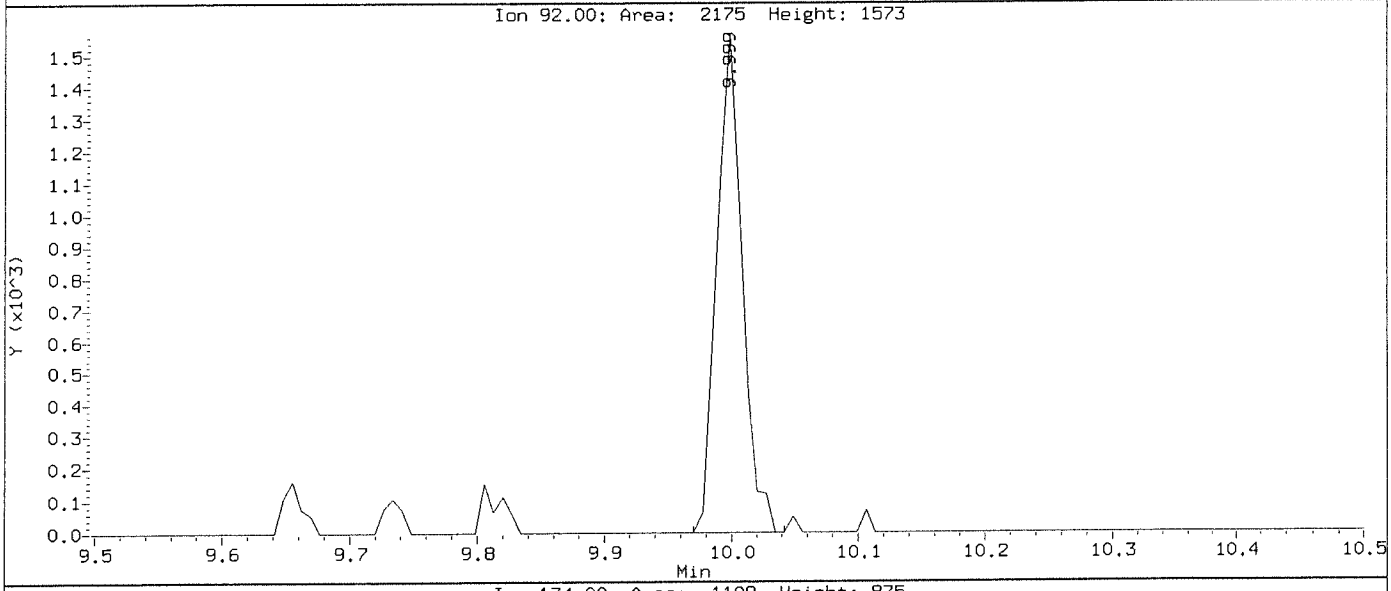
Compound: n-Butylbenzene
CAS Number: 104-51-8

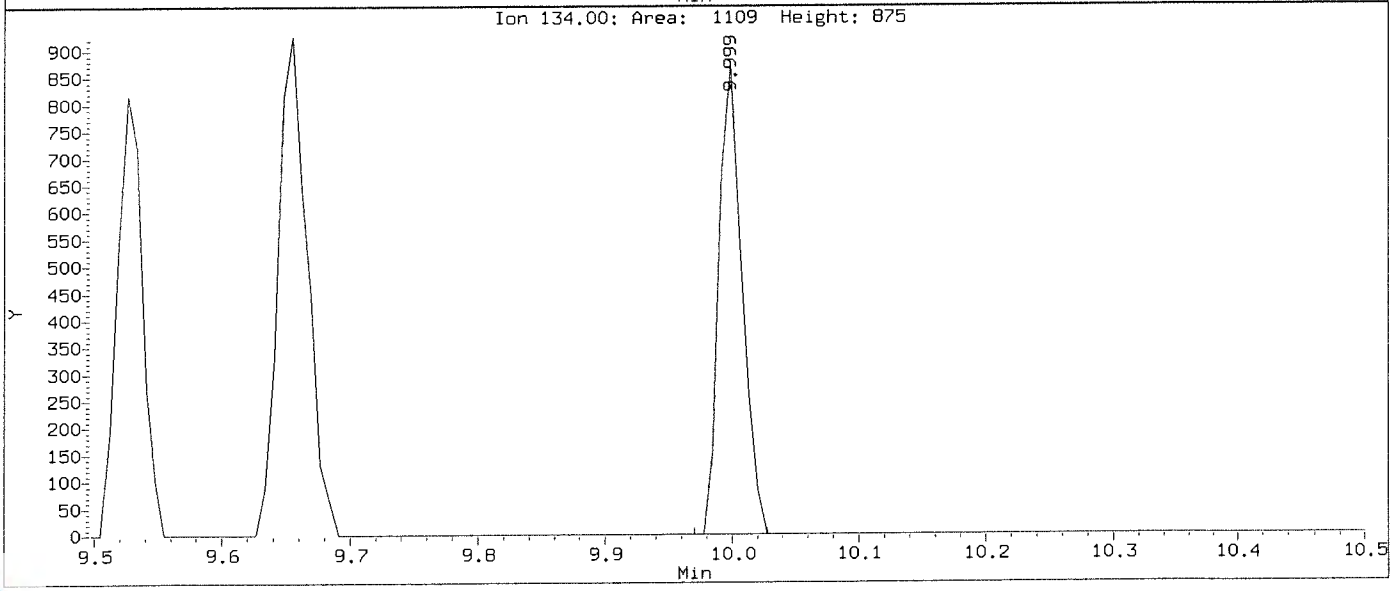


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Injection Date: 18-NOV-2019 14:35
Instrument: voa6.i
Client Sample ID: VSTD000.5

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

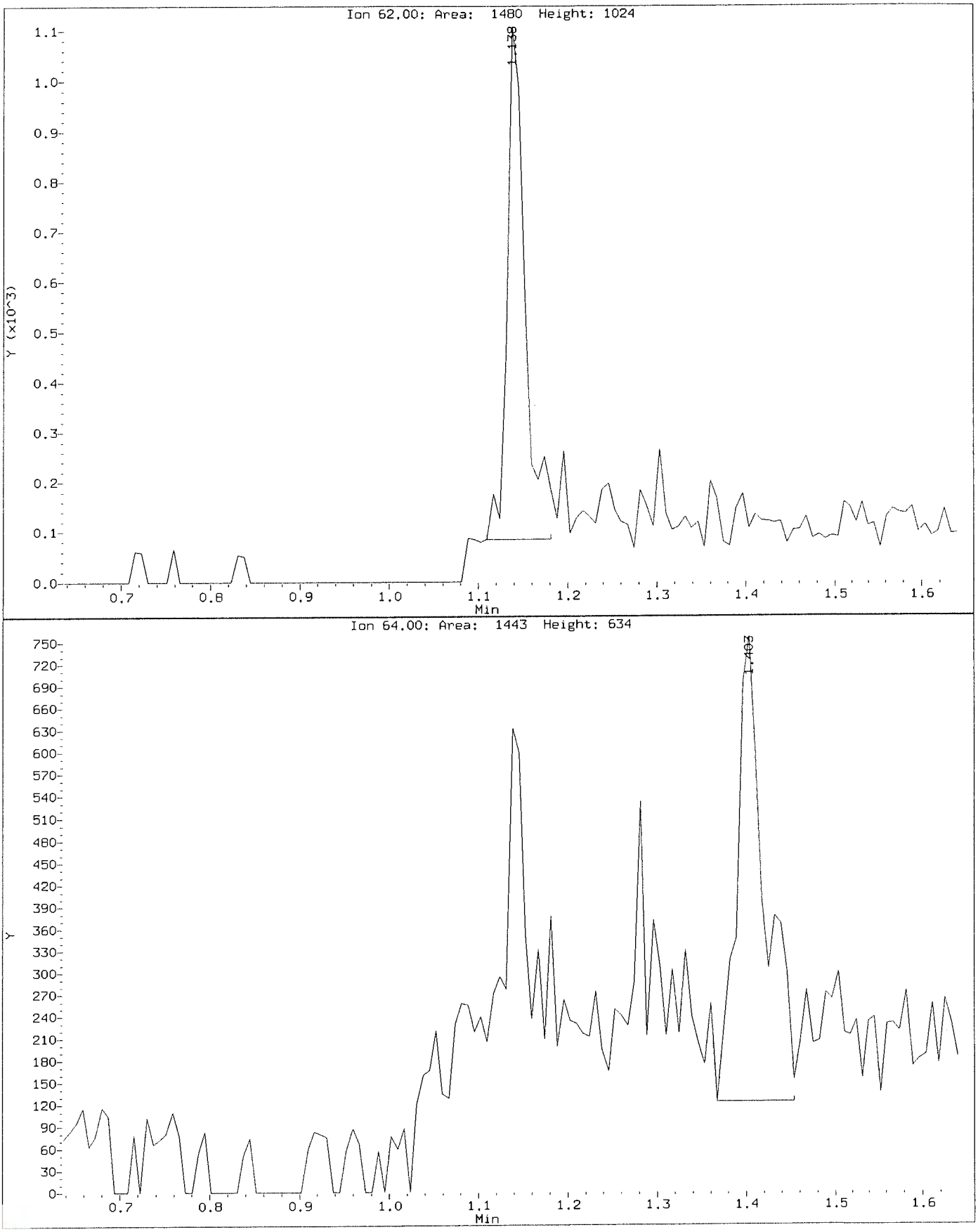






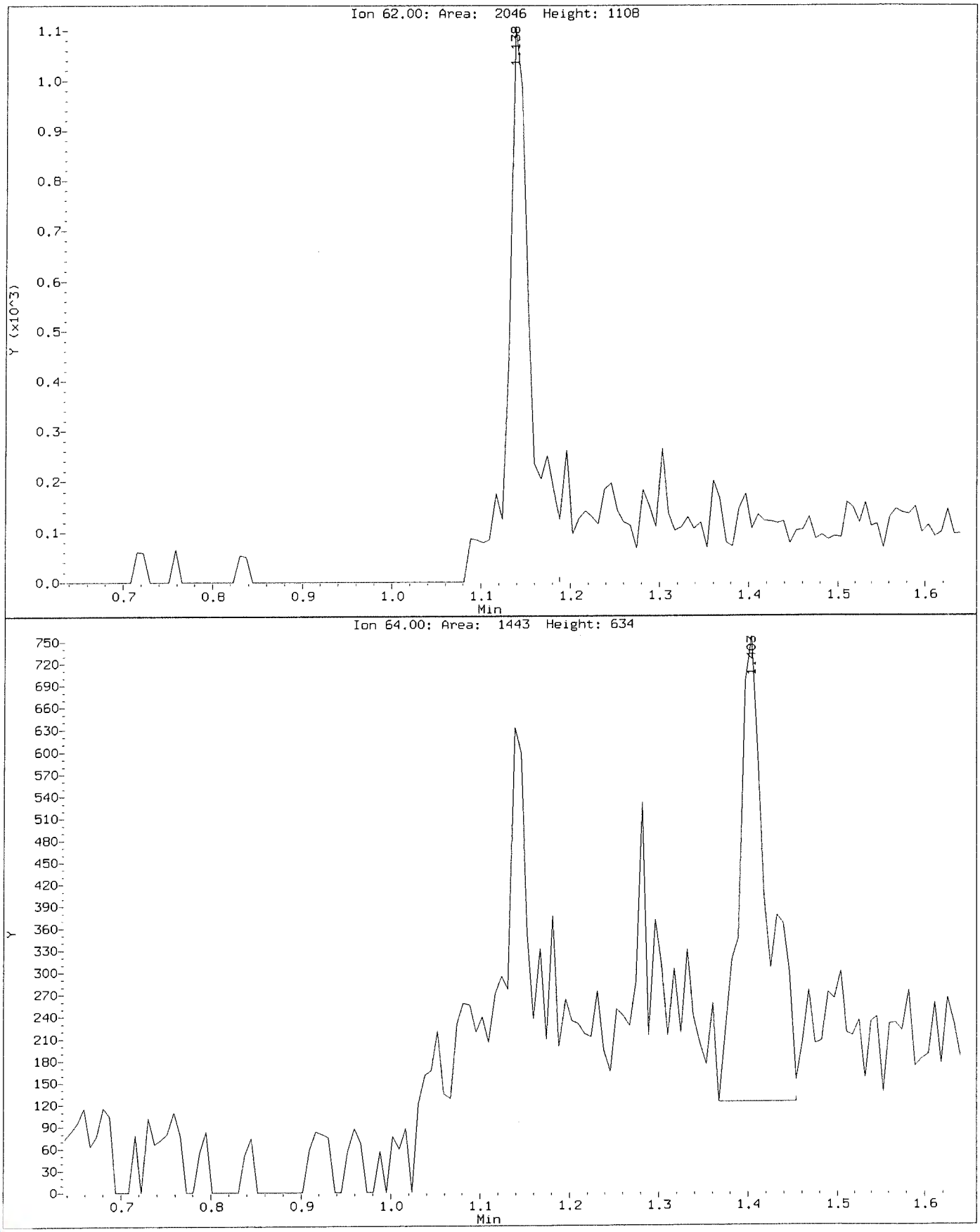
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Injection Date: 18-NOV-2019 14:35
Instrument: voa6.i
Client Sample ID: VSTD000.5

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



Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111803.D
Injection Date: 18-NOV-2019 14:35
Instrument: voa6.i
Client Sample ID: VSTD000.5

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



Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111804.D Page 1
Report Date: 22-Dec-2019 16:31

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X191118.b\X111804.D
Lab Smp Id: VSTD001 Client Smp ID: VSTD001
Inj Date : 18-NOV-2019 14:59
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\X191118.b\8260W.m
Meth Date : 22-Dec-2019 16:31 voa6.i Quant Type: ISTD
Cal Date : 18-NOV-2019 14:59 Cal File: X111804.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14

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

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

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	416007	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	570122	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	516622	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	279609	50.0000	
$ 30 Dibromofluoromethane	113	4.104	4.103	(0.981)	3882	1.00000	1.38(a)
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	4458	1.00000	1.85(a)
$ 48 Toluene-d8	98	6.389	6.388	(0.833)	13715	1.00000	1.00(a)
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	5731	1.00000	1.60(a)
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	4166	1.00000	1.11(a)
31 1,1,1-Trichloroethane	97	4.082	4.089	(0.976)	6451	1.00000	1.14(a)
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	4719	1.00000	1.20(aM)
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	3216	1.00000	1.19(a)
22 1,1-Dichloroethane	63	2.929	2.921	(0.700)	6907	1.00000	1.14(a)
11 1,1-Dichloroethene	96	1.912	1.911	(0.457)	3522	1.00000	0.99(a)
32 1,1-Dichloropropene	75	4.283	4.282	(0.862)	5427	1.00000	1.18(a)
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	1182	1.00000	0.29(a)
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	4081	1.00000	1.22(aM)
90 1,2,4-Trichlorobenzene	180	11.345	11.338	(1.173)	2432	1.00000	1.03(aM)
79 1,2,4-Trimethylbenzene	105	9.383	9.382	(0.970)	14648	1.00000	1.10(a)
89 1,2-Dibromo-3-Chloropropane	155	10.665	10.657	(1.103)	464	1.00000	0.73(aM)
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	3982	1.00000	1.09(a)
88 1,2-Dichlorobenzene	146	9.999	9.998	(1.034)	8297	1.00000	1.11(a)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	5359	1.00000	1.18(a)

Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111804.D Page 2
Report Date: 22-Dec-2019 16:31

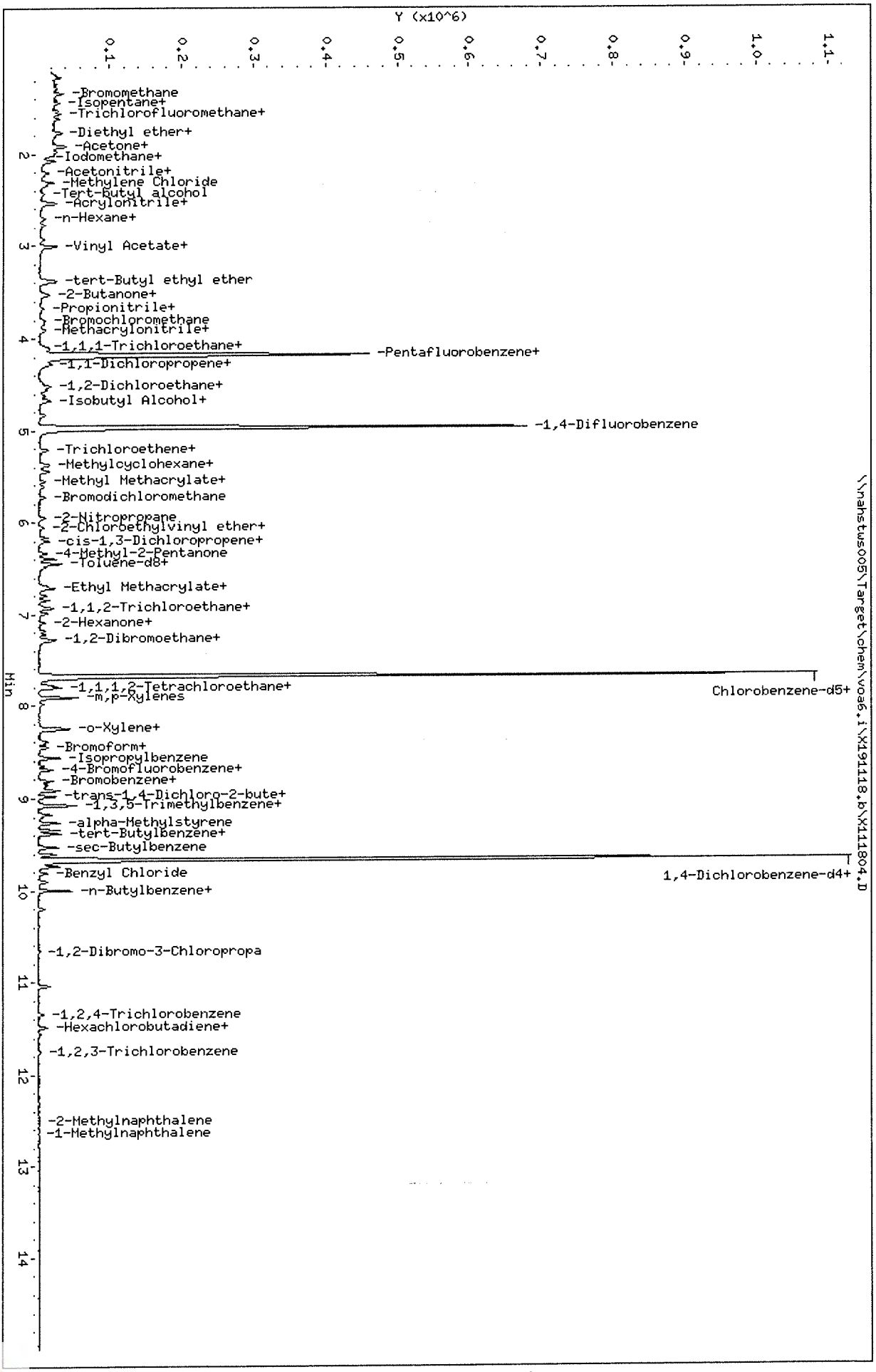
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	3352	1.00000	0.98(aM)
75 1,3,5-Trimethylbenzene	105	9.067	9.074	(0.938)	13162	1.00000	1.03(a)
83 1,3-Dichlorobenzene	146	9.605	9.612	(0.993)	8955	1.00000	1.11(a)
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	6334	1.00000	1.15(a)
84 1,4-Dichlorobenzene	146	9.684	9.683	(1.001)	9129	1.00000	1.12(a)
26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	6785	1.00000	1.23(a)
24 2-Butanone	43	3.588	3.580	(0.858)	2602	2.00000	2.03(a)
76 2-Chlorotoluene	91	8.974	8.981	(0.928)	11127	1.00000	1.10(a)
52 2-Hexanone	43	7.090	7.090	(0.924)	4893	2.00000	2.30(a)
77 4-Chlorotoluene	91	9.075	9.074	(0.939)	13982	1.00000	1.14(a)
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	14705	1.00000	1.07(a)
45 4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	6643	2.00000	2.19(a)
10 Acetone	43	1.969	1.976	(0.471)	5956	2.00000	1.88(a)
37 Benzene	78	4.519	4.512	(0.909)	15129	1.00000	1.16(a)
74 Bromobenzene	156	8.810	8.809	(0.911)	5611	1.00000	1.15(a)
29 Bromochloromethane	128	3.803	3.795	(0.909)	2687	1.00000	1.19(a)
39 Bromodichloromethane	83	5.730	5.729	(1.153)	5583	1.00000	1.18(aM)
66 Bromoform	173	8.416	8.415	(1.097)	3197	1.00000	2.01(Ta)
6 Bromomethane	94	1.339	1.331	(0.320)	6334	1.00000	(aM)
19 Carbon Disulfide	76	2.069	2.069	(0.495)	20920	2.00000	2.18(a)
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	5740	1.00000	1.13(aM)
59 Chlorobenzene	112	7.699	7.699	(1.004)	11449	1.00000	1.13(a)
7 Chloroethane	64	1.403	1.396	(0.336)	3001	1.00000	1.14(aM)
28 Chloroform	83	3.910	3.910	(0.935)	8234	1.00000	1.22(a)
3 Chloromethane	50	1.074	1.073	(0.257)	6118	1.00000	1.53(aM)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	4494	1.00000	1.13(a)
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	6302	1.00000	1.13(a)
55 Dibromochloromethane	129	7.176	7.183	(0.936)	4470	1.00000	1.13(a)
44 Dibromomethane	93	5.558	5.557	(1.118)	2789	1.00000	1.15(a)
2 Dichlorodifluoromethane	85	0.973	0.966	(0.233)	3829	1.00000	1.87(aM)
61 Ethylbenzene	106	7.800	7.807	(1.017)	5813	1.00000	1.11(a)
91 Hexachlorobutadiene	225	11.481	11.488	(1.187)	2468	1.00000	0.76(a)
67 Isopropylbenzene	105	8.566	8.566	(1.117)	16809	1.00000	1.08(a)
62 m,p-Xylenes	106	7.907	7.907	(1.031)	13495	2.00000	2.14(a)
17 Methylene Chloride	84	2.306	2.305	(0.551)	4626	1.00000	1.22(a)
87 n-Butylbenzene	91	9.999	9.998	(1.034)	11491	1.00000	1.00(a)
73 n-Propylbenzene	91	8.917	8.917	(0.922)	18779	1.00000	1.08(a)
92 Naphthalene	128	11.553	11.546	(1.195)	3182	1.00000	1.05(a)
63 o-Xylene	106	8.244	8.244	(1.075)	6995	1.00000	1.12(a)
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	15987	1.00000	1.06(a)
64 Styrene	104	8.265	8.265	(1.078)	11719	1.00000	1.08(a)
78 tert-Butylbenzene	119	9.340	9.339	(0.966)	12122	1.00000	1.11(a)
56 Tetrachloroethene	164	6.933	6.933	(0.904)	4263	1.00000	1.17(a)
50 Toluene	91	6.453	6.453	(0.841)	16346	1.00000	1.11(a)
20 trans-1,2-Dichloroethene	96	2.535	2.527	(0.606)	4068	1.00000	1.18(a)
51 trans-1,3-Dichloropropene	75	6.689	6.682	(1.346)	5295	1.00000	1.04(a)
38 Trichloroethene	130	5.214	5.206	(1.049)	4445	1.00000	1.11(a)
8 Trichlorofluoromethane	101	1.561	1.553	(0.373)	6912	1.00000	1.07(a)
5 Vinyl Chloride	62	1.138	1.138	(0.272)	4533	1.00000	1.06(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.

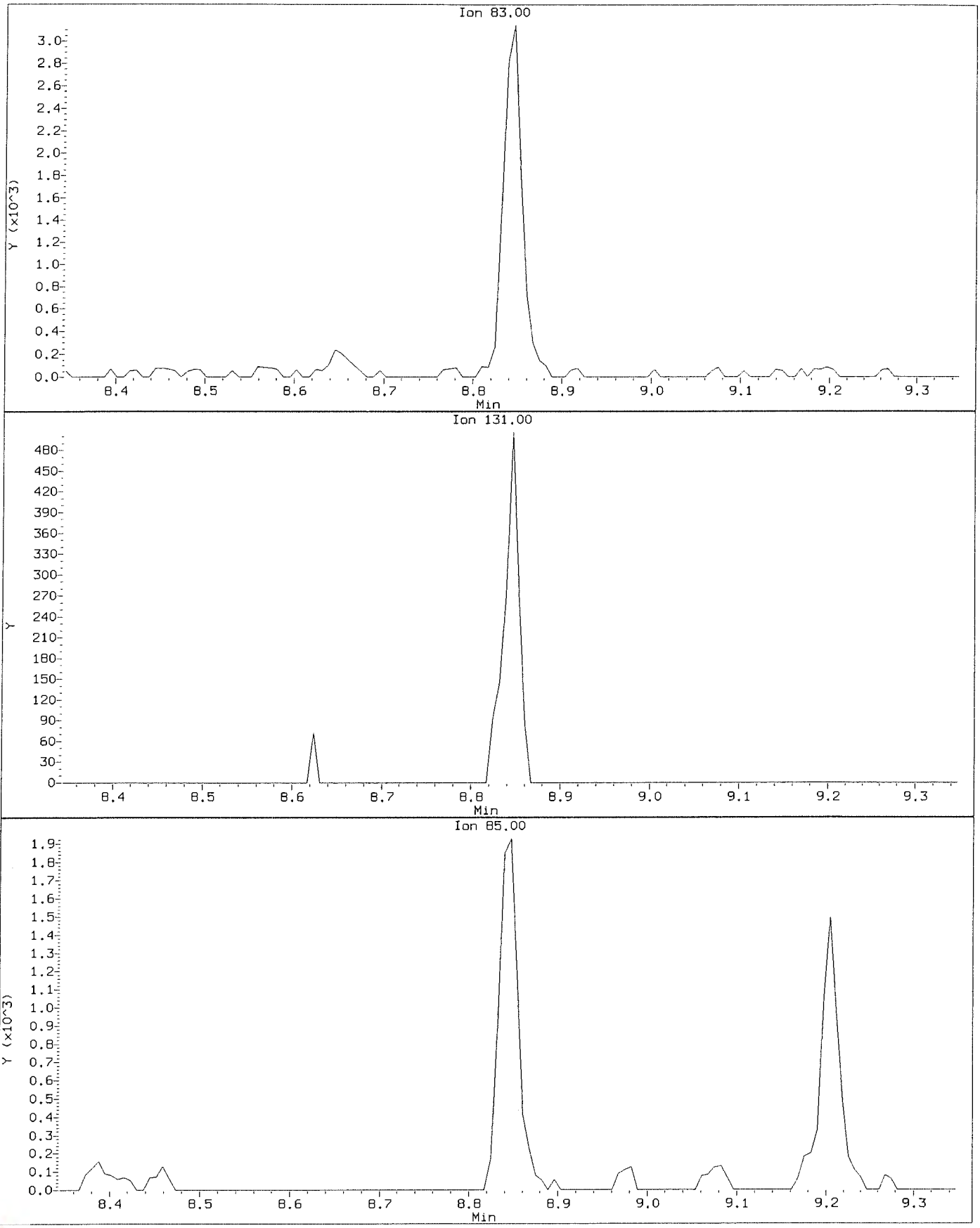


Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111804.D
Date : 18-NOV-2019 14:59
Client ID: VSTD001
Sample Info: VSTD001;VSTD001;1;3;
Purge Volume: 5.0
Column phase: DB624

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

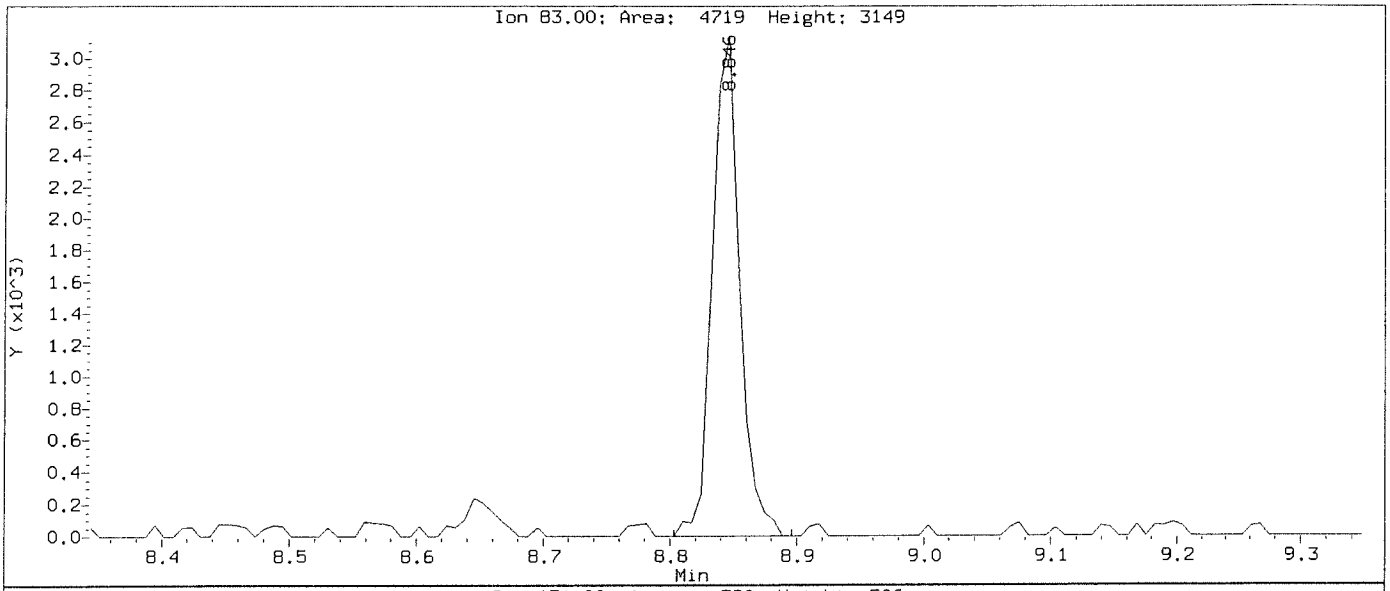
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Injection Date: 18-NOV-2019 14:59
Instrument: voa6.i
Client Sample ID: VSTD001

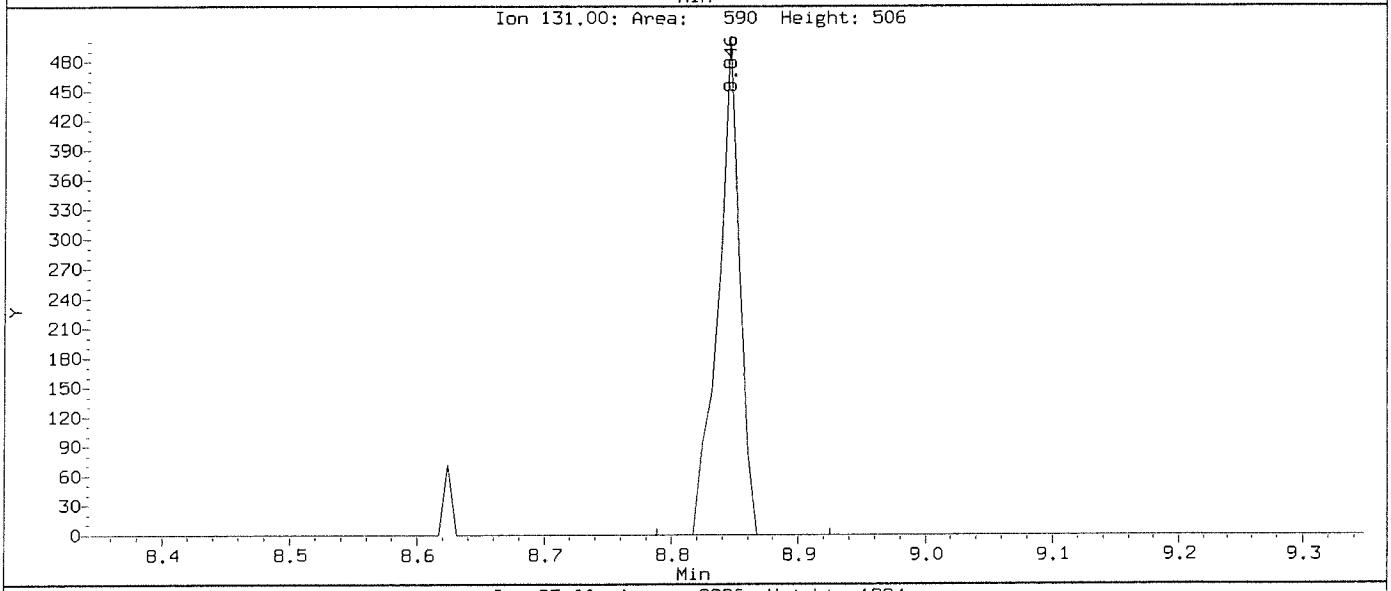
Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5

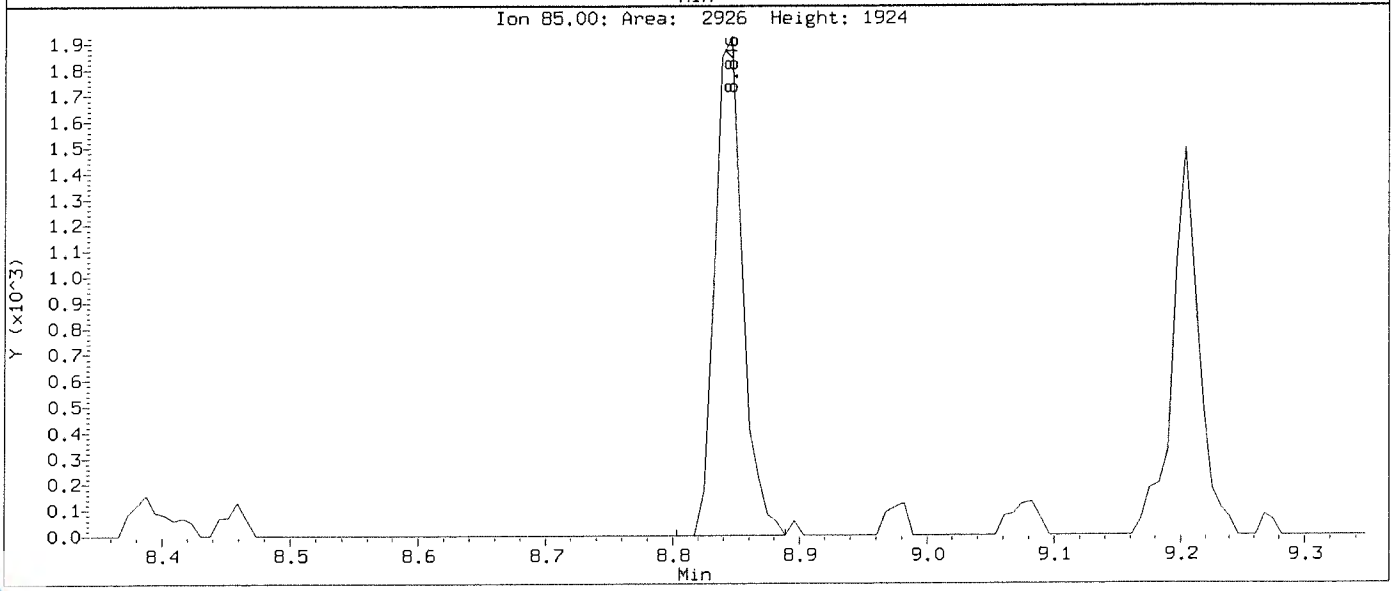


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Injection Date: 18-NOV-2019 14:59
Instrument: voa6.i
Client Sample ID: VSTD001

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

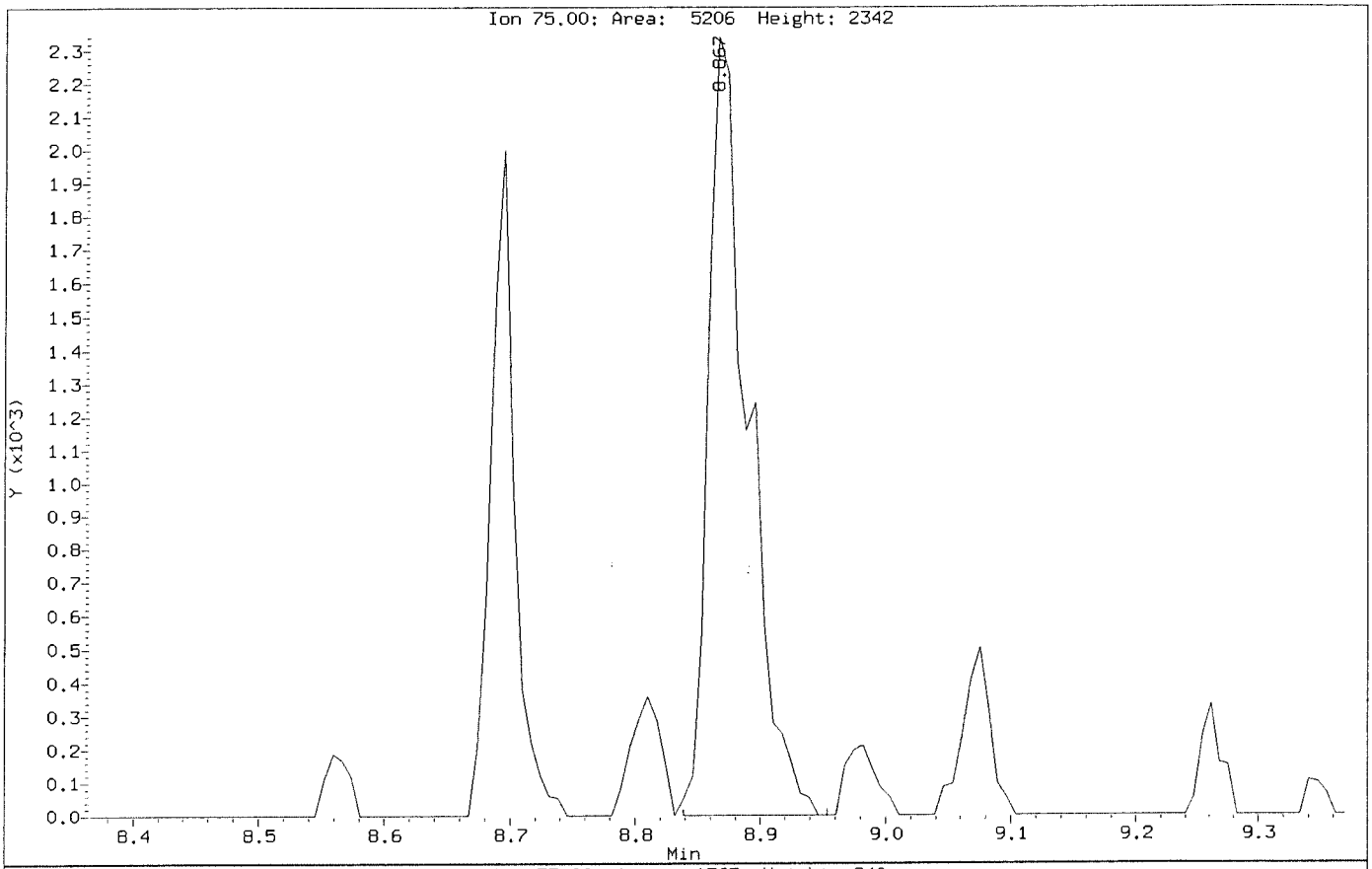


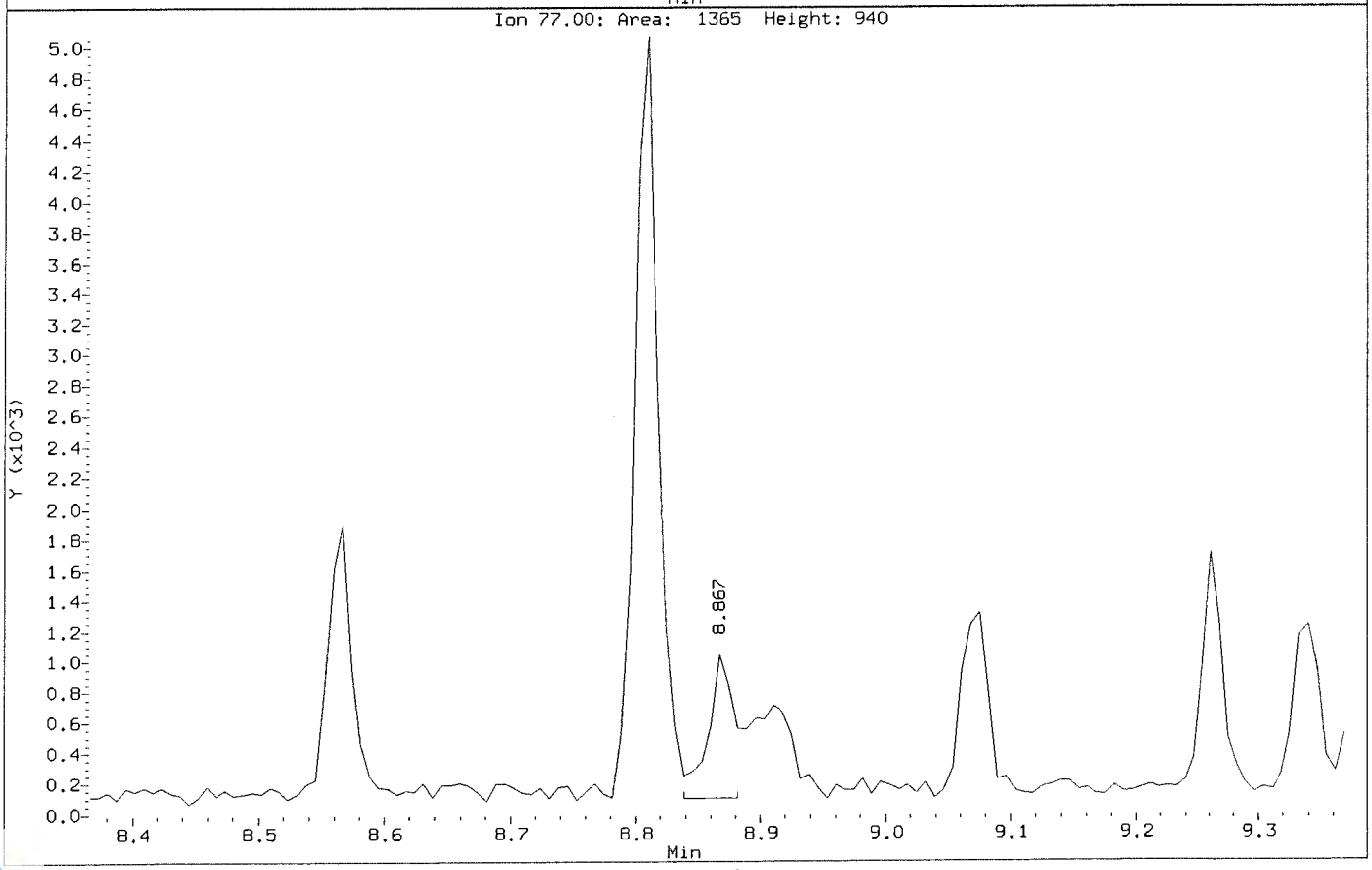




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Injection Date: 18-NOV-2019 14:59
Instrument: voa6.i
Client Sample ID: VSTD001

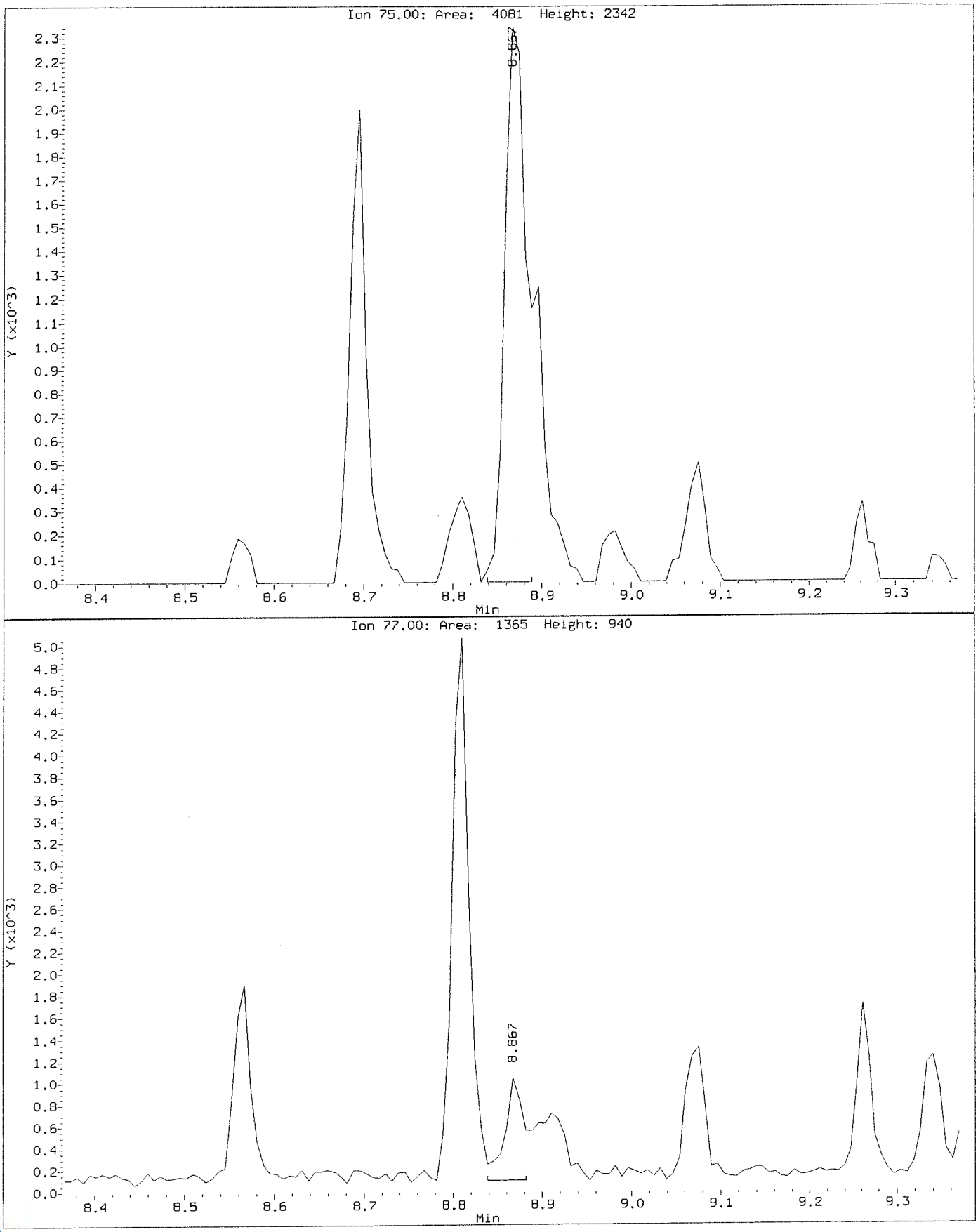
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





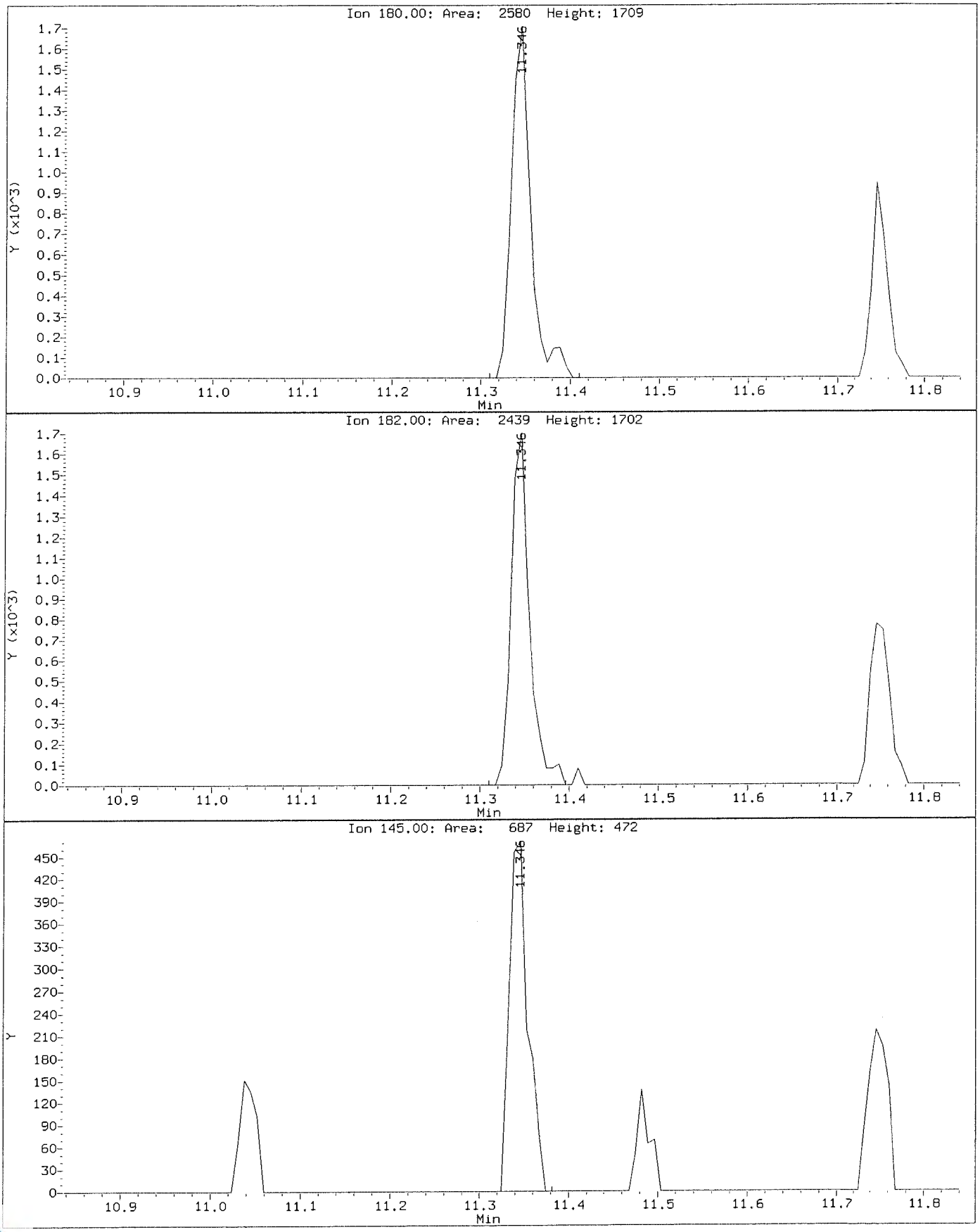
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Injection Date: 18-NOV-2019 14:59
Instrument: voa6.i
Client Sample ID: VSTD001

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



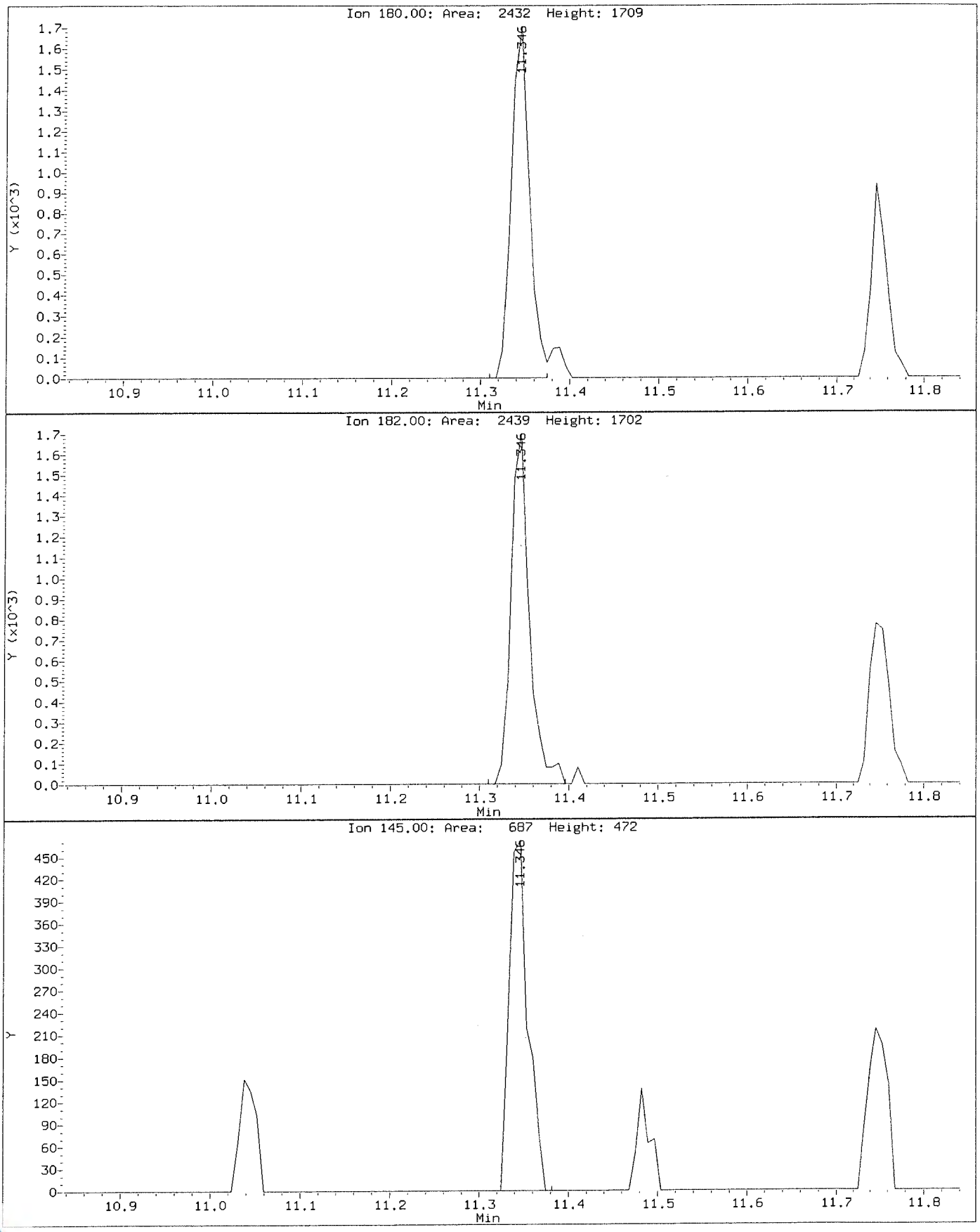
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Injection Date: 18-NOV-2019 14:59
Instrument: voa6.i
Client Sample ID: VSTD001

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



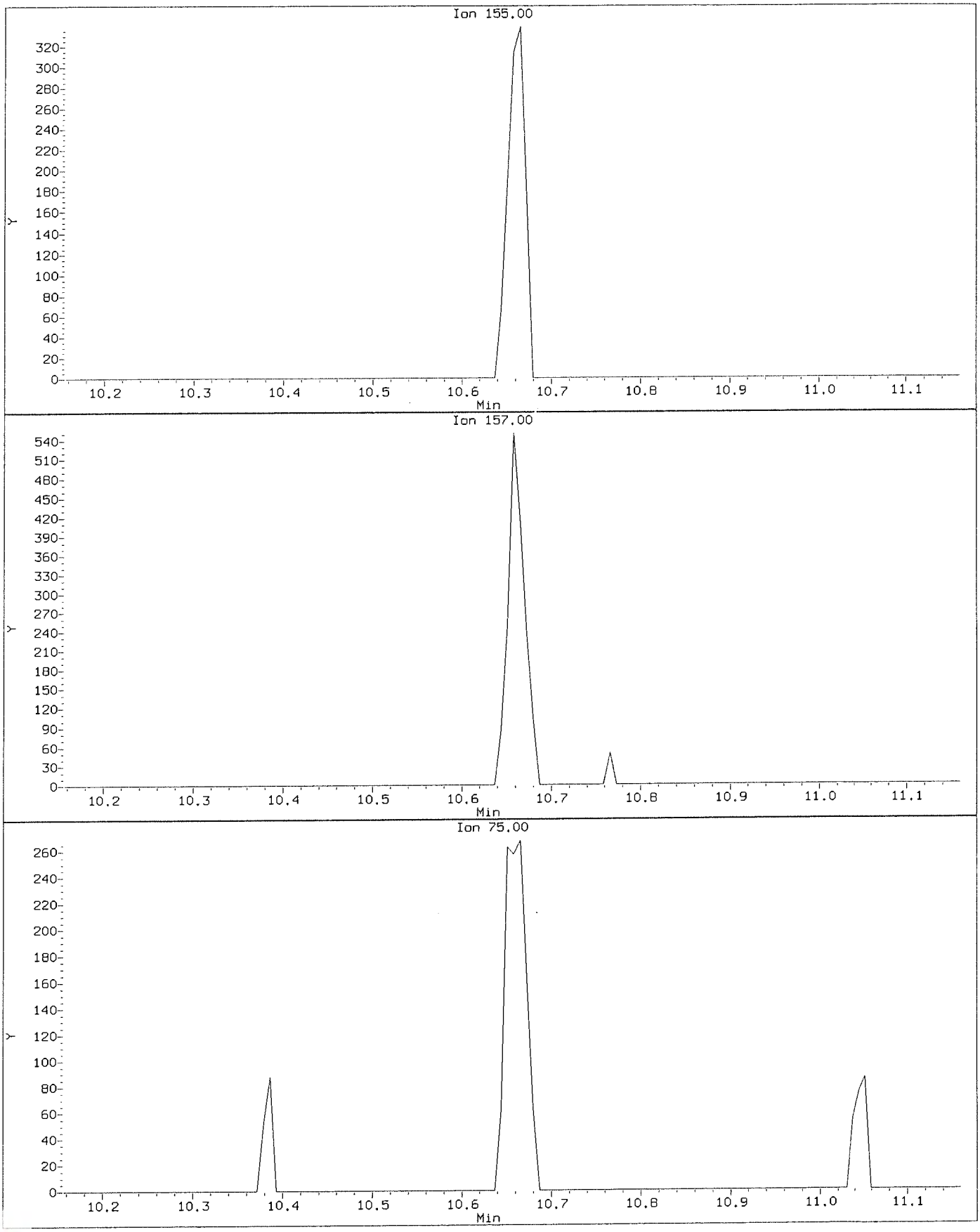
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Instrument: voa6.i
Client Sample ID: VSTD001

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



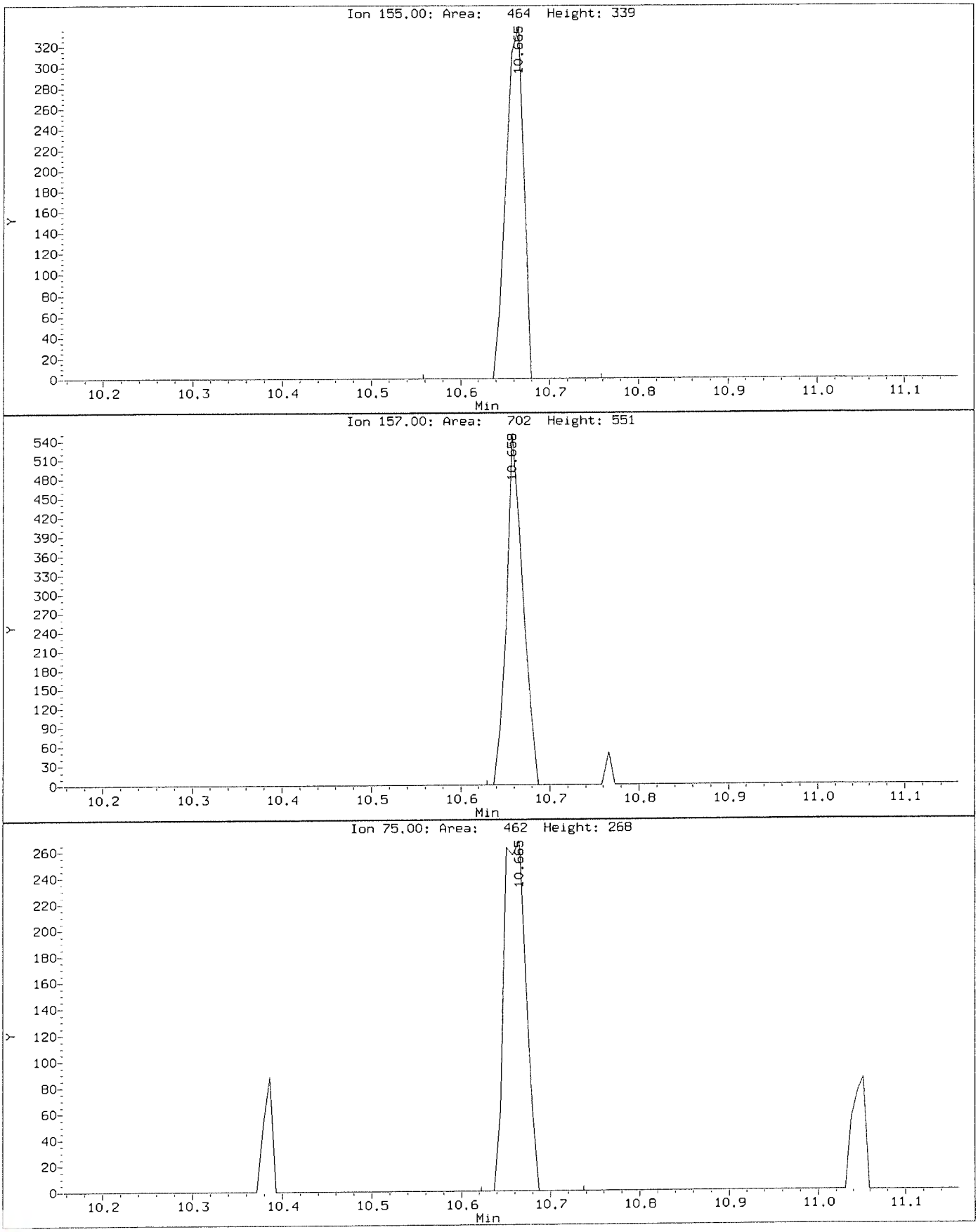
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Injection Date: 18-NOV-2019 14:59
Instrument: voa6.i
Client Sample ID: VSTD001

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



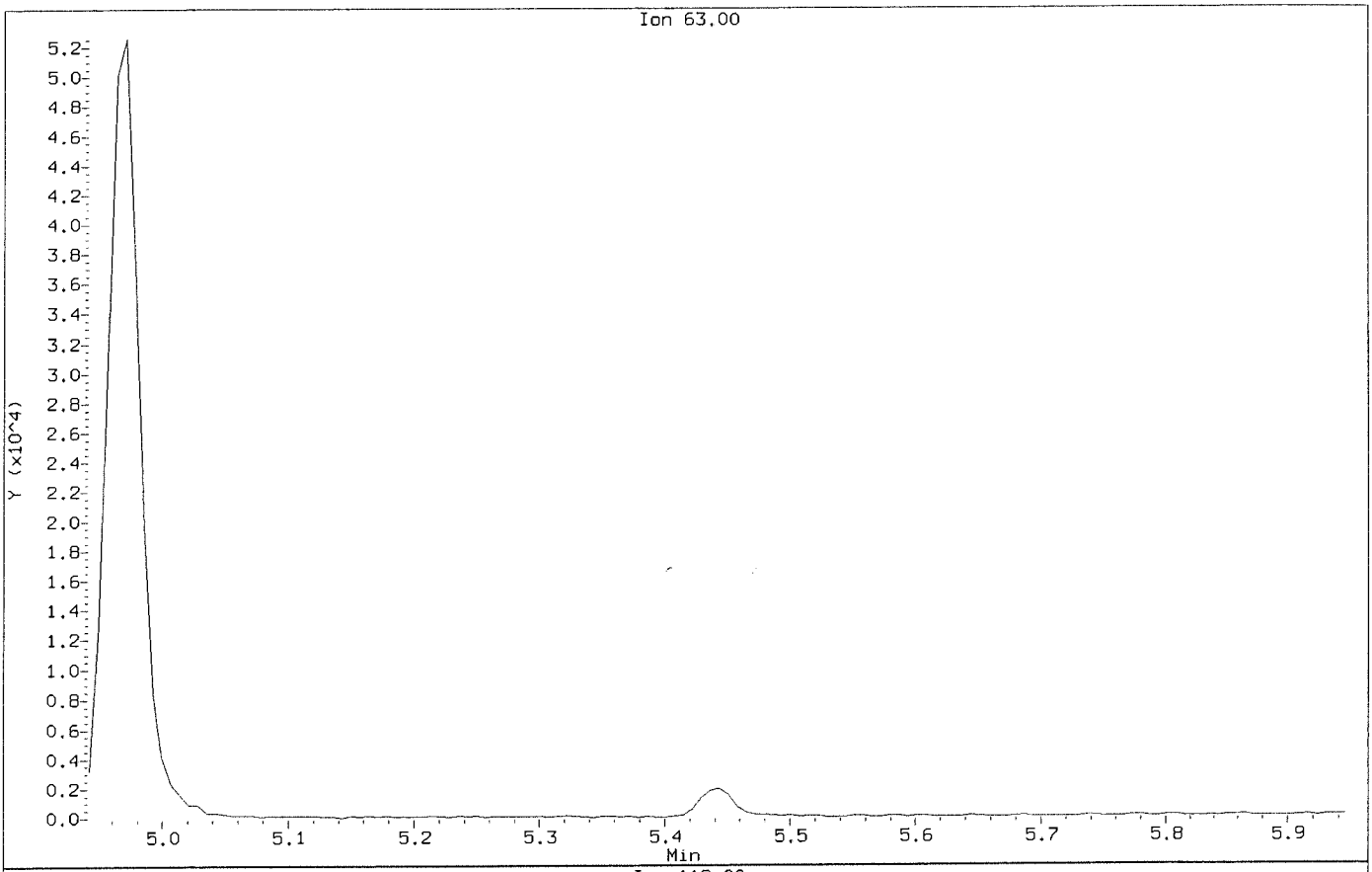
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Instrument: voa6.i
Client Sample ID: VSTD001

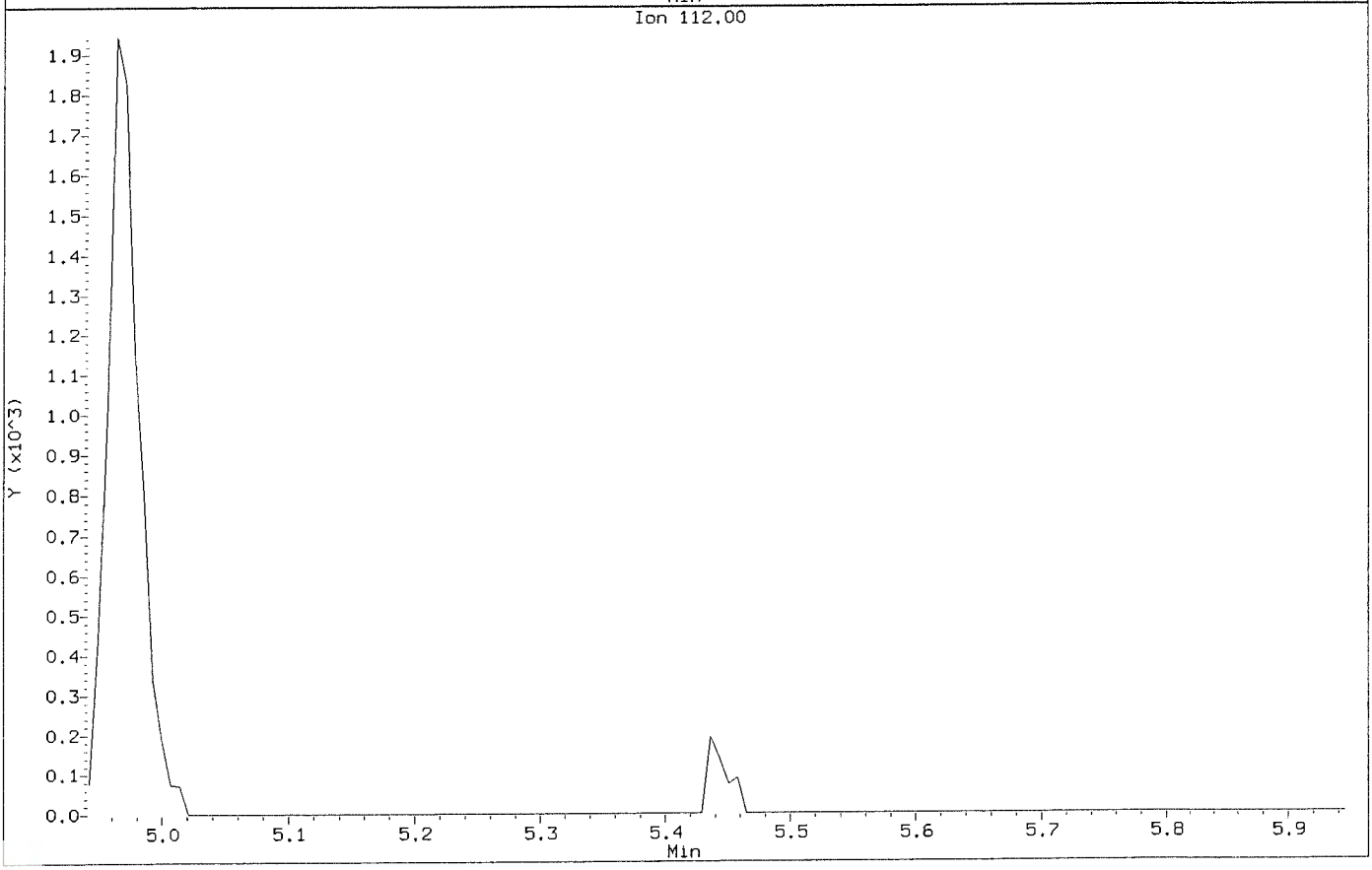
Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\Before2\X111804.D
Injection Date: 18-NOV-2019 14:59
Instrument: voa6.i
Client Sample ID: VSTD001

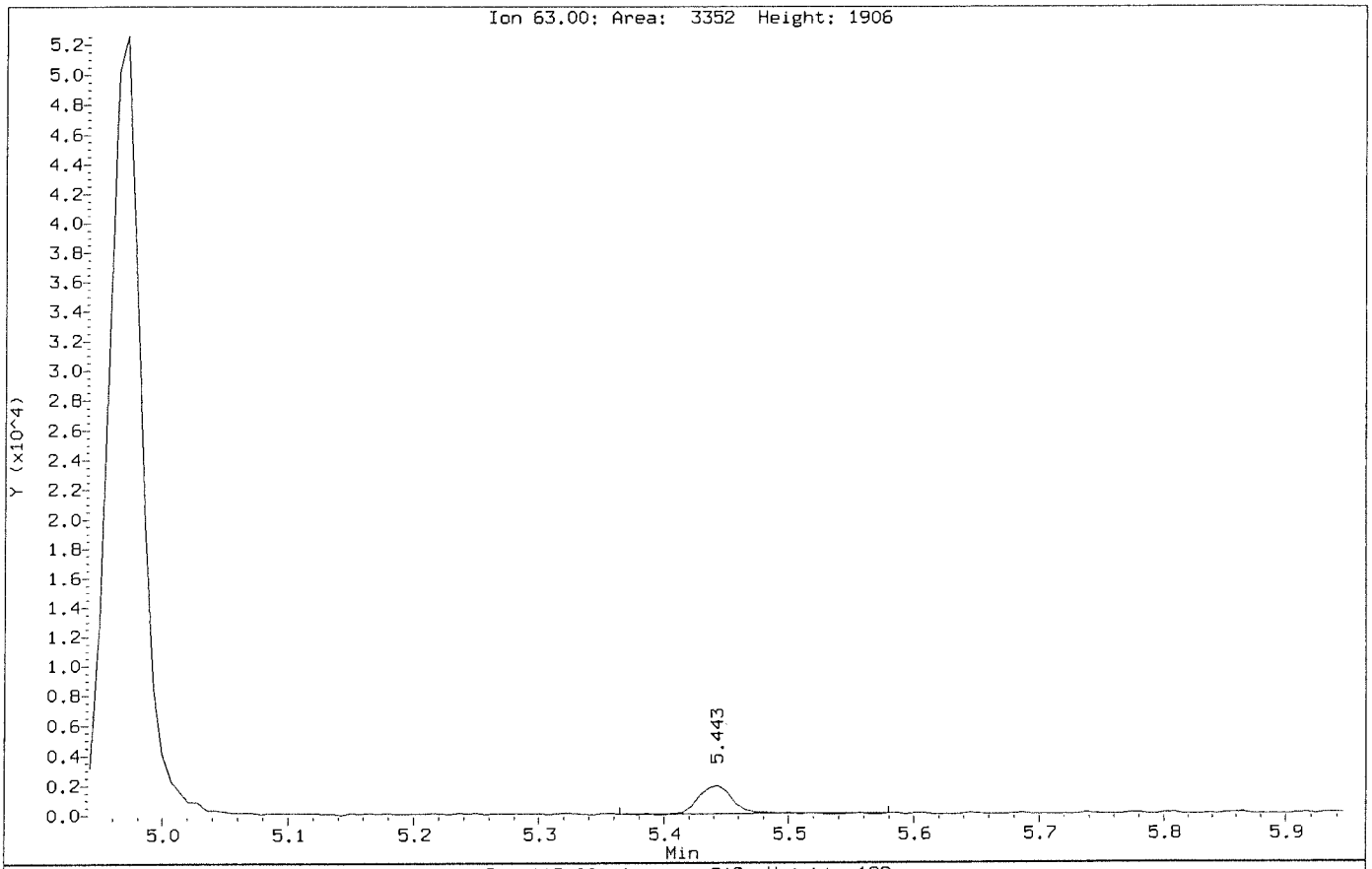
Compound: 1,2-Dichloropropane
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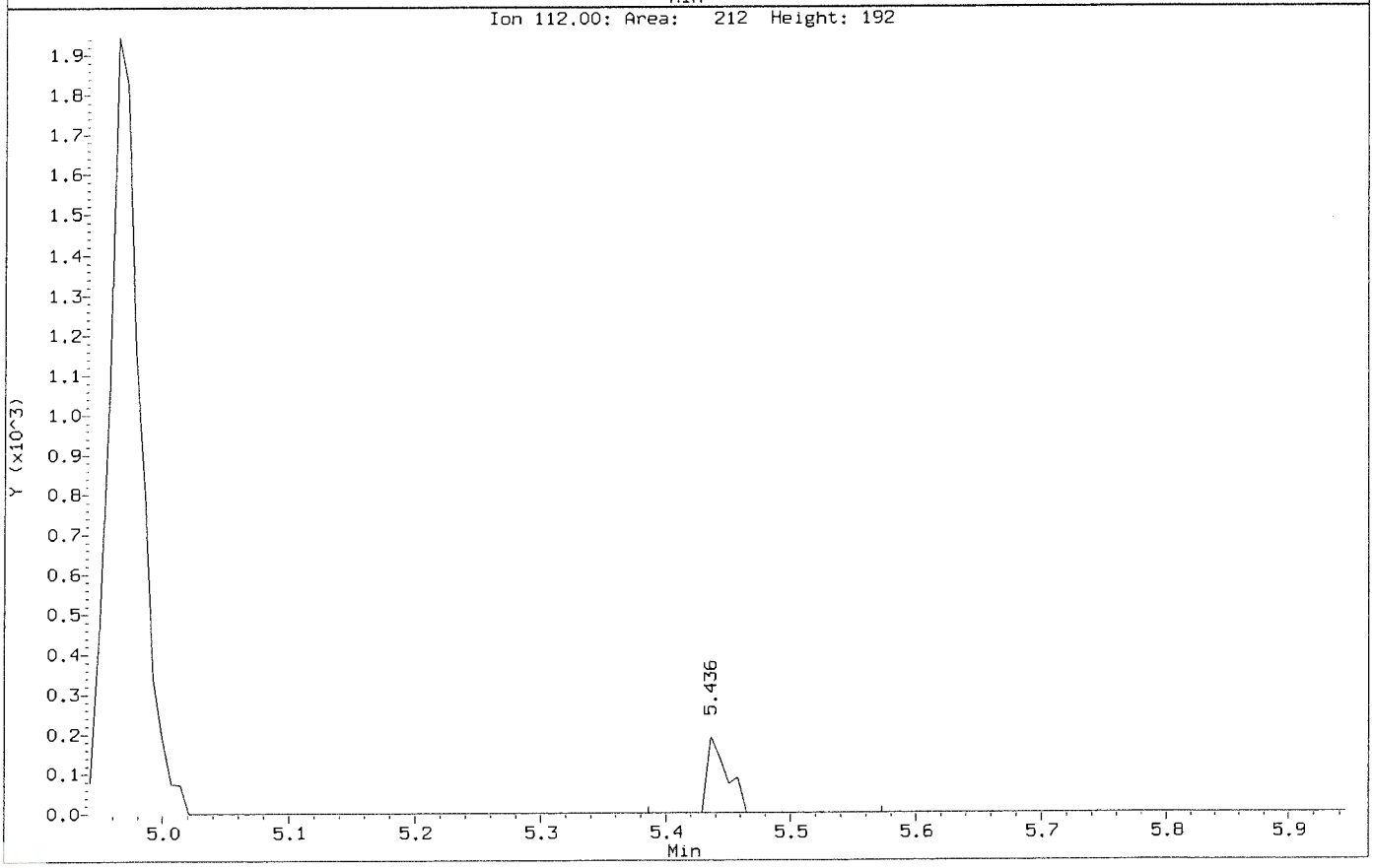




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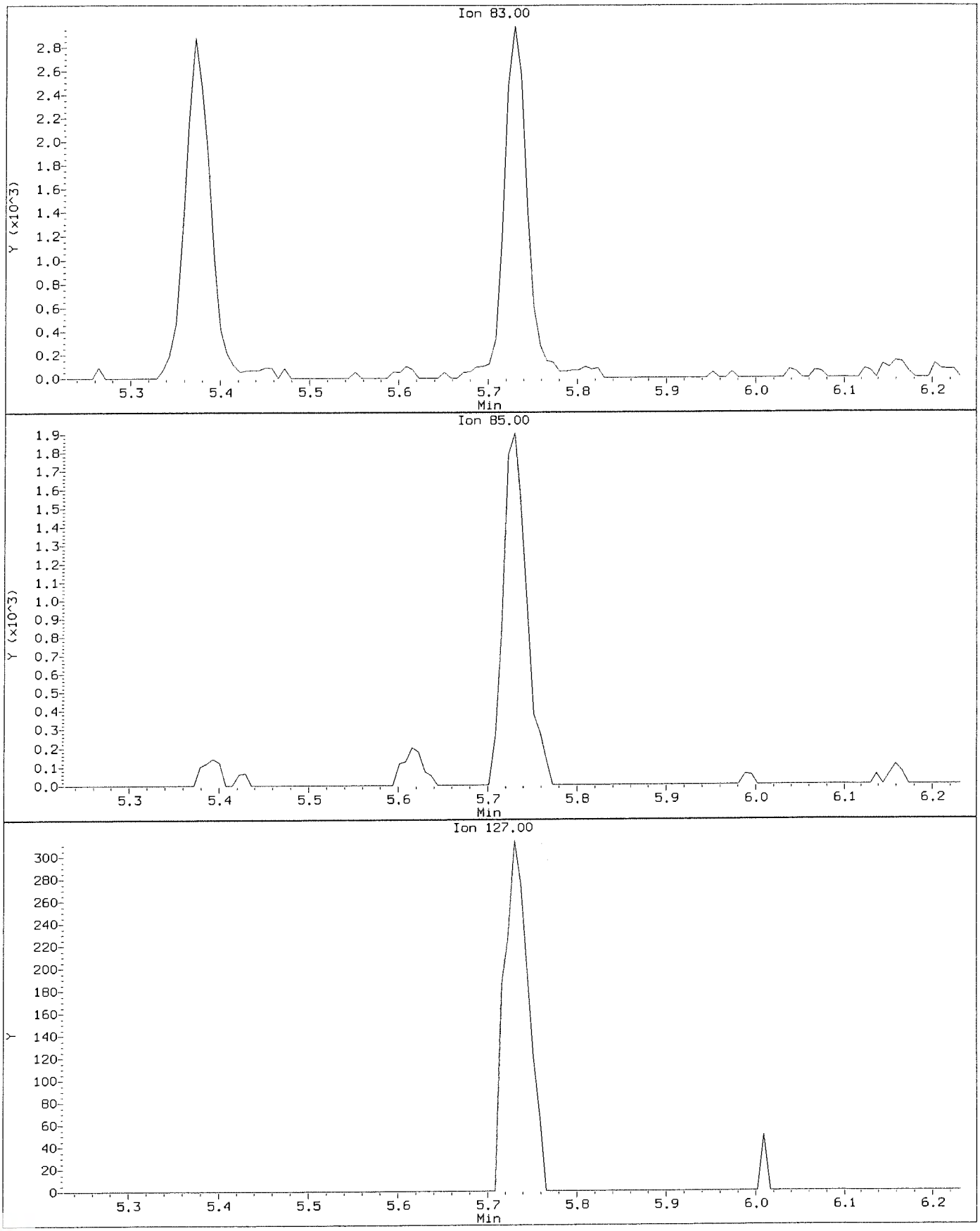
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5





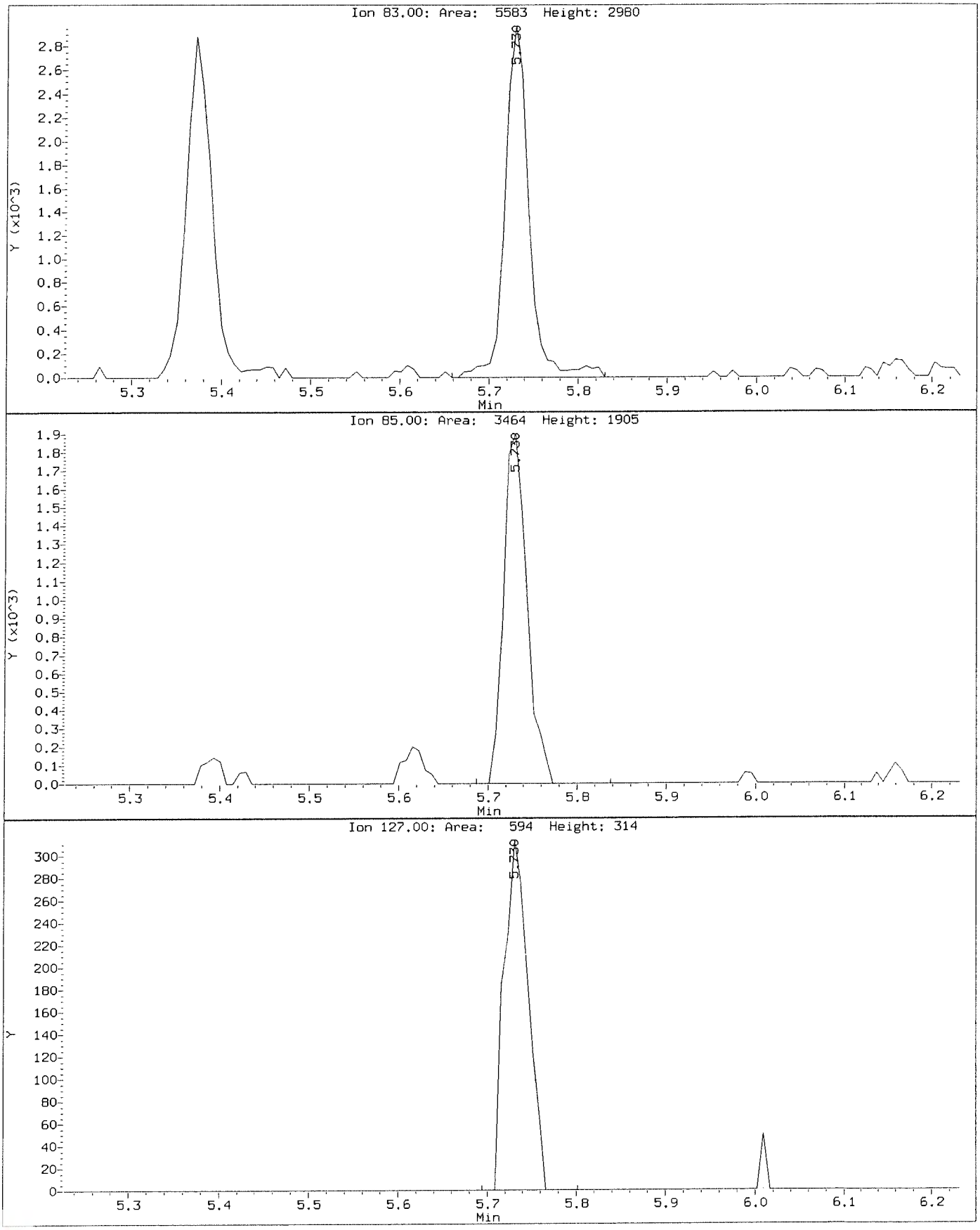
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Injection Date: 18-NOV-2019 14:59
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Bromodichloromethane
CAS Number: 75-27-4



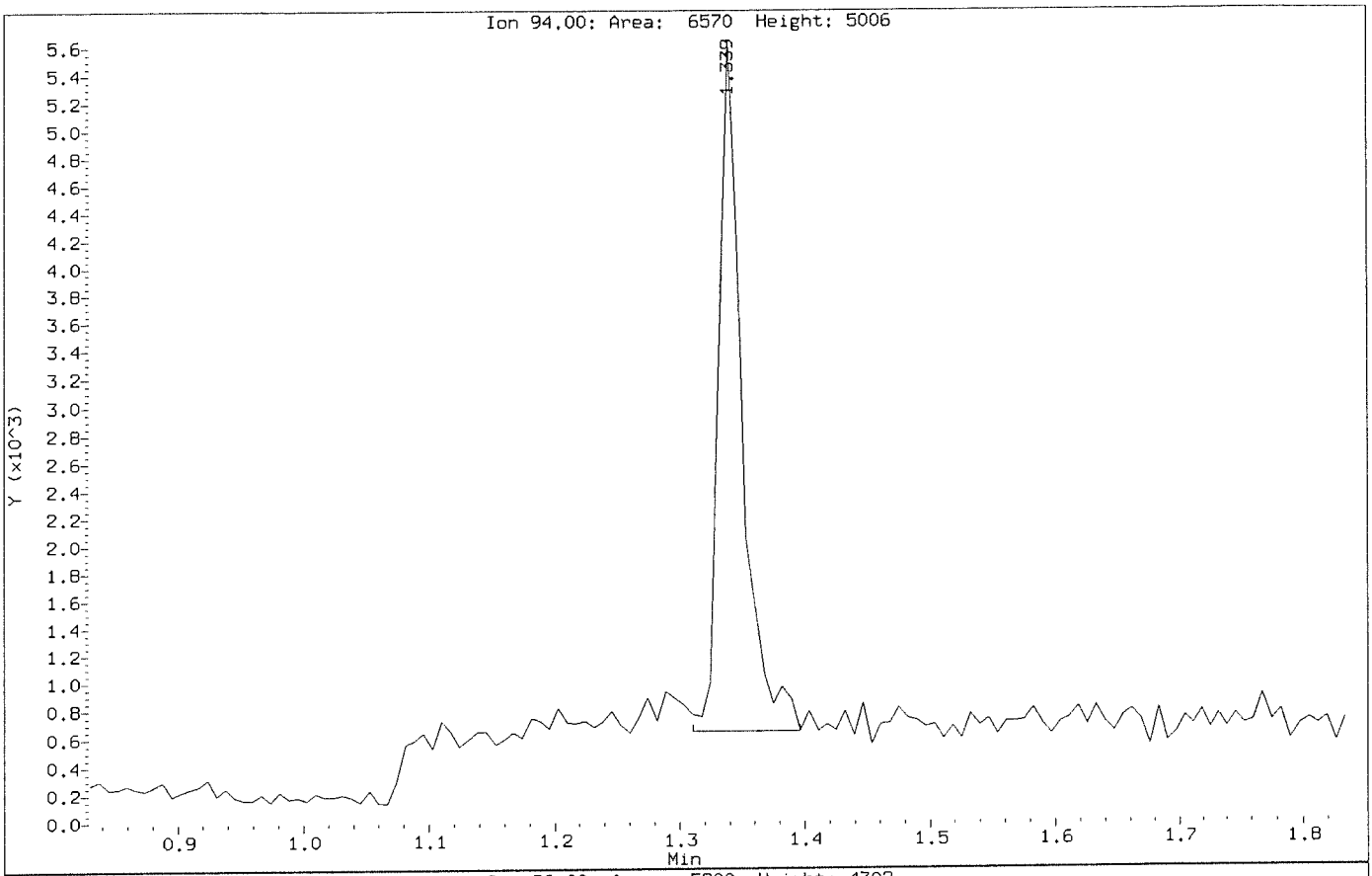
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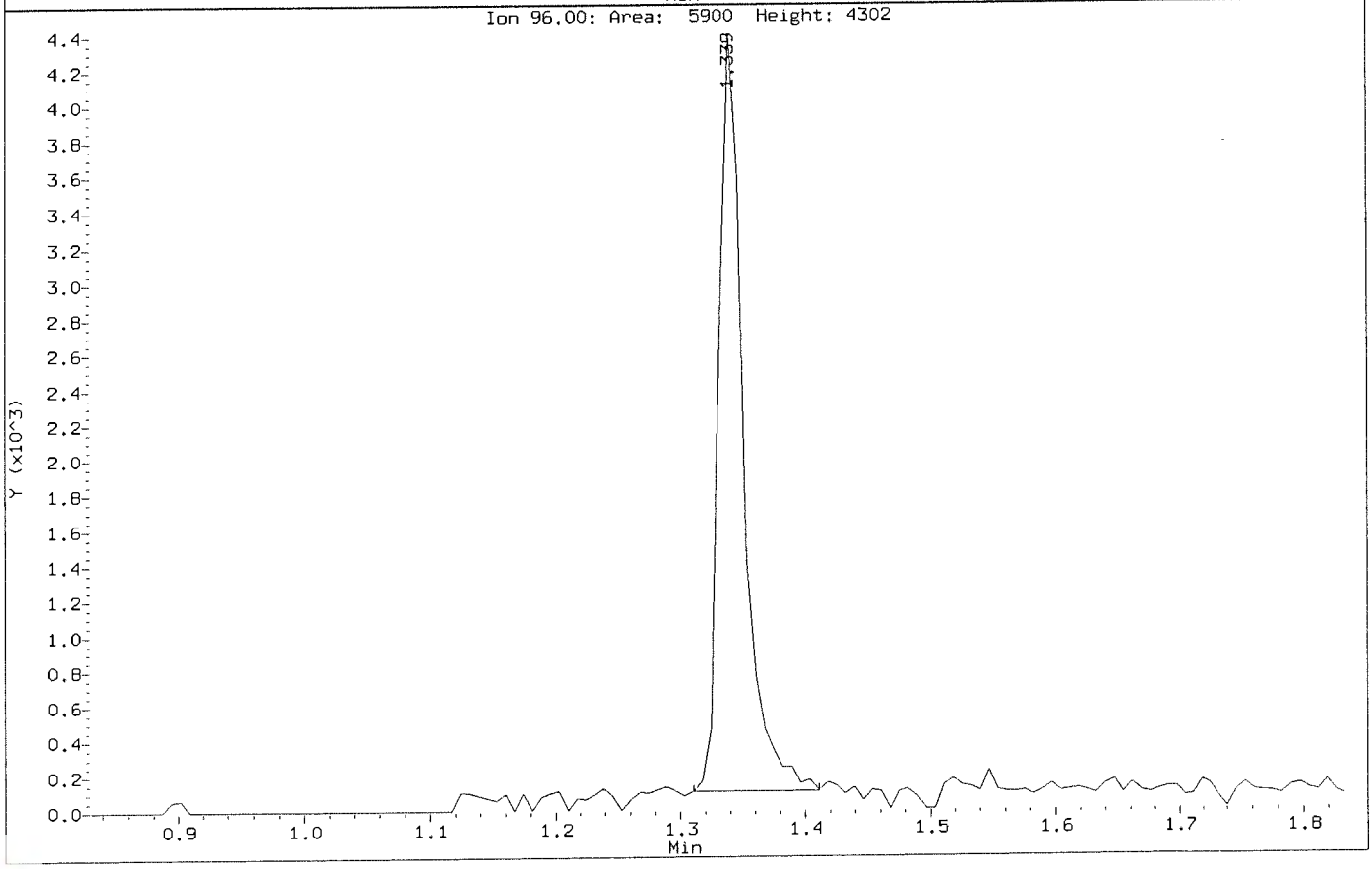
Compound: Bromodichloromethane
CAS Number: 75-27-4



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Injection Date: 18-NOV-2019 14:59
Instrument: voa6.i
Client Sample ID: VSTD001

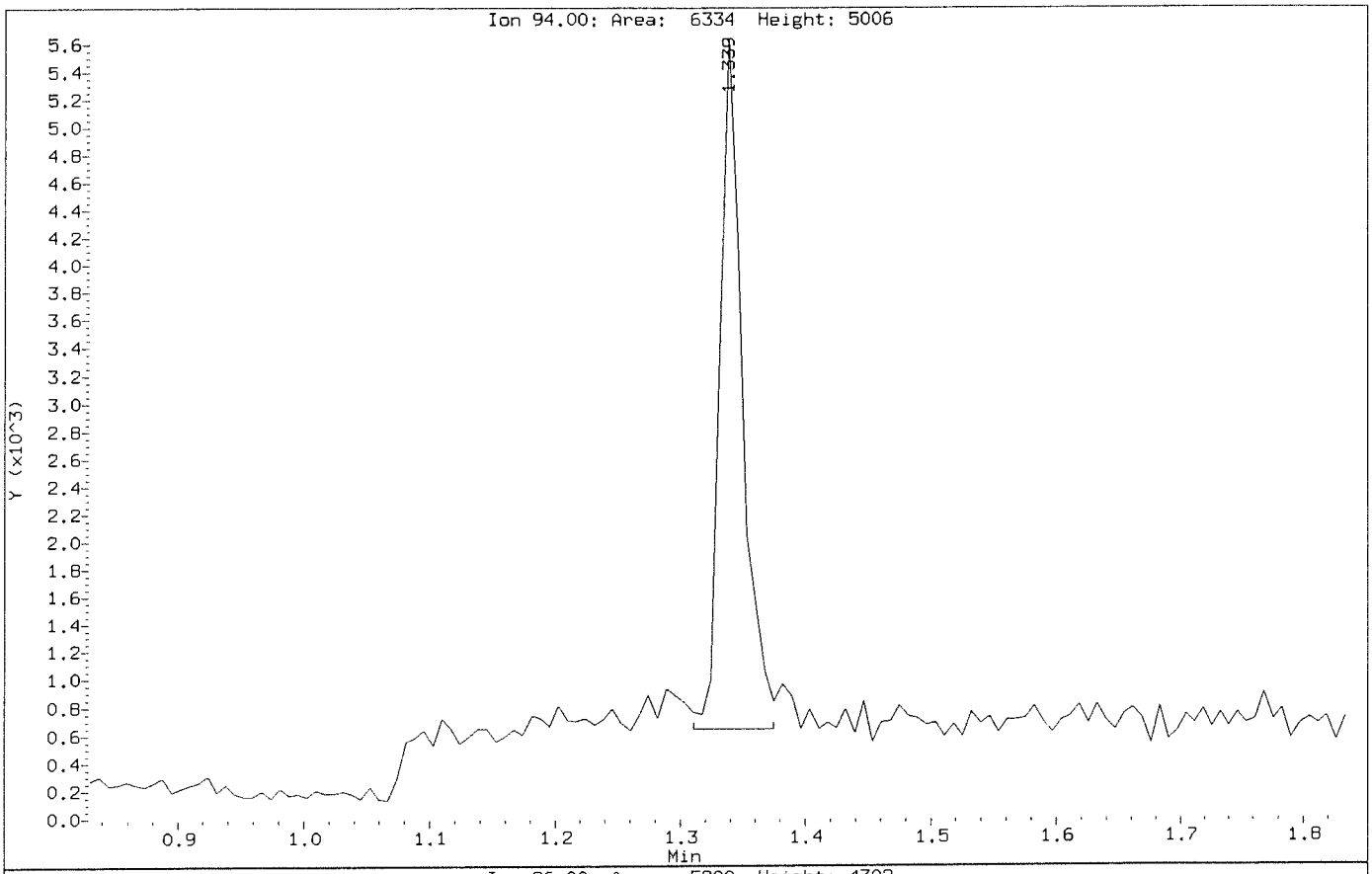
Compound: Bromomethane
CAS Number: 74-83-9

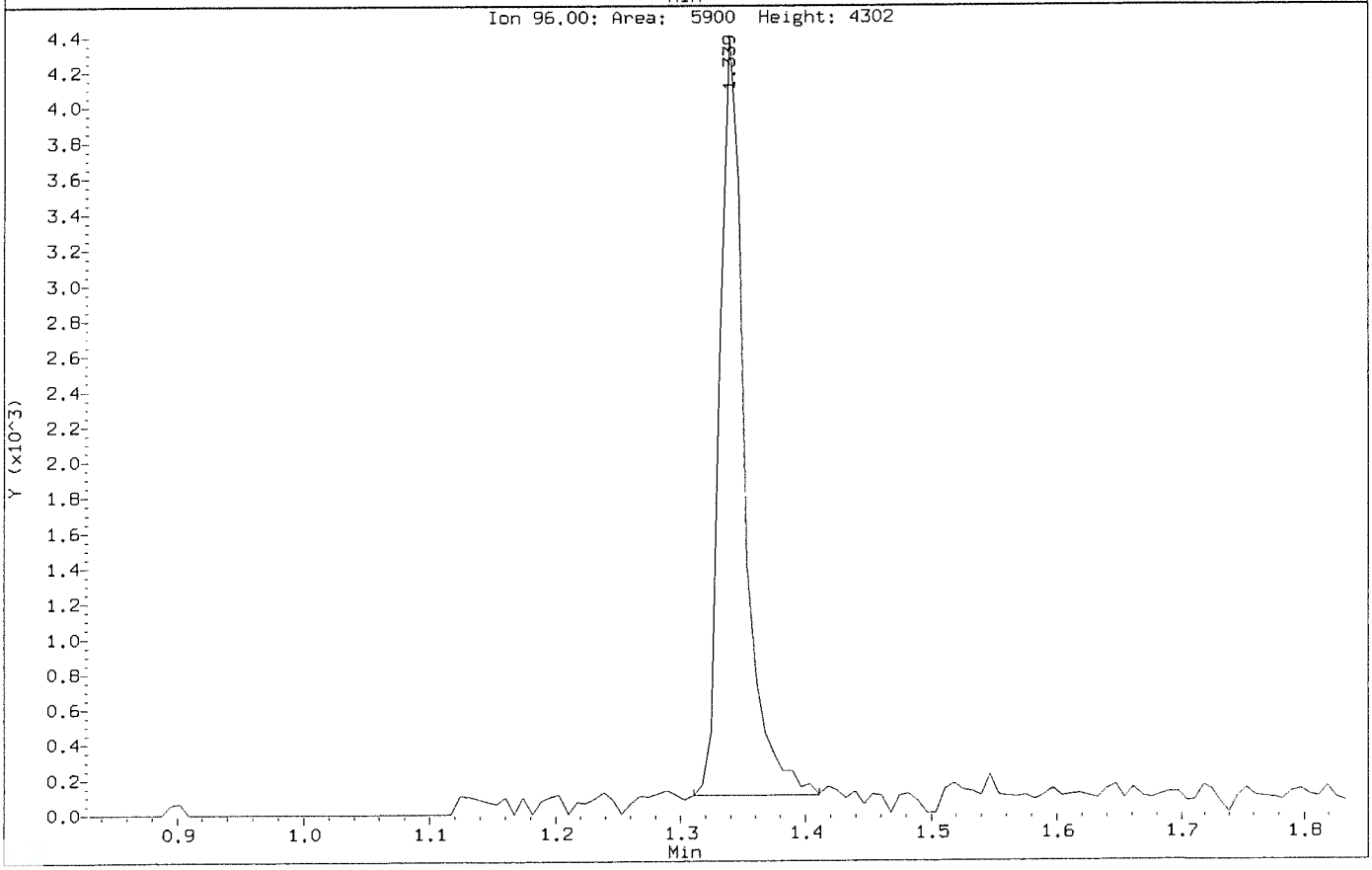




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Injection Date: 18-NOV-2019 14:59
Instrument: voa6.i
Client Sample ID: VSTD001

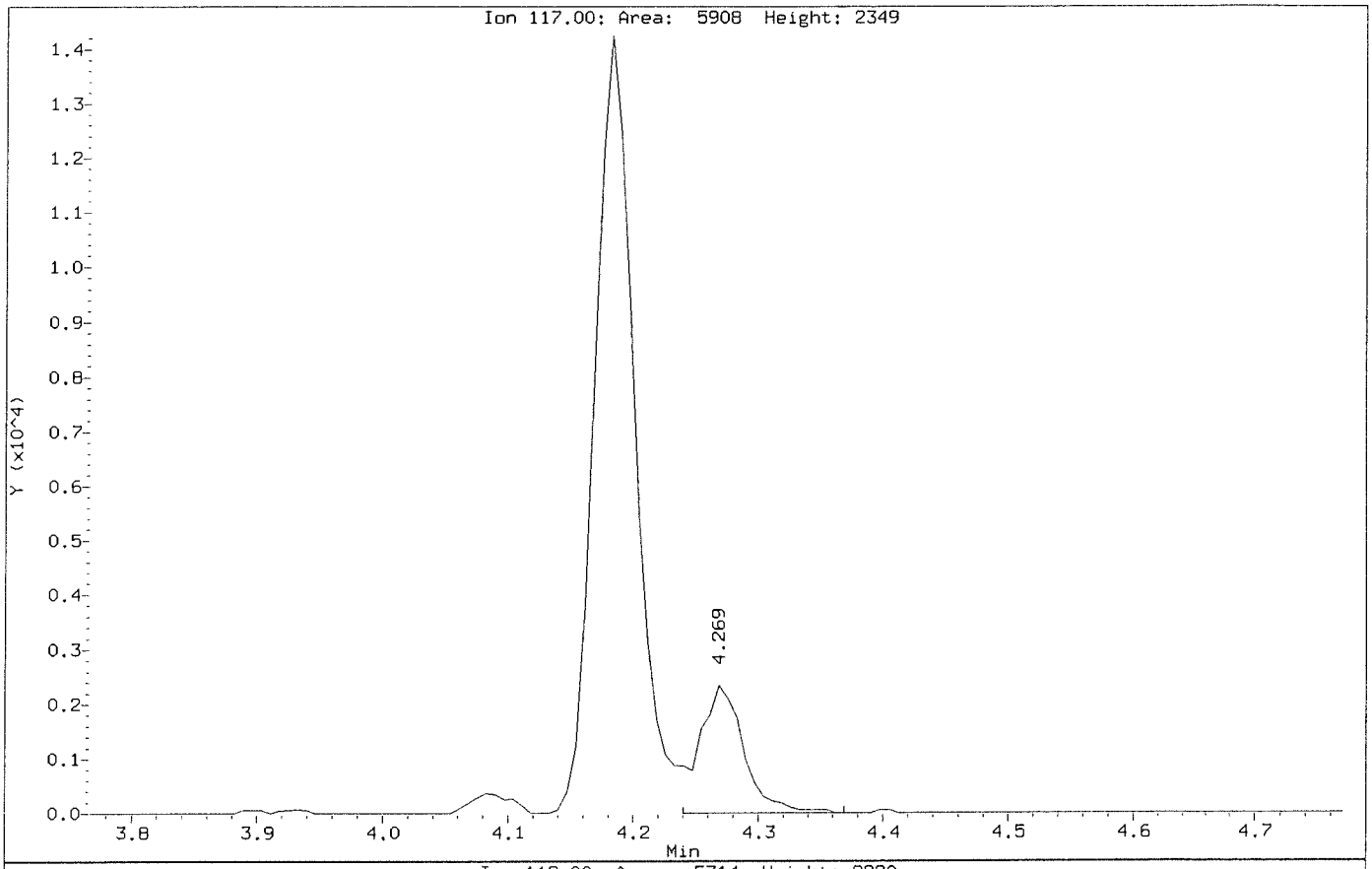
Compound: Bromomethane
CAS Number: 74-83-9

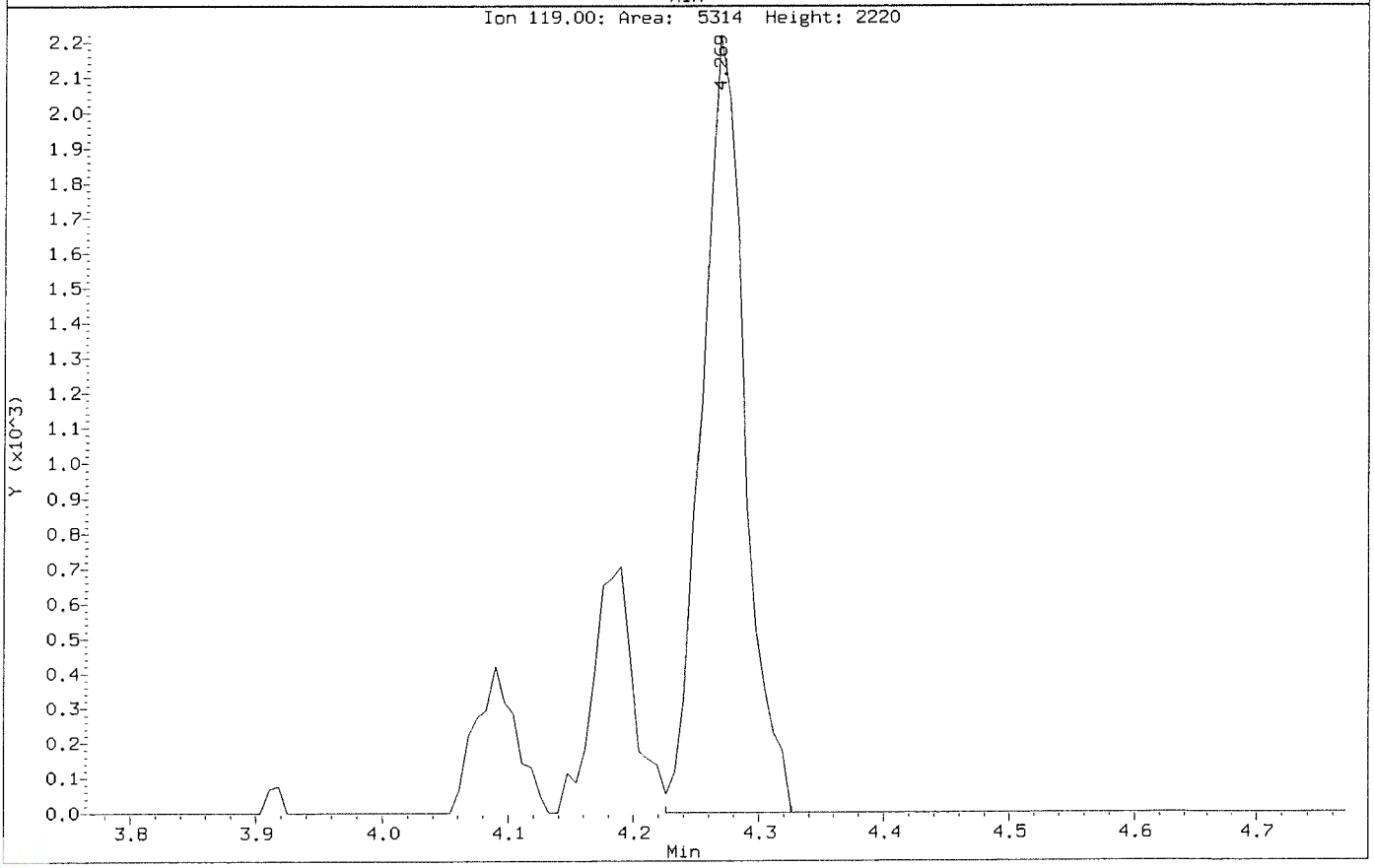




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Injection Date: 18-NOV-2019 14:59
Instrument: voa6.i
Client Sample ID: VSTD001

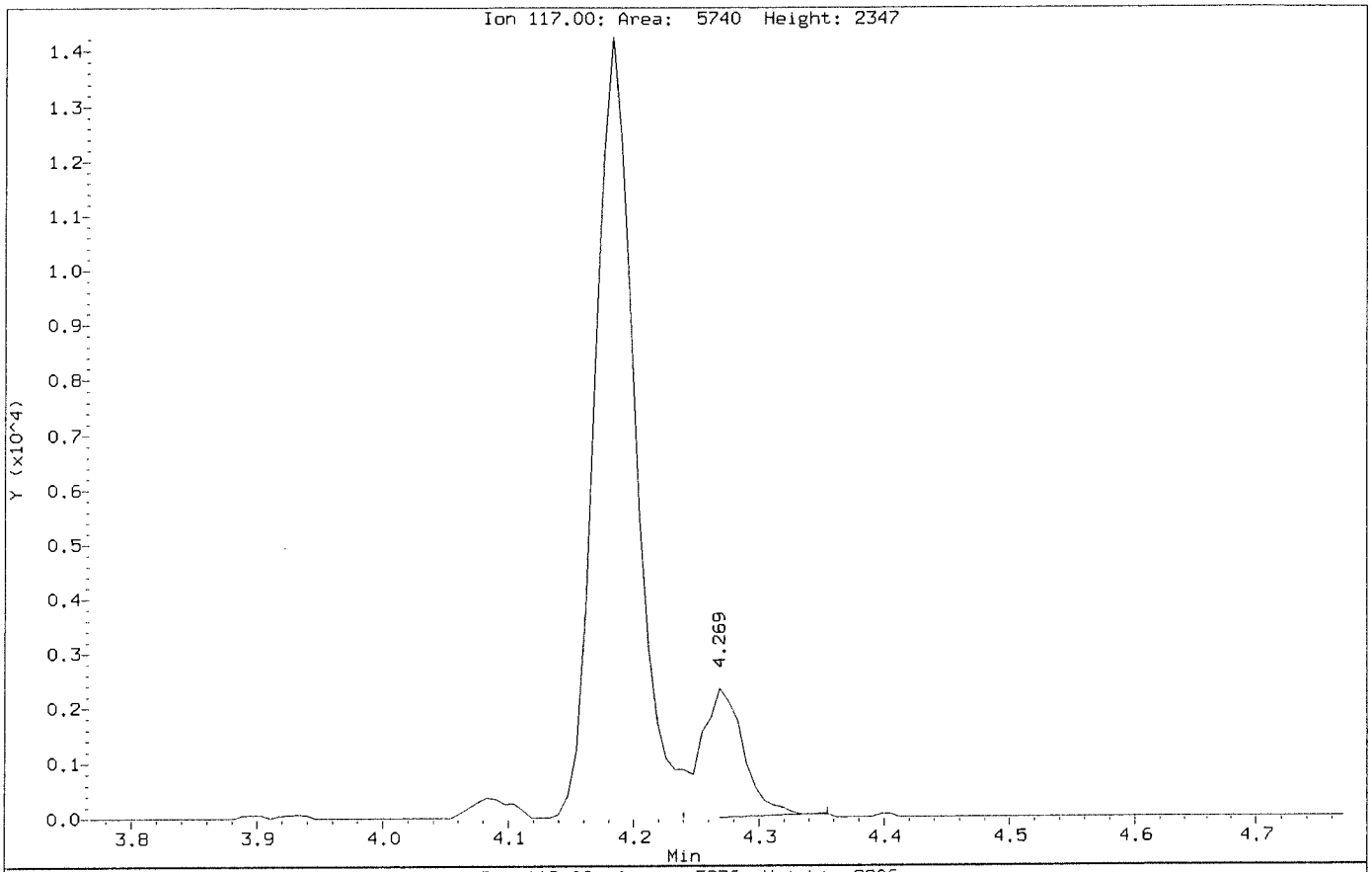
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

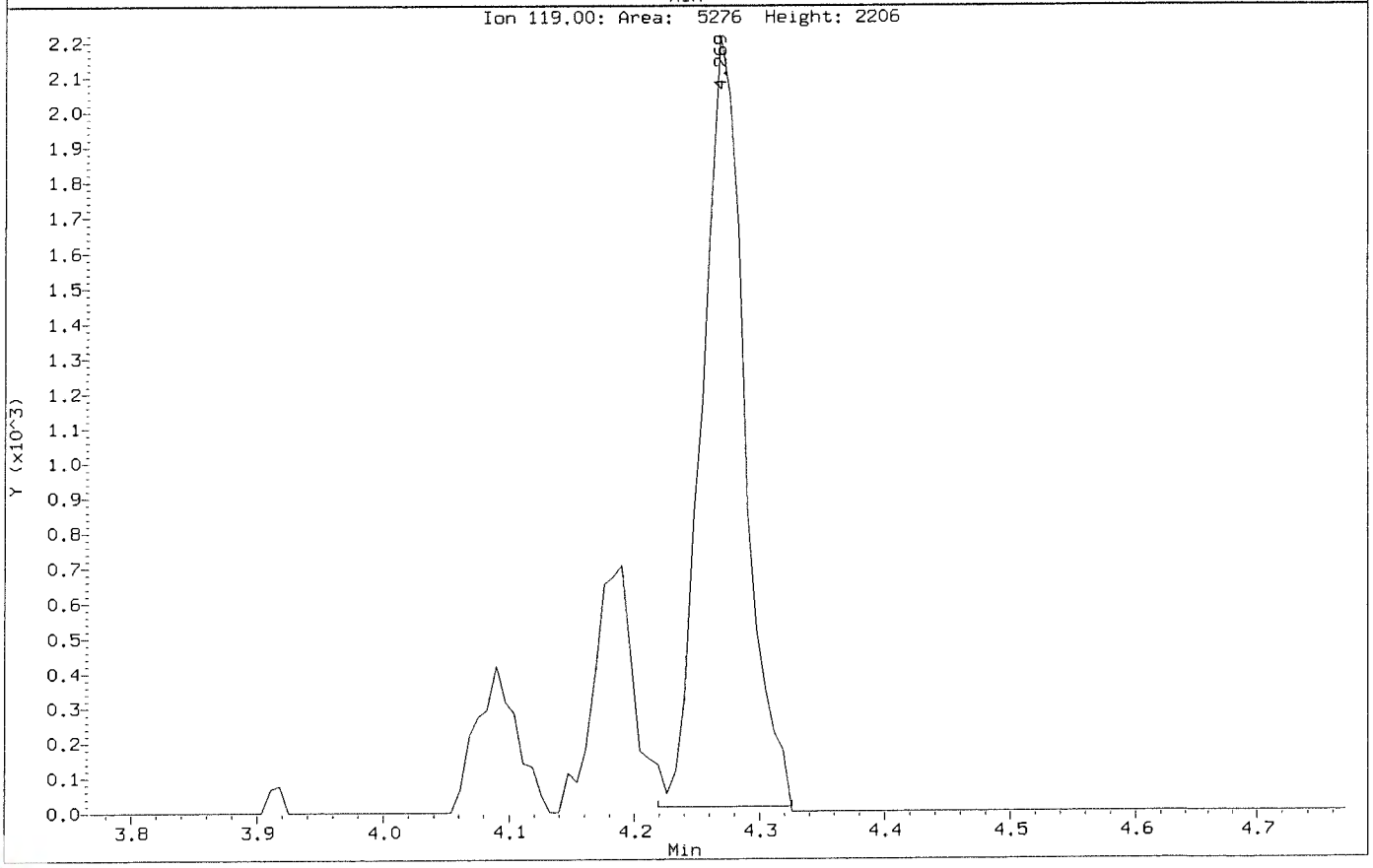




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Injection Date: 18-NOV-2019 14:59
Instrument: voa6.i
Client Sample ID: VSTD001

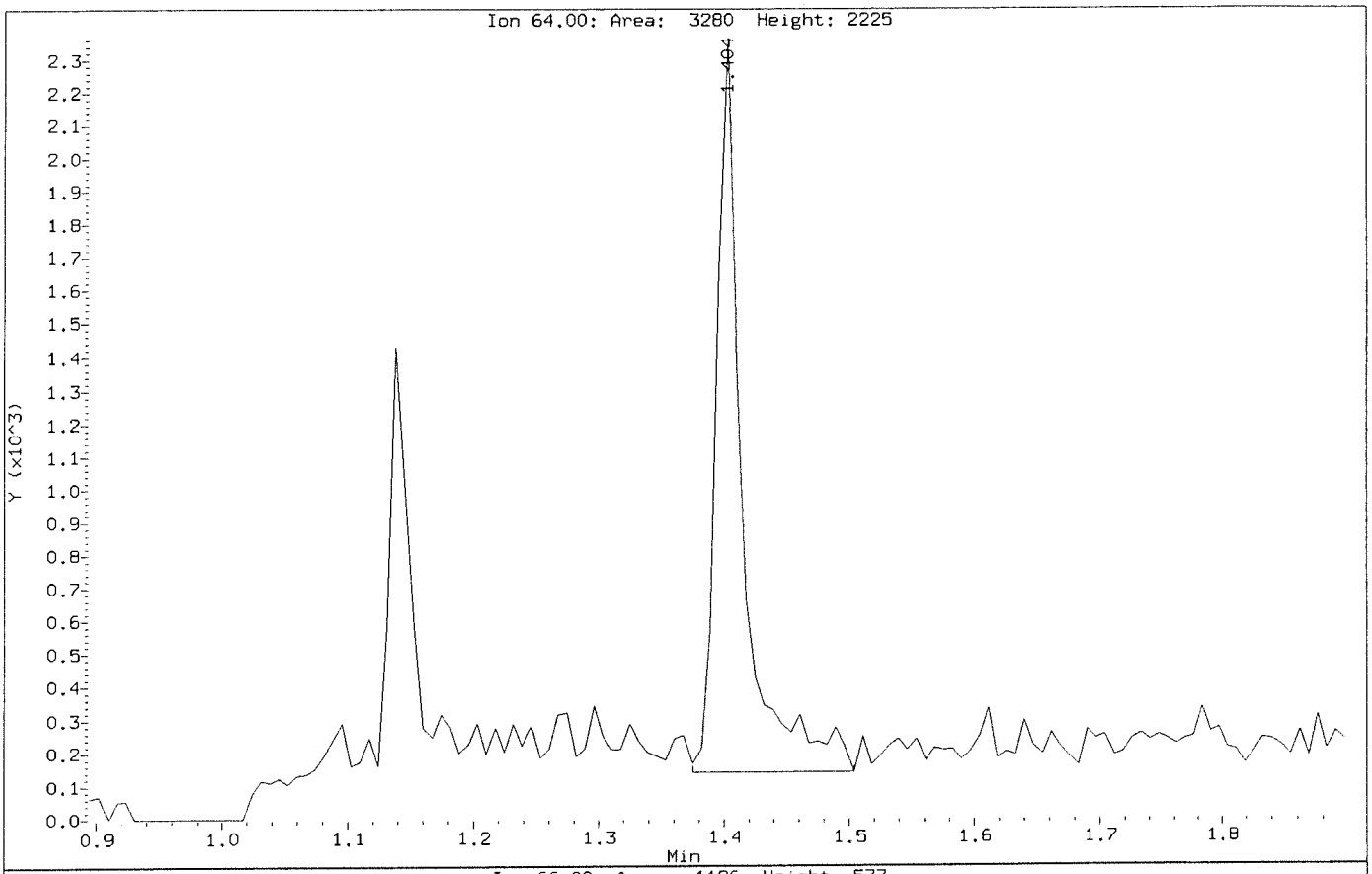
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

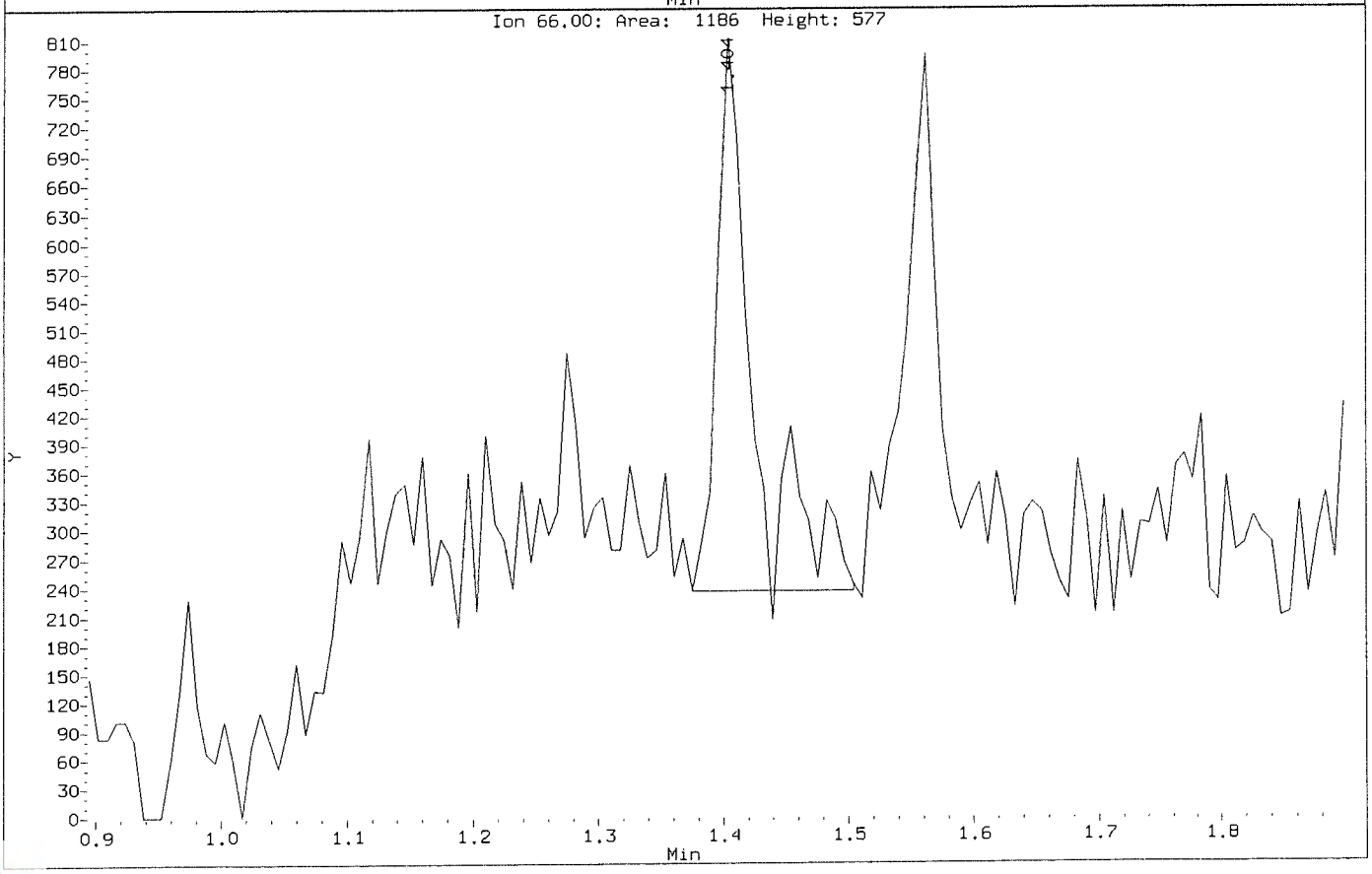




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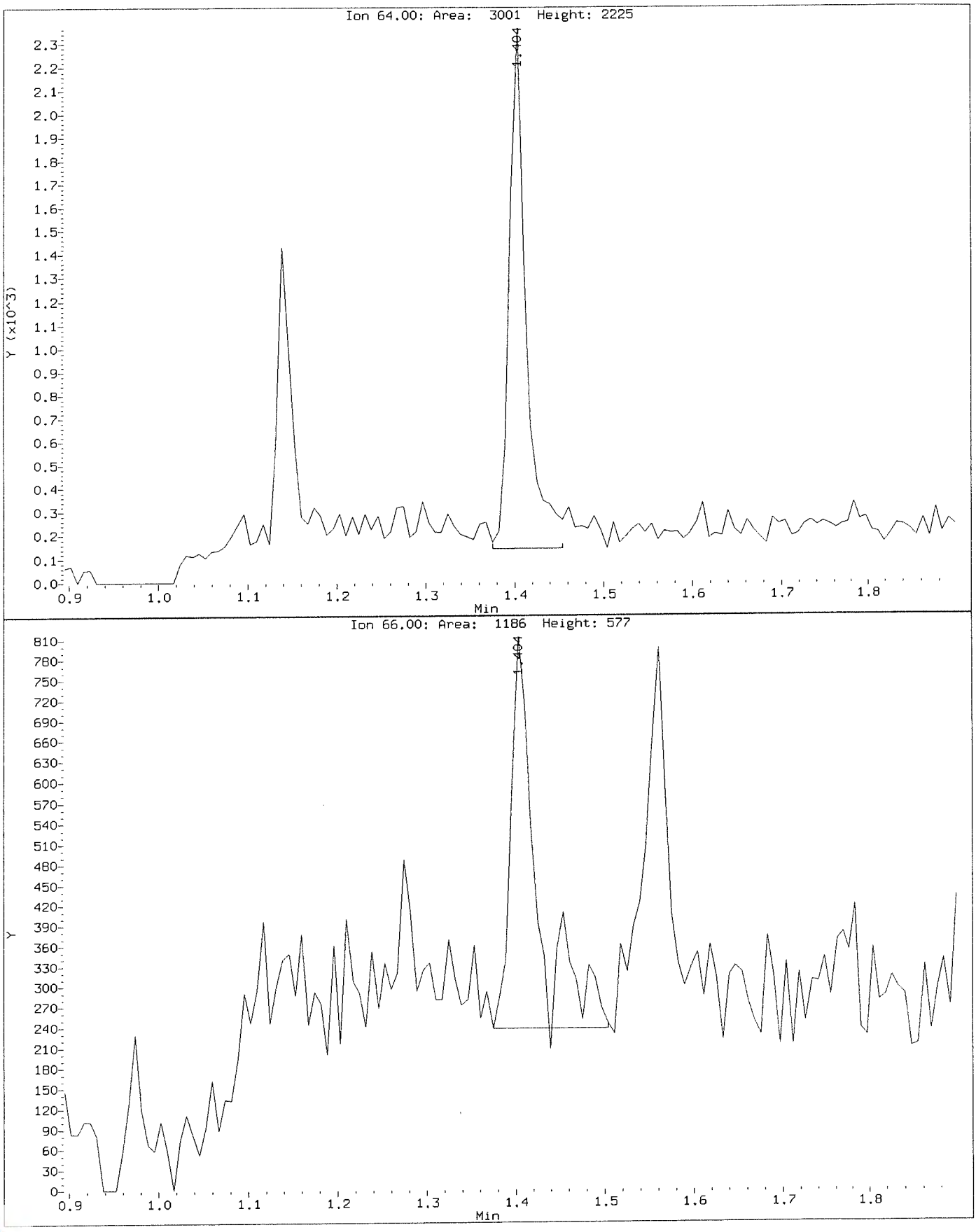
Compound: Chloroethane
CAS Number: 75-00-3





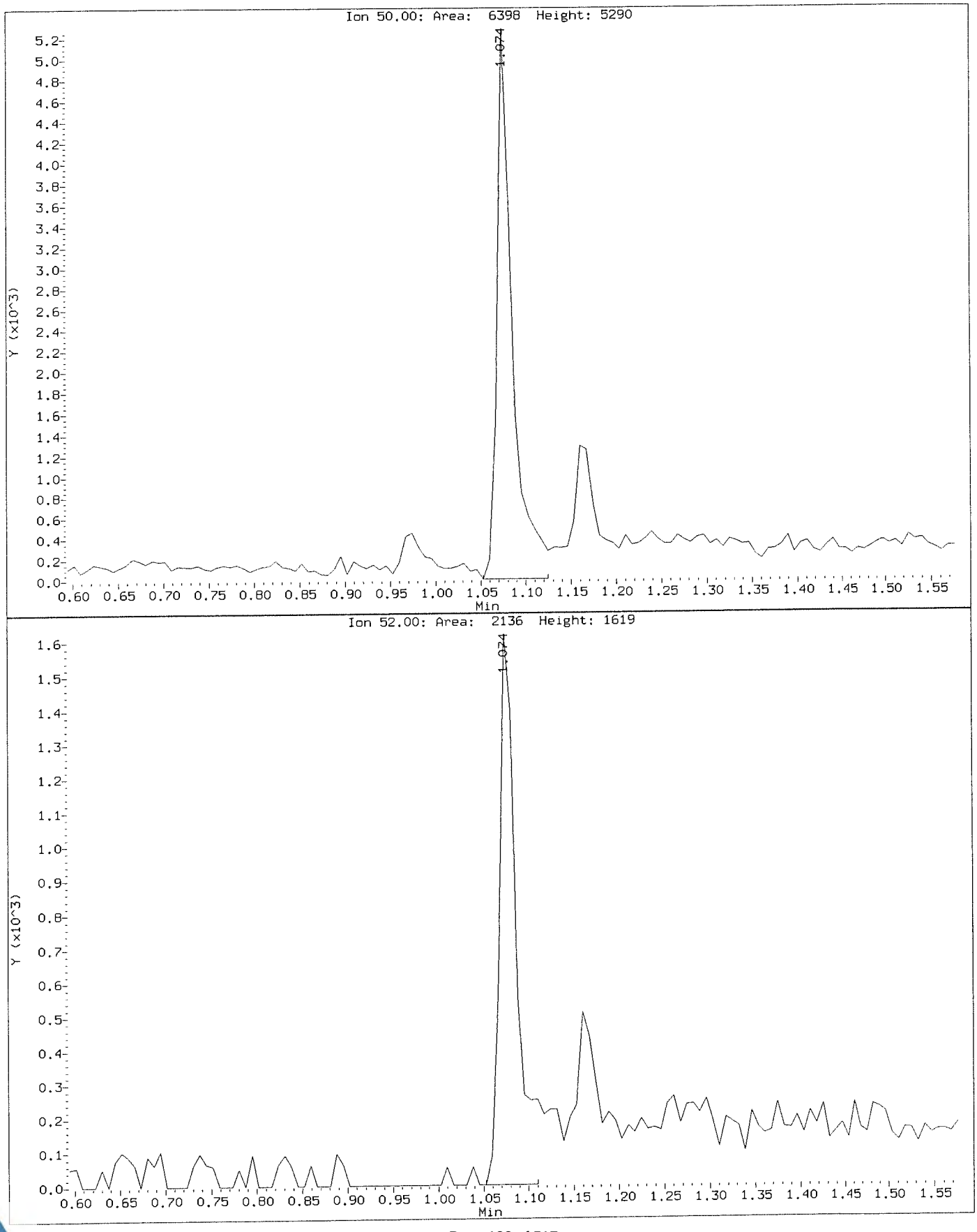
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Injection Date: 18-NOV-2019 14:59
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Chloroethane
CAS Number: 75-00-3



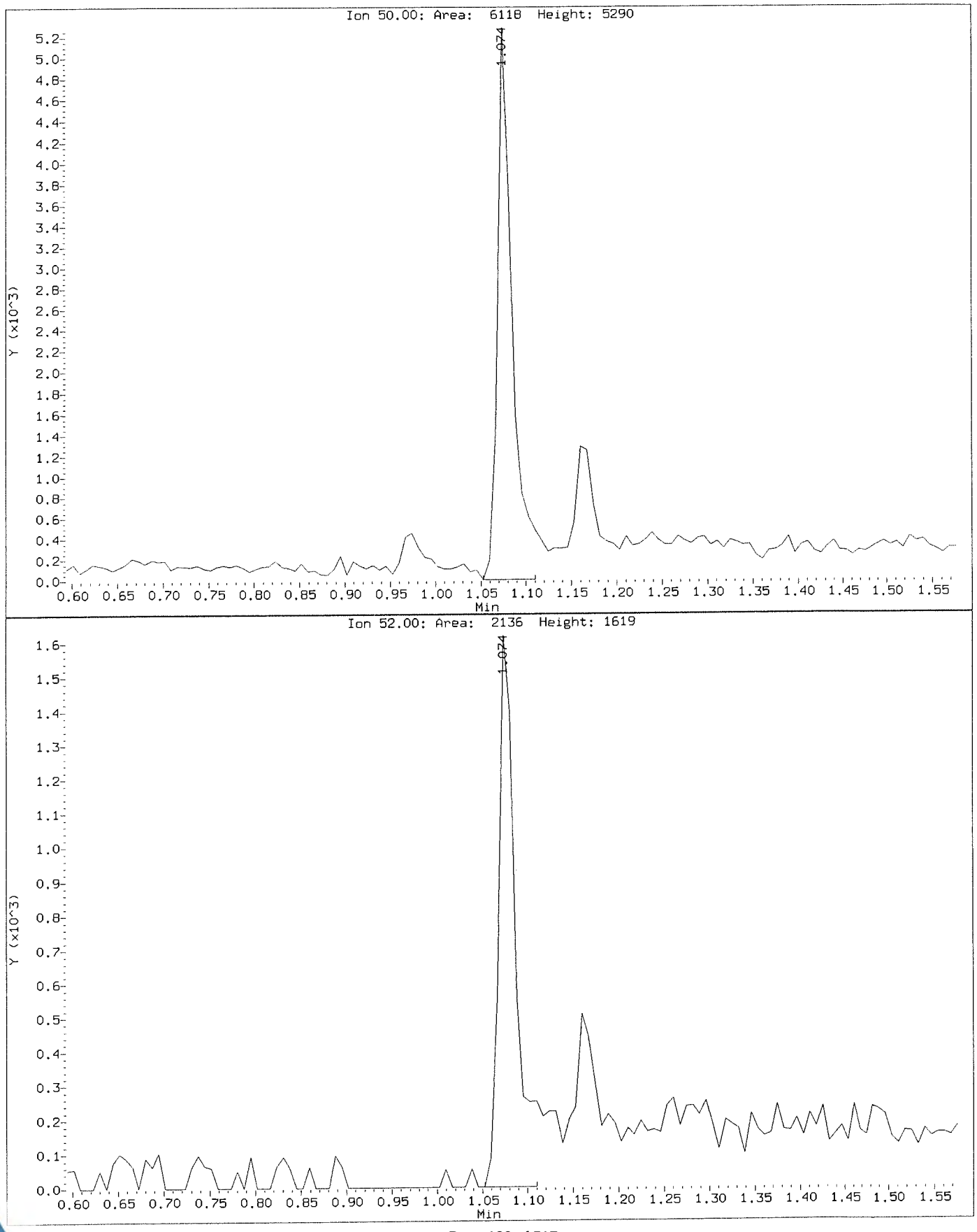
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Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Chloromethane
CAS Number: 74-87-3



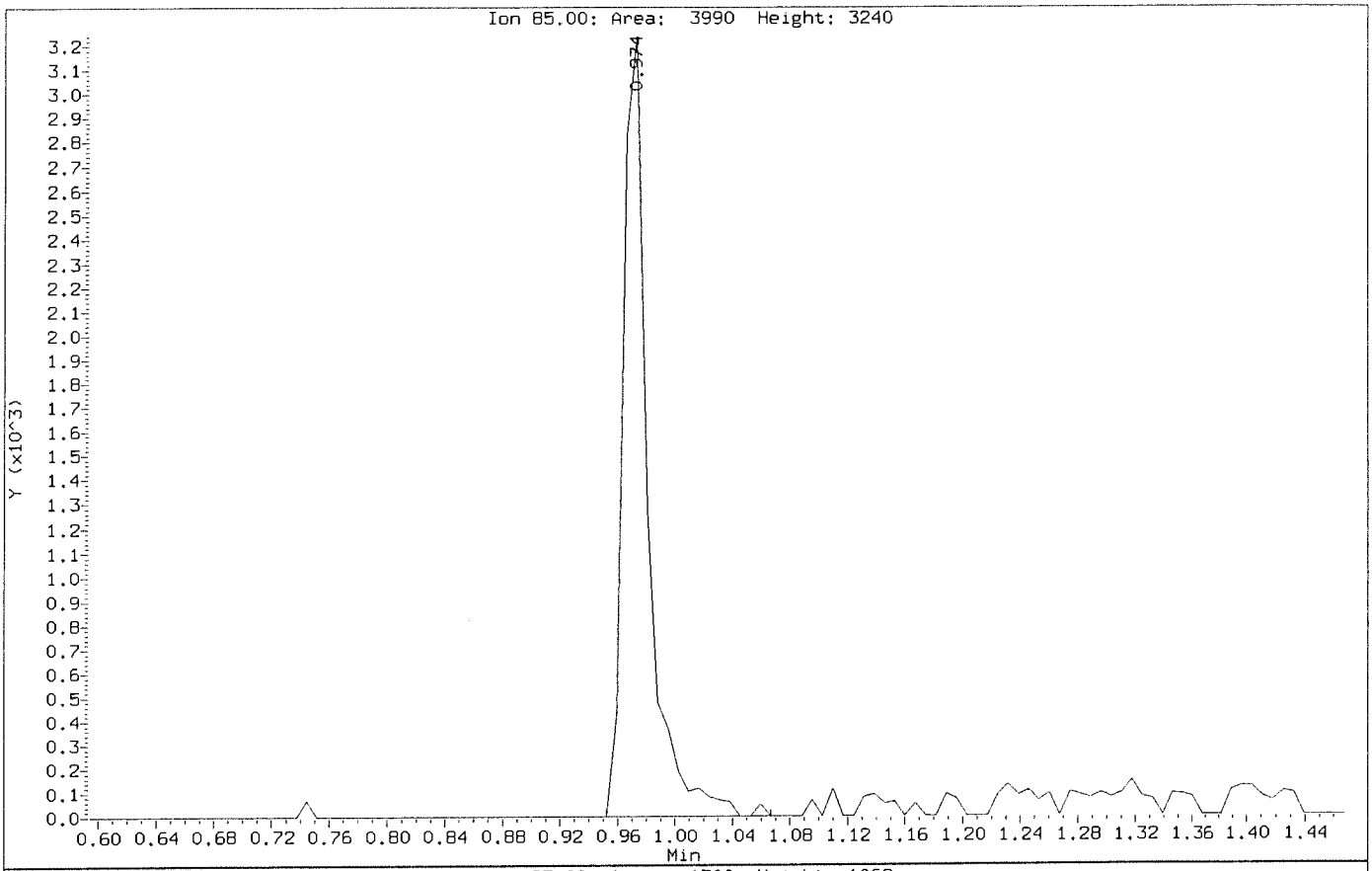
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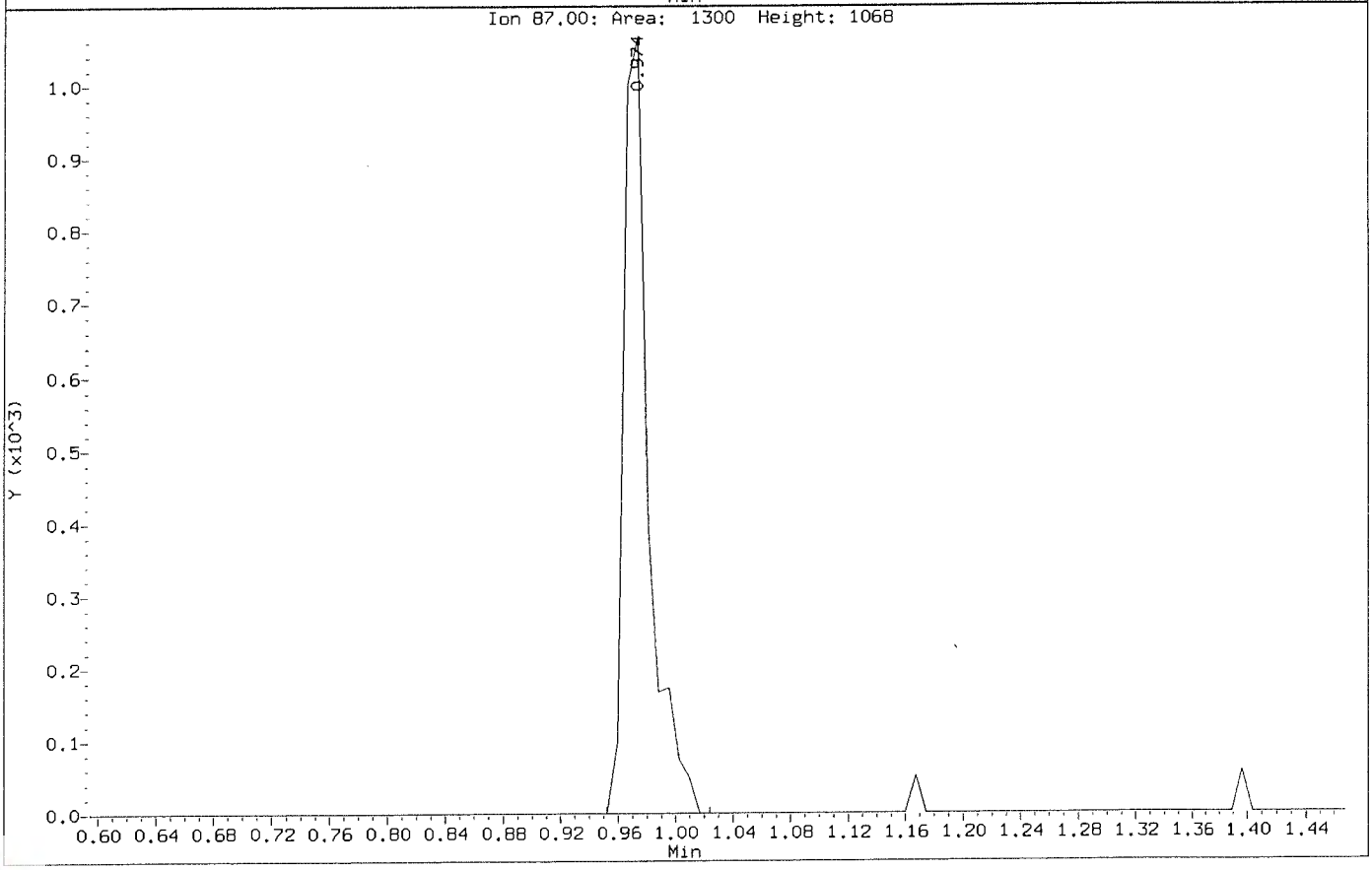
Compound: Chloromethane
CAS Number: 74-87-3



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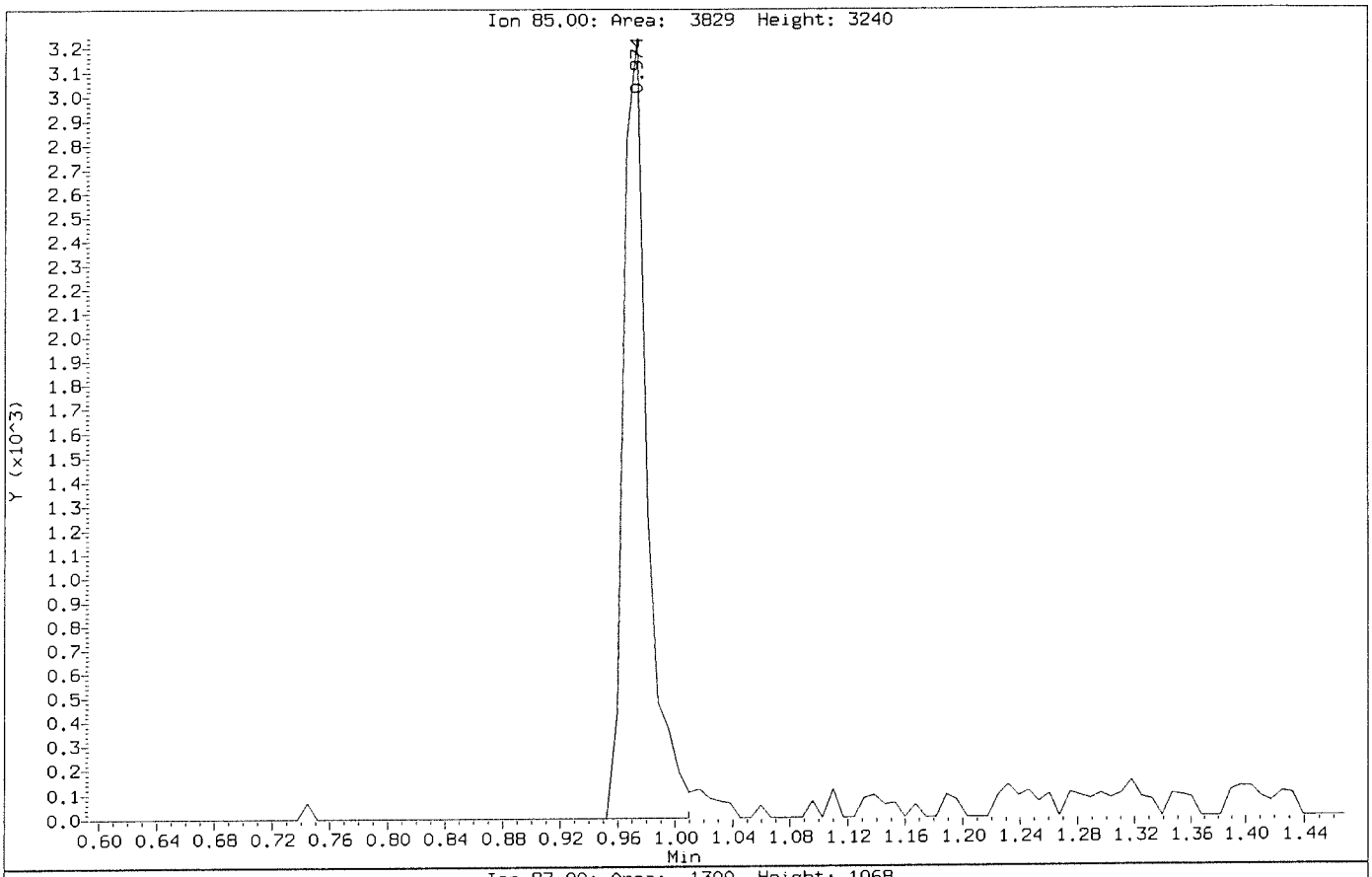
Compound: Dichlorodifluoromethane
CAS Number: 75-71-8

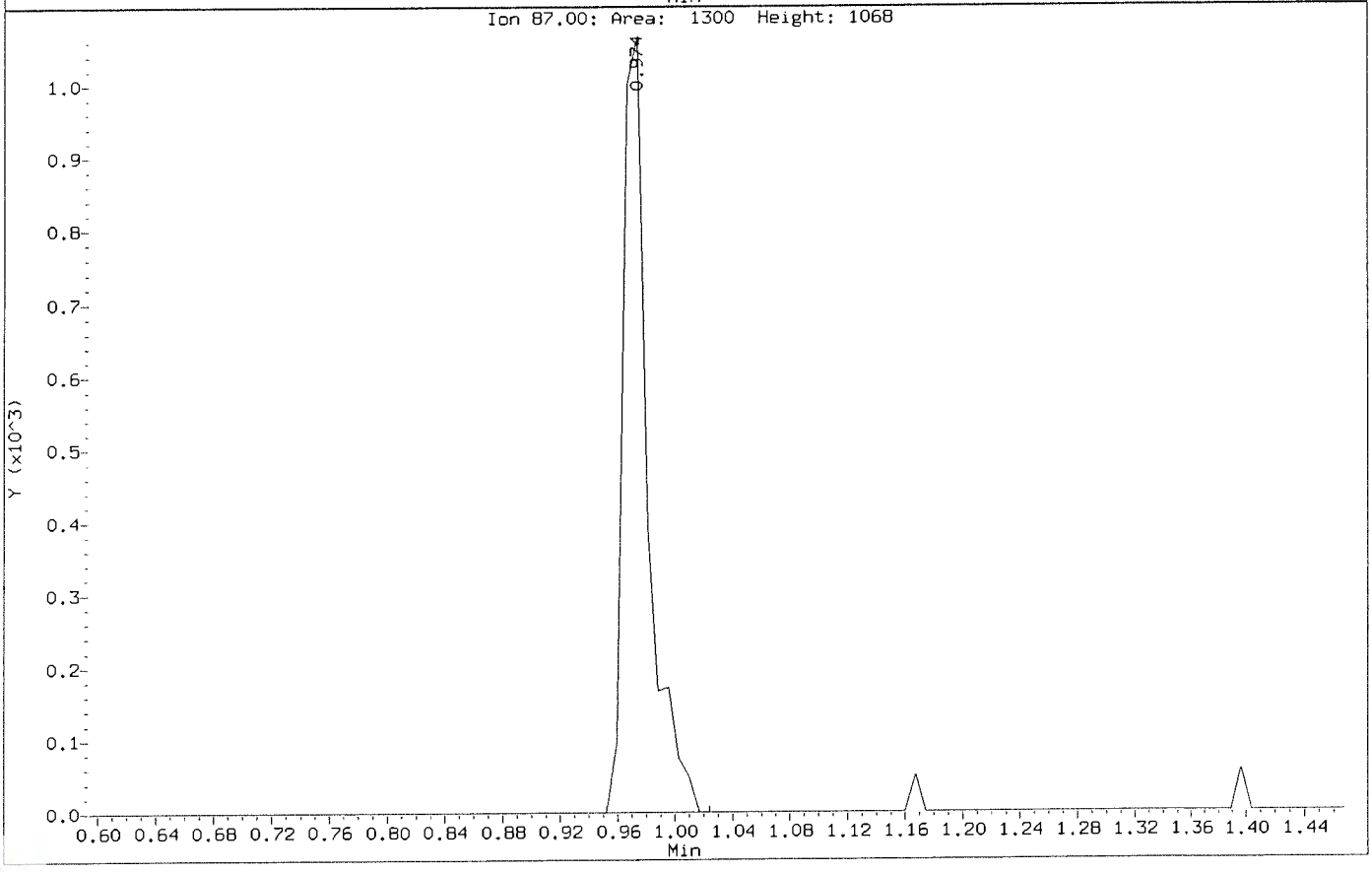




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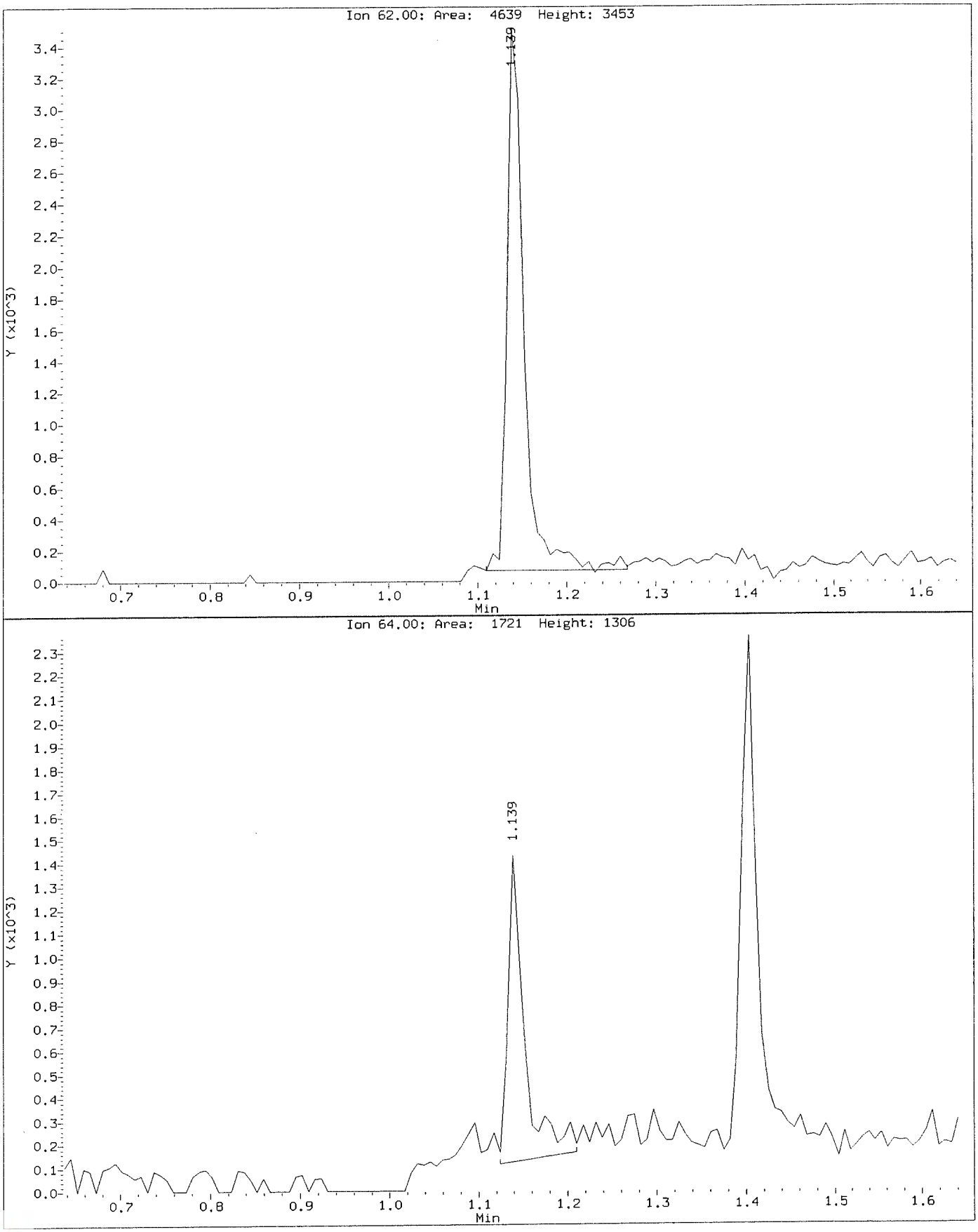
Compound: Dichlorodifluoromethane
CAS Number: 75-71-8





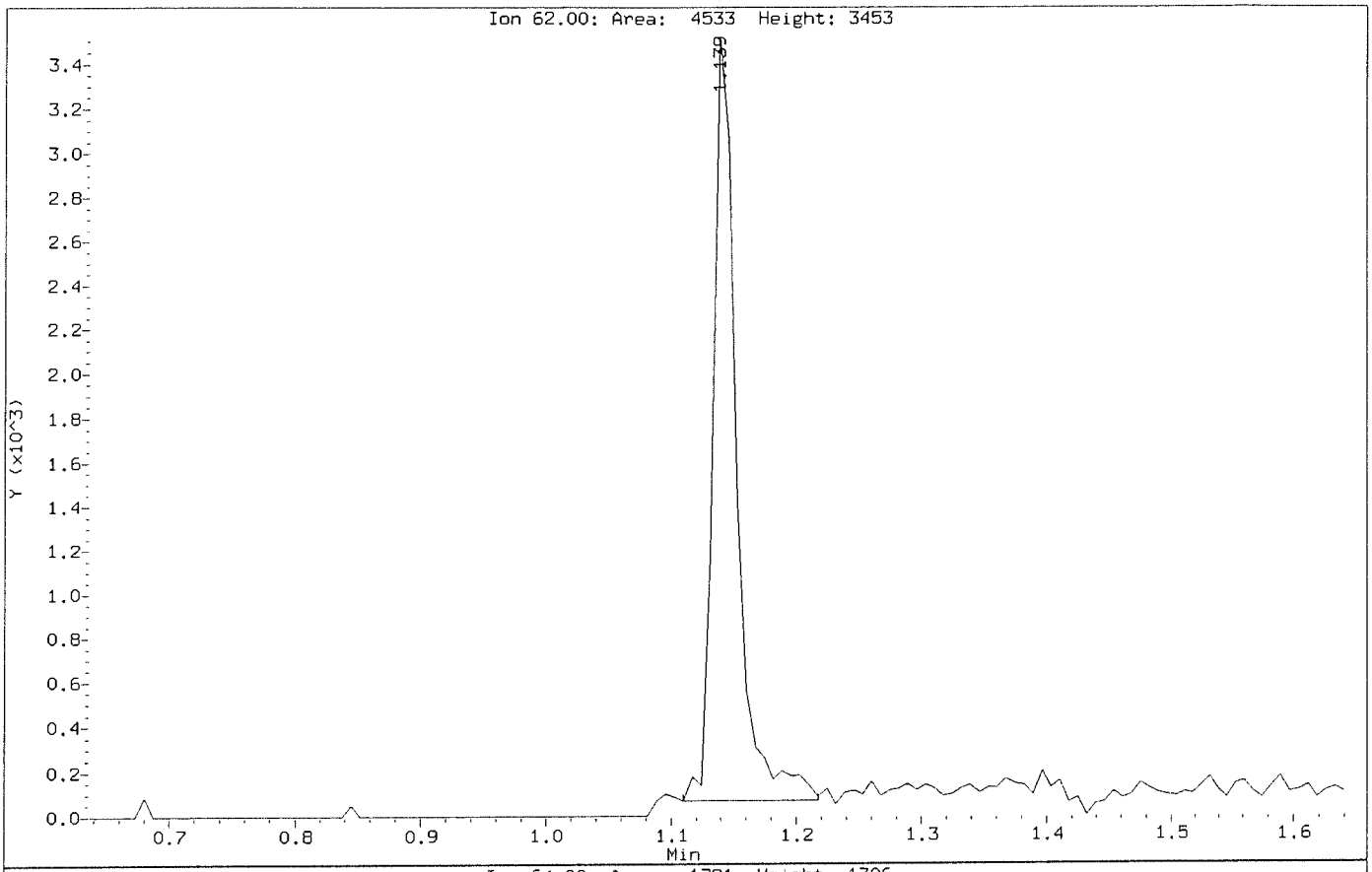
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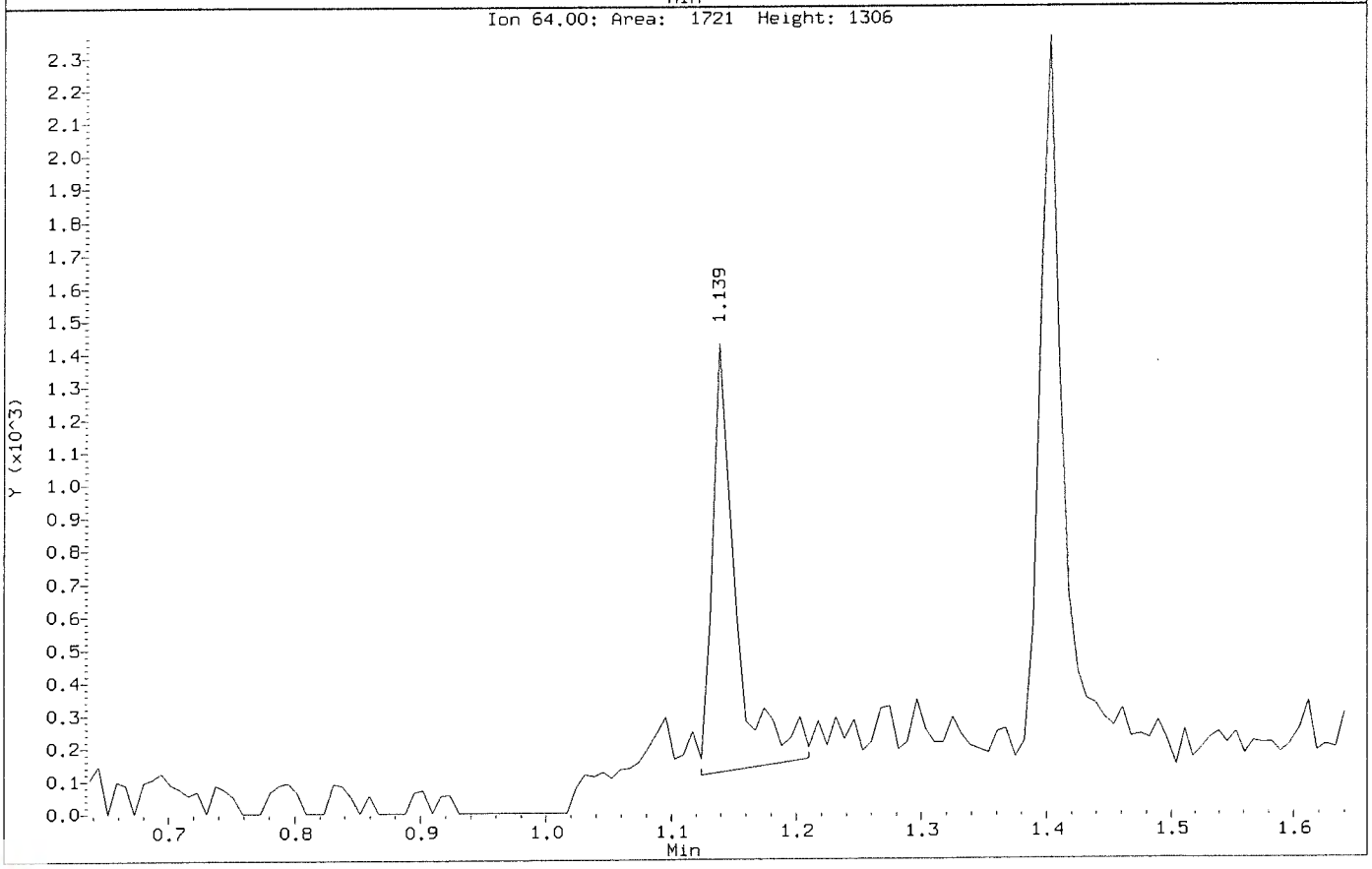
Compound: Vinyl Chloride
CAS Number: 75-01-4



Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111804.D
Injection Date: 18-NOV-2019 14:59
Instrument: voa6.i
Client Sample ID: VSTD001

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





Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111805.D Page 1
Report Date: 22-Dec-2019 16:31

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X191118.b\X111805.D
Lab Smp Id: VSTD002 Client Smp ID: VSTD002
Inj Date : 18-NOV-2019 15:23
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\X191118.b\8260W.m
Meth Date : 22-Dec-2019 16:31 voa6.i Quant Type: ISTD
Cal Date : 18-NOV-2019 15:23 Cal File: X111805.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14

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

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

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	415277	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	574320	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	519547	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	278615	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	8127	2.00000	2.50(a)
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	8034	2.00000	2.76(a)
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	28201	2.00000	2.06(a)
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	10468	2.00000	2.56(a)
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	7788	2.00000	2.06(a)
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	12006	2.00000	2.14(a)
68 1,1,2,2-Tetrachloroethane	83	8.838	8.845	(0.914)	8194	2.00000	2.09(a)
53 1,1,2-Trichloroethane	83	6.840	6.847	(0.892)	5924	2.00000	2.18(a)
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	12973	2.00000	2.14(a)
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	7795	2.00000	2.21(a)
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	10135	2.00000	2.18(a)
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	2753	2.00000	1.85(a)
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	7810	2.00000	2.35(aM)
90 1,2,4-Trichlorobenzene	180	11.345	11.338	(1.173)	5184	2.00000	2.20(a)
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	27218	2.00000	2.05(a)
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.102)	859	2.00000	1.65(a)
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	7900	2.00000	2.16(a)
88 1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	15931	2.00000	2.15(a)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	9378	2.00000	2.05(a)

Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111805.D Page 2
Report Date: 22-Dec-2019 16:31

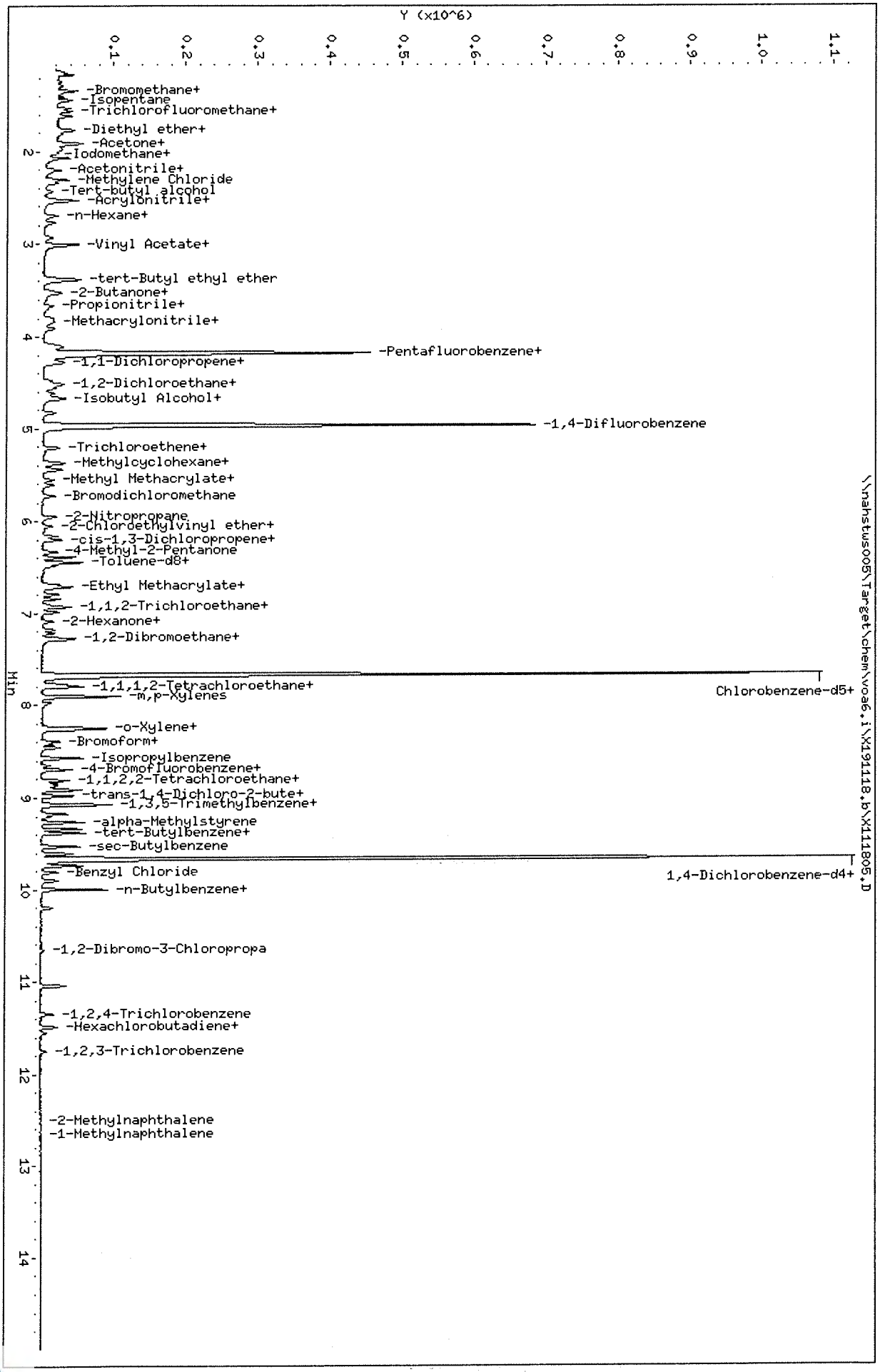
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	7169	2.00000	2.08(aM)
75 1,3,5-Trimethylbenzene	105	9.067	9.074	(0.938)	26432	2.00000	2.08(a)
83 1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	17183	2.00000	2.15(a)
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	11850	2.00000	2.14(a)
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	17620	2.00000	2.17(a)
26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	11201	2.00000	2.04(a)
24 2-Butanone	43	3.588	3.580	(0.858)	5067	4.00000	3.97(a)
76 2-Chlorotoluene	91	8.974	8.981	(0.928)	21210	2.00000	2.11(a)
52 2-Hexanone	43	7.090	7.090	(0.924)	8468	4.00000	3.96(a)
77 4-Chlorotoluene	91	9.074	9.074	(0.939)	24759	2.00000	2.03(a)
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	28289	2.00000	2.07(a)
45 4-Methyl-2-Pentanone	43	6.324	6.331	(0.824)	13007	4.00000	4.27(a)
10 Acetone	43	1.976	1.976	(0.473)	7954	4.00000	3.82(a)
37 Benzene	78	4.519	4.512	(0.909)	28031	2.00000	2.13(a)
74 Bromobenzene	156	8.809	8.809	(0.911)	10482	2.00000	2.16(a)
29 Bromochloromethane	128	3.795	3.795	(0.908)	5128	2.00000	2.27(a)
39 Bromodichloromethane	83	5.729	5.729	(1.153)	9742	2.00000	2.04(a)
66 Bromoform	173	8.415	8.415	(1.097)	5989	2.00000	2.89(a)
6 Bromomethane	94	1.338	1.331	(0.320)	12041	2.00000	0.69(a)
19 Carbon Disulfide	76	2.069	2.069	(0.495)	40384	4.00000	4.21(a)
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	11097	2.00000	2.18(aM)
59 Chlorobenzene	112	7.699	7.699	(1.004)	21369	2.00000	2.10(a)
7 Chloroethane	64	1.403	1.396	(0.336)	5731	2.00000	2.19(a)
28 Chloroform	83	3.910	3.910	(0.935)	14792	2.00000	2.19(a)
3 Chloromethane	50	1.073	1.073	(0.257)	10461	2.00000	2.49(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	8197	2.00000	2.08(a)
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	11415	2.00000	2.03(a)
55 Dibromochloromethane	129	7.176	7.183	(0.936)	8154	2.00000	2.06(a)
44 Dibromomethane	93	5.557	5.557	(1.118)	5355	2.00000	2.20(a)
2 Dichlorodifluoromethane	85	0.973	0.966	(0.233)	7335	2.00000	2.78(a)
61 Ethylbenzene	106	7.799	7.807	(1.017)	10700	2.00000	2.04(a)
91 Hexachlorobutadiene	225	11.488	11.488	(1.188)	4522	2.00000	1.82(a)
67 Isopropylbenzene	105	8.566	8.566	(1.117)	32629	2.00000	2.10(a)
62 m,p-Xylenes	106	7.907	7.907	(1.031)	26786	4.00000	4.23(a)
17 Methylene Chloride	84	2.305	2.305	(0.551)	8025	2.00000	2.13(a)
87 n-Butylbenzene	91	9.998	9.998	(1.034)	22333	2.00000	1.96(a)
73 n-Propylbenzene	91	8.917	8.917	(0.922)	35573	2.00000	2.06(a)
92 Naphthalene	128	11.553	11.546	(1.195)	6733	2.00000	2.23(a)
63 o-Xylene	106	8.244	8.244	(1.075)	13637	2.00000	2.18(a)
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	31860	2.00000	2.12(a)
64 Styrene	104	8.265	8.265	(1.078)	22366	2.00000	2.06(a)
78 tert-Butylbenzene	119	9.339	9.339	(0.966)	22956	2.00000	2.11(a)
56 Tetrachloroethene	164	6.933	6.933	(0.904)	8185	2.00000	2.24(a)
50 Toluene	91	6.453	6.453	(0.841)	31139	2.00000	2.11(a)
20 trans-1,2-Dichloroethene	96	2.535	2.527	(0.606)	7239	2.00000	2.11(a)
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	10523	2.00000	2.06(a)
38 Trichloroethene	130	5.214	5.206	(1.049)	8894	2.00000	2.21(a)
8 Trichlorofluoromethane	101	1.560	1.553	(0.373)	13581	2.00000	2.10(a)
5 Vinyl Chloride	62	1.138	1.138	(0.272)	9073	2.00000	2.14(a)

QC Flag Legend

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

QC Flag Legend

M - Compound response manually integrated.

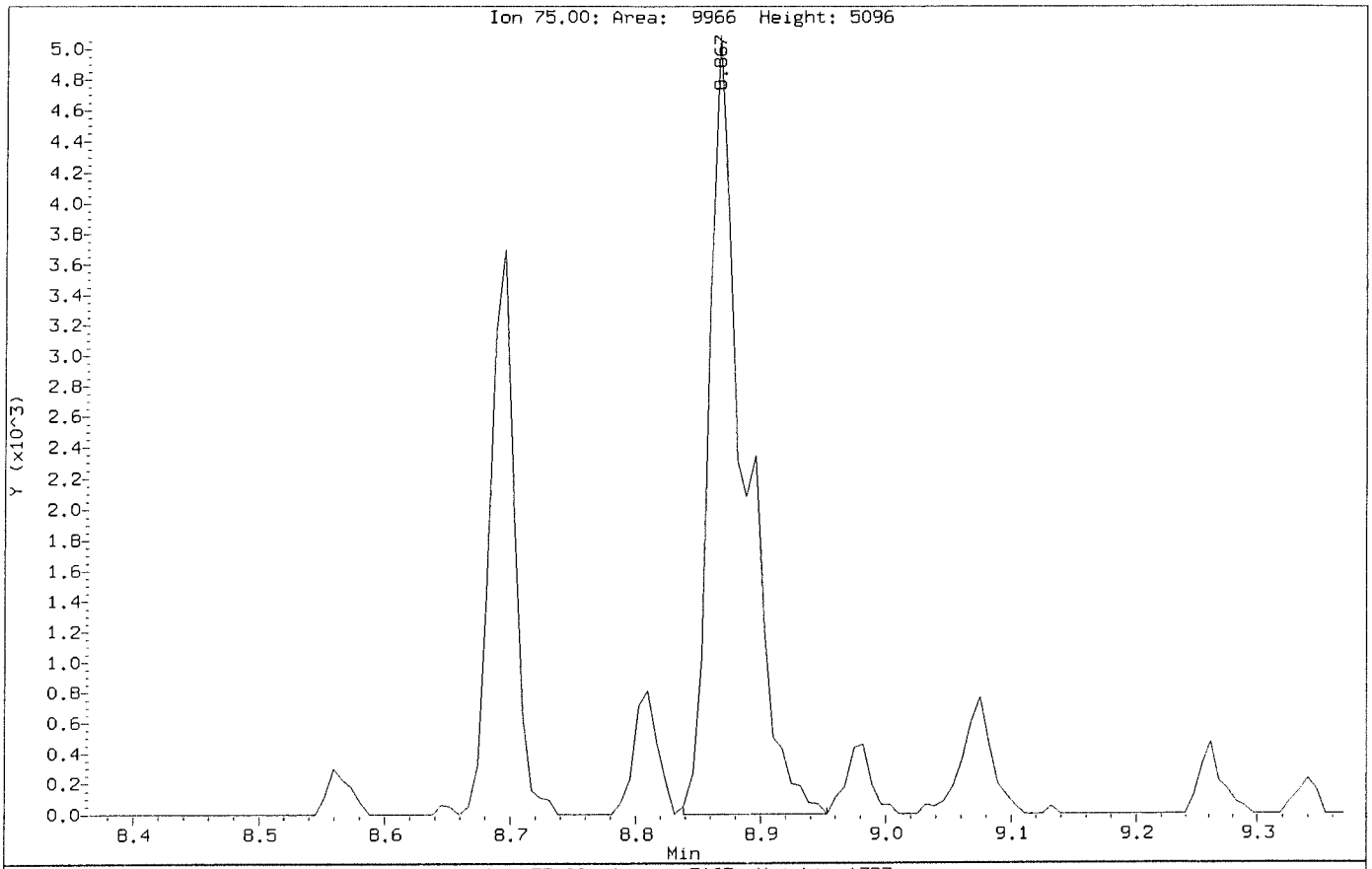


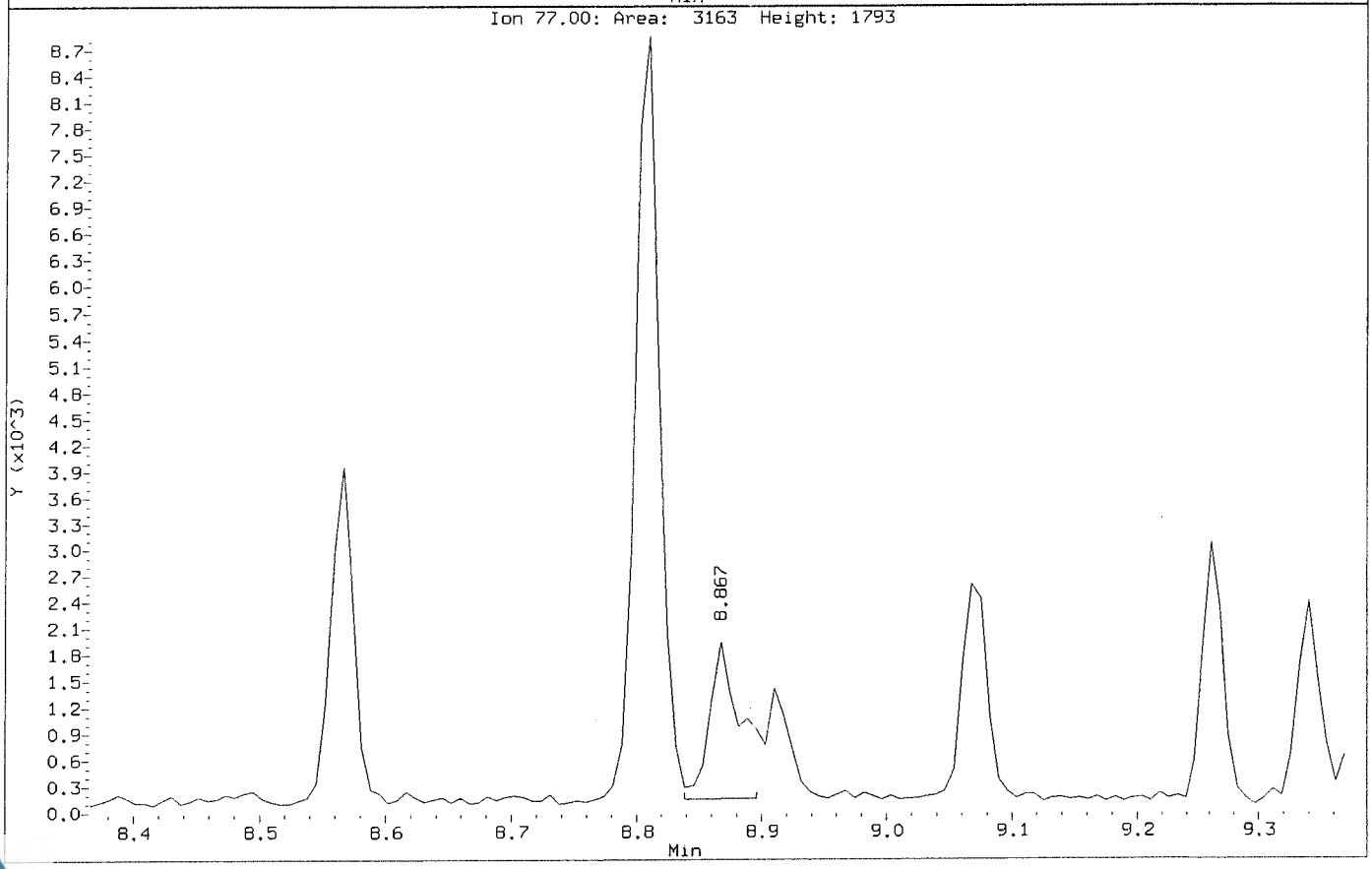
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Client ID: VSTD002
Sample Info: VSTD002;VSTD002;1;4;
Purge Volume: 5.0
Column phase: DB624

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

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Instrument: voa6.i
Client Sample ID: VSTD002

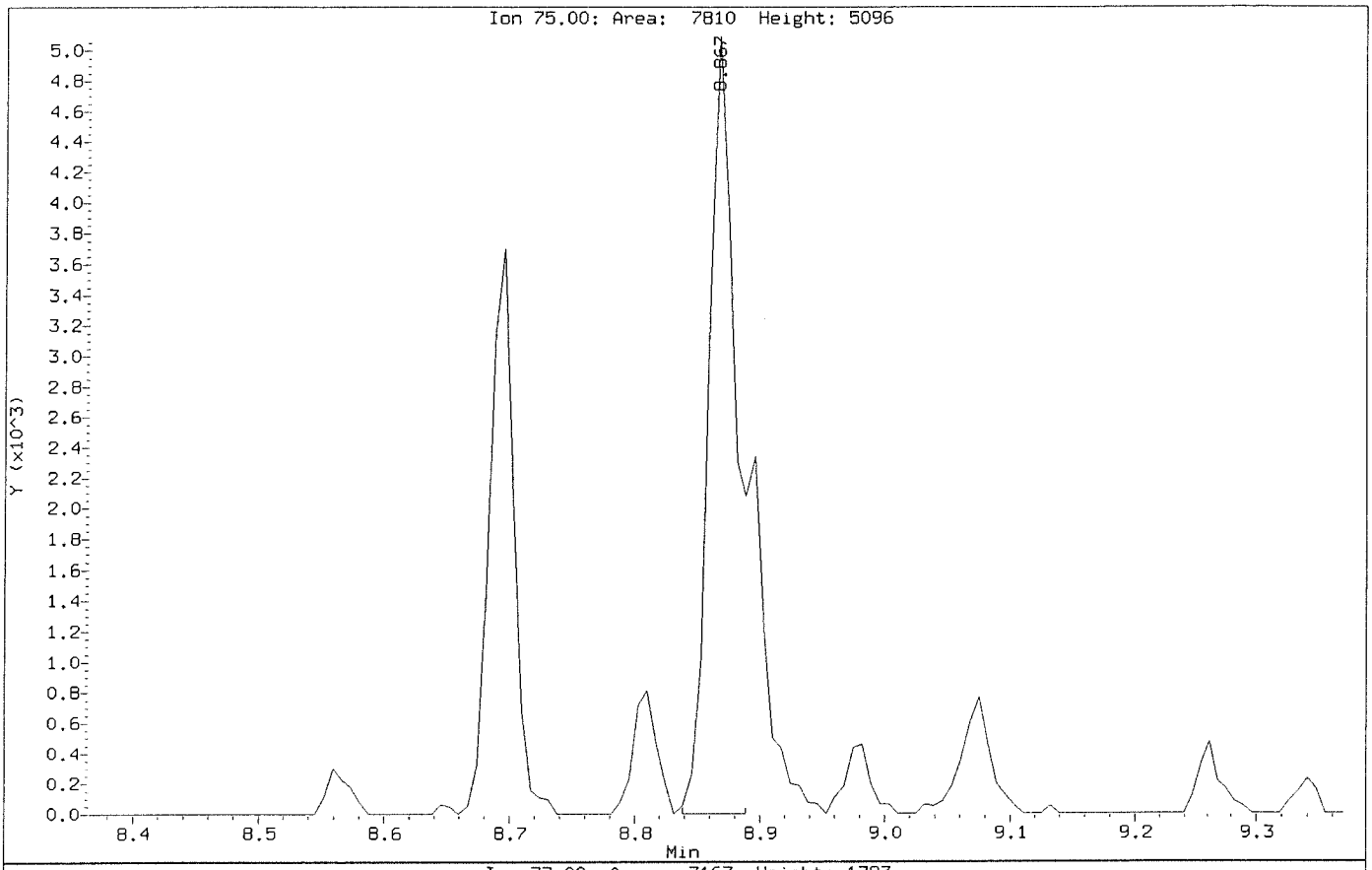
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

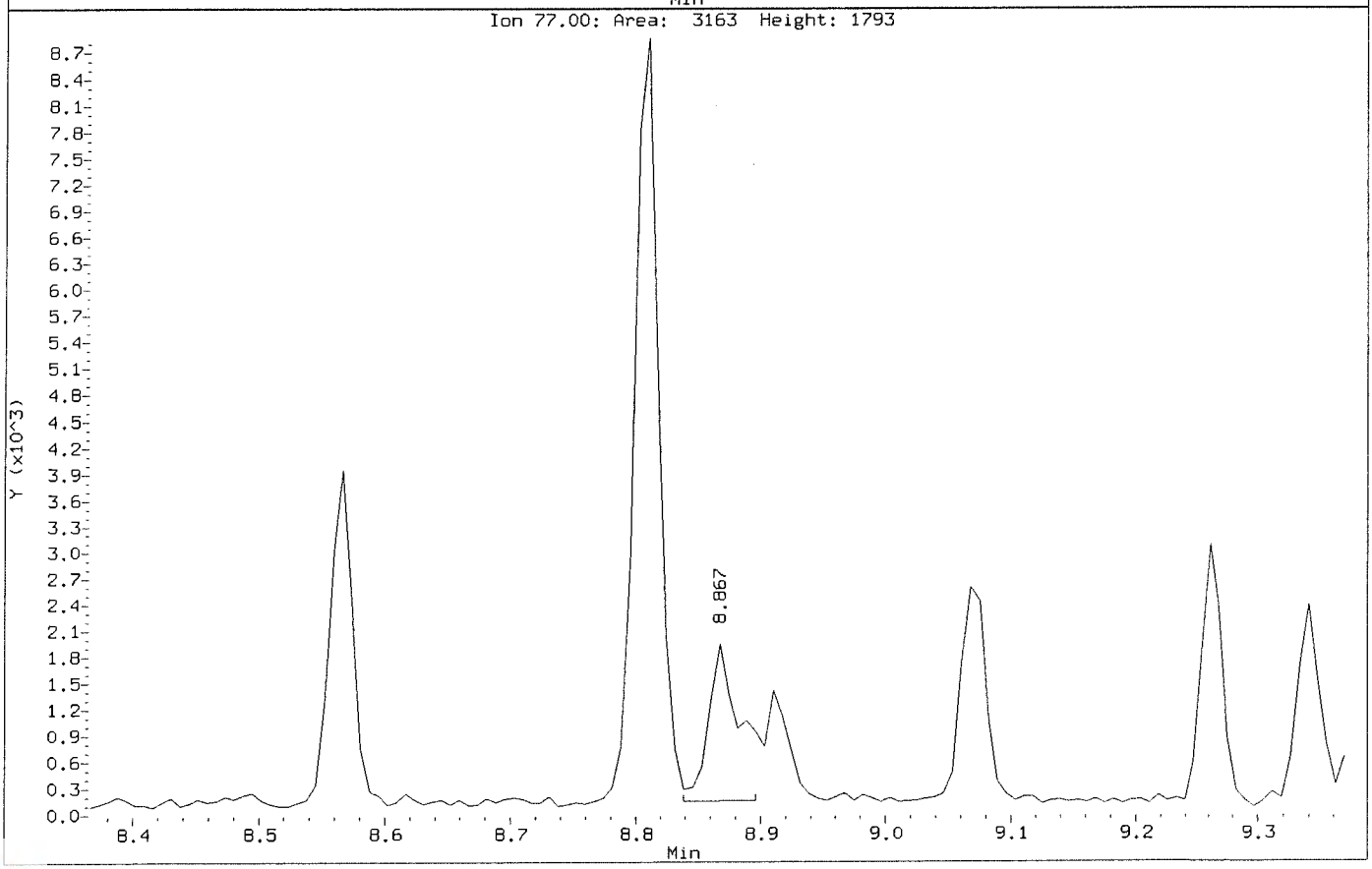




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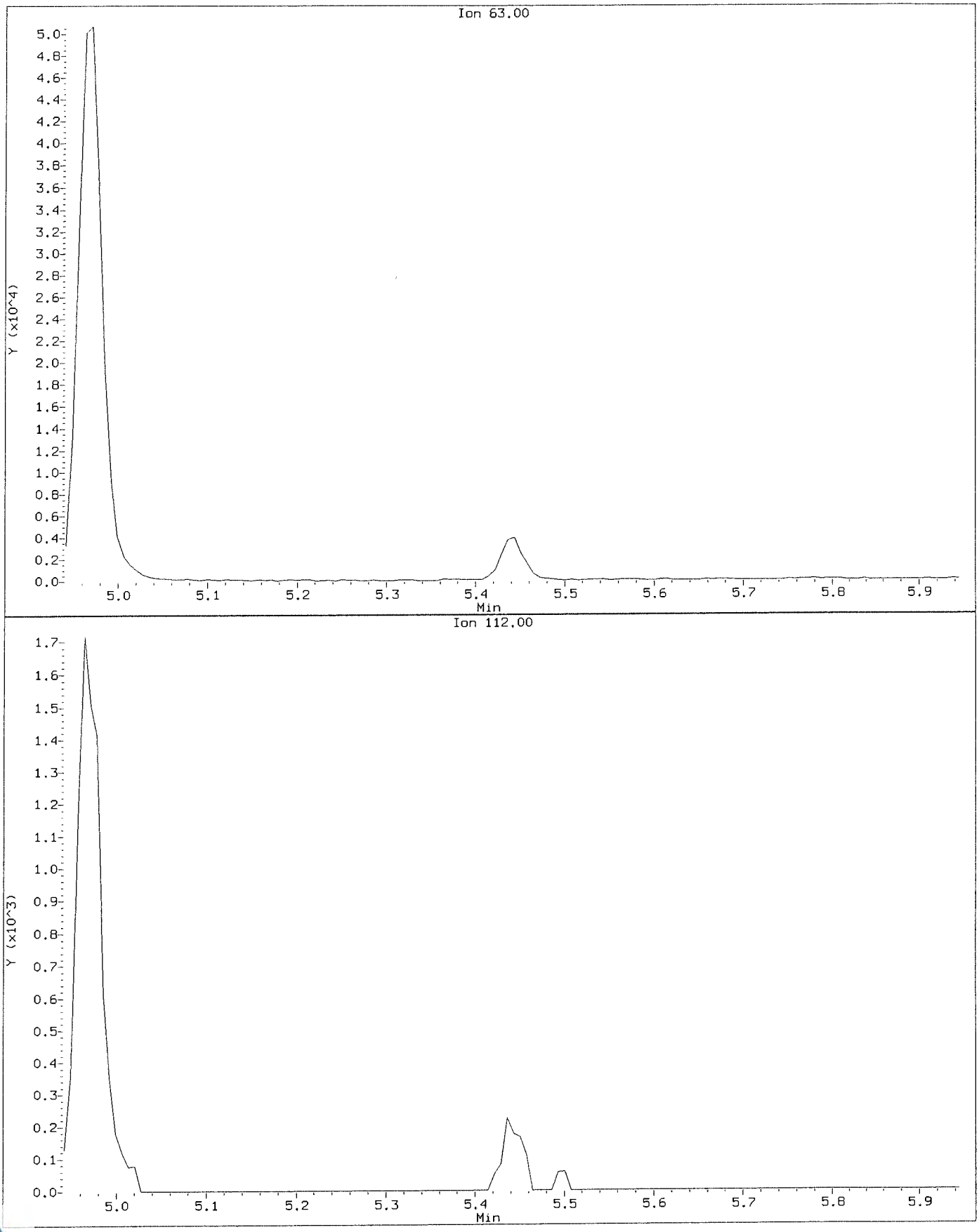
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CAS Number: 96-18-4





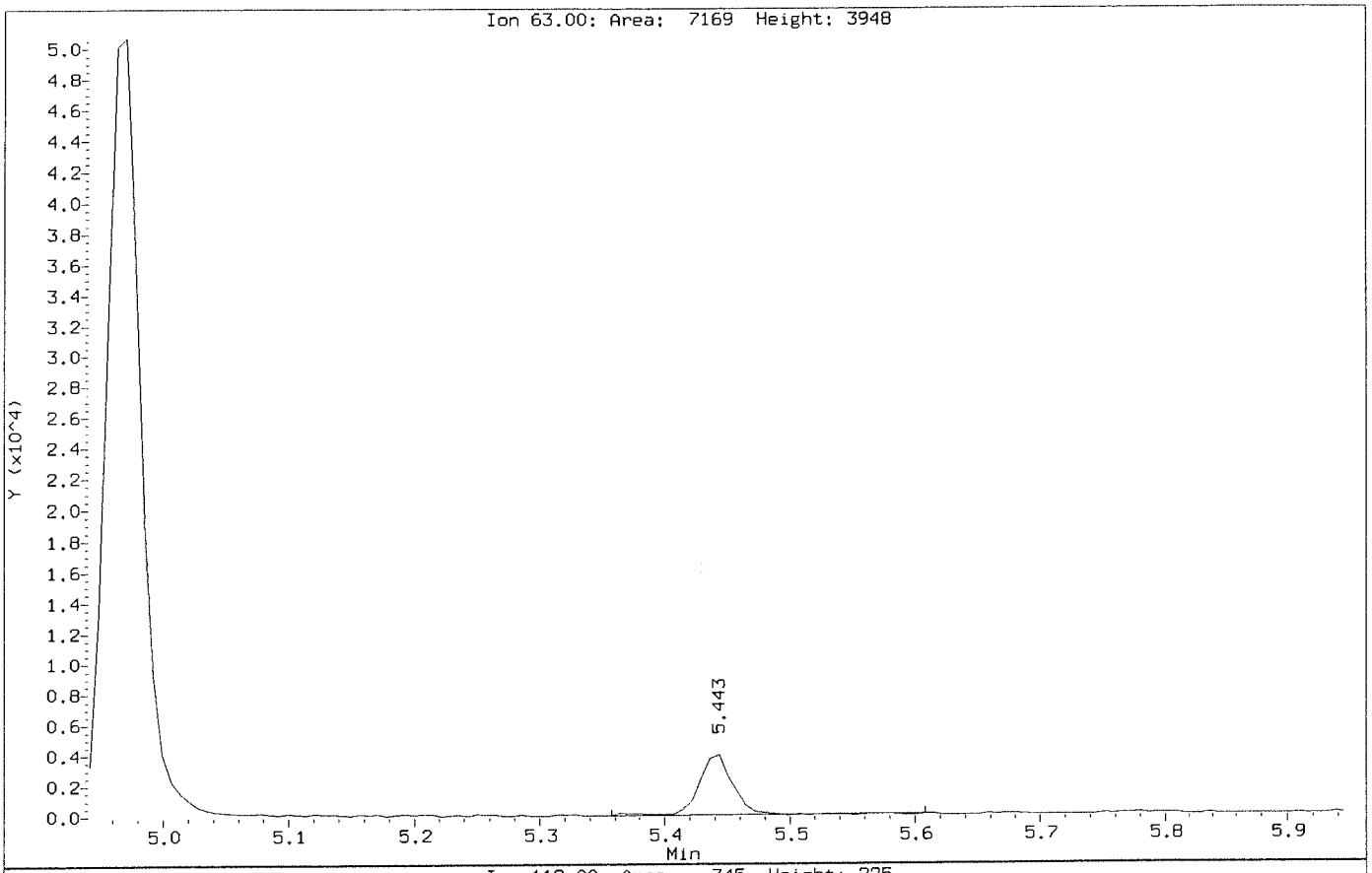
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Client Sample ID: VSTD002

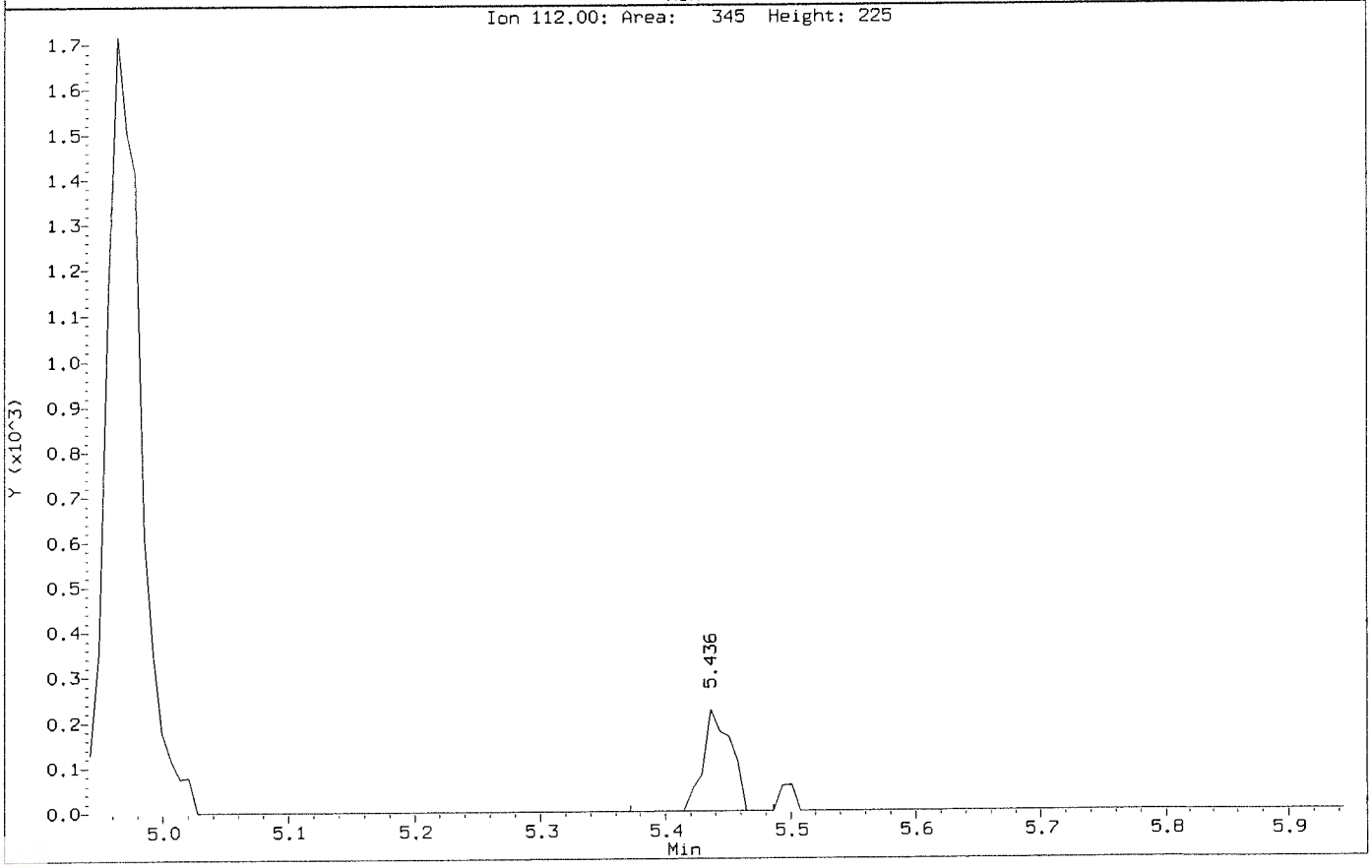
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5



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Instrument: voa6.i
Client Sample ID: VSTD002

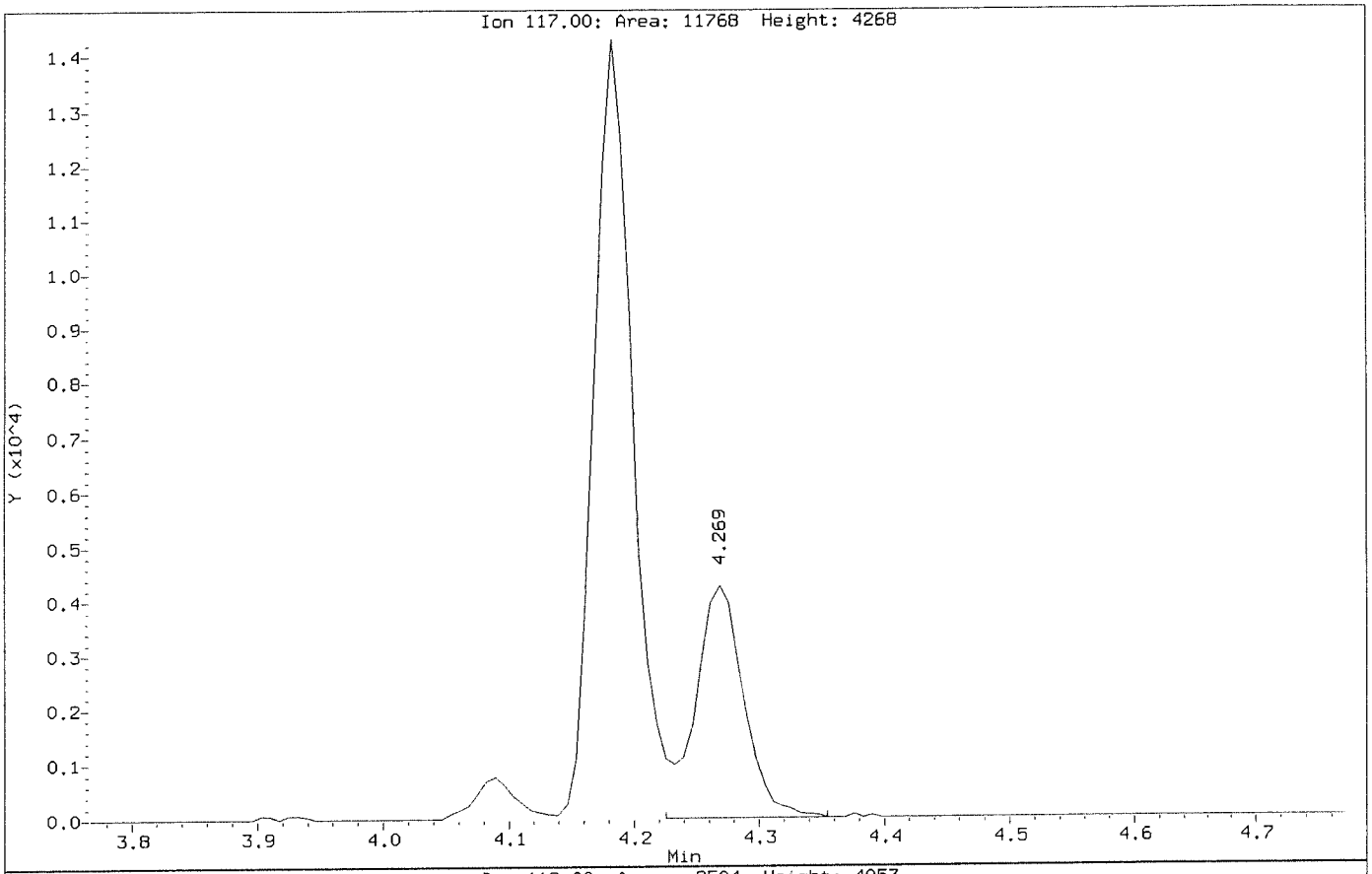
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CAS Number: 78-87-5

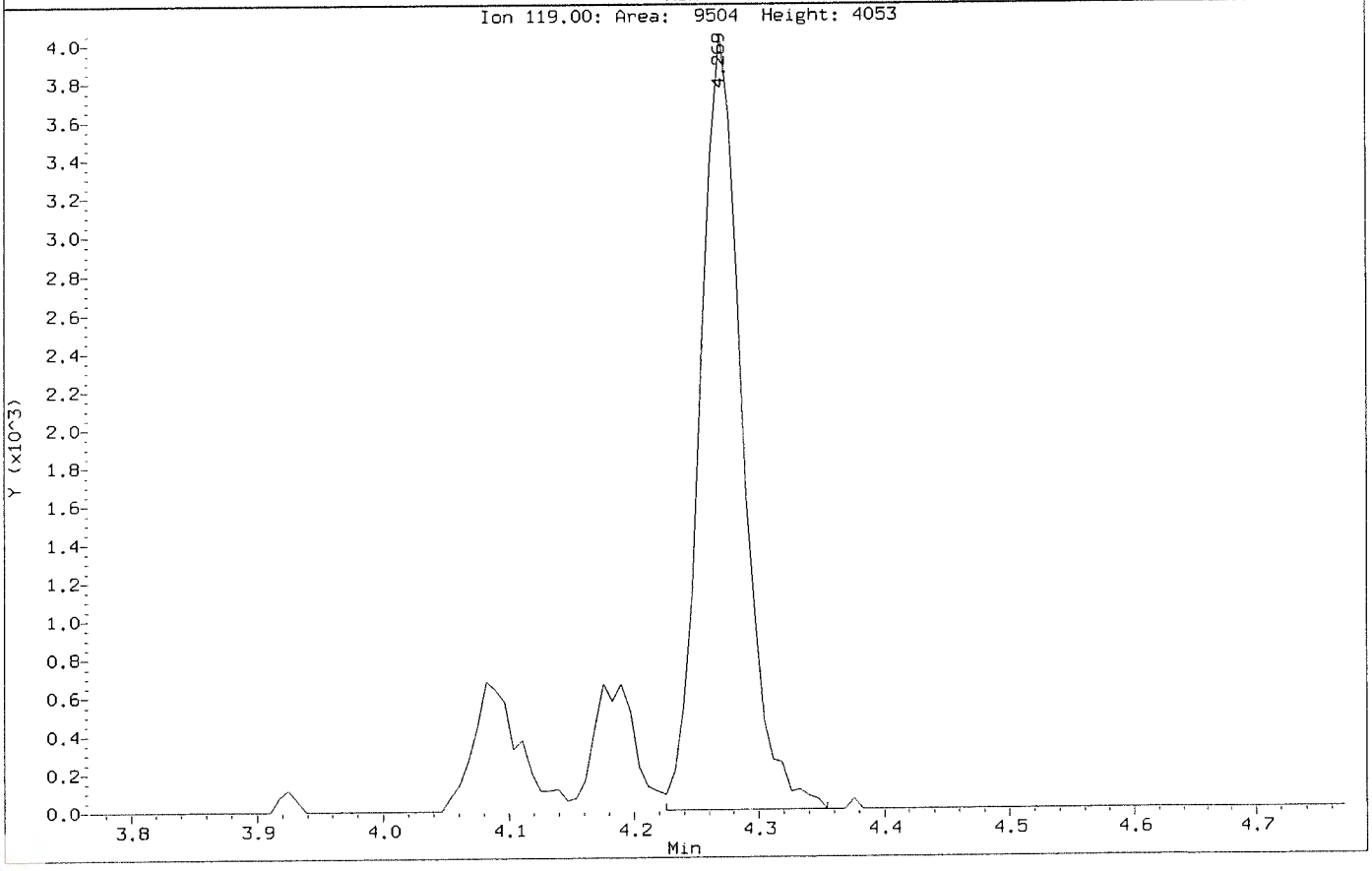




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Client Sample ID: VSTD002

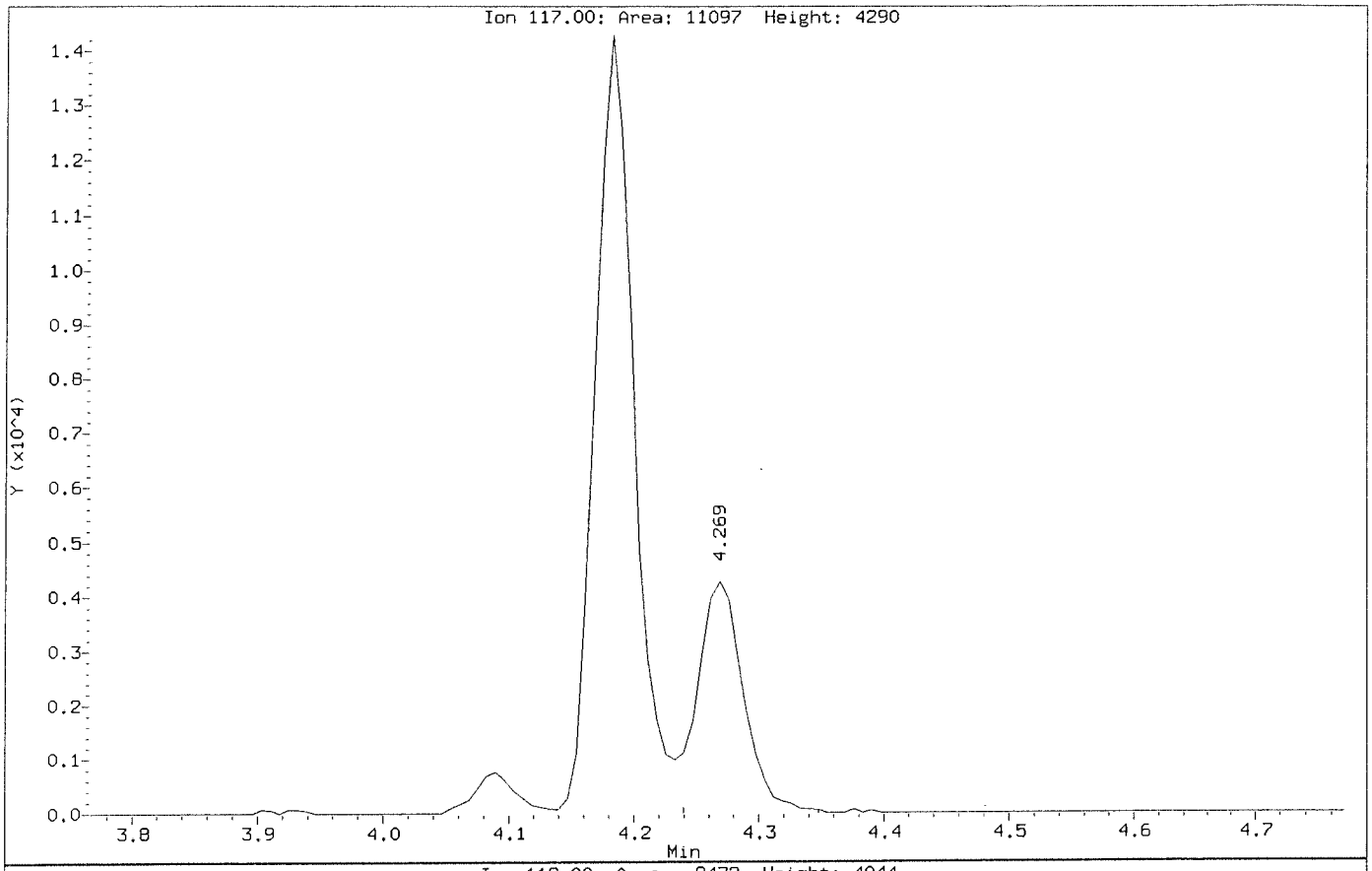
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

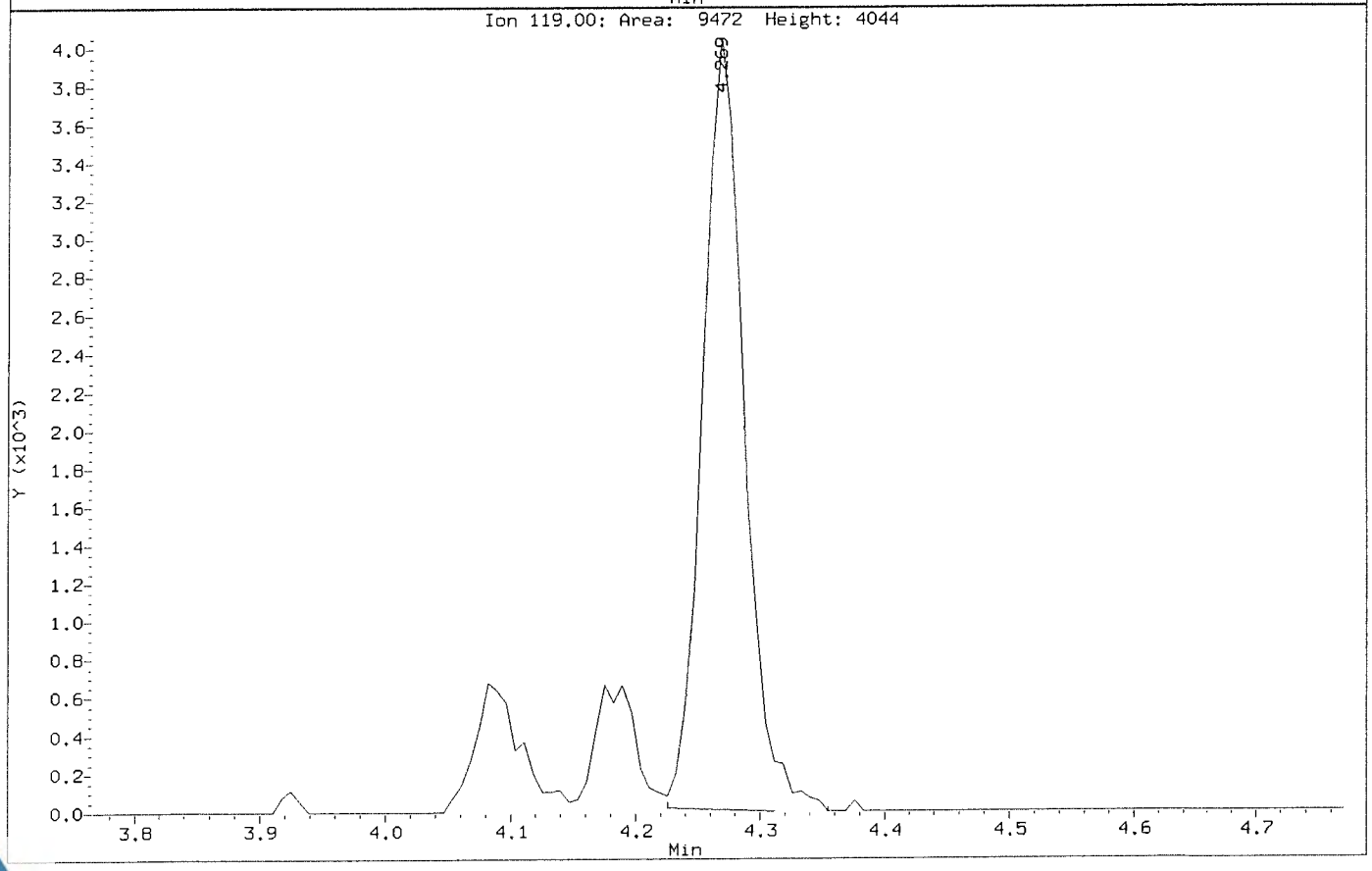




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Injection Date: 18-NOV-2019 15:23
Instrument: voa6.i
Client Sample ID: VSTD002

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





Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111806.D Page 1
Report Date: 22-Dec-2019 16:31

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Data file : \\nahstws005\Target\chem\voa6.i\X191118.b\X111806.D
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Inj Date : 18-NOV-2019 15:47
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\X191118.b\8260W.m
Meth Date : 22-Dec-2019 16:31 voa6.i Quant Type: ISTD
Cal Date : 18-NOV-2019 15:47 Cal File: X111806.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14

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

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

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	410845	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	563063	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	510927	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	277846	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	20237	5.00000	5.74
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	20921	5.00000	6.06
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	69936	5.00000	5.19
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	25804	5.00000	5.80
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	20728	5.00000	5.59
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	29459	5.00000	5.31
68 1,1,2,2-Tetrachloroethane	83	8.838	8.845	(0.914)	22230	5.00000	5.68
53 1,1,2-Trichloroethane	83	6.840	6.847	(0.892)	15003	5.00000	5.61
22 1,1-Dichloroethane	63	2.922	2.921	(0.699)	32313	5.00000	5.40
11 1,1-Dichloroethene	96	1.912	1.911	(0.457)	19077	5.00000	5.47
32 1,1-Dichloropropene	75	4.283	4.282	(0.862)	24310	5.00000	5.35
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	6553	5.00000	5.62
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	18403	5.00000	5.55(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	14399	5.00000	6.15
79 1,2,4-Trimethylbenzene	105	9.383	9.382	(0.970)	71210	5.00000	5.40
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.657	(1.102)	2641	5.00000	5.82
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	20565	5.00000	5.73
88 1,2-Dichlorobenzene	146	9.999	9.998	(1.034)	41602	5.00000	5.64
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	24346	5.00000	5.44

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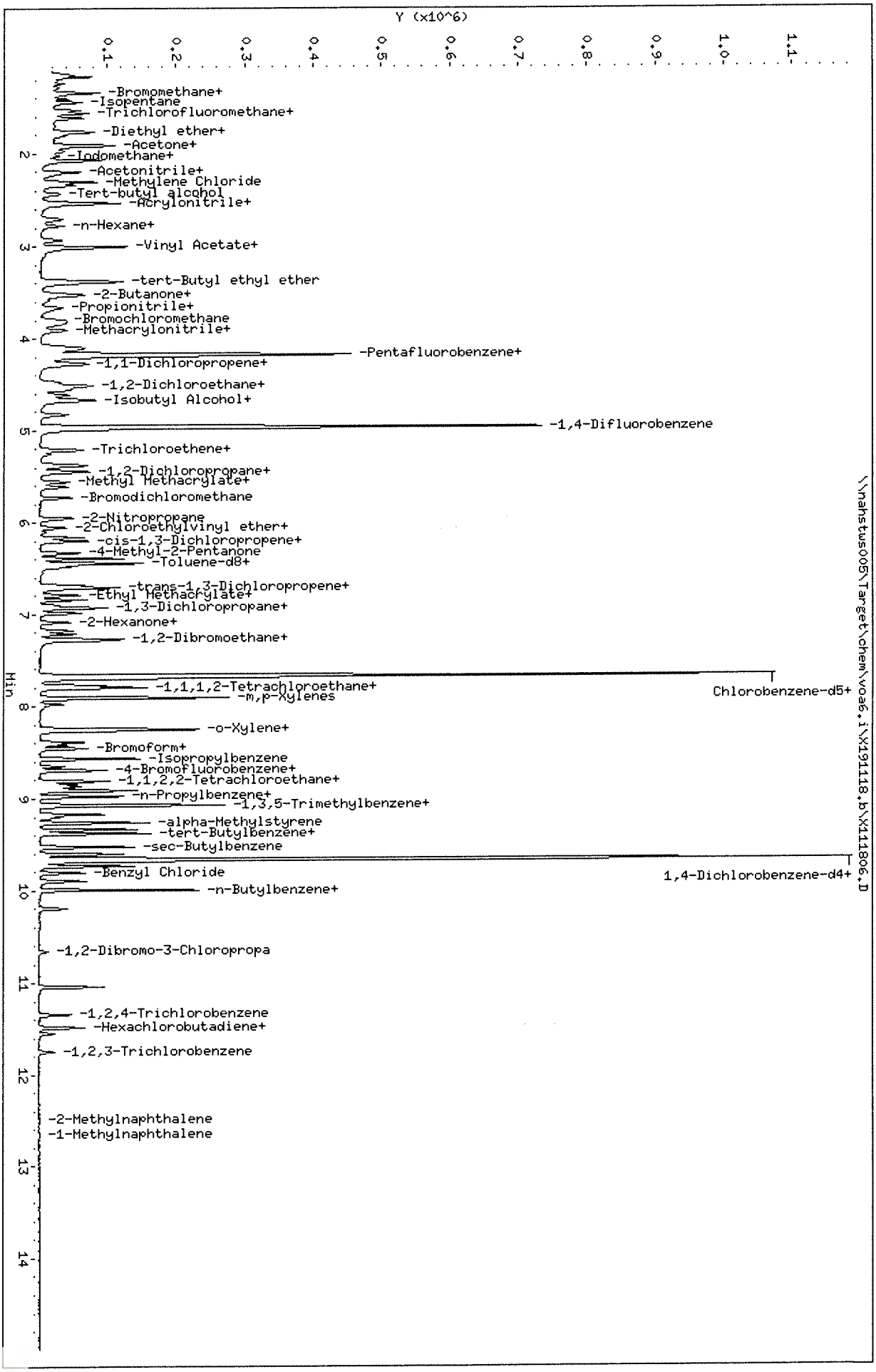
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
42	1,2-Dichloropropane	63	5.436	5.443	(1.094)	19076	5.00000	5.67
75	1,3,5-Trimethylbenzene	105	9.067	9.074	(0.938)	68944	5.00000	5.45
83	1,3-Dichlorobenzene	146	9.605	9.612	(0.993)	45064	5.00000	5.65
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	29776	5.00000	5.49
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	44703	5.00000	5.52
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	28965	5.00000	5.33
24	2-Butanone	43	3.581	3.580	(0.856)	13522	10.0000	10.72
76	2-Chlorotoluene	91	8.974	8.981	(0.928)	56464	5.00000	5.64
52	2-Hexanone	43	7.090	7.090	(0.924)	23980	10.0000	11.42
77	4-Chlorotoluene	91	9.075	9.074	(0.939)	66074	5.00000	5.45
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	71485	5.00000	5.25
45	4-Methyl-2-Pentanone	43	6.324	6.331	(0.824)	33803	10.0000	11.29
10	Acetone	43	1.969	1.976	(0.471)	15992	10.0000	11.75
37	Benzene	78	4.512	4.512	(0.908)	72584	5.00000	5.63
74	Bromobenzene	156	8.810	8.809	(0.911)	27619	5.00000	5.71
29	Bromochloromethane	128	3.795	3.795	(0.908)	11669	5.00000	5.24
39	Bromodichloromethane	83	5.729	5.729	(1.153)	26638	5.00000	5.71
66	Bromoform	173	8.416	8.415	(1.097)	16084	5.00000	6.17
6	Bromomethane	94	1.338	1.331	(0.320)	28671	5.00000	4.99(a)
19	Carbon Disulfide	76	2.069	2.069	(0.495)	103008	10.0000	10.87
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	26931	5.00000	5.41(M)
59	Chlorobenzene	112	7.699	7.699	(1.004)	55668	5.00000	5.58
7	Chloroethane	64	1.403	1.396	(0.336)	13261	5.00000	5.12
28	Chloroform	83	3.910	3.910	(0.935)	34944	5.00000	5.25
3	Chloromethane	50	1.073	1.073	(0.257)	24949	5.00000	5.75
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	22227	5.00000	5.70
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	31191	5.00000	5.68
55	Dibromochloromethane	129	7.176	7.183	(0.936)	21920	5.00000	5.64
44	Dibromomethane	93	5.558	5.557	(1.118)	13775	5.00000	5.78
2	Dichlorodifluoromethane	85	0.973	0.966	(0.233)	18346	5.00000	5.69
61	Ethylbenzene	106	7.800	7.807	(1.017)	29424	5.00000	5.70
91	Hexachlorobutadiene	225	11.489	11.488	(1.188)	11525	5.00000	5.47
67	Isopropylbenzene	105	8.566	8.566	(1.117)	81869	5.00000	5.36
62	m,p-Xylenes	106	7.907	7.907	(1.031)	69325	10.0000	11.14
17	Methylene Chloride	84	2.306	2.305	(0.551)	20180	5.00000	5.43
87	n-Butylbenzene	91	9.999	9.998	(1.034)	57498	5.00000	5.08
73	n-Propylbenzene	91	8.917	8.917	(0.922)	92937	5.00000	5.41
92	Naphthalene	128	11.546	11.546	(1.194)	17063	5.00000	5.68
63	o-Xylene	106	8.244	8.244	(1.075)	33646	5.00000	5.48
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	78149	5.00000	5.23
64	Styrene	104	8.258	8.265	(1.077)	58650	5.00000	5.49
78	tert-Butylbenzene	119	9.340	9.339	(0.966)	59074	5.00000	5.45
56	Tetrachloroethene	164	6.933	6.933	(0.904)	20334	5.00000	5.66
50	Toluene	91	6.446	6.453	(0.840)	80201	5.00000	5.53
20	trans-1,2-Dichloroethene	96	2.535	2.527	(0.606)	18086	5.00000	5.35
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	28395	5.00000	5.67
38	Trichloroethene	130	5.207	5.206	(1.048)	22280	5.00000	5.65
8	Trichlorofluoromethane	101	1.561	1.553	(0.373)	33411	5.00000	5.24
5	Vinyl Chloride	62	1.138	1.138	(0.272)	20691	5.00000	4.94(a)

QC Flag Legend

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

QC Flag Legend

M - Compound response manually integrated.

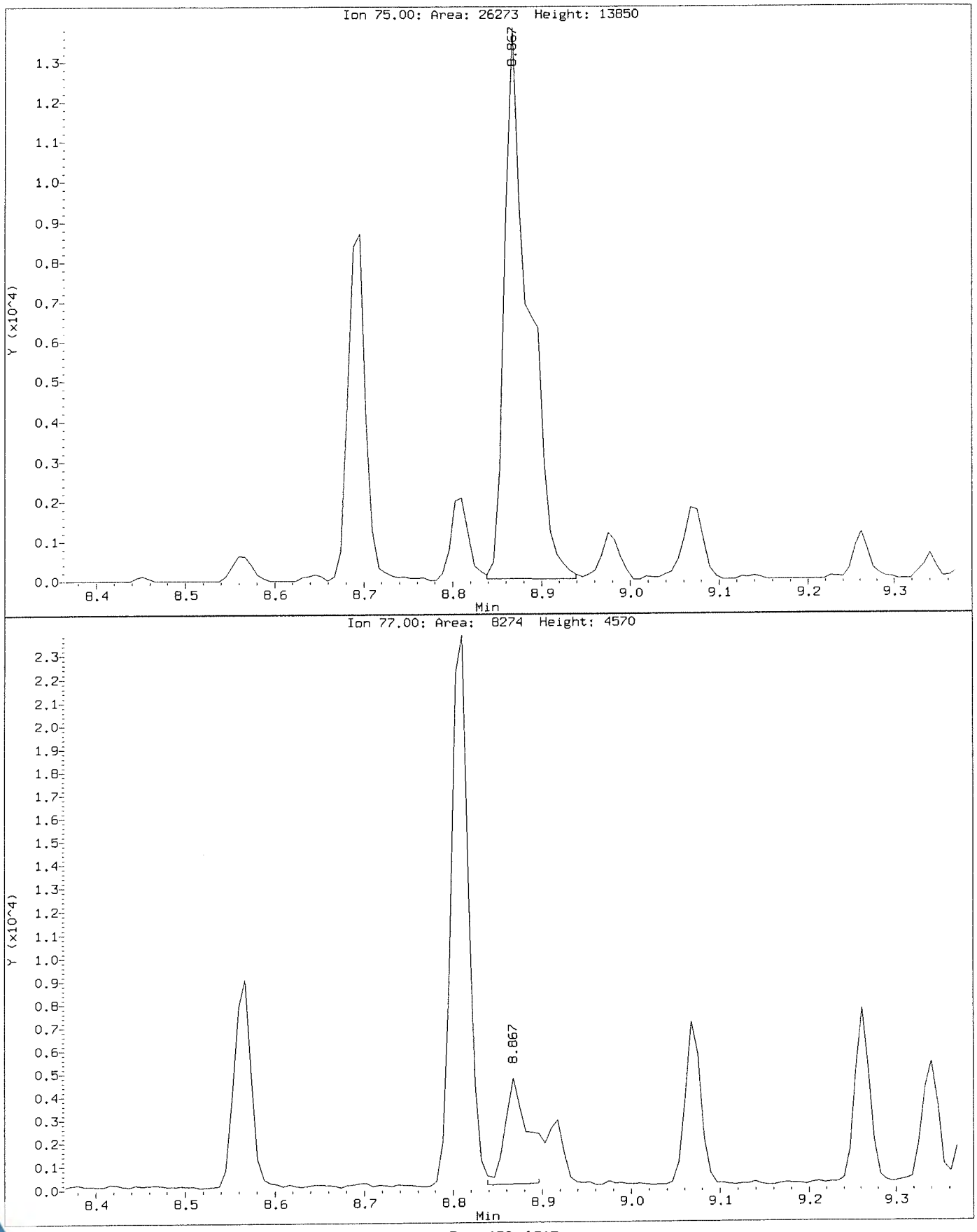


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Purge Volume: 5.0
Column phase: DB624

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

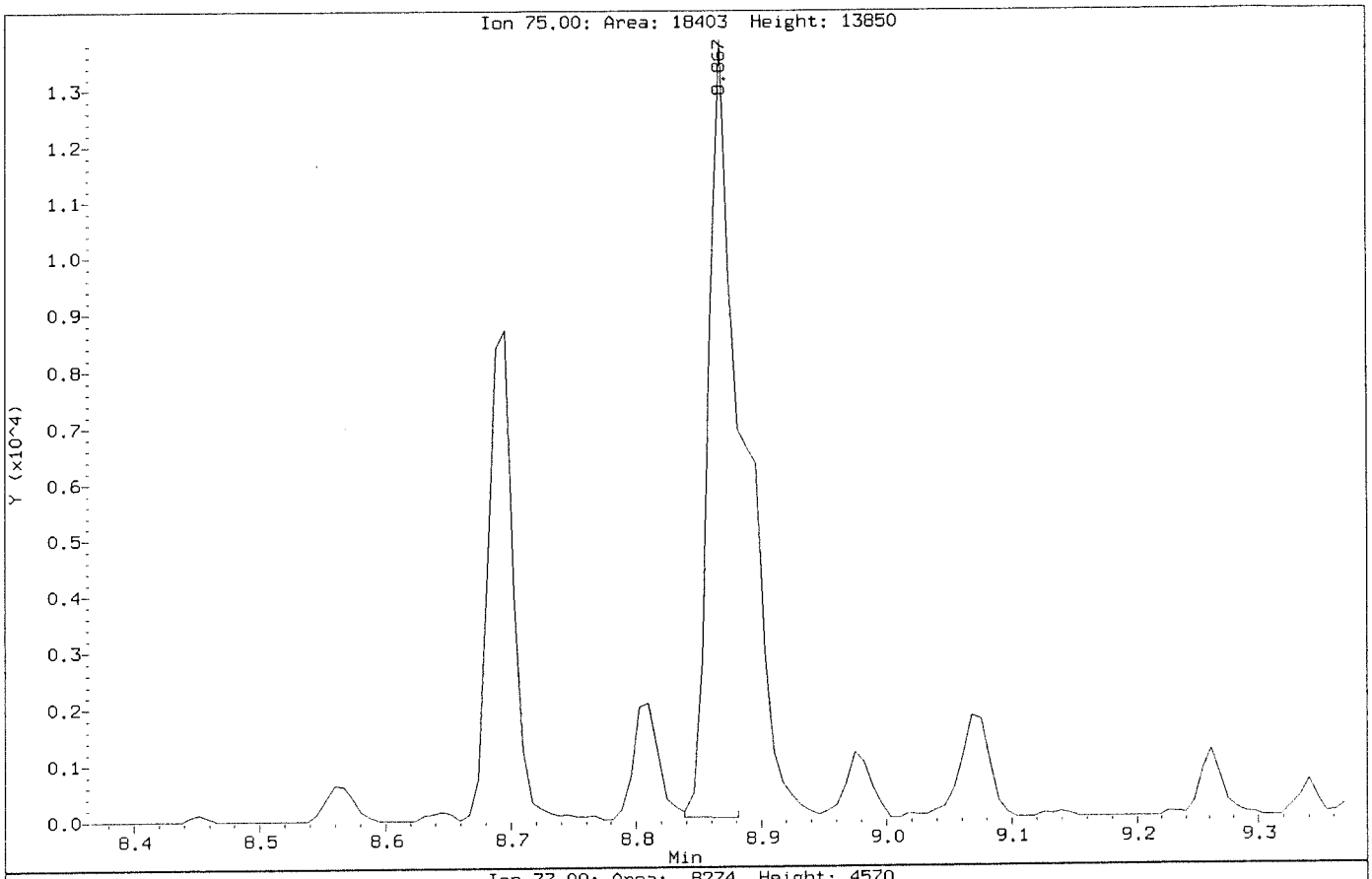
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Client Sample ID: VSTD005

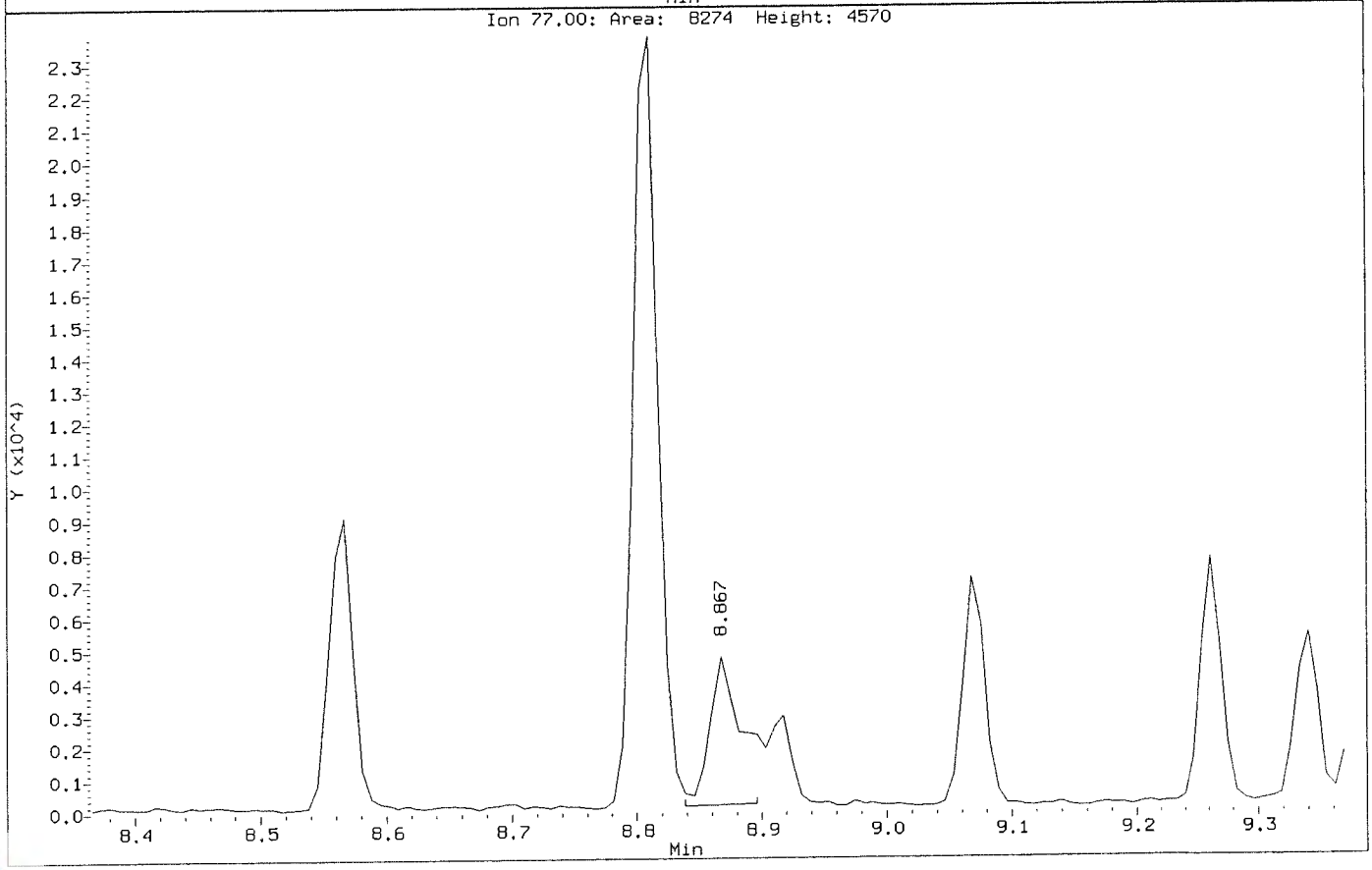
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



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Instrument: voa6.i
Client Sample ID: VSTD005

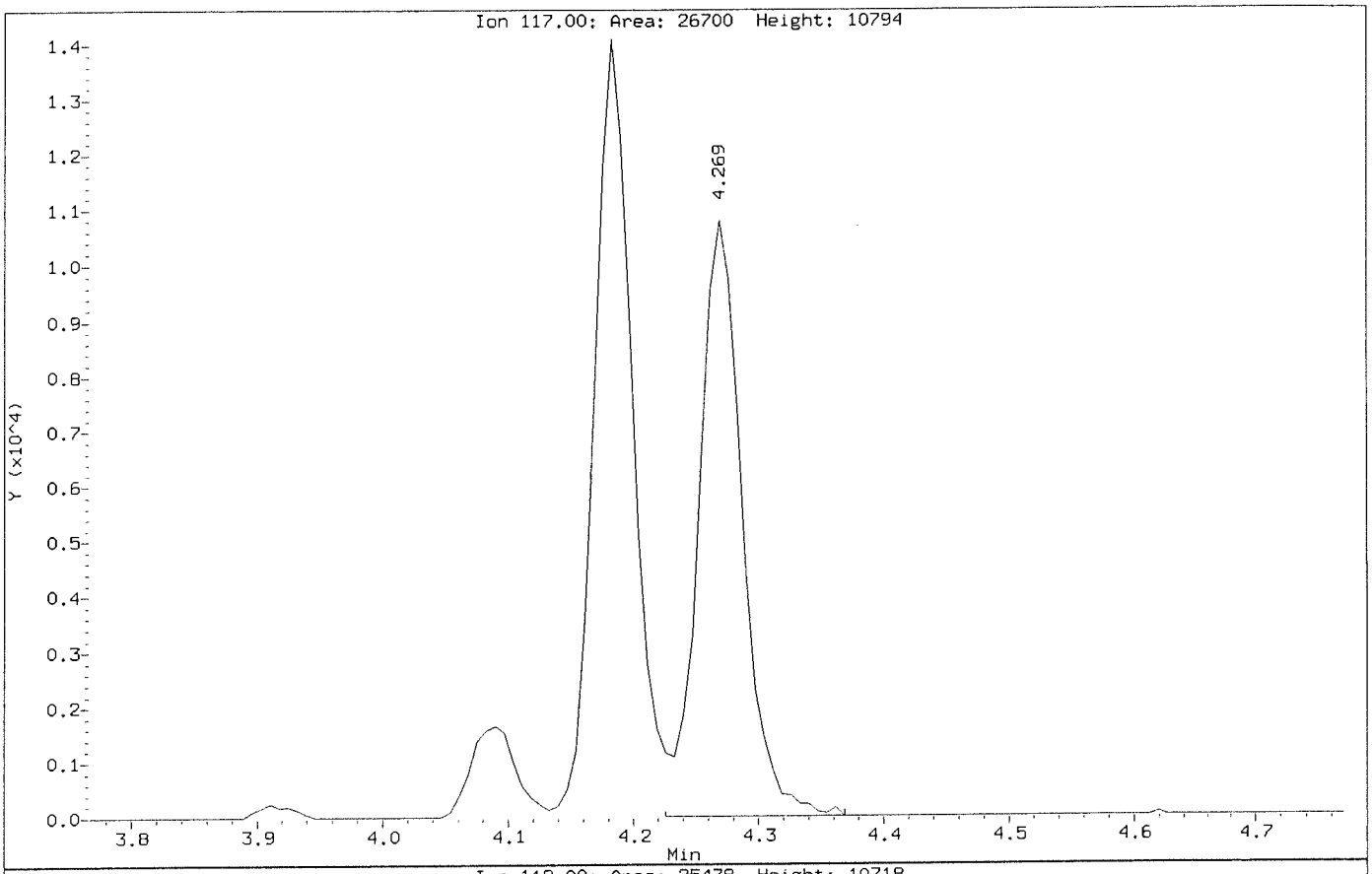
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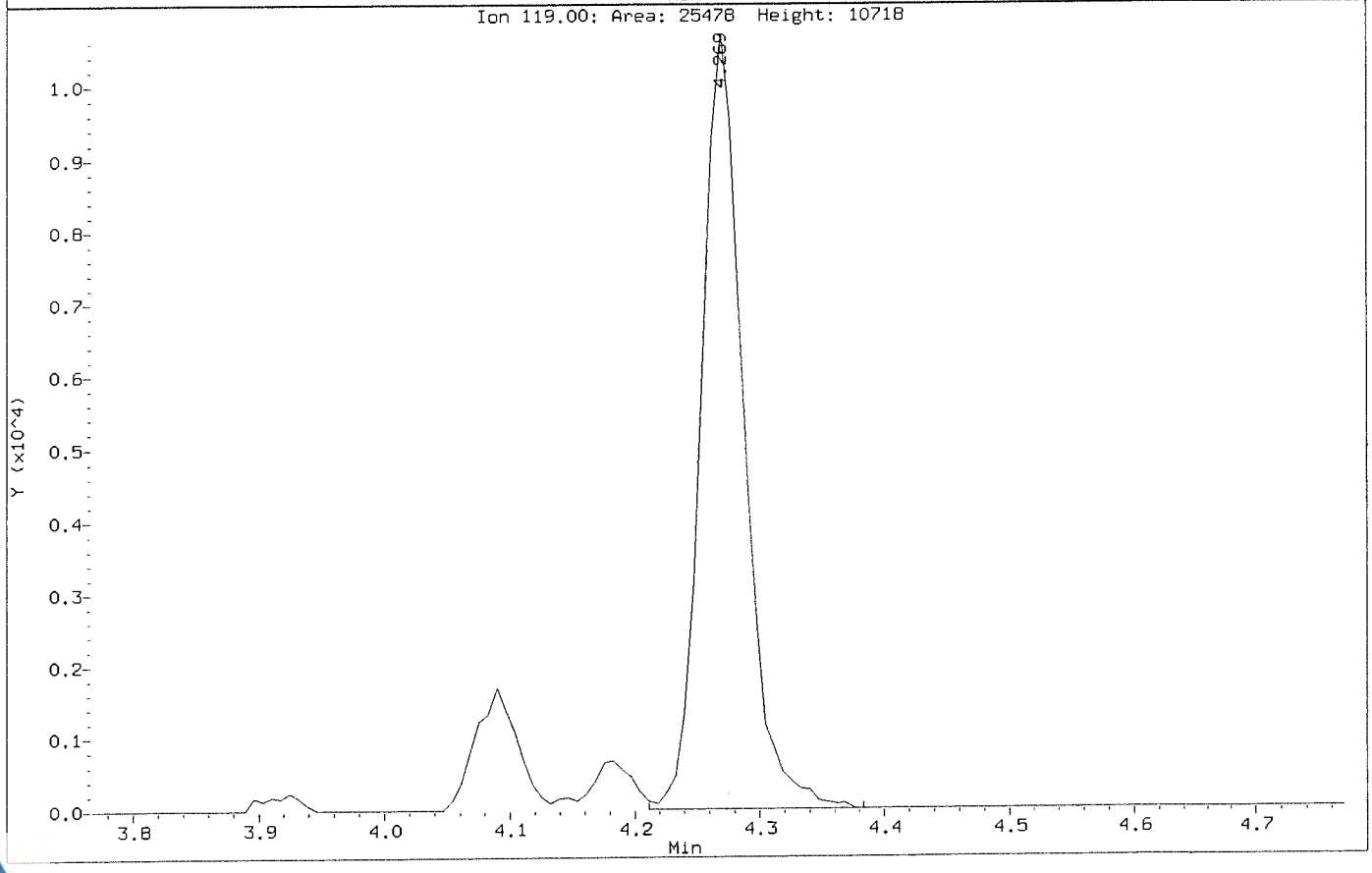




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Instrument: voa6.i
Client Sample ID: VSTD005

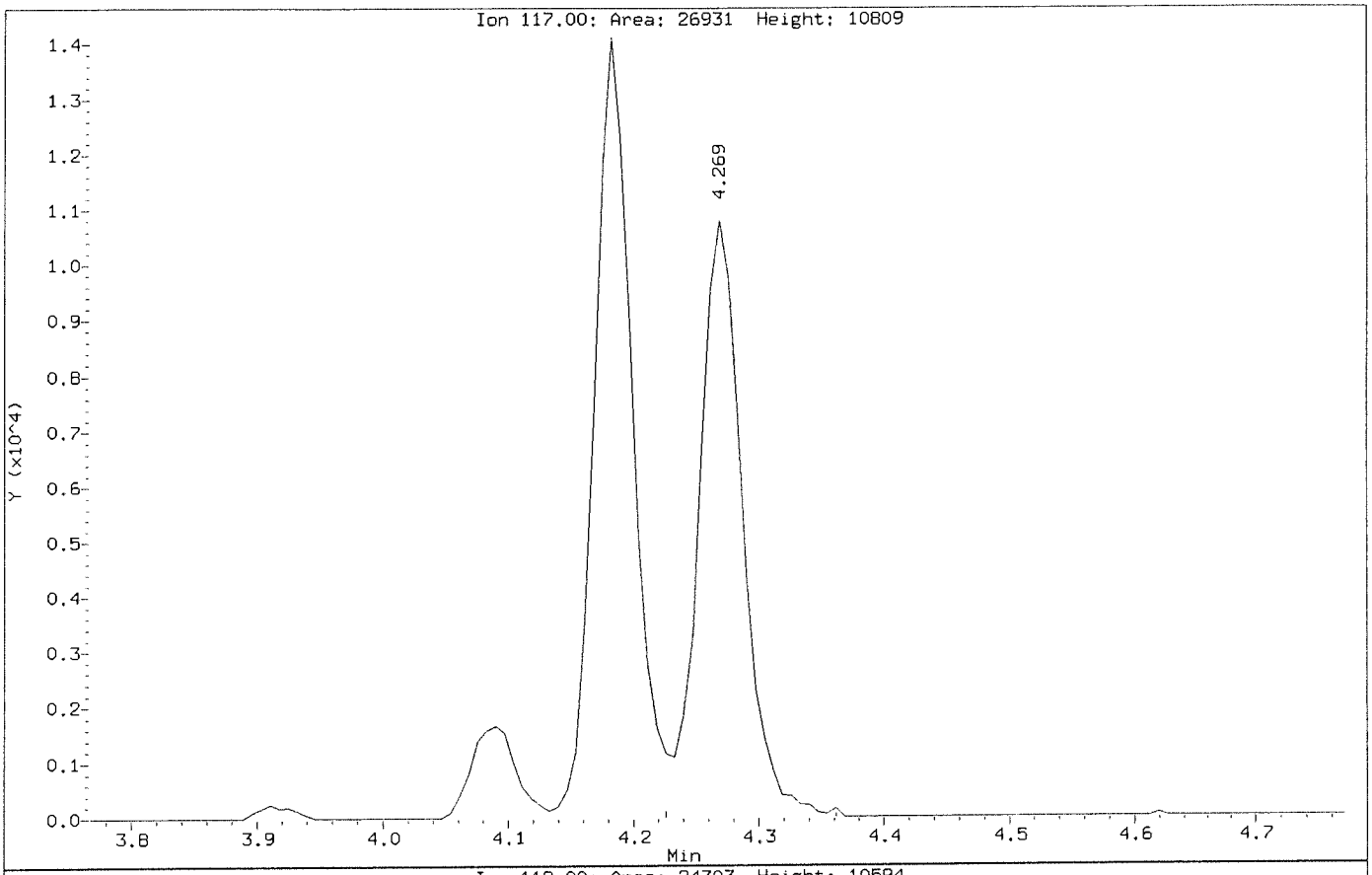
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

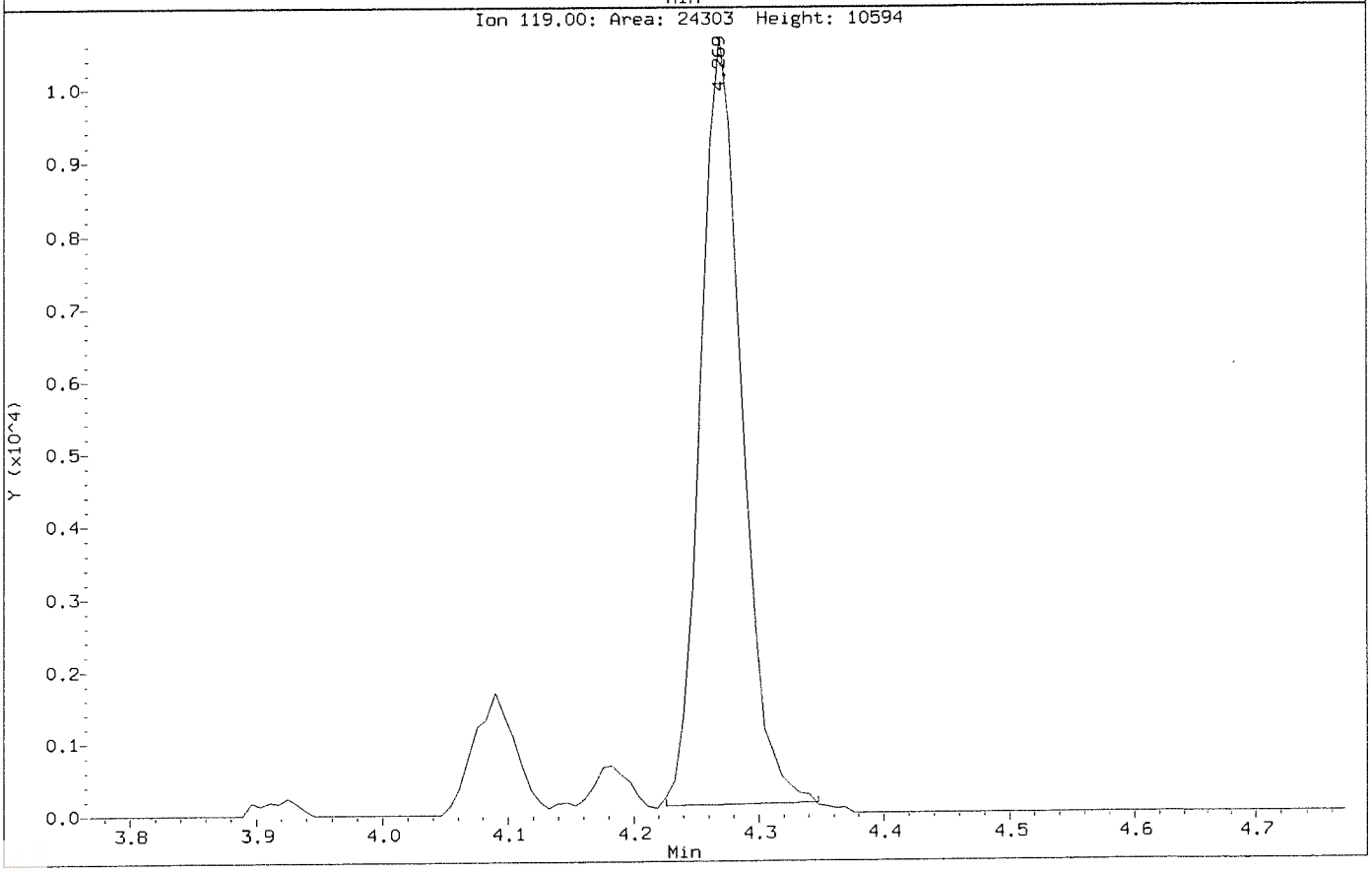




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Injection Date: 18-NOV-2019 15:47
Instrument: voa6.i
Client Sample ID: VSTD005

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





Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111807.D Page 1
Report Date: 22-Dec-2019 16:31

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X191118.b\X111807.D
Lab Smp Id: VSTD020 Client Smp ID: VSTD020
Inj Date : 18-NOV-2019 16:11
Operator : PC Inst ID: voa6.i
Smp Info : VSTD020;VSTD020;1;6;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X191118.b\8260W.m
Meth Date : 22-Dec-2019 16:31 voa6.i Quant Type: ISTD
Cal Date : 18-NOV-2019 16:11 Cal File: X111807.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14

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

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

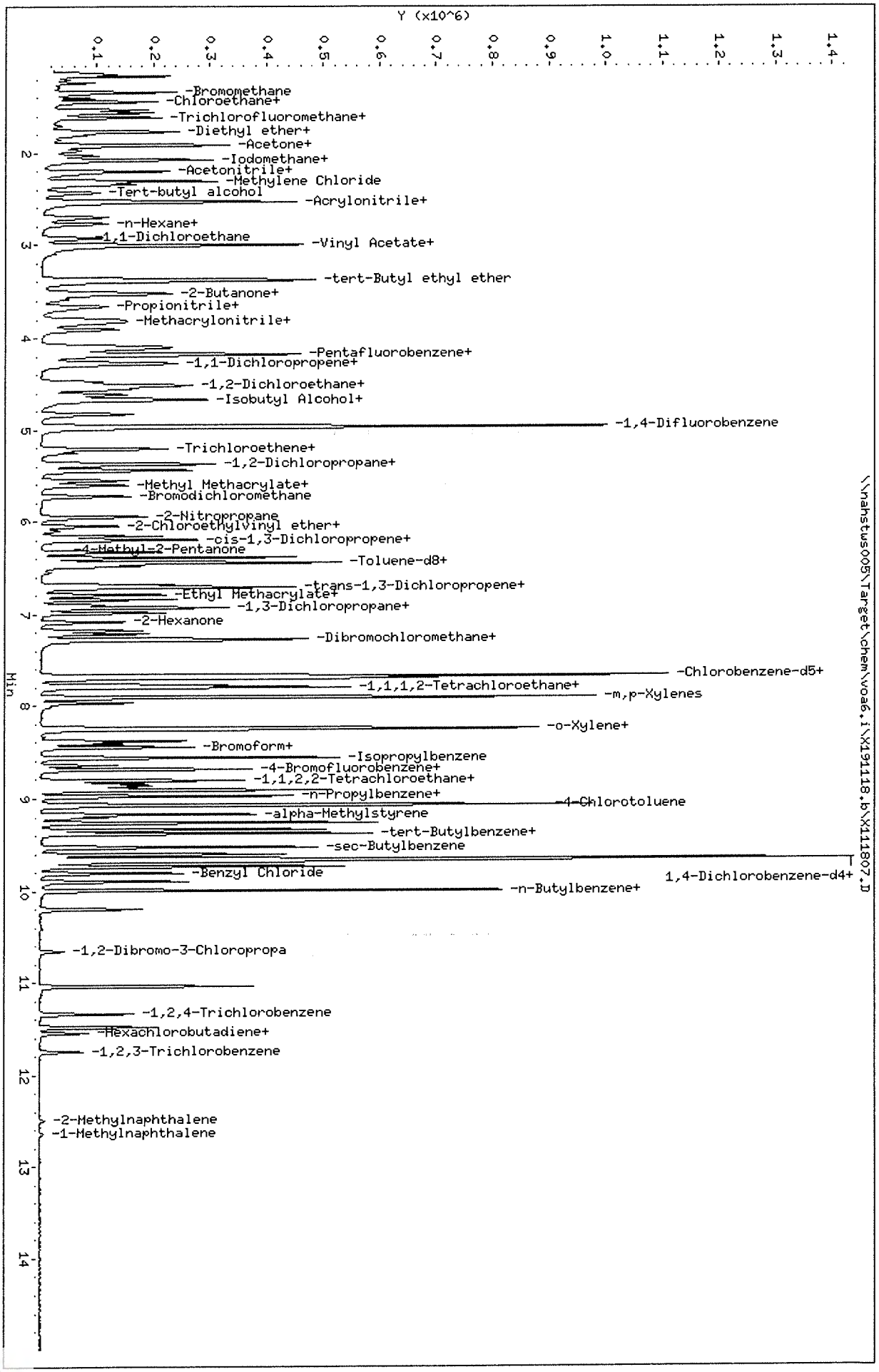
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	411693	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	563792	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	515046	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.669	(1.000)	278890	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	75094	20.0000	20.28
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	75813	20.0000	20.02
$	48 Toluene-d8	98	6.388	6.388	(0.833)	260273	20.0000	19.17
$	69 4-Bromofluorobenzene	95	8.688	8.695	(1.133)	94194	20.0000	19.91
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	73347	20.0000	19.62
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	105363	20.0000	18.97
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.845	(0.915)	75821	20.0000	19.33
	53 1,1,2-Trichloroethane	83	6.840	6.847	(0.892)	52184	20.0000	19.38
	22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	113669	20.0000	18.97
	11 1,1-Dichloroethene	96	1.919	1.911	(0.459)	64160	20.0000	18.38
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	84000	20.0000	18.47
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	21856	20.0000	20.64
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	64689	20.0000	19.46 (M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	46623	20.0000	19.84
	79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	254992	20.0000	19.26
	89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.103)	8805	20.0000	20.13
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	71738	20.0000	19.85
	88 1,2-Dichlorobenzene	146	9.998	9.998	(1.035)	144121	20.0000	19.47
	33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	88277	20.0000	19.72

Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111807.D Page 2
Report Date: 22-Dec-2019 16:31

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)	64004	20.0000	19.00
75 1,3,5-Trimethylbenzene	105	9.067	9.074	(0.938)	247054	20.0000	19.45
83 1,3-Dichlorobenzene	146	9.605	9.612	(0.994)	157428	20.0000	19.68
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	105400	20.0000	19.28
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	158049	20.0000	19.44
26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	100376	20.0000	18.46
24 2-Butanone	43	3.580	3.580	(0.856)	48098	40.0000	38.07
76 2-Chlorotoluene	91	8.974	8.981	(0.929)	193547	20.0000	19.28
52 2-Hexanone	43	7.083	7.090	(0.923)	78795	40.0000	37.24
77 4-Chlorotoluene	91	9.074	9.074	(0.939)	231980	20.0000	19.07
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	257377	20.0000	18.86
45 4-Methyl-2-Pentanone	43	6.324	6.331	(0.824)	115695	40.0000	38.33
10 Acetone	43	1.976	1.976	(0.473)	43200	40.0000	38.23
37 Benzene	78	4.512	4.512	(0.908)	250181	20.0000	19.39
74 Bromobenzene	156	8.809	8.809	(0.912)	97394	20.0000	20.09
29 Bromochloromethane	128	3.795	3.795	(0.908)	41933	20.0000	18.80
39 Bromodichloromethane	83	5.729	5.729	(1.153)	89170	20.0000	19.11
66 Bromoform	173	8.415	8.415	(1.097)	56416	20.0000	19.02
6 Bromomethane	94	1.338	1.331	(0.320)	93456	20.0000	21.54
19 Carbon Disulfide	76	2.069	2.069	(0.495)	362755	40.0000	38.21
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	90839	20.0000	18.23 (M)
59 Chlorobenzene	112	7.699	7.699	(1.004)	192384	20.0000	19.13
7 Chloroethane	64	1.403	1.396	(0.336)	46616	20.0000	17.98
28 Chloroform	83	3.910	3.910	(0.935)	121141	20.0000	18.16
3 Chloromethane	50	1.073	1.073	(0.257)	85402	20.0000	19.21
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	74754	20.0000	19.14
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	107408	20.0000	19.53
55 Dibromochloromethane	129	7.176	7.183	(0.936)	76215	20.0000	19.48
44 Dibromomethane	93	5.557	5.557	(1.118)	46676	20.0000	19.58
2 Dichlorodifluoromethane	85	0.973	0.966	(0.233)	63810	20.0000	17.59
61 Ethylbenzene	106	7.799	7.807	(1.017)	101554	20.0000	19.54
91 Hexachlorobutadiene	225	11.481	11.488	(1.188)	37789	20.0000	19.03
67 Isopropylbenzene	105	8.566	8.566	(1.117)	293670	20.0000	19.08
62 m,p-Xylenes	106	7.907	7.907	(1.031)	243460	40.0000	38.83
17 Methylene Chloride	84	2.305	2.305	(0.551)	66846	20.0000	17.95
87 n-Butylbenzene	91	9.998	9.998	(1.035)	210608	20.0000	18.54
73 n-Propylbenzene	91	8.917	8.917	(0.923)	331965	20.0000	19.25
92 Naphthalene	128	11.546	11.546	(1.195)	57138	20.0000	18.96
63 o-Xylene	106	8.244	8.244	(1.075)	119876	20.0000	19.37
81 sec-Butylbenzene	105	9.526	9.526	(0.986)	278964	20.0000	18.62
64 Styrene	104	8.258	8.265	(1.077)	206802	20.0000	19.22
78 tert-Butylbenzene	119	9.339	9.339	(0.967)	208031	20.0000	19.13
56 Tetrachloroethene	164	6.933	6.933	(0.904)	68625	20.0000	18.96
50 Toluene	91	6.446	6.453	(0.840)	280019	20.0000	19.17
20 trans-1,2-Dichloroethene	96	2.535	2.527	(0.606)	63600	20.0000	18.77
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	100272	20.0000	20.00
38 Trichloroethene	130	5.206	5.206	(1.048)	77608	20.0000	19.68
8 Trichlorofluoromethane	101	1.560	1.553	(0.373)	116474	20.0000	18.23
5 Vinyl Chloride	62	1.138	1.138	(0.272)	74818	20.0000	17.83

QC Flag Legend

M - Compound response manually integrated.

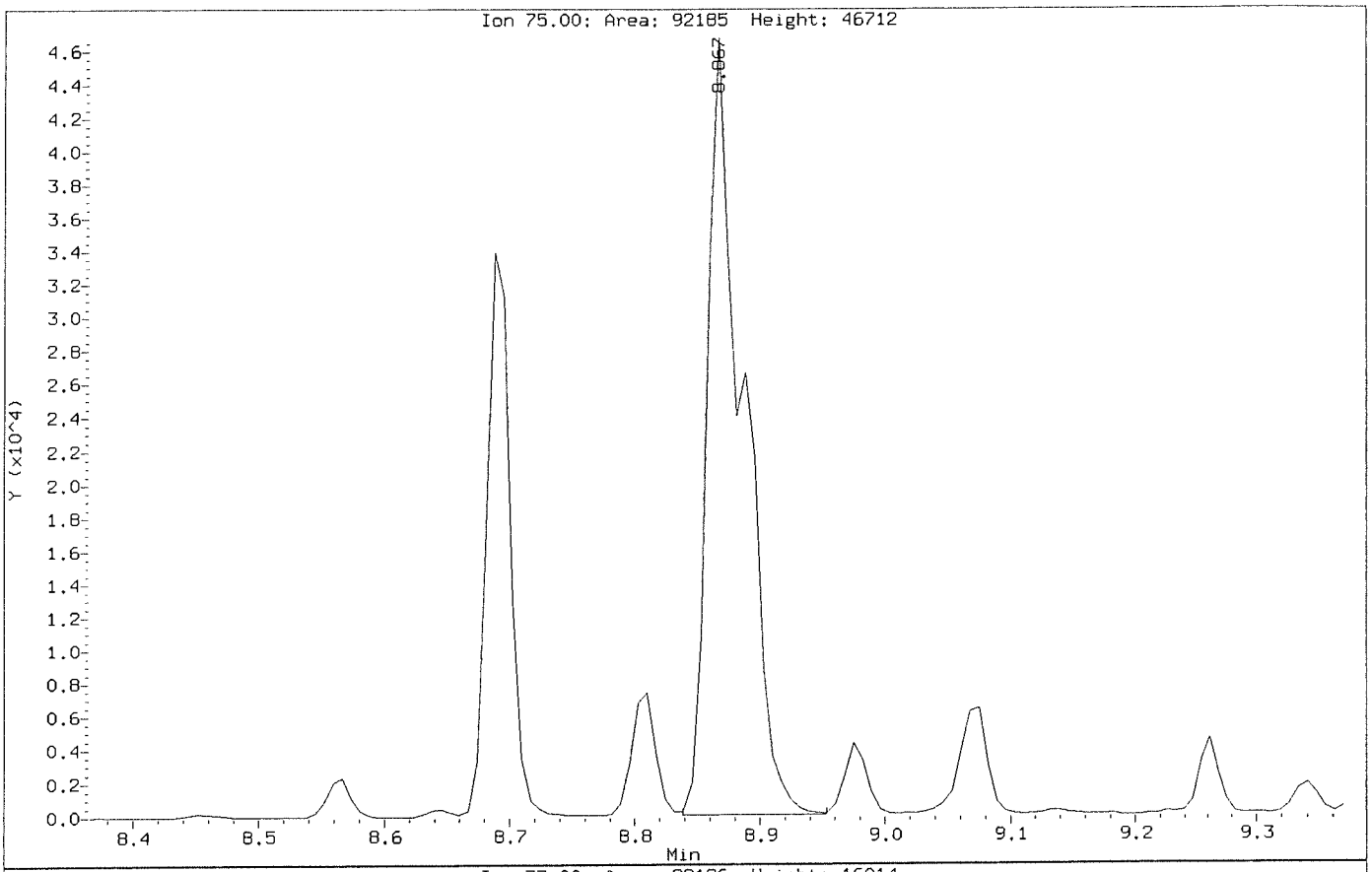


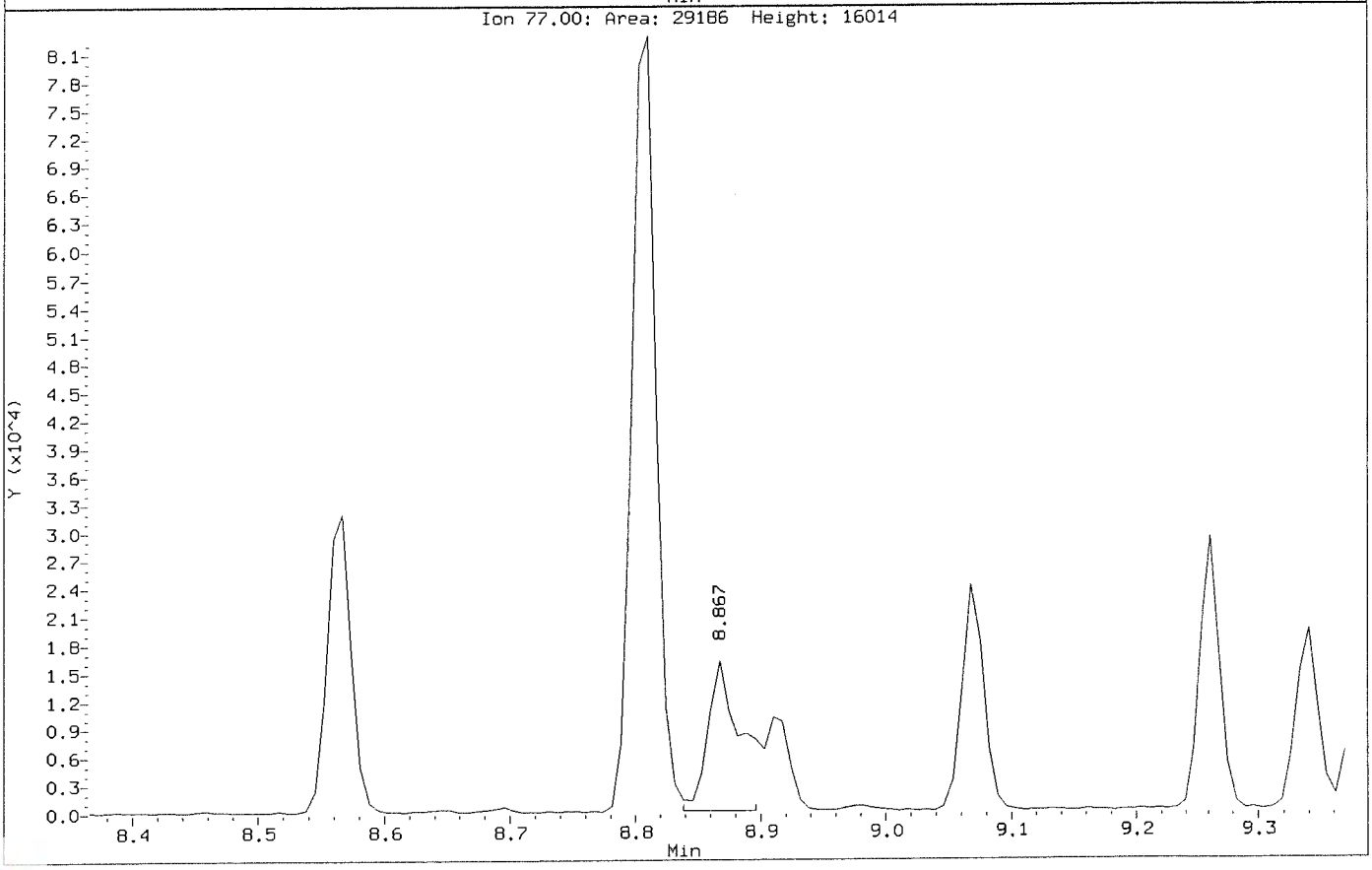
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Date : 18-NOV-2019 16:11
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Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\Before2\X111807.D
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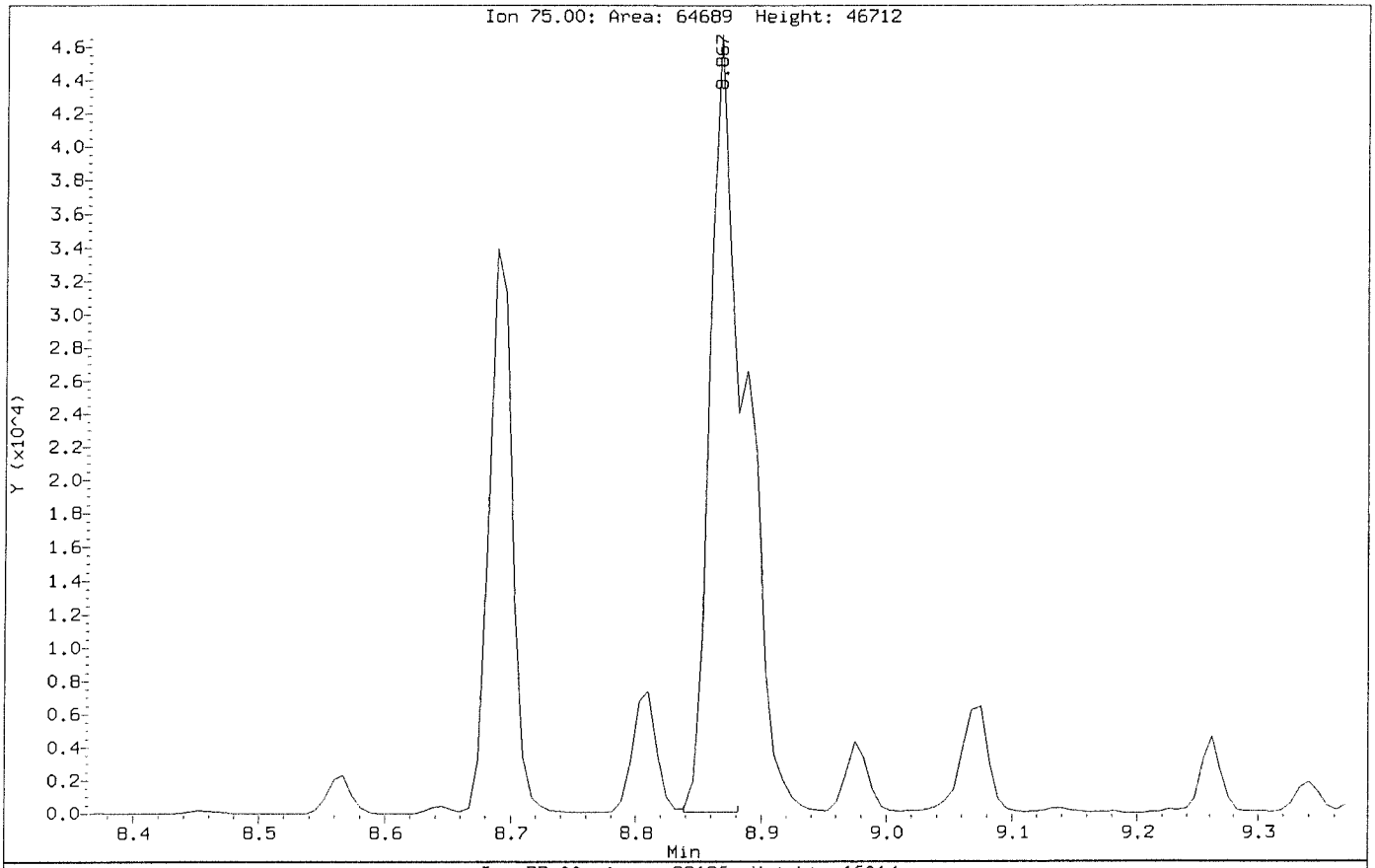
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CAS Number: 96-18-4

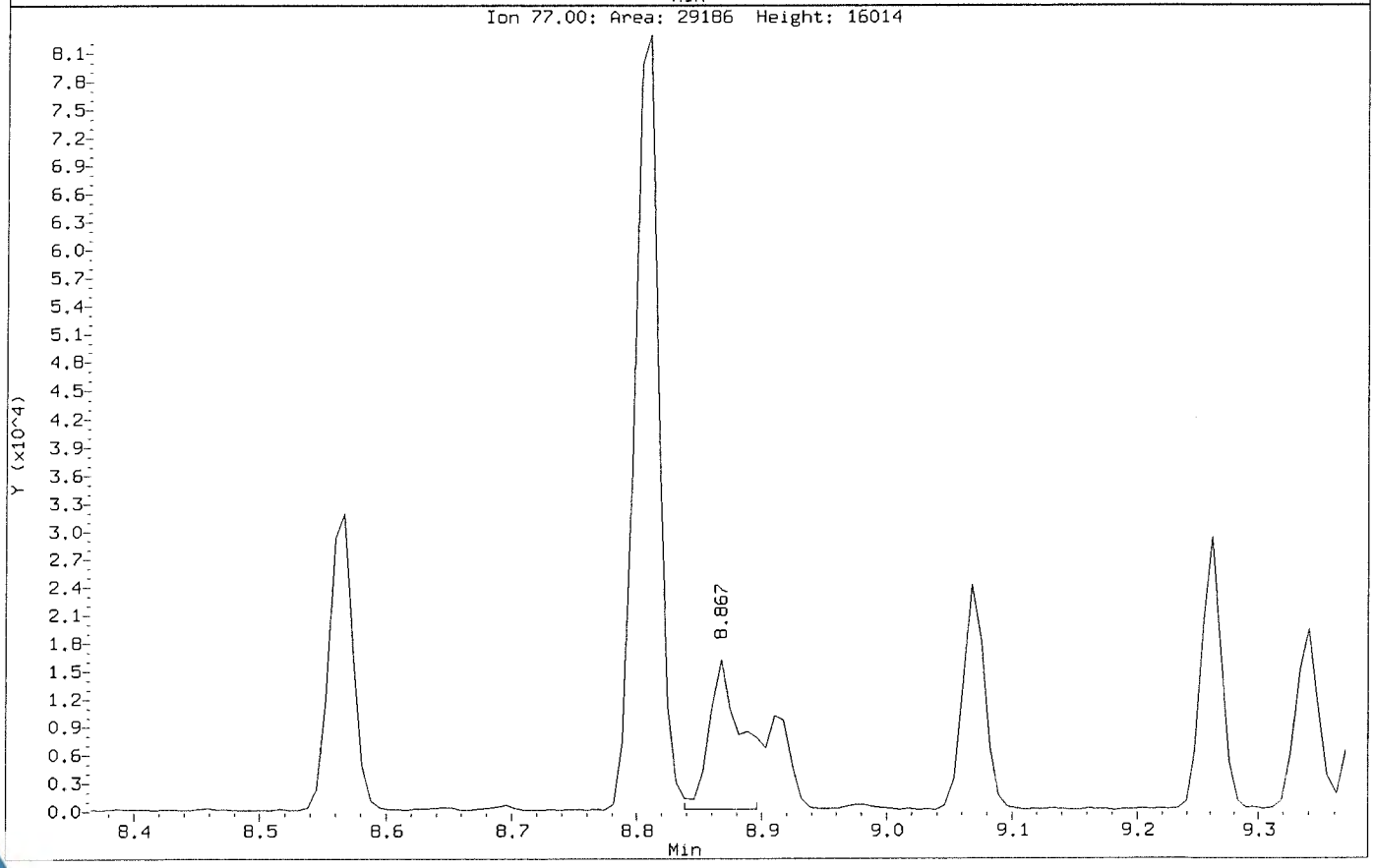




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Instrument: voa6.i
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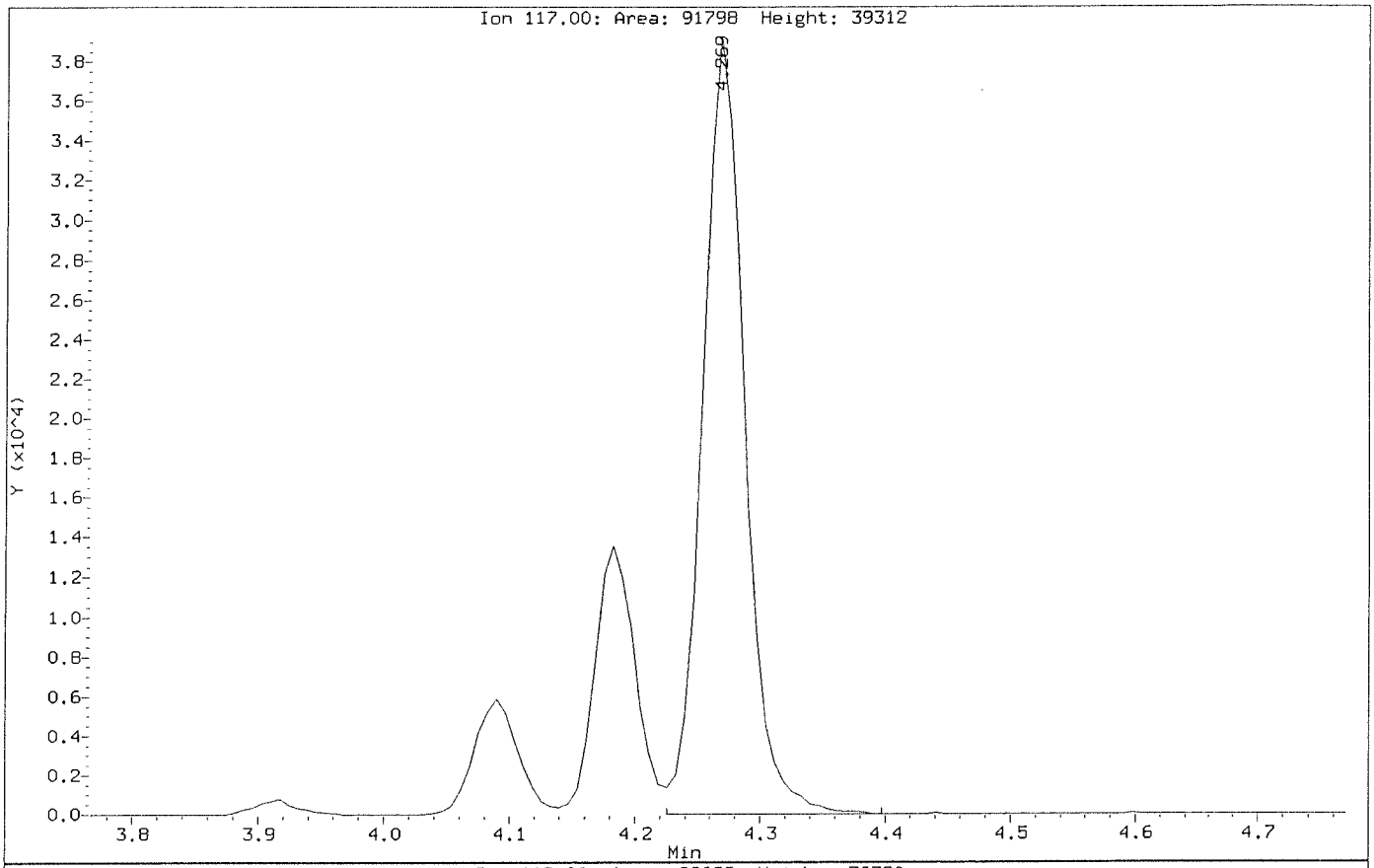
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CAS Number: 96-18-4

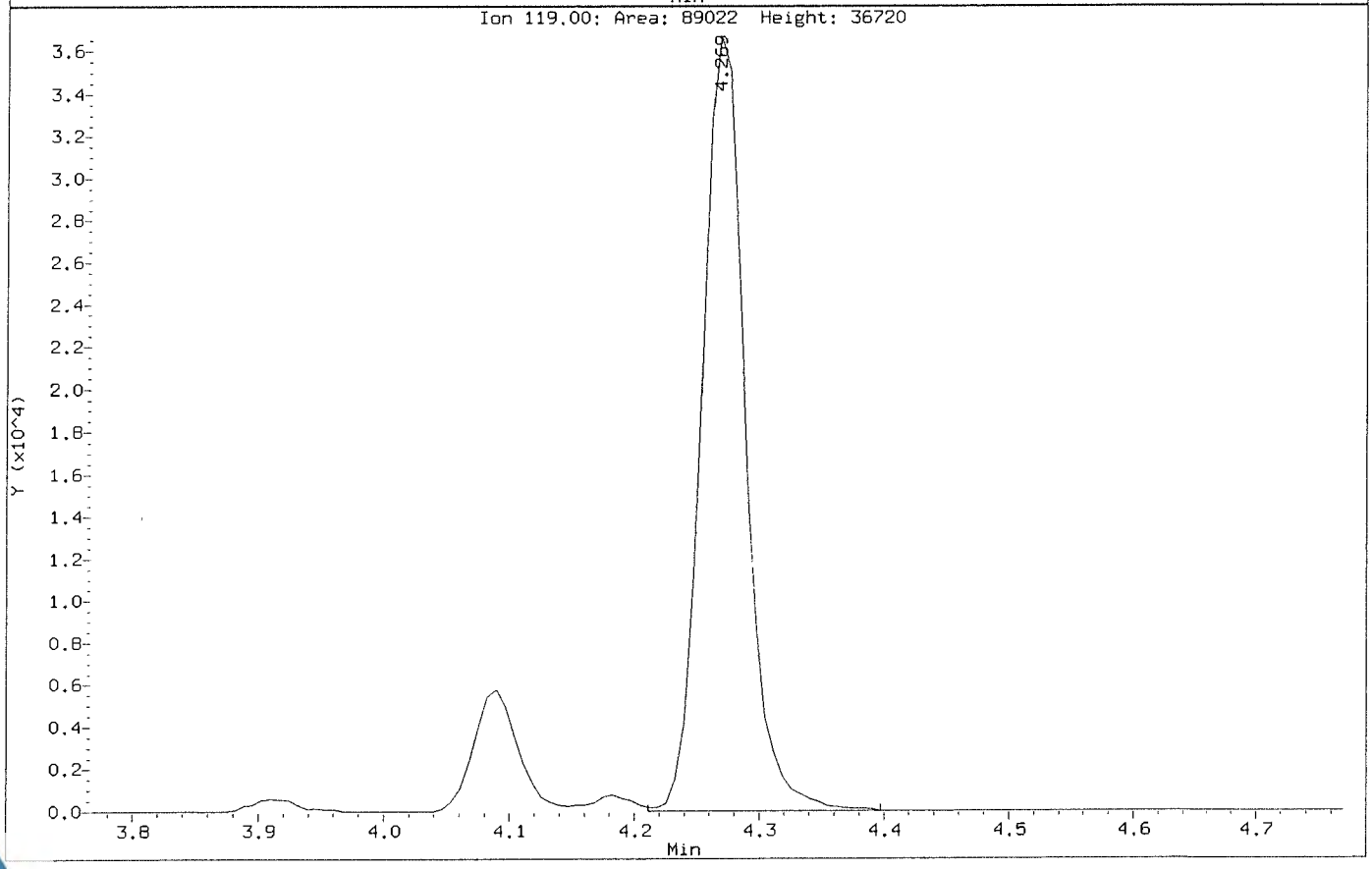




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Client Sample ID: VSTD020

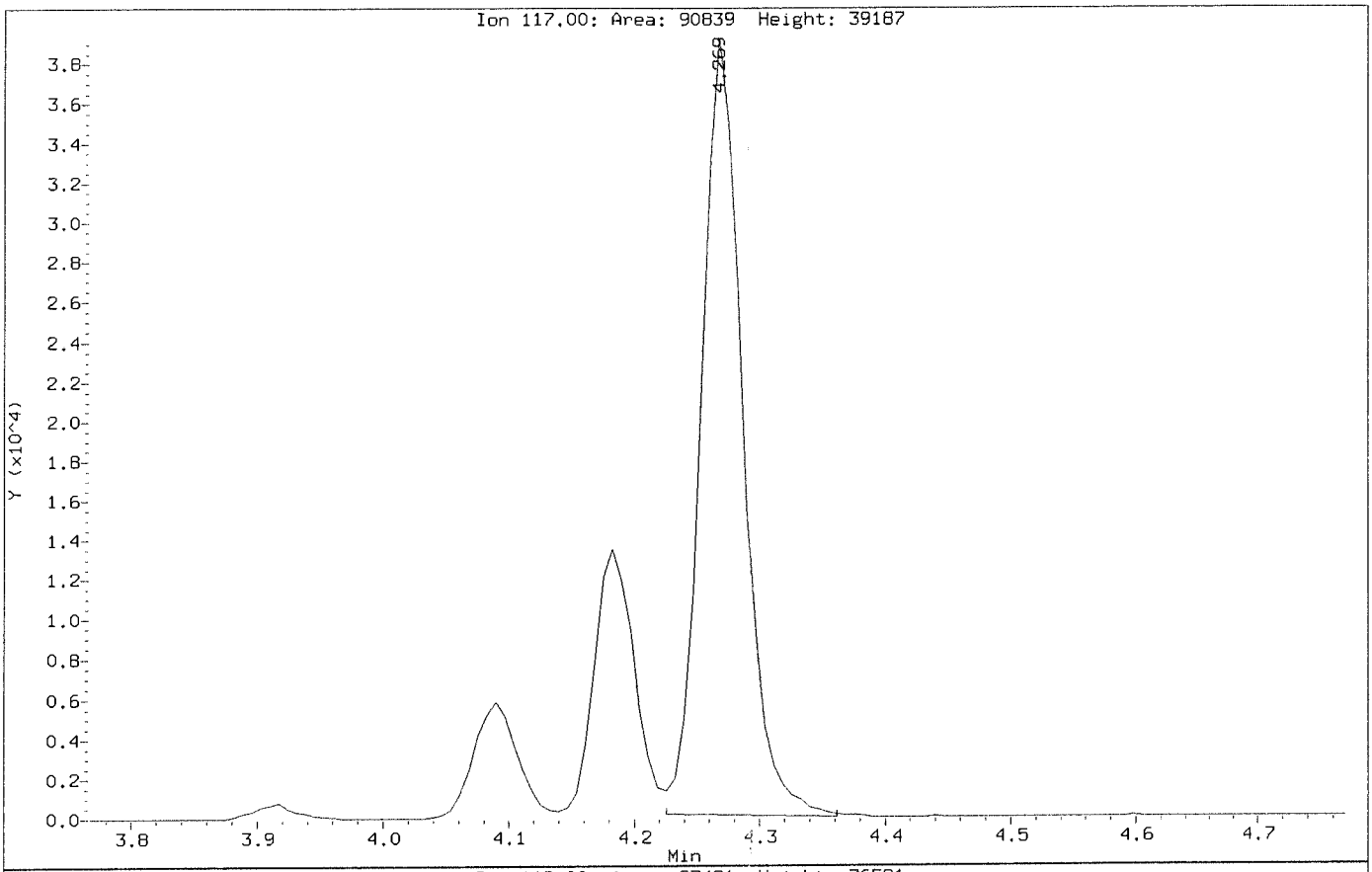
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

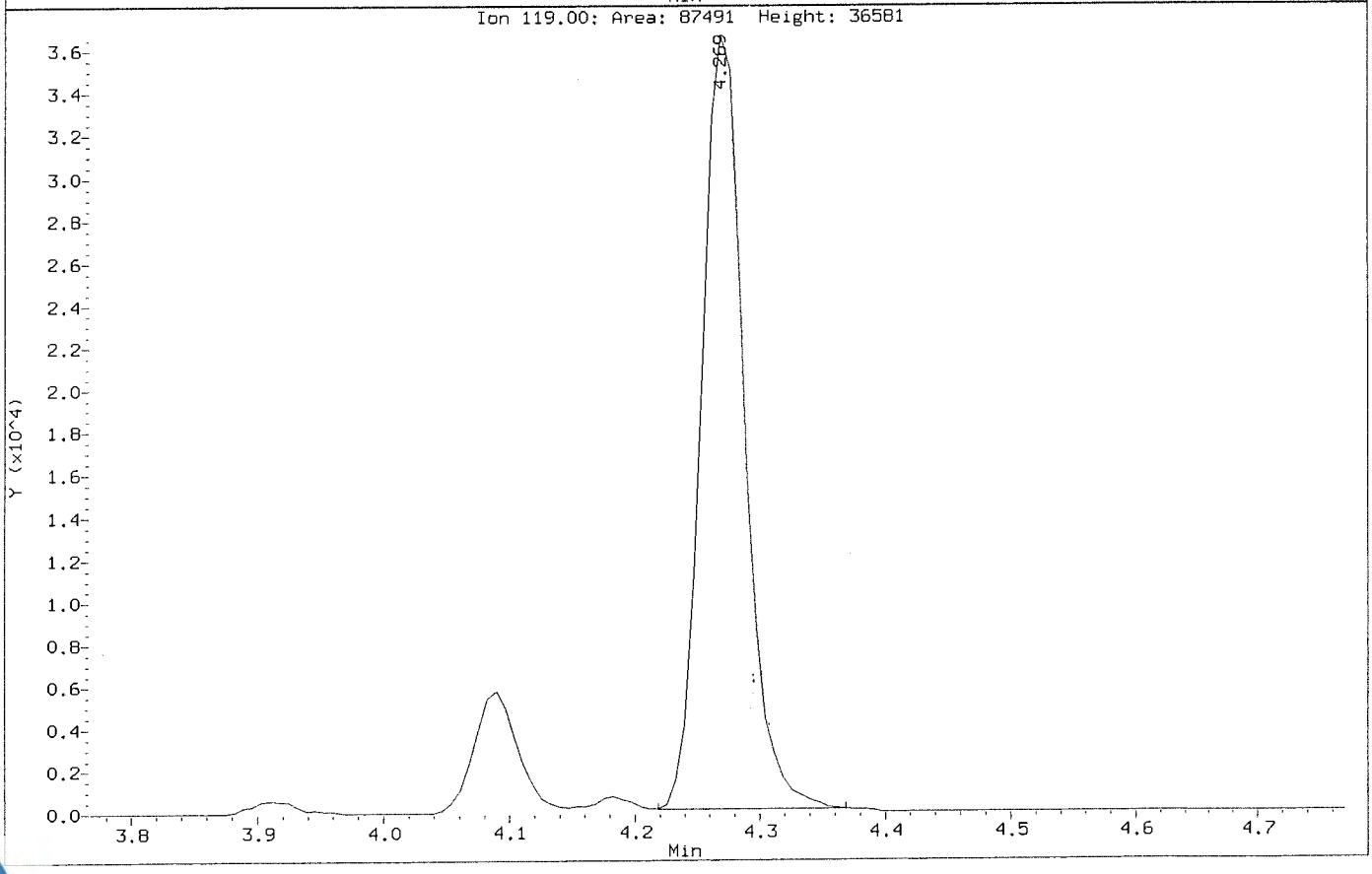




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Instrument: voa6.i
Client Sample ID: VSTD020

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





Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111808.D Page 1
Report Date: 22-Dec-2019 16:31

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X191118.b\X111808.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 18-NOV-2019 16:35
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\X191118.b\8260W.m
Meth Date : 22-Dec-2019 16:31 voa6.i Quant Type: ISTD
Cal Date : 18-NOV-2019 16:35 Cal File: X111808.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14

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

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

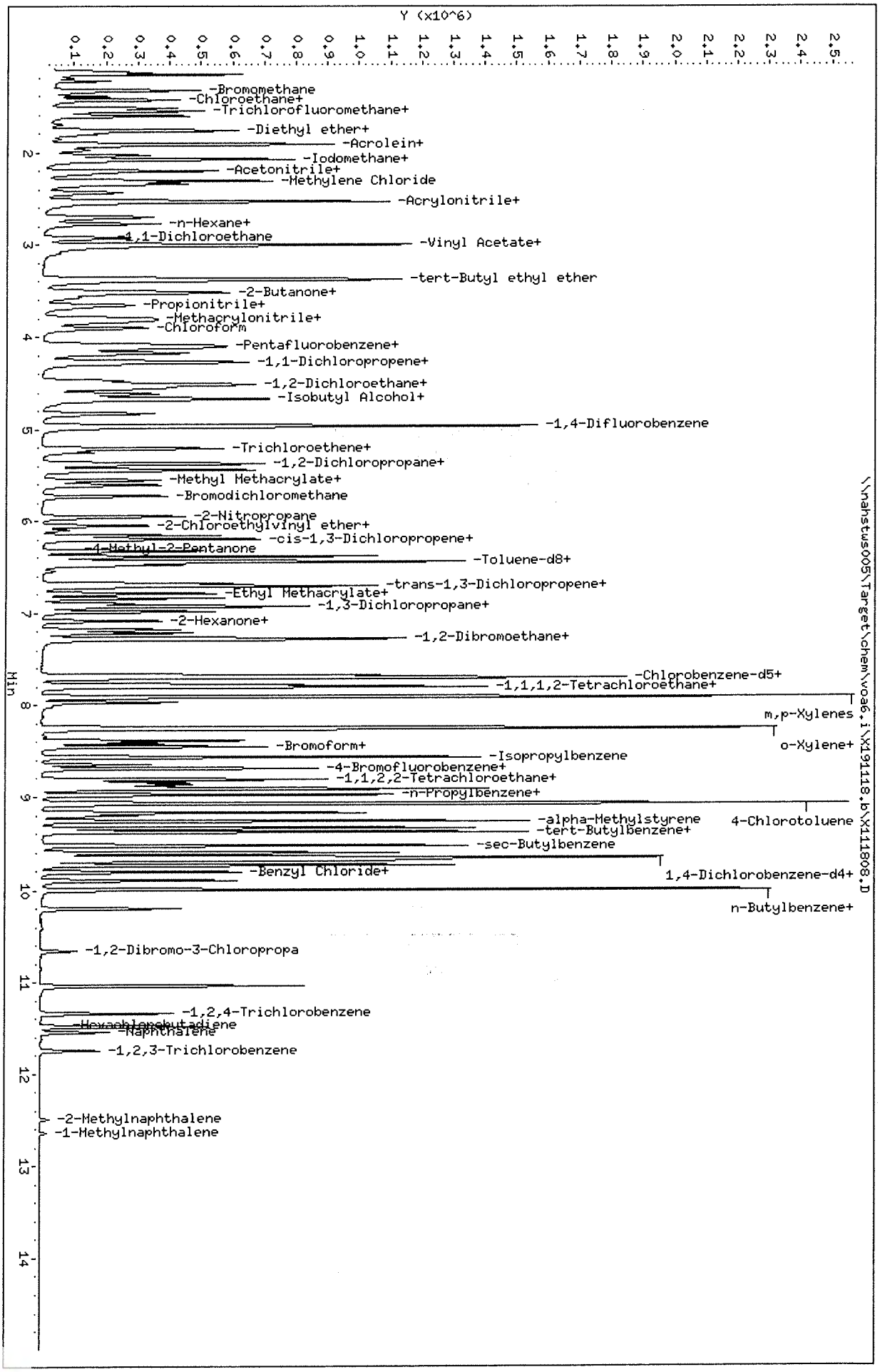
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	399282	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	548073	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	502523	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	273444	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	173990	50.0000	47.93
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	178006	50.0000	47.42
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	608955	50.0000	45.99
$ 69 4-Bromofluorobenzene	95	8.688	8.695	(1.133)	222328	50.0000	47.57
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	184913	50.0000	50.72
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	268813	50.0000	49.90
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	183844	50.0000	47.81
53 1,1,2-Trichloroethane	83	6.840	6.847	(0.892)	128481	50.0000	48.90
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	283343	50.0000	48.77
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	171500	50.0000	50.68
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	220463	50.0000	49.86
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	52554	50.0000	51.69
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	157820	50.0000	48.44 (M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	115181	50.0000	50.00
79 1,2,4-Trimethylbenzene	105	9.383	9.382	(0.970)	661580	50.0000	50.99
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.657	(1.102)	21800	50.0000	51.36
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	174730	50.0000	49.57
88 1,2-Dichlorobenzene	146	9.999	9.998	(1.034)	363670	50.0000	50.11
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	219760	50.0000	50.51

Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111808.D Page 2
Report Date: 22-Dec-2019 16:31

	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)	161607	50.0000	49.36
75	1,3,5-Trimethylbenzene	105	9.067	9.074	(0.938)	647527	50.0000	52.01
83	1,3-Dichlorobenzene	146	9.605	9.612	(0.993)	398343	50.0000	50.79
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	259218	50.0000	48.60
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	400593	50.0000	50.27
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	257082	50.0000	48.75
24	2-Butanone	43	3.573	3.580	(0.854)	116745	100.000	95.28
76	2-Chlorotoluene	91	8.974	8.981	(0.928)	506692	50.0000	51.50
52	2-Hexanone	43	7.090	7.090	(0.924)	193251	100.000	93.61
77	4-Chlorotoluene	91	9.075	9.074	(0.939)	603806	50.0000	50.63
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	703086	50.0000	52.54
45	4-Methyl-2-Pentanone	43	6.324	6.331	(0.824)	284508	100.000	96.62
10	Acetone	43	1.976	1.976	(0.473)	103091	100.000	99.72
37	Benzene	78	4.512	4.512	(0.908)	637799	50.0000	50.87
74	Bromobenzene	156	8.809	8.809	(0.911)	240153	50.0000	50.53
29	Bromochloromethane	128	3.795	3.795	(0.908)	105150	50.0000	48.61
39	Bromodichloromethane	83	5.729	5.729	(1.153)	226127	50.0000	49.85
66	Bromoform	173	8.416	8.415	(1.097)	143798	50.0000	48.09
6	Bromomethane	94	1.338	1.331	(0.320)	215480	50.0000	54.47
19	Carbon Disulfide	76	2.069	2.069	(0.495)	951783	100.000	103.39
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	247524	50.0000	51.11(M)
59	Chlorobenzene	112	7.699	7.699	(1.004)	485055	50.0000	49.44
7	Chloroethane	64	1.403	1.396	(0.336)	124291	50.0000	49.44
28	Chloroform	83	3.910	3.910	(0.935)	300015	50.0000	46.39
3	Chloromethane	50	1.073	1.073	(0.257)	215753	50.0000	49.75
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	187629	50.0000	49.55
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	273432	50.0000	51.15
55	Dibromochloromethane	129	7.176	7.183	(0.936)	191497	50.0000	50.17
44	Dibromomethane	93	5.557	5.557	(1.118)	115707	50.0000	49.94
2	Dichlorodifluoromethane	85	0.973	0.966	(0.233)	186161	50.0000	51.14
61	Ethylbenzene	106	7.799	7.807	(1.017)	257283	50.0000	50.75
91	Hexachlorobutadiene	225	11.488	11.488	(1.188)	99881	50.0000	52.17
67	Isopropylbenzene	105	8.566	8.566	(1.117)	765390	50.0000	50.97
62	m,p-Xylenes	106	7.907	7.907	(1.031)	625932	100.000	102.32
17	Methylene Chloride	84	2.305	2.305	(0.551)	168044	50.0000	46.54
87	n-Butylbenzene	91	9.999	9.998	(1.034)	591076	50.0000	53.08
73	n-Propylbenzene	91	8.917	8.917	(0.922)	884464	50.0000	52.32
92	Naphthalene	128	11.546	11.546	(1.194)	142473	50.0000	48.22
63	o-Xylene	106	8.244	8.244	(1.075)	301622	50.0000	49.96
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	772064	50.0000	52.58
64	Styrene	104	8.258	8.265	(1.077)	530825	50.0000	50.56
78	tert-Butylbenzene	119	9.340	9.339	(0.966)	550071	50.0000	51.60
56	Tetrachloroethene	164	6.933	6.933	(0.904)	176674	50.0000	50.03
50	Toluene	91	6.446	6.453	(0.840)	709296	50.0000	49.77
20	trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	163591	50.0000	49.79
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	247921	50.0000	50.89
38	Trichloroethene	130	5.206	5.206	(1.048)	196625	50.0000	51.29
8	Trichlorofluoromethane	101	1.560	1.553	(0.373)	328789	50.0000	53.08
5	Vinyl Chloride	62	1.138	1.138	(0.272)	201503	50.0000	49.51

QC Flag Legend

M - Compound response manually integrated.

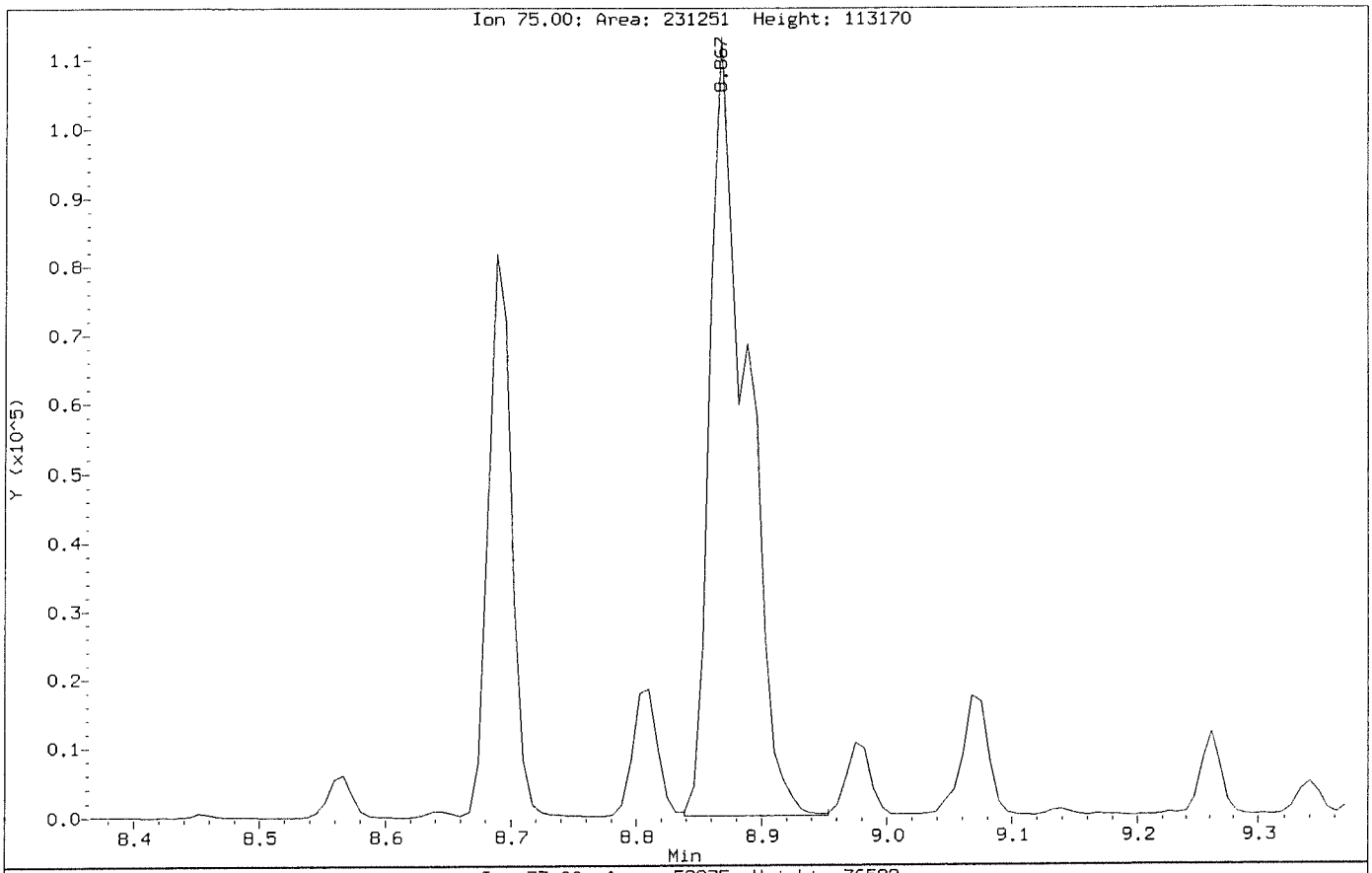


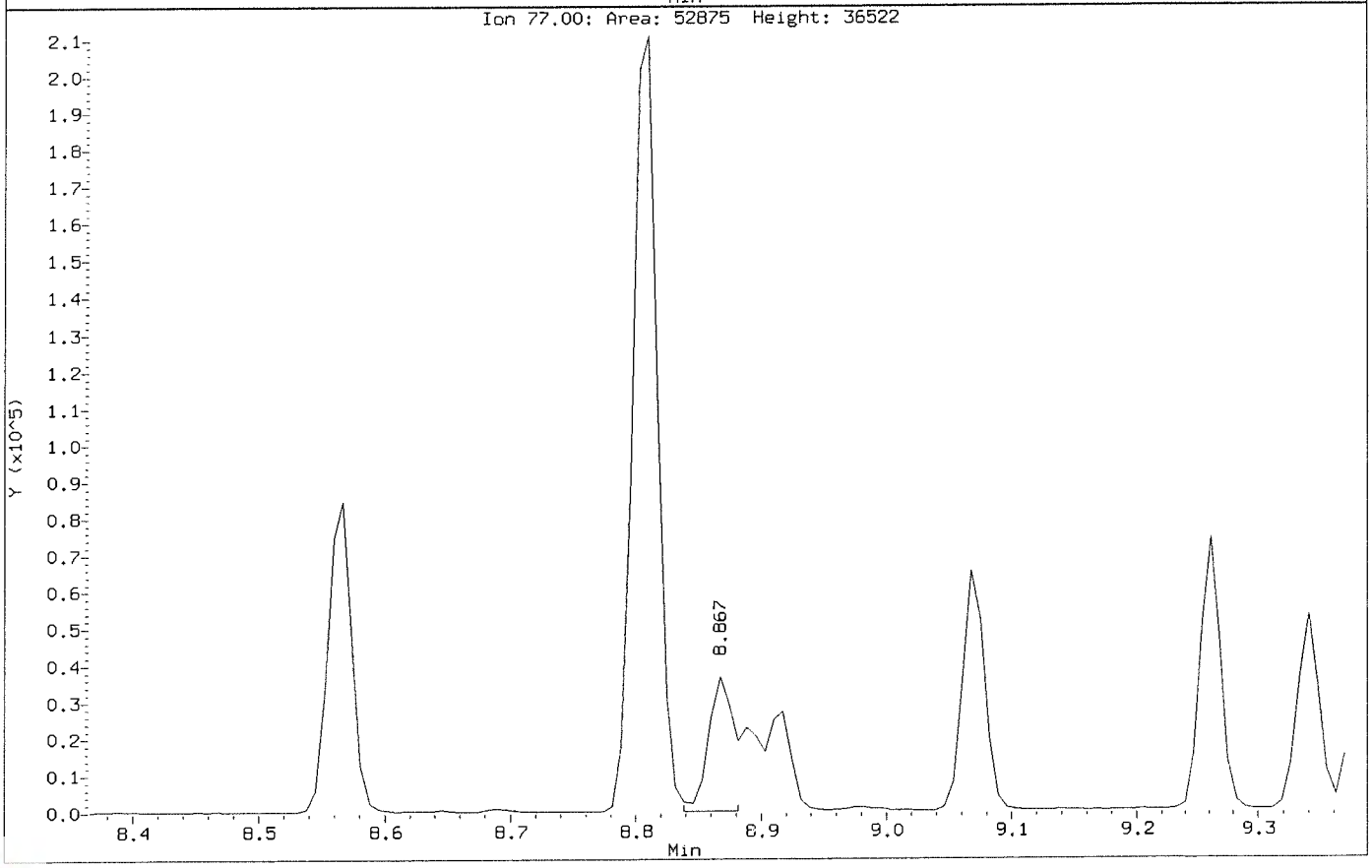
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Purge Volume: 5.0
Column phase: DB624

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

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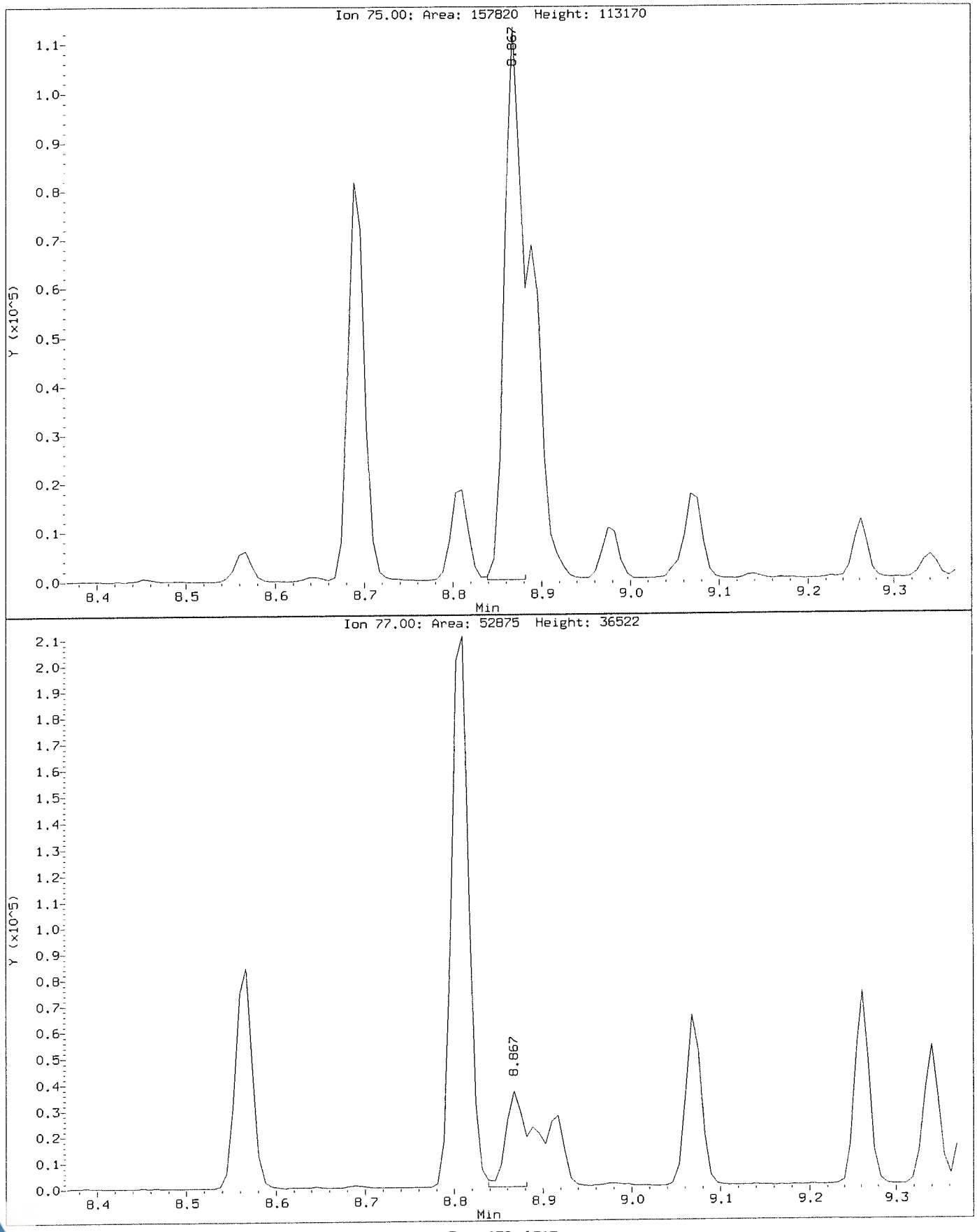
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





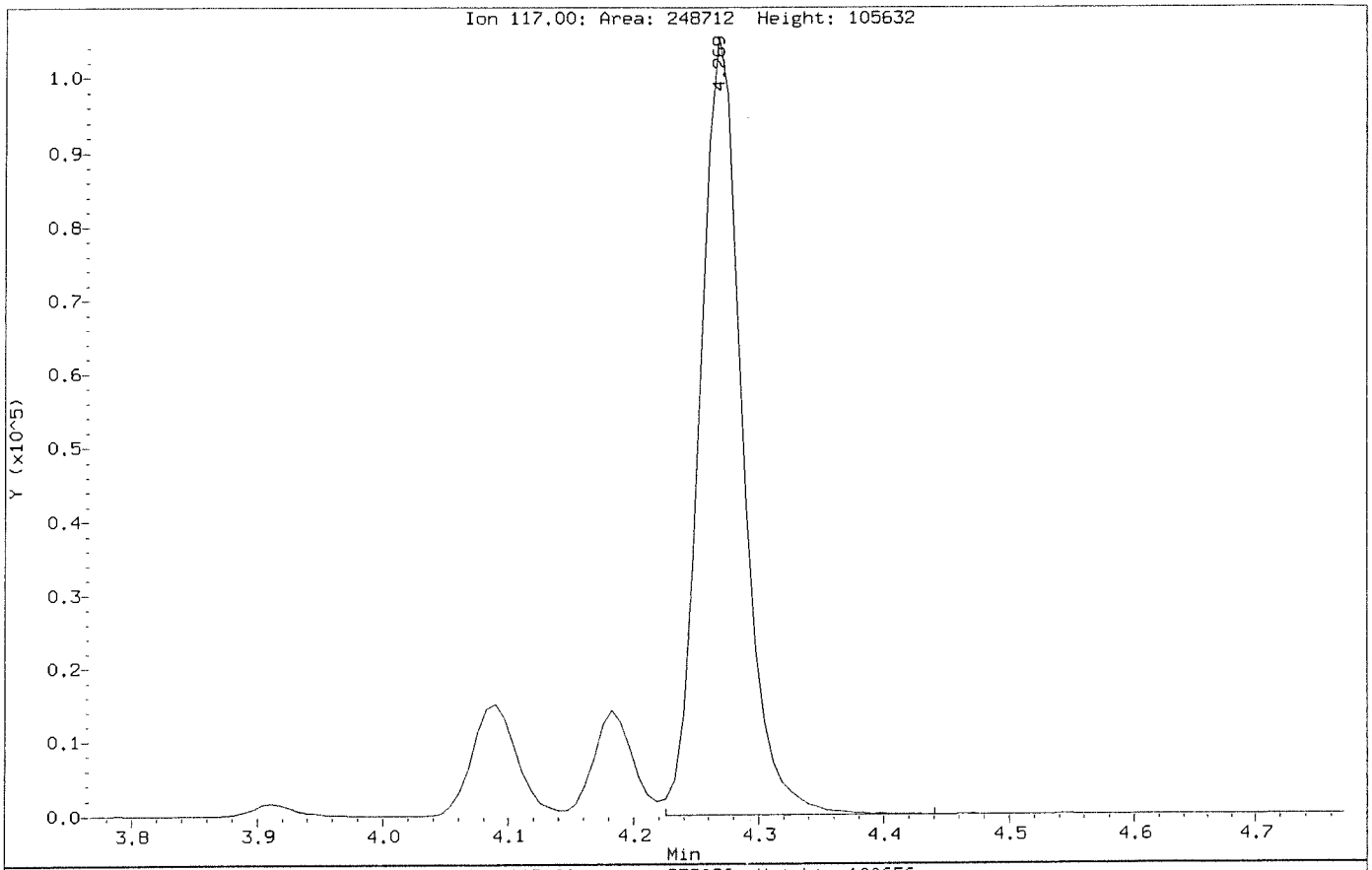
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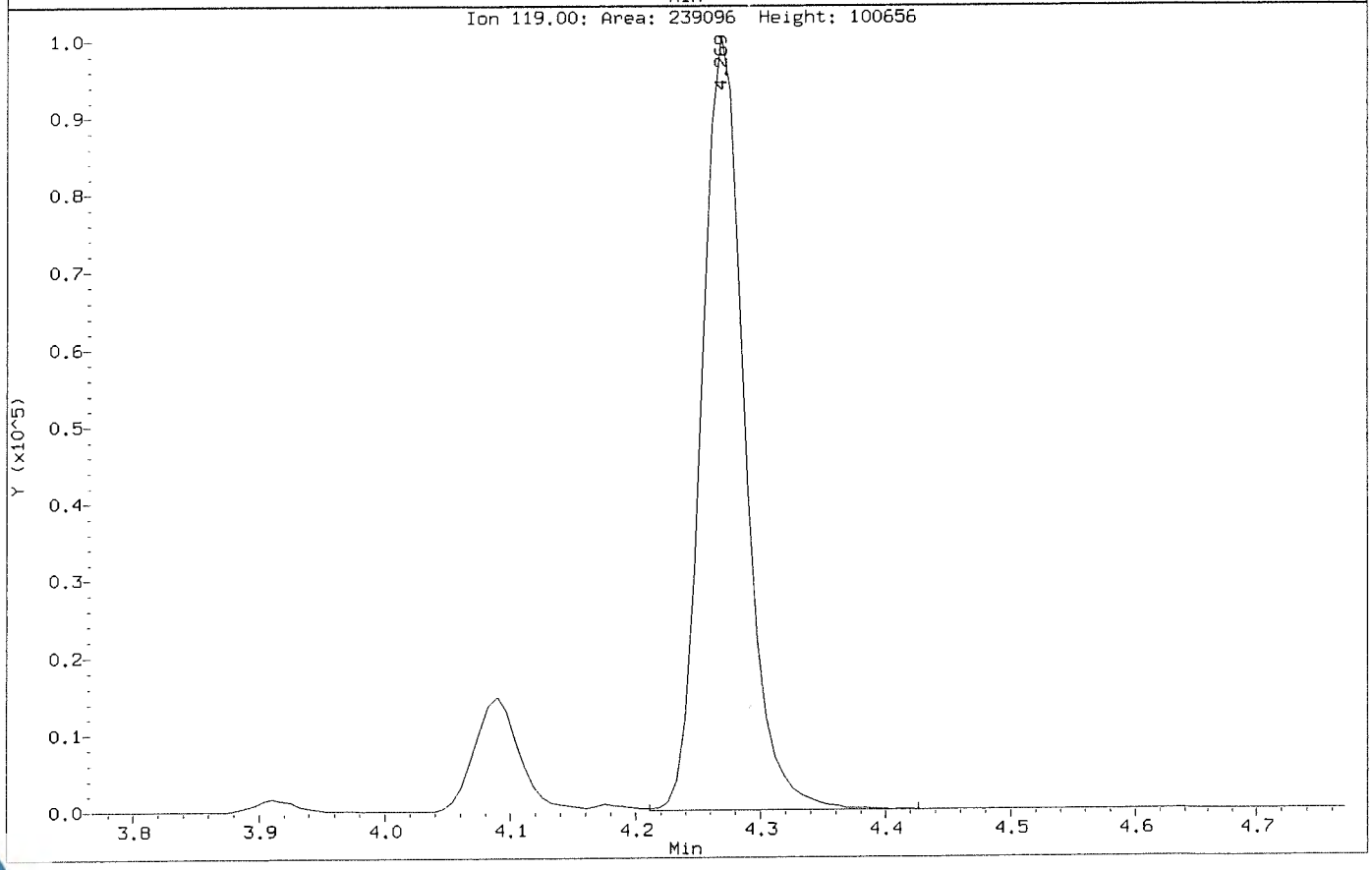
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



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Instrument: voa6.i
Client Sample ID: VSTD050

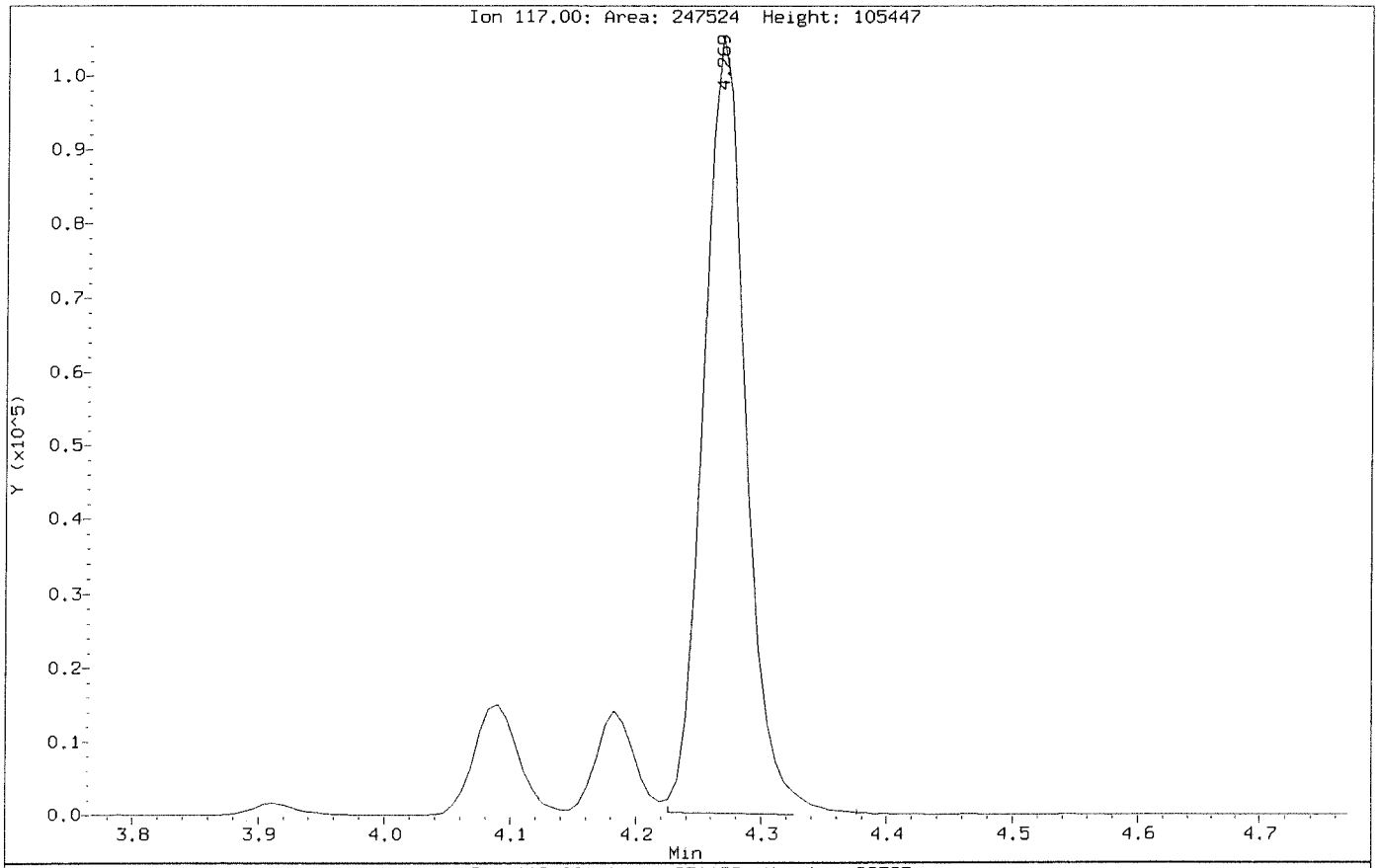
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

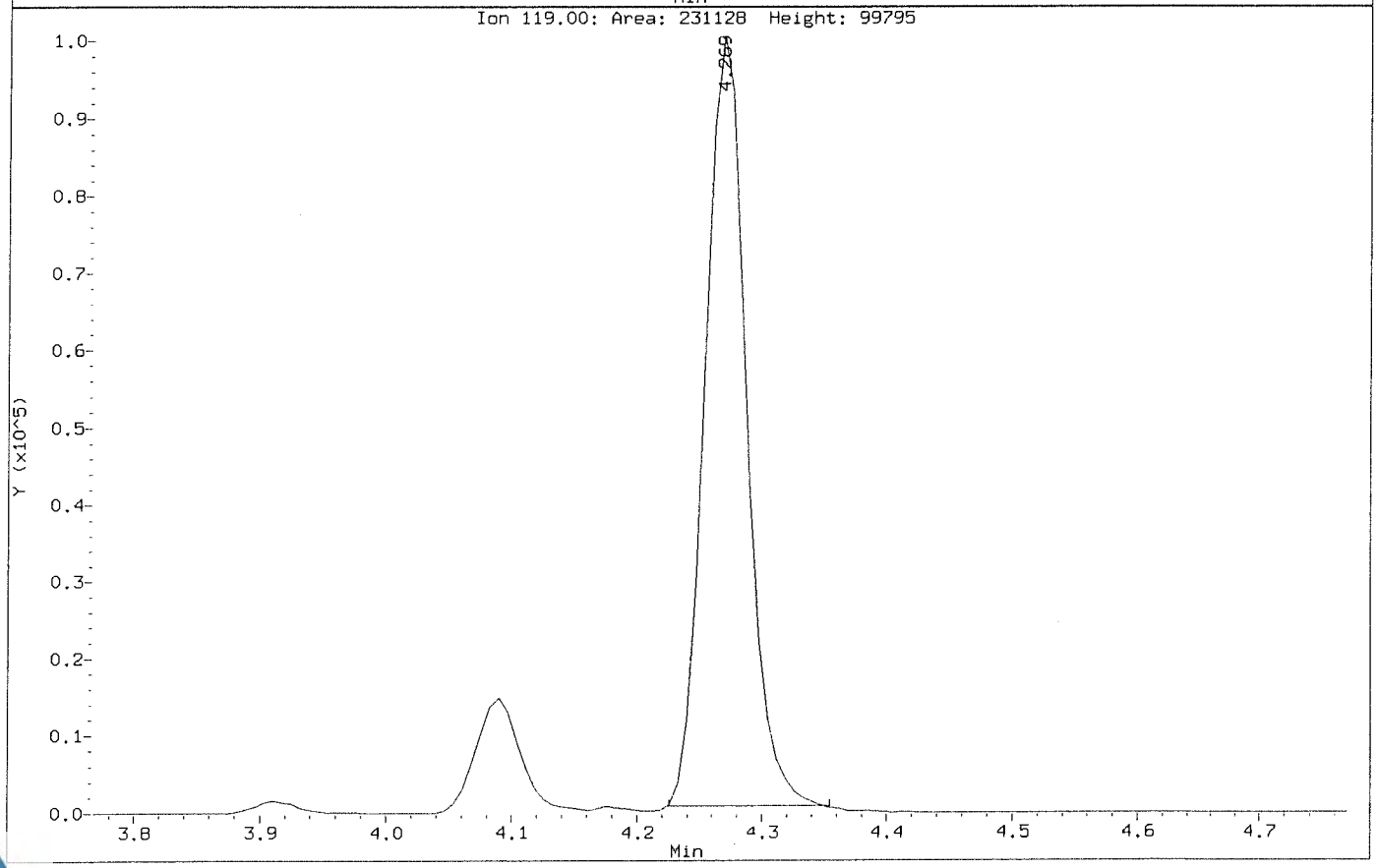




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Injection Date: 18-NOV-2019 16:35
Instrument: voa6.i
Client Sample ID: VSTD050

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





Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111809.D Page 1
Report Date: 22-Dec-2019 16:31

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X191118.b\X111809.D
Lab Smp Id: VSTD100 Client Smp ID: VSTD100
Inj Date : 18-NOV-2019 16:59
Operator : PC Inst ID: voa6.i
Smp Info : VSTD100;VSTD100;1;8;
Misc Info : HS18090001;WATER;0;1;
Comment :
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Meth Date : 22-Dec-2019 16:31 voa6.i Quant Type: ISTD
Cal Date : 18-NOV-2019 16:59 Cal File: X111809.D
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14

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

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

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	392699	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	554744	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	502006	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	278931	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	354918	100.000	99.03
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	364646	100.000	97.98
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1251601	100.000	94.62
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	465570	100.000	99.26
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	370675	100.000	101.77
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	531073	100.000	100.24
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	374065	100.000	95.36
53 1,1,2-Trichloroethane	83	6.840	6.847	(0.892)	259169	100.000	98.76
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	562516	100.000	98.44
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	336639	100.000	101.15
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	435155	100.000	97.24
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	102660	100.000	99.24
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	314678	100.000	94.68(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	224252	100.000	95.44
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	1360930	100.000	102.82
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.657	(1.102)	42468	100.000	98.40
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	348356	100.000	98.94
88 1,2-Dichlorobenzene	146	9.999	9.998	(1.034)	740257	100.000	99.99
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	440676	100.000	100.06

Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111809.D Page 2
Report Date: 22-Dec-2019 16:31

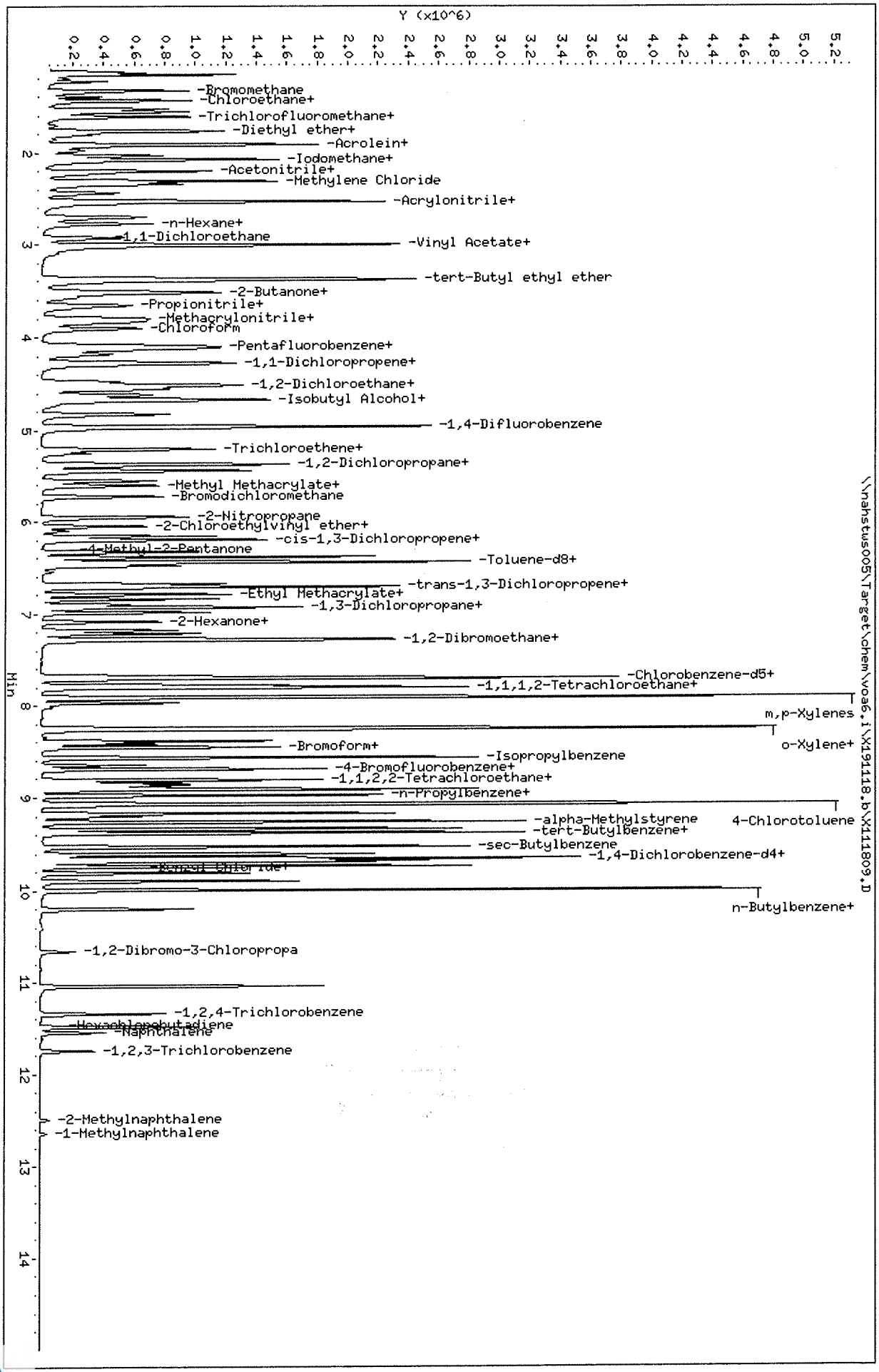
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	322033	100.000	97.17
75	1,3,5-Trimethylbenzene	105	9.067	9.074	(0.938)	1326043	100.000	104.41
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	793024	100.000	99.13
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	523367	100.000	98.23
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	805891	100.000	99.14
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	505741	100.000	97.52
24	2-Butanone	43	3.580	3.580	(0.856)	231090	200.000	191.78
76	2-Chlorotoluene	91	8.974	8.981	(0.928)	1019206	100.000	101.56
52	2-Hexanone	43	7.090	7.090	(0.924)	404339	200.000	196.07
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	1244013	100.000	102.27
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	1420650	100.000	104.09
45	4-Methyl-2-Pentanone	43	6.324	6.331	(0.824)	584699	200.000	198.78
10	Acetone	43	1.976	1.976	(0.473)	202207	200.000	202.71(A)
37	Benzene	78	4.519	4.512	(0.909)	1259183	100.000	99.22
74	Bromobenzene	156	8.809	8.809	(0.911)	477901	100.000	98.58
29	Bromochloromethane	128	3.795	3.795	(0.908)	204995	100.000	96.36
39	Bromodichloromethane	83	5.729	5.729	(1.153)	453036	100.000	98.68
66	Bromoform	173	8.415	8.415	(1.097)	293256	100.000	97.14
6	Bromomethane	94	1.331	1.331	(0.318)	396733	100.000	104.04
19	Carbon Disulfide	76	2.069	2.069	(0.495)	1866170	200.000	206.12(A)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	490954	100.000	100.15(H)
59	Chlorobenzene	112	7.699	7.699	(1.004)	969904	100.000	98.96
7	Chloroethane	64	1.396	1.396	(0.334)	244234	100.000	98.78
28	Chloroform	83	3.910	3.910	(0.935)	592217	100.000	93.11
3	Chloromethane	50	1.073	1.073	(0.257)	420936	100.000	98.51
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	373378	100.000	100.25
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	548280	100.000	101.34
55	Dibromochloromethane	129	7.176	7.183	(0.936)	387071	100.000	101.53
44	Dibromomethane	93	5.557	5.557	(1.118)	228649	100.000	97.50
2	Dichlorodifluoromethane	85	0.973	0.966	(0.233)	359790	100.000	99.65
61	Ethylbenzene	106	7.799	7.807	(1.017)	511284	100.000	100.96
91	Hexachlorobutadiene	225	11.488	11.488	(1.188)	192455	100.000	99.01
67	Isopropylbenzene	105	8.566	8.566	(1.117)	1550450	100.000	103.37
62	m,p-Xylenes	106	7.907	7.907	(1.031)	1262031	200.000	206.53(A)
17	Methylene Chloride	84	2.305	2.305	(0.551)	333987	100.000	94.05
87	n-Butylbenzene	91	9.999	9.998	(1.034)	1214189	100.000	106.90
73	n-Propylbenzene	91	8.917	8.917	(0.922)	1771664	100.000	102.75
92	Naphthalene	128	11.546	11.546	(1.194)	281768	100.000	93.49
63	o-Xylene	106	8.244	8.244	(1.075)	610719	100.000	101.26
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	1561099	100.000	104.22
64	Styrene	104	8.258	8.265	(1.077)	1077784	100.000	102.77
78	tert-Butylbenzene	119	9.340	9.339	(0.966)	1121644	100.000	103.15
56	Tetrachloroethene	164	6.933	6.933	(0.904)	341567	100.000	96.83
50	Toluene	91	6.446	6.453	(0.840)	1413996	100.000	99.32
20	trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	324394	100.000	100.39
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	504686	100.000	102.35
38	Trichloroethene	130	5.206	5.206	(1.048)	388311	100.000	100.09
8	Trichlorofluoromethane	101	1.560	1.553	(0.373)	647137	100.000	106.23
5	Vinyl Chloride	62	1.138	1.138	(0.272)	400884	100.000	100.16

QC Flag Legend

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

QC Flag Legend

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

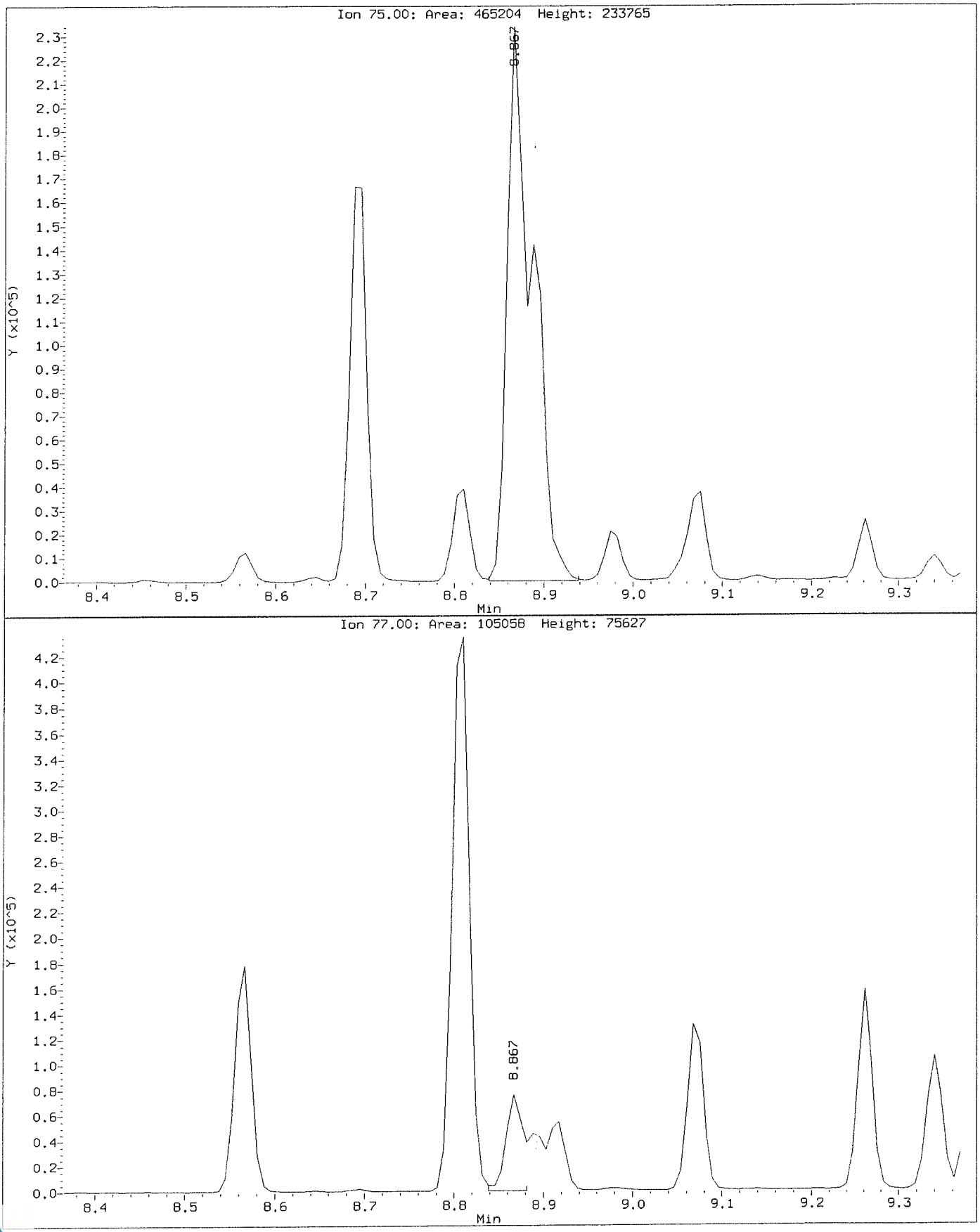


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Date : 18-NOV-2019 16:59
Client ID: VSTD100
Sample Info: VSTD100;VSTD100;1;8;
Purge Volume: 5.0
Column phase: DB624

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

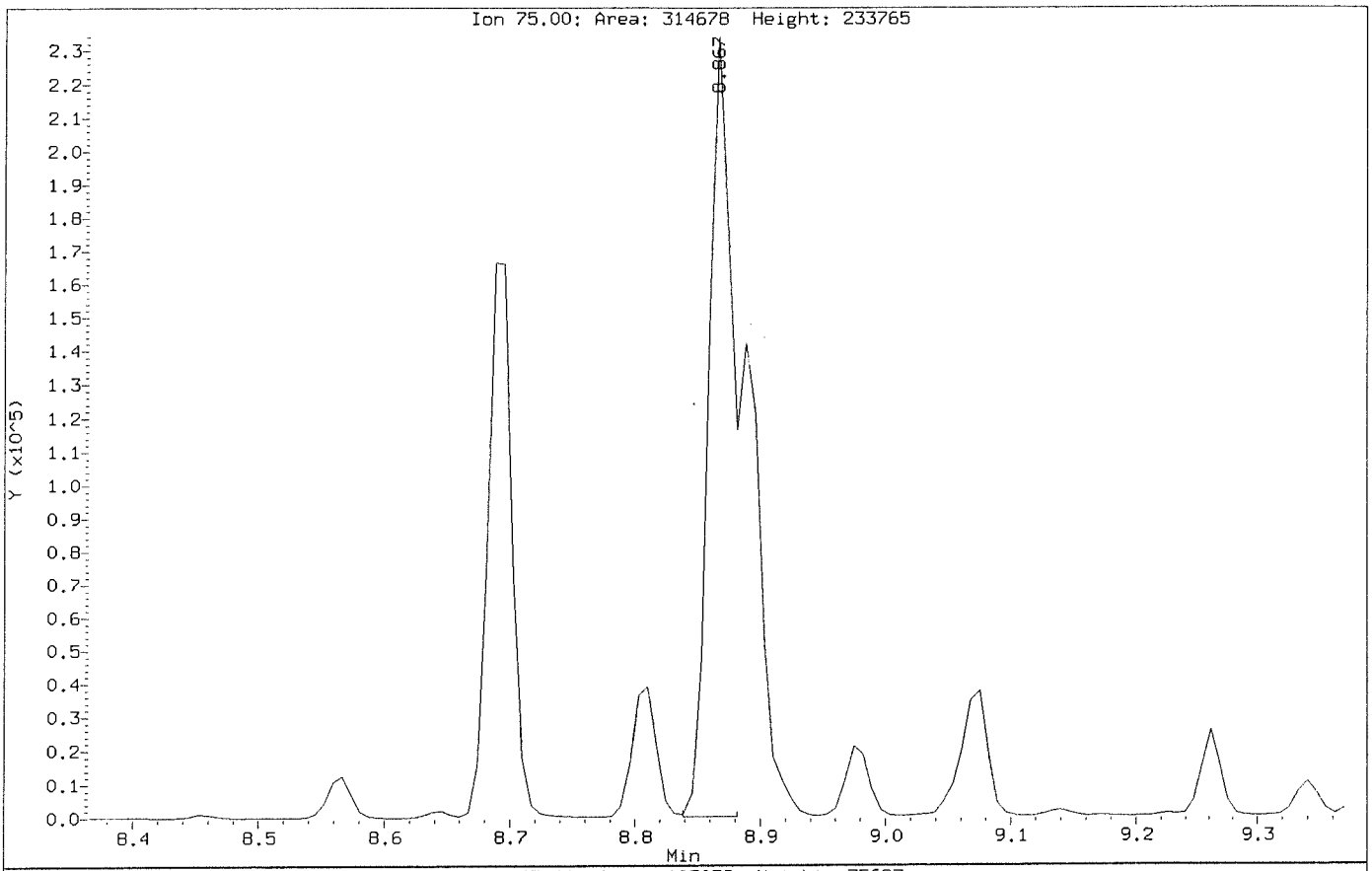
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Injection Date: 18-NOV-2019 16:59
Instrument: voa6.i
Client Sample ID: VSTD100

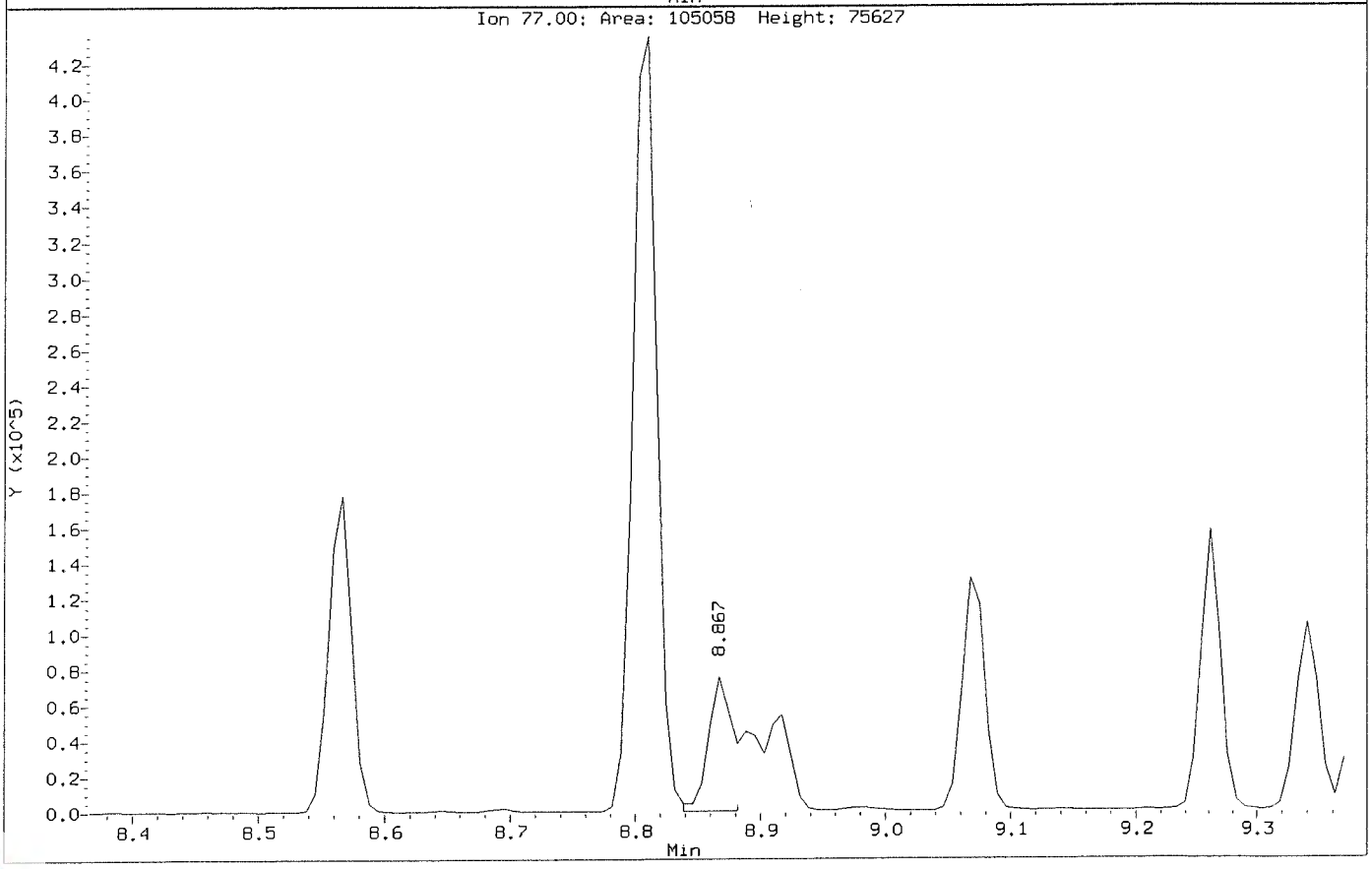
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



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Injection Date: 18-NOV-2019 16:59
Instrument: voa6.i
Client Sample ID: VSTD100

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





Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111810.D Page 1
Report Date: 22-Dec-2019 16:31

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X191118.b\X111810.D
Lab Smp Id: VSTD150 Client Smp ID: VSTD150
Inj Date : 18-NOV-2019 17:22
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\X191118.b\8260W.m
Meth Date : 22-Dec-2019 16:31 voa6.i Quant Type: ISTD
Cal Date : 18-NOV-2019 17:22 Cal File: X111810.D
Als bottle: 11 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14

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

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

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	378157	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	542191	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	494760	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	282310	50.0000	
$ 30 Dibromofluoromethane	113	4.104	4.103	(0.981)	514854	150.000	148.99
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	532181	150.000	148.11
$ 48 Toluene-d8	98	6.389	6.388	(0.833)	1815269	150.000	139.25
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	688600	150.000	148.76
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	548257	150.000	152.74
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	768782	150.000	150.69
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	560927	150.000	141.29
53 1,1,2-Trichloroethane	83	6.840	6.847	(0.892)	380298	150.000	147.04
22 1,1-Dichloroethane	63	2.922	2.921	(0.699)	825788	150.000	150.08
11 1,1-Dichloroethene	96	1.912	1.911	(0.457)	483391	150.000	150.83
32 1,1-Dichloropropene	75	4.283	4.282	(0.862)	635821	150.000	145.37
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	156391	150.000	148.93
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	465353	150.000	138.34(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	338737	150.000	142.44
79 1,2,4-Trimethylbenzene	105	9.383	9.382	(0.970)	2030171	150.000	151.55
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.657	(1.102)	65470	150.000	150.06
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	518766	150.000	149.49
88 1,2-Dichlorobenzene	146	9.999	9.998	(1.034)	1121580	150.000	149.69
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	645436	150.000	149.95

Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111810.D Page 2
Report Date: 22-Dec-2019 16:31

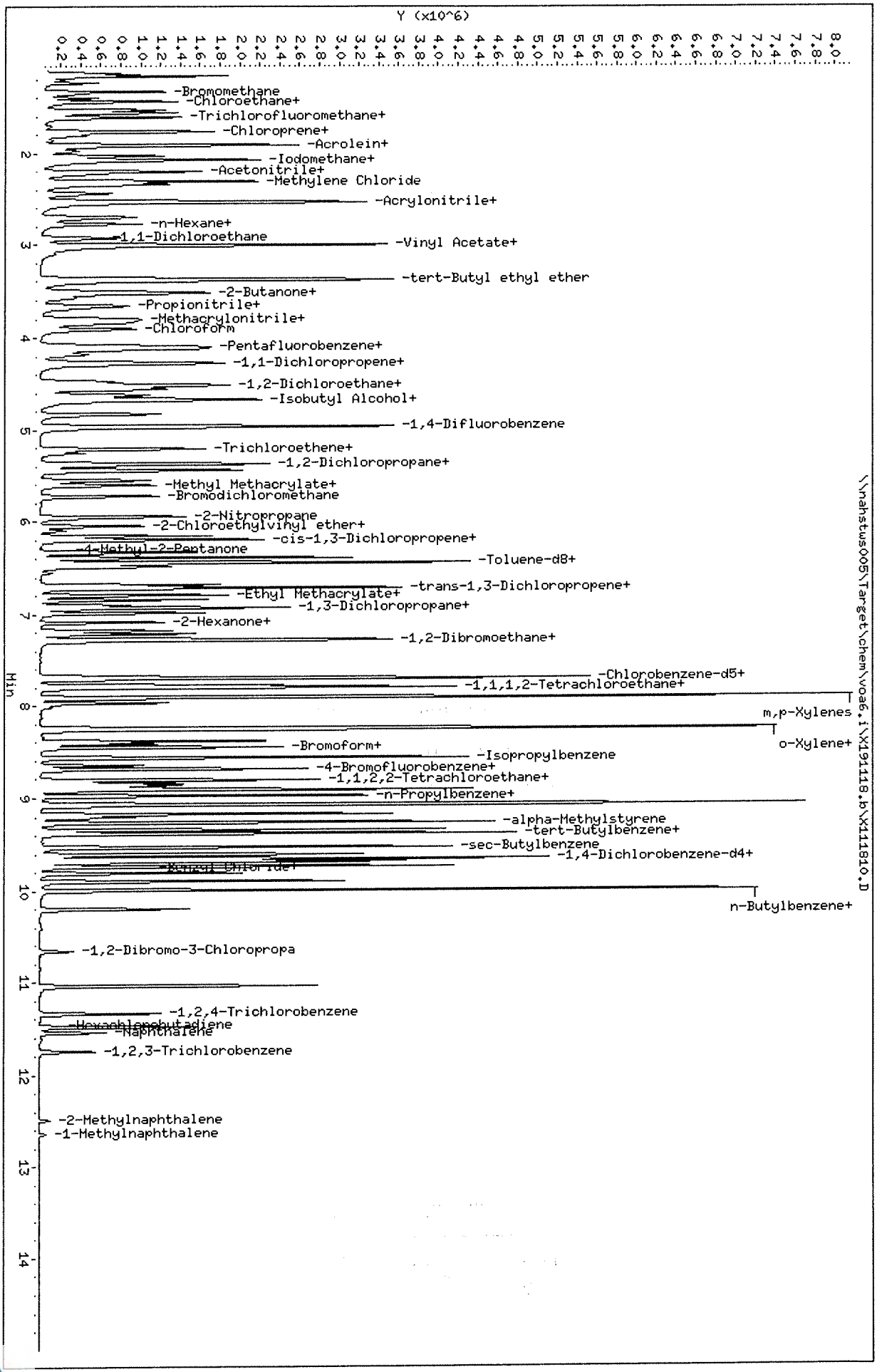
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	471959	150.000	145.71
75 1,3,5-Trimethylbenzene	105	9.067	9.074	(0.938)	1980658	150.000	154.09
83 1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	1183710	150.000	146.20
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	763789	150.000	145.46
84 1,4-Dichlorobenzene	146	9.684	9.683	(1.001)	1195790	150.000	145.34
26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	732900	150.000	146.75
24 2-Butanone	43	3.573	3.580	(0.854)	346972	300.000	299.02(A)
76 2-Chlorotoluene	91	8.982	8.981	(0.929)	1513395	150.000	149.00
52 2-Hexanone	43	7.090	7.090	(0.924)	606144	300.000	298.23(A)
77 4-Chlorotoluene	91	9.075	9.074	(0.939)	1867848	150.000	151.71
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	2100293	150.000	152.04
45 4-Methyl-2-Pentanone	43	6.324	6.331	(0.824)	884349	300.000	305.06(A)
10 Acetone	43	1.976	1.976	(0.473)	284604	300.000	298.06(A)
37 Benzene	78	4.512	4.512	(0.908)	1843665	150.000	148.64
74 Bromobenzene	156	8.810	8.809	(0.911)	709083	150.000	144.52
29 Bromochloromethane	128	3.795	3.795	(0.908)	294445	150.000	143.73
39 Bromodichloromethane	83	5.730	5.729	(1.153)	669356	150.000	149.18
66 Bromoform	173	8.416	8.415	(1.097)	447981	150.000	150.02
6 Bromomethane	94	1.331	1.331	(0.318)	529714	150.000	145.16
19 Carbon Disulfide	76	2.069	2.069	(0.495)	2705391	300.000	310.30(A)
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	707541	150.000	147.68(H)
59 Chlorobenzene	112	7.699	7.699	(1.004)	1445648	150.000	149.66
7 Chloroethane	64	1.396	1.396	(0.334)	351927	150.000	147.81
28 Chloroform	83	3.910	3.910	(0.935)	863467	150.000	140.99
3 Chloromethane	50	1.074	1.073	(0.257)	613254	150.000	148.94
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	542390	150.000	151.24
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	808388	150.000	152.88
55 Dibromochloromethane	129	7.176	7.183	(0.936)	573494	150.000	152.63
44 Dibromomethane	93	5.558	5.557	(1.118)	338759	150.000	147.80
2 Dichlorodifluoromethane	85	0.966	0.966	(0.231)	504807	150.000	144.79
61 Ethylbenzene	106	7.800	7.807	(1.017)	751250	150.000	150.52
91 Hexachlorobutadiene	225	11.489	11.488	(1.188)	279881	150.000	142.49
67 Isopropylbenzene	105	8.566	8.566	(1.117)	2283588	150.000	154.47
62 m,p-Xylenes	106	7.907	7.907	(1.031)	1861660	300.000	309.12(A)
17 Methylene Chloride	84	2.306	2.305	(0.551)	485622	150.000	142.02
87 n-Butylbenzene	91	9.999	9.998	(1.034)	1823176	150.000	158.59
73 n-Propylbenzene	91	8.917	8.917	(0.922)	2616190	150.000	149.92
92 Naphthalene	128	11.546	11.546	(1.194)	435593	150.000	142.81
63 o-Xylene	106	8.244	8.244	(1.075)	906786	150.000	152.56
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	2308597	150.000	152.28
64 Styrene	104	8.258	8.265	(1.077)	1622659	150.000	156.99
78 tert-Butylbenzene	119	9.340	9.339	(0.966)	1665732	150.000	151.35
56 Tetrachloroethene	164	6.933	6.933	(0.904)	493485	150.000	141.95
50 Toluene	91	6.446	6.453	(0.840)	2107838	150.000	150.23
20 trans-1,2-Dichloroethene	96	2.528	2.527	(0.604)	472385	150.000	151.82
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	741568	150.000	153.87
38 Trichloroethene	130	5.207	5.206	(1.048)	566006	150.000	149.27
8 Trichlorofluoromethane	101	1.553	1.553	(0.372)	922117	150.000	157.19
5 Vinyl Chloride	62	1.138	1.138	(0.272)	578026	150.000	149.97

QC Flag Legend

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

QC Flag Legend

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

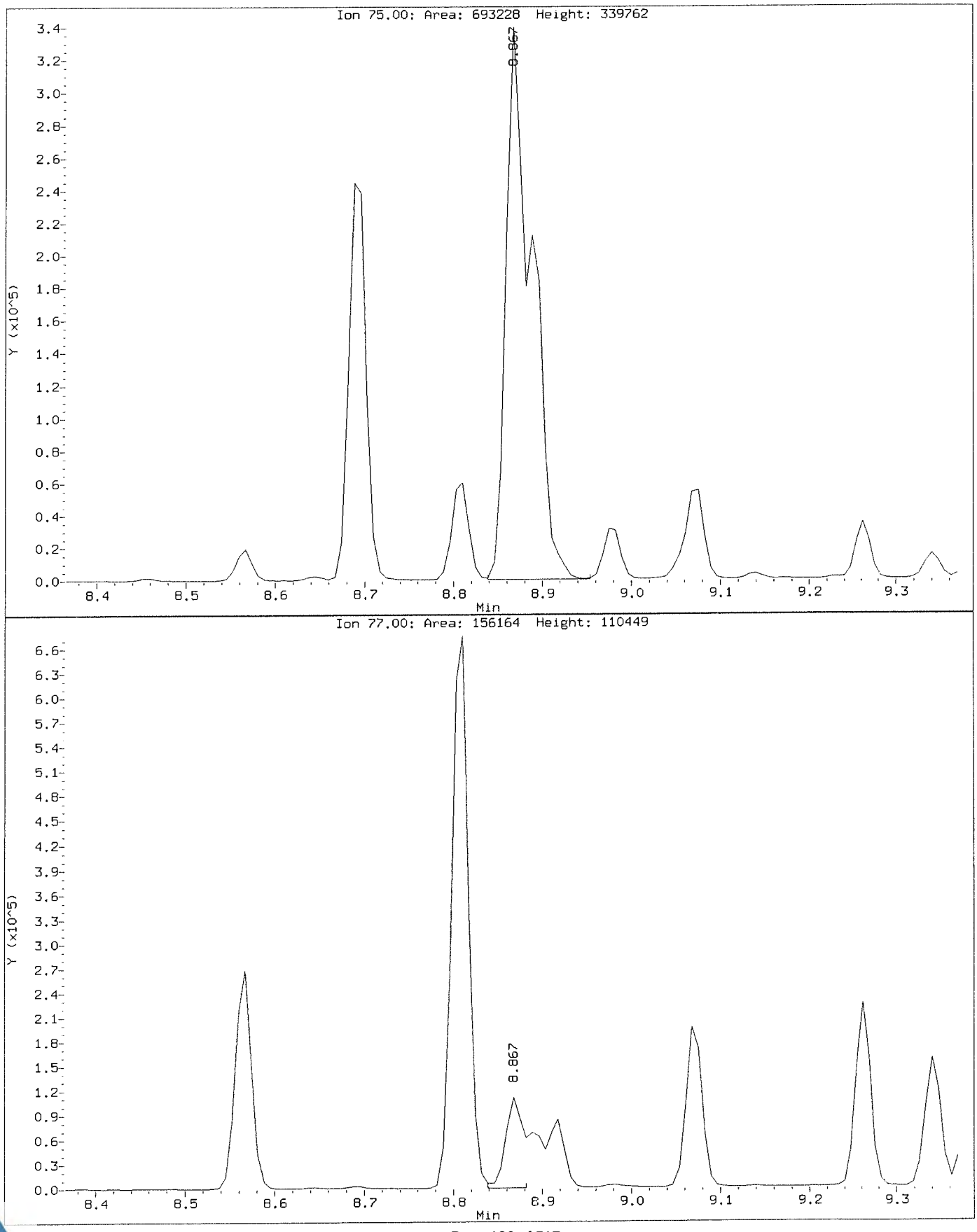


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Date : 18-NOV-2019 17:22
Client ID: VSTD150
Sample Info: VSTD150;VSTD150;1;9;
Purge Volume: 5.0
Column phase: DB624

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

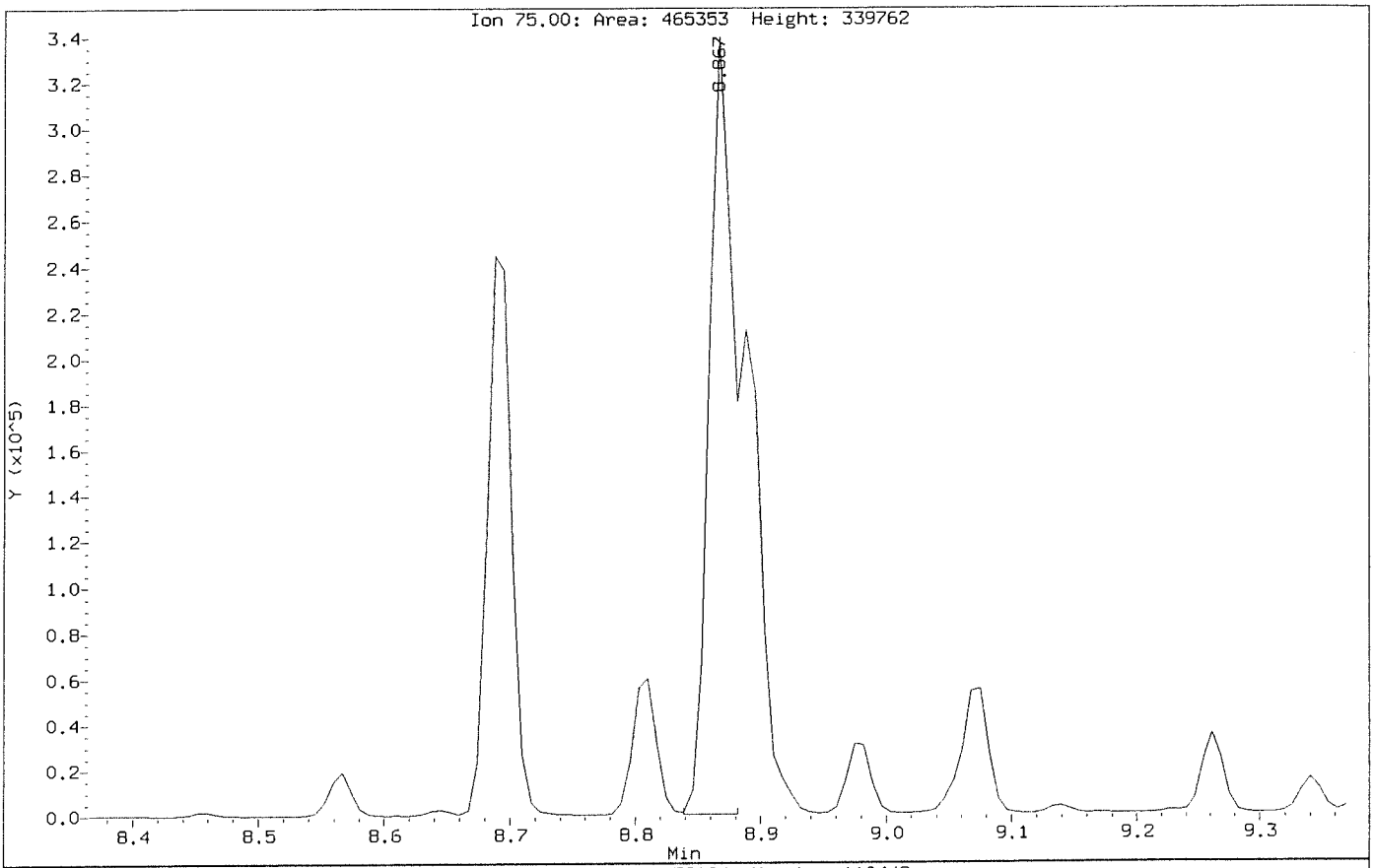
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Injection Date: 18-NOV-2019 17:22
Instrument: voa6.i
Client Sample ID: VSTD150

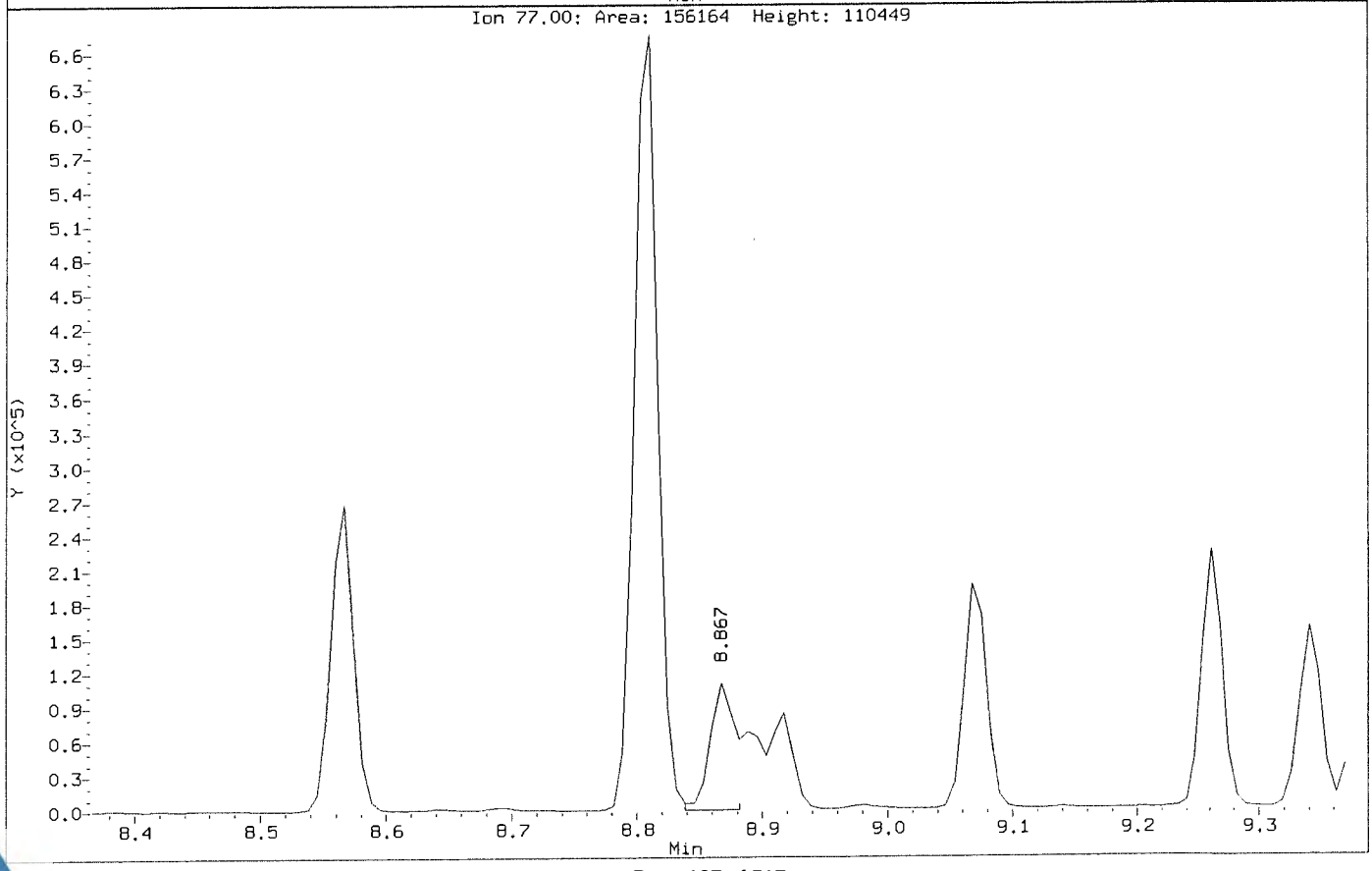
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111810.D
Injection Date: 18-NOV-2019 17:22
Instrument: voa6.i
Client Sample ID: VSTD150

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





Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111811.D Page 1
Report Date: 22-Dec-2019 16:32

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X191118.b\X111811.D
Lab Smp Id: VSTD200 Client Smp ID: VSTD200
Inj Date : 18-NOV-2019 17:46
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\X191118.b\8260W.m
Meth Date : 22-Dec-2019 16:31 voa6.i Quant Type: ISTD
Cal Date : 18-NOV-2019 17:46 Cal File: X111811.D
Als bottle: 12 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14

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

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

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	369517	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	542684	50.0000	
*	47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	493817	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	280605	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	681300	200.000	201.64(A)
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	713282	200.000	202.89(A)
$	48 Toluene-d8	98	6.388	6.388	(0.833)	2431773	200.000	186.90
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	933083	200.000	201.81(A)
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	731912	200.000	204.29(A)
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	1030058	200.000	206.62(A)
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	742176	200.000	188.09
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	511936	200.000	198.31
	22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	1089650	200.000	202.66(A)
	11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	641291	200.000	204.78(A)
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	849992	200.000	194.17
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	210414	200.000	200.64(A)
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	609450	200.000	182.28(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	455609	200.000	192.75
	79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	2745695	200.000	206.21(A)
	89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.102)	86827	200.000	200.34(A)
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	693307	200.000	200.18(A)
	88 1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	1508205	200.000	202.51(A)
	33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	865099	200.000	200.81(A)

Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111811.D Page 2
Report Date: 22-Dec-2019 16:32

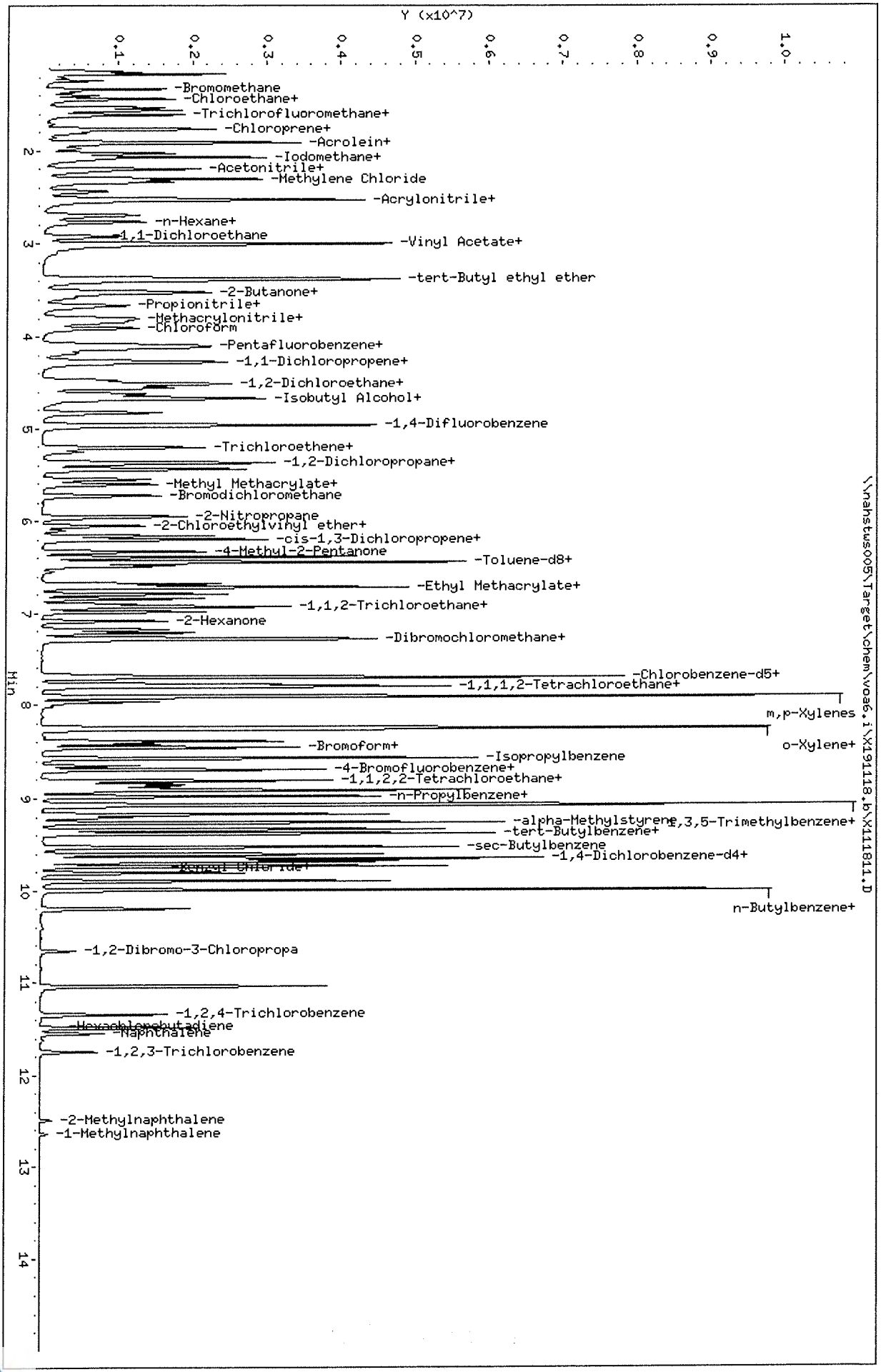
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	629023	200.000	194.03
75	1,3,5-Trimethylbenzene	105	9.074	9.074	(0.939)	2668415	200.000	208.86(A)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	1590132	200.000	197.60
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	1018788	200.000	194.39
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	1621999	200.000	198.35
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	972273	200.000	199.24
24	2-Butanone	43	3.580	3.580	(0.856)	437867	400.000	386.18(A)
76	2-Chlorotoluene	91	8.981	8.981	(0.929)	2019887	200.000	200.07(A)
52	2-Hexanone	43	7.090	7.090	(0.924)	806375	400.000	397.51(A)
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	2525879	200.000	206.41(A)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	2843849	200.000	207.12(A)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	1178590	400.000	407.33(A)
10	Acetone	43	1.976	1.976	(0.473)	372223	400.000	400.25(A)
37	Benzene	78	4.512	4.512	(0.908)	2449808	200.000	197.34
74	Bromobenzene	156	8.809	8.809	(0.911)	958177	200.000	196.47
29	Bromochloromethane	128	3.795	3.795	(0.908)	376537	200.000	188.10
39	Bromodichloromethane	83	5.729	5.729	(1.153)	893499	200.000	198.95
66	Bromoform	173	8.415	8.415	(1.097)	602595	200.000	201.83(A)
6	Bromomethane	94	1.331	1.331	(0.318)	631015	200.000	177.48(M)
19	Carbon Disulfide	76	2.069	2.069	(0.495)	3628864	400.000	425.96(A)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	954439	200.000	199.03(H)
59	Chlorobenzene	112	7.699	7.699	(1.004)	1940751	200.000	201.30(A)
7	Chloroethane	64	1.396	1.396	(0.334)	459143	200.000	197.35
28	Chloroform	83	3.910	3.910	(0.935)	1152726	200.000	192.62
3	Chloromethane	50	1.073	1.073	(0.257)	811388	200.000	201.60(A)
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	721487	200.000	205.88(A)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	1069987	200.000	202.17(A)
55	Dibromochloromethane	129	7.183	7.183	(0.937)	764698	200.000	203.91(A)
44	Dibromomethane	93	5.557	5.557	(1.118)	451528	200.000	196.82
2	Dichlorodifluoromethane	85	0.966	0.966	(0.231)	695305	200.000	203.74(A)
61	Ethylbenzene	106	7.807	7.807	(1.018)	1011964	200.000	203.15(A)
91	Hexachlorobutadiene	225	11.488	11.488	(1.188)	373475	200.000	191.48
67	Isopropylbenzene	105	8.566	8.566	(1.117)	3082382	200.000	208.91(A)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	2525960	400.000	420.22(A)
17	Methylene Chloride	84	2.305	2.305	(0.551)	644942	200.000	193.02
87	n-Butylbenzene	91	9.998	9.998	(1.034)	2465783	200.000	215.80(A)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	3540988	200.000	204.15(A)
92	Naphthalene	128	11.546	11.546	(1.194)	574298	200.000	189.43
63	o-Xylene	106	8.244	8.244	(1.075)	1231007	200.000	207.50(A)
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	3131997	200.000	207.86(A)
64	Styrene	104	8.265	8.265	(1.078)	2199171	200.000	213.18(A)
78	tert-Butylbenzene	119	9.339	9.339	(0.966)	2240944	200.000	204.85(A)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	660581	200.000	190.38
50	Toluene	91	6.453	6.453	(0.841)	2834294	200.000	202.39(A)
20	trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	630988	200.000	207.54(A)
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	1000892	200.000	207.50(A)
38	Trichloroethene	130	5.206	5.206	(1.048)	754871	200.000	198.90
8	Trichlorofluoromethane	101	1.553	1.553	(0.371)	1241567	200.000	216.59(A)
5	Vinyl Chloride	62	1.138	1.138	(0.272)	773023	200.000	205.26(A)

QC Flag Legend

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

QC Flag Legend

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

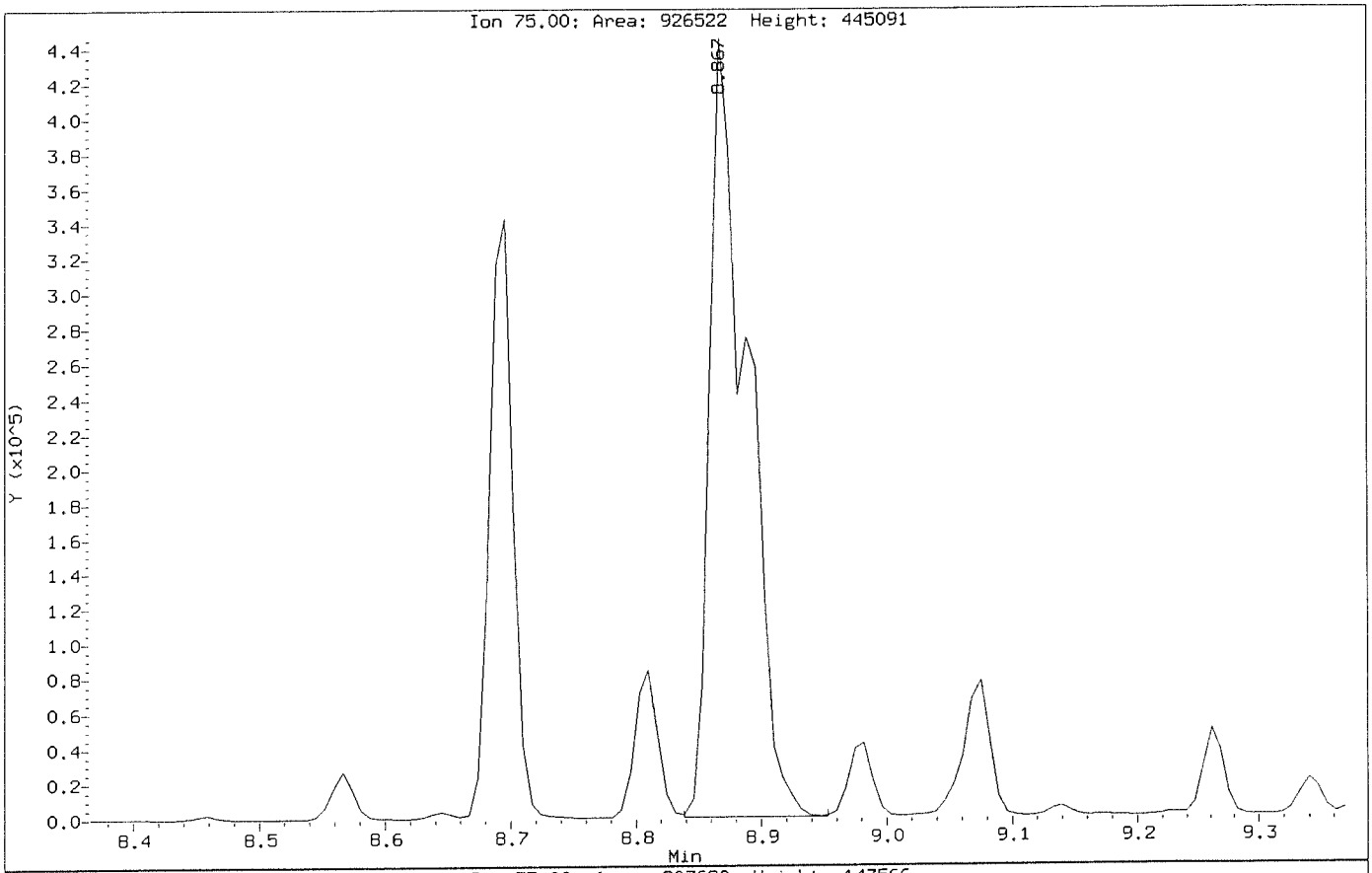


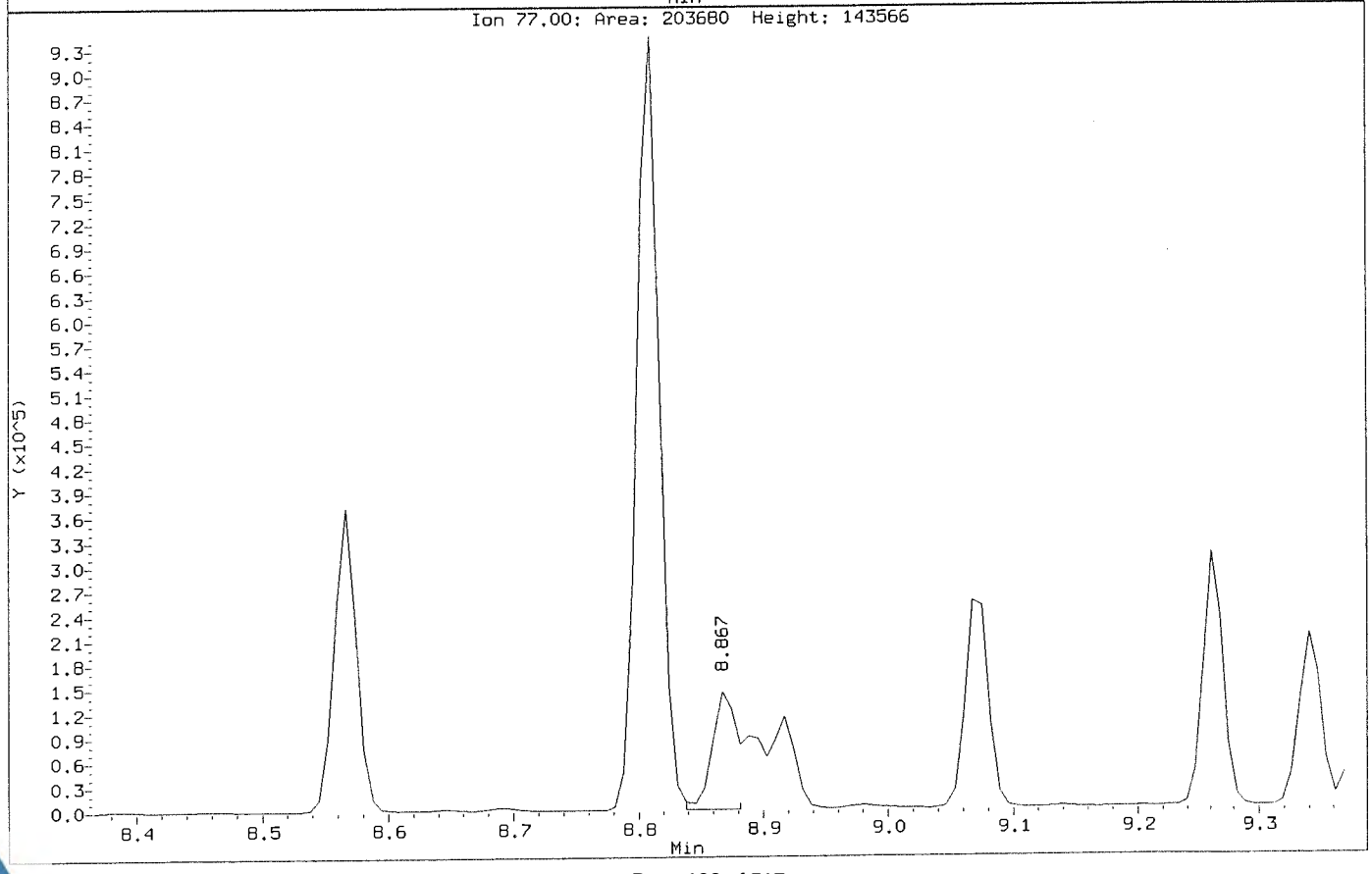
Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111811.D
Date : 18-NOV-2019 17:46
Client ID: VSTD200
Sample Info: VSTD200;VSTD200;1;10;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\Before2\X111811.D
Injection Date: 18-NOV-2019 17:46
Instrument: voa6.i
Client Sample ID: VSTD200

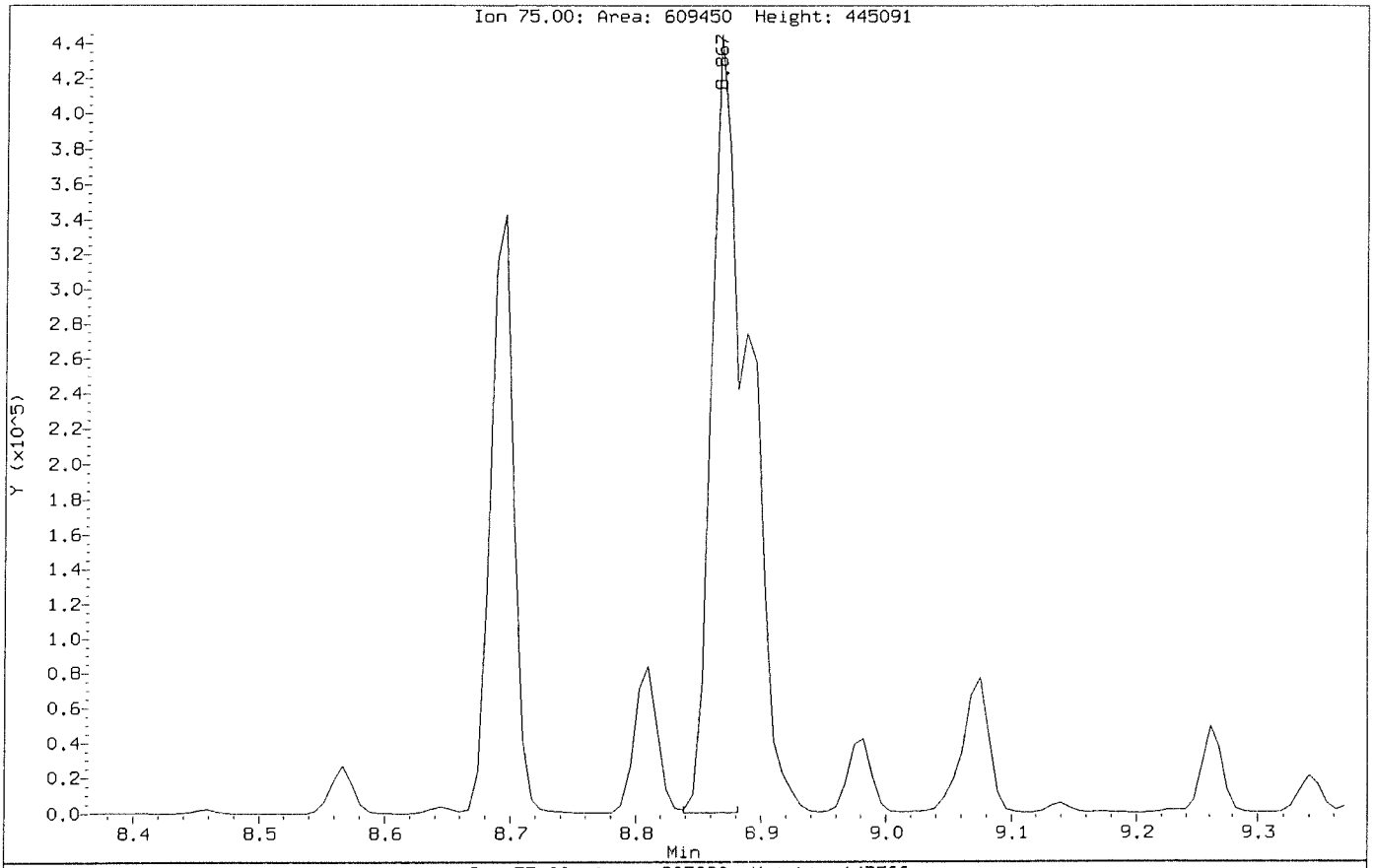
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

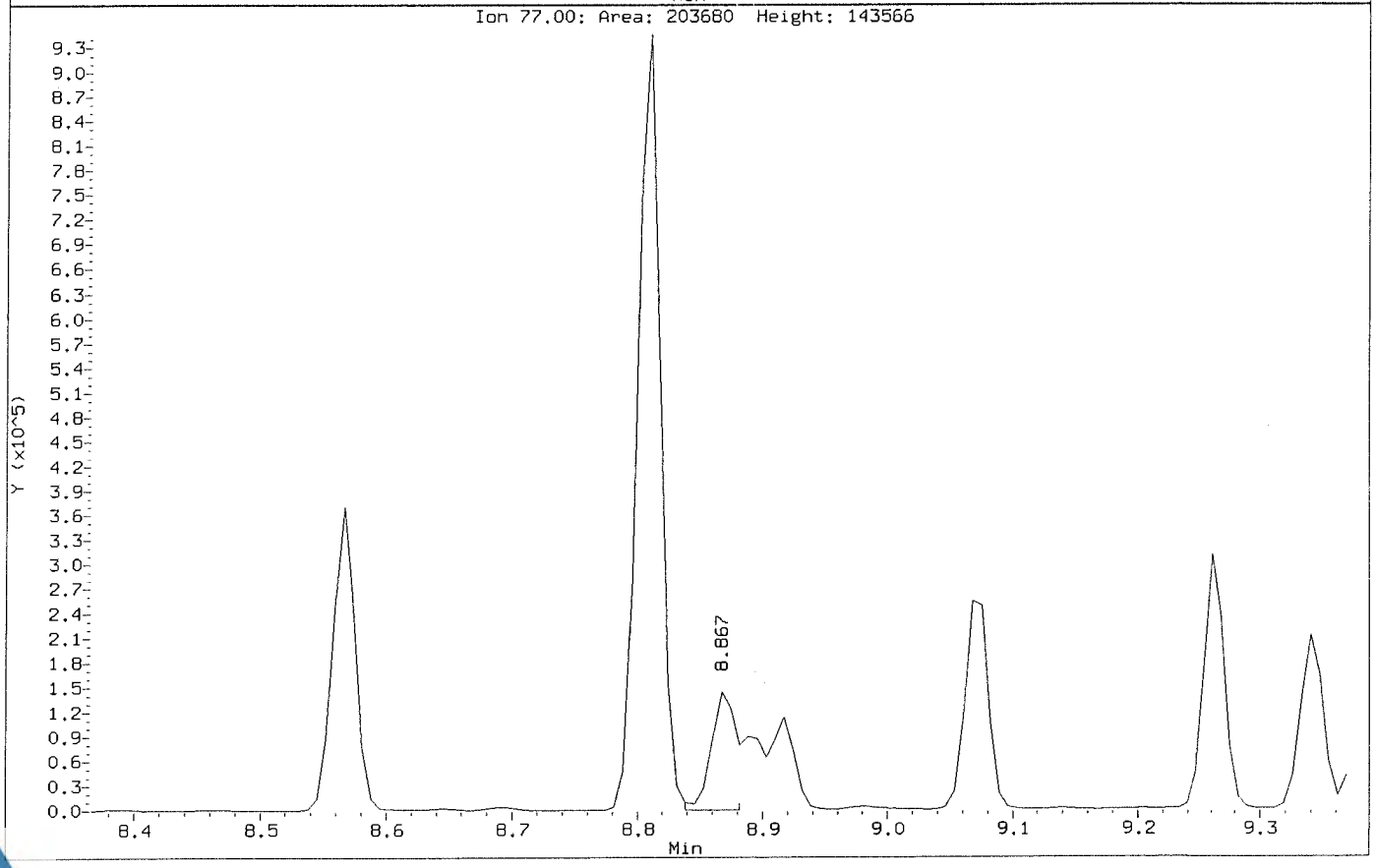




Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111811.D
Injection Date: 18-NOV-2019 17:46
Instrument: voa6.i
Client Sample ID: VSTD200

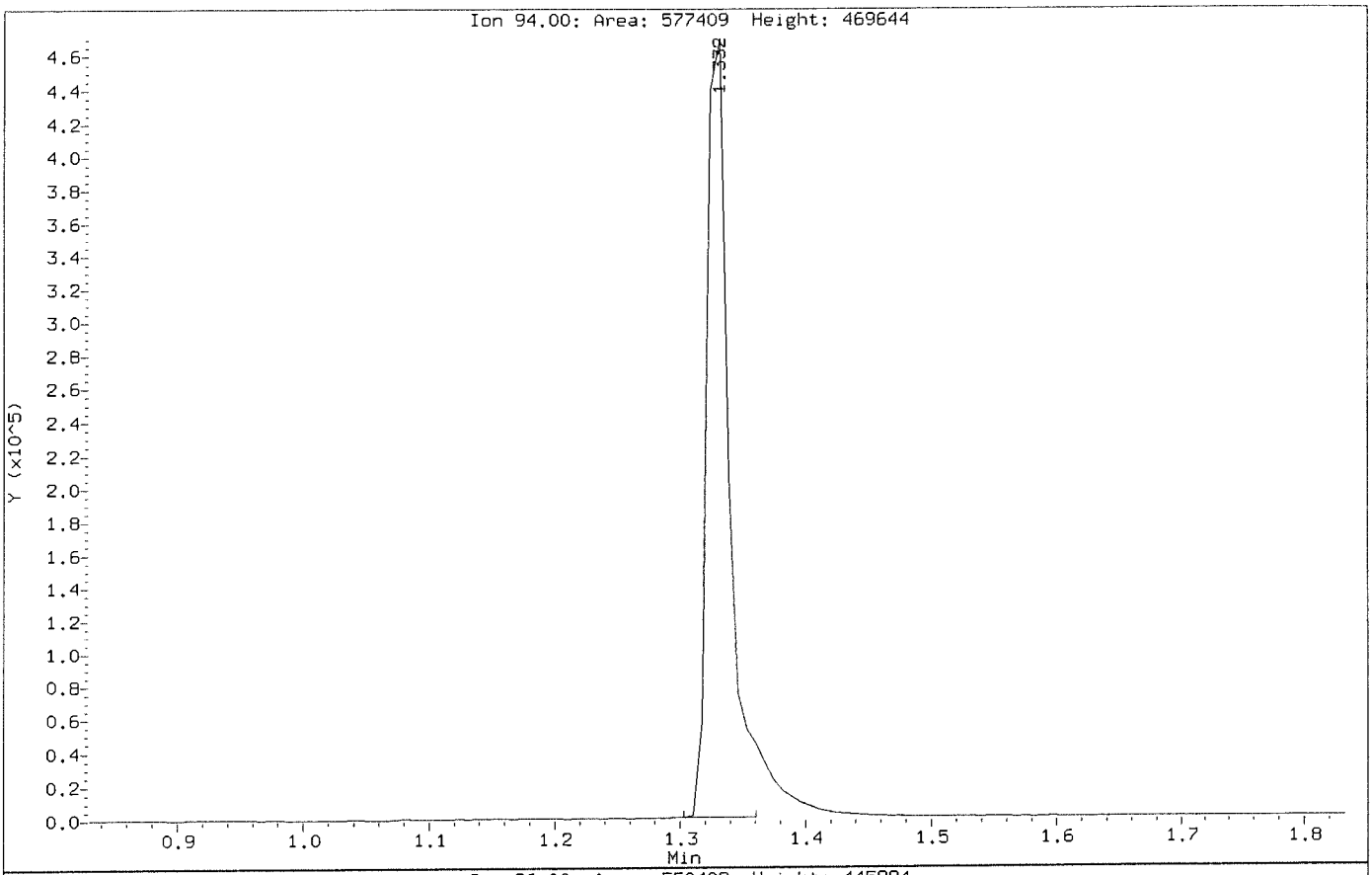
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

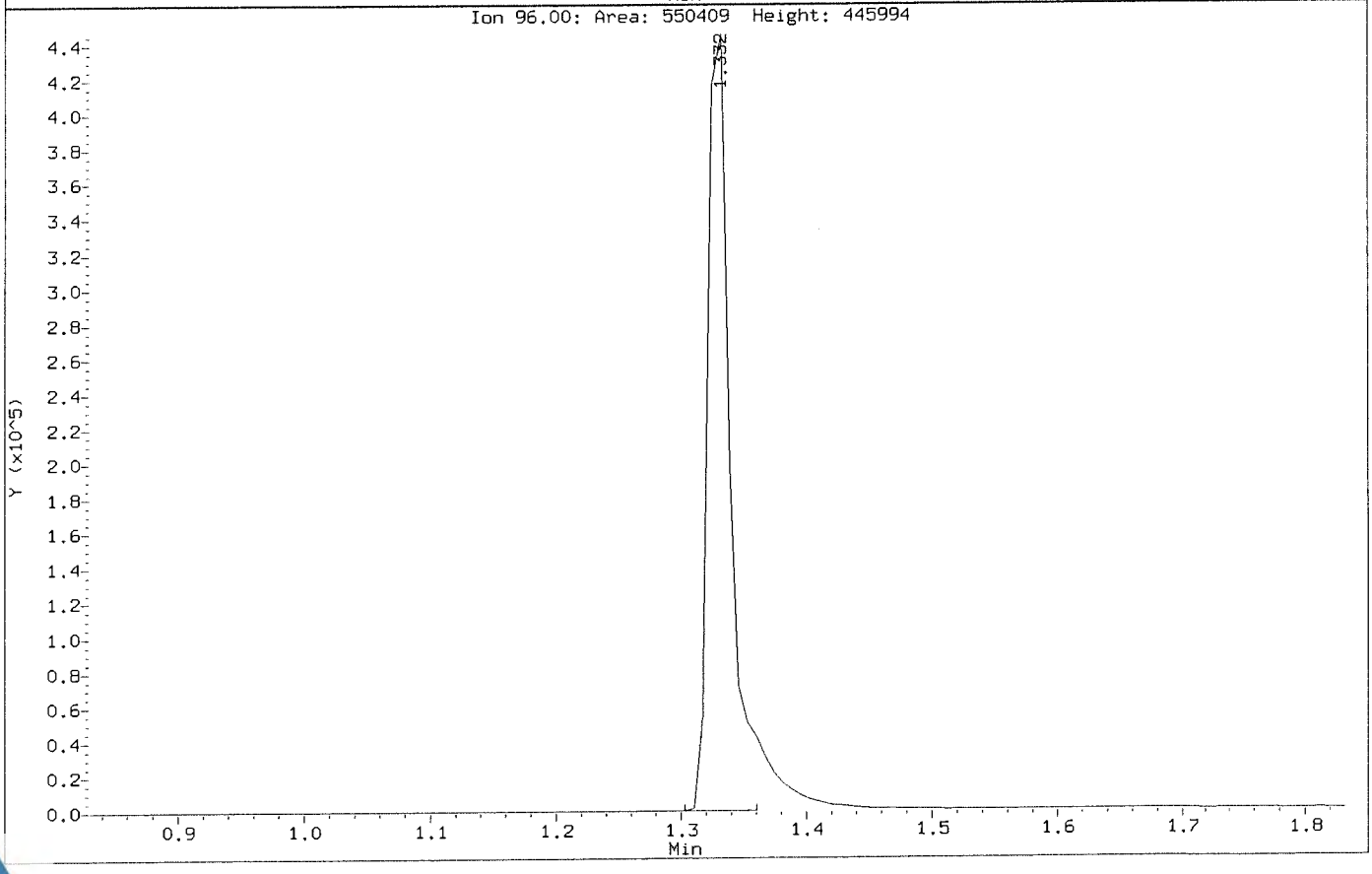




Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\Before2\X111811.D
Injection Date: 18-NOV-2019 17:46
Instrument: voa6.i
Client Sample ID: VSTD200

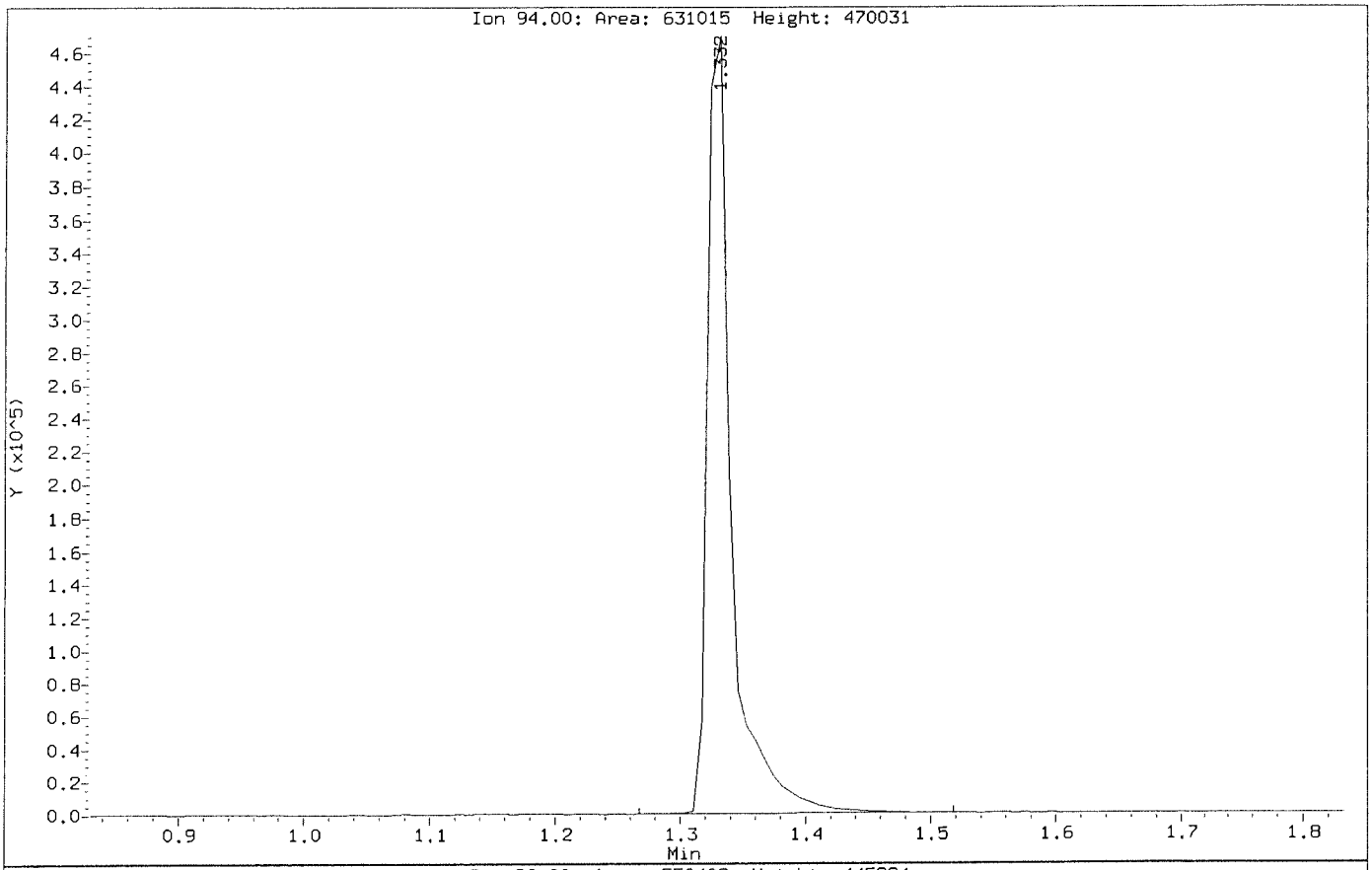
Compound: Bromomethane
CAS Number: 74-83-9

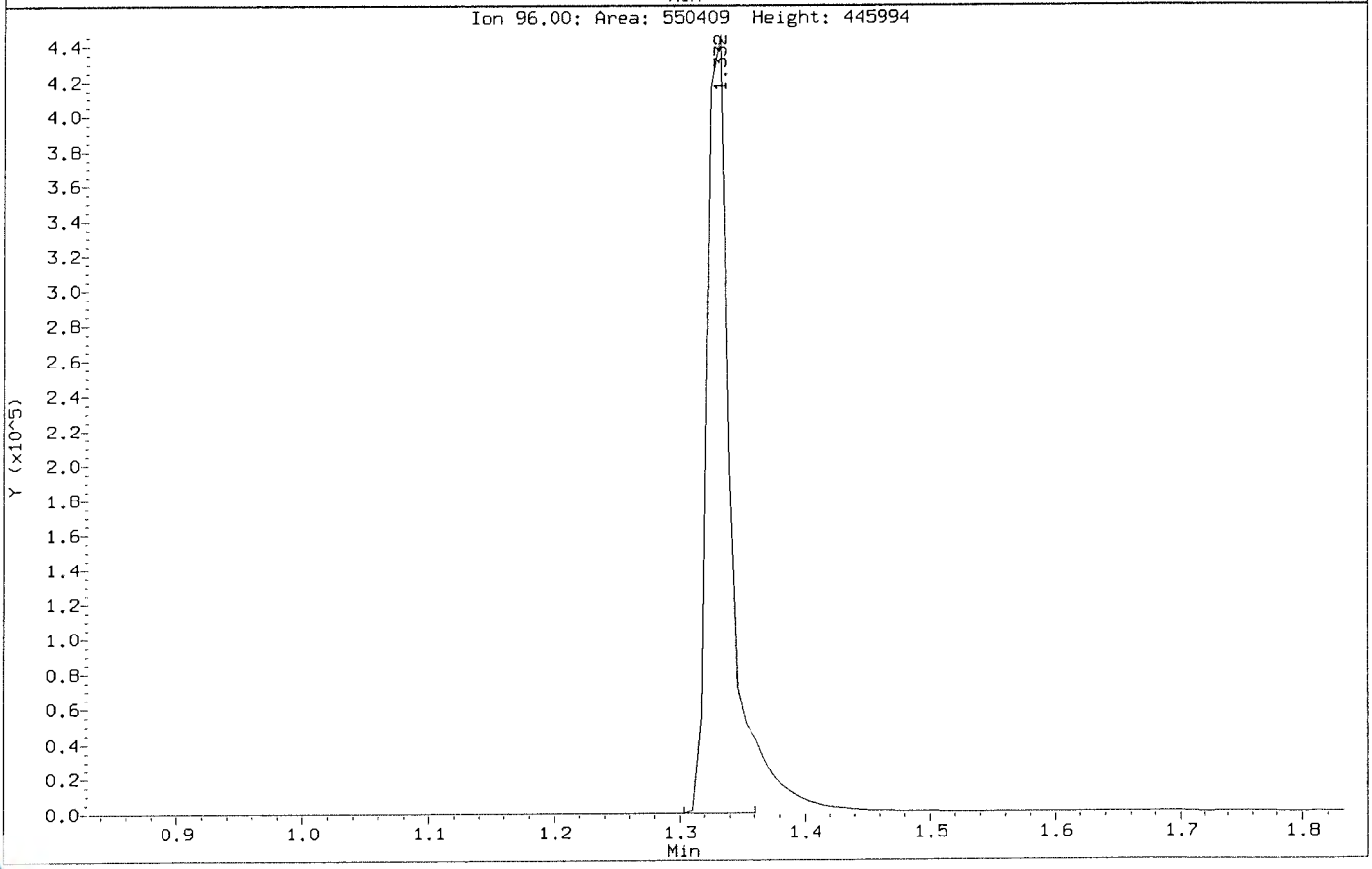




Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111811.D
Injection Date: 18-NOV-2019 17:46
Instrument: voa6.i
Client Sample ID: VSTD200

Compound: Bromomethane
CAS Number: 74-83-9





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X191118.b\X111814.D
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 18-NOV-2019 18:58
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\X191118.b\8260W.m
Meth Date : 22-Dec-2019 16:31 voa6.i Quant Type: ISTD
Cal Date : 18-NOV-2019 17:46 Cal File: X111811.D
Als bottle: 15 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14

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

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

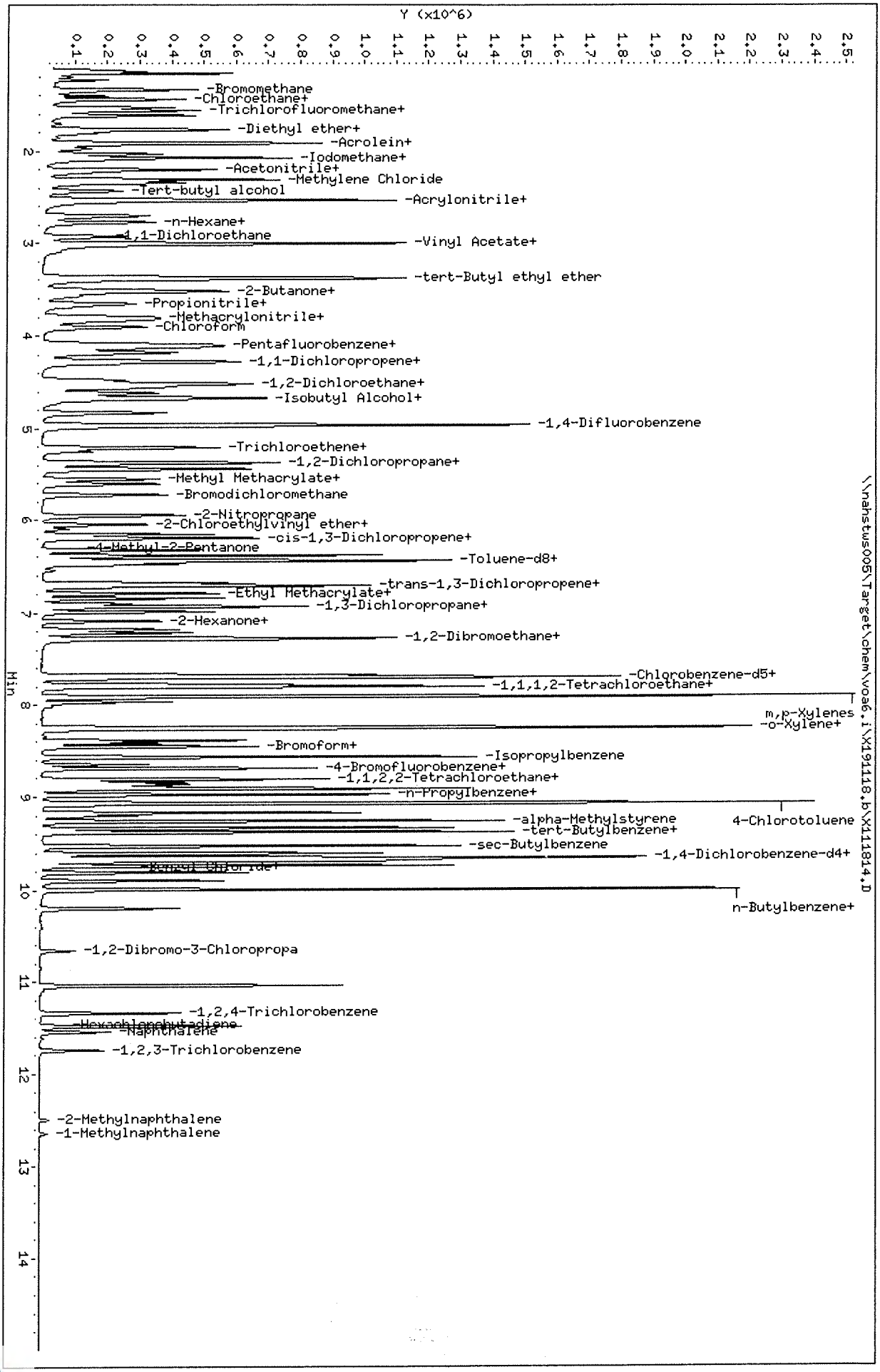
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	365284	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	526230	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	487659	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	262170	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	172534	51.9307	51.93
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	177715	51.6875	51.68
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	603087	46.9372	46.93
$ 69 4-Bromofluorobenzene	95	8.688	8.695	(1.133)	217553	47.9674	47.96
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	181751	51.3728	51.37
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	259914	52.7430	52.74
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	183157	49.6822	49.68
53 1,1,2-Trichloroethane	83	6.840	6.847	(0.892)	125473	49.2205	49.22
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	273555	51.4692	51.46
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	164159	53.0287	53.02
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	211745	49.8829	49.88
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	56746	58.2884	58.28
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	154338	49.4088	49.40(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	122229	55.3465	55.34
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	627033	50.4058	50.40
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.102)	20914	51.3981	51.39
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	171012	50.0005	50.00
88 1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	343886	49.4226	49.42
33 1,2-Dichloroethane	62	4.555	4.562	(0.916)	214666	51.3880	51.38

Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111814.D Page 2
Report Date: 22-Dec-2019 16:32

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
42 1,2-Dichloropropane	63	5.436	5.443	(1.094)	155619	49.5052	49.50
75 1,3,5-Trimethylbenzene	105	9.067	9.074	(0.938)	621241	52.0454	52.04
83 1,3-Dichlorobenzene	146	9.604	9.612	(0.993)	380305	50.5823	50.58
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	254579	49.1895	49.18
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	379206	49.6335	49.63
26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	252567	52.3575	52.35
24 2-Butanone	43	3.573	3.580	(0.854)	117980	105.260	105.25
76 2-Chlorotoluene	91	8.974	8.981	(0.928)	475545	50.4166	50.41
52 2-Hexanone	43	7.090	7.090	(0.924)	192493	96.0902	96.09
77 4-Chlorotoluene	91	9.074	9.074	(0.939)	578291	50.5814	50.58
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	664137	51.7722	51.77
45 4-Methyl-2-Pentanone	43	6.324	6.331	(0.824)	279109	97.6823	97.68
10 Acetone	43	1.969	1.976	(0.471)	104925	111.376	111.37
37 Benzene	78	4.512	4.512	(0.908)	612198	50.8565	50.85
74 Bromobenzene	156	8.809	8.809	(0.911)	233126	51.1647	51.16
29 Bromochloromethane	128	3.795	3.795	(0.908)	101596	51.3407	51.34
39 Bromodichloromethane	83	5.729	5.729	(1.153)	222106	51.0024	51.00
66 Bromoform	173	8.415	8.415	(1.097)	142491	49.0895	49.08
6 Bromomethane	94	1.338	1.331	(0.320)	208417	57.7314	57.73
19 Carbon Disulfide	76	2.069	2.069	(0.495)	924383	109.763	109.76
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	237498	51.0754	51.07
59 Chlorobenzene	112	7.699	7.699	(1.004)	468418	49.2009	49.20
7 Chloroethane	64	1.403	1.396	(0.336)	118785	51.6484	51.64
28 Chloroform	83	3.910	3.910	(0.935)	292027	49.3641	49.36
3 Chloromethane	50	1.073	1.073	(0.257)	200113	50.4397	50.43
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	184183	53.1686	53.16
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	267228	52.0716	52.07
55 Dibromochloromethane	129	7.176	7.183	(0.936)	184910	49.9303	49.93
44 Dibromomethane	93	5.557	5.557	(1.118)	112351	50.5059	50.50
2 Dichlorodifluoromethane	85	0.973	0.966	(0.233)	176572	52.9949	52.99
61 Ethylbenzene	106	7.799	7.807	(1.017)	247055	50.2234	50.22
91 Hexachlorobutadiene	225	11.481	11.488	(1.187)	113053	61.6918	61.69(R)
67 Isopropylbenzene	105	8.566	8.566	(1.117)	730633	50.1455	50.14
62 m,p-Xylenes	106	7.907	7.907	(1.031)	603641	101.692	101.69
17 Methylene Chloride	84	2.305	2.305	(0.551)	164000	49.6528	49.65
87 n-Butylbenzene	91	9.998	9.998	(1.034)	555875	52.0702	52.07
73 n-Propylbenzene	91	8.917	8.917	(0.922)	841108	51.9034	51.90
92 Naphthalene	128	11.546	11.546	(1.194)	144573	51.0408	51.04
63 o-Xylene	106	8.243	8.244	(1.075)	291303	49.7239	49.72
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	728868	51.7743	51.77
64 Styrene	104	8.258	8.265	(1.077)	512981	50.3548	50.35
78 tert-Butylbenzene	119	9.339	9.339	(0.966)	525095	51.3776	51.37
56 Tetrachloroethene	164	6.933	6.933	(0.904)	169030	49.3314	49.33
50 Toluene	91	6.446	6.453	(0.840)	685240	49.5512	49.55
20 trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	157233	52.3156	52.31
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	242451	51.8354	51.83
38 Trichloroethene	130	5.206	5.206	(1.048)	190582	51.7868	51.78
8 Trichlorofluoromethane	101	1.560	1.553	(0.373)	314898	55.5726	55.57
5 Vinyl Chloride	62	1.138	1.138	(0.272)	193522	51.9818	51.98

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

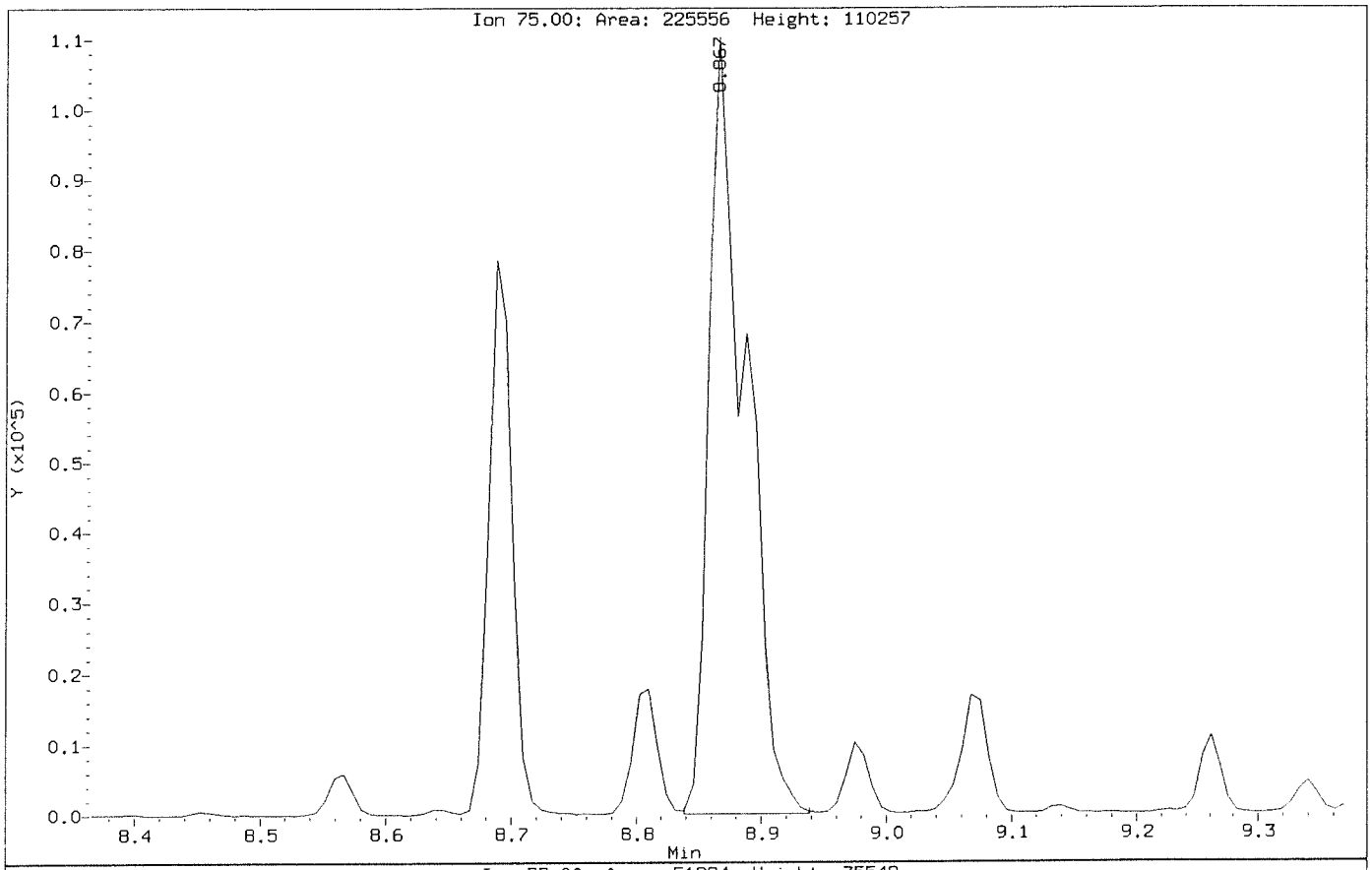


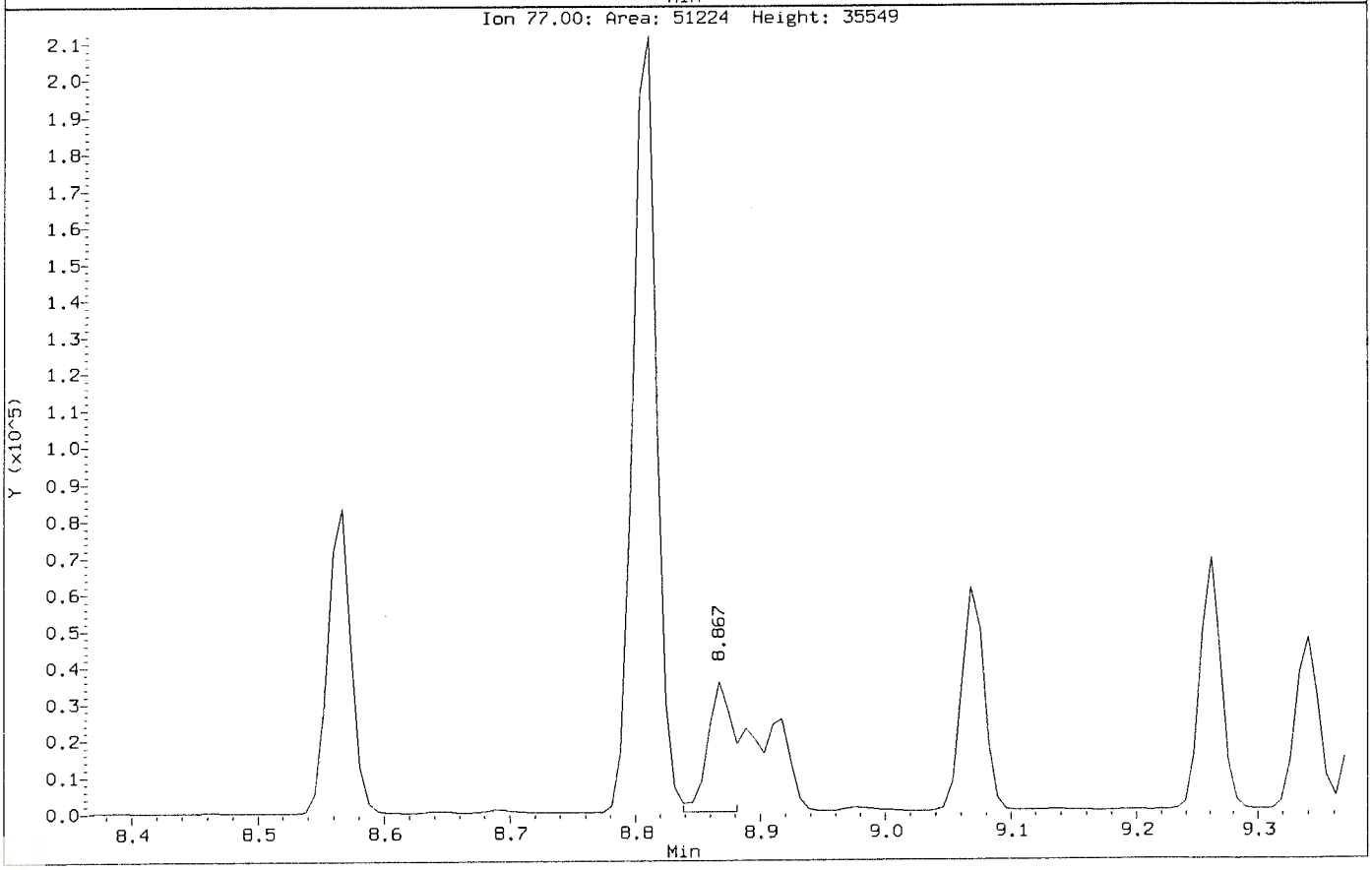
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Date : 18-NOV-2019 18:58
Client ID: ICV
Sample Info: CCV;CCV;2;;ICV
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\Before2\X111814.D
Injection Date: 18-NOV-2019 18:58
Instrument: voa6.i
Client Sample ID: ICV

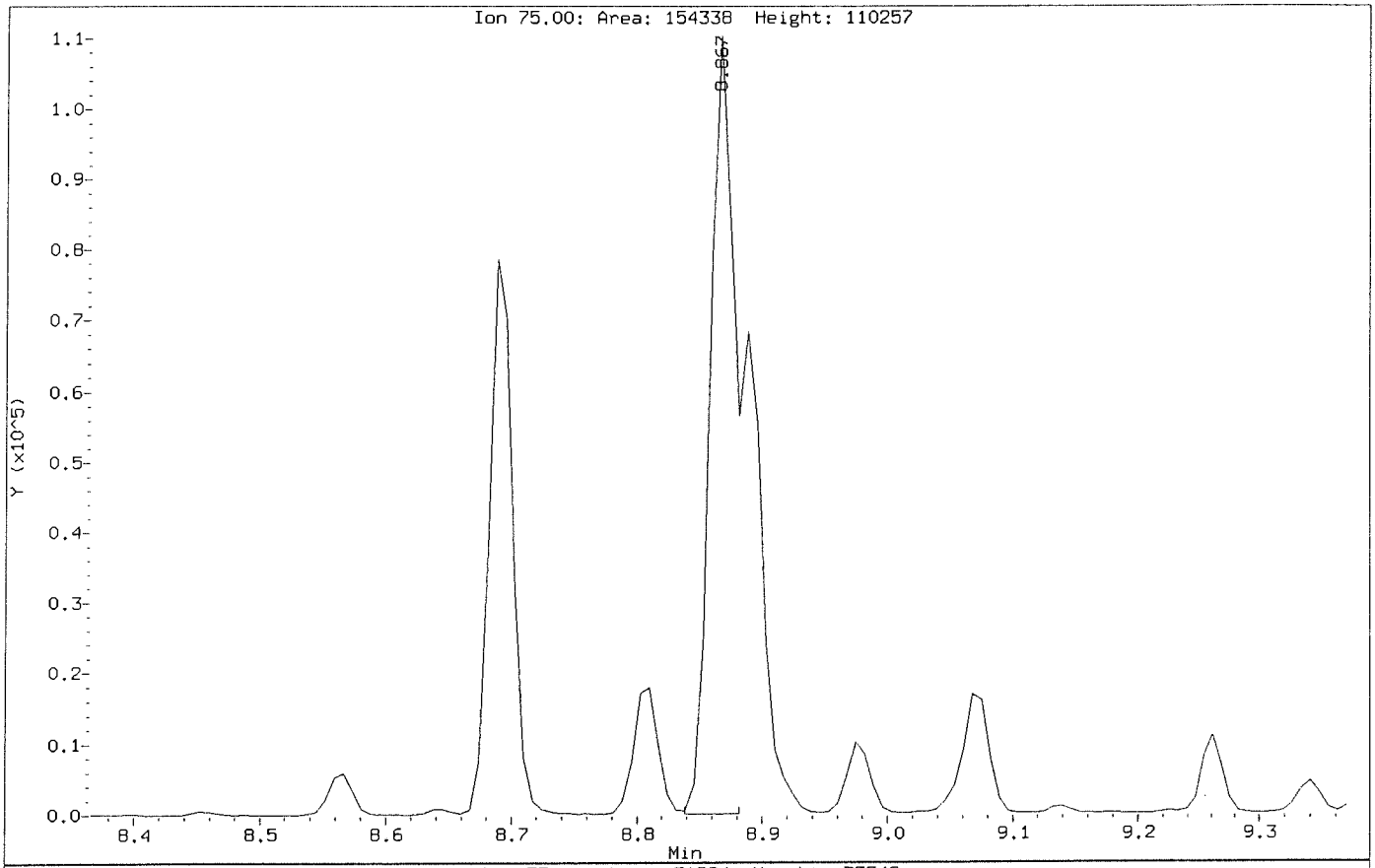
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

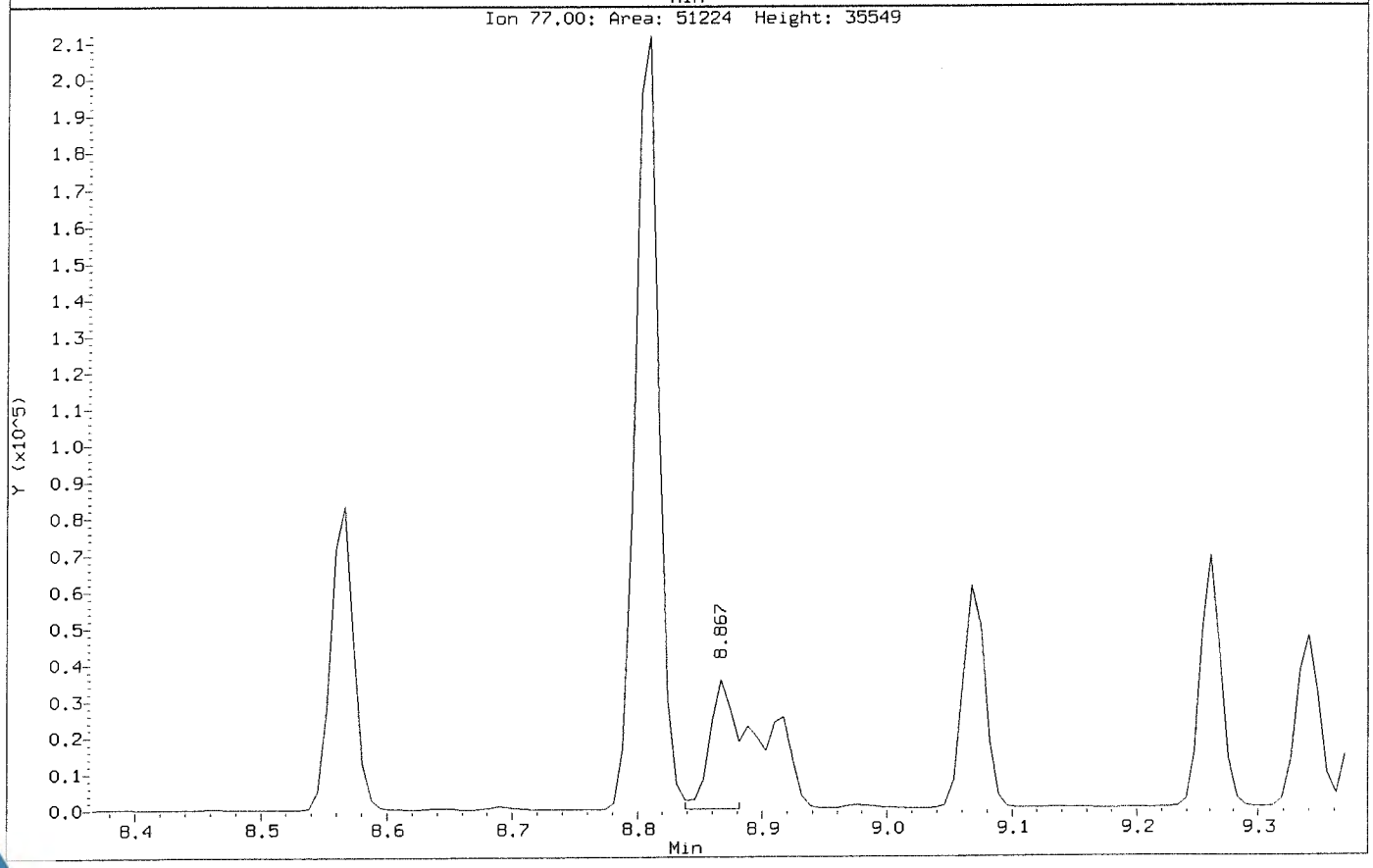




Data File: \\nahstws005\Target\chem\voa6.i\X191118.b\X111814.D
Injection Date: 18-NOV-2019 18:58
Instrument: voa6.i
Client Sample ID: ICV

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





MSVOA06 -Logbook

Batch: 38652 **Analyst:** Devak Giga

Date: 01-03-2020 **Reviewer:**

Method: 8260 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	01-03-2020 12:22 pm	1.00	0.00 mL	0.00 mL	X010301.D	Liquid	Y	NA
	Auto find/ purged									
2	CCV	CCV	01-03-2020 12:46 pm	1.00	5.00 mL	0.00 mL	X010302.D	Liquid	Y	NA
	Auto find/ purged									
3	BLANK	SAMP	01-03-2020 01:10 pm	1.00	5.00 mL	0.00 mL	X010303.D	Liquid	Y	NA
	Cleanup Blk									
4	BLANK	SAMP	01-03-2020 01:34 pm	1.00	5.00 mL	0.00 mL	X010304.D	Liquid	Y	NA
	Cleanup Blk									
5	CCB	SAMP	01-03-2020 01:58 pm	1.00	5.00 mL	0.00 mL	X010305.D	Liquid	Y	NA
	CCB									
6	VLCSW-200103	LCS	01-03-2020 02:22 pm	1.00	5.00 mL	0.00 mL	X010306.D	Liquid	Y	NA
	4.0 uL cal std/50 mL DI									
7	BLK	SAMP	01-03-2020 02:46 pm	1.00	5.00 mL	0.00 mL	X010307.D	Liquid	Y	NA
	Cleanup Blk									
8	VBLKW-200103	MBLK	01-03-2020 03:10 pm	1.00	5.00 mL	0.00 mL	X010308.D	Liquid	Y	NA
9	HS19121257-07	SAMP	01-03-2020 03:34 pm	1.00	5.00 mL	0.00 mL	X010309.D	Liquid	Y	NA
10	HS19121257-05	SAMP	01-03-2020 03:58 pm	1.00	5.00 mL	0.00 mL	X010310.D	Liquid	Y	NA
11	HS19121257-06	SAMP	01-03-2020 04:22 pm	1.00	5.00 mL	0.00 mL	X010311.D	Liquid	Y	NA
12	HS19121316-02	SAMP	01-03-2020 04:46 pm	1.00	5.00 mL	0.00 mL	X010312.D	Liquid	Y	NA
13	HS19121316-01	SAMP	01-03-2020 05:10 pm	1.00	5.00 mL	0.00 mL	X010313.D	Liquid	Y	NA
14	HS19121433-02	SAMP	01-03-2020 05:35 pm	1.00	5.00 mL	0.00 mL	X010314.D	Liquid	Y	NA
15	HS19121484-02	SAMP	01-03-2020 05:59 pm	1.00	5.00 mL	0.00 mL	X010315.D	Liquid	Y	NA
16	HS19121433-01	SAMP	01-03-2020 06:23 pm	1.00	5.00 mL	0.00 mL	X010316.D	Liquid	Y	NA
17	HS19121484-01	SAMP	01-03-2020 06:47 pm	1.00	5.00 mL	0.00 mL	X010317.D	Liquid	Y	NA
18	HS19121484-01MS	MS	01-03-2020 07:11 pm	1.00	5.00 mL	0.00 mL	X010318.D	Liquid	Y	NA
	3.5 uL cal std/40 mL samp									
19	HS19121484-01MSD	MSD	01-03-2020 07:35 pm	1.00	5.00 mL	0.00 mL	X010319.D	Liquid	Y	NA
	3.5 uL cal std/40 mL samp									
20	CCV-END	CCV	01-03-2020 07:59 pm	1.00	5.00 mL	0.00 mL	X010320.D	Liquid	Y	NA
	Auto find/ purged									
21	HS19121503-02	SAMP	01-03-2020 08:23 pm	5000.0	5.00 mL	0.00 mL	X010321.D	Liquid	Y	NA
22	HS19121407-01	SAMP	01-03-2020 08:47 pm	500.0(	5.00 mL	0.00 mL	X010322.D	Liquid	Y	NA
23	HS20010070-01	SAMP	01-03-2020 09:11 pm	1.00	5.00 mL	0.00 mL	X010323.D	Liquid	Y	NA
24	HS20010080-01	SAMP	01-03-2020 09:35 pm	1.00	5.00 mL	0.00 mL	X010324.D	Liquid	Y	NA
25	HS20010094-01	SAMP	01-03-2020 09:59 pm	1.00	5.00 mL	0.00 mL	X010325.D	Liquid	Y	NA
26	MBLK-149335	MBLK	01-03-2020 10:23 pm	20.00	5.00 mL	0.00 mL	X010326.D	Liquid	Y	NA
27	HS20010009-01	SAMP	01-03-2020 10:47 pm	20.00	5.00 mL	0.00 mL	X010327.D	Liquid	Y	NA
28	HS20010018-01	SAMP	01-03-2020 11:11 pm	20.00	5.00 mL	0.00 mL	X010328.D	Liquid	Y	NA
29	BLK	SAMP	01-03-2020 11:35 pm	1.00	5.00 mL	0.00 mL	X010340.D	Liquid	Y	NA
	Cleanup Blk									

MSVOA06 -Logbook

Chemical	Value
SURR SPK ID	31106-04-03
IS ID	31106-04-04
LCS/MS ID	30603-95-01
CAL STD ID	31106-08-01/02
BFB ID	31106-04-03
pH Paper	634-64-11

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ALS HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS19121257

	CLIENT SAMPLE NO.	SMC1 (DCE)#	SMC2 #	SMC3 (TOL)#	OTHER #	TOT OUT
01	VLCSW-200103	115	109	103	108	0
02	VBLKW-200103	100	97	102	100	0
03	HS19121257-07	99	98	101	100	0
04	HS19121257-05	100	97	104	101	0
05	HS19121257-06	100	97	103	101	0
06						
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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-200103

Lab Name: ALS HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS19121257

Lab File ID: X010308 Lab Sample ID: VBLKW-200103

Date Analyzed: 01/03/20 Time Analyzed: 1510

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-200103	VLCSW-200103	X010306	1422
02	HS19121257-0	HS19121257-07	X010309	1534
03	HS19121257-0	HS19121257-05	X010310	1558
04	HS19121257-0	HS19121257-06	X010311	1622
05	HS19121484-0	HS19121484-01M	X010318	1911
06	HS19121484-0	HS19121484-01M	X010319	1935
07				
08				
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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.: HS19121257

Lab File ID: X010301 BFB Injection Date: 01/03/20

Instrument ID: VOA6 BFB Injection Time: 1222

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.7
75	30.0 - 60.0% of mass 95	47.9
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.8
173	Less than 2.0% of mass 174	0.3 (0.5)1
174	Greater than 50.0% of mass 95	58.9
175	5.0 - 9.0% of mass 174	4.4 (7.4)1
176	95.0 - 101.0% of mass 174	56.2 (95.4)1
177	5.0 - 9.0% of mass 176	3.9 (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	CCV	CCV	X010302	01/03/20	1246
02	VLCSW-200103	VLCSW-200103	X010306	01/03/20	1422
03	VBLKW-200103	VBLKW-200103	X010308	01/03/20	1510
04	HS19121257-0	HS19121257-07	X010309	01/03/20	1534
05	HS19121257-0	HS19121257-05	X010310	01/03/20	1558
06	HS19121257-0	HS19121257-06	X010311	01/03/20	1622
07	HS19121484-0	HS19121484-01M	X010318	01/03/20	1911
08	HS19121484-0	HS19121484-01M	X010319	01/03/20	1935
09	CCV-END	CCV-END	X010320	01/03/20	1959
10					
11					
12					
13					
14					
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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.: HS19121257

Instrument ID: VOA6 Calibration Date: 01/03/20 Time: 1246

Lab File ID: X010302 Init. Calib. Date(s): 11/18/19 11/18/19

Init. Calib. Times: 1347 1746

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	0.4880000	0.5604182	0.5604182	0.2	-14.84	20.00	AVRG	
trans-1,3-Dichloropropene	0.4440000	0.4983745	0.4983745	0.1	-12.25	20.00	AVRG	
1,3-Dichlorobenzene	1.4340000	1.4693659	1.4693659	0.6	-2.47	20.00	AVRG	
2,2-Dichloropropane	0.6600000	0.6828828	0.6828828	0.1	-3.47	20.00	AVRG	
1,1-Dichloropropene	0.4030000	0.4021576	0.4021576	0.1	0.21	20.00	AVRG	
Dibromomethane	0.2110000	0.2214598	0.2214598	0.1	-4.96	20.00	AVRG	
1,2-Dibromoethane	0.3510000	0.3622887	0.3622887	0.1	-3.22	20.00	AVRG	
trans-1,2-Dichloroethene	0.4110000	0.4455464	0.4455464	0.1	-8.40	20.00	AVRG	
1,1,1,2-Tetrachloroethane	0.3630000	0.3731017	0.3731017	0.1	-2.78	20.00	AVRG	
1,1,1-Trichloroethane	0.6740000	0.6654895	0.6654895	0.1	1.26	20.00	AVRG	
1,1,2,2-Tetrachloroethane	0.7030000	0.7672843	0.7672843	0.3	-9.14	20.00	AVRG	
1,1,2-Trichloroethane	0.2610000	0.2798355	0.2798355	0.1	-7.22	20.00	AVRG	
1,1-Dichloroethane	0.7270000	0.8282415	0.8282415	0.2	-13.92	20.00	AVRG	
1,1-Dichloroethene	0.4240000	0.3667318	0.3667318	0.1	13.51	20.00	AVRG	
Trichloroethene	0.3500000	0.3502930	0.3502930	0.2	-0.08	20.00	AVRG	
1,2,3-Trichlorobenzene	62.831334	50.000000	0.2331929	0.1	-25.66	20.00	2RDR	<-
Trichlorofluoromethane	0.7760000	0.6563274	0.6563274	0.1	15.42	20.00	AVRG	
1,2,4-Trichlorobenzene	0.4210000	0.4451166	0.4451166	0.2	-5.73	20.00	AVRG	
1,2,4-Trimethylbenzene	2.3720000	2.4467825	2.4467825	0.1	-3.15	20.00	AVRG	
Tetrachloroethene	0.3510000	0.2942487	0.2942487	0.2	16.17	20.00	AVRG	
1,2-Dichlorobenzene	1.3270000	1.3416213	1.3416213	0.4	-1.10	20.00	AVRG	
1,2-Dichloroethane	0.3970000	0.4174857	0.4174857	0.1	-5.16	20.00	AVRG	
1,2-Dichloropropane	0.2990000	0.3356207	0.3356207	0.1	-12.25	20.00	AVRG	
1,3,5-Trimethylbenzene	2.2760000	2.3351475	2.3351475	0.1	-2.60	20.00	AVRG	
1,3-Dichloropropane	0.5310000	0.5741398	0.5741398	0.1	-8.12	20.00	AVRG	
1,4-Dichlorobenzene	1.4570000	1.4862963	1.4862963	0.4	-2.01	20.00	AVRG	
Toluene	1.4180000	1.4387758	1.4387758	0.4	-1.46	20.00	AVRG	
2-Butanone	0.1530000	0.1851945	0.1851945	0.1	-21.04	20.00	AVRG	<-
2-Chlorotoluene	1.7990000	1.9764138	1.9764138	0.1	-9.86	20.00	AVRG	
2-Hexanone	0.2050000	0.2216354	0.2216354	0.1	-8.11	20.00	AVRG	
4-Chlorotoluene	2.1800000	2.3234535	2.3234535	0.1	-6.58	20.00	AVRG	
tert-Butylbenzene	1.9490000	1.8794045	1.8794045	0.1	3.57	20.00	AVRG	
4-Methyl-2-Pentanone	0.2930000	0.3256416	0.3256416	0.1	-11.14	20.00	AVRG	
Acetone	111.64653	100.00000	0.1439586	0.1	-11.65	20.00	LINR	
Benzene	1.1440000	1.2669165	1.2669165	0.5	-10.74	20.00	AVRG	
Bromobenzene	0.8690000	0.9214374	0.9214374	0.1	-6.03	20.00	AVRG	
Bromochloromethane	0.2710000	0.2871502	0.2871502	0.1	-5.96	20.00	AVRG	
Bromodichloromethane	0.4140000	0.4439900	0.4439900	0.2	-7.24	20.00	AVRG	
Bromoform	48.801657	50.000000	0.2904448	0.1	2.40	20.00	LINR	
Bromomethane	40.037422	50.000000	0.4025529	0.1	19.92	20.00	LINR	
Carbon Disulfide	1.1530000	1.2813425	1.2813425	0.1	-11.13	20.00	AVRG	
Carbon Tetrachloride	0.4420000	0.3942532	0.3942532	0.1	10.80	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.: HS1912125

Instrument ID: VOA6 Calibration Date: 01/03/20 Time: 1246

Lab File ID: X010302 Init. Calib. Date(s): 11/18/19 11/18/19

Init. Calib. Times: 1347 1746

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Chlorobenzene	0.9760000	0.9735456	0.9735456	0.5	0.25	20.00	AVRG
Chloroethane	0.3150000	0.2918036	0.2918036	0.1	7.36	20.00	AVRG
Chloroform	0.8100000	0.8332824	0.8332824	0.2	-2.87	20.00	AVRG
Chloromethane	46.254428	50.000000	0.5022025	0.1	7.49	20.00	LINR
cis-1,2-Dichloroethene	0.4740000	0.5325897	0.5325897	0.1	-12.36	20.00	AVRG
Dibromochloromethane	0.3800000	0.3994655	0.3994655	0.1	-5.12	20.00	AVRG
Dichlorodifluoromethane	49.210919	50.000000	0.4482839	0.1	1.58	20.00	LINR
Ethylbenzene	0.5040000	0.4928963	0.4928963	0.1	2.20	20.00	AVRG
Hexachlorobutadiene	0.4020000	0.3216744	0.3216744	0.1	19.98	20.00	AVRG
Isopropylbenzene	1.4940000	1.3812299	1.3812299	0.1	7.55	20.00	AVRG
m,p-Xylenes	0.6080000	0.5956845	0.5956845	0.1	2.02	20.00	AVRG
Methylene Chloride	0.4520000	0.4885372	0.4885372	0.1	-8.08	20.00	AVRG
n-Butylbenzene	2.0360000	1.9471262	1.9471262	0.5	4.36	20.00	AVRG
n-Propylbenzene	3.0900000	3.1396084	3.1396084	0.1	-1.60	20.00	AVRG
Naphthalene	0.5400000	0.6246876	0.6246876	0.2	-15.68	20.00	AVRG
o-Xylene	0.6000000	0.5924227	0.5924227	0.3	1.26	20.00	AVRG
sec-Butylbenzene	2.6850000	2.5694079	2.5694079	0.1	4.30	20.00	AVRG
Styrene	1.0440000	1.0630470	1.0630470	0.3	-1.82	20.00	AVRG
Vinyl Chloride	0.5100000	0.5180620	0.5180620	0.1	-1.58	20.00	AVRG
1,2,3-Trichloropropane	0.5960000	0.6773916	0.6773916	0.1	-13.66	20.00	AVRG
p-Isopropyltoluene	2.4460000	2.3621950	2.3621950	0.1	3.43	20.00	AVRG
1,2-Dibromo-3-Chloropropane	54.990324	50.000000	8.53e-002	0.05	-9.98	20.00	LINR
1,2-Dichloroethane-d4	55.573834	50.000000	0.5236215	0.1	-11.15	20.00	LINR
Dibromofluoromethane	53.958216	50.000000	0.4909008	0.1	-7.92	20.00	LINR
Toluene-d8	1.3170000	1.3347090	1.3347090	0.1	-1.34	20.00	AVRG
4-Bromofluorobenzene	53.841927	50.000000	0.5012323	0.1	-7.68	20.00	LINR

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS19121257

Instrument ID: VOA6 Calibration Date: 01/03/20 Time: 1959

Lab File ID: X010320 Init. Calib. Date(s): 11/18/19 11/18/19

Init. Calib. Times: 1347 1746

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	0.4880000	0.5314863	0.5314863	0.2	-8.91	50.00	AVRG
trans-1,3-Dichloropropene	0.4440000	0.4696789	0.4696789	0.1	-5.78	50.00	AVRG
1,3-Dichlorobenzene	1.4340000	1.4676939	1.4676939	0.6	-2.35	50.00	AVRG
2,2-Dichloropropane	0.6600000	0.6706539	0.6706539	0.1	-1.61	50.00	AVRG
1,1-Dichloropropene	0.4030000	0.4149488	0.4149488	0.1	-2.96	50.00	AVRG
Dibromomethane	0.2110000	0.2127635	0.2127635	0.1	-0.84	50.00	AVRG
1,2-Dibromoethane	0.3510000	0.3552016	0.3552016	0.1	-1.20	50.00	AVRG
trans-1,2-Dichloroethene	0.4110000	0.4509812	0.4509812	0.1	-9.73	50.00	AVRG
1,1,1,2-Tetrachloroethane	0.3630000	0.3650613	0.3650613	0.1	-0.57	50.00	AVRG
1,1,1-Trichloroethane	0.6740000	0.6941718	0.6941718	0.1	-2.99	50.00	AVRG
1,1,2,2-Tetrachloroethane	0.7030000	0.7522392	0.7522392	0.3	-7.00	50.00	AVRG
1,1,2-Trichloroethane	0.2610000	0.2712438	0.2712438	0.1	-3.92	50.00	AVRG
1,1-Dichloroethane	0.7270000	0.8317780	0.8317780	0.2	-14.41	50.00	AVRG
1,1-Dichloroethene	0.4240000	0.3876587	0.3876587	0.1	8.57	50.00	AVRG
Trichloroethene	0.3500000	0.3571280	0.3571280	0.2	-2.04	50.00	AVRG
1,2,3-Trichlorobenzene	69.693639	50.000000	0.2585212	0.1	-39.39	50.00	2RDR
Trichlorofluoromethane	0.7760000	0.6974322	0.6974322	0.1	10.12	50.00	AVRG
1,2,4-Trichlorobenzene	0.4210000	0.5002317	0.5002317	0.2	-18.82	50.00	AVRG
1,2,4-Trimethylbenzene	2.3720000	2.5096978	2.5096978	0.1	-5.80	50.00	AVRG
Tetrachloroethene	0.3510000	0.3174781	0.3174781	0.2	9.55	50.00	AVRG
1,2-Dichlorobenzene	1.3270000	1.3436891	1.3436891	0.4	-1.26	50.00	AVRG
1,2-Dichloroethane	0.3970000	0.4035610	0.4035610	0.1	-1.65	50.00	AVRG
1,2-Dichloropropane	0.2990000	0.3250380	0.3250380	0.1	-8.71	50.00	AVRG
1,3,5-Trimethylbenzene	2.2760000	2.4459626	2.4459626	0.1	-7.47	50.00	AVRG
1,3-Dichloropropane	0.5310000	0.5567995	0.5567995	0.1	-4.86	50.00	AVRG
1,4-Dichlorobenzene	1.4570000	1.4666447	1.4666447	0.4	-0.66	50.00	AVRG
Toluene	1.4180000	1.4658215	1.4658215	0.4	-3.37	50.00	AVRG
2-Butanone	0.1530000	0.1661724	0.1661724	0.1	-8.61	50.00	AVRG
2-Chlorotoluene	1.7990000	2.0336023	2.0336023	0.1	-13.04	50.00	AVRG
2-Hexanone	0.2050000	0.2065180	0.2065180	0.1	-0.74	50.00	AVRG
4-Chlorotoluene	2.1800000	2.3600901	2.3600901	0.1	-8.26	50.00	AVRG
tert-Butylbenzene	1.9490000	2.0091865	2.0091865	0.1	-3.09	50.00	AVRG
4-Methyl-2-Pentanone	0.2930000	0.3090536	0.3090536	0.1	-5.48	50.00	AVRG
Acetone	90.098460	100.00000	0.1171023	0.1	9.90	50.00	LINR
Benzene	1.1440000	1.2637410	1.2637410	0.5	-10.47	50.00	AVRG
Bromobenzene	0.8690000	0.9082878	0.9082878	0.1	-4.52	50.00	AVRG
Bromochloromethane	0.2710000	0.2801555	0.2801555	0.1	-3.38	50.00	AVRG
Bromodichloromethane	0.4140000	0.4349452	0.4349452	0.2	-5.06	50.00	AVRG
Bromoform	46.953509	50.000000	0.2792157	0.1	6.09	50.00	LINR
Bromomethane	34.393474	50.000000	0.3489624	0.1	31.21	50.00	LINR
Carbon Disulfide	1.1530000	1.3351127	1.3351127	0.1	-15.79	50.00	AVRG
Carbon Tetrachloride	0.4420000	0.4147394	0.4147394	0.1	6.17	50.00	AVRG

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS1912125

Instrument ID: VOA6 Calibration Date: 01/03/20 Time: 1959

Lab File ID: X010320 Init. Calib. Date(s): 11/18/19 11/18/19

Init. Calib. Times: 1347 1746

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Chlorobenzene	0.9760000	0.9752063	0.9752063	0.5	0.08	50.00	AVRG
Chloroethane	0.3150000	0.3019521	0.3019521	0.1	4.14	50.00	AVRG
Chloroform	0.8100000	0.8315573	0.8315573	0.2	-2.66	50.00	AVRG
Chloromethane	47.939797	50.000000	0.5205756	0.1	4.12	50.00	LINR
cis-1,2-Dichloroethene	0.4740000	0.5312213	0.5312213	0.1	-12.07	50.00	AVRG
Dibromochloromethane	0.3800000	0.3832437	0.3832437	0.1	-0.85	50.00	AVRG
Dichlorodifluoromethane	52.079215	50.000000	0.4748891	0.1	-4.16	50.00	LINR
Ethylbenzene	0.5040000	0.5100671	0.5100671	0.1	-1.20	50.00	AVRG
Hexachlorobutadiene	0.4020000	0.3591787	0.3591787	0.1	10.65	50.00	AVRG
Isopropylbenzene	1.4940000	1.4557970	1.4557970	0.1	2.56	50.00	AVRG
m,p-Xylenes	0.6080000	0.6125029	0.6125029	0.1	-0.74	50.00	AVRG
Methylene Chloride	0.4520000	0.4862607	0.4862607	0.1	-7.58	50.00	AVRG
n-Butylbenzene	2.0360000	2.0498271	2.0498271	0.5	-0.68	50.00	AVRG
n-Propylbenzene	3.0900000	3.3201809	3.3201809	0.1	-7.45	50.00	AVRG
Naphthalene	0.5400000	0.6412655	0.6412655	0.2	-18.75	50.00	AVRG
o-Xylene	0.6000000	0.6022720	0.6022720	0.3	-0.38	50.00	AVRG
sec-Butylbenzene	2.6850000	2.7490877	2.7490877	0.1	-2.39	50.00	AVRG
Styrene	1.0440000	1.0661707	1.0661707	0.3	-2.12	50.00	AVRG
Vinyl Chloride	0.5100000	0.5528743	0.5528743	0.1	-8.41	50.00	AVRG
1,2,3-Trichloropropane	0.5960000	0.6629624	0.6629624	0.1	-11.24	50.00	AVRG
p-Isopropyltoluene	2.4460000	2.4990676	2.4990676	0.1	-2.17	50.00	AVRG
1,2-Dibromo-3-Chloropropane	53.561132	50.000000	8.31e-002	0.05	-7.12	50.00	LINR
1,2-Dichloroethane-d4	53.495754	50.000000	0.5037786	0.1	-6.99	50.00	LINR
Dibromofluoromethane	52.219506	50.000000	0.4749737	0.1	-4.44	50.00	LINR
Toluene-d8	1.3170000	1.2946129	1.2946129	0.1	1.70	50.00	AVRG
4-Bromofluorobenzene	52.078347	50.000000	0.4846861	0.1	-4.16	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.: HS19121257

Lab File ID (Standard): X010302 Date Analyzed: 01/03/20

Instrument ID: VOA6 Time Analyzed: 1246

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	486082	7.67	530593	4.97	247306	9.67
	UPPER LIMIT	972164	8.17	1061186	5.47	494612	10.17
	LOWER LIMIT	243041	7.17	265297	4.47	123653	9.17
	CLIENT SAMPLE NO.						
01	VLCSW-200103	520288	7.67	580708	4.97	261023	9.66
02	VBLKW-200103	635283	7.67	743854	4.97	308149	9.66
03	HS19121257-07	651602	7.67	752571	4.97	322243	9.66
04	HS19121257-05	626401	7.67	744753	4.97	311786	9.66
05	HS19121257-06	625320	7.67	737114	4.97	313221	9.67
06	HS19121484-01	615346	7.67	719478	4.97	304061	9.67
07	HS19121484-01	607679	7.67	702013	4.97	301903	9.66
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

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

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

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

FORM VIII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS19121257

Lab File ID (Standard): X010302 Date Analyzed: 01/03/20

Instrument ID: VOA6 Time Analyzed: 1246

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	366404	4.18				
	UPPER LIMIT	732808	4.68				
	LOWER LIMIT	183202	3.68				
01	VLCSW-200103	391451	4.18				
02	VBLKW-200103	525398	4.18				
03	HS19121257-07	532712	4.18				
04	HS19121257-05	524320	4.18				
05	HS19121257-06	518311	4.18				
06	HS19121484-01	512591	4.18				
07	HS19121484-01	497920	4.18				
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\X200103.b\X010301.D

Date : 03-JAN-2020 12:22

Client ID: BFB

Instrument: voa6.i

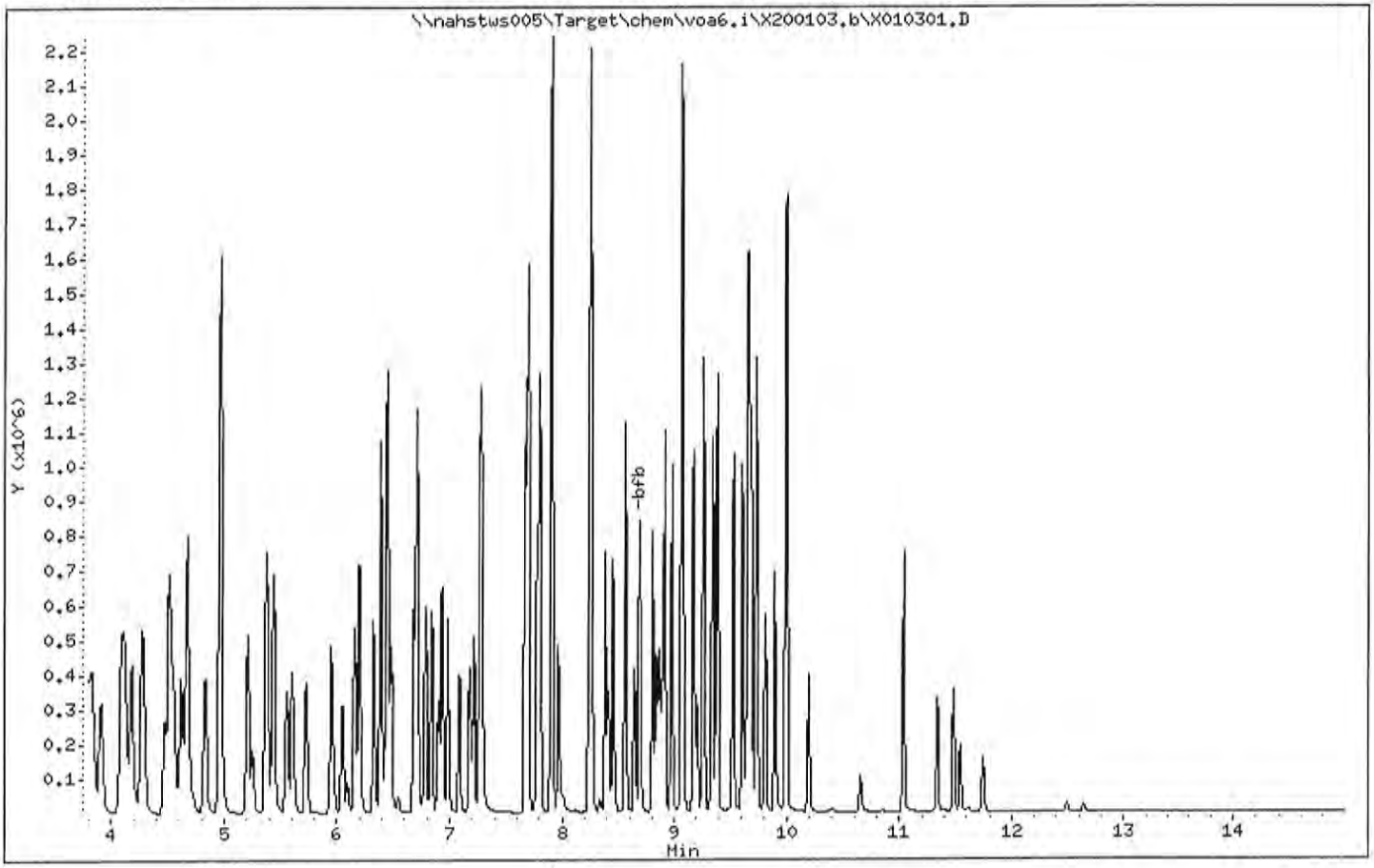
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\nahstws005\Target\chem\voa6.i\X200103.b\X010301.D

Date : 03-JAN-2020 12:22

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

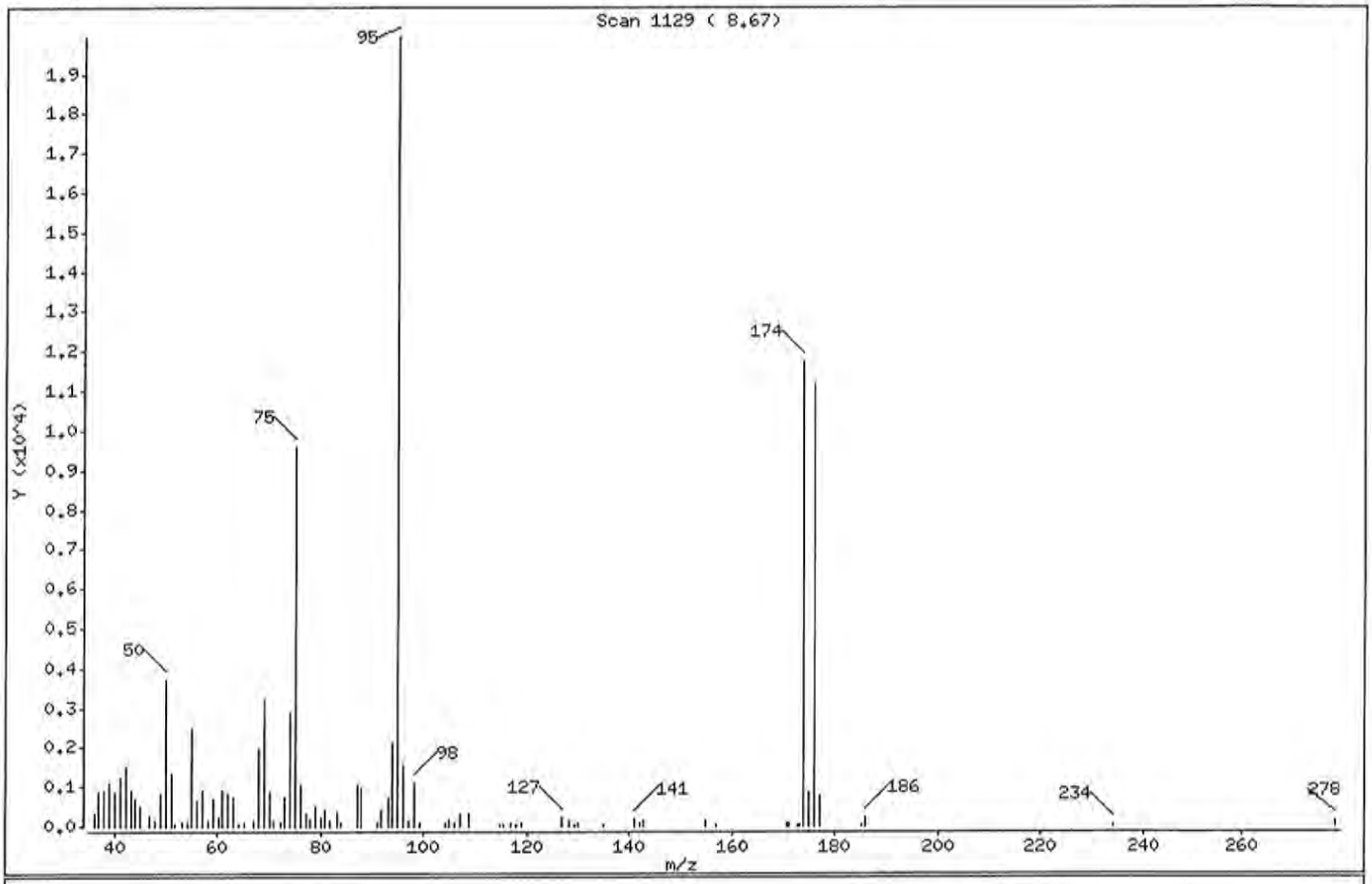
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	18.67
75	30.00 - 60.00% of mass 95	47.93
96	5.00 - 9.00% of mass 95	7.80
173	Less than 2.00% of mass 174	0.28 (0.48)
174	Greater than 50.00% of mass 95	58.87
175	5.00 - 9.00% of mass 174	4.38 (7.44)
176	95.00 - 101.00% of mass 174	56.18 (95.43)
177	5.00 - 9.00% of mass 176	3.92 (6.97)

Data File: \\nahstws005\Target\chem\voa6.i\X200103.b\X010301.D Page 3

Date : 03-JAN-2020 12:22

Client ID: BFB Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0 Operator: PC

Column phase: DB624 Column diameter: 0.25

Data File: X010301.D
Spectrum: Scan 1129 (8.67)
Location of Maximum: 95.00
Number of points: 90

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.10	307	60.10	208	84.10	114	128.10	145
37.00	851	60.90	909	87.00	1055	129.10	68
38.00	903	62.10	846	87.90	969	129.80	95
39.10	1091	62.90	742	91.00	102	135.00	55
40.00	878	64.20	57	91.90	414	140.90	164
41.10	1231	65.10	99	93.00	726	142.10	114
42.10	1529	66.90	153	94.00	2101	142.70	134
43.10	932	68.00	1986	95.00	19944	154.80	156
44.00	674	69.10	3227	96.00	1556	157.00	58
45.00	525	70.00	852	97.00	155	170.70	76
46.90	267	71.00	141	98.00	1078	171.00	81
47.70	146	72.20	100	99.10	100	172.70	56
49.00	848	73.00	741	104.00	106	173.00	62
50.10	3724	74.00	2906	105.00	205	173.90	11741
51.00	1335	75.00	9560	105.90	77	174.90	874
51.80	68	76.00	1062	106.90	341	175.90	11204
53.20	108	77.10	327	108.90	328	176.90	781
54.10	148	78.00	183	114.90	57	185.10	56
55.00	2478	78.90	482	115.60	52	185.90	211
56.00	626	80.00	225	117.00	93	233.90	62
57.10	930	80.90	431	117.90	64	278.00	147
58.00	124	81.90	151	118.90	86		
59.00	698	83.10	381	126.90	228		

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200103.b\X010302.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 03-JAN-2020 12:46
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200103.b\8260W.m
Meth Date : 06-Jan-2020 17:00 voa6.i Quant Type: ISTD
Cal Date : 18-NOV-2019 16:35 Cal File: X111808.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14

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

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

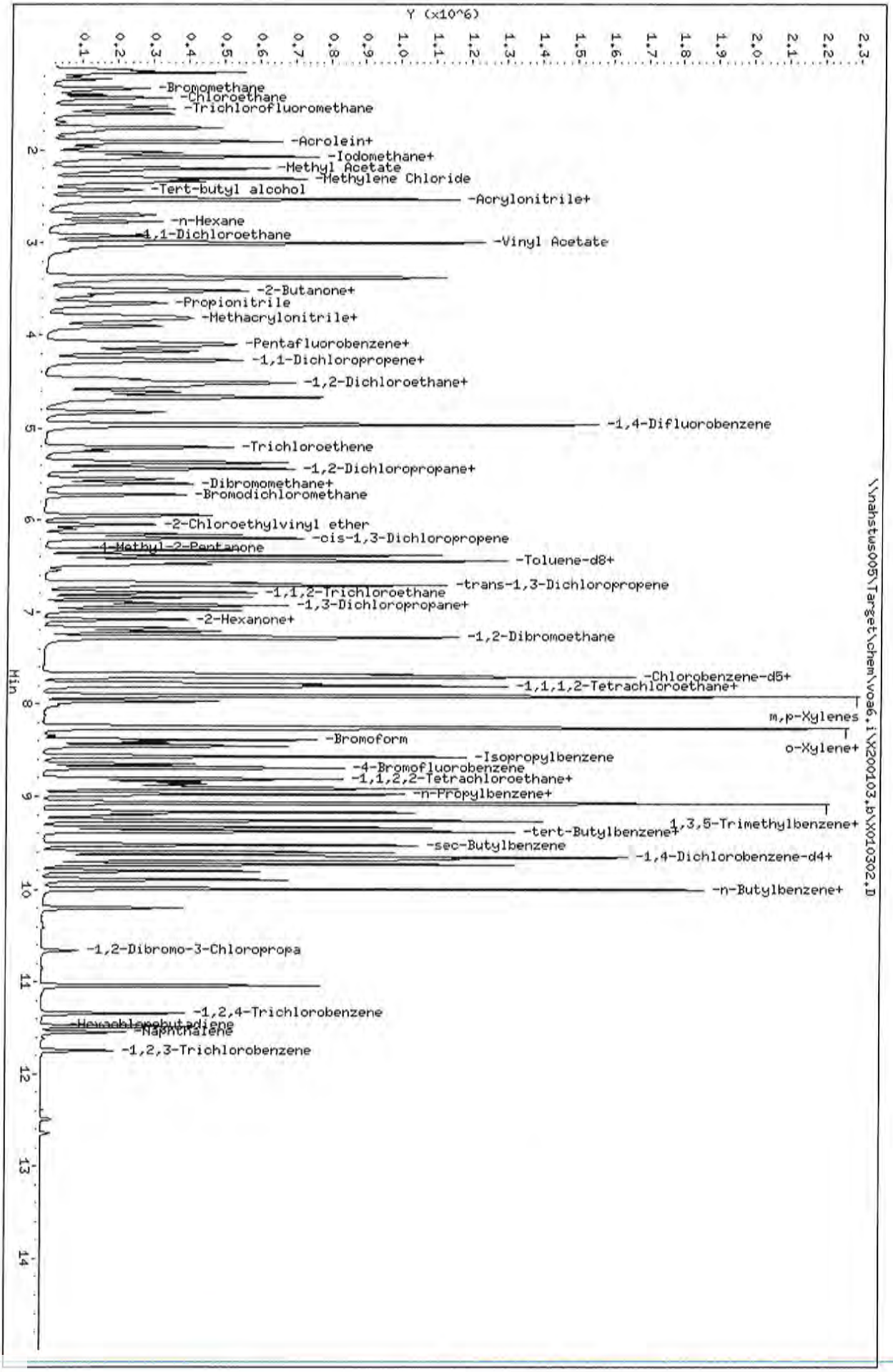
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	366404	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	530593	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	486082	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	247306	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	179868	50.0000	53.95
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	191857	50.0000	55.57
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	648778	50.0000	50.65
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	243640	50.0000	53.84
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	181358	50.0000	51.42
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	243838	50.0000	49.32
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	189754	50.0000	54.56
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	136023	50.0000	53.53
22 1,1-Dichloroethane	63	2.922	2.921	(0.699)	303471	50.0000	56.92
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	134372	50.0000	43.27
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	213382	50.0000	49.85
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	57670	50.0000	62.83
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	167523	50.0000	56.85(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	110080	50.0000	52.84
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	605104	50.0000	51.56
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	21098	50.0000	54.99
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	176102	50.0000	51.65
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	331791	50.0000	50.55
33 1,2-Dichloroethane	62	4.555	4.555	(0.916)	221515	50.0000	52.59

Data File: \\nahstws005\Target\chem\voa6.i\X200103.b\X010302.D Page 2
Report Date: 06-Jan-2020 17:00

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	178078	50.0000	56.18
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	577496	50.0000	51.28
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	363383	50.0000	51.23
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	279079	50.0000	54.09
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	367570	50.0000	51.00
26	2,2-Dichloropropane	77	3.516	3.509	(0.841)	250211	50.0000	51.71
24	2-Butanone	43	3.573	3.573	(0.854)	135712	100.000	120.71
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	488779	50.0000	54.93
52	2-Hexanone	43	7.090	7.083	(0.924)	215466	100.000	107.90
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	574604	50.0000	53.27
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	584185	50.0000	48.27
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	316577	100.000	111.15
10	Acetone	43	1.969	1.969	(0.471)	105494	100.000	111.64
37	Benzene	78	4.512	4.512	(0.908)	672217	50.0000	55.38
74	Bromobenzene	156	8.810	8.810	(0.911)	227877	50.0000	53.01
29	Bromochloromethane	128	3.795	3.795	(0.908)	105213	50.0000	53.00
39	Bromodichloromethane	83	5.729	5.729	(1.153)	235578	50.0000	53.65
66	Bromoform	173	8.416	8.416	(1.097)	141180	50.0000	48.80
6	Bromomethane	94	1.338	1.338	(0.320)	147497	50.0000	40.03 (M)
19	Carbon Disulfide	76	2.069	2.069	(0.495)	938978	100.000	111.15
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	209188	50.0000	44.61
59	Chlorobenzene	112	7.699	7.692	(1.004)	473223	50.0000	49.86
7	Chloroethane	64	1.403	1.403	(0.336)	106918	50.0000	46.34
28	Chloroform	83	3.910	3.910	(0.935)	305318	50.0000	51.45
3	Chloromethane	50	1.073	1.073	(0.257)	184009	50.0000	46.25
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	195143	50.0000	56.16
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	297354	50.0000	57.46
55	Dibromochloromethane	129	7.176	7.176	(0.936)	194173	50.0000	52.60
44	Dibromomethane	93	5.558	5.557	(1.118)	117505	50.0000	52.38
2	Dichlorodifluoromethane	85	0.966	0.966	(0.231)	164253	50.0000	49.21
61	Ethylbenzene	106	7.800	7.800	(1.017)	239588	50.0000	48.86
91	Hexachlorobutadiene	225	11.489	11.481	(1.188)	79552	50.0000	40.02
67	Isopropylbenzene	105	8.566	8.566	(1.117)	671391	50.0000	46.22
62	m,p-Xylenes	106	7.907	7.907	(1.031)	579103	100.000	97.87
17	Methylene Chloride	84	2.305	2.305	(0.551)	179002	50.0000	54.02
87	n-Butylbenzene	91	9.999	9.999	(1.034)	481536	50.0000	47.81
73	n-Propylbenzene	91	8.917	8.917	(0.922)	776444	50.0000	50.79
92	Naphthalene	128	11.546	11.546	(1.194)	154489	50.0000	57.81
63	o-Xylene	106	8.244	8.244	(1.075)	287966	50.0000	49.31
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	635430	50.0000	47.84
64	Styrene	104	8.258	8.258	(1.077)	516728	50.0000	50.88
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	464788	50.0000	48.21
56	Tetrachloroethene	164	6.933	6.933	(0.904)	143029	50.0000	41.87
50	Toluene	91	6.446	6.446	(0.840)	699363	50.0000	50.73
20	trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	163250	50.0000	54.15
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	264434	50.0000	56.07
38	Trichloroethene	130	5.207	5.207	(1.048)	185863	50.0000	50.08
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	240481	50.0000	42.30
5	Vinyl Chloride	62	1.138	1.138	(0.272)	189820	50.0000	50.83

QC Flag Legend

M - Compound response manually integrated.

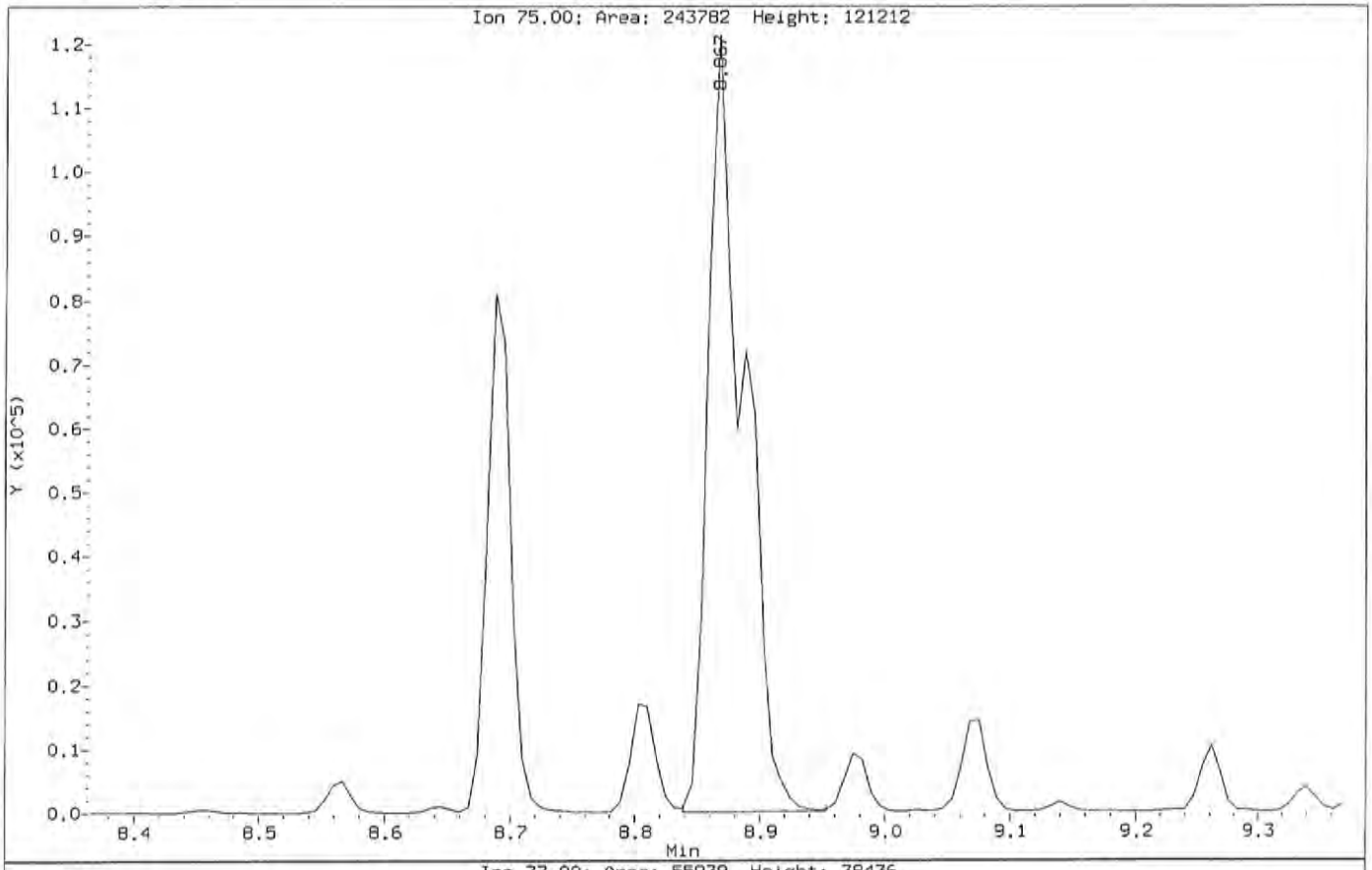


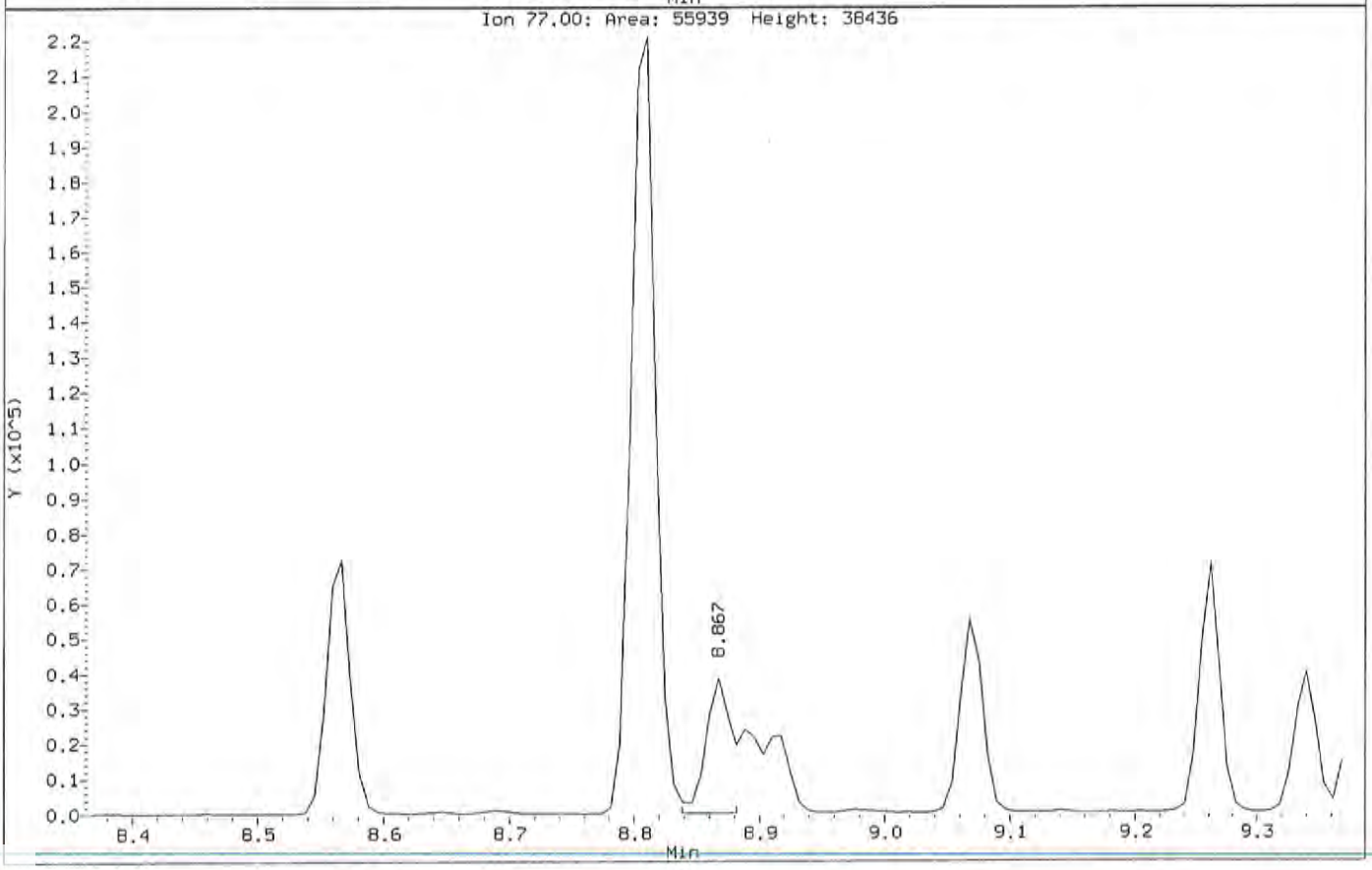
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Date : 03-JAN-2020 12:46
Client ID: CCV
Sample Info: CCV;CCV;2;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200103.b\Before\X010302.D
Injection Date: 03-JAN-2020 12:46
Instrument: voa6.i
Client Sample ID: CCV

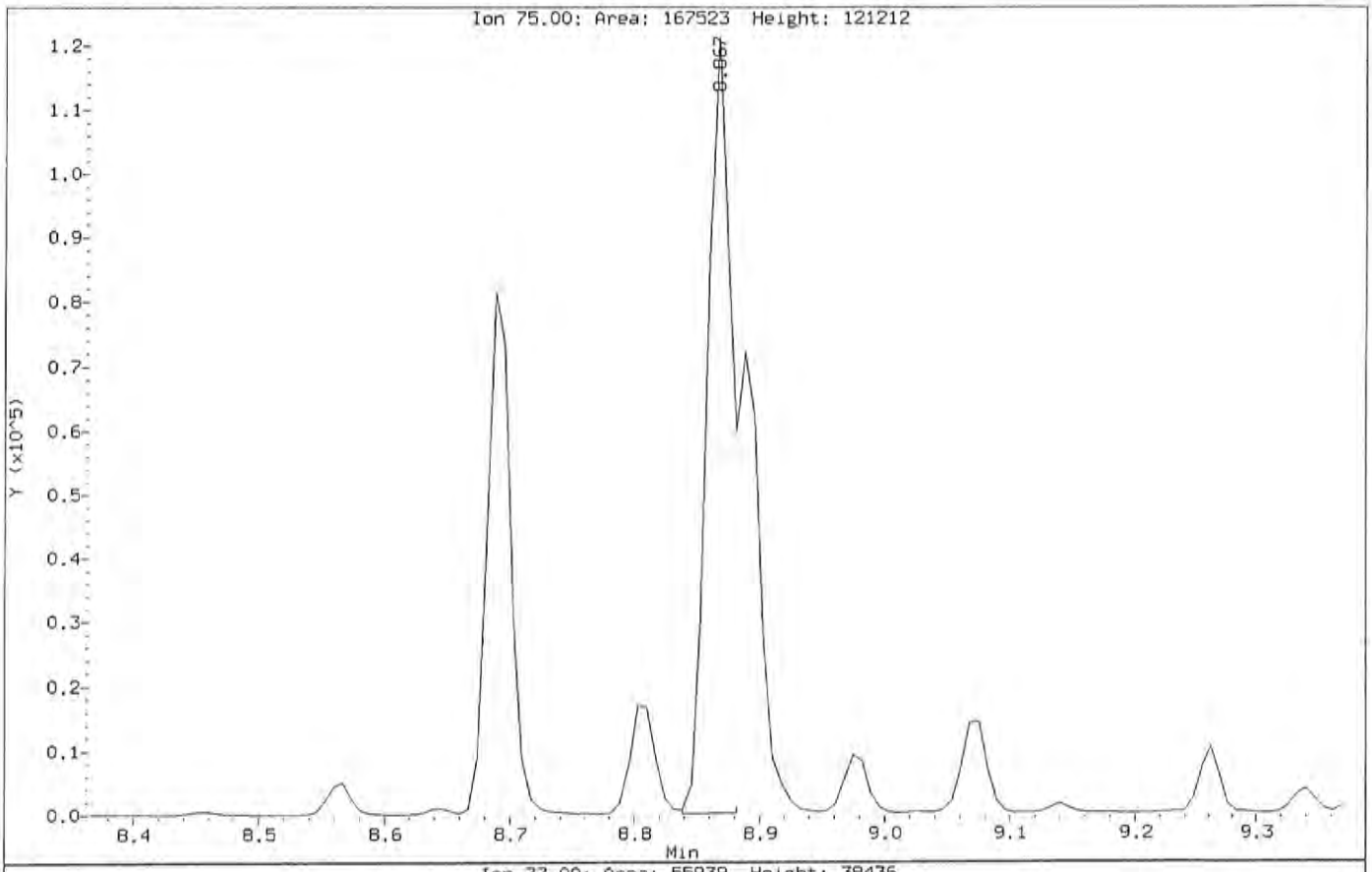
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

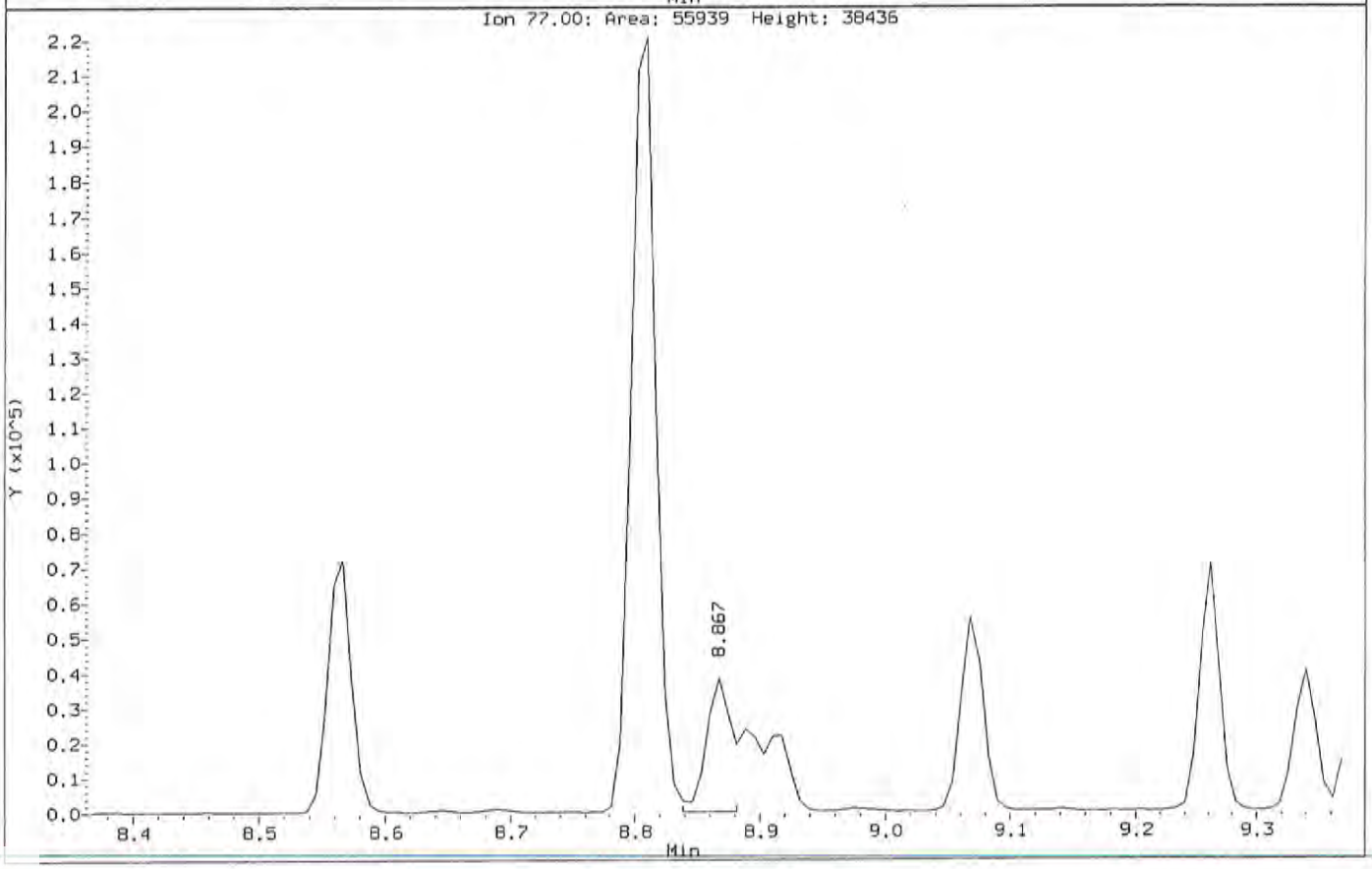




Data File: \\nahstws005\Target\chem\voa6.i\X200103.b\X010302.D
Injection Date: 03-JAN-2020 12:46
Instrument: voa6.i
Client Sample ID: CCV

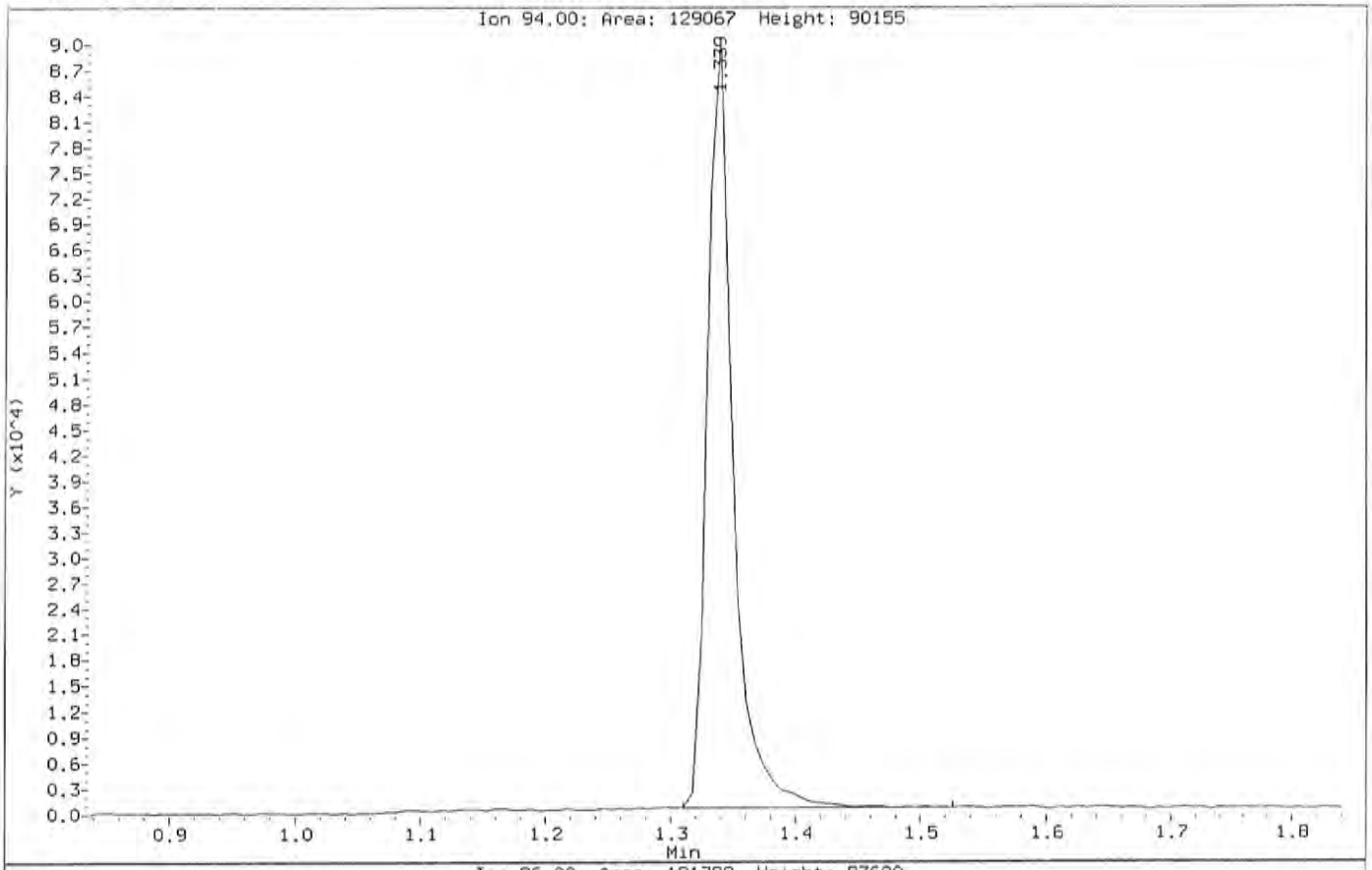
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

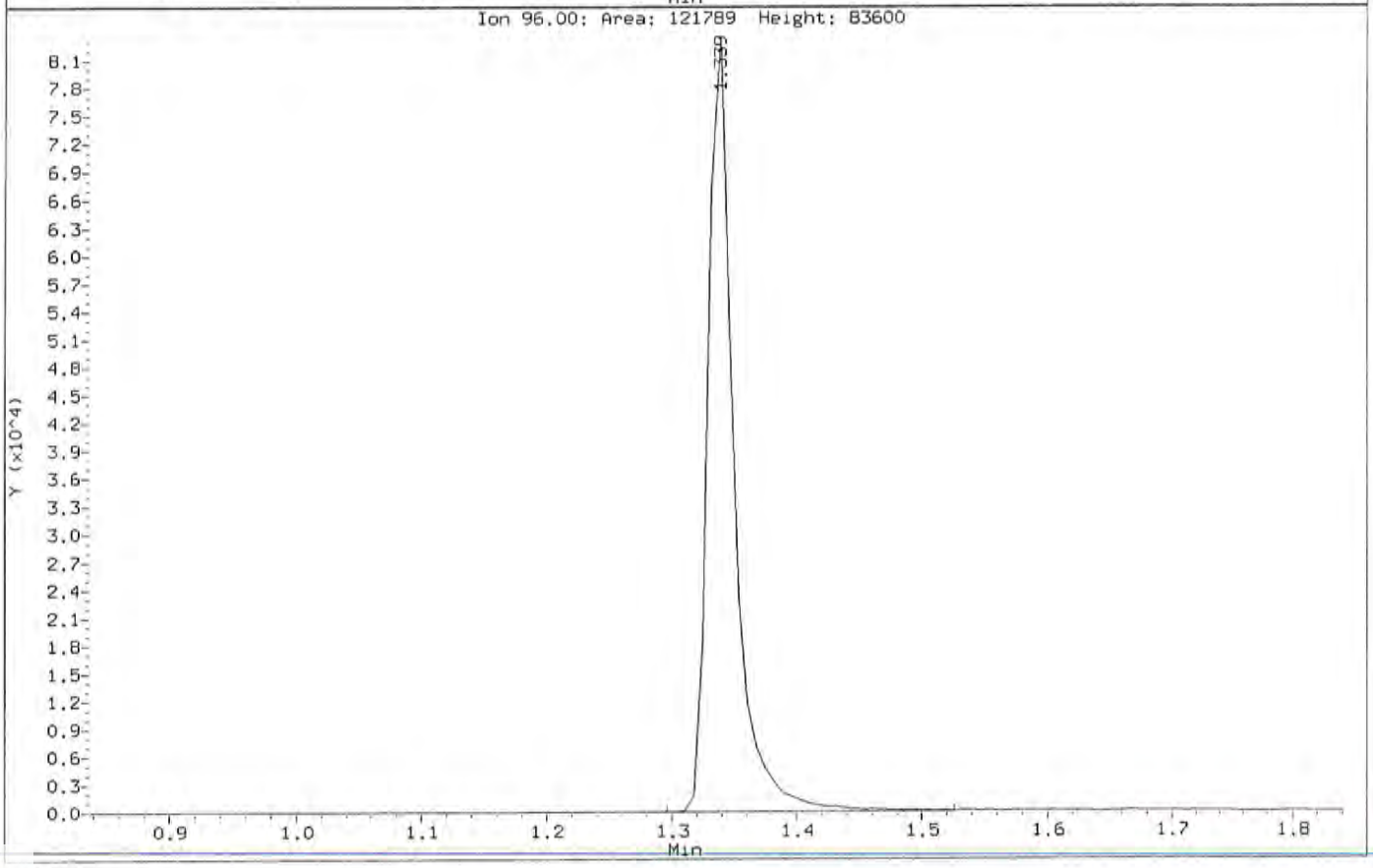




Data File: \\nahstws005\Target\chem\voa6.i\X200103.b\Before\X010302.D
Injection Date: 03-JAN-2020 12:46
Instrument: voa6.i
Client Sample ID: CCV

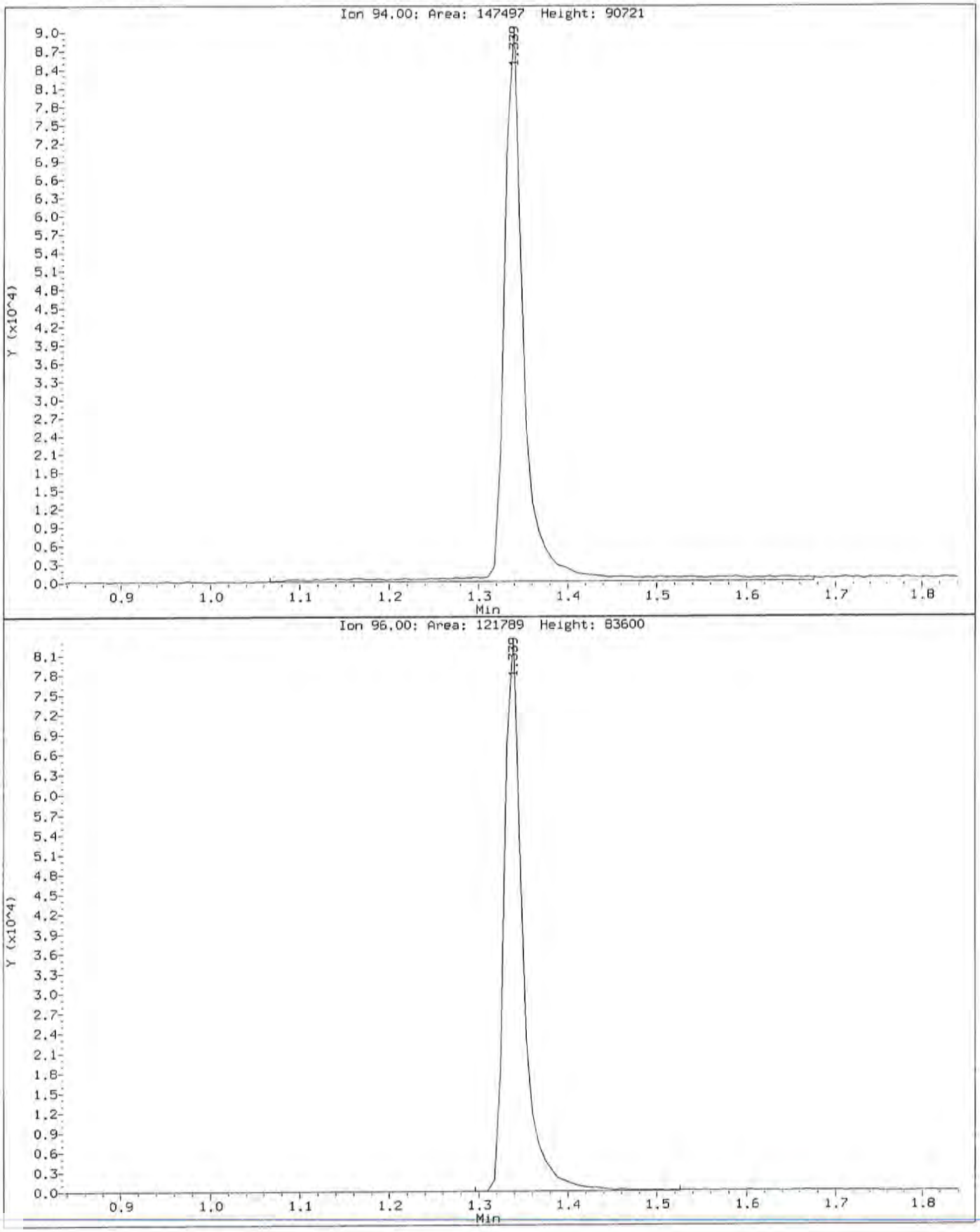
Compound: Bromomethane
CAS Number: 74-83-9





Data File: \\nahstws005\Target\chem\voa6.i\X200103.b\X010302.D
Injection Date: 03-JAN-2020 12:46
Instrument: voa6.i
Client Sample ID: CCV

Compound: Bromomethane
CAS Number: 74-83-9



Data File: \\nahstws005\Target\chem\voa6.i\X200103.b\X010306.D Page 1
Report Date: 06-Jan-2020 17:00

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200103.b\X010306.D
Lab Smp Id: VLCSW-200103 Client Smp ID: VLCSW-200103
Inj Date : 03-JAN-2020 14:22
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-200103;VLCSW-200103;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200103.b\8260W.m
Meth Date : 06-Jan-2020 17:00 voa6.i Quant Type: ISTD
Cal Date : 18-NOV-2019 16:35 Cal File: X111808.D
Als bottle: 6 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14

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

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

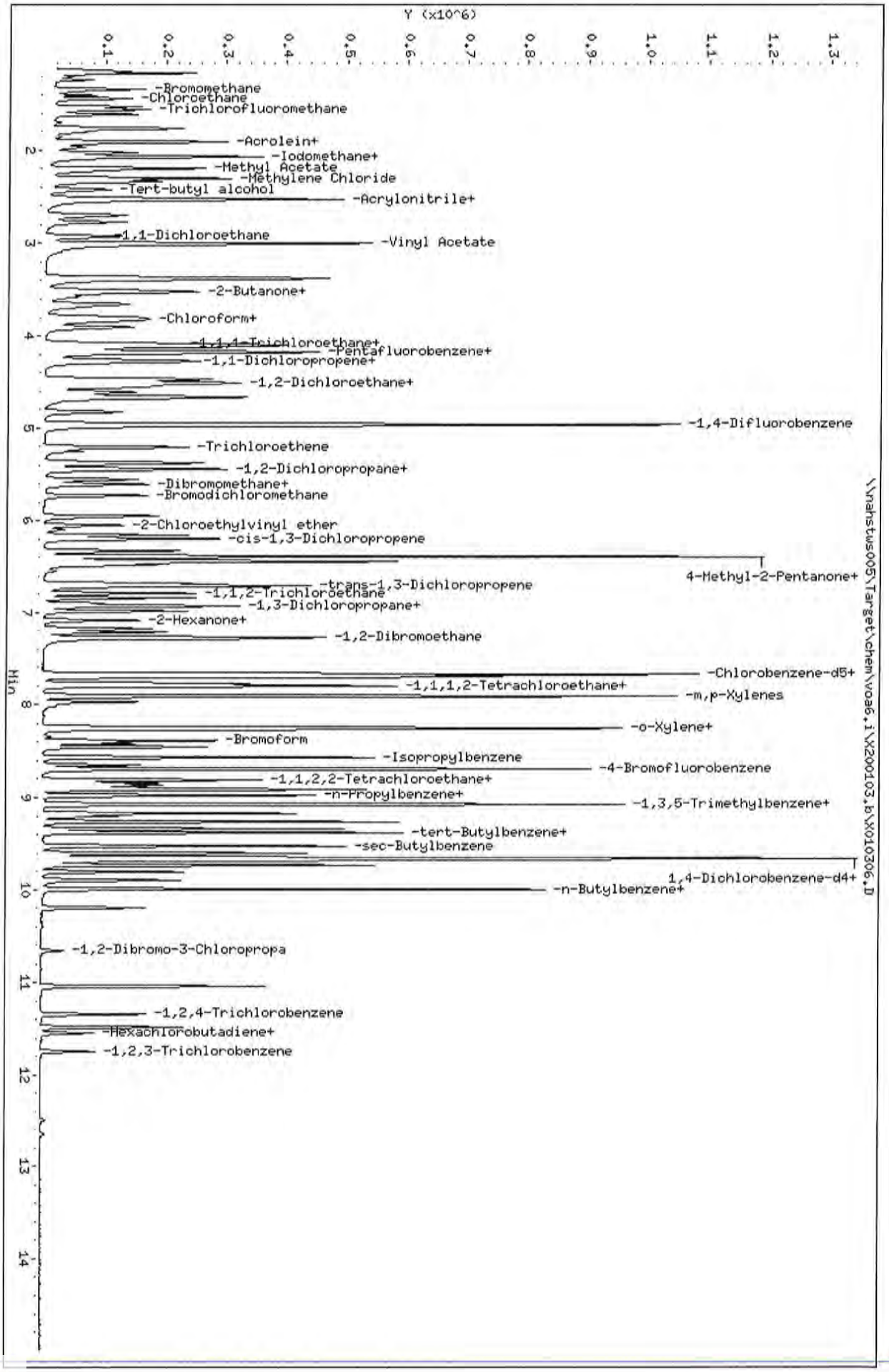
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	391451	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	580708	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	520288	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	261023	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	194899	54.7211	54.72
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	211612	57.3502	57.35
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	704668	51.4036	51.40
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	260974	53.8806	53.88
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	77621	20.5640	20.56
31 1,1,1-Trichloroethane	97	4.082	4.089	(0.976)	114122	21.6102	21.61
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	81092	22.0933	22.09
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	58863	21.6426	21.64
22 1,1-Dichloroethane	63	2.922	2.921	(0.699)	138105	24.2474	24.24
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	63564	19.1607	19.16
32 1,1-Dichloropropene	75	4.283	4.282	(0.862)	98147	20.9524	20.95
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	25702	26.1452	26.14
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	70174	22.5638	22.56(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	51090	23.2357	23.23
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	266507	21.5180	21.51
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	7836	19.1301	19.13
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	75141	20.5919	20.59
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.035)	141682	20.4517	20.45
33 1,2-Dichloroethane	62	4.562	4.555	(0.918)	98120	21.2850	21.28

Data File: \\nahstws005\Target\chem\voa6.i\X200103.b\X010306.D Page 2
Report Date: 06-Jan-2020 17:00

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	78550	22.6440	22.64
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	261231	21.9812	21.98
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	155386	20.7579	20.75
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	120821	21.8809	21.88
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	154151	20.2652	20.26
26	2,2-Dichloropropane	77	3.516	3.509	(0.841)	114207	22.0927	22.09
24	2-Butanone	43	3.573	3.573	(0.854)	55432	46.1497	46.14
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	218791	23.2979	23.29
52	2-Hexanone	43	7.090	7.083	(0.924)	88479	41.3977	41.39
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	253603	22.2794	22.27
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	264951	20.7448	20.74
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	129767	42.5675	42.56
10	Acetone	43	1.969	1.969	(0.471)	47361	44.6790	44.67
37	Benzene	78	4.512	4.512	(0.908)	304012	22.8857	22.88
74	Bromobenzene	156	8.810	8.810	(0.912)	97165	21.4188	21.41
29	Bromochloromethane	128	3.795	3.795	(0.908)	45417	21.4169	21.41
39	Bromodichloromethane	83	5.729	5.729	(1.153)	103453	21.5274	21.52
66	Bromoform	173	8.416	8.416	(1.097)	58272	19.4321	19.43
6	Bromomethane	94	1.339	1.338	(0.320)	67157	15.7101	15.71
19	Carbon Disulfide	76	2.069	2.069	(0.495)	437777	48.5076	48.50
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	97028	18.9089	18.90
59	Chlorobenzene	112	7.699	7.692	(1.004)	211770	20.8486	20.84
7	Chloroethane	64	1.403	1.403	(0.336)	49407	20.0464	20.04
28	Chloroform	83	3.910	3.910	(0.935)	138526	21.8511	21.85
3	Chloromethane	50	1.074	1.073	(0.257)	85062	20.1203	20.12
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	87736	23.6340	23.63
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	128891	22.7593	22.75
55	Dibromochloromethane	129	7.176	7.176	(0.936)	81734	20.6861	20.68
44	Dibromomethane	93	5.558	5.557	(1.118)	50871	20.7230	20.72
2	Dichlorodifluoromethane	85	0.966	0.966	(0.231)	72950	20.9728	20.97
61	Ethylbenzene	106	7.800	7.800	(1.017)	109450	20.8546	20.85
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	43179	20.5840	20.58
67	Isopropylbenzene	105	8.566	8.566	(1.117)	305378	19.6446	19.64
62	m,p-Xylenes	106	7.907	7.907	(1.031)	260931	41.2010	41.20
17	Methylene Chloride	84	2.306	2.305	(0.551)	80549	22.7569	22.75
87	n-Butylbenzene	91	9.999	9.999	(1.035)	221533	20.8427	20.84
73	n-Propylbenzene	91	8.917	8.917	(0.923)	354401	21.9656	21.96
92	Naphthalene	128	11.546	11.546	(1.195)	60880	21.5878	21.58
63	o-Xylene	106	8.244	8.244	(1.075)	128019	20.4817	20.48
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	293243	20.9217	20.92
64	Styrene	104	8.258	8.258	(1.077)	221710	20.3985	20.39
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	216153	21.2423	21.24
56	Tetrachloroethene	164	6.933	6.933	(0.904)	67692	18.5169	18.51
50	Toluene	91	6.446	6.446	(0.840)	319730	21.6704	21.67
20	trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	74908	23.2578	23.25
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	114428	22.1693	22.16
38	Trichloroethene	130	5.207	5.207	(1.048)	85338	21.0135	21.01
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	108661	17.8944	17.89
5	Vinyl Chloride	62	1.138	1.138	(0.272)	88956	22.2972	22.29

QC Flag Legend

M - Compound response manually integrated.

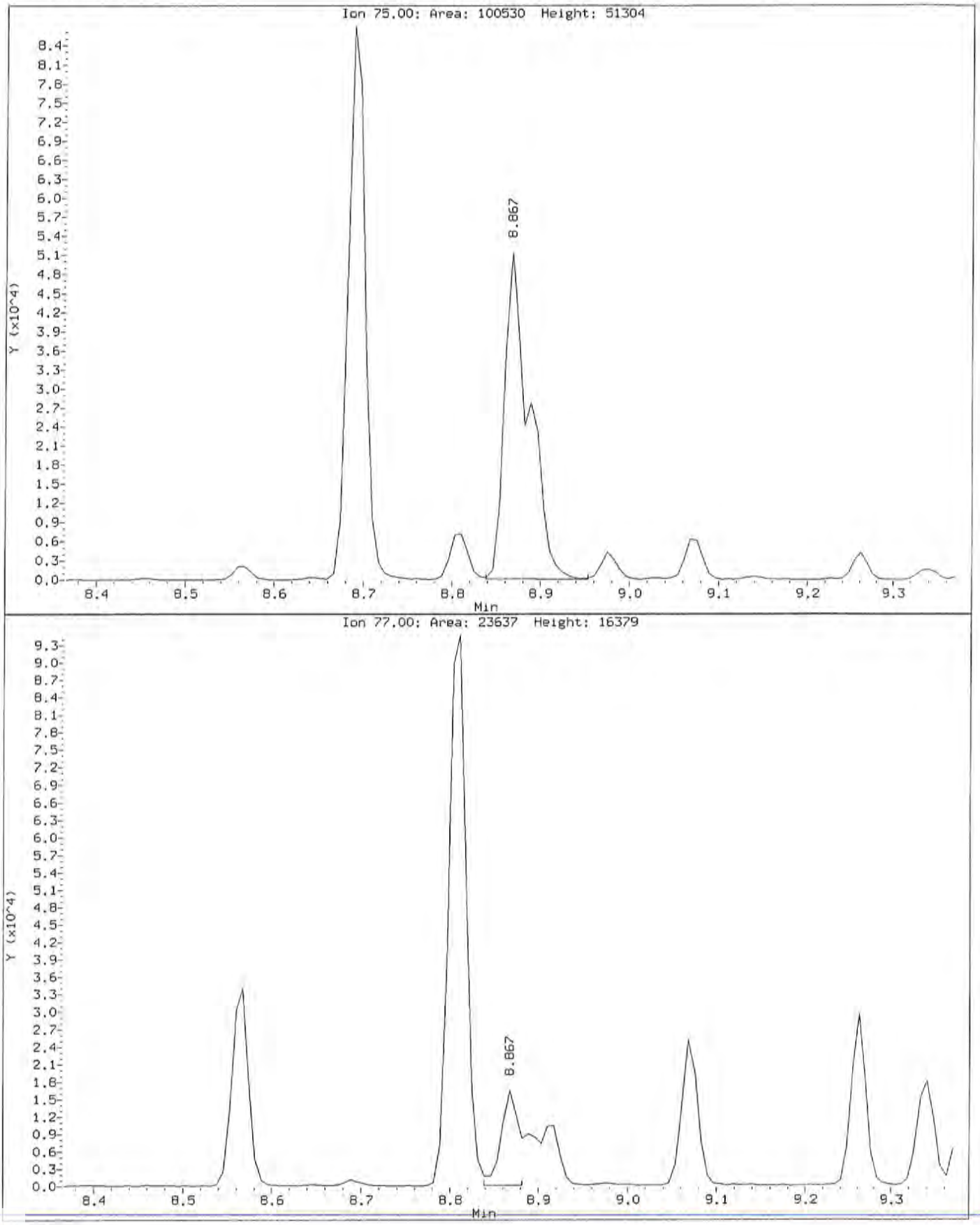


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Date : 03-JAN-2020 14:22
Client ID: VLCSW-200103
Sample Info: VLCSW-200103;VLCSW-200103;3;;LCS
Purge Volume: 5.0
Column phase: DB624

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

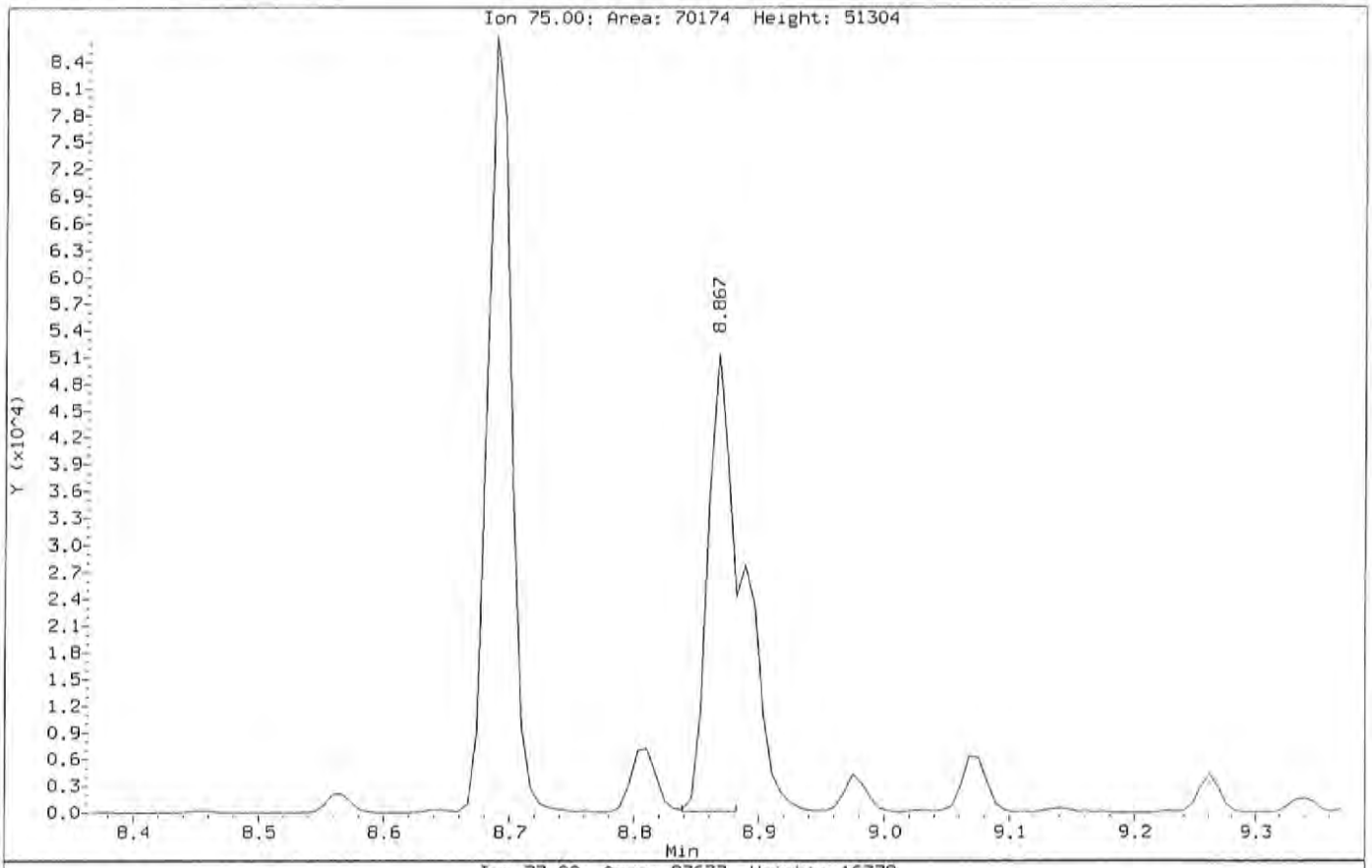
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Instrument: voa6.i
Client Sample ID: VLCSW-200103

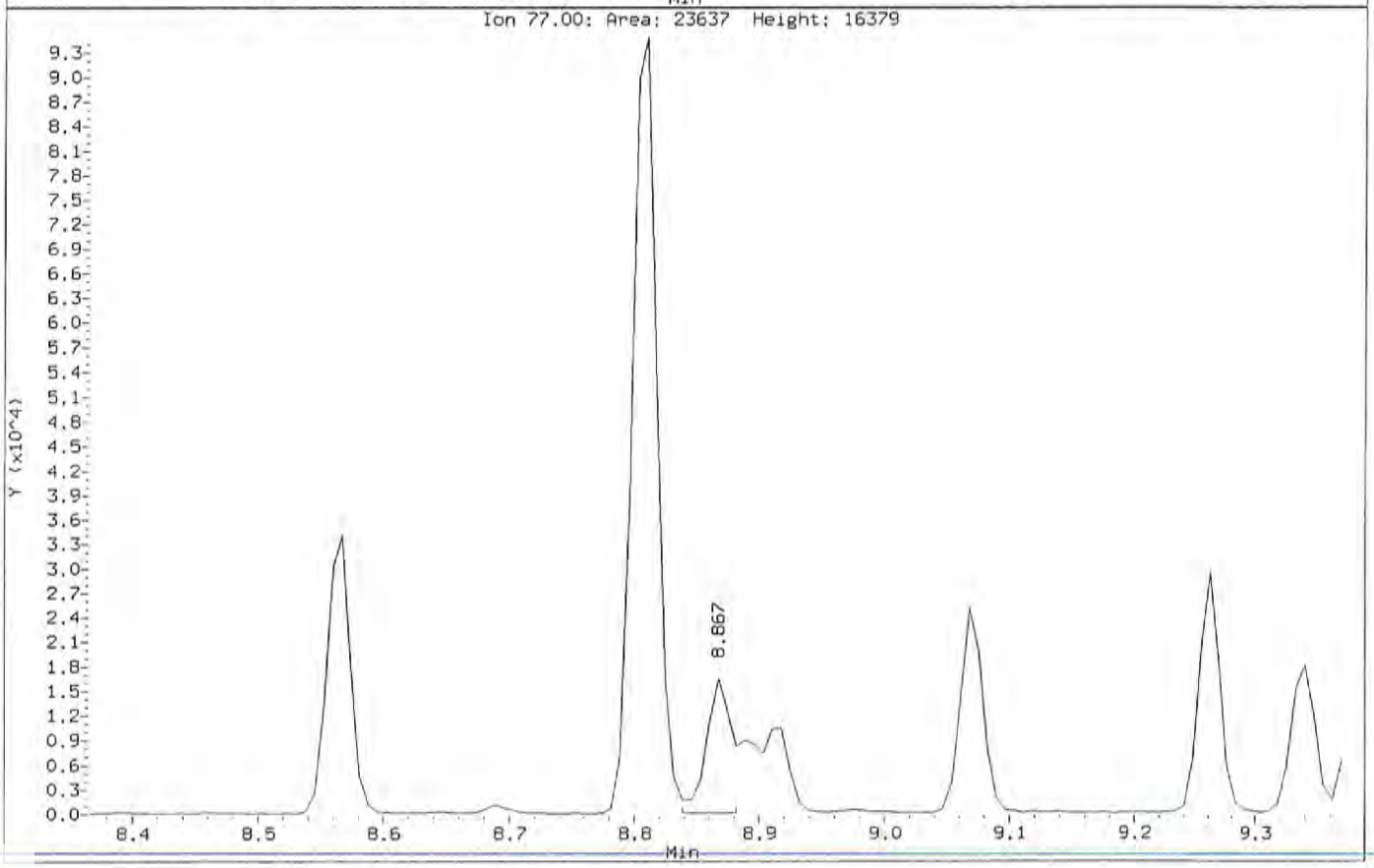
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



Data File: \\nahstws005\Target\chem\voa6.i\X200103.b\X010306.D
Injection Date: 03-JAN-2020 14:22
Instrument: voa6.i
Client Sample ID: VLCSW-200103

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





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200103.b\X010308.D
Lab Smp Id: VBLKW-200103 Client Smp ID: VBLKW-200103
Inj Date : 03-JAN-2020 15:10
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-200103;VBLKW-200103;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200103.b\8260W.m
Meth Date : 06-Jan-2020 17:00 voa6.i Quant Type: ISTD
Cal Date : 18-NOV-2019 16:35 Cal File: X111808.D
Als bottle: 8 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14

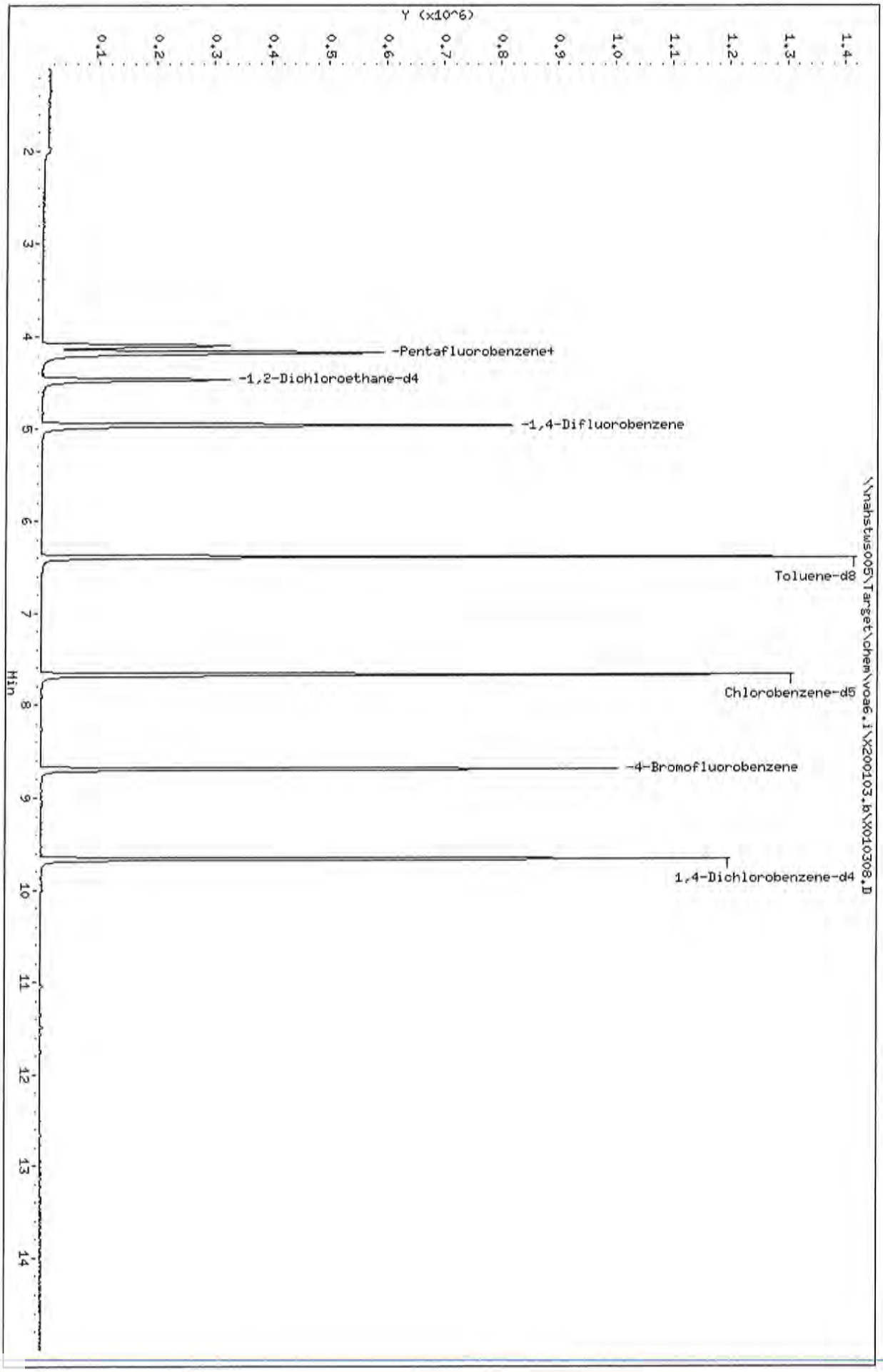
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	525398	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	743854	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	635283	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	308149	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	232003	48.5735	48.57
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	246500	49.8711	49.87
$	48 Toluene-d8	98	6.388	6.388	(0.833)	858109	51.2659	51.26
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	295736	50.0354	50.03

Data File: \\nahstws005\Target\chem\voa6.i\X200103.b\X010308.D
Date : 03-JAN-2020 15:10
Client ID: VBLKW-200103
Sample Info: VBLKW-200103;VBLKW-200103;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\X200103.b\X010309.D
Lab Smp Id: HS19121257-07 Client Smp ID: HS19121257-07
Inj Date : 03-JAN-2020 15:34
Operator : PC Inst ID: voa6.i
Smp Info : HS19121257-07;HS19121257-07;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200103.b\8260W.m
Meth Date : 30-Jan-2020 15:45 DevakG Quant Type: ISTD
Cal Date : 18-NOV-2019 16:35 Cal File: X111808.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

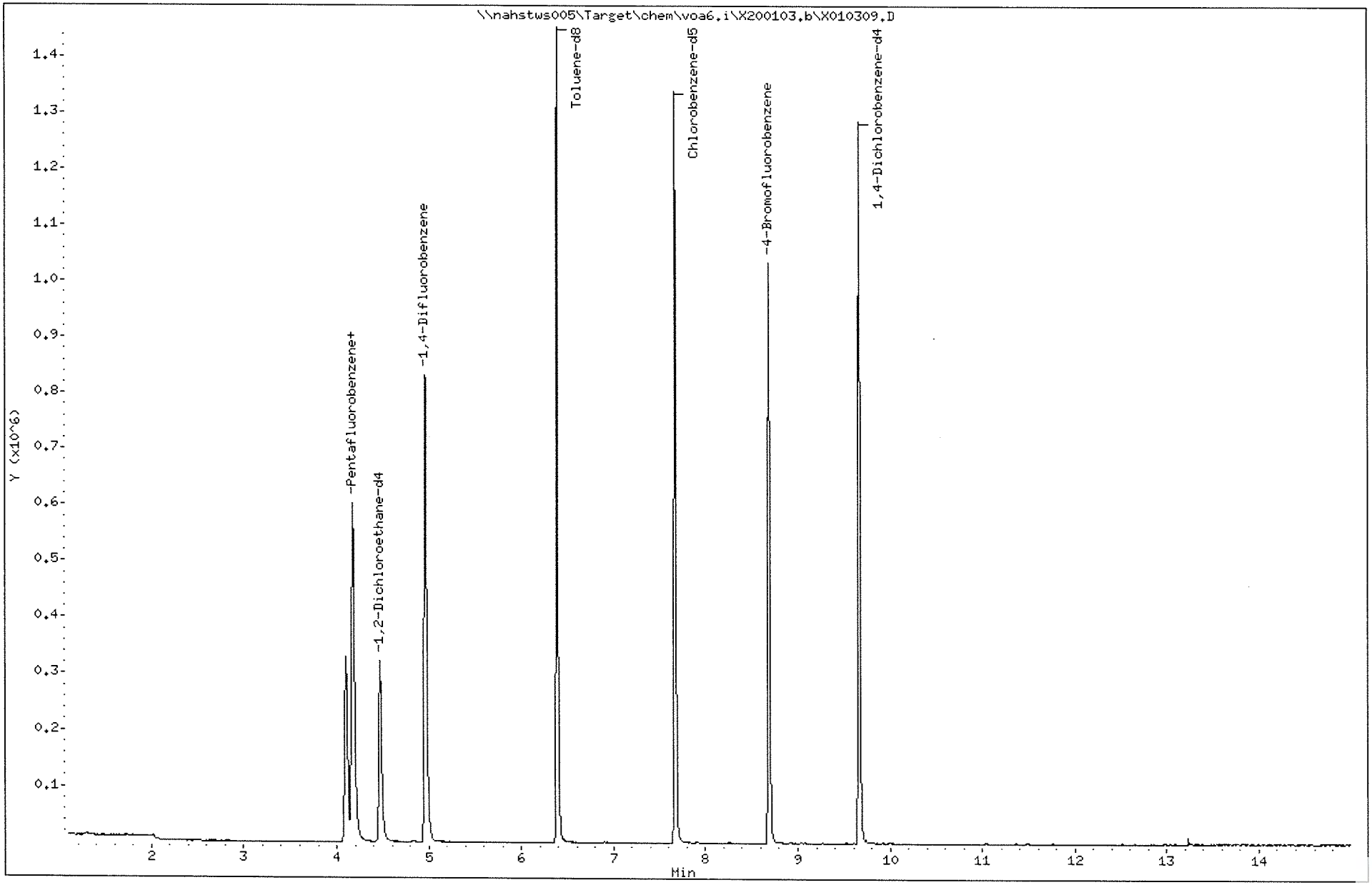
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	532712	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	752571	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	651602	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	322243	50.0000	
$ 30 Dibromofluoromethane	113	4.104	4.103	(0.981)	236393	48.8113	48.81
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	248304	49.5512	49.55
$ 48 Toluene-d8	98	6.389	6.388	(0.833)	868860	50.6081	50.60
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	304909	50.2932	50.29

Data File: \\nahstws005\Target\chem\voa6.i\X200103.b\X010309.D
Date : 03-JAN-2020 15:34
Client ID: HS19121257-07
Sample Info: HS19121257-07;HS19121257-07;;;
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\X200103.b\X010310.D
Lab Smp Id: HS19121257-05 Client Smp ID: HS19121257-05
Inj Date : 03-JAN-2020 15:58
Operator : PC Inst ID: voa6.i
Smp Info : HS19121257-05;HS19121257-05;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200103.b\8260W.m
Meth Date : 30-Jan-2020 15:45 DevakG Quant Type: ISTD
Cal Date : 18-NOV-2019 16:35 Cal File: X111808.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

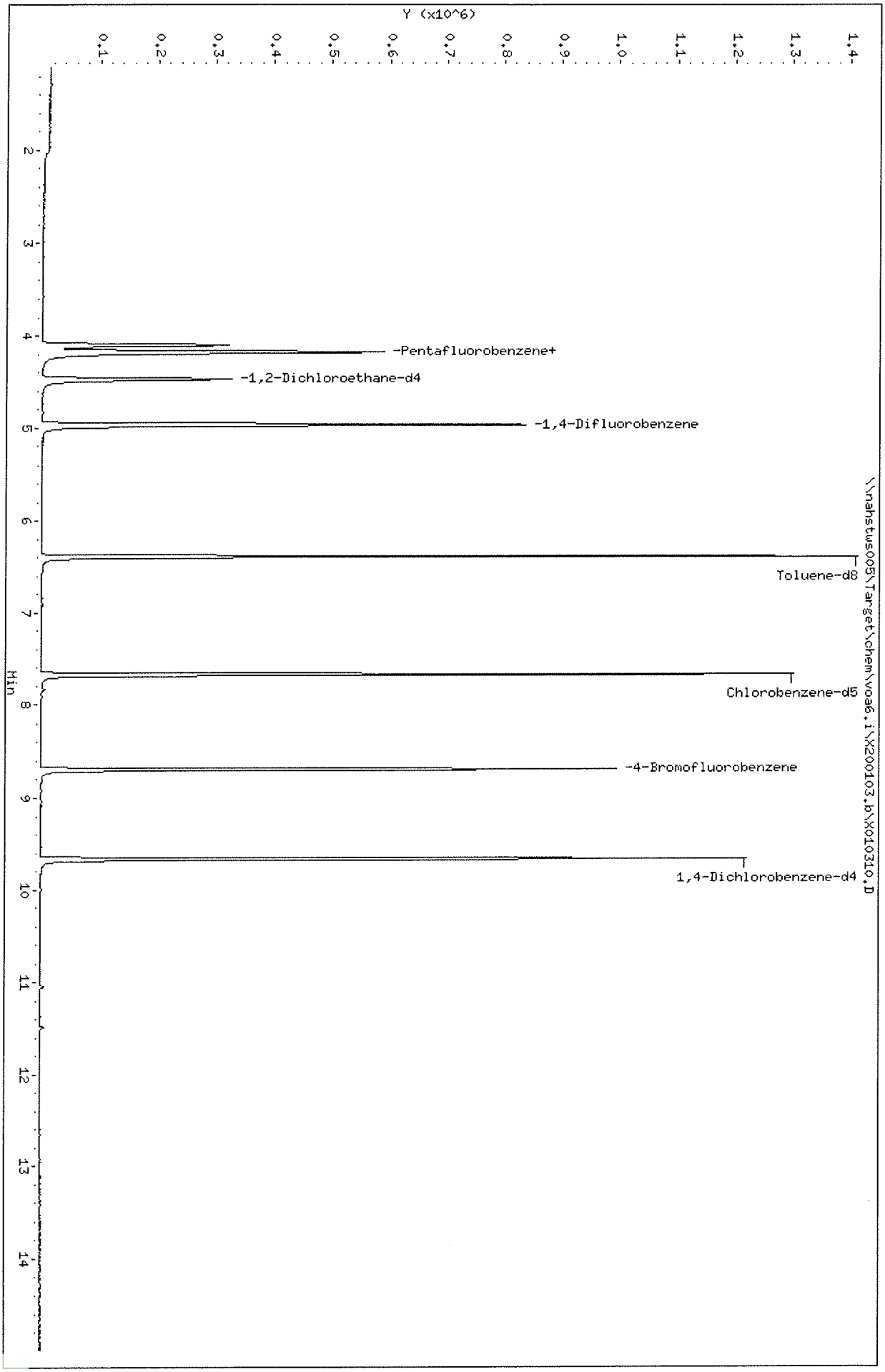
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	524320	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	744753	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	626401	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	311786	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	232042	48.6808	48.68
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	245795	49.8313	49.83
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	856019	51.8661	51.86
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	293724	50.3966	50.39

Data File: \\nahstws005\Target\chem\voa6.i\X200103.b\X010310.D
Date : 03-JAN-2020 15:58
Client ID: HS191212S7-05
Sample Info: HS191212S7-05;HS191212S7-05;;;
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\X200103.b\X010311.D
Lab Smp Id: HS19121257-06 Client Smp ID: HS19121257-06
Inj Date : 03-JAN-2020 16:22
Operator : PC Inst ID: voa6.i
Smp Info : HS19121257-06;HS19121257-06;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200103.b\8260W.m
Meth Date : 30-Jan-2020 15:45 DevakG Quant Type: ISTD
Cal Date : 18-NOV-2019 16:35 Cal File: X111808.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

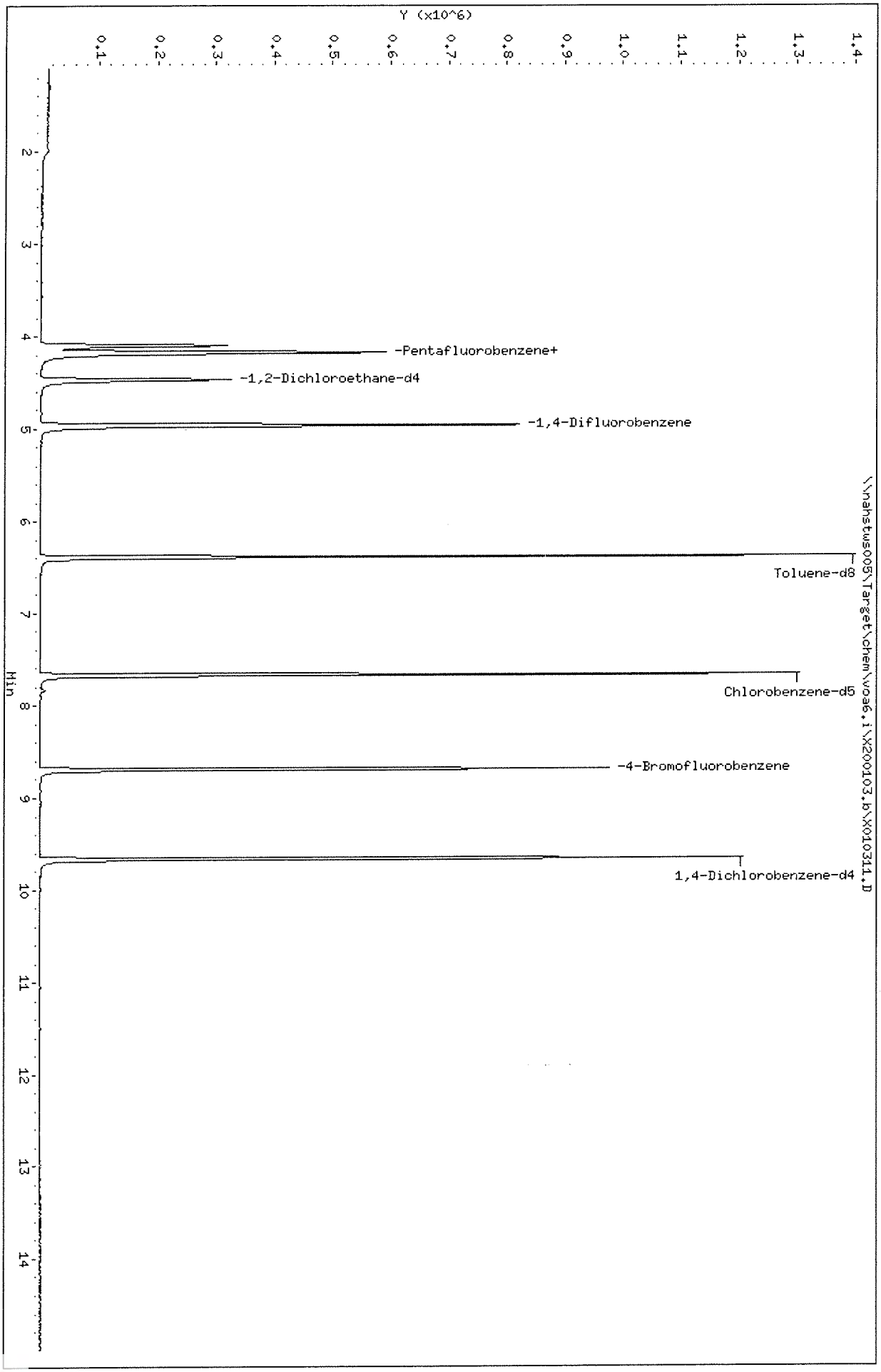
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	518311	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	737114	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	625320	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	313221	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	229329	48.6695	48.66
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	242995	49.8347	49.83
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	845765	51.3334	51.33
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	293969	50.5247	50.52

Data File: \\nahstws005\Target\chem\voa6.i\X200103.b\X010311.D
Date : 03-JAN-2020 16:22
Client ID: HS19121257-06
Sample Info: HS19121257-06;HS19121257-06;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\nahstws005\Target\chem\voa6.i\X200103.b\X010318.D Page 1
Report Date: 06-Jan-2020 17:00

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200103.b\X010318.D
Lab Smp Id: HS19121484-01MS Client Smp ID: HS19121484-01MS
Inj Date : 03-JAN-2020 19:11
Operator : PC Inst ID: voa6.i
Smp Info : HS19121484-01MS;HS19121484-01MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200103.b\8260W.m
Meth Date : 06-Jan-2020 17:00 voa6.i Quant Type: ISTD
Cal Date : 18-NOV-2019 16:35 Cal File: X111808.D
Als bottle: 18 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14

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

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

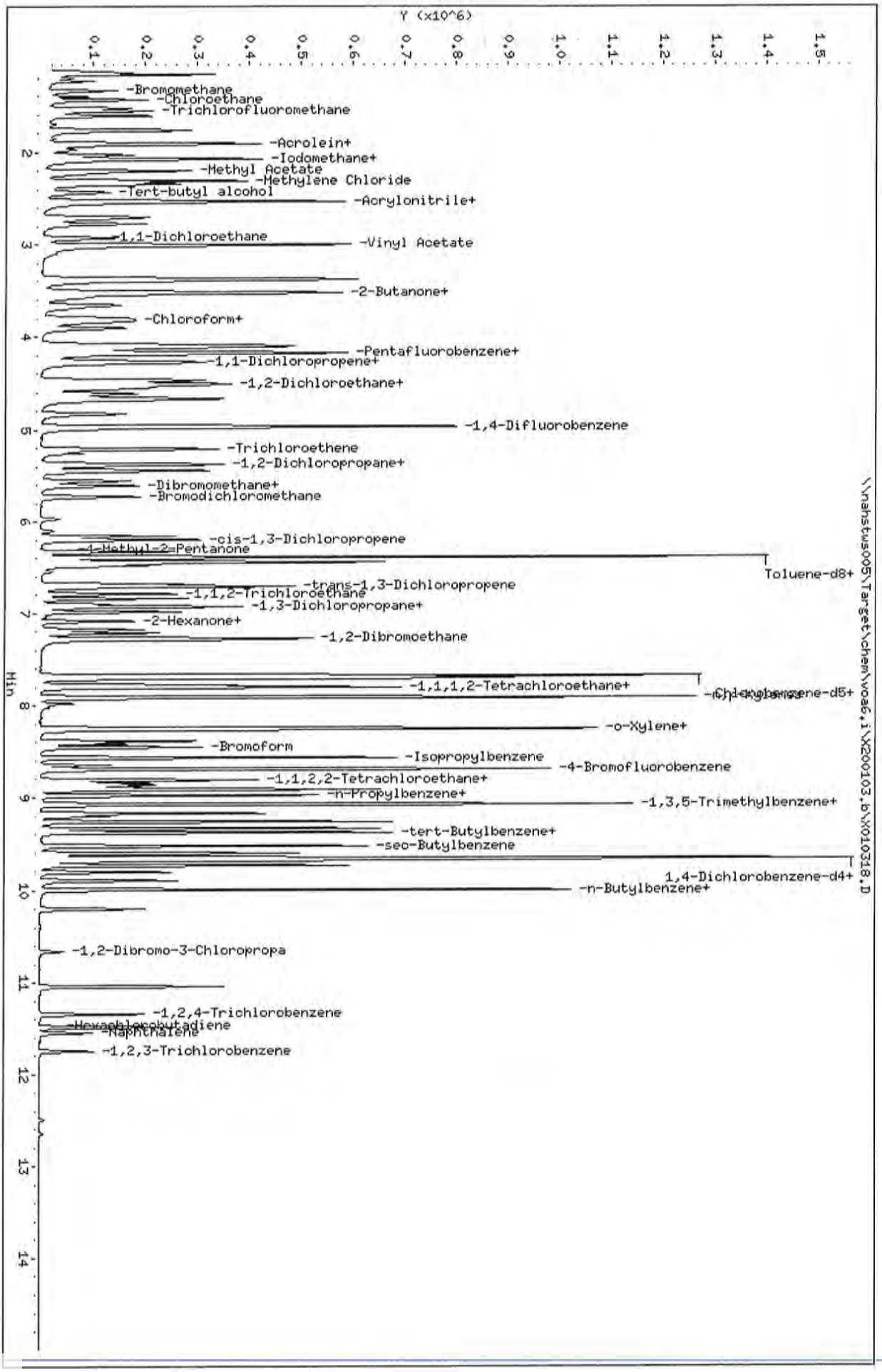
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1	Pentafluorobenzene	168	4.182	4.182	(1.000)	512591	50.0000	
* 36	1,4-Difluorobenzene	114	4.970	4.970	(1.000)	719478	50.0000	
* 47	Chlorobenzene-d5	117	7.671	7.671	(1.000)	615346	50.0000	
* 70	1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	304061	50.0000	
$ 30	Dibromofluoromethane	113	4.103	4.103	(0.981)	225771	48.4507	48.45
$ 35	1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	238114	49.3854	49.38
$ 48	Toluene-d8	98	6.388	6.388	(0.933)	827682	51.0502	51.05
$ 69	4-Bromofluorobenzene	95	8.688	8.688	(1.133)	289680	50.5940	50.59
60	1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	86154	19.2987	19.29
31	1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	136468	19.7345	19.73
68	1,1,2,2-Tetrachloroethane	83	8.845	8.838	(0.915)	90698	21.2128	21.21
53	1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	65632	20.4037	20.40
22	1,1-Dichloroethane	63	2.921	2.921	(0.699)	157208	21.0784	21.07
11	1,1-Dichloroethene	96	1.911	1.912	(0.457)	77364	17.8092	17.80
32	1,1-Dichloropropene	75	4.282	4.282	(0.862)	119747	20.6330	20.63
93	1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	29817	26.0348	26.03
71	1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	78448	21.6539	21.65(M)
90	1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	58871	22.9847	22.98
79	1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	316668	21.9491	21.94
89	1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	9860	20.6914	20.69
57	1,2-Dibromoethane	107	7.262	7.262	(0.947)	85028	19.7018	19.70
88	1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	164491	20.3833	20.38
33	1,2-Dichloroethane	62	4.562	4.555	(0.918)	115262	20.1810	20.18

Data File: \\nahstws005\Target\chem\voa6.i\X200103.b\X010318.D Page 2
Report Date: 06-Jan-2020 17:00

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	87482	20.3547	20.35
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	313128	22.6186	22.61
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	182575	20.9378	20.93
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	133912	20.5053	20.50
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	178812	20.1799	20.17
26	2,2-Dichloropropane	77	3.509	3.509	(0.839)	131691	19.4544	19.45
24	2-Butanone	43	3.580	3.573	(0.856)	60458	38.4387	38.43
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	259240	23.6977	23.69
52	2-Hexanone	43	7.090	7.083	(0.924)	100811	39.8813	39.88
77	4-Chlorotoluene	91	9.074	9.075	(0.939)	296477	22.3593	22.35
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	333568	22.4205	22.42
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	150255	41.6742	41.67
10	Acetone	43	1.969	1.969	(0.471)	41821	28.8724	28.87
37	Benzene	78	4.512	4.512	(0.908)	342891	20.8338	20.83
74	Bromobenzene	156	8.809	8.810	(0.911)	111332	21.0680	21.06
29	Bromochloromethane	128	3.795	3.795	(0.908)	51875	18.6811	18.68
39	Bromodichloromethane	83	5.729	5.729	(1.153)	113400	19.0459	19.04
66	Bromoform	173	8.415	8.416	(1.097)	64797	18.3298	18.32
6	Bromomethane	94	1.338	1.338	(0.320)	70389	12.1041	12.10
19	Carbon Disulfide	76	2.069	2.069	(0.495)	519634	43.9705	43.97
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	121455	19.1041	19.10
59	Chlorobenzene	112	7.699	7.692	(1.004)	234198	19.4948	19.49
7	Chloroethane	64	1.403	1.403	(0.336)	58723	18.1955	18.19
28	Chloroform	83	3.910	3.910	(0.935)	153706	18.5157	18.51
3	Chloromethane	50	1.073	1.073	(0.257)	99175	17.9351	17.93
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	255499	52.5599	52.55
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	140238	19.9868	19.98
55	Dibromochloromethane	129	7.176	7.176	(0.936)	90364	19.3373	19.33
44	Dibromomethane	93	5.557	5.557	(1.118)	56829	18.6850	18.68
2	Dichlorodifluoromethane	85	0.966	0.966	(0.231)	97562	21.4011	21.40
61	Ethylbenzene	106	7.799	7.800	(1.017)	129106	20.7997	20.79
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	50032	20.4749	20.47
67	Isopropylbenzene	105	8.566	8.566	(1.117)	381185	20.7332	20.73
62	m,p-Xylenes	106	7.907	7.907	(1.031)	305263	40.7550	40.75
17	Methylene Chloride	84	2.305	2.305	(0.551)	93935	20.2669	20.26
87	n-Butylbenzene	91	9.999	9.999	(1.034)	277566	22.4182	22.41
73	n-Propylbenzene	91	8.917	8.917	(0.922)	437757	23.2916	23.29
92	Naphthalene	128	11.546	11.546	(1.194)	69925	21.2855	21.28
63	o-Xylene	106	8.244	8.244	(1.075)	149405	20.2107	20.21
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	369903	22.6556	22.65
64	Styrene	104	8.258	8.258	(1.077)	249798	19.4323	19.43
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	272247	22.9679	22.96
56	Tetrachloroethene	164	6.933	6.933	(0.904)	83558	19.3261	19.32
50	Toluene	91	6.446	6.446	(0.840)	365331	20.9361	20.93
20	trans-1,2-Dichloroethene	96	2.527	2.528	(0.604)	85525	20.2787	20.27
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	123709	19.3447	19.34
38	Trichloroethene	130	5.206	5.207	(1.048)	122873	24.4204	24.42
8	Trichlorofluoromethane	101	1.560	1.561	(0.373)	142904	17.9719	17.97
5	Vinyl Chloride	62	1.138	1.138	(0.272)	111930	21.4253	21.42

QC Flag Legend

M - Compound response manually integrated.

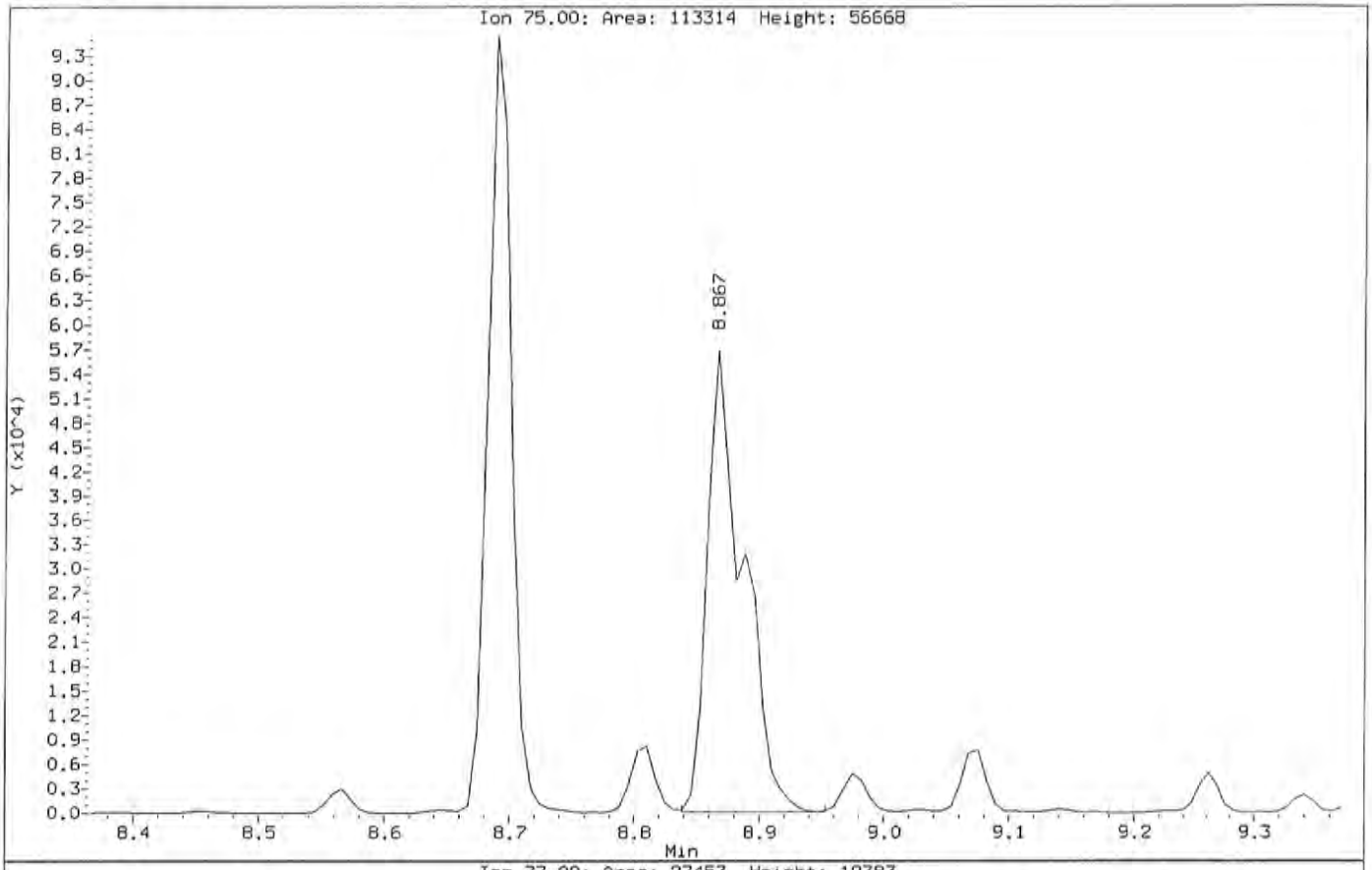


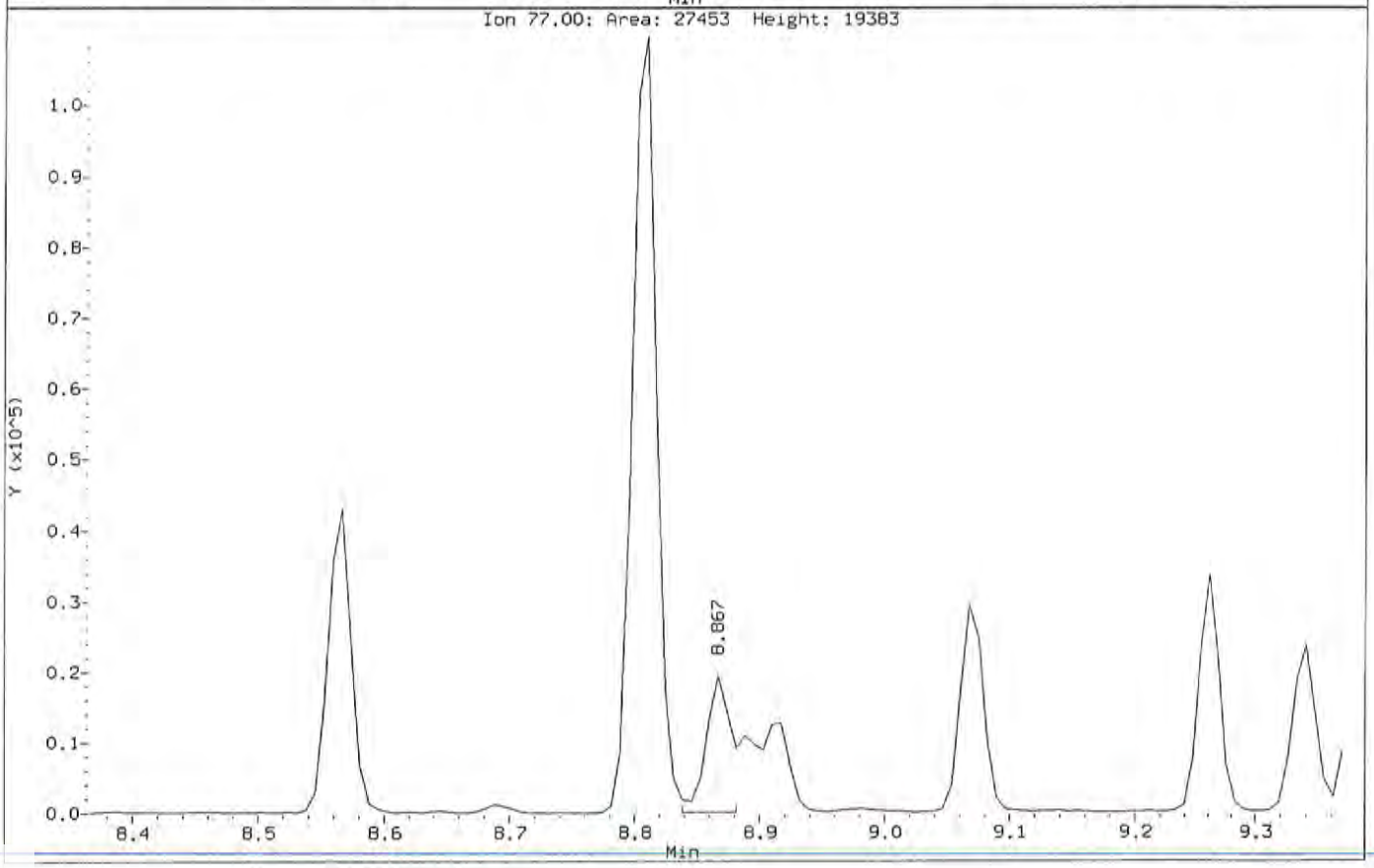
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Sample Info: HS19121484-01HS;HS19121484-01HS;3;;HS
Purge Volume: 5.0
Column phase: DB624

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

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Injection Date: 03-JAN-2020 19:11
Instrument: voa6.i
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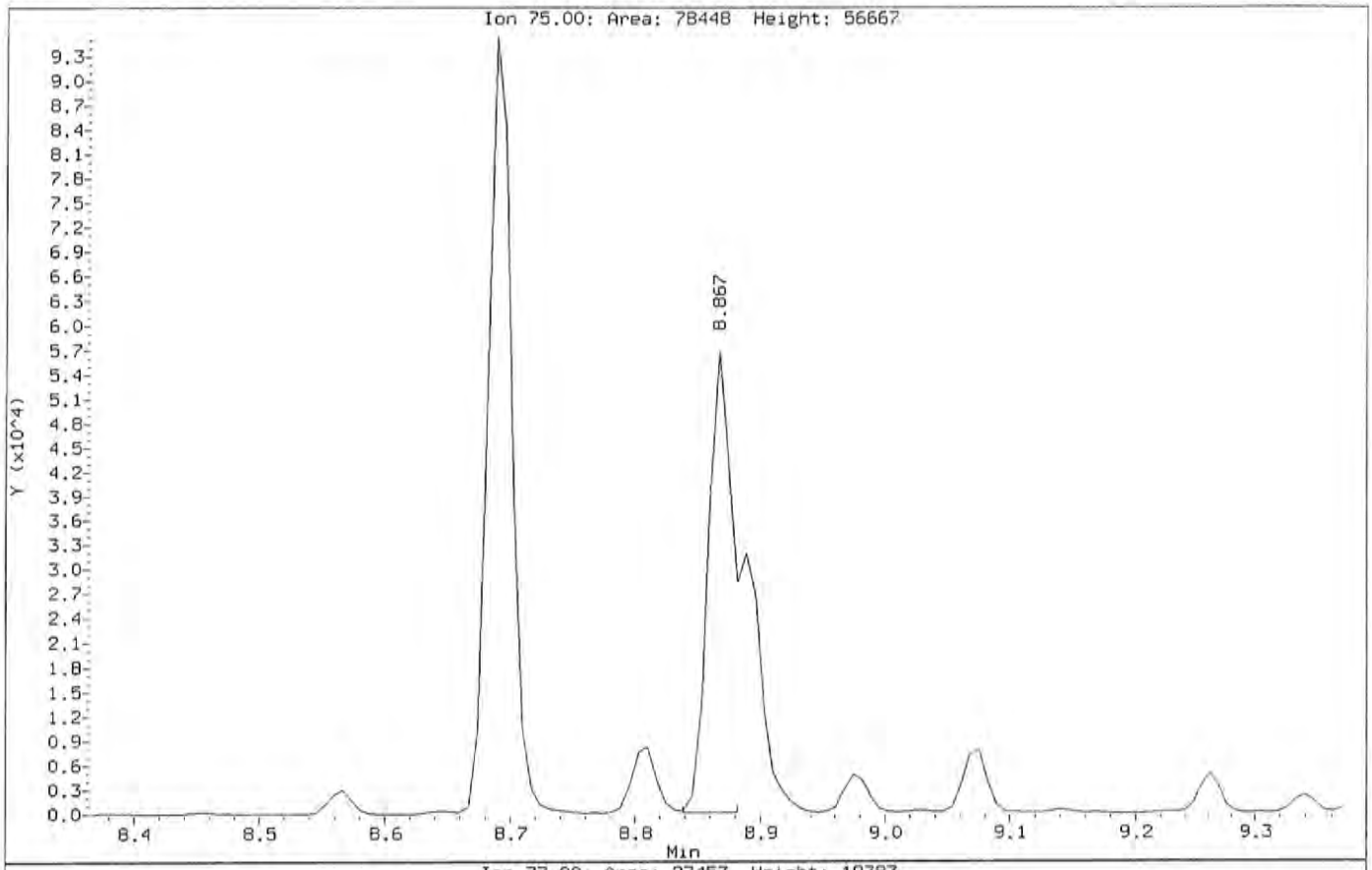
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CAS Number: 96-18-4

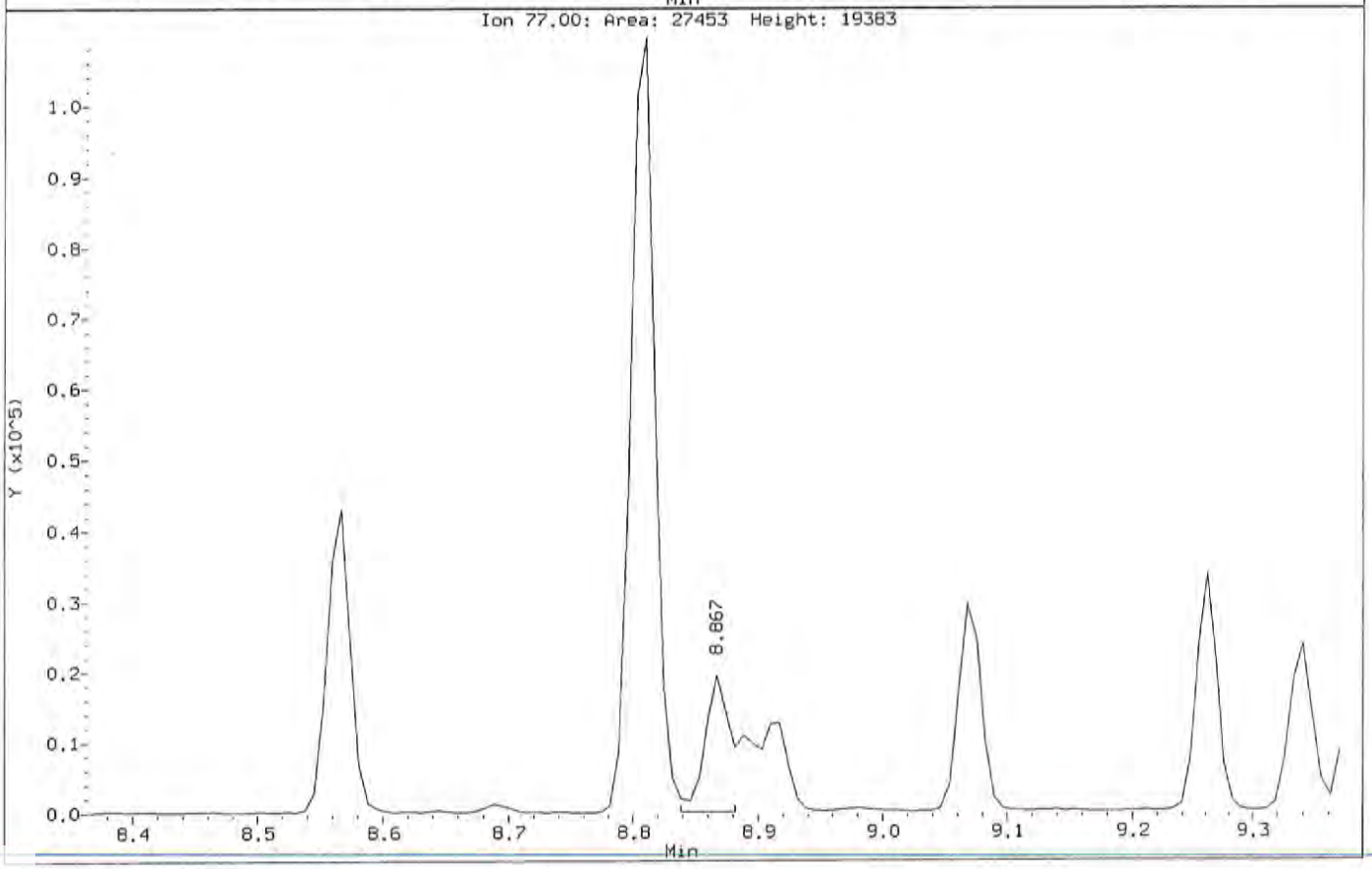




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Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





Data File: \\nahstws005\Target\chem\voa6.i\X200103.b\X010319.D Page 1
Report Date: 06-Jan-2020 17:00

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200103.b\X010319.D
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Inj Date : 03-JAN-2020 19:35
Operator : PC Inst ID: voa6.i
Smp Info : HS19121484-01MSD;HS19121484-01MSD;3;;MSD
Misc Info : HS18090001;WATER;0;1;
Comment :
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Meth Date : 06-Jan-2020 17:00 voa6.i Quant Type: ISTD
Cal Date : 18-NOV-2019 16:35 Cal File: X111808.D
Als bottle: 18 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14

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

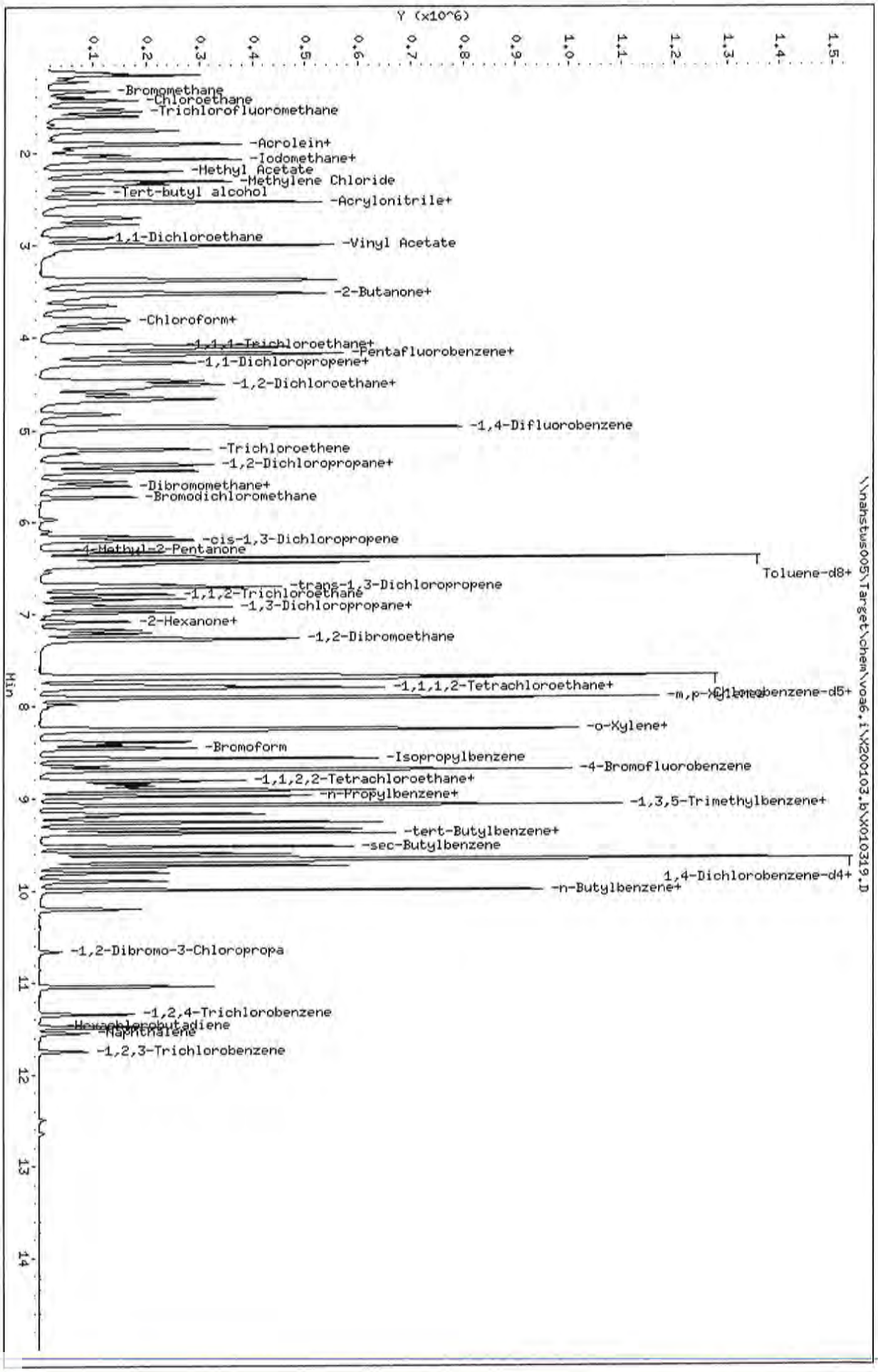
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	497920	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	702013	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	607679	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	301903	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	219028	48.3891	48.38
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	230986	49.3196	49.31
$	48 Toluene-d8	98	6.388	6.388	(0.833)	813776	50.8257	50.82
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	285343	50.4663	50.46
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	83279	18.8901	18.89
	31 1,1,1-Trichloroethane	97	4.082	4.089	(0.976)	125872	18.7385	18.73
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	86437	20.3607	20.36
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	62753	19.7548	19.75
	22 1,1-Dichloroethane	63	2.922	2.921	(0.699)	146537	20.2265	20.22
	11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	69936	16.5737	16.57
	32 1,1-Dichloropropene	75	4.282	4.292	(0.862)	110404	19.4964	19.49
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	26863	23.5501	23.55
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	75467	20.9799	20.97(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	51211	20.1370	20.13
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	303739	21.2034	21.20
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	9415	19.8858	19.88
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	80611	18.9140	18.91
	88 1,2-Dichlorobenzene	146	9.991	9.999	(1.034)	156463	19.5271	19.52
	33 1,2-Dichloroethane	62	4.555	4.555	(0.916)	111245	19.9622	19.96

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	84049	20.0425	20.04
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	299532	21.7912	21.79
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	173316	20.0180	20.01
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	128260	19.8876	19.88
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	173952	19.7717	19.77
26	2,2-Dichloropropane	77	3.509	3.509	(0.839)	121899	18.5385	18.53
24	2-Butanone	43	3.581	3.573	(0.856)	56800	37.1770	37.17
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	243752	22.4412	22.44
52	2-Hexanone	43	7.090	7.083	(0.924)	95026	38.0670	38.06
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	282615	21.4662	21.46
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	311805	21.1075	21.10
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	139971	39.3117	39.31
10	Acetone	43	1.969	1.969	(0.471)	38644	27.2771	27.27
37	Benzene	78	4.512	4.512	(0.908)	321310	20.0083	20.00
74	Bromobenzene	156	8.810	8.810	(0.912)	105088	20.0285	20.02
29	Bromochloromethane	128	3.795	3.795	(0.908)	48475	17.9711	17.97
39	Bromodichloromethane	83	5.729	5.729	(1.153)	109219	18.8001	18.80
66	Bromoform	173	8.416	8.416	(1.097)	62353	17.8865	17.88
6	Bromomethane	94	1.338	1.338	(0.320)	65997	11.6013	11.60
19	Carbon Disulfide	76	2.069	2.069	(0.495)	470453	40.9818	40.98
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	113477	18.2932	18.29
59	Chlorobenzene	112	7.692	7.692	(1.003)	224831	18.9512	18.95
7	Chloroethane	64	1.403	1.403	(0.336)	53066	16.9271	16.92
28	Chloroform	83	3.910	3.910	(0.935)	146096	18.1175	18.11
3	Chloromethane	50	1.073	1.073	(0.257)	90706	16.8978	16.89
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	240621	50.9578	50.95
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	135743	19.8274	19.82
55	Dibromochloromethane	129	7.176	7.176	(0.936)	86930	18.8371	18.83
44	Dibromomethane	93	5.558	5.557	(1.118)	53686	18.0908	18.09
2	Dichlorodifluoromethane	85	0.966	0.966	(0.231)	84342	19.1433	19.14
61	Ethylbenzene	106	7.800	7.800	(1.017)	119991	19.5751	19.57
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	42967	17.7093	17.70
67	Isopropylbenzene	105	8.566	8.566	(1.117)	356430	19.6313	19.63
62	m,p-Xylenes	106	7.907	7.907	(1.031)	290511	39.2749	39.27
17	Methylene Chloride	84	2.305	2.305	(0.551)	87806	19.5027	19.50
87	n-Butylbenzene	91	9.999	9.999	(1.035)	261450	21.2675	21.26
73	n-Propylbenzene	91	8.917	8.917	(0.923)	413018	22.1324	22.13
92	Naphthalene	128	11.546	11.546	(1.195)	67868	20.8071	20.80
63	o-Xylene	106	8.244	8.244	(1.075)	141724	19.4136	19.41
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	354499	21.8673	21.86
64	Styrene	104	8.258	8.258	(1.077)	243126	19.1519	19.15
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	253427	21.5330	21.53
56	Tetrachloroethene	164	6.933	6.933	(0.904)	77796	18.2204	18.22
50	Toluene	91	6.446	6.446	(0.840)	342884	19.8976	19.89
20	trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	79199	19.3321	19.33
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	118310	18.9607	18.96
38	Trichloroethene	130	5.207	5.207	(1.048)	114425	23.3071	23.30
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	127315	16.4832	16.48
5	Vinyl Chloride	62	1.138	1.138	(0.272)	100178	19.7408	19.74

QC Flag Legend

M - Compound response manually integrated.

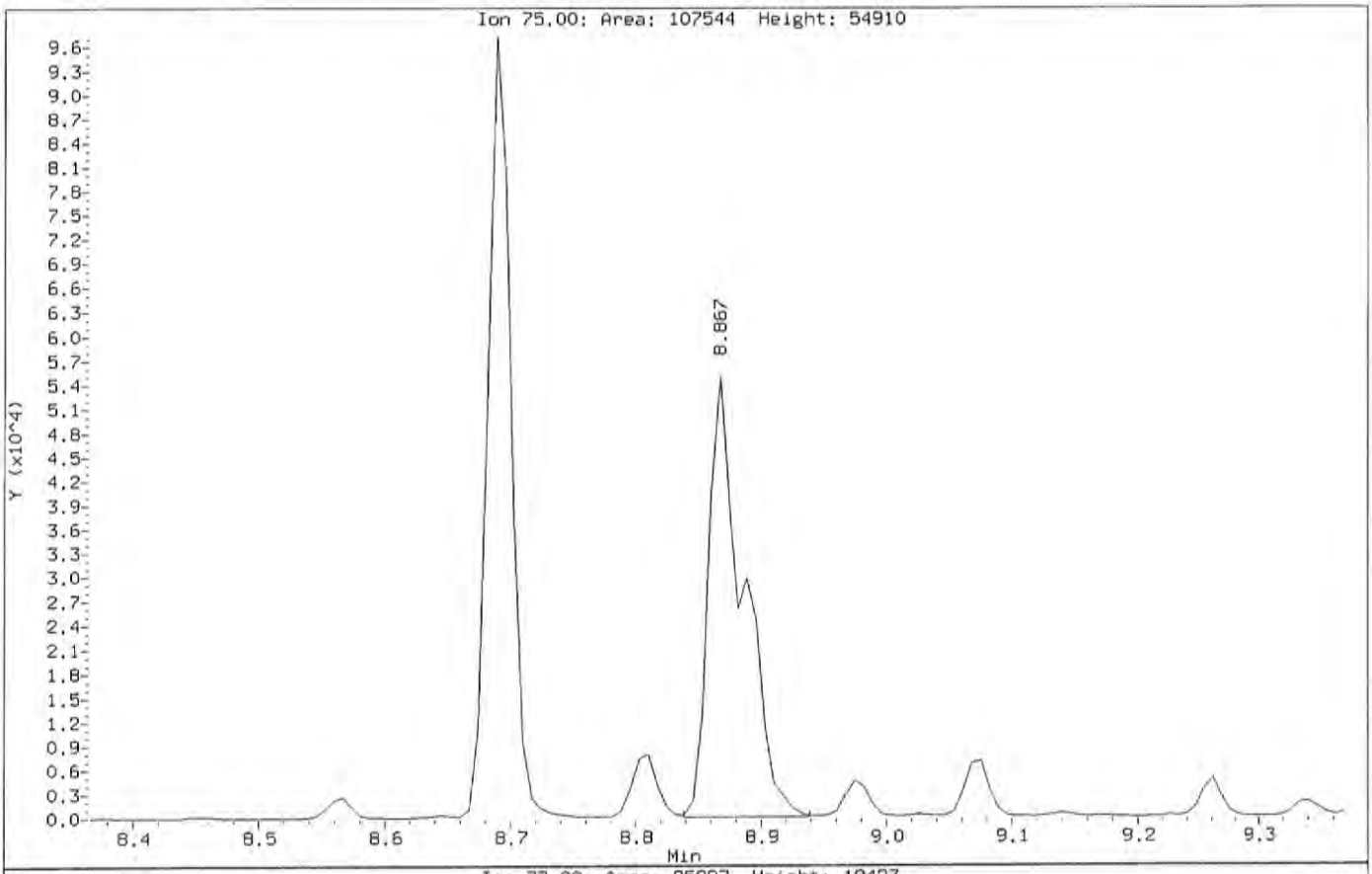


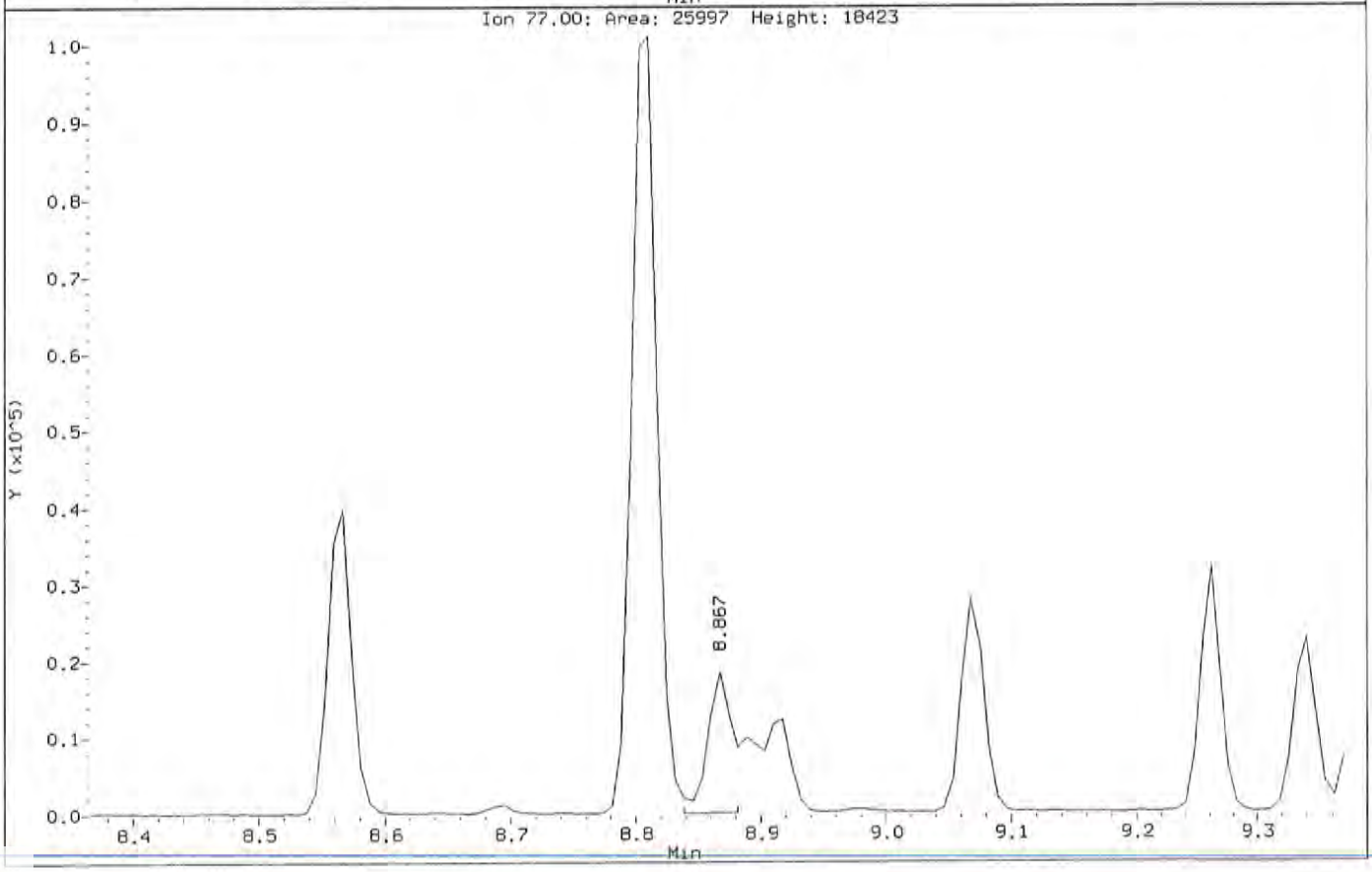
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Instrument: voa6.i
Operator: PC
Column diameter: 0.18

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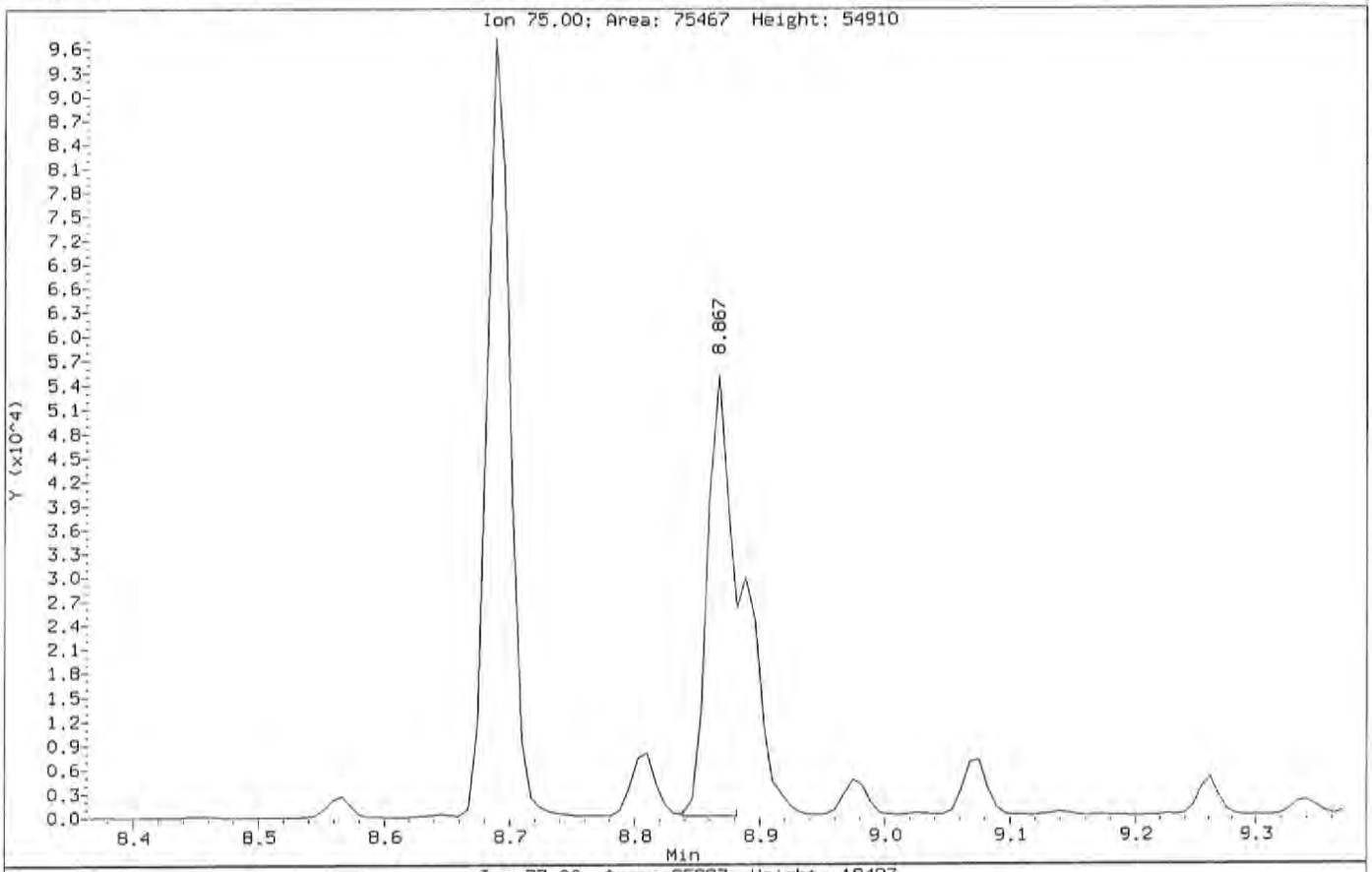
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CAS Number: 96-18-4

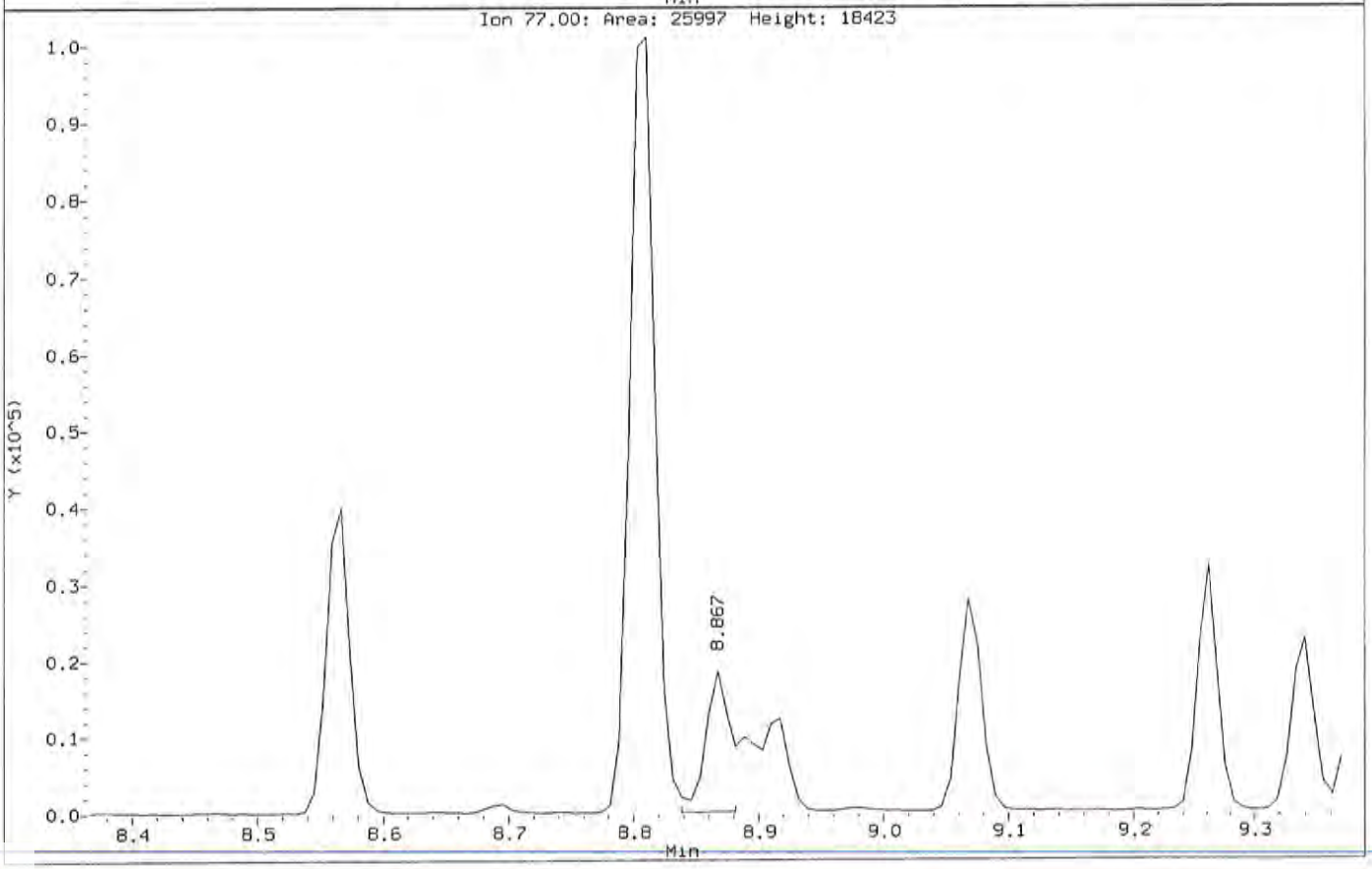




Data File: \\nahstws005\Target\chem\voa6.i\X200103.b\X010319.D
Injection Date: 03-JAN-2020 19:35
Instrument: voa6.i
Client Sample ID: HS19121484-01MSD

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





Data File: \\nahstws005\Target\chem\voa6.i\X200103.b\X010320.D Page 1
Report Date: 06-Jan-2020 17:00

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200103.b\X010320.D
Lab Smp Id: CCV-END Client Smp ID: CCV-END
Inj Date : 03-JAN-2020 19:59
Operator : PC Inst ID: voa6.i
Smp Info : CCV-END;CCV-END;2;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200103.b\8260W.m
Meth Date : 06-Jan-2020 17:00 voa6.i Quant Type: ISTD
Cal Date : 18-NOV-2019 16:35 Cal File: X111808.D
Als bottle: 19 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14

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

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

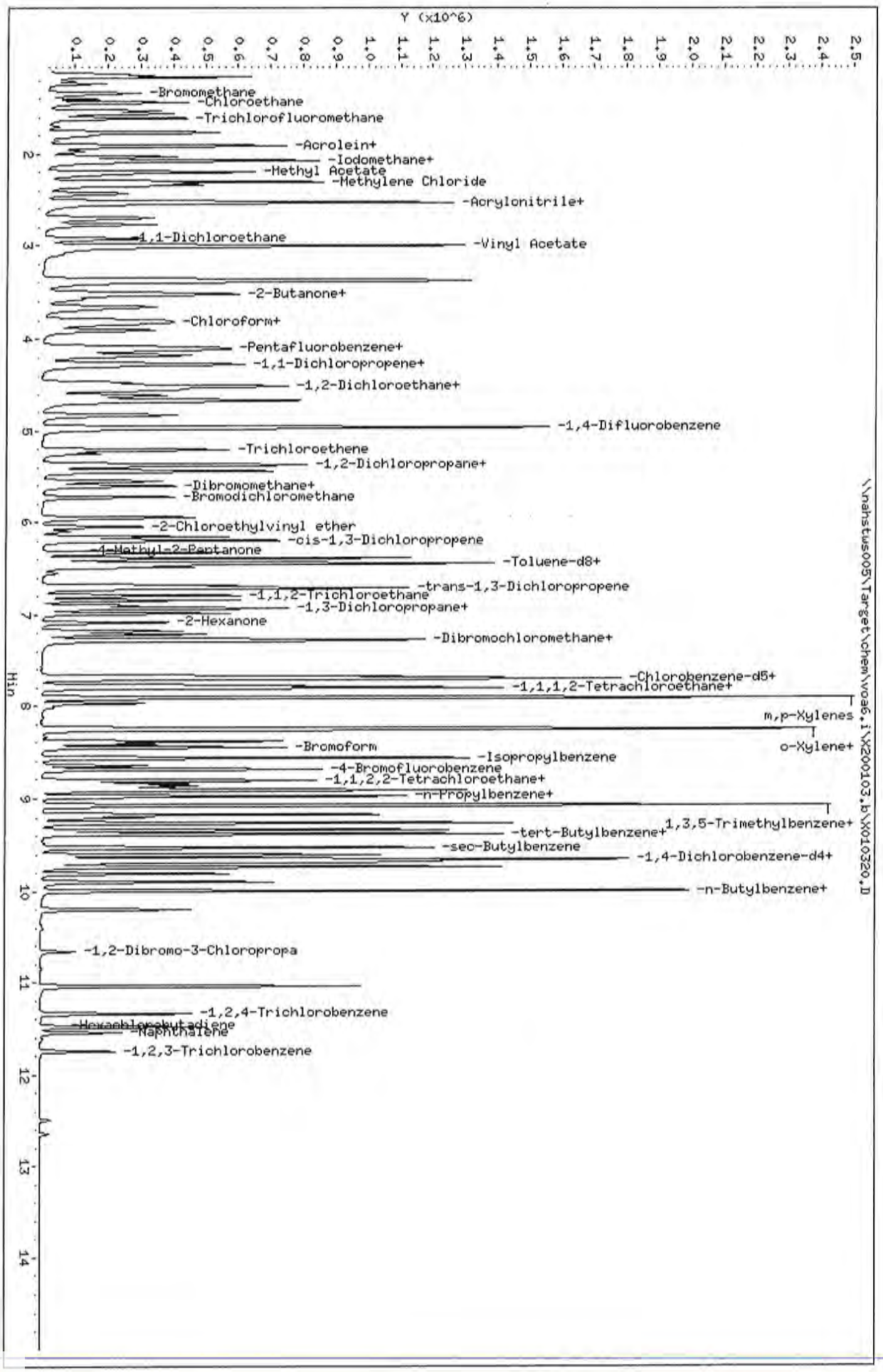
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	389830	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	568152	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	515938	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	261143	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	185159	50.0000	52.21
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	196388	50.0000	53.49
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	667940	50.0000	49.13
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	250068	50.0000	52.07
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	188349	50.0000	50.31
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	270609	50.0000	51.45
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	196442	50.0000	53.49
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	139945	50.0000	51.88
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	324252	50.0000	57.16
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	151121	50.0000	45.74
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	235754	50.0000	51.44
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	67511	50.0000	69.69
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	173128	50.0000	55.64(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	130632	50.0000	59.38
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	655390	50.0000	52.89
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	21703	50.0000	53.56
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	183262	50.0000	50.64
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.035)	350895	50.0000	50.62
33 1,2-Dichloroethane	62	4.555	4.555	(0.916)	229284	50.0000	50.83

Data File: \\nahstws005\Target\chem\voa6.i\X200103.b\X010320.D Page 2
Report Date: 06-Jan-2020 17:00

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
42 1,2-Dichloropropane	63	5.436	5.436	(1.094)	184671	50.0000	54.41
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	638746	50.0000	53.72
83 1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	383278	50.0000	51.17
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	287274	50.0000	52.46
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	383004	50.0000	50.32
26 2,2-Dichloropropane	77	3.509	3.509	(0.839)	261441	50.0000	50.78
24 2-Butanone	43	3.573	3.573	(0.854)	129558	100.000	108.31
76 2-Chlorotoluene	91	8.974	8.974	(0.929)	531061	50.0000	56.52
52 2-Hexanone	43	7.083	7.083	(0.923)	213101	100.000	100.54
77 4-Chlorotoluene	91	9.075	9.075	(0.939)	616321	50.0000	54.11
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	652614	50.0000	51.07
45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	318905	100.000	105.49
10 Acetone	43	1.969	1.969	(0.471)	91300	100.000	90.09
37 Benzene	78	4.512	4.512	(0.908)	717997	50.0000	55.24
74 Bromobenzene	156	8.810	8.810	(0.912)	237193	50.0000	52.26
29 Bromochloromethane	128	3.795	3.795	(0.908)	109213	50.0000	51.71
39 Bromodichloromethane	83	5.729	5.729	(1.153)	247115	50.0000	52.55
66 Bromoform	173	8.416	8.416	(1.097)	144058	50.0000	46.95
6 Bromomethane	94	1.338	1.338	(0.320)	136036	50.0000	34.39
19 Carbon Disulfide	76	2.069	2.069	(0.495)	1040934	100.000	115.81
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	235635	50.0000	46.93
59 Chlorobenzene	112	7.692	7.692	(1.003)	503146	50.0000	49.95
7 Chloroethane	64	1.403	1.403	(0.336)	117710	50.0000	47.95
28 Chloroform	83	3.910	3.910	(0.935)	324166	50.0000	51.34
3 Chloromethane	50	1.073	1.073	(0.257)	202936	50.0000	47.93
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	207086	50.0000	56.01
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	301965	50.0000	54.49
55 Dibromochloromethane	129	7.176	7.176	(0.936)	197730	50.0000	50.46
44 Dibromomethane	93	5.557	5.557	(1.118)	120882	50.0000	50.33
2 Dichlorodifluoromethane	85	0.966	0.966	(0.231)	185126	50.0000	52.07
61 Ethylbenzene	106	7.800	7.800	(1.017)	263163	50.0000	50.56
91 Hexachlorobutadiene	225	11.481	11.481	(1.188)	93797	50.0000	44.69
67 Isopropylbenzene	105	8.566	8.566	(1.117)	751101	50.0000	48.72
62 m,p-Xylenes	106	7.907	7.907	(1.031)	632027	100.000	100.63
17 Methylene Chloride	84	2.305	2.305	(0.551)	189559	50.0000	53.77
87 n-Butylbenzene	91	9.999	9.999	(1.035)	535298	50.0000	50.33
73 n-Propylbenzene	91	8.917	8.917	(0.923)	867042	50.0000	53.71
92 Naphthalene	128	11.546	11.546	(1.195)	167462	50.0000	59.35
63 o-Xylene	106	8.244	8.244	(1.075)	310735	50.0000	50.13
81 sec-Butylbenzene	105	9.526	9.526	(0.986)	717905	50.0000	51.19
64 Styrene	104	8.258	8.258	(1.077)	550078	50.0000	51.03
78 tert-Butylbenzene	119	9.340	9.340	(0.967)	524685	50.0000	51.53
56 Tetrachloroethene	164	6.933	6.933	(0.904)	163799	50.0000	45.18
50 Toluene	91	6.446	6.446	(0.840)	756273	50.0000	51.69
20 trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	175806	50.0000	54.81
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	266849	50.0000	52.84
38 Trichloroethene	130	5.207	5.207	(1.048)	202903	50.0000	51.06
8 Trichlorofluoromethane	101	1.561	1.561	(0.373)	271880	50.0000	44.95
5 Vinyl Chloride	62	1.138	1.138	(0.272)	215527	50.0000	54.24

QC Flag Legend

M - Compound response manually integrated.

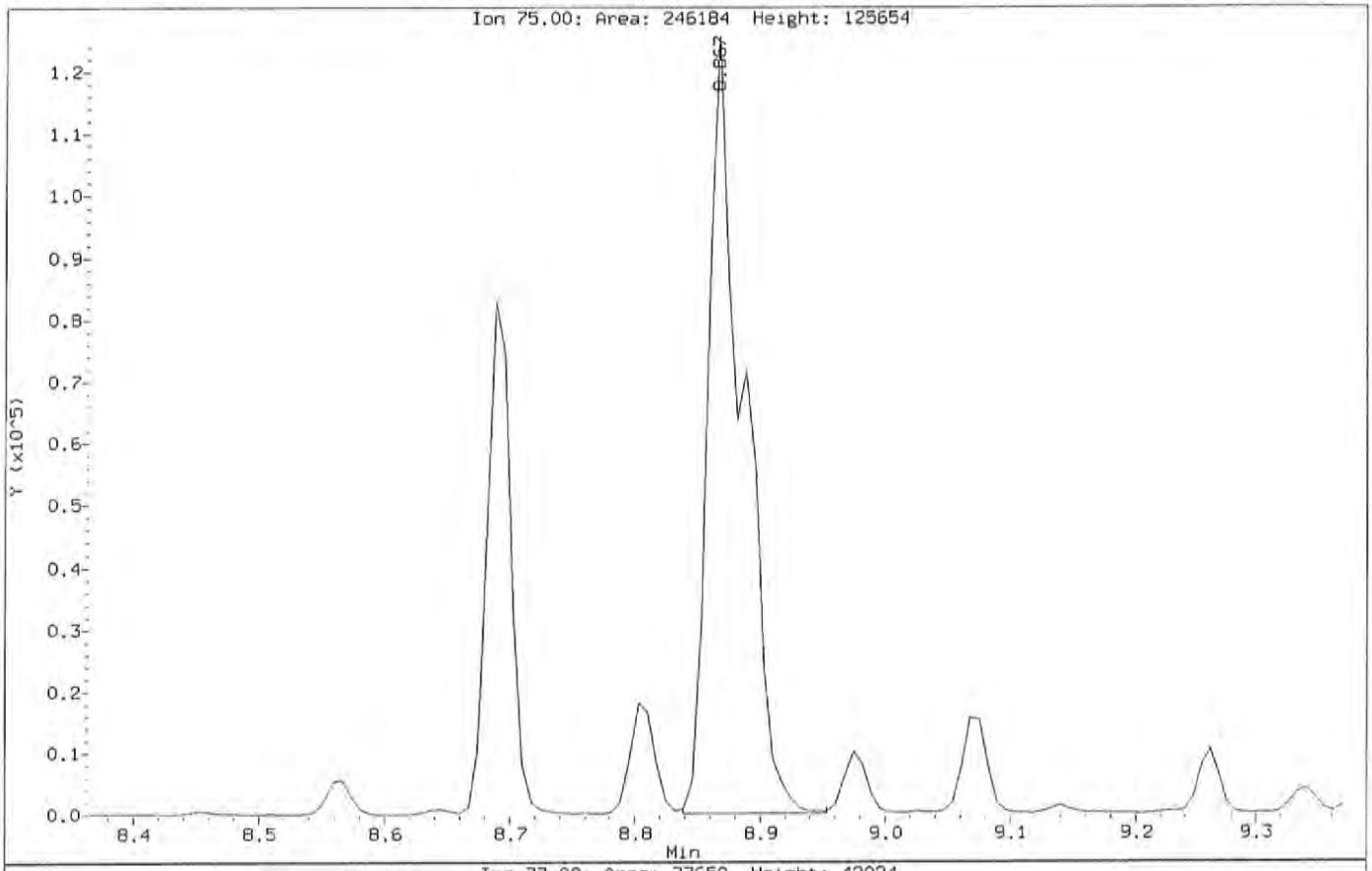


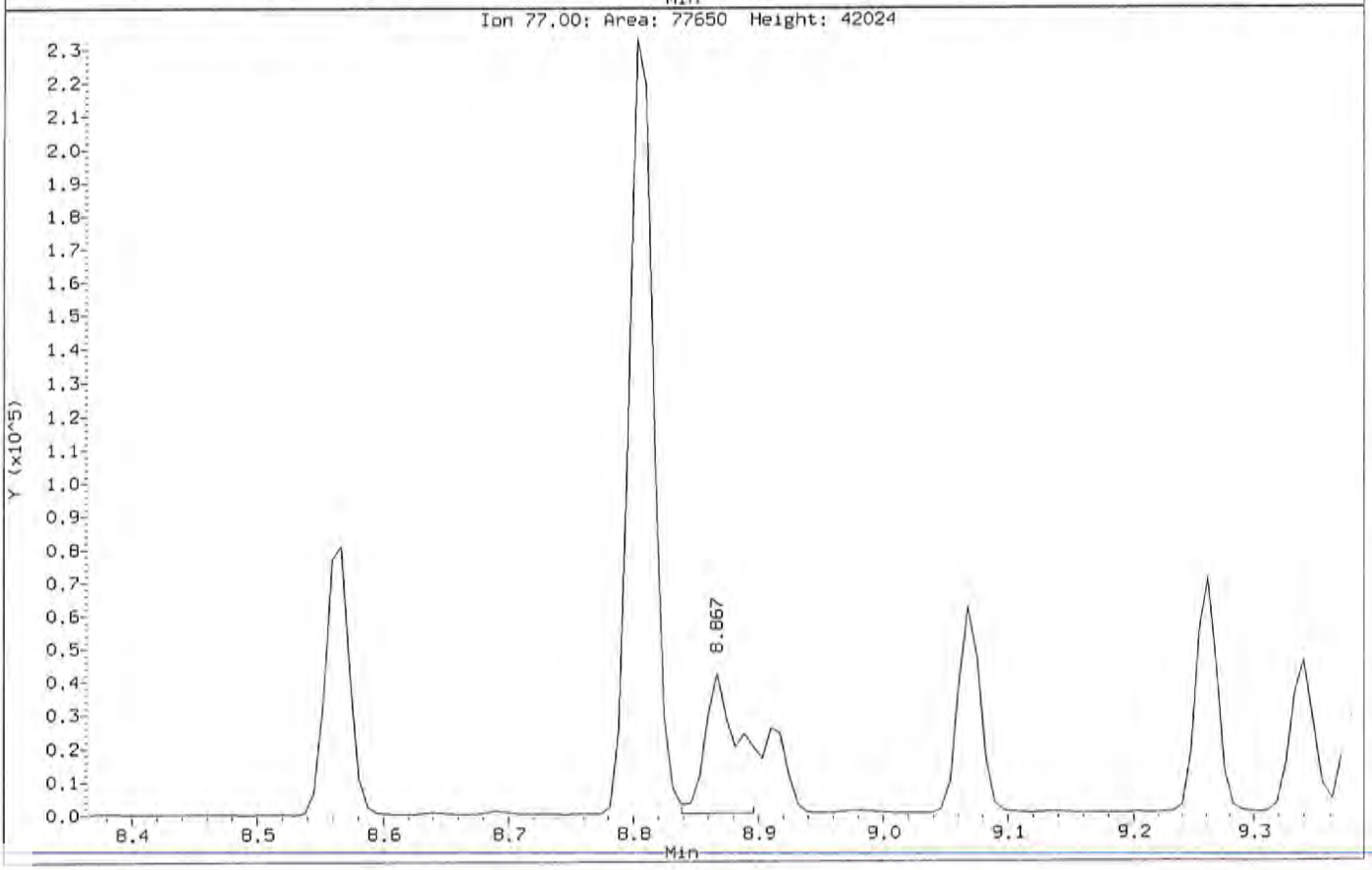
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Date : 03-JAN-2020 19:59
Client ID: CCV-END
Sample Info: CCV-END;CCV-END;2;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200103.b\Before\X010320.D
Injection Date: 03-JAN-2020 19:59
Instrument: voa6.i
Client Sample ID: CCV-END

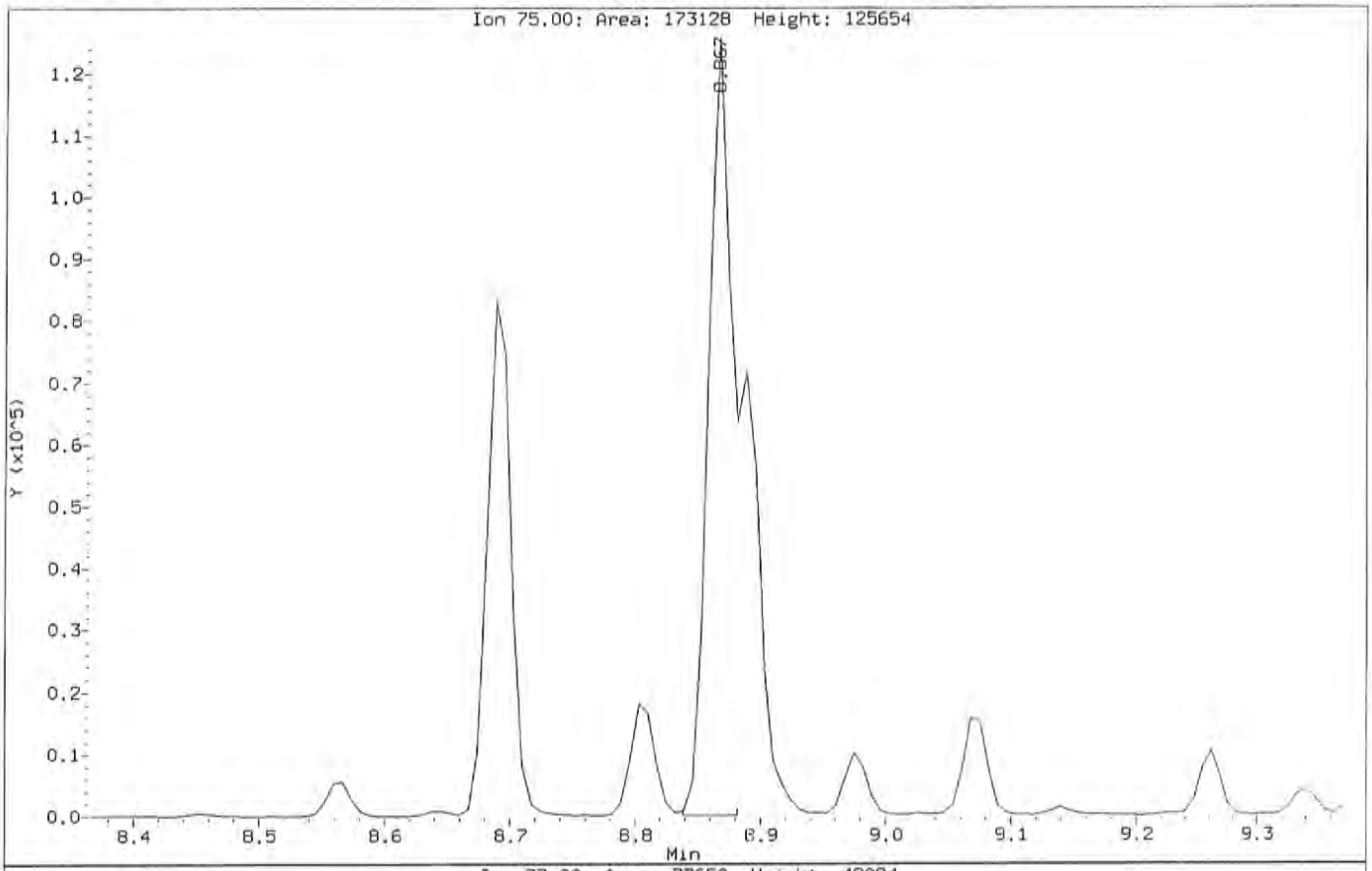
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

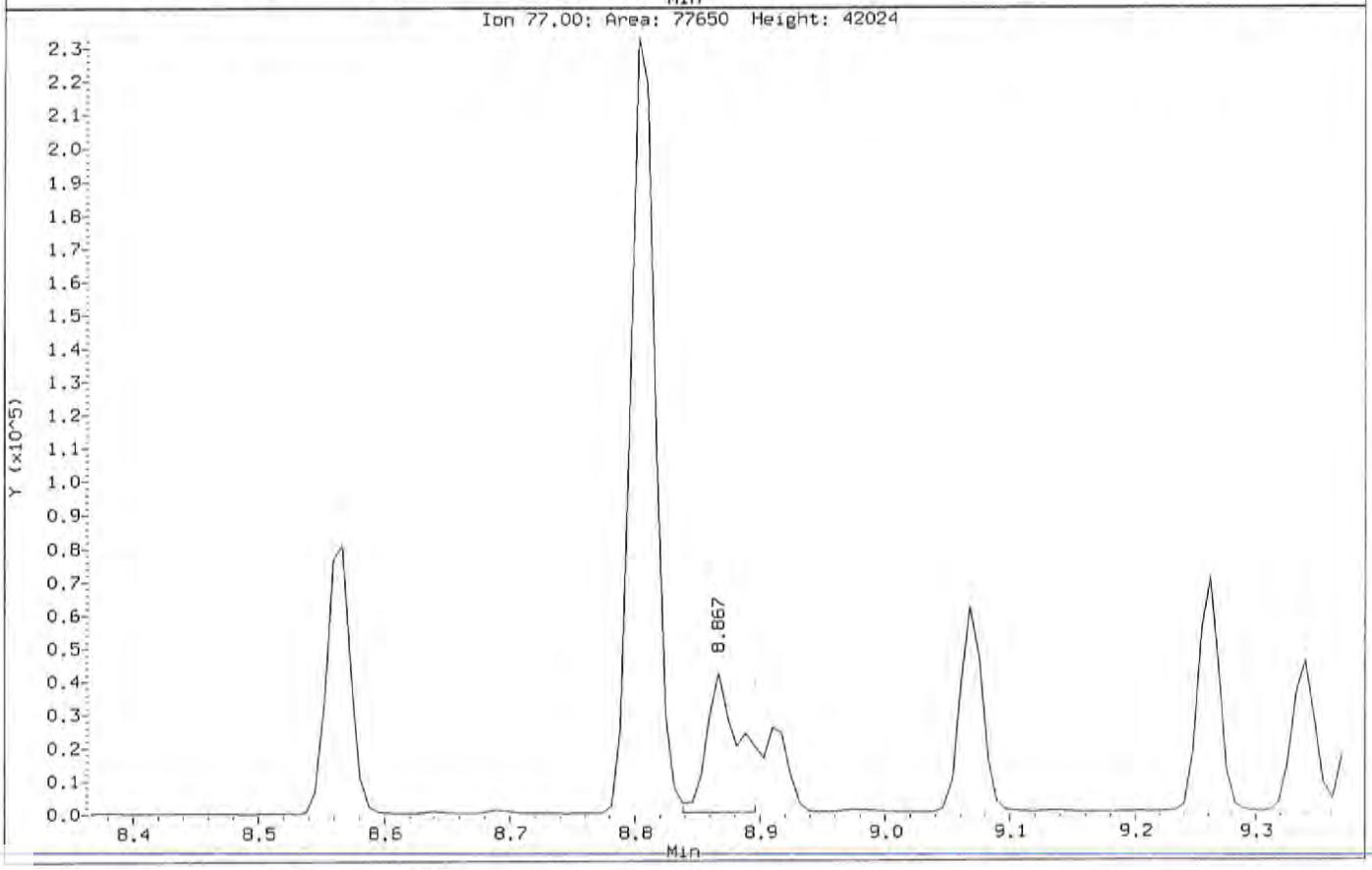




Data File: \\nahstws005\Target\chem\voa6.i\X200103.b\X010320.D
Injection Date: 03-JAN-2020 19:59
Instrument: voa6.i
Client Sample ID: CCV-END

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





MSVOA06 -Logbook

Batch: 39110 **Analyst:** Presenta Cabascango

Date: 01-02-2020 **Reviewer:**

Method: 8260 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	01-02-2020 09:59 am	1.00	50 mL	50 mL	X010201.D	Liquid	Y	NA
2	CCV	CCV	01-02-2020 10:23 am	1.00	50 mL	50 mL	X010202.D	Liquid	Y	NA
3	BLANK	SAMP	01-02-2020 10:47 am	1.00	50 mL	50 mL	X010203.D	Liquid	Y	NA
4	BLANK	SAMP	01-02-2020 11:09 am	1.00	50 mL	50 mL	X010204.D	Liquid	Y	NA
5	CCB	SAMP	01-02-2020 11:34 am	1.00	50 mL	50 mL	X010205.D	Liquid	Y	NA
6	VLCSW-200102	LCS	01-02-2020 11:58 am	1.00	50 mL	50 mL	X010206.D	Liquid	Y	NA
7	BLK	SAMP	01-02-2020 12:22 pm	1.00	50 mL	50 mL	X010207.D	Liquid	Y	NA
8	VBLKW-200102	MBLK	01-02-2020 12:46 pm	1.00	50 mL	50 mL	X010208.D	Liquid	Y	NA
9	HS19121155-09	SAMP	01-02-2020 01:10 pm	1.00	50 mL	50 mL	X010209.D	Liquid	Y	NA
10	HS19121155-01	SAMP	01-02-2020 01:34 pm	1.00	50 mL	50 mL	X010210.D	Liquid	Y	NA
11	HS19121155-02	SAMP	01-02-2020 01:58 pm	1.00	50 mL	50 mL	X010211.D	Liquid	Y	NA
12	HS19121155-04	SAMP	01-02-2020 02:22 pm	1.00	50 mL	50 mL	X010212.D	Liquid	Y	NA
13	HS19121155-05	SAMP	01-02-2020 02:46 pm	1.00	50 mL	50 mL	X010213.D	Liquid	Y	NA
14	HS19121155-06	SAMP	01-02-2020 03:10 pm	1.00	50 mL	50 mL	X010214.D	Liquid	Y	NA
15	HS19121155-07	SAMP	01-02-2020 03:34 pm	1.00	50 mL	50 mL	X010215.D	Liquid	Y	NA
16	HS19121155-08	SAMP	01-02-2020 03:58 pm	1.00	50 mL	50 mL	X010216.D	Liquid	Y	NA
17	HS19121257-01	SAMP	01-02-2020 04:22 pm	1.00	50 mL	50 mL	X010217.D	Liquid	Y	NA
18	HS19121155-03	SAMP	01-02-2020 04:46 pm	10.00	5 mL	50 mL	X010218.D	Liquid	Y	NA
19	HS19121257-01MS	MS	01-02-2020 05:11 pm	1.00	50 mL	50 mL	X010219.D	Liquid	Y	NA
20	HS19121257-01MSD	MSD	01-02-2020 05:35 pm	1.00	50 mL	50 mL	X010220.D	Liquid	Y	NA
21	HS19121155-03	SAMP	01-02-2020 05:59 pm	100.0(	500 µL	50 mL	X010221.D	Liquid	Y	NA
22	HS19121155-04	SAMP	01-02-2020 06:23 pm	1.00	50 mL	50 mL	X010222.D	Liquid	Y	NA
23	HS19121155-05	SAMP	01-02-2020 06:47 pm	1.00	50 mL	50 mL	X010223.D	Liquid	Y	NA
24	HS19121155-06	SAMP	01-02-2020 07:11 pm	1.00	50 mL	50 mL	X010224.D	Liquid	Y	NA
25	HS19121155-07	SAMP	01-02-2020 07:35 pm	1.00	50 mL	50 mL	X010225.D	Liquid	Y	NA
26	HS19121257-02	SAMP	01-02-2020 07:59 pm	1.00	50 mL	50 mL	X010226.D	Liquid	Y	NA
27	HS19121257-03	SAMP	01-02-2020 08:23 pm	1.00	50 mL	50 mL	X010227.D	Liquid	Y	NA
28	HS19121257-04	SAMP	01-02-2020 08:47 pm	1.00	50 mL	50 mL	X010228.D	Liquid	Y	NA
29	CCV-END	CCV	01-02-2020 09:11 pm	1.00	50 mL	50 mL	X010229.D	Liquid	Y	NA

Chemical	Value
SURR SPK ID	31106-04-03
IS ID	31106-04-04
LCS/MS ID	30603-95-01
CAL STD ID	31106-08-01/02
BFB ID	31106-04-03
pH Paper	634-64-11

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ALS HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS19121257

	CLIENT SAMPLE NO.	SMC1 (DCE)#	SMC2 #	SMC3 (TOL)#	OTHER #	TOT OUT
01	VLCSW-200102	104	102	98	104	0
02	VBLKW-200102	94	96	103	101	0
03	HS19121257-01	96	97	103	101	0
04	HS19121257-01	97	98	103	102	0
05	HS19121257-01	96	97	103	101	0
06	HS19121257-02	100	97	104	101	0
07	HS19121257-03	99	97	103	101	0
08	HS19121257-04	101	98	103	101	0
09						
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		QC LIMITS
SMC1 (DCE)	= 1,2-Dichloroethane-d4	(0-130)
SMC2	= Dibromofluoromethane	(0-130)
SMC3 (TOL)	= Toluene-d8	(0-130)
OTHER	= 4-Bromofluorobenzene	(0-130)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKW-200102

Lab Name: ALS HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS19121257

Lab File ID: X010208 Lab Sample ID: VBLKW-200102

Date Analyzed: 01/02/20 Time Analyzed: 1246

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-200102	VLCSW-200102	X010206	1158
02	HS19121257-0	HS19121257-01	X010217	1622
03	HS19121257-0	HS19121257-01M	X010219	1711
04	HS19121257-0	HS19121257-01M	X010220	1735
05	HS19121257-0	HS19121257-02	X010226	1959
06	HS19121257-0	HS19121257-03	X010227	2023
07	HS19121257-0	HS19121257-04	X010228	2047
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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.: HS19121257

Lab File ID: X010201 BFB Injection Date: 01/02/20

Instrument ID: VOA6 BFB Injection Time: 0959

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.3
75	30.0 - 60.0% of mass 95	46.7
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.6
173	Less than 2.0% of mass 174	0.5 (0.7)1
174	Greater than 50.0% of mass 95	74.8
175	5.0 - 9.0% of mass 174	5.8 (7.7)1
176	95.0 - 101.0% of mass 174	72.5 (96.9)1
177	5.0 - 9.0% of mass 176	5.0 (6.9)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	CCV	CCV	X010202	01/02/20	1023
02	VLCSW-200102	VLCSW-200102	X010206	01/02/20	1158
03	VBLKW-200102	VBLKW-200102	X010208	01/02/20	1246
04	HS19121257-0	HS19121257-01	X010217	01/02/20	1622
05	HS19121257-0	HS19121257-01M	X010219	01/02/20	1711
06	HS19121257-0	HS19121257-01M	X010220	01/02/20	1735
07	HS19121257-0	HS19121257-02	X010226	01/02/20	1959
08	HS19121257-0	HS19121257-03	X010227	01/02/20	2023
09	HS19121257-0	HS19121257-04	X010228	01/02/20	2047
10	CCV-END	CCV-END	X010229	01/02/20	2111
11					
12					
13					
14					
15					
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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.: HS19121257

Instrument ID: VOA6 Calibration Date: 01/02/20 Time: 1023

Lab File ID: X010202 Init. Calib. Date(s): 11/18/19 11/18/19

Init. Calib. Times: 1347 1746

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	0.4880000	0.5587290	0.5587290	0.2	-14.49	20.00	AVRG	
trans-1,3-Dichloropropene	0.4440000	0.4873763	0.4873763	0.1	-9.77	20.00	AVRG	
1,3-Dichlorobenzene	1.4340000	1.5300989	1.5300989	0.6	-6.70	20.00	AVRG	
2,2-Dichloropropane	0.6600000	0.7232591	0.7232591	0.1	-9.58	20.00	AVRG	
1,1-Dichloropropene	0.4030000	0.4410618	0.4410618	0.1	-9.44	20.00	AVRG	
Dibromomethane	0.2110000	0.2185891	0.2185891	0.1	-3.60	20.00	AVRG	
1,2-Dibromoethane	0.3510000	0.3550625	0.3550625	0.1	-1.16	20.00	AVRG	
trans-1,2-Dichloroethene	0.4110000	0.4645477	0.4645477	0.1	-13.03	20.00	AVRG	
1,1,1,2-Tetrachloroethane	0.3630000	0.3737056	0.3737056	0.1	-2.95	20.00	AVRG	
1,1,1-Trichloroethane	0.6740000	0.7113666	0.7113666	0.1	-5.54	20.00	AVRG	
1,1,2,2-Tetrachloroethane	0.7030000	0.7595193	0.7595193	0.3	-8.04	20.00	AVRG	
1,1,2-Trichloroethane	0.2610000	0.2741704	0.2741704	0.1	-5.05	20.00	AVRG	
1,1-Dichloroethane	0.7270000	0.8471362	0.8471362	0.2	-16.52	20.00	AVRG	
1,1-Dichloroethene	0.4240000	0.3965926	0.3965926	0.1	6.46	20.00	AVRG	
Trichloroethene	0.3500000	0.3761997	0.3761997	0.2	-7.48	20.00	AVRG	
1,2,3-Trichlorobenzene	59.436274	50.000000	0.2206769	0.1	-18.87	20.00	2RDR	
Trichlorofluoromethane	0.7760000	0.7281538	0.7281538	0.1	6.16	20.00	AVRG	
1,2,4-Trichlorobenzene	0.4210000	0.4391052	0.4391052	0.2	-4.30	20.00	AVRG	
1,2,4-Trimethylbenzene	2.3720000	2.6362972	2.6362972	0.1	-11.14	20.00	AVRG	
Tetrachloroethene	0.3510000	0.3370255	0.3370255	0.2	3.98	20.00	AVRG	
1,2-Dichlorobenzene	1.3270000	1.3808585	1.3808585	0.4	-4.06	20.00	AVRG	
1,2-Dichloroethane	0.3970000	0.4124367	0.4124367	0.1	-3.89	20.00	AVRG	
1,2-Dichloropropane	0.2990000	0.3324046	0.3324046	0.1	-11.17	20.00	AVRG	
1,3,5-Trimethylbenzene	2.2760000	2.5855656	2.5855656	0.1	-13.60	20.00	AVRG	
1,3-Dichloropropane	0.5310000	0.5633717	0.5633717	0.1	-6.10	20.00	AVRG	
1,4-Dichlorobenzene	1.4570000	1.5310765	1.5310765	0.4	-5.08	20.00	AVRG	
Toluene	1.4180000	1.5158113	1.5158113	0.4	-6.90	20.00	AVRG	
2-Butanone	0.1530000	0.1774479	0.1774479	0.1	-15.98	20.00	AVRG	
2-Chlorotoluene	1.7990000	2.0956397	2.0956397	0.1	-16.49	20.00	AVRG	
2-Hexanone	0.2050000	0.2163217	0.2163217	0.1	-5.52	20.00	AVRG	
4-Chlorotoluene	2.1800000	2.4427692	2.4427692	0.1	-12.05	20.00	AVRG	
tert-Butylbenzene	1.9490000	2.1564028	2.1564028	0.1	-10.64	20.00	AVRG	
4-Methyl-2-Pentanone	0.2930000	0.3080025	0.3080025	0.1	-5.12	20.00	AVRG	
Acetone	116.98223	100.00000	0.1506087	0.1	-16.98	20.00	LINR	
Benzene	1.1440000	1.3079976	1.3079976	0.5	-14.34	20.00	AVRG	
Bromobenzene	0.8690000	0.9266295	0.9266295	0.1	-6.63	20.00	AVRG	
Bromochloromethane	0.2710000	0.2860139	0.2860139	0.1	-5.54	20.00	AVRG	
Bromodichloromethane	0.4140000	0.4400959	0.4400959	0.2	-6.30	20.00	AVRG	
Bromoform	48.689201	50.000000	0.2897616	0.1	2.62	20.00	LINR	
Bromomethane	40.042440	50.000000	0.4026006	0.1	19.92	20.00	LINR	
Carbon Disulfide	1.1530000	1.3930478	1.3930478	0.1	-20.82	20.00	AVRG	<-
Carbon Tetrachloride	0.4420000	0.4457899	0.4457899	0.1	-0.86	20.00	AVRG	

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS1912125

Instrument ID: VOA6 Calibration Date: 01/02/20 Time: 1023

Lab File ID: X010202 Init. Calib. Date(s): 11/18/19 11/18/19

Init. Calib. Times: 1347 1746

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Chlorobenzene	0.9760000	1.0007913	1.0007913	0.5	-2.54	20.00	AVRG
Chloroethane	0.3150000	0.2924637	0.2924637	0.1	7.15	20.00	AVRG
Chloroform	0.8100000	0.8329484	0.8329484	0.2	-2.83	20.00	AVRG
Chloromethane	47.749011	50.000000	0.5184958	0.1	4.50	20.00	LINR
cis-1,2-Dichloroethene	0.4740000	0.5370934	0.5370934	0.1	-13.31	20.00	AVRG
Dibromochloromethane	0.3800000	0.3955947	0.3955947	0.1	-4.10	20.00	AVRG
Dichlorodifluoromethane	55.691637	50.000000	0.5083965	0.1	-11.38	20.00	LINR
Ethylbenzene	0.5040000	0.5403491	0.5403491	0.1	-7.21	20.00	AVRG
Hexachlorobutadiene	0.4020000	0.3451572	0.3451572	0.1	14.14	20.00	AVRG
Isopropylbenzene	1.4940000	1.5618392	1.5618392	0.1	-4.54	20.00	AVRG
m,p-Xylenes	0.6080000	0.6442453	0.6442453	0.1	-5.96	20.00	AVRG
Methylene Chloride	0.4520000	0.4915605	0.4915605	0.1	-8.75	20.00	AVRG
n-Butylbenzene	2.0360000	2.2462658	2.2462658	0.5	-10.33	20.00	AVRG
n-Propylbenzene	3.0900000	3.4921193	3.4921193	0.1	-13.01	20.00	AVRG
Naphthalene	0.5400000	0.5991550	0.5991550	0.2	-10.95	20.00	AVRG
o-Xylene	0.6000000	0.6324244	0.6324244	0.3	-5.40	20.00	AVRG
sec-Butylbenzene	2.6850000	3.0050880	3.0050880	0.1	-11.92	20.00	AVRG
Styrene	1.0440000	1.0975209	1.0975209	0.3	-5.13	20.00	AVRG
Vinyl Chloride	0.5100000	0.5571055	0.5571055	0.1	-9.24	20.00	AVRG
1,2,3-Trichloropropane	0.5960000	0.6576610	0.6576610	0.1	-10.34	20.00	AVRG
p-Isopropyltoluene	2.4460000	2.7241539	2.7241539	0.1	-11.37	20.00	AVRG
1,2-Dibromo-3-Chloropropane	55.384089	50.000000	8.59e-002	0.05	-10.77	20.00	LINR
1,2-Dichloroethane-d4	52.516669	50.000000	0.4944296	0.1	-5.03	20.00	LINR
Dibromofluoromethane	51.934838	50.000000	0.4723661	0.1	-3.87	20.00	LINR
Toluene-d8	1.3170000	1.3093377	1.3093377	0.1	0.58	20.00	AVRG
4-Bromofluorobenzene	52.797666	50.000000	0.4914349	0.1	-5.60	20.00	LINR

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS19121257

Instrument ID: VOA6 Calibration Date: 01/02/20 Time: 2111

Lab File ID: X010229 Init. Calib. Date(s): 11/18/19 11/18/19

Init. Calib. Times: 1347 1746

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	0.4880000	0.2344275	0.2344275	0.2	51.96	50.00	AVRG	<-
trans-1,3-Dichloropropene	0.4440000	0.2068232	0.2068232	0.1	53.42	50.00	AVRG	<-
1,3-Dichlorobenzene	1.4340000	0.6951980	0.6951980	0.6	51.52	50.00	AVRG	<-
2,2-Dichloropropane	0.6600000	0.2870167	0.2870167	0.1	56.51	50.00	AVRG	<-
1,1-Dichloropropene	0.4030000	0.1832894	0.1832894	0.1	54.52	50.00	AVRG	<-
Dibromomethane	0.2110000	9.41e-002	9.41e-002	0.1	55.40	50.00	AVRG	<-
1,2-Dibromoethane	0.3510000	0.1589444	0.1589444	0.1	54.72	50.00	AVRG	<-
trans-1,2-Dichloroethene	0.4110000	0.1988631	0.1988631	0.1	51.61	50.00	AVRG	<-
1,1,1,2-Tetrachloroethane	0.3630000	0.1633787	0.1633787	0.1	54.99	50.00	AVRG	<-
1,1,1-Trichloroethane	0.6740000	0.2996029	0.2996029	0.1	55.55	50.00	AVRG	<-
1,1,2,2-Tetrachloroethane	0.7030000	0.3568860	0.3568860	0.3	49.23	50.00	AVRG	
1,1,2-Trichloroethane	0.2610000	0.1231601	0.1231601	0.1	52.81	50.00	AVRG	<-
1,1-Dichloroethane	0.7270000	0.3666741	0.3666741	0.2	49.56	50.00	AVRG	
1,1-Dichloroethene	0.4240000	0.1712591	0.1712591	0.1	59.61	50.00	AVRG	<-
Trichloroethene	0.3500000	0.1544426	0.1544426	0.2	55.87	50.00	AVRG	<-
1,2,3-Trichlorobenzene	30.143914	50.000000	0.1130961	0.1	39.71	50.00	2RDR	
Trichlorofluoromethane	0.7760000	0.3087919	0.3087919	0.1	60.21	50.00	AVRG	<-
1,2,4-Trichlorobenzene	0.4210000	0.2271244	0.2271244	0.2	46.05	50.00	AVRG	
1,2,4-Trimethylbenzene	2.3720000	1.1711937	1.1711937	0.1	50.62	50.00	AVRG	<-
Tetrachloroethene	0.3510000	0.1430483	0.1430483	0.2	59.24	50.00	AVRG	<-
1,2-Dichlorobenzene	1.3270000	0.6222863	0.6222863	0.4	53.10	50.00	AVRG	<-
1,2-Dichloroethane	0.3970000	0.1825836	0.1825836	0.1	54.01	50.00	AVRG	<-
1,2-Dichloropropane	0.2990000	0.1443569	0.1443569	0.1	51.72	50.00	AVRG	<-
1,3,5-Trimethylbenzene	2.2760000	1.1440332	1.1440332	0.1	49.73	50.00	AVRG	
1,3-Dichloropropane	0.5310000	0.2539148	0.2539148	0.1	52.18	50.00	AVRG	<-
1,4-Dichlorobenzene	1.4570000	0.6819103	0.6819103	0.4	53.20	50.00	AVRG	<-
Toluene	1.4180000	0.6611158	0.6611158	0.4	53.38	50.00	AVRG	<-
2-Butanone	0.1530000	7.4e-002	7.4e-002	0.1	51.63	50.00	AVRG	<-
2-Chlorotoluene	1.7990000	0.9508230	0.9508230	0.1	47.15	50.00	AVRG	
2-Hexanone	0.2050000	9.42e-002	9.42e-002	0.1	54.05	50.00	AVRG	<-
4-Chlorotoluene	2.1800000	1.0951755	1.0951755	0.1	49.76	50.00	AVRG	
tert-Butylbenzene	1.9490000	0.9545607	0.9545607	0.1	51.02	50.00	AVRG	<-
4-Methyl-2-Pentanone	0.2930000	0.1407297	0.1407297	0.1	51.97	50.00	AVRG	<-
Acetone	38.848484	100.00000	5.32e-002	0.1	61.15	50.00	LINR	<-
Benzene	1.1440000	0.5547910	0.5547910	0.5	51.50	50.00	AVRG	<-
Bromobenzene	0.8690000	0.4268815	0.4268815	0.1	50.88	50.00	AVRG	<-
Bromochloromethane	0.2710000	0.1228479	0.1228479	0.1	54.67	50.00	AVRG	<-
Bromodichloromethane	0.4140000	0.1883852	0.1883852	0.2	54.50	50.00	AVRG	<-
Bromoform	21.364566	50.000000	0.1237407	0.1	57.27	50.00	LINR	<-
Bromomethane	13.472991	50.000000	0.1503177	0.1	73.05	50.00	LINR	<-
Carbon Disulfide	1.1530000	0.5804151	0.5804151	0.1	49.66	50.00	AVRG	
Carbon Tetrachloride	0.4420000	0.1829124	0.1829124	0.1	58.62	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.: HS1912125

Instrument ID: VOA6 Calibration Date: 01/02/20 Time: 2111

Lab File ID: X010229 Init. Calib. Date(s): 11/18/19 11/18/19

Init. Calib. Times: 1347 1746

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Chlorobenzene	0.9760000	0.4373845	0.4373845	0.5	55.19	50.00	AVRG	<-
Chloroethane	0.3150000	0.1318281	0.1318281	0.1	58.15	50.00	AVRG	<-
Chloroform	0.8100000	0.3616362	0.3616362	0.2	55.35	50.00	AVRG	<-
Chloromethane	21.349764	50.000000	0.2307028	0.1	57.30	50.00	LINR	<-
cis-1,2-Dichloroethene	0.4740000	0.2315220	0.2315220	0.1	51.16	50.00	AVRG	<-
Dibromochloromethane	0.3800000	0.1739182	0.1739182	0.1	54.23	50.00	AVRG	<-
Dichlorodifluoromethane	23.779821	50.000000	0.2123949	0.1	52.44	50.00	LINR	<-
Ethylbenzene	0.5040000	0.2277206	0.2277206	0.1	54.82	50.00	AVRG	<-
Hexachlorobutadiene	0.4020000	0.1724027	0.1724027	0.1	57.11	50.00	AVRG	<-
Isopropylbenzene	1.4940000	0.6565621	0.6565621	0.1	56.05	50.00	AVRG	<-
m,p-Xylenes	0.6080000	0.2743054	0.2743054	0.1	54.88	50.00	AVRG	<-
Methylene Chloride	0.4520000	0.2125709	0.2125709	0.1	52.97	50.00	AVRG	<-
n-Butylbenzene	2.0360000	0.9652293	0.9652293	0.5	52.59	50.00	AVRG	<-
n-Propylbenzene	3.0900000	1.5630683	1.5630683	0.1	49.42	50.00	AVRG	
Naphthalene	0.5400000	0.2752271	0.2752271	0.2	49.03	50.00	AVRG	
o-Xylene	0.6000000	0.2709613	0.2709613	0.3	54.84	50.00	AVRG	<-
sec-Butylbenzene	2.6850000	1.2998331	1.2998331	0.1	51.59	50.00	AVRG	<-
Styrene	1.0440000	0.4789005	0.4789005	0.3	54.13	50.00	AVRG	<-
Vinyl Chloride	0.5100000	0.2451700	0.2451700	0.1	51.93	50.00	AVRG	<-
1,2,3-Trichloropropane	0.5960000	0.3123992	0.3123992	0.1	47.58	50.00	AVRG	
p-Isopropyltoluene	2.4460000	1.1706806	1.1706806	0.1	52.14	50.00	AVRG	<-
1,2-Dibromo-3-Chloropropane	24.374206	50.000000	3.81e-002	0.05	51.25	50.00	LINR	<-
1,2-Dichloroethane-d4	51.000679	50.000000	0.4799539	0.1	-2.00	50.00	LINR	
Dibromofluoromethane	50.435190	50.000000	0.4586289	0.1	-0.87	50.00	LINR	
Toluene-d8	1.3170000	1.3127833	1.3127833	0.1	0.32	50.00	AVRG	
4-Bromofluorobenzene	50.601435	50.000000	0.4708295	0.1	-1.20	50.00	LINR	

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS19121257

Lab File ID (Standard): X010202 Date Analyzed: 01/02/20

Instrument ID: VOA6 Time Analyzed: 1023

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	458722	7.67	502111	4.97	235258	9.66
	UPPER LIMIT	917444	8.17	1004222	5.47	470516	10.16
	LOWER LIMIT	229361	7.17	251056	4.47	117629	9.16
	CLIENT SAMPLE NO.						
01	VLCSW-200102	484500	7.67	543397	4.97	248490	9.67
02	VBLKW-200102	576824	7.67	665875	4.97	283964	9.67
03	HS19121257-01	625853	7.67	734778	4.97	308222	9.66
04	HS19121257-01	585783	7.67	685546	4.97	286860	9.67
05	HS19121257-01	587766	7.67	683266	4.97	287693	9.67
06	HS19121257-02	624835	7.67	739320	4.97	303662	9.66
07	HS19121257-03	636124	7.67	743827	4.97	316792	9.67
08	HS19121257-04	635505	7.67	742675	4.97	317520	9.67
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 VIII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS19121257

Lab File ID (Standard): X010202 Date Analyzed: 01/02/20

Instrument ID: VOA6 Time Analyzed: 1023

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

		IS4 AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	348539	4.18				
	UPPER LIMIT	697078	4.68				
	LOWER LIMIT	174270	3.68				
	CLIENT SAMPLE NO.						
01	VLCSW-200102	373826	4.18				
02	VBLKW-200102	472706	4.18				
03	HS19121257-01	515225	4.18				
04	HS19121257-01	482225	4.18				
05	HS19121257-01	480311	4.18				
06	HS19121257-02	522961	4.18				
07	HS19121257-03	523592	4.18				
08	HS19121257-04	524714	4.18				
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\X200102.b\X010201.D

Date : 02-JAN-2020 09:59

Client ID: BFB

Instrument: voa6.i

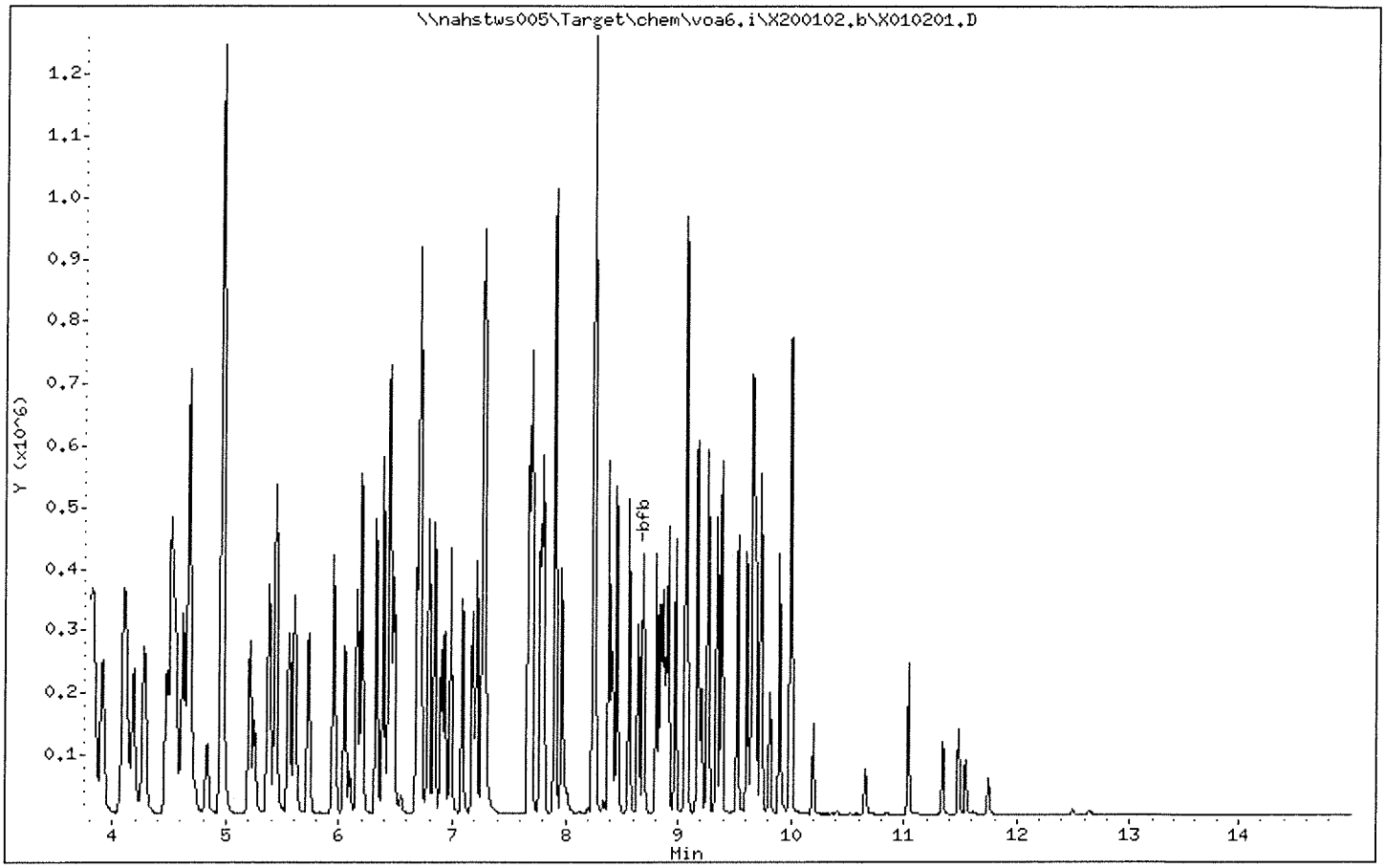
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010201.D

Date : 02-JAN-2020 09:59

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

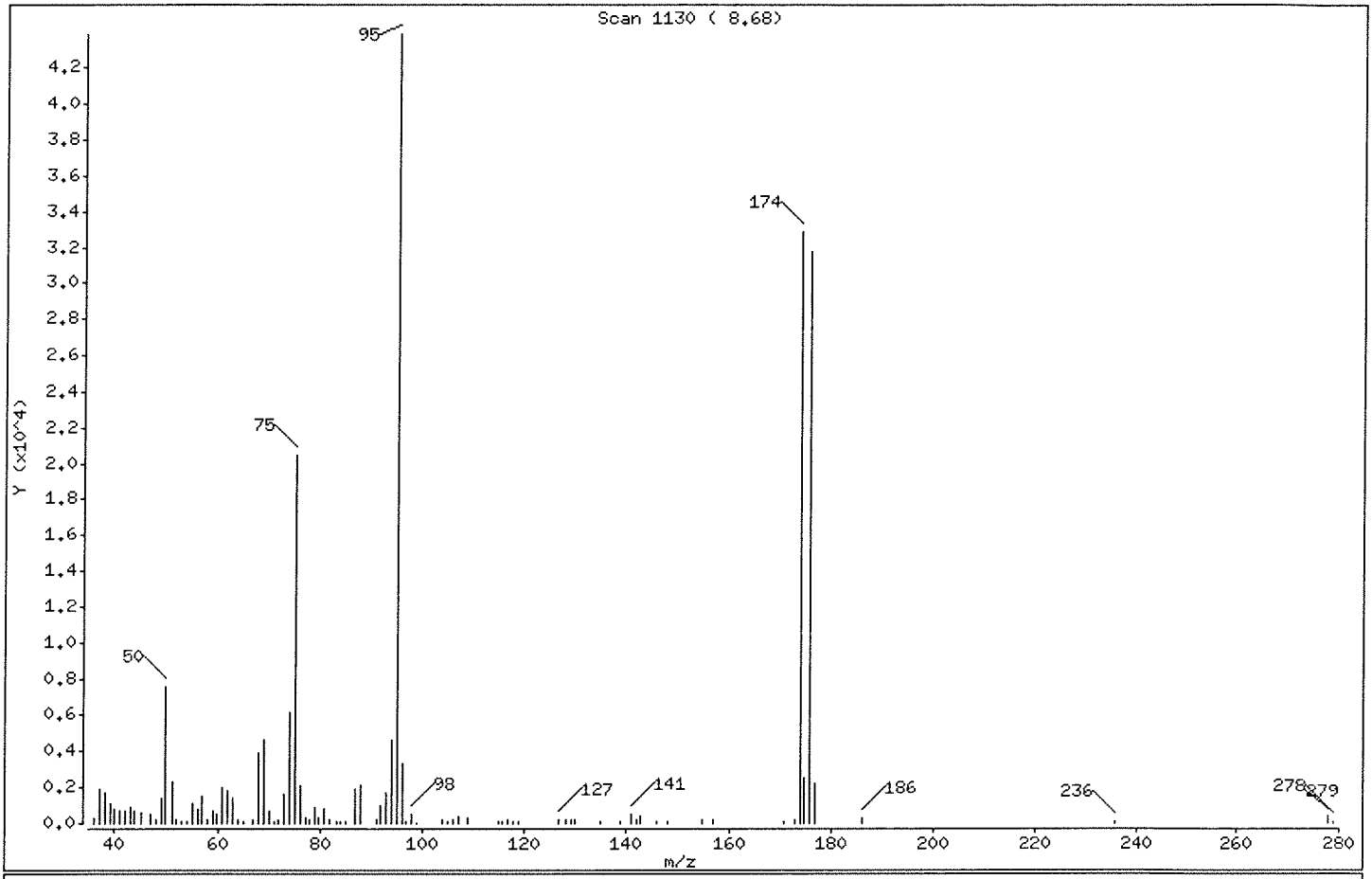
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.27
75	30.00 - 60.00% of mass 95	46.72
96	5.00 - 9.00% of mass 95	7.63
173	Less than 2.00% of mass 174	0.54 (0.73)
174	Greater than 50.00% of mass 95	74.84
175	5.00 - 9.00% of mass 174	5.76 (7.70)
176	95.00 - 101.00% of mass 174	72.49 (96.86)
177	5.00 - 9.00% of mass 176	5.03 (6.95)

Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010201.D

Date : 02-JAN-2020 09:59

Client ID: BFB Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0 Operator: PC

Column phase: DB624 Column diameter: 0.25

Data File: X010201.D
Spectrum: Scan 1130 (8.68)
Location of Maximum: 95.00
Number of points: 92

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.90	286	61.00	1979	86.90	1957	129.80	187
37.10	1929	62.00	1801	88.00	2103	135.00	68
38.00	1666	63.00	1402	91.00	208	138.70	51
39.00	1092	64.00	184	92.00	1020	140.90	481
40.00	799	65.10	103	93.00	1677	142.10	196
41.10	700	67.00	180	94.00	4633	142.90	357
42.10	672	68.00	3941	95.00	43856	146.00	70
43.00	880	69.00	4604	96.00	3346	147.90	70
43.90	675	70.00	749	97.00	120	154.80	205
45.10	654	71.10	89	98.00	552	157.00	191
47.10	518	72.00	211	98.90	50	171.00	126
48.10	210	73.00	1613	103.90	205	173.00	238
49.00	1437	74.10	6156	104.90	143	173.90	32824
50.00	7573	75.00	20488	105.90	172	174.90	2528
51.10	2275	76.10	2073	107.00	408	175.90	31792
52.10	178	77.10	310	109.00	339	176.90	2208
53.20	52	77.90	238	115.00	85	186.00	284
54.00	113	79.00	869	115.70	116	235.70	75
55.10	1101	79.80	283	116.90	222	278.00	365
56.10	801	80.90	805	117.90	136	279.10	66
57.00	1531	81.90	233	119.00	108		
58.00	152	83.20	123	126.80	246		
59.00	709	83.90	121	128.00	243		
59.90	455	85.10	54	129.10	167		

Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010202.D Page 1
Report Date: 26-Jan-2020 12:07

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200102.b\X010202.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 02-JAN-2020 10:23
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200102.b\8260W.m
Meth Date : 26-Jan-2020 12:07 voa6.i Quant Type: ISTD
Cal Date : 18-NOV-2019 16:35 Cal File: X111808.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

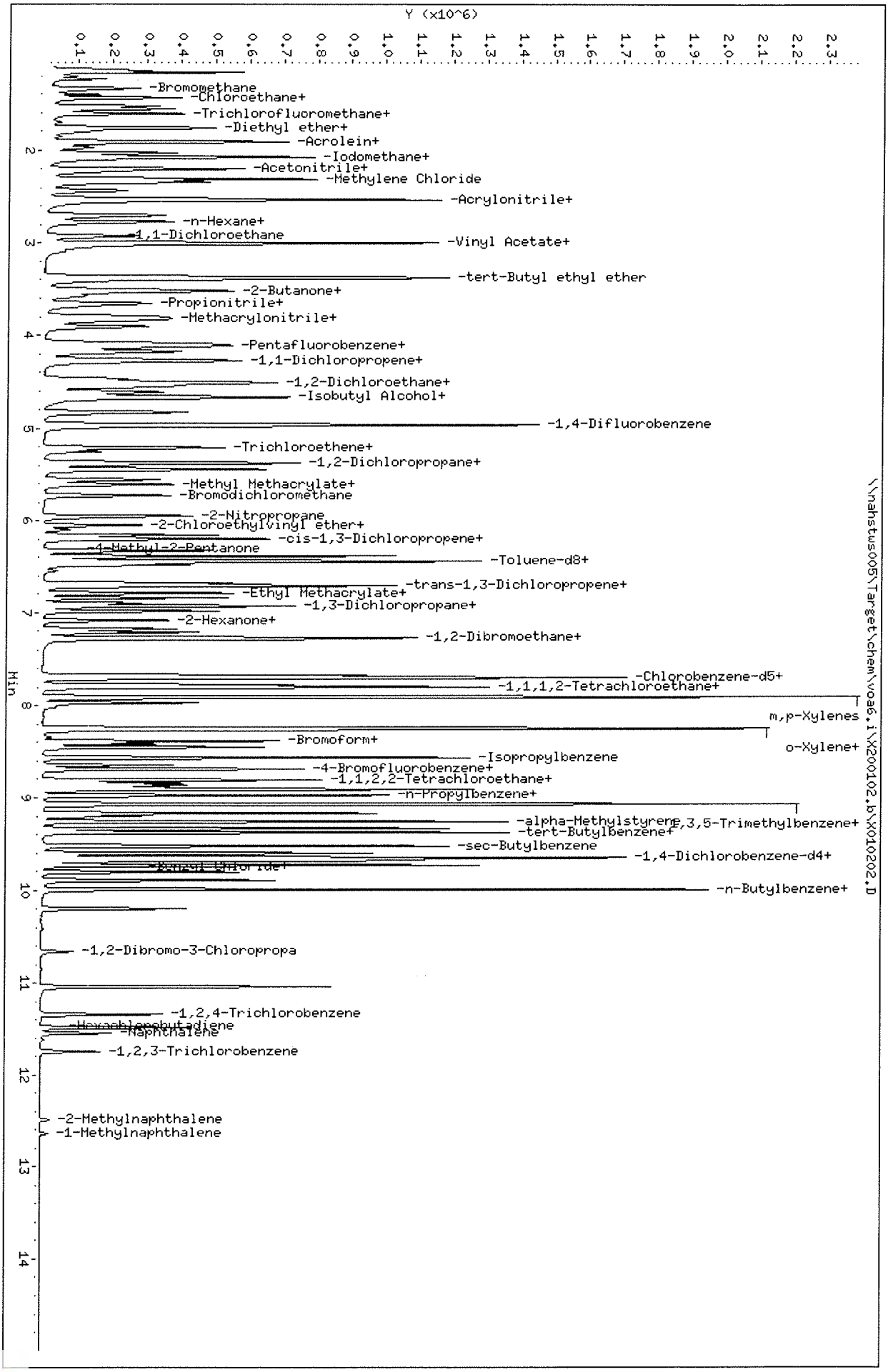
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	348539	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	502111	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	458722	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	235258	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	164638	50.0000	51.93
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	172328	50.0000	52.51
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	600622	50.0000	49.69
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	225432	50.0000	52.79
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	171427	50.0000	51.51
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	247939	50.0000	52.73
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	178683	50.0000	54.01
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	125768	50.0000	52.44
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	295260	50.0000	58.22
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	138228	50.0000	46.79
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	221462	50.0000	54.67
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	51916	50.0000	59.43
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	154720	50.0000	55.19(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	103303	50.0000	52.12
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	620210	50.0000	55.56
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.103)	20213	50.0000	55.38
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	162875	50.0000	50.62
88 1,2-Dichlorobenzene	146	9.998	9.998	(1.035)	324858	50.0000	52.02

	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)	207089	50.0000	51.95
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	166904	50.0000	55.64
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	608275	50.0000	56.78
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	359968	50.0000	53.35
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	258431	50.0000	53.08
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	360198	50.0000	52.53
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	252084	50.0000	54.76
24	2-Butanone	43	3.573	3.573	(0.854)	123695	100.000	115.66
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	493016	50.0000	58.24
52	2-Hexanone	43	7.083	7.083	(0.923)	198463	100.000	105.31
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	574681	50.0000	56.01
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	640879	50.0000	55.67
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	282575	100.000	105.13
10	Acetone	43	1.969	1.969	(0.471)	104986	100.000	116.98
37	Benzene	78	4.512	4.512	(0.908)	656760	50.0000	57.17
74	Bromobenzene	156	8.809	8.809	(0.912)	217997	50.0000	53.31
29	Bromochloromethane	128	3.795	3.795	(0.908)	99687	50.0000	52.79
39	Bromodichloromethane	83	5.729	5.729	(1.153)	220977	50.0000	53.18
66	Bromoform	173	8.415	8.415	(1.097)	132920	50.0000	48.68
6	Bromomethane	94	1.338	1.338	(0.320)	140322	50.0000	40.04(M)
19	Carbon Disulfide	76	2.069	2.069	(0.495)	971063	100.000	120.84
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	223836	50.0000	50.44
59	Chlorobenzene	112	7.699	7.699	(1.004)	459085	50.0000	51.26
7	Chloroethane	64	1.403	1.403	(0.336)	101935	50.0000	46.45
28	Chloroform	83	3.910	3.910	(0.935)	290315	50.0000	51.43
3	Chloromethane	50	1.073	1.073	(0.257)	180716	50.0000	47.74
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	187198	50.0000	56.63
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	280544	50.0000	57.29
55	Dibromochloromethane	129	7.176	7.176	(0.936)	181468	50.0000	52.09
44	Dibromomethane	93	5.557	5.557	(1.118)	109756	50.0000	51.70
2	Dichlorodifluoromethane	85	0.966	0.966	(0.231)	177196	50.0000	55.69
61	Ethylbenzene	106	7.799	7.799	(1.017)	247870	50.0000	53.56
91	Hexachlorobutadiene	225	11.488	11.488	(1.189)	81201	50.0000	42.94
67	Isopropylbenzene	105	8.566	8.566	(1.117)	716450	50.0000	52.27
62	m,p-Xylenes	106	7.907	7.907	(1.031)	591059	100.000	105.85
17	Methylene Chloride	84	2.305	2.305	(0.551)	171328	50.0000	54.36
87	n-Butylbenzene	91	9.998	9.998	(1.035)	528452	50.0000	55.16
73	n-Propylbenzene	91	8.917	8.917	(0.923)	821549	50.0000	56.49
92	Naphthalene	128	11.546	11.546	(1.195)	140956	50.0000	55.45
63	o-Xylene	106	8.244	8.244	(1.075)	290107	50.0000	52.64
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	706971	50.0000	55.96
64	Styrene	104	8.258	8.258	(1.077)	503457	50.0000	52.53
78	tert-Butylbenzene	119	9.339	9.339	(0.967)	507311	50.0000	55.31
56	Tetrachloroethene	164	6.933	6.933	(0.904)	154601	50.0000	47.96
50	Toluene	91	6.446	6.446	(0.840)	695336	50.0000	53.45
20	trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	161913	50.0000	56.46
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	244717	50.0000	54.83
38	Trichloroethene	130	5.206	5.206	(1.048)	188894	50.0000	53.79
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	253790	50.0000	46.94
5	Vinyl Chloride	62	1.138	1.138	(0.272)	194173	50.0000	54.66

QC Flag Legend

M - Compound response manually integrated.

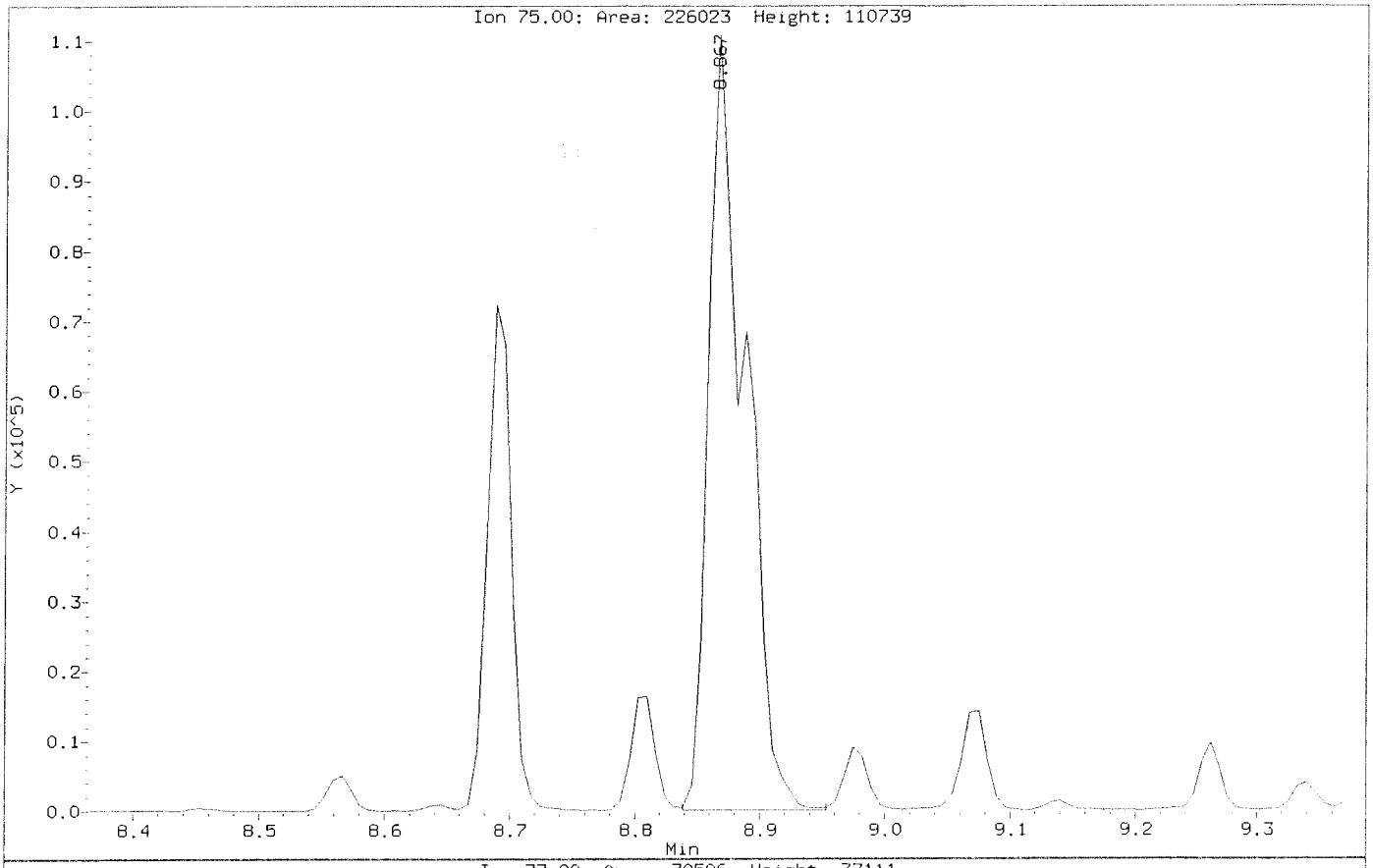


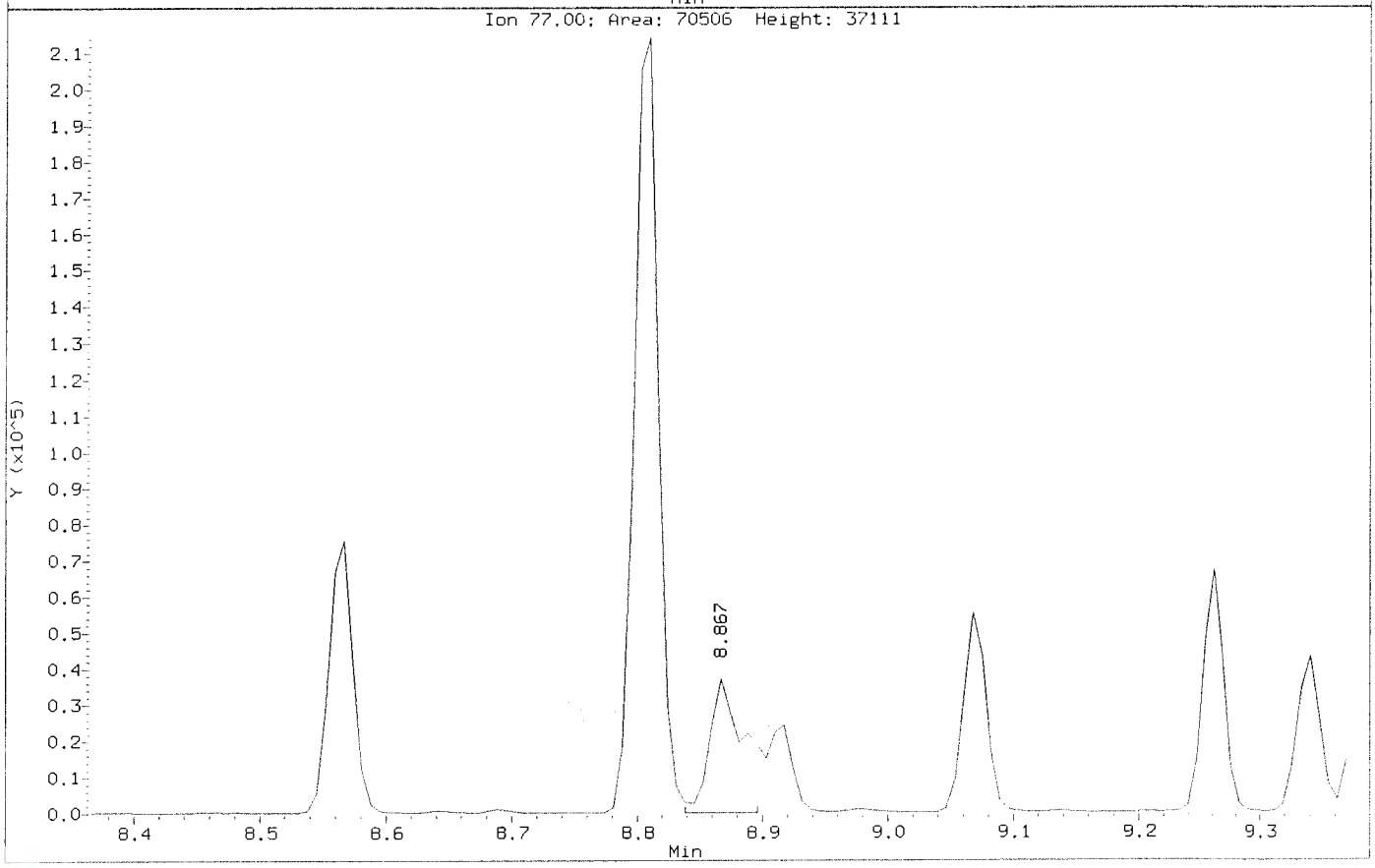
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Client ID: CCV
Sample Info: CCV;CCV;2;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\Before\X010202.D
Injection Date: 02-JAN-2020 10:23
Instrument: voa6.i
Client Sample ID: CCV

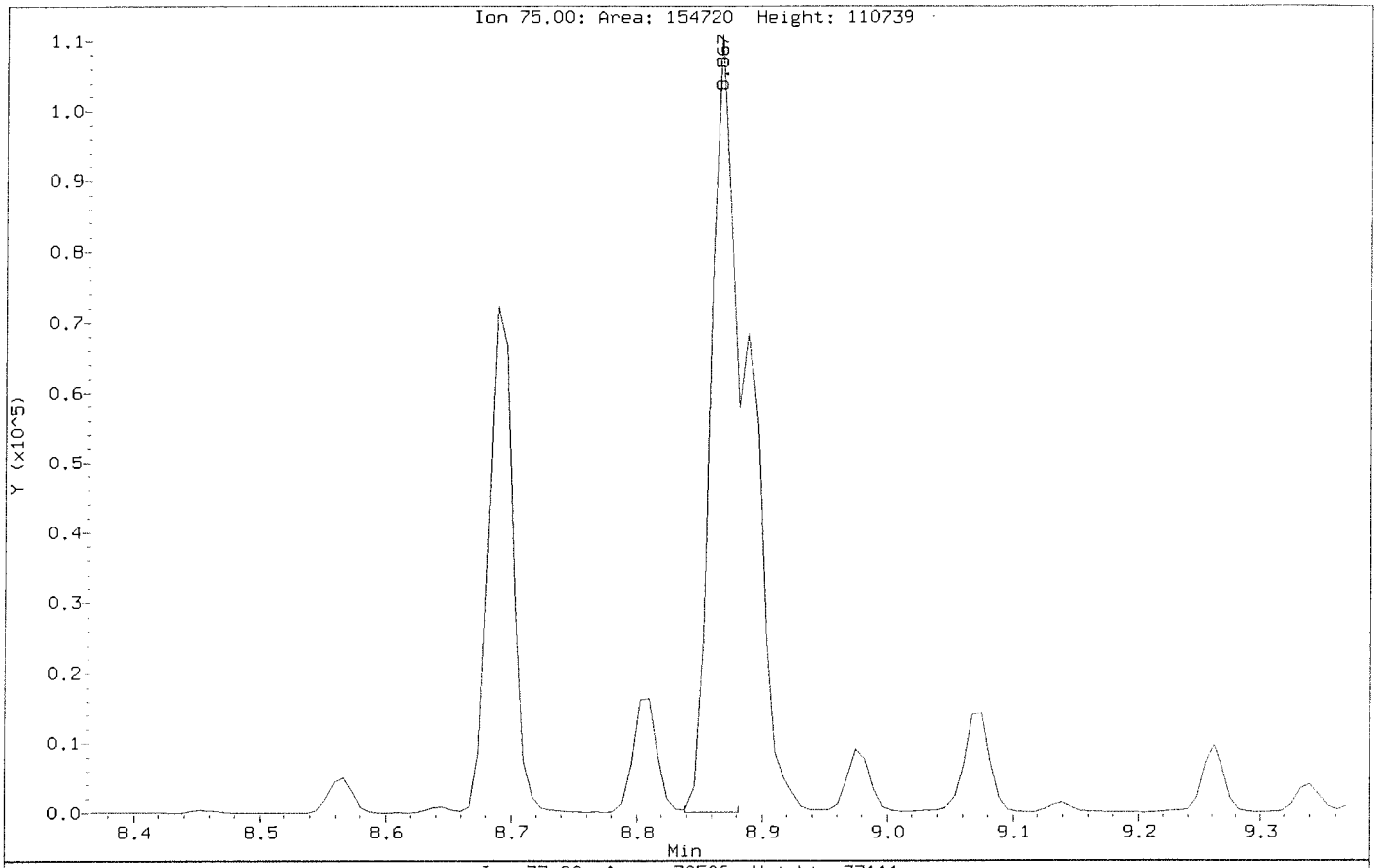
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

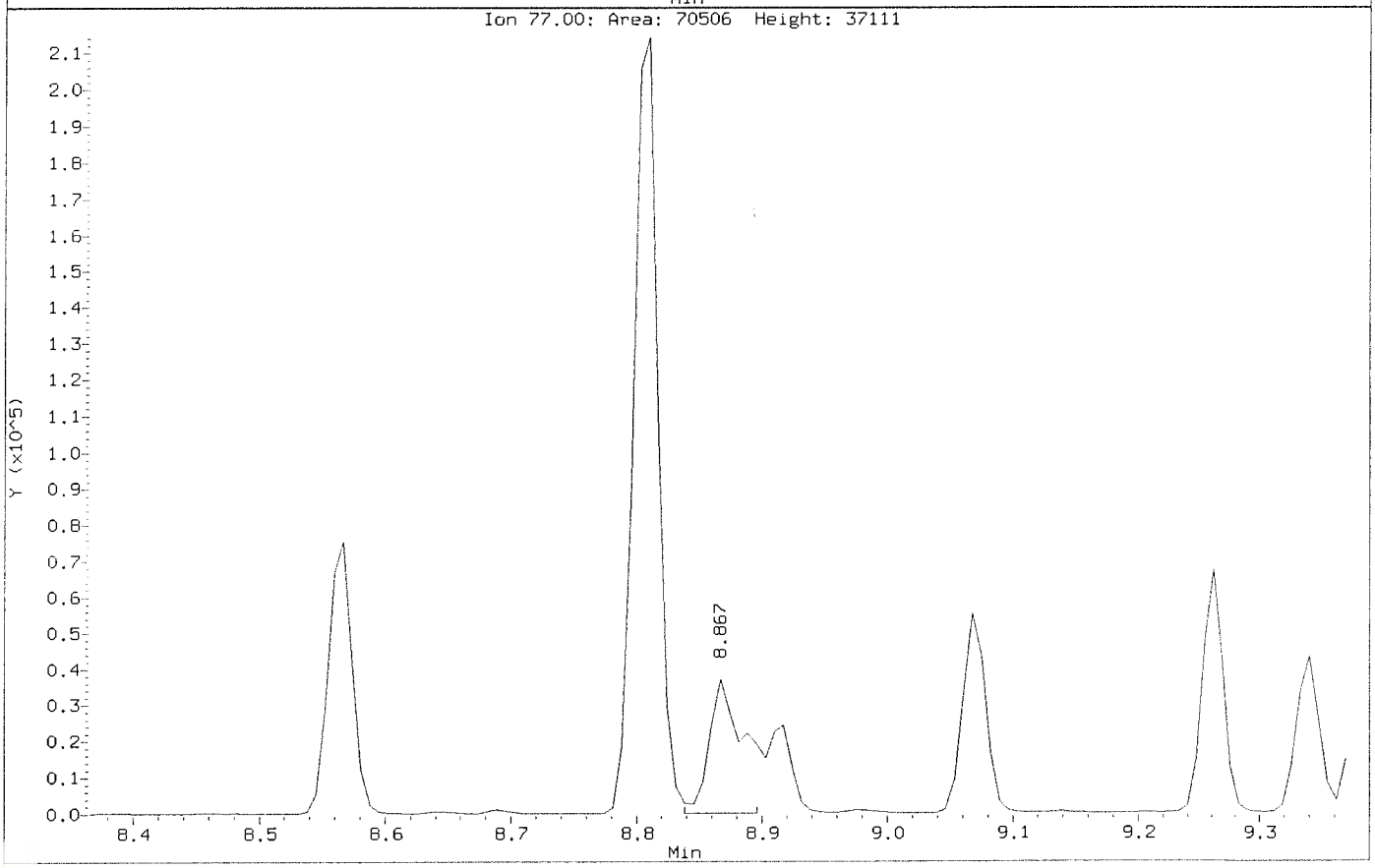




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Injection Date: 02-JAN-2020 10:23
Instrument: voa6.i
Client Sample ID: CCV

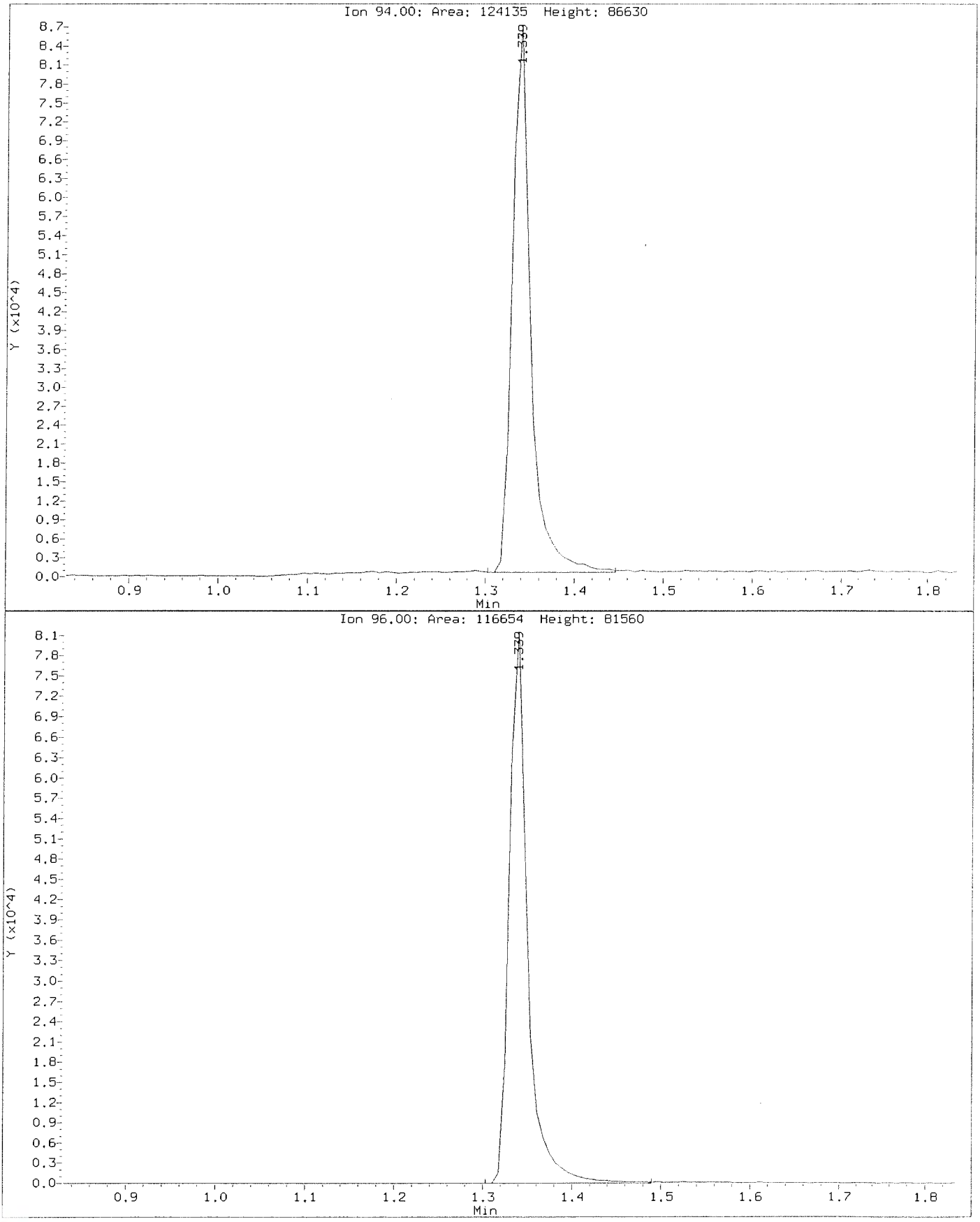
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CAS Number: 96-18-4





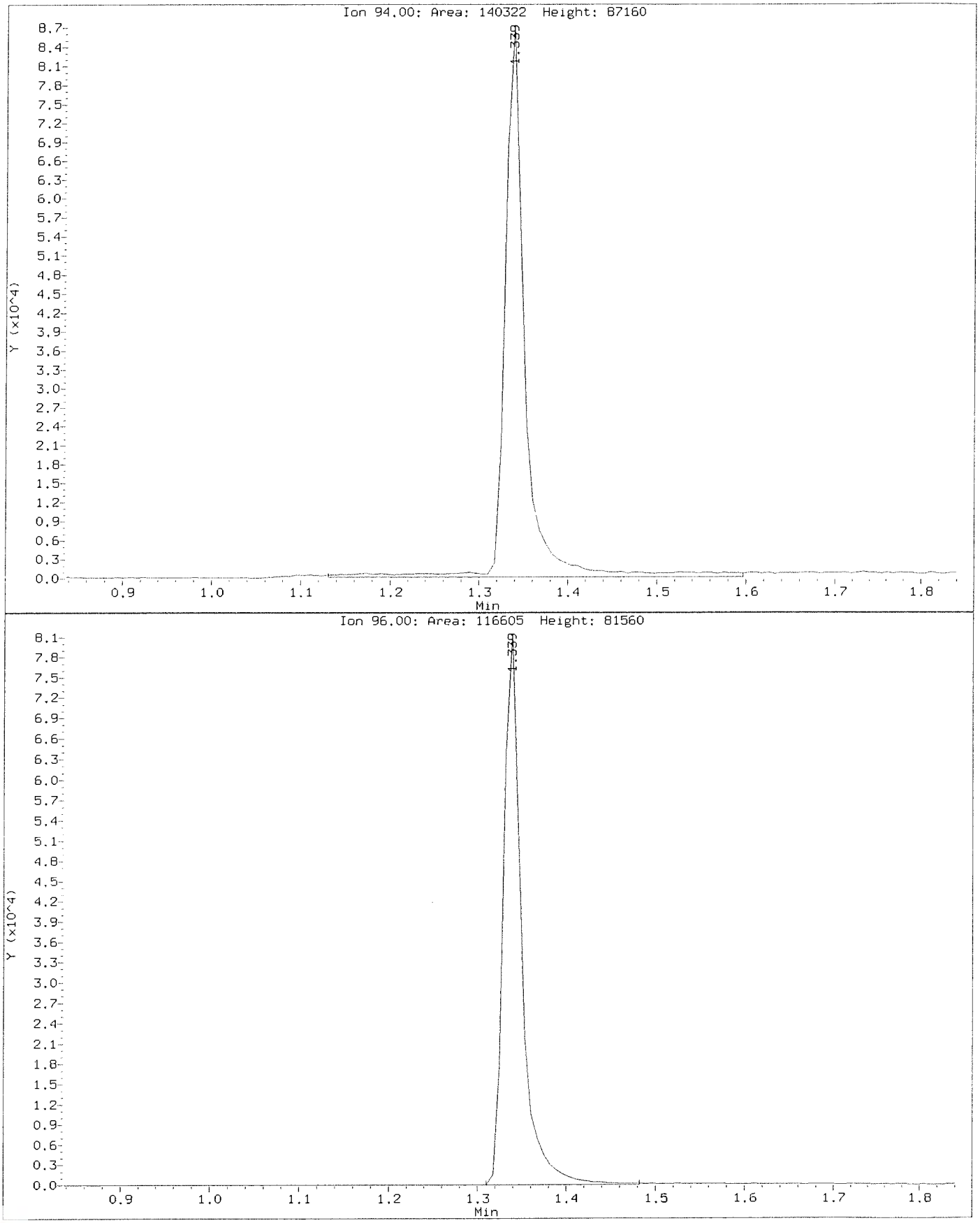
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Injection Date: 02-JAN-2020 10:23
Instrument: voa6.i
Client Sample ID: CCV

Compound: Bromomethane
CAS Number: 74-83-9



Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010202.D
Injection Date: 02-JAN-2020 10:23
Instrument: voa6.i
Client Sample ID: CCV

Compound: Bromomethane
CAS Number: 74-83-9



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200102.b\X010206.D
Lab Smp Id: VLCSW-200102 Client Smp ID: VLCSW-200102
Inj Date : 02-JAN-2020 11:58
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-200102;VLCSW-200102;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment   :
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Meth Date : 26-Jan-2020 12:07 voa6.i Quant Type: ISTD
Cal Date : 18-NOV-2019 16:35 Cal File: X111808.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

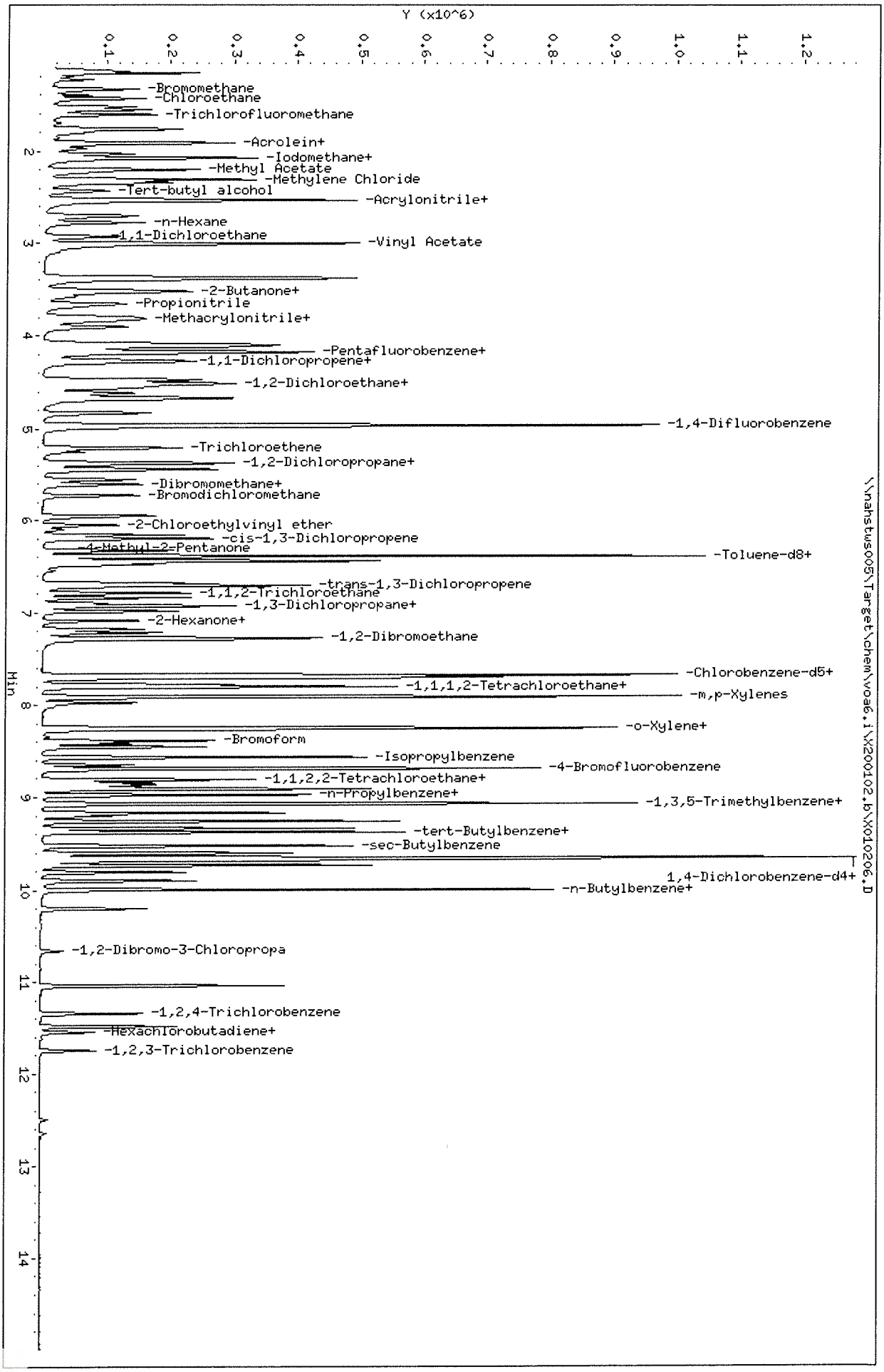
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

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)	373826	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	543397	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	484500	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	248490	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	173969	51.1716	51.17
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	183388	52.1125	52.11
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	625807	49.0230	49.02
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	234114	51.9207	51.92
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	72080	20.5066	20.50
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	104786	20.7778	20.77
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	76104	21.7801	21.78
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	53506	21.1261	21.12
22 1,1-Dichloroethane	63	2.922	2.921	(0.699)	127306	23.4052	23.40
11 1,1-Dichloroethene	96	1.912	1.911	(0.457)	58603	18.4981	18.49
32 1,1-Dichloropropene	75	4.283	4.282	(0.862)	93029	21.2234	21.22
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	25051	26.7868	26.78
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	65645	22.1721	22.17(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	48435	23.1393	23.13
79 1,2,4-Trimethylbenzene	105	9.383	9.382	(0.970)	259832	22.0372	22.03
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.657	(1.102)	8089	20.7724	20.77
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	69626	20.4900	20.48
88 1,2-Dichlorobenzene	146	9.999	9.998	(1.034)	135811	20.5930	20.59

	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	4.555	(0.918)	88045	20.4109	20.41
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	71052	21.8889	21.88
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	254278	22.4753	22.47
83	1,3-Dichlorobenzene	146	9.612	9.605	(0.994)	148852	20.8879	20.88
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	110866	21.5611	21.56
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	148860	20.5566	20.55
26	2,2-Dichloropropane	77	3.509	3.516	(0.839)	104120	21.0910	21.09
24	2-Butanone	43	3.581	3.573	(0.856)	51658	45.0354	45.03
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	209237	23.4043	23.40
52	2-Hexanone	43	7.083	7.083	(0.923)	82434	41.4184	41.41
77	4-Chlorotoluene	91	9.075	9.074	(0.939)	239529	22.1043	22.10
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	264858	21.7834	21.78
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	117906	41.5337	41.53
10	Acetone	43	1.969	1.969	(0.471)	45861	45.3577	45.35
37	Benzene	78	4.512	4.512	(0.908)	283976	22.8452	22.84
74	Bromobenzene	156	8.810	8.809	(0.911)	90854	21.0377	21.03
29	Bromochloromethane	128	3.795	3.795	(0.908)	43616	21.5374	21.53
39	Bromodichloromethane	83	5.729	5.729	(1.153)	93101	20.7035	20.70
66	Bromoform	173	8.416	8.415	(1.097)	54415	19.4835	19.48
6	Bromomethane	94	1.339	1.338	(0.320)	61896	15.0798	15.07
19	Carbon Disulfide	76	2.069	2.069	(0.495)	411285	47.7208	47.72
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	91844	19.1276	19.12
59	Chlorobenzene	112	7.699	7.699	(1.004)	192357	20.3362	20.33
7	Chloroethane	64	1.403	1.403	(0.336)	45670	19.4038	19.40
28	Chloroform	83	3.910	3.910	(0.935)	124022	20.4856	20.48
3	Chloromethane	50	1.074	1.073	(0.257)	77002	19.0823	19.08
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	80113	22.5980	22.59
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	116658	22.0136	22.01
55	Dibromochloromethane	129	7.176	7.176	(0.936)	74932	20.3654	20.36
44	Dibromomethane	93	5.558	5.557	(1.118)	47017	20.4681	20.46
2	Dichlorodifluoromethane	85	0.966	0.966	(0.231)	71221	21.4214	21.42
61	Ethylbenzene	106	7.800	7.799	(1.017)	103284	21.1334	21.13
91	Hexachlorobutadiene	225	11.489	11.488	(1.188)	41550	20.8064	20.80
67	Isopropylbenzene	105	8.566	8.566	(1.117)	299947	20.7205	20.72
62	m,p-Xylenes	106	7.907	7.907	(1.031)	247816	42.0206	42.02
17	Methylene Chloride	84	2.306	2.305	(0.551)	74439	22.0223	22.02
87	n-Butylbenzene	91	9.999	9.998	(1.034)	219188	21.6622	21.66
73	n-Propylbenzene	91	8.917	8.917	(0.922)	346190	22.5389	22.53
92	Naphthalene	128	11.546	11.546	(1.194)	57624	21.4638	21.46
63	o-Xylene	106	8.244	8.244	(1.075)	121578	20.8880	20.88
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	292069	21.8889	21.88
64	Styrene	104	8.258	8.258	(1.077)	212668	21.0118	21.01
78	tert-Butylbenzene	119	9.340	9.339	(0.966)	212797	21.9672	21.96
56	Tetrachloroethene	164	6.933	6.933	(0.904)	65795	19.3275	19.32
50	Toluene	91	6.446	6.446	(0.840)	297076	21.6223	21.62
20	trans-1,2-Dichloroethene	96	2.528	2.527	(0.604)	69098	22.4654	22.46
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	104502	21.6364	21.63
38	Trichloroethene	130	5.207	5.206	(1.048)	78184	20.5738	20.57
8	Trichlorofluoromethane	101	1.561	1.560	(0.373)	106637	18.3891	18.38
5	Vinyl Chloride	62	1.138	1.138	(0.272)	82946	21.7710	21.77

QC Flag Legend

M - Compound response manually integrated.

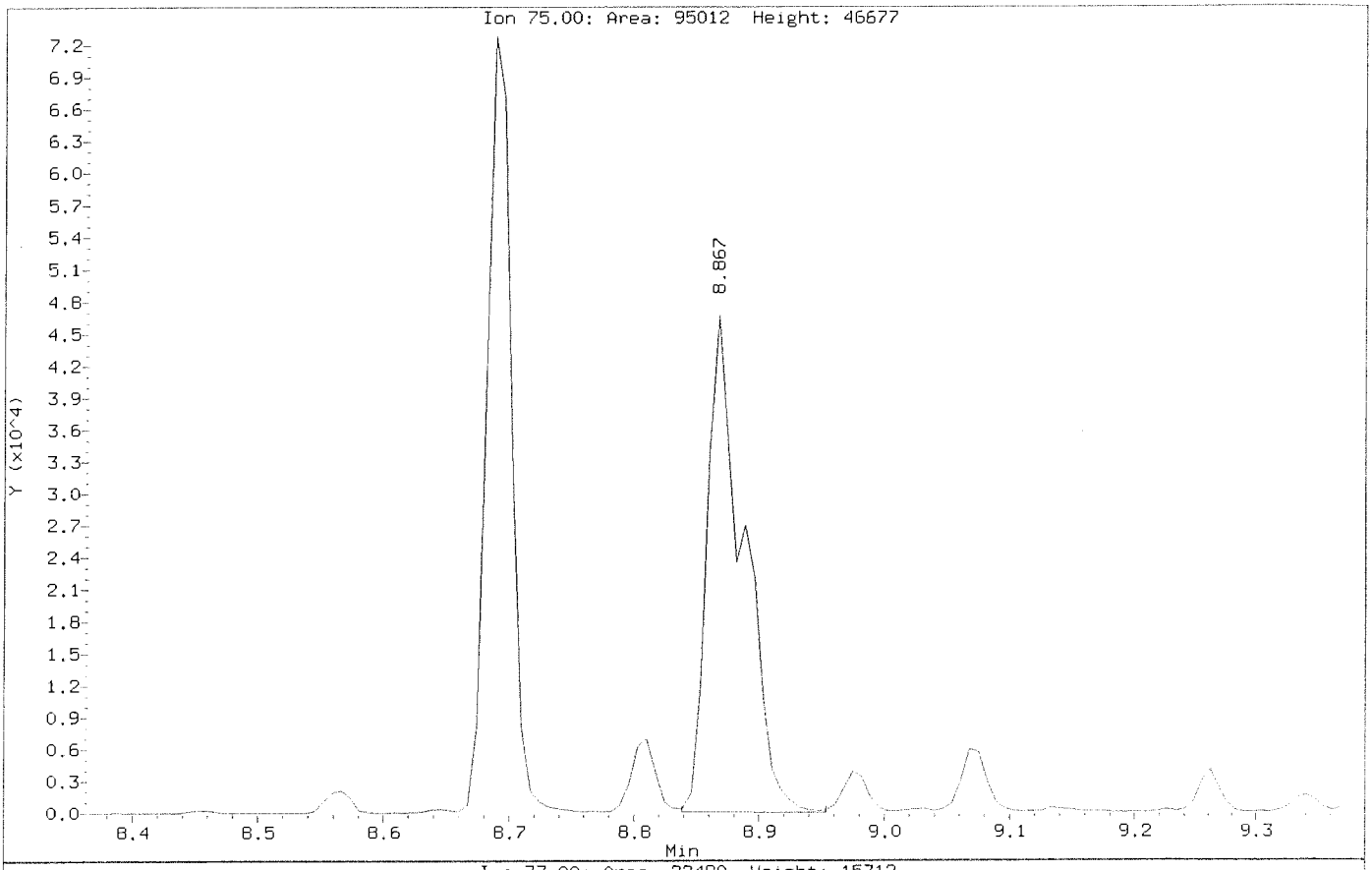


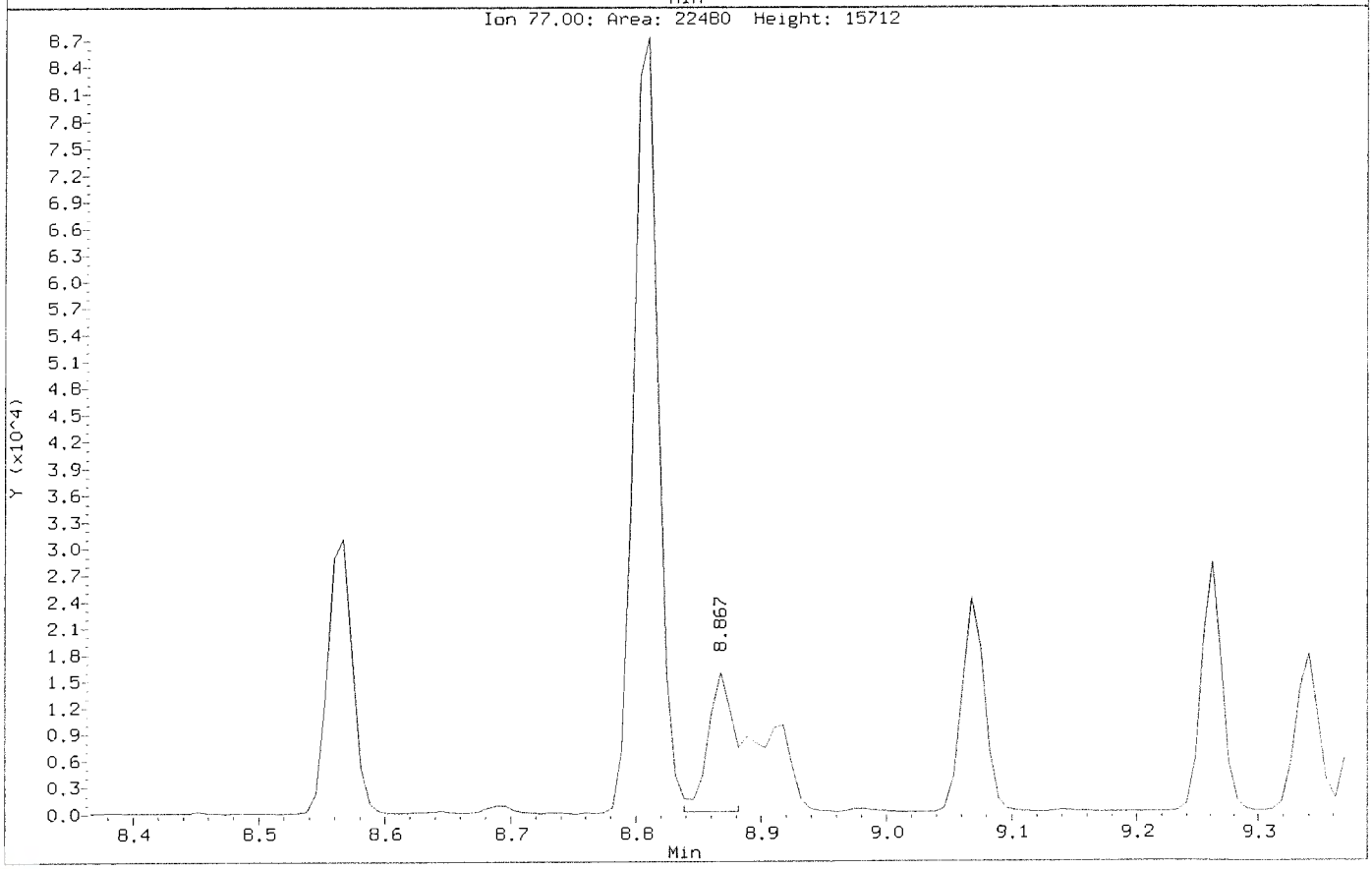
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Sample Info: VLCSW-200102;VLCSW-200102;3;;LCS
Purge Volume: 5.0
Column phase: DB624

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

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Instrument: voa6.i
Client Sample ID: VLCSW-200102

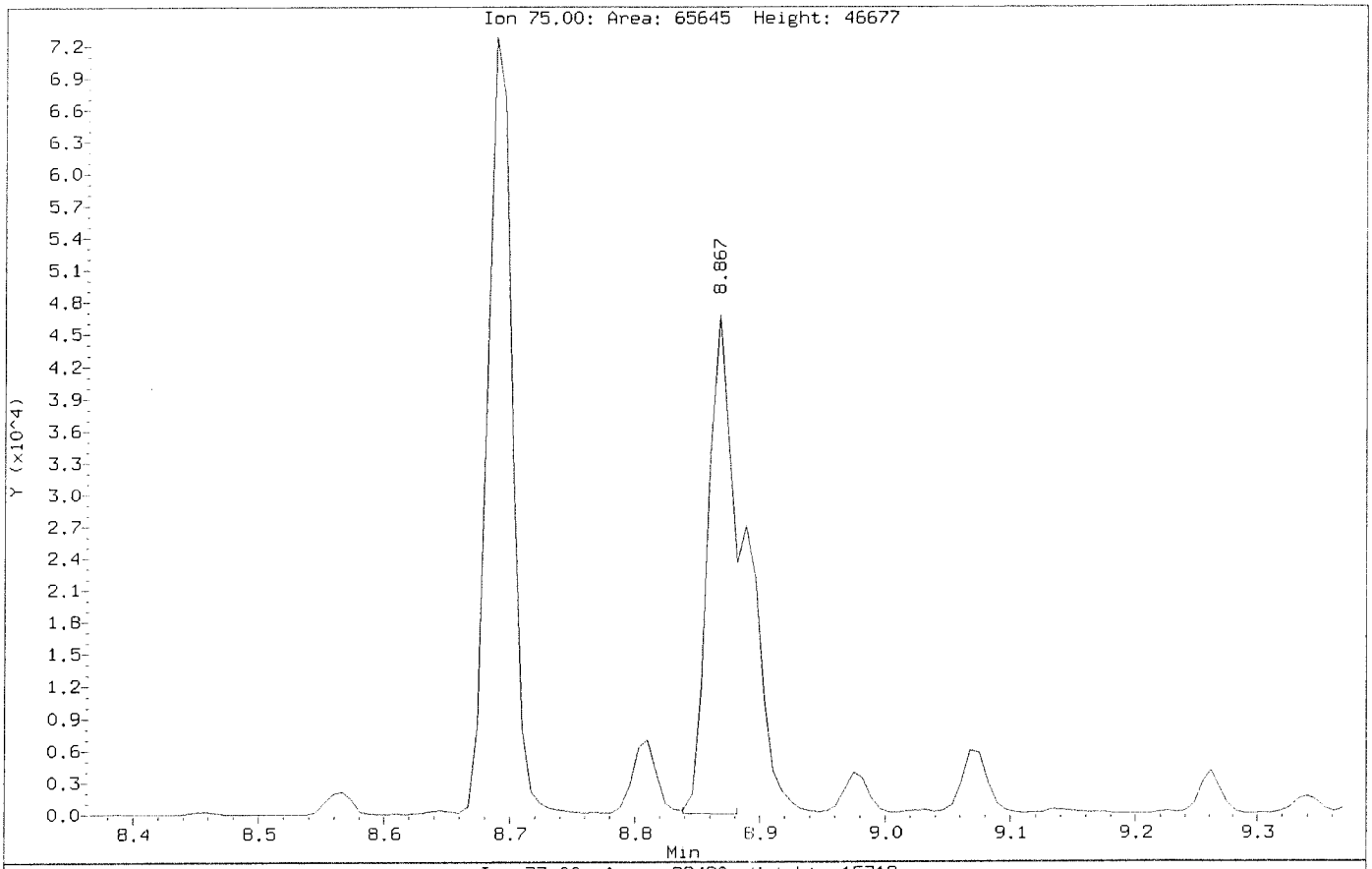
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

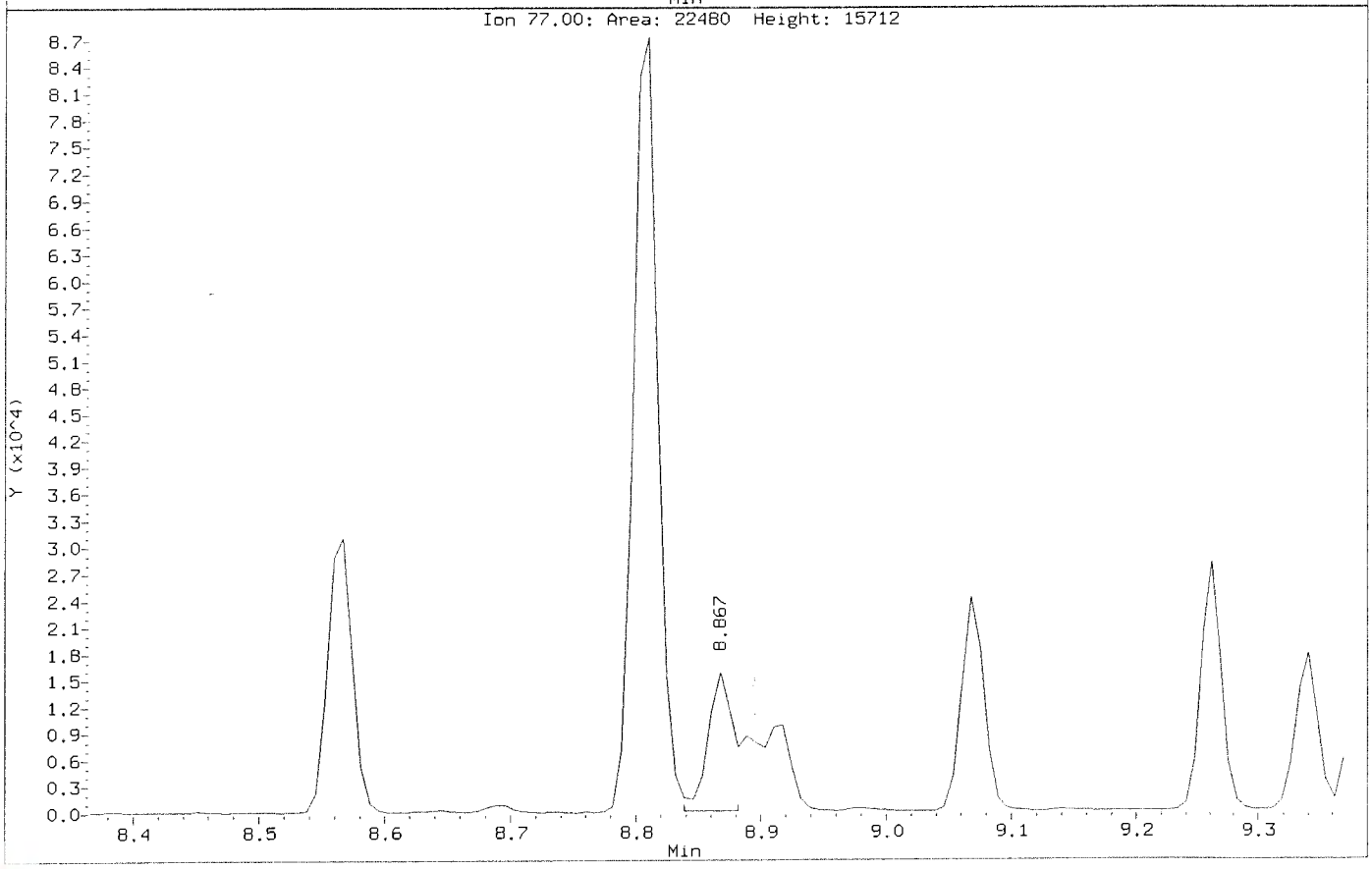




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Injection Date: 02-JAN-2020 11:58
Instrument: voa6.i
Client Sample ID: VLCSW-200102

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





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200102.b\X010208.D
Lab Smp Id: VBLKW-200102 Client Smp ID: VBLKW-200102
Inj Date : 02-JAN-2020 12:46
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-200102;VBLKW-200102;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200102.b\8260W.m
Meth Date : 26-Jan-2020 12:07 voa6.i Quant Type: ISTD
Cal Date : 18-NOV-2019 16:35 Cal File: X111808.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

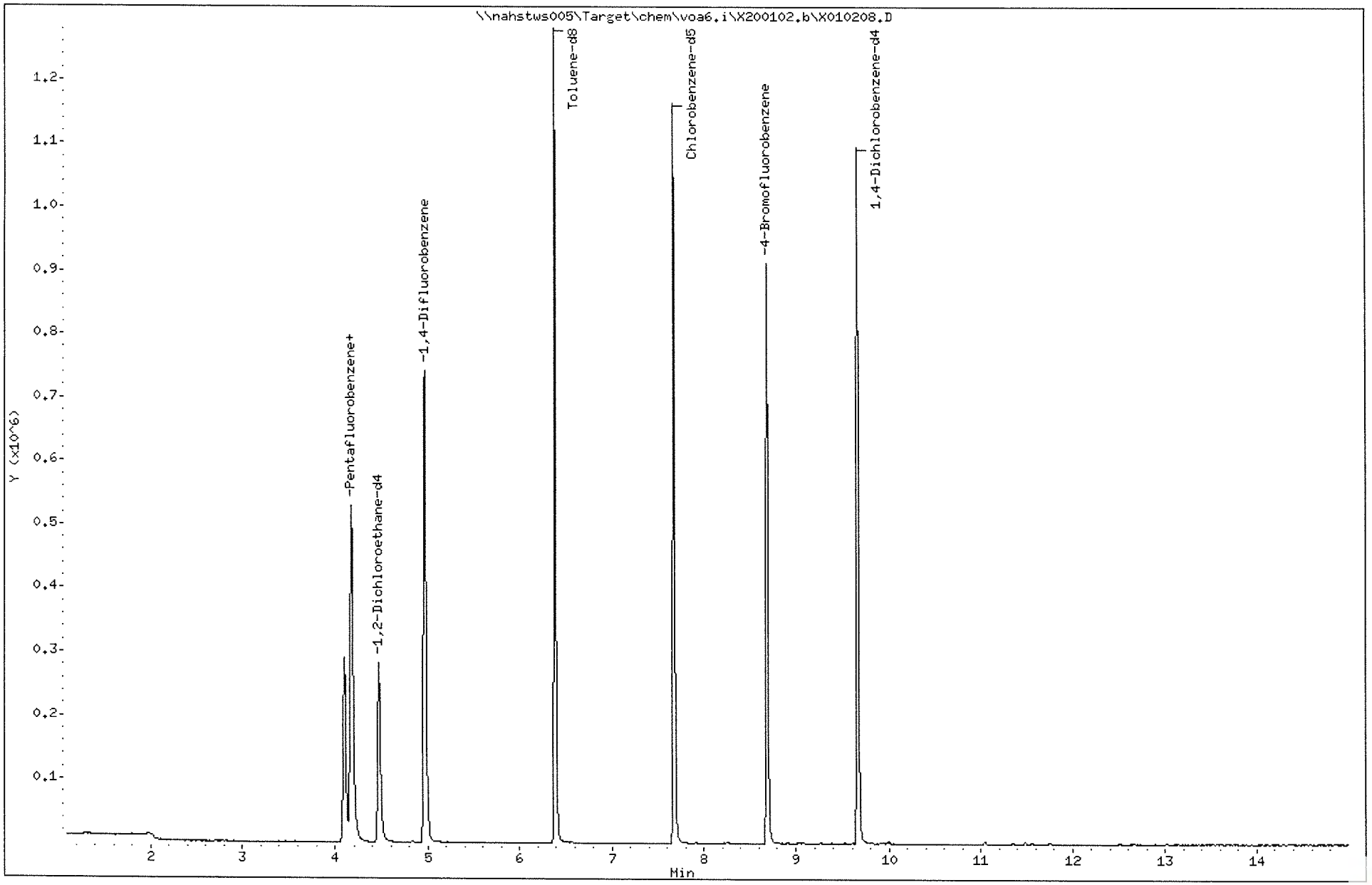
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	472706	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	665875	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	576824	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	283964	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	205622	47.8545	47.85
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	208579	46.9468	46.94
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	780114	51.3296	51.32
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	271591	50.6024	50.60

Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010208.D
Date : 02-JAN-2020 12:46
Client ID: VBLKW-200102
Sample Info: VBLKW-200102;VBLKW-200102;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\X200102.b\X010217.D
Lab Smp Id: HS19121257-01 Client Smp ID: HS19121257-01
Inj Date : 02-JAN-2020 16:22
Operator : PC Inst ID: voa6.i
Smp Info : HS19121257-01;HS19121257-01;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200102.b\8260W.m
Meth Date : 26-Jan-2020 12:06 DevakG Quant Type: ISTD
Cal Date : 18-NOV-2019 16:35 Cal File: X111808.D
Als bottle: 17
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

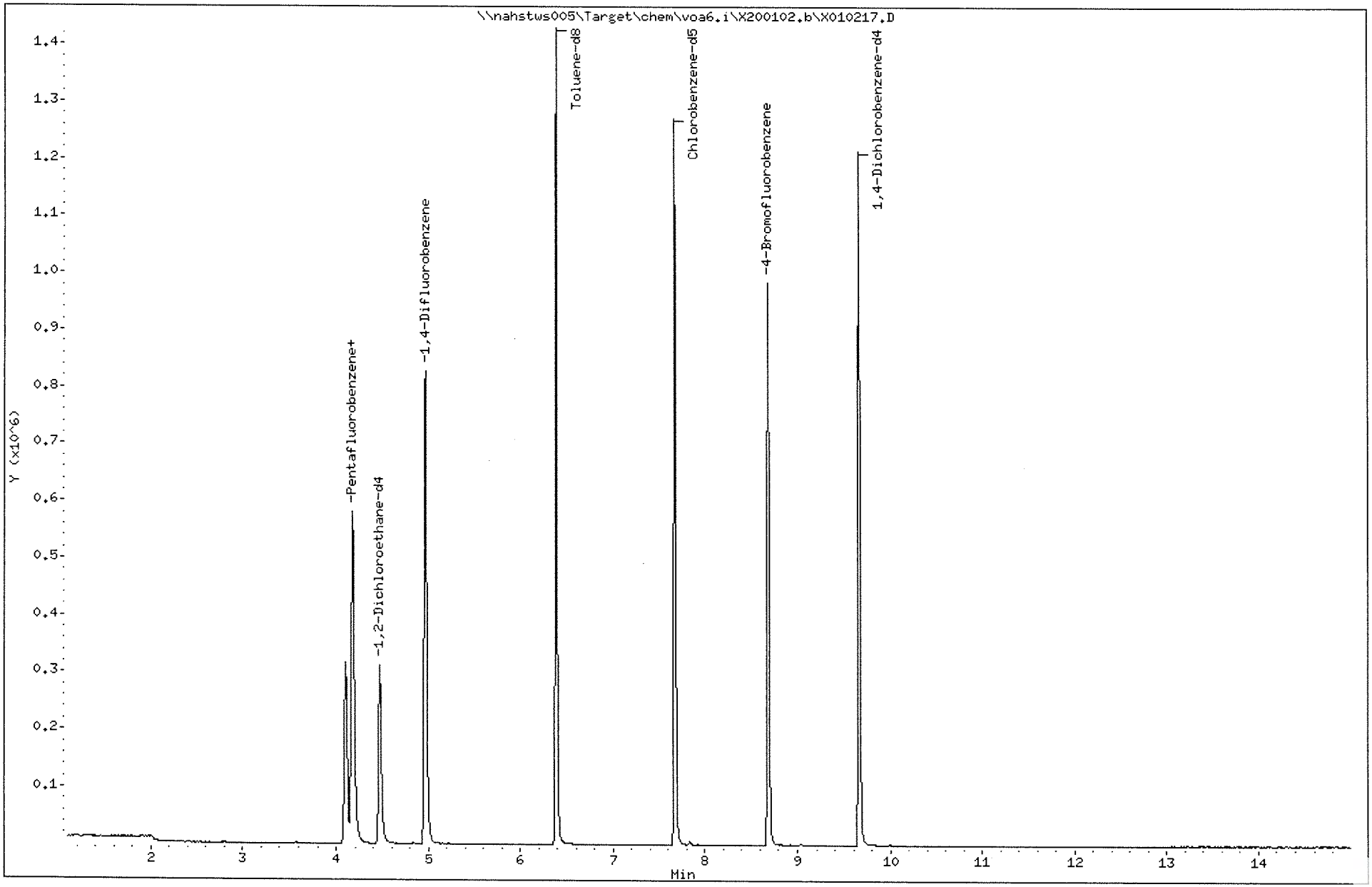
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	515225	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	734778	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	625853	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.669	(1.000)	308222	50.0000	
$ 30 Dibromofluoromethane	113	4.104	4.103	(0.981)	227187	48.5049	48.50
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	233810	48.2618	48.26
$ 48 Toluene-d8	98	6.389	6.388	(0.833)	852041	51.6703	51.67
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	294766	50.6178	50.61

Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010217.D
Date : 02-JAN-2020 16:22
Client ID: HS19121257-01
Sample Info: HS19121257-01;HS19121257-01;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010219.D Page 1
Report Date: 26-Jan-2020 12:07

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200102.b\X010219.D
Lab Smp Id: HS19121257-01MS Client Smp ID: HS19121257-01MS
Inj Date : 02-JAN-2020 17:11
Operator : PC Inst ID: voa6.i
Smp Info : HS19121257-01MS;HS19121257-01MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200102.b\8260W.m
Meth Date : 26-Jan-2020 12:07 voa6.i Quant Type: ISTD
Cal Date : 18-NOV-2019 16:35 Cal File: X111808.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

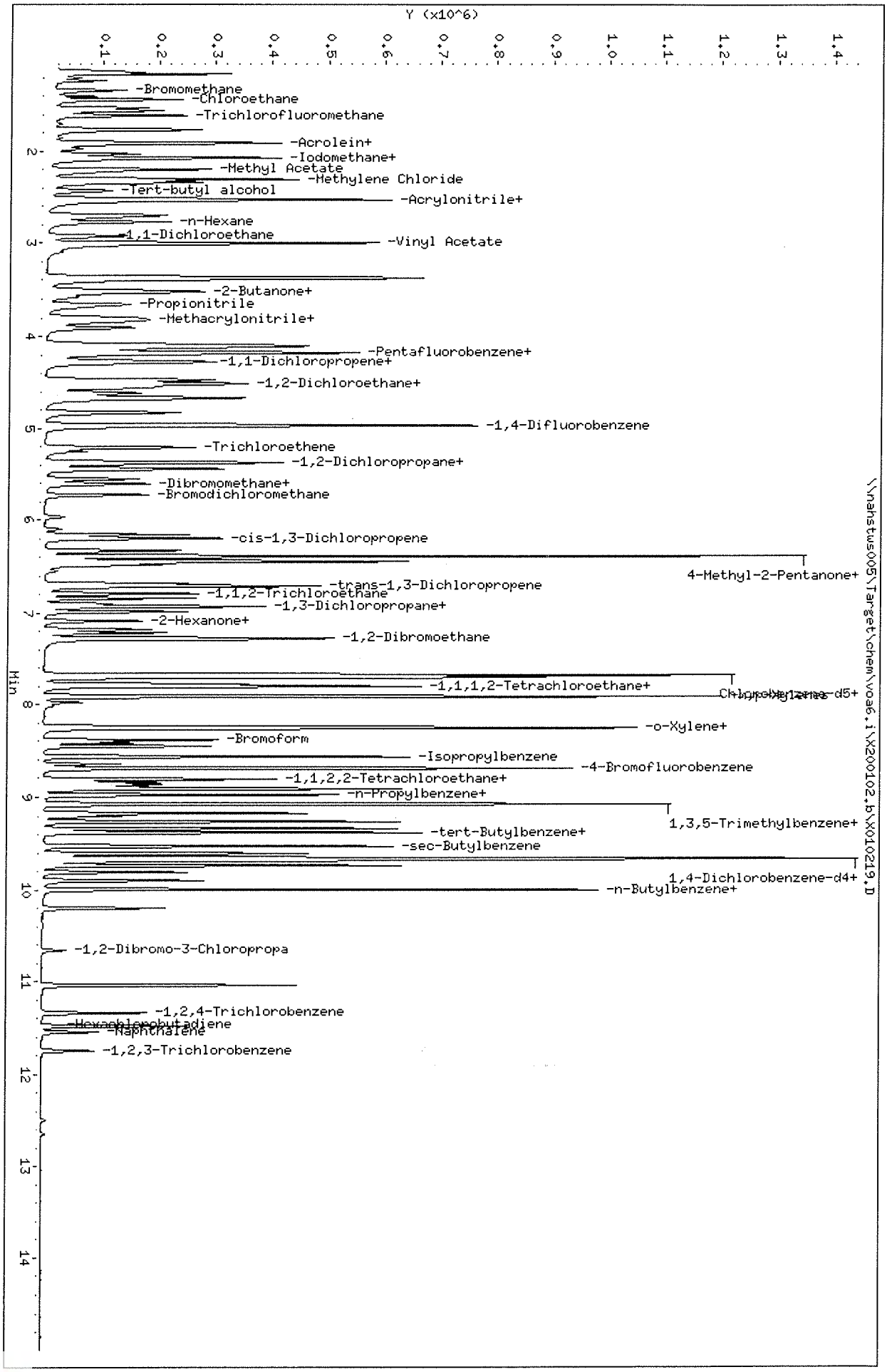
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	482225	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	685546	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	585783	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	286860	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	213722	48.7508	48.75
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	219355	48.3749	48.37
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	797356	51.6617	51.66
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	276637	50.7530	50.75
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	84351	19.8484	19.84
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	129446	19.8978	19.89
68 1,1,2,2-Tetrachloroethane	83	8.845	8.838	(0.915)	87147	21.6044	21.60
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	62768	20.4981	20.49
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	151263	21.5584	21.55
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	74432	18.2132	18.21
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	116149	21.0036	21.00
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	27618	25.5465	25.54
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	75069	21.9637	21.96(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	55198	22.8430	22.84
79 1,2,4-Trimethylbenzene	105	9.383	9.382	(0.970)	310003	22.7755	22.77
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.657	(1.102)	9304	20.6954	20.69
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	80410	19.5721	19.57
88 1,2-Dichlorobenzene	146	9.999	9.998	(1.034)	156898	20.6083	20.60

Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010219.D Page 2
Report Date: 26-Jan-2020 12:07

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
33 1,2-Dichloroethane	62	4.555	4.555	(0.916)	103902	19.0924	19.09
42 1,2-Dichloropropane	63	5.436	5.436	(1.094)	85401	20.8540	20.85
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	305209	23.3686	23.36
83 1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	178094	21.6486	21.64
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	128552	20.6780	20.67
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	174530	20.8777	20.87
26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	128205	20.1321	20.13
24 2-Butanone	43	3.580	3.573	(0.856)	55828	37.7301	37.73
76 2-Chlorotoluene	91	8.974	8.974	(0.928)	251452	24.3641	24.36
52 2-Hexanone	43	7.090	7.083	(0.924)	94187	39.1412	39.14
77 4-Chlorotoluene	91	9.075	9.074	(0.939)	287032	22.9450	22.94
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	325135	23.1641	23.16
45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	144064	41.9737	41.97
10 Acetone	43	1.969	1.969	(0.471)	37927	27.6940	27.69
37 Benzene	78	4.512	4.512	(0.908)	336701	21.4703	21.47
74 Bromobenzene	156	8.809	8.809	(0.911)	106281	21.3181	21.31
29 Bromochloromethane	128	3.795	3.795	(0.908)	49424	18.9193	18.91
39 Bromodichloromethane	83	5.729	5.729	(1.153)	108624	19.1468	19.14
66 Bromoform	173	8.416	8.415	(1.097)	62049	18.4323	18.43
6 Bromomethane	94	1.338	1.338	(0.320)	65816	12.0161	12.01
19 Carbon Disulfide	76	2.069	2.069	(0.495)	512827	46.1270	46.12
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	117143	19.3378	19.33
59 Chlorobenzene	112	7.699	7.699	(1.004)	228208	19.9549	19.95
7 Chloroethane	64	1.403	1.403	(0.336)	55795	18.3769	18.37
28 Chloroform	83	3.910	3.910	(0.935)	147404	18.8746	18.87
3 Chloromethane	50	1.073	1.073	(0.257)	97109	18.6597	18.65
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	96261	21.0493	21.04
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	137023	20.4952	20.49
55 Dibromochloromethane	129	7.176	7.176	(0.936)	87431	19.6539	19.65
44 Dibromomethane	93	5.557	5.557	(1.118)	53918	18.6054	18.60
2 Dichlorodifluoromethane	85	0.966	0.966	(0.231)	97029	22.5741	22.57
61 Ethylbenzene	106	7.799	7.799	(1.017)	124254	21.0282	21.02
91 Hexachlorobutadiene	225	11.488	11.488	(1.188)	47684	20.6842	20.68
67 Isopropylbenzene	105	8.566	8.566	(1.117)	368920	21.0787	21.07
62 m,p-Xylenes	106	7.907	7.907	(1.031)	298633	41.8820	41.88
17 Methylene Chloride	84	2.305	2.305	(0.551)	86596	19.8600	19.85
87 n-Butylbenzene	91	9.999	9.998	(1.034)	271648	23.2558	23.25
73 n-Propylbenzene	91	8.917	8.917	(0.922)	425449	23.9941	23.99
92 Naphthalene	128	11.546	11.546	(1.194)	65490	21.1309	21.13
63 o-Xylene	106	8.244	8.244	(1.075)	143695	20.4193	20.41
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	365783	23.7466	23.74
64 Styrene	104	8.258	8.258	(1.077)	245749	20.0822	20.08
78 tert-Butylbenzene	119	9.340	9.339	(0.966)	263808	23.5905	23.59
56 Tetrachloroethene	164	6.933	6.933	(0.904)	80944	19.6663	19.66
50 Toluene	91	6.446	6.446	(0.840)	356920	21.4863	21.48
20 trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	84280	21.2419	21.24
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	120633	19.7974	19.79
38 Trichloroethene	130	5.206	5.206	(1.048)	94726	19.7581	19.75
8 Trichlorofluoromethane	101	1.560	1.560	(0.373)	138062	18.4564	18.45
5 Vinyl Chloride	62	1.138	1.138	(0.272)	108439	22.0642	22.06

QC Flag Legend

M - Compound response manually integrated.

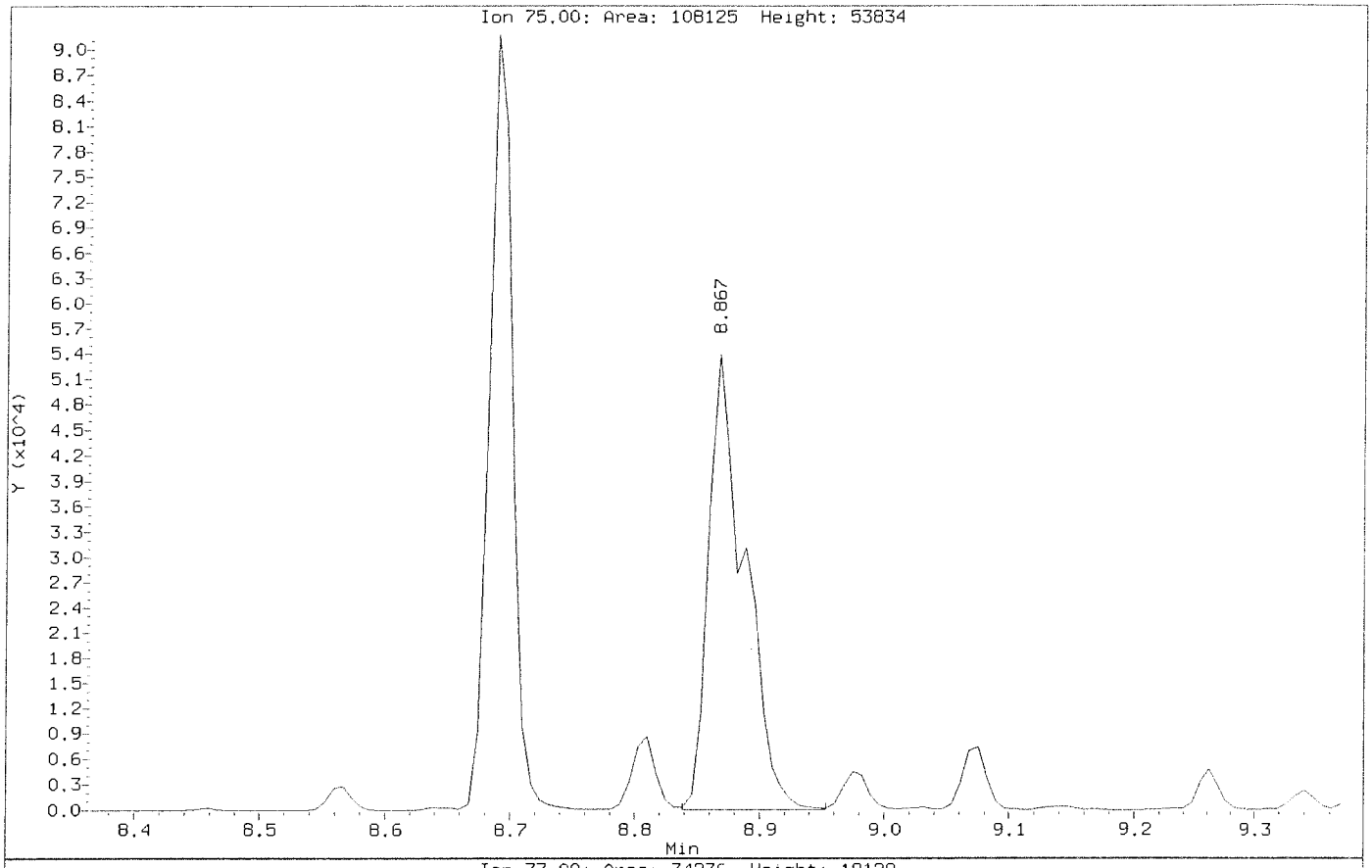


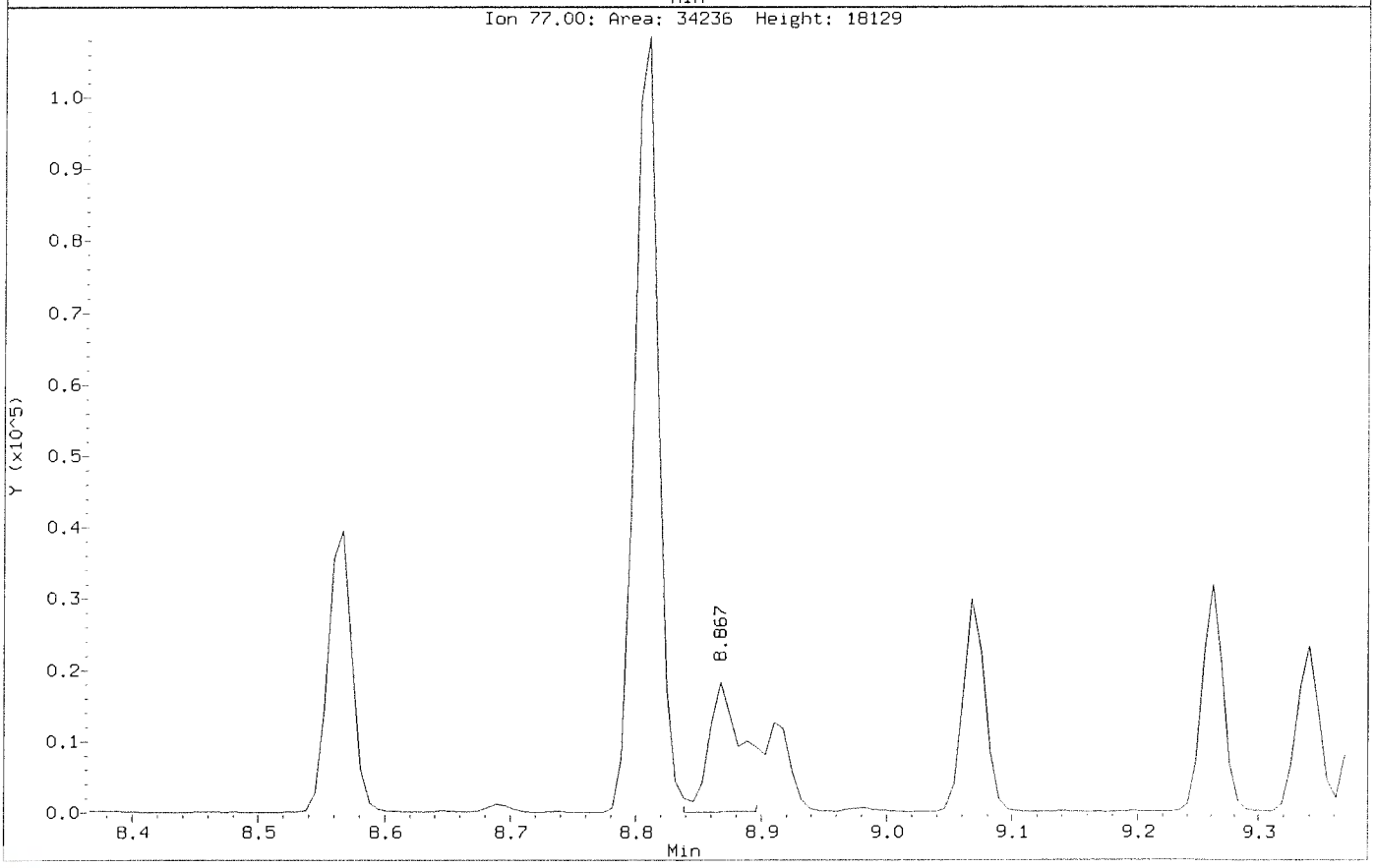
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Sample Info: HS19121257-01MS;HS19121257-01MS;3;;NS
Purge Volume: 5.0
Column phase: DB624

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

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Instrument: voa6.i
Client Sample ID: HS19121257-01MS

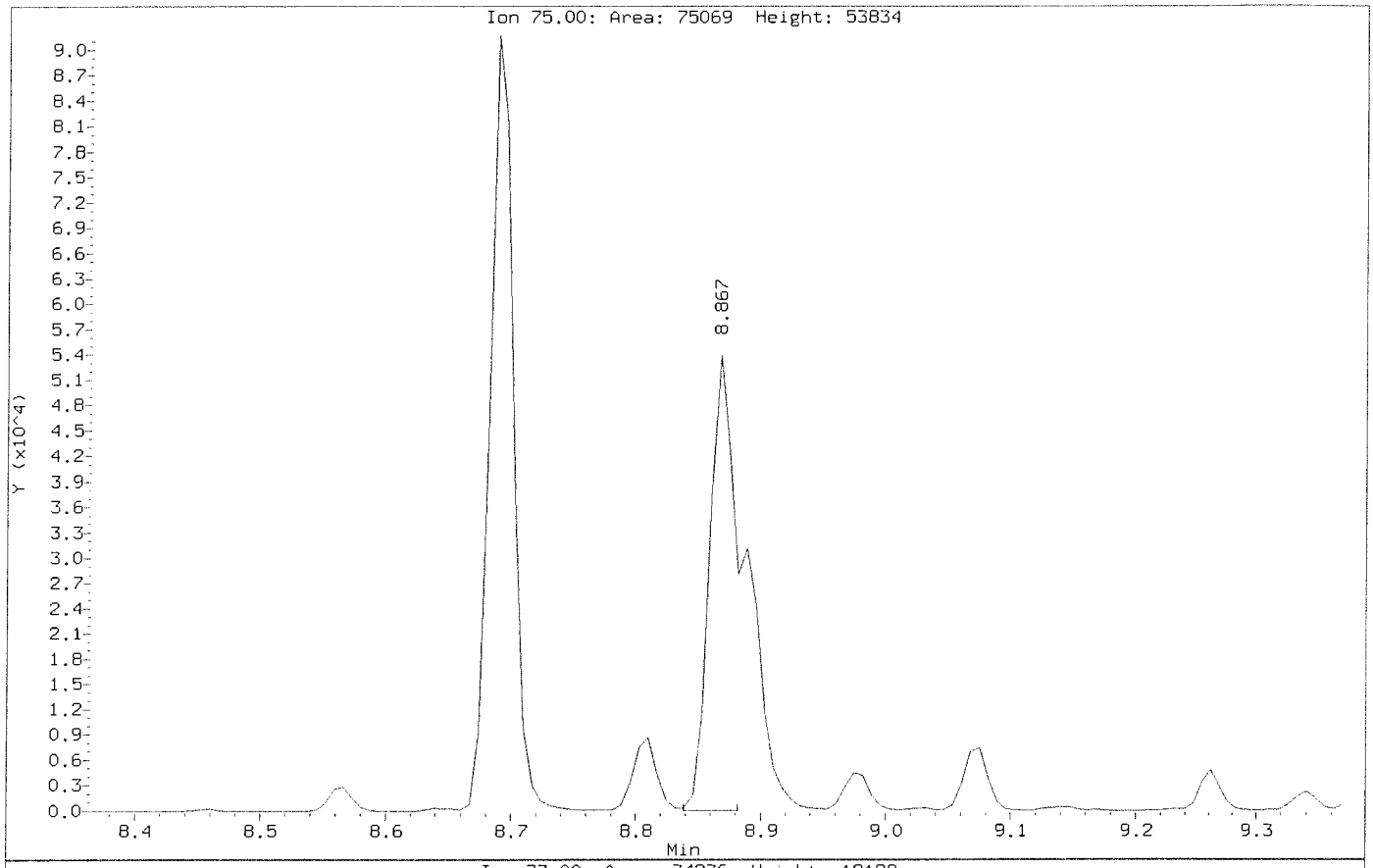
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

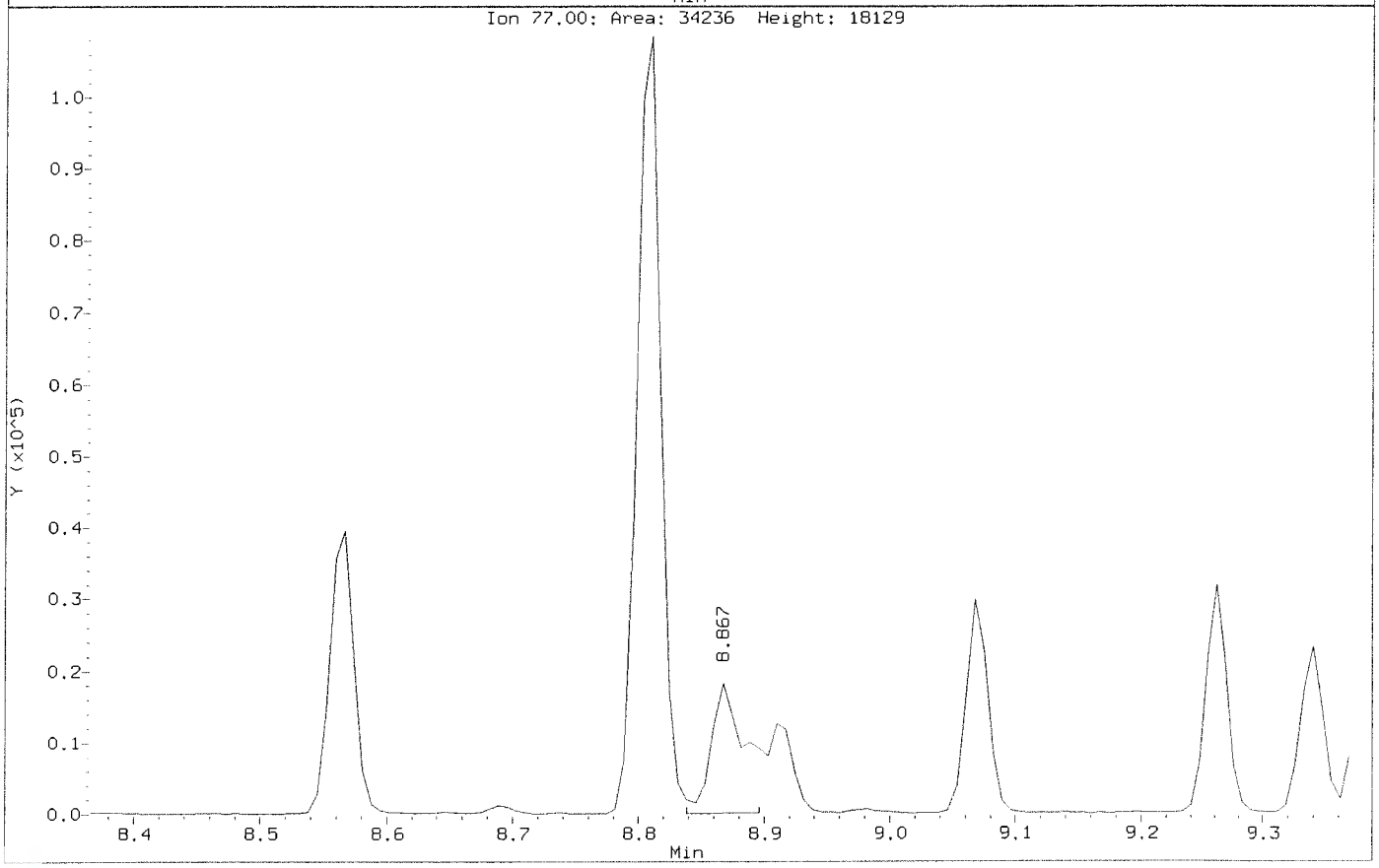




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Injection Date: 02-JAN-2020 17:11
Instrument: voa6.i
Client Sample ID: HS19121257-01MS

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





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200102.b\X010220.D
Lab Smp Id: HS19121257-01MSD Client Smp ID: HS19121257-01MSD
Inj Date : 02-JAN-2020 17:35
Operator : PC Inst ID: voa6.i
Smp Info : HS19121257-01MSD;HS19121257-01MSD;3;;MSD
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200102.b\8260W.m
Meth Date : 26-Jan-2020 12:07 voa6.i Quant Type: ISTD
Cal Date : 18-NOV-2019 16:35 Cal File: X111808.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

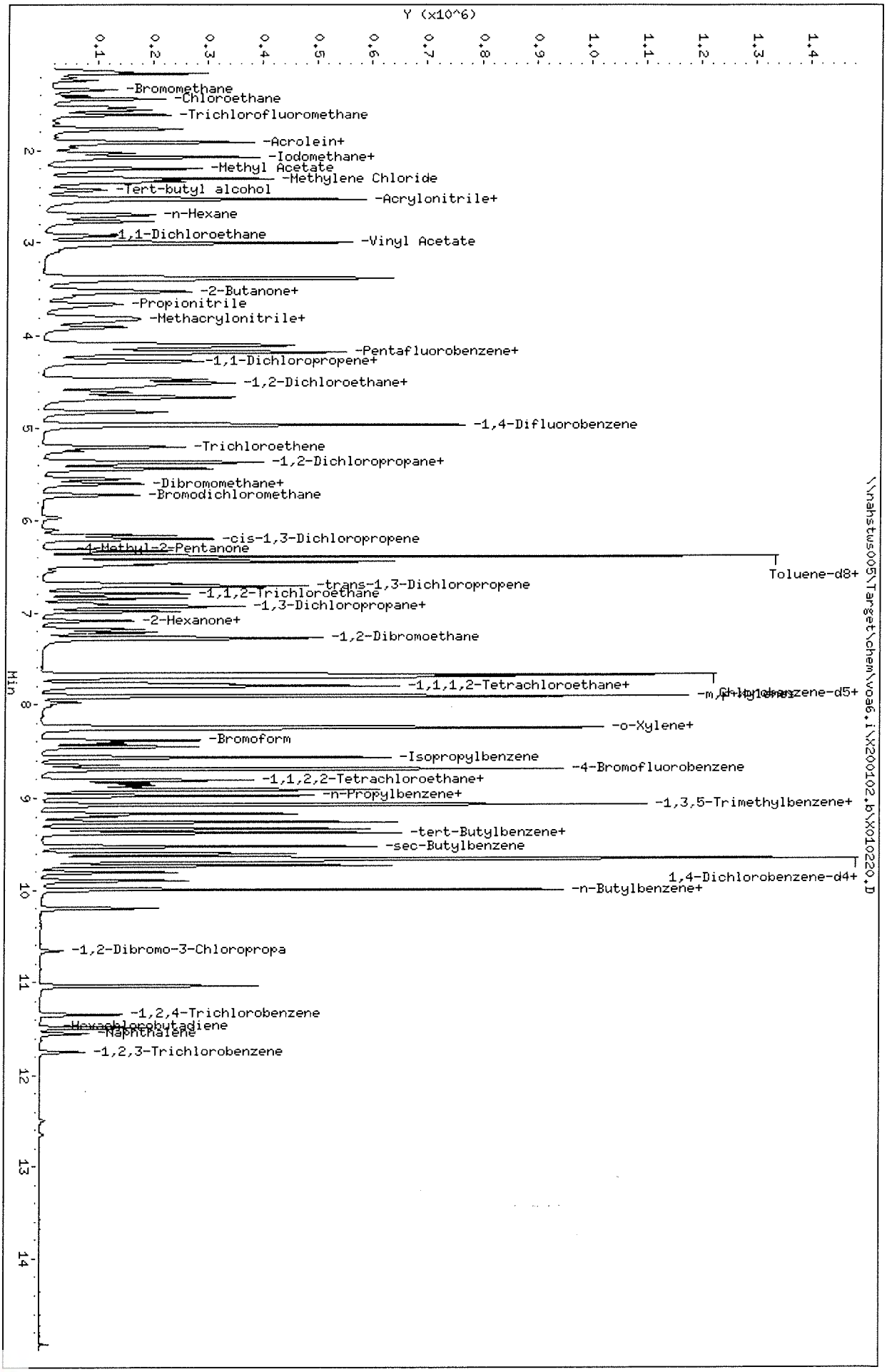
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	480311	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	683266	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	587766	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	287693	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	211892	48.5277	48.52
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	217036	48.0591	48.05
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	797018	51.4656	51.46
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	276647	50.5850	50.58
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	83267	19.5272	19.52
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	124425	19.2022	19.20
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	85810	21.2114	21.21
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	61076	19.8782	19.87
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	145191	20.7754	20.77
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	70406	17.2967	17.29
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	110433	20.0366	20.03
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	23362	21.4224	21.42
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	73587	21.4677	21.46(M)
90 1,2,4-Trichlorobenzene	180	11.345	11.338	(1.173)	46241	19.0808	19.08
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	302923	22.1909	22.19
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.657	(1.102)	8548	18.9302	18.93
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	79107	19.1900	19.18
88 1,2-Dichlorobenzene	146	9.999	9.998	(1.034)	154398	20.2212	20.22

Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010220.D Page 2
Report Date: 26-Jan-2020 12:07

	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	4.555	(0.918)	101808	18.7701	18.77
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	81800	20.0414	20.04
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	299589	22.8719	22.87
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	172095	20.8588	20.85
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	127133	20.3807	20.38
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	170912	20.3857	20.38
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	122324	19.2851	19.28
24	2-Butanone	43	3.580	3.573	(0.856)	54171	36.7561	36.75
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	244958	23.6661	23.66
52	2-Hexanone	43	7.090	7.083	(0.924)	92312	38.2326	38.23
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	281777	22.4597	22.45
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	314645	22.3518	22.35
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	141821	41.1808	41.18
10	Acetone	43	1.969	1.969	(0.471)	35813	26.0540	26.05
37	Benzene	78	4.512	4.512	(0.908)	322111	20.6085	20.60
74	Bromobenzene	156	8.809	8.809	(0.911)	105527	21.1056	21.10
29	Bromochloromethane	128	3.795	3.795	(0.908)	47986	18.4420	18.44
39	Bromodichloromethane	83	5.729	5.729	(1.153)	107050	18.9323	18.93
66	Bromoform	173	8.415	8.415	(1.097)	60603	17.9686	17.96
6	Bromomethane	94	1.338	1.338	(0.320)	64096	11.6962	11.69
19	Carbon Disulfide	76	2.069	2.069	(0.495)	481265	43.4607	43.46
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	112185	18.5811	18.58
59	Chlorobenzene	112	7.699	7.699	(1.004)	221408	19.2950	19.29
7	Chloroethane	64	1.403	1.403	(0.336)	54010	17.8599	17.85
28	Chloroform	83	3.910	3.910	(0.935)	143226	18.4127	18.41
3	Chloromethane	50	1.073	1.073	(0.257)	91858	17.7305	17.73
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	90960	19.9694	19.96
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	131816	19.7821	19.78
55	Dibromochloromethane	129	7.176	7.176	(0.936)	85240	19.0967	19.09
44	Dibromomethane	93	5.557	5.557	(1.118)	52719	18.2523	18.25
2	Dichlorodifluoromethane	85	0.966	0.966	(0.231)	89151	20.8923	20.89
61	Ethylbenzene	106	7.799	7.799	(1.017)	121666	20.5208	20.52
91	Hexachlorobutadiene	225	11.488	11.488	(1.188)	38338	16.5819	16.58
67	Isopropylbenzene	105	8.566	8.566	(1.117)	359295	20.4595	20.45
62	m,p-Xylenes	106	7.907	7.907	(1.031)	292340	40.8611	40.86
17	Methylene Chloride	84	2.305	2.305	(0.551)	82739	19.0510	19.05
87	n-Butylbenzene	91	9.999	9.998	(1.034)	263599	22.5014	22.50
73	n-Propylbenzene	91	8.917	8.917	(0.922)	413516	23.2536	23.25
92	Naphthalene	128	11.546	11.546	(1.194)	60132	19.3459	19.34
63	o-Xylene	106	8.244	8.244	(1.075)	141786	20.0801	20.08
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	356529	23.0788	23.07
64	Styrene	104	8.258	8.258	(1.077)	243345	19.8186	19.81
78	tert-Butylbenzene	119	9.340	9.339	(0.966)	254961	22.7333	22.73
56	Tetrachloroethene	164	6.933	6.933	(0.904)	78337	18.9687	18.96
50	Toluene	91	6.446	6.446	(0.840)	345543	20.7312	20.73
20	trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	79241	20.0514	20.05
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	118223	19.4666	19.46
38	Trichloroethene	130	5.206	5.206	(1.048)	91774	19.2063	19.20
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	129903	17.4349	17.43
5	Vinyl Chloride	62	1.138	1.138	(0.272)	98857	20.1947	20.19

QC Flag Legend

M - Compound response manually integrated.

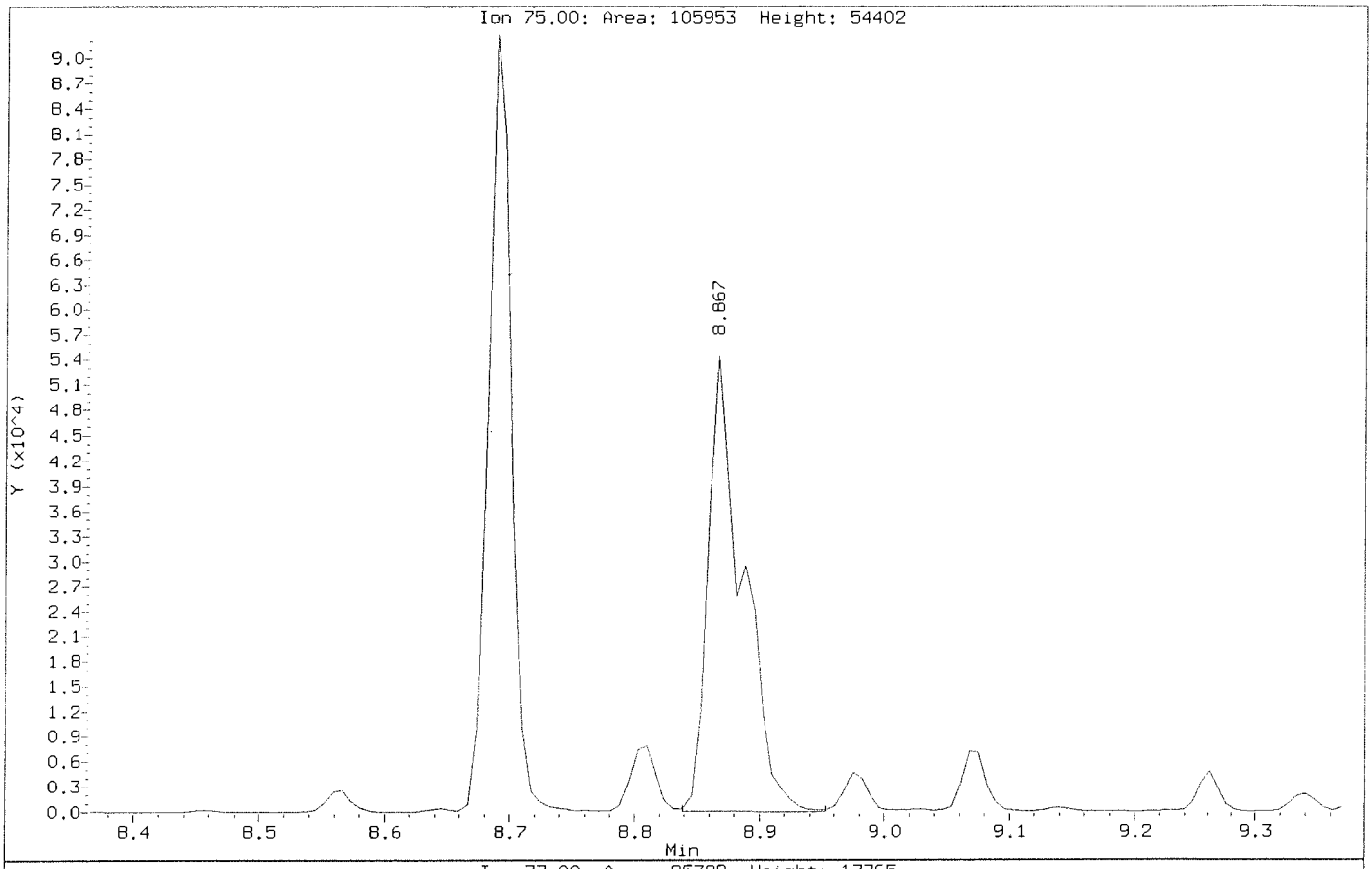


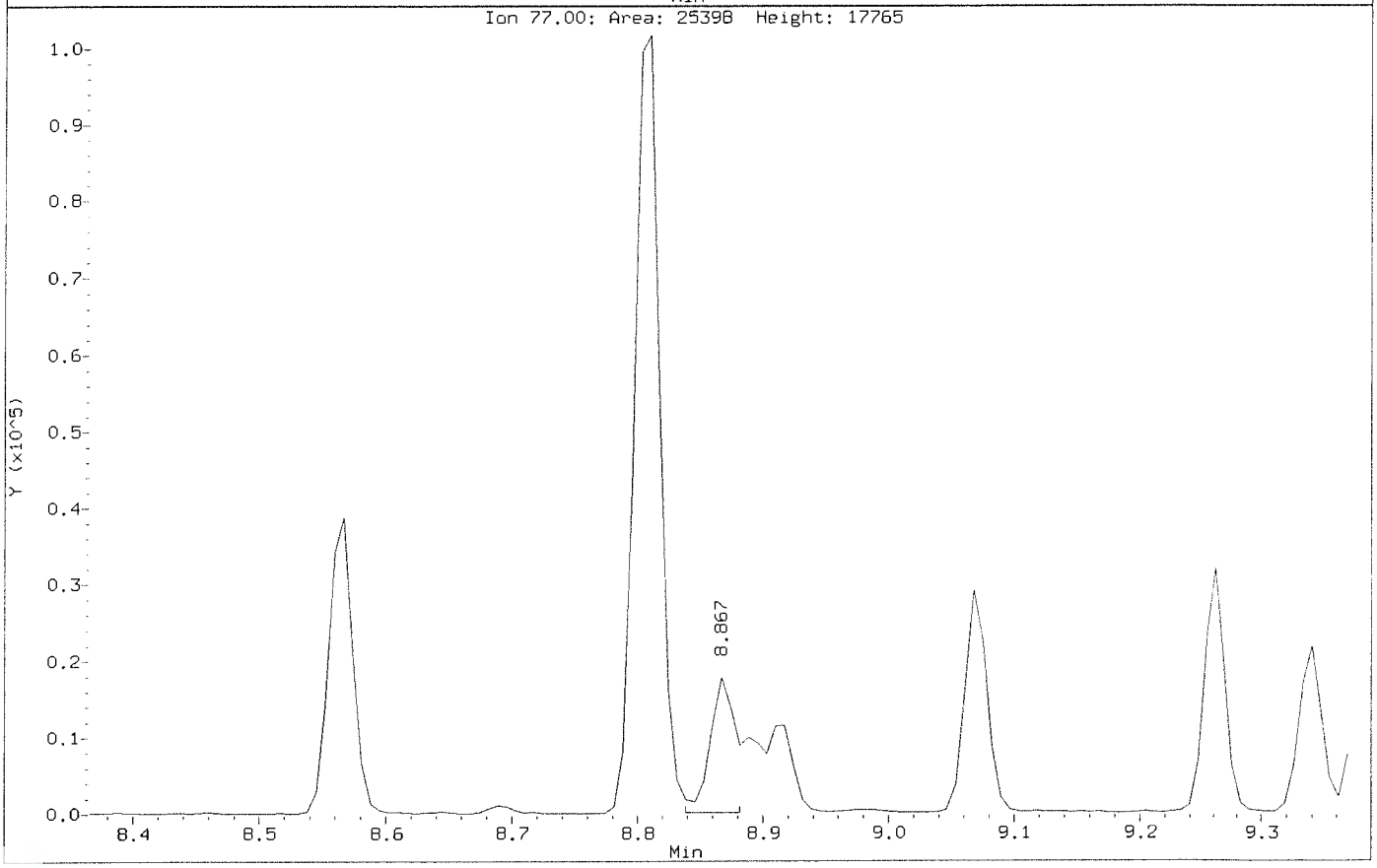
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Sample Info: HS19121257-01MSD;HS19121257-01MSD;3;;MSD
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\Before\X010220.D
Injection Date: 02-JAN-2020 17:35
Instrument: voa6.i
Client Sample ID: HS19121257-01MSD

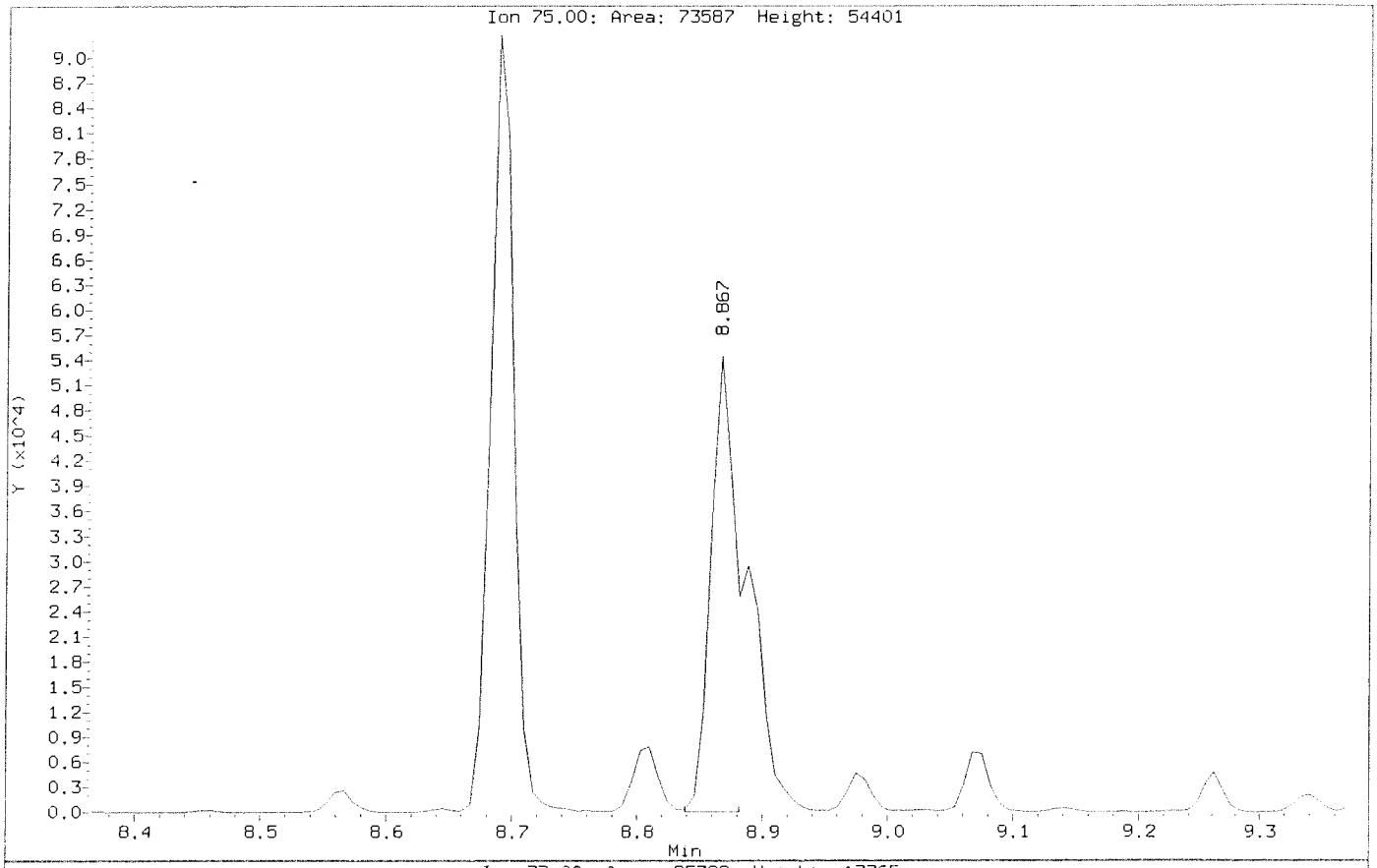
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CAS Number: 96-18-4

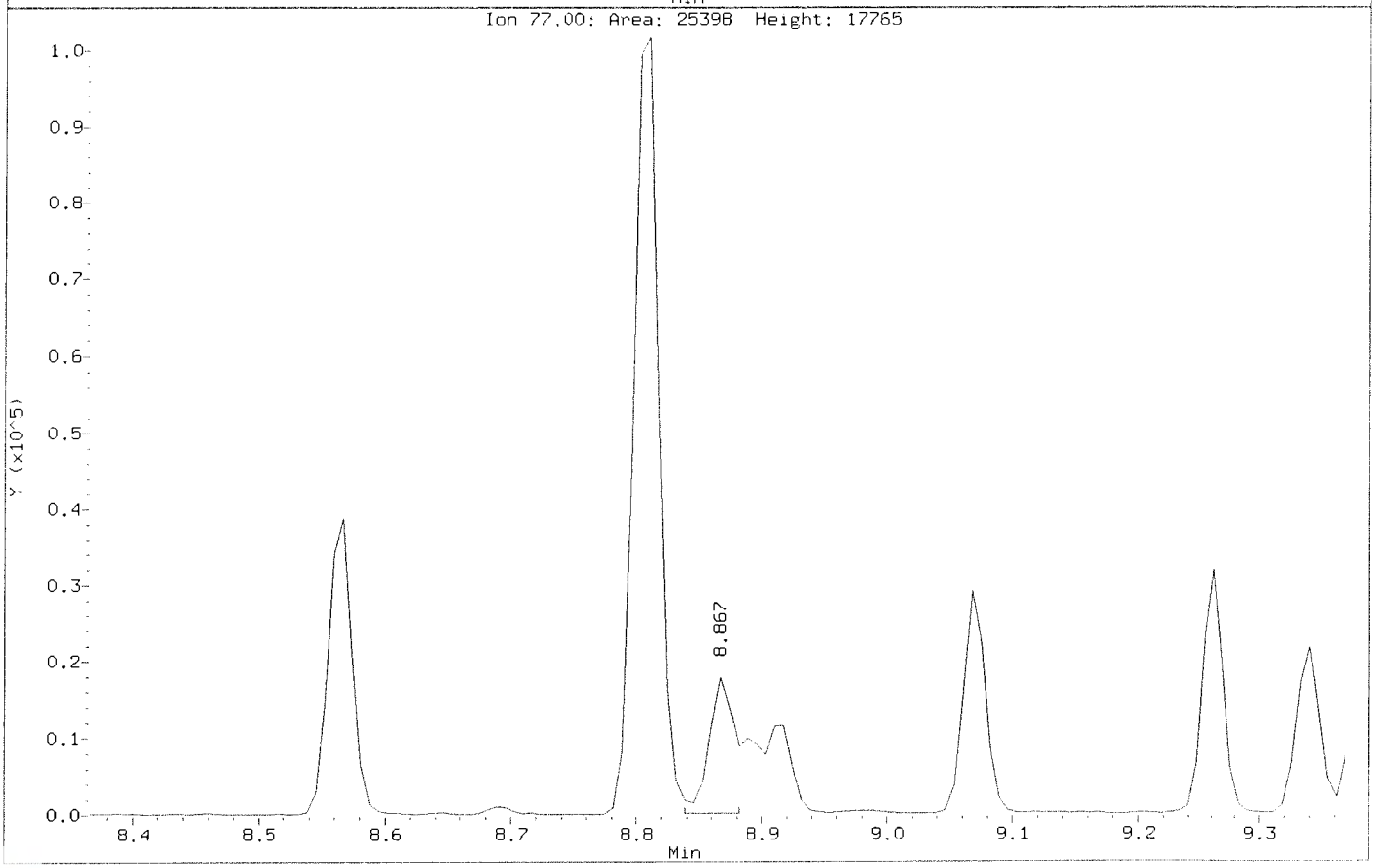




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Injection Date: 02-JAN-2020 17:35
Instrument: voa6.i
Client Sample ID: HS19121257-01MSD

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





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200102.b\X010226.D
Lab Smp Id: HS19121257-02 Client Smp ID: HS19121257-02
Inj Date : 02-JAN-2020 19:59
Operator : PC Inst ID: voa6.i
Smp Info : HS19121257-02;HS19121257-02;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200102.b\8260W.m
Meth Date : 26-Jan-2020 12:06 DevakG Quant Type: ISTD
Cal Date : 18-NOV-2019 16:35 Cal File: X111808.D
Als bottle: 25
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

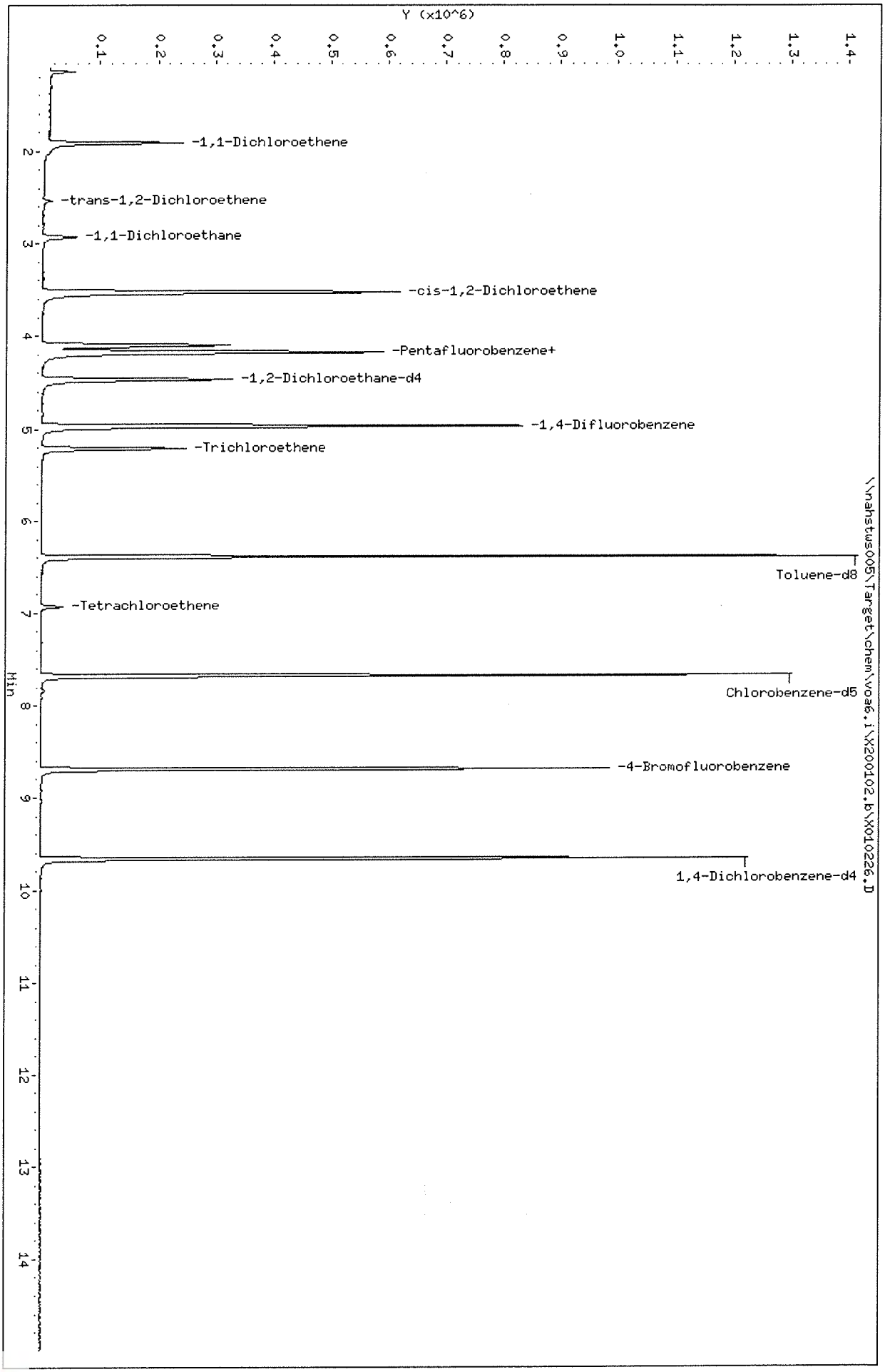
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	522961	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	739320	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	624835	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.669	(1.000)	303662	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	231741	48.7435	48.74
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	244867	49.7731	49.77
$	48 Toluene-d8	98	6.388	6.388	(0.833)	854453	51.9010	51.90
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	293416	50.4693	50.46
	22 1,1-Dichloroethane	63	2.922	2.921	(0.699)	63571	8.35455	8.35
	11 1,1-Dichloroethene	96	1.912	1.911	(0.457)	85983	19.4008	19.40
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	336274	67.8048	67.80
	56 Tetrachloroethene	164	6.933	6.933	(0.904)	8335	1.89852	1.89(a)
	20 trans-1,2-Dichloroethene	96	2.535	2.528	(0.606)	6233	1.44859	1.44(a)
	38 Trichloroethene	130	5.207	5.206	(1.048)	88878	17.1900	17.18
	5 Vinyl Chloride	62	1.138	1.138	(0.272)	30496	5.72171	5.72

QC Flag Legend

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

Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010226.D
Date : 02-JAN-2020 19:59
Client ID: HS19121257-02
Sample Info: HS19121257-02;HS19121257-02;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010226.D

Date : 02-JAN-2020 19:59

Client ID: HS19121257-02

Instrument: voa6.i

Sample Info: HS19121257-02;HS19121257-02;;;

Purge Volume: 5.0

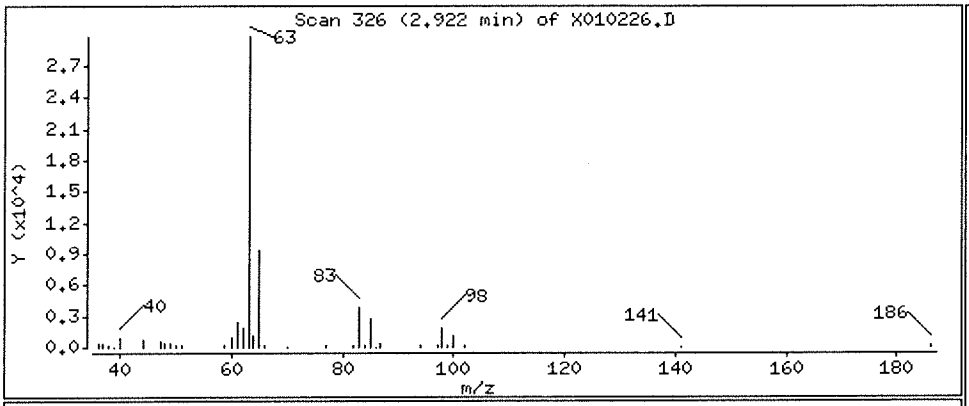
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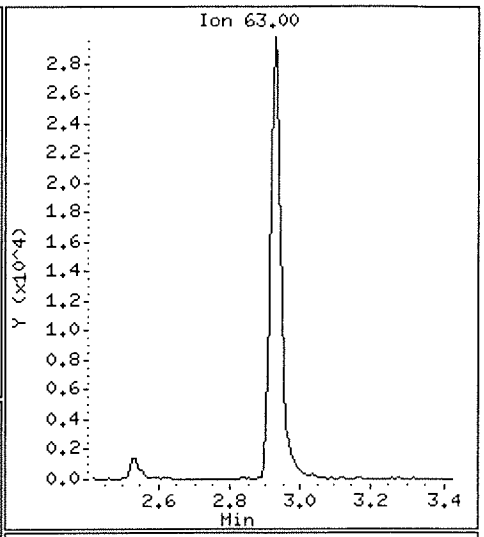
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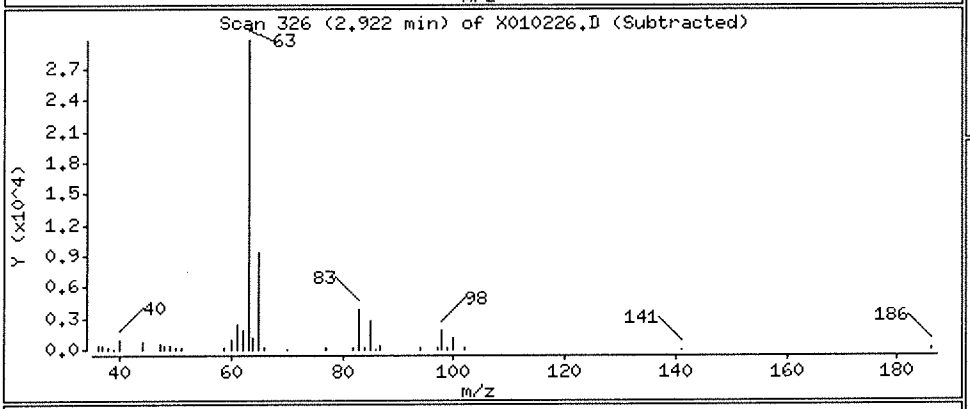
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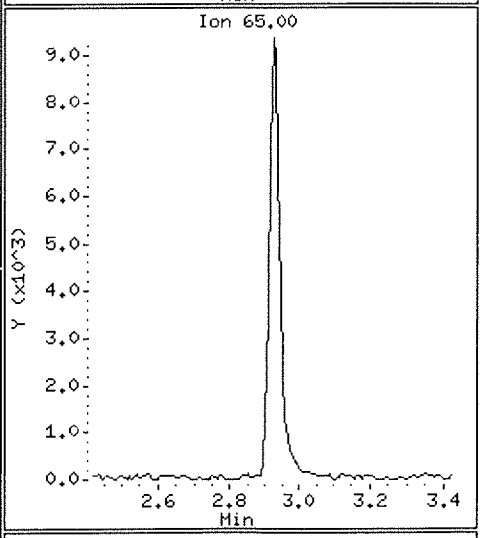
22 1,1-Dichloroethane

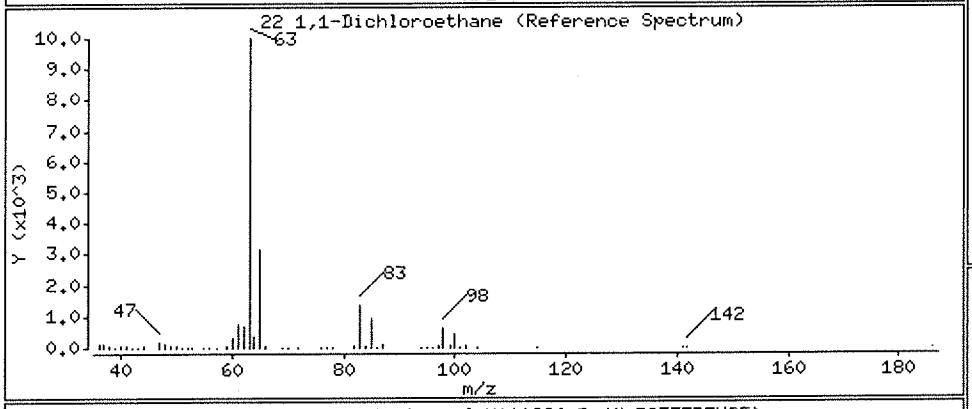
Concentration: 8.35 ug/l

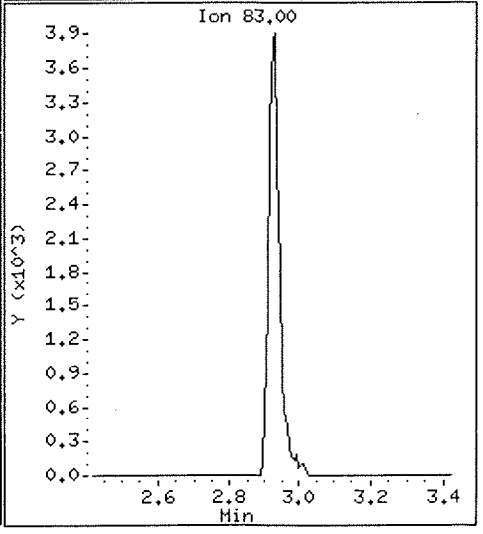


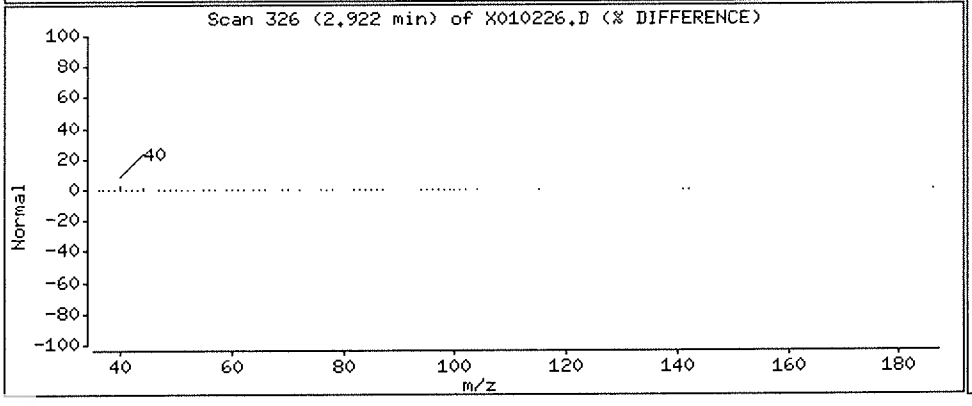












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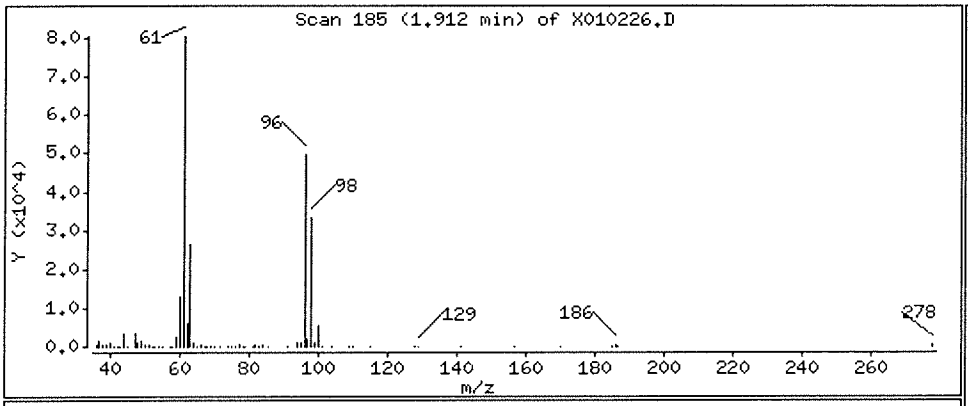
Client ID: HS19121257-02 Instrument: voa6.i

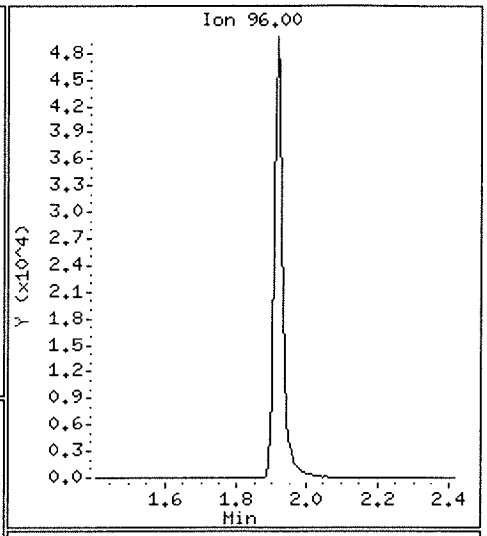
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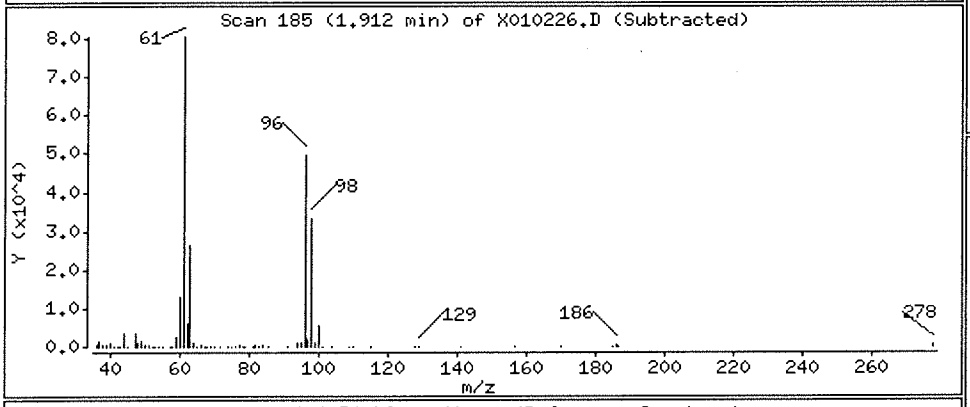
Purge Volume: 5.0 Operator: PC

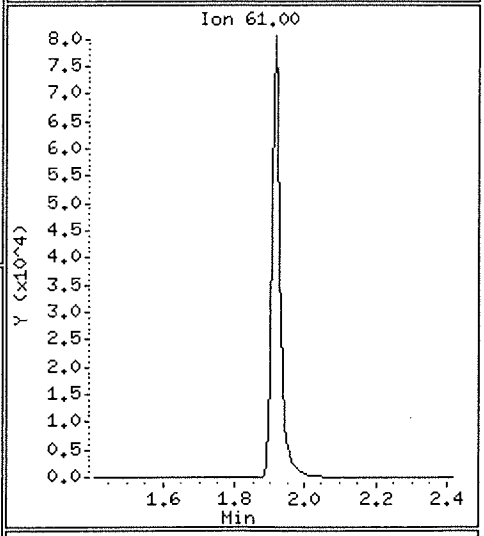
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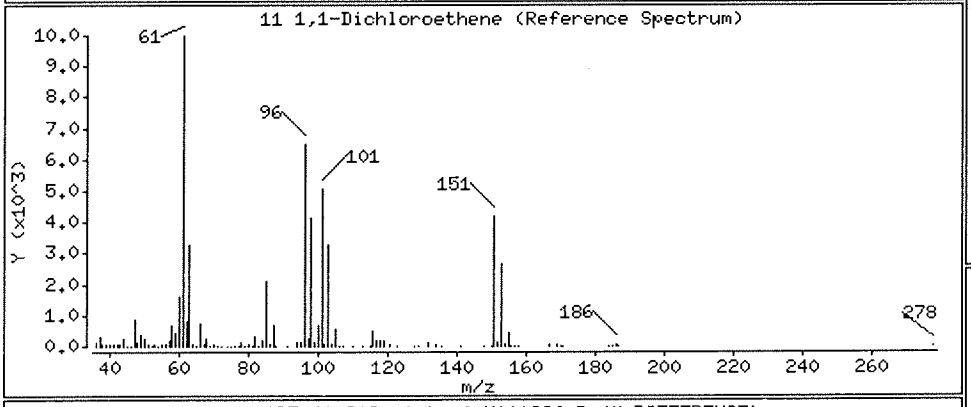
11 1,1-Dichloroethene Concentration: 19.40 ug/l

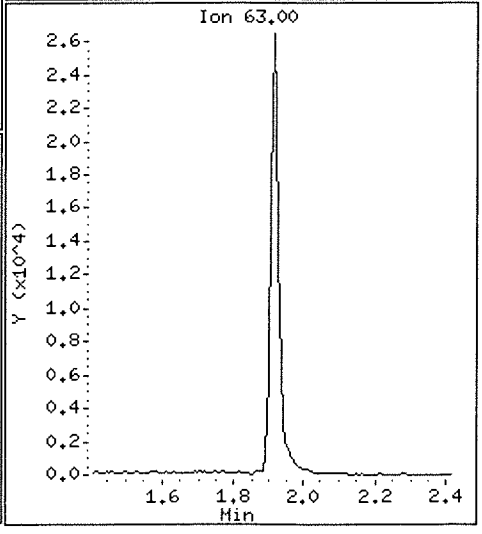


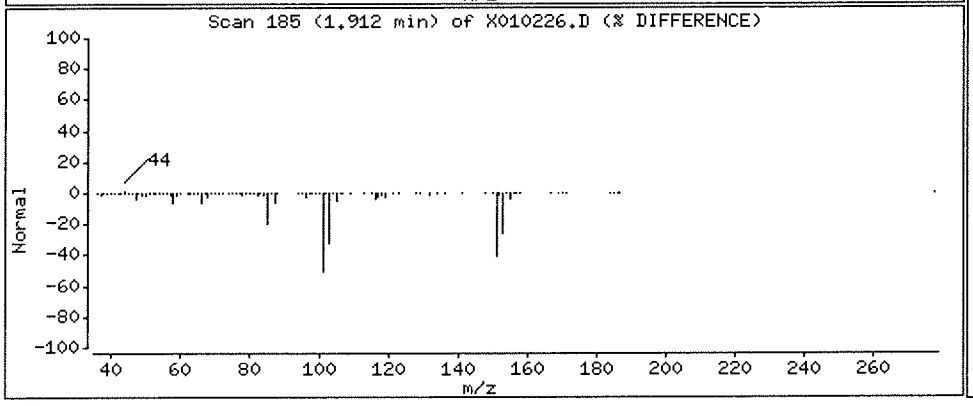












Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010226.D

Date : 02-JAN-2020 19:59

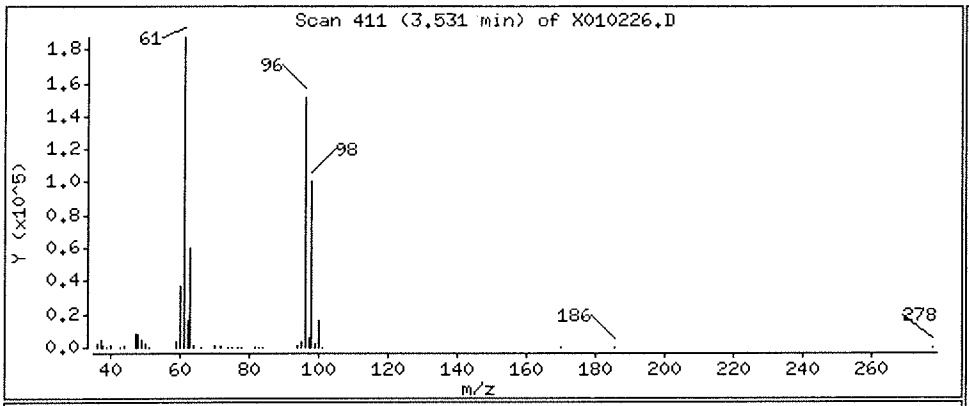
Client ID: HS19121257-02 Instrument: voa6.i

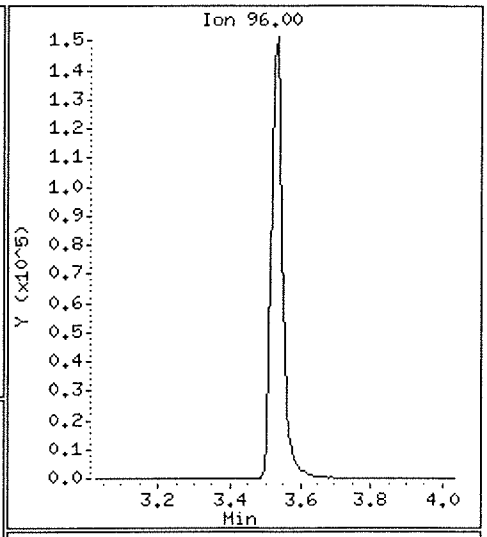
Sample Info: HS19121257-02;HS19121257-02;;;

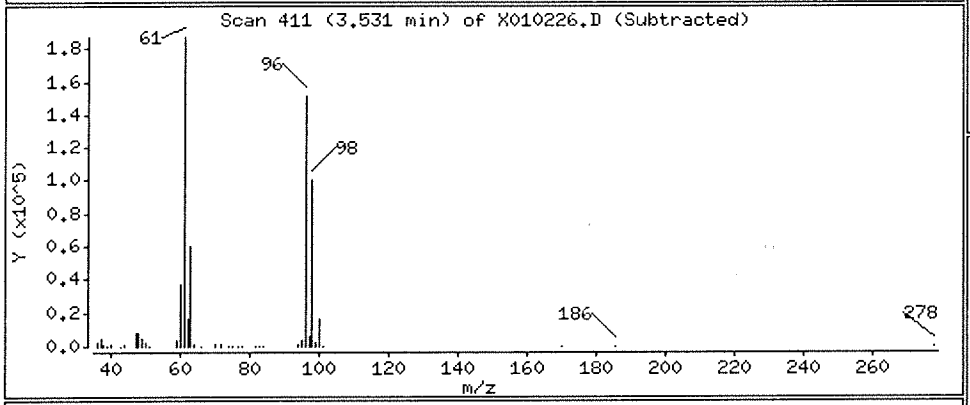
Purge Volume: 5.0 Operator: PC

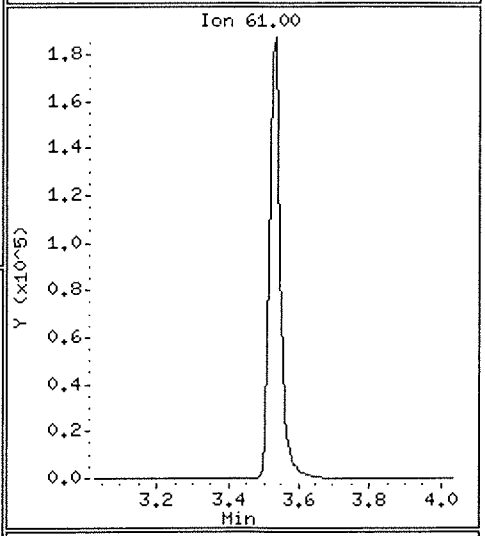
Column phase: DB624 Column diameter: 0.18

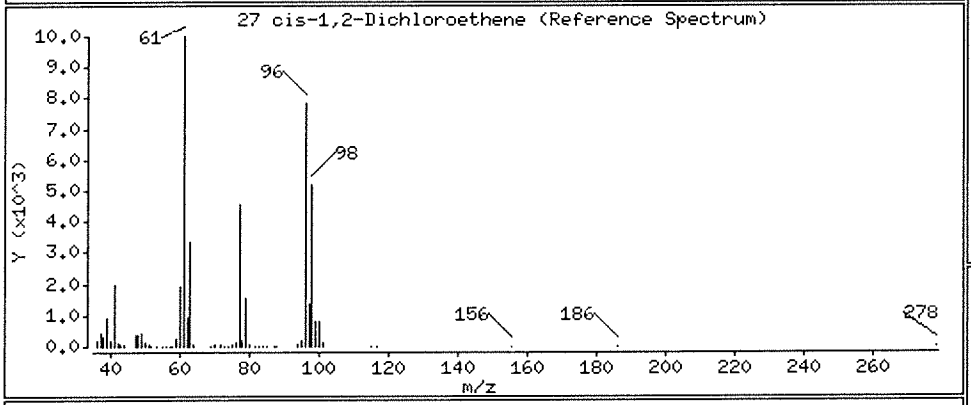
27 cis-1,2-Dichloroethene Concentration: 67.80 ug/l

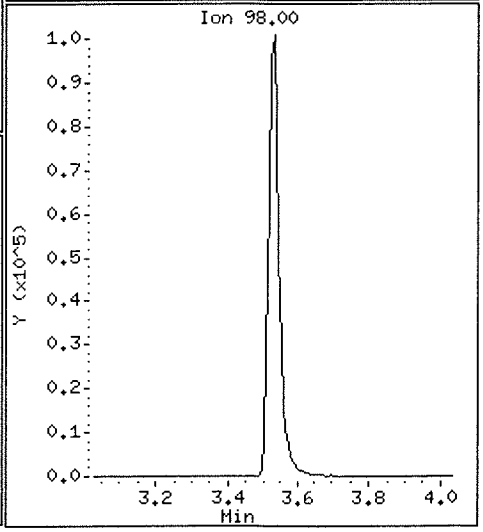


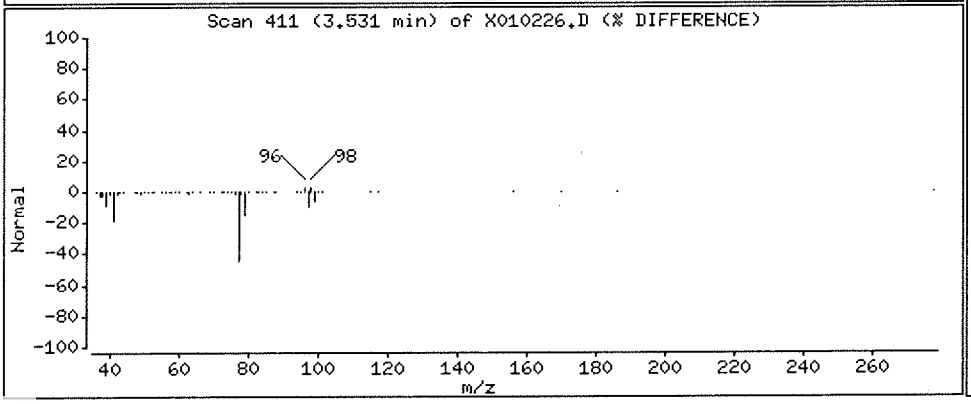












Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010226.D Page 6

Date : 02-JAN-2020 19:59

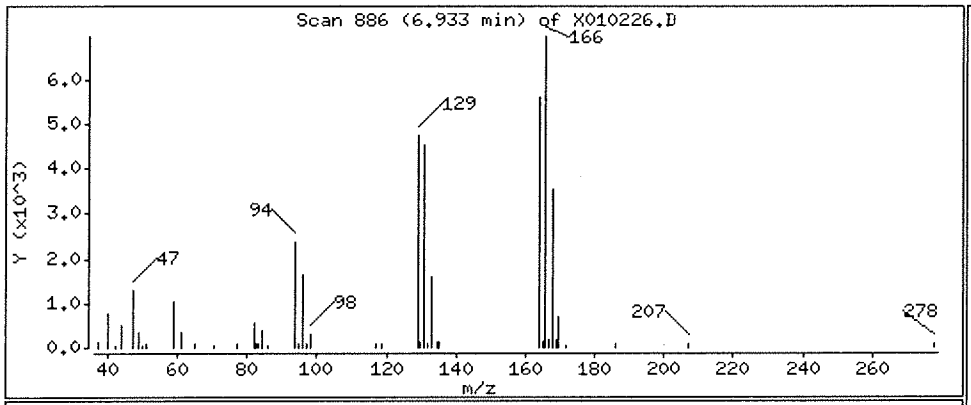
Client ID: HS19121257-02 Instrument: voa6.i

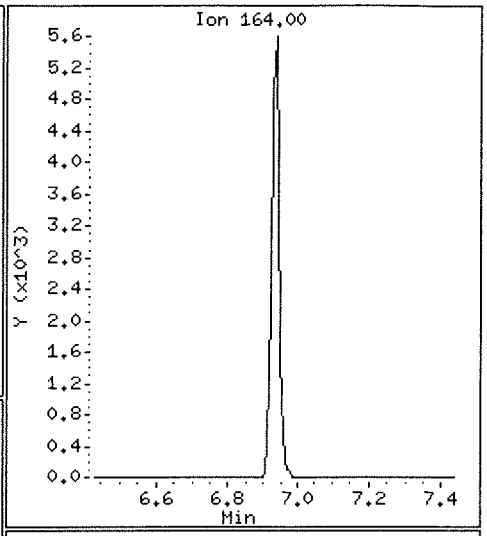
Sample Info: HS19121257-02;HS19121257-02;;;

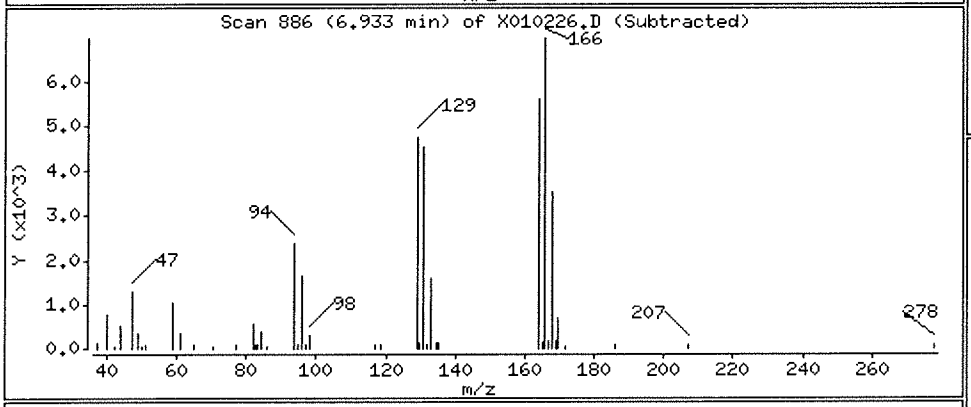
Purge Volume: 5.0 Operator: PC

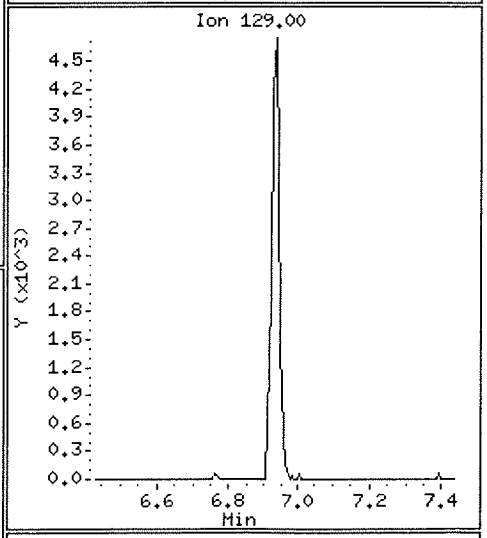
Column phase: DB624 Column diameter: 0.18

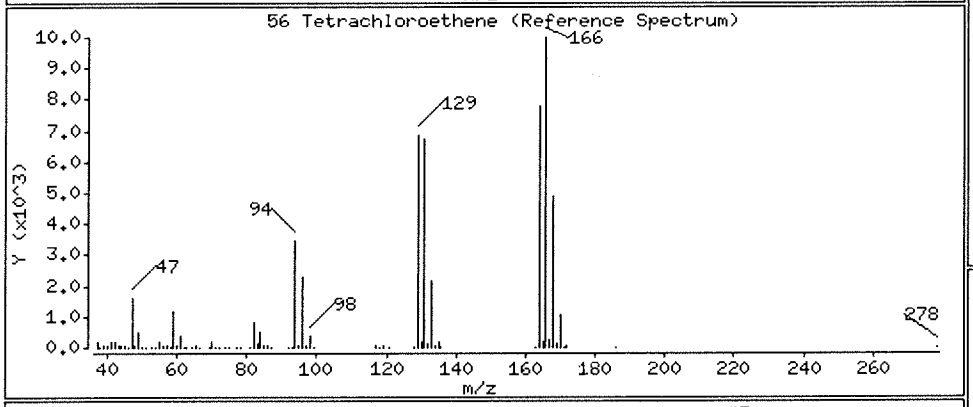
56 Tetrachloroethene Concentration: 1.89 ug/l

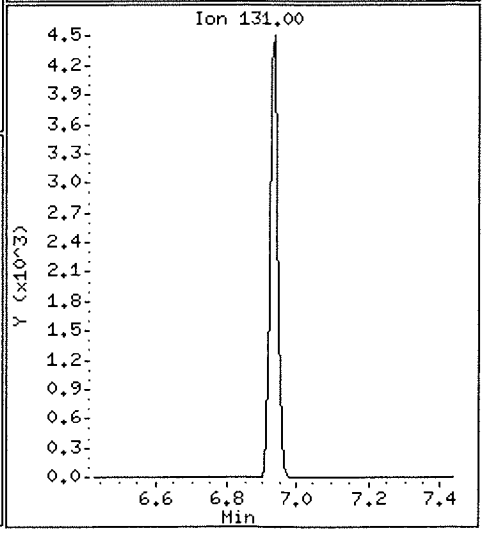


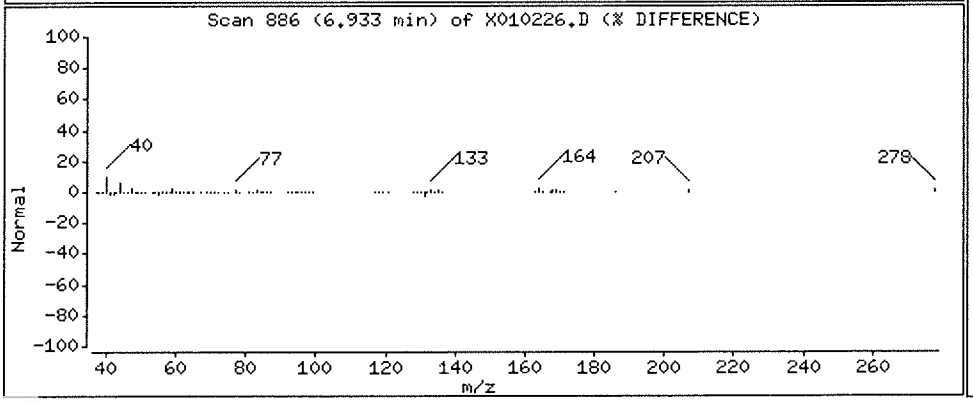












Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010226.D

Date : 02-JAN-2020 19:59

Client ID: HS19121257-02

Instrument: voa6.i

Sample Info: HS19121257-02;HS19121257-02;;;

Purge Volume: 5.0

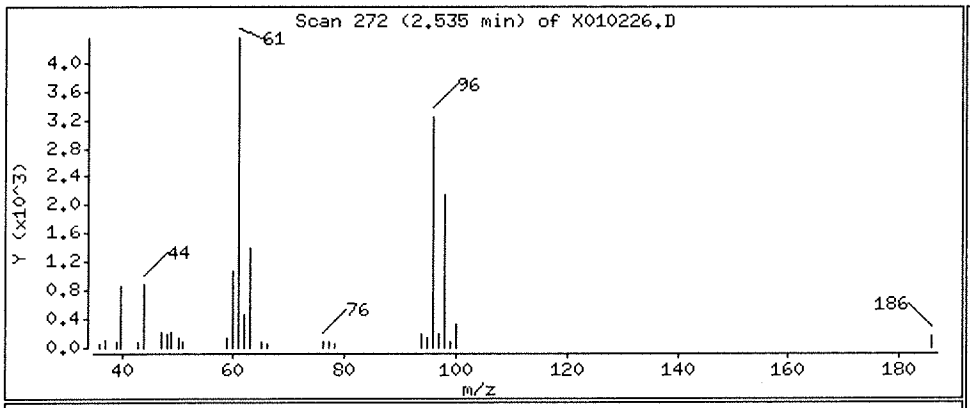
Operator: PC

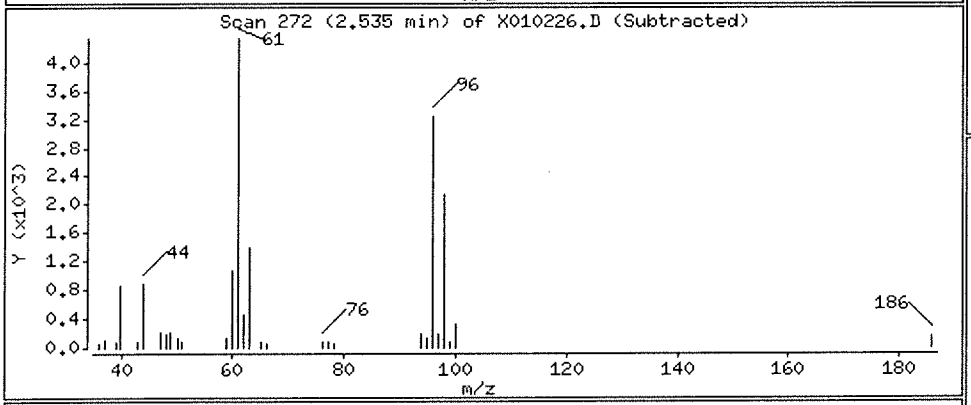
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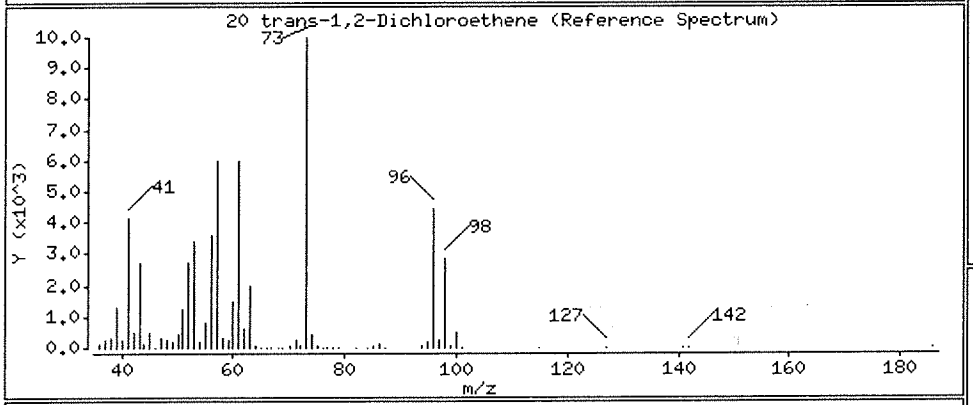
Column diameter: 0.18

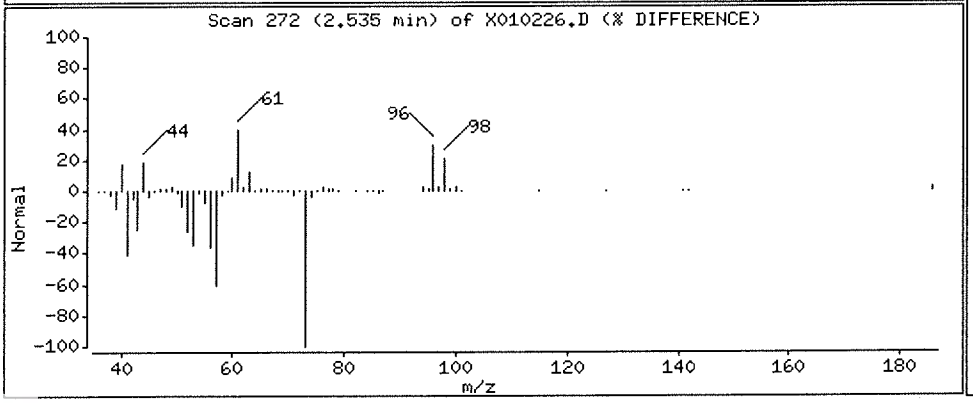
20 trans-1,2-Dichloroethene

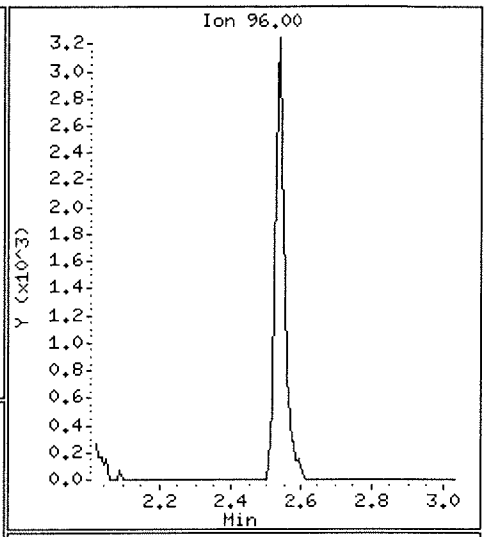
Concentration: 1.44 ug/l

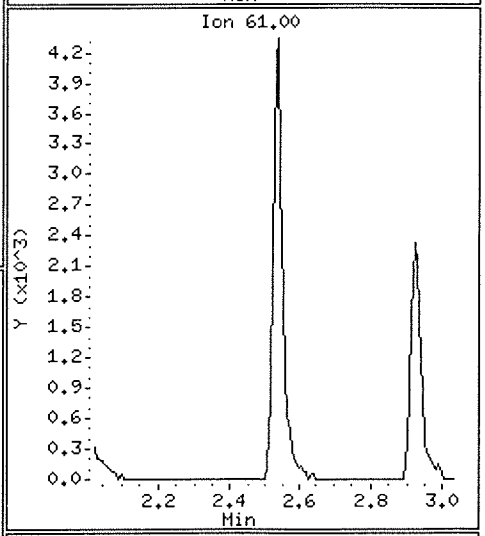


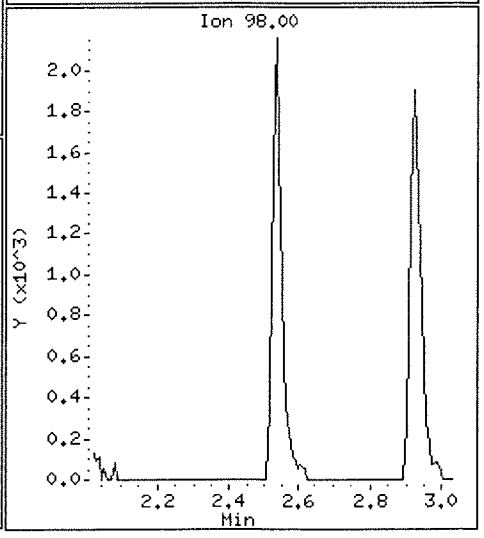












Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010226.D Page 8

Date : 02-JAN-2020 19:59

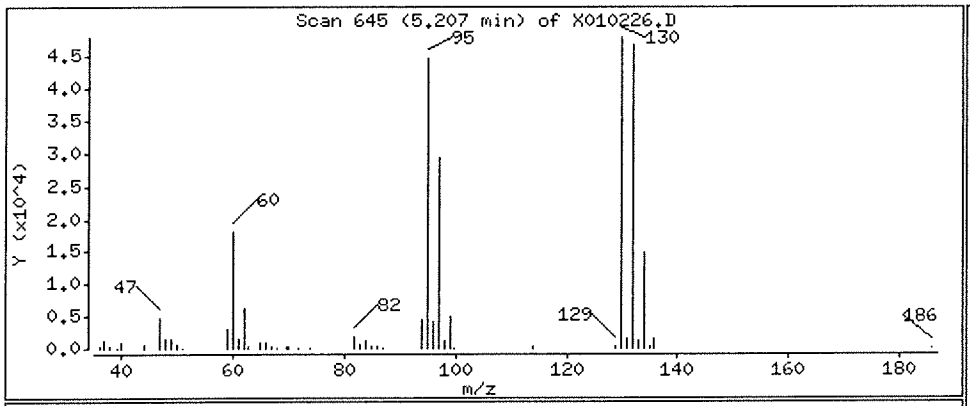
Client ID: HS19121257-02 Instrument: voa6.i

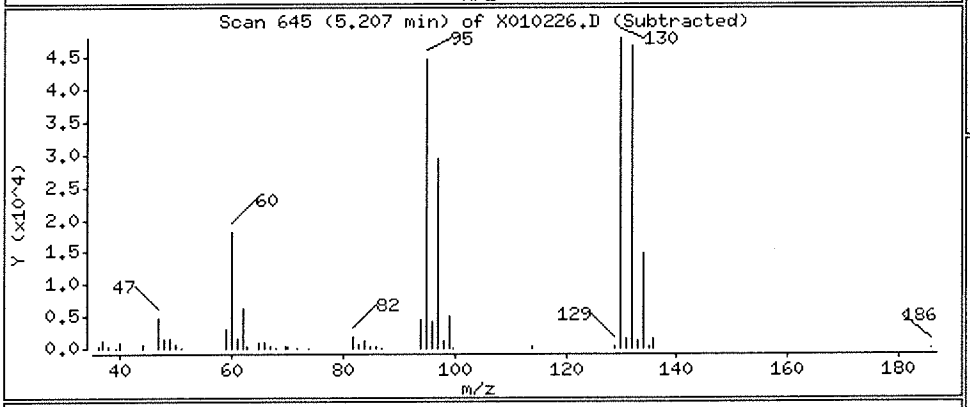
Sample Info: HS19121257-02;HS19121257-02;;;

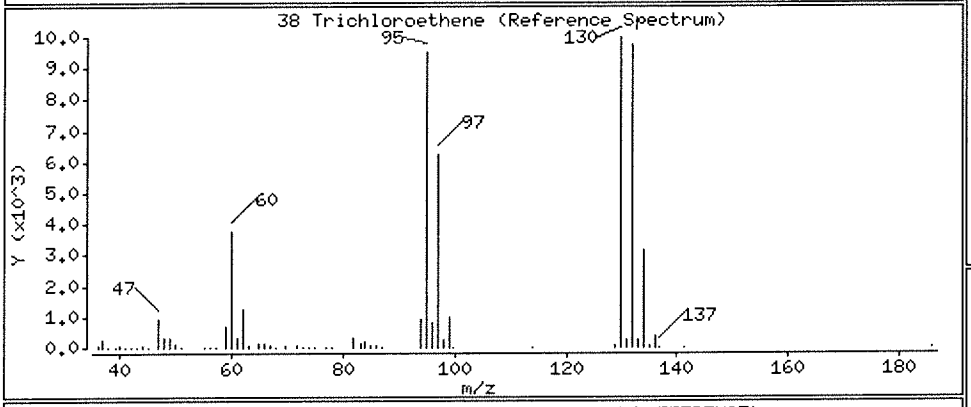
Purge Volume: 5.0 Operator: PC

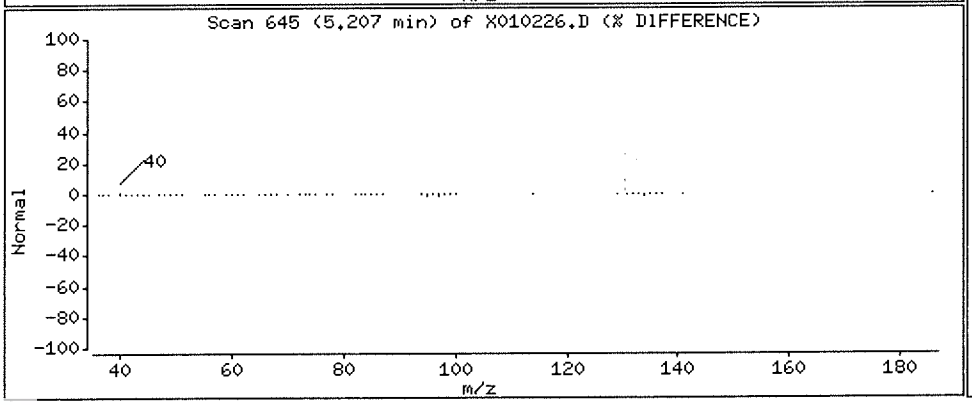
Column phase: DB624 Column diameter: 0.18

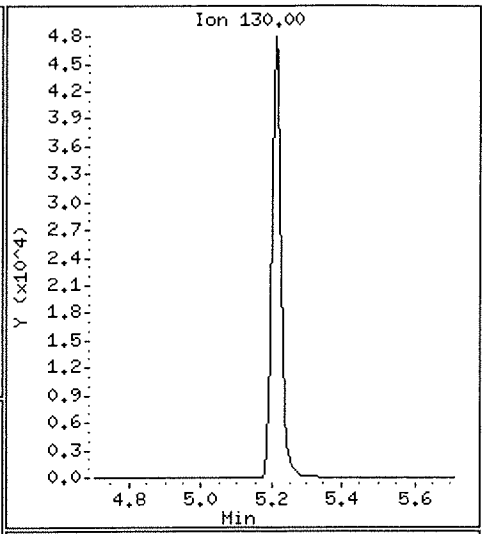
38 Trichloroethene Concentration: 17.18 ug/l

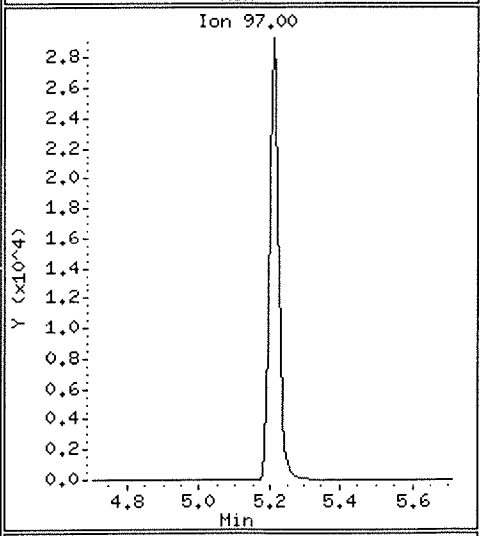


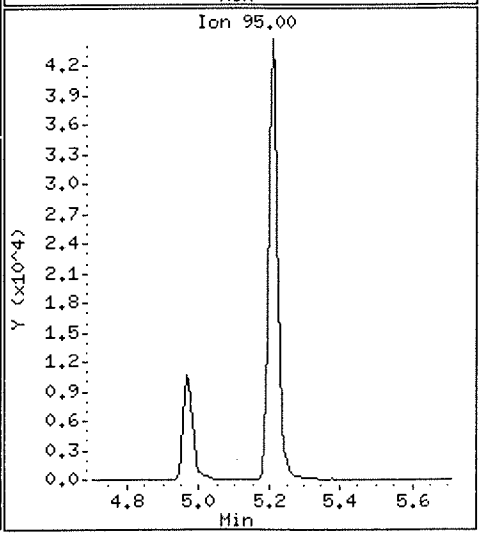












Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010226.D

Date : 02-JAN-2020 19:59

Client ID: HS19121257-02

Instrument: voa6.i

Sample Info: HS19121257-02;HS19121257-02;;;

Purge Volume: 5.0

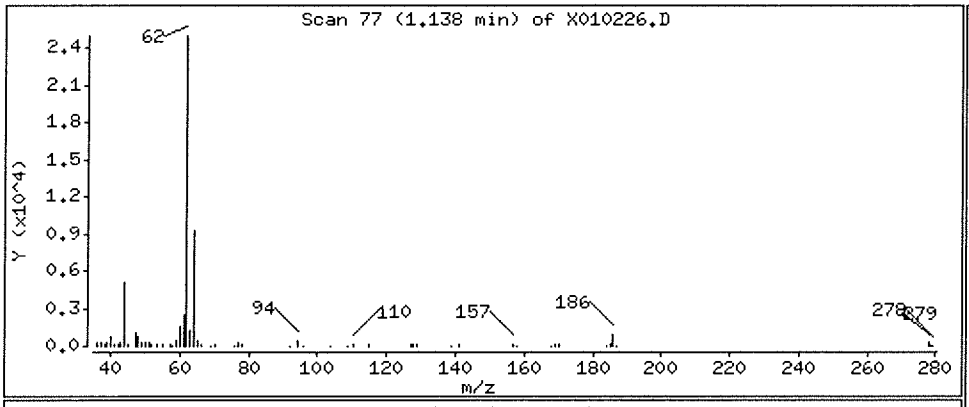
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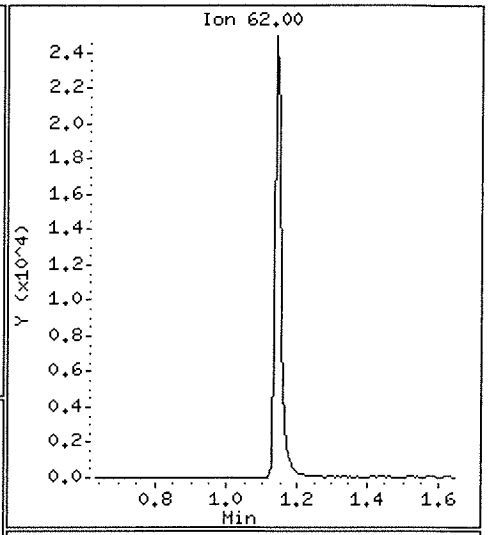
Column phase: DB624

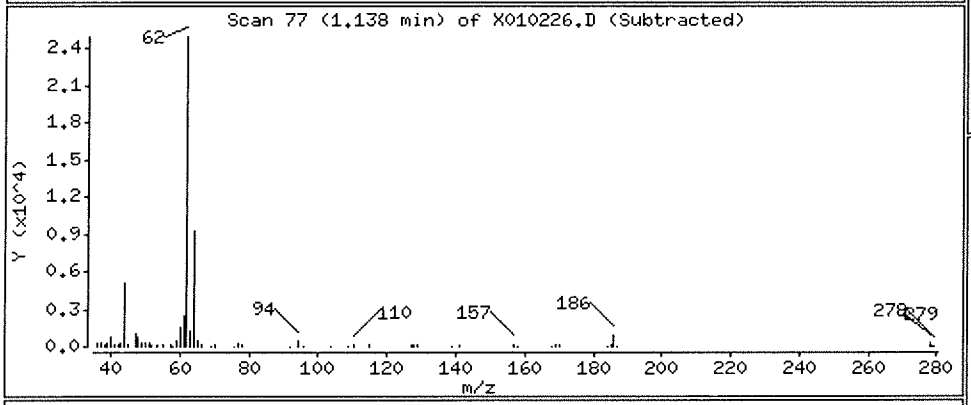
Column diameter: 0.18

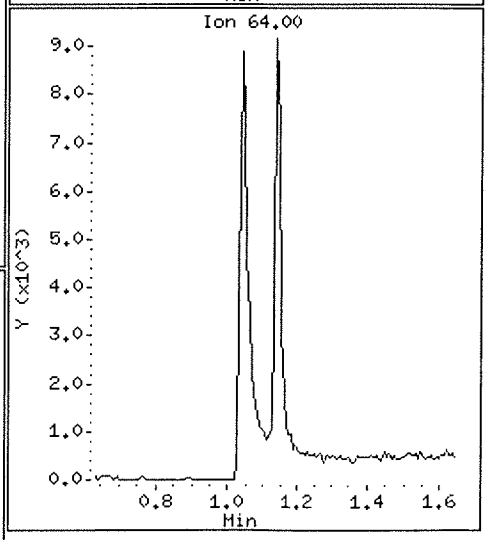
5 Vinyl Chloride

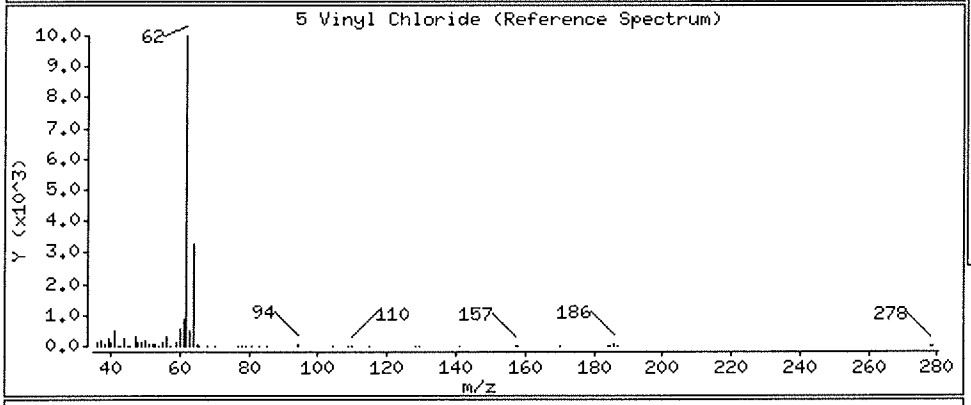
Concentration: 5.72 ug/l

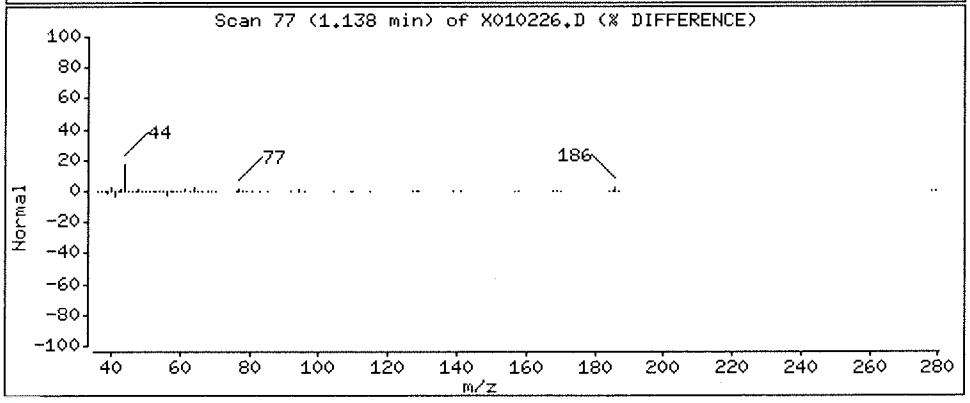












ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200102.b\X010227.D
Lab Smp Id: HS19121257-03 Client Smp ID: HS19121257-03
Inj Date : 02-JAN-2020 20:23
Operator : PC Inst ID: voa6.i
Smp Info : HS19121257-03;HS19121257-03;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200102.b\8260W.m
Meth Date : 26-Jan-2020 12:06 DevakG Quant Type: ISTD
Cal Date : 18-NOV-2019 16:35 Cal File: X111808.D
Als bottle: 26
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

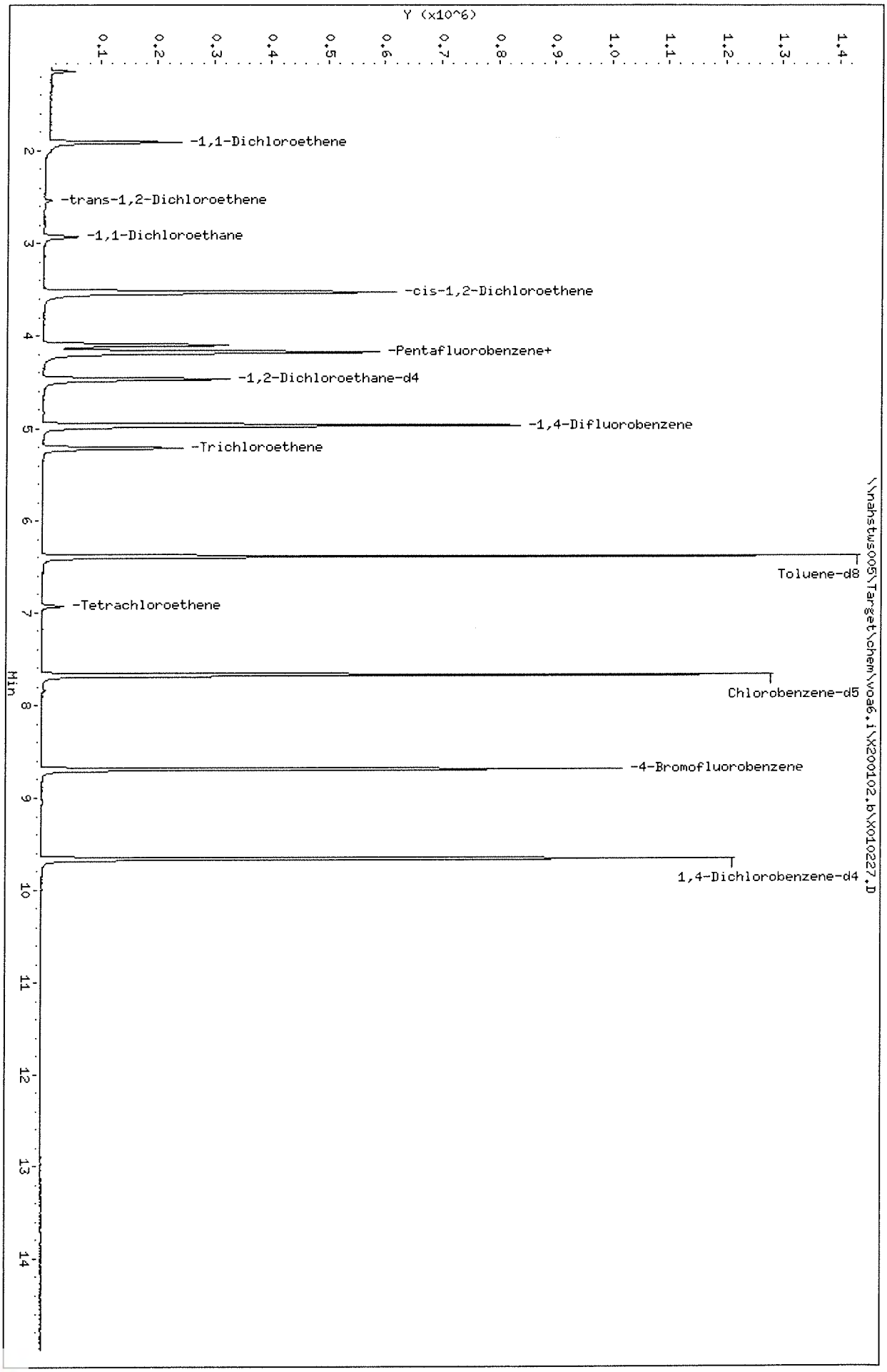
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	523592	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	743827	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	636124	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	316792	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	230832	48.4957	48.49
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	244761	49.6928	49.69
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	862805	51.4783	51.47
$ 69 4-Bromofluorobenzene	95	8.695	8.688	(1.134)	300022	50.6879	50.68
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	63963	8.39593	8.39
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	86605	19.5176	19.51
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	337762	68.0227	68.02
56 Tetrachloroethene	164	6.933	6.933	(0.904)	8486	1.89861	1.89(a)
20 trans-1,2-Dichloroethene	96	2.535	2.528	(0.606)	6369	1.47841	1.47(a)
38 Trichloroethene	130	5.206	5.206	(1.048)	88358	16.9858	16.98
5 Vinyl Chloride	62	1.138	1.138	(0.272)	29816	5.58738	5.58

QC Flag Legend

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



Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010227.D
Date : 02-JAN-2020 20:23
Client ID: HS19121257-03
Sample Info: HS19121257-03;HS19121257-03;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010227.D Page 3

Date : 02-JAN-2020 20:23

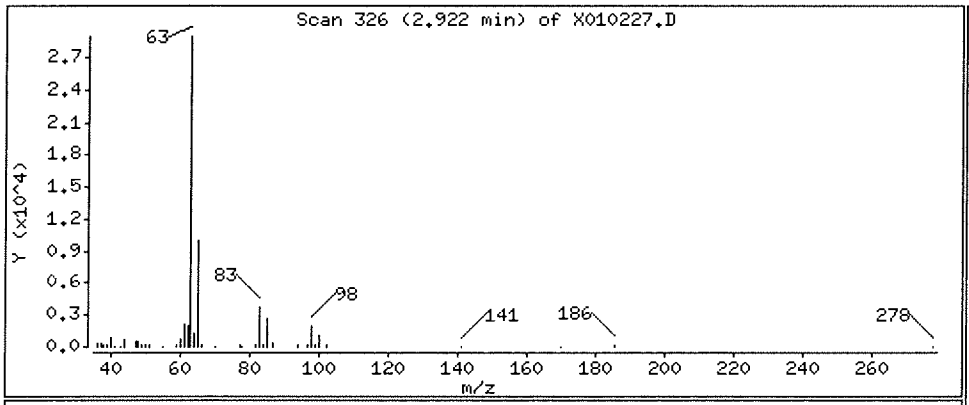
Client ID: HS19121257-03 Instrument: voa6.i

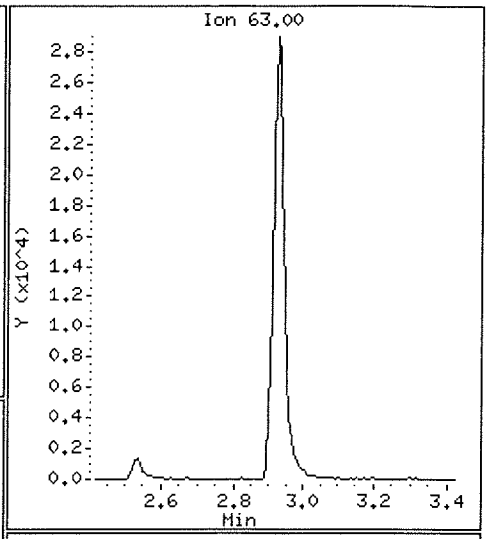
Sample Info: HS19121257-03;HS19121257-03;;;

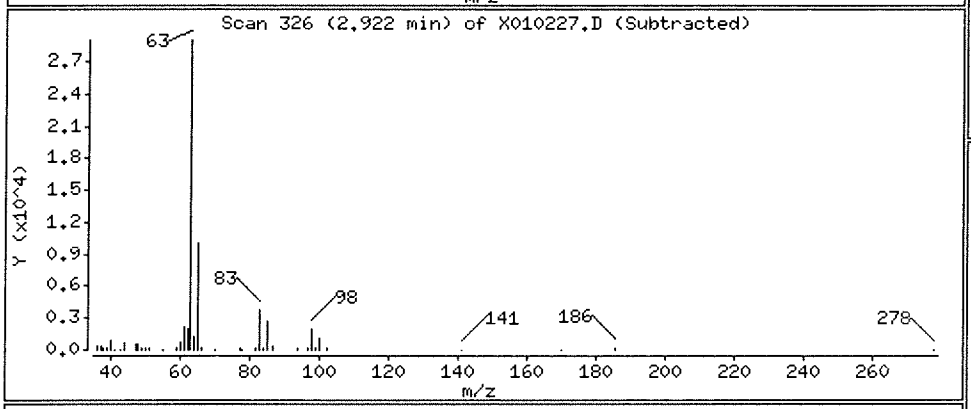
Purge Volume: 5.0 Operator: PC

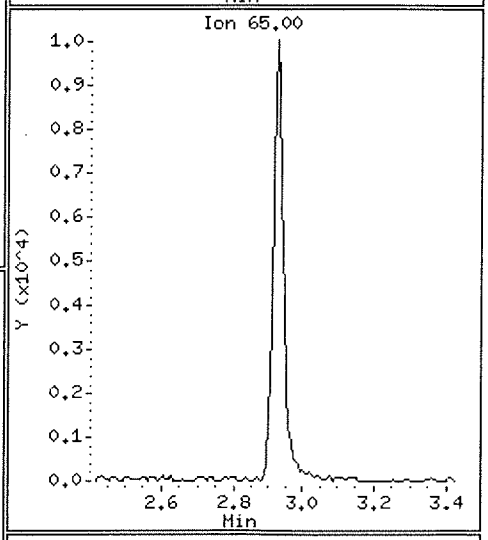
Column phase: DB624 Column diameter: 0.18

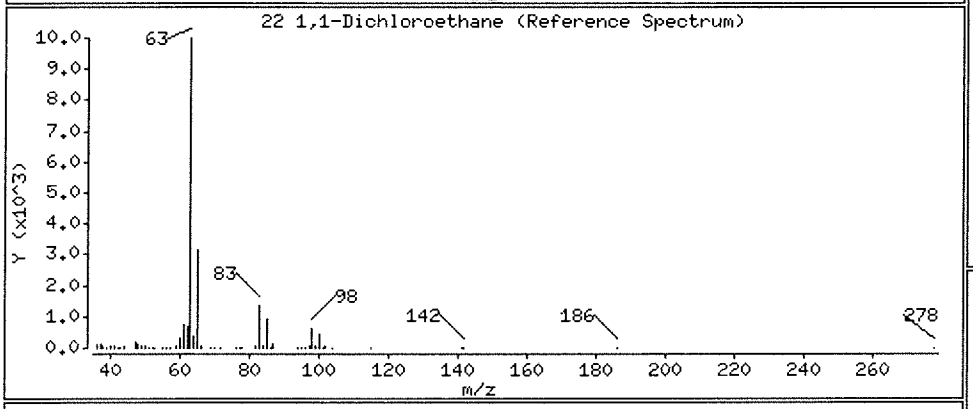
22 1,1-Dichloroethane Concentration: 8.39 ug/l

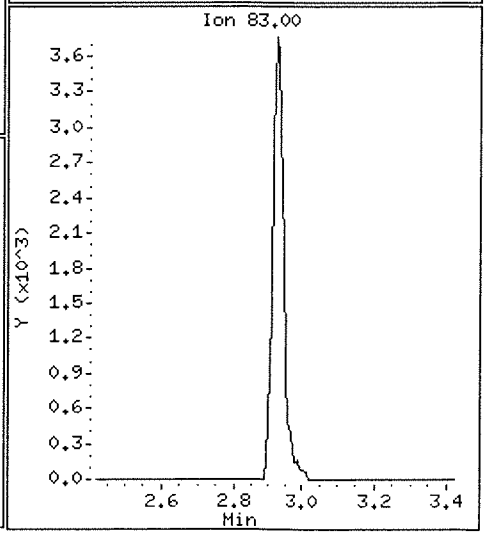


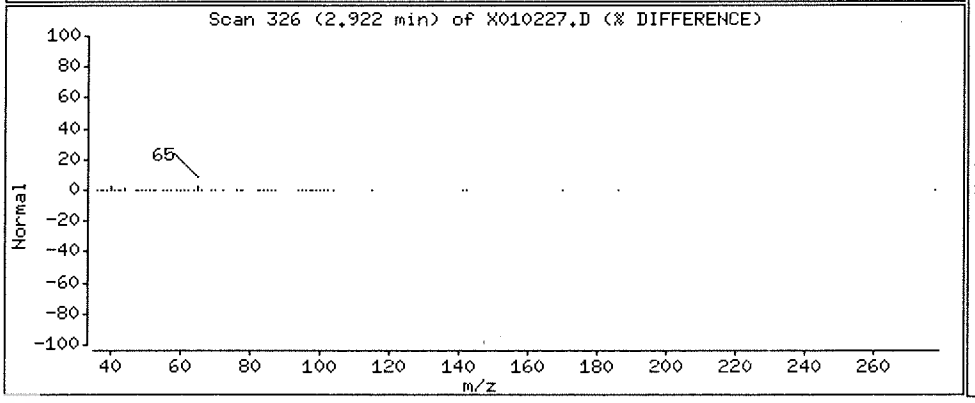












Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010227.D Page 4

Date : 02-JAN-2020 20:23

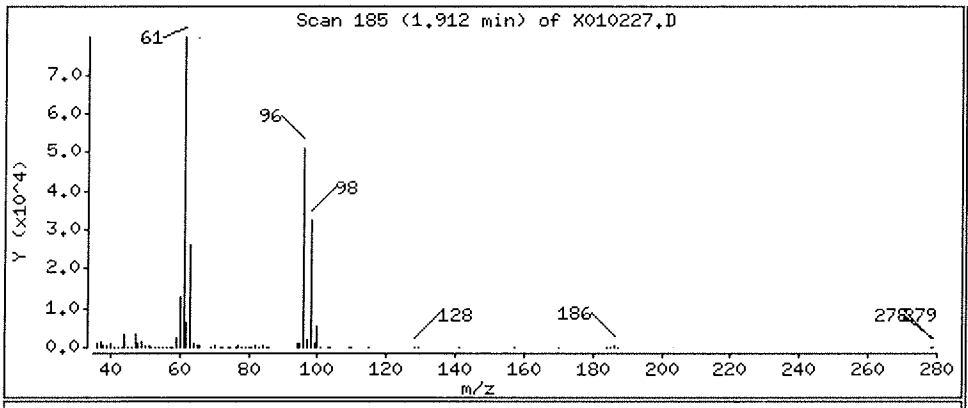
Client ID: HS19121257-03 Instrument: voa6.i

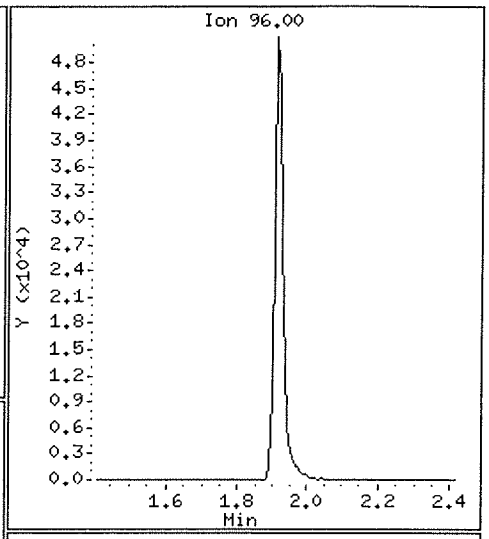
Sample Info: HS19121257-03;HS19121257-03;;;

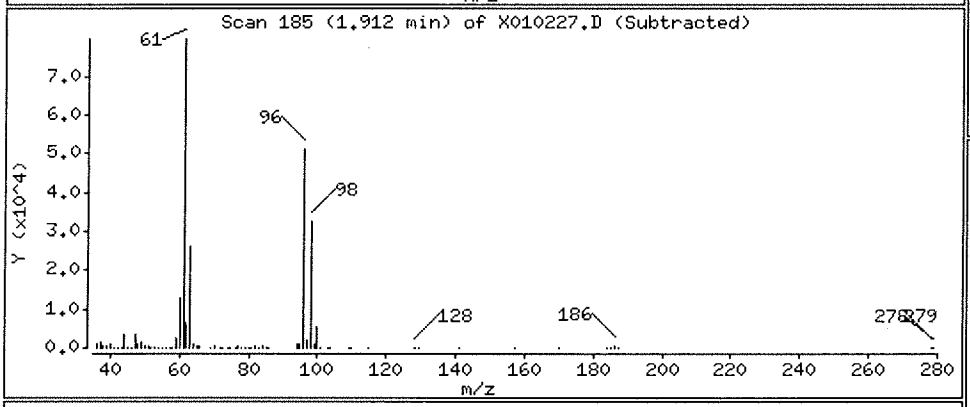
Purge Volume: 5.0 Operator: PC

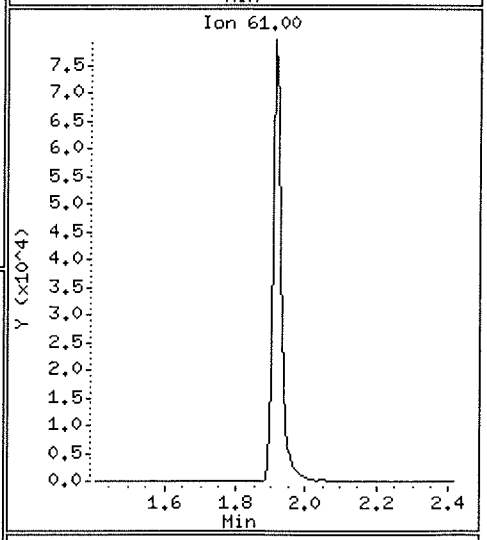
Column phase: DB624 Column diameter: 0.18

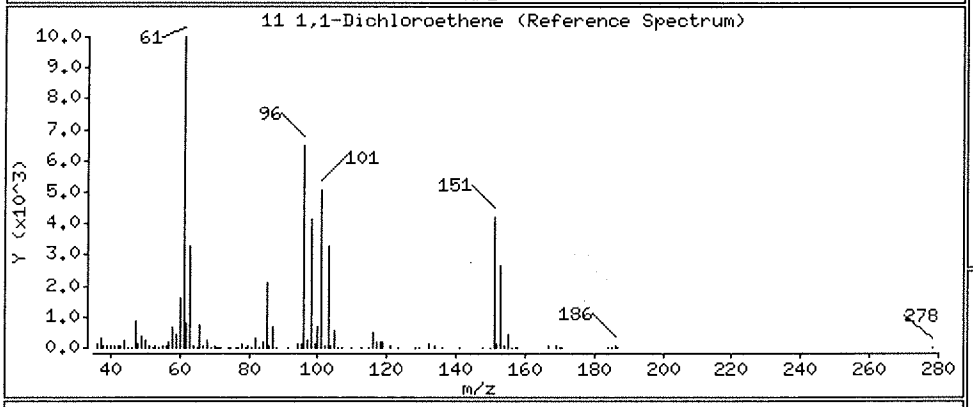
11 1,1-Dichloroethene Concentration: 19.51 ug/l

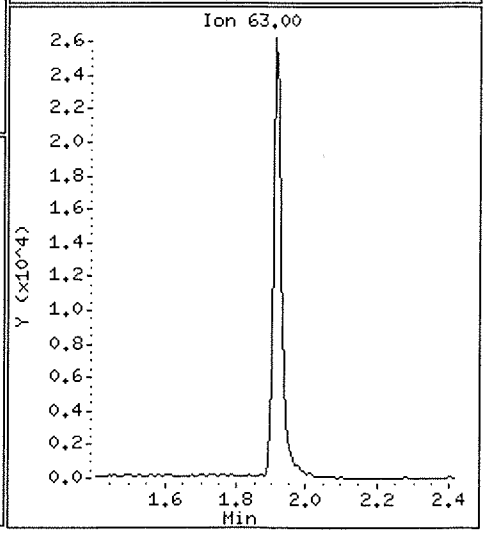


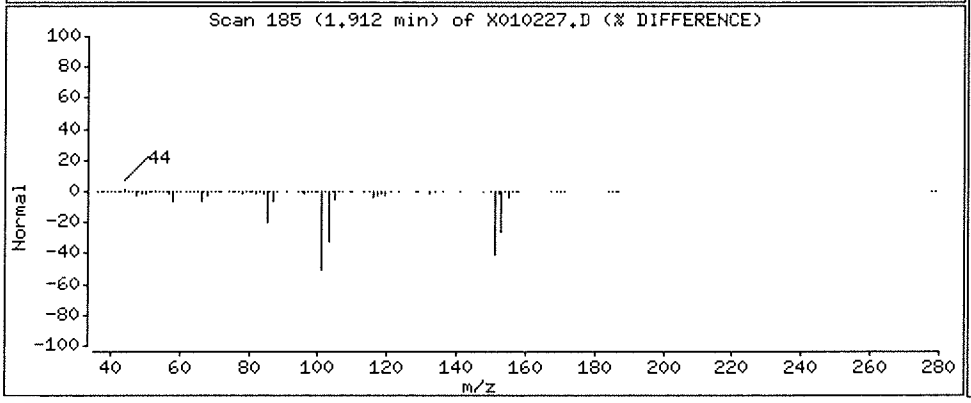












Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010227.D Page 5

Date : 02-JAN-2020 20:23

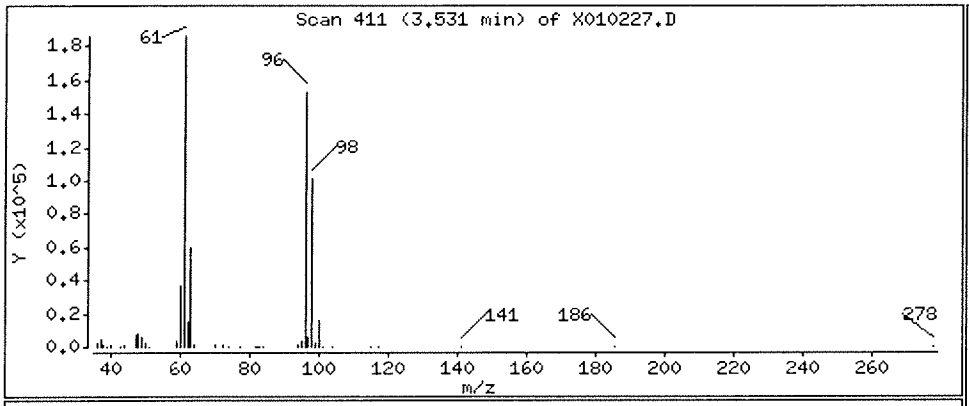
Client ID: HS19121257-03 Instrument: voa6.i

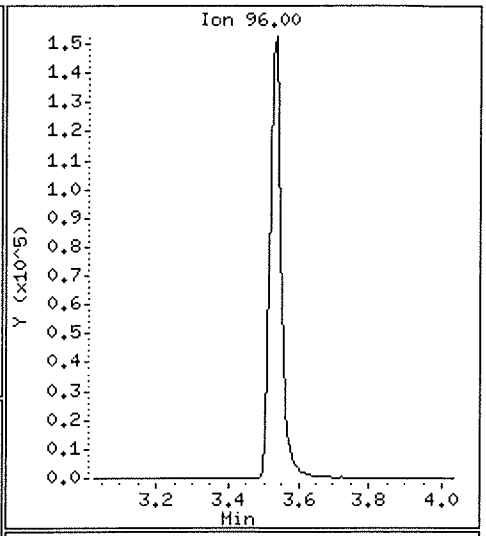
Sample Info: HS19121257-03;HS19121257-03;;;

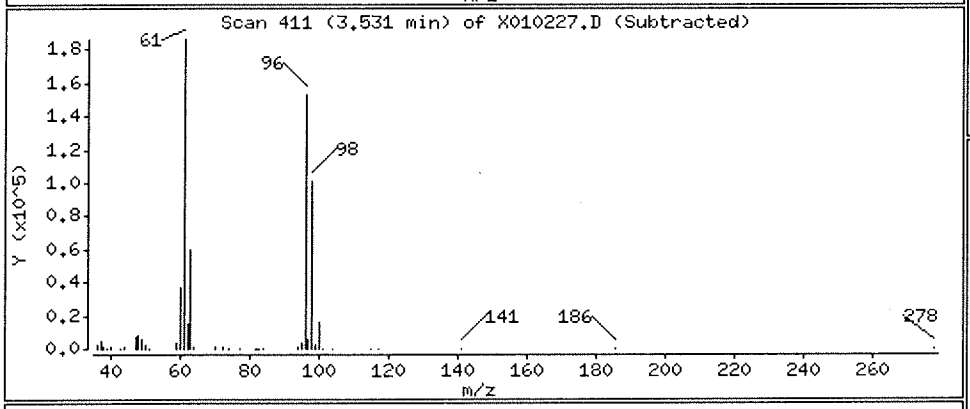
Purge Volume: 5.0 Operator: PC

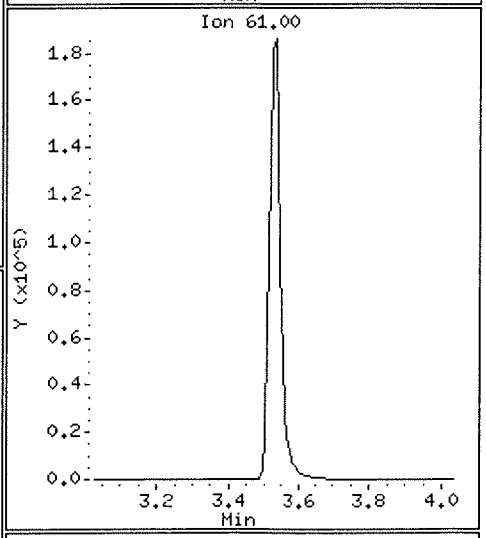
Column phase: DB624 Column diameter: 0.18

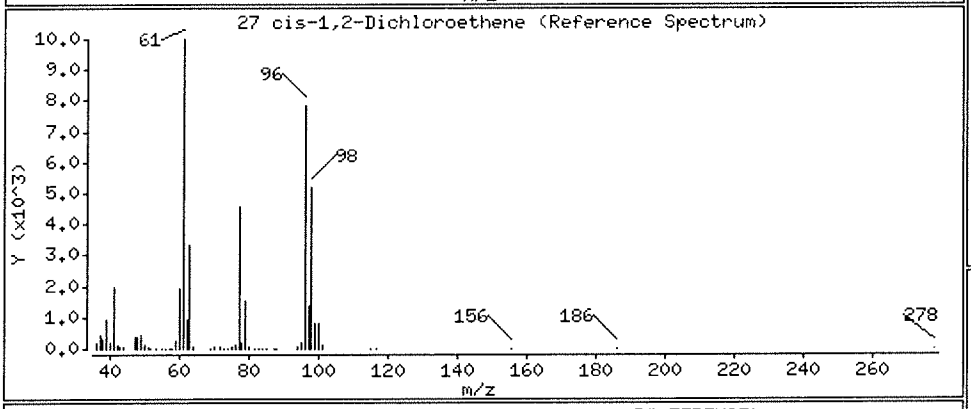
27 cis-1,2-Dichloroethene Concentration: 68.02 ug/l

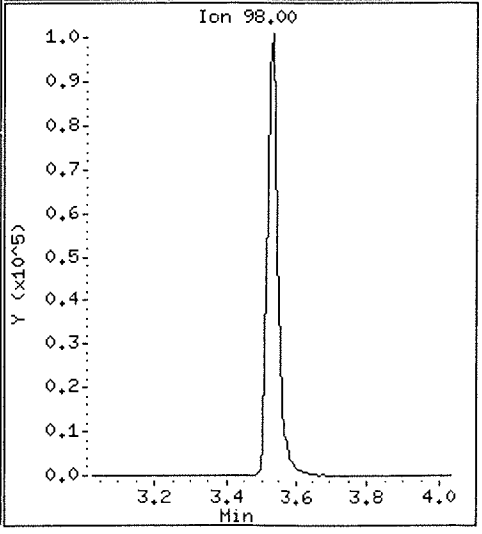


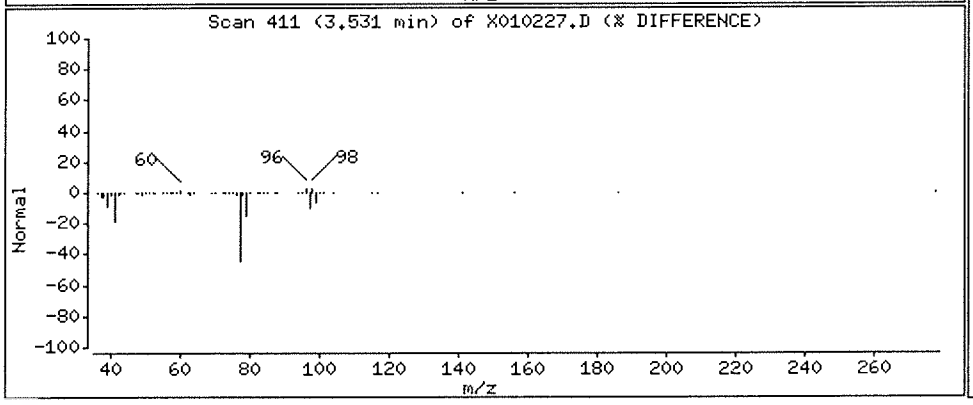












Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010227.D

Date : 02-JAN-2020 20:23

Client ID: HS19121257-03

Instrument: voa6.i

Sample Info: HS19121257-03;HS19121257-03;;;

Purge Volume: 5.0

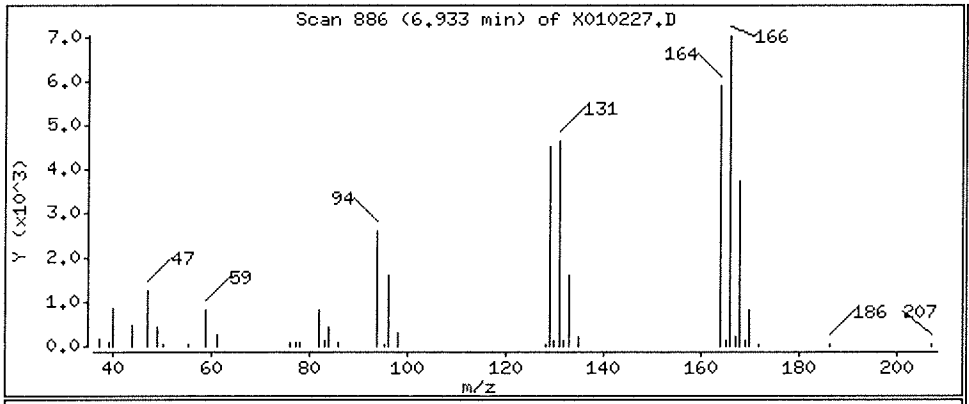
Operator: PC

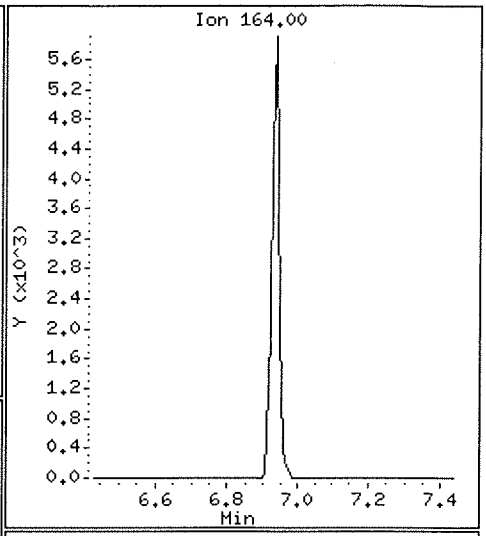
Column phase: DB624

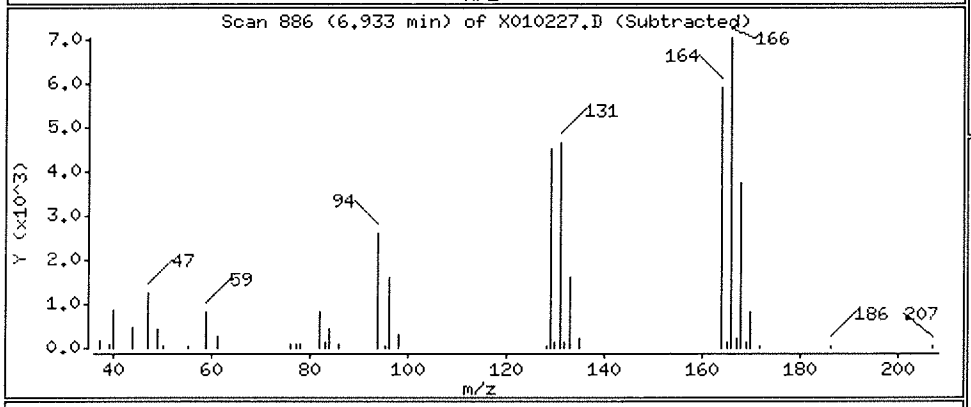
Column diameter: 0.18

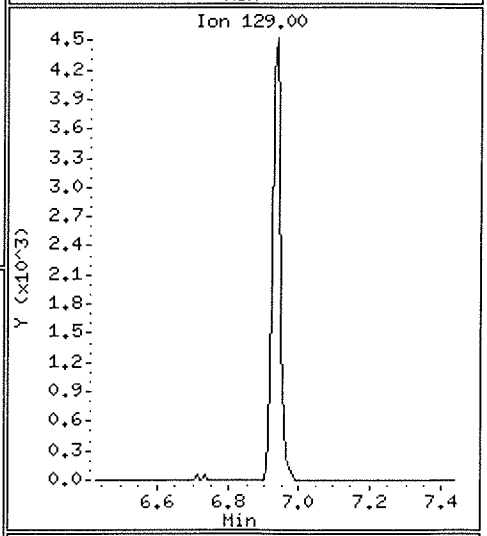
56 Tetrachloroethene

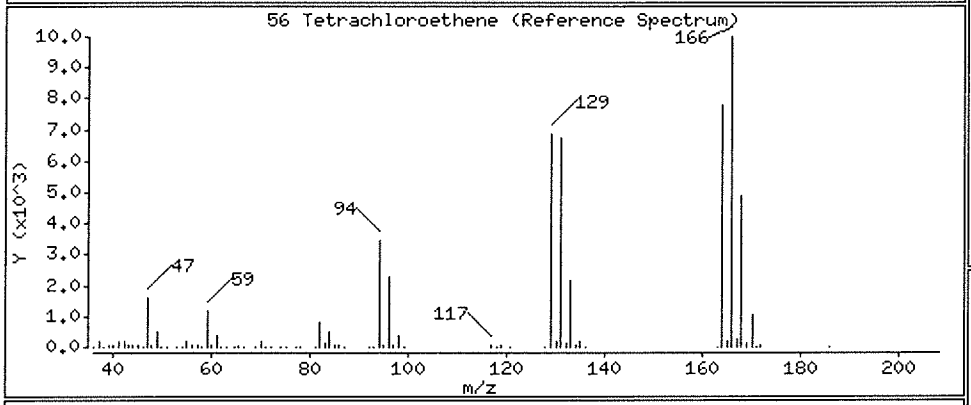
Concentration: 1.89 ug/l

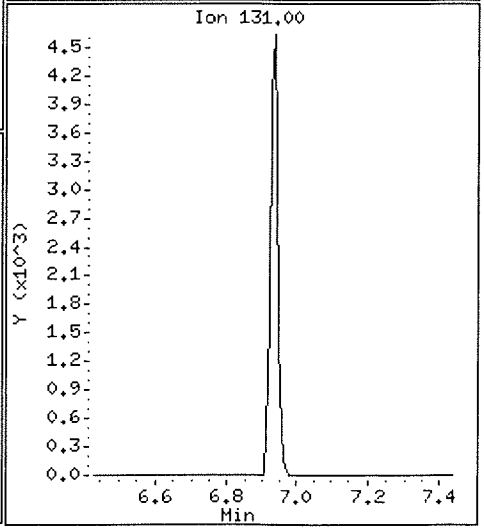


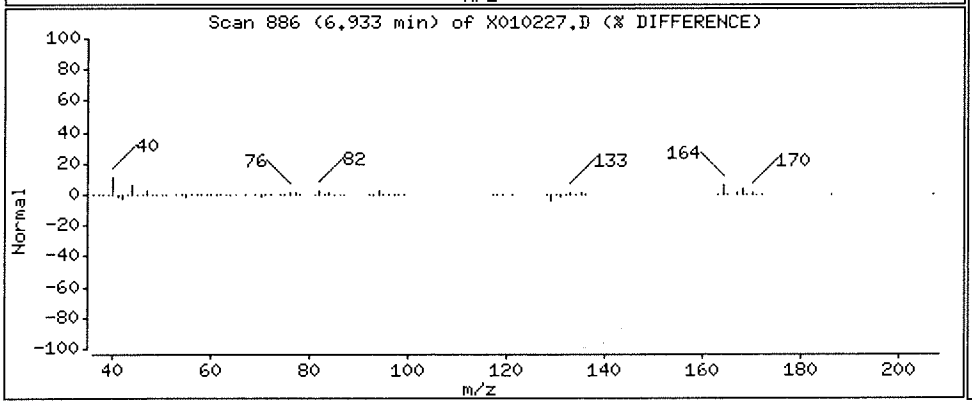












Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010227.D

Date : 02-JAN-2020 20:23

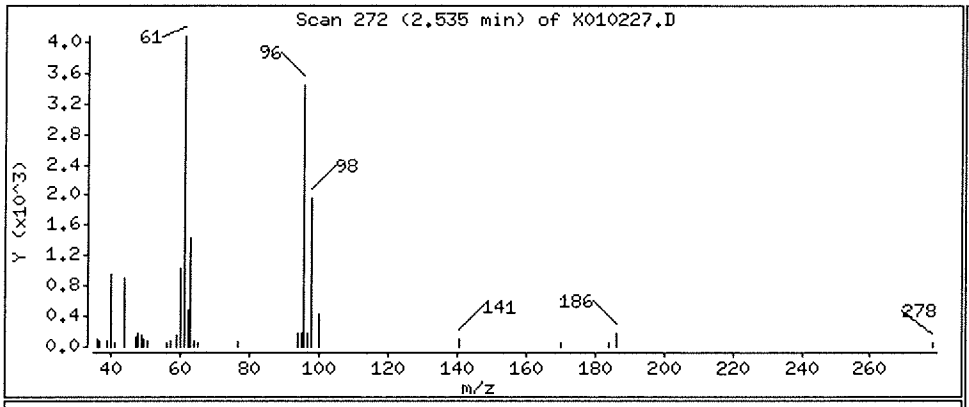
Client ID: HS19121257-03 Instrument: voa6.i

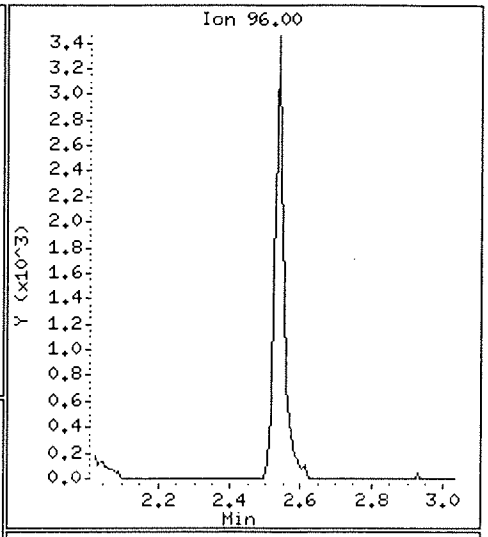
Sample Info: HS19121257-03;HS19121257-03;;;

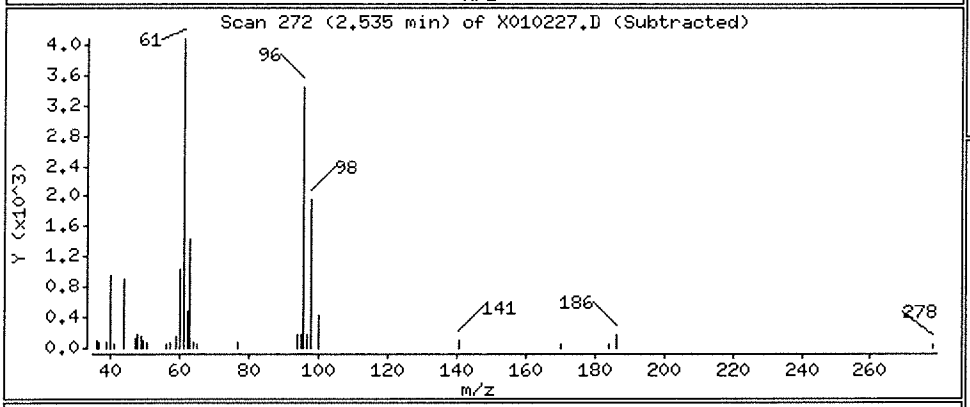
Purge Volume: 5.0 Operator: PC

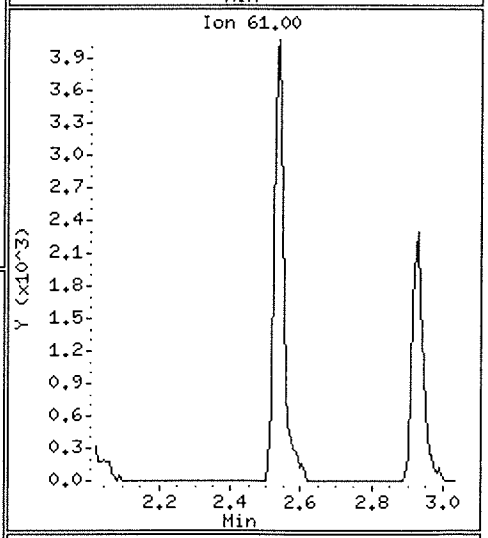
Column phase: DB624 Column diameter: 0.18

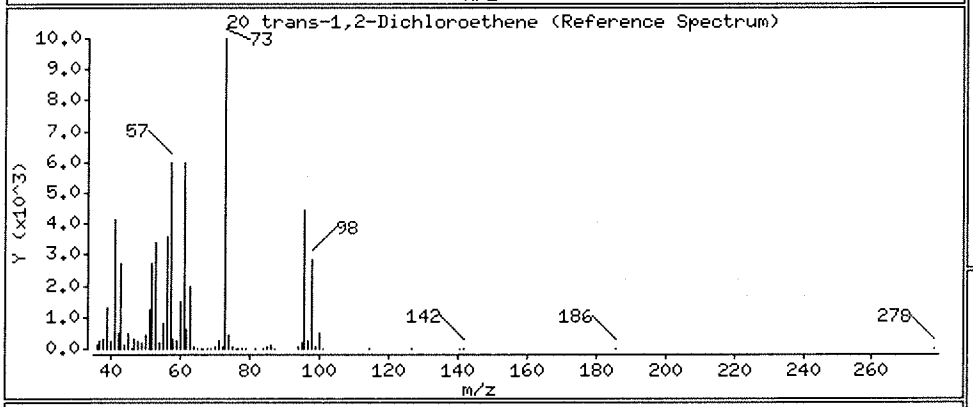
20 trans-1,2-Dichloroethene Concentration: 1.47 ug/l

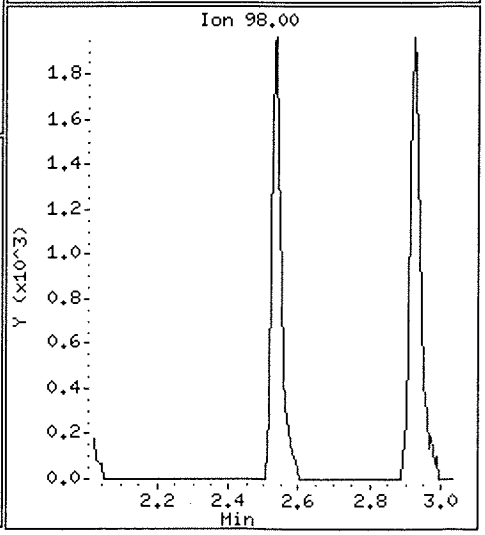


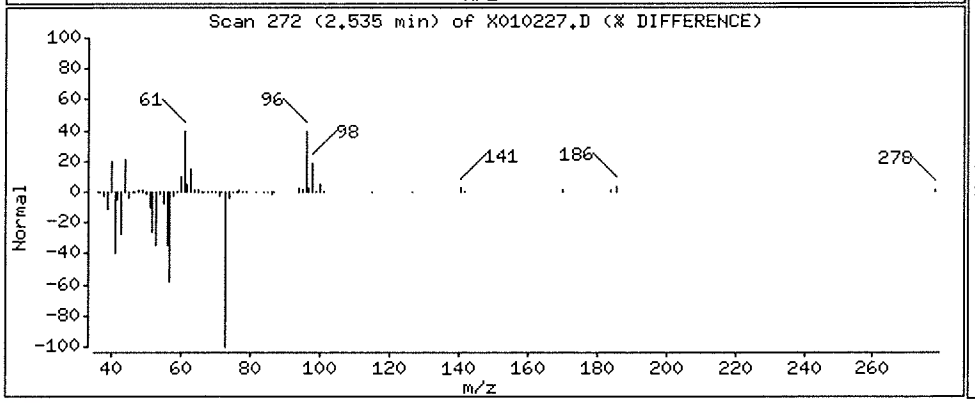












Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010227.D Page 8

Date : 02-JAN-2020 20:23

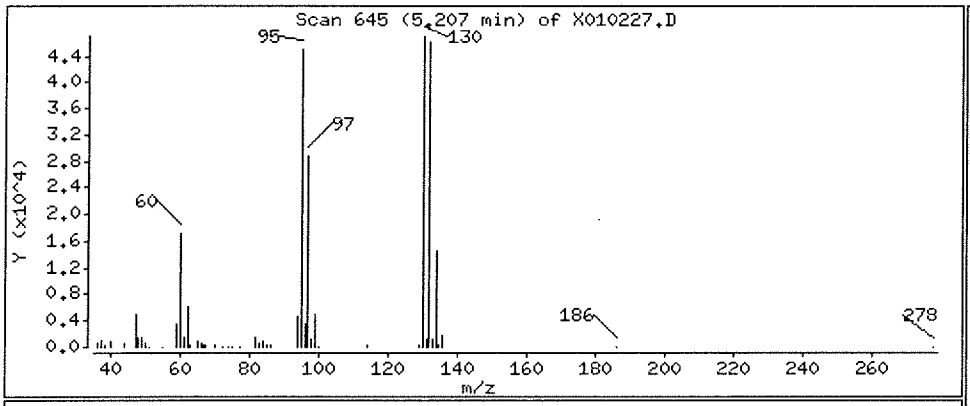
Client ID: HS19121257-03 Instrument: voa6.i

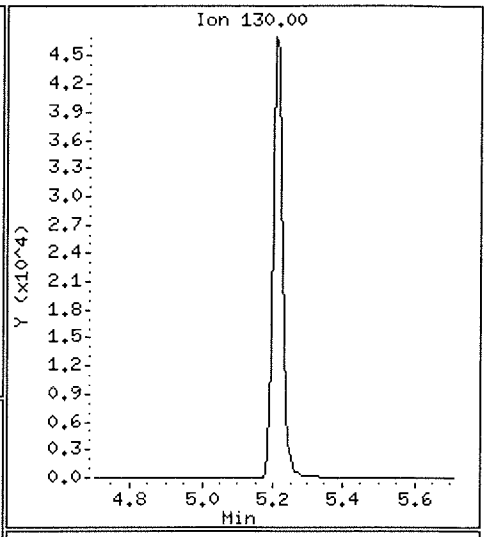
Sample Info: HS19121257-03;HS19121257-03;;;

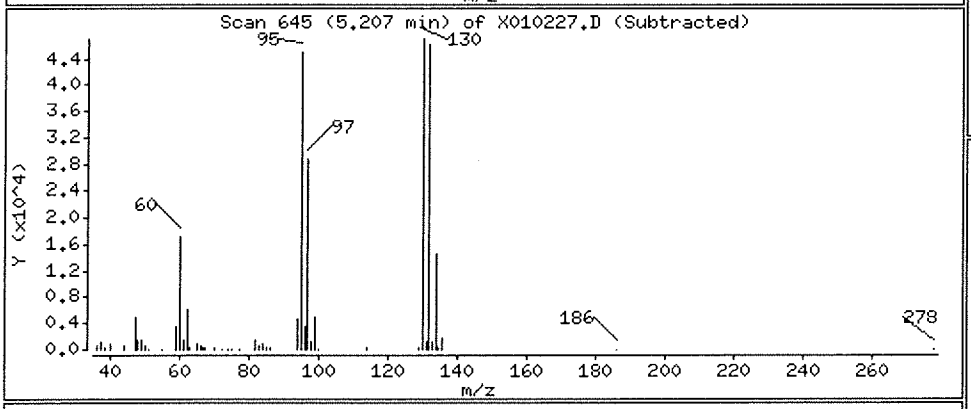
Purge Volume: 5.0 Operator: PC

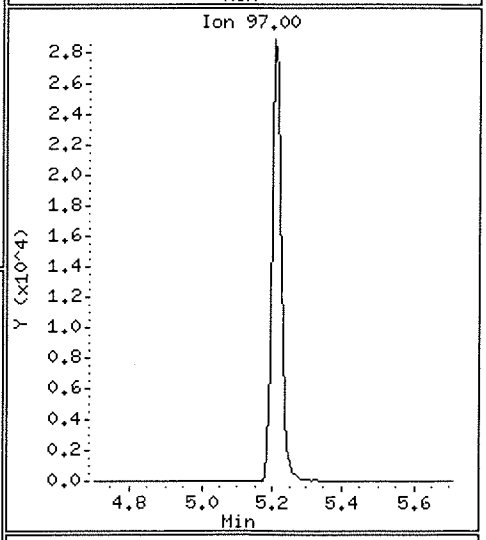
Column phase: DB624 Column diameter: 0.18

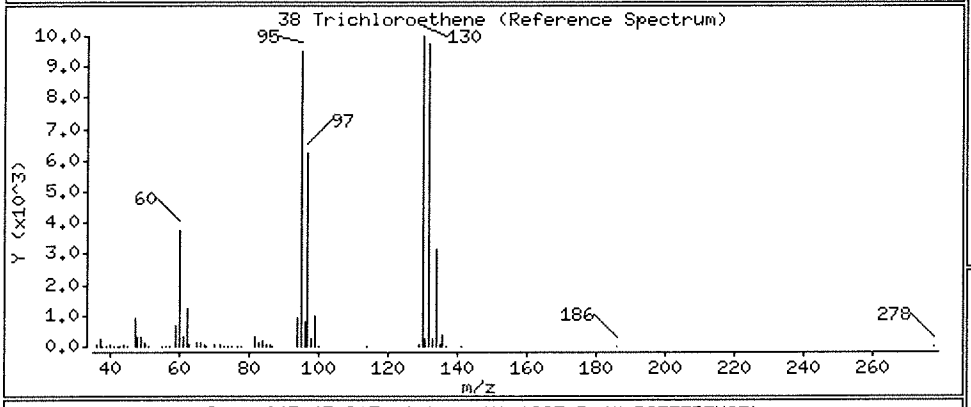
38 Trichloroethene Concentration: 16.98 ug/l

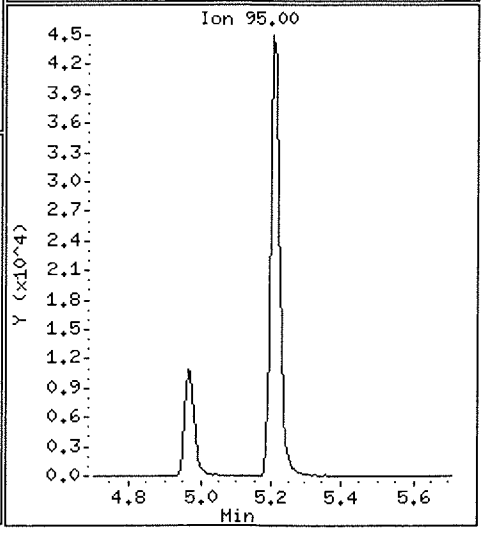


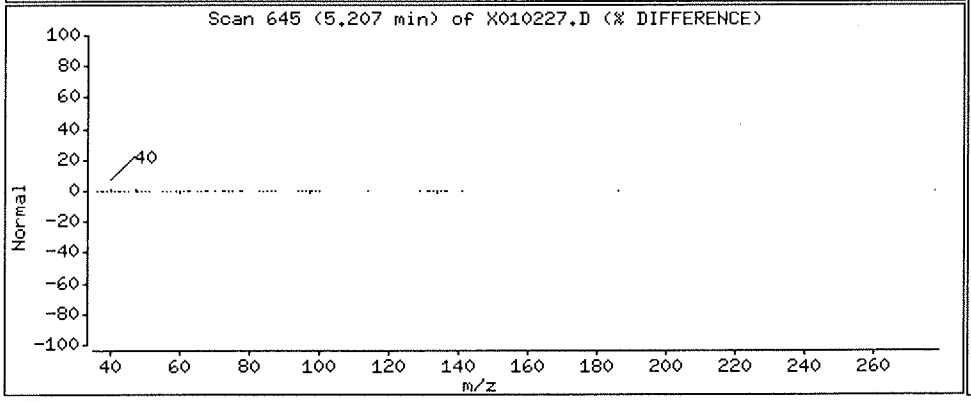












Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010227.D

Date : 02-JAN-2020 20:23

Client ID: HS19121257-03

Instrument: voa6.i

Sample Info: HS19121257-03;HS19121257-03;;;

Purge Volume: 5.0

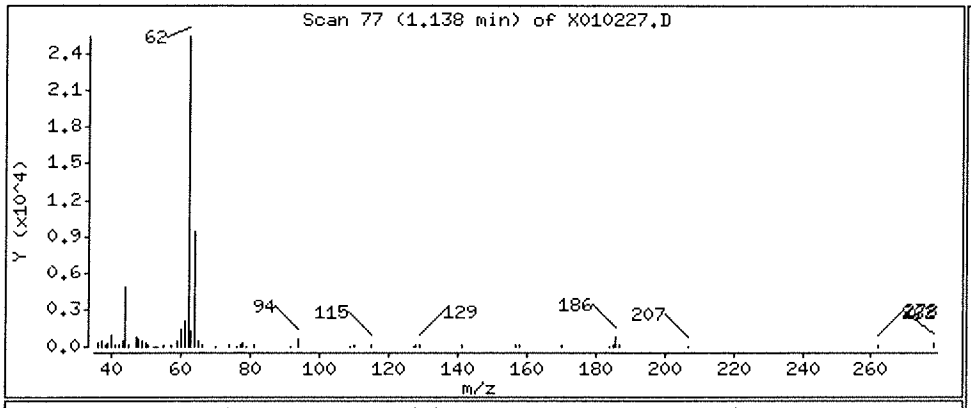
Operator: PC

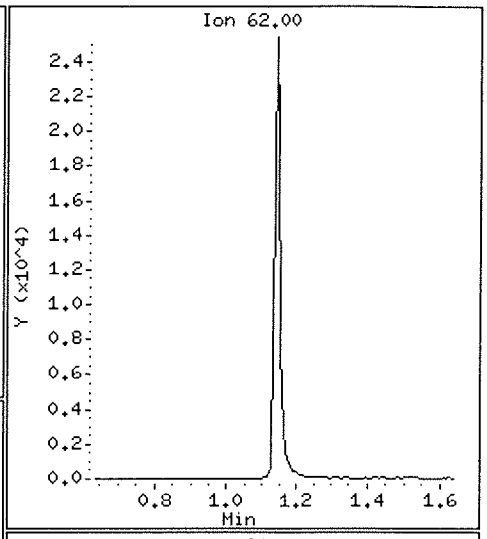
Column phase: DB624

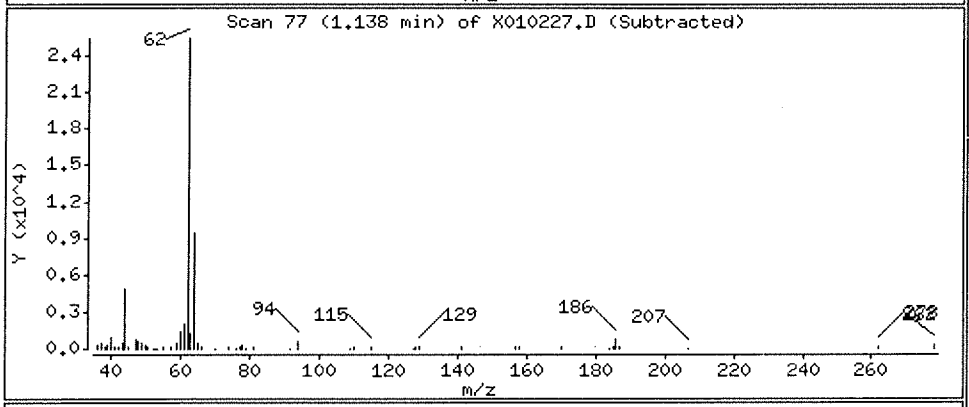
Column diameter: 0.18

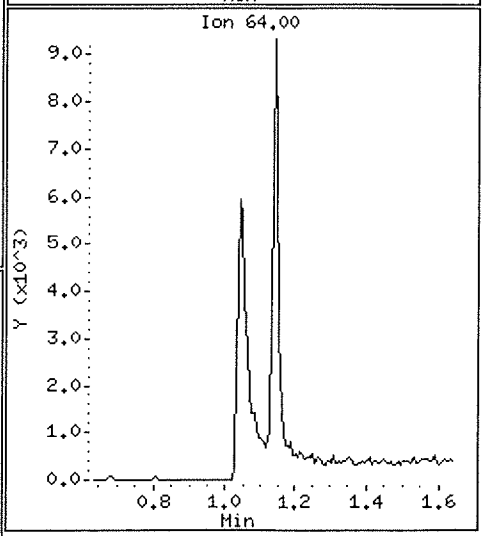
5 Vinyl Chloride

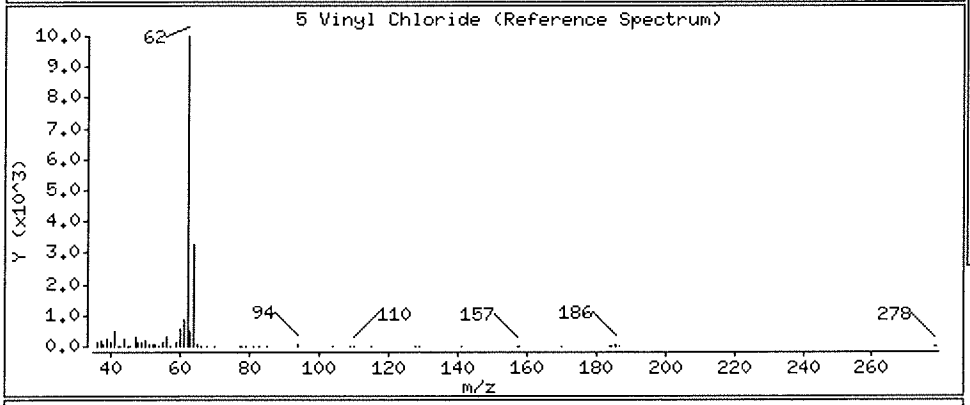
Concentration: 5.58 ug/l

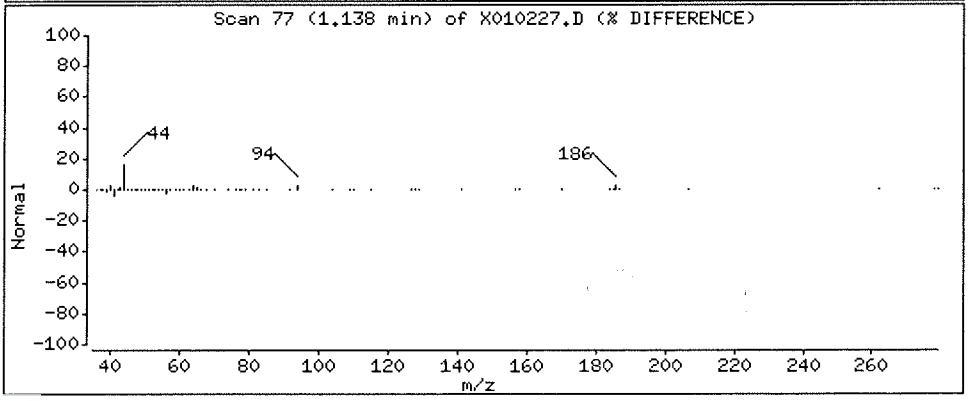












ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200102.b\X010228.D
Lab Smp Id: HS19121257-04 Client Smp ID: HS19121257-04
Inj Date : 02-JAN-2020 20:47
Operator : PC Inst ID: voa6.i
Smp Info : HS19121257-04;HS19121257-04;;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X200102.b\8260W.m
Meth Date : 26-Jan-2020 12:06 DevakG Quant Type: ISTD
Cal Date : 18-NOV-2019 16:35 Cal File: X111808.D
Als bottle: 27
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

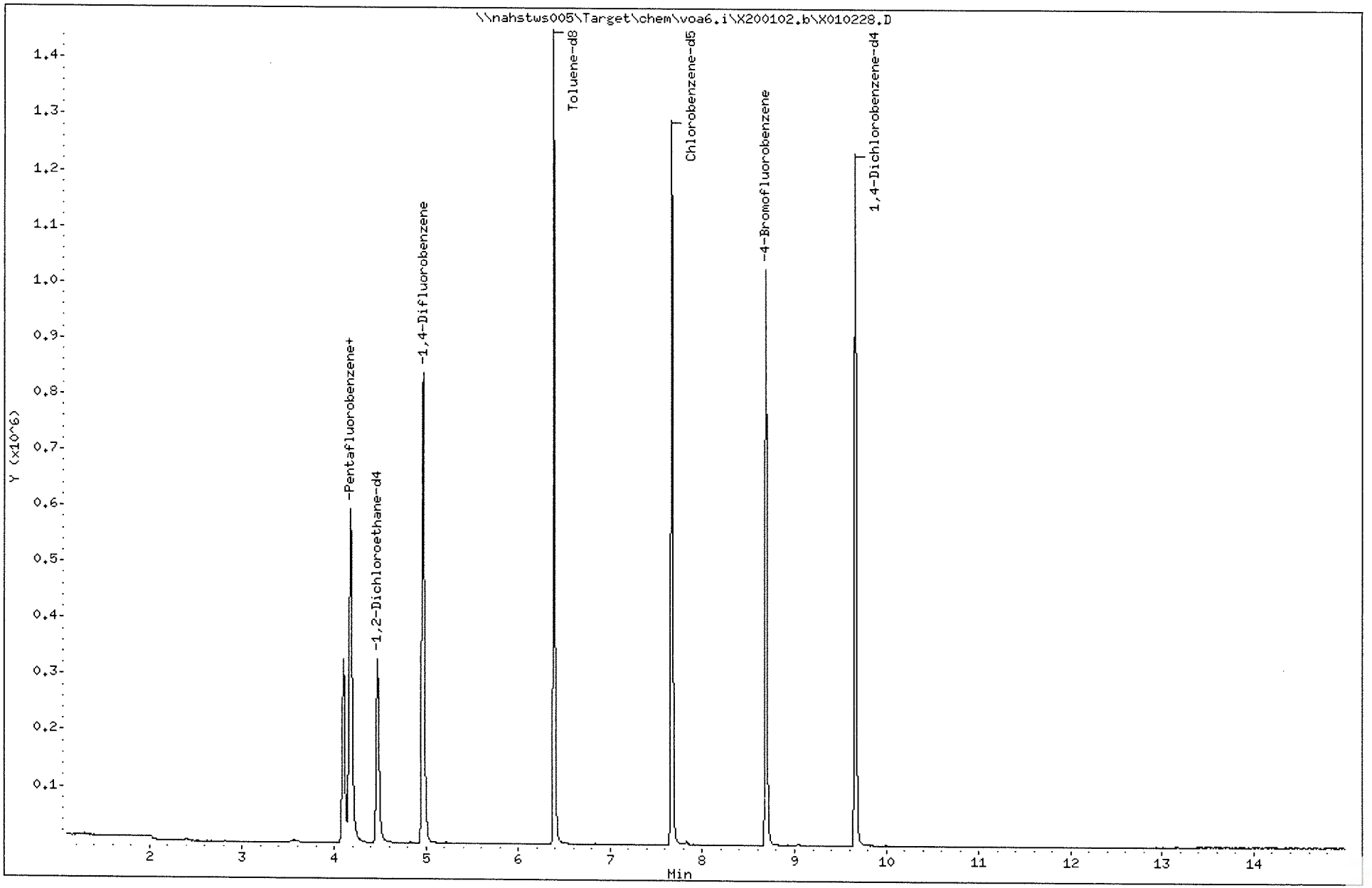
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

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)	524714	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	742675	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	635505	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	317520	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	233444	48.9362	48.93
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	249558	50.5455	50.54
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	861941	51.4768	51.47
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	300080	50.7466	50.74

Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010228.D
Date : 02-JAN-2020 20:47
Client ID: HS19121257-04
Sample Info: HS19121257-04;HS19121257-04;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i

Operator: PC
Column diameter: 0.18



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200102.b\X010229.D
Lab Smp Id: CCV-END Client Smp ID: CCV-END
Inj Date : 02-JAN-2020 21:11
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\X200102.b\8260W.m
Meth Date : 26-Jan-2020 12:07 voa6.i Quant Type: ISTD
Cal Date : 18-NOV-2019 16:35 Cal File: X111808.D
Als bottle: 28 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

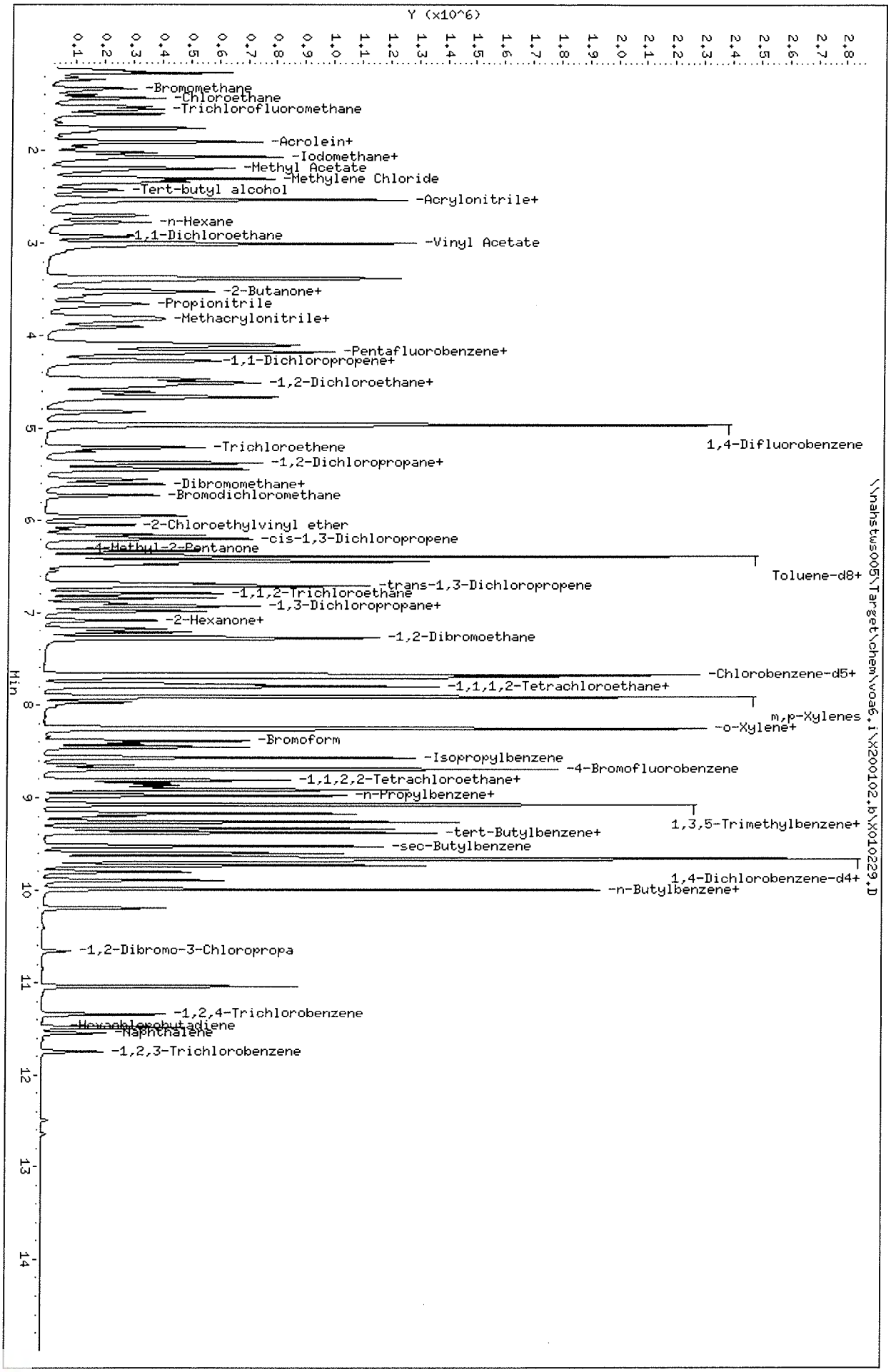
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	886283	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	1265163	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	1114484	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	541778	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	406475	50.0000	50.43
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	425375	50.0000	51.00
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1463076	50.0000	49.82
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	524732	50.0000	50.60
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	182083	50.0000	22.51
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	265533	50.0000	22.20
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	193353	50.0000	25.37
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	137260	50.0000	23.56
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	324977	50.0000	25.20
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	151784	50.0000	20.20
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	231891	50.0000	22.72
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	61273	50.0000	30.14
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	169251	50.0000	26.21(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	123051	50.0000	26.96
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	634527	50.0000	24.68
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	20645	50.0000	24.37
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	177141	50.0000	22.66
88 1,2-Dichlorobenzene	146	9.991	9.991	(1.033)	337141	50.0000	23.44

Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010229.D Page 2
Report Date: 26-Jan-2020 12:07

	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)	230998	50.0000	23.00
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	182635	50.0000	24.16
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	619812	50.0000	25.12
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	376643	50.0000	24.24
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	282984	50.0000	23.92
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	369444	50.0000	23.39
26	2,2-Dichloropropane	77	3.509	3.509	(0.839)	254378	50.0000	21.73
24	2-Butanone	43	3.573	3.573	(0.854)	131118	100.000	48.21
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	515135	50.0000	26.42
52	2-Hexanone	43	7.083	7.083	(0.923)	210031	100.000	45.87
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	593342	50.0000	25.11
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	634249	50.0000	23.92
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	313682	100.000	48.03
10	Acetone	43	1.969	1.969	(0.471)	94349	100.000	38.84
37	Benzene	78	4.512	4.512	(0.908)	701901	50.0000	24.25
74	Bromobenzene	156	8.809	8.809	(0.911)	231275	50.0000	24.56
29	Bromochloromethane	128	3.795	3.795	(0.908)	108878	50.0000	22.67
39	Bromodichloromethane	83	5.729	5.729	(1.153)	238338	50.0000	22.76
66	Bromoform	173	8.416	8.416	(1.097)	137907	50.0000	21.36
6	Bromomethane	94	1.331	1.331	(0.318)	133224	50.0000	13.47
19	Carbon Disulfide	76	2.069	2.069	(0.495)	1028824	100.000	50.35
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	231414	50.0000	20.70
59	Chlorobenzene	112	7.699	7.699	(1.004)	487458	50.0000	22.40
7	Chloroethane	64	1.396	1.396	(0.334)	116837	50.0000	20.93
28	Chloroform	83	3.910	3.910	(0.935)	320512	50.0000	22.33
3	Chloromethane	50	1.073	1.073	(0.257)	204468	50.0000	21.34
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	205194	50.0000	24.41
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	296589	50.0000	24.03
55	Dibromochloromethane	129	7.176	7.176	(0.936)	193829	50.0000	22.90
44	Dibromomethane	93	5.550	5.550	(1.117)	119088	50.0000	22.26
2	Dichlorodifluoromethane	85	0.966	0.966	(0.231)	188242	50.0000	23.77
61	Ethylbenzene	106	7.800	7.800	(1.017)	253791	50.0000	22.57
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	93404	50.0000	21.45
67	Isopropylbenzene	105	8.566	8.566	(1.117)	731728	50.0000	21.97
62	m,p-Xylenes	106	7.907	7.907	(1.031)	611418	100.000	45.07
17	Methylene Chloride	84	2.305	2.305	(0.551)	188398	50.0000	23.50
87	n-Butylbenzene	91	9.999	9.999	(1.034)	522940	50.0000	23.70
73	n-Propylbenzene	91	8.917	8.917	(0.922)	846836	50.0000	25.28
92	Naphthalene	128	11.546	11.546	(1.194)	149112	50.0000	25.47
63	o-Xylene	106	8.244	8.244	(1.075)	301982	50.0000	22.55
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	704221	50.0000	24.20
64	Styrene	104	8.258	8.258	(1.077)	533727	50.0000	22.92
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	517160	50.0000	24.48
56	Tetrachloroethene	164	6.933	6.933	(0.904)	159425	50.0000	20.35
50	Toluene	91	6.446	6.446	(0.840)	736803	50.0000	23.31
20	trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	176249	50.0000	24.16
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	261665	50.0000	23.26
38	Trichloroethene	130	5.206	5.206	(1.048)	195395	50.0000	22.08
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	273677	50.0000	19.90
5	Vinyl Chloride	62	1.138	1.138	(0.272)	217290	50.0000	24.05

QC Flag Legend

M - Compound response manually integrated.

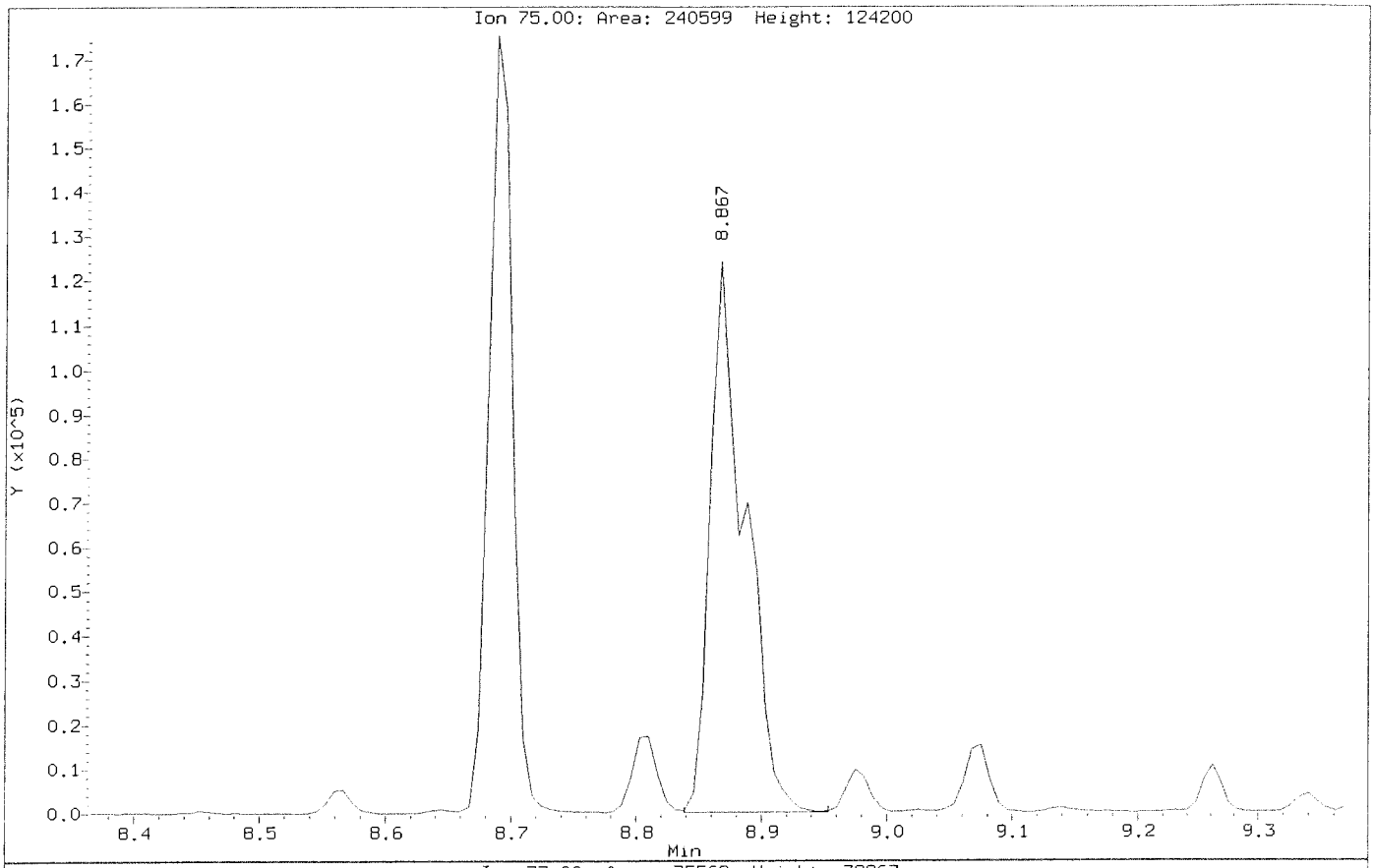


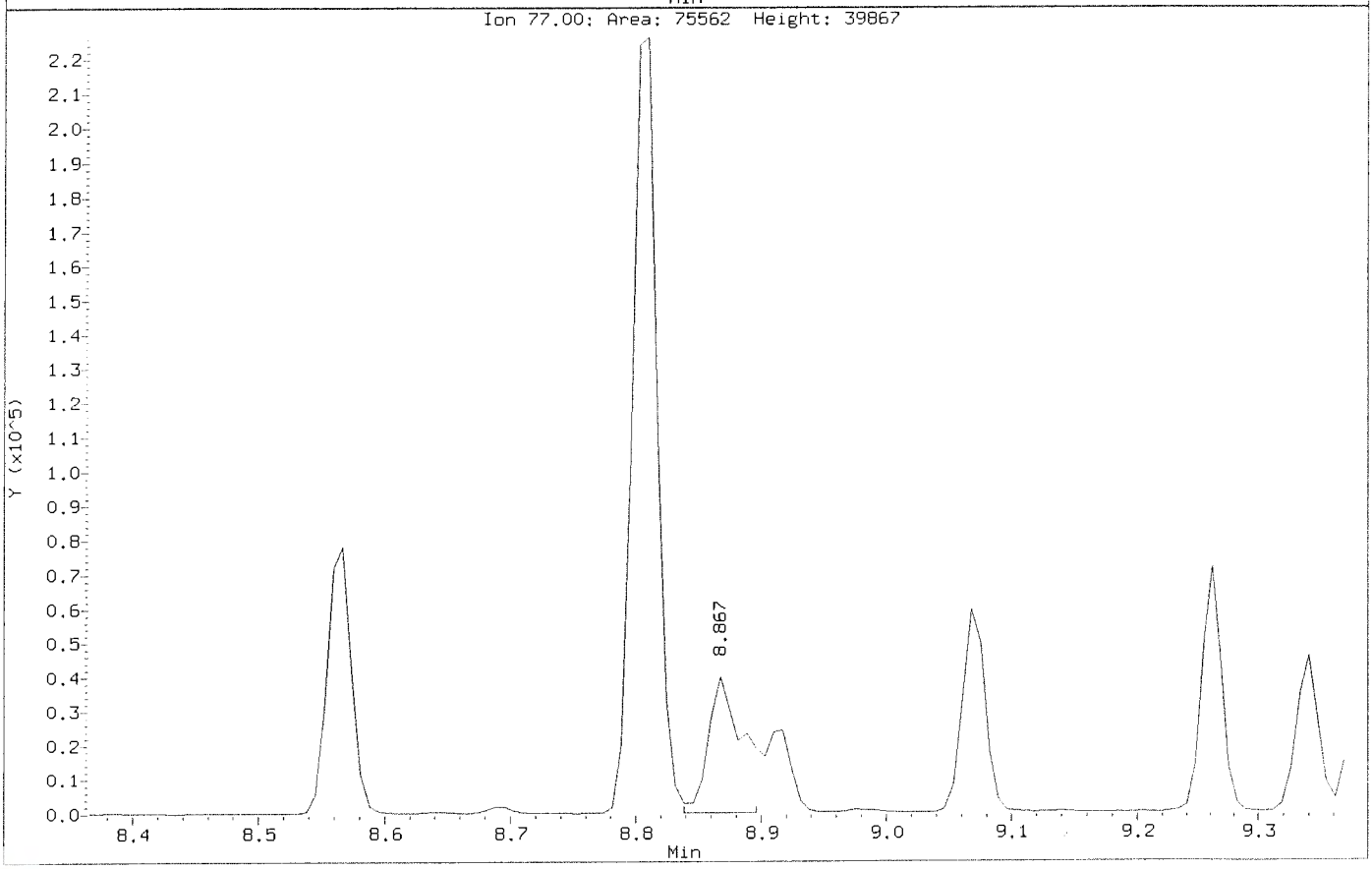
Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010229.D
Date : 02-JAN-2020 21:11
Client ID: CCV-END
Sample Info: CCV-END;CCV-END;2;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\Before\X010229.D
Injection Date: 02-JAN-2020 21:11
Instrument: voa6.i
Client Sample ID: CCV-END

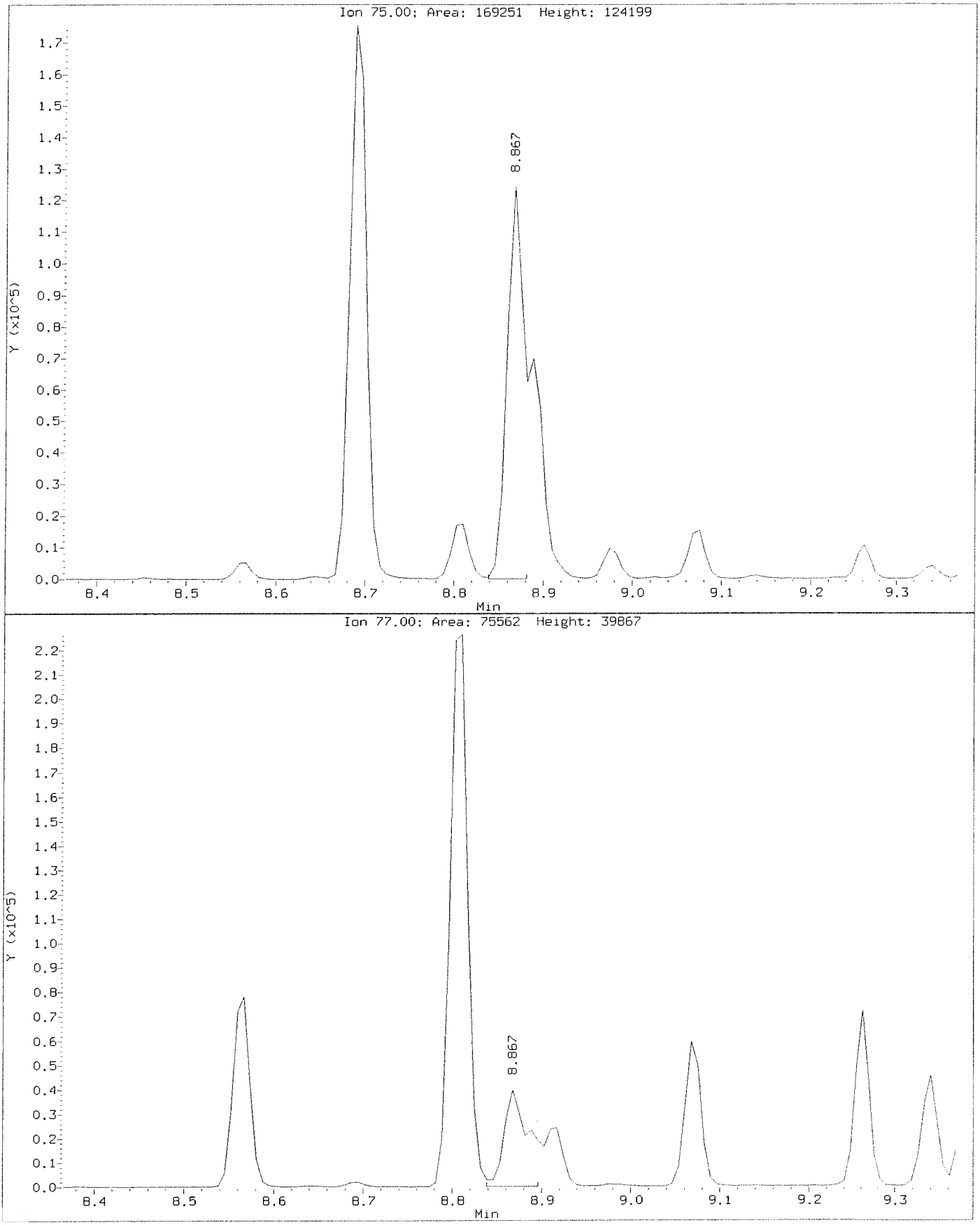
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





Data File: \\nahstws005\Target\chem\voa6.i\X200102.b\X010229.D
Injection Date: 02-JAN-2020 21:11
Instrument: voa6.i
Client Sample ID: CCV-END

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



HS19121257 - ME - ICP_W_DOD

ALS WO# HS19121257

ALS Houston, US Date: 08-Jan-20

Form 11 - INTERNAL STANDARD ASSOCIATION

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
WorkOrder: HS19121257

Instrument:ICPMS05

Mass	Analyte	Assoc Int Standard 1	Assoc Int Standard 2	Mode
9	Beryllium	Lithium		Ar
11	Boron	Lithium		Ar
23	Sodium	Germanium		Ar
24	Magnesium	Germanium		Ar
27	Aluminum	Germanium		Ar
39	Potassium	Germanium		Ar
44	Calcium	Germanium		Ar
47	Titanium	Germanium		Ar
51	Vanadium	Germanium		ArHe
52	Chromium	Germanium		ArHe
55	Manganese	Germanium		ArHe
56	Iron	Germanium		ArHe
59	Cobalt	Germanium		ArHe
60	Nickel	Germanium		ArHe
63	Copper	Germanium		ArHe
66	Zinc	Germanium		ArHe
75	Arsenic	Germanium		ArHe
78	Selenium	Germanium		ArHe
88	Strontium	Germanium		Ar
95	Molybdenum	Germanium		Ar
105	Palladium	Germanium		Ar
107	Silver	Germanium		Ar
114	Cadmium	Indium		Ar
118	Tin	Germanium		Ar
121	Antimony	Germanium		ArHe
137	Barium	Indium		Ar
205	Thallium	Bismuth		Ar
208	Lead	Bismuth		Ar

ALS Houston, US Date: 08-Jan-20

FORM 12 - PREPARATION LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
WorkOrder: HS19121257
Start Date: 27-Dec-2019 09:00 End Date: 27-Dec-2019 13:00

Batch ID: 149161
Prep Code: 3010A
Method: SW3010A
Technician:

SampID	ClientID	Matrix	Init Wt	Init Vol	FinalVol (mL)	PrepFac
HS19121036-01MS				10	10	1
HS19121036-01MSD				10	10	1
HS19121036-01PDS				10	10	1
HS19121036-01SD				10	10	1
HS19121257-02	LHSMW06_122019	Groundwater		10	10	1
HS19121257-03	LHSMW06_122019_a	Groundwater		10	10	1
LCS-149161				10	10	1
MBLK-149161				10	10	1

ALS Houston, US

Date: 08-Jan-20

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
WorkOrder: HS19121257
Start Date: 03-Jan-2020 End Date: 03-Jan-2020

Run ID:ICPMS05_353764
Instrument:ICPMS05
Method:

Sample No.	D/F	Time	FileID	Analytes
ICPMS05_353764_Tune	1	03-Jan-2020 00:00	ICPMS05_353764_Tune_1	
CAL BLK	1	03-Jan-2020 11:06	013CALB.d_5422272	AS
2/10/200	1	03-Jan-2020 11:08	014CALS.d_5422273	AS
5/25/500	1	03-Jan-2020 11:10	015CALS.d_5422274	AS
10/50/1000	1	03-Jan-2020 11:13	016CALS.d_5422275	AS
100/500/10K	1	03-Jan-2020 11:15	017CALS.d_5422276	AS
200/1000/20K	1	03-Jan-2020 11:17	018CALS.d_5422277	AS
ICV	1	03-Jan-2020 11:22	020_ICV.d_5422279	AS
LLICV2	1	03-Jan-2020 11:24	021LCV2.d_5422280	AS
LLICV5	1	03-Jan-2020 11:26	022LCV5.d_5422281	AS
ICB	1	03-Jan-2020 11:28	023_ICB.d_5422282	AS
ICSA	1	03-Jan-2020 11:30	024ICSA.d_5422283	AS
ICSAB	1	03-Jan-2020 11:33	025ICSB.d_5422284	AS
CCV 1	1	03-Jan-2020 11:55	032_CCV.d_5423036	AS
CCB 1	1	03-Jan-2020 11:57	033_CCB.d_5423037	AS
MBLK-149161	1	03-Jan-2020 12:00	034SMPL.d_5423038	AS
LCS-149161	1	03-Jan-2020 12:03	035SMPL.d_5423039	AS
ZZZZZZSD	5	03-Jan-2020 12:12	039SMPL.d_5423043	AS
ZZZZZZMS	1	03-Jan-2020 12:14	040SMPL.d_5423044	AS
ZZZZZZMSD	1	03-Jan-2020 12:17	041SMPL.d_5423045	AS
ZZZZZZPDS	1	03-Jan-2020 12:19	042SMPL.d_5423046	AS
CCV 2	1	03-Jan-2020 12:27	044_CCV.d_5423048	AS
CCB 2	1	03-Jan-2020 12:30	045_CCB.d_5423049	AS
LHSMW06_122019	1	03-Jan-2020 12:52	054SMPL.d_5423058	AS
CCV 3	1	03-Jan-2020 12:58	056_CCV.d_5423060	AS
CCB 3	1	03-Jan-2020 13:00	057_CCB.d_5423035	AS
CAL BLK	1	03-Jan-2020 13:55	077CALB.d_5423146	AS
2/10/200	1	03-Jan-2020 13:57	078CALS.d_5423147	AS
5/25/500	1	03-Jan-2020 13:59	079CALS.d_5423148	AS
10/50/1000	1	03-Jan-2020 14:02	080CALS.d_5423149	AS
100/500/10K	1	03-Jan-2020 14:04	081CALS.d_5423150	AS
200/1000/20K	1	03-Jan-2020 14:06	082CALS.d_5423151	AS
LLCCV2	1	03-Jan-2020 14:19	085LCV2.d_5423154	AS
LLCCV5	1	03-Jan-2020 14:21	086LCV5.d_5423155	AS
ICCB 4	1	03-Jan-2020 14:23	087_ICB.d_5423156	AS
ZZZZZZSD	100	03-Jan-2020 14:36	092SMPL.d_5423161	
ZZZZZZPDS	20	03-Jan-2020 14:39	093SMPL.d_5423162	
CCV 4	1	03-Jan-2020 14:50	098_CCV.d_5423167	AS
CCB 5	1	03-Jan-2020 14:52	099_CCB.d_5423168	AS
CCV 5	1	03-Jan-2020 15:16	110_CCV.d_5423222	AS
CCB 6	1	03-Jan-2020 15:19	111_CCB.d_5423223	AS
CCV 6	1	03-Jan-2020 15:43	122_CCV.d_5423226	AS
CCV 7	1	03-Jan-2020 15:43	122_CCV.d_5428365	AS
CCB 7	1	03-Jan-2020 15:45	123_CCB.d_5423227	AS
CCB 8	1	03-Jan-2020 15:45	123_CCB.d_5428366	AS
LHSMW06_122019_a	1	03-Jan-2020 15:52	126SMPL.d_5428367	AS
CCV 8	1	03-Jan-2020 16:16	134_CCV.d_5428368	AS
CCB 9	1	03-Jan-2020 16:19	135_CCB.d_5428369	AS

ALS Houston, US Date: 08-Jan-20

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
WorkOrder: HS19121257

Run ID: ICPMS05_353764
Instrument: ICPMS05
Method: SW6020

ICV	Date: 03-Jan-2020 11:22		Seq: 5422279	ICV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Arsenic	100	98.942	99	90-110	

CCV1	Date: 03-Jan-2020 11:55		Seq: 5423036	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Arsenic	100	101.747	102	90-110	

CCV2	Date: 03-Jan-2020 12:27		Seq: 5423048	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Arsenic	100	99.283	99	90-110	

CCV3	Date: 03-Jan-2020 12:58		Seq: 5423060	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Arsenic	100	100.144	100	90-110	

CCV4	Date: 03-Jan-2020 14:50		Seq: 5423167	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Arsenic	100	104.993	105	90-110	

CCV5	Date: 03-Jan-2020 15:16		Seq: 5423222	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Arsenic	100	104.521	105	90-110	

CCV7	Date: 03-Jan-2020 15:43		Seq: 5428365	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Arsenic	100	104.533	105	90-110	

CCV6	Date: 03-Jan-2020 15:43		Seq: 5423226	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Arsenic	100	104.533	105	90-110	

CCV8	Date: 03-Jan-2020 16:16		Seq: 5428368	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Arsenic	100	104.245	104	90-110	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
WorkOrder: HS19121257

Run ID: ICPMS05_353764
Instrument: ICPMS05
Method: SW6020

ICB	Date: 03-Jan-2020 11:28		Seq: 5422282	ICB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Arsenic	5	0.4	5	U	
CCB1	Date: 03-Jan-2020 11:57		Seq: 5423037	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Arsenic	2	0.4	2	U	
MBLK-149161	Date: 03-Jan-2020 12:00		Seq: 5423038	MBLK	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Arsenic	5	0.4	5	U	
CCB2	Date: 03-Jan-2020 12:30		Seq: 5423049	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Arsenic	2	0.4	2	U	
CCB3	Date: 03-Jan-2020 13:00		Seq: 5423035	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Arsenic	2	0.4	2	U	
ICCB4	Date: 03-Jan-2020 14:23		Seq: 5423156	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Arsenic	5	0.4	5	U	
CCB5	Date: 03-Jan-2020 14:52		Seq: 5423168	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Arsenic	2	0.4	2	U	
CCB6	Date: 03-Jan-2020 15:19		Seq: 5423223	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Arsenic	2	0.4	2	U	
CCB8	Date: 03-Jan-2020 15:45		Seq: 5428366	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Arsenic	2	0.4	2	U	
CCB7	Date: 03-Jan-2020 15:45		Seq: 5423227	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Arsenic	2	0.4	2	U	
CCB9	Date: 03-Jan-2020 16:19		Seq: 5428369	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Arsenic	2	0.4	2	U	

ALS Houston, US Date: 08-Jan-20

Form 4 - ICP Interference Check Sample

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
WorkOrder: HS19121257

Run ID: ICPMS05_353764
Instrument: ICPMS05
Method: SW6020

ICSA	Date: 03-Jan-2020 11:30	Seq: 5422283	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Arsenic		0.024	0	

ICSAB	Date: 03-Jan-2020 11:33	Seq: 5422284	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Arsenic	100	109.7	110	

ALS Houston, US Date: 08-Jan-20

Form 5A - Matrix Spike/Matrix Spike Duplicate Recovery

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
WorkOrder: HS19121257

Date Analyzed: 03-Jan-2020 12:17
Date Extracted: 27-Dec-2019 13:00
Units: ug/L

Matrix Spike: HS19121036-01MS
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	MS Result	Spike Amount	% Rec	MSD Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Arsenic	5.000	49.54	50.00	99.1	48.23	50.00	96.5	84-116	2.68	20

ALS Houston, US Date: 08-Jan-20

Form 5B - Post Digest Sample Recovery

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
WorkOrder: HS19121257

Date Analyzed: 03-Jan-2020 12:19
Date Extracted: 27-Dec-2019 13:00
Units: ug/L

Lab Sample ID: HS19121036-01PDS
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	PDS Result	Spike Amount	% Rec	% Rec Limits
Arsenic	0	98.11	100	98	80-120

ALS Houston, US Date: 08-Jan-20

Form 7 - Laboratory Control Sample

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
WorkOrder: HS19121257

Date Analyzed: 03-Jan-2020 12:03
Date Extracted: 27-Dec-2019 13:00
Units: ug/L

Lab Sample ID: LCS-149161 Analysis Method: SW6020

Analyte	Spike Amount	LCS Result	% Rec	% Rec Limits
Arsenic	50	50.72	101	84-116

ALS Houston, US Date: 08-Jan-20

Form 8 - ICP Serial Dilutions

Client: Bhate Environmental Associates, Inc.
Project: LHAAP/SITE58
WorkOrder: HS19121257

Date Analyzed: 03-Jan-2020 12:12
Date Extracted: 27-Dec-2019 13:00
Units: ug/L

Lab Sample ID: HS19121036-01SD
Client Sample ID:

Analysis Method: SW6020

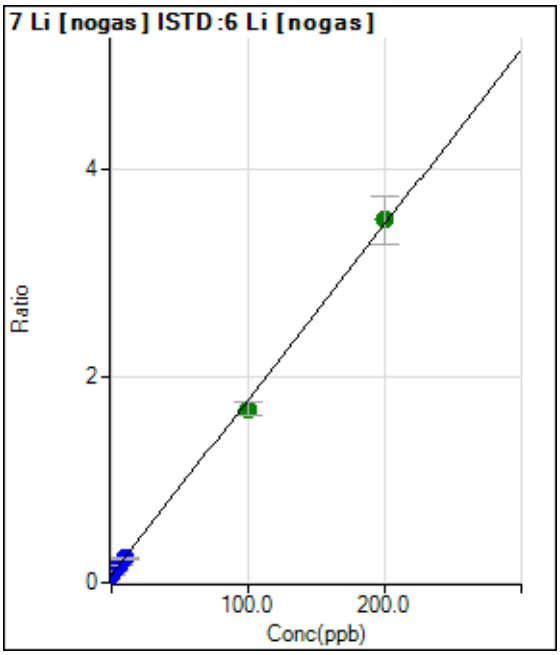
Analyte	Sample Result	C	SD Result	C	RPD	Q
Arsenic	0	U	0	U	0	

Calibration for 163_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\010320A.b\
Analysis File: 010320A.batch.bin
DA Date-Time: 1/6/2020 8:24:45 AM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	153CALB.d	CAL BLK	1/3/2020 8:58:18 PM
2	154CALS.d	2/10/200	1/3/2020 9:00:32 PM
3	155CALS.d	5/25/500	1/3/2020 9:02:49 PM
4	156CALS.d	10/50/1000	1/3/2020 9:05:04 PM
5	157CALS.d	100/500/10K	1/3/2020 9:07:18 PM
6	158CALS.d	200/1000/20K	1/3/2020 9:09:30 PM
7			

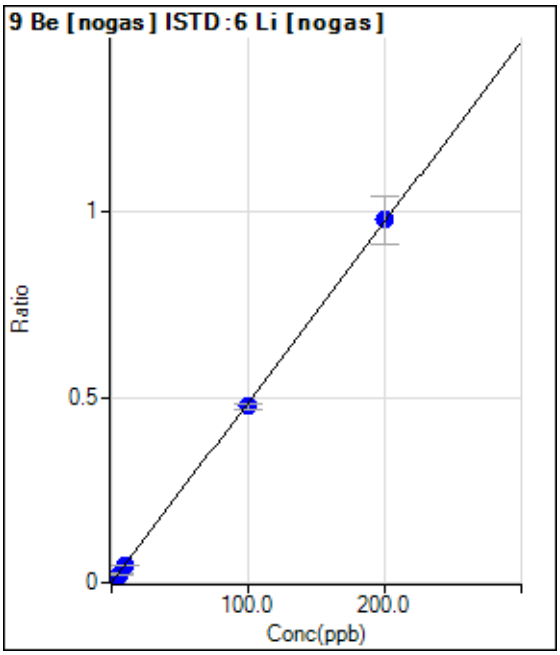
Calibration for 163_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	87724.13	0.0762	P	3.4
2	☐	2.000	1.894	123984.27	0.1083	P	3.4
3	☐	5.000	4.943	176028.98	0.1600	P	1.9
4	☐	10.000	9.260	258496.92	0.2333	P	1.3
5	☐	100.000	94.822	1801984.50	1.6847	A	7.3
6	☐	200.000	202.629	3542933.38	3.5136	A	13.5
7	☐	1.000					

y = 0.0170 * x + 0.0762
R = 0.9995
DL = 0.4636
BEC = 4.491

Weight: <None>
Min Conc: <None>

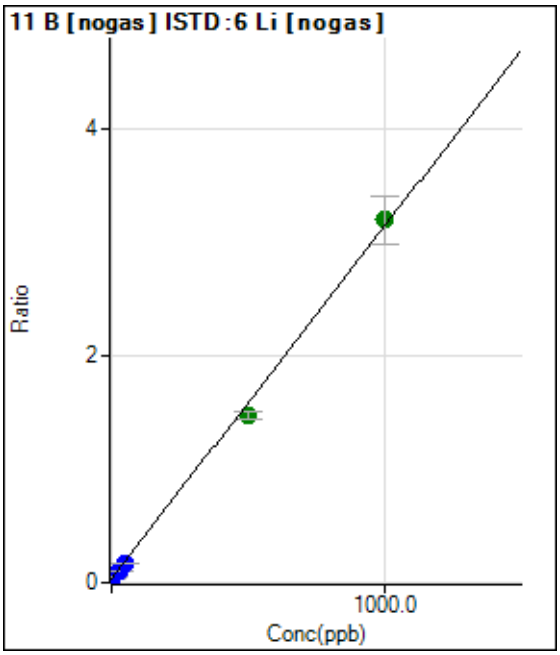


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	78.5
2	☐	2.000	1.851	10311.19	0.0090	P	3.8
3	☐	5.000	4.746	25386.77	0.0231	P	3.1
4	☐	10.000	9.467	50990.39	0.0460	P	3.0
5	☐	100.000	97.765	508490.11	0.4752	P	3.7
6	☐	200.000	201.152	985846.65	0.9776	P	13.5
7	☐	1.000					

y = 0.0049 * x + 1.1629E-005
R = 0.9999
DL = 0.005636
BEC = 0.002393

Weight: <None>
Min Conc: <None>

Calibration for 163_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40018.10	0.0347	P	1.3
2	☐	10.000	8.021	68281.90	0.0597	P	5.4
3	☐	25.000	21.726	112553.21	0.1023	P	0.9
4	☐	50.000	42.733	185734.98	0.1676	P	3.0
5	☐	500.000	464.312	1581944.61	1.4787	A	5.1
6	☐	1000.000	1018.309	3230079.22	3.2016	A	13.0
7	☐	5.000					

y = 0.0031 * x + 0.0347

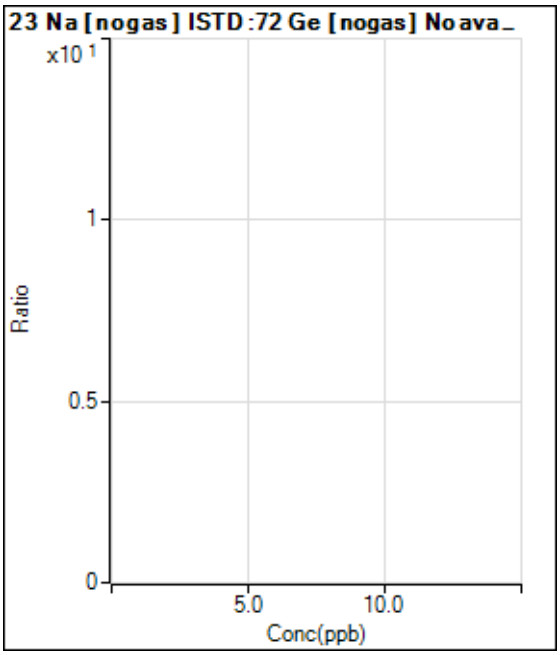
R = 0.9991

DL = 0.4211

BEC = 11.17

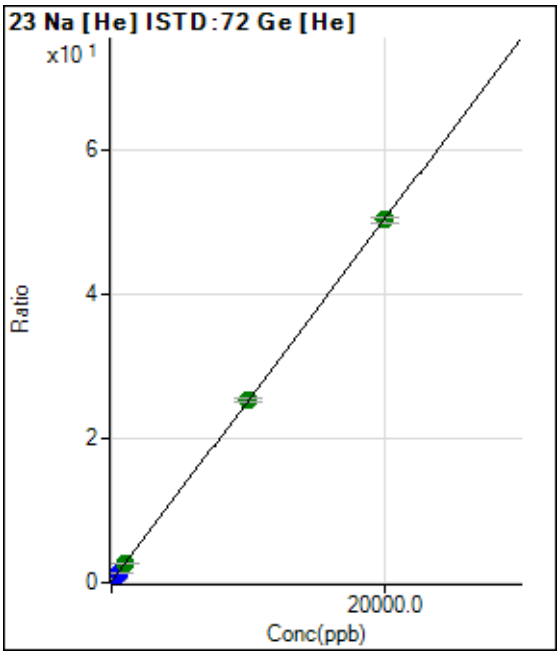
Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

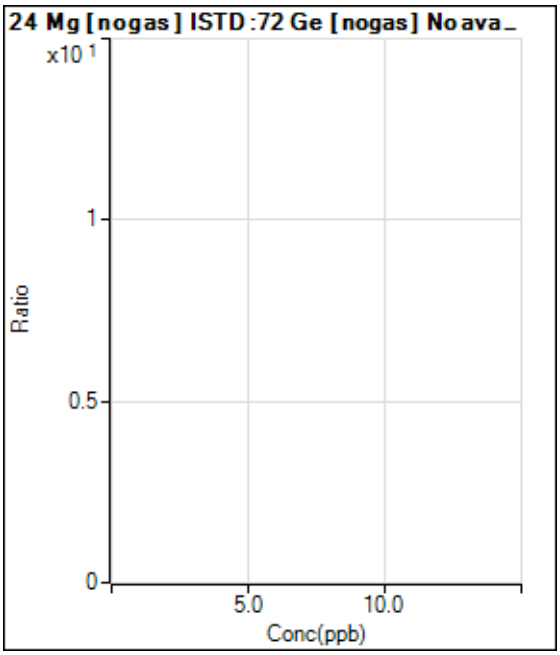
Calibration for 163_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	58376.64	0.1367	P	4.2
2	☐	200.000	207.662	283817.67	0.6573	P	1.9
3	☐	500.000	507.643	624102.73	1.4093	P	2.3
4	☐	1000.000	989.493	1163948.76	2.6173	A	1.3
5	☐	10000.000	10050.125	10847119.42	25.3315	A	1.5
6	☐	20000.000	19975.195	20952284.69	50.2129	A	1.7
7	☐	100.000					

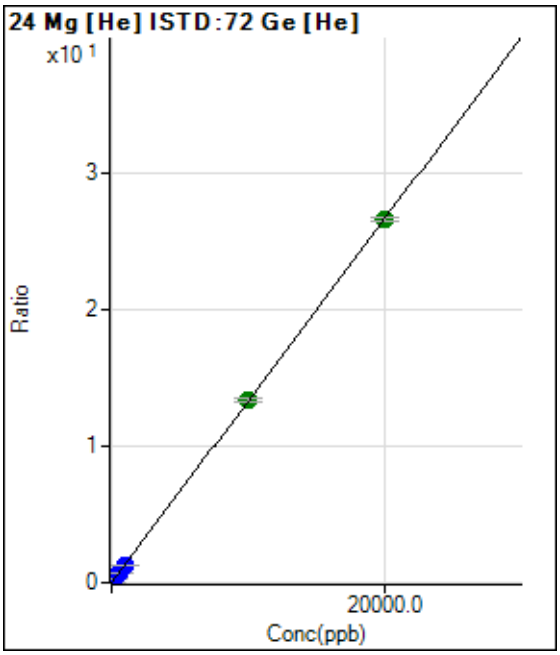
y = 0.0025 * x + 0.1367
R = 1.0000
DL = 6.819
BEC = 54.52

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

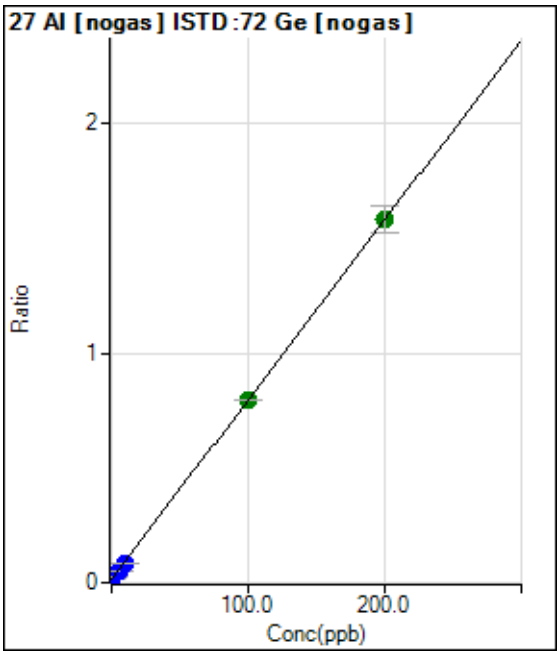
Calibration for 163_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	446.68	0.0010	P	27.5
2	☐	200.000	210.559	121737.65	0.2819	P	1.8
3	☐	500.000	518.513	306749.28	0.6927	P	2.6
4	☐	1000.000	988.973	587159.82	1.3203	P	1.5
5	☐	10000.000	10086.933	5761743.04	13.4563	A	2.1
6	☐	20000.000	19956.517	11108640.25	26.6217	A	1.1
7	☐	100.000					

y = 0.0013 * x + 0.0010
R = 1.0000
DL = 0.6472
BEC = 0.7834

Weight: <None>
Min Conc: <None>

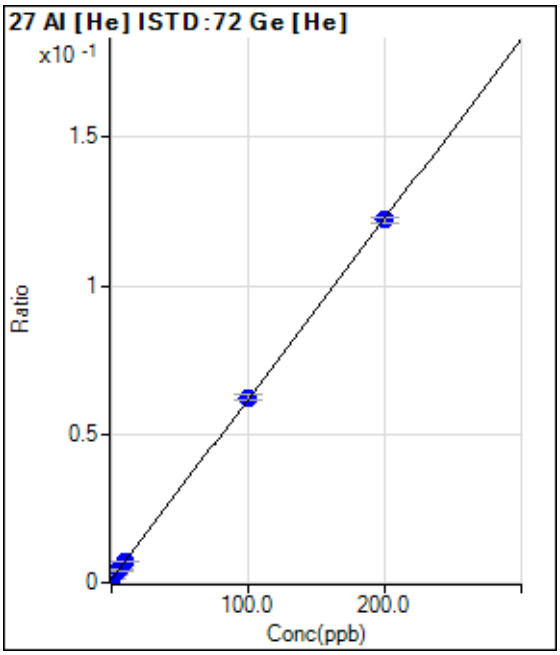


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26408.65	0.0145	P	4.2
2	☐	2.000	1.900	55094.24	0.0294	P	0.5
3	☐	5.000	4.553	94377.07	0.0501	P	3.6
4	☐	10.000	9.210	167487.39	0.0866	P	1.4
5	☐	100.000	99.850	1463238.26	0.7963	A	0.7
6	☐	200.000	200.127	2930362.04	1.5814	A	7.4
7	☐	1.000					

y = 0.0078 * x + 0.0145
R = 1.0000
DL = 0.2305
BEC = 1.849

Weight: <None>
Min Conc: <None>

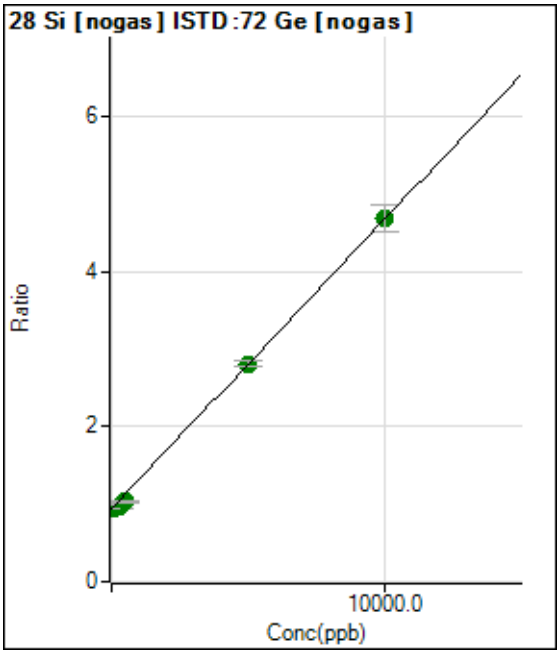
Calibration for 163_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	490.01	0.0011	P	12.6
2	☐	2.000	2.154	1060.04	0.0025	P	10.7
3	☐	5.000	5.390	1956.80	0.0044	P	12.3
4	☐	10.000	9.897	3180.32	0.0072	P	4.8
5	☐	100.000	100.896	26695.83	0.0623	P	2.8
6	☐	200.000	199.546	50985.40	0.1222	P	1.7
7	☐	1.000					

y = 6.0657E-004 * x + 0.0011
R = 1.0000
DL = 0.7182
BEC = 1.893

Weight: <None>
Min Conc: <None>

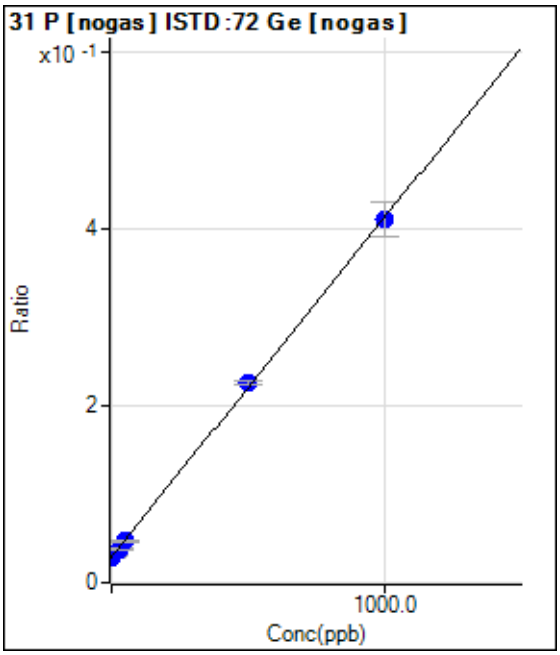


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1721372.06	0.9438	A	2.1
2	☐	100.000	13.626	1781249.30	0.9489	A	1.8
3	☐	250.000	64.688	1824592.26	0.9680	A	4.2
4	☐	500.000	256.927	2011112.73	1.0398	A	2.0
5	☐	5000.000	5013.415	5175372.32	2.8166	A	2.2
6	☐	10000.000	10010.942	8676827.79	4.6835	A	7.6
7	☐	50.000					

y = 3.7356E-004 * x + 0.9438
R = 0.9998
DL = 160.6
BEC = 2527

Weight: <None>
Min Conc: <None>

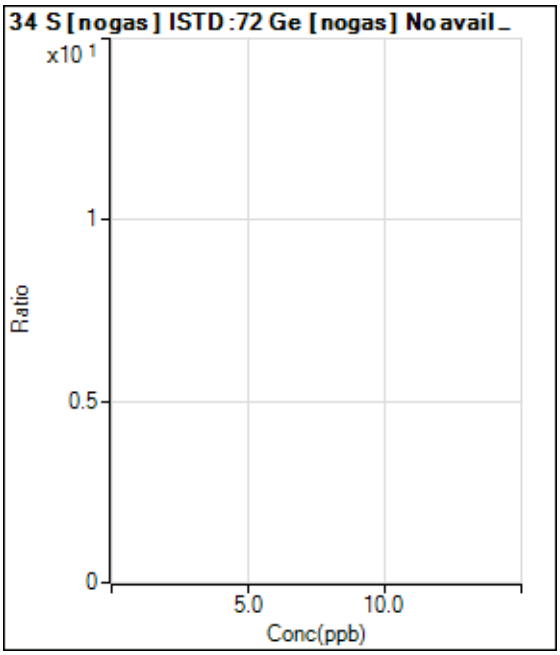
Calibration for 163_ICV.d



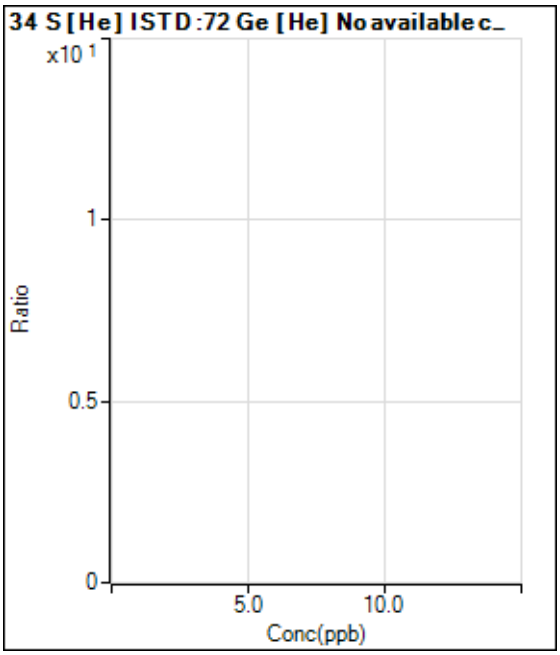
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	53168.23	0.0291	P	1.1
2	☐	10.000	6.900	59671.21	0.0318	P	2.4
3	☐	25.000	22.978	71498.30	0.0380	P	3.2
4	☐	50.000	47.009	91295.75	0.0472	P	2.3
5	☐	500.000	514.668	416731.58	0.2268	P	2.0
6	☐	1000.000	992.897	759578.77	0.4105	P	9.4
7	☐	5.000					

y = 3.8405E-004 * x + 0.0291
R = 0.9998
DL = 2.431
BEC = 75.89

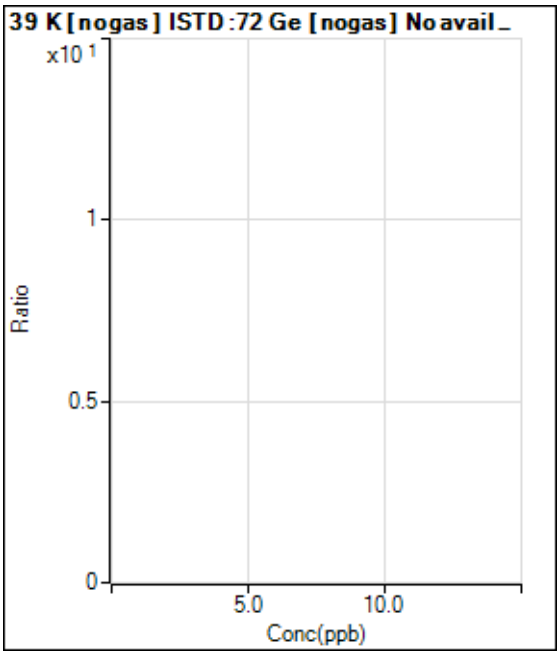
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	400.000					
3	☐	1000.000					
4	☐	2000.000					
5	☐	20000.000					
6	☐	40000.000					
7	☐	200.000					

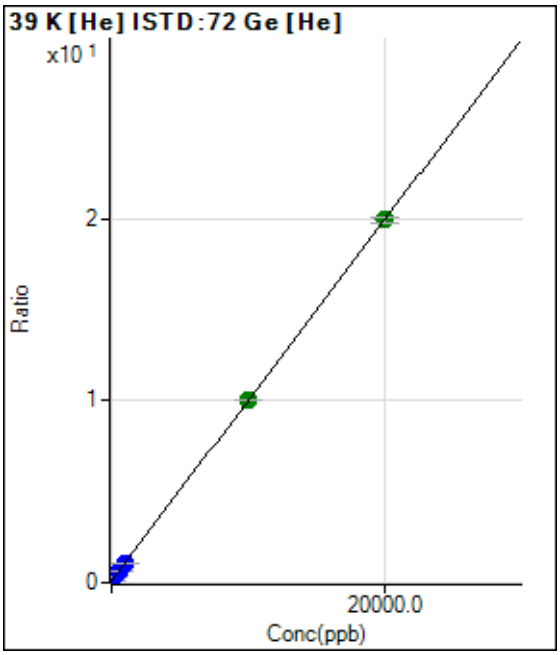


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	400.000					
3	☐	1000.000					
4	☐	2000.000					
5	☐	20000.000					
6	☐	40000.000					
7	☐	200.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

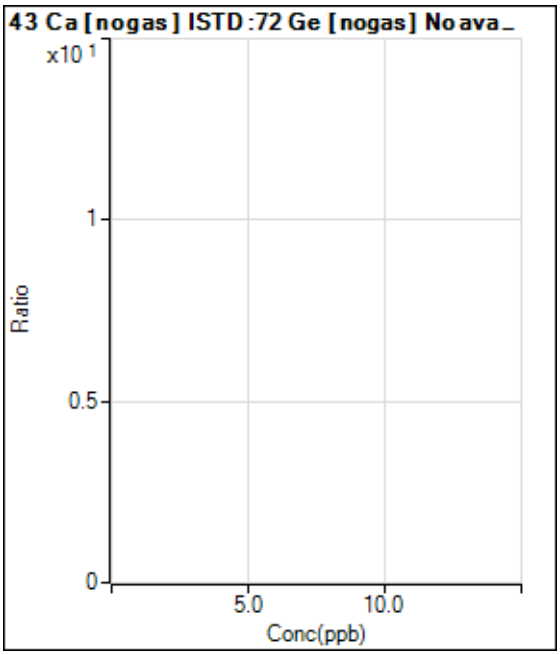
Calibration for 163_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	49572.42	0.1160	P	1.9
2	☐	200.000	203.565	137229.64	0.3178	P	2.6
3	☐	500.000	497.246	269665.32	0.6090	P	2.7
4	☐	1000.000	964.491	476833.74	1.0722	P	0.6
5	☐	10000.000	10009.320	4298711.39	10.0390	A	0.4
6	☐	20000.000	19997.149	8320702.38	19.9407	A	1.9
7	☐	100.000					

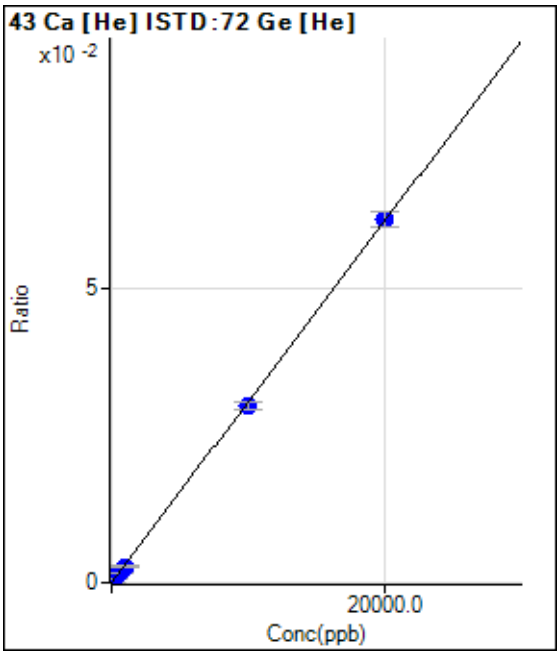
y = 9.9137E-004 * x + 0.1160
R = 1.0000
DL = 6.742
BEC = 117

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

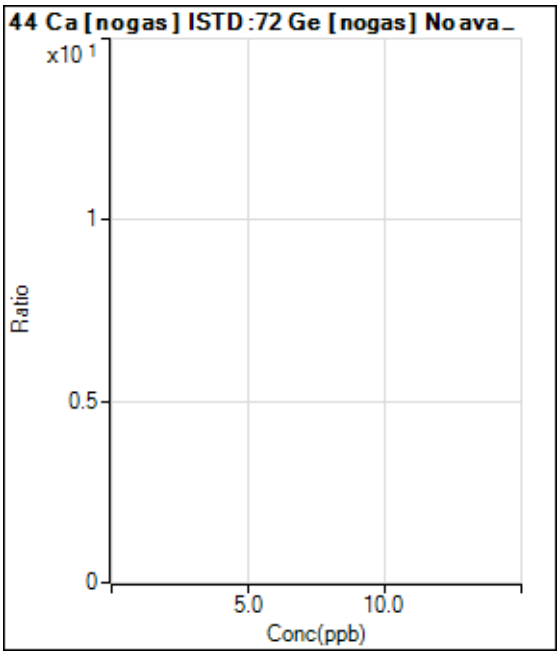
Calibration for 163_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	1.3
2	☐	200.000	196.776	280.01	0.0006	P	18.9
3	☐	500.000	503.312	703.36	0.0016	P	9.5
4	☐	1000.000	872.592	1206.73	0.0027	P	12.9
5	☐	10000.000	9823.218	12874.60	0.0301	P	4.6
6	☐	20000.000	20094.711	25641.18	0.0615	P	4.2
7	☐	100.000					

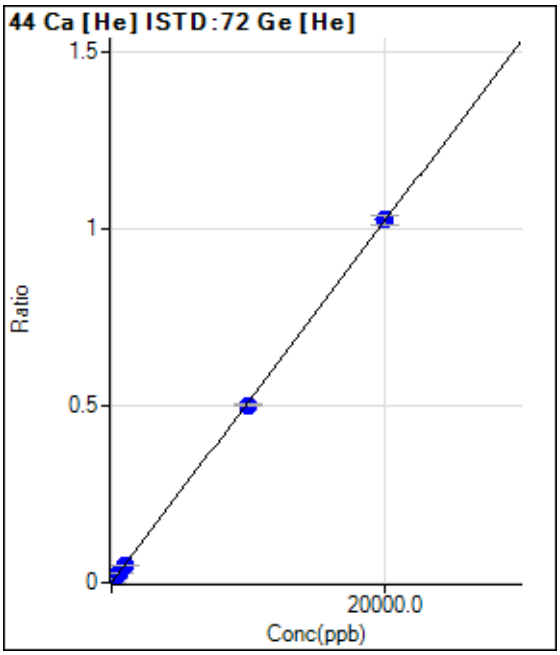
y = 3.0565E-006 * x + 4.6816E-005
R = 0.9999
DL = 0.5776
BEC = 15.32

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

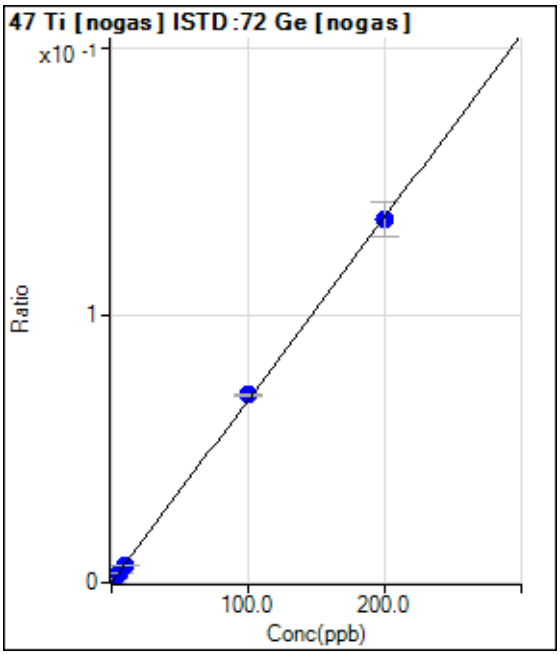
Calibration for 163_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	203.34	0.0005	P	6.4
2	☐	200.000	205.812	4734.00	0.0110	P	2.0
3	☐	500.000	496.741	11413.66	0.0258	P	4.6
4	☐	1000.000	973.408	22263.50	0.0501	P	1.6
5	☐	10000.000	9823.560	214467.01	0.5009	P	1.7
6	☐	20000.000	20089.573	427160.79	1.0238	P	2.6
7	☐	100.000					

y = 5.0939E-005 * x + 4.7570E-004
R = 0.9999
DL = 1.78
BEC = 9.338

Weight: <None>
Min Conc: <None>

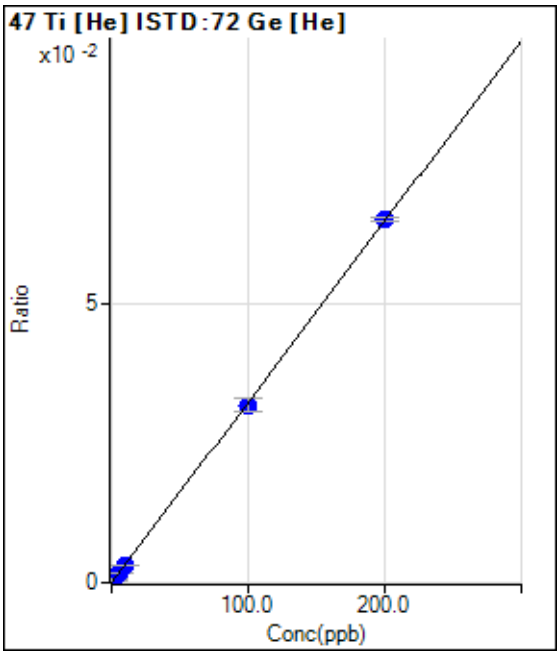


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	76.67	0.0000	P	38.9
2	☐	2.000	1.984	2620.24	0.0014	P	8.9
3	☐	5.000	5.043	6571.26	0.0035	P	4.4
4	☐	10.000	9.387	12484.34	0.0065	P	2.2
5	☐	100.000	102.771	129027.61	0.0702	P	1.6
6	☐	200.000	198.644	251128.90	0.1357	P	9.4
7	☐	1.000					

y = 6.8289E-004 * x + 4.1943E-005
R = 0.9999
DL = 0.07166
BEC = 0.06142

Weight: <None>
Min Conc: <None>

Calibration for 163_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	2.000	1.749	243.34	0.0006	P	32.4
3	☐	5.000	5.501	786.70	0.0018	P	10.6
4	☐	10.000	9.482	1363.40	0.0031	P	7.4
5	☐	100.000	98.276	13605.17	0.0318	P	7.0
6	☐	200.000	200.878	27106.69	0.0650	P	0.9
7	☐	1.000					

y = 3.2337E-004 * x + 0.0000E+000

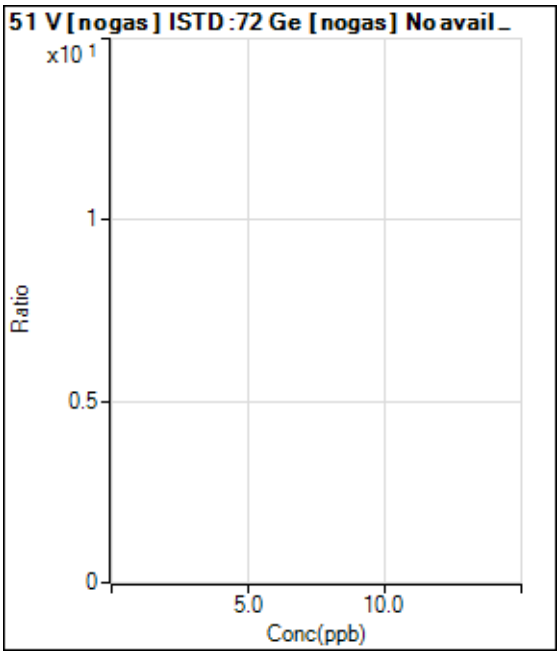
R = 0.9999

DL = 0

BEC = 0

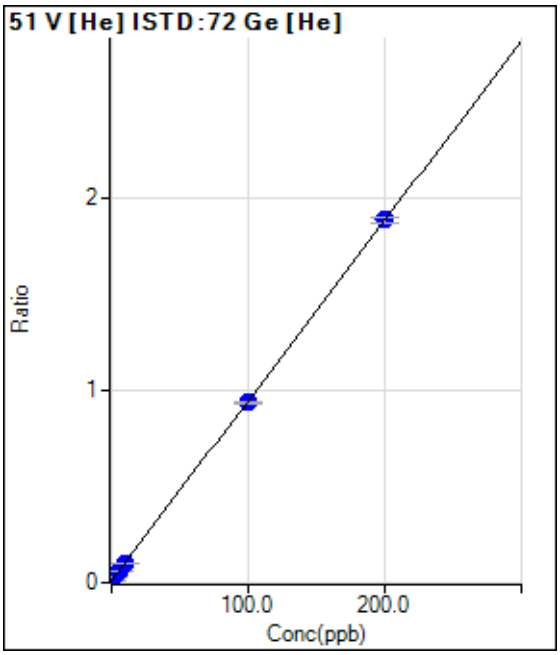
Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

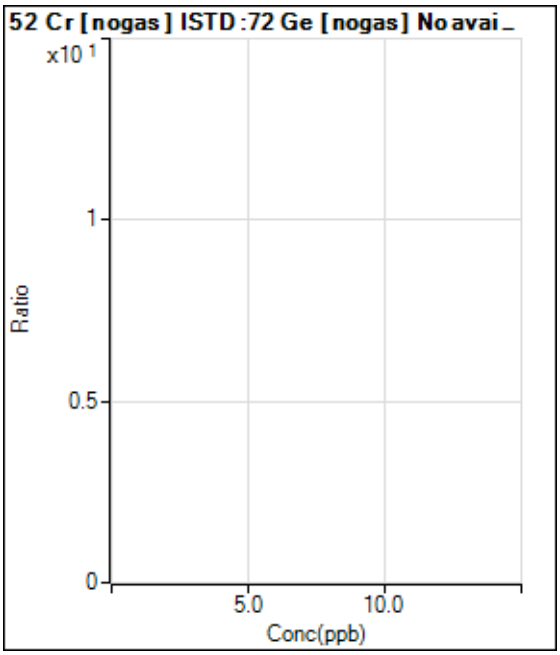
Calibration for 163_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4408.32	0.0103	P	2.1
2	☐	2.000	1.984	12456.42	0.0288	P	1.1
3	☐	5.000	5.081	25569.75	0.0578	P	5.9
4	☐	10.000	9.516	44114.33	0.0992	P	1.5
5	☐	100.000	98.967	400211.49	0.9346	P	0.7
6	☐	200.000	200.539	785814.21	1.8832	P	1.4
7	☐	1.000					

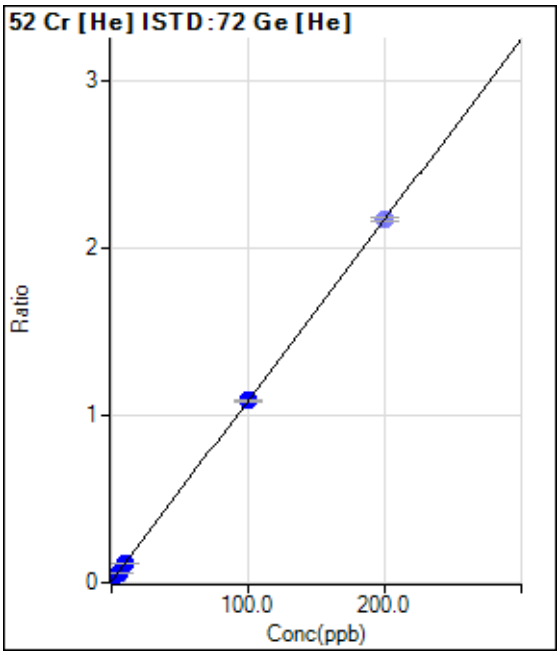
y = 0.0093 * x + 0.0103
R = 1.0000
DL = 0.06802
BEC = 1.105

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

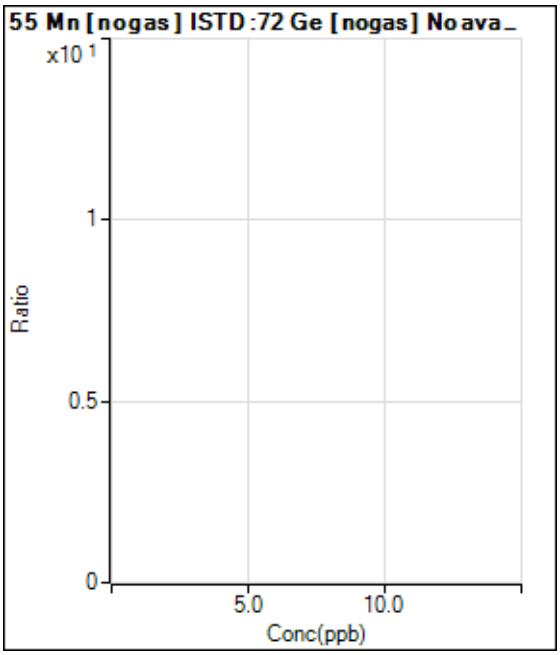
Calibration for 163_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3393.70	0.0079	P	8.6
2	☐	2.000	2.027	12901.33	0.0299	P	3.8
3	☐	5.000	5.022	27583.98	0.0623	P	0.7
4	☐	10.000	9.963	51468.42	0.1157	P	2.0
5	☐	100.000	100.002	466640.23	1.0898	P	1.1
6	☑	200.000		905910.09	2.1709	P	0.9
7	☐	1.000					

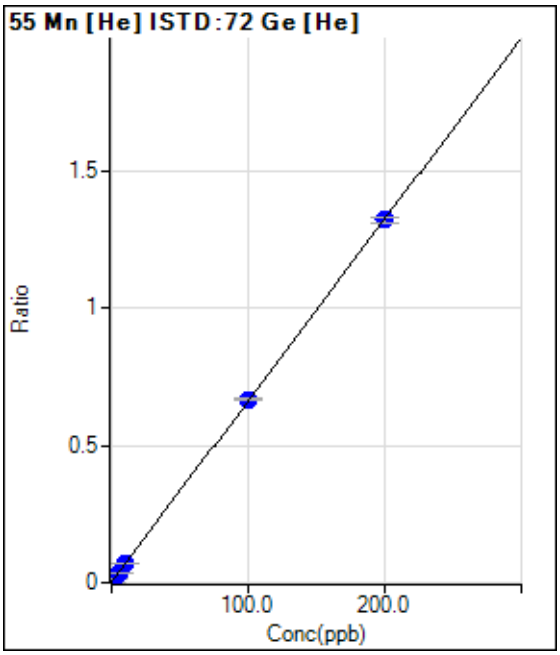
y = 0.0108 * x + 0.0079
R = 1.0000
DL = 0.1896
BEC = 0.7348

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

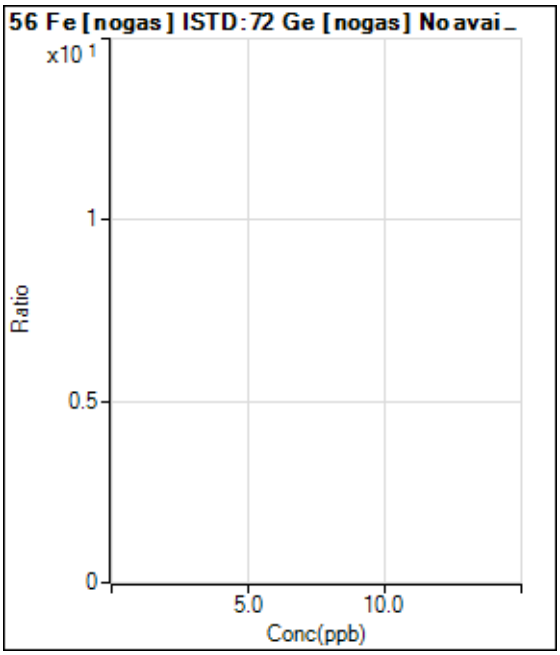
Calibration for 163_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	963.37	0.0023	P	12.3
2	☐	2.000	1.939	6517.93	0.0151	P	4.5
3	☐	5.000	5.152	16093.92	0.0363	P	3.1
4	☐	10.000	10.005	30442.07	0.0684	P	1.0
5	☐	100.000	100.504	285697.32	0.6672	P	1.0
6	☐	200.000	199.745	552355.13	1.3238	P	1.6
7	☐	1.000					

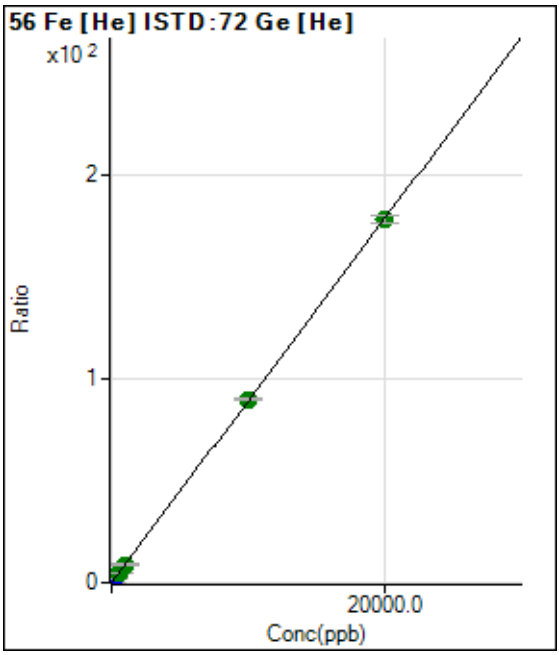
y = 0.0066 * x + 0.0023
R = 1.0000
DL = 0.1255
BEC = 0.341

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

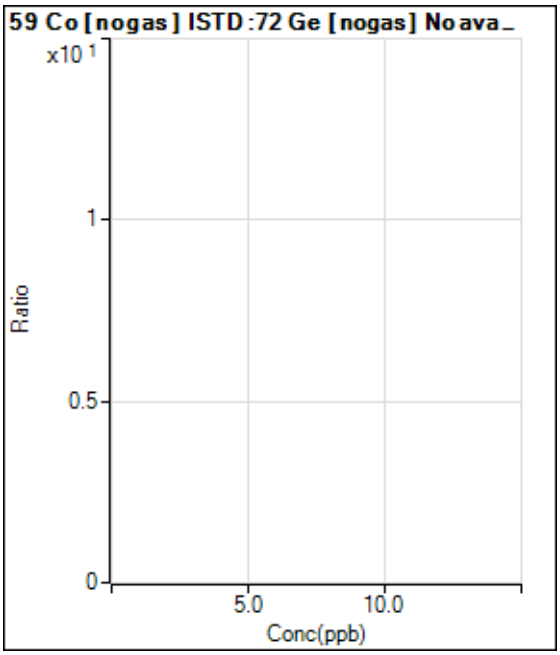
Calibration for 163_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8145.24	0.0191	P	3.5
2	☐	200.000	207.361	807457.59	1.8696	P	0.9
3	☐	500.000	527.468	2092660.28	4.7262	A	3.4
4	☐	1000.000	1000.379	3978788.28	8.9464	A	0.7
5	☐	10000.000	10094.947	38584847.76	90.1061	A	1.0
6	☐	20000.000	19951.747	74297595.56	178.0678	A	2.0
7	☐	100.000					

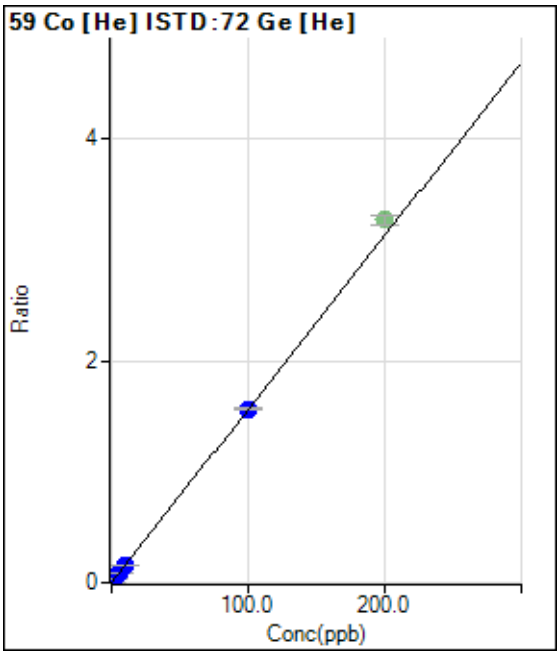
y = 0.0089 * x + 0.0191
R = 1.0000
DL = 0.2222
BEC = 2.137

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

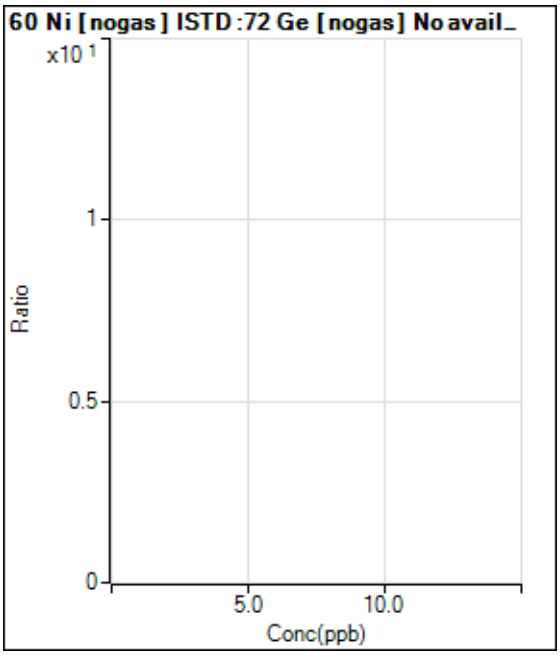
Calibration for 163_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	43.33	0.0001	P	48.3
2	☐	2.000	2.129	14425.87	0.0334	P	1.8
3	☐	5.000	5.151	35735.08	0.0807	P	1.7
4	☐	10.000	9.899	68921.93	0.1550	P	1.3
5	☐	100.000	100.000	669989.05	1.5646	P	0.9
6	☑	200.000		1366010.92	3.2738	A	2.3
7	☐	1.000					

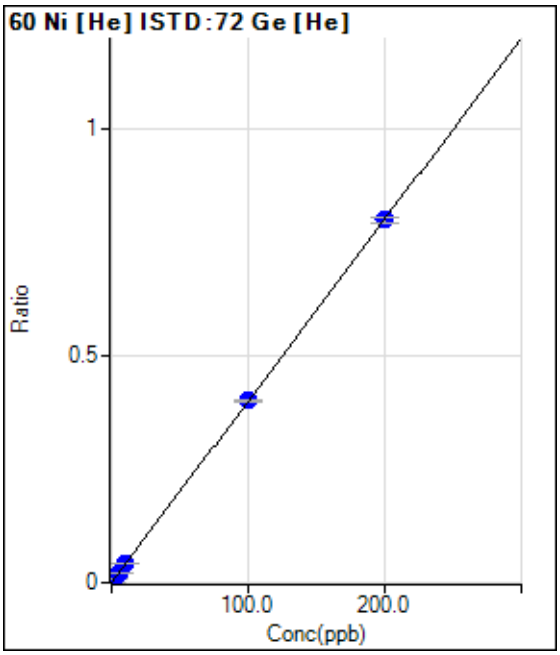
y = 0.0156 * x + 1.0167E-004
R = 1.0000
DL = 0.009421
BEC = 0.006498

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

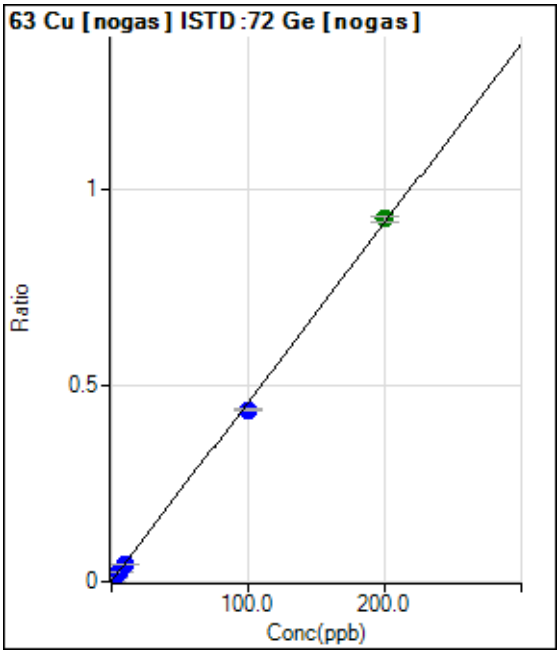
Calibration for 163_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	103.33	0.0002	P	16.1
2	☐	2.000	2.137	3790.45	0.0088	P	5.9
3	☐	5.000	5.427	9709.37	0.0219	P	2.5
4	☐	10.000	10.100	18042.43	0.0406	P	1.1
5	☐	100.000	100.144	171317.42	0.4001	P	0.9
6	☐	200.000	199.911	333134.71	0.7984	P	1.8
7	☐	1.000					

y = 0.0040 * x + 2.4218E-004
R = 1.0000
DL = 0.02926
BEC = 0.06066

Weight: <None>
Min Conc: <None>

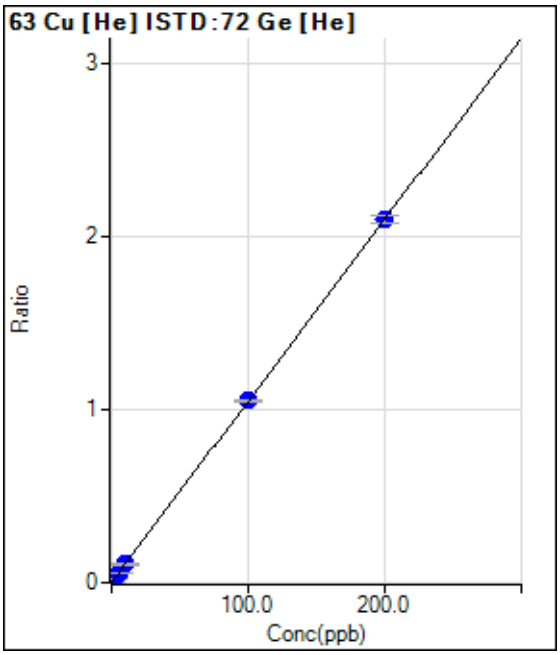


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1990.14	0.0011	P	1.6
2	☐	2.000	1.920	18479.54	0.0098	P	1.2
3	☐	5.000	4.790	43197.74	0.0229	P	0.9
4	☐	10.000	9.239	83592.64	0.0432	P	1.3
5	☐	100.000	95.574	802772.96	0.4369	P	1.5
6	☐	200.000	202.257	1719703.31	0.9233	A	1.7
7	☐	1.000					

y = 0.0046 * x + 0.0011
R = 0.9997
DL = 0.01176
BEC = 0.2393

Weight: <None>
Min Conc: <None>

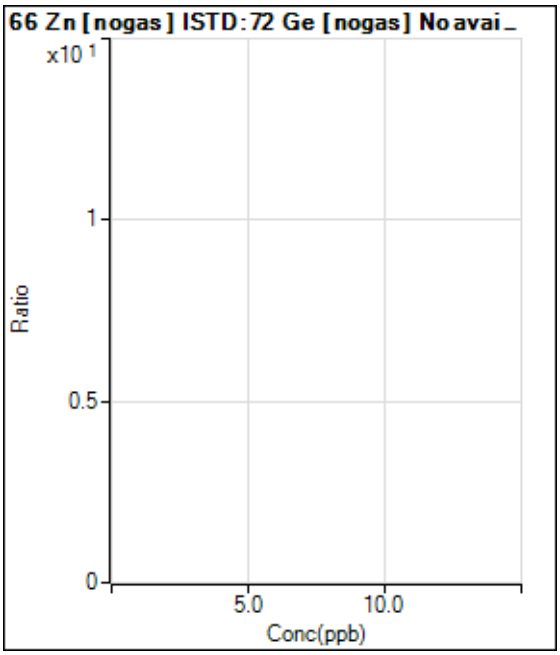
Calibration for 163_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	616.69	0.0014	P	10.6
2	☐	2.000	2.044	9862.76	0.0228	P	2.6
3	☐	5.000	5.044	24025.97	0.0543	P	4.8
4	☐	10.000	10.013	47261.13	0.1063	P	2.6
5	☐	100.000	100.122	449467.82	1.0496	P	0.6
6	☐	200.000	199.937	873970.90	2.0946	P	2.0
7	☐	1.000					

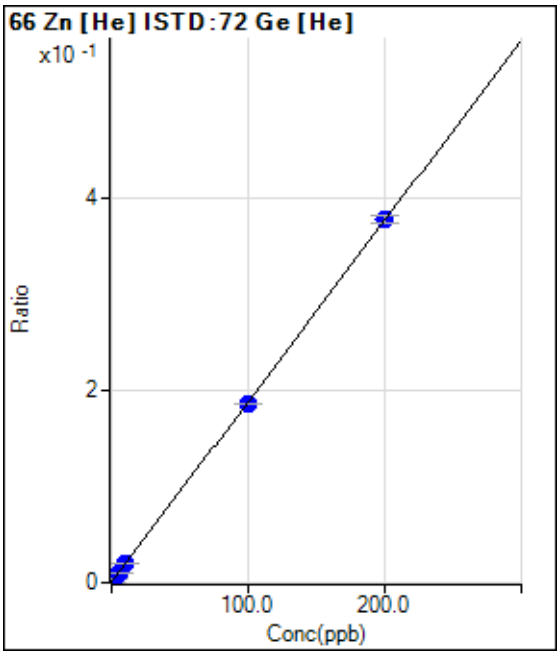
y = 0.0105 * x + 0.0014
R = 1.0000
DL = 0.04371
BEC = 0.138

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

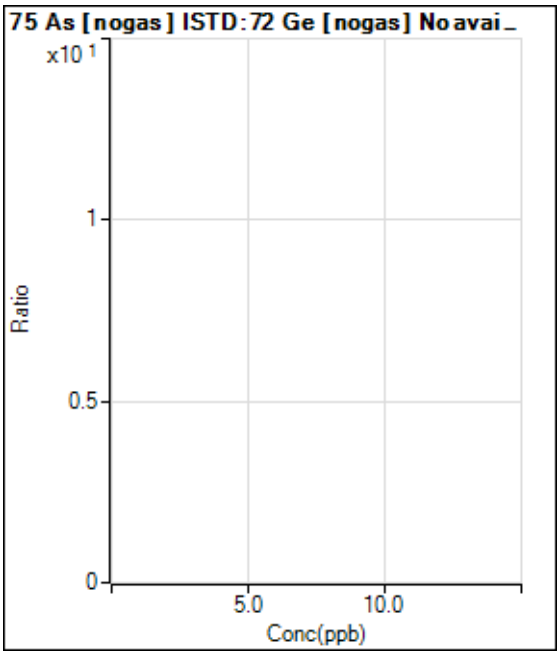
Calibration for 163_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	250.01	0.0006	P	17.6
2	☐	2.000	2.054	1920.13	0.0044	P	8.6
3	☐	5.000	5.157	4547.30	0.0103	P	13.8
4	☐	10.000	10.048	8665.50	0.0195	P	3.4
5	☐	100.000	98.856	79873.41	0.1865	P	0.5
6	☐	200.000	200.565	157656.34	0.3779	P	2.0
7	☐	1.000					

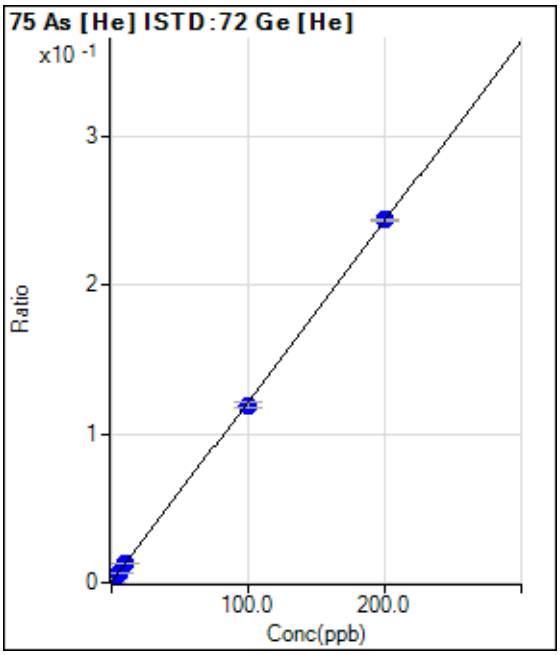
y = 0.0019 * x + 5.8476E-004
R = 1.0000
DL = 0.1643
BEC = 0.3109

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

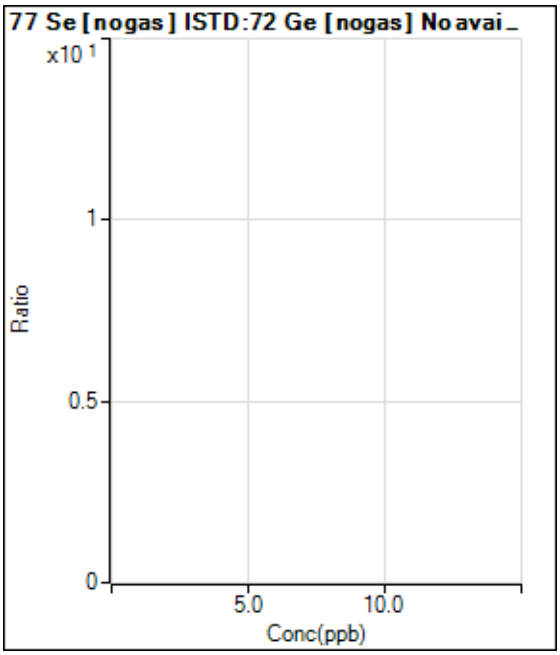
Calibration for 163_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	106.67	0.0002	P	29.6
2	☐	2.000	1.942	1125.59	0.0026	P	3.6
3	☐	5.000	4.899	2742.44	0.0062	P	1.0
4	☐	10.000	10.079	5547.53	0.0125	P	2.5
5	☐	100.000	98.259	51143.69	0.1194	P	3.0
6	☐	200.000	200.870	101776.24	0.2439	P	0.6
7	☐	1.000					

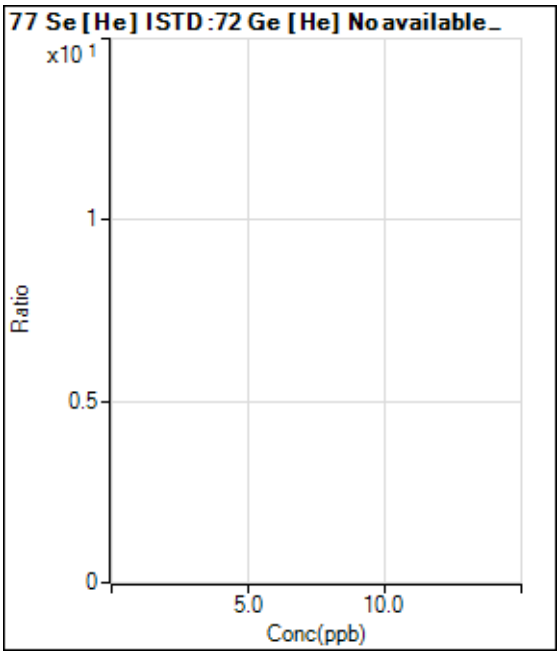
y = 0.0012 * x + 2.4911E-004
R = 0.9999
DL = 0.1826
BEC = 0.2054

Weight: <None>
Min Conc: <None>

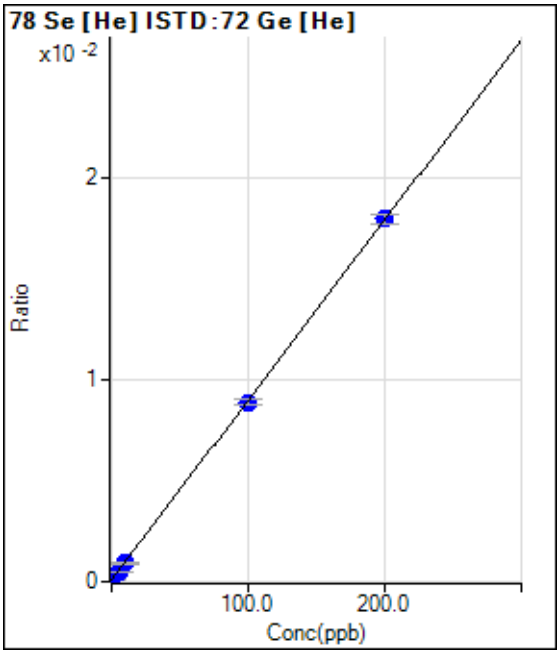


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

Calibration for 163_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.00	0.0001	P	33.8
2	☐	2.000	2.100	117.33	0.0003	P	12.0
3	☐	5.000	4.212	203.33	0.0005	P	8.0
4	☐	10.000	9.282	405.34	0.0009	P	6.3
5	☐	100.000	98.713	3803.74	0.0089	P	3.1
6	☐	200.000	200.698	7498.23	0.0180	P	2.9
7	☐	1.000					

y = 8.9128E-005 * x + 8.4127E-005

R = 1.0000

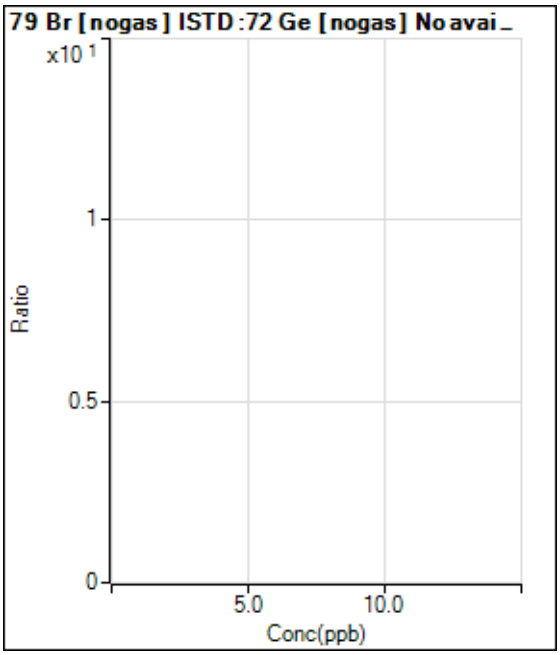
DL = 0.957

BEC = 0.9439

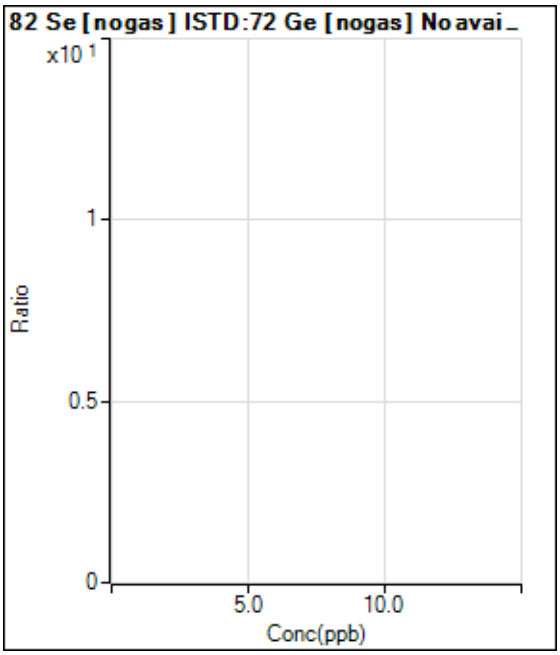
Weight: <None>

Min Conc: <None>

Calibration for 163_ICV.d

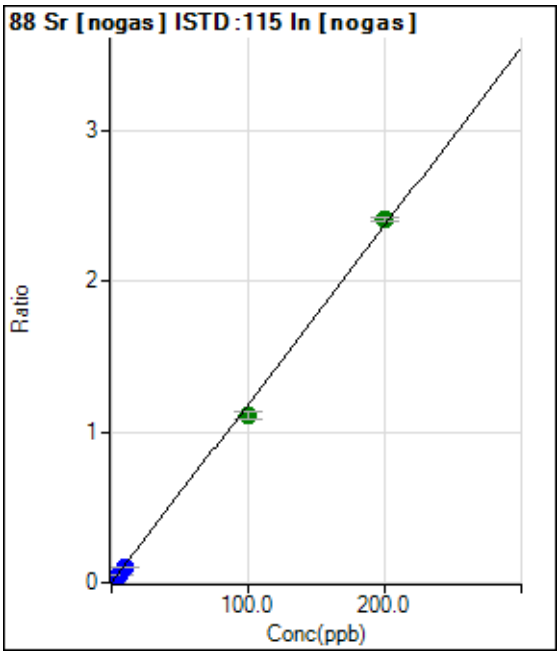


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

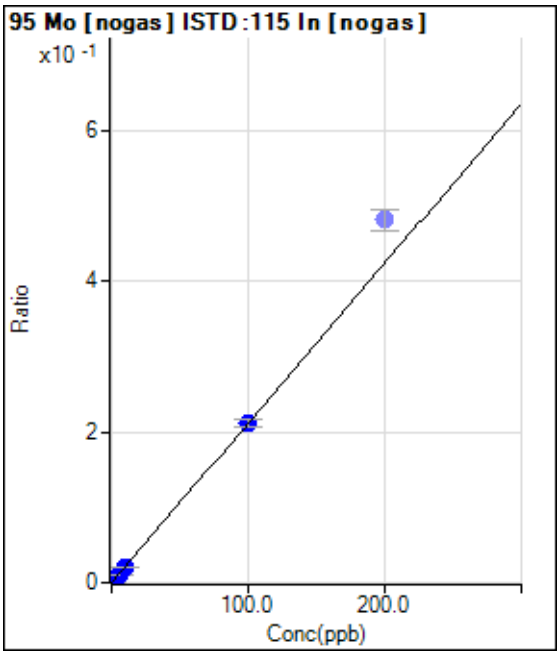
Calibration for 163_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	636.69	0.0003	P	21.9
2	☐	2.000	1.801	39620.76	0.0217	P	1.4
3	☐	5.000	4.602	98870.95	0.0548	P	4.0
4	☐	10.000	8.652	191979.03	0.1027	P	4.5
5	☐	100.000	93.549	1984987.26	1.1068	A	4.6
6	☐	200.000	203.305	3831245.25	2.4049	A	1.0
7	☐	1.000					

y = 0.0118 * x + 3.4549E-004
R = 0.9993
DL = 0.01919
BEC = 0.02921

Weight: <None>
Min Conc: <None>

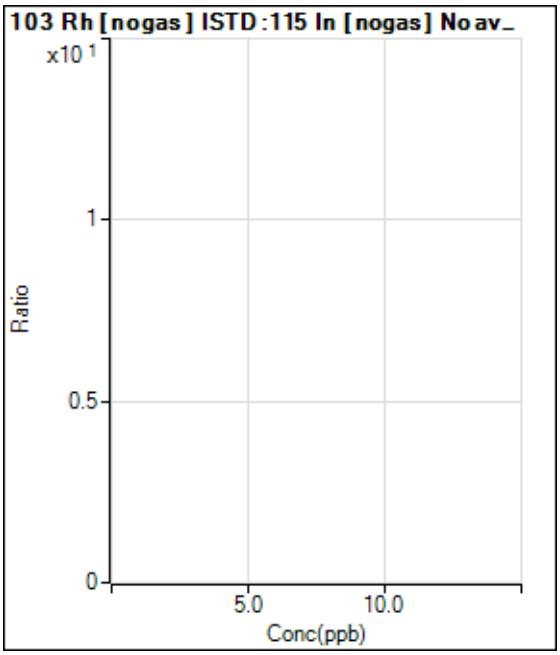


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66.67	0.0000	P	53.0
2	☐	2.000	1.982	7738.45	0.0042	P	4.3
3	☐	5.000	5.128	19651.07	0.0109	P	4.0
4	☐	10.000	9.529	37773.73	0.0202	P	3.3
5	☐	100.000	100.041	379688.10	0.2117	P	3.9
6	☑	200.000		764579.13	0.4808	P	5.9
7	☐	1.000					

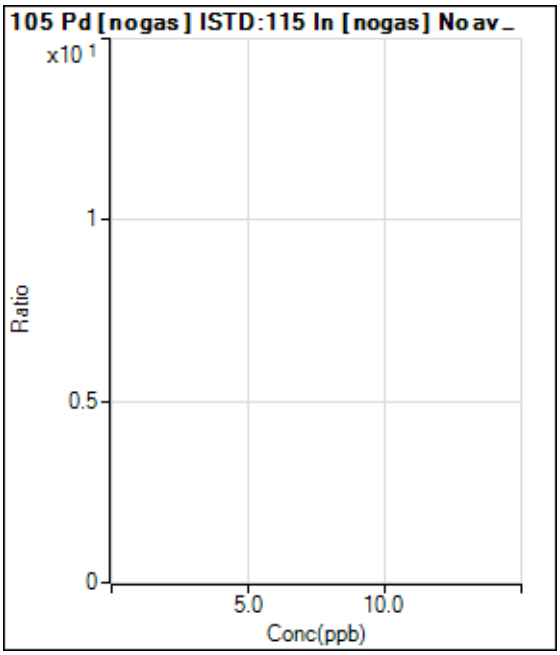
y = 0.0021 * x + 3.6276E-005
R = 1.0000
DL = 0.02726
BEC = 0.01715

Weight: <None>
Min Conc: <None>

Calibration for 163_ICV.d

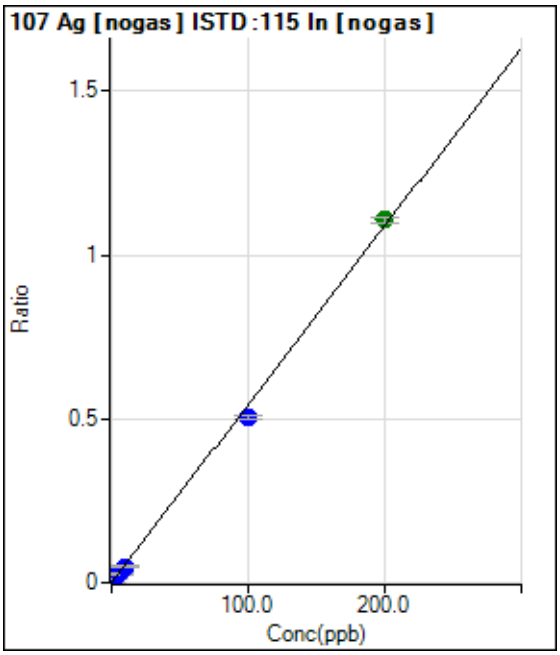


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

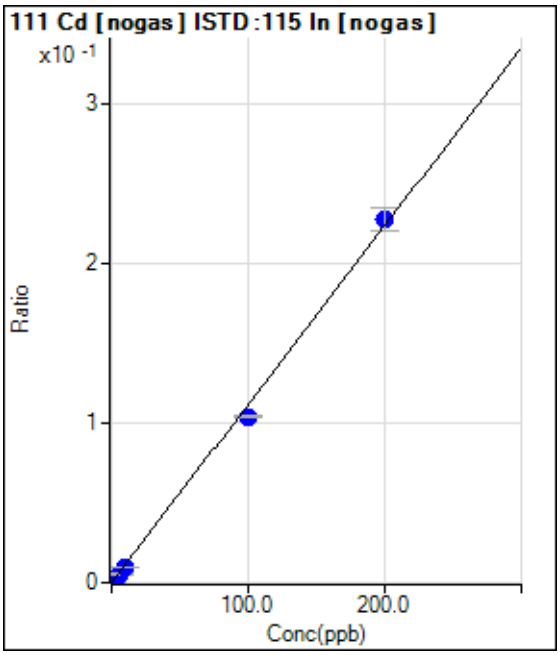
Calibration for 163_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93.33	0.0001	P	6.5
2	☐	2.000	1.907	19050.46	0.0104	P	2.4
3	☐	5.000	4.878	47948.78	0.0266	P	3.4
4	☐	10.000	9.065	92254.35	0.0493	P	2.3
5	☐	100.000	92.925	906192.33	0.5051	P	2.5
6	☐	200.000	203.588	1764151.69	1.1066	A	1.5
7	☐	1.000					

y = 0.0054 * x + 5.0674E-005
R = 0.9991
DL = 0.001806
BEC = 0.009323

Weight: <None>
Min Conc: <None>

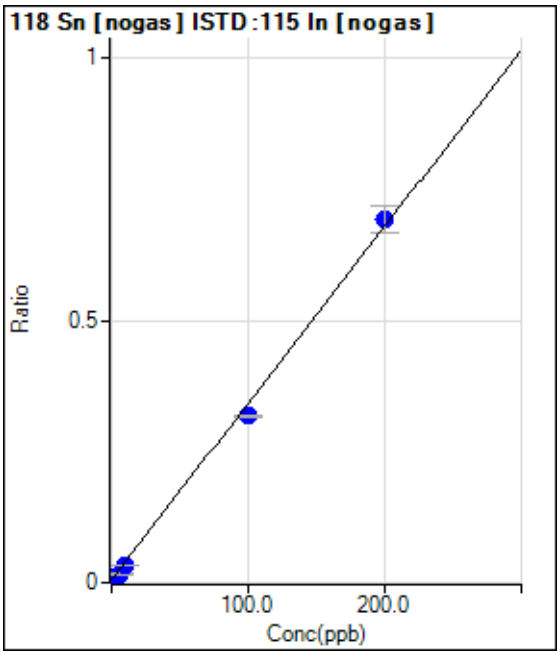


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	86.6
2	☐	2.000	1.806	3703.78	0.0020	P	1.7
3	☐	5.000	4.737	9559.38	0.0053	P	4.8
4	☐	10.000	8.860	18520.02	0.0099	P	3.6
5	☐	100.000	93.211	186843.34	0.1041	P	0.7
6	☐	200.000	203.460	361267.69	0.2272	P	6.2
7	☐	1.000					

y = 0.0011 * x + 7.2124E-006
R = 0.9992
DL = 0.01678
BEC = 0.006458

Weight: <None>
Min Conc: <None>

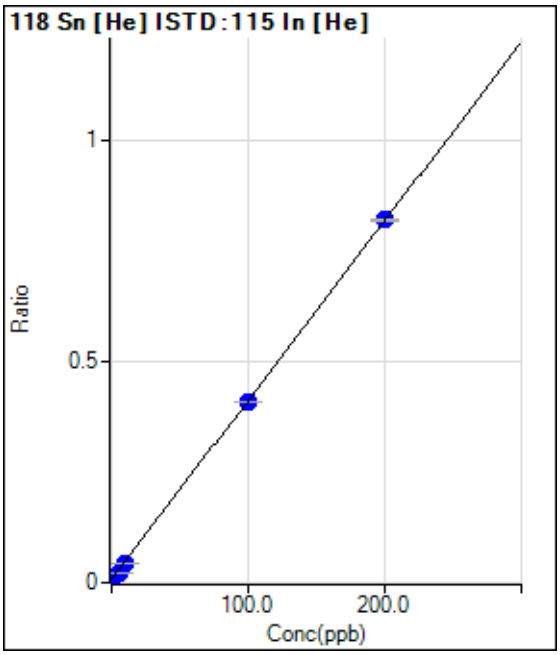
Calibration for 163_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10630.07	0.0058	P	1.2
2	☐	2.000	1.483	19684.99	0.0108	P	0.9
3	☐	5.000	3.146	29498.59	0.0163	P	5.1
4	☐	10.000	8.080	61612.02	0.0329	P	2.8
5	☐	100.000	92.550	568758.17	0.3170	P	1.8
6	☐	200.000	203.872	1098572.61	0.6913	P	7.5
7	☐	1.000					

y = 0.0034 * x + 0.0058
R = 0.9991
DL = 0.0637
BEC = 1.716

Weight: <None>
Min Conc: <None>

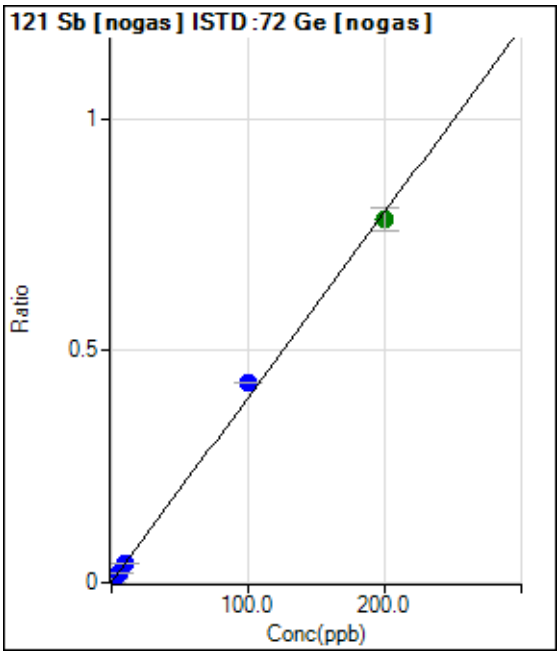


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4490.64	0.0076	P	4.7
2	☐	2.000	1.471	7928.60	0.0136	P	1.4
3	☐	5.000	3.254	12311.21	0.0208	P	1.2
4	☐	10.000	8.521	24517.45	0.0421	P	2.0
5	☐	100.000	98.862	229007.67	0.4084	P	0.3
6	☐	200.000	200.692	454633.00	0.8213	P	0.5
7	☐	1.000					

y = 0.0041 * x + 0.0076
R = 1.0000
DL = 0.2653
BEC = 1.873

Weight: <None>
Min Conc: <None>

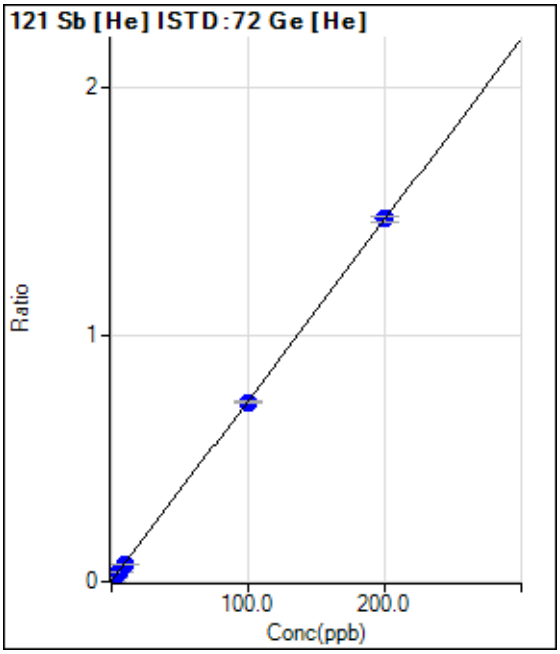
Calibration for 163_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1723.45	0.0009	P	10.5
2	☐	2.000	2.137	17755.98	0.0095	P	1.4
3	☐	5.000	5.299	41536.20	0.0221	P	1.2
4	☐	10.000	10.089	79581.12	0.0411	P	1.8
5	☐	100.000	108.094	792918.30	0.4315	P	0.4
6	☐	200.000	195.939	1448957.43	0.7814	A	6.5
7	☐	1.000					

y = 0.0040 * x + 9.4541E-004
R = 0.9988
DL = 0.07492
BEC = 0.2374

Weight: <None>
Min Conc: <None>

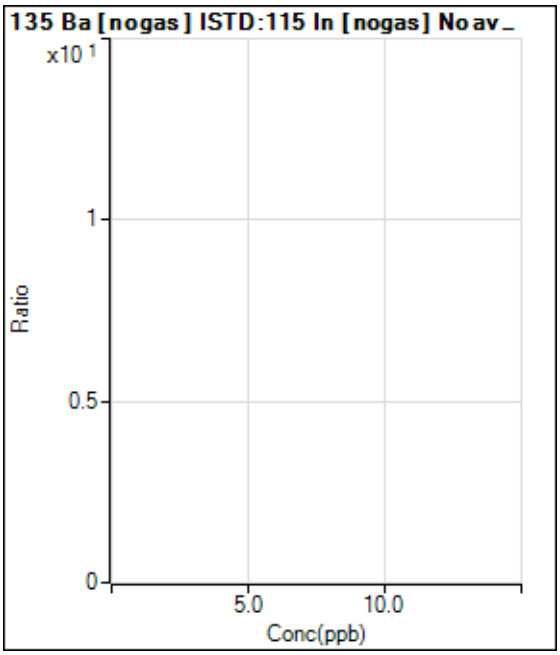


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	753.37	0.0018	P	14.9
2	☐	2.000	1.942	6908.13	0.0160	P	1.5
3	☐	5.000	4.714	16074.27	0.0363	P	3.2
4	☐	10.000	9.451	31578.70	0.0710	P	1.4
5	☐	100.000	99.130	311746.73	0.7280	P	0.4
6	☐	200.000	200.470	613566.79	1.4705	P	1.6
7	☐	1.000					

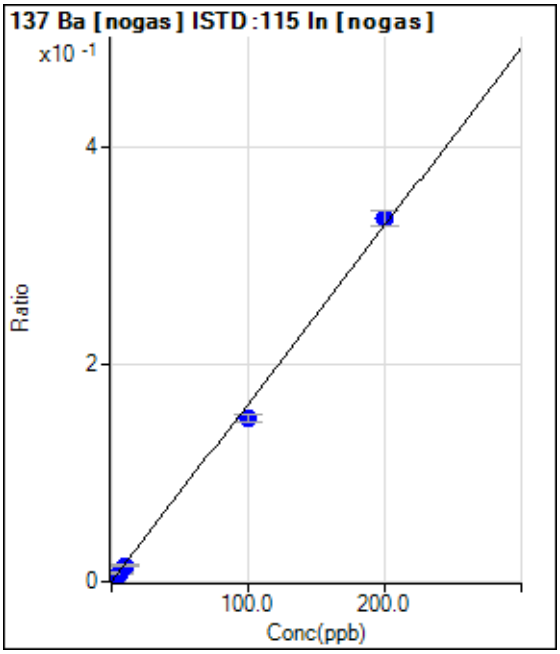
y = 0.0073 * x + 0.0018
R = 1.0000
DL = 0.1076
BEC = 0.2409

Weight: <None>
Min Conc: <None>

Calibration for 163_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	220.01	0.0001	P	19.8
2	☐	2.000	1.745	5457.62	0.0030	P	7.7
3	☐	5.000	4.765	14326.15	0.0079	P	4.0
4	☐	10.000	9.024	27919.53	0.0149	P	4.8
5	☐	100.000	92.334	271864.12	0.1516	P	4.7
6	☐	200.000	203.890	532381.96	0.3346	P	4.3
7	☐	1.000					

y = 0.0016 * x + 1.1942E-004

R = 0.9990

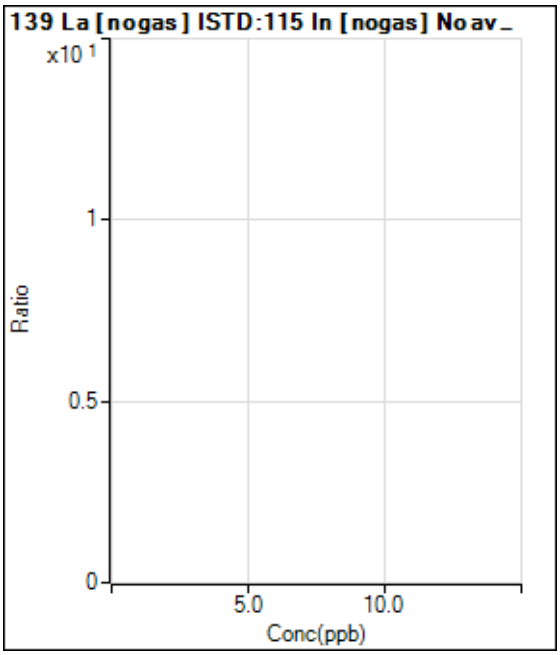
DL = 0.04318

BEC = 0.07279

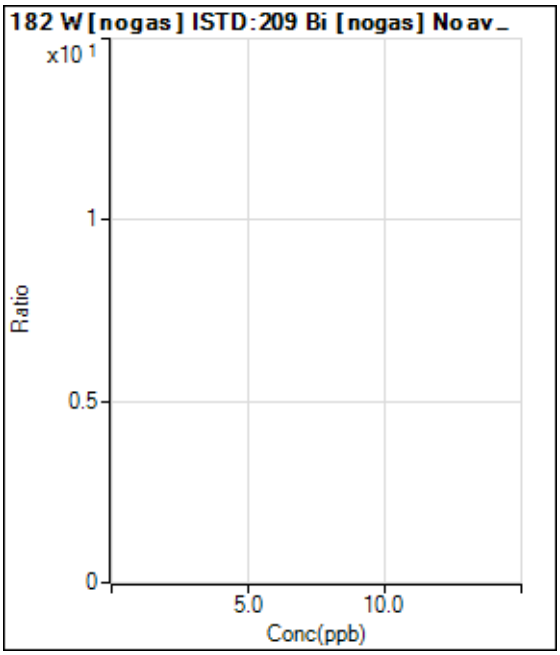
Weight: <None>

Min Conc: <None>

Calibration for 163_ICV.d

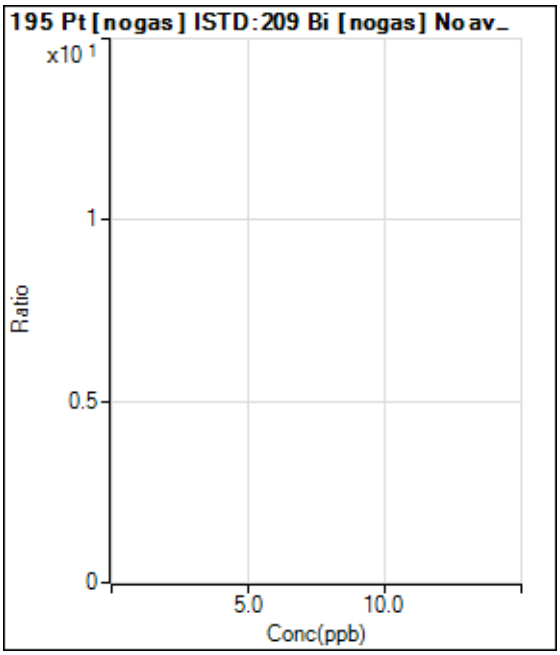


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

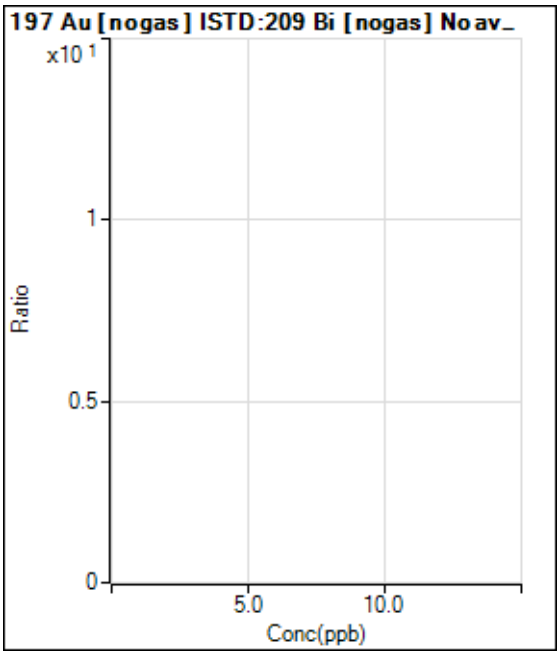


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

Calibration for 163_ICV.d

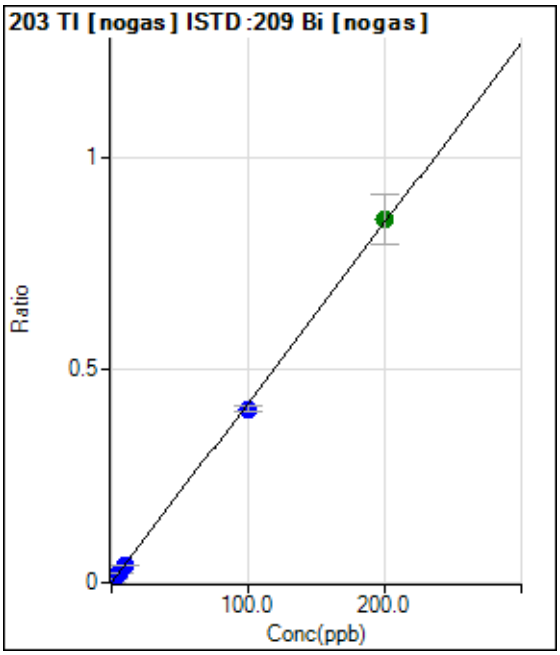


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

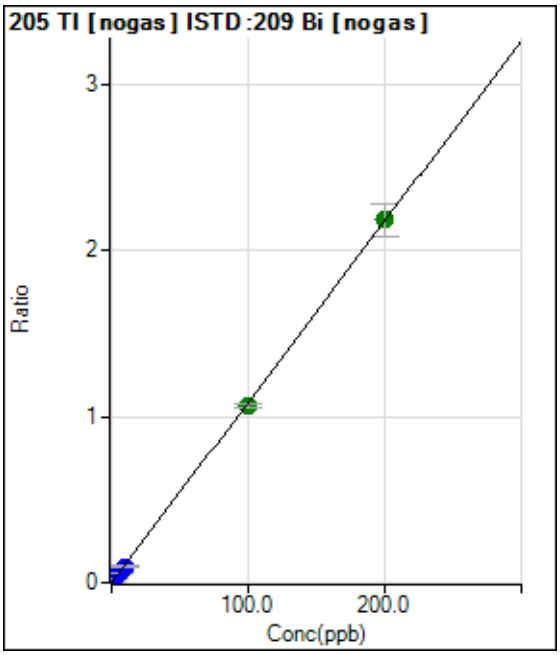
Calibration for 163_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30.00	0.0000	P	87.0
2	☐	2.000	2.021	12438.21	0.0086	P	2.7
3	☐	5.000	5.399	31981.75	0.0228	P	8.6
4	☐	10.000	9.674	61375.65	0.0409	P	1.9
5	☐	100.000	96.596	603840.04	0.4080	P	2.9
6	☐	200.000	201.708	1135883.18	0.8519	A	13.6
7	☐	1.000					

y = 0.0042 * x + 2.0405E-005
R = 0.9998
DL = 0.01262
BEC = 0.004831

Weight: <None>
Min Conc: <None>

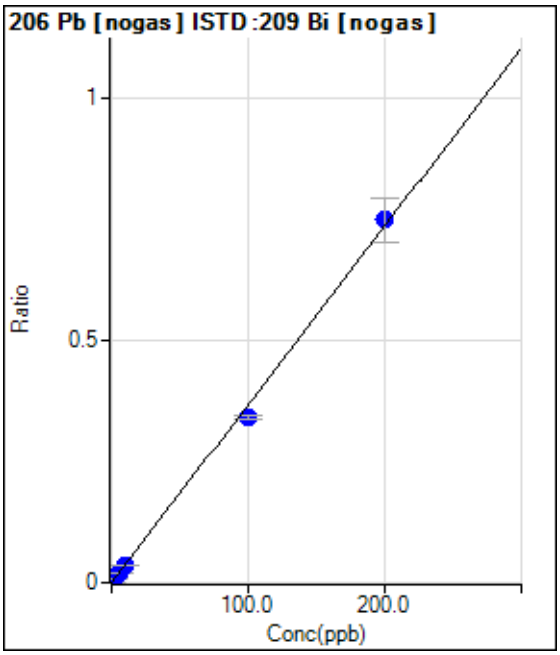


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	90.00	0.0001	P	41.0
2	☐	2.000	1.899	30061.39	0.0207	P	2.7
3	☐	5.000	4.997	76174.57	0.0543	P	7.4
4	☐	10.000	9.015	147069.83	0.0979	P	2.3
5	☐	100.000	98.168	1577993.67	1.0660	A	1.9
6	☐	200.000	200.966	2920997.46	2.1821	A	8.9
7	☐	1.000					

y = 0.0109 * x + 6.1875E-005
R = 0.9999
DL = 0.007004
BEC = 0.005699

Weight: <None>
Min Conc: <None>

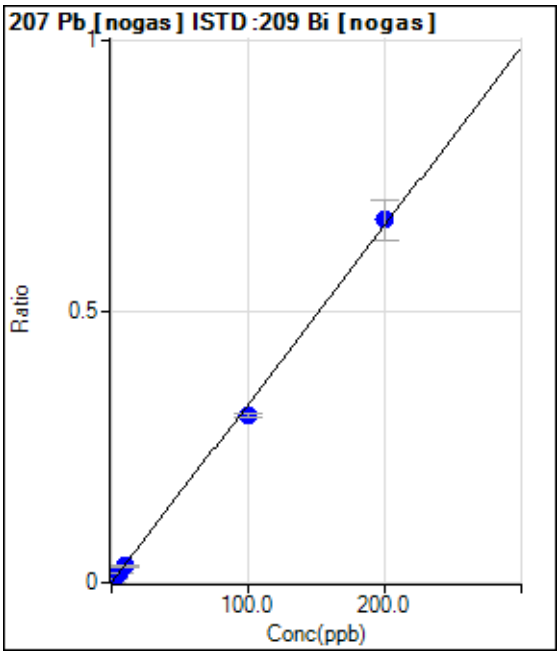
Calibration for 163_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.00	0.0000	P	37.5
2	☐	2.000	1.935	10400.19	0.0072	P	4.4
3	☐	5.000	5.173	26708.75	0.0191	P	8.3
4	☐	10.000	9.403	51956.63	0.0346	P	2.4
5	☐	100.000	92.732	504555.33	0.3408	P	2.4
6	☐	200.000	203.660	999450.04	0.7485	P	11.9
7	☐	1.000					

y = 0.0037 * x + 4.7887E-005
R = 0.9991
DL = 0.01465
BEC = 0.01303

Weight: <None>
Min Conc: <None>

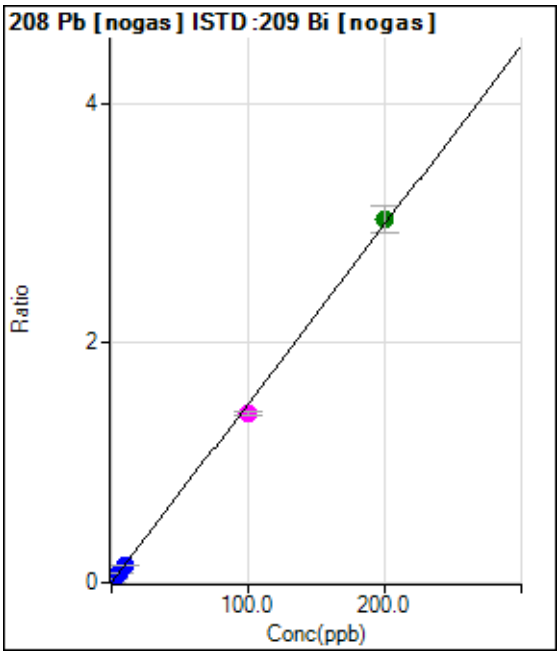


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	50.00	0.0000	P	34.1
2	☐	2.000	1.881	9042.75	0.0062	P	7.6
3	☐	5.000	5.148	23797.67	0.0170	P	8.9
4	☐	10.000	9.208	45584.16	0.0304	P	1.4
5	☐	100.000	93.586	456322.22	0.3082	P	1.7
6	☐	200.000	203.244	894208.22	0.6693	P	11.1
7	☐	1.000					

y = 0.0033 * x + 3.4195E-005
R = 0.9993
DL = 0.01061
BEC = 0.01038

Weight: <None>
Min Conc: <None>

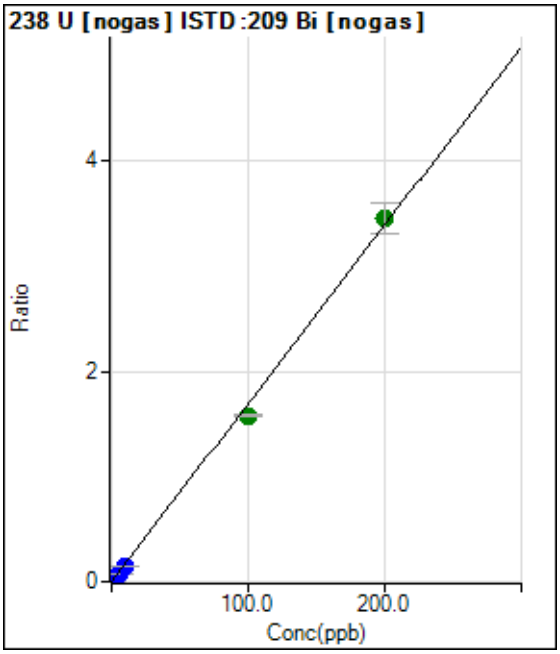
Calibration for 163_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	266.67	0.0002	P	8.3
2	☐	2.000	1.908	41685.06	0.0287	P	5.3
3	☐	5.000	5.093	107024.86	0.0763	P	6.3
4	☐	10.000	9.349	210099.63	0.1399	P	0.9
5	☐	100.000	94.668	2095173.88	1.4151	M	2.8
6	☐	200.000	202.697	4060527.54	3.0296	A	7.4
7	☐	1.000					

y = 0.0149 * x + 1.8259E-004
R = 0.9995
DL = 0.00305
BEC = 0.01222

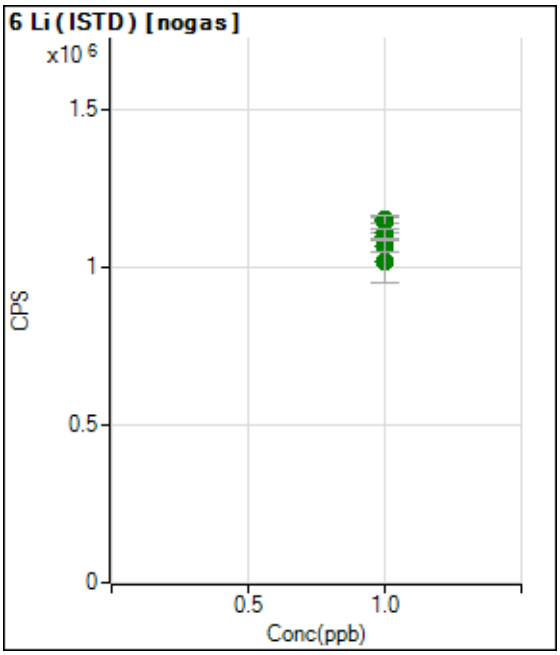
Weight: <None>
Min Conc: <None>



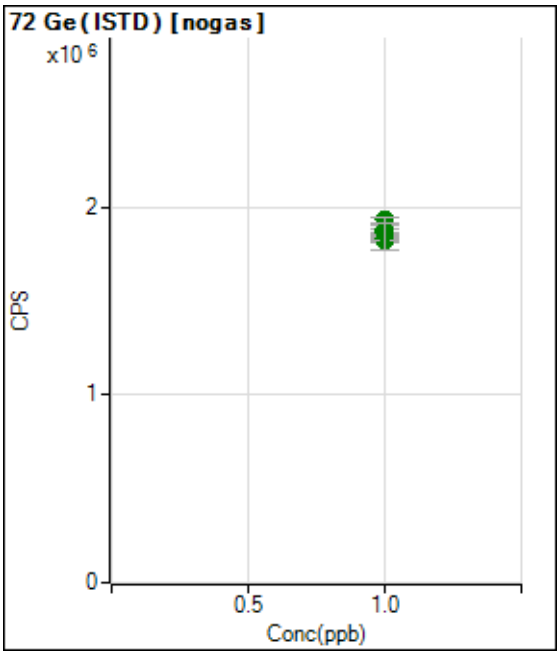
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0000	P	92.2
2	☐	2.000	1.769	43586.73	0.0300	P	5.0
3	☐	5.000	4.601	109389.75	0.0780	P	6.9
4	☐	10.000	8.430	214602.32	0.1429	P	1.7
5	☐	100.000	92.914	2331503.30	1.5750	A	1.2
6	☐	200.000	203.634	4622430.66	3.4517	A	8.4
7	☐	1.000					

y = 0.0170 * x + 1.1421E-005
R = 0.9991
DL = 0.001864
BEC = 0.0006738

Weight: <None>
Min Conc: <None>

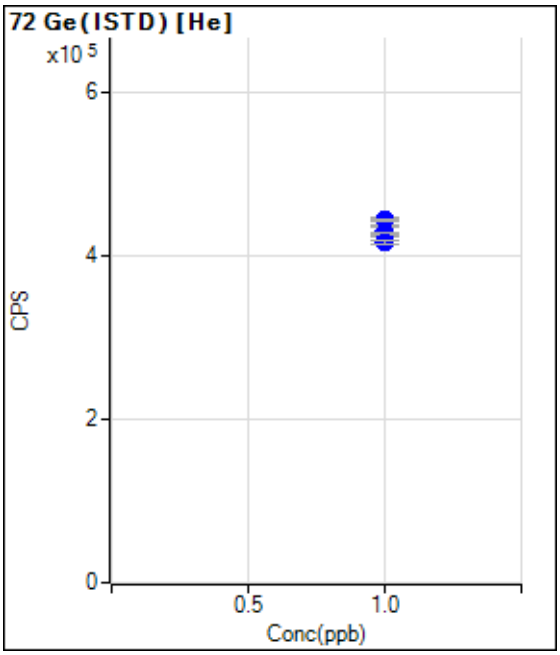


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1151863.30		A	1.5
2	☐	1.000		1145510.22		A	3.8
3	☐	1.000		1100246.67		A	2.4
4	☐	1.000		1108409.18		A	2.3
5	☐	1.000		1071026.45		A	3.4
6	☐	1.000		1020826.09		A	13.6
7	☐	1.000					

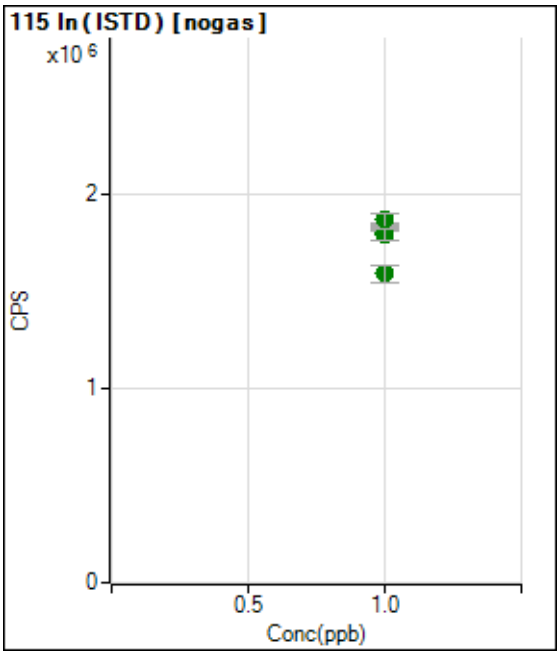


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1824061.43		A	1.1
2	☐	1.000		1877007.42		A	1.2
3	☐	1.000		1883917.78		A	2.5
4	☐	1.000		1934517.00		A	1.5
5	☐	1.000		1837619.92		A	1.2
6	☐	1.000		1861543.83		A	9.5
7	☐	1.000					

Calibration for 163_ICV.d

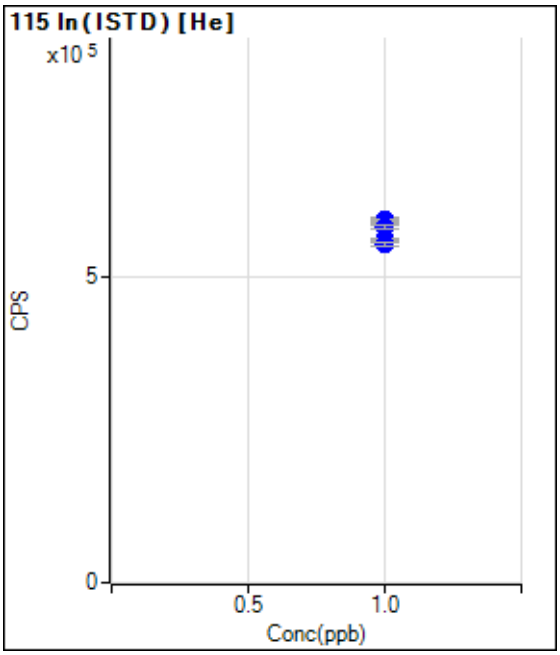


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		427251.24		P	1.3
2	☐	1.000		431912.19		P	1.8
3	☐	1.000		443014.22		P	2.5
4	☐	1.000		444734.00		P	0.4
5	☐	1.000		428201.77		P	0.5
6	☐	1.000		417316.02		P	1.3
7	☐	1.000					

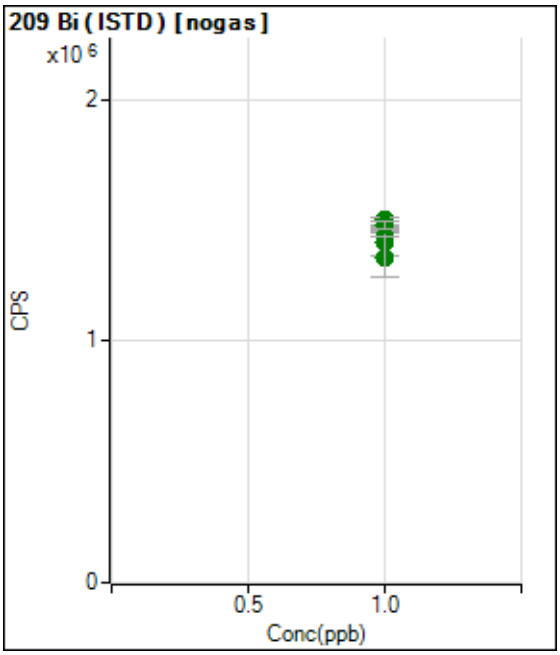


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1842086.41		A	0.9
2	☐	1.000		1829909.95		A	1.8
3	☐	1.000		1806867.41		A	4.2
4	☐	1.000		1871604.02		A	3.6
5	☐	1.000		1794931.01		A	3.0
6	☐	1.000		1593582.82		A	5.7
7	☐	1.000					

Calibration for 163_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		591083.87		P	1.5
2	☐	1.000		584767.05		P	0.6
3	☐	1.000		592186.93		P	0.6
4	☐	1.000		581788.74		P	1.1
5	☐	1.000		560720.35		P	0.9
6	☐	1.000		553575.63		P	1.0
7	☐	1.000					



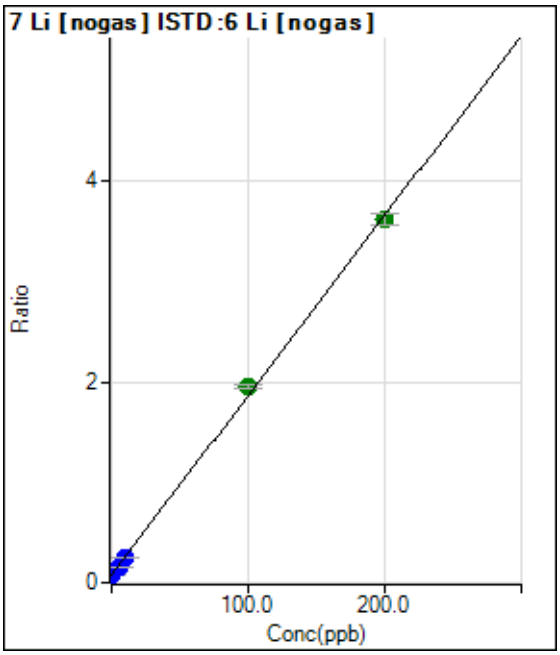
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1459556.75		A	1.3
2	☐	1.000		1454241.02		A	3.1
3	☐	1.000		1406998.15		A	7.2
4	☐	1.000		1501686.90		A	1.0
5	☐	1.000		1480559.35		A	1.7
6	☐	1.000		1348503.73		A	12.4
7	☐	1.000					

Calibration for 084_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\010320A.b\
Analysis File: 010320A.batch.bin
DA Date-Time: 1/6/2020 8:24:44 AM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	077CALB.d	CAL BLK	1/3/2020 1:55:23 PM
2	078CALS.d	2/10/200	1/3/2020 1:57:37 PM
3	079CALS.d	5/25/500	1/3/2020 1:59:52 PM
4	080CALS.d	10/50/1000	1/3/2020 2:02:06 PM
5	081CALS.d	100/500/10K	1/3/2020 2:04:20 PM
6	082CALS.d	200/1000/20K	1/3/2020 2:06:32 PM
7			

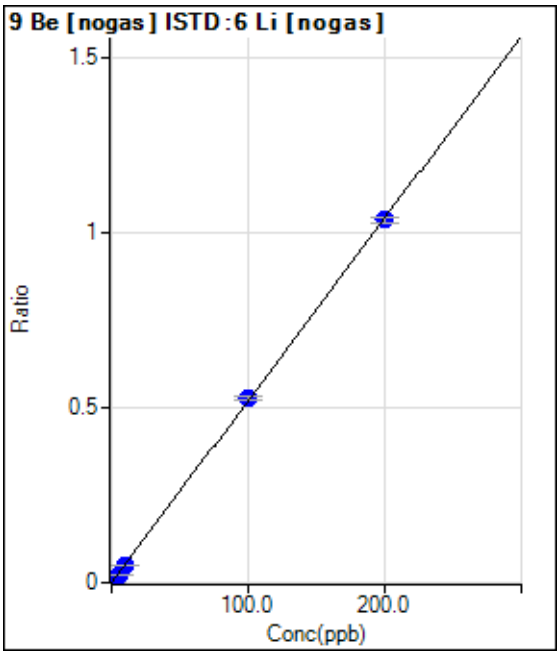
Calibration for 084_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83992.68	0.0762	P	3.3
2	☐	2.000	1.761	119182.99	0.1077	P	3.9
3	☐	5.000	4.509	172044.01	0.1569	P	4.2
4	☐	10.000	9.419	268265.66	0.2448	P	0.9
5	☐	100.000	104.737	1985204.71	1.9503	A	2.2
6	☐	200.000	197.675	3568429.22	3.6132	A	3.1
7	☐	1.000					

y = 0.0179 * x + 0.0762
R = 0.9996
DL = 0.4161
BEC = 4.261

Weight: <None>
Min Conc: <None>

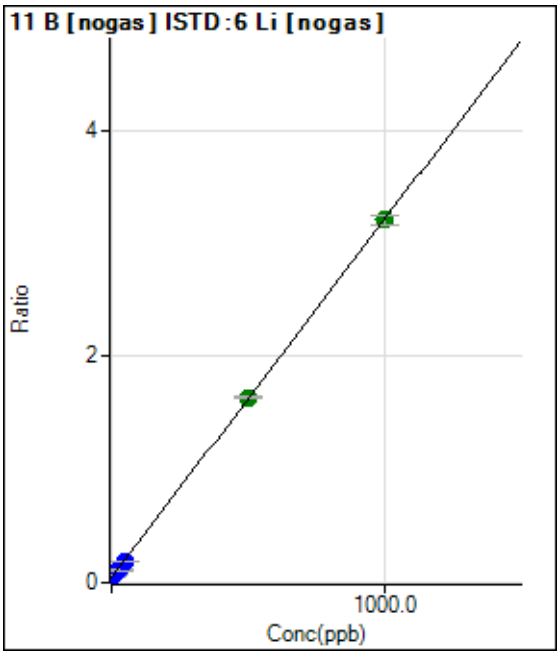


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	51.67	0.0000	P	6.1
2	☐	2.000	1.814	10502.91	0.0095	P	3.1
3	☐	5.000	4.656	26635.06	0.0243	P	2.8
4	☐	10.000	9.485	54169.04	0.0494	P	1.7
5	☐	100.000	101.543	538109.39	0.5287	P	2.5
6	☐	200.000	199.265	1024684.44	1.0374	P	1.9
7	☐	1.000					

y = 0.0052 * x + 4.6890E-005
R = 1.0000
DL = 0.001639
BEC = 0.009007

Weight: <None>
Min Conc: <None>

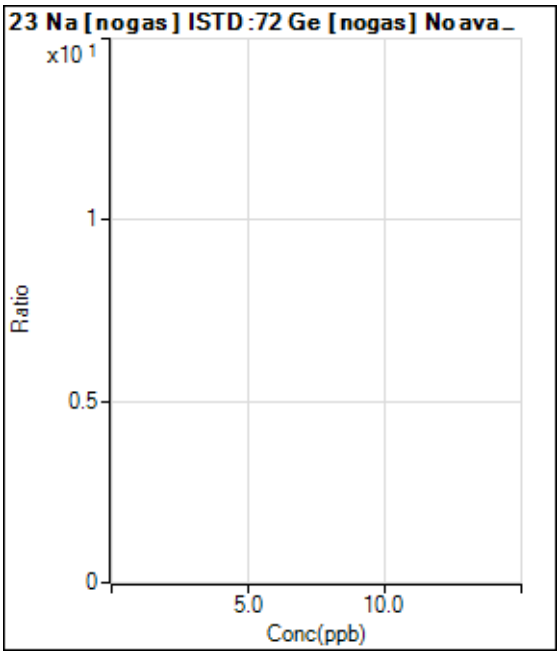
Calibration for 084_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	49339.66	0.0448	P	2.6
2	☐	10.000	7.757	76723.41	0.0694	P	3.2
3	☐	25.000	21.270	122999.33	0.1122	P	3.2
4	☐	50.000	44.161	202385.86	0.1847	P	1.4
5	☐	500.000	503.486	1669529.93	1.6397	A	0.9
6	☐	1000.000	998.664	3168613.29	3.2082	A	2.6
7	☐	5.000					

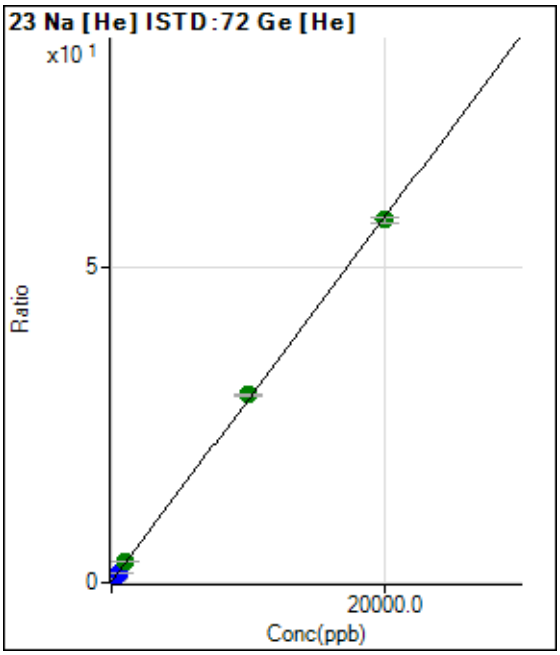
y = 0.0032 * x + 0.0448
R = 1.0000
DL = 1.102
BEC = 14.14

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

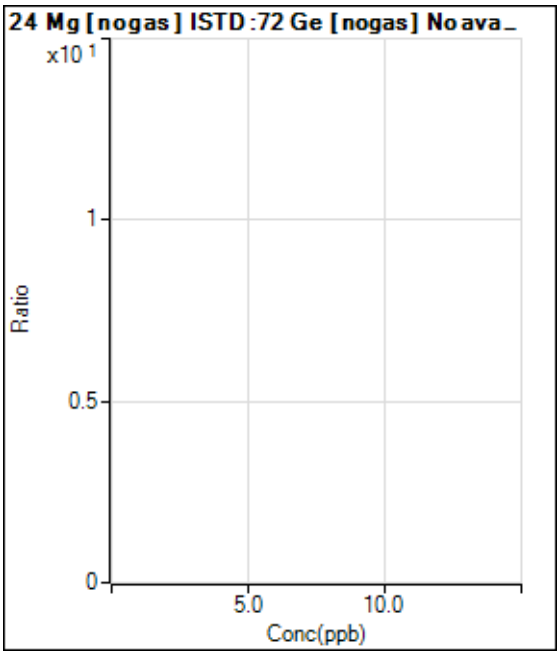
Calibration for 084_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	68329.29	0.1716	P	2.8
2	☐	200.000	196.669	296803.26	0.7406	P	2.9
3	☐	500.000	496.692	637412.49	1.6086	P	1.4
4	☐	1000.000	1076.382	1299619.83	3.2857	A	1.6
5	☐	10000.000	10262.285	11510297.33	29.8619	A	1.5
6	☐	20000.000	19865.155	21753878.01	57.6445	A	1.7
7	☐	100.000					

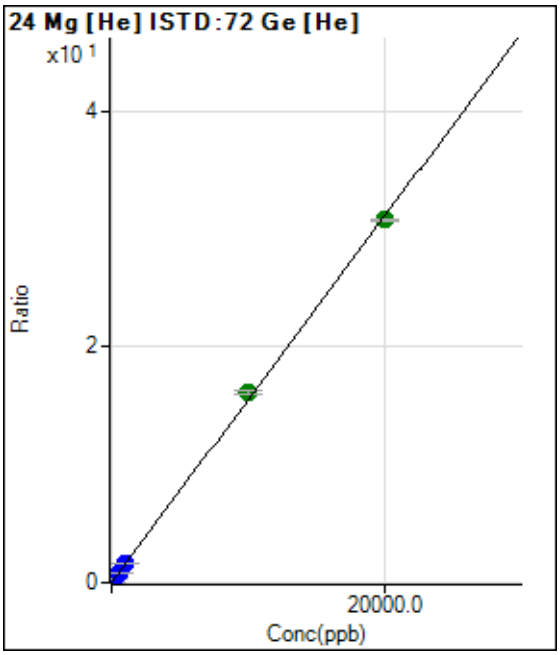
y = 0.0029 * x + 0.1716
R = 0.9999
DL = 4.973
BEC = 59.32

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

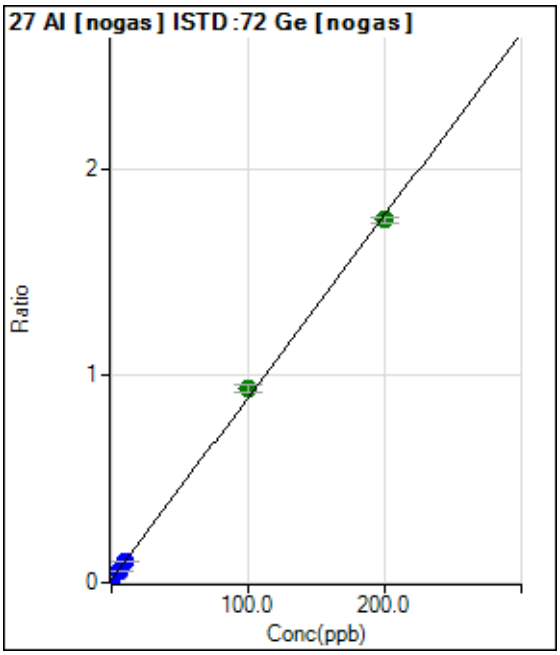
Calibration for 084_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	733.36	0.0018	P	6.2
2	☐	200.000	200.063	125280.92	0.3126	P	2.9
3	☐	500.000	498.470	307541.33	0.7761	P	0.7
4	☐	1000.000	1008.992	620672.37	1.5691	P	0.7
5	☐	10000.000	10381.600	6216339.49	16.1278	A	1.3
6	☐	20000.000	19808.788	11611941.50	30.7712	A	0.6
7	☐	100.000					

y = 0.0016 * x + 0.0018
R = 0.9997
DL = 0.2212
BEC = 1.186

Weight: <None>
Min Conc: <None>

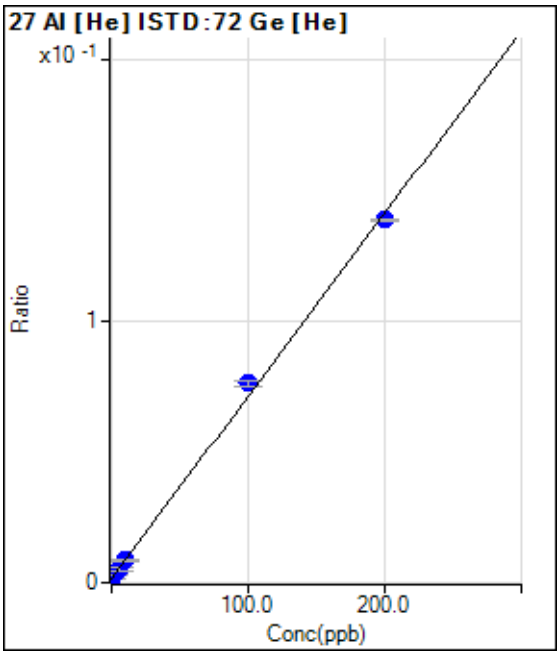


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25944.81	0.0149	P	6.0
2	☐	2.000	2.645	66308.10	0.0381	P	30.4
3	☐	5.000	4.661	100364.36	0.0559	P	4.5
4	☐	10.000	10.081	183256.49	0.1035	P	1.2
5	☐	100.000	105.049	1615552.01	0.9385	A	3.7
6	☐	200.000	197.474	2897300.06	1.7512	A	1.9
7	☐	1.000					

y = 0.0088 * x + 0.0149
R = 0.9995
DL = 0.3041
BEC = 1.692

Weight: <None>
Min Conc: <None>

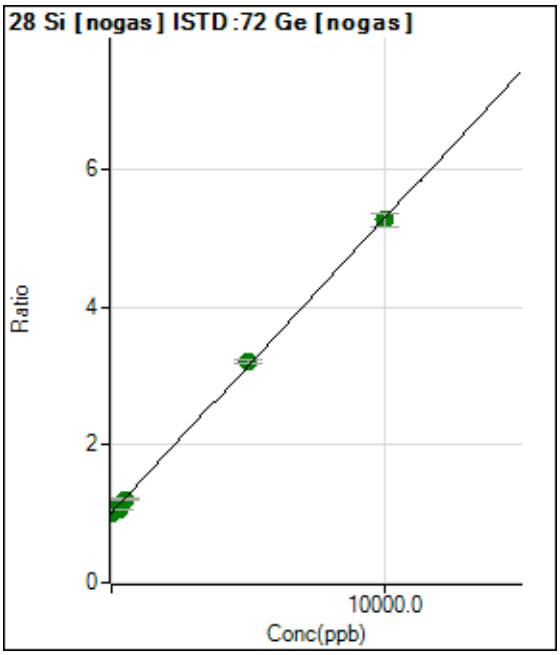
Calibration for 084_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	623.35	0.0016	P	30.0
2	☐	2.000	1.685	1100.05	0.0027	P	6.4
3	☐	5.000	5.538	2157.14	0.0054	P	28.4
4	☐	10.000	10.056	3397.02	0.0086	P	8.4
5	☐	100.000	106.857	29363.02	0.0762	P	2.4
6	☐	200.000	196.558	52385.79	0.1388	P	0.7
7	☐	1.000					

y = 6.9831E-004 * x + 0.0016
R = 0.9992
DL = 2.019
BEC = 2.241

Weight: <None>
Min Conc: <None>

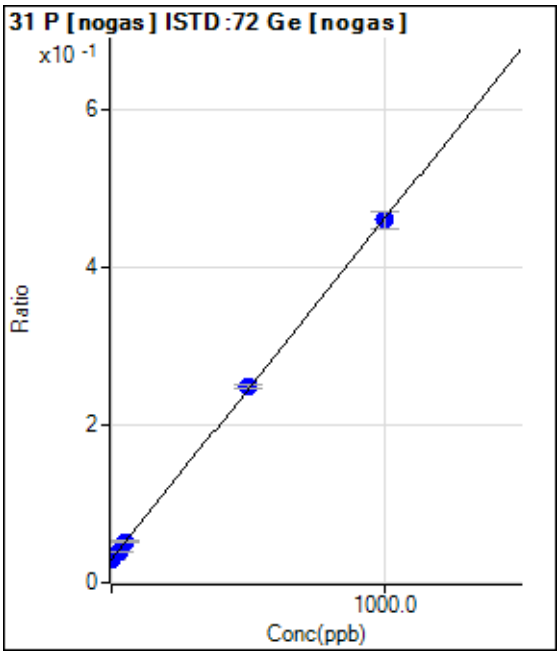


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1772209.24	1.0158	A	3.1
2	☐	100.000	86.755	1835157.06	1.0530	A	3.4
3	☐	250.000	122.158	1921229.24	1.0681	A	1.3
4	☐	500.000	452.611	2141444.86	1.2096	A	2.0
5	☐	5000.000	5119.925	5523757.00	3.2080	A	1.4
6	☐	10000.000	9945.736	8720364.87	5.2742	A	3.6
7	☐	50.000					

y = 4.2816E-004 * x + 1.0158
R = 0.9998
DL = 217.7
BEC = 2373

Weight: <None>
Min Conc: <None>

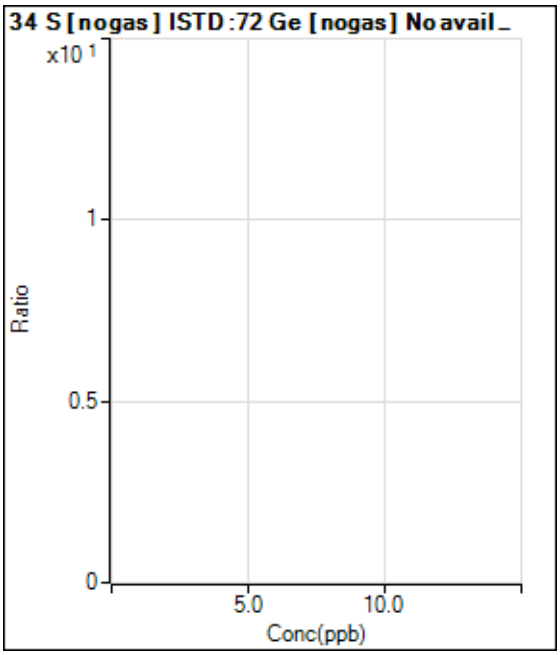
Calibration for 084_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	51928.34	0.0298	P	3.3
2	☐	10.000	8.854	58550.68	0.0336	P	2.3
3	☐	25.000	21.633	70253.96	0.0391	P	4.6
4	☐	50.000	51.005	91657.86	0.0518	P	2.8
5	☐	500.000	505.770	427055.98	0.2480	P	1.9
6	☐	1000.000	997.160	760296.37	0.4601	P	5.1
7	☐	5.000					

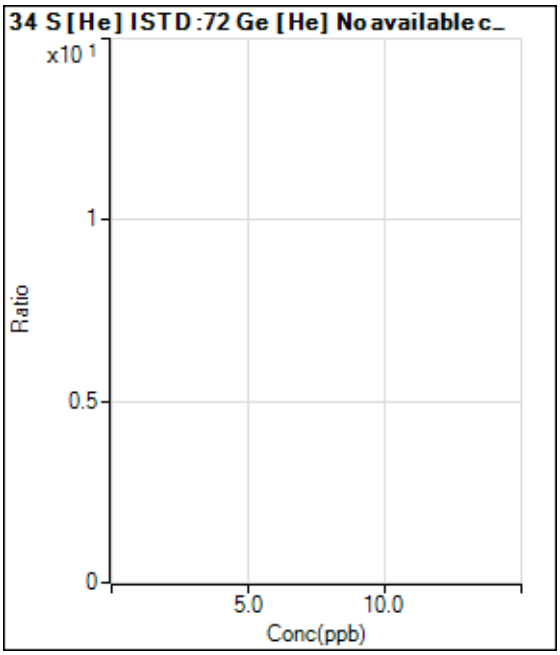
y = 4.3155E-004 * x + 0.0298
R = 1.0000
DL = 6.809
BEC = 68.98

Weight: <None>
Min Conc: <None>

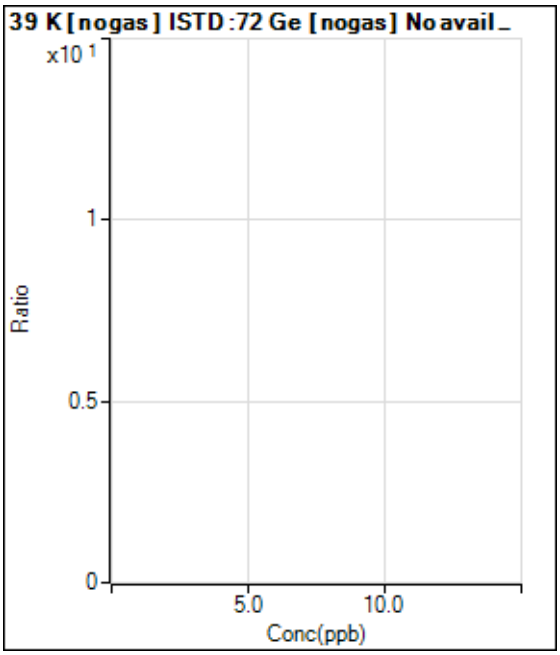


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	400.000					
3	☐	1000.000					
4	☐	2000.000					
5	☐	20000.000					
6	☐	40000.000					
7	☐	200.000					

Calibration for 084_ICV.d

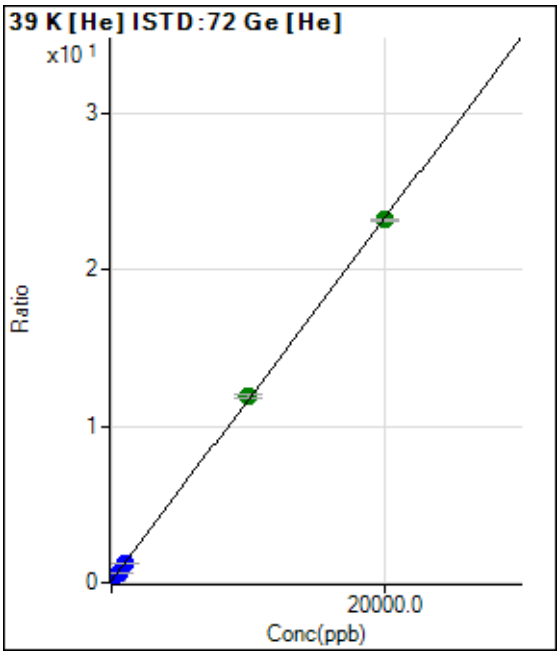


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	400.000					
3	☐	1000.000					
4	☐	2000.000					
5	☐	20000.000					
6	☐	40000.000					
7	☐	200.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

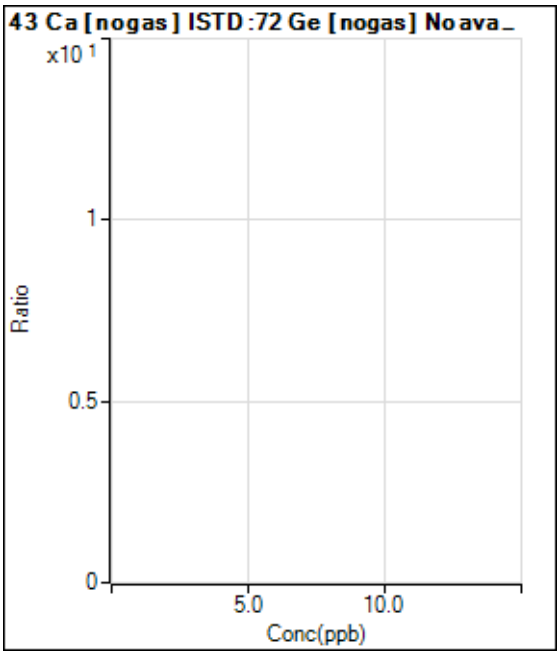
Calibration for 084_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	45555.65	0.1144	P	0.9
2	☐	200.000	196.075	136968.97	0.3417	P	3.0
3	☐	500.000	482.635	267096.99	0.6740	P	0.1
4	☐	1000.000	997.760	502850.06	1.2713	P	1.3
5	☐	10000.000	10150.673	4580528.99	11.8843	A	2.1
6	☐	20000.000	19925.249	8761477.16	23.2181	A	0.8
7	☐	100.000					

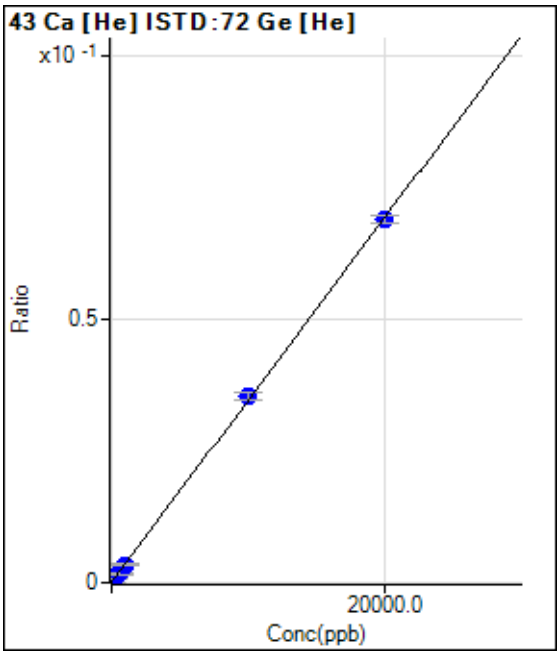
y = 0.0012 * x + 0.1144
R = 1.0000
DL = 2.59
BEC = 98.66

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

Calibration for 084_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.33	0.0001	P	107.2
2	☐	200.000	228.255	340.01	0.0008	P	8.0
3	☐	500.000	478.197	676.69	0.0017	P	27.1
4	☐	1000.000	953.742	1326.73	0.0034	P	11.2
5	☐	10000.000	10216.696	13628.50	0.0354	P	3.5
6	☐	20000.000	19894.228	25958.45	0.0688	P	2.0
7	☐	100.000					

y = 3.4550E-006 * x + 5.8234E-005

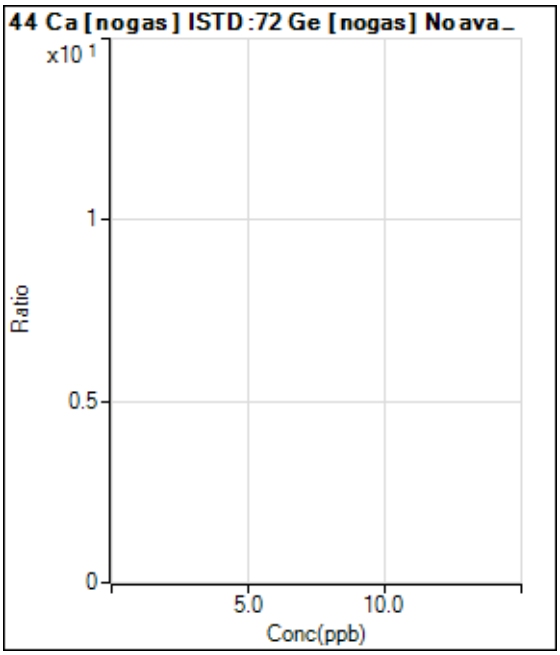
R = 0.9999

DL = 54.2

BEC = 16.86

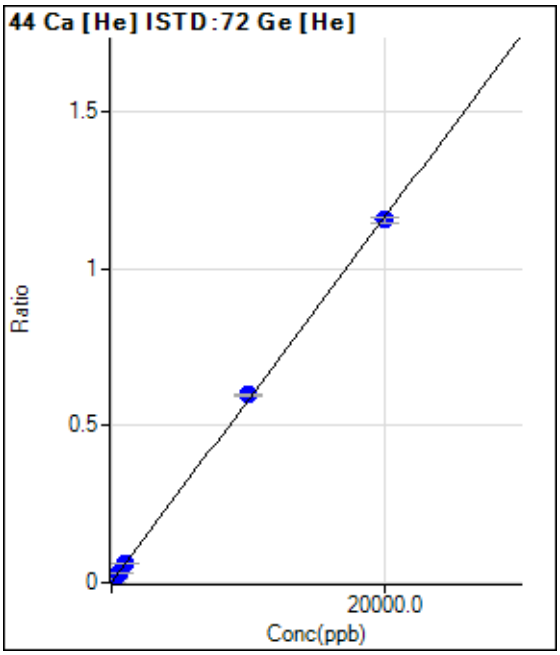
Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

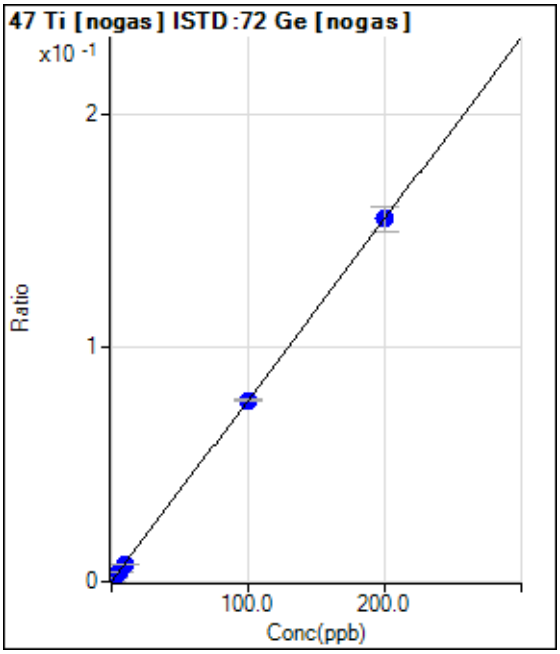
Calibration for 084_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	320.01	0.0008	P	5.1
2	☐	200.000	193.560	4827.36	0.0121	P	7.5
3	☐	500.000	475.003	11256.88	0.0284	P	0.9
4	☐	1000.000	1013.364	23611.84	0.0597	P	2.0
5	☐	10000.000	10268.837	230337.61	0.5976	P	1.4
6	☐	20000.000	19865.603	435953.63	1.1553	P	1.8
7	☐	100.000					

y = 5.8116E-005 * x + 8.0353E-004
R = 0.9999
DL = 2.12
BEC = 13.83

Weight: <None>
Min Conc: <None>

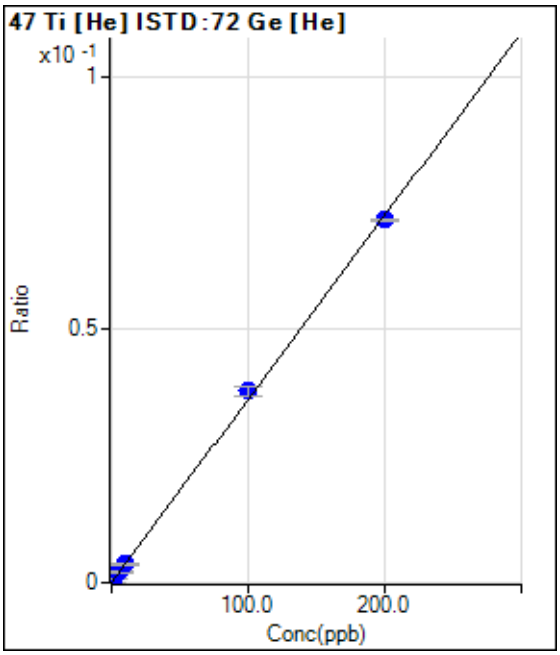


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	150.00	0.0001	P	23.2
2	☐	2.000	2.014	2870.27	0.0016	P	4.9
3	☐	5.000	4.817	6858.03	0.0038	P	5.7
4	☐	10.000	9.514	13201.49	0.0075	P	1.6
5	☐	100.000	100.029	133637.59	0.0776	P	1.4
6	☐	200.000	200.014	256071.47	0.1551	P	6.6
7	☐	1.000					

y = 7.7481E-004 * x + 8.5847E-005
R = 1.0000
DL = 0.07711
BEC = 0.1108

Weight: <None>
Min Conc: <None>

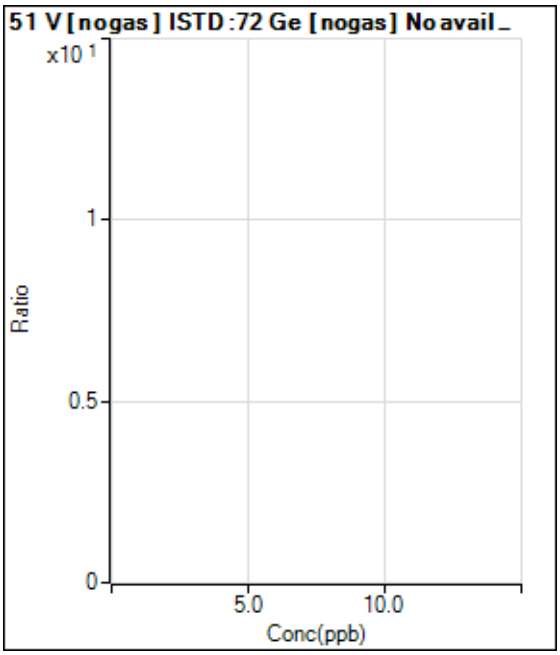
Calibration for 084_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.33	0.0000	P	173.2
2	☐	2.000	1.858	273.34	0.0007	P	7.2
3	☐	5.000	5.835	840.03	0.0021	P	17.0
4	☐	10.000	10.166	1460.08	0.0037	P	5.6
5	☐	100.000	104.342	14572.52	0.0378	P	4.5
6	☐	200.000	197.801	27046.54	0.0717	P	0.8
7	☐	1.000					

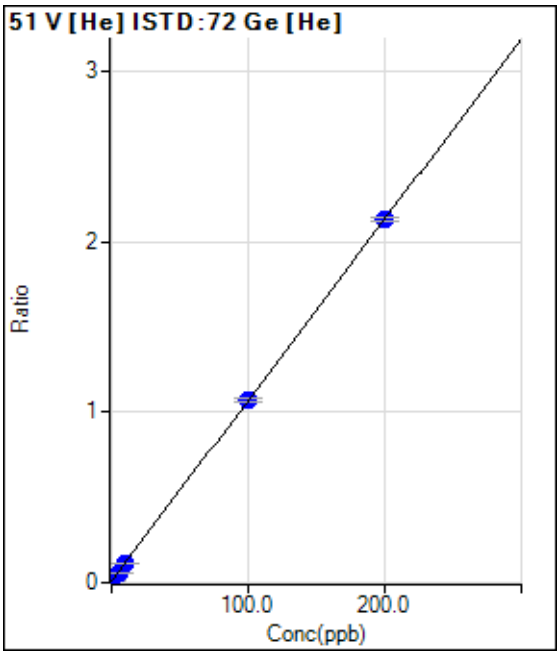
y = 3.6230E-004 * x + 8.4098E-006
R = 0.9997
DL = 0.1206
BEC = 0.02321

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

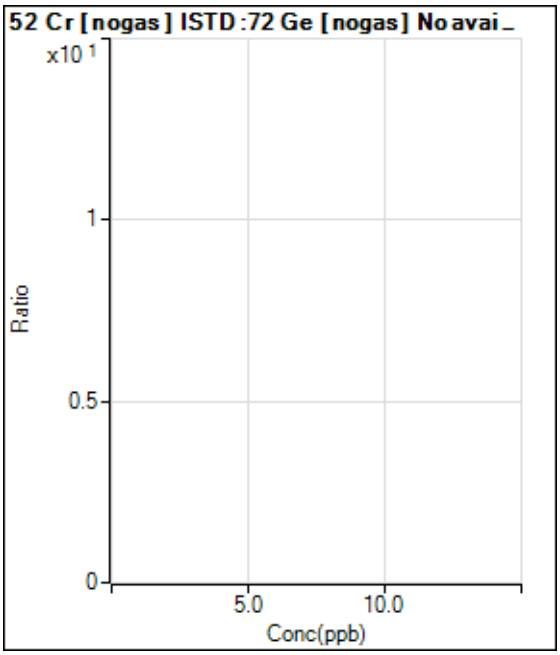
Calibration for 084_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3654.82	0.0092	P	1.7
2	☐	2.000	1.979	12098.40	0.0302	P	3.8
3	☐	5.000	4.870	24123.43	0.0609	P	1.5
4	☐	10.000	10.135	46196.02	0.1168	P	1.0
5	☐	100.000	100.205	413656.23	1.0732	P	1.8
6	☐	200.000	199.894	804391.67	2.1317	P	0.9
7	☐	1.000					

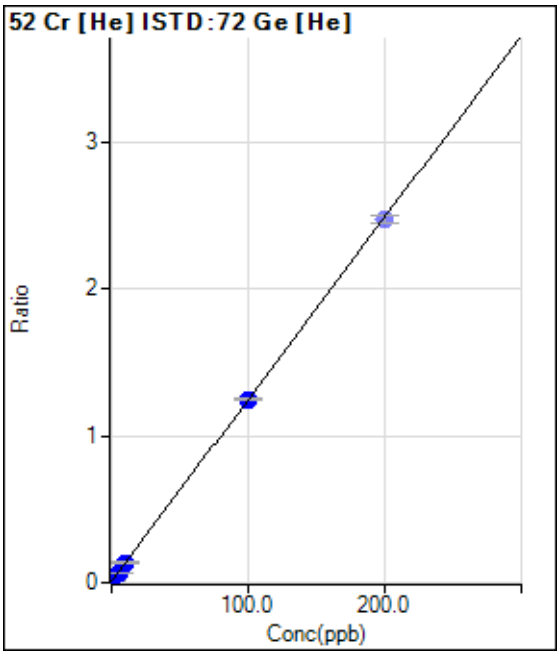
y = 0.0106 * x + 0.0092
R = 1.0000
DL = 0.04304
BEC = 0.8643

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

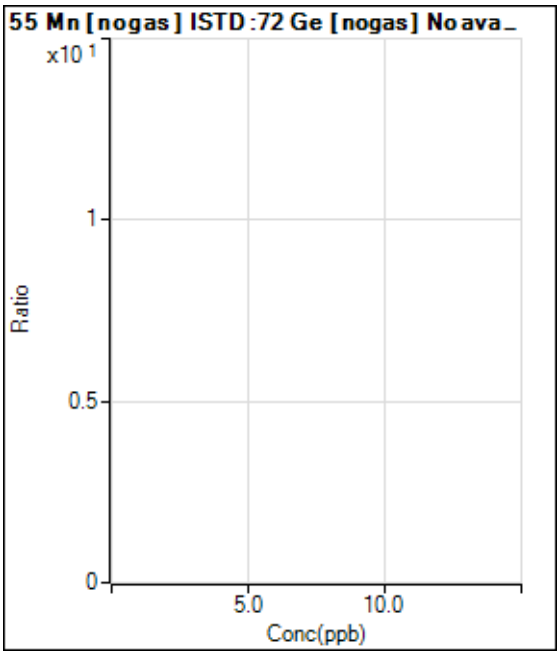
Calibration for 084_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3440.38	0.0086	P	3.8
2	☐	2.000	2.006	13418.38	0.0335	P	0.8
3	☐	5.000	4.894	27427.18	0.0692	P	2.0
4	☐	10.000	10.400	54339.86	0.1374	P	0.2
5	☐	100.000	99.965	480290.66	1.2460	P	1.1
6	☑	200.000		931581.92	2.4688	P	2.2
7	☐	1.000					

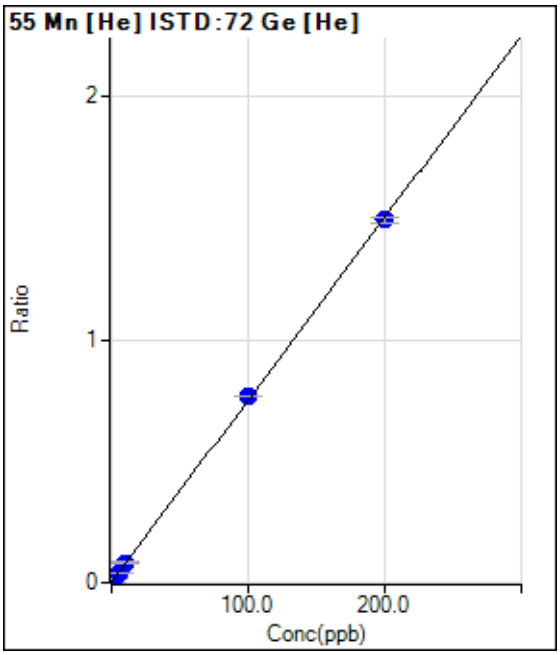
y = 0.0124 * x + 0.0086
R = 1.0000
DL = 0.07914
BEC = 0.6981

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

Calibration for 084_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	700.03	0.0018	P	23.1
2	☐	2.000	2.064	6908.10	0.0172	P	5.7
3	☐	5.000	5.008	15580.17	0.0393	P	3.0
4	☐	10.000	10.772	32645.85	0.0825	P	2.0
5	☐	100.000	102.199	296087.47	0.7681	P	0.3
6	☐	200.000	198.861	563394.47	1.4930	P	1.7
7	☐	1.000					

y = 0.0075 * x + 0.0018

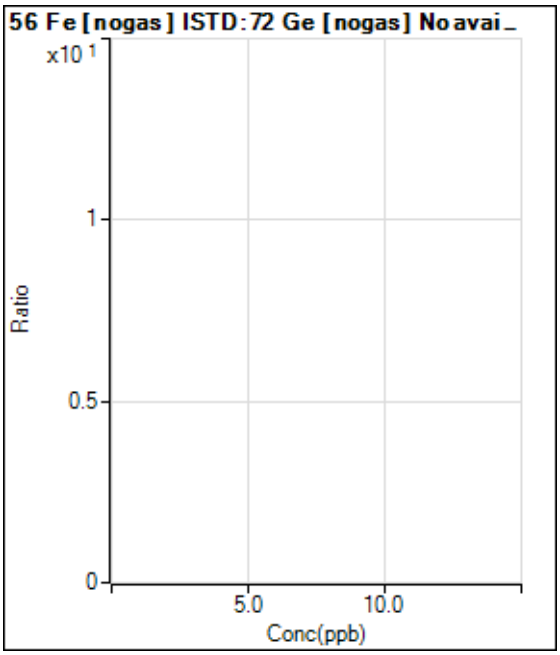
R = 0.9999

DL = 0.1622

BEC = 0.2342

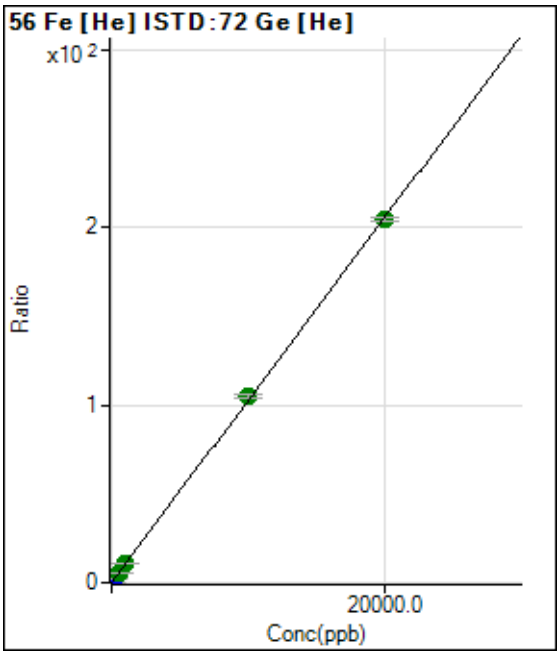
Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

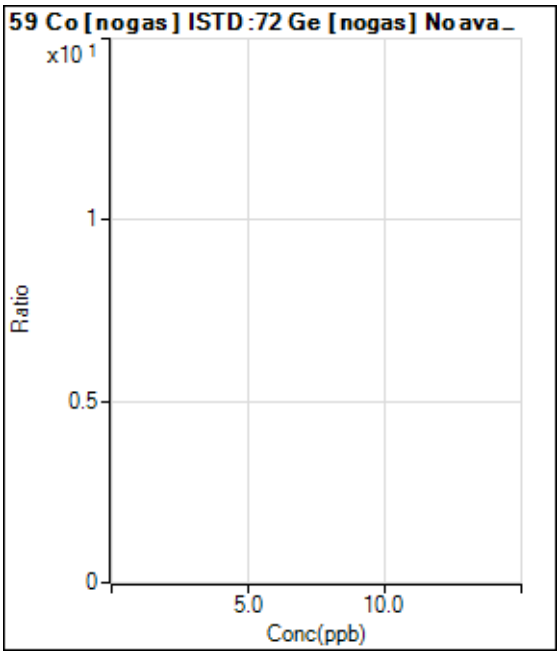
Calibration for 084_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12467.72	0.0313	P	2.4
2	☐	200.000	199.827	833684.81	2.0806	P	3.9
3	☐	500.000	510.961	2088709.03	5.2713	A	2.4
4	☐	1000.000	1038.452	4224816.08	10.6808	A	1.0
5	☐	10000.000	10217.258	40398413.56	104.8106	A	1.7
6	☐	20000.000	19889.176	76978453.85	203.9974	A	1.2
7	☐	100.000					

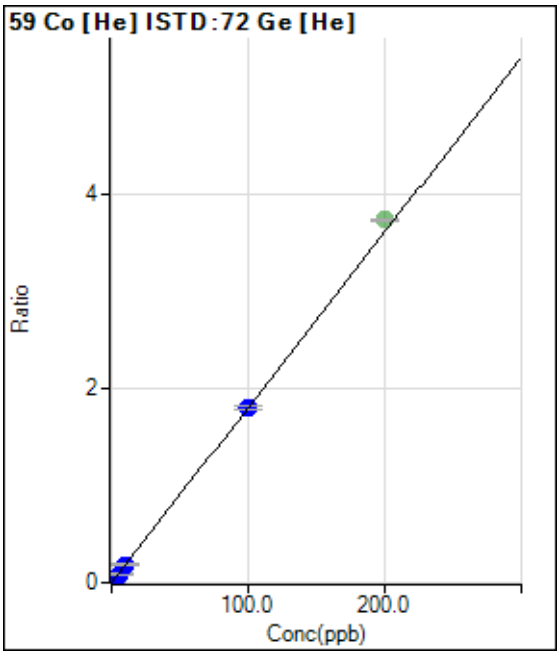
y = 0.0103 * x + 0.0313
R = 0.9999
DL = 0.2229
BEC = 3.053

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

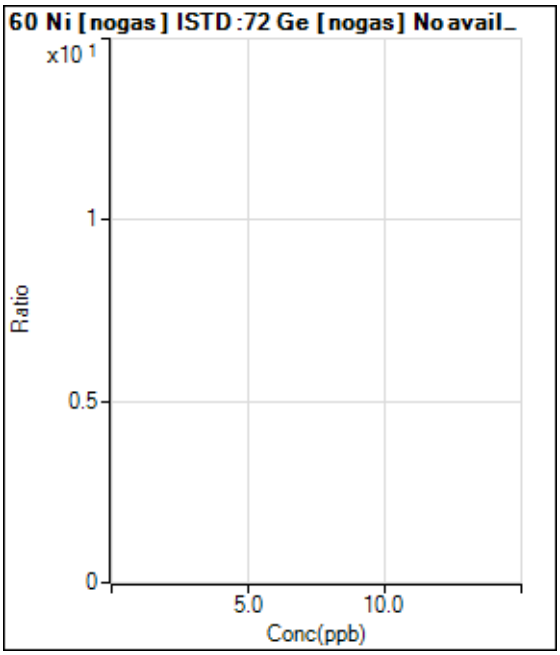
Calibration for 084_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	90.00	0.0002	P	51.2
2	☐	2.000	2.021	14672.71	0.0366	P	5.0
3	☐	5.000	4.924	35210.65	0.0889	P	4.1
4	☐	10.000	10.376	73974.64	0.1870	P	1.9
5	☐	100.000	99.966	693738.61	1.7999	P	2.2
6	☑	200.000		1407498.26	3.7299	A	0.5
7	☐	1.000					

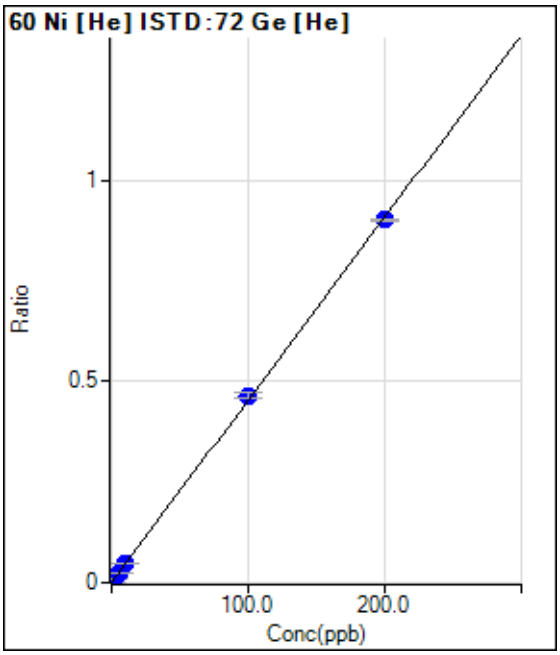
y = 0.0180 * x + 2.2608E-004
R = 1.0000
DL = 0.01931
BEC = 0.01256

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

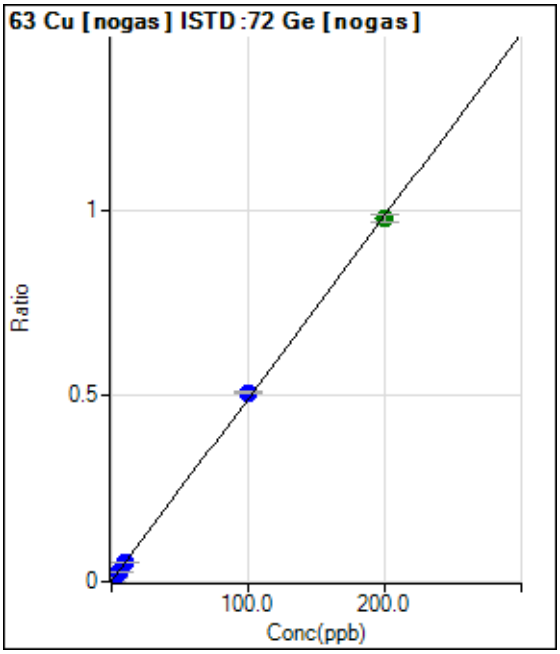
Calibration for 084_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	156.67	0.0004	P	6.3
2	☐	2.000	2.170	4110.53	0.0102	P	6.9
3	☐	5.000	5.246	9585.95	0.0242	P	4.2
4	☐	10.000	10.307	18649.62	0.0472	P	3.4
5	☐	100.000	102.477	179328.97	0.4653	P	2.6
6	☐	200.000	198.738	340375.19	0.9020	P	0.8
7	☐	1.000					

y = 0.0045 * x + 3.9325E-004
R = 0.9999
DL = 0.01651
BEC = 0.08669

Weight: <None>
Min Conc: <None>

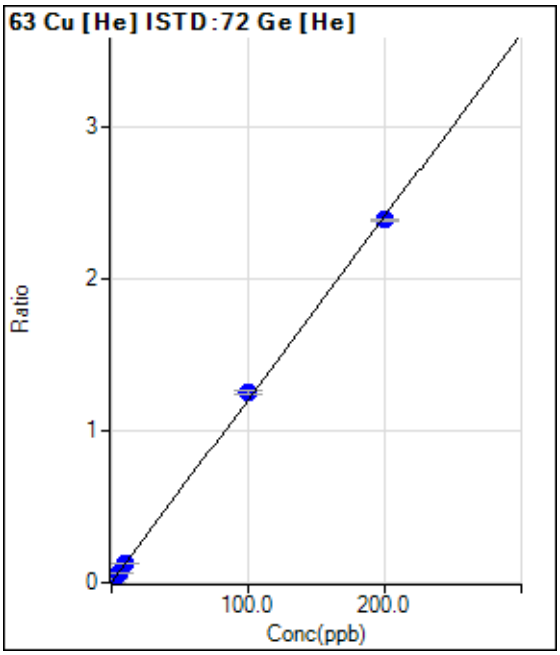


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2816.92	0.0016	P	6.7
2	☐	2.000	2.057	20444.94	0.0117	P	0.7
3	☐	5.000	4.860	45871.23	0.0255	P	1.0
4	☐	10.000	10.098	90756.79	0.0513	P	1.9
5	☐	100.000	103.038	875219.86	0.5082	P	1.2
6	☐	200.000	198.479	1619749.82	0.9775	A	2.2
7	☐	1.000					

y = 0.0049 * x + 0.0016
R = 0.9998
DL = 0.06585
BEC = 0.3283

Weight: <None>
Min Conc: <None>

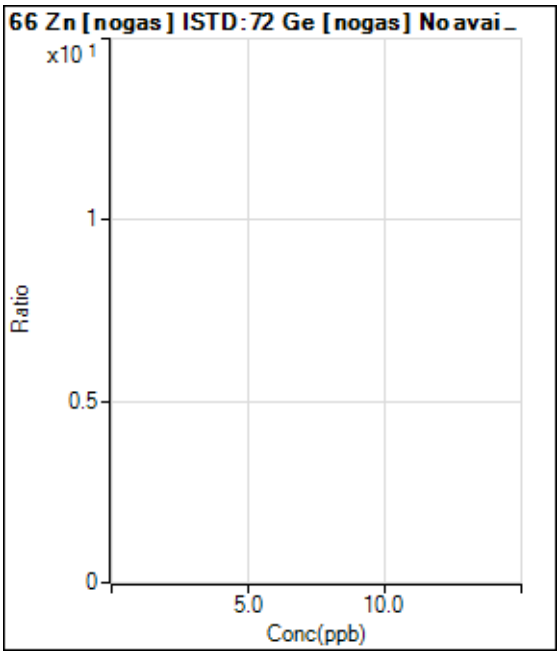
Calibration for 084_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	730.03	0.0018	P	10.1
2	☐	2.000	2.018	10453.09	0.0261	P	2.1
3	☐	5.000	4.971	24393.18	0.0616	P	1.6
4	☐	10.000	10.501	50633.59	0.1280	P	1.6
5	☐	100.000	103.487	479970.63	1.2453	P	2.1
6	☐	200.000	198.232	899508.40	2.3837	P	0.7
7	☐	1.000					

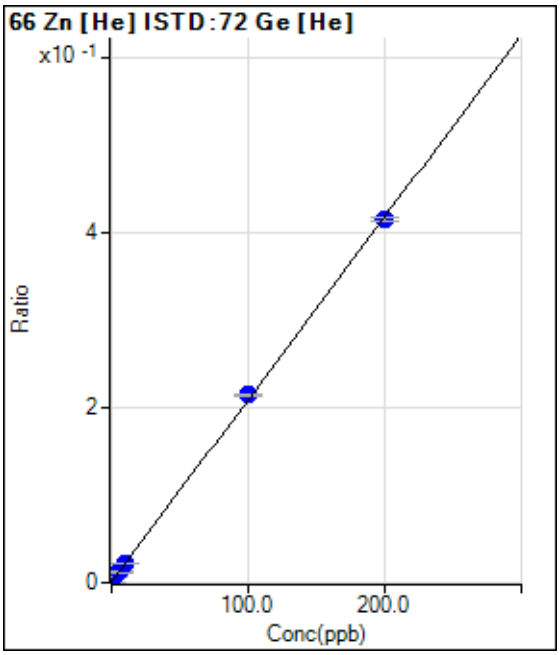
y = 0.0120 * x + 0.0018
R = 0.9998
DL = 0.04625
BEC = 0.1526

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

Calibration for 084_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	313.34	0.0008	P	5.3
2	☐	2.000	2.386	2306.84	0.0058	P	1.6
3	☐	5.000	5.450	4807.35	0.0121	P	4.1
4	☐	10.000	10.316	8805.56	0.0223	P	1.7
5	☐	100.000	102.809	82800.00	0.2148	P	1.0
6	☐	200.000	198.564	156284.55	0.4142	P	1.1
7	☐	1.000					

y = 0.0021 * x + 7.8698E-004

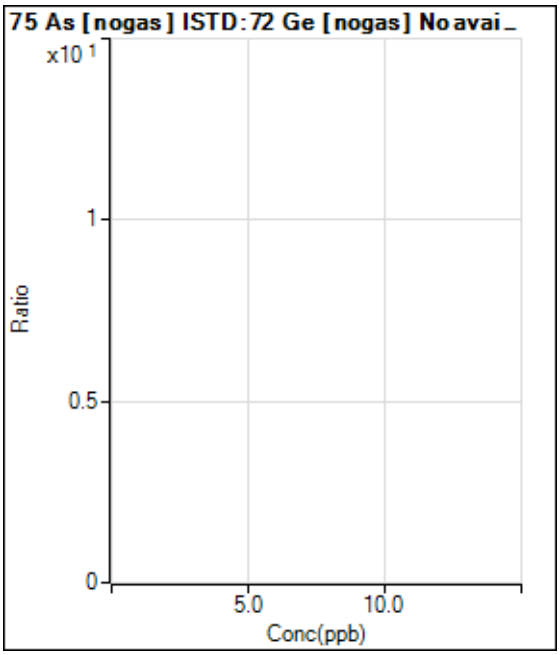
R = 0.9999

DL = 0.05984

BEC = 0.378

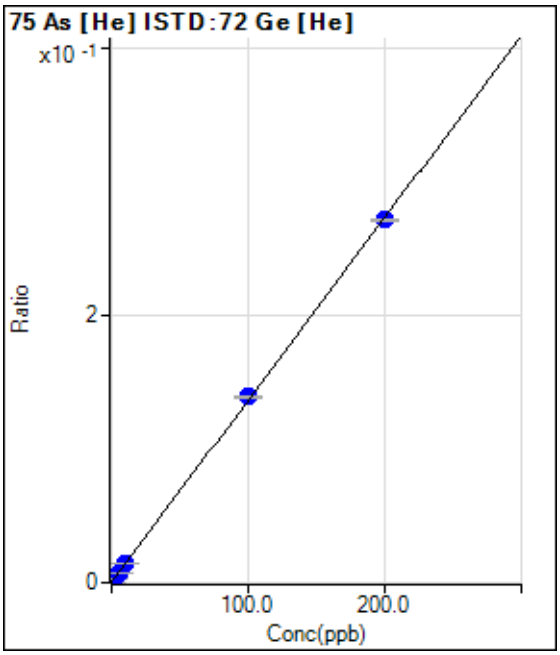
Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

Calibration for 084_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93.33	0.0002	P	15.4
2	☐	2.000	2.009	1192.27	0.0030	P	4.8
3	☐	5.000	4.863	2719.11	0.0069	P	2.1
4	☐	10.000	10.228	5605.33	0.0142	P	1.7
5	☐	100.000	102.071	53703.09	0.1393	P	0.8
6	☐	200.000	198.956	102396.74	0.2713	P	0.8
7	☐	1.000					

y = 0.0014 * x + 2.3416E-004

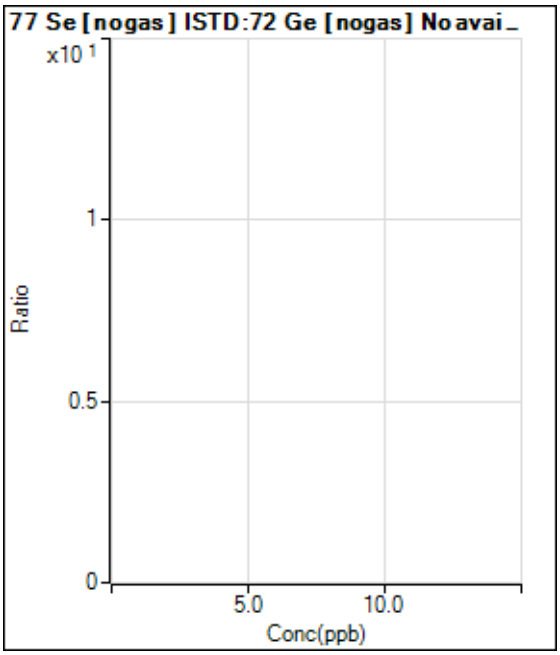
R = 0.9999

DL = 0.07946

BEC = 0.1718

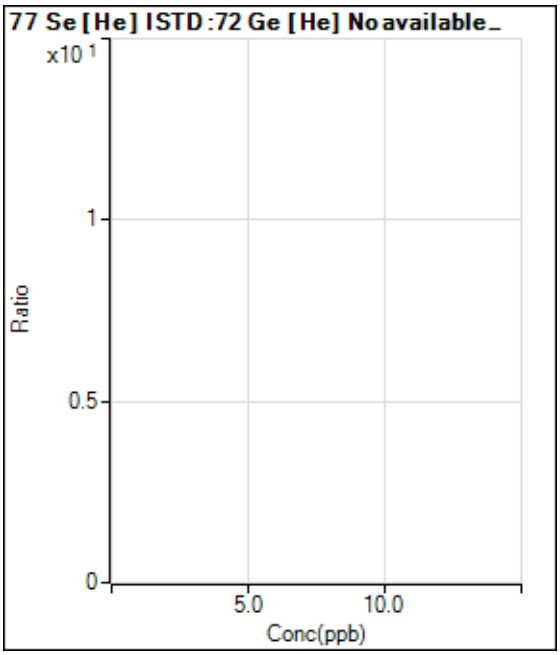
Weight: <None>

Min Conc: <None>

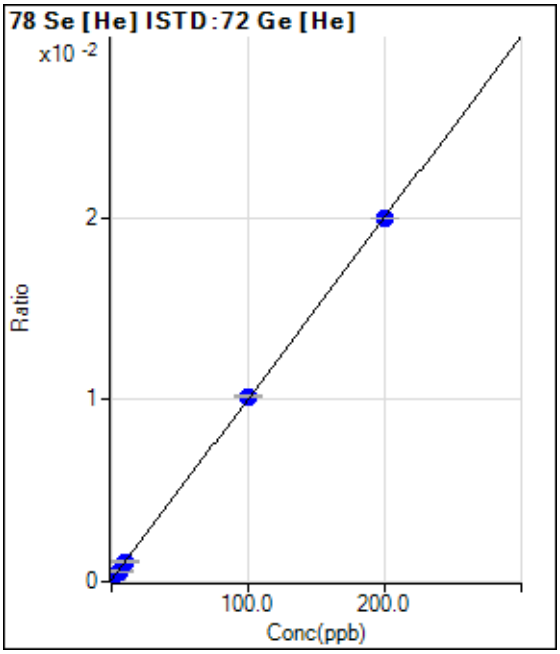


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

Calibration for 084_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	34.67	0.0001	P	17.5
2	☐	2.000	2.066	117.33	0.0003	P	2.3
3	☐	5.000	4.817	224.67	0.0006	P	9.0
4	☐	10.000	9.974	427.34	0.0011	P	8.6
5	☐	100.000	101.480	3929.77	0.0102	P	1.2
6	☐	200.000	199.265	7522.91	0.0199	P	0.1
7	☐	1.000					

y = 9.9609E-005 * x + 8.6953E-005

R = 1.0000

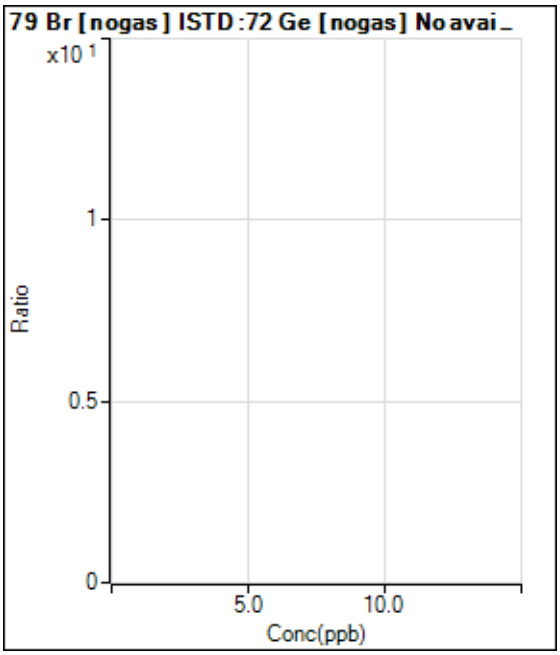
DL = 0.4578

BEC = 0.8729

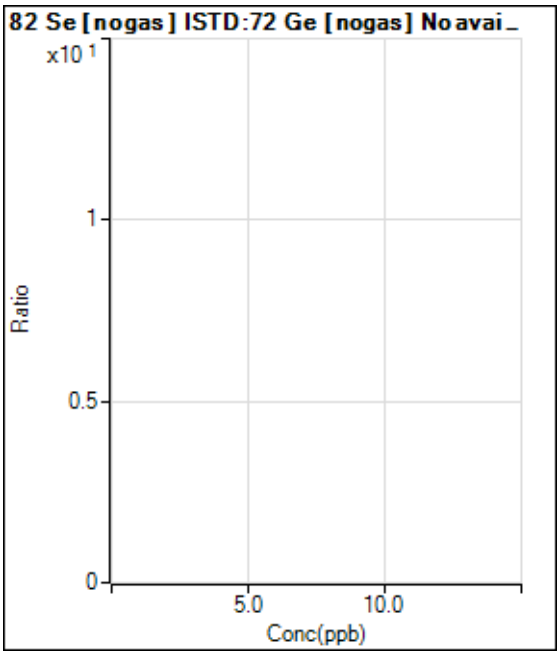
Weight: <None>

Min Conc: <None>

Calibration for 084_ICV.d

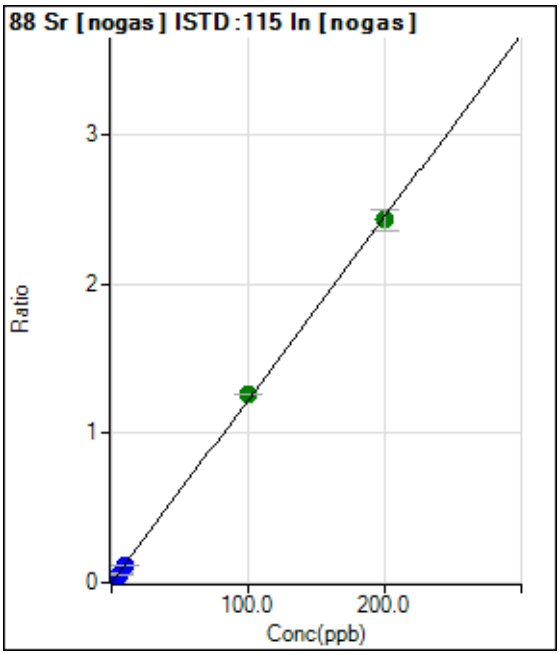


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

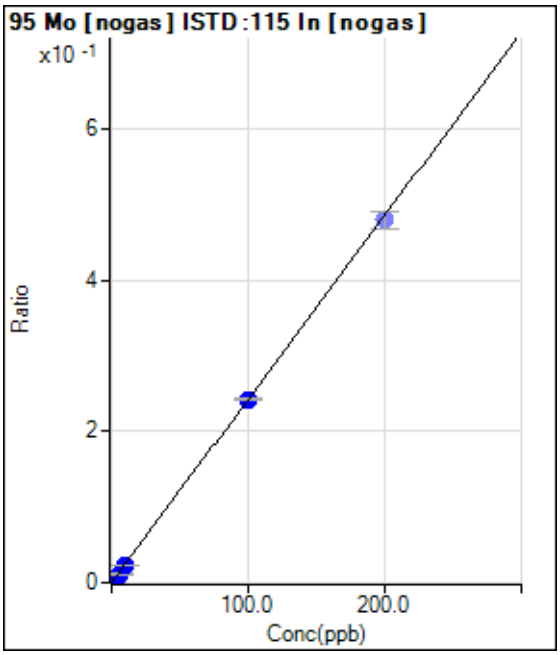
Calibration for 084_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	816.70	0.0005	P	10.8
2	☐	2.000	1.852	40543.03	0.0231	P	3.3
3	☐	5.000	4.598	99262.95	0.0567	P	7.5
4	☐	10.000	9.378	201527.66	0.1152	P	1.7
5	☐	100.000	103.108	2066978.04	1.2620	A	0.4
6	☐	200.000	198.489	3941086.61	2.4290	A	6.1
7	☐	1.000					

y = 0.0122 * x + 4.7850E-004
R = 0.9998
DL = 0.01269
BEC = 0.03911

Weight: <None>
Min Conc: <None>

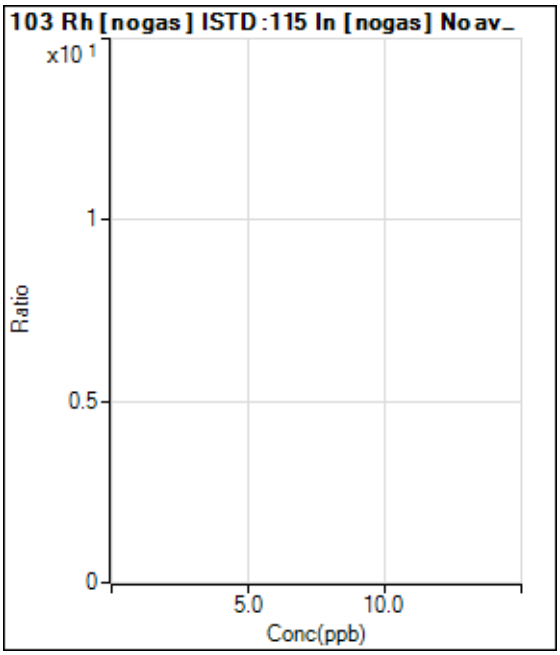


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	113.33	0.0001	P	37.7
2	☐	2.000	1.883	8138.63	0.0046	P	4.2
3	☐	5.000	4.599	19651.08	0.0112	P	9.6
4	☐	10.000	9.469	40372.59	0.0231	P	2.4
5	☐	100.000	100.075	398442.26	0.2433	P	2.1
6	☑	200.000		780149.34	0.4806	P	5.1
7	☐	1.000					

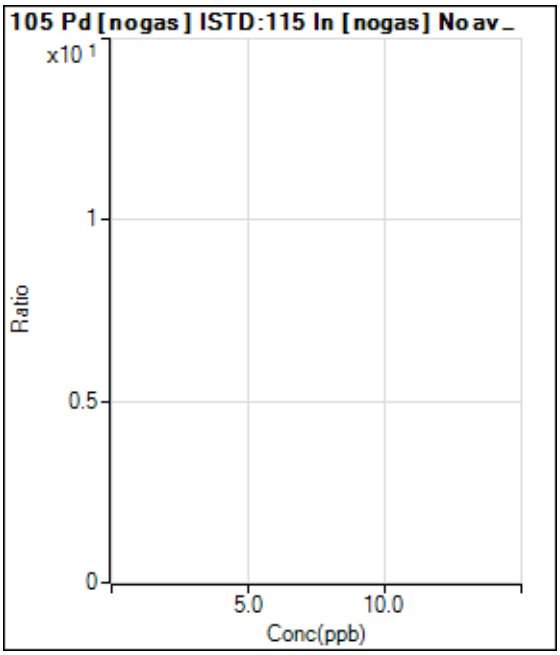
y = 0.0024 * x + 6.6498E-005
R = 1.0000
DL = 0.03092
BEC = 0.02736

Weight: <None>
Min Conc: <None>

Calibration for 084_ICV.d

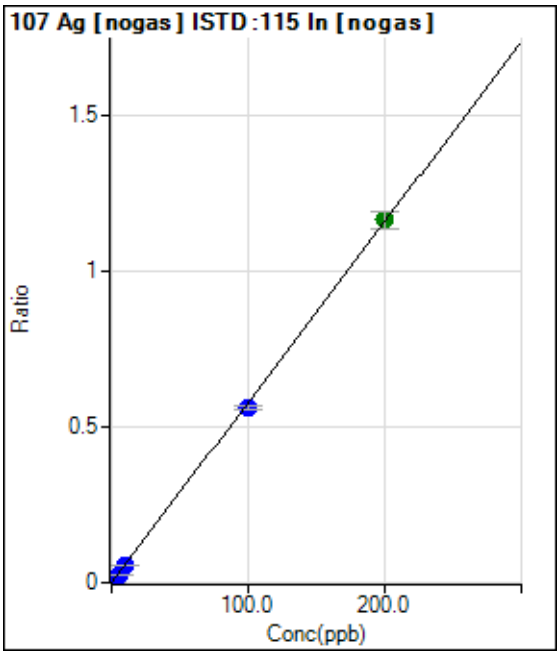


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

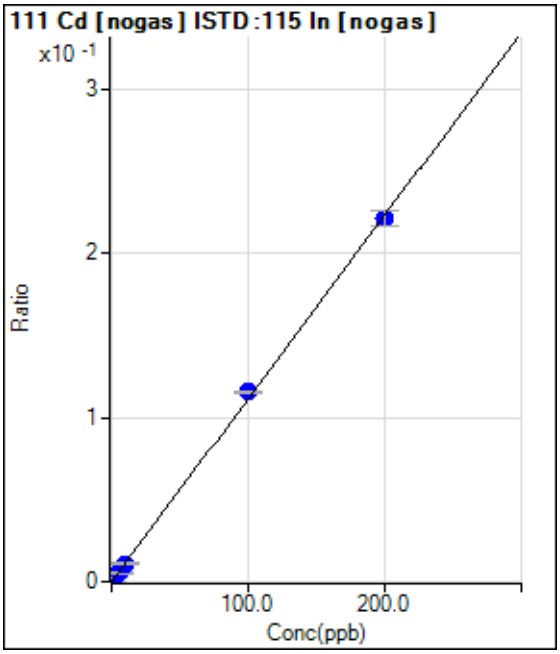
Calibration for 084_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63.33	0.0000	P	25.0
2	☐	2.000	1.864	18987.15	0.0108	P	4.9
3	☐	5.000	4.606	46735.55	0.0267	P	7.5
4	☐	10.000	9.765	98983.51	0.0566	P	2.5
5	☐	100.000	97.445	924427.20	0.5645	P	2.3
6	☐	200.000	201.300	1892685.80	1.1660	A	4.9
7	☐	1.000					

y = 0.0058 * x + 3.7136E-005
R = 0.9999
DL = 0.004814
BEC = 0.006411

Weight: <None>
Min Conc: <None>

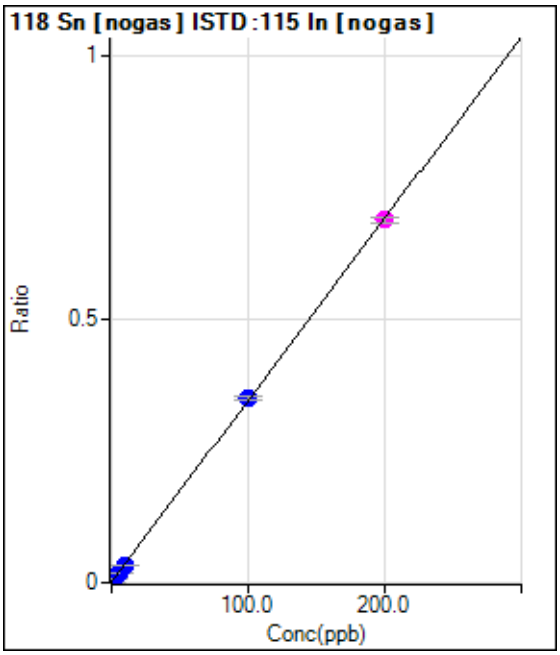


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0000	P	125.4
2	☐	2.000	1.955	3840.48	0.0022	P	10.3
3	☐	5.000	4.780	9369.31	0.0053	P	5.7
4	☐	10.000	9.911	19364.25	0.0111	P	4.0
5	☐	100.000	103.588	189367.44	0.1156	P	1.3
6	☐	200.000	198.217	359222.91	0.2213	P	4.4
7	☐	1.000					

y = 0.0011 * x + 9.8268E-006
R = 0.9998
DL = 0.03313
BEC = 0.008804

Weight: <None>
Min Conc: <None>

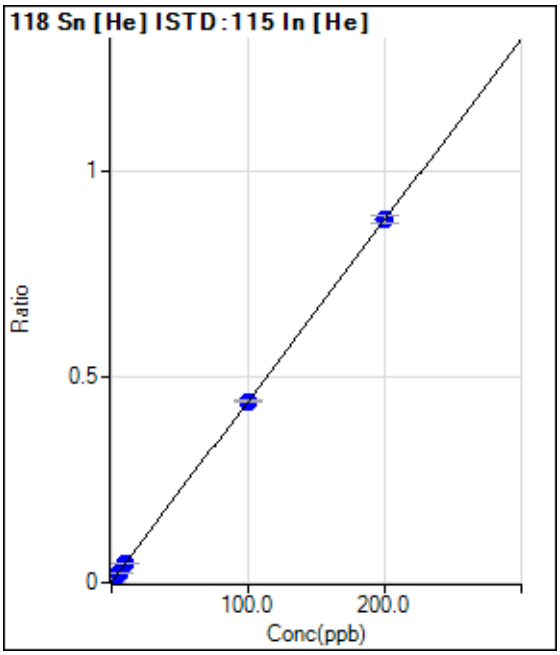
Calibration for 084_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2260.18	0.0013	P	5.3
2	☐	2.000	1.808	13261.90	0.0076	P	4.5
3	☐	5.000	4.617	30196.60	0.0173	P	7.1
4	☐	10.000	9.423	59203.77	0.0338	P	3.0
5	☐	100.000	101.446	575533.38	0.3515	P	2.6
6	☐	200.000	199.317	1120280.01	0.6893	M	1.5
7	☐	1.000					

y = 0.0035 * x + 0.0013
R = 1.0000
DL = 0.06047
BEC = 0.3833

Weight: <None>
Min Conc: <None>

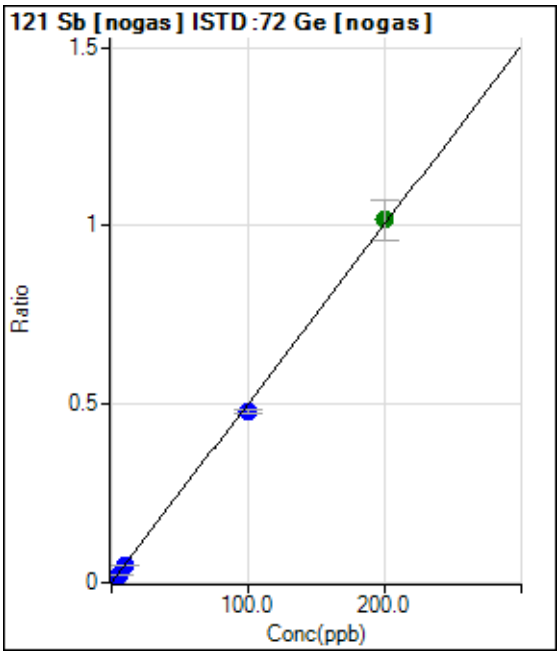


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	936.71	0.0017	P	7.0
2	☐	2.000	1.781	5250.87	0.0095	P	2.5
3	☐	5.000	4.597	11944.23	0.0219	P	6.3
4	☐	10.000	10.018	24824.55	0.0457	P	1.3
5	☐	100.000	99.941	234641.12	0.4403	P	1.3
6	☐	200.000	200.041	454058.40	0.8796	P	2.2
7	☐	1.000					

y = 0.0044 * x + 0.0017
R = 1.0000
DL = 0.0822
BEC = 0.3906

Weight: <None>
Min Conc: <None>

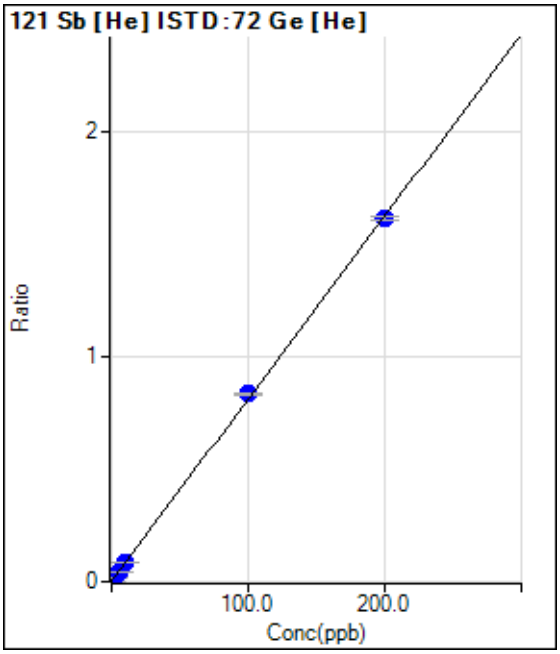
Calibration for 084_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1653.44	0.0009	P	9.7
2	☐	2.000	1.836	17699.25	0.0102	P	3.5
3	☐	5.000	4.478	42044.28	0.0234	P	4.7
4	☐	10.000	9.177	83140.99	0.0470	P	0.9
5	☐	100.000	95.035	822194.47	0.4775	P	2.1
6	☐	200.000	202.538	1676124.40	1.0166	A	11.0
7	☐	1.000					

y = 0.0050 * x + 9.4826E-004
R = 0.9996
DL = 0.05516
BEC = 0.1891

Weight: <None>
Min Conc: <None>

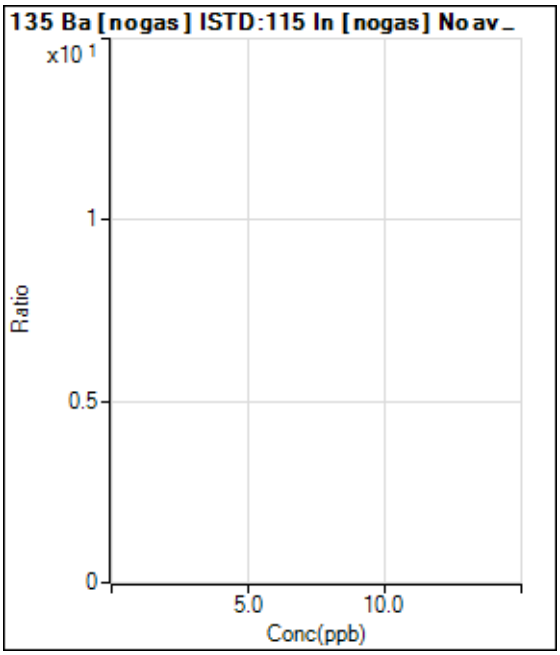


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	660.02	0.0017	P	12.4
2	☐	2.000	1.968	7051.54	0.0176	P	3.5
3	☐	5.000	4.916	16427.88	0.0415	P	3.0
4	☐	10.000	10.260	33519.04	0.0847	P	0.7
5	☐	100.000	102.605	320899.40	0.8325	P	1.0
6	☐	200.000	198.687	607768.34	1.6105	P	1.1
7	☐	1.000					

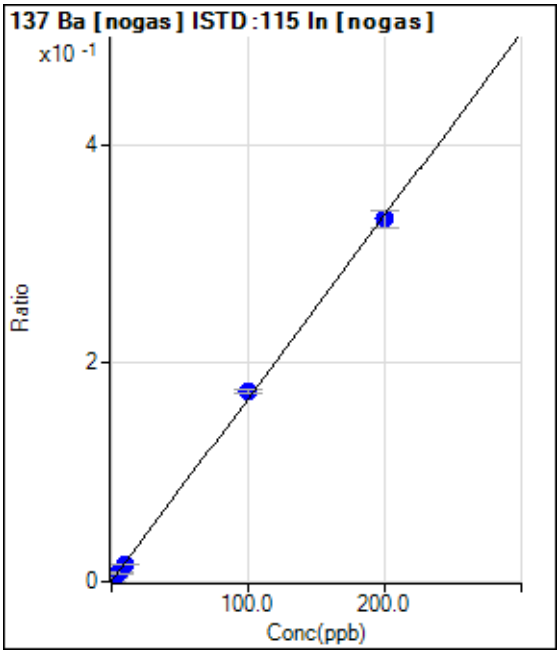
y = 0.0081 * x + 0.0017
R = 0.9999
DL = 0.07638
BEC = 0.2048

Weight: <None>
Min Conc: <None>

Calibration for 084_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	503.35	0.0003	P	16.7
2	☐	2.000	1.869	6001.14	0.0034	P	3.4
3	☐	5.000	4.715	14309.53	0.0082	P	11.3
4	☐	10.000	9.473	28253.56	0.0162	P	3.3
5	☐	100.000	103.726	284855.82	0.1740	P	2.2
6	☐	200.000	198.172	539091.23	0.3321	P	4.8
7	☐	1.000					

y = 0.0017 * x + 2.9495E-004

R = 0.9997

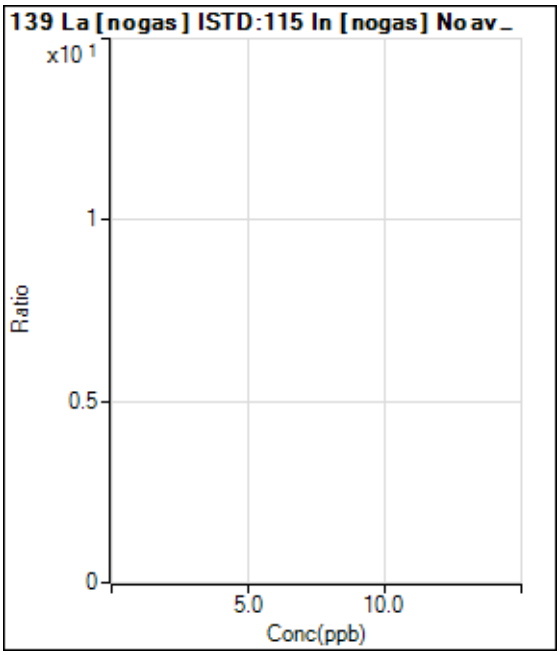
DL = 0.08802

BEC = 0.1762

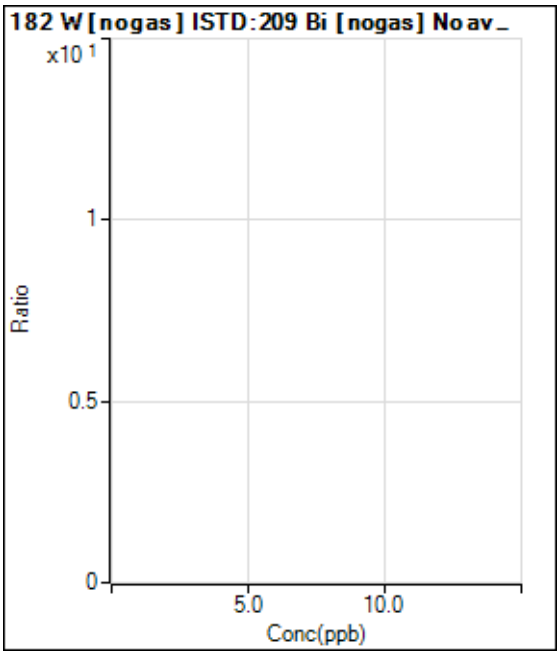
Weight: <None>

Min Conc: <None>

Calibration for 084_ICV.d

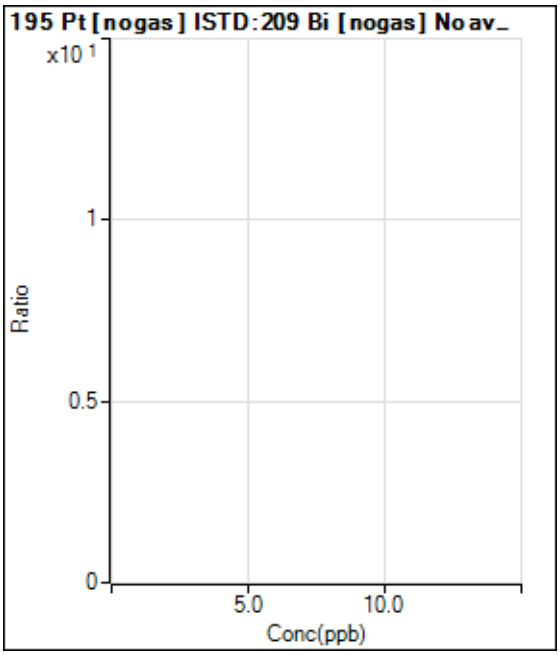


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

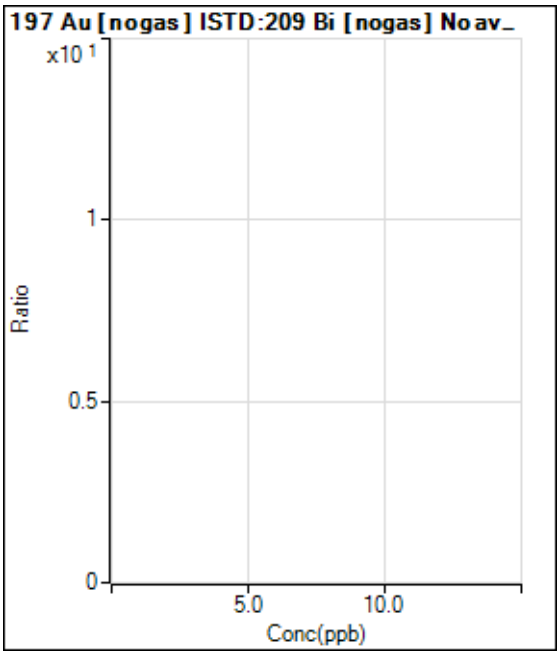


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

Calibration for 084_ICV.d

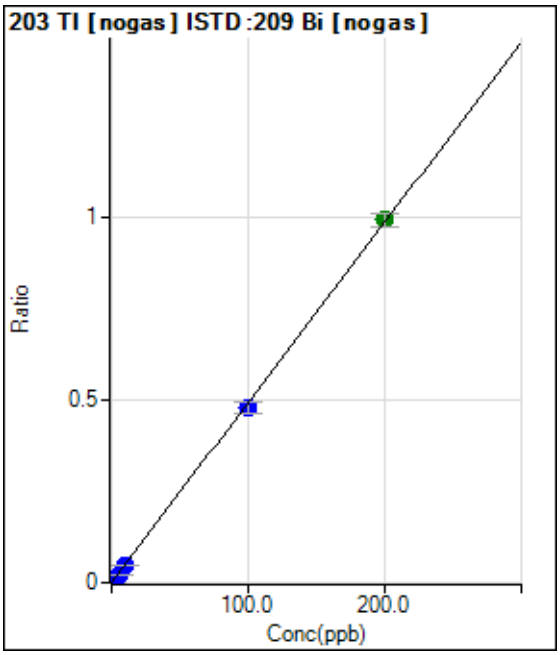


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

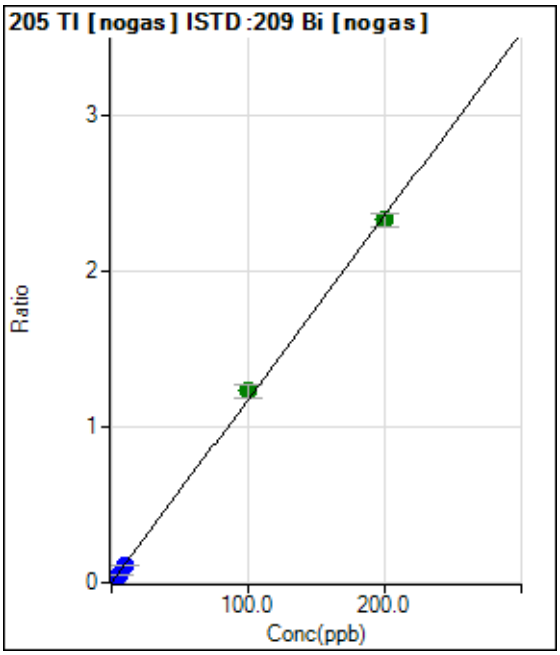
Calibration for 084_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	140.00	0.0001	P	14.1
2	☐	2.000	1.765	12314.76	0.0088	P	5.4
3	☐	5.000	4.405	30459.01	0.0218	P	7.2
4	☐	10.000	9.241	63426.86	0.0456	P	3.3
5	☐	100.000	97.289	634674.61	0.4796	P	7.3
6	☐	200.000	201.411	1345999.38	0.9927	A	4.1
7	☐	1.000					

y = 0.0049 * x + 1.0200E-004
R = 0.9999
DL = 0.008752
BEC = 0.0207

Weight: <None>
Min Conc: <None>

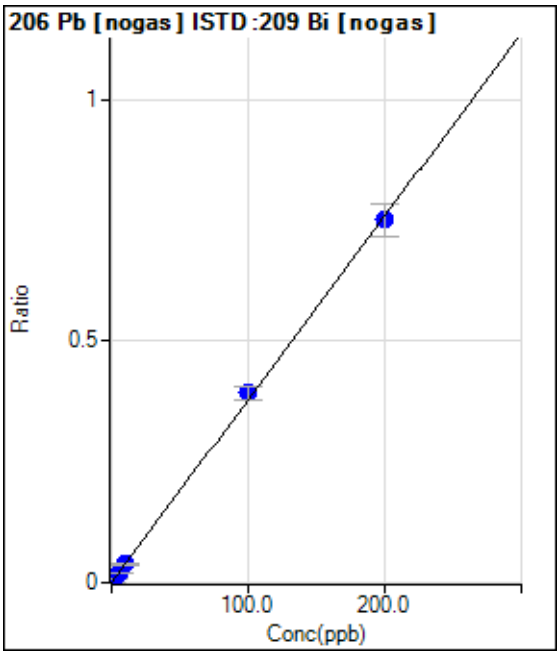


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	256.68	0.0002	P	26.2
2	☐	2.000	1.788	29761.17	0.0213	P	4.4
3	☐	5.000	4.510	74503.43	0.0533	P	5.9
4	☐	10.000	9.236	151500.57	0.1090	P	3.0
5	☐	100.000	104.417	1628589.87	1.2306	A	7.2
6	☐	200.000	197.844	3162626.20	2.3315	A	3.9
7	☐	1.000					

y = 0.0118 * x + 1.8714E-004
R = 0.9996
DL = 0.0125
BEC = 0.01588

Weight: <None>
Min Conc: <None>

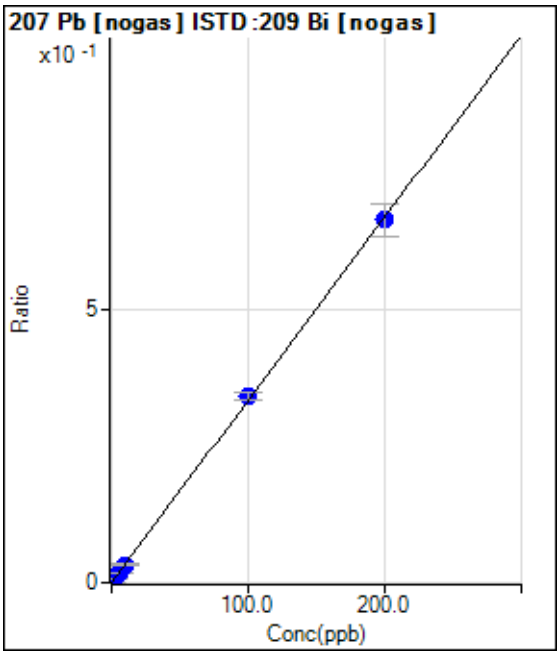
Calibration for 084_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	143.33	0.0001	P	8.3
2	☐	2.000	1.989	10693.70	0.0076	P	8.4
3	☐	5.000	5.095	27112.95	0.0194	P	7.5
4	☐	10.000	10.032	52969.68	0.0381	P	3.9
5	☐	100.000	103.763	520653.82	0.3933	P	6.8
6	☐	200.000	198.115	1014992.28	0.7509	P	9.1
7	☐	1.000					

y = 0.0038 * x + 1.0446E-004
R = 0.9997
DL = 0.006883
BEC = 0.02756

Weight: <None>
Min Conc: <None>

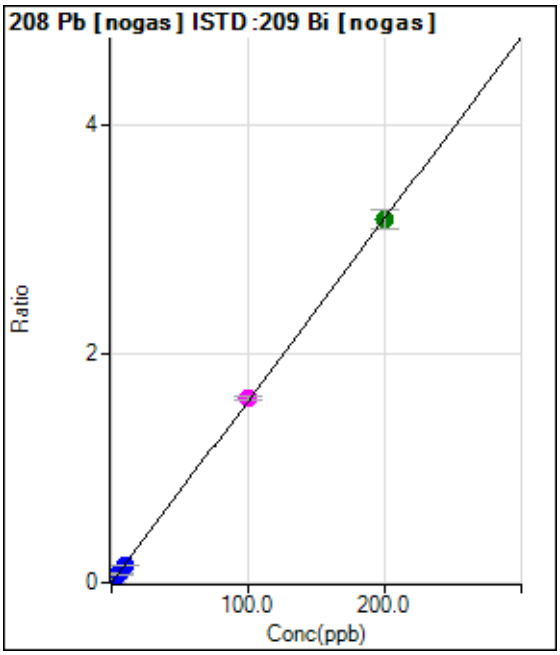


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	130.00	0.0001	P	7.5
2	☐	2.000	2.024	9626.27	0.0069	P	3.6
3	☐	5.000	4.933	23196.84	0.0166	P	7.5
4	☐	10.000	9.905	46212.75	0.0333	P	5.0
5	☐	100.000	102.542	455129.75	0.3435	P	4.0
6	☐	200.000	198.735	899985.90	0.6657	P	8.8
7	☐	1.000					

y = 0.0033 * x + 9.4722E-005
R = 0.9999
DL = 0.006374
BEC = 0.02828

Weight: <None>
Min Conc: <None>

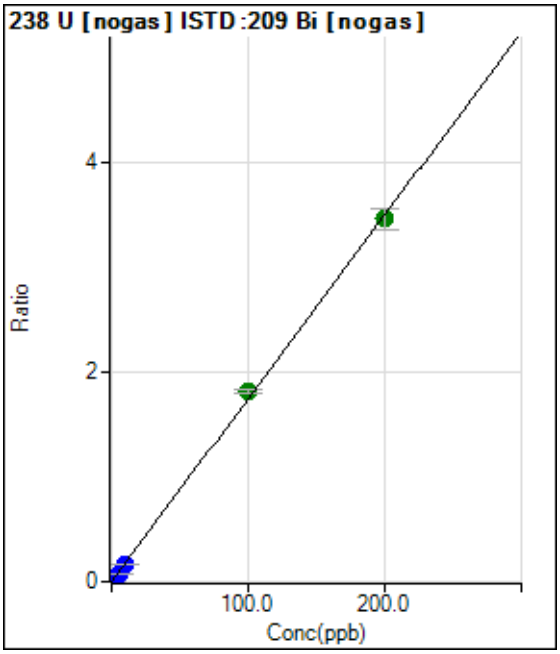
Calibration for 084_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	536.67	0.0004	P	6.3
2	☐	2.000	1.926	43326.55	0.0309	P	1.3
3	☐	5.000	4.834	107594.60	0.0771	P	8.0
4	☐	10.000	9.658	213441.23	0.1536	P	3.5
5	☐	100.000	101.126	2127538.34	1.6046	M	2.1
6	☐	200.000	199.459	4287755.59	3.1645	A	5.2
7	☐	1.000					

y = 0.0159 * x + 3.9112E-004
R = 1.0000
DL = 0.004646
BEC = 0.02466

Weight: <None>
Min Conc: <None>

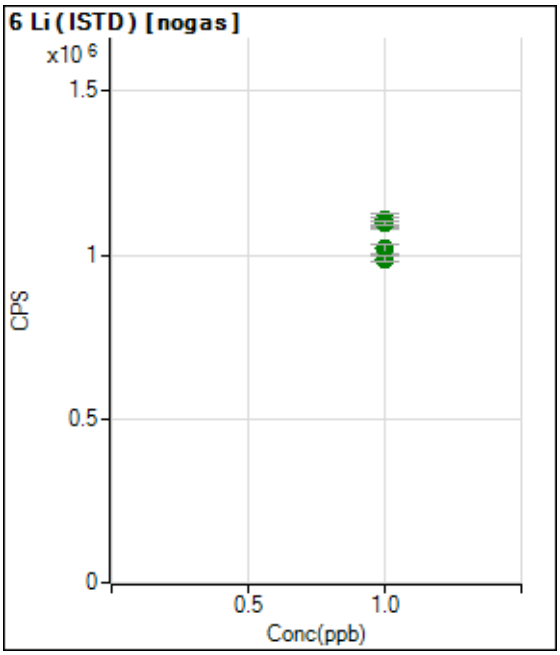


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	60.00	0.0000	P	33.5
2	☐	2.000	1.836	44914.15	0.0321	P	4.1
3	☐	5.000	4.560	111206.83	0.0796	P	5.7
4	☐	10.000	9.259	224464.79	0.1616	P	4.5
5	☐	100.000	103.934	2403336.53	1.8133	A	2.9
6	☐	200.000	198.083	4679614.62	3.4559	A	6.2
7	☐	1.000					

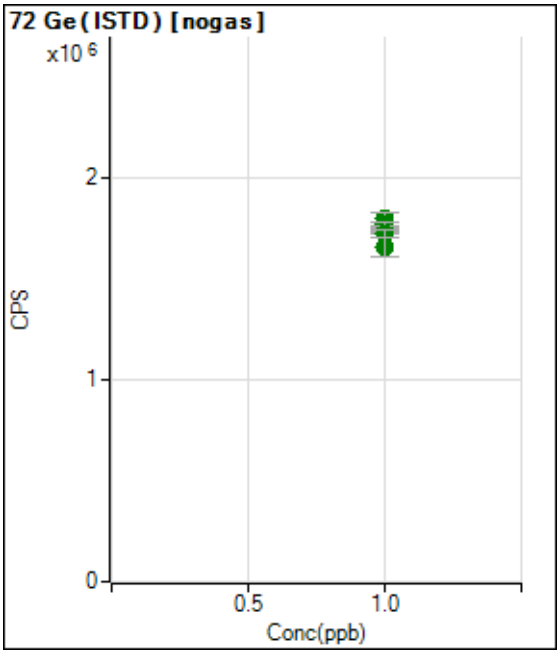
y = 0.0174 * x + 4.3735E-005
R = 0.9997
DL = 0.002521
BEC = 0.002507

Weight: <None>
Min Conc: <None>

Calibration for 084_ICV.d

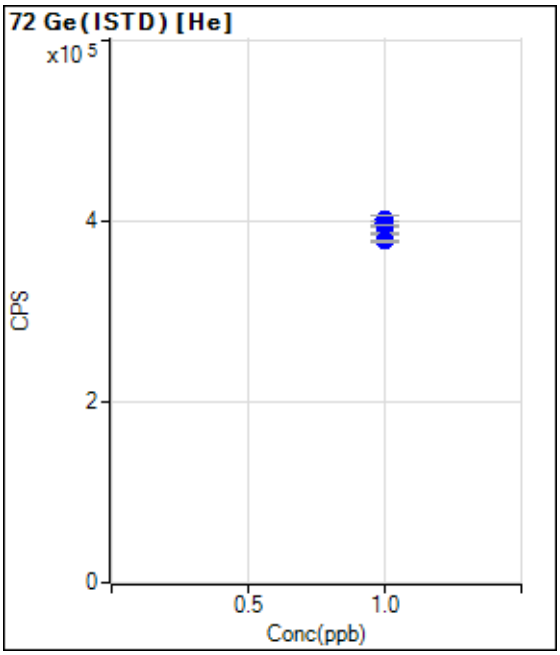


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1102270.34		A	2.2
2	☐	1.000		1107099.47		A	3.4
3	☐	1.000		1097502.93		A	3.6
4	☐	1.000		1096063.37		A	1.2
5	☐	1.000		1018259.69		A	2.7
6	☐	1.000		987920.88		A	1.6
7	☐	1.000					

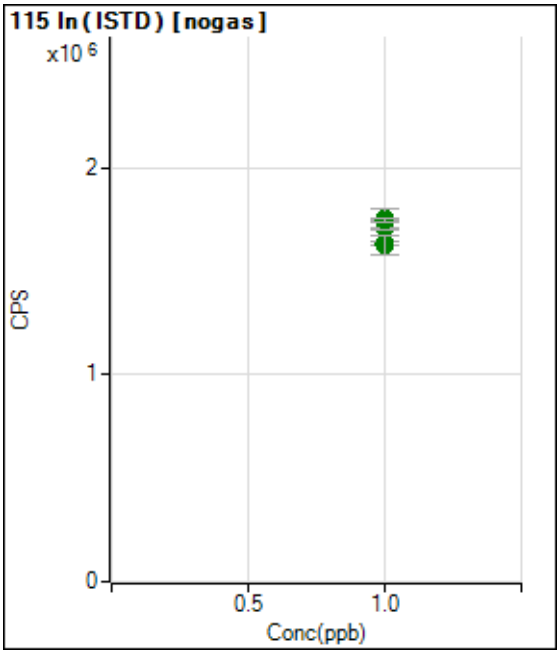


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1744974.87		A	1.6
2	☐	1.000		1743679.98		A	2.2
3	☐	1.000		1798700.23		A	3.9
4	☐	1.000		1770437.11		A	1.0
5	☐	1.000		1722209.61		A	2.1
6	☐	1.000		1655675.18		A	5.8
7	☐	1.000					

Calibration for 084_ICV.d

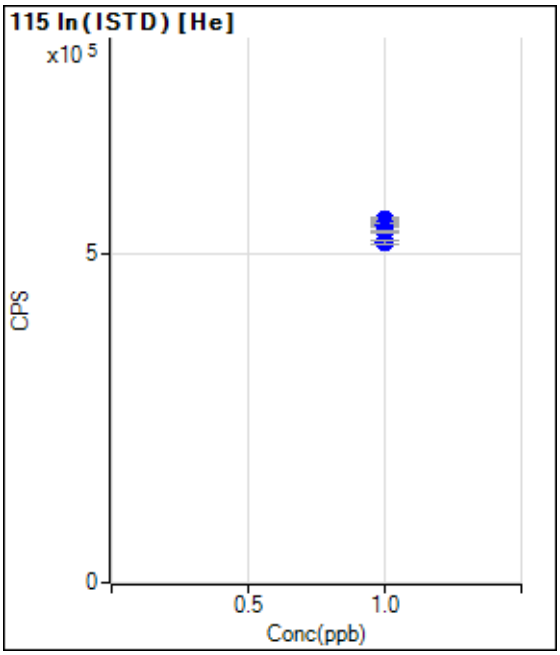


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		398221.83		P	1.0
2	☐	1.000		400973.20		P	2.8
3	☐	1.000		396271.85		P	1.2
4	☐	1.000		395546.44		P	0.3
5	☐	1.000		385466.82		P	0.8
6	☐	1.000		377362.10		P	0.4
7	☐	1.000					

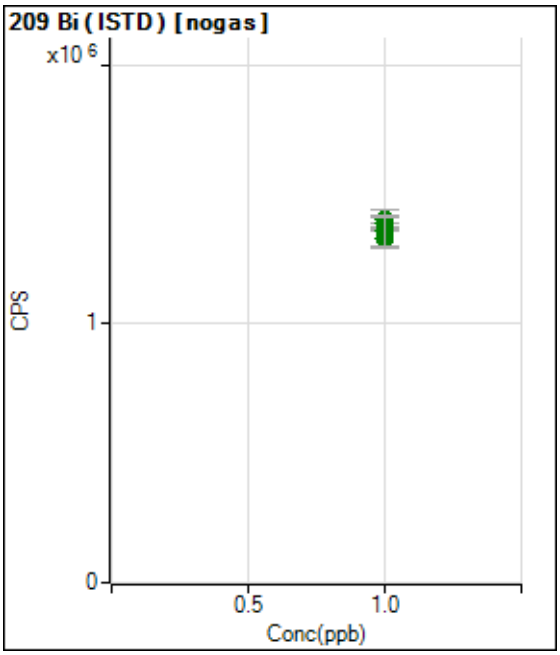


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1707883.39		A	0.9
2	☐	1.000		1752869.15		A	0.9
3	☐	1.000		1754490.50		A	6.1
4	☐	1.000		1749172.06		A	0.9
5	☐	1.000		1637830.22		A	1.5
6	☐	1.000		1626044.39		A	5.4
7	☐	1.000					

Calibration for 084_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		546301.06		P	1.5
2	☐	1.000		550874.64		P	0.9
3	☐	1.000		545992.67		P	2.2
4	☐	1.000		543499.55		P	0.7
5	☐	1.000		532892.82		P	0.2
6	☐	1.000		516284.70		P	1.1
7	☐	1.000					



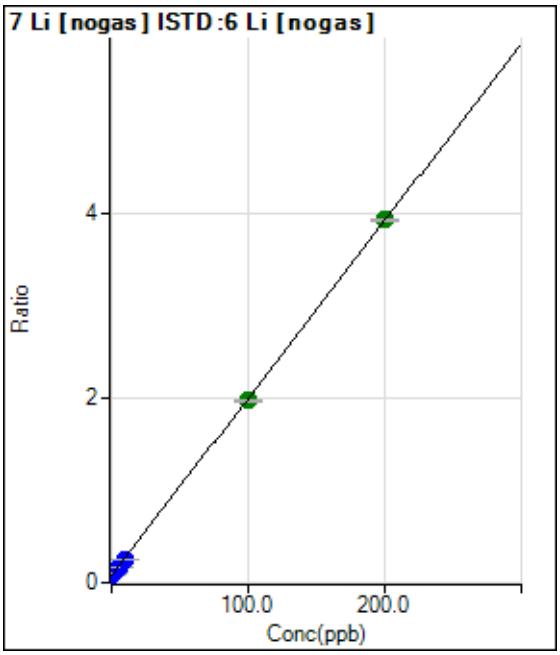
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1372321.28		A	0.3
2	☐	1.000		1400493.62		A	1.9
3	☐	1.000		1400060.76		A	5.6
4	☐	1.000		1390515.71		A	3.4
5	☐	1.000		1326695.06		A	5.2
6	☐	1.000		1359094.77		A	9.0
7	☐	1.000					

Calibration for 020_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\010320A.b\
Analysis File: 010320A.batch.bin
DA Date-Time: 1/6/2020 8:24:44 AM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	013CALB.d	CAL BLK	1/3/2020 11:06:19 AM
2	014CALS.d	2/10/200	1/3/2020 11:08:36 AM
3	015CALS.d	5/25/500	1/3/2020 11:10:52 AM
4	016CALS.d	10/50/1000	1/3/2020 11:13:07 AM
5	017CALS.d	100/500/10K	1/3/2020 11:15:22 AM
6	018CALS.d	200/1000/20K	1/3/2020 11:17:35 AM
7			

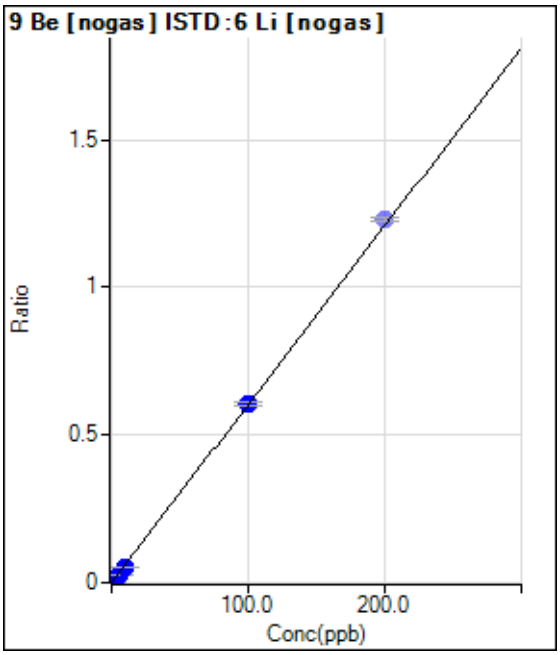
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	69106.18	0.0780	P	1.9
2	☐	2.000	1.795	99688.53	0.1126	P	3.2
3	☐	5.000	4.425	143257.45	0.1632	P	1.2
4	☐	10.000	9.037	220679.85	0.2519	P	2.3
5	☐	100.000	98.887	1581715.91	1.9809	A	1.0
6	☐	200.000	200.621	2924348.50	3.9385	A	0.7
7	☐	1.000					

y = 0.0192 * x + 0.0780
R = 1.0000
DL = 0.2262
BEC = 4.056

Weight: <None>
Min Conc: <None>

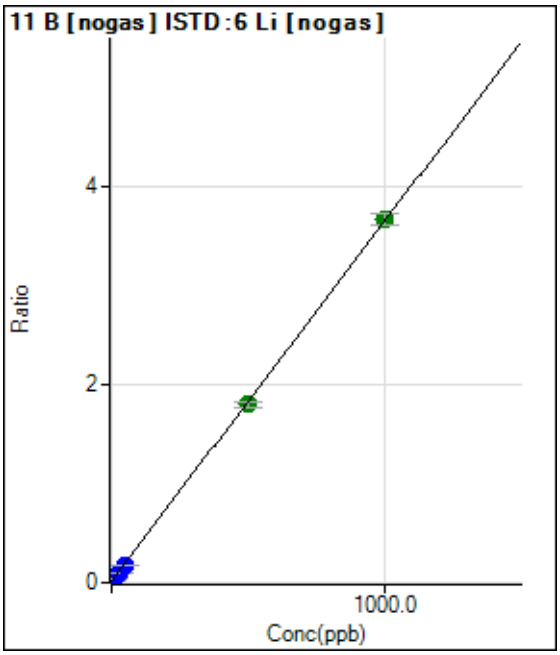


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	45.00	0.0001	P	33.0
2	☐	2.000	1.792	9619.13	0.0109	P	5.9
3	☐	5.000	4.470	23737.98	0.0270	P	0.7
4	☐	10.000	8.962	47433.19	0.0542	P	1.7
5	☐	100.000	100.134	482715.97	0.6046	P	1.8
6	☑	200.000		912463.09	1.2288	P	1.1
7	☐	1.000					

y = 0.0060 * x + 5.0749E-005
R = 1.0000
DL = 0.008323
BEC = 0.008406

Weight: <None>
Min Conc: <None>

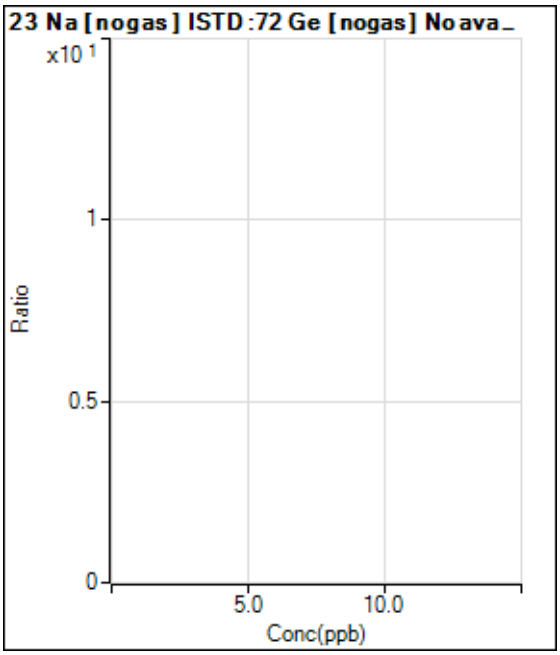
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	15037.57	0.0170	P	1.3
2	☐	10.000	8.457	42293.03	0.0478	P	1.2
3	☐	25.000	21.635	84011.71	0.0957	P	0.9
4	☐	50.000	43.951	154948.95	0.1769	P	2.0
5	☐	500.000	492.047	1442995.14	1.8074	A	3.3
6	☐	1000.000	1004.379	2725574.65	3.6717	A	3.2
7	☐	5.000					

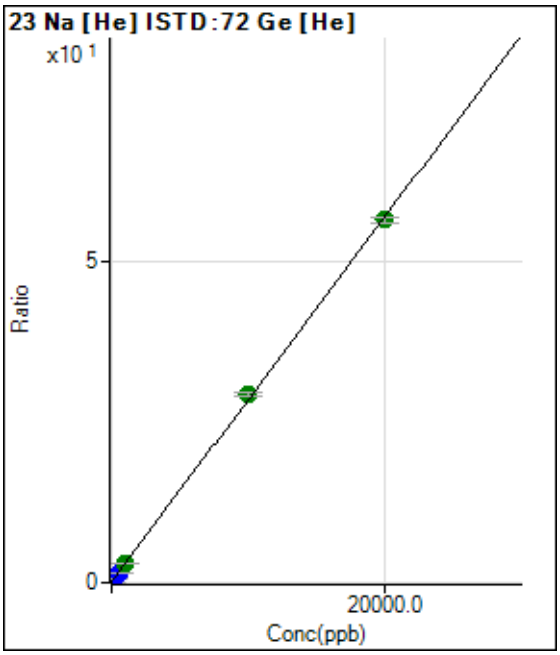
y = 0.0036 * x + 0.0170
R = 1.0000
DL = 0.176
BEC = 4.666

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

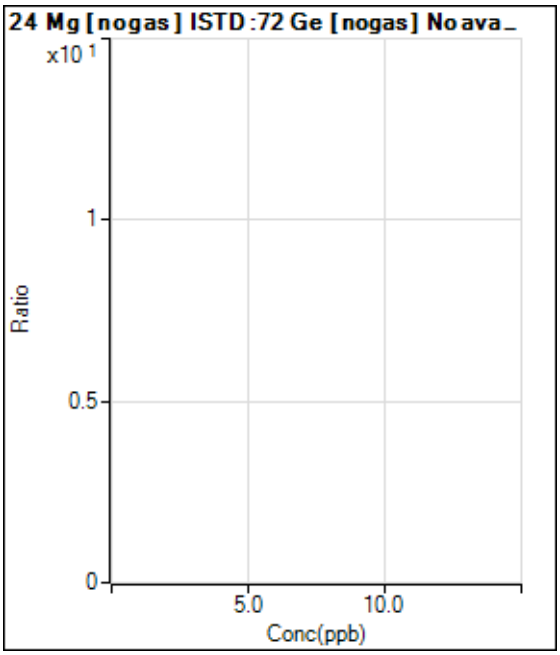
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	50413.91	0.1274	P	1.4
2	☐	200.000	196.085	277734.42	0.6855	P	1.6
3	☐	500.000	485.150	605505.47	1.5083	P	1.6
4	☐	1000.000	1023.031	1201129.31	3.0393	A	2.8
5	☐	10000.000	10279.162	11330990.25	29.3856	A	2.3
6	☐	20000.000	19859.678	21100227.19	56.6551	A	1.2
7	☐	100.000					

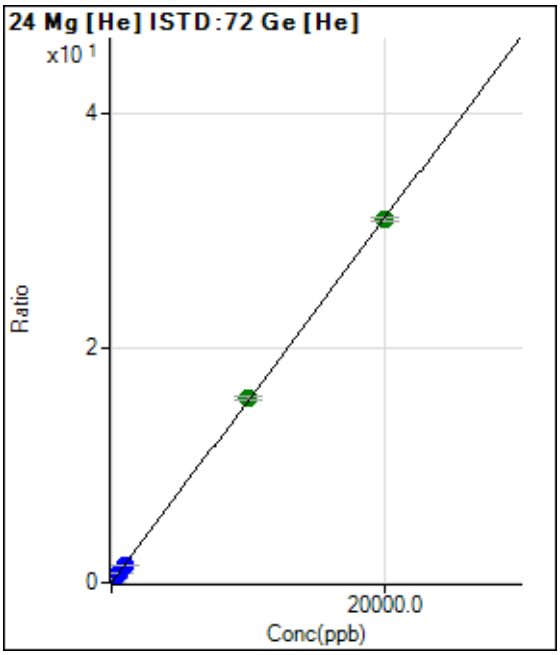
y = 0.0028 * x + 0.1274
R = 0.9999
DL = 1.918
BEC = 44.76

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

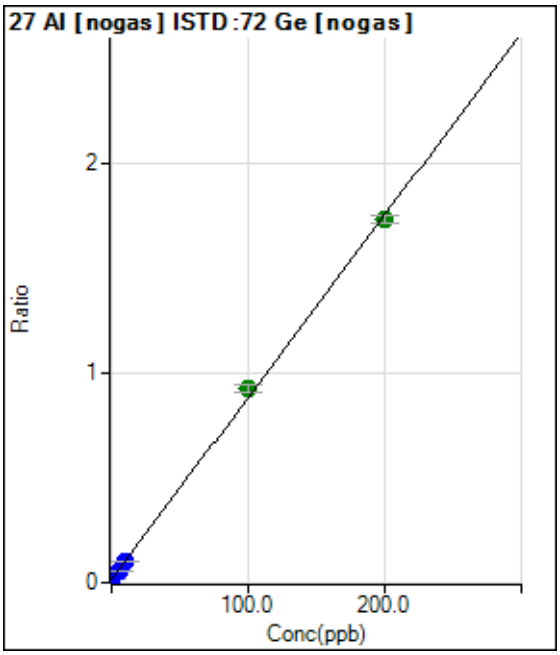
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	473.35	0.0012	P	17.3
2	☐	200.000	197.298	124356.79	0.3069	P	3.3
3	☐	500.000	486.201	302959.51	0.7546	P	0.8
4	☐	1000.000	991.693	607787.10	1.5380	P	0.5
5	☐	10000.000	10158.311	6070488.24	15.7432	A	1.5
6	☐	20000.000	19921.632	11498469.41	30.8732	A	0.9
7	☐	100.000					

y = 0.0015 * x + 0.0012
R = 1.0000
DL = 0.4
BEC = 0.7703

Weight: <None>
Min Conc: <None>

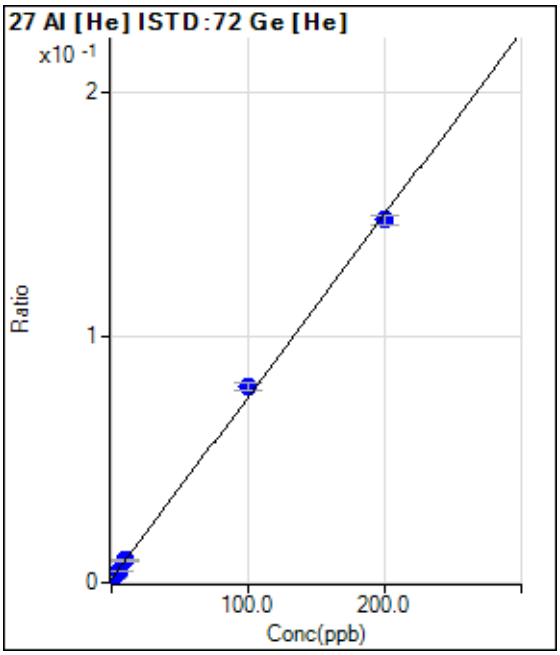


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22810.74	0.0153	P	3.4
2	☐	2.000	1.981	48783.02	0.0325	P	1.5
3	☐	5.000	4.901	87296.94	0.0579	P	2.6
4	☐	10.000	9.968	157130.75	0.1019	P	1.6
5	☐	100.000	105.071	1376930.60	0.9281	A	4.2
6	☐	200.000	197.469	2475522.72	1.7308	A	2.2
7	☐	1.000					

y = 0.0087 * x + 0.0153
R = 0.9995
DL = 0.1806
BEC = 1.765

Weight: <None>
Min Conc: <None>

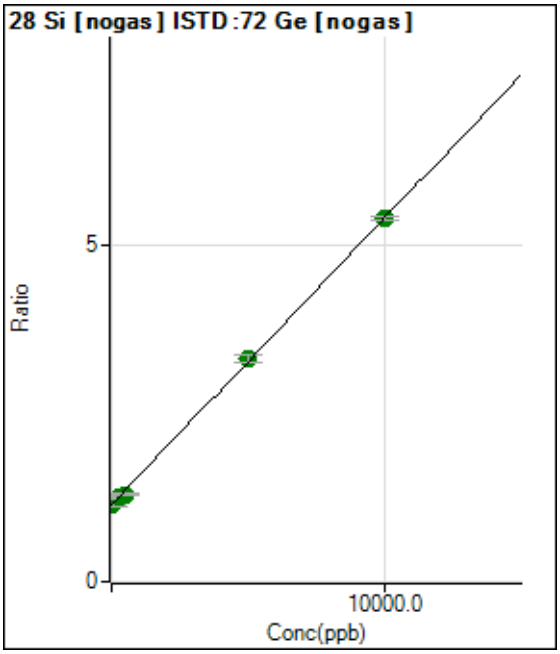
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	546.68	0.0014	P	16.6
2	☐	2.000	1.669	1063.38	0.0026	P	14.2
3	☐	5.000	4.486	1893.46	0.0047	P	1.9
4	☐	10.000	10.461	3620.40	0.0092	P	10.1
5	☐	100.000	105.924	30905.52	0.0801	P	3.8
6	☐	200.000	197.031	55083.57	0.1479	P	2.4
7	☐	1.000					

y = 7.4361E-004 * x + 0.0014
R = 0.9994
DL = 0.9223
BEC = 1.857

Weight: <None>
Min Conc: <None>

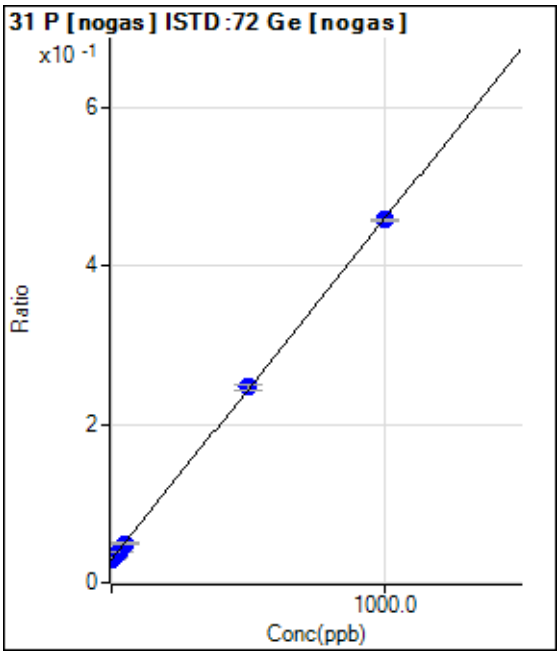


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1704571.64	1.1461	A	2.7
2	☐	100.000	30.013	1736665.03	1.1589	A	5.6
3	☐	250.000	247.967	1886977.68	1.2518	A	2.8
4	☐	500.000	335.676	1987777.78	1.2891	A	1.9
5	☐	5000.000	5086.181	4916957.01	3.3139	A	3.0
6	☐	10000.000	9965.876	7715215.51	5.3938	A	1.1
7	☐	50.000					

y = 4.2622E-004 * x + 1.1461
R = 0.9998
DL = 217.2
BEC = 2689

Weight: <None>
Min Conc: <None>

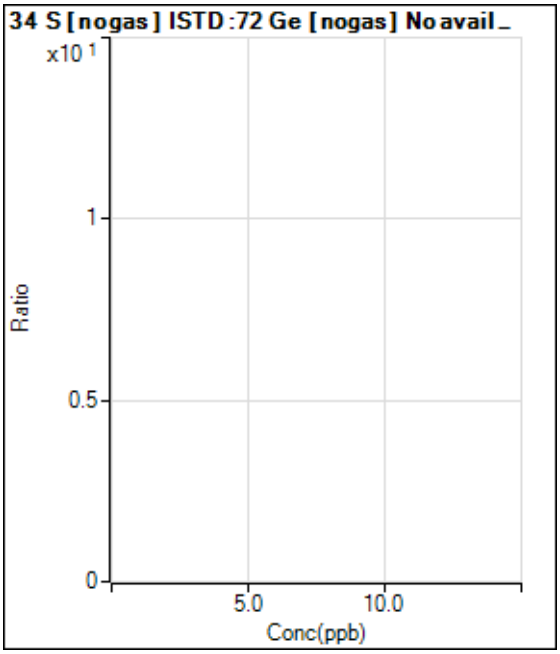
Calibration for 020_ICV.d



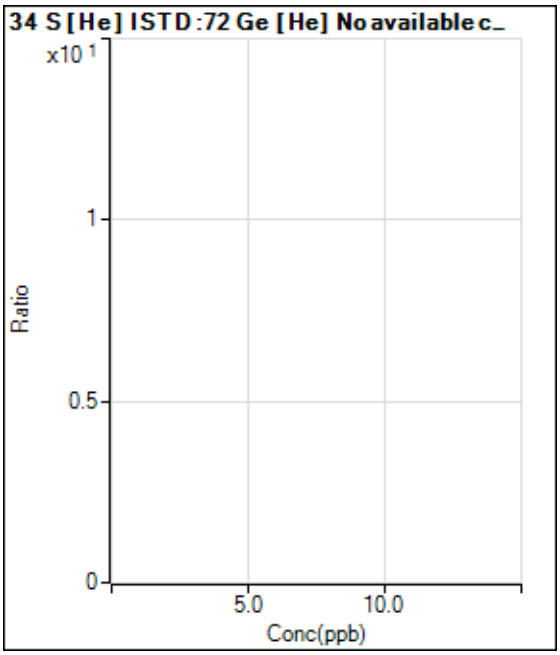
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	43406.85	0.0292	P	2.5
2	☐	10.000	7.164	48358.68	0.0323	P	3.1
3	☐	25.000	21.928	58209.70	0.0386	P	1.3
4	☐	50.000	47.674	76608.45	0.0497	P	1.5
5	☐	500.000	505.933	366034.75	0.2467	P	2.7
6	☐	1000.000	997.255	655012.96	0.4579	P	0.4
7	☐	5.000					

y = 4.2990E-004 * x + 0.0292
R = 1.0000
DL = 5.181
BEC = 67.89

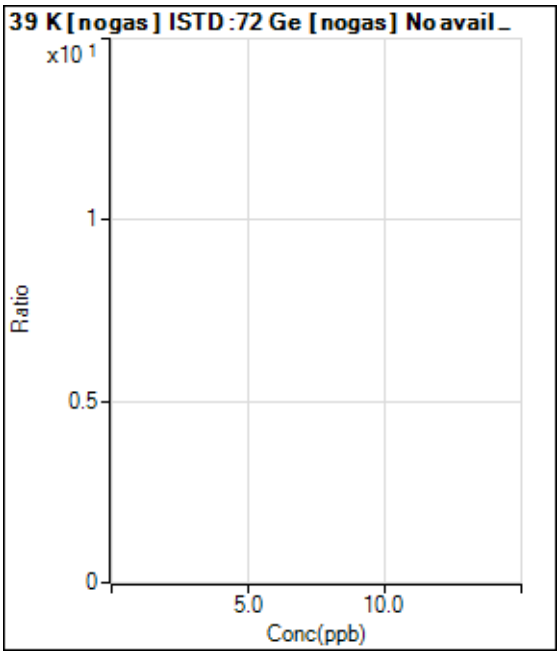
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	400.000					
3	☐	1000.000					
4	☐	2000.000					
5	☐	20000.000					
6	☐	40000.000					
7	☐	200.000					

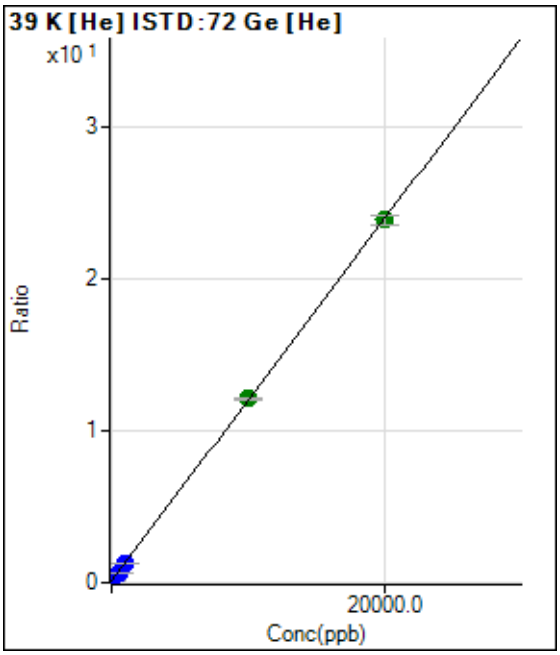


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	400.000					
3	☐	1000.000					
4	☐	2000.000					
5	☐	20000.000					
6	☐	40000.000					
7	☐	200.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

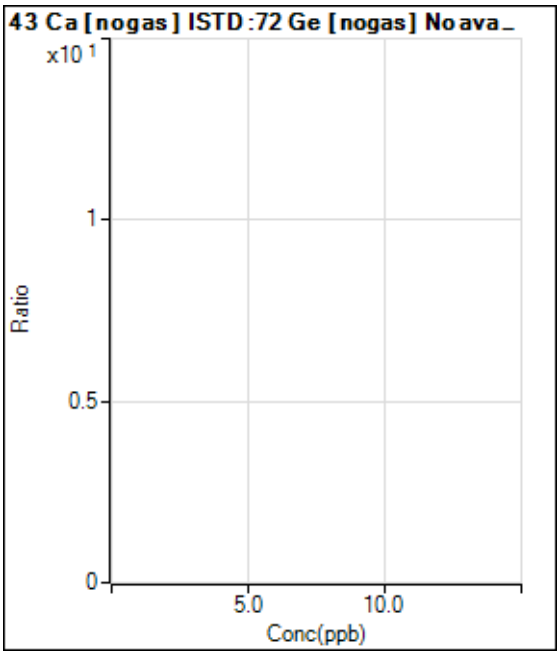
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	45933.14	0.1161	P	0.9
2	☐	200.000	190.098	138780.60	0.3425	P	1.1
3	☐	500.000	481.040	276641.32	0.6891	P	1.7
4	☐	1000.000	970.509	502730.17	1.2722	P	1.4
5	☐	10000.000	10098.005	4682984.72	12.1454	A	1.0
6	☐	20000.000	19953.045	8894580.07	23.8852	A	3.0
7	☐	100.000					

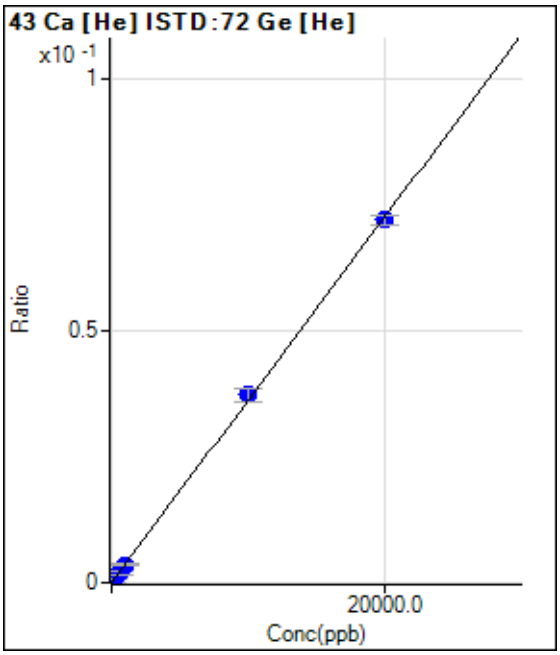
y = 0.0012 * x + 0.1161
R = 1.0000
DL = 2.693
BEC = 97.45

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.33	0.0000	P	173.2
2	☐	200.000	220.081	326.68	0.0008	P	17.9
3	☐	500.000	525.547	766.70	0.0019	P	24.3
4	☐	1000.000	966.212	1386.74	0.0035	P	12.1
5	☐	10000.000	10275.112	14355.74	0.0372	P	6.4
6	☐	20000.000	19863.294	26799.46	0.0720	P	2.9
7	☐	100.000					

y = 3.6225E-006 * x + 8.4148E-006

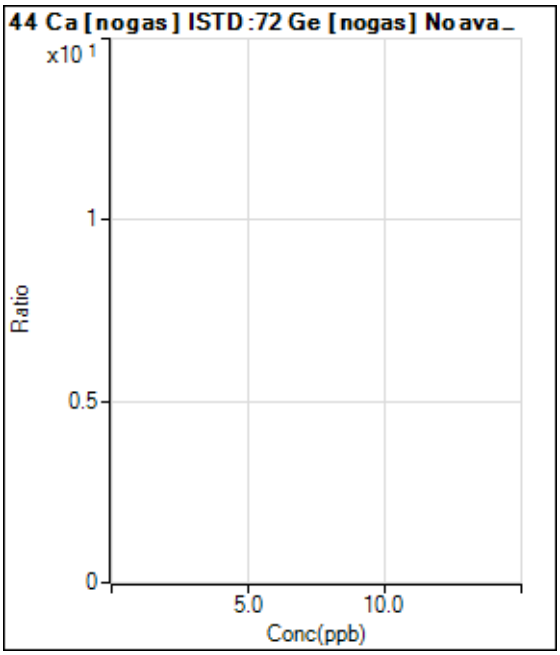
R = 0.9999

DL = 12.07

BEC = 2.323

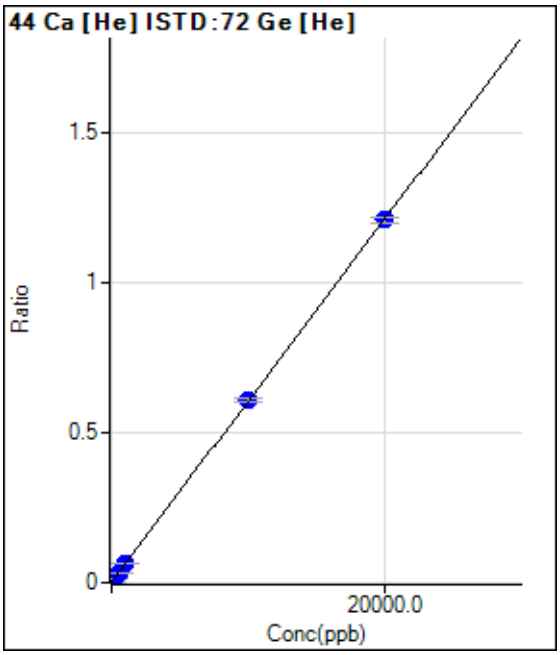
Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

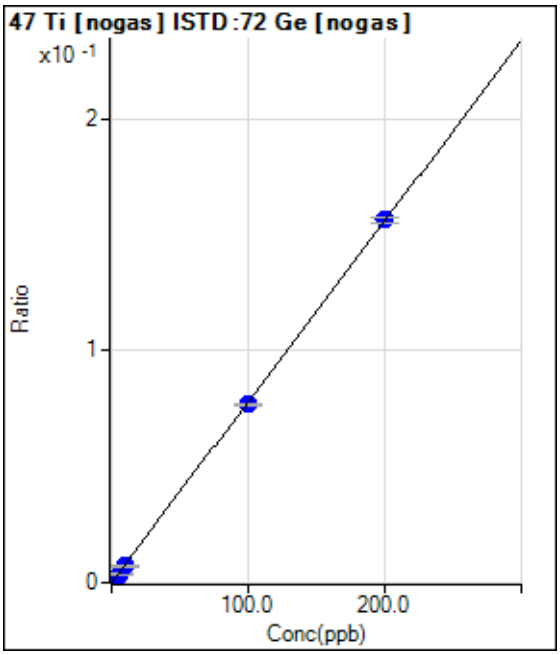
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	413.35	0.0010	P	18.4
2	☐	200.000	186.379	4997.41	0.0123	P	5.7
3	☐	500.000	482.358	12154.11	0.0303	P	2.0
4	☐	1000.000	1004.888	24476.25	0.0619	P	1.7
5	☐	10000.000	10041.067	235025.19	0.6095	P	2.0
6	☐	20000.000	19979.799	451326.17	1.2118	P	1.7
7	☐	100.000					

y = 6.0599E-005 * x + 0.0010
R = 1.0000
DL = 9.495
BEC = 17.23

Weight: <None>
Min Conc: <None>

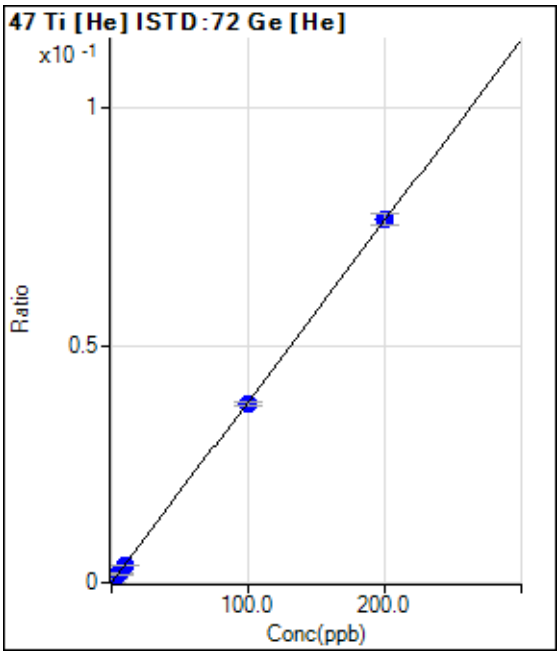


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	140.00	0.0001	P	9.9
2	☐	2.000	2.026	2503.54	0.0017	P	7.3
3	☐	5.000	4.620	5560.91	0.0037	P	4.4
4	☐	10.000	9.077	11033.46	0.0072	P	4.1
5	☐	100.000	98.652	114091.37	0.0769	P	1.4
6	☐	200.000	200.729	223594.44	0.1563	P	1.5
7	☐	1.000					

y = 7.7833E-004 * x + 9.3943E-005
R = 1.0000
DL = 0.03575
BEC = 0.1207

Weight: <None>
Min Conc: <None>

Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.33	0.0000	P	173.2
2	☐	2.000	2.611	406.68	0.0010	P	2.0
3	☐	5.000	4.967	763.36	0.0019	P	10.5
4	☐	10.000	9.495	1433.41	0.0036	P	7.2
5	☐	100.000	99.036	14555.87	0.0378	P	1.9
6	☐	200.000	200.502	28458.63	0.0764	P	3.3
7	☐	1.000					

y = 3.8109E-004 * x + 8.4148E-006

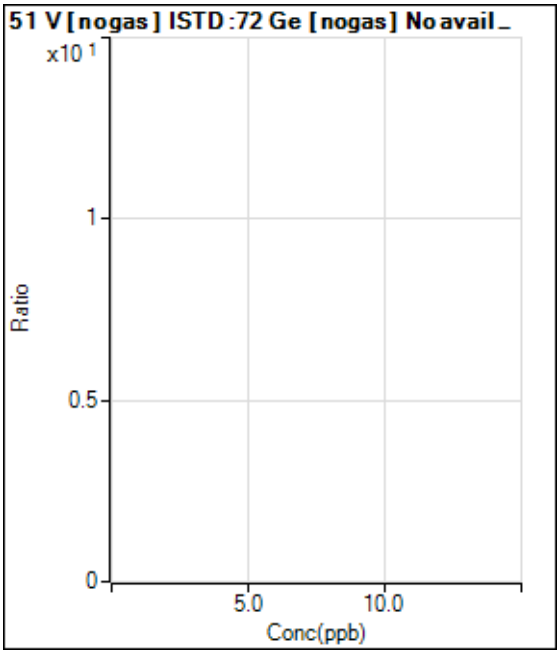
R = 1.0000

DL = 0.1147

BEC = 0.02208

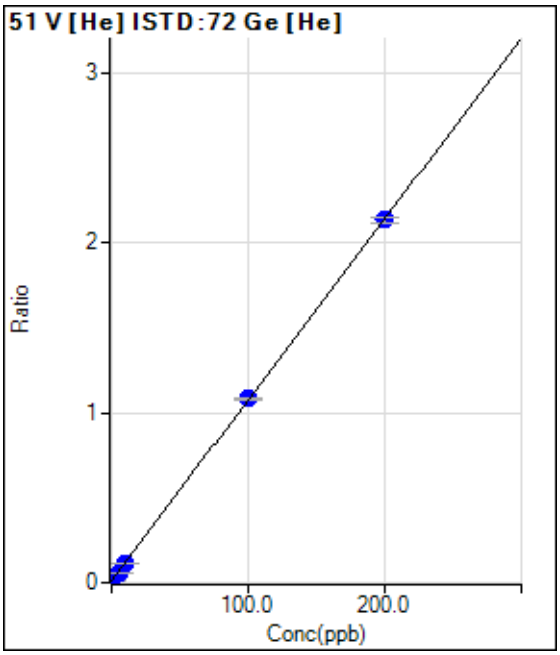
Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

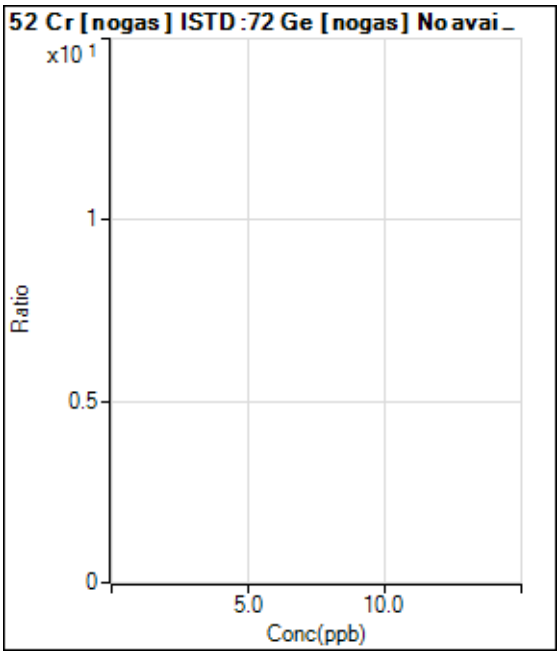
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4690.61	0.0119	P	3.5
2	☐	2.000	1.856	12799.99	0.0316	P	3.1
3	☐	5.000	4.633	24533.94	0.0611	P	0.5
4	☐	10.000	9.543	44773.69	0.1133	P	1.6
5	☐	100.000	100.816	417803.41	1.0836	P	0.8
6	☐	200.000	199.626	794747.92	2.1339	P	1.6
7	☐	1.000					

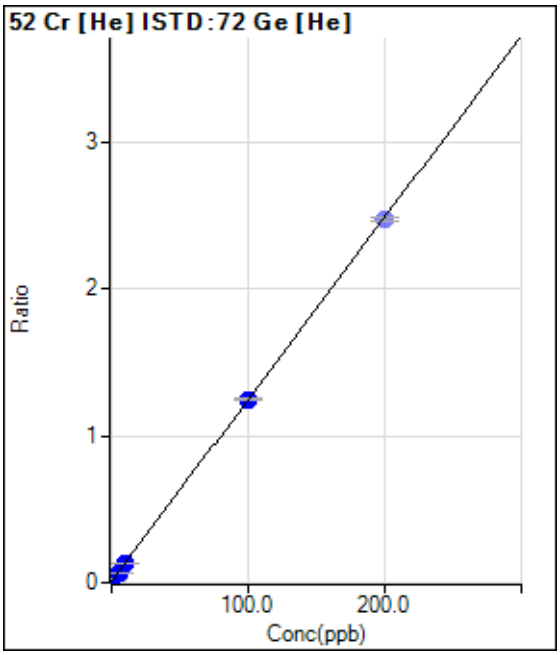
y = 0.0106 * x + 0.0119
R = 1.0000
DL = 0.116
BEC = 1.116

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3830.47	0.0097	P	12.3
2	☐	2.000	1.876	13338.28	0.0329	P	2.4
3	☐	5.000	4.744	27480.62	0.0684	P	1.3
4	☐	10.000	9.944	52491.21	0.1328	P	3.3
5	☐	100.000	100.021	481340.01	1.2483	P	1.7
6	☑	200.000		920183.48	2.4707	P	1.1
7	☐	1.000					

y = 0.0124 * x + 0.0097

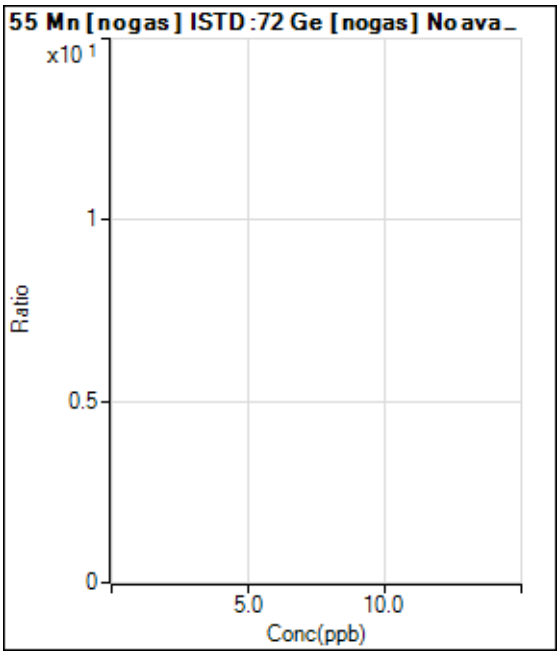
R = 1.0000

DL = 0.2897

BEC = 0.7829

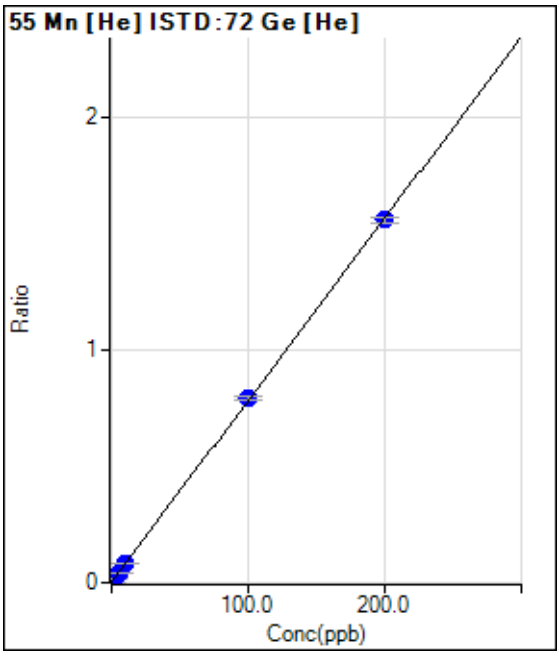
Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

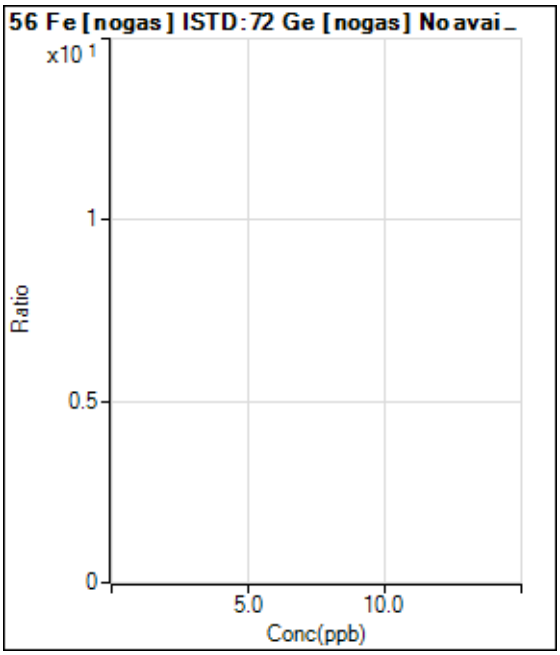
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	673.36	0.0017	P	0.6
2	☐	2.000	1.930	6794.68	0.0168	P	4.7
3	☐	5.000	4.972	16263.99	0.0405	P	3.0
4	☐	10.000	10.217	32191.73	0.0815	P	1.0
5	☐	100.000	101.333	305665.78	0.7927	P	1.2
6	☐	200.000	199.324	580146.02	1.5577	P	1.3
7	☐	1.000					

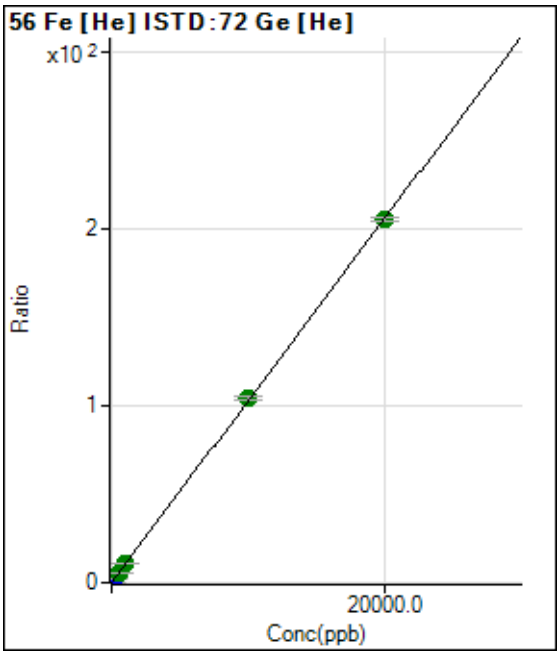
y = 0.0078 * x + 0.0017
R = 1.0000
DL = 0.004035
BEC = 0.218

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

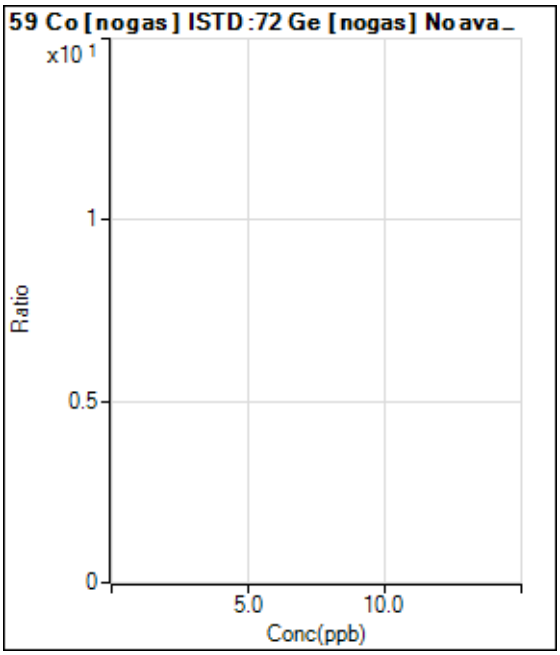
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10146.23	0.0257	P	3.4
2	☐	200.000	199.191	841352.20	2.0765	P	1.8
3	☐	500.000	503.949	2093414.45	5.2144	A	1.2
4	☐	1000.000	1037.936	4233357.12	10.7123	A	1.0
5	☐	10000.000	10123.591	40200837.73	104.2590	A	1.4
6	☐	20000.000	19936.217	76460485.53	205.2907	A	1.1
7	☐	100.000					

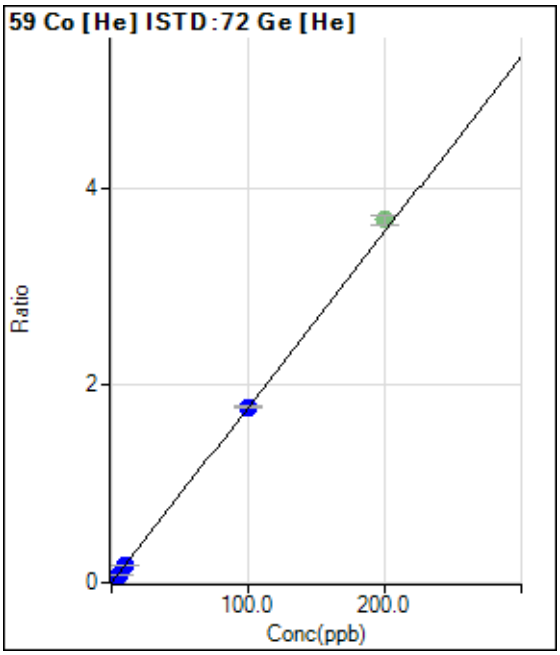
y = 0.0103 * x + 0.0257
R = 1.0000
DL = 0.2546
BEC = 2.491

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

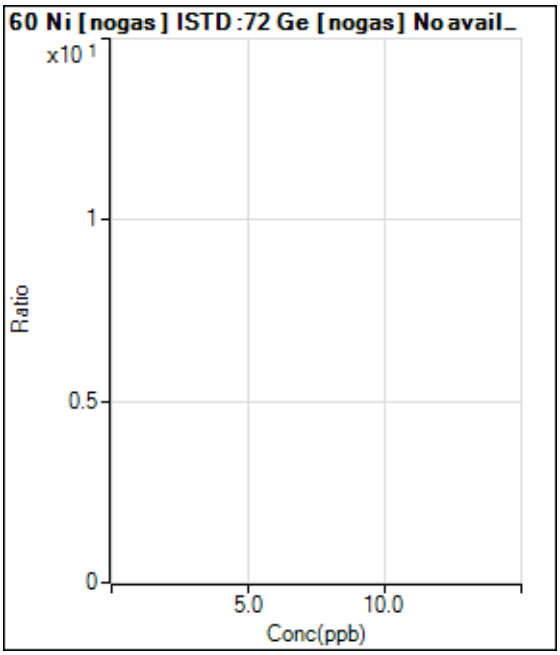
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	50.00	0.0001	P	34.8
2	☐	2.000	2.006	14499.21	0.0358	P	3.0
3	☐	5.000	4.879	34863.14	0.0868	P	1.4
4	☐	10.000	10.000	70287.13	0.1779	P	1.8
5	☐	100.000	100.006	685360.66	1.7775	P	0.8
6	☑	200.000		1369486.54	3.6775	A	2.9
7	☐	1.000					

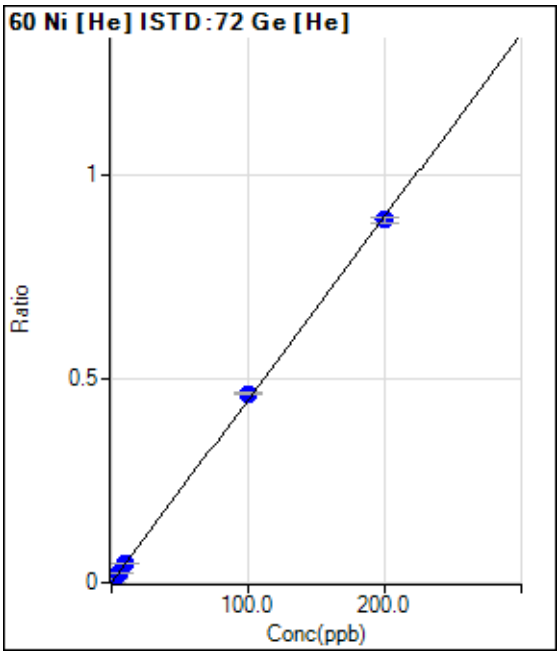
y = 0.0178 * x + 1.2643E-004
R = 1.0000
DL = 0.007426
BEC = 0.007114

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

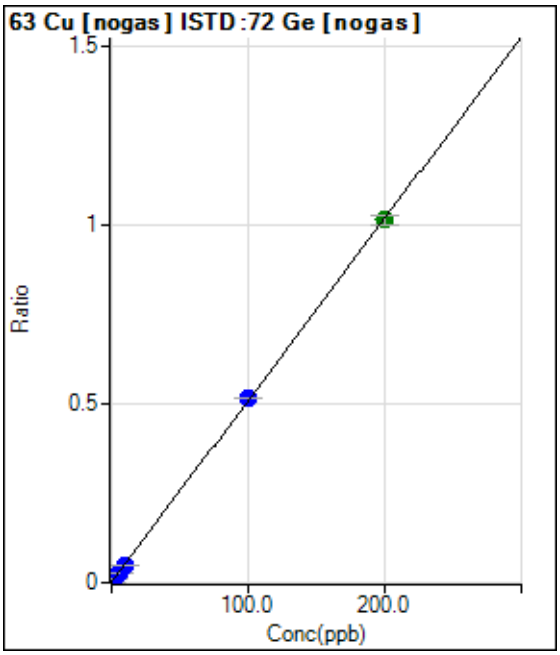
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	133.33	0.0003	P	17.3
2	☐	2.000	2.056	3880.47	0.0096	P	2.1
3	☐	5.000	5.095	9329.15	0.0232	P	4.8
4	☐	10.000	10.174	18205.95	0.0461	P	0.7
5	☐	100.000	103.449	179429.52	0.4653	P	1.2
6	☐	200.000	198.264	332030.23	0.8915	P	1.5
7	☐	1.000					

y = 0.0045 * x + 3.3700E-004
R = 0.9998
DL = 0.03886
BEC = 0.07497

Weight: <None>
Min Conc: <None>

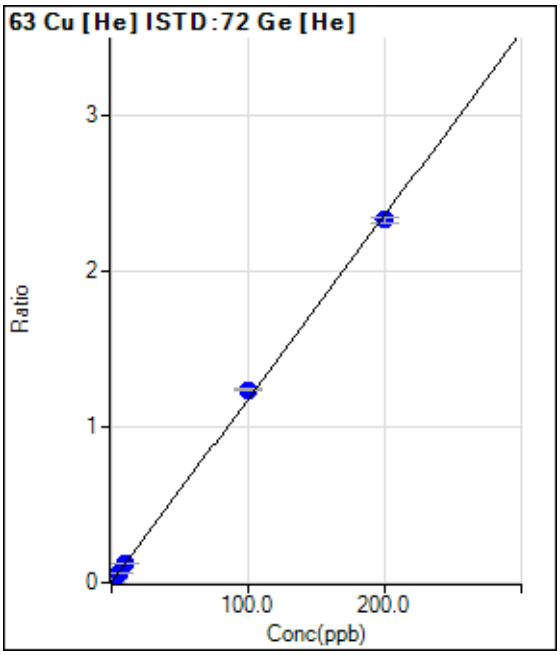


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1806.78	0.0012	P	11.7
2	☐	2.000	2.027	17268.34	0.0115	P	3.1
3	☐	5.000	4.928	39609.57	0.0263	P	1.5
4	☐	10.000	9.638	77419.69	0.0502	P	1.5
5	☐	100.000	101.310	766281.32	0.5163	P	0.9
6	☐	200.000	199.365	1451427.43	1.0149	A	2.4
7	☐	1.000					

y = 0.0051 * x + 0.0012
R = 1.0000
DL = 0.08426
BEC = 0.2392

Weight: <None>
Min Conc: <None>

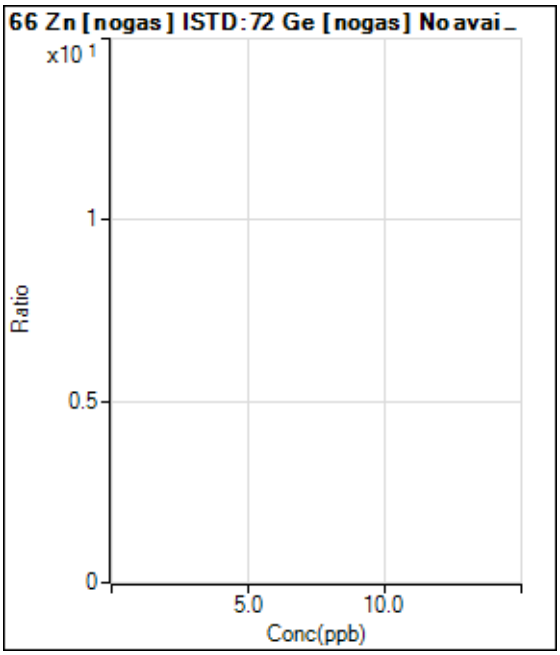
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	733.36	0.0019	P	18.3
2	☐	2.000	2.028	10426.42	0.0257	P	5.4
3	☐	5.000	5.038	24563.33	0.0612	P	4.5
4	☐	10.000	10.155	47996.26	0.1215	P	0.4
5	☐	100.000	104.814	476706.49	1.2363	P	1.2
6	☐	200.000	197.584	867360.12	2.3289	P	1.5
7	☐	1.000					

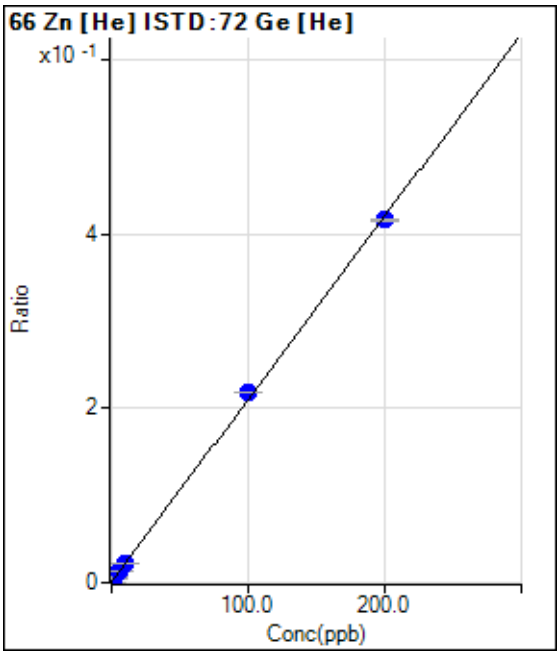
y = 0.0118 * x + 0.0019
R = 0.9996
DL = 0.08631
BEC = 0.1573

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	300.01	0.0008	P	14.6
2	☐	2.000	2.150	2133.49	0.0053	P	11.2
3	☐	5.000	5.625	5040.76	0.0126	P	5.5
4	☐	10.000	9.957	8552.10	0.0216	P	5.6
5	☐	100.000	103.571	84055.38	0.2180	P	0.4
6	☐	200.000	198.199	155126.94	0.4165	P	0.4
7	☐	1.000					

y = 0.0021 * x + 7.5908E-004

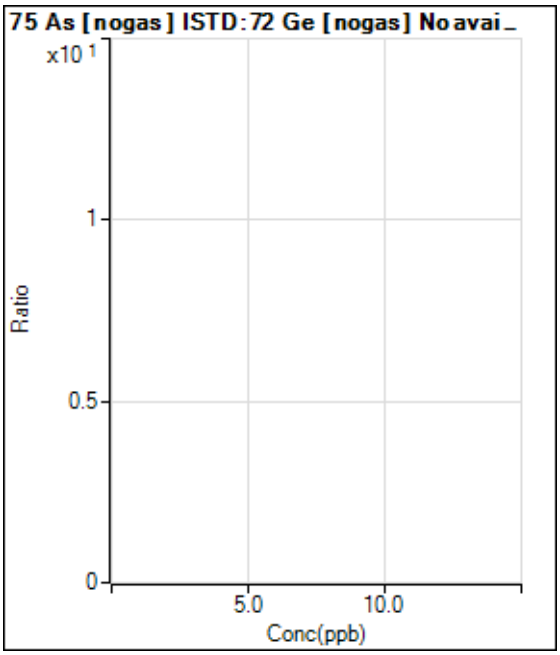
R = 0.9998

DL = 0.1583

BEC = 0.3619

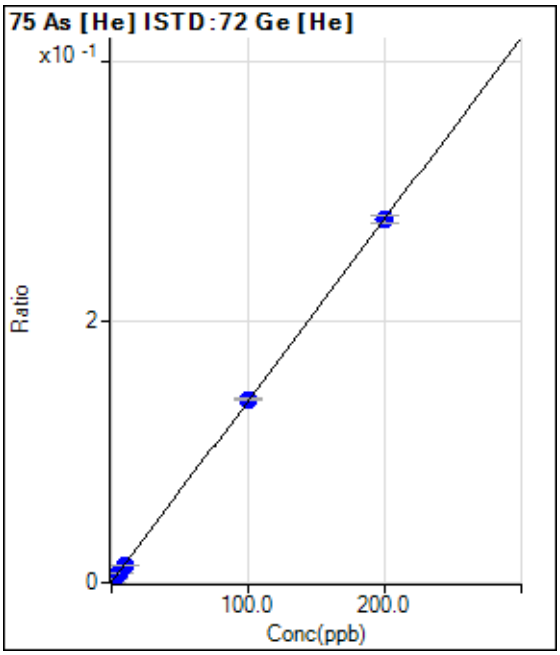
Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

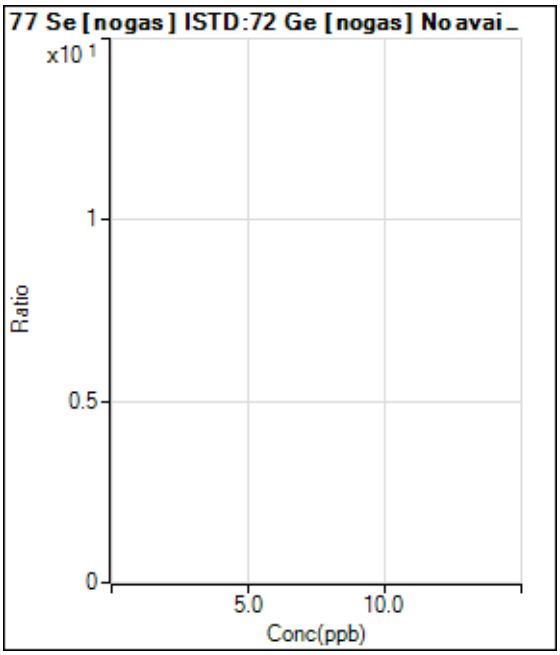
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	118.89	0.0003	P	15.1
2	☐	2.000	1.871	1177.82	0.0029	P	2.6
3	☐	5.000	4.797	2803.56	0.0070	P	2.7
4	☐	10.000	9.612	5409.71	0.0137	P	4.7
5	☐	100.000	100.792	54250.25	0.1407	P	1.3
6	☐	200.000	199.630	103673.30	0.2784	P	2.1
7	☐	1.000					

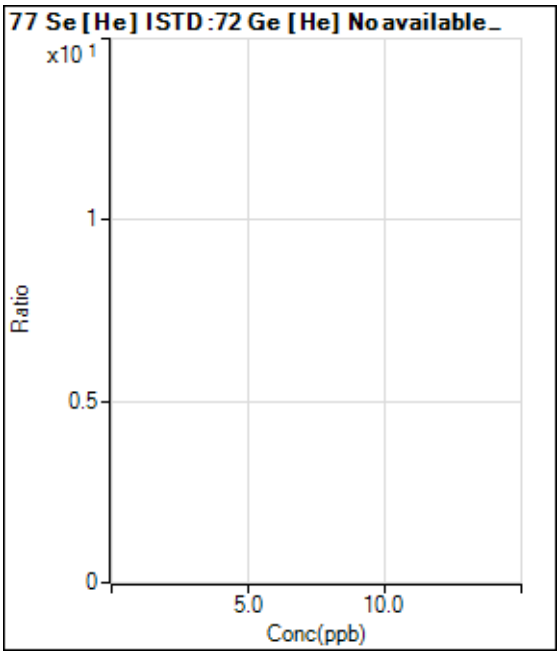
y = 0.0014 * x + 3.0003E-004
R = 1.0000
DL = 0.09785
BEC = 0.2154

Weight: <None>
Min Conc: <None>

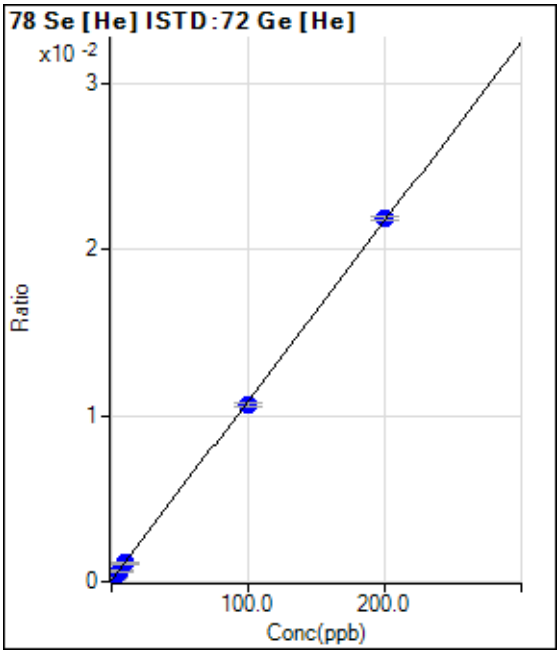


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	38.67	0.0001	P	24.1
2	☐	2.000	1.337	98.00	0.0002	P	13.4
3	☐	5.000	4.864	250.00	0.0006	P	10.8
4	☐	10.000	9.690	452.01	0.0011	P	9.0
5	☐	100.000	97.484	4095.80	0.0106	P	1.7
6	☐	200.000	201.284	8129.83	0.0218	P	1.2
7	☐	1.000					

y = 1.0796E-004 * x + 9.7761E-005

R = 0.9999

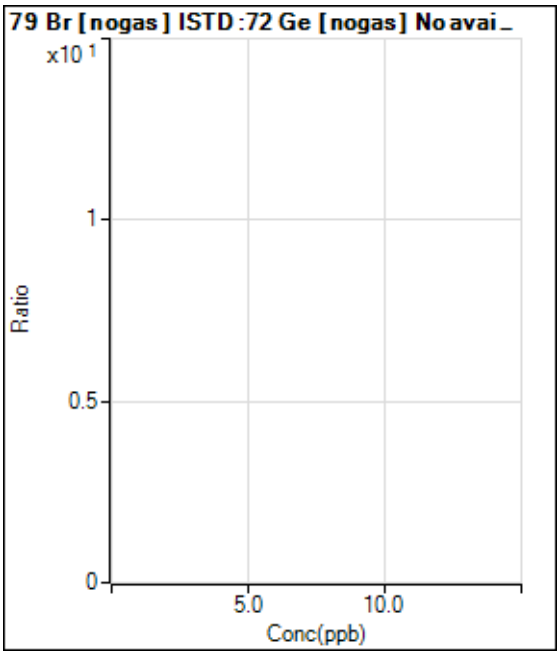
DL = 0.6542

BEC = 0.9055

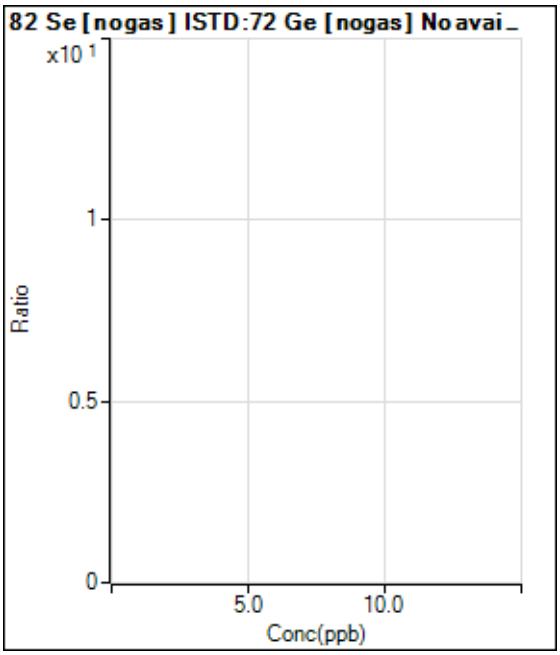
Weight: <None>

Min Conc: <None>

Calibration for 020_ICV.d

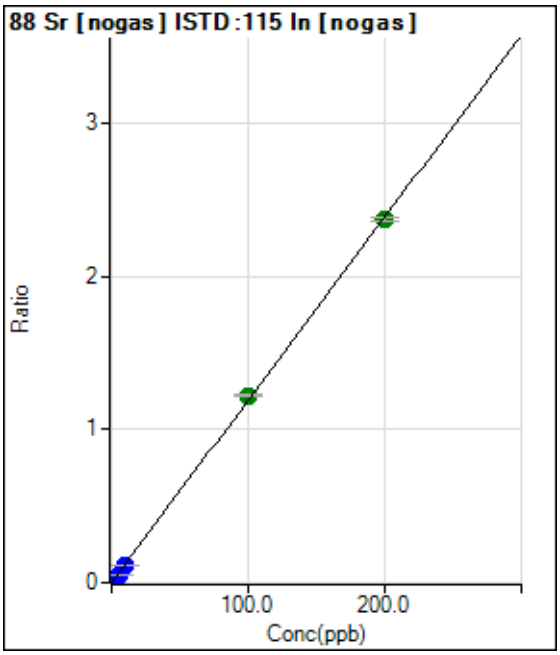


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

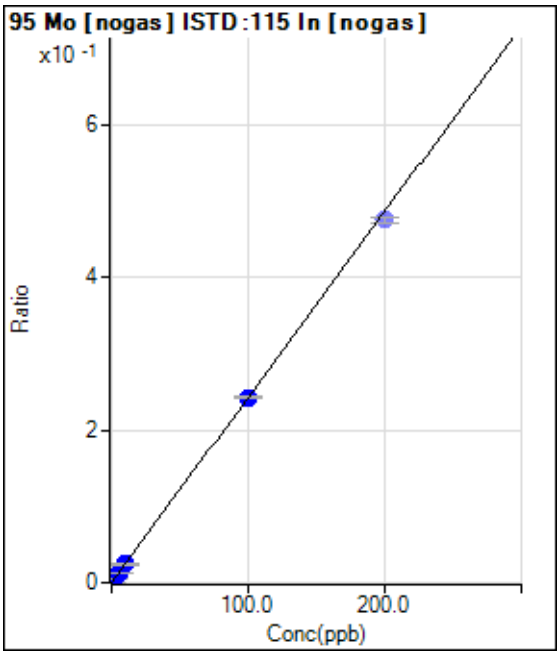
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	716.69	0.0005	P	6.9
2	☐	2.000	1.881	34727.24	0.0229	P	3.2
3	☐	5.000	4.594	84645.17	0.0553	P	3.1
4	☐	10.000	9.628	172744.08	0.1153	P	3.2
5	☐	100.000	102.603	1800545.18	1.2240	A	1.4
6	☐	200.000	198.728	3383359.33	2.3702	A	1.0
7	☐	1.000					

y = 0.0119 * x + 4.7839E-004
R = 0.9999
DL = 0.008349
BEC = 0.04012

Weight: <None>
Min Conc: <None>

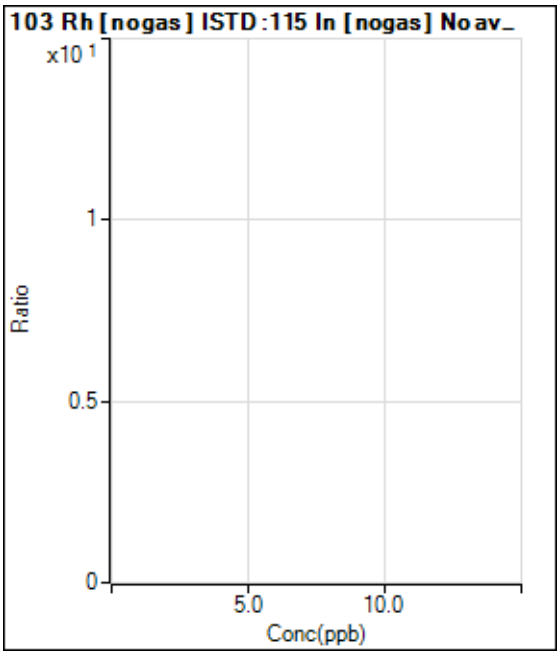


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30.00	0.0000	P	32.6
2	☐	2.000	1.936	7164.89	0.0047	P	6.0
3	☐	5.000	4.758	17759.02	0.0116	P	1.0
4	☐	10.000	9.850	35929.77	0.0240	P	4.2
5	☐	100.000	100.028	357894.93	0.2433	P	1.0
6	☑	200.000		679250.95	0.4759	P	1.3
7	☐	1.000					

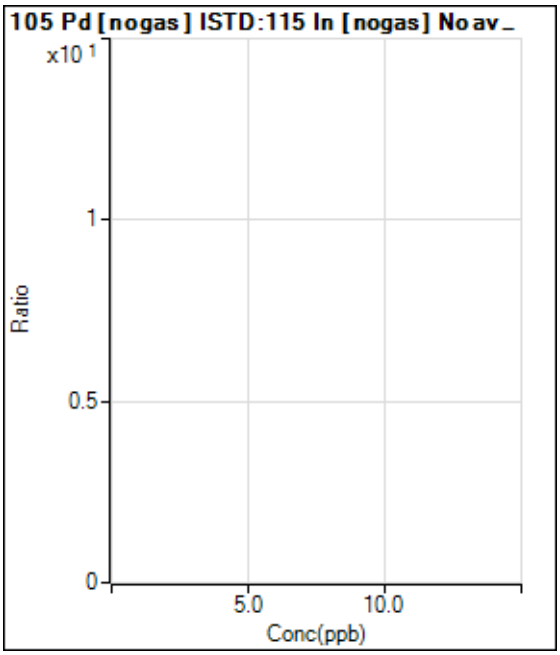
y = 0.0024 * x + 1.9997E-005
R = 1.0000
DL = 0.008049
BEC = 0.008222

Weight: <None>
Min Conc: <None>

Calibration for 020_ICV.d

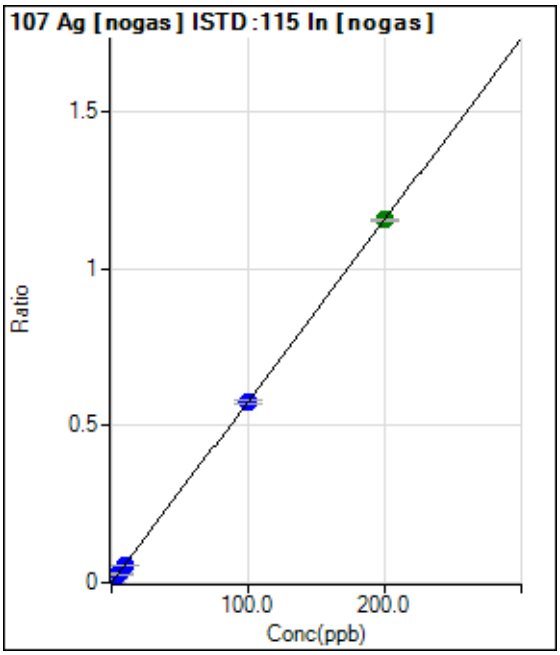


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

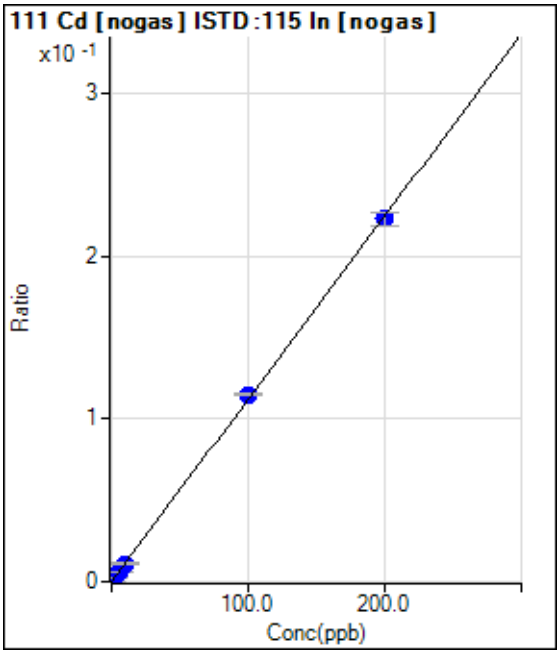
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	53.33	0.0000	P	27.2
2	☐	2.000	1.997	17542.33	0.0116	P	6.9
3	☐	5.000	4.790	42471.23	0.0277	P	1.1
4	☐	10.000	9.898	85777.34	0.0572	P	2.8
5	☐	100.000	99.959	849884.10	0.5778	P	1.9
6	☐	200.000	200.031	1650538.10	1.1562	A	0.6
7	☐	1.000					

y = 0.0058 * x + 3.5532E-005
R = 1.0000
DL = 0.005021
BEC = 0.006147

Weight: <None>
Min Conc: <None>

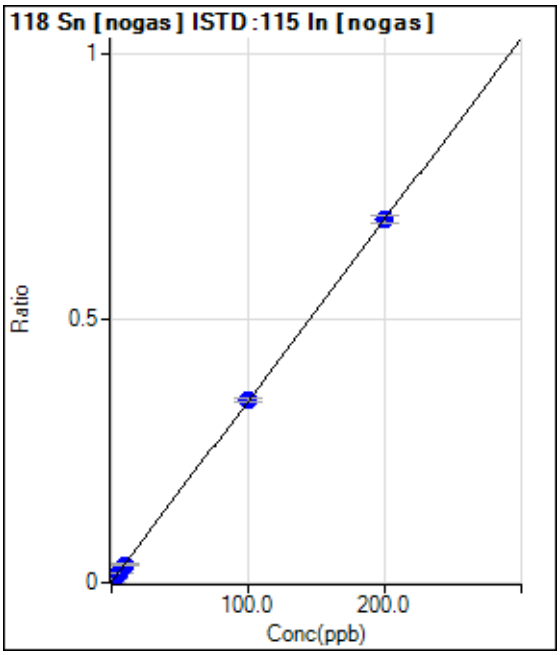


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.33	0.0000	P	173.2
2	☐	2.000	2.070	3520.40	0.0023	P	5.0
3	☐	5.000	4.901	8418.81	0.0055	P	4.7
4	☐	10.000	9.920	16668.16	0.0111	P	3.1
5	☐	100.000	102.646	169253.65	0.1151	P	1.3
6	☐	200.000	198.683	317926.85	0.2227	P	3.4
7	☐	1.000					

y = 0.0011 * x + 2.1967E-006
R = 0.9999
DL = 0.01018
BEC = 0.00196

Weight: <None>
Min Conc: <None>

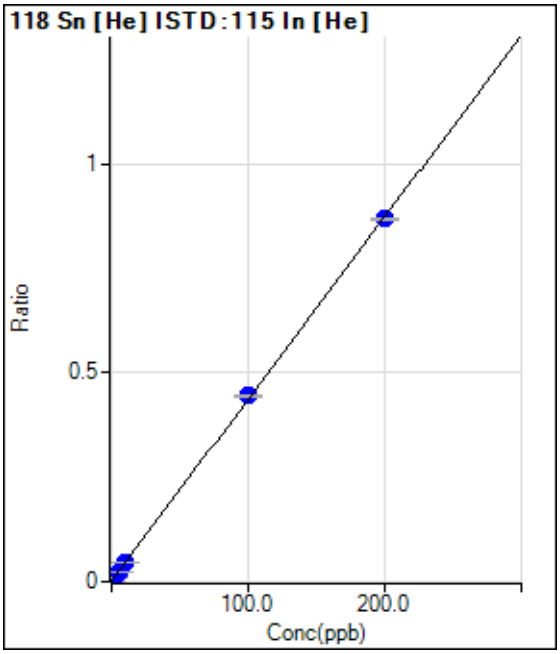
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2163.50	0.0014	P	4.3
2	☐	2.000	1.855	11830.83	0.0078	P	1.5
3	☐	5.000	4.541	26053.03	0.0170	P	1.9
4	☐	10.000	9.644	51693.13	0.0345	P	2.8
5	☐	100.000	100.215	507313.18	0.3449	P	2.2
6	☐	200.000	199.923	980099.23	0.6866	P	2.1
7	☐	1.000					

y = 0.0034 * x + 0.0014
R = 1.0000
DL = 0.05414
BEC = 0.4215

Weight: <None>
Min Conc: <None>

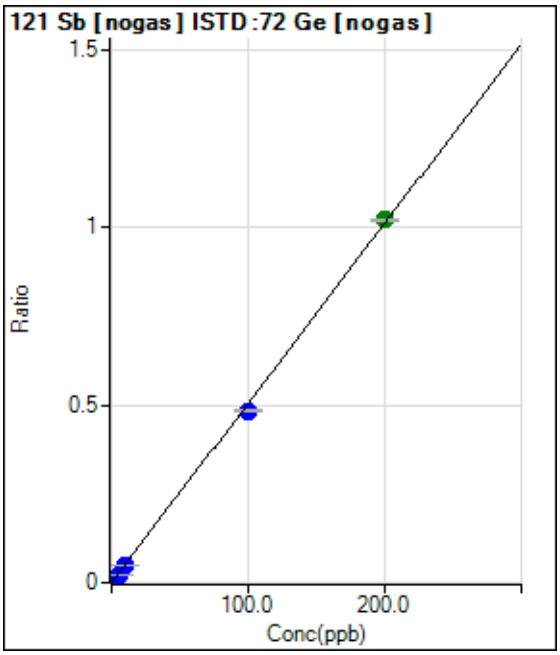


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	953.37	0.0017	P	13.8
2	☐	2.000	1.862	5587.64	0.0098	P	0.3
3	☐	5.000	4.726	12634.68	0.0223	P	2.0
4	☐	10.000	10.098	25231.79	0.0457	P	2.2
5	☐	100.000	101.747	240388.39	0.4446	P	0.7
6	☐	200.000	199.130	456402.46	0.8686	P	0.4
7	☐	1.000					

y = 0.0044 * x + 0.0017
R = 0.9999
DL = 0.1623
BEC = 0.3909

Weight: <None>
Min Conc: <None>

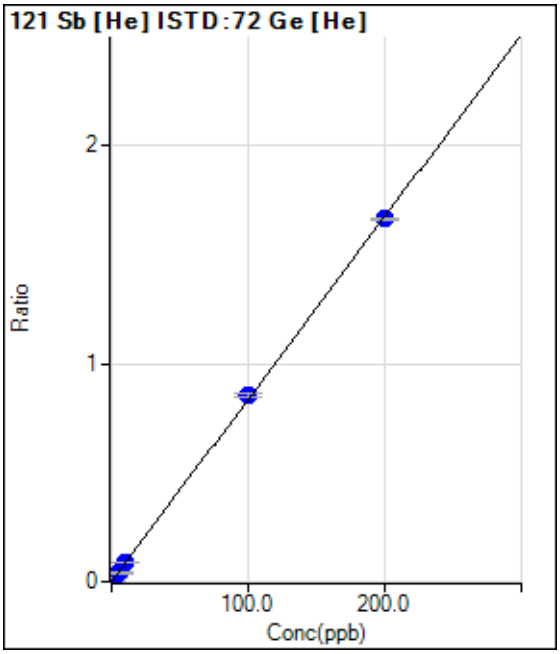
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	503.35	0.0003	P	19.7
2	☐	2.000	1.943	15220.12	0.0102	P	3.5
3	☐	5.000	4.676	36114.04	0.0240	P	2.4
4	☐	10.000	9.192	72091.95	0.0468	P	1.3
5	☐	100.000	95.826	718683.77	0.4843	P	1.8
6	☐	200.000	202.136	1460858.83	1.0212	A	0.8
7	☐	1.000					

y = 0.0051 * x + 3.3949E-004
R = 0.9997
DL = 0.03976
BEC = 0.06722

Weight: <None>
Min Conc: <None>

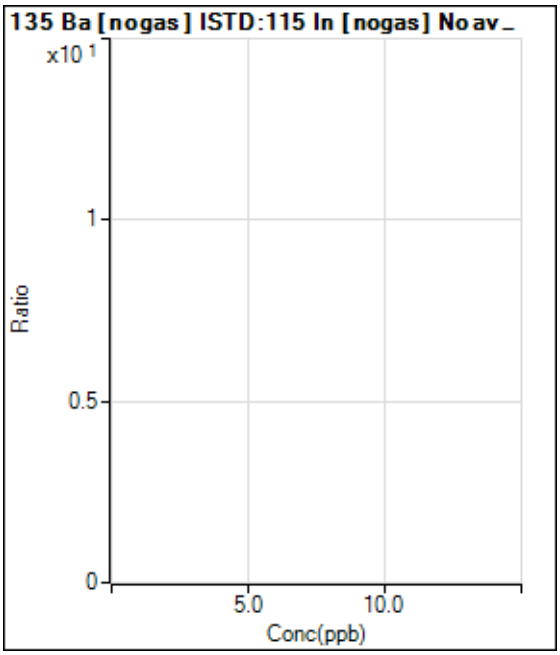


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	226.67	0.0006	P	16.0
2	☐	2.000	1.953	6851.45	0.0169	P	2.6
3	☐	5.000	4.681	15950.78	0.0397	P	1.7
4	☐	10.000	10.103	33625.82	0.0851	P	2.6
5	☐	100.000	101.980	329174.27	0.8537	P	1.6
6	☐	200.000	199.013	620283.13	1.6654	P	0.8
7	☐	1.000					

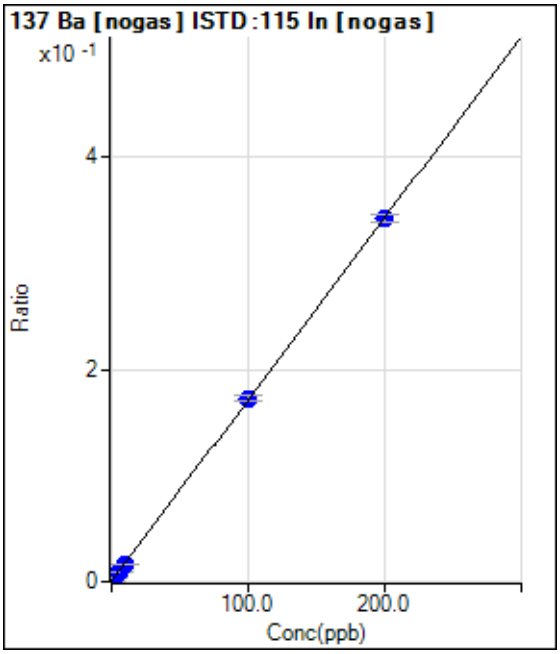
y = 0.0084 * x + 5.7173E-004
R = 0.9999
DL = 0.03273
BEC = 0.06834

Weight: <None>
Min Conc: <None>

Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	460.01	0.0003	P	14.2
2	☐	2.000	1.792	5114.16	0.0034	P	6.9
3	☐	5.000	4.691	12774.89	0.0083	P	3.3
4	☐	10.000	9.602	25111.85	0.0168	P	2.2
5	☐	100.000	100.865	254505.89	0.1730	P	2.3
6	☐	200.000	199.597	488336.36	0.3421	P	2.0
7	☐	1.000					

y = 0.0017 * x + 3.0759E-004

R = 1.0000

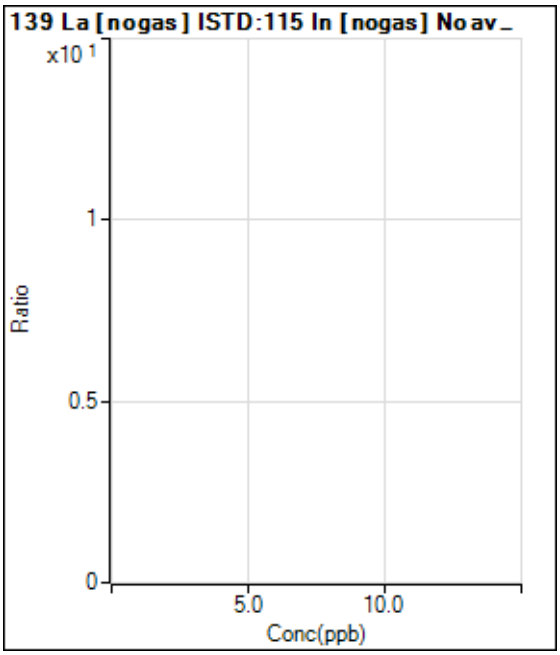
DL = 0.07646

BEC = 0.1796

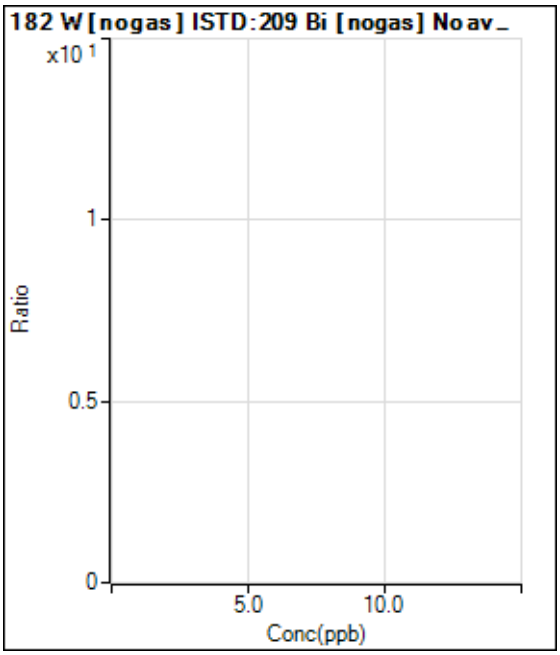
Weight: <None>

Min Conc: <None>

Calibration for 020_ICV.d

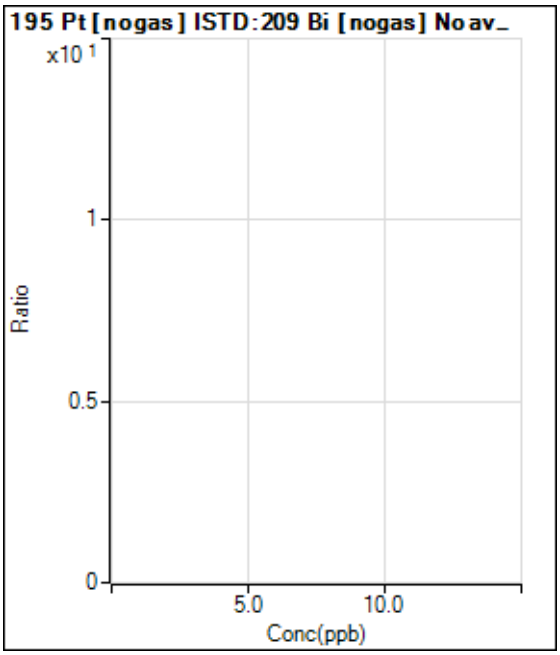


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

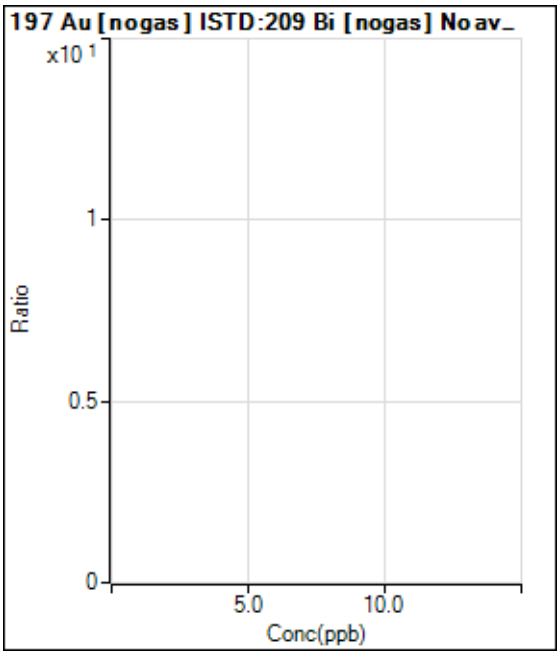


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

Calibration for 020_ICV.d

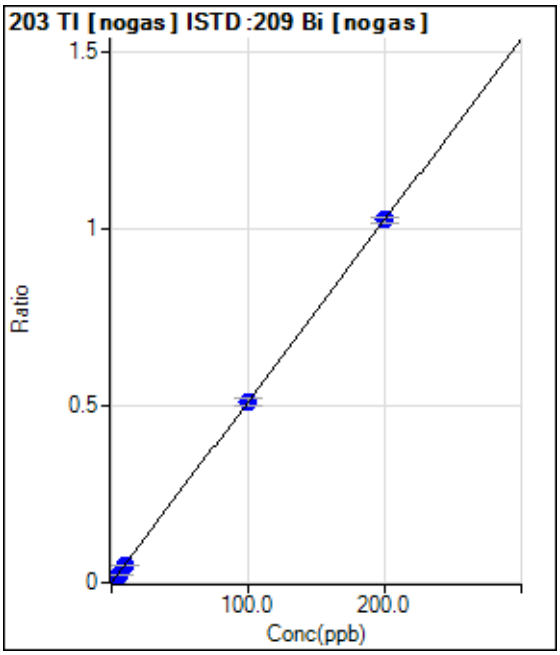


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

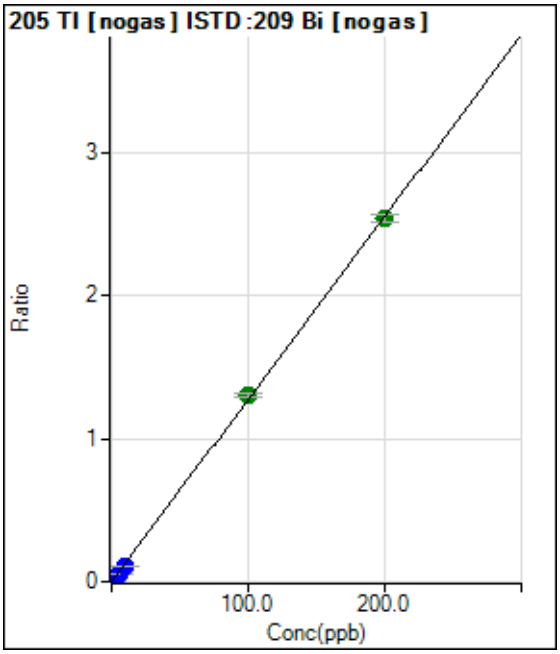
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.33	0.0000	P	69.7
2	☐	2.000	1.887	11694.34	0.0097	P	4.4
3	☐	5.000	4.250	27490.05	0.0218	P	1.7
4	☐	10.000	9.228	57989.78	0.0472	P	2.8
5	☐	100.000	99.816	584014.78	0.5105	P	3.4
6	☐	200.000	200.150	1115191.91	1.0235	P	1.7
7	☐	1.000					

y = 0.0051 * x + 2.7596E-005
R = 1.0000
DL = 0.01128
BEC = 0.005396

Weight: <None>
Min Conc: <None>

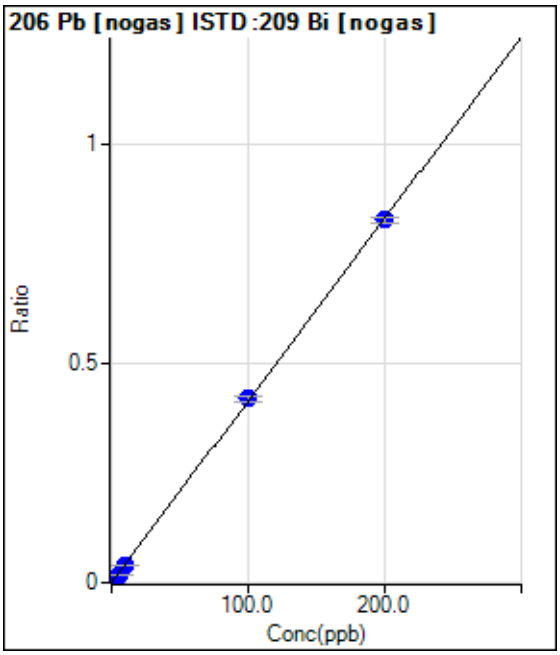


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	96.67	0.0001	P	31.7
2	☐	2.000	1.818	28127.70	0.0233	P	3.5
3	☐	5.000	4.090	66023.95	0.0523	P	2.3
4	☐	10.000	8.809	138164.40	0.1125	P	1.8
5	☐	100.000	102.203	1492388.00	1.3041	A	2.1
6	☐	200.000	198.983	2767309.34	2.5390	A	2.1
7	☐	1.000					

y = 0.0128 * x + 7.9871E-005
R = 0.9999
DL = 0.005953
BEC = 0.00626

Weight: <None>
Min Conc: <None>

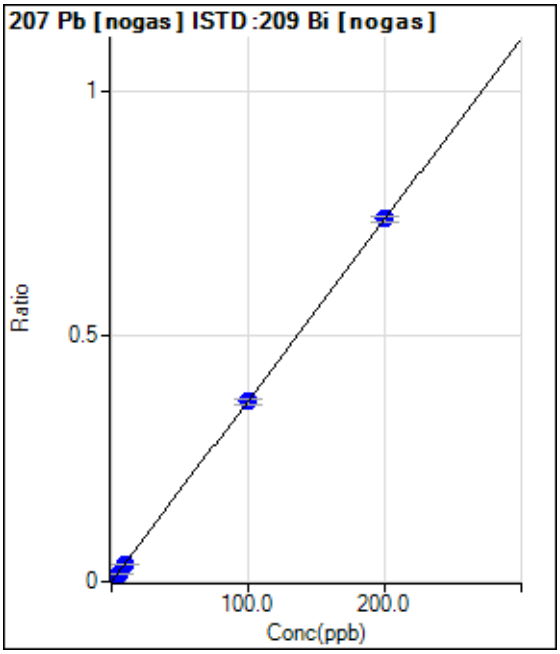
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	190.00	0.0002	P	43.9
2	☐	2.000	1.954	9963.18	0.0082	P	6.6
3	☐	5.000	4.547	23984.62	0.0190	P	4.9
4	☐	10.000	9.706	49575.55	0.0404	P	1.8
5	☐	100.000	101.178	479717.83	0.4192	P	2.9
6	☐	200.000	199.437	900461.65	0.8262	P	1.7
7	☐	1.000					

y = 0.0041 * x + 1.5660E-004
R = 1.0000
DL = 0.04985
BEC = 0.03781

Weight: <None>
Min Conc: <None>

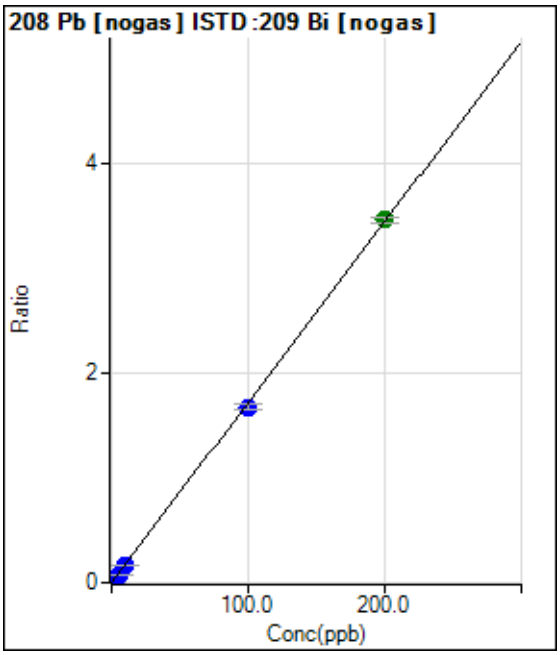


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	100.00	0.0001	P	54.8
2	☐	2.000	1.929	8692.49	0.0072	P	5.1
3	☐	5.000	4.481	20963.75	0.0166	P	5.2
4	☐	10.000	9.442	42849.96	0.0349	P	1.1
5	☐	100.000	99.317	418997.16	0.3662	P	3.5
6	☐	200.000	200.383	805139.29	0.7387	P	1.9
7	☐	1.000					

y = 0.0037 * x + 8.2387E-005
R = 1.0000
DL = 0.03672
BEC = 0.02235

Weight: <None>
Min Conc: <None>

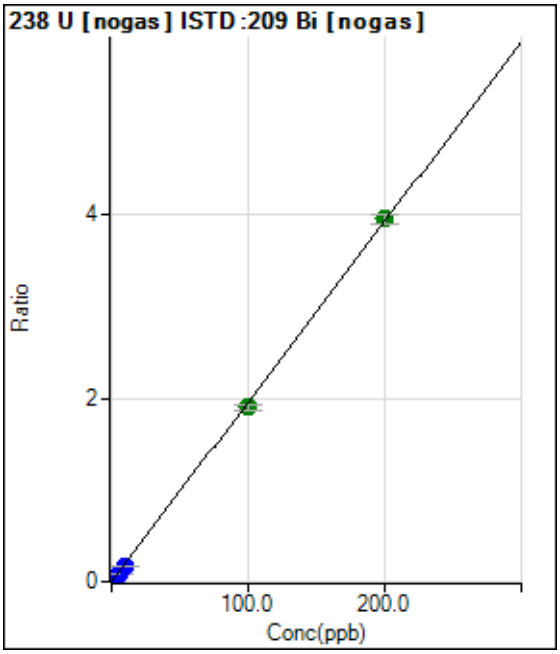
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	586.68	0.0005	P	19.6
2	☐	2.000	1.867	39439.24	0.0326	P	3.4
3	☐	5.000	4.439	97132.43	0.0769	P	3.4
4	☐	10.000	9.253	196241.50	0.1598	P	1.2
5	☐	100.000	97.523	1921486.79	1.6793	P	3.6
6	☐	200.000	201.291	3777432.58	3.4657	A	1.9
7	☐	1.000					

y = 0.0172 * x + 4.8429E-004
R = 0.9999
DL = 0.01651
BEC = 0.02813

Weight: <None>
Min Conc: <None>

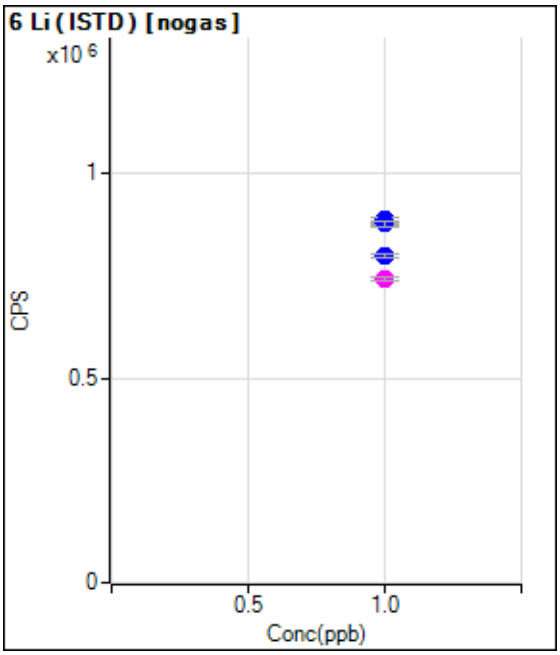


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	51.2
2	☐	2.000	1.738	41257.41	0.0341	P	3.0
3	☐	5.000	4.107	101867.74	0.0806	P	2.9
4	☐	10.000	8.701	209791.58	0.1708	P	4.9
5	☐	100.000	96.852	2175786.11	1.9012	A	3.6
6	☐	200.000	201.664	4312625.98	3.9587	A	2.7
7	☐	1.000					

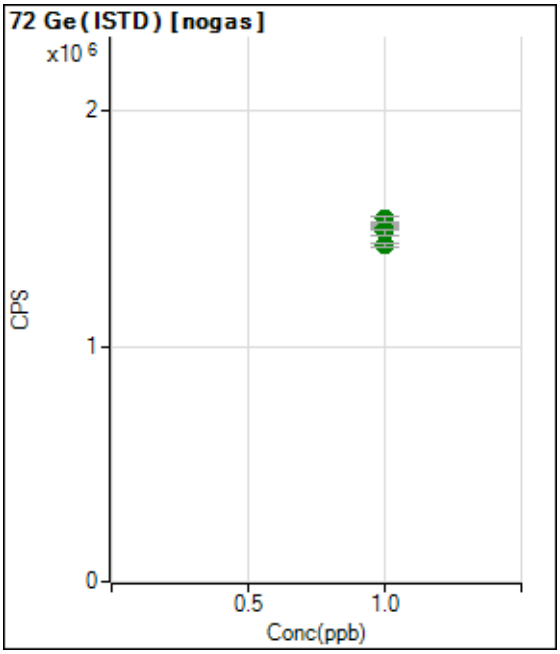
y = 0.0196 * x + 1.6614E-005
R = 0.9998
DL = 0.001299
BEC = 0.0008464

Weight: <None>
Min Conc: <None>

Calibration for 020_ICV.d

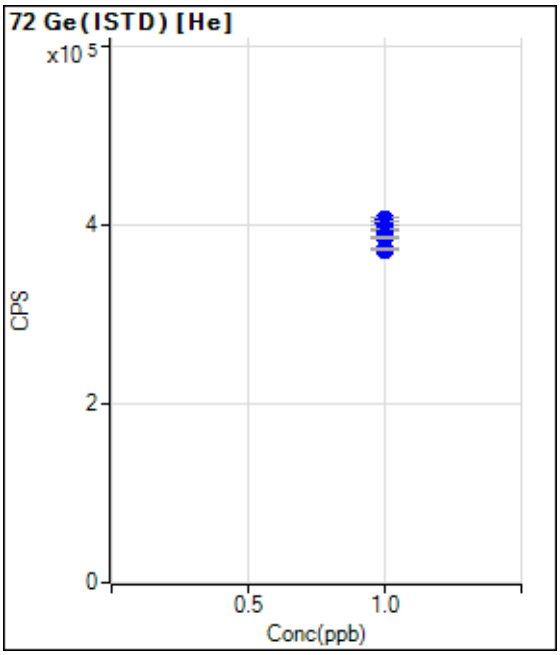


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		885638.35		P	1.2
2	☐	1.000		885778.33		P	1.8
3	☐	1.000		877886.86		P	1.2
4	☐	1.000		876028.19		P	1.5
5	☐	1.000		798541.77		P	1.0
6	☐	1.000		742562.72		M	1.7
7	☐	1.000					

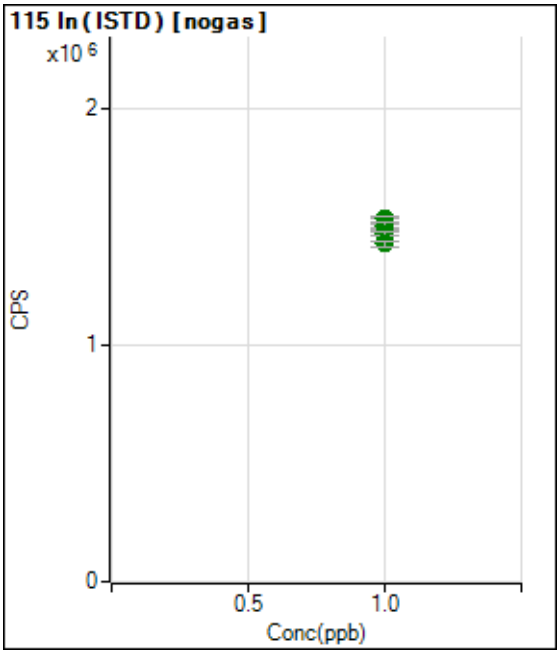


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1488050.03		A	2.8
2	☐	1.000		1498968.21		A	0.8
3	☐	1.000		1507621.96		A	1.2
4	☐	1.000		1541804.45		A	1.9
5	☐	1.000		1484255.76		A	1.8
6	☐	1.000		1430507.53		A	1.5
7	☐	1.000					

Calibration for 020_ICV.d

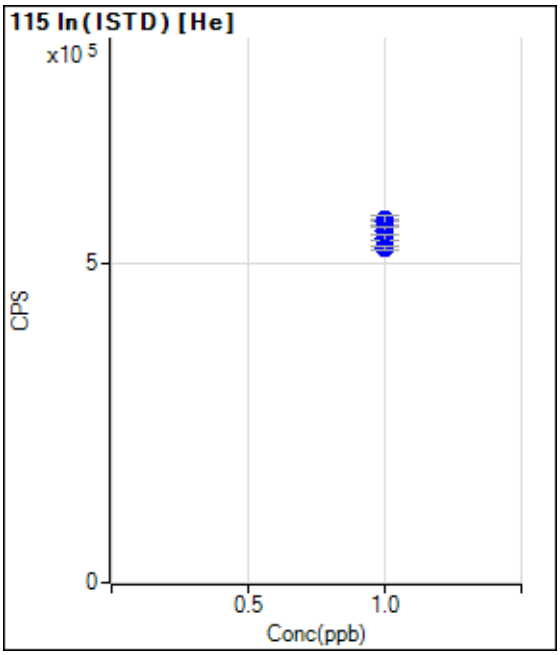


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		395690.43		P	1.9
2	☐	1.000		405182.39		P	1.2
3	☐	1.000		401477.83		P	0.9
4	☐	1.000		395177.94		P	0.4
5	☐	1.000		385580.03		P	0.3
6	☐	1.000		372463.67		P	1.0
7	☐	1.000					

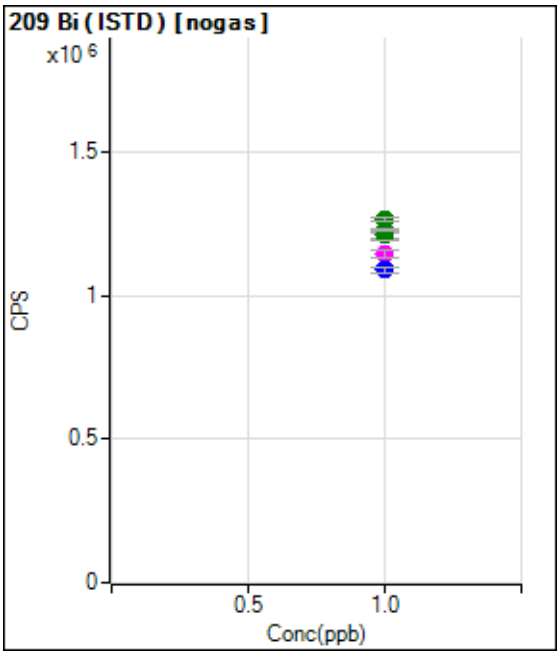


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1497103.28		A	1.5
2	☐	1.000		1516563.30		A	2.6
3	☐	1.000		1532062.63		A	1.9
4	☐	1.000		1499098.26		A	2.6
5	☐	1.000		1471031.34		A	1.0
6	☐	1.000		1427550.26		A	1.5
7	☐	1.000					

Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		559996.79		P	0.7
2	☐	1.000		569648.32		P	0.8
3	☐	1.000		567347.79		P	2.8
4	☐	1.000		552725.58		P	1.8
5	☐	1.000		540682.77		P	1.7
6	☐	1.000		525459.94		P	1.5
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1210057.56		A	1.6
2	☐	1.000		1209342.54		A	3.2
3	☐	1.000		1263277.46		A	1.2
4	☐	1.000		1228305.68		A	0.5
5	☐	1.000		1144799.49		M	2.9
6	☐	1.000		1089744.98		P	1.7
7	☐	1.000					

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	013CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T11:06:19-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	45	74.07
B	11	1	nogas	15038	0.01
Al	27	1	nogas	22811	0.01
P	31	1	nogas	43407	0.00
Ti	47	1	nogas	140	8.84
Cu	63	1	nogas	1807	0.54
Sr	88	1	nogas	717	1.17
Mo	95	1	nogas	30	111.11
Ag	107	1	nogas	53	53.70
Cd	111	1	nogas	3	5196.15
Sn	118	1	nogas	2164	0.27
Sb	121	1	nogas	503	3.40
Ba	137	1	nogas	460	2.84
Tl	205	1	nogas	97	32.69
Pb	208	1	nogas	587	3.50
Li	7	1	nogas	69106	0.00
Si	28	1	nogas	1704572	0.00
Na	23	2	He	50414	0.00
Mg	24	2	He	473	4.05
Al	27	2	He	547	3.11
K	39	2	He	45933	0.00
Ca	43	2	He	3	5196.15
Ca	44	2	He	413	4.55
V	51	2	He	4691	0.04
Cr	52	2	He	3830	0.27
Mn	55	2	He	673	0.34
Fe	56	2	He	10146	0.02
Co	59	2	He	50	69.28
Ni	60	2	He	133	12.99
Cu	63	2	He	733	2.53
Zn	66	2	He	300	4.44
As	75	2	He	119	13.82
Sb	121	2	He	227	7.87
Se	78	2	He	39	61.79

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Ge	72	1	nogas	1488050	2.77

Calibration Blank Report

In	115	1	nogas	1497103	1.55
Li	6	1	nogas	885638	1.20
Bi	209	1	nogas	1210058	1.56
Ge	72	2	He	395690	1.89
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
In	115	2	He	559997	0.69

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	014CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T11:08:36-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	013CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	9619	0.04
B	11	1	nogas	42293	0.00
Al	27	1	nogas	48783	0.00
P	31	1	nogas	48359	0.01
Ti	47	1	nogas	2504	0.26
Cu	63	1	nogas	17268	0.01
Sr	88	1	nogas	34727	0.00
Mo	95	1	nogas	7165	0.05
Ag	107	1	nogas	17542	0.03
Cd	111	1	nogas	3520	0.10
Sn	118	1	nogas	11831	0.03
Sb	121	1	nogas	15220	0.02
Ba	137	1	nogas	5114	0.09
Tl	205	1	nogas	28128	0.00
Pb	208	1	nogas	39439	0.00
Si	28	1	nogas	1736665	0.00
Na	23	2	He	277734	0.00
Mg	24	2	He	124357	0.00
Al	27	2	He	1063	1.43
K	39	2	He	138781	0.00
Ca	43	2	He	327	5.65
Ca	44	2	He	4997	0.09
V	51	2	He	12800	0.03
Cr	52	2	He	13338	0.02
Mn	55	2	He	6795	0.08
Fe	56	2	He	841352	0.00
Co	59	2	He	14499	0.03
Ni	60	2	He	3880	0.05
Cu	63	2	He	10426	0.05
Zn	66	2	He	2133	0.49
As	75	2	He	1178	0.28
Sb	121	2	He	6851	0.02
Se	78	2	He	98	12.67

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag

Calibration Standard Report

Ge	72	1	nogas	1498968	0.82	1488050	100.73	70	120	
In	115	1	nogas	1516563	2.56	1497103	101.30	70	120	
Li	6	1	nogas	885778	1.81	885638	100.02	70	120	
Bi	209	1	nogas	1209343	3.18	1210058	99.94	70	120	
Ge	72	2	He	405182	1.21	395690	102.40	70	120	
In	115	2	He	569648	0.76	559997	101.72	70	120	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	015CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T11:10:52-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	013CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	23738	0.01
B	11	1	nogas	84012	0.00
Al	27	1	nogas	87297	0.00
P	31	1	nogas	58210	0.00
Ti	47	1	nogas	5561	0.06
Cu	63	1	nogas	39610	0.00
Sr	88	1	nogas	84645	0.00
Mo	95	1	nogas	17759	0.01
Ag	107	1	nogas	42471	0.00
Cd	111	1	nogas	8419	0.05
Sn	118	1	nogas	26053	0.01
Sb	121	1	nogas	36114	0.00
Ba	137	1	nogas	12775	0.01
Tl	205	1	nogas	66024	0.00
Pb	208	1	nogas	97132	0.00
Si	28	1	nogas	1886978	0.00
Na	23	2	He	605505	0.00
Mg	24	2	He	302960	0.00
Al	27	2	He	1893	0.06
K	39	2	He	276641	0.00
Ca	43	2	He	767	3.05
Ca	44	2	He	12154	0.02
V	51	2	He	24534	0.01
Cr	52	2	He	27481	0.01
Mn	55	2	He	16264	0.01
Fe	56	2	He	2093414	0.00
Co	59	2	He	34863	0.00
Ni	60	2	He	9329	0.05
Cu	63	2	He	24563	0.02
Zn	66	2	He	5041	0.10
As	75	2	He	2804	0.13
Sb	121	2	He	15951	0.00
Se	78	2	He	250	4.16

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag

Calibration Standard Report

Ge	72	1	nogas	1507622	1.23	1488050	101.32	70	120	
In	115	1	nogas	1532063	1.85	1497103	102.34	70	120	
Li	6	1	nogas	877887	1.23	885638	99.12	70	120	
Bi	209	1	nogas	1263277	1.16	1210058	104.40	70	120	
Ge	72	2	He	401478	0.92	395690	101.46	70	120	
In	115	2	He	567348	2.79	559997	101.31	70	120	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	016CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T11:13:07-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	013CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	47433	0.00
B	11	1	nogas	154949	0.00
Al	27	1	nogas	157131	0.00
P	31	1	nogas	76608	0.00
Ti	47	1	nogas	11033	0.03
Cu	63	1	nogas	77420	0.00
Sr	88	1	nogas	172744	0.00
Mo	95	1	nogas	35930	0.01
Ag	107	1	nogas	85777	0.00
Cd	111	1	nogas	16668	0.02
Sn	118	1	nogas	51693	0.00
Sb	121	1	nogas	72092	0.00
Ba	137	1	nogas	25112	0.01
Tl	205	1	nogas	138164	0.00
Pb	208	1	nogas	196242	0.00
Si	28	1	nogas	1987778	0.00
Na	23	2	He	1201129	0.00
Mg	24	2	He	607787	0.00
Al	27	2	He	3620	0.29
K	39	2	He	502730	0.00
Ca	43	2	He	1387	0.89
Ca	44	2	He	24476	0.01
V	51	2	He	44774	0.00
Cr	52	2	He	52491	0.01
Mn	55	2	He	32192	0.00
Fe	56	2	He	4233357	0.00
Co	59	2	He	70287	0.00
Ni	60	2	He	18206	0.00
Cu	63	2	He	47996	0.00
Zn	66	2	He	8552	0.06
As	75	2	He	5410	0.09
Sb	121	2	He	33626	0.01
Se	78	2	He	452	1.97

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag

Calibration Standard Report

Ge	72	1	nogas	1541804	1.89	1488050	103.61	70	120	
In	115	1	nogas	1499098	2.55	1497103	100.13	70	120	
Li	6	1	nogas	876028	1.51	885638	98.91	70	120	
Bi	209	1	nogas	1228306	0.54	1210058	101.51	70	120	
Ge	72	2	He	395178	0.38	395690	99.87	70	120	
In	115	2	He	552726	1.80	559997	98.70	70	120	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	017CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T11:15:22-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	013CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	482716	0.00
B	11	1	nogas	1442995	0.00
Al	27	1	nogas	1376931	0.00
P	31	1	nogas	366035	0.00
Ti	47	1	nogas	114091	0.00
Cu	63	1	nogas	766281	0.00
Sr	88	1	nogas	1800545	0.00
Mo	95	1	nogas	357895	0.00
Ag	107	1	nogas	849884	0.00
Cd	111	1	nogas	169254	0.00
Sn	118	1	nogas	507313	0.00
Sb	121	1	nogas	718684	0.00
Ba	137	1	nogas	254506	0.00
Tl	205	1	nogas	1492388	0.00
Pb	208	1	nogas	1921487	0.00
Si	28	1	nogas	4916957	0.00
Na	23	2	He	11330990	0.00
Mg	24	2	He	6070488	0.00
Al	27	2	He	30906	0.01
K	39	2	He	4682985	0.00
Ca	43	2	He	14356	0.05
Ca	44	2	He	235025	0.00
V	51	2	He	417803	0.00
Cr	52	2	He	481340	0.00
Mn	55	2	He	305666	0.00
Fe	56	2	He	40200838	0.00
Co	59	2	He	685361	0.00
Ni	60	2	He	179430	0.00
Cu	63	2	He	476706	0.00
Zn	66	2	He	84055	0.00
As	75	2	He	54250	0.00
Sb	121	2	He	329174	0.00
Se	78	2	He	4096	0.05

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag

Calibration Standard Report

Ge	72	1	nogas	1484256	1.79	1488050	99.75	70	120	
In	115	1	nogas	1471031	1.04	1497103	98.26	70	120	
Li	6	1	nogas	798542	0.99	885638	90.17	70	120	
Bi	209	1	nogas	1144799	2.86	1210058	94.61	70	120	
Ge	72	2	He	385580	0.34	395690	97.44	70	120	
In	115	2	He	540683	1.74	559997	96.55	70	120	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	018CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T11:17:35-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	013CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	912463	0.00
B	11	1	nogas	2725575	0.00
Al	27	1	nogas	2475523	0.00
P	31	1	nogas	655013	0.00
Ti	47	1	nogas	223594	0.00
Cu	63	1	nogas	1451427	0.00
Sr	88	1	nogas	3383359	0.00
Mo	95	1	nogas	679251	0.00
Ag	107	1	nogas	1650538	0.00
Cd	111	1	nogas	317927	0.00
Sn	118	1	nogas	980099	0.00
Sb	121	1	nogas	1460859	0.00
Ba	137	1	nogas	488336	0.00
Tl	205	1	nogas	2767309	0.00
Pb	208	1	nogas	3777433	0.00
Si	28	1	nogas	7715216	0.00
Na	23	2	He	21100227	0.00
Mg	24	2	He	11498469	0.00
Al	27	2	He	55084	0.00
K	39	2	He	8894580	0.00
Ca	43	2	He	26799	0.01
Ca	44	2	He	451326	0.00
V	51	2	He	794748	0.00
Cr	52	2	He	920183	0.00
Mn	55	2	He	580146	0.00
Fe	56	2	He	76460486	0.00
Co	59	2	He	1369487	0.00
Ni	60	2	He	332030	0.00
Cu	63	2	He	867360	0.00
Zn	66	2	He	155127	0.00
As	75	2	He	103673	0.00
Sb	121	2	He	620283	0.00
Se	78	2	He	8130	0.01

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag

Calibration Standard Report

Ge	72	1	nogas	1430508	1.51	1488050	96.13	70	120	
In	115	1	nogas	1427550	1.51	1497103	95.35	70	120	
Li	6	1	nogas	742563	1.66	885638	83.84	70	120	
Bi	209	1	nogas	1089745	1.74	1210058	90.06	70	120	
Ge	72	2	He	372464	1.01	395690	94.13	70	120	
In	115	2	He	525460	1.48	559997	93.83	70	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	020_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T11:22:01-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	013CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	nogas	96.047	0.322	463402	0.71	100	96.0	90	110	
B	11	1	nogas	498.540	5.245	1442934	5.45	500	99.7	90	110	
Al	27	1	nogas	105.954	10.404	1367681	4.86	100	106.0	90	110	
P	31	1	nogas	497.178	6.050	355756	2.03	500	99.4	90	110	
Ti	47	1	nogas	97.332	4.424	111120	2.31	100	97.3	90	110	
Cu	63	1	nogas	100.589	5.430	750688	1.38	100	100.6	90	110	
Sr	88	1	nogas	102.501	7.695	1725913	4.86	100	102.5	90	110	
Mo	95	1	nogas	101.634	7.496	342638	1.80	100	101.6	90	110	
Ag	107	1	nogas	99.170	5.223	809353	1.43	100	99.2	90	110	
Cd	111	1	nogas	102.545	4.001	162371	1.84	100	102.5	90	110	
Sn	118	1	nogas	100.474	5.851	488074	0.24	100	100.5	90	110	
Sb	121	1	nogas	93.304	5.334	690593	1.77	100	93.3	90	110	
Ba	137	1	nogas	101.911	7.884	246565	2.18	100	101.9	90	110	
Tl	205	1	nogas	100.622	9.680	1463172	5.69	100	100.6	90	110	
Pb	208	1	nogas	95.064	4.074	1868447	0.79	100	95.1	90	110	
U	238	1	nogas	95.673	7.850	2141060	3.46	100	95.7	90	110	
Li	7	1	nogas	97.650	4.140	1541922	3.47	100	97.7	90	110	
Si	28	1	nogas	4919.500	11.074	4745114	0.89	5000	98.4	90	110	
Tl	203	1	nogas	98.744	7.321	575786	2.92	100	98.7	90	110	
Na	23	2	He	9772.812	1.971	10669875	1.18	10000	97.7	90	110	
Mg	24	2	He	9897.241	2.189	5856407	0.90	10000	99.0	90	110	
Al	27	2	He	104.418	2.211	30184	3.41	100	104.4	90	110	
K	39	2	He	9978.821	1.203	4583365	0.24	10000	99.8	90	110	
Ca	43	2	He	10234.507	3.159	14162	3.72	10000	102.3	90	110	
Ca	44	2	He	9826.017	2.581	227738	1.43	10000	98.3	90	110	
V	51	2	He	96.309	0.806	395465	0.56	100	96.3	90	110	
Cr	52	2	He	98.368	1.740	466465	0.44	100	98.4	90	110	
Mn	55	2	He	100.161	2.321	299173	1.17	100	100.2	90	110	
Fe	56	2	He	10131.828	1.474	39841861	0.50	10000	101.3	90	110	
Co	59	2	He	94.901	1.899	661816	1.11	100	94.9	90	110	
Ni	60	2	He	99.500	1.439	170902	0.17	100	99.5	90	110	
Cu	63	2	He	102.317	1.207	460844	0.25	100	102.3	90	110	
Zn	66	2	He	100.333	2.971	80637	1.91	100	100.3	90	110	
As	75	2	He	98.942	0.452	52746	1.11	100	98.9	90	110	
Sn	118	2	He	96.979	0.807	230125	2.96	100	97.0	90	110	
Sb	121	2	He	99.355	3.183	317537	1.90	100	99.4	90	110	
Se	78	2	He	99.844	0.498	4154	1.66	100	99.8	90	110	
Ti	47	2	He	98.798	3.581	14386	4.87	100	98.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1467889	6.71	1488050	98.65	70	120	
In	115	1	nogas	1414731	5.96	1497103	94.50	70	120	
Li	6	1	nogas	787988	0.73	885638	88.97	70	120	
Bi	209	1	nogas	1142787	4.61	1210058	94.44	70	120	
Ge	72	2	He	381878	1.29	395690	96.51	70	120	
In	115	2	He	542847	2.17	559997	96.94	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	023_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T11:28:42-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	013CALB.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
Be	9	1	nogas	0.010	21.7	98	11.7	1	
B	11	1	nogas	13.941	4.9	58393	3.3	10	ICB Main CR1 Failed
Al	27	1	nogas	2.505	2.7	55615	1.2	5	
P	31	1	nogas	-4.789	-32.4	40657	1.7	10	
Ti	47	1	nogas	0.002	1229.7	143	21.3	2.5	
Cu	63	1	nogas	0.006	183.7	1873	5.7	1	
Sr	88	1	nogas	0.063	14.2	1827	7.0	2.5	
Mo	95	1	nogas	0.063	37.0	253	29.9	2.5	
Ag	107	1	nogas	0.014	41.9	177	31.2	2.5	
Cd	111	1	nogas	0.018	100.5	33	91.7	1	
Sn	118	1	nogas	-0.036	-158.5	1960	12.3	5	
Sb	121	1	nogas	0.047	28.6	867	11.2	2.5	
Ba	137	1	nogas	-0.011	-322.6	427	19.1	2.5	
Tl	205	1	nogas	0.069	5.0	1110	6.8	1	
Pb	208	1	nogas	0.022	14.4	990	7.1	2.5	
U	238	1	nogas	0.015	4.7	367	3.1	2.5	
Si	28	1	nogas	-104.192	-89.3	1651258	3.1	5	
Na	23	2	He	7.181	11.4	57825	2.7	100	
Mg	24	2	He	2.257	15.8	1837	13.0	100	
Al	27	2	He	3.198	7.0	1470	4.7	5	
K	39	2	He	7.377	47.2	48820	1.9	100	
Ca	43	2	He	18.856	1.6	30	0.0	100	
Ca	44	2	He	20.907	18.4	903	9.5	100	
V	51	2	He	-0.481	-5.6	2639	5.5	2.5	
Cr	52	2	He	-0.038	-83.2	3607	5.1	2.5	
Mn	55	2	He	0.312	1.9	1617	0.4	2.5	
Fe	56	2	He	1.858	8.6	17509	2.9	100	
Co	59	2	He	0.018	38.4	180	28.9	2.5	
Ni	60	2	He	0.094	50.0	297	28.1	2.5	
Cu	63	2	He	0.060	37.4	1000	11.4	1	
Zn	66	2	He	1.121	2.6	1217	2.9	2.5	
As	75	2	He	-0.068	-26.8	80	11.0	2.5	
Sb	121	2	He	0.049	43.2	383	19.2	2.5	
Se	78	2	He	-0.227	-45.2	29	16.1	1	
Ti	47	2	He	0.068	114.8	13	86.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1499080	0.84	1488050	100.74	70	120	

Initial Calibration Blank (ICB) Report

In	115	1	nogas	1486539	2.52	1497103	99.29	70	120	
Li	6	1	nogas	862536	0.49	885638	97.39	70	120	
Bi	209	1	nogas	1153536	2.28	1210058	95.33	70	120	
Ge	72	2	He	391079	1.43	395690	98.83	70	120	
In	115	2	He	551990	1.08	559997	98.57	70	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	024ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T11:30:57-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	013CALB.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
Be	9	1	nogas	0.004	55.1	60	16.7	0	ICSA Main CR1 Failed
B	11	1	nogas	10.022	6.6	44291	4.3	0	ICSA Main CR1 Failed
Al	27	1	nogas	91268.328	3.5	1153389743	1.3	0	
P	31	1	nogas	94933.546	3.2	59413652	1.0	0	
Ti	47	1	nogas	2059.425	3.3	2331936	1.3	0	
Cu	63	1	nogas	0.859	12.2	8119	7.9	0	ICSA Main CR1 Failed
Sr	88	1	nogas	0.853	7.5	14353	5.3	0	ICSA Main CR1 Failed
Mo	95	1	nogas	2138.244	4.5	6885258	1.2	0	
Ag	107	1	nogas	0.025	16.0	247	13.0	0	ICSA Main CR1 Failed
Cd	111	1	nogas	2.829	11.1	4277	10.6	0	
Sn	118	1	nogas	0.362	8.0	3619	4.0	0	ICSA Main CR1 Failed
Sb	121	1	nogas	0.167	8.0	1720	3.8	0	ICSA Main CR1 Failed
Ba	137	1	nogas	0.144	17.5	747	8.9	0	ICSA Main CR1 Failed
Tl	205	1	nogas	0.039	11.5	607	11.0	0	ICSA Main CR1 Failed
Pb	208	1	nogas	0.102	4.0	2337	1.6	0	ICSA Main CR1 Failed
Si	28	1	nogas	390.689	15.9	1910373	3.0	0	
Na	23	2	He	104781.173	2.2	107316635	1.5	0	
Mg	24	2	He	102950.058	1.3	57384259	0.5	0	
Al	27	2	He	98867.708	1.6	26445166	1.5	0	
K	39	2	He	104039.014	1.5	44626188	2.2	0	
Ca	43	2	He	99311.965	1.5	129425	2.5	0	
Ca	44	2	He	105553.039	2.9	2301599	3.8	0	
V	51	2	He	-0.335	-8.4	2986	3.6	0	ICSA Main CR1 Failed
Cr	52	2	He	0.390	14.3	5217	4.5	0	ICSA Main CR1 Failed
Mn	55	2	He	0.535	5.2	2113	4.5	0	ICSA Main CR1 Failed
Fe	56	2	He	103924.502	1.7	384868594	0.8	0	
Co	59	2	He	0.343	7.6	2300	8.1	0	ICSA Main CR1 Failed
Ni	60	2	He	0.436	6.4	827	5.5	0	ICSA Main CR1 Failed
Cu	63	2	He	0.448	4.7	2564	3.3	0	ICSA Main CR1 Failed
Zn	66	2	He	0.623	26.2	743	16.8	0	ICSA Main CR1 Failed
As	75	2	He	0.024	29.1	120	2.8	0	ICSA Main CR1 Failed
Sb	121	2	He	0.215	4.0	853	3.4	0	ICSA Main CR1 Failed
Se	78	2	He	0.022	722.5	36	16.7	0	ICSA Main CR1 Failed
Ti	47	2	He	2075.325	0.1	284494	0.8	0	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1455416	2.19	1488050	97.81	70	120	
In	115	1	nogas	1348829	3.71	1497103	90.10	70	120	
Li	6	1	nogas	828772	0.56	885638	93.58	70	120	
Bi	209	1	nogas	1042206	1.63	1210058	86.13	70	120	
Ge	72	2	He	359713	0.94	395690	90.91	70	120	
In	115	2	He	499595	2.03	559997	89.21	70	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	025ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T11:33:10-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	013CALB.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
Be	9	1	nogas	100.748	3.279	506699	0.26	100	100.7	80	120	
B	11	1	nogas	519.184	4.379	1587465	0.94	100	519.2	80	120	
Al	27	1	nogas	98065.447	2.290	1222651395	0.32	100	98065.4	80	120	ICSB Main CR1 Failed
Ti	47	1	nogas	2249.595	0.776	2513570	1.59	100	2249.6	80	120	ICSB Main CR1 Failed
Cu	63	1	nogas	101.555	1.206	742893	1.09	100	101.6	80	120	
Sr	88	1	nogas	110.978	6.782	1891892	4.57	100	111.0	80	120	
Mo	95	1	nogas	2108.181	2.960	7204409	0.76	100	2108.2	80	120	ICSB Main CR1 Failed
Ag	107	1	nogas	99.166	2.671	819733	1.44	100	99.2	80	120	
Cd	111	1	nogas	109.432	1.333	175454	0.91	100	109.4	80	120	
Sn	118	1	nogas	108.267	2.337	532697	0.63	100	108.3	80	120	
Sb	121	1	nogas	103.372	1.960	749799	0.67	100	103.4	80	120	
Ba	137	1	nogas	108.177	4.116	265288	2.00	100	108.2	80	120	
Tl	205	1	nogas	110.600	4.020	1497542	2.74	100	110.6	80	120	
Pb	208	1	nogas	105.719	0.536	1932263	0.87	100	105.7	80	120	
U	238	1	nogas	113.034	2.675	2354801	1.61	100	113.0	80	120	
Si	28	1	nogas	5949.597	5.160	5283183	1.51	100	5949.6	80	120	ICSB Main CR1 Failed
Na	23	2	He	115682.726	1.815	120404742	2.70	100	115682.7	80	120	
Mg	24	2	He	112874.749	1.431	63926409	0.82	100	112874.7	80	120	
Al	27	2	He	98694.663	0.705	26823718	1.11	100	98694.7	80	120	ICSB Main CR1 Failed
K	39	2	He	113886.004	1.018	49626011	1.14	100	113886.0	80	120	
Ca	43	2	He	109058.002	1.090	144406	2.09	100	109058.0	80	120	
Ca	44	2	He	111628.069	0.468	2472779	1.34	100	111628.1	80	120	ICSB Main CR1 Failed
V	51	2	He	109.129	2.630	428252	1.61	100	109.1	80	120	
Cr	52	2	He	109.237	2.530	495368	1.42	100	109.2	80	120	
Mn	55	2	He	109.658	2.335	313458	1.94	100	109.7	80	120	
Fe	56	2	He	113219.553	2.289	426028034	1.86	100	113219.6	80	120	
Co	59	2	He	104.325	1.664	696383	1.77	100	104.3	80	120	
Ni	60	2	He	107.475	1.319	176700	2.15	100	107.5	80	120	
Cu	63	2	He	105.956	1.139	456749	0.75	100	106.0	80	120	
Zn	66	2	He	110.174	1.213	84732	0.82	100	110.2	80	120	
As	75	2	He	109.748	0.994	55981	0.30	100	109.7	80	120	
Sb	121	2	He	109.265	1.504	334259	0.43	100	109.3	80	120	
Se	78	2	He	111.966	3.904	4453	2.79	100	112.0	80	120	
Ti	47	2	He	2135.540	1.054	297466	1.86	100	2135.5	80	120	ICSB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1435640	2.27	1488050	96.48	70	120	
In	115	1	nogas	1430523	2.23	1497103	95.55	70	120	
Li	6	1	nogas	833633	3.41	885638	94.13	70	120	
Bi	209	1	nogas	1061474	1.27	1210058	87.72	70	120	
Ge	72	2	He	365492	1.11	395690	92.37	70	120	
In	115	2	He	516853	0.57	559997	92.30	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	032_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T11:55:32-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	013CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	93.991	0.983	505335	0.87	100	94.0	90	110	
B	11	1	nogas	474.484	2.899	1552378	2.13	500	94.9	90	110	
Al	27	1	nogas	109.674	2.827	1472732	2.53	100	109.7	90	110	
P	31	1	nogas	526.356	2.417	388614	1.43	500	105.3	90	110	
Ti	47	1	nogas	101.365	2.372	120169	2.36	100	101.4	90	110	
Cu	63	1	nogas	103.533	1.762	802724	2.21	100	103.5	90	110	
Sr	88	1	nogas	101.717	4.375	1834512	0.71	100	101.7	90	110	
Mo	95	1	nogas	100.656	3.768	363777	0.15	100	100.7	90	110	
Ag	107	1	nogas	97.638	5.219	853092	1.34	100	97.6	90	110	
Cd	111	1	nogas	102.739	4.204	174140	1.25	100	102.7	90	110	
Sn	118	1	nogas	100.097	1.327	521302	3.12	100	100.1	90	110	
Sb	121	1	nogas	96.068	1.859	738753	2.71	100	96.1	90	110	
Ba	137	1	nogas	100.736	2.494	261411	1.75	100	100.7	90	110	
Tl	205	1	nogas	102.134	5.740	1564732	0.69	100	102.1	90	110	
Pb	208	1	nogas	95.392	4.089	1973324	1.02	100	95.4	90	110	
U	238	1	nogas	93.858	6.109	2211808	1.08	100	93.9	90	110	
Li	7	1	nogas	92.650	2.396	1657266	3.00	100	92.6	90	110	
Si	28	1	nogas	5222.151	2.065	5129499	0.71	5000	104.4	90	110	
Tl	203	1	nogas	98.874	6.378	606947	1.30	100	98.9	90	110	
Na	23	2	He	10332.061	2.707	11525426	1.28	10000	103.3	90	110	
Mg	24	2	He	10360.084	1.638	6266254	1.33	10000	103.6	90	110	
Al	27	2	He	105.517	2.488	31176	4.39	100	105.5	90	110	
K	39	2	He	10264.092	1.829	4816886	0.22	10000	102.6	90	110	
Ca	43	2	He	10464.805	1.249	14803	3.13	10000	104.6	90	110	
Ca	44	2	He	10024.931	2.100	237485	1.32	10000	100.2	90	110	
V	51	2	He	101.568	1.727	426019	1.63	100	101.6	90	110	
Cr	52	2	He	101.301	1.930	490868	0.98	100	101.3	90	110	
Mn	55	2	He	101.263	2.443	309118	0.42	100	101.3	90	110	
Fe	56	2	He	10254.698	1.888	41213349	0.49	10000	102.5	90	110	
Co	59	2	He	97.695	1.318	696370	0.73	100	97.7	90	110	
Ni	60	2	He	101.914	1.282	178917	0.80	100	101.9	90	110	
Cu	63	2	He	105.106	0.985	483869	1.28	100	105.1	90	110	
Zn	66	2	He	103.100	0.708	84705	1.93	100	103.1	90	110	
As	75	2	He	101.747	1.445	55430	0.62	100	101.7	90	110	
Sb	121	2	He	99.667	2.411	325578	0.67	100	99.7	90	110	
Se	78	2	He	100.232	2.317	4263	4.12	100	100.2	90	110	
Ti	47	2	He	103.382	2.575	15377	0.56	100	103.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1521372	0.91	1488050	102.24	70	120	
In	115	1	nogas	1513563	3.90	1497103	101.10	70	120	
Li	6	1	nogas	890574	1.69	885638	100.56	70	120	
Bi	209	1	nogas	1202976	5.12	1210058	99.41	70	120	
Ge	72	2	He	390342	2.04	395690	98.65	70	120	
In	115	2	He	556813	1.32	559997	99.43	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	033_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T11:57:43-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	013CALB.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
Be	9	1	nogas	0.035	30.4	252	25.5	1	
B	11	1	nogas	14.902	6.9	67730	4.5	10	CCB Main CR1 Failed
Al	27	1	nogas	2.678	1.5	60159	0.8	5	
P	31	1	nogas	1.212	70.8	46291	1.0	10	
Ti	47	1	nogas	0.047	40.3	203	11.4	2.5	
Cu	63	1	nogas	0.155	22.4	3120	8.6	2	
Sr	88	1	nogas	0.108	16.3	2757	9.9	2.5	
Mo	95	1	nogas	0.252	7.7	970	6.3	2.5	
Ag	107	1	nogas	0.046	16.3	473	15.9	2.5	
Cd	111	1	nogas	0.059	13.0	107	14.3	1	
Sn	118	1	nogas	0.179	93.2	3204	25.7	5	
Sb	121	1	nogas	0.153	5.3	1737	3.7	2.5	
Ba	137	1	nogas	0.009	35.4	503	1.1	2.5	
Tl	205	1	nogas	0.350	17.7	5771	20.6	1	
Pb	208	1	nogas	0.055	16.8	1817	13.5	2.5	
U	238	1	nogas	0.054	24.9	1367	28.6	2.5	
Si	28	1	nogas	-147.415	-38.9	1688025	2.0	5	
Na	23	2	He	21.493	5.7	74843	1.6	100	
Mg	24	2	He	4.499	10.8	3240	8.9	100	
Al	27	2	He	2.751	5.5	1360	3.4	5	
K	39	2	He	13.551	18.6	52477	1.9	100	
Ca	43	2	He	13.907	28.9	23	24.7	100	
Ca	44	2	He	27.131	10.0	1067	5.7	100	
V	51	2	He	-0.415	-3.9	2956	1.9	2.5	
Cr	52	2	He	-0.090	-48.4	3410	6.5	2.5	
Mn	55	2	He	0.393	10.5	1893	6.4	2.5	
Fe	56	2	He	4.862	2.9	30045	1.6	100	
Co	59	2	He	0.038	24.2	327	20.4	2.5	
Ni	60	2	He	0.097	23.4	307	13.6	2.5	
Cu	63	2	He	0.064	17.6	1037	4.8	2	
Zn	66	2	He	1.096	5.6	1213	4.5	2.5	
As	75	2	He	0.038	98.9	140	14.5	2.5	
Sb	121	2	He	0.145	17.9	707	11.8	2.5	
Se	78	2	He	0.137	89.0	45	11.3	2	
Ti	47	2	He	0.110	60.4	20	50.0	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1558370	0.26	1488050	104.73	70	120	
In	115	1	nogas	1562409	1.91	1497103	104.36	70	120	
Li	6	1	nogas	951468	0.90	885638	107.43	70	120	
Bi	209	1	nogas	1266534	3.89	1210058	104.67	70	120	

Continuing Calibration Blank (CCB) Report

Ge	72	2	He	396886	0.45	395690	100.30	70	120	
In	115	2	He	556956	1.73	559997	99.46	70	120	

Sample Report

Sample Table

Sample Name	MBLK-149161
Data File Name	034SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T12:00:46-06:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 149161
ISTD Ref FileName	013CALB.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
Be	9	1	nogas	0.005	0.005	76.08	77	0.01	2000	
B	11	1	nogas	8.527	8.527	6.12	46359	0.02	2000	
Al	27	1	nogas	2.974	2.974	8.57	63500	0.00	2000	
Ti	47	1	nogas	0.073	0.073	57.00	233	0.03	2000	
Cu	63	1	nogas	0.134	0.134	9.71	2927	0.00	2000	
Sr	88	1	nogas	0.066	0.066	15.49	1967	0.00	2000	
Mo	95	1	nogas	0.099	0.099	16.18	400	0.02	2000	
Ag	107	1	nogas	0.011	0.011	54.43	153	0.01	2000	
Cd	111	1	nogas	0.008	0.008	43.21	17	0.05	2000	
Sn	118	1	nogas	0.066	0.066	23.31	2604	0.00	2000	
Sb	121	1	nogas	0.105	0.105	9.95	1343	0.01	2000	
Ba	137	1	nogas	0.124	0.124	18.77	810	0.02	2000	
Tl	205	1	nogas	0.044	0.044	9.54	840	0.01	2000	
Pb	208	1	nogas	0.008	0.008	54.09	817	0.00	2000	
U	238	1	nogas	0.009	0.009	19.53	240	0.00	2000	
Si	28	1	nogas	-2.859	-2.859	-4984.52	1767893	0.00	2000	
Na	23	2	He	21.606	21.606	8.34	75228	0.03	200000	
Mg	24	2	He	5.501	5.501	14.98	3867	0.14	200000	
Al	27	2	He	2.931	2.931	21.43	1417	0.21	2000	
K	39	2	He	18.403	18.403	15.25	54961	0.03	200000	
Ca	43	2	He	43.888	43.888	24.02	67	65.83	200000	
Ca	44	2	He	30.019	30.019	8.27	1140	2.63	200000	
V	51	2	He	-0.139	-0.139	-23.86	4133	0.00	2000	
Cr	52	2	He	-0.062	-0.062	-164.82	3554	0.00	2000	
Mn	55	2	He	1.014	1.014	6.77	3830	0.03	2000	
Fe	56	2	He	1.589	1.589	7.42	16731	0.01	200000	
Co	59	2	He	0.006	0.006	68.06	97	0.01	2000	
Ni	60	2	He	0.122	0.122	6.08	353	0.03	2000	
Cu	63	2	He	0.104	0.104	13.98	1223	0.01	2000	
Zn	66	2	He	2.450	2.450	12.89	2347	0.10	2000	
As	75	2	He	-0.003	-0.003	-1192.16	118	0.00	2000	
Sb	121	2	He	0.138	0.138	7.67	687	0.02	2000	
Se	78	2	He	-0.021	-0.021	-1550.07	38	-0.06	2000	
Ti	47	2	He	0.022	0.022	173.44	7	0.33	2000	

QC ISTD Table

Sample Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1543706	2.70	1488050	103.74	70	120	
In	115	1	nogas	1557743	1.69	1497103	104.05	70	120	
Li	6	1	nogas	966014	1.35	885638	109.08	70	120	
Bi	209	1	nogas	1303158	7.32	1210058	107.69	70	120	
Ge	72	2	He	398269	1.05	395690	100.65	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
In	115	2	He	563670	1.33	559997	100.66	70	120	

Sample Report

Sample Table

Sample Name	LCS-149161
Data File Name	035SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T12:03:45-06:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 149161
ISTD Ref FileName	013CALB.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
Be	9	1	nogas	46.590	46.590	1.76	269013	0.02	2000	
B	11	1	nogas	427.949	427.949	2.86	1505291	0.03	2000	
Al	27	1	nogas	115.799	115.799	1.22	1650041	0.01	2000	
Ti	47	1	nogas	141.957	141.957	1.73	178673	0.08	2000	
Cu	63	1	nogas	49.579	49.579	3.50	409257	0.01	2000	
Sr	88	1	nogas	95.108	95.108	3.48	1840176	0.01	2000	
Mo	95	1	nogas	46.839	46.839	0.81	181611	0.03	2000	
Ag	107	1	nogas	45.709	45.709	0.21	428602	0.01	2000	
Cd	111	1	nogas	50.609	50.609	0.51	92027	0.05	2000	
Sn	118	1	nogas	91.421	91.421	1.30	510575	0.02	2000	
Sb	121	1	nogas	46.845	46.845	1.47	382808	0.01	2000	
Ba	137	1	nogas	48.025	48.025	1.46	133904	0.04	2000	
Tl	205	1	nogas	42.899	42.899	5.42	721924	0.01	2000	
Pb	208	1	nogas	44.968	44.968	4.68	1021672	0.00	2000	
U	238	1	nogas	82.682	82.682	4.16	2141000	0.00	2000	
Si	28	1	nogas	5455.963	5455.963	1.75	5608845	0.10	2000	>LDR
Na	23	2	He	5164.095	5164.095	2.18	6083698	0.08	200000	
Mg	24	2	He	5262.523	5262.523	1.86	3346818	0.16	200000	
Al	27	2	He	110.192	110.192	1.72	34191	0.32	2000	
K	39	2	He	5330.838	5330.838	2.04	2653464	0.20	200000	
Ca	43	2	He	5371.127	5371.127	2.49	7988	67.24	200000	
Ca	44	2	He	5169.057	5169.057	2.55	128952	4.01	200000	
V	51	2	He	50.109	50.109	1.46	223441	0.02	2000	
Cr	52	2	He	50.668	50.668	2.40	260127	0.02	2000	
Mn	55	2	He	51.232	51.232	2.41	164791	0.03	2000	
Fe	56	2	He	5271.653	5271.653	1.58	22282136	0.02	200000	
Co	59	2	He	49.134	49.134	2.43	368247	0.01	2000	
Ni	60	2	He	51.422	51.422	2.20	94984	0.05	2000	
Cu	63	2	He	51.901	51.901	1.47	251601	0.02	2000	
Zn	66	2	He	53.261	53.261	1.16	46152	0.12	2000	
As	75	2	He	50.723	50.723	1.67	29115	0.17	2000	
Sb	121	2	He	49.304	49.304	2.57	169474	0.03	2000	
Se	78	2	He	50.728	50.728	3.84	2287	2.22	2000	
Ti	47	2	He	144.200	144.200	3.03	22551	0.64	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1615662	0.44	1488050	108.58	70	120	

Sample Report

In	115	1	nogas	1622032	0.47	1497103	108.34	70	120	
Li	6	1	nogas	956405	1.41	885638	107.99	70	120	
Bi	209	1	nogas	1320518	3.86	1210058	109.13	70	120	
Ge	72	2	He	410362	0.80	395690	103.71	70	120	
In	115	2	He	576018	1.71	559997	102.86	70	120	

Sample Report

Sample Table

Sample Name	HS19121036-01SD
Data File Name	039SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T12:12:36-06:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 149161
ISTD Ref FileName	013CALB.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
Be	9	1	nogas	0.006	0.006	39.18	92	0.01	2000	
B	11	1	nogas	8.526	8.526	2.70	50223	0.02	2000	
Al	27	1	nogas	36.493	36.493	6.98	546944	0.01	2000	
Ti	47	1	nogas	0.894	0.894	58.03	1297	0.07	2000	
Cu	63	1	nogas	0.349	0.349	8.64	4924	0.01	2000	
Sr	88	1	nogas	797.946	797.946	5.39	15286609	0.01	2000	
Mo	95	1	nogas	0.078	0.078	11.17	330	0.02	2000	
Ag	107	1	nogas	0.008	0.008	19.97	133	0.01	2000	
Cd	111	1	nogas	0.050	0.050	23.68	93	0.05	2000	
Sn	118	1	nogas	-0.112	-0.112	-21.33	1710	-0.01	2000	
Sb	121	1	nogas	0.136	0.136	9.17	1687	0.01	2000	
Ba	137	1	nogas	180.904	180.904	4.40	498324	0.04	2000	
Tl	205	1	nogas	0.024	0.024	12.52	477	0.01	2000	
Pb	208	1	nogas	0.050	0.050	8.70	1643	0.00	2000	
U	238	1	nogas	0.131	0.131	7.77	3164	0.00	2000	
Si	28	1	nogas	23323.030	23323.030	1.11	18248921	0.13	2000	>LDR
Na	23	2	He	49345.088	49345.088	1.22	56686367	0.09	200000	
Mg	24	2	He	15760.182	15760.182	0.78	9850165	0.16	200000	
Al	27	2	He	37.639	37.639	7.96	11835	0.32	2000	
K	39	2	He	203.756	203.756	4.86	144659	0.14	200000	
Ca	43	2	He	46310.756	46310.756	2.76	67640	68.47	200000	
Ca	44	2	He	45212.102	45212.102	6.52	1104593	4.09	200000	
V	51	2	He	0.809	0.809	8.79	8250	0.01	2000	
Cr	52	2	He	0.489	0.489	16.54	6338	0.01	2000	
Mn	55	2	He	34.690	34.690	2.35	109865	0.03	2000	
Fe	56	2	He	31.772	31.772	3.71	142221	0.02	200000	
Co	59	2	He	0.209	0.209	13.22	1587	0.01	2000	
Ni	60	2	He	5.182	5.182	2.61	9533	0.05	2000	
Cu	63	2	He	0.205	0.205	15.45	1723	0.01	2000	
Zn	66	2	He	2.105	2.105	3.41	2087	0.10	2000	
As	75	2	He	0.122	0.122	58.11	189	0.06	2000	
Sb	121	2	He	0.171	0.171	5.52	807	0.02	2000	
Se	78	2	He	-0.139	-0.139	-47.01	33	-0.42	2000	
Ti	47	2	He	0.804	0.804	26.45	127	0.63	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1646034	0.58	1488050	110.62	70	120	

Sample Report

In	115	1	nogas	1608940	4.32	1497103	107.47	70	120	
Li	6	1	nogas	1046554	2.96	885638	118.17	70	120	
Bi	209	1	nogas	1228100	3.01	1210058	101.49	70	120	
Ge	72	2	He	403276	1.55	395690	101.92	70	120	
In	115	2	He	560823	0.61	559997	100.15	70	120	

Sample Report

Sample Table

Sample Name	HS19121036-01MS
Data File Name	040SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T12:14:48-06:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 149161
ISTD Ref FileName	013CALB.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
Be	9	1	nogas	46.824	46.824	2.26	251489	0.02	2000	
B	11	1	nogas	450.879	450.879	3.68	1474300	0.03	2000	
Al	27	1	nogas	353.429	353.429	9.34	4595732	0.01	2000	
Ti	47	1	nogas	151.528	151.528	1.28	176038	0.09	2000	
Cu	63	1	nogas	47.341	47.341	1.17	360791	0.01	2000	
Sr	88	1	nogas	4230.578	4230.578	2.26	73864607	0.01	2000	>LDR
Mo	95	1	nogas	48.884	48.884	3.10	171061	0.03	2000	
Ag	107	1	nogas	42.876	42.876	3.92	362783	0.01	2000	
Cd	111	1	nogas	47.854	47.854	3.11	78528	0.06	2000	
Sn	118	1	nogas	90.487	90.487	1.43	456202	0.02	2000	
Sb	121	1	nogas	46.443	46.443	2.52	350245	0.01	2000	
Ba	137	1	nogas	1027.852	1027.852	3.47	2576846	0.04	2000	
Tl	205	1	nogas	45.085	45.085	1.94	616129	0.01	2000	
Pb	208	1	nogas	48.237	48.237	1.48	889825	0.01	2000	
U	238	1	nogas	92.676	92.676	2.70	1948093	0.00	2000	
Si	28	1	nogas	130425.126	130425.126	3.30	84586739	0.15	2000	>LDR
Na	23	2	He	251333.776	251333.776	0.53	268193336	0.09	200000	>LDR
Mg	24	2	He	84460.783	84460.783	0.87	49059149	0.17	200000	
Al	27	2	He	347.131	347.131	8.95	97259	0.36	2000	
K	39	2	He	6100.727	6100.727	0.65	2767569	0.22	200000	
Ca	43	2	He	236710.410	236710.410	1.41	321410	73.65	200000	>LDR
Ca	44	2	He	234303.824	234303.824	1.11	5322212	4.40	200000	>LDR
V	51	2	He	51.121	51.121	0.58	208138	0.02	2000	
Cr	52	2	He	51.640	51.640	1.64	242104	0.02	2000	
Mn	55	2	He	218.673	218.673	1.07	640470	0.03	2000	
Fe	56	2	He	5167.073	5167.073	1.26	19952482	0.03	200000	
Co	59	2	He	47.099	47.099	0.60	322479	0.01	2000	
Ni	60	2	He	73.770	73.770	0.72	124415	0.06	2000	
Cu	63	2	He	47.774	47.774	1.77	211612	0.02	2000	
Zn	66	2	He	56.994	56.994	1.18	45092	0.13	2000	
As	75	2	He	49.539	49.539	0.38	25979	0.19	2000	
Sb	121	2	He	47.977	47.977	1.20	150667	0.03	2000	
Se	78	2	He	48.274	48.274	2.50	1990	2.43	2000	
Ti	47	2	He	147.233	147.233	3.05	21035	0.70	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1491677	2.65	1488050	100.24	70	120	

Sample Report

In	115	1	nogas	1464587	2.66	1497103	97.83	70	120	
Li	6	1	nogas	889656	1.17	885638	100.45	70	120	
Bi	209	1	nogas	1071031	1.47	1210058	88.51	70	120	
Ge	72	2	He	374838	0.89	395690	94.73	70	120	
In	115	2	He	518367	0.87	559997	92.57	70	120	

Sample Report

Sample Table

Sample Name	HS19121036-01MSD
Data File Name	041SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T12:17:01-06:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 149161
ISTD Ref FileName	013CALB.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
Be	9	1	nogas	45.227	45.227	2.46	244216	0.02	2000	
B	11	1	nogas	442.297	442.297	1.48	1454753	0.03	2000	
Al	27	1	nogas	335.850	335.850	2.58	4468099	0.01	2000	
Ti	47	1	nogas	142.189	142.189	2.31	168742	0.08	2000	
Cu	63	1	nogas	46.290	46.290	1.29	360436	0.01	2000	
Sr	88	1	nogas	4104.176	4104.176	2.18	72236682	0.01	2000	>LDR
Mo	95	1	nogas	47.898	47.898	1.25	168995	0.03	2000	
Ag	107	1	nogas	42.071	42.071	1.92	358975	0.01	2000	
Cd	111	1	nogas	47.111	47.111	1.68	77959	0.06	2000	
Sn	118	1	nogas	87.917	87.917	1.81	446949	0.02	2000	
Sb	121	1	nogas	43.895	43.895	3.03	338240	0.01	2000	
Ba	137	1	nogas	1012.648	1012.648	2.26	2560106	0.04	2000	
Tl	205	1	nogas	45.037	45.037	0.27	620186	0.01	2000	
Pb	208	1	nogas	47.209	47.209	1.35	877477	0.01	2000	
U	238	1	nogas	91.371	91.371	2.92	1935360	0.00	2000	
Si	28	1	nogas	122696.689	122696.689	2.80	81419457	0.15	2000	>LDR
Na	23	2	He	246779.396	246779.396	1.63	262522456	0.09	200000	>LDR
Mg	24	2	He	82163.236	82163.236	2.41	47575576	0.17	200000	
Al	27	2	He	351.352	351.352	3.34	98137	0.36	2000	
K	39	2	He	5944.873	5944.873	1.56	2689932	0.22	200000	
Ca	43	2	He	228683.509	228683.509	1.29	309570	73.87	200000	>LDR
Ca	44	2	He	224894.623	224894.623	1.91	5092771	4.42	200000	>LDR
V	51	2	He	49.992	49.992	1.55	203012	0.02	2000	
Cr	52	2	He	50.330	50.330	2.08	235332	0.02	2000	
Mn	55	2	He	214.961	214.961	0.83	627708	0.03	2000	
Fe	56	2	He	5064.911	5064.911	0.35	19498347	0.03	200000	
Co	59	2	He	45.921	45.921	1.55	313429	0.01	2000	
Ni	60	2	He	69.983	69.983	2.69	117660	0.06	2000	
Cu	63	2	He	46.265	46.265	1.80	204301	0.02	2000	
Zn	66	2	He	54.460	54.460	1.04	42971	0.13	2000	
As	75	2	He	48.227	48.227	1.91	25215	0.19	2000	
Sb	121	2	He	47.364	47.364	1.17	148279	0.03	2000	
Se	78	2	He	47.212	47.212	6.36	1941	2.43	2000	
Ti	47	2	He	142.198	142.198	5.89	20255	0.70	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1523731	1.22	1488050	102.40	70	120	

Sample Report

In	115	1	nogas	1476175	1.06	1497103	98.60	70	120	
Li	6	1	nogas	894592	2.33	885638	101.01	70	120	
Bi	209	1	nogas	1079098	0.36	1210058	89.18	70	120	
Ge	72	2	He	373726	1.41	395690	94.45	70	120	
In	115	2	He	503189	2.08	559997	89.86	70	120	

Sample Report

Sample Table

Sample Name	HS19121036-01PDS
Data File Name	042SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T12:19:12-06:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 149161
ISTD Ref FileName	013CALB.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
Be	9	1	nogas	86.075	86.075	2.15	474296	0.02	2000	
B	11	1	nogas	30.406	30.406	5.25	116423	0.03	2000	
Al	27	1	nogas	307.803	307.803	7.29	4009191	0.01	2000	
Ti	47	1	nogas	105.658	105.658	2.03	122708	0.09	2000	
Cu	63	1	nogas	91.580	91.580	0.60	695892	0.01	2000	
Sr	88	1	nogas	4039.267	4039.267	1.87	70515337	0.01	2000	>LDR
Mo	95	1	nogas	96.599	96.599	3.08	337963	0.03	2000	
Ag	107	1	nogas	82.479	82.479	3.61	697841	0.01	2000	
Cd	111	1	nogas	96.175	96.175	1.46	157851	0.06	2000	
Sn	118	1	nogas	0.119	0.119	19.26	2714	0.00	2000	
Sb	121	1	nogas	81.089	81.089	2.07	610889	0.01	2000	
Ba	137	1	nogas	1035.567	1035.567	5.07	2595904	0.04	2000	
Tl	205	1	nogas	95.823	95.823	2.94	1292571	0.01	2000	
Pb	208	1	nogas	94.092	94.092	2.50	1712802	0.01	2000	
U	238	1	nogas	0.725	0.725	3.94	15064	0.00	2000	
Si	28	1	nogas	118905.378	118905.378	2.45	77241466	0.15	2000	>LDR
Na	23	2	He	255270.458	255270.458	0.89	269115569	0.09	200000	>LDR
Mg	24	2	He	87731.297	87731.297	1.52	50341988	0.17	200000	
Al	27	2	He	316.820	316.820	7.85	87668	0.36	2000	
K	39	2	He	10815.238	10815.238	1.92	4813351	0.22	200000	
Ca	43	2	He	236708.553	236708.553	2.12	317480	74.56	200000	>LDR
Ca	44	2	He	232505.015	232505.015	2.26	5216835	4.46	200000	>LDR
V	51	2	He	97.893	97.893	3.15	389617	0.03	2000	
Cr	52	2	He	97.355	97.355	2.41	447675	0.02	2000	
Mn	55	2	He	259.960	259.960	3.51	751794	0.03	2000	
Fe	56	2	He	9774.726	9774.726	3.69	37262300	0.03	200000	
Co	59	2	He	90.654	90.654	3.51	612881	0.01	2000	
Ni	60	2	He	124.385	124.385	4.18	207063	0.06	2000	
Cu	63	2	He	92.499	92.499	3.25	403959	0.02	2000	
Zn	66	2	He	101.471	101.471	1.96	79083	0.13	2000	
As	75	2	He	98.108	98.108	1.24	50717	0.19	2000	
Sb	121	2	He	84.143	84.143	2.02	260834	0.03	2000	
Se	78	2	He	96.044	96.044	4.58	3874	2.48	2000	
Ti	47	2	He	99.213	99.213	1.91	14009	0.71	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1490710	1.48	1488050	100.18	70	120	

Sample Report

In	115	1	nogas	1464325	1.95	1497103	97.81	70	120	
Li	6	1	nogas	912992	2.65	885638	103.09	70	120	
Bi	209	1	nogas	1057309	1.31	1210058	87.38	70	120	
Ge	72	2	He	370370	2.47	395690	93.60	70	120	
In	115	2	He	497400	0.75	559997	88.82	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	044_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T12:27:54-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	013CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	90.473	2.556	504184	0.63	100	90.5	90	110	
B	11	1	nogas	458.985	4.109	1557477	3.91	500	91.8	90	110	
Al	27	1	nogas	106.229	3.692	1480400	2.61	100	106.2	90	110	
P	31	1	nogas	510.892	2.372	392665	1.12	500	102.2	90	110	
Ti	47	1	nogas	98.463	3.670	121058	1.50	100	98.5	90	110	
Cu	63	1	nogas	99.981	1.939	804132	0.46	100	100.0	90	110	
Sr	88	1	nogas	105.260	2.341	1923600	1.06	100	105.3	90	110	
Mo	95	1	nogas	101.343	4.533	370897	1.53	100	101.3	90	110	
Ag	107	1	nogas	97.995	4.824	867314	1.79	100	98.0	90	110	
Cd	111	1	nogas	102.230	3.530	175516	0.51	100	102.2	90	110	
Sn	118	1	nogas	100.113	1.362	527947	1.91	100	100.1	90	110	
Sb	121	1	nogas	95.047	4.107	757828	1.79	100	95.0	90	110	
Ba	137	1	nogas	100.401	3.115	263820	0.26	100	100.4	90	110	
Tl	205	1	nogas	99.040	7.745	1555818	4.88	100	99.0	90	110	
Pb	208	1	nogas	94.565	5.279	2005226	1.12	100	94.6	90	110	
U	238	1	nogas	92.983	5.348	2248207	3.01	100	93.0	90	110	
Li	7	1	nogas	94.454	1.146	1750049	1.64	100	94.5	90	110	
Si	28	1	nogas	4944.022	4.060	5133773	1.23	5000	98.9	90	110	
Tl	203	1	nogas	96.538	5.243	607918	0.65	100	96.5	90	110	
Na	23	2	He	10367.065	1.411	11435045	0.27	10000	103.7	90	110	
Mg	24	2	He	10331.481	1.230	6178205	0.17	10000	103.3	90	110	
Al	27	2	He	100.074	3.665	29243	2.69	100	100.1	90	110	
K	39	2	He	9875.072	1.216	4584261	1.50	10000	98.8	90	110	
Ca	43	2	He	9848.461	1.846	13769	0.71	10000	98.5	90	110	
Ca	44	2	He	9839.146	1.149	230477	1.13	10000	98.4	90	110	
V	51	2	He	100.273	2.094	415850	1.02	100	100.3	90	110	
Cr	52	2	He	99.649	2.134	477450	0.98	100	99.6	90	110	
Mn	55	2	He	98.012	0.361	295896	0.79	100	98.0	90	110	
Fe	56	2	He	10008.878	0.589	39776564	1.10	10000	100.1	90	110	
Co	59	2	He	96.013	0.729	676716	1.63	100	96.0	90	110	
Ni	60	2	He	101.470	1.726	176115	0.61	100	101.5	90	110	
Cu	63	2	He	104.210	1.134	474301	0.41	100	104.2	90	110	
Zn	66	2	He	101.482	1.101	82435	1.83	100	101.5	90	110	
As	75	2	He	99.283	1.181	53484	1.41	100	99.3	90	110	
Sb	121	2	He	100.792	1.321	325568	0.19	100	100.8	90	110	
Se	78	2	He	96.706	5.521	4065	4.50	100	96.7	90	110	
Ti	47	2	He	97.697	3.858	14372	4.45	100	97.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1578585	2.36	1488050	106.08	70	120	
In	115	1	nogas	1532637	3.09	1497103	102.37	70	120	
Li	6	1	nogas	923371	2.42	885638	104.26	70	120	
Bi	209	1	nogas	1233376	4.67	1210058	101.93	70	120	
Ge	72	2	He	385894	1.14	395690	97.52	70	120	
In	115	2	He	530718	2.07	559997	94.77	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	045_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T12:30:06-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	013CALB.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
Be	9	1	nogas	0.032	8.9	240	3.6	1	
B	11	1	nogas	14.961	1.9	70746	4.7	10	CCB Main CR1 Failed
Al	27	1	nogas	2.895	12.5	63150	4.7	5	
P	31	1	nogas	4.967	101.7	48837	1.7	10	
Ti	47	1	nogas	0.111	88.4	280	39.3	2.5	
Cu	63	1	nogas	0.229	17.7	3707	2.7	2	
Sr	88	1	nogas	0.304	3.9	6601	1.0	2.5	
Mo	95	1	nogas	0.248	6.9	987	4.7	2.5	
Ag	107	1	nogas	0.050	22.2	523	15.4	2.5	
Cd	111	1	nogas	0.052	20.7	97	15.8	1	
Sn	118	1	nogas	0.110	32.1	2930	2.2	5	
Sb	121	1	nogas	0.362	6.0	3380	1.1	2.5	
Ba	137	1	nogas	0.070	60.5	690	18.2	2.5	
Tl	205	1	nogas	0.307	25.5	5351	24.7	1	
Pb	208	1	nogas	0.060	14.9	2040	7.5	2.5	
U	238	1	nogas	0.053	17.9	1417	17.9	2.5	
Si	28	1	nogas	-262.091	-70.7	1612645	2.7	5	
Na	23	2	He	43.369	7.0	97347	2.1	100	
Mg	24	2	He	8.628	7.1	5654	7.0	100	
Al	27	2	He	2.740	5.7	1327	2.9	5	
K	39	2	He	13.515	14.3	51314	2.2	100	
Ca	43	2	He	37.777	42.0	57	40.8	100	
Ca	44	2	He	27.803	6.4	1060	6.2	100	
V	51	2	He	-0.412	-11.8	2902	5.5	2.5	
Cr	52	2	He	-0.043	-28.4	3557	1.4	2.5	
Mn	55	2	He	0.458	18.6	2053	14.8	2.5	
Fe	56	2	He	4.949	6.4	29728	3.1	100	
Co	59	2	He	0.034	10.5	293	7.1	2.5	
Ni	60	2	He	0.099	36.6	303	20.1	2.5	
Cu	63	2	He	0.095	2.0	1153	1.8	2	
Zn	66	2	He	1.026	6.2	1130	4.9	2.5	
As	75	2	He	0.028	160.3	131	16.3	2.5	
Sb	121	2	He	0.388	6.9	1480	4.9	2.5	
Se	78	2	He	-0.075	-393.9	35	33.3	2	
Ti	47	2	He	0.160	66.8	27	57.3	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1563765	6.29	1488050	105.09	70	120	
In	115	1	nogas	1611518	4.48	1497103	107.64	70	120	
Li	6	1	nogas	990472	4.11	885638	111.84	70	120	
Bi	209	1	nogas	1344878	6.44	1210058	111.14	70	120	

Continuing Calibration Blank (CCB) Report

Ge	72	2	He	388227	2.21	395690	98.11	70	120	
In	115	2	He	533454	2.35	559997	95.26	70	120	

Sample Report

Sample Table

Sample Name	HS19121257-02
Data File Name	054SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T12:52:05-06:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 149161
ISTD Ref FileName	013CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	0.015	0.015	3.65	160	0.01	2000	
B	11	1	nogas	19.162	19.162	8.88	96939	0.02	2000	
Al	27	1	nogas	61.015	61.015	6.27	898423	0.01	2000	
Ti	47	1	nogas	3.146	3.146	5.14	4194	0.08	2000	
Cu	63	1	nogas	12.068	12.068	15.48	102889	0.01	2000	
Sr	88	1	nogas	2339.599	2339.599	7.07	44178591	0.01	2000	>LDR
Mo	95	1	nogas	0.642	0.642	4.06	2470	0.03	2000	
Ag	107	1	nogas	0.021	0.021	15.04	247	0.01	2000	
Cd	111	1	nogas	0.459	0.459	4.14	820	0.06	2000	
Sn	118	1	nogas	-0.263	-0.263	-2.28	863	-0.03	2000	
Sb	121	1	nogas	0.119	0.119	36.37	1543	0.01	2000	
Ba	137	1	nogas	26.321	26.321	8.35	71829	0.04	2000	
Tl	205	1	nogas	0.011	0.011	44.69	253	0.00	2000	
Pb	208	1	nogas	0.048	0.048	4.92	1500	0.00	2000	
U	238	1	nogas	1.668	1.668	5.72	37354	0.00	2000	
Si	28	1	nogas	162554.349	162554.349	3.33	116086288	0.14	2000	>LDR
Na	23	2	He	334076.856	334076.856	0.62	377237941	0.09	200000	>LDR
Mg	24	2	He	49951.152	49951.152	1.59	30698842	0.16	200000	
Al	27	2	He	89.109	89.109	57.76	26638	0.33	2000	
K	39	2	He	735.020	735.020	1.72	393279	0.19	200000	
Ca	43	2	He	106251.678	106251.678	1.21	152656	69.60	200000	
Ca	44	2	He	103356.401	103356.401	2.20	2485787	4.16	200000	
V	51	2	He	1.039	1.039	8.22	9079	0.01	2000	
Cr	52	2	He	2.898	2.898	5.31	17999	0.02	2000	
Mn	55	2	He	207.796	207.796	2.21	643894	0.03	2000	
Fe	56	2	He	139.743	139.743	1.45	580787	0.02	200000	
Co	59	2	He	0.436	0.436	3.89	3214	0.01	2000	
Ni	60	2	He	18.047	18.047	4.77	32289	0.06	2000	
Cu	63	2	He	1.201	1.201	3.46	6341	0.02	2000	
Zn	66	2	He	2.910	2.910	6.79	2720	0.11	2000	
As	75	2	He	0.233	0.233	8.76	248	0.09	2000	
Sb	121	2	He	0.173	0.173	28.33	797	0.02	2000	
Se	78	2	He	-0.065	-0.065	-331.59	36	-0.18	2000	
Ti	47	2	He	1.540	1.540	19.46	237	0.65	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1649335	3.11	1488050	110.84	70	120	

Sample Report

In	115	1	nogas	1587895	5.88	1497103	106.06	70	120	
Li	6	1	nogas	1121735	6.98	885638	126.66	70	120	ISTD Failed
Bi	209	1	nogas	1143664	7.64	1210058	94.51	70	120	
Ge	72	2	He	396677	2.50	395690	100.25	70	120	
In	115	2	He	536393	0.40	559997	95.79	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	056_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T12:58:13-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	013CALB.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
Be	9	1	nogas	84.404	1.394	540484	0.18	100	84.4	90	110	CCV Main CR1-2 Failed
B	11	1	nogas	426.189	0.997	1662852	0.74	500	85.2	90	110	CCV Main CR1-2 Failed
Al	27	1	nogas	107.095	1.207	1633626	0.89	100	107.1	90	110	
P	31	1	nogas	516.737	0.320	434165	0.51	500	103.3	90	110	
Ti	47	1	nogas	99.100	0.855	133405	0.81	100	99.1	90	110	
Cu	63	1	nogas	99.707	0.486	877830	0.34	100	99.7	90	110	
Sr	88	1	nogas	103.641	4.110	2068960	1.88	100	103.6	90	110	
Mo	95	1	nogas	100.031	3.259	400138	0.71	100	100.0	90	110	
Ag	107	1	nogas	96.905	3.690	937385	0.63	100	96.9	90	110	
Cd	111	1	nogas	101.048	2.088	189629	1.28	100	101.0	90	110	
Sn	118	1	nogas	98.183	2.051	565873	3.02	100	98.2	90	110	
Sb	121	1	nogas	91.731	0.968	800888	0.69	100	91.7	90	110	
Ba	137	1	nogas	97.835	4.241	280855	1.25	100	97.8	90	110	
Tl	205	1	nogas	96.845	3.470	1640049	2.51	100	96.8	90	110	
Pb	208	1	nogas	97.197	3.069	2221477	2.60	100	97.2	90	110	
U	238	1	nogas	91.840	5.768	2393764	6.44	100	91.8	90	110	
Li	7	1	nogas	88.626	1.457	1891577	1.17	100	88.6	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	4941.275	0.387	5618017	0.53	5000	98.8	90	110	
Tl	203	1	nogas	93.432	4.704	634123	4.02	100	93.4	90	110	
Na	23	2	He	10620.487	3.939	12063692	2.03	10000	106.2	90	110	
Mg	24	2	He	10320.336	1.786	6357861	0.88	10000	103.2	90	110	
Al	27	2	He	100.727	2.990	30318	1.04	100	100.7	90	110	
K	39	2	He	10025.091	2.476	4792955	1.08	10000	100.3	90	110	
Ca	43	2	He	10007.068	2.759	14412	1.85	10000	100.1	90	110	
Ca	44	2	He	9779.089	2.169	235959	0.14	10000	97.8	90	110	
V	51	2	He	100.608	1.764	429848	0.92	100	100.6	90	110	
Cr	52	2	He	101.179	2.189	499367	0.84	100	101.2	90	110	
Mn	55	2	He	98.239	2.501	305484	0.94	100	98.2	90	110	
Fe	56	2	He	10111.743	1.821	41395544	1.07	10000	101.1	90	110	
Co	59	2	He	98.636	4.177	715837	1.88	100	98.6	90	110	
Ni	60	2	He	103.503	4.413	184997	2.23	100	103.5	90	110	
Cu	63	2	He	105.469	1.504	494527	1.07	100	105.5	90	110	
Zn	66	2	He	101.571	1.335	84993	1.08	100	101.6	90	110	
As	75	2	He	100.144	1.207	55576	1.33	100	100.1	90	110	
Sb	121	2	He	98.270	1.673	327022	1.13	100	98.3	90	110	
Se	78	2	He	93.417	5.318	4046	3.10	100	93.4	90	110	
Ti	47	2	He	97.524	0.784	14779	1.78	100	97.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1727467	0.31	1488050	116.09	70	120	
In	115	1	nogas	1674774	3.28	1497103	111.87	70	120	
Li	6	1	nogas	1060742	1.49	885638	119.77	70	120	
Bi	209	1	nogas	1327475	1.42	1210058	109.70	70	120	
Ge	72	2	He	397607	2.26	395690	100.48	70	120	
In	115	2	He	539395	0.92	559997	96.32	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	057_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T13:00:25-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	013CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.025	15.1	215	11.6	1	
B	11	1	nogas	10.879	7.2	60963	5.5	10	CCB Main CR1 Failed
Al	27	1	nogas	2.607	6.6	63976	2.3	5	
P	31	1	nogas	4.533	19.9	52460	1.6	10	
Ti	47	1	nogas	0.116	13.2	310	6.5	2.5	
Cu	63	1	nogas	1.016	3.5	10747	0.5	2	
Sr	88	1	nogas	0.308	11.1	7088	9.6	2.5	
Mo	95	1	nogas	0.173	9.9	740	12.0	2.5	
Ag	107	1	nogas	0.034	14.7	397	11.4	2.5	
Cd	111	1	nogas	0.045	44.0	90	40.1	1	
Sn	118	1	nogas	0.064	73.7	2840	7.1	5	
Sb	121	1	nogas	0.150	8.3	1847	7.1	2.5	
Ba	137	1	nogas	0.055	57.3	687	15.6	2.5	
Tl	205	1	nogas	0.270	32.1	4751	33.5	1	
Pb	208	1	nogas	0.044	24.6	1667	16.5	2.5	
U	238	1	nogas	0.037	16.0	1010	17.5	2.5	
Si	28	1	nogas	-245.854	-22.2	1754822	3.2	5	
Na	23	2	He	144.769	0.6	217711	1.6	100	CCB Main CR1 Failed
Mg	24	2	He	10.751	7.3	7208	7.6	100	
Al	27	2	He	2.397	18.5	1277	10.7	5	
K	39	2	He	10.409	6.8	51849	0.6	100	
Ca	43	2	He	33.986	82.3	53	78.1	100	
Ca	44	2	He	30.582	24.2	1170	16.2	100	
V	51	2	He	-0.503	-8.9	2629	8.5	2.5	
Cr	52	2	He	-0.092	-8.6	3454	1.9	2.5	
Mn	55	2	He	0.564	12.6	2464	10.2	2.5	
Fe	56	2	He	7.549	32.9	41788	25.9	100	
Co	59	2	He	0.031	12.1	280	9.4	2.5	
Ni	60	2	He	0.146	23.6	400	15.2	2.5	
Cu	63	2	He	0.095	39.9	1200	15.2	2	
Zn	66	2	He	1.158	4.3	1287	4.3	2.5	
As	75	2	He	-0.026	-31.1	107	3.1	2.5	
Sb	121	2	He	0.179	10.6	837	8.8	2.5	
Se	78	2	He	-0.292	-47.2	27	21.7	2	
Ti	47	2	He	0.021	176.8	7	86.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1685305	2.42	1488050	113.26	70	120	
In	115	1	nogas	1708502	2.76	1497103	114.12	70	120	
Li	6	1	nogas	1077614	0.79	885638	121.68	70	120	ISTD Failed
Bi	209	1	nogas	1342518	3.21	1210058	110.95	70	120	

Continuing Calibration Blank (CCB) Report

Ge	72	2	He	403550	1.09	395690	101.99	70	120	
In	115	2	He	543523	0.86	559997	97.06	70	120	

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	077CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T13:55:23-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	52	10.81
B	11	1	nogas	49340	0.00
Al	27	1	nogas	25945	0.02
P	31	1	nogas	51928	0.00
Ti	47	1	nogas	150	16.03
Cu	63	1	nogas	2817	0.25
Sr	88	1	nogas	817	1.21
Mo	95	1	nogas	113	32.41
Ag	107	1	nogas	63	38.08
Cd	111	1	nogas	17	749.40
Sn	118	1	nogas	2260	0.27
Sb	121	1	nogas	1653	0.52
Ba	137	1	nogas	503	3.17
Tl	205	1	nogas	257	10.11
Pb	208	1	nogas	537	1.12
Li	7	1	nogas	83993	0.00
Si	28	1	nogas	1772209	0.00
Na	23	2	He	68329	0.00
Mg	24	2	He	733	0.84
Al	27	2	He	623	4.83
K	39	2	He	45556	0.00
Ca	43	2	He	23	462.23
Ca	44	2	He	320	1.69
V	51	2	He	3655	0.07
Cr	52	2	He	3440	0.08
Mn	55	2	He	700	3.36
Fe	56	2	He	12468	0.02
Co	59	2	He	90	56.58
Ni	60	2	He	157	4.70
Cu	63	2	He	730	1.35
Zn	66	2	He	313	1.56
As	75	2	He	93	17.54
Sb	121	2	He	660	1.79
Se	78	2	He	35	53.50

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Ge	72	1	nogas	1744975	1.55

Calibration Blank Report

In	115	1	nogas	1707883	0.88
Li	6	1	nogas	1102270	2.18
Bi	209	1	nogas	1372321	0.31
Ge	72	2	He	398222	1.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
In	115	2	He	546301	1.51

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	078CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T13:57:37-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	077CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	10503	0.02
B	11	1	nogas	76723	0.00
Al	27	1	nogas	66308	0.04
P	31	1	nogas	58551	0.00
Ti	47	1	nogas	2870	0.18
Cu	63	1	nogas	20445	0.01
Sr	88	1	nogas	40543	0.01
Mo	95	1	nogas	8139	0.04
Ag	107	1	nogas	18987	0.02
Cd	111	1	nogas	3840	0.25
Sn	118	1	nogas	13262	0.04
Sb	121	1	nogas	17699	0.02
Ba	137	1	nogas	6001	0.04
Tl	205	1	nogas	29761	0.01
Pb	208	1	nogas	43327	0.00
Si	28	1	nogas	1835157	0.00
Na	23	2	He	296803	0.00
Mg	24	2	He	125281	0.00
Al	27	2	He	1100	0.79
K	39	2	He	136969	0.00
Ca	43	2	He	340	3.12
Ca	44	2	He	4827	0.12
V	51	2	He	12098	0.01
Cr	52	2	He	13418	0.02
Mn	55	2	He	6908	0.07
Fe	56	2	He	833685	0.00
Co	59	2	He	14673	0.02
Ni	60	2	He	4111	0.23
Cu	63	2	He	10453	0.01
Zn	66	2	He	2307	0.07
As	75	2	He	1192	0.53
Sb	121	2	He	7052	0.03
Se	78	2	He	117	0.84

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag

Calibration Standard Report

Ge	72	1	nogas	1743680	2.24	1744975	99.93	70	120	
In	115	1	nogas	1752869	0.92	1707883	102.63	70	120	
Li	6	1	nogas	1107099	3.39	1102270	100.44	70	120	
Bi	209	1	nogas	1400494	1.93	1372321	102.05	70	120	
Ge	72	2	He	400973	2.79	398222	100.69	70	120	
In	115	2	He	550875	0.90	546301	100.84	70	120	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	079CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T13:59:52-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	077CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	26635	0.00
B	11	1	nogas	122999	0.00
Al	27	1	nogas	100364	0.00
P	31	1	nogas	70254	0.00
Ti	47	1	nogas	6858	0.03
Cu	63	1	nogas	45871	0.01
Sr	88	1	nogas	99263	0.00
Mo	95	1	nogas	19651	0.02
Ag	107	1	nogas	46736	0.00
Cd	111	1	nogas	9369	0.07
Sn	118	1	nogas	30197	0.01
Sb	121	1	nogas	42044	0.00
Ba	137	1	nogas	14310	0.04
Tl	205	1	nogas	74503	0.00
Pb	208	1	nogas	107595	0.00
Si	28	1	nogas	1921229	0.00
Na	23	2	He	637412	0.00
Mg	24	2	He	307541	0.00
Al	27	2	He	2157	1.38
K	39	2	He	267097	0.00
Ca	43	2	He	677	3.88
Ca	44	2	He	11257	0.00
V	51	2	He	24123	0.00
Cr	52	2	He	27427	0.00
Mn	55	2	He	15580	0.03
Fe	56	2	He	2088709	0.00
Co	59	2	He	35211	0.01
Ni	60	2	He	9586	0.04
Cu	63	2	He	24393	0.01
Zn	66	2	He	4807	0.07
As	75	2	He	2719	0.10
Sb	121	2	He	16428	0.01
Se	78	2	He	225	4.24

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag

Calibration Standard Report

Ge	72	1	nogas	1798700	3.94	1744975	103.08	70	120	
In	115	1	nogas	1754491	6.08	1707883	102.73	70	120	
Li	6	1	nogas	1097503	3.61	1102270	99.57	70	120	
Bi	209	1	nogas	1400061	5.65	1372321	102.02	70	120	
Ge	72	2	He	396272	1.16	398222	99.51	70	120	
In	115	2	He	545993	2.15	546301	99.94	70	120	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	080CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T14:02:06-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	077CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	54169	0.00
B	11	1	nogas	202386	0.00
Al	27	1	nogas	183256	0.00
P	31	1	nogas	91658	0.00
Ti	47	1	nogas	13201	0.01
Cu	63	1	nogas	90757	0.00
Sr	88	1	nogas	201528	0.00
Mo	95	1	nogas	40373	0.01
Ag	107	1	nogas	98984	0.00
Cd	111	1	nogas	19364	0.02
Sn	118	1	nogas	59204	0.00
Sb	121	1	nogas	83141	0.00
Ba	137	1	nogas	28254	0.01
Tl	205	1	nogas	151501	0.00
Pb	208	1	nogas	213441	0.00
Si	28	1	nogas	2141445	0.00
Na	23	2	He	1299620	0.00
Mg	24	2	He	620672	0.00
Al	27	2	He	3397	0.25
K	39	2	He	502850	0.00
Ca	43	2	He	1327	0.87
Ca	44	2	He	23612	0.01
V	51	2	He	46196	0.00
Cr	52	2	He	54340	0.00
Mn	55	2	He	32646	0.01
Fe	56	2	He	4224816	0.00
Co	59	2	He	73975	0.00
Ni	60	2	He	18650	0.02
Cu	63	2	He	50634	0.00
Zn	66	2	He	8806	0.02
As	75	2	He	5605	0.03
Sb	121	2	He	33519	0.00
Se	78	2	He	427	1.99

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag

Calibration Standard Report

Ge	72	1	nogas	1770437	0.98	1744975	101.46	70	120	
In	115	1	nogas	1749172	0.92	1707883	102.42	70	120	
Li	6	1	nogas	1096063	1.22	1102270	99.44	70	120	
Bi	209	1	nogas	1390516	3.37	1372321	101.33	70	120	
Ge	72	2	He	395546	0.34	398222	99.33	70	120	
In	115	2	He	543500	0.70	546301	99.49	70	120	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	081CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T14:04:20-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	077CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	538109	0.00
B	11	1	nogas	1669530	0.00
Al	27	1	nogas	1615552	0.00
P	31	1	nogas	427056	0.00
Ti	47	1	nogas	133638	0.00
Cu	63	1	nogas	875220	0.00
Sr	88	1	nogas	2066978	0.00
Mo	95	1	nogas	398442	0.00
Ag	107	1	nogas	924427	0.00
Cd	111	1	nogas	189367	0.00
Sn	118	1	nogas	575533	0.00
Sb	121	1	nogas	822194	0.00
Ba	137	1	nogas	284856	0.00
Tl	205	1	nogas	1628590	0.00
Pb	208	1	nogas	2127538	0.00
Si	28	1	nogas	5523757	0.00
Na	23	2	He	11510297	0.00
Mg	24	2	He	6216339	0.00
Al	27	2	He	29363	0.01
K	39	2	He	4580529	0.00
Ca	43	2	He	13628	0.02
Ca	44	2	He	230338	0.00
V	51	2	He	413656	0.00
Cr	52	2	He	480291	0.00
Mn	55	2	He	296087	0.00
Fe	56	2	He	40398414	0.00
Co	59	2	He	693739	0.00
Ni	60	2	He	179329	0.00
Cu	63	2	He	479971	0.00
Zn	66	2	He	82800	0.00
As	75	2	He	53703	0.00
Sb	121	2	He	320899	0.00
Se	78	2	He	3930	0.02

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag

Calibration Standard Report

Ge	72	1	nogas	1722210	2.12	1744975	98.70	70	120	
In	115	1	nogas	1637830	1.53	1707883	95.90	70	120	
Li	6	1	nogas	1018260	2.69	1102270	92.38	70	120	
Bi	209	1	nogas	1326695	5.16	1372321	96.68	70	120	
Ge	72	2	He	385467	0.76	398222	96.80	70	120	
In	115	2	He	532893	0.19	546301	97.55	70	120	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	082CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T14:06:32-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	077CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	1024684	0.00
B	11	1	nogas	3168613	0.00
Al	27	1	nogas	2897300	0.00
P	31	1	nogas	760296	0.00
Ti	47	1	nogas	256071	0.00
Cu	63	1	nogas	1619750	0.00
Sr	88	1	nogas	3941087	0.00
Mo	95	1	nogas	780149	0.00
Ag	107	1	nogas	1892686	0.00
Cd	111	1	nogas	359223	0.00
Sn	118	1	nogas	1120280	0.00
Sb	121	1	nogas	1676124	0.00
Ba	137	1	nogas	539091	0.00
Tl	205	1	nogas	3162626	0.00
Pb	208	1	nogas	4287756	0.00
Si	28	1	nogas	8720365	0.00
Na	23	2	He	21753878	0.00
Mg	24	2	He	11611941	0.00
Al	27	2	He	52386	0.00
K	39	2	He	8761477	0.00
Ca	43	2	He	25958	0.01
Ca	44	2	He	435954	0.00
V	51	2	He	804392	0.00
Cr	52	2	He	931582	0.00
Mn	55	2	He	563394	0.00
Fe	56	2	He	76978454	0.00
Co	59	2	He	1407498	0.00
Ni	60	2	He	340375	0.00
Cu	63	2	He	899508	0.00
Zn	66	2	He	156285	0.00
As	75	2	He	102397	0.00
Sb	121	2	He	607768	0.00
Se	78	2	He	7523	0.01

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag

Calibration Standard Report

Ge	72	1	nogas	1655675	5.79	1744975	94.88	70	120	
In	115	1	nogas	1626044	5.36	1707883	95.21	70	120	
Li	6	1	nogas	987921	1.56	1102270	89.63	70	120	
Bi	209	1	nogas	1359095	8.98	1372321	99.04	70	120	
Ge	72	2	He	377362	0.44	398222	94.76	70	120	
In	115	2	He	516285	1.13	546301	94.51	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICCB
Data File Name	087_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T14:23:34-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	077CALB.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
Be	9	1	nogas	0.020	17.7	155	14.1	1	
B	11	1	nogas	6.269	37.1	66193	3.0	10	
Al	27	1	nogas	1.141	10.9	40113	1.5	5	
P	31	1	nogas	0.548	742.3	48299	0.7	10	
Ti	47	1	nogas	0.009	160.9	150	13.3	2.5	
Cu	63	1	nogas	0.043	71.7	2940	5.3	1	
Sr	88	1	nogas	0.055	39.4	1707	15.1	2.5	
Mo	95	1	nogas	0.049	24.9	277	11.6	2.5	
Ag	107	1	nogas	0.016	65.7	190	45.6	2.5	
Cd	111	1	nogas	0.012	71.6	33	34.6	1	
Sn	118	1	nogas	0.081	75.9	2387	8.2	5	
Sb	121	1	nogas	-0.002	-219.3	1517	4.4	2.5	
Ba	137	1	nogas	-0.006	-549.8	423	9.8	2.5	
Tl	205	1	nogas	0.058	22.2	1060	4.9	1	
Pb	208	1	nogas	0.020	34.8	860	3.1	2.5	
U	238	1	nogas	0.013	19.5	333	8.7	2.5	
Si	28	1	nogas	132.059	176.7	1724565	4.8	5	ICB Main CR1 Failed
Na	23	2	He	0.744	29.9	67854	0.8	100	
Mg	24	2	He	1.551	11.1	1660	6.5	100	
Al	27	2	He	0.609	37.2	777	7.1	5	
K	39	2	He	11.329	5.6	49799	1.1	100	
Ca	43	2	He	5.492	361.7	30	88.2	100	
Ca	44	2	He	15.426	31.2	663	15.7	100	
V	51	2	He	-0.279	-5.7	2428	3.5	2.5	
Cr	52	2	He	-0.068	-27.0	3047	3.8	2.5	
Mn	55	2	He	0.516	9.6	2197	5.9	2.5	
Fe	56	2	He	1.170	7.2	16908	2.1	100	
Co	59	2	He	0.009	41.1	150	17.6	2.5	
Ni	60	2	He	0.134	12.2	390	6.8	2.5	
Cu	63	2	He	0.028	84.5	847	13.3	1	
Zn	66	2	He	1.016	14.5	1133	10.3	2.5	
As	75	2	He	-0.030	-151.8	76	31.9	2.5	
Sb	121	2	He	-0.001	-2044.5	643	11.2	2.5	
Se	78	2	He	-0.120	-167.6	29	27.6	1	
Ti	47	2	He	-0.023	0.0	0	#DIV/0!	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

Ge	72	1	nogas	1613140	5.57	1744975	92.44	70	120	
In	115	1	nogas	1500932	9.19	1707883	87.88	70	120	
Li	6	1	nogas	1030361	8.06	1102270	93.48	70	120	
Bi	209	1	nogas	1235352	12.59	1372321	90.02	70	120	
Ge	72	2	He	390494	0.88	398222	98.06	70	120	
In	115	2	He	546239	1.80	546301	99.99	70	120	

Sample Report

Sample Table

Sample Name	HS19121036-01SD
Data File Name	092SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T14:36:51-06:00
Sample Type	Sample
Dilution	100
Comment	DOD TW 149161
ISTD Ref FileName	077CALB.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
Be	9	1	nogas	-0.003	-0.271	-149.56	37	-0.01	2000	
B	11	1	nogas	-1.105	-110.492	-38.89	45793	0.00	2000	
Al	27	1	nogas	3.231	323.116	6.60	74708	0.00	2000	
Ti	47	1	nogas	0.027	2.665	113.05	183	0.01	2000	
Cu	63	1	nogas	0.711	71.052	7.82	8816	0.01	2000	
Sr	88	1	nogas	41.415	4141.473	2.84	895929	0.00	2000	
Mo	95	1	nogas	-0.003	-0.316	-266.12	103	0.00	2000	
Ag	107	1	nogas	-0.002	-0.182	-194.73	47	0.00	2000	
Cd	111	1	nogas	0.001	0.104	1242.23	20	0.01	2000	
Sn	118	1	nogas	-0.145	-14.536	-14.17	1453	-0.01	2000	
Sb	121	1	nogas	0.008	0.816	7.85	1710	0.00	2000	
Ba	137	1	nogas	10.342	1034.171	5.67	31092	0.03	2000	
Tl	205	1	nogas	-0.004	-0.423	-78.67	193	0.00	2000	
Pb	208	1	nogas	-0.001	-0.140	-141.69	520	0.00	2000	
U	238	1	nogas	0.013	1.323	8.83	387	0.00	2000	
Si	28	1	nogas	1637.172	163717.186	21.26	2957572	0.06	2000	
Na	23	2	He	2738.175	273817.473	2.12	3374184	0.08	200000	
Mg	24	2	He	832.202	83220.201	0.19	539661	0.15	200000	
Al	27	2	He	3.098	309.796	19.92	1553	0.20	2000	
K	39	2	He	21.690	2169.028	9.74	58174	0.04	200000	
Ca	43	2	He	2379.389	237938.858	7.34	3450	68.96	200000	
Ca	44	2	He	2459.983	245998.305	1.58	59936	4.10	200000	
V	51	2	He	0.251	25.116	19.42	4937	0.01	2000	
Cr	52	2	He	-0.020	-2.041	-108.73	3497	0.00	2000	
Mn	55	2	He	1.846	184.569	3.40	6501	0.03	2000	
Fe	56	2	He	3.886	388.650	6.14	29671	0.01	200000	
Co	59	2	He	0.003	0.295	289.26	117	0.00	2000	
Ni	60	2	He	0.216	21.645	13.20	573	0.04	2000	
Cu	63	2	He	0.420	41.998	11.44	2867	0.01	2000	
Zn	66	2	He	0.336	33.629	32.79	620	0.05	2000	
As	75	2	He	0.065	6.472	48.18	134	0.05	2000	
Sb	121	2	He	-0.001	-0.139	-801.30	687	0.00	2000	
Se	78	2	He	-0.327	-32.701	-9.10	23	-1.44	2000	
Ti	47	2	He	0.043	4.273	153.59	10	0.43	2000	

QC ISTD Table

Sample Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1728716	6.03	1744975	99.07	70	120	
In	115	1	nogas	1767600	3.51	1707883	103.50	70	120	
Li	6	1	nogas	1109967	2.68	1102270	100.70	70	120	
Bi	209	1	nogas	1408469	1.83	1372321	102.63	70	120	
Ge	72	2	He	416878	0.78	398222	104.68	70	120	
In	115	2	He	567822	0.09	546301	103.94	70	120	

Sample Report

Sample Table

Sample Name	HS19121036-01PDS
Data File Name	093SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T14:39:05-06:00
Sample Type	Sample
Dilution	20
Comment	DOD TW 149161
ISTD Ref FileName	077CALB.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
Be	9	1	nogas	112.805	2256.105	5.47	612824	0.02	2000	
B	11	1	nogas	-0.866	-17.316	-70.45	43882	0.00	2000	
Al	27	1	nogas	128.818	2576.360	1.49	1887020	0.01	2000	
Ti	47	1	nogas	119.592	2391.845	4.36	152498	0.08	2000	
Cu	63	1	nogas	117.409	2348.184	2.19	951902	0.01	2000	
Sr	88	1	nogas	170.673	3413.460	2.99	3401287	0.01	2000	
Mo	95	1	nogas	115.349	2306.978	5.02	452288	0.03	2000	
Ag	107	1	nogas	104.380	2087.601	4.26	984310	0.01	2000	
Cd	111	1	nogas	120.340	2406.806	4.27	218685	0.06	2000	
Sn	118	1	nogas	0.003	0.063	6795.71	2193	0.00	2000	
Sb	121	1	nogas	107.585	2151.710	1.69	888689	0.01	2000	
Ba	137	1	nogas	159.198	3183.950	4.92	434325	0.04	2000	
Tl	205	1	nogas	116.907	2338.132	6.24	1746418	0.01	2000	
Pb	208	1	nogas	121.375	2427.495	5.30	2441982	0.00	2000	
U	238	1	nogas	0.033	0.659	3.31	787	0.00	2000	
Si	28	1	nogas	5165.367	103307.344	1.90	5307483	0.10	2000	>LDR
Na	23	2	He	22115.934	442318.676	1.05	24439558	0.09	200000	
Mg	24	2	He	15015.235	300304.699	1.06	8885319	0.17	200000	
Al	27	2	He	125.132	2502.633	2.21	33881	0.37	2000	
K	39	2	He	11701.696	234033.919	1.40	5212109	0.22	200000	
Ca	43	2	He	21257.190	425143.796	2.16	27998	75.92	200000	
Ca	44	2	He	21175.360	423507.203	1.36	469095	4.51	200000	
V	51	2	He	117.705	2354.105	1.98	479563	0.02	2000	
Cr	52	2	He	117.103	2342.053	1.71	552683	0.02	2000	
Mn	55	2	He	124.908	2498.156	2.27	357459	0.03	2000	
Fe	56	2	He	11884.476	237689.513	1.71	46437263	0.03	200000	
Co	59	2	He	111.460	2229.192	1.61	786310	0.01	2000	
Ni	60	2	He	118.500	2369.996	0.76	204934	0.06	2000	
Cu	63	2	He	116.971	2339.416	0.32	536116	0.02	2000	
Zn	66	2	He	119.384	2387.679	1.10	94981	0.13	2000	
As	75	2	He	116.559	2331.186	2.07	60591	0.19	2000	
Sb	121	2	He	110.485	2209.706	0.95	341452	0.03	2000	
Se	78	2	He	117.261	2345.217	4.48	4482	2.62	2000	
Ti	47	2	He	117.595	2351.896	3.80	16231	0.72	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1644529	0.67	1744975	94.24	70	120	

Sample Report

In	115	1	nogas	1629591	3.62	1707883	95.42	70	120	
Li	6	1	nogas	1045569	5.57	1102270	94.86	70	120	
Bi	209	1	nogas	1270521	5.69	1372321	92.58	70	120	
Ge	72	2	He	380947	0.63	398222	95.66	70	120	
In	115	2	He	526523	1.18	546301	96.38	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	098_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T14:50:11-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	077CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	105.546	0.496	562915	1.17	100	105.5	90	110	
B	11	1	nogas	523.614	1.148	1744834	0.63	500	104.7	90	110	
Al	27	1	nogas	108.418	3.902	1654023	2.26	100	108.4	90	110	
P	31	1	nogas	538.504	2.357	447967	0.33	500	107.7	90	110	
Ti	47	1	nogas	105.467	1.668	139790	0.60	100	105.5	90	110	
Cu	63	1	nogas	104.816	1.111	883496	1.26	100	104.8	90	110	
Sr	88	1	nogas	104.584	3.270	2175883	1.98	100	104.6	90	110	
Mo	95	1	nogas	104.574	2.686	428324	2.59	100	104.6	90	110	
Ag	107	1	nogas	101.470	1.836	999450	2.52	100	101.5	90	110	
Cd	111	1	nogas	106.744	0.679	202605	1.49	100	106.7	90	110	
Sn	118	1	nogas	101.232	1.543	596295	0.31	100	101.2	90	110	
Sb	121	1	nogas	100.066	1.579	859092	0.57	100	100.1	90	110	
Ba	137	1	nogas	103.803	2.429	295956	1.61	100	103.8	90	110	
Tl	205	1	nogas	107.110	5.208	1739024	2.66	100	107.1	90	110	
Pb	208	1	nogas	107.761	3.034	2356440	0.72	100	107.8	90	110	
U	238	1	nogas	108.126	3.921	2599387	1.35	100	108.1	90	110	
Li	7	1	nogas	105.877	1.951	2018808	2.50	100	105.9	90	110	
Si	28	1	nogas	5282.852	3.592	5600695	1.08	5000	105.7	90	110	
Tl	203	1	nogas	99.766	4.678	677551	2.11	100	99.8	90	110	
Na	23	2	He	10610.408	2.081	12080001	0.87	10000	106.1	90	110	
Mg	24	2	He	10483.759	3.228	6372897	2.14	10000	104.8	90	110	
Al	27	2	He	108.126	2.880	30158	1.39	100	108.1	90	110	
K	39	2	He	10366.654	1.735	4748858	0.78	10000	103.7	90	110	
Ca	43	2	He	10838.911	2.705	14679	2.72	10000	108.4	90	110	
Ca	44	2	He	10345.999	0.907	235662	1.97	10000	103.5	90	110	
V	51	2	He	106.459	1.274	445976	0.39	100	106.5	90	110	
Cr	52	2	He	106.798	3.257	518068	1.94	100	106.8	90	110	
Mn	55	2	He	107.370	2.348	315756	0.92	100	107.4	90	110	
Fe	56	2	He	10427.543	1.785	41860476	0.65	10000	104.3	90	110	
Co	59	2	He	100.448	0.646	728103	1.12	100	100.4	90	110	
Ni	60	2	He	105.905	1.802	188190	1.89	100	105.9	90	110	
Cu	63	2	He	105.596	1.766	497279	1.48	100	105.6	90	110	
Zn	66	2	He	106.770	0.404	87307	1.68	100	106.8	90	110	
As	75	2	He	104.993	0.252	56091	1.62	100	105.0	90	110	
Sb	121	2	He	105.154	1.724	333868	0.56	100	105.2	90	110	
Se	78	2	He	105.920	4.165	4162	3.37	100	105.9	90	110	
Ti	47	2	He	101.611	2.015	14412	2.60	100	101.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1709168	1.74	1744975	97.95	70	120	
In	115	1	nogas	1700297	1.31	1707883	99.56	70	120	
Li	6	1	nogas	1024359	0.73	1102270	92.93	70	120	
Bi	209	1	nogas	1378884	2.77	1372321	100.48	70	120	
Ge	72	2	He	391405	1.49	398222	98.29	70	120	
In	115	2	He	538021	0.69	546301	98.48	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	099_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T14:52:22-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	077CALB.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
Be	9	1	nogas	0.040	17.7	278	9.9	1	
B	11	1	nogas	7.268	24.5	74634	4.6	10	
Al	27	1	nogas	2.726	6.8	69426	1.4	5	
P	31	1	nogas	-0.111	-2658.1	53115	0.3	10	
Ti	47	1	nogas	0.058	61.5	233	19.3	2.5	
Cu	63	1	nogas	0.181	14.8	4477	4.8	2	
Sr	88	1	nogas	0.107	14.1	3180	7.4	2.5	
Mo	95	1	nogas	0.167	9.7	837	8.5	2.5	
Ag	107	1	nogas	0.033	12.5	410	13.6	2.5	
Cd	111	1	nogas	0.026	58.8	70	42.9	1	
Sn	118	1	nogas	0.130	20.8	3164	2.9	5	
Sb	121	1	nogas	0.151	20.4	3040	5.2	2.5	
Ba	137	1	nogas	0.045	52.3	660	9.9	2.5	
Tl	205	1	nogas	0.357	20.5	6371	20.7	1	
Pb	208	1	nogas	0.061	19.6	1963	15.0	2.5	
U	238	1	nogas	0.047	21.7	1247	21.3	2.5	
Si	28	1	nogas	-134.268	-77.8	1712499	0.6	5	
Na	23	2	He	14.624	13.8	87651	4.5	100	
Mg	24	2	He	3.471	15.7	2960	10.7	100	
Al	27	2	He	2.275	22.1	1293	13.2	5	
K	39	2	He	10.782	23.3	51969	2.1	100	
Ca	43	2	He	35.404	102.0	73	67.3	100	
Ca	44	2	He	18.258	16.6	763	8.7	100	
V	51	2	He	-0.388	-8.0	2069	5.8	2.5	
Cr	52	2	He	-0.004	-509.5	3520	5.1	2.5	
Mn	55	2	He	0.358	13.2	1817	6.3	2.5	
Fe	56	2	He	3.880	4.1	29123	3.6	100	
Co	59	2	He	0.016	34.2	217	20.8	2.5	
Ni	60	2	He	0.115	53.5	373	29.6	2.5	
Cu	63	2	He	0.040	85.6	950	19.5	2	
Zn	66	2	He	1.112	6.2	1270	2.8	2.5	
As	75	2	He	0.039	122.9	118	24.4	2.5	
Sb	121	2	He	0.186	18.8	1297	11.1	2.5	
Se	78	2	He	-0.037	-877.9	34	36.7	2	
Ti	47	2	He	0.066	55.5	13	43.3	2.5	

Continuing Calibration Blank (CCB) Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1789444	4.56	1744975	102.55	70	120	
In	115	1	nogas	1786028	3.17	1707883	104.58	70	120	
Li	6	1	nogas	1103403	4.70	1102270	100.10	70	120	
Bi	209	1	nogas	1449519	4.74	1372321	105.63	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	409612	2.15	398222	102.86	70	120	
In	115	2	He	558677	1.16	546301	102.27	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	110_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T15:16:54-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	077CALB.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
Be	9	1	nogas	107.918	0.830	555408	0.89	100	107.9	90	110	
B	11	1	nogas	543.651	3.141	1746322	2.23	500	108.7	90	110	
Al	27	1	nogas	110.738	1.833	1662462	2.37	100	110.7	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	525.086	0.945	431105	0.56	500	105.0	90	110	
Ti	47	1	nogas	104.682	3.120	136520	2.45	100	104.7	90	110	
Cu	63	1	nogas	105.405	2.119	874115	1.35	100	105.4	90	110	
Sr	88	1	nogas	101.416	3.475	2099692	1.95	100	101.4	90	110	
Mo	95	1	nogas	100.858	3.767	410977	2.02	100	100.9	90	110	
Ag	107	1	nogas	97.169	3.667	952058	1.96	100	97.2	90	110	
Cd	111	1	nogas	105.177	2.546	198627	1.53	100	105.2	90	110	
Sn	118	1	nogas	101.727	1.131	596403	1.96	100	101.7	90	110	
Sb	121	1	nogas	99.511	1.988	840632	1.22	100	99.5	90	110	
Ba	137	1	nogas	102.467	1.317	290779	1.51	100	102.5	90	110	
Tl	205	1	nogas	102.439	4.230	1660143	0.93	100	102.4	90	110	
Pb	208	1	nogas	106.017	2.043	2314350	1.57	100	106.0	90	110	
U	238	1	nogas	106.393	2.753	2553692	2.20	100	106.4	90	110	
Li	7	1	nogas	105.240	2.397	1936829	2.58	100	105.2	90	110	
Si	28	1	nogas	5260.671	0.811	5495811	0.25	5000	105.2	90	110	
Tl	203	1	nogas	95.488	3.775	647347	1.05	100	95.5	90	110	
Na	23	2	He	10370.634	1.403	11899381	1.13	10000	103.7	90	110	
Mg	24	2	He	10213.379	1.116	6256941	1.12	10000	102.1	90	110	
Al	27	2	He	111.069	0.753	31203	0.36	100	111.1	90	110	CCV Main CR1-2 Failed
K	39	2	He	10302.358	1.152	4755945	1.23	10000	103.0	90	110	
Ca	43	2	He	10514.536	2.124	14349	2.20	10000	105.1	90	110	
Ca	44	2	He	10476.961	0.605	240435	1.00	10000	104.8	90	110	
V	51	2	He	104.917	0.647	442923	0.35	100	104.9	90	110	
Cr	52	2	He	105.774	2.688	517111	2.29	100	105.8	90	110	
Mn	55	2	He	106.548	1.638	315762	1.24	100	106.5	90	110	
Fe	56	2	He	10333.183	0.140	41800989	0.41	10000	103.3	90	110	
Co	59	2	He	99.128	0.748	723983	0.89	100	99.1	90	110	
Ni	60	2	He	104.421	1.247	186958	0.95	100	104.4	90	110	
Cu	63	2	He	102.949	2.066	488551	2.37	100	102.9	90	110	
Zn	66	2	He	107.177	2.490	88299	2.57	100	107.2	90	110	
As	75	2	He	104.521	0.695	56259	0.63	100	104.5	90	110	
Sb	121	2	He	105.456	2.747	337403	2.81	100	105.5	90	110	
Se	78	2	He	106.196	1.571	4206	1.80	100	106.2	90	110	
Ti	47	2	He	103.027	2.287	14723	2.18	100	103.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1681632	0.78	1744975	96.37	70	120	
In	115	1	nogas	1692162	1.79	1707883	99.08	70	120	
Li	6	1	nogas	988535	0.94	1102270	89.68	70	120	
Bi	209	1	nogas	1376343	3.22	1372321	100.29	70	120	
Ge	72	2	He	394351	0.41	398222	99.03	70	120	
In	115	2	He	545002	0.86	546301	99.76	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	111_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T15:19:06-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	077CALB.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
Be	9	1	nogas	0.026	33.7	190	25.1	1	
B	11	1	nogas	11.043	7.0	82925	3.1	10	CCB Main CR1 Failed
Al	27	1	nogas	2.467	11.1	62365	6.2	5	
P	31	1	nogas	0.182	816.5	50915	2.4	10	
Ti	47	1	nogas	0.028	188.7	183	38.3	2.5	
Cu	63	1	nogas	0.431	5.7	6365	3.1	2	
Sr	88	1	nogas	0.976	3.8	21583	4.0	2.5	
Mo	95	1	nogas	0.186	13.2	893	12.3	2.5	
Ag	107	1	nogas	0.029	23.0	360	18.2	2.5	
Cd	111	1	nogas	0.027	37.0	70	28.6	1	
Sn	118	1	nogas	0.060	46.5	2660	6.5	5	
Sb	121	1	nogas	-0.039	-12.4	1287	2.7	2.5	
Ba	137	1	nogas	0.290	16.4	1357	10.9	2.5	
Tl	205	1	nogas	0.331	44.6	5675	44.3	1	
Pb	208	1	nogas	0.066	10.2	1987	8.5	2.5	
U	238	1	nogas	0.055	25.2	1390	25.9	2.5	
Si	28	1	nogas	-40.604	-98.6	1703270	2.1	5	
Na	23	2	He	135.443	1.9	224522	1.9	100	CCB Main CR1 Failed
Mg	24	2	He	17.665	2.7	11667	2.6	100	
Al	27	2	He	2.371	35.8	1283	18.5	5	
K	39	2	He	13.659	3.2	51888	0.4	100	
Ca	43	2	He	111.496	37.2	177	32.2	100	CCB Main CR1 Failed
Ca	44	2	He	103.822	13.0	2724	11.2	100	CCB Main CR1 Failed
V	51	2	He	0.428	5.0	5465	1.1	2.5	
Cr	52	2	He	0.026	299.1	3567	10.0	2.5	
Mn	55	2	He	0.175	24.7	1223	11.2	2.5	
Fe	56	2	He	2.107	14.0	21086	6.3	100	
Co	59	2	He	0.017	43.8	213	25.8	2.5	
Ni	60	2	He	0.070	5.2	283	2.0	2.5	
Cu	63	2	He	0.304	3.3	2187	2.3	2	
Zn	66	2	He	0.731	19.3	920	12.3	2.5	
As	75	2	He	0.078	14.6	136	5.1	2.5	
Sb	121	2	He	-0.050	-4.9	500	2.0	2.5	
Se	78	2	He	-0.151	-69.6	29	14.5	2	
Ti	47	2	He	0.092	43.2	17	34.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1705837	0.70	1744975	97.76	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	nogas	1737327	0.77	1707883	101.72	70	120	
Li	6	1	nogas	1039705	0.04	1102270	94.32	70	120	
Bi	209	1	nogas	1383085	2.14	1372321	100.78	70	120	
Ge	72	2	He	398440	0.60	398222	100.05	70	120	
In	115	2	He	551493	0.61	546301	100.95	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	122_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T15:43:29-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	077CALB.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
Be	9	1	nogas	109.396	2.208	598836	0.34	100	109.4	90	110	
B	11	1	nogas	574.530	2.697	1960426	0.34	500	114.9	90	110	CCV Main CR1-2 Failed
Al	27	1	nogas	107.258	3.754	1779775	1.32	100	107.3	90	110	
P	31	1	nogas	521.636	1.810	473713	1.02	500	104.3	90	110	
Ti	47	1	nogas	103.934	2.565	149808	0.85	100	103.9	90	110	
Cu	63	1	nogas	103.667	0.735	950469	1.95	100	103.7	90	110	
Sr	88	1	nogas	101.327	3.955	2322436	2.96	100	101.3	90	110	
Mo	95	1	nogas	99.820	1.363	450402	0.43	100	99.8	90	110	
Ag	107	1	nogas	96.668	1.401	1049016	2.61	100	96.7	90	110	
Cd	111	1	nogas	104.763	2.726	219105	3.95	100	104.8	90	110	
Sn	118	1	nogas	102.149	2.555	662829	1.93	100	102.1	90	110	
Sb	121	1	nogas	99.884	2.820	932464	0.43	100	99.9	90	110	
Ba	137	1	nogas	102.617	2.801	322286	1.05	100	102.6	90	110	
Tl	205	1	nogas	105.878	2.598	1826945	2.51	100	105.9	90	110	
Pb	208	1	nogas	107.018	1.599	2486099	1.07	100	107.0	90	110	
U	238	1	nogas	107.478	2.771	2744944	1.27	100	107.5	90	110	
Li	7	1	nogas	106.923	3.351	2091323	1.05	100	106.9	90	110	
Si	28	1	nogas	4881.582	4.599	5771358	1.34	5000	97.6	90	110	
Tl	203	1	nogas	97.726	4.186	705165	3.27	100	97.7	90	110	
Na	23	2	He	10383.382	2.174	12975053	1.29	10000	103.8	90	110	
Mg	24	2	He	10210.225	3.107	6811120	1.70	10000	102.1	90	110	
Al	27	2	He	107.852	2.187	33016	0.89	100	107.9	90	110	
K	39	2	He	10190.155	3.794	5122511	2.29	10000	101.9	90	110	
Ca	43	2	He	10656.269	3.166	15837	2.69	10000	106.6	90	110	
Ca	44	2	He	10388.466	3.126	259600	1.81	10000	103.9	90	110	
V	51	2	He	105.291	2.331	484045	0.86	100	105.3	90	110	
Cr	52	2	He	105.605	2.617	562269	1.48	100	105.6	90	110	
Mn	55	2	He	107.841	1.971	348094	2.07	100	107.8	90	110	
Fe	56	2	He	10425.879	2.109	45932188	1.47	10000	104.3	90	110	
Co	59	2	He	100.302	1.420	797825	0.91	100	100.3	90	110	
Ni	60	2	He	106.617	2.187	207881	0.91	100	106.6	90	110	
Cu	63	2	He	103.705	0.875	535979	0.74	100	103.7	90	110	
Zn	66	2	He	105.639	1.717	94801	2.30	100	105.6	90	110	
As	75	2	He	104.533	0.864	61281	0.82	100	104.5	90	110	
Sb	121	2	He	104.593	1.965	364435	0.55	100	104.6	90	110	
Se	78	2	He	108.283	2.580	4669	1.54	100	108.3	90	110	
Ti	47	2	He	102.428	2.142	15940	1.11	100	102.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1859054	2.51	1744975	106.54	70	120	
In	115	1	nogas	1873232	1.80	1707883	109.68	70	120	
Li	6	1	nogas	1051792	2.51	1102270	95.42	70	120	
Bi	209	1	nogas	1464329	2.01	1372321	106.70	70	120	
Ge	72	2	He	429536	1.46	398222	107.86	70	120	
In	115	2	He	592581	0.23	546301	108.47	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	122_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T15:43:29-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	077CALB.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
Be	9	1	nogas	109.396	2.208	598836	0.34	100	109.4	90	110	
B	11	1	nogas	574.530	2.697	1960426	0.34	500	114.9	90	110	CCV Main CR1-2 Failed
Al	27	1	nogas	107.258	3.754	1779775	1.32	100	107.3	90	110	
P	31	1	nogas	521.636	1.810	473713	1.02	500	104.3	90	110	
Ti	47	1	nogas	103.934	2.565	149808	0.85	100	103.9	90	110	
Cu	63	1	nogas	103.667	0.735	950469	1.95	100	103.7	90	110	
Sr	88	1	nogas	101.327	3.955	2322436	2.96	100	101.3	90	110	
Mo	95	1	nogas	99.820	1.363	450402	0.43	100	99.8	90	110	
Ag	107	1	nogas	96.668	1.401	1049016	2.61	100	96.7	90	110	
Cd	111	1	nogas	104.763	2.726	219105	3.95	100	104.8	90	110	
Sn	118	1	nogas	102.149	2.555	662829	1.93	100	102.1	90	110	
Sb	121	1	nogas	99.884	2.820	932464	0.43	100	99.9	90	110	
Ba	137	1	nogas	102.617	2.801	322286	1.05	100	102.6	90	110	
Tl	205	1	nogas	105.878	2.598	1826945	2.51	100	105.9	90	110	
Pb	208	1	nogas	107.018	1.599	2486099	1.07	100	107.0	90	110	
U	238	1	nogas	107.478	2.771	2744944	1.27	100	107.5	90	110	
Li	7	1	nogas	106.923	3.351	2091323	1.05	100	106.9	90	110	
Si	28	1	nogas	4881.582	4.599	5771358	1.34	5000	97.6	90	110	
Tl	203	1	nogas	97.726	4.186	705165	3.27	100	97.7	90	110	
Na	23	2	He	10383.382	2.174	12975053	1.29	10000	103.8	90	110	
Mg	24	2	He	10210.225	3.107	6811120	1.70	10000	102.1	90	110	
Al	27	2	He	107.852	2.187	33016	0.89	100	107.9	90	110	
K	39	2	He	10190.155	3.794	5122511	2.29	10000	101.9	90	110	
Ca	43	2	He	10656.269	3.166	15837	2.69	10000	106.6	90	110	
Ca	44	2	He	10388.466	3.126	259600	1.81	10000	103.9	90	110	
V	51	2	He	105.291	2.331	484045	0.86	100	105.3	90	110	
Cr	52	2	He	105.605	2.617	562269	1.48	100	105.6	90	110	
Mn	55	2	He	107.841	1.971	348094	2.07	100	107.8	90	110	
Fe	56	2	He	10425.879	2.109	45932188	1.47	10000	104.3	90	110	
Co	59	2	He	100.302	1.420	797825	0.91	100	100.3	90	110	
Ni	60	2	He	106.617	2.187	207881	0.91	100	106.6	90	110	
Cu	63	2	He	103.705	0.875	535979	0.74	100	103.7	90	110	
Zn	66	2	He	105.639	1.717	94801	2.30	100	105.6	90	110	
As	75	2	He	104.533	0.864	61281	0.82	100	104.5	90	110	
Sb	121	2	He	104.593	1.965	364435	0.55	100	104.6	90	110	
Se	78	2	He	108.283	2.580	4669	1.54	100	108.3	90	110	
Ti	47	2	He	102.428	2.142	15940	1.11	100	102.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1859054	2.51	1744975	106.54	70	120	
In	115	1	nogas	1873232	1.80	1707883	109.68	70	120	
Li	6	1	nogas	1051792	2.51	1102270	95.42	70	120	
Bi	209	1	nogas	1464329	2.01	1372321	106.70	70	120	
Ge	72	2	He	429536	1.46	398222	107.86	70	120	
In	115	2	He	592581	0.23	546301	108.47	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	123_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T15:45:40-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	077CALB.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
Be	9	1	nogas	0.033	18.2	238	12.6	1	
B	11	1	nogas	30.642	6.1	153050	2.0	10	CCB Main CR1 Failed
Al	27	1	nogas	1.575	11.5	51484	3.8	5	
P	31	1	nogas	4.241	71.3	56652	2.5	10	
Ti	47	1	nogas	0.036	96.6	203	23.2	2.5	
Cu	63	1	nogas	0.560	7.6	7835	6.4	2	
Sr	88	1	nogas	1.362	3.3	30990	1.4	2.5	
Mo	95	1	nogas	0.188	23.8	940	22.6	2.5	
Ag	107	1	nogas	0.039	22.2	470	17.4	2.5	
Cd	111	1	nogas	0.013	24.4	43	13.3	1	
Sn	118	1	nogas	0.066	53.7	2804	7.3	5	
Sb	121	1	nogas	-0.032	-23.9	1417	4.3	2.5	
Ba	137	1	nogas	0.617	11.5	2404	10.0	2.5	
Tl	205	1	nogas	0.285	39.7	5174	39.2	1	
Pb	208	1	nogas	0.058	16.1	1900	12.8	2.5	
U	238	1	nogas	0.051	20.7	1357	21.4	2.5	
Si	28	1	nogas	-153.472	-28.6	1704407	3.3	5	
Na	23	2	He	217.733	1.8	339477	0.9	100	CCB Main CR1 Failed
Mg	24	2	He	25.623	0.6	17642	2.8	100	
Al	27	2	He	1.346	14.9	1060	3.3	5	
K	39	2	He	10.485	19.5	53593	0.6	100	
Ca	43	2	He	144.952	4.9	237	2.4	100	CCB Main CR1 Failed
Ca	44	2	He	132.316	1.8	3597	1.1	100	CCB Main CR1 Failed
V	51	2	He	0.460	4.6	5954	1.6	2.5	
Cr	52	2	He	0.025	72.3	3790	3.3	2.5	
Mn	55	2	He	0.143	51.9	1193	17.2	2.5	
Fe	56	2	He	1.669	21.9	20525	9.4	100	
Co	59	2	He	0.007	76.2	150	29.1	2.5	
Ni	60	2	He	0.042	131.9	247	43.4	2.5	
Cu	63	2	He	0.400	11.2	2810	5.9	2	
Zn	66	2	He	0.580	22.4	843	11.3	2.5	
As	75	2	He	0.046	103.8	126	20.6	2.5	
Sb	121	2	He	-0.020	-133.6	633	12.0	2.5	
Se	78	2	He	-0.271	-58.6	25	25.4	2	
Ti	47	2	He	0.019	380.2	7	173.2	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1793620	1.74	1744975	102.79	70	120	
In	115	1	nogas	1809137	1.93	1707883	105.93	70	120	
Li	6	1	nogas	1079652	2.18	1102270	97.95	70	120	
Bi	209	1	nogas	1454897	1.77	1372321	106.02	70	120	

Continuing Calibration Blank (CCB) Report

Ge	72	2	He	423616	2.30	398222	106.38	70	120	
In	115	2	He	596737	1.36	546301	109.23	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	123_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T15:45:40-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	077CALB.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
Be	9	1	nogas	0.033	18.2	238	12.6	1	
B	11	1	nogas	30.642	6.1	153050	2.0	10	CCB Main CR1 Failed
Al	27	1	nogas	1.575	11.5	51484	3.8	5	
P	31	1	nogas	4.241	71.3	56652	2.5	10	
Ti	47	1	nogas	0.036	96.6	203	23.2	2.5	
Cu	63	1	nogas	0.560	7.6	7835	6.4	2	
Sr	88	1	nogas	1.362	3.3	30990	1.4	2.5	
Mo	95	1	nogas	0.188	23.8	940	22.6	2.5	
Ag	107	1	nogas	0.039	22.2	470	17.4	2.5	
Cd	111	1	nogas	0.013	24.4	43	13.3	1	
Sn	118	1	nogas	0.066	53.7	2804	7.3	5	
Sb	121	1	nogas	-0.032	-23.9	1417	4.3	2.5	
Ba	137	1	nogas	0.617	11.5	2404	10.0	2.5	
Tl	205	1	nogas	0.285	39.7	5174	39.2	1	
Pb	208	1	nogas	0.058	16.1	1900	12.8	2.5	
U	238	1	nogas	0.051	20.7	1357	21.4	2.5	
Si	28	1	nogas	-153.472	-28.6	1704407	3.3	5	
Na	23	2	He	217.733	1.8	339477	0.9	100	CCB Main CR1 Failed
Mg	24	2	He	25.623	0.6	17642	2.8	100	
Al	27	2	He	1.346	14.9	1060	3.3	5	
K	39	2	He	10.485	19.5	53593	0.6	100	
Ca	43	2	He	144.952	4.9	237	2.4	100	CCB Main CR1 Failed
Ca	44	2	He	132.316	1.8	3597	1.1	100	CCB Main CR1 Failed
V	51	2	He	0.460	4.6	5954	1.6	2.5	
Cr	52	2	He	0.025	72.3	3790	3.3	2.5	
Mn	55	2	He	0.143	51.9	1193	17.2	2.5	
Fe	56	2	He	1.669	21.9	20525	9.4	100	
Co	59	2	He	0.007	76.2	150	29.1	2.5	
Ni	60	2	He	0.042	131.9	247	43.4	2.5	
Cu	63	2	He	0.400	11.2	2810	5.9	2	
Zn	66	2	He	0.580	22.4	843	11.3	2.5	
As	75	2	He	0.046	103.8	126	20.6	2.5	
Sb	121	2	He	-0.020	-133.6	633	12.0	2.5	
Se	78	2	He	-0.271	-58.6	25	25.4	2	
Ti	47	2	He	0.019	380.2	7	173.2	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1793620	1.74	1744975	102.79	70	120	
In	115	1	nogas	1809137	1.93	1707883	105.93	70	120	
Li	6	1	nogas	1079652	2.18	1102270	97.95	70	120	
Bi	209	1	nogas	1454897	1.77	1372321	106.02	70	120	

Continuing Calibration Blank (CCB) Report

Ge	72	2	He	423616	2.30	398222	106.38	70	120	
In	115	2	He	596737	1.36	546301	109.23	70	120	

Sample Report

Sample Table

Sample Name	HS19121257-03
Data File Name	126SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T15:52:54-06:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 149161
ISTD Ref FileName	077CALB.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
Be	9	1	nogas	0.020	0.020	6.16	135	0.01	2000	
B	11	1	nogas	94.532	94.532	12.08	308884	0.03	2000	
Al	27	1	nogas	48.634	48.634	4.83	701373	0.01	2000	
Ti	47	1	nogas	3.069	3.069	1.60	3911	0.08	2000	
Cu	63	1	nogas	2.203	2.203	3.00	19744	0.01	2000	
Sr	88	1	nogas	2216.129	2216.129	10.56	40044078	0.01	2000	>LDR
Mo	95	1	nogas	0.684	0.684	13.24	2530	0.03	2000	
Ag	107	1	nogas	0.010	0.010	69.31	147	0.01	2000	
Cd	111	1	nogas	0.406	0.406	13.15	683	0.06	2000	
Sn	118	1	nogas	-0.188	-0.188	-6.58	997	-0.02	2000	
Sb	121	1	nogas	-0.076	-0.076	-20.82	900	-0.01	2000	
Ba	137	1	nogas	26.858	26.858	11.82	66799	0.04	2000	
Tl	205	1	nogas	0.004	0.004	64.62	277	0.00	2000	
Pb	208	1	nogas	0.052	0.052	28.30	1400	0.00	2000	
U	238	1	nogas	1.762	1.762	12.16	35517	0.00	2000	
Si	28	1	nogas	154973.991	154973.991	4.04	106805135	0.15	2000	>LDR
Na	23	2	He	284866.807	284866.807	2.07	331685822	0.09	200000	>LDR
Mg	24	2	He	43239.216	43239.216	0.94	27025768	0.16	200000	
Al	27	2	He	45.978	45.978	4.27	13548	0.34	2000	
K	39	2	He	622.305	622.305	0.72	336374	0.19	200000	
Ca	43	2	He	94433.220	94433.220	2.00	131304	71.92	200000	
Ca	44	2	He	94118.283	94118.283	0.34	2201227	4.28	200000	
V	51	2	He	1.485	1.485	2.45	10036	0.01	2000	
Cr	52	2	He	2.619	2.619	2.39	16458	0.02	2000	
Mn	55	2	He	189.456	189.456	1.67	572363	0.03	2000	
Fe	56	2	He	95.037	95.037	1.48	404757	0.02	200000	
Co	59	2	He	0.335	0.335	12.09	2587	0.01	2000	
Ni	60	2	He	15.961	15.961	1.89	29293	0.05	2000	
Cu	63	2	He	0.766	0.766	2.17	4441	0.02	2000	
Zn	66	2	He	3.048	3.048	4.62	2870	0.11	2000	
As	75	2	He	0.284	0.284	4.55	250	0.11	2000	
Sb	121	2	He	-0.076	-0.076	-18.52	420	-0.02	2000	
Se	78	2	He	0.158	0.158	47.07	41	0.38	2000	
Ti	47	2	He	1.028	1.028	15.28	153	0.67	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1586965	3.95	1744975	90.94	70	120	

Sample Report

In	115	1	nogas	1485988	8.80	1707883	87.01	70	120	
Li	6	1	nogas	903116	9.16	1102270	81.93	70	120	
Bi	209	1	nogas	1162382	9.13	1372321	84.70	70	120	
Ge	72	2	He	402374	0.18	398222	101.04	70	120	
In	115	2	He	526780	1.81	546301	96.43	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	134_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T16:16:56-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	077CALB.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
Be	9	1	nogas	111.246	2.116	610541	1.20	100	111.2	90	110	CCV Main CR1-2 Failed
B	11	1	nogas	590.971	3.761	2019831	0.47	500	118.2	90	110	CCV Main CR1-2 Failed
Al	27	1	nogas	107.945	1.077	1780086	2.40	100	107.9	90	110	
P	31	1	nogas	538.470	2.392	483939	0.75	500	107.7	90	110	
Ti	47	1	nogas	103.183	2.146	147754	1.34	100	103.2	90	110	
Cu	63	1	nogas	103.573	2.168	943081	1.02	100	103.6	90	110	
Sr	88	1	nogas	100.402	4.095	2304357	3.69	100	100.4	90	110	
Mo	95	1	nogas	101.297	3.289	457577	2.47	100	101.3	90	110	
Ag	107	1	nogas	99.373	3.132	1079338	2.24	100	99.4	90	110	
Cd	111	1	nogas	106.353	0.771	222639	0.43	100	106.4	90	110	
Sn	118	1	nogas	100.426	3.323	652549	3.36	100	100.4	90	110	
Sb	121	1	nogas	99.255	1.508	920612	0.34	100	99.3	90	110	
Ba	137	1	nogas	102.217	1.124	321486	0.65	100	102.2	90	110	
Tl	205	1	nogas	105.108	3.598	1853727	3.13	100	105.1	90	110	
Pb	208	1	nogas	107.097	2.591	2542950	1.74	100	107.1	90	110	
U	238	1	nogas	106.827	1.835	2789210	1.10	100	106.8	90	110	
Li	7	1	nogas	109.294	1.297	2142307	2.45	100	109.3	90	110	
Si	28	1	nogas	5035.047	3.556	5855106	1.45	5000	100.7	90	110	
Tl	203	1	nogas	98.907	2.774	729605	2.10	100	98.9	90	110	
Na	23	2	He	10344.311	3.131	13134097	2.67	10000	103.4	90	110	
Mg	24	2	He	10262.608	2.760	6956288	1.57	10000	102.6	90	110	
Al	27	2	He	108.873	3.759	33851	2.01	100	108.9	90	110	
K	39	2	He	10186.028	2.436	5203403	1.17	10000	101.9	90	110	
Ca	43	2	He	10473.797	3.058	15814	1.33	10000	104.7	90	110	
Ca	44	2	He	10185.469	3.020	258610	1.26	10000	101.9	90	110	
V	51	2	He	104.317	3.778	487222	2.11	100	104.3	90	110	
Cr	52	2	He	103.587	2.909	560401	1.14	100	103.6	90	110	
Mn	55	2	He	104.982	2.141	344274	0.74	100	105.0	90	110	
Fe	56	2	He	10229.658	2.008	45789173	0.60	10000	102.3	90	110	
Co	59	2	He	98.460	1.837	795733	1.35	100	98.5	90	110	
Ni	60	2	He	105.039	3.683	208057	2.04	100	105.0	90	110	
Cu	63	2	He	101.602	2.711	533456	1.22	100	101.6	90	110	
Zn	66	2	He	106.665	2.116	97234	0.36	100	106.7	90	110	
As	75	2	He	104.245	0.834	62094	0.95	100	104.2	90	110	
Sb	121	2	He	106.105	3.538	375584	2.40	100	106.1	90	110	
Se	78	2	He	106.772	2.033	4679	0.31	100	106.8	90	110	
Ti	47	2	He	102.907	5.933	16267	4.88	100	102.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1846436	1.40	1744975	105.81	70	120	
In	115	1	nogas	1875407	1.17	1707883	109.81	70	120	
Li	6	1	nogas	1054623	3.35	1102270	95.68	70	120	
Bi	209	1	nogas	1496657	0.87	1372321	109.06	70	120	
Ge	72	2	He	436443	1.73	398222	109.60	70	120	
In	115	2	He	603494	2.01	546301	110.47	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	135_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2020-01-03T16:19:08-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	077CALB.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
Be	9	1	nogas	0.027	17.5	210	12.6	1	
B	11	1	nogas	40.492	3.5	193647	1.6	10	CCB Main CR1 Failed
Al	27	1	nogas	1.621	5.3	53669	1.5	5	
P	31	1	nogas	5.956	32.3	59574	0.4	10	
Ti	47	1	nogas	0.097	38.1	297	19.2	2.5	
Cu	63	1	nogas	0.651	2.5	8879	3.6	2	
Sr	88	1	nogas	1.414	1.1	33271	3.3	2.5	
Mo	95	1	nogas	0.156	34.0	830	29.0	2.5	
Ag	107	1	nogas	0.030	2.3	390	4.4	2.5	
Cd	111	1	nogas	0.016	88.2	53	60.3	1	
Sn	118	1	nogas	0.104	33.1	3147	4.6	5	
Sb	121	1	nogas	0.010	61.4	1843	1.1	2.5	
Ba	137	1	nogas	0.488	11.5	2080	6.8	2.5	
Tl	205	1	nogas	0.280	30.7	5234	32.4	1	
Pb	208	1	nogas	0.052	35.7	1833	27.0	2.5	
U	238	1	nogas	0.048	22.5	1320	23.6	2.5	
Si	28	1	nogas	-171.571	-24.4	1736205	0.7	5	
Na	23	2	He	192.505	1.0	319473	1.3	100	CCB Main CR1 Failed
Mg	24	2	He	23.969	0.8	17135	1.7	100	
Al	27	2	He	0.872	22.4	953	6.8	5	
K	39	2	He	9.603	25.6	55037	1.6	100	
Ca	43	2	He	143.653	42.4	243	38.2	100	CCB Main CR1 Failed
Ca	44	2	He	130.631	12.2	3680	10.8	100	CCB Main CR1 Failed
V	51	2	He	0.263	7.7	5246	1.0	2.5	
Cr	52	2	He	-0.042	-63.6	3564	5.0	2.5	
Mn	55	2	He	0.199	19.2	1427	9.7	2.5	
Fe	56	2	He	2.089	5.8	23125	3.1	100	
Co	59	2	He	0.010	42.6	180	20.0	2.5	
Ni	60	2	He	0.061	32.3	293	14.2	2.5	
Cu	63	2	He	0.352	5.3	2657	2.8	2	
Zn	66	2	He	0.429	14.8	737	8.6	2.5	
As	75	2	He	0.096	25.2	160	9.1	2.5	
Sb	121	2	He	0.010	316.3	763	15.6	2.5	
Se	78	2	He	-0.217	-43.8	29	14.5	2	
Ti	47	2	He	0.061	157.6	13	114.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1842841	2.15	1744975	105.61	70	120	
In	115	1	nogas	1871829	2.65	1707883	109.60	70	120	
Li	6	1	nogas	1119303	1.53	1102270	101.55	70	120	
Bi	209	1	nogas	1491894	3.21	1372321	108.71	70	120	

Continuing Calibration Blank (CCB) Report

Ge	72	2	He	438499	0.98	398222	110.11	70	120	
In	115	2	He	609937	0.88	546301	111.65	70	120	

Tune Report

Batch Folder C:\Agilent\ICPMH\1\DATA\010320A.b
Report Comment
Instrument Name G3281A JP11080910

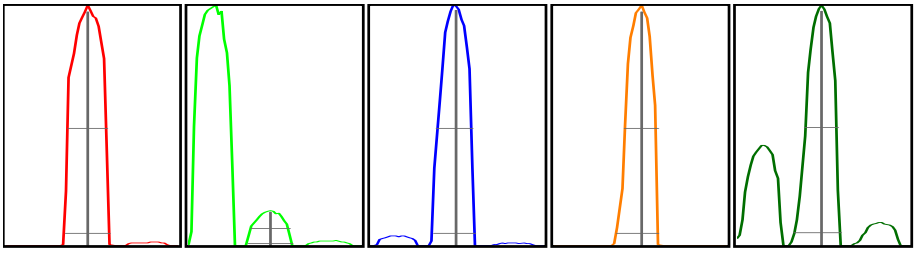
[nogas]

Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
9		24390				NaN	-	
24		56822				NaN	-	
59		64009				NaN	-	
115		77043				NaN	-	
208		46572				NaN	-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
9	0.99	5.00				
24	0.28	5.00				
59	0.72	5.00				
115	0.46	5.00				
208	0.45	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	24101	24248	24349	24716	24539
24	56608	56914	56717	57011	56860
59	63280	63989	64459	63964	64354
115	76638	77236	77538	77009	76794
208	46478	46536	46298	46713	46834

Integration Time [sec] 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-X% (Actual)	W-X% (Required)	W-X% (Flag)
9	3869.03	8.95	8.9 - 9.1		0.66	0.784		
24	9465.90	23.95	23.9 - 24.1		0.64	0.785		
59	11207.41	59.00	58.9 - 59.1		0.60	0.737		
115	14439.09	115.05	114.9 - 115.1		0.56	0.716		
208	8418.73	208.00	207.9 - 208.1		0.56	0.782		

X = 5 **Integration Time [sec]** 0.1 **Acquisition Time [sec]** 168.5 **Y Axis** Linear

Tune Parameters

Plasma Paramters

RF Power	1600 W	Carrier Gas	0.45 L/min	S/C Temp	2 ℃
RF Matching	1.70 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.50 L/min
Smpl Depth	8.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	8.0 V	Deflect	10.0 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-50 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

OctP Bias	-8.0 V	He Flow	0.0 mL/min	Energy Discrimination	5.0 V
OctP RF	190 V	H2 Flow	0.0 mL/min		
Use Gas	false	3rd Gas Flow	0 %		

Tune Report

[He]

Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
9		585				NaN	-	
24		3878				NaN	-	
59		35181				NaN	-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
9	2.85	5.00				
24	0.82	5.00				
59	0.53	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	595	574	602	562	594
24	3846	3859	3906	3918	3863
59	35037	35071	35382	35025	35390

Integration Time [sec] 0.1

Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-X% (Actual)	W-X% (Required)	W-X% (Flag)
9	96.48	8.95	8.9 - 9.1		0.66	0.778		
24	652.69	23.95	23.9 - 24.1		0.63	0.778		
59	6248.10	59.00	58.9 - 59.1		0.59	0.733		

X = 5 **Integration Time [sec]** 0.1 **Acquisition Time [sec]** 100.6 **Y Axis** Linear

Tune Parameters

Plasma Paramters

RF Power	1600 W	Carrier Gas	0.45 L/min	S/C Temp	2 ℃
RF Matching	1.70 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.50 L/min
Smpl Depth	8.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	8.0 V	Deflect	2.0 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

OctP Bias	-18.0 V	He Flow	4.3 mL/min	Energy Discrimination	5.0 V
OctP RF	190 V	H2 Flow	0.0 mL/min		
Use Gas	true	3rd Gas Flow	0 %		

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WorkOrder: HS20031084

LHAAP-58

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

24-Apr-2020

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HS20031084 LHAAP58. Finalpdf

ALS WO# HS20031084

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April 08, 2020

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

Work Order: **HS20031084**

Laboratory Results for: **LHAAP-58**

Dear Marcia,

ALS Environmental received 8 sample(s) on Mar 25, 2020 for the analysis presented in the following report.

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

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

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

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 08-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Work Order: HS20031084

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20031084-01	35AWW11_032420	Groundwater		24-Mar-2020 07:45	25-Mar-2020 08:45	☐
HS20031084-02	35AWW11_032420_a	Groundwater		24-Mar-2020 07:45	25-Mar-2020 08:45	☐
HS20031084-03	35AWW20_032420	Groundwater		24-Mar-2020 09:05	25-Mar-2020 08:45	☐
HS20031084-04	LHSMW07_032420	Groundwater		24-Mar-2020 10:15	25-Mar-2020 08:45	☐
HS20031084-05	35AWW06_032420	Groundwater		24-Mar-2020 11:10	25-Mar-2020 08:45	☐
HS20031084-06	35AWW23_032420	Groundwater		24-Mar-2020 12:05	25-Mar-2020 08:45	☐
HS20031084-07	35AWW19_032420	Groundwater		24-Mar-2020 13:00	25-Mar-2020 08:45	☐
HS20031084-08	Trip Blank	Water	CG-111519 -108	24-Mar-2020 00:00	25-Mar-2020 08:45	☐

ALS Houston, US Date: 08-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Work Order: HS20031084

CASE NARRATIVE

Work Order Comments

- The analysis for TOC was subcontracted to ALS Environmental in Kelso, WA. Final Report attached.

  The analysis for Volatile Fatty Acids were subcontracted to ALS Environmental in Rochester, NY. Final Report attached.

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

  The analyses for DHC/DHB were subcontracted to Microbial Insights in Knoxville, TN. Final Report attached.

GCMS Volatiles by Method SW8260

Batch ID: R358961

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

WetChemistry by Method SW9056

Batch ID: R359083

Sample ID: 35AWW20_032420 (HS20031084-03MS)

- The MS and/or MSD recovery was outside of the control limits; however, the result in the parent sample is greater than 4x the spike amount. (Chloride,Nitrogen, Nitrate (As N),Sulfate)

Sample ID: HS20030838-01MS

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

ALS Houston, US Date: 08-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW11_032420
Collection Date: 24-Mar-2020 07:45

ANALYTICAL REPORT
WorkOrder:HS20031084
Lab ID:HS20031084-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:01
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:01
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 16:01
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:01
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:01
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:01
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:01
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 16:01
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 16:01
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 16:01
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:01
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:01
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:01
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 16:01
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:01
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 16:01
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:01
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 16:01
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:01
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 16:01
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:01
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	25-Mar-2020 16:01
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:01
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	25-Mar-2020 16:01
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 16:01
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:01
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	25-Mar-2020 16:01
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	25-Mar-2020 16:01
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:01
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 16:01
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:01
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:01
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 16:01
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 16:01
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	25-Mar-2020 16:01
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 16:01
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:01
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:01
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:01

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

ALS Houston, US Date: 08-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW11_032420
Collection Date: 24-Mar-2020 07:45

ANALYTICAL REPORT
WorkOrder:HS20031084
Lab ID:HS20031084-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:01
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:01
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	25-Mar-2020 16:01
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:01
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:01
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:01
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:01
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	25-Mar-2020 16:01
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:01
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	25-Mar-2020 16:01
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	25-Mar-2020 16:01
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 16:01
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:01
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:01
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:01
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:01
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:01
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:01
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:01
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:01
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:01
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:01
Trichloroethene	**1.4**		**0.20**	**0.50**	**1.0**	**UG/L**	1	25-Mar-2020 16:01
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:01
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:01
Surr: 1,2-Dichloroethane-d4	*91.6*			**0**	*81-118*	*%REC*	*1*	*25-Mar-2020 16:01*
Surr: 4-Bromofluorobenzene	*98.8*			**0**	*85-114*	*%REC*	*1*	*25-Mar-2020 16:01*
Surr: Dibromofluoromethane	*94.6*			**0**	*80-119*	*%REC*	*1*	*25-Mar-2020 16:01*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*25-Mar-2020 16:01*
ANIONS BY SW9056A		**Method:SW9056**						Analyst: KVL
Chloride	**2,090**		**10.0**	**25.0**	**25.0**	**mg/L**	50	26-Mar-2020 00:56
Nitrogen, Nitrate (As N)	0.500	U	0.150	0.500	0.500	mg/L	5	25-Mar-2020 20:06
Sulfate	**282**		**1.00**	**2.50**	**2.50**	**mg/L**	5	25-Mar-2020 20:06
SUBCONTRACT ANALYSIS - DHC/DHB		**Method:NA**						Analyst: SUB
Subcontract Analysis	See attached		0	0	0	NA	1	30-Mar-2020 12:29
SUBCONTRACT ANALYSIS - RSK		**Method:NA**						Analyst: SUBCA
Subcontract Analysis	See Attached		0	0		NA	1	08-Apr-2020 10:19

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

ALS Houston, US Date: 08-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW11_032420
Collection Date: 24-Mar-2020 07:45

ANALYTICAL REPORT
WorkOrder:HS20031084
Lab ID:HS20031084-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	03-Apr-2020 15:23
SUBCONTRACT ANALYSIS - VOLATILE FATTY ACIDS		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	02-Apr-2020 09:10

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

ALS Houston, US Date: 08-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW11_032420_a
Collection Date: 24-Mar-2020 07:45

ANALYTICAL REPORT
WorkOrder:HS20031084
Lab ID:HS20031084-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:25
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:25
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 16:25
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:25
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:25
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:25
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:25
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 16:25
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 16:25
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 16:25
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:25
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:25
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:25
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 16:25
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:25
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 16:25
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:25
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 16:25
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:25
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 16:25
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:25
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	25-Mar-2020 16:25
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:25
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	25-Mar-2020 16:25
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 16:25
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:25
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	25-Mar-2020 16:25
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	25-Mar-2020 16:25
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:25
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 16:25
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:25
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:25
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 16:25
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 16:25
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	25-Mar-2020 16:25
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 16:25
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:25
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:25
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:25

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

ALS Houston, US Date: 08-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW11_032420_a
Collection Date: 24-Mar-2020 07:45

ANALYTICAL REPORT
WorkOrder:HS20031084
Lab ID:HS20031084-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:25
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:25
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	25-Mar-2020 16:25
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:25
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:25
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:25
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:25
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	25-Mar-2020 16:25
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:25
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	25-Mar-2020 16:25
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	25-Mar-2020 16:25
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 16:25
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:25
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:25
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:25
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:25
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:25
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:25
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:25
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:25
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:25
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:25
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:25
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:25
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:25
Surr: 1,2-Dichloroethane-d4	*92.0*			**0**	*81-118*	*%REC*	*1*	*25-Mar-2020 16:25*
Surr: 4-Bromofluorobenzene	*96.2*			**0**	*85-114*	*%REC*	*1*	*25-Mar-2020 16:25*
Surr: Dibromofluoromethane	*96.0*			**0**	*80-119*	*%REC*	*1*	*25-Mar-2020 16:25*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*25-Mar-2020 16:25*
ANIONS BY SW9056A		**Method:SW9056**						Analyst: KVL
Chloride	**2,110**		**10.0**	**25.0**	**25.0**	**mg/L**	50	26-Mar-2020 01:32
Nitrogen, Nitrate (As N)	0.500	U	0.150	0.500	0.500	mg/L	5	25-Mar-2020 20:24
Sulfate	**113**		**1.00**	**2.50**	**2.50**	**mg/L**	5	25-Mar-2020 20:24
SUBCONTRACT ANALYSIS - RSK		**Method:NA**						Analyst: SUBCA
Subcontract Analysis	See Attached		0	0		NA	1	08-Apr-2020 10:19
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	03-Apr-2020 15:23

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

ALS Houston, US Date: 08-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW11_032420_a
Collection Date: 24-Mar-2020 07:45

ANALYTICAL REPORT
WorkOrder:HS20031084
Lab ID:HS20031084-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - VOLATILE FATTY ACIDS	**Method:NA**							Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	02-Apr-2020 09:10

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

ALS Houston, US Date: 08-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW20_032420
Collection Date: 24-Mar-2020 09:05

ANALYTICAL REPORT
WorkOrder:HS20031084
Lab ID:HS20031084-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	2.5	U	1.5	2.5	5.0	UG/L	5	25-Mar-2020 18:49
1,1,1-Trichloroethane	2.5	U	1.0	2.5	5.0	UG/L	5	25-Mar-2020 18:49
1,1,2,2-Tetrachloroethane	2.5	U	2.5	2.5	5.0	UG/L	5	25-Mar-2020 18:49
1,1,2-Trichloroethane	**83**		**1.5**	**2.5**	**5.0**	**UG/L**	5	25-Mar-2020 18:49
1,1-Dichloroethane	**560**		**1.0**	**2.5**	**5.0**	**UG/L**	5	25-Mar-2020 18:49
1,1-Dichloroethene	**1,300**		**5.0**	**12**	**25**	**UG/L**	25	25-Mar-2020 18:25
1,1-Dichloropropene	2.5	U	1.5	2.5	5.0	UG/L	5	25-Mar-2020 18:49
1,2,3-Trichlorobenzene	2.5	U	2.0	2.5	5.0	UG/L	5	25-Mar-2020 18:49
1,2,3-Trichloropropane	2.5	U	2.5	2.5	5.0	UG/L	5	25-Mar-2020 18:49
1,2,4-Trichlorobenzene	2.5	U	2.5	2.5	5.0	UG/L	5	25-Mar-2020 18:49
1,2,4-Trimethylbenzene	2.5	U	1.5	2.5	5.0	UG/L	5	25-Mar-2020 18:49
1,2-Dibromo-3-chloropropane	2.5	U	1.0	2.5	5.0	UG/L	5	25-Mar-2020 18:49
1,2-Dibromoethane	2.5	U	1.0	2.5	5.0	UG/L	5	25-Mar-2020 18:49
1,2-Dichlorobenzene	**25**		**2.5**	**2.5**	**5.0**	**UG/L**	5	25-Mar-2020 18:49
1,2-Dichloroethane	**18**		**1.0**	**2.5**	**5.0**	**UG/L**	5	25-Mar-2020 18:49
1,2-Dichloropropane	2.5	U	2.5	2.5	5.0	UG/L	5	25-Mar-2020 18:49
1,3,5-Trimethylbenzene	2.5	U	1.5	2.5	5.0	UG/L	5	25-Mar-2020 18:49
1,3-Dichlorobenzene	2.5	U	2.0	2.5	5.0	UG/L	5	25-Mar-2020 18:49
1,3-Dichloropropane	2.5	U	1.5	2.5	5.0	UG/L	5	25-Mar-2020 18:49
1,4-Dichlorobenzene	2.5	U	2.0	2.5	5.0	UG/L	5	25-Mar-2020 18:49
2,2-Dichloropropane	2.5	U	1.0	2.5	5.0	UG/L	5	25-Mar-2020 18:49
2-Butanone	5.0	U	2.5	5.0	10	UG/L	5	25-Mar-2020 18:49
2-Chlorotoluene	2.5	U	1.5	2.5	5.0	UG/L	5	25-Mar-2020 18:49
2-Hexanone	5.0	U	5.0	5.0	10	UG/L	5	25-Mar-2020 18:49
4-Chlorotoluene	2.5	U	2.0	2.5	5.0	UG/L	5	25-Mar-2020 18:49
4-Isopropyltoluene	2.5	U	1.5	2.5	5.0	UG/L	5	25-Mar-2020 18:49
4-Methyl-2-pentanone	5.0	U	3.5	5.0	10	UG/L	5	25-Mar-2020 18:49
Acetone	5.0	U	2.0	5.0	10	UG/L	5	25-Mar-2020 18:49
Benzene	**8.7**		**1.0**	**2.5**	**5.0**	**UG/L**	5	25-Mar-2020 18:49
Bromobenzene	2.5	U	2.0	2.5	5.0	UG/L	5	25-Mar-2020 18:49
Bromochloromethane	2.5	U	1.0	2.5	5.0	UG/L	5	25-Mar-2020 18:49
Bromodichloromethane	2.5	U	1.0	2.5	5.0	UG/L	5	25-Mar-2020 18:49
Bromoform	2.5	U	2.0	2.5	5.0	UG/L	5	25-Mar-2020 18:49
Bromomethane	2.5	U	2.0	2.5	5.0	UG/L	5	25-Mar-2020 18:49
Carbon disulfide	5.0	U	3.0	5.0	10	UG/L	5	25-Mar-2020 18:49
Carbon tetrachloride	2.5	U	2.5	2.5	5.0	UG/L	5	25-Mar-2020 18:49
Chlorobenzene	2.5	U	1.5	2.5	5.0	UG/L	5	25-Mar-2020 18:49
Chloroethane	2.5	U	1.5	2.5	5.0	UG/L	5	25-Mar-2020 18:49
Chloroform	2.5	U	1.0	2.5	5.0	UG/L	5	25-Mar-2020 18:49

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

ALS Houston, US Date: 08-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW20_032420
Collection Date: 24-Mar-2020 09:05

ANALYTICAL REPORT
WorkOrder:HS20031084
Lab ID:HS20031084-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	2.5	U	1.0	2.5	5.0	UG/L	5	25-Mar-2020 18:49
cis-1,2-Dichloroethene	**71**		**1.0**	**2.5**	**5.0**	**UG/L**	5	25-Mar-2020 18:49
cis-1,3-Dichloropropene	2.5	U	0.50	2.5	5.0	UG/L	5	25-Mar-2020 18:49
Dibromochloromethane	2.5	U	1.5	2.5	5.0	UG/L	5	25-Mar-2020 18:49
Dibromomethane	2.5	U	1.0	2.5	5.0	UG/L	5	25-Mar-2020 18:49
Dichlorodifluoromethane	2.5	U	1.5	2.5	5.0	UG/L	5	25-Mar-2020 18:49
Ethylbenzene	2.5	U	1.5	2.5	5.0	UG/L	5	25-Mar-2020 18:49
Hexachlorobutadiene	5.0	U	5.0	5.0	5.0	UG/L	5	25-Mar-2020 18:49
Isopropylbenzene	2.5	U	1.5	2.5	5.0	UG/L	5	25-Mar-2020 18:49
m,p-Xylene	5.0	U	2.5	5.0	10	UG/L	5	25-Mar-2020 18:49
Methylene chloride	5.0	U	2.0	5.0	10	UG/L	5	25-Mar-2020 18:49
n-Butylbenzene	2.5	U	2.0	2.5	5.0	UG/L	5	25-Mar-2020 18:49
n-Propylbenzene	2.5	U	1.5	2.5	5.0	UG/L	5	25-Mar-2020 18:49
Naphthalene	2.5	U	1.5	2.5	5.0	UG/L	5	25-Mar-2020 18:49
o-Xylene	2.5	U	1.5	2.5	5.0	UG/L	5	25-Mar-2020 18:49
sec-Butylbenzene	2.5	U	1.5	2.5	5.0	UG/L	5	25-Mar-2020 18:49
Styrene	2.5	U	1.5	2.5	5.0	UG/L	5	25-Mar-2020 18:49
tert-Butylbenzene	2.5	U	1.5	2.5	5.0	UG/L	5	25-Mar-2020 18:49
Tetrachloroethene	2.5	U	1.5	2.5	5.0	UG/L	5	25-Mar-2020 18:49
Toluene	2.5	U	1.0	2.5	5.0	UG/L	5	25-Mar-2020 18:49
trans-1,2-Dichloroethene	**6.6**		**1.0**	**2.5**	**5.0**	**UG/L**	5	25-Mar-2020 18:49
trans-1,3-Dichloropropene	2.5	U	1.0	2.5	5.0	UG/L	5	25-Mar-2020 18:49
Trichloroethene	**120**		**1.0**	**2.5**	**5.0**	**UG/L**	5	25-Mar-2020 18:49
Trichlorofluoromethane	2.5	U	1.5	2.5	5.0	UG/L	5	25-Mar-2020 18:49
Vinyl chloride	**1,500**		**5.0**	**12**	**25**	**UG/L**	25	25-Mar-2020 18:25
Surr: 1,2-Dichloroethane-d4	*90.5*			**0**	*81-118*	*%REC*	*25*	*25-Mar-2020 18:25*
Surr: 1,2-Dichloroethane-d4	*89.7*			**0**	*81-118*	*%REC*	*5*	*25-Mar-2020 18:49*
Surr: 4-Bromofluorobenzene	*99.1*			**0**	*85-114*	*%REC*	*25*	*25-Mar-2020 18:25*
Surr: 4-Bromofluorobenzene	*97.8*			**0**	*85-114*	*%REC*	*5*	*25-Mar-2020 18:49*
Surr: Dibromofluoromethane	*95.3*			**0**	*80-119*	*%REC*	*5*	*25-Mar-2020 18:49*
Surr: Dibromofluoromethane	*94.3*			**0**	*80-119*	*%REC*	*25*	*25-Mar-2020 18:25*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*25*	*25-Mar-2020 18:25*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*5*	*25-Mar-2020 18:49*
ANIONS BY SW9056A		**Method:SW9056**						Analyst: KVL
Chloride	**718**		**10.0**	**25.0**	**25.0**	**mg/L**	50	26-Mar-2020 03:39
Nitrogen, Nitrate (As N)	0.100	U	0.0300	0.100	0.100	mg/L	1	25-Mar-2020 20:42
Sulfate	**1,020**		**10.0**	**25.0**	**25.0**	**mg/L**	50	26-Mar-2020 03:39
SUBCONTRACT ANALYSIS - DHC/DHB		**Method:NA**						Analyst: SUB
Subcontract Analysis	See attached		0	0	0	NA	1	30-Mar-2020 12:29

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

ALS Houston, US Date: 08-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW20_032420
Collection Date: 24-Mar-2020 09:05

ANALYTICAL REPORT
WorkOrder:HS20031084
Lab ID:HS20031084-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - RSK		**Method:NA**						Analyst: SUBCA
Subcontract Analysis	See Attached		0	0		NA	1	08-Apr-2020 10:19
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	03-Apr-2020 15:23
SUBCONTRACT ANALYSIS - VOLATILE FATTY ACIDS		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	02-Apr-2020 09:10

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

ALS Houston, US Date: 08-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: LHSMW07_032420
Collection Date: 24-Mar-2020 10:15

ANALYTICAL REPORT
WorkOrder:HS20031084
Lab ID:HS20031084-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:49
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:49
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 16:49
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:49
1,1-Dichloroethane	**11**		**0.20**	**0.50**	**1.0**	**UG/L**	1	25-Mar-2020 16:49
1,1-Dichloroethene	**94**		**0.20**	**0.50**	**1.0**	**UG/L**	1	25-Mar-2020 16:49
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:49
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 16:49
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 16:49
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 16:49
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:49
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:49
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:49
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 16:49
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:49
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 16:49
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:49
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 16:49
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:49
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 16:49
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:49
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	25-Mar-2020 16:49
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:49
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	25-Mar-2020 16:49
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 16:49
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:49
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	25-Mar-2020 16:49
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	25-Mar-2020 16:49
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:49
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 16:49
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:49
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:49
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 16:49
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 16:49
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	25-Mar-2020 16:49
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 16:49
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:49
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:49
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:49

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

ALS Houston, US Date: 08-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: LHSMW07_032420
Collection Date: 24-Mar-2020 10:15

ANALYTICAL REPORT
WorkOrder:HS20031084
Lab ID:HS20031084-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:49
cis-1,2-Dichloroethene	**1.0**		**0.20**	**0.50**	**1.0**	**UG/L**	1	25-Mar-2020 16:49
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	25-Mar-2020 16:49
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:49
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:49
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:49
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:49
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	25-Mar-2020 16:49
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:49
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	25-Mar-2020 16:49
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	25-Mar-2020 16:49
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 16:49
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:49
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:49
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:49
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:49
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:49
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:49
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:49
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:49
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:49
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 16:49
Trichloroethene	**2.8**		**0.20**	**0.50**	**1.0**	**UG/L**	1	25-Mar-2020 16:49
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 16:49
Vinyl chloride	**46**		**0.20**	**0.50**	**1.0**	**UG/L**	1	25-Mar-2020 16:49
Surr: 1,2-Dichloroethane-d4	*91.0*			**0**	*81-118*	*%REC*	*1*	*25-Mar-2020 16:49*
Surr: 4-Bromofluorobenzene	*98.0*			**0**	*85-114*	*%REC*	*1*	*25-Mar-2020 16:49*
Surr: Dibromofluoromethane	*94.8*			**0**	*80-119*	*%REC*	*1*	*25-Mar-2020 16:49*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*1*	*25-Mar-2020 16:49*
ANIONS BY SW9056A		**Method:SW9056**						Analyst: KVL
Chloride	**1,960**		**10.0**	**25.0**	**25.0**	**mg/L**	50	26-Mar-2020 04:33
Nitrogen, Nitrate (As N)	0.500	U	0.150	0.500	0.500	mg/L	5	25-Mar-2020 21:55
Sulfate	**2,750**		**10.0**	**25.0**	**25.0**	**mg/L**	50	26-Mar-2020 04:33
SUBCONTRACT ANALYSIS - DHC/DHB		**Method:NA**						Analyst: SUB
Subcontract Analysis	See attached		0	0	0	NA	1	30-Mar-2020 12:29
SUBCONTRACT ANALYSIS - RSK		**Method:NA**						Analyst: SUBCA
Subcontract Analysis	See Attached		0	0		NA	1	08-Apr-2020 10:19

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

ALS Houston, US Date: 08-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: LHSMW07_032420
Collection Date: 24-Mar-2020 10:15

ANALYTICAL REPORT
WorkOrder:HS20031084
Lab ID:HS20031084-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	03-Apr-2020 15:23
SUBCONTRACT ANALYSIS - VOLATILE FATTY ACIDS		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	02-Apr-2020 09:10

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

ALS Houston, US Date: 08-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW06_032420
Collection Date: 24-Mar-2020 11:10

ANALYTICAL REPORT
WorkOrder:HS20031084
Lab ID:HS20031084-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:13
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 17:13
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 17:13
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:13
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 17:13
1,1-Dichloroethene	**0.78**	J	**0.20**	**0.50**	**1.0**	**UG/L**	1	25-Mar-2020 17:13
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:13
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 17:13
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 17:13
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 17:13
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:13
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 17:13
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 17:13
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 17:13
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 17:13
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 17:13
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:13
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 17:13
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:13
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 17:13
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 17:13
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	25-Mar-2020 17:13
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:13
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	25-Mar-2020 17:13
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 17:13
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:13
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	25-Mar-2020 17:13
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	25-Mar-2020 17:13
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 17:13
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 17:13
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 17:13
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 17:13
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 17:13
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 17:13
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	25-Mar-2020 17:13
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 17:13
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:13
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:13
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 17:13

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

ALS Houston, US Date: 08-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW06_032420
Collection Date: 24-Mar-2020 11:10

ANALYTICAL REPORT
WorkOrder:HS20031084
Lab ID:HS20031084-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 17:13
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 17:13
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	25-Mar-2020 17:13
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:13
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 17:13
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:13
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:13
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	25-Mar-2020 17:13
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:13
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	25-Mar-2020 17:13
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	25-Mar-2020 17:13
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 17:13
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:13
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:13
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:13
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:13
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:13
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:13
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:13
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 17:13
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 17:13
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 17:13
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 17:13
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:13
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 17:13
Surr: 1,2-Dichloroethane-d4	*91.4*			**0**	*81-118*	*%REC*	*1*	*25-Mar-2020 17:13*
Surr: 4-Bromofluorobenzene	*98.6*			**0**	*85-114*	*%REC*	*1*	*25-Mar-2020 17:13*
Surr: Dibromofluoromethane	*95.6*			**0**	*80-119*	*%REC*	*1*	*25-Mar-2020 17:13*
Surr: Toluene-d8	*102*			**0**	*89-112*	*%REC*	*1*	*25-Mar-2020 17:13*
ANIONS BY SW9056A		**Method:SW9056**						Analyst: KVL
Chloride	**968**		**2.00**	**5.00**	**5.00**	**mg/L**	10	26-Mar-2020 05:09
Nitrogen, Nitrate (As N)	0.100	U	0.0300	0.100	0.100	mg/L	1	25-Mar-2020 22:13
Sulfate	**1.51**		**0.200**	**0.500**	**0.500**	**mg/L**	1	25-Mar-2020 22:13
SUBCONTRACT ANALYSIS - DHC/DHB		**Method:NA**						Analyst: SUB
Subcontract Analysis	See attached		0	0	0	NA	1	30-Mar-2020 12:29
SUBCONTRACT ANALYSIS - RSK		**Method:NA**						Analyst: SUBCA
Subcontract Analysis	See Attached		0	0		NA	1	08-Apr-2020 10:19

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

ALS Houston, US Date: 08-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW06_032420
Collection Date: 24-Mar-2020 11:10

ANALYTICAL REPORT
WorkOrder:HS20031084
Lab ID:HS20031084-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	03-Apr-2020 15:23

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

ALS Houston, US Date: 08-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW23_032420
Collection Date: 24-Mar-2020 12:05

ANALYTICAL REPORT
WorkOrder:HS20031084
Lab ID:HS20031084-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:37
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 17:37
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 17:37
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:37
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 17:37
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 17:37
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:37
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 17:37
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 17:37
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 17:37
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:37
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 17:37
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 17:37
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 17:37
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 17:37
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 17:37
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:37
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 17:37
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:37
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 17:37
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 17:37
2-Butanone	**300**		**0.50**	**1.0**	**2.0**	**UG/L**	1	25-Mar-2020 17:37
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:37
2-Hexanone	**4.0**		**1.0**	**1.0**	**2.0**	**UG/L**	1	25-Mar-2020 17:37
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 17:37
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:37
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	25-Mar-2020 17:37
Acetone	**400**		**0.40**	**1.0**	**2.0**	**UG/L**	1	25-Mar-2020 17:37
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 17:37
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 17:37
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 17:37
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 17:37
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 17:37
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 17:37
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	25-Mar-2020 17:37
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 17:37
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:37
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:37
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 17:37

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

ALS Houston, US Date: 08-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW23_032420
Collection Date: 24-Mar-2020 12:05

ANALYTICAL REPORT
WorkOrder:HS20031084
Lab ID:HS20031084-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 17:37
cis-1,2-Dichloroethene	**6.5**		**0.20**	**0.50**	**1.0**	**UG/L**	1	25-Mar-2020 17:37
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	25-Mar-2020 17:37
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:37
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 17:37
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:37
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:37
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	25-Mar-2020 17:37
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:37
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	25-Mar-2020 17:37
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	25-Mar-2020 17:37
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 17:37
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:37
Naphthalene	**3.0**		**0.30**	**0.50**	**1.0**	**UG/L**	1	25-Mar-2020 17:37
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:37
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:37
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:37
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:37
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:37
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 17:37
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 17:37
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 17:37
Trichloroethene	**1.3**		**0.20**	**0.50**	**1.0**	**UG/L**	1	25-Mar-2020 17:37
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 17:37
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 17:37
Surr: 1,2-Dichloroethane-d4	*93.2*			**0**	*81-118*	*%REC*	*1*	*25-Mar-2020 17:37*
Surr: 4-Bromofluorobenzene	*99.4*			**0**	*85-114*	*%REC*	*1*	*25-Mar-2020 17:37*
Surr: Dibromofluoromethane	*96.0*			**0**	*80-119*	*%REC*	*1*	*25-Mar-2020 17:37*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*1*	*25-Mar-2020 17:37*
ANIONS BY SW9056A		**Method:SW9056**						Analyst: KVL
Chloride	**925**		**2.00**	**5.00**	**5.00**	**mg/L**	10	26-Mar-2020 06:22
Nitrogen, Nitrate (As N)	0.100	U	0.0300	0.100	0.100	mg/L	1	25-Mar-2020 23:07
Sulfate	**1.84**		**0.200**	**0.500**	**0.500**	**mg/L**	1	25-Mar-2020 23:07
SUBCONTRACT ANALYSIS - DHC/DHB		**Method:NA**						Analyst: SUB
Subcontract Analysis	See attached		0	0	0	NA	1	30-Mar-2020 12:29
SUBCONTRACT ANALYSIS - RSK		**Method:NA**						Analyst: SUBCA
Subcontract Analysis	See Attached		0	0		NA	1	08-Apr-2020 10:19

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

ALS Houston, US Date: 08-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW23_032420
Collection Date: 24-Mar-2020 12:05

ANALYTICAL REPORT
WorkOrder:HS20031084
Lab ID:HS20031084-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	03-Apr-2020 15:23
SUBCONTRACT ANALYSIS - VOLATILE FATTY ACIDS		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	02-Apr-2020 09:10

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

ALS Houston, US Date: 08-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW19_032420
Collection Date: 24-Mar-2020 13:00

ANALYTICAL REPORT
WorkOrder:HS20031084
Lab ID:HS20031084-07
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 18:01
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 18:01
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 18:01
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 18:01
1,1-Dichloroethane	**0.84**	J	**0.20**	**0.50**	**1.0**	**UG/L**	1	25-Mar-2020 18:01
1,1-Dichloroethene	**4.4**		**0.20**	**0.50**	**1.0**	**UG/L**	1	25-Mar-2020 18:01
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 18:01
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 18:01
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 18:01
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 18:01
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 18:01
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 18:01
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 18:01
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 18:01
1,2-Dichloroethane	**1.1**		**0.20**	**0.50**	**1.0**	**UG/L**	1	25-Mar-2020 18:01
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 18:01
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 18:01
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 18:01
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 18:01
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 18:01
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 18:01
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	25-Mar-2020 18:01
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 18:01
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	25-Mar-2020 18:01
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 18:01
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 18:01
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	25-Mar-2020 18:01
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	25-Mar-2020 18:01
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 18:01
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 18:01
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 18:01
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 18:01
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 18:01
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 18:01
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	25-Mar-2020 18:01
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 18:01
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 18:01
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 18:01
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 18:01

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

ALS Houston, US Date: 08-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW19_032420
Collection Date: 24-Mar-2020 13:00

ANALYTICAL REPORT
WorkOrder:HS20031084
Lab ID:HS20031084-07
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 18:01
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 18:01
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	25-Mar-2020 18:01
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 18:01
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 18:01
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 18:01
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 18:01
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	25-Mar-2020 18:01
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 18:01
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	25-Mar-2020 18:01
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	25-Mar-2020 18:01
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 18:01
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 18:01
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 18:01
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 18:01
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 18:01
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 18:01
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 18:01
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 18:01
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 18:01
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 18:01
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 18:01
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 18:01
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 18:01
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 18:01
Surr: 1,2-Dichloroethane-d4	*92.9*			**0**	*81-118*	*%REC*	*1*	*25-Mar-2020 18:01*
Surr: 4-Bromofluorobenzene	*95.5*			**0**	*85-114*	*%REC*	*1*	*25-Mar-2020 18:01*
Surr: Dibromofluoromethane	*96.1*			**0**	*80-119*	*%REC*	*1*	*25-Mar-2020 18:01*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*1*	*25-Mar-2020 18:01*
ANIONS BY SW9056A		**Method:SW9056**						Analyst: KVL
Chloride	**922**		**2.00**	**5.00**	**5.00**	**mg/L**	10	26-Mar-2020 06:58
Nitrogen, Nitrate (As N)	0.100	U	0.0300	0.100	0.100	mg/L	1	25-Mar-2020 23:25
Sulfate	**989**		**2.00**	**5.00**	**5.00**	**mg/L**	10	26-Mar-2020 06:58
SUBCONTRACT ANALYSIS - DHC/DHB		**Method:NA**						Analyst: SUB
Subcontract Analysis	See attached		0	0	0	NA	1	30-Mar-2020 12:29
SUBCONTRACT ANALYSIS - RSK		**Method:NA**						Analyst: SUBCA
Subcontract Analysis	See Attached		0	0		NA	1	08-Apr-2020 10:19

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

ALS Houston, US Date: 08-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW19_032420
Collection Date: 24-Mar-2020 13:00

ANALYTICAL REPORT
WorkOrder:HS20031084
Lab ID:HS20031084-07
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	03-Apr-2020 15:23
SUBCONTRACT ANALYSIS - VOLATILE FATTY ACIDS		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	02-Apr-2020 09:10

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

ALS Houston, US Date: 08-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: Trip Blank
Collection Date: 24-Mar-2020 00:00

ANALYTICAL REPORT
WorkOrder:HS20031084
Lab ID:HS20031084-08
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	25-Mar-2020 15:37
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 15:37
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 15:37
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 15:37
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 15:37
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 15:37
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 15:37
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 15:37
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 15:37
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 15:37
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 15:37
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 15:37
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 15:37
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 15:37
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 15:37
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 15:37
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 15:37
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 15:37
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 15:37
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 15:37
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 15:37
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	25-Mar-2020 15:37
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 15:37
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	25-Mar-2020 15:37
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 15:37
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 15:37
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	25-Mar-2020 15:37
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	25-Mar-2020 15:37
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 15:37
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 15:37
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 15:37
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 15:37
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 15:37
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 15:37
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	25-Mar-2020 15:37
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	UG/L	1	25-Mar-2020 15:37
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 15:37
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 15:37
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 15:37

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

ALS Houston, US Date: 08-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: Trip Blank
Collection Date: 24-Mar-2020 00:00

ANALYTICAL REPORT
WorkOrder:HS20031084
Lab ID:HS20031084-08
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	25-Mar-2020 15:37
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 15:37
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	25-Mar-2020 15:37
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 15:37
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 15:37
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 15:37
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 15:37
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	25-Mar-2020 15:37
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 15:37
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	25-Mar-2020 15:37
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	25-Mar-2020 15:37
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	25-Mar-2020 15:37
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 15:37
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 15:37
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 15:37
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 15:37
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 15:37
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 15:37
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 15:37
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 15:37
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 15:37
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 15:37
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 15:37
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	25-Mar-2020 15:37
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	25-Mar-2020 15:37
Surr: 1,2-Dichloroethane-d4	*89.7*			**0**	*81-118*	*%REC*	*1*	*25-Mar-2020 15:37*
Surr: 4-Bromofluorobenzene	*96.2*			**0**	*85-114*	*%REC*	*1*	*25-Mar-2020 15:37*
Surr: Dibromofluoromethane	*94.5*			**0**	*80-119*	*%REC*	*1*	*25-Mar-2020 15:37*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*25-Mar-2020 15:37*

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

ALS Houston, US Date: 08-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20031084

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R358961 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS20031084-08	Trip Blank	24 Mar 2020 00:00			25 Mar 2020 15:37	1
Batch ID: R358961 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Groundwater	
HS20031084-01	35AWW11_032420	24 Mar 2020 07:45			25 Mar 2020 16:01	1
HS20031084-02	35AWW11_032420_a	24 Mar 2020 07:45			25 Mar 2020 16:25	1
HS20031084-03	35AWW20_032420	24 Mar 2020 09:05			25 Mar 2020 18:49	5
HS20031084-03	35AWW20_032420	24 Mar 2020 09:05			25 Mar 2020 18:25	25
HS20031084-04	LHSMW07_032420	24 Mar 2020 10:15			25 Mar 2020 16:49	1
HS20031084-05	35AWW06_032420	24 Mar 2020 11:10			25 Mar 2020 17:13	1
HS20031084-06	35AWW23_032420	24 Mar 2020 12:05			25 Mar 2020 17:37	1
HS20031084-07	35AWW19_032420	24 Mar 2020 13:00			25 Mar 2020 18:01	1
Batch ID: R359083 (0)	**Test Name :** ANIONS BY SW9056A				**Matrix:** Groundwater	
HS20031084-01	35AWW11_032420	24 Mar 2020 07:45			26 Mar 2020 00:56	50
HS20031084-01	35AWW11_032420	24 Mar 2020 07:45			25 Mar 2020 20:06	5
HS20031084-02	35AWW11_032420_a	24 Mar 2020 07:45			26 Mar 2020 01:32	50
HS20031084-02	35AWW11_032420_a	24 Mar 2020 07:45			25 Mar 2020 20:24	5
HS20031084-03	35AWW20_032420	24 Mar 2020 09:05			26 Mar 2020 03:39	50
HS20031084-03	35AWW20_032420	24 Mar 2020 09:05			25 Mar 2020 20:42	1
HS20031084-04	LHSMW07_032420	24 Mar 2020 10:15			26 Mar 2020 04:33	50
HS20031084-04	LHSMW07_032420	24 Mar 2020 10:15			25 Mar 2020 21:55	5
HS20031084-05	35AWW06_032420	24 Mar 2020 11:10			26 Mar 2020 05:09	10
HS20031084-05	35AWW06_032420	24 Mar 2020 11:10			25 Mar 2020 22:13	1
HS20031084-06	35AWW23_032420	24 Mar 2020 12:05			26 Mar 2020 06:22	10
HS20031084-06	35AWW23_032420	24 Mar 2020 12:05			25 Mar 2020 23:07	1
HS20031084-07	35AWW19_032420	24 Mar 2020 13:00			26 Mar 2020 06:58	10
HS20031084-07	35AWW19_032420	24 Mar 2020 13:00			25 Mar 2020 23:25	1
Batch ID: R359132 (0)	**Test Name :** SUBCONTRACT ANALYSIS - DHC/DHB				**Matrix:** Groundwater	
HS20031084-01	35AWW11_032420	24 Mar 2020 07:45			30 Mar 2020 12:29	1
HS20031084-03	35AWW20_032420	24 Mar 2020 09:05			30 Mar 2020 12:29	1
HS20031084-04	LHSMW07_032420	24 Mar 2020 10:15			30 Mar 2020 12:29	1
HS20031084-05	35AWW06_032420	24 Mar 2020 11:10			30 Mar 2020 12:29	1
HS20031084-06	35AWW23_032420	24 Mar 2020 12:05			30 Mar 2020 12:29	1
HS20031084-07	35AWW19_032420	24 Mar 2020 13:00			30 Mar 2020 12:29	1

ALS Houston, US Date: 08-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20031084

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R359358 (0)	**Test Name :** SUBCONTRACT ANALYSIS - VOLATILE FATTY ACIDS				**Matrix:** Groundwater	
HS20031084-01	35AWW11_032420	24 Mar 2020 07:45			02 Apr 2020 09:10	1
HS20031084-02	35AWW11_032420_a	24 Mar 2020 07:45			02 Apr 2020 09:10	1
HS20031084-03	35AWW20_032420	24 Mar 2020 09:05			02 Apr 2020 09:10	1
HS20031084-04	LHSMW07_032420	24 Mar 2020 10:15			02 Apr 2020 09:10	1
HS20031084-06	35AWW23_032420	24 Mar 2020 12:05			02 Apr 2020 09:10	1
HS20031084-07	35AWW19_032420	24 Mar 2020 13:00			02 Apr 2020 09:10	1
Batch ID: R359470 (0)	**Test Name :** SUBCONTRACT ANALYSIS - TOC ANALYSIS				**Matrix:** Groundwater	
HS20031084-01	35AWW11_032420	24 Mar 2020 07:45			03 Apr 2020 15:23	1
HS20031084-02	35AWW11_032420_a	24 Mar 2020 07:45			03 Apr 2020 15:23	1
HS20031084-03	35AWW20_032420	24 Mar 2020 09:05			03 Apr 2020 15:23	1
HS20031084-04	LHSMW07_032420	24 Mar 2020 10:15			03 Apr 2020 15:23	1
HS20031084-05	35AWW06_032420	24 Mar 2020 11:10			03 Apr 2020 15:23	1
HS20031084-06	35AWW23_032420	24 Mar 2020 12:05			03 Apr 2020 15:23	1
HS20031084-07	35AWW19_032420	24 Mar 2020 13:00			03 Apr 2020 15:23	1
Batch ID: R359649 (0)	**Test Name :** SUBCONTRACT ANALYSIS - RSK				**Matrix:** Groundwater	
HS20031084-01	35AWW11_032420	24 Mar 2020 07:45			08 Apr 2020 10:19	1
HS20031084-02	35AWW11_032420_a	24 Mar 2020 07:45			08 Apr 2020 10:19	1
HS20031084-03	35AWW20_032420	24 Mar 2020 09:05			08 Apr 2020 10:19	1
HS20031084-04	LHSMW07_032420	24 Mar 2020 10:15			08 Apr 2020 10:19	1
HS20031084-05	35AWW06_032420	24 Mar 2020 11:10			08 Apr 2020 10:19	1
HS20031084-06	35AWW23_032420	24 Mar 2020 12:05			08 Apr 2020 10:19	1
HS20031084-07	35AWW19_032420	24 Mar 2020 13:00			08 Apr 2020 10:19	1

ALS Houston, US Date: 08-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20031084

QC BATCH REPORT

Batch ID: R358961 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-200325** Units: **UG/L** Analysis Date: **25-Mar-2020 15:13**
Client ID: Run ID: **VOA6_358961** SeqNo: **5531839** 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	0.50	1.0								U
1,1,2-Trichloroethane	0.50	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	0.50	1.0								U
1,2,3-Trichlorobenzene	0.50	1.0								U
1,2,3-Trichloropropane	0.50	1.0								U
1,2,4-Trichlorobenzene	0.50	1.0								U
1,2,4-Trimethylbenzene	0.50	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	0.50	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	0.50	1.0								U
1,3,5-Trimethylbenzene	0.50	1.0								U
1,3-Dichlorobenzene	0.50	1.0								U
1,3-Dichloropropane	0.50	1.0								U
1,4-Dichlorobenzene	0.50	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	0.50	1.0								U
2-Hexanone	1.0	2.0								U
4-Chlorotoluene	0.50	1.0								U
4-Isopropyltoluene	0.50	1.0								U
4-Methyl-2-pentanone	1.0	2.0								U
Acetone	1.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	0.50	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	0.50	1.0								U
Bromomethane	0.50	1.0								U

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Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
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QC BATCH REPORT

Batch ID: R358961 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-200325** Units: **UG/L** Analysis Date: **25-Mar-2020 15:13**
Client ID: Run ID: **VOA6_358961** SeqNo: **5531839** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	1.0	2.0								U
Carbon tetrachloride	0.50	1.0								U
Chlorobenzene	0.50	1.0								U
Chloroethane	0.50	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	0.50	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	0.50	1.0								U
Ethylbenzene	0.50	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	0.50	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	1.0	2.0								U
Naphthalene	0.50	1.0								U
n-Butylbenzene	0.50	1.0								U
n-Propylbenzene	0.50	1.0								U
o-Xylene	0.50	1.0								U
sec-Butylbenzene	0.50	1.0								U
Styrene	0.50	1.0								U
tert-Butylbenzene	0.50	1.0								U
Tetrachloroethene	0.50	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*44.92*	*1.0*	*50*	*0*	*89.8*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*48.47*	*1.0*	*50*	*0*	*96.9*	*85 - 114*				
Surr: Dibromofluoromethane	*46.84*	*1.0*	*50*	*0*	*93.7*	*80 - 119*				
Surr: Toluene-d8	*51.58*	*1.0*	*50*	*0*	*103*	*89 - 112*				

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Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20031084

QC BATCH REPORT

Batch ID: R358961 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-200325** Units: **UG/L** Analysis Date: **25-Mar-2020 14:25**
Client ID: Run ID: **VOA6_358961** SeqNo: **5531838** 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	20.02	1.0	20	0	100	78 - 124				
1,1,1-Trichloroethane	19.91	1.0	20	0	99.5	74 - 131				
1,1,2,2-Tetrachloroethane	20.02	1.0	20	0	100	71 - 121				
1,1,2-Trichloroethane	19.82	1.0	20	0	99.1	80 - 119				
1,1-Dichloroethane	20.39	1.0	20	0	102	77 - 125				
1,1-Dichloroethene	19.1	1.0	20	0	95.5	71 - 131				
1,1-Dichloropropene	18.46	1.0	20	0	92.3	78 - 125				
1,2,3-Trichlorobenzene	21.61	1.0	20	0	108	69 - 129				
1,2,3-Trichloropropane	19.86	1.0	20	0	99.3	73 - 122				
1,2,4-Trichlorobenzene	20.91	1.0	20	0	105	69 - 130				
1,2,4-Trimethylbenzene	20.22	1.0	20	0	101	76 - 124				
1,2-Dibromo-3-chloropropane	20.75	1.0	20	0	104	62 - 128				
1,2-Dibromoethane	20.26	1.0	20	0	101	77 - 121				
1,2-Dichlorobenzene	19.73	1.0	20	0	98.6	80 - 119				
1,2-Dichloroethane	20.14	1.0	20	0	101	73 - 128				
1,2-Dichloropropane	19.95	1.0	20	0	99.8	78 - 122				
1,3,5-Trimethylbenzene	19.91	1.0	20	0	99.5	75 - 124				
1,3-Dichlorobenzene	20.03	1.0	20	0	100	80 - 119				
1,3-Dichloropropane	19.89	1.0	20	0	99.5	80 - 119				
1,4-Dichlorobenzene	19.1	1.0	20	0	95.5	79 - 118				
2,2-Dichloropropane	20.17	1.0	20	0	101	60 - 139				
2-Butanone	40.71	2.0	40	0	102	56 - 143				
2-Chlorotoluene	19.76	1.0	20	0	98.8	79 - 122				
2-Hexanone	42.16	2.0	40	0	105	57 - 139				
4-Chlorotoluene	20.11	1.0	20	0	101	78 - 122				
4-Isopropyltoluene	20.38	1.0	20	0	102	77 - 127				
4-Methyl-2-pentanone	40.65	2.0	40	0	102	67 - 130				
Acetone	34.83	2.0	40	0	87.1	39 - 160				
Benzene	19.82	1.0	20	0	99.1	79 - 120				
Bromobenzene	20.12	1.0	20	0	101	80 - 120				
Bromochloromethane	20.25	1.0	20	0	101	78 - 123				
Bromodichloromethane	19.71	1.0	20	0	98.6	79 - 125				
Bromoform	20.47	1.0	20	0	102	66 - 130				
Bromomethane	23.3	1.0	20	0	116	53 - 141				

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Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20031084

QC BATCH REPORT

Batch ID: R358961 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-200325** Units: **UG/L** Analysis Date: **25-Mar-2020 14:25**
Client ID: Run ID: **VOA6_358961** SeqNo: **5531838** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	40.44	2.0	40	0	101	64 - 133				
Carbon tetrachloride	18.54	1.0	20	0	92.7	72 - 136				
Chlorobenzene	20.08	1.0	20	0	100	82 - 118				
Chloroethane	18.83	1.0	20	0	94.2	60 - 138				
Chloroform	19.72	1.0	20	0	98.6	79 - 124				
Chloromethane	19.6	1.0	20	0	98.0	50 - 139				
cis-1,2-Dichloroethene	20.55	1.0	20	0	103	78 - 123				
cis-1,3-Dichloropropene	20.03	1.0	20	0	100	75 - 124				
Dibromochloromethane	19.65	1.0	20	0	98.2	74 - 126				
Dibromomethane	20.33	1.0	20	0	102	79 - 123				
Dichlorodifluoromethane	18.03	1.0	20	0	90.1	32 - 152				
Ethylbenzene	20.22	1.0	20	0	101	79 - 121				
Hexachlorobutadiene	20.38	1.0	20	0	102	66 - 134				
Isopropylbenzene	20.26	1.0	20	0	101	72 - 131				
m,p-Xylene	40.52	2.0	40	0	101	80 - 121				
Methylene chloride	19.82	2.0	20	0	99.1	74 - 124				
Naphthalene	20.82	1.0	20	0	104	61 - 128				
n-Butylbenzene	20.58	1.0	20	0	103	75 - 128				
n-Propylbenzene	20.51	1.0	20	0	103	76 - 126				
o-Xylene	20.36	1.0	20	0	102	78 - 122				
sec-Butylbenzene	19.98	1.0	20	0	99.9	77 - 126				
Styrene	20.06	1.0	20	0	100	78 - 123				
tert-Butylbenzene	19.94	1.0	20	0	99.7	78 - 124				
Tetrachloroethene	20	1.0	20	0	100	74 - 129				
Toluene	20.03	1.0	20	0	100	80 - 121				
trans-1,2-Dichloroethene	20.05	1.0	20	0	100	75 - 124				
trans-1,3-Dichloropropene	19.87	1.0	20	0	99.4	73 - 127				
Trichloroethene	20.18	1.0	20	0	101	79 - 123				
Trichlorofluoromethane	20.08	1.0	20	0	100	65 - 141				
Vinyl chloride	18.07	1.0	20	0	90.3	58 - 137				
Surr: 1,2-Dichloroethane-d4	*51.01*	*1.0*	*50*	*0*	*102*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*50.41*	*1.0*	*50*	*0*	*101*	*85 - 114*				
Surr: Dibromofluoromethane	*51.96*	*1.0*	*50*	*0*	*104*	*80 - 119*				
Surr: Toluene-d8	*51.04*	*1.0*	*50*	*0*	*102*	*89 - 112*				

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Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20031084

QC BATCH REPORT

Batch ID: R358961 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20031084-03MS** Units: **UG/L** Analysis Date: **25-Mar-2020 19:13**
Client ID: **35AWW20_032420** Run ID: **VOA6_358961** SeqNo: **5531849** PrepDate: DF: **25**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	523.9	25	500	0	105	78 - 124				
1,1,1-Trichloroethane	516.5	25	500	0	103	74 - 131				
1,1,2,2-Tetrachloroethane	517.8	25	500	0	104	71 - 121				
1,1,2-Trichloroethane	605.2	25	500	83.62	104	80 - 119				
1,1-Dichloroethane	1099	25	500	584.3	103	77 - 125				
1,1-Dichloroethene	1829	25	500	1311	104	71 - 131				
1,1-Dichloropropene	502.8	25	500	0	101	78 - 125				
1,2,3-Trichlorobenzene	354.7	25	500	0	70.9	69 - 129				
1,2,3-Trichloropropane	545.6	25	500	0	109	73 - 122				
1,2,4-Trichlorobenzene	373.2	25	500	0	74.6	69 - 130				
1,2,4-Trimethylbenzene	560.8	25	500	0	112	76 - 124				
1,2-Dibromo-3-chloropropane	506.4	25	500	0	101	62 - 128				
1,2-Dibromoethane	521.2	25	500	0	104	77 - 121				
1,2-Dichlorobenzene	563.2	25	500	26.44	107	80 - 119				
1,2-Dichloroethane	528.8	25	500	23.19	101	73 - 128				
1,2-Dichloropropane	509.5	25	500	0	102	78 - 122				
1,3,5-Trimethylbenzene	552.9	25	500	0	111	75 - 124				
1,3-Dichlorobenzene	549.5	25	500	0	110	80 - 119				
1,3-Dichloropropane	505.5	25	500	0	101	80 - 119				
1,4-Dichlorobenzene	533.1	25	500	0	107	79 - 118				
2,2-Dichloropropane	492.4	25	500	0	98.5	60 - 139				
2-Butanone	977.9	50	1000	0	97.8	56 - 143				
2-Chlorotoluene	549.5	25	500	0	110	79 - 122				
2-Hexanone	1064	50	1000	0	106	57 - 139				
4-Chlorotoluene	556.1	25	500	0	111	78 - 122				
4-Isopropyltoluene	575.4	25	500	0	115	77 - 127				
4-Methyl-2-pentanone	1065	50	1000	0	107	67 - 130				
Acetone	732.1	50	1000	0	73.2	39 - 160				
Benzene	530.5	25	500	0	106	79 - 120				
Bromobenzene	544.4	25	500	0	109	80 - 120				
Bromochloromethane	482.4	25	500	0	96.5	78 - 123				
Bromodichloromethane	498.4	25	500	0	99.7	79 - 125				
Bromoform	535.5	25	500	0	107	66 - 130				
Bromomethane	515	25	500	0	103	53 - 141				

ALS Houston, US Date: 08-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20031084

QC BATCH REPORT

Batch ID: R358961 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20031084-03MS** Units: **UG/L** Analysis Date: **25-Mar-2020 19:13**
Client ID: **35AWW20_032420** Run ID: **VOA6_358961** SeqNo: **5531849** PrepDate: DF: **25**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	1055	50	1000	0	105	64 - 133				
Carbon tetrachloride	506.2	25	500	0	101	72 - 136				
Chlorobenzene	529.2	25	500	0	106	82 - 118				
Chloroethane	569	25	500	0	114	60 - 138				
Chloroform	485.9	25	500	0	97.2	79 - 124				
Chloromethane	504.4	25	500	0	101	50 - 139				
cis-1,2-Dichloroethene	572.4	25	500	72.04	100	78 - 123				
cis-1,3-Dichloropropene	494.7	25	500	0	98.9	75 - 124				
Dibromochloromethane	515.1	25	500	0	103	74 - 126				
Dibromomethane	502.9	25	500	0	101	79 - 123				
Dichlorodifluoromethane	502.4	25	500	0	100	32 - 152				
Ethylbenzene	537.5	25	500	0	108	79 - 121				
Hexachlorobutadiene	393	25	500	0	78.6	66 - 134				
Isopropylbenzene	548.4	25	500	0	110	72 - 131				
m,p-Xylene	1091	50	1000	0	109	80 - 121				
Methylene chloride	483.4	50	500	0	96.7	74 - 124				
Naphthalene	392.3	25	500	0	78.5	61 - 128				
n-Butylbenzene	571.4	25	500	0	114	75 - 128				
n-Propylbenzene	578.8	25	500	0	116	76 - 126				
o-Xylene	538.8	25	500	0	108	78 - 122				
sec-Butylbenzene	581.7	25	500	0	116	77 - 126				
Styrene	533.4	25	500	0	107	78 - 123				
tert-Butylbenzene	564.4	25	500	0	113	78 - 124				
Tetrachloroethene	563.7	25	500	0	113	74 - 129				
Toluene	537	25	500	0	107	80 - 121				
trans-1,2-Dichloroethene	502.5	25	500	0	101	75 - 124				
trans-1,3-Dichloropropene	502.1	25	500	0	100	73 - 127				
Trichloroethene	651.8	25	500	120.3	106	79 - 123				
Trichlorofluoromethane	530.7	25	500	0	106	65 - 141				
Vinyl chloride	2113	25	500	1524	118	58 - 137				
Surr: 1,2-Dichloroethane-d4	*1124*	*25*	*1250*	*0*	*90.0*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*1230*	*25*	*1250*	*0*	*98.4*	*85 - 114*				
Surr: Dibromofluoromethane	*1190*	*25*	*1250*	*0*	*95.2*	*80 - 119*				
Surr: Toluene-d8	*1292*	*25*	*1250*	*0*	*103*	*89 - 112*				

ALS Houston, US Date: 08-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20031084

QC BATCH REPORT

Batch ID: R358961 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20031084-03MSD** Units: **UG/L** Analysis Date: **25-Mar-2020 19:37**
Client ID: **35AWW20_032420** Run ID: **VOA6_358961** SeqNo: **5531850** PrepDate: DF: **25**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	498.3	25	500	0	99.7	78 - 124	523.9	5.01	20	
1,1,1-Trichloroethane	480.6	25	500	0	96.1	74 - 131	516.5	7.2	20	
1,1,2,2-Tetrachloroethane	509.1	25	500	0	102	71 - 121	517.8	1.7	20	
1,1,2-Trichloroethane	594.1	25	500	83.62	102	80 - 119	605.2	1.84	20	
1,1-Dichloroethane	1043	25	500	584.3	91.7	77 - 125	1099	5.28	20	
1,1-Dichloroethene	1693	25	500	1311	76.5	71 - 131	1829	7.72	20	
1,1-Dichloropropene	471.8	25	500	0	94.4	78 - 125	502.8	6.35	20	
1,2,3-Trichlorobenzene	411	25	500	0	82.2	69 - 129	354.7	14.7	20	
1,2,3-Trichloropropane	508	25	500	0	102	73 - 122	545.6	7.14	20	
1,2,4-Trichlorobenzene	405.1	25	500	0	81.0	69 - 130	373.2	8.19	20	
1,2,4-Trimethylbenzene	528.2	25	500	0	106	76 - 124	560.8	5.98	20	
1,2-Dibromo-3-chloropropane	513.6	25	500	0	103	62 - 128	506.4	1.4	20	
1,2-Dibromoethane	509.5	25	500	0	102	77 - 121	521.2	2.29	20	
1,2-Dichlorobenzene	533.3	25	500	26.44	101	80 - 119	563.2	5.45	20	
1,2-Dichloroethane	519.1	25	500	23.19	99.2	73 - 128	528.8	1.87	20	
1,2-Dichloropropane	484.5	25	500	0	96.9	78 - 122	509.5	5.03	20	
1,3,5-Trimethylbenzene	518.5	25	500	0	104	75 - 124	552.9	6.42	20	
1,3-Dichlorobenzene	510.2	25	500	0	102	80 - 119	549.5	7.43	20	
1,3-Dichloropropane	502.5	25	500	0	100	80 - 119	505.5	0.605	20	
1,4-Dichlorobenzene	506.7	25	500	0	101	79 - 118	533.1	5.08	20	
2,2-Dichloropropane	448.4	25	500	0	89.7	60 - 139	492.4	9.34	20	
2-Butanone	952.8	50	1000	0	95.3	56 - 143	977.9	2.59	20	
2-Chlorotoluene	516.5	25	500	0	103	79 - 122	549.5	6.19	20	
2-Hexanone	1053	50	1000	0	105	57 - 139	1064	1.03	20	
4-Chlorotoluene	514.2	25	500	0	103	78 - 122	556.1	7.83	20	
4-Isopropyltoluene	538.9	25	500	0	108	77 - 127	575.4	6.55	20	
4-Methyl-2-pentanone	1031	50	1000	0	103	67 - 130	1065	3.29	20	
Acetone	714.6	50	1000	0	71.5	39 - 160	732.1	2.42	20	
Benzene	500.7	25	500	0	100	79 - 120	530.5	5.78	20	
Bromobenzene	509.3	25	500	0	102	80 - 120	544.4	6.65	20	
Bromochloromethane	455.4	25	500	0	91.1	78 - 123	482.4	5.75	20	
Bromodichloromethane	488.7	25	500	0	97.7	79 - 125	498.4	1.96	20	
Bromoform	517.4	25	500	0	103	66 - 130	535.5	3.44	20	
Bromomethane	486.9	25	500	0	97.4	53 - 141	515	5.61	20	

ALS Houston, US Date: 08-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20031084

QC BATCH REPORT

Batch ID: R358961 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20031084-03MSD** Units: **UG/L** Analysis Date: **25-Mar-2020 19:37**
Client ID: **35AWW20_032420** Run ID: **VOA6_358961** SeqNo: **5531850** PrepDate: DF: **25**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	967.8	50	1000	0	96.8	64 - 133	1055	8.62	20	
Carbon tetrachloride	468.8	25	500	0	93.8	72 - 136	506.2	7.68	20	
Chlorobenzene	504	25	500	0	101	82 - 118	529.2	4.88	20	
Chloroethane	491.7	25	500	0	98.3	60 - 138	569	14.6	20	
Chloroform	460.9	25	500	0	92.2	79 - 124	485.9	5.27	20	
Chloromethane	458.4	25	500	0	91.7	50 - 139	504.4	9.56	20	
cis-1,2-Dichloroethene	530.9	25	500	72.04	91.8	78 - 123	572.4	7.51	20	
cis-1,3-Dichloropropene	487.4	25	500	0	97.5	75 - 124	494.7	1.48	20	
Dibromochloromethane	498.9	25	500	0	99.8	74 - 126	515.1	3.21	20	
Dibromomethane	505.6	25	500	0	101	79 - 123	502.9	0.521	20	
Dichlorodifluoromethane	454	25	500	0	90.8	32 - 152	502.4	10.1	20	
Ethylbenzene	511.8	25	500	0	102	79 - 121	537.5	4.9	20	
Hexachlorobutadiene	404.9	25	500	0	81.0	66 - 134	393	2.98	20	
Isopropylbenzene	521.2	25	500	0	104	72 - 131	548.4	5.07	20	
m,p-Xylene	1019	50	1000	0	102	80 - 121	1091	6.88	20	
Methylene chloride	457.7	50	500	0	91.5	74 - 124	483.4	5.47	20	
Naphthalene	440.4	25	500	0	88.1	61 - 128	392.3	11.5	20	
n-Butylbenzene	546.5	25	500	0	109	75 - 128	571.4	4.47	20	
n-Propylbenzene	537.2	25	500	0	107	76 - 126	578.8	7.44	20	
o-Xylene	506.2	25	500	0	101	78 - 122	538.8	6.24	20	
sec-Butylbenzene	531.2	25	500	0	106	77 - 126	581.7	9.06	20	
Styrene	489.5	25	500	0	97.9	78 - 123	533.4	8.58	20	
tert-Butylbenzene	526.8	25	500	0	105	78 - 124	564.4	6.9	20	
Tetrachloroethene	521.6	25	500	0	104	74 - 129	563.7	7.76	20	
Toluene	505.5	25	500	0	101	80 - 121	537	6.04	20	
trans-1,2-Dichloroethene	473.3	25	500	0	94.7	75 - 124	502.5	5.99	20	
trans-1,3-Dichloropropene	491.5	25	500	0	98.3	73 - 127	502.1	2.13	20	
Trichloroethene	623.2	25	500	120.3	101	79 - 123	651.8	4.48	20	
Trichlorofluoromethane	486.9	25	500	0	97.4	65 - 141	530.7	8.6	20	
Vinyl chloride	1908	25	500	1524	76.8	58 - 137	2113	10.2	20	
Surr: 1,2-Dichloroethane-d4	*1116*	*25*	*1250*	*0*	*89.3*	*81 - 118*	*1124*	*0.777*	*20*	
Surr: 4-Bromofluorobenzene	*1237*	*25*	*1250*	*0*	*99.0*	*85 - 114*	*1230*	*0.606*	*20*	
Surr: Dibromofluoromethane	*1171*	*25*	*1250*	*0*	*93.7*	*80 - 119*	*1190*	*1.57*	*20*	
Surr: Toluene-d8	*1278*	*25*	*1250*	*0*	*102*	*89 - 112*	*1292*	*1.08*	*20*	

ALS Houston, US Date: 08-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20031084

QC BATCH REPORT

Batch ID: R358961 (0)	Instrument: VOA6	Method: VOLATILES ORGANICS BY METHOD 8260C

The following samples were analyzed in this batch:

HS20031084-01	HS20031084-02	HS20031084-03	HS20031084-04
HS20031084-05	HS20031084-06	HS20031084-07	HS20031084-08

ALS Houston, US Date: 08-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20031084

QC BATCH REPORT

Batch ID: R359083 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY SW9056A**

MBLK Sample ID: **MBLK-03.24.20 W** Units: **mg/L** Analysis Date: **25-Mar-2020 15:10**
Client ID: Run ID: **ICS-Integrion_359083** SeqNo: **5535422** PrepDate: DF: **1**

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

LCS Sample ID: **LCS-W1** Units: **mg/L** Analysis Date: **26-Mar-2020 07:34**
Client ID: Run ID: **ICS-Integrion_359083** SeqNo: **5535461** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.68	0.500	20	0	98.4	80 - 120				
Nitrogen, Nitrate (As N)	4.035	0.100	4	0	101	80 - 120				
Sulfate	19.1	0.500	20	0	95.5	80 - 120				

LCSD Sample ID: **LCSD-W1** Units: **mg/L** Analysis Date: **26-Mar-2020 07:52**
Client ID: Run ID: **ICS-Integrion_359083** SeqNo: **5535462** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.93	0.500	20	0	99.6	80 - 120	19.68	1.24	20	
Nitrogen, Nitrate (As N)	4.034	0.100	4	0	101	80 - 120	4.035	0.0297	20	
Sulfate	19.34	0.500	20	0	96.7	80 - 120	19.1	1.27	20	

MS Sample ID: **HS20031084-03MS** Units: **mg/L** Analysis Date: **26-Mar-2020 03:03**
Client ID: **35AWW20_032420** Run ID: **ICS-Integrion_359083** SeqNo: **5535446** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	791.4	5.00	100	712.7	78.6	80 - 120				SO
Nitrogen, Nitrate (As N)	22.21	1.00	20	0	111	80 - 120				
Sulfate	1075	5.00	100	1012	62.9	80 - 120				SEO

ALS Houston, US Date: 08-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20031084

QC BATCH REPORT

Batch ID: R359083 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY SW9056A**

MS Sample ID: **HS20031084-03MS** Units: **mg/L** Analysis Date: **26-Mar-2020 03:57**
Client ID: **35AWW20_032420** Run ID: **ICS-Integrion_359083** SeqNo: **5535449** PrepDate: DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	771.8	25.0	500	718.2	10.7	80 - 120				S
Nitrogen, Nitrate (As N)	24.64	5.00	100	0	24.6	80 - 120				S
Sulfate	1038	25.0	500	1021	3.45	80 - 120				S

MS Sample ID: **HS20031084-03MS** Units: **mg/L** Analysis Date: **25-Mar-2020 21:00**
Client ID: **35AWW20_032420** Run ID: **ICS-Integrion_359083** SeqNo: **5535428** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	690.6	0.500	10	71.83	6190	80 - 120				SEO
Nitrogen, Nitrate (As N)	2.342	0.100	2	0	117	80 - 120				
Sulfate	0.500	0.500	10	102.4	-1020	80 - 120				SO U

MS Sample ID: **HS20030838-01MS** Units: **mg/L** Analysis Date: **26-Mar-2020 00:20**
Client ID: Run ID: **ICS-Integrion_359083** SeqNo: **5535437** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	356.1	0.500	10	352.5	35.8	80 - 120				SEO
Nitrogen, Nitrate (As N)	2.064	0.100	2	0.101	98.1	80 - 120				
Sulfate	42.57	0.500	10	32.76	98.1	80 - 120				

MSD Sample ID: **HS20031084-03MSD** Units: **mg/L** Analysis Date: **25-Mar-2020 21:37**
Client ID: **35AWW20_032420** Run ID: **ICS-Integrion_359083** SeqNo: **5535429** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	690.3	0.500	10	71.83	6180	80 - 120	690.6	0.0442	20	SEO
Nitrogen, Nitrate (As N)	2.372	0.100	2	0	119	80 - 120	2.342	1.28	20	
Sulfate	0.500	0.500	10	102.4	-1020	80 - 120	0	0	20	SO U

ALS Houston, US Date: 08-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20031084

QC BATCH REPORT

Batch ID: R359083 (0) **Instrument:** ICS-Integrion **Method:** ANIONS BY SW9056A

MSD Sample ID: **HS20031084-03MSD** Units: **mg/L** Analysis Date: **26-Mar-2020 04:15**
Client ID: **35AWW20_032420** Run ID: **ICS-Integrion_359083** SeqNo: **5535450** PrepDate: DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	779.4	25.0	500	718.2	12.2	80 - 120	771.8	0.973	20	S
Nitrogen, Nitrate (As N)	24.79	5.00	100	0	24.8	80 - 120	24.64	0.587	20	S
Sulfate	1049	25.0	500	1021	5.66	80 - 120	1038	1.06	20	S

MSD Sample ID: **HS20031084-03MSD** Units: **mg/L** Analysis Date: **26-Mar-2020 03:21**
Client ID: **35AWW20_032420** Run ID: **ICS-Integrion_359083** SeqNo: **5535447** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	790.8	5.00	100	712.7	78.0	80 - 120	791.4	0.0758	20	SO
Nitrogen, Nitrate (As N)	22.23	1.00	20	0	111	80 - 120	22.21	0.0855	20	
Sulfate	1076	5.00	100	1012	63.7	80 - 120	1075	0.0781	20	SEO

MSD Sample ID: **HS20030838-01MSD** Units: **mg/L** Analysis Date: **26-Mar-2020 00:38**
Client ID: Run ID: **ICS-Integrion_359083** SeqNo: **5535438** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	353.8	0.500	10	352.5	13.3	80 - 120	356.1	0.632	20	SEO
Nitrogen, Nitrate (As N)	2.122	0.100	2	0.101	101	80 - 120	2.064	2.81	20	
Sulfate	41.66	0.500	10	32.76	89.0	80 - 120	42.57	2.17	20	

The following samples were analyzed in this batch:

HS20031084-01	HS20031084-02	HS20031084-03	HS20031084-04
HS20031084-05	HS20031084-06	HS20031084-07	

ALS Houston, US Date: 08-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: **HS20031084**

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
California	2919, 2019-2020	30-Apr-2020
Dept of Defense	ANAB L2231 V009	22-Dec-2021
Florida	E87611-28	30-Jun-2020
Illinois	2000322019-2	09-May-2020
Kansas	E-10352 2019-2020	31-Jul-2020
Kentucky	123043, 2019-2020	30-Apr-2020
Louisiana	03087, 2019-2020	30-Jun-2020
Maryland	343, 2019-2020	30-Jun-2020
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2019-2020	30-Apr-2020
Oklahoma	2019-067	31-Aug-2020
Texas	T104704231-19-25	30-Apr-2020

ALS Houston, US Date: 08-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Work Order: HS20031084

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20031084-01	35AWW11_032420	Login	3/25/2020 10:16:12 AM	JML	Sub
HS20031084-01	35AWW11_032420	Login	3/25/2020 10:16:12 AM	JML	Sub
HS20031084-01	35AWW11_032420	Login	3/25/2020 10:16:12 AM	JML	WET034
HS20031084-01	35AWW11_032420	Login	3/25/2020 10:16:12 AM	JML	VOA176
HS20031084-01	35AWW11_032420	Login	3/25/2020 10:16:12 AM	JML	Sub
HS20031084-01	35AWW11_032420	Login	3/25/2020 10:16:12 AM	JML	Sub
HS20031084-02	35AWW11_032420_a	Login	3/25/2020 10:24:09 AM	JML	Sub
HS20031084-02	35AWW11_032420_a	Login	3/25/2020 10:24:09 AM	JML	WET034
HS20031084-02	35AWW11_032420_a	Login	3/25/2020 10:24:09 AM	JML	VOA176
HS20031084-02	35AWW11_032420_a	Login	3/25/2020 10:24:09 AM	JML	Sub
HS20031084-02	35AWW11_032420_a	Login	3/25/2020 10:24:09 AM	JML	Sub
HS20031084-03	35AWW20_032420	Login	3/25/2020 10:24:09 AM	JML	Sub
HS20031084-03	35AWW20_032420	Login	3/25/2020 10:24:09 AM	JML	Sub
HS20031084-03	35AWW20_032420	Login	3/25/2020 10:24:09 AM	JML	WET034
HS20031084-03	35AWW20_032420	Login	3/25/2020 10:24:09 AM	JML	VOA176
HS20031084-03	35AWW20_032420	Login	3/25/2020 10:24:09 AM	JML	Sub
HS20031084-03	35AWW20_032420	Login	3/25/2020 10:24:09 AM	JML	Sub
HS20031084-04	LHSMW07_032420	Login	3/25/2020 10:24:09 AM	JML	Sub
HS20031084-04	LHSMW07_032420	Login	3/25/2020 10:24:09 AM	JML	Sub
HS20031084-04	LHSMW07_032420	Login	3/25/2020 10:24:09 AM	JML	WET034
HS20031084-04	LHSMW07_032420	Login	3/25/2020 10:24:09 AM	JML	VOA176
HS20031084-04	LHSMW07_032420	Login	3/25/2020 10:24:09 AM	JML	Sub
HS20031084-04	LHSMW07_032420	Login	3/25/2020 10:24:09 AM	JML	Sub
HS20031084-05	35AWW06_032420	Login	3/25/2020 10:24:09 AM	JML	Sub
HS20031084-05	35AWW06_032420	Login	3/25/2020 10:24:09 AM	JML	WET034
HS20031084-05	35AWW06_032420	Login	3/25/2020 10:24:09 AM	JML	VOA176
HS20031084-05	35AWW06_032420	Login	3/25/2020 10:24:09 AM	JML	Sub
HS20031084-05	35AWW06_032420	Login	3/25/2020 10:24:09 AM	JML	Sub
HS20031084-06	35AWW23_032420	Login	3/25/2020 10:24:09 AM	JML	Sub
HS20031084-06	35AWW23_032420	Login	3/25/2020 10:24:09 AM	JML	Sub
HS20031084-06	35AWW23_032420	Login	3/25/2020 10:24:09 AM	JML	WET034
HS20031084-06	35AWW23_032420	Login	3/25/2020 10:24:09 AM	JML	VOA176
HS20031084-06	35AWW23_032420	Login	3/25/2020 10:24:09 AM	JML	Sub
HS20031084-06	35AWW23_032420	Login	3/25/2020 10:24:09 AM	JML	Sub
HS20031084-07	35AWW19_032420	Login	3/25/2020 10:24:09 AM	JML	Sub
HS20031084-07	35AWW19_032420	Login	3/25/2020 10:24:09 AM	JML	Sub
HS20031084-07	35AWW19_032420	Login	3/25/2020 10:24:09 AM	JML	WET034
HS20031084-07	35AWW19_032420	Login	3/25/2020 10:24:09 AM	JML	VOA176
HS20031084-07	35AWW19_032420	Login	3/25/2020 10:24:09 AM	JML	Sub

ALS Houston, US Date: 08-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Work Order: HS20031084

SAMPLE TRACKING

HS20031084-07	35AWW19_032420	Login	3/25/2020 10:24:09 AM	JML	Sub
HS20031084-08	Trip Blank	Login	3/25/2020 10:28:32 AM	JML	VOA176

ALS Houston, US Date: 08-Apr-20

Sample Receipt Checklist

Client Name: Bhate Environmental
Work Order: HS20031084
Date/Time Received: **25-Mar-2020 08:45**
Received by: **AC**

Checklist completed by: *Paresh M. Giga* eSignature 25-Mar-2020 Date
Reviewed by: *RJ Modashia* eSignature 25-Mar-2020 Date

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

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	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):	0.4c U/c	IR11	
Cooler(s)/Kit(s):	44711		
Date/Time sample(s) sent to storage:	3/25/2020 10:50		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

bhate

1608 13th Avenue South, Suite 300
Birmingham Alabama 35205
Tel: 205-918-4000
Fax: 205-918-4050

Chain of Custody and Analytical Request

Page: _____ of _____

Project/Phase No: NWO1312.0150

COC Number(1): _____

LIMS Number: _____

Facility/Base I.D.: LHAAP

Project/Site Name: LHAAP / Site 58

Client Name:

Collected by: Scott Beesinger

Field Sample ID (30 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code (2)	Sample Number (3)	Sample Matrix (4)	Number of containers	VOC	MEE	TOC	Carbon Dioxide	Anions	Ambient Blank Lot Control Number	Equipment Blank Lot Control Number	Trip Blank Lot Control Number	Cooler ID
35AWW11-032420	24MAR2020	0745	-	N		WG	11	X	X	X	X	X				
35AWW11-032420-a	24MAR2020	0745	-	FD		WG	11	X	X	X	X	X				
35AWW20-032420	24MAR2020	0905	-	N		WG	11	X	X	X	X	X				
35AWW20-032420-MS	24MAR2020	0905		MS		WG	11	X	X	X	X	X				
35AWW20-032420-MSD	24MAR2020	0905		SD		WG	11	X	X	X	X	X				
LHSMW07-032420	24MAR2020	1015	-	N		WG	11	X	X	X	X	X				
35AWW06-032420	24MAR2020	1110	-	N		WG	11	X	X	X	X	X				
35AWW23-032420	24MAR2020	1205	-	N		WG	11	X	X	X	X	X				
35AWW19-032420	24MAR2020	1300	-	N		WG	11	X	X	X	X	X				
TRIP BLANK	24MAR2020		-	TB		W	2	X								
			-													

Sample Analysis Requested (5) | Quality Assurance Samples (6)

HS20031084
Bhate Environmental Associates, Inc.
LHAAP-58

COMMENTS: _____

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received By (signed)	Date	Time
1.	Scott Beesinger	3/24/20	1430	ALC	3/25/2020	0345
2.						
3.						

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: _____ Shipped No.:

_____ Method of Shipment: _____

_____ Fed _____ Ex _____ Airbill Number:

_____ Analytical Lab: ALS 10450 Stanclift Rd, Suite 210 Houston, TX 77099 (281) 530-5656

ATTN: SONIA WEST Lab Recipient: Delivery Date/Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)

2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-c) Sample, FD = Field Duplicate (-a) Samples, FR = Field Replicate (-b) Samples, EB = Equipment Blank (-d) Samples, MS = Matrix Spike, SD = Matrix Spike Duplicate, AB = Ambient Blank (-e)

3.) Sample Number: Unique sample number collected from a particular location per day. (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01, if sampled again on 10/10/99 = 02, etc.)

4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc), SQ = Soil Blanks

5.) Sample Analysis Requested: Analytical method requested and number of containers provided for each.

6.) Quality assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipment Blank Lot Control

44711 cooler

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

44711

CUSTODY SEAL

Date: 3/24/20 Time: 1430
Name: Scott Beesinger
Company: APTIM

Seal Broken By: SM
Date: 03/25/20

44711 MAR 2 5 2020

Must Deliver Next Business Day
Time and Tempature Sensitive!

44711

ORIGIN ID:SGRA (903) 930-6193
SCOTT BEESINGER
APTIM ENVIROMENTAL & INFASTRUCTURE
1203-B EAST GRAND AVE
PMB 202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 01NOV19
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) 530-5868
REF: LHAAP 4 - RJ

RMA:

FedEx Express

FedEx
TRK# 0221 1251 0291 2710

WED - 25 MAR 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

April 03, 2020

Analytical Report for Service Request No: K2002616

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

RE: HS20031084

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory March 26, 2020
For your reference, these analyses have been assigned our service request number **K2002616.**

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
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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

ALS Environmental

Client: ALS Environmental - US
Project: HS20031084
Sample Matrix: Ground Water

Service Request: K2002616
Date Received: 03/26/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

Sample Receipt:

Seven ground water samples were received for analysis at ALS Environmental on 03/26/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

General Chemistry:

No significant anomalies were noted with this analysis.

Approved by Kelley Lovejoy Date 04/03/2020

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

K2002616

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

Subcontract Chain of Custody

SAMPLING STATE: **Texas** **COC ID:** **13579**

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:	HS20031084
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20031084-01**	**35AWW11_032420**	**Groundwater**	**24 Mar 2020 07:45**
	TOC Analysis for DOD Level IV/Excel EDD			08 Apr 2020
2.	**HS20031084-02**	**35AWW11_032420-a**	**Groundwater**	**24 Mar 2020 07:45**
	TOC Analysis for DOD Level IV/Excel EDD			08 Apr 2020
3.	**HS20031084-03**	**35AWW20_032420**	**Groundwater**	**24 Mar 2020 09:05**
	TOC Analysis for DOD Level IV/Excel EDD			08 Apr 2020
4.	**HS20031084-04**	**LHSMW07_032420**	**Groundwater**	**24 Mar 2020 10:15**
	TOC Analysis for DOD Level IV/Excel EDD			08 Apr 2020
5.	**HS20031084-05**	**35AWW06_032420**	**Groundwater**	**24 Mar 2020 11:10**
	TOC Analysis for DOD Level IV/Excel EDD			08 Apr 2020
6.	**HS20031084-06**	**35AWW23_032420**	**Groundwater**	**24 Mar 2020 12:05**
	TOC Analysis for DOD Level IV/Excel EDD			08 Apr 2020
7.	**HS20031084-07**	**35AWW19_032420**	**Groundwater**	**24 Mar 2020 13:00**
	TOC Analysis for DOD Level IV/Excel EDD			08 Apr 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.
HS20031084-03 = MS/MSD

K200261 5

Subcontract Chain of Custody

SAMPLING STATE: **Texas** **COC ID:** **13579**

QC Level: DOD IV (DoD Data Package)

Relinquished By:	[signature]	Date/Time:	3/25/20 18:00
Received By:	[signature] ALS	Date/Time:	3/26/20 0940
Cooler ID(s):		Temperature(s):	

PC KL

Cooler Receipt and Preservation Form

Client ALS-Houston Service Request K20 02616

Received: 3/26/20 Opened: 3/26/20 By: dh Unloaded: 3/26/20 By: dh

1. Samples were received via? *USPS* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 2 Front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N

Temp Blank	Sample 1	Sample 2	Sample 3	Sample 4	IR GUN	Cooler / COC ID NA	Tracking Number NA	Filed
—	4.2	4.3	3.9	3.8	39800488WS	13579	125102958701	

4. Packing material: *Inserts* *Baggies* (*Bubble Wrap*) *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
6. Were samples received in good condition (temperature, unbroken)? *Indicate in the table below.* NA (Y) N
   If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA (Y) N
11. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
12. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

General Chemistry

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	K2002616
Project:	HS20031084	**Date Collected:**	03/24/20
Sample Matrix:	Ground Water	**Date Received:**	03/26/20
Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Carbon, Total Organic

Sample Name	Lab Code	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
35AWW11_32420	K2002616-001	**5.88**	0.50	0.20	0.07	1	03/31/20 14:24	
35AWW11_32420-a	K2002616-002	**7.86**	0.50	0.20	0.07	1	03/31/20 14:52	
35AWW20_32420	K2002616-003	**18.3**	0.50	0.20	0.07	1	03/31/20 15:20	
LHSMW07_32420	K2002616-004	**3.29**	0.50	0.20	0.07	1	03/31/20 16:18	
35AWW06_32420	K2002616-005	**15.6**	0.50	0.20	0.07	1	03/31/20 16:46	
35AWW23_32420	K2002616-006	**250**	100	40	20	200	03/31/20 17:44	
35AWW19_32420	K2002616-007	**1.79**	0.50	0.20	0.07	1	03/31/20 18:12	
Method Blank	K2002616-MB	ND U	0.50	0.20	0.07	1	03/31/20 13:40	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2002616
Project	HS20031084	**Date Collected:**	03/24/20
Sample Matrix:	Ground Water	**Date Received:**	03/26/20
Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Replicate Sample Summary
Carbon, Total Organic

Sample Name:	Lab Code:	LOQ	LOD	MDL	Sample Result	Duplicate Result	Average	RPD	RPD Limit	Date Analyzed
35AWW11_32420	K2002616-001DUP	0.50	0.20	0.07	5.88	5.76	5.82	2	10	03/31/20
35AWW11_32420-a	K2002616-002DUP	0.50	0.20	0.07	7.86	8.19	8.03	4	10	03/31/20
35AWW20_32420	K2002616-003DUP	0.50	0.20	0.07	18.3	17.9	18.1	2	10	03/31/20
LHSMW07_32420	K2002616-004DUP	0.50	0.20	0.07	3.29	2.88	3.08	13 *	10	03/31/20
35AWW06_32420	K2002616-005DUP	0.50	0.20	0.07	15.6	16.3	15.9	5	10	03/31/20
35AWW23_32420	K2002616-006DUP	100	40	20	250	240	244	5	10	03/31/20
35AWW19_32420	K2002616-007DUP	0.50	0.20	0.07	1.79	1.76	1.77	1	10	03/31/20

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

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

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

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2002616
Project:	HS20031084	**Date Collected:**	03/24/20
Sample Matrix:	Ground Water	**Date Received:**	03/26/20
		Date Analyzed:	03/31/20
		Date Extracted:	NA

Matrix Spike Summary
Carbon, Total Organic

Sample Name:	35AWW20_32420	**Units:**	mg/L
Lab Code:	K2002616-003	**Basis:**	NA
Analysis Method:	SM 5310 C		
Prep Method:	None		

Matrix Spike
K2002616-003MS

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Carbon, Total Organic	18.3	129	100	111	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.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2002616
Project:	HS20031084	**Date Analyzed:**	03/31/20
Sample Matrix:	Ground Water	**Date Extracted:**	NA

Lab Control Sample Summary
Carbon, Total Organic

Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	675059

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2002616-LCS	23.2	25.0	93	83-117

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:** K2002616
Project: HS20031084

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	675059	KQ2004390-01	03/31/20 13:11	25.0	24.9	100	90-110
CCV2	675059	KQ2004390-02	03/31/20 17:14	25.0	26.4	105	90-110
CCV3	675059	KQ2004390-03	03/31/20 22:24	25.0	24.5	98	90-110
CCV4	675059	KQ2004390-04	04/01/20 03:08	25.0	23.9	96	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:**K2002616
Project: HS20031084

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	675059	KQ2004390-05	03/31/20 13:25	0.50	0.20	0.07	ND	U
CCB2	675059	KQ2004390-06	03/31/20 17:29	0.50	0.20	0.07	ND	U
CCB3	675059	KQ2004390-07	03/31/20 22:39	0.50	0.20	0.07	ND	U
CCB4	675059	KQ2004390-08	04/01/20 03:22	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
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Work Request # Original ( ) K2002616, 2617, 2626, 2643, 2669, 2615, 2627,
Tier: IV IV I IV II I I
Date Analyzed: 3/31/20
Analyst: BDP
Analysis: TOC
TOC: 675059, 675060
Run #

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: K2002616-4/4d report a high %RSD due to suspected non-homogenous sample.

Final Approved by: _____ Date: 4/1/20

DQREPORT

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** BDITZLER **Analysis Lot:** 675059 **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
K2002616-001	Carbon, Total Organic	N/A		Ground Water	5.88 mg/L	10 mL	5.88 mg/L	1	0.07	0.50			3/31/20 14:24:00	N	IV
K2002616-002	Carbon, Total Organic	N/A		Ground Water	7.86 mg/L	10 mL	7.86 mg/L	1	0.07	0.50			3/31/20 14:52:00	N	IV
K2002616-003	Carbon, Total Organic	N/A		Ground Water	18.28 mg/L	10 mL	18.3 mg/L	1	0.07	0.50			3/31/20 15:20:00	Y	IV
K2002616-004	Carbon, Total Organic	N/A		Ground Water	3.29 mg/L	10 mL	3.29 mg/L	1	0.07	0.50			3/31/20 16:18:00	N	IV
K2002616-005	Carbon, Total Organic	N/A		Ground Water	15.55 mg/L	10 mL	15.6 mg/L	1	0.07	0.50			3/31/20 16:46:00	N	IV
K2002616-006	Carbon, Total Organic	N/A		Ground Water	1.25 mg/L	10 mL	250 mg/L	200	20	100			3/31/20 17:44:00	N	IV
K2002616-007	Carbon, Total Organic	N/A		Ground Water	1.79 mg/L	10 mL	1.79 mg/L	1	0.07	0.50			3/31/20 18:12:00	N	IV
K2002617-001	Carbon, Total Organic	N/A		Water	1.97 mg/L	10 mL	1.97 mg/L	1	0.07	0.50			3/31/20 18:40:00	N	IV
K2002626-001	Carbon, Total Organic	N/A		Ground Water	1.96 mg/L	10 mL	78 mg/L	40	3	20			3/31/20 21:56:00	N	I
K2002626-002	Carbon, Total Organic	N/A		Ground Water	4.92 mg/L	10 mL	4.92 mg/L	1	0.07	0.50			3/31/20 23:23:00	N	I
K2002626-003	Carbon, Total Organic	N/A		Ground Water	8.93 mg/L	10 mL	8.93 mg/L	1	0.07	0.50			3/31/20 23:51:00	N	I
K2002643-001	Carbon, Total Organic	N/A		Ground Water	5.21 mg/L	10 mL	5.21 mg/L	1	0.07	0.50			3/31/20 19:08:00	N	IV
K2002643-002	Carbon, Total Organic	N/A		Ground Water	13.59 mg/L	10 mL	2720 mg/L	200	20	100			3/31/20 19:36:00	N	IV
K2002643-003	Carbon, Total Organic	N/A		Ground Water	4.10 mg/L	10 mL	820 mg/L	200	20	100			3/31/20 20:04:00	N	IV
K2002643-004	Carbon, Total Organic	N/A		Ground Water	4.10 mg/L	10 mL	820 mg/L	200	20	100			3/31/20 20:32:00	N	IV
K2002643-005	Carbon, Total Organic	N/A		Ground Water	3.23 mg/L	10 mL	650 mg/L	200	20	100			3/31/20 21:00:00	N	IV
K2002669-001	Carbon, Total Organic	N/A		Water	2.38 mg/L	10 mL	2.38 mg/L	1	0.07	0.50			3/31/20 21:28:00	N	II
KQ2004390-01	Carbon, Total Organic	CCV		Ground Water	24.90 mg/L	10 mL	24.9 mg/L	1					3/31/20 13:11:00	N	IV
KQ2004390-02	Carbon, Total Organic	CCV		Ground Water	26.36 mg/L	10 mL	26.4 mg/L	1					3/31/20 17:14:00	N	IV
KQ2004390-03	Carbon, Total Organic	CCV		Ground Water	24.52 mg/L	10 mL	24.5 mg/L	1					3/31/20 22:24:00	N	IV
KQ2004390-04	Carbon, Total Organic	CCV		Ground Water	23.88 mg/L	10 mL	23.9 mg/L	1					4/1/20 03:08:00	N	IV
KQ2004390-05	Carbon, Total Organic	CCB		Ground Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			3/31/20 13:25:00	N	IV
KQ2004390-06	Carbon, Total Organic	CCB		Ground Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			3/31/20 17:29:00	N	IV
KQ2004390-07	Carbon, Total Organic	CCB		Ground Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			3/31/20 22:39:00	N	IV

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

4/1/20

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** BDITZLER **Analysis Lot:** 675059 **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
KQ2004390-08	Carbon, Total Organic	CCB		Ground Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/1/20 03:22:00	N	IV
KQ2004390-09	Carbon, Total Organic	MB		Ground Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			3/31/20 13:40:00	N	IV
KQ2004390-10	Carbon, Total Organic	LCS		Ground Water	23.18 mg/L	10 mL	23.2 mg/L	1	0.07	0.50	93		3/31/20 13:55:00	N	IV
KQ2004390-11	Carbon, Total Organic	MS	K2002616-003	Ground Water	32.23 mg/L	10 mL	129 mg/L	4	0.3	2.0	111		3/31/20 15:49:00	N	IV
KQ2004390-12	Carbon, Total Organic	DUP	K2002616-002	Ground Water	8.19 mg/L	10 mL	8.19 mg/L	1	0.07	0.50		4	3/31/20 14:52:00	N	IV
KQ2004390-13	Carbon, Total Organic	DUP	K2002616-001	Ground Water	5.76 mg/L	10 mL	5.76 mg/L	1	0.07	0.50		2	3/31/20 14:24:00	N	IV
KQ2004390-14	Carbon, Total Organic	DUP	K2002616-003	Ground Water	17.94 mg/L	10 mL	17.9 mg/L	1	0.07	0.50		2	3/31/20 15:20:00	N	IV
KQ2004390-15	Carbon, Total Organic	DUP	K2002616-004	Ground Water	2.88 mg/L	10 mL	2.88 mg/L	1	0.07	0.50		13*	3/31/20 16:18:00	N	IV
KQ2004390-16	Carbon, Total Organic	DUP	K2002616-005	Ground Water	16.31 mg/L	10 mL	16.3 mg/L	1	0.07	0.50		5	3/31/20 16:46:00	N	IV
KQ2004390-17	Carbon, Total Organic	DUP	K2002616-006	Ground Water	1.19 mg/L	10 mL	240 mg/L	200	20	100		5	3/31/20 17:44:00	N	IV
KQ2004390-18	Carbon, Total Organic	DUP	K2002616-007	Ground Water	1.76 mg/L	10 mL	1.76 mg/L	1	0.07	0.50		1	3/31/20 18:12:00	N	IV
KQ2004390-19	Carbon, Total Organic	DUP	K2002617-001	Water	1.92 mg/L	10 mL	1.92 mg/L	1	0.07	0.50		3	3/31/20 18:40:00	N	IV
KQ2004390-20	Carbon, Total Organic	DUP	K2002626-003	Ground Water	9.15 mg/L	10 mL	9.15 mg/L	1	0.07	0.50		3	3/31/20 23:51:00	N	I
KQ2004390-21	Carbon, Total Organic	DUP	K2002626-001	Ground Water	1.84 mg/L	10 mL	74 mg/L	40	3	20		6	3/31/20 21:56:00	N	I
KQ2004390-22	Carbon, Total Organic	DUP	K2002626-002	Ground Water	4.82 mg/L	10 mL	4.82 mg/L	1	0.07	0.50		2	3/31/20 23:23:00	N	I
KQ2004390-23	Carbon, Total Organic	DUP	K2002643-002	Ground Water	13.82 mg/L	10 mL	2760 mg/L	200	20	100		2	3/31/20 19:36:00	N	IV
KQ2004390-24	Carbon, Total Organic	DUP	K2002643-001	Ground Water	5.01 mg/L	10 mL	5.01 mg/L	1	0.07	0.50		4	3/31/20 19:08:00	N	IV
KQ2004390-25	Carbon, Total Organic	DUP	K2002643-003	Ground Water	4.00 mg/L	10 mL	800 mg/L	200	20	100		3	3/31/20 20:04:00	N	IV
KQ2004390-26	Carbon, Total Organic	DUP	K2002643-004	Ground Water	4.10 mg/L	10 mL	820 mg/L	200	20	100		<1	3/31/20 20:32:00	N	IV
KQ2004390-27	Carbon, Total Organic	DUP	K2002643-005	Ground Water	3.23 mg/L	10 mL	650 mg/L	200	20	100		<1	3/31/20 21:00:00	N	IV
KQ2004390-28	Carbon, Total Organic	DUP	K2002669-001	Water	2.35 mg/L	10 mL	2.35 mg/L	1	0.07	0.50		1	3/31/20 21:28:00	N	II

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** BDITZLER **Analysis Lot:** 675060 **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
K2002615-001	Carbon, Total Organic	N/A		Water	3.82 mg/L	10 mL	3.82 mg/L	1	0.07	0.50			4/1/20 02:40:00	N	I
K2002615-002	Carbon, Total Organic	N/A		Water	1.99 mg/L	10 mL	1.99 mg/L	1	0.07	0.50			4/1/20 03:37:00	N	I
K2002615-003	Carbon, Total Organic	N/A		Water	1.84 mg/L	10 mL	1.84 mg/L	1	0.07	0.50			4/1/20 04:34:00	N	I
K2002615-004	Carbon, Total Organic	N/A		Water	1.94 mg/L	10 mL	1.94 mg/L	1	0.07	0.50			4/1/20 05:03:00	N	I
K2002615-005	Carbon, Total Organic	N/A		Water	1.75 mg/L	10 mL	1.75 mg/L	1	0.07	0.50			4/1/20 05:31:00	N	I
K2002627-001	Carbon, Total Organic	N/A		Ground Water	9.51 mg/L	10 mL	9.51 mg/L	1	0.07	0.50			4/1/20 00:19:00	N	I
K2002627-002	Carbon, Total Organic	N/A		Ground Water	17.26 mg/L	10 mL	17.3 mg/L	1	0.07	0.50			4/1/20 00:47:00	N	I
K2002627-003	Carbon, Total Organic	N/A		Ground Water	21.98 mg/L	10 mL	22.0 mg/L	1	0.07	0.50			4/1/20 01:15:00	N	I
K2002627-004	Carbon, Total Organic	N/A		Ground Water	16.50 mg/L	10 mL	16.5 mg/L	1	0.07	0.50			4/1/20 01:43:00	N	I
K2002627-005	Carbon, Total Organic	N/A		Ground Water	3.70 mg/L	10 mL	74 mg/L	20	2	10			4/1/20 02:11:00	N	I
KQ2004389-01	Carbon, Total Organic	MS	K2002615-002	Water	29.40 mg/L	10 mL	29.4 mg/L	1	0.07	0.50	110		4/1/20 04:05:00	N	I
KQ2004389-02	Carbon, Total Organic	CCV		Ground Water	24.52 mg/L	10 mL	24.5 mg/L	1					3/31/20 22:24:00	N	I
KQ2004389-03	Carbon, Total Organic	CCV		Ground Water	23.88 mg/L	10 mL	23.9 mg/L	1					4/1/20 03:08:00	N	I
KQ2004389-04	Carbon, Total Organic	CCV		Ground Water	24.14 mg/L	10 mL	24.1 mg/L	1					4/1/20 05:59:00	N	I
KQ2004389-05	Carbon, Total Organic	CCB		Ground Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			3/31/20 22:39:00	N	I
KQ2004389-06	Carbon, Total Organic	CCB		Ground Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/1/20 03:22:00	N	I
KQ2004389-07	Carbon, Total Organic	CCB		Ground Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/1/20 06:14:00	N	I
KQ2004389-08	Carbon, Total Organic	MB		Ground Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			3/31/20 22:54:00	N	I
KQ2004389-09	Carbon, Total Organic	LCS		Ground Water	23.02 mg/L	10 mL	23.0 mg/L	1	0.07	0.50	92		3/31/20 23:08:00	N	I
KQ2004389-10	Carbon, Total Organic	DUP	K2002615-001	Water	3.86 mg/L	10 mL	3.86 mg/L	1	0.07	0.50		<1	4/1/20 02:40:00	N	I
KQ2004389-11	Carbon, Total Organic	DUP	K2002615-002	Water	2.06 mg/L	10 mL	2.06 mg/L	1	0.07	0.50		3	4/1/20 03:37:00	N	I
KQ2004389-12	Carbon, Total Organic	DUP	K2002615-003	Water	1.83 mg/L	10 mL	1.83 mg/L	1	0.07	0.50		<1	4/1/20 04:34:00	N	I
KQ2004389-13	Carbon, Total Organic	DUP	K2002615-004	Water	1.97 mg/L	10 mL	1.97 mg/L	1	0.07	0.50		1	4/1/20 05:03:00	N	I
KQ2004389-14	Carbon, Total Organic	DUP	K2002615-005	Water	1.77 mg/L	10 mL	1.77 mg/L	1	0.07	0.50		1	4/1/20 05:31:00	N	I
KQ2004389-15	Carbon, Total Organic	DUP	K2002627-001	Ground Water	9.27 mg/L	10 mL	9.27 mg/L	1	0.07	0.50		3	4/1/20 00:19:00	N	I
KQ2004389-16	Carbon, Total Organic	DUP	K2002627-002	Ground Water	16.99 mg/L	10 mL	17.0 mg/L	1	0.07	0.50		2	4/1/20 00:47:00	N	I
KQ2004389-17	Carbon, Total Organic	DUP	K2002627-003	Ground Water	22.16 mg/L	10 mL	22.2 mg/L	1	0.07	0.50		<1	4/1/20 01:15:00	N	I

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** BDITZLER **Analysis Lot:** 675060 **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
KQ2004389-18	Carbon, Total Organic	DUP	K2002627-004	Ground Water	15.54 mg/L	10 mL	15.5 mg/L	1	0.07	0.50		6	4/1/20 01:43:00	N	I
KQ2004389-19	Carbon, Total Organic	DUP	K2002627-005	Ground Water	3.73 mg/L	10 mL	75 mg/L	20	2	10		<1	4/1/20 02:11:00	N	I

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

TOC: ~~675059~~, 675060 EDD 4/1/20 675059

Schedule: 03312020

Version: 2
Instrument: Fusion1
Last Saved by: Fusion1 (Fusion1)
Last Saved on: 2020/03/31 09:56 - Tuesday

Position	Sample Type	Sample ID	Method ID (Calibration ID)	Reps	Use	State
(Clean)	Clean	Clean		1	True	Ready
75	Sample	RB	CAS_salt_010711 (CAS_salt_010711)	6	True	Ready
(Clean)	Clean	Clean		1	True	Ready
(Clean)	Clean	Clean		1	True	Ready
(Blank)	Blank	Reagent/Acid Blank		1	True	Ready
D	Sample	RB	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
1	Sample	MB1	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
C	Check Standard	[TOC] LCS [24.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
2	Sample	ICS	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
3	Sample	K2002616-001.01	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
4	Sample	K2002616-002.01	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
5	Sample	K2002616-003.01	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
6	Sample	K2002616-003.01 ms 4x	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
7	Sample	RB	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
8	Sample	K2002616-004.01	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
9	Sample	K2002616-005.01	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	K2002616-006.01 200x	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
11	Sample	K2002616-007.01	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
12	Sample	K2002617-001.01	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
13	Sample	K2002643-001.01	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
14	Sample	K2002643-002.01 200x	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
15	Sample	K2002643-003.01 200x	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
16	Sample	K2002643-004.01 200x	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
17	Sample	K2002643-005.01 200x	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
18	Sample	K2002669-001.01	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
19	Sample	K2002626-001.03 40x	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
20	Sample	MB2	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
C	Check Standard	[TOC] LCS [24.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
21	Sample	K2002626-002.03	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
22	Sample	K2002626-003.03	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
23	Sample	K2002627-001.03	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
24	Sample	K2002627-002.03	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
25	Sample	K2002627-003.03	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
26	Sample	K2002627-004.03	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
27	Sample	K2002627-005.03 20x	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
28	Sample	K2002615-001.01	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
29	Sample	K2002615-002.01	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
30	Sample	K2002615-002.01 ms	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
31	Sample	RB	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
32	Sample	K2002615-003.01	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
33	Sample	K2002615-004.01	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
34	Sample	K2002615-005.01	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
					False	

Printed on: April 1, 2020 09:42:44

Fusion Report - 03312020
Tuesday, March 31, 2020 09:56 AM

(View - Reps, Unused Reps, Meta-Data, Signature, History)
Printed on 2020/04/01 09:42 - Wednesday

Report Summary Information

Company Location:	Gen Chem Lab		
Schedule Name:	03312020	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)		
Comment:			

Report Results

Sample Type: Clean

From Schedule Version 2

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/03/31 09:56

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	14.29	20.33	6.04	49.65	05:22
2	TC Clean	48.76	52.68	3.92	49.97	04:04
3	TC Clean	23.02	27.18	4.16	50.02	03:48
4	TC Clean	16.99	20.98	3.99	49.98	03:47

Sample Type: Sample

From Schedule Version 2

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	75	TOC	RB	0.3482 ppm	0.3035 ppm	87.1600%	2020/03/31 10:18

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.8670	8.6704	13.06	17.11	4.06	49.97	10:26
2	TOC	0.5444	5.4437	10.89	14.92	4.03	49.95	10:27
3	TOC	0.2892	2.8920	9.17	13.14	3.96	50.01	10:25
4	TOC	0.1915	1.9150	8.51	12.63	4.12	50.00	10:26
5	TOC	0.1109	1.1091	7.97	11.90	3.93	50.02	10:26
6	TOC	0.0864	0.8637	7.81	11.82	4.01	50.06	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.2272 (IC) (v1367)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

Sample Type: Clean — From Schedule Version 2

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/03/31 11:39

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	12.69	17.32	4.63	49.59	05:20
2	TC Clean	5.58	9.55	3.97	49.97	04:00
3	TC Clean	3.49	7.47	3.98	49.97	03:46
4	TC Clean	3.19	7.07	3.88	50.08	03:44

Sample Type: Clean — From Schedule Version 2

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/03/31 12:00

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	0.98	4.91	3.92	49.61	05:11
2	TC Clean	7.38	11.45	4.07	50.06	04:05
3	TC Clean	2.70	6.66	3.96	49.97	03:52
4	TC Clean	2.62	6.74	4.12	50.04	03:54

Sample Type: Blank (Creating v1368) — From Schedule Version 2

	Pos	Analysis Type	Sample ID	Start Time
◆	(blank)		Reagent/Acid Blank	2020/03/31 12:22

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	0.99	4.94	3.95	49.76	05:21
2	TC Clean	6.55	10.65	4.10	50.01	04:03
3	TC Clean	2.47	6.68	4.21	49.97	03:54
4	TC Clean	2.37	6.44	4.07	50.00	03:54
5	Reagent Blank	2.81	6.93	4.12	50.03	05:06

6	Acid Blank	0.86	5.01	4.15	49.61	05:28

Sample Type: Sample

From Schedule Version 2

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	D	TOC	RB	0.1360 ppm	0.0000 ppm	0.0000%	2020/03/31 12:56

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.1360	1.3602	8.14	12.20	4.06	50.02	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.2233 (IC) (v1368)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

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)	24.9028 ppm (PASS)	0.0000 ppm	0%	2020/03/31 13:11

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.9028	249.0277	175.29	179.38	4.09	50.03	10:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	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%	2020/03/31 13:25

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	6.09	10.24	4.15	50.07	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	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%	2020/03/31 13:40

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	5.63	9.78	4.15	50.03	10:32

Dilution: 1:10

Blank Contribution: (TC) 7.2233 (IC) (v1368)

Method: CAS_salt_010711 (v4)

Calibration: CAS_salt_010711 (v32)

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 [24.0 ppm]	0 / infinity (NA / NA)	23.1776 ppm (PASS)	0.0000 ppm	0%	2020/03/31 13:55

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	23.1776	231.7756	163.69	167.63	3.94	50.02	10:32

Completion State: Success - Criteria met.

Success Action: Do Nothing

Method: CAS_salt_010711 (v4)

Calibration: CAS_salt_010711 (v32)

STD Conc - Pos C: 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	0.3678 ppm	0.0000 ppm	0.0000%	2020/03/31 14:10

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.3678	3.6784	9.70	13.82	4.12	50.04	10:33

Dilution: 1:10

Blank Contribution: (TC) 7.2233 (IC) (v1368)

Method: CAS_salt_010711 (v4)

Calibration: CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	3	TOC	K2002616-001.01	5.8203 ppm	0.0834 ppm	1.4300%	2020/03/31 14:24

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	5.8792	58.7924	46.76	50.75	3.99	50.05	10:27
2	TOC	5.7613	57.6132	45.97	49.87	3.90	50.07	10:25

Dilution: 1:10

Blank Contribution: (TC) 7.2233 (IC) (v1368)

Method: CAS_salt_010711 (v4)

Calibration: CAS_salt_010711 (v32)

	Pos	Analysis	Sample ID	Result (ppmC)	Std. Dev.	RSD	Start Time

		Type			(ppmC)		
◈	4	TOC	K2002616-002.01	8.0252 ppm	0.2306 ppm	2.8700%	2020/03/31 14:52

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	7.8621	78.6215	60.10	64.03	3.94	50.05	10:30
2	TOC	8.1882	81.8824	62.29	66.34	4.05	50.04	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.2233 (IC) (v1368)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	5	TOC	K2002616-003.01	18.1073 ppm	0.2396 ppm	1.3200%	2020/03/31 15:20

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	18.2768	182.7676	130.13	134.06	3.92	50.07	10:29
2	TOC	17.9379	179.3788	127.86	131.72	3.86	50.08	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.2233 (IC) (v1368)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	6	TOC	K2002616-003.01 ms 4x	32.2294 ppm	0.0000 ppm	0.0000%	2020/03/31 15:49

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	32.2294	322.2939	223.96	227.85	3.88	50.08	10:34

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.2233 (IC) (v1368)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	7	TOC	RB	0.1033 ppm	0.0000 ppm	0.0000%	2020/03/31 16:03

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.1033	1.0330	7.92	11.83	3.92	50.11	10:32

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.2233 (IC) (v1368)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	8	TOC	K2002616-004.01	3.0809 ppm	0.2896 ppm	9.4000%	2020/03/31 16:18

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.2856	32.8562	29.32	33.48	4.16	50.10	10:28
2	TOC	2.8761	28.7610	26.56	30.62	4.06	50.08	10:28

Dilution	Blank Contribution	Method	Calibration

1:10	(TC) 7.2233 (IC) (v1368)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	9	TOC	K2002616-005.01	15.9327 ppm	0.5349 ppm	3.3600%	2020/03/31 16:46

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	15.5545	155.5452	111.83	115.79	3.96	50.06	10:29
2	TOC	16.3110	163.1095	116.91	121.05	4.14	50.06	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.2233 (IC) (v1368)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

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)	26.3566 ppm (PASS)	0.0000 ppm	0%	2020/03/31 17:14

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	26.3566	263.5660	185.06	188.96	3.89	50.09	10:33

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	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%	2020/03/31 17:29

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	11.56	3.98	50.10	10:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	0 ppmC

Sample Type: Sample — From Schedule Version 2

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	10	TOC	K2002616-006.01 200x	1.2187 ppm	0.0421 ppm	3.4500%	2020/03/31 17:44

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.2484	12.4844	15.62	19.50	3.88	50.11	10:29
2	TOC	1.1890	11.8896	15.22	19.07	3.85	50.09	10:25

Dilution 1:10 | **Blank Contribution** (TC) 7.2233 (IC) (v1368) | **Method** CAS_salt_010711 (v4) | **Calibration** CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	11	TOC	K2002616-007.01	1.7747 ppm	0.0154 ppm	0.8700%	2020/03/31 18:12

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.7855	17.8554	19.23	23.17	3.94	50.06	10:32
2	TOC	1.7638	17.6383	19.08	22.95	3.86	50.08	10:24

Dilution 1:10 | **Blank Contribution** (TC) 7.2233 (IC) (v1368) | **Method** CAS_salt_010711 (v4) | **Calibration** CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	12	TOC	K2002617-001.01	1.9417 ppm	0.0365 ppm	1.8800%	2020/03/31 18:40

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.9675	19.6755	20.45	24.36	3.91	50.05	10:29
2	TOC	1.9159	19.1595	20.11	24.00	3.90	50.07	10:24

Dilution 1:10 | **Blank Contribution** (TC) 7.2233 (IC) (v1368) | **Method** CAS_salt_010711 (v4) | **Calibration** CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	13	TOC	K2002643-001.01	5.1094 ppm	0.1398 ppm	2.7400%	2020/03/31 19:08

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	5.2083	52.0831	42.25	46.15	3.90	50.07	10:31
2	TOC	5.0105	50.1054	40.92	44.84	3.93	50.07	10:26

Dilution 1:10 | **Blank Contribution** (TC) 7.2233 (IC) (v1368) | **Method** CAS_salt_010711 (v4) | **Calibration** CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	14	TOC	K2002643-002.01 200x	13.7052 ppm	0.1570 ppm	1.1500%	2020/03/31 19:36

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	13.5942	135.9421	98.64	102.59	3.94	50.12	10:27
2	TOC	13.8162	138.1622	100.14	104.12	3.99	50.10	10:25

Dilution 1:10 | **Blank Contribution** (TC) 7.2233 (IC) | **Method** CAS_salt_010711 | **Calibration** CAS_salt_010711

(v1368) (v4) (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	15	TOC	K2002643-003.01 200x	4.0489 ppm	0.0728 ppm	1.8000%	2020/03/31 20:04

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.1003	41.0035	34.80	38.76	3.96	50.11	10:30
2	TOC	3.9974	39.9745	34.11	38.24	4.13	50.08	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.2233 (IC) (v1368)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	16	TOC	K2002643-004.01 200x	4.0983 ppm	0.0005 ppm	0.0100%	2020/03/31 20:32

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.0980	40.9797	34.78	38.80	4.01	50.07	10:29
2	TOC	4.0987	40.9871	34.79	38.58	3.79	50.11	10:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.2233 (IC) (v1368)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	17	TOC	K2002643-005.01 200x	3.2333 ppm	0.0011 ppm	0.0300%	2020/03/31 21:00

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.2340	32.3402	28.97	32.78	3.80	50.06	10:28
2	TOC	3.2325	32.3254	28.96	32.83	3.86	50.08	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.2233 (IC) (v1368)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	18	TOC	K2002669-001.01	2.3631 ppm	0.0214 ppm	0.9100%	2020/03/31 21:28

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.3783	23.7826	23.22	27.17	3.95	50.04	10:25
2	TOC	2.3479	23.4792	23.01	26.81	3.80	50.03	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.2233 (IC) (v1368)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	19	TOC	K2002626-001.03 40x	1.8987 ppm	0.0801 ppm	4.2200%	2020/03/31 21:56

Rep	Base	ppm	µg	Adjusted	NDIR (Abs)	Baseline	Pressure	Run

#	Analysis Type			(Abs)		(Abs)	(psig)	Time
1	TOC	1.9554	19.5536	20.37	24.04	3.67	50.04	10:30
2	TOC	1.8420	18.4205	19.61	23.45	3.84	50.05	10:30

Dilution: 1:10

Blank Contribution: (TC) 7.2233 (IC) (v1368)

Method: CAS_salt_010711 (v4)

Calibration: CAS_salt_010711 (v32)

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)	24.5215 ppm (PASS)	0.0000 ppm	0%	2020/03/31 22:24

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.5215	245.2150	172.72	176.49	3.77	50.04	10:29

Completion State: Success - Criteria met.

Success Action: Do Nothing

Method: CAS_salt_010711 (v4)

Calibration: CAS_salt_010711 (v32)

STD Conc - Pos B: 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%	2020/03/31 22:39

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	5.75	9.68	3.93	50.03	10:32

Completion State: Success - Criteria met.

Success Action: Do Nothing

Method: CAS_salt_010711 (v4)

Calibration: CAS_salt_010711 (v32)

STD Conc - Pos D: 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%	2020/03/31 22:54

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	5.38	9.25	3.86	50.02	10:30

Dilution: 1:10

Blank Contribution: (TC) 7.2233 (IC) (v1368)

Method: CAS_salt_010711 (v4)

Calibration: CAS_salt_010711 (v32)

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 [24.0 ppm]	0 / infinity (NA / NA)	23.0156 ppm (PASS)	0.0000 ppm	0%	2020/03/31 23:08

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	23.0156	230.1562	162.60	166.47	3.87	50.01	10:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	25 ppmC

Sample Type: Sample

From Schedule Version 2

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	21	TOC	K2002626-002.03	4.8696 ppm	0.0768 ppm	1.5800%	2020/03/31 23:23

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.9238	49.2384	40.34	44.20	3.87	50.02	10:26
2	TOC	4.8153	48.1529	39.61	43.50	3.90	50.01	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.2233 (IC) (v1368)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	22	TOC	K2002626-003.03	9.0398 ppm	0.1610 ppm	1.7800%	2020/03/31 23:51

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	8.9259	89.2594	67.25	71.09	3.84	50.00	10:29
2	TOC	9.1536	91.5360	68.78	72.65	3.87	50.01	10:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.2233 (IC) (v1368)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	23	TOC	K2002627-001.03	9.3889 ppm	0.1660 ppm	1.7700%	2020/04/01 00:19

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	9.5063	95.0632	71.15	75.01	3.86	49.99	10:26
2	TOC	9.2715	92.7152	69.57	73.58	4.01	50.01	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.2233 (IC) (v1368)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	24	TOC	K2002627-002.03	17.1223 ppm	0.1942 ppm	1.1300%	2020/04/01 00:47

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	17.2597	172.5966	123.29	127.22	3.92	49.99	10:30
2	TOC	16.9850	169.8501	121.45	125.30	3.85	50.00	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.2233 (IC) (v1368)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	25	TOC	K2002627-003.03	22.0681 ppm	0.1309 ppm	0.5900%	2020/04/01 01:15

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	21.9755	219.7551	155.01	158.98	3.97	50.02	10:29
2	TOC	22.1606	221.6064	156.25	160.15	3.89	49.98	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.2233 (IC) (v1368)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	26	TOC	K2002627-004.03	16.0202 ppm	0.6826 ppm	4.2600%	2020/04/01 01:43

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	16.5029	165.0293	118.20	122.21	4.01	49.98	10:27
2	TOC	15.5376	155.3757	111.71	115.69	3.97	50.00	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.2233 (IC) (v1368)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	27	TOC	K2002627-005.03 20x	3.7166 ppm	0.0182 ppm	0.4900%	2020/04/01 02:11

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.7038	37.0376	32.13	36.14	4.01	50.00	10:29
2	TOC	3.7295	37.2949	32.30	36.31	4.01	49.99	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.2233 (IC) (v1368)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	28	TOC	K2002615-001.01	3.8382 ppm	0.0252 ppm	0.6600%	2020/04/01 02:40

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.8203	38.2034	32.92	36.90	3.98	49.98	10:25

2	TOC	3.8560	38.5603	33.16	37.04	3.89	49.98	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.2233 (IC) 1368)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32

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)	23.8767 ppm (PASS)	0.0000 ppm	0%	2020/04/01 03:08

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	23.8767	238.7674	168.39	172.35	3.96	50.00	10:28

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	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%	2020/04/01 03:22

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	5.05	8.96	3.91	49.97	10:33

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	0 ppmC

Sample Type: Sample

From Schedule Version 2

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	29	TOC	K2002615-002.01	2.0222 ppm	0.0481 ppm	2.3800%	2020/04/01 03:37

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.9882	19.8822	20.59	24.65	4.06	49.96	10:27
2	TOC	2.0562	20.5617	21.05	24.93	3.88	49.99	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.2233 (IC) (v1368)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

		Analysis			Std. Dev.		

	Pos	Type	Sample ID	Result (ppmC)	(ppmC)	RSD	Start Time
◈	30	TOC	K2002615-002.01 ms	29.3992 ppm	0.0000 ppm	0.0000%	2020/04/01 04:05

Rep	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	29.3992	293.9919	204.93	208.92	3.98	49.99	10:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.2233 (IC) (v1368)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	31	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2020/04/01 04:20

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	5.36	9.23	3.87	49.97	10:34

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.2233 (IC) (v1368)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	32	TOC	K2002615-003.01	1.8307 ppm	0.0076 ppm	0.4100%	2020/04/01 04:34

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.8361	18.3610	19.57	23.47	3.90	49.97	10:25
2	TOC	1.8254	18.2539	19.50	23.43	3.93	50.01	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.2233 (IC) (v1368)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	33	TOC	K2002615-004.01	1.9548 ppm	0.0196 ppm	1.0000%	2020/04/01 05:03

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.9409	19.4093	20.28	24.36	4.08	49.97	10:27
2	TOC	1.9686	19.6859	20.46	24.51	4.05	49.99	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.2233 (IC) (v1368)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	34	TOC	K2002615-005.01	1.7603 ppm	0.0131 ppm	0.7500%	2020/04/01 05:31

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.7510	17.5104	19.00	23.08	4.08	50.00	10:25
2	TOC	1.7696	17.6963	19.12	22.94	3.82	49.98	10:27

Dilution	Blank Contribution	Method	Calibration

1:10	(TC) 7.2233 (IC) (v1368)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

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)	24.1353 ppm (PASS)	0.0000 ppm	0%	2020/04/01 05:59

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.1353	241.3533	170.13	174.09	3.97	49.99	10:29

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	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%	2020/04/01 06:14

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	4.66	8.60	3.94	49.99	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	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
v1367	0.9567	1.0790	0.0000	0.0000	0.0000	2020/03/28 23:52	Fusion1 (Fusion1)
v1368	0.9373	0.8610	0.0000	0.0000	0.0000	2020/03/31 12:56	Fusion1 (Fusion1)

Calibrations

Name: CAS_salt_010711 (TOC)

Version:	v32	Calibration curve formula:	TOC: y = 6.725x + 7.818
Ver Creation:	2020/03/11 15:55	r^2 value:	TOC: r^2 = 0.99921
Comment:			
Operator:	Fusion1 (Fusion1)		
Basic Analysis Type	TOC		

Basic Analysis Type: TOC

Sample ID	Y Raw Value	X Expected	Message	End Time
DI Water	5.8640	0.0000		2020/03/11 14:28
0.500 ppm	9.5210	0.5000		2020/03/11 14:42
1.0 ppm	12.5930	1.0000		2020/03/11 14:56
5.0 ppm	40.5270	5.0000		2020/03/11 15:10
10 ppm	79.5310	10.0000		2020/03/11 15:25
25 ppm	181.4610	25.0000		2020/03/11 15:39
50 ppm	340.5610	50.0000		2020/03/11 15:53

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	2020/04/01 06:29

ALS Environmental

StarLIMS Run: 675059, 675060

Analysis: DOC/TOC

Method: SM 5310 C, 9060A, 415.1, 9060

CCV: 11-GEN-05-82C 50 ppm LCS: 11-GEN-05-79J 25.0 ppm

ICAL Date: 3/11/2020

ICAL ID: 19-GEN-8-7-E->J

ICS ID: 11-GEN-05-78M

ICS TV: 25.0 ppm ICS % R < 1

Spike ID: 11-GEN-05-82C 0.05 ml of 5000 ppm stock ---> 10.0 ml = 25.0 ppm x dilution factor

Sodium Persulfate: 19-GEN-08-9-H

21 % H3PO4: 19-GEN-08-10-G

Equipment ID: K-TOC-03

PIPETTE ID: 124276B, 129001F, N11314F, Marge

FILTER ID: 16967789

Analyzed By:	Date Analyzed: 3/31/20
Reviewed By:	Date Reviewed: 4/1/20

April 02, 2020 Service Request No:R2002537

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

Laboratory Results for: LHAAP / Site 58

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory March 25, 2020
For your reference, these analyses have been assigned our service request number **R2002537.**

All testing was performed according to our laboratory's quality assurance program and met the requirements of the TNI standards except as noted in the case narrative report. Any testing not included in the lab's accreditation is identified on a Non-Certified Analytes report. All results are intended to be considered in their entirety. ALS Environmental is not responsible for use of less than the complete report. Results apply only to the individual samples submitted to the lab for analysis, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s), and represented by Laboratory Control Sample control limits. Any events, such as QC failures or Holding Time exceedances, which may add to the uncertainty are explained in the report narrative or are flagged with qualifiers. The flags are explained in the Report Qualifiers and Definitions page of this report.

Please contact me if you have any questions. My extension is 7471. You may also contact me via email at Brady.Kalkman@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Brady Kalkman
Project Manager

CC: Joni Blankfield

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ALS Group USA, Corp.
dba ALS Environmental

Narrative Documents

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Client: ALS Environmental - US
Project: LHAAP / Site 58
Sample Matrix: Water

Service Request: R2002537
Date Received: 03/25/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Six water samples were received for analysis at ALS Environmental on 03/25/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Semivoa GC:

Method Organic Acids, 03/31/2020: The upper control criterion was exceeded for Butyric Acid in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.

Method Organic Acids, 03/31/2020: The control limits for matrix spike recovery of one or more of the spiked analytes is not applicable and have been flagged with a "#". The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery. No further corrective action was required.

Approved by _____ Date 04/02/2020

SAMPLE DETECTION SUMMARY

CLIENT ID: 35AWW11_032420			Lab ID: R2002537-001			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Acetic Acid	5.8			1.0	mg/L	Organic Acids

CLIENT ID: 35AWW11_032420_a			Lab ID: R2002537-002			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Acetic Acid	5.5			1.0	mg/L	Organic Acids

CLIENT ID: 35AWW23_032420			Lab ID: R2002537-005			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Acetic Acid	97			2.0	mg/L	Organic Acids
Propionic Acid	320			2.0	mg/L	Organic Acids

Sample Receipt Information

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: ALS Environmental - US **Service Request:**R2002537
Project: LHAAP / Site 58/NW01312.0150

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
R2002537-001	35AWW11_032420	3/24/2020	0745
R2002537-002	35AWW11_032420_a	3/24/2020	0745
R2002537-003	35AWW20_032420	3/24/2020	0905
R2002537-004	LHSMW07_032420	3/24/2020	1015
R2002537-005	35AWW23_032420	3/24/2020	1205
R2002537-006	35AWW19_032420	3/24/2020	1300

bhate ENVIRONMENTAL CONSTRUCTION ENERGY

1608 13th Avenue South, Suite 300
Birmingham Alabama 35205
Tel: 205-918-4000
Fax: 205-918-4050

Chain of Custody and Analytical Request

Page: ____ of ____

Project/Phase No: NWO1312.0150

COC Number(1): ____

LIMS Number: ____

Facility/Base I.D.: LHAAP

Project/Site Name: LHAAP / Site 58

Client Name:

Collected by: Scott Beesinger

Field Sample ID (30 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code (2)	Sample Number (3)	Sample Matrix (4)	Number of containers	Volatile Fatty Acids										Ambient Blank Lot Control Number	Equipment Blank Lot Control Number	Trip Blank Lot Control Number	Cooler ID
35AWW11_032420	24 MAR 2020	0745	-	N		WG	1	X													
35AWW11_032420_a	24 MAR 2020	0745	-	FD		WG	1	X													
35AWW20_032420	24 MAR 2020	0905	-	N		WG	1	X													
35AWW20_032420_MS	24 MAR 2020	0905		MS		WG	1	X													
35AWW20_032420_MSD	24 MAR 2020	0905		SD		WG	1	X													
LHSMW07_032420	24 MAR 2020	1015	-	N		WG	1	X													
35AWW06_032420	24 MAR 2020	1110	-	N		WG	1	X										Reid Haden 3/25/2020			
35AWW23_032420	24 MAR 2020	1205	-	N		WG	1	X													
35AWW19_032420	24 MAR 2020	1300	-	N		WG	1	X													
			-																		
			-																		

Sample Analysis Requested (5) | Quality Assurance Samples (6)

COMMENTS: ____

Custody Transfers Prior to Receipt by Laboratory

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1. Scott Beesinger	3/24/20	1430	1. [signature]	3/25/2020	0925
2.			2.		
3.			3.		

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: ____ Shipped ____ No.:

Method of Shipment: ____

Fed ____ Ex ____ Airbill ____ Number:

Analytical Lab: ALS 10450 Stancliff Rd. Suite 210 Houston, TX 77099 (281) 530-5656

ATTN: SONIA WEST Lab Recipient: Delivery Date/Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)

2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-c) Sample, FD = Field Duplicate (-a) Samples, FR = Field Replicate (-b) Samples, EB = Equipment Blank (-d) Samples, MS = Matrix Spike, SD = Matrix Spike Duplicate, AB = Ambient Blank (-e)

3.) Sample Number: Unique sample number collected from a particular location per day. (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01, if sampled again on 10/10/99 = 02, etc.)

4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc), SQ = Soil Blanks

5.) Sample Analysis Requested: Analytical method requested and number of containers provided for each.

6.) Quality assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipment Bl

R2002537 5
ALS Laboratory Group
LHAAP / Site 58

Cooler Receipt and Preservation Check Form

R2002537 5
ALS Laboratory Group
LHAAP / Site 68

Project/Client Bhate Folder Number

Cooler received on 3/25/2020 by: [illegible]

COURIER: ALS UPS (FEDEX) VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	(Y) N	
2	**Custody papers** properly completed (ink, signed)?	(Y) N	
3	Did all bottles arrive in good **condition** (unbroken)?	Y (N)	
4	Circle: ~~Wet Ice~~ **Dry Ice Gel packs** present?	(Y) N	
5a	**Perchlorate** samples have required headspace?	Y N ~~NA~~	
5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	Y N (NA)	
6	Where did the bottles originate?	(ALS/ROC) CLIENT	
7	Soil VOA received as:	Bulk Encore 5035set (NA)	

8. Temperature Readings Date: 3/25/2020 Time: 0937 ID: IR#7 ~~IR#10~~ From: Temp Blank (Sample Bottle)

Observed Temp (°C)	5.4						
Within 0-6°C?	(Y) N	Y N	Y N	Y N	Y N	Y N	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed (described below) Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R-002 by [illegible] on 3/25/2020 at 0940
5035 samples placed in storage location: _____ by _____ on _____ at _____

Cooler Breakdown/Preservation Check**: Date: 3/25/2020 Time: 1245 by: DLW

9.	Were all bottle labels complete (*i.e.* analysis, preservation, etc.)?	(YES)	NO
10.	Did all bottle labels and tags agree with custody papers?	(YES)	NO
11.	Were correct containers used for the tests indicated?	(YES)	NO
12.	Were 5035 vials acceptable (no extra labels, not leaking)?	YES	NO (N/A)
13.	Air Samples: Cassettes / Tubes Intact with MS? Canisters Pressurized	Tedlar® Bags Inflated	(N/A)

pH	Lot of test paper	Reagent	Preserved? Yes	Preserved? No	Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
≥12		NaOH								
≤2		HNO_3								
≤2		H_2SO_4								
<4		$NaHSO_4$								
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522			If +, contact PM to add $Na_2S_2O_3$ (625, 608, CN), ascorbic (phenol).					
		$Na_2S_2O_3$								
		ZnAcetate	-	-						
		HCl	**	**						

**VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).

Bottle lot numbers: Client

Explain all Discrepancies/ Other Comments:

Reid broken : 35A-MW06-032420

HPROD	BULK
HTR	FLDT
SUB	HGFB
ALS	LL3541

Labels secondary reviewed by: DLW

PC Secondary Review: _____

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Miscellaneous Forms

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REPORT QUALIFIERS AND DEFINITIONS

U	Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
J	Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).
B	Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.
E	Inorganics- Concentration is estimated due to the serial dilution was outside control limits.
E	Organics- Concentration has exceeded the calibration range for that specific analysis.
D	Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.
*	Indicates that a quality control parameter has exceeded laboratory limits. Under the ñNotesò column of the Form I, this qualifier denotes analysis was performed out of Holding Time.
H	Analysis was performed out of hold time for tests that have an ñimmediateò hold time criteria.
#	Spike was diluted out.
+	Correlation coefficient for MSA is <0.995.
N	Inorganics- Matrix spike recovery was outside laboratory limits.
N	Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
S	Concentration has been determined using Method of Standard Additions (MSA).
W	Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
P	Concentration >40% difference between the two GC columns.
C	Confirmed by GC/MS
Q	DoD reports: indicates a pesticide/Aroclor is not confirmed (Ó100% Difference between two GC columns).
X	See Case Narrative for discussion.
MRL LOQ	Method Reporting Limit. Also known as: Limit of Quantitation (LOQ) The lowest concentration at which the method analyte may be reliably quantified under the method conditions.
MDL	Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).
LOD	Limit of Detection. A value at or above the MDL which has been verified to be detectable.
ND	Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

Rochester Lab ID # for State Certifications[1]

Connecticut ID # PH0556	Maine ID #NY0032	Pennsylvania ID# 68-786
Delaware Approved	New Hampshire ID # 2941	Rhode Island ID # 158
DoD ELAP #65817	New York ID # 10145	Virginia #460167
Florida ID # E87674	North Carolina #676	

[1] Analyses were performed according to our laboratoryôs NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to https://www.alsglobal.com/locations/americas/north-america/usa/new-york/rochester-environmental

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

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Analyst Summary report

Client: ALS Environmental - US
Project: LHAAP / Site 58/NW01312.0150
Service Request: R2002537

Sample Name: 35AWW11_032420
Lab Code: R2002537-001
Sample Matrix: Water
Date Collected: 03/24/20
Date Received: 03/25/20

Analysis Method	Extracted/Digested By	Analyzed By
Organic Acids		AFELSER

Sample Name: 35AWW11_032420_a
Lab Code: R2002537-002
Sample Matrix: Water
Date Collected: 03/24/20
Date Received: 03/25/20

Analysis Method	Extracted/Digested By	Analyzed By
Organic Acids		AFELSER

Sample Name: 35AWW20_032420
Lab Code: R2002537-003
Sample Matrix: Water
Date Collected: 03/24/20
Date Received: 03/25/20

Analysis Method	Extracted/Digested By	Analyzed By
Organic Acids		AFELSER

Sample Name: LHSMW07_032420
Lab Code: R2002537-004
Sample Matrix: Water
Date Collected: 03/24/20
Date Received: 03/25/20

Analysis Method	Extracted/Digested By	Analyzed By
Organic Acids		AFELSER

Sample Name: 35AWW23_032420
Lab Code: R2002537-005
Sample Matrix: Water
Date Collected: 03/24/20
Date Received: 03/25/20

Analysis Method	Extracted/Digested By	Analyzed By
Organic Acids		AFELSER

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Analyst Summary report

Client:	ALS Environmental - US	**Service Request:**	R2002537
Project:	LHAAP / Site 58/NW01312.0150		

Sample Name:	35AWW19_032420	**Date Collected:**	03/24/20
Lab Code:	R2002537-006	**Date Received:**	03/25/20
Sample Matrix:	Water		

Analysis Method	Extracted/Digested By	Analyzed By
Organic Acids		AFELSER

INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9034 Sulfide Acid Soluble	9030B
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7199	3060A
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction
For analytical methods not listed, the preparation method is the same as the analytical method reference.	

Sample Results

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Semivolatile Organic Compounds by GC

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Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R2002537
Project:	LHAAP / Site 58/NW01312.0150	**Date Collected:**	03/24/20 07:45
Sample Matrix:	Water	**Date Received:**	03/25/20 09:25
Sample Name:	35AWW11_032420	**Units:**	mg/L
Lab Code:	R2002537-001	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids

Analyte Name	Result		MRL	Dil.	Date Analyzed	Q
Pyruvic Acid	ND	U	0.50	1	03/27/20 16:39	
Acetic Acid	**5.8**		1.0	1	03/27/20 16:39	
Butanoic Acid (Butyric Acid)	ND	U	2.0	1	03/27/20 16:39	
Lactic Acid	ND	U	1.0	1	03/27/20 16:39	
Propionic Acid	ND	U	1.0	1	03/27/20 16:39	

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Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R2002537
Project:	LHAAP / Site 58/NW01312.0150	**Date Collected:**	03/24/20 07:45
Sample Matrix:	Water	**Date Received:**	03/25/20 09:25
Sample Name:	35AWW11_032420_a	**Units:**	mg/L
Lab Code:	R2002537-002	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids

Analyte Name	Result		MRL	Dil.	Date Analyzed	Q
Pyruvic Acid	ND	U	0.50	1	03/27/20 17:39	
Acetic Acid	**5.5**		1.0	1	03/27/20 17:39	
Butanoic Acid (Butyric Acid)	ND	U	2.0	1	03/27/20 17:39	
Lactic Acid	ND	U	1.0	1	03/27/20 17:39	
Propionic Acid	ND	U	1.0	1	03/27/20 17:39	

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Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R2002537
Project:	LHAAP / Site 58/NW01312.0150	**Date Collected:**	03/24/20 09:05
Sample Matrix:	Water	**Date Received:**	03/25/20 09:25
Sample Name:	35AWW20_032420	**Units:**	mg/L
Lab Code:	R2002537-003	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Pyruvic Acid	ND U	0.50	1	03/27/20 19:48	
Acetic Acid	ND U	1.0	1	03/27/20 19:48	
Butanoic Acid (Butyric Acid)	ND U	2.0	1	03/27/20 19:48	
Lactic Acid	ND U	1.0	1	03/27/20 19:48	
Propionic Acid	ND U	1.0	1	03/27/20 19:48	

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Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R2002537
Project:	LHAAP / Site 58/NW01312.0150	**Date Collected:**	03/24/20 10:15
Sample Matrix:	Water	**Date Received:**	03/25/20 09:25
Sample Name:	LHSMW07_032420	**Units:**	mg/L
Lab Code:	R2002537-004	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Pyruvic Acid	ND U	0.50	1	03/27/20 22:57	
Acetic Acid	ND U	1.0	1	03/27/20 22:57	
Butanoic Acid (Butyric Acid)	ND U	2.0	1	03/27/20 22:57	
Lactic Acid	ND U	1.0	1	03/27/20 22:57	
Propionic Acid	ND U	1.0	1	03/27/20 22:57	

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Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R2002537
Project:	LHAAP / Site 58/NW01312.0150	**Date Collected:**	03/24/20 12:05
Sample Matrix:	Water	**Date Received:**	03/25/20 09:25
Sample Name:	35AWW23_032420	**Units:**	mg/L
Lab Code:	R2002537-005	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids

Analyte Name	Result		MRL	Dil.	Date Analyzed	Q
Pyruvic Acid	ND	U	1.0	2	03/31/20 18:02	
Acetic Acid	**97**		2.0	2	03/31/20 18:02	
Butanoic Acid (Butyric Acid)	ND	U	4.0	2	03/31/20 18:02	
Lactic Acid	ND	U	2.0	2	03/31/20 18:02	
Propionic Acid	**320**		2.0	2	03/31/20 18:02	

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Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R2002537
Project:	LHAAP / Site 58/NW01312.0150	**Date Collected:**	03/24/20 13:00
Sample Matrix:	Water	**Date Received:**	03/25/20 09:25
Sample Name:	35AWW19_032420	**Units:**	mg/L
Lab Code:	R2002537-006	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Pyruvic Acid	ND U	0.50	1	03/28/20 02:04	
Acetic Acid	ND U	1.0	1	03/28/20 02:04	
Butanoic Acid (Butyric Acid)	ND U	2.0	1	03/28/20 02:04	
Lactic Acid	ND U	1.0	1	03/28/20 02:04	
Propionic Acid	ND U	1.0	1	03/28/20 02:04	

QC Summary Forms

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Semivolatile Organic Compounds by GC

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QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	R2002537
Project:	LHAAP / Site 58/NW01312.0150	**Date Collected:**	03/24/20
Sample Matrix:	Water	**Date Received:**	03/25/20
		Date Analyzed:	03/27/20

Duplicate Matrix Spike Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Sample Name:	35AWW20_032420	**Units:**	mg/L
Lab Code:	R2002537-003	**Basis:**	NA
Analysis Method:	Organic Acids		

		Matrix Spike RQ2003058-06			Duplicate Matrix Spike RQ2003058-07					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Pyruvic Acid	ND U	1.68	2.00	84	1.51	2.00	75	39-130	11	30
Acetic Acid	ND U	20.9	20.1	104	18.9	20.1	94	10-179	10	30
Butanoic Acid (Butyric Acid)	ND U	19.6	20.0	98	20.7	20.0	104	39-161	5	30
Lactic Acid	ND U	16.1	20.0	80	14.1	20.0	70	48-147	13	30
Propionic Acid	ND U	23.0	20.0	115	21.0	20.0	105	49-162	9	30

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

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

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

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QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	R2002537
Project:	LHAAP / Site 58/NW01312.0150	**Date Collected:**	03/24/20
Sample Matrix:	Water	**Date Received:**	03/25/20
		Date Analyzed:	03/31/20

Duplicate Matrix Spike Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Sample Name:	35AWW23_032420	**Units:**	mg/L
Lab Code:	R2002537-005	**Basis:**	NA
Analysis Method:	Organic Acids		

		Matrix Spike RQ2003182-07			Duplicate Matrix Spike RQ2003182-08					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Pyruvic Acid	ND U	3.32	3.99	83	3.30	3.99	83	39-130	<1	30
Acetic Acid	97	126	40.1	73	125	40.1	70	10-179	<1	30
Butanoic Acid (Butyric Acid)	ND U	39.4	40.0	99	39.4	40.0	98	39-161	<1	30
Lactic Acid	ND U	30.9	40.1	77	31.1	40.1	78	48-147	<1	30
Propionic Acid	320	329	40.1	15 #	325	40.1	5 #	49-162	1	30

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

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

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

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Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R2002537
Project:	LHAAP / Site 58/NW01312.0150	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	mg/L
Lab Code:	RQ2003058-02	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Pyruvic Acid	ND U	0.50	1	03/27/20 13:30	
Acetic Acid	ND U	1.0	1	03/27/20 13:30	
Butanoic Acid (Butyric Acid)	ND U	2.0	1	03/27/20 13:30	
Lactic Acid	ND U	1.0	1	03/27/20 13:30	
Propionic Acid	ND U	1.0	1	03/27/20 13:30	

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Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R2002537
Project:	LHAAP / Site 58/NW01312.0150	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	mg/L
Lab Code:	RQ2003182-02	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Pyruvic Acid	ND U	0.50	1	03/31/20 14:56	
Acetic Acid	ND U	1.0	1	03/31/20 14:56	
Butanoic Acid (Butyric Acid)	ND U	2.0	1	03/31/20 14:56	
Lactic Acid	ND U	1.0	1	03/31/20 14:56	
Propionic Acid	ND U	1.0	1	03/31/20 14:56	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: LHAAP / Site 58/NW01312.0150
Sample Matrix: Water

Service Request: R2002537
Date Analyzed: 03/27/20

Duplicate Lab Control Sample Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Units:mg/L
Basis:NA

		Lab Control Sample			Duplicate Lab Control Sample					
		RQ2003058-03			RQ2003058-04					
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Pyruvic Acid	Organic Acids	1.71	2.00	85	1.72	2.00	86	73-122	<1	30
Acetic Acid	Organic Acids	19.8	20.1	99	19.8	20.1	98	80-130	<1	30
Butanoic Acid (Butyric Acid)	Organic Acids	18.2	20.0	91	20.5	20.0	103	86-128	12	30
Lactic Acid	Organic Acids	15.4	20.0	77	15.3	20.0	76	75-125	<1	30
Propionic Acid	Organic Acids	22.6	20.0	113	22.9	20.0	114	63-153	2	30

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: LHAAP / Site 58/NW01312.0150
Sample Matrix: Water

Service Request: R2002537
Date Analyzed: 03/31/20

Duplicate Lab Control Sample Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Units:mg/L
Basis:NA

		Lab Control Sample RQ2003182-03			Duplicate Lab Control Sample RQ2003182-04					
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Pyruvic Acid	Organic Acids	1.79	2.00	90	1.74	2.00	87	73-122	3	30
Acetic Acid	Organic Acids	20.7	20.1	103	20.5	20.1	102	80-130	1	30
Butanoic Acid (Butyric Acid)	Organic Acids	25.9	20.0	129 *	20.6	20.0	103	86-128	23	30
Lactic Acid	Organic Acids	15.9	20.0	79	15.8	20.0	79	75-125	<1	30
Propionic Acid	Organic Acids	22.4	20.0	112	22.9	20.0	114	63-153	2	30

LABORATORY REPORT

April 7, 2020

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

RE: HS20031084

Dear RJ:

Enclosed are the results of the samples submitted to our laboratory on March 26, 2020. For your reference, these analyses have been assigned our service request number P2001715.

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

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

Respectfully submitted,

ALS | Environmental



By Hayden Akers at 3:55 pm, Apr 07, 2020

Hayden Akers
Project Manager

Client: ALS Laboratory Group Service Request No: P2001715
Project: HS20031084

CASE NARRATIVE

The samples were received intact under chain of custody on March 26, 2020 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Carbon Dioxide Analysis

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

The recoveries for the matrix spike and its duplicate were outside of the DoD control limits due to matrix interference. However all quality control parameters were met with the laboratory control sample and its duplicate.

Methane, Ethene and Ethane Analysis

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

The recoveries for methane and ethene did not pass the DoD control limit criteria for the matrix sample and its duplicate. The sample, matrix spike, matrix spike duplicate were re-prepped a couple of days later and had similar results. However the same spiking standard was used for the laboratory control sample and its duplicate and all quality control criteria were met.

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

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

ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Alaska DEC	http://dec.alaska.gov/eh/lab.aspx	17-019
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.floridahealth.gov/licensing-and-regulation/environmental-laboratories/index.html	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/page/la-lab-accreditation	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml	2018027
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1776326
New Jersey DEP (NELAP)	http://www.nj.gov/dep/enforcement/oqa.html	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://www.oregon.gov/oha/ph/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-007
Pennsylvania DEP	http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/agency/qa/env_lab_accreditation.html	T104704413-19-10
Utah DOH (NELAP)	http://health.utah.gov/lab/lab_cert_env	CA016272019-10
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

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

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

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: ALS Laboratory Group
Service Request: P2001715
Project ID: HS20031084

Date Received: 3/26/2020
Time Received: 09:15

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	RSK 175 - CO2	RSK 175 - Gases
35AWW11_032420	P2001715-001	Water	3/24/2020	07:45	X	X
35AWW11_032420-a	P2001715-002	Water	3/24/2020	07:45	X	X
35AWW20_032420	P2001715-003	Water	3/24/2020	09:05	X	X
LHSMW07_032420	P2001715-004	Water	3/24/2020	10:15	X	X
35AWW06_032420	P2001715-005	Water	3/24/2020	11:10	X	X
35AWW23_032420	P2001715-006	Water	3/24/2020	12:05	X	X
35AWW19_032420	P2001715-007	Water	3/24/2020	13:00	X	X

P2001715

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

Subcontract Chain of Custody

SAMPLING STATE: Texas

COC ID: 13580

SUBCONTRACT TO:

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

Phone: +1 805 526 7161

CUSTOMER INFORMATION:

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

INVOICE INFORMATION:

Company: ALS Houston
Contact: Accounts Payable
Address: 10450 Stancliff Rd, Ste 210
Phone: +1 281 530 5656
Reference: HS20031084
TSR: Danielle Winnings

	LAB SAMPLE ID / ANALYSIS REQUESTED	CLIENT SAMPLE ID	MATRIX	COLLECT DATE / DUE DATE
1.	HS20031084-01	35AWW11_032420	Groundwater	24 Mar 2020 07:45
	MEE plus CO2 Sub to ALS SimiValley			08 Apr 2020
2.	HS20031084-02	35AWW11_032420-a	Groundwater	24 Mar 2020 07:45
	MEE plus CO2 Sub to ALS SimiValley			08 Apr 2020
3.	HS20031084-03	35AWW20_032420	Groundwater	24 Mar 2020 09:05
	MEE plus CO2 Sub to ALS SimiValley			08 Apr 2020
4.	HS20031084-04	LHSMW07_032420	Groundwater	24 Mar 2020 10:15
	MEE plus CO2 Sub to ALS SimiValley			08 Apr 2020
5.	HS20031084-05	35AWW06_032420	Groundwater	24 Mar 2020 11:10
	MEE plus CO2 Sub to ALS SimiValley			08 Apr 2020
6.	HS20031084-06	35AWW23_032420	Groundwater	24 Mar 2020 12:05
	MEE plus CO2 Sub to ALS SimiValley			08 Apr 2020
7.	HS20031084-07	35AWW19_032420	Groundwater	24 Mar 2020 13:00
	MEE plus CO2 Sub to ALS SimiValley			08 Apr 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.
HS20031084-03 = MS/MSD

RIGHT SOLUTIONS | RIGHT PARTNER

Neat & HCL Vials

P2001715

Subcontract Chain of Custody

SAMPLING STATE: **Texas**

QC Level: DOD IV (DoD Data Package)

COC ID: **13580**

Relinquished By:	J. MacLean	Date/Time:	3/25/20 18:00
Received By:		Date/Time:	3/26/20 0911
Cooler ID(s):		Temperature(s):	

2° wet

ALS Environmental
Sample Acceptance Check Form

Client: ALS Laboratory Group Work order: P2001715

Project: HS20031084

Sample(s) received on: 03/26/20 Date opened: 03/26/20 by: ADAVID

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

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Did **sample containers** arrive in good condition?	☒	☐	☐
3	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
4	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
5	Was **sample volume** received adequate for analysis?	☒	☐	☐
6	Are samples within specified holding times?	☒	☐	☐
7	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☒	☐	☐
	Cooler Temperature: 2° C Blank Temperature: ° C Thermometer ID T-111 Wet Ic			
8	Were **custody seals** on outside of cooler/Box/Container?	☒	☐	☐
	Location of seal(s)? Cooler lid. Sealing Lid?	☒	☐	☐
	Were signature and date included?	☒	☐	☐
	Were seals intact?	☒	☐	☐
9	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☒	☐	☐
	Is there a client indication that the submitted samples are **pH** preserved?	☒	☐	☐
	Were **VOA vials** checked for presence/absence of air bubbles?	☒	☐	☐
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☒	☐	☐
10	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
11	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P2001715-001.01	40mL VOA NP		7		A	wh 3/31/20
P2001715-001.02	40mL VOA NP				A	
P2001715-001.04	40ml VOA HCL		1		A	LD 03/30/2020
P2001715-001.05	40ml VOA HCL				A	
P2001715-001.06	40ml VOA HCL				A	
P2001715-002.01	40mL VOA NP		7		A	wh 3/31/20
P2001715-002.02	40mL VOA NP				A	
P2001715-002.04	40ml VOA HCL		1		A	LD 03/30/2020
P2001715-002.05	40ml VOA HCL				A	
P2001715-002.06	40ml VOA HCL				A	
P2001715-003.01	40mL VOA NP		7		A	wh 3/31/20
P2001715-003.02	40mL VOA NP		7		A	wh 3/31/20
P2001715-003.03	40mL VOA NP		7		A	wh 3/31/20
P2001715-003.04	40ml VOA HCL		1		A	LD 03/30/2020
P2001715-003.05	40ml VOA HCL		1		A	LD 03/30/2020

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

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

ALS Environmental
Sample Acceptance Check Form

Client: ALS Laboratory Group Work order: P2001715

Project: HS20031084

Sample(s) received on: 03/26/20 Date opened: 03/26/20 by: ADAVID

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P2001715-003.06	40ml VOA HCL		1		A	LD 03/30/2020
P2001715-003.07	40mL VOA NP				A	
P2001715-003.08	40mL VOA NP				A	
P2001715-003.09	40mL VOA NP				A	
P2001715-003.10	40ml VOA HCL		1		A	LD 04/01/2020
P2001715-003.11	40ml VOA HCL		1		A	LD 04/01/2020
P2001715-003.12	40ml VOA HCL		1		A	LD 04/01/2020
P2001715-003.13	40ml VOA HCL				A	
P2001715-003.14	40ml VOA HCL				A	
P2001715-003.15	40ml VOA HCL				A	
P2001715-004.01	40mL VOA NP		7		A	wh 3/31/20
P2001715-004.02	40mL VOA NP				A	
P2001715-004.04	40ml VOA HCL		1		A	LD 03/30/2020
P2001715-004.05	40ml VOA HCL				A	
P2001715-004.06	40ml VOA HCL				A	
P2001715-005.01	40mL VOA NP		7		A	wh 3/31/20
P2001715-005.02	40mL VOA NP				A	
P2001715-005.04	40ml VOA HCL		1		A	LD 03/30/2020
P2001715-005.05	40ml VOA HCL				A	
P2001715-005.06	40ml VOA HCL				A	
P2001715-006.01	40mL VOA NP		7		A	wh 3/31/20
P2001715-006.02	40mL VOA NP				A	
P2001715-006.04	40ml VOA HCL		1		A	LD 03/30/2020
P2001715-006.05	40ml VOA HCL				A	
P2001715-006.06	40ml VOA HCL				A	
P2001715-007.01	40mL VOA NP		6		A	wh 3/31/20
P2001715-007.02	40mL VOA NP				A	
P2001715-007.04	40ml VOA HCL		1		A	LD 03/30/2020
P2001715-007.05	40ml VOA HCL				A	
P2001715-007.06	40ml VOA HCL				A	

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

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

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Project ID: **HS20031084** ALS Project ID: P2001715

Carbon Dioxide

Test Code: RSK 175
Instrument ID: HP5890A/GC10/TCD
Analyst: Li Donghao
Matrix: Liquid
Test Notes:

Date(s) Collected: 3/24/20
Date Received: 3/26/20
Date Analyzed: 3/31/20

Client Sample ID	ALS Sample ID	Injection Volume ml(s)	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
35AWW11_032420	P2001715-001	0.10	**450,000**	1,000	860	370	
35AWW11_032420-a	P2001715-002	0.10	**510,000**	1,000	860	370	
35AWW20_032420	P2001715-003	0.10	**260,000**	1,000	860	370	
LHSMW07_032420	P2001715-004	0.10	**250,000**	1,000	860	370	
35AWW06_032420	P2001715-005	0.10	**360,000**	1,000	860	370	
35AWW23_032420	P2001715-006	0.10	**600,000**	1,000	860	370	
35AWW19_032420	P2001715-007	0.10	**200,000**	1,000	860	370	
Method Control Sample	P200331-MB	0.10	860	1,000	860	370	**U**

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

ALS ENVIRONMENTAL

MATRIX SPIKE / DUPLICATE MATRIX SPIKE SUMMARY

Client: **ALS Laboratory Group**
Client Sample ID: **35AWW20_032420**
Client Project ID: **HS20031084**

ALS Project ID: P2001715
ALS Sample ID: P2001715-003MS
P2001715-003DMS

Test Code: RSK 175
Instrument ID: HP5890A/GC10/TCD
Analyst: Li Donghao
Matrix: Liquid
Test Notes:

Date Collected: ######
Date Received: ######
Date Analyzed: ######
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Spike Amount MS / DMS ug/L	Sample Amount ug/L	Result MS ug/L	Result DMS ug/L	% Recovery MS	% Recovery DMS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
124-38-9	Carbon Dioxide	22,900	264,000	316,000	304,000	**200**	**175**	80-122	13	30	**N**

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

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **ALS Laboratory Group**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2001715
Client Project ID: **HS20031084** ALS Sample ID: P200331-DLCS

Test Code: RSK 175 Date Collected: NA
Instrument ID: HP5890A/GC10/TCD Date Received: NA
Analyst: Li Donghao Date Analyzed: 3/31/20
Matrix: Liquid Volume(s) Analyzed: NA ml(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS ug/L	Result$_1$ LCS ug/L	Result$_1$ DLCS ug/L	% Recovery LCS	% Recovery DLCS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
124-38-9	Carbon Dioxide	22,900	24,200	22,500	**106**	**98**	80-122	8	12	

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

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **35AWW11_032420**
Client Project ID: **HS20031084**

ALS Project ID: P2001715
ALS Sample ID: P2001715-001

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Li Donghao
Matrix: Water
Test Notes:

Date Collected: 03/24/20
Date Received: 03/26/20
Date Analyzed: 03/30/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	**850**	1.3	1.0	0.51	
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

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

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **35AWW11_032420-a**
Client Project ID: **HS20031084**

ALS Project ID: P2001715
ALS Sample ID: P2001715-002

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Li Donghao
Matrix: Water
Test Notes:

Date Collected: 03/24/20
Date Received: 03/26/20
Date Analyzed: 03/30/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	**860**	1.3	1.0	0.51	
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

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

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **35AWW20_032420**
Client Project ID: **HS20031084**

ALS Project ID: P2001715
ALS Sample ID: P2001715-003

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Li Donghao
Matrix: Water
Test Notes:

Date Collected: 03/24/20
Date Received: 03/26/20
Date Analyzed: 03/30/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	**410**	1.3	1.0	0.51	
74-85-1	Ethene	**6.0**	1.0	0.55	0.24	
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

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

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **LHSMW07_032420**
Client Project ID: **HS20031084**

ALS Project ID: P2001715
ALS Sample ID: P2001715-004

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Li Donghao
Matrix: Water
Test Notes:

Date Collected: 03/24/20
Date Received: 03/26/20
Date Analyzed: 03/30/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	**77**	1.3	1.0	0.51	
74-85-1	Ethene	**2.3**	1.0	0.55	0.24	
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

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

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **35AWW06_032420**
Client Project ID: **HS20031084**

ALS Project ID: P2001715
ALS Sample ID: P2001715-005

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Li Donghao
Matrix: Water
Test Notes:

Date Collected: 03/24/20
Date Received: 03/26/20
Date Analyzed: 03/30/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	**1,300**	1.3	1.0	0.51	
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

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

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **35AWW23_032420**
Client Project ID: **HS20031084**

ALS Project ID: P2001715
ALS Sample ID: P2001715-006

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Li Donghao
Matrix: Water
Test Notes:

Date Collected: 03/24/20
Date Received: 03/26/20
Date Analyzed: 03/30/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	**1,400**	1.3	1.0	0.51	
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

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

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **35AWW19_032420**
Client Project ID: **HS20031084**

ALS Project ID: P2001715
ALS Sample ID: P2001715-007

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Li Donghao
Matrix: Water
Test Notes:

Date Collected: 03/24/20
Date Received: 03/26/20
Date Analyzed: 03/30/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	**3.1**	1.3	1.0	0.51	
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

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

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **Method Control Sample**
Client Project ID: **HS20031084**

ALS Project ID: P2001715
ALS Sample ID: P200330-MB

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Li Donghao
Matrix: Water
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 3/30/20
Volume(s) Analyzed: 0.10 ml(s)

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

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

ALS ENVIRONMENTAL

MATRIX SPIKE / DUPLICATE MATRIX SPIKE SUMMARY

Client: **ALS Laboratory Group**
Client Sample ID: **35AWW20_032420**
Client Project ID: **HS20031084**

ALS Project ID: P2001715
ALS Sample ID: P2001715-003MS
P2001715-003DMS

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Li Donghao
Matrix: Water
Test Notes:

Date Collected: 3/24/20
Date Received: 3/26/20
Date Analyzed: 3/30/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Spike Amount MS / DMS µg/L	Sample Amount µg/L	Result MS µg/L	Result DMS µg/L	% Recovery MS	% Recovery DMS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
74-82-8	Methane	2.52	412	1,750	1,810	**200**	**200**	73-125	0	30	**N**
74-85-1	Ethene	4.40	6.00	26.3	27.2	**200**	**200**	72-133	0	30	**N**
74-84-0	Ethane	4.72	ND	3.52	3.56	**75**	**75**	74-131	0	30	

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

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **ALS Laboratory Group**
Client Sample ID: **Duplicate Lab Control Sample**
Client Project ID: **HS20031084**

ALS Project ID: P2001715
ALS Sample ID: P200330-LCS
P200330-DLCS

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Li Donghao
Matrix: Water
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 3/30/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Spike Amount LCS / DLCS µg/L	Result$_1$ LCS µg/L	Result$_1$ DLCS µg/L	% Recovery LCS	% Recovery DLCS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
74-82-8	Methane	2.52	3.00	2.93	**119**	**116**	73-125	3	26	
74-85-1	Ethene	4.40	4.96	4.84	**113**	**110**	72-133	3	11	
74-84-0	Ethane	4.72	4.83	4.85	**102**	**103**	74-131	1	10	

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

Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\31CO2\
Data File : 03310107.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 31-Mar-2020, 14:16:14
Operator : LD
Sample : P2001715-001 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 31 15:11:29 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.915f	252767	0.053	ppm
2)	Carbon monoxide	1.915f	252767	N.D.	ppm
3)	Methane (TCD)	4.087f	252081	26654.541	ppm
4)	Carbon dioxide	5.911	4867966	20738.647	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

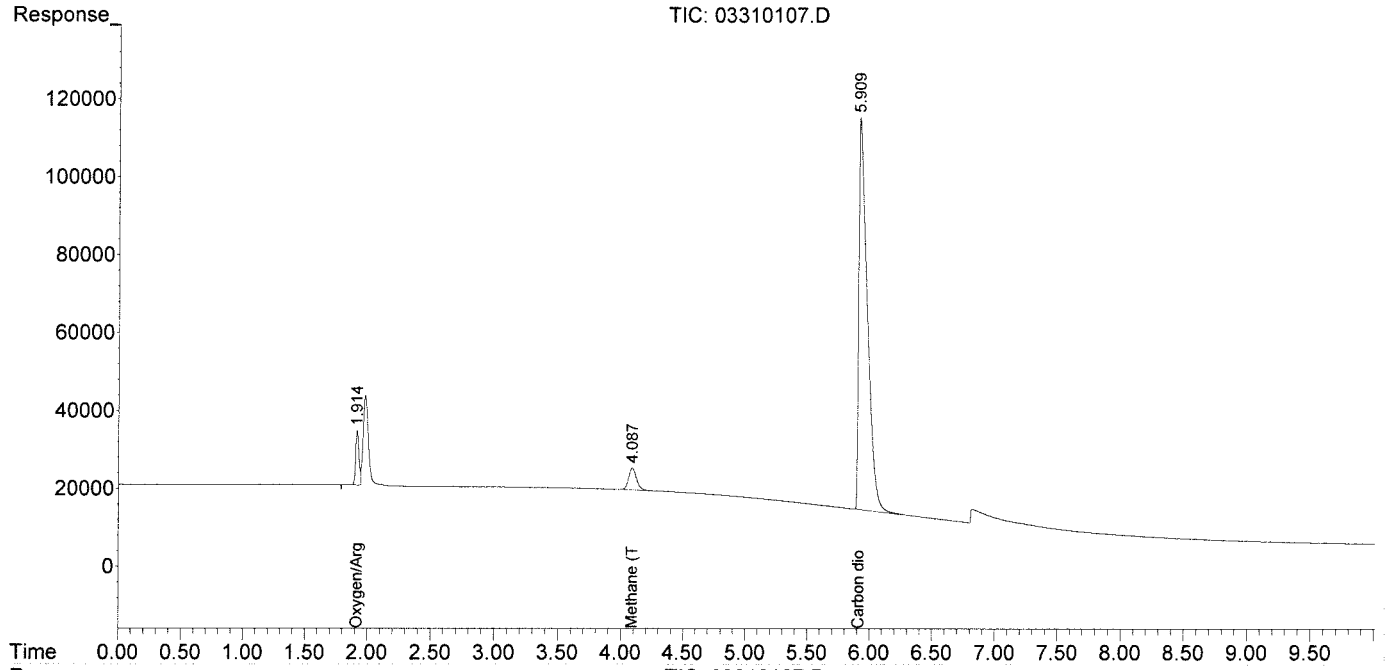
(f)=RT Delta > 1/2 Window (m)=manual int.

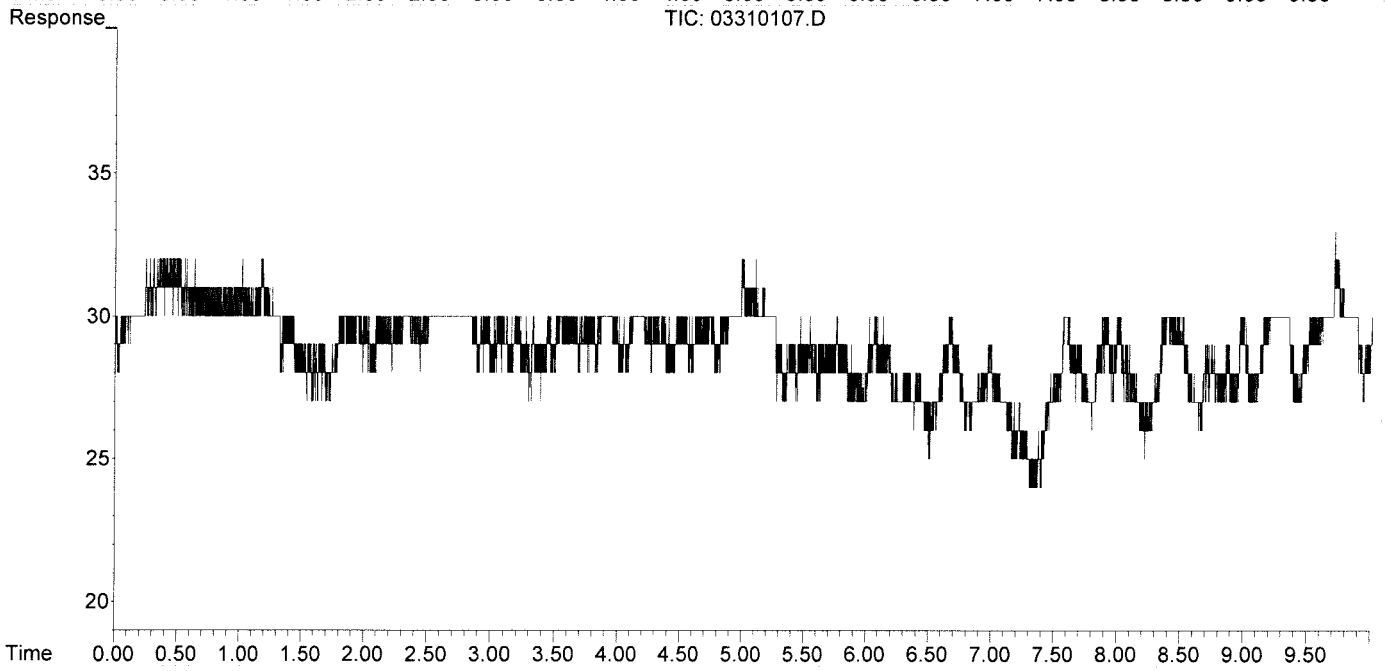
Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\31CO2\
Data File : 03310107.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 31-Mar-2020, 14:16:14
Operator : LD
Sample : P2001715-001 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 31 15:11:29 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\31CO2\
Data File : 03310108.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 31-Mar-2020, 14:37:56
Operator : LD
Sample : P2001715-002 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 31 15:11:42 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.912f	141930	0.030	ppm
2)	Carbon monoxide	1.912f	141930	N.D.	ppm
3)	Methane (TCD)	4.080f	342465	36211.505	ppm
4)	Carbon dioxide	5.901	5507798	23464.477	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

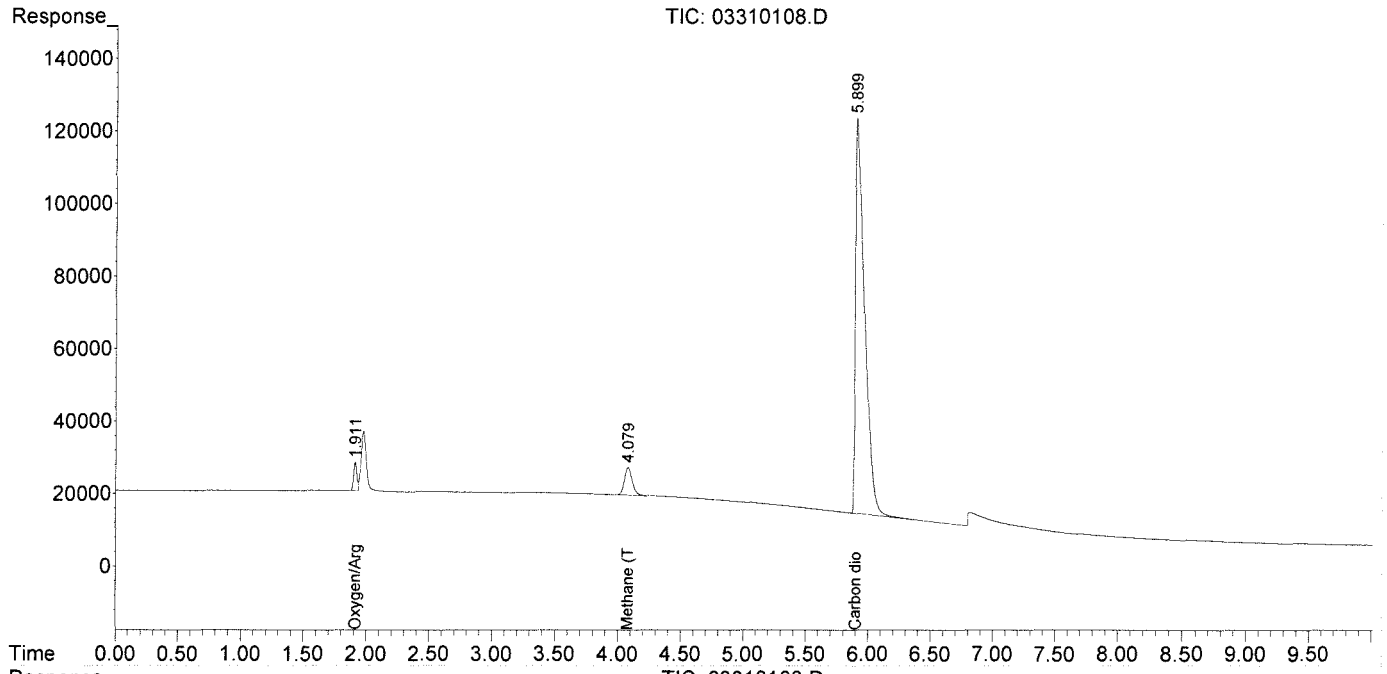
(f)=RT Delta > 1/2 Window (m)=manual int.

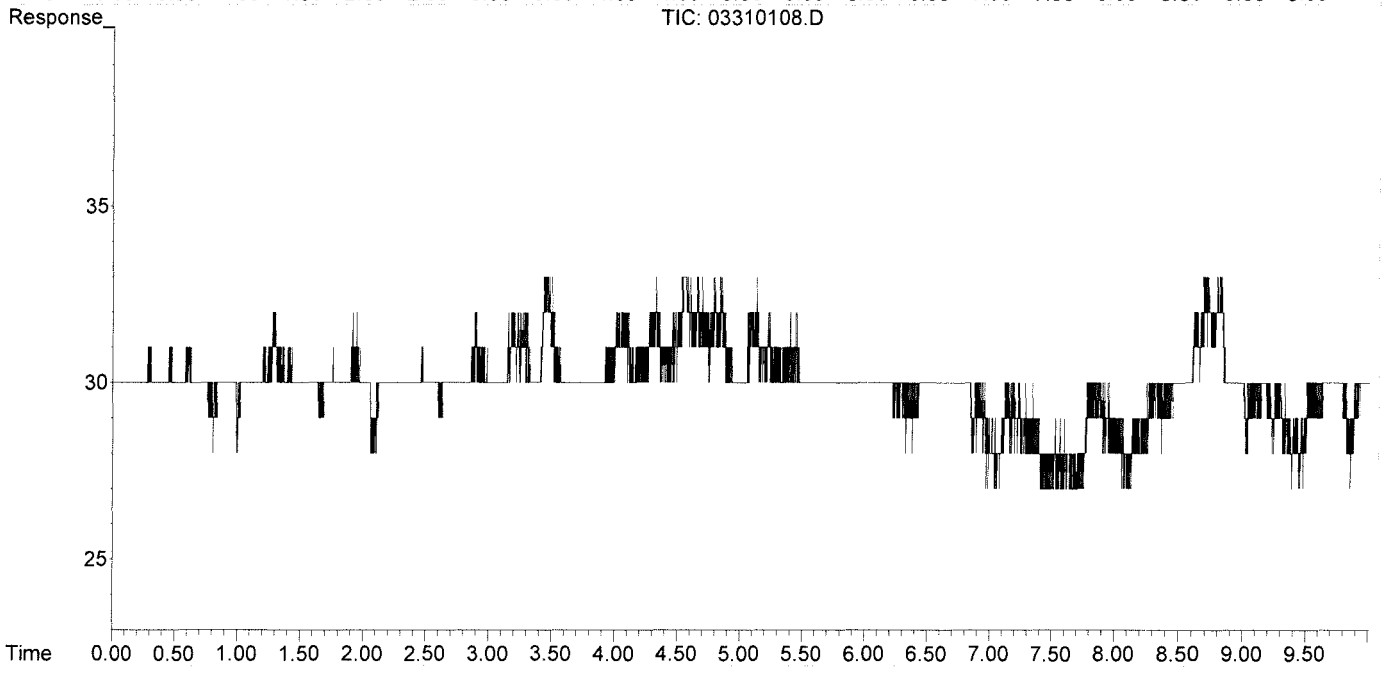
Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\31CO2\
Data File : 03310108.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 31-Mar-2020, 14:37:56
Operator : LD
Sample : P2001715-002 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 31 15:11:42 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\31CO2\
Data File : 03310109.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 31-Mar-2020, 14:55:05
Operator : LD
Sample : P2001715-003 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 31 15:11:55 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.914f	336009	0.071	ppm
2)	Carbon monoxide	1.914f	336009	N.D.	ppm
3)	Methane (TCD)	4.089f	138278	14621.208	ppm
4)	Carbon dioxide	5.935	2840988	12103.260	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

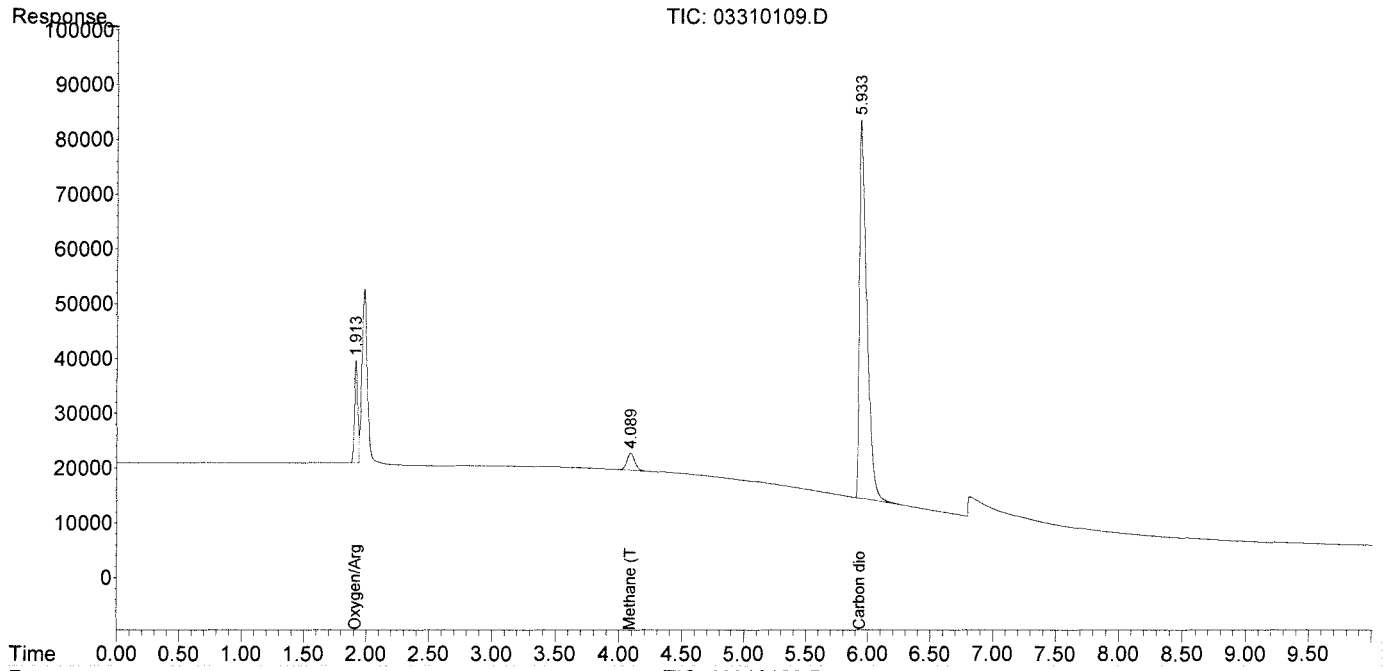
(f)=RT Delta > 1/2 Window (m)=manual int.

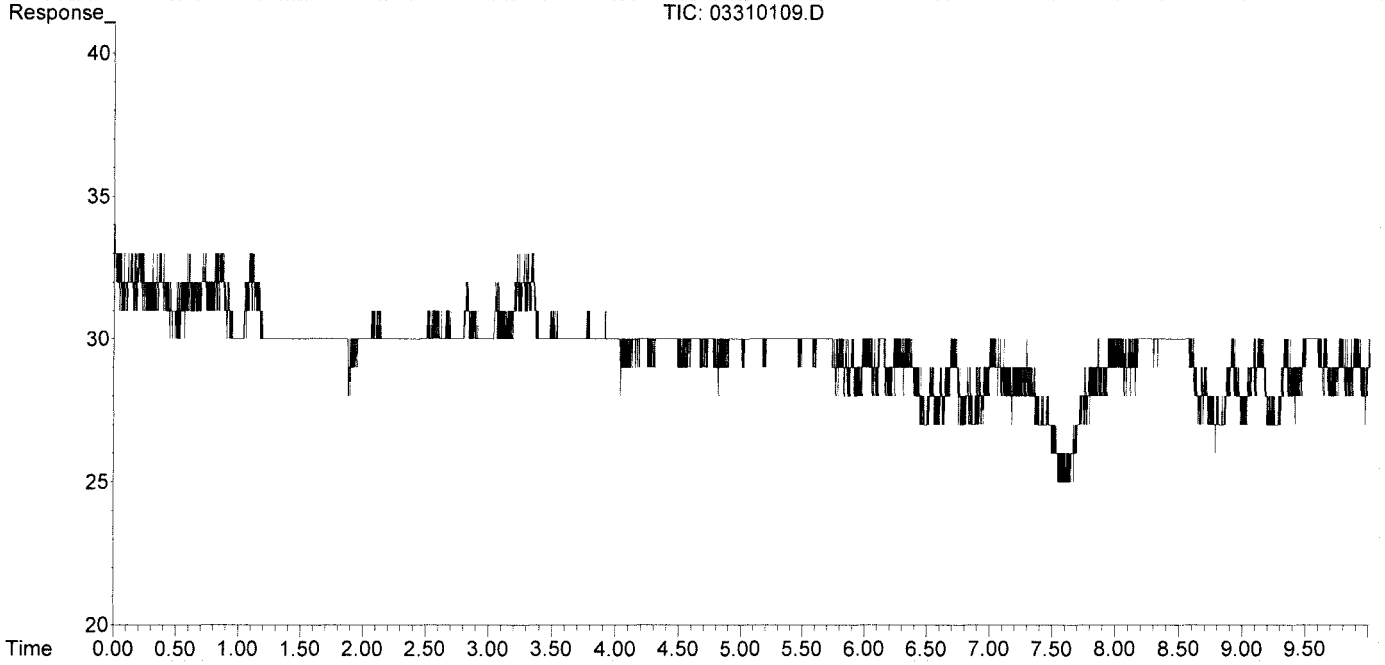
Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\31CO2\
Data File : 03310109.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 31-Mar-2020, 14:55:05
Operator : LD
Sample : P2001715-003 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 31 15:11:55 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\31CO2\
Data File : 03310110.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 31-Mar-2020, 15:10:58
Operator : LD
Sample : P2001715-003ms 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 31 15:21:14 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.904	694650	0.146	ppm
2)	Carbon monoxide	1.904	694650	N.D.	ppm
3)	Methane (TCD)	4.076f	655461	69307.020	ppm
4)	Carbon dioxide	5.925	3395578	14465.939	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

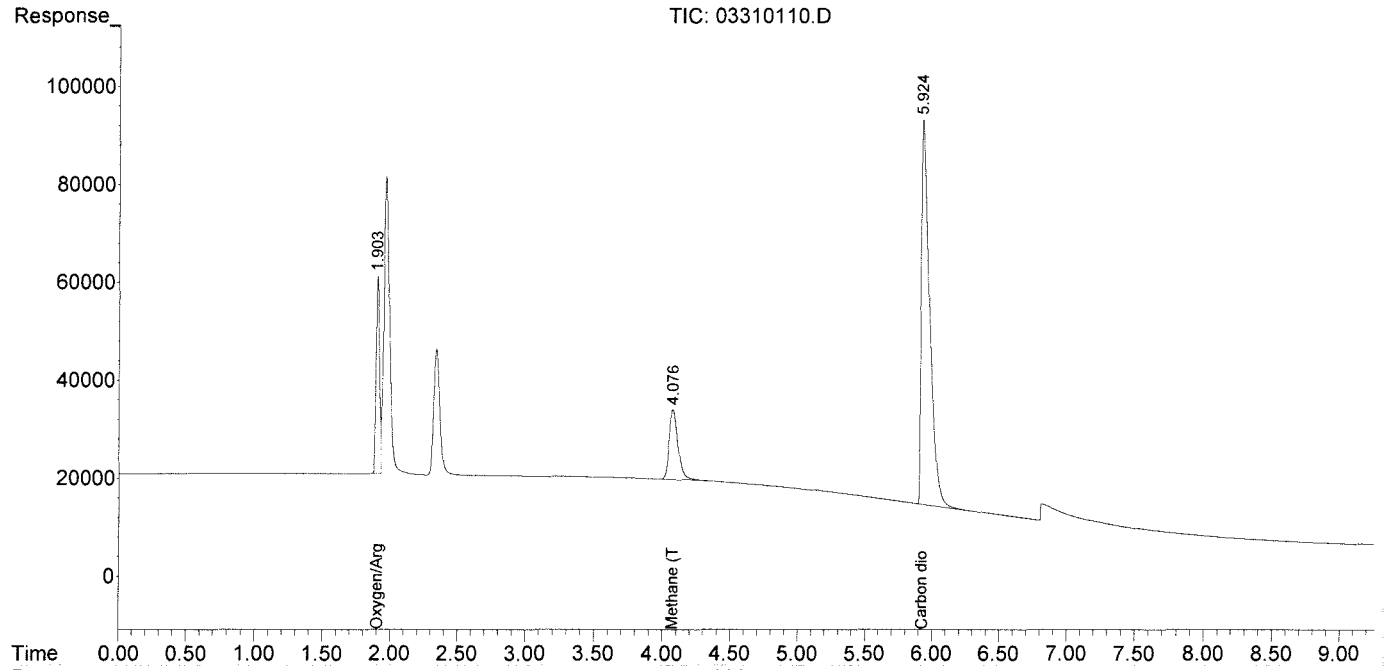
(f)=RT Delta > 1/2 Window (m)=manual int.

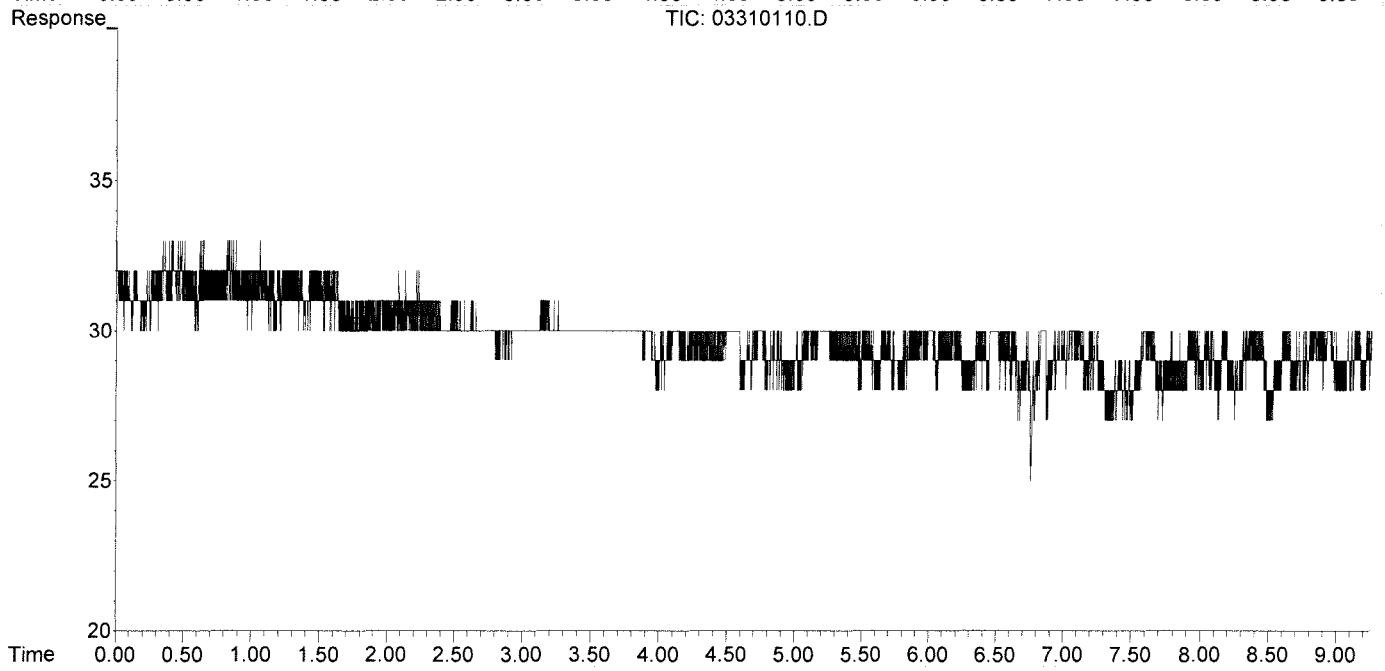
Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\31CO2\
Data File : 03310110.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 31-Mar-2020, 15:10:58
Operator : LD
Sample : P2001715-003ms 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 31 15:21:14 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\31CO2\
Data File : 03310111.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 31-Mar-2020, 15:23:05
Operator : LD
Sample : P2001715-003msd 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 31 16:00:14 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.906f	710098	0.149	ppm
2)	Carbon monoxide	1.906f	710098	N.D.	ppm
3)	Methane (TCD)	4.082f	661522	69947.869	ppm
4)	Carbon dioxide	5.930	3265148	13910.275	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

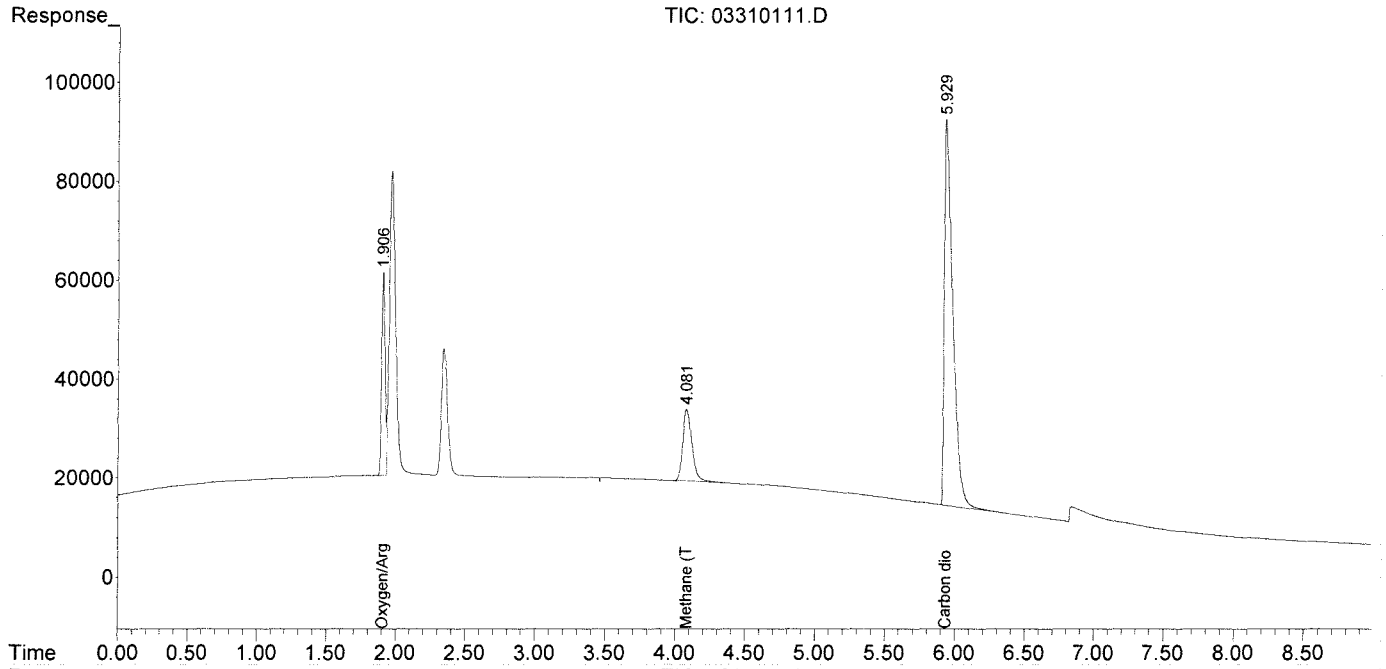
(f)=RT Delta > 1/2 Window (m)=manual int.

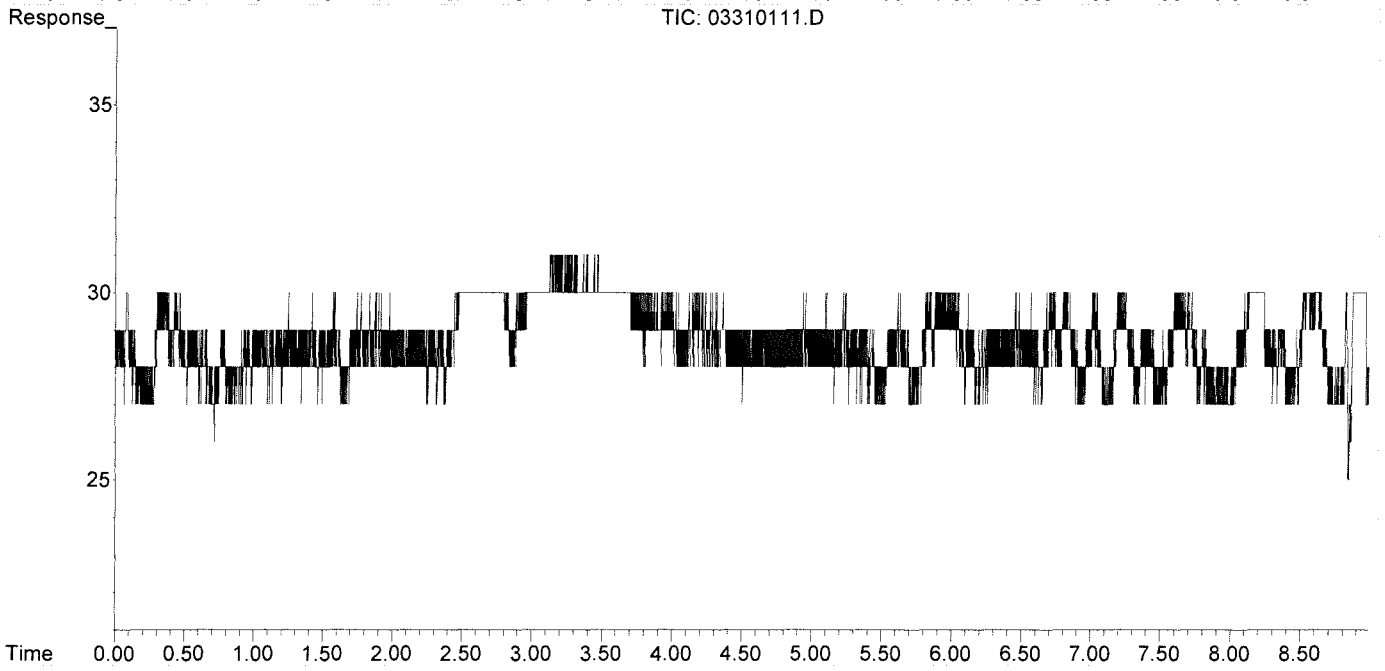
Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\31CO2\
Data File : 03310111.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 31-Mar-2020, 15:23:05
Operator : LD
Sample : P2001715-003msd 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 31 16:00:14 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\31CO2\
Data File : 03310112.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 31-Mar-2020, 15:56:00
Operator : LD
Sample : P2001715-004 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 31 16:37:11 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.910f	345680	0.073	ppm
2)	Carbon monoxide	1.910f	345680	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	5.933	2674347	11393.330	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

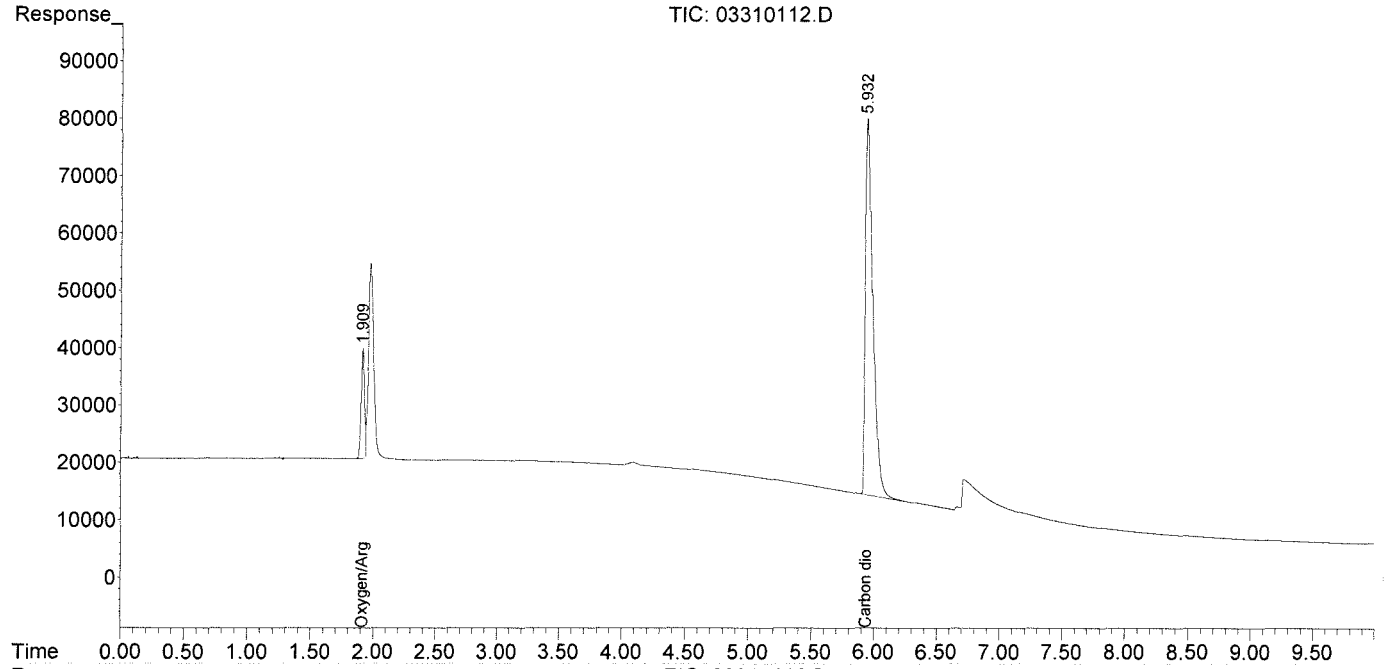
(f)=RT Delta > 1/2 Window (m)=manual int.

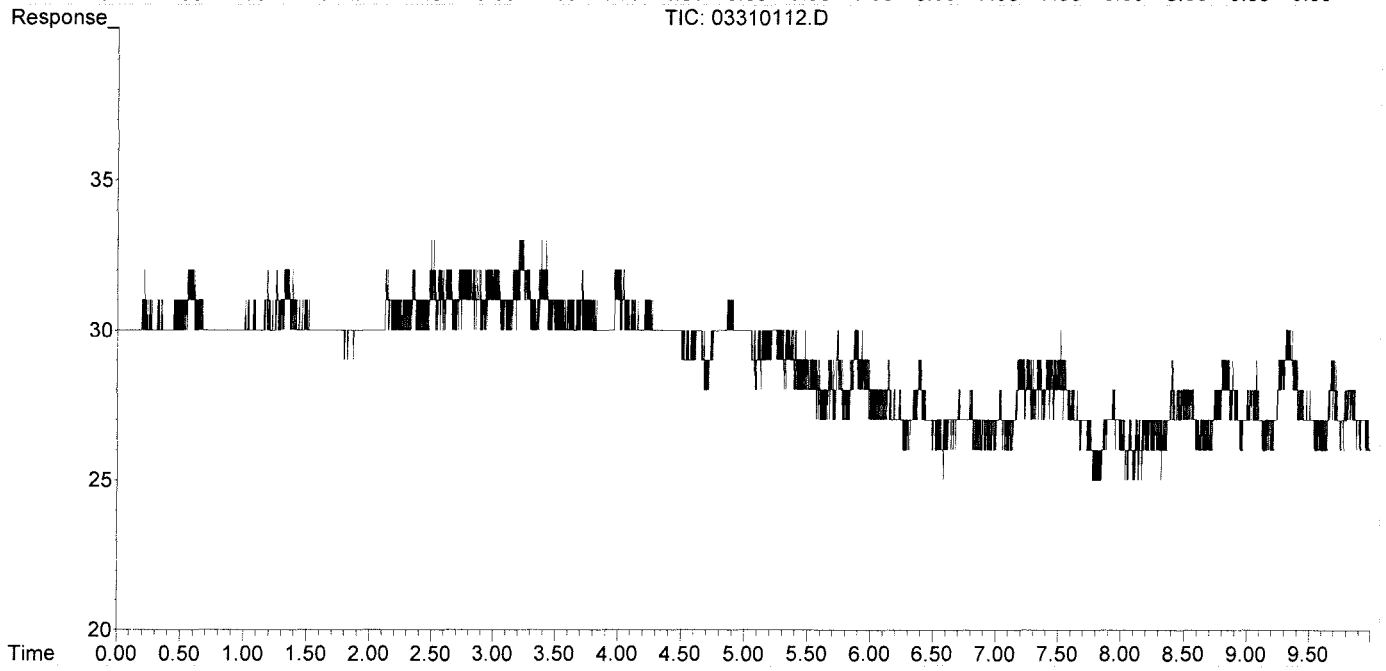
Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\31CO2\
Data File : 03310112.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 31-Mar-2020, 15:56:00
Operator : LD
Sample : P2001715-004 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 31 16:37:11 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\31CO2\
Data File : 03310113.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 31-Mar-2020, 16:26:21
Operator : LD
Sample : P2001715-005 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 31 17:07:31 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.918f	143841	0.030	ppm
2)	Carbon monoxide	1.918f	143841	N.D.	ppm
3)	Methane (TCD)	4.079f	563985	59634.579	ppm
4)	Carbon dioxide	5.920	3904815	16635.406	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

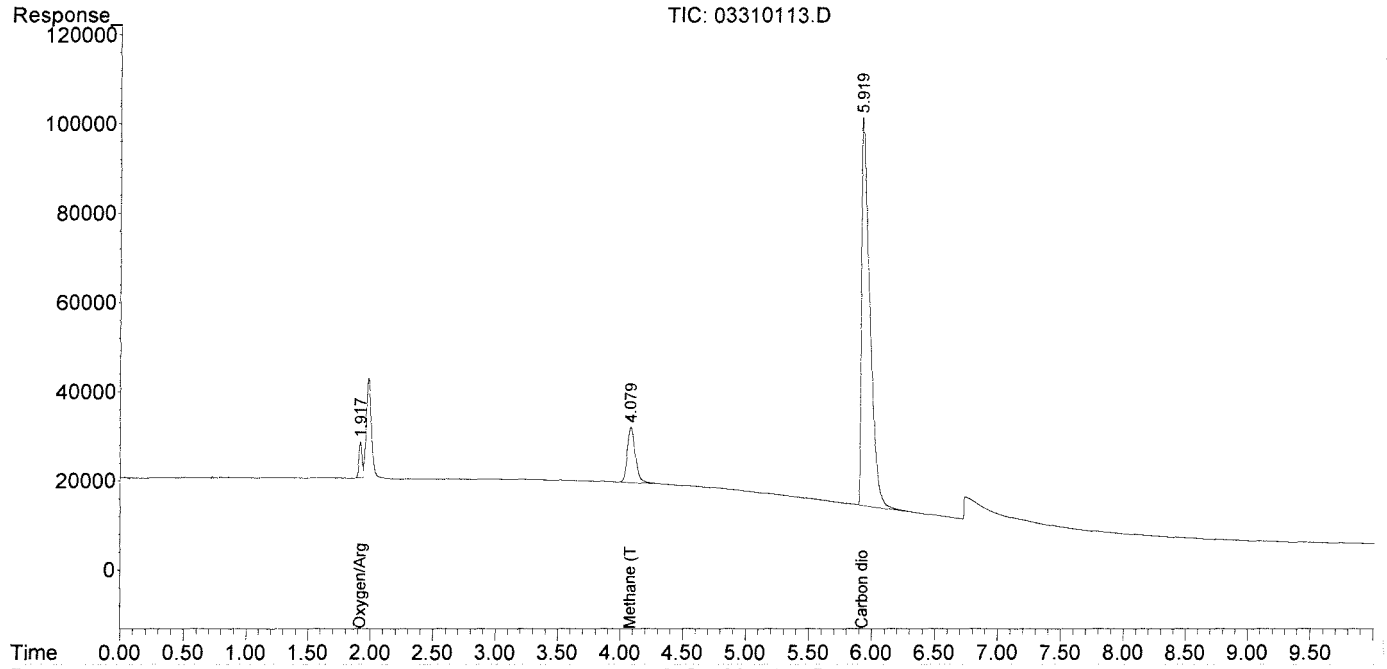
(f)=RT Delta > 1/2 Window (m)=manual int.

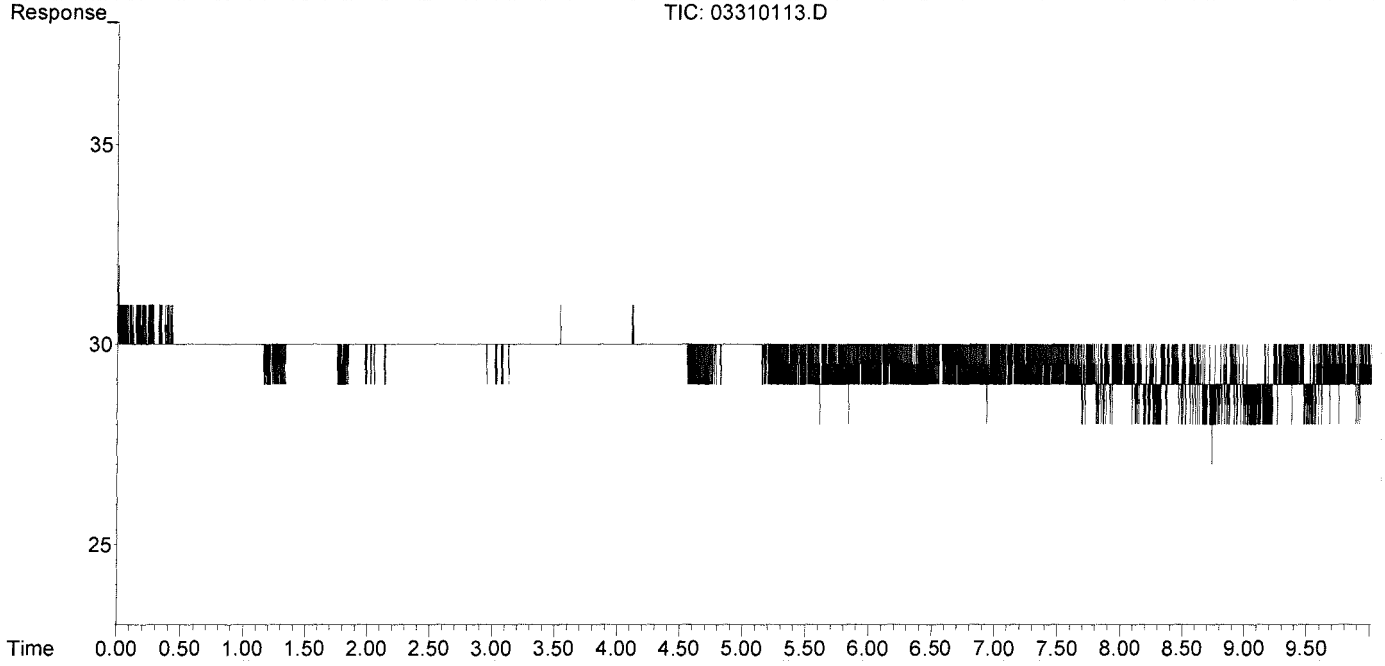
Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\31CO2\
Data File : 03310113.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 31-Mar-2020, 16:26:21
Operator : LD
Sample : P2001715-005 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 31 17:07:31 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\31CO2\
Data File : 03310116.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 31-Mar-2020, 17:09:23
Operator : LD
Sample : P2001715-006 0.05ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 31 17:38:17 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.920f	100272	0.021	ppm
2)	Carbon monoxide	1.920f	100272	N.D.	ppm
3)	Methane (TCD)	4.040f	8697	919.606	ppm
4)	Carbon dioxide	5.928	3236837	13789.664	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

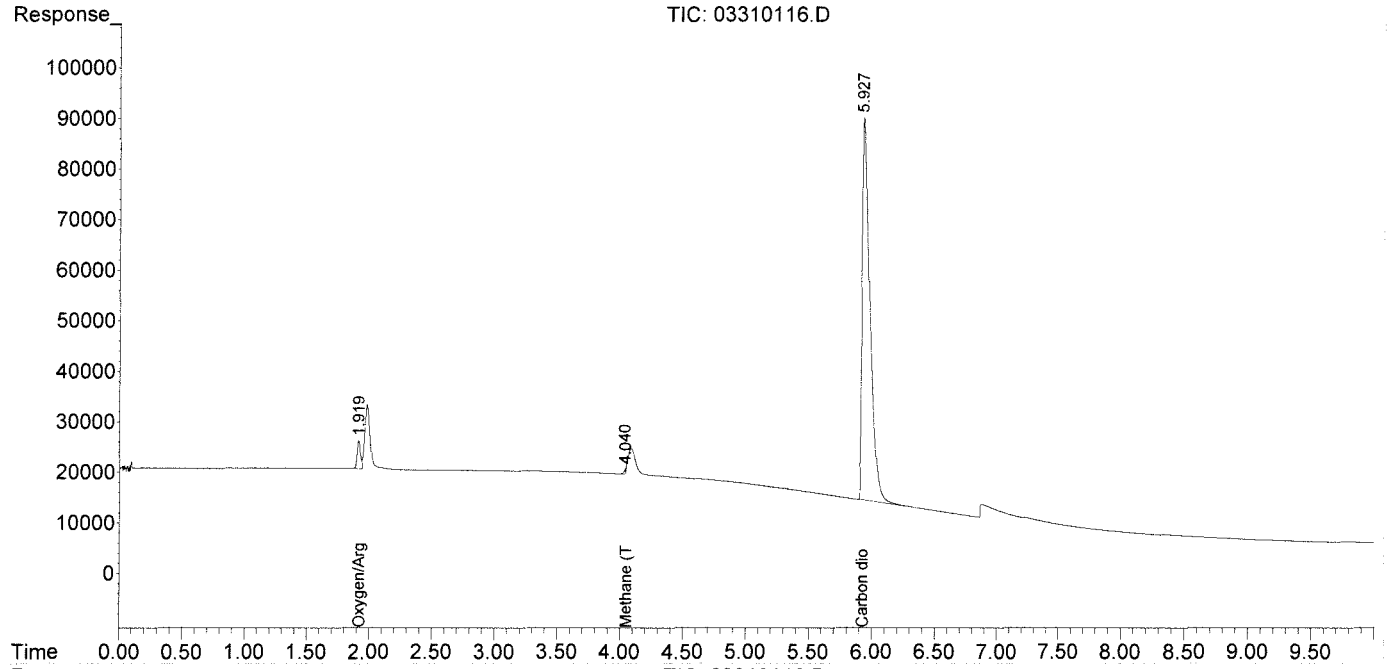
(f)=RT Delta > 1/2 Window (m)=manual int.

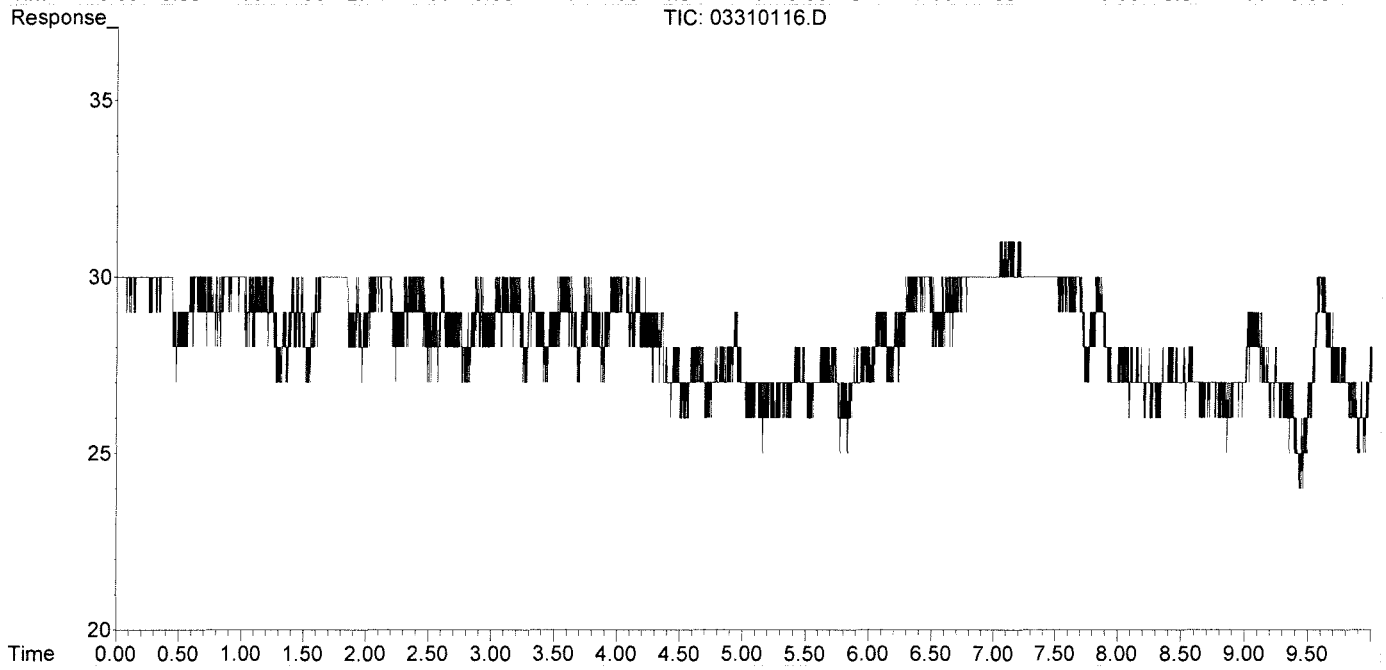
Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\31CO2\
Data File : 03310116.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 31-Mar-2020, 17:09:23
Operator : LD
Sample : P2001715-006 0.05ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 31 17:38:17 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\31CO2\
Data File : 03310115.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 31-Mar-2020, 16:51:33
Operator : LD
Sample : P2001715-007 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 31 17:08:03 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.909f	1670880	0.351	ppm
2)	Carbon monoxide	1.909f	1670880	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	5.943	2114432	9007.963	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

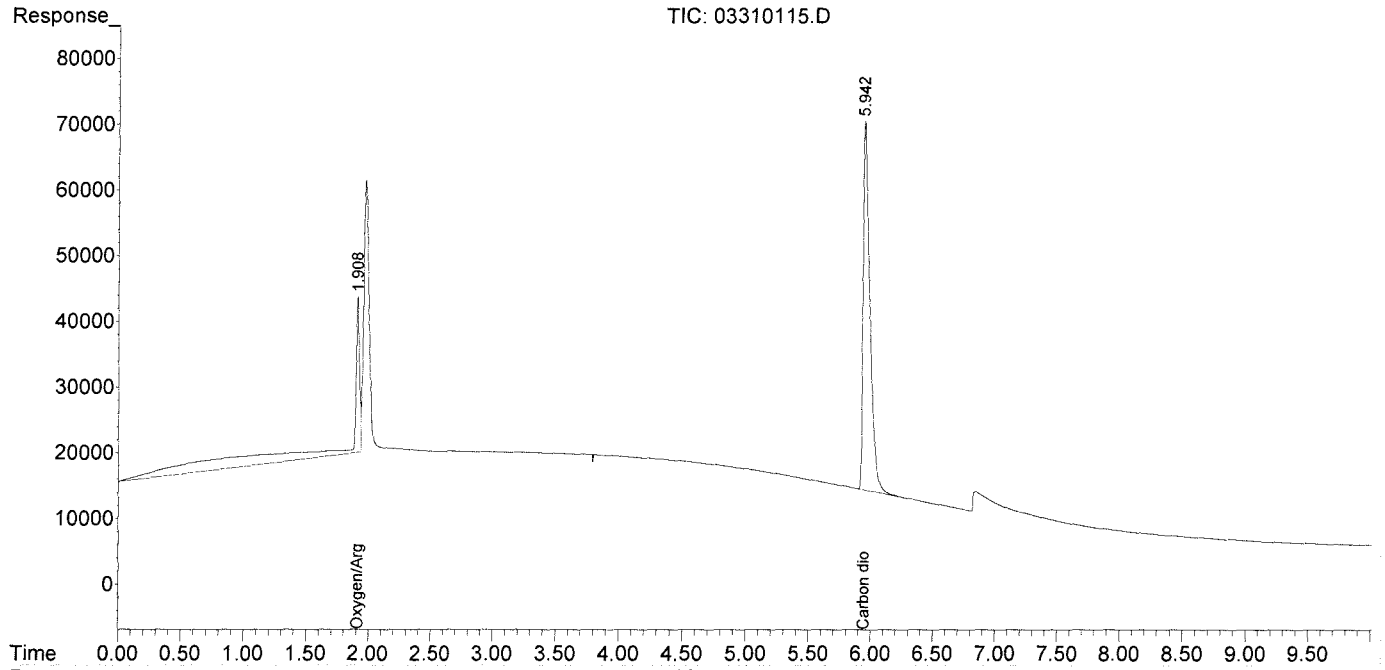
(f)=RT Delta > 1/2 Window (m)=manual int.

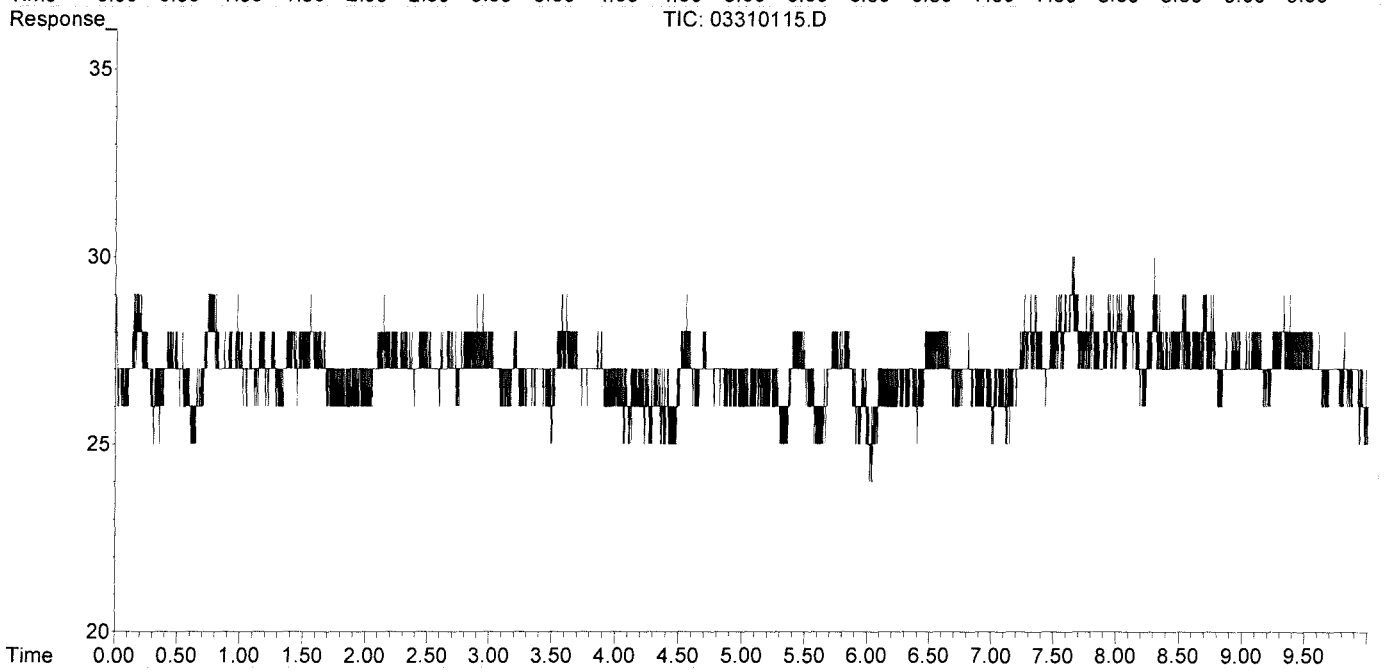
Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\31CO2\
Data File : 03310115.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 31-Mar-2020, 16:51:33
Operator : LD
Sample : P2001715-007 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 31 17:08:03 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\31CO2\
Data File : 03310104.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 31-Mar-2020, 13:30:56
Operator : LD
Sample : mcs 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 31 13:54:18 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.910f	1428108	0.300	ppm
2)	Carbon monoxide	1.910f	1428108	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

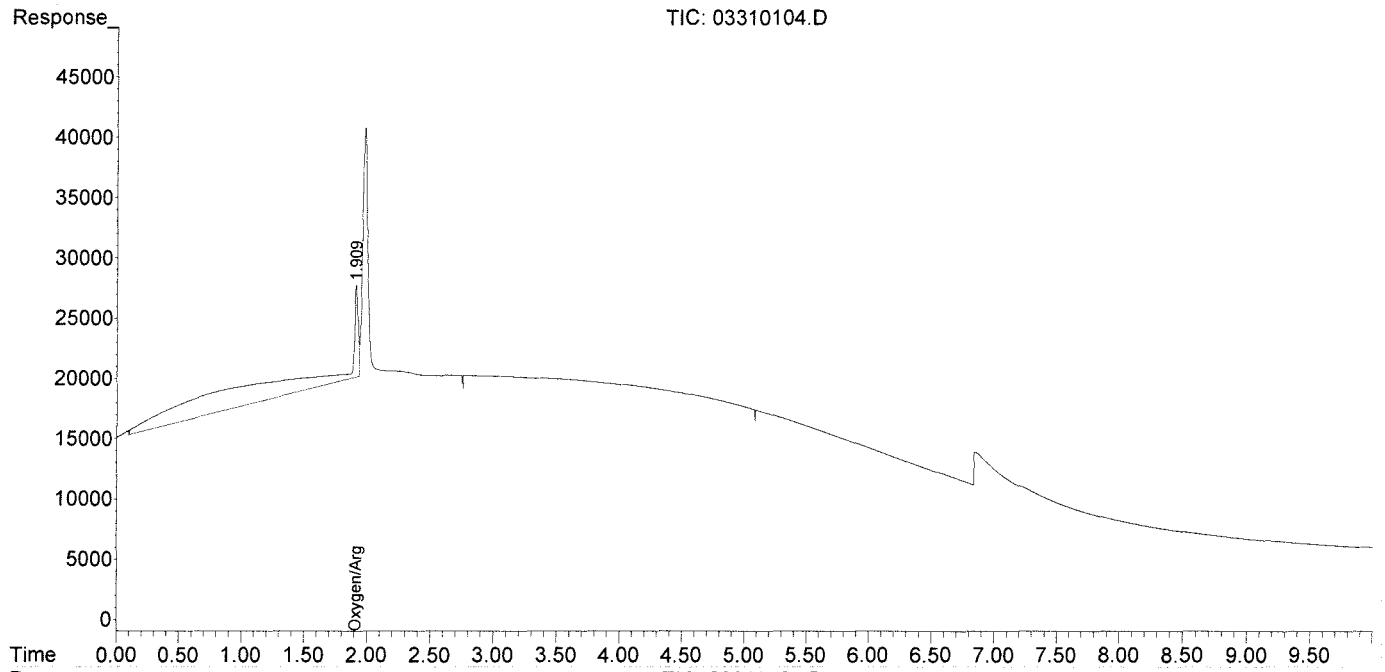
(f)=RT Delta > 1/2 Window (m)=manual int.

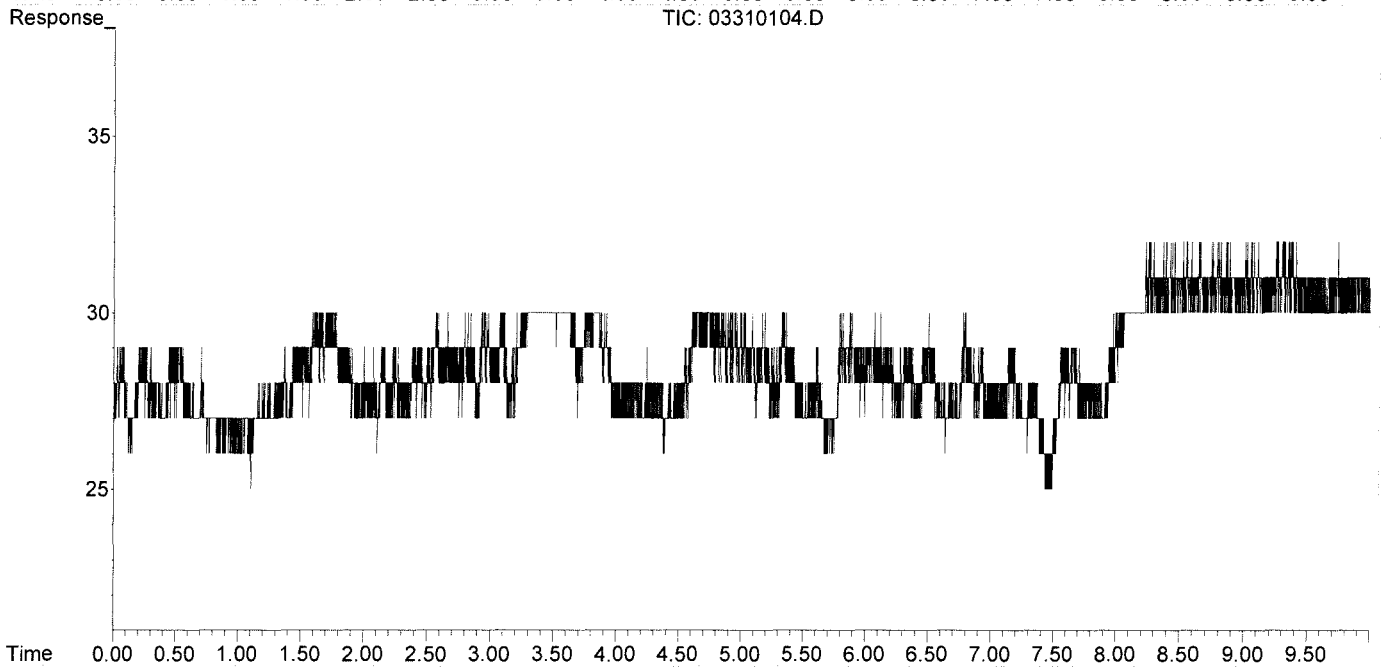
Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\31CO2\
Data File : 03310104.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 31-Mar-2020, 13:30:56
Operator : LD
Sample : mcs 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 31 13:54:18 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\31CO2\
Data File : 03310105.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 31-Mar-2020, 13:43:55
Operator : LD
Sample : lcs tcd 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 31 13:54:29 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.906f	1871628	0.393	ppm	
2)	Carbon monoxide	1.906f	1871628	N.D.	ppm	
3)	Methane (TCD)	4.084f	576905	61000.656	ppm	
4)	Carbon dioxide	5.983	260552	1110.013	ppm	m
6)	Methane (FID)	0.000	0	N.D.	ppm	
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

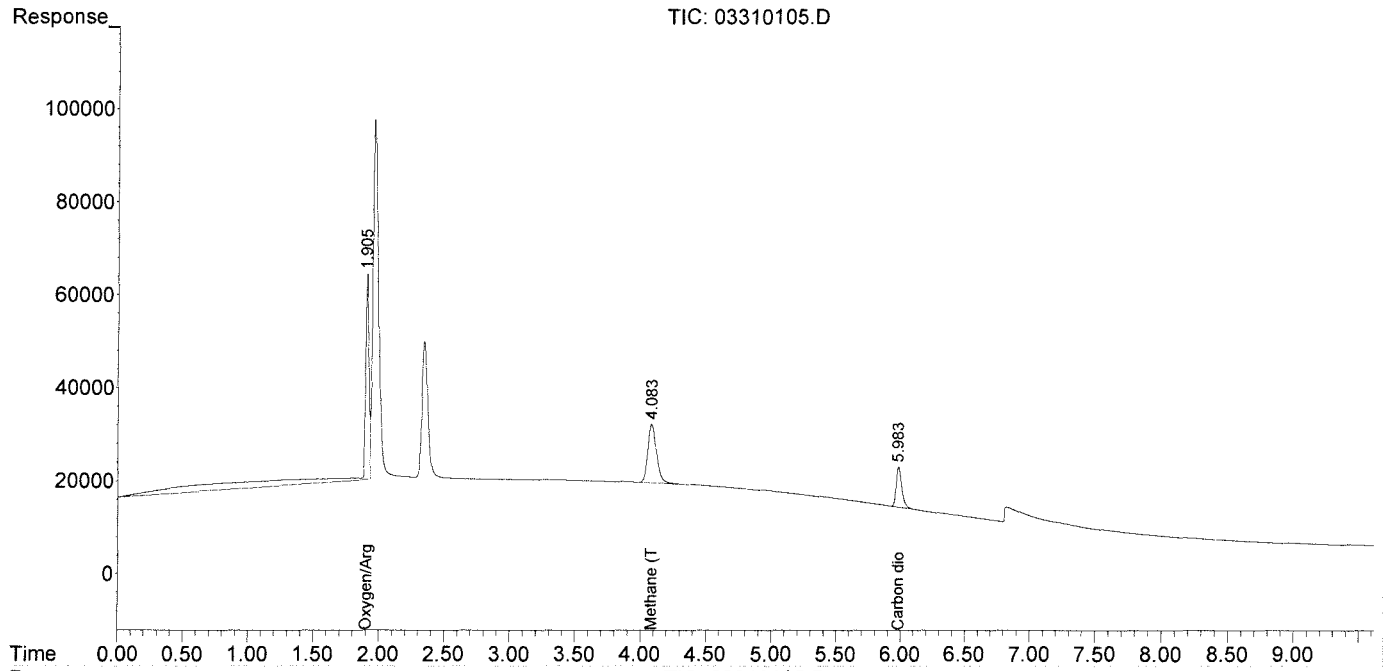
(f)=RT Delta > 1/2 Window (m)=manual int.

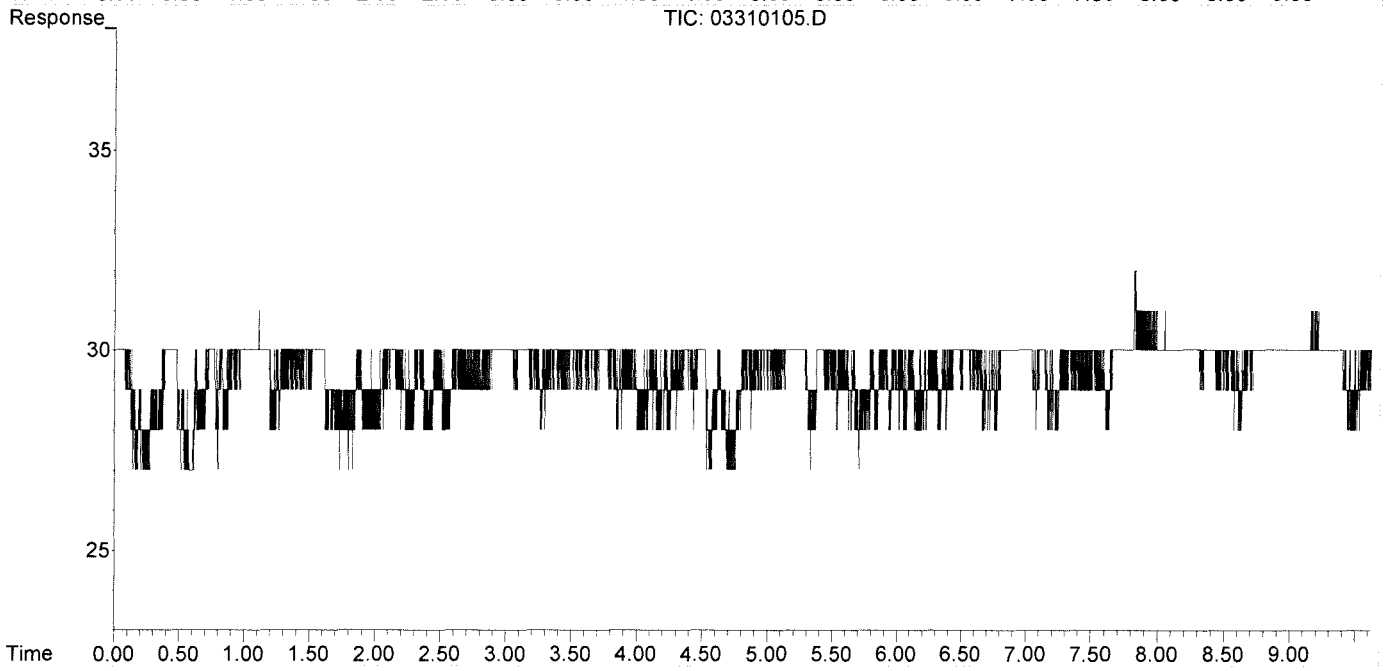
Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\31CO2\
Data File : 03310105.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 31-Mar-2020, 13:43:55
Operator : LD
Sample : lcs tcd 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 31 13:54:29 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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





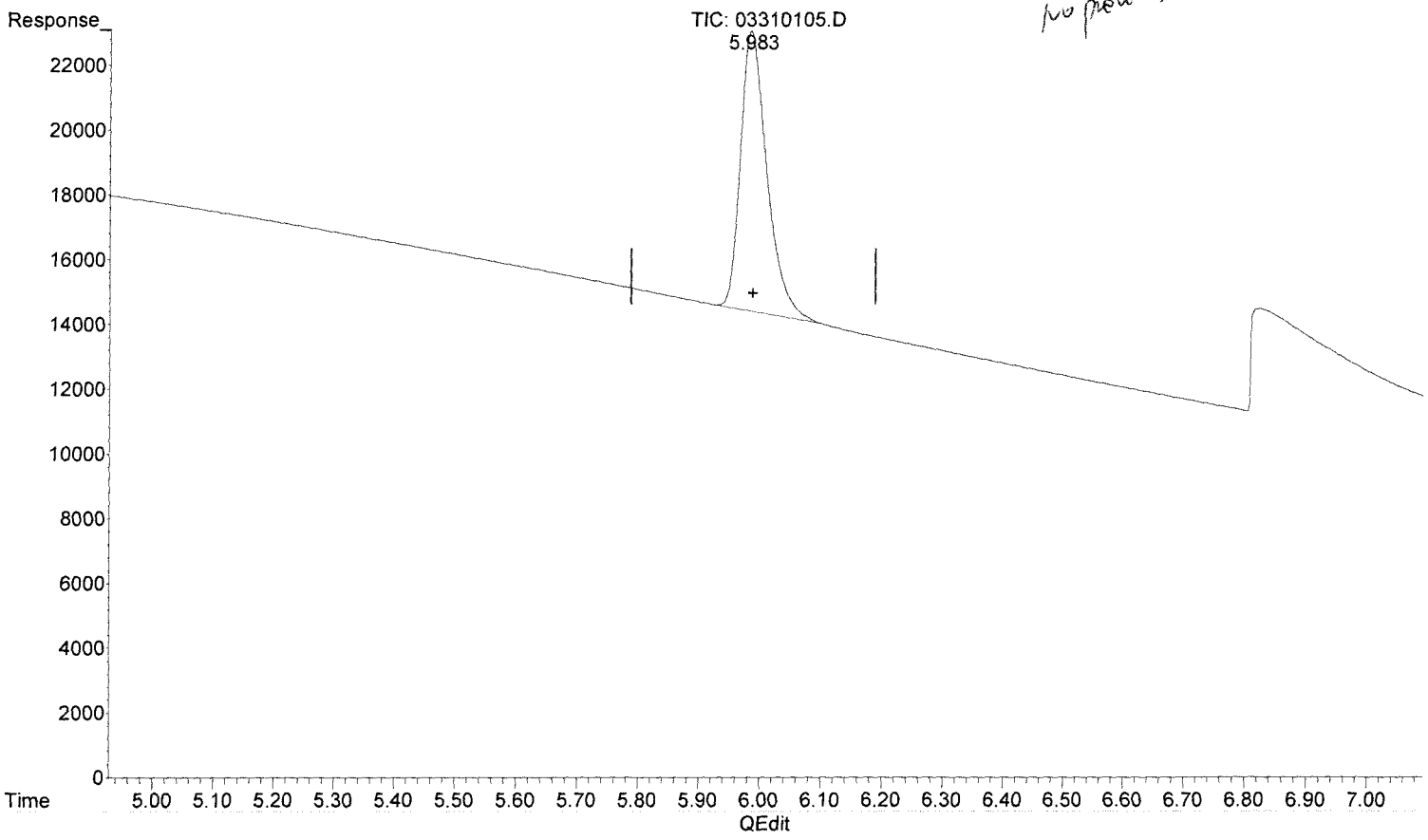
Quantitation Report (Qedit)

Data Path : J:\GC10\DATA\RSK_FID\2020_03\31CO2\
Data File : 03310105.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 31-Mar-2020, 13:43:55
Operator : LD
Sample : lcs tcd 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 31 13:54:29 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

LD
BLC
04/01
no previous

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



(4) Carbon dioxide

5.983min 1110.013 ppm m

response 260552

no Previous BLC

(+) = Expected Retention Time
RS082817_CO2.M Wed Apr 01 15:03:06 2020 Page: 1

Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\31CO2\
Data File : 03310106.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 31-Mar-2020, 13:58:57
Operator : LD
Sample : lcsd tcd 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 31 14:09:36 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.903	787537	0.165	ppm	
2)	Carbon monoxide	1.903	787537	N.D.	ppm	
3)	Methane (TCD)	4.081f	562585	59486.565	ppm	
4)	Carbon dioxide	5.981	242178	1031.735	ppm	m
6)	Methane (FID)	0.000	0	N.D.	ppm	
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

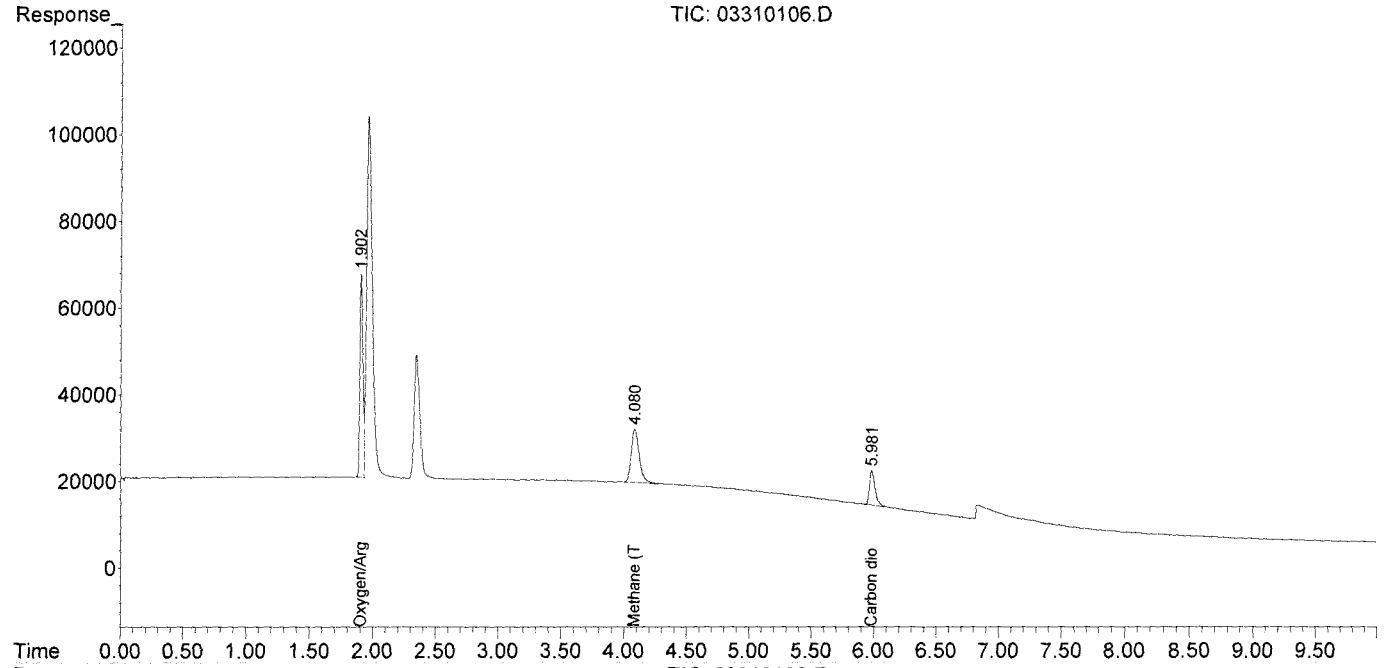
(f)=RT Delta > 1/2 Window (m)=manual int.

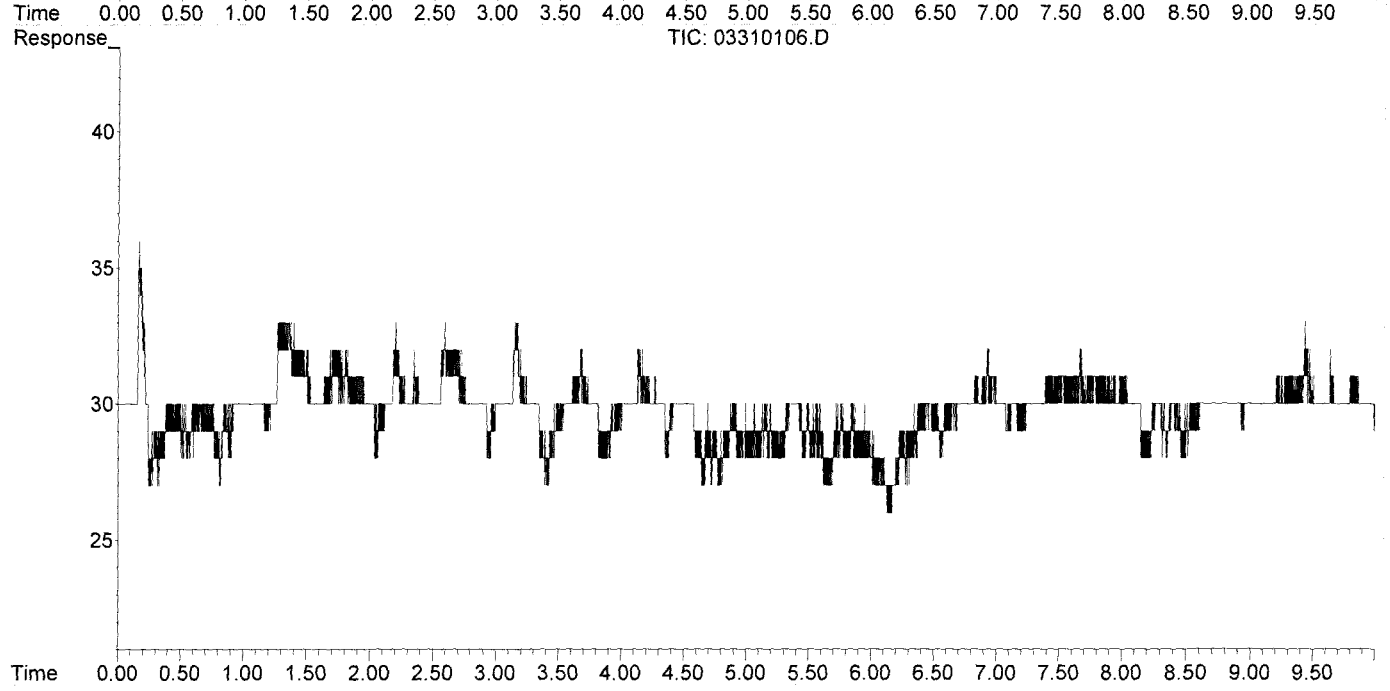
Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\31CO2\
Data File : 03310106.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 31-Mar-2020, 13:58:57
Operator : LD
Sample : lcsd tcd 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 31 14:09:36 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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



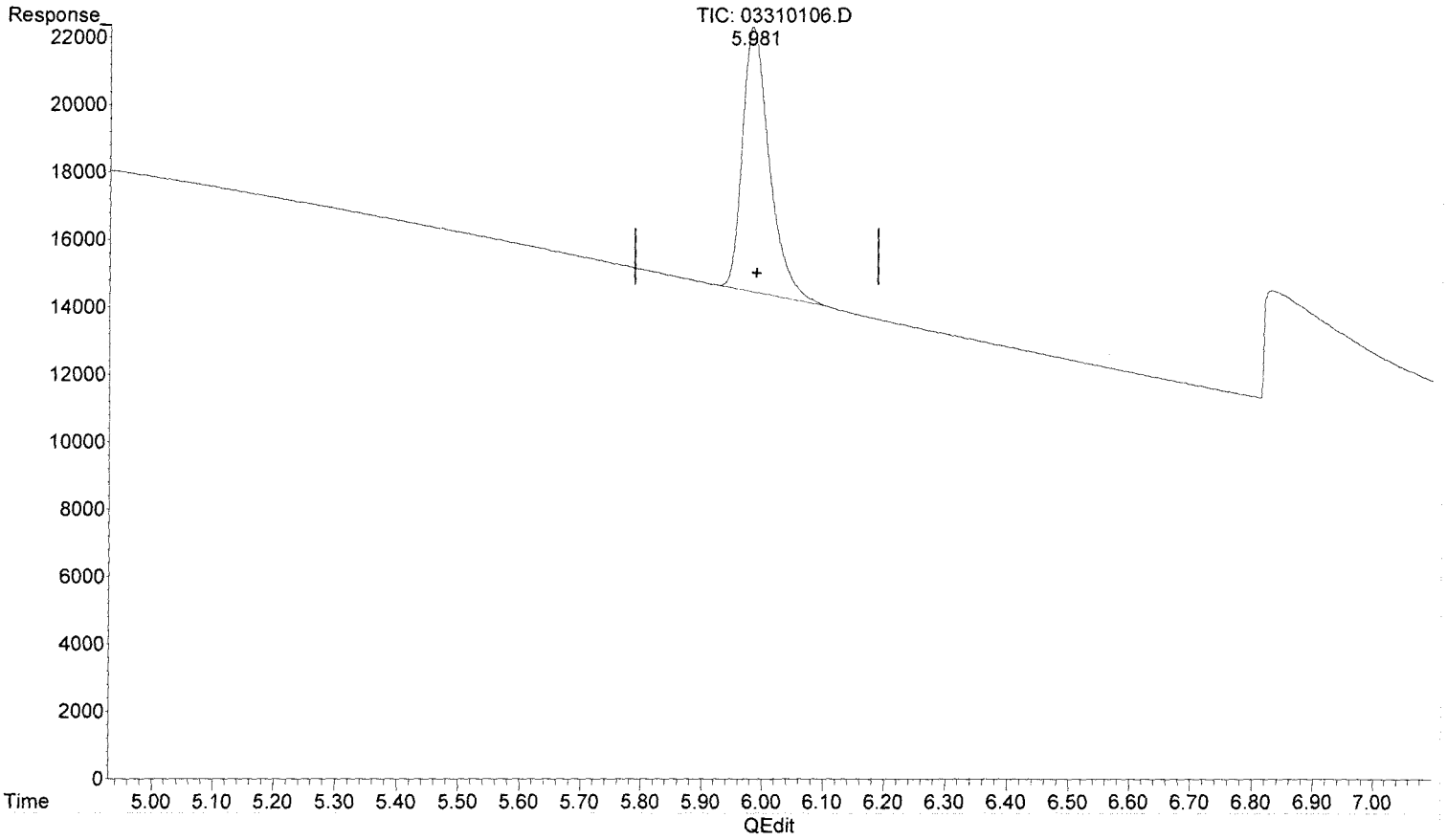


Quantitation Report (Qedit)

Data Path : J:\GC10\DATA\RSK_FID\2020_03\31CO2\
Data File : 03310106.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 31-Mar-2020, 13:58:57
Operator : LD
Sample : lcsd tcd 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 31 14:09:36 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(4) Carbon dioxide

5.981min 1031.735 ppm m

response 242178

CO
BLC
04/01
W previous

(+) = Expected Retention Time
RS082817_CO2.M Wed Apr 01 15:03:20 2020 Page: 1

Response Factor Report HP5890

Method Path : I:\GC10\METHODS\
Method File : RS082817_CO2.M
Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
Last Update : Tue Aug 29 16:13:13 2017
Response Via : Initial Calibration

Calibration Files
1 =08291715.D 2 =08291716.D 3 =08291717.D
4 =08291719.D 5 =08291720.D 6 =08291721.D

	Compound	1	2	3	4	5	6	Avg		%RSD
1)	Oxygen/Argon	4.760						4.760	E6	0.00
2)	Carbon monoxide	2.775		1.066	0.043	0.033	0.027	0.657	E6	170.12
3)	Methane (TCD)							9.457		0.00
4)	Carbon dioxide	2.717	2.193	2.338	2.272	2.265	2.298	2.347	E2	7.99

Signal #2 Calibration Files
1 =08291715.D 2 =08291716.D 3 =08291717.D
4 =08291719.D 5 =08291720.D 6 =08291721.D

	Compound	1	2	3	4	5	6	Avg		%RSD
6)	Methane (FID)	1.253	1.160	1.005	0.927	0.848	0.848	0.945	E4	15.85
7)	Ethylene	1.677	1.605	1.900	1.749	1.597	1.579	1.684	E4	7.30
8)	Ethane	1.769	1.631	1.866	1.767	1.639	1.667	1.723	E4	5.40
9)	Propylene	2.402	2.309	2.767	2.551	2.331	2.333	2.449	E4	7.32
10)	Propane	2.906	2.737	2.817	2.639	2.410	2.420	2.655	E4	7.75
11)	Isobutylene							0.000		-1.00
12)	Isobutane							0.000		-1.00
13)	n-Butane							0.000		-1.00

(#) = Out of Range ### Number of calibration levels exceeded format ###

RS082817_CO2.M Wed Aug 30 13:24:19 2017

Compounds -- Compound #4 -- Carbon dioxide

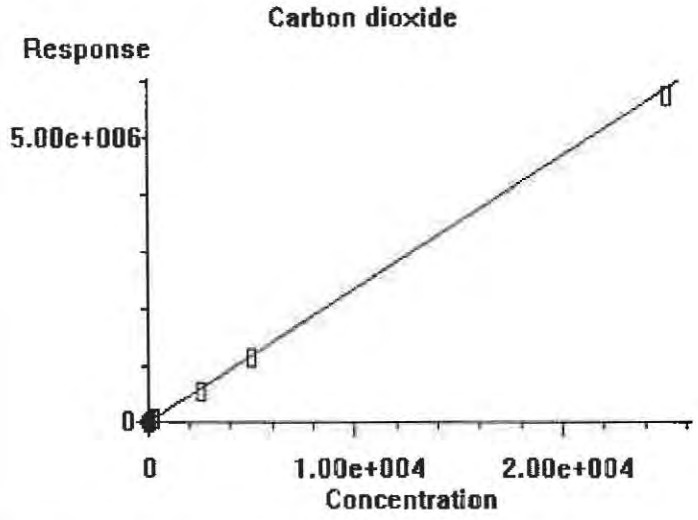
Search by: Ret Time | Name | Index — Find Compound

- Compound Database
- External Standard Compoun
  - Oxygen/Argon
  - Carbon monoxide
  - Methane (TCD)
  - Carbon dioxide
  - Signal #2
  - Methane (FID)
  - Ethylene
  - Ethane
  - Propylene
  - Propane
  - Isobutylene
  - Isobutane
  - n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response
1	25.000000	6793.665186
2	100.000000	21932.418000
3	250.000000	58460.642510
4	2500.000000	568043.388750
5	5000.000000	1132363.215937
6	25000.000000	5744294.891563
7	25000.000000	
8	25000.000000	
9	2000.000000	
10	30000.000000	

Lvl ID	Concentration	Response



0.000e+000	Quadratic term
2.347e+002	Linear term
0.000e+000	Constant term
7.987%	RF Rel Std Dev

OK | Cancel | Help | Print Calibration Curve | Copy Calibration Curve

Calibration Status Report HP5890

Method Path : I:\GC10\METHODS\
Method File : RS082817_CO2.M
Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
Last Update : Tue Aug 29 16:13:13 2017
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	0	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291715.D
2	2	0	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291716.D
3	3	3	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291717.D
4	4	10	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291719.D
5	5	25	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291720.D
6	6	125	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291721.D
7	7	5000	0	J:\GC10\DATA\RSK_FID\2017_08\24\08241708.D
8	8	25000	0	J:\GC10\DATA\RSK_FID\2017_08\24\08241709.D
9	9	2000	0	J:\GC10\DATA\RSK_FID\2017_08\24\08241710.D
10	10	30000	0	J:\GC10\DATA\RSK_FID\2017_08\24\08241711.D

#	ID	Update Time	Quant Time	Acquisition Time
1	1	Aug 29 14:21 2017	Aug 29 14:20 2017	29-Aug-2017, 14:07
2	2	Aug 29 14:52 2017	Aug 29 14:51 2017	29-Aug-2017, 14:22
3	3	Aug 29 15:04 2017	Aug 29 15:04 2017	29-Aug-2017, 14:53
4	4	Aug 29 15:36 2017	Aug 29 15:36 2017	29-Aug-2017, 15:23
5	5	Aug 29 15:57 2017	Aug 29 15:57 2017	29-Aug-2017, 15:44
6	6	Aug 29 16:13 2017	Aug 29 16:13 2017	29-Aug-2017, 16:00
7	7	Aug 25 09:05 2017	Aug 24 16:00 2017	24-Aug-2017, 15:44
8	8	Aug 25 09:06 2017	Aug 24 16:13 2017	24-Aug-2017, 16:02
9	9	Aug 25 09:06 2017	Aug 24 16:31 2017	24-Aug-2017, 16:16
10	10	Aug 25 09:07 2017	Aug 24 16:42 2017	24-Aug-2017, 16:33

RS082817_CO2.M Wed Aug 30 13:24:30 2017

Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291715.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:07
Operator : MC
Sample : 25ppm s32-08291701 0.25ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 14:20:06 2017
Quant Method : I:\GC10\METHODS\RS082417.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Fri Aug 25 09:19:14 2017
Response via : Initial Calibration
Integrator: ChemStation

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

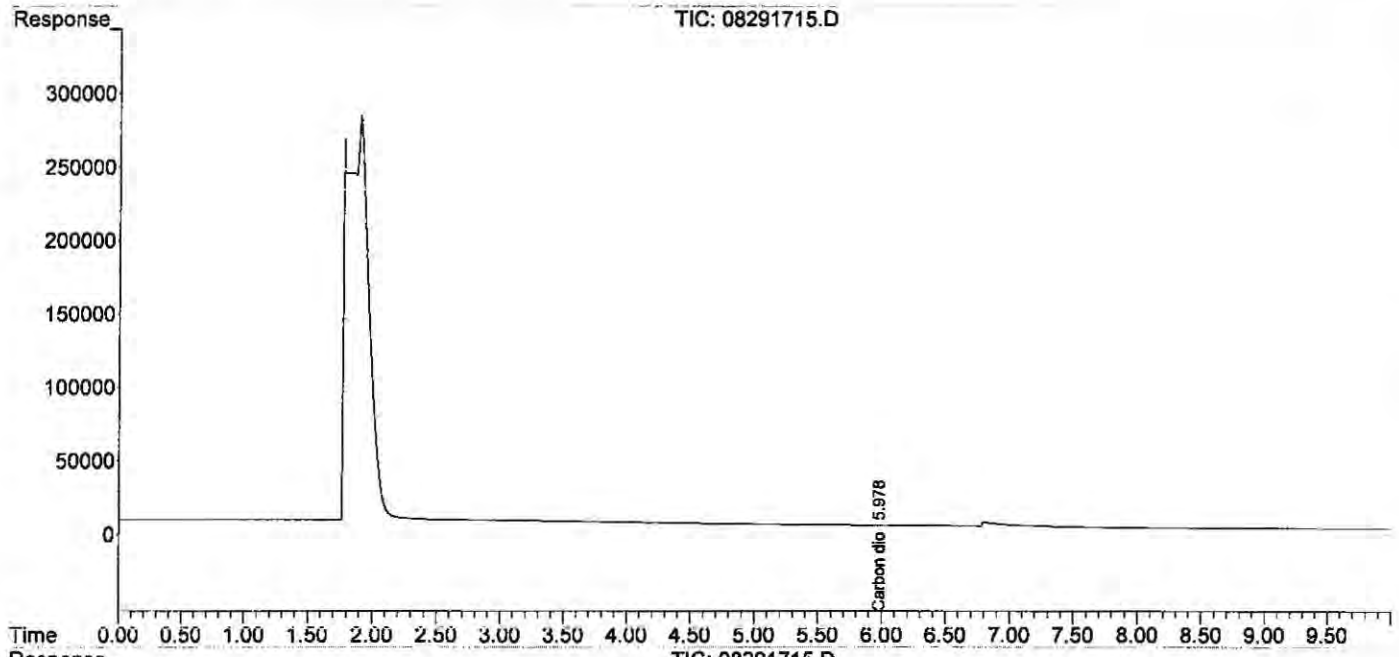
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	1.776	277465	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	5.978	6794	27.870	ppm	m
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

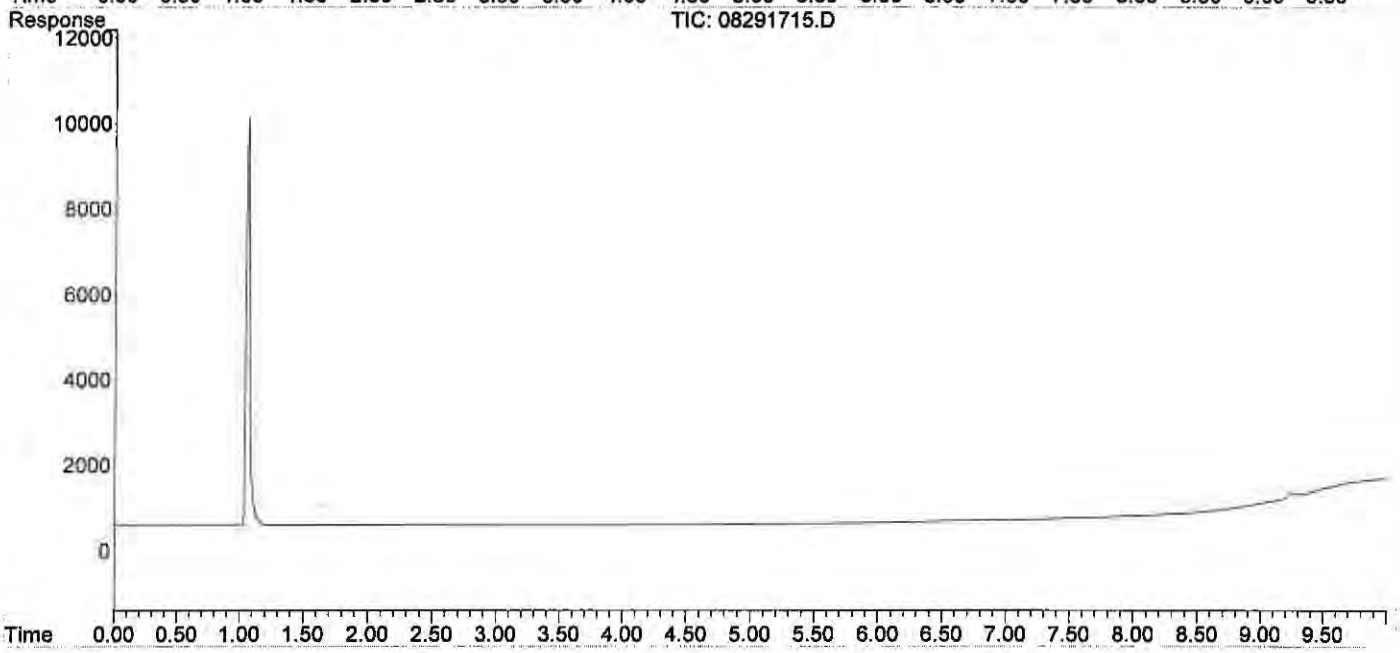
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291715.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:07
Operator : MC
Sample : 25ppm s32-08291701 0.25ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 14:20:06 2017
Quant Method : I:\GC10\METHODS\RS082417.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Fri Aug 25 09:19:14 2017
Response via : Initial Calibration
Integrator: ChemStation

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



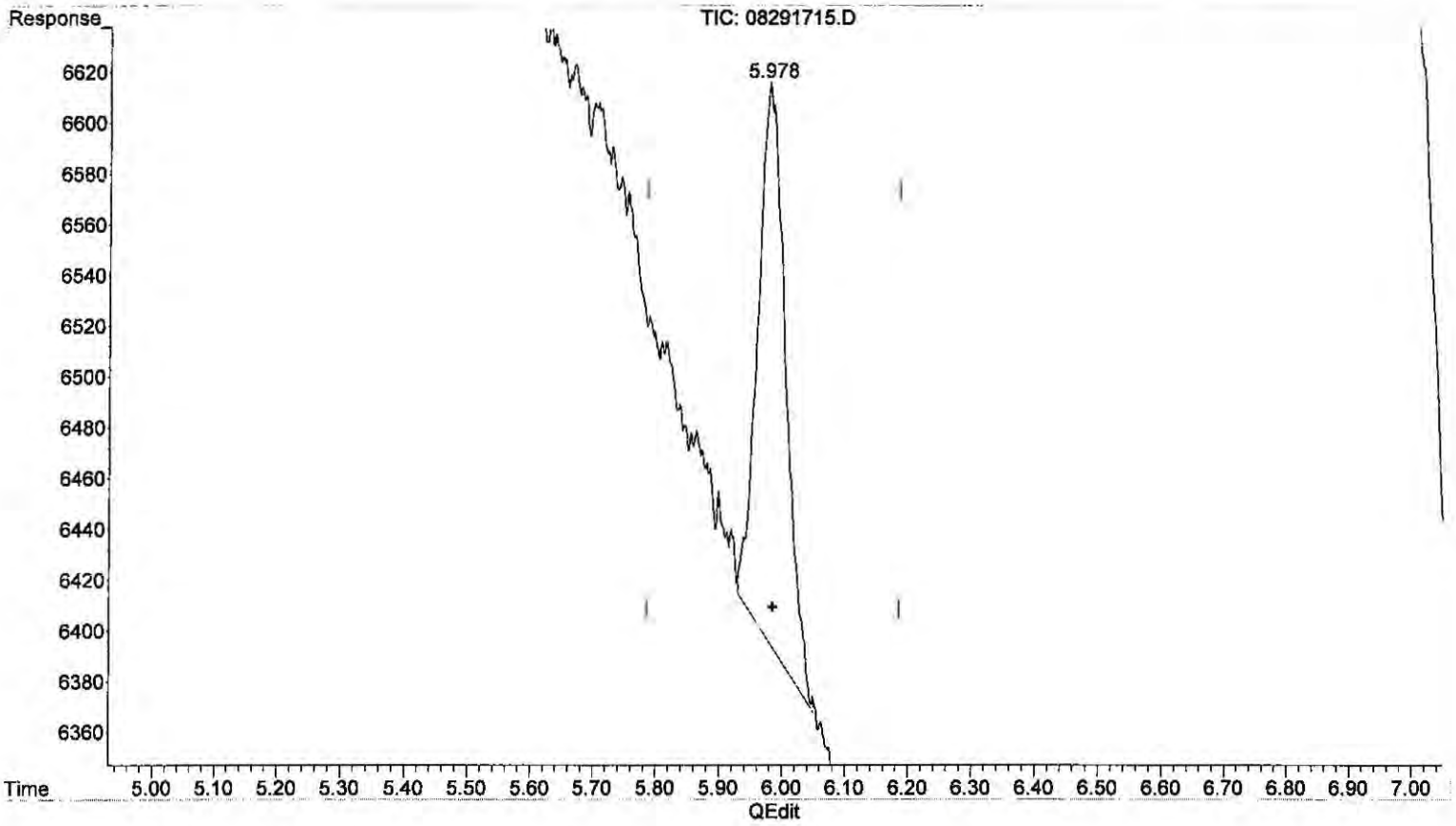


Quantitation Report (Qedit)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291715.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:07
Operator : MC
Sample : 25ppm s32-08291701 0.25ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 14:20:06 2017
Quant Method : I:\GC10\METHODS\RS082417.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Fri Aug 25 09:19:14 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(4) Carbon dioxide

5.978min 27.870 ppm m

response 6794

8/30/17
BW
M.
prelim

8/4/17

(+) = Expected Retention Time

RS082817_CO2.M Wed Aug 30 13:17:47 2017

Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291716.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:22
Operator : MC
Sample : 100ppm s32-08291702 0.2ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 14:51:38 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 14:21:08 2017
Response via : Initial Calibration
Integrator: ChemStation

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

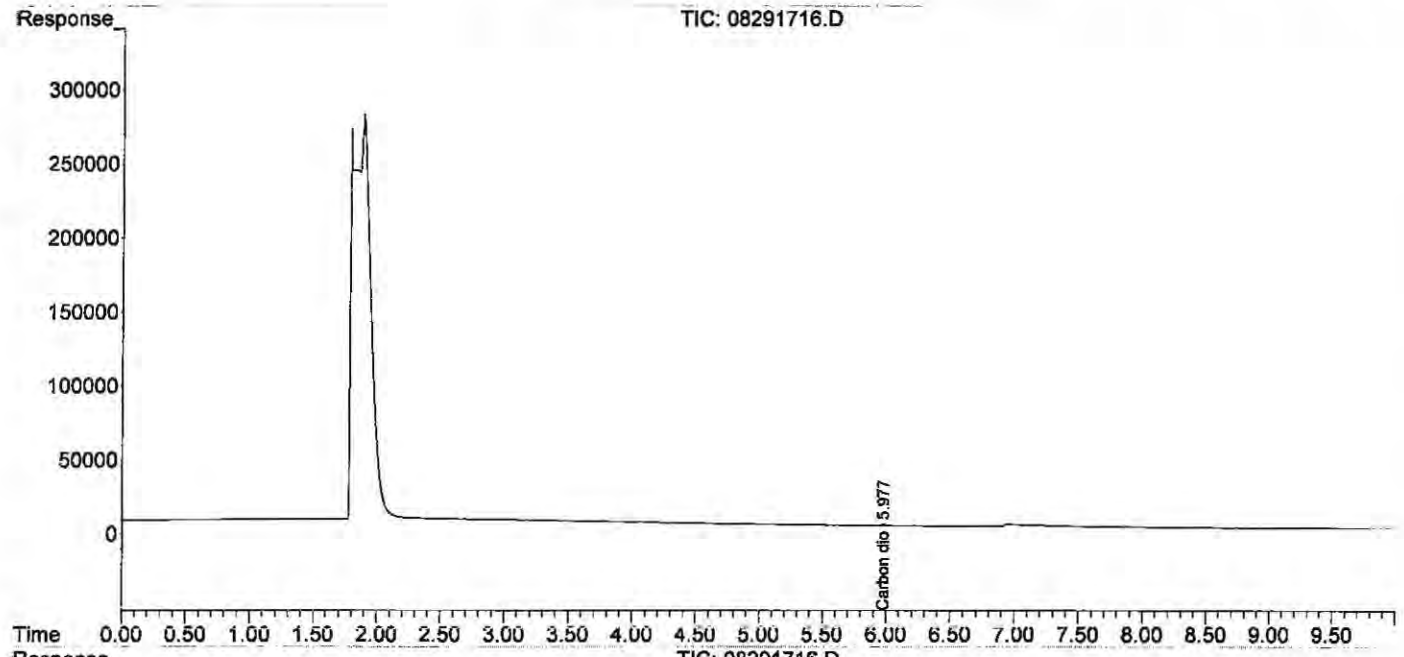
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.790	-598962	N.D.	ppm	
2)	Carbon monoxide	0.000	0	N.D.	ppm	d
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	5.978	21932	87.858	ppm	
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

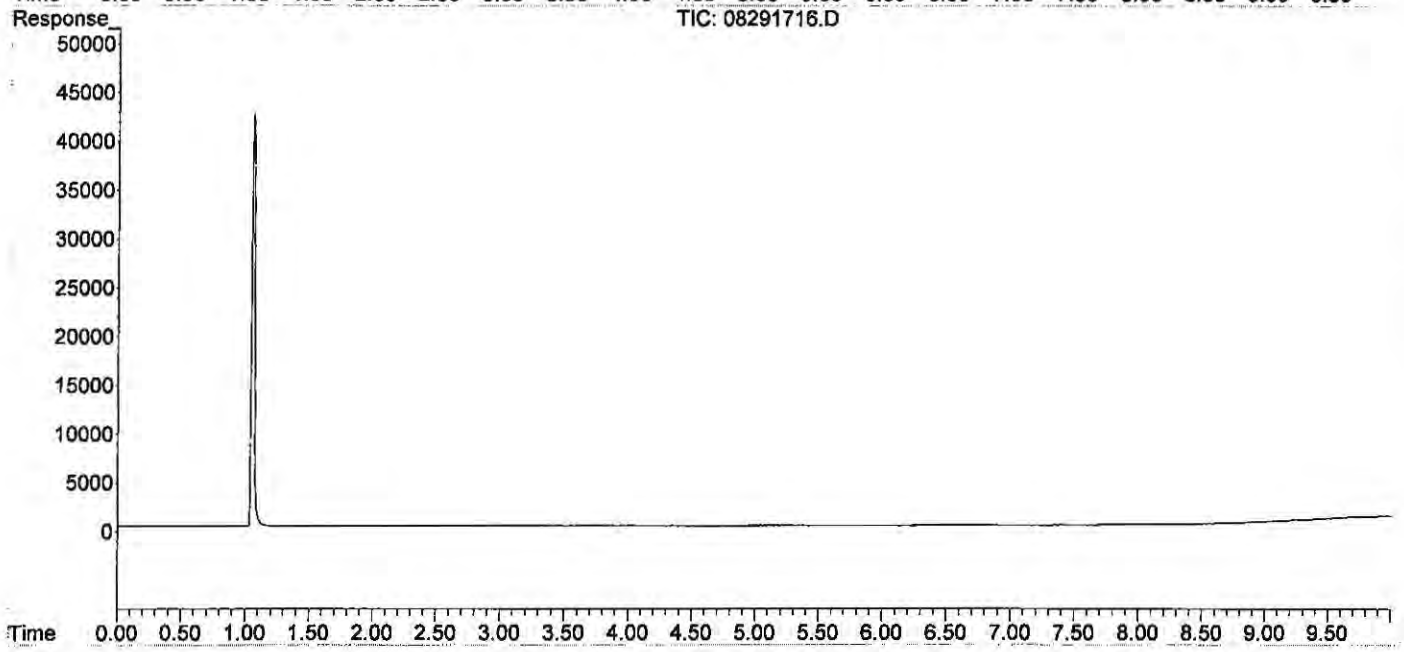
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291716.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:22
Operator : MC
Sample : 100ppm s32-08291702 0.2ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 14:51:38 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 14:21:08 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291717.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:53
Operator : MC
Sample : 250ppm s32-08291702 0.5ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:03:42 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 14:52:06 2017
Response via : Initial Calibration
Integrator: ChemStation

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

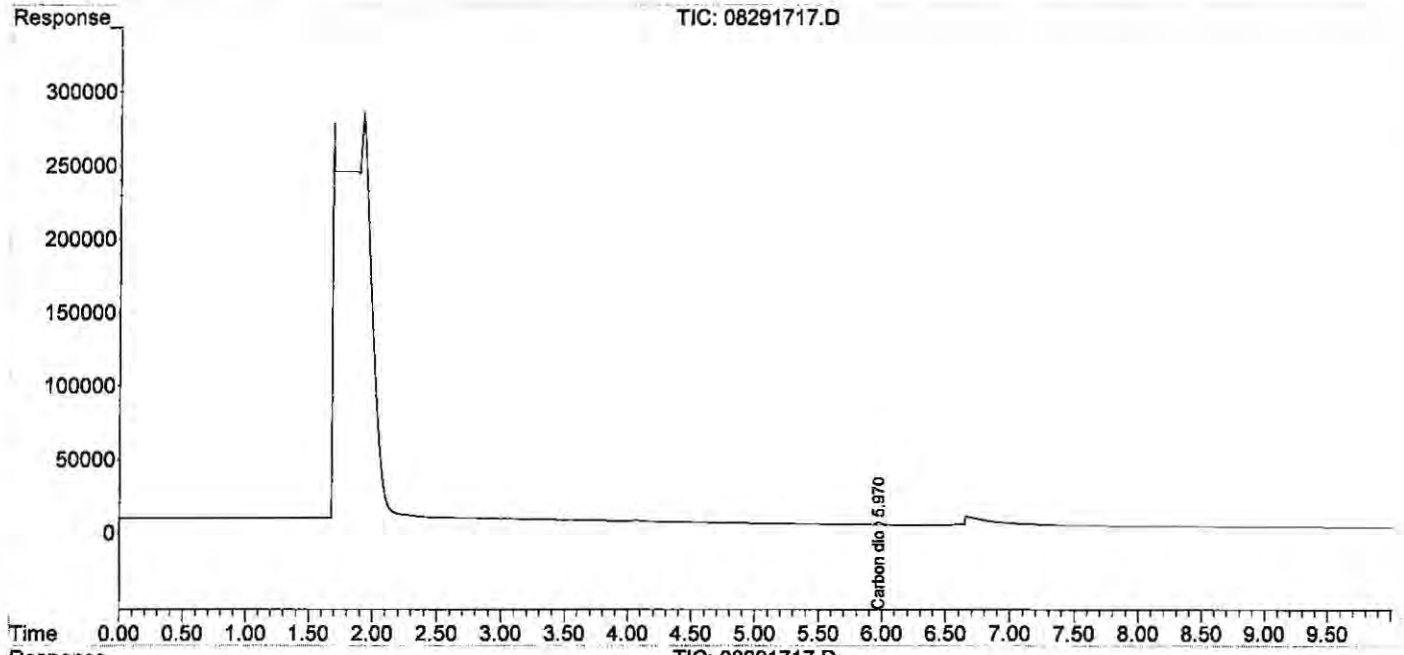
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.920f	-30716454	N.D.	ppm	
2)	Carbon monoxide	0.000	0	N.D.	ppm	d
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	5.970	58461	240.204	ppm	m
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

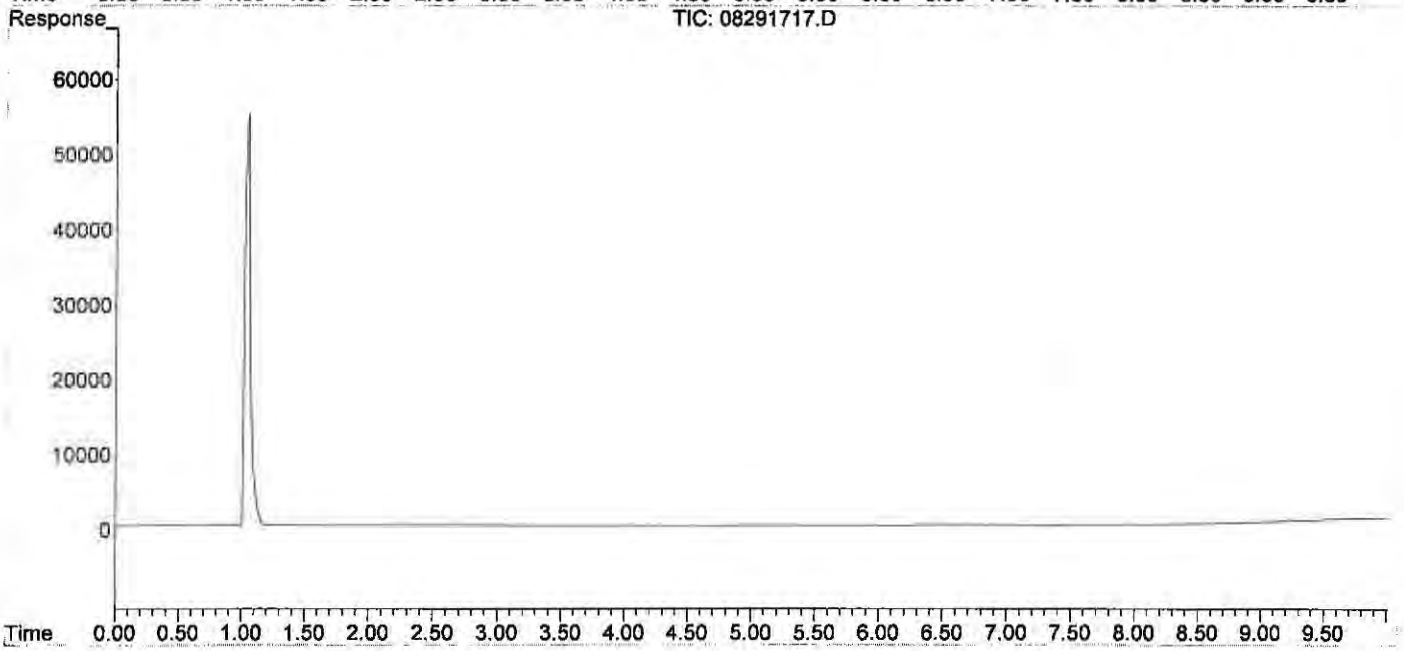
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291717.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:53
Operator : MC
Sample : 250ppm s32-08291702 0.5ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:03:42 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 14:52:06 2017
Response via : Initial Calibration
Integrator: ChemStation

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



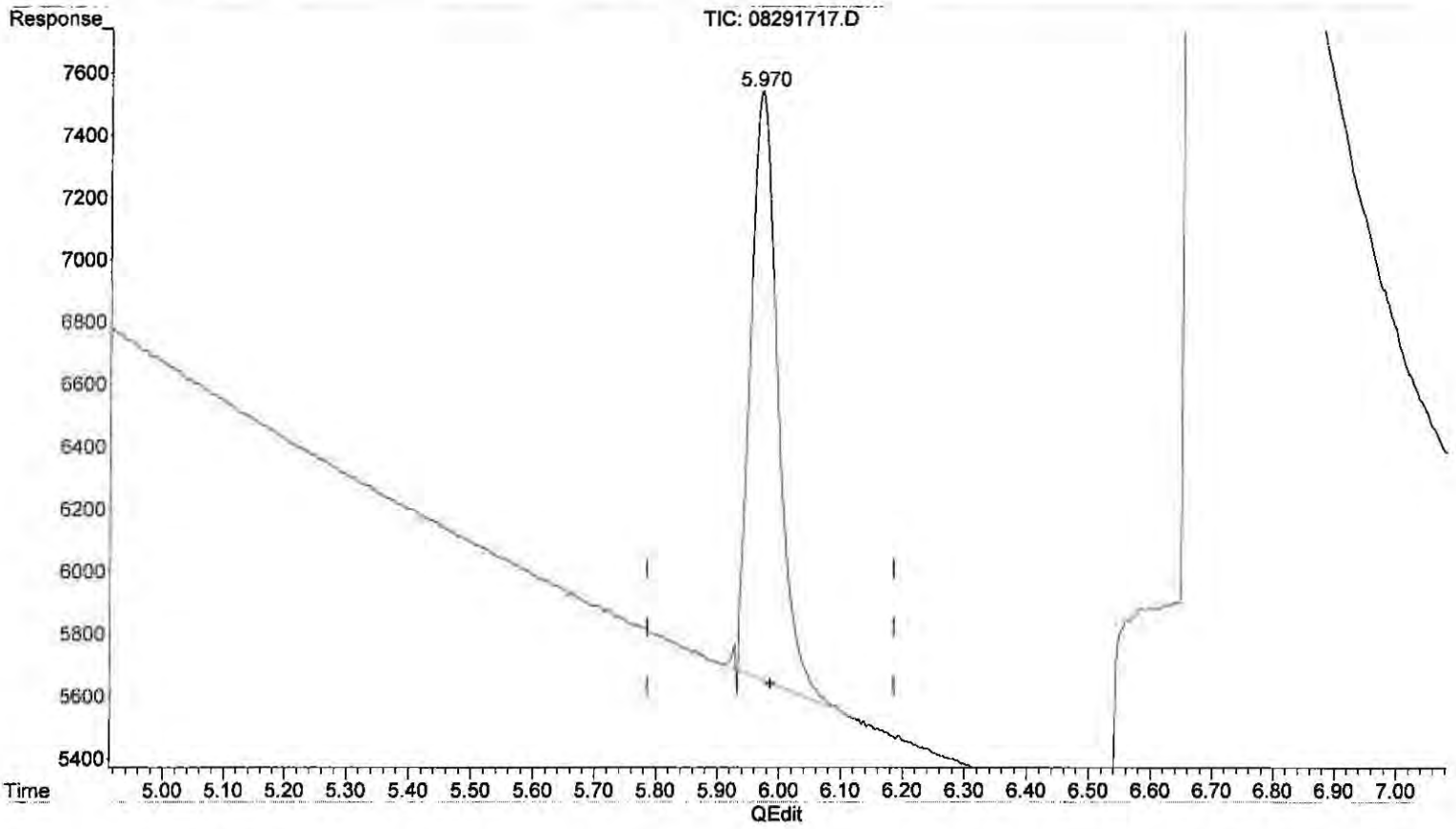


Quantitation Report (Qedit)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291717.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:53
Operator : MC
Sample : 250ppm s32-08291702 0.5ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:03:42 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 14:52:06 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(4) Carbon dioxide

5.970min 240.204 ppm m

response 58461

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291719.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 15:23
Operator : MC
Sample : 2500ppm s32-08231701 50ul
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:35:50 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:04:14 2017
Response via : Initial Calibration
Integrator: ChemStation

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

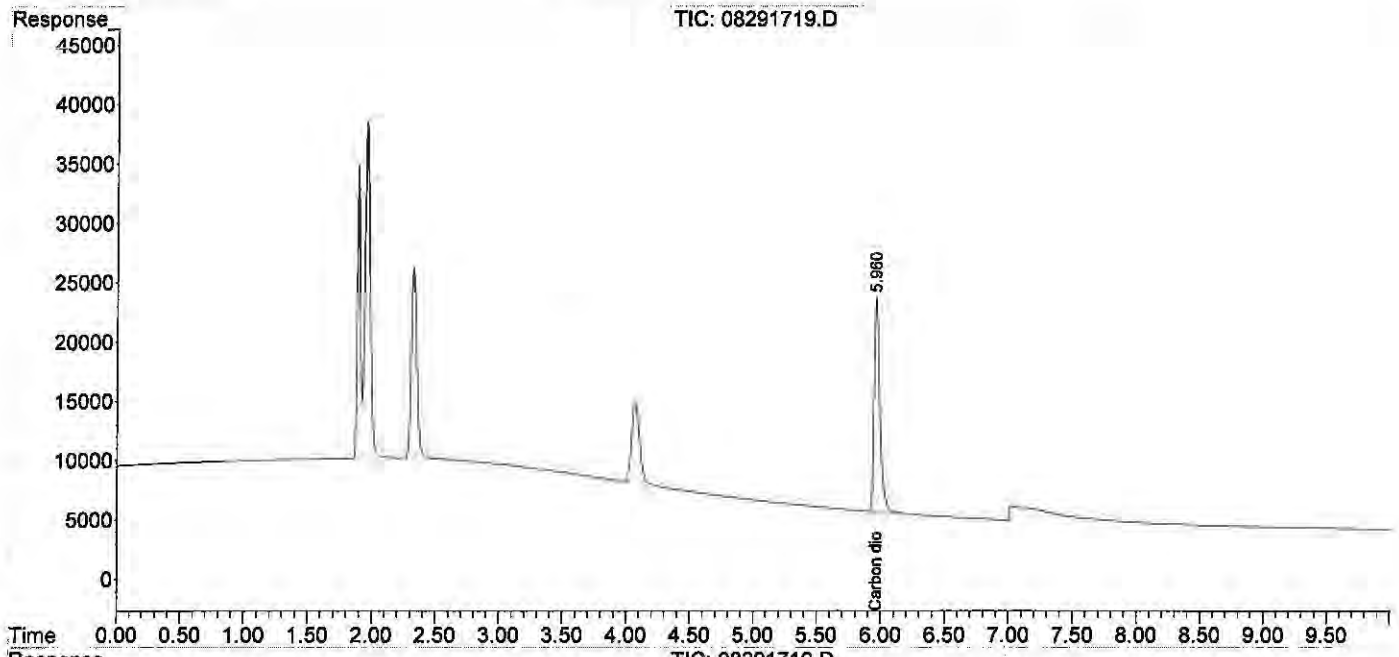
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	1.891	425113	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	5.962	568043	2369.673	ppm	
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

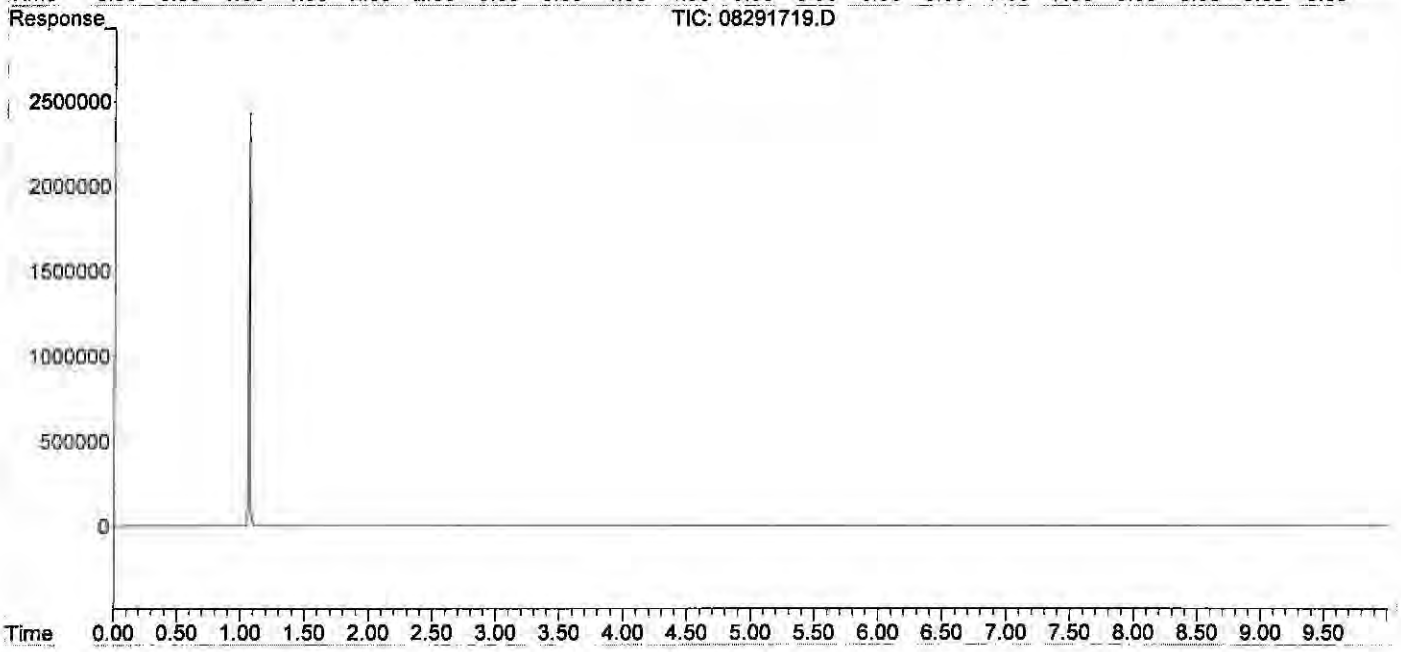
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291719.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 15:23
Operator : MC
Sample : 2500ppm s32-08231701 50ul
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:35:50 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:04:14 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291720.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 15:44
Operator : MC
Sample : 5000ppm s32-08231701 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:57:17 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:36:14 2017
Response via : Initial Calibration
Integrator: ChemStation

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

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	1.880	819221	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	5.948	1132363	4753.126	ppm	
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

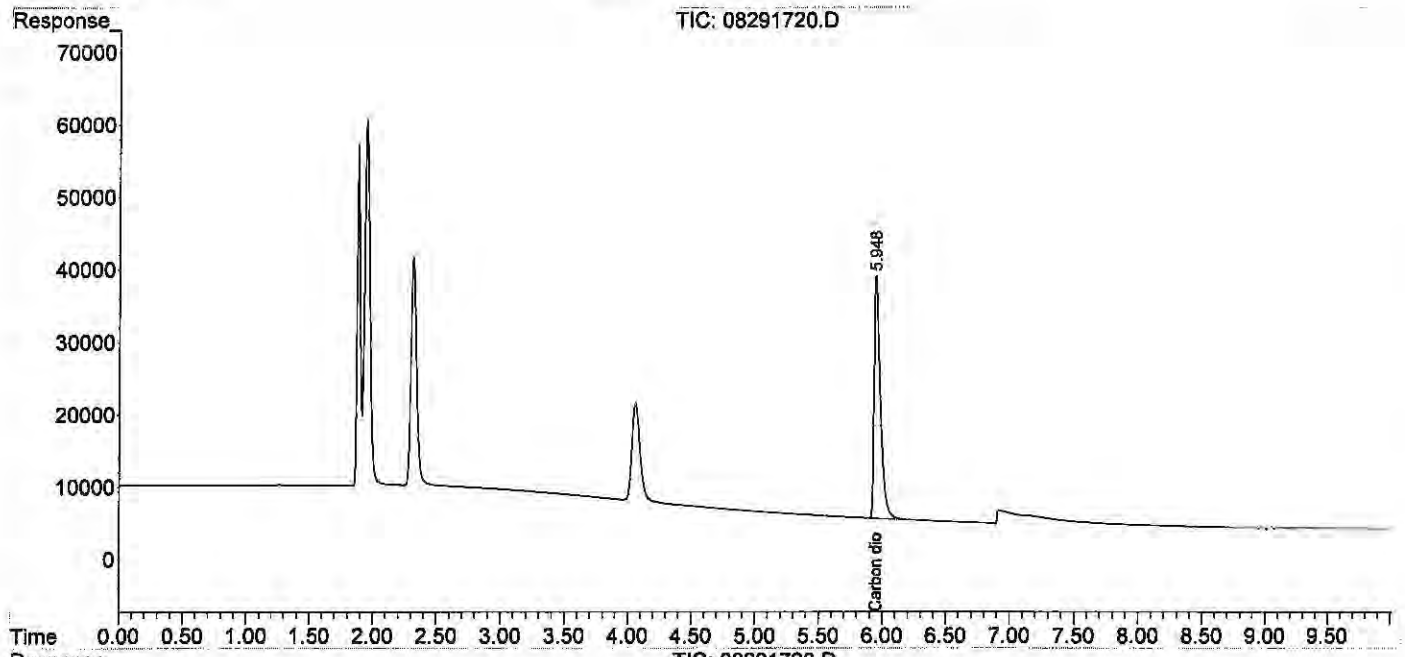
(f)=RT Delta > 1/2 Window (m)=manual int.

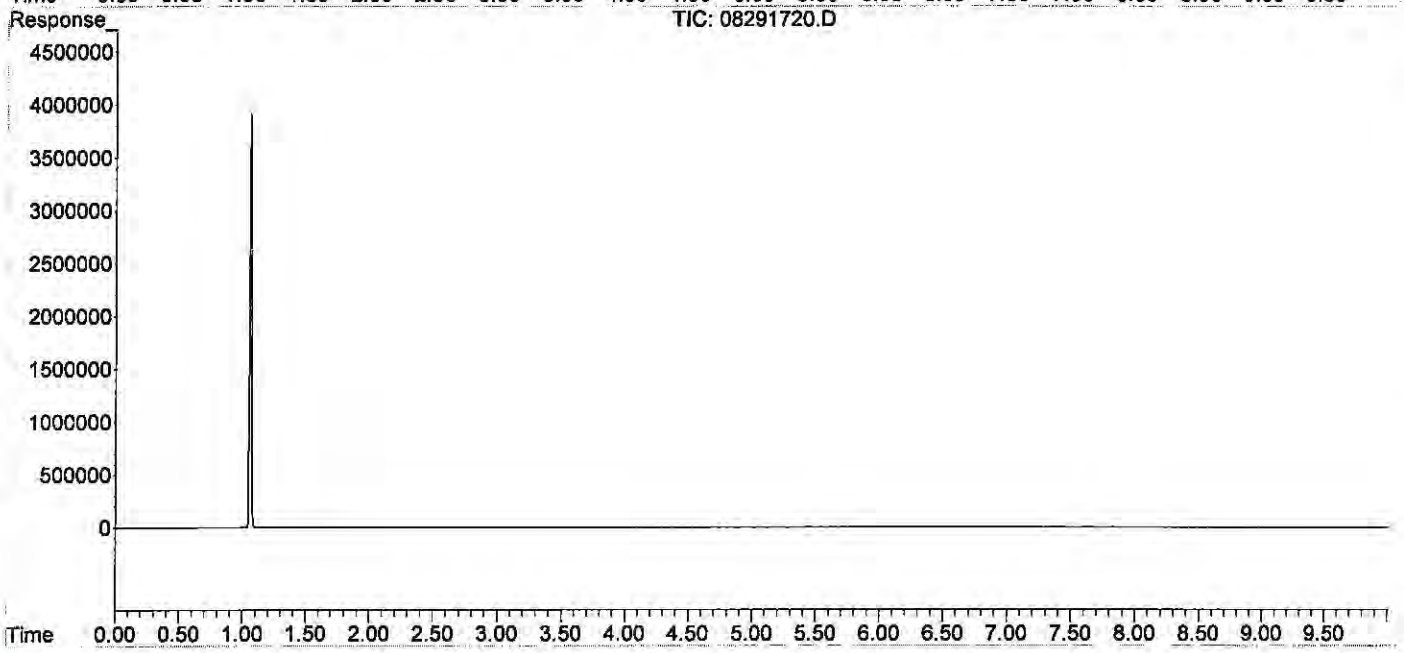
Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291720.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 15:44
Operator : MC
Sample : 5000ppm s32-08231701 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:57:17 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:36:14 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291721.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 16:00
Operator : MC
Sample : 25000ppm s32-08231701 0.5ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 16:12:53 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:57:37 2017
Response via : Initial Calibration
Integrator: ChemStation

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

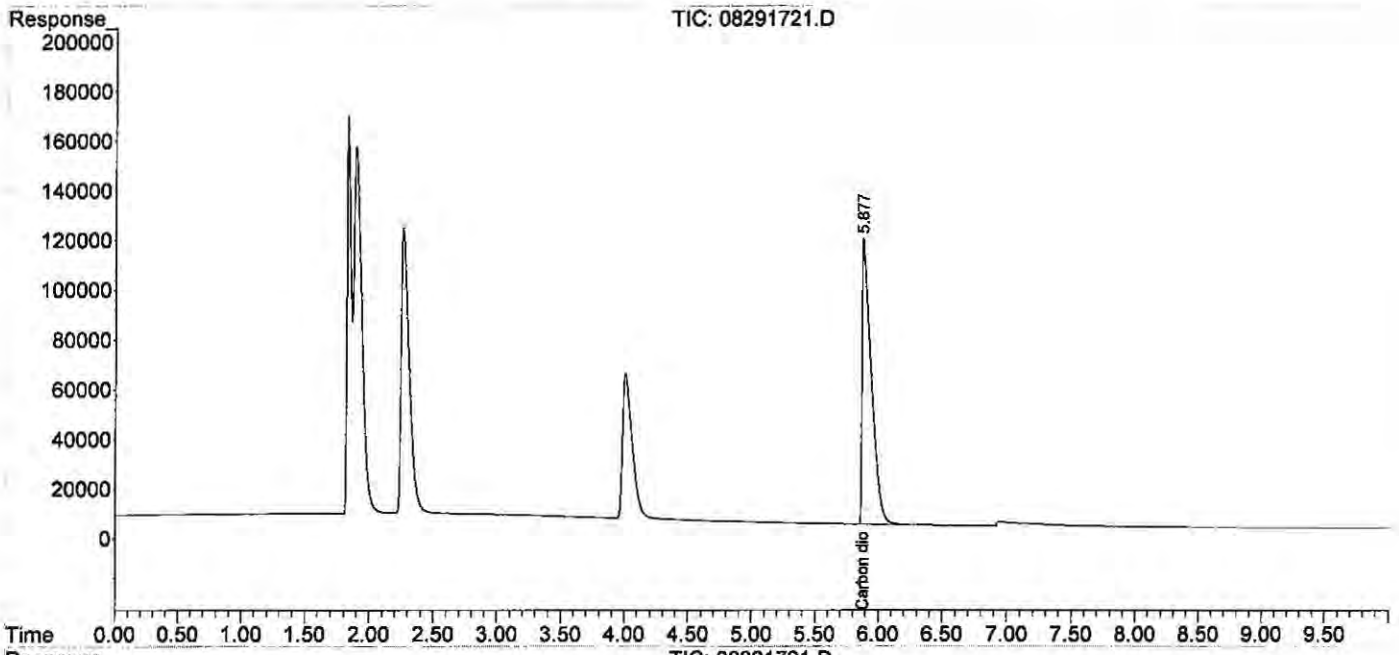
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	1.827	3325463	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	5.879f	5744295	24443.288	ppm	
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

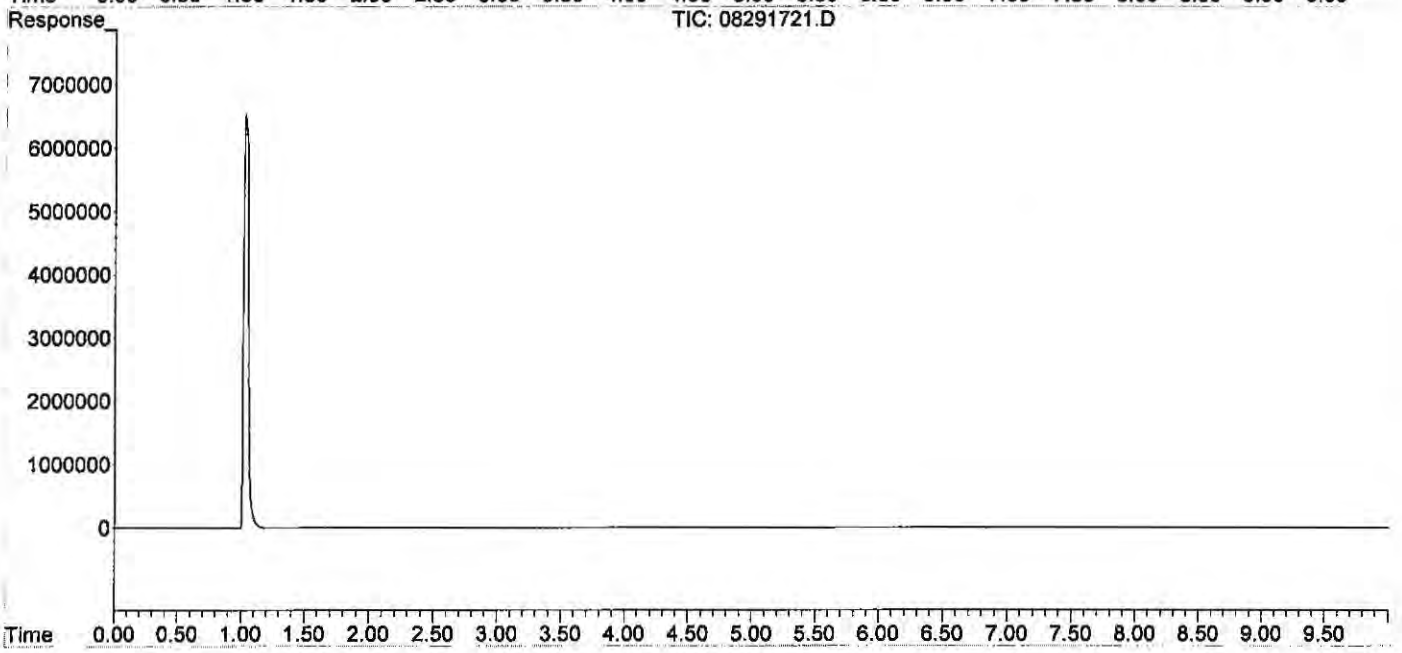
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291721.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 16:00
Operator : MC
Sample : 25000ppm s32-08231701 0.5ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 16:12:53 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:57:37 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291723.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 16:35
Operator : MC
Sample : icv s30-07071701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 16:54:07 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.886	536422	0.113	ppm
2)	Carbon monoxide	1.886	536422	N.D.	ppm
3)	Methane (TCD)	4.059f	626500	66244.710	ppm
4)	Carbon dioxide	5.947	1163775	4957.948	ppm
6)	Methane (FID)	1.062	37290742	3947.023	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

Actual %D
5000 99.16

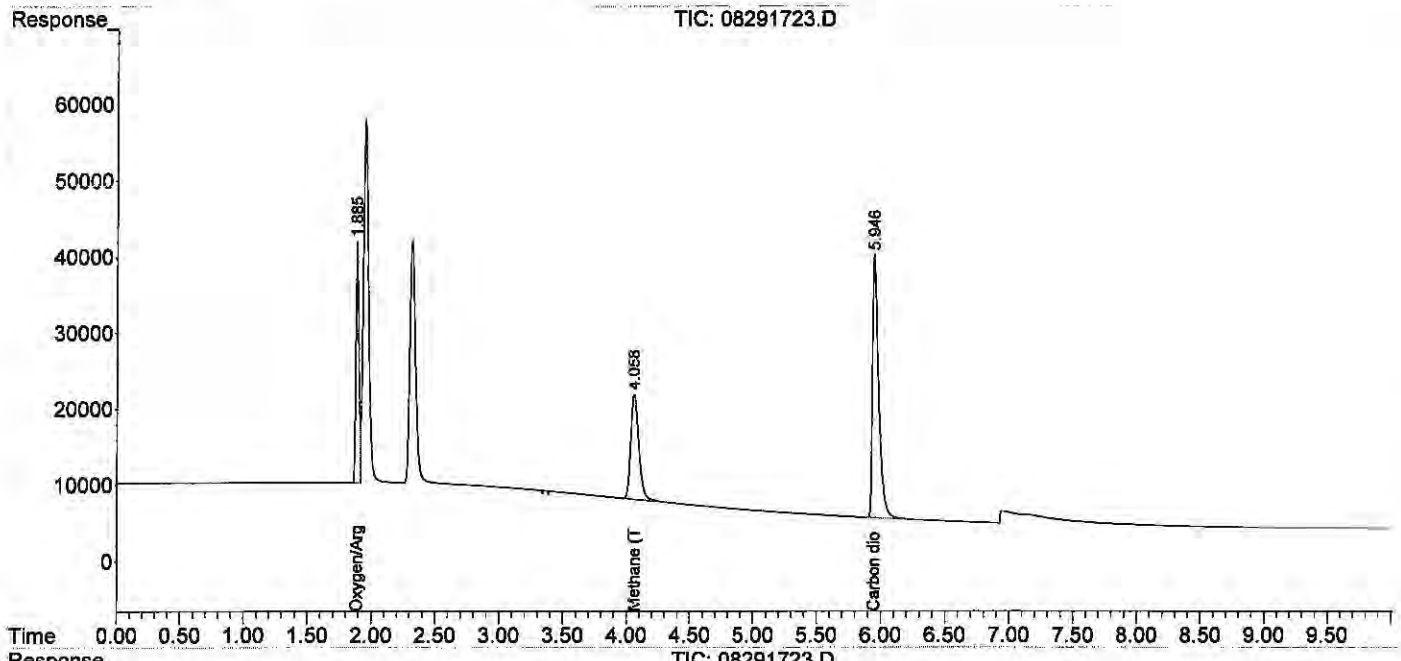
(f)=RT Delta > 1/2 Window (m)=manual int.

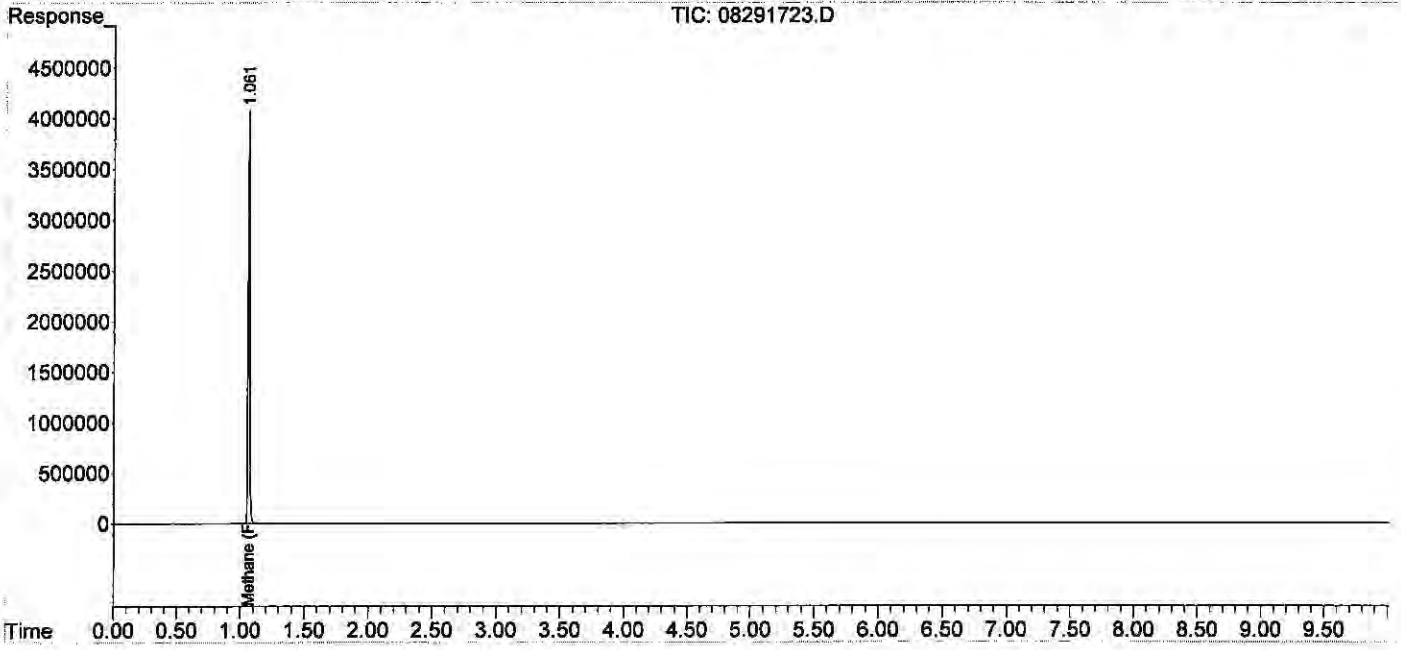
9/4/17

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291723.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 16:35
Operator : MC
Sample : icv s30-07071701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 16:54:07 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Dissolved Gases by RSK175

ALS Environmental

Method : RSK175 Headspace Method for Dissolved Hydrocarbon in Water by FID/TCD
Client : ALS Laboratory Group
Service Request: P2001715
Sample Vol. (ml) : 32.00 ml
Analyst : LD
Date Analysis : 03/31/20
Head Space Vol.(ml) : 8.00 ml
Instrument : GC#10
Detector : FID#10, TCD#10
Gas Constant : 24.05684 (20°C)

HEAD SPACE RESULT (ppm)

Sample ID	Ini. Vol.	Carbon Dioxide
STD S32-01312001	0.100	4769.306
ACTUAL		5000.00
%Difference		4.6%
mcs 0.1ml	0.100	0.000
rb 0.1ml	0.100	0.000
lcs tcd 0.1ml	0.100	1110.013
lcsd tcd 0.1ml	0.100	1031.735
P2001715-001 0.1ml	0.100	20738.65
P2001715-002 0.1ml	0.100	23464.48
P2001715-003 0.1ml	0.100	12103.26
P2001715-004 0.1ml	0.100	11393.33
P2001715-005 0.1ml	0.100	16635.41
P2001715-006 0.05ml	0.050	13789.66
P2001715-007 0.1ml	0.100	9007.963
P2001715-003ms 0.1ml	0.100	14465.94
P2001715-003msd 0.1ml	0.100	13910.28
STD S32-01312001		4940.878
ACTUAL		5000.00
%Difference		1.2%

FINAL HEAD SPACE RESULT (ppm)

		Carbon Dioxide
WWt.		44.10
HENRY'S CONSTANT		1.42E+03
RL		100.00
mcs 0.1ml		0.000
lcs tcd 0.1ml		11100.130
lcsd tcd 0.1ml		10317.350
P2001715-001 0.1ml		207386.47
P2001715-002 0.1ml		234644.77
P2001715-003 0.1ml		121032.60
P2001715-004 0.1ml		113933.30
P2001715-005 0.1ml		166354.06
P2001715-006 0.05ml		275793.28
P2001715-007 0.1ml		90079.630
P2001715-003ms 0.1ml		144659.39
P2001715-003msd 0.1ml		139102.75
P2001715-003msd 0.1ml	17:09:23	

LD 04/01

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J:\Excel\Report\RSK175\2020\P2001715_ALS Laboratory Gro... HS20031201_RSK

Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\31CO2\
Data File : 03310102.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 31-Mar-2020, 13:03:45
Operator : LD
Sample : STD S32-01312001
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 31 13:13:12 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

04/01
LD

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

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.908f	824764	0.173	ppm
2)	Carbon monoxide	1.908f	824764	N.D.	ppm
3)	Methane (TCD)	4.081f	637800	67439.582	ppm
4)	Carbon dioxide	5.964	1119495	4769.306	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

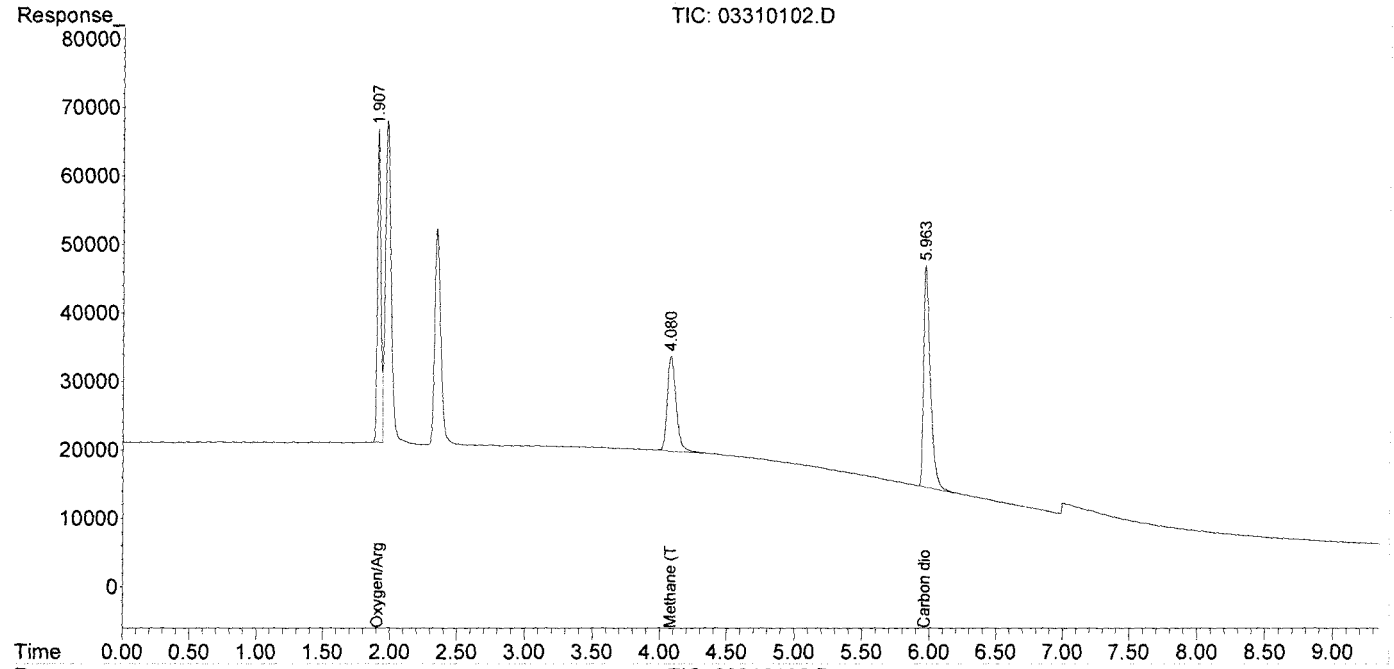
(f)=RT Delta > 1/2 Window (m)=manual int.

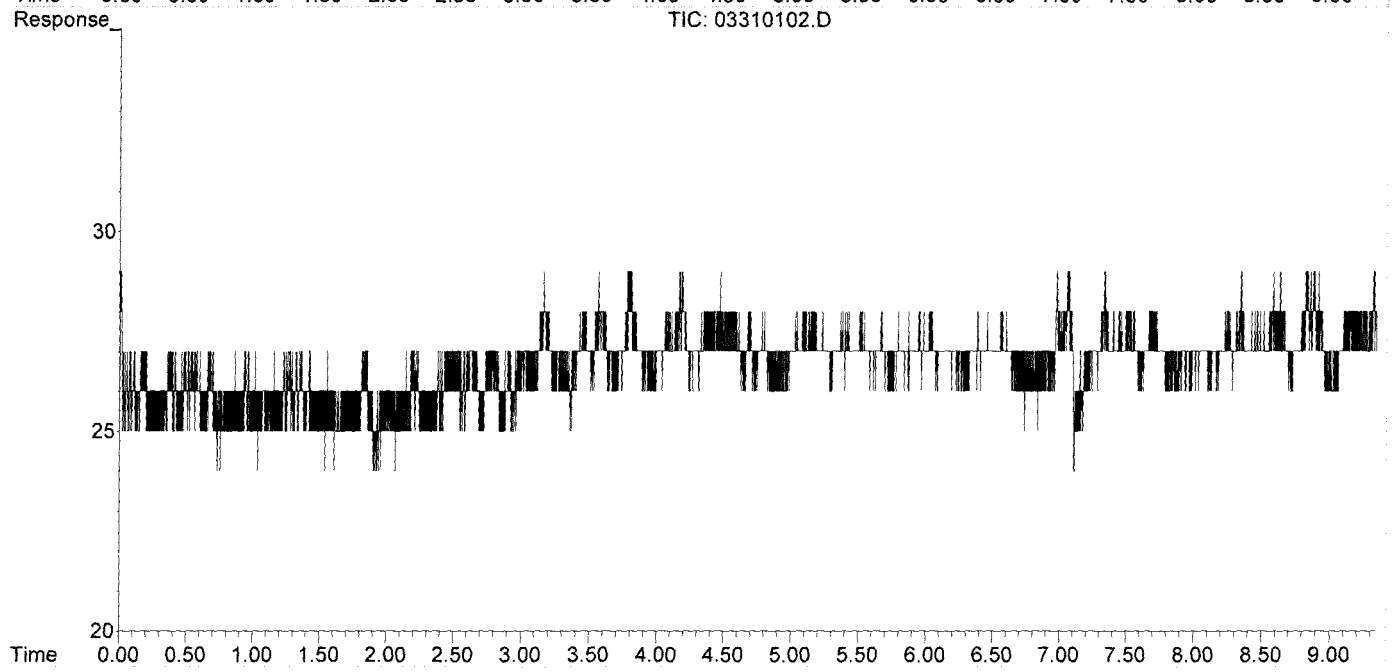
Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\31CO2\
Data File : 03310102.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 31-Mar-2020, 13:03:45
Operator : LD
Sample : STD S32-01312001
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 31 13:13:12 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2020_03\31CO2\
Data File : 03310117.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 31-Mar-2020, 17:22:26
Operator : LD
Sample : STD S32-01312001
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 31 17:38:33 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.905f	1846993	0.388	ppm	
2)	Carbon monoxide	1.905f	1846993	N.D.	ppm	
3)	Methane (TCD)	4.079f	645640	68268.620	ppm	
4)	Carbon dioxide	5.961	1159768	4940.878	ppm	m
6)	Methane (FID)	0.000	0	N.D.	ppm	
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

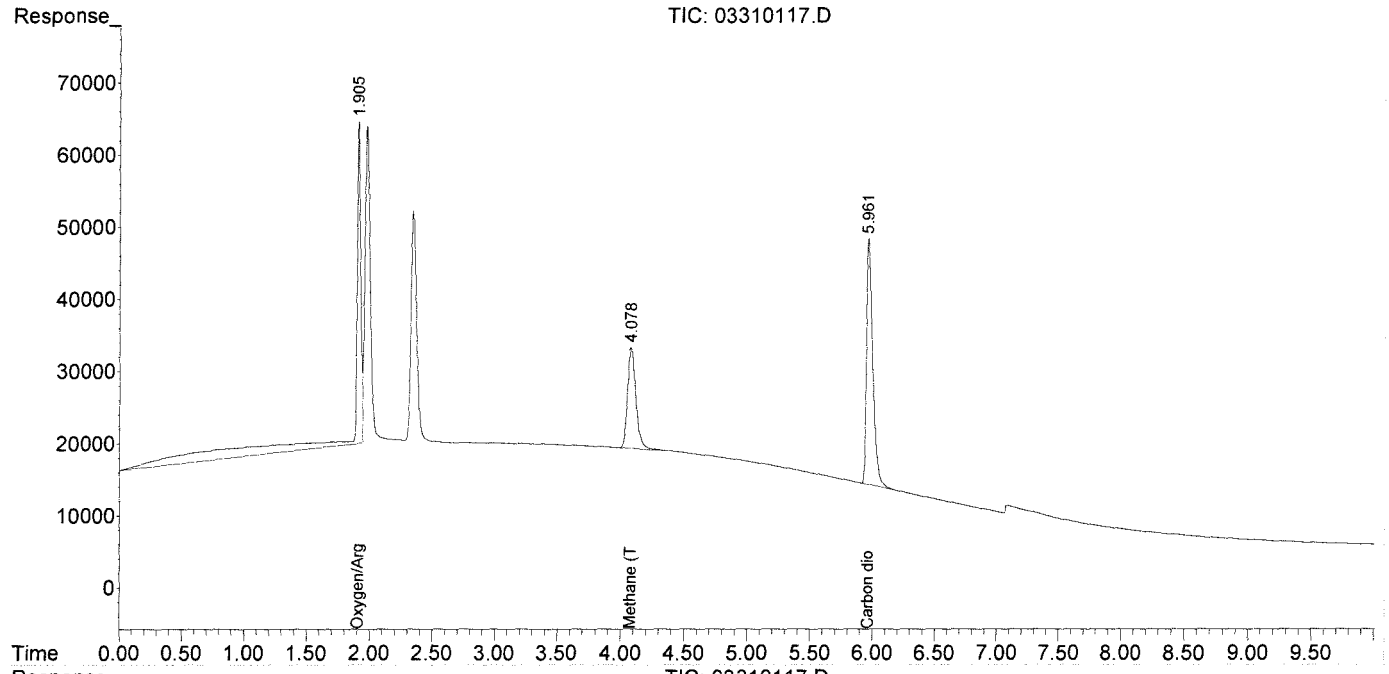
(f)=RT Delta > 1/2 Window (m)=manual int.

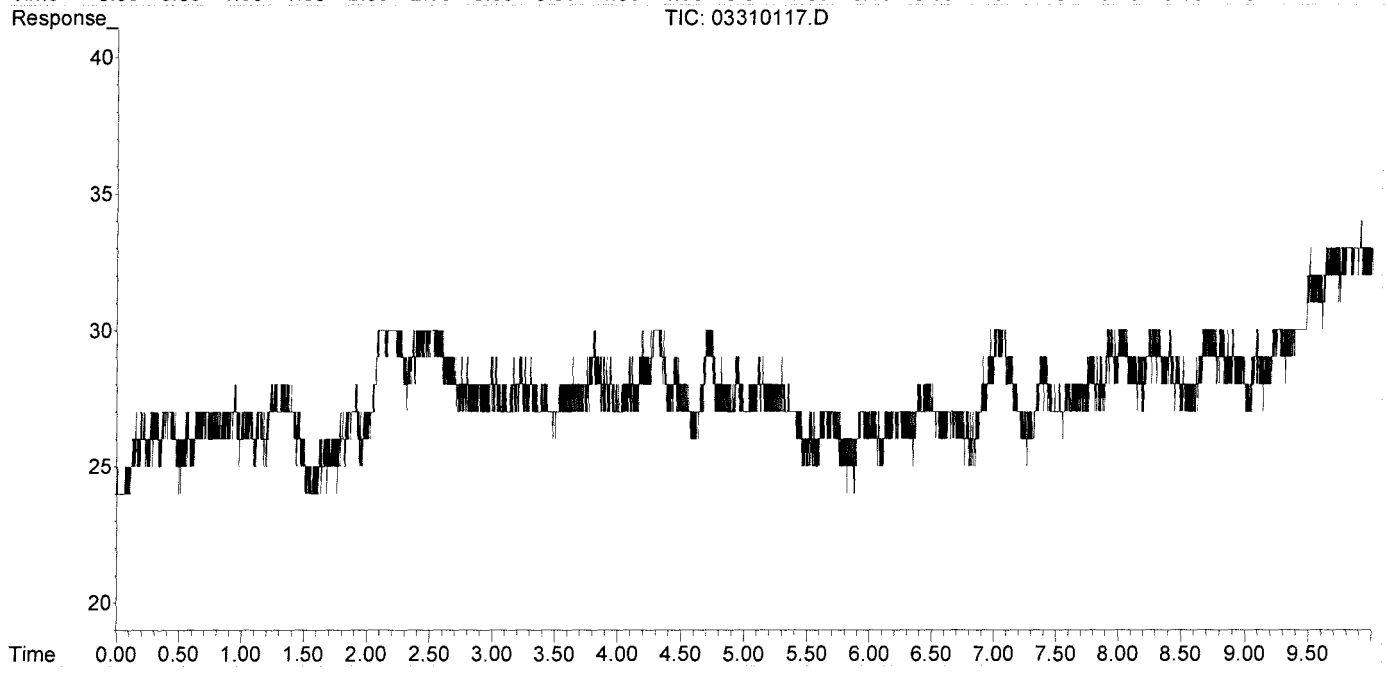
Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2020_03\31CO2\
Data File : 03310117.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 31-Mar-2020, 17:22:26
Operator : LD
Sample : STD S32-01312001
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 31 17:38:33 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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



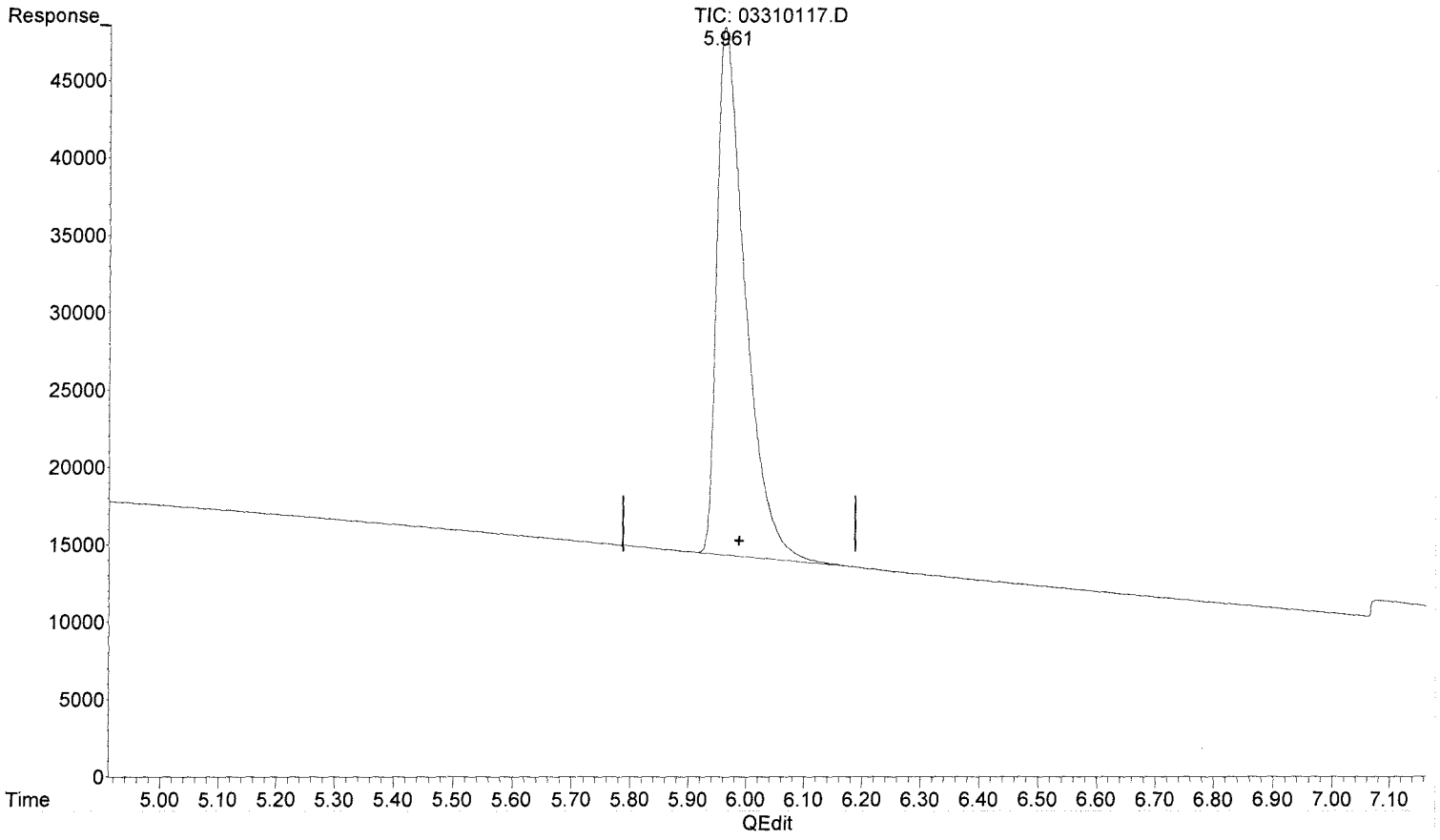


Quantitation Report (Qedit)

Data Path : J:\GC10\DATA\RSK_FID\2020_03\31CO2\
Data File : 03310117.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 31-Mar-2020, 17:22:26
Operator : LD
Sample : STD S32-01312001
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 31 17:38:33 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(4) Carbon dioxide

5.961min 4940.878 ppm m

response 1159768

4/1/20 per previous

LD
BLC
04/01
no previous

(+) = Expected Retention Time
RS082817_CO2.M Wed Apr 01 15:05:04 2020 Page: 1

Injection Log

Directory: I:\GC10\DATA\RSK_FID\2017_08\29\

	Date/Time	File Name	Sample ID	Misc Info	Operator	Acquisition Method	Comments
1	29-Aug-17, 07:58:00	08291701.D	std s30-06161601		MC	RSKBOTH.M	Pass
2	29-Aug-17, 08:11:02	08291702.D	mb 0.5ml		MC	RSKBOTH.M	Pass
3	29-Aug-17, 08:24:13	08291703.D	4089-001 0.5ml		MC	RSKBOTH.M	
4	29-Aug-17, 08:39:29	08291704.D	4089-002 0.5ml		MC	RSKBOTH.M	
5	29-Aug-17, 08:53:38	08291705.D	4089-003 0.5ml		MC	RSKBOTH.M	
6	29-Aug-17, 09:33:52	08291706.D	4089-004 0.5ml		MC	RSKBOTH.M	
7	29-Aug-17, 09:50:51	08291707.D	4089-005 0.5ml		MC	RSKBOTH.M	
8	29-Aug-17, 10:07:54	08291708.D	4089-006 0.5ml		MC	RSKBOTH.M	
9	29-Aug-17, 10:42:34	08291709.D	4089-007 0.5ml		MC	RSKBOTH.M	
10	29-Aug-17, 11:06:01	08291710.D	4089-008 0.5ml		MC	RSKBOTH.M	
11	29-Aug-17, 11:23:53	08291711.D	4089-009 0.5ml		MC	RSKBOTH.M	
12	29-Aug-17, 11:37:17	08291712.D	lcs s30-05241604		MC	RSKBOTH.M	Pass
13	29-Aug-17, 11:50:31	08291713.D	lcs s30-05241604		MC	RSKBOTH.M	Pass
14	29-Aug-17, 12:29:45	08291714.D	std s30-06161601		MC	RSKBOTH.M	Pass
15	29-Aug-17, 14:07:01	08291715.D	25ppm s32-08291701 0.25ml		MC	RSKBOTH.M	Curve
16	29-Aug-17, 14:22:12	08291716.D	100ppm s32-08291702 0.2ml		MC	RSKBOTH.M	Curve
17	29-Aug-17, 14:53:00	08291717.D	250ppm s32-08291702 0.5ml		MC	RSKBOTH.M	Curve
18	29-Aug-17, 15:07:43	08291718.D	mls inject		MC	RSKBOTH.M	
19	29-Aug-17, 15:23:21	08291719.D	2500ppm s32-08231701 50ul		MC	RSKBOTH.M	Curve
20	29-Aug-17, 15:44:54	08291720.D	5000ppm s32-08231701 0.1ml		MC	RSKBOTH.M	Curve
21	29-Aug-17, 16:00:09	08291721.D	25000ppm s32-08231701 0.5ml		MC	RSKBOTH.M	Curve
22	29-Aug-17, 16:15:43	08291722.D	mb 0.1ml		MC	RSKBOTH.M	Pass
23	29-Aug-17, 16:35:37	08291723.D	lcv s30-07071701		MC	RSKBOTH.M	Pass

Injection Log

Directory: I:\GC10\DATA\RSK_TCD\2020_03\31\

	Date/Time	File Name	Sample ID	Misc Info	Operator	Acquisition Method	Comments
1	31-Mar-20, 12:43:45	03310101.D	prime		LD	RSKBOTH.M	
2	31-Mar-20, 13:03:45	03310102.D	STD S32-01312001		LD	RSKBOTH.M	pass
3	31-Mar-20, 13:19:29	03310103.D	rb 0.1ml		LD	RSKBOTH.M	pass
4	31-Mar-20, 13:30:56	03310104.D	mcs 0.1ml		LD	RSKBOTH.M	pass
5	31-Mar-20, 13:43:55	03310105.D	lcs tcd 0.1ml		LD	RSKBOTH.M	pass
6	31-Mar-20, 13:58:57	03310106.D	lcsd tcd 0.1ml		LD	RSKBOTH.M	pass
7	31-Mar-20, 14:16:14	03310107.D	P2001715-001 0.1ml		LD	RSKBOTH.M	
8	31-Mar-20, 14:37:56	03310108.D	P2001715-002 0.1ml		LD	RSKBOTH.M	
9	31-Mar-20, 14:55:05	03310109.D	P2001715-003 0.1ml		LD	RSKBOTH.M	
10	31-Mar-20, 15:10:58	03310110.D	P2001715-003ms 0.1ml		LD	RSKBOTH.M	
11	31-Mar-20, 15:23:05	03310111.D	P2001715-003msd 0.1ml		LD	RSKBOTH.M	
12	31-Mar-20, 15:56:00	03310112.D	P2001715-004 0.1ml		LD	RSKBOTH.M	
13	31-Mar-20, 16:26:21	03310113.D	P2001715-005 0.1ml		LD	RSKBOTH.M	
14	31-Mar-20, 16:39:35	03310114.D	XXXXXXP2001715-006 0.1		LD	RSKBOTH.M	
15	31-Mar-20, 16:51:33	03310115.D	P2001715-007 0.1ml		LD	RSKBOTH.M	
16	31-Mar-20, 17:09:23	03310116.D	P2001715-006 0.05ml		LD	RSKBOTH.M	
17	31-Mar-20, 17:22:26	03310117.D	STD S32-01312001		LD	RSKBOTH.M	pass
18	31-Mar-20, 17:42:37	03310118.D	meepp loq		LD	RSKBOTH.M	pass
19	31-Mar-20, 17:52:40	03310119.D	meepp loq		LD	RSKBOTH.M	pass
20	31-Mar-20, 18:11:38	03310120.D	meepp loq		LD	RSKBOTH.M	pass

Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\30\
Data File : 03300106.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Mar-2020, 16:01:40
Operator : LD
Sample : P2001715-001 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 30 19:05:24 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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

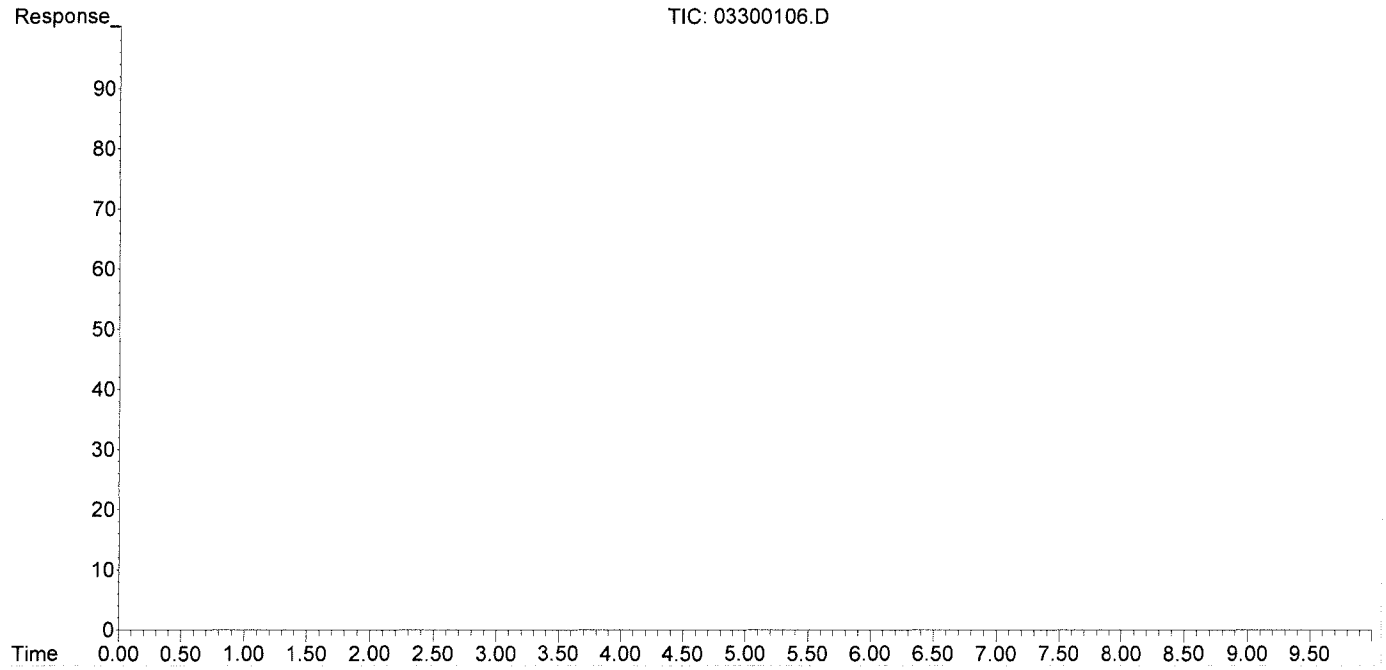
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.109	4042945	445.718	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

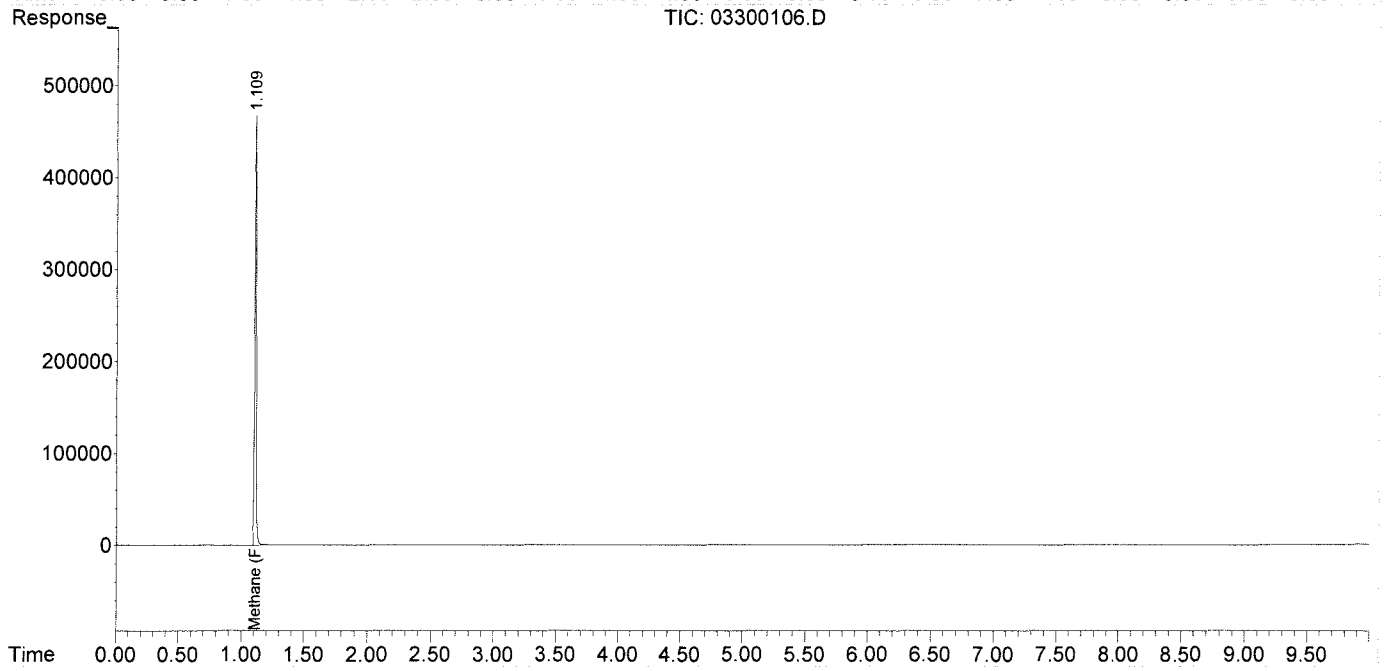
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_03\30\
Data File : 03300106.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Mar-2020, 16:01:40
Operator : LD
Sample : P2001715-001 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 30 19:05:24 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\30\
Data File : 03300107.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Mar-2020, 16:17:41
Operator : LD
Sample : P2001715-002 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 30 19:05:37 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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

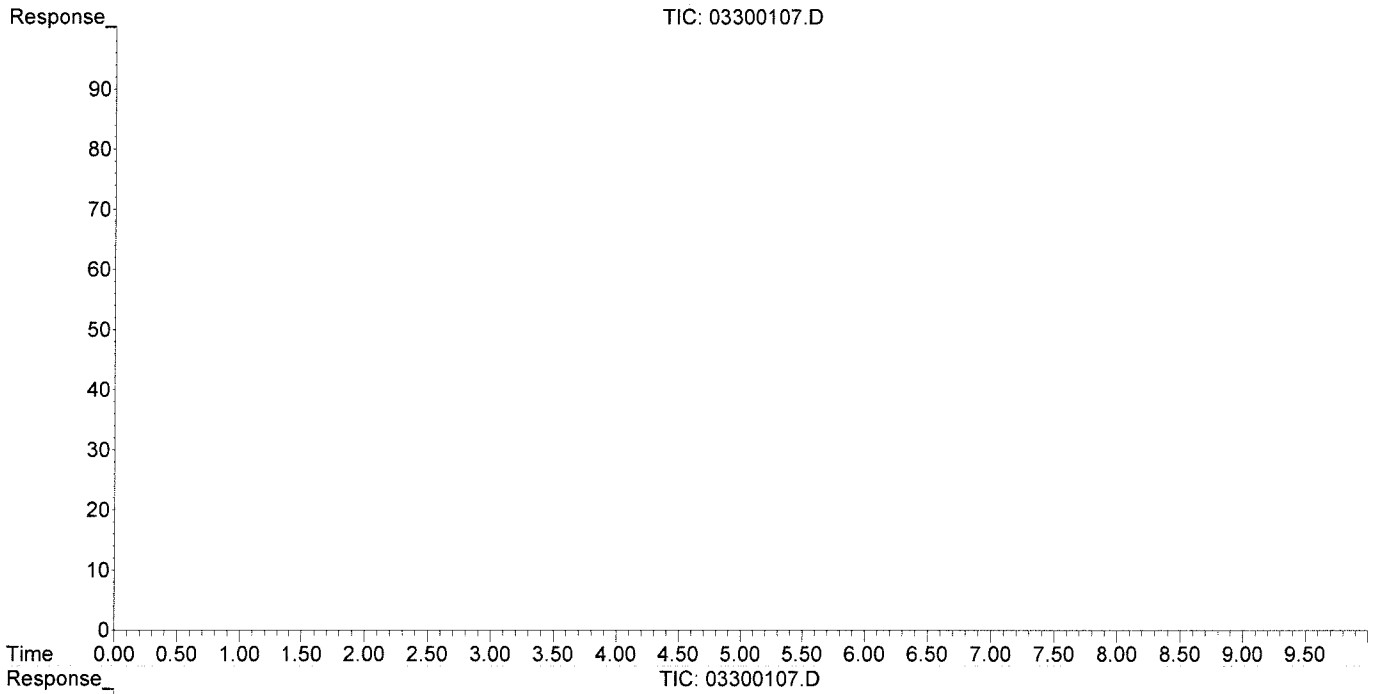
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.113	4098637	451.857	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

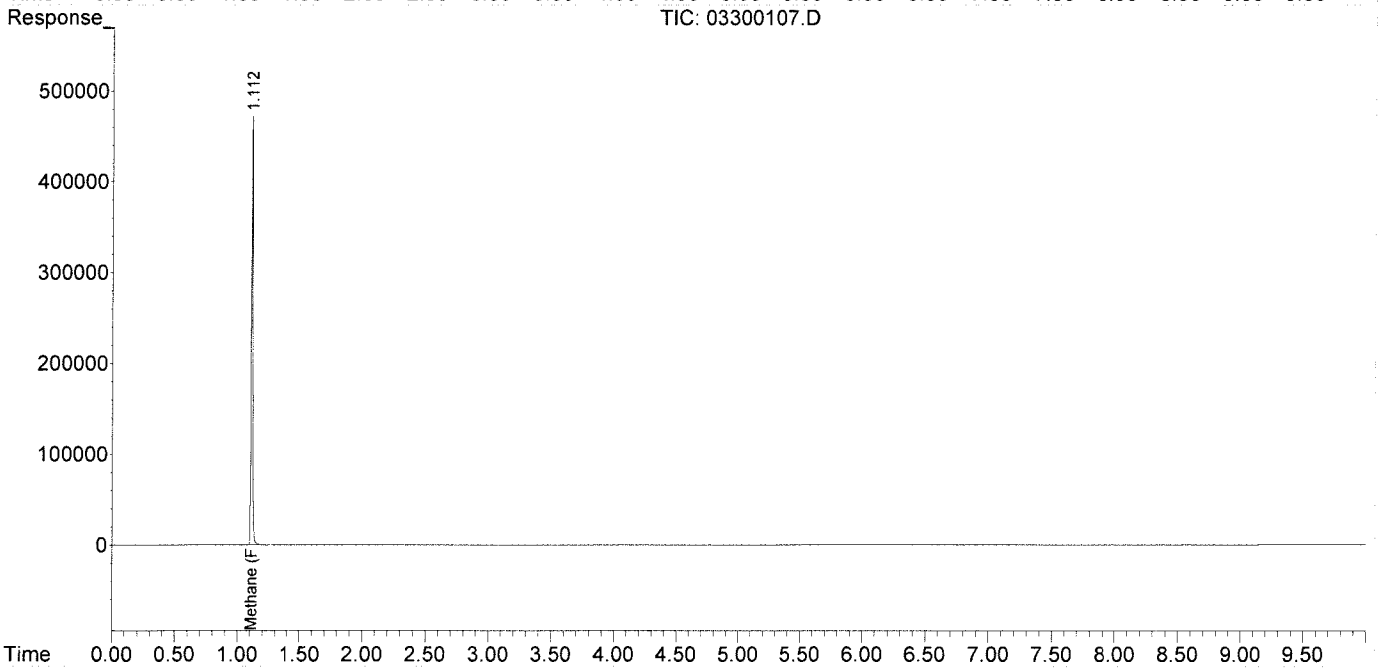
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_03\30\
Data File : 03300107.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Mar-2020, 16:17:41
Operator : LD
Sample : P2001715-002 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 30 19:05:37 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\30\
Data File : 03300108.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Mar-2020, 16:31:12
Operator : LD
Sample : P2001715-003 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 30 17:14:09 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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

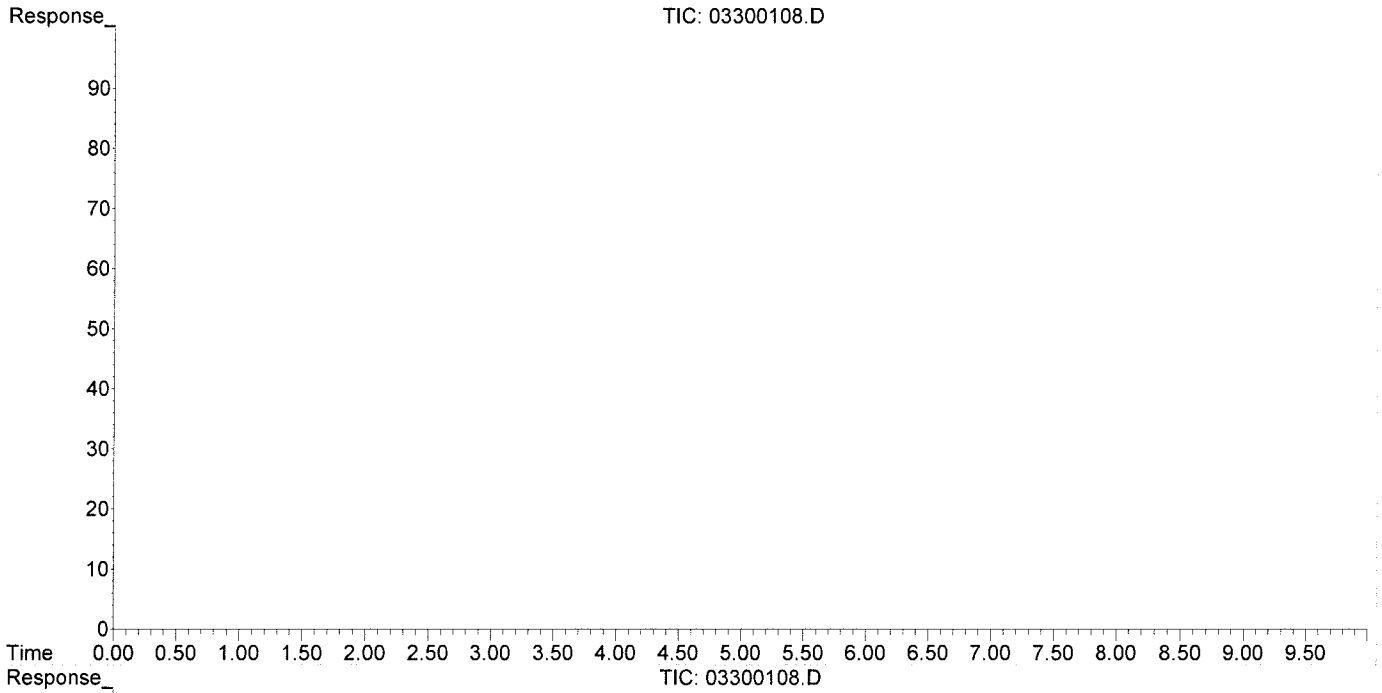
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	
2)	Carbon monoxide	0.000	0	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	1.110	1963618	216.481	ppm	
7)	Ethylene	1.681	22621	1.352	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	d
13)	n-Butane	0.000	0	N.D.	ppm	d

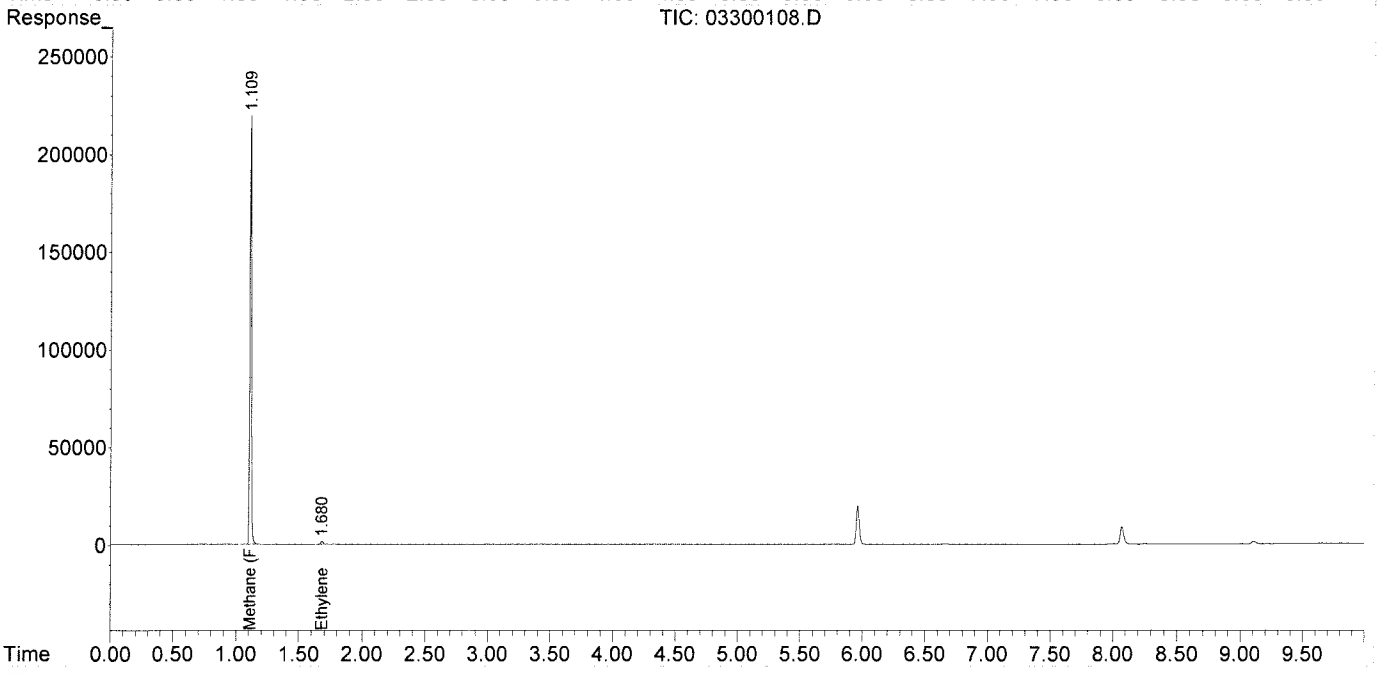
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_03\30\
Data File : 03300108.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Mar-2020, 16:31:12
Operator : LD
Sample : P2001715-003 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 30 17:14:09 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\30\
Data File : 03300109.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Mar-2020, 16:51:09
Operator : LD
Sample : P2001715-003 MS 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 30 17:14:34 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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

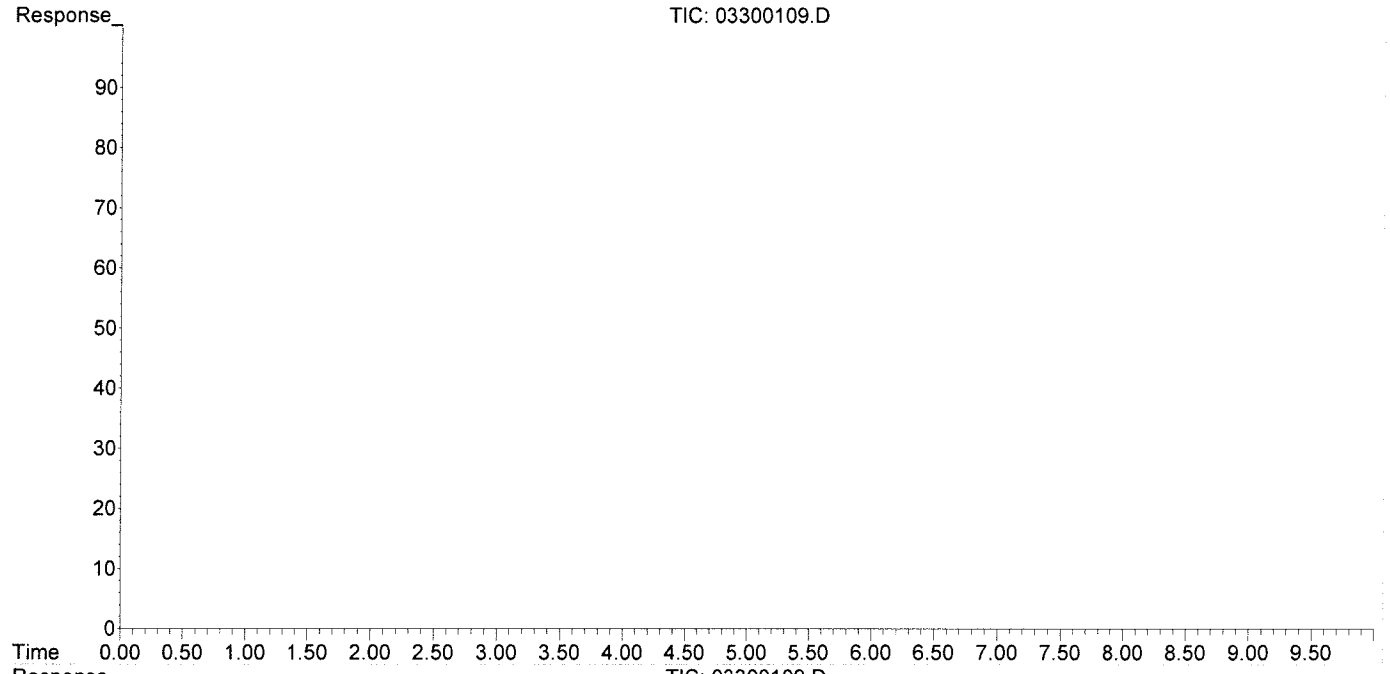
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	
2)	Carbon monoxide	0.000	0	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	1.106	8330408	918.392	ppm	
7)	Ethylene	1.678	99020	5.917	ppm	
8)	Ethane	1.946	15855	0.935	ppm	
9)	Propylene	4.329	16018	0.684	ppm	
10)	Propane	4.452	22404	0.900	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	d
12)	Isobutane	0.000	0	N.D.	ppm	d
13)	n-Butane	0.000	0	N.D.	ppm	d

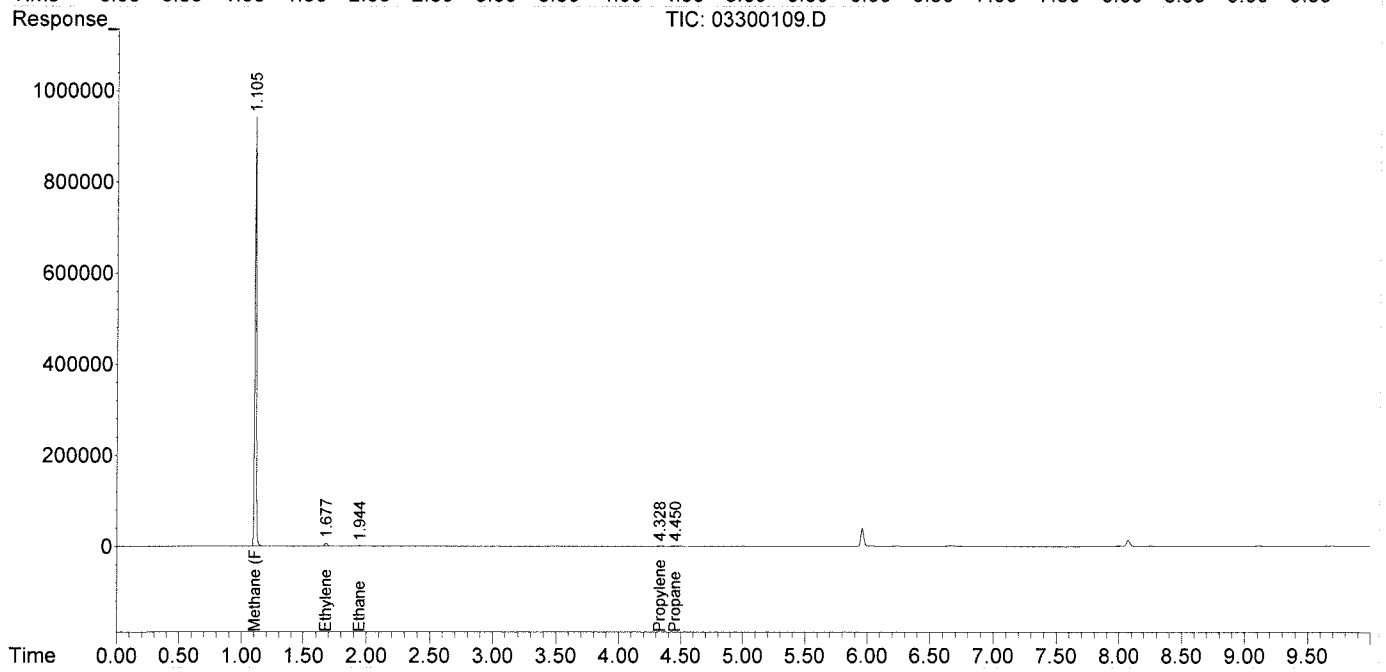
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_03\30\
Data File : 03300109.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Mar-2020, 16:51:09
Operator : LD
Sample : P2001715-003 MS 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 30 17:14:34 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\30\
Data File : 03300110.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Mar-2020, 17:04:38
Operator : LD
Sample : P2001715-003 MSD 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 30 17:15:02 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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

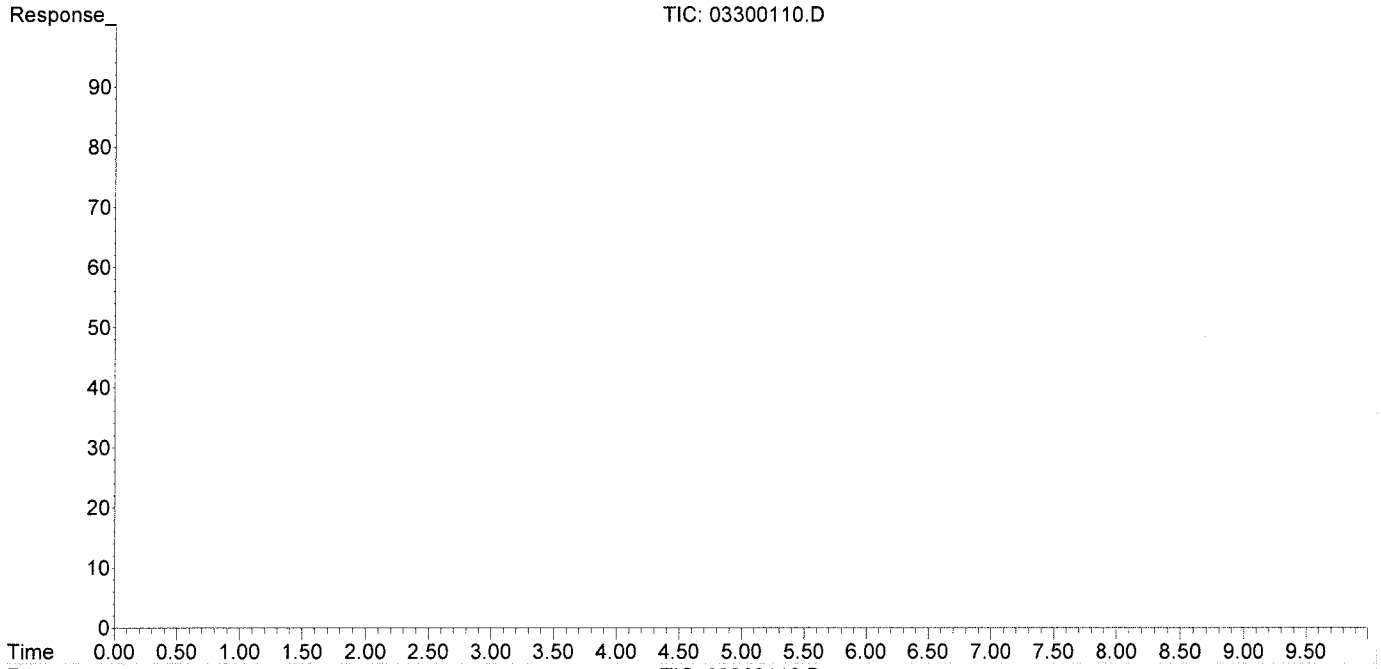
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	
2)	Carbon monoxide	0.000	0	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	1.108	8608724	949.076	ppm	
7)	Ethylene	1.679	102338	6.115	ppm	
8)	Ethane	1.946	16036	0.946	ppm	
9)	Propylene	4.333	16141	0.689	ppm	
10)	Propane	4.455	22954	0.923	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	d
12)	Isobutane	0.000	0	N.D.	ppm	d
13)	n-Butane	0.000	0	N.D.	ppm	d

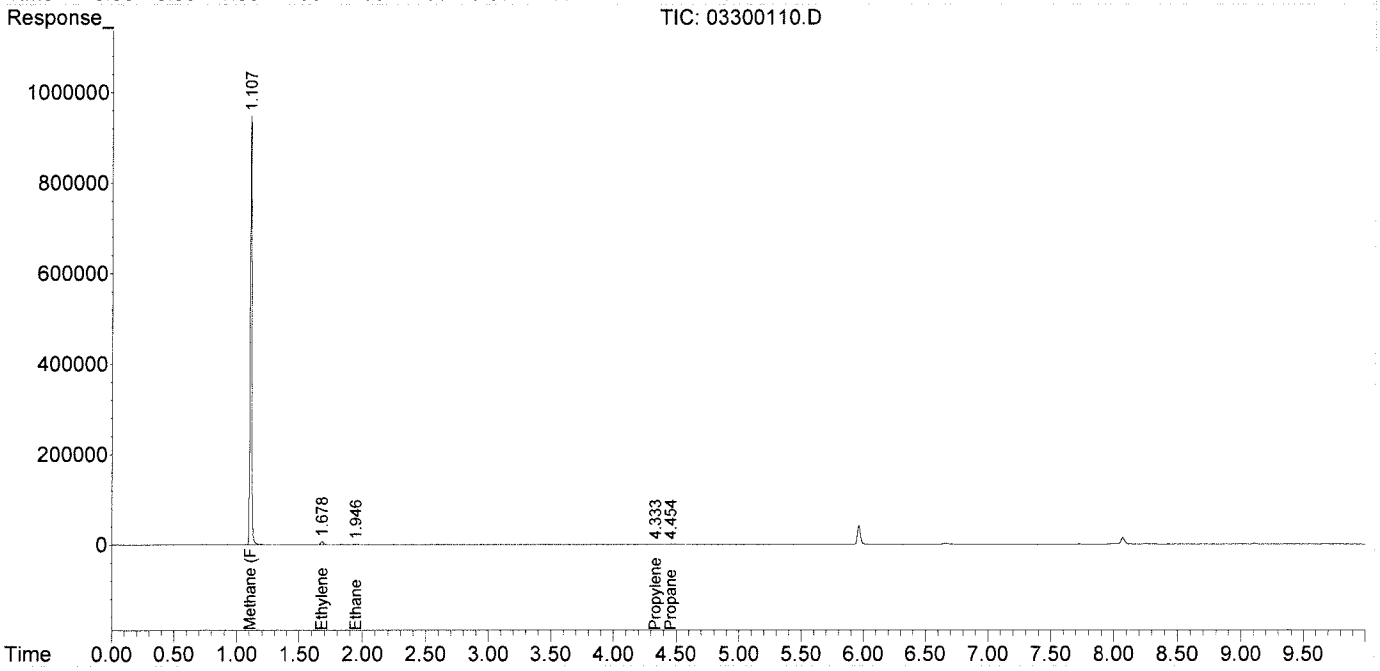
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_03\30\
Data File : 03300110.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Mar-2020, 17:04:38
Operator : LD
Sample : P2001715-003 MSD 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 30 17:15:02 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\30\
Data File : 03300111.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Mar-2020, 17:19:07
Operator : LD
Sample : P2001715-004 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 30 19:06:36 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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

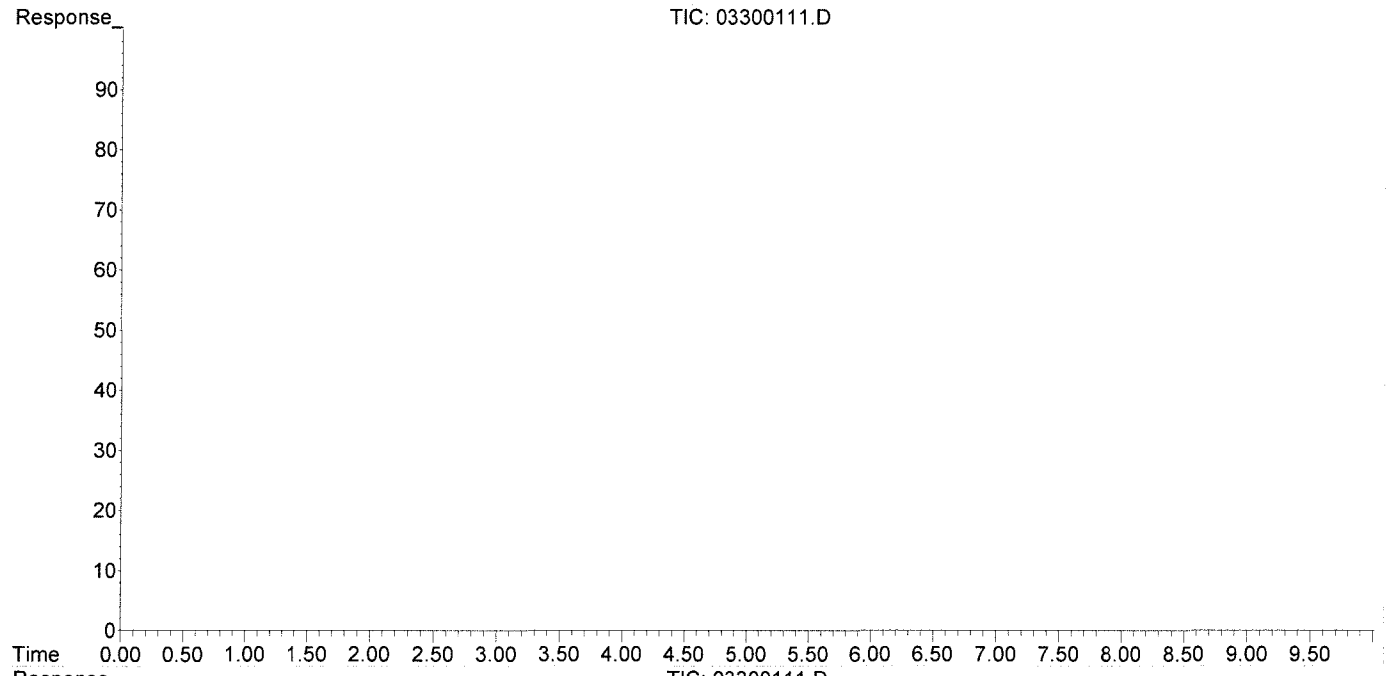
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	
2)	Carbon monoxide	0.000	0	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	1.110	364616	40.197	ppm	
7)	Ethylene	1.684	8538	0.510	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	d
13)	n-Butane	0.000	0	N.D.	ppm	d

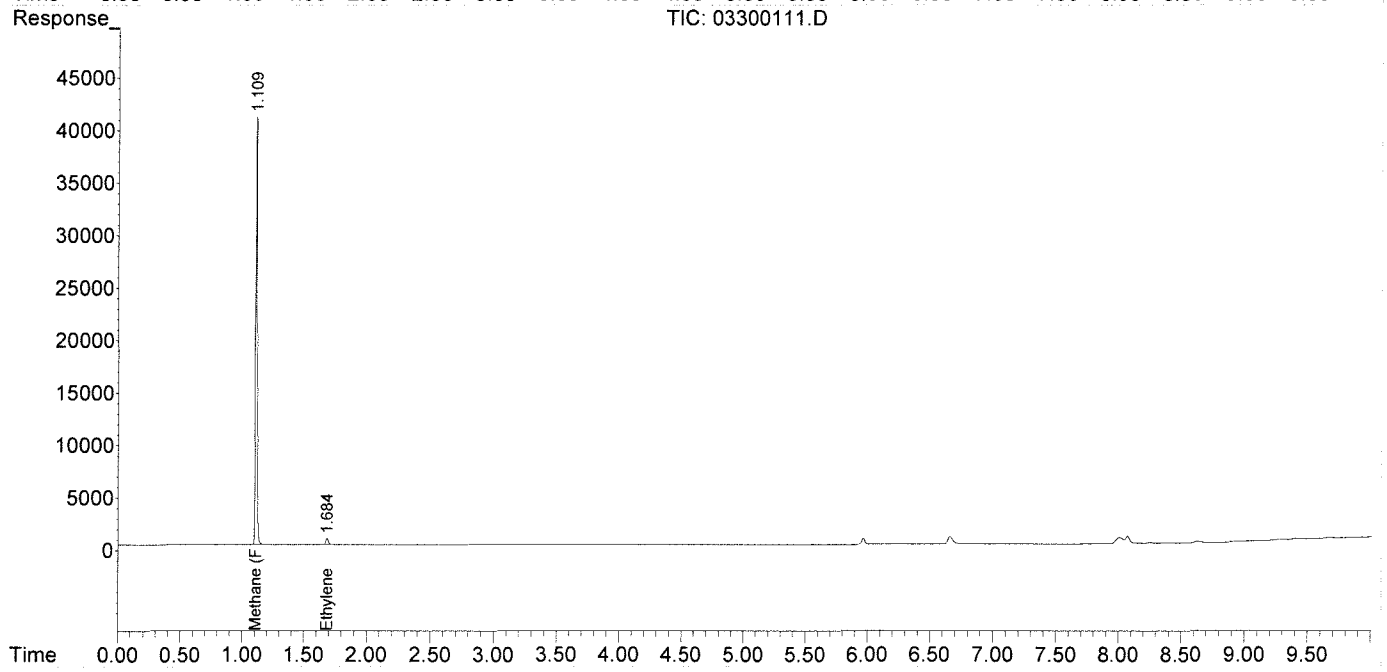
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_03\30\
Data File : 03300111.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Mar-2020, 17:19:07
Operator : LD
Sample : P2001715-004 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 30 19:06:36 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\30\
Data File : 03300112.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Mar-2020, 17:37:14
Operator : LD
Sample : P2001715-005 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 30 19:07:05 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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

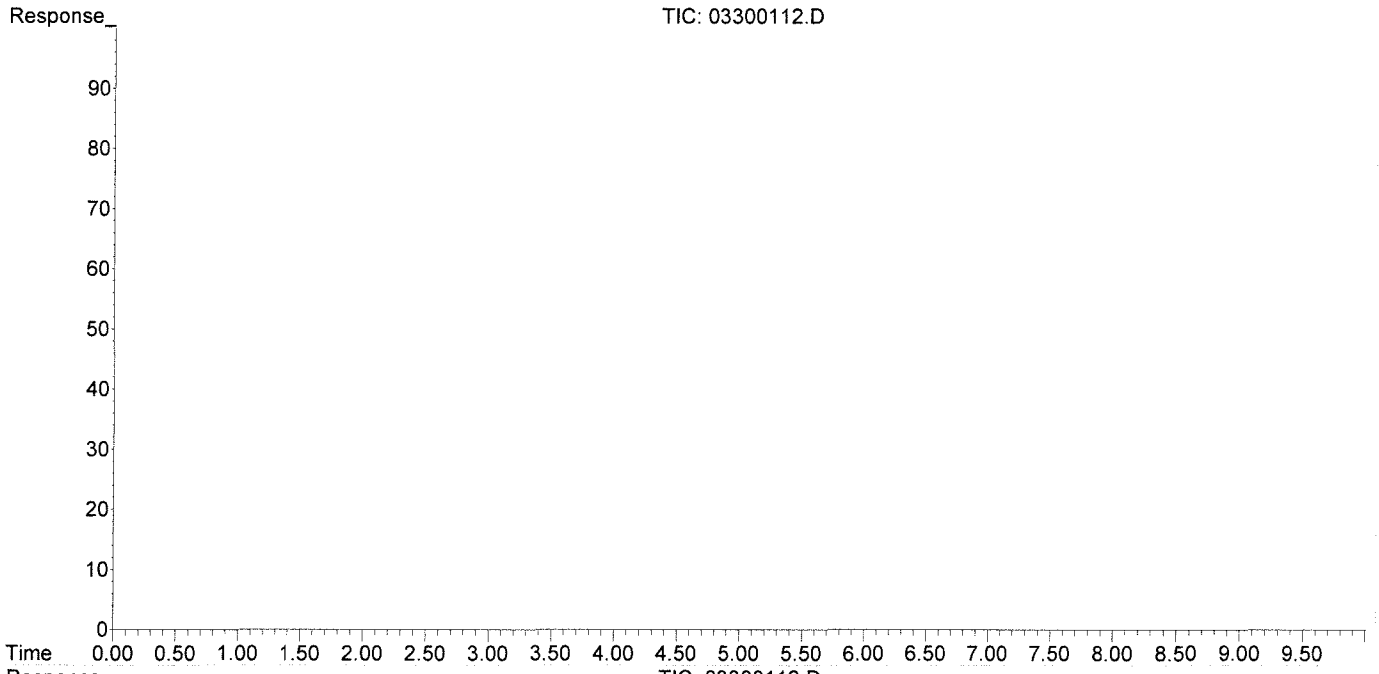
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.111	6282661	692.637	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

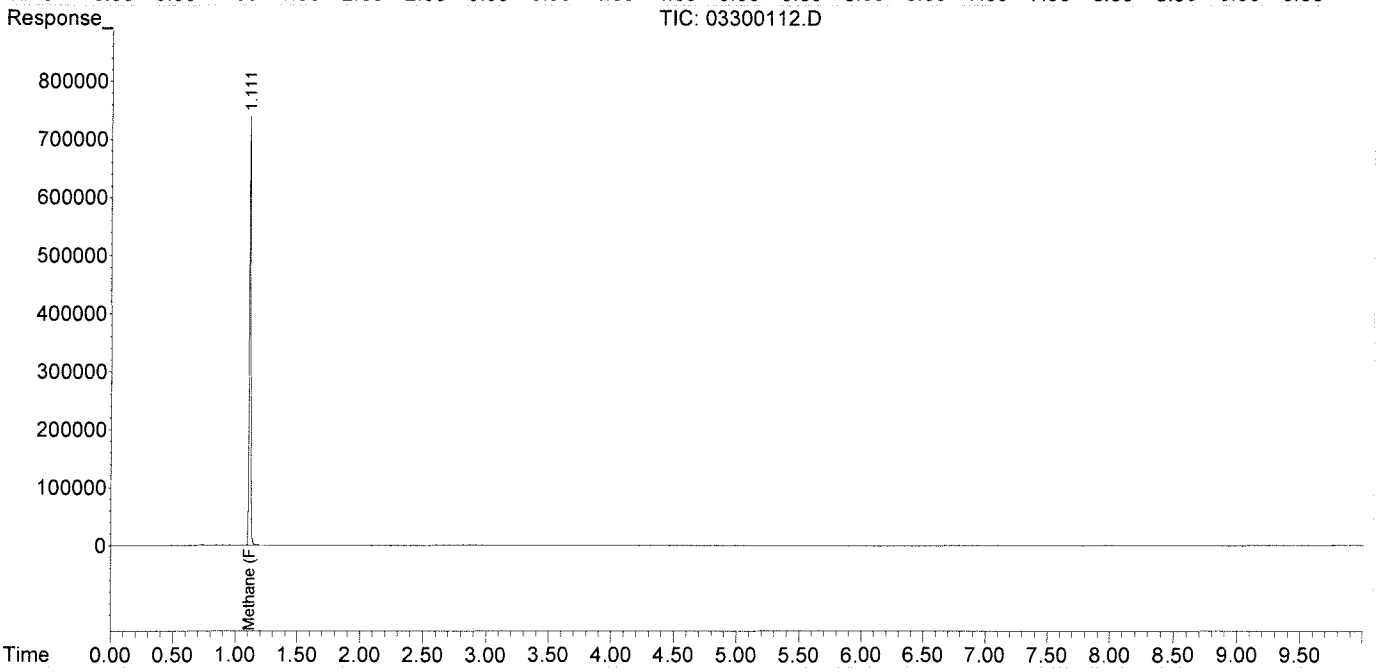
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_03\30\
Data File : 03300112.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Mar-2020, 17:37:14
Operator : LD
Sample : P2001715-005 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 30 19:07:05 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\30\
Data File : 03300113.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Mar-2020, 17:51:05
Operator : LD
Sample : P2001715-006 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 30 19:08:03 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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

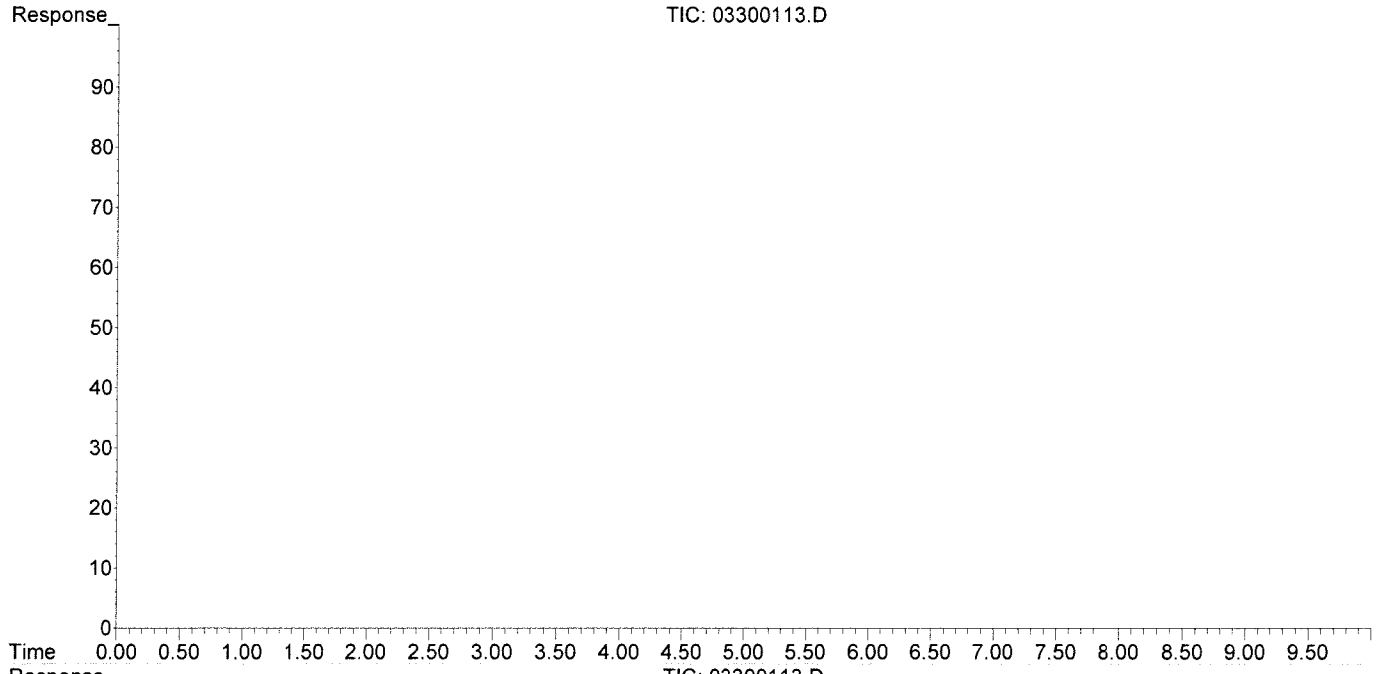
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.107	6552999	722.441	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

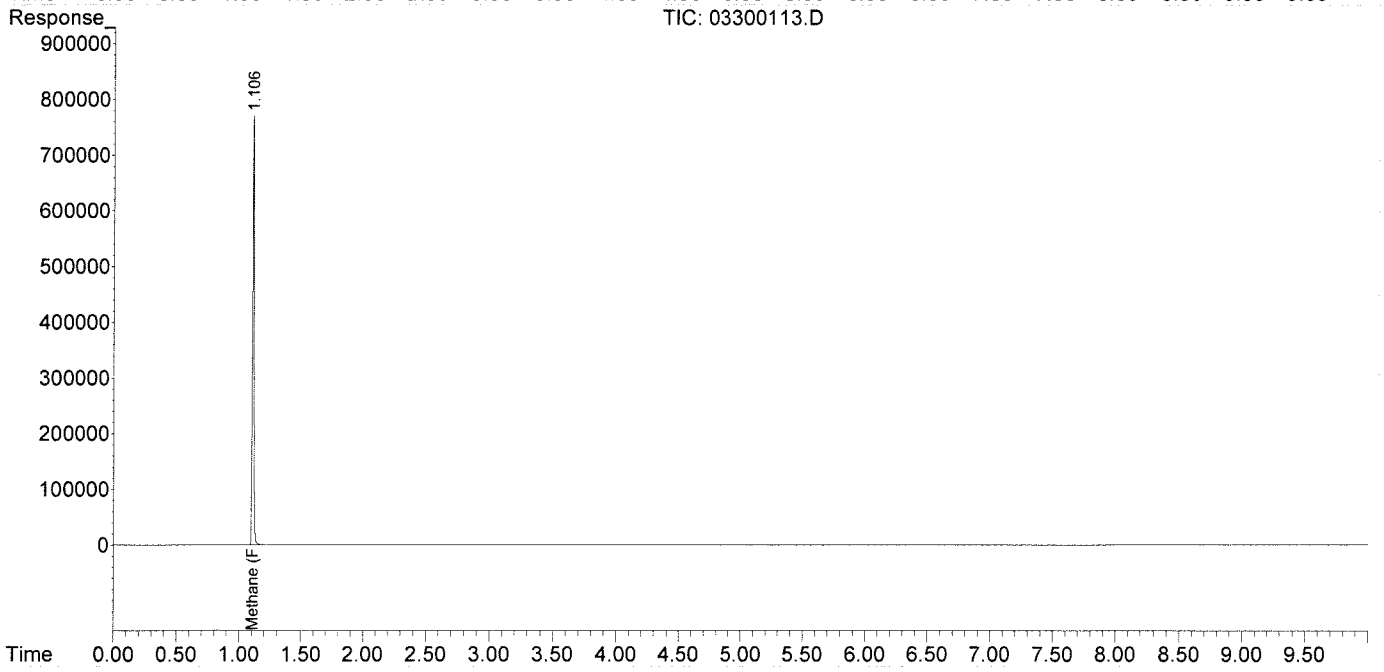
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_03\30\
Data File : 03300113.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Mar-2020, 17:51:05
Operator : LD
Sample : P2001715-006 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 30 19:08:03 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\30\
Data File : 03300114.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Mar-2020, 18:04:06
Operator : LD
Sample : P2001715-007 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 30 19:08:26 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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

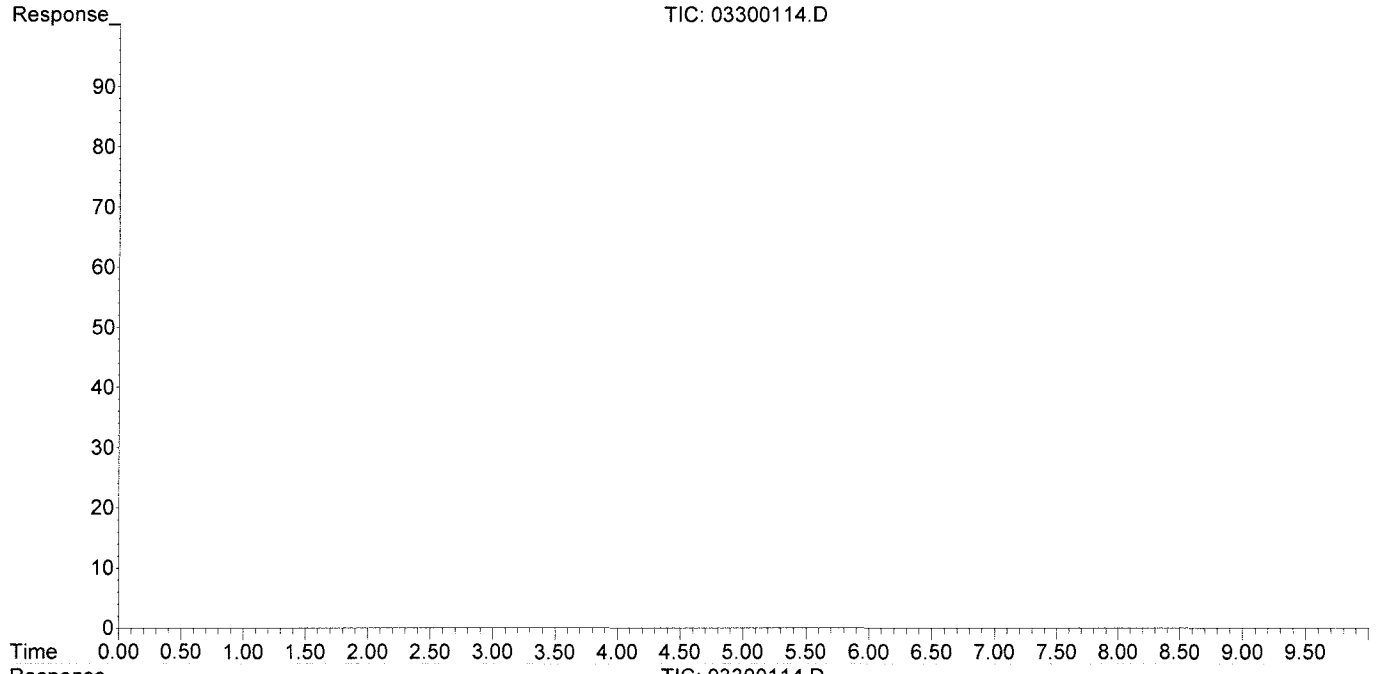
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.089	15007	1.654	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

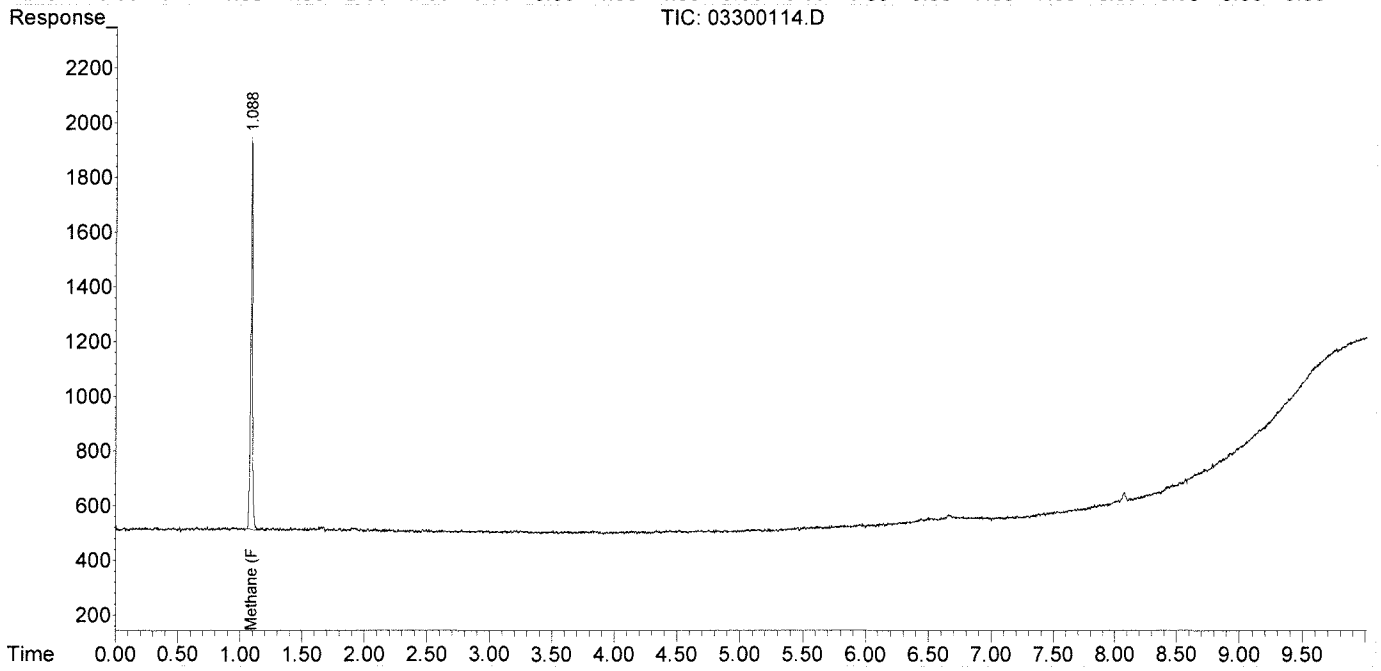
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_03\30\
Data File : 03300114.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Mar-2020, 18:04:06
Operator : LD
Sample : P2001715-007 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 30 19:08:26 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\30\
Data File : 03300103.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Mar-2020, 15:14:49
Operator : LD
Sample : MCS 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 30 15:32:23 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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

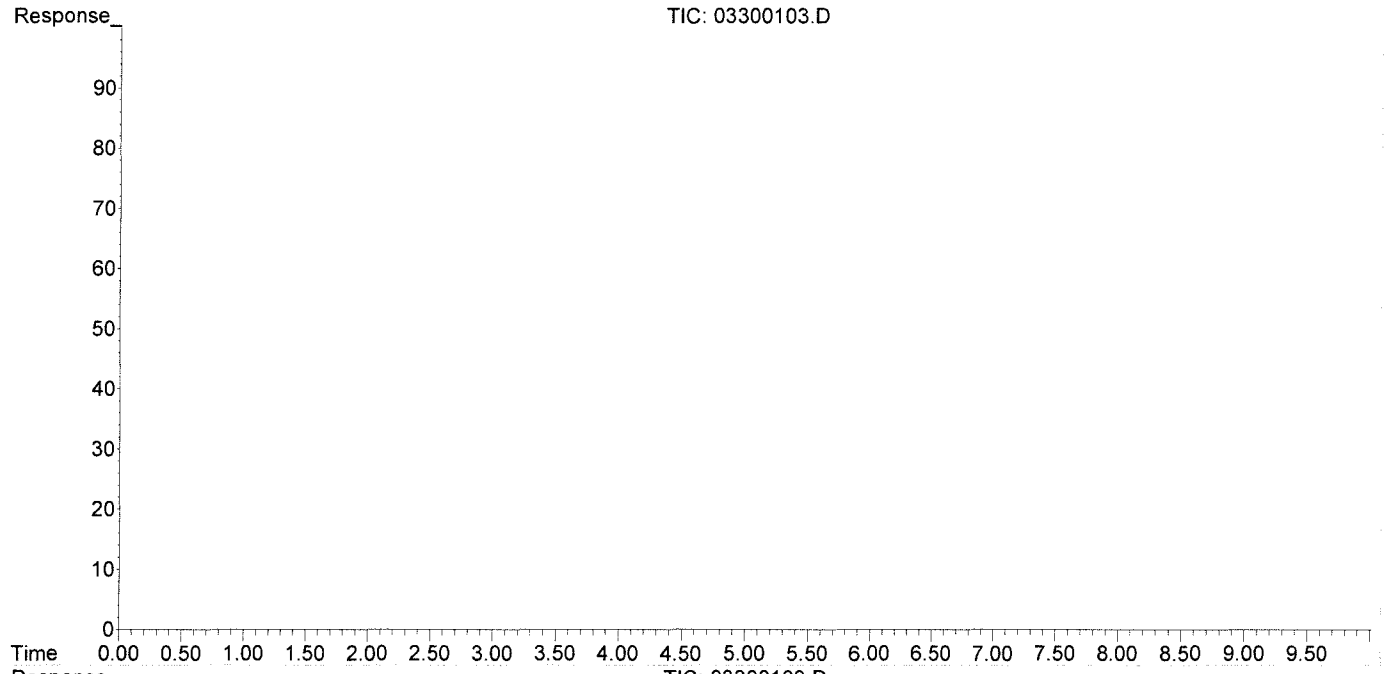
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000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

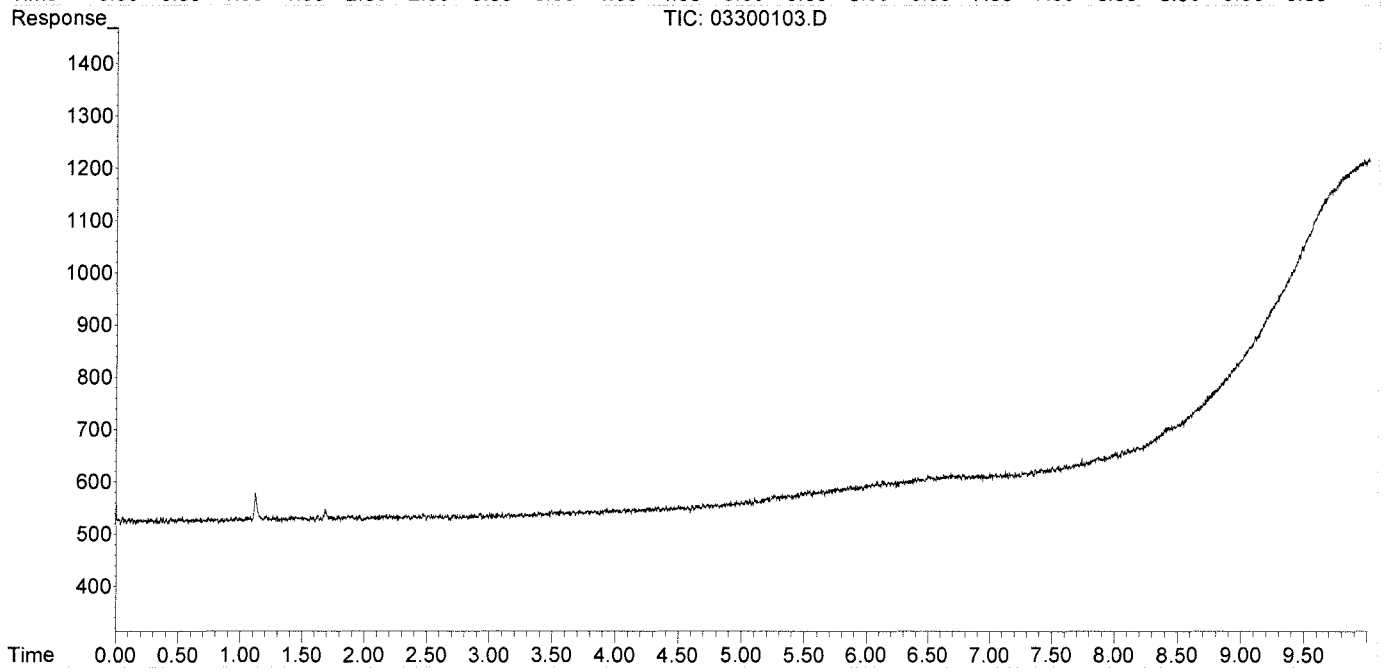
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_03\30\
Data File : 03300103.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Mar-2020, 15:14:49
Operator : LD
Sample : MCS 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 30 15:32:23 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\30\
Data File : 03300104.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Mar-2020, 15:31:42
Operator : LD
Sample : LCS FID 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 30 15:45:00 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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

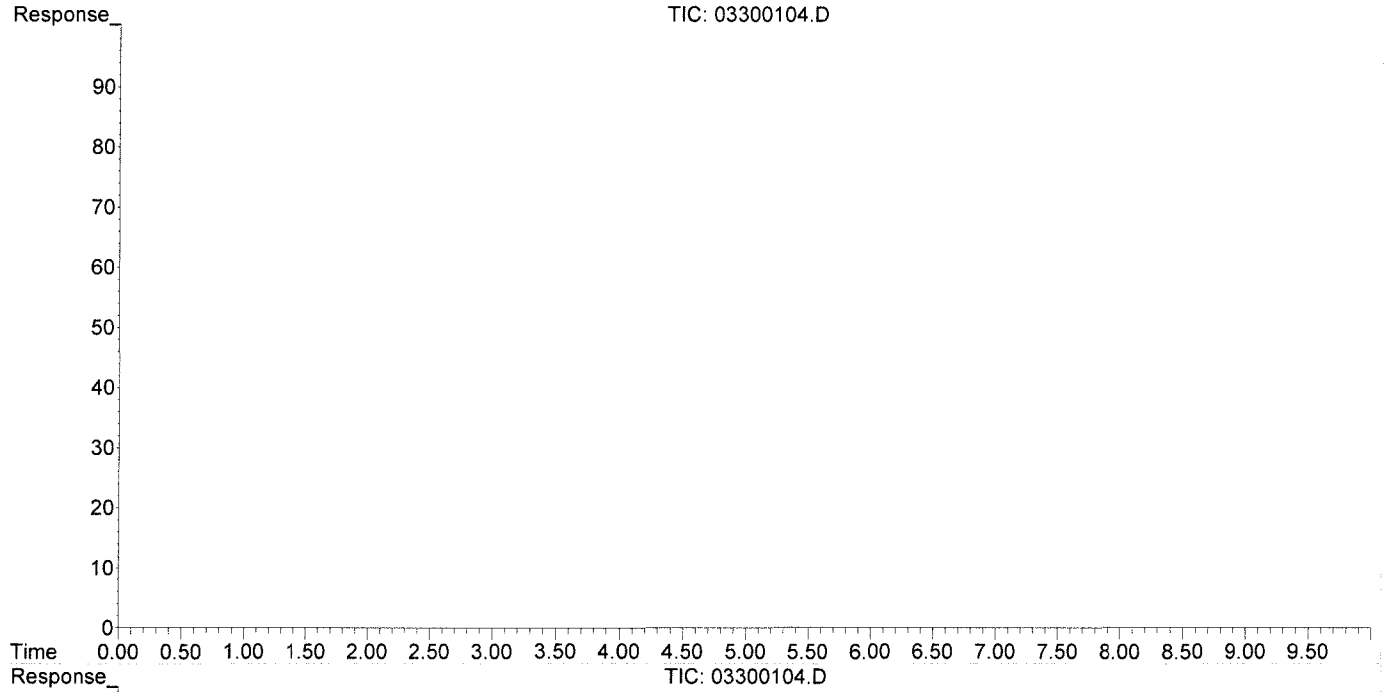
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	
2)	Carbon monoxide	0.000	0	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	1.112	14295	1.576	ppm	
7)	Ethylene	1.685	18700	1.117	ppm	
8)	Ethane	1.951	21774	1.285	ppm	
9)	Propylene	4.329	24622	1.051	ppm	
10)	Propane	4.451	32720	1.315	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	d
13)	n-Butane	0.000	0	N.D.	ppm	d

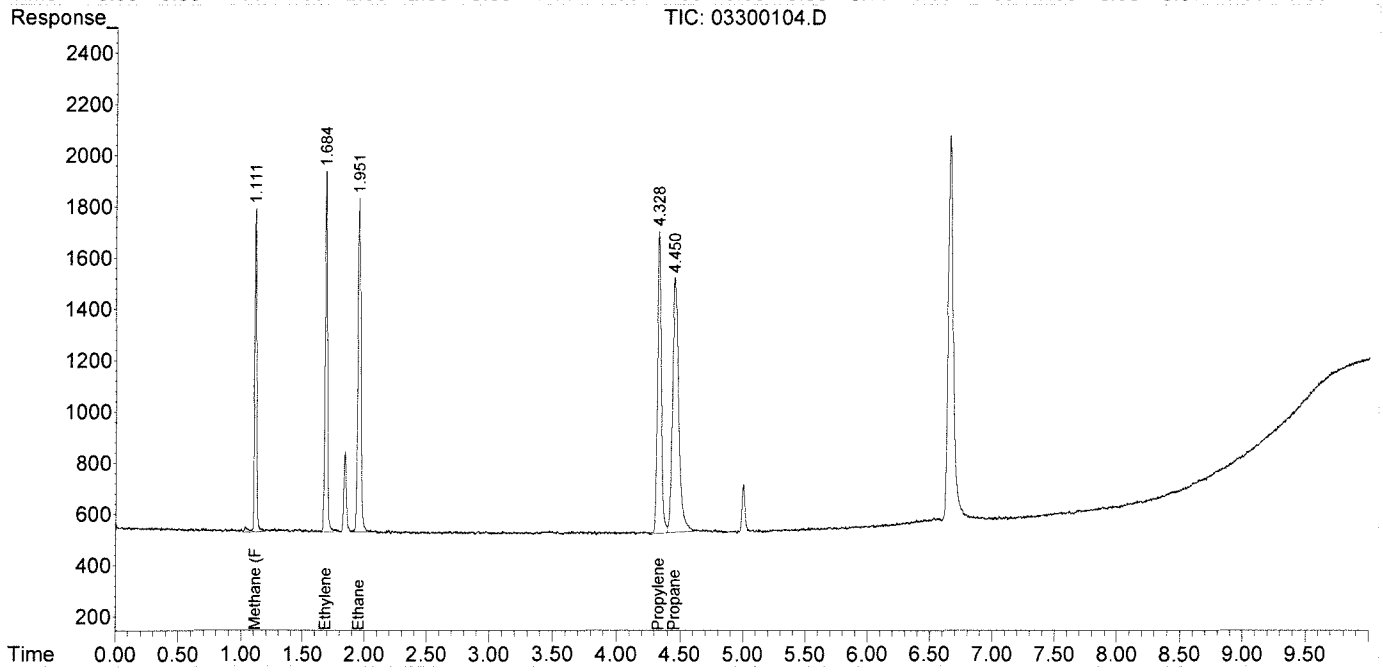
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_03\30\
Data File : 03300104.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Mar-2020, 15:31:42
Operator : LD
Sample : LCS FID 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 30 15:45:00 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\30\
Data File : 03300105.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Mar-2020, 15:48:34
Operator : LD
Sample : LCSD FID 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 30 15:58:53 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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

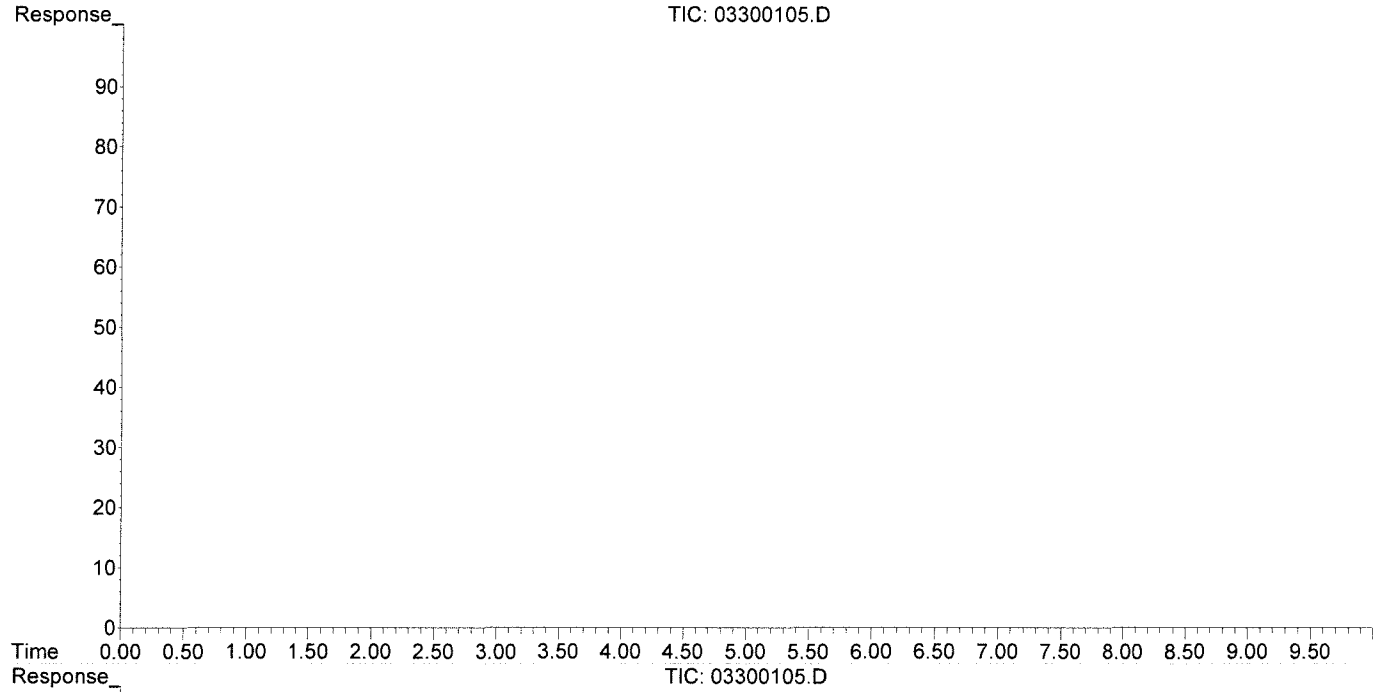
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.111	13940	1.537	ppm
7)	Ethylene	1.684	18220	1.089	ppm
8)	Ethane	1.951	21849	1.289	ppm
9)	Propylene	4.332	23929	1.021	ppm
10)	Propane	4.454	32526	1.307	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	6.656	42532	1.598	ppm
13)	n-Butane	6.656	42532	1.598	ppm

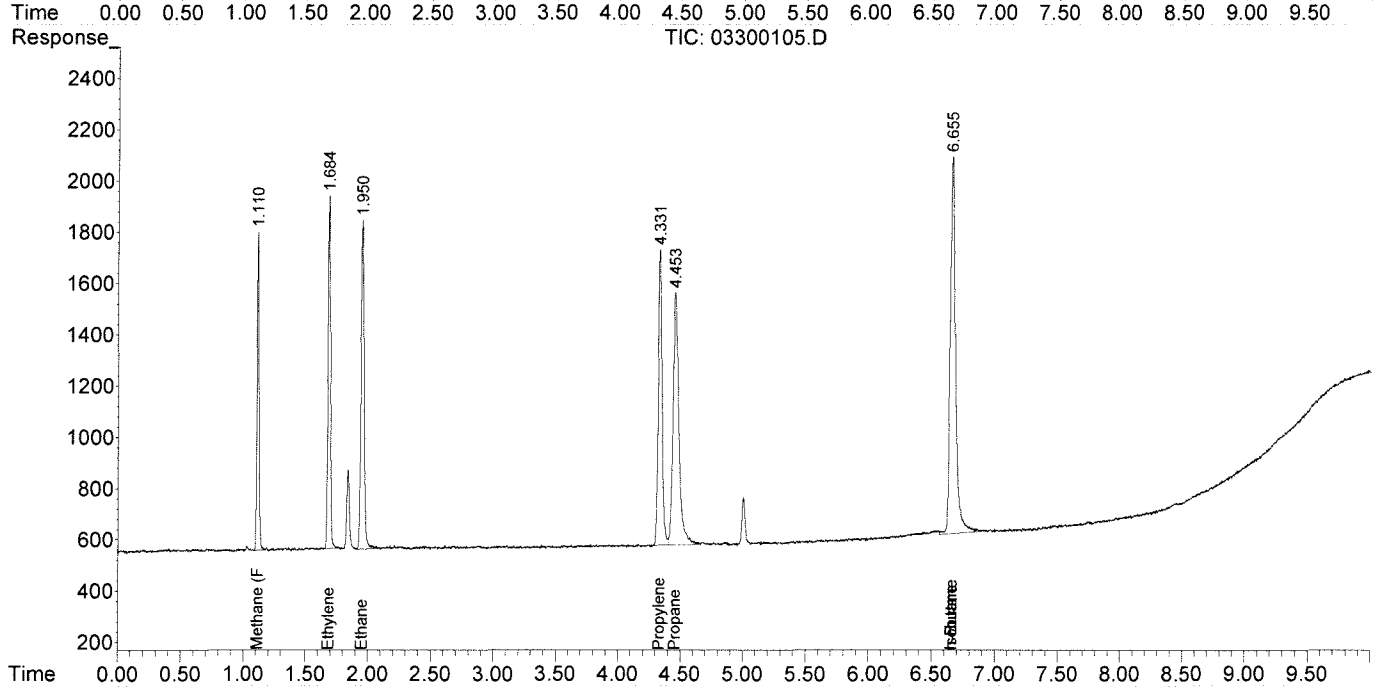
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_03\30\
Data File : 03300105.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Mar-2020, 15:48:34
Operator : LD
Sample : LCSD FID 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 30 15:58:53 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Response Factor Report HP5890

Method Path : J:\GC10\METHODS\
Method File : RS091217_R.M
Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
Last Update : Wed Sep 13 11:14:47 2017
Response Via : Initial Calibration

Calibration Files
1 =09121702.D 2 =09121703.D 3 =09121704.D
4 =09121705.D 5 =09121706.D 6 =09121707.D

	Compound	1	2	3	4	5	6	Avg	%RSD
1)	Oxygen/Argon	3.739		1.014			0.001	0.793 E6	189.17
2)	Carbon monoxide	3.739		1.014			0.001	0.594 E6	221.92
3)	Methane (TCD)						2.161	0.951 E2	106.37
4)	Carbon dioxide	2.365	2.569	2.558	2.361	2.459	2.314	2.438 E2	4.44

Signal #2 Calibration Files
1 =09121702.D 2 =09121703.D 3 =09121704.D
4 =09121705.D 5 =09121706.D 6 =09121707.D

	Compound	1	2	3	4	5	6	Avg	%RSD
6)	Methane (FID)		1.180	0.975	0.908	0.870	0.868	0.907 E4	11.66
7)	Ethylene	1.736	1.638	1.780	1.720	1.628	1.670	1.673 E4	3.90
8)	Ethane	1.781	1.676	1.784	1.730	1.692	1.675	1.695 E4	3.83
9)	Propylene	2.505	2.296	2.592	2.480	2.346	2.252	2.343 E4	6.56
10)	Propane	2.439	2.283	2.645	2.555	2.433	2.522	2.488 E4	4.20
11)	Isobutylene							0.652 E1	138.46
12)	Isobutane	6.058	4.793	2.214	1.553	1.353		2.662 E4	86.17
13)	n-Butane	6.058	4.793	2.214	1.553	1.353		2.662 E4	86.17

(#) = Out of Range ### Number of calibration levels exceeded format ###

RS091217_R.M Wed Sep 13 15:11:48 2017

Edit Compounds -- Compound #6 -- Methane (FID)

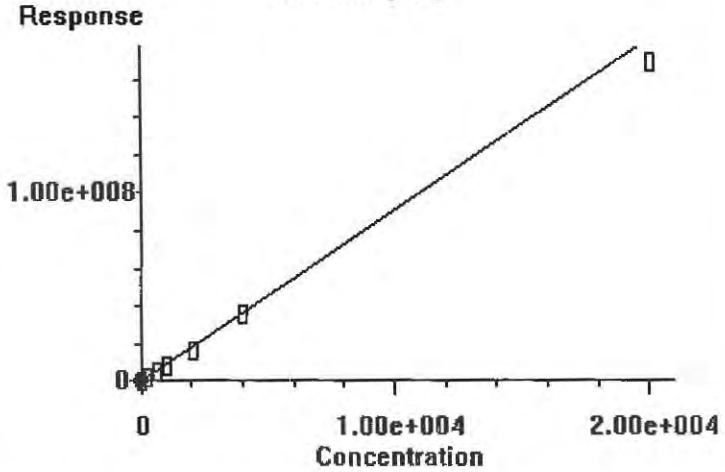
Search by: Ret Time | Name | Index | Find Compound

- Compound Database
- External Standard Compoun
  - Oxygen/Argon
  - Carbon monoxide
  - Methane (TCD)
  - Carbon dioxide
  - Signal #2
  - Methane (FID)
  - Ethylene
  - Ethane
  - Propylene
  - Propane
  - Isobutylene
  - Isobutane
  - n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response
1	0.151000	
2	0.302000	3564.400000
3	1.510000	14725.268625
4	4.530000	41128.575000
5	10.570000	91966.784531
6	200.000000	1735997.497500
7	600.000000	5189848.900000
8	1000.000000	8598533.570000
9	2000.000000	16098209.390000
10	4000.000000	35776839.311362
11	20000.000000	169009160.49199

Methane (FID)



0.000e+000	Quadratic term
9.071e+003	Linear term
0.000e+000	Constant term
11.657%	RF Rel Std Dev

OK | Cancel | Help | Print Calibration Curve | Copy Calibration Curve

Edit Compounds -- Compound #7 -- Ethylene

Search by: Ret Time | Name | Index | Find Compound

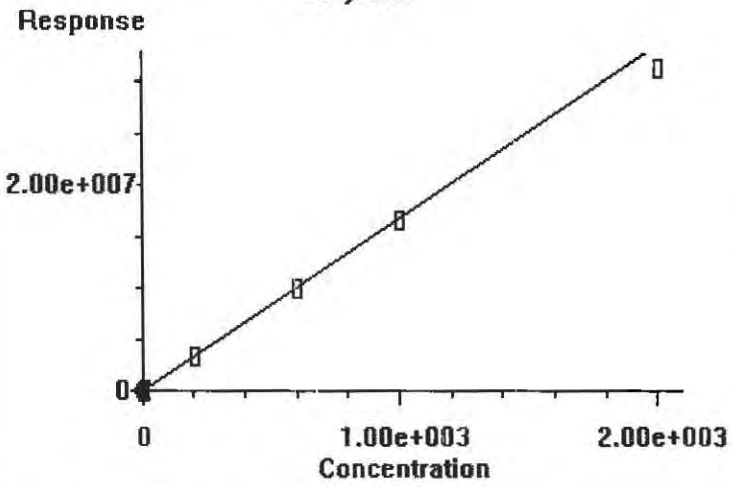
- Compound Database
- External Standard Compoun
  - Oxygen/Argon
  - Carbon monoxide
  - Methane (TCD)
  - Carbon dioxide
  - Signal #2
  - Methane (FID)
  - Ethylene
  - Ethane
  - Propylene
  - Propane
  - Isobutylene
  - Isobutane
  - n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response
1	0.151000	2621.970000
2	0.302000	4946.731301
3	1.510000	26884.746847
4	4.530000	77902.721497
5	10.570000	172085.529560
6	200.000000	3339702.313219
7	600.000000	10007758.776971
8	1000.000000	16608503.805988
9	2000.000000	31192443.898600
10	4000.000000	

Lvl ID	Concentration	Response
11	20000.000000	

Ethylene



0.000e+000	Quadratic term
1.673e+004	Linear term
0.000e+000	Constant term
3.897%	RF Rel Std Dev

OK | Cancel | Help | Print Calibration Curve | Copy Calibration Curve

Edit Compounds -- Compound #8 -- Ethane

Search by: Ret Time | Name | Index — Find Compound

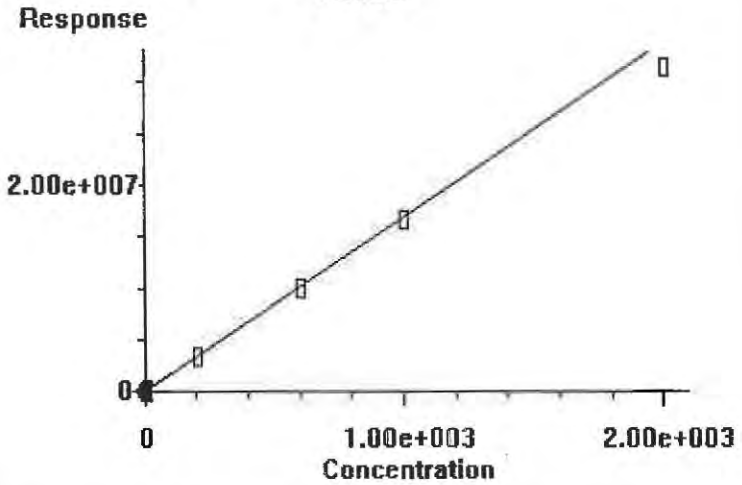
- Compound Database
  - External Standard Compoun
    - Oxygen/Argon
    - Carbon monoxide
    - Methane (TCD)
    - Carbon dioxide
    - Signal #2
    - Methane (FID)
    - Ethylene
    - Ethane
    - Propylene
    - Propane
    - Isobutylene
    - Isobutane
    - n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response
1	0.151000	2689.928008
2	0.302000	5060.331943
3	1.510000	26943.667500
4	4.530000	78353.525045
5	10.570000	178840.731148
6	200.000000	3350442.319129
7	600.000000	10048964.218029
8	1000.000000	16703164.879012
9	2000.000000	31424217.938900
10	4000.000000	

Lvl ID	Concentration	Response
11	20000.000000	

Ethane



0.000e+000	Quadratic term
1.695e+004	Linear term
0.000e+000	Constant term
3.831%	RF Rel Std Dev

OK | Cancel | Help | Print Calibration Curve | Copy Calibration Curve

Edit Compounds -- Compound #9 -- Propylene

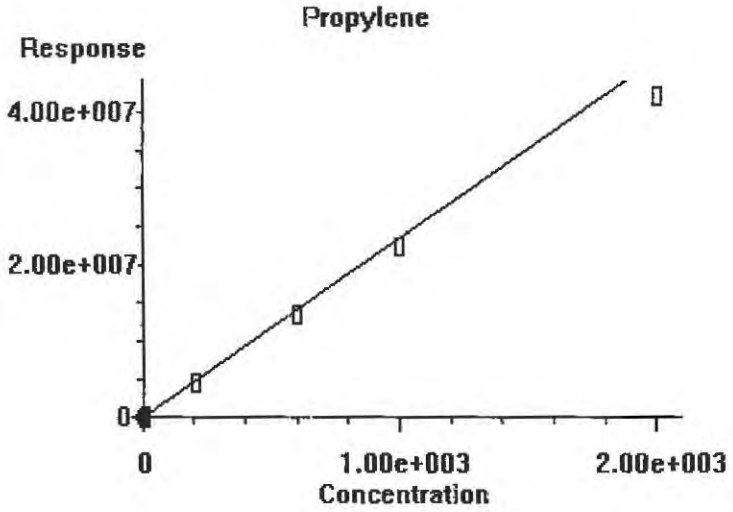
Search by: Ret Time | Name | Index | Find Compound

- Compound Database
- External Standard Compoun
  - Oxygen/Argon
  - Carbon monoxide
  - Methane (TCD)
  - Carbon dioxide
  - Signal #2
  - Methane (FID)
  - Ethylene
  - Ethane
  - Propylene
  - Propane
  - Isobutylene
  - Isobutane
  - n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response
1	0.151000	3782.537646
2	0.302000	6933.285530
3	1.510000	39139.518208
4	4.530000	112341.896872
5	10.570000	248003.903623
6	200.000000	4504060.086084
7	600.000000	13569342.761419
8	1000.000000	22494887.720990
9	2000.000000	42124689.656800
10	4000.000000	

Lvl ID	Concentration	Response
11	20000.000000	



0.000e+000	Quadratic term
2.343e+004	Linear term
0.000e+000	Constant term
6.559%	RF Rel Std Dev

OK | Cancel | Help | Print Calibration Curve | Copy Calibration Curve

Edit Compounds -- Compound #10 -- Propane

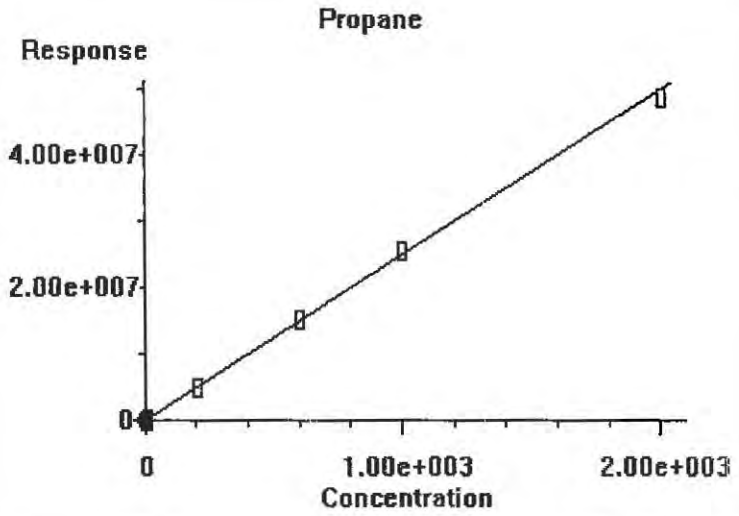
Search by: Ret Time | Name | Index — Find Compound

- Compound Database
- External Standard Compoun
  - Oxygen/Argon
  - Carbon monoxide
  - Methane (TCD)
  - Carbon dioxide
  - Signal #2
  - Methane (FID)
  - Ethylene
  - Ethane
  - Propylene
  - Propane
  - Isobutylene
  - Isobutane
  - n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response
1	0.151000	3682.897354
2	0.302000	6894.237803
3	1.510000	39934.166792
4	4.530000	115723.428128
5	10.570000	257124.432806
6	200.000000	5043035.663316
7	600.000000	15251325.797404
8	1000.000000	25459410.657938
9	2000.000000	48583085.287451
10	4000.000000	

Lvl ID	Concentration	Response
11	20000.000000	



0.000e+000	Quadratic term
2.488e+004	Linear term
0.000e+000	Constant term
4.200%	RF Rel Std Dev

OK | Cancel | Help | Print Calibration Curve | Copy Calibration Curve

Calibration Status Report HP5890

Method Path : J:\GC10\METHODS\
Method File : RS091217_R.M
Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
Last Update : Wed Sep 13 11:14:47 2017
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	0	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121702.D
2	2	0	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121703.D
3	3	3	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121704.D
4	4	10	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121705.D
5	5	25	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121706.D
6	6	125	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121707.D
7	7	5000	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121708.D
8	8	25000	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121709.D
9	9	2000	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121710.D
10	10	30000	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121711.D
11	11	20000	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121712.D

#	ID	Update Time	Quant Time	Acquisition Time
1	1	Sep 13 11:04 2017	Sep 12 15:03 2017	12-Sep-2017, 10:52
2	2	Sep 13 11:05 2017	Sep 13 11:05 2017	12-Sep-2017, 11:05
3	3	Sep 13 11:06 2017	Sep 13 11:05 2017	12-Sep-2017, 11:45
4	4	Sep 13 11:09 2017	Sep 13 11:06 2017	12-Sep-2017, 12:09
5	5	Sep 13 11:09 2017	Sep 13 11:09 2017	12-Sep-2017, 12:30
6	6	Sep 13 11:10 2017	Sep 13 11:10 2017	12-Sep-2017, 12:47
7	7	Sep 13 11:11 2017	Sep 13 11:10 2017	12-Sep-2017, 13:00
8	8	Sep 13 11:12 2017	Sep 13 11:11 2017	12-Sep-2017, 13:47
9	9	Sep 13 11:12 2017	Sep 13 11:12 2017	12-Sep-2017, 14:07
10	10	Sep 13 11:14 2017	Sep 13 11:13 2017	12-Sep-2017, 14:48
11	11	Sep 13 11:14 2017	Sep 13 11:14 2017	12-Sep-2017, 15:21

RS091217_R.M Wed Sep 13 15:11:22 2017

Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121702.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 10:52
Operator : MC
Sample : 0.151ppm 0.250ml s32-09121702
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 12 11:03:15 2017
Quant Method : I:\GC10\METHODS\RS082417.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Fri Aug 25 09:19:14 2017
Response via : Initial Calibration
Integrator: ChemStation

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

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.767	373920	0.128	ppm	
2)	Carbon monoxide	1.767	373920	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	1.595	2622	0.156	ppm	
8)	Ethane	1.848	2690	0.156	ppm	
9)	Propylene	4.222	3783	0.154	ppm	
10)	Propane	4.348	3683	0.139	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	6.582f	6058	NoCal	ppm	
13)	n-Butane	6.582f	6058	NoCal	ppm	

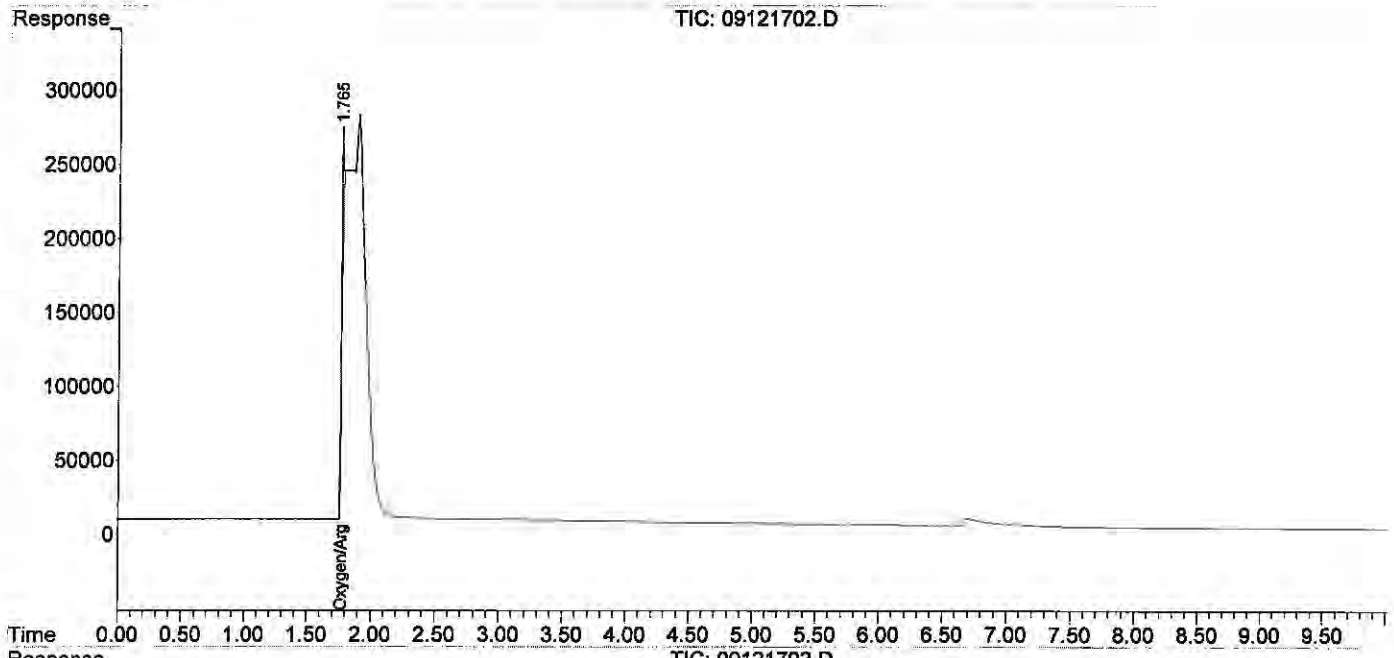
(f)=RT Delta > 1/2 Window (m)=manual int.

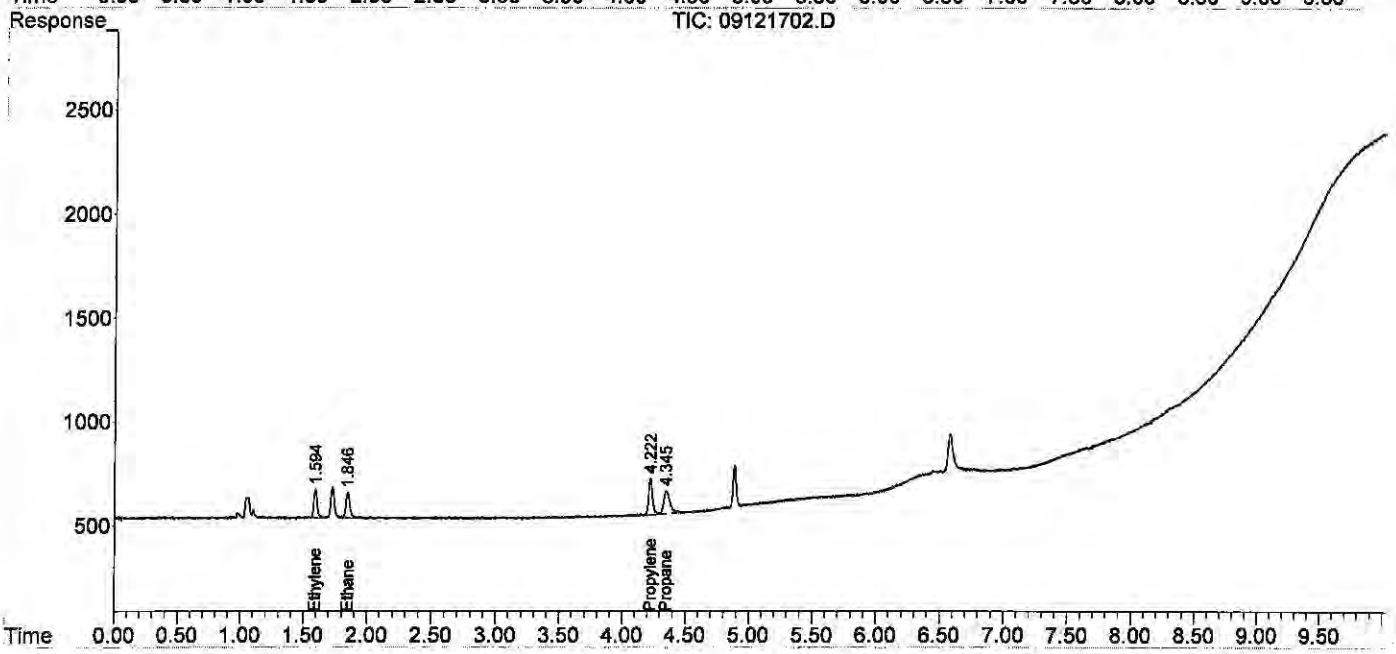
9/13/17

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121702.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 10:52
Operator : MC
Sample : 0.151ppm 0.250ml s32-09121702
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 12 11:03:15 2017
Quant Method : I:\GC10\METHODS\RS082417.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Fri Aug 25 09:19:14 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121703.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 11:05
Operator : MC
Sample : 0.302ppm 0.5ml s32-09121702
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:05:03 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.913f	-25181981	N.D.	ppm	
2)	Carbon monoxide	1.913f	-25181981	1.089	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	1.049	3564	0.391	ppm	m
7)	Ethylene	1.577	4947	0.292	ppm	
8)	Ethane	1.828	5060	0.293	ppm	
9)	Propylene	4.207	6933	0.281	ppm	
10)	Propane	4.337	6894	0.268	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	6.579f	9587	0.158	ppm	
13)	n-Butane	6.579f	9587	0.158	ppm	

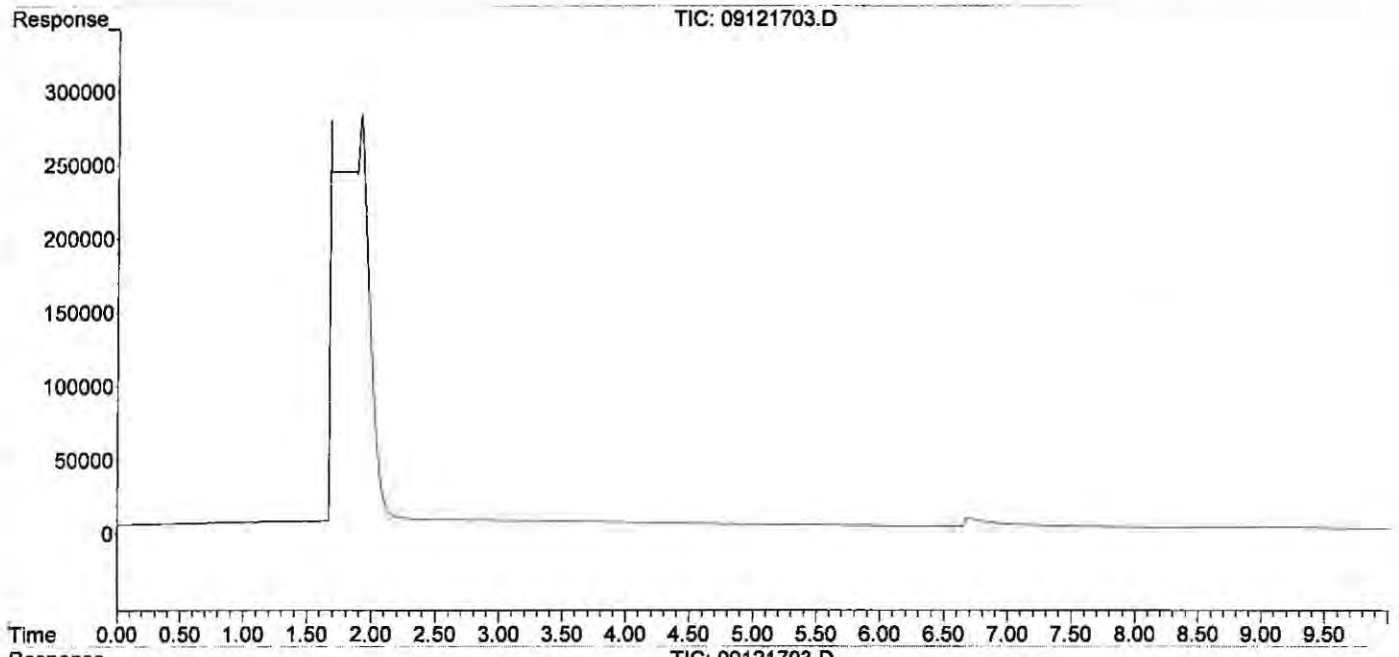
(f)=RT Delta > 1/2 Window (m)=manual int.

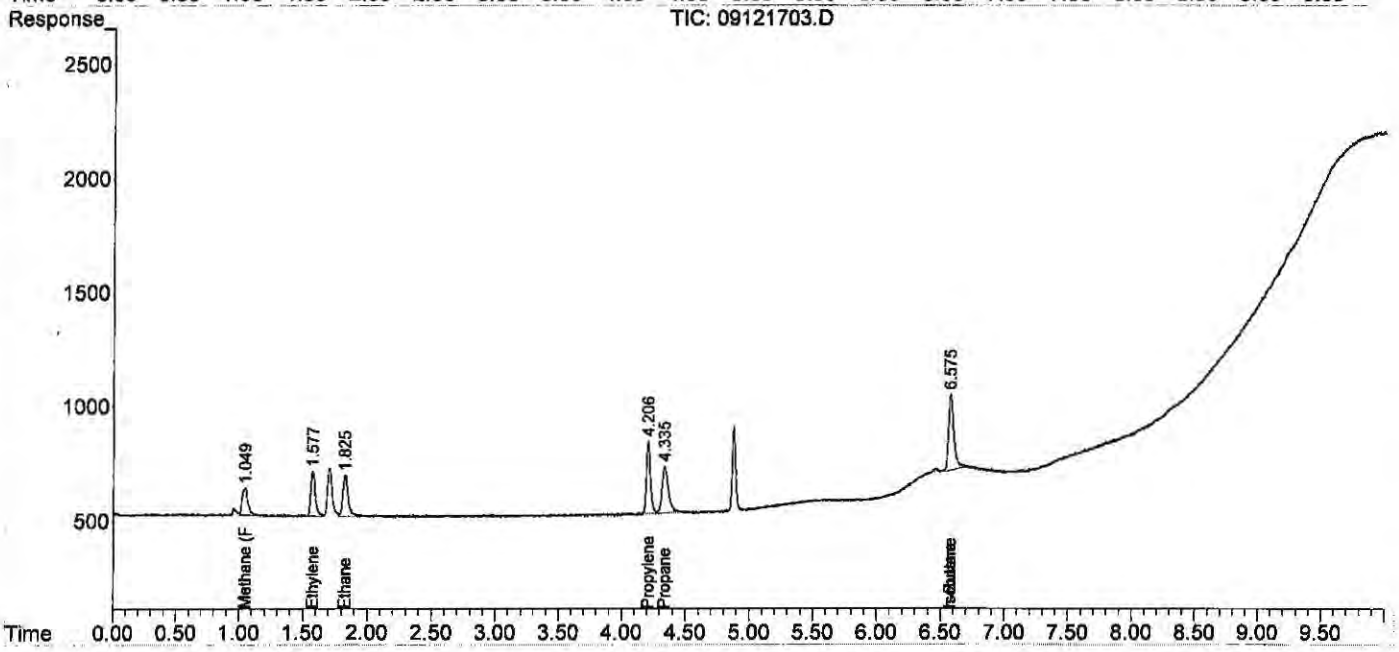
Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121703.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 11:05
Operator : MC
Sample : 0.302ppm 0.5ml s32-09121702
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:05:03 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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

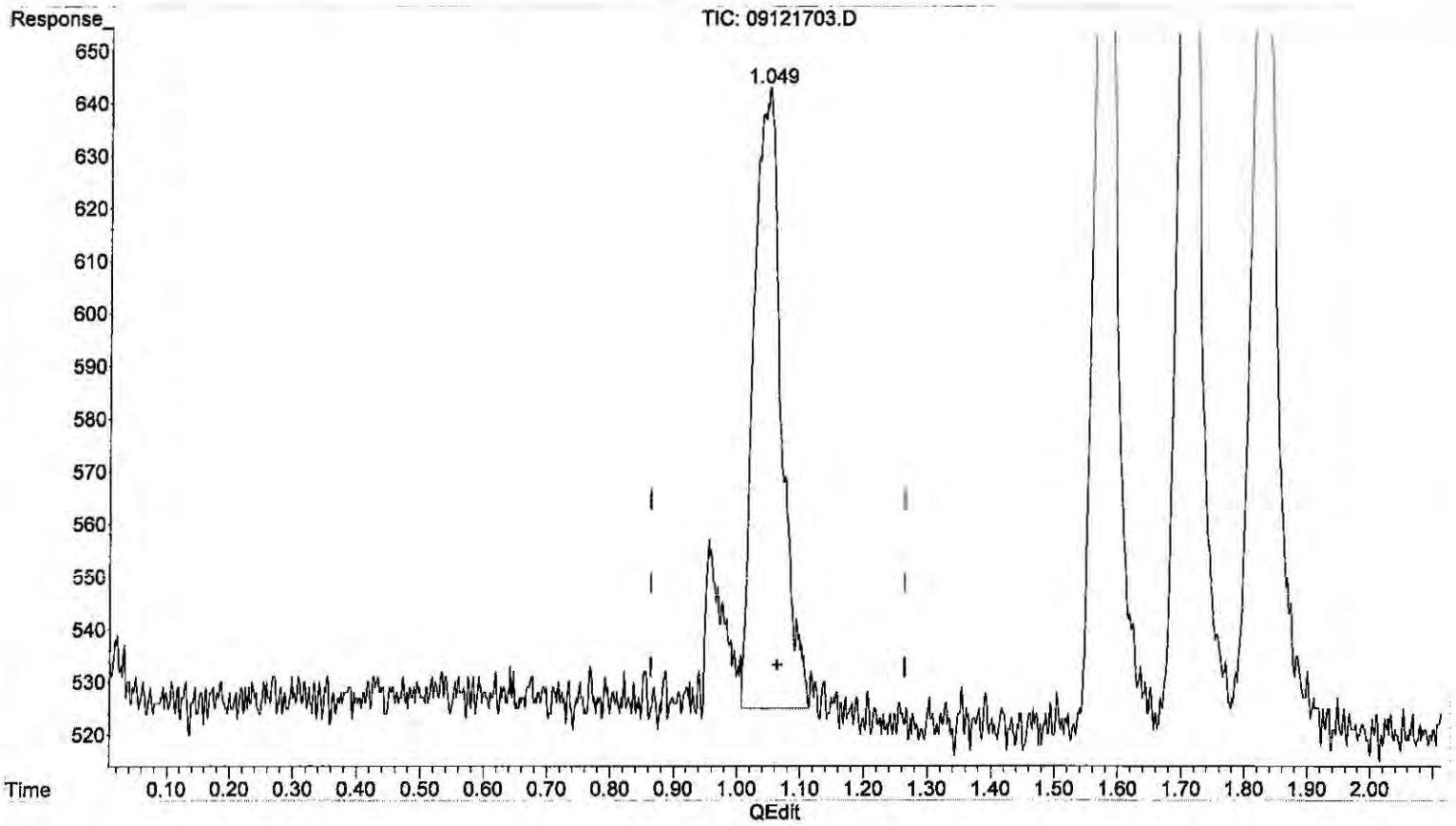




Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121703.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 11:05
Operator : MC
Sample : 0.302ppm 0.5ml s32-09121702
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:05:03 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(6) Methane (FID)
1.049min 0.391 ppm m
response 3564

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121704.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 11:45
Operator : MC
Sample : 1.51ppm 0.1ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:05:55 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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

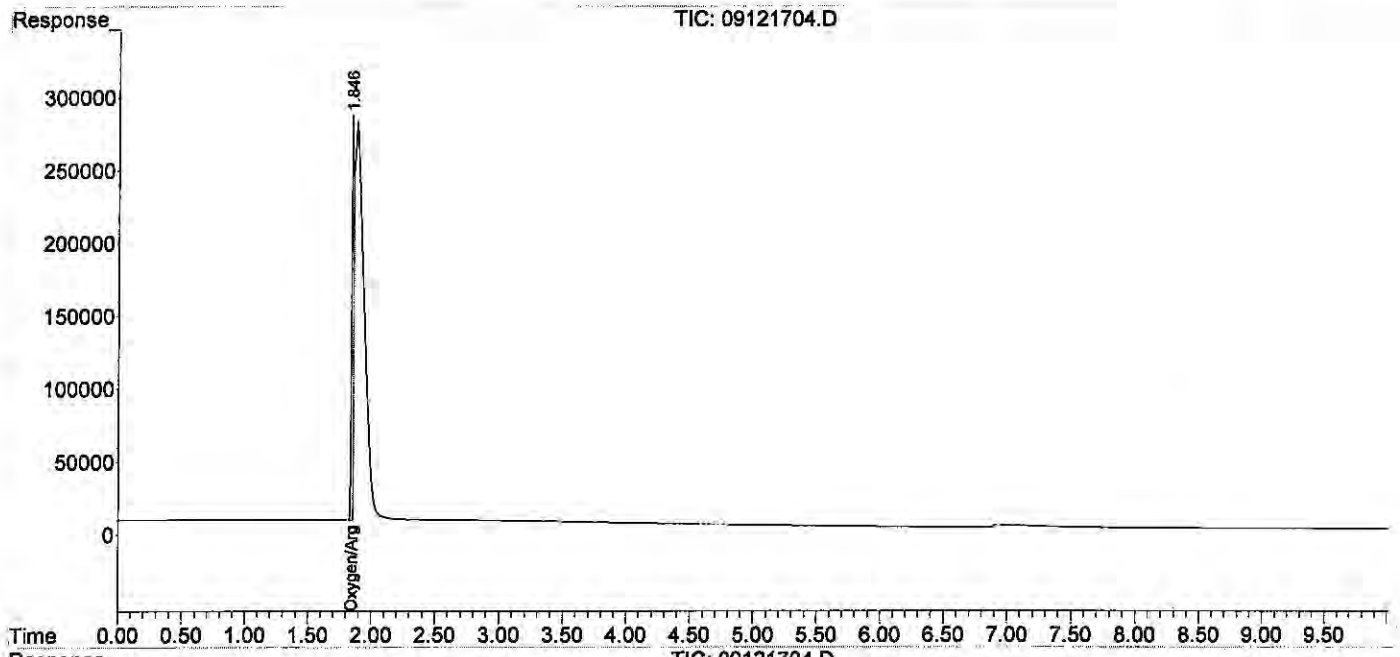
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.847	2536230	1.056	ppm
2)	Carbon monoxide	1.847	2536230	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.064	14725	1.613	ppm
7)	Ethylene	1.598	26885	1.582	ppm
8)	Ethane	1.851	26944	1.555	ppm
9)	Propylene	4.220	39140	1.589	ppm
10)	Propane	4.349	39934	1.596	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	6.578f	55348	1.020	ppm
13)	n-Butane	6.578f	55348	1.020	ppm

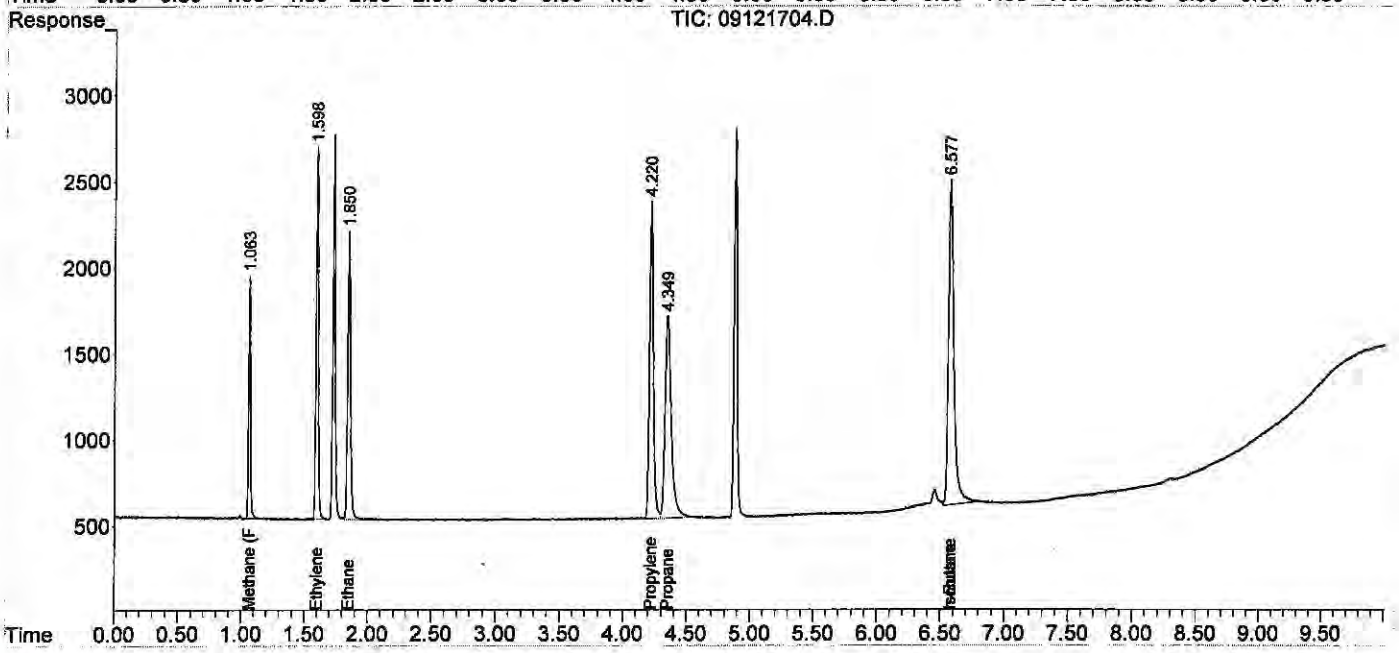
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121704.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 11:45
Operator : MC
Sample : 1.51ppm 0.1ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:05:55 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121705.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:09
Operator : MC
Sample : 4.53ppm 0.3ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:06:32 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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

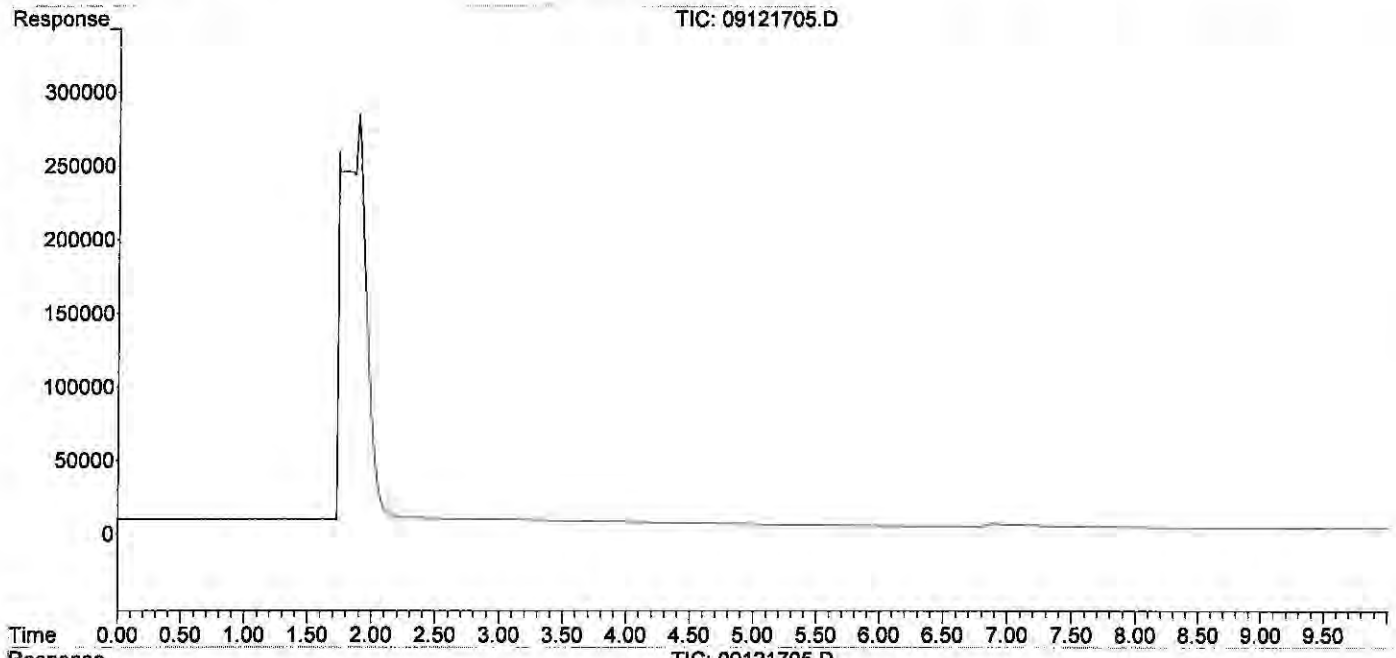
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.738	-331216	N.D.	ppm
2)	Carbon monoxide	1.738	-331216	0.019	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.052	41129	4.522	ppm
7)	Ethylene	1.586	77903	4.637	ppm
8)	Ethane	1.838	78354	4.558	ppm
9)	Propylene	4.218	112342	4.614	ppm
10)	Propane	4.347	115723	4.680	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	6.580f	155256	3.565	ppm
13)	n-Butane	6.580f	155256	3.565	ppm

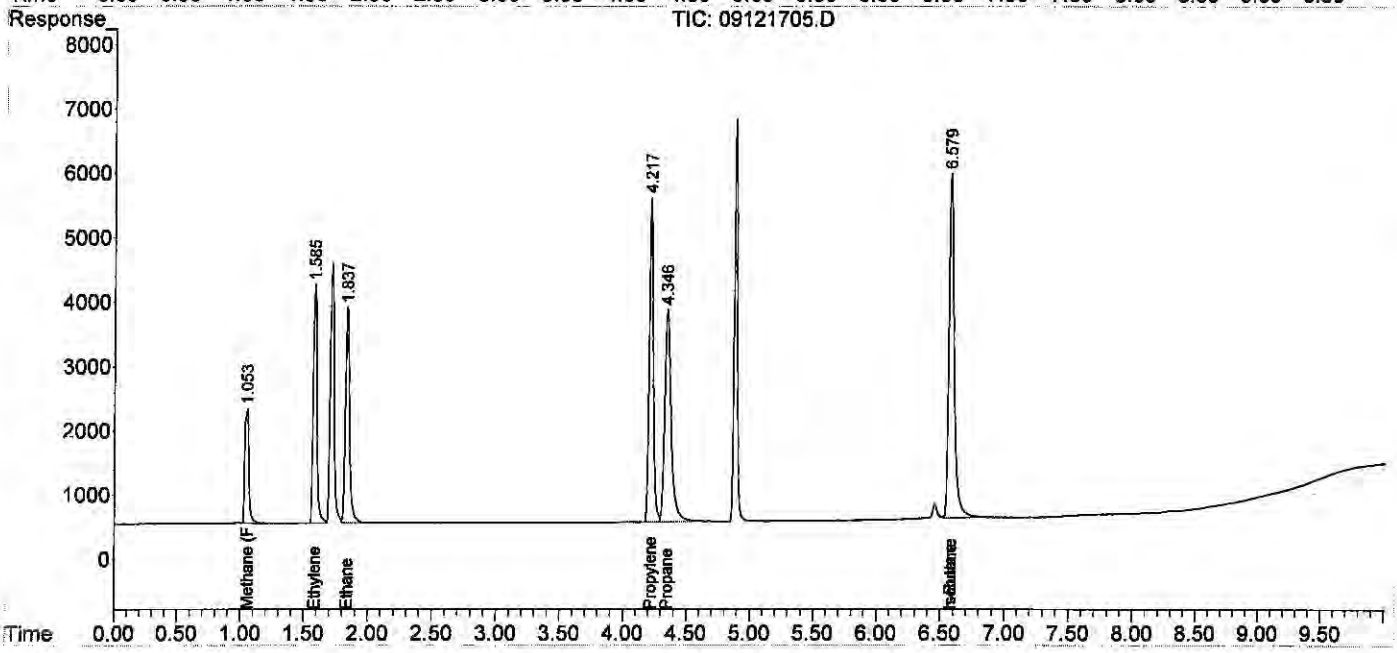
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121705.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:09
Operator : MC
Sample : 4.53ppm 0.3ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:06:32 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121706.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:30
Operator : MC
Sample : 10.57ppm 0.7ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:09:24 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.929f	-31871242	N.D.	ppm
2)	Carbon monoxide	1.929f	-31871242	1.818	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.025	91967	10.135	ppm
7)	Ethylene	1.568	172086	10.273	ppm
8)	Ethane	1.822	178841	10.441	ppm
9)	Propylene	4.214	248004	10.236	ppm
10)	Propane	4.344	257124	10.458	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	6.578f	338181	9.254	ppm
13)	n-Butane	6.578f	338181	9.254	ppm

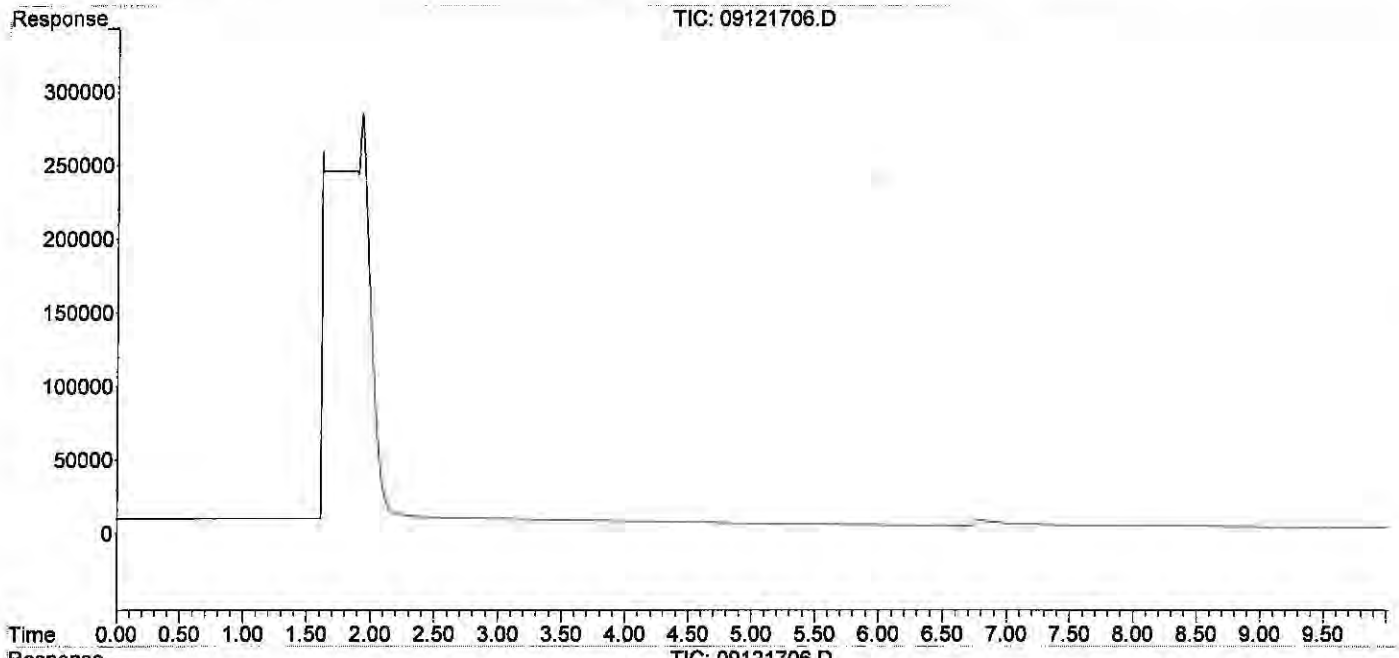
(f)=RT Delta > 1/2 Window (m)=manual int.

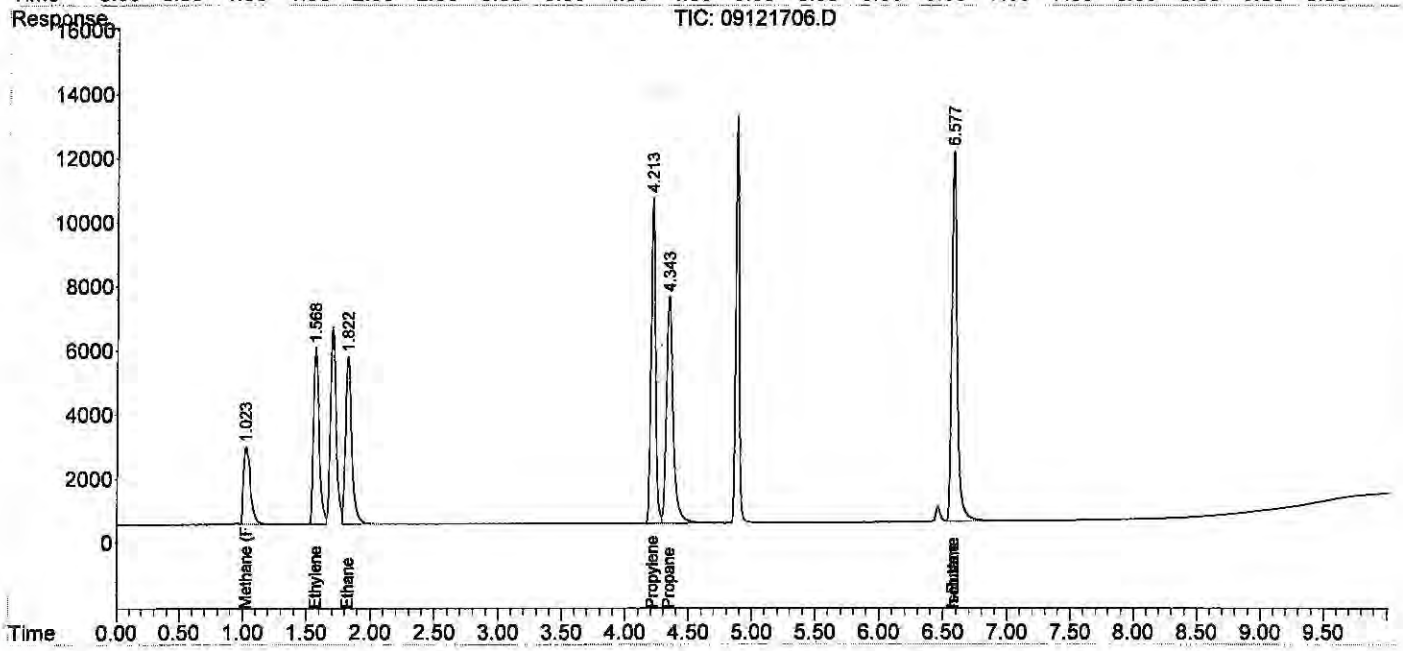
Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121706.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:30
Operator : MC
Sample : 10.57ppm 0.7ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:09:24 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121707.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:47
Operator : MC
Sample : 200ppm 0.1ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:09:59 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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

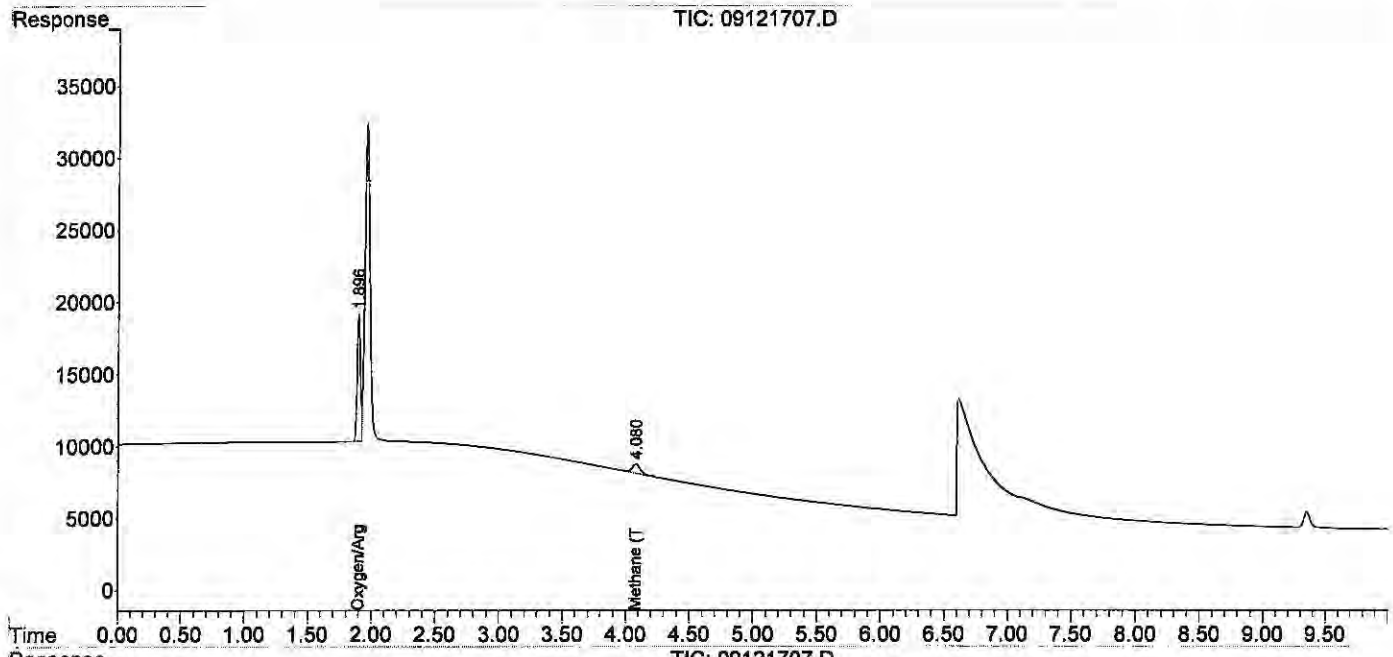
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.897	155286	0.065	ppm
2)	Carbon monoxide	1.897	155286	N.D.	ppm
3)	Methane (TCD)	4.079f	27015	2856.472	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.063	1735997	190.792	ppm
7)	Ethylene	1.597	3339702	198.758	ppm
8)	Ethane	1.849	3350442	194.597	ppm
9)	Propylene	4.201	4504060	185.706	ppm
10)	Propane	4.333	5043036	204.809	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

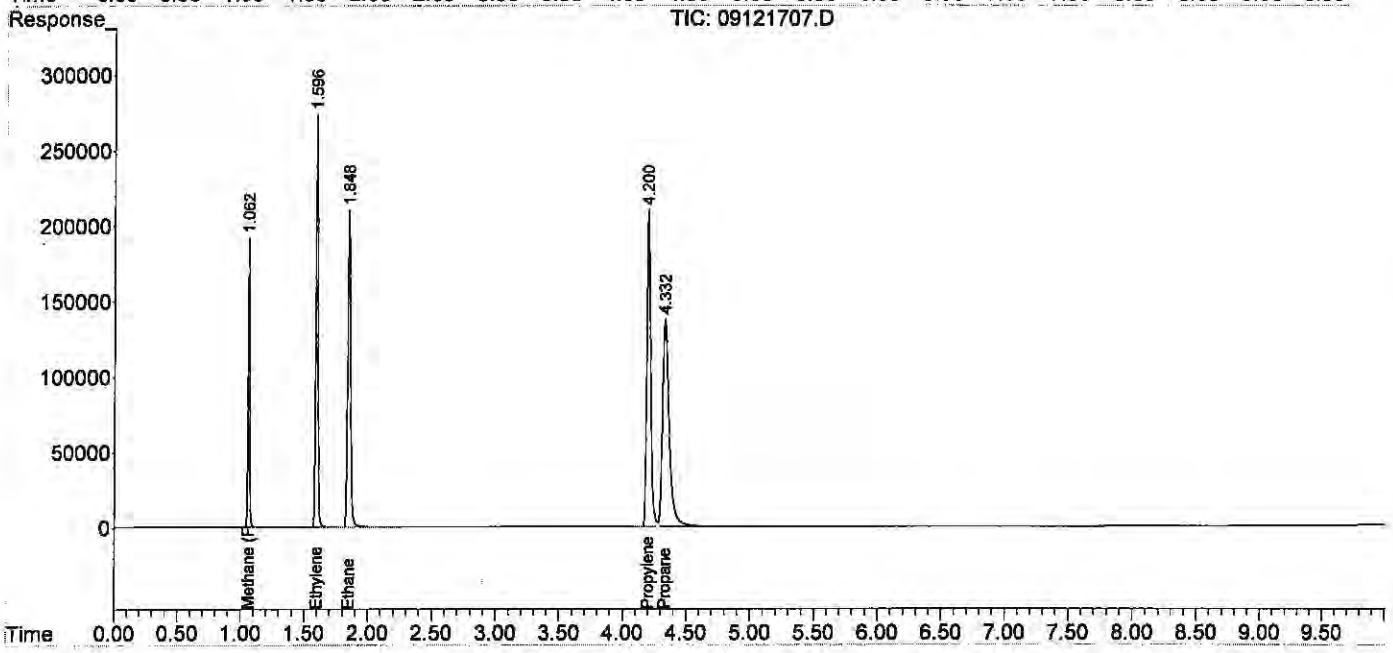
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121707.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:47
Operator : MC
Sample : 200ppm 0.1ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:09:59 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121708.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 13:00
Operator : MC
Sample : 600ppm 0.3ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:10:57 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:10:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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

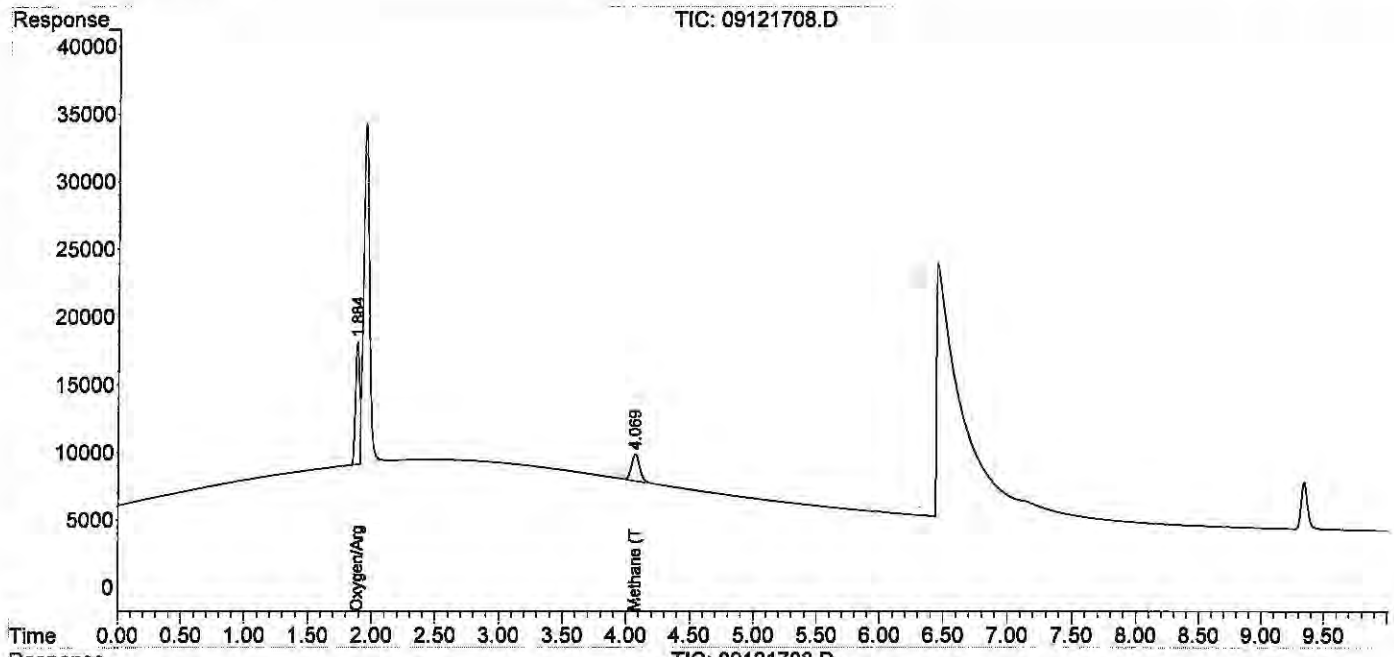
	Compound	R.T.	Response	Conc	Units
Target	Compounds				
1)	Oxygen/Argon	1.884	196022	0.124	ppm
2)	Carbon monoxide	1.884	196022	N.D.	ppm
3)	Methane (TCD)	4.070f	88282	782.730	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.044	5189849	539.759	ppm
7)	Ethylene	1.573	10007759	590.286	ppm
8)	Ethane	1.822	10048964	583.213	ppm
9)	Propylene	4.160	13569343	562.612	ppm
10)	Propane	4.300	15251326	615.171	ppm
11)	Isobutylene	6.143	9815	NoCal	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

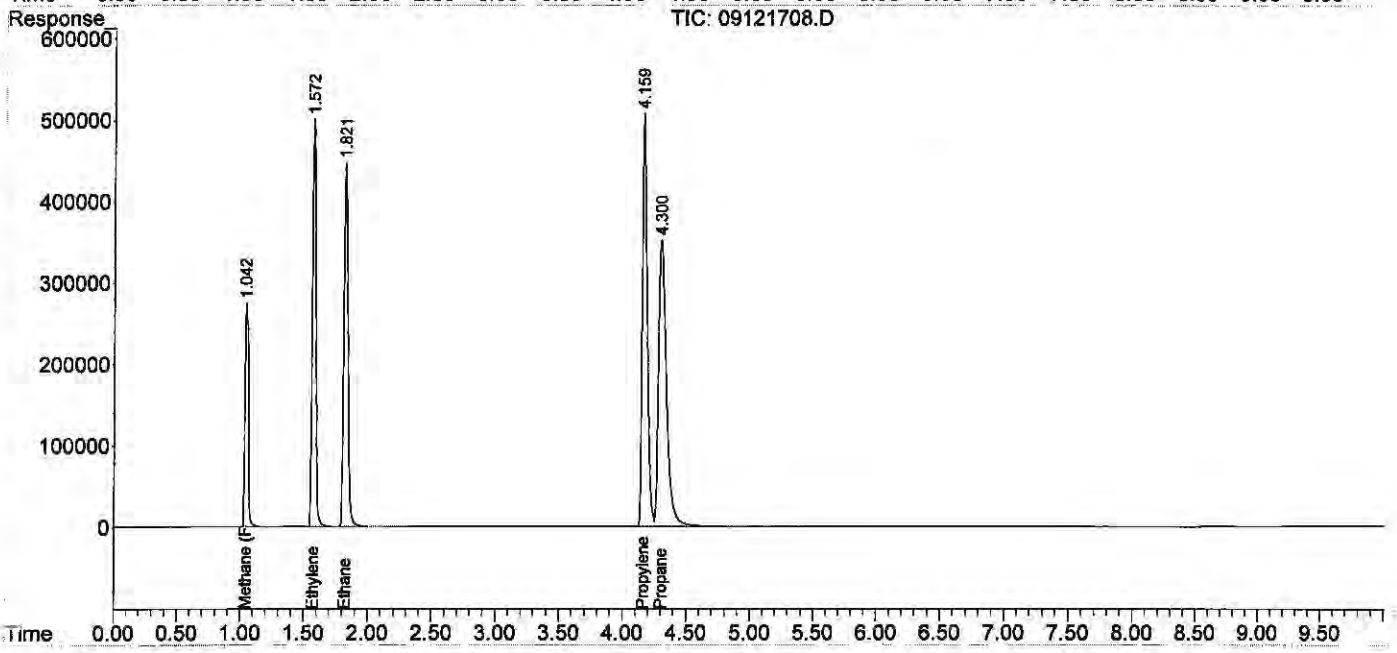
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121708.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 13:00
Operator : MC
Sample : 600ppm 0.3ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:10:57 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:10:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121709.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 13:47
Operator : MC
Sample : 1000ppm 0.5ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:11:46 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:11:38 2017
Response via : Initial Calibration
Integrator: ChemStation

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

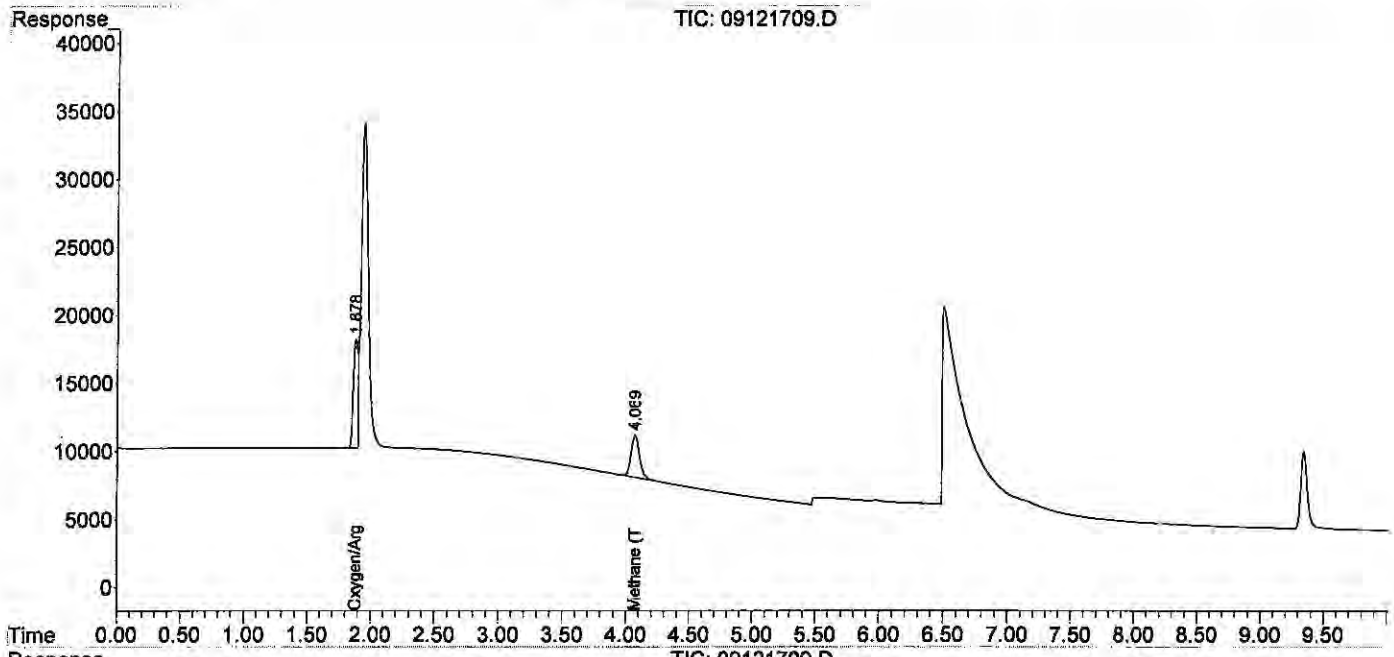
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.879	192611	0.162	ppm
2)	Carbon monoxide	1.879	192611	N.D.	ppm
3)	Methane (TCD)	4.070f	145492	1244.729	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.039	8598534	945.644	ppm
7)	Ethylene	1.576	16608504	981.887	ppm
8)	Ethane	1.827	16709165	973.644	ppm
9)	Propylene	4.161	22494888	941.060	ppm
10)	Propane	4.298	25459411	1023.223	ppm
11)	Isobutylene	6.138	16970	8645.243	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

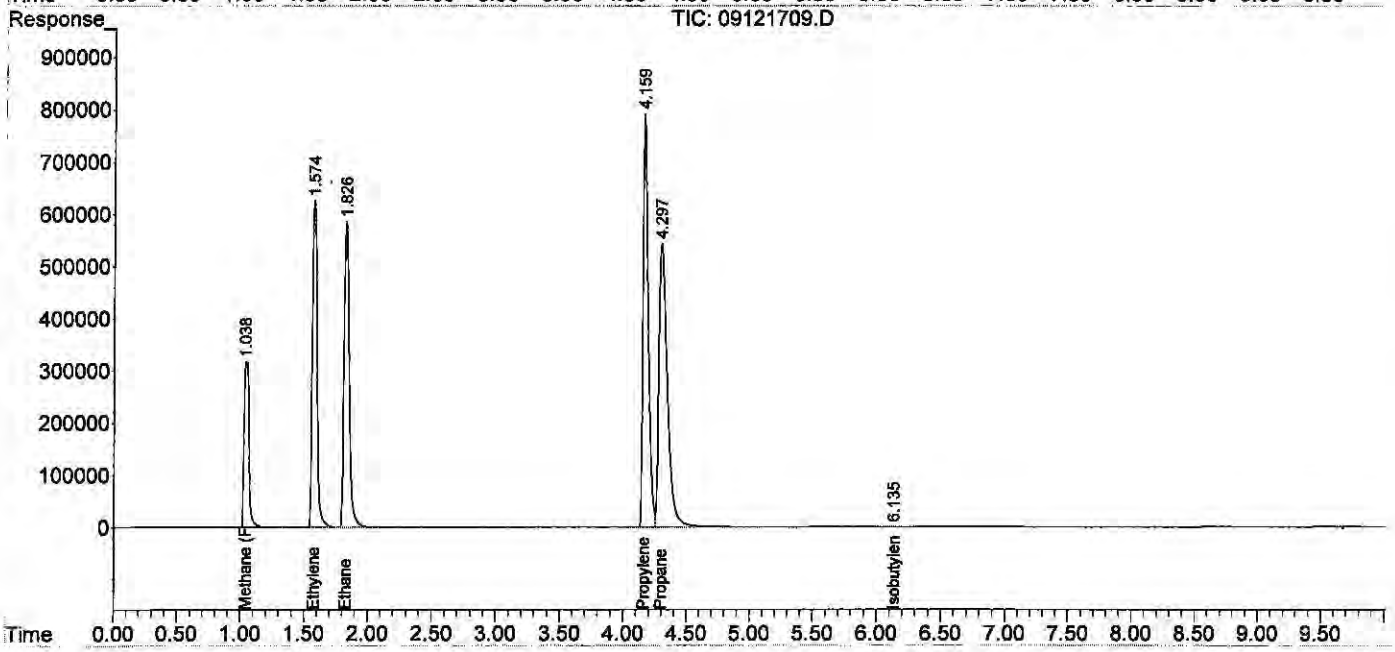
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121709.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 13:47
Operator : MC
Sample : 1000ppm 0.5ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:11:46 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:11:38 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121710.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 14:07
Operator : MC
Sample : 2000ppm 1ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:12:33 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:12:25 2017
Response via : Initial Calibration
Integrator: ChemStation

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

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.922f	1578147	1.659	ppm	
2)	Carbon monoxide	1.922f	1578147	N.D.	ppm	
3)	Methane (TCD)	4.057f	281651	3526.607	ppm	
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	1.016	16098209	1763.622	ppm	
7)	Ethylene	1.552	31192444	1848.268	ppm	
8)	Ethane	1.801	31424218	1837.143	ppm	
9)	Propylene	4.129	42124690	1775.341	ppm	m
10)	Propane	4.269	48583085	1946.921	ppm	
11)	Isobutylene	6.136	33832	25613.603	ppm	
12)	Isobutane	6.576f	3845	0.120	ppm	
13)	n-Butane	6.576f	3845	0.120	ppm	

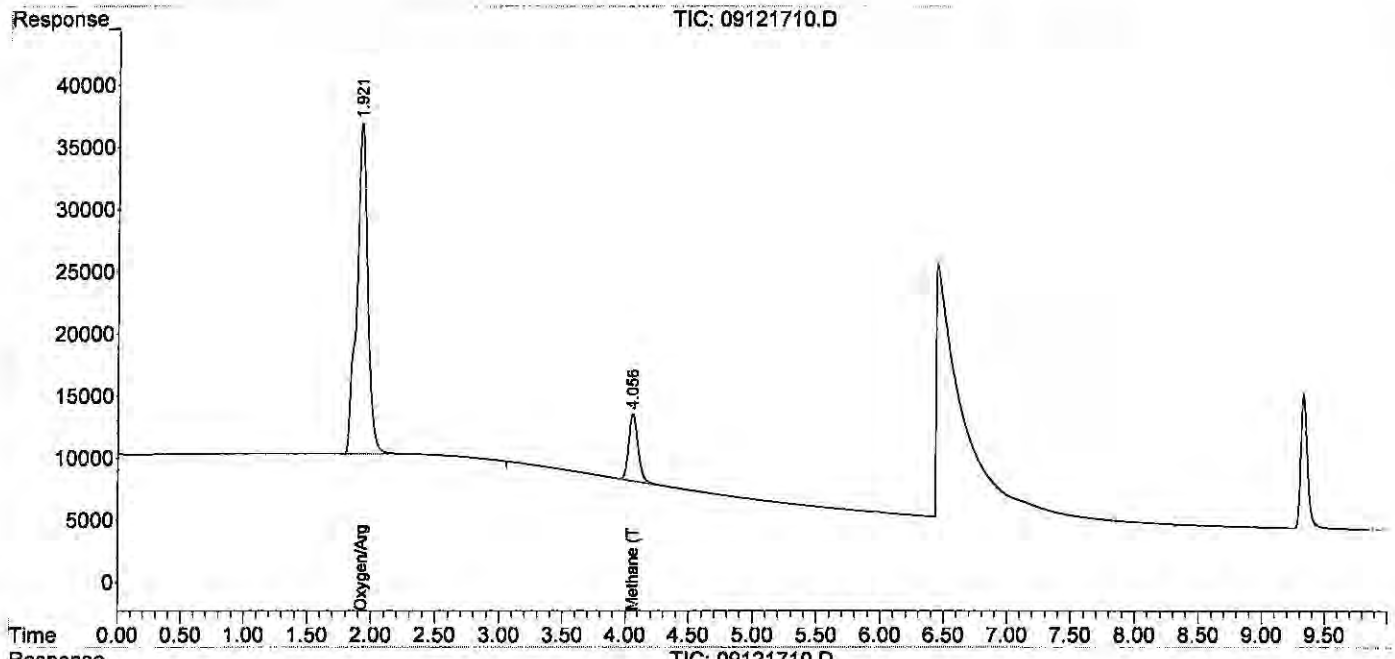
(f)=RT Delta > 1/2 Window (m)=manual int.

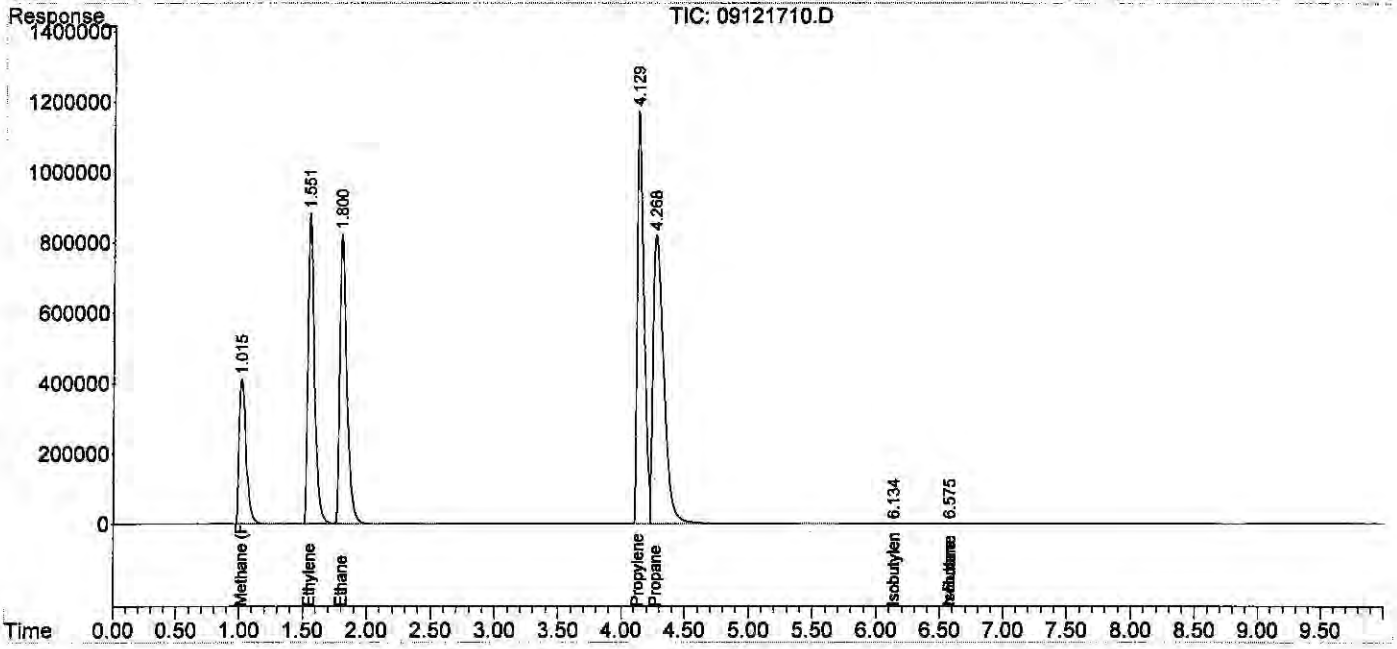
Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121710.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 14:07
Operator : MC
Sample : 2000ppm 1ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:12:33 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:12:25 2017
Response via : Initial Calibration
Integrator: ChemStation

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



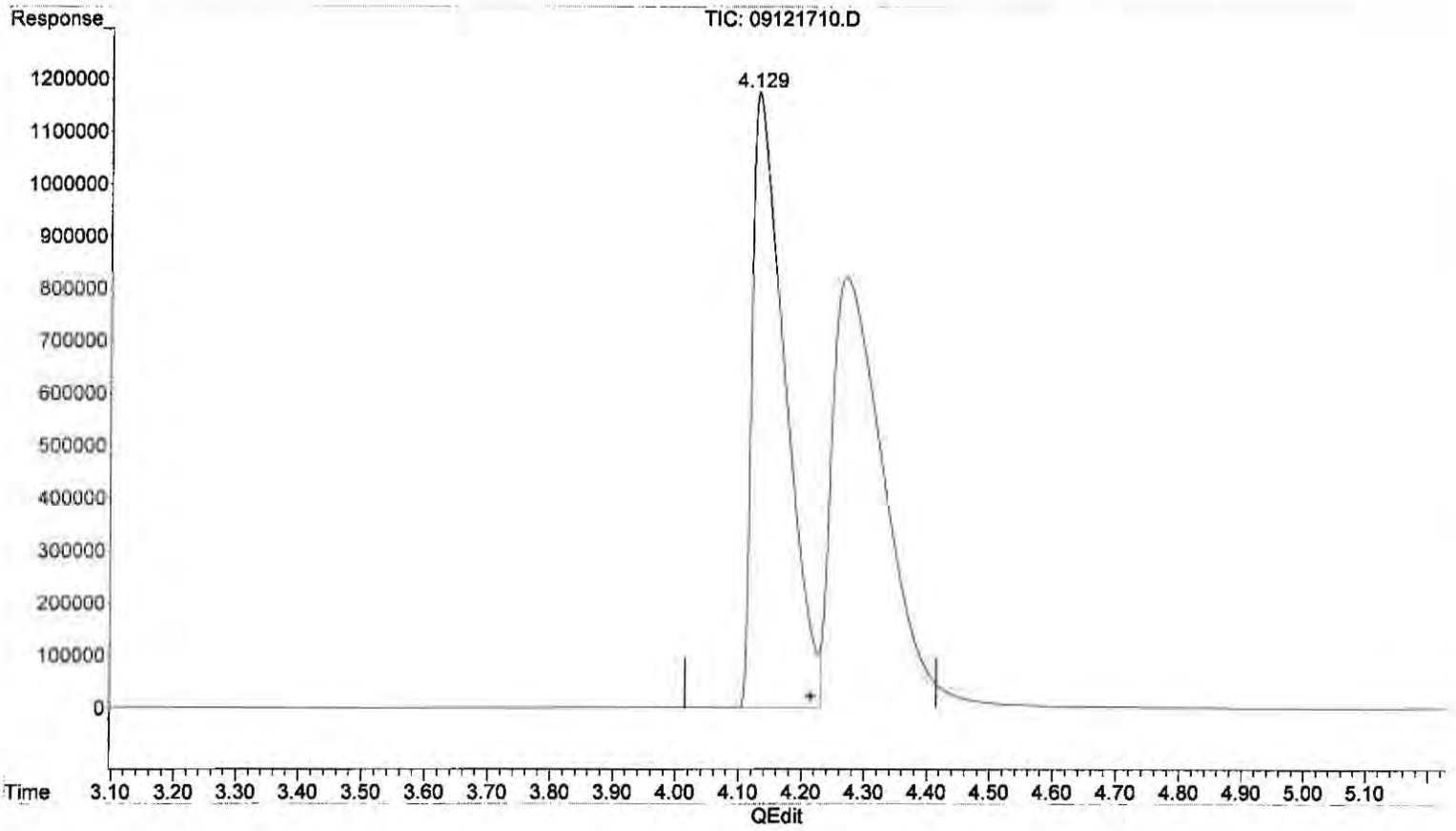


Quantitation Report (Qedit)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121710.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 14:07
Operator : MC
Sample : 2000ppm 1ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:12:33 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:12:25 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(9) Propylene

4.129min 1775.341 ppm m

response 42124690

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

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

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

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

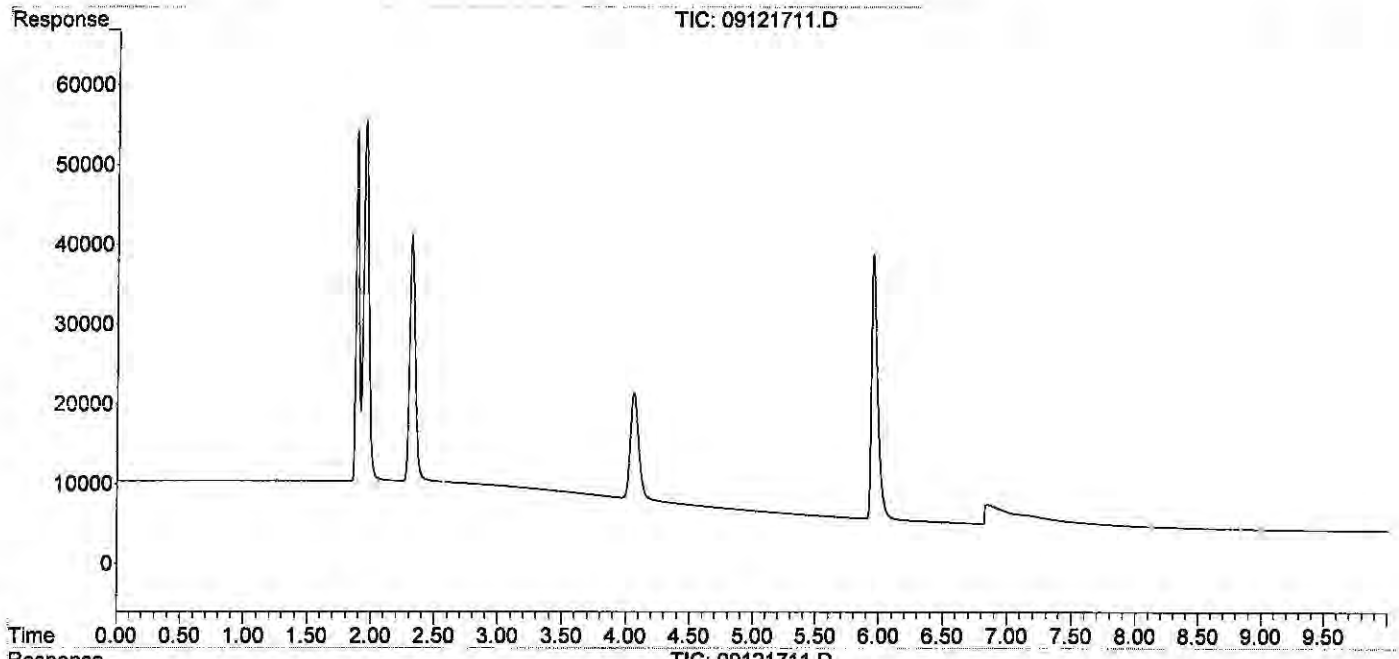
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	0.000	0	N.D.	ppm	d
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	0.000	0	N.D.	ppm	d
6)	Methane (FID)	1.059	35776839	3925.122	ppm	
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

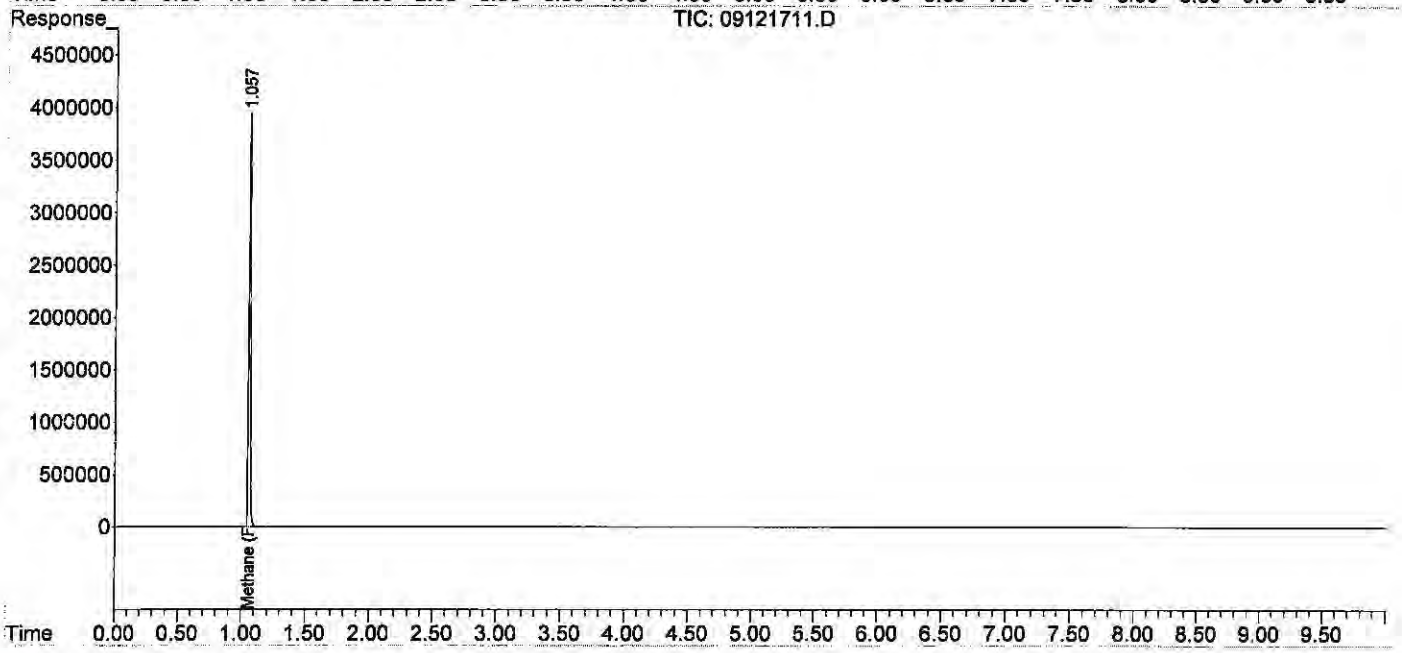
(f)=RT Delta > 1/2 Window (m)=manual int.

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

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

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





Quantitation Report (QT Reviewed)

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

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

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

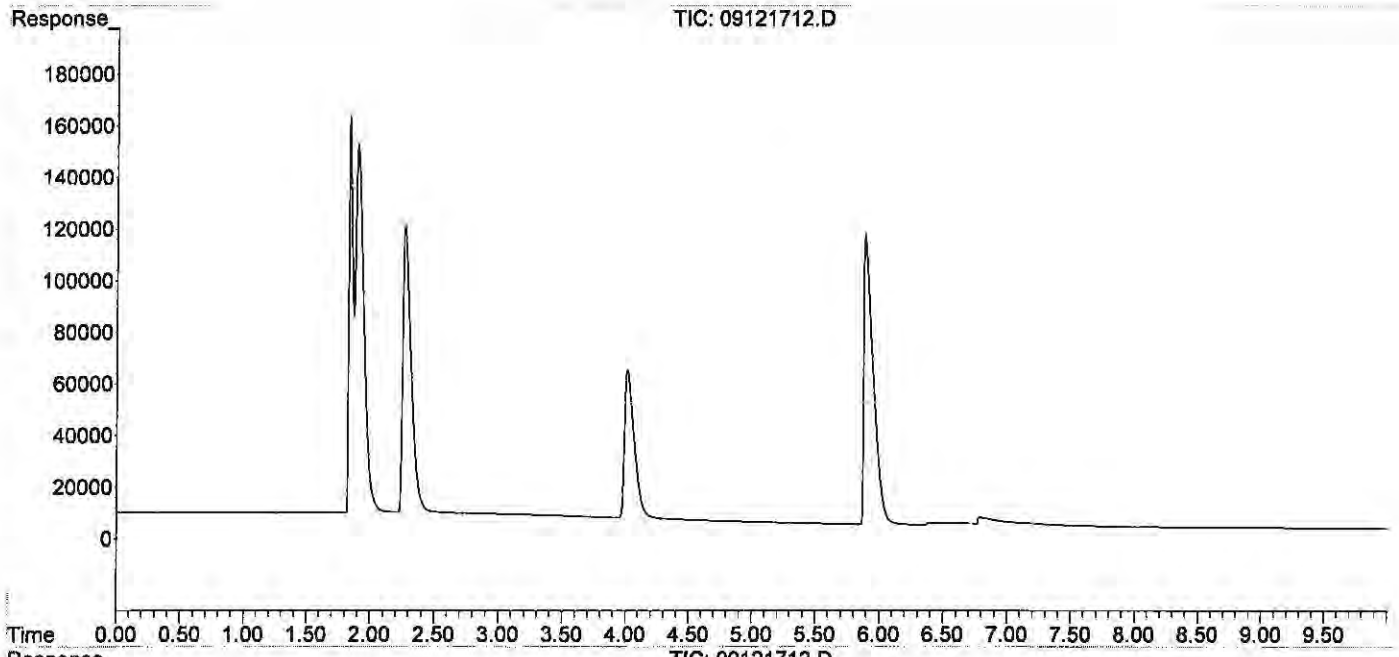
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	1.836	3190788	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	0.000	0	N.D.	ppm	d
6)	Methane (FID)	1.034	169009160	18492.064	ppm	
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000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

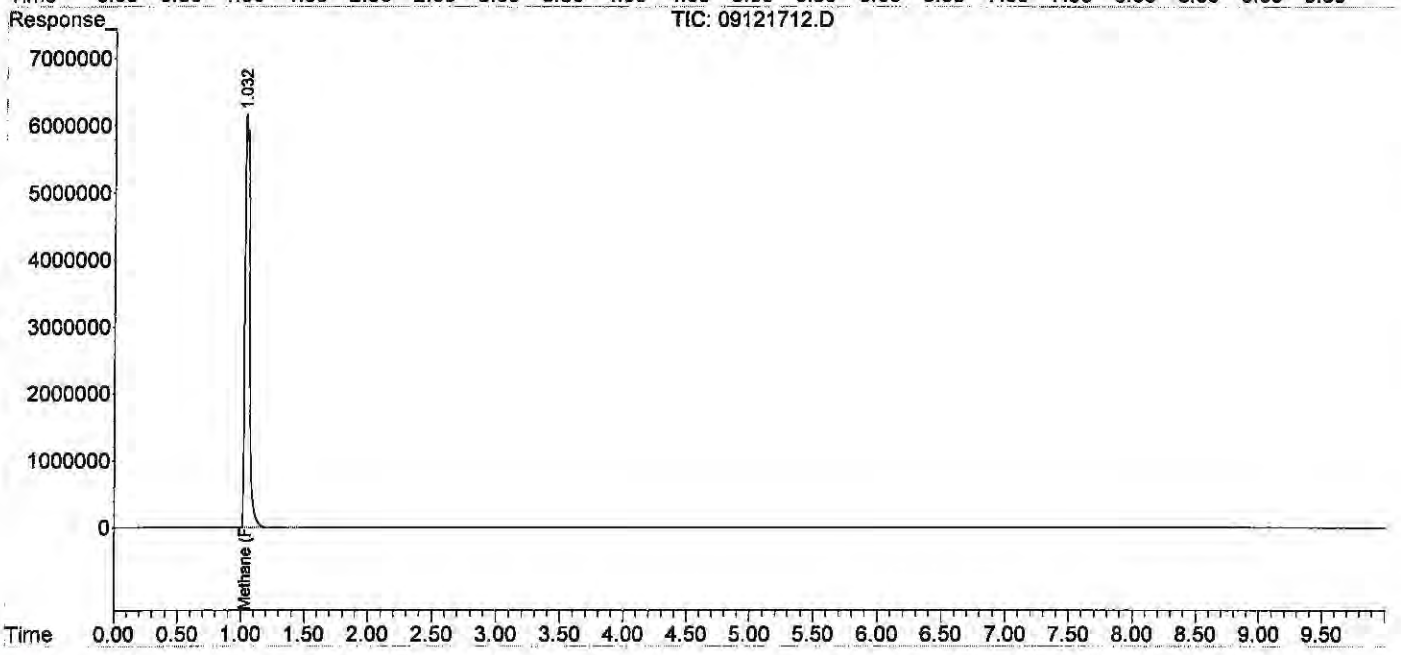
(f)=RT Delta > 1/2 Window (m)=manual int.

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

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

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





Quantitation Report (QT Reviewed)

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

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

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

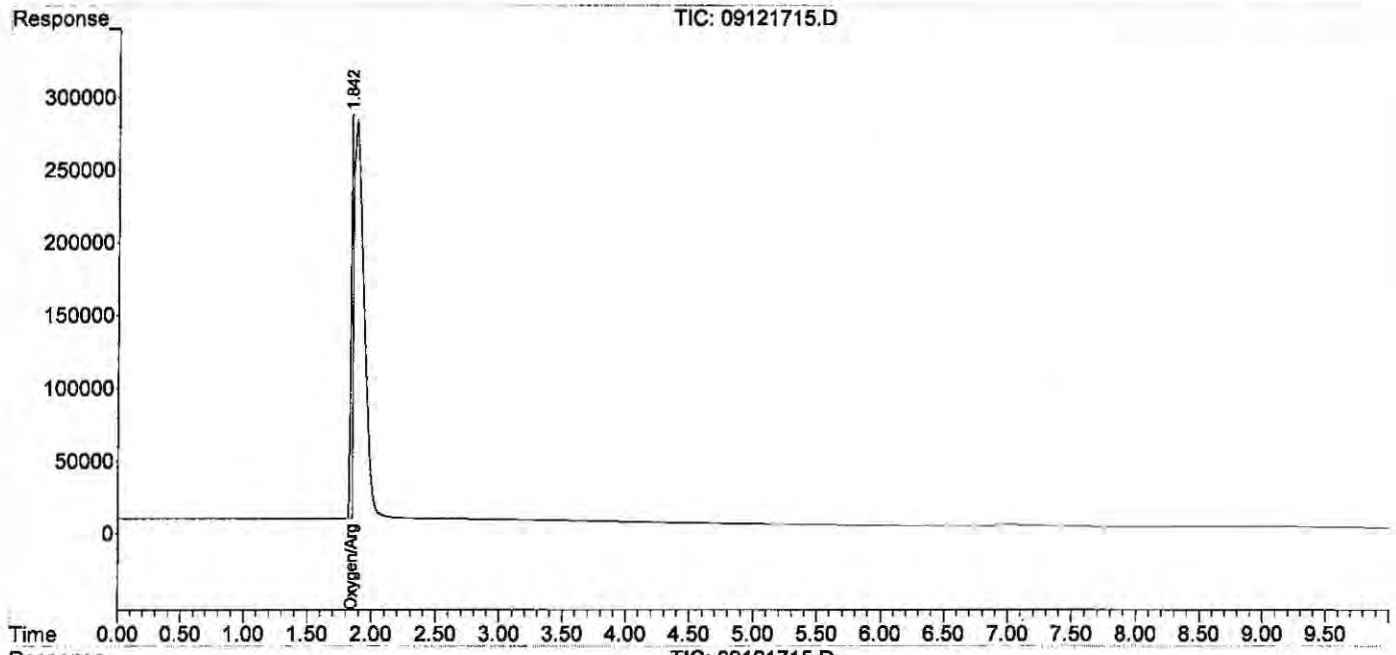
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.843	2922459	3.687	ppm	
2)	Carbon monoxide	1.843	2922459	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	acked 7/5
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	1.063	13748	1.516	ppm	1510 1.50 101.1
7)	Ethylene	1.598	24153	1.443	ppm	1510 1.50 96.2
8)	Ethane	1.850	24488	1.445	ppm	1510 1.50 96.3
9)	Propylene	4.221	36004	1.537	ppm	1510 1.50 102.5
10)	Propane	4.350	37738	1.517	ppm	1511 1.51 100.5
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	6.579f	48019	1.804	ppm	9/14/2
13)	n-Butane	6.579f	48019	1.804	ppm	

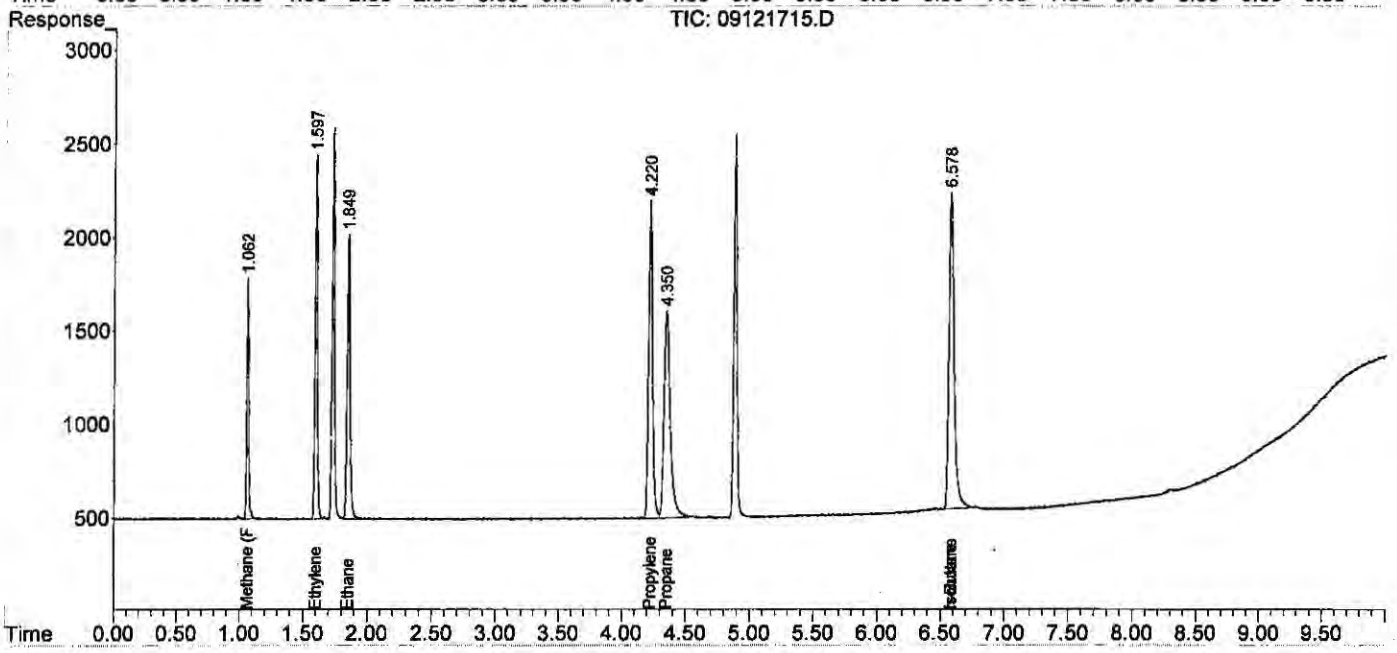
(f)=RT Delta > 1/2 Window (m)=manual int.

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

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

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





Dissolved Gases by RSK175

ALS Environmental

Method : RSK175 Headspace Method for Dissolved Hydrocarbon in Water by FID/TCD
Client : ALS Laboratory Group
Service Request: P2001715
Sample Vol. (ml) : 32.00 ml
Analyst : LD
Date Analysis : 03/30/20
Head Space Vol.(ml) : 8.00 ml
Instrument : GC#10
Detector : FID#10, TCD#10
Gas Constant : 24.05684 (20°C)

HEAD SPACE RESULT (ppm)

Sample ID	Inj. Vol.	Methane	Ethylene	Ethane
STD S32-05221901	0.100	97.704	104.050	103.499
ACTUAL		101.50	100.90	101.40
%Difference		3.7%	3.1%	2.1%
MCS 0.1ml	0.100	0.000	0.000	0.000
RB 0.1ml	0.100	0.000	0.000	0.000
LCS FID 0.1ml	0.100	1.576	1.117	1.285
LCSD FID 0.1ml	0.100	1.537	1.089	1.289
P2001715-001 0.1ml	0.100	445.718	0.000	0.000
P2001715-002 0.1ml	0.100	451.857	0.000	0.000
P2001715-003 0.1ml	0.100	216.481	1.352	0.000
P2001715-004 0.1ml	0.100	40.197	0.510	0.000
P2001715-005 0.1ml	0.100	692.637	0.000	0.000
P2001715-006 0.1ml	0.100	722.441	0.000	0.000
P2001715-007 0.1ml	0.100	1.654	0.000	0.000
P2001715-003 MS 0.1ml	0.100	918.392	5.917	0.935
P2001715-003 MSD 0.1r	0.100	949.076	6.115	0.946
STD S32-05221901		90.962	96.289	95.587
ACTUAL		101.50	100.90	101.40
%Difference		10.4%	4.6%	5.7%

FINAL HEAD SPACE RESULT (ppm)

	Methane	Ethylene	Ethane
WWt.	16.04	28.05	30.07
HENRY'S CONSTANT	3.76E+04	1.02E+04	2.63E+04
RL	1.30	1.00	0.60
MCS 0.1ml	0.000	0.000	0.000
LCS FID 0.1ml	15.760	11.170	12.850
LCSD FID 0.1ml	15.370	10.890	12.890
P2001715-001 0.1ml	4457.180	0.000	0.000
P2001715-002 0.1ml	4518.570	0.000	0.000
P2001715-003 0.1ml	2164.810	13.520	0.000
P2001715-004 0.1ml	401.970	5.100	0.000
P2001715-005 0.1ml	6926.370	0.000	0.000
P2001715-006 0.1ml	7224.410	0.000	0.000
P2001715-007 0.1ml	16.540	0.000	0.000
P2001715-003 MS 0.1ml	9183.920	59.170	9.350
P2001715-003 MSD 0.1ml	9490.760	61.150	9.460
17:51:05	722.44	0.00	0.00

LD
03/30

Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\30\
Data File : 03300101.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Mar-2020, 14:08:34
Operator : LD
Sample : STD S32-05221901
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 30 14:25:13 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

LD
05/30

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

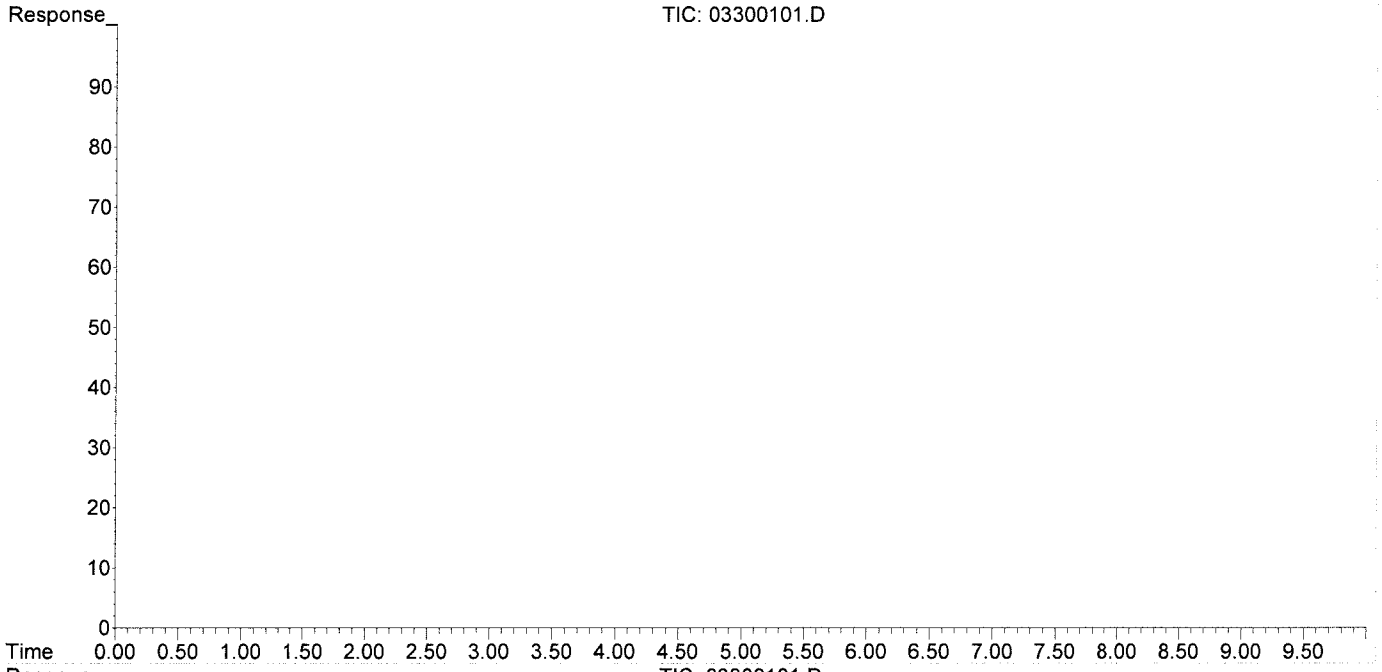
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.103	886235	97.704	ppm
7)	Ethylene	1.674	1741208	104.050	ppm
8)	Ethane	1.939	1754333	103.499	ppm
9)	Propylene	4.318	2570991	109.724	ppm
10)	Propane	4.441	2640982	106.148	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

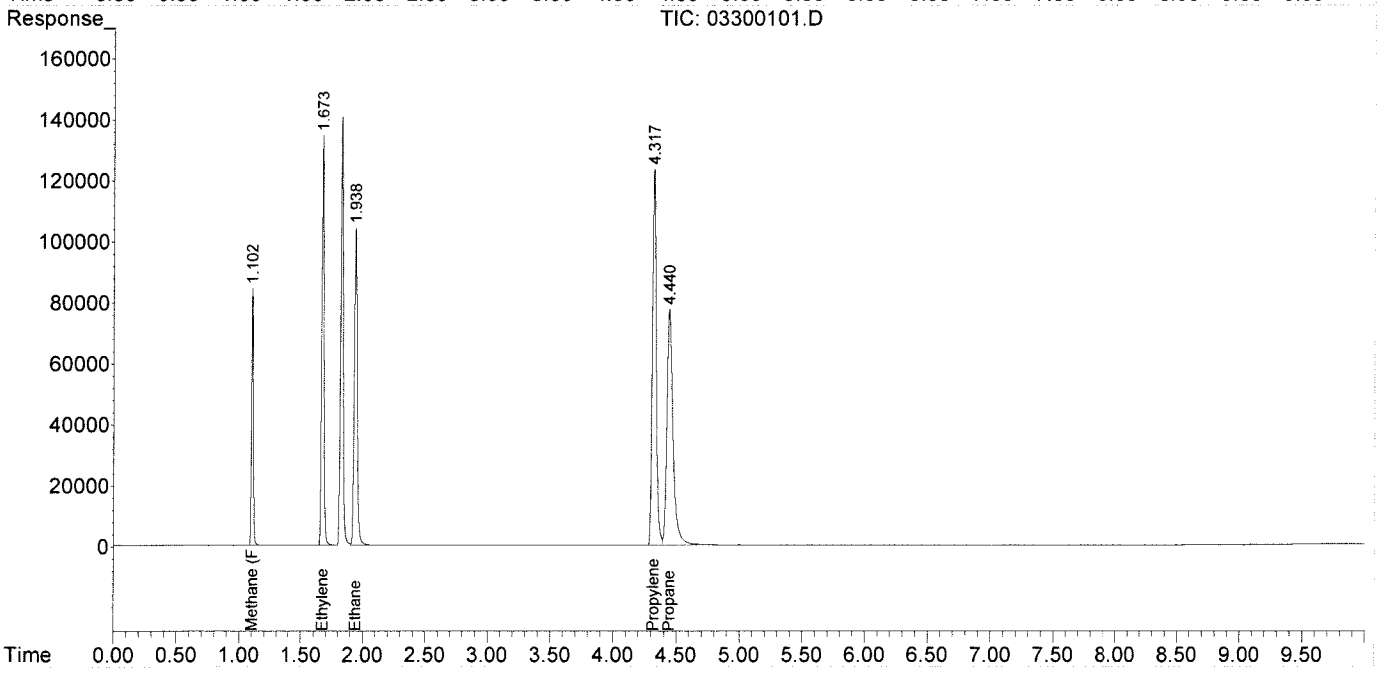
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_03\30\
Data File : 03300101.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Mar-2020, 14:08:34
Operator : LD
Sample : STD S32-05221901
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 30 14:25:13 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_03\30\
Data File : 03300115.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Mar-2020, 18:17:13
Operator : LD
Sample : STD S32-05221901
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 30 18:52:44 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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

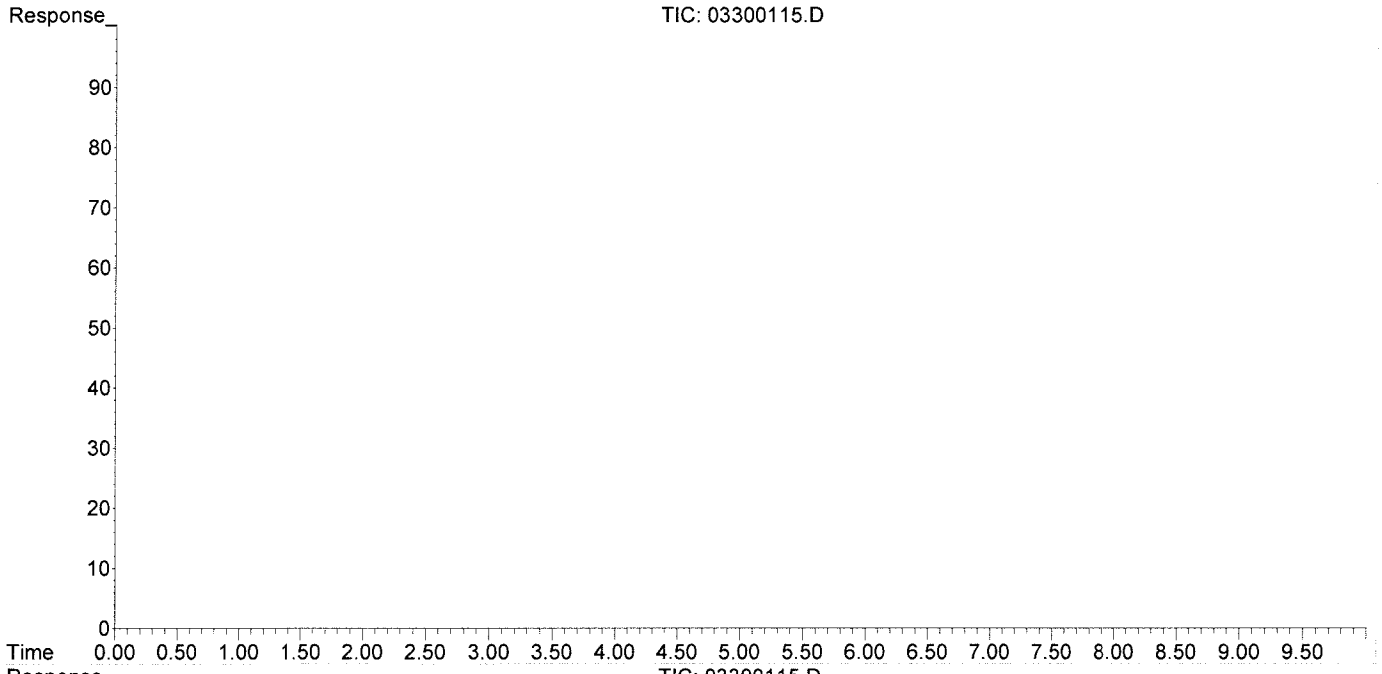
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.108	825083	90.962	ppm
7)	Ethylene	1.675	1611337	96.289	ppm
8)	Ethane	1.940	1620217	95.587	ppm
9)	Propylene	4.324	2333283	99.579	ppm
10)	Propane	4.447	2400300	96.474	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

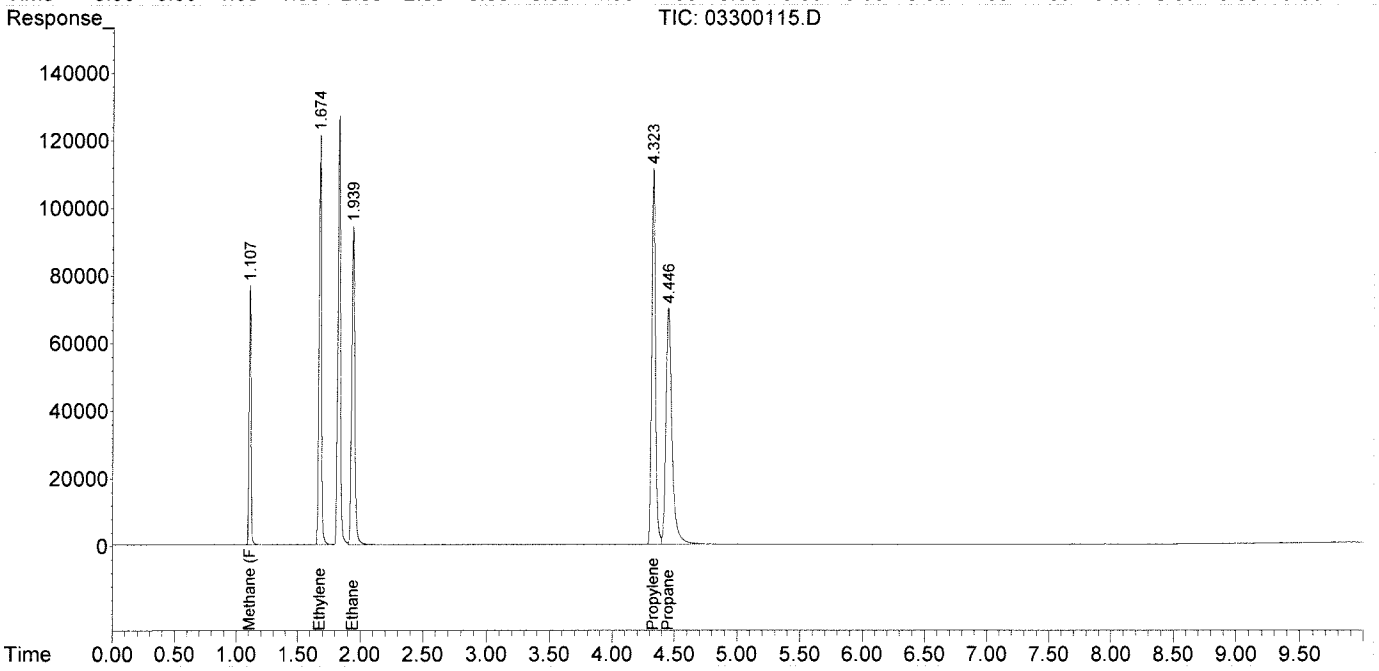
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_03\30\
Data File : 03300115.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Mar-2020, 18:17:13
Operator : LD
Sample : STD S32-05221901
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Mar 30 18:52:44 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Injection Log

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

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

Injection Log

Directory: I:\GC10\DATA\RSK_FID\2020_03\30\

	Date/Time	File Name	Sample ID	Misc Info	Operator	Acquisition Method	Comments
1	30-Mar-20, 14:08:34	03300101.D	STD S32-05221901		LD	RSKBOTH.M	PASS
2	30-Mar-20, 14:27:03	03300102.D	RB 0.1ml		LD	RSKBOTH.M	PASS
3	30-Mar-20, 15:14:49	03300103.D	MCS 0.1ml		LD	RSKBOTH.M	PASS
4	30-Mar-20, 15:31:42	03300104.D	LCS FID 0.1ml		LD	RSKBOTH.M	PASS
5	30-Mar-20, 15:48:34	03300105.D	LCSD FID 0.1ml		LD	RSKBOTH.M	PASS
6	30-Mar-20, 16:01:40	03300106.D	P2001715-001 0.1ml		LD	RSKBOTH.M	
7	30-Mar-20, 16:17:41	03300107.D	P2001715-002 0.1ml		LD	RSKBOTH.M	
8	30-Mar-20, 16:31:12	03300108.D	P2001715-003 0.1ml		LD	RSKBOTH.M	
9	30-Mar-20, 16:51:09	03300109.D	P2001715-003 MS 0.1ml		LD	RSKBOTH.M	
10	30-Mar-20, 17:04:38	03300110.D	P2001715-003 MSD 0.1ml		LD	RSKBOTH.M	
11	30-Mar-20, 17:19:07	03300111.D	P2001715-004 0.1ml		LD	RSKBOTH.M	
12	30-Mar-20, 17:37:14	03300112.D	P2001715-005 0.1ml		LD	RSKBOTH.M	
13	30-Mar-20, 17:51:05	03300113.D	P2001715-006 0.1ml		LD	RSKBOTH.M	
14	30-Mar-20, 18:04:06	03300114.D	P2001715-007 0.1ml		LD	RSKBOTH.M	
15	30-Mar-20, 18:17:13	03300115.D	STD S32-05221901		LD	RSKBOTH.M	PASS
16	30-Mar-20, 18:39:06	03300116.D	J2001621-050 0.1ml		LD	RSKBOTH.M	
17	30-Mar-20, 18:53:50	03300117.D	J2001621-051 0.1ml		LD	RSKBOTH.M	
18	30-Mar-20, 19:13:21	03300118.D	J2001621-052 0.1ml		LD	RSKBOTH.M	
19	30-Mar-20, 19:28:00	03300119.D	J2001621-053 0.1ml		LD	RSKBOTH.M	
20	30-Mar-20, 19:43:18	03300120.D	STD S32-05221901		LD	RSKBOTH.M	PASS
21	30-Mar-20, 19:56:30	03300121.D	LOQ 0.05ml		LD	RSKBOTH.M	
22	30-Mar-20, 20:10:25	03300122.D	LOQ 0.05ml		LD	RSKBOTH.M	

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Knoxville, TN 37932
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Fax: (865) 573-8133

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

Phone: 281-575-2279

Fax:

Identifier: 105RC **Date Rec:** 03/25/2020 **Report Date:** 03/30/2020

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

Purchase Order #:

Analysis Requested: CENSUS

Reviewed By:



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MICROBIAL INSIGHTS, INC.

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

CENSUS

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

MI Project Number: **105RC**
Date Received: 03/25/2020

Sample Information

Client Sample ID:		**35AWW11_032420**	**35AWW20_032420**	**LHSMW07_032420**	**35AWW06_032420**	**35AWW23_032420**
Sample Date:		03/24/2020	03/24/2020	03/24/2020	03/24/2020	03/24/2020
Units:		cells/mL	cells/mL	cells/mL	cells/mL	cells/mL
Analyst/Reviewer:		CB	CB	CB	CB	CB
Dechlorinating Bacteria						
Dehalococcoides	*DHC*	**9.40E+02**	**1.30E+04**	**2.28E+03**	**9.60E+00**	**1.36E+02**
tceA Reductase	TCE	<6.00E-01	<5.00E-01	<6.00E-01	<5.00E-01	**2.30E+01**
BAV1 Vinyl Chloride Reductase	BVC	**1.95E+01**	**1.98E+04**	**4.80E+00**	**4.70E+00**	**9.00E-01**
Vinyl Chloride Reductase	VCR	**4.43E+02**	<5.00E-01	**2.27E+03**	<5.00E-01	**4.93E+01**
Dehalobacter spp.	*DHBt*	**4.06E+04**	**9.54E+02**	**1.03E+04**	**1.22E+03**	<5.50E+00

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

MICROBIAL INSIGHTS, INC.

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

CENSUS

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

MI Project Number: **105RC**
Date Received: 03/25/2020

Sample Information

Client Sample ID:	**35AWW19_032420**
Sample Date:	03/24/2020
Units:	cells/mL
Analyst/Reviewer:	CB

Dechlorinating Bacteria

Dehalococcoides	*DHC*	**9.40E+00**
tceA Reductase	TCE	<5.00E-01
BAV1 Vinyl Chloride Reductase	BVC	**1.80E+00**
Vinyl Chloride Reductase	VCR	<5.00E-01
Dehalobacter spp.	*DHBt*	**1.22E+04**

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

Quality Assurance/Quality Control Data

Samples Received **3/25/2020**

Component	Date Prepared	Date Analyzed	Arrival Temperature	Positive Control	Extraction Blank	Negative Control
BVC	03/25/2020	03/30/2020	0 °C	106%	non-detect	non-detect
DHBt	03/25/2020	03/30/2020	0 °C	114%	non-detect	non-detect
DHC	03/25/2020	03/30/2020	0 °C	102%	non-detect	non-detect
TCE	03/25/2020	03/30/2020	0 °C	107%	non-detect	non-detect
VCR	03/25/2020	03/30/2020	0 °C	107%	non-detect	non-detect

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

The MI Database

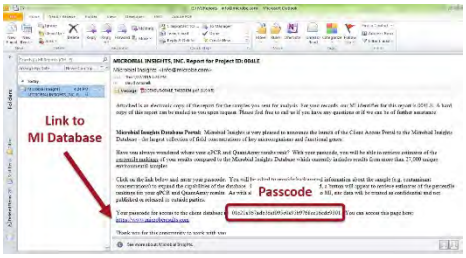
The Microbial Insights Database is the largest collection of field concentrations of key microorganisms and functional genes currently containing qPCR and QuantArray results for more than 40,000 unique groundwater, soil, and sediment samples from all 50 states and 33 countries worldwide.

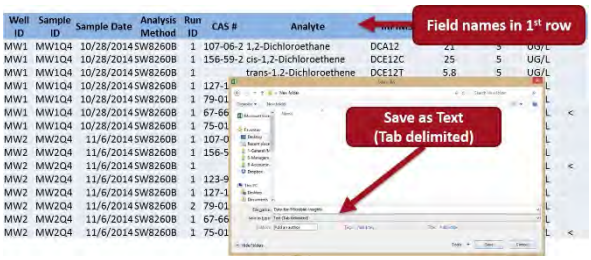
Is that low, medium or high?

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

Retrieving Estimated Percentile Ranks

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





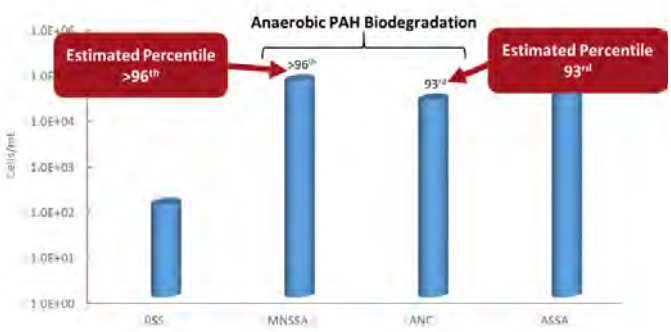
All site specific data will be treated as confidential and uploading is easy.

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

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

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

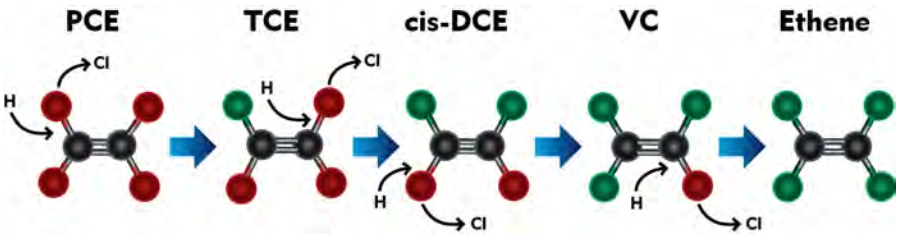
- Not only were ANC and MNSSA genes detected, but these functional genes responsible for anaerobic biodegradation of PAHs were present at concentrations "far better than average" based on the estimated percentile ranks.
- Demonstrating high concentrations of ANC and MNSSA gave an additional line of evidence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



DHC Interpretation

Dehalococcoides 16S rRNA gene (qDHC)

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



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

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

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DHC Interpretation

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

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

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

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DHC Interpretation

Reporting

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

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CENSUS

Client: Company Name
Project: Your Project Name

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

Sample Information

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

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

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

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

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

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DHC Interpretation

Quality Assurance

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

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

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How to Use Estimated Percentile Ranks from the Microbial Insights Database

The MI Database and Client Portal

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

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

Is that low, medium or high?

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

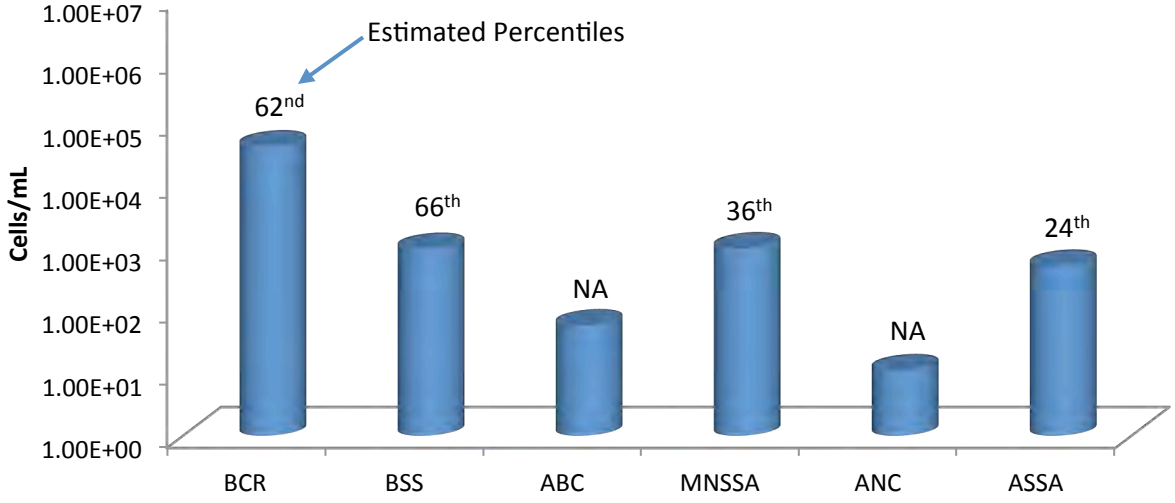
Is that a low, medium, or high concentration? The estimated percentile ranks retrieved from the MI Database answer that question by comparing your qPCR and QuantArray results to those of the literally thousands of other environmental samples submitted to MI for analysis over the last 20+ years.

Using the Estimated Percentile - Interpretation Examples

MNA Assessment – Petroleum Hydrocarbon Site:

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

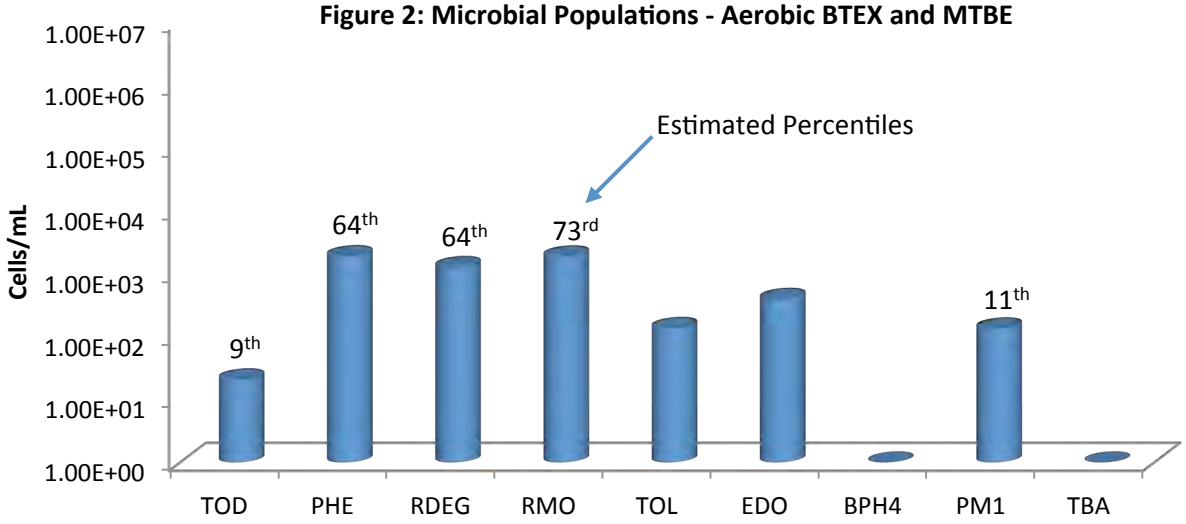
Figure 1: Microbial Populations - Anaerobic BTEX and PAHs



Anaerobic BTEX and PAH Biodegradation (Figure 1):

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

Figure 2: Microbial Populations - Aerobic BTEX and MTBE



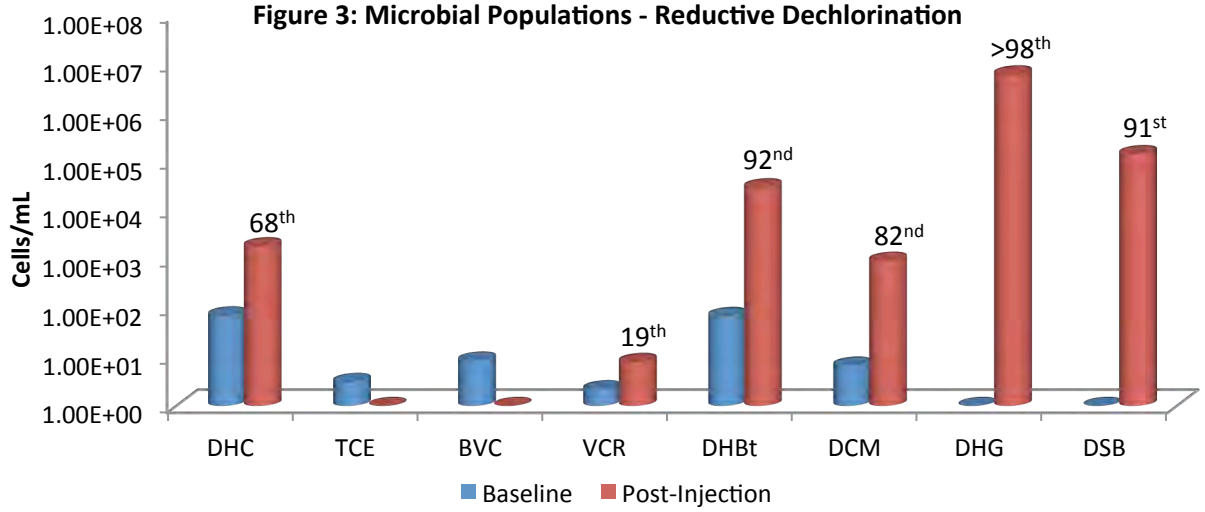
Aerobic BTEX and MTBE Biodegradation (Figure 2):

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

Biostimulation – Chlorinated Solvent Site:

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

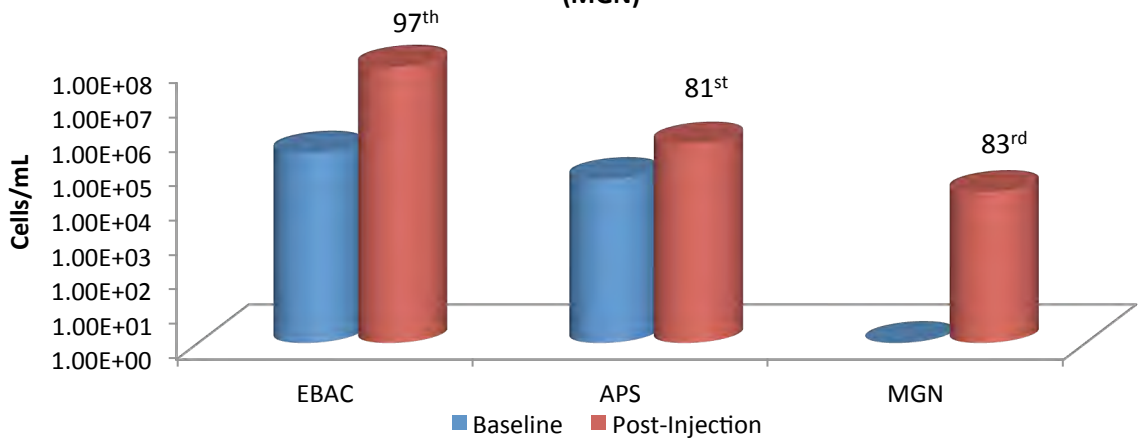
Figure 3: Microbial Populations - Reductive Dechlorination



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

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

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



References

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

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EDD type: ☐ Microbial Insights Standard (default) ☐ All other available EDDs (5% surcharge) Specify EDD Type:

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

Sample Information					Analyses					CENSUS: Please select the target organism/gene																							
MI ID (Laboratory Use Only)	Sample Name	Date Sampled	Time Sampled	Matrix	PLFA	DGGE+3ID	DGGE+5ID	QuantArray Chlor	QuantArray Petro	DHC (Dehalococcoides)	DHC Functional genes (bvc, tce, vcr)	DHBt (Dehalobacter)	DSM (Desulfuromonas)	DSB (Desulfitobacterium)	EBAC (Total)	SRB (Sulfate Reducing Bacteria-APS)	MGN (Methanogens)	MOB (Methanotrophs)	SMMO	DNF (Denitrifiers-nirS and nirK)	AOB (ammonia oxidizing bacteria)	PM1 (MTBE aerobic)	RMO (Toluene Monooxygenase)	RDEG (Toluene Monooxygenase)	PHE (Phenol Hydroxylase)	NAH (Napthalene-aerobic)	BSSA (Toluene/Xylene-Anaerobic)	add. qPCR:	add. qPCR:	RNA (Expression Option)*	Other:	Other:	Other:
105RC1	35AWW11_032420	3/24/20	0745	WG							X	X																					
2	35AWW20_032420	3/24/20	0905	WG							X	X																					
3	LHSMW07_032420	3/24/20	1015	WG							X	X																					
4	35AWW06_032420	3/24/20	1110	WG							X	X																					
5	35AWW23_032420	3/24/20	1205	WG							X	X																					
6	35AWW19_032420	3/24/20	1300	WG							X	X																					

Relinquished by: Scott Deering 3/24/20 1430
Received by: AJ Hussak Date 3/25/20 0945

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Failure to provide sufficient and/or correct information regarding reporting, invoicing & analyses requested information may result in delays for which MI will not be liable.

HS20031084 8260 Raw Data

ALS WO# HS20031084

MSVOA06 -Logbook

Batch: 40066
Date: 03-19-2020
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	03-19-2020 11:10 am	1.00	0.00 mL	0.00 mL	X031901.D	Liquid	Y	N/
	Auto find/ purged									
2	VSTD000.25	ICAL1	03-19-2020 11:34 am	1.00	5.00 mL	0.00 mL	X031902.D	Liquid	Y	N/
3	VSTD000.5	ICAL2	03-19-2020 11:58 am	1.00	5.00 mL	0.00 mL	X031903.D	Liquid	Y	N/
4	VSTD001	ICAL3	03-19-2020 12:46 pm	1.00	5.00 mL	0.00 mL	X031904.D	Liquid	Y	N/
5	VSTD002	ICAL4	03-19-2020 01:10 pm	1.00	5.00 mL	0.00 mL	X031905.D	Liquid	Y	N/
6	VSTD005	ICAL5	03-19-2020 01:34 pm	1.00	5.00 mL	0.00 mL	X031906.D	Liquid	Y	N/
7	VSTD020	ICAL6	03-19-2020 01:58 pm	1.00	5.00 mL	0.00 mL	X031907.D	Liquid	Y	N/
8	VSTD050	ICAL7	03-19-2020 02:22 pm	1.00	5.00 mL	0.00 mL	X031908.D	Liquid	Y	N/
9	VSTD100	ICAL8	03-19-2020 02:46 pm	1.00	5.00 mL	0.00 mL	X031909.D	Liquid	Y	N/
10	VSTD150	ICAL9	03-19-2020 03:10 pm	1.00	5.00 mL	0.00 mL	X031910.D	Liquid	Y	N/
11	VSTD200	ICAL	03-19-2020 03:33 pm	1.00	5.00 mL	0.00 mL	X031911.D	Liquid	Y	N/
12	BLANK	SAMP	03-19-2020 03:58 pm	1.00	5.00 mL	0.00 mL	X031912.D	Liquid	Y	N/
13	BLANK	SAMP	03-19-2020 04:22 pm	1.00	5.00 mL	0.00 mL	X031913.D	Liquid	Y	N/
14	BLANK	SAMP	03-19-2020 04:46 pm	1.00	5.00 mL	0.00 mL	X031914.D	Liquid	Y	N/
15	ICV	ICV	03-19-2020 05:09 pm	1.00	5.00 mL	0.00 mL	X031915.D	Liquid	Y	N/
16	BLANK	SAMP	03-19-2020 05:33 pm	1.00	5.00 mL	0.00 mL	X031916.D	Liquid	Y	N/
17	VLCSW-200319	LCS	03-19-2020 05:57 pm	1.00	5.00 mL	0.00 mL	X031917.D	Liquid	Y	N/
18	VLCSDW-200319	LCSD	03-19-2020 06:21 pm	1.00	5.00 mL	0.00 mL	X031918.D	Liquid	Y	N/
19	BLANK	SAMP	03-19-2020 06:45 pm	1.00	5.00 mL	0.00 mL	X031919.D	Liquid	Y	N/
20	BLANK	SAMP	03-19-2020 07:10 pm	1.00	5.00 mL	0.00 mL	X031920.D	Liquid	Y	N/
21	VBLKW1-200319	MBLK	03-19-2020 07:34 pm	1.00	5.00 mL	0.00 mL	X031921.D	Liquid	Y	N/
22	VBLKW2-200319	MBLK	03-19-2020 07:58 pm	1.00	5.00 mL	0.00 mL	X031922.D	Liquid	Y	N/
23	VBLKW3-200319	MBLK	03-19-2020 08:22 pm	1.00	5.00 mL	0.00 mL	X031923.D	Liquid	Y	N/
24	HS20021070-01	SAMP	03-19-2020 08:46 pm	1.00	5.00 mL	0.00 mL	X031924.D	Liquid	Y	N/
25	HS20021070-02	SAMP	03-19-2020 09:10 pm	1.00	5.00 mL	0.00 mL	X031925.D	Liquid	Y	N/
26	HS20021070-03	SAMP	03-19-2020 09:33 pm	1.00	5.00 mL	0.00 mL	X031926.D	Liquid	Y	N/
27	BFB	TUNE	03-19-2020 09:57 pm	1.00	0.00 mL	0.00 mL	Y031901.D	Liquid	Y	N/
	Auto find/ purged									
28	CCV	CCV	03-19-2020 10:21 pm	1.00	5.00 mL	0.00 mL	Y031902a.D	Liquid	Y	N/
29	CCV	CCV	03-19-2020 10:45 pm	1.00	5.00 mL	0.00 mL	Y031903.D	Liquid	Y	N/
30	CCB	SAMP	03-19-2020 11:09 pm	1.00	5.00 mL	0.00 mL	Y031904.D	Liquid	Y	N/
31	VLCSW-200319	LCS	03-19-2020 11:33 pm	1.00	5.00 mL	0.00 mL	Y031905.D	Liquid	Y	N/
32	BLANK	SAMP	03-19-2020 11:57 pm	1.00	5.00 mL	0.00 mL	Y031906.D	Liquid	Y	N/
33	VBLKW1-200319	MBLK	03-20-2020 12:21 am	1.00	5.00 mL	0.00 mL	Y031907.D	Liquid	Y	N/
34	HS20030474-07	SAMP	03-20-2020 12:45 am	1.00	5.00 mL	0.00 mL	Y031908.D	Liquid	Y	N/
35	HS20030498-08	SAMP	03-20-2020 01:09 am	1.00	5.00 mL	0.00 mL	Y031909.D	Liquid	Y	N/
36	HS20030838-02	SAMP	03-20-2020 01:34 am	1.00	5.00 mL	0.00 mL	Y031910.D	Liquid	Y	N/
37	HS20030838-01	SAMP	03-20-2020 01:58 am	1.00	5.00 mL	0.00 mL	Y031911.D	Liquid	Y	N/
38	HS20030474-04	SAMP	03-20-2020 02:22 am	1.00	5.00 mL	0.00 mL	Y031912.D	Liquid	Y	N/
39	HS20030474-05	SAMP	03-20-2020 02:46 am	1.00	5.00 mL	0.00 mL	Y031913.D	Liquid	Y	N/
40	HS20030498-03	SAMP	03-20-2020 03:10 am	1.00	5.00 mL	0.00 mL	Y031914.D	Liquid	Y	N/

MSVOA06 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
41	HS20030498-03MS	MS	03-20-2020 03:34 am	1.00	5.00 mL	0.00 mL	Y031915.D	Liquid	Y	NA
42	HS20030498-03MSD	MSD	03-20-2020 03:58 am	1.00	5.00 mL	0.00 mL	Y031916.D	Liquid	Y	NA
43	HS20030498-03	SAMP	03-20-2020 04:22 am	25.00	5.00 mL	0.00 mL	Y031917.D	Liquid	Y	NA
44	HS20030474-03	SAMP	03-20-2020 04:46 am	1.00	5.00 mL	0.00 mL	Y031918.D	Liquid	Y	NA
45	HS20030474-03	SAMP	03-20-2020 05:10 am	10.00	5.00 mL	0.00 mL	Y031919.D	Liquid	Y	NA
46	HS20030474-06	SAMP	03-20-2020 05:34 am	1.00	5.00 mL	0.00 mL	Y031920.D	Liquid	Y	NA
47	HS20030474-06	SAMP	03-20-2020 05:58 am	25.00	5.00 mL	0.00 mL	Y031921.D	Liquid	Y	NA
48	HS20030498-01	SAMP	03-20-2020 06:22 am	5.00	5.00 mL	0.00 mL	Y031922.D	Liquid	Y	NA
49	HS20030498-01	SAMP	03-20-2020 06:46 am	25.00	5.00 mL	0.00 mL	Y031923.D	Liquid	Y	NA
50	HS20030498-02	SAMP	03-20-2020 07:10 am	5.00	5.00 mL	0.00 mL	Y031924.D	Liquid	Y	NA
51	HS20030498-02	SAMP	03-20-2020 07:34 am	50.00	5.00 mL	0.00 mL	Y031925.D	Liquid	Y	NA
52	HS20030474-01	SAMP	03-20-2020 07:58 am	10.00	5.00 mL	0.00 mL	Y031926.D	Liquid	Y	NA
53	HS20030474-01	SAMP	03-20-2020 08:23 am	100.0(	5.00 mL	0.00 mL	Y031927.D	Liquid	Y	NA
54	HS20030474-02	SAMP	03-20-2020 08:47 am	25.00	5.00 mL	0.00 mL	Y031928.D	Liquid	Y	NA
55	HS20030474-02	SAMP	03-20-2020 09:11 am	250.0(	5.00 mL	0.00 mL	Y031929.D	Liquid	Y	NA
56	CCV-END	CCV	03-20-2020 09:35 am	1.00	5.00 mL	0.00 mL	Y031930.D	Liquid	Y	NA

Chemical	Value
SURR SPK ID	31106-16-03
IS ID	31106-16-04
LCS/MS ID	31105-08-01
CAL STD ID	31106-20-01/02
BFB ID	31106-16-03
pH Paper	634-64-11

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS20031084

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
Dichlorodifluoromethane	50.00	47.80	96	80-120
Chloromethane	50.00	47.95	96	80-120
Vinyl Chloride	50.00	47.84	96	80-120
Bromomethane	50.00	56.02	112	80-120
Chloroethane	50.00	49.70	99	80-120
Trichlorofluoromethane	50.00	51.46	103	80-120
Acrolein	100.00	95.63	96	80-120
Acetone	100.00	111.42	111	80-120
1,1-Dichloroethene	50.00	49.14	98	80-120
Iodomethane	100.00	97.24	97	80-120
Acrylonitrile	100.00	100.14	100	80-120
Methylene Chloride	50.00	51.71	103	80-120
Methyl tert-butyl ether	50.00	48.98	98	80-120
Carbon Disulfide	100.00	101.89	102	80-120
trans-1,2-Dichloroethen	50.00	50.69	101	80-120
Vinyl Acetate	100.00	104.72	105	80-120
1,1-Dichloroethane	50.00	51.04	102	80-120
2-Butanone	100.00	106.43	106	80-120
2,2-Dichloropropane	50.00	52.20	104	80-120
cis-1,2-Dichloroethene	50.00	49.99	100	80-120
Chloroform	50.00	49.48	99	80-120
Bromochloromethane	50.00	49.43	99	80-120
1,1,1-Trichloroethane	50.00	50.79	102	80-120
1,1-Dichloropropene	50.00	48.21	96	80-120
1,2-Dichloroethane	50.00	51.76	104	80-120
Carbon Tetrachloride	50.00	47.80	96	80-120
Benzene	50.00	49.74	99	80-120
Trichloroethene	50.00	50.47	101	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.: HS20031084

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
Bromodichloromethane	50.00	49.67	99	80-120
2-Chloroethylvinyl ethe	100.00	106.99	107	80-120
1,2-Dichloropropane	50.00	49.37	99	80-120
Dibromomethane	50.00	50.57	101	80-120
4-Methyl-2-Pentanone	100.00	102.03	102	80-120
cis-1,3-Dichloropropene	50.00	51.07	102	80-120
Toluene	50.00	49.68	99	80-120
trans-1,3-Dichloroprope	50.00	52.11	104	80-120
2-Hexanone	100.00	103.01	103	80-120
1,1,2-Trichloroethane	50.00	49.65	99	80-120
1,3-Dichloropropane	50.00	49.69	99	80-120
Dibromochloromethane	50.00	50.41	101	80-120
Tetrachloroethene	50.00	49.80	100	80-120
1,2-Dibromoethane	50.00	49.62	99	80-120
Chlorobenzene	50.00	49.80	100	80-120
1,1,1,2-Tetrachloroetha	50.00	49.89	100	80-120
Ethylbenzene	50.00	50.58	101	80-120
m,p-Xylenes	100.00	102.04	102	80-120
o-Xylene	50.00	50.69	101	80-120
Styrene	50.00	51.02	102	80-120
Bromoform	50.00	51.96	104	80-120
Isopropylbenzene	50.00	50.93	102	80-120
1,1,2,2-Tetrachloroetha	50.00	48.52	97	80-120
1,2,3-Trichloropropane	50.00	50.62	101	80-120
n-Propylbenzene	50.00	51.27	102	80-120
Bromobenzene	50.00	49.83	100	80-120
1,3,5-Trimethylbenzene	50.00	50.48	101	80-120
2-Chlorotoluene	50.00	49.86	100	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.: HS20031084

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
4-Chlorotoluene	50.00	50.32	101	80-120
tert-Butylbenzene	50.00	49.37	99	80-120
1,2,4-Trimethylbenzene	50.00	51.71	103	80-120
sec-Butylbenzene	50.00	50.63	101	80-120
p-Isopropyltoluene	50.00	51.73	103	80-120
1,3-Dichlorobenzene	50.00	51.18	102	80-120
1,4-Dichlorobenzene	50.00	48.99	98	80-120
n-Butylbenzene	50.00	52.63	105	80-120
1,2-Dichlorobenzene	50.00	51.45	103	80-120
1,2-Dibromo-3-Chloropro	50.00	50.81	102	80-120
1,2,4-Trichlorobenzene	50.00	51.33	103	80-120
Hexachlorobutadiene	50.00	50.08	100	80-120
Naphthalene	50.00	50.64	101	80-120
1,2,3-Trichlorobenzene	50.00	52.57	105	80-120
1-Chlorohexane	50.00	50.18	100	80-120
1,4-Dioxane	1000.00	1063.69	106	80-120
n-Hexane	50.00	53.69	107	80-120
Cyclohexane	50.00	52.43	105	80-120
Freon TF	50.00	52.46	105	80-120
Methylcyclohexane	50.00	50.64	101	80-120
Methyl Acetate	50.00	53.58	107	80-120
Tert-Butyl alcohol	1000.00	1078.77	108	80-120
Dibromofluoromethane	50.00	52.34	105	80-120
1,2-Dichloroethane-d4	50.00	52.45	105	80-120
Toluene-d8	50.00	49.94	100	80-120
4-Bromofluorobenzene	50.00	50.83	102	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
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS20031084

Lab File ID: X031901 DFTPP Injection Date: 03/19/20

Instrument ID: VOA6 DFTPP Injection Time: 1110

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.4
75	30.0 - 60.0% of mass 95	46.8
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	79.4
175	5.0 - 9.0% of mass 174	6.2 (7.8)1
176	95.0 - 101.0% of mass 174	77.1 (97.2)1
177	5.0 - 9.0% of mass 176	4.8 (6.3)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD000.25	VSTD000.25	X031902	03/19/20	1134
02	VSTD000.5	VSTD000.5	X031903	03/19/20	1158
03	VSTD001	VSTD001	X031904	03/19/20	1246
04	VSTD002	VSTD002	X031905	03/19/20	1310
05	VSTD005	VSTD005	X031906	03/19/20	1334
06	VSTD020	VSTD020	X031907	03/19/20	1358
07	VSTD050	VSTD050	X031908	03/19/20	1422
08	VSTD100	VSTD100	X031909	03/19/20	1446
09	VSTD150	VSTD150	X031910	03/19/20	1510
10	VSTD200	VSTD200	X031911	03/19/20	1533
11	ICV	ICV	X031915	03/19/20	1709
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM V VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS20031084

Instrument ID: VOA6 Calibration Date(s): 03/19/20 03/19/20

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

LAB FILE ID: RF0.25: X031902 RF0.5: X031903 RF1: X031904
RF2: X031905 RF5: X031906 RF20: X031907

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
Dichlorodifluoromethane		1124	2862	6239	15743	63872
Chloromethane		2775	5203	10714	28777	101480
Vinyl Chloride		0.886	0.813	0.712	0.728	0.737
Bromomethane		1517	2753	5011	12906	42412
Chloroethane		1295	2888	5355	14009	46166
Trichlorofluoromethane		0.668	0.699	0.717	0.746	0.760
Acrolein		441	931	1381	2842	10501
Acetone		14691	16305	18578	24801	55534
1,1-Dichloroethene		0.484	0.400	0.446	0.430	0.416
Iodomethane		2102	4535	9766	30659	135035
Acrylonitrile		0.378	0.329	0.309	0.308	0.333
Methylene Chloride		3149	5960	9972	22460	70573
Methyl tert-butyl ether		1.766	1.610	1.612	1.574	1.568
Carbon Disulfide		1.332	1.384	1.321	1.471	1.421
trans-1,2-Dichloroethene		0.486	0.494	0.479	0.543	0.509
Vinyl Acetate		1.860	1.956	1.988	2.203	2.139
1,1-Dichloroethane		0.944	1.099	1.059	1.250	1.181
2-Butanone		2790	5607	8438	20120	73828
2,2-Dichloropropane		0.744	0.742	0.756	0.884	0.816
cis-1,2-Dichloroethene		0.482	0.574	0.608	0.642	0.582
Chloroform		0.880	0.991	0.942	0.998	0.920
Bromochloromethane		0.317	0.303	0.318	0.328	0.309
1,1,1-Trichloroethane		0.598	0.795	0.785	0.833	0.807
1,1-Dichloropropene		0.537	0.497	0.444	0.493	0.434
1,2-Dichloroethane		0.487	0.510	0.514	0.548	0.517
Carbon Tetrachloride		0.492	0.531	0.469	0.489	0.432
Benzene		1.257	1.373	1.260	1.422	1.284
Trichloroethene		0.291	0.342	0.344	0.368	0.337
Bromodichloromethane		0.461	0.466	0.442	0.492	0.443
2-Chloroethylvinyl ether		0.070	0.076	0.091	0.098	0.090
1,2-Dichloropropane		0.403	0.422	0.424	0.472	0.413
Dibromomethane		0.181	0.232	0.217	0.232	0.220
4-Methyl-2-Pentanone		0.500	0.525	0.507	0.525	0.506
cis-1,3-Dichloropropene		0.545	0.558	0.524	0.583	0.565
Toluene		1.463	1.510	1.489	1.673	1.533
trans-1,3-Dichloropropene		0.407	0.503	0.446	0.540	0.504
2-Hexanone		0.296	0.322	0.366	0.349	0.343
1,1,2-Trichloroethane		0.296	0.308	0.293	0.307	0.281
1,3-Dichloropropane		0.560	0.633	0.617	0.655	0.589
Dibromochloromethane		0.340	0.409	0.387	0.416	0.374
Tetrachloroethene		0.266	0.331	0.296	0.338	0.311
1,2-Dibromoethane		0.343	0.358	0.356	0.394	0.360
Chlorobenzene		0.868	1.032	0.997	1.084	0.983
1,1,1,2-Tetrachloroethane		0.346	0.367	0.358	0.405	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.: HS2003108

Instrument ID: VOA6 Calibration Date(s): 03/19/20 03/19/20

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

LAB FILE ID: RF0.25: X031902 RF0.5: X031903 RF1: X031904
RF2: X031905 RF5: X031906 RF20: X031907

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
Ethylbenzene		0.440	0.558	0.495	0.564	0.531
m,p-Xylenes		0.494	0.652	0.619	0.683	0.640
o-Xylene		0.515	0.612	0.592	0.697	0.619
Styrene		0.986	1.032	1.080	1.181	1.084
Bromoform		0.223	0.260	0.258	0.265	0.256
Isopropylbenzene		1.202	1.577	1.533	1.672	1.560
1,1,2,2-Tetrachloroethane		0.904	0.876	0.919	0.840	0.824
1,2,3-Trichloropropane		0.692	0.699	0.782	0.728	0.702
Methacrylonitrile		0.776	0.858	0.651	0.738	0.730
n-Propylbenzene		2.776	3.438	3.544	3.801	3.678
Bromobenzene		0.773	0.893	0.852	0.943	0.909
1,3,5-Trimethylbenzene		2.032	2.697	2.576	2.786	2.624
2-Chlorotoluene		1.877	2.261	2.247	2.320	2.176
4-Chlorotoluene		1.984	2.487	2.606	2.672	2.501
Propionitrile		0.129	0.117	0.116	0.112	0.117
tert-Butylbenzene		1.911	2.264	2.169	2.348	2.220
1,2,4-Trimethylbenzene		2.158	2.540	2.520	2.664	2.692
sec-Butylbenzene		2.544	3.060	2.889	3.072	3.120
p-Isopropyltoluene		2.166	2.529	2.426	2.699	2.727
1,3-Dichlorobenzene		1.241	1.468	1.464	1.544	1.516
1,4-Dichlorobenzene		1.454	1.628	1.537	1.590	1.528
n-Butylbenzene		2.097	2.005	2.159	2.244	2.307
1,2-Dichlorobenzene		1.173	1.319	1.348	1.375	1.368
1,2-Dibromo-3-Chloropropane		86	273	777	1809	6529
1,2,4-Trichlorobenzene		612	1407	2892	8554	34013
Hexachlorobutadiene		0.422	0.313	0.278	0.305	0.296
Naphthalene		833	2100	4891	11877	46336
1,2,3-Trichlorobenzene		177	922	1673	4327	16083
1-Chlorohexane		0.345	0.494	0.428	0.439	0.441
1,4-Dioxane		0.004	0.005	0.006	0.006	0.006
n-Hexane		0.693		0.749	0.832	0.884
1,3-Butadiene		0.590	0.720	0.689	0.734	0.757
Cyclohexane		0.804	0.998	1.024	1.106	1.178
Freon TF		0.273	0.337	0.394	0.410	0.401
Methylcyclohexane		1.226	1.218	1.284	1.266	1.242
Methyl Acetate		0.450	0.523	0.521	0.590	0.556
Tert-Butyl alcohol		0.062	0.067	0.083	0.070	0.069
Isopropyl Alcohol		0.041	0.056	0.056	0.049	0.048
Acetaldehyde				0.060	0.049	0.047
Dibromofluoromethane		1595	3028	5989	17420	61899
1,2-Dichloroethane-d4		2909	4838	8567	20720	80050
Toluene-d8		6812	12359	23746	62955	225397
4-Bromofluorobenzene		3499	8202	12385	22920	85378

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.: HS2003108

Instrument ID: VOA6 Calibration Date(s): 03/19/20 03/19/20

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

LAB FILE ID: RF50: X031908 RF100: X031909 RF150: X031910
RF200: X031911

COMPOUND	RF50	RF100	RF150	RF200
Dichlorodifluoromethane	163717	326339	471885	629109
Chloromethane	249660	504548	731993	988147
Vinyl Chloride	0.708	0.760	0.743	0.769
Bromomethane	99641	203423	287355	370752
Chloroethane	111607	217230	312401	406978
Trichlorofluoromethane	0.749	0.795	0.768	0.792
Acrolein	29869	51935	77253	98725
Acetone	121303	216512	303043	388579
1,1-Dichloroethene	0.399	0.419	0.406	0.413
Iodomethane	367297	730685	1092503	1422582
Acrylonitrile	0.313	0.322	0.302	0.310
Methylene Chloride	162281	310528	437081	572059
Methyl tert-butyl ether	1.485	1.526	1.463	1.500
Carbon Disulfide	1.357	1.446	1.384	1.427
trans-1,2-Dichloroethene	0.469	0.494	0.474	0.486
Vinyl Acetate	2.009	2.076	1.977	2.024
1,1-Dichloroethane	1.091	1.152	1.106	1.138
2-Butanone	184861	359895	497070	654316
2,2-Dichloropropane	0.754	0.788	0.753	0.773
cis-1,2-Dichloroethene	0.544	0.578	0.547	0.567
Chloroform	0.875	0.916	0.887	0.913
Bromochloromethane	0.276	0.284	0.268	0.270
1,1,1-Trichloroethane	0.758	0.808	0.777	0.802
1,1-Dichloropropene	0.442	0.458	0.455	0.470
1,2-Dichloroethane	0.538	0.548	0.536	0.556
Carbon Tetrachloride	0.443	0.463	0.460	0.481
Benzene	1.287	1.339	1.310	1.367
Trichloroethene	0.345	0.364	0.357	0.370
Bromodichloromethane	0.441	0.459	0.458	0.476
2-Chloroethylvinyl ether	0.093	0.098	0.096	0.101
1,2-Dichloropropane	0.415	0.425	0.417	0.436
Dibromomethane	0.220	0.224	0.220	0.229
4-Methyl-2-Pentanone	0.508	0.507	0.516	0.534
cis-1,3-Dichloropropene	0.563	0.578	0.572	0.596
Toluene	1.490	1.504	1.486	1.522
trans-1,3-Dichloropropene	0.511	0.528	0.518	0.538
2-Hexanone	0.343	0.345	0.354	0.366
1,1,2-Trichloroethane	0.276	0.280	0.273	0.277
1,3-Dichloropropane	0.580	0.586	0.580	0.588
Dibromochloromethane	0.386	0.388	0.388	0.399
Tetrachloroethene	0.307	0.318	0.318	0.322
1,2-Dibromoethane	0.355	0.351	0.351	0.357
Chlorobenzene	0.958	0.975	0.972	0.994
1,1,1,2-Tetrachloroethane	0.362	0.368	0.373	0.378

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2003108

Instrument ID: VOA6 Calibration Date(s): 03/19/20 03/19/20

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

LAB FILE ID: RF50: X031908 RF100: X031909 RF150: X031910
RF200: X031911

COMPOUND	RF50	RF100	RF150	RF200
Ethylbenzene	0.518	0.533	0.528	0.540
m,p-Xylenes	0.629	0.639	0.636	0.652
o-Xylene	0.610	0.620	0.617	0.627
Styrene	1.079	1.089	1.074	1.099
Bromoform	0.269	0.269	0.266	0.274
Isopropylbenzene	1.532	1.591	1.588	1.619
1,1,2,2-Tetrachloroethane	0.829	0.815	0.796	0.830
1,2,3-Trichloropropane	0.714	0.717	0.693	0.704
Methacrylonitrile	0.703	0.716	0.685	0.697
n-Propylbenzene	3.624	3.789	3.723	3.838
Bromobenzene	0.897	0.918	0.905	0.929
1,3,5-Trimethylbenzene	2.596	2.684	2.650	2.705
2-Chlorotoluene	2.086	2.207	2.182	2.226
4-Chlorotoluene	2.497	2.580	2.531	2.591
Propionitrile	0.113	0.115	0.110	0.112
tert-Butylbenzene	2.159	2.233	2.178	2.251
1,2,4-Trimethylbenzene	2.622	2.717	2.693	2.775
sec-Butylbenzene	3.030	3.198	3.149	3.243
p-Isopropyltoluene	2.673	2.786	2.740	2.827
1,3-Dichlorobenzene	1.525	1.556	1.521	1.567
1,4-Dichlorobenzene	1.499	1.543	1.510	1.570
n-Butylbenzene	2.317	2.418	2.353	2.433
1,2-Dichlorobenzene	1.368	1.393	1.349	1.386
1,2-Dibromo-3-Chloropropane	17754	33604	47590	66266
1,2,4-Trichlorobenzene	88482	169420	245681	324332
Hexachlorobutadiene	0.311	0.300	0.290	0.295
Naphthalene	122519	241230	357065	492204
1,2,3-Trichlorobenzene	44729	85762	123021	166163
1-Chlorohexane	0.430	0.448	0.439	0.457
1,4-Dioxane	0.006	0.006	0.006	0.006
n-Hexane	0.879	0.930	0.894	0.910
1,3-Butadiene	0.749	0.798	0.770	0.800
Cyclohexane	1.100	1.169	1.124	1.159
Freon TF	0.401	0.421	0.407	0.416
Methylcyclohexane	1.214	1.305	1.288	1.337
Methyl Acetate	0.542	0.578	0.556	0.573
Tert-Butyl alcohol	0.069	0.070	0.066	0.072
Isopropyl Alcohol	0.050	0.050	0.046	0.049
Acetaldehyde	0.051	0.053	0.050	0.050
Dibromofluoromethane	149393	290125	416931	545685
1,2-Dichloroethane-d4	185105	366265	529642	688377
Toluene-d8	537213	1054666	1518049	1981187
4-Bromofluorobenzene	199673	397823	566125	739220

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.: HS2003108

Instrument ID: VOA6 Calibration Date(s): 03/19/20 03/19/20

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

COMPOUND	CURVE	COEFFICENTS A0	COEFFICENTS A1	COEFFICENTS A2	%RSD OR R^2	MAX %RSD OR R^2
Dichlorodifluoromethane	LINR	2.02e-002	1.75478050		0.9992209	0.9900000
Chloromethane	LINR	2.067e-002	1.12392448		0.9986574	0.9900000
Vinyl Chloride	AVRG		0.76175324		7.441	15.000
Bromomethane	LINR	-8.81e-003	2.95165258		0.9993001	0.9900000
Chloroethane	LINR	-6.9e-003	2.70393352		0.9996635	0.9900000
Trichlorofluoromethane	AVRG		0.74364832		5.672	15.000
Acrolein	LINR	-2.41e-002	22.1859121		0.9997328	0.9900000
Acetone	LINR	-0.2687695	5.81630961		0.9996145	0.9900000
1,1-Dichloroethene	AVRG		0.42368132		6.348	15.000
Iodomethane	2ORDR	3.523e-002	1.62749488	-1.89e-002	0.9998719	0.9900000
Acrylonitrile	AVRG		0.32259517		7.177	15.000
Methylene Chloride	LINR	-2.83e-002	1.93261442		0.9993556	0.9900000
Methyl tert-butyl ether	AVRG		1.56717212		5.848	15.000
Carbon Disulfide	AVRG		1.39355342		3.681	15.000
trans-1,2-Dichloroethene	AVRG		0.49269559		4.542	15.000
Vinyl Acetate	AVRG		2.02579393		5.028	15.000
1,1-Dichloroethane	AVRG		1.11344182		7.624	15.000
2-Butanone	LINR	-2.45e-002	3.36188880		0.9990000	0.9900000
2,2-Dichloropropane	AVRG		0.77905342		5.897	15.000
cis-1,2-Dichloroethene	AVRG		0.56940459		7.826	15.000
Chloroform	AVRG		0.92454258		4.869	15.000
Bromochloromethane	AVRG		0.29704850		7.656	15.000
1,1,1-Trichloroethane	AVRG		0.77374272		8.939	15.000
1,1-Dichloropropene	AVRG		0.46992210		7.115	15.000
1,2-Dichloroethane	AVRG		0.52824438		4.254	15.000
Carbon Tetrachloride	AVRG		0.47342914		6.236	15.000
Benzene	AVRG		1.32210076		4.304	15.000
Trichloroethene	AVRG		0.34655559		6.956	15.000
Bromodichloromethane	AVRG		0.45988348		3.675	15.000
2-Chloroethylvinyl ether	AVRG		9.038e-002		11.825	15.000
1,2-Dichloropropane	AVRG		0.42513713		4.632	15.000
Dibromomethane	AVRG		0.21956706		7.042	15.000
4-Methyl-2-Pentanone	AVRG		0.51419012		2.203	15.000
cis-1,3-Dichloropropene	AVRG		0.56488187		3.764	15.000
Toluene	AVRG		1.51897347		4.052	15.000
trans-1,3-Dichloropropene	AVRG		0.49935421		8.902	15.000
2-Hexanone	AVRG		0.34279215		6.362	15.000
1,1,2-Trichloroethane	AVRG		0.28806737		4.628	15.000
1,3-Dichloropropane	AVRG		0.59876655		5.045	15.000
Dibromochloromethane	AVRG		0.38752445		5.645	15.000
Tetrachloroethene	AVRG		0.31204981		6.793	15.000
1,2-Dibromoethane	AVRG		0.35846309		3.952	15.000
Chlorobenzene	AVRG		0.98500217		5.892	15.000
1,1,1,2-Tetrachloroethane	AVRG		0.36889975		4.418	15.000

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2003108

Instrument ID: VOA6 Calibration Date(s): 03/19/20 03/19/20

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
Ethylbenzene	AVRG		0.52300936		7.101	15.000
m,p-Xylenes	AVRG		0.62733071		8.457	15.000
o-Xylene	AVRG		0.61238275		7.642	15.000
Styrene	AVRG		1.07835092		4.821	15.000
Bromoform	AVRG		0.25994793		5.781	15.000
Isopropylbenzene	AVRG		1.54161974		8.718	15.000
1,1,2,2-Tetrachloroethane	AVRG		0.84810485		4.966	15.000
1,2,3-Trichloropropane	AVRG		0.71448618		3.930	15.000
Methacrylonitrile	AVRG		0.72828621		8.238	15.000
n-Propylbenzene	AVRG		3.57909806		9.151	15.000
Bromobenzene	AVRG		0.89102138		5.740	15.000
1,3,5-Trimethylbenzene	AVRG		2.59468373		8.488	15.000
2-Chlorotoluene	AVRG		2.17573638		5.949	15.000
4-Chlorotoluene	AVRG		2.49438366		8.047	15.000
Propionitrile	AVRG		0.11573707		4.912	15.000
tert-Butylbenzene	AVRG		2.19255253		5.496	15.000
1,2,4-Trimethylbenzene	AVRG		2.59781634		7.086	15.000
sec-Butylbenzene	AVRG		3.03410476		6.935	15.000
p-Isopropyltoluene	AVRG		2.61936194		8.070	15.000
1,3-Dichlorobenzene	AVRG		1.48919654		6.689	15.000
1,4-Dichlorobenzene	AVRG		1.53987367		3.345	15.000
n-Butylbenzene	AVRG		2.25919546		6.474	15.000
1,2-Dichlorobenzene	AVRG		1.34223435		5.008	15.000
1,2-Dibromo-3-Chloropropane	LINR	2.099e-002	11.7793755		0.9979048	0.9900000
1,2,4-Trichlorobenzene	LINR	1.269e-002	2.36816541		0.9997537	0.9900000
Hexachlorobutadiene	AVRG		0.31220416		13.618	15.000
Naphthalene	LINR	3.898e-002	1.58223000		0.9978307	0.9900000
1,2,3-Trichlorobenzene	LINR	1.976e-002	4.65121772		0.9991338	0.9900000
1-Chlorohexane	AVRG		0.43579178		9.014	15.000
1,4-Dioxane	AVRG		5.763e-003		13.780	15.000
n-Hexane	AVRG		0.84644636		9.878	15.000
1,3-Butadiene	AVRG		0.73409951		8.818	15.000
Cyclohexane	AVRG		1.07365839		11.050	15.000
Freon TF	AVRG		0.38431026		12.636	15.000
Methylcyclohexane	AVRG		1.26470400		3.369	15.000
Methyl Acetate	AVRG		0.54324621		7.796	15.000
Tert-Butyl alcohol	AVRG		7.001e-002		8.024	15.000
Isopropyl Alcohol	AVRG		4.933e-002		9.266	15.000
Acetaldehyde	AVRG		5.163e-002		7.788	15.000
Dibromofluoromethane	LINR	-2.15e-003	2.01723959		0.9996206	0.9900000
1,2-Dichloroethane-d4	LINR	-3.16e-003	1.59695811		0.9996477	0.9900000
Toluene-d8	LINR	-1.51e-003	0.78192287		0.9999532	0.9900000
4-Bromofluorobenzene	LINR	-9.86e-003	2.09903025		0.9999140	0.9900000

FORM VI VOA

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200319DP\X031901.D

Date : 19-MAR-2020 11:10

Client ID: BFB

Instrument: voa6.i

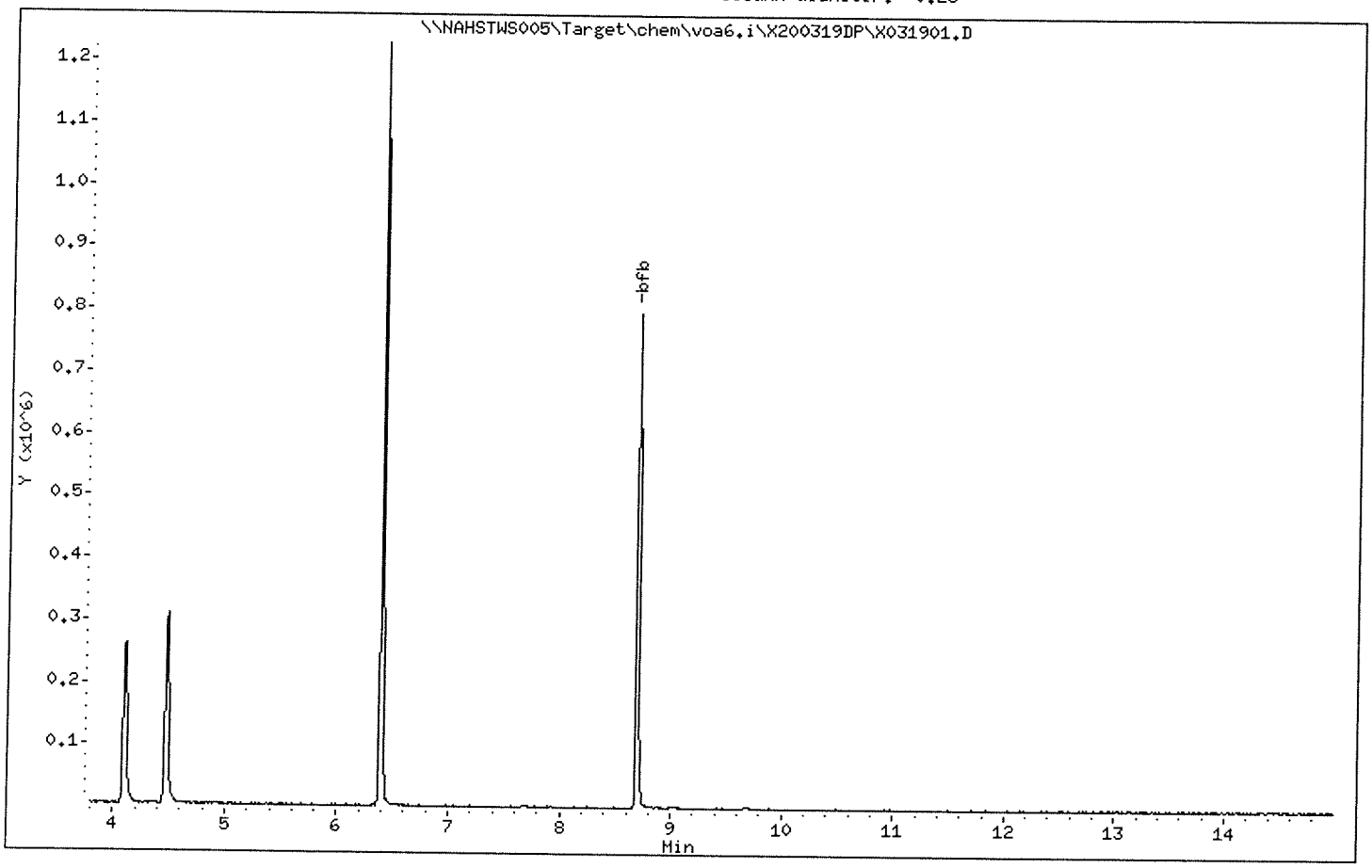
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200319DP\X031901.D

Date : 19-MAR-2020 11:10

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

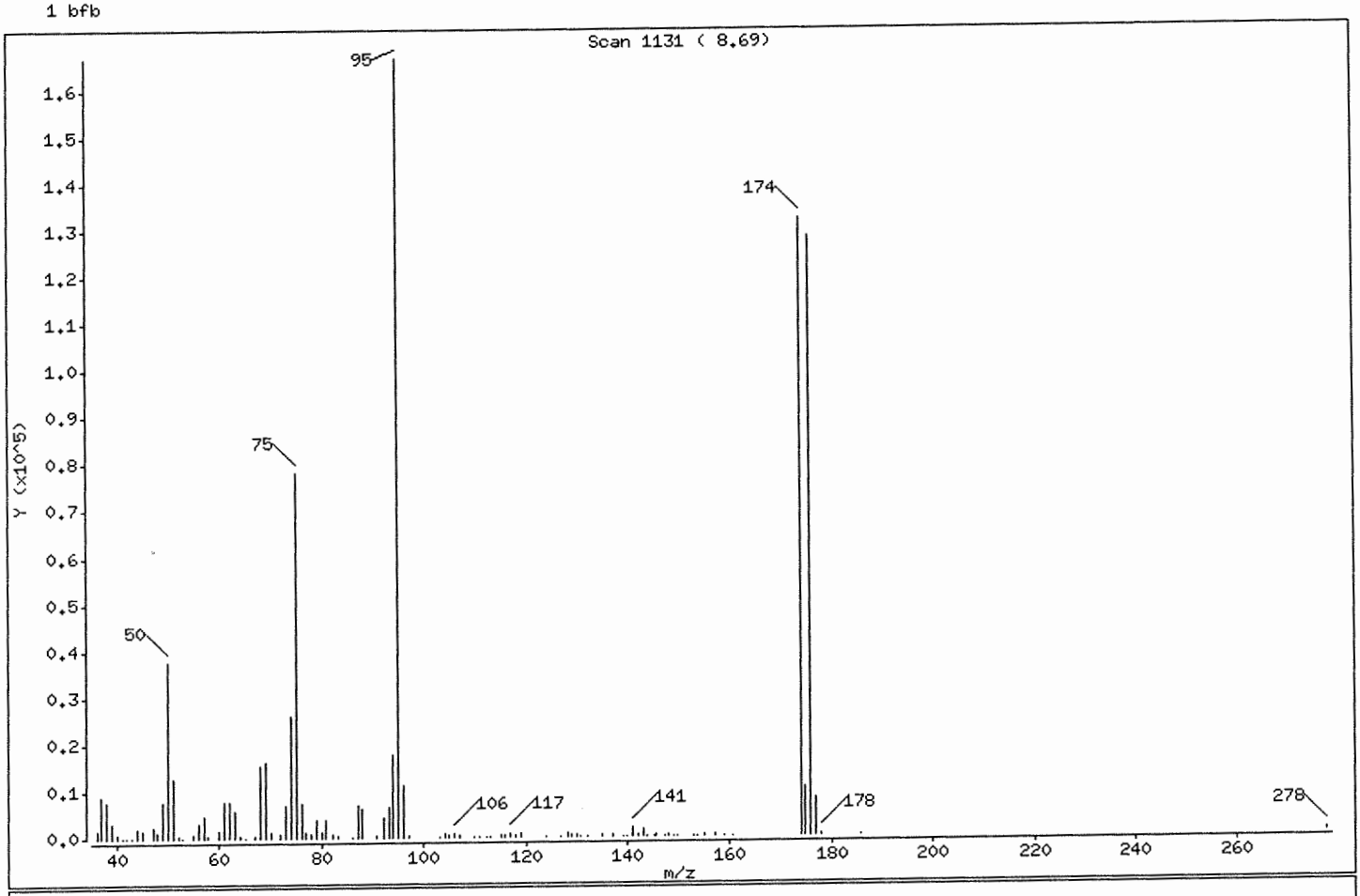
Volume Injected (uL): 2.0

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	22.44
75	30.00 - 60.00% of mass 95	46.84
96	5.00 - 9.00% of mass 95	6.71
173	Less than 2.00% of mass 174	0.00 (0.00)
174	Greater than 50.00% of mass 95	79.36
175	5.00 - 9.00% of mass 174	6.21 (7.83)
176	95.00 - 101.00% of mass 174	77.12 (97.18)
177	5.00 - 9.00% of mass 176	4.84 (6.28)

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200319DP\X031901.D

Date : 19-MAR-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: X031901.D
Spectrum: Scan 1131 (8.69)
Location of Maximum: 95.00
Number of points: 101

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.10	1360	65.00	163	97.10	263	140.90	1836
37.00	8769	67.10	353	103.20	89	142.00	192
38.00	7670	68.00	15485	104.00	727	142.90	1435
39.10	2999	69.00	16031	104.80	202	143.90	95
40.00	952	70.00	1269	105.80	737	145.10	117
41.20	93	72.00	762	106.90	217	145.60	258
41.90	78	73.00	6729	109.90	88	147.10	75
43.00	168	74.00	26176	110.90	73	148.00	387
44.00	1824	75.00	78128	112.20	62	149.10	83
45.00	1552	76.10	7370	112.80	75	149.80	76
47.00	2478	77.00	1071	115.00	259	153.00	135
47.90	1254	78.00	826	115.90	438	153.80	67
49.00	7676	79.00	3833	117.00	918	155.10	401
50.00	37424	80.00	1180	117.90	502	157.10	297
51.00	12563	80.90	3942	118.90	858	158.90	162
52.00	570	82.00	745	123.90	50	160.80	187
52.90	73	83.10	195	126.90	85	174.00	132352
55.00	621	85.90	140	128.00	809	175.00	10363
56.10	2880	87.00	6928	129.00	384	176.00	128616
57.00	4661	87.90	6204	130.00	465	177.00	8074
57.90	288	90.70	380	130.70	179	178.00	201
60.00	1638	92.00	4234	132.10	55	186.00	57
61.00	7723	93.00	6369	134.80	234	277.90	192
62.00	7841	94.00	17568	136.90	228		
63.00	5744	95.00	166784	139.00	69		
64.00	482	96.10	11193	139.90	141		

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200319DP\X031902.D Page 1
Report Date: 15-Apr-2020 14:24

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200319DP\X031902.D
Lab Smp Id: VSTD000.25 Client Smp ID: VSTD000.25
Inj Date : 19-MAR-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\X200319DP\8260W.m
Meth Date : 15-Apr-2020 14:24 voa6.i Quant Type: ISTD
Cal Date : 19-MAR-2020 15:33 Cal File: X031911.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.sub
Target Version: 4.14
Processing Host: NAHSTW7066

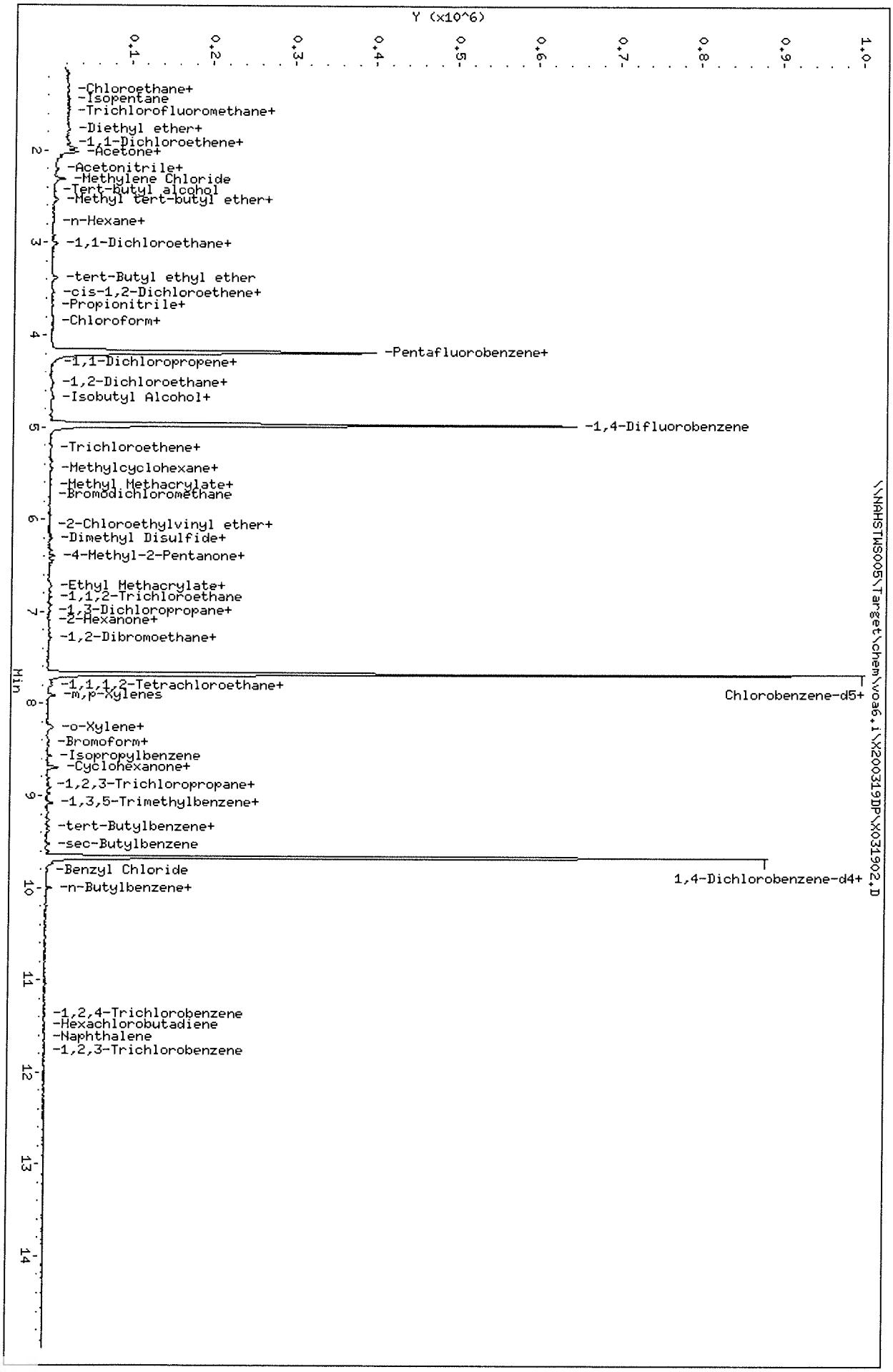
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	334865	50.0000	
	2 Dichlorodifluoromethane	85	0.966	0.966	(0.231)	636	0.25000	1.17(aM)
	3 Chloromethane	50	1.073	1.073	(0.257)	1346	0.25000	1.25(aM)
	15 Iodomethane	142	2.026	2.026	(0.485)	1140	0.50000	2.03(a)
$	30 Dibromofluoromethane	113	4.111	4.111	(0.983)	908	0.25000	0.16(a)
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	1143	0.25000	0.11(Ta)
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	508670	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	452074	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	4217	0.25000	0.28(Ta)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	4979	0.25000	0.66(aM)
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	214709	50.0000	
	90 1,2,4-Trichlorobenzene	180	11.360	11.360	(1.175)	135	0.25000	0.70(aM)
	92 Naphthalene	128	11.582	11.582	(1.198)	478	0.25000	2.12(aM)
	93 1,2,3-Trichlorobenzene	180	11.761	11.761	(1.216)	117	0.25000	1.11(aM)
M	94 1,2-Dichloroethylene (total)	96				1296	0.50000	(a)

QC Flag Legend

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



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200319DP\X031902.D
Date : 19-MAR-2020 11:34
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\X200319DP\X031903.D Page 1
Report Date: 15-Apr-2020 14:24

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200319DP\X031903.D
Lab Smp Id: VSTD000.5 Client Smp ID: VSTD000.5
Inj Date : 19-MAR-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\X200319DP\8260W.m
Meth Date : 15-Apr-2020 14:24 voa6.i Quant Type: ISTD
Cal Date : 19-MAR-2020 11:34 Cal File: X031902.D
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.sub
Target Version: 4.14
Processing Host: NAHSTW7066

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

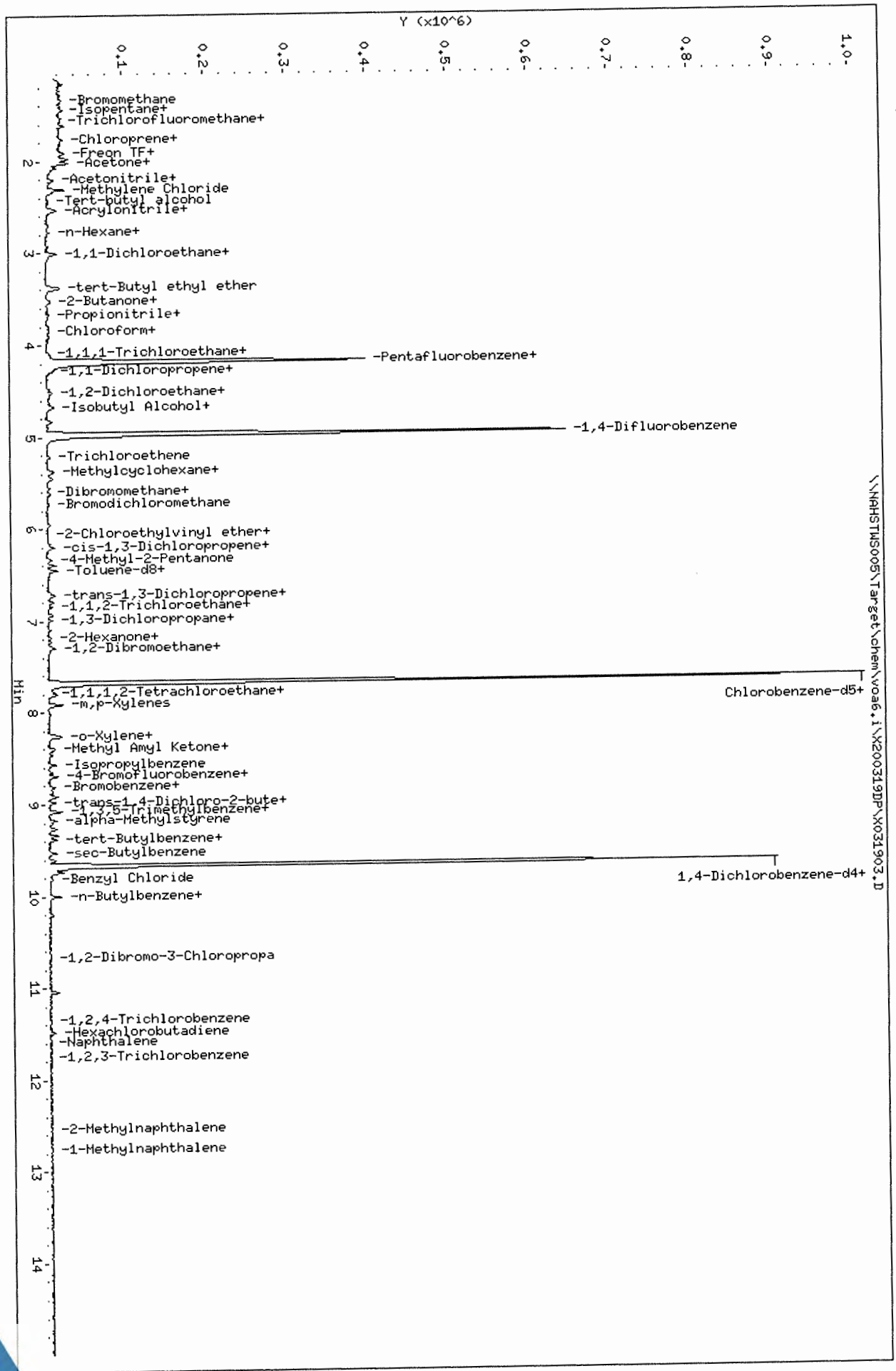
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	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)	332459	50.0000	
	25 Methacrylonitrile	41	3.860	3.860	(0.923)	2581	0.50000	0.53(aM)
	4 Propionitrile	54	3.666	3.666	(0.877)	4293	5.00000	5.57(a)
	2 Dichlorodifluoromethane	85	0.966	0.966	(0.231)	1124	0.50000	1.30(aM)
	3 Chloromethane	50	1.073	1.073	(0.257)	2775	0.50000	1.50(a)
	5 Vinyl Chloride	62	1.138	1.138	(0.272)	2946	0.50000	0.58(aM)
	11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	1608	0.50000	0.57(aM)
	15 Iodomethane	142	2.033	2.033	(0.486)	2102	1.00000	2.27(a)
	19 Carbon Disulfide	76	2.069	2.069	(0.495)	8859	1.00000	0.95(a)
	20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	1616	0.50000	0.49(a)
	22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	3139	0.50000	0.42(Ta)
	29 Bromochloromethane	128	3.803	3.803	(0.909)	1055	0.50000	0.53(aM)
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	1595	0.50000	0.37(a)
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	2706	0.50000	0.57(a)
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	2909	0.50000	0.54(TaM)
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	503603	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	451366	50.0000	
$	48 Toluene-d8	98	6.396	6.396	(0.834)	6812	0.50000	0.51(a)
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	1337	0.50000	0.51(a)
	54 1,3-Dichloropropane	76	6.990	6.990	(0.911)	2529	0.50000	0.46(a)
	57 1,2-Dibromoethane	107	7.269	7.269	(0.948)	1548	0.50000	0.47(a)
	59 Chlorobenzene	112	7.699	7.699	(1.004)	3920	0.50000	0.44(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	60 1,1,1,2-Tetrachloroethane	131	7.785	7.785	(1.015)	1560	0.50000	0.46(a)
	62 m,p-Xylenes	106	7.907	7.907	(1.031)	4461	1.00000	0.78(a)
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	1998	0.50000	0.53(aM)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	3499	0.50000	0.32(a)
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	220941	50.0000	
	89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.103)	86	0.50000	1.27(aM)
	90 1,2,4-Trichlorobenzene	180	11.352	11.352	(1.174)	612	0.50000	0.96(aM)
	92 Naphthalene	128	11.582	11.582	(1.198)	833	0.50000	2.24(a)
	93 1,2,3-Trichlorobenzene	180	11.754	11.754	(1.216)	177	0.50000	1.17(aM)
M	94 1,2-Dichloroethylene (total)	96				3219	1.00000	(a)

QC Flag Legend

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



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200319DP\X031903.D
Date : 19-MAR-2020 11:58
Client ID: VSTD000.5
Sample Info: VSTD000.5;VSTD000.5;1;2;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200319DP\X031904.D Page 1
Report Date: 15-Apr-2020 14:24

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200319DP\X031904.D
Lab Smp Id: VSTD001 Client Smp ID: VSTD001
Inj Date : 19-MAR-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\X200319DP\8260W.m
Meth Date : 15-Apr-2020 14:24 voa6.i Quant Type: ISTD
Cal Date : 19-MAR-2020 11:58 Cal File: X031903.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.sub
Target Version: 4.14
Processing Host: NAHSTW7066

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

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

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	323740	50.0000	
140 1,3-Butadiene	54	1.159	1.159	(0.277)	4662	1.00000	0.98(a)
25 Methacrylonitrile	41	3.838	3.838	(0.918)	5554	1.00000	1.17(a)
136 n-Hexane	57	2.771	2.771	(0.663)	4944	1.00000	0.90(a)
4 Propionitrile	54	3.666	3.666	(0.877)	7593	10.0000	10.13(a)
2 Dichlorodifluoromethane	85	0.966	0.966	(0.231)	2862	1.00000	1.78(a)
3 Chloromethane	50	1.073	1.073	(0.257)	5203	1.00000	1.93(a)
5 Vinyl Chloride	62	1.138	1.138	(0.272)	5267	1.00000	1.06(a)
6 Bromomethane	94	1.338	1.338	(0.320)	2753	1.00000	0.81(a)
7 Chloroethane	64	1.403	1.403	(0.336)	2888	1.00000	0.86(a)
8 Trichlorofluoromethane	101	1.561	1.561	(0.373)	4524	1.00000	0.93(a)
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	2593	1.00000	0.94(a)
15 Iodomethane	142	2.026	2.026	(0.485)	4535	2.00000	2.90(a)
18 Methyl tert-butyl ether	73	2.535	2.535	(0.606)	10428	1.00000	1.02(a)
19 Carbon Disulfide	76	2.069	2.069	(0.495)	17917	2.00000	1.98(a)
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	3196	1.00000	1.00(a)
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	7117	1.00000	0.98(a)
24 2-Butanone	43	3.588	3.588	(0.858)	5607	2.00000	1.68(a)
26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	4808	1.00000	0.95(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	3714	1.00000	1.00(a)
28 Chloroform	83	3.910	3.910	(0.935)	6415	1.00000	1.07(a)
29 Bromochloromethane	128	3.795	3.795	(0.908)	1964	1.00000	1.02(a)

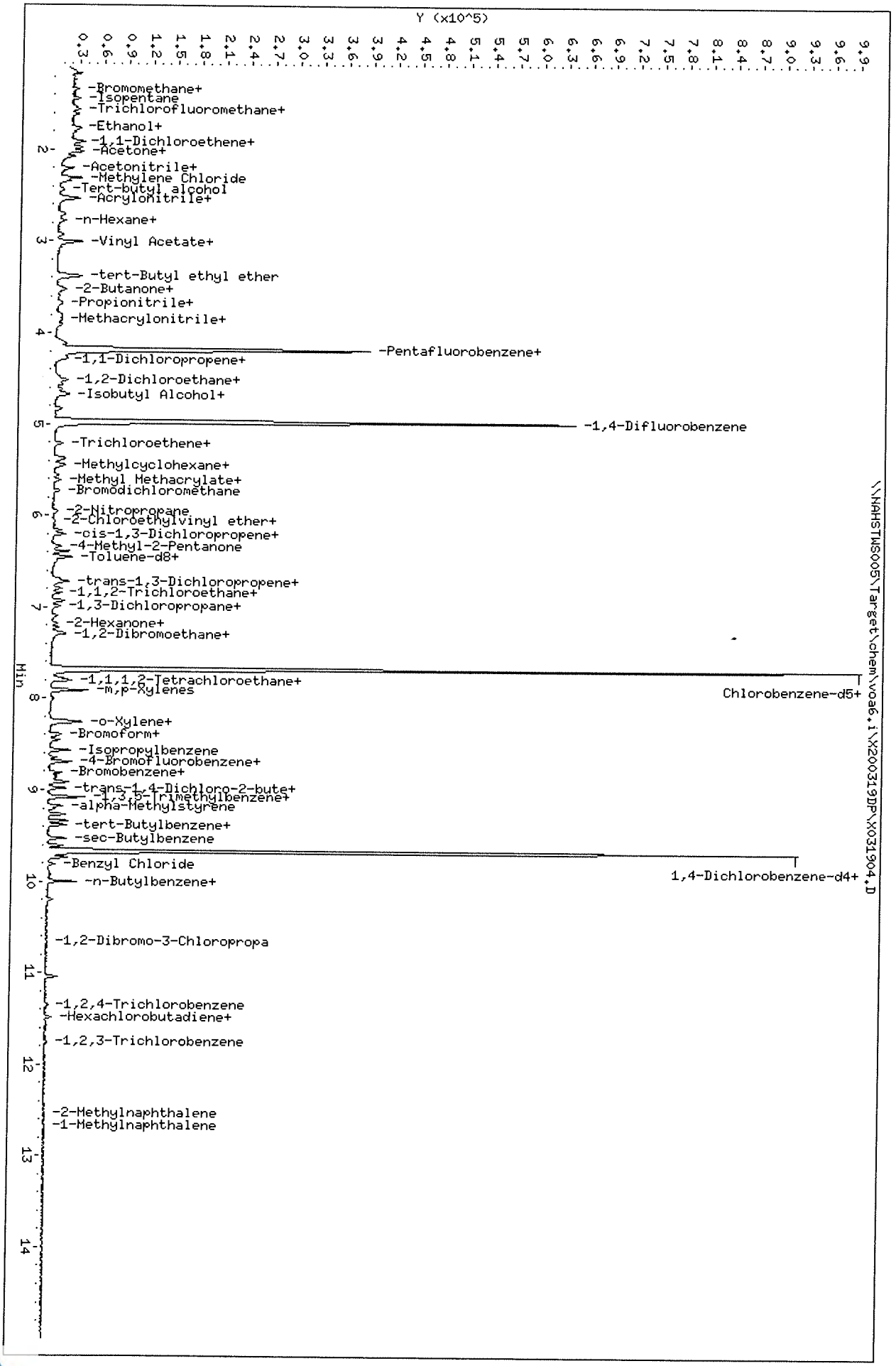
Data File: \\NAHSTWS005\Target\chem\voa6.i\X200319DP\X031904.D Page 2
Report Date: 15-Apr-2020 14:24

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	3028	1.00000	0.83(a)
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	5150	1.00000	1.02(a)
	32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	4910	1.00000	1.05(a)
	33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	5041	1.00000	0.96(a)
	34 Carbon Tetrachloride	117	4.261	4.261	(0.857)	5251	1.00000	1.12(aH)
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	4838	1.00000	1.03(a)
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	494081	50.0000	
	37 Benzene	78	4.519	4.519	(0.909)	13571	1.00000	1.03(a)
	38 Trichloroethene	130	5.206	5.206	(1.048)	3378	1.00000	0.98(a)
	39 Bromodichloromethane	83	5.729	5.729	(1.153)	4602	1.00000	1.01(aM)
	42 1,2-Dichloropropane	63	5.436	5.436	(1.094)	4169	1.00000	0.99(aM)
	44 Dibromomethane	93	5.557	5.557	(1.118)	2295	1.00000	1.05(a)
	45 4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	9292	2.00000	2.04(a)
	46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	5516	1.00000	0.98(a)
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	442403	50.0000	
$	48 Toluene-d8	98	6.396	6.396	(0.834)	12359	1.00000	1.01(a)
	50 Toluene	91	6.453	6.453	(0.841)	13358	1.00000	0.99(a)
	51 trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	4970	1.00000	1.00(a)
	52 2-Hexanone	43	7.098	7.098	(0.925)	5707	2.00000	1.88(a)
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	2724	1.00000	1.06(a)
	54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	5604	1.00000	1.05(a)
	55 Dibromochloromethane	129	7.183	7.183	(0.937)	3622	1.00000	1.05(a)
	56 Tetrachloroethene	164	6.933	6.933	(0.904)	2931	1.00000	1.06(a)
	57 1,2-Dibromoethane	107	7.269	7.269	(0.948)	3171	1.00000	0.99(a)
	58 1-Chlorohexane	55	7.699	7.699	(1.549)	4879	1.00000	1.13(aM)
	59 Chlorobenzene	112	7.699	7.699	(1.004)	9133	1.00000	1.04(a)
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	3248	1.00000	0.99(a)
	61 Ethylbenzene	106	7.807	7.807	(1.018)	4935	1.00000	1.06(a)
	62 m,p-Xylenes	106	7.907	7.907	(1.031)	11547	2.00000	2.08(a)
	63 o-Xylene	106	8.251	8.251	(1.076)	5420	1.00000	1.00(a)
	64 Styrene	104	8.265	8.265	(1.078)	9134	1.00000	0.95(a)
	66 Bromoform	173	8.416	8.416	(1.097)	2301	1.00000	1.00(Ta)
	67 Isopropylbenzene	105	8.566	8.566	(1.117)	13956	1.00000	1.02(a)
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	3833	1.00000	1.03(aM)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	8202	1.00000	1.45(a)
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	218790	50.0000	
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	3060	1.00000	0.97(aM)
	73 n-Propylbenzene	91	8.917	8.917	(0.922)	15046	1.00000	0.96(a)
	74 Bromobenzene	156	8.817	8.817	(0.912)	3908	1.00000	1.00(a)
	75 1,3,5-Trimethylbenzene	105	9.075	9.075	(0.939)	11803	1.00000	1.03(a)
	76 2-Chlorotoluene	91	8.981	8.981	(0.929)	9892	1.00000	1.03(a)
	77 4-Chlorotoluene	91	9.075	9.075	(0.939)	10881	1.00000	0.99(a)
	78 tert-Butylbenzene	119	9.340	9.340	(0.966)	9908	1.00000	1.03(a)
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	11115	1.00000	0.97(a)
	81 sec-Butylbenzene	105	9.526	9.526	(0.985)	13392	1.00000	1.00(a)
	82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	11067	1.00000	0.96(a)
	83 1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	6424	1.00000	0.98(a)
	84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	7124	1.00000	1.05(a)
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	5770	1.00000	0.98(a)
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	273	1.00000	1.78(aM)
	90 1,2,4-Trichlorobenzene	180	11.352	11.352	(1.174)	1407	1.00000	1.39(aM)
	92 Naphthalene	128	11.560	11.560	(1.196)	2100	1.00000	2.70(a)
	93 1,2,3-Trichlorobenzene	180	11.754	11.754	(1.216)	922	1.00000	1.96(aM)
M	94 1,2-Dichloroethylene (total)	96				6910	2.00000	(a)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
141 Cyclohexane	56	4.132	4.132	(0.988)	6463	1.00000	0.92(aH)
138 Freon TF	101	1.911	1.911	(0.457)	2180	1.00000	0.87(a)
146 Methyl Acetate	43	2.234	2.234	(0.534)	3384	1.00000	0.96(a)
148 Tert-Butyl alcohol	59	2.434	2.434	(0.582)	8684	20.0000	19.15(a)
149 Isopropyl Alcohol	45	2.098	2.098	(0.502)	7200	20.0000	22.54(T)

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\X200319DP\X031904.D
Date : 19-MAR-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

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200319DP\X031905.D
Lab Smp Id: VSTD002 Client Smp ID: VSTD002
Inj Date : 19-MAR-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\X200319DP\8260W.m
Meth Date : 15-Apr-2020 14:24 voa6.i Quant Type: ISTD
Cal Date : 19-MAR-2020 12:46 Cal File: X031904.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.sub
Target Version: 4.14
Processing Host: NAHSTW7066

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

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

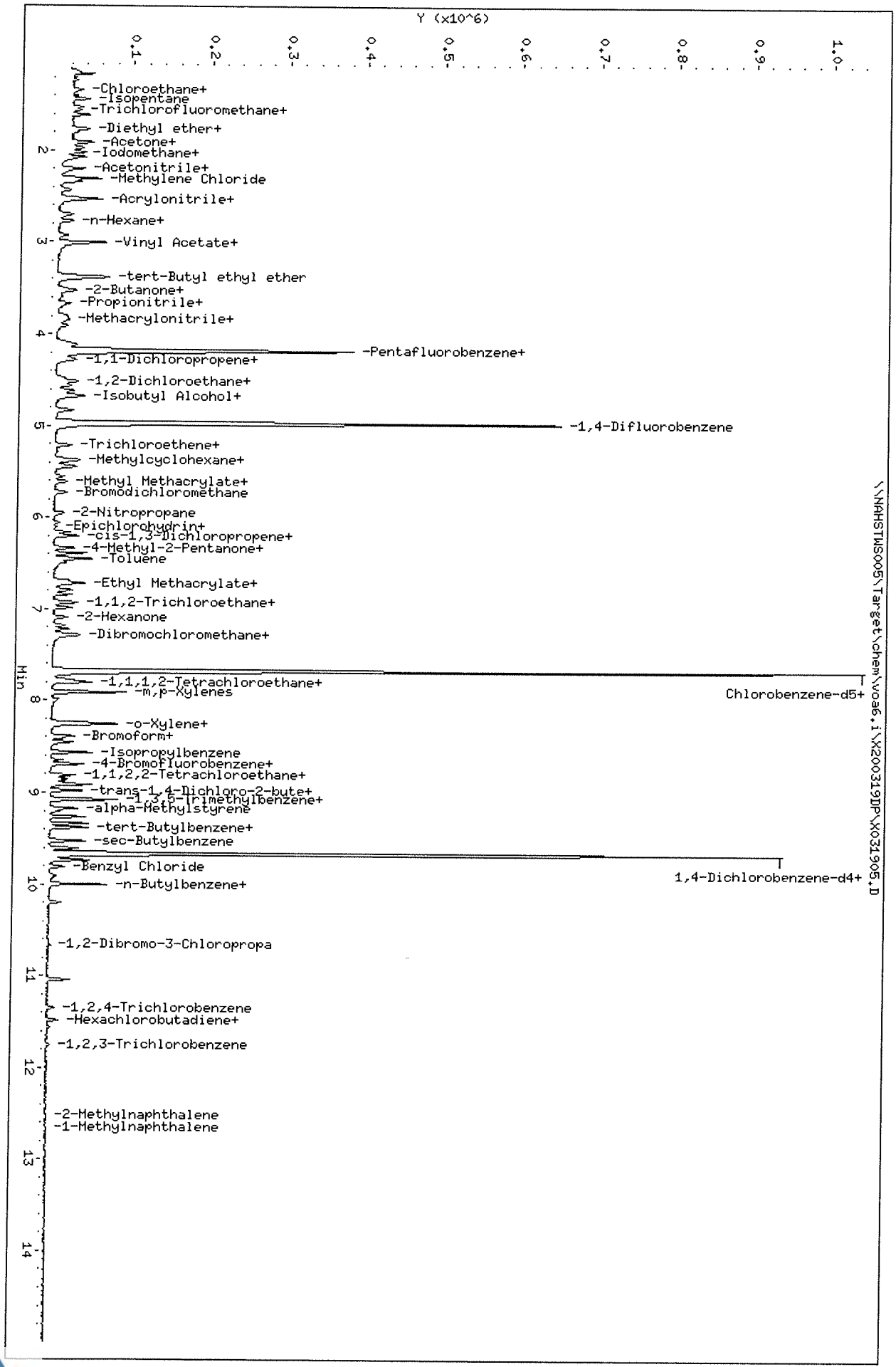
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	317561	50.0000	
140 1,3-Butadiene	54	1.159	1.159	(0.277)	8755	2.00000	1.87(a)
25 Methacrylonitrile	41	3.831	3.831	(0.916)	8267	2.00000	1.78(a)
136 n-Hexane	57	2.771	2.771	(0.663)	9516	2.00000	1.77(a)
4 Propionitrile	54	3.659	3.659	(0.875)	14729	20.0000	20.03(a)
2 Dichlorodifluoromethane	85	0.966	0.966	(0.231)	6239	2.00000	2.73(a)
3 Chloromethane	50	1.073	1.073	(0.257)	10714	2.00000	2.92(a)
5 Vinyl Chloride	62	1.138	1.138	(0.272)	9040	2.00000	1.86(a)
6 Bromomethane	94	1.338	1.338	(0.320)	5011	2.00000	1.88(aM)
7 Chloroethane	64	1.403	1.403	(0.336)	5355	2.00000	1.93(a)
8 Trichlorofluoromethane	101	1.560	1.560	(0.373)	9104	2.00000	1.92(a)
10 Acetone	43	1.969	1.969	(0.471)	18578	4.00000	3.57(a)
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	5662	2.00000	2.10(a)
15 Iodomethane	142	2.026	2.026	(0.485)	9766	4.00000	4.26(a)
17 Methylene Chloride	84	2.305	2.305	(0.551)	9972	2.00000	1.61(aM)
18 Methyl tert-butyl ether	73	2.535	2.535	(0.606)	20471	2.00000	2.05(a)
19 Carbon Disulfide	76	2.069	2.069	(0.495)	33565	4.00000	3.79(a)
20 trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	6086	2.00000	1.94(a)
21 Vinyl Acetate	43	3.000	3.000	(0.717)	50506	4.00000	3.92(a)
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	13451	2.00000	1.90(a)
24 2-Butanone	43	3.588	3.588	(0.858)	8438	4.00000	3.23(a)
26 2,2-Dichloropropane	77	3.509	3.509	(0.839)	9606	2.00000	1.94(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	7730	2.00000	2.13(a)
	28 Chloroform	83	3.910	3.910	(0.935)	11966	2.00000	2.03(a)
	29 Bromochloromethane	128	3.802	3.802	(0.909)	4034	2.00000	2.13(a)
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	5989	2.00000	1.79(a)
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	9968	2.00000	2.02(a)
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	8839	2.00000	1.88(a)
	33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	10240	2.00000	1.94(a)
	34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	9340	2.00000	1.97(aH)
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	8567	2.00000	1.99(aM)
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	498211	50.0000	
	37 Benzene	78	4.519	4.519	(0.909)	25104	2.00000	1.90(a)
	38 Trichloroethene	130	5.214	5.214	(1.049)	6853	2.00000	1.98(a)
	39 Bromodichloromethane	83	5.729	5.729	(1.153)	8809	2.00000	1.92(a)
	42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	8451	2.00000	1.99(aM)
	44 Dibromomethane	93	5.557	5.557	(1.118)	4334	2.00000	1.98(a)
	45 4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	18212	4.00000	3.94(a)
	46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	10443	2.00000	1.85(a)
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	449226	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	23746	2.00000	1.99(a)
	50 Toluene	91	6.453	6.453	(0.841)	26759	2.00000	1.96(a)
	51 trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	8886	2.00000	1.78(a)
	52 2-Hexanone	43	7.090	7.090	(0.924)	13171	4.00000	4.27(a)
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	5273	2.00000	2.03(a)
	54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	11093	2.00000	2.06(a)
	55 Dibromochloromethane	129	7.183	7.183	(0.937)	6952	2.00000	1.99(a)
	56 Tetrachloroethene	164	6.933	6.933	(0.904)	5327	2.00000	1.90(a)
	57 1,2-Dibromoethane	107	7.269	7.269	(0.948)	6401	2.00000	1.98(a)
	58 1-Chlorohexane	55	7.699	7.699	(1.549)	8528	2.00000	1.96(aM)
	59 Chlorobenzene	112	7.699	7.699	(1.004)	17919	2.00000	2.02(a)
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	6440	2.00000	1.94(a)
	61 Ethylbenzene	106	7.799	7.799	(1.017)	8888	2.00000	1.89(a)
	62 m,p-Xylenes	106	7.907	7.907	(1.031)	22262	4.00000	3.94(a)
	63 o-Xylene	106	8.244	8.244	(1.075)	10646	2.00000	1.93(a)
	64 Styrene	104	8.265	8.265	(1.078)	19413	2.00000	2.00(a)
	66 Bromoform	173	8.415	8.415	(1.097)	4643	2.00000	1.98(Ta)
	67 Isopropylbenzene	105	8.566	8.566	(1.117)	27545	2.00000	1.98(a)
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	8148	2.00000	2.16(a)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	12385	2.00000	2.40(a)
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	221564	50.0000	
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	6933	2.00000	2.18(aM)
	73 n-Propylbenzene	91	8.917	8.917	(0.922)	31409	2.00000	1.98(a)
	74 Bromobenzene	156	8.809	8.809	(0.911)	7556	2.00000	1.91(a)
	75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	22835	2.00000	1.98(a)
	76 2-Chlorotoluene	91	8.974	8.974	(0.928)	19917	2.00000	2.06(a)
	77 4-Chlorotoluene	91	9.074	9.074	(0.939)	23098	2.00000	2.08(a)
	78 tert-Butylbenzene	119	9.339	9.339	(0.966)	19225	2.00000	1.97(a)
	79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	22332	2.00000	1.93(a)
	81 sec-Butylbenzene	105	9.526	9.526	(0.985)	25606	2.00000	1.90(a)
	82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	21500	2.00000	1.85(a)
	83 1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	12971	2.00000	1.96(a)
	84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	13625	2.00000	1.99(a)
	87 n-Butylbenzene	91	9.998	9.998	(1.034)	19136	2.00000	1.91(a)
	88 1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	11951	2.00000	2.00(a)
	89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.102)	777	2.00000	3.11(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
90	1,2,4-Trichlorobenzene	180	11.345	11.345	(1.173)	2892	2.00000	2.18(a)
92	Naphthalene	128	11.553	11.553	(1.195)	4891	2.00000	3.69(a)
93	1,2,3-Trichlorobenzene	180	11.753	11.753	(1.216)	1673	2.00000	2.74(a)
M 94	1,2-Dichloroethylene (total)	96				13816	4.00000	(a)
135	1,4-Dioxane	88	5.600	5.600	(1.339)	1656	40.0000	45.23(a)
141	Cyclohexane	56	4.125	4.125	(0.986)	13004	2.00000	1.90(aH)
138	Freon TF	101	1.919	1.919	(0.459)	4999	2.00000	2.04(a)
147	Methylcyclohexane	55	5.393	5.393	(1.085)	25595	2.00000	2.03(a)
146	Methyl Acetate	43	2.234	2.234	(0.534)	6616	2.00000	1.91(a)
148	Tert-Butyl alcohol	59	2.434	2.434	(0.582)	21043	40.0000	47.32(a)
149	Isopropyl Alcohol	45	2.098	2.098	(0.502)	14226	40.0000	45.40(T)

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\X200319DP\X031905.D
Date : 19-MAR-2020 13:10
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

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200319DP\X031906.D
Lab Smp Id: VSTD005 Client Smp ID: VSTD005
Inj Date : 19-MAR-2020 13:34
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\X200319DP\8260W.m
Meth Date : 15-Apr-2020 14:24 voa6.i Quant Type: ISTD
Cal Date : 19-MAR-2020 13:10 Cal File: X031905.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.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)	309553	50.0000	
194 Acetaldehyde	44	1.210	1.210	(0.289)	6091	20.0000	19.05(M)
140 1,3-Butadiene	54	1.159	1.159	(0.277)	22721	5.00000	4.99(a)
25 Methacrylonitrile	41	3.824	3.824	(0.914)	22847	5.00000	5.06
136 n-Hexane	57	2.771	2.771	(0.663)	25748	5.00000	4.91(a)
4 Propionitrile	54	3.659	3.659	(0.875)	34711	50.0000	48.44(a)
2 Dichlorodifluoromethane	85	0.966	0.966	(0.231)	15743	5.00000	5.47
3 Chloromethane	50	1.073	1.073	(0.257)	28777	5.00000	6.25
5 Vinyl Chloride	62	1.138	1.138	(0.272)	22527	5.00000	4.77(a)
6 Bromomethane	94	1.339	1.339	(0.320)	12906	5.00000	5.71
7 Chloroethane	64	1.403	1.403	(0.336)	14009	5.00000	5.77
8 Trichlorofluoromethane	101	1.561	1.561	(0.373)	23105	5.00000	5.01
9 Acrolein	56	1.854	1.854	(0.443)	2842	10.0000	8.98(a)
10 Acetone	43	1.976	1.976	(0.473)	24801	10.0000	9.86
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	13314	5.00000	5.07
15 Iodomethane	142	2.026	2.026	(0.485)	30659	10.0000	9.81
16 Acrylonitrile	53	2.535	2.535	(0.606)	19060	10.0000	9.54(a)
17 Methylene Chloride	84	2.306	2.306	(0.551)	22460	5.00000	5.59(M)
18 Methyl tert-butyl ether	73	2.535	2.535	(0.606)	48716	5.00000	5.02
19 Carbon Disulfide	76	2.069	2.069	(0.495)	91050	10.0000	10.55
20 trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	16813	5.00000	5.51
21 Vinyl Acetate	43	3.000	3.000	(0.717)	136400	10.0000	10.87

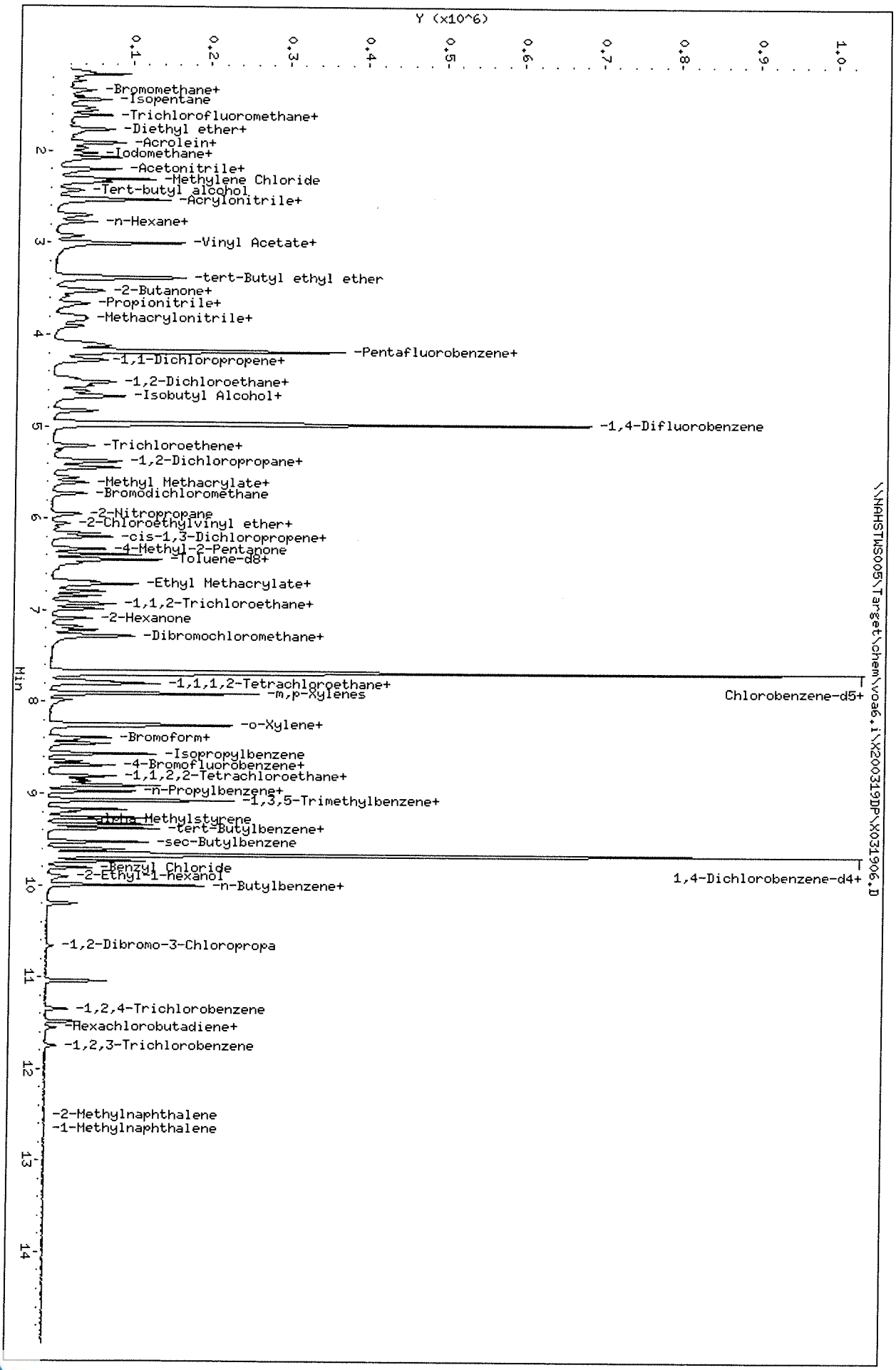
Data File: \\NAHSTWS005\Target\chem\voa6.i\X200319DP\X031906.D Page 2
Report Date: 15-Apr-2020 14:24

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	22 1,1-Dichloroethane	63	2.922	2.922	(0.699)	38686	5.00000	5.61
	24 2-Butanone	43	3.581	3.581	(0.856)	20120	10.0000	9.69
	26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	27375	5.00000	5.67
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	19888	5.00000	5.64
	28 Chloroform	83	3.910	3.910	(0.935)	30895	5.00000	5.39
	29 Bromochloromethane	128	3.795	3.795	(0.908)	10154	5.00000	5.52
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	17420	5.00000	5.56
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	25795	5.00000	5.38
	32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	23991	5.00000	5.24
	33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	26678	5.00000	5.18
	34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	23818	5.00000	5.16(H)
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	20720	5.00000	5.18
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	486956	50.0000	
	37 Benzene	78	4.512	4.512	(0.908)	69240	5.00000	5.37
	38 Trichloroethene	130	5.214	5.214	(1.049)	17942	5.00000	5.31
	39 Bromodichloromethane	83	5.729	5.729	(1.153)	23944	5.00000	5.34
	41 2-Chloroethylvinyl ether	63	6.052	6.052	(1.218)	9587	10.0000	10.89(a)
	42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	22971	5.00000	5.54
	44 Dibromomethane	93	5.558	5.558	(1.118)	11296	5.00000	5.28
	45 4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	46353	10.0000	10.20
	46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	28393	5.00000	5.16
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	441541	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	62955	5.00000	5.49
	50 Toluene	91	6.446	6.446	(0.840)	73883	5.00000	5.50
	51 trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	26321	5.00000	5.41
	52 2-Hexanone	43	7.090	7.090	(0.924)	30833	10.0000	10.18
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	13550	5.00000	5.32
	54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	28928	5.00000	5.47
	55 Dibromochloromethane	129	7.184	7.184	(0.937)	18358	5.00000	5.36
	56 Tetrachloroethene	164	6.933	6.933	(0.904)	14927	5.00000	5.41
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	17381	5.00000	5.49
	58 1-Chlorohexane	55	7.699	7.699	(1.549)	21395	5.00000	5.04(M)
	59 Chlorobenzene	112	7.699	7.699	(1.004)	47883	5.00000	5.50
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	17875	5.00000	5.48
	61 Ethylbenzene	106	7.800	7.800	(1.017)	24916	5.00000	5.39
	62 m,p-Xylenes	106	7.907	7.907	(1.031)	60314	10.0000	10.88
	63 o-Xylene	106	8.244	8.244	(1.075)	30786	5.00000	5.69
	64 Styrene	104	8.265	8.265	(1.078)	52135	5.00000	5.47
	66 Bromoform	173	8.416	8.416	(1.097)	11689	5.00000	5.09
	67 Isopropylbenzene	105	8.566	8.566	(1.117)	73820	5.00000	5.42
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	18964	5.00000	4.95(a)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	22920	5.00000	4.95(a)
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	225770	50.0000	
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	16436	5.00000	5.09(M)
	73 n-Propylbenzene	91	8.917	8.917	(0.923)	85813	5.00000	5.30
	74 Bromobenzene	156	8.810	8.810	(0.912)	21284	5.00000	5.29
	75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	62900	5.00000	5.36
	76 2-Chlorotoluene	91	8.974	8.974	(0.929)	52378	5.00000	5.33
	77 4-Chlorotoluene	91	9.075	9.075	(0.939)	60315	5.00000	5.35
	78 tert-Butylbenzene	119	9.340	9.340	(0.967)	53004	5.00000	5.35
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	60146	5.00000	5.12
	81 sec-Butylbenzene	105	9.526	9.526	(0.986)	69349	5.00000	5.06
	82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	60928	5.00000	5.15
	83 1,3-Dichlorobenzene	146	9.612	9.612	(0.995)	34867	5.00000	5.18

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	35893	5.00000	5.16
	87 n-Butylbenzene	91	9.999	9.999	(1.035)	50672	5.00000	4.96(a)
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.035)	31049	5.00000	5.12
	89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.104)	1809	5.00000	5.76
	90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.174)	8554	5.00000	5.12
	92 Naphthalene	128	11.546	11.546	(1.195)	11877	5.00000	6.11
	93 1,2,3-Trichlorobenzene	180	11.754	11.754	(1.216)	4327	5.00000	5.44
M	94 1,2-Dichloroethylene (total)	96				36701	10.0000	(a)
	135 1,4-Dioxane	88	5.601	5.601	(1.339)	3782	100.000	105.99
	141 Cyclohexane	56	4.125	4.125	(0.986)	34240	5.00000	5.15(M)
	138 Freon TF	101	1.912	1.912	(0.457)	12708	5.00000	5.34
	147 Methylcyclohexane	55	5.386	5.386	(1.084)	61662	5.00000	5.00
	146 Methyl Acetate	43	2.234	2.234	(0.534)	18269	5.00000	5.43
	148 Tert-Butyl alcohol	59	2.427	2.427	(0.580)	43691	100.000	100.79
	149 Isopropyl Alcohol	45	2.098	2.098	(0.502)	30208	100.000	98.90(T)

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\X200319DP\X031906.D
Date : 19-MAR-2020 13:34
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\X200319DP\X031907.D Page 1
Report Date: 15-Apr-2020 14:24

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200319DP\X031907.D
Lab Smp Id: VSTD020 Client Smp ID: VSTD020
Inj Date : 19-MAR-2020 13:58
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\X200319DP\8260W.m
Meth Date : 15-Apr-2020 14:24 voa6.i Quant Type: ISTD
Cal Date : 19-MAR-2020 13:34 Cal File: X031906.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.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)	299061	50.0000	
194 Acetaldehyde	44	1.210	1.210	(0.289)	22676	80.0000	73.42(M)
140 1,3-Butadiene	54	1.159	1.159	(0.277)	90542	20.0000	20.62
25 Methacrylonitrile	41	3.824	3.824	(0.914)	87326	20.0000	20.04
136 n-Hexane	57	2.771	2.771	(0.663)	105710	20.0000	20.87
4 Propionitrile	54	3.652	3.652	(0.873)	140329	200.000	202.71(a)
2 Dichlorodifluoromethane	85	0.973	0.973	(0.233)	63872	20.0000	19.74
3 Chloromethane	50	1.074	1.074	(0.257)	101480	20.0000	20.10
5 Vinyl Chloride	62	1.138	1.138	(0.272)	88179	20.0000	19.35
6 Bromomethane	94	1.339	1.339	(0.320)	42412	20.0000	20.48
7 Chloroethane	64	1.403	1.403	(0.336)	46166	20.0000	20.52
8 Trichlorofluoromethane	101	1.561	1.561	(0.373)	90870	20.0000	20.42
9 Acrolein	56	1.854	1.854	(0.443)	10501	40.0000	37.74
10 Acetone	43	1.969	1.969	(0.471)	55534	40.0000	40.56
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	49791	20.0000	19.64
15 Iodomethane	142	2.026	2.026	(0.485)	135035	40.0000	38.31
16 Acrylonitrile	53	2.535	2.535	(0.606)	79652	40.0000	41.28
17 Methylene Chloride	84	2.306	2.306	(0.551)	70573	20.0000	21.38
18 Methyl tert-butyl ether	73	2.535	2.535	(0.606)	187641	20.0000	20.01
19 Carbon Disulfide	76	2.069	2.069	(0.495)	339930	40.0000	40.78
20 trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	60905	20.0000	20.66
21 Vinyl Acetate	43	3.000	3.000	(0.717)	511724	40.0000	42.23

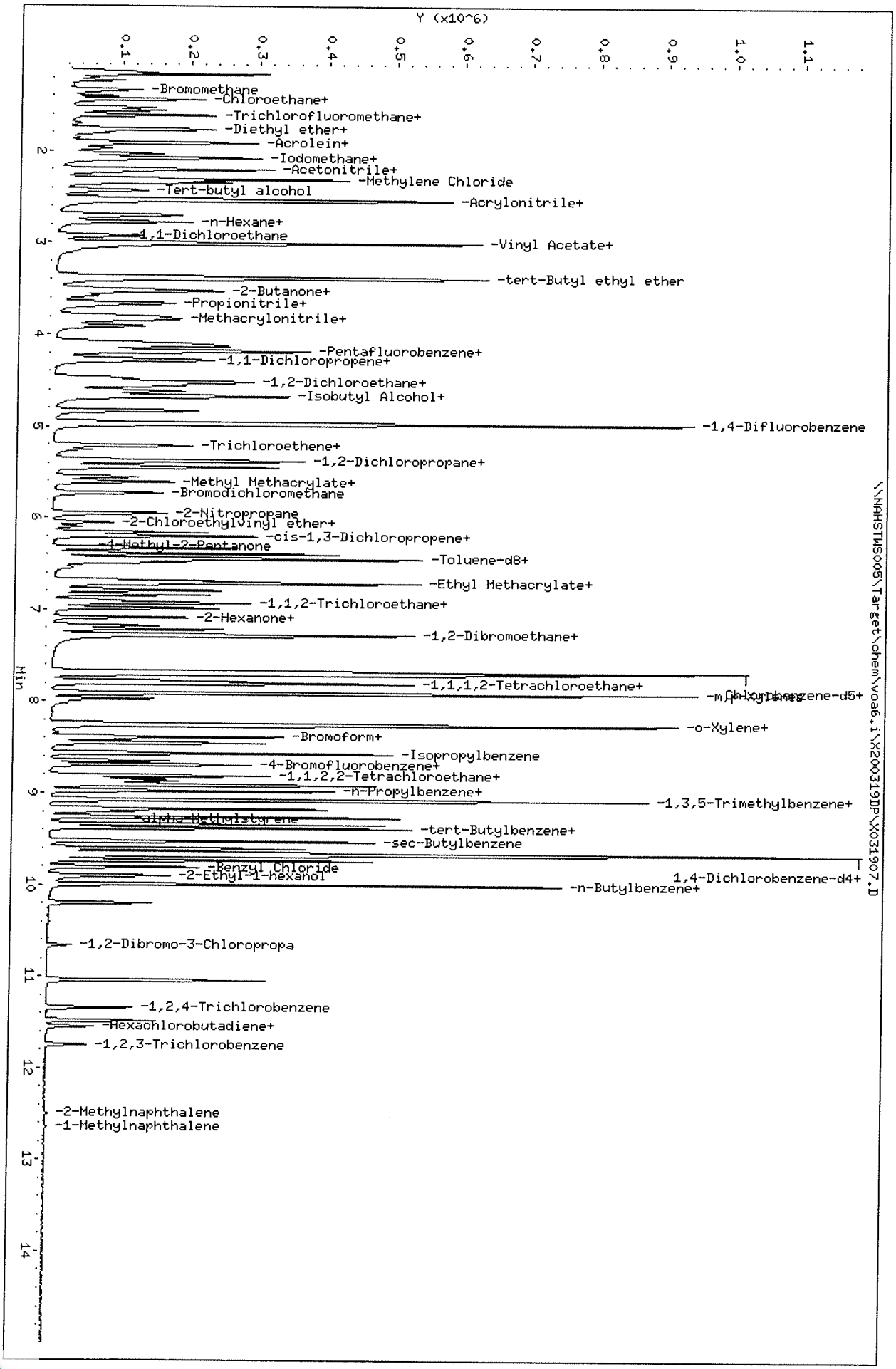
Data File: \\NAHSTWS005\Target\chem\voa6.i\X200319DP\X031907.D Page 2
Report Date: 15-Apr-2020 14:24

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	22 1,1-Dichloroethane	63	2.922	2.922	(0.699)	141321	20.0000	21.22
	24 2-Butanone	43	3.581	3.581	(0.856)	73828	40.0000	40.26
	26 2,2-Dichloropropane	77	3.509	3.509	(0.839)	97570	20.0000	20.93
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	69663	20.0000	20.45
	28 Chloroform	83	3.910	3.910	(0.935)	110013	20.0000	19.89
	29 Bromochloromethane	128	3.795	3.795	(0.908)	36932	20.0000	20.78
$	30 Dibromofluoromethane	113	4.104	4.104	(0.981)	61899	20.0000	20.76
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	96530	20.0000	20.85
	32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	83390	20.0000	18.44
	33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	99484	20.0000	19.58
	34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	83114	20.0000	18.25(H)
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	80050	20.0000	21.21
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	480908	50.0000	
	37 Benzene	78	4.512	4.512	(0.908)	246905	20.0000	19.41
	38 Trichloroethene	130	5.207	5.207	(1.048)	64841	20.0000	19.45
	39 Bromodichloromethane	83	5.730	5.730	(1.153)	85233	20.0000	19.26
	41 2-Chloroethylvinyl ether	63	6.052	6.052	(1.218)	34445	40.0000	39.62
	42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	79460	20.0000	19.43
	44 Dibromomethane	93	5.558	5.558	(1.118)	42289	20.0000	20.02
	45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	175231	40.0000	39.34
	46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	108622	20.0000	19.99
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	433129	50.0000	
$	48 Toluene-d8	98	6.389	6.389	(0.833)	225397	20.0000	20.27
	50 Toluene	91	6.446	6.446	(0.840)	265643	20.0000	20.18
	51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	96866	20.0000	20.16
	52 2-Hexanone	43	7.090	7.090	(0.924)	119018	40.0000	40.08
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	48758	20.0000	19.53
	54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	102124	20.0000	19.68
	55 Dibromochloromethane	129	7.176	7.176	(0.936)	64897	20.0000	19.33
	56 Tetrachloroethene	164	6.933	6.933	(0.904)	53882	20.0000	19.93
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	62361	20.0000	20.08
	58 1-Chlorohexane	55	7.699	7.699	(1.549)	84779	20.0000	20.22
	59 Chlorobenzene	112	7.699	7.699	(1.004)	170337	20.0000	19.96
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	62830	20.0000	19.66
	61 Ethylbenzene	106	7.800	7.800	(1.017)	91953	20.0000	20.29
	62 m,p-Xylenes	106	7.907	7.907	(1.031)	221928	40.0000	40.83
	63 o-Xylene	106	8.244	8.244	(1.075)	107313	20.0000	20.22
	64 Styrene	104	8.258	8.258	(1.077)	187844	20.0000	20.10
	66 Bromoform	173	8.416	8.416	(1.097)	44317	20.0000	19.68
	67 Isopropylbenzene	105	8.566	8.566	(1.117)	270189	20.0000	20.23
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	70466	20.0000	19.42
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	85378	20.0000	20.19
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	213879	50.0000	
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	60016	20.0000	19.63(M)
	73 n-Propylbenzene	91	8.917	8.917	(0.923)	314628	20.0000	20.55
	74 Bromobenzene	156	8.810	8.810	(0.912)	77758	20.0000	20.40
	75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	224472	20.0000	20.22
	76 2-Chlorotoluene	91	8.974	8.974	(0.929)	186152	20.0000	20.00
	77 4-Chlorotoluene	91	9.075	9.075	(0.939)	213990	20.0000	20.05
	78 tert-Butylbenzene	119	9.340	9.340	(0.967)	189929	20.0000	20.25
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	230301	20.0000	20.72
	81 sec-Butylbenzene	105	9.526	9.526	(0.986)	266922	20.0000	20.56
	82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	233327	20.0000	20.82
	83 1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	129656	20.0000	20.35

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
84	1,4-Dichlorobenzene	146	9.684	9.684	(1.002)	130711	20.0000	19.84
87	n-Butylbenzene	91	9.999	9.999	(1.035)	197347	20.0000	20.42
88	1,2-Dichlorobenzene	146	9.999	9.999	(1.035)	117025	20.0000	20.38
89	1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	6529	20.0000	19.02
90	1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	34013	20.0000	19.46
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	25359	20.0000	18.98
92	Naphthalene	128	11.546	11.546	(1.195)	46336	20.0000	19.08
93	1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	16083	20.0000	18.47
M 94	1,2-Dichloroethylene (total)	96				130568	40.0000	(a)
135	1,4-Dioxane	88	5.601	5.601	(1.339)	14527	400.000	421.40
141	Cyclohexane	56	4.125	4.125	(0.986)	140988	20.0000	21.95
138	Freon TF	101	1.912	1.912	(0.457)	47937	20.0000	20.85
147	Methylcyclohexane	55	5.379	5.379	(1.082)	238954	20.0000	19.64
146	Methyl Acetate	43	2.234	2.234	(0.534)	66531	20.0000	20.47
148	Tert-Butyl alcohol	59	2.427	2.427	(0.580)	164610	400.000	393.08
149	Isopropyl Alcohol	45	2.091	2.091	(0.500)	114617	400.000	388.44

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\voa6.i\X200319DP\X031907.D
Date : 19-MAR-2020 13:58
Client ID: VSTD020
Sample Info: VSTD020;VSTD020;1;6;;
Purge Volume: 5.0
Column phase: DB624

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

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200319DP\X031908.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 19-MAR-2020 14:22
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\X200319DP\8260W.m
Meth Date : 15-Apr-2020 14:24 voa6.i Quant Type: ISTD
Cal Date : 19-MAR-2020 13:58 Cal File: X031907.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.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)	308394	50.0000	
194 Acetaldehyde	44	1.210	1.210	(0.289)	63119	200.000	198.19(M)
140 1,3-Butadiene	54	1.159	1.159	(0.277)	230867	50.0000	50.98
25 Methacrylonitrile	41	3.817	3.817	(0.913)	216907	50.0000	48.28
136 n-Hexane	57	2.771	2.771	(0.663)	271166	50.0000	51.93
4 Propionitrile	54	3.652	3.652	(0.873)	348352	500.000	487.98
2 Dichlorodifluoromethane	85	0.966	0.966	(0.231)	163717	50.0000	47.58
3 Chloromethane	50	1.073	1.073	(0.257)	249660	50.0000	46.52
5 Vinyl Chloride	62	1.138	1.138	(0.272)	218403	50.0000	46.48
6 Bromomethane	94	1.338	1.338	(0.320)	99641	50.0000	47.24
7 Chloroethane	64	1.403	1.403	(0.336)	111607	50.0000	48.58
8 Trichlorofluoromethane	101	1.561	1.561	(0.373)	231128	50.0000	50.39
9 Acrolein	56	1.854	1.854	(0.443)	29869	100.000	106.23
10 Acetone	43	1.969	1.969	(0.471)	121303	100.000	100.95
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	123020	50.0000	47.07
15 Iodomethane	142	2.026	2.026	(0.485)	367297	100.000	97.34
16 Acrylonitrile	53	2.528	2.528	(0.604)	193031	100.000	97.01
17 Methylene Chloride	84	2.305	2.305	(0.551)	162281	50.0000	49.43
18 Methyl tert-butyl ether	73	2.535	2.535	(0.606)	457984	50.0000	47.38
19 Carbon Disulfide	76	2.069	2.069	(0.495)	836919	100.000	97.36
20 trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	144545	50.0000	47.56
21 Vinyl Acetate	43	3.000	3.000	(0.717)	1239428	100.000	99.19

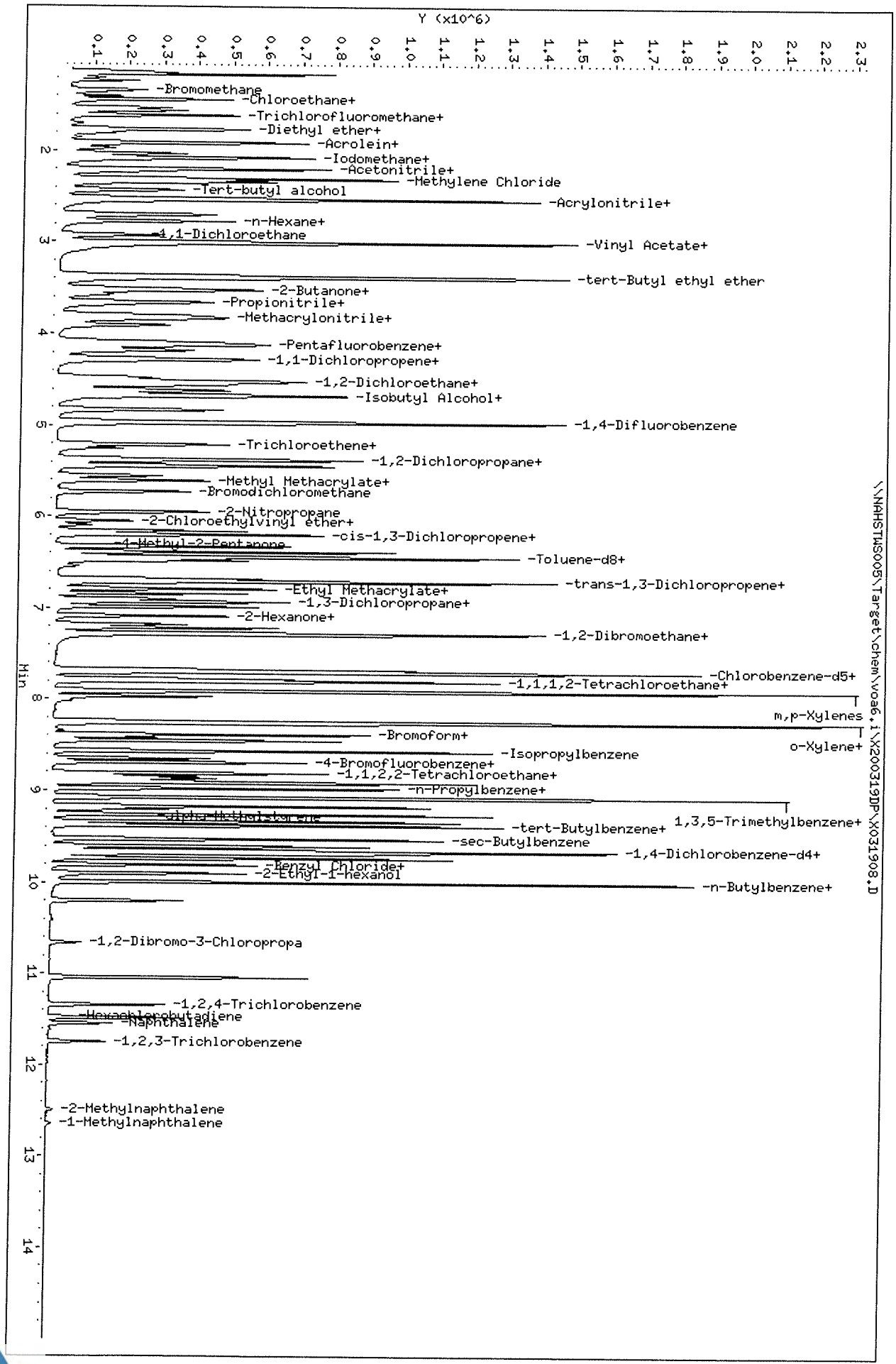
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Report Date: 15-Apr-2020 14:24

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	336578	50.0000	49.00
	24 2-Butanone	43	3.573	3.573	(0.854)	184861	100.000	99.53
	26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	232607	50.0000	48.40
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	167789	50.0000	47.77
	28 Chloroform	83	3.910	3.910	(0.935)	269940	50.0000	47.33
	29 Bromochloromethane	128	3.795	3.795	(0.908)	85069	50.0000	46.43
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	149393	50.0000	48.75
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	233723	50.0000	48.97
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	205150	50.0000	47.04
	33 1,2-Dichloroethane	62	4.555	4.555	(0.916)	249570	50.0000	50.91
	34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	205597	50.0000	46.80(H)
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	185105	50.0000	47.76
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	463946	50.0000	
	37 Benzene	78	4.512	4.512	(0.908)	596924	50.0000	48.65
	38 Trichloroethene	130	5.206	5.206	(1.048)	160161	50.0000	49.80
	39 Bromodichloromethane	83	5.729	5.729	(1.153)	204509	50.0000	47.92
	41 2-Chloroethylvinyl ether	63	6.052	6.052	(1.218)	86417	100.000	103.04
	42 1,2-Dichloropropane	63	5.436	5.436	(1.094)	192720	50.0000	48.85
	44 Dibromomethane	93	5.557	5.557	(1.118)	102239	50.0000	50.18
	45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	431551	100.000	98.88
	46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	261376	50.0000	49.86
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	424365	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	537213	50.0000	49.41
	50 Toluene	91	6.446	6.446	(0.840)	632395	50.0000	49.05
	51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	237031	50.0000	51.15
	52 2-Hexanone	43	7.090	7.090	(0.924)	291000	100.000	100.02
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	117355	50.0000	47.99
	54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	245962	50.0000	48.39
	55 Dibromochloromethane	129	7.176	7.176	(0.936)	163847	50.0000	49.81
	56 Tetrachloroethene	164	6.933	6.933	(0.904)	130441	50.0000	49.25
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	150861	50.0000	49.58
	58 1-Chlorohexane	55	7.699	7.699	(1.549)	199606	50.0000	49.36
	59 Chlorobenzene	112	7.699	7.699	(1.004)	406480	50.0000	48.62
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	153830	50.0000	49.13
	61 Ethylbenzene	106	7.800	7.800	(1.017)	219992	50.0000	49.55
	62 m,p-Xylenes	106	7.907	7.907	(1.031)	534133	100.000	100.31
	63 o-Xylene	106	8.244	8.244	(1.075)	258758	50.0000	49.78
	64 Styrene	104	8.258	8.258	(1.077)	457749	50.0000	50.01
	66 Bromoform	173	8.416	8.416	(1.097)	114146	50.0000	51.73
	67 Isopropylbenzene	105	8.566	8.566	(1.117)	650132	50.0000	49.68
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	175490	50.0000	48.88
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	199673	50.0000	48.88
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	211624	50.0000	
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	151214	50.0000	50.00(M)
	73 n-Propylbenzene	91	8.917	8.917	(0.922)	767030	50.0000	50.63
	74 Bromobenzene	156	8.810	8.810	(0.911)	189763	50.0000	50.31
	75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	549498	50.0000	50.03
	76 2-Chlorotoluene	91	8.974	8.974	(0.928)	441409	50.0000	47.93
	77 4-Chlorotoluene	91	9.075	9.075	(0.939)	528510	50.0000	50.06
	78 tert-Butylbenzene	119	9.340	9.340	(0.966)	456921	50.0000	49.23
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	554907	50.0000	50.46
	81 sec-Butylbenzene	105	9.526	9.526	(0.985)	641225	50.0000	49.93
	82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	565687	50.0000	51.02
	83 1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	322739	50.0000	51.20

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	317227	50.0000	48.67	
87	n-Butylbenzene	91	9.999	9.999	(1.034)	490350	50.0000	51.28	
88	1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	289553	50.0000	50.96	
89	1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	17754	50.0000	50.46	
90	1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	88482	50.0000	50.14	
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	65738	50.0000	49.74	
92	Naphthalene	128	11.546	11.546	(1.194)	122519	50.0000	47.75	
93	1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	44729	50.0000	50.14	
M 94	1,2-Dichloroethylene (total)	96				312334	100.000		(a)
135	1,4-Dioxane	88	5.600	5.600	(1.339)	37419	1000.00	1052.62	
141	Cyclohexane	56	4.125	4.125	(0.986)	339216	50.0000	51.22	
138	Freon TF	101	1.912	1.912	(0.457)	123568	50.0000	52.13	
147	Methylcyclohexane	55	5.378	5.378	(1.082)	563345	50.0000	48.00	
146	Methyl Acetate	43	2.227	2.227	(0.532)	167212	50.0000	49.90	
148	Tert-Butyl alcohol	59	2.427	2.427	(0.580)	425810	1000.00	986.04	
149	Isopropyl Alcohol	45	2.098	2.098	(0.502)	307651	1000.00	1011.10	

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\voa6.i\X200319DP\X031908.D
Date : 19-MAR-2020 14:22
Client ID: VSTD050
Sample Info: VSTD050;VSTD050;1;7;;
Purge Volume: 5.0
Column phase: DB624

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

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200319DP\X031909.D
Lab Smp Id: VSTD100 Client Smp ID: VSTD100
Inj Date : 19-MAR-2020 14:46
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\X200319DP\8260W.m
Meth Date : 15-Apr-2020 14:24 voa6.i Quant Type: ISTD
Cal Date : 19-MAR-2020 14:22 Cal File: X031908.D
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.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)	286614	50.0000	
194 Acetaldehyde	44	1.209	1.209	(0.289)	122596	400.000	414.20(M)
140 1,3-Butadiene	54	1.159	1.159	(0.277)	457530	100.000	108.72
25 Methacrylonitrile	41	3.824	3.824	(0.914)	410571	100.000	98.34
136 n-Hexane	57	2.771	2.771	(0.663)	533420	100.000	109.93
4 Propionitrile	54	3.652	3.652	(0.873)	661943	1000.00	997.74
2 Dichlorodifluoromethane	85	0.966	0.966	(0.231)	326339	100.000	100.90
3 Chloromethane	50	1.073	1.073	(0.257)	504548	100.000	99.95
5 Vinyl Chloride	62	1.138	1.138	(0.272)	435381	100.000	99.70
6 Bromomethane	94	1.331	1.331	(0.318)	203423	100.000	104.30
7 Chloroethane	64	1.396	1.396	(0.334)	217230	100.000	102.12
8 Trichlorofluoromethane	101	1.560	1.560	(0.373)	455540	100.000	106.86
9 Acrolein	56	1.854	1.854	(0.443)	51935	200.000	199.80
10 Acetone	43	1.969	1.969	(0.471)	216512	200.000	206.24
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	240131	100.000	98.87
15 Iodomethane	142	2.026	2.026	(0.485)	730685	200.000	203.08
16 Acrylonitrile	53	2.535	2.535	(0.606)	369687	200.000	199.91
17 Methylene Chloride	84	2.305	2.305	(0.551)	310528	100.000	103.27
18 Methyl tert-butyl ether	73	2.535	2.535	(0.606)	874802	100.000	97.37
19 Carbon Disulfide	76	2.069	2.069	(0.495)	1657301	200.000	207.46
20 trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	283351	100.000	100.32
21 Vinyl Acetate	43	3.000	3.000	(0.717)	2379659	200.000	204.92

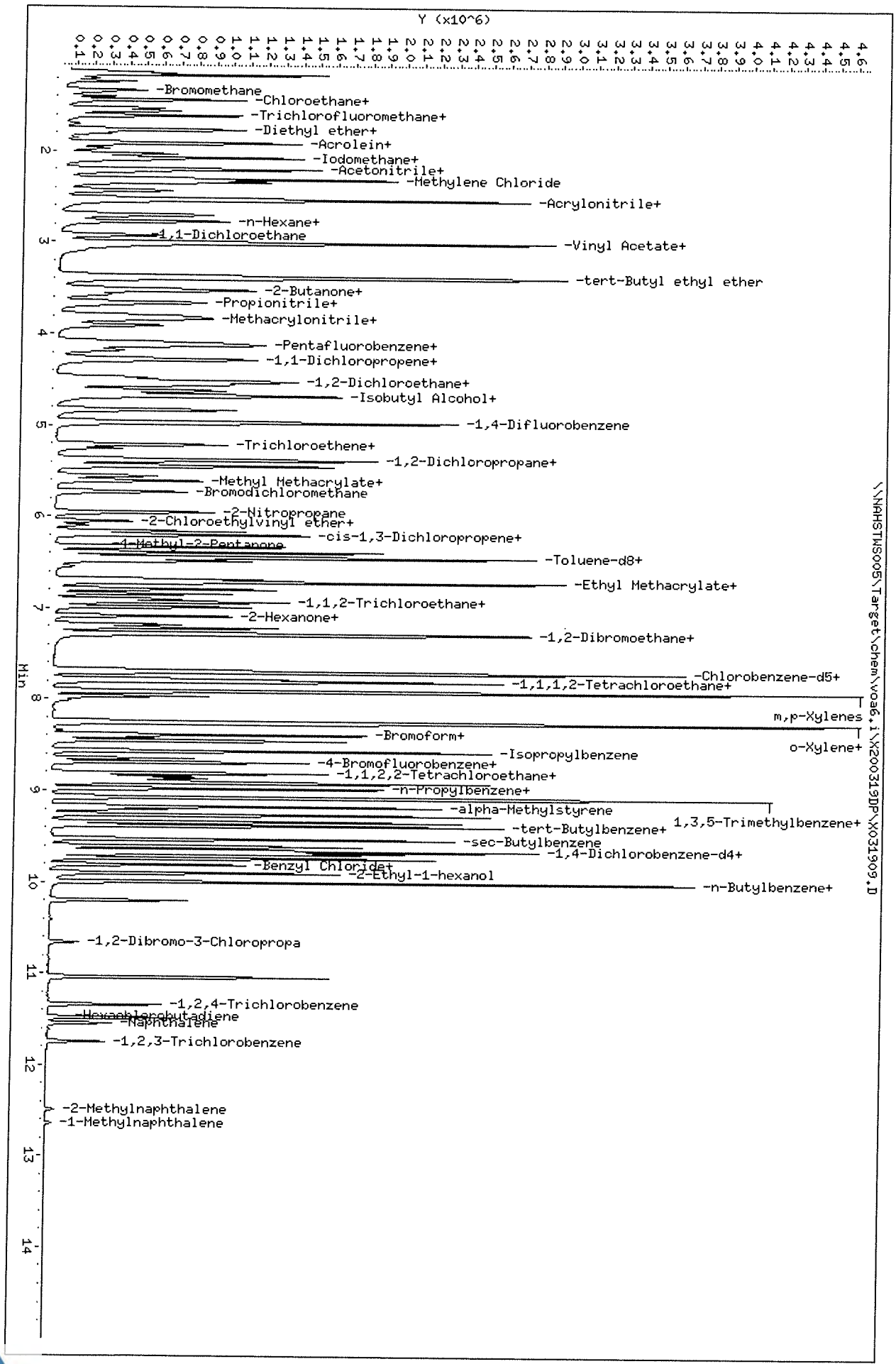
Data File: \\NAHSTWS005\Target\chem\voa6.i\X200319DP\X031909.D Page 2
Report Date: 15-Apr-2020 14:24

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
	22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	660408	100.000	103.47
	24 2-Butanone	43	3.573	3.573	(0.854)	359895	200.000	209.84
	26 2,2-Dichloropropane	77	3.509	3.509	(0.839)	451766	100.000	101.16
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	331114	100.000	101.44
	28 Chloroform	83	3.910	3.910	(0.935)	525175	100.000	99.09
	29 Bromochloromethane	128	3.795	3.795	(0.908)	162945	100.000	95.69
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	290125	100.000	101.98
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	463257	100.000	104.44
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	402683	100.000	97.44
	33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	481696	100.000	103.69
	34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	407262	100.000	97.82(H)
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	366265	100.000	101.87
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	439703	50.0000	
	37 Benzene	78	4.512	4.512	(0.908)	1177865	100.000	101.30
	38 Trichloroethene	130	5.206	5.206	(1.048)	320532	100.000	105.17
	39 Bromodichloromethane	83	5.729	5.729	(1.153)	403894	100.000	99.86
	41 2-Chloroethylvinyl ether	63	6.052	6.052	(1.218)	172175	200.000	216.62
	42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	373714	100.000	99.95
	44 Dibromomethane	93	5.557	5.557	(1.118)	196973	100.000	102.01
	45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	837755	200.000	197.34
	46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	508156	100.000	102.29
*	47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	412807	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	1054666	100.000	99.81
	50 Toluene	91	6.446	6.446	(0.840)	1241839	100.000	99.02
	51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	463895	100.000	105.63
	52 2-Hexanone	43	7.090	7.090	(0.924)	569169	200.000	201.10
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	230846	100.000	97.06
	54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	483487	100.000	97.80
	55 Dibromochloromethane	129	7.176	7.176	(0.936)	320226	100.000	100.08
	56 Tetrachloroethene	164	6.933	6.933	(0.904)	262641	100.000	101.94
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	290036	100.000	98.00
	58 1-Chlorohexane	55	7.699	7.699	(1.549)	394403	100.000	102.91
	59 Chlorobenzene	112	7.699	7.699	(1.004)	805199	100.000	99.01
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	303827	100.000	99.75
	61 Ethylbenzene	106	7.799	7.799	(1.017)	439751	100.000	101.84
	62 m,p-Xylenes	106	7.907	7.907	(1.031)	1055261	200.000	203.74
	63 o-Xylene	106	8.244	8.244	(1.075)	512373	100.000	101.34
	64 Styrene	104	8.258	8.258	(1.077)	899459	100.000	101.02
	66 Bromoform	173	8.415	8.415	(1.097)	222273	100.000	103.56
	67 Isopropylbenzene	105	8.566	8.566	(1.117)	1313933	100.000	103.23
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	329585	100.000	96.07
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	397823	100.000	100.64
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	202255	50.0000	
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	290038	100.000	100.35(M)
	73 n-Propylbenzene	91	8.917	8.917	(0.922)	1532692	100.000	105.86
	74 Bromobenzene	156	8.809	8.809	(0.911)	371399	100.000	103.04
	75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	1085888	100.000	103.45
	76 2-Chlorotoluene	91	8.974	8.974	(0.928)	892647	100.000	101.42
	77 4-Chlorotoluene	91	9.074	9.074	(0.939)	1043851	100.000	103.45
	78 tert-Butylbenzene	119	9.339	9.339	(0.966)	903121	100.000	101.82
	79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	1099023	100.000	104.58
	81 sec-Butylbenzene	105	9.526	9.526	(0.985)	1293767	100.000	105.41
	82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	1127065	100.000	106.37
	83 1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	629654	100.000	104.52

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	624029	100.000	100.18
87	n-Butylbenzene	91	9.998	9.998	(1.034)	977967	100.000	107.01
88	1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	563387	100.000	103.76
89	1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.102)	33604	100.000	98.90
90	1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	169420	100.000	99.82
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	121295	100.000	96.04
92	Naphthalene	128	11.546	11.546	(1.194)	241230	100.000	96.30
93	1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	85762	100.000	99.60
M 94	1,2-Dichloroethylene (total)	96				614465	200.000	(a)
135	1,4-Dioxane	88	5.600	5.600	(1.339)	71184	2000.00	2154.62
141	Cyclohexane	56	4.125	4.125	(0.986)	670041	100.000	108.86
138	Freon TF	101	1.911	1.911	(0.457)	241148	100.000	109.46
147	Methylcyclohexane	55	5.378	5.378	(1.082)	1148019	100.000	103.22(A)
146	Methyl Acetate	43	2.227	2.227	(0.532)	331536	100.000	106.46
148	Tert-Butyl alcohol	59	2.434	2.434	(0.582)	808861	2000.00	2015.41
149	Isopropyl Alcohol	45	2.098	2.098	(0.502)	575061	2000.00	2033.57

QC Flag Legend

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



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200319DP\X031909.D
Date : 19-MAR-2020 14:46
Client ID: VSTD100
Sample Info: VSTD100;VSTD100;1;8;;
Purge Volume: 5.0
Column phase: DB624

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

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200319DP\X031910.D
Lab Smp Id: VSTD150 Client Smp ID: VSTD150
Inj Date : 19-MAR-2020 15:10
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\X200319DP\8260W.m
Meth Date : 15-Apr-2020 14:24 voa6.i Quant Type: ISTD
Cal Date : 19-MAR-2020 14:46 Cal File: X031909.D
Als bottle: 11 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.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)	285712	50.0000	
194 Acetaldehyde	44	1.210	1.210	(0.289)	172238	600.000	583.76(M)
140 1,3-Butadiene	54	1.159	1.159	(0.277)	659703	150.000	157.26
25 Methacrylonitrile	41	3.817	3.817	(0.913)	587235	150.000	141.10
136 n-Hexane	57	2.771	2.771	(0.663)	766429	150.000	158.45
4 Propionitrile	54	3.659	3.659	(0.875)	938618	1500.00	1419.24
2 Dichlorodifluoromethane	85	0.966	0.966	(0.231)	471885	150.000	145.92
3 Chloromethane	50	1.073	1.073	(0.257)	731993	150.000	145.00
5 Vinyl Chloride	62	1.138	1.138	(0.272)	636695	150.000	146.27
6 Bromomethane	94	1.331	1.331	(0.318)	287355	150.000	147.99
7 Chloroethane	64	1.396	1.396	(0.334)	312401	150.000	147.48
8 Trichlorofluoromethane	101	1.561	1.561	(0.373)	657928	150.000	154.82
9 Acrolein	56	1.854	1.854	(0.443)	77253	300.000	298.73
10 Acetone	43	1.969	1.969	(0.471)	303043	300.000	295.01
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	347727	150.000	143.62
15 Iodomethane	142	2.026	2.026	(0.485)	1092503	300.000	299.12
16 Acrylonitrile	53	2.535	2.535	(0.606)	517404	300.000	280.68
17 Methylene Chloride	84	2.306	2.306	(0.551)	437081	150.000	146.41
18 Methyl tert-butyl ether	73	2.535	2.535	(0.606)	1253947	150.000	140.02
19 Carbon Disulfide	76	2.069	2.069	(0.495)	2371886	300.000	297.85
20 trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	406540	150.000	144.39
21 Vinyl Acetate	43	3.000	3.000	(0.717)	3388660	300.000	292.73

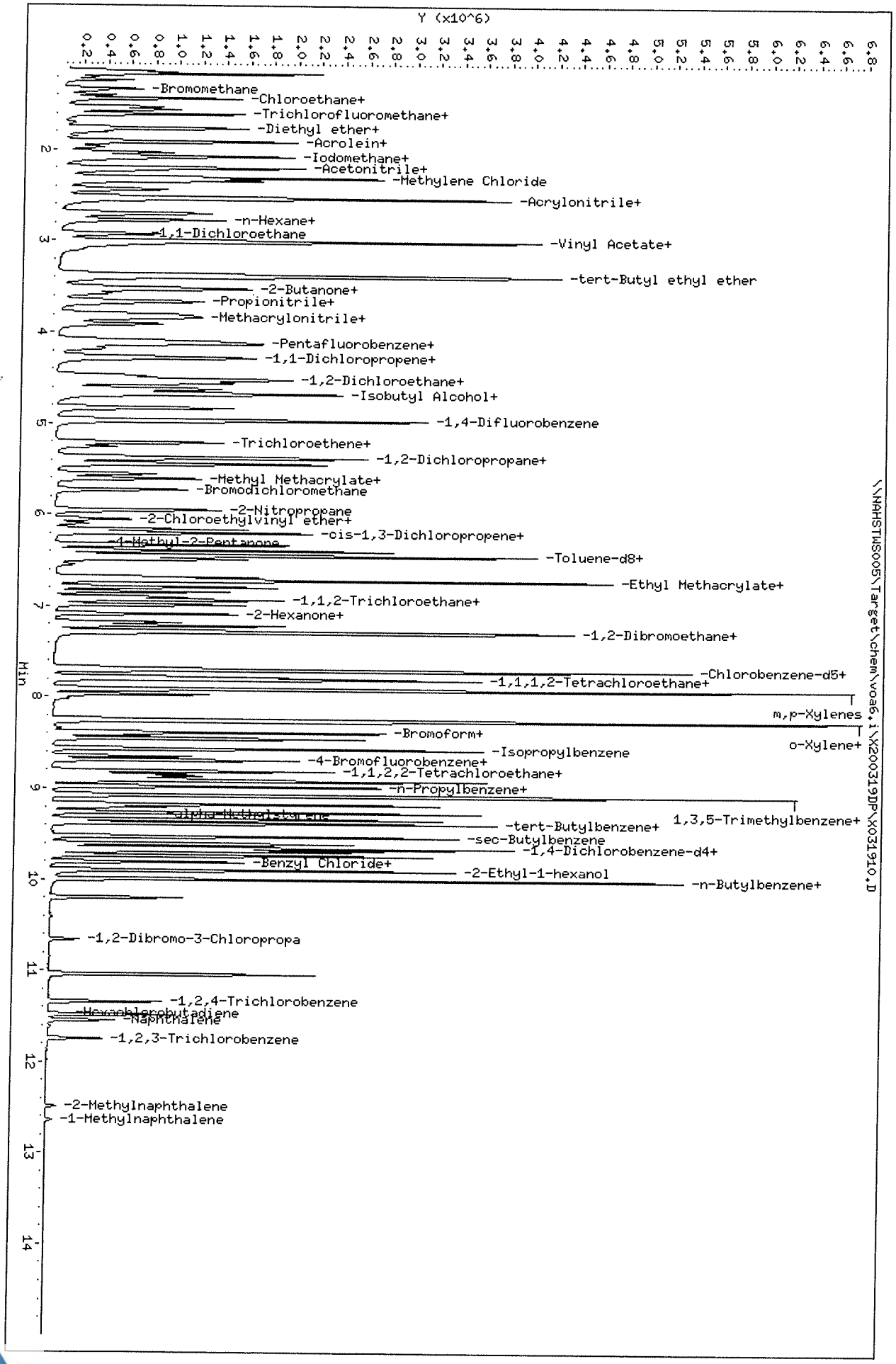
Data File: \\NAHSTWS005\Target\chem\voa6.i\X200319DP\X031910.D Page 2
Report Date: 15-Apr-2020 14:24

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	22 1,1-Dichloroethane	63	2.922	2.922	(0.699)	948191	150.000	149.02
	24 2-Butanone	43	3.573	3.573	(0.854)	497070	300.000	291.21
	26 2,2-Dichloropropane	77	3.509	3.509	(0.839)	645511	150.000	145.00
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	468820	150.000	144.08
	28 Chloroform	83	3.910	3.910	(0.935)	759996	150.000	143.85
	29 Bromochloromethane	128	3.795	3.795	(0.908)	229996	150.000	135.49
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	416931	150.000	147.07
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	666081	150.000	150.65
	32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	587782	150.000	145.26
	33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	692218	150.000	152.19
	34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	593692	150.000	145.64(H)
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	529642	150.000	147.86
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	430514	50.0000	
	37 Benzene	78	4.512	4.512	(0.908)	1691673	150.000	148.60
	38 Trichloroethene	130	5.207	5.207	(1.048)	461294	150.000	154.59
	39 Bromodichloromethane	83	5.729	5.729	(1.153)	592277	150.000	149.57
	41 2-Chloroethylvinyl ether	63	6.052	6.052	(1.218)	247783	300.000	318.40
	42 1,2-Dichloropropane	63	5.436	5.436	(1.094)	538425	150.000	147.08
	44 Dibromomethane	93	5.558	5.558	(1.118)	284031	150.000	150.23
	45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	1230331	300.000	300.82
	46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	738492	150.000	151.83
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	397694	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	1518049	150.000	149.15
	50 Toluene	91	6.446	6.446	(0.840)	1772413	150.000	146.70
	51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	668696	150.000	155.52
	52 2-Hexanone	43	7.090	7.090	(0.924)	843572	300.000	309.39
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	326278	150.000	142.40
	54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	691711	150.000	145.24
	55 Dibromochloromethane	129	7.176	7.176	(0.936)	462936	150.000	150.19
	56 Tetrachloroethene	164	6.933	6.933	(0.904)	379985	150.000	153.09
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	418517	150.000	146.78
	58 1-Chlorohexane	55	7.699	7.699	(1.549)	567300	150.000	151.18
	59 Chlorobenzene	112	7.699	7.699	(1.004)	1159521	150.000	148.00
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	445294	150.000	151.76
	61 Ethylbenzene	106	7.800	7.800	(1.017)	629668	150.000	151.36
	62 m,p-Xylenes	106	7.907	7.907	(1.031)	1518024	300.000	304.23
	63 o-Xylene	106	8.244	8.244	(1.075)	736668	150.000	151.24
	64 Styrene	104	8.265	8.265	(1.078)	1281550	150.000	149.41
	66 Bromoform	173	8.416	8.416	(1.097)	317135	150.000	153.38
	67 Isopropylbenzene	105	8.566	8.566	(1.117)	1894328	150.000	154.48
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	473161	150.000	140.80
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	566125	150.000	148.90
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	198118	50.0000	
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	411651	150.000	145.40(M)
	73 n-Propylbenzene	91	8.917	8.917	(0.922)	2212844	150.000	156.03
	74 Bromobenzene	156	8.810	8.810	(0.911)	538014	150.000	152.38
	75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	1574959	150.000	153.19
	76 2-Chlorotoluene	91	8.981	8.981	(0.929)	1296866	150.000	150.43
	77 4-Chlorotoluene	91	9.075	9.075	(0.939)	1504217	150.000	152.19
	78 tert-Butylbenzene	119	9.340	9.340	(0.966)	1294499	150.000	149.00
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	1600393	150.000	155.47
	81 sec-Butylbenzene	105	9.526	9.526	(0.985)	1871774	150.000	155.69
	82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	1628806	150.000	156.93
	83 1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	904120	150.000	153.22

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	897453	150.000	147.08
87	n-Butylbenzene	91	9.999	9.999	(1.034)	1398349	150.000	156.20
88	1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	802042	150.000	150.80
89	1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	47590	150.000	142.52
90	1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	245681	150.000	147.46
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	172213	150.000	139.21
92	Naphthalene	128	11.546	11.546	(1.194)	357065	150.000	144.53
93	1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	123021	150.000	145.39
M 94	1,2-Dichloroethylene (total)	96				875360	300.000	(a)
135	1,4-Dioxane	88	5.601	5.601	(1.339)	99056	3000.00	3007.72
141	Cyclohexane	56	4.125	4.125	(0.986)	963518	150.000	157.04
138	Freon TF	101	1.912	1.912	(0.457)	348564	150.000	158.72
147	Methylcyclohexane	55	5.378	5.378	(1.082)	1664247	150.000	152.83(A)
146	Methyl Acetate	43	2.227	2.227	(0.532)	476410	150.000	153.47
148	Tert-Butyl alcohol	59	2.434	2.434	(0.582)	1136958	3000.00	2841.86
149	Isopropyl Alcohol	45	2.098	2.098	(0.502)	785587	3000.00	2786.81

QC Flag Legend

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



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200319DP\X031910.D
Date : 19-MAR-2020 15:10
Client ID: VSTD150
Sample Info: VSTD150;VSTD150;1;9;;
Purge Volume: 5.0
Column phase: DB624

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

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200319DP\X031911.D
Lab Smp Id: VSTD200 Client Smp ID: VSTD200
Inj Date : 19-MAR-2020 15:33
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\X200319DP\8260W.m
Meth Date : 15-Apr-2020 14:24 voa6.i Quant Type: ISTD
Cal Date : 19-MAR-2020 15:10 Cal File: X031910.D
Als bottle: 12 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.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)	273221	50.0000	
194 Acetaldehyde	44	1.210	1.210	(0.289)	219665	800.000	778.54(M)
140 1,3-Butadiene	54	1.159	1.159	(0.277)	874826	200.000	218.08(A)
25 Methacrylonitrile	41	3.824	3.824	(0.914)	761594	200.000	191.37
136 n-Hexane	57	2.771	2.771	(0.663)	994119	200.000	214.92(A)
4 Propionitrile	54	3.659	3.659	(0.875)	1222944	2000.00	1933.70
2 Dichlorodifluoromethane	85	0.966	0.966	(0.231)	629109	200.000	203.03(A)
3 Chloromethane	50	1.073	1.073	(0.257)	988147	200.000	204.27(A)
5 Vinyl Chloride	62	1.138	1.138	(0.272)	840563	200.000	201.93(A)
6 Bromomethane	94	1.331	1.331	(0.318)	370752	200.000	199.82
7 Chloroethane	64	1.396	1.396	(0.334)	406978	200.000	201.03(A)
8 Trichlorofluoromethane	101	1.553	1.553	(0.371)	865123	200.000	212.89(A)
9 Acrolein	56	1.854	1.854	(0.443)	98725	400.000	399.62
10 Acetone	43	1.976	1.976	(0.473)	388579	400.000	400.16(A)
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	451814	200.000	195.15
15 Iodomethane	142	2.026	2.026	(0.485)	1422582	400.000	399.88
16 Acrylonitrile	53	2.535	2.535	(0.606)	676824	400.000	383.94
17 Methylene Chloride	84	2.305	2.305	(0.551)	572059	200.000	200.90(A)
18 Methyl tert-butyl ether	73	2.535	2.535	(0.606)	1639368	200.000	191.43
19 Carbon Disulfide	76	2.069	2.069	(0.495)	3119639	400.000	409.67(A)
20 trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	531005	200.000	197.23
21 Vinyl Acetate	43	3.000	3.000	(0.717)	4422918	400.000	399.54

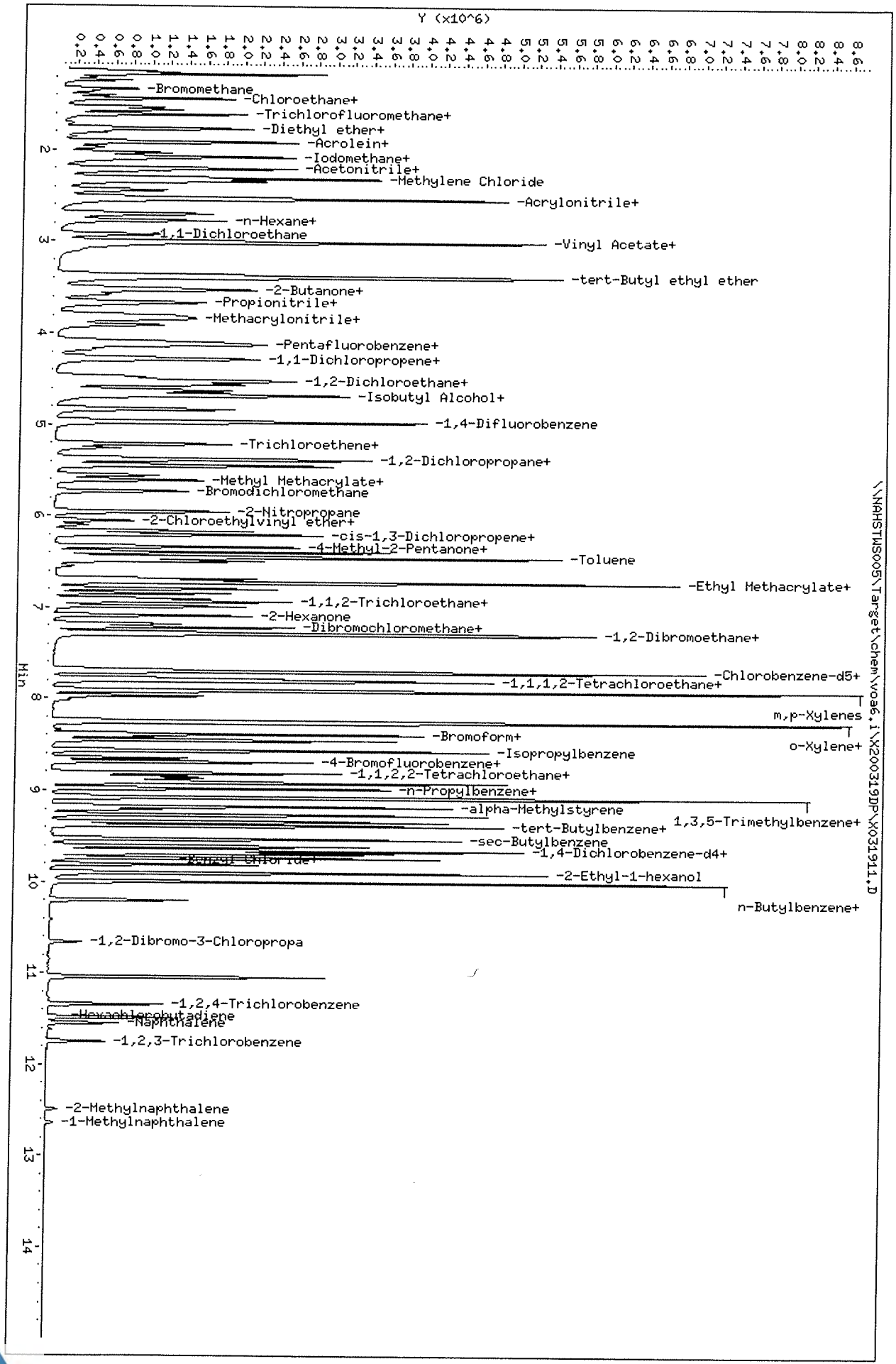
Data File: \\NAHSTWS005\Target\chem\voa6.i\X200319DP\X031911.D Page 2
Report Date: 15-Apr-2020 14:24

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	22 1,1-Dichloroethane	63	2.922	2.922	(0.699)	1243557	200.000	204.38(A)
	24 2-Butanone	43	3.573	3.573	(0.854)	654316	400.000	401.32(A)
	26 2,2-Dichloropropane	77	3.509	3.509	(0.839)	844564	200.000	198.39
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	619486	200.000	199.09
	28 Chloroform	83	3.910	3.910	(0.935)	997512	200.000	197.44
	29 Bromochloromethane	128	3.795	3.795	(0.908)	295088	200.000	181.79
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	545685	200.000	201.33(A)
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	876411	200.000	207.28(A)
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	767969	200.000	200.11(A)
	33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	908572	200.000	210.61(A)
	34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	785989	200.000	203.29(AH)
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	688377	200.000	201.01(A)
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	408332	50.0000	
	37 Benzene	78	4.512	4.512	(0.908)	2233172	200.000	206.83(A)
	38 Trichloroethene	130	5.207	5.207	(1.048)	603965	200.000	213.40(A)
	39 Bromodichloromethane	83	5.729	5.729	(1.153)	777914	200.000	207.12(A)
	41 2-Chloroethylvinyl ether	63	6.052	6.052	(1.218)	331022	400.000	448.47(A)
	42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	711371	200.000	204.89(A)
	44 Dibromomethane	93	5.558	5.558	(1.118)	374361	200.000	208.77(A)
	45 4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	1646427	400.000	415.24(A)
	46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	973271	200.000	210.97(A)
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	385556	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	1981187	200.000	200.82(A)
	50 Toluene	91	6.453	6.453	(0.841)	2348004	200.000	200.46(A)
	51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	878457	200.000	215.41(A)
	52 2-Hexanone	43	7.090	7.090	(0.924)	1128514	400.000	426.93(A)
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	427427	200.000	192.42
	54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	907304	200.000	196.50
	55 Dibromochloromethane	129	7.184	7.184	(0.937)	615447	200.000	205.95(A)
	56 Tetrachloroethene	164	6.933	6.933	(0.904)	495976	200.000	206.11(A)
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	551238	200.000	199.42
	58 1-Chlorohexane	55	7.699	7.699	(1.549)	746897	200.000	209.86(A)
	59 Chlorobenzene	112	7.699	7.699	(1.004)	1533740	200.000	201.92(A)
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	582637	200.000	204.81(A)
	61 Ethylbenzene	106	7.807	7.807	(1.018)	833444	200.000	206.65(A)
	62 m,p-Xylenes	106	7.907	7.907	(1.031)	2010382	400.000	415.58(A)
	63 o-Xylene	106	8.244	8.244	(1.075)	967457	200.000	204.87(A)
	64 Styrene	104	8.265	8.265	(1.078)	1694416	200.000	203.77(A)
	66 Bromoform	173	8.416	8.416	(1.097)	422053	200.000	210.55(A)
	67 Isopropylbenzene	105	8.566	8.566	(1.117)	2497470	200.000	210.09(A)
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	633008	200.000	195.62
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	739220	200.000	200.72(A)
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	190770	50.0000	
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	536856	200.000	196.93(M)
	73 n-Propylbenzene	91	8.917	8.917	(0.922)	2928666	200.000	214.46(A)
	74 Bromobenzene	156	8.810	8.810	(0.911)	709081	200.000	208.57(A)
	75 1,3,5-Trimethylbenzene	105	9.075	9.075	(0.939)	2064356	200.000	208.52(A)
	76 2-Chlorotoluene	91	8.981	8.981	(0.929)	1698858	200.000	204.64(A)
	77 4-Chlorotoluene	91	9.075	9.075	(0.939)	1976941	200.000	207.72(A)
	78 tert-Butylbenzene	119	9.340	9.340	(0.966)	1717735	200.000	205.33(A)
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	2117296	200.000	213.61(A)
	81 sec-Butylbenzene	105	9.526	9.526	(0.985)	2474942	200.000	213.79(A)
	82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	2157385	200.000	215.86(A)
	83 1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	1196016	200.000	210.49(A)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	1197957	200.000	203.89(A)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	1856828	200.000	215.41(A)
88	1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	1057834	200.000	206.56(A)
89	1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	66266	200.000	205.63(A)
90	1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	324332	200.000	201.94(A)
91	Hexachlorobutadiene	225	11.488	11.488	(1.188)	225137	200.000	189.00
92	Naphthalene	128	11.546	11.546	(1.194)	492204	200.000	206.06(A)
93	1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	166163	200.000	203.55(A)
M 94	1,2-Dichloroethylene (total)	96				1150491	400.000	(a)
135	1,4-Dioxane	88	5.600	5.600	(1.339)	132373	4000.00	4203.11(A)
141	Cyclohexane	56	4.125	4.125	(0.986)	1267036	200.000	215.96(A)
138	Freon TF	101	1.912	1.912	(0.457)	455138	200.000	216.72(A)
147	Methylcyclohexane	55	5.378	5.378	(1.082)	2183530	200.000	211.41(A)
146	Methyl Acetate	43	2.227	2.227	(0.532)	626578	200.000	211.07(A)
148	Tert-Butyl alcohol	59	2.434	2.434	(0.582)	1584030	4000.00	4140.35(A)
149	Isopropyl Alcohol	45	2.098	2.098	(0.502)	1064593	4000.00	3949.22

QC Flag Legend

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



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200319DP\X031911.D
Date : 19-MAR-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

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200319DP\X031915.D
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 19-MAR-2020 17:09
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\X200319DP\8260W.m
Meth Date : 15-Apr-2020 14:24 voa6.i Quant Type: ISTD
Cal Date : 19-MAR-2020 15:33 Cal File: X031911.D
Als bottle: 16 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.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)	286433	50.0000	
194 Acetaldehyde	44	1.209	1.210	(0.289)	69789	235.940	235.94
140 1,3-Butadiene	54	1.159	1.159	(0.277)	221029	52.5583	52.55
25 Methacrylonitrile	41	3.817	3.824	(0.913)	211289	50.6433	50.64
136 n-Hexane	57	2.771	2.771	(0.663)	260390	53.6997	53.69
4 Propionitrile	54	3.652	3.659	(0.873)	342696	516.873	516.87
2 Dichlorodifluoromethane	85	0.966	0.966	(0.231)	152772	47.8065	47.80
3 Chloromethane	50	1.073	1.073	(0.257)	239142	47.9516	47.95
5 Vinyl Chloride	62	1.138	1.138	(0.272)	208794	47.8466	47.84
6 Bromomethane	94	1.338	1.331	(0.320)	109581	56.0202	56.02
7 Chloroethane	64	1.403	1.396	(0.336)	106040	49.7060	49.70
8 Trichlorofluoromethane	101	1.560	1.553	(0.373)	219266	51.4696	51.46
9 Acrolein	56	1.854	1.854	(0.443)	25004	95.6313	95.63
10 Acetone	43	1.969	1.976	(0.471)	122985	111.428	111.42
11 1,1-Dichloroethene	96	1.911	1.912	(0.457)	119289	49.1482	49.14
15 Iodomethane	142	2.026	2.026	(0.485)	340790	97.2434	97.24
16 Acrylonitrile	53	2.535	2.535	(0.606)	185078	100.148	100.14
17 Methylene Chloride	84	2.305	2.305	(0.551)	157492	51.7167	51.71
18 Methyl tert-butyl ether	73	2.535	2.535	(0.606)	439740	48.9808	48.98
19 Carbon Disulfide	76	2.069	2.069	(0.495)	813441	101.894	101.89
20 trans-1,2-Dichloroethene	96	2.527	2.528	(0.604)	143090	50.6965	50.69
21 Vinyl Acetate	43	3.000	3.000	(0.717)	1215336	104.724	104.72

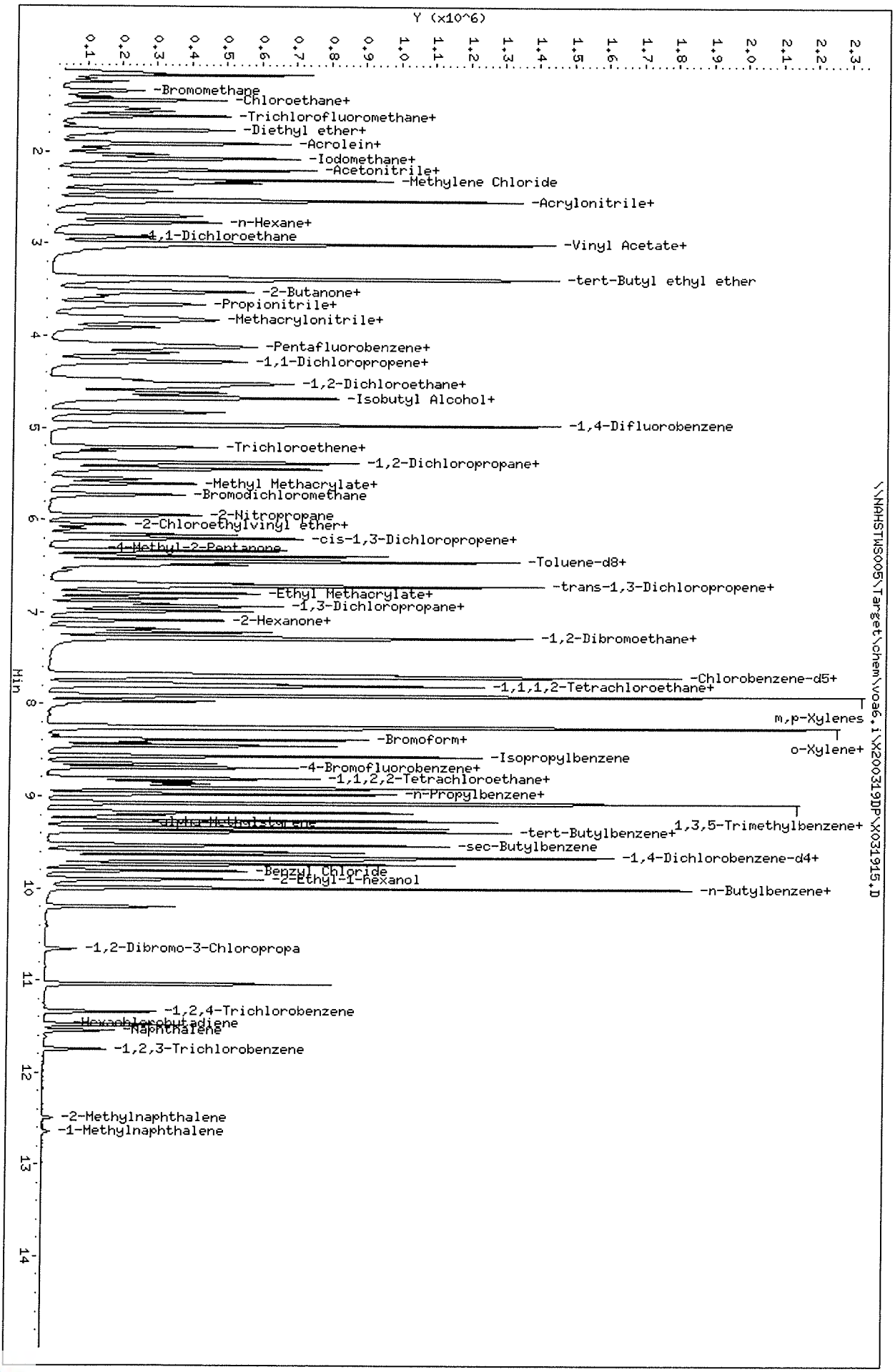
Data File: \\NAHSTWS005\Target\chem\voa6.i\X200319DP\X031915.D Page 2
Report Date: 15-Apr-2020 14:24

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
	22 1,1-Dichloroethane	63	2.921	2.922	(0.699)	325609	51.0477	51.04
	24 2-Butanone	43	3.573	3.573	(0.854)	183455	106.434	106.43
	26 2,2-Dichloropropane	77	3.516	3.509	(0.841)	233005	52.2089	52.20
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	163069	49.9916	49.99
	28 Chloroform	83	3.910	3.910	(0.935)	262117	49.4897	49.48
	29 Bromochloromethane	128	3.795	3.795	(0.908)	84125	49.4362	49.43
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	148947	52.3413	52.34
	31 1,1,1-Trichloroethane	97	4.082	4.089	(0.976)	225132	50.7911	50.79
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	201566	48.2102	48.21
	33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	243287	51.7645	51.76
	34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	201378	47.8084	47.80
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	188752	52.4596	52.45
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	444859	50.0000	
	37 Benzene	78	4.512	4.512	(0.908)	585201	49.7494	49.74
	38 Trichloroethene	130	5.206	5.207	(1.048)	155631	50.4744	50.47
	39 Bromodichloromethane	83	5.729	5.729	(1.153)	203262	49.6771	49.67
	41 2-Chloroethylvinyl ether	63	6.052	6.052	(1.218)	86038	106.995	106.99
	42 1,2-Dichloropropane	63	5.436	5.443	(1.094)	186757	49.3737	49.37
	44 Dibromomethane	93	5.557	5.558	(1.118)	98804	50.5772	50.57
	45 4-Methyl-2-Pentanone	43	6.324	6.331	(0.824)	433250	102.039	102.03
	46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	256671	51.0701	51.07
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	412876	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	528266	49.9474	49.94
	50 Toluene	91	6.446	6.453	(0.840)	623254	49.6896	49.68
	51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	231539	52.1150	52.11
	52 2-Hexanone	43	7.090	7.090	(0.924)	291598	103.016	103.01
	53 1,1,2-Trichloroethane	83	6.840	6.847	(0.892)	118115	49.6548	49.65
	54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	245721	49.6976	49.69
	55 Dibromochloromethane	129	7.176	7.184	(0.936)	161318	50.4120	50.41
	56 Tetrachloroethene	164	6.933	6.933	(0.904)	128325	49.8010	49.80
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	146879	49.6210	49.62
	58 1-Chlorohexane	55	7.699	7.699	(1.549)	194588	50.1862	50.18
	59 Chlorobenzene	112	7.699	7.699	(1.004)	405100	49.8053	49.80
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	152004	49.8996	49.89
	61 Ethylbenzene	106	7.799	7.807	(1.017)	218481	50.5888	50.58
	62 m,p-Xylenes	106	7.907	7.907	(1.031)	528609	102.044	102.04
	63 o-Xylene	106	8.244	8.244	(1.075)	256331	50.6907	50.69
	64 Styrene	104	8.258	8.265	(1.077)	454347	51.0244	51.02
	66 Bromoform	173	8.415	8.416	(1.097)	111551	51.9682	51.96
	67 Isopropylbenzene	105	8.566	8.566	(1.117)	648434	50.9376	50.93
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.845	(0.915)	172061	48.5215	48.52
$	69 4-Bromofluorobenzene	95	8.688	8.695	(1.133)	201904	50.8305	50.83
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.669	(1.000)	209059	50.0000	
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	151236	50.6247	50.62(M)
	73 n-Propylbenzene	91	8.917	8.917	(0.923)	767293	51.2730	51.27
	74 Bromobenzene	156	8.809	8.810	(0.912)	185649	49.8317	49.83
	75 1,3,5-Trimethylbenzene	105	9.067	9.075	(0.938)	547661	50.4811	50.48
	76 2-Chlorotoluene	91	8.974	8.981	(0.929)	453611	49.8630	49.86
	77 4-Chlorotoluene	91	9.074	9.075	(0.939)	524836	50.3224	50.32
	78 tert-Butylbenzene	119	9.339	9.340	(0.967)	452674	49.3784	49.37
	79 1,2,4-Trimethylbenzene	105	9.382	9.383	(0.971)	561735	51.7159	51.71
	81 sec-Butylbenzene	105	9.526	9.526	(0.986)	642389	50.6371	50.63
	82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	566654	51.7397	51.73
	83 1,3-Dichlorobenzene	146	9.605	9.612	(0.994)	318697	51.1832	51.18

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
	84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	315469	48.9974	48.99
	87 n-Butylbenzene	91	9.998	9.999	(1.035)	497200	52.6355	52.63
	88 1,2-Dichlorobenzene	146	9.998	9.999	(1.035)	288756	51.4522	51.45
	89 1,2-Dibromo-3-Chloropropane	155	10.657	10.658	(1.103)	17665	50.8159	50.81
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	89521	51.3382	51.33
	91 Hexachlorobutadiene	225	11.481	11.488	(1.188)	65384	50.0880	50.08
	92 Naphthalene	128	11.546	11.546	(1.195)	128692	50.6482	50.64
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	46377	52.5788	52.57
M	94 1,2-Dichloroethylene (total)	96				306159	100.688	100.68
M	95 Xylenes (total)	106				784940	152.735	152.73
	135 1,4-Dioxane	88	5.600	5.600	(1.339)	35120	1063.70	1063.69
	141 Cyclohexane	56	4.125	4.125	(0.986)	322519	52.4368	52.43
	138 Freon TF	101	1.911	1.912	(0.457)	115501	52.4627	52.46
	147 Methylcyclohexane	55	5.378	5.378	(1.082)	569909	50.6482	50.64
	146 Methyl Acetate	43	2.227	2.227	(0.532)	166755	53.5833	53.58
	148 Tert-Butyl alcohol	59	2.434	2.434	(0.582)	432679	1078.78	1078.77
	149 Isopropyl Alcohol	45	2.098	2.098	(0.502)	308186	1090.52	1090.51

QC Flag Legend

M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200319DP\X031915.D
Date : 19-MAR-2020 17:09
Client ID: ICV
Sample Info: CCV;CCV;2;;;ICV
Purge Volume: 5.0
Column phase: DB624

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

MSVOA06 -Logbook

Batch: 40077
Date: 03-25-2020
Method: 8260
Comments:

Analyst: Presenta Cabascango
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	03-25-2020 12:49 pm	1.00	50 mL	50 mL	X032501a.D	Liquid	Y	NA
	Auto find/ purged									
2	BFB	TUNE	03-25-2020 01:13 pm	1.00	50 mL	50 mL	X032502.D	Liquid	Y	NA
	Auto find/ purged									
3	CCV	CCV	03-25-2020 01:37 pm	1.00	50 mL	50 mL	X032503.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
4	CCB	SAMP	03-25-2020 02:01 pm	1.00	50 mL	50 mL	X032504.D	Liquid	Y	NA
5	VLCSW-200325	LCS	03-25-2020 02:25 pm	1.00	50 mL	50 mL	X032505.D	Liquid	Y	NA
	4.0 uL cal std/50 mL DI									
6	BLANK	SAMP	03-25-2020 02:49 pm	1.00	50 mL	50 mL	X032506.D	Liquid	Y	NA
7	VBLKW-200325	MBLK	03-25-2020 03:13 pm	1.00	50 mL	50 mL	X032507.D	Liquid	Y	NA
8	HS20031084-08	SAMP	03-25-2020 03:37 pm	1.00	50 mL	50 mL	X032508.D	Liquid	Y	<2
9	HS20031084-01	SAMP	03-25-2020 04:01 pm	1.00	50 mL	50 mL	X032509.D	Liquid	Y	<2
10	HS20031084-02	SAMP	03-25-2020 04:25 pm	1.00	50 mL	50 mL	X032510.D	Liquid	Y	<2
11	HS20031084-04	SAMP	03-25-2020 04:49 pm	1.00	50 mL	50 mL	X032511.D	Liquid	Y	<2
12	HS20031084-05	SAMP	03-25-2020 05:13 pm	1.00	50 mL	50 mL	X032512.D	Liquid	Y	<2
13	HS20031084-06	SAMP	03-25-2020 05:37 pm	1.00	50 mL	50 mL	X032513.D	Liquid	Y	<2
14	HS20031084-07	SAMP	03-25-2020 06:01 pm	1.00	50 mL	50 mL	X032514.D	Liquid	Y	<2
15	HS20031084-03	SAMP	03-25-2020 06:25 pm	25.00	2 mL	50 mL	X032515.D	Liquid	Y	<2
16	HS20031084-03	SAMP	03-25-2020 06:49 pm	5.00	10 mL	50 mL	X032516.D	Liquid	Y	<2
17	HS20031084-03MS	MS	03-25-2020 07:13 pm	25.00	2 mL	50 mL	X032517.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
18	HS20031084-03MSD	MSD	03-25-2020 07:37 pm	25.00	2 mL	50 mL	X032518.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
19	CCV-END	CCV	03-25-2020 08:01 pm	1.00	50 mL	50 mL	X032519.D	Liquid	Y	na
	10 uL cal std/50 mL DI									
20	HS20031013-05	SAMP	03-25-2020 08:25 pm	1.00	50 mL	50 mL	X032520.D	Liquid	Y	<2
21	HS20031009-08	SAMP	03-25-2020 08:49 pm	1.00	50 mL	50 mL	X032521.D	Liquid	Y	<2
22	HS20031009-01	SAMP	03-25-2020 09:13 pm	1.00	50 mL	50 mL	X032522.D	Liquid	Y	<2
23	HS20031009-02	SAMP	03-25-2020 09:37 pm	1.00	50 mL	50 mL	X032523.D	Liquid	Y	<2
24	HS20031009-03	SAMP	03-25-2020 10:01 pm	1.00	50 mL	50 mL	X032524.D	Liquid	Y	<2
25	HS20031009-04	SAMP	03-25-2020 10:25 pm	1.00	50 mL	50 mL	X032525.D	Liquid	Y	<2
26	HS20031009-05	SAMP	03-25-2020 10:50 pm	1.00	50 mL	50 mL	X032526.D	Liquid	Y	<2
27	HS20031009-06	SAMP	03-25-2020 11:14 pm	1.00	50 mL	50 mL	X032527.D	Liquid	Y	<2
28	HS20031009-07	SAMP	03-25-2020 11:38 pm	1.00	50 mL	50 mL	X032528.D	Liquid	Y	<2
29	HS20030942-02	SAMP	03-26-2020 12:02 am	1.00	50 mL	50 mL	X032529.D	Liquid	Y	<2
30	HS20030942-01	SAMP	03-26-2020 12:26 am	1.00	50 mL	50 mL	X032530.D	Liquid	Y	<2

MSVOA06 -Logbook

Chemical	Value
SURR SPK ID	31106-21-06
IS ID	31106-21-06
CAL STD ID	31106-22-01/02
BFB ID	31106-21-06
pH Paper	634-64-11

FORM 2
WATER VOLATILE SURROGATE RECOVERY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS20031084

	CLIENT SAMPLE NO.	S1 #	S2 (DCE) #	S3 (TOL) #	S4 #	S5 #	S6 #	S7 #	S8 #	TOT OUT
01	CCB	96	91	106	97					0
02	VLCSW-200325	104	102	102	101					0
03	VBLKW-200325	94	90	103	97					0
04	HS20031084-0	94	90	105	96					0
05	HS20031084-0	94	92	104	99					0
06	HS20031084-0	96	92	104	96					0
07	HS20031084-0	95	91	103	98					0
08	HS20031084-0	96	91	102	99					0
09	HS20031084-0	96	93	103	99					0
10	HS20031084-0	96	93	106	95					0
11	HS20031084-0	94	90	105	99					0
12	HS20031084-0	95	90	104	98					0
13	HS20031084-0	95	90	103	98					0
14	HS20031084-0	94	89	102	99					0
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										

		QC LIMITS
S1	= Dibromofluoromethane	(71-125)
S2 (DCE)	= 1,2-Dichloroethane-d4	(70-125)
S3 (TOL)	= Toluene-d8	(75-125)
S4	= 4-Bromofluorobenzene	(72-125)

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

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKW-200325

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS20031084

Lab File ID: X032507 Lab Sample ID: VBLKW-200325

Instrument ID: VOA6 Date Extracted:

Matrix: (soil/water) WATER Date Analyzed: 03/25/20

Level: (low/med) LOW Time Analyzed: 1513

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

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	CCB	CCB	X032504	03/25/20
02	VLCSW-200325	VLCSW-200325	X032505	03/25/20
03	HS20031084-0	HS20031084-08	X032508	03/25/20
04	HS20031084-0	HS20031084-01	X032509	03/25/20
05	HS20031084-0	HS20031084-02	X032510	03/25/20
06	HS20031084-0	HS20031084-04	X032511	03/25/20
07	HS20031084-0	HS20031084-05	X032512	03/25/20
08	HS20031084-0	HS20031084-06	X032513	03/25/20
09	HS20031084-0	HS20031084-07	X032514	03/25/20
10	HS20031084-0	HS20031084-03	X032515	03/25/20
11	HS20031084-0	HS20031084-03	X032516	03/25/20
12	HS20031084-0	HS20031084-03M	X032517	03/25/20
13	HS20031084-0	HS20031084-03M	X032518	03/25/20
14				
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30				

COMMENTS:

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS20031084

Lab File ID: X032502 DFTPP Injection Date: 03/25/20

Instrument ID: VOA6 DFTPP Injection Time: 1313

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.0
75	30.0 - 60.0% of mass 95	44.6
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.7 (0.7)1
174	Greater than 50.0% of mass 95	92.2
175	5.0 - 9.0% of mass 174	6.7 (7.3)1
176	95.0 - 101.0% of mass 174	90.8 (98.5)1
177	5.0 - 9.0% of mass 176	6.0 (6.6)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CCV	CCV	X032503	03/25/20	1337
02	CCB	CCB	X032504	03/25/20	1401
03	VLCSW-200325	VLCSW-200325	X032505	03/25/20	1425
04	VBLKW-200325	VBLKW-200325	X032507	03/25/20	1513
05	HS20031084-0	HS20031084-08	X032508	03/25/20	1537
06	HS20031084-0	HS20031084-01	X032509	03/25/20	1601
07	HS20031084-0	HS20031084-02	X032510	03/25/20	1625
08	HS20031084-0	HS20031084-04	X032511	03/25/20	1649
09	HS20031084-0	HS20031084-05	X032512	03/25/20	1713
10	HS20031084-0	HS20031084-06	X032513	03/25/20	1737
11	HS20031084-0	HS20031084-07	X032514	03/25/20	1801
12	HS20031084-0	HS20031084-03	X032515	03/25/20	1825
13	HS20031084-0	HS20031084-03	X032516	03/25/20	1849
14	HS20031084-0	HS20031084-03M	X032517	03/25/20	1913
15	HS20031084-0	HS20031084-03M	X032518	03/25/20	1937
16	CCV-END	CCV-END	X032519	03/25/20	2001
17					
18					
19					
20					
21					
22					

FORM V VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS20031084

Instrument ID: VOA6 Calibration Date: 03/25/20 Time: 1337

Lab File ID: X032503 Init. Calib. Date(s): 03/19/20 03/19/20

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
Dichlorodifluoromethane	43.897343	50.000000	0.4942579	0.1	12.20	20.00	LINR
Chloromethane	47.571160	50.000000	0.8200507	0.1	4.86	20.00	LINR
Vinyl Chloride	0.7620000	0.7160680	0.7160680	0.1	6.03	20.00	AVRG
Bromomethane	51.972082	50.000000	0.3470288	0.1	-3.94	20.00	LINR
Chloroethane	50.858991	50.000000	0.4044401	0.1	-1.72	20.00	LINR
Trichlorofluoromethane	0.7440000	0.7599686	0.7599686	0.1	-2.15	20.00	AVRG
Acrolein	102.10987	100.00000	4.85e-002	0.01	-2.11	20.00	LINR
Acetone	95.357355	100.00000	0.1937755	0.1	4.64	20.00	LINR
1,1-Dichloroethene	0.4240000	0.4098117	0.4098117	0.1	3.35	20.00	AVRG
Iodomethane	103.57234	100.00000	0.6097733	0.1	-3.57	20.00	2RDR
Acrylonitrile	0.3230000	0.3271900	0.3271900	0.05	-1.30	20.00	AVRG
Methylene Chloride	50.028066	50.000000	0.5355912	0.1	-0.06	20.00	LINR
Methyl tert-butyl ether	1.5670000	1.4943013	1.4943013	0.1	4.64	20.00	AVRG
Carbon Disulfide	1.3940000	1.4189841	1.4189841	0.1	-1.79	20.00	AVRG
trans-1,2-Dichloroethene	0.4930000	0.4910296	0.4910296	0.1	0.40	20.00	AVRG
Vinyl Acetate	2.0260000	2.1002320	2.1002320	0.01	-3.66	20.00	AVRG
1,1-Dichloroethane	1.1130000	1.1341824	1.1341824	0.2	-1.90	20.00	AVRG
2-Butanone	103.87435	100.00000	0.3192011	0.1	-3.87	20.00	LINR
2,2-Dichloropropane	0.7790000	0.7010049	0.7010049	0.1	10.01	20.00	AVRG
cis-1,2-Dichloroethene	0.5690000	0.5750584	0.5750584	0.1	-1.06	20.00	AVRG
Chloroform	0.9250000	0.9074548	0.9074548	0.2	1.90	20.00	AVRG
Bromochloromethane	0.2970000	0.2885424	0.2885424	0.1	2.85	20.00	AVRG
1,1,1-Trichloroethane	0.7740000	0.7820324	0.7820324	0.1	-1.04	20.00	AVRG
1,1-Dichloropropene	0.4700000	0.4379635	0.4379635	0.1	6.82	20.00	AVRG
1,2-Dichloroethane	0.5280000	0.5393487	0.5393487	0.1	-2.15	20.00	AVRG
Carbon Tetrachloride	0.4730000	0.4346654	0.4346654	0.1	8.10	20.00	AVRG
Benzene	1.3220000	1.3277316	1.3277316	0.5	-0.43	20.00	AVRG
Trichloroethene	0.3460000	0.3531183	0.3531183	0.2	-2.06	20.00	AVRG
Bromodichloromethane	0.4600000	0.4589161	0.4589161	0.2	0.24	20.00	AVRG
2-Chloroethylvinyl ether	9.e-002	8.75e-002	8.75e-002	0.001	2.78	20.00	AVRG
1,2-Dichloropropane	0.4250000	0.4210246	0.4210246	0.1	0.94	20.00	AVRG
Dibromomethane	0.2190000	0.2252125	0.2252125	0.1	-2.84	20.00	AVRG
4-Methyl-2-Pentanone	0.5140000	0.5182680	0.5182680	0.1	-0.83	20.00	AVRG
cis-1,3-Dichloropropene	0.5650000	0.5571972	0.5571972	0.2	1.38	20.00	AVRG
Toluene	1.5190000	1.4976581	1.4976581	0.4	1.40	20.00	AVRG
trans-1,3-Dichloropropene	0.4990000	0.4970964	0.4970964	0.1	0.38	20.00	AVRG
2-Hexanone	0.3430000	0.3588118	0.3588118	0.1	-4.61	20.00	AVRG
1,1,2-Trichloroethane	0.2880000	0.2835836	0.2835836	0.1	1.53	20.00	AVRG
1,3-Dichloropropane	0.5990000	0.5884447	0.5884447	0.1	1.76	20.00	AVRG
Dibromochloromethane	0.3870000	0.3855962	0.3855962	0.1	0.36	20.00	AVRG
Tetrachloroethene	0.3120000	0.2990801	0.2990801	0.2	4.14	20.00	AVRG
1,2-Dibromoethane	0.3580000	0.3626118	0.3626118	0.1	-1.29	20.00	AVRG

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2003108

Instrument ID: VOA6 Calibration Date: 03/25/20 Time: 1337

Lab File ID: X032503 Init. Calib. Date(s): 03/19/20 03/19/20

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	0.9850000	0.9763034	0.9763034	0.5	0.88	20.00	AVRG	
1,1,1,2-Tetrachloroethane	0.3690000	0.3672255	0.3672255	0.1	0.48	20.00	AVRG	
Ethylbenzene	0.5230000	0.5170936	0.5170936	0.1	1.13	20.00	AVRG	
m,p-Xylenes	0.6270000	0.6162600	0.6162600	0.1	1.71	20.00	AVRG	
o-Xylene	0.6120000	0.6115366	0.6115366	0.3	0.08	20.00	AVRG	
Styrene	1.0780000	1.0578113	1.0578113	0.3	1.87	20.00	AVRG	
Bromoform	0.2600000	0.2677742	0.2677742	0.1	-2.99	20.00	AVRG	
Isopropylbenzene	1.5420000	1.5053889	1.5053889	0.1	2.37	20.00	AVRG	
1,1,2,2-Tetrachloroethane	0.8480000	0.8470952	0.8470952	0.3	0.11	20.00	AVRG	
1,2,3-Trichloropropane	0.7140000	0.7207645	0.7207645	0.1	-0.95	20.00	AVRG	
Methacrylonitrile	0.7280000	0.7530113	0.7530113	0.1	-3.44	20.00	AVRG	
n-Propylbenzene	3.5790000	3.5848286	3.5848286	0.1	-0.16	20.00	AVRG	
Bromobenzene	0.8910000	0.8942308	0.8942308	0.1	-0.36	20.00	AVRG	
1,3,5-Trimethylbenzene	2.5940000	2.5488424	2.5488424	0.1	1.74	20.00	AVRG	
2-Chlorotoluene	2.1760000	2.1550377	2.1550377	0.1	0.96	20.00	AVRG	
4-Chlorotoluene	2.4940000	2.5074981	2.5074981	0.1	-0.54	20.00	AVRG	
Propionitrile	0.1160000	0.1211841	0.1211841	0.01	-4.47	20.00	AVRG	
tert-Butylbenzene	2.1920000	2.1047004	2.1047004	0.1	3.98	20.00	AVRG	
1,2,4-Trimethylbenzene	2.5980000	2.6298173	2.6298173	0.1	-1.22	20.00	AVRG	
sec-Butylbenzene	3.0340000	2.9294731	2.9294731	0.1	3.44	20.00	AVRG	
p-Isopropyltoluene	2.6190000	2.5816552	2.5816552	0.1	1.42	20.00	AVRG	
1,3-Dichlorobenzene	1.4890000	1.5018433	1.5018433	0.6	-0.86	20.00	AVRG	
1,4-Dichlorobenzene	1.5400000	1.5136614	1.5136614	0.4	1.71	20.00	AVRG	
n-Butylbenzene	2.2590000	2.1981618	2.1981618	0.5	2.69	20.00	AVRG	
1,2-Dichlorobenzene	1.3420000	1.3466361	1.3466361	0.4	-0.34	20.00	AVRG	
1,2-Dibromo-3-Chloropropane	47.107443	50.000000	7.7e-002	0.05	5.78	20.00	LINR	
1,2,4-Trichlorobenzene	48.821770	50.000000	0.3205563	0.2	2.36	20.00	LINR	
Hexachlorobutadiene	0.3120000	0.2195944	0.2195944	0.1	29.62	20.00	AVRG	<-
Naphthalene	47.828189	50.000000	0.4783626	0.2	4.34	20.00	LINR	
1,2,3-Trichlorobenzene	49.367571	50.000000	0.1608385	0.1	1.26	20.00	LINR	
1-Chlorohexane	0.4360000	0.4096020	0.4096020	0.1	6.05	20.00	AVRG	
1,4-Dioxane	6.e-003	6.28e-003	6.28e-003	0.001	-4.67	20.00	AVRG	
n-Hexane	0.8460000	0.7685117	0.7685117	0.1	9.16	20.00	AVRG	
1,3-Butadiene	0.7340000	0.7586533	0.7586533	0.1	-3.36	20.00	AVRG	
Cyclohexane	1.0740000	1.0747780	1.0747780	0.1	-0.07	20.00	AVRG	
Freon TF	0.3840000	0.3924284	0.3924284	0.1	-2.19	20.00	AVRG	
Methylcyclohexane	1.2640000	1.1186733	1.1186733	0.1	11.50	20.00	AVRG	
Methyl Acetate	0.5430000	0.5744308	0.5744308	0.1	-5.79	20.00	AVRG	
Tert-Butyl alcohol	7.e-002	7.84e-002	7.84e-002	0.005	-12.00	20.00	AVRG	
Isopropyl Alcohol	4.9e-002	5.35e-002	5.35e-002	0.005	-9.18	20.00	AVRG	
Acetaldehyde	5.1e-002	6.28e-002	6.28e-002	0.001	-23.14	20.00	AVRG	<-

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2003108

Instrument ID: VOA6 Calibration Date: 03/25/20 Time: 1337

Lab File ID: X032503 Init. Calib. Date(s): 03/19/20 03/19/20

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
Dibromofluoromethane	52.180852	50.000000	0.5137711	0.1	-4.36	20.00	LINR
1,2-Dichloroethane-d4	51.389312	50.000000	0.6302798	0.1	-2.78	20.00	LINR
Toluene-d8	50.822140	50.000000	1.2812393	0.1	-1.64	20.00	LINR
4-Bromofluorobenzene	50.882446	50.000000	0.4777534	0.1	-1.76	20.00	LINR

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS20031084

Instrument ID: VOA6 Calibration Date: 03/25/20 Time: 2001

Lab File ID: X032519 Init. Calib. Date(s): 03/19/20 03/19/20

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
Dichlorodifluoromethane	44.375668	50.000000	0.4942579	0.1	11.25	20.00	LINR
Chloromethane	47.117267	50.000000	0.8200507	0.1	5.76	20.00	LINR
Vinyl Chloride	0.7620000	0.7160680	0.7160680	0.1	6.03	20.00	AVRG
Bromomethane	50.774785	50.000000	0.3470288	0.1	-1.55	20.00	LINR
Chloroethane	54.333932	50.000000	0.4044401	0.1	-8.67	20.00	LINR
Trichlorofluoromethane	0.7440000	0.7599686	0.7599686	0.1	-2.15	20.00	AVRG
Acrolein	106.38140	100.00000	4.85e-002	0.01	-6.38	20.00	LINR
Acetone	99.267328	100.00000	0.1937755	0.1	0.73	20.00	LINR
1,1-Dichloroethene	0.4240000	0.4098117	0.4098117	0.1	3.35	20.00	AVRG
Iodomethane	99.598658	100.00000	0.6097733	0.1	0.40	20.00	2RDR
Acrylonitrile	0.3230000	0.3271900	0.3271900	0.05	-1.30	20.00	AVRG
Methylene Chloride	50.339990	50.000000	0.5355912	0.1	-0.68	20.00	LINR
Methyl tert-butyl ether	1.5670000	1.4943013	1.4943013	0.1	4.64	20.00	AVRG
Carbon Disulfide	1.3940000	1.4189841	1.4189841	0.1	-1.79	20.00	AVRG
trans-1,2-Dichloroethene	0.4930000	0.4910296	0.4910296	0.1	0.40	20.00	AVRG
Vinyl Acetate	2.0260000	2.1002320	2.1002320	0.01	-3.66	20.00	AVRG
1,1-Dichloroethane	1.1130000	1.1341824	1.1341824	0.2	-1.90	20.00	AVRG
2-Butanone	106.08467	100.00000	0.3192011	0.1	-6.08	20.00	LINR
2,2-Dichloropropane	0.7790000	0.7010049	0.7010049	0.1	10.01	20.00	AVRG
cis-1,2-Dichloroethene	0.5690000	0.5750584	0.5750584	0.1	-1.06	20.00	AVRG
Chloroform	0.9250000	0.9074548	0.9074548	0.2	1.90	20.00	AVRG
Bromochloromethane	0.2970000	0.2885424	0.2885424	0.1	2.85	20.00	AVRG
1,1,1-Trichloroethane	0.7740000	0.7820324	0.7820324	0.1	-1.04	20.00	AVRG
1,1-Dichloropropene	0.4700000	0.4379635	0.4379635	0.1	6.82	20.00	AVRG
1,2-Dichloroethane	0.5280000	0.5393487	0.5393487	0.1	-2.15	20.00	AVRG
Carbon Tetrachloride	0.4730000	0.4346654	0.4346654	0.1	8.10	20.00	AVRG
Benzene	1.3220000	1.3277316	1.3277316	0.5	-0.43	20.00	AVRG
Trichloroethene	0.3460000	0.3531183	0.3531183	0.2	-2.06	20.00	AVRG
Bromodichloromethane	0.4600000	0.4589161	0.4589161	0.2	0.24	20.00	AVRG
2-Chloroethylvinyl ether	9.e-002	8.75e-002	8.75e-002	0.001	2.78	20.00	AVRG
1,2-Dichloropropane	0.4250000	0.4210246	0.4210246	0.1	0.94	20.00	AVRG
Dibromomethane	0.2190000	0.2252125	0.2252125	0.1	-2.84	20.00	AVRG
4-Methyl-2-Pentanone	0.5140000	0.5182680	0.5182680	0.1	-0.83	20.00	AVRG
cis-1,3-Dichloropropene	0.5650000	0.5571972	0.5571972	0.2	1.38	20.00	AVRG
Toluene	1.5190000	1.4976581	1.4976581	0.4	1.40	20.00	AVRG
trans-1,3-Dichloropropene	0.4990000	0.4970964	0.4970964	0.1	0.38	20.00	AVRG
2-Hexanone	0.3430000	0.3588118	0.3588118	0.1	-4.61	20.00	AVRG
1,1,2-Trichloroethane	0.2880000	0.2835836	0.2835836	0.1	1.53	20.00	AVRG
1,3-Dichloropropane	0.5990000	0.5884447	0.5884447	0.1	1.76	20.00	AVRG
Dibromochloromethane	0.3870000	0.3855962	0.3855962	0.1	0.36	20.00	AVRG
Tetrachloroethene	0.3120000	0.2990801	0.2990801	0.2	4.14	20.00	AVRG
1,2-Dibromoethane	0.3580000	0.3626118	0.3626118	0.1	-1.29	20.00	AVRG

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2003108

Instrument ID: VOA6 Calibration Date: 03/25/20 Time: 2001

Lab File ID: X032519 Init. Calib. Date(s): 03/19/20 03/19/20

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	0.9850000	0.9763034	0.9763034	0.5	0.88	20.00	AVRG	
1,1,1,2-Tetrachloroethane	0.3690000	0.3672255	0.3672255	0.1	0.48	20.00	AVRG	
Ethylbenzene	0.5230000	0.5170936	0.5170936	0.1	1.13	20.00	AVRG	
m,p-Xylenes	0.6270000	0.6162600	0.6162600	0.1	1.71	20.00	AVRG	
o-Xylene	0.6120000	0.6115366	0.6115366	0.3	0.08	20.00	AVRG	
Styrene	1.0780000	1.0578113	1.0578113	0.3	1.87	20.00	AVRG	
Bromoform	0.2600000	0.2677742	0.2677742	0.1	-2.99	20.00	AVRG	
Isopropylbenzene	1.5420000	1.5053889	1.5053889	0.1	2.37	20.00	AVRG	
1,1,2,2-Tetrachloroethane	0.8480000	0.8470952	0.8470952	0.3	0.11	20.00	AVRG	
1,2,3-Trichloropropane	0.7140000	0.7207645	0.7207645	0.1	-0.95	20.00	AVRG	
Methacrylonitrile	0.7280000	0.7530113	0.7530113	0.1	-3.44	20.00	AVRG	
n-Propylbenzene	3.5790000	3.5848286	3.5848286	0.1	-0.16	20.00	AVRG	
Bromobenzene	0.8910000	0.8942308	0.8942308	0.1	-0.36	20.00	AVRG	
1,3,5-Trimethylbenzene	2.5940000	2.5488424	2.5488424	0.1	1.74	20.00	AVRG	
2-Chlorotoluene	2.1760000	2.1550377	2.1550377	0.1	0.96	20.00	AVRG	
4-Chlorotoluene	2.4940000	2.5074981	2.5074981	0.1	-0.54	20.00	AVRG	
Propionitrile	0.1160000	0.1211841	0.1211841	0.01	-4.47	20.00	AVRG	
tert-Butylbenzene	2.1920000	2.1047004	2.1047004	0.1	3.98	20.00	AVRG	
1,2,4-Trimethylbenzene	2.5980000	2.6298173	2.6298173	0.1	-1.22	20.00	AVRG	
sec-Butylbenzene	3.0340000	2.9294731	2.9294731	0.1	3.44	20.00	AVRG	
p-Isopropyltoluene	2.6190000	2.5816552	2.5816552	0.1	1.42	20.00	AVRG	
1,3-Dichlorobenzene	1.4890000	1.5018433	1.5018433	0.6	-0.86	20.00	AVRG	
1,4-Dichlorobenzene	1.5400000	1.5136614	1.5136614	0.4	1.71	20.00	AVRG	
n-Butylbenzene	2.2590000	2.1981618	2.1981618	0.5	2.69	20.00	AVRG	
1,2-Dichlorobenzene	1.3420000	1.3466361	1.3466361	0.4	-0.34	20.00	AVRG	
1,2-Dibromo-3-Chloropropane	46.419987	50.000000	7.7e-002	0.05	7.16	20.00	LINR	
1,2,4-Trichlorobenzene	38.591195	50.000000	0.3205563	0.2	22.82	20.00	LINR	<-
Hexachlorobutadiene	0.3120000	0.2195944	0.2195944	0.1	29.62	20.00	AVRG	<-
Naphthalene	39.792977	50.000000	0.4783626	0.2	20.41	20.00	LINR	<-
1,2,3-Trichlorobenzene	38.392984	50.000000	0.1608385	0.1	23.21	20.00	LINR	<-
1-Chlorohexane	0.4360000	0.4096020	0.4096020	0.1	6.05	20.00	AVRG	
1,4-Dioxane	6.e-003	6.28e-003	6.28e-003	0.001	-4.67	20.00	AVRG	
n-Hexane	0.8460000	0.7685117	0.7685117	0.1	9.16	20.00	AVRG	
1,3-Butadiene	0.7340000	0.7586533	0.7586533	0.1	-3.36	20.00	AVRG	
Cyclohexane	1.0740000	1.0747780	1.0747780	0.1	-0.07	20.00	AVRG	
Freon TF	0.3840000	0.3924284	0.3924284	0.1	-2.19	20.00	AVRG	
Methylcyclohexane	1.2640000	1.1186733	1.1186733	0.1	11.50	20.00	AVRG	
Methyl Acetate	0.5430000	0.5744308	0.5744308	0.1	-5.79	20.00	AVRG	
Tert-Butyl alcohol	7.e-002	7.84e-002	7.84e-002	0.005	-12.00	20.00	AVRG	
Isopropyl Alcohol	4.9e-002	5.35e-002	5.35e-002	0.005	-9.18	20.00	AVRG	
Acetaldehyde	5.1e-002	6.28e-002	6.28e-002	0.001	-23.14	20.00	AVRG	<-

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2003108

Instrument ID: VOA6 Calibration Date: 03/25/20 Time: 2001

Lab File ID: X032519 Init. Calib. Date(s): 03/19/20 03/19/20

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
Dibromofluoromethane	51.712375	50.000000	0.5137711	0.1	-3.42	20.00	LINR
1,2-Dichloroethane-d4	50.168421	50.000000	0.6302798	0.1	-0.34	20.00	LINR
Toluene-d8	50.016204	50.000000	1.2812393	0.1	-0.03	20.00	LINR
4-Bromofluorobenzene	49.648170	50.000000	0.4777534	0.1	0.70	20.00	LINR

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

outputFile debug: C:\tp\envision\results\HS20031084/08bc.01 Lab Code: AL

Lab File ID (Standard): X032503 Date Analyzed: 03/25/20

Instrument ID: VOA6 Time Analyzed: 1337

		IS1 AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	297977	4.18	464570	4.97	423510	7.67
	UPPER LIMIT	595954	4.68	929140	5.47	847020	8.17
	LOWER LIMIT	148989	3.68	232285	4.47	211755	7.17
	CLIENT SAMPLE NO.						
01	CCB	393815	4.18	586483	4.97	505641	7.67
02	VLCSW-200325	307914	4.18	480240	4.97	436754	7.67
03	VBLKW-200325	395138	4.18	586918	4.97	516167	7.67
04	HS20031084-0	393770	4.18	581708	4.97	505474	7.67
05	HS20031084-0	389251	4.18	584469	4.97	508809	7.67
06	HS20031084-0	388790	4.18	580901	4.97	510541	7.67
07	HS20031084-0	389321	4.18	582733	4.97	513807	7.67
08	HS20031084-0	396902	4.18	593306	4.97	521304	7.67
09	HS20031084-0	396080	4.18	598653	4.97	526028	7.67
10	HS20031084-0	395559	4.18	588734	4.97	509831	7.67
11	HS20031084-0	400862	4.18	587840	4.97	513182	7.67
12	HS20031084-0	389465	4.18	575005	4.97	505230	7.67
13	HS20031084-0	376465	4.18	555029	4.97	491455	7.67
14	HS20031084-0	373724	4.18	551628	4.97	490359	7.67
15							
16							
17							
18							
19							
20							

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

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

Column used to flag internal standard area values 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:

outputFile debug: C:\tp\envision\results\HS20031084/08bc.01 Lab Code: AL

Lab File ID (Standard): X032503 Date Analyzed: 03/25/20

Instrument ID: VOA6 Time Analyzed: 1337

		IS4 (DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	208130	9.67				
	UPPER LIMIT	416260	10.17				
	LOWER LIMIT	104065	9.17				
	CLIENT SAMPLE NO.						
01	CCB	230499	9.67				
02	VLCSW-200325	218404	9.67				
03	VBLKW-200325	243902	9.67				
04	HS20031084-0	238000	9.67				
05	HS20031084-0	251350	9.67				
06	HS20031084-0	243636	9.67				
07	HS20031084-0	250209	9.67				
08	HS20031084-0	254766	9.67				
09	HS20031084-0	256873	9.67				
10	HS20031084-0	241305	9.67				
11	HS20031084-0	248147	9.67				
12	HS20031084-0	241827	9.67				
13	HS20031084-0	237178	9.67				
14	HS20031084-0	242332	9.66				
15							
16							
17							
18							
19							
20							

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

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

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

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032502.D

Date : 25-MAR-2020 13:13

Client ID: BFB

Instrument: voa6.i

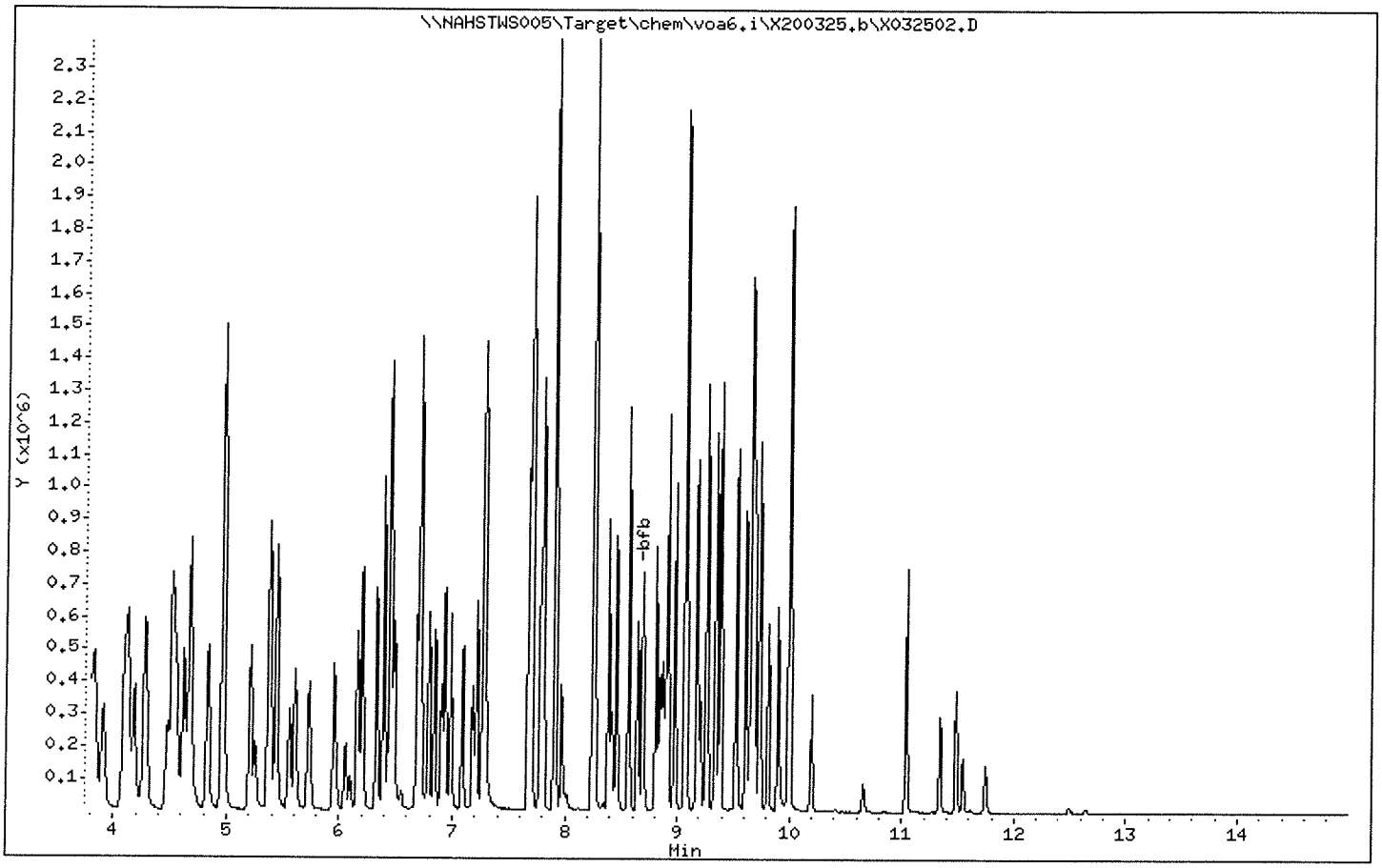
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032502.D

Date : 25-MAR-2020 13:13

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

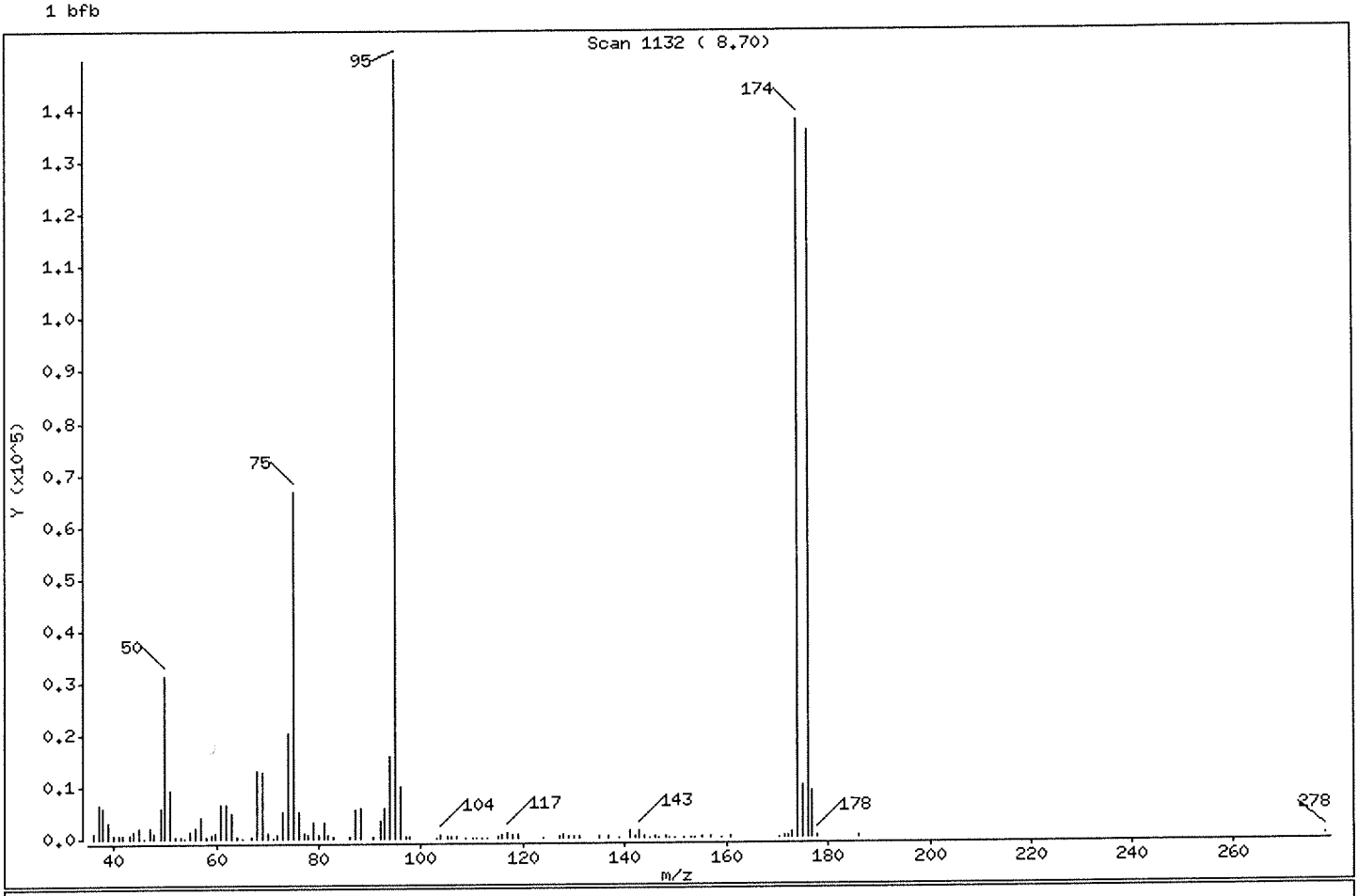
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	21.01
75	30.00 - 60.00% of mass 95	44.64
96	5.00 - 9.00% of mass 95	6.61
173	Less than 2.00% of mass 174	0.68 (0.74)
174	Greater than 50.00% of mass 95	92.18
175	5.00 - 9.00% of mass 174	6.75 (7.32)
176	95.00 - 101.00% of mass 174	90.81 (98.52)
177	5.00 - 9.00% of mass 176	6.00 (6.61)

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032502.D

Date : 25-MAR-2020 13:13

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: X032502.D
Spectrum: Scan 1132 (8.70)
Location of Maximum: 95.00
Number of points: 110

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1043	64.10	373	97.10	419	142.90	1337
37.00	6602	65.00	86	97.80	230	143.80	180
38.00	5906	67.00	453	102.90	110	144.90	108
39.00	3013	68.00	12950	103.80	559	146.00	177
40.10	772	69.00	12586	105.00	321	146.60	96
41.00	553	70.00	1114	106.00	425	147.90	286
41.90	678	71.10	95	106.90	215	148.90	84
43.00	848	72.00	690	108.80	96	149.80	160
44.00	1409	73.00	5293	110.00	92	151.70	77
45.00	2059	74.00	20360	110.80	113	152.90	81
46.00	59	75.00	66824	111.80	54	153.80	153
47.00	2011	76.00	5172	112.80	141	155.00	390
47.90	1128	77.00	1027	115.10	227	156.80	315
49.00	5863	78.00	683	115.90	537	158.90	141
50.00	31448	78.90	3215	117.00	920	160.80	201
51.00	9354	79.90	833	117.80	548	170.30	103
52.10	320	80.90	2964	119.00	712	171.30	213
53.00	188	81.80	649	123.80	67	172.00	205
53.90	163	83.00	196	127.00	254	172.90	1016
55.00	1354	85.90	199	127.90	648	173.90	137984
56.00	2047	87.00	5410	128.80	231	174.90	10101
57.00	3971	88.00	5997	129.90	488	175.90	135936
58.10	250	90.80	275	130.90	184	176.90	8985
59.00	716	92.00	3575	134.90	262	177.90	346
59.90	1123	92.90	5769	136.80	262	185.90	255
60.90	6375	94.00	15718	138.90	113	278.20	153
62.00	6625	95.00	149696	140.90	1278		
63.00	4842	96.00	9898	141.90	339		

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032503.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 25-MAR-2020 13:37
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200325.b\8260W.m
Meth Date : 15-Apr-2020 14:45 voa6.i Quant Type: ISTD
Cal Date : 19-MAR-2020 14:22 Cal File: X031908.D
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.sub
Target Version: 4.14
Processing Host: NAHSTW7066

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

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

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	297977	50.0000	
194 Acetaldehyde	44	1.209	1.209	(0.289)	74820	200.000	243.14
140 1,3-Butadiene	54	1.159	1.159	(0.277)	222578	50.0000	50.87
25 Methacrylonitrile	41	3.824	3.824	(0.914)	219603	50.0000	50.59
136 n-Hexane	57	2.771	2.771	(0.663)	256060	50.0000	50.76
4 Propionitrile	54	3.652	3.652	(0.873)	357729	500.000	518.64
2 Dichlorodifluoromethane	85	0.973	0.973	(0.233)	145653	50.0000	43.89
3 Chloromethane	50	1.073	1.073	(0.257)	246763	50.0000	47.57
5 Vinyl Chloride	62	1.138	1.138	(0.272)	207204	50.0000	45.64
6 Bromomethane	94	1.338	1.338	(0.320)	105824	50.0000	51.97
7 Chloroethane	64	1.403	1.403	(0.336)	112855	50.0000	50.85
8 Trichlorofluoromethane	101	1.560	1.560	(0.373)	224115	50.0000	50.56
9 Acrolein	56	1.854	1.854	(0.443)	27752	100.000	102.10
10 Acetone	43	1.969	1.969	(0.471)	111475	100.000	95.35
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	119185	50.0000	47.20
15 Iodomethane	142	2.026	2.026	(0.485)	378380	100.000	103.57
16 Acrylonitrile	53	2.535	2.535	(0.606)	196902	100.000	102.41
17 Methylene Chloride	84	2.305	2.305	(0.551)	158632	50.0000	50.02
18 Methyl tert-butyl ether	73	2.535	2.535	(0.606)	453341	50.0000	48.53
19 Carbon Disulfide	76	2.069	2.069	(0.495)	835254	100.000	100.57
20 trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	146447	50.0000	49.87
21 Vinyl Acetate	43	3.000	3.000	(0.717)	1255660	100.000	104.00

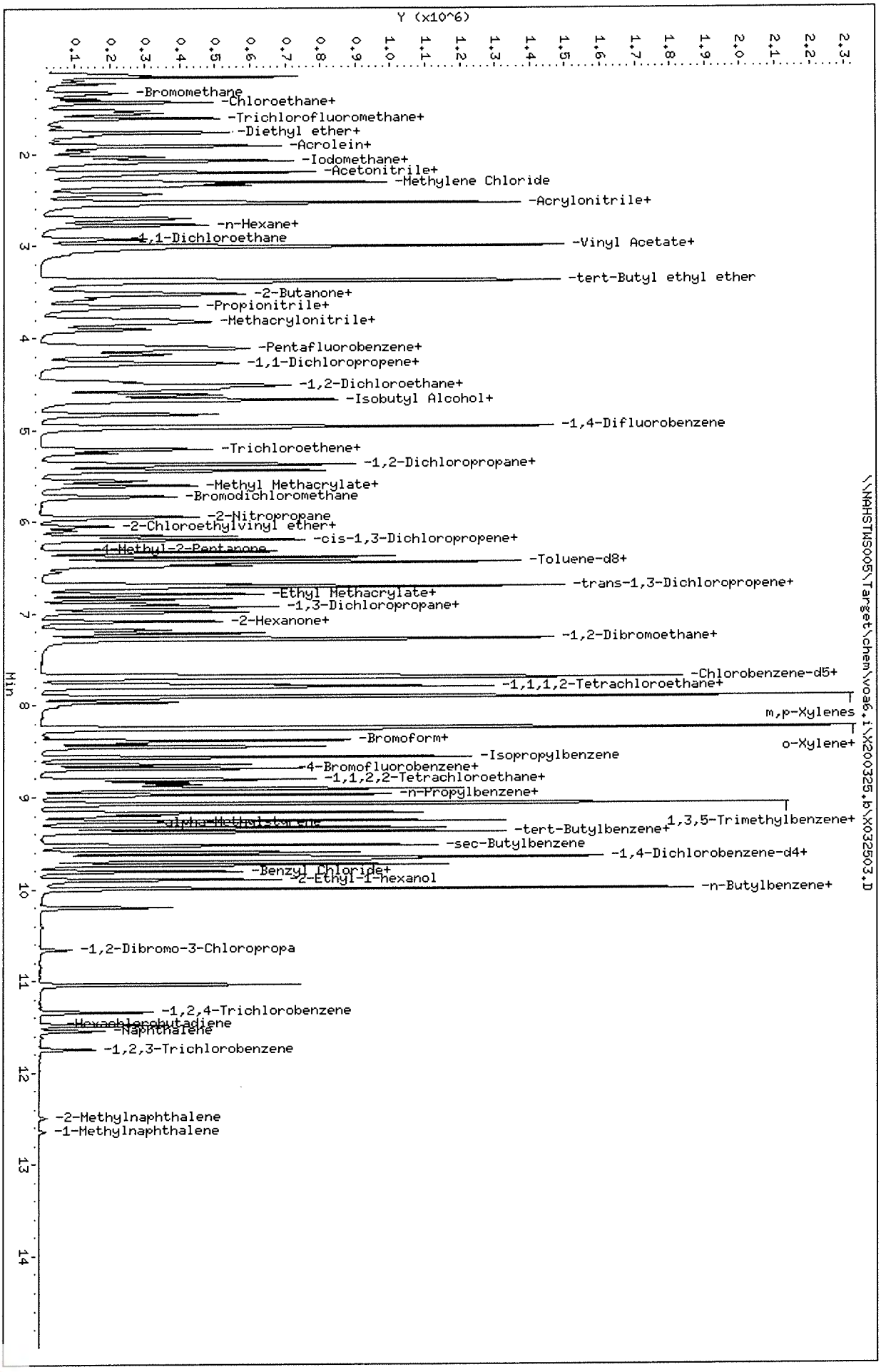
Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032503.D Page 2
Report Date: 15-Apr-2020 14:45

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	338120	50.0000	50.95
	24 2-Butanone	43	3.580	3.580	(0.856)	186311	100.000	103.87
	26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	232189	50.0000	50.01
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	170345	50.0000	50.19
	28 Chloroform	83	3.910	3.910	(0.935)	273639	50.0000	49.66
	29 Bromochloromethane	128	3.795	3.795	(0.908)	87822	50.0000	49.60
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	154476	50.0000	52.18
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	229882	50.0000	49.85
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	203317	50.0000	46.56
	33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	241388	50.0000	49.18
	34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	198867	50.0000	45.20
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	192365	50.0000	51.38
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	464570	50.0000	
	37 Benzene	78	4.512	4.512	(0.908)	606742	50.0000	49.39
	38 Trichloroethene	130	5.206	5.206	(1.048)	162472	50.0000	50.45
	39 Bromodichloromethane	83	5.729	5.729	(1.153)	209799	50.0000	49.09
	41 2-Chloroethylvinyl ether	63	6.052	6.052	(1.218)	82276	100.000	97.97
	42 1,2-Dichloropropane	63	5.436	5.436	(1.094)	194547	50.0000	49.25
	44 Dibromomethane	93	5.557	5.557	(1.118)	102511	50.0000	50.24
	45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	440107	100.000	101.05
	46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	262071	50.0000	49.93
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	423510	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	551348	50.0000	50.82
	50 Toluene	91	6.446	6.446	(0.840)	634977	50.0000	49.35
	51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	232522	50.0000	50.11
	52 2-Hexanone	43	7.090	7.090	(0.924)	297923	100.000	102.60
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	121348	50.0000	49.73
	54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	250799	50.0000	49.45
	55 Dibromochloromethane	129	7.176	7.176	(0.936)	161960	50.0000	49.34
	56 Tetrachloroethene	164	6.933	6.933	(0.904)	130808	50.0000	49.48
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	152150	50.0000	50.11
	58 1-Chlorohexane	55	7.699	7.699	(1.549)	199757	50.0000	49.33
	59 Chlorobenzene	112	7.699	7.699	(1.004)	416223	50.0000	49.88
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	156096	50.0000	49.95
	61 Ethylbenzene	106	7.799	7.799	(1.017)	223192	50.0000	50.38
	62 m,p-Xylenes	106	7.907	7.907	(1.031)	534832	100.000	100.65
	63 o-Xylene	106	8.244	8.244	(1.075)	261520	50.0000	50.41
	64 Styrene	104	8.258	8.258	(1.077)	448775	50.0000	49.13
	66 Bromoform	173	8.415	8.415	(1.097)	113750	50.0000	51.66
	67 Isopropylbenzene	105	8.566	8.566	(1.117)	654850	50.0000	50.15
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	176526	50.0000	50.00
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	207314	50.0000	50.88
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	208130	50.0000	
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	149625	50.0000	50.30(M)
	73 n-Propylbenzene	91	8.917	8.917	(0.922)	772608	50.0000	51.85
	74 Bromobenzene	156	8.809	8.809	(0.911)	187981	50.0000	50.68
	75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	546207	50.0000	50.57
	76 2-Chlorotoluene	91	8.974	8.974	(0.928)	460206	50.0000	50.81
	77 4-Chlorotoluene	91	9.074	9.074	(0.939)	534010	50.0000	51.43
	78 tert-Butylbenzene	119	9.340	9.340	(0.966)	453598	50.0000	49.70
	79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	562020	50.0000	51.97
	81 sec-Butylbenzene	105	9.526	9.526	(0.985)	643112	50.0000	50.92
	82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	562060	50.0000	51.54
	83 1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	319284	50.0000	51.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	320617	50.0000	50.01	
87	n-Butylbenzene	91	9.999	9.999	(1.034)	492523	50.0000	52.37	
88	1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	290178	50.0000	51.93	
89	1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	16276	50.0000	47.10	
90	1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	84700	50.0000	48.82	
91	Hexachlorobutadiene	225	11.488	11.488	(1.188)	60703	50.0000	46.70	
92	Naphthalene	128	11.546	11.546	(1.194)	120701	50.0000	47.82	
93	1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	43297	50.0000	49.36	
M 94	1,2-Dichloroethylene (total)	96				316792	100.000		(a)
135	1,4-Dioxane	88	5.600	5.600	(1.339)	35738	1000.00	1040.47	
141	Cyclohexane	56	4.125	4.125	(0.986)	327520	50.0000	51.18	
138	Freon TF	101	1.911	1.911	(0.457)	117493	50.0000	51.29	
147	Methylcyclohexane	55	5.378	5.378	(1.082)	587386	50.0000	49.98	
146	Methyl Acetate	43	2.234	2.234	(0.534)	173826	50.0000	53.69	
148	Tert-Butyl alcohol	59	2.434	2.434	(0.582)	432620	1000.00	1036.84	
149	Isopropyl Alcohol	45	2.098	2.098	(0.502)	312832	1000.00	1064.07	

QC Flag Legend

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



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032503.D
Date : 25-MAR-2020 13:37
Client ID: CCV
Sample Info: CCV;CCV;2;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032504.D Page 1
Report Date: 15-Apr-2020 14:45

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032504.D
Lab Smp Id: CCB Client Smp ID: CCB
Inj Date : 25-MAR-2020 14:01
Operator : PC Inst ID: voa6.i
Smp Info : CCB;CCB;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200325.b\8260W.m
Meth Date : 15-Apr-2020 14:45 voa6.i Quant Type: ISTD
Cal Date : 19-MAR-2020 14:22 Cal File: X031908.D
Als bottle: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.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

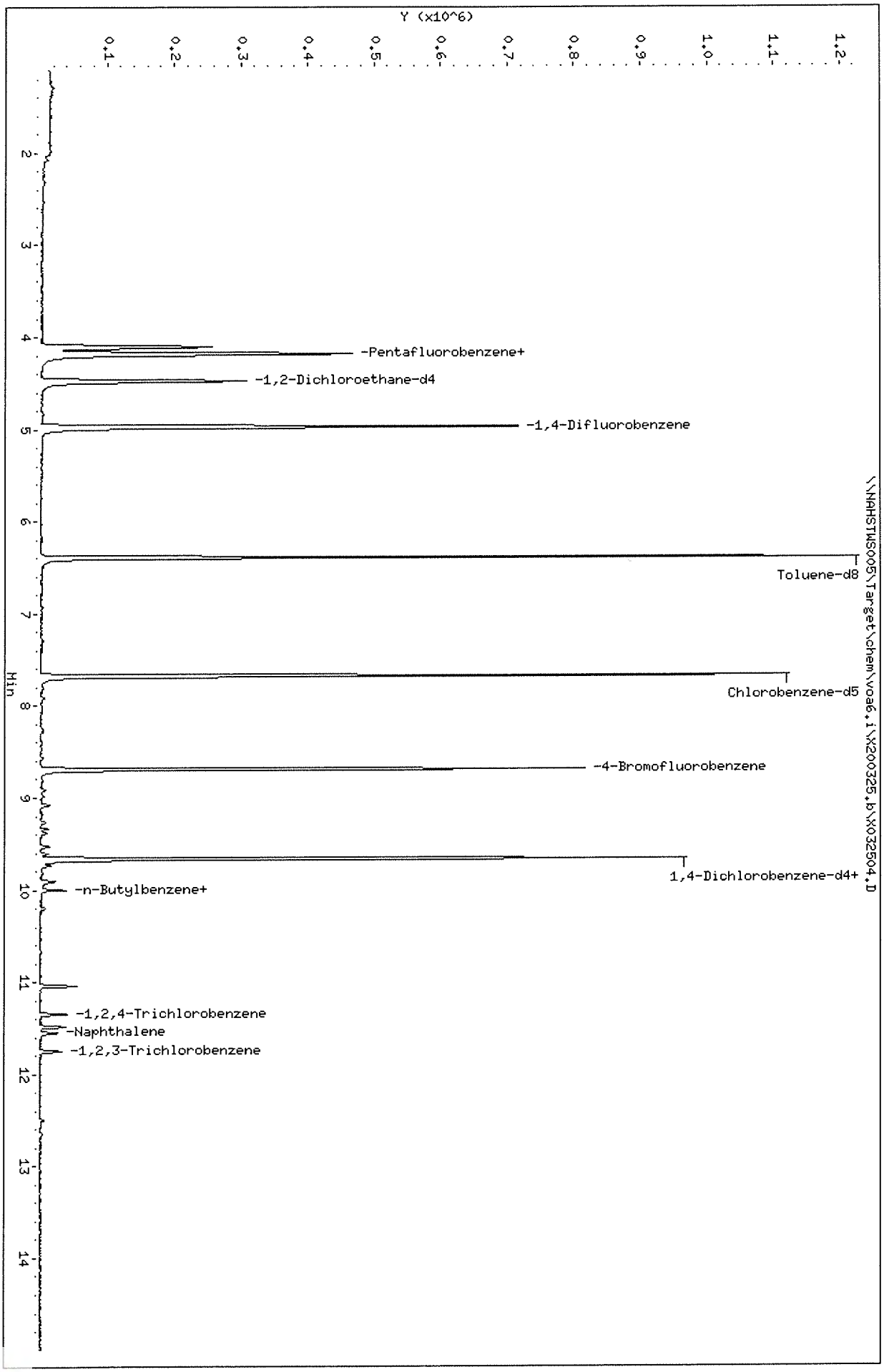
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	393815	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	187456	47.9027	47.90
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	225883	45.6408	45.64
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	586483	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	505641	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	683317	52.7587	52.75
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	237232	48.7474	48.74
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	230499	50.0000	
	83 1,3-Dichlorobenzene	146	9.612	9.605	(0.994)	4387	0.63902	0.63(a)
	87 n-Butylbenzene	91	9.999	9.999	(1.034)	11528	1.10688	1.10(a)
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	4604	0.74406	0.74(a)
	90 1,2,4-Trichlorobenzene	180	11.345	11.338	(1.173)	12434	7.02207	7.02
	92 Naphthalene	128	11.546	11.546	(1.194)	21002	9.15727	9.15
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	9398	10.4703	10.47

QC Flag Legend

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

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032504.D
Date : 25-MAR-2020 14:01
Client ID: CCB
Sample Info: CCB;CCB;;;
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\X200325.b\X032505.D
Lab Smp Id: VLCSW-200325 Client Smp ID: VLCSW-200325
Inj Date : 25-MAR-2020 14:25
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-200325;VLCSW-200325;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200325.b\8260W.m
Meth Date : 15-Apr-2020 14:45 voa6.i Quant Type: ISTD
Cal Date : 19-MAR-2020 14:22 Cal File: X031908.D
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.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)	307914	50.0000	
194 Acetaldehyde	44	1.210	1.209	(0.289)	36770	115.638	115.63
140 1,3-Butadiene	54	1.159	1.159	(0.277)	90326	19.9801	19.98
25 Methacrylonitrile	41	3.824	3.824	(0.914)	92872	20.7073	20.70
136 n-Hexane	57	2.771	2.771	(0.663)	107366	20.5972	20.59
4 Propionitrile	54	3.652	3.652	(0.873)	150108	210.607	210.60(a)
2 Dichlorodifluoromethane	85	0.973	0.973	(0.233)	59729	18.0295	18.02
3 Chloromethane	50	1.073	1.073	(0.257)	101750	19.6035	19.60
5 Vinyl Chloride	62	1.138	1.138	(0.272)	84753	18.0668	18.06
6 Bromomethane	94	1.338	1.338	(0.320)	49531	23.2995	23.29
7 Chloroethane	64	1.403	1.403	(0.336)	43679	18.8332	18.83
8 Trichlorofluoromethane	101	1.560	1.560	(0.373)	91973	20.0832	20.08
9 Acrolein	56	1.854	1.854	(0.443)	12716	44.6068	44.60
10 Acetone	43	1.976	1.969	(0.473)	51104	34.8277	34.82
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	49844	19.1036	19.10
15 Iodomethane	142	2.026	2.026	(0.485)	132316	36.5553	36.55
16 Acrylonitrile	53	2.535	2.535	(0.606)	82127	41.3398	41.33
17 Methylene Chloride	84	2.305	2.305	(0.551)	67653	19.8165	19.81
18 Methyl tert-butyl ether	73	2.535	2.535	(0.606)	190672	19.7565	19.75
19 Carbon Disulfide	76	2.069	2.069	(0.495)	347035	40.4381	40.43
20 trans-1,2-Dichloroethene	96	2.528	2.527	(0.604)	60833	20.0494	20.04
21 Vinyl Acetate	43	3.000	3.000	(0.717)	519355	41.6303	41.63

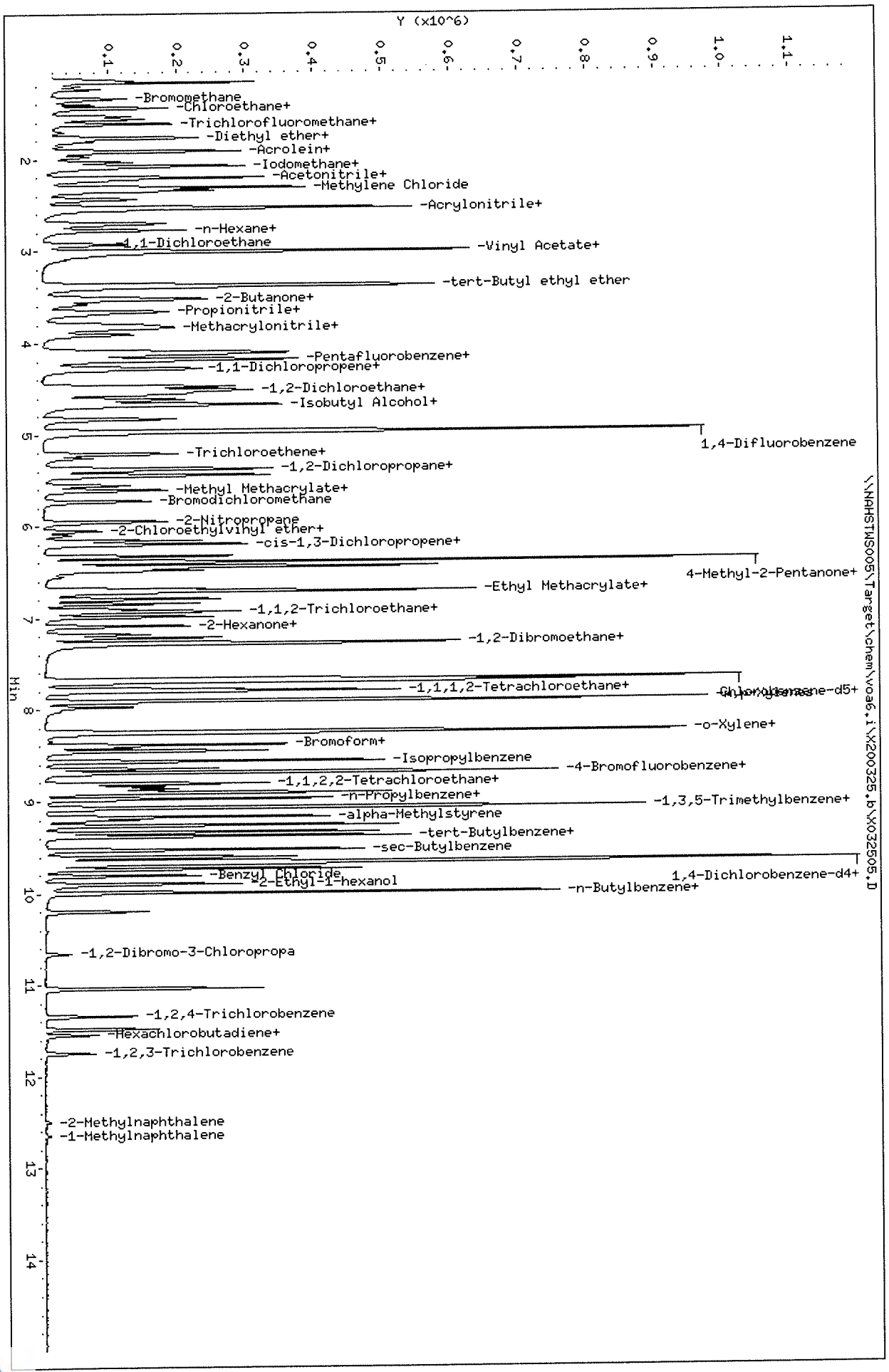
Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032505.D Page 2
Report Date: 15-Apr-2020 14:45

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
	22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	139812	20.3900	20.39
	24 2-Butanone	43	3.580	3.580	(0.856)	76829	40.7148	40.71
	26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	96770	20.1704	20.17
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	72074	20.5541	20.55
	28 Chloroform	83	3.910	3.910	(0.935)	112298	19.7236	19.72
	29 Bromochloromethane	128	3.803	3.795	(0.909)	37046	20.2514	20.25
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	158952	51.9596	51.95
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	94855	19.9069	19.90
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	83300	18.4557	18.45
	33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	102169	20.1371	20.13
	34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	84292	18.5372	18.53
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	197301	51.0058	51.00
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	480240	50.0000	
	37 Benzene	78	4.512	4.512	(0.908)	251733	19.8238	19.82
	38 Trichloroethene	130	5.206	5.206	(1.048)	67156	20.1755	20.17
	39 Bromodichloromethane	83	5.729	5.729	(1.153)	87077	19.7137	19.71
	41 2-Chloroethylvinyl ether	63	6.052	6.052	(1.218)	33254	38.3072	38.30
	42 1,2-Dichloropropane	63	5.443	5.436	(1.095)	81481	19.9544	19.95
	44 Dibromomethane	93	5.557	5.557	(1.118)	42873	20.3296	20.32
	45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	182561	40.6460	40.64
	46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	108701	20.0349	20.03
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	436754	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	570980	51.0361	51.03
	50 Toluene	91	6.446	6.446	(0.840)	265716	20.0263	20.02
	51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	95313	19.8726	19.87
	52 2-Hexanone	43	7.090	7.090	(0.924)	126234	42.1579	42.15
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	49882	19.8236	19.82
	54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	104035	19.8909	19.89
	55 Dibromochloromethane	129	7.176	7.176	(0.936)	66505	19.6466	19.64
	56 Tetrachloroethene	164	6.933	6.933	(0.904)	54524	20.0031	20.00
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	63448	20.2631	20.26
	58 1-Chlorohexane	55	7.699	7.699	(1.549)	85488	20.4239	20.42
	59 Chlorobenzene	112	7.699	7.699	(1.004)	172785	20.0818	20.08
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	64515	20.0210	20.02
	61 Ethylbenzene	106	7.799	7.799	(1.017)	92392	20.2236	20.22
	62 m,p-Xylenes	106	7.907	7.907	(1.031)	222063	40.5240	40.52
	63 o-Xylene	106	8.244	8.244	(1.075)	108919	20.3617	20.36
	64 Styrene	104	8.258	8.258	(1.077)	188949	20.0594	20.05
	66 Bromoform	173	8.416	8.415	(1.097)	46485	20.4720	20.47
	67 Isopropylbenzene	105	8.566	8.566	(1.117)	272824	20.2600	20.25
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	74158	20.0179	20.01
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	211850	50.4146	50.41
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	218404	50.0000	
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	61993	19.8636	19.86 (M)
	73 n-Propylbenzene	91	8.917	8.917	(0.922)	320683	20.5122	20.51
	74 Bromobenzene	156	8.809	8.809	(0.911)	78289	20.1151	20.11
	75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	225626	19.9074	19.90
	76 2-Chlorotoluene	91	8.974	8.974	(0.928)	187752	19.7555	19.75
	77 4-Chlorotoluene	91	9.075	9.074	(0.939)	219163	20.1147	20.11
	78 tert-Butylbenzene	119	9.340	9.340	(0.966)	190949	19.9378	19.93
	79 1,2,4-Trimethylbenzene	105	9.383	9.382	(0.970)	229406	20.2165	20.21
	81 sec-Butylbenzene	105	9.526	9.526	(0.985)	264786	19.9790	19.97
	82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	233131	20.3758	20.37
	83 1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	130277	20.0274	20.02

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
	84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	128499	19.1040	19.10
	87 n-Butylbenzene	91	9.999	9.999	(1.034)	203116	20.5826	20.58
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	115666	19.7282	19.72
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	7304	20.7461	20.74
	90 1,2,4-Trichlorobenzene	180	11.345	11.338	(1.173)	37401	20.9117	20.91
	91 Hexachlorobutadiene	225	11.488	11.488	(1.188)	27787	20.3757	20.37
	92 Naphthalene	128	11.546	11.546	(1.194)	52099	20.8206	20.82
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	19370	21.6138	21.61
M	94 1,2-Dichloroethylene (total)	96				132907	40.6035	40.60
M	95 Xylenes (total)	106				330982	60.8857	60.88
	135 1,4-Dioxane	88	5.600	5.600	(1.339)	14441	406.868	406.86
	141 Cyclohexane	56	4.125	4.125	(0.986)	144382	21.8367	21.83
	138 Freon TF	101	1.911	1.911	(0.457)	50252	21.2330	21.23
	147 Methylcyclohexane	55	5.378	5.378	(1.082)	231456	19.0542	19.05
	146 Methyl Acetate	43	2.234	2.234	(0.534)	70370	21.0345	21.03
	148 Tert-Butyl alcohol	59	2.434	2.434	(0.582)	182158	422.481	422.48
	149 Isopropyl Alcohol	45	2.098	2.098	(0.502)	121673	400.505	400.50

QC Flag Legend

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



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032505.D
Date : 25-MAR-2020 14:25
Client ID: VLCSW-200325
Sample Info: VLCSW-200325;VLCSW-200325;3;;LCS
Purge Volume: 5.0
Column phase: DB624

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

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032507.D
Lab Smp Id: VBLKW-200325 Client Smp ID: VBLKW-200325
Inj Date : 25-MAR-2020 15:13
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-200325;VBLKW-200325;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200325.b\8260W.m
Meth Date : 15-Apr-2020 14:45 voa6.i Quant Type: ISTD
Cal Date : 19-MAR-2020 14:22 Cal File: X031908.D
Als bottle: 7 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.sub
Target Version: 4.14
Processing Host: NAHSTW7066

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

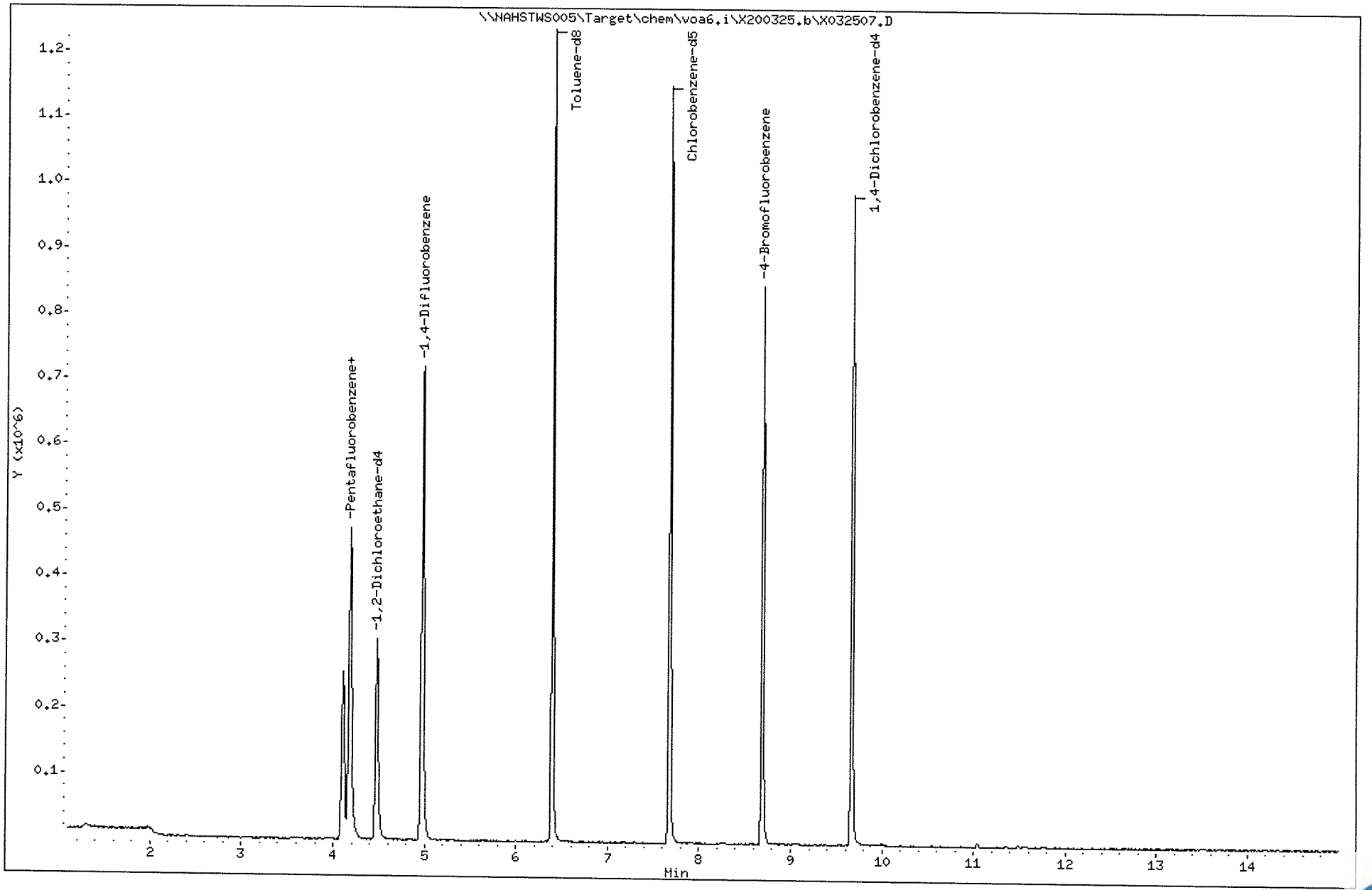
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

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)	395138	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	183941	46.8447	46.84
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	223071	44.9192	44.91
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	586918	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	516167	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	682032	51.5840	51.58
$ 69 4-Bromofluorobenzene	95	8.695	8.688	(1.134)	240814	48.4716	48.47
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	243902	50.0000	

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032507.D
Date : 25-MAR-2020 15:13
Client ID: VBLKW-200325
Sample Info: VBLKW-200325;VBLKW-200325;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\X200325.b\X032508.D
Lab Smp Id: HS20031084-08 Client Smp ID: HS20031084-08
Inj Date : 25-MAR-2020 15:37
Operator : PC Inst ID: voa6.i
Smp Info : HS20031084-08;HS20031084-08;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200325.b\8260W.m
Meth Date : 15-Apr-2020 14:45 voa6.i Quant Type: ISTD
Cal Date : 19-MAR-2020 14:22 Cal File: X031908.D
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.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)	393770	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	184901	47.2538	47.25
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	221869	44.8321	44.83
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	581708	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	505474	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	678534	52.4062	52.40
$ 69 4-Bromofluorobenzene	95	8.695	8.688	(1.134)	233986	48.0897	48.08
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	238000	50.0000	

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032508.D

Date : 25-MAR-2020 15:37

Client ID: HS20031084-08

Sample Info: HS20031084-08;HS20031084-08;;;

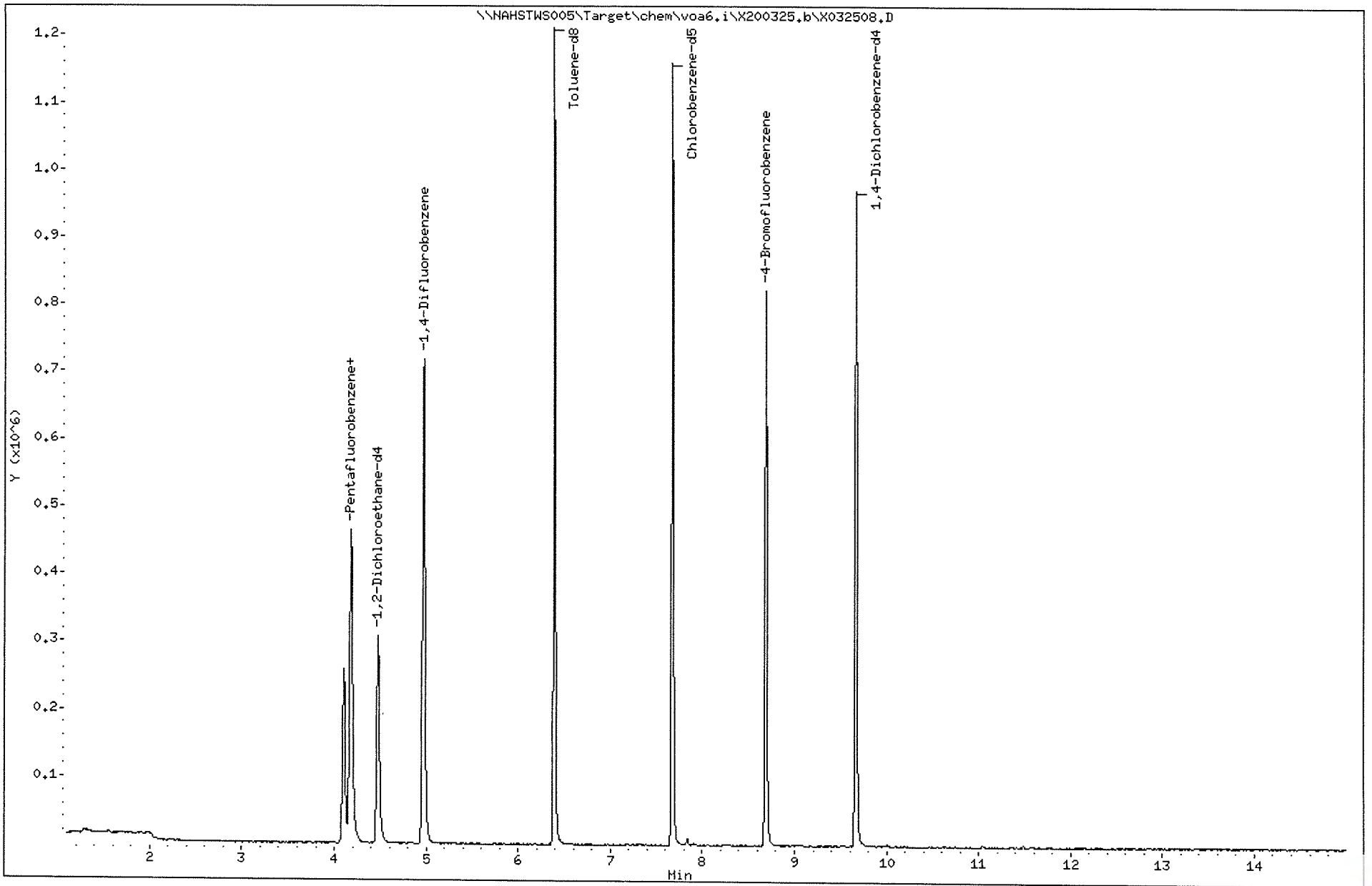
Purge Volume: 5.0

Column phase: DB624

Instrument: voa6.i

Operator: PC

Column diameter: 0.18



ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032509.D
Lab Smp Id: HS20031084-01 Client Smp ID: HS20031084-01
Inj Date : 25-MAR-2020 16:01
Operator : PC Inst ID: voa6.i
Smp Info : HS20031084-01;HS20031084-01;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200325.b\8260W.m
Meth Date : 15-Apr-2020 14:52 Qin.Xu Quant Type: ISTD
Cal Date : 19-MAR-2020 14:22 Cal File: X031908.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.sub
Target Version: 4.14
Processing Host: NAHSTW7066

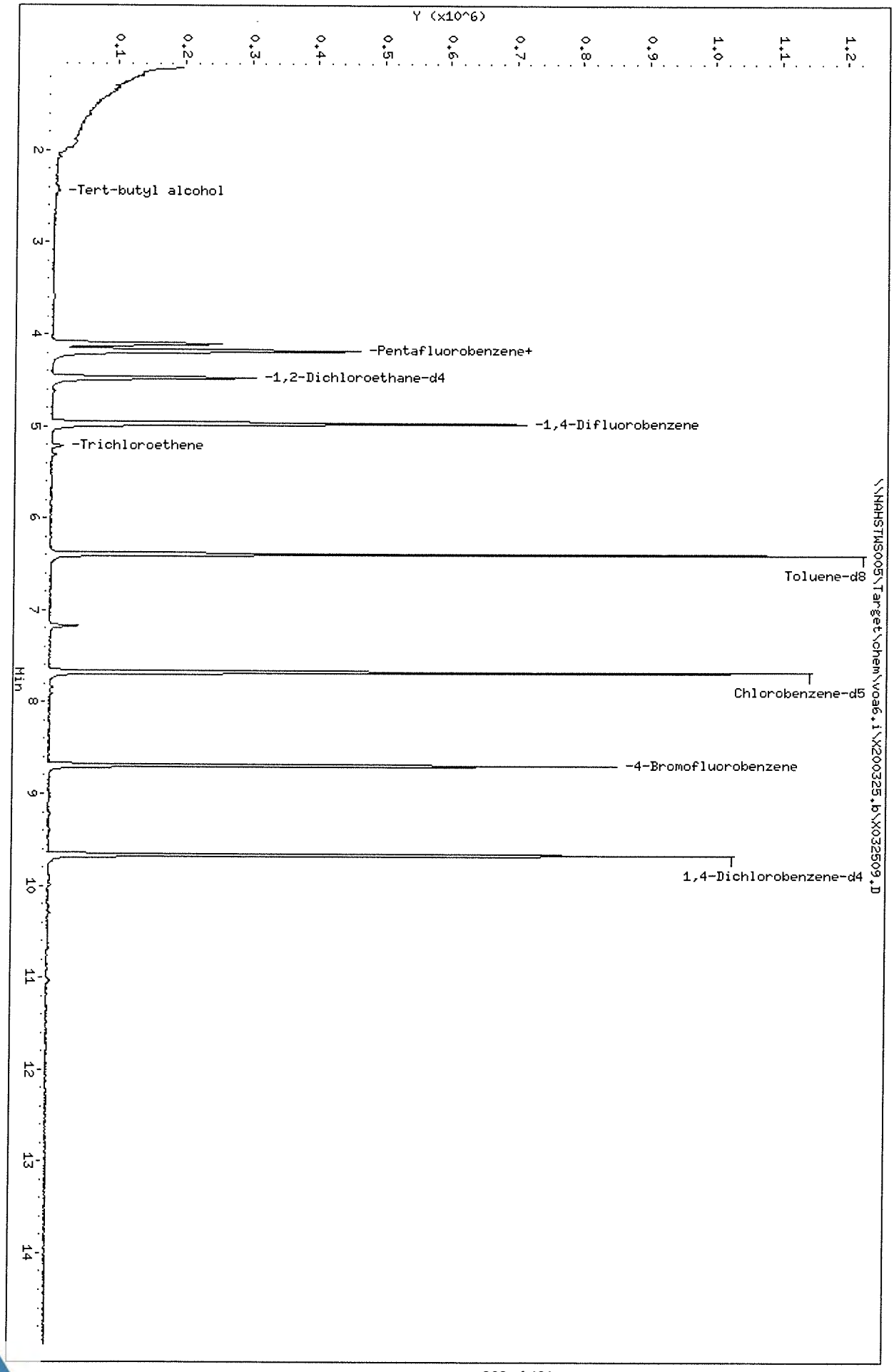
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	389251	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	182867	47.2766	47.27
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	224018	45.7952	45.79
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	584469	50.0000	
38 Trichloroethene	130	5.214	5.207	(1.049)	5539	1.36731	1.36(a)
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	508809	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	677567	51.9879	51.98
$ 69 4-Bromofluorobenzene	95	8.695	8.688	(1.134)	241783	49.3796	49.37
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	251350	50.0000	
148 Tert-Butyl alcohol	59	2.442	2.434	(0.584)	8242	15.1214	15.12(a)

QC Flag Legend

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



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032509.D
Date : 25-MAR-2020 16:01
Client ID: HS200310B4-01
Sample Info: HS200310B4-01;HS200310B4-01;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032509.D Page 3

Date : 25-MAR-2020 16:01

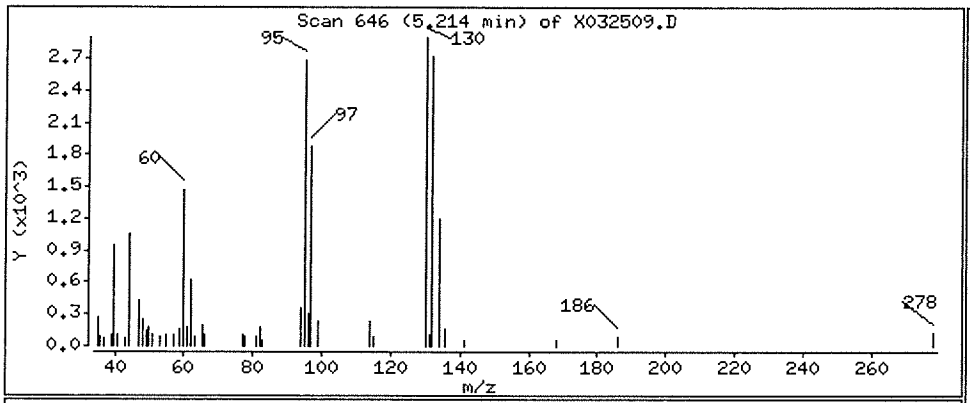
Client ID: HS20031084-01 Instrument: voa6.i

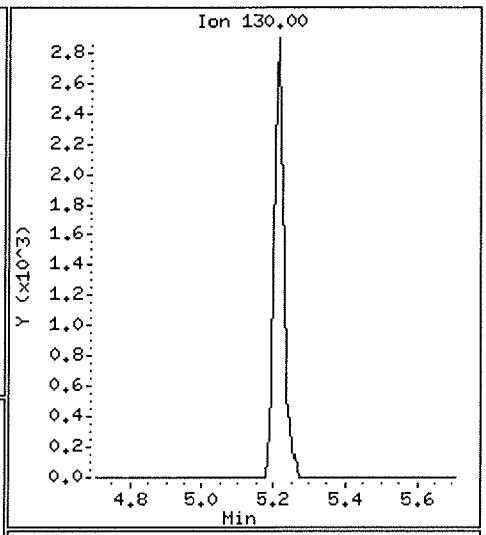
Sample Info: HS20031084-01;HS20031084-01;;;

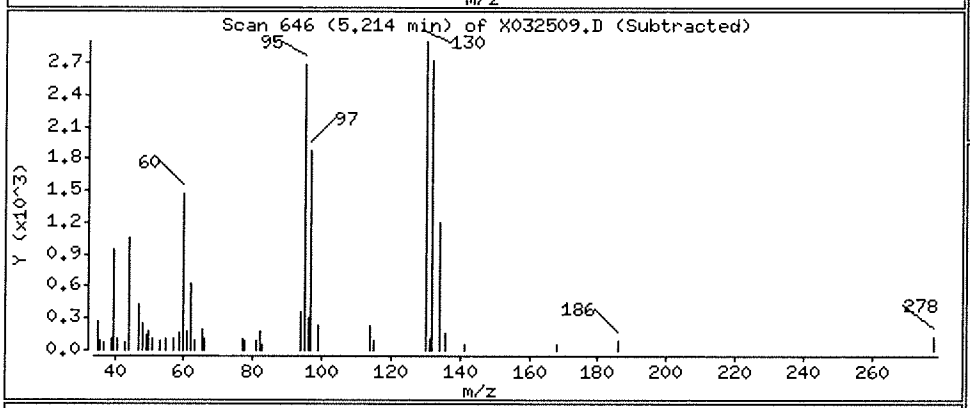
Purge Volume: 5.0 Operator: PC

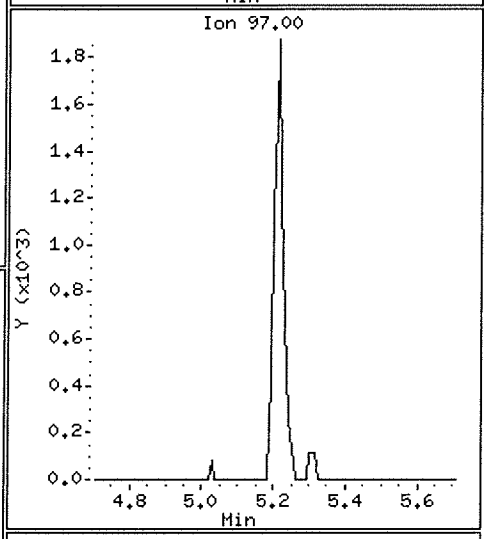
Column phase: DB624 Column diameter: 0.18

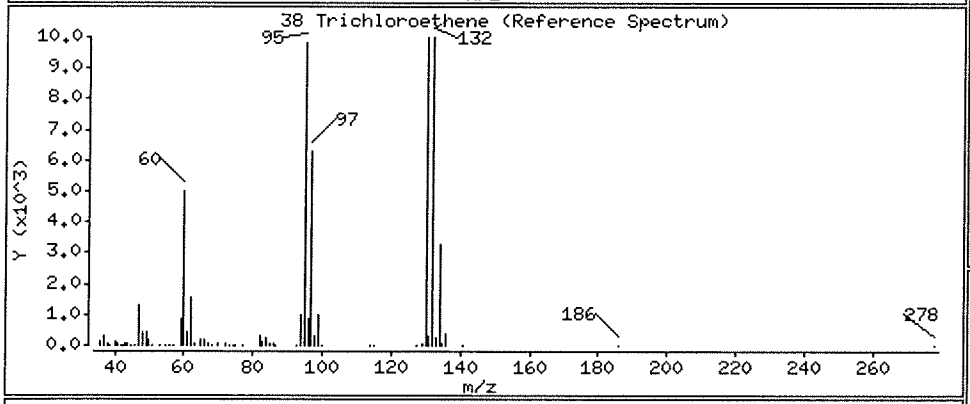
38 Trichloroethene Concentration: 1.36 ug/l

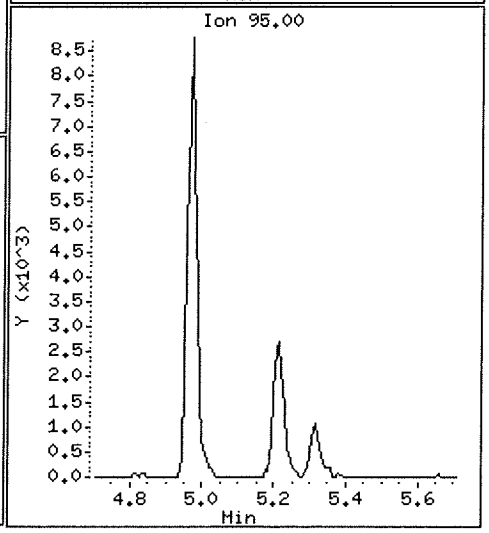


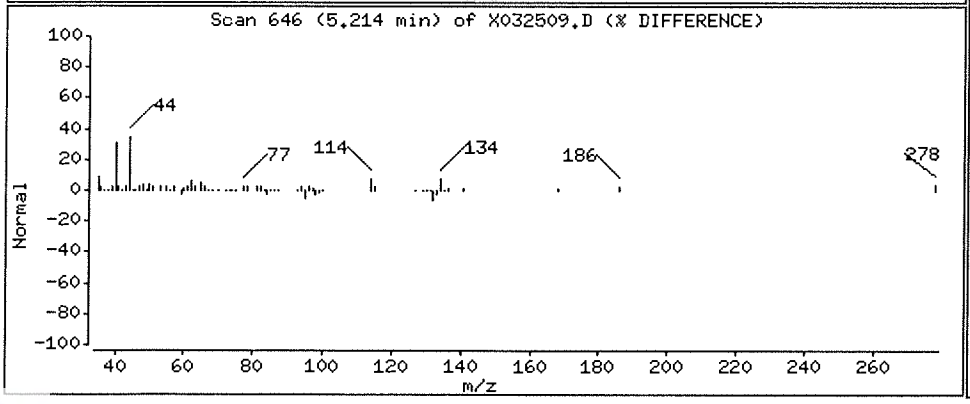












Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032509.D

Date : 25-MAR-2020 16:01

Client ID: HS20031084-01

Instrument: voa6.i

Sample Info: HS20031084-01;HS20031084-01;;;

Purge Volume: 5.0

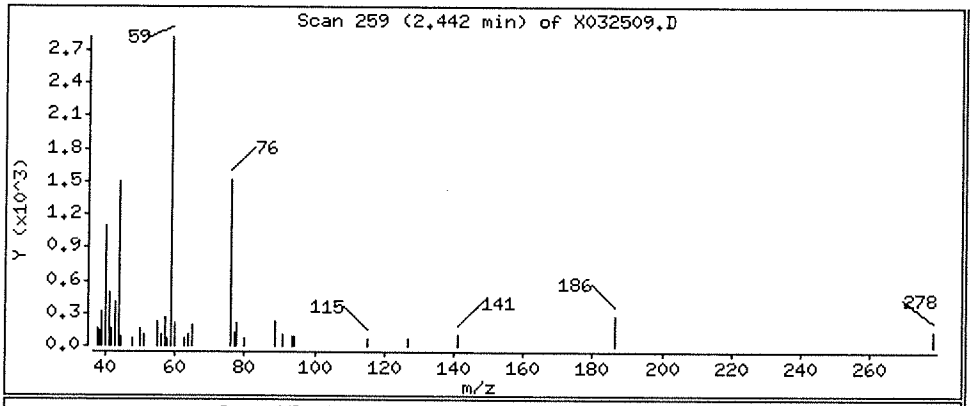
Operator: PC

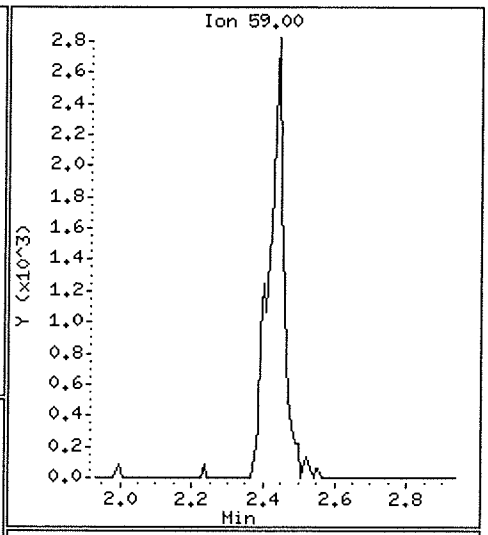
Column phase: DB624

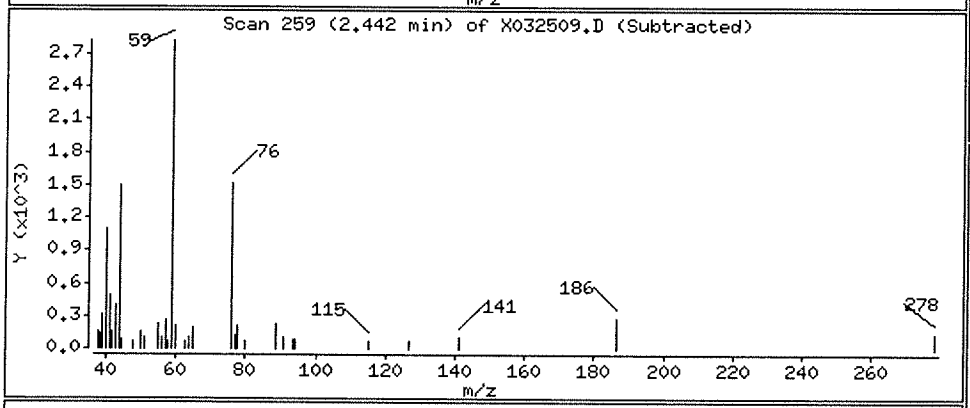
Column diameter: 0.18

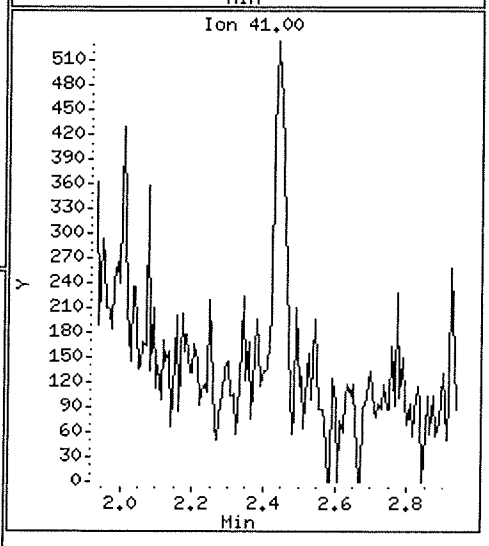
148 Tert-Butyl alcohol

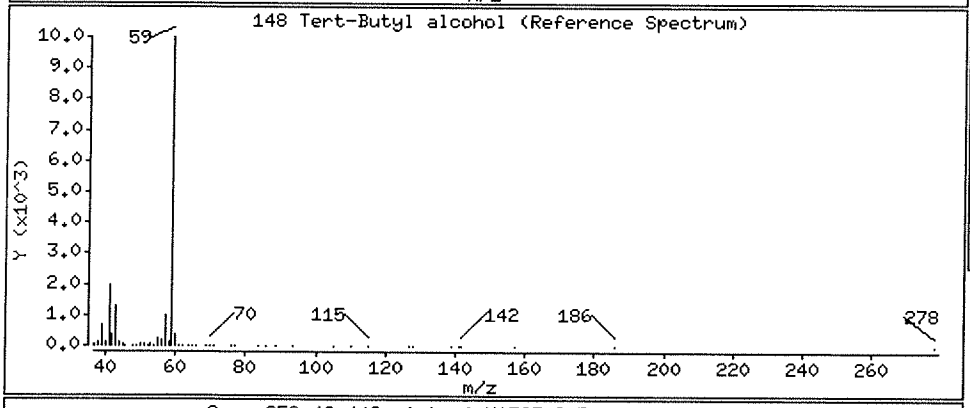
Concentration: 15.12 ug/l

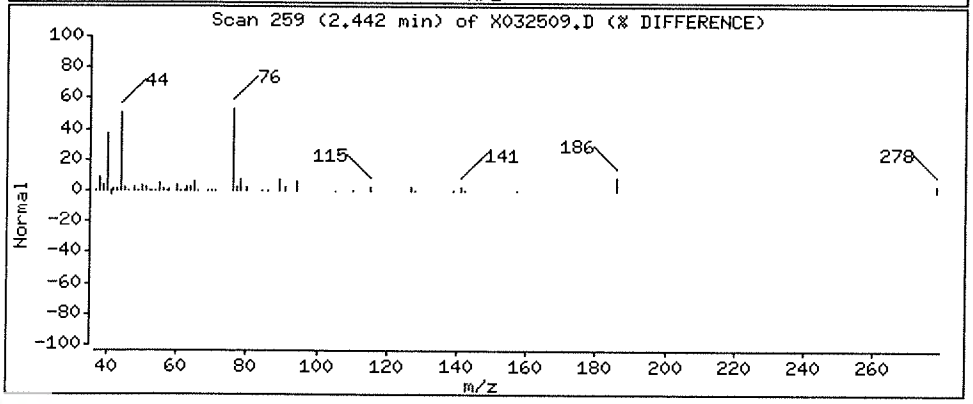












ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032510.D
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Inj Date : 25-MAR-2020 16:25
Operator : PC Inst ID: voa6.i
Smp Info : HS20031084-02;HS20031084-02;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200325.b\8260W.m
Meth Date : 15-Apr-2020 14:45 voa6.i Quant Type: ISTD
Cal Date : 19-MAR-2020 14:22 Cal File: X031908.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.sub
Target Version: 4.14
Processing Host: NAHSTW7066

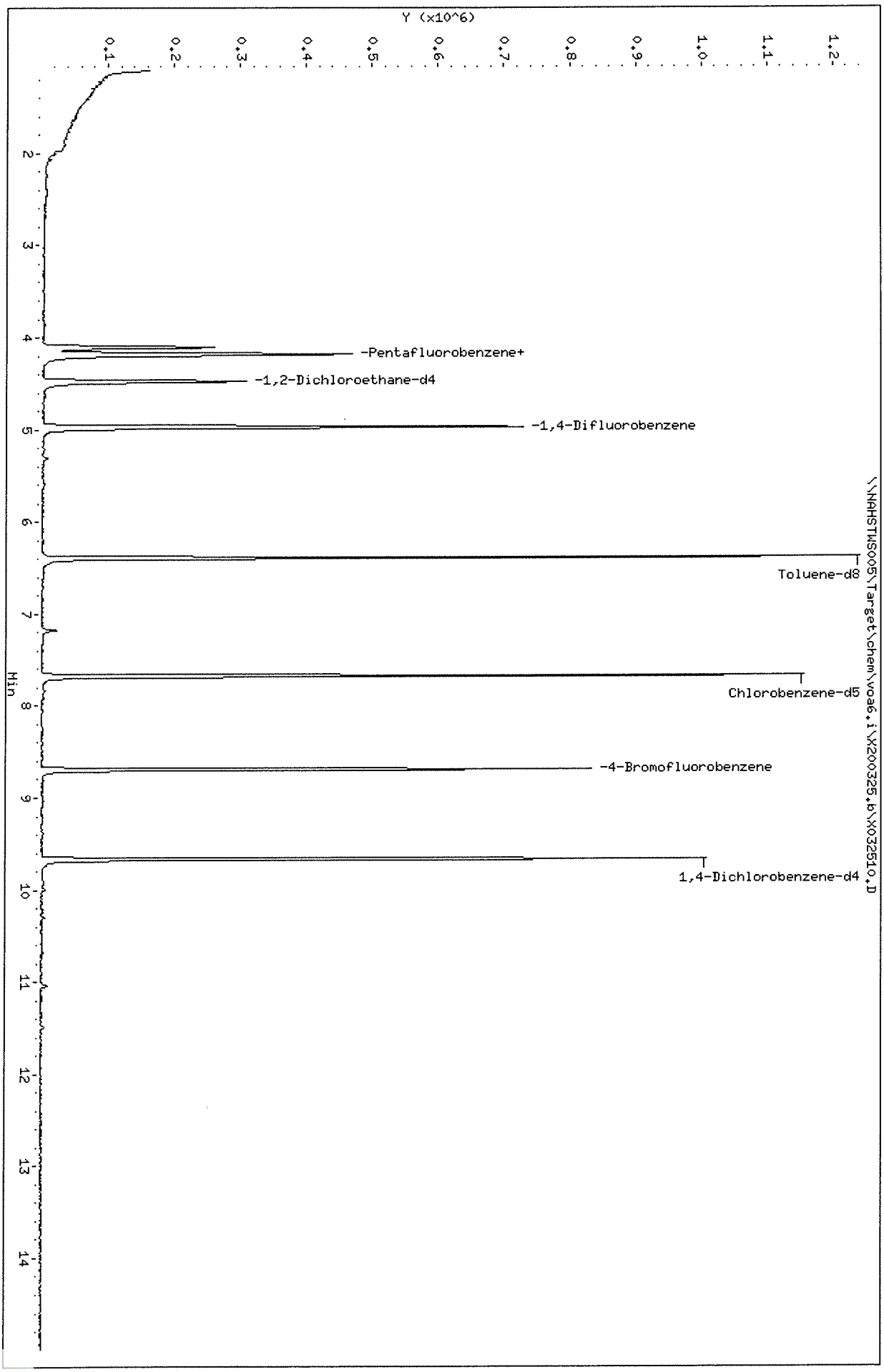
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	388790	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	185433	47.9984	47.99
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	224729	45.9957	45.99
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	580901	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	510541	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	682384	52.1802	52.18
$ 69 4-Bromofluorobenzene	95	8.695	8.688	(1.134)	236459	48.1159	48.11
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	243636	50.0000	

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032510.D
Date : 25-MAR-2020 16:25
Client ID: HS20031084-02
Sample Info: HS20031084-02;HS20031084-02;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032511.D Page 1
Report Date: 15-Apr-2020 14:53

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032511.D
Lab Smp Id: HS20031084-04 Client Smp ID: HS20031084-04
Inj Date : 25-MAR-2020 16:49
Operator : PC Inst ID: voa6.i
Smp Info : HS20031084-04;HS20031084-04;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200325.b\8260W.m
Meth Date : 15-Apr-2020 14:52 Qin.Xu Quant Type: ISTD
Cal Date : 19-MAR-2020 14:22 Cal File: X031908.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.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)	389321	50.0000	
	5 Vinyl Chloride	62	1.138	1.138	(0.272)	274157	46.2218	46.22
	11 1,1-Dichloroethene	96	1.911	1.912	(0.457)	308860	93.6234	93.62
	22 1,1-Dichloroethane	63	2.921	2.922	(0.699)	91856	10.5950	10.59
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	4611	1.04001	1.04(a)
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	183283	47.3758	47.37
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	222677	45.5119	45.51
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	582733	50.0000	
	38 Trichloroethene	130	5.214	5.207	(1.049)	11499	2.84700	2.84(a)
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	513807	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	677939	51.5098	51.50
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	242263	48.9925	48.99
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	250209	50.0000	
M	94 1,2-Dichloroethylene (total)	96				4611	1.04001	1.04(a)

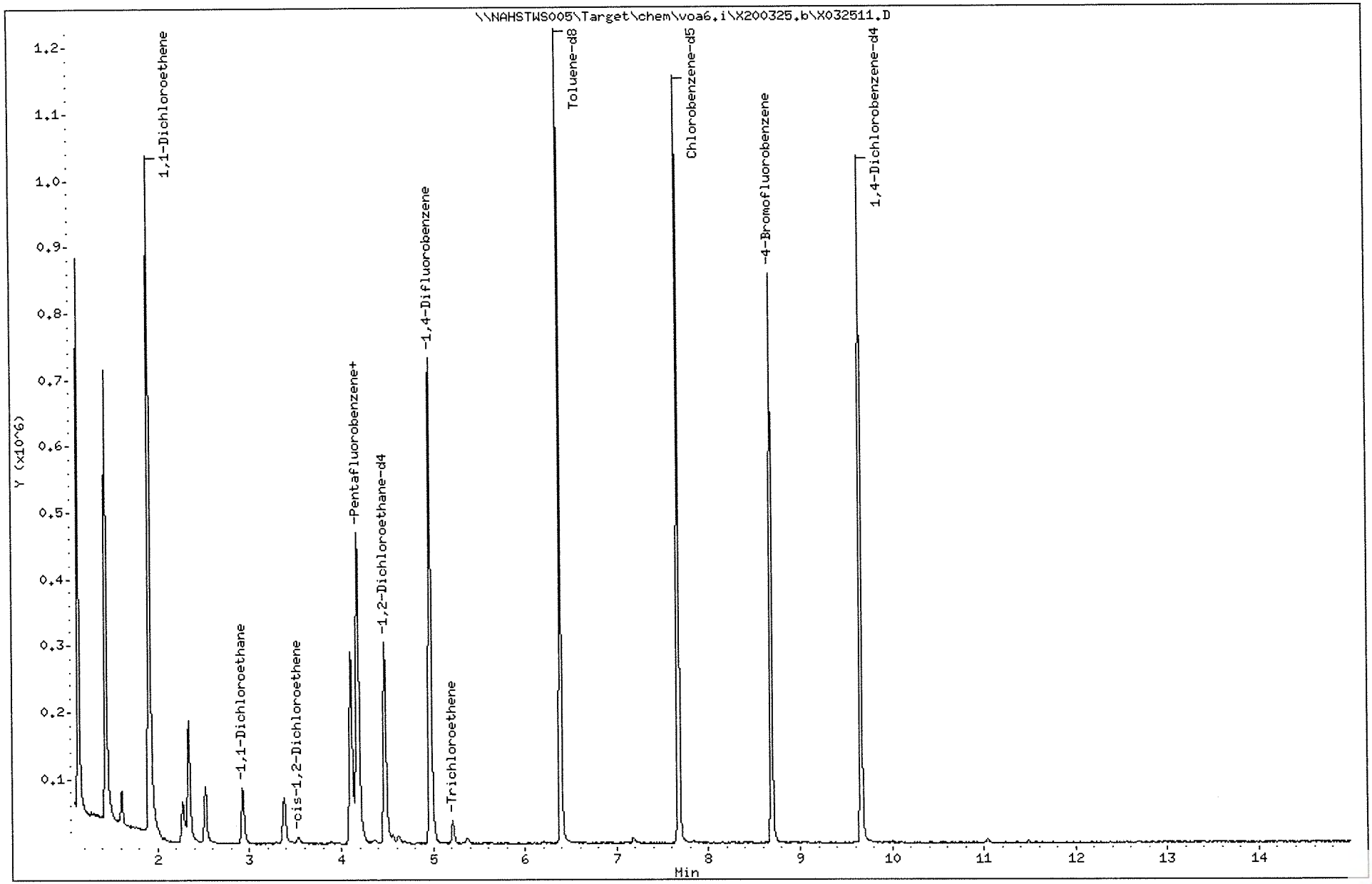
QC Flag Legend

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

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032511.D
Date : 25-MAR-2020 16:49
Client ID: HS20031084-04
Sample Info: HS20031084-04;HS20031084-04;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i

Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032511.D

Date : 25-MAR-2020 16:49

Client ID: HS20031084-04

Instrument: voa6.i

Sample Info: HS20031084-04;HS20031084-04;;;

Purge Volume: 5.0

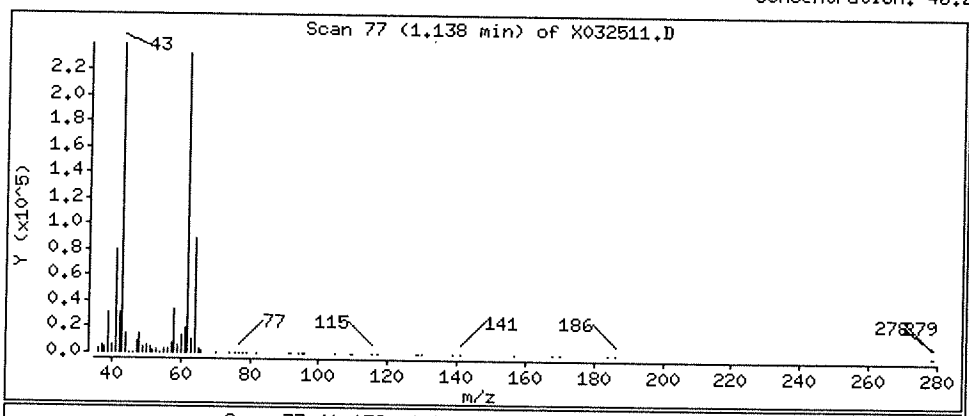
Operator: PC

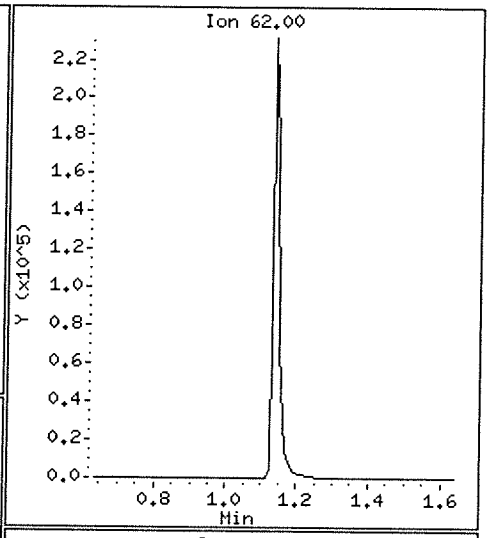
Column phase: DB624

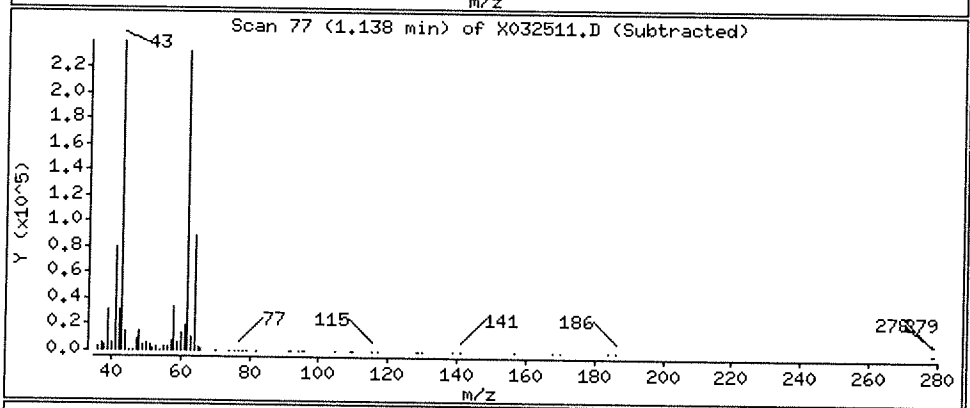
Column diameter: 0.18

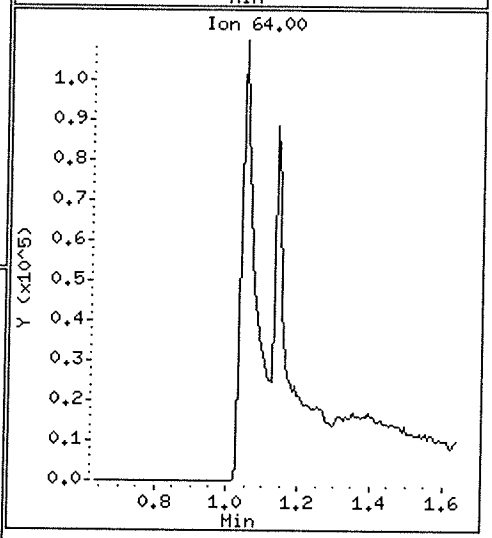
5 Vinyl Chloride

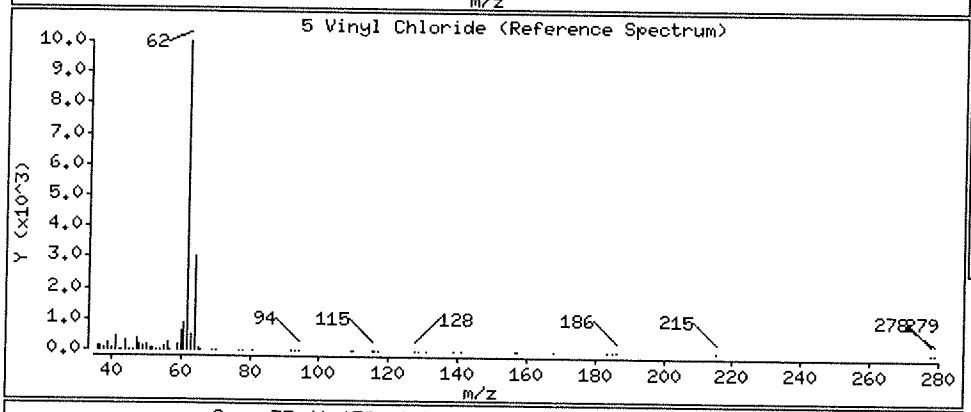
Concentration: 46.22 ug/l

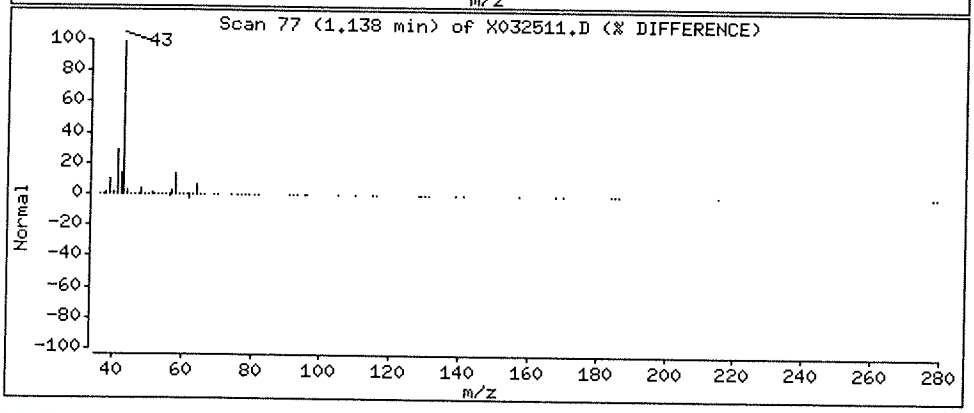












Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032511.D

Date : 25-MAR-2020 16:49

Client ID: HS20031084-04

Instrument: voa6.i

Sample Info: HS20031084-04;HS20031084-04;;;

Purge Volume: 5.0

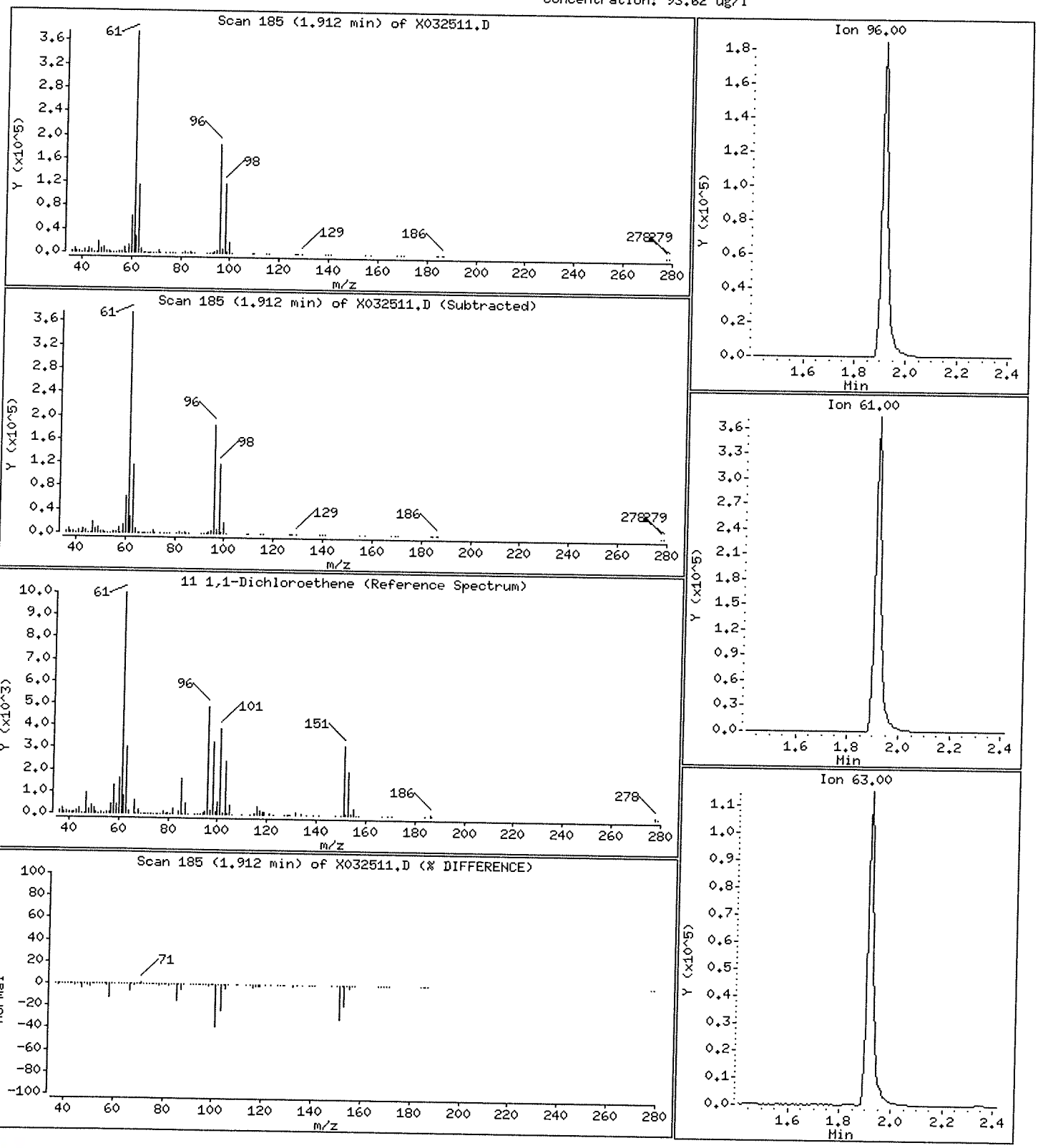
Operator: PC

Column phase: DB624

Column diameter: 0.18

11 1,1-Dichloroethene

Concentration: 93.62 ug/l



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032511.D

Date : 25-MAR-2020 16:49

Client ID: HS20031084-04

Instrument: voa6.i

Sample Info: HS20031084-04;HS20031084-04;;;

Purge Volume: 5.0

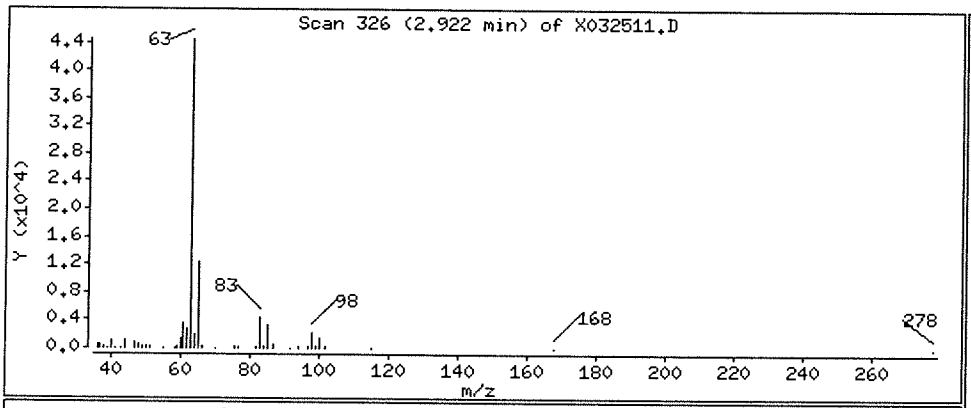
Operator: PC

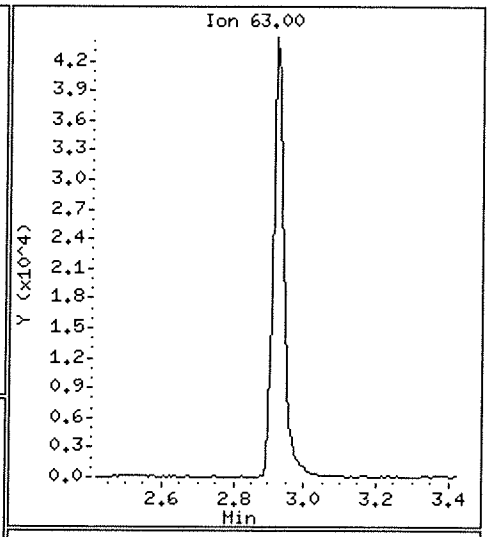
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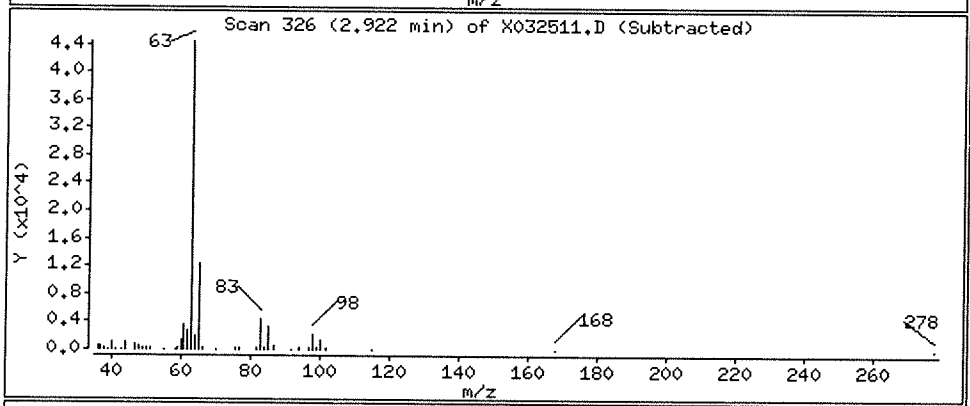
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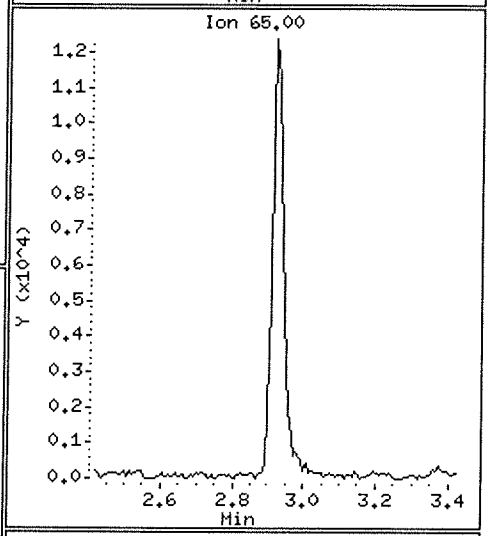
22 1,1-Dichloroethane

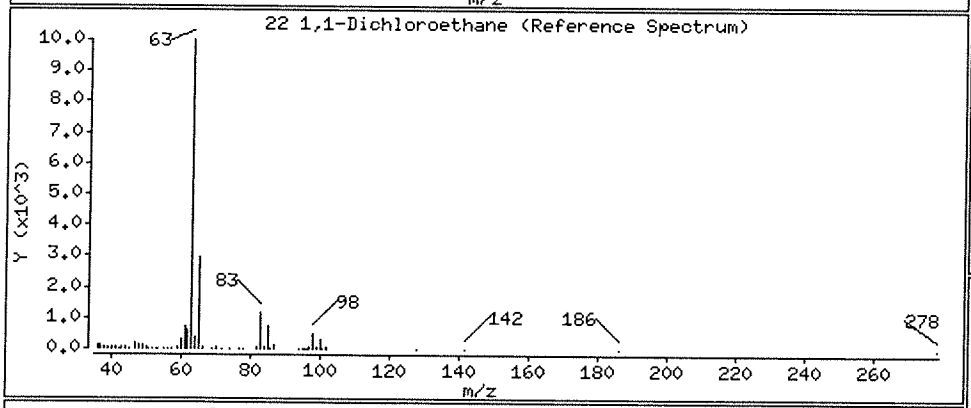
Concentration: 10.59 ug/l

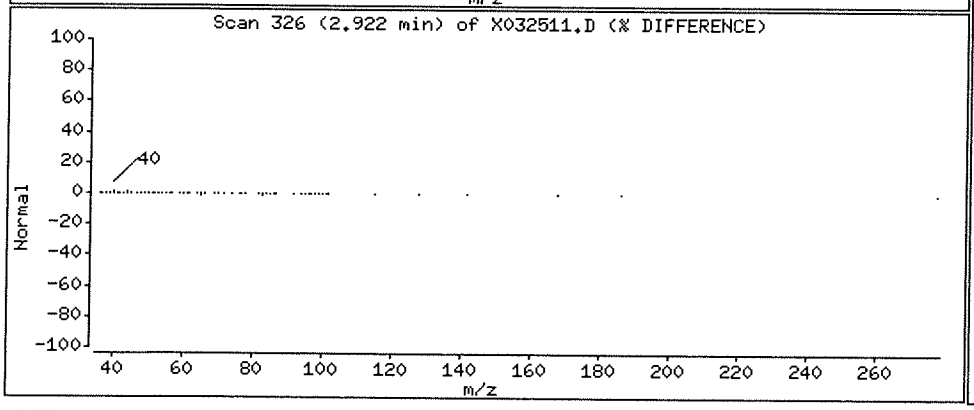


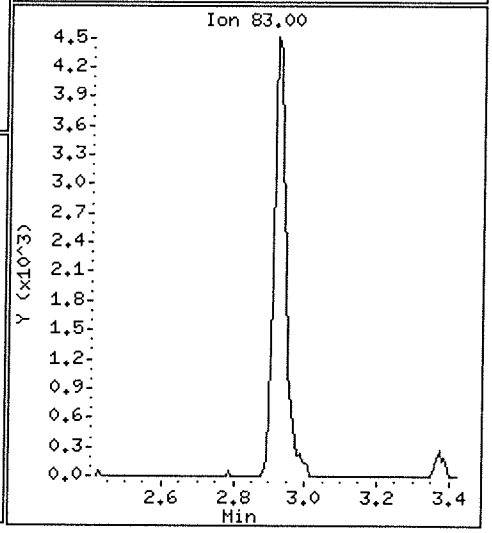












Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032511.D

Date : 25-MAR-2020 16:49

Client ID: HS20031084-04

Instrument: voa6.i

Sample Info: HS20031084-04;HS20031084-04;;;

Purge Volume: 5.0

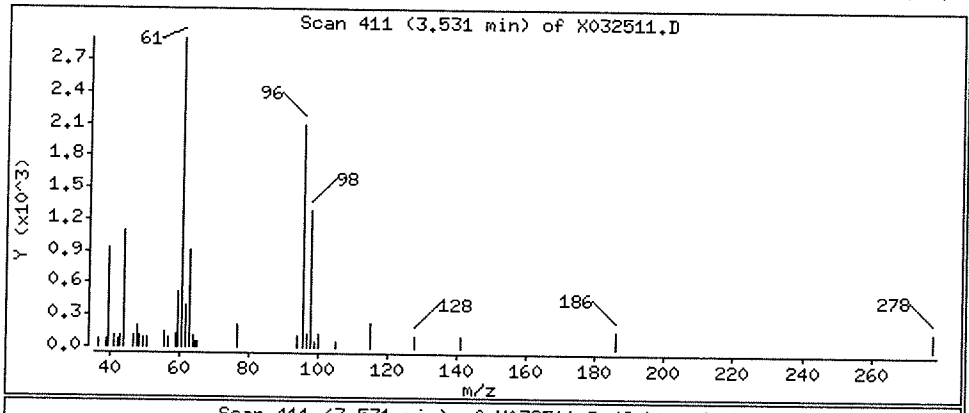
Operator: PC

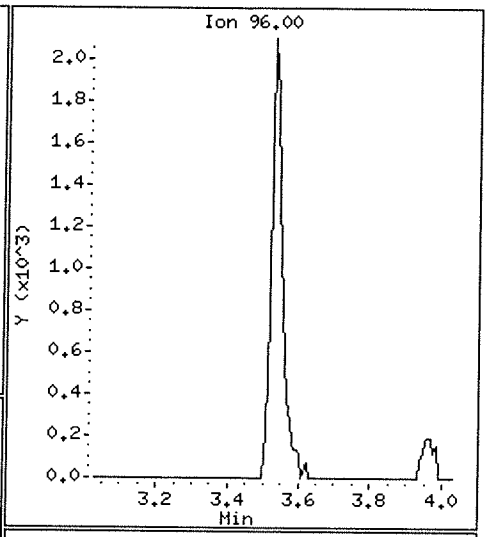
Column phase: DB624

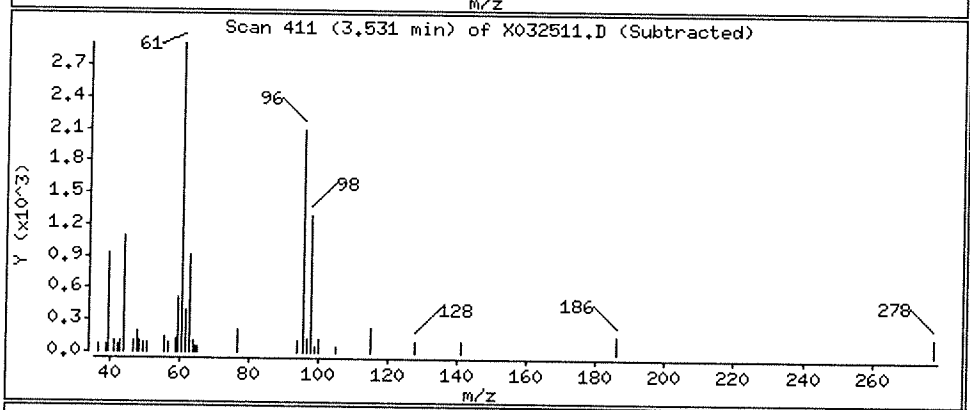
Column diameter: 0.18

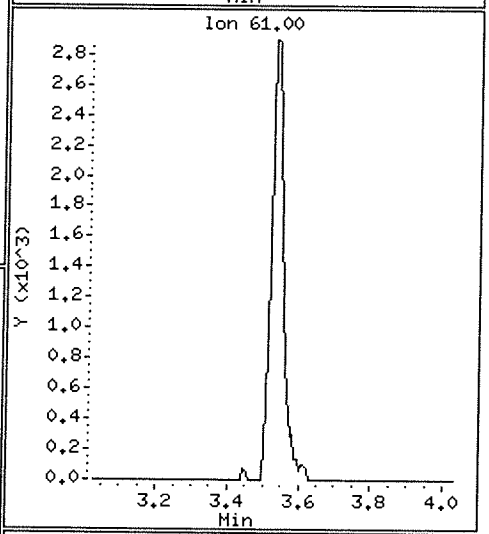
27 cis-1,2-Dichloroethene

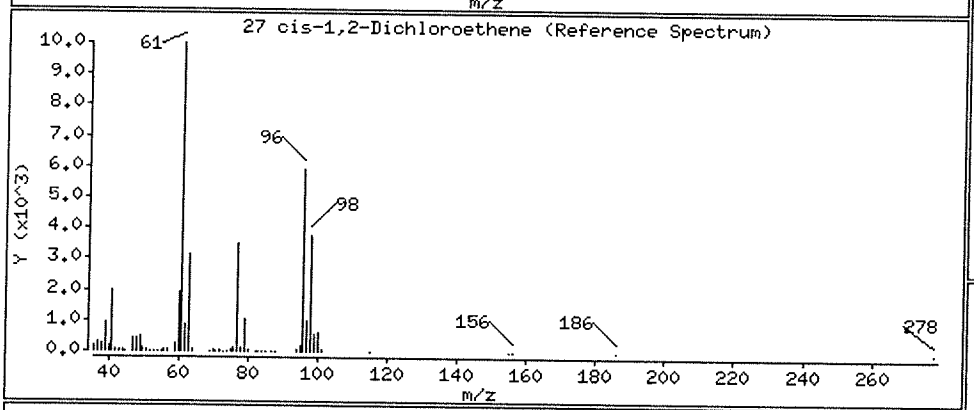
Concentration: 1.04 ug/l

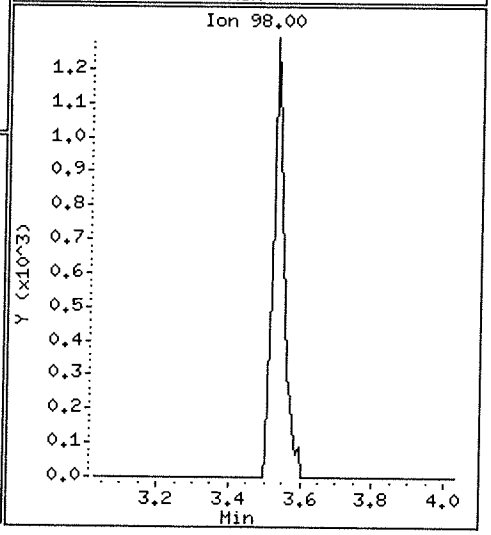


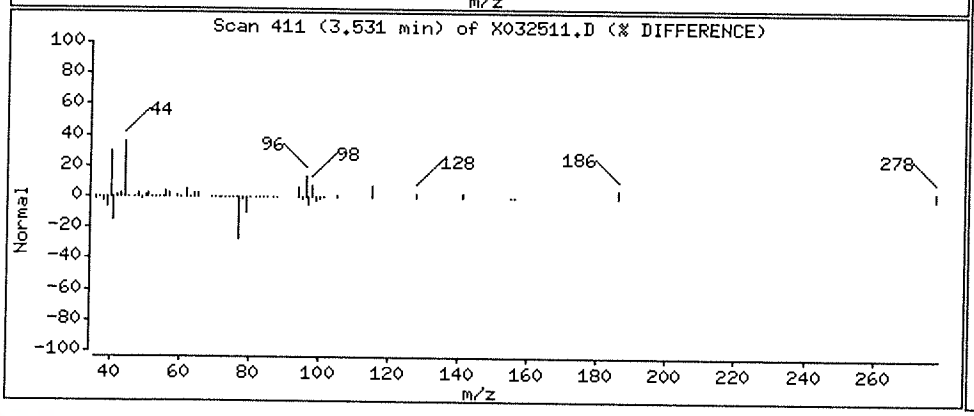












Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032511.D Page 7

Date : 25-MAR-2020 16:49

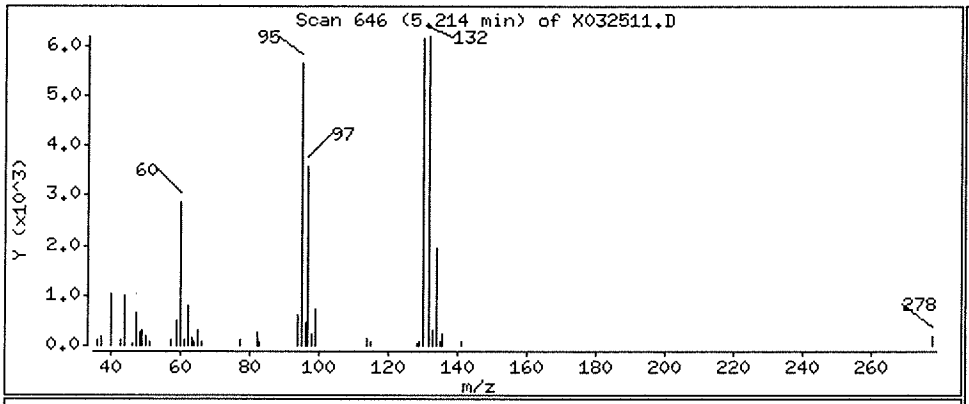
Client ID: HS20031084-04 Instrument: voa6.i

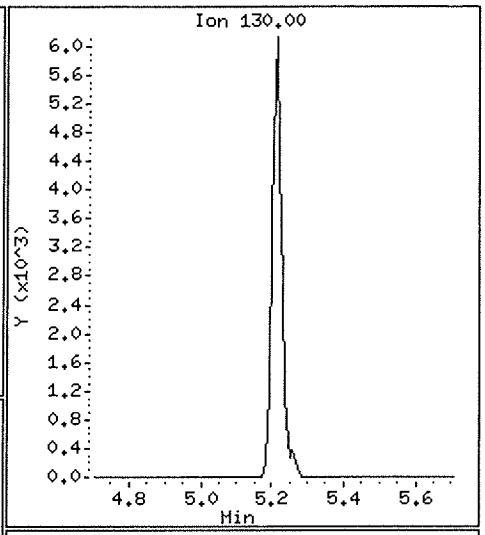
Sample Info: HS20031084-04;HS20031084-04;;;

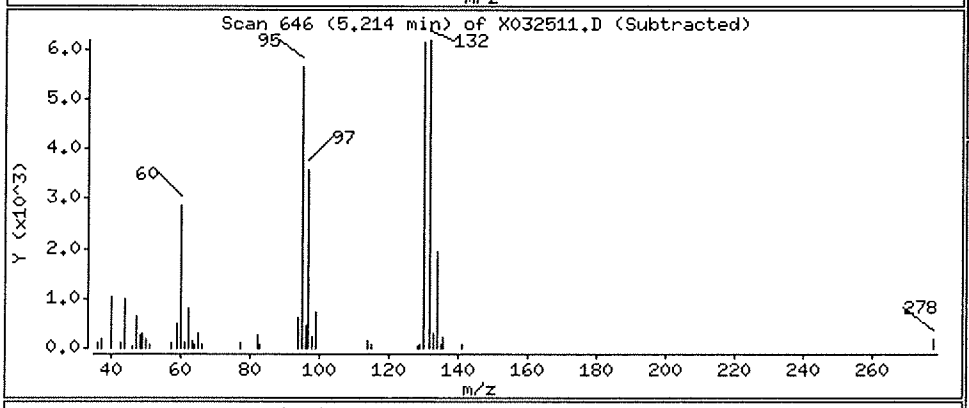
Purge Volume: 5.0 Operator: PC

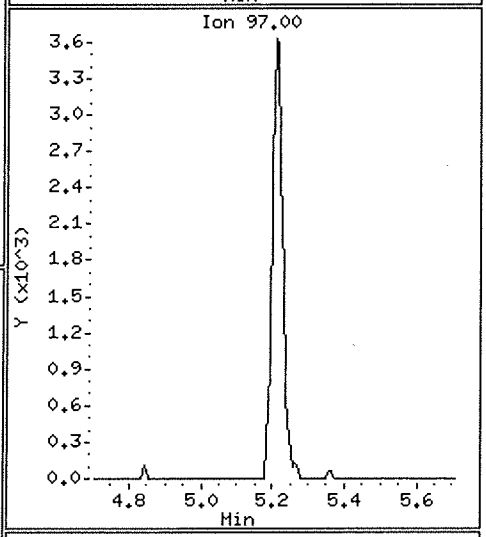
Column phase: DB624 Column diameter: 0.18

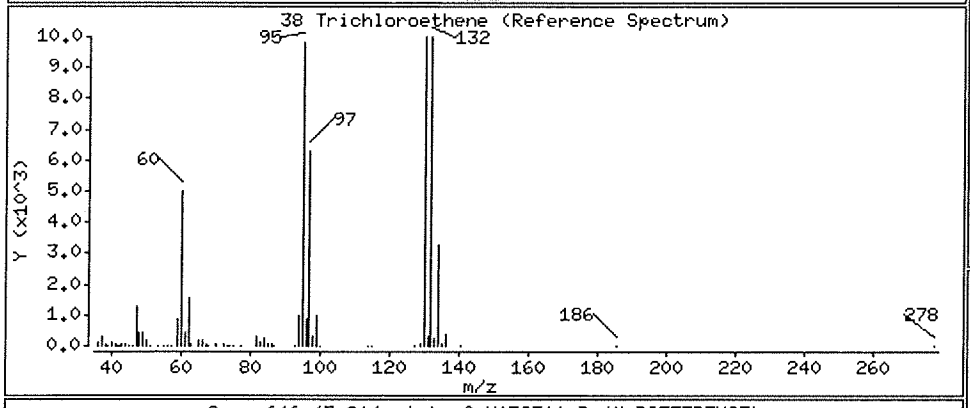
38 Trichloroethene Concentration: 2.84 ug/l

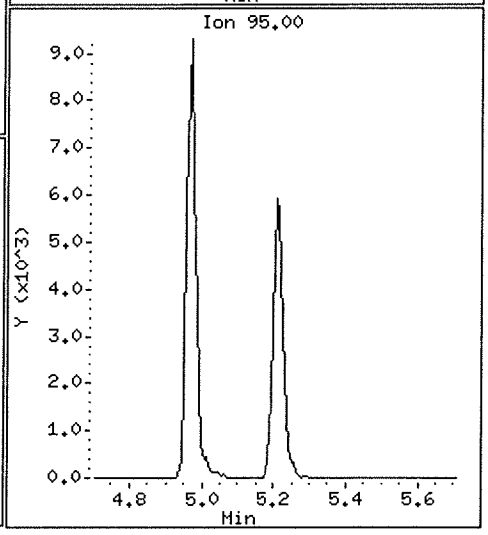


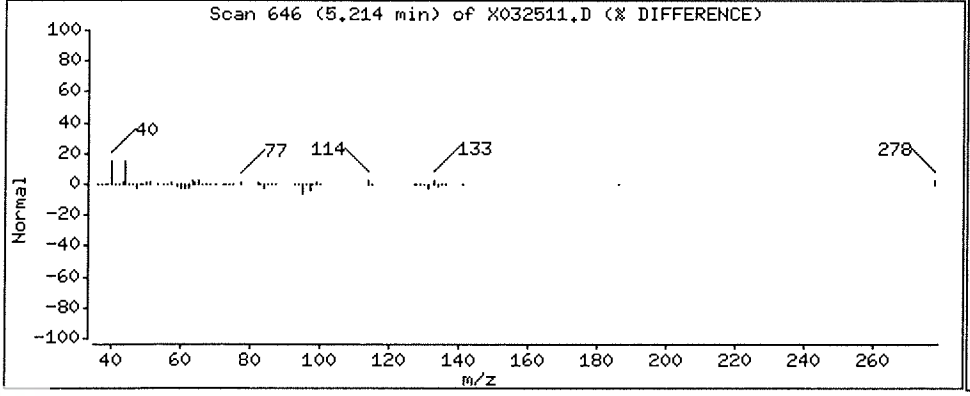












Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032512.D Page 1
Report Date: 15-Apr-2020 14:53

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032512.D
Lab Smp Id: HS20031084-05 Client Smp ID: HS20031084-05
Inj Date : 25-MAR-2020 17:13
Operator : PC Inst ID: voa6.i
Smp Info : HS20031084-05;HS20031084-05;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200325.b\8260W.m
Meth Date : 15-Apr-2020 14:52 Qin.Xu Quant Type: ISTD
Cal Date : 19-MAR-2020 14:22 Cal File: X031908.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.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)	396902	50.0000	
	11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	2623	0.77991	0.77(a)
$	30 Dibromofluoromethane	113	4.104	4.103	(0.981)	188475	47.7883	47.78
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	228004	45.7113	45.71
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	593306	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	521304	50.0000	
$	48 Toluene-d8	98	6.389	6.388	(0.833)	681892	51.0644	51.06
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	247383	49.3116	49.31
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	254766	50.0000	

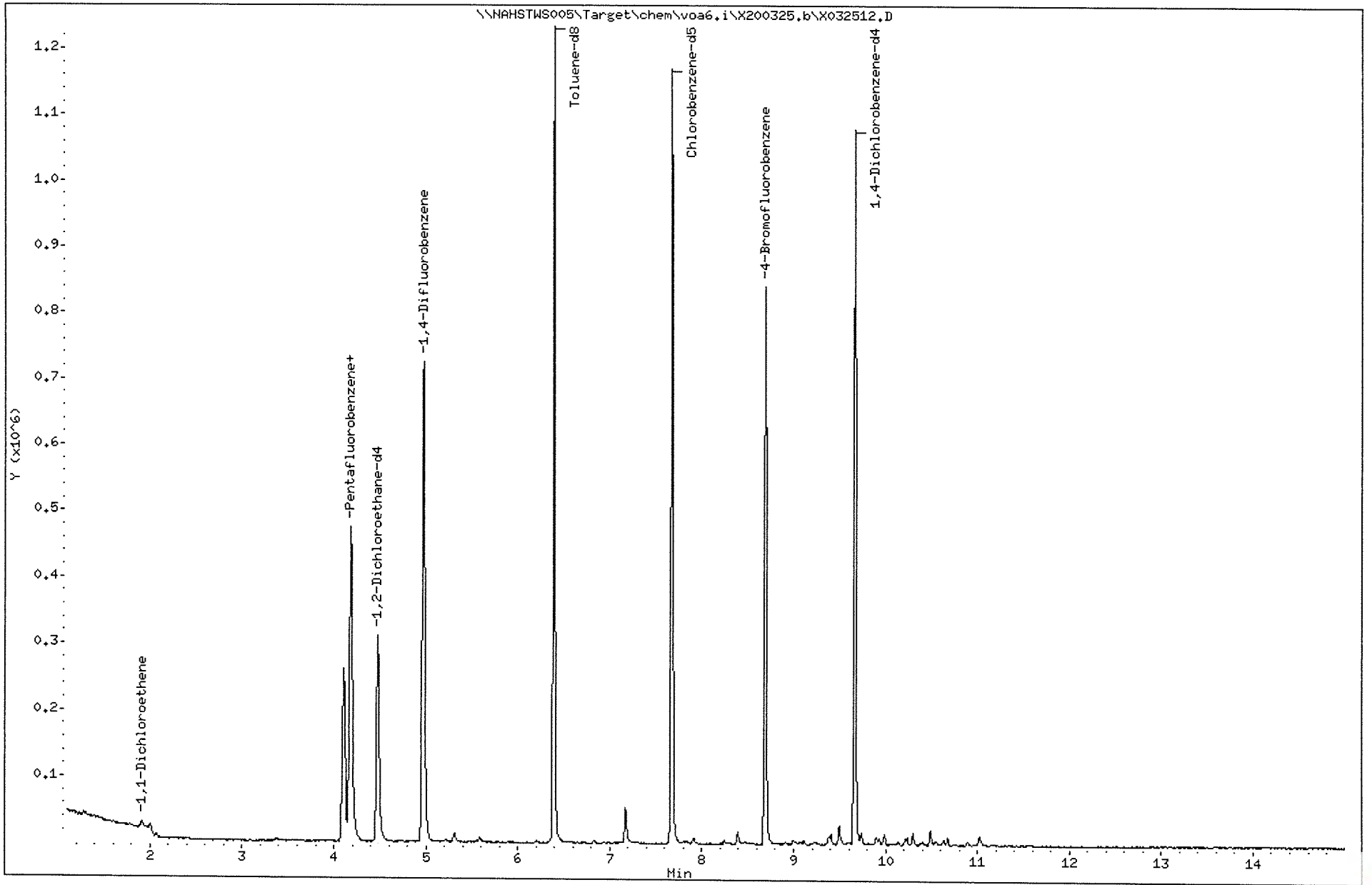
QC Flag Legend

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

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032512.D
Date : 25-MAR-2020 17:13
Client ID: HS20031084-05
Sample Info: HS20031084-05;HS20031084-05;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i

Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032512.D

Date : 25-MAR-2020 17:13

Client ID: HS20031084-05

Instrument: voa6.i

Sample Info: HS20031084-05;HS20031084-05;;;

Purge Volume: 5.0

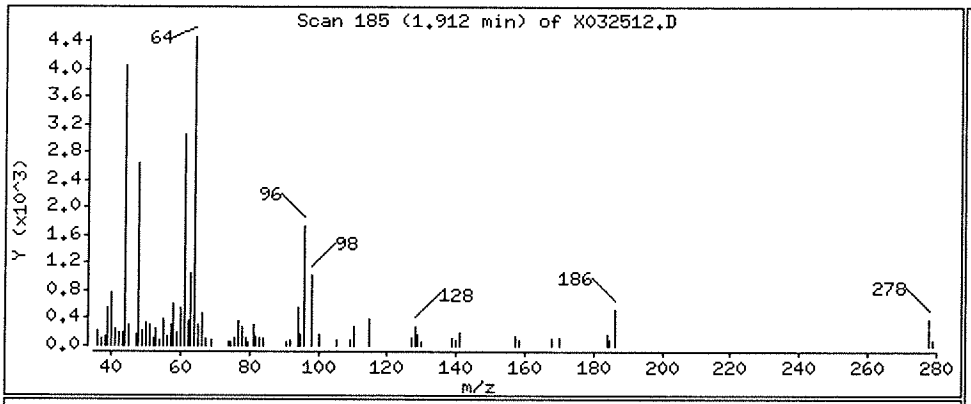
Operator: PC

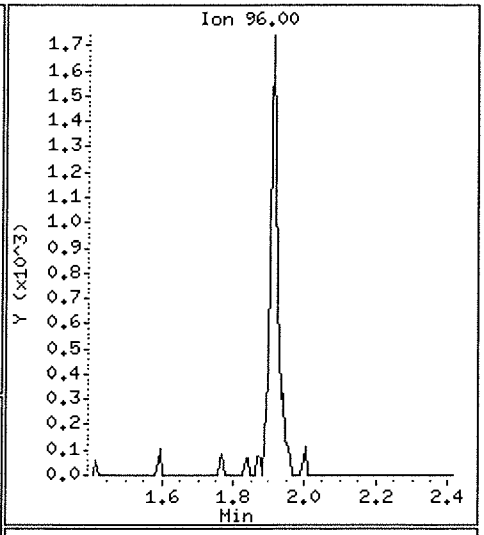
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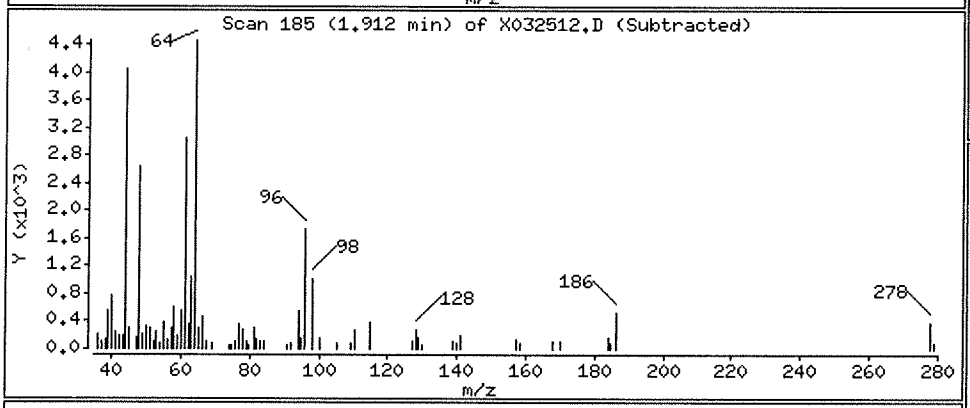
Column diameter: 0.18

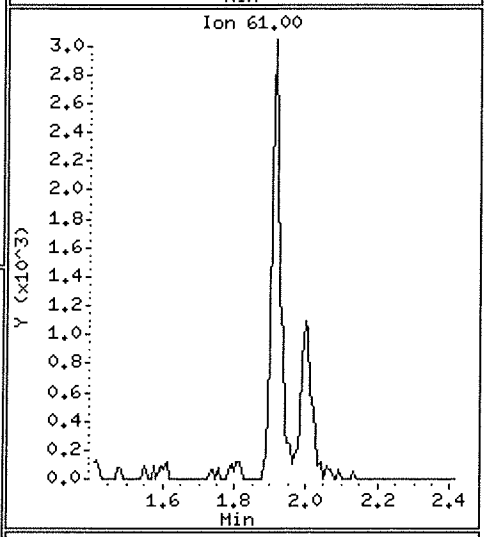
11 1,1-Dichloroethene

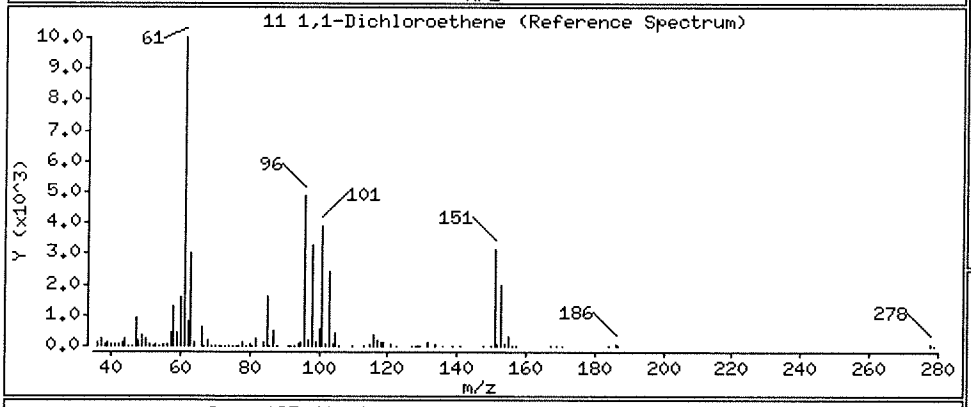
Concentration: 0.77 ug/l

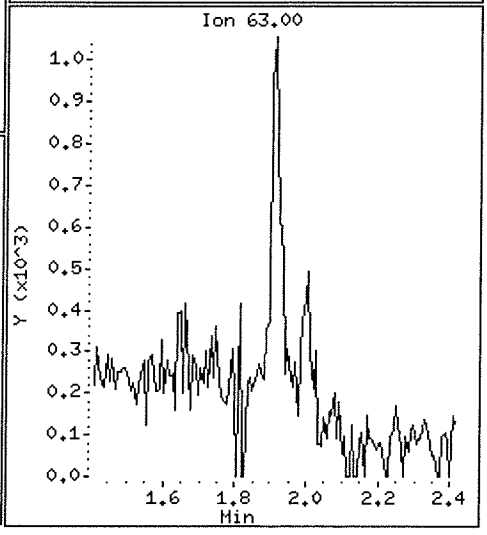


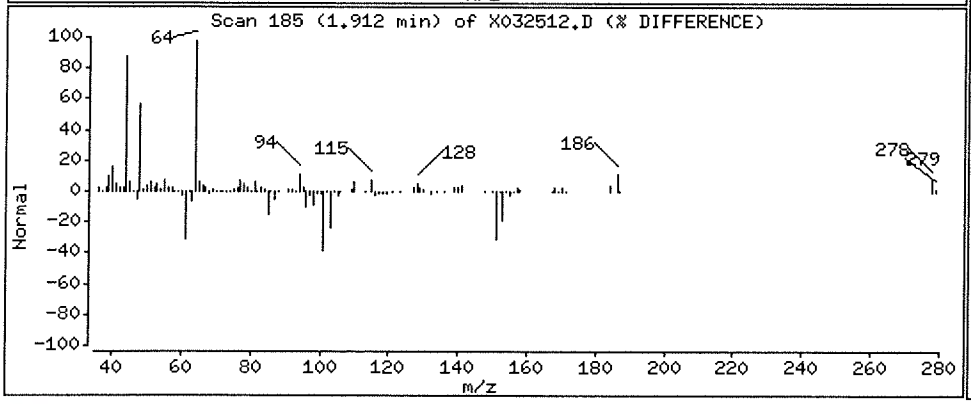












Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032513.D Page 1
Report Date: 15-Apr-2020 14:54

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032513.D
Lab Smp Id: HS20031084-06 Client Smp ID: HS20031084-06
Inj Date : 25-MAR-2020 17:37
Operator : PC Inst ID: voa6.i
Smp Info : HS20031084-06;HS20031084-06;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200325.b\8260W.m
Meth Date : 15-Apr-2020 14:52 Qin.Xu Quant Type: ISTD
Cal Date : 19-MAR-2020 14:22 Cal File: X031908.D
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.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)	396080	50.0000	
	10 Acetone	43	1.976	1.969	(0.473)	558346	396.518	396.51
	24 2-Butanone	43	3.573	3.573	(0.854)	700756	296.170	296.17
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	29363	6.50978	6.50
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	188937	48.0053	48.00
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	231869	46.5856	46.58
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	598653	50.0000	
	38 Trichloroethene	130	5.214	5.207	(1.049)	5353	1.29009	1.29(a)
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	526028	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	691961	51.3535	51.35
	52 2-Hexanone	43	7.090	7.083	(0.924)	14281	3.95994	3.95(a)
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	251600	49.7057	49.70
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	256873	50.0000	
	92 Naphthalene	128	11.553	11.546	(1.195)	3535	3.03770	3.03(a)
M	94 1,2-Dichloroethylene (total)	96				29363	6.50978	6.50(a)
	149 Isopropyl Alcohol	45	2.098	2.098	(0.502)	68278	174.719	174.71

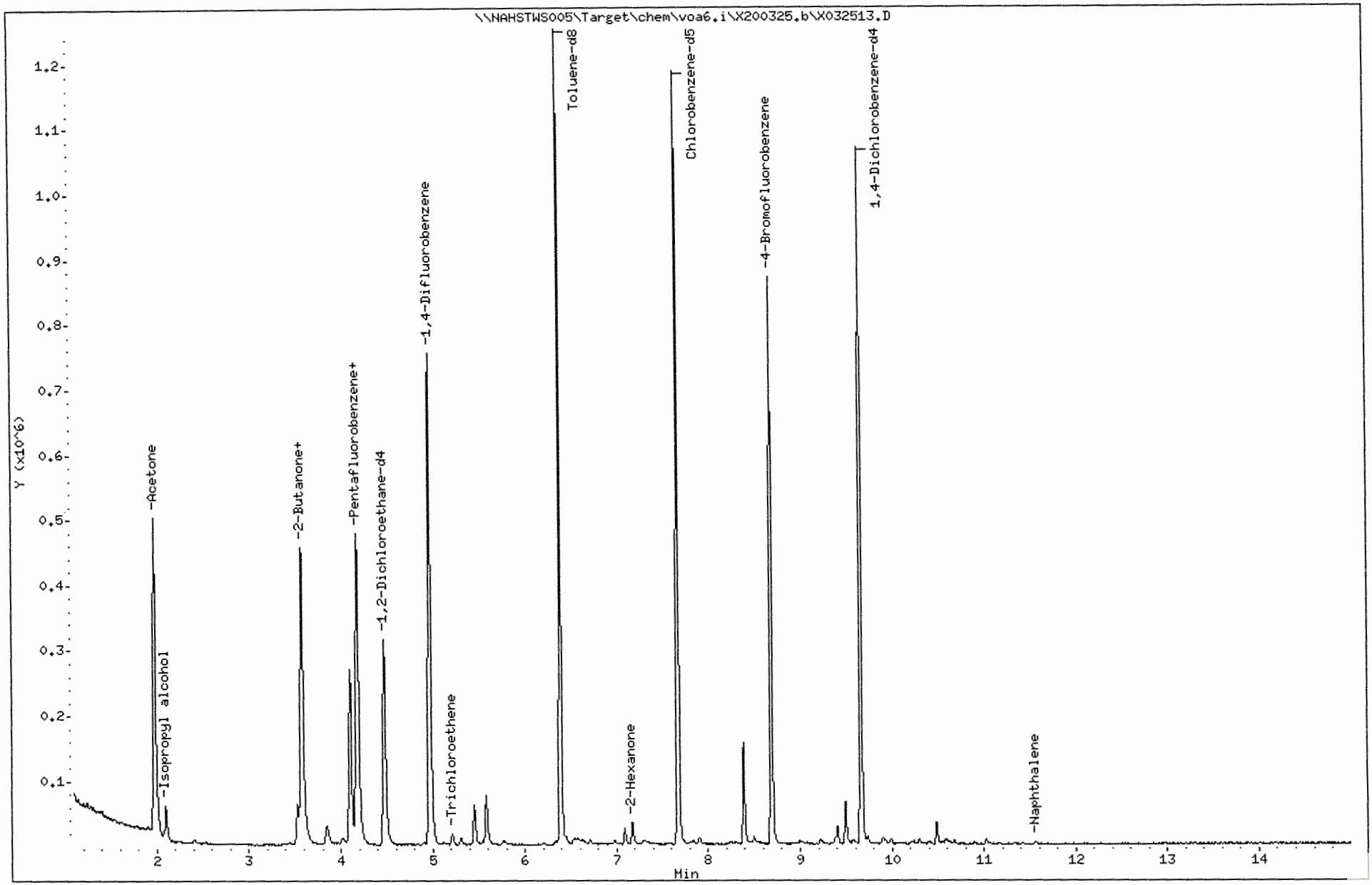
QC Flag Legend

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

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032513.D
Date : 25-MAR-2020 17:37
Client ID: HS20031084-06
Sample Info: HS20031084-06;HS20031084-06;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i

Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032513.D

Date : 25-MAR-2020 17:37

Client ID: HS20031084-06

Instrument: voa6.i

Sample Info: HS20031084-06;HS20031084-06;;;

Purge Volume: 5.0

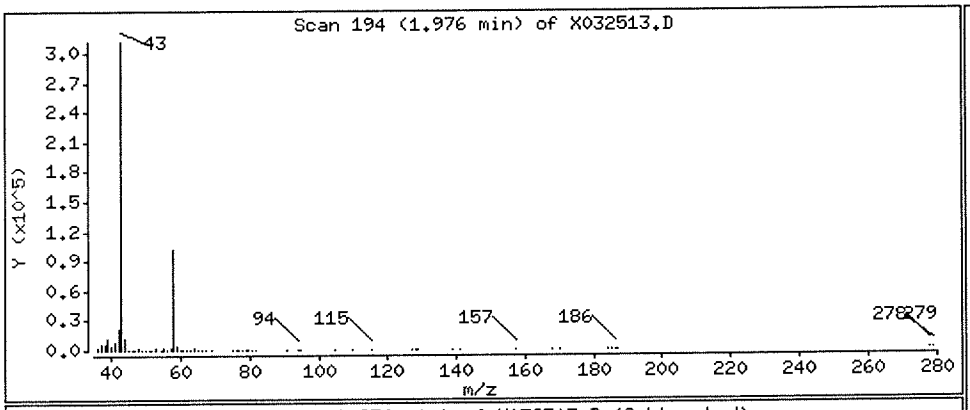
Operator: PC

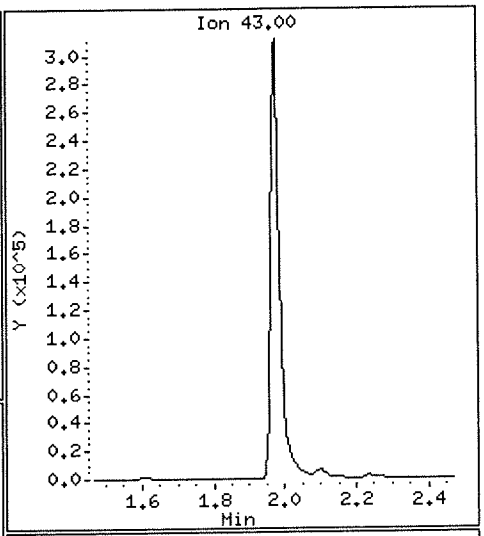
Column phase: DB624

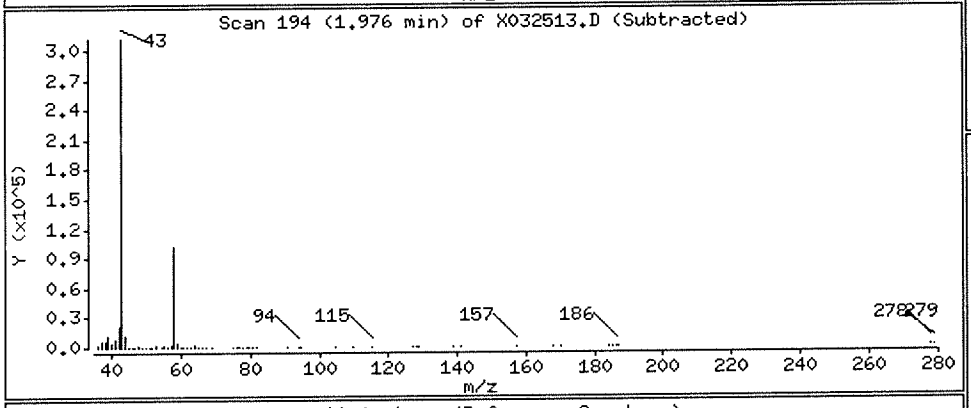
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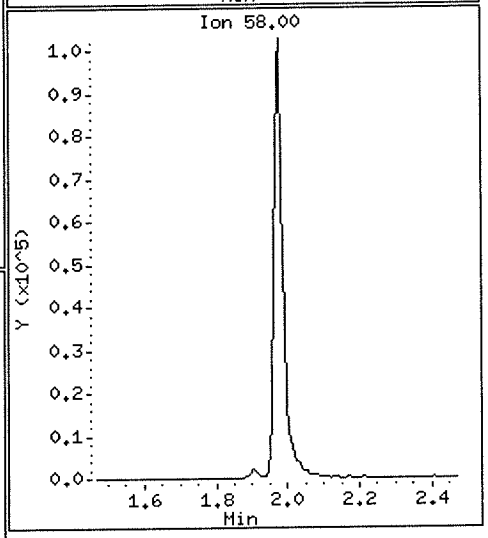
10 Acetone

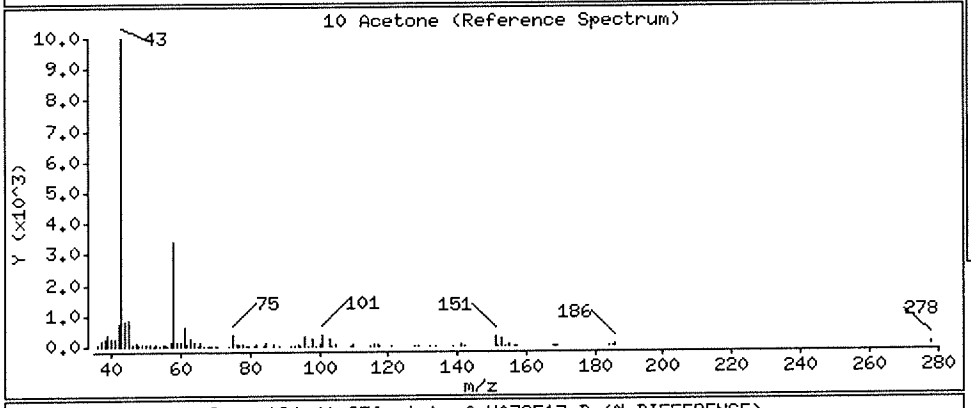
Concentration: 396.51 ug/l

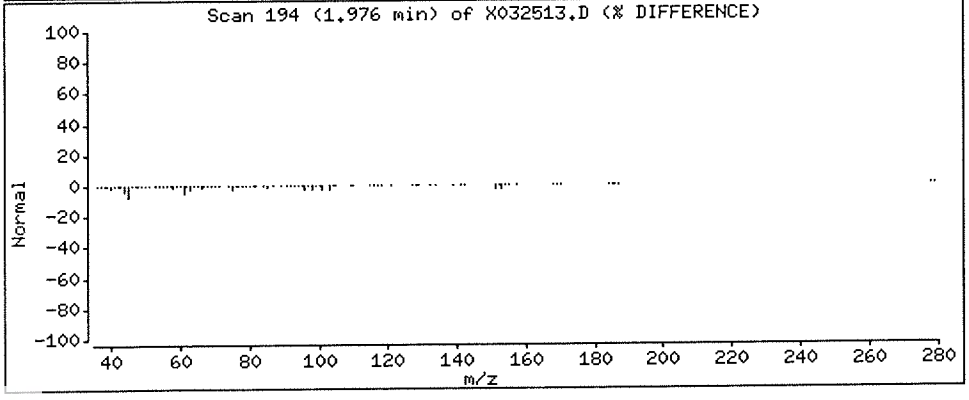












Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032513.D

Date : 25-MAR-2020 17:37

Client ID: HS20031084-06

Instrument: voa6.i

Sample Info: HS20031084-06;HS20031084-06;;;

Purge Volume: 5.0

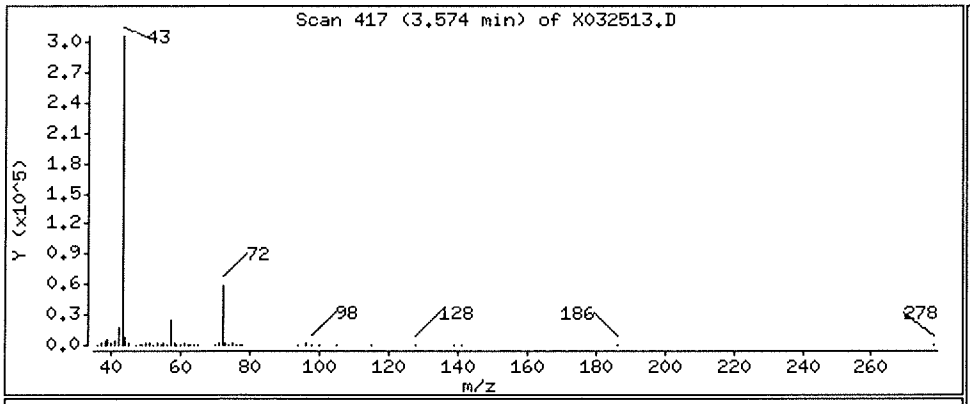
Operator: PC

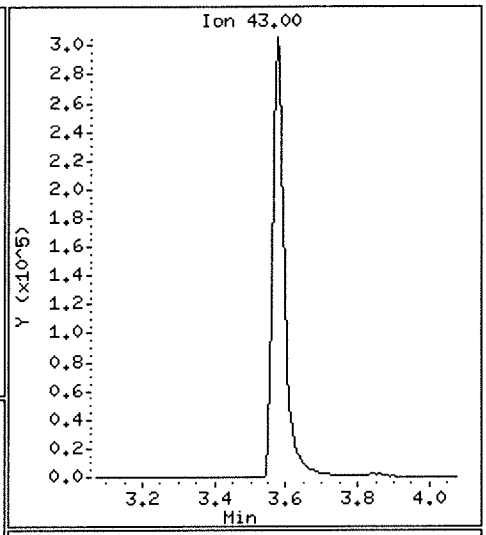
Column phase: DB624

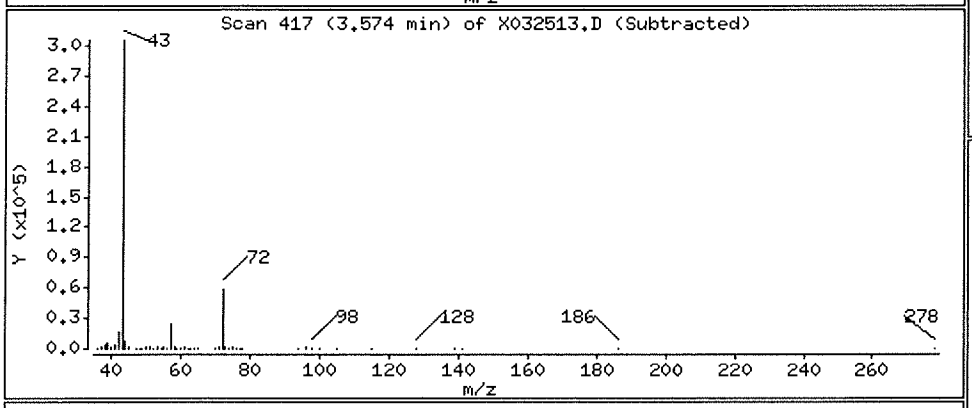
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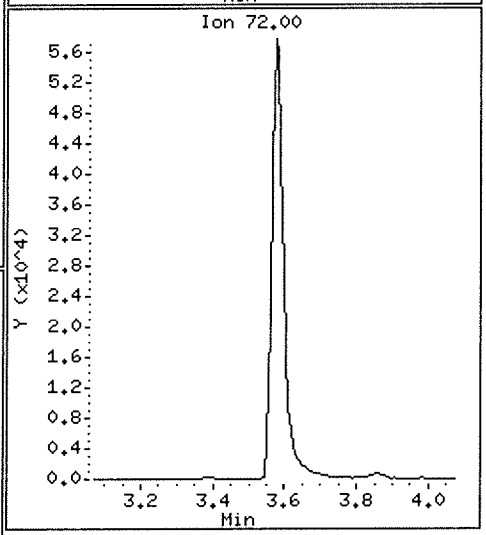
24 2-Butanone

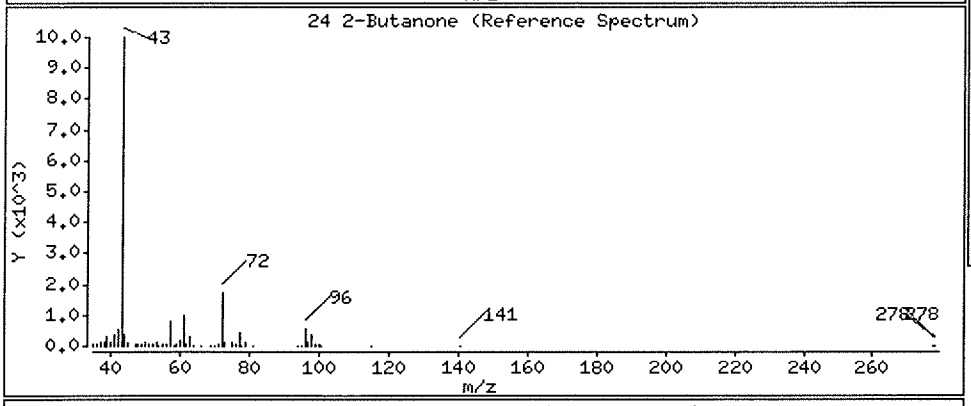
Concentration: 296.17 ug/l

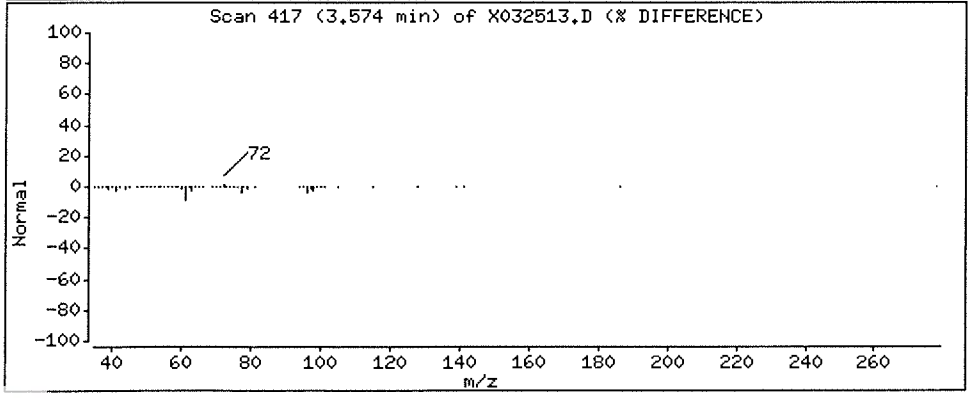












Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032513.D

Date : 25-MAR-2020 17:37

Client ID: HS20031084-06

Instrument: voa6.i

Sample Info: HS20031084-06;HS20031084-06;;;

Purge Volume: 5.0

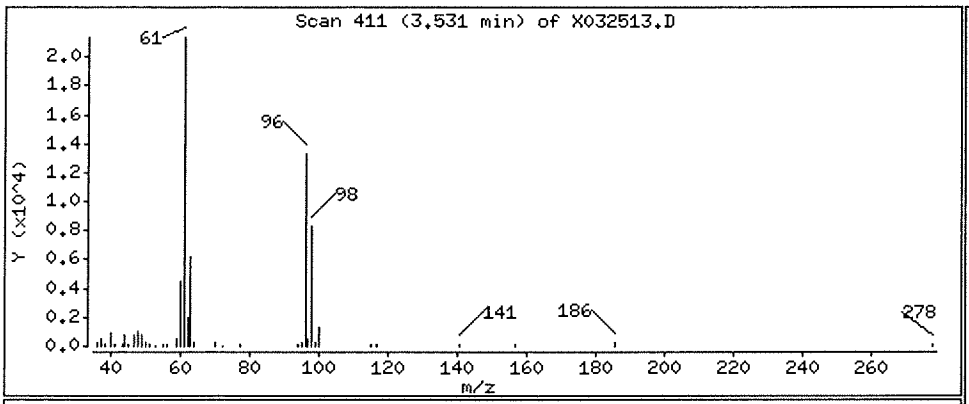
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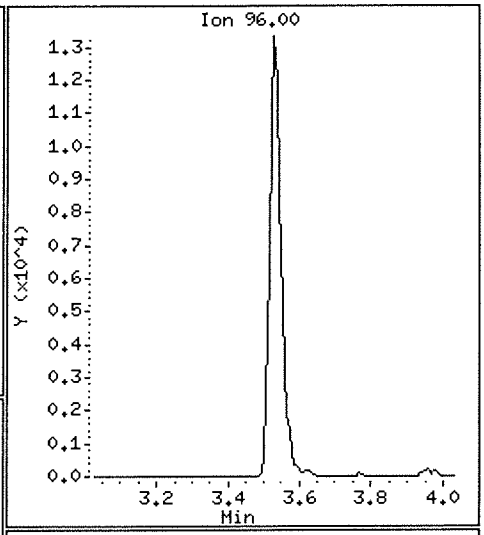
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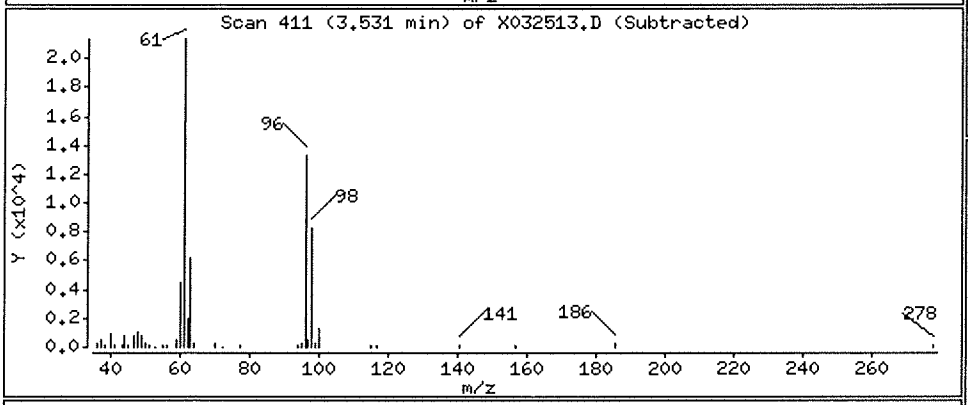
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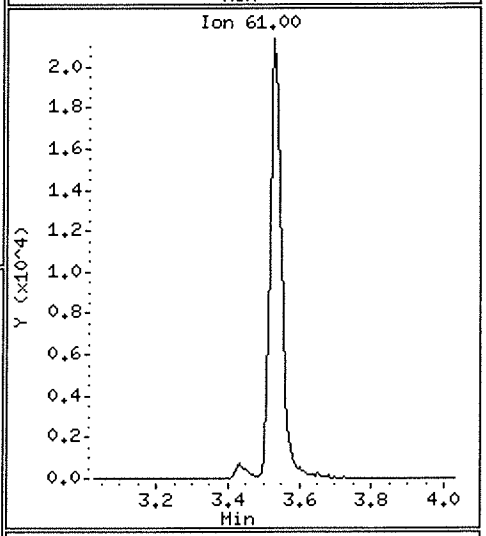
27 cis-1,2-Dichloroethene

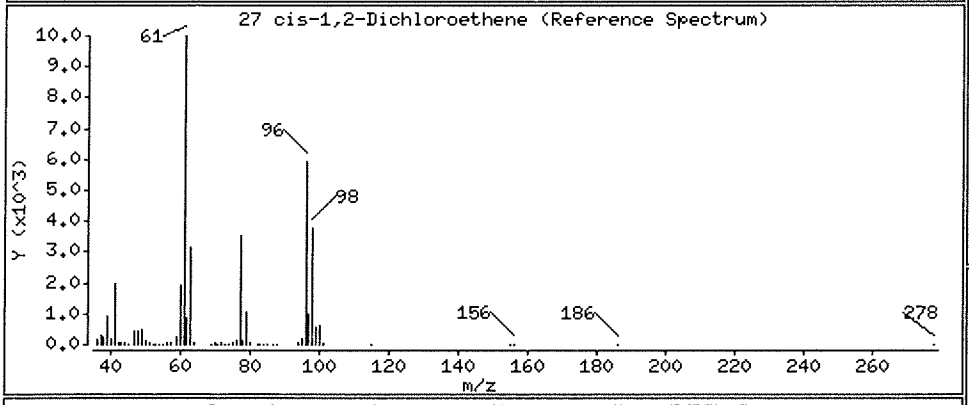
Concentration: 6.50 ug/l

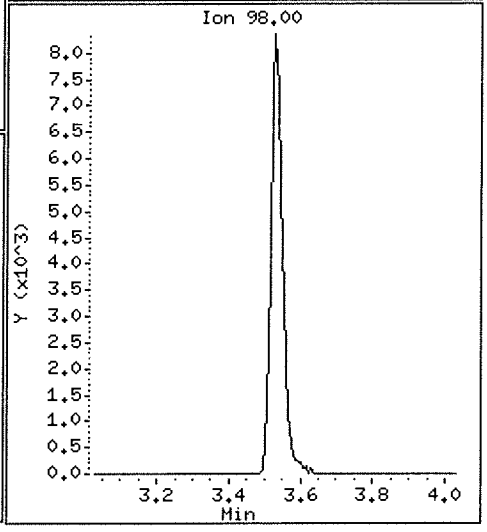


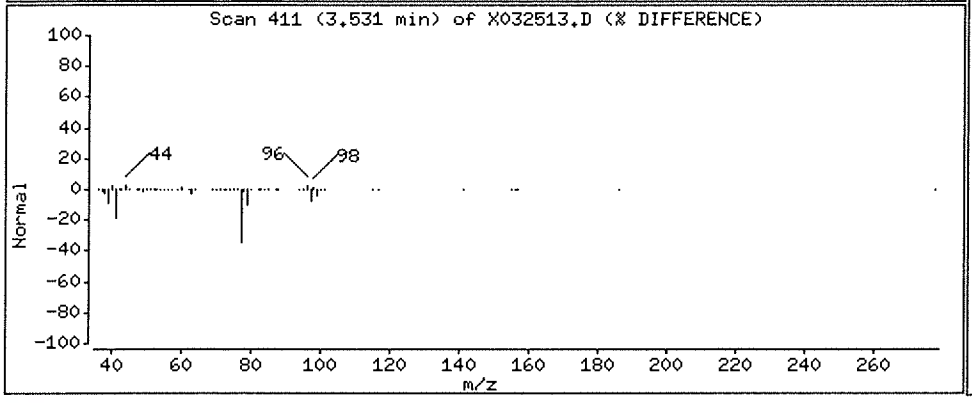












Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032513.D

Date : 25-MAR-2020 17:37

Client ID: HS20031084-06

Instrument: voa6.i

Sample Info: HS20031084-06;HS20031084-06;;;

Purge Volume: 5.0

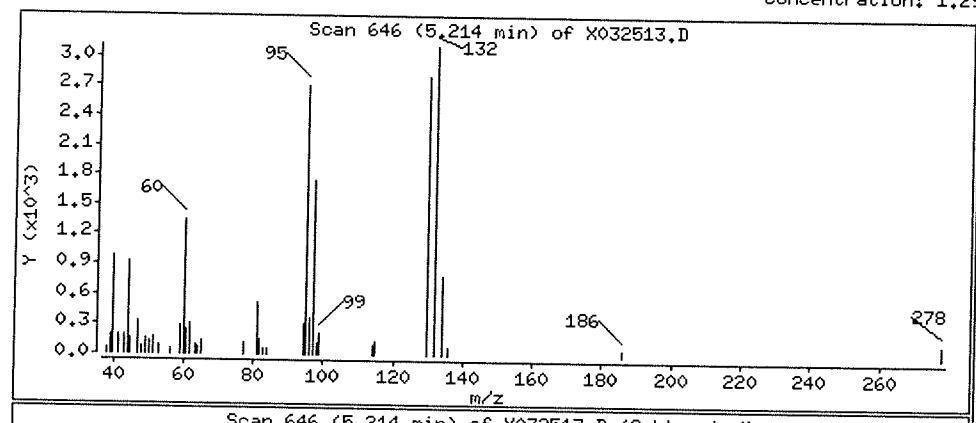
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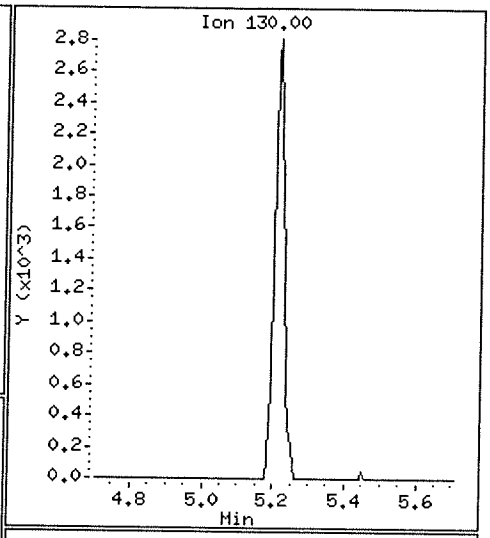
Column phase: DB624

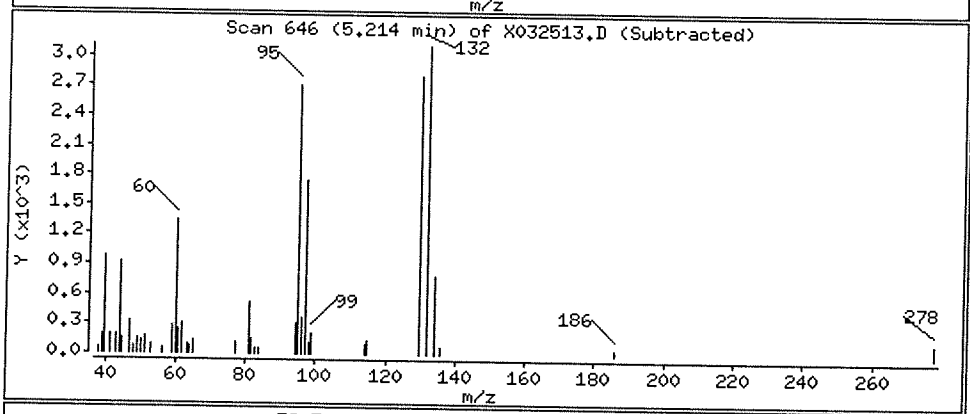
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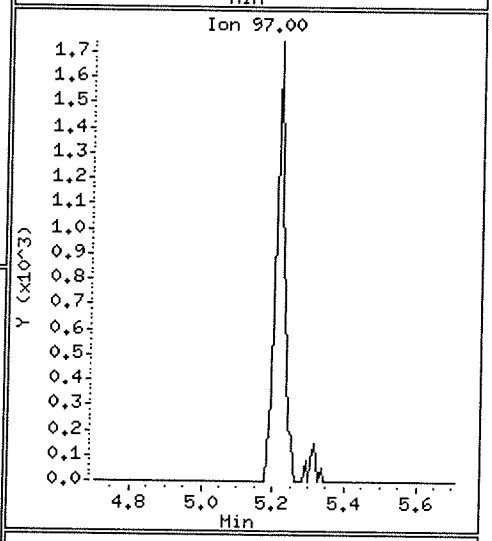
38 Trichloroethene

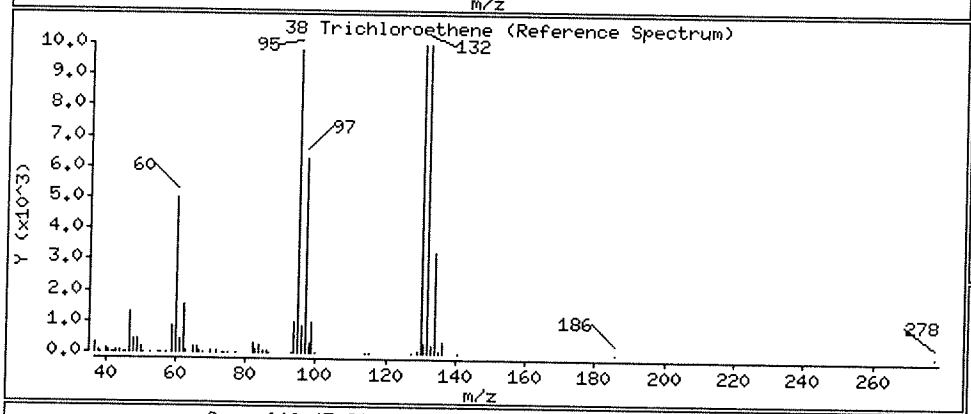
Concentration: 1.29 ug/l

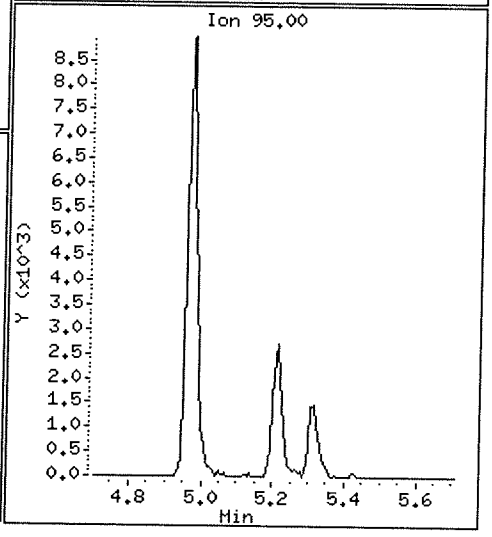


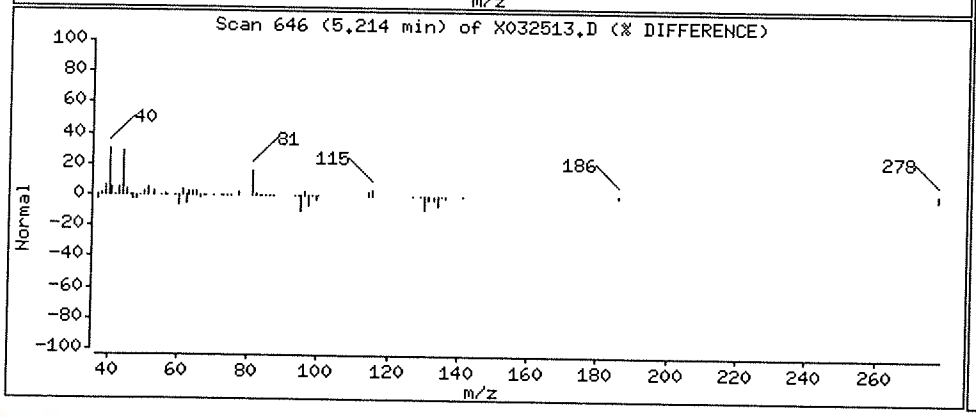












Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032513.D

Date : 25-MAR-2020 17:37

Client ID: HS20031084-06

Instrument: voa6.i

Sample Info: HS20031084-06;HS20031084-06;;;

Purge Volume: 5.0

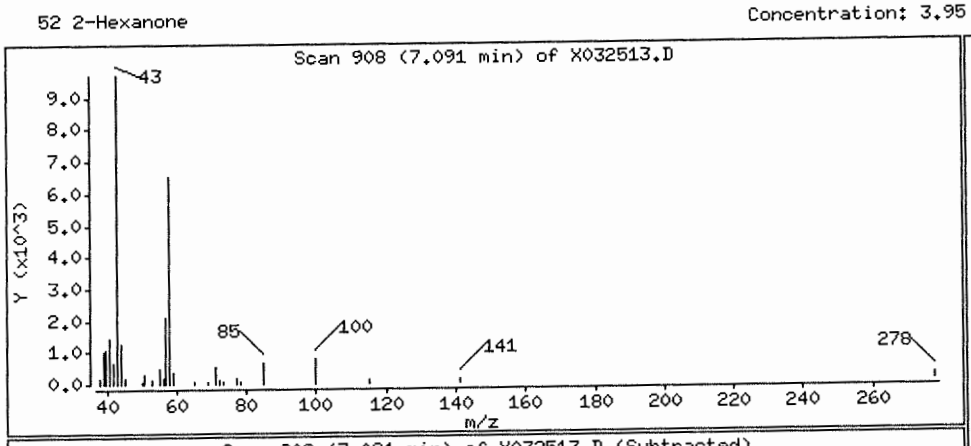
Operator: PC

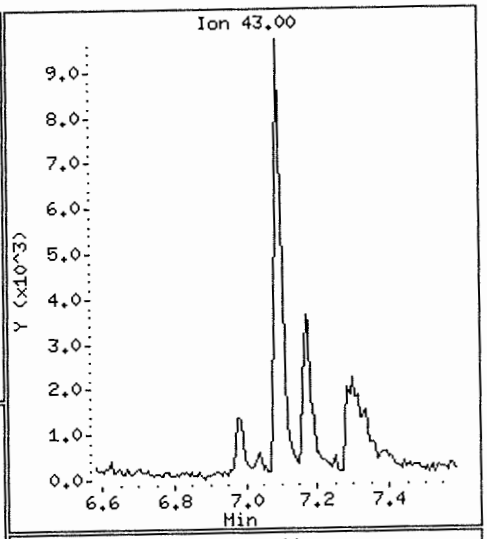
Column phase: DB624

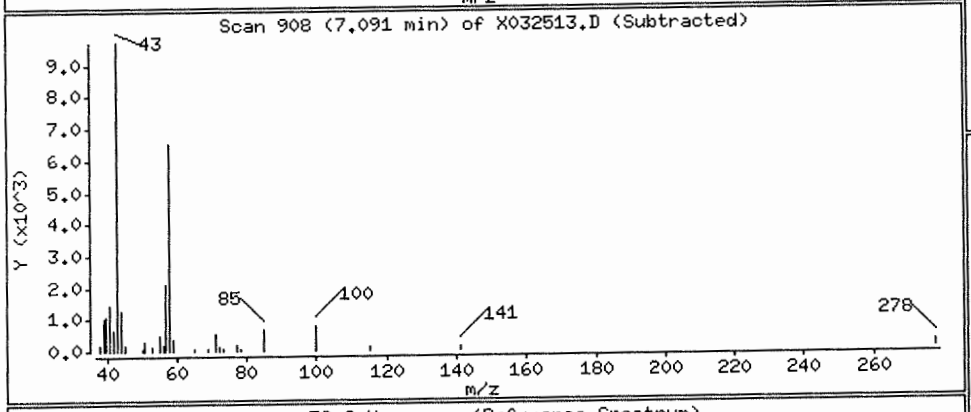
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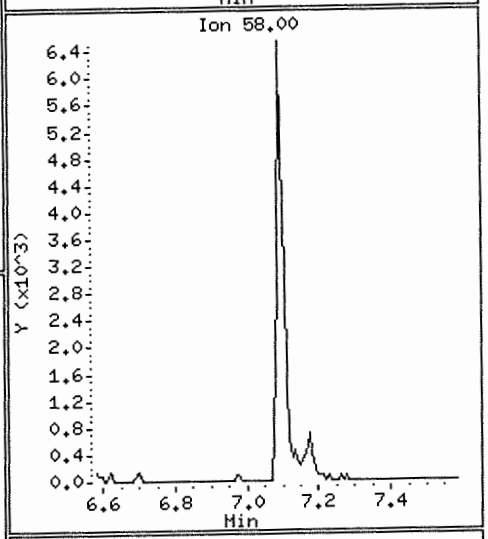
52 2-Hexanone

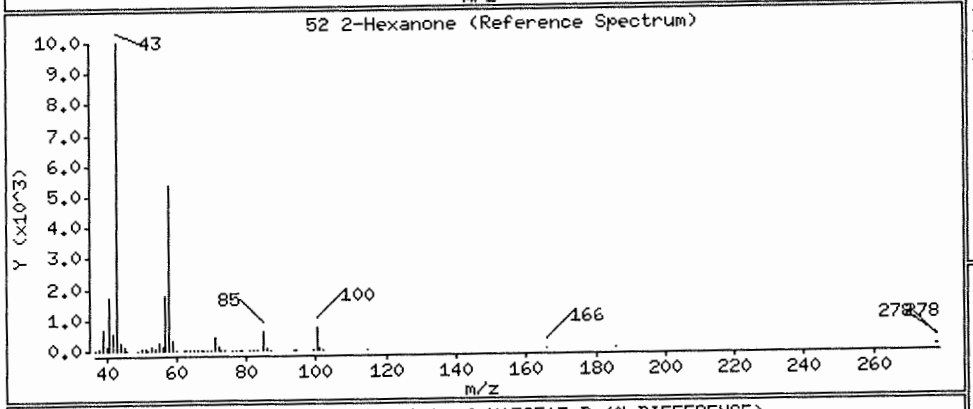
Concentration: 3.95 ug/l

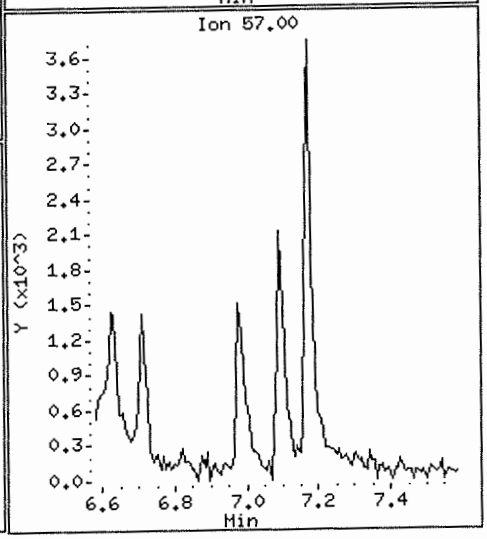


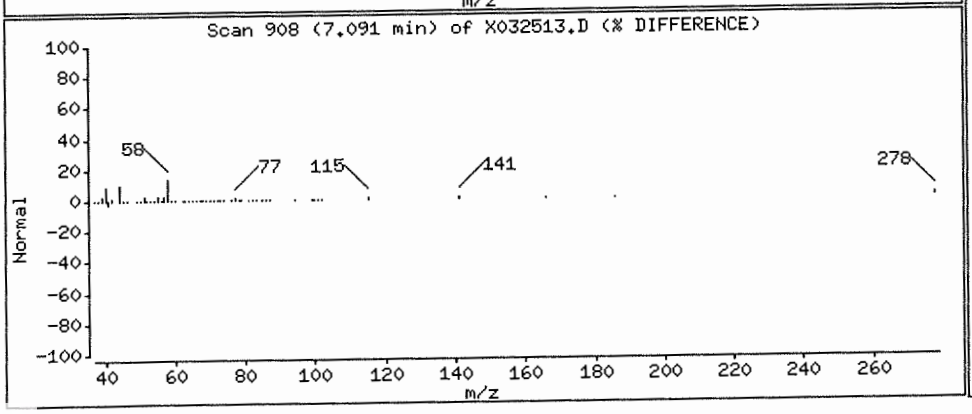












Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032513.D

Date : 25-MAR-2020 17:37

Client ID: HS20031084-06

Instrument: voa6.i

Sample Info: HS20031084-06;HS20031084-06;;;

Purge Volume: 5.0

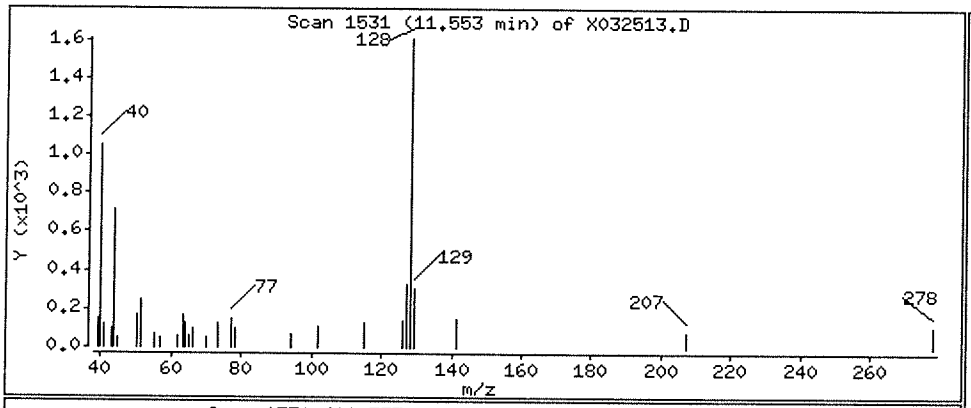
Operator: PC

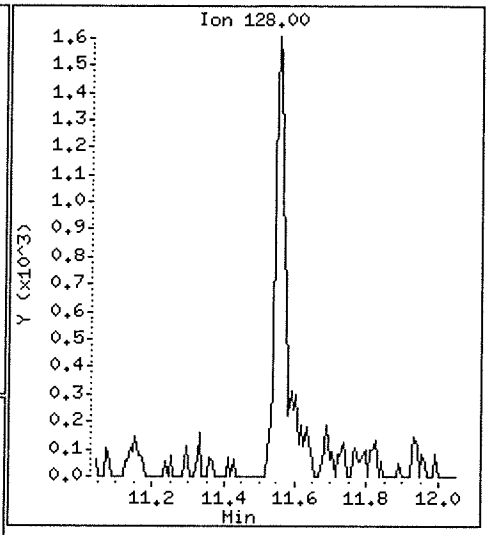
Column phase: DB624

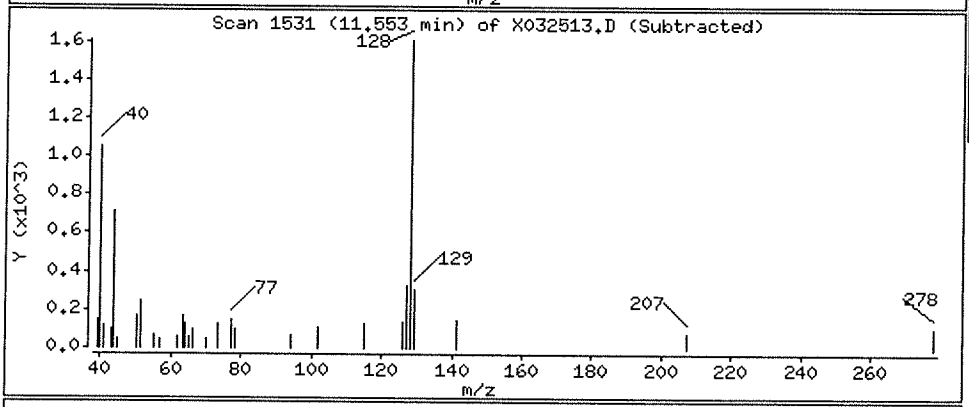
Column diameter: 0.18

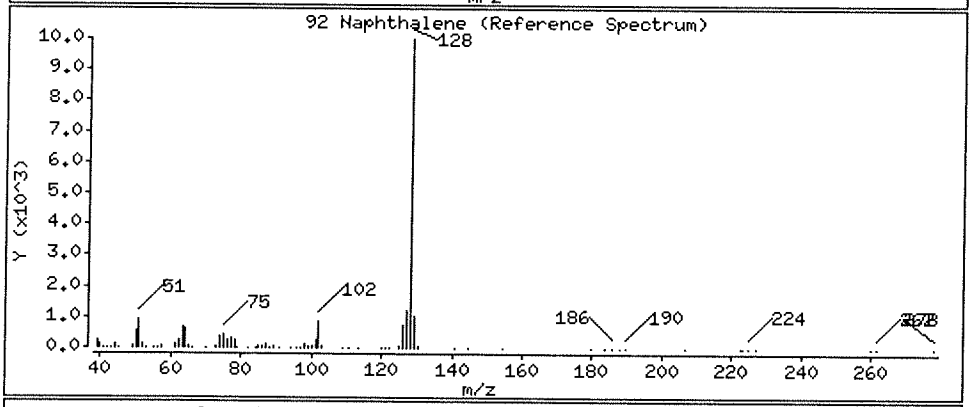
92 Naphthalene

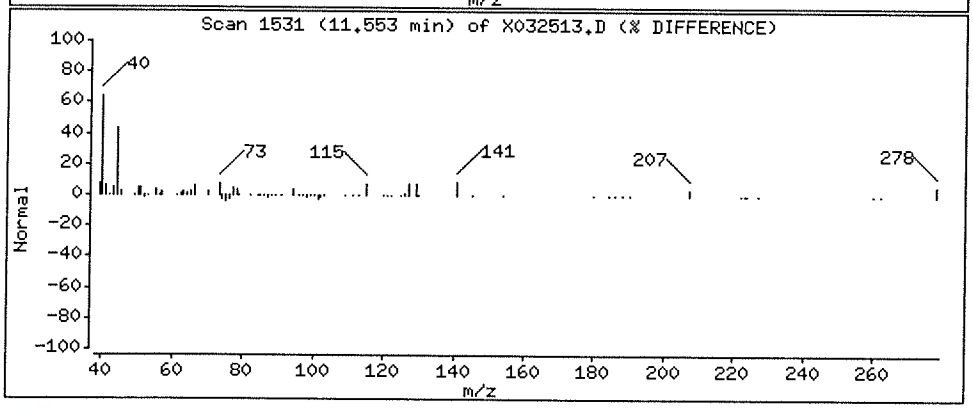
Concentration: 3.03 ug/l











Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032513.D

Date : 25-MAR-2020 17:37

Client ID: HS20031084-06

Instrument: voa6.i

Sample Info: HS20031084-06;HS20031084-06;;;

Purge Volume: 5.0

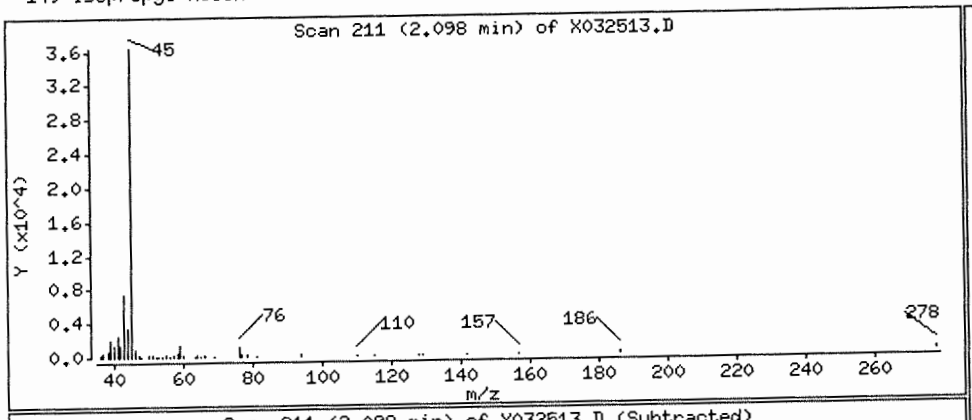
Operator: PC

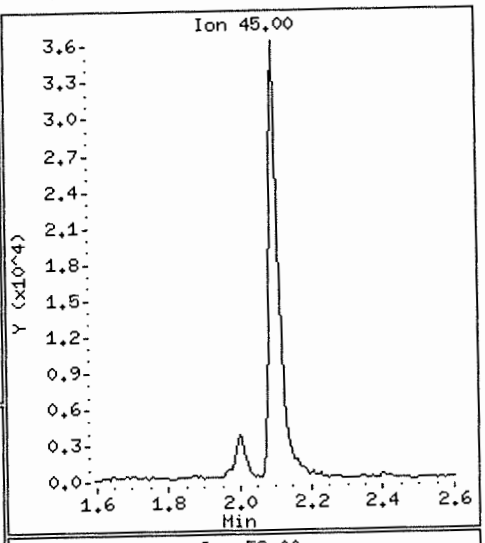
Column phase: DB624

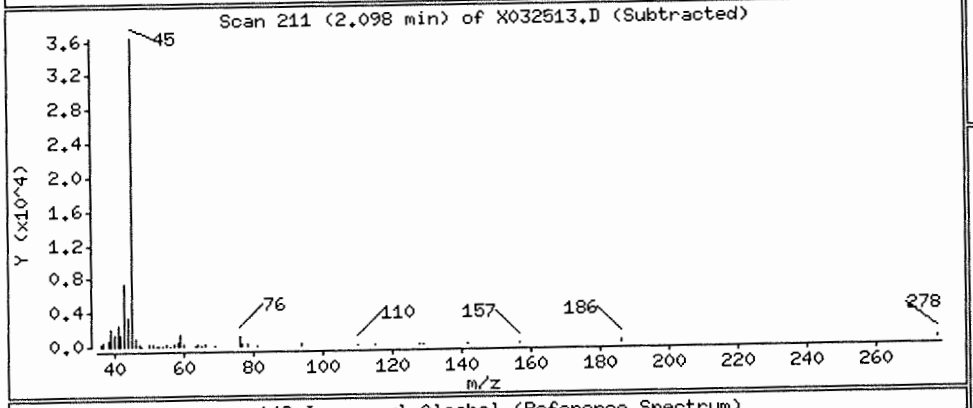
Column diameter: 0.18

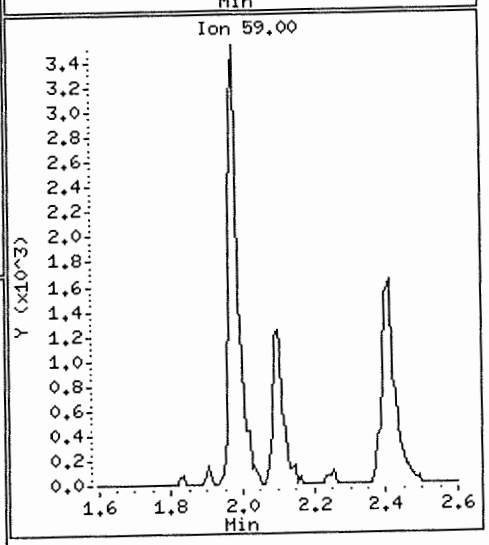
149 Isopropyl Alcohol

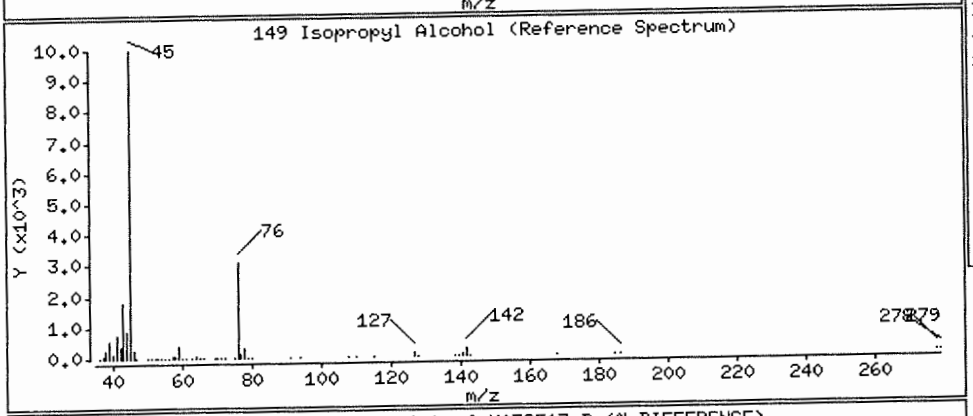
Concentration: 174.71 ug/l

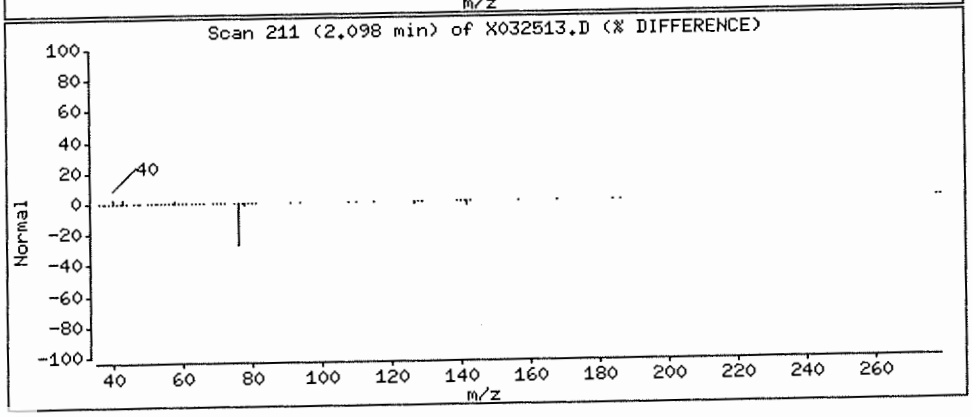












ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032514.D
Lab Smp Id: HS20031084-07 Client Smp ID: HS20031084-07
Inj Date : 25-MAR-2020 18:01
Operator : PC Inst ID: voa6.i
Smp Info : HS20031084-07;HS20031084-07;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200325.b\8260W.m
Meth Date : 15-Apr-2020 14:52 Qin.Xu Quant Type: ISTD
Cal Date : 19-MAR-2020 14:22 Cal File: X031908.D
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.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)	395559	50.0000	
	11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	14633	4.36569	4.36(a)
	22 1,1-Dichloroethane	63	2.929	2.922	(0.700)	7423	0.84270	0.84(a)
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	188790	48.0312	48.03
	33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	7076	1.13764	1.13(a)
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	230830	46.4375	46.43
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	588734	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	509831	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	690141	52.8478	52.84
$	69 4-Bromofluorobenzene	95	8.695	8.688	(1.134)	234235	47.7258	47.72
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	241305	50.0000	

QC Flag Legend

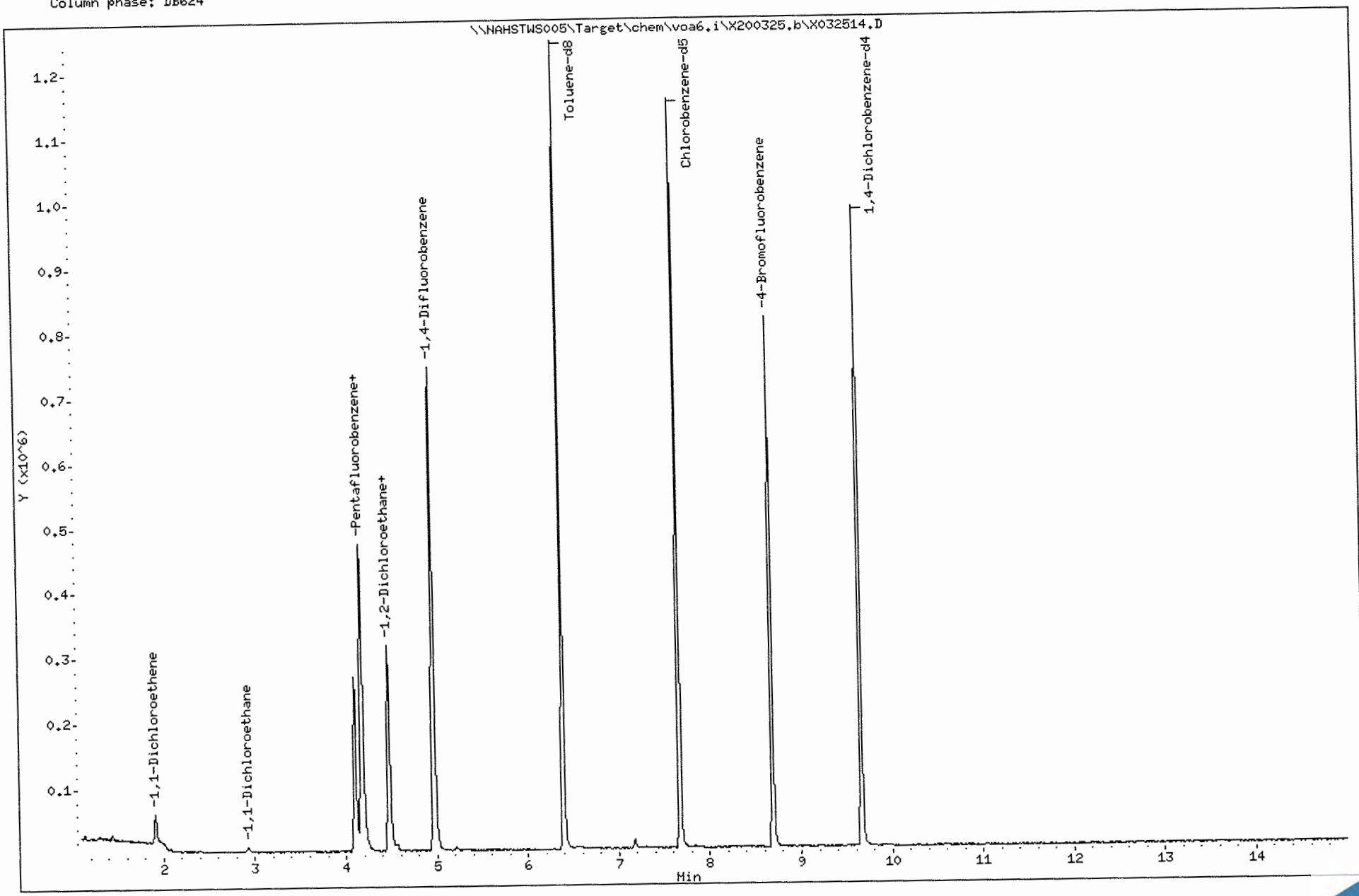
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

01002039

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032514.D
Date : 25-MAR-2020 18:01
Client ID: HS20031084-07
Sample Info: HS20031084-07;HS20031084-07;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i

Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032514.D

Date : 25-MAR-2020 18:01

Client ID: HS20031084-07

Instrument: voa6.i

Sample Info: HS20031084-07;HS20031084-07;;;

Purge Volume: 5.0

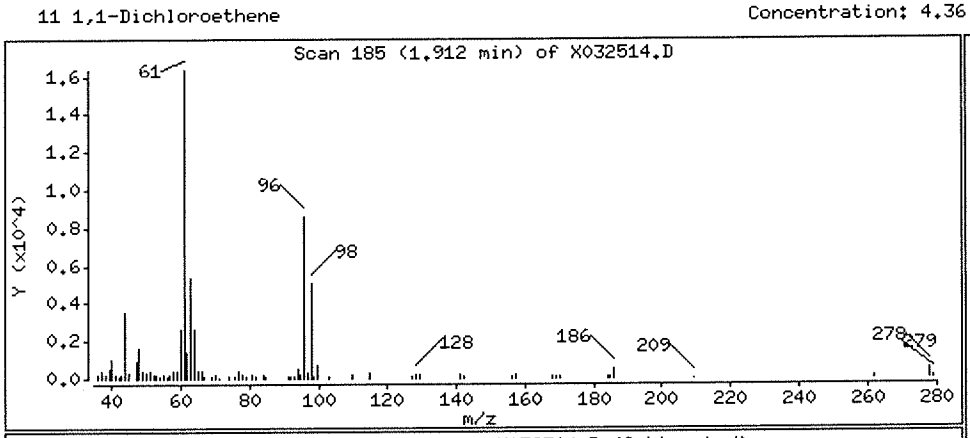
Operator: PC

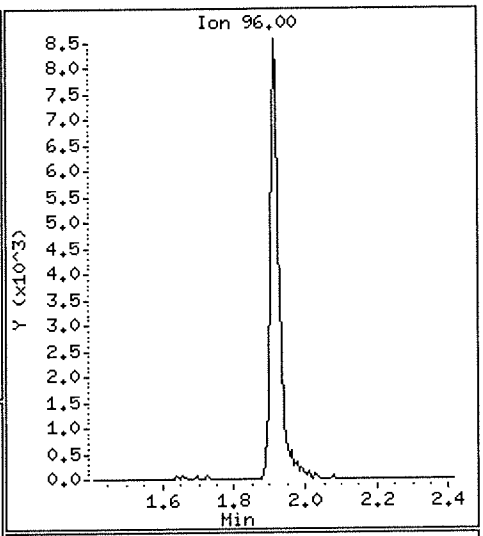
Column phase: DB624

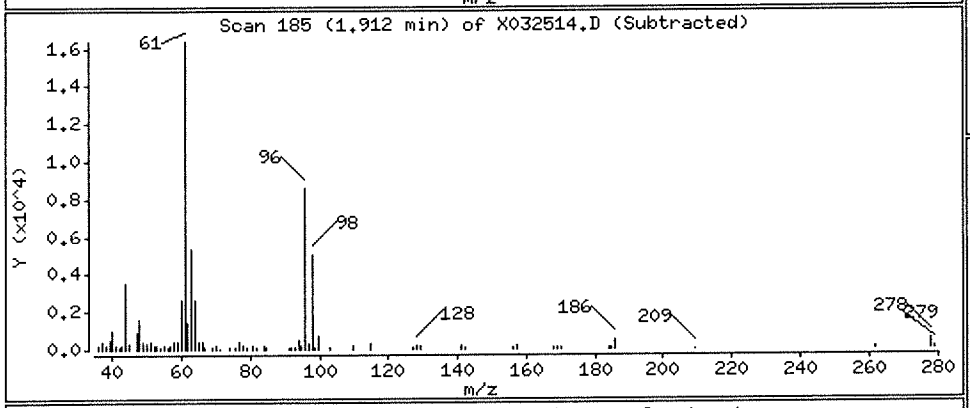
Column diameter: 0.18

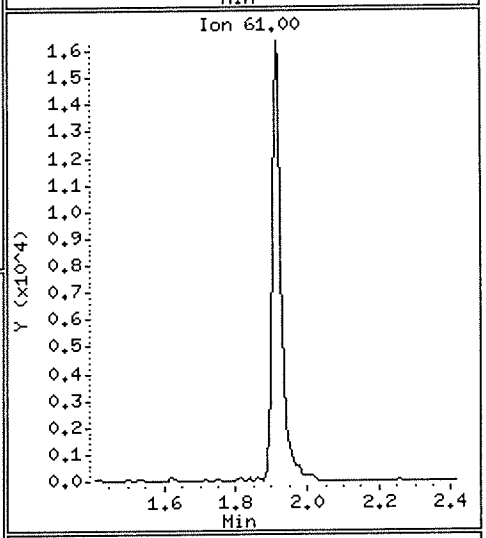
11 1,1-Dichloroethene

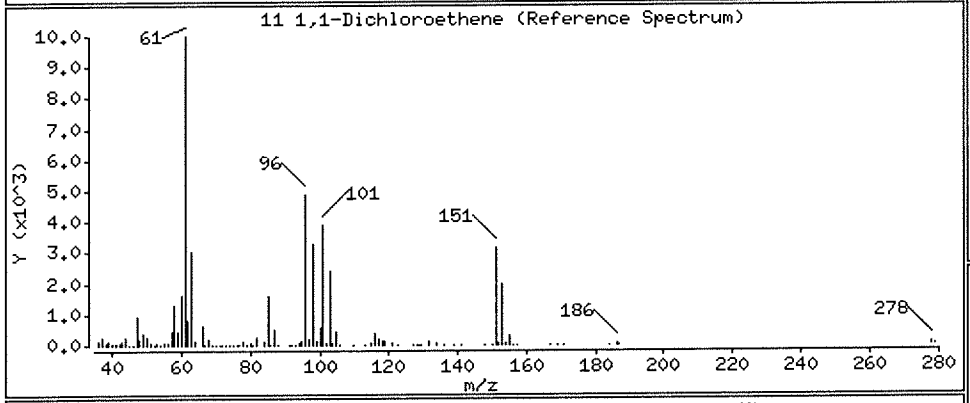
Concentration: 4.36 ug/l

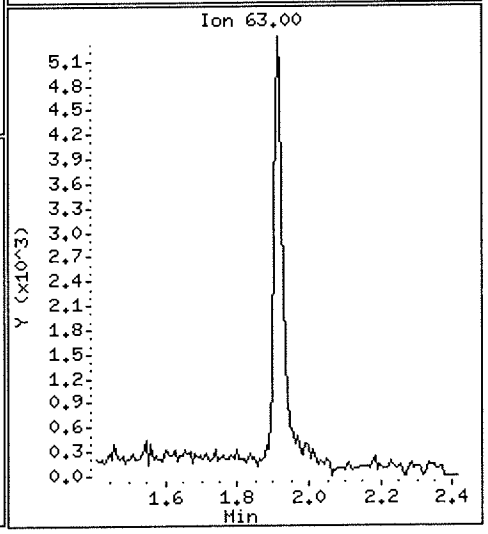


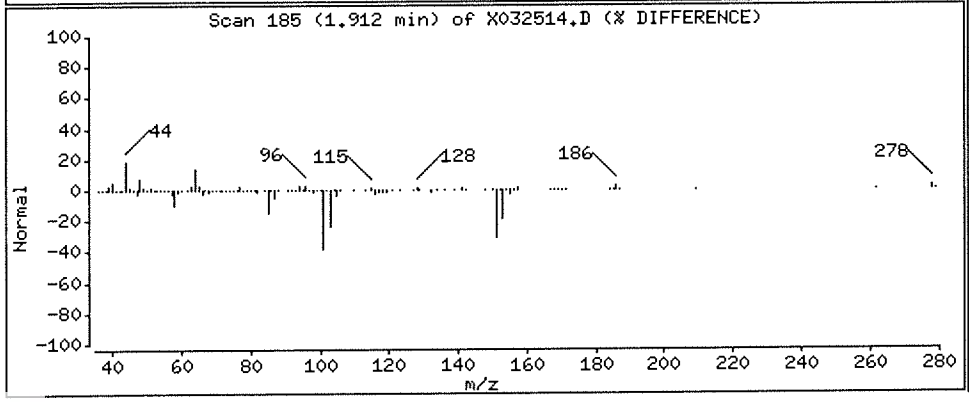












Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032514.D

Date : 25-MAR-2020 18:01

Client ID: HS20031084-07

Instrument: voa6.i

Sample Info: HS20031084-07;HS20031084-07;;;

Purge Volume: 5.0

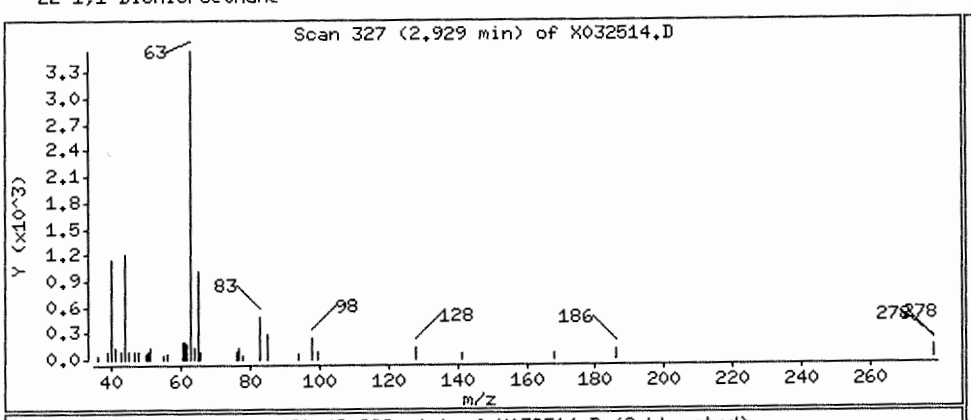
Operator: PC

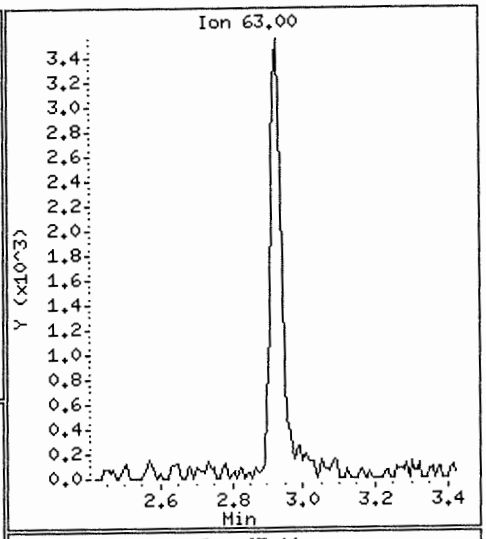
Column phase: DB624

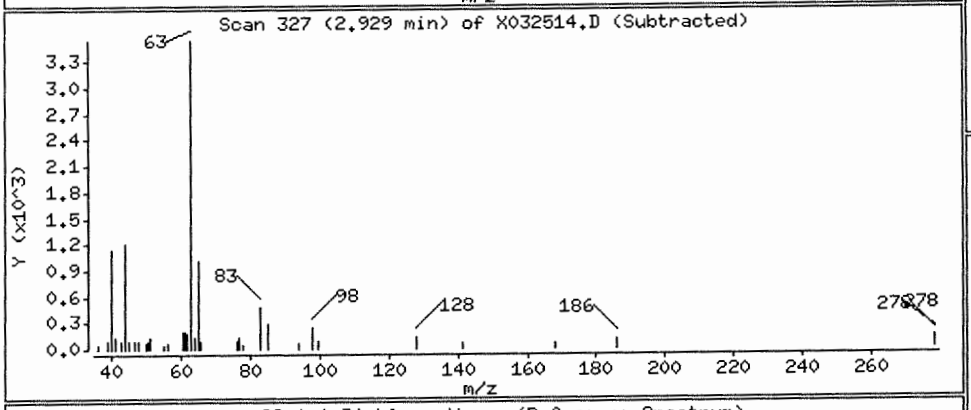
Column diameter: 0.18

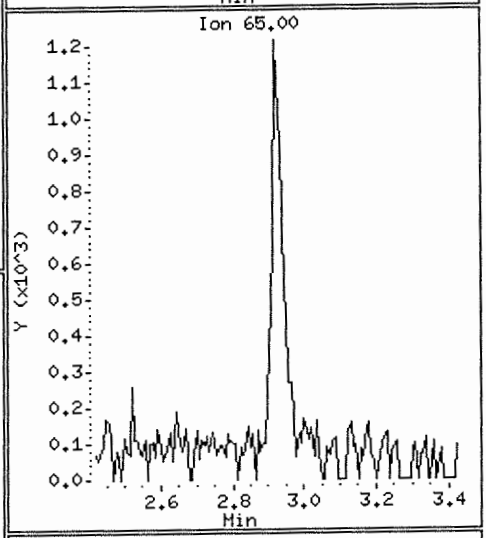
22 1,1-Dichloroethane

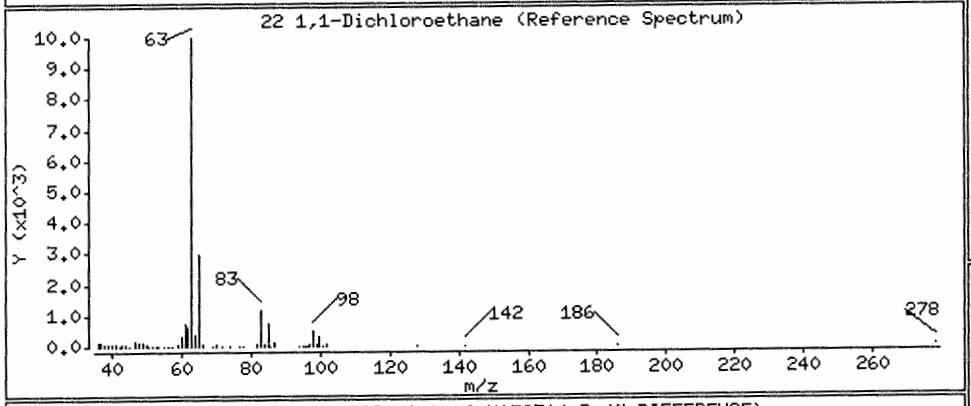
Concentration: 0.84 ug/l

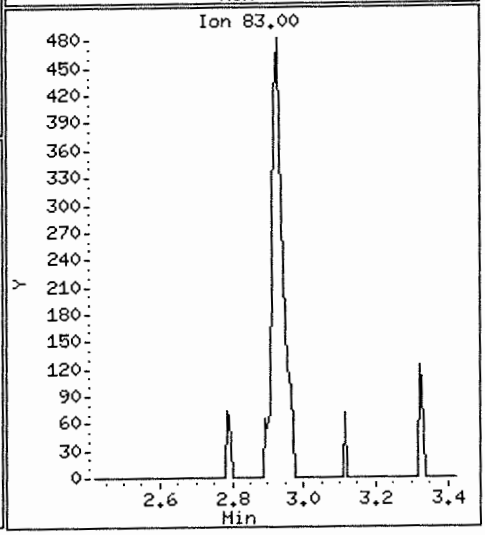


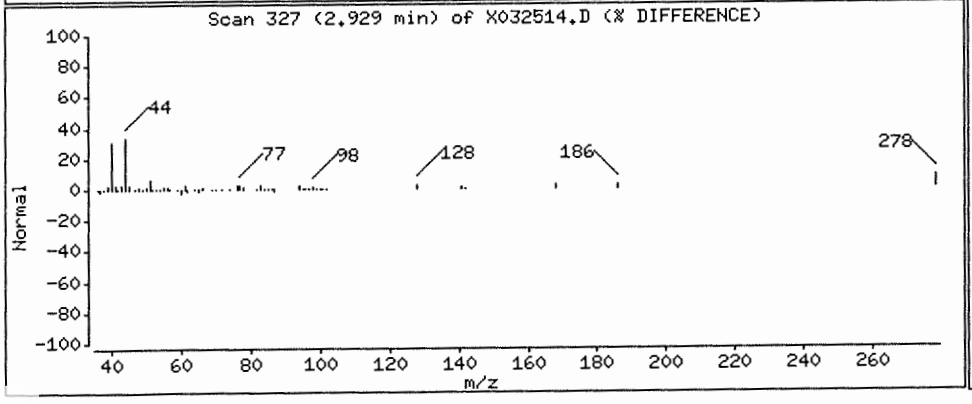












Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032514.D

Date : 25-MAR-2020 18:01

Client ID: HS20031084-07

Instrument: voa6.i

Sample Info: HS20031084-07;HS20031084-07;;;

Purge Volume: 5.0

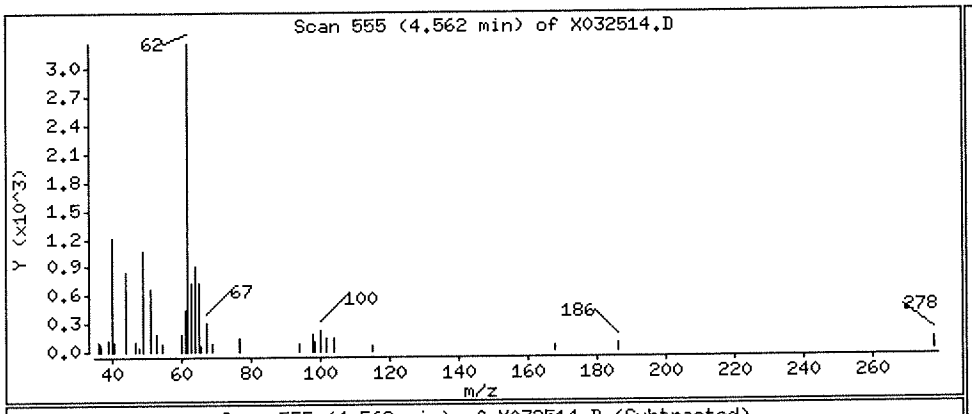
Operator: PC

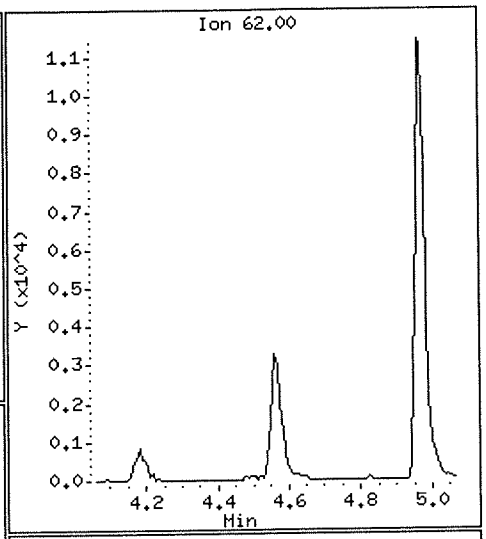
Column phase: DB624

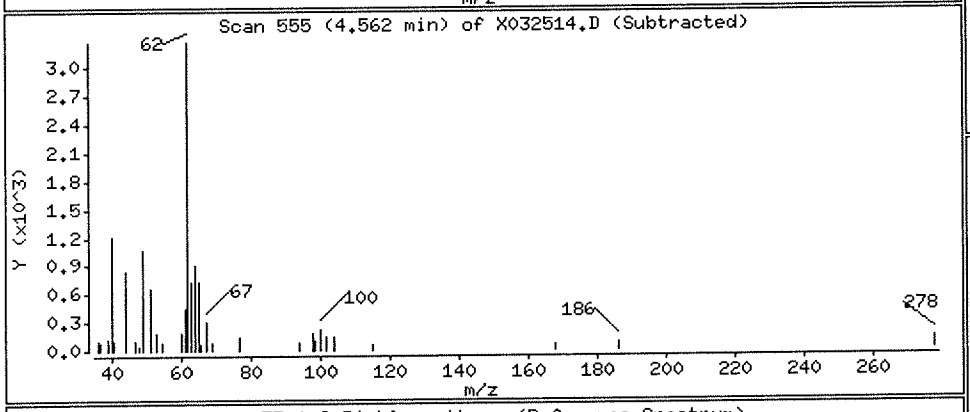
Column diameter: 0.18

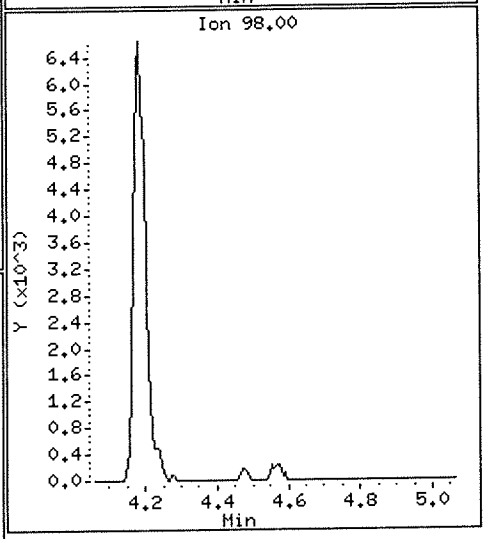
33 1,2-Dichloroethane

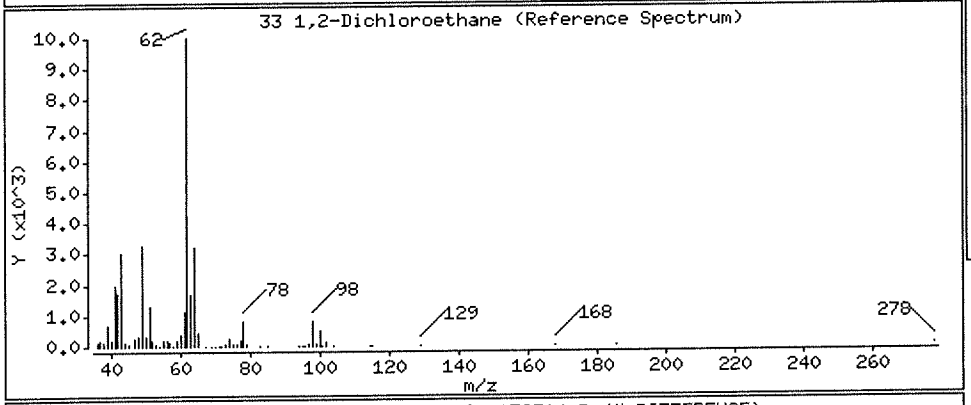
Concentration: 1.13 ug/l

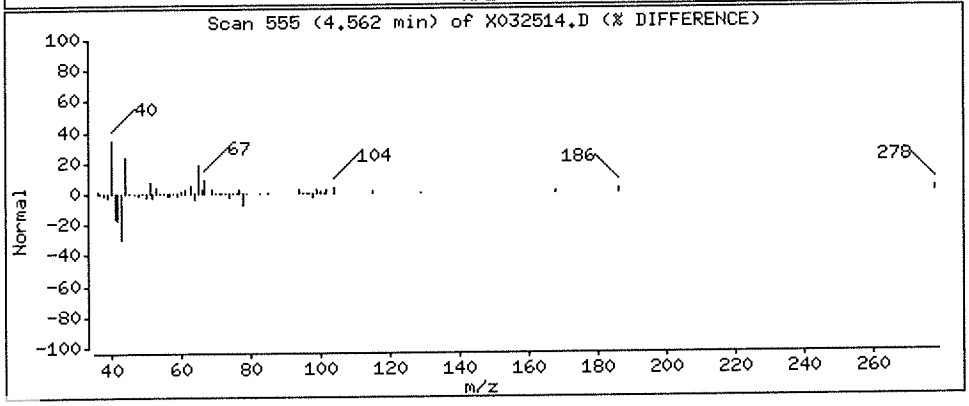












Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032515.D Page 1
Report Date: 15-Apr-2020 14:54

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032515.D
Lab Smp Id: HS20031084-03 Client Smp ID: HS20031084-03
Inj Date : 25-MAR-2020 18:25
Operator : PC Inst ID: voa6.i
Smp Info : HS20031084-03;HS20031084-03;;;
Misc Info : HS18090001;WATER;0;25;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200325.b\8260W.m
Meth Date : 15-Apr-2020 14:52 Qin.Xu Quant Type: ISTD
Cal Date : 19-MAR-2020 14:22 Cal File: X031908.D
Als bottle: 15
Dil Factor: 25.00000
Integrator: HP RTE Compound Sublist: 8260_GB.sub
Target Version: 4.14
Processing Host: NAHSTW7066

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

Name	Value	Description
DF	25.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

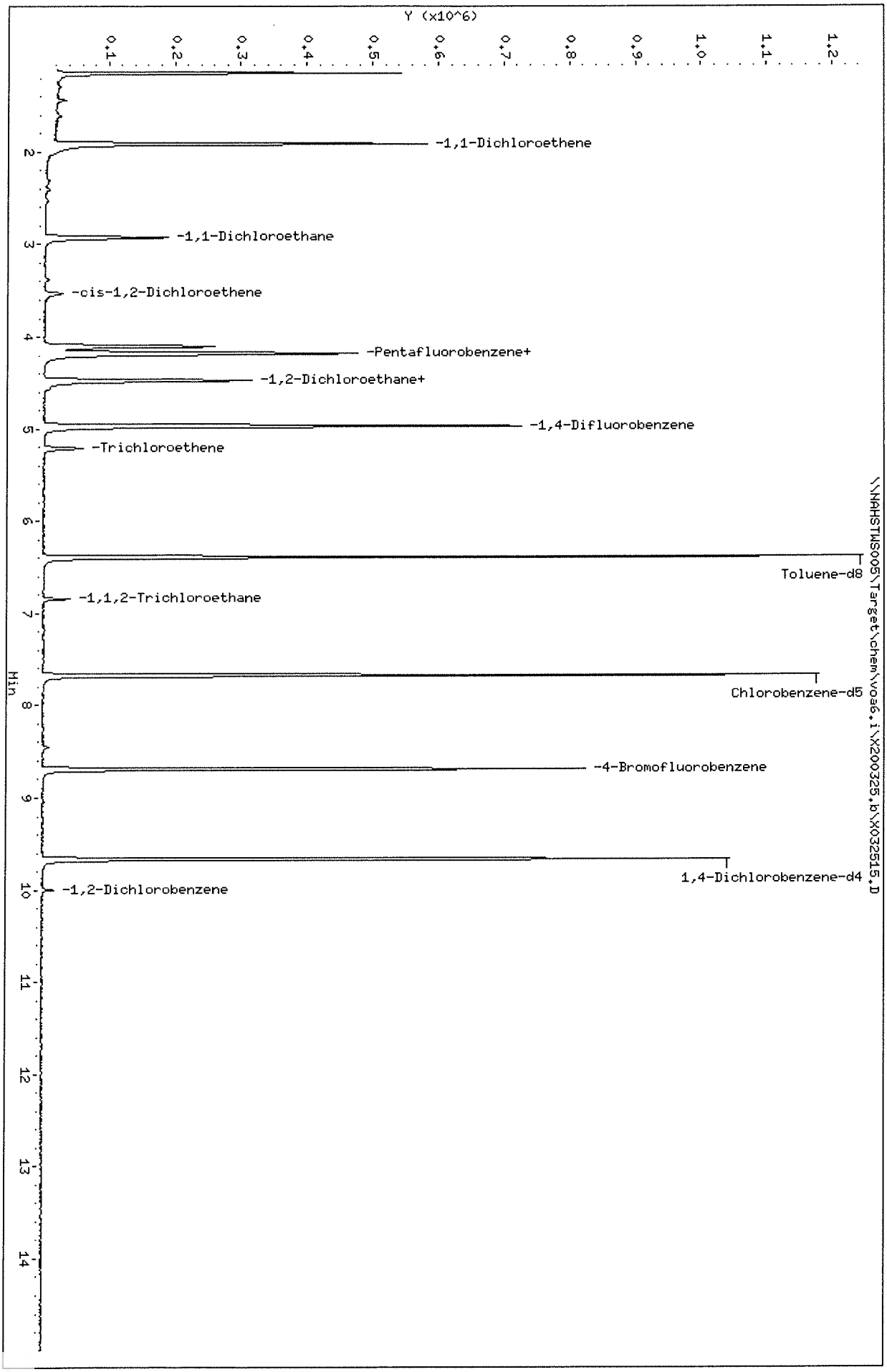
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	400862	50.0000	
	5 Vinyl Chloride	62	1.138	1.138	(0.272)	372174	60.9406	1523.51
	11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	178076	52.4253	1310.63
	22 1,1-Dichloroethane	63	2.921	2.922	(0.699)	208619	23.3701	584.25
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	13155	2.88168	72.04(a)
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	187825	47.1516	47.15
	33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	5761	0.92763	23.19(a)
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	227883	45.2340	45.23
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	587840	50.0000	
	38 Trichloroethene	130	5.214	5.207	(1.049)	19602	4.81103	120.27(a)
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	513182	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	692713	52.6982	52.69
	53 1,1,2-Trichloroethane	83	6.847	6.840	(0.893)	9889	3.34470	83.61(a)
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	244673	49.5456	49.54
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	248147	50.0000	
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	7045	1.05758	26.43(a)
M	94 1,2-Dichloroethylene (total)	96				13155	2.88168	72.04(a)

QC Flag Legend

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

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032515.D
Date : 25-MAR-2020 18:25
Client ID: HS20031084-03
Sample Info: HS20031084-03;HS20031084-03;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032515.D Page 3

Date : 25-MAR-2020 18:25

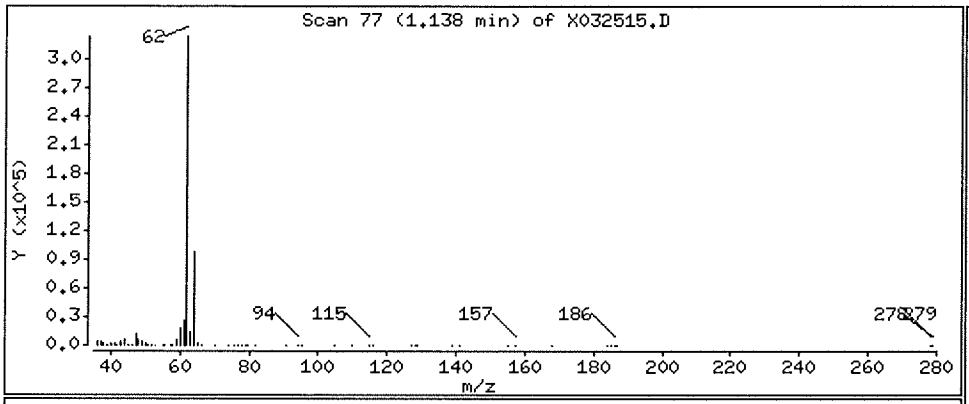
Client ID: HS20031084-03 Instrument: voa6.i

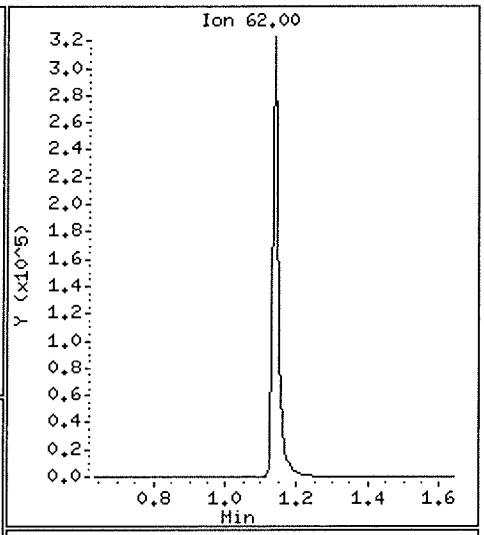
Sample Info: HS20031084-03;HS20031084-03;;;

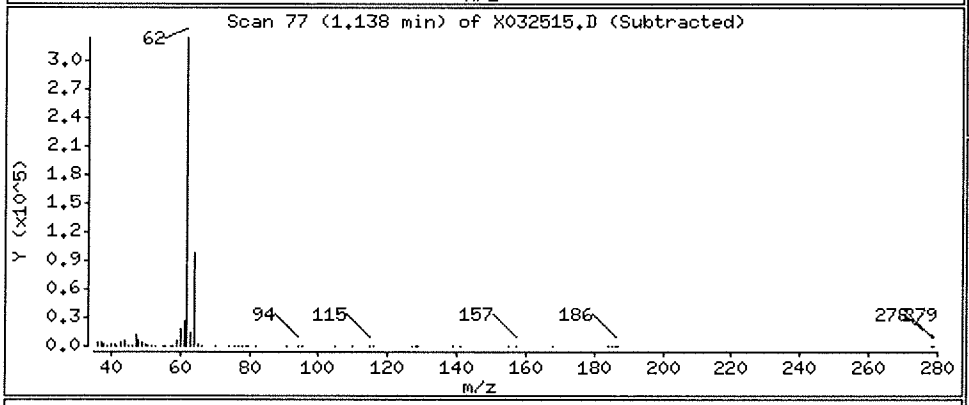
Purge Volume: 5.0 Operator: PC

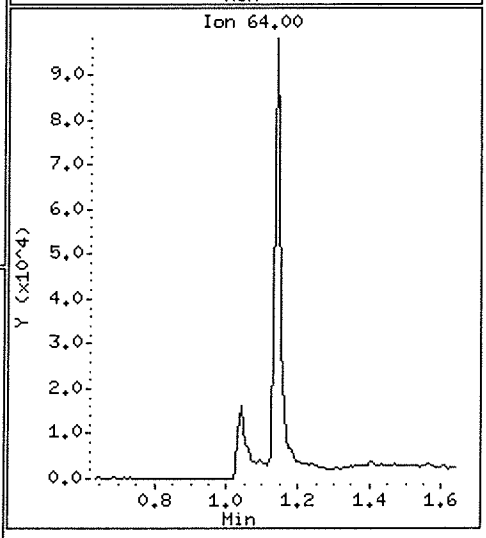
Column phase: DB624 Column diameter: 0.18

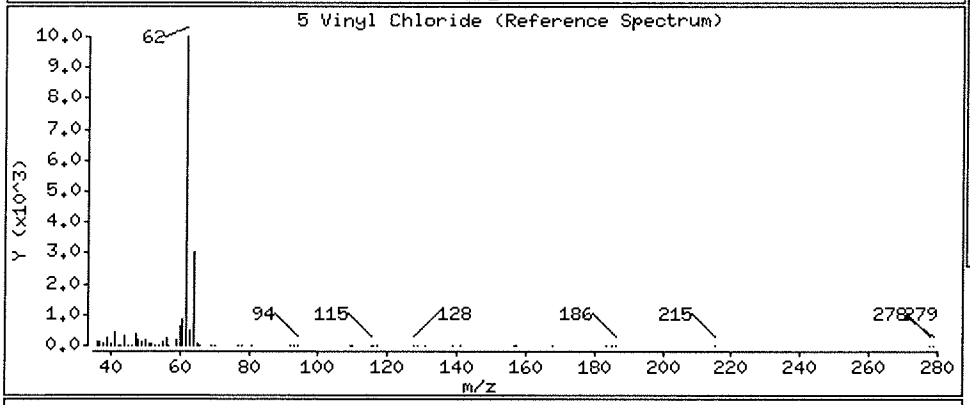
5 Vinyl Chloride Concentration: 1523.51 ug/l

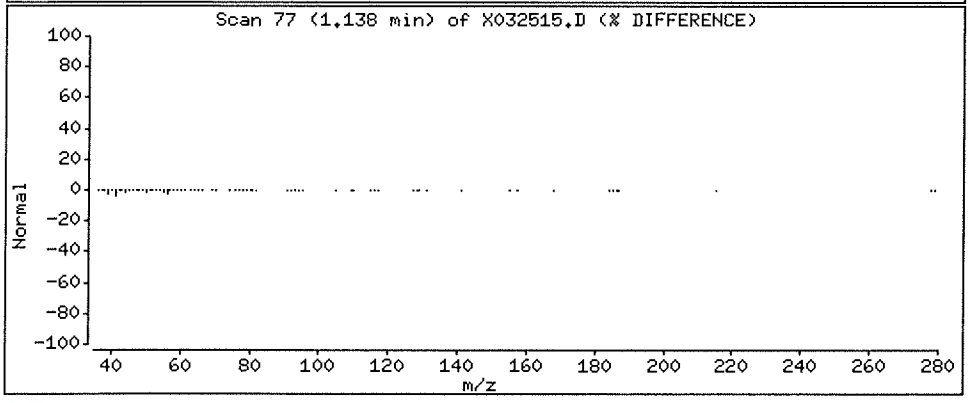












Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032515.D

Date : 25-MAR-2020 18:25

Client ID: HS20031084-03

Instrument: voa6.i

Sample Info: HS20031084-03;HS20031084-03;;;

Purge Volume: 5.0

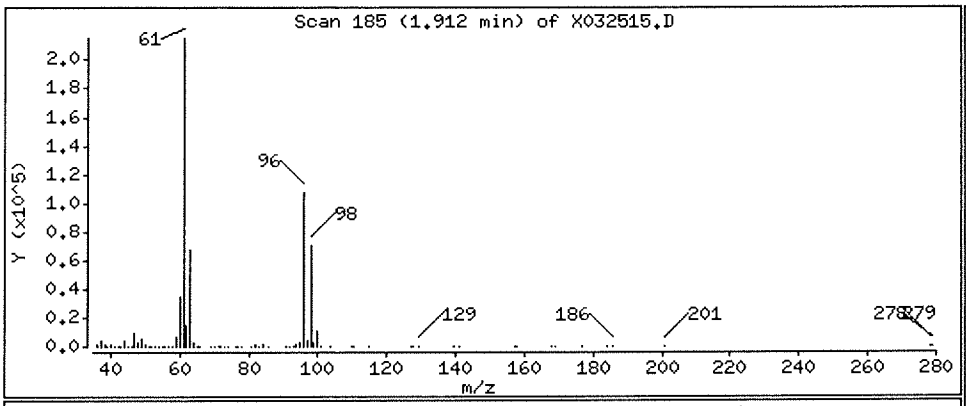
Operator: PC

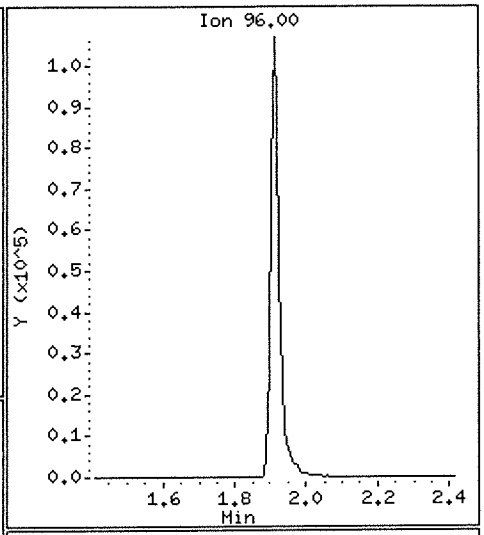
Column phase: DB624

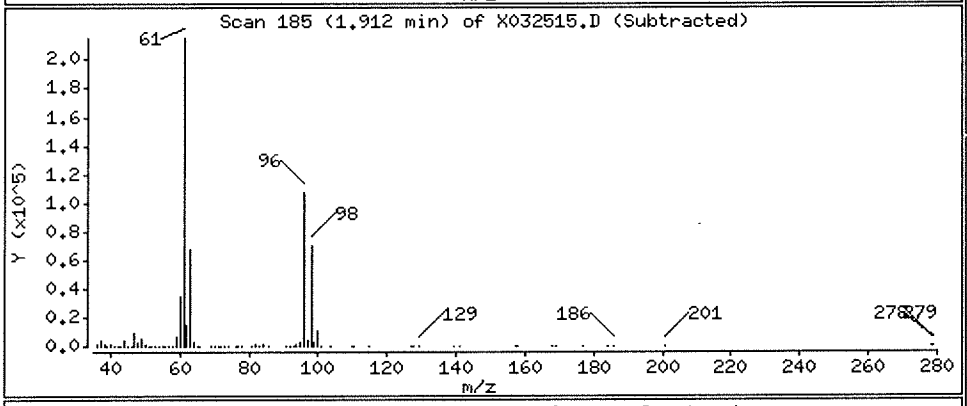
Column diameter: 0.18

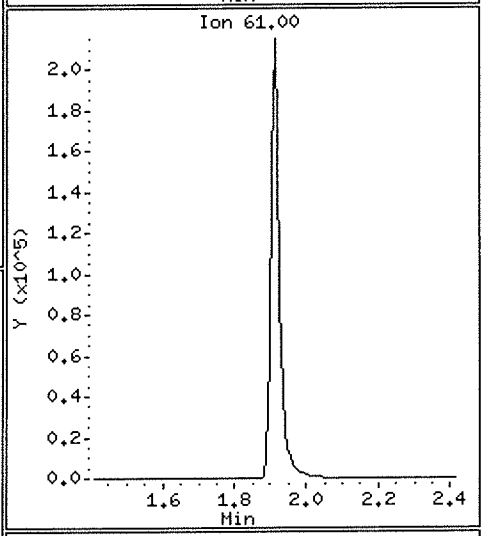
11 1,1-Dichloroethene

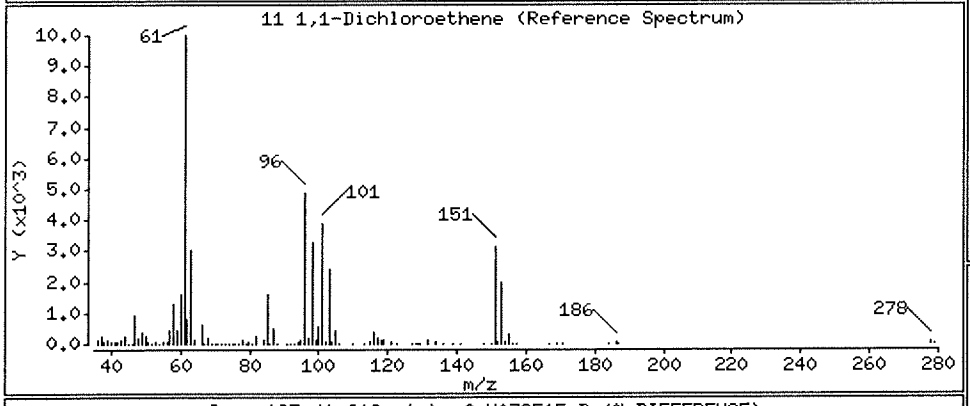
Concentration: 1310.63 ug/l

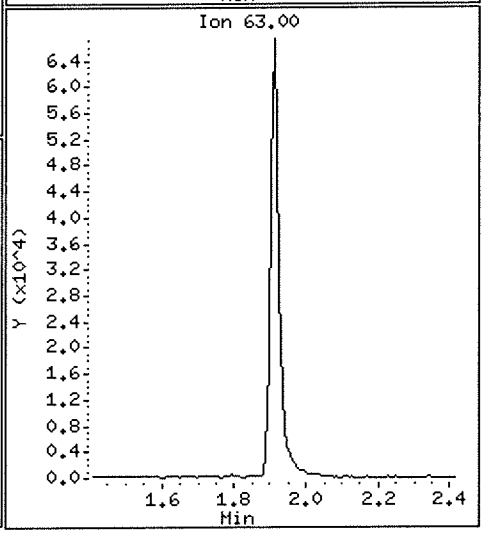


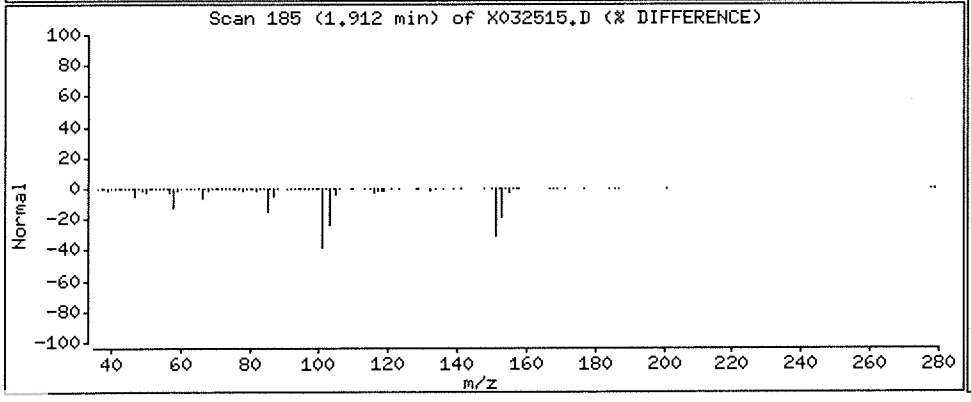












Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032515.D Page 5

Date : 25-MAR-2020 18:25

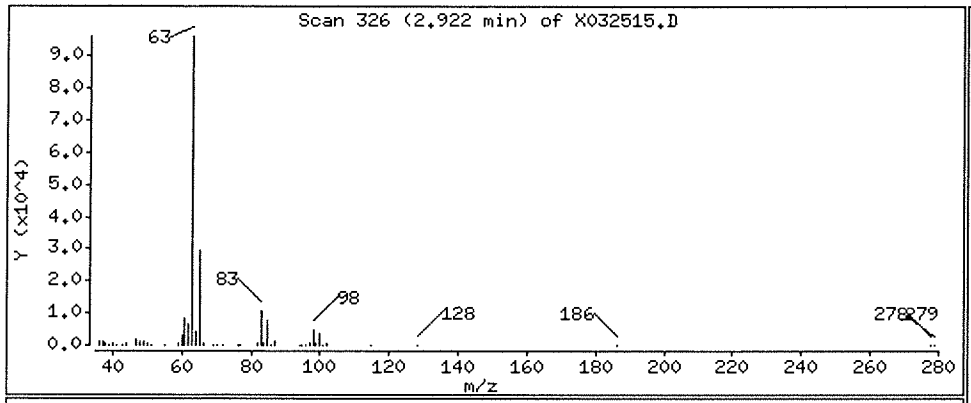
Client ID: HS20031084-03 Instrument: voa6.i

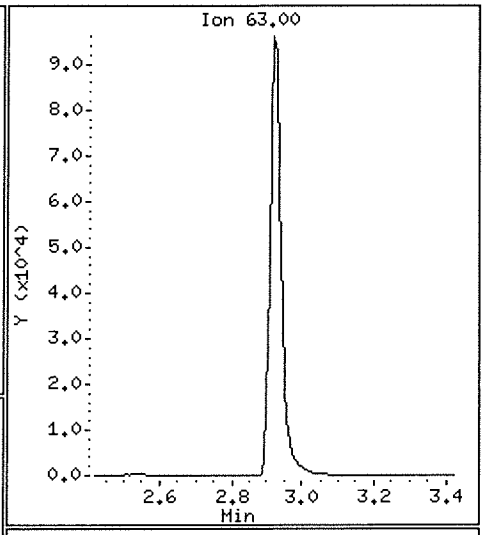
Sample Info: HS20031084-03;HS20031084-03;;;

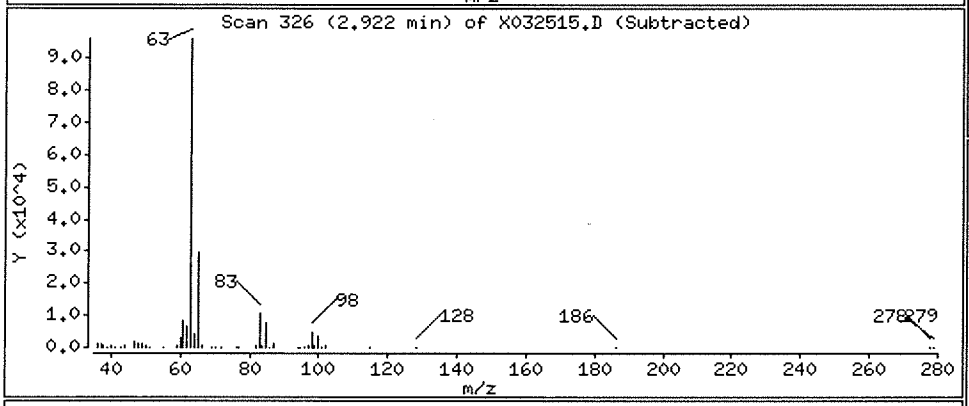
Purge Volume: 5.0 Operator: PC

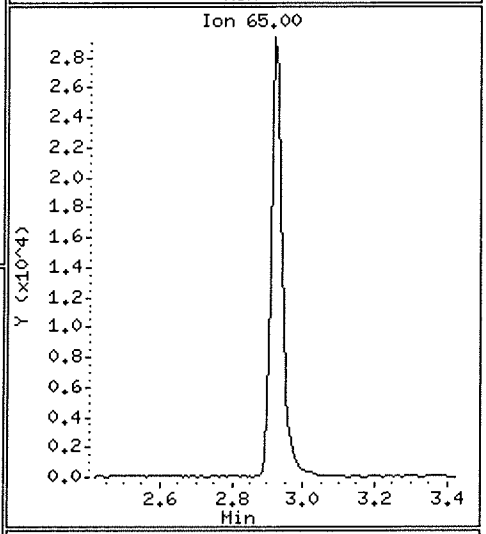
Column phase: DB624 Column diameter: 0.18

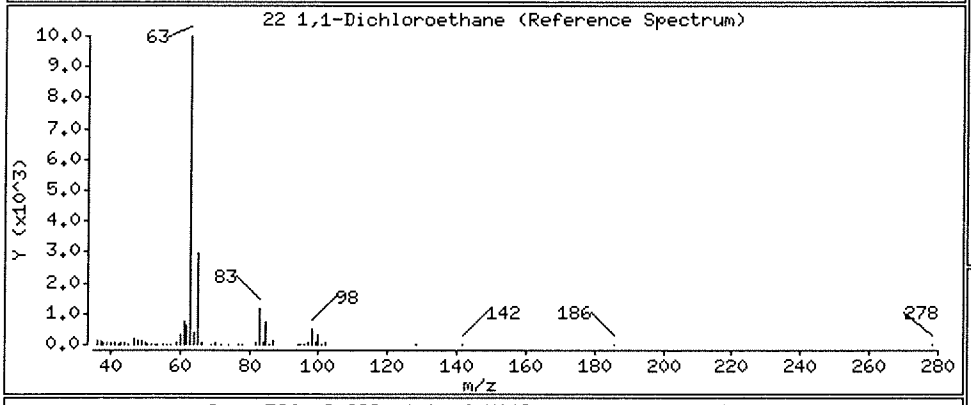
22 1,1-Dichloroethane Concentration: 584.25 ug/l

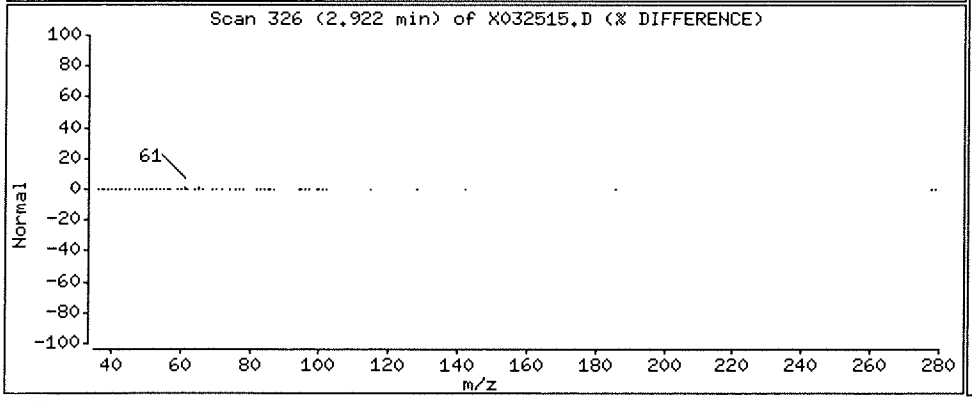


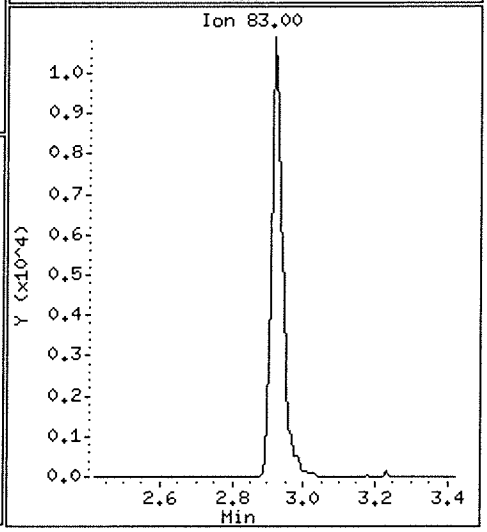












Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032515.D Page 6

Date : 25-MAR-2020 18:25

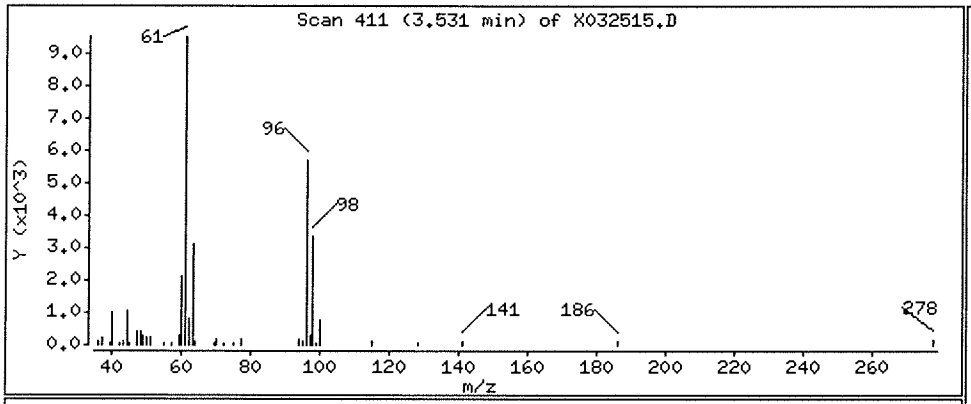
Client ID: HS20031084-03 Instrument: voa6.i

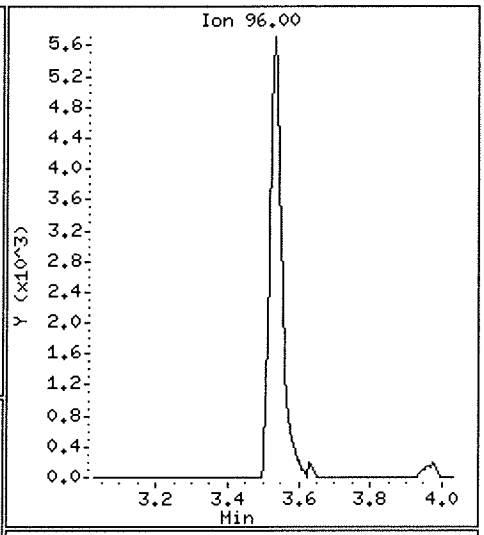
Sample Info: HS20031084-03;HS20031084-03;;;

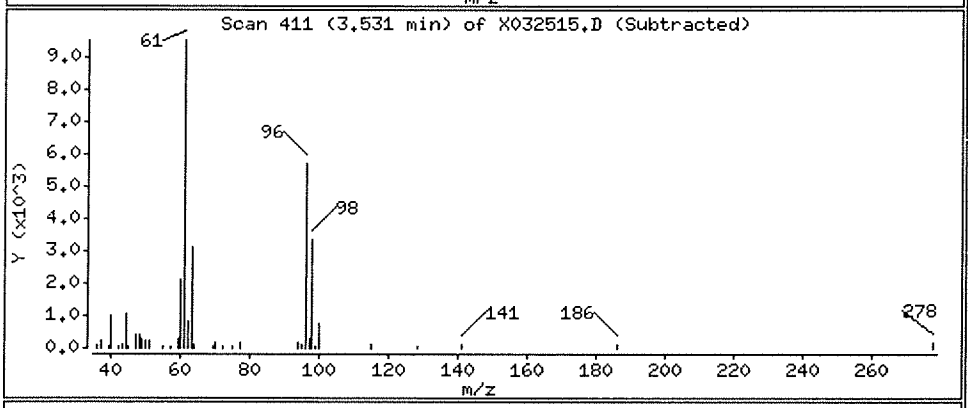
Purge Volume: 5.0 Operator: PC

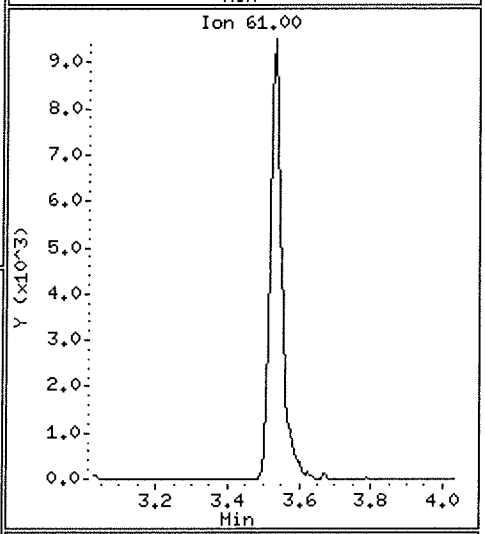
Column phase: DB624 Column diameter: 0.18

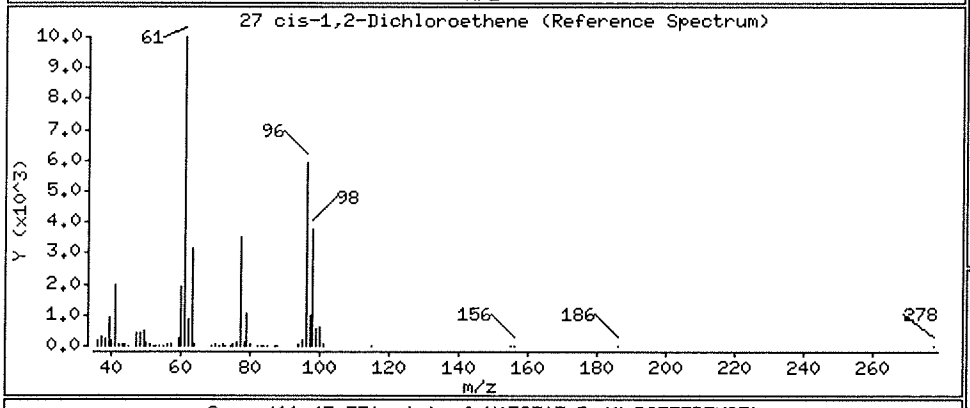
27 cis-1,2-Dichloroethene Concentration: 72.04 ug/l

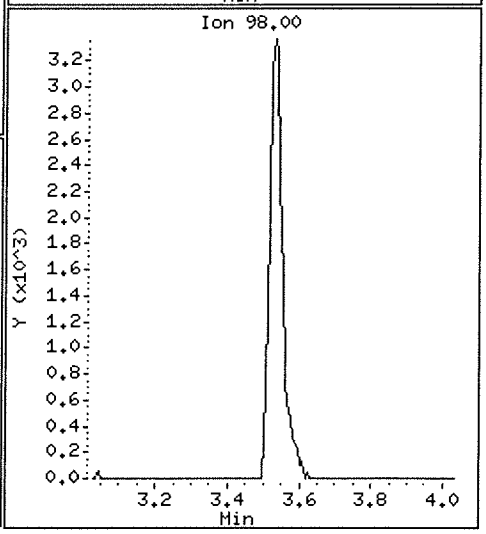


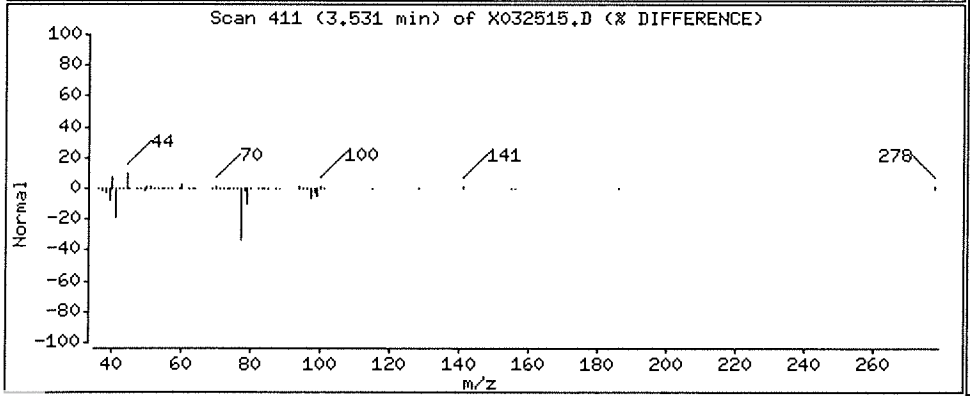












Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032515.D

Date : 25-MAR-2020 18:25

Client ID: HS20031084-03

Instrument: voa6.i

Sample Info: HS20031084-03;HS20031084-03;;;

Purge Volume: 5.0

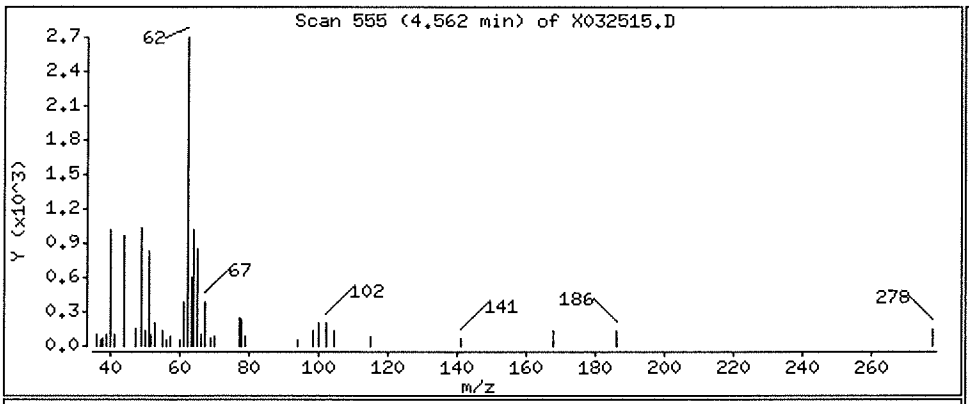
Operator: PC

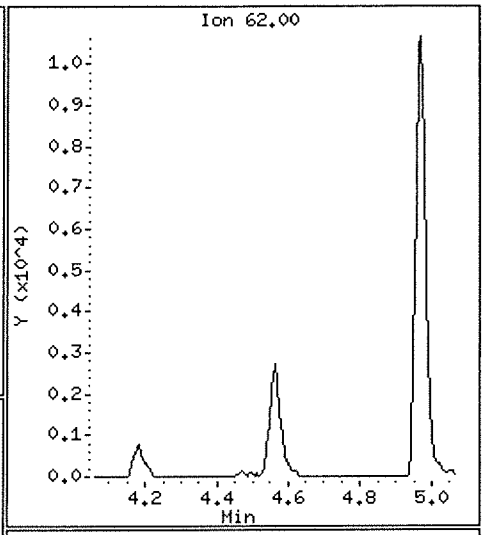
Column phase: DB624

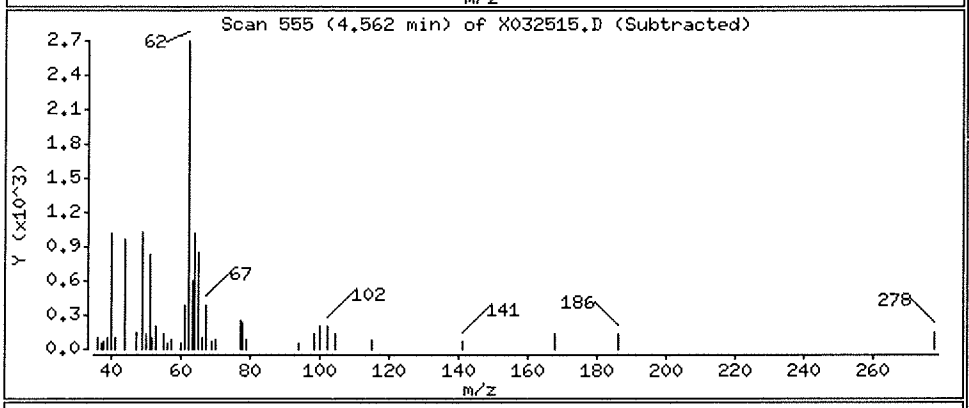
Column diameter: 0.18

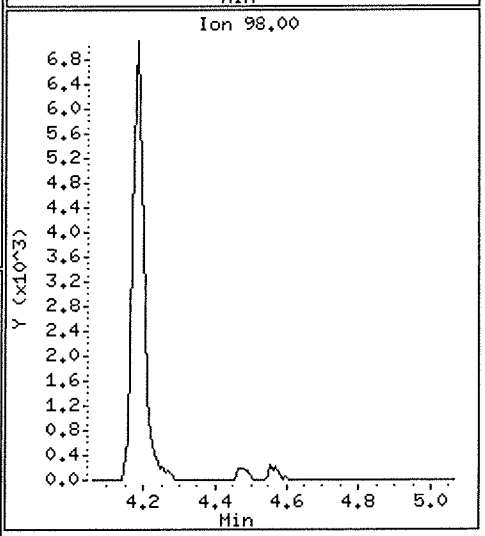
33 1,2-Dichloroethane

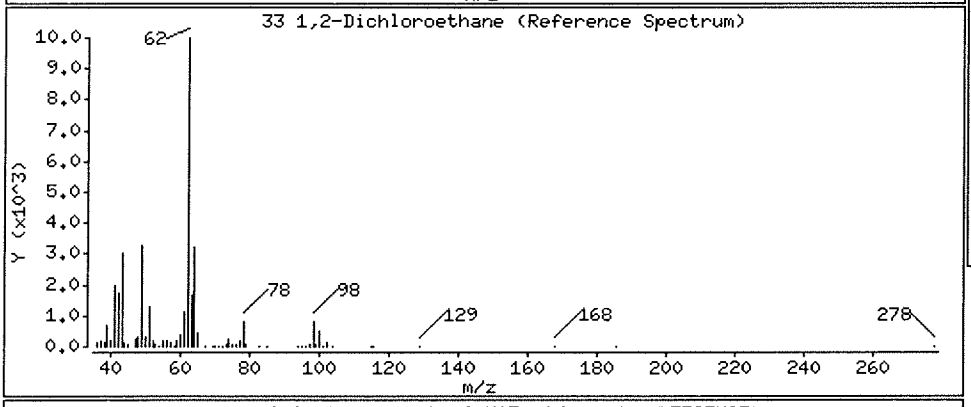
Concentration: 23.19 ug/l

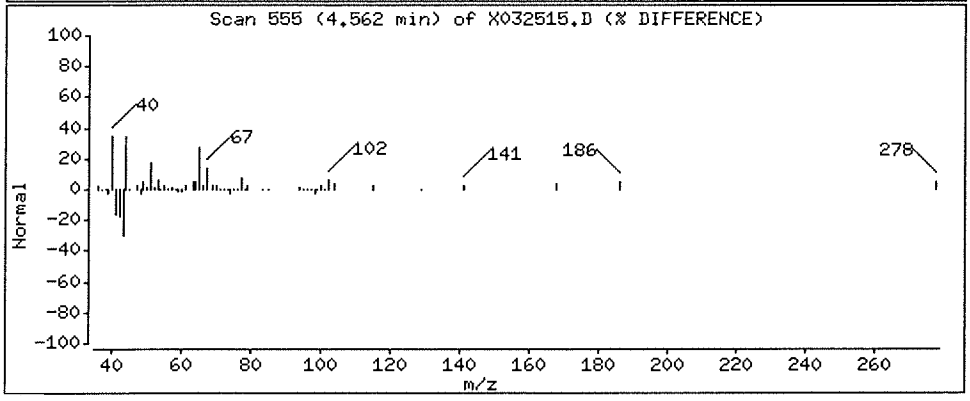












Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032515.D

Date : 25-MAR-2020 18:25

Client ID: HS20031084-03

Instrument: voa6.i

Sample Info: HS20031084-03;HS20031084-03;;;

Purge Volume: 5.0

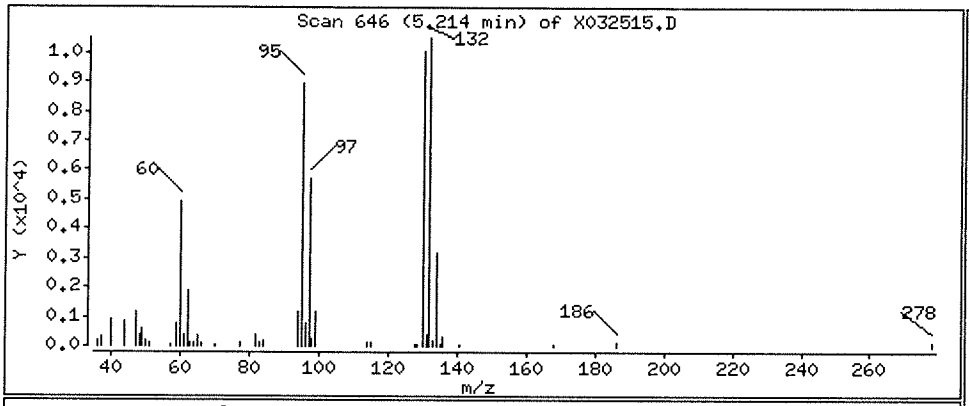
Operator: PC

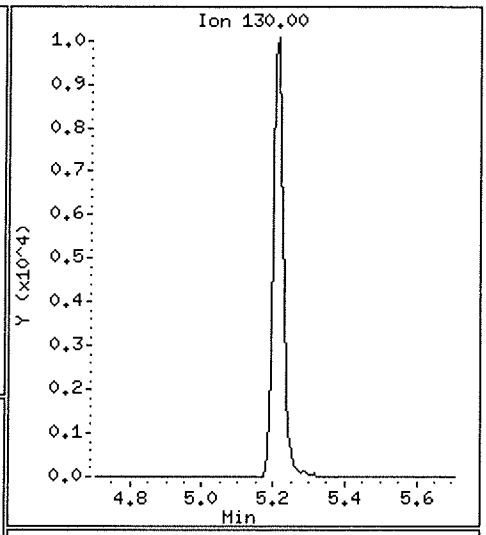
Column phase: DB624

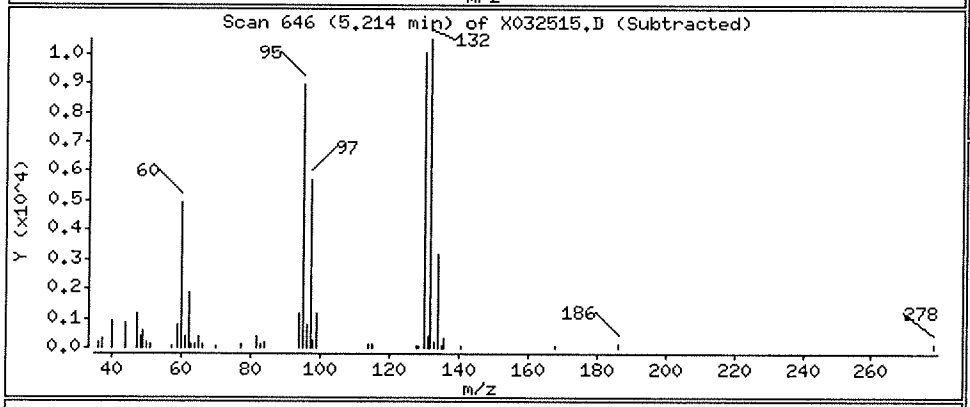
Column diameter: 0.18

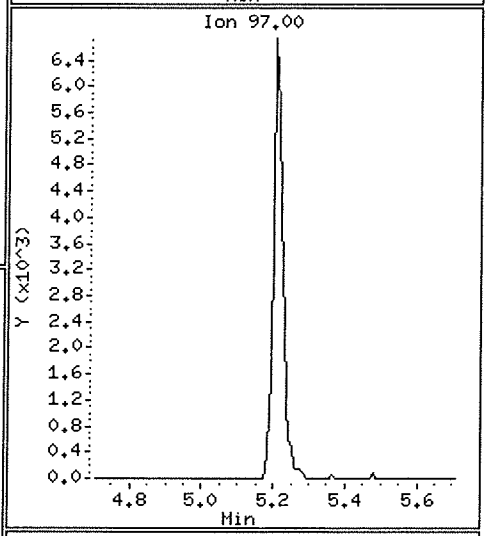
38 Trichloroethene

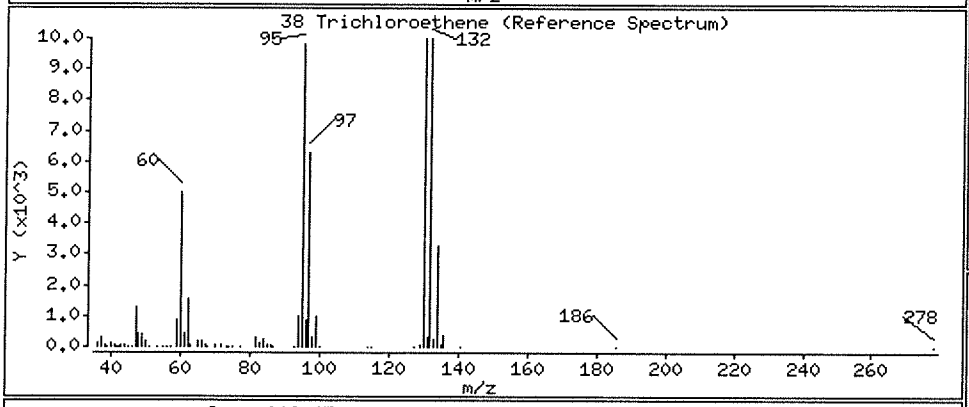
Concentration: 120.27 ug/l

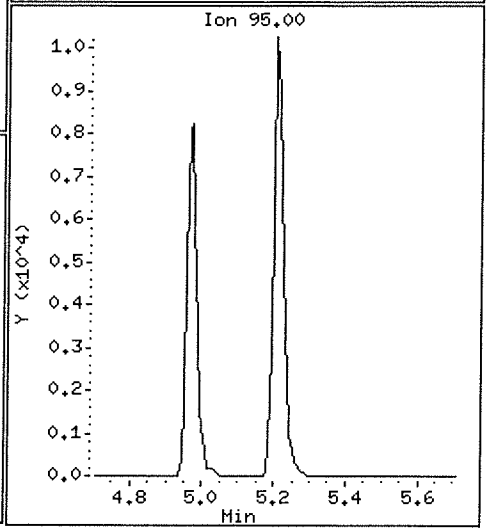


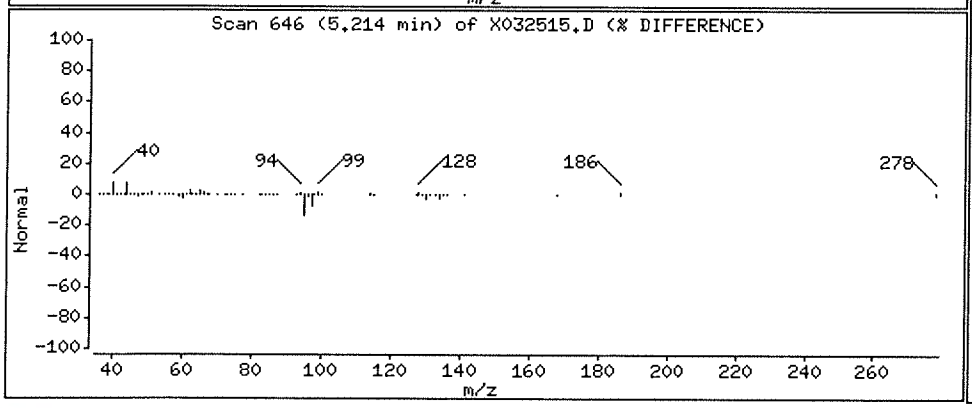












Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032515.D

Date : 25-MAR-2020 18:25

Client ID: HS20031084-03

Instrument: voa6.i

Sample Info: HS20031084-03;HS20031084-03;;;

Purge Volume: 5.0

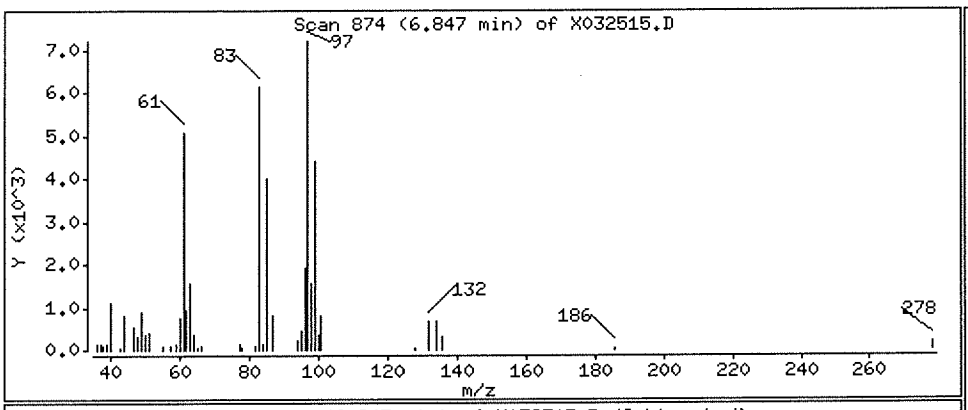
Operator: PC

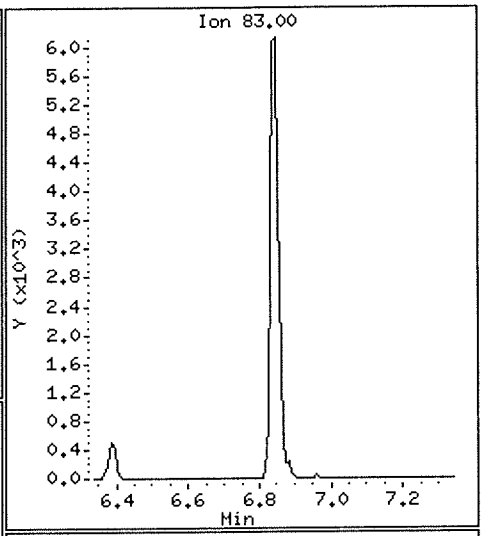
Column phase: DB624

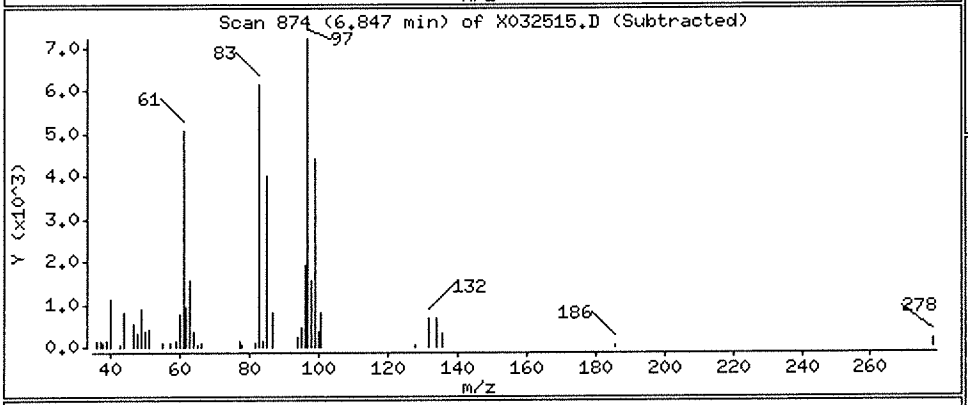
Column diameter: 0.18

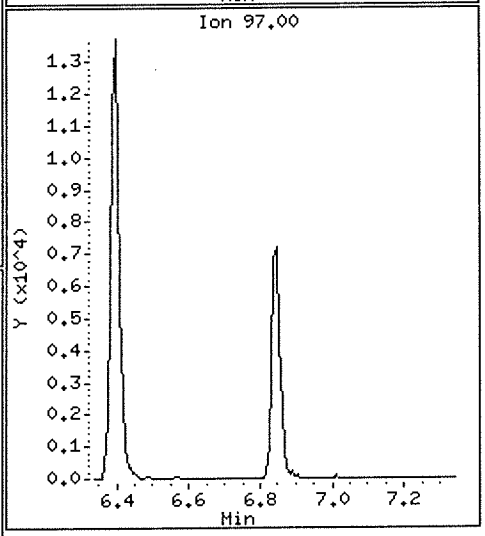
53 1,1,2-Trichloroethane

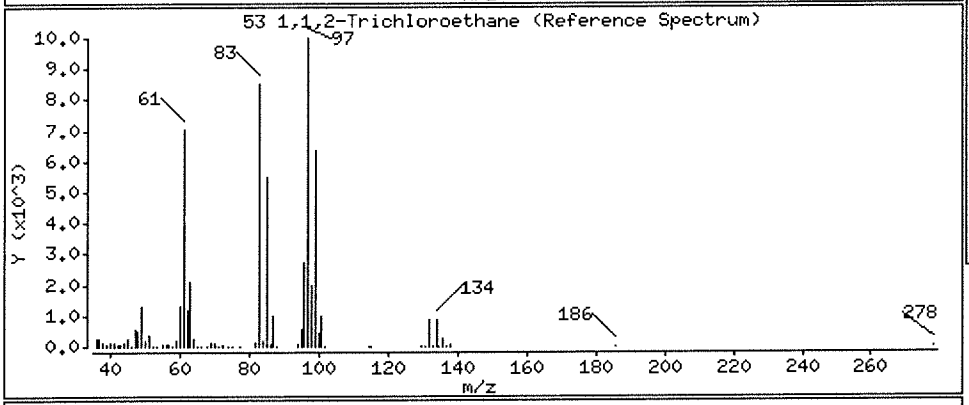
Concentration: 83.61 ug/l

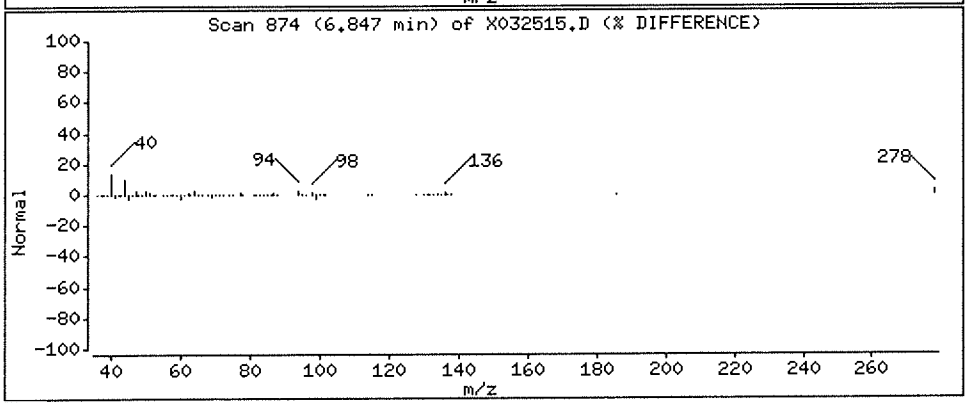












Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032515.D

Date : 25-MAR-2020 18:25

Client ID: HS20031084-03

Instrument: voa6.i

Sample Info: HS20031084-03;HS20031084-03;;;

Purge Volume: 5.0

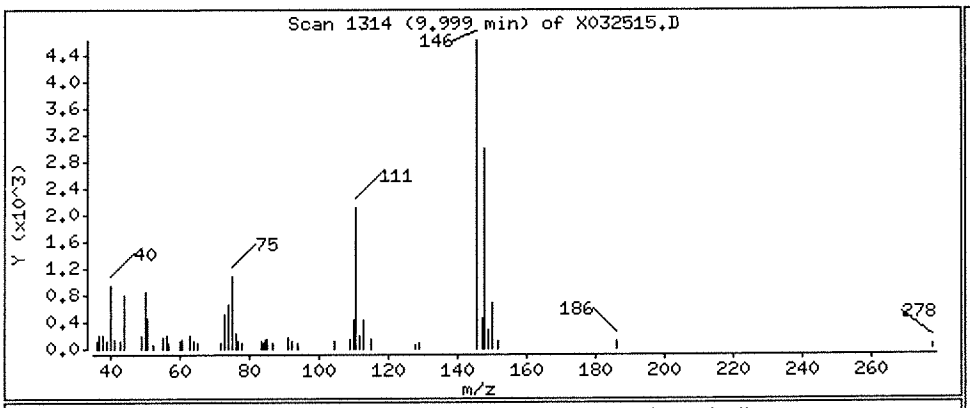
Operator: PC

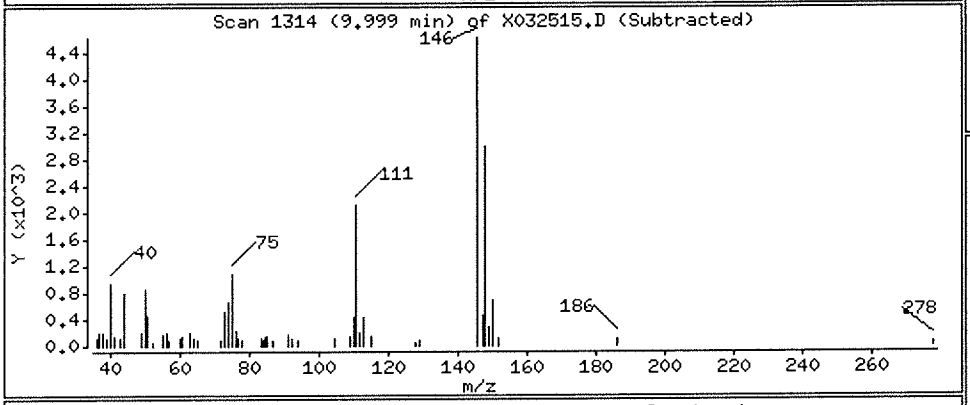
Column phase: DB624

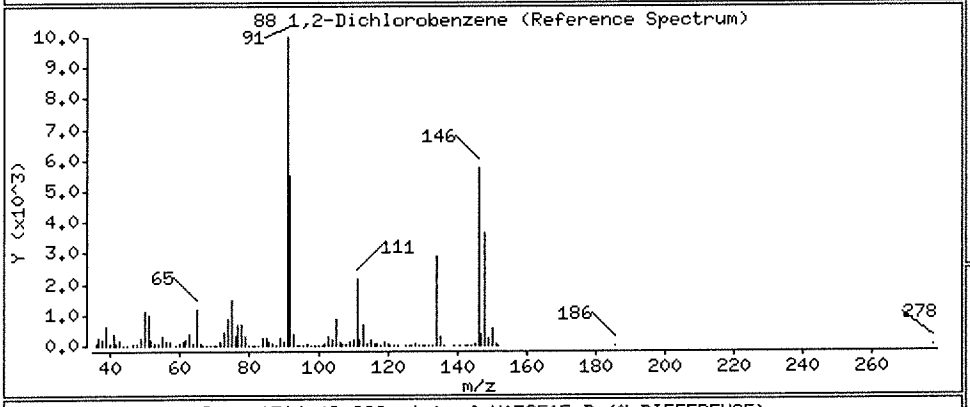
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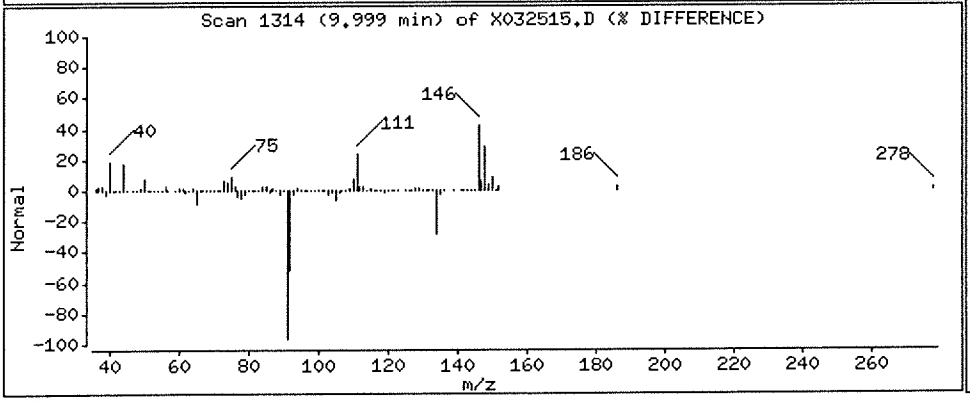
88 1,2-Dichlorobenzene

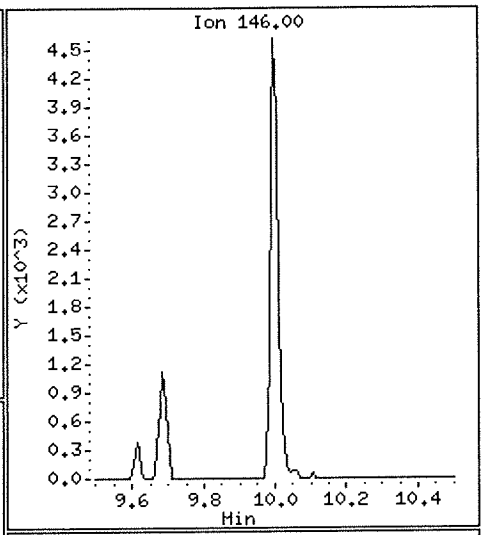
Concentration: 26.43 ug/l

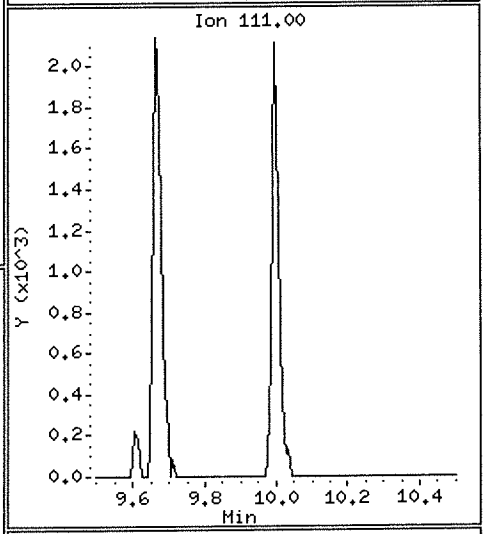


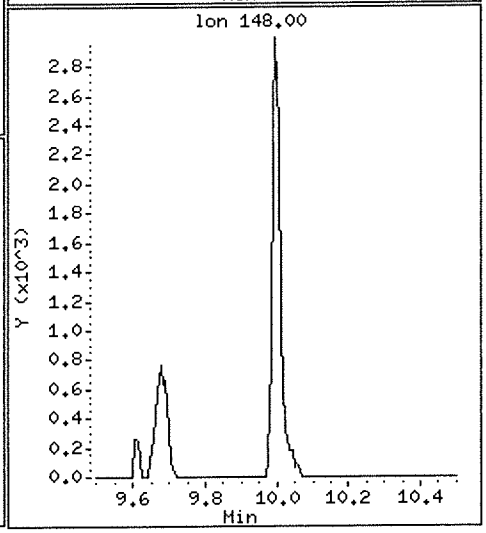












Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032516.D Page 1
Report Date: 15-Apr-2020 14:55

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032516.D
Lab Smp Id: HS20031084-03 Client Smp ID: HS20031084-03
Inj Date : 25-MAR-2020 18:49
Operator : PC Inst ID: voa6.i
Smp Info : HS20031084-03;HS20031084-03;;;
Misc Info : HS18090001;WATER;0;5;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200325.b\8260W.m
Meth Date : 15-Apr-2020 14:52 Qin.Xu Quant Type: ISTD
Cal Date : 19-MAR-2020 14:22 Cal File: X031908.D
Als bottle: 16
Dil Factor: 5.00000
Integrator: HP RTE Compound Sublist: 8260_GB.sub
Target Version: 4.14
Processing Host: NAHSTW7066

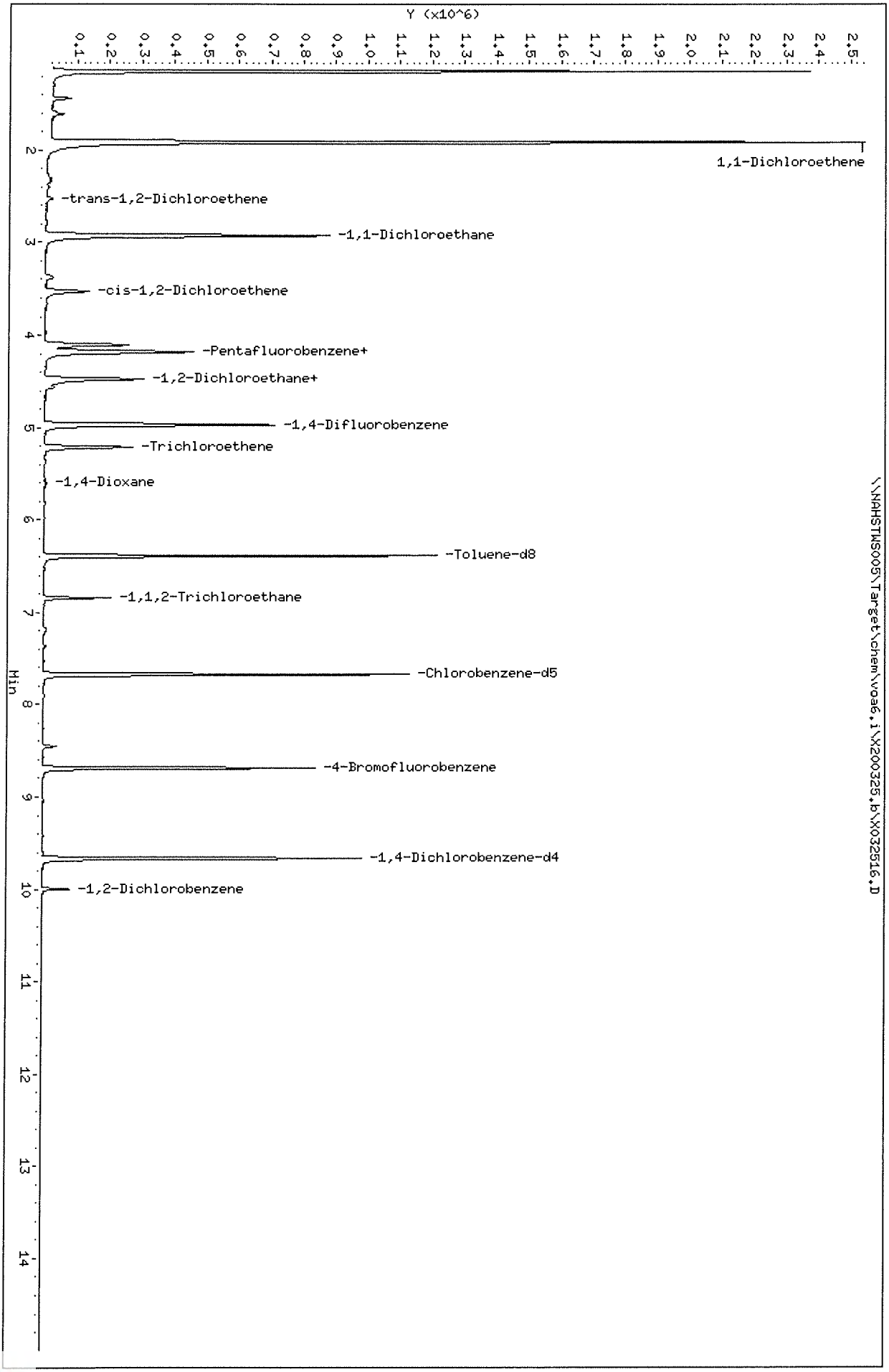
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	389465	50.0000	
	5 Vinyl Chloride	62	1.138	1.138	(0.272)	1701222	286.714	1433.56(A)
	11 1,1-Dichloroethene	96	1.911	1.912	(0.457)	783531	237.421	1187.10(A)
	20 trans-1,2-Dichloroethene	96	2.535	2.528	(0.606)	5097	1.32812	6.64(a)
	22 1,1-Dichloroethane	63	2.921	2.922	(0.699)	971516	112.017	560.08
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	63243	14.2591	71.29
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	184323	47.6276	47.62
	33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	21976	3.61753	18.08(a)
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	219513	44.8463	44.84
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	575005	50.0000	
	37 Benzene	78	4.519	4.512	(0.909)	26399	1.73629	8.68(a)
	38 Trichloroethene	130	5.206	5.207	(1.048)	91790	23.0314	115.15
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	505230	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	671669	51.9004	51.90
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	48508	16.6648	83.32
$	69 4-Bromofluorobenzene	95	8.695	8.688	(1.134)	237820	48.9096	48.90
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	241827	50.0000	
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	32749	5.04469	25.22
M	94 1,2-Dichloroethylene (total)	96				68340	15.5873	77.93
	135 1,4-Dioxane	88	5.600	5.601	(1.339)	5074	113.023	565.11
	141 Cyclohexane	56	4.132	4.125	(0.988)	10415	1.24536	6.22(a)

QC Flag Legend

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



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032516.D
Date : 25-MAR-2020 18:49
Client ID: HS20031084-03
Sample Info: HS20031084-03;HS20031084-03;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032516.D

Date : 25-MAR-2020 18:49

Client ID: HS20031084-03

Instrument: voa6.i

Sample Info: HS20031084-03;HS20031084-03;;;

Purge Volume: 5.0

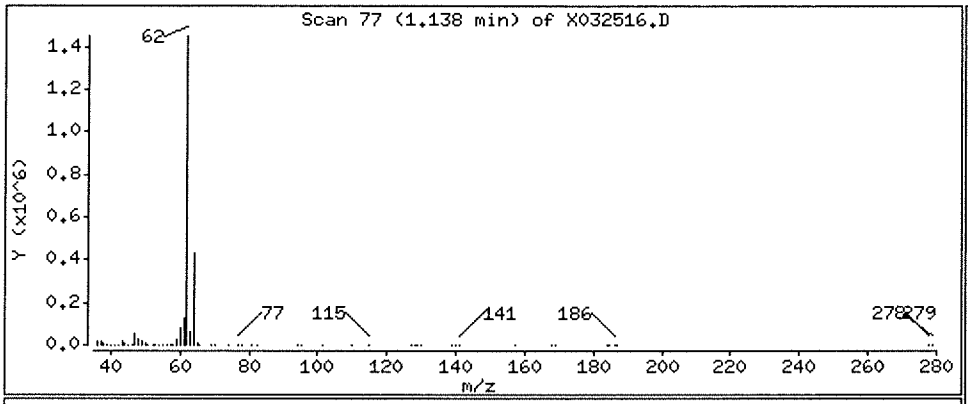
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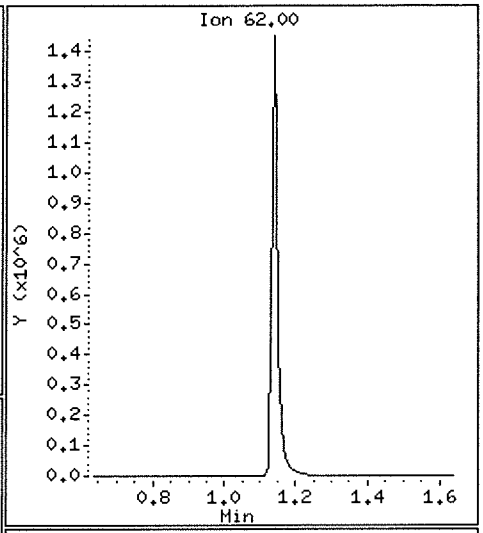
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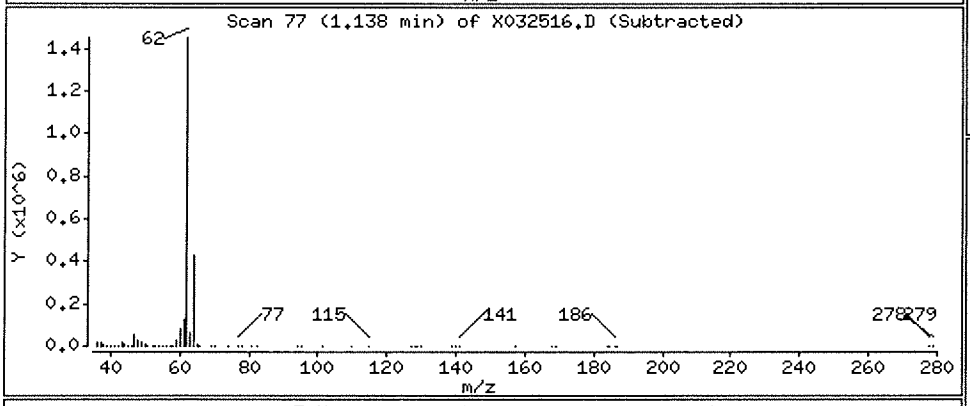
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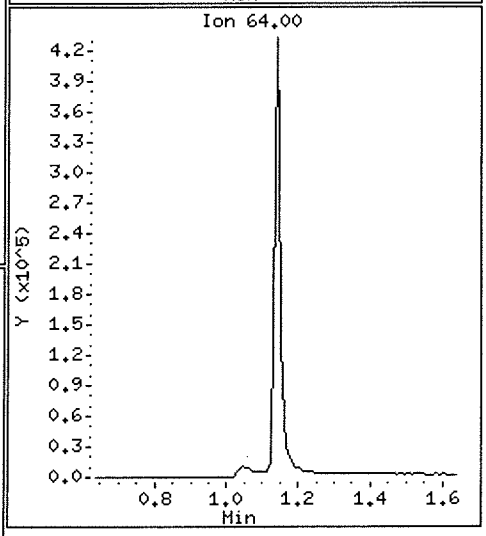
5 Vinyl Chloride

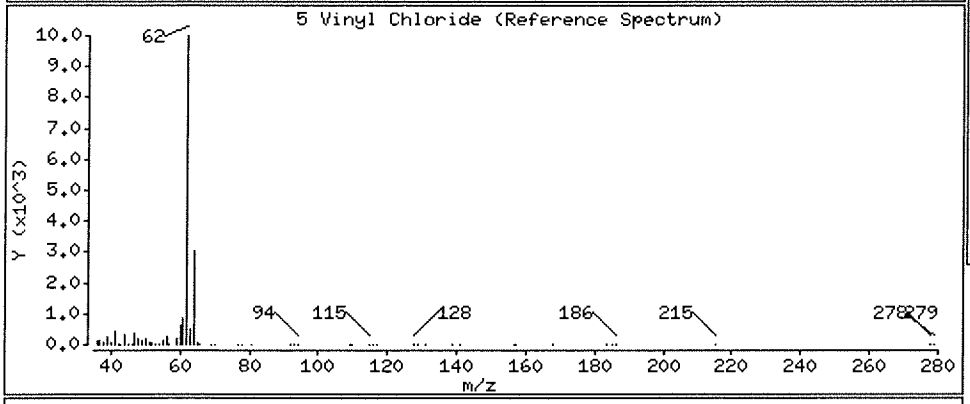
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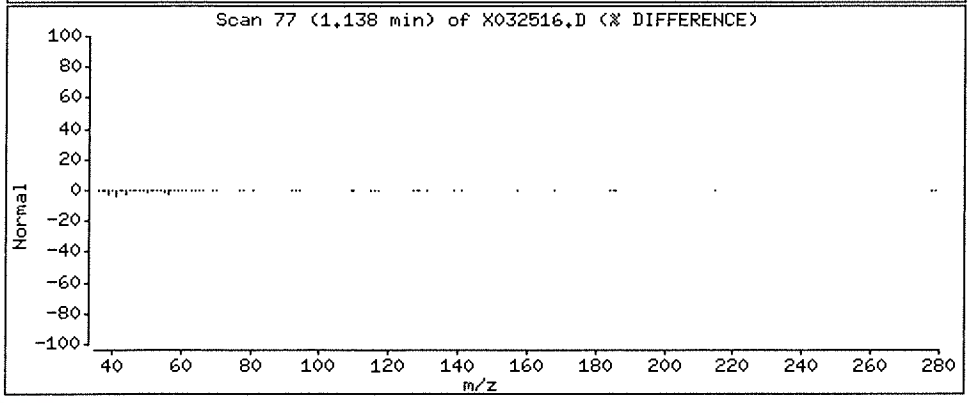












Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032516.D

Date : 25-MAR-2020 18:49

Client ID: HS20031084-03

Instrument: voa6.i

Sample Info: HS20031084-03;HS20031084-03;;;

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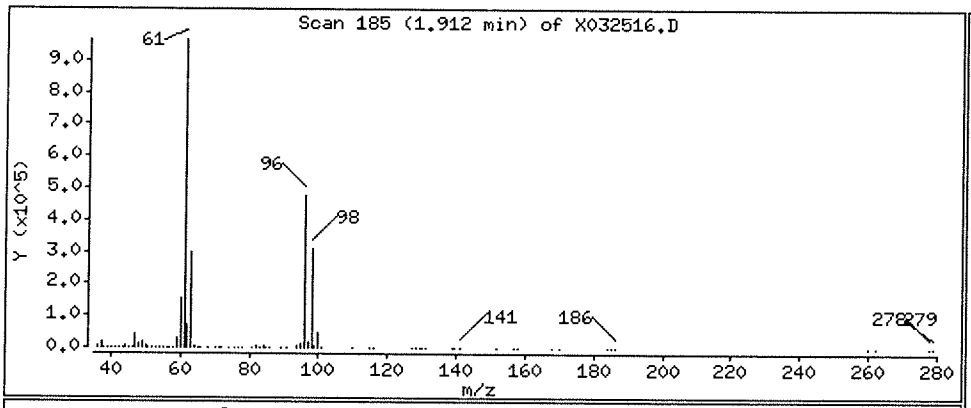
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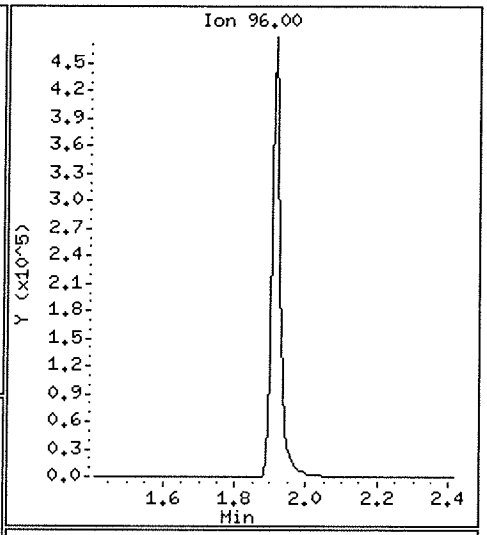
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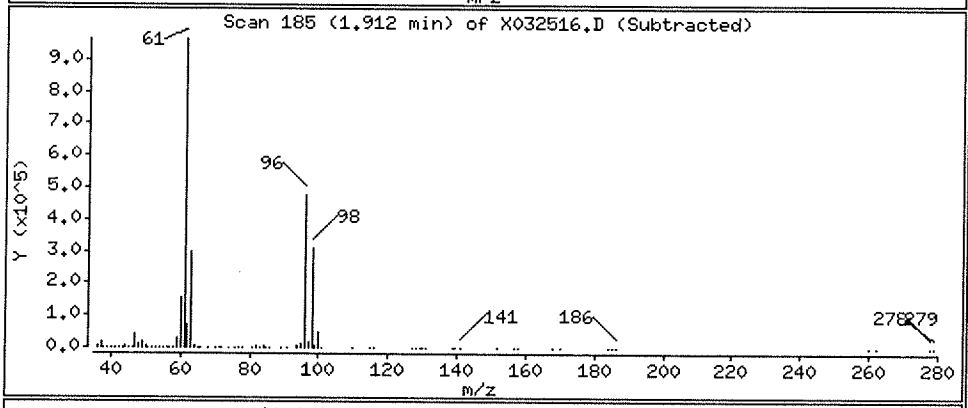
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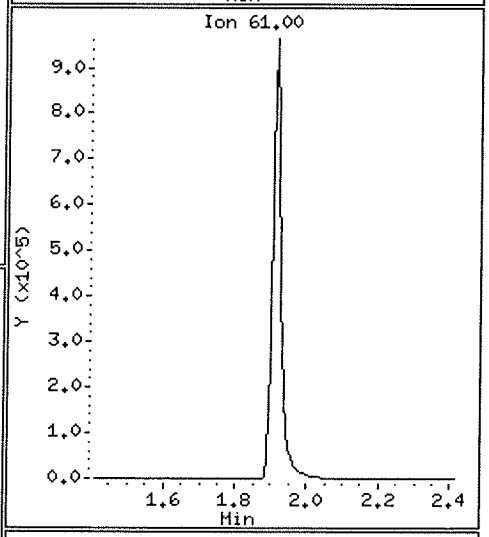
11 1,1-Dichloroethene

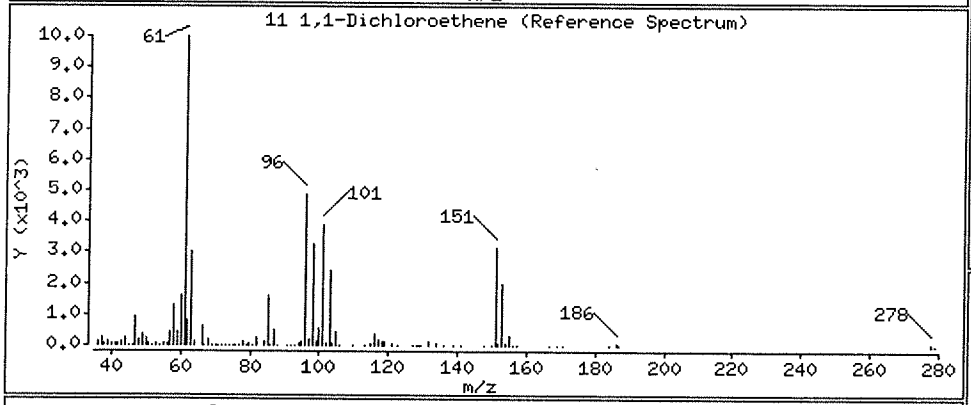
Concentration: 1187.10 ug/l

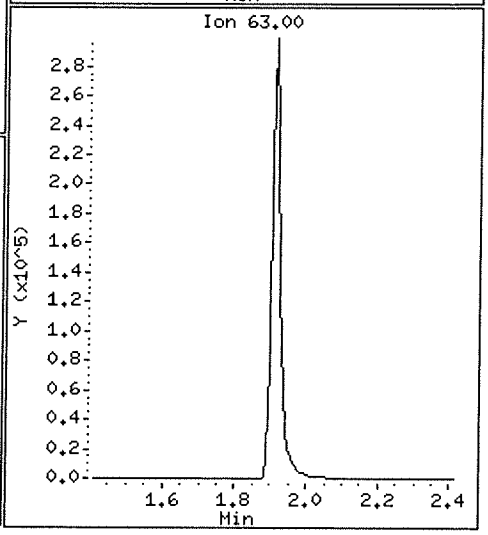


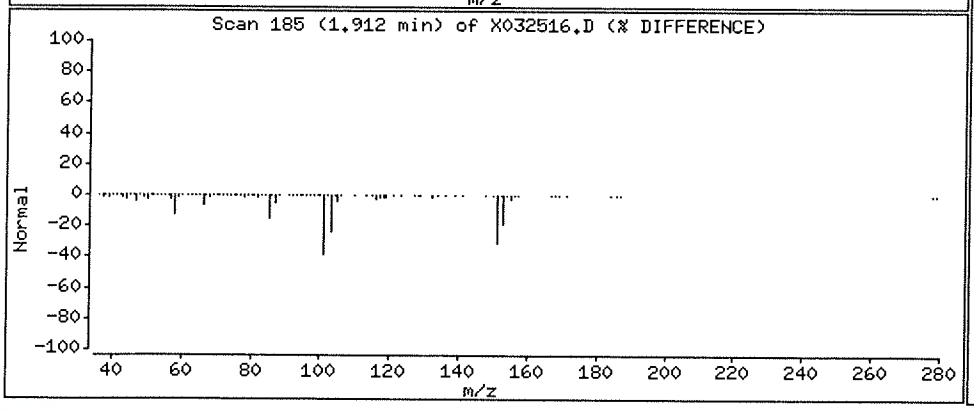












Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032516.D

Date : 25-MAR-2020 18:49

Client ID: HS20031084-03

Instrument: voa6.i

Sample Info: HS20031084-03;HS20031084-03;;;

Purge Volume: 5.0

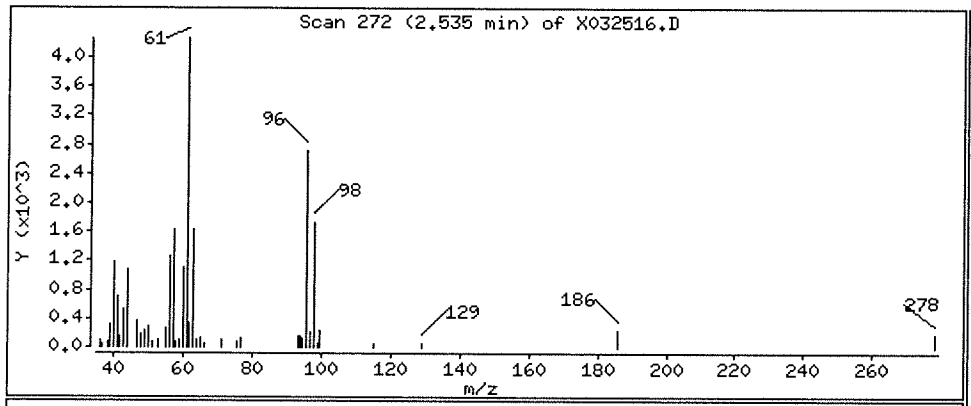
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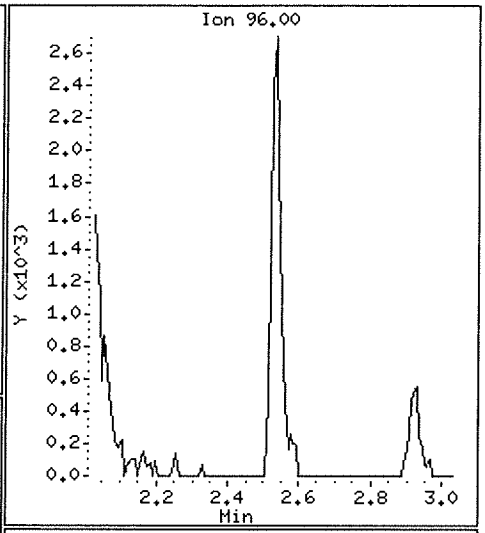
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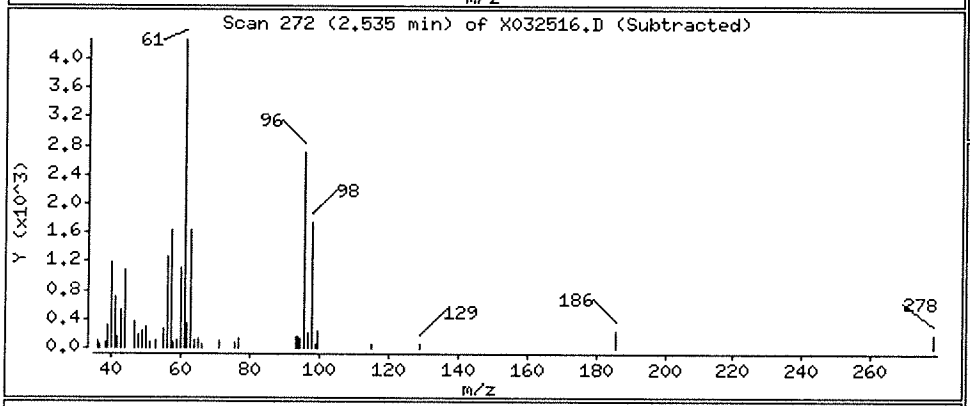
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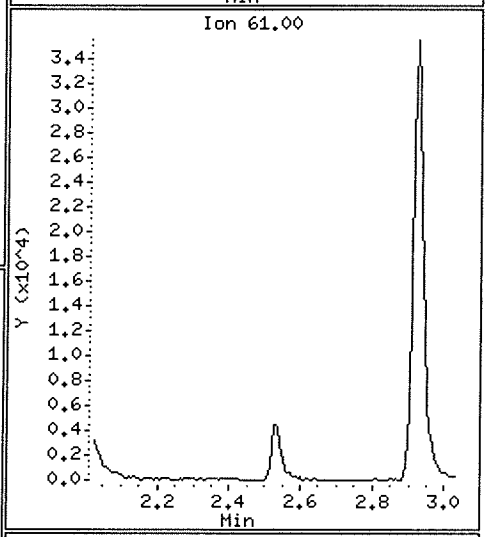
20 trans-1,2-Dichloroethene

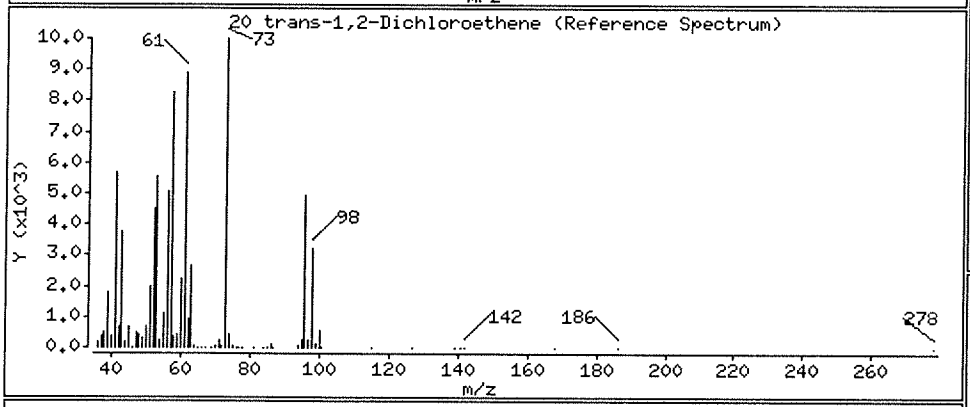
Concentration: 6.64 ug/l

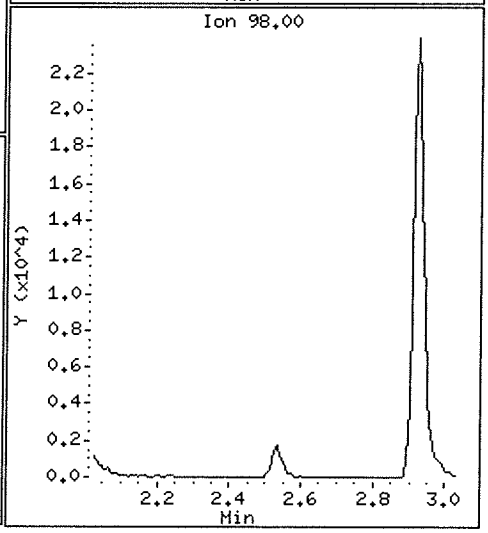


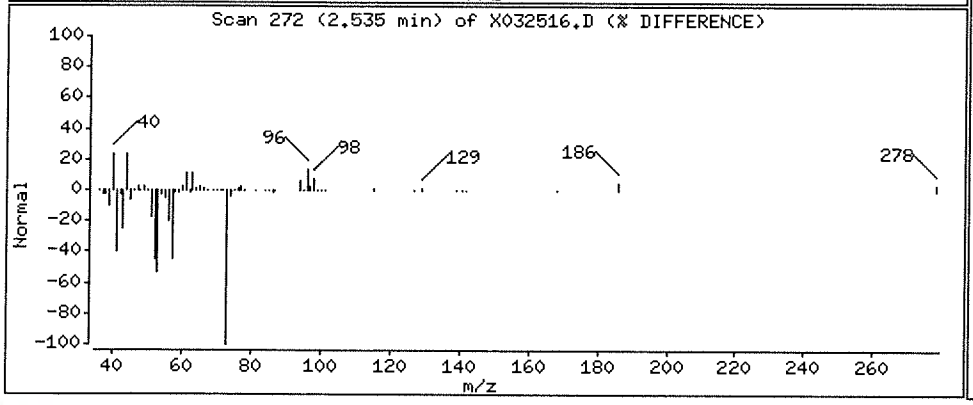












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Date : 25-MAR-2020 18:49

Client ID: HS20031084-03

Instrument: voa6.i

Sample Info: HS20031084-03;HS20031084-03;;;

Purge Volume: 5.0

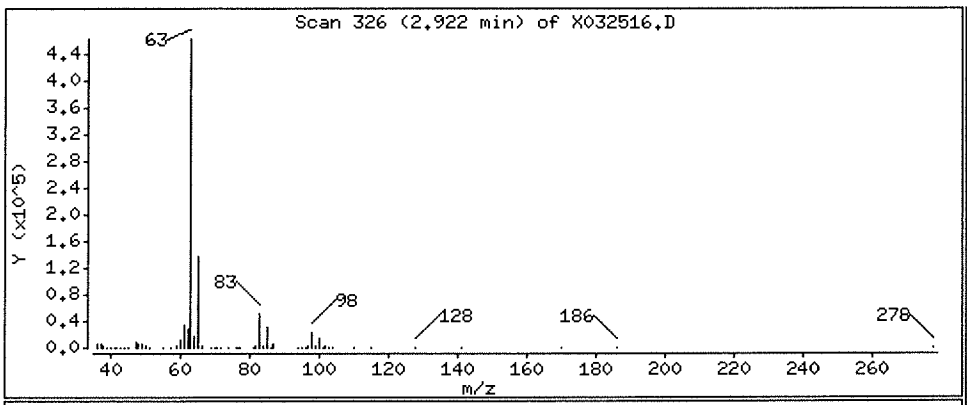
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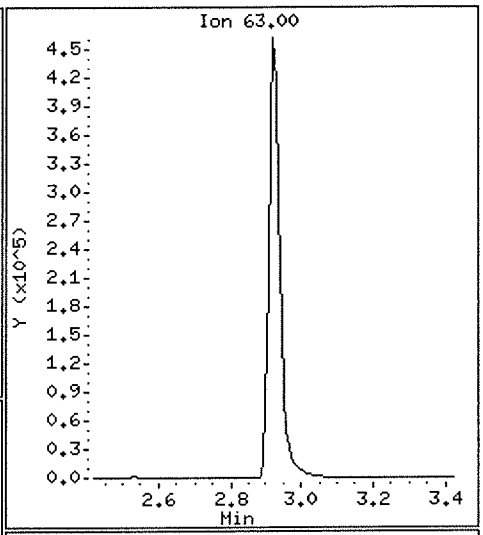
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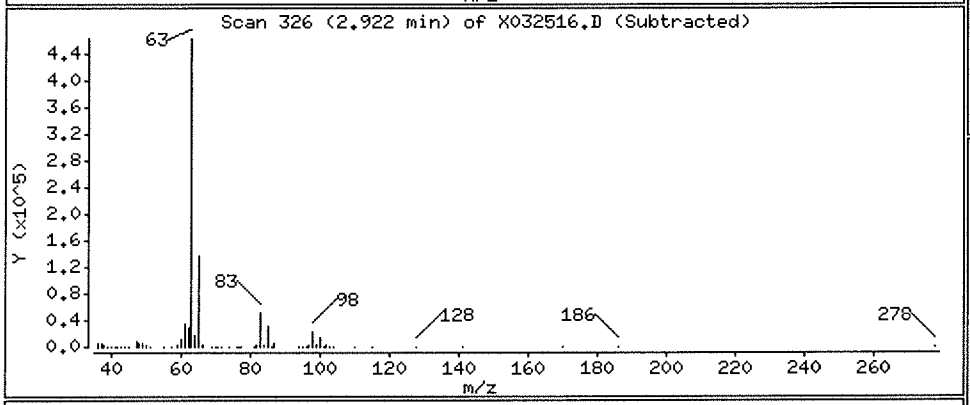
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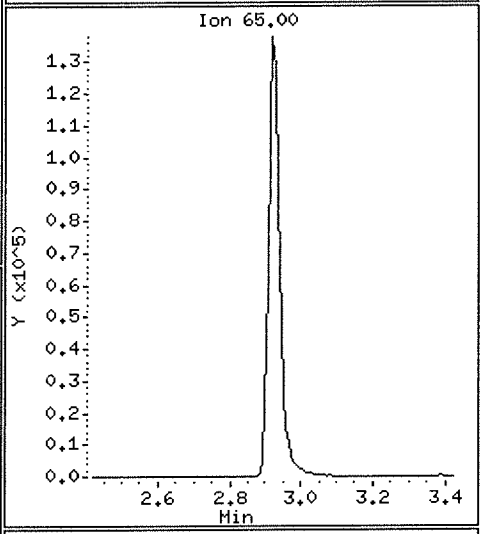
22 1,1-Dichloroethane

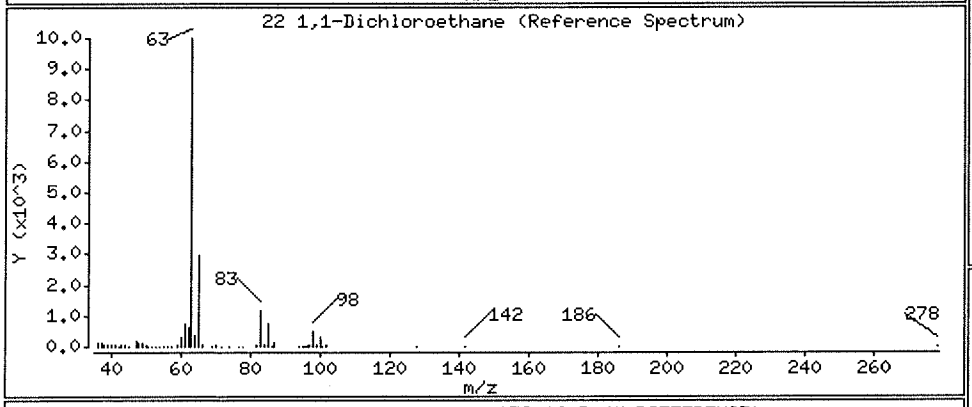
Concentration: 560.08 ug/l

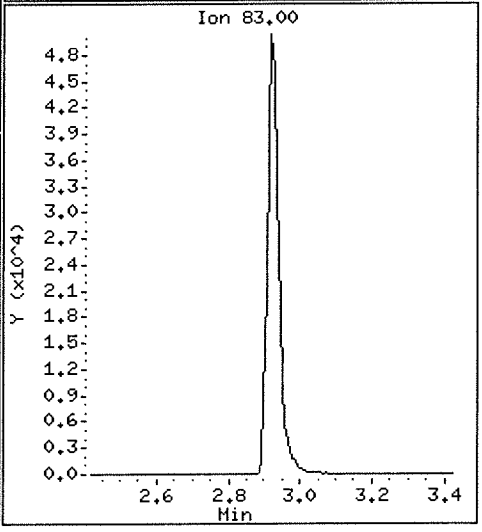


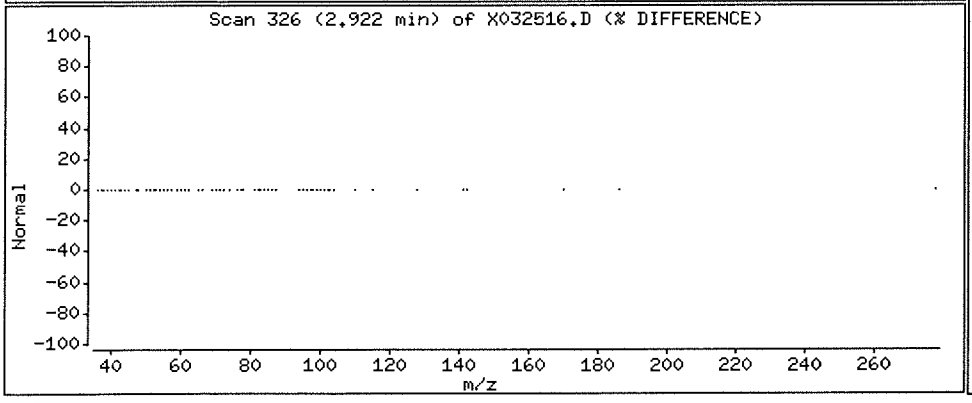












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Date : 25-MAR-2020 18:49

Client ID: HS20031084-03

Instrument: voa6.i

Sample Info: HS20031084-03;HS20031084-03;;;

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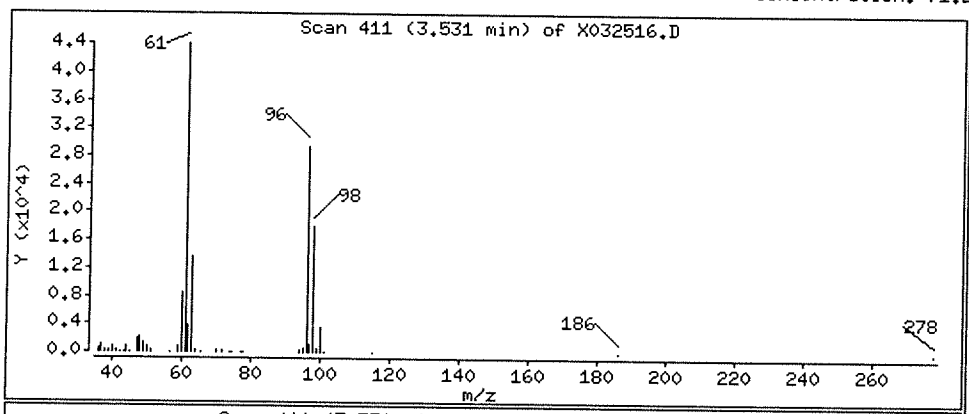
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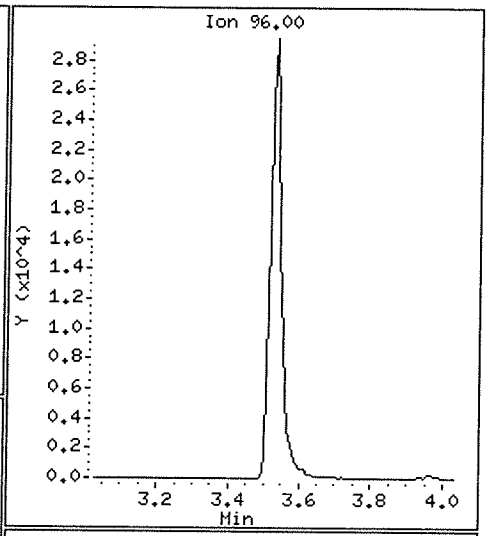
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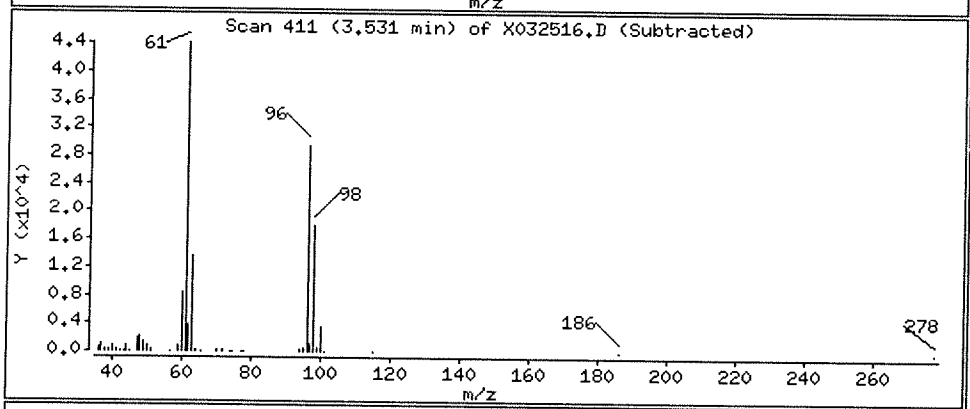
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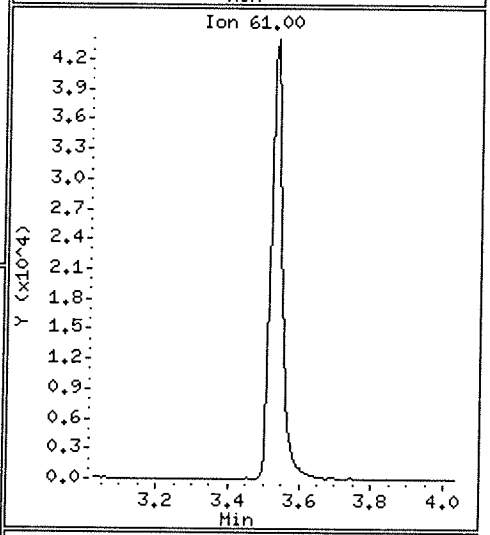
27 cis-1,2-Dichloroethene

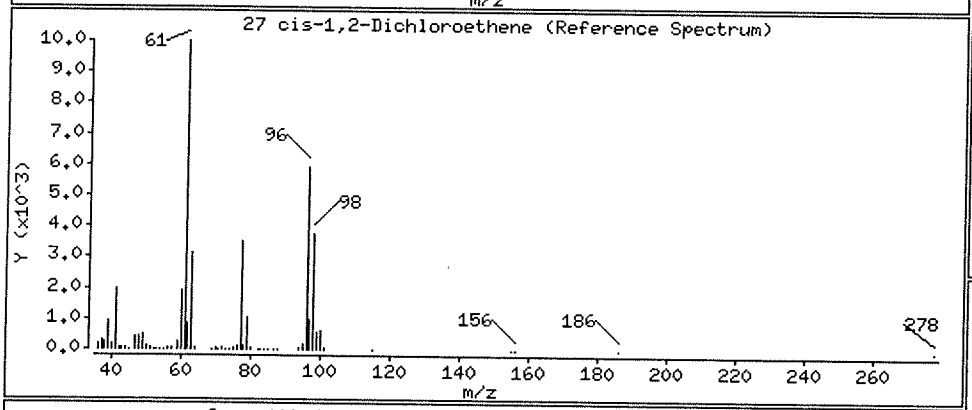
Concentration: 71.29 ug/l

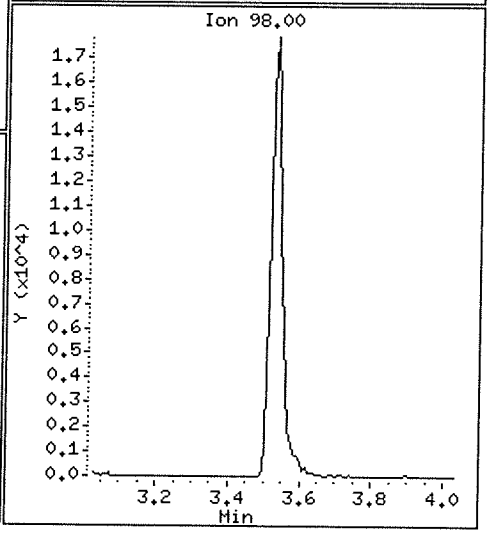


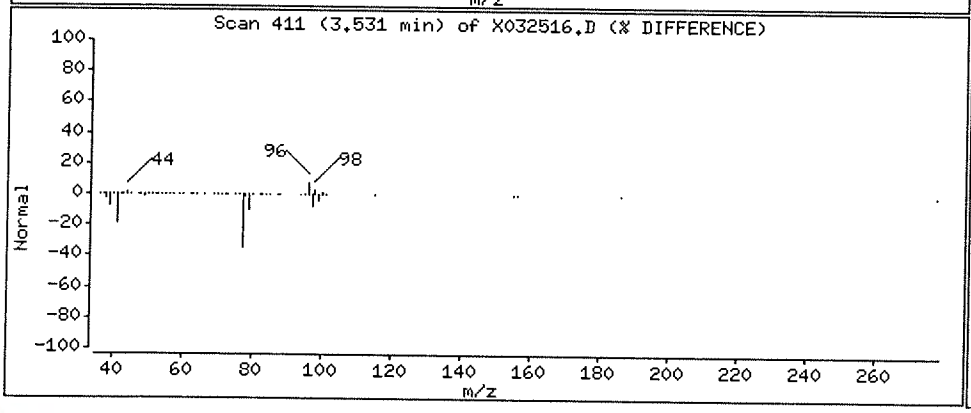












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Date : 25-MAR-2020 18:49

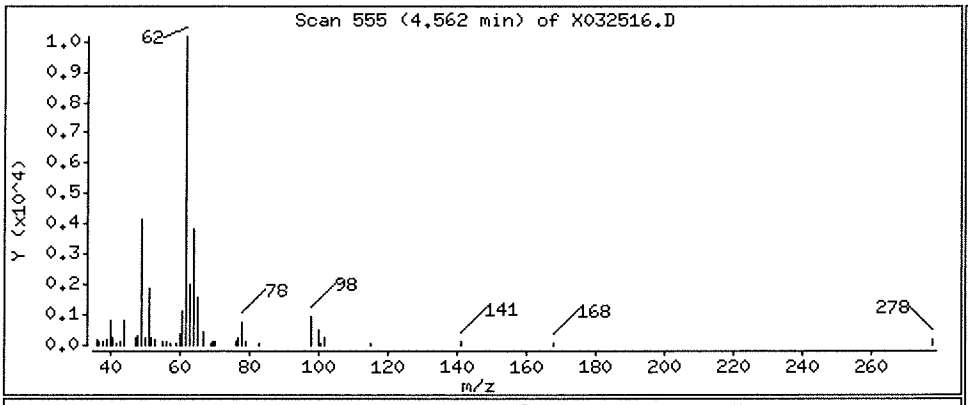
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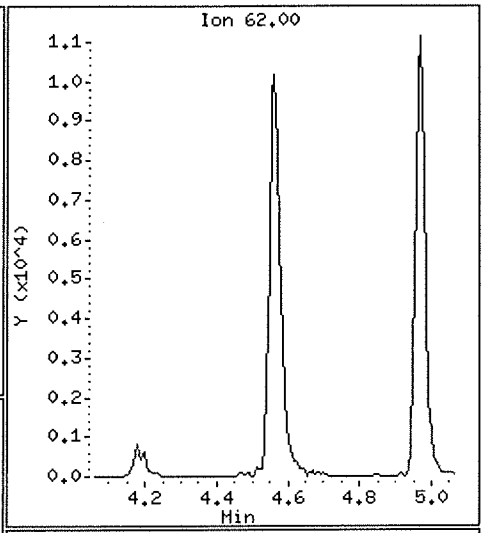
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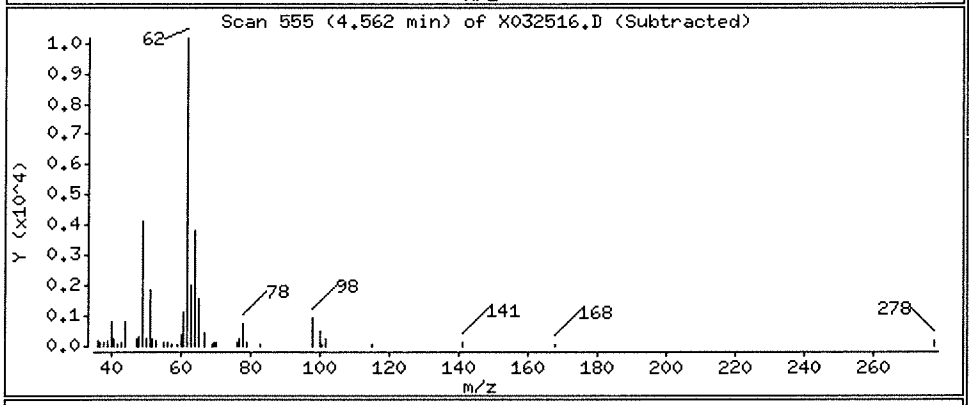
Purge Volume: 5.0 Operator: PC

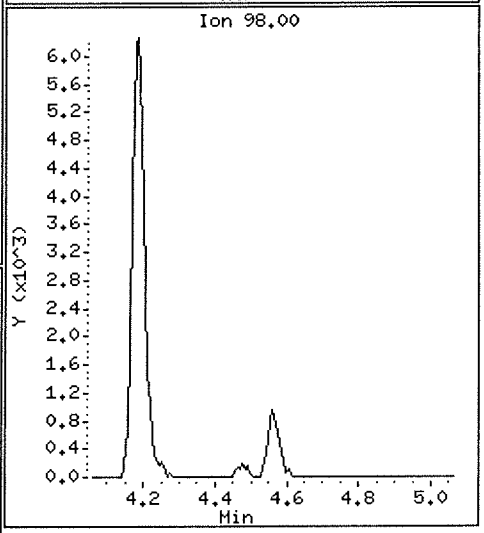
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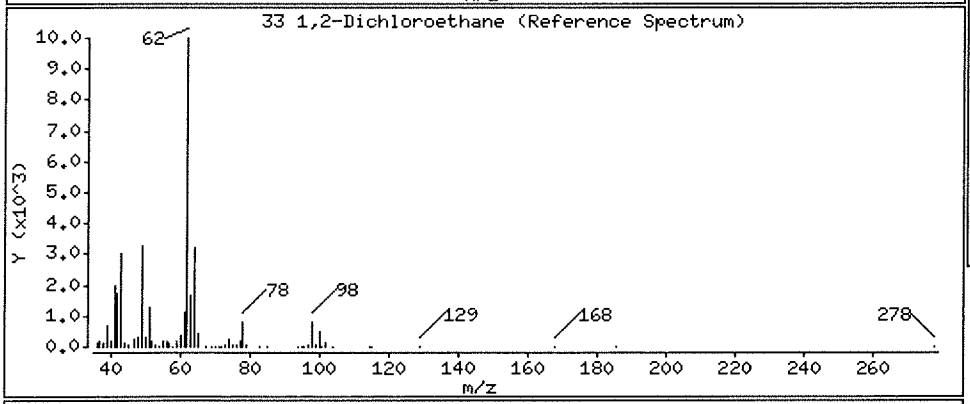
33 1,2-Dichloroethane Concentration: 18.08 ug/l

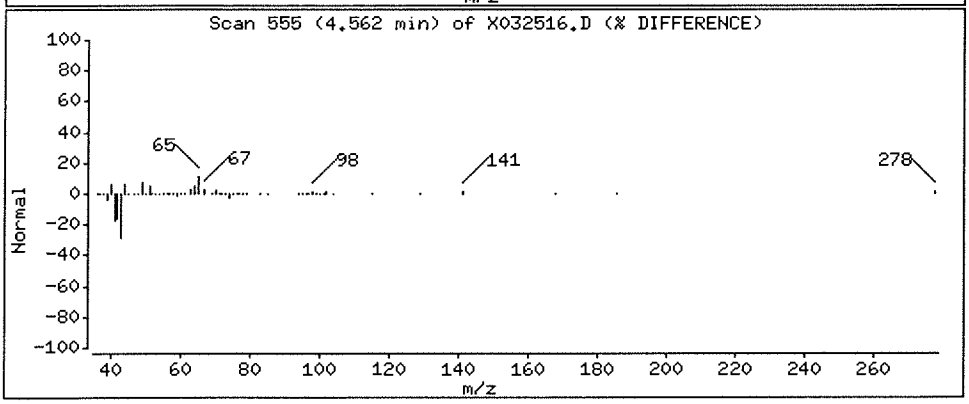












Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032516.D Page 10

Date : 25-MAR-2020 18:49

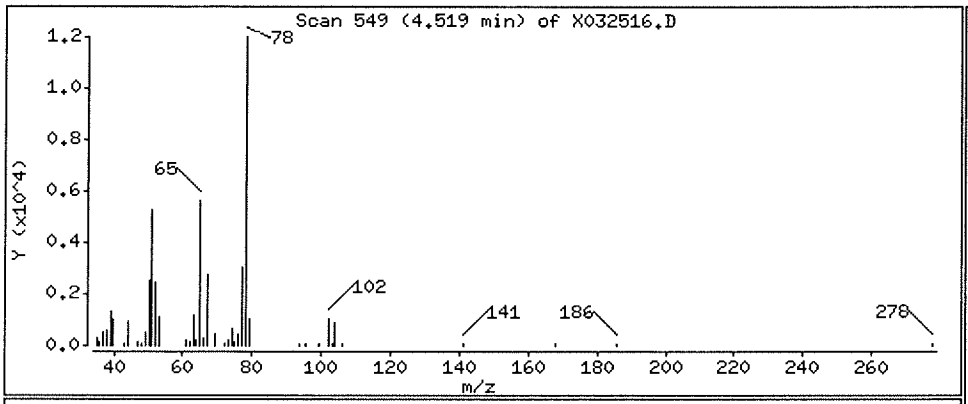
Client ID: HS20031084-03 Instrument: voa6.i

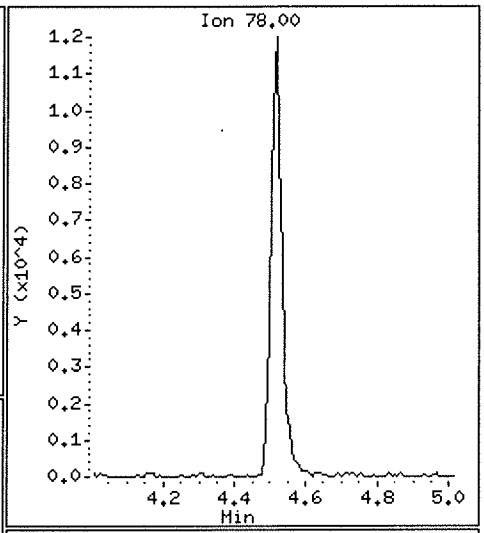
Sample Info: HS20031084-03;HS20031084-03;;;

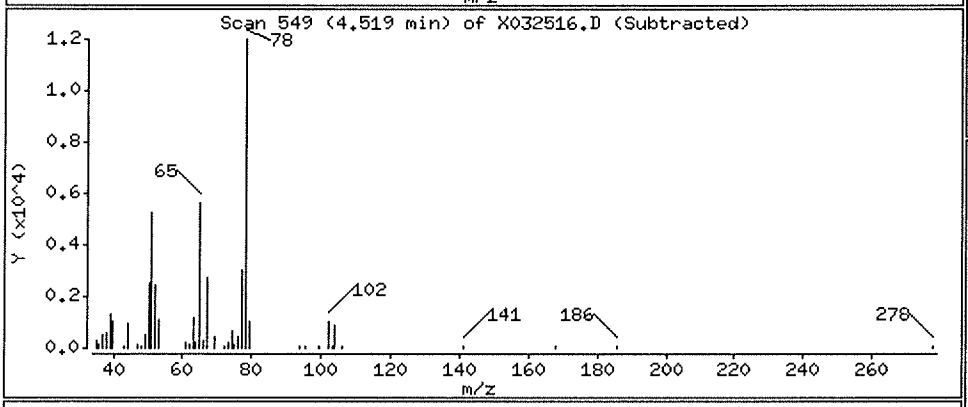
Purge Volume: 5.0 Operator: PC

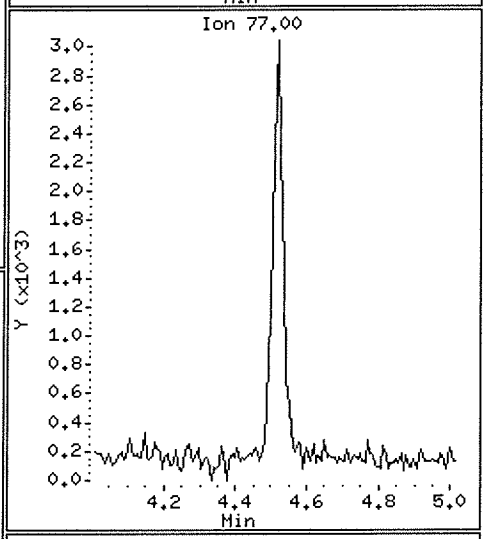
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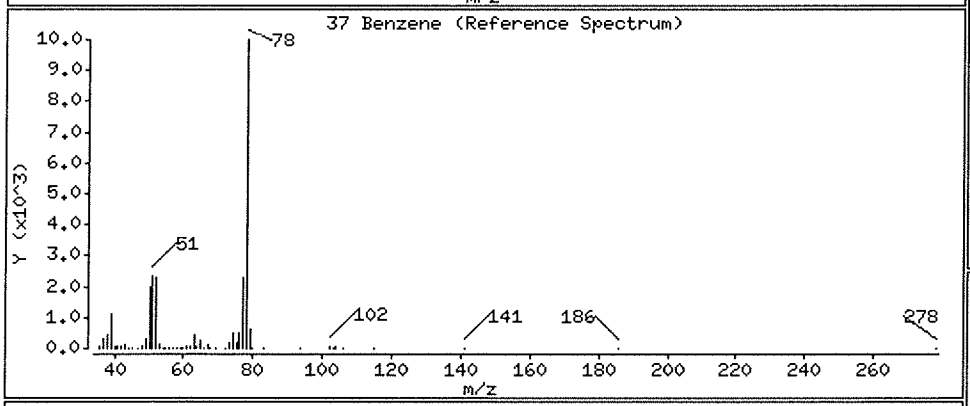
37 Benzene Concentration: 8.68 ug/l

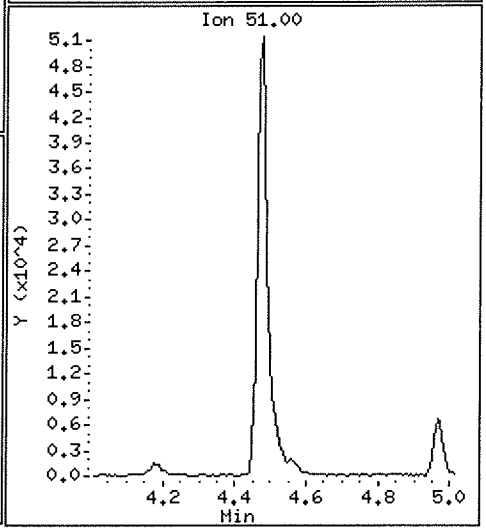


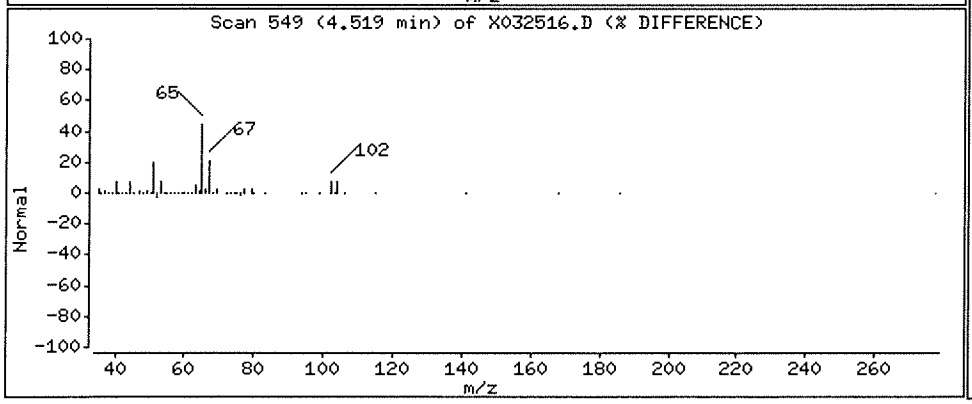












Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032516.D

Date : 25-MAR-2020 18:49

Client ID: HS20031084-03

Instrument: voa6.i

Sample Info: HS20031084-03;HS20031084-03;;;

Purge Volume: 5.0

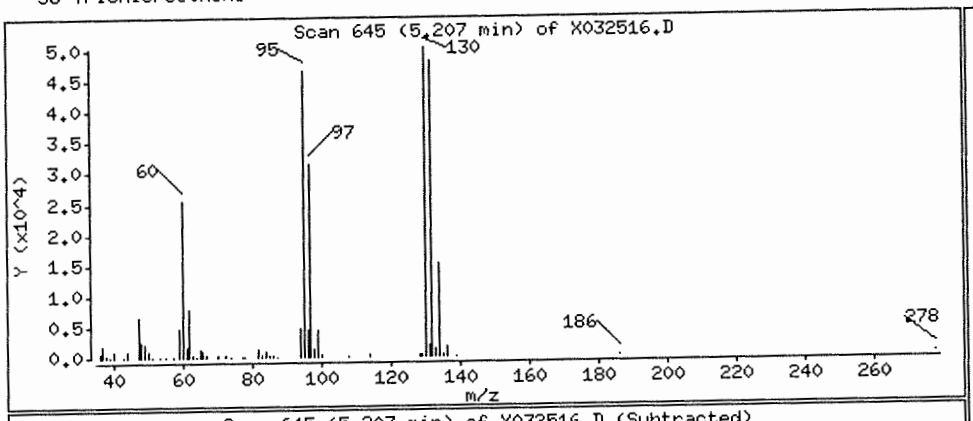
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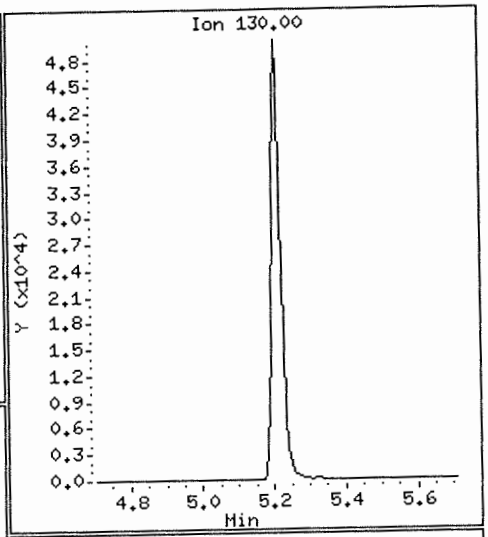
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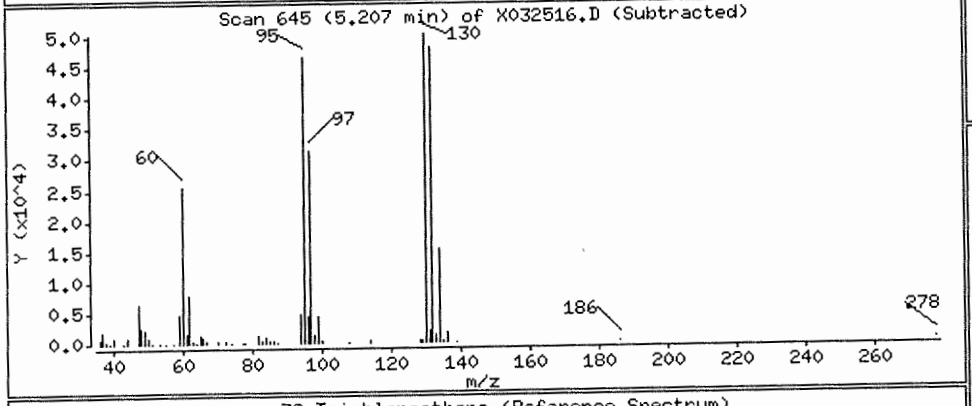
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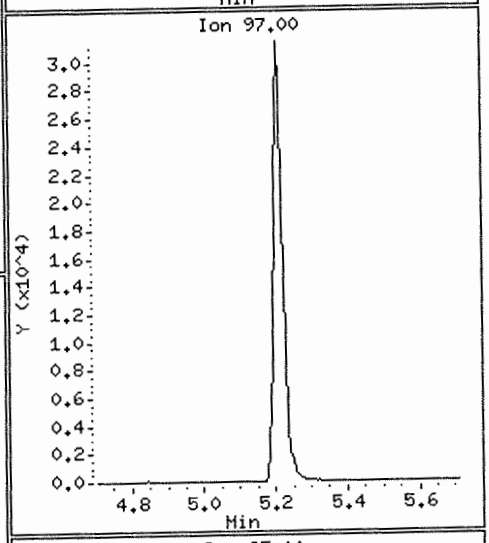
38 Trichloroethene

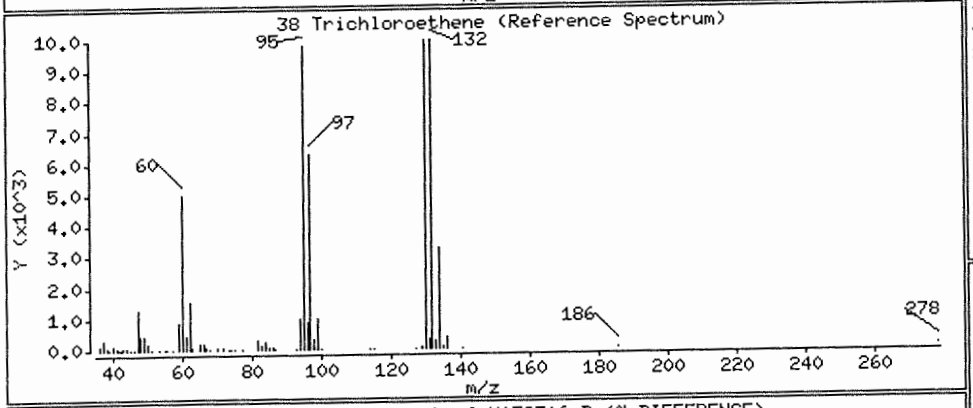
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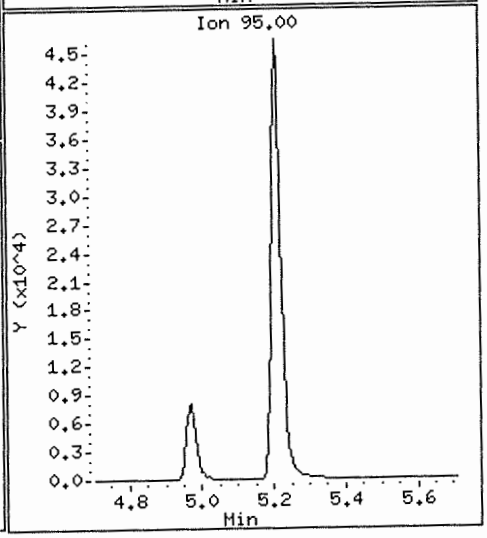


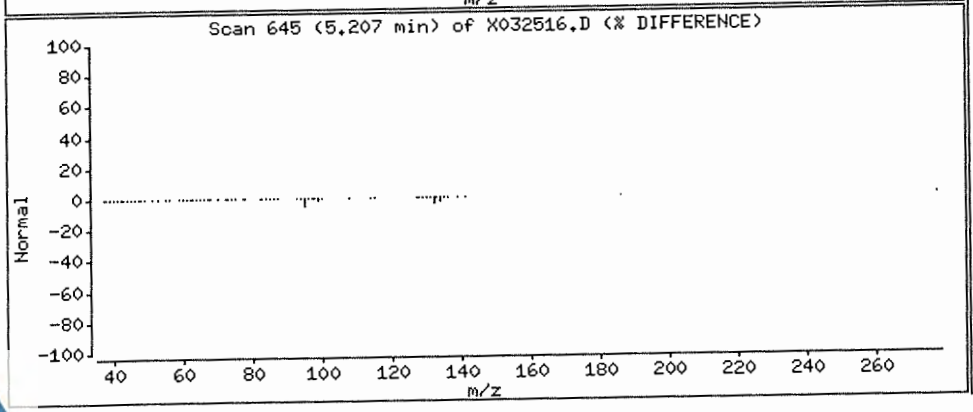












Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032516.D

Date : 25-MAR-2020 18:49

Client ID: HS20031084-03

Instrument: voa6.i

Sample Info: HS20031084-03;HS20031084-03;;;

Purge Volume: 5.0

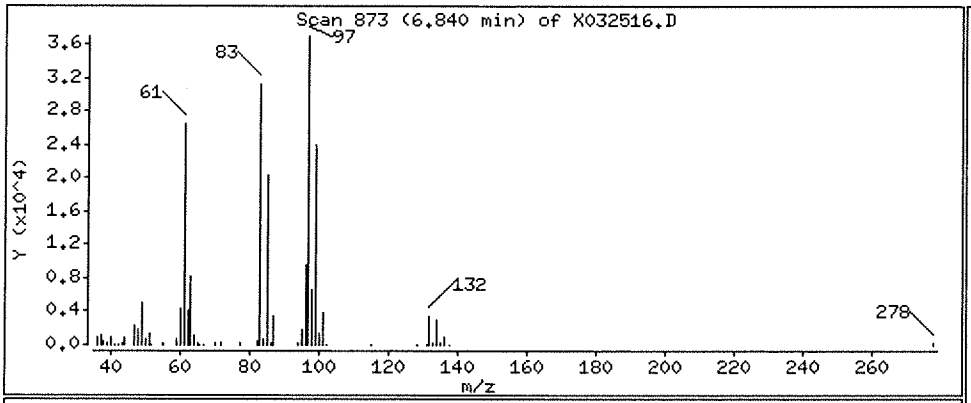
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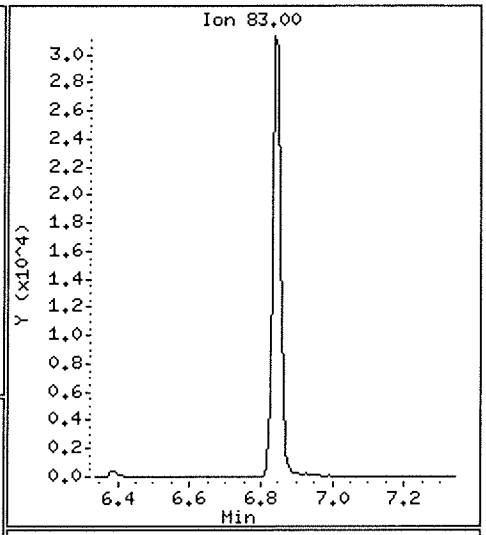
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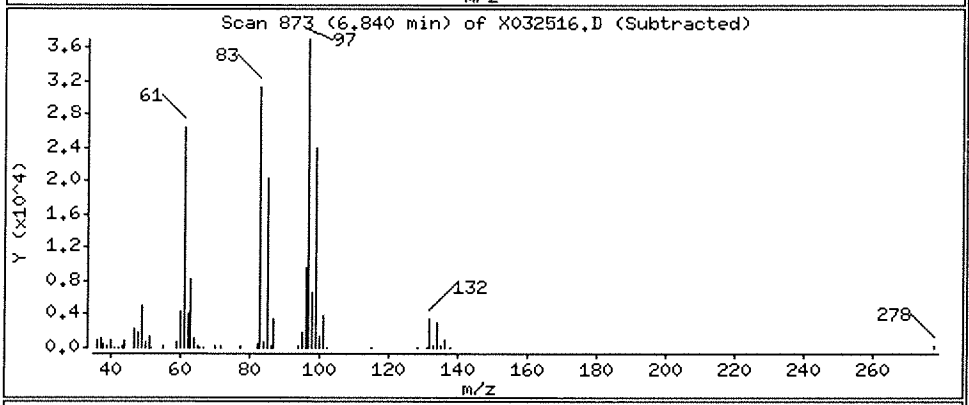
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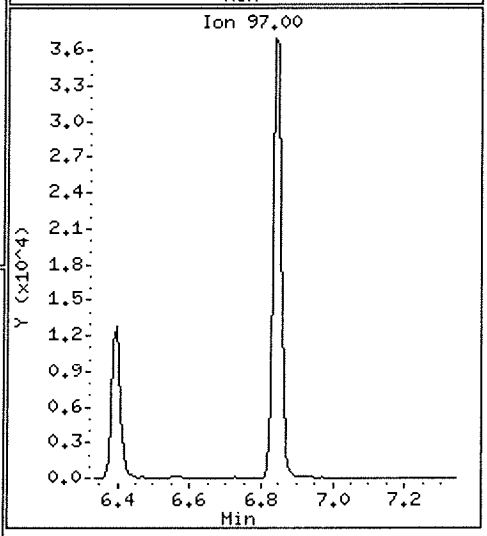
53 1,1,2-Trichloroethane

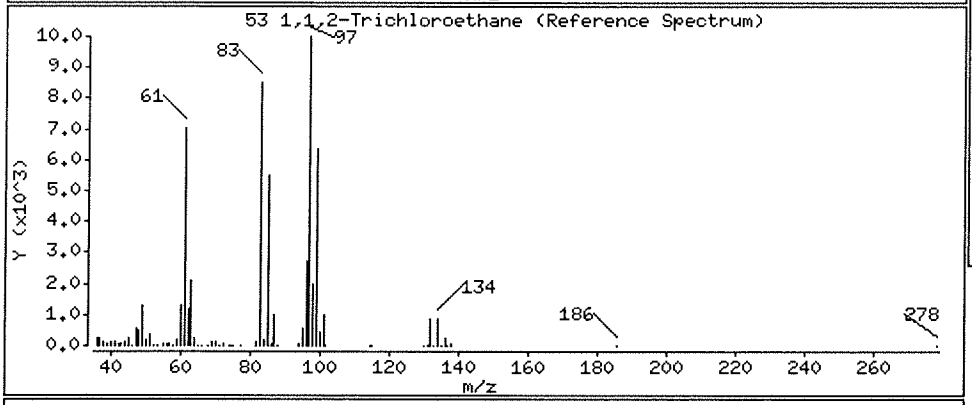
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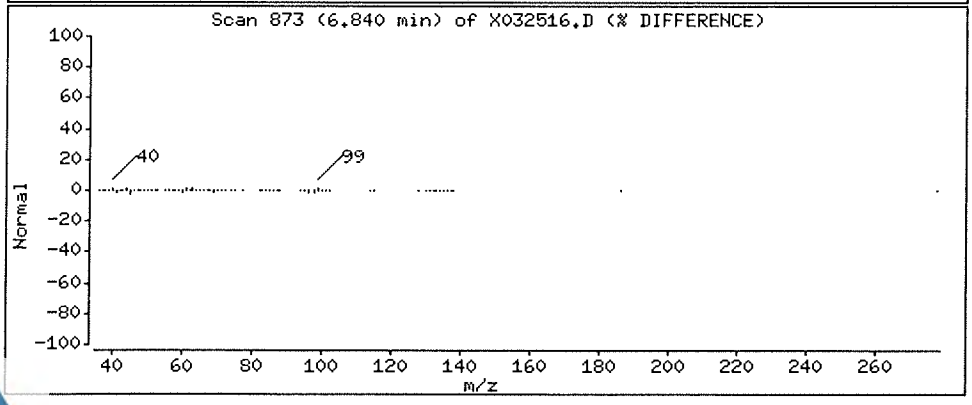












Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032516.D

Date : 25-MAR-2020 18:49

Client ID: HS20031084-03

Instrument: voa6.i

Sample Info: HS20031084-03;HS20031084-03;;;

Purge Volume: 5.0

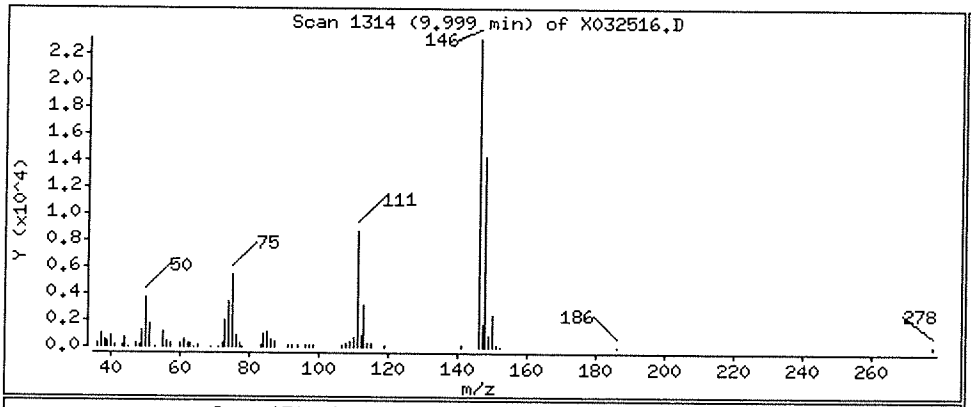
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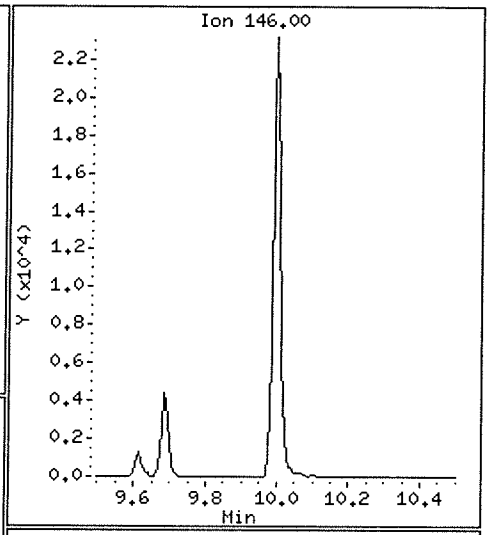
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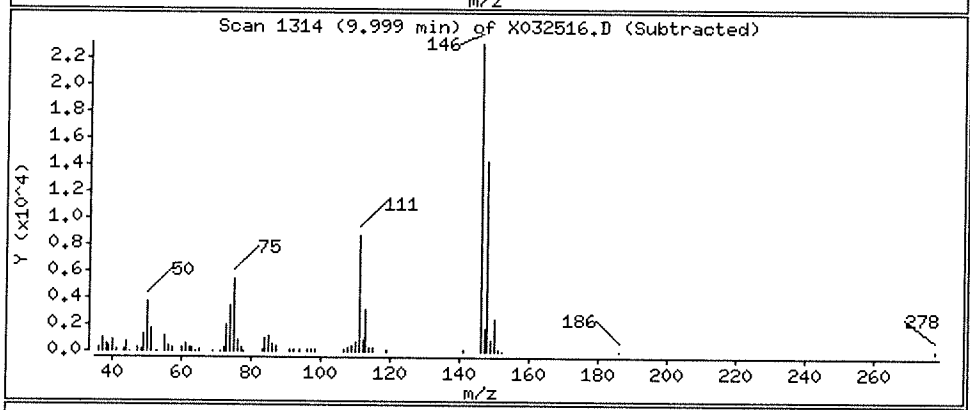
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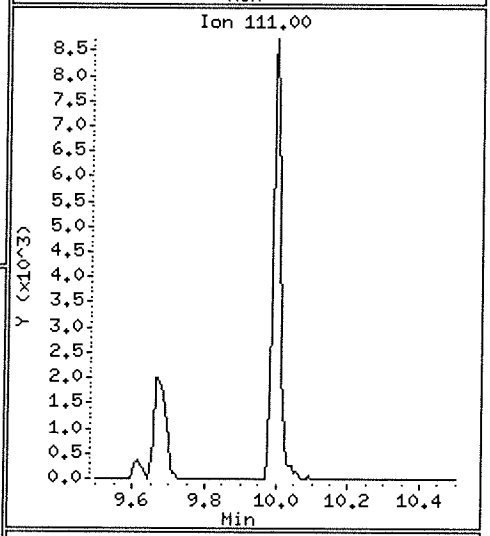
88 1,2-Dichlorobenzene

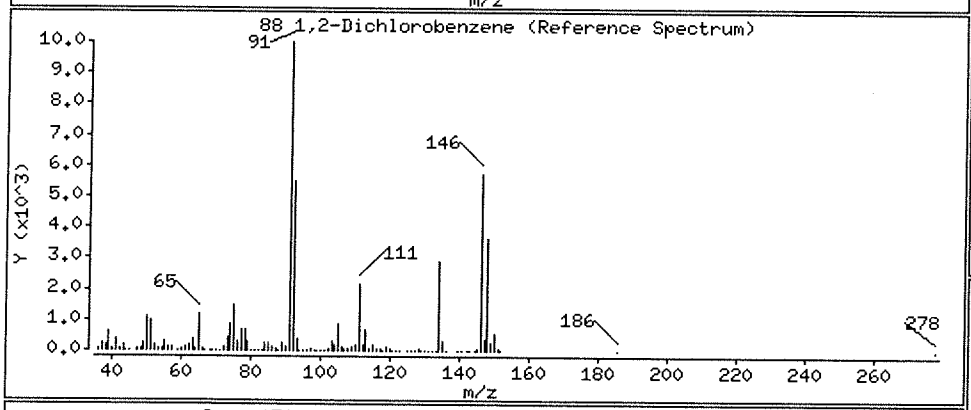
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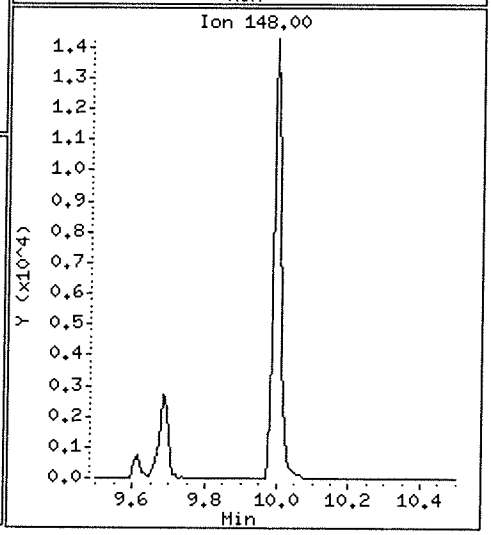


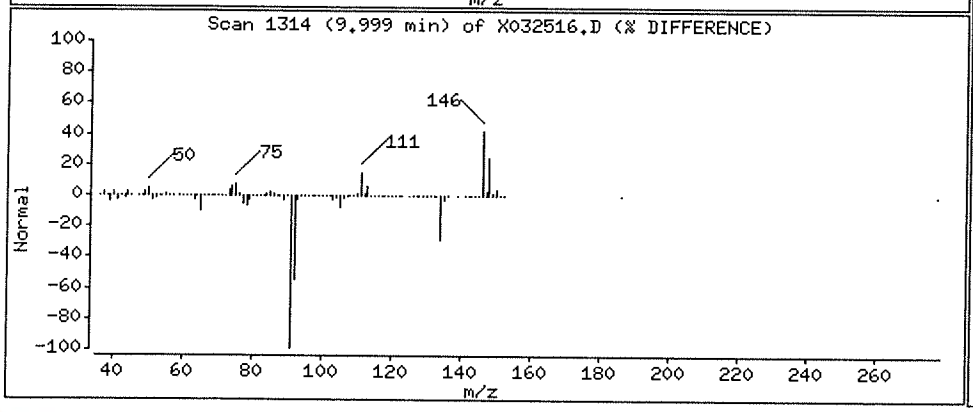












Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032516.D

Date : 25-MAR-2020 18:49

Client ID: HS20031084-03

Instrument: voa6.i

Sample Info: HS20031084-03;HS20031084-03;;;

Purge Volume: 5.0

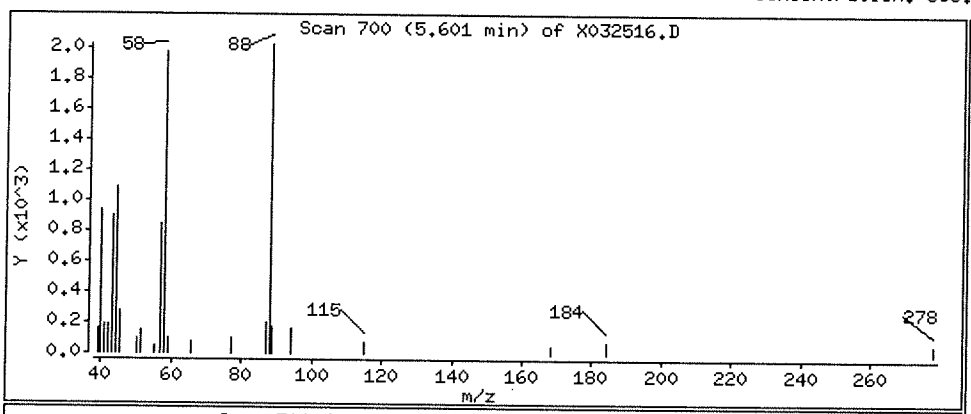
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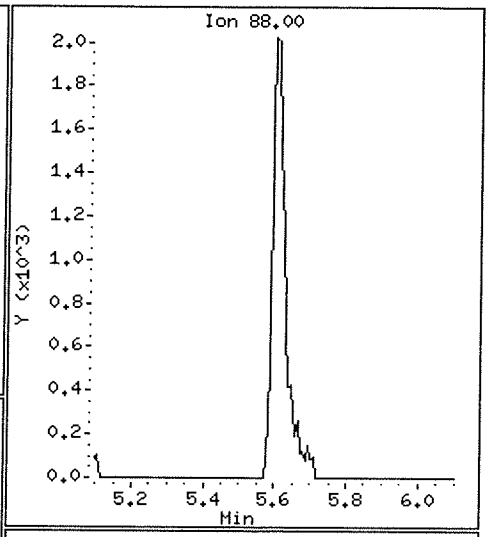
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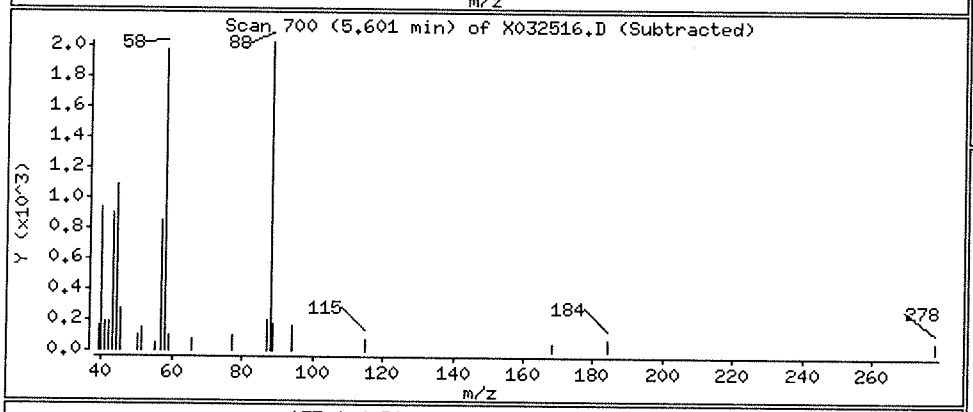
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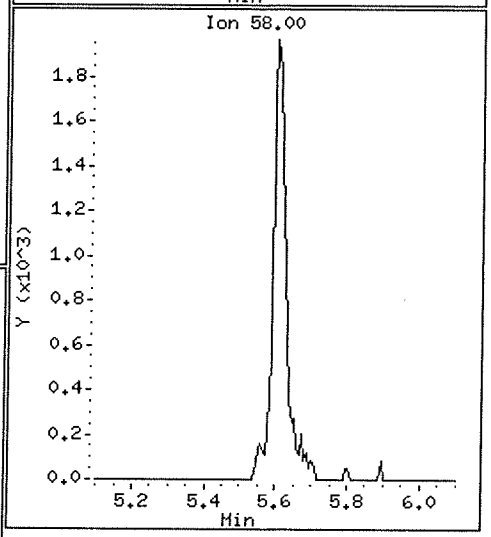
135 1,4-Dioxane

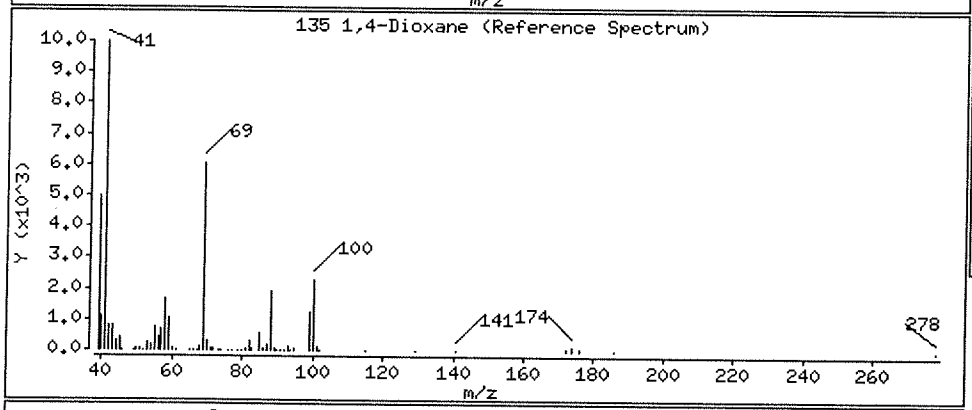
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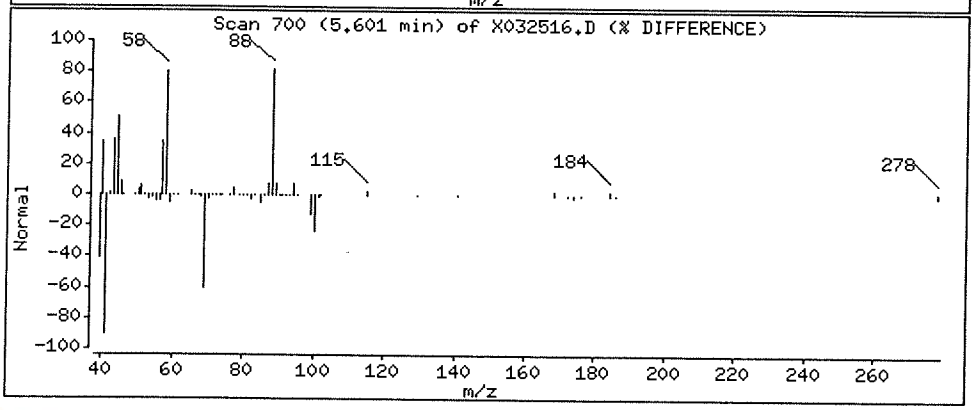












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Date : 25-MAR-2020 18:49

Client ID: HS20031084-03

Instrument: voa6.i

Sample Info: HS20031084-03;HS20031084-03;;;

Purge Volume: 5.0

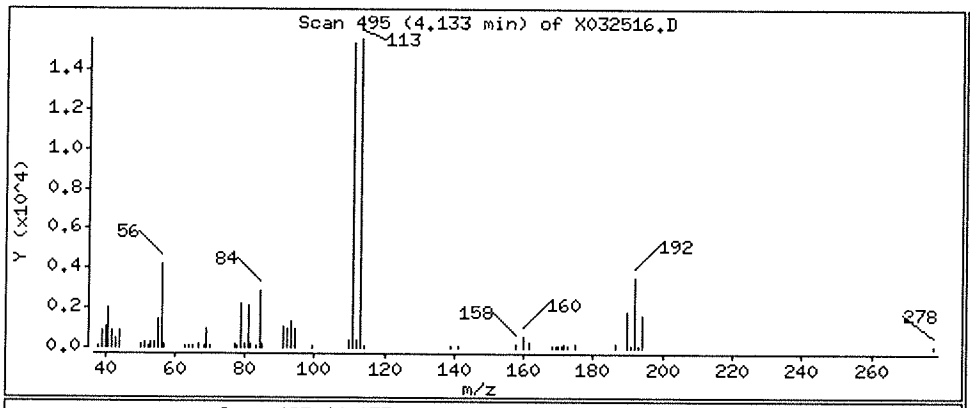
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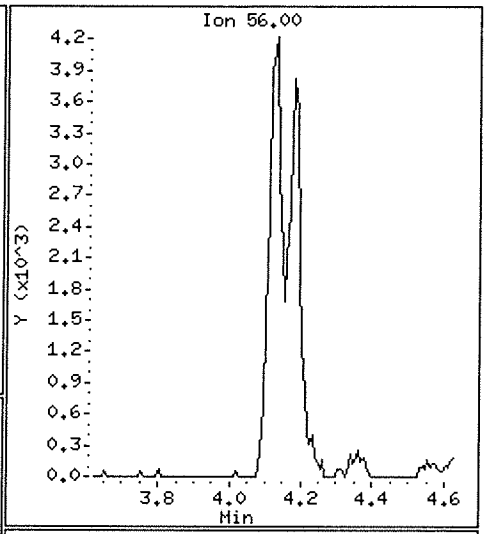
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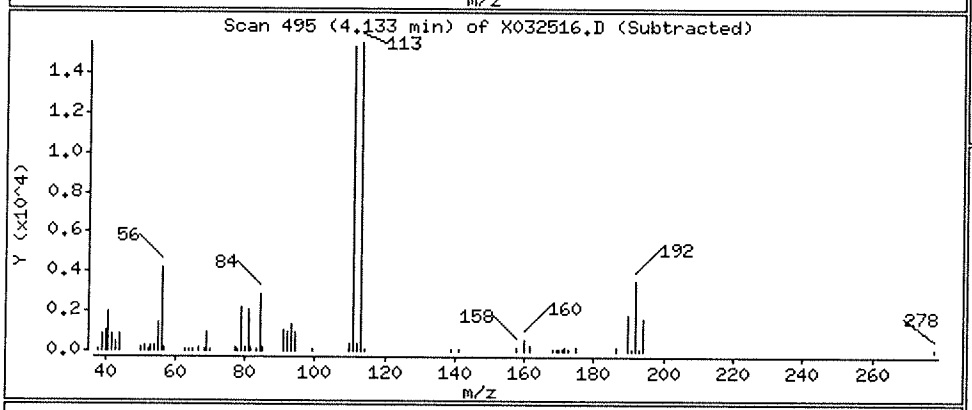
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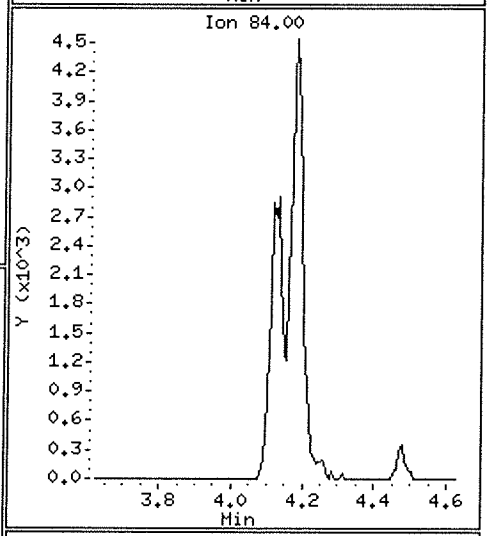
141 Cyclohexane

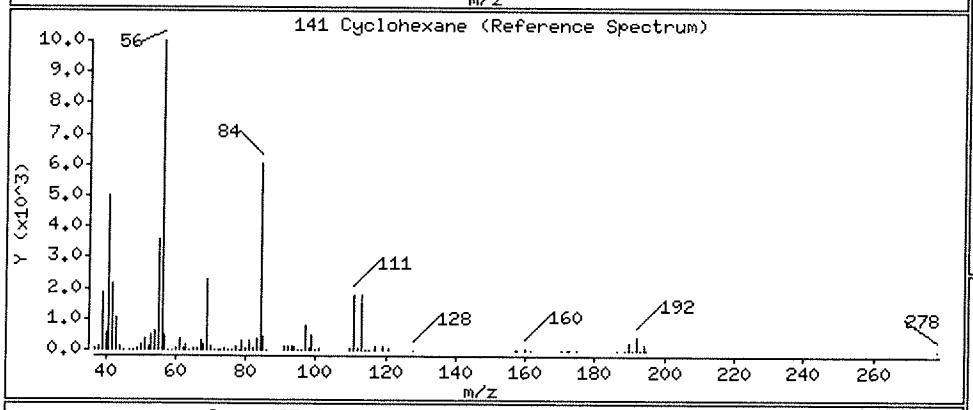
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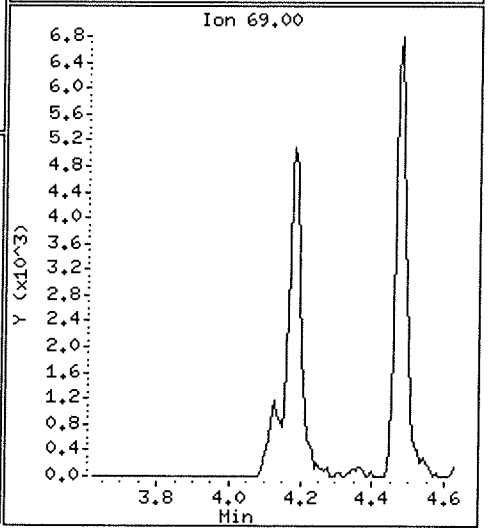


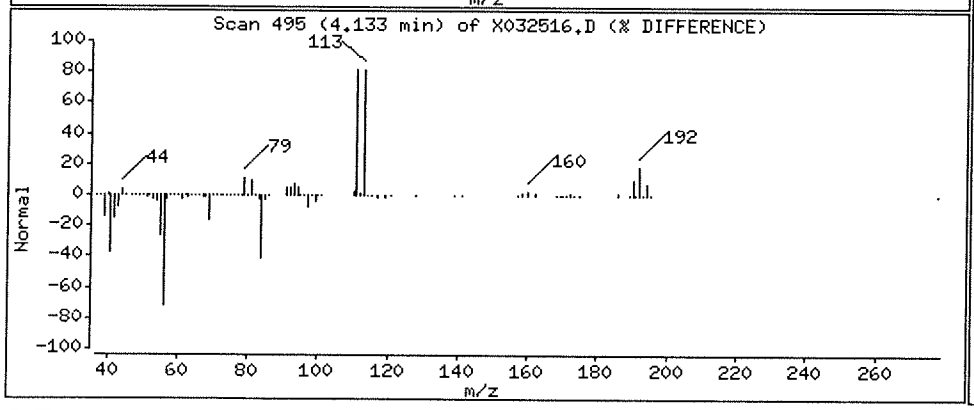












Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032517.D Page 1
Report Date: 15-Apr-2020 14:45

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032517.D
Lab Smp Id: HS20031084-03MS Client Smp ID: HS20031084-03MS
Inj Date : 25-MAR-2020 19:13
Operator : PC Inst ID: voa6.i
Smp Info : HS20031084-03MS;HS20031084-03MS;3;;MS
Misc Info : HS18090001;WATER;0;25;
Comment :
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Meth Date : 15-Apr-2020 14:45 voa6.i Quant Type: ISTD
Cal Date : 19-MAR-2020 14:22 Cal File: X031908.D
Als bottle: 17 QC Sample: MS
Dil Factor: 25.00000
Integrator: HP RTE Compound Sublist: 8260_GB.sub
Target Version: 4.14
Processing Host: NAHSTW7066

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

Name	Value	Description
DF	25.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	376465	50.0000	
194 Acetaldehyde	44	1.210	1.209	(0.289)	54978	141.417	3535.43
140 1,3-Butadiene	54	1.159	1.159	(0.277)	121514	21.9845	549.61
25 Methacrylonitrile	41	3.824	3.824	(0.914)	108977	19.8737	496.84
136 n-Hexane	57	2.771	2.771	(0.663)	138525	21.7357	543.39
4 Propionitrile	54	3.652	3.652	(0.873)	175955	201.918	5047.94(a)
2 Dichlorodifluoromethane	85	0.966	0.973	(0.231)	81899	20.0974	502.43
3 Chloromethane	50	1.073	1.073	(0.257)	128248	20.1775	504.43
5 Vinyl Chloride	62	1.138	1.138	(0.272)	484679	84.5056	2112.63
6 Bromomethane	94	1.331	1.338	(0.318)	53674	20.6008	515.01
7 Chloroethane	64	1.403	1.403	(0.336)	64340	22.7608	569.02
8 Trichlorofluoromethane	101	1.561	1.560	(0.373)	118850	21.2264	530.66
9 Acrolein	56	1.854	1.854	(0.443)	14389	41.1947	1029.86
10 Acetone	43	1.969	1.969	(0.471)	55303	29.2825	732.06
11 1,1-Dichloroethene	96	1.912	1.911	(0.457)	233369	73.1559	1828.89
15 Iodomethane	142	2.026	2.026	(0.485)	120498	27.7110	692.77
16 Acrylonitrile	53	2.535	2.535	(0.606)	95620	39.3674	984.18
17 Methylene Chloride	84	2.306	2.305	(0.551)	80848	19.3374	483.43
18 Methyl tert-butyl ether	73	2.535	2.535	(0.606)	220917	18.7222	468.05
19 Carbon Disulfide	76	2.069	2.069	(0.495)	442747	42.1966	1054.91
20 trans-1,2-Dichloroethene	96	2.528	2.527	(0.604)	74566	20.1005	502.51
21 Vinyl Acetate	43	3.000	3.000	(0.717)	602472	39.4991	987.47

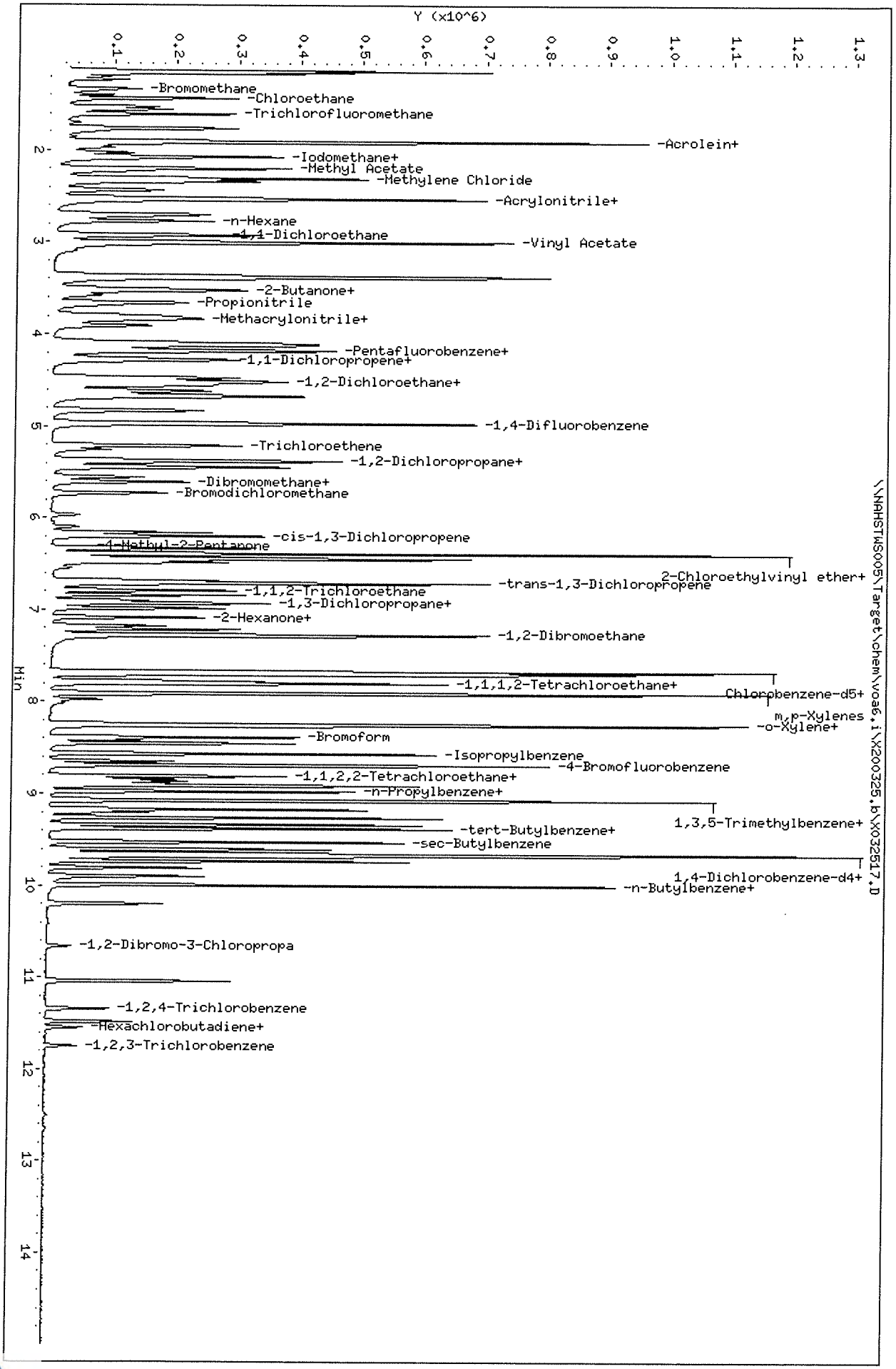
Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032517.D Page 2
Report Date: 15-Apr-2020 14:45

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
	22 1,1-Dichloroethane	63	2.922	2.921	(0.699)	368664	43.9753	1099.38
	24 2-Butanone	43	3.581	3.580	(0.856)	90351	39.1152	977.88
	26 2,2-Dichloropropane	77	3.509	3.516	(0.839)	115530	19.6958	492.39
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	98152	22.8941	572.35
	28 Chloroform	83	3.910	3.910	(0.935)	135291	19.4351	485.87
	29 Bromochloromethane	128	3.795	3.795	(0.908)	43153	19.2943	482.35
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	178059	47.5977	47.59
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	120349	20.6581	516.45
	32 1,1-Dichloropropene	75	4.283	4.282	(0.862)	104916	20.1127	502.81
	33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	124043	21.1540	528.84
	34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	106403	20.2467	506.16
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	212794	44.9753	44.97
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	555029	50.0000	
	37 Benzene	78	4.512	4.512	(0.908)	311417	21.2194	530.48
	38 Trichloroethene	130	5.207	5.206	(1.048)	100297	26.0717	651.79
	39 Bromodichloromethane	83	5.729	5.729	(1.153)	101769	19.9353	498.38
	41 2-Chloroethylvinyl ether	63	6.446	6.052	(1.297)	28993	28.8983	722.45
	42 1,2-Dichloropropane	63	5.436	5.436	(1.094)	96177	20.3796	509.49
	44 Dibromomethane	93	5.558	5.557	(1.118)	49033	20.1176	502.93
	45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	215305	42.6007	1065.01
	46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	124070	19.7862	494.65
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	491455	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	650684	51.6878	51.68
	50 Toluene	91	6.446	6.446	(0.840)	320693	21.4796	536.98
	51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	111325	20.0834	502.08
	52 2-Hexanone	43	7.090	7.090	(0.924)	143426	42.5680	1064.20
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	68544	24.2082	605.20
	54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	119002	20.2201	505.50
	55 Dibromochloromethane	129	7.176	7.176	(0.936)	78487	20.6056	515.13
	56 Tetrachloroethene	164	6.933	6.933	(0.904)	69160	22.5485	563.71
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	73462	20.8499	521.24
	58 1-Chlorohexane	55	7.699	7.699	(1.549)	111535	23.0561	576.40
	59 Chlorobenzene	112	7.699	7.699	(1.004)	204933	21.1671	529.17
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	75987	20.9564	523.91
	61 Ethylbenzene	106	7.800	7.799	(1.017)	110534	21.5017	537.54
	62 m,p-Xylenes	106	7.907	7.907	(1.031)	269125	43.6459	1091.14
	63 o-Xylene	106	8.244	8.244	(1.075)	129735	21.5536	538.84
	64 Styrene	104	8.258	8.258	(1.077)	226126	21.3342	533.35
	66 Bromoform	173	8.416	8.415	(1.097)	54731	21.4207	535.51
	67 Isopropylbenzene	105	8.566	8.566	(1.117)	332363	21.9342	548.35
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	83332	20.7137	517.84
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	232690	49.1988	49.19
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	237178	50.0000	
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	73967	21.8243	545.60(M)
	73 n-Propylbenzene	91	8.917	8.917	(0.922)	393036	23.1502	578.75
	74 Bromobenzene	156	8.810	8.809	(0.911)	92035	21.7751	544.37
	75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	272203	22.1159	552.89
	76 2-Chlorotoluene	91	8.974	8.974	(0.928)	226841	21.9791	549.47
	77 4-Chlorotoluene	91	9.075	9.074	(0.939)	263193	22.2437	556.09
	78 tert-Butylbenzene	119	9.340	9.340	(0.966)	234799	22.5757	564.39
	79 1,2,4-Trimethylbenzene	105	9.383	9.382	(0.970)	276426	22.4319	560.79
	81 sec-Butylbenzene	105	9.526	9.526	(0.985)	334868	23.2669	581.67
	82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	285993	23.0174	575.43
	83 1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	155277	21.9812	549.52

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
	84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	155765	21.3246	533.11
	87 n-Butylbenzene	91	9.999	9.999	(1.034)	244945	22.8565	571.41
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	143440	22.5288	563.21
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	7735	20.2572	506.43
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	28630	14.9279	373.19
	91 Hexachlorobutadiene	225	11.481	11.488	(1.187)	23278	15.7182	392.95
	92 Naphthalene	128	11.546	11.546	(1.194)	41202	15.6921	392.30
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	13460	14.1862	354.65
M	94 1,2-Dichloroethylene (total)	96				172718	42.9946	1074.86
M	95 Xylenes (total)	106				398860	65.1996	1629.98
	135 1,4-Dioxane	88	5.601	5.600	(1.339)	20487	472.106	11802.65
	141 Cyclohexane	56	4.125	4.125	(0.986)	192164	23.7712	594.28
	138 Freon TF	101	1.912	1.911	(0.457)	66310	22.9162	572.90
	147 Methylcyclohexane	55	5.378	5.378	(1.082)	304157	21.6652	541.63
	146 Methyl Acetate	43	2.234	2.234	(0.534)	85267	20.8463	521.15
	148 Tert-Butyl alcohol	59	2.434	2.434	(0.582)	228377	433.227	10830.68
	149 Isopropyl Alcohol	45	2.098	2.098	(0.502)	150973	406.460	10161.49

QC Flag Legend

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



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032517.D
Date : 25-MAR-2020 19:13
Client ID: HS20031084-03HS
Sample Info: HS20031084-03HS;HS20031084-03HS;3;;HS
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032518.D Page 1
Report Date: 15-Apr-2020 14:45

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032518.D
Lab Smp Id: HS20031084-03MSD Client Smp ID: HS20031084-03MSD
Inj Date : 25-MAR-2020 19:37
Operator : PC Inst ID: voa6.i
Smp Info : HS20031084-03MSD;HS20031084-03MSD;3;;MSD
Misc Info : HS18090001;WATER;0;25;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200325.b\8260W.m
Meth Date : 15-Apr-2020 14:45 voa6.i Quant Type: ISTD
Cal Date : 19-MAR-2020 14:22 Cal File: X031908.D
Als bottle: 17 QC Sample: MSD
Dil Factor: 25.00000
Integrator: HP RTE Compound Sublist: 8260_GB.sub
Target Version: 4.14
Processing Host: NAHSTW7066

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

Name	Value	Description
DF	25.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	373724	50.0000	
194 Acetaldehyde	44	1.209	1.209	(0.289)	50598	131.105	3277.63
140 1,3-Butadiene	54	1.159	1.159	(0.277)	100605	18.3351	458.37
25 Methacrylonitrile	41	3.831	3.824	(0.916)	106298	19.5273	488.18
136 n-Hexane	57	2.771	2.771	(0.663)	126852	20.0501	501.25
4 Propionitrile	54	3.652	3.652	(0.873)	173044	200.034	5000.84(a)
2 Dichlorodifluoromethane	85	0.966	0.973	(0.231)	73048	18.1594	453.98
3 Chloromethane	50	1.073	1.073	(0.257)	115073	18.3368	458.42
5 Vinyl Chloride	62	1.138	1.138	(0.272)	434474	76.3077	1907.69
6 Bromomethane	94	1.338	1.338	(0.320)	50435	19.4760	486.90
7 Chloroethane	64	1.403	1.403	(0.336)	55327	19.6698	491.74
8 Trichlorofluoromethane	101	1.560	1.560	(0.373)	108253	19.4756	486.89
9 Acrolein	56	1.854	1.854	(0.443)	14520	41.8945	1047.36
10 Acetone	43	1.969	1.969	(0.471)	54002	28.5835	714.58
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	214456	67.7201	1693.00
15 Iodomethane	142	2.026	2.026	(0.485)	138080	31.6982	792.45
16 Acrylonitrile	53	2.535	2.535	(0.606)	92674	38.4343	960.85
17 Methylene Chloride	84	2.305	2.305	(0.551)	76277	18.3077	457.69
18 Methyl tert-butyl ether	73	2.535	2.535	(0.606)	212127	18.1092	452.72
19 Carbon Disulfide	76	2.069	2.069	(0.495)	403218	38.7111	967.77
20 trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	69720	18.9321	473.30
21 Vinyl Acetate	43	3.000	3.000	(0.717)	574757	37.9584	948.96

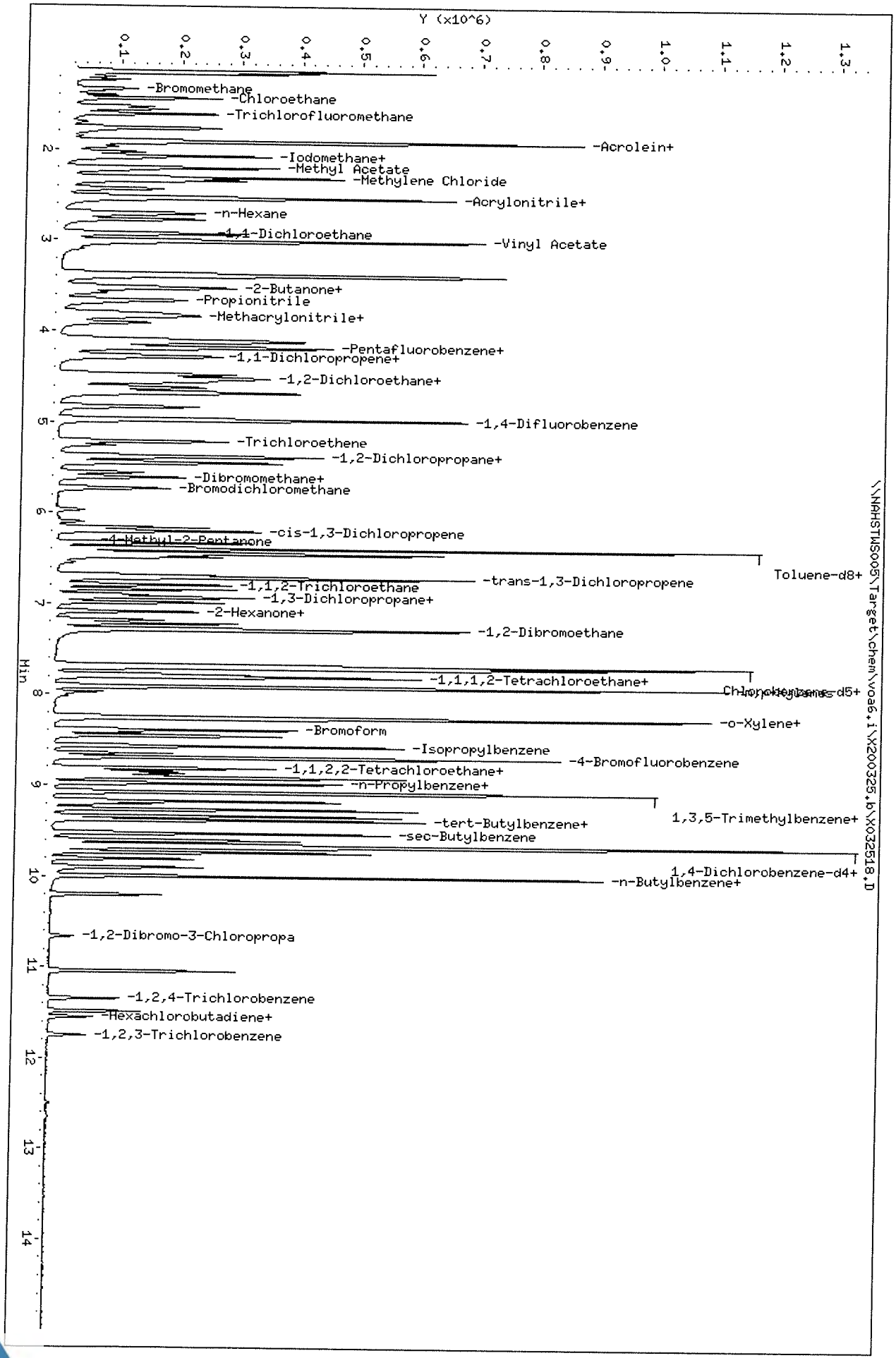
Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032518.D Page 2
Report Date: 15-Apr-2020 14:45

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
	22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	347144	41.7120	1042.80
	24 2-Butanone	43	3.580	3.580	(0.856)	87466	38.1135	952.83
	26 2,2-Dichloropropane	77	3.509	3.516	(0.839)	104450	17.9374	448.43
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	90387	21.2375	530.93
	28 Chloroform	83	3.910	3.910	(0.935)	127404	18.4364	460.90
	29 Bromochloromethane	128	3.795	3.795	(0.908)	40446	18.2166	455.41
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	174020	46.8575	46.85
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	111170	19.2225	480.56
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	97851	18.8740	471.84
	33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	121003	20.7628	519.06
	34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	97934	18.7500	468.75
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	209615	44.6271	44.62
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	551628	50.0000	
	37 Benzene	78	4.512	4.512	(0.908)	292114	20.0268	500.66
	38 Trichloroethene	130	5.206	5.206	(1.048)	95310	24.9281	623.20
	39 Bromodichloromethane	83	5.729	5.729	(1.153)	99181	19.5481	488.70
	42 1,2-Dichloropropane	63	5.436	5.436	(1.094)	90899	19.3800	484.50
	44 Dibromomethane	93	5.557	5.557	(1.118)	48987	20.2226	505.56
	45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	207863	41.2201	1030.50
	46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	121500	19.4959	487.39
*	47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	490359	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	642264	51.1322	51.13
	50 Toluene	91	6.446	6.446	(0.840)	301207	20.2195	505.48
	51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	108316	19.6611	491.52
	52 2-Hexanone	43	7.090	7.090	(0.924)	141639	42.1316	1053.28
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	67141	23.7656	594.14
	54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	118021	20.0982	502.45
	55 Dibromochloromethane	129	7.176	7.176	(0.936)	75837	19.9544	498.85
	56 Tetrachloroethene	164	6.933	6.933	(0.904)	63849	20.8634	521.58
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	71642	20.3788	509.47
	58 1-Chlorohexane	55	7.699	7.699	(1.549)	102753	21.3717	534.29
	59 Chlorobenzene	112	7.699	7.699	(1.004)	194733	20.1585	503.96
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	72115	19.9330	498.32
	61 Ethylbenzene	106	7.799	7.799	(1.017)	105013	20.4734	511.83
	62 m,p-Xylenes	106	7.907	7.907	(1.031)	250665	40.7430	1018.57
	63 o-Xylene	106	8.243	8.244	(1.075)	121612	20.2493	506.23
	64 Styrene	104	8.258	8.258	(1.077)	207066	19.5796	489.49
	66 Bromoform	173	8.415	8.415	(1.097)	52763	20.6966	517.41
	67 Isopropylbenzene	105	8.566	8.566	(1.117)	315216	20.8491	521.22
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.838	(0.915)	83706	20.3641	509.10
$	69 4-Bromofluorobenzene	95	8.695	8.688	(1.134)	233568	49.4978	49.49
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.669	(1.000)	242332	50.0000	
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	70365	20.3199	507.99(M)
	73 n-Propylbenzene	91	8.917	8.917	(0.923)	372761	21.4890	537.22
	74 Bromobenzene	156	8.809	8.809	(0.912)	87984	20.3739	509.34
	75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	260831	20.7412	518.53
	76 2-Chlorotoluene	91	8.974	8.974	(0.929)	217850	20.6591	516.47
	77 4-Chlorotoluene	91	9.074	9.074	(0.939)	248643	20.5671	514.17
	78 tert-Butylbenzene	119	9.339	9.340	(0.967)	223906	21.0705	526.76
	79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	266026	21.1288	528.22
	81 sec-Butylbenzene	105	9.526	9.526	(0.986)	312485	21.2499	531.24
	82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	273667	21.5569	538.92
	83 1,3-Dichlorobenzene	146	9.612	9.605	(0.995)	147293	20.4075	510.18
	84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	151269	20.2686	506.71

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
	87 n-Butylbenzene	91	9.998	9.999	(1.035)	239336	21.8582	546.45
	88 1,2-Dichlorobenzene	146	9.998	9.999	(1.035)	138782	21.3336	533.33
	89 1,2-Dibromo-3-Chloropropane	155	10.657	10.658	(1.103)	8021	20.5438	513.59
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	31860	16.2021	405.05
	91 Hexachlorobutadiene	225	11.488	11.488	(1.189)	24504	16.1941	404.85
	92 Naphthalene	128	11.546	11.546	(1.195)	47985	17.6141	440.35
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	16099	16.4381	410.95
M	94 1,2-Dichloroethylene (total)	96				160107	40.1696	1004.23
M	95 Xylenes (total)	106				372277	60.9923	1524.80
	135 1,4-Dioxane	88	5.600	5.600	(1.339)	18061	419.254	10481.34
	141 Cyclohexane	56	4.125	4.125	(0.986)	172681	21.5178	537.94
	138 Freon TF	101	1.919	1.911	(0.459)	59405	20.6805	517.01
	147 Methylcyclohexane	55	5.378	5.378	(1.082)	291033	20.8582	521.45
	146 Methyl Acetate	43	2.234	2.234	(0.534)	80028	19.7090	492.72
	148 Tert-Butyl alcohol	59	2.434	2.434	(0.582)	211018	403.234	10080.84
	149 Isopropyl Alcohol	45	2.098	2.098	(0.502)	148289	402.162	10054.04

QC Flag Legend

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



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032518.D
Date : 25-MAR-2020 19:37
Client ID: HS200310B4-03MSD
Sample Info: HS200310B4-03MSD;HS200310B4-03MSD;3;;MSD
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032519.D Page 1
Report Date: 15-Apr-2020 14:45

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032519.D
Lab Smp Id: CCV-END Client Smp ID: CCV-END
Inj Date : 25-MAR-2020 20:01
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\X200325.b\8260W.m
Meth Date : 15-Apr-2020 14:45 voa6.i Quant Type: ISTD
Cal Date : 19-MAR-2020 14:22 Cal File: X031908.D
Als bottle: 18 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.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)	299540	50.0000	
194 Acetaldehyde	44	1.210	1.210	(0.289)	75222	200.000	243.18
140 1,3-Butadiene	54	1.159	1.159	(0.277)	227247	50.0000	51.67
25 Methacrylonitrile	41	3.824	3.824	(0.914)	225557	50.0000	51.69
136 n-Hexane	57	2.771	2.771	(0.663)	230200	50.0000	45.39
4 Propionitrile	54	3.652	3.652	(0.873)	362995	500.000	523.53
2 Dichlorodifluoromethane	85	0.966	0.966	(0.231)	148050	50.0000	44.37
3 Chloromethane	50	1.073	1.073	(0.257)	245638	50.0000	47.11
5 Vinyl Chloride	62	1.138	1.138	(0.272)	214491	50.0000	47.00
6 Bromomethane	94	1.339	1.339	(0.320)	103949	50.0000	50.77
7 Chloroethane	64	1.403	1.403	(0.336)	121146	50.0000	54.33
8 Trichlorofluoromethane	101	1.561	1.561	(0.373)	227641	50.0000	51.09
9 Acrolein	56	1.854	1.854	(0.443)	29051	100.000	106.38
10 Acetone	43	1.969	1.969	(0.471)	116087	100.000	99.26
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	122755	50.0000	48.36
15 Iodomethane	142	2.026	2.026	(0.485)	365303	100.000	99.59
16 Acrylonitrile	53	2.535	2.535	(0.606)	196013	100.000	101.42
17 Methylene Chloride	84	2.306	2.306	(0.551)	160431	50.0000	50.33
18 Methyl tert-butyl ether	73	2.535	2.535	(0.606)	447603	50.0000	47.67
19 Carbon Disulfide	76	2.069	2.069	(0.495)	850085	100.000	101.82
20 trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	147083	50.0000	49.83
21 Vinyl Acetate	43	3.000	3.000	(0.717)	1258207	100.000	103.67

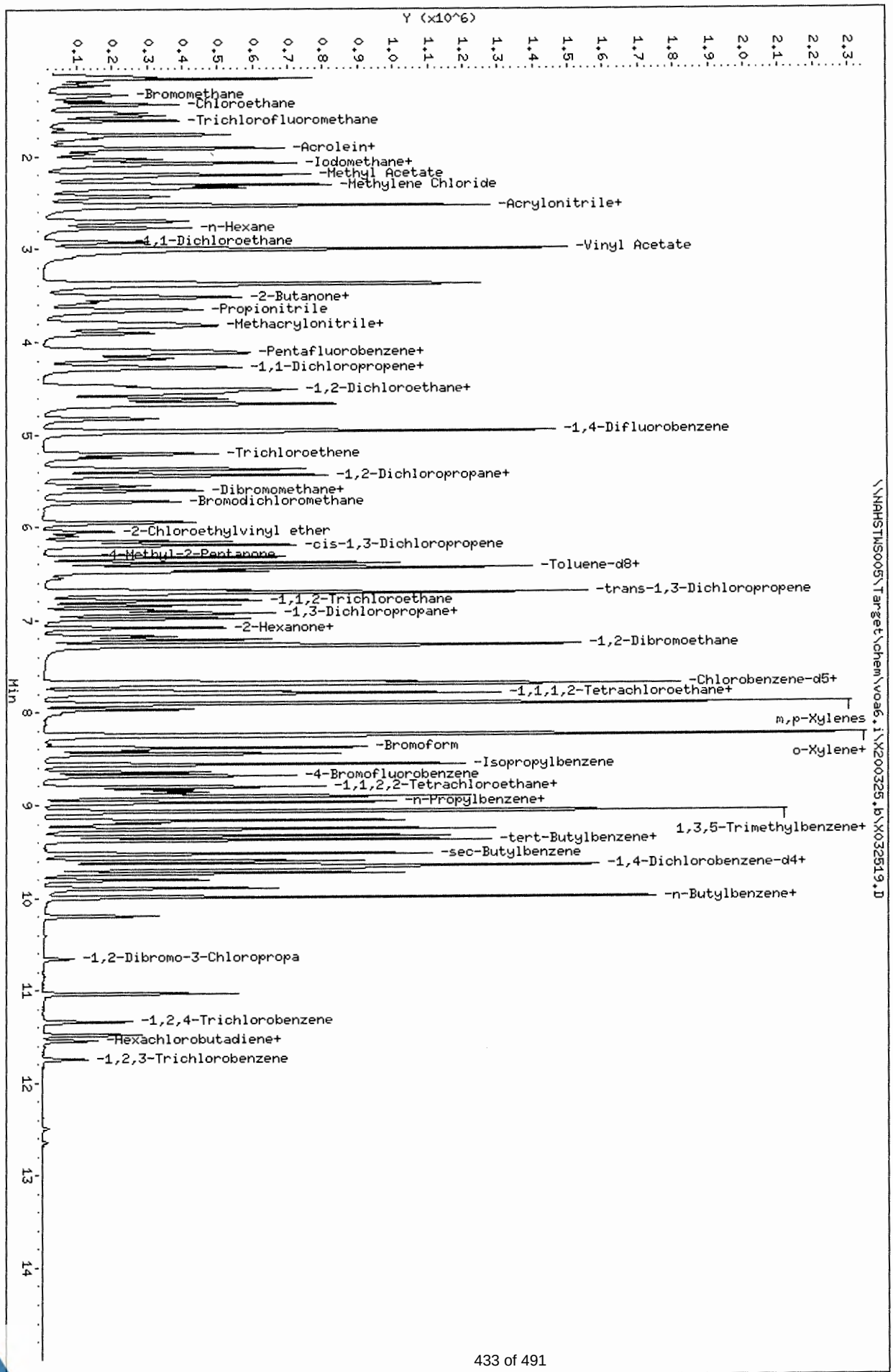
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Report Date: 15-Apr-2020 14:45

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	22 1,1-Dichloroethane	63	2.922	2.922	(0.699)	339733	50.0000	50.93
	24 2-Butanone	43	3.573	3.573	(0.854)	191227	100.000	106.08
	26 2,2-Dichloropropane	77	3.509	3.509	(0.839)	209979	50.0000	44.99
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	172253	50.0000	50.49
	28 Chloroform	83	3.910	3.910	(0.935)	271819	50.0000	49.07
	29 Bromochloromethane	128	3.795	3.795	(0.908)	86430	50.0000	48.56
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	153895	50.0000	51.71
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	234250	50.0000	50.53
	32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	203173	50.0000	46.59
	33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	250206	50.0000	51.05
	34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	201643	50.0000	45.90
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	188794	50.0000	50.16
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	463904	50.0000	
	37 Benzene	78	4.512	4.512	(0.908)	615940	50.0000	50.21
	38 Trichloroethene	130	5.207	5.207	(1.048)	163813	50.0000	50.94
	39 Bromodichloromethane	83	5.729	5.729	(1.153)	212893	50.0000	49.89
	41 2-Chloroethylvinyl ether	63	6.052	6.052	(1.218)	81196	100.000	96.82
	42 1,2-Dichloropropane	63	5.436	5.436	(1.094)	195315	50.0000	49.51
	44 Dibromomethane	93	5.558	5.558	(1.118)	104477	50.0000	51.28
	45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	443938	100.000	100.79
	46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	258486	50.0000	49.31
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	428290	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	548742	50.0000	50.01
	50 Toluene	91	6.446	6.446	(0.840)	641432	50.0000	49.29
	51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	230605	50.0000	49.77
	52 2-Hexanone	43	7.083	7.083	(0.923)	307351	100.000	104.67
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	121456	50.0000	49.22
	54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	252025	50.0000	49.13
	55 Dibromochloromethane	129	7.176	7.176	(0.936)	165147	50.0000	49.75
	56 Tetrachloroethene	164	6.933	6.933	(0.904)	128093	50.0000	47.92
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	155303	50.0000	50.57
	58 1-Chlorohexane	55	7.699	7.699	(1.549)	190016	50.0000	46.99
	59 Chlorobenzene	112	7.699	7.699	(1.004)	418141	50.0000	49.55
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	157279	50.0000	49.77
	61 Ethylbenzene	106	7.800	7.800	(1.017)	221466	50.0000	49.43
	62 m,p-Xylenes	106	7.907	7.907	(1.031)	527876	100.000	98.23
	63 o-Xylene	106	8.244	8.244	(1.075)	261915	50.0000	49.93
	64 Styrene	104	8.258	8.258	(1.077)	453050	50.0000	49.04
	66 Bromoform	173	8.416	8.416	(1.097)	114685	50.0000	51.50
	67 Isopropylbenzene	105	8.566	8.566	(1.117)	644743	50.0000	48.82
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	179912	50.0000	49.94
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	204617	50.0000	49.64
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	212387	50.0000	
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	153081	50.0000	50.43(M)
	73 n-Propylbenzene	91	8.917	8.917	(0.923)	761371	50.0000	50.08
	74 Bromobenzene	156	8.810	8.810	(0.912)	189923	50.0000	50.18
	75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	541341	50.0000	49.11
	76 2-Chlorotoluene	91	8.974	8.974	(0.929)	457702	50.0000	49.52
	77 4-Chlorotoluene	91	9.075	9.075	(0.939)	532560	50.0000	50.26
	78 tert-Butylbenzene	119	9.340	9.340	(0.967)	447011	50.0000	47.99
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	558539	50.0000	50.61
	81 sec-Butylbenzene	105	9.526	9.526	(0.986)	622182	50.0000	48.27
	82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	548310	50.0000	49.28
	83 1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	318972	50.0000	50.42

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	321482	50.0000	49.14	
87	n-Butylbenzene	91	9.999	9.999	(1.035)	466861	50.0000	48.64	
88	1,2-Dichlorobenzene	146	9.999	9.999	(1.035)	286008	50.0000	50.16	
89	1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	16361	50.0000	46.41	
90	1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	68082	50.0000	38.59	
91	Hexachlorobutadiene	225	11.489	11.489	(1.189)	46639	50.0000	35.16	
92	Naphthalene	128	11.546	11.546	(1.195)	101598	50.0000	39.79	
93	1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	34160	50.0000	38.39	
M 94	1,2-Dichloroethylene (total)	96				319336	100.000		(a)
135	1,4-Dioxane	88	5.601	5.601	(1.339)	37598	1000.00	1088.92	
141	Cyclohexane	56	4.125	4.125	(0.986)	321939	50.0000	50.05	
138	Freon TF	101	1.912	1.912	(0.457)	117548	50.0000	51.05	
147	Methylcyclohexane	55	5.378	5.378	(1.082)	518957	50.0000	44.22	
146	Methyl Acetate	43	2.227	2.227	(0.532)	172065	50.0000	52.87	
148	Tert-Butyl alcohol	59	2.434	2.434	(0.582)	469942	1000.00	1120.41	
149	Isopropyl Alcohol	45	2.098	2.098	(0.502)	320332	1000.00	1083.89	

QC Flag Legend

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



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200325.b\X032519.D
Date : 25-MAR-2020 20:01
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

HS20031084 Wet Chem Raw Data (IC)

ALS WO# HS20031084

Sequence: 032420
Last Update Operator: Janki.Desai

CD	Name	Comment	Type	Position	Dilution	Level	Instrument Method	Processing Method	Volume	Status	Inject Time
	STD1	2970209205	Calibration	GA1	1.0000	1	Anions Prog	Anions Proce	5.0	Finished	2/5/2020 7:39:11 PM -06:00
	STD2	NEW PRGM	Calibration	GA2	1.0000	2	Anions Prog	Anions Proce	5.0	Finished	2/5/2020 7:57:16 PM -06:00
	STD3		Calibration	GA3	1.0000	3	Anions Prog	Anions Proce	5.0	Finished	2/5/2020 8:15:24 PM -06:00
	STD4		Calibration	GA4	1.0000	4	Anions Prog	Anions Proce	5.0	Finished	2/5/2020 8:33:31 PM -06:00
	STD5	NO2/PO4	Calibration	GA5	1.0000	5	Anions Prog	Anions Proce	5.0	Finished	2/5/2020 8:51:36 PM -06:00
	STD6	MAX 10PPM	Calibration	GA6	1.0000	6	Anions Prog	Anions Proce	5.0	Finished	2/5/2020 9:09:41 PM -06:00
	ICV	2970209123	Unknown	GA7	1.0000		Anions Prog	Anions Proce	5.0	Finished	2/5/2020 9:27:48 PM -06:00
	ICB		Unknown	GA8	1.0000		Anions Prog	Anions Proce	5.0	Finished	2/5/2020 9:45:53 PM -06:00
	CCV1		Unknown	BA3	1.0000		Anions Prog	Anions Proce	5.0	Finished	3/25/2020 12:16:39 PM -05:00
	CCB		Unknown	BA4	1.0000		Anions Prog	Anions Proce	5.0	Finished	3/25/2020 12:34:48 PM -05:00
	MBLK-03.24.20 W	2ND BATCH	Unknown	RA1	1.0000		Anions Prog	Anions Proce	5.0	Finished	3/25/2020 3:10:20 PM -05:00
	CCV		Unknown	BA1	1.0000		Anions Prog	Anions Proce	5.0	Finished	3/25/2020 5:17:17 PM -05:00
	CCB		Unknown	BA2	1.0000		Anions Prog	Anions Proce	5.0	Finished	3/25/2020 5:35:24 PM -05:00
	HS20031084-01DF5	7	Unknown	GA8	5.0000		Anions Prog	Anions Proce	5.0	Finished	3/25/2020 8:06:26 PM -05:00
	HS20031084-02DF5	8	Unknown	GB1	5.0000		Anions Prog	Anions Proce	5.0	Finished	3/25/2020 8:24:32 PM -05:00
	HS20031084-03	9	Unknown	GB2	1.0000		Anions Prog	Anions Proce	5.0	Finished	3/25/2020 8:42:42 PM -05:00
	HS20031084-03MS		Unknown	GB3	1.0000		Anions Prog	Anions Proce	5.0	Finished	3/25/2020 9:00:48 PM -05:00
	HS20031084-03MSD		Unknown	GB4	1.0000		Anions Prog	Anions Proce	5.0	Finished	3/25/2020 9:37:08 PM -05:00
	HS20031084-04DF5	11	Unknown	GB5	5.0000		Anions Prog	Anions Proce	5.0	Finished	3/25/2020 9:55:16 PM -05:00
	HS20031084-05	12	Unknown	GB6	1.0000		Anions Prog	Anions Proce	5.0	Finished	3/25/2020 10:13:22 PM -05:00
	CCV1		Unknown	BA3	1.0000		Anions Prog	Anions Proce	5.0	Finished	3/25/2020 10:31:31 PM -05:00
	CCB		Unknown	BA4	1.0000		Anions Prog	Anions Proce	5.0	Finished	3/25/2020 10:49:40 PM -05:00
	HS20031084-06	13	Unknown	GB7	1.0000		Anions Prog	Anions Proce	5.0	Finished	3/25/2020 11:07:51 PM -05:00
	HS20031084-07	14	Unknown	GB8	1.0000		Anions Prog	Anions Proce	5.0	Finished	3/25/2020 11:25:57 PM -05:00
	HS20030838-01	15	Unknown	RB5	1.0000		Anions Prog	Anions Proce	5.0	Finished	3/25/2020 11:44:06 PM -05:00
	HS20030838-01MS		Unknown	RB7	1.0000		Anions Prog	Anions Proce	5.0	Finished	3/26/2020 12:20:19 AM -05:00
	HS20030838-01MSD		Unknown	RB8	1.0000		Anions Prog	Anions Proce	5.0	Finished	3/26/2020 12:38:26 AM -05:00
	HS20031084-01DF50		Unknown	GC1	50.0000		Anions Prog	Anions Proce	5.0	Finished	3/26/2020 12:56:31 AM -05:00
	HS20031084-01DF500		Unknown	GC2	500.0000		Anions Prog	Anions Proce	5.0	Finished	3/26/2020 1:14:36 AM -05:00

Sequence: 032420
Last Update Operator: Janki.Desai

CD	Name	Comment	Type	Position	Dilution	Level	Instrument Method	Processing Method	Volume	Status	Inject Time
	HS20031084-02DF50		Unknown	GC3	50.0000		Anions Prog	Anions Proce	5.0	Finished	3/26/2020 1:32:43 AM -05:00
	HS20031084-02DF500		Unknown	GC4	500.0000		Anions Prog	Anions Proce	5.0	Finished	3/26/2020 1:50:49 AM -05:00
	CCV		Unknown	BA1	1.0000		Anions Prog	Anions Proce	5.0	Finished	3/26/2020 2:08:55 AM -05:00
	CCB		Unknown	BA2	1.0000		Anions Prog	Anions Proce	5.0	Finished	3/26/2020 2:27:01 AM -05:00
	HS20031084-03DF10		Unknown	GC5	10.0000		Anions Prog	Anions Proce	5.0	Finished	3/26/2020 2:45:09 AM -05:00
	HS20031084-03MSDF10		Unknown	GD7	10.0000		Anions Prog	Anions Proce	5.0	Finished	3/26/2020 3:03:14 AM -05:00
	HS20031084-03MSDDF10	1.0	Unknown	GD8	10.0000		Anions Prog	Anions Proce	5.0	Finished	3/26/2020 3:21:19 AM -05:00
	HS20031084-03DF50	3	Unknown	GC6	50.0000		Anions Prog	Anions Proce	5.0	Finished	3/26/2020 3:39:25 AM -05:00
	HS20031084-03MSDF50		Unknown	GE1	50.0000		Anions Prog	Anions Proce	5.0	Finished	3/26/2020 3:57:33 AM -05:00
	HS20031084-03MSDDF50		Unknown	GE2	50.0000		Anions Prog	Anions Proce	5.0	Finished	3/26/2020 4:15:37 AM -05:00
	HS20031084-04DF50		Unknown	GC7	50.0000		Anions Prog	Anions Proce	5.0	Finished	3/26/2020 4:33:43 AM -05:00
	HS20031084-04DF500		Unknown	GC8	500.0000		Anions Prog	Anions Proce	5.0	Finished	3/26/2020 4:51:48 AM -05:00
	HS20031084-05DF10		Unknown	GD1	10.0000		Anions Prog	Anions Proce	5.0	Finished	3/26/2020 5:09:56 AM -05:00
	HS20031084-05DF50		Unknown	GD2	50.0000		Anions Prog	Anions Proce	5.0	Finished	3/26/2020 5:28:01 AM -05:00
	CCV1		Unknown	BA3	1.0000		Anions Prog	Anions Proce	5.0	Finished	3/26/2020 5:46:07 AM -05:00
	CCB		Unknown	BA4	1.0000		Anions Prog	Anions Proce	5.0	Finished	3/26/2020 6:04:12 AM -05:00
	HS20031084-06DF10		Unknown	GD3	10.0000		Anions Prog	Anions Proce	5.0	Finished	3/26/2020 6:22:20 AM -05:00
	HS20031084-06DF50		Unknown	GD4	50.0000		Anions Prog	Anions Proce	5.0	Finished	3/26/2020 6:40:27 AM -05:00
	HS20031084-07DF10		Unknown	GD5	10.0000		Anions Prog	Anions Proce	5.0	Finished	3/26/2020 6:58:31 AM -05:00
	HS20031084-07DF50		Unknown	GD6	50.0000		Anions Prog	Anions Proce	5.0	Finished	3/26/2020 7:16:37 AM -05:00
	LCS-W1		Unknown	RA2	1.0000		Anions Prog	Anions Proce	5.0	Finished	3/26/2020 7:34:46 AM -05:00
	LCSD-W1		Unknown	RA3	1.0000		Anions Prog	Anions Proce	5.0	Finished	3/26/2020 7:52:51 AM -05:00
	CCV		Unknown	BA1	1.0000		Anions Prog	Anions Proce	5.0	Finished	3/26/2020 9:05:17 AM -05:00
	CCB		Unknown	BA2	1.0000		Anions Prog	Anions Proce	5.0	Finished	3/26/2020 9:23:22 AM -05:00

Sequence: 032420
Injection #6: STD6

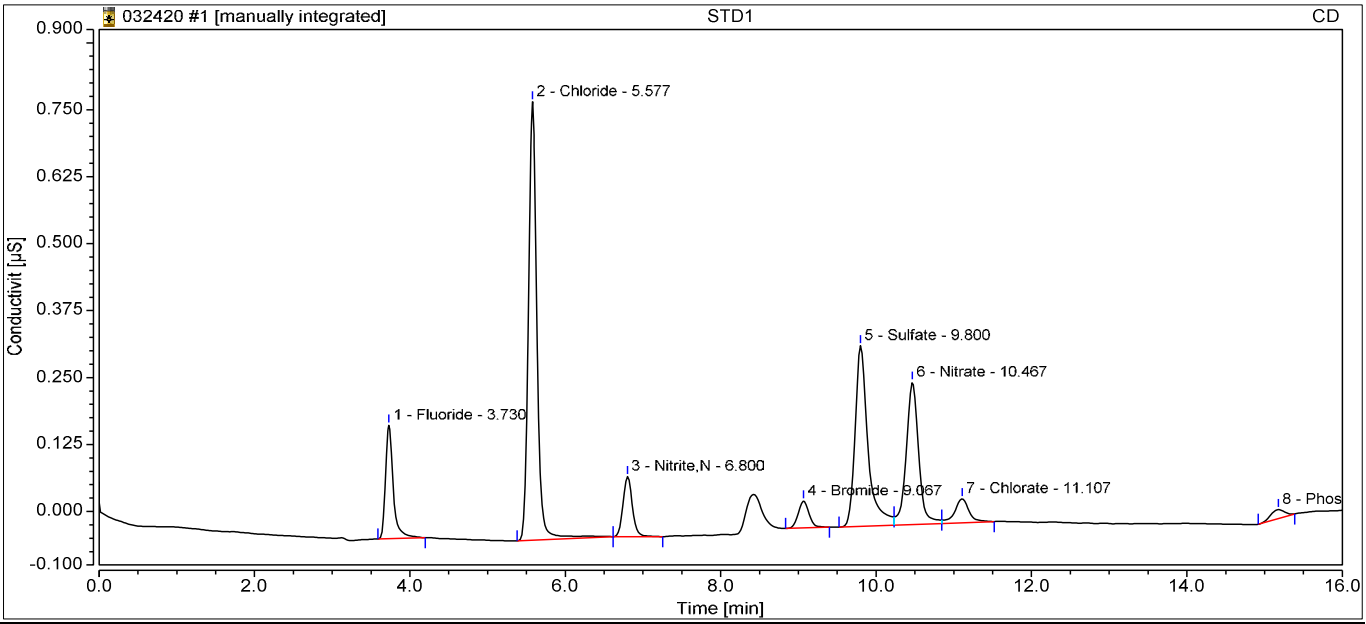
Calibration

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***	***13.4314***	***0.99915***	***-0.0083***	***0.3414***	***0.0000***
2	Chloride	Lin, WithOffset, 1/	Area	6	2.2020	0.99998	-0.0141	0.2320	0.0000
3	Nitrite,N	Lin, WithOffset, 1/	Area	6	30.0137	0.99594	-0.0159	0.4671	0.0000
4	Bromide	Lin, WithOffset, 1/	Area	6	12.1436	0.99933	-0.0033	0.0991	0.0000
5	Sulfate	Lin, WithOffset, 1/	Area	6	4.2312	0.99991	-0.0170	0.1679	0.0000
6	Nitrate	Lin, WithOffset, 1/	Area	6	2.3081	0.99997	-0.0076	0.5843	0.0000
7	Chlorate	Lin, WithOffset, 1/	Area	6	9.7729	0.99945	0.0017	0.0949	0.0000
8	Phosphate	Lin, WithOffset, 1/	Area	6	20.6471	0.99870	-0.0235	0.2186	0.0000
Maximum					**30.0137**	0.99998			
Minimum					2.2020	**0.99594**			

1 STD1

Sample Name:	**STD1**	*Injection Volume:*	**5.00**
Vial Number:	**GA1**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**02/05/2020 19:39**	*Sample Weight:*	**1.0000**

Run Time:



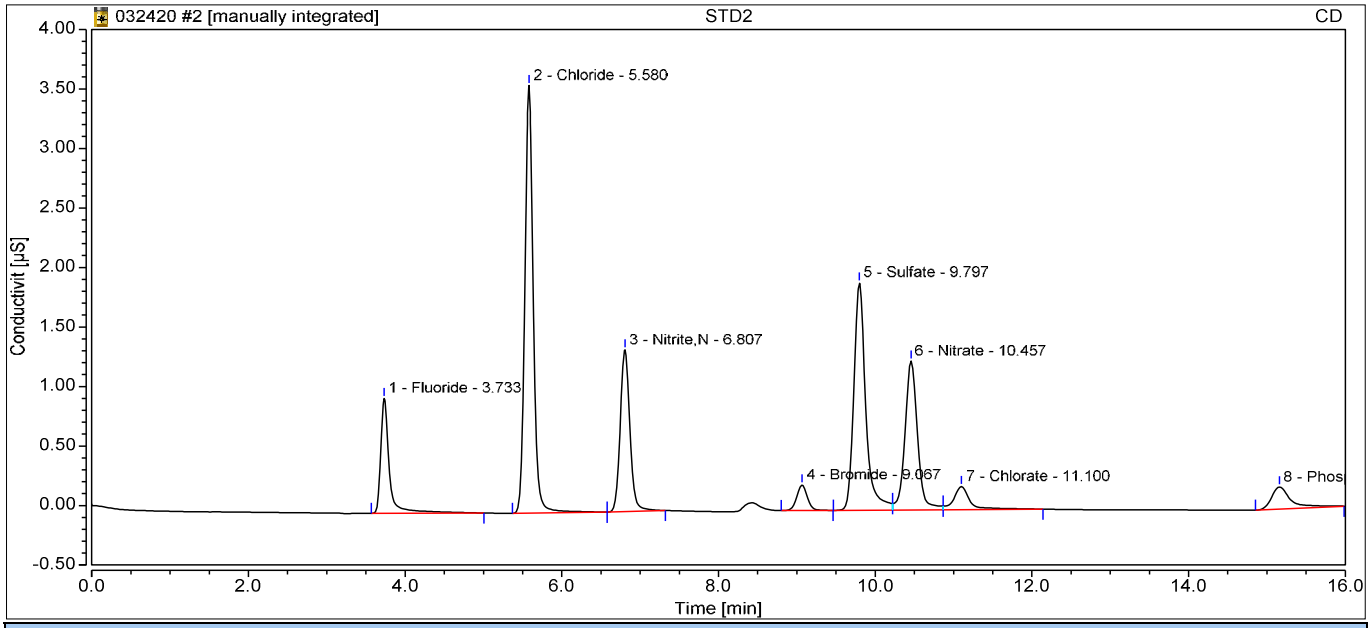
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.024	0.0955	0.0955	1.0000
2	5.58	Chloride	BMB	0.103	0.5065	0.5065	1.0000
3	6.80	Nitrite,N	BMB	0.016	0.0673	0.0673	1.0000
4	9.07	Bromide	BMB	0.008	0.1156	0.1156	1.0000
5	9.80	Sulfate	BM	0.065	0.4885	0.4885	1.0000
6	10.47	Nitrate	M	0.049	0.0974	0.0974	1.0000
7	11.11	Chlorate	MB	0.010	0.0834	0.0834	1.0000
8	15.18	Phosphate	BMB*	0.003	0.1235	0.1235	1.0000
Total:			**0.000**	**0.279**		**1.58**	

2 STD2

Sample Name:	**STD2**	*Injection Volume:*	**5.00**
Vial Number:	**GA2**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**02/05/2020 19:57**	*Sample Weight:*	**1.0000**

Run Time:



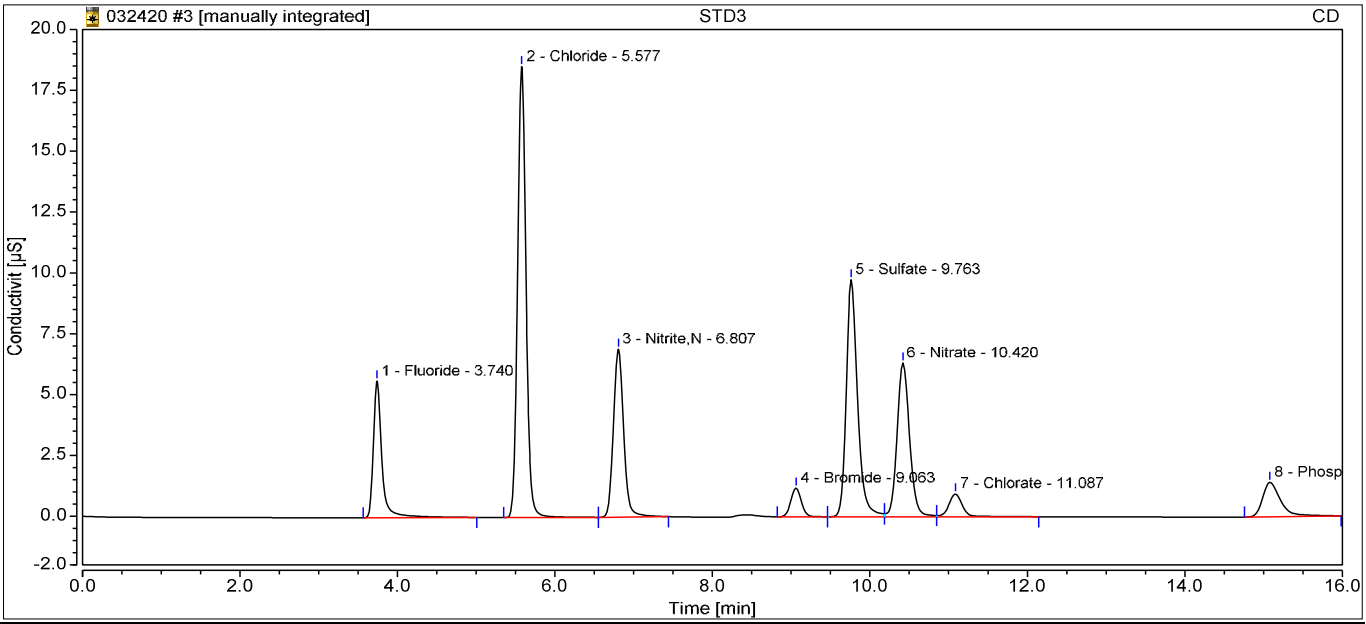
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.123	0.3833	0.3833	1.0000
2	5.58	Chloride	BMb*	0.449	1.9963	1.9963	1.0000
3	6.81	Nitrite,N	bMB*	0.194	0.4500	0.4500	1.0000
4	9.07	Bromide	BMB	0.034	0.3722	0.3722	1.0000
5	9.80	Sulfate	BM	0.335	2.0973	2.0973	1.0000
6	10.46	Nitrate	M	0.232	0.4103	0.4103	1.0000
7	11.10	Chlorate	MB	0.047	0.4759	0.4759	1.0000
8	15.16	Phosphate	BMB	0.053	0.3508	0.3508	1.0000
Total:			**0.000**	**1.467**		**6.54**	

3 STD3

Sample Name:	**STD3**	*Injection Volume:*	**5.00**
Vial Number:	**GA3**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**02/05/2020 20:15**	*Sample Weight:*	**1.0000**

Run Time:



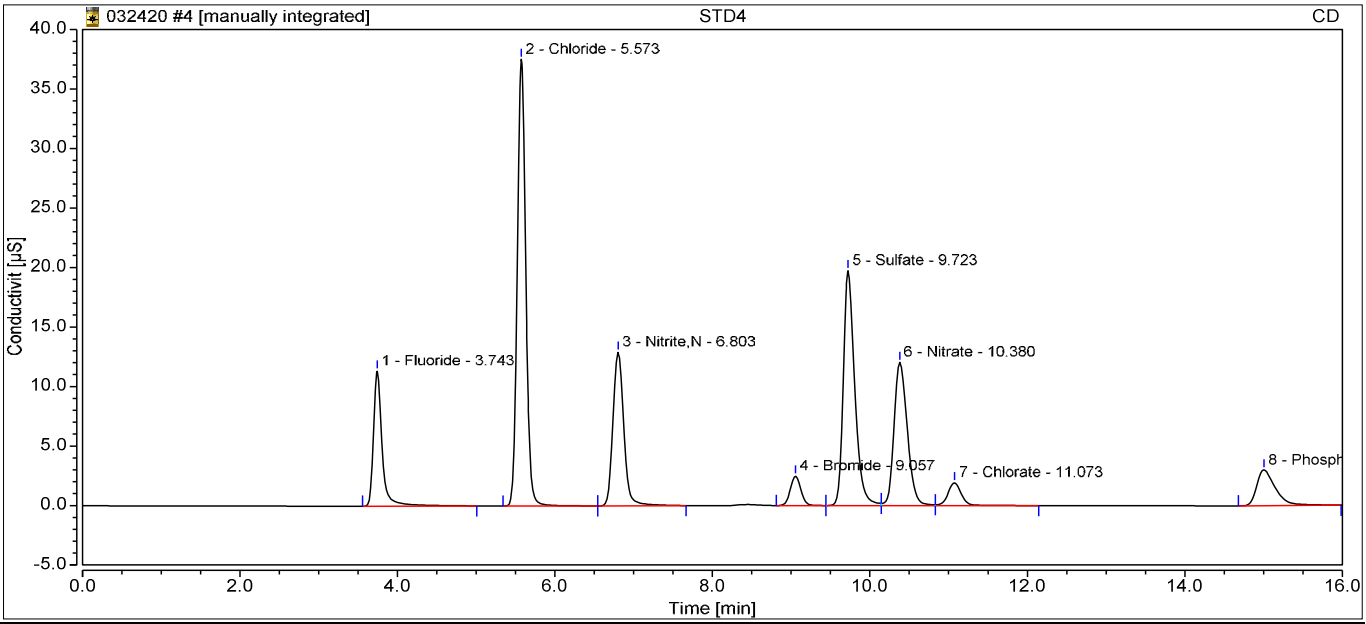
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	0.701	2.0769	2.0769	1.0000
2	5.58	Chloride	BMb*	2.284	9.9073	9.9073	1.0000
3	6.81	Nitrite,N	bMB*	1.029	2.2369	2.2369	1.0000
4	9.06	Bromide	BM	0.182	1.8657	1.8657	1.0000
5	9.76	Sulfate	M	1.624	9.7730	9.7730	1.0000
6	10.42	Nitrate	M	1.160	1.9980	1.9980	1.0000
7	11.09	Chlorate	MB	0.189	1.9689	1.9689	1.0000
8	15.08	Phosphate	BMB	0.374	1.8187	1.8187	1.0000
Total:			**0.000**	**7.542**		**31.65**	

4 STD4

Sample Name:	**STD4**	*Injection Volume:*	**5.00**
Vial Number:	**GA4**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**02/05/2020 20:33**	*Sample Weight:*	**1.0000**

Run Time:



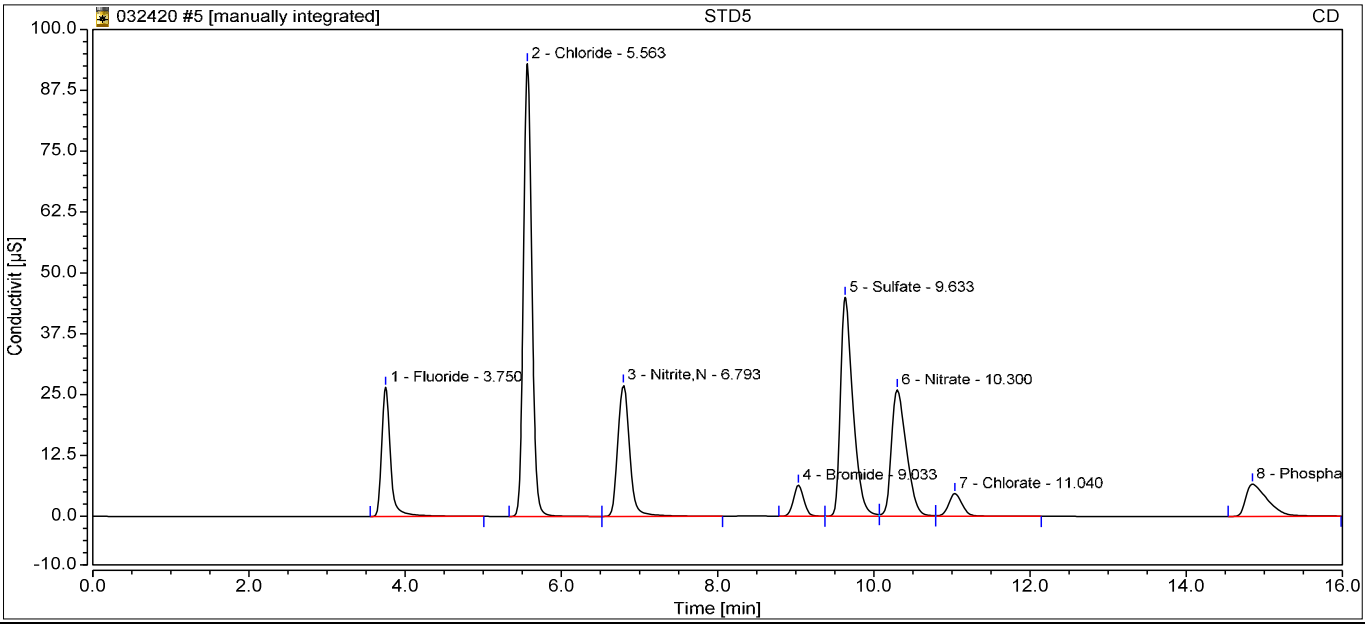
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.428	4.2080	4.2080	1.0000
2	5.57	Chloride	BMb*	4.627	20.0069	20.0069	1.0000
3	6.80	Nitrite,N	bMB*	2.046	4.4146	4.4146	1.0000
4	9.06	Bromide	BM	0.382	3.8871	3.8871	1.0000
5	9.72	Sulfate	M	3.337	19.9713	19.9713	1.0000
6	10.38	Nitrate	M	2.343	4.0228	4.0228	1.0000
7	11.07	Chlorate	MB	0.380	3.9830	3.9830	1.0000
8	15.00	Phosphate	BMB	0.824	3.8745	3.8745	1.0000
Total:			**0.000**	**15.366**		**64.37**	

5 STD5

Sample Name:	**STD5**	*Injection Volume:*	**5.00**
Vial Number:	**GA5**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**02/05/2020 20:51**	*Sample Weight:*	**1.0000**

Run Time:



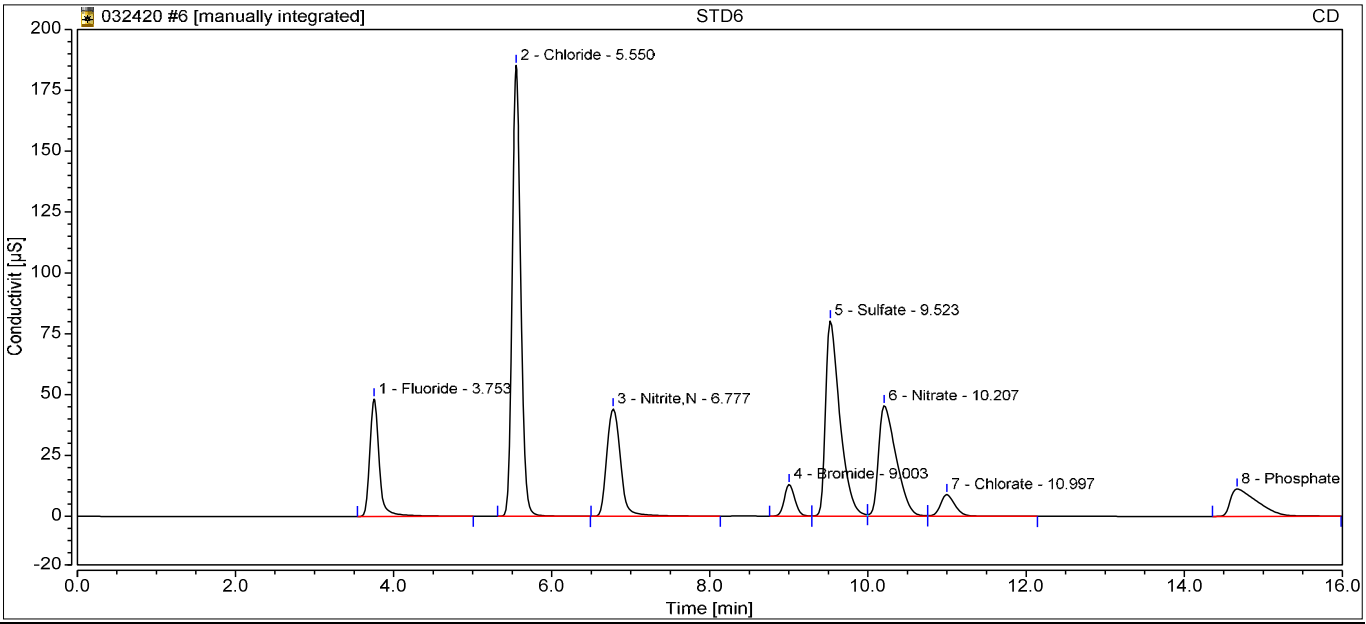
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.75	Fluoride	BMB	3.472	10.1940	10.1940	1.0000
2	5.56	Chloride	BMB	11.516	49.7057	49.7057	1.0000
3	6.79	Nitrite,N	BMB*	4.776	10.2593	10.2593	1.0000
4	9.03	Bromide	BM	0.981	9.9279	9.9279	1.0000
5	9.63	Sulfate	M	8.325	49.6811	49.6811	1.0000
6	10.30	Nitrate	M	5.799	9.9382	9.9382	1.0000
7	11.04	Chlorate	MB	0.944	9.9252	9.9252	1.0000
8	14.85	Phosphate	BMB	2.135	9.8737	9.8737	1.0000
Total:			**0.000**	**37.949**		**159.51**	

6 STD6

Sample Name:	**STD6**	*Injection Volume:*	**5.00**
Vial Number:	**GA6**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**02/05/2020 21:09**	*Sample Weight:*	**1.0000**

Run Time:



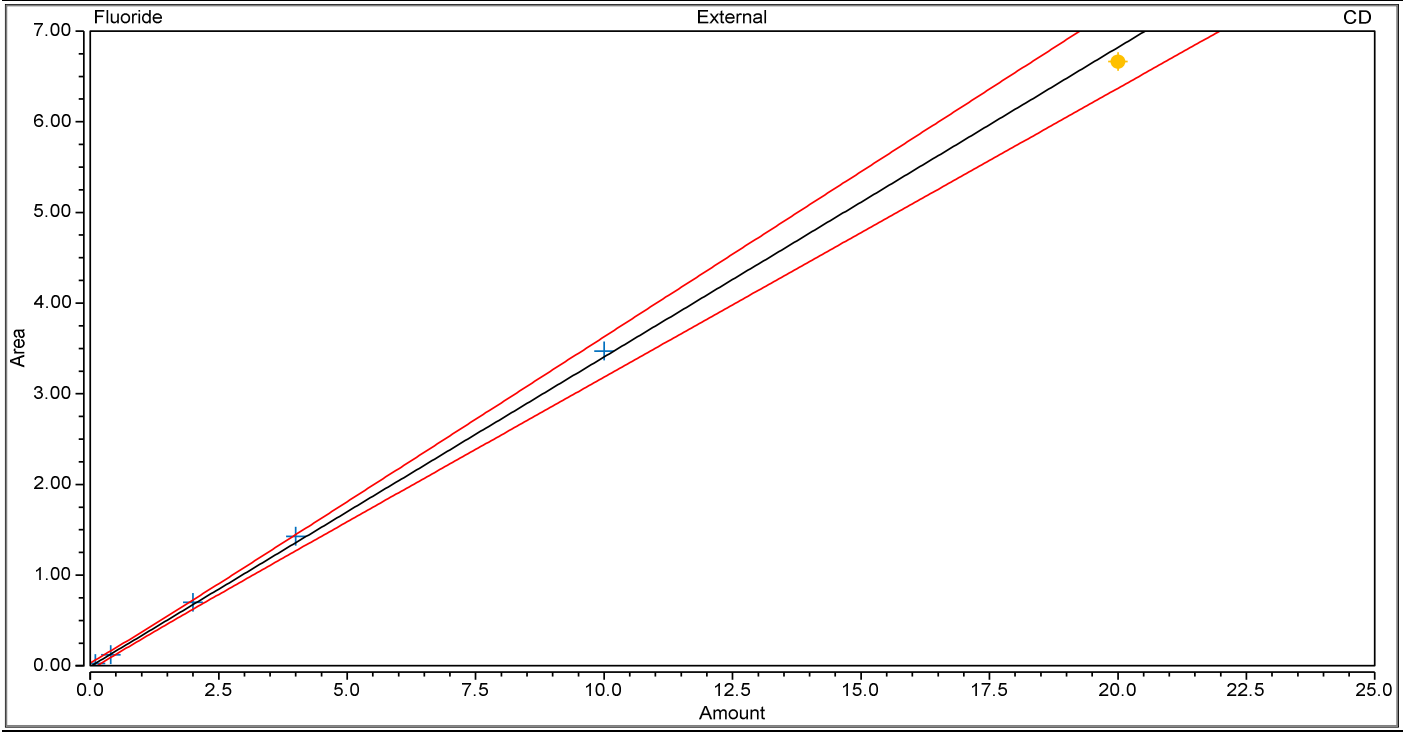
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.75	Fluoride	BMB	6.664	19.5424	19.5424	1.0000
2	5.55	Chloride	BMB	23.270	100.3774	100.3774	1.0000
3	6.78	Nitrite,N	BMB*	8.893	19.0718	19.0718	1.0000
4	9.00	Bromide	BM	2.012	20.3316	20.3316	1.0000
5	9.52	Sulfate	M	16.857	100.4888	100.4888	1.0000
6	10.21	Nitrate	M	11.698	20.0333	20.0333	1.0000
7	11.00	Chlorate	MB	1.906	20.0635	20.0635	1.0000
8	14.67	Phosphate	BMB	4.450	20.4589	20.4589	1.0000
Total:			**0.000**	**75.750**		**320.37**	

Calibration

Calibration Details	Fluoride		
Calibration Type	Lin, WithOffset, 1/A	*Offset (C0)*	-0.0083
Evaluation Type	Area	*Slope (C1)*	0.3414
Number of Calibration Points	6	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.9991

Calibration Plot **Fluoride**



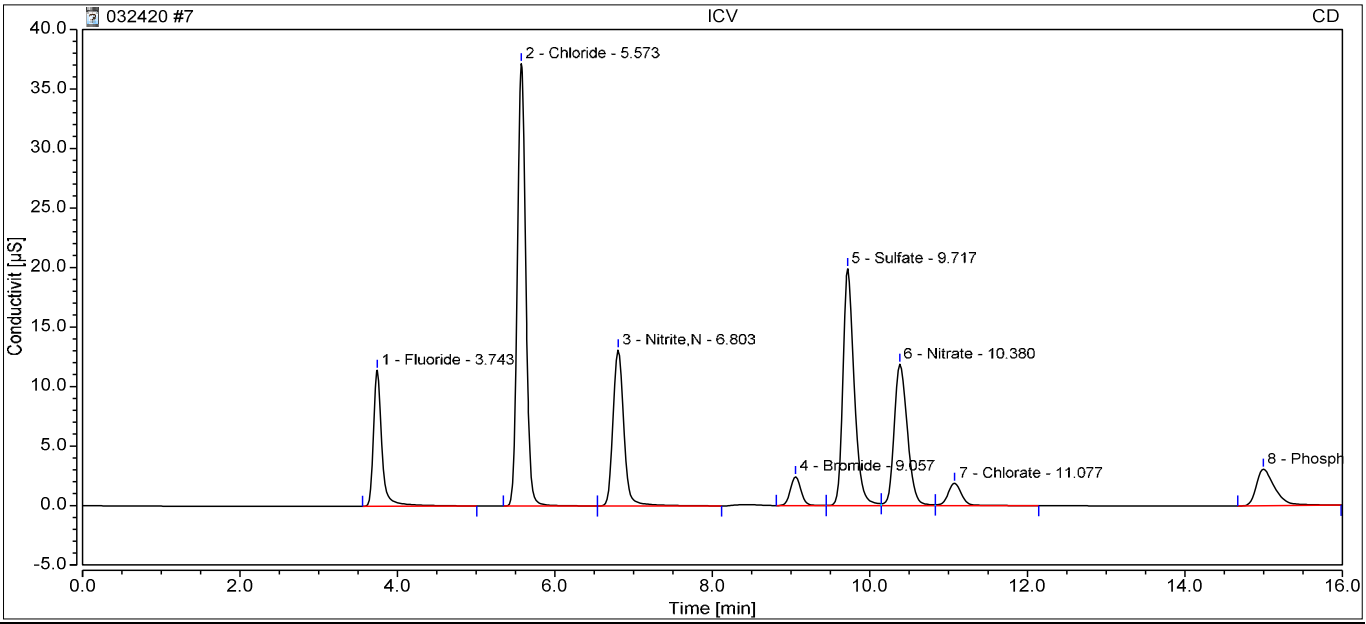
Calibration Results **Fluoride**

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	0.0243	0.0243	0.024	0.212
2	STD2	2	0.4000	0.1226	0.1226	0.123	0.964
3	STD3	3	2.0000	0.7008	0.7008	0.701	5.614
4	STD4	4	4.0000	1.4284	1.4284	1.428	11.345
5	STD5	5	10.0000	3.4723	3.4723	3.472	26.547
6	STD6	6	20.0000	6.6641	6.6641	6.664	48.233

7 ICV

Sample Name:	**ICV**	*Injection Volume:*	**5.00**
Vial Number:	**GA7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**02/05/2020 21:27**	*Sample Weight:*	**1.0000**

Run Time:



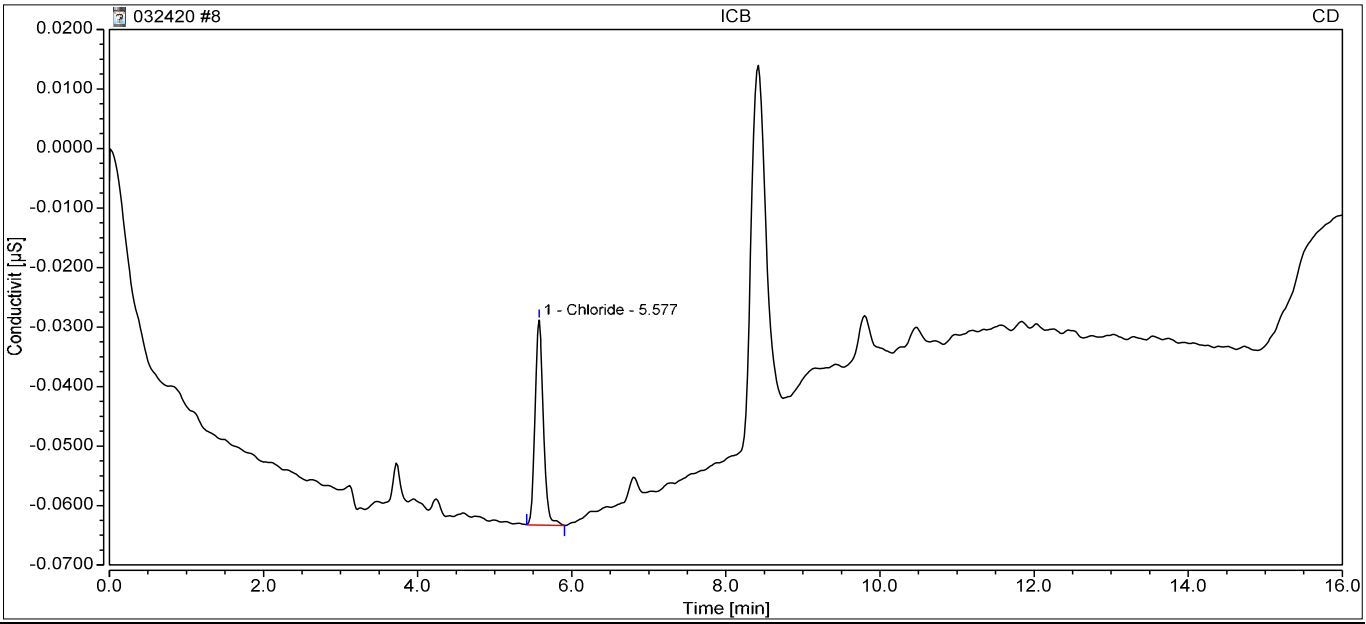
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.412	4.1607	4.1607	1.0000
2	5.57	Chloride	BMB	4.570	19.7627	19.7627	1.0000
3	6.80	Nitrite,N	BMB	2.081	4.4887	4.4887	1.0000
4	9.06	Bromide	BM	0.374	3.8104	3.8104	1.0000
5	9.72	Sulfate	M	3.327	19.9126	19.9126	1.0000
6	10.38	Nitrate	M	2.299	3.9478	3.9478	1.0000
7	11.08	Chlorate	MB	0.379	3.9799	3.9799	1.0000
8	15.00	Phosphate	BMB	0.835	3.9271	3.9271	1.0000
Total:			**0.000**	**15.278**		**63.99**	

8 ICB

Sample Name:	**ICB**	*Injection Volume:*	**5.00**
Vial Number:	**GA8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**02/05/2020 21:45**	*Sample Weight:*	**1.0000**

Run Time:



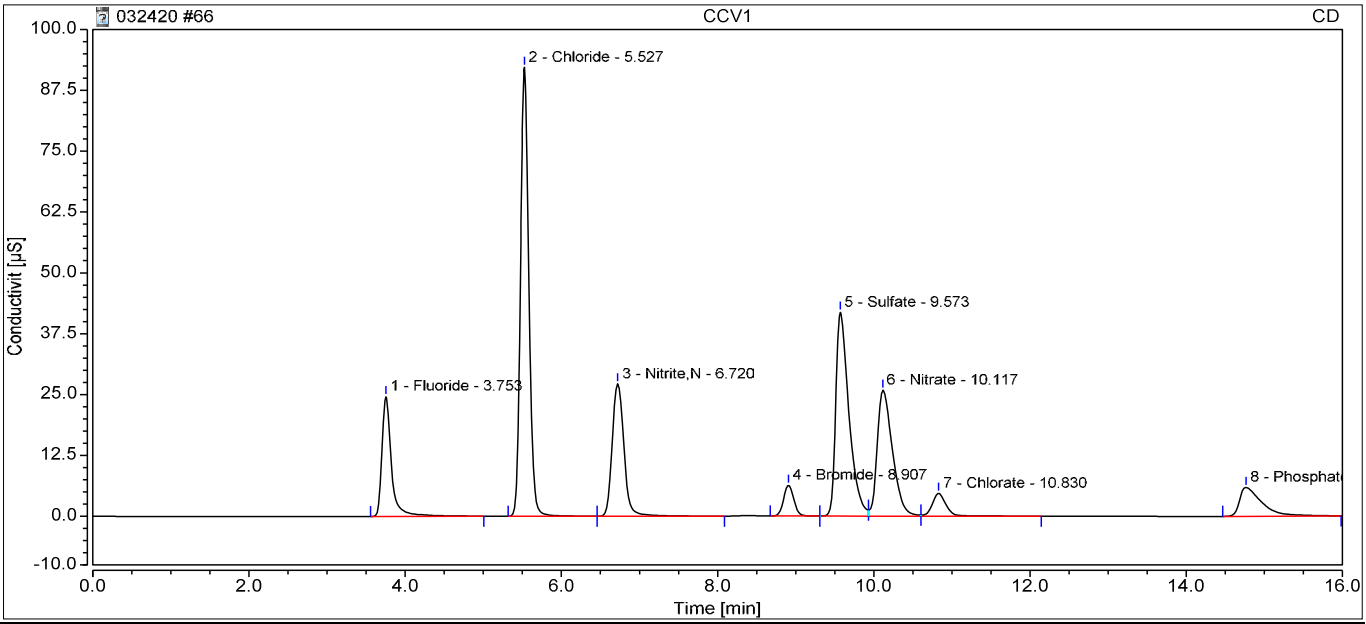
Integration Results

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	5.58	Chloride	BMB	0.004	0.0794	0.0794	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**		**0.08**	

66 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**BA3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/25/2020 12:16**	*Sample Weight:*	**1.0000**

Run Time:



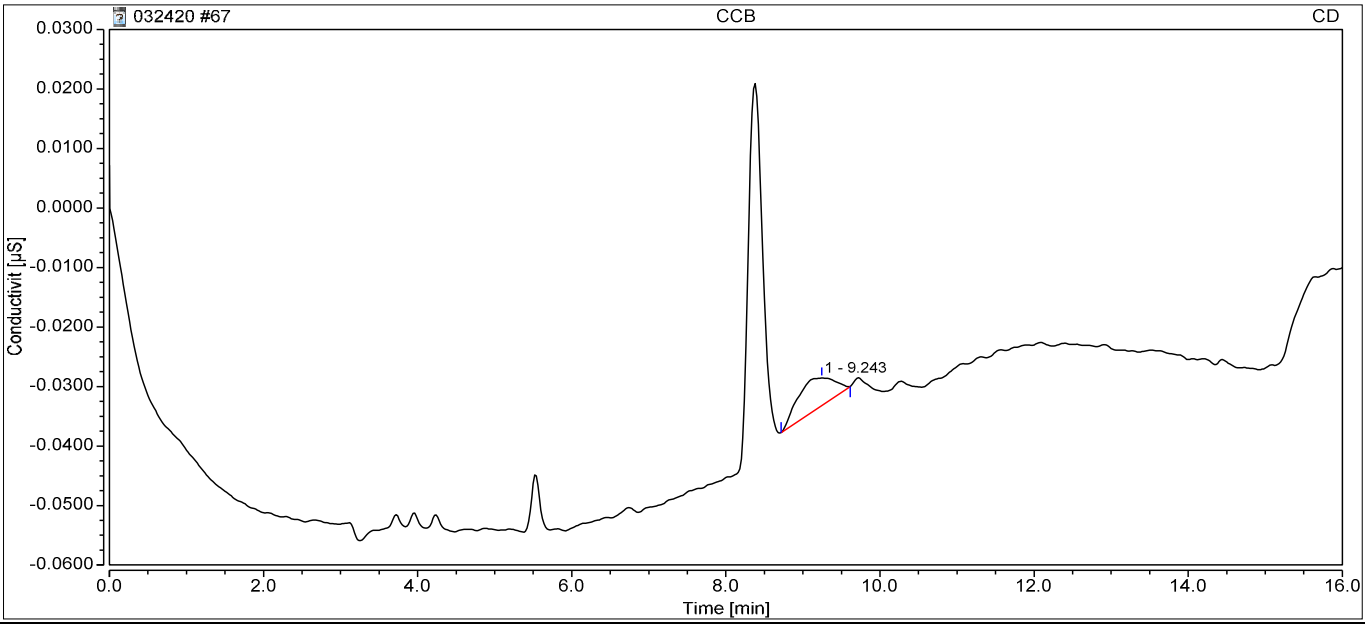
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.75	Fluoride	BMB	3.454	10.1403	10.1403	1.0000
2	5.53	Chloride	BMB	11.410	49.2500	49.2500	1.0000
3	6.72	Nitrite,N	BMB	4.765	10.2358	10.2358	1.0000
4	8.91	Bromide	BM	0.958	9.6999	9.6999	1.0000
5	9.57	Sulfate	M	8.164	48.7186	48.7186	1.0000
6	10.12	Nitrate	M	5.822	9.9774	9.9774	1.0000
7	10.83	Chlorate	MB	0.960	10.0951	10.0951	1.0000
8	14.77	Phosphate	BMB	1.971	9.1203	9.1203	1.0000
Total:			**0.000**	**37.504**		**157.24**	

67 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/25/2020 12:34**	*Sample Weight:*	**1.0000**

Run Time:



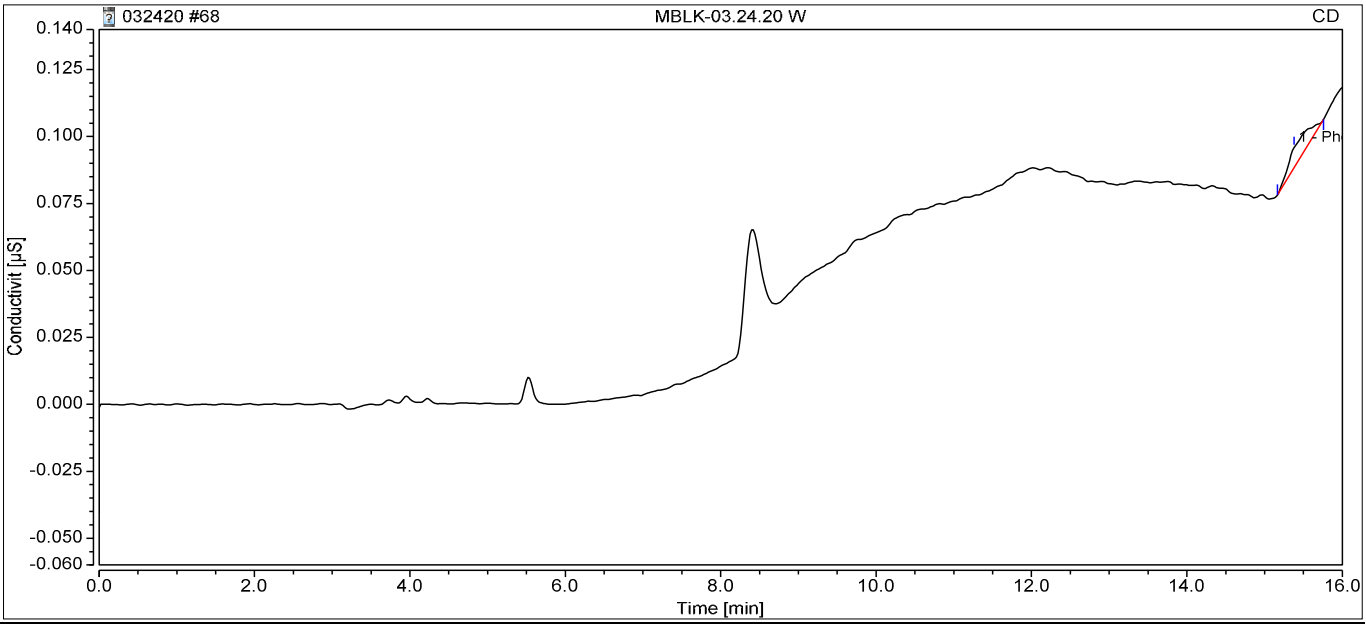
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
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**	

68 MBLK-03.24.20 W

Sample Name:	**MBLK-03.24.20 W**	*Injection Volume:*	**5.00**
Vial Number:	**RA1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/25/2020 15:10**	*Sample Weight:*	**1.0000**

Run Time:



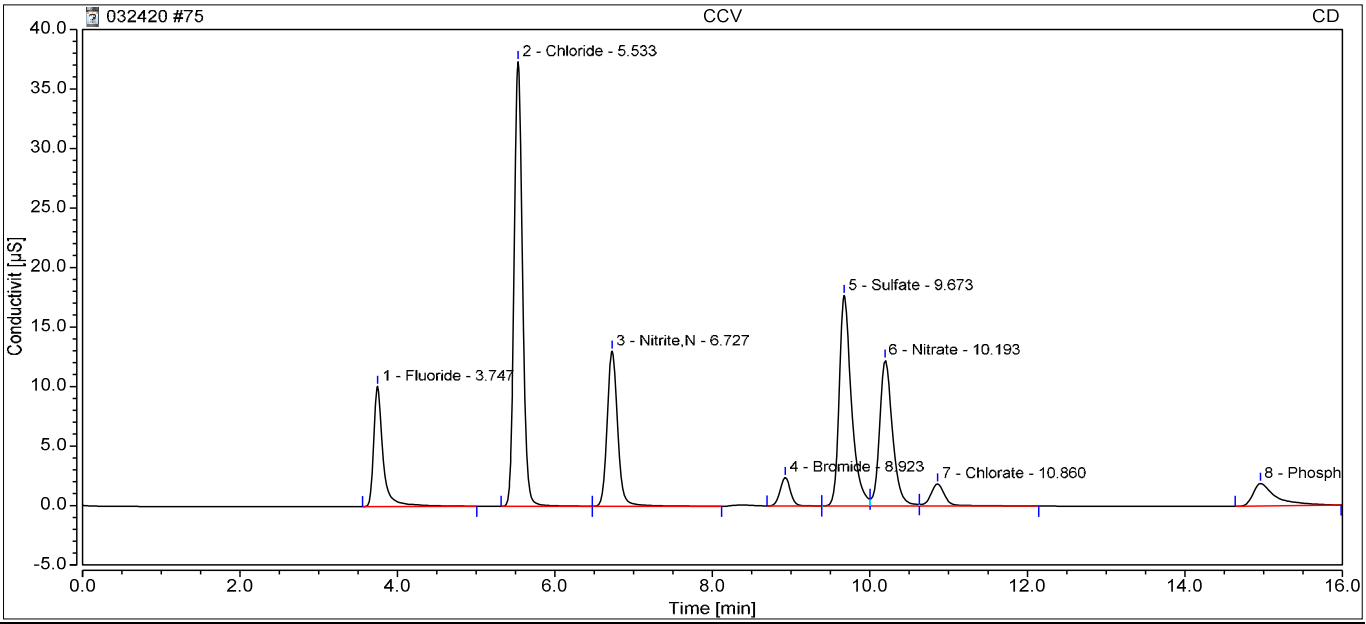
Integration Results

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
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
1	15.38	Phosphate	BMB	0.003	0.1191	0.1191	1.0000
Total:			**0.000**	**0.003**		**0.12**	

75 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**BA1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/25/2020 17:17**	*Sample Weight:*	**1.0000**

Run Time:



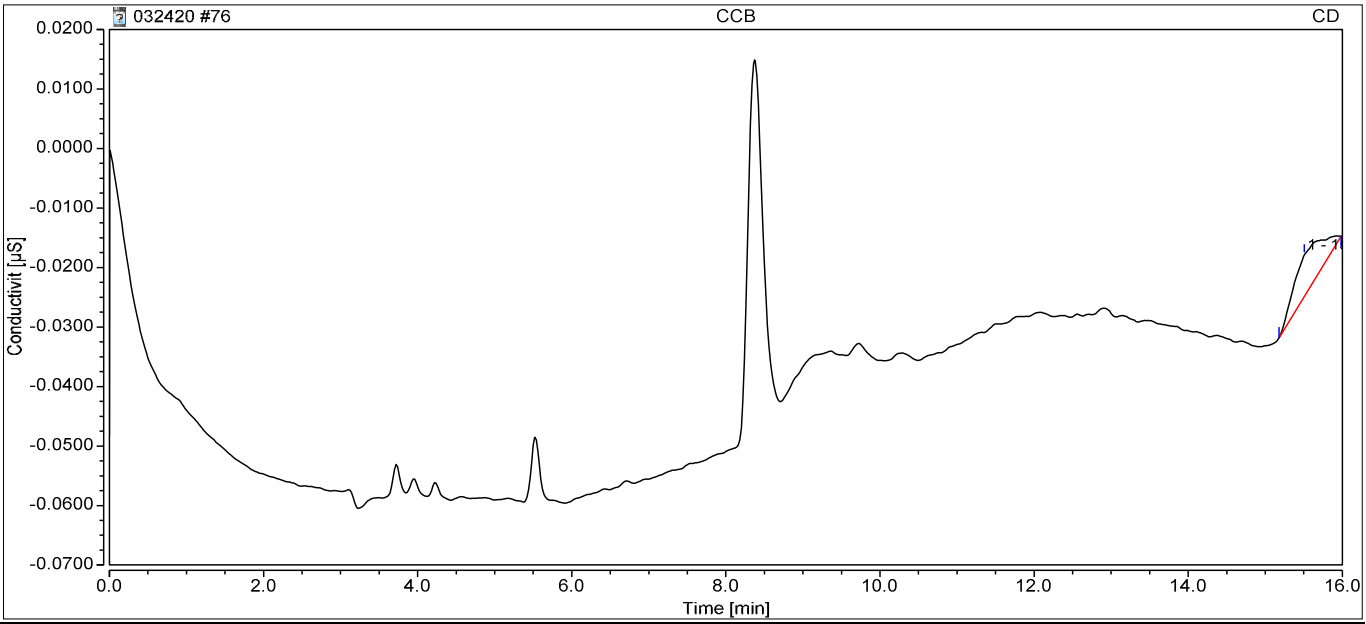
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.75	Fluoride	BMB	1.395	4.1098	4.1098	1.0000
2	5.53	Chloride	BMB	4.575	19.7825	19.7825	1.0000
3	6.73	Nitrite,N	BMB	2.035	4.3899	4.3899	1.0000
4	8.92	Bromide	BM	0.364	3.7054	3.7054	1.0000
5	9.67	Sulfate	M	3.198	19.1475	19.1475	1.0000
6	10.19	Nitrate	M	2.345	4.0266	4.0266	1.0000
7	10.86	Chlorate	MB	0.393	4.1201	4.1201	1.0000
8	14.96	Phosphate	BMB	0.646	3.0629	3.0629	1.0000
Total:			**0.000**	**14.951**		**62.34**	

76 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/25/2020 17:35**	*Sample Weight:*	**1.0000**

Run Time:



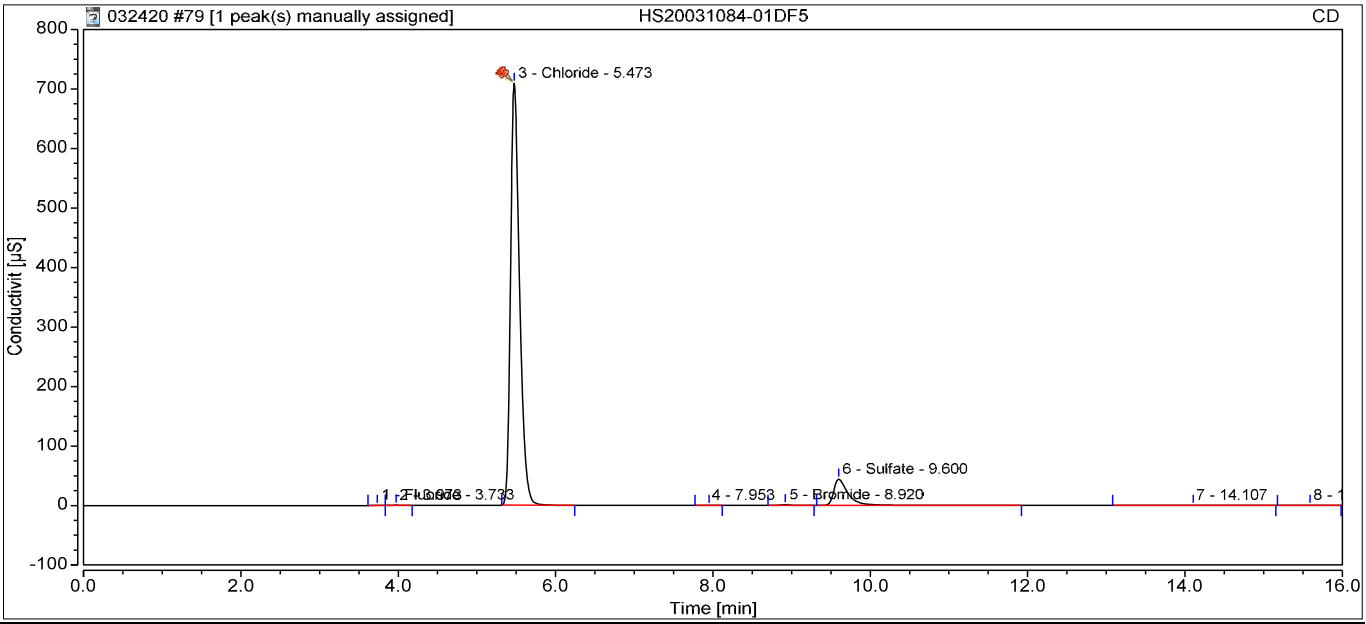
Integration Results

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
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**	

79 HS20031084-01DF5

Sample Name:	**HS20031084-01DF5**	*Injection Volume:*	**5.00**
Vial Number:	**GA8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**5.0000**
Recording Time:	**03/25/2020 20:06**	*Sample Weight:*	**1.0000**

Run Time:



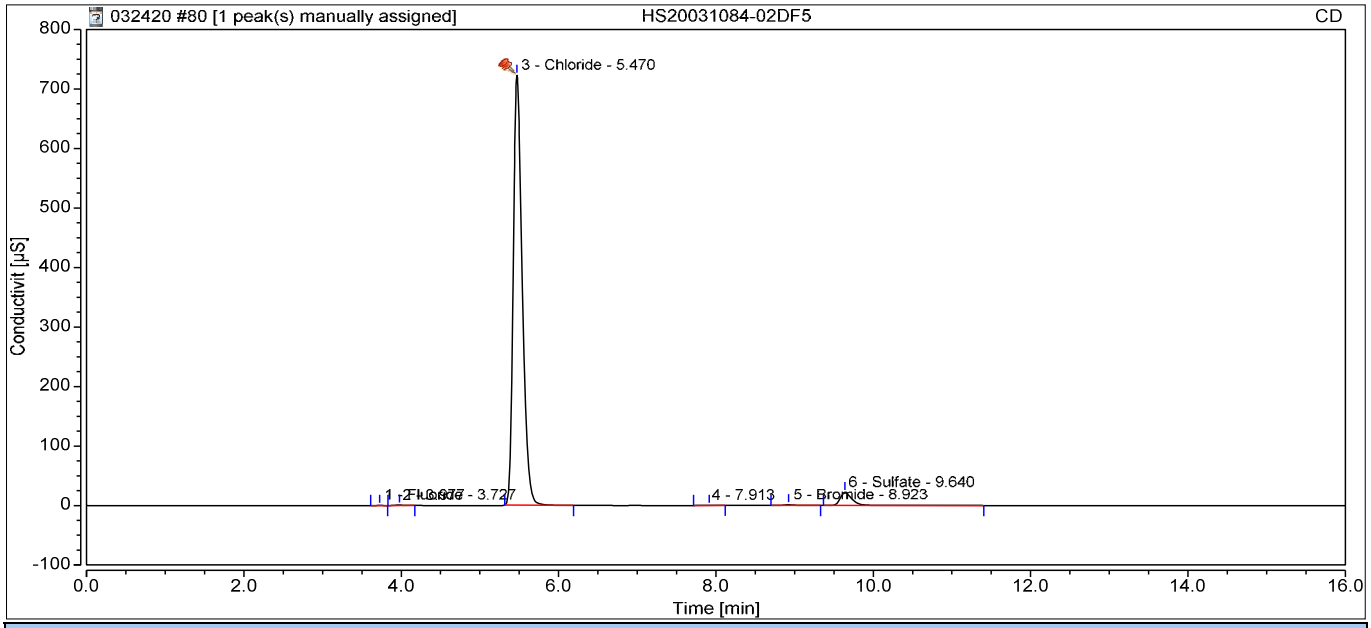
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.007	0.0450	0.2249	5.0000
3	5.47	Chloride	BMB^	94.679	408.2180	2041.0901	5.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	5.0000
5	8.92	Bromide	BMB	0.163	1.6784	8.3920	5.0000
6	9.60	Sulfate	BMB	9.451	56.3830	281.9149	5.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	5.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	5.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	5.0000
Total:			**0.000**	**104.300**		**2331.62**	

80 HS20031084-02DF5

Sample Name:	**HS20031084-02DF5**	*Injection Volume:*	**5.00**
Vial Number:	**GB1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**5.0000**
Recording Time:	**03/25/2020 20:24**	*Sample Weight:*	**1.0000**

Run Time:



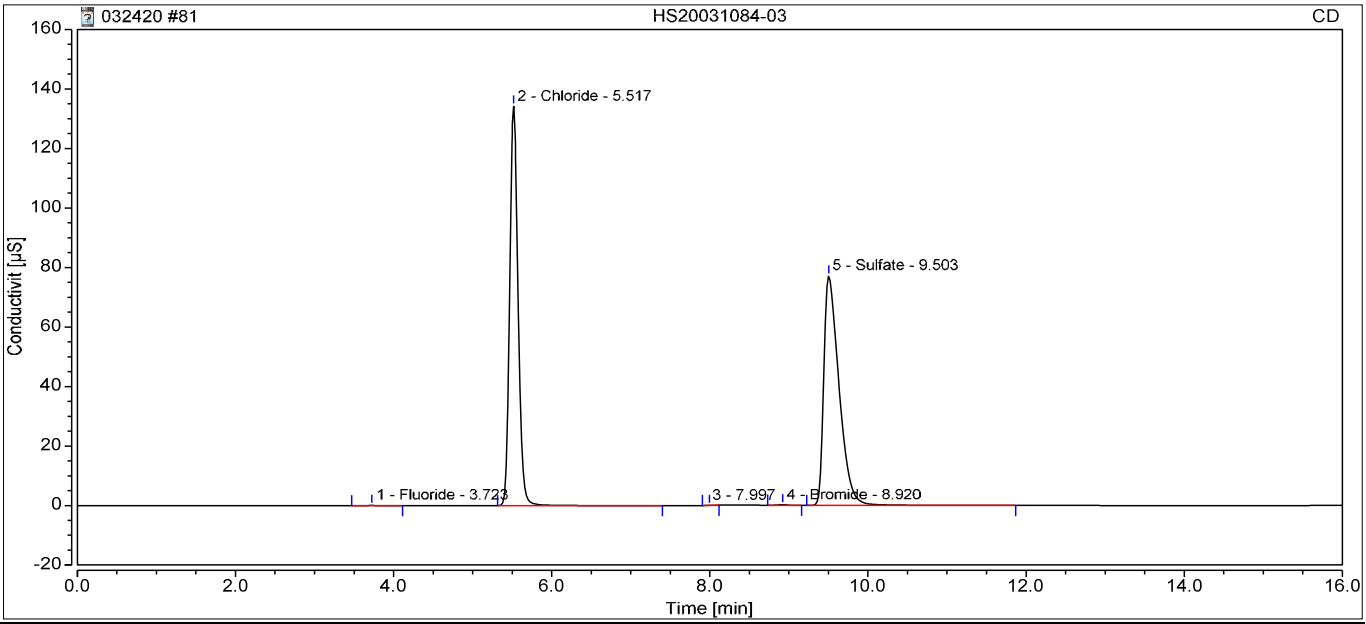
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.010	0.0532	0.2662	5.0000
3	5.47	Chloride	BMB^	95.959	413.7383	2068.6913	5.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	5.0000
5	8.92	Bromide	BMB	0.168	1.7255	8.6275	5.0000
6	9.64	Sulfate	BMB	3.789	22.6670	113.3352	5.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	5.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	5.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	5.0000
Total:			**0.000**	**99.926**		**2190.92**	

81 HS20031084-03

Sample Name:	**HS20031084-03**	*Injection Volume:*	**5.00**
Vial Number:	**GB2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/25/2020 20:42**	*Sample Weight:*	**1.0000**

Run Time:

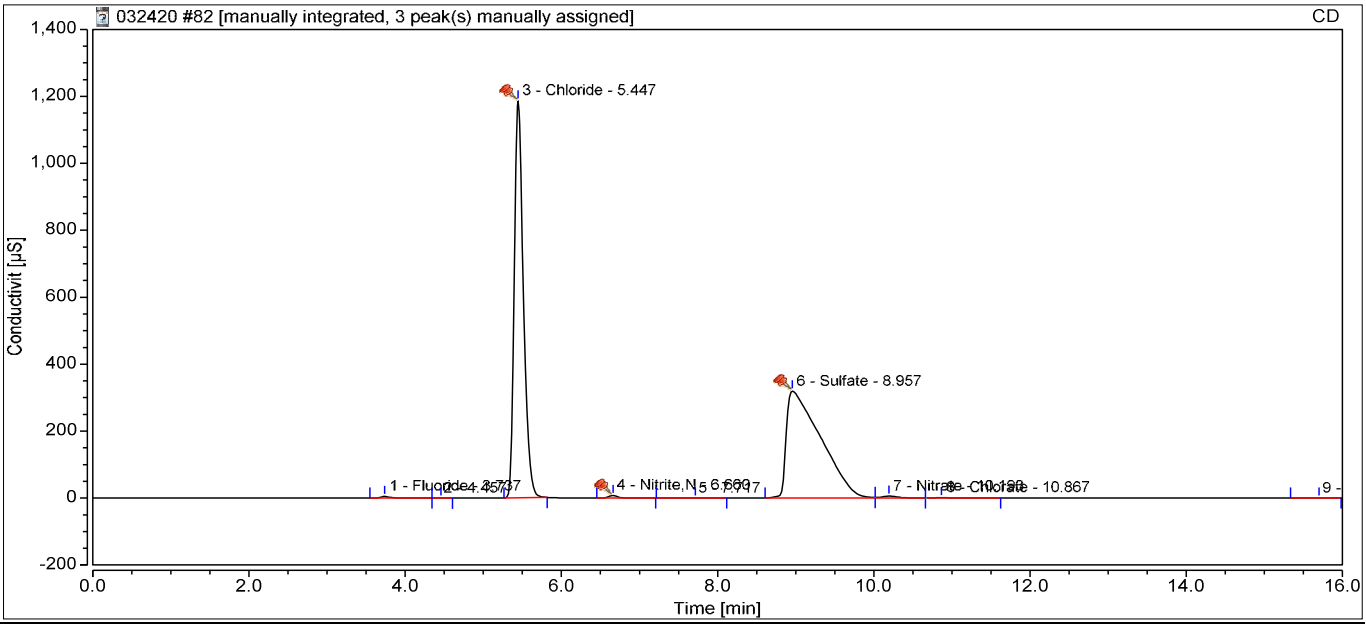


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	0.009	0.0501	0.0501	1.0000
2	5.52	Chloride	BMB	16.649	71.8344	71.8344	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
4	8.92	Bromide	BMB	0.032	0.3589	0.3589	1.0000
5	9.50	Sulfate	BMB	17.175	102.3845	102.3845	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**	**33.865**		**174.63**	

82	*HS20031084-03MS*		
Sample Name:	**HS20031084-03MS**	*Injection Volume:*	**5.00**
Vial Number:	**GB3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/25/2020 21:00**	*Sample Weight:*	**1.0000**

Run Time:



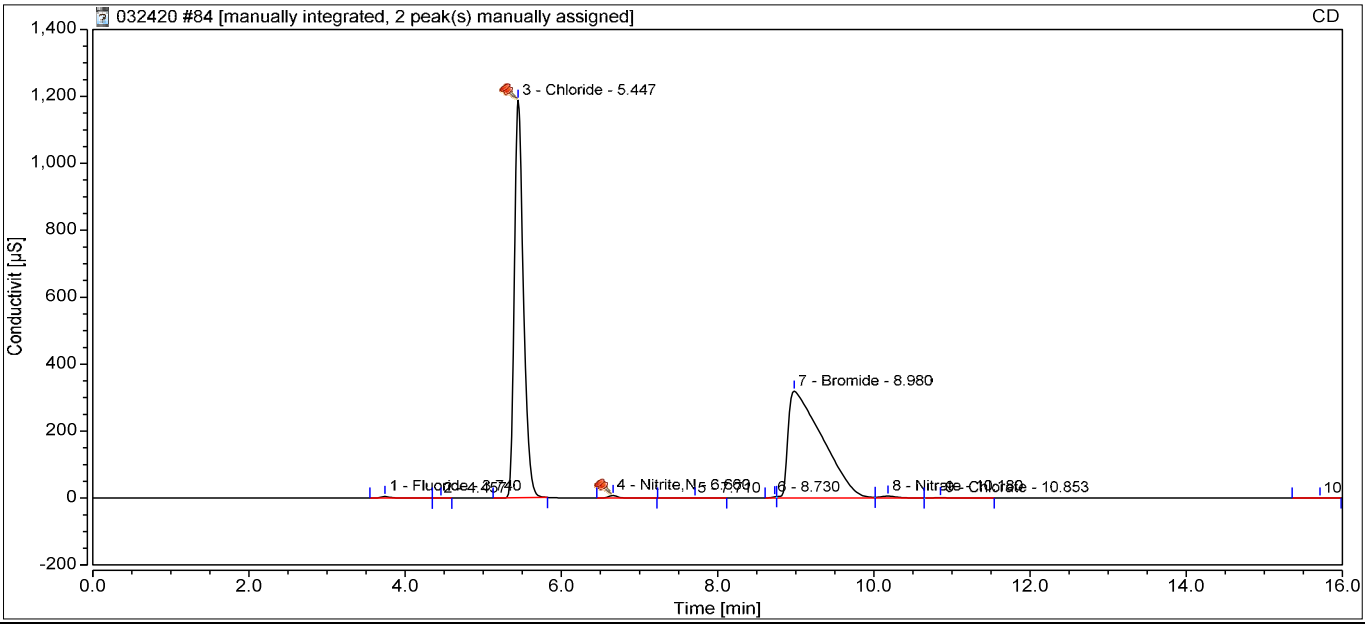
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	0.742	2.1961	2.1961	1.0000
3	5.45	Chloride	BMB*^	160.181	690.5958	690.5958	1.0000
4	6.66	Nitrite,N	BMB^	1.020	2.2167	2.2167	1.0000
6	8.96	Sulfate	BM ^	162.264	966.4243	966.4243	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
7	10.19	Nitrate	M	1.361	2.3420	2.3420	1.0000
8	10.87	Chlorate	MB	0.195	2.0347	2.0347	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**325.761**		**1665.81**	

84 HS20031084-03MSD

Sample Name:	**HS20031084-03MSD**	*Injection Volume:*	**5.00**
Vial Number:	**GB4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/25/2020 21:37**	*Sample Weight:*	**1.0000**

Run Time:



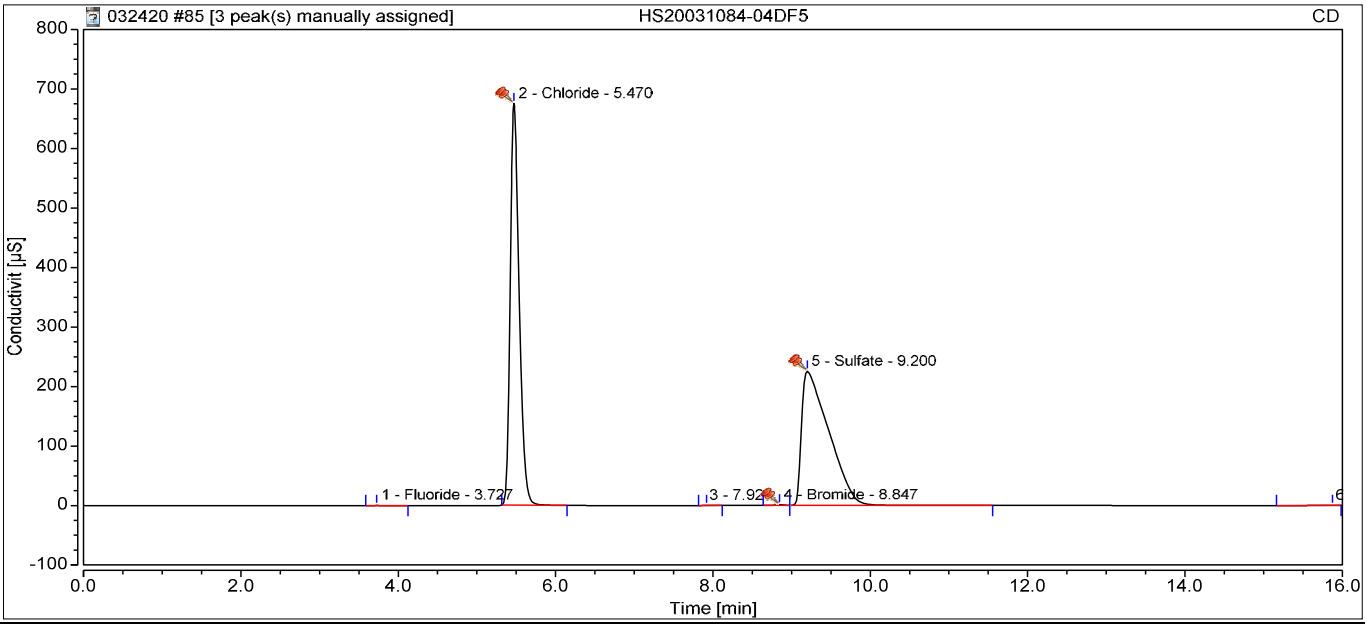
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	0.736	2.1806	2.1806	1.0000
3	5.45	Chloride	BMB*^	160.110	690.2906	690.2906	1.0000
4	6.66	Nitrite,N	BMB^	1.023	2.2244	2.2244	1.0000
7	8.98	Bromide	M	161.804	1632.3247	1632.3247	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
8	10.18	Nitrate	M	1.379	2.3722	2.3722	1.0000
9	10.85	Chlorate	MB	0.194	2.0221	2.0221	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**325.246**		**2331.41**	

85 HS20031084-04DF5

Sample Name:	**HS20031084-04DF5**	*Injection Volume:*	**5.00**
Vial Number:	**GB5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**5.0000**
Recording Time:	**03/25/2020 21:55**	*Sample Weight:*	**1.0000**

Run Time:



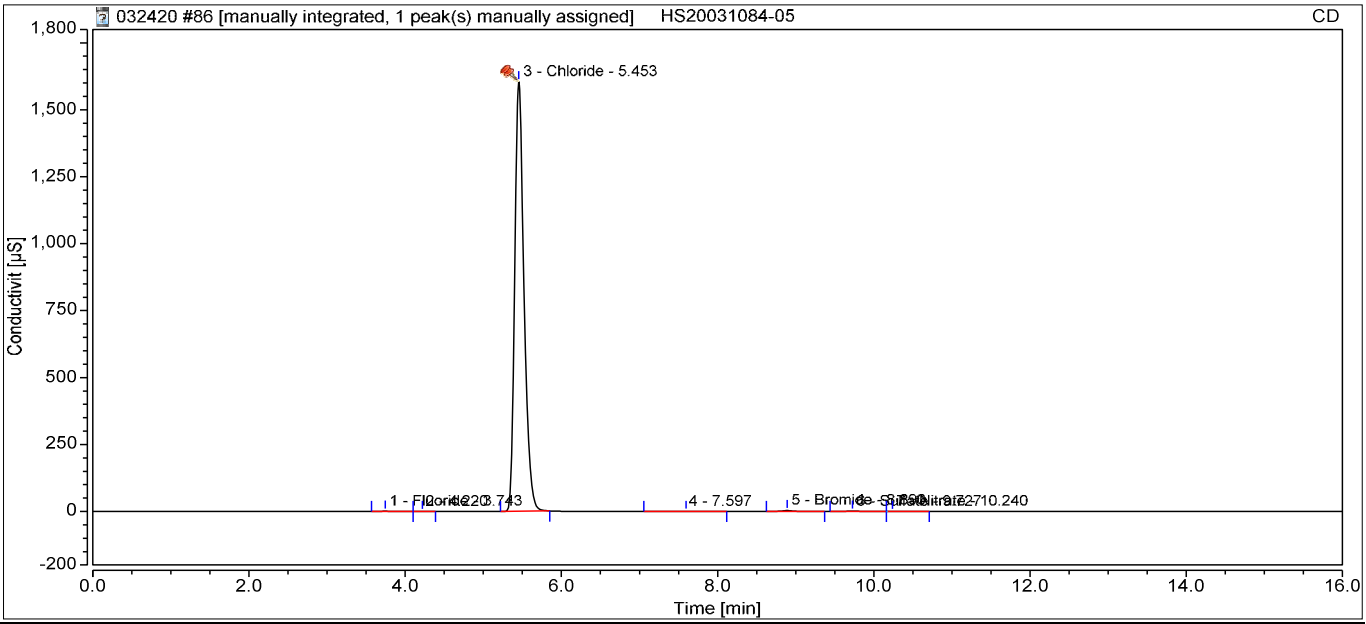
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.015	0.0670	0.3350	5.0000
2	5.47	Chloride	BMB^	89.373	385.3435	1926.7176	5.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	5.0000
4	8.85	Bromide	BM ^	0.188	1.9297	9.6483	5.0000
5	9.20	Sulfate	MB^	89.769	534.6986	2673.4931	5.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	5.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	5.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	5.0000
Total:			**0.000**	**179.344**		**4610.19**	

86 HS20031084-05

Sample Name:	**HS20031084-05**	*Injection Volume:*	**5.00**
Vial Number:	**GB6**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/25/2020 22:13**	*Sample Weight:*	**1.0000**

Run Time:



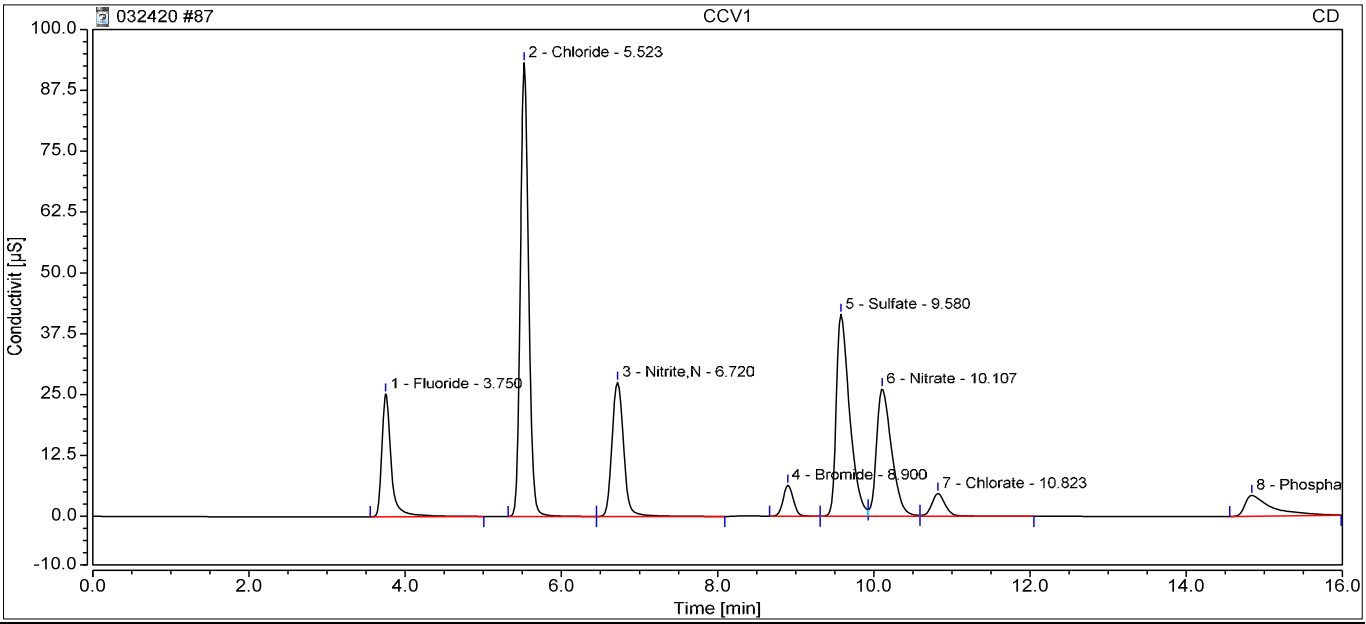
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	0.131	0.4082	0.4082	1.0000
3	5.45	Chloride	BMB*^	220.333	949.9075	949.9075	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
5	8.89	Bromide	BMB	0.481	4.8851	4.8851	1.0000
6	9.73	Sulfate	BM	0.236	1.5094	1.5094	1.0000
7	10.24	Nitrate	MB	0.009	0.0285	0.0285	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**	**221.190**		**956.74**	

87 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**BA3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/25/2020 22:31**	*Sample Weight:*	**1.0000**

Run Time:



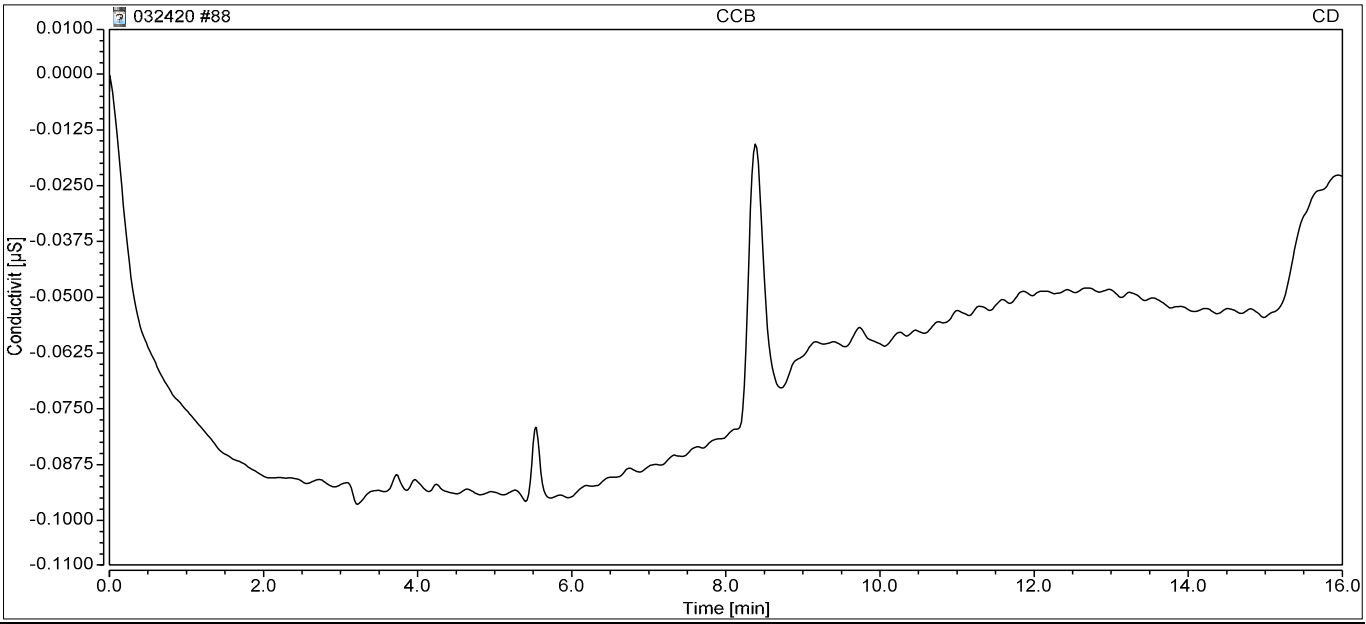
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.75	Fluoride	BMB	3.477	10.2075	10.2075	1.0000
2	5.52	Chloride	BMB	11.408	49.2416	49.2416	1.0000
3	6.72	Nitrite,N	BMB	4.768	10.2419	10.2419	1.0000
4	8.90	Bromide	BM	0.959	9.7105	9.7105	1.0000
5	9.58	Sulfate	M	8.208	48.9840	48.9840	1.0000
6	10.11	Nitrate	M	5.837	10.0034	10.0034	1.0000
7	10.82	Chlorate	MB	0.957	10.0638	10.0638	1.0000
8	14.84	Phosphate	BMB	1.722	7.9851	7.9851	1.0000
Total:			**0.000**	**37.338**		**156.44**	

88 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/25/2020 22:49**	*Sample Weight:*	**1.0000**

Run Time:



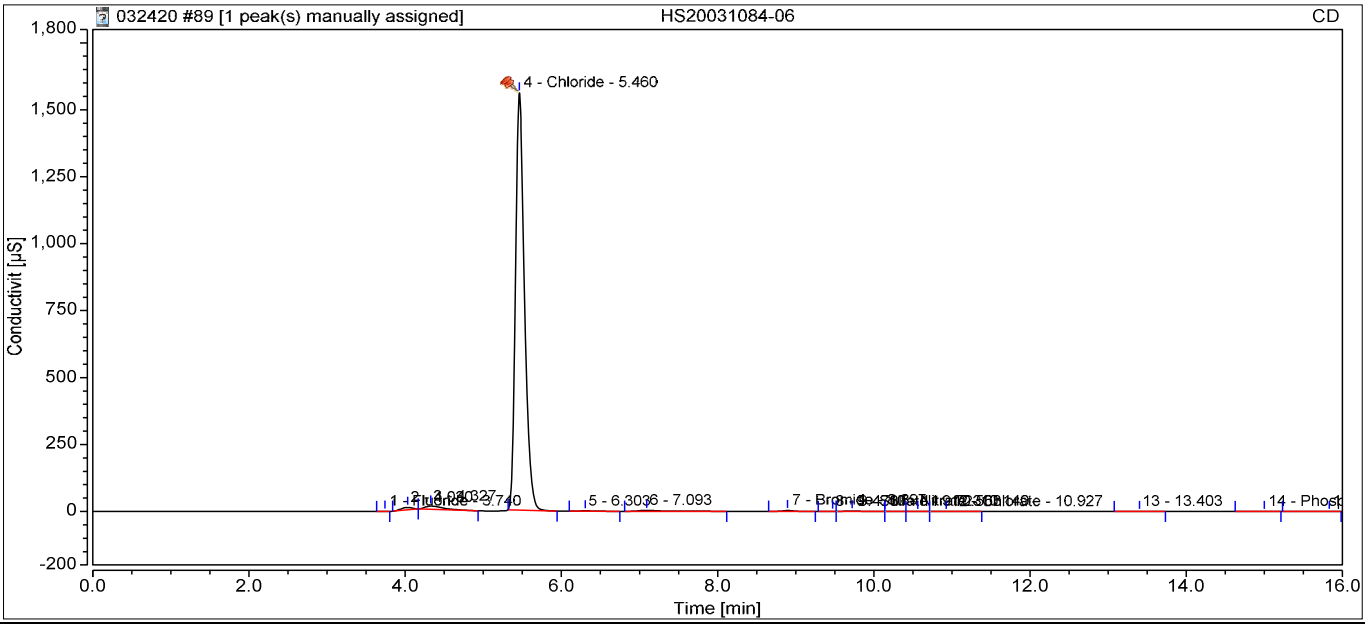
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.000**		**0.00**	

89 HS20031084-06

Sample Name:	**HS20031084-06**	*Injection Volume:*	**5.00**
Vial Number:	**GB7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/25/2020 23:07**	*Sample Weight:*	**1.0000**

Run Time:

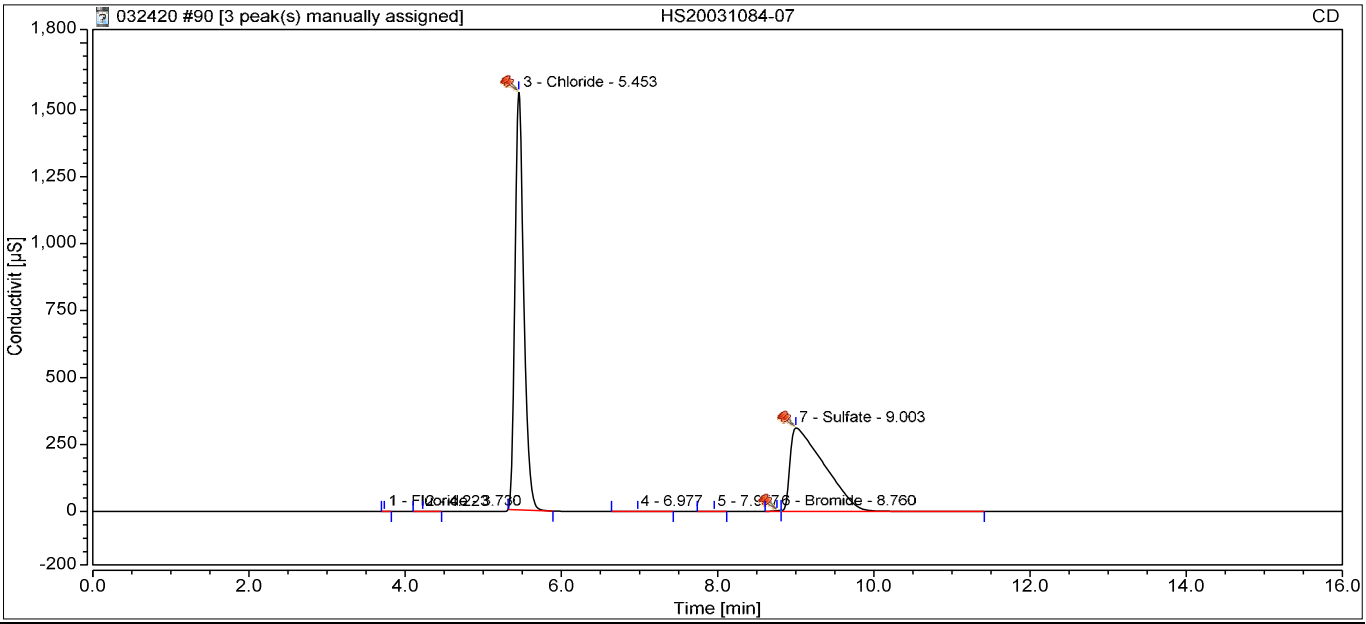


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	0.019	0.0785	0.0785	1.0000
4	5.46	Chloride	BMB^	207.735	895.6005	895.6005	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
7	8.90	Bromide	BMB	0.482	4.8989	4.8989	1.0000
9	9.72	Sulfate	M	0.291	1.8355	1.8355	1.0000
10	10.14	Nitrate	MB	0.007	0.0243	0.0243	1.0000
12	10.93	Chlorate	MB	0.028	0.2813	0.2813	1.0000
14	15.00	Phosphate	BMB	0.005	0.1288	0.1288	1.0000
Total:			**0.000**	**208.567**		**902.85**	

90	*HS20031084-07*		
Sample Name:	**HS20031084-07**	*Injection Volume:*	**5.00**
Vial Number:	**GB8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/25/2020 23:25**	*Sample Weight:*	**1.0000**

Run Time:



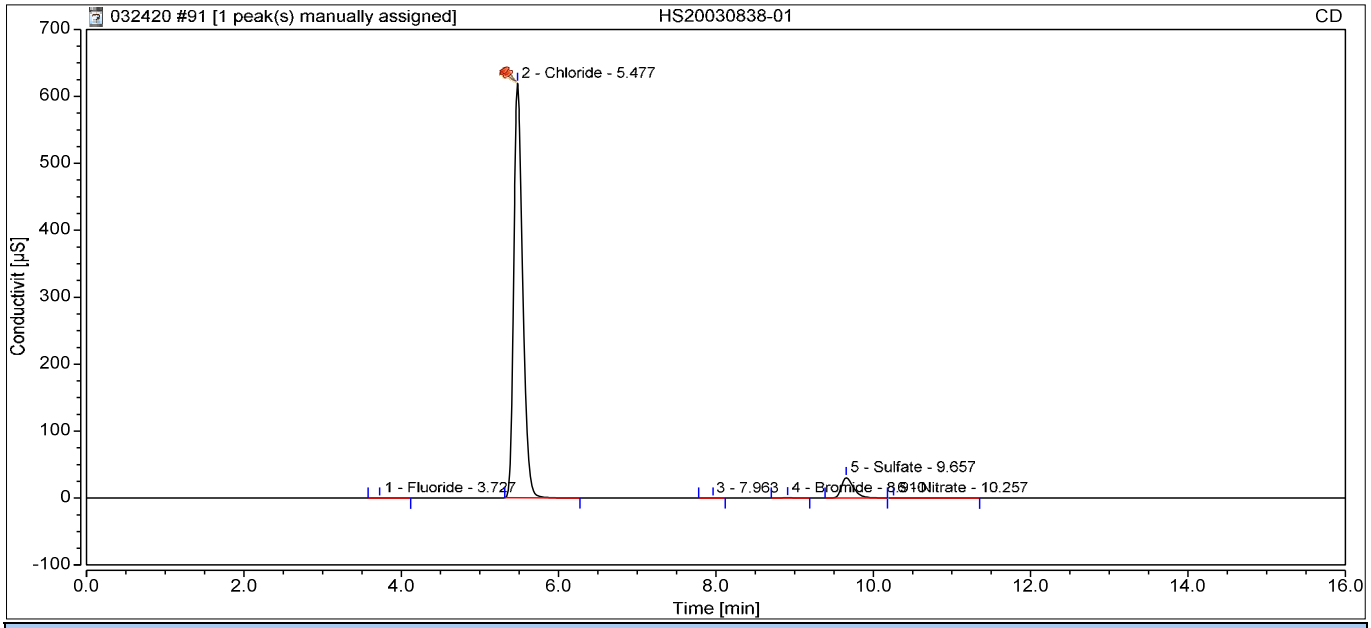
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.005	0.0400	0.0400	1.0000
3	5.45	Chloride	BMB^	204.139	880.0984	880.0984	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
6	8.76	Bromide	BM ^	0.309	3.1473	3.1473	1.0000
7	9.00	Sulfate	MB^	157.059	935.4305	935.4305	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**	**361.512**		**1818.72**	

91 HS20030838-01

Sample Name:	**HS20030838-01**	*Injection Volume:*	**5.00**
Vial Number:	**RB5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/25/2020 23:44**	*Sample Weight:*	**1.0000**

Run Time:

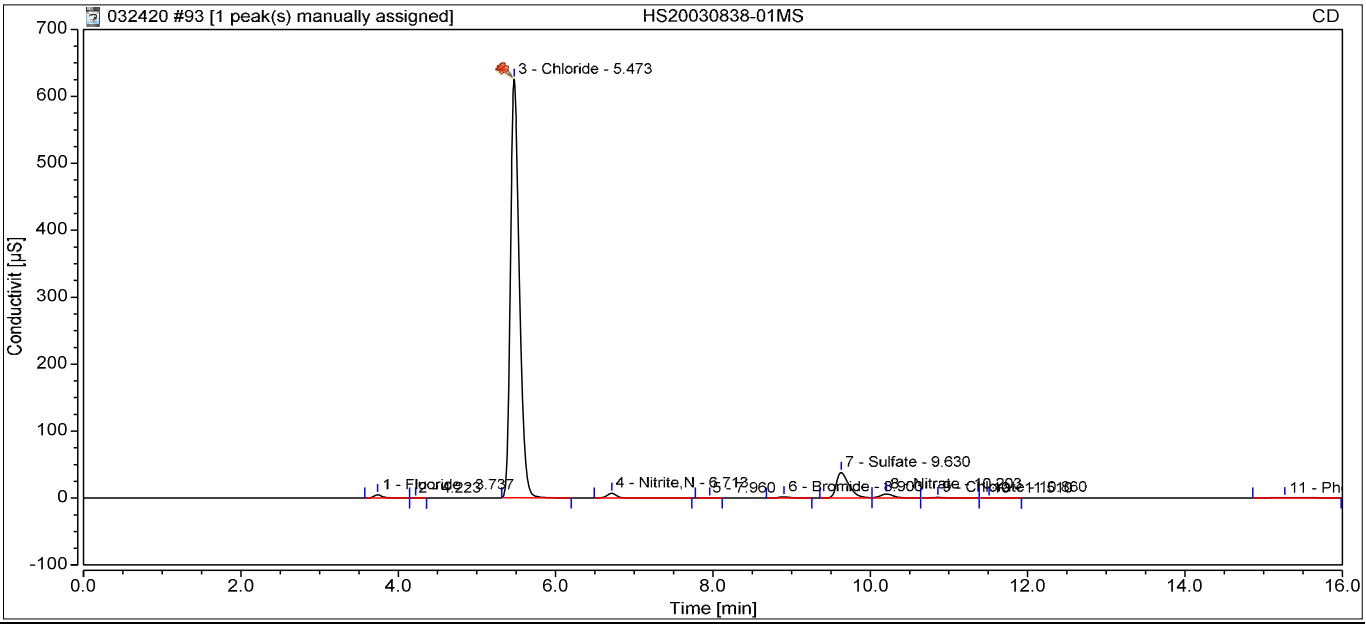


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.025	0.0978	0.0978	1.0000
2	5.48	Chloride	BMB^	81.749	352.4777	352.4777	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
4	8.91	Bromide	BMB	0.073	0.7681	0.7681	1.0000
5	9.66	Sulfate	BM	5.483	32.7551	32.7551	1.0000
6	10.26	Nitrate	MB	0.051	0.1010	0.1010	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**	**87.381**		**386.20**	

93	*HS20030838-01MS*		
Sample Name:	**HS20030838-01MS**	*Injection Volume:*	**5.00**
Vial Number:	**RB7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/26/2020 00:20**	*Sample Weight:*	**1.0000**

Run Time:



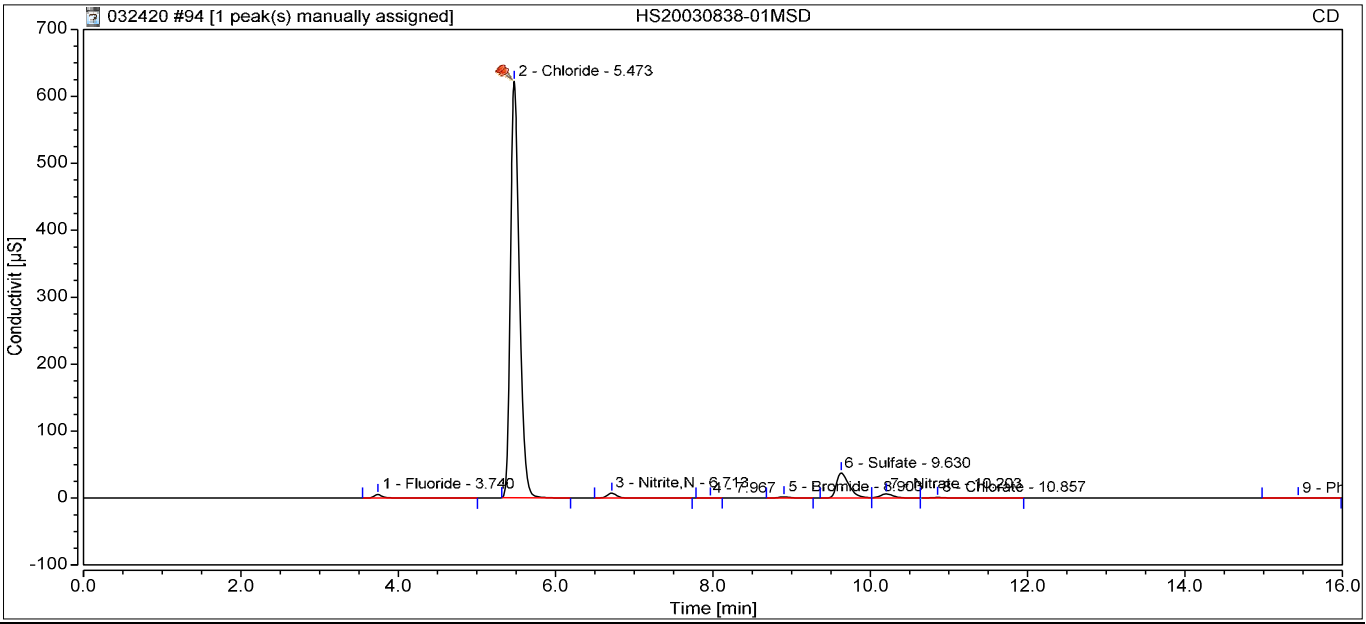
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	0.637	1.8890	1.8890	1.0000
3	5.47	Chloride	BMB^	82.579	356.0555	356.0555	1.0000
4	6.71	Nitrite,N	BMB	1.039	2.2579	2.2579	1.0000
6	8.90	Bromide	BMB	0.250	2.5535	2.5535	1.0000
7	9.63	Sulfate	BM	7.131	42.5698	42.5698	1.0000
8	10.20	Nitrate	M	1.198	2.0635	2.0635	1.0000
9	10.86	Chlorate	M	0.184	1.9187	1.9187	1.0000
11	15.27	Phosphate	BMB	0.342	1.6708	1.6708	1.0000
Total:			**0.000**	**93.359**		**410.98**	

94 HS20030838-01MSD

Sample Name:	**HS20030838-01MSD**	*Injection Volume:*	**5.00**
Vial Number:	**RB8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/26/2020 00:38**	*Sample Weight:*	**1.0000**

Run Time:



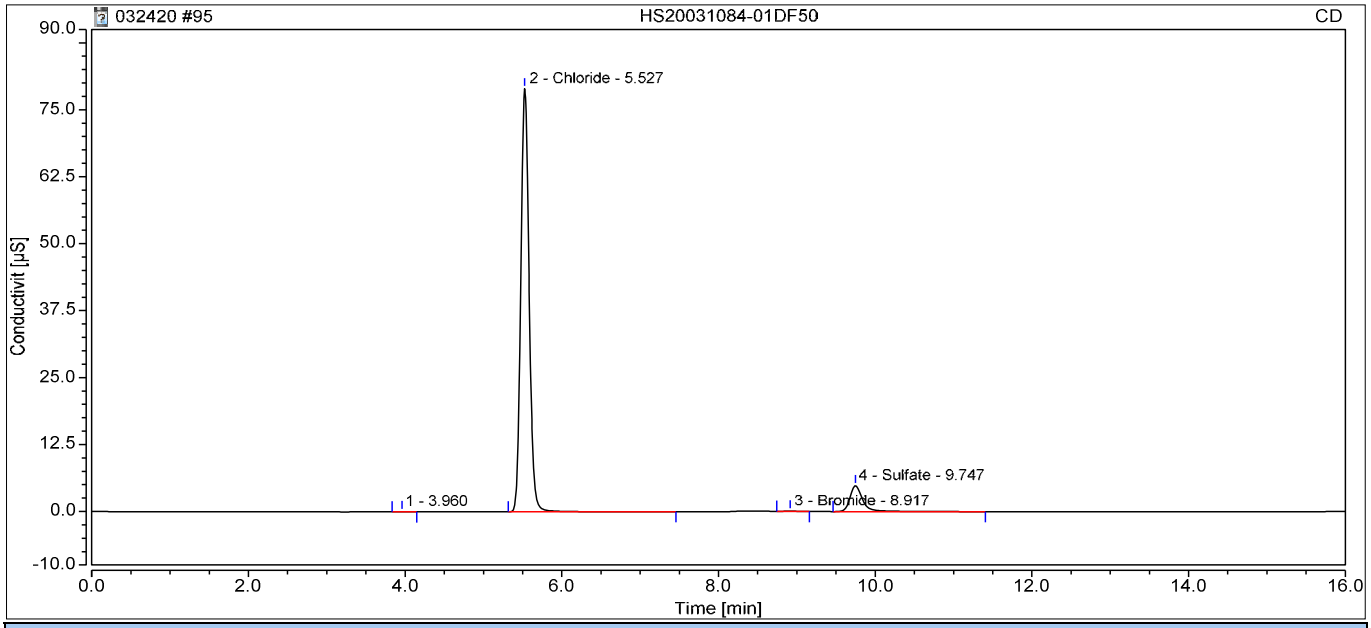
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	0.742	2.1968	2.1968	1.0000
2	5.47	Chloride	BMB^	82.058	353.8122	353.8122	1.0000
3	6.71	Nitrite,N	BMB	1.068	2.3208	2.3208	1.0000
5	8.90	Bromide	BMB	0.255	2.6094	2.6094	1.0000
6	9.63	Sulfate	BM	6.978	41.6576	41.6576	1.0000
7	10.20	Nitrate	M	1.233	2.1224	2.1224	1.0000
8	10.86	Chlorate	MB	0.193	2.0157	2.0157	1.0000
9	15.44	Phosphate	BMB	0.151	0.7970	0.7970	1.0000
Total:			**0.000**	**92.678**		**407.53**	

95 HS20031084-01DF50

Sample Name:	**HS20031084-01DF50**	*Injection Volume:*	**5.00**
Vial Number:	**GC1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**50.0000**
Recording Time:	**03/26/2020 00:56**	*Sample Weight:*	**1.0000**

Run Time:



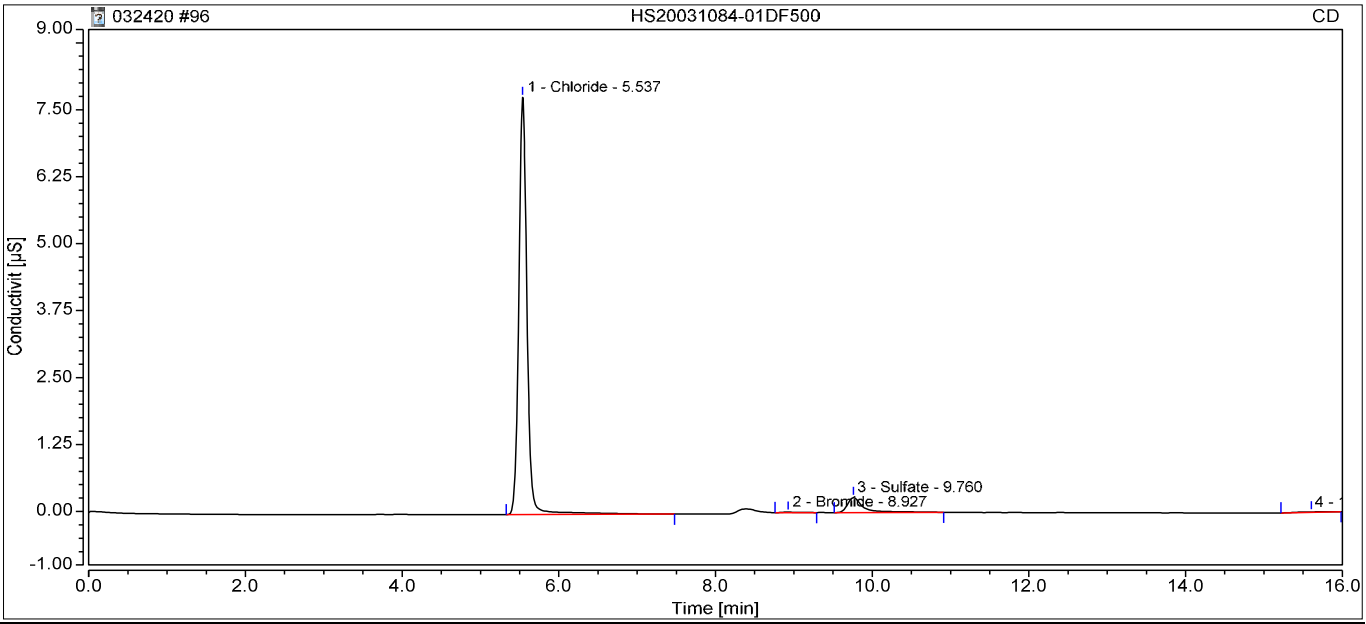
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	50.0000
2	5.53	Chloride	BMB	9.697	41.8653	2093.2640	50.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	50.0000
3	8.92	Bromide	BMB	0.013	0.1600	8.0015	50.0000
4	9.75	Sulfate	BMB	0.921	5.5836	279.1812	50.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	50.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	50.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	50.0000
Total:			**0.000**	**10.630**		**2380.45**	

96 HS20031084-01DF500

Sample Name:	**HS20031084-01DF500**	*Injection Volume:*	**5.00**
Vial Number:	**GC2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**500.0000**
Recording Time:	**03/26/2020 01:14**	*Sample Weight:*	**1.0000**

Run Time:



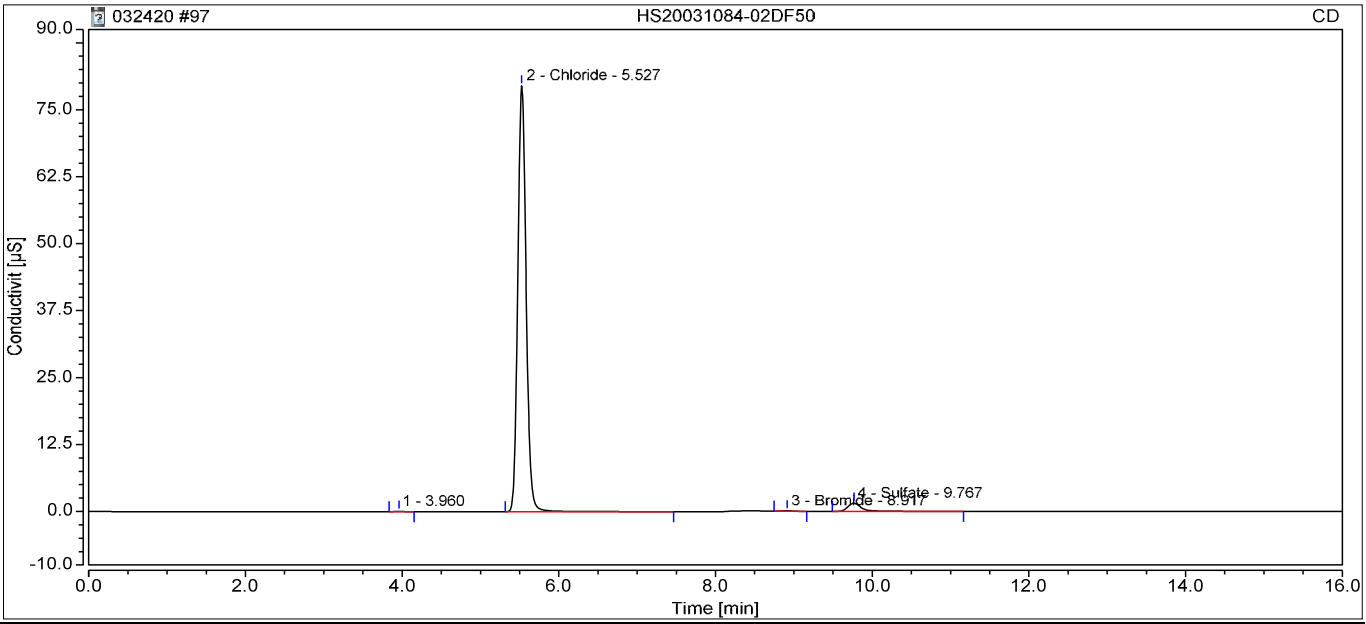
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	500.0000
1	5.54	Chloride	BMB	0.950	4.1557	2077.8720	500.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	500.0000
2	8.93	Bromide	BMB	0.002	0.0542	27.0809	500.0000
3	9.76	Sulfate	BMB	0.067	0.5014	250.7155	500.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	500.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	500.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	500.0000
Total:			**0.000**	**1.019**		**2355.67**	

97 HS20031084-02DF50

Sample Name:	**HS20031084-02DF50**	*Injection Volume:*	**5.00**
Vial Number:	**GC3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**50.0000**
Recording Time:	**03/26/2020 01:32**	*Sample Weight:*	**1.0000**

Run Time:



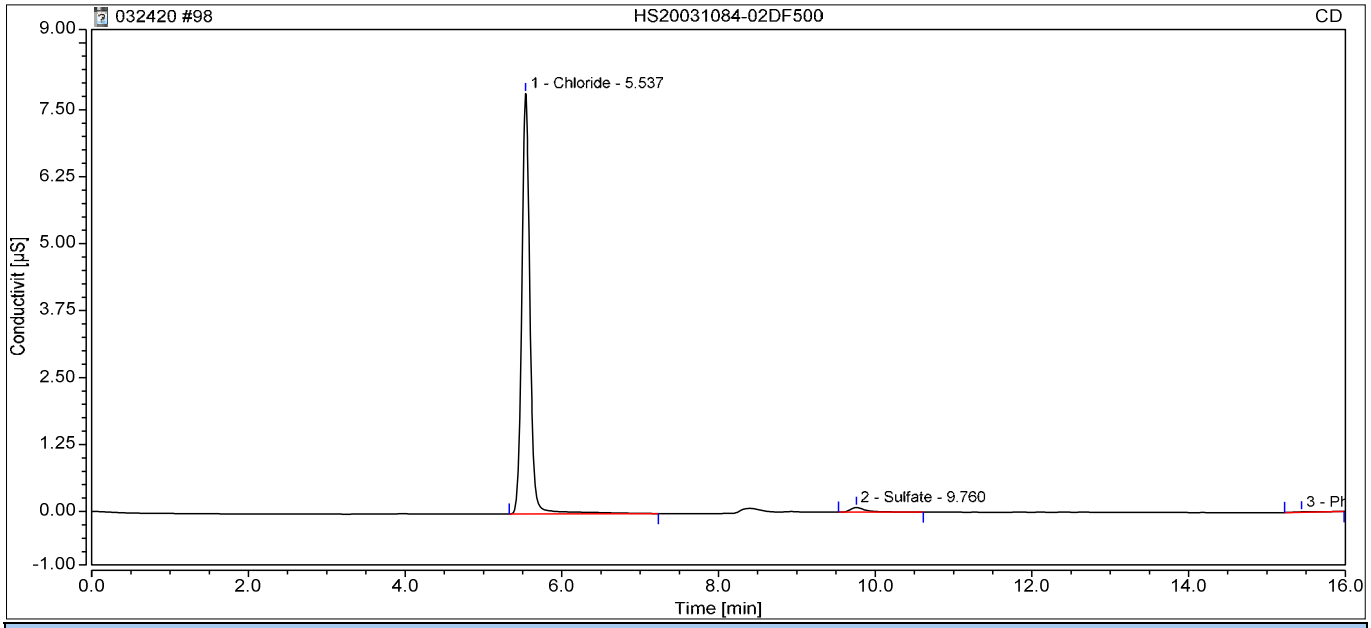
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	50.0000
2	5.53	Chloride	BMB	9.765	42.1565	2107.8262	50.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	50.0000
3	8.92	Bromide	BMB	0.012	0.1589	7.9428	50.0000
4	9.77	Sulfate	BMB	0.333	2.0855	104.2768	50.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	50.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	50.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	50.0000
Total:			**0.000**	**10.110**		**2220.05**	

98 HS20031084-02DF500

Sample Name:	**HS20031084-02DF500**	*Injection Volume:*	**5.00**
Vial Number:	**GC4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**500.0000**
Recording Time:	**03/26/2020 01:50**	*Sample Weight:*	**1.0000**

Run Time:



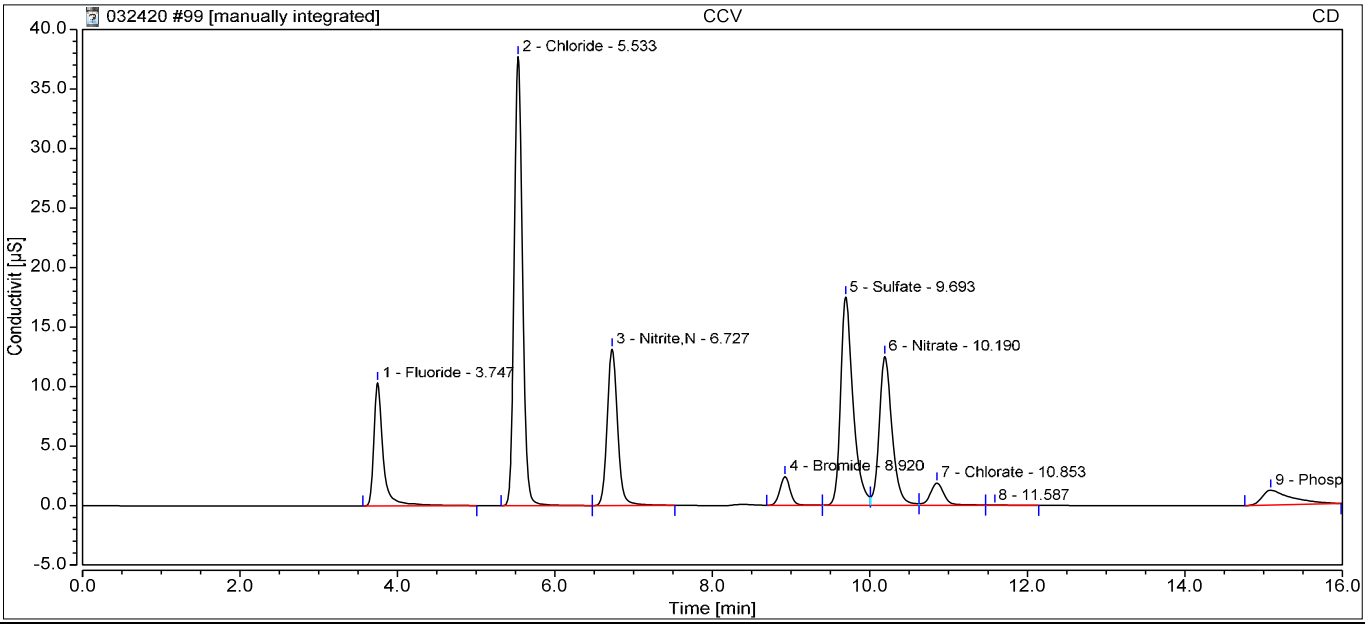
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	500.0000
1	5.54	Chloride	BMB	0.956	4.1816	2090.7754	500.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	500.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	500.0000
2	9.76	Sulfate	BMB	0.020	0.2219	110.9389	500.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	500.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	500.0000
3	15.44	Phosphate	BMB	0.003	0.1222	61.1125	500.0000
Total:			**0.000**	**0.979**		**2262.83**	

99 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**BA1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/26/2020 02:08**	*Sample Weight:*	**1.0000**

Run Time:



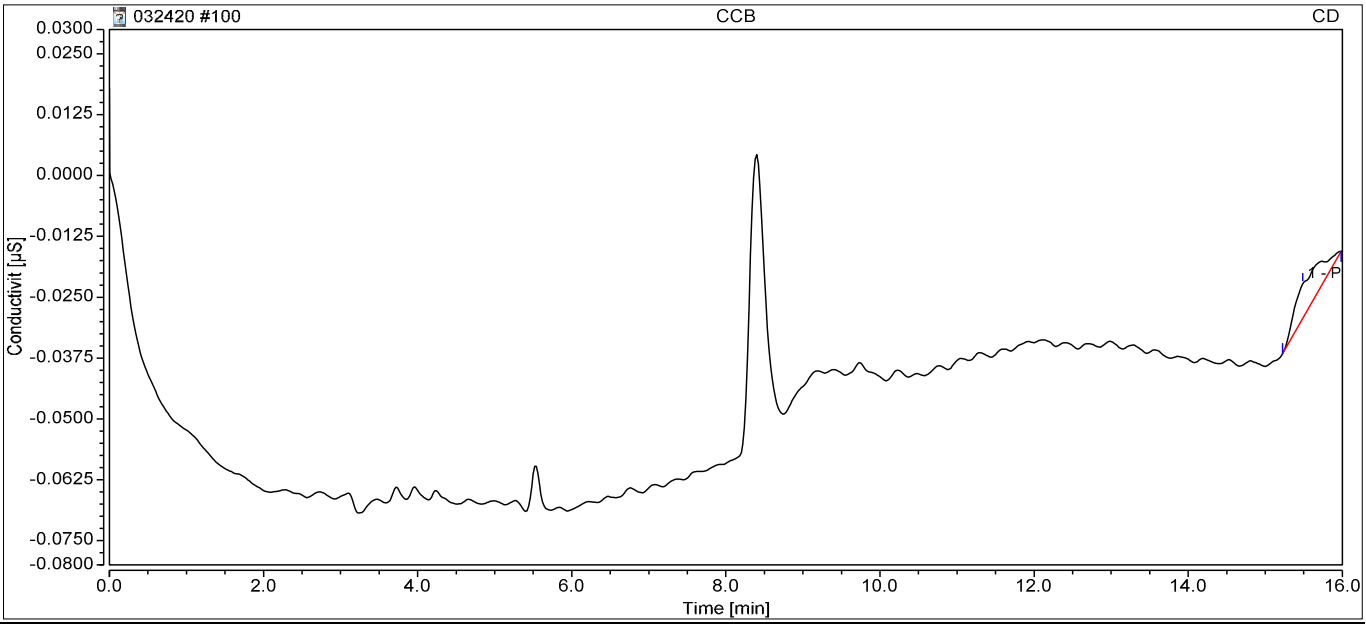
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.75	Fluoride	BMB	1.407	4.1465	4.1465	1.0000
2	5.53	Chloride	BMb*	4.578	19.7960	19.7960	1.0000
3	6.73	Nitrite,N	bMB*	2.022	4.3626	4.3626	1.0000
4	8.92	Bromide	BM	0.366	3.7285	3.7285	1.0000
5	9.69	Sulfate	M	3.219	19.2729	19.2729	1.0000
6	10.19	Nitrate	M	2.364	4.0587	4.0587	1.0000
7	10.85	Chlorate	M	0.388	4.0662	4.0662	1.0000
9	15.09	Phosphate	BMB	0.546	2.6048	2.6048	1.0000
Total:			**0.000**	**14.890**		**62.04**	

100 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/26/2020 02:27**	*Sample Weight:*	**1.0000**

Run Time:



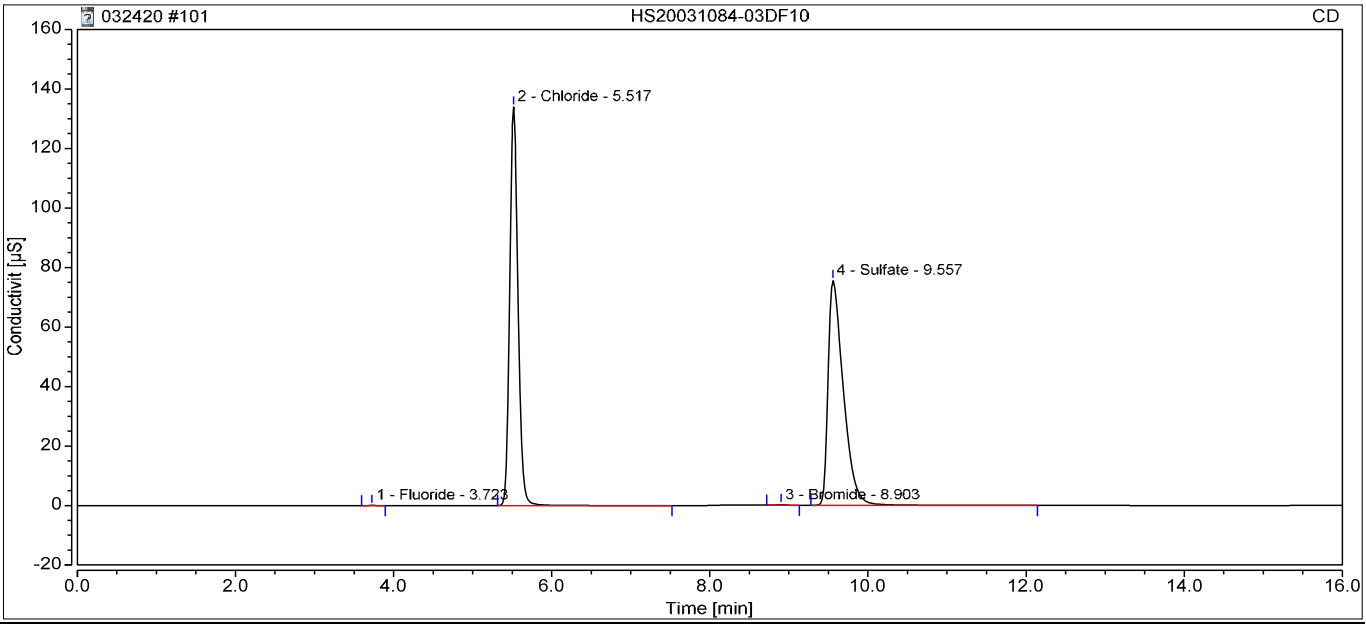
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
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
1	15.49	Phosphate	BMB	0.003	0.1215	0.1215	1.0000
Total:			**0.000**	**0.003**		**0.12**	

101 HS20031084-03DF10

Sample Name:	**HS20031084-03DF10**	*Injection Volume:*	**5.00**
Vial Number:	**GC5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**10.0000**
Recording Time:	**03/26/2020 02:45**	*Sample Weight:*	**1.0000**

Run Time:



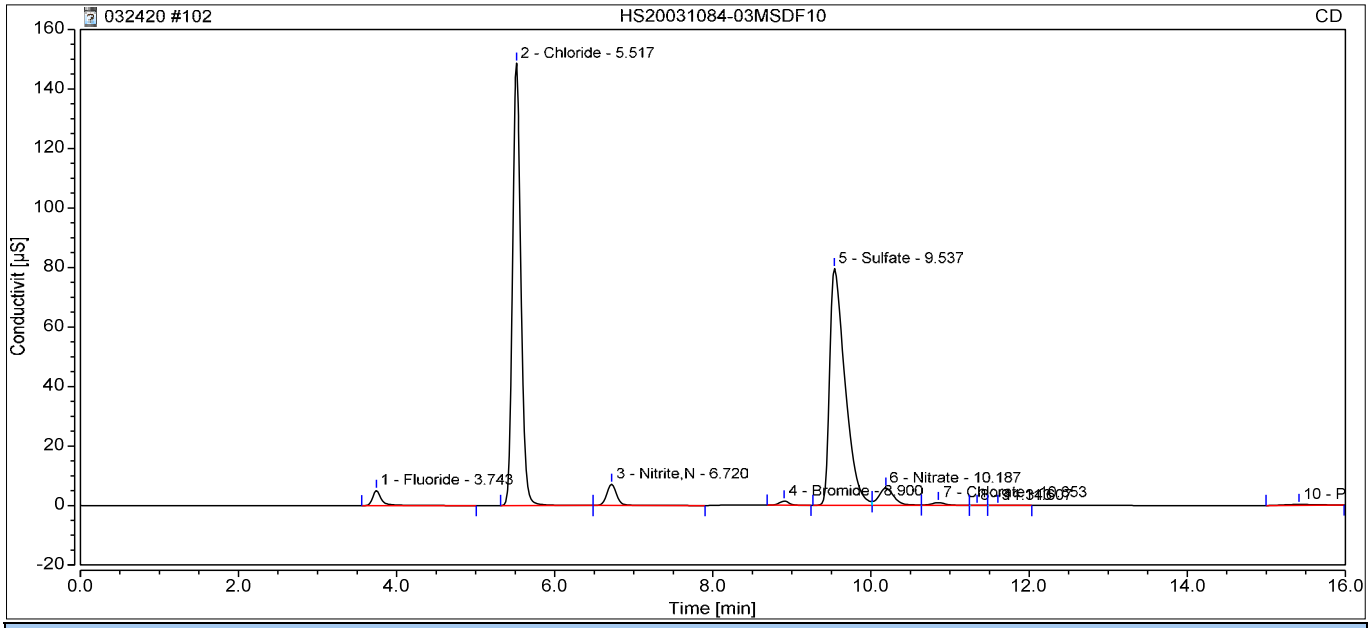
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	0.007	0.0450	0.4505	10.0000
2	5.52	Chloride	BMB	16.519	71.2735	712.7354	10.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	10.0000
3	8.90	Bromide	BMB	0.031	0.3456	3.4559	10.0000
4	9.56	Sulfate	BMB	16.980	101.2207	1012.2073	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**	**33.537**		**1728.85**	

102 HS20031084-03MSDF10

Sample Name:	**HS20031084-03MSDF10**	*Injection Volume:*	**5.00**
Vial Number:	**GD7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**10.0000**
Recording Time:	**03/26/2020 03:03**	*Sample Weight:*	**1.0000**

Run Time:



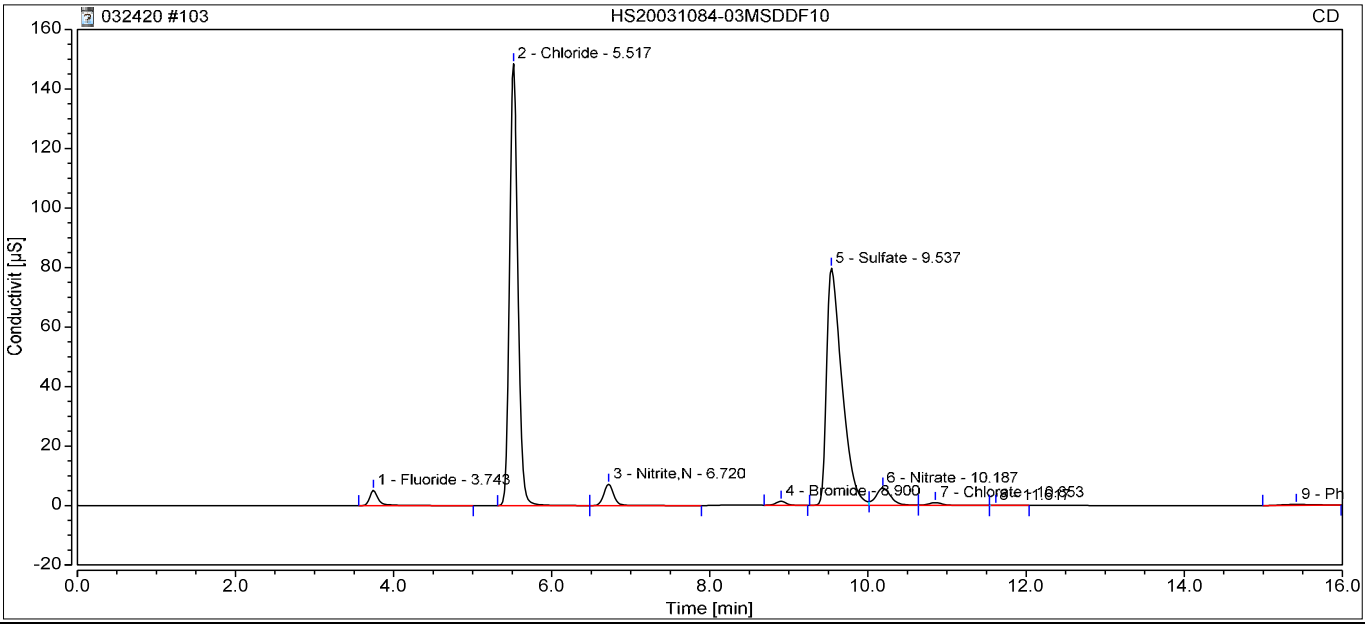
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	0.691	2.0495	20.4953	10.0000
2	5.52	Chloride	BMB	18.343	79.1362	791.3622	10.0000
3	6.72	Nitrite,N	BMB	1.038	2.2565	22.5651	10.0000
4	8.90	Bromide	BMB	0.203	2.0856	20.8559	10.0000
5	9.54	Sulfate	BM	18.036	107.5082	1075.0822	10.0000
6	10.19	Nitrate	M	1.290	2.2213	22.2133	10.0000
7	10.85	Chlorate	M	0.197	2.0608	20.6085	10.0000
10	15.41	Phosphate	BMB	0.146	0.7734	7.7335	10.0000
Total:			**0.000**	**39.945**		**1980.92**	

103 HS20031084-03MSDDF10

Sample Name:	**HS20031084-03MSDDF10**	*Injection Volume:*	**5.00**
Vial Number:	**GD8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**10.0000**
Recording Time:	**03/26/2020 03:21**	*Sample Weight:*	**1.0000**

Run Time:



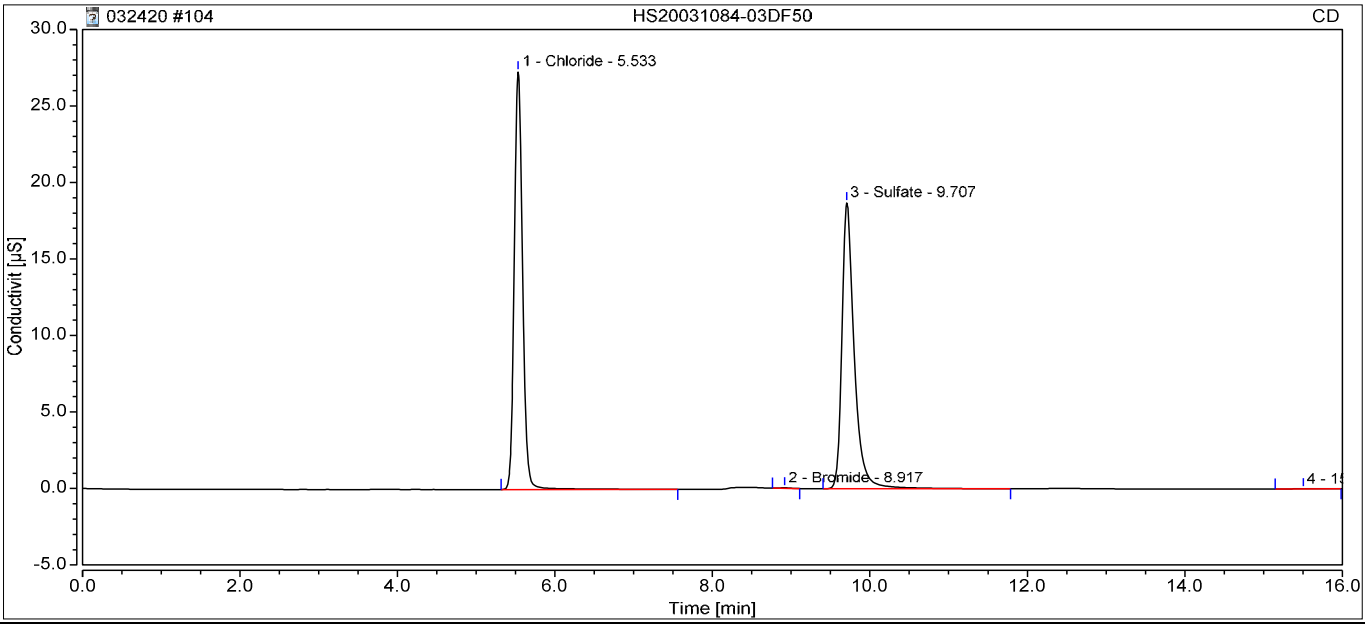
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	0.697	2.0670	20.6702	10.0000
2	5.52	Chloride	BMB	18.329	79.0763	790.7634	10.0000
3	6.72	Nitrite,N	BMB	1.043	2.2659	22.6594	10.0000
4	8.90	Bromide	BMB	0.204	2.0911	20.9115	10.0000
5	9.54	Sulfate	BM	18.050	107.5922	1075.9215	10.0000
6	10.19	Nitrate	M	1.291	2.2232	22.2321	10.0000
7	10.85	Chlorate	M	0.206	2.1480	21.4804	10.0000
9	15.42	Phosphate	BMB	0.154	0.8101	8.1013	10.0000
Total:			**0.000**	**39.973**		**1982.74**	

104 HS20031084-03DF50

Sample Name:	**HS20031084-03DF50**	*Injection Volume:*	**5.00**
Vial Number:	**GC6**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**50.0000**
Recording Time:	**03/26/2020 03:39**	*Sample Weight:*	**1.0000**

Run Time:



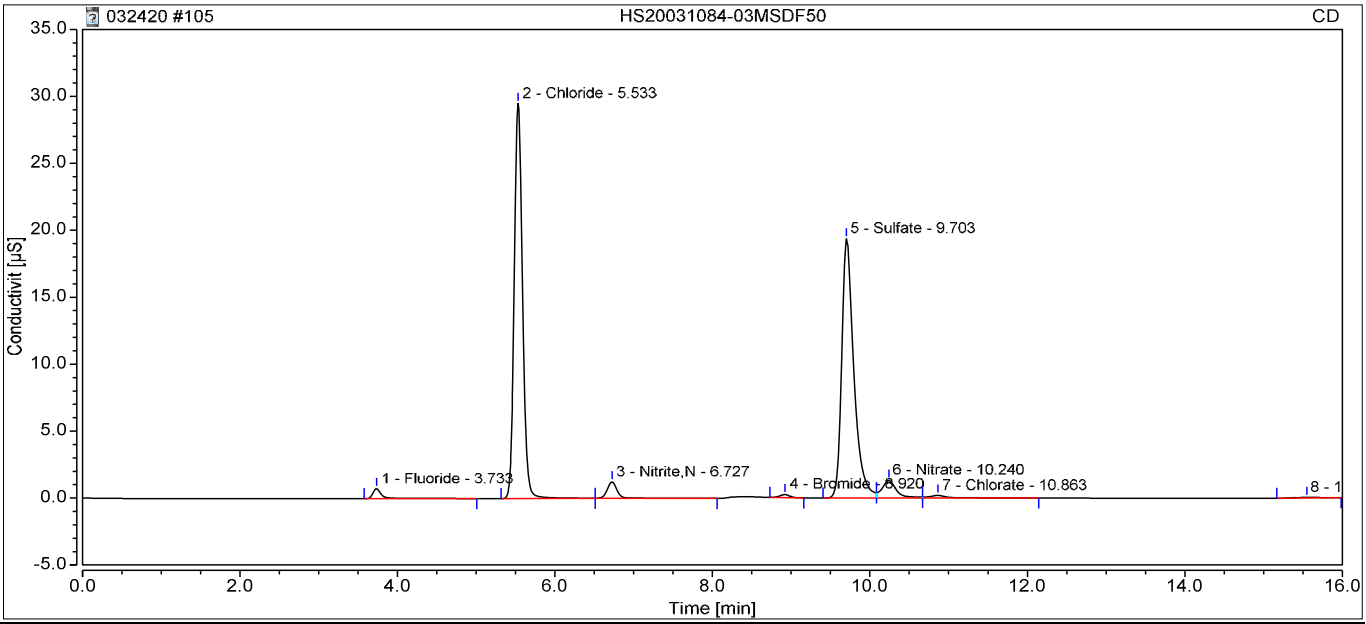
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	50.0000
1	5.53	Chloride	BMB	3.318	14.3648	718.2397	50.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	50.0000
2	8.92	Bromide	BMB	0.005	0.0886	4.4322	50.0000
3	9.71	Sulfate	BMB	3.410	20.4101	1020.5063	50.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	50.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	50.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	50.0000
Total:			**0.000**	**6.734**		**1743.18**	

105 HS20031084-03MSDF50

Sample Name:	**HS20031084-03MSDF50**	*Injection Volume:*	**5.00**
Vial Number:	**GE1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**50.0000**
Recording Time:	**03/26/2020 03:57**	*Sample Weight:*	**1.0000**

Run Time:



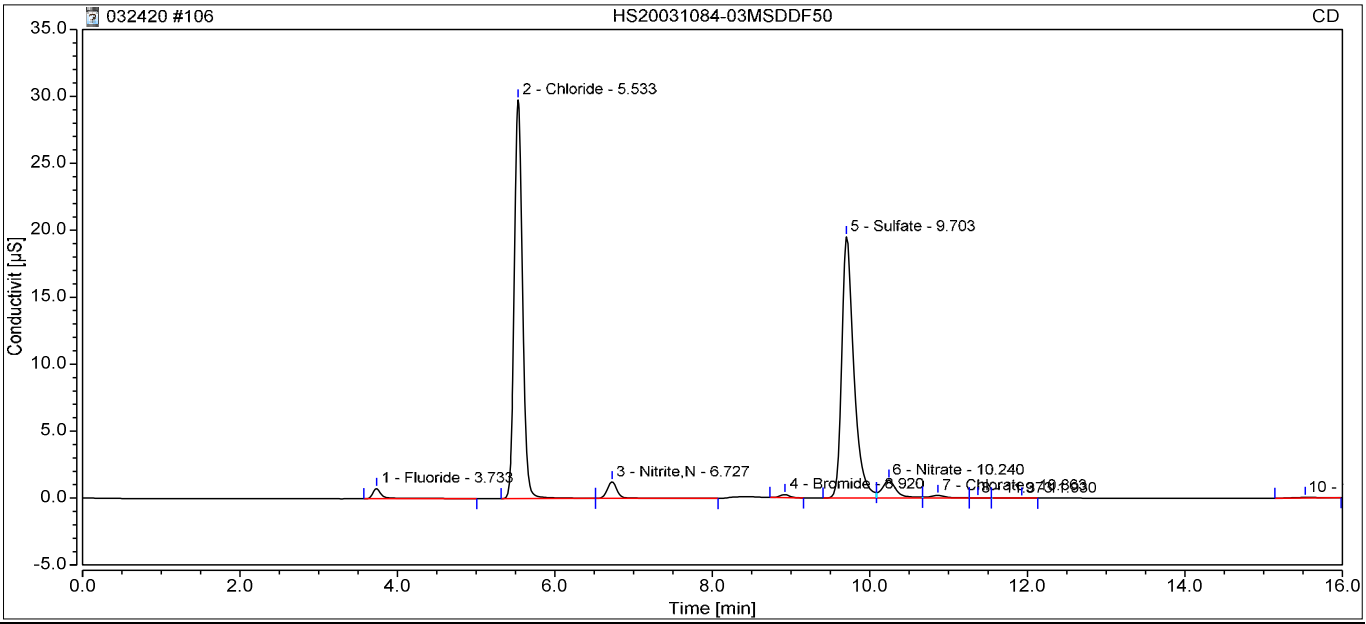
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.108	0.3393	16.9656	50.0000
2	5.53	Chloride	BMB	3.567	15.4369	771.8454	50.0000
3	6.73	Nitrite,N	BMB	0.183	0.4256	21.2794	50.0000
4	8.92	Bromide	BMB	0.033	0.3640	18.2016	50.0000
5	9.70	Sulfate	BM	3.468	20.7549	1037.7429	50.0000
6	10.24	Nitrate	M	0.280	0.4929	24.6440	50.0000
7	10.86	Chlorate	MB	0.056	0.5760	28.7992	50.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	50.0000
Total:			**0.000**	**7.695**		**1919.48**	

106 HS20031084-03MSDDF50

Sample Name:	**HS20031084-03MSDDF50**	*Injection Volume:*	**5.00**
Vial Number:	**GE2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**50.0000**
Recording Time:	**03/26/2020 04:15**	*Sample Weight:*	**1.0000**

Run Time:



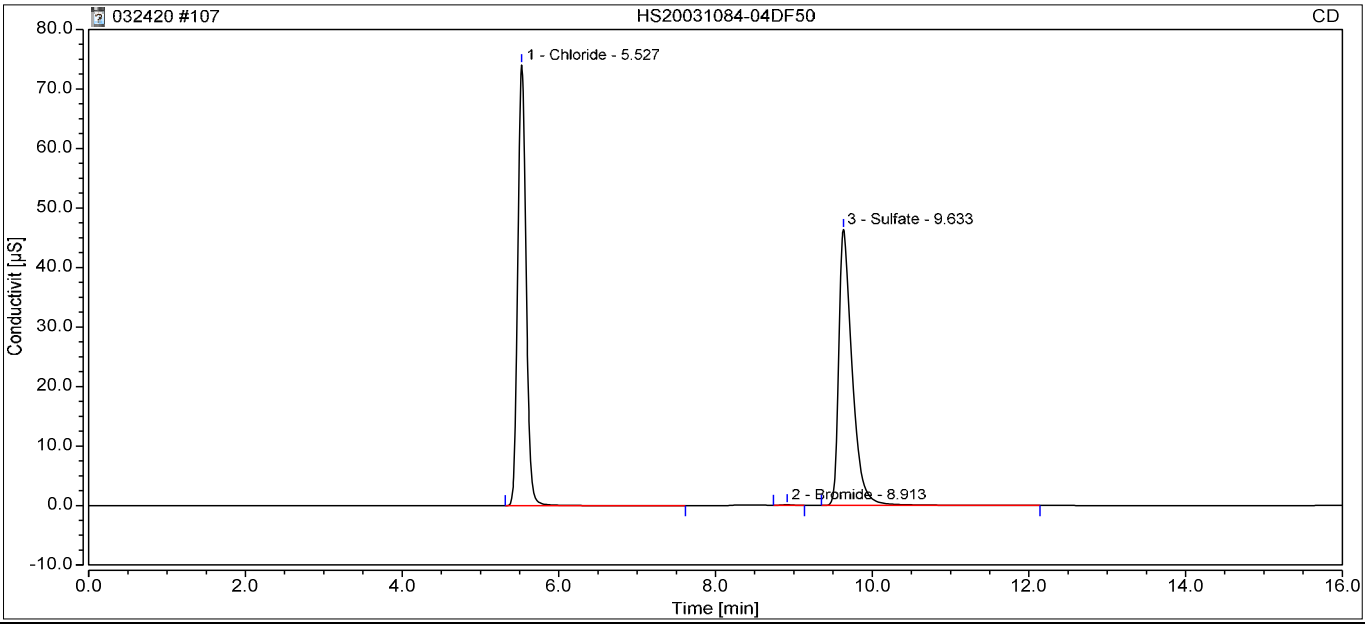
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.109	0.3447	17.2342	50.0000
2	5.53	Chloride	BMB	3.602	15.5882	779.4114	50.0000
3	6.73	Nitrite,N	BMB	0.185	0.4295	21.4772	50.0000
4	8.92	Bromide	BMB	0.033	0.3651	18.2554	50.0000
5	9.70	Sulfate	BM	3.505	20.9756	1048.7796	50.0000
6	10.24	Nitrate	M	0.282	0.4958	24.7888	50.0000
7	10.86	Chlorate	M	0.050	0.5074	25.3680	50.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	50.0000
Total:			**0.000**	**7.766**		**1935.31**	

107 HS20031084-04DF50

Sample Name:	**HS20031084-04DF50**	*Injection Volume:*	**5.00**
Vial Number:	**GC7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**50.0000**
Recording Time:	**03/26/2020 04:33**	*Sample Weight:*	**1.0000**

Run Time:



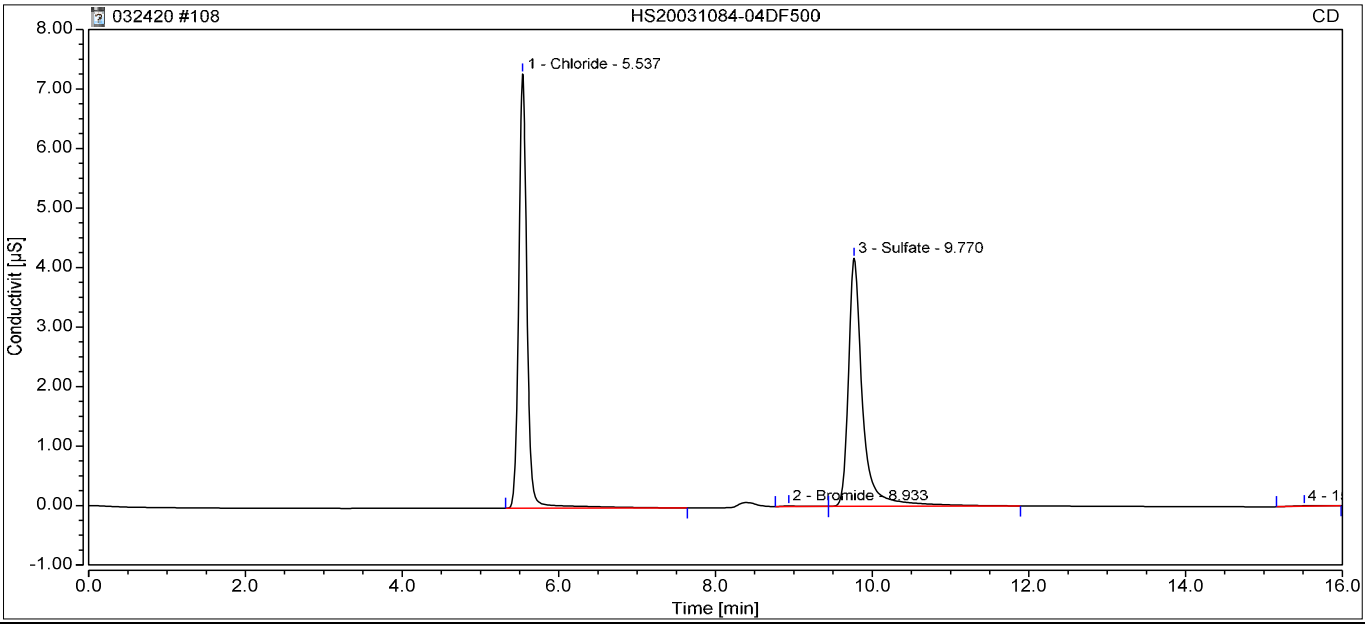
Integration Results

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.	50.0000
1	5.53	Chloride	BMB	9.093	39.2594	1962.9687	50.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	50.0000
2	8.91	Bromide	BMB	0.015	0.1833	9.1655	50.0000
3	9.63	Sulfate	BMB	9.216	54.9821	2749.1062	50.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	50.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	50.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	50.0000
Total:			**0.000**	**18.323**		**4721.24**	

108 HS20031084-04DF500

Sample Name:	**HS20031084-04DF500**	*Injection Volume:*	**5.00**
Vial Number:	**GC8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**500.0000**
Recording Time:	**03/26/2020 04:51**	*Sample Weight:*	**1.0000**

Run Time:



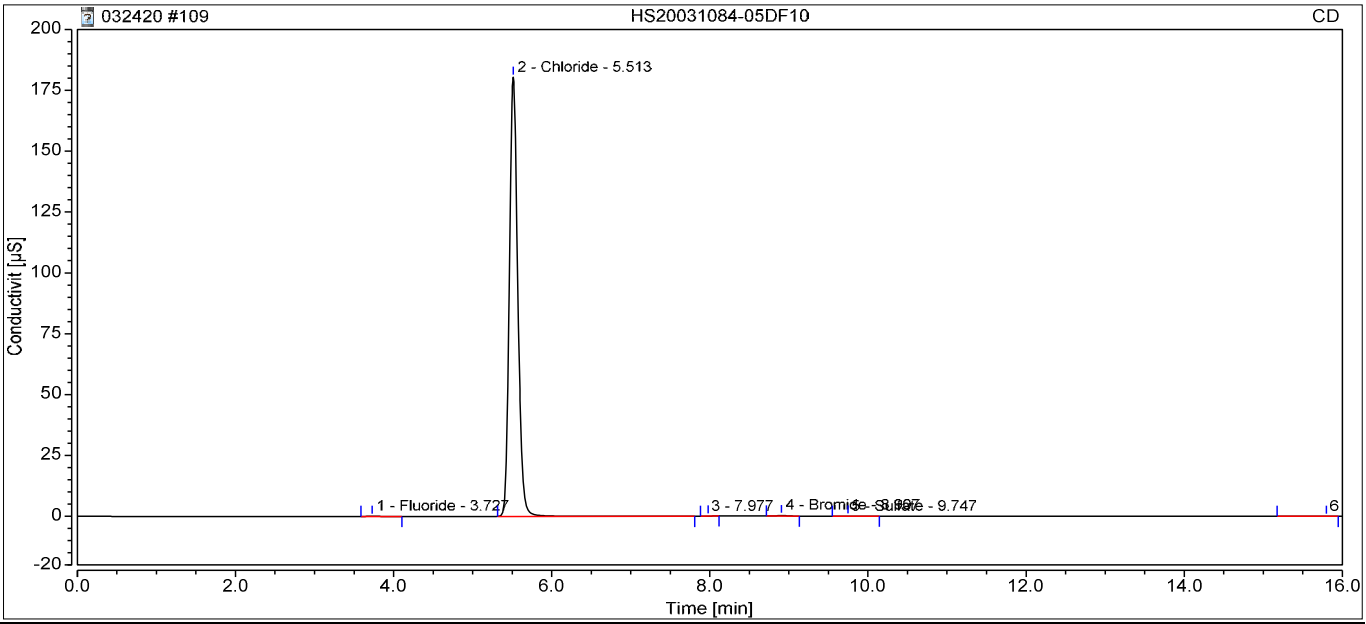
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	500.0000
1	5.54	Chloride	BMB	0.894	3.9147	1957.3695	500.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	500.0000
2	8.93	Bromide	BMB	0.003	0.0593	29.6460	500.0000
3	9.77	Sulfate	BMB	0.874	5.3037	2651.8268	500.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	500.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	500.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	500.0000
Total:			**0.000**	**1.770**		**4638.84**	

109 HS20031084-05DF10

Sample Name:	**HS20031084-05DF10**	*Injection Volume:*	**5.00**
Vial Number:	**GD1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**10.0000**
Recording Time:	**03/26/2020 05:09**	*Sample Weight:*	**1.0000**

Run Time:



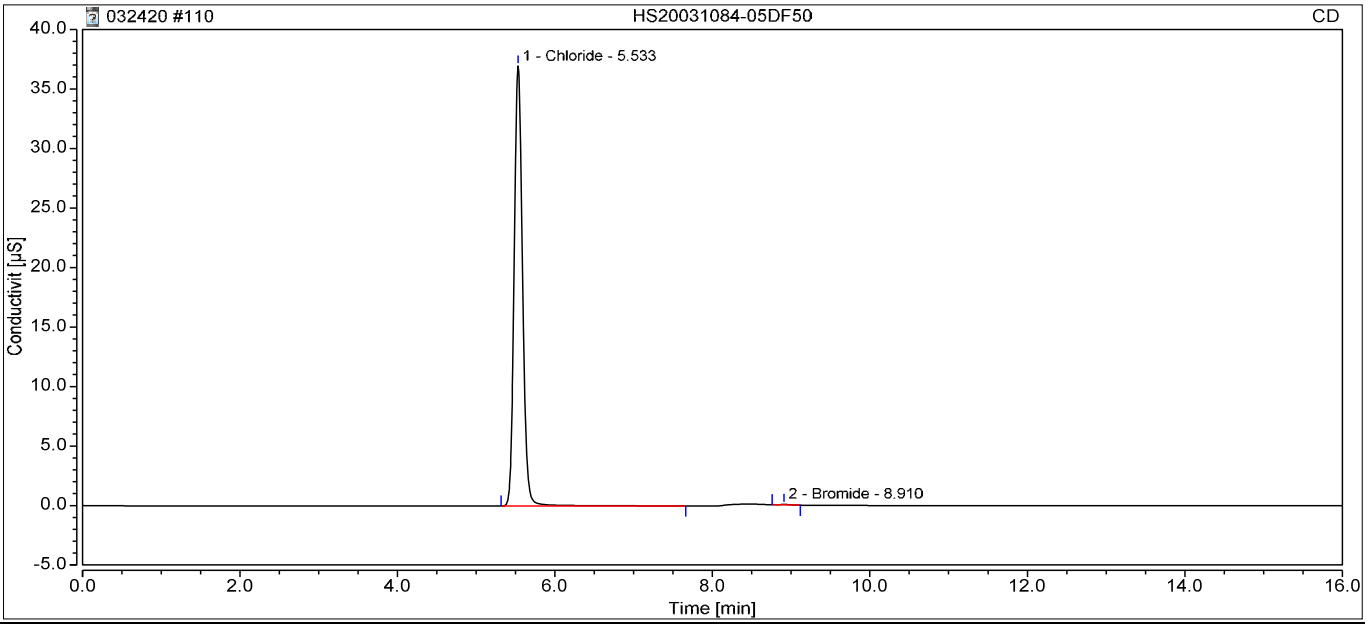
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.011	0.0561	0.5607	10.0000
2	5.51	Chloride	BMB	22.441	96.8027	968.0270	10.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	10.0000
4	8.91	Bromide	BMB	0.033	0.3668	3.6685	10.0000
5	9.75	Sulfate	BMB	0.011	0.1676	1.6756	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**	**22.496**		**973.93**	

110 HS20031084-05DF50

Sample Name:	**HS20031084-05DF50**	*Injection Volume:*	**5.00**
Vial Number:	**GD2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**50.0000**
Recording Time:	**03/26/2020 05:28**	*Sample Weight:*	**1.0000**

Run Time:



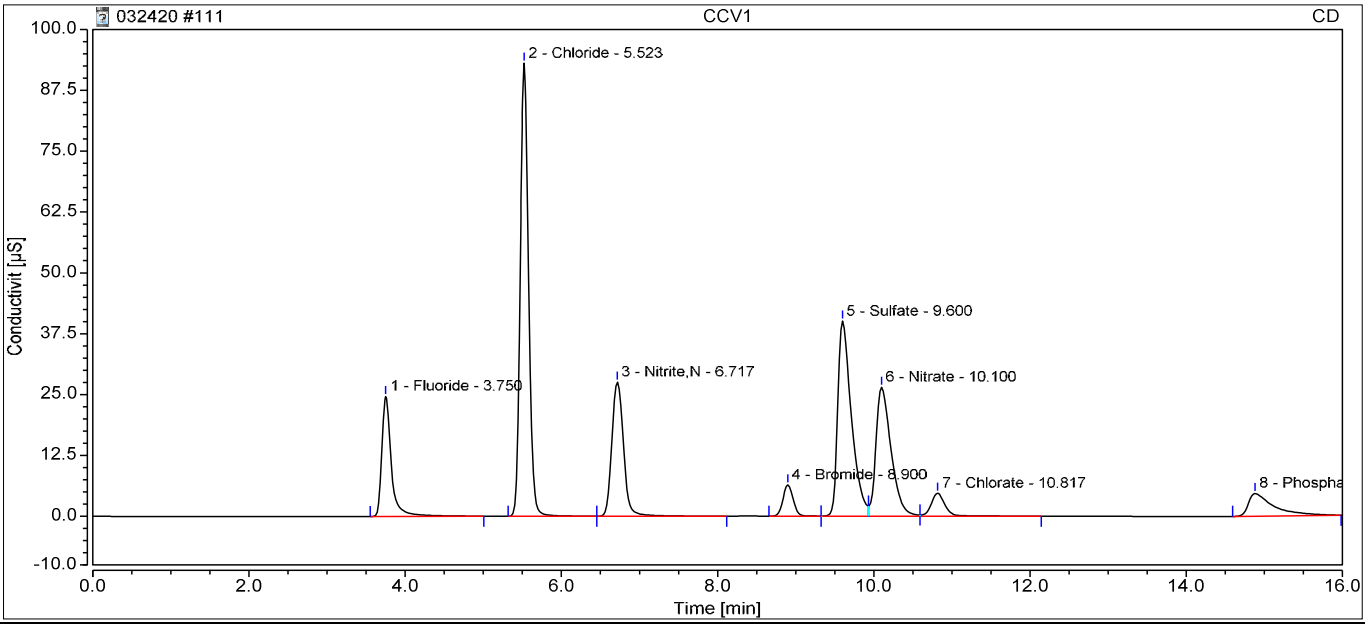
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	50.0000
1	5.53	Chloride	BMB	4.521	19.5516	977.5814	50.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	50.0000
2	8.91	Bromide	BMB	0.005	0.0887	4.4350	50.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	50.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	50.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	50.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	50.0000
Total:			**0.000**	**4.527**		**982.02**	

111 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**BA3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/26/2020 05:46**	*Sample Weight:*	**1.0000**

Run Time:



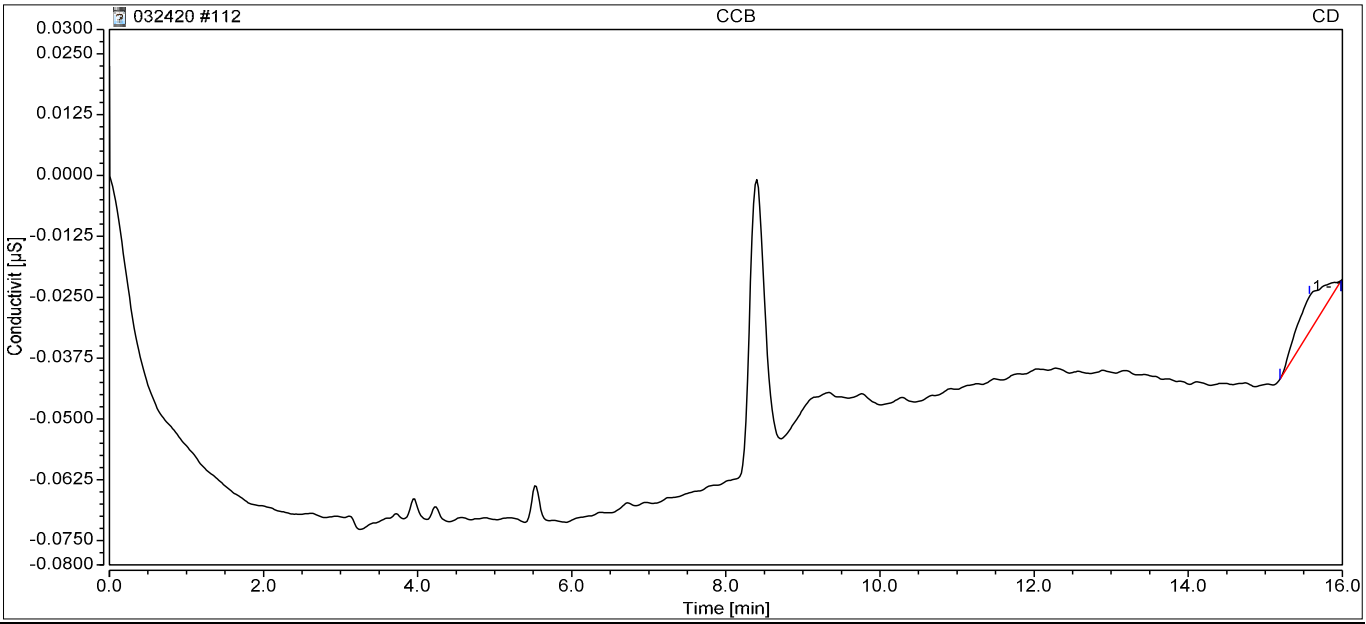
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.75	Fluoride	BMB	3.471	10.1911	10.1911	1.0000
2	5.52	Chloride	BMB	11.448	49.4113	49.4113	1.0000
3	6.72	Nitrite,N	BMB	4.799	10.3076	10.3076	1.0000
4	8.90	Bromide	BM	0.977	9.8865	9.8865	1.0000
5	9.60	Sulfate	M	8.120	48.4563	48.4563	1.0000
6	10.10	Nitrate	M	5.946	10.1898	10.1898	1.0000
7	10.82	Chlorate	MB	0.987	10.3826	10.3826	1.0000
8	14.88	Phosphate	BMB	1.758	8.1475	8.1475	1.0000
Total:			**0.000**	**37.506**		**156.97**	

112 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/26/2020 06:04**	*Sample Weight:*	**1.0000**

Run Time:



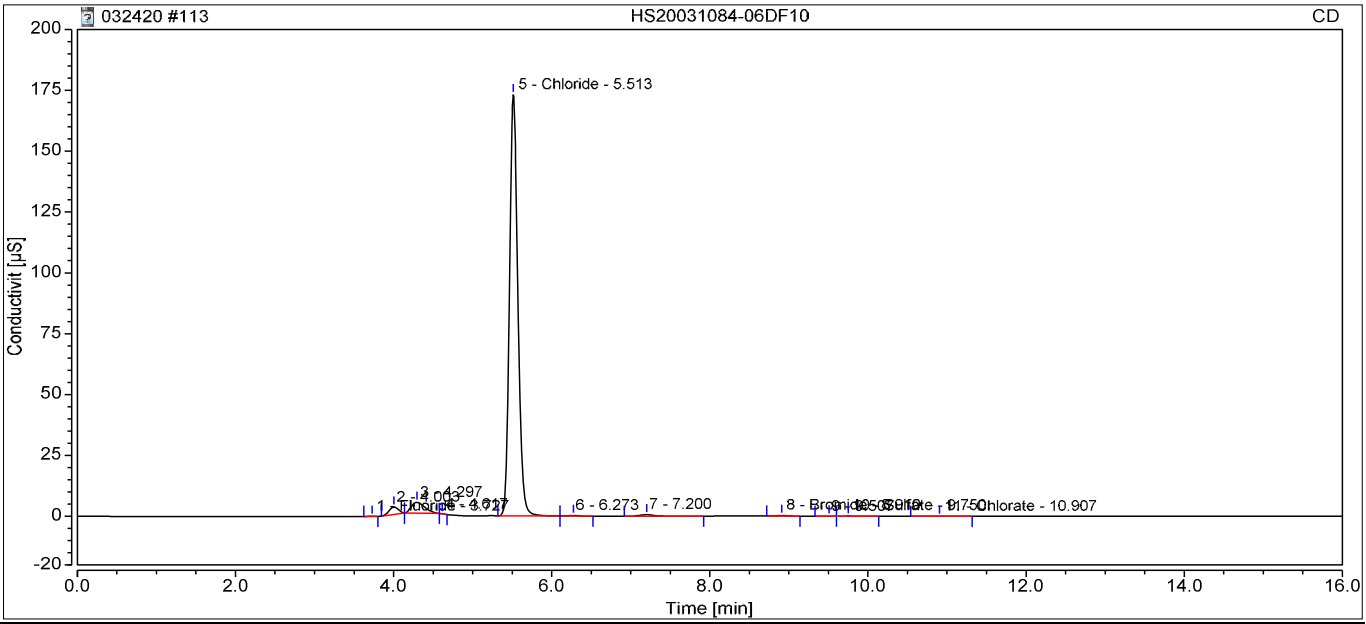
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
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**	

113 HS20031084-06DF10

Sample Name:	**HS20031084-06DF10**	*Injection Volume:*	**5.00**
Vial Number:	**GD3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**10.0000**
Recording Time:	**03/26/2020 06:22**	*Sample Weight:*	**1.0000**

Run Time:



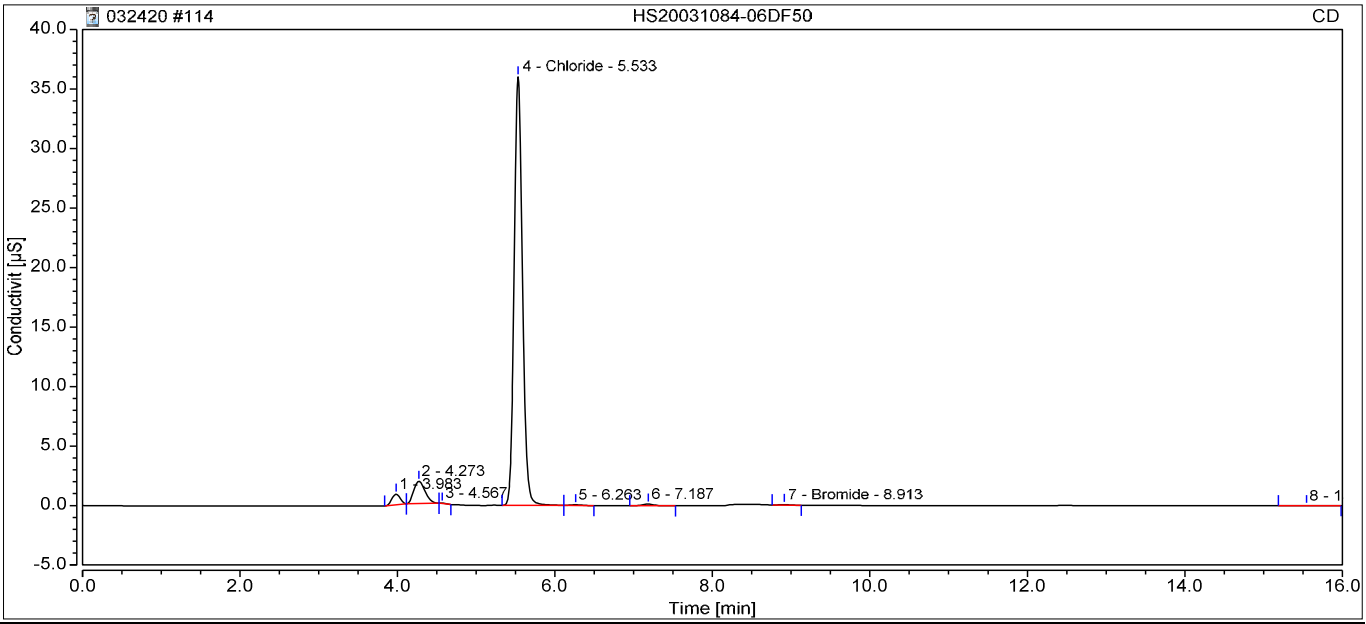
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.003	0.0333	0.3329	10.0000
5	5.51	Chloride	BMB	21.446	92.5158	925.1576	10.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	10.0000
8	8.91	Bromide	BMB	0.034	0.3782	3.7824	10.0000
10	9.75	Sulfate	MB	0.013	0.1814	1.8144	10.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	10.0000
11	10.91	Chlorate	BMB	0.003	0.0162	0.1625	10.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	10.0000
Total:			**0.000**	**21.500**		**931.25**	

114 HS20031084-06DF50

Sample Name:	**HS20031084-06DF50**	*Injection Volume:*	**5.00**
Vial Number:	**GD4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**50.0000**
Recording Time:	**03/26/2020 06:40**	*Sample Weight:*	**1.0000**

Run Time:



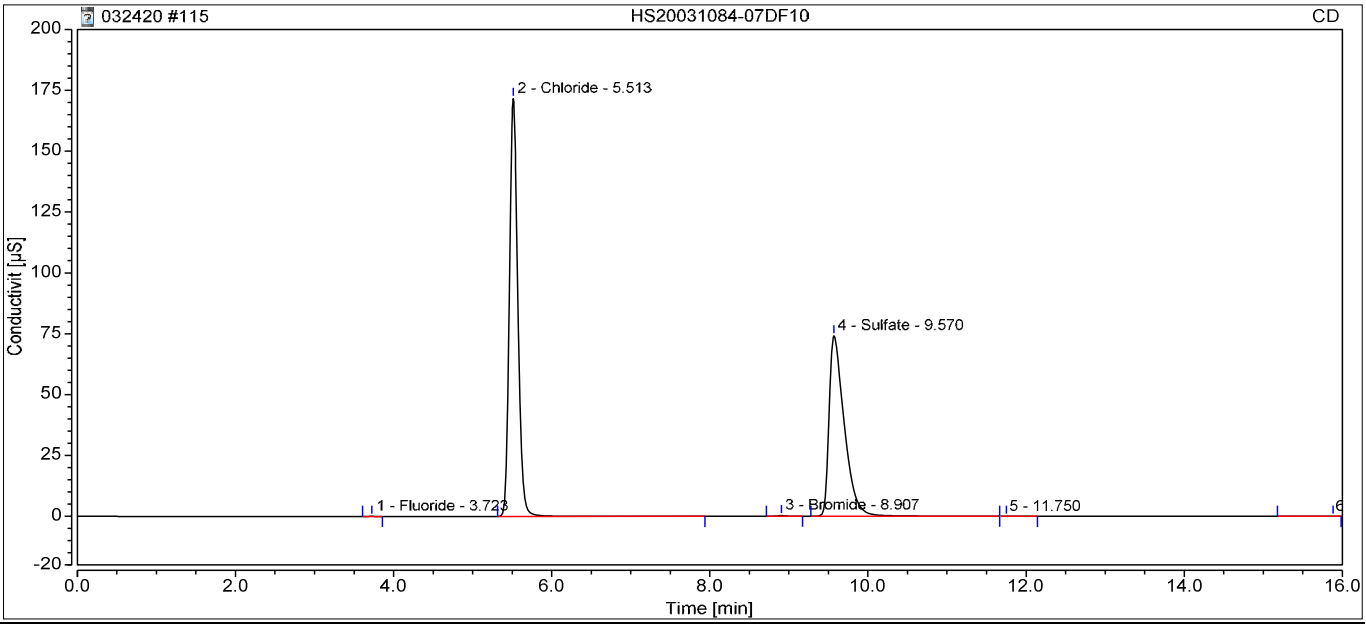
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	50.0000
4	5.53	Chloride	BMB	4.365	18.8794	943.9717	50.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	50.0000
7	8.91	Bromide	BMB	0.006	0.0930	4.6524	50.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	50.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	50.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	50.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	50.0000
Total:			**0.000**	**4.371**		**948.62**	

115 HS20031084-07DF10

Sample Name:	**HS20031084-07DF10**	*Injection Volume:*	**5.00**
Vial Number:	**GD5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**10.0000**
Recording Time:	**03/26/2020 06:58**	*Sample Weight:*	**1.0000**

Run Time:



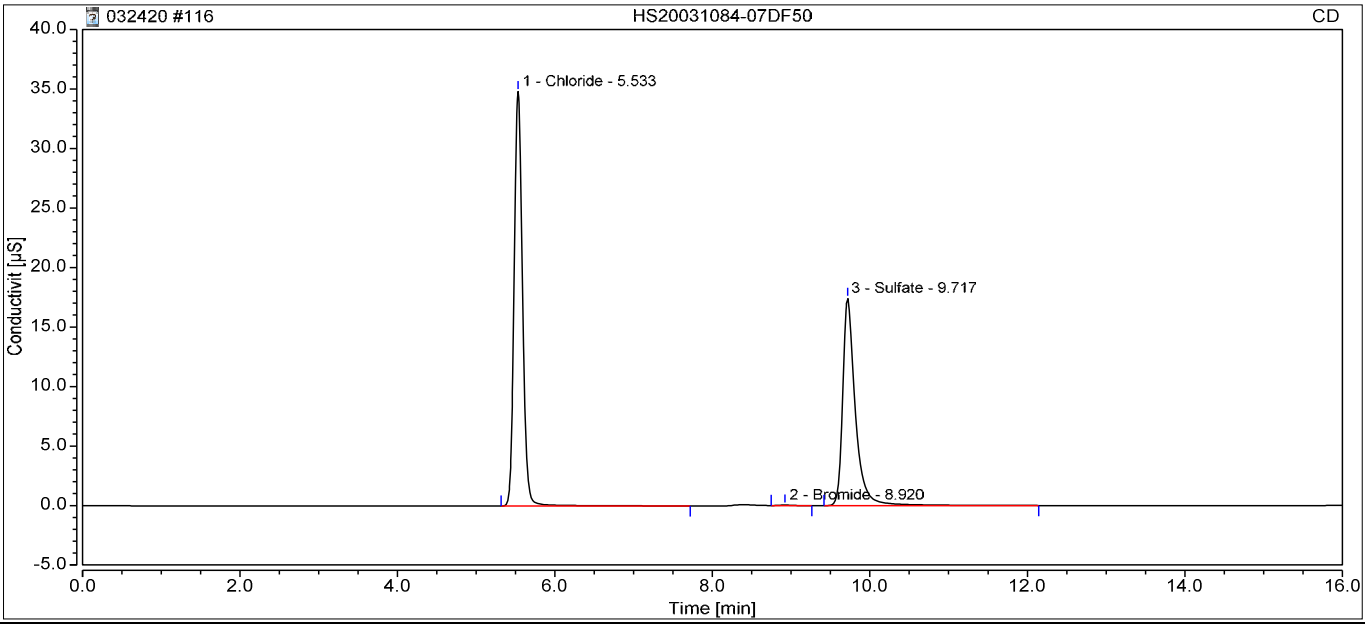
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	0.002	0.0313	0.3133	10.0000
2	5.51	Chloride	BMB	21.374	92.2023	922.0230	10.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	10.0000
3	8.91	Bromide	BMB	0.033	0.3699	3.6988	10.0000
4	9.57	Sulfate	BM	16.596	98.9324	989.3241	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**	**38.005**		**1915.36**	

116 HS20031084-07DF50

Sample Name:	**HS20031084-07DF50**	*Injection Volume:*	**5.00**
Vial Number:	**GD6**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**50.0000**
Recording Time:	**03/26/2020 07:16**	*Sample Weight:*	**1.0000**

Run Time:



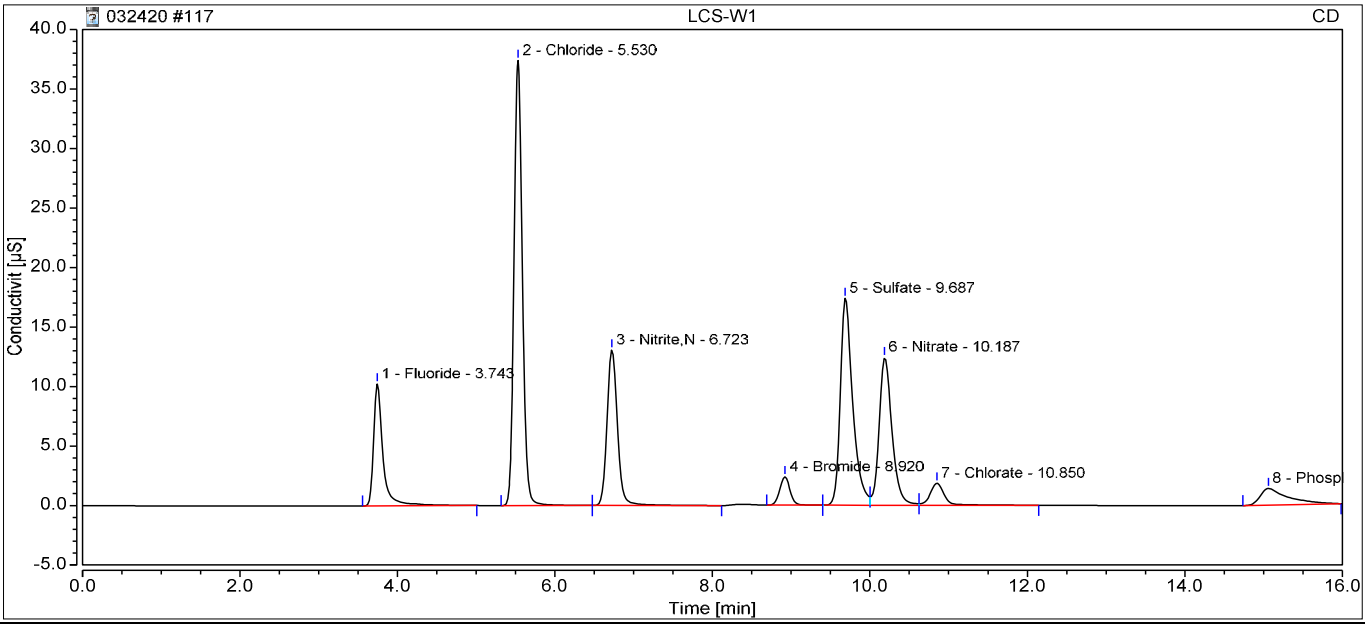
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	50.0000
1	5.53	Chloride	BMB	4.254	18.4017	920.0852	50.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	50.0000
2	8.92	Bromide	BMB	0.006	0.0981	4.9046	50.0000
3	9.72	Sulfate	BMB	3.261	19.5214	976.0676	50.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	50.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	50.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	50.0000
Total:			**0.000**	**7.522**		**1901.06**	

117 LCS-W1

Sample Name:	**LCS-W1**	*Injection Volume:*	**5.00**
Vial Number:	**RA2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/26/2020 07:34**	*Sample Weight:*	**1.0000**

Run Time:



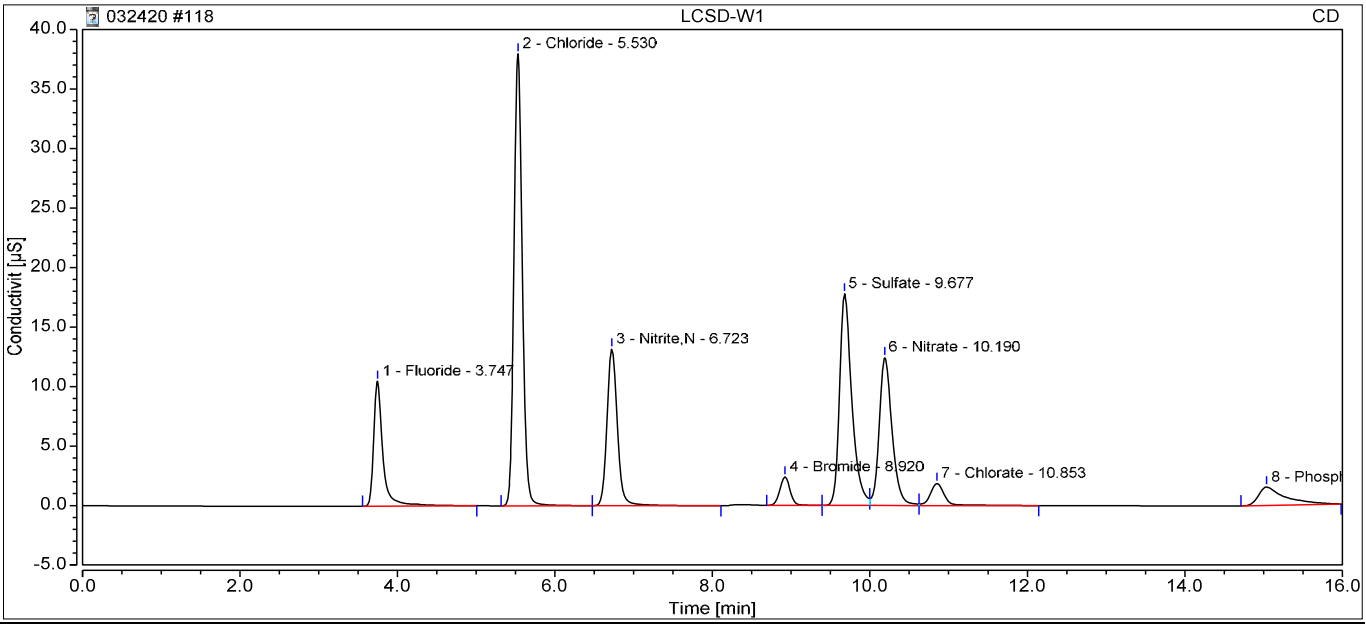
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.408	4.1478	4.1478	1.0000
2	5.53	Chloride	BMB	4.551	19.6816	19.6816	1.0000
3	6.72	Nitrite,N	BMB	2.031	4.3821	4.3821	1.0000
4	8.92	Bromide	BM	0.361	3.6737	3.6737	1.0000
5	9.69	Sulfate	M	3.189	19.0951	19.0951	1.0000
6	10.19	Nitrate	M	2.350	4.0353	4.0353	1.0000
7	10.85	Chlorate	MB	0.392	4.1065	4.1065	1.0000
8	15.06	Phosphate	BMB	0.577	2.7466	2.7466	1.0000
Total:			**0.000**	**14.859**		**61.87**	

118 LCSD-W1

Sample Name:	**LCSD-W1**	*Injection Volume:*	**5.00**
Vial Number:	**RA3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/26/2020 07:52**	*Sample Weight:*	**1.0000**

Run Time:



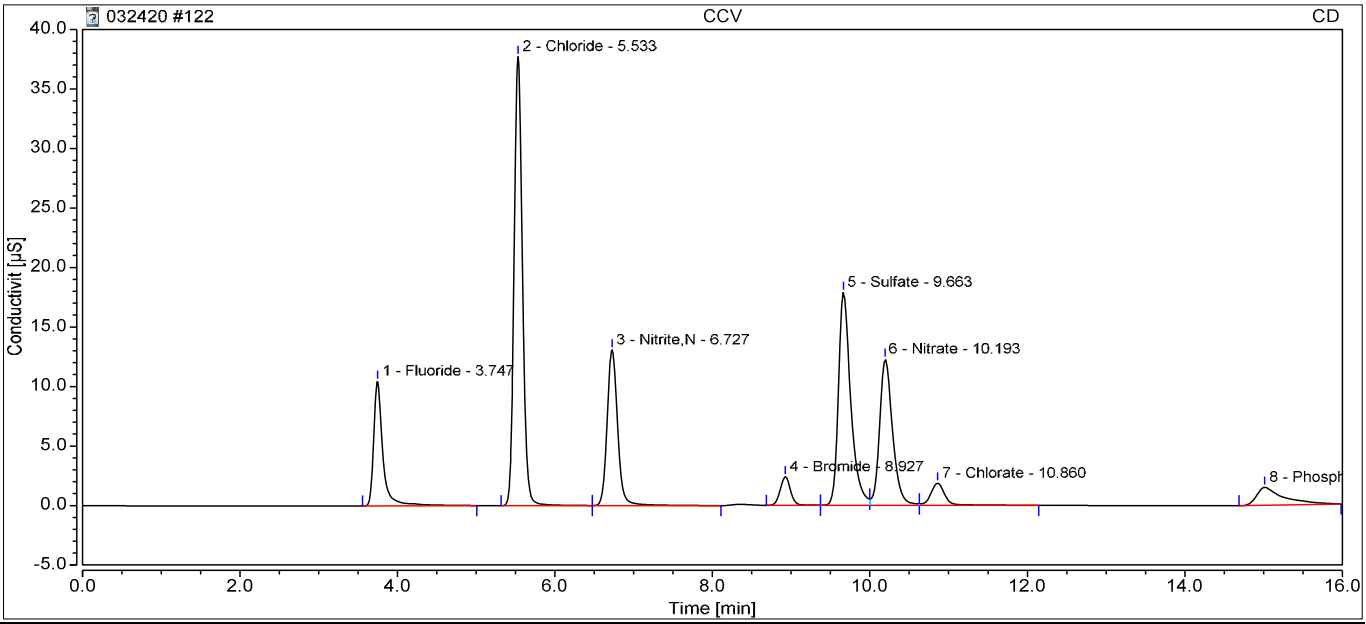
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.75	Fluoride	BMB	1.416	4.1716	4.1716	1.0000
2	5.53	Chloride	BMB	4.608	19.9276	19.9276	1.0000
3	6.72	Nitrite,N	BMB	2.038	4.3973	4.3973	1.0000
4	8.92	Bromide	BM	0.364	3.7011	3.7011	1.0000
5	9.68	Sulfate	M	3.231	19.3400	19.3400	1.0000
6	10.19	Nitrate	M	2.350	4.0341	4.0341	1.0000
7	10.85	Chlorate	MB	0.391	4.0959	4.0959	1.0000
8	15.04	Phosphate	BMB	0.612	2.9073	2.9073	1.0000
Total:			**0.000**	**15.009**		**62.57**	

122 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**BA1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/26/2020 09:05**	*Sample Weight:*	**1.0000**

Run Time:



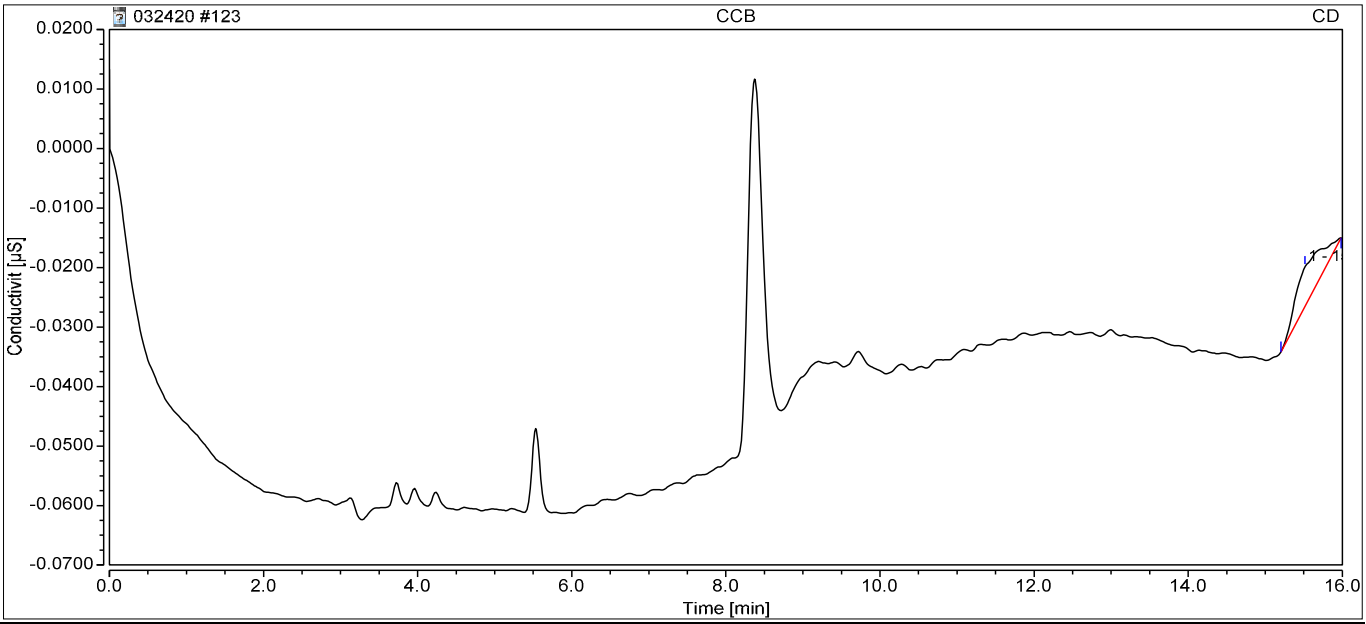
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.75	Fluoride	BMB	1.408	4.1480	4.1480	1.0000
2	5.53	Chloride	BMB	4.589	19.8448	19.8448	1.0000
3	6.73	Nitrite,N	BMB	2.037	4.3941	4.3941	1.0000
4	8.93	Bromide	BM	0.366	3.7303	3.7303	1.0000
5	9.66	Sulfate	M	3.239	19.3933	19.3933	1.0000
6	10.19	Nitrate	M	2.350	4.0351	4.0351	1.0000
7	10.86	Chlorate	MB	0.395	4.1395	4.1395	1.0000
8	15.01	Phosphate	BMB	0.601	2.8553	2.8553	1.0000
Total:			**0.000**	**14.985**		**62.54**	

123 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/26/2020 09:23**	*Sample Weight:*	**1.0000**

Run Time:



Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
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**	

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

WorkOrder: HS20040727

LHAAP-58

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

17-Apr-2020

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10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
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April 17, 2020

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

Work Order: **HS20040727**

Laboratory Results for: **LHAAP-58**

Dear Marcia,

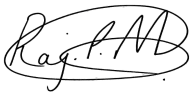
ALS Environmental received 1 sample(s) on Apr 08, 2020 for the analysis presented in the following report.

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

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

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

Sincerely,



Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 17-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Work Order: HS20040727

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20040727-01	35AWW06_032420	Groundwater		07-Apr-2020 09:00	08-Apr-2020 09:20	☐

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ALS Houston, US Date: 17-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Work Order: HS20040727

CASE NARRATIVE

Work Order Comments

- The analysis for Volatile Fatty Acids was subcontracted to ALS Environmental in Rochester NY. Final report attached.

- Samples were sent directly by the client to ALS Rochester. No chain was received in Houston Lab

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ALS Houston, US Date: 17-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW06_032420
Collection Date: 07-Apr-2020 09:00

ANALYTICAL REPORT
WorkOrder:HS20040727
Lab ID:HS20040727-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - VOLATILE FATTY ACIDS	**Method:NA**							Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	17-Apr-2020 13:37

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

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ALS Houston, US Date: 17-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20040727

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R360165 (0)	**Test Name :** SUBCONTRACT ANALYSIS - VOLATILE FATTY ACIDS				**Matrix:** Groundwater	
HS20040727-01	35AWW06_032420	07 Apr 2020 09:00			17 Apr 2020 13:37	1

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ALS Houston, US Date: 17-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: **HS20040727**

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
California	2919, 2019-2020	30-Apr-2020
Dept of Defense	ANAB L2231 V009	22-Dec-2021
Florida	E87611-28	30-Jun-2020
Illinois	2000322019-2	09-May-2020
Kansas	E-10352 2019-2020	31-Jul-2020
Kentucky	123043, 2019-2020	30-Apr-2020
Louisiana	03087, 2019-2020	30-Jun-2020
Maryland	343, 2019-2020	30-Jun-2020
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2019-2020	30-Apr-2020
Oklahoma	2019-067	31-Aug-2020
Texas	T104704231-19-25	30-Apr-2020

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April 17, 2020 Service Request No:R2002879

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

Laboratory Results for: LHAAP / Site 58

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory April 08, 2020
For your reference, these analyses have been assigned our service request number **R2002879.**

All testing was performed according to our laboratory's quality assurance program and met the requirements of the TNI standards except as noted in the case narrative report. Any testing not included in the lab's accreditation is identified on a Non-Certified Analytes report. All results are intended to be considered in their entirety. ALS Environmental is not responsible for use of less than the complete report. Results apply only to the individual samples submitted to the lab for analysis, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s), and represented by Laboratory Control Sample control limits. Any events, such as QC failures or Holding Time exceedances, which may add to the uncertainty are explained in the report narrative or are flagged with qualifiers. The flags are explained in the Report Qualifiers and Definitions page of this report.

Please contact me if you have any questions. My extension is 7471. You may also contact me via email at Brady.Kalkman@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Brady Kalkman
Project Manager

CC: Joni Blankfield

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ALS Group USA, Corp.
dba ALS Environmental

ALS Environmental
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ALS Environmental—Rochester Laboratory
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Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

1565 Jefferson Rd, Building 300, Rochester, NY 14623 | 585-288-5380 | www.alsglobal.com

Client: ALS Environmental - US
Project: LHAAP / Site 58
Sample Matrix: Water

Service Request: R2002879
Date Received: 04/08/2020

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 04/08/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Semivoa GC:

No significant anomalies were noted with this analysis.

Approved by _____ Date 04/17/2020

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Sample Receipt Information

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: ALS Environmental - US **Service Request:**R2002879
Project: LHAAP / Site 58/NW01312.0150

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
R2002879-001	35AWW06_040720	4/7/2020	0900

bhate ENVIRONMENTAL CONSTRUCTION EMEMY

Page: of

Project/Phase No: NWO1312.0150

COC Number(1):

LIMS Number:

1608 13th Avenue South, Suite 300
Birmingham Alabama 35205
Tel: 205-918-4000
Fax: 205-918-4050

Chain of Custody and Analytical Request

Facility/Base I.D.: LHAAP

Project/Site Name: LHAAP / Site 58

Client Name:

Collected by: Scott Beesinger

Field Sample ID (30 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code (2)	Sample Number (3)	Sample Matrix (4)	Sample Analysis Requested (5): Number of containers	Volatile Fatty Acids										Quality Assurance Samples (6): Ambient Blank Lot Control Number	Equipment Blank Lot Control Number	Trip Blank Lot Control Number	Cooler ID
35AWW06_040720	07 Apr 2020	0900	-		N	WG	1	X													
			-																		
			-																		
			-																		
			-																		
			-																		
			-																		
			-																		
			-																		

COMMENTS:

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received By (Signed)	Date	Time
1.	Scott Beesinger	4/7/20	1430		3-8-2020	09:20
2.						
3.						

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: Shipped No.:

Method of Shipment:

Fed Ex Airbill Number:

Analytical Lab: ALS 10450 Stancliff Rd, Suite 210 Houston, TX 77099 (281) 530-5656

ATTN: SONIA WEST Lab Recipient: Delivery Date/Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)

2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-c) Sample, FD = Field Duplicate (-a) Samples, FR = Field Replicate (-b) Samples, EB = Equipment Blank (-d) Samples, MS = Matrix Spike, SD = Matrix Spike Duplicate, AB = Ambient

3.) Sample Number: Unique sample number collected from a particular location per day. (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01, if sampled again on 10/10/99 = 02, etc.)

4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc), SQ = Soil Blanks

le Analysis Requested: Analytical method requested and number of containers provided for each.

ty assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipmer

R2002879 5
ALS Laboratory Group
LHAAP / Site 58

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Cooler Receipt and Preservation Check Form

R2002879 5
ALS Laboratory Group
LHAAP / Site 68

Project/Client Blade Folder Number

Cooler received on 4-8-2020 by: JZ

COURIER: ALS UPS (FEDEX) VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	(Y)	N
2	**Custody papers** properly completed (ink, signed)?	(Y)	N
3	Did all bottles arrive in good **condition** (unbroken)?	(Y)	N
4	Circle: (**Wet Ice**) **Dry Ice** **Gel packs** present?	(Y)	N

5a	**Perchlorate** samples have required headspace?	Y	N	(NA)
5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	Y	N	(NA)
6	Where did the bottles originate?	(ALS/ROC)	CLIENT	
7	Soil VOA received as: Bulk Encore 5035set	(NA)		

3. Temperature Readings Date: 4820 20 Time: 09:41 ID: IR#7 (IR#10) From: (Temp Blank) Sample Bottle

Observed Temp (°C)	2.4						
Within 0-6°C?	(Y) N	Y N	Y N	Y N	Y N	Y N	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed (described below) Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R-002 by JZ on 4821 at 09:44
5035 samples placed in storage location: _____ by _____ on _____ at _____ within 48 hours of sampling? Y N

Cooler Breakdown/Preservation Check**: Date: 4/8/2020 Time: 1330 by: JW

9. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? (YES) NO
10. Did all bottle labels and tags agree with custody papers? (YES) NO
11. Were correct containers used for the tests indicated? (YES) NO
12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO (NA)
13. Air Samples: Cassettes / Tubes Intact with MS? Canisters Pressurized Tedlar® Bags Inflated (NA)

pH	Lot of test paper	Reagent	Preserved? Yes	Preserved? No	Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
≥12		NaOH								
≤2		HNO_3								
≤2		H_2SO_4								
<4		$NaHSO_4$								
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522			If +, contact PM to add $Na_2S_2O_3$ (625, 608, CN), ascorbic (phenol).					
		$Na_2S_2O_3$								
		ZnAcetate	-	-			**VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).			
		HCl	**	**						

Bottle lot numbers: 91119-01
Explain all Discrepancies/ Other Comments:

HPROD	BULK
HTR	FLDT
SUB	HGFB
ALS	LL3541

els secondary reviewed by: JW
Secondary Review: _____

*Significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

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ALS Group USA, Corp.
dba ALS Environmental

Internal Chain of Custody Report

Client: ALS Laboratory Group **Service Request:** R2002879
Project: LHAAP / Site 58/NW01312.0150

Bottle ID	Methods	Date	Time	Sample Location / User	Disposed On
R2002879-001.01					
	Organic Acids				
		4/8/2020	1332	R-002 / GLAFORCE	
		4/8/2020	1332	SMO / GLAFORCE	
		4/9/2020	0729	In Lab / AFELSER	
		4/9/2020	1302	R-002 / AFELSER	

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Miscellaneous Forms

ALS Environmental—Rochester Laboratory
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REPORT QUALIFIERS AND DEFINITIONS

U	Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
J	Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).
B	Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.
E	Inorganics- Concentration is estimated due to the serial dilution was outside control limits.
E	Organics- Concentration has exceeded the calibration range for that specific analysis.
D	Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.
*	Indicates that a quality control parameter has exceeded laboratory limits. Under the ñNotesò column of the Form I, this qualifier denotes analysis was performed out of Holding Time.
H	Analysis was performed out of hold time for tests that have an ñimmediateò hold time criteria.
#	Spike was diluted out.
+	Correlation coefficient for MSA is <0.995.
N	Inorganics- Matrix spike recovery was outside laboratory limits.
N	Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
S	Concentration has been determined using Method of Standard Additions (MSA).
W	Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
P	Concentration >40% difference between the two GC columns.
C	Confirmed by GC/MS
Q	DoD reports: indicates a pesticide/Aroclor is not confirmed (Ó100% Difference between two GC columns).
X	See Case Narrative for discussion.
MRL LOQ	Method Reporting Limit. Also known as: Limit of Quantitation (LOQ) The lowest concentration at which the method analyte may be reliably quantified under the method conditions.
MDL	Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).
LOD	Limit of Detection. A value at or above the MDL which has been verified to be detectable.
ND	Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

Rochester Lab ID # for State Certifications[1]

Connecticut ID # PH0556	Maine ID #NY0032	Pennsylvania ID# 68-786
Delaware Approved	New Hampshire ID # 2941	Rhode Island ID # 158
DoD ELAP #65817	New York ID # 10145	Virginia #460167
Florida ID # E87674	North Carolina #676	

[1] Analyses were performed according to our laboratoryôs NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to https://www.alsglobal.com/locations/americas/north-america/usa/new-york/rochester-environmental

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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
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
dba ALS Environmental

Client: ALS Environmental - US **Service Request:** R2002879
Project: LHAAP / Site 58/NW01312.0150

Non-Certified Analytes

Certifying Agency: New York Department of Health

Method	Matrix	Analyte
Organic Acids	Water	Acetic Acid
Organic Acids	Water	Butanoic Acid (Butyric Acid)
Organic Acids	Water	Lactic Acid
Organic Acids	Water	Propionic Acid
Organic Acids	Water	Pyruvic Acid

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client:	ALS Environmental - US	**Service Request:**	R2002879
Project:	LHAAP / Site 58/NW01312.0150		

Sample Name:	35AWW06_040720	**Date Collected:**	04/7/20
Lab Code:	R2002879-001	**Date Received:**	04/8/20
Sample Matrix:	Water		

Analysis Method	Extracted/Digested By	Analyzed By
Organic Acids		AFELSER

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INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9034 Sulfide Acid Soluble	9030B
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7199	3060A
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction
For analytical methods not listed, the preparation method is the same as the analytical method reference.	

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Sample Results

ALS Environmental—Rochester Laboratory
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Semivolatile Organic Compounds by GC

ALS Environmental—Rochester Laboratory
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Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R2002879
Project:	LHAAP / Site 58/NW01312.0150	**Date Collected:**	04/07/20 09:00
Sample Matrix:	Water	**Date Received:**	04/08/20 09:20
Sample Name:	35AWW06_040720	**Units:**	mg/L
Lab Code:	R2002879-001	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids

Analyte Name	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
Pyruvic Acid	ND U	0.20	0.10	0.016	1	04/09/20 15:44	
Acetic Acid	**1.5 J**	4.0	2.0	0.56	1	04/09/20 15:44	
Butanoic Acid (Butyric Acid)	ND U	2.0	1.0	0.32	1	04/09/20 15:44	
Lactic Acid	ND U	2.0	1.0	0.14	1	04/09/20 15:44	
Propionic Acid	ND U	2.0	1.0	0.19	1	04/09/20 15:44	

QC Summary Forms

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
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Semivolatile Organic Compounds by GC

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	R2002879
Project:	LHAAP / Site 58/NW01312.0150	**Date Collected:**	04/07/20
Sample Matrix:	Water	**Date Received:**	04/08/20
		Date Analyzed:	04/9/20

Duplicate Matrix Spike Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Sample Name:	35AWW06_040720	**Units:**	mg/L
Lab Code:	R2002879-001	**Basis:**	NA
Analysis Method:	Organic Acids		

		Matrix Spike RQ2003624-05			Duplicate Matrix Spike RQ2003624-06					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Pyruvic Acid	ND U	1.70	2.00	85	1.55	2.00	78	73-122	9	30
Acetic Acid	1.5 J	20.4	20.1	94	21.0	20.1	97	80-130	3	30
Butanoic Acid (Butyric Acid)	ND U	19.4	20.1	97	20.8	20.1	104	86-128	7	30
Lactic Acid	ND U	20.1	20.0	100	18.7	20.0	93	81-114	7	30
Propionic Acid	ND U	20.1	20.0	100	21.1	20.0	105	63-153	5	30

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

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

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

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: LHAAP / Site 58/NW01312.0150
Sample Matrix: Water

Service Request: R2002879
Date Analyzed: 04/09/20 12:35

Method Blank Summary

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Sample Name: Method Blank
Lab Code: RQ2003624-02

Instrument ID:R-HPLC-05
File ID:I:\ACQUDATA\hplc05\data\040920\A0004923.D\

Analysis Method: Organic Acids

Analysis Lot:676686

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	RQ2003624-03	I:\ACQUDATA\hplc05\data\040920\A0004924.D\	04/09/20 13:38
Duplicate Lab Control Sample	RQ2003624-04	I:\ACQUDATA\hplc05\data\040920\A0004925.D\	04/09/20 14:41
35AWW06_040720	R2002879-001	I:\ACQUDATA\hplc05\data\040920\A0004926.D\	04/09/20 15:44
35AWW06_040720MS	RQ2003624-05	I:\ACQUDATA\hplc05\data\040920\A0004927.D\	04/09/20 16:47
35AWW06_040720DMS	RQ2003624-06	I:\ACQUDATA\hplc05\data\040920\A0004928.D\	04/09/20 17:47

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R2002879
Project:	LHAAP / Site 58/NW01312.0150	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	mg/L
Lab Code:	RQ2003624-02	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids

Analyte Name	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
Pyruvic Acid	ND U	0.20	0.10	0.016	1	04/09/20 12:35	
Acetic Acid	ND U	4.0	2.0	0.56	1	04/09/20 12:35	
Butanoic Acid (Butyric Acid)	ND U	2.0	1.0	0.32	1	04/09/20 12:35	
Lactic Acid	ND U	2.0	1.0	0.14	1	04/09/20 12:35	
Propionic Acid	ND U	2.0	1.0	0.19	1	04/09/20 12:35	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: LHAAP / Site 58/NW01312.0150
Sample Matrix: Water

Service Request: R2002879
Date Analyzed: 04/09/20 13:38

Lab Control Sample Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Sample Name: Lab Control Sample
Lab Code: RQ2003624-03

Instrument ID:R-HPLC-05
File ID:I:\ACQUDATA\hplc05\data\040920\A0004924.D\

Analysis Method: Organic Acids

Analysis Lot:676686

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Method Blank	RQ2003624-02	I:\ACQUDATA\hplc05\data\040920\A0004923.D\	04/09/20 12:35
Duplicate Lab Control Sample	RQ2003624-04	I:\ACQUDATA\hplc05\data\040920\A0004925.D\	04/09/20 14:41
35AWW06_040720	R2002879-001	I:\ACQUDATA\hplc05\data\040920\A0004926.D\	04/09/20 15:44
35AWW06_040720MS	RQ2003624-05	I:\ACQUDATA\hplc05\data\040920\A0004927.D\	04/09/20 16:47
35AWW06_040720DMS	RQ2003624-06	I:\ACQUDATA\hplc05\data\040920\A0004928.D\	04/09/20 17:47

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: LHAAP / Site 58/NW01312.0150
Sample Matrix: Water

Service Request: R2002879
Date Analyzed: 04/09/20

Duplicate Lab Control Sample Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Units:mg/L
Basis:NA

		Lab Control Sample			Duplicate Lab Control Sample					
		RQ2003624-03			RQ2003624-04					
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Pyruvic Acid	Organic Acids	1.65	2.00	83	1.71	2.00	85	73-122	3	30
Acetic Acid	Organic Acids	20.7	20.1	103	21.0	20.1	105	80-130	1	30
Butanoic Acid (Butyric Acid)	Organic Acids	18.7	20.1	93	20.3	20.1	101	86-128	8	30
Lactic Acid	Organic Acids	18.5	20.0	92	18.4	20.0	92	81-114	<1	30
Propionic Acid	Organic Acids	21.6	20.0	108	22.0	20.0	110	63-153	2	30

Raw Data

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Semivolatile Organic Compounds by GC

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R2002879
Project:	LHAAP / Site 58/NW01312.0150	**Date Collected:**	04/07/20 09:00
Sample Matrix:	Water	**Date Received:**	04/08/20 09:20
Sample Name:	35AWW06_040720	**Units:**	mg/L
Lab Code:	R2002879-001	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids

Analyte Name	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
Pyruvic Acid	ND U	0.20	0.10	0.016	1	04/09/20 15:44	
Acetic Acid	**1.5 J**	4.0	2.0	0.56	1	04/09/20 15:44	
Butanoic Acid (Butyric Acid)	ND U	2.0	1.0	0.32	1	04/09/20 15:44	
Lactic Acid	ND U	2.0	1.0	0.14	1	04/09/20 15:44	
Propionic Acid	ND U	2.0	1.0	0.19	1	04/09/20 15:44	

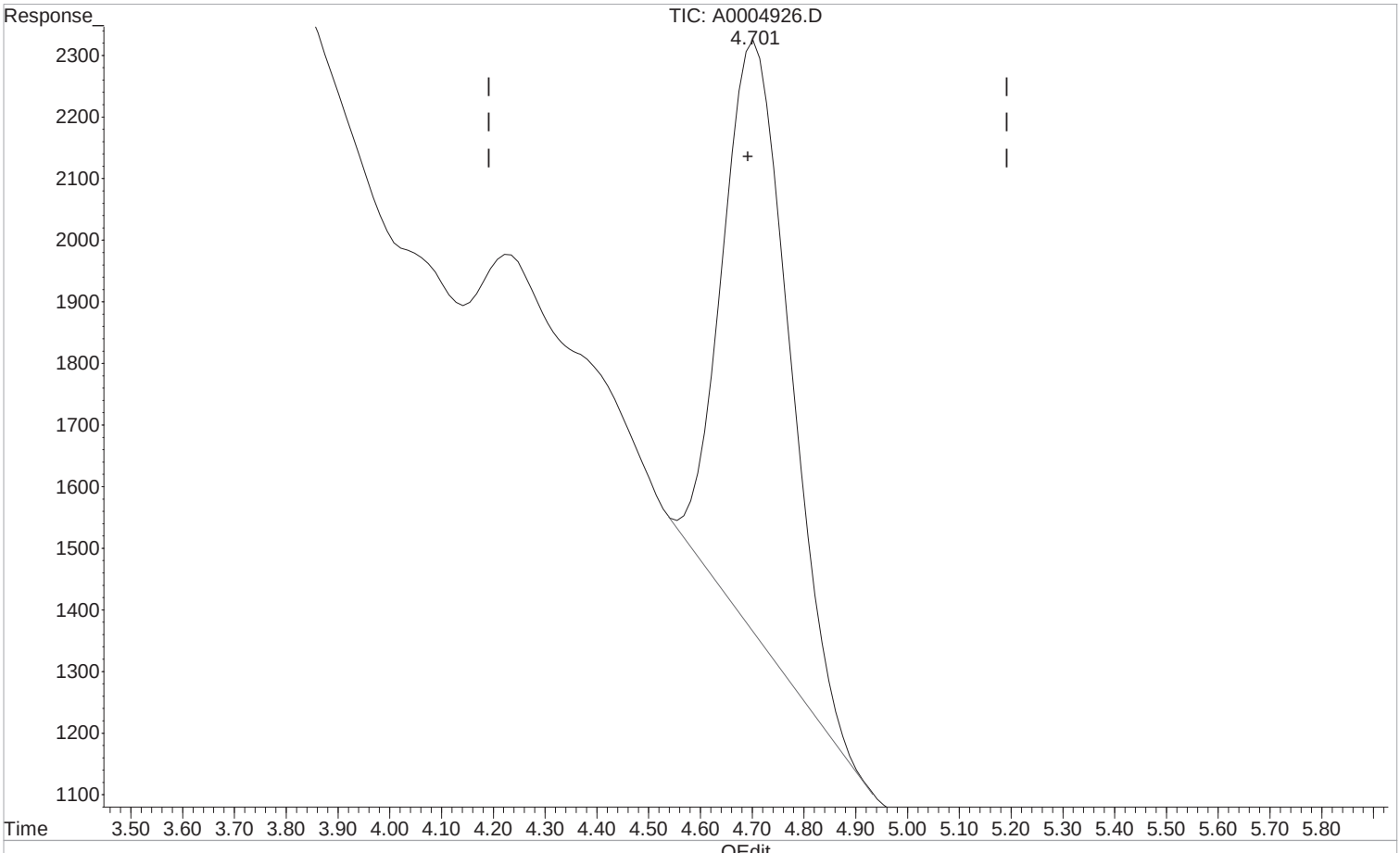
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004926.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 15:44:31
Operator : A.Felser
Sample : R2002879-001
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.701min 1.548 ppm m

response 86766

Manual Integration:

After

Peak not found.

04/14/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

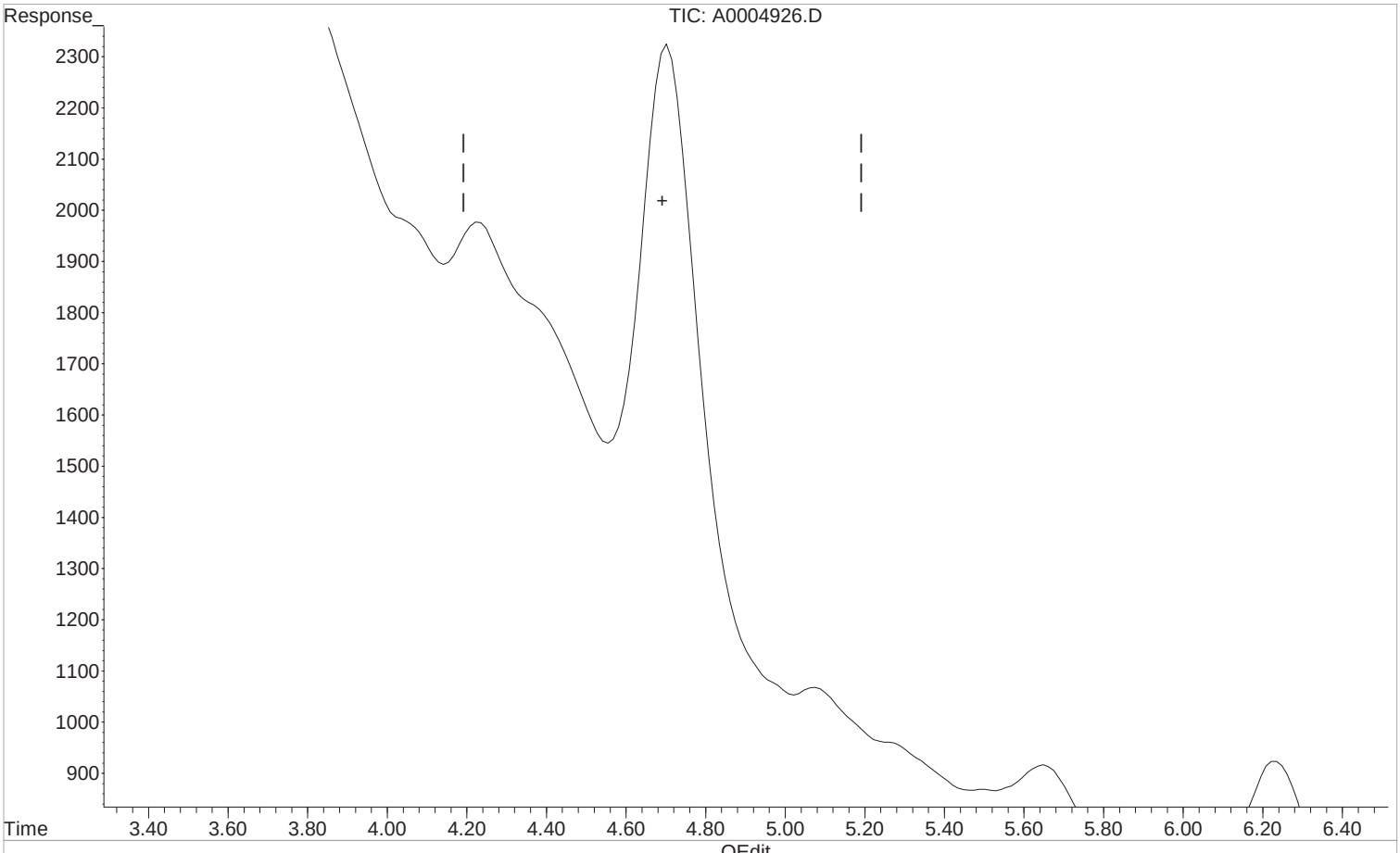
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004926.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 15:44:31
Operator : A.Felser
Sample : R2002879-001
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.705min -0.044 ppm

response -2459

Manual Integration:

Before

04/14/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004926.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 15:44:31
Operator : A.Felser
Sample : R2002879-001
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	0.000	0	N.D.	ppm	
2) T	Pyruvic acid	0.000	0	N.D.	ppm	
3) T	Lactic Acid	0.000	0	N.D.	ppm	
4) T	Acetic Acid	4.701	86766	1.548	ppm	m
5) T	Propionic Acid	0.000	0	N.D.	ppm	
6) T	Butyric Acid	0.000	0	N.D.	ppm	

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

RIGHT SOLUTIONS | RIGHT PARTNER

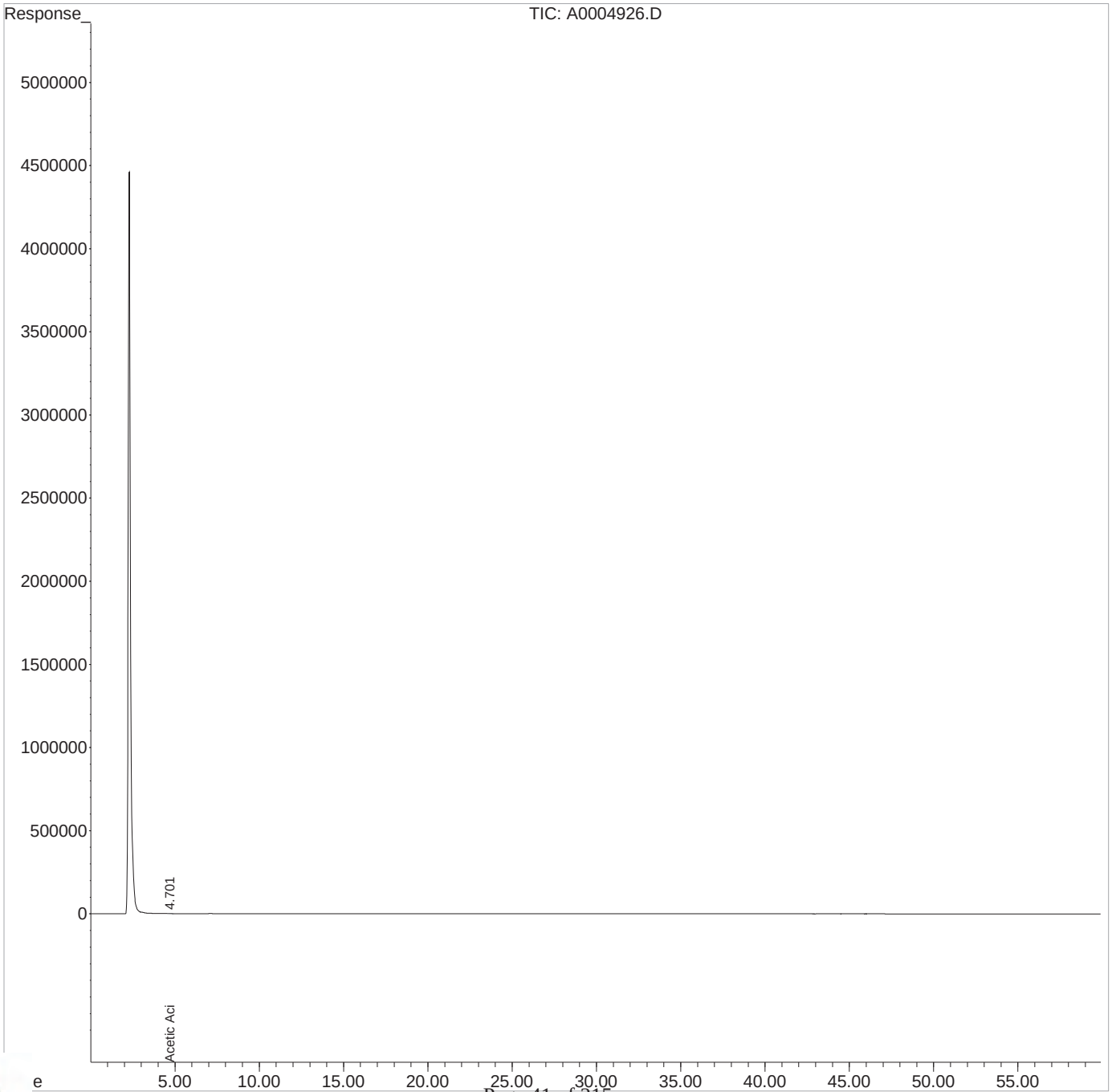
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004926.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 15:44:31
Operator : A.Felser
Sample : R2002879-001
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



RIGHT SOLUTIONS | RIGHT PARTNER

1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004923.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 12:35:28
Operator : A.Felser
Sample : MB
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 09 15:21:30 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	0.000	0	N.D.	ppm	
2) T	Pyruvic acid	0.000	0	N.D.	ppm	
3) T	Lactic Acid	0.000	0	N.D.	ppm	
4) T	Acetic Acid	0.000	0	N.D.	ppm	
5) T	Propionic Acid	0.000	0	N.D.	ppm	d
6) T	Butyric Acid	0.000	0	N.D.	ppm	

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

RIGHT SOLUTIONS | RIGHT PARTNER

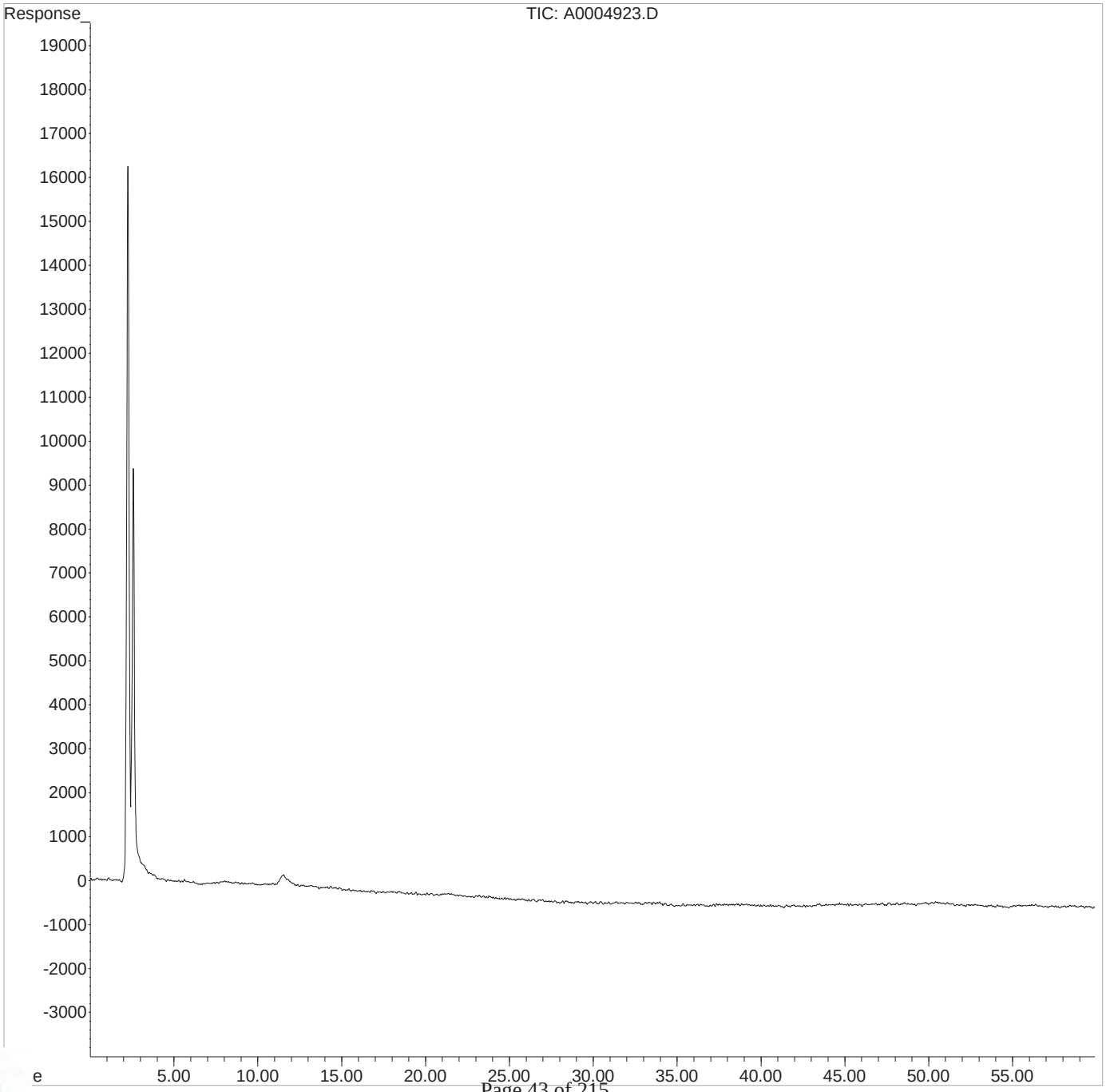
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004923.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 12:35:28
Operator : A.Felser
Sample : MB
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 09 15:21:30 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



RIGHT SOLUTIONS | RIGHT PARTNER

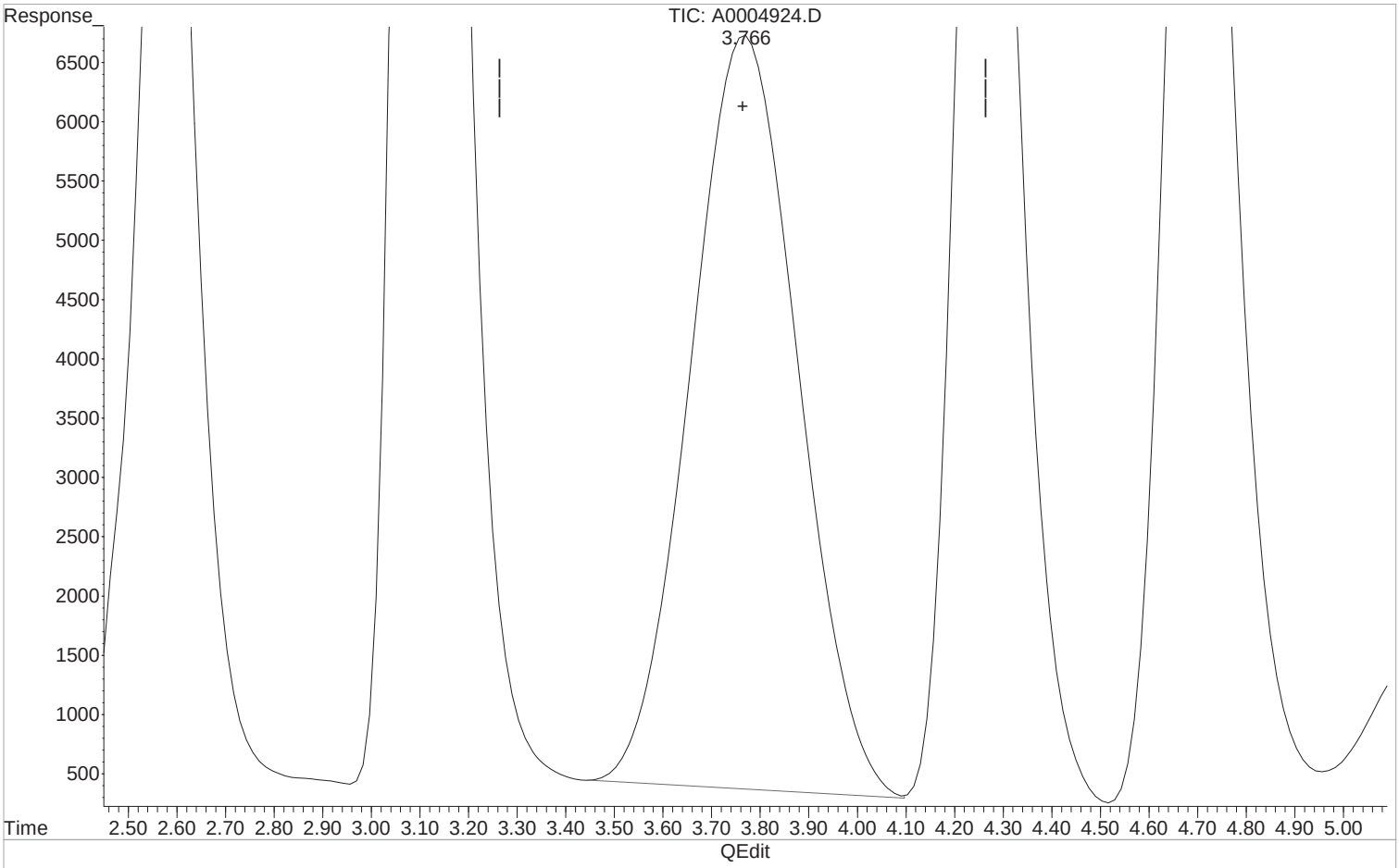
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004924.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 13:38:30
Operator : A.Felser
Sample : LCS
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 09 15:22:04 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.766min 1.650 ppm m

response 975965

Manual Integration:

After

Poor integration.

04/14/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

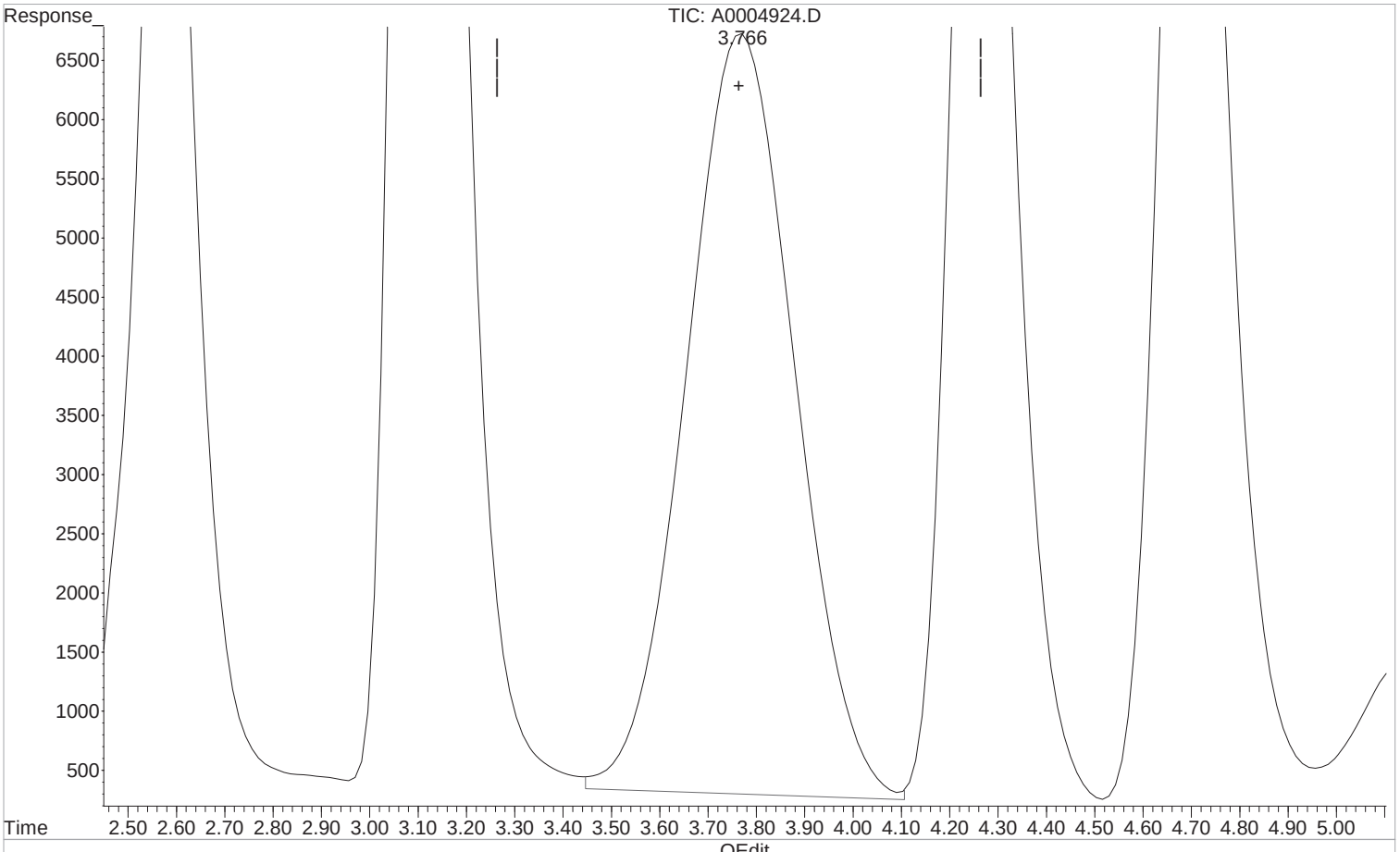
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004924.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 13:38:30
Operator : A.Felser
Sample : LCS
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 09 15:22:04 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.771min 1.699 ppm

response 1004913

Manual Integration:

Before

04/14/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

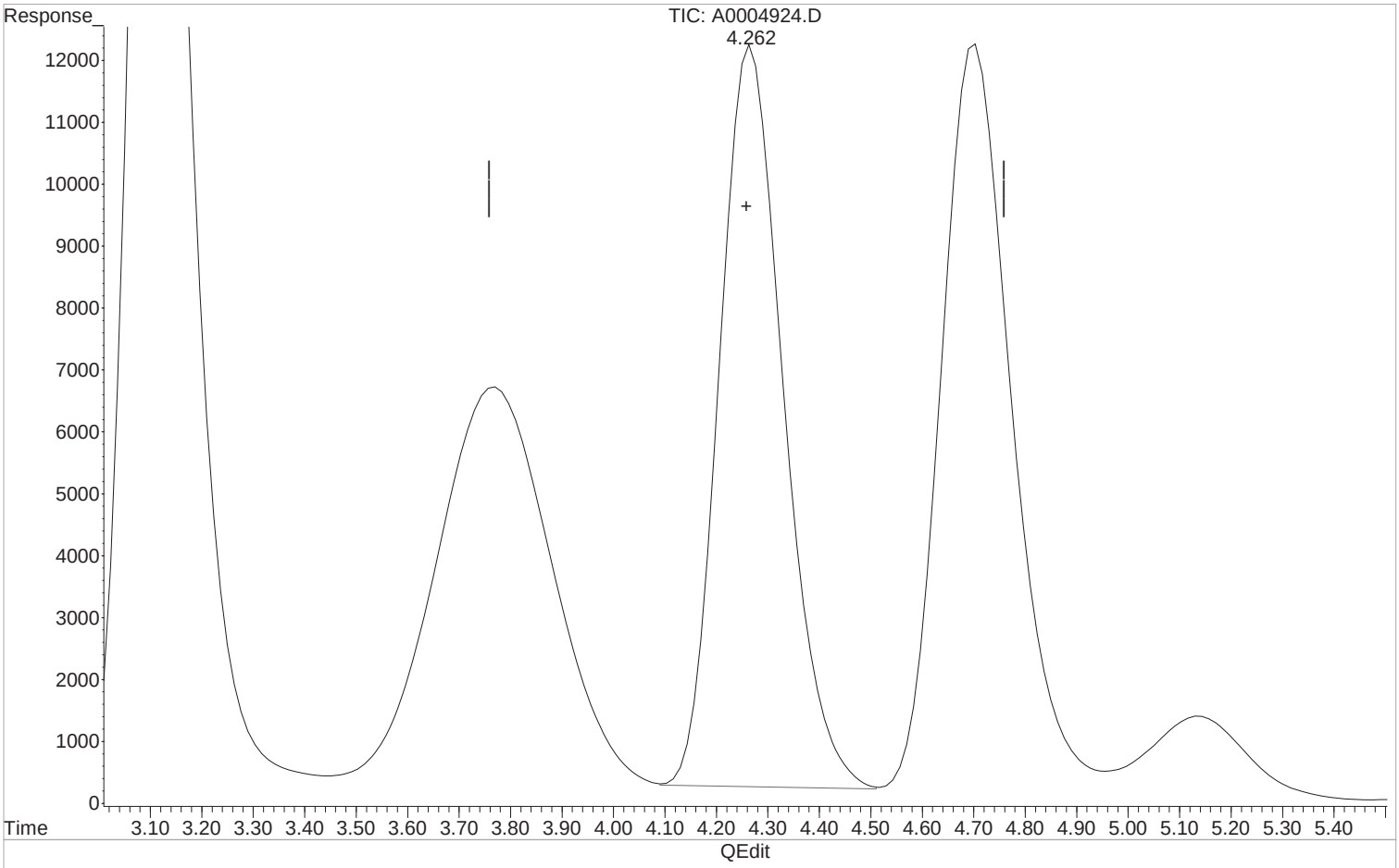
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004924.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 13:38:30
Operator : A.Felser
Sample : LCS
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 09 15:22:04 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.262min 18.467 ppm m

response 1041853

Manual Integration:

After

Poor integration.

04/14/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

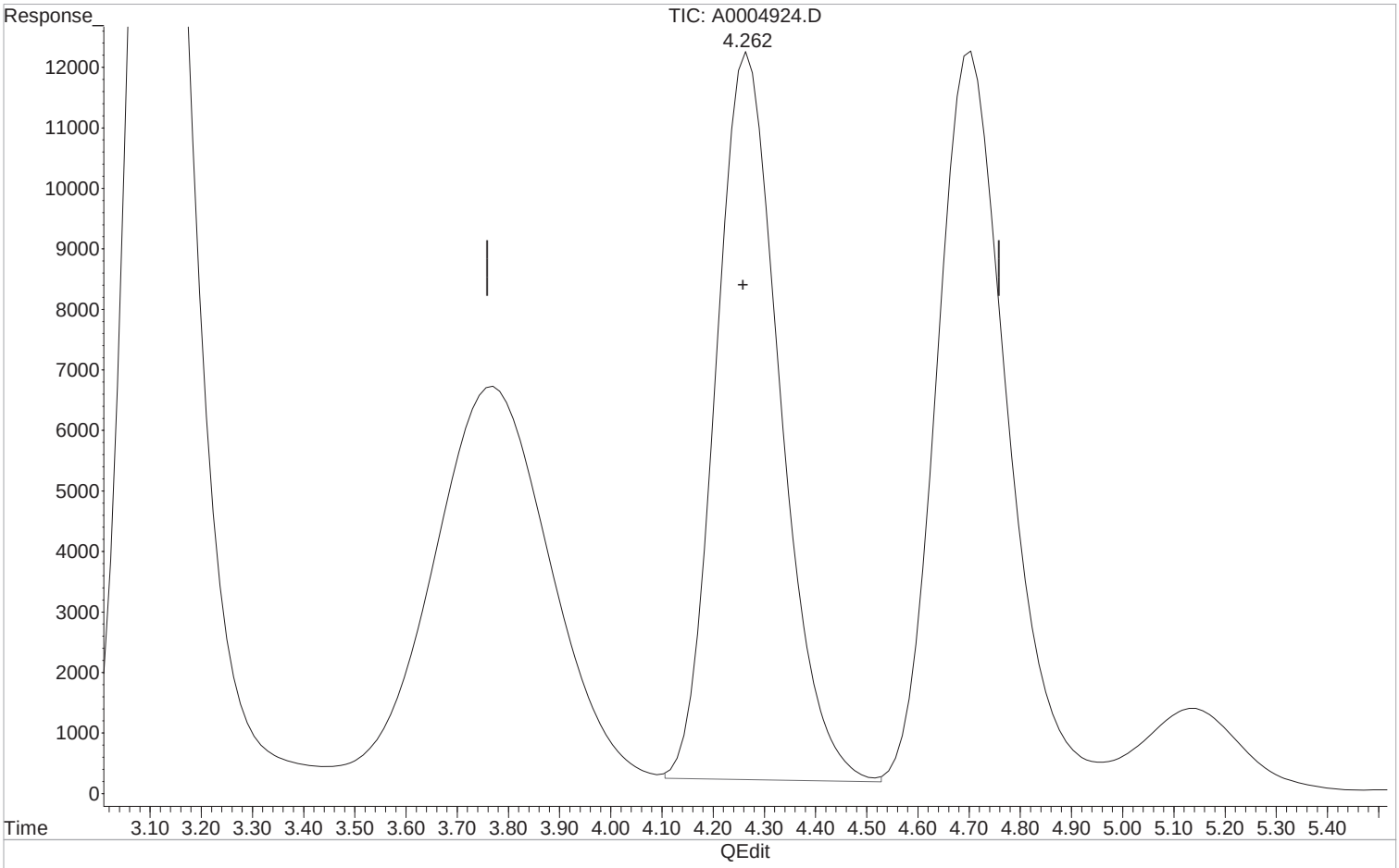
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004924.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 13:38:30
Operator : A.Felser
Sample : LCS
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 09 15:22:04 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.269min 18.642 ppm

response 1051720

Manual Integration:

Before

04/14/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

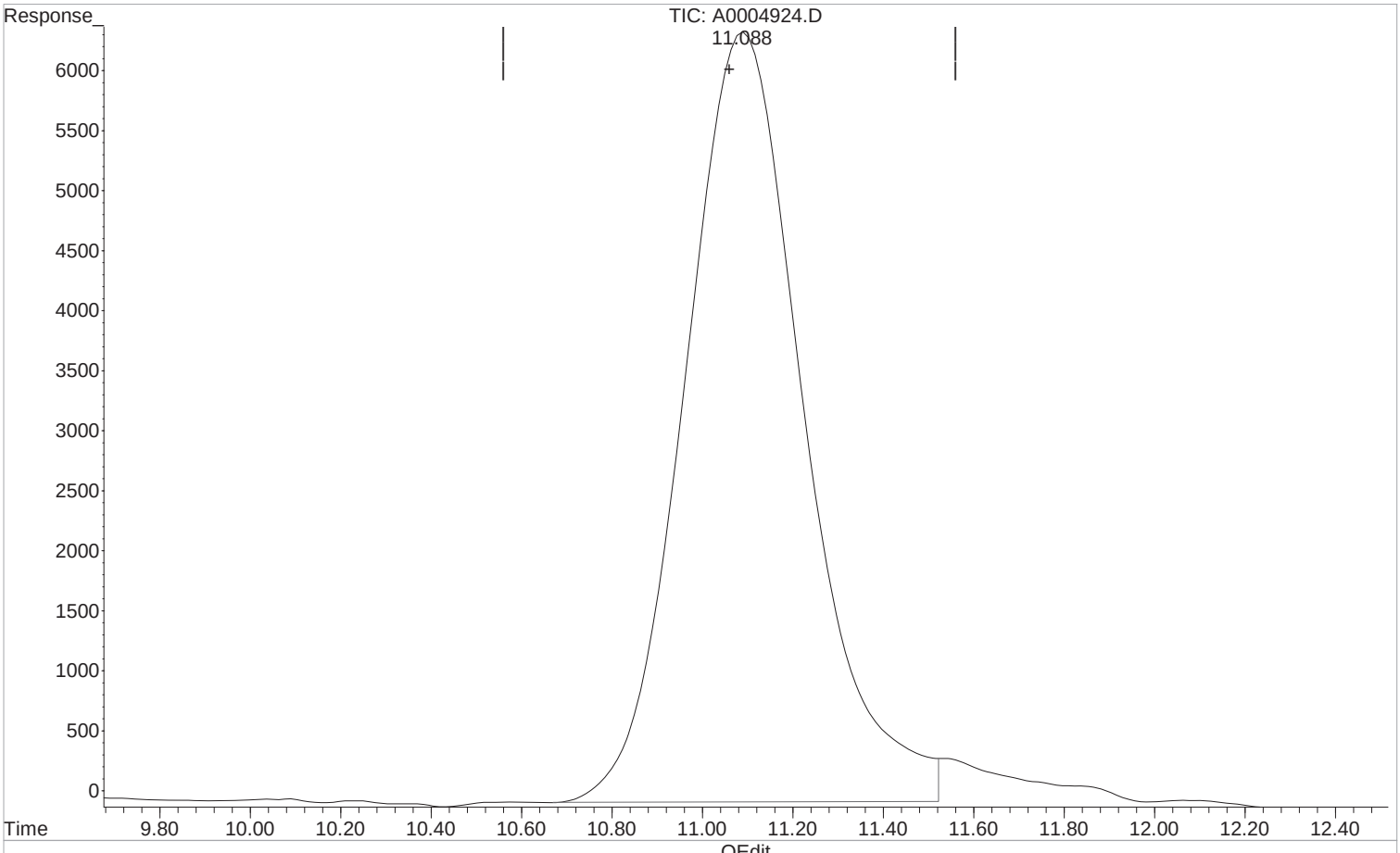
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004924.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 13:38:30
Operator : A.Felser
Sample : LCS
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 09 15:22:04 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

11.088min 21.571 ppm m

response 1172570

Manual Integration:

After

Poor integration.

04/14/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

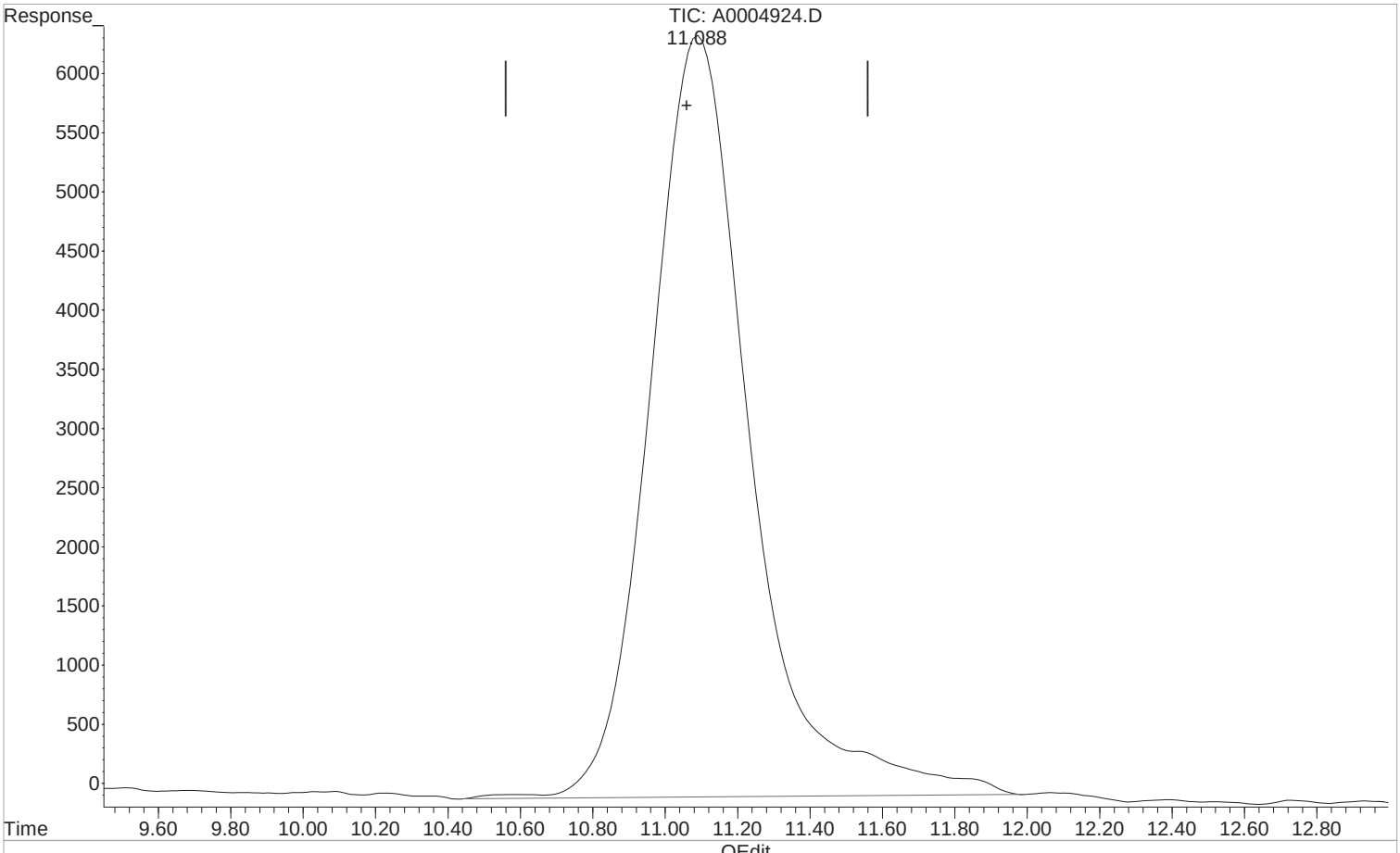
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004924.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 13:38:30
Operator : A.Felser
Sample : LCS
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 09 15:22:04 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

11.093min 22.772 ppm

response 1237850

Manual Integration:

Before

04/14/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

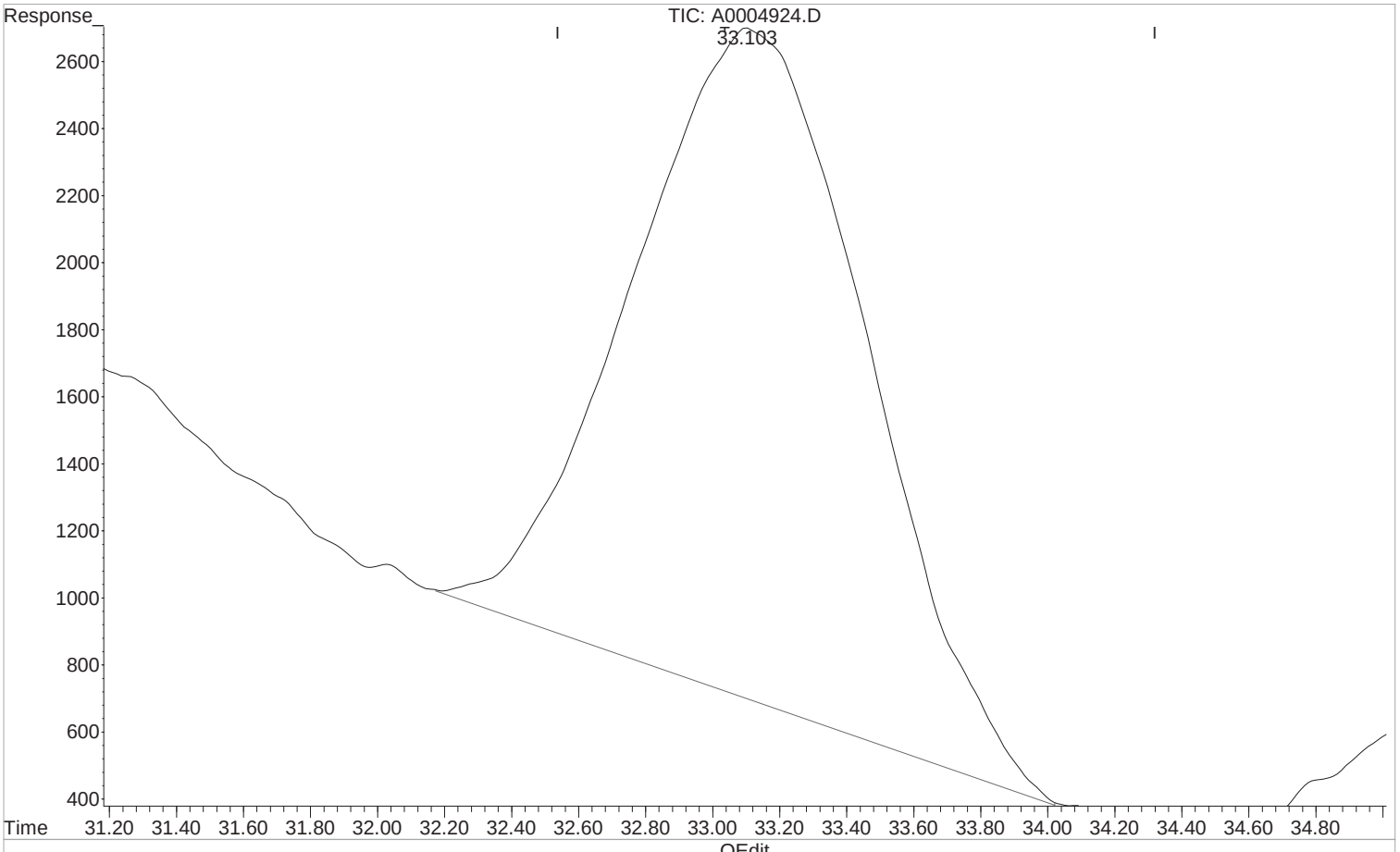
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004924.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 13:38:30
Operator : A.Felser
Sample : LCS
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 09 15:22:04 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

33.103min 18.706 ppm m

response 983218

Manual Integration:

After

Poor integration.

04/14/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

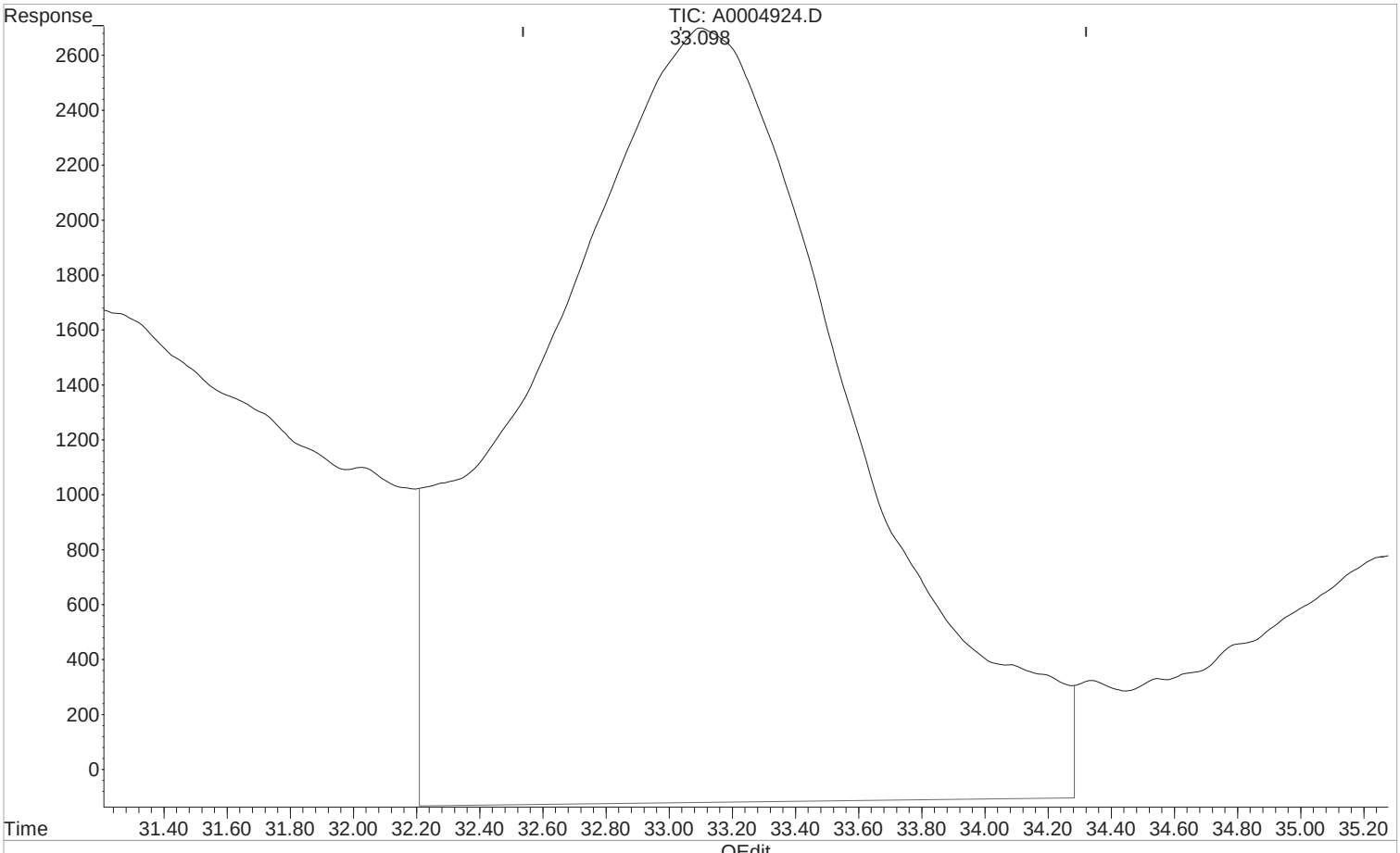
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004924.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 13:38:30
Operator : A.Felser
Sample : LCS
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 09 15:22:04 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

33.109min 36.995 ppm

response 1944520

Manual Integration:

Before

04/14/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004924.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 13:38:30
Operator : A.Felser
Sample : LCS
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 09 15:22:04 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	3.118	1879905	20.164	ppm	
2) T	Pyruvic acid	3.766	975965	1.650	ppm	m
3) T	Lactic Acid	4.262	1041853	18.467	ppm	m
4) T	Acetic Acid	4.705	1162372	20.739	ppm	
5) T	Propionic Acid	11.088	1172570	21.571	ppm	m
6) T	Butyric Acid	33.103	983218	18.706	ppm	m

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

RIGHT SOLUTIONS | RIGHT PARTNER

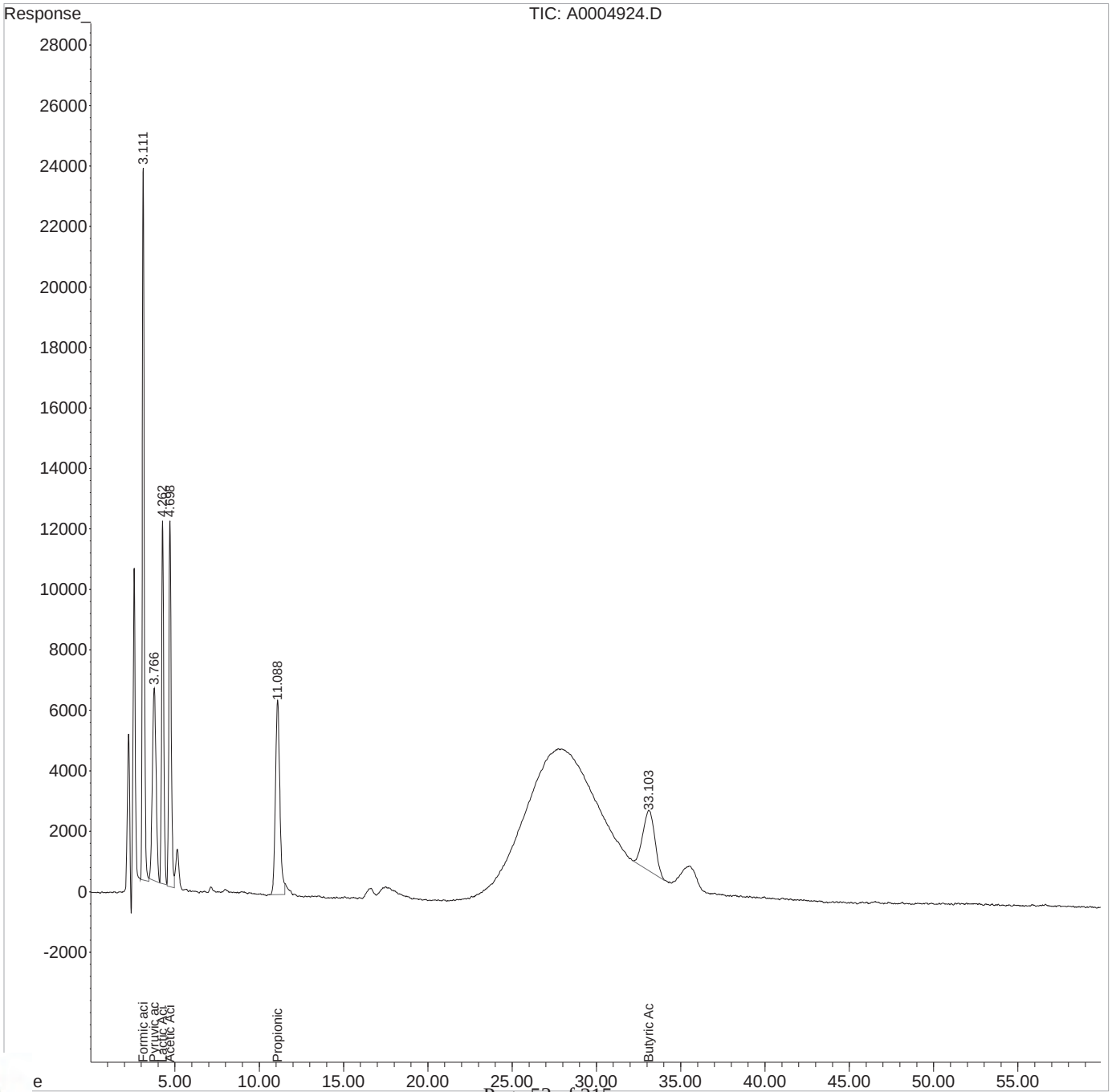
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004924.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 13:38:30
Operator : A.Felser
Sample : LCS
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 09 15:22:04 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



RIGHT SOLUTIONS | RIGHT PARTNER

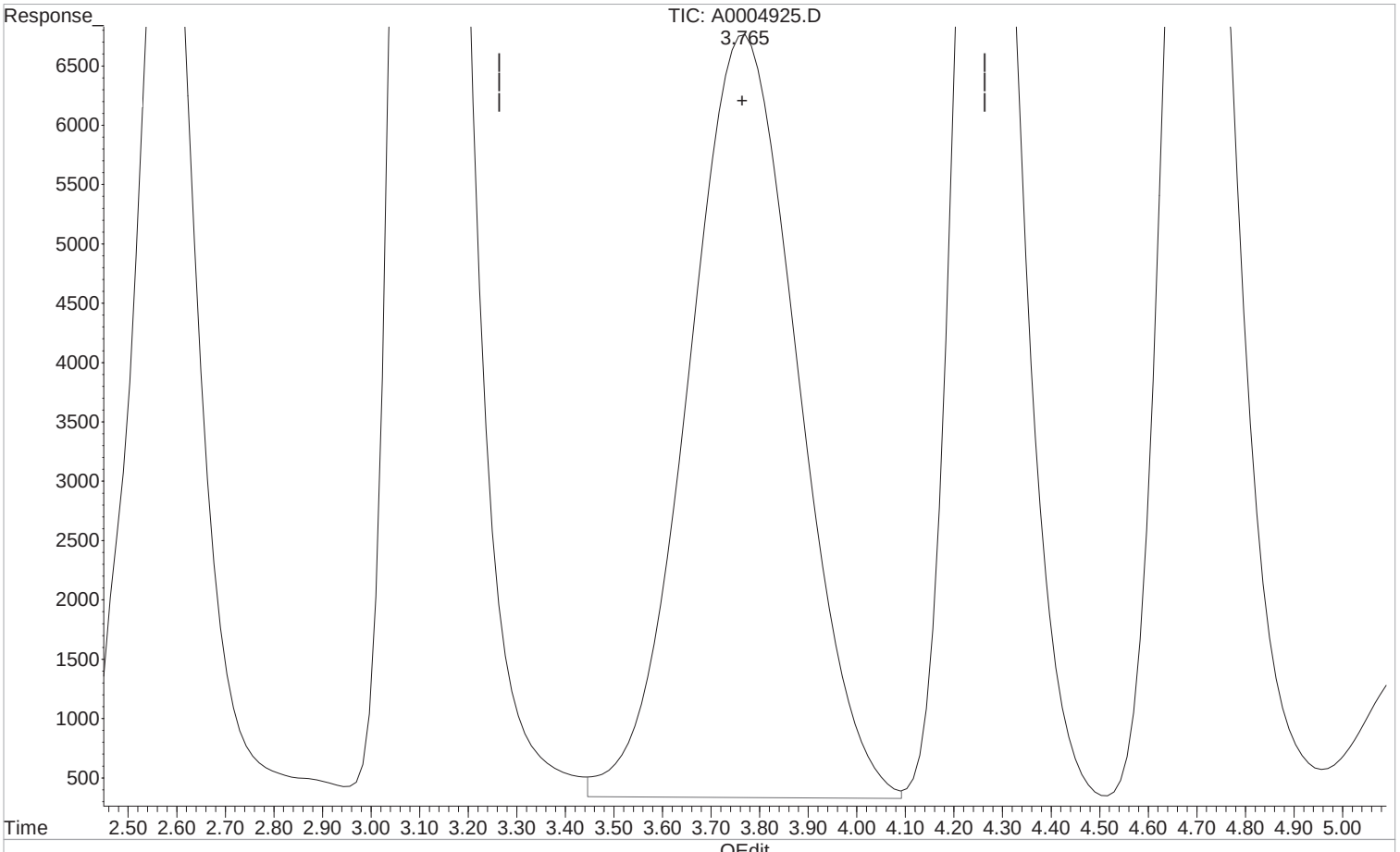
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004925.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 14:41:36
Operator : A.Felser
Sample : DLCS
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:23 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.765min 1.706 ppm m

response 1009385

Manual Integration:

After

Poor integration.

04/14/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

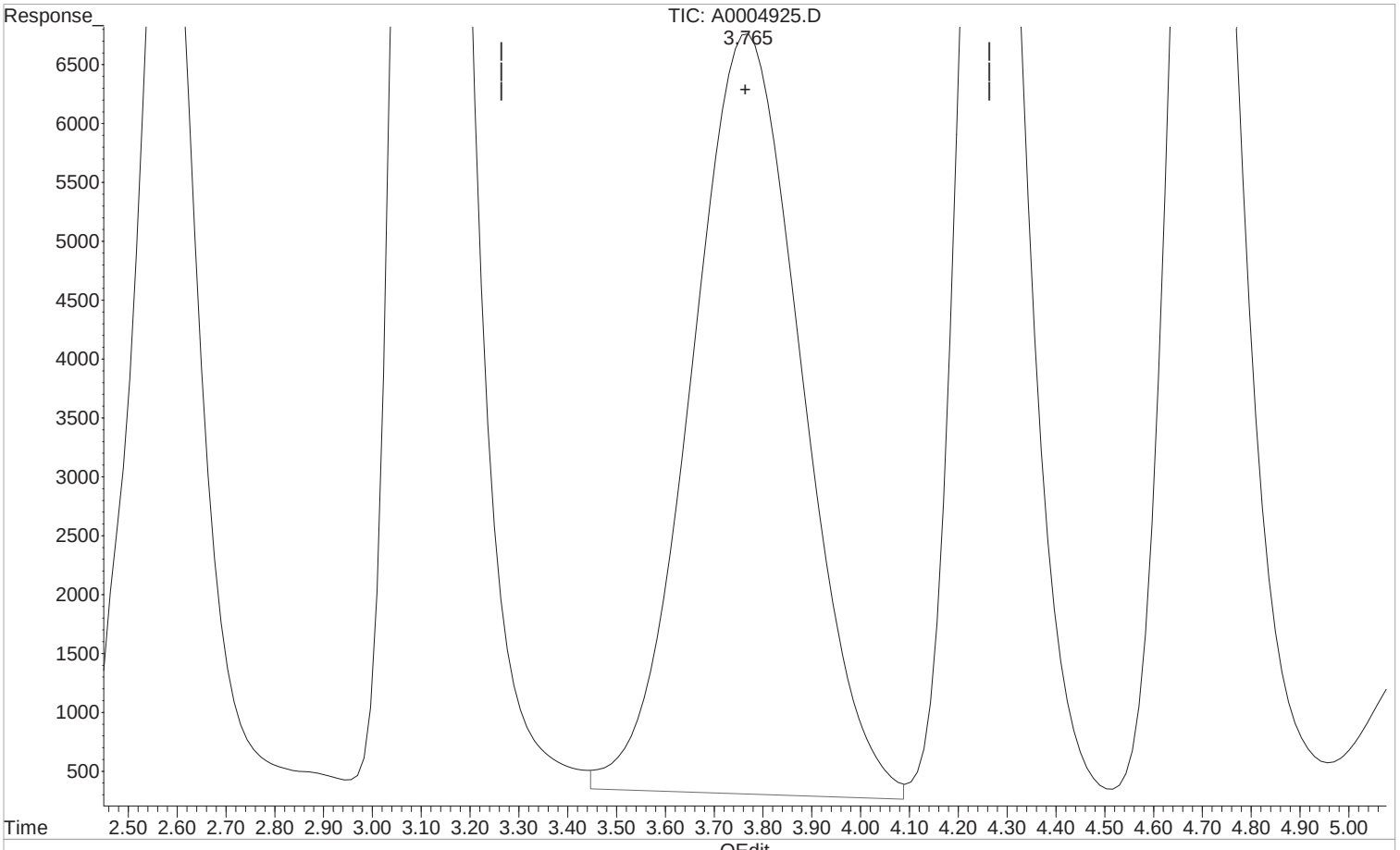
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004925.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 14:41:36
Operator : A.Felser
Sample : DLCS
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:23 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.770min 1.724 ppm

response 1020069

Manual Integration:

Before

04/14/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

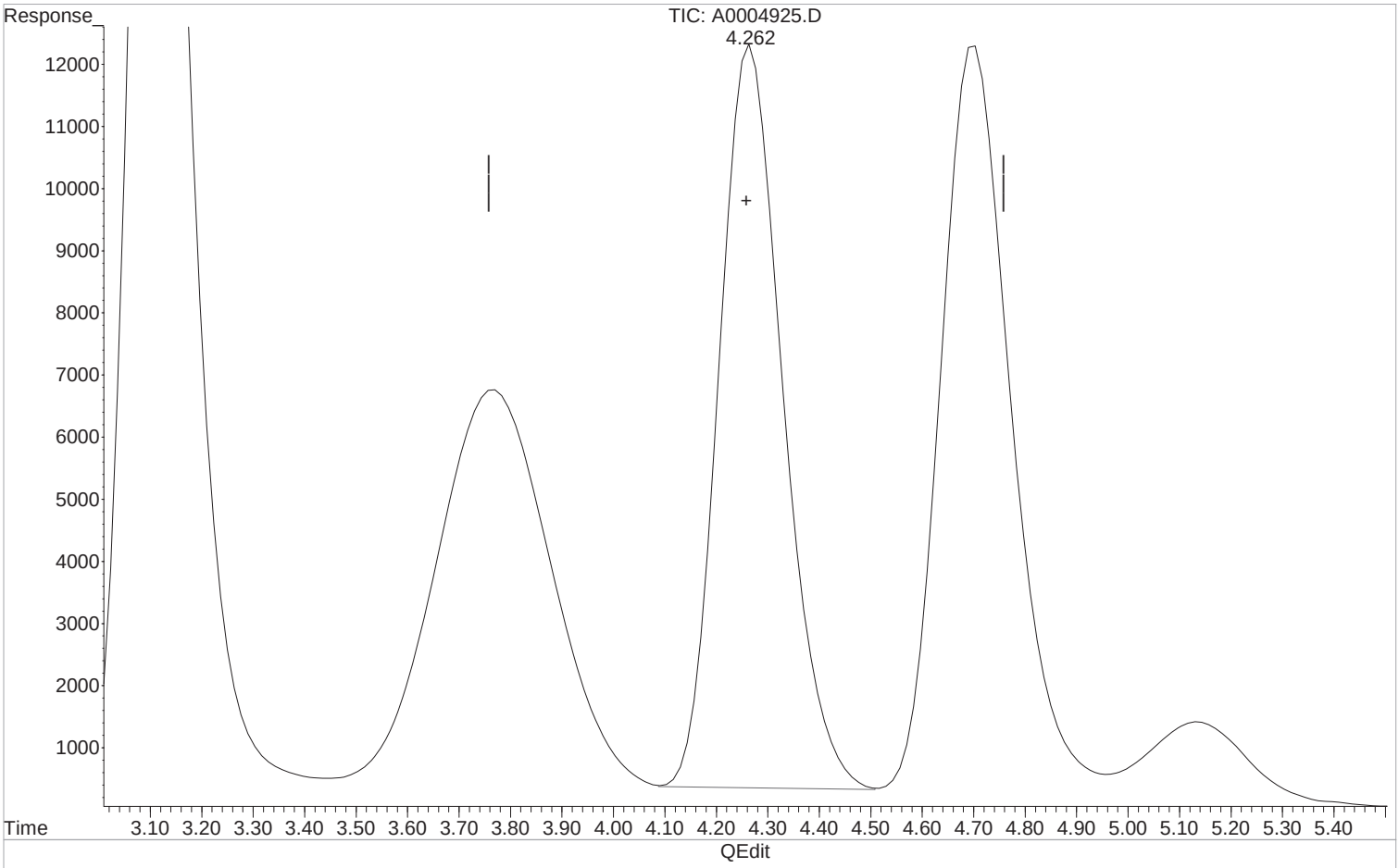
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004925.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 14:41:36
Operator : A.Felser
Sample : DLCS
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:23 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.262min 18.381 ppm m

response 1037011

Manual Integration:

After

Poor integration.

04/14/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

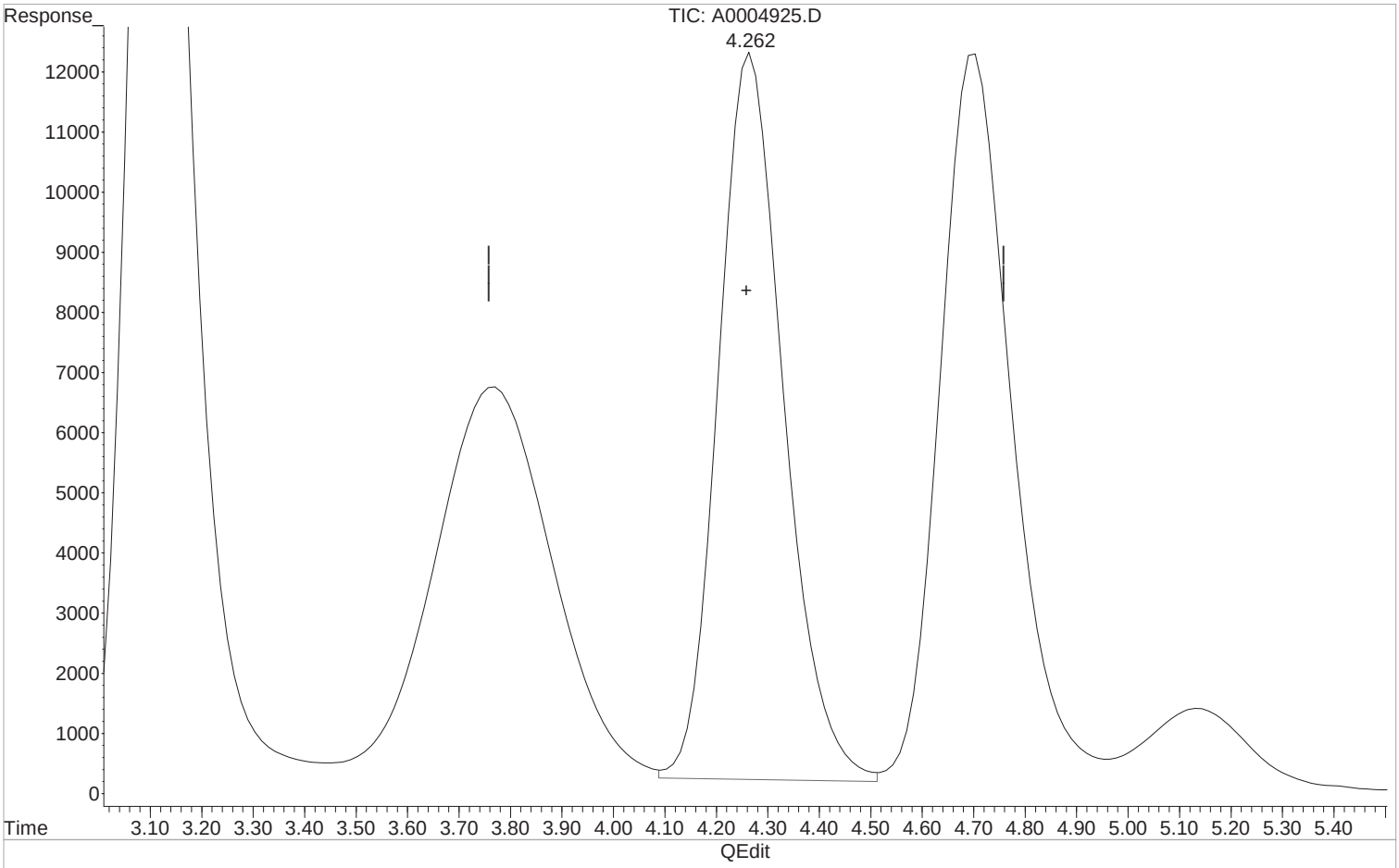
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004925.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 14:41:36
Operator : A.Felser
Sample : DLCS
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:23 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.268min 18.922 ppm

response 1067511

Manual Integration:

Before

04/14/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

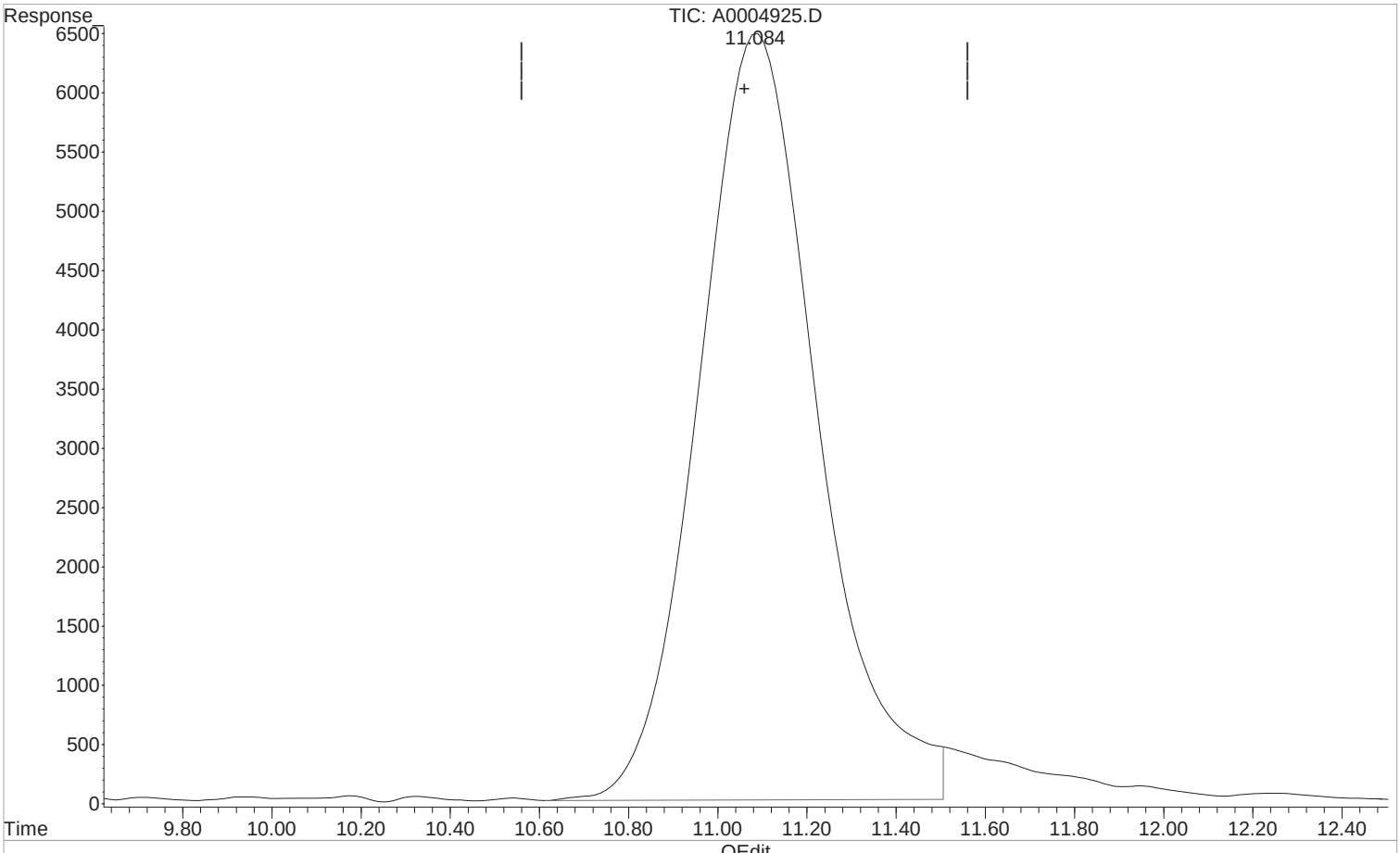
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004925.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 14:41:36
Operator : A.Felser
Sample : DLCS
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:23 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

11.084min 21.960 ppm m

response 1193682

Manual Integration:

After

Poor integration.

04/14/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

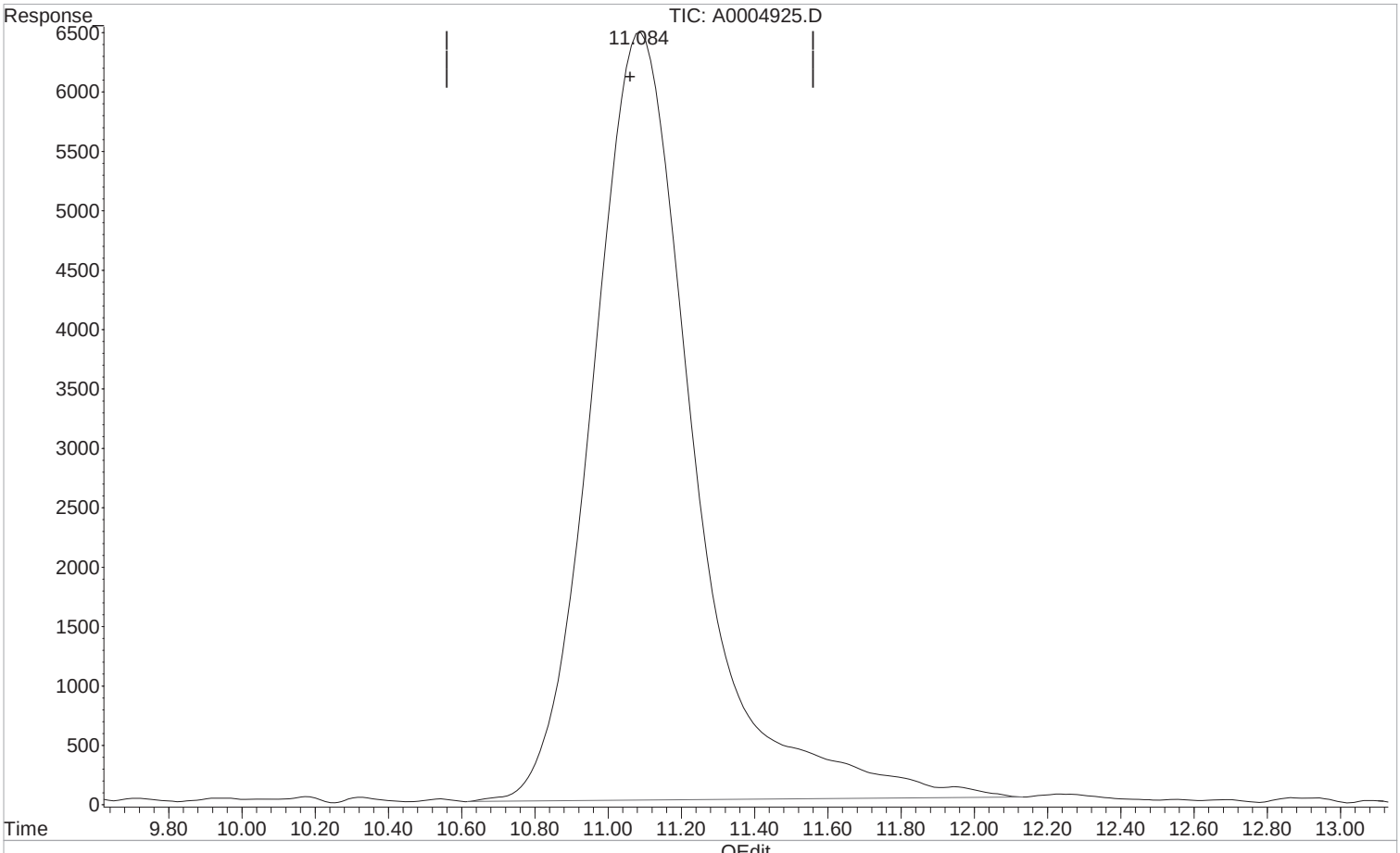
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004925.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 14:41:36
Operator : A.Felser
Sample : DLCS
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:23 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

11.090min 23.057 ppm

response 1253300

Manual Integration:

Before

04/14/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

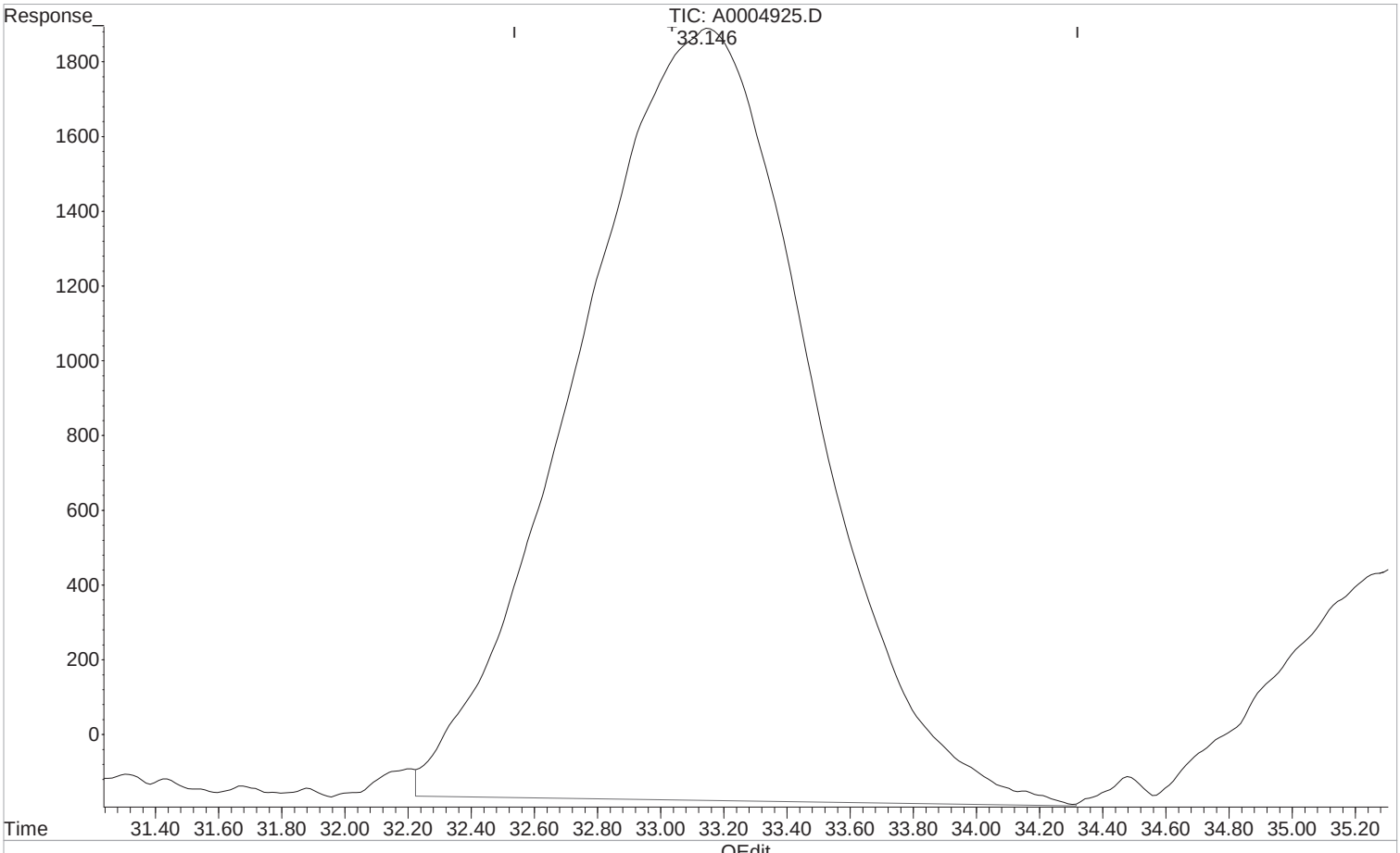
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004925.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 14:41:36
Operator : A.Felser
Sample : DLCS
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:23 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

33.146min 20.297 ppm m

response 1066840

Manual Integration:

After

Poor integration.

04/14/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

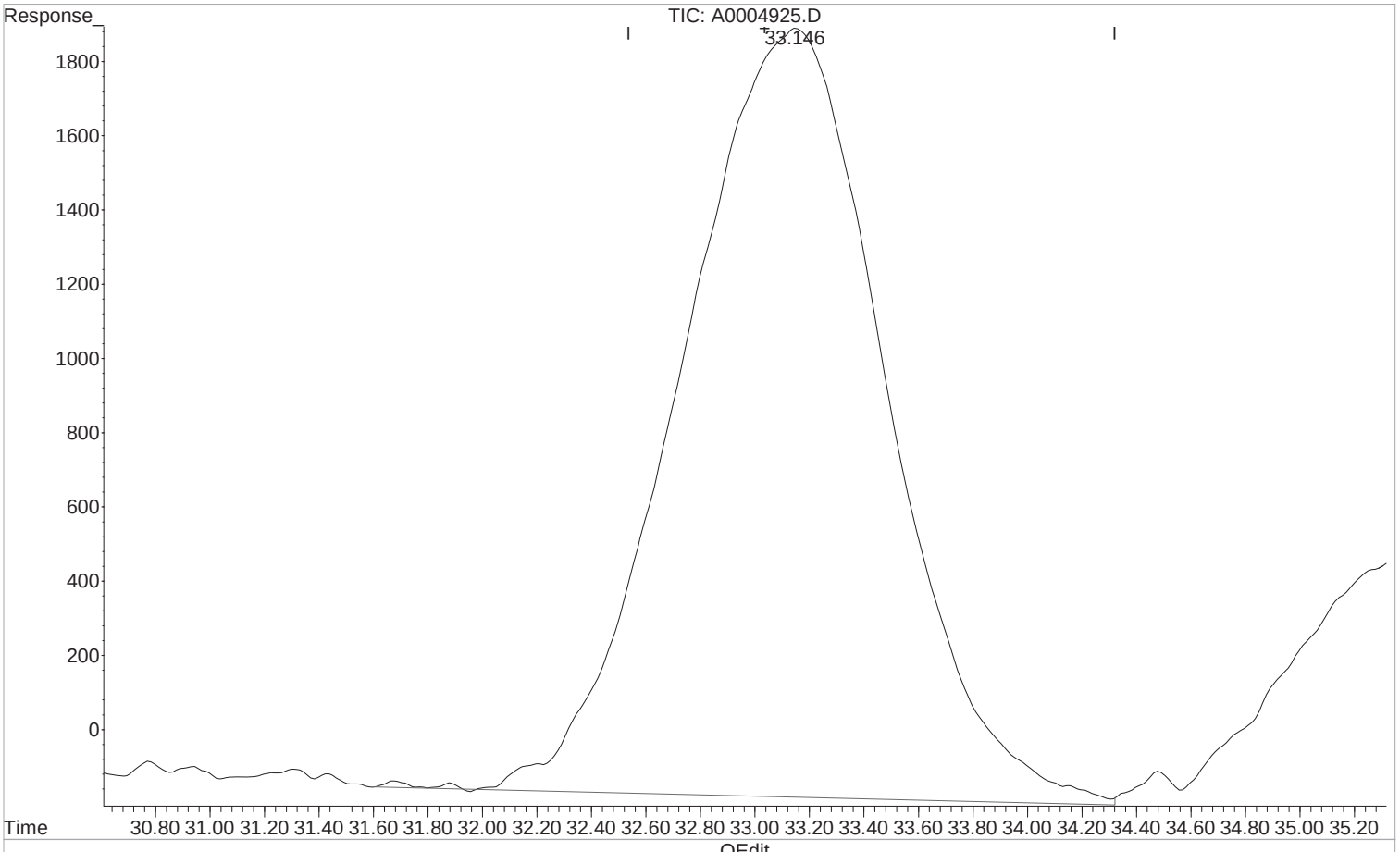
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004925.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 14:41:36
Operator : A.Felser
Sample : DLCS
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:23 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

33.155min 20.581 ppm

response 1081793

Manual Integration:

Before

04/14/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004925.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 14:41:36
Operator : A.Felser
Sample : DLCS
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:23 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	3.118	1872872	20.088	ppm	
2) T	Pyruvic acid	3.765	1009385	1.706	ppm	m
3) T	Lactic Acid	4.262	1037011	18.381	ppm	m
4) T	Acetic Acid	4.704	1176112	20.984	ppm	
5) T	Propionic Acid	11.084	1193682	21.960	ppm	m
6) T	Butyric Acid	33.146	1066840	20.297	ppm	m

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

RIGHT SOLUTIONS | RIGHT PARTNER

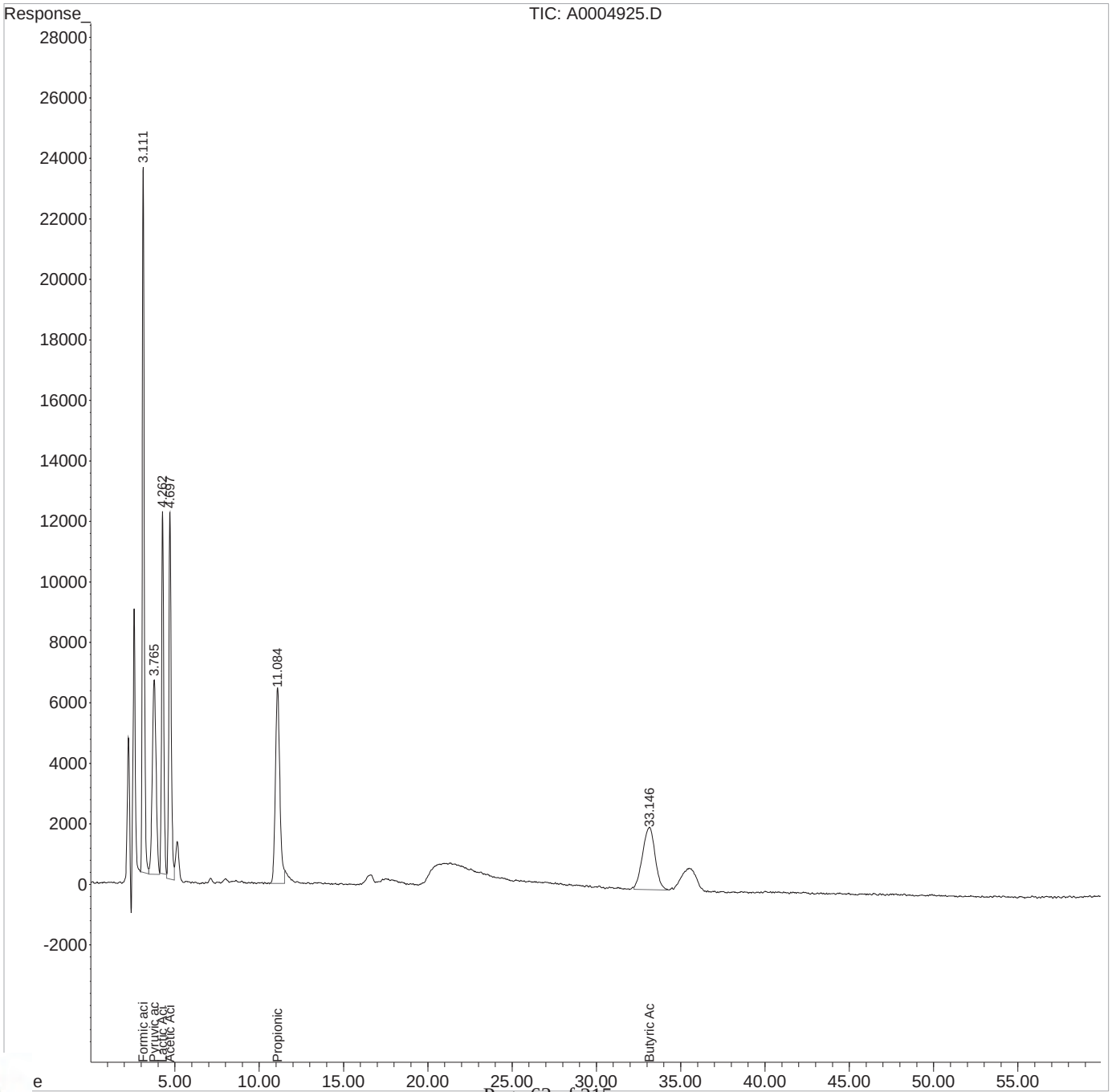
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004925.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 14:41:36
Operator : A.Felser
Sample : DLCS
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:23 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



RIGHT SOLUTIONS | RIGHT PARTNER

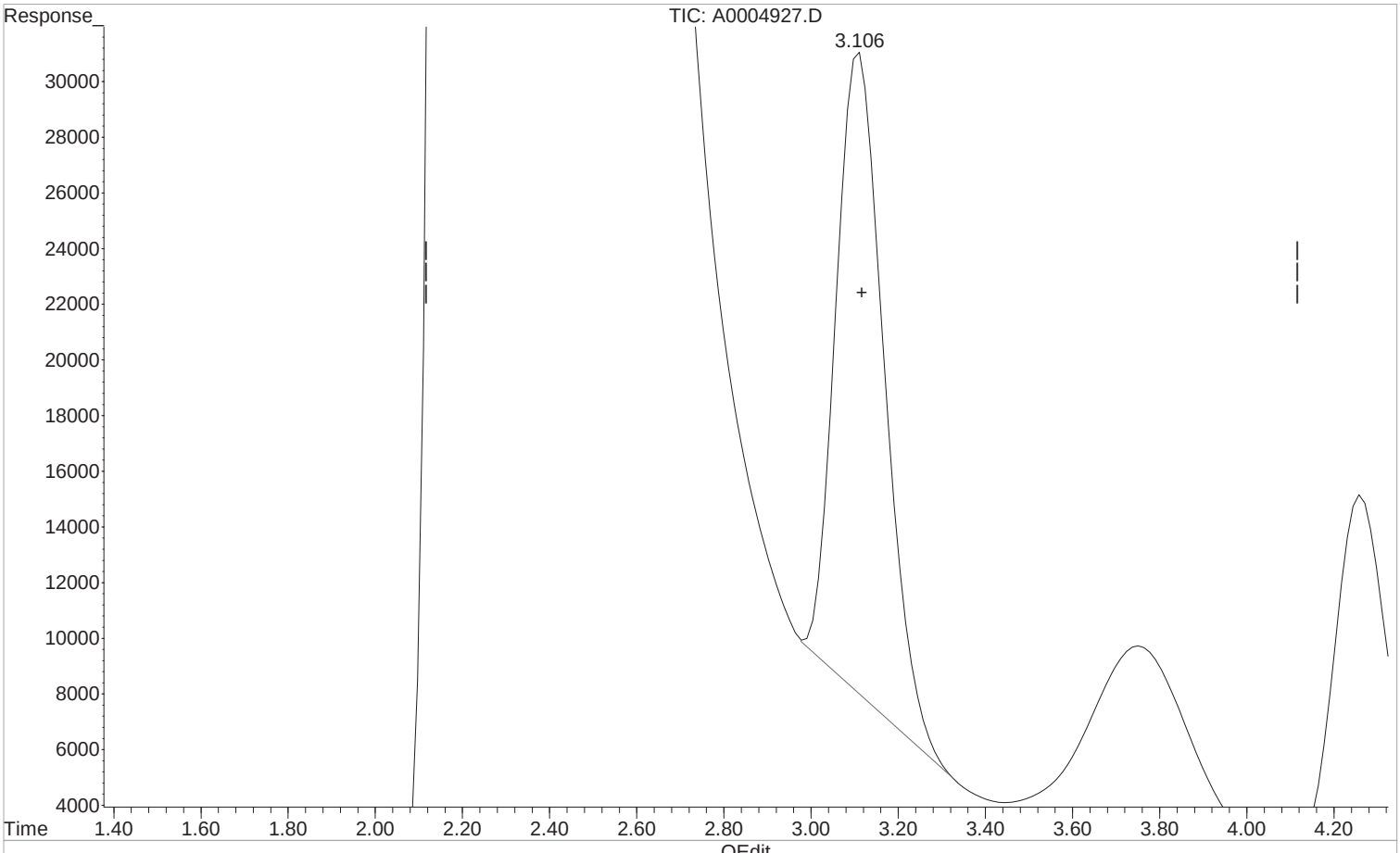
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004927.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 16:47:25
Operator : A.Felser
Sample : R2002879-001MS
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

3.106min 19.147 ppm m

response 1785162

Manual Integration:

After

Poor integration.

04/14/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

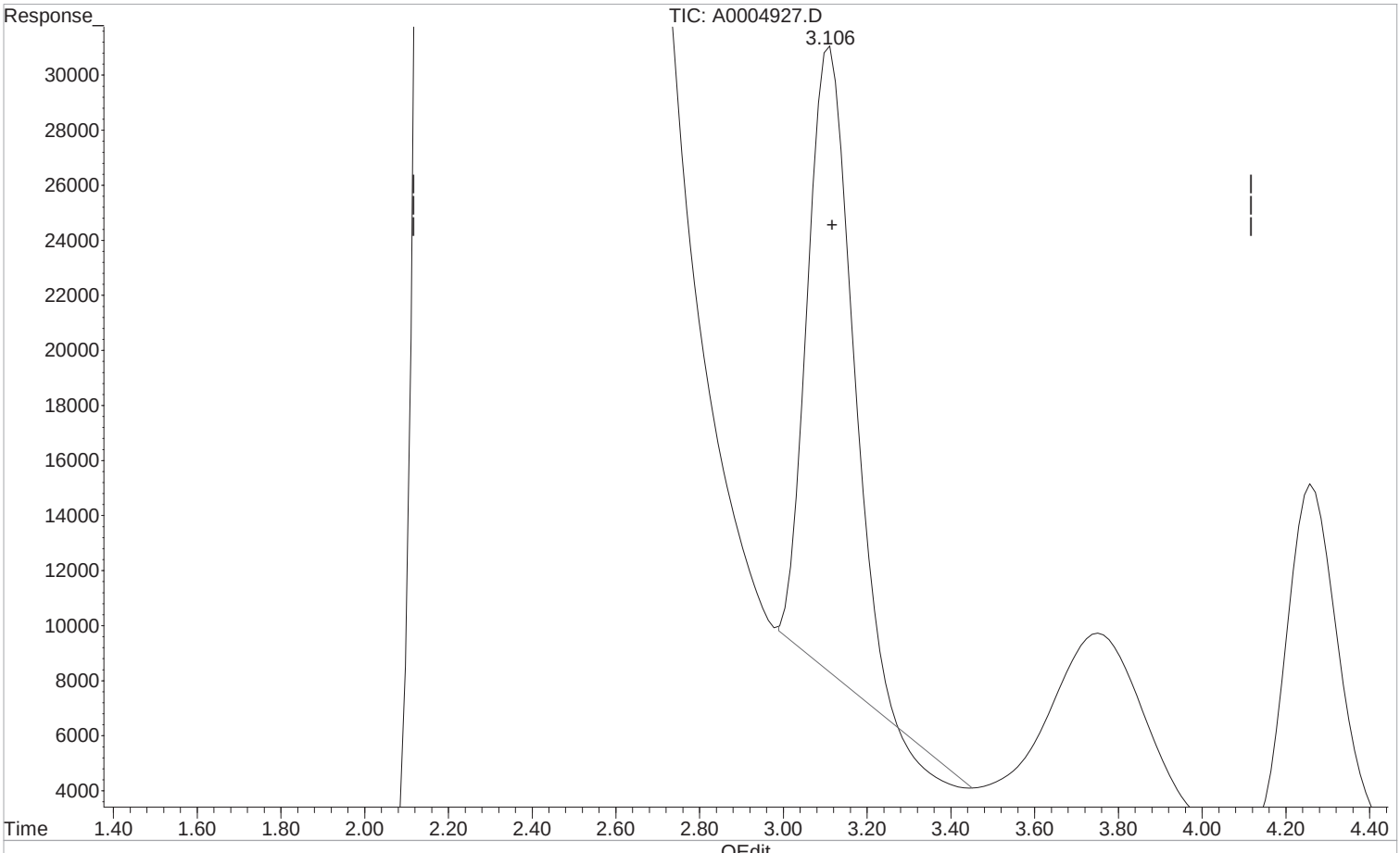
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004927.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 16:47:25
Operator : A.Felser
Sample : R2002879-001MS
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

3.112min 18.076 ppm

response 1685310

Manual Integration:

Before

04/14/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

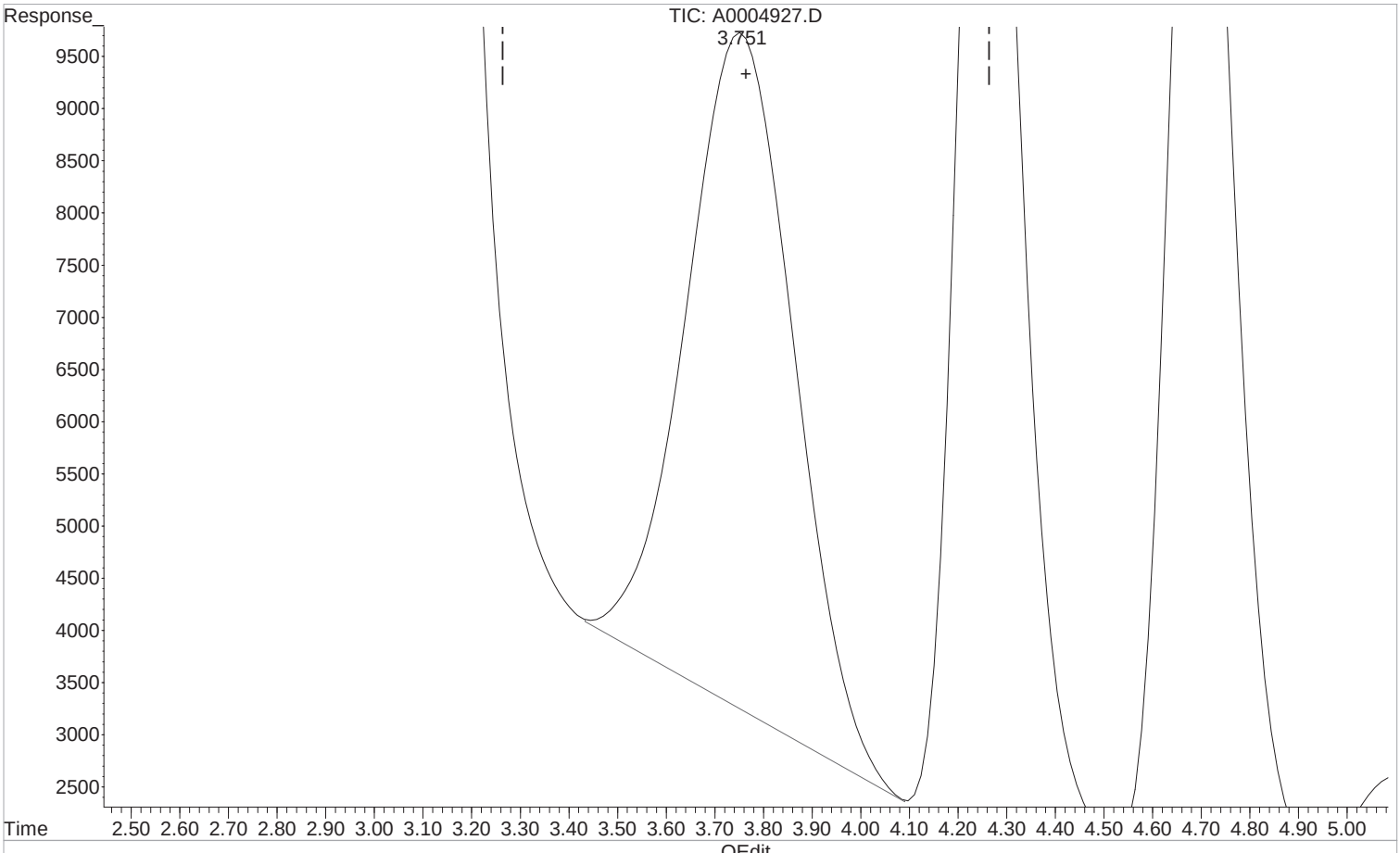
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004927.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 16:47:25
Operator : A.Felser
Sample : R2002879-001MS
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.751min 1.700 ppm m

response 1005940

Manual Integration:

After

Poor integration.

04/14/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

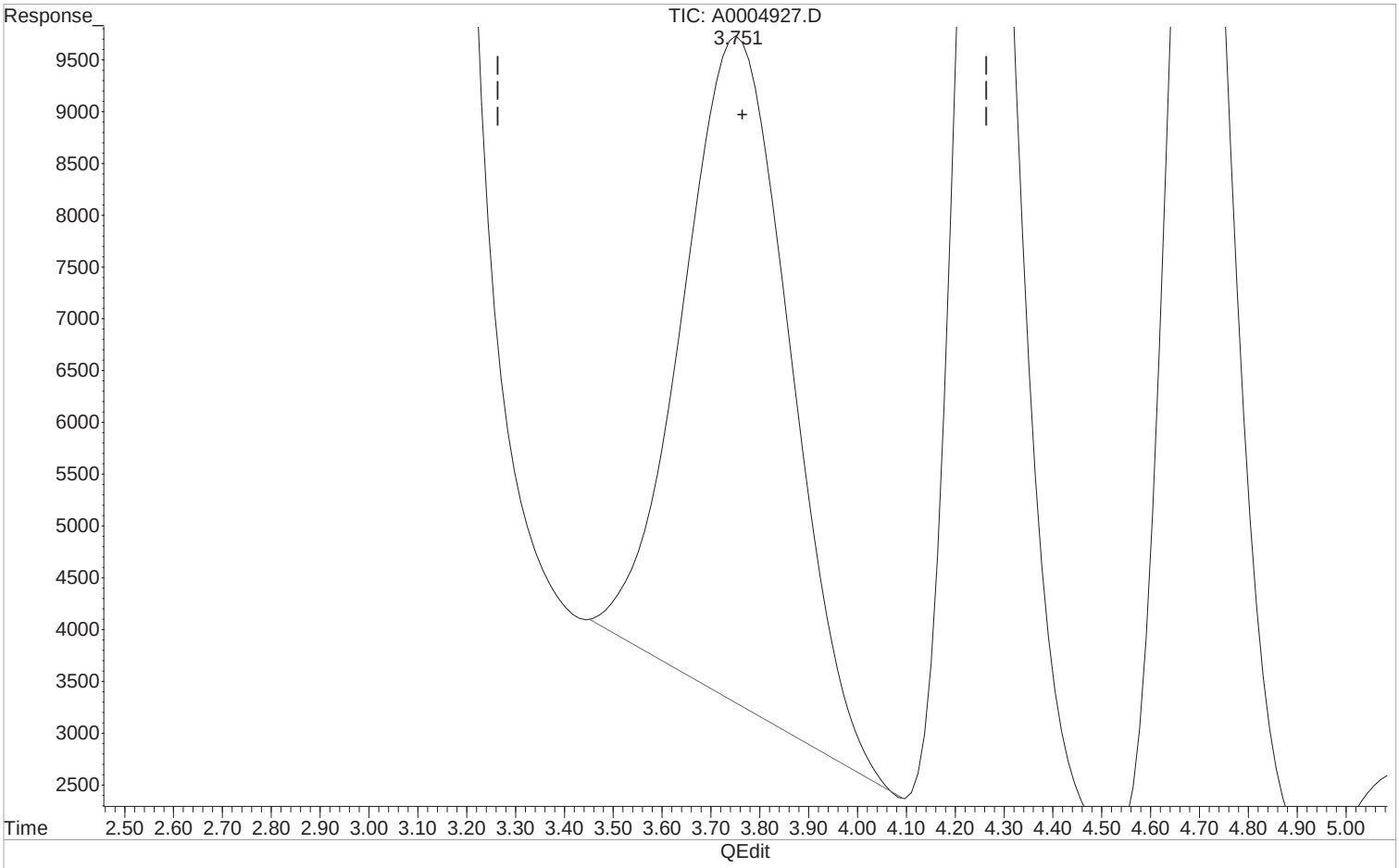
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004927.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 16:47:25
Operator : A.Felser
Sample : R2002879-001MS
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.755min 1.682 ppm

response 994825

Manual Integration:

Before

04/14/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

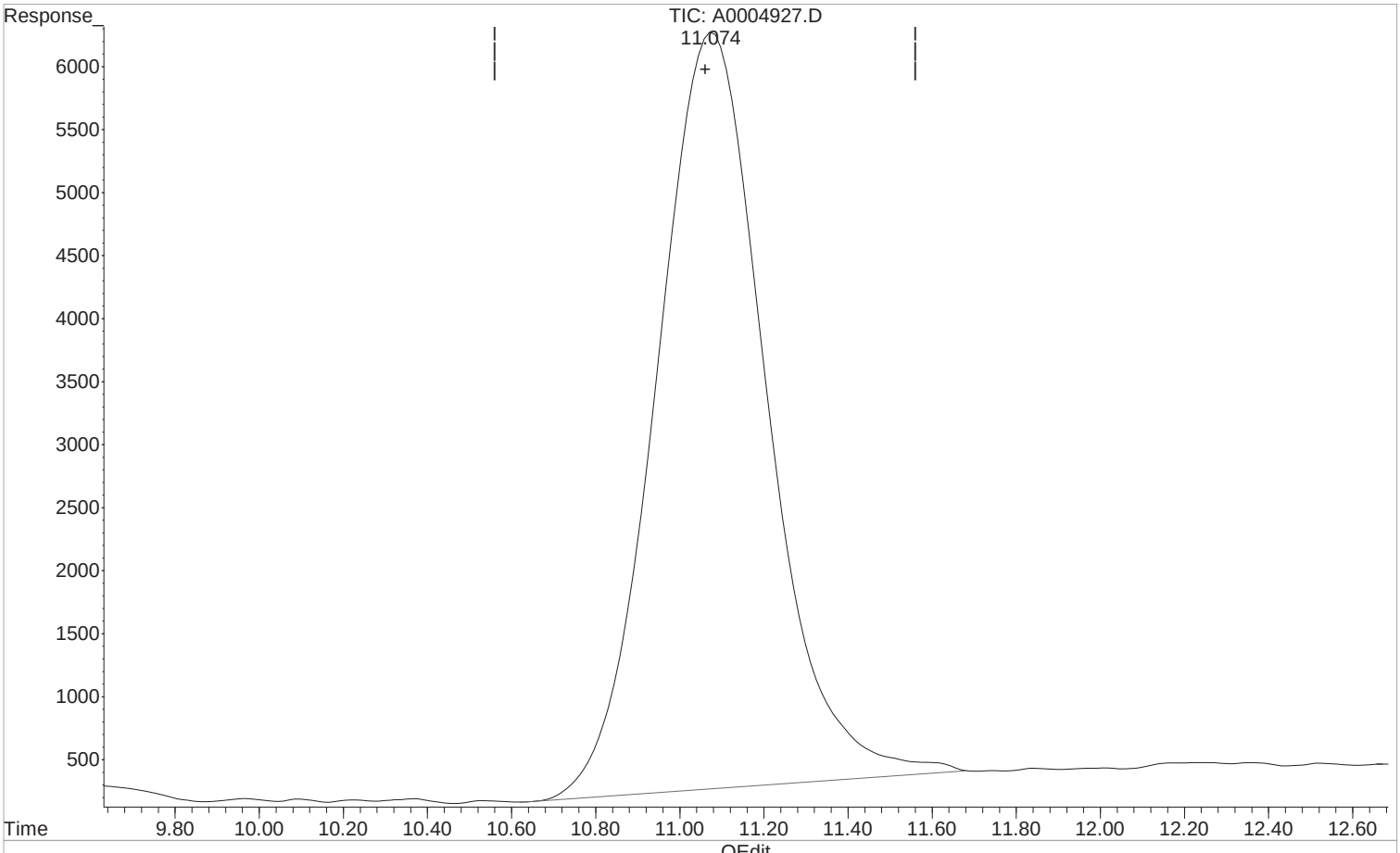
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004927.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 16:47:25
Operator : A.Felser
Sample : R2002879-001MS
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

11.074min 20.126 ppm m

response 1094024

Manual Integration:

After

Poor integration.

04/14/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

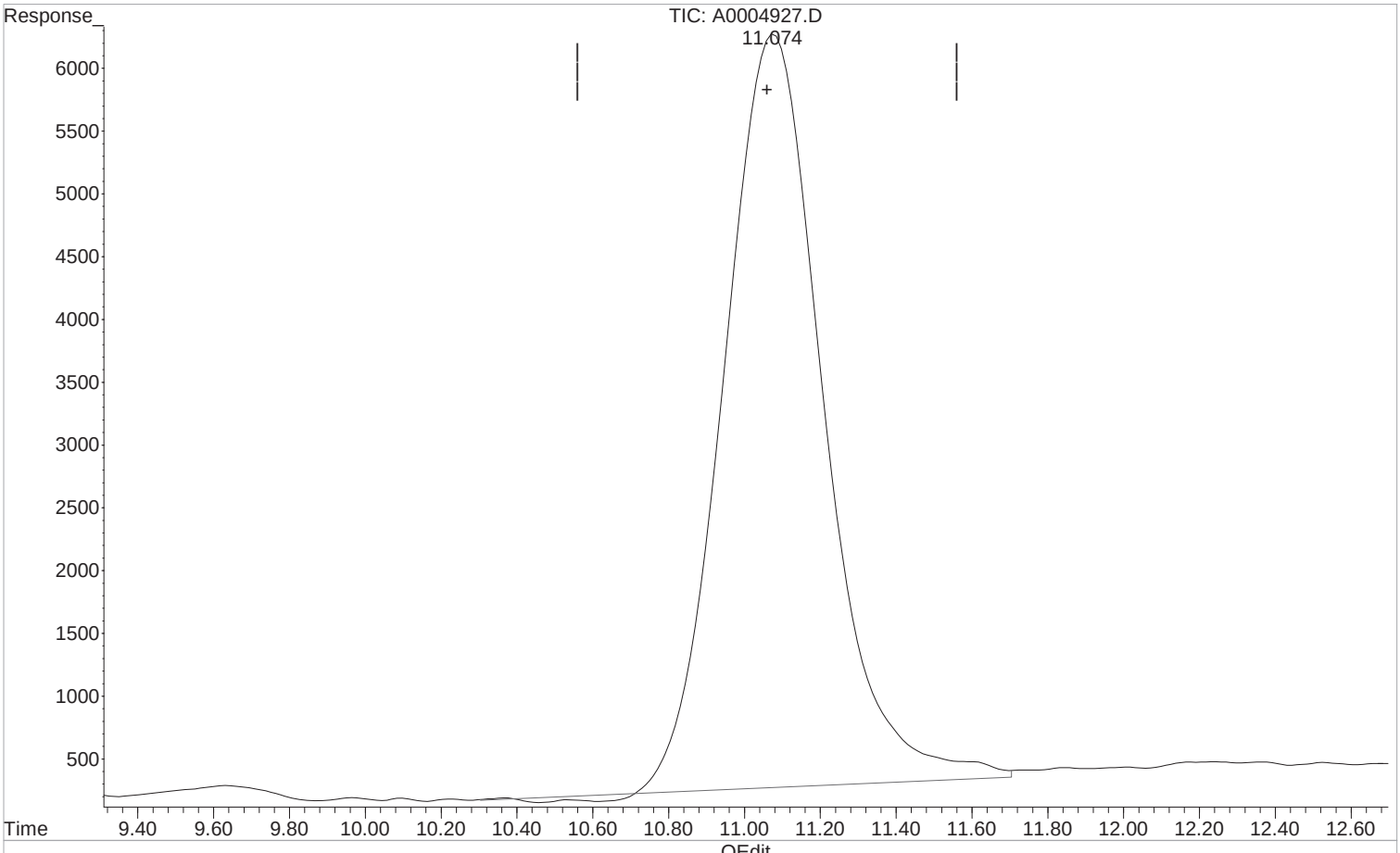
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004927.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 16:47:25
Operator : A.Felser
Sample : R2002879-001MS
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

11.079min 20.112 ppm

response 1093241

Manual Integration:

Before

04/14/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004927.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 16:47:25
Operator : A.Felser
Sample : R2002879-001MS
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	3.106	1785162	19.147	ppm	m
2) T	Pyruvic acid	3.751	1005940	1.700	ppm	m
3) T	Lactic Acid	4.264	1131187	20.051	ppm	
4) T	Acetic Acid	4.701	1142467	20.384	ppm	
5) T	Propionic Acid	11.074	1094024	20.126	ppm	m
6) T	Butyric Acid	33.098	1021110	19.427	ppm	

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

RIGHT SOLUTIONS | RIGHT PARTNER

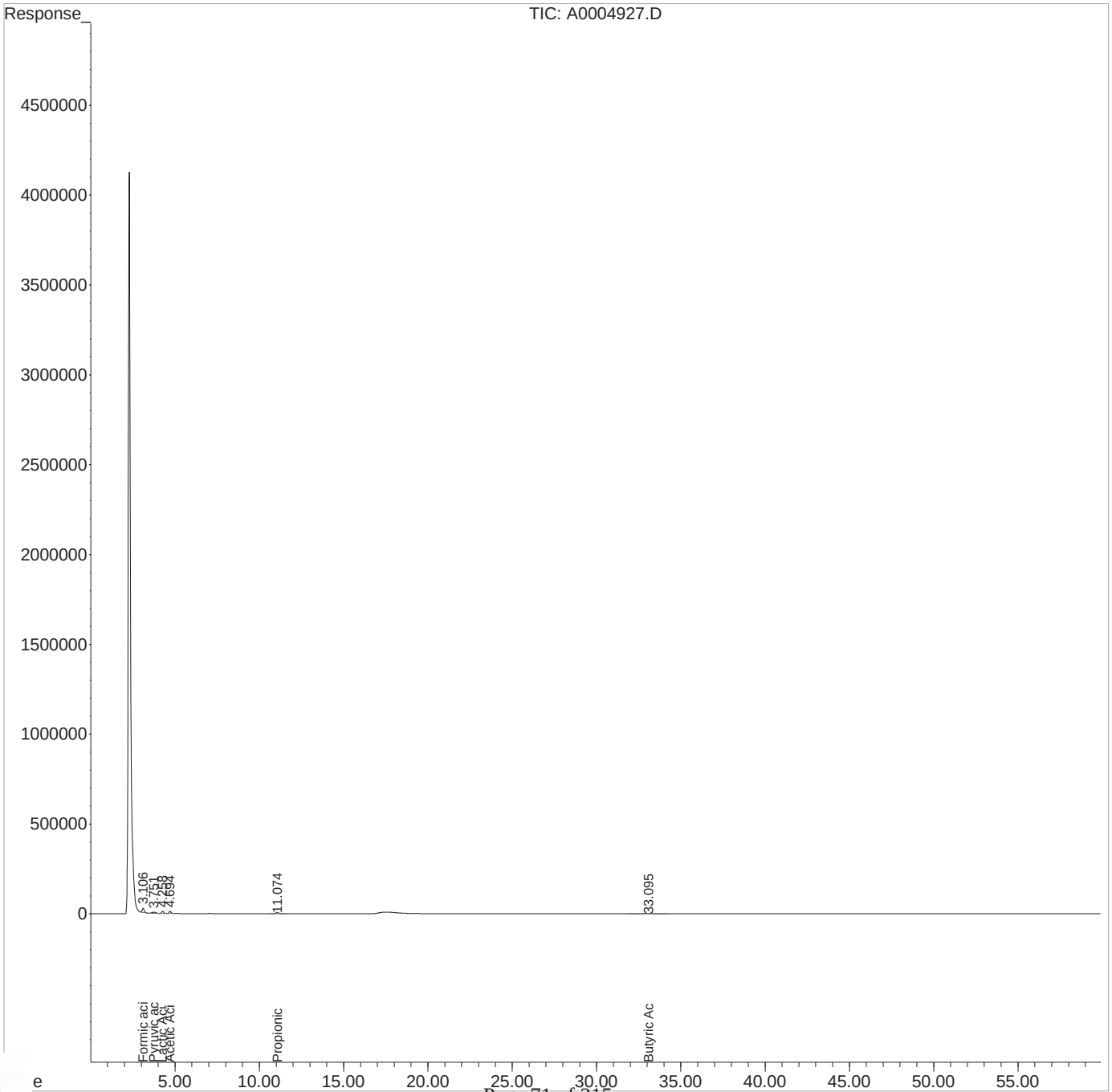
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004927.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 16:47:25
Operator : A.Felser
Sample : R2002879-001MS
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



RIGHT SOLUTIONS | RIGHT PARTNER

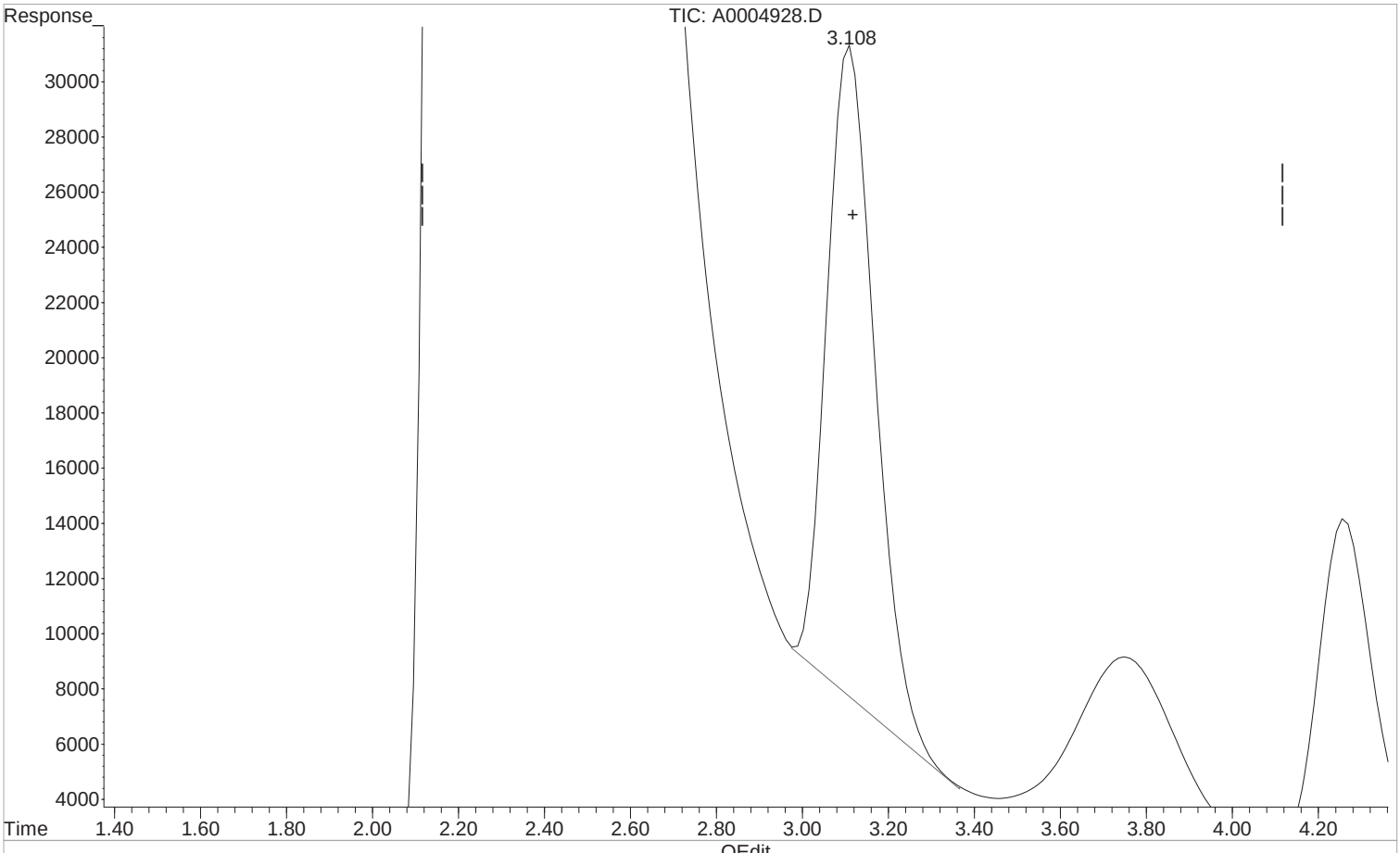
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004928.D
Signal(s) : dad1C.ch
Acq On : 31-Dec-2000, 02:47:45
Operator : A.Felser
Sample : R2002879-001DMS
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:30 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

3.108min 19.711 ppm m

response 1837743

Manual Integration:

After

Poor integration.

04/14/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

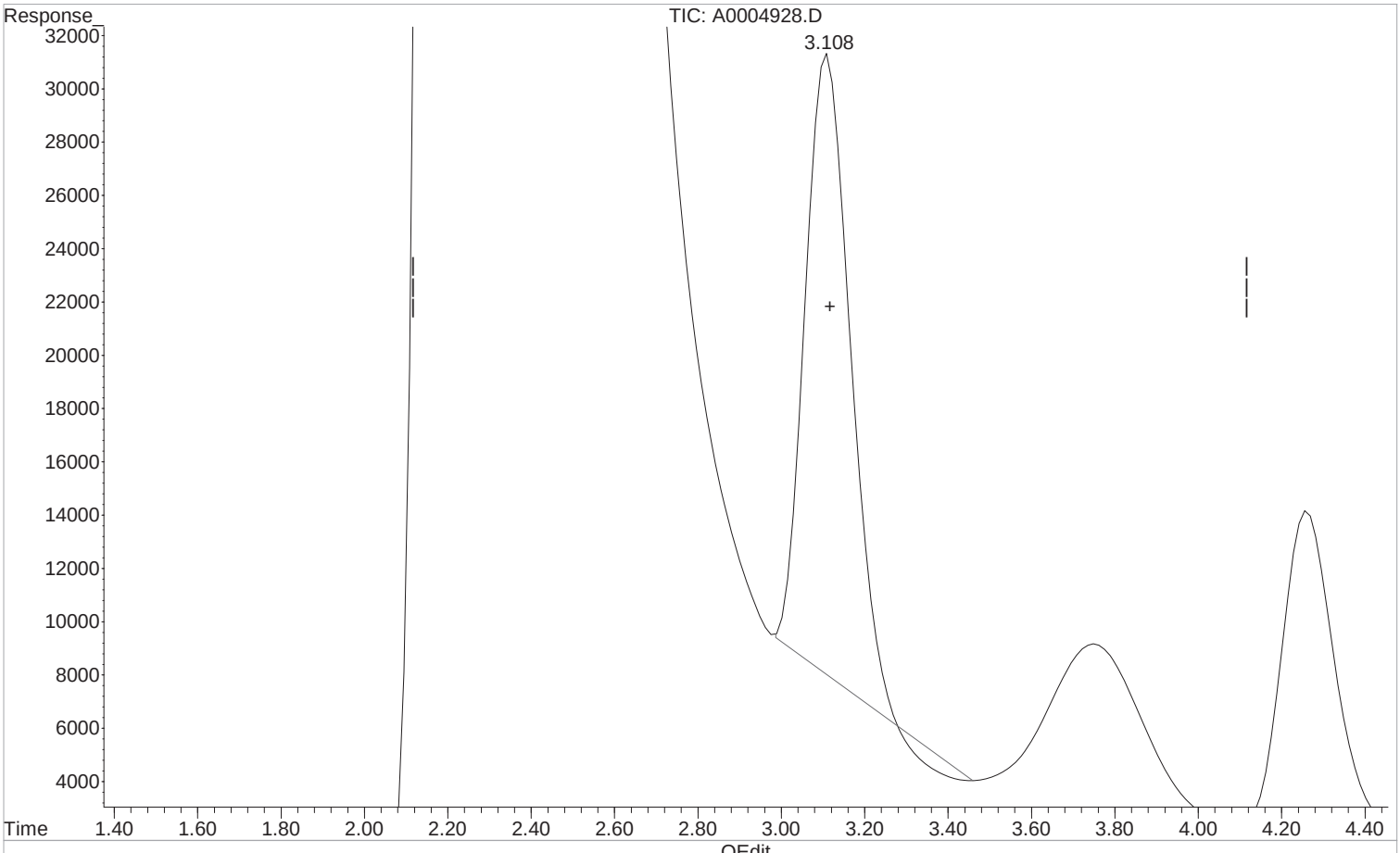
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004928.D
Signal(s) : dad1C.ch
Acq On : 31-Dec-2000, 02:47:45
Operator : A.Felser
Sample : R2002879-001DMS
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:30 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

3.112min 18.639 ppm

response 1737763

Manual Integration:

Before

04/14/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

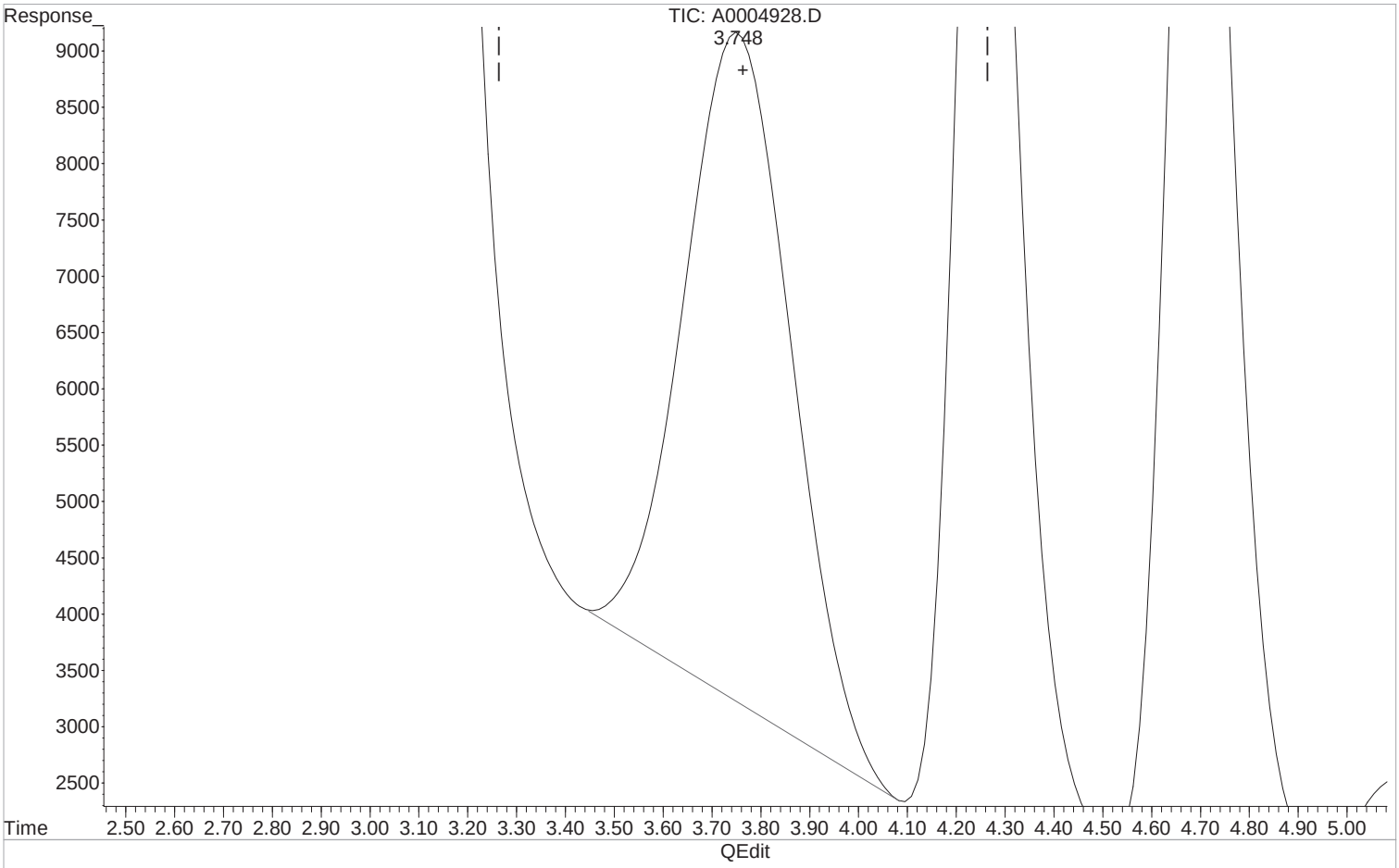
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004928.D
Signal(s) : dad1C.ch
Acq On : 31-Dec-2000, 02:47:45
Operator : A.Felser
Sample : R2002879-001DMS
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:30 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.748min 1.553 ppm m

response 918777

Manual Integration:

After

Poor integration.

04/14/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

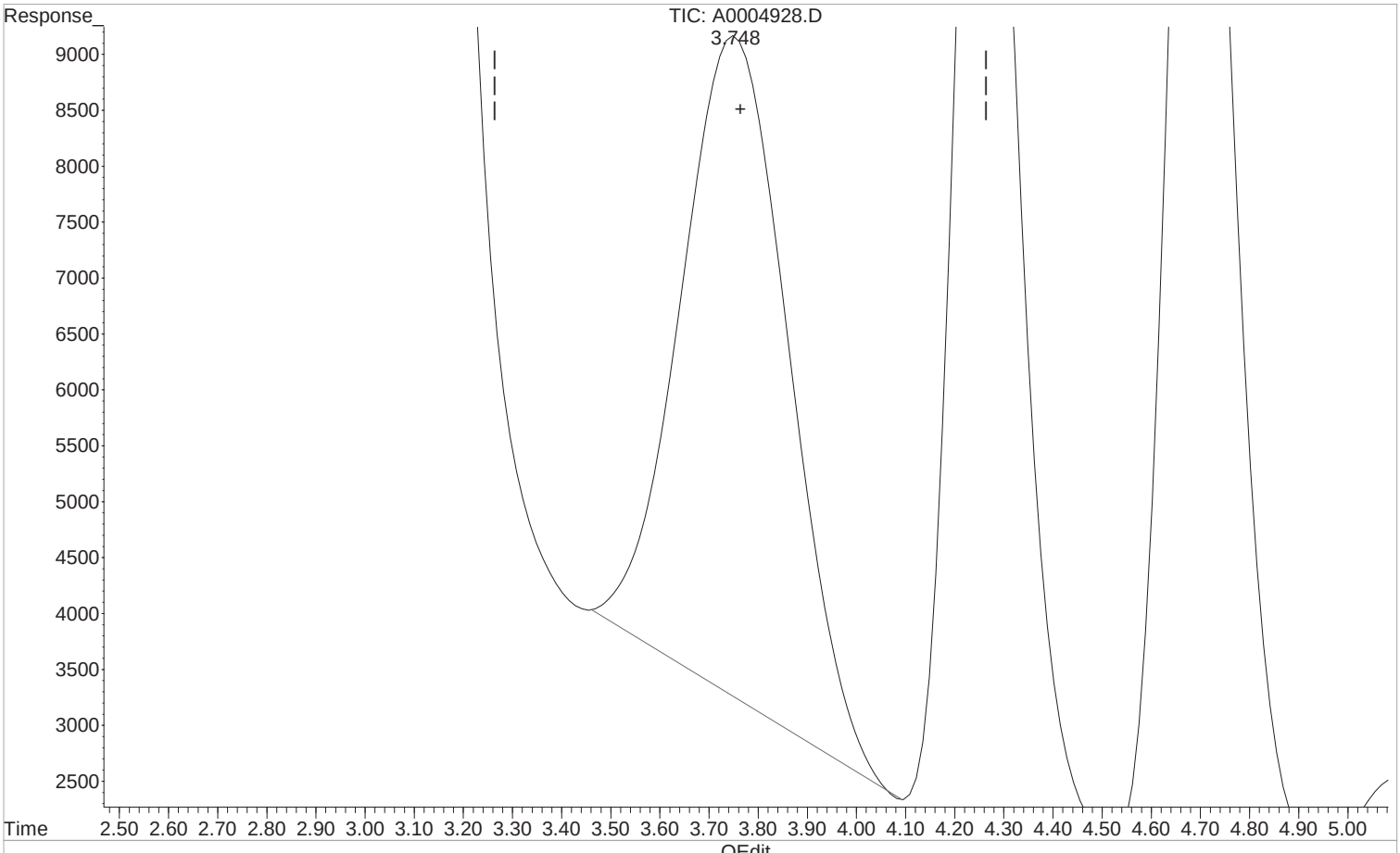
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004928.D
Signal(s) : dad1C.ch
Acq On : 31-Dec-2000, 02:47:45
Operator : A.Felser
Sample : R2002879-001DMS
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:30 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.753min 1.542 ppm

response 912469

Manual Integration:

Before

04/14/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

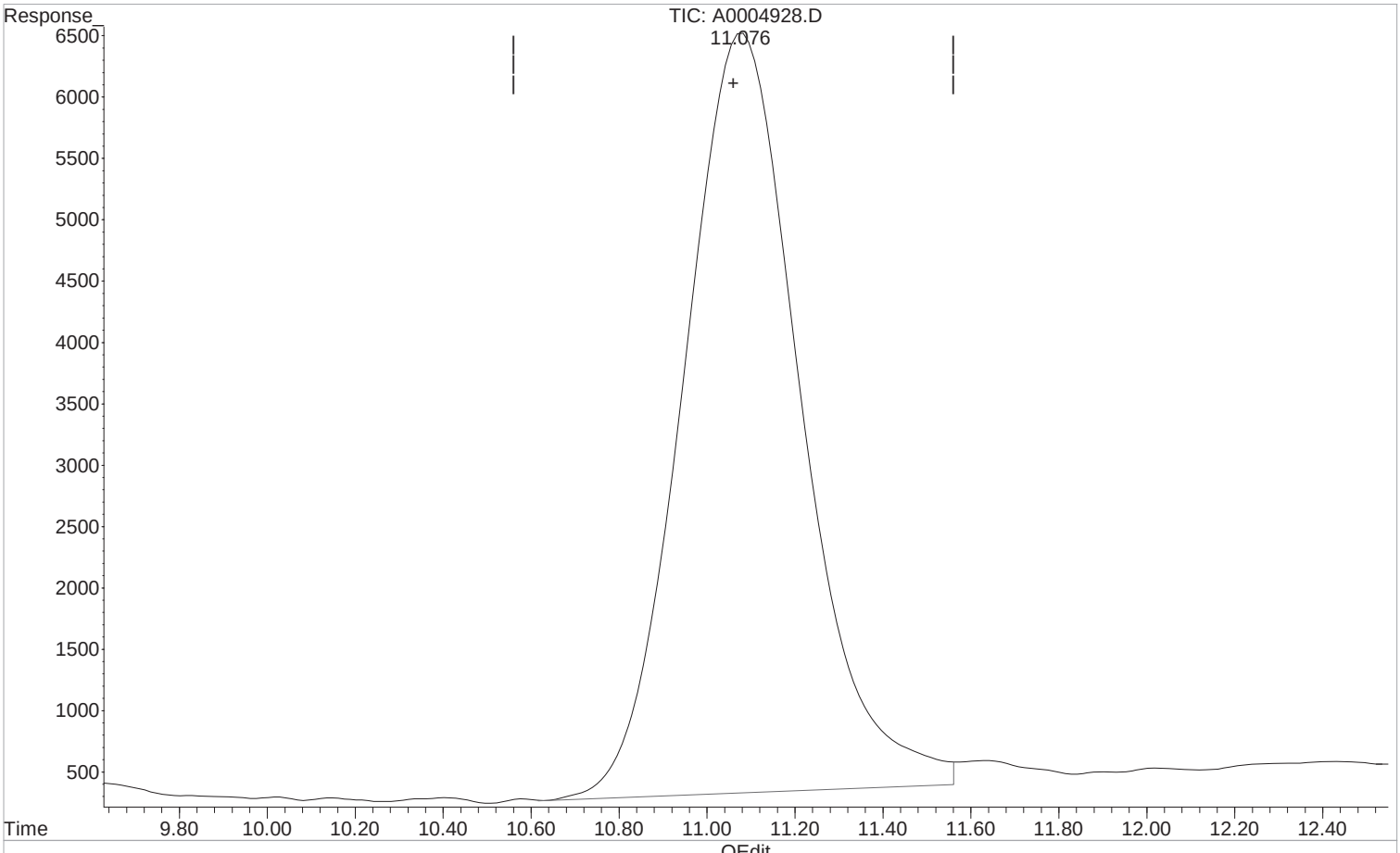
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004928.D
Signal(s) : dad1C.ch
Acq On : 31-Dec-2000, 02:47:45
Operator : A.Felser
Sample : R2002879-001DMS
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:30 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

11.076min 21.116 ppm m

response 1147833

Manual Integration:

After

Poor integration.

04/14/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

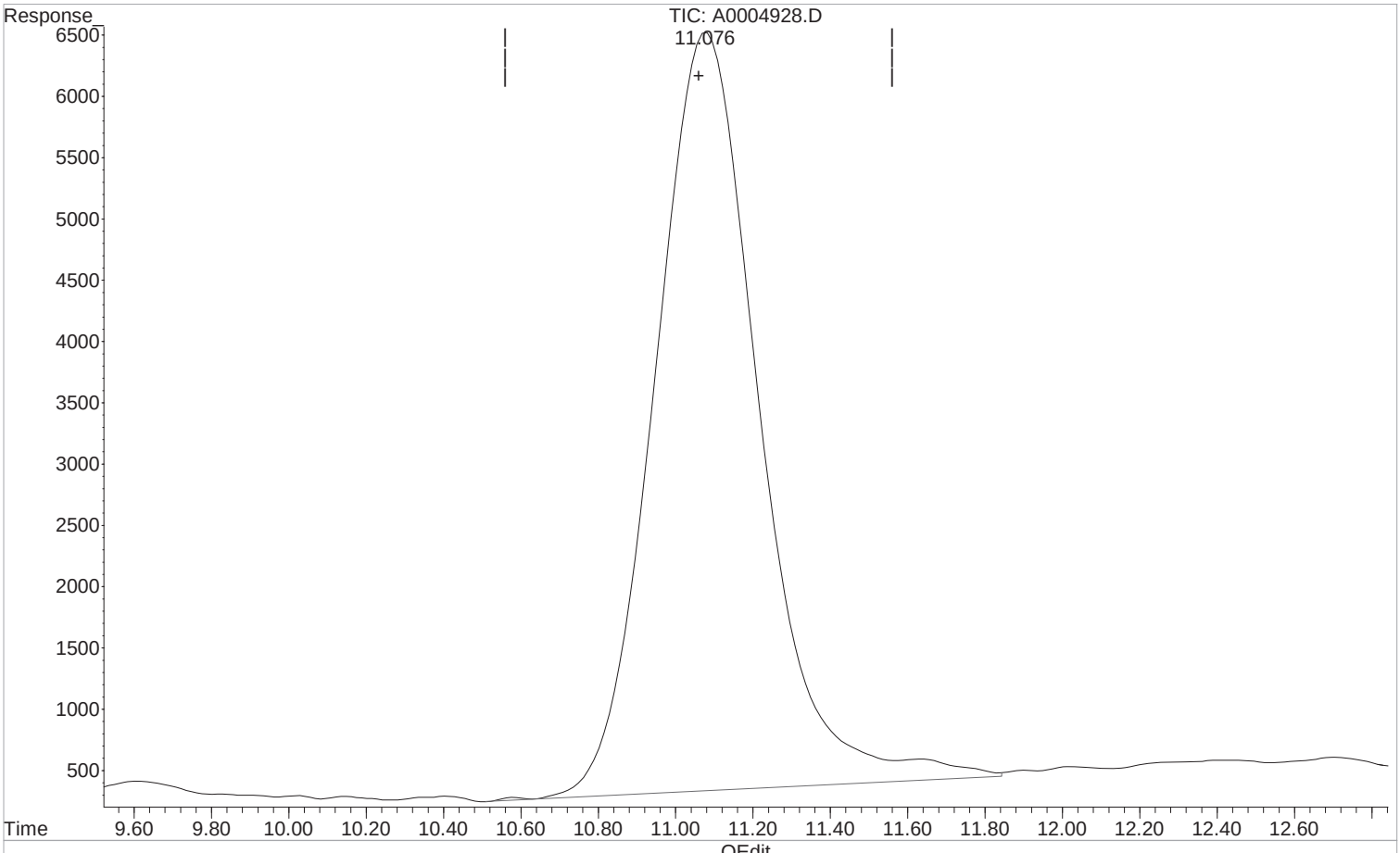
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004928.D
Signal(s) : dad1C.ch
Acq On : 31-Dec-2000, 02:47:45
Operator : A.Felser
Sample : R2002879-001DMS
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:30 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

11.082min 21.429 ppm

response 1164844

Manual Integration:

Before

04/14/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004928.D
Signal(s) : dad1C.ch
Acq On : ~~31-Dec-2000, 02:47:45~~ 09-Apr-2020, 17:47
Operator : A.Felser
Sample : R2002879-001DMS
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:30 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	3.108	1837743	19.711	ppm	m
2) T	Pyruvic acid	3.748	918777	1.553	ppm	m
3) T	Lactic Acid	4.264	1053023	18.665	ppm	
4) T	Acetic Acid	4.700	1178072	21.019	ppm	
5) T	Propionic Acid	11.076	1147833	21.116	ppm	m
6) T	Butyric Acid	33.072	1091804	20.772	ppm	

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

RIGHT SOLUTIONS | RIGHT PARTNER

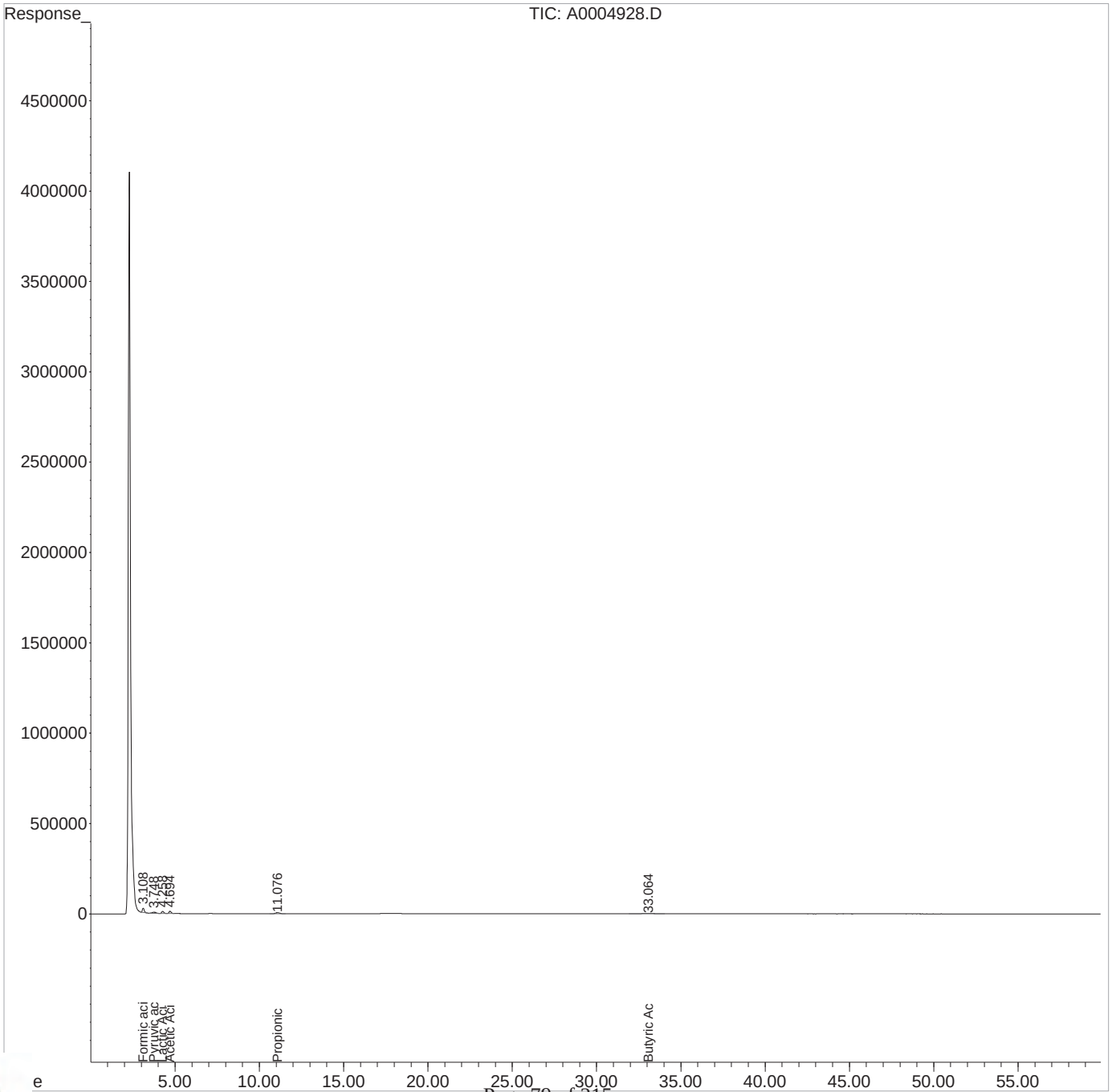
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004928.D
Signal(s) : dad1C.ch
Acq On : 31-Dec-2000, 02:47:45
Operator : A.Felser
Sample : R2002879-001DMS
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:30 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



RIGHT SOLUTIONS | RIGHT PARTNER

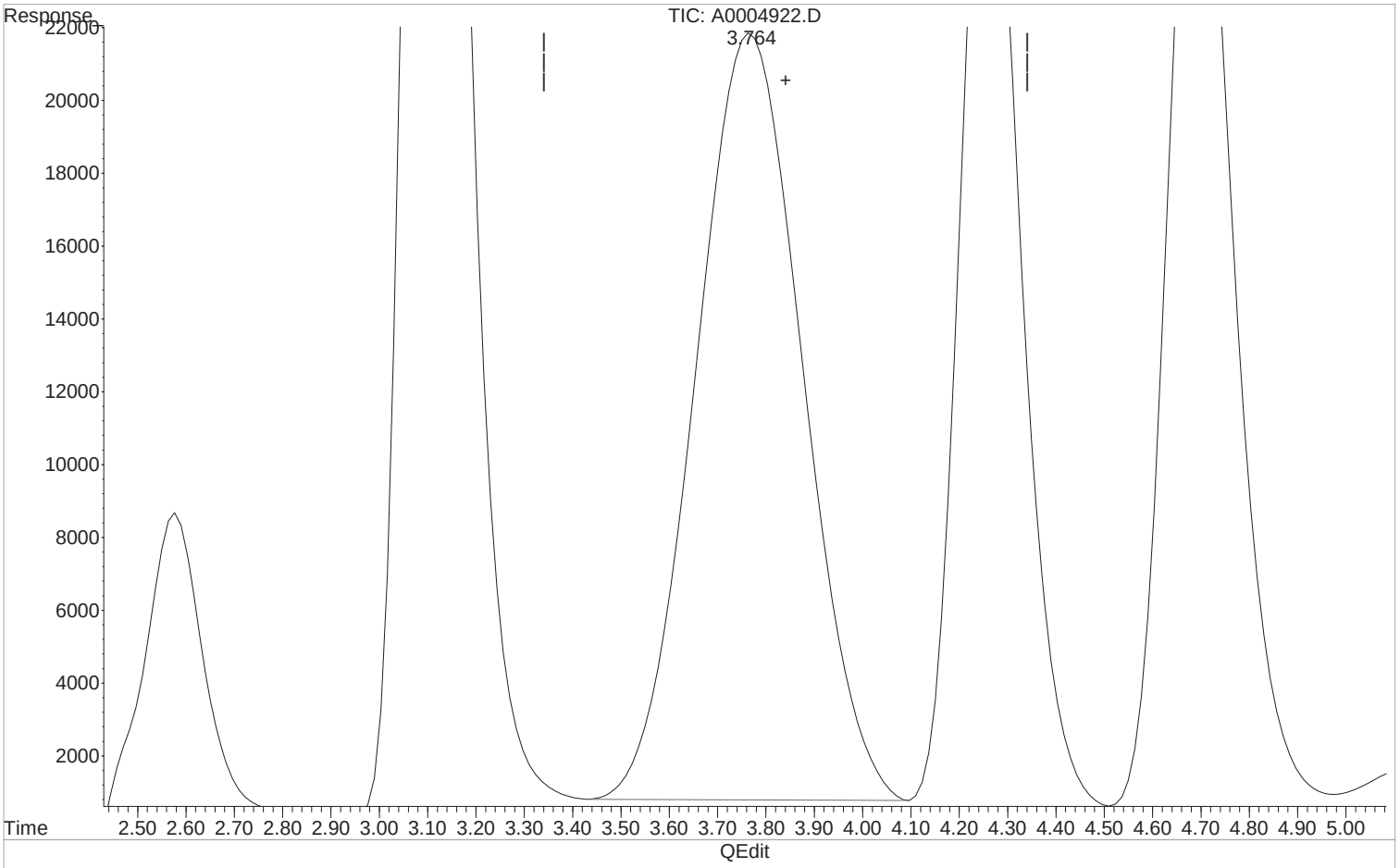
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004922.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 01:47:53
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 09 12:34:09 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:33:56 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.764min 5.478 ppm m

response 3240731

Manual Integration:

After

Poor integration.

04/09/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

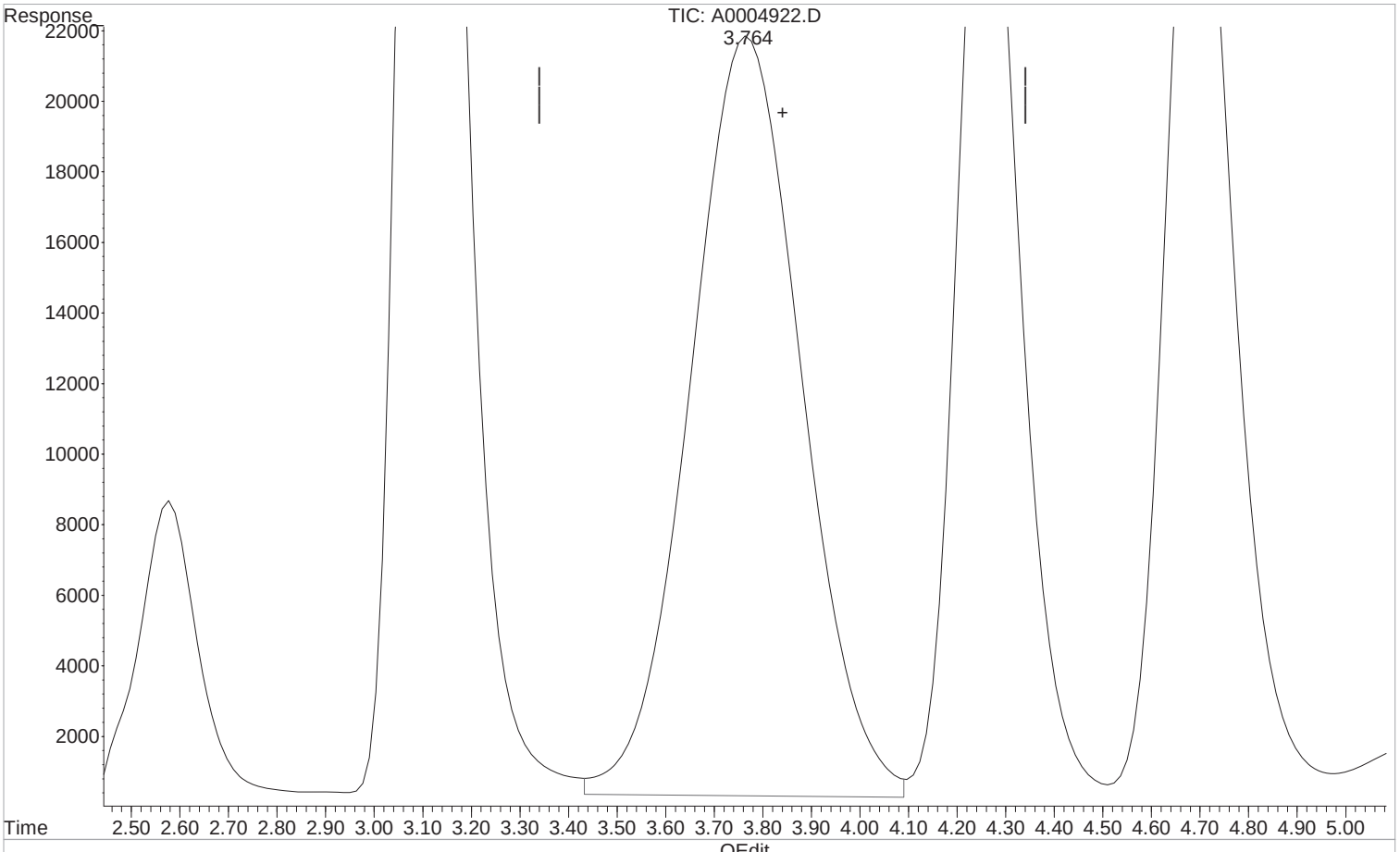
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004922.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 01:47:53
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 09 12:34:09 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:33:56 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.770min 5.796 ppm

response 3428875

Manual Integration:

Before

04/09/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

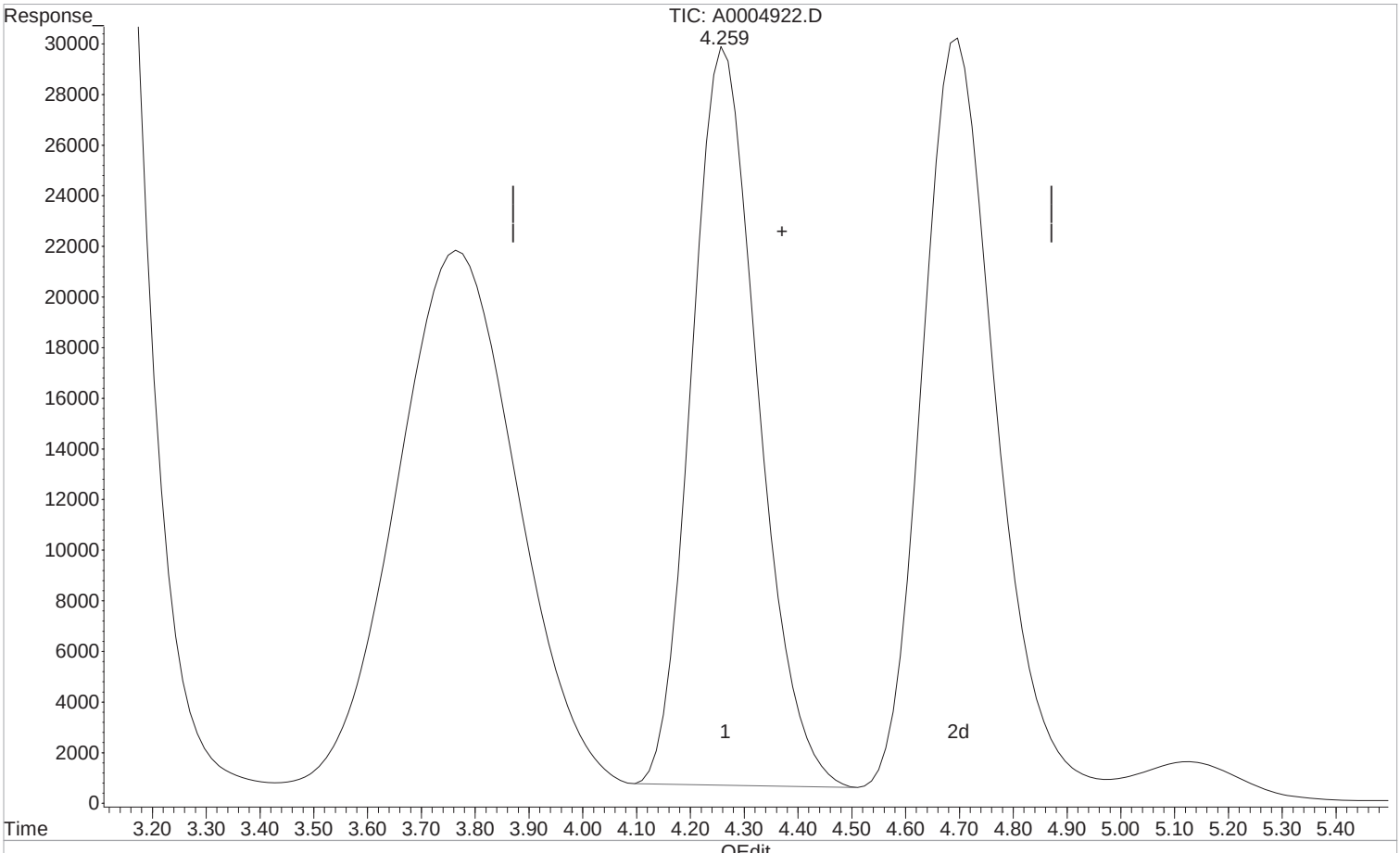
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004922.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 01:47:53
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 09 12:34:09 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:33:56 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.259min 44.440 ppm m

response 2507148

Manual Integration:

After

Poor integration.

04/09/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

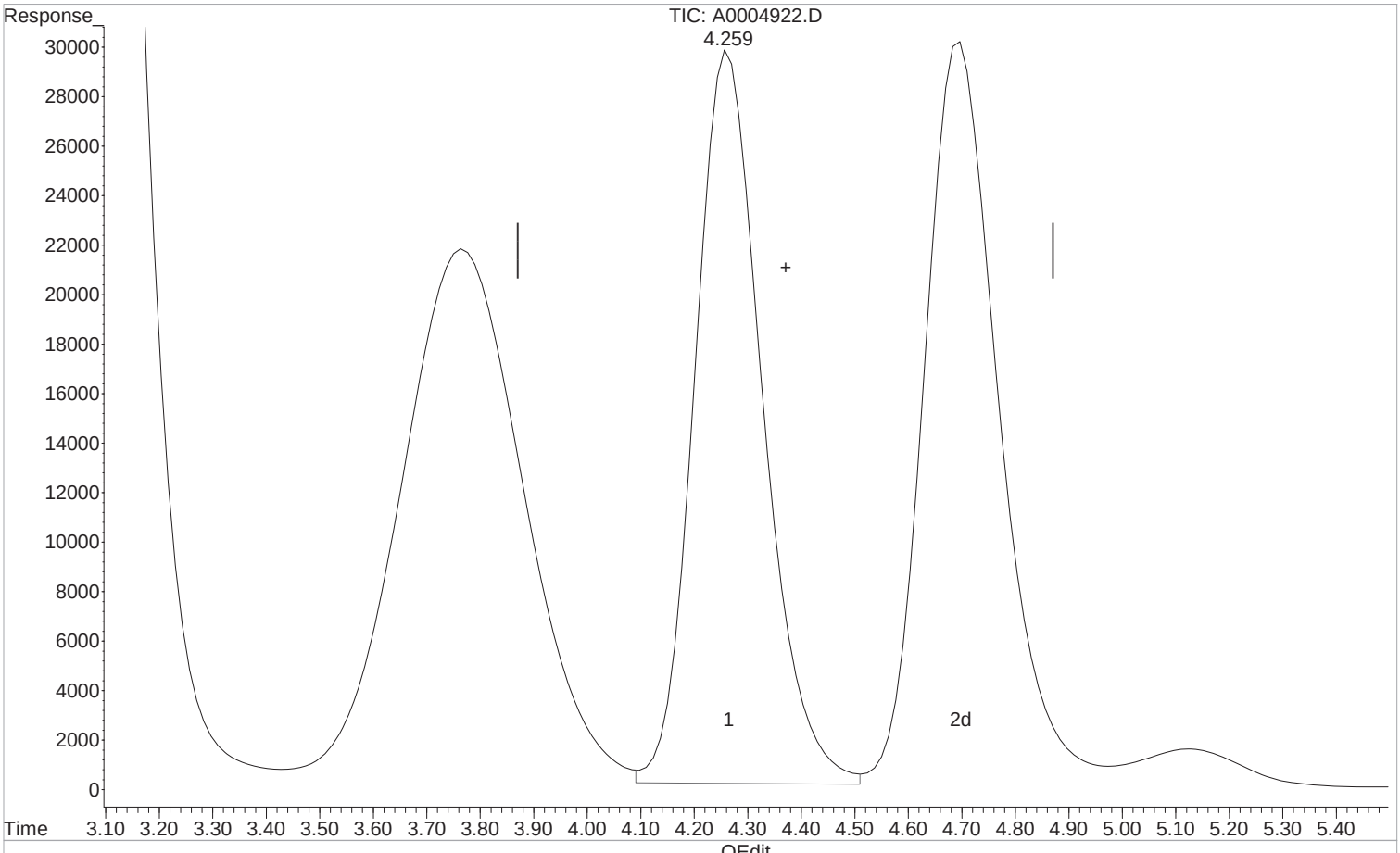
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004922.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 01:47:53
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 09 12:34:09 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:33:56 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.265min 46.480 ppm

response 2622220

Manual Integration:

Before

04/09/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

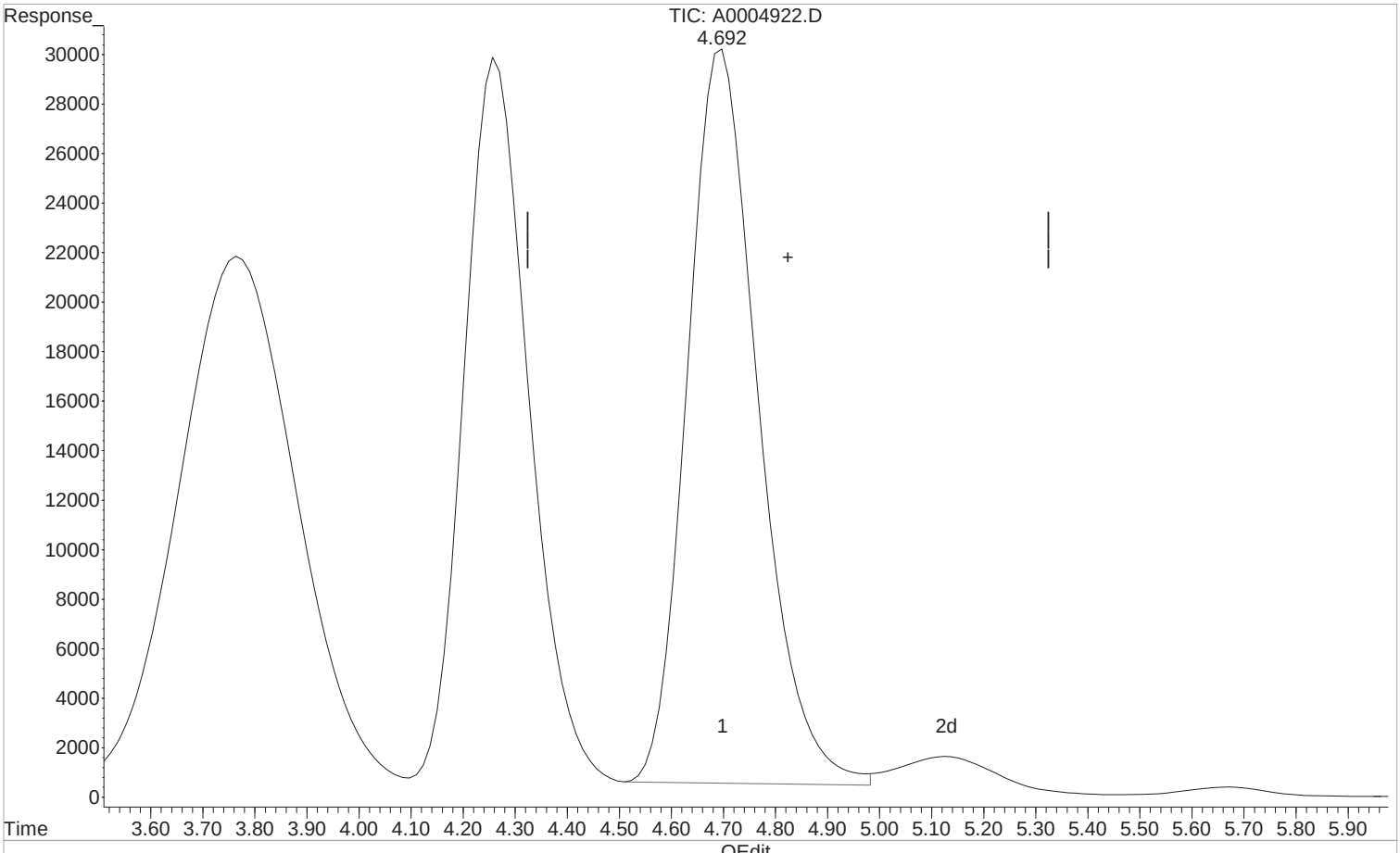
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004922.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 01:47:53
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 09 12:34:09 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:33:56 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.692min 50.213 ppm m

response 2814373

Manual Integration:

After

Poor integration.

04/09/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

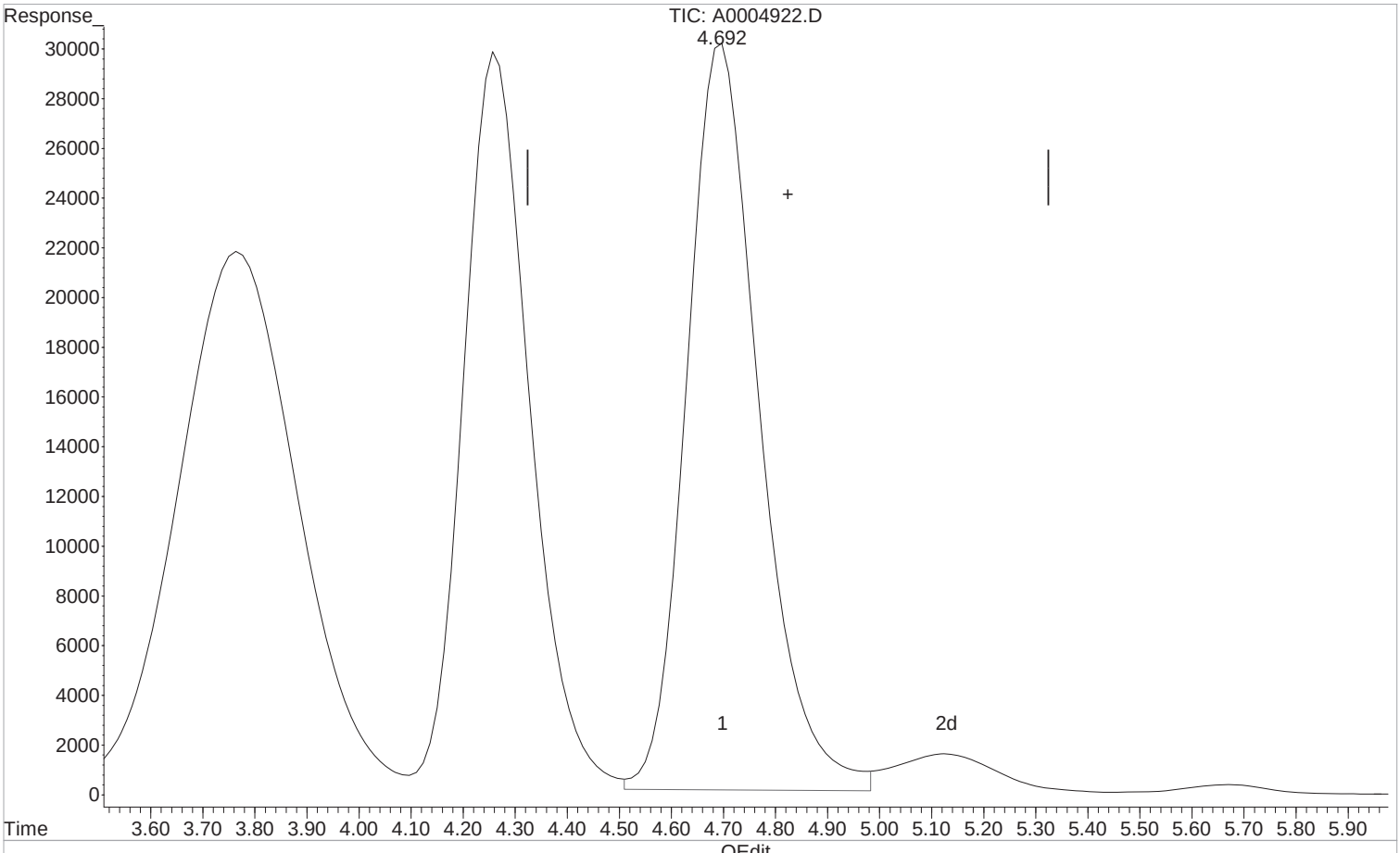
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004922.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 01:47:53
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 09 12:34:09 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:33:56 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.699min 52.021 ppm

response 2915660

Manual Integration:

Before

04/09/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

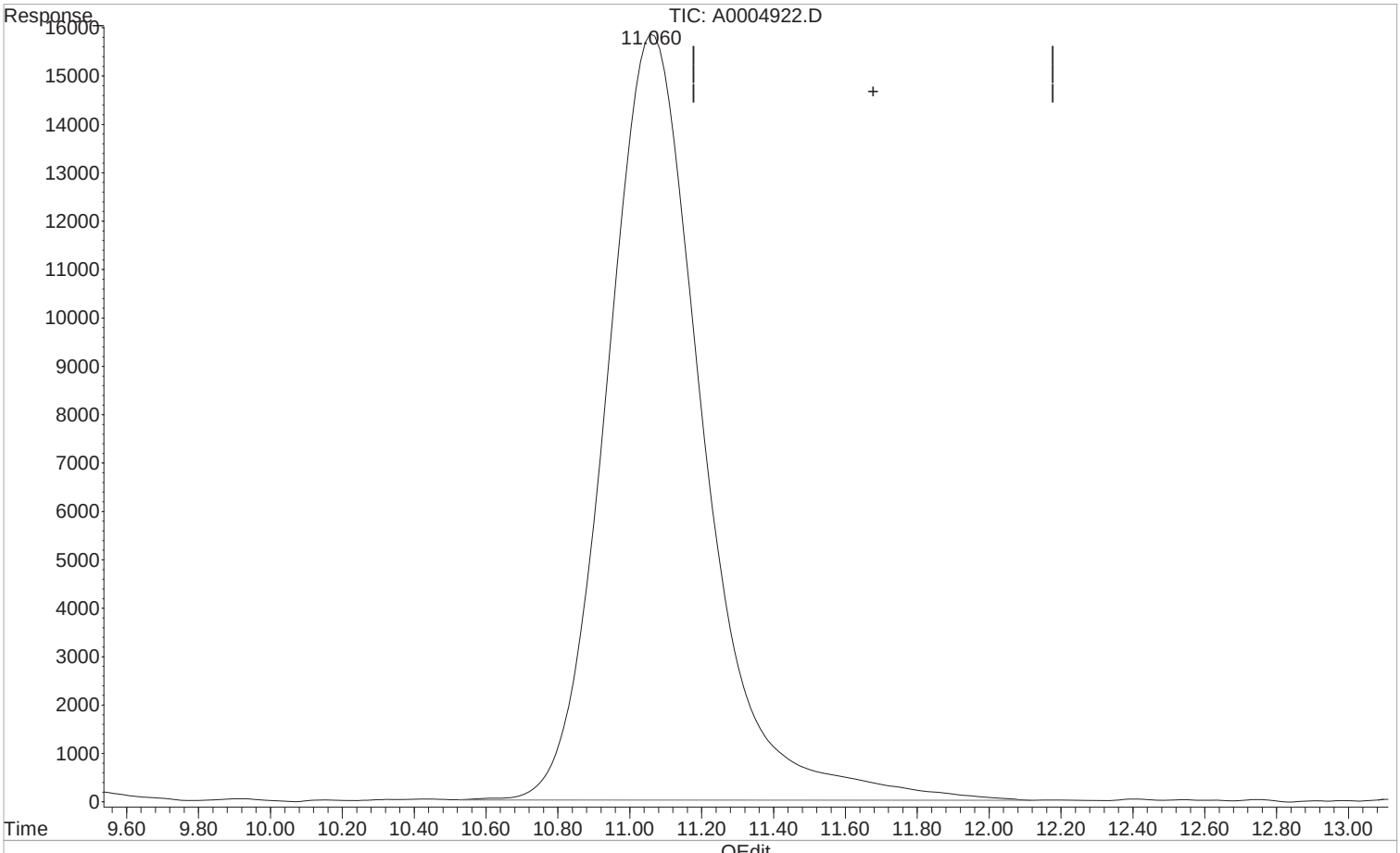
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004922.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 01:47:53
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 09 12:34:09 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:33:56 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

11.060min 54.436 ppm m

response 2958998

Manual Integration:

After

Peak not found.

04/09/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

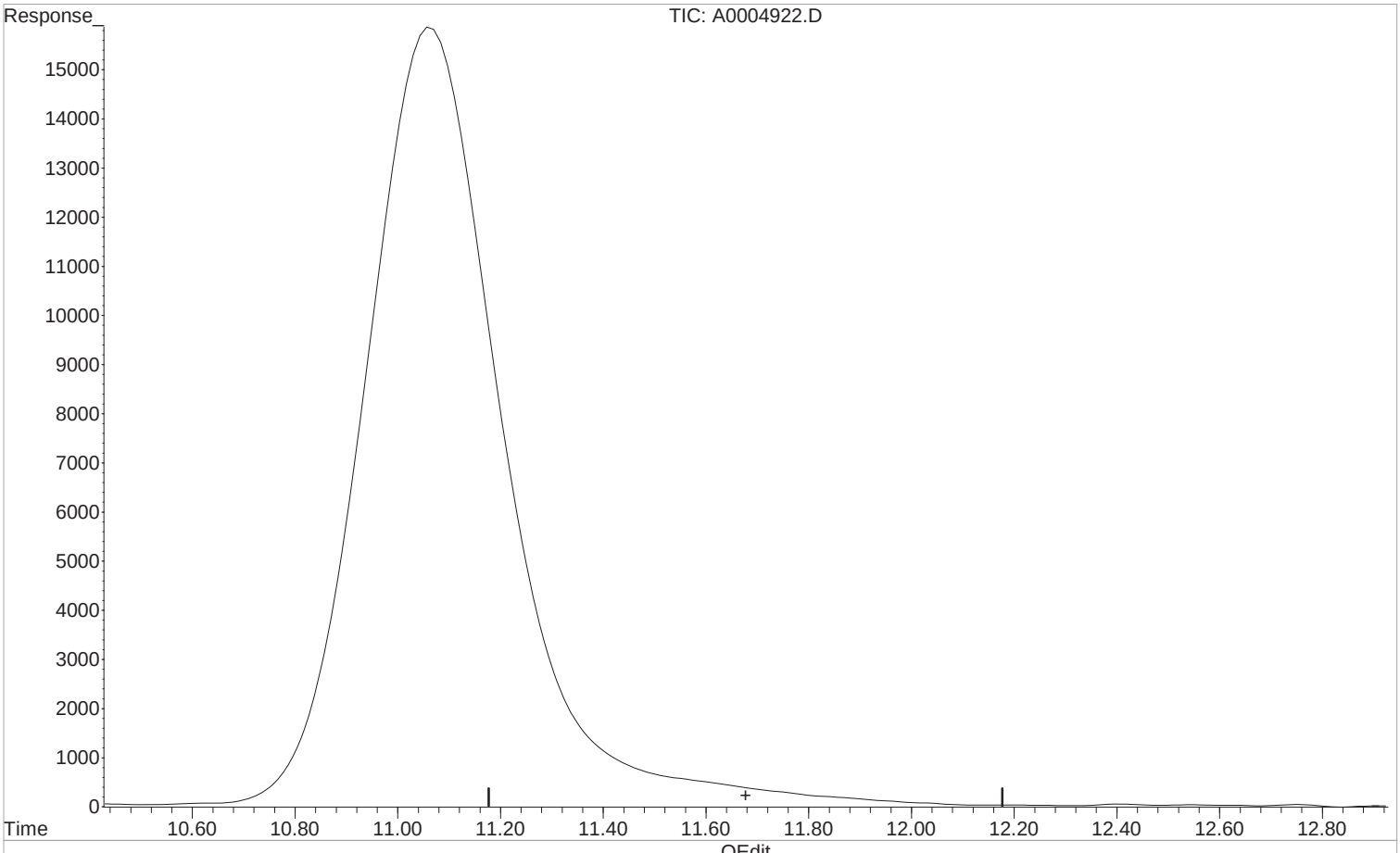
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004922.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 01:47:53
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 09 12:34:09 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:33:56 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

11.678min 0.000 ppm

response 0

Manual Integration:

Before

04/09/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

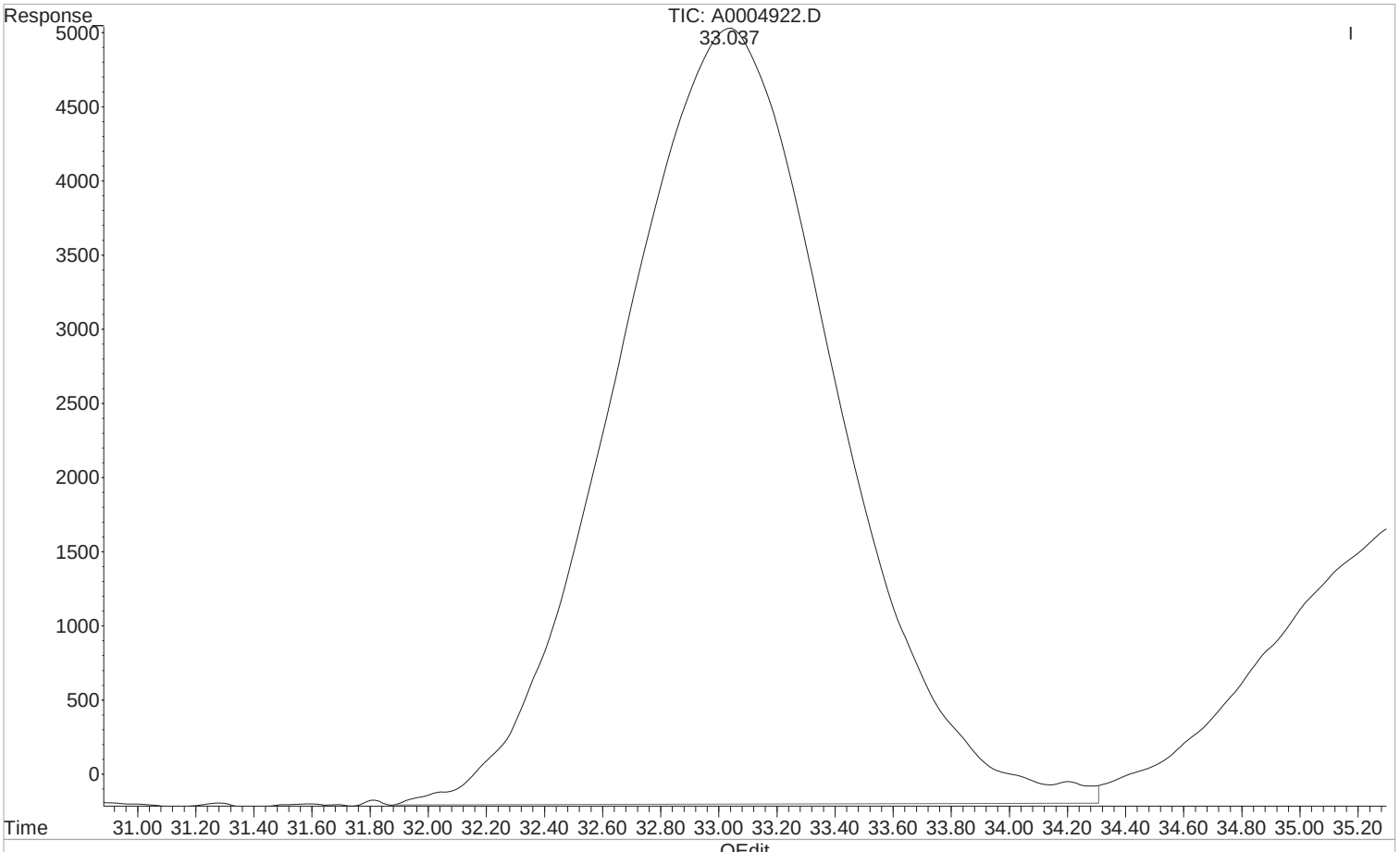
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004922.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 01:47:53
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 09 12:34:09 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:33:56 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

33.037min 52.083 ppm m

response 2737582

Manual Integration:

After

Wrong peak selected.

04/09/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

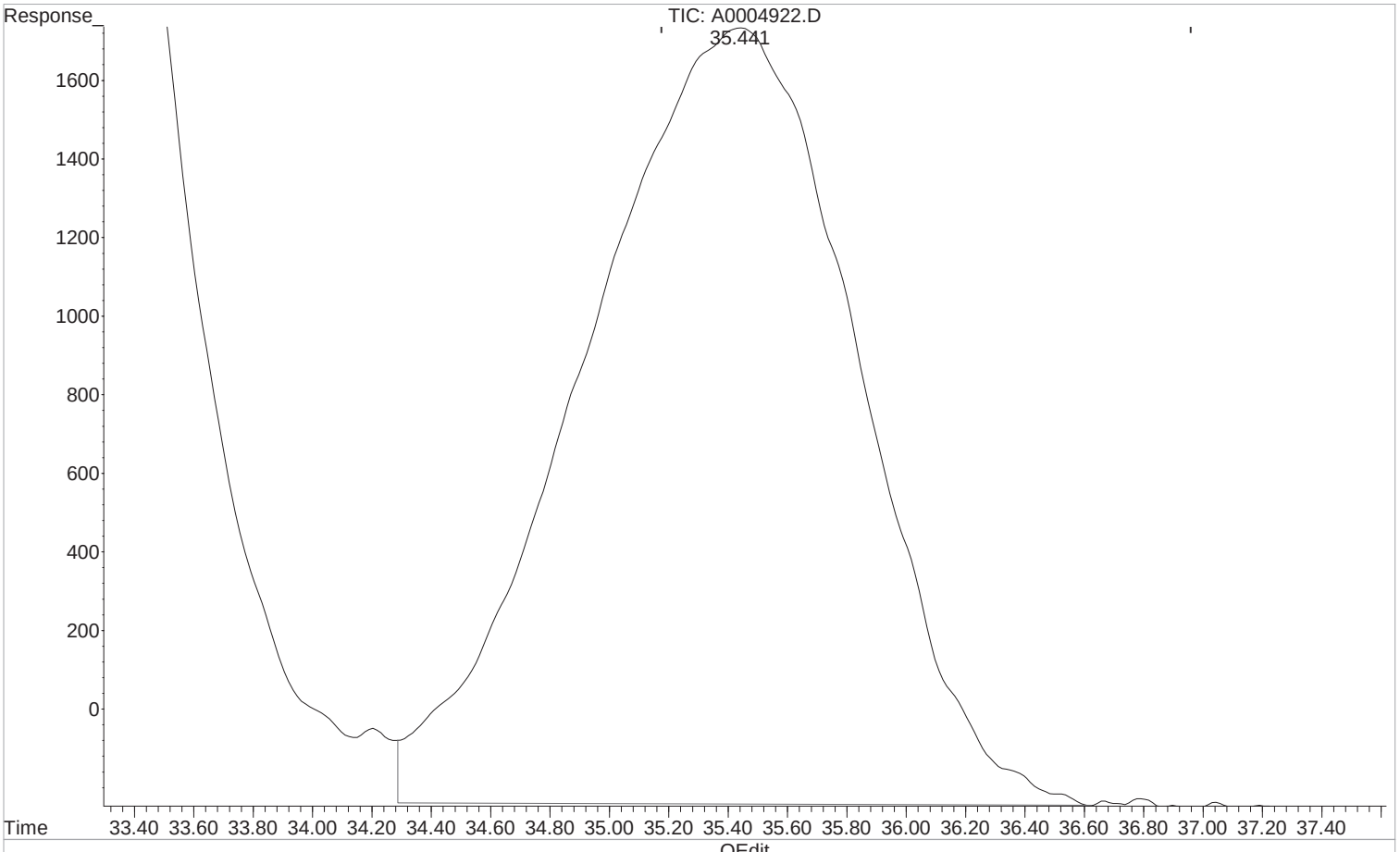
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004922.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 01:47:53
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 09 12:34:09 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:33:56 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

35.444min 24.150 ppm

response 1269364

Manual Integration:

Before

04/09/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

1st AF 04/14/20
2nd BA 04/14/20

Evaluate Continuing Calibration Report

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004922.D
Signal(s) : dad1C.ch
Acq On : ~~30-Dec-2000, 01:47:53~~ 09-Apr-2020, 11:29
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 09 12:34:09 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:33:56 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1 t	Formic acid	93.232	94.318 E3	-1.2	100	0.00
2 T	Pyruvic acid	591.568	648.146 E3	-9.6	110	0.00
3 T	Lactic Acid	56.417	50.143 E3	11.1	89	0.00
4 T	Acetic Acid	56.048	56.287 E3	-0.4	100	0.00
5 T	Propionic Acid	54.357	59.180 E3	-8.9	106	0.00
6 T	Butyric Acid	52.562	54.752 E3	-4.2	103	0.00

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0

RIGHT SOLUTIONS | RIGHT PARTNER

1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004922.D
Signal(s) : dad1C.ch
Acq On : ~~30-Dec-2000, 01:47:53~~ 09-Apr-2020, 11:29
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 09 12:34:09 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:33:56 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	3.117	4715914	50.582	ppm	
2) T	Pyruvic acid	3.764	3240731	5.478	ppm	m
3) T	Lactic Acid	4.259	2507148	44.440	ppm	m
4) T	Acetic Acid	4.692	2814373	50.213	ppm	m
5) T	Propionic Acid	11.060f	2958998	54.436	ppm	m
6) T	Butyric Acid	33.037f	2737582	52.083	ppm	m

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

RIGHT SOLUTIONS | RIGHT PARTNER

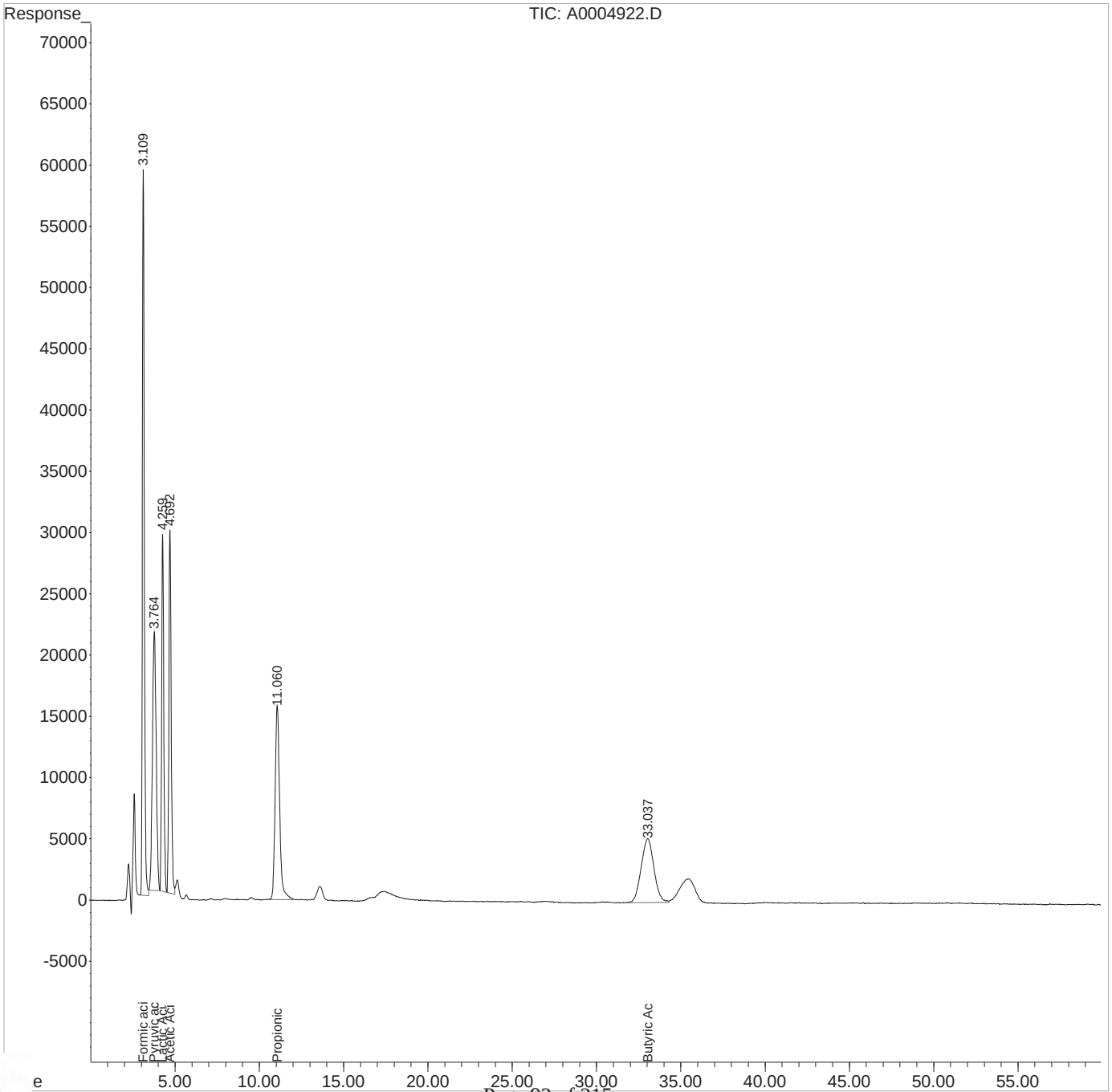
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004922.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 01:47:53
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 09 12:34:09 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:33:56 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



RIGHT SOLUTIONS | RIGHT PARTNER

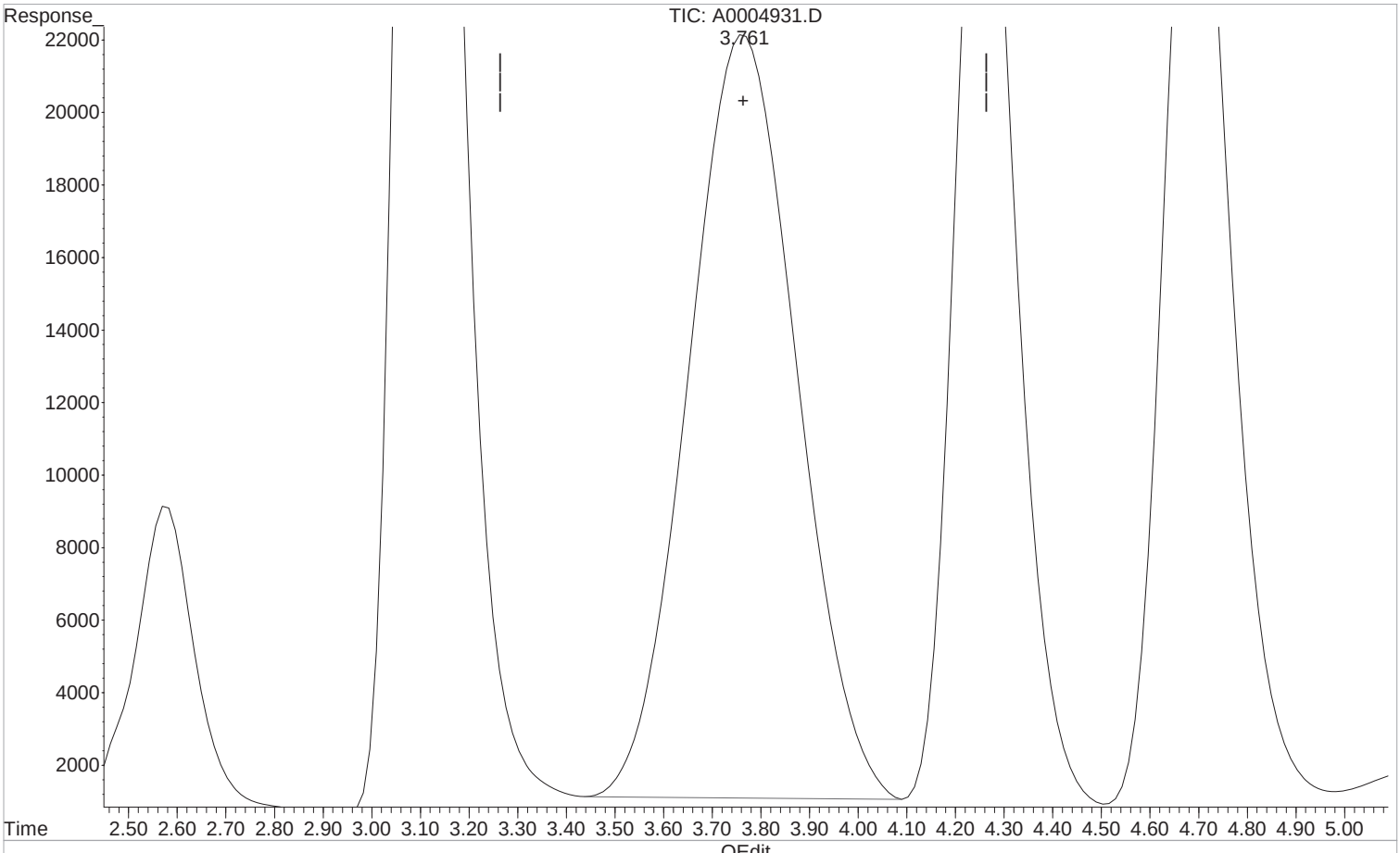
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004931.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 20:59:35
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:36 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.761min 5.485 ppm m

response 3244970

Manual Integration:

After

Poor integration.

04/14/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

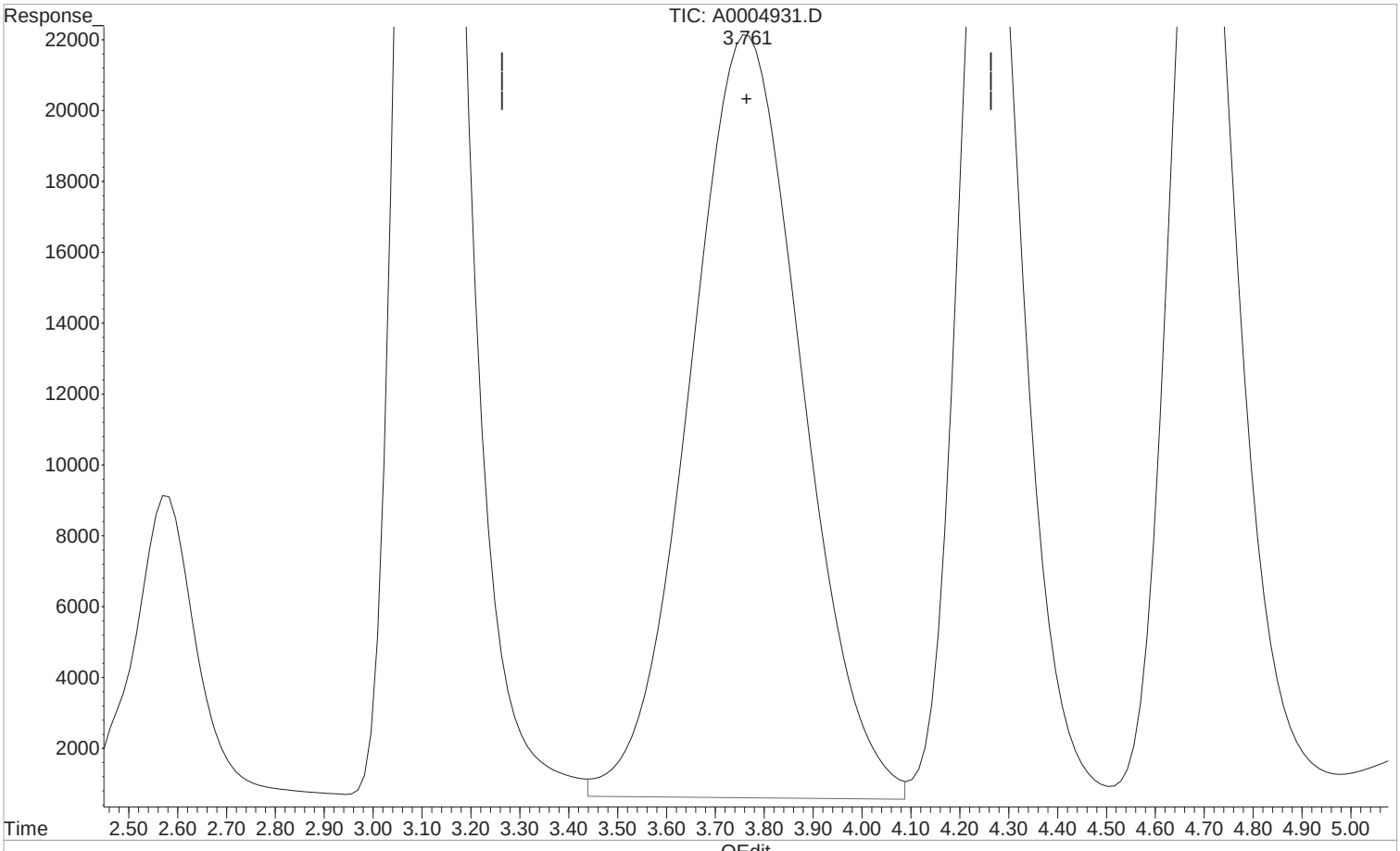
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004931.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 20:59:35
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:36 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.767min 5.808 ppm

response 3435749

Manual Integration:

Before

04/14/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

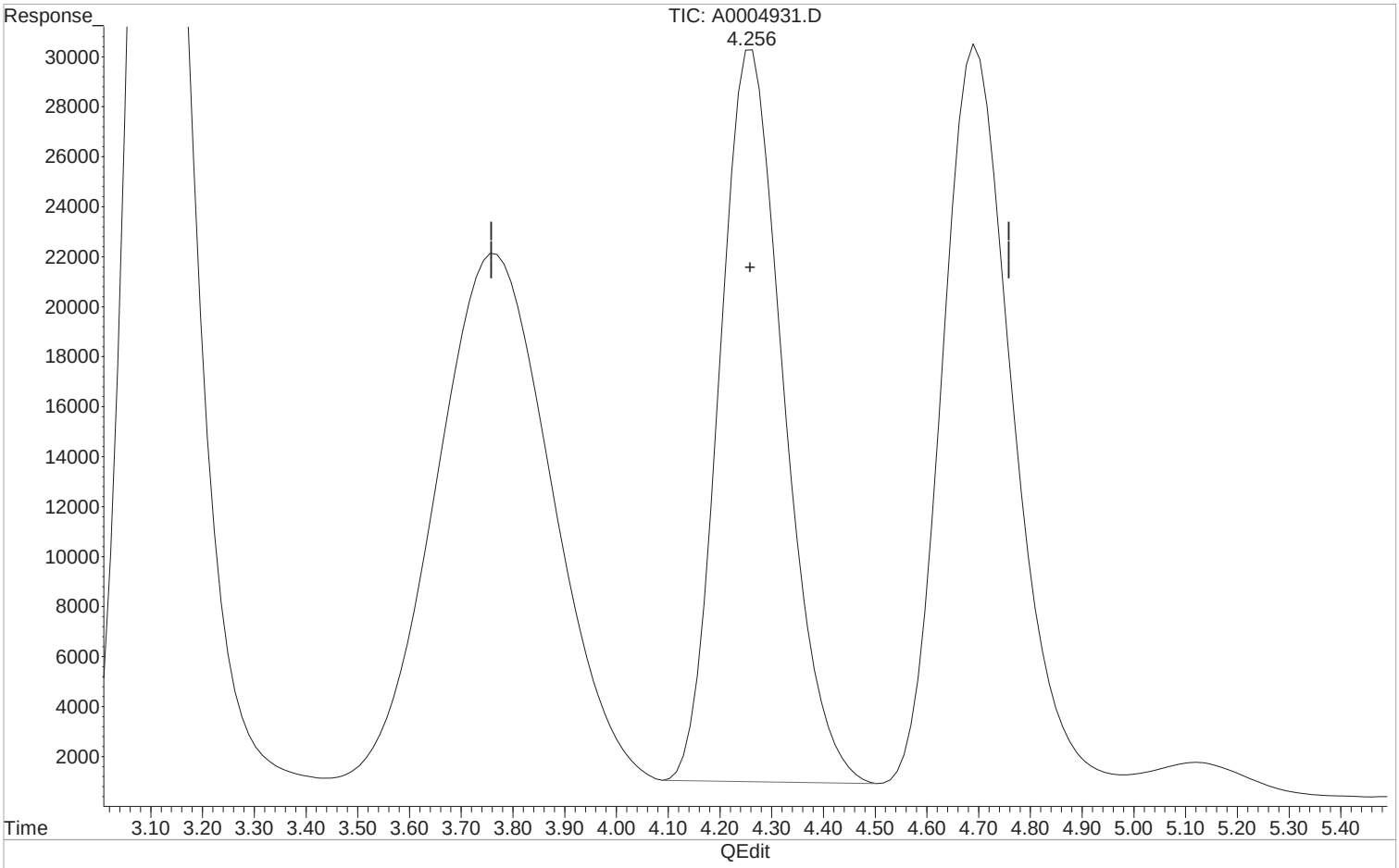
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004931.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 20:59:35
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:36 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.256min 44.979 ppm m

response 2537562

Manual Integration:

After

Poor integration.

04/14/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

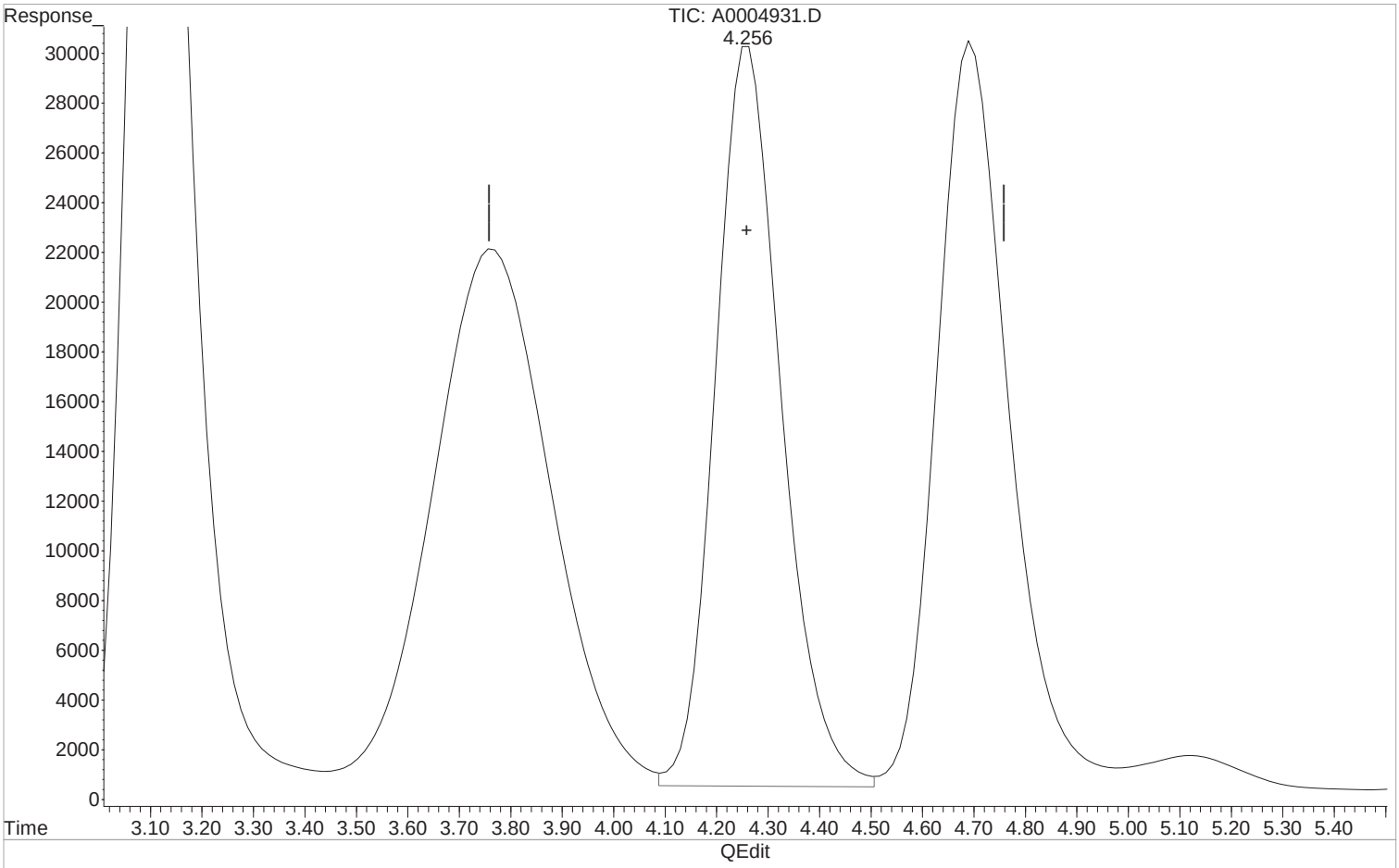
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004931.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 20:59:35
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:36 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.263min 47.015 ppm

response 2652422

Manual Integration:

Before

04/14/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

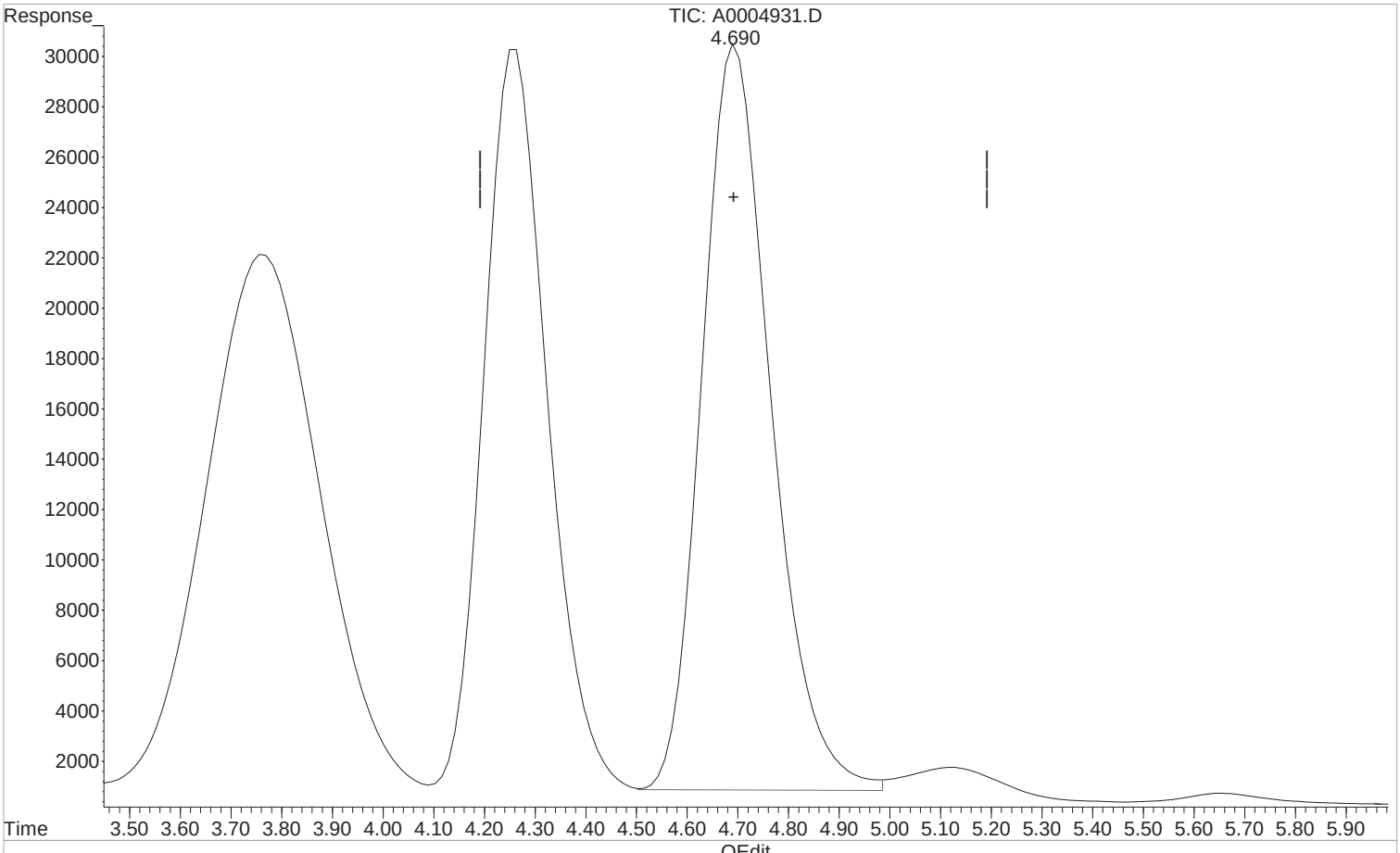
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004931.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 20:59:35
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:36 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.690min 50.235 ppm m

response 2815601

Manual Integration:

After

Poor integration.

04/14/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

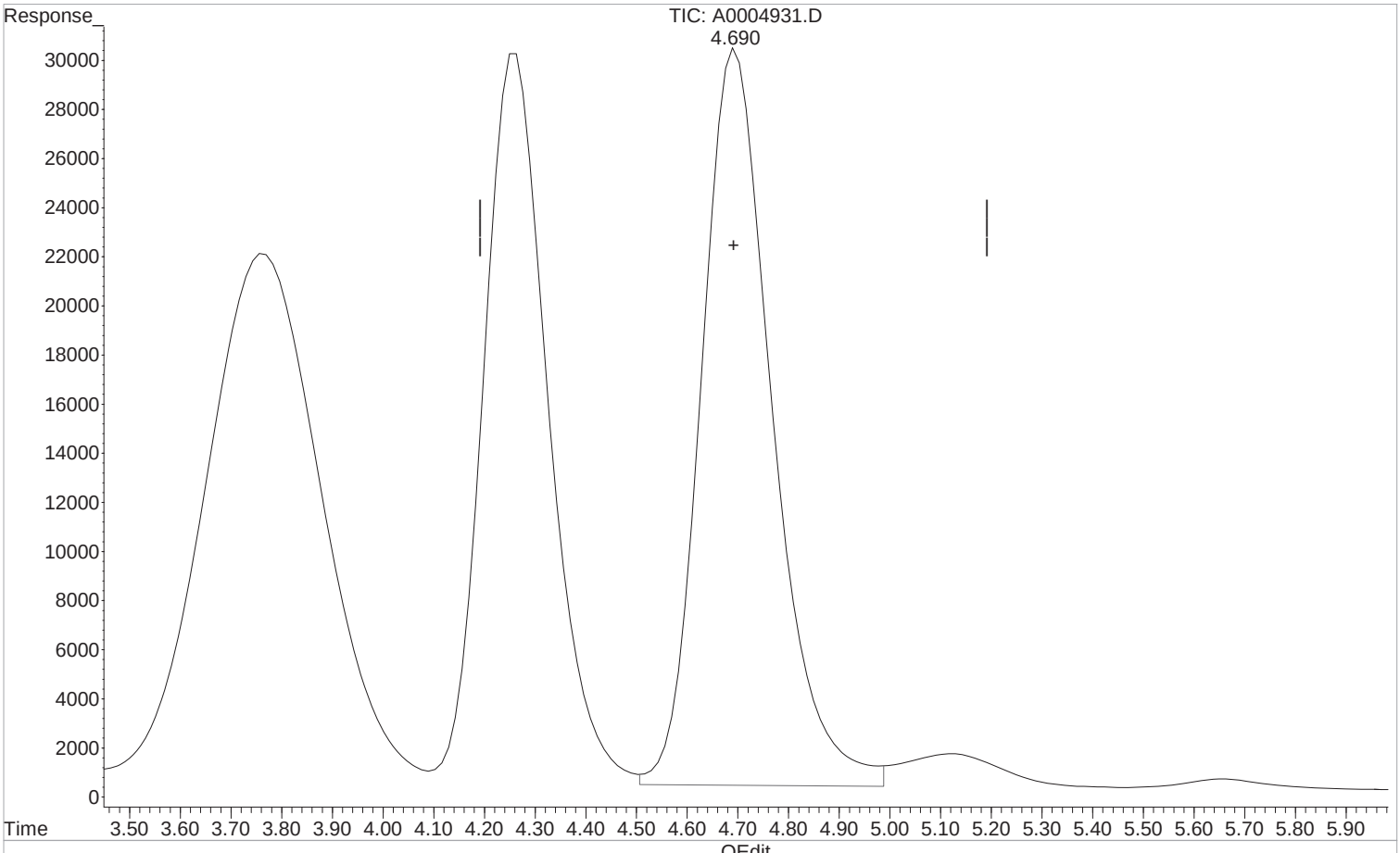
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004931.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 20:59:35
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:36 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.697min 52.189 ppm

response 2925121

Manual Integration:

Before

04/14/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

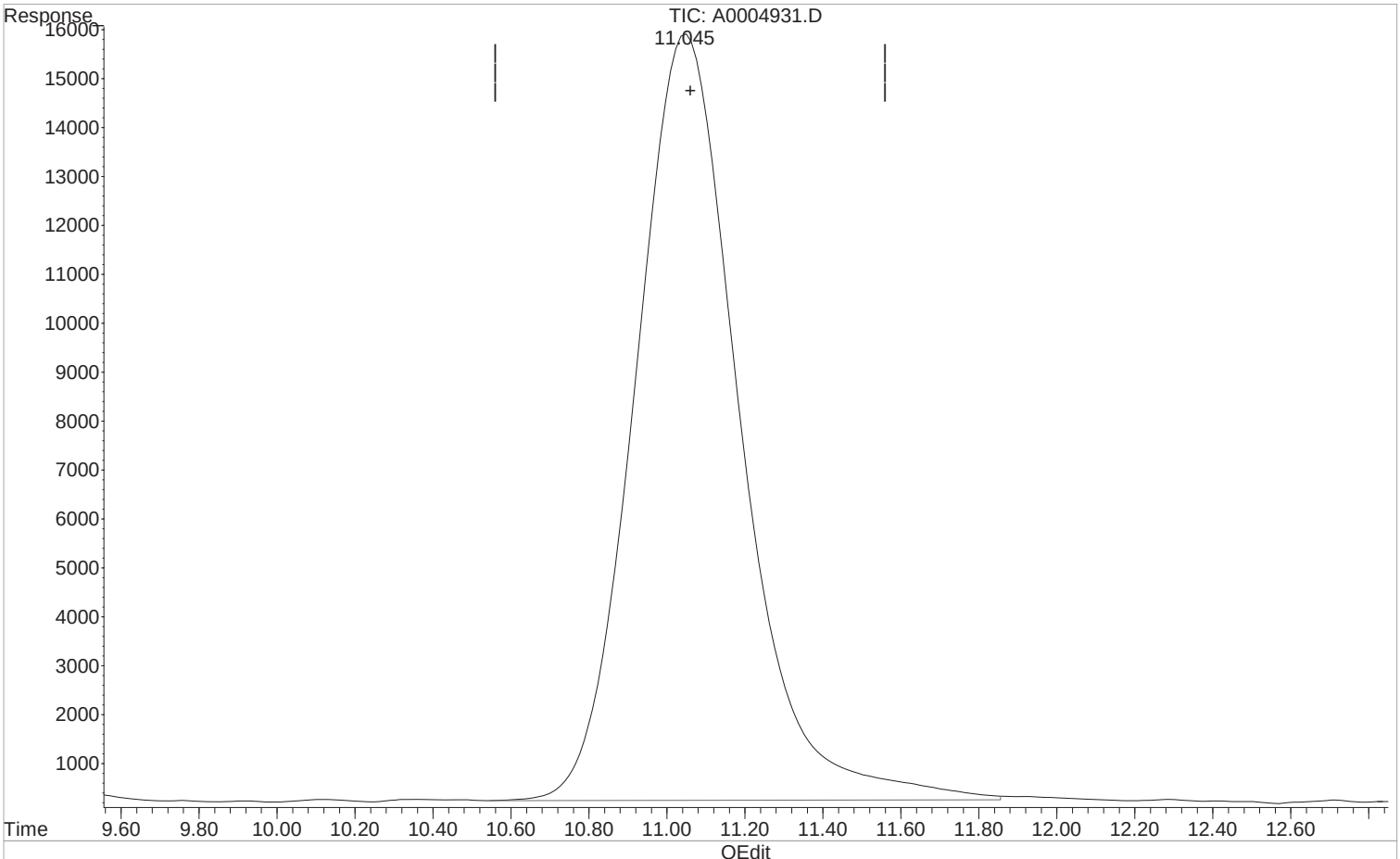
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004931.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 20:59:35
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:36 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

11.045min 53.876 ppm m

response 2928541

Manual Integration:

After

Poor integration.

04/14/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

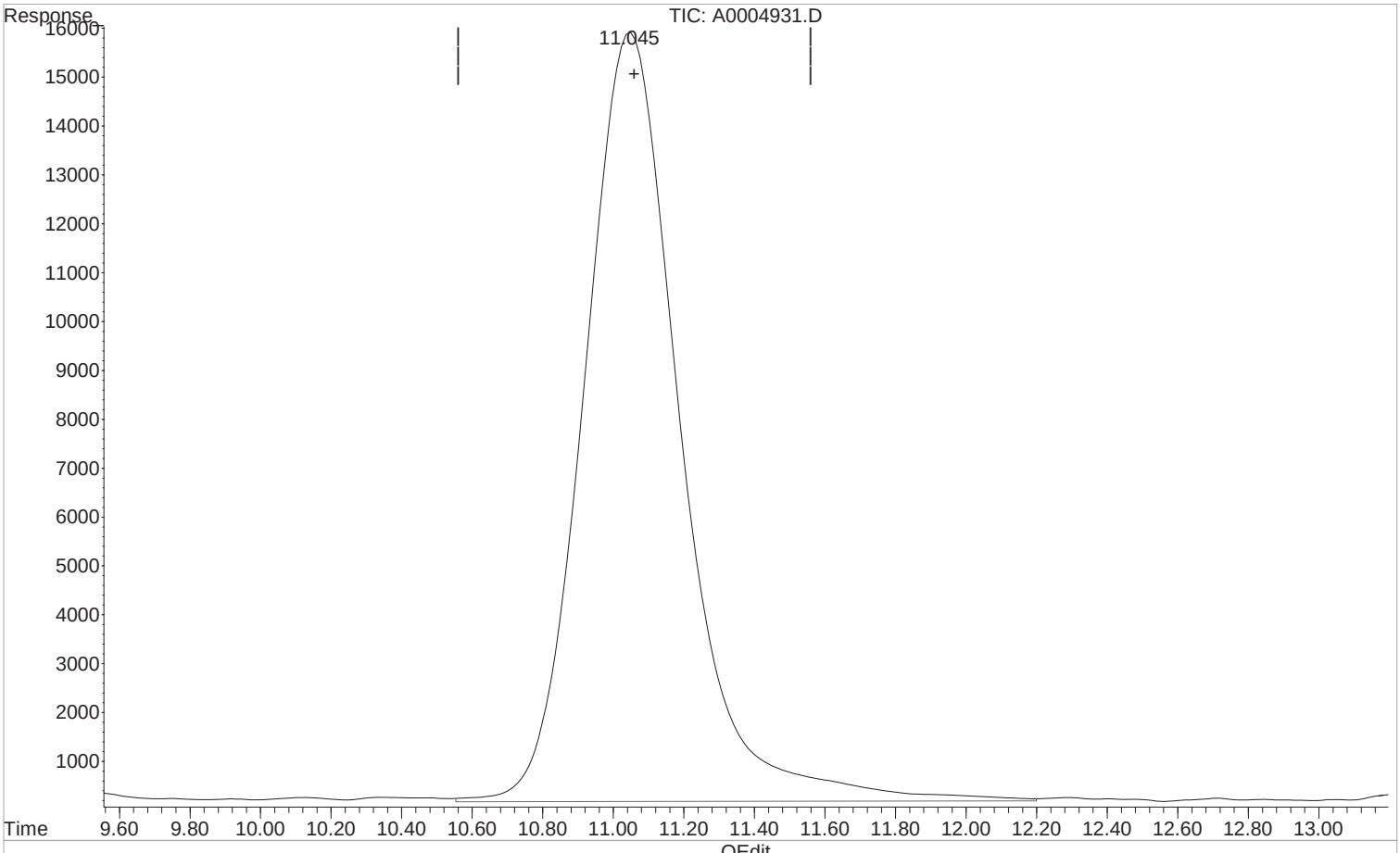
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004931.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 20:59:35
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:36 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

11.051min 55.202 ppm

response 3000639

Manual Integration:

Before

04/14/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

1st AF 04/14/20
2nd BA 04/14/20

Evaluate Continuing Calibration Report

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004931.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 20:59:35
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:36 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1 t	Formic acid	93.232	94.594 E3	-1.5	100	0.00
2 T	Pyruvic acid	591.568	648.994 E3	-9.7	110	0.00
3 T	Lactic Acid	56.417	50.751 E3	10.0	90	0.00
4 T	Acetic Acid	56.048	56.312 E3	-0.5	100	0.00
5 T	Propionic Acid	54.357	58.571 E3	-7.8	105	-0.01
6 T	Butyric Acid	52.562	54.303 E3	-3.3	102	-0.10

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0

RIGHT SOLUTIONS | RIGHT PARTNER

1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004931.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 20:59:35
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:36 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	3.115	4729720	50.730	ppm	
2) T	Pyruvic acid	3.761	3244970	5.485	ppm	m
3) T	Lactic Acid	4.256	2537562	44.979	ppm	m
4) T	Acetic Acid	4.690	2815601	50.235	ppm	m
5) T	Propionic Acid	11.045	2928541	53.876	ppm	m
6) T	Butyric Acid	32.932	2715153	51.656	ppm	

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

RIGHT SOLUTIONS | RIGHT PARTNER

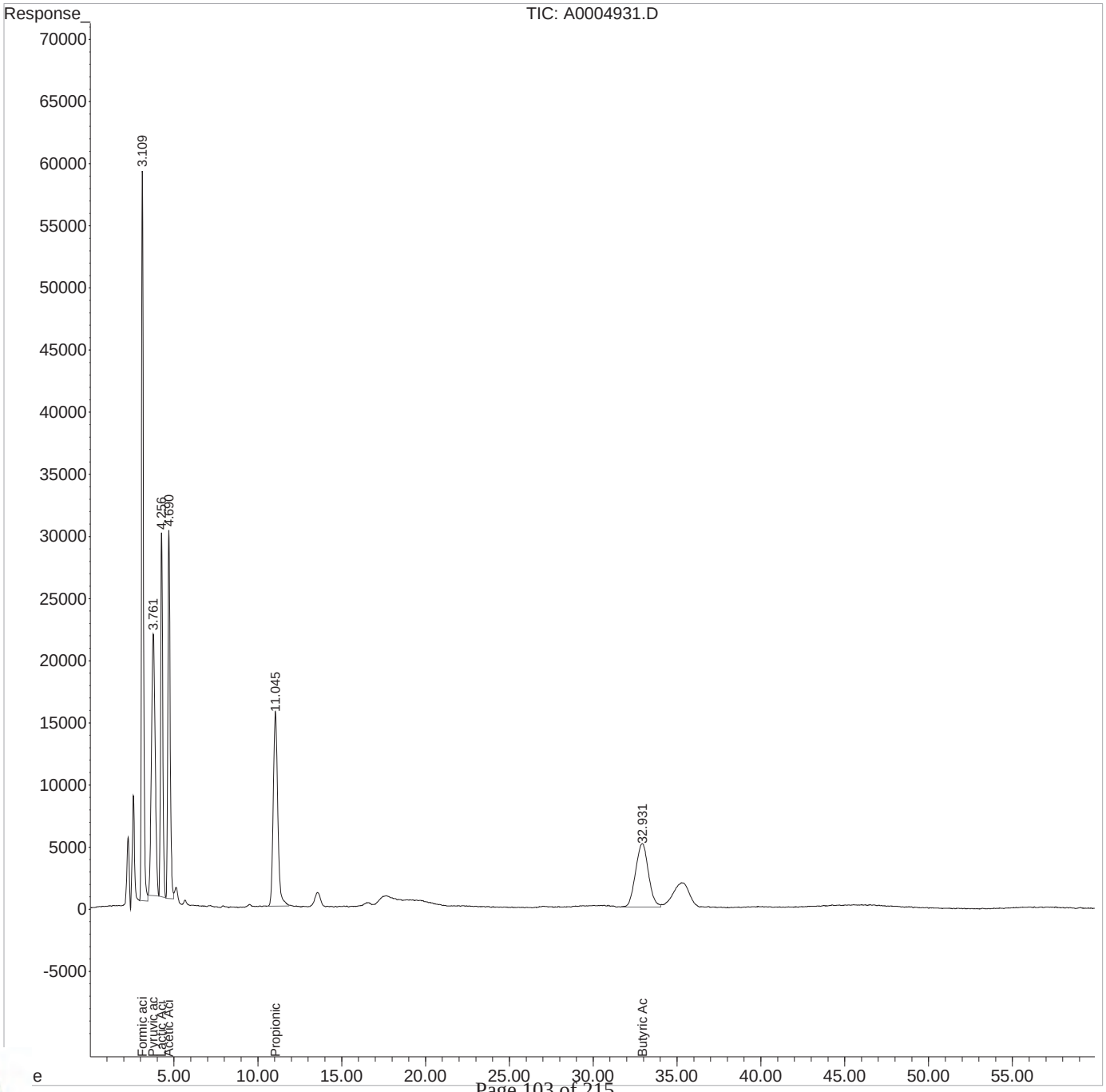
1st AF 04/14/20
2nd BA 04/14/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\040920\
Data File : A0004931.D
Signal(s) : dad1C.ch
Acq On : 09-Apr-2020, 20:59:35
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Apr 14 08:55:36 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Apr 09 12:35:40 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



RIGHT SOLUTIONS | RIGHT PARTNER

Analysis: Met Acids Analyst: Arden Run Method: NEWMETA.M

Date: 03/12/2020 Instr. HPLC05 Quant Method: MA03/220.M

LIMS Run#:

Setup: Column: Synergi Hydro-RP 150x4.6 Col. Temp: 35°C Flow: 0.6 mL/min

Mobile Phase: 0.02M KH2PO4 prep 0.1% PO4 ul Inj.: 50

Mobile Phase ID: O-760-76 03/12/2020

Pos.	Sample	Diln.	Stds. ID	File#	OK?	Comments
1	Blk			A0004461	—	
1	Blk			62	—	
1	Blk			63	—	
1	last Blk			64	Y	
2	STD 1	2µL/1mL	205268	65	Y	
3	2	4µL/1mL		66	Y	
4	3	10µL/1mL		67	Y	
5	4	20µL/1mL		68	Y	
6	5	40µL/1mL		69	Y	
7	6	0.1mL/1mL		70	Y	
8	7	0.2mL/1mL		71	Y	
9	8	0.4mL/1mL	↓	72	Y	
10	ICV	100µL/1mL	203153	73	N	Interference w/ Butyric

Arden 03/17/2020

Primary: 205268 exp: 03/21/20 Secondary: 203153 exp: 03/21/20

pH Paper: 205508 Acid: 203550

Runlog HPLCr2
3/23/18

O-998 Page 20

RIGHT SOLUTIONS | RIGHT PARTNER

Analysis: Nut Acids Analyst: AFelker Run Method: NEWMETA.M

Date: 03/16/2020 Instr. HPLC05 Quant Method: MA031220.M

LIMS Run#: 673626

Setup: Column: Synergi Hydro RP 150 x 4.6 Col.Temp: 35°C Flow: 0.6mL/min

Mobile Phase: 0.02M KH2PO4 pH 6.0 in DI Water ul Inj.: 50

Mobile Phase ID: O-7668-76 03/12/2020

Pos.	Sample	Diln.	Stds. ID	File#	OK?	Comments
1	DLK			A0004774	—	
1	DLK			75	—	
2	CCV	100ppm/1mL	205268	76	Y	
3	ICV	↓	203153	77	Y	
4	CCV	100ppm/1mL	205268	78	Y	Retest ↑
5	MD			79	Y	
6	LCS	100ppm/1mL	203153	80	Y	
7	DLCV	↓	↓	81	Y	
8	K2001981-001			82	N	Anal. >LR, dilute 1/2
9	↓ -001 MS		203153	83	N	↓
4	CCV	100ppm/1mL	205268	84	Y	
10	K2001981-001 Dmp		203153	85	N	Anal. >LR
11	K2001990-001	2		86	Y	
12	R2001765-012			87	Y	
13	↓ -022			88	Y	
14	↓ -023			89	Y	
4	CCV	100ppm/1mL	205268	90	Y	
15	LOQ/MDL	10ppm/1mL	203153	91	Y	
16	LODV	5ppm/1mL	↓	92	Y	
17	K2002223-001			93	Y	
18	↓ -003			94	Y	
19	↓ -005			95	Y	
4	CCV	100ppm/1mL	205268	96	Y	
20	K2001981-001	2		97		
4	CCV	100ppm/1mL	205268	98	Y	

05/17/2020

Primary: 205268 exp: 03/21/20 Secondary: 203153 exp: 03/25/20

pH Paper: 205502 Acid: 203940

Runlog HPLCr2
3/23/18

O-998 Page 21

RIGHT SOLUTIONS | RIGHT PARTNER

1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004472.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 20:00:49
Operator : A.Felser
Sample : STD 8
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	2.949	18444040	201.560	ppm	
2) T	Pyruvic acid	3.625	11605902	19.912	ppm	m
3) T	Lactic Acid	4.103	11063811	199.720	ppm	m
4) T	Acetic Acid	4.584	11047591	197.987	ppm	m
5) T	Propionic Acid	11.450	10994386	200.127	ppm	
6) T	Butyric Acid	36.001f	10326182	196.253	ppm	m

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

RIGHT SOLUTIONS | RIGHT PARTNER

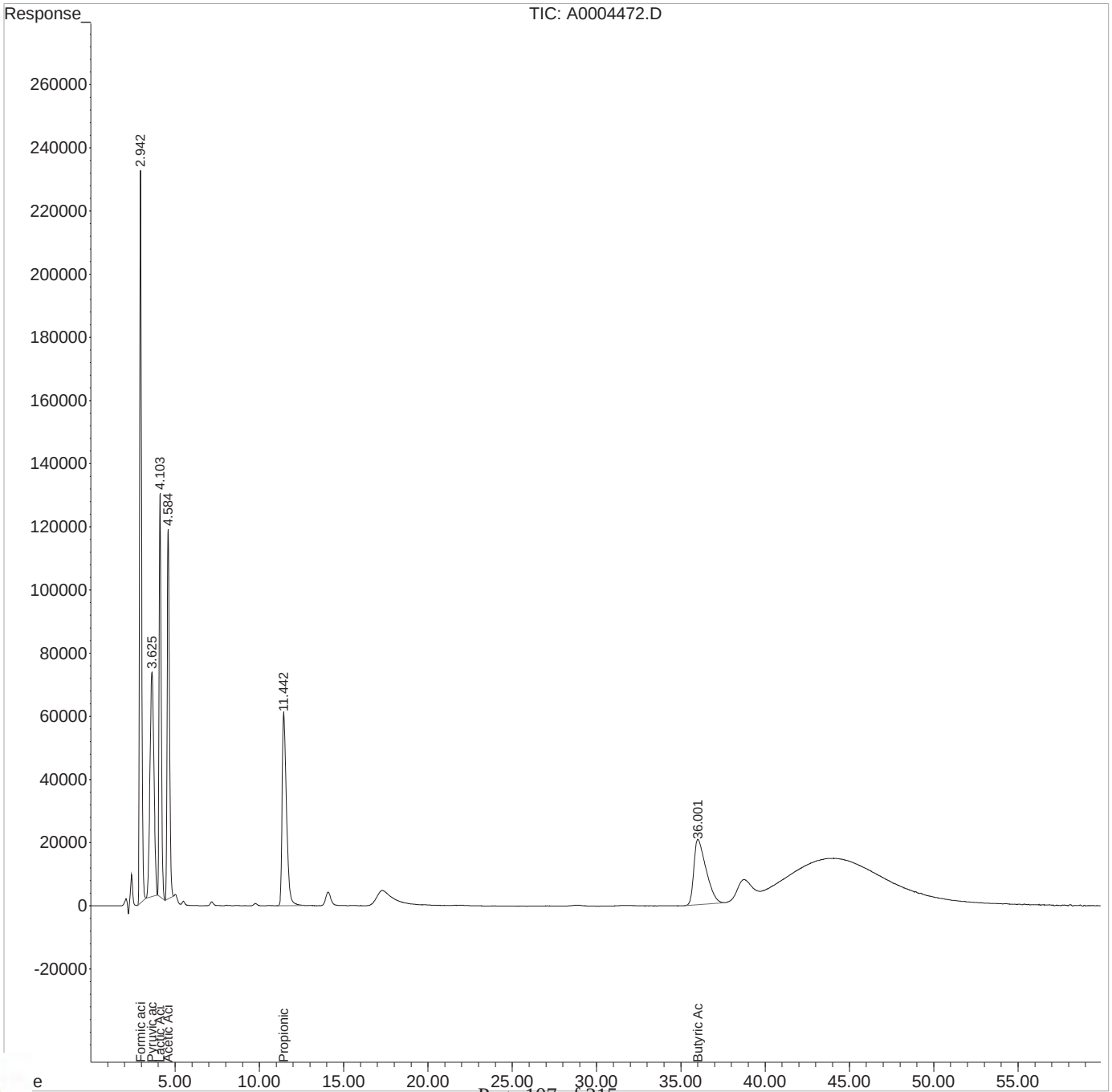
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004472.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 20:00:49
Operator : A.Felser
Sample : STD 8
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



RIGHT SOLUTIONS | RIGHT PARTNER

1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004464.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 11:36:51
Operator : A.Felser
Sample : INST BLK
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:30:23 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:29:26 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1) t	Formic acid	0.000	0	N.D.	ppm
2) T	Pyruvic acid	0.000	0	N.D.	ppm
3) T	Lactic Acid	0.000	0	N.D.	ppm
4) T	Acetic Acid	0.000	0	N.D.	ppm
5) T	Propionic Acid	0.000	0	N.D.	ppm
6) T	Butyric Acid	0.000	0	N.D.	ppm

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

RIGHT SOLUTIONS | RIGHT PARTNER

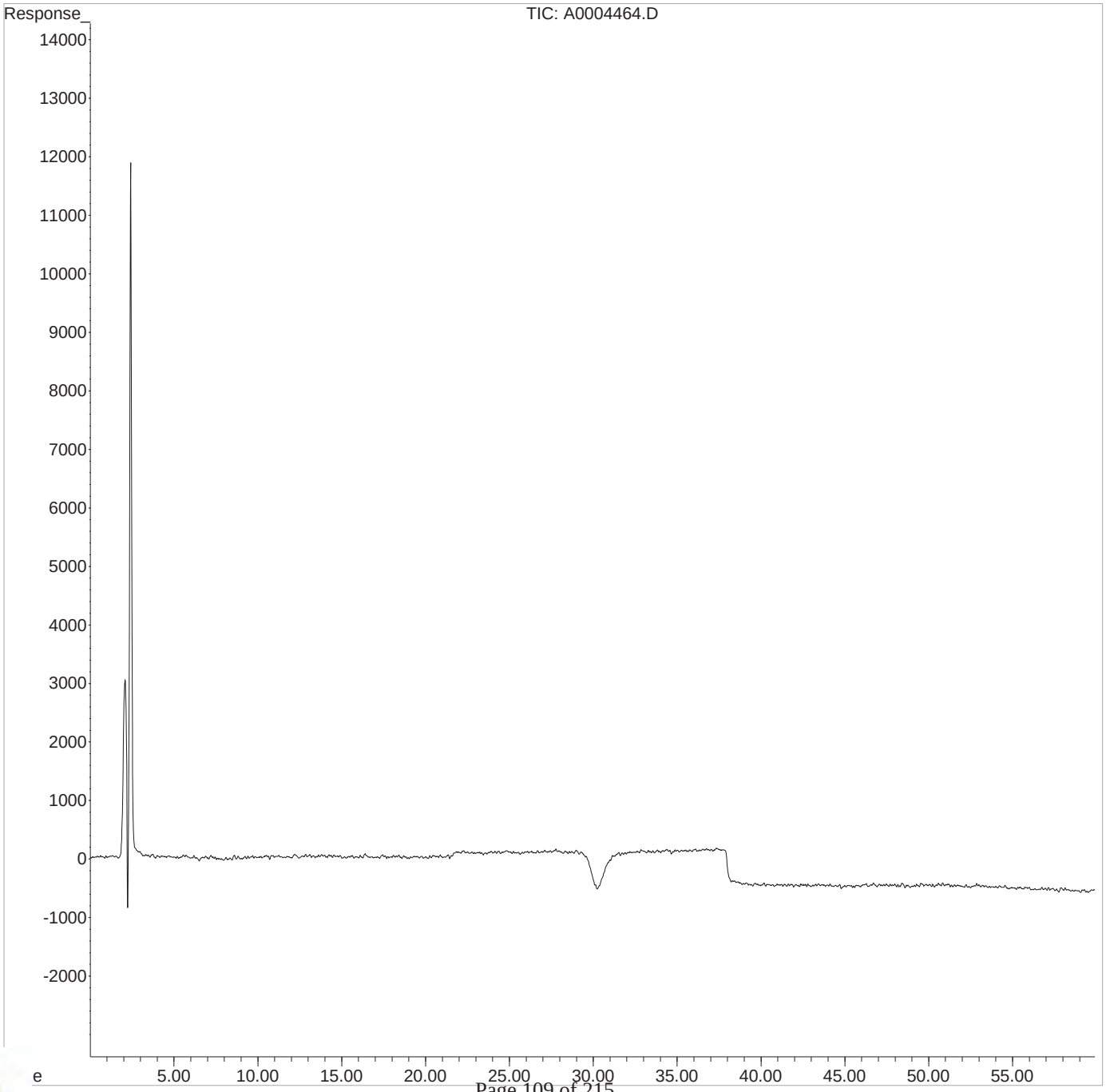
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004464.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 11:36:51
Operator : A.Felser
Sample : INST BLK
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:30:23 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:29:26 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



RIGHT SOLUTIONS | RIGHT PARTNER

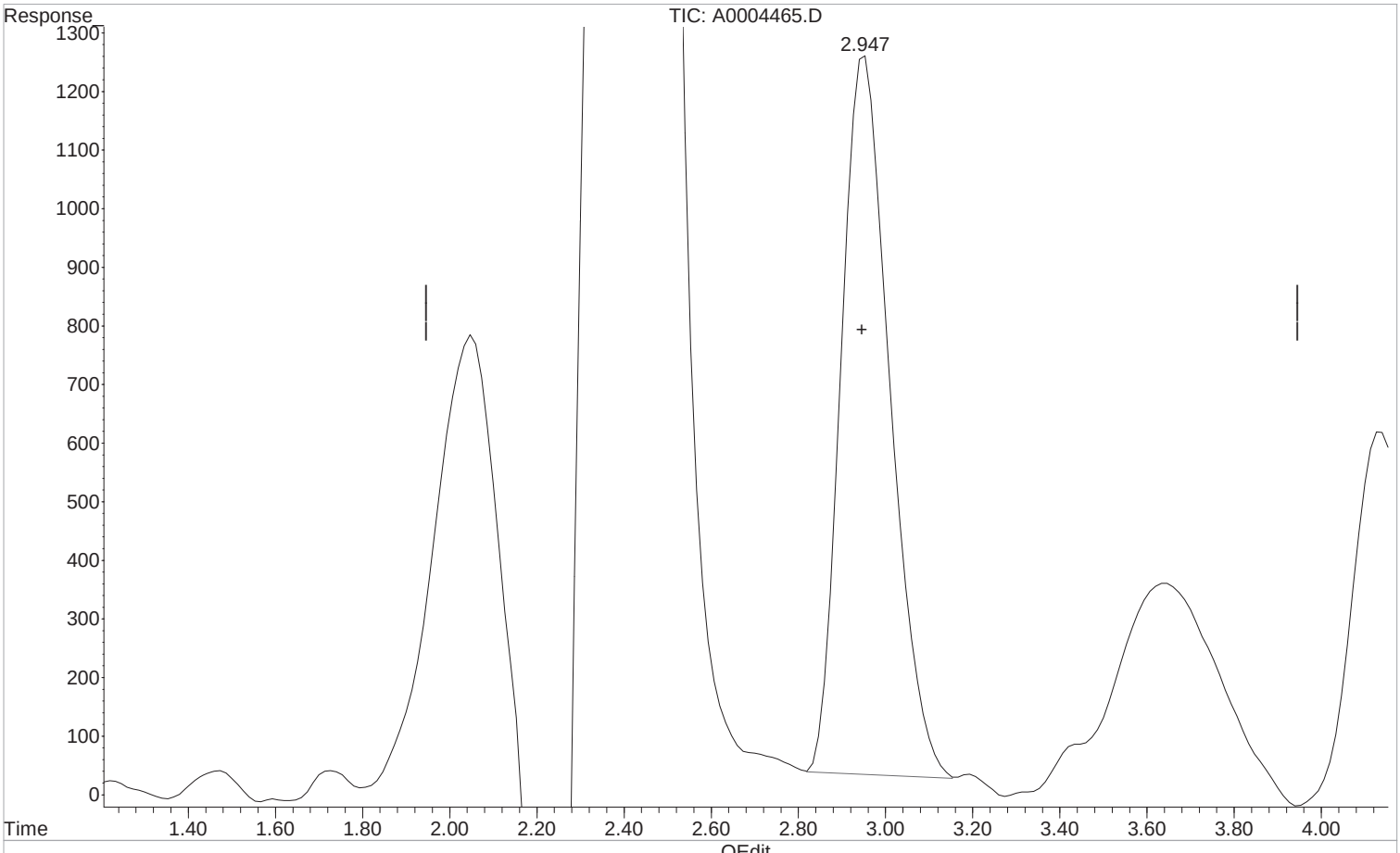
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.947min 1.051 ppm m

response 96141

Manual Integration:

After

Peak not found.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

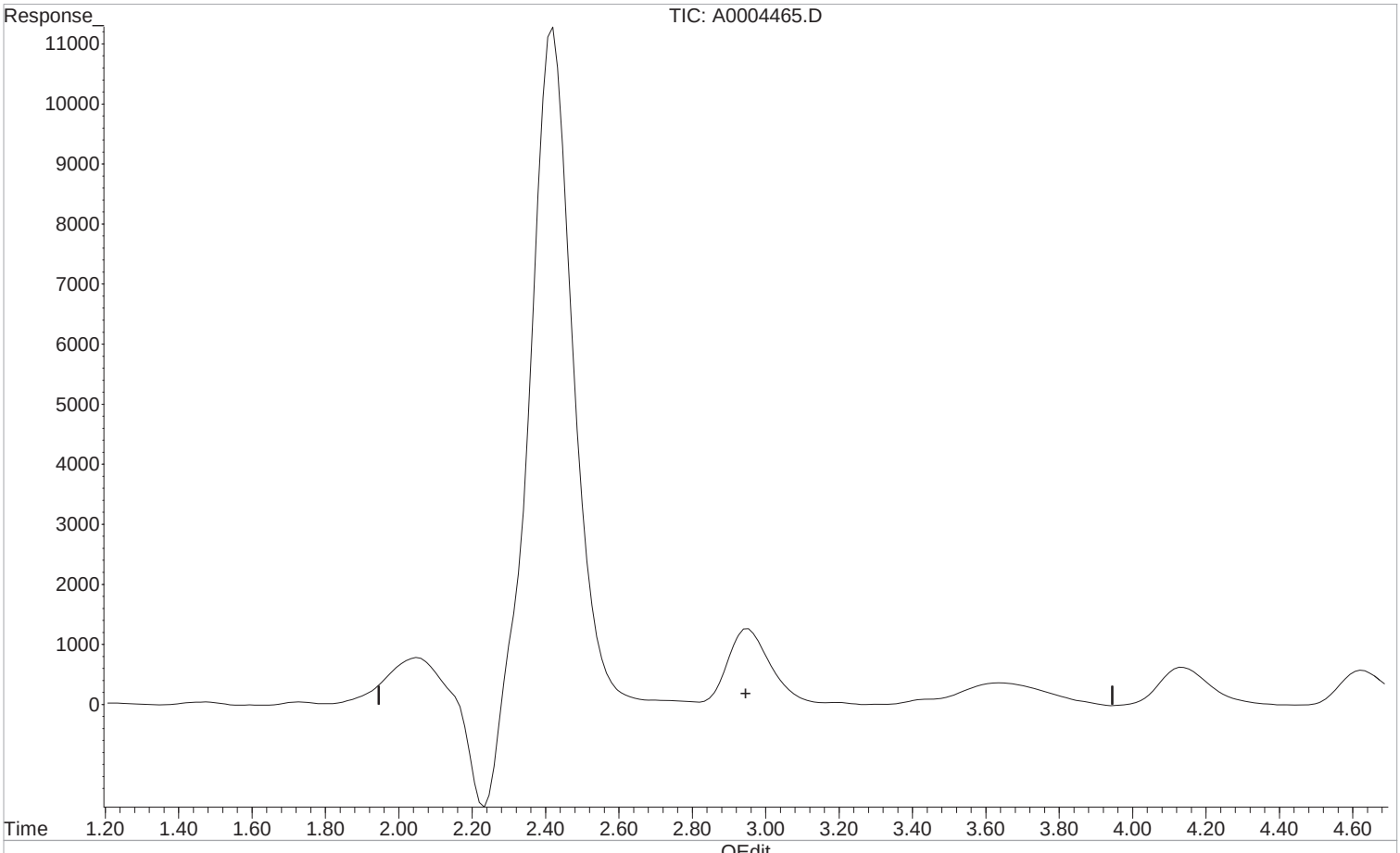
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.946min 0.000 ppm

response 0

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

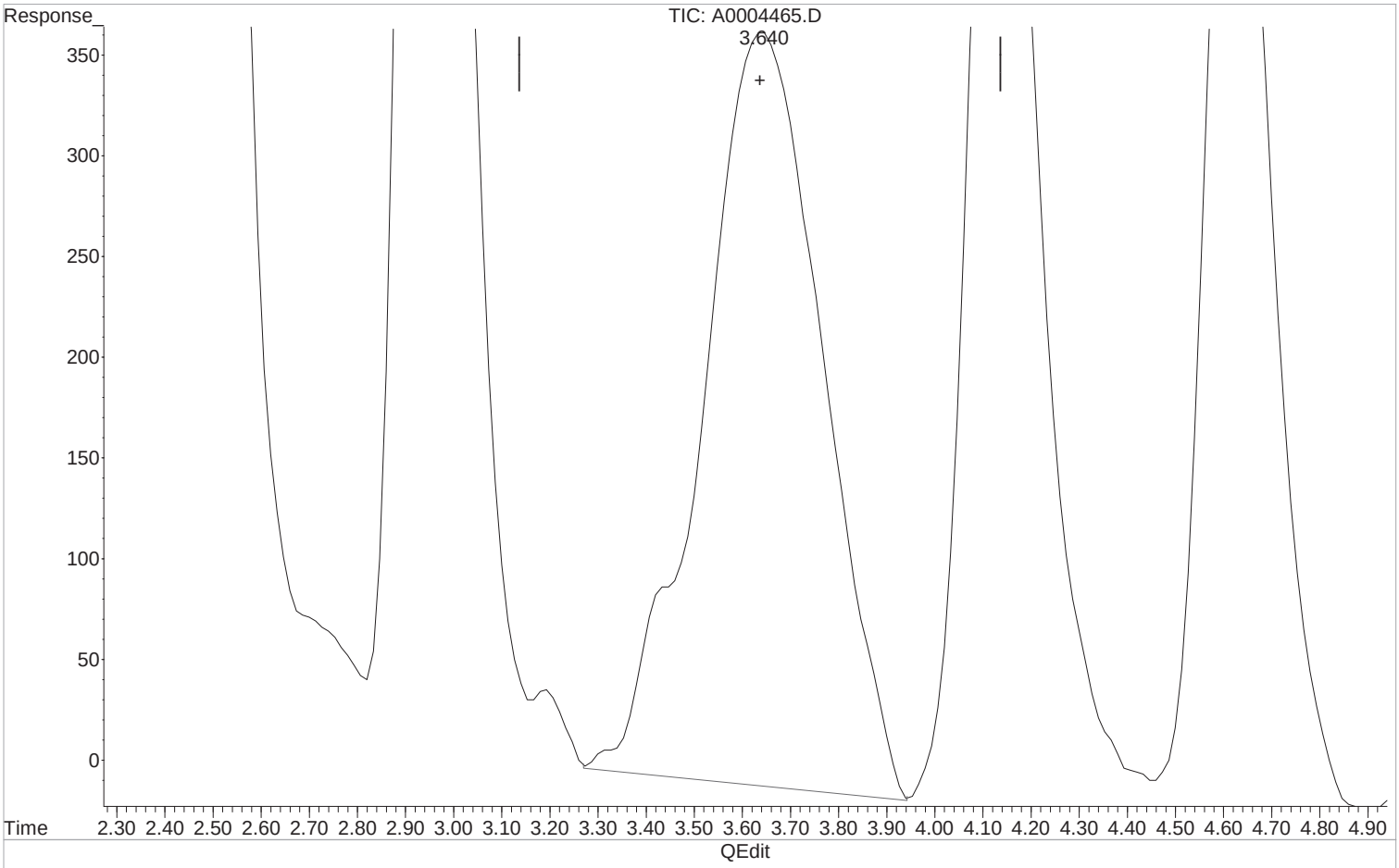
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.640min 0.112 ppm m

response 65073

Manual Integration:

After

Peak not found.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

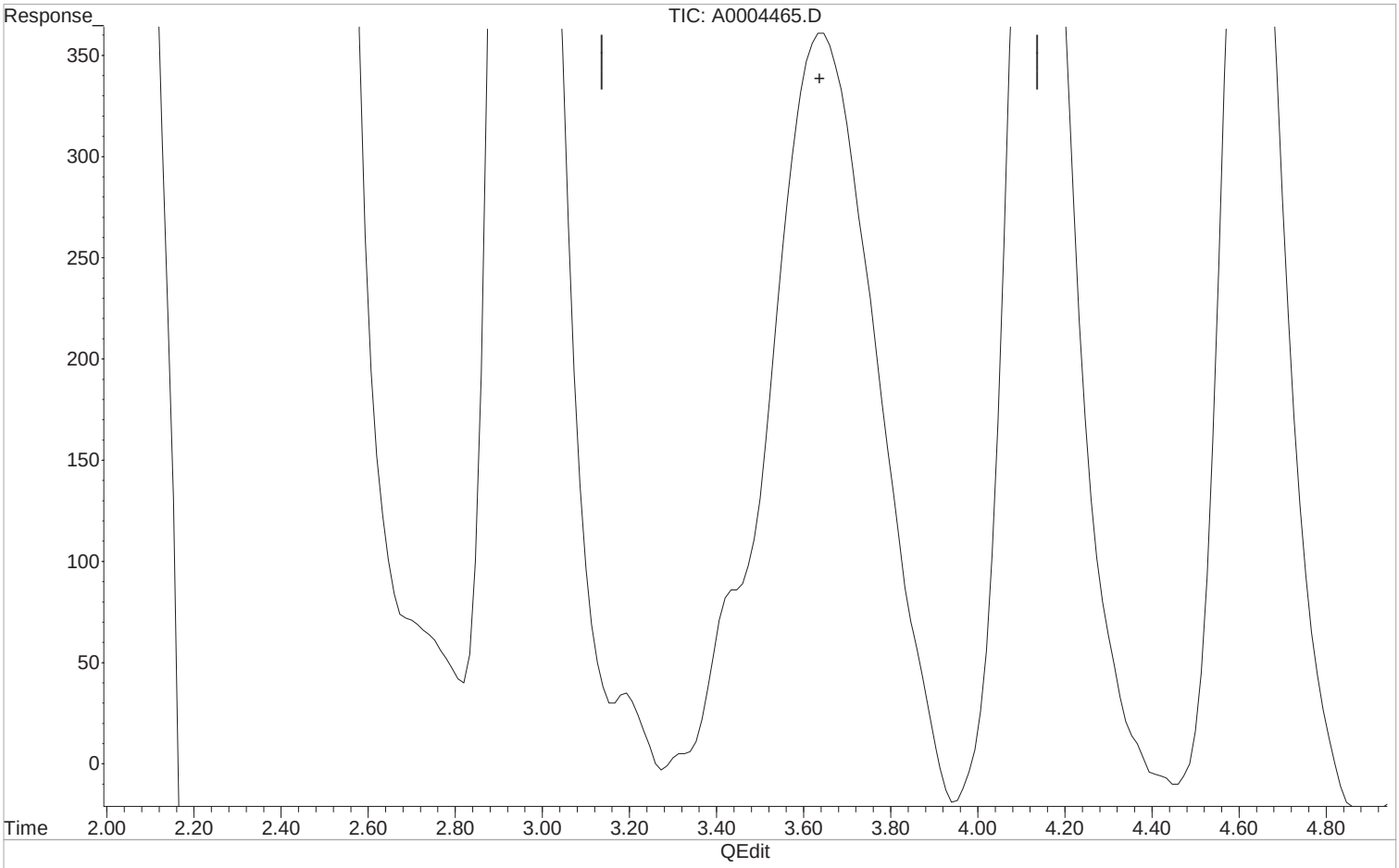
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.645min -0.100 ppm

response -58358

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

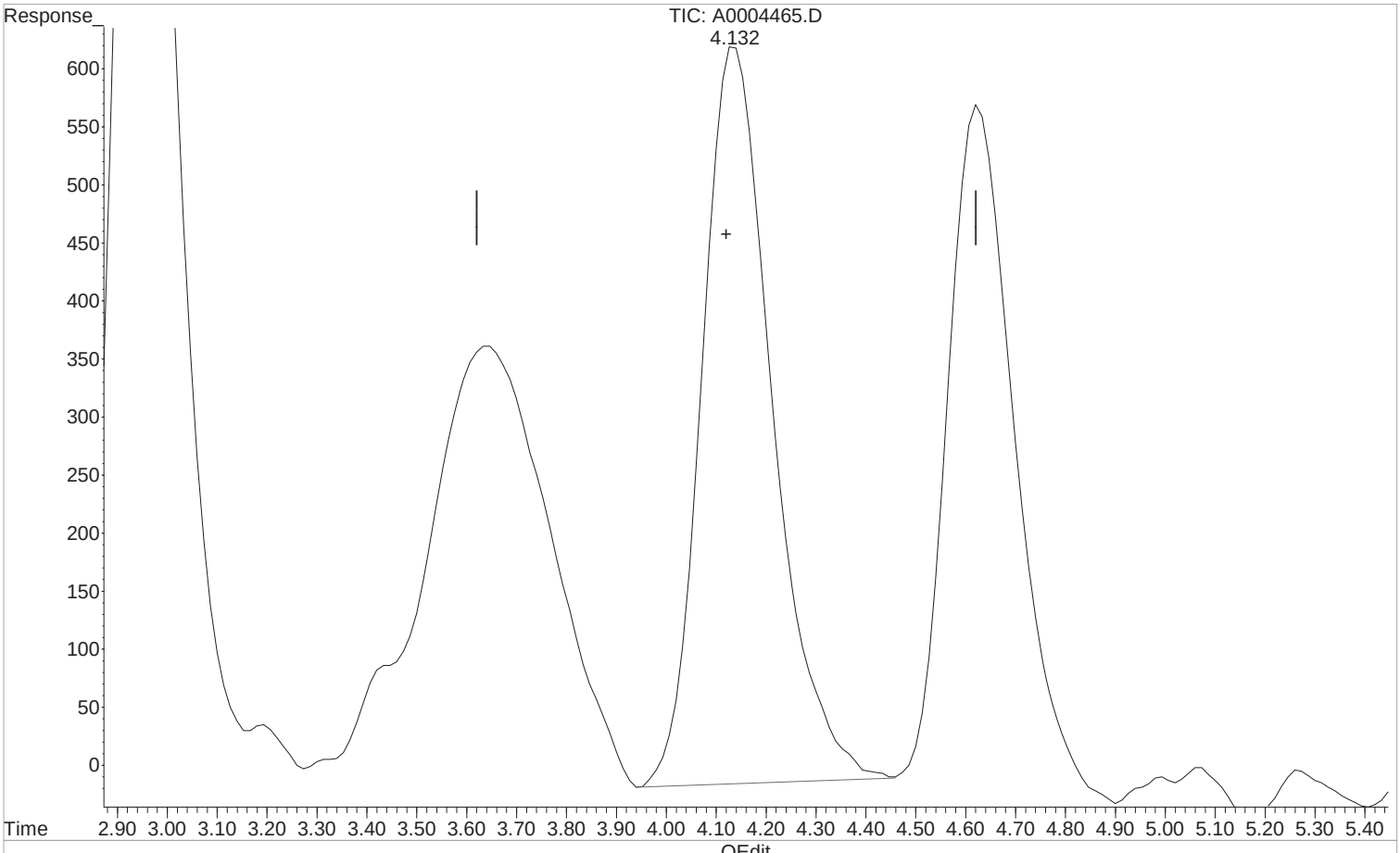
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.132min 1.131 ppm m

response 62664

Manual Integration:

After

Poor integration.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

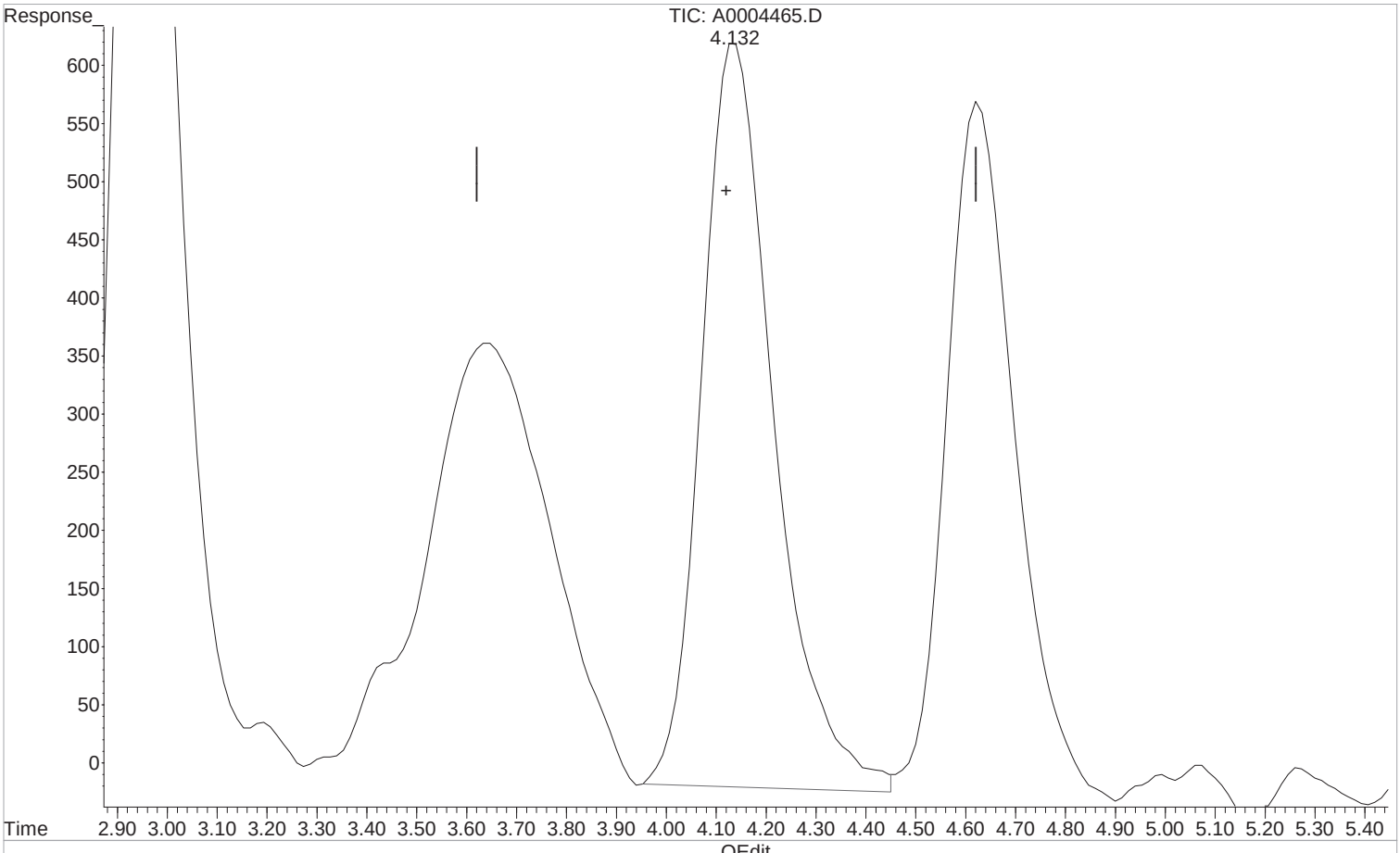
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.140min 1.165 ppm

response 64524

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

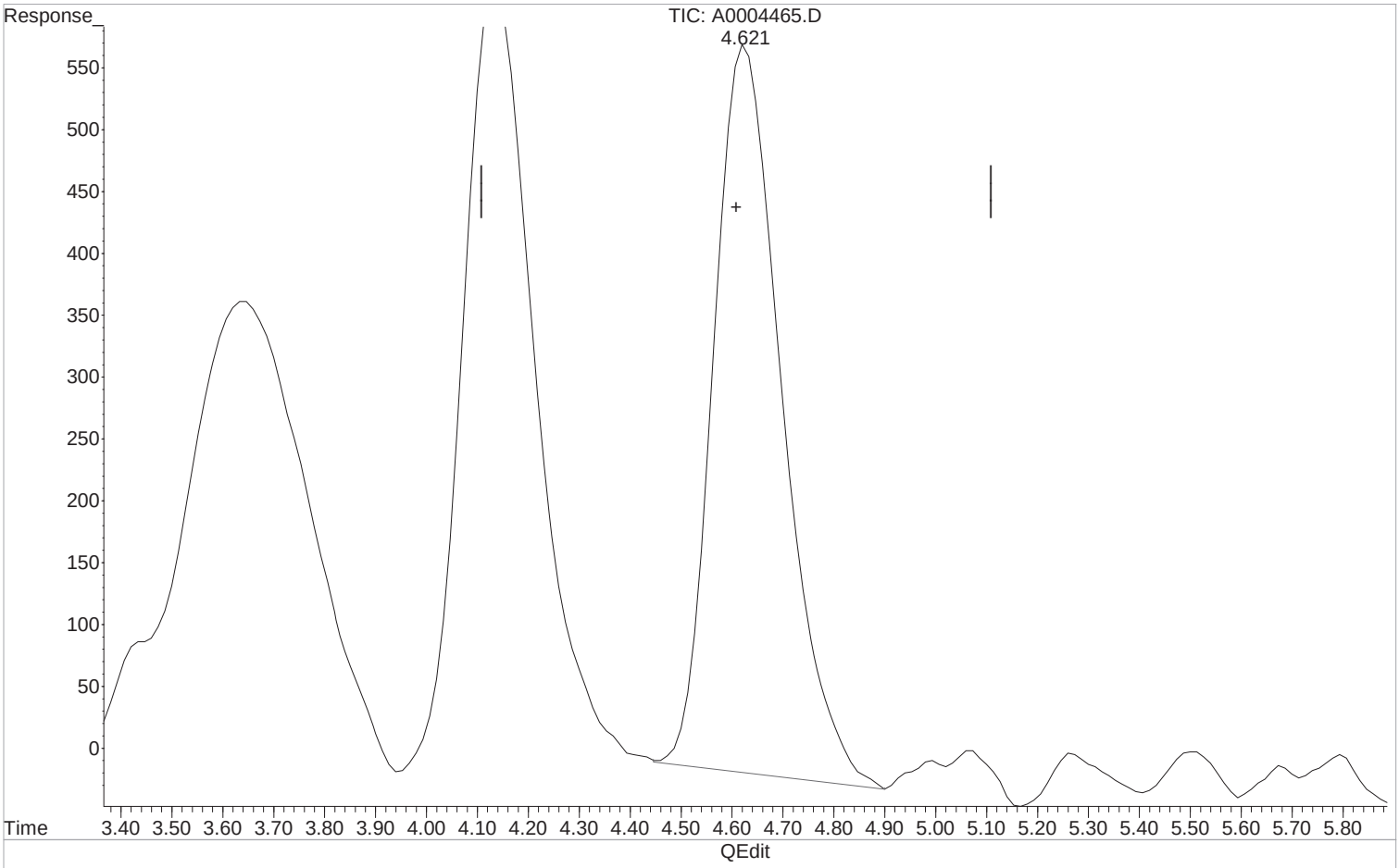
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.621min 0.989 ppm m

response 55208

Manual Integration:

After

Poor integration.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

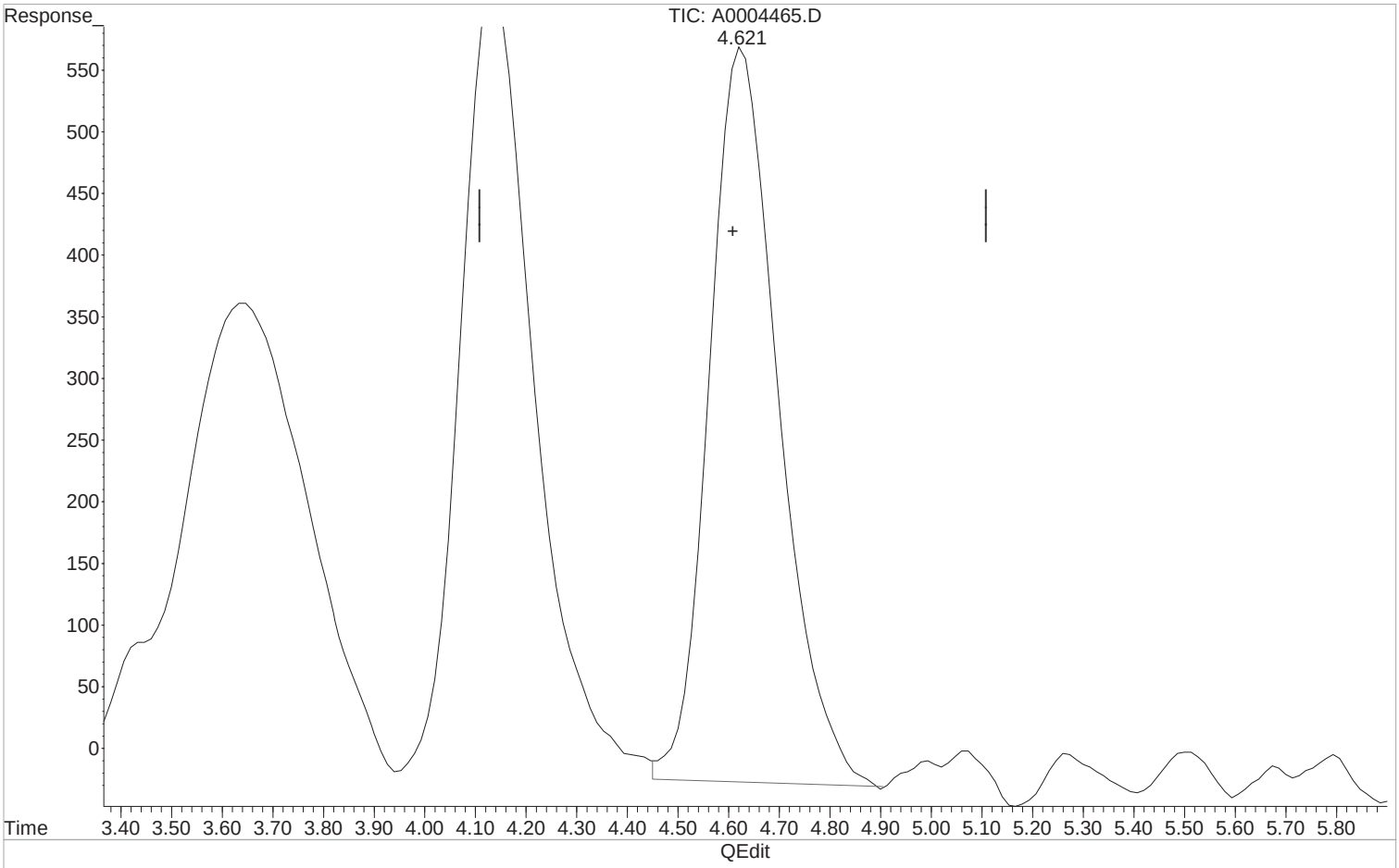
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.629min 1.019 ppm

response 56862

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

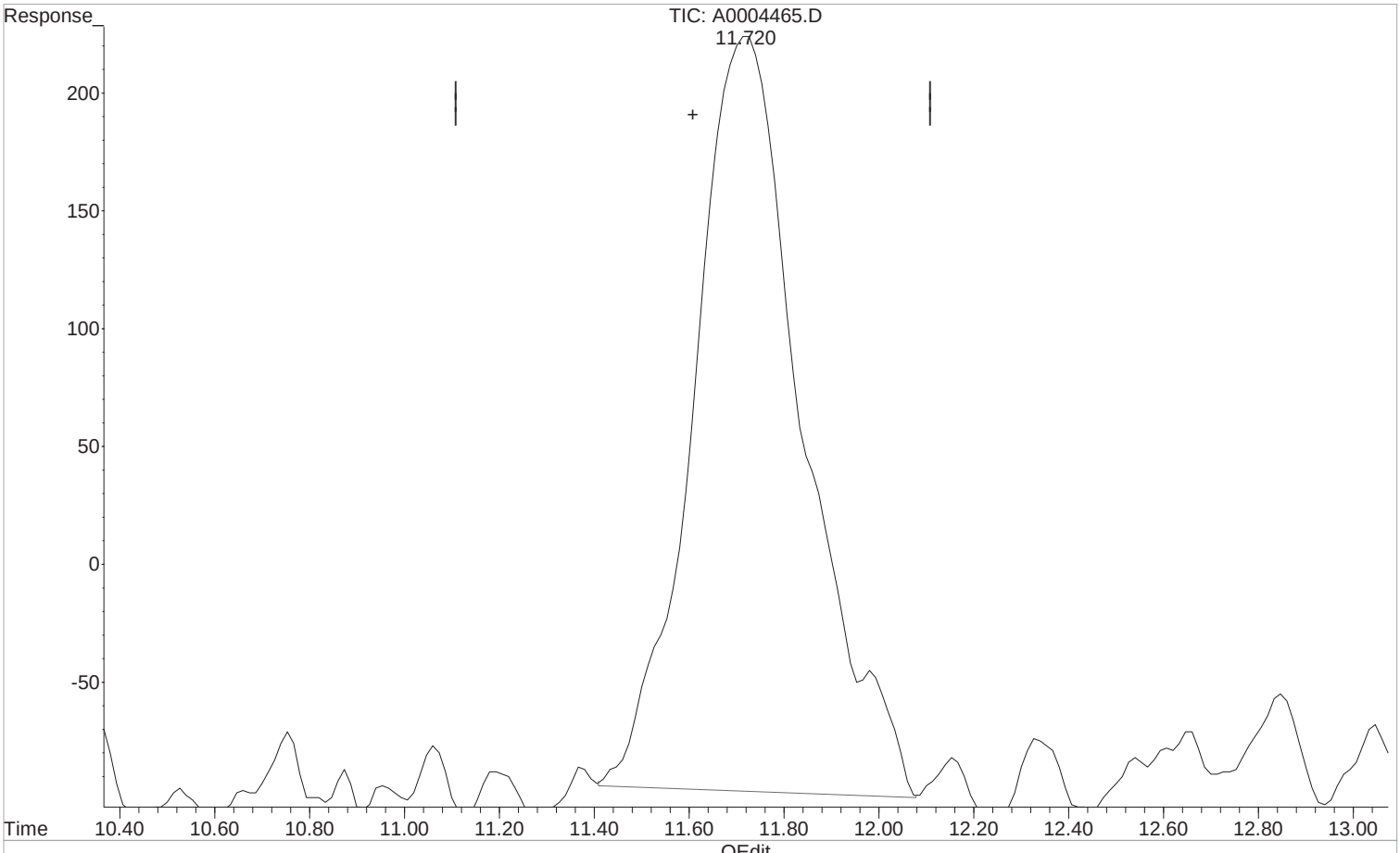
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

11.720min 0.938 ppm m

response 51534

Manual Integration:

After

Poor integration.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

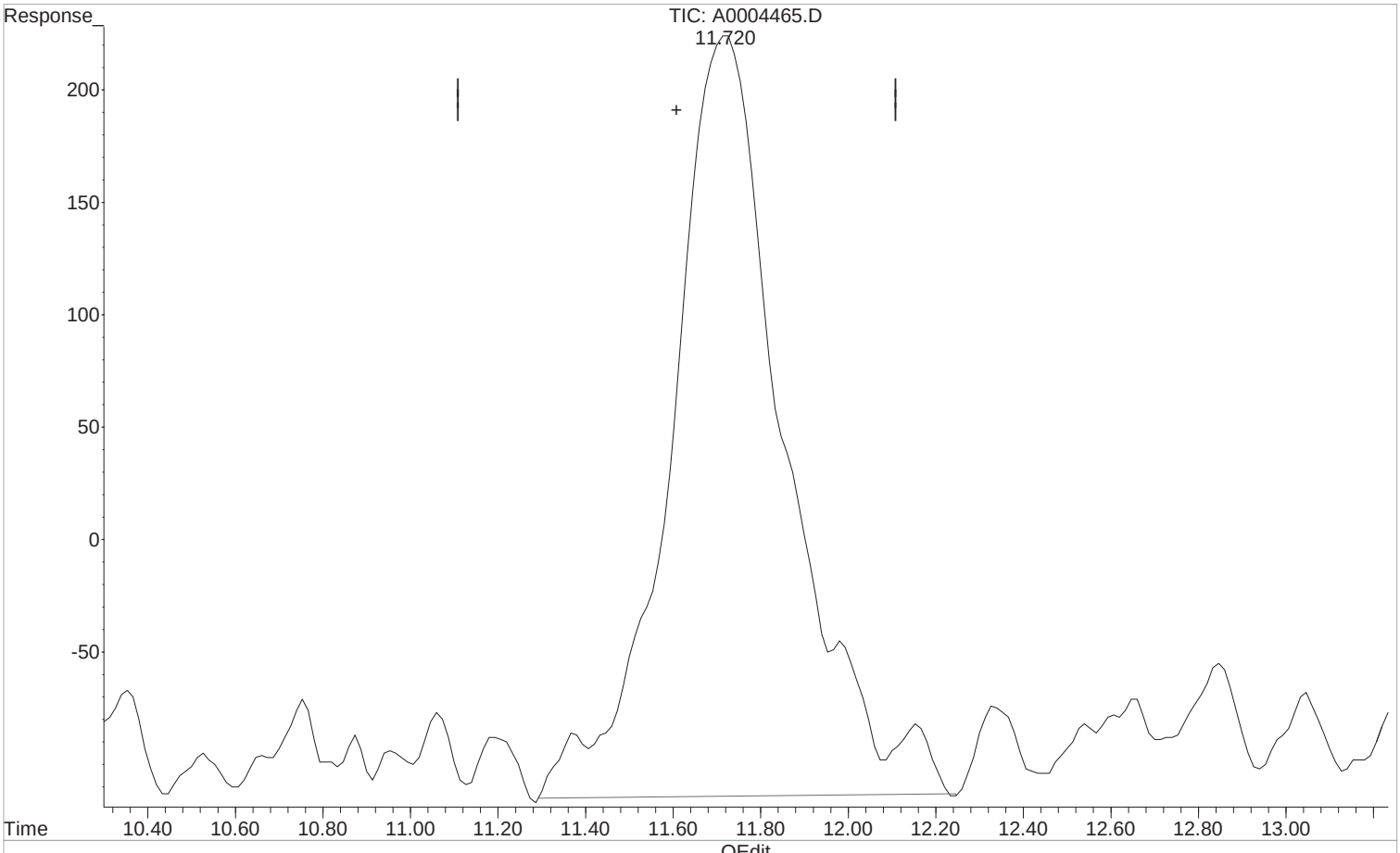
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

11.721min 1.124 ppm

response 61737

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

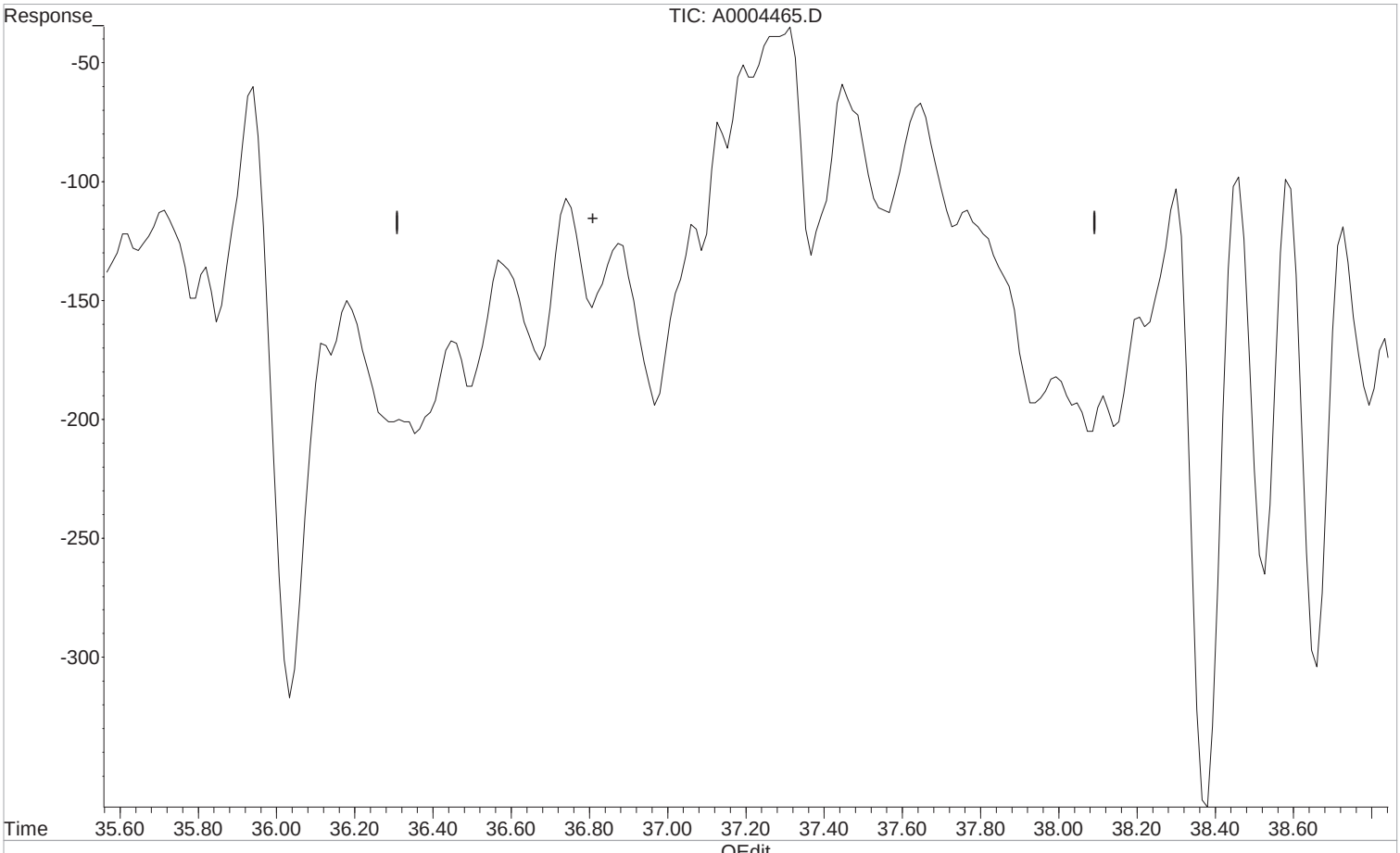
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

37.309min 1.012 ppm m

response 53231

Manual Integration:

After

Peak not found.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

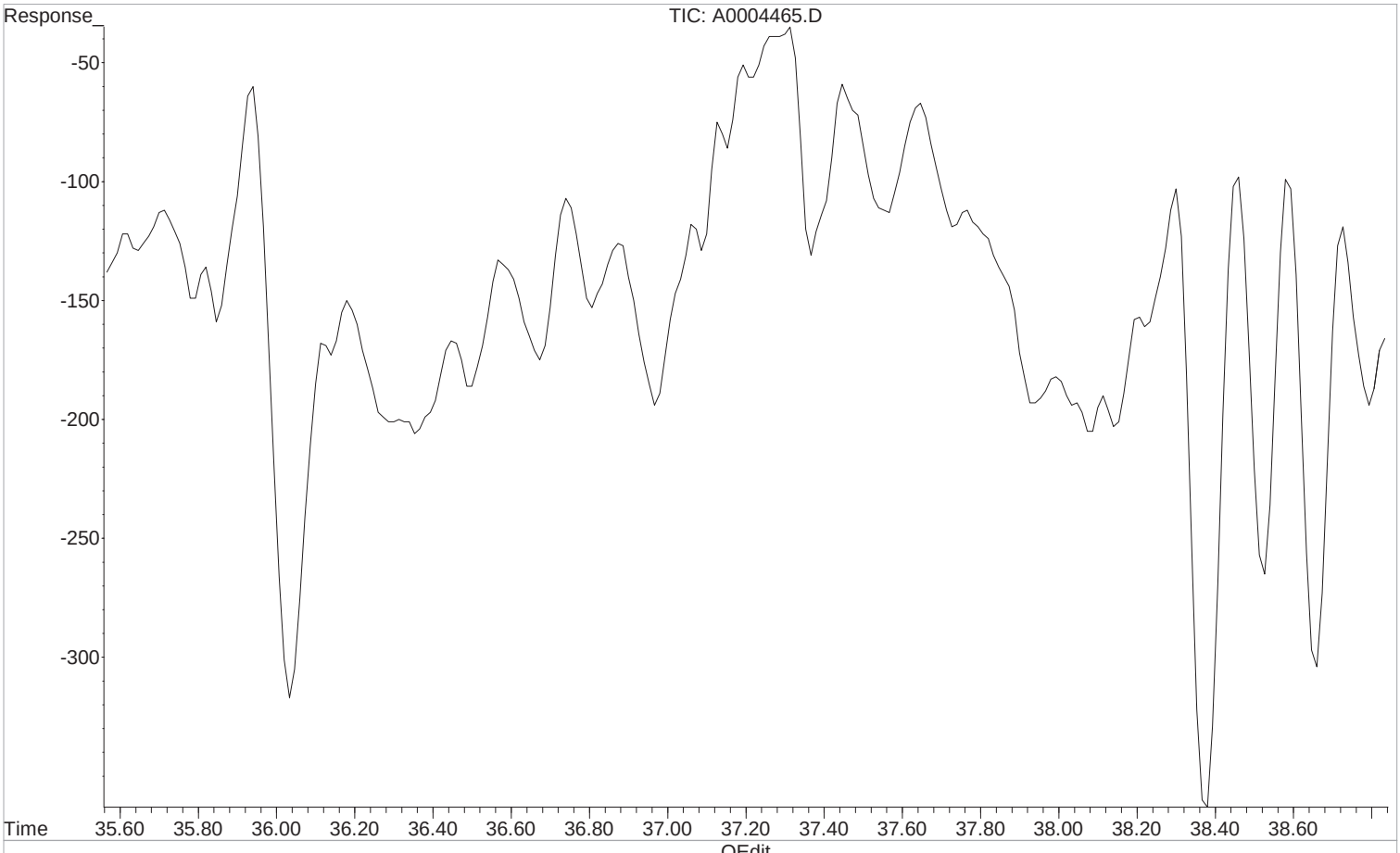
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

0.000min 0.000 ppm d

response 0

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	2.947	96141	1.051	ppm	m
2) T	Pyruvic acid	3.640	65073	0.112	ppm	m
3) T	Lactic Acid	4.132	62664	1.131	ppm	m
4) T	Acetic Acid	4.621	55208	0.989	ppm	m
5) T	Propionic Acid	11.720	51534	0.938	ppm	m
6) T	Butyric Acid	37.309f	53231	1.012	ppm	m

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

RIGHT SOLUTIONS | RIGHT PARTNER

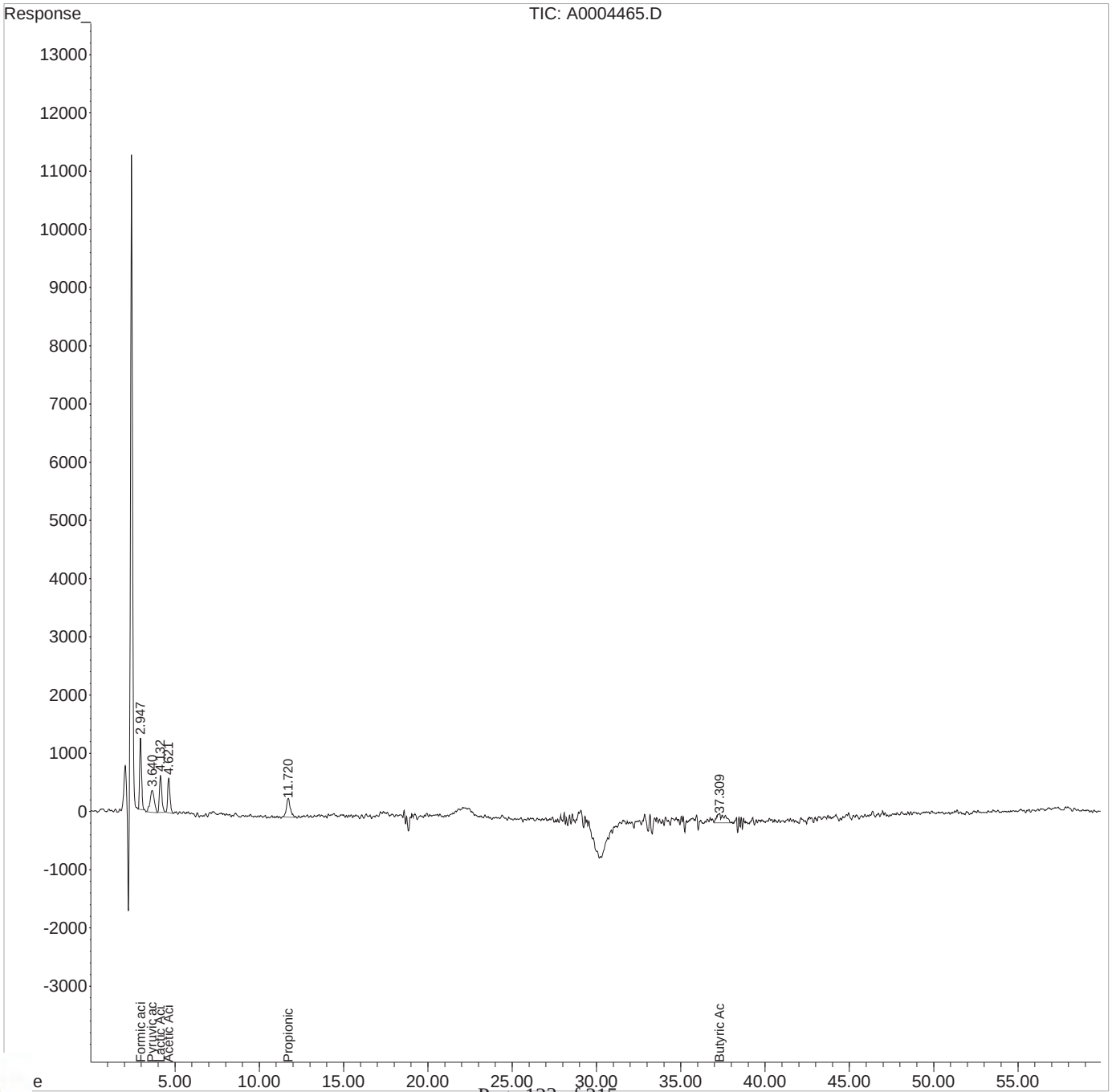
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



RIGHT SOLUTIONS | RIGHT PARTNER

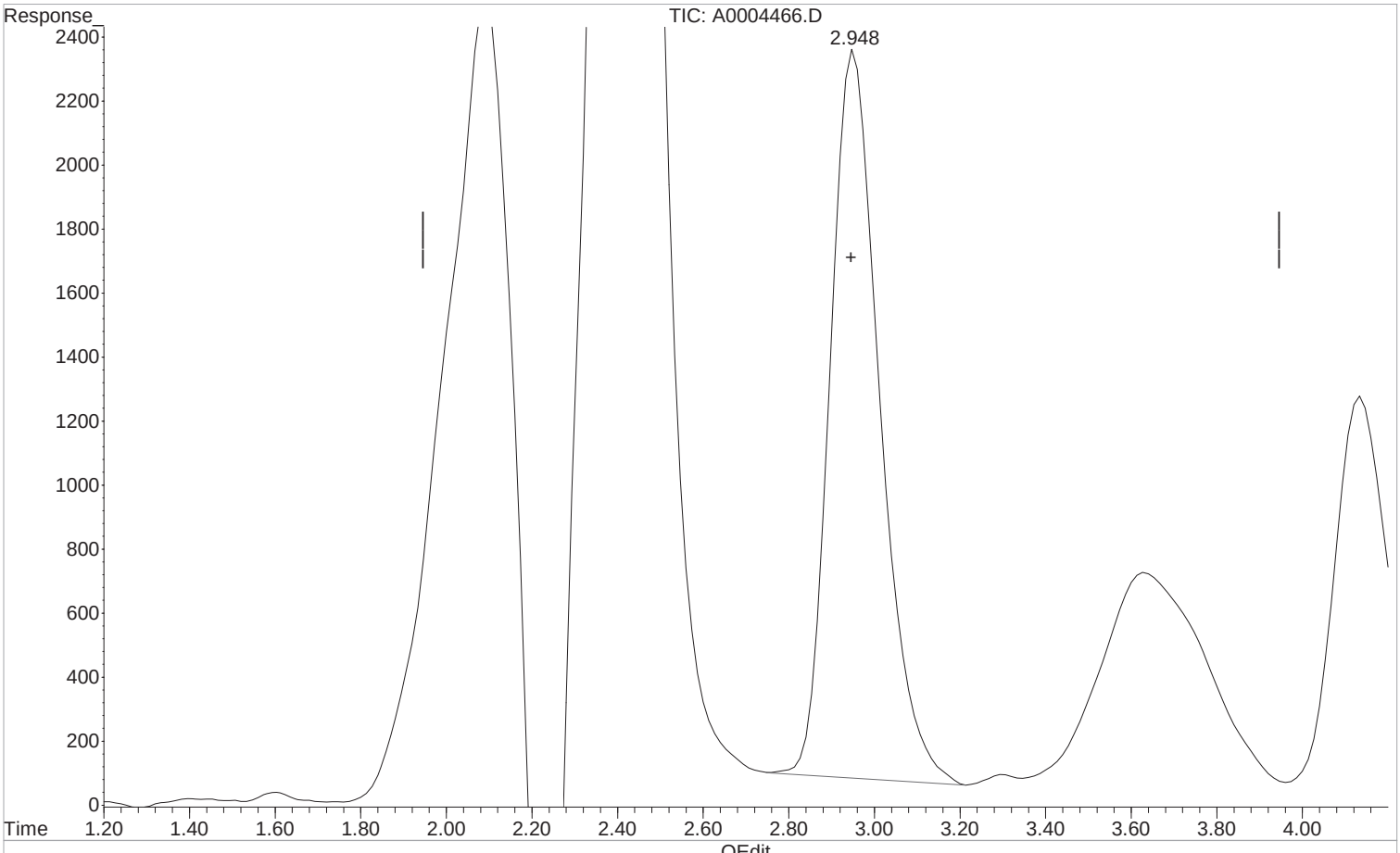
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.948min 2.019 ppm m

response 184745

Manual Integration:

After

Poor integration.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

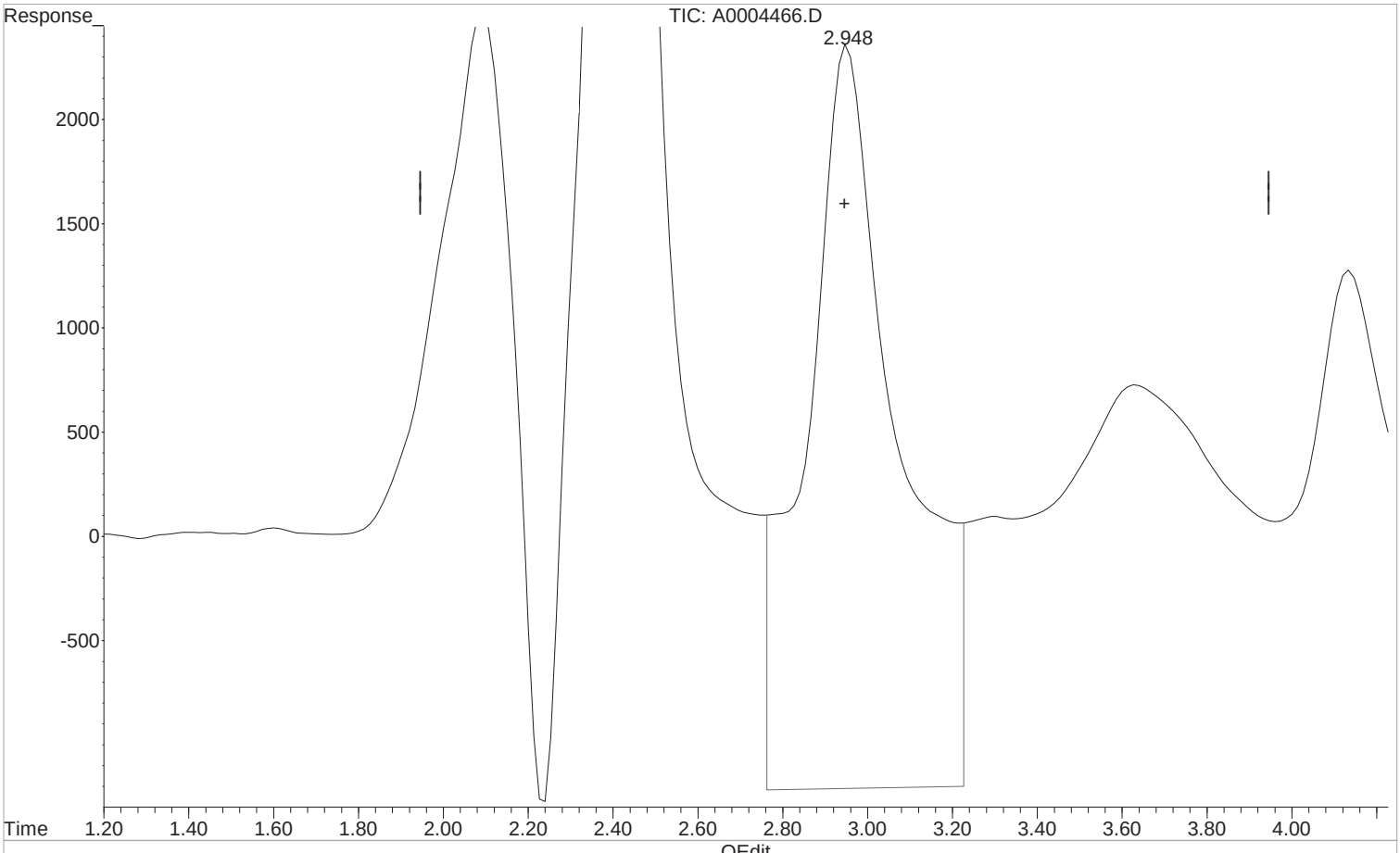
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.955min 5.943 ppm

response 543858

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

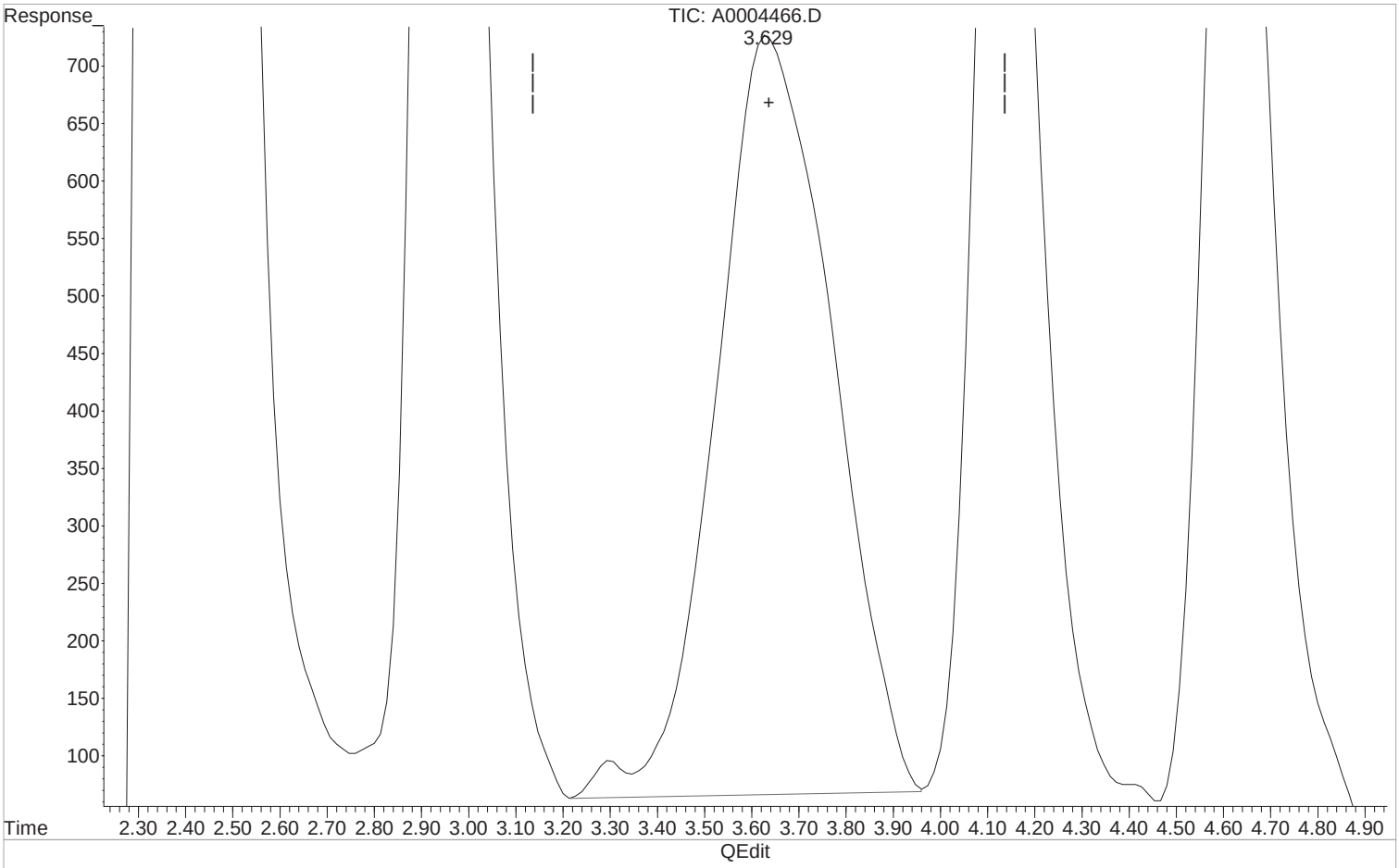
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.629min 0.194 ppm m

response 113308

Manual Integration:

After

Poor integration.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

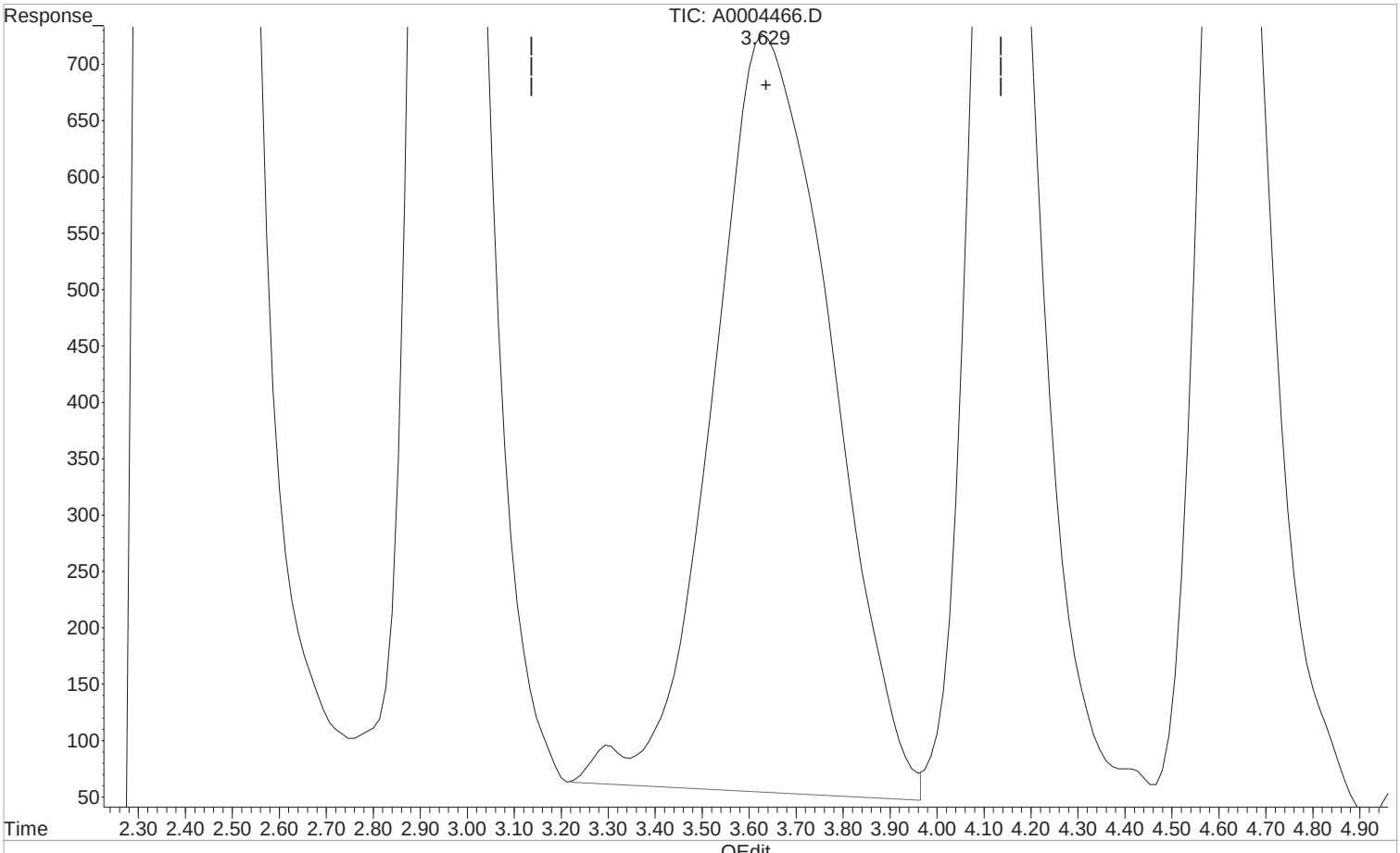
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.639min 0.203 ppm

response 118180

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

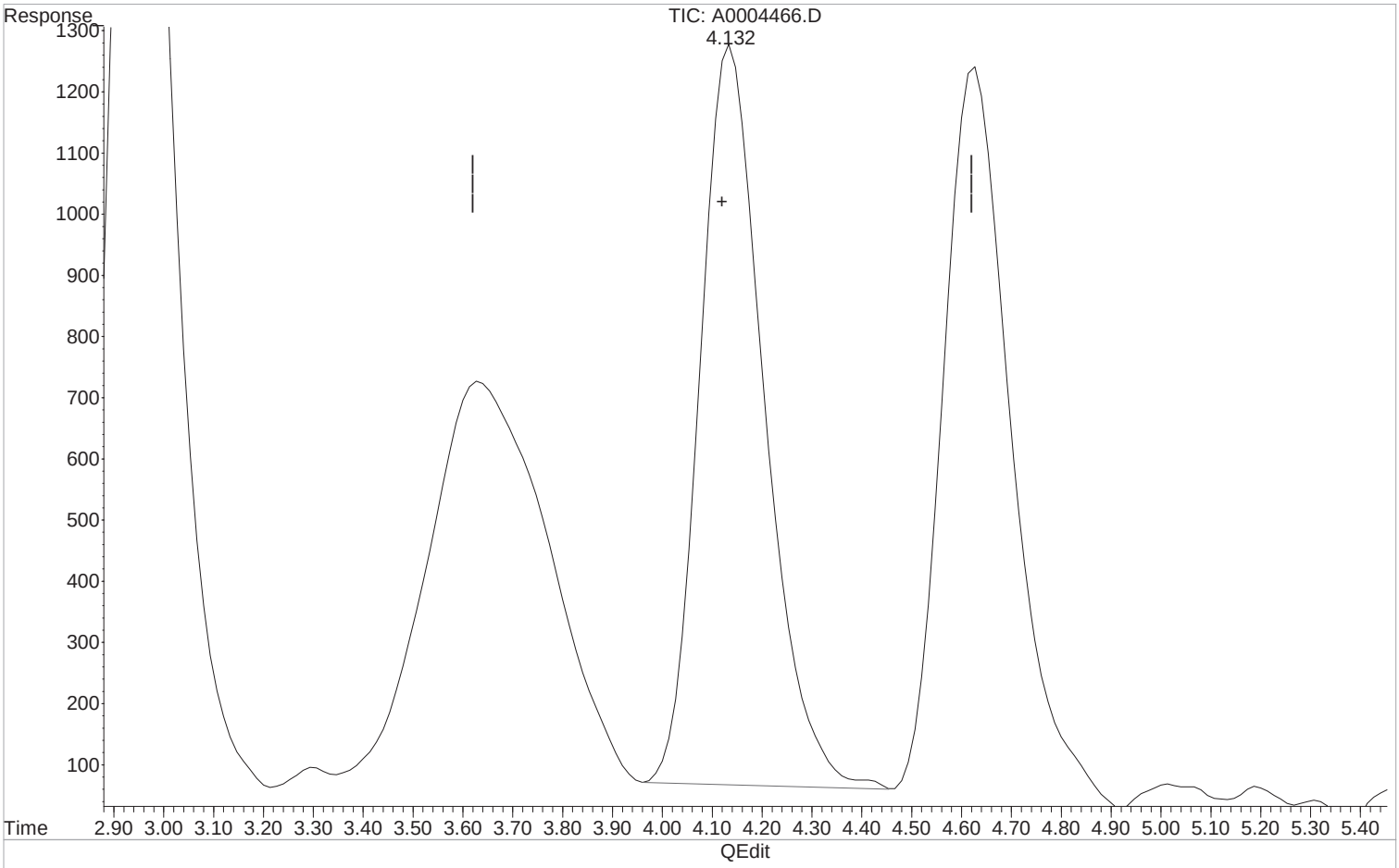
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.132min 1.974 ppm m

response 109344

Manual Integration:

After

Poor integration.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

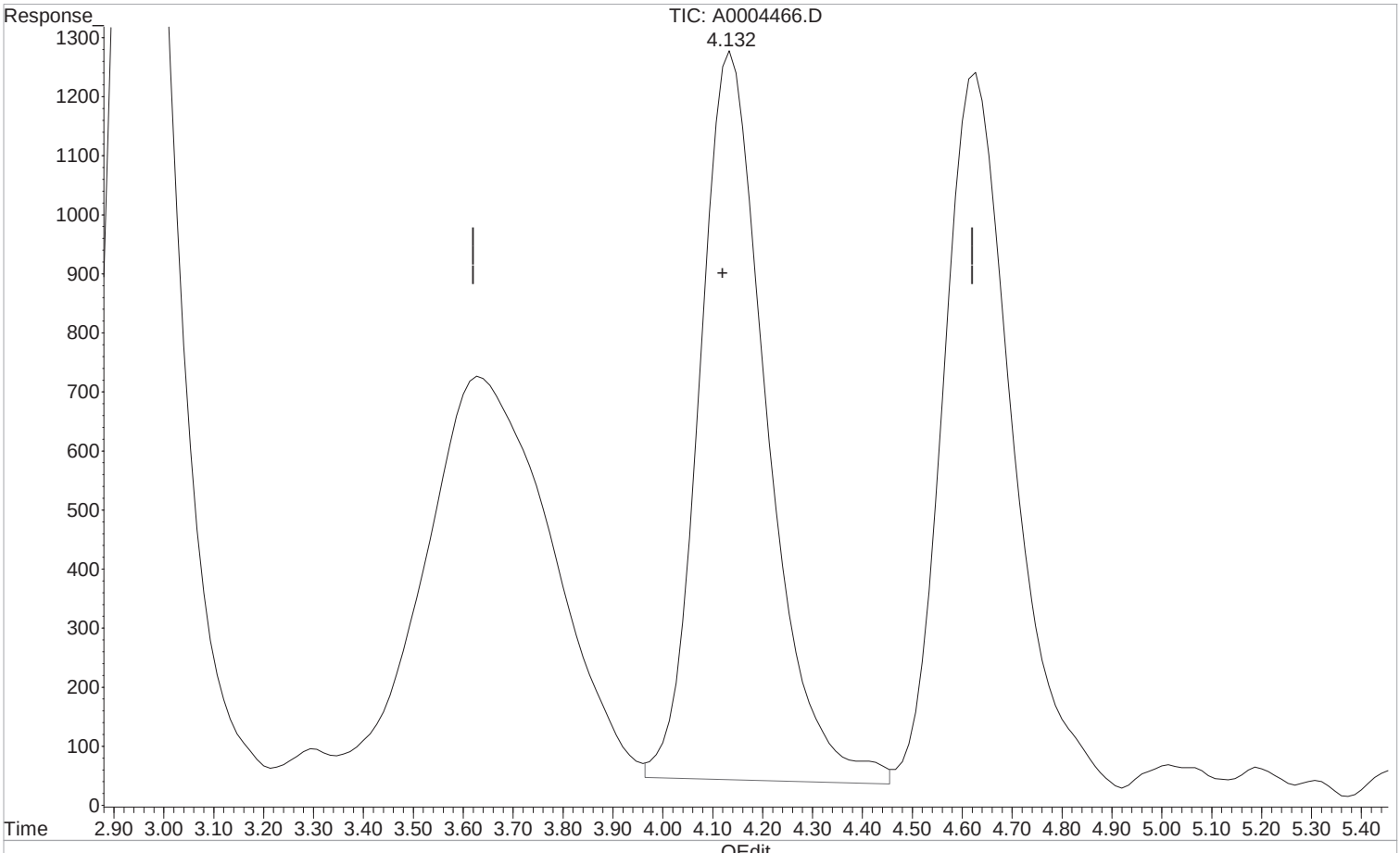
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.139min 2.102 ppm

response 116418

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

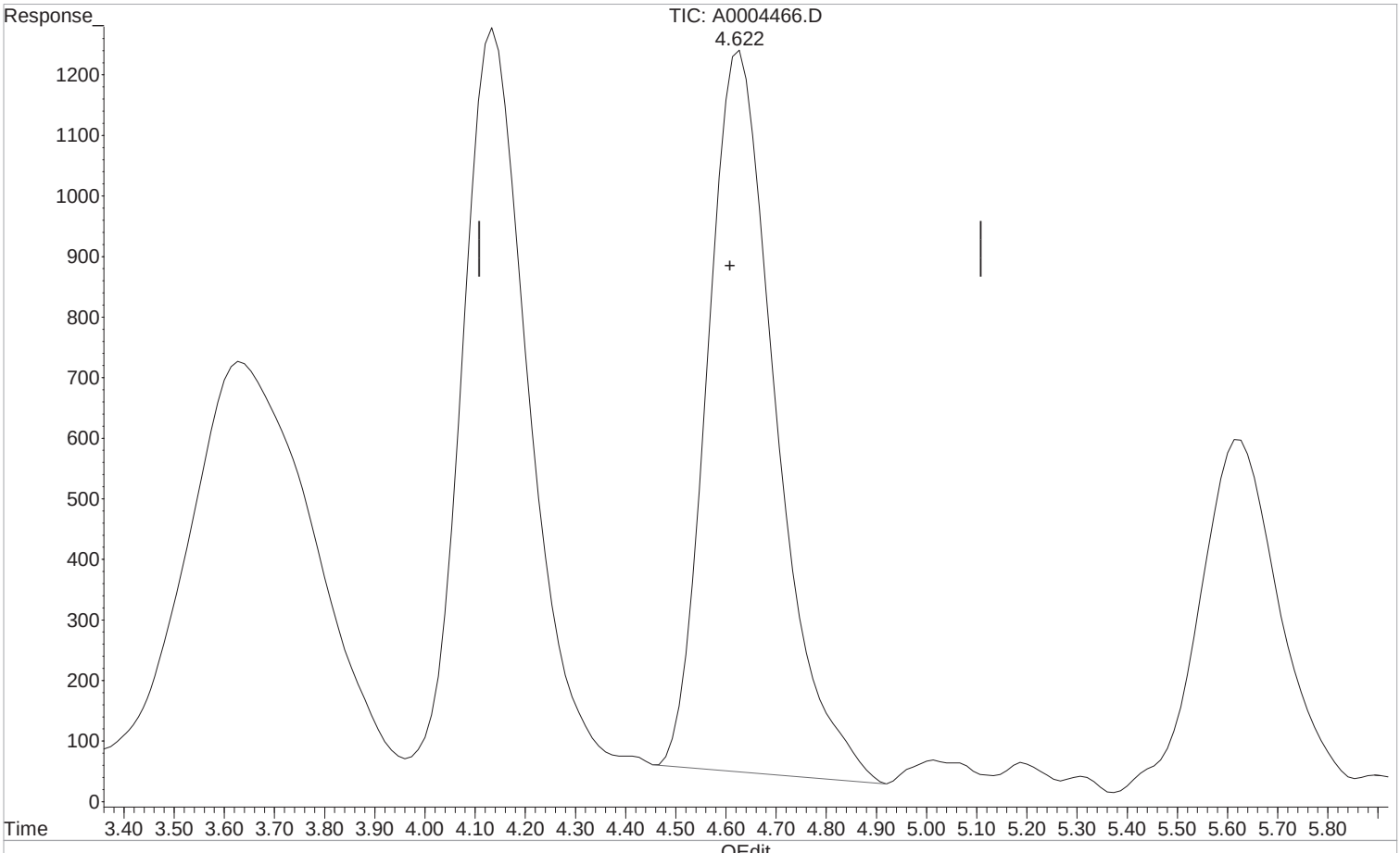
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.622min 2.028 ppm m

response 113173

Manual Integration:

After

Poor integration.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

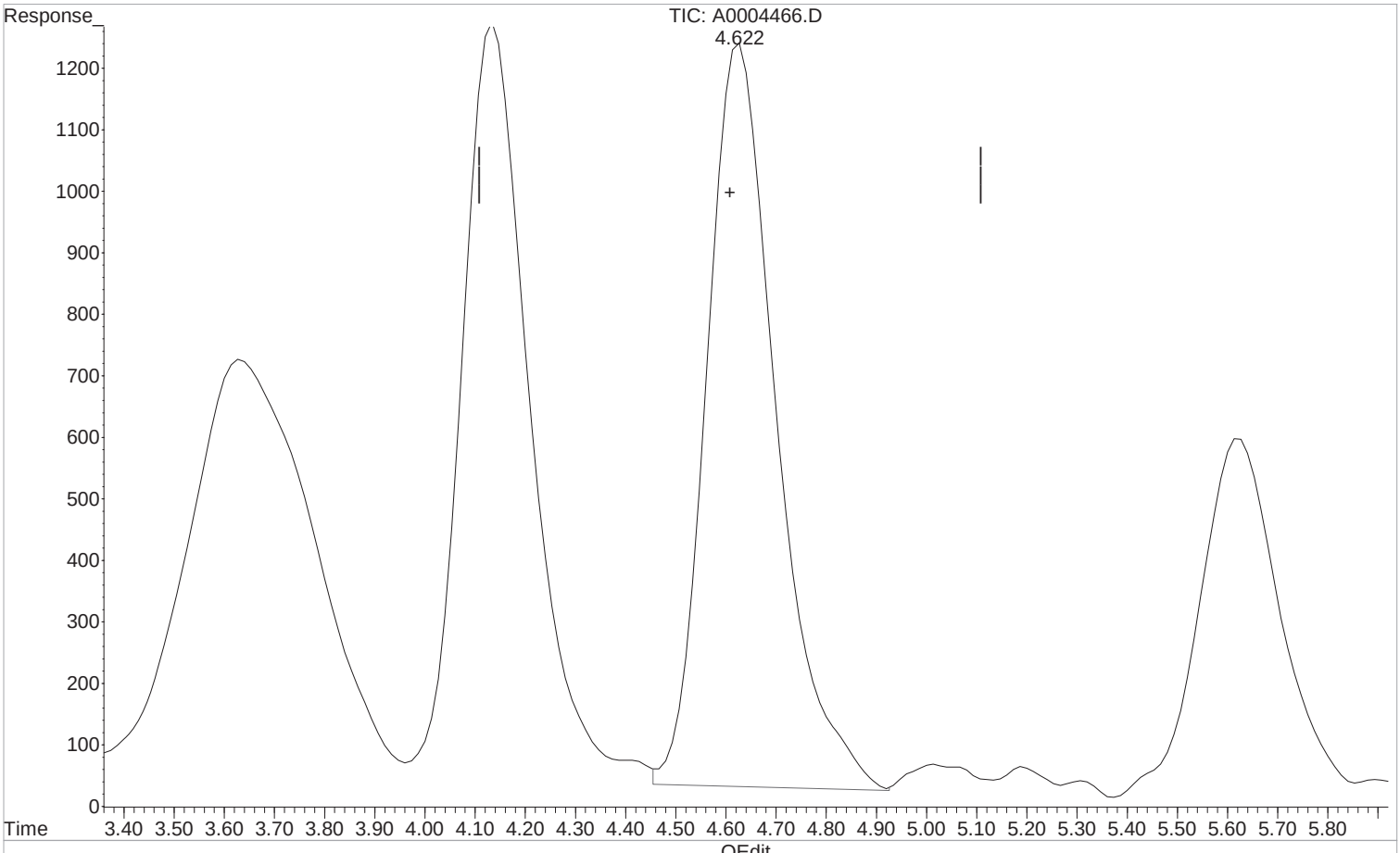
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.629min 2.100 ppm

response 117200

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

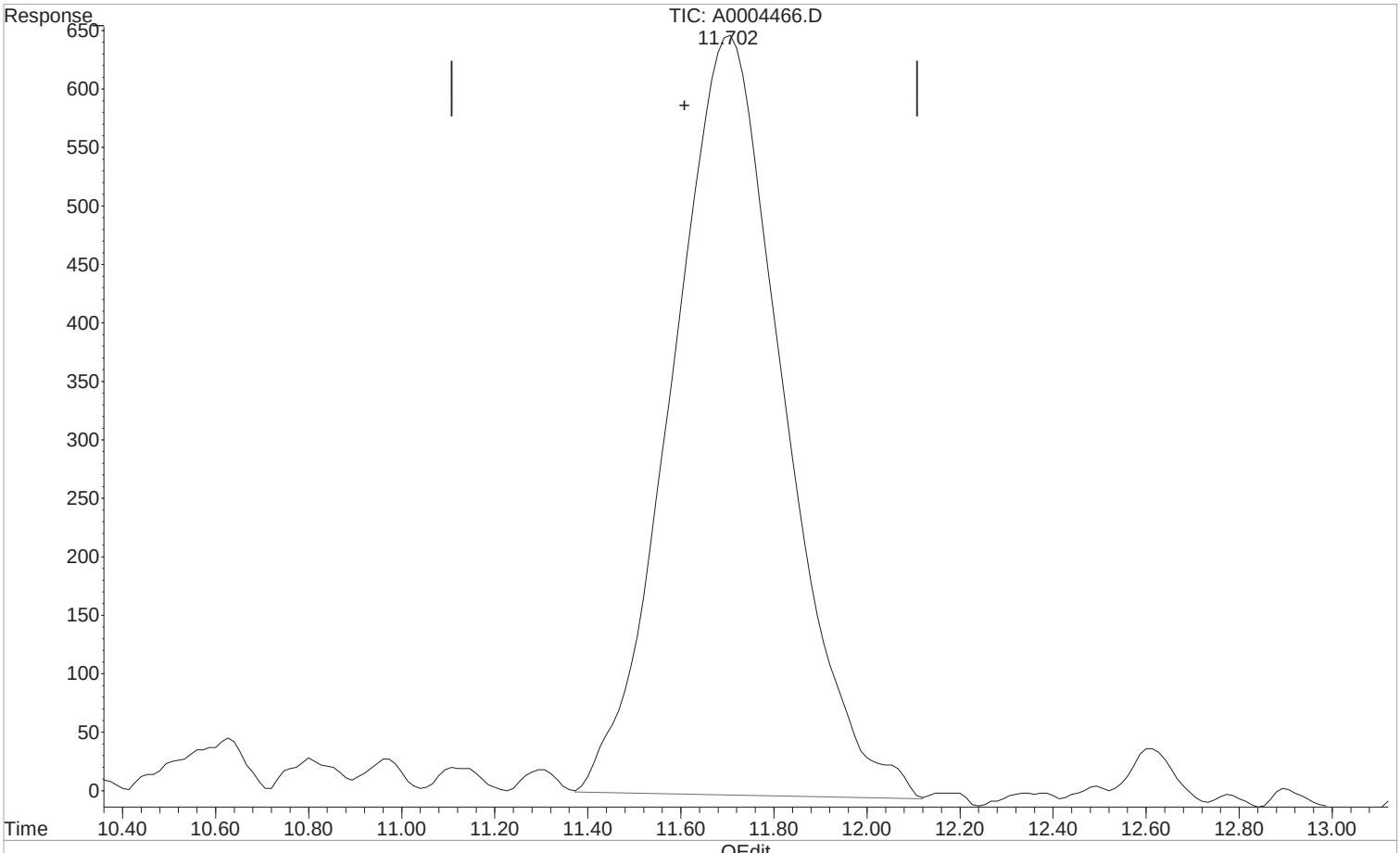
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

11.702min 1.979 ppm m

response 108705

Manual Integration:

After

Poor integration.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

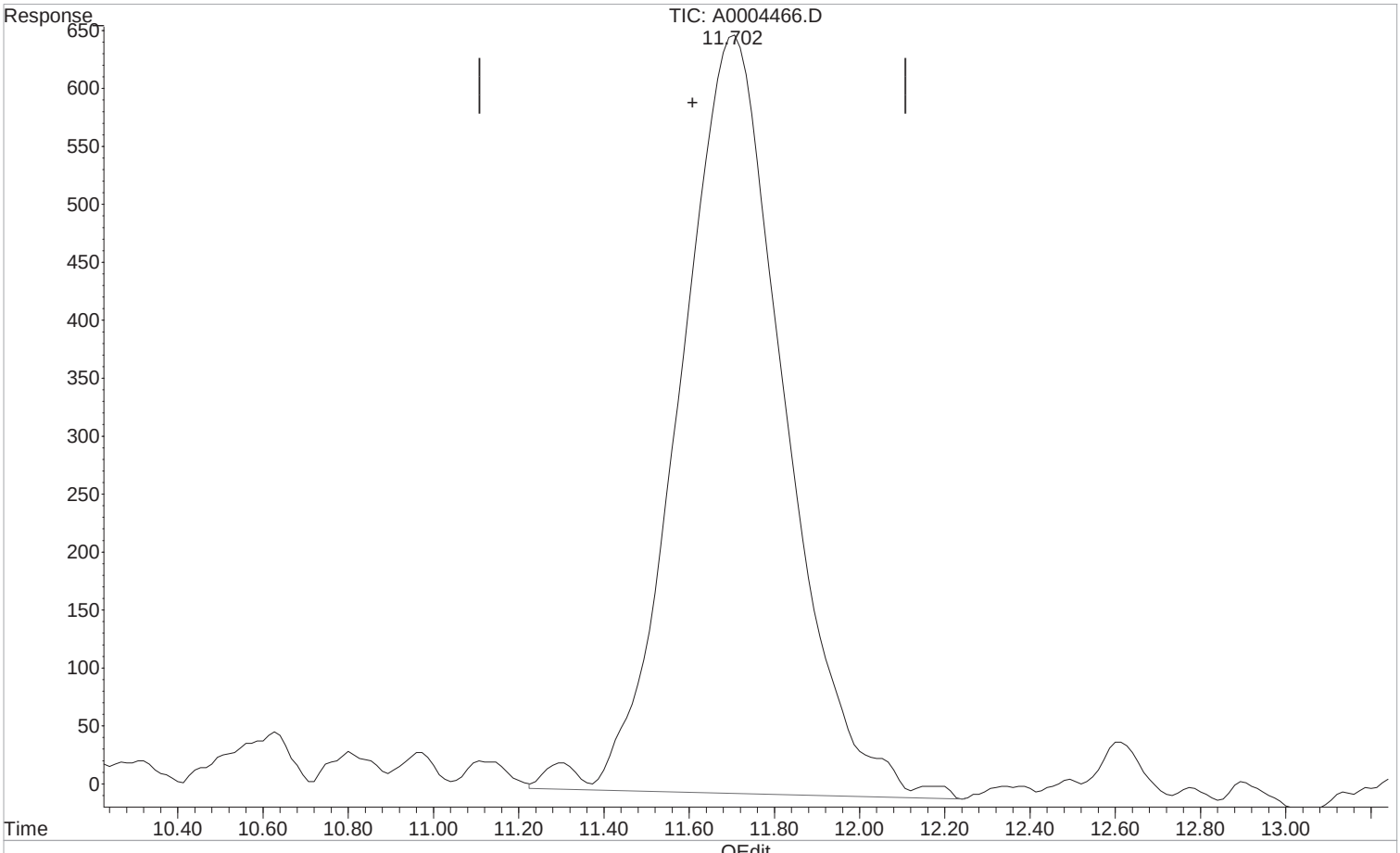
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

11.707min 2.047 ppm

response 112454

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

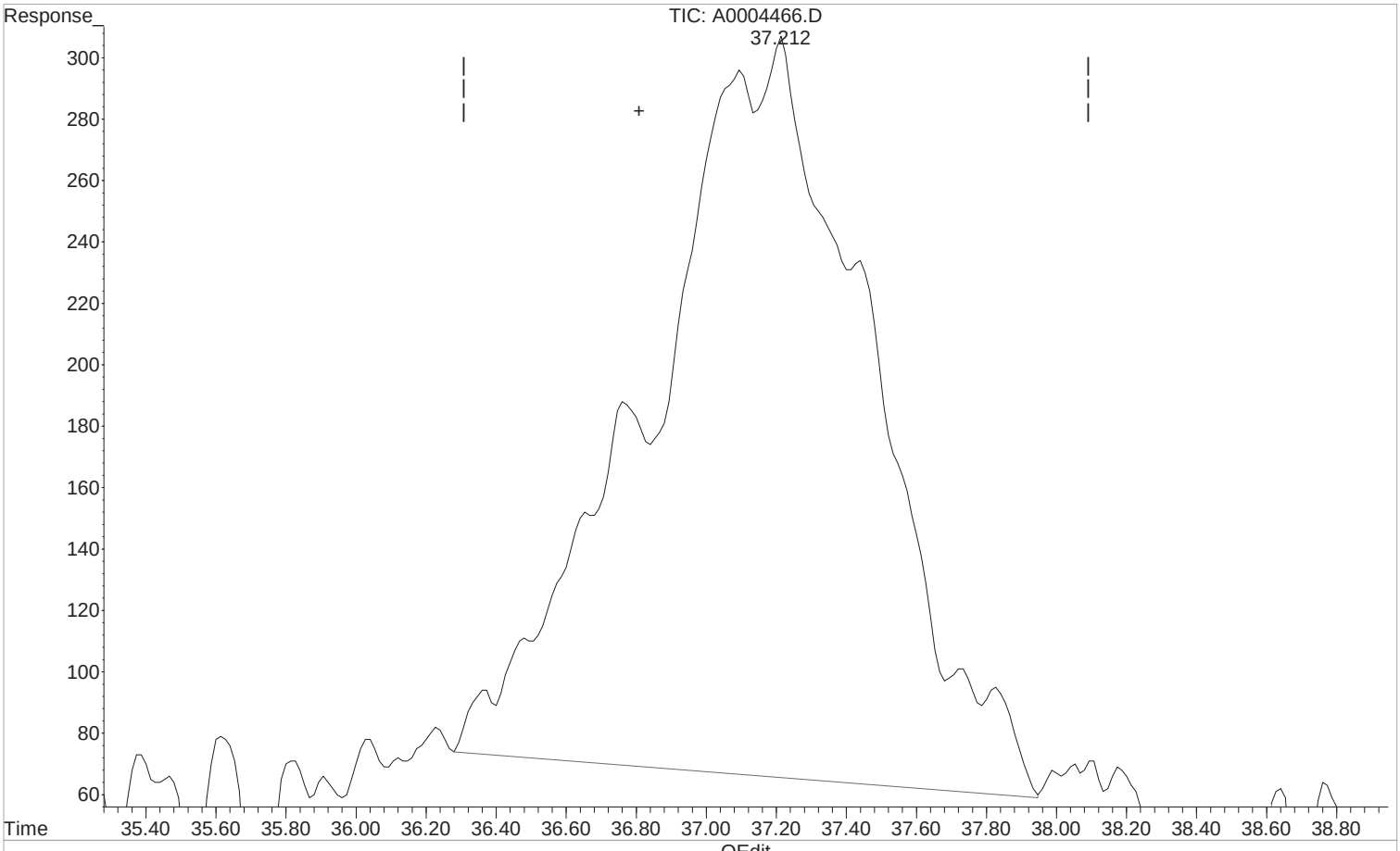
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

37.212min 2.029 ppm m

response 106761

Manual Integration:

After

Poor integration.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

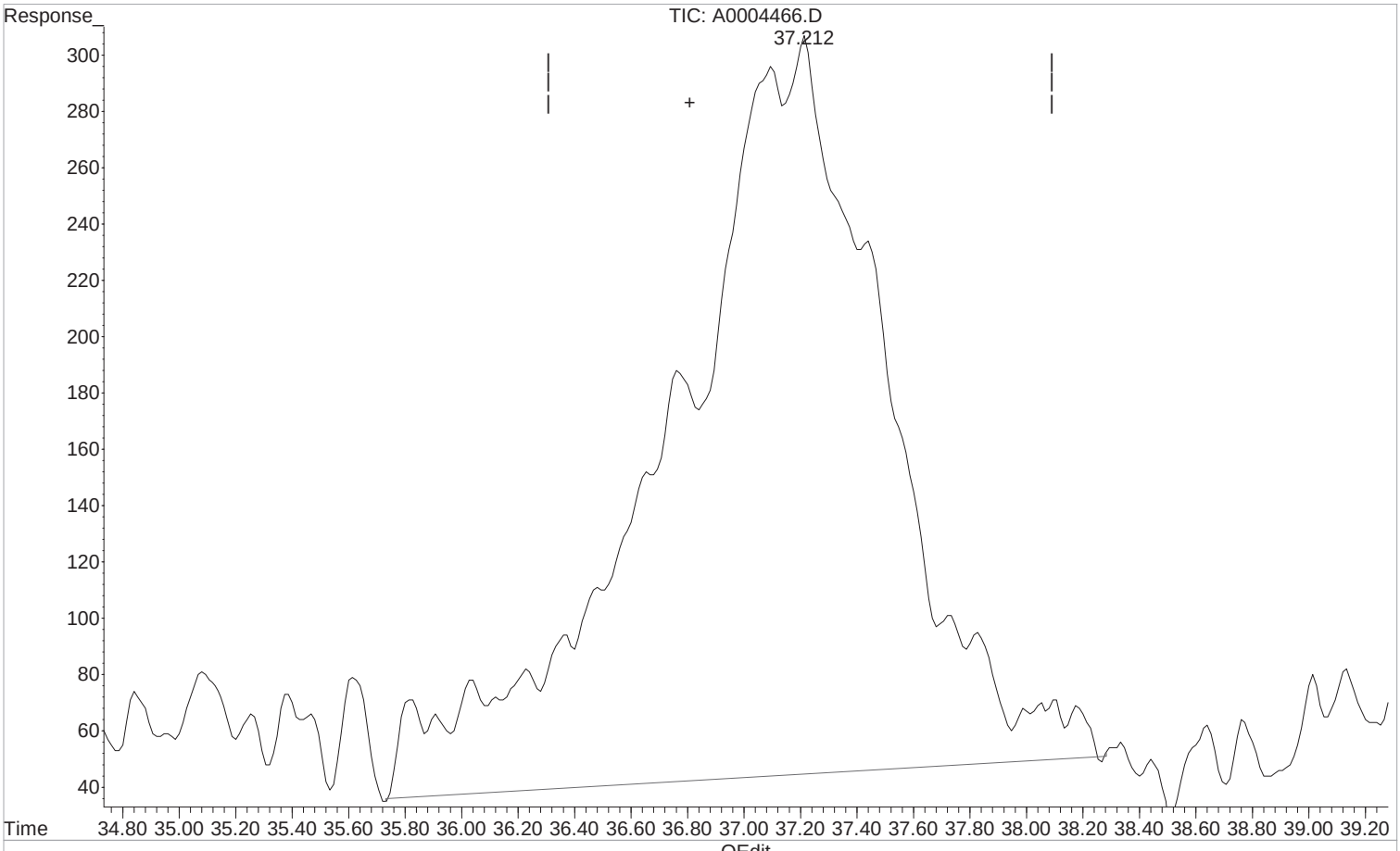
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

37.213min 2.698 ppm

response 141960

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	2.948	184745	2.019	ppm	m
2) T	Pyruvic acid	3.629	113308	0.194	ppm	m
3) T	Lactic Acid	4.132	109344	1.974	ppm	m
4) T	Acetic Acid	4.622	113173	2.028	ppm	m
5) T	Propionic Acid	11.702	108705	1.979	ppm	m
6) T	Butyric Acid	37.212	106761	2.029	ppm	m

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

RIGHT SOLUTIONS | RIGHT PARTNER

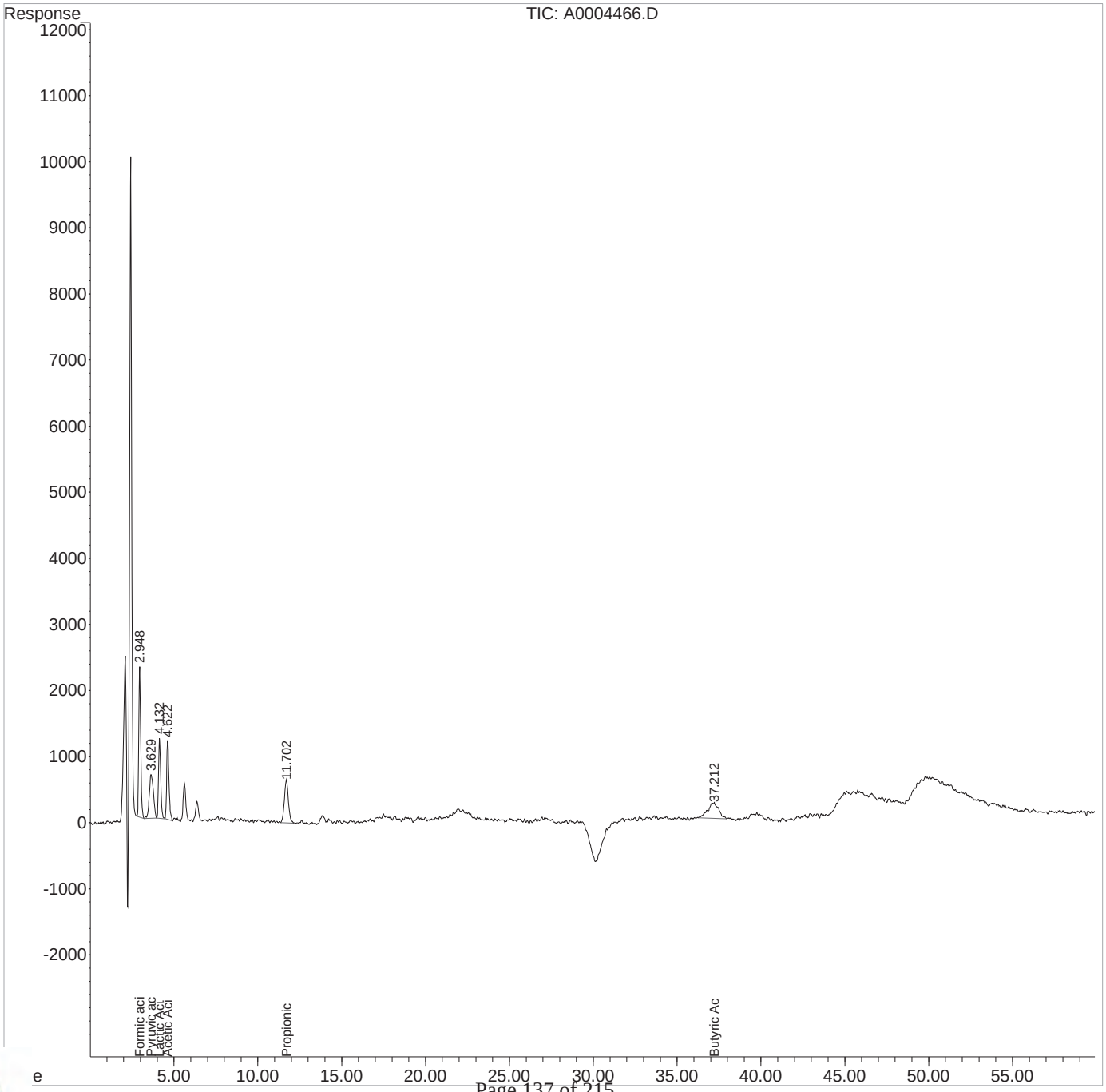
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



RIGHT SOLUTIONS | RIGHT PARTNER

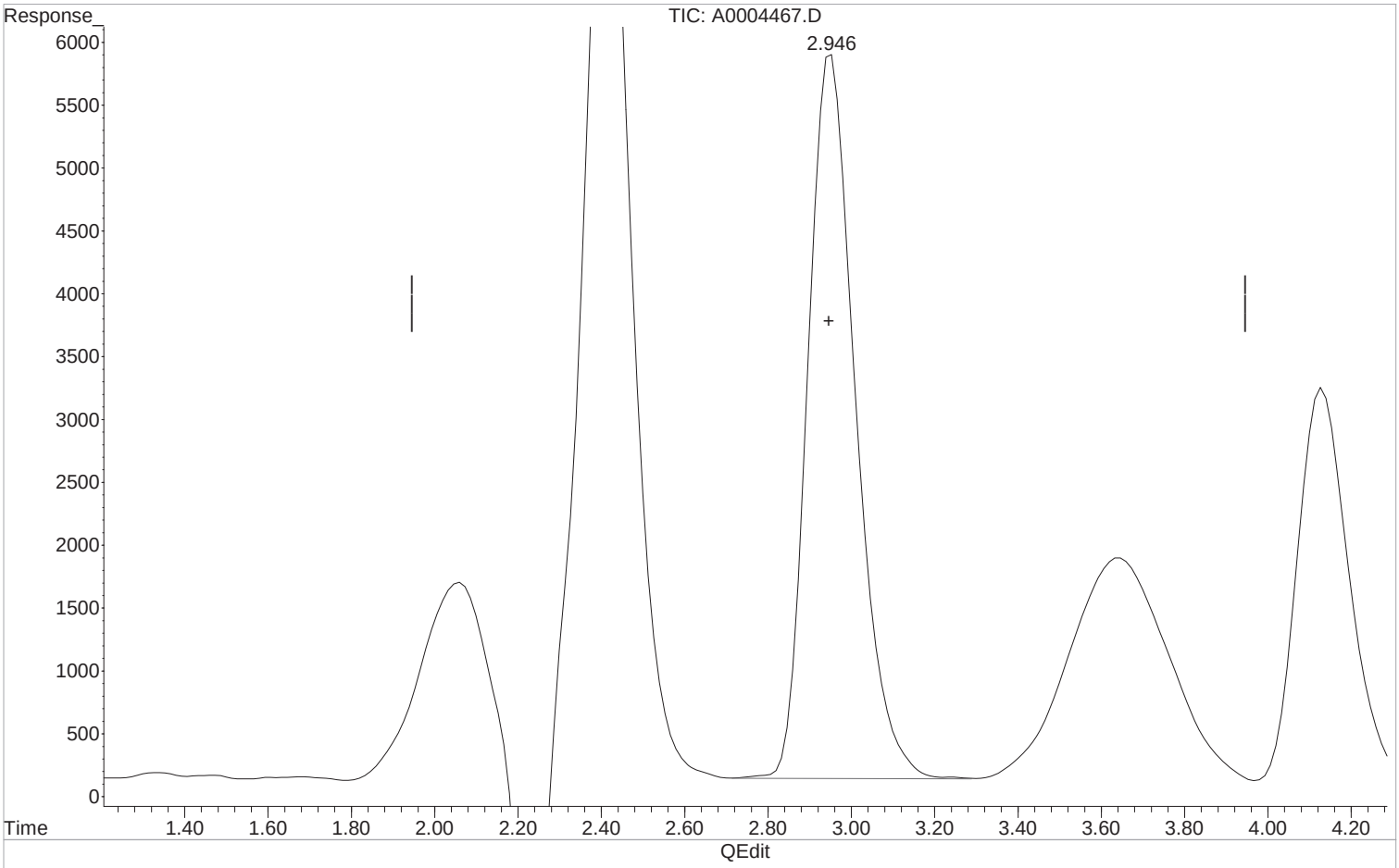
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.946min 5.032 ppm m

response 460497

Manual Integration:

After

Poor integration.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

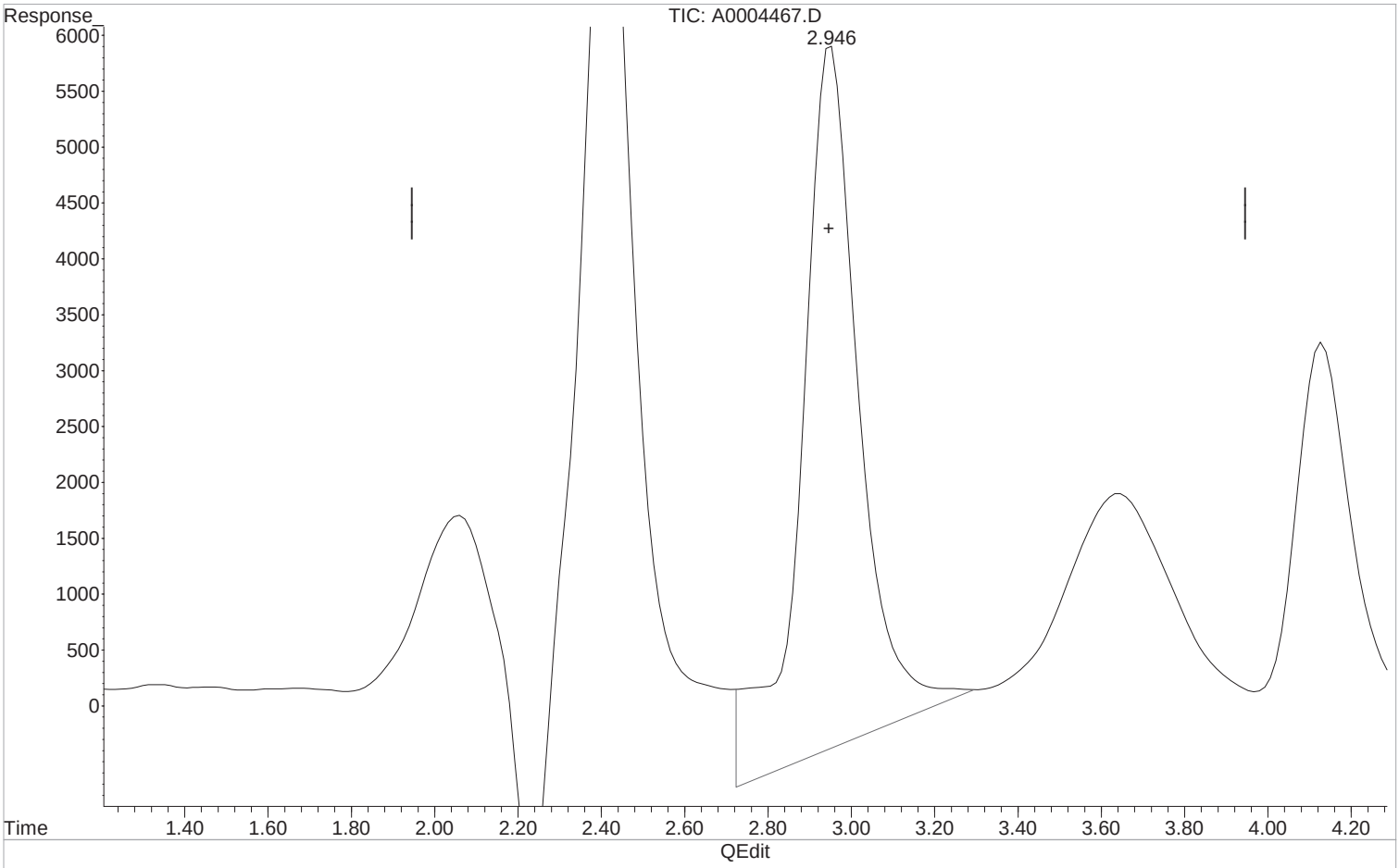
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.953min 6.666 ppm

response 609950

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

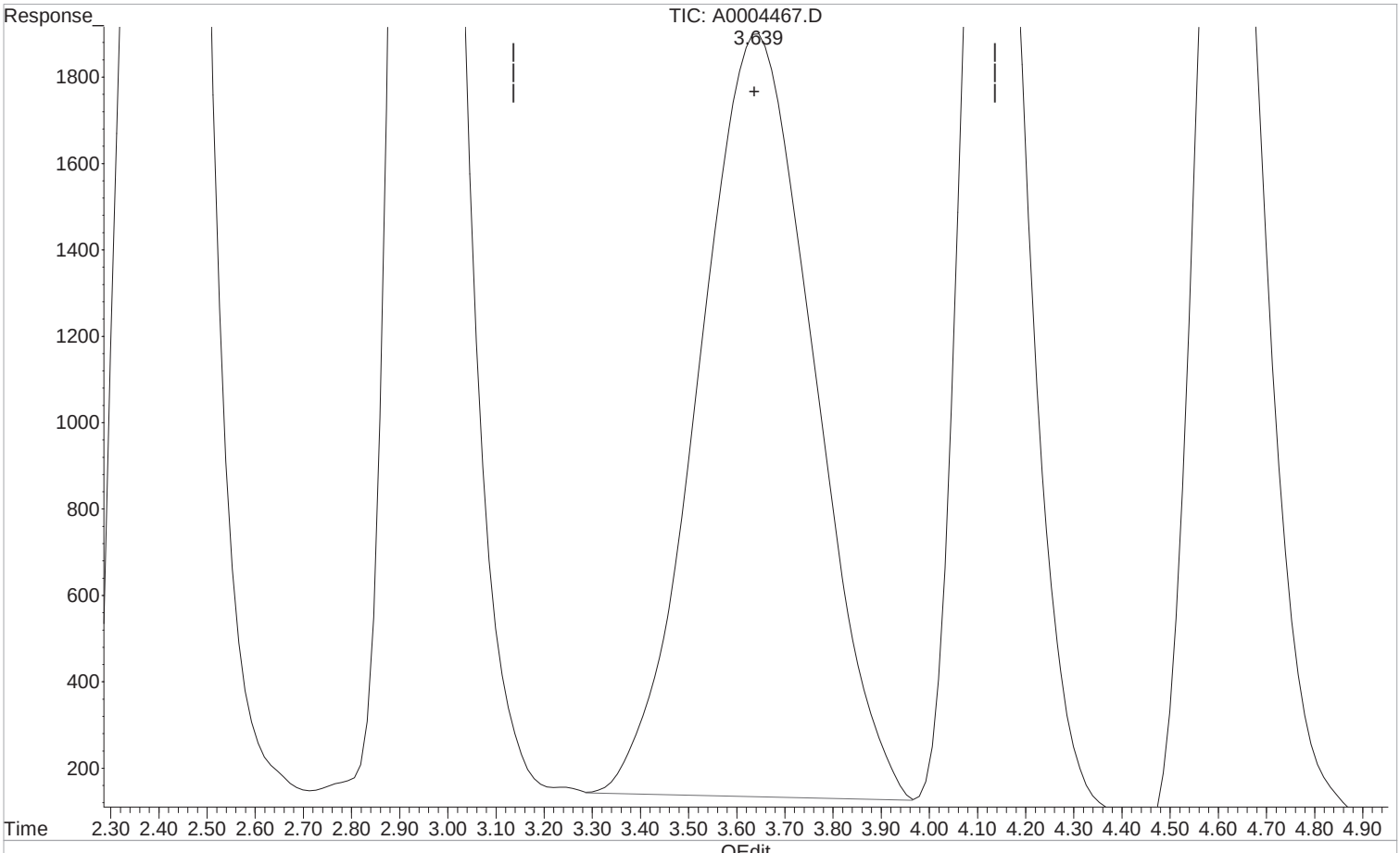
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.639min 0.503 ppm m

response 293242

Manual Integration:

After

Poor integration.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

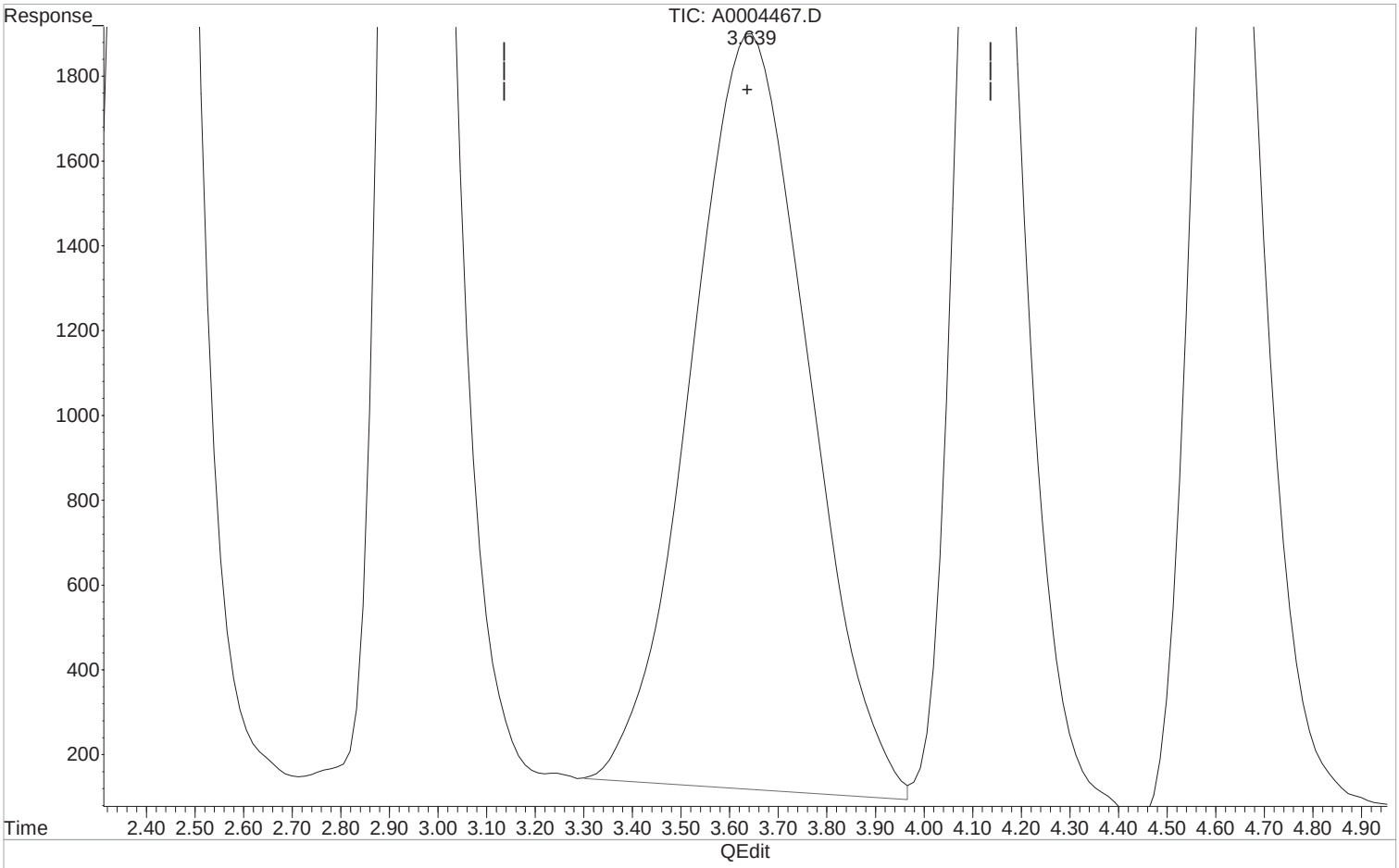
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.645min 0.513 ppm

response 299276

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

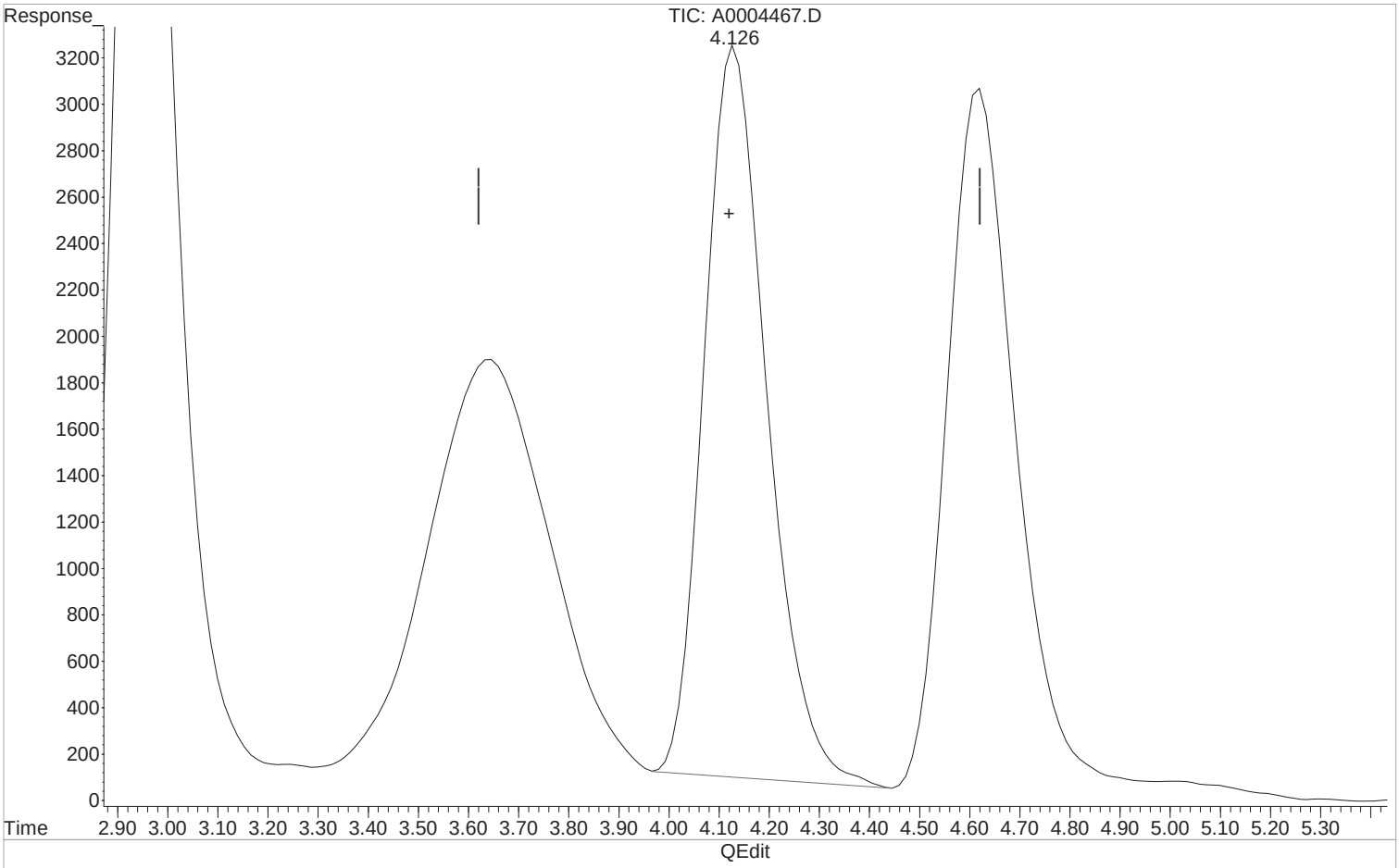
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.126min 4.978 ppm m

response 275770

Manual Integration:

After

Poor integration.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

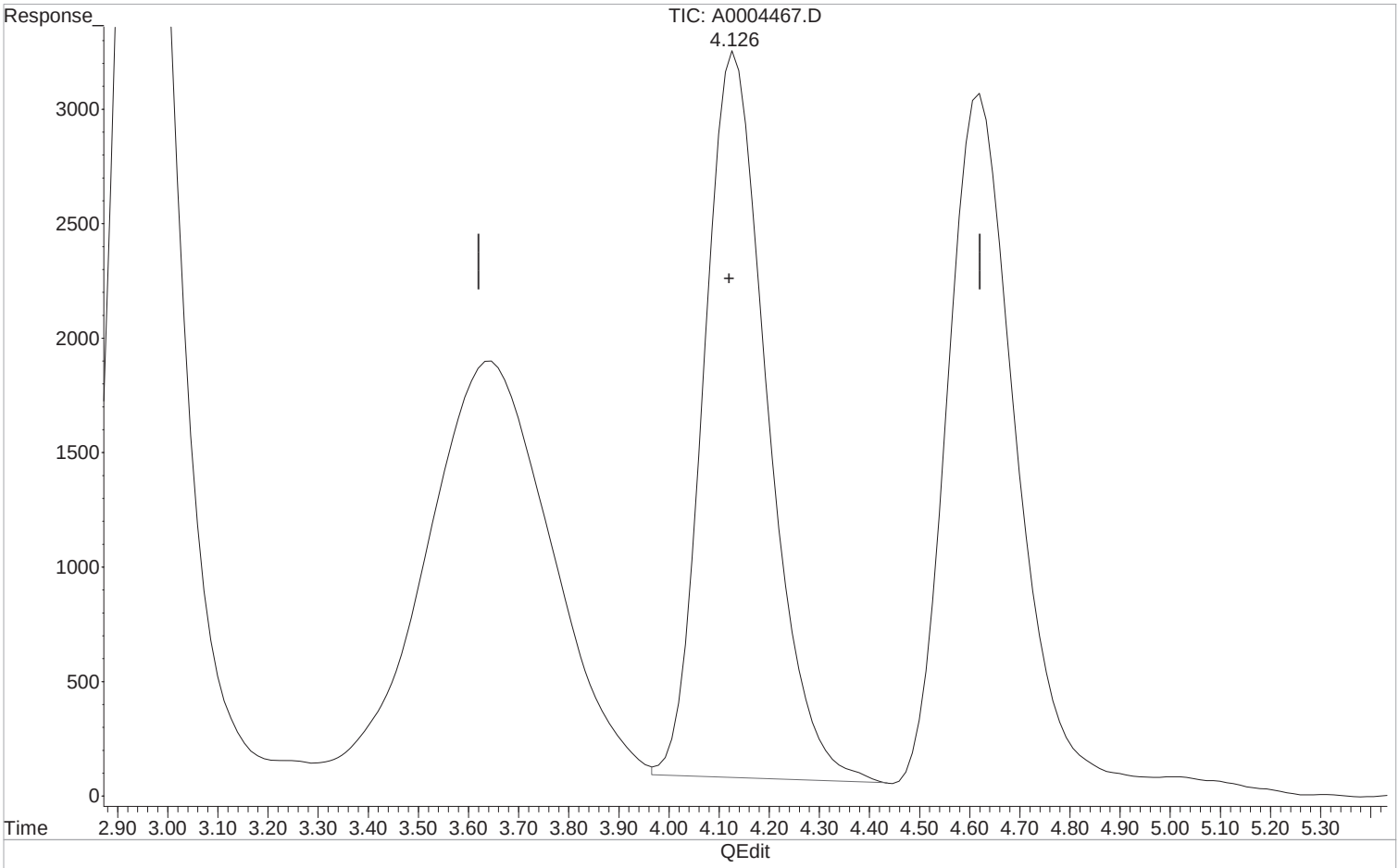
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.132min 5.051 ppm

response 279806

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

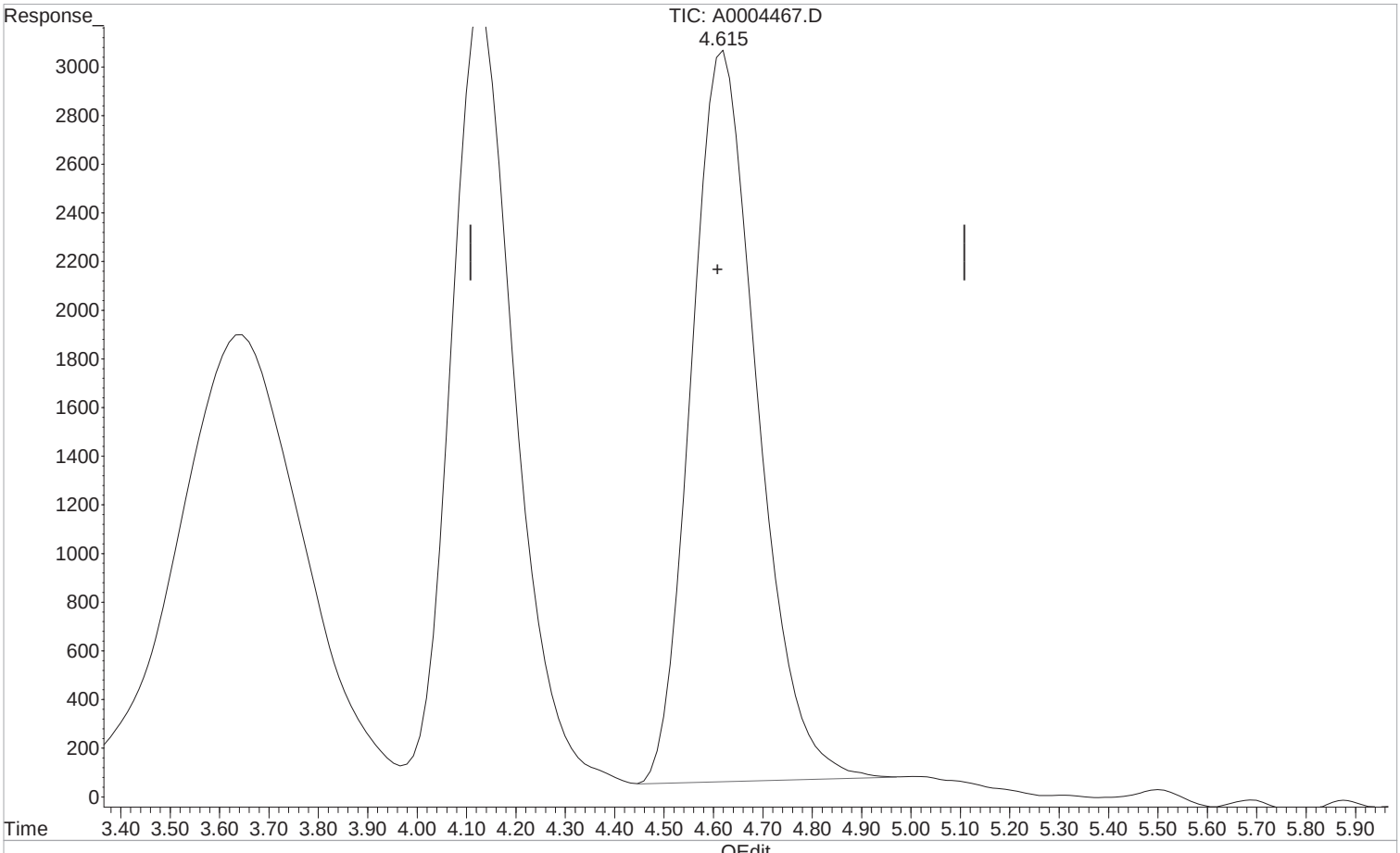
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.615min 5.028 ppm m

response 280536

Manual Integration:

After

Poor integration.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

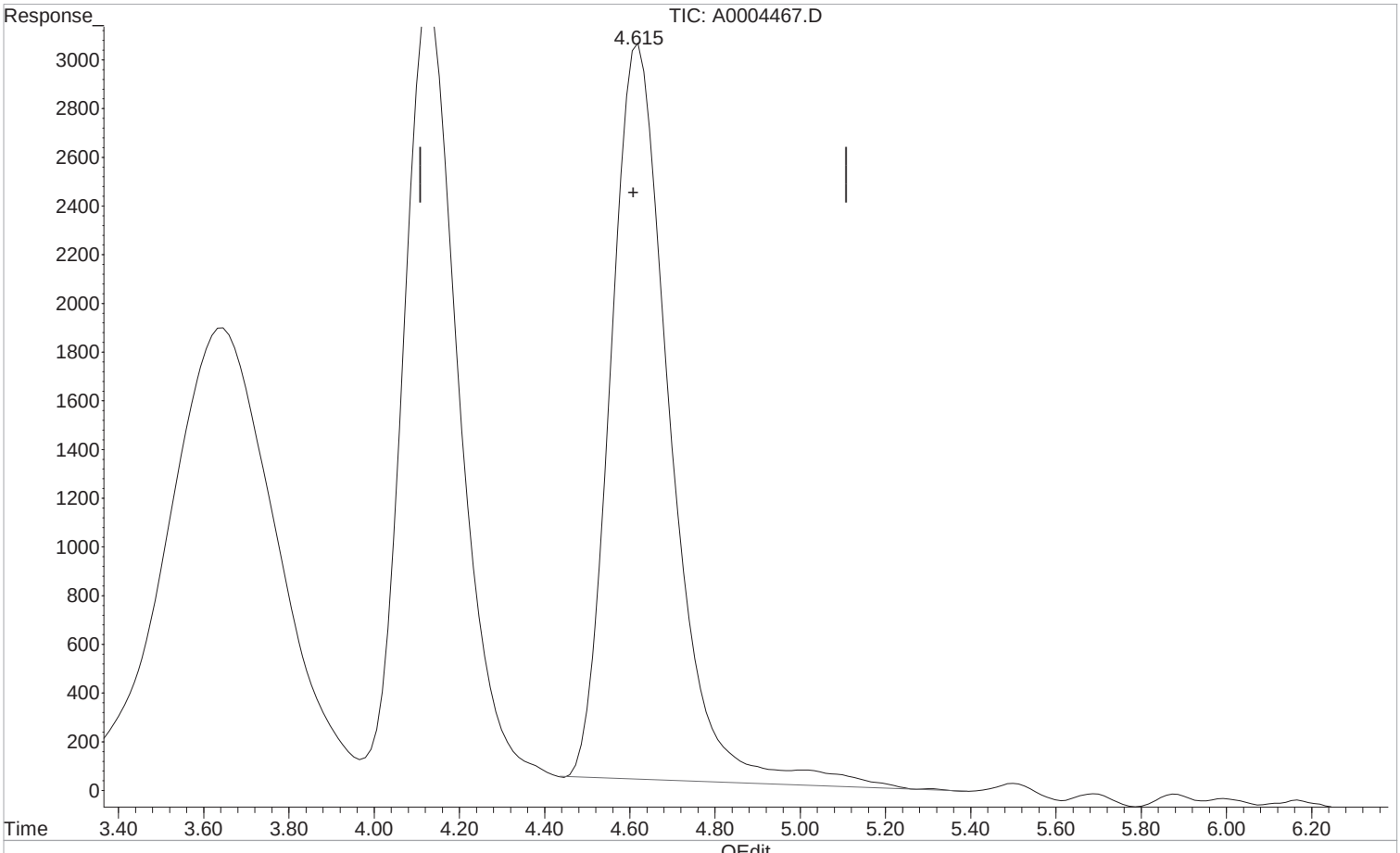
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.622min 5.292 ppm

response 295308

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

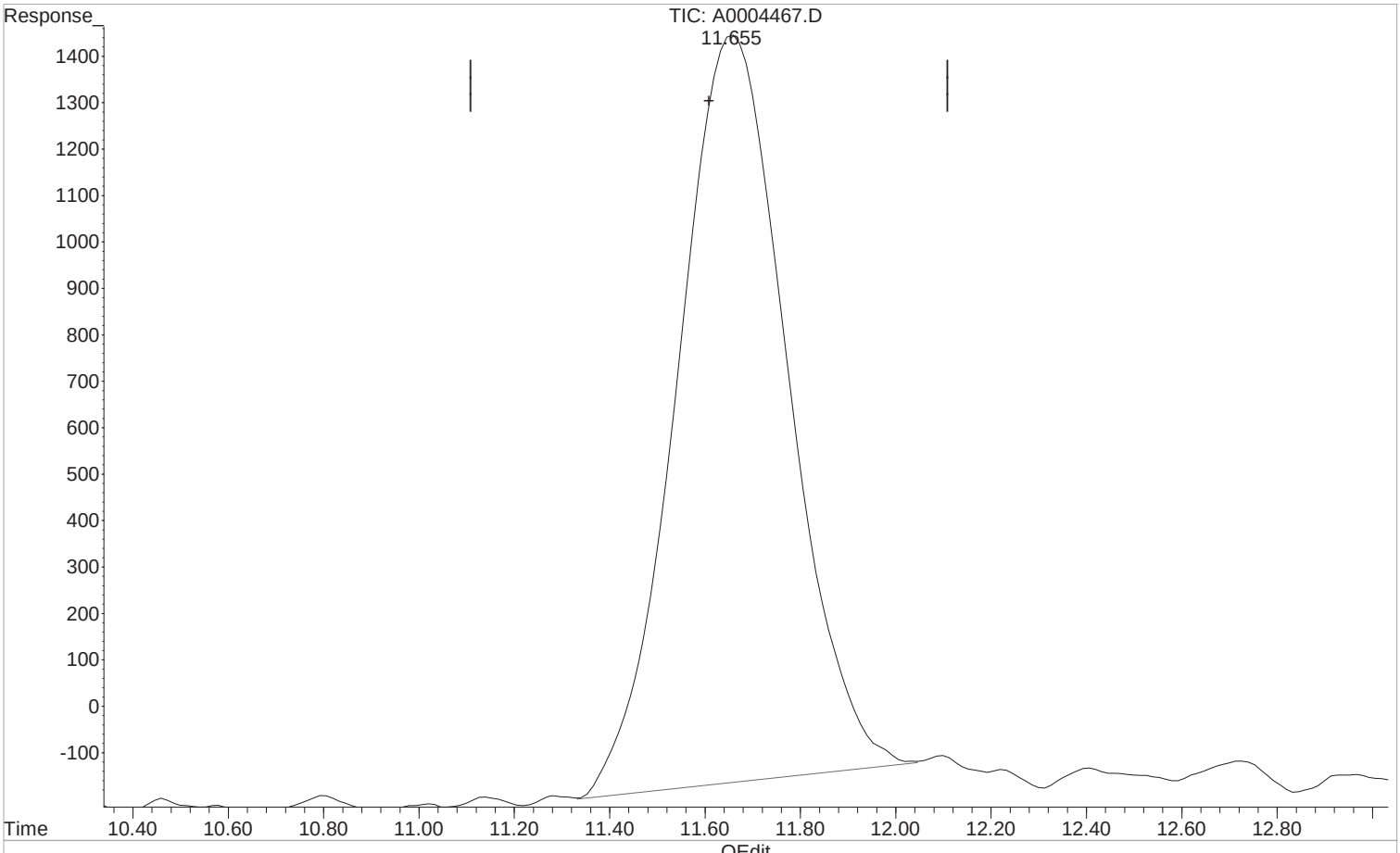
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

11.655min 4.717 ppm m

response 259122

Manual Integration:

After

Poor integration.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

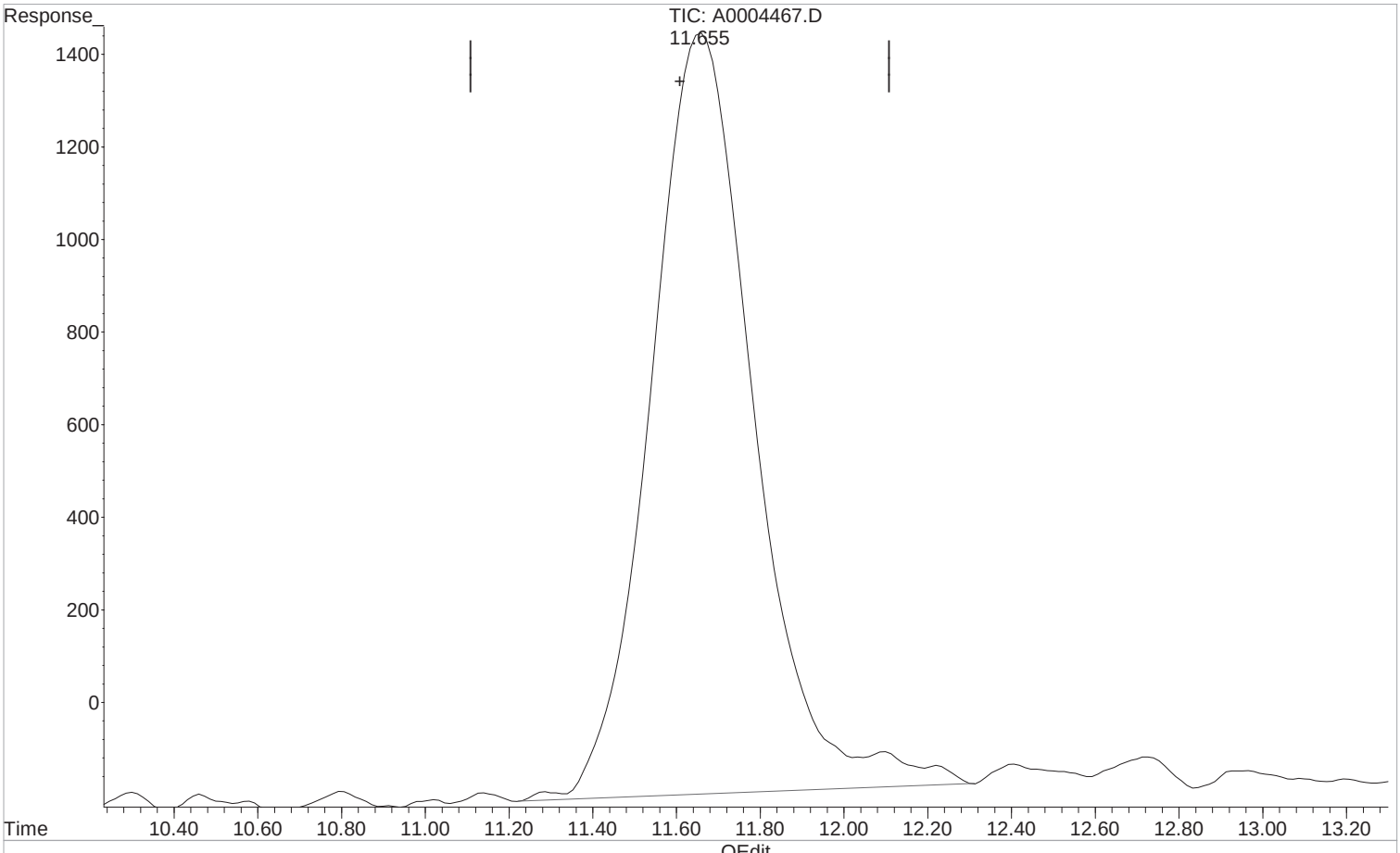
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

11.661min 5.138 ppm

response 282253

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

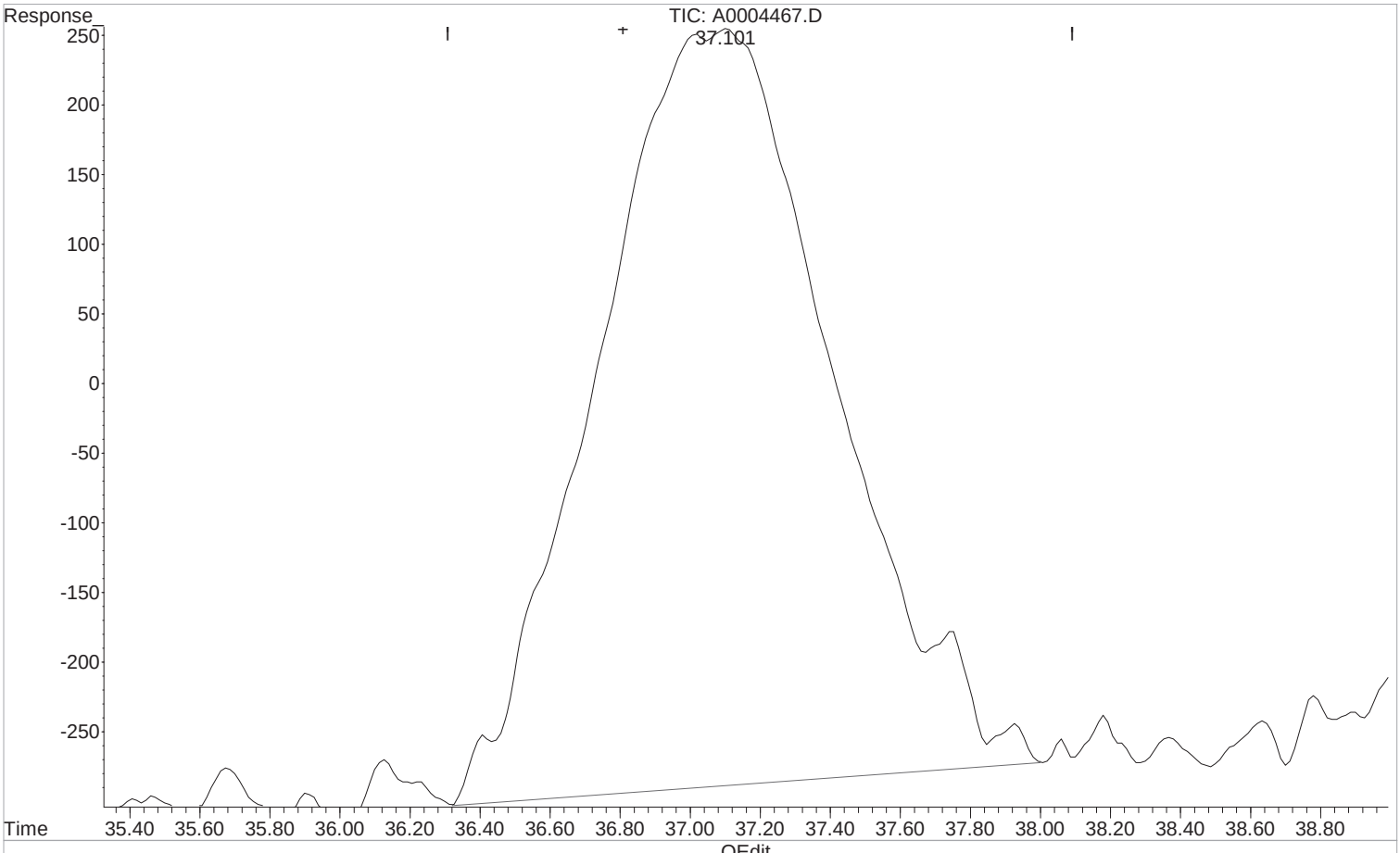
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

37.101min 4.834 ppm m

response 254345

Manual Integration:

After

Poor integration.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

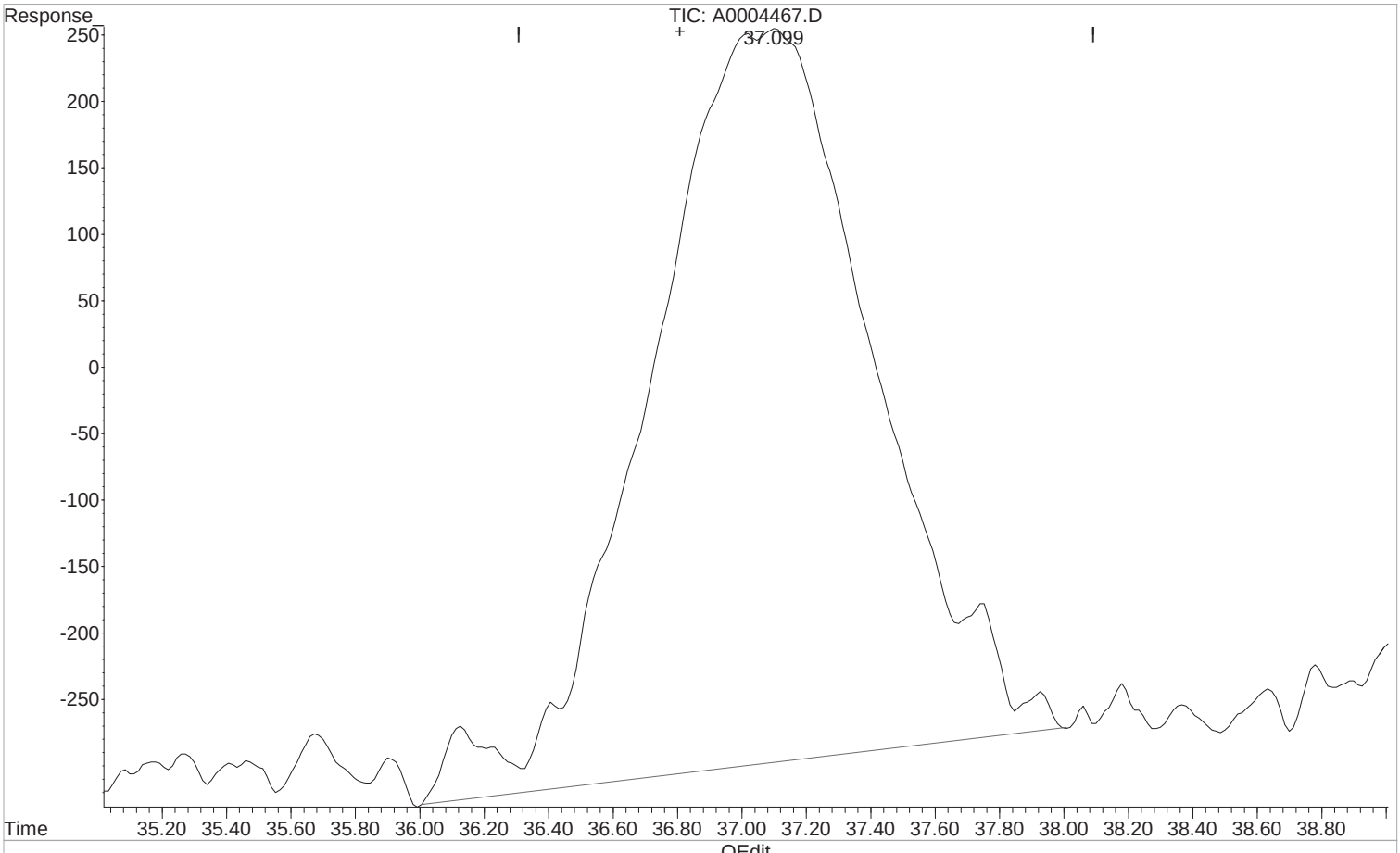
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

37.103min 5.106 ppm

response 268658

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : ~~30-Dec-2000, 02:48:14~~ 12-Mar-2020, 14:42
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	2.946	460497	5.032	ppm	m
2) T	Pyruvic acid	3.639	293242	0.503	ppm	m
3) T	Lactic Acid	4.126	275770	4.978	ppm	m
4) T	Acetic Acid	4.615	280536	5.028	ppm	m
5) T	Propionic Acid	11.655	259122	4.717	ppm	m
6) T	Butyric Acid	37.101	254345	4.834	ppm	m

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

RIGHT SOLUTIONS | RIGHT PARTNER

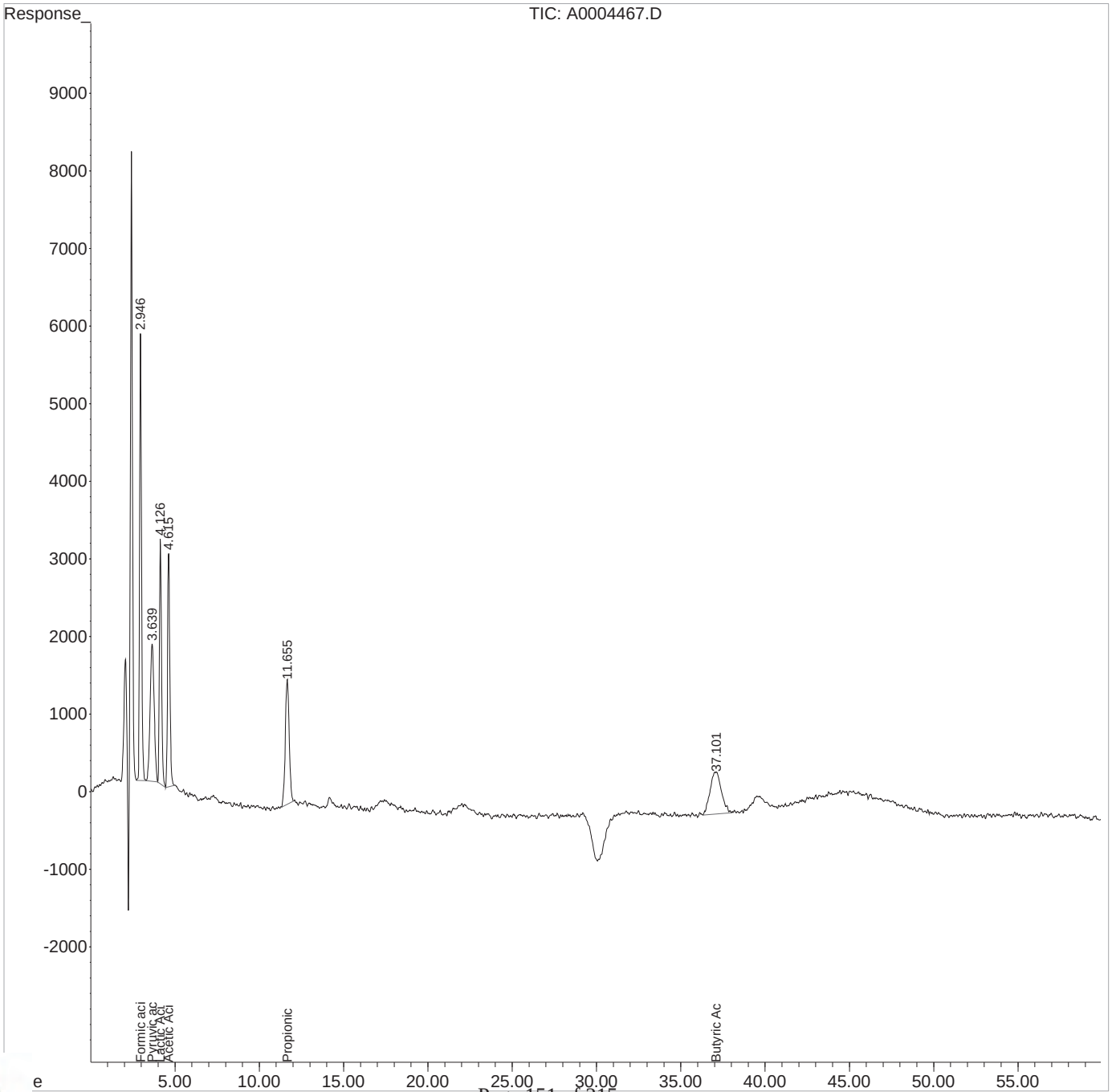
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



RIGHT SOLUTIONS | RIGHT PARTNER

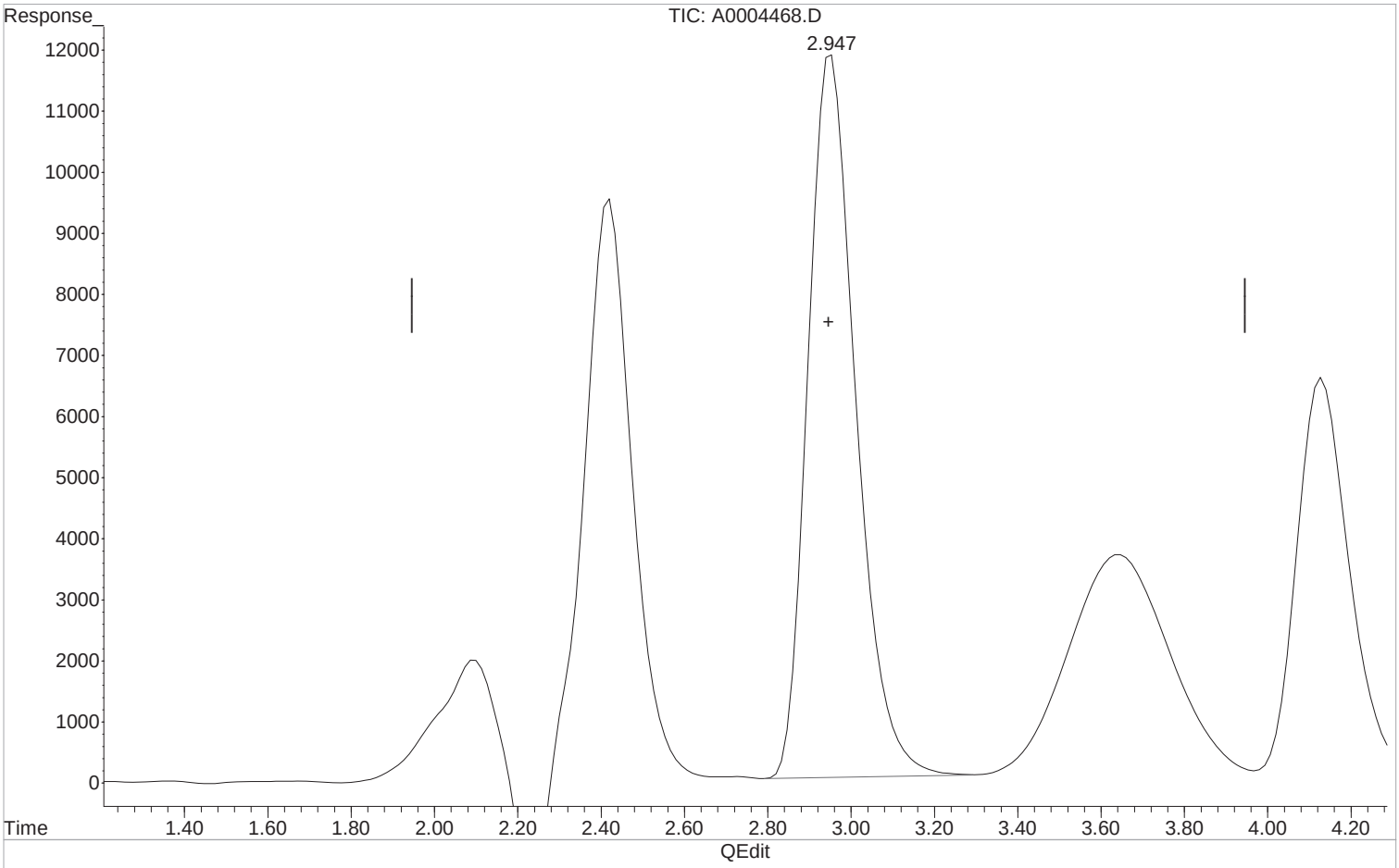
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004468.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 15:48:46
Operator : A.Felser
Sample : STD 4
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:22 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.947min 10.368 ppm m

response 948710

Manual Integration:

After

Poor integration.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

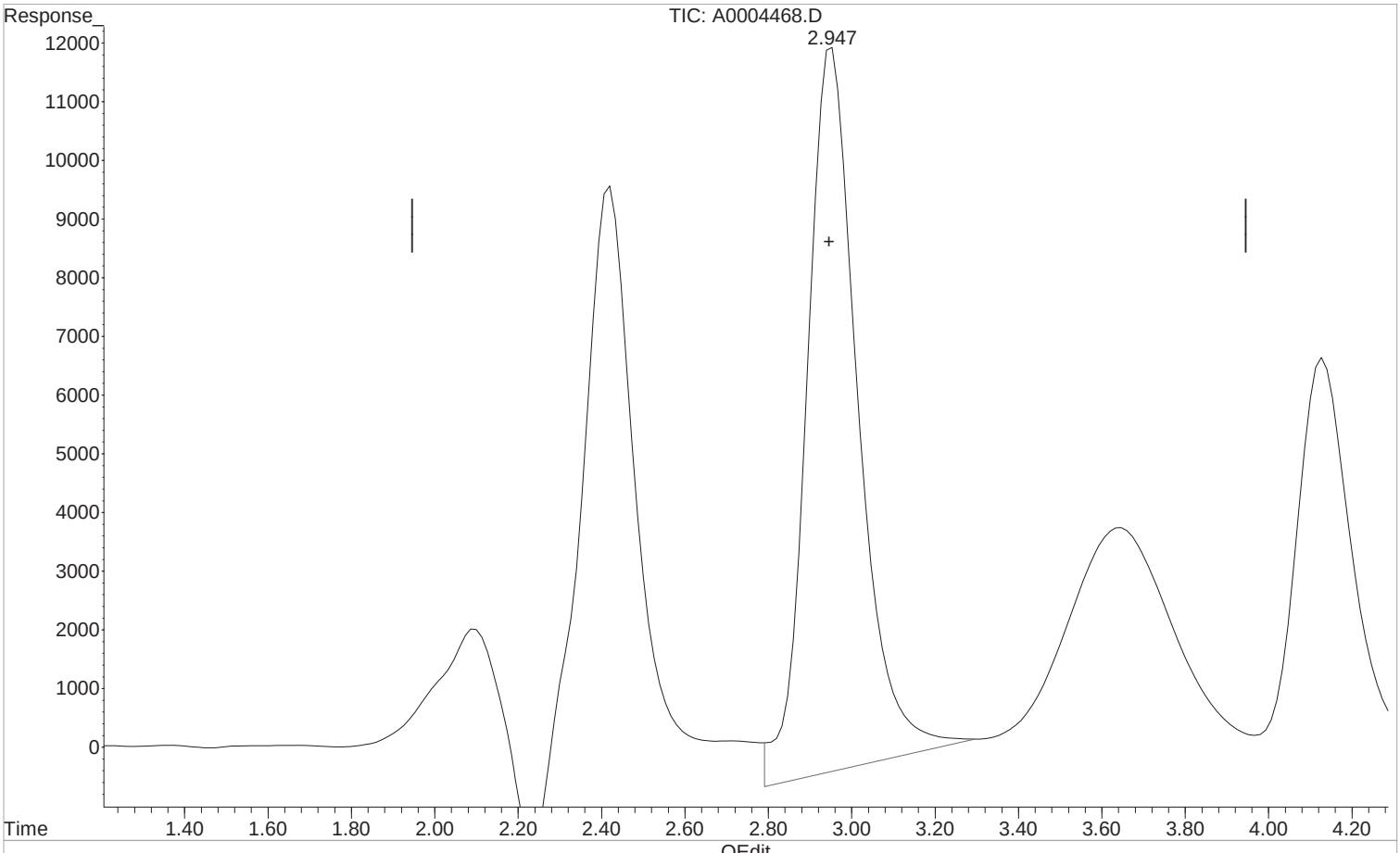
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004468.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 15:48:46
Operator : A.Felser
Sample : STD 4
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:22 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.954min 11.593 ppm

response 1060848

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

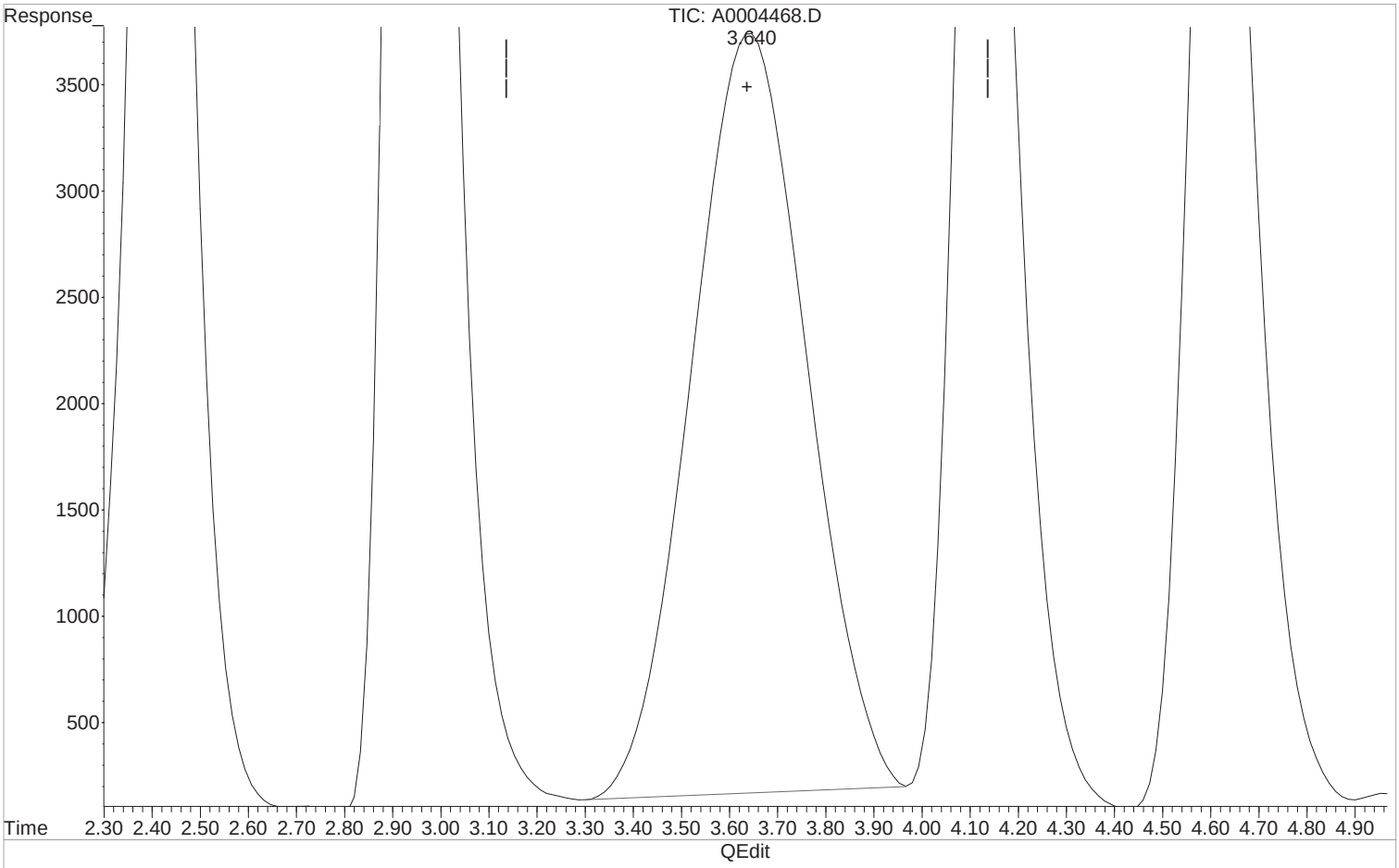
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004468.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 15:48:46
Operator : A.Felser
Sample : STD 4
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:22 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.640min 1.020 ppm m

response 594304

Manual Integration:

After

Poor integration.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

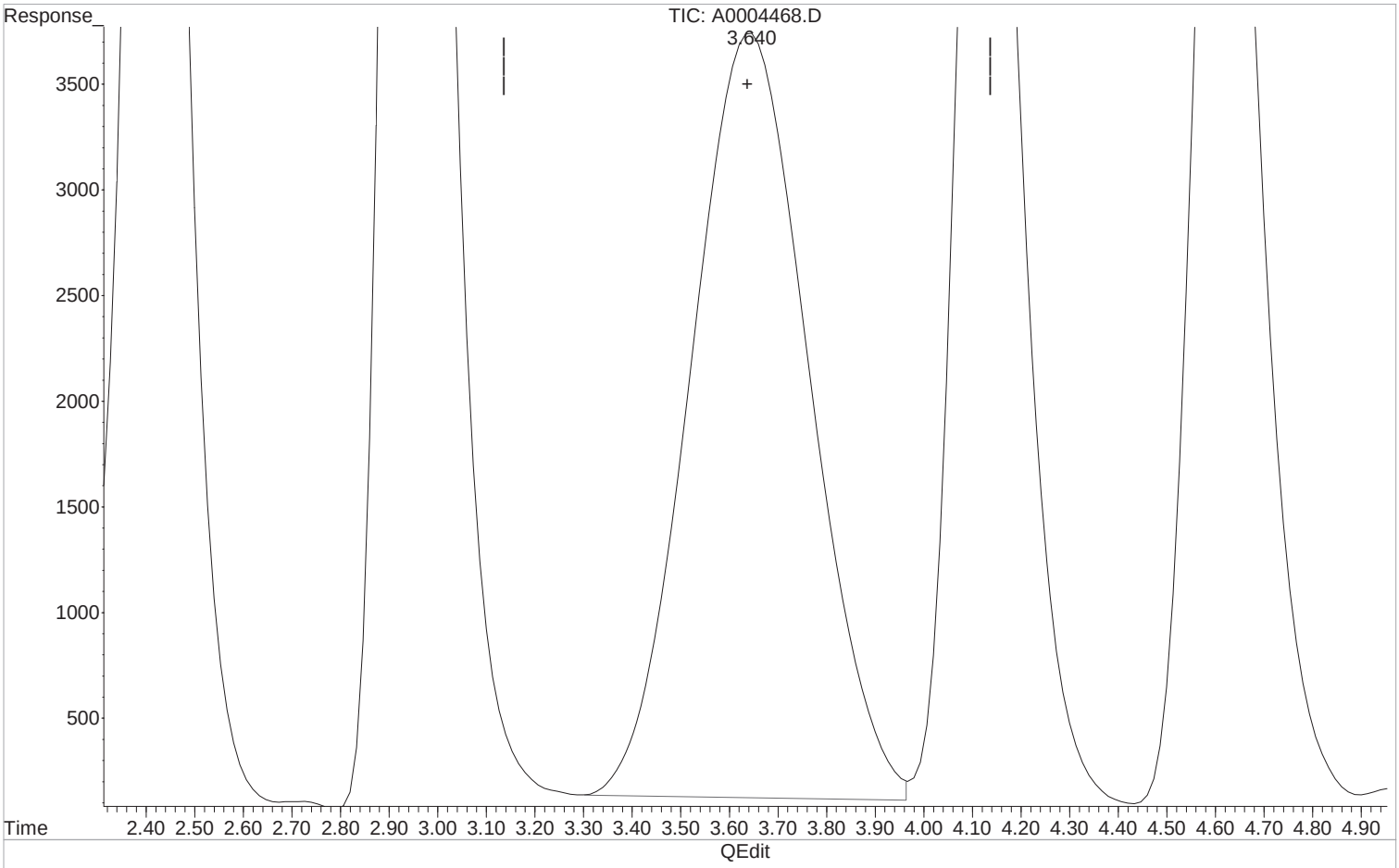
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004468.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 15:48:46
Operator : A.Felser
Sample : STD 4
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:22 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.646min 1.048 ppm

response 611122

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

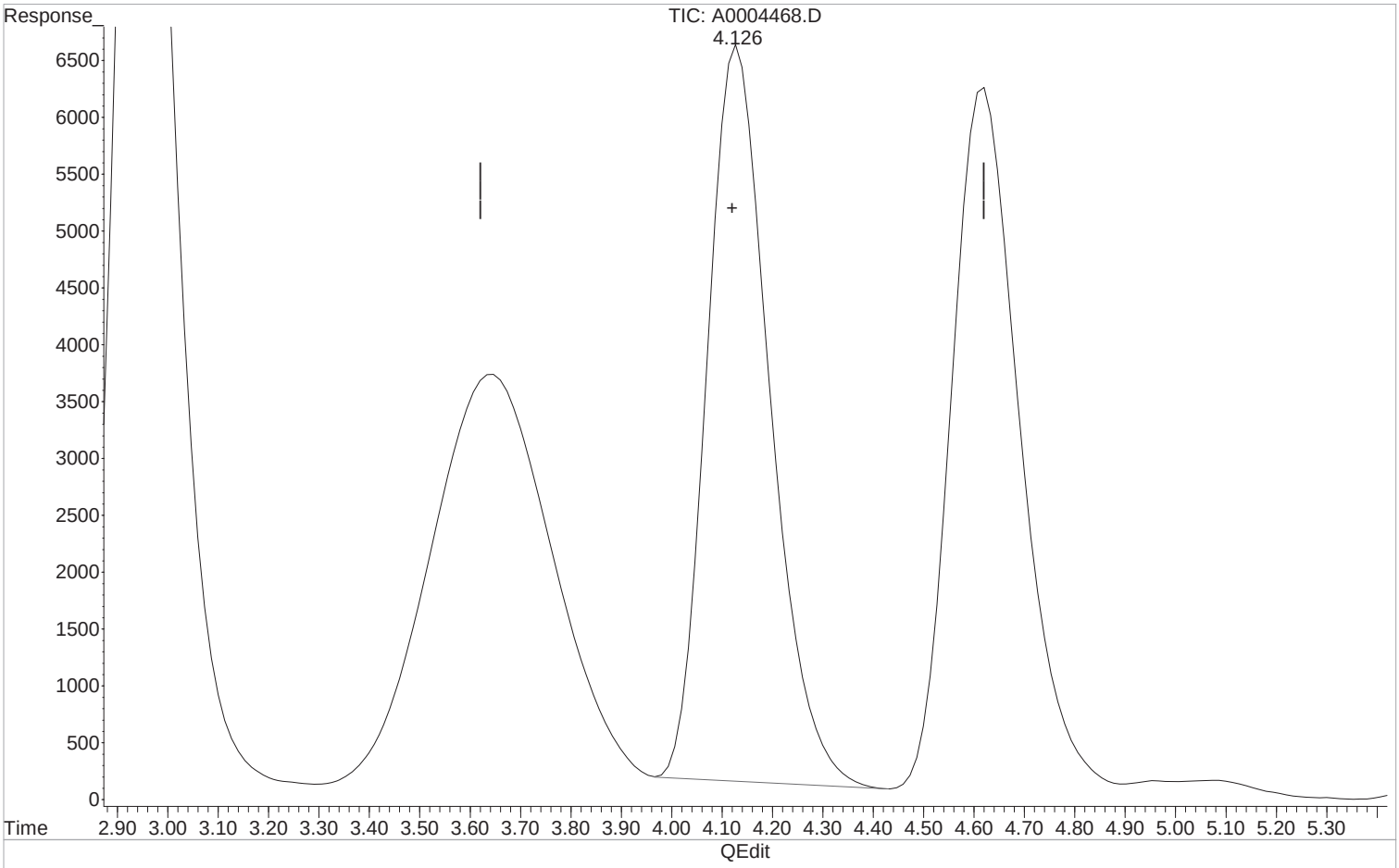
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004468.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 15:48:46
Operator : A.Felser
Sample : STD 4
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:22 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.126min 10.183 ppm m

response 564128

Manual Integration:

After

Poor integration.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

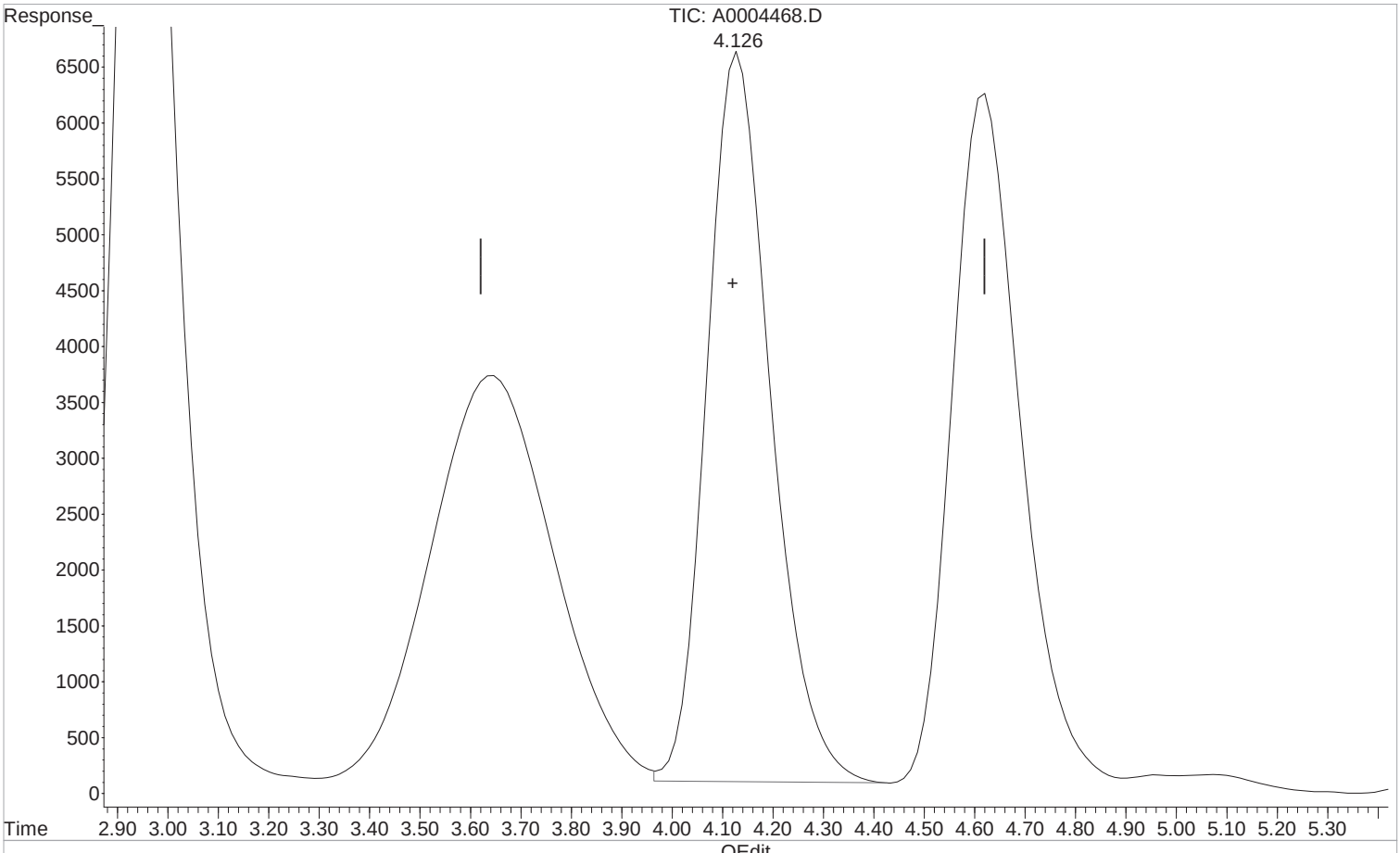
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004468.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 15:48:46
Operator : A.Felser
Sample : STD 4
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:22 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.132min 10.406 ppm

response 576451

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

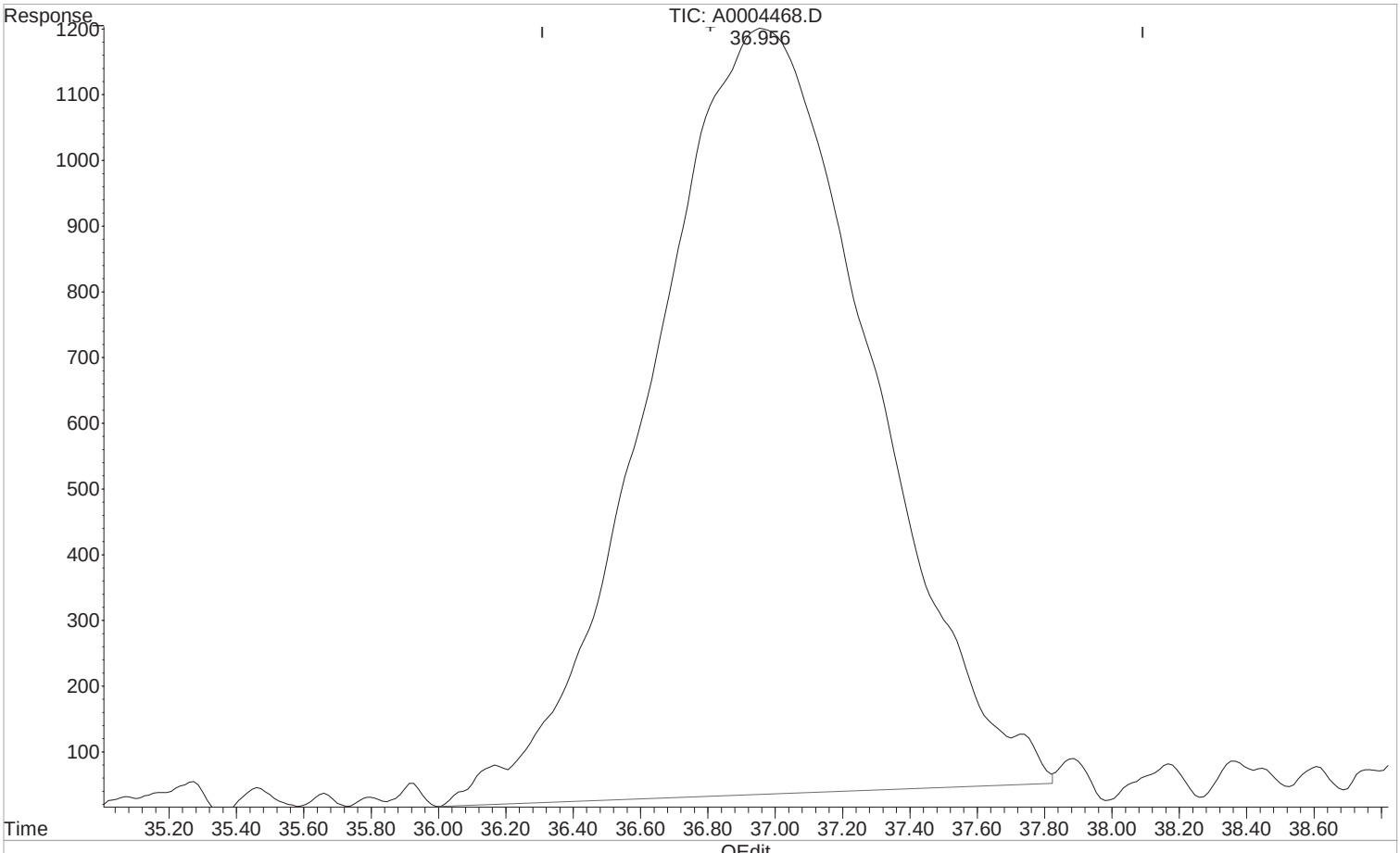
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004468.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 15:48:46
Operator : A.Felser
Sample : STD 4
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:22 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

36.956min 10.111 ppm m

response 532016

Manual Integration:

After

Poor integration.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

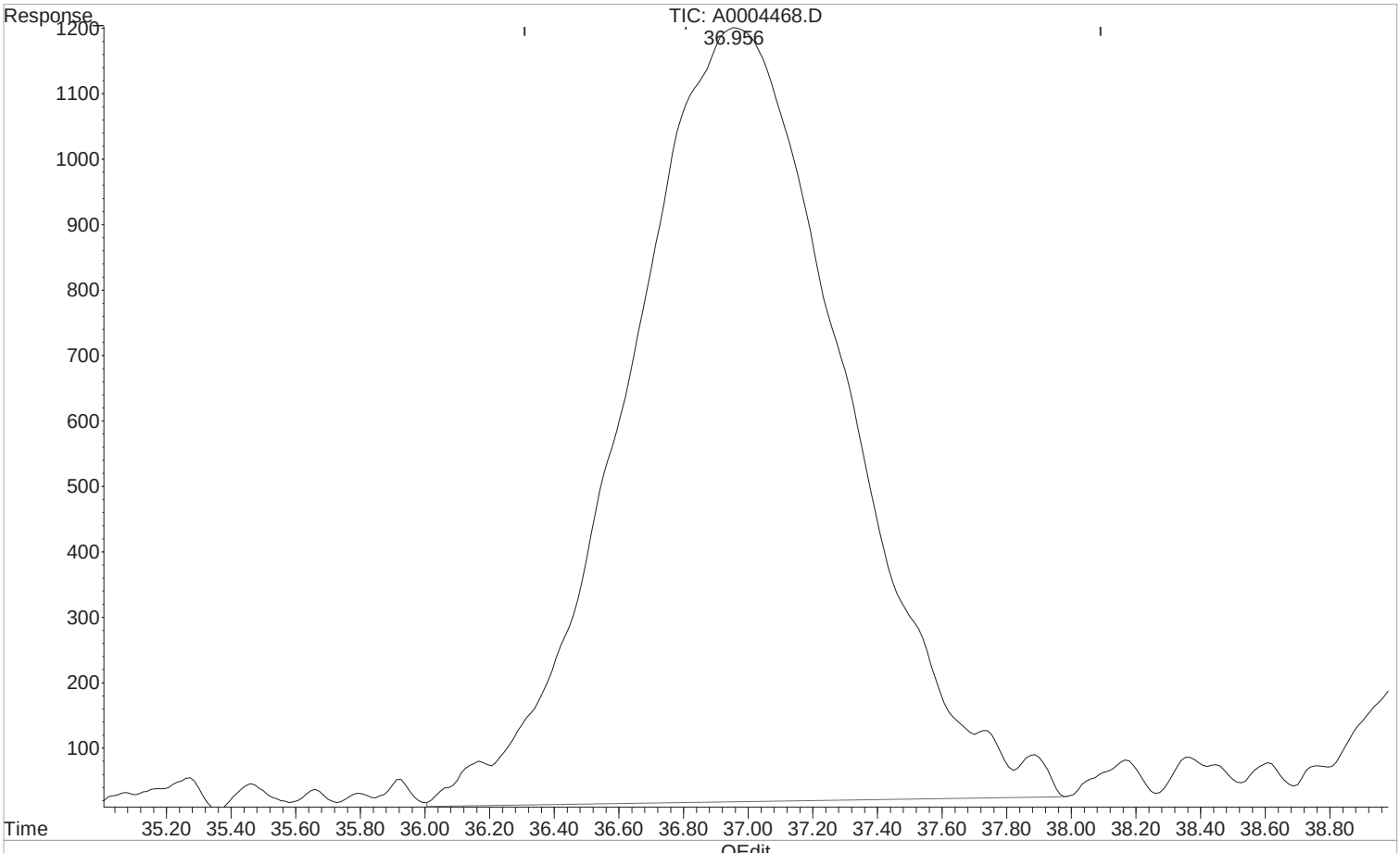
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004468.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 15:48:46
Operator : A.Felser
Sample : STD 4
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:22 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

36.967min 10.515 ppm

response 553241

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004468.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 15:48:46
Operator : A.Felser
Sample : STD 4
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:22 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	2.947	948710	10.368	ppm	m
2) T	Pyruvic acid	3.640	594304	1.020	ppm	m
3) T	Lactic Acid	4.126	564128	10.183	ppm	m
4) T	Acetic Acid	4.622	573121	10.271	ppm	
5) T	Propionic Acid	11.654	559828	10.190	ppm	
6) T	Butyric Acid	36.956	532016	10.111	ppm	m

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

RIGHT SOLUTIONS | RIGHT PARTNER

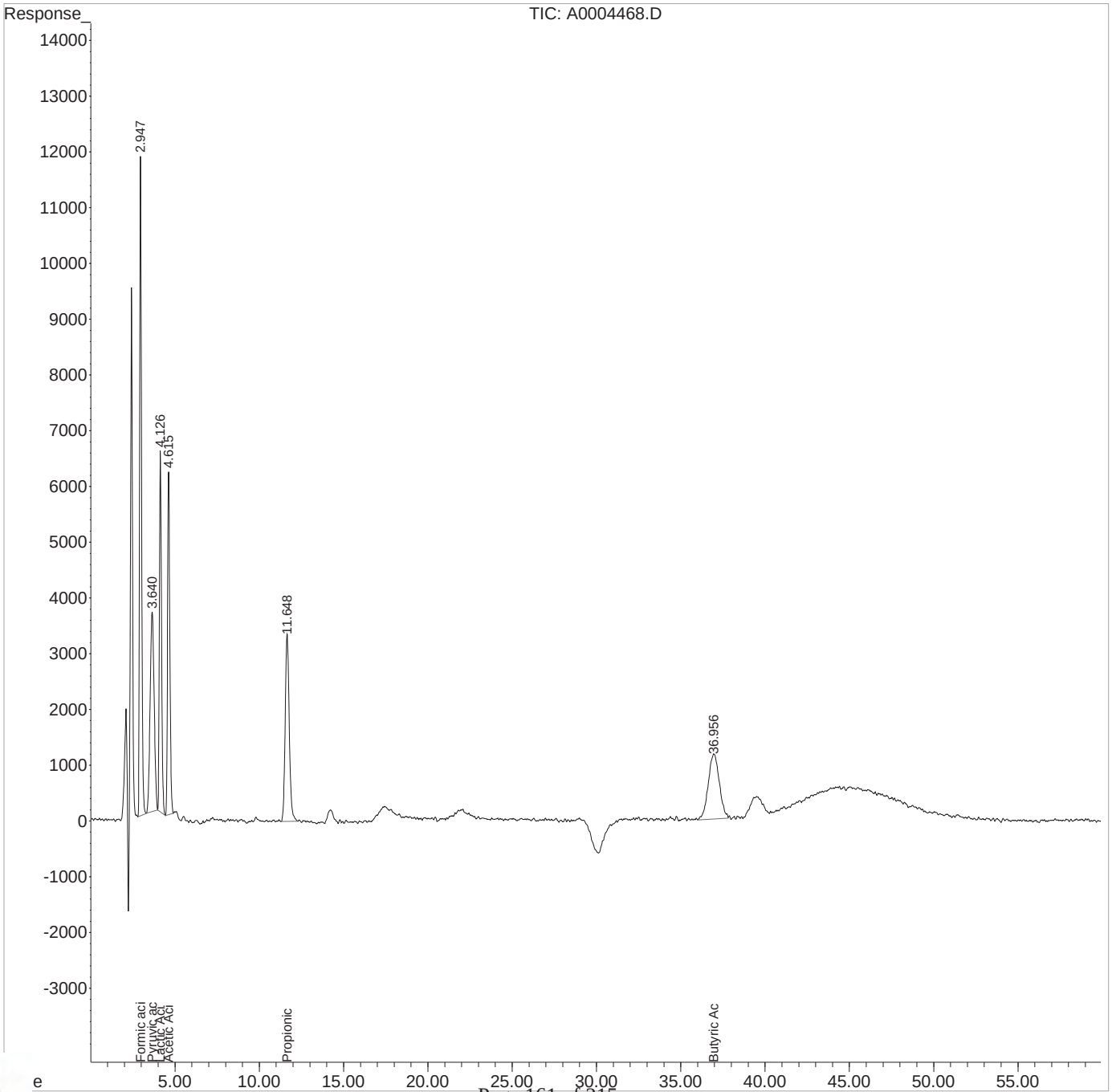
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004468.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 15:48:46
Operator : A.Felser
Sample : STD 4
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:22 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



RIGHT SOLUTIONS | RIGHT PARTNER

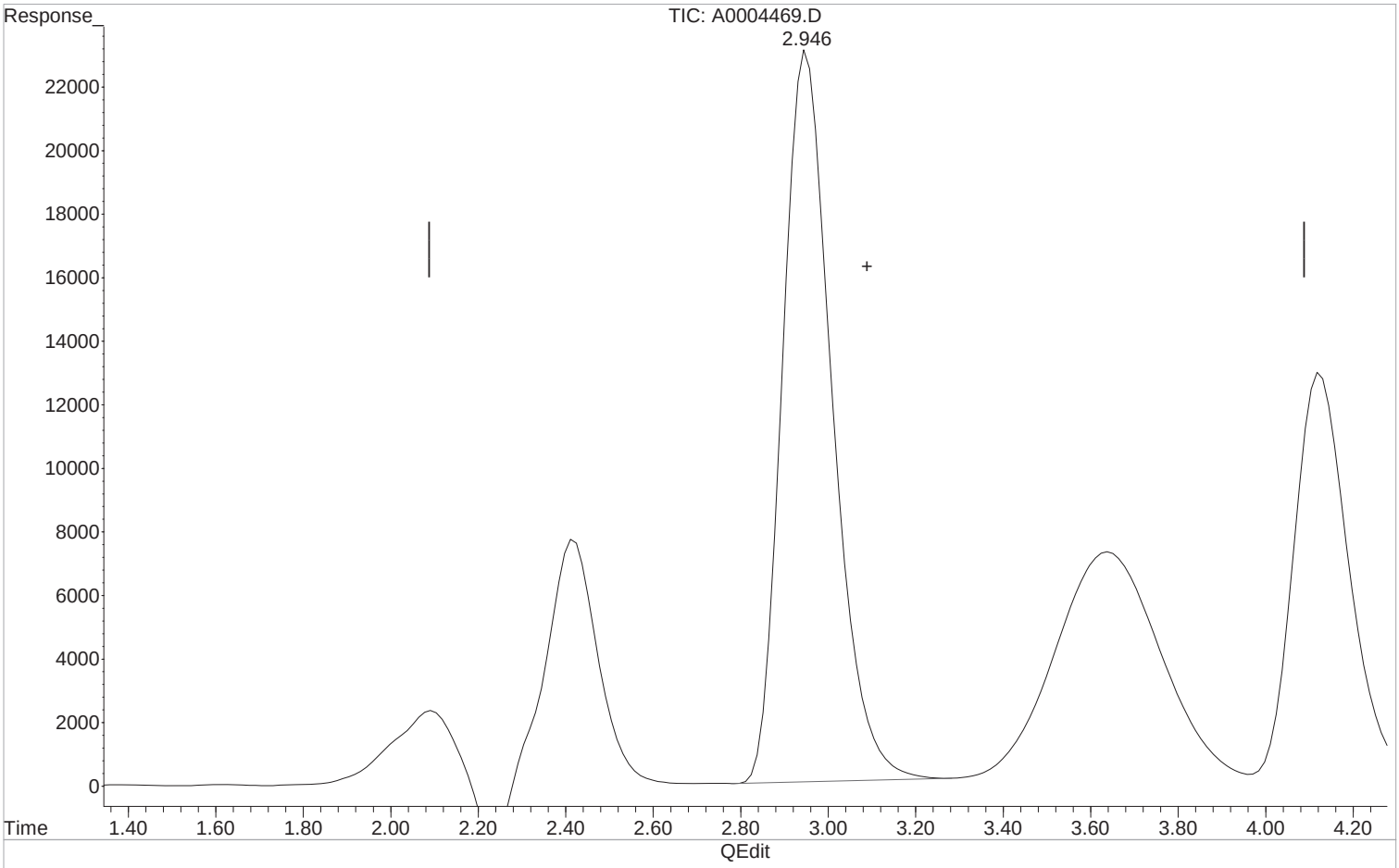
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.946min 19.154 ppm m

response 1830133

Manual Integration:

After

Poor integration.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

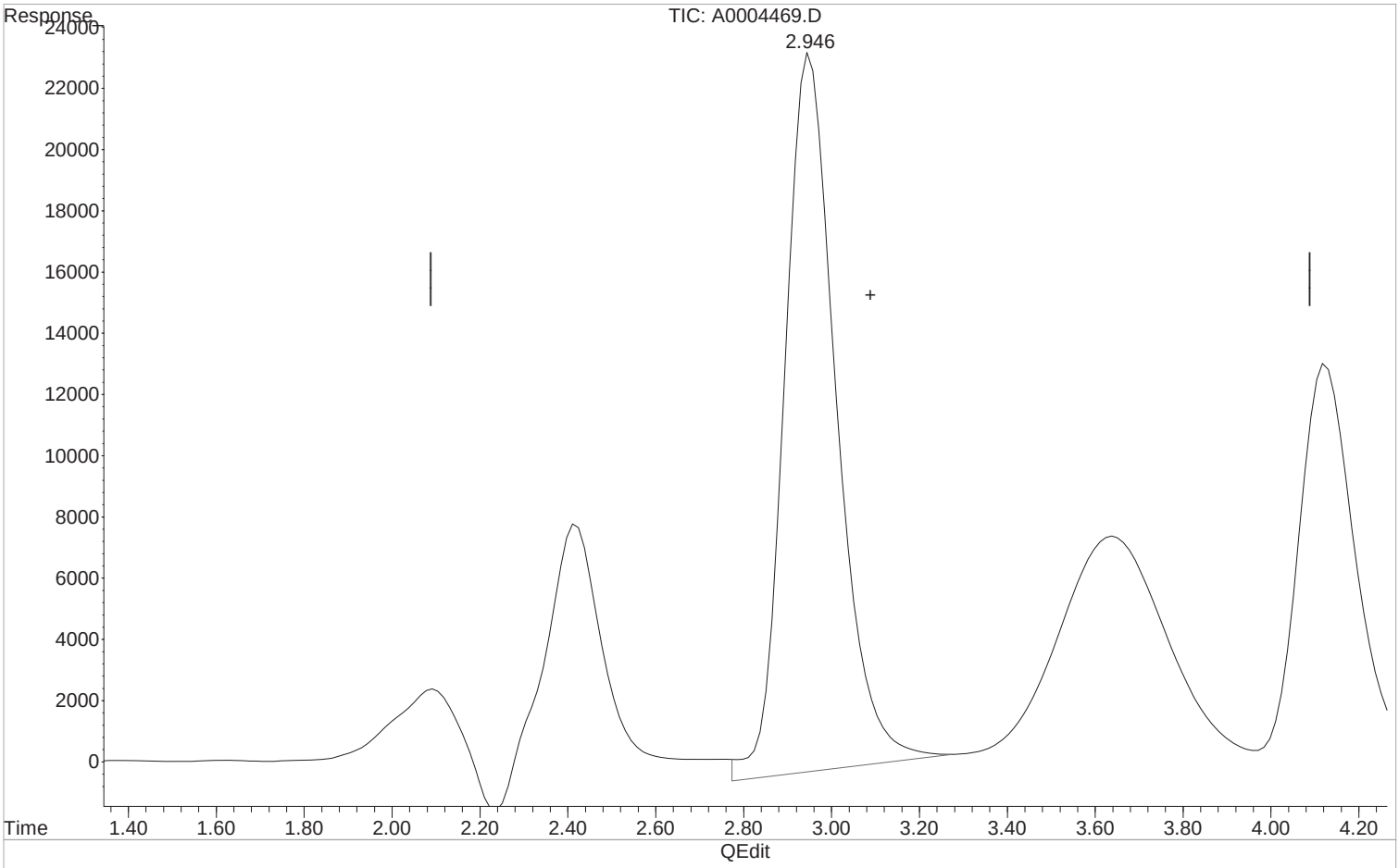
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.953min 20.256 ppm

response 1935353

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

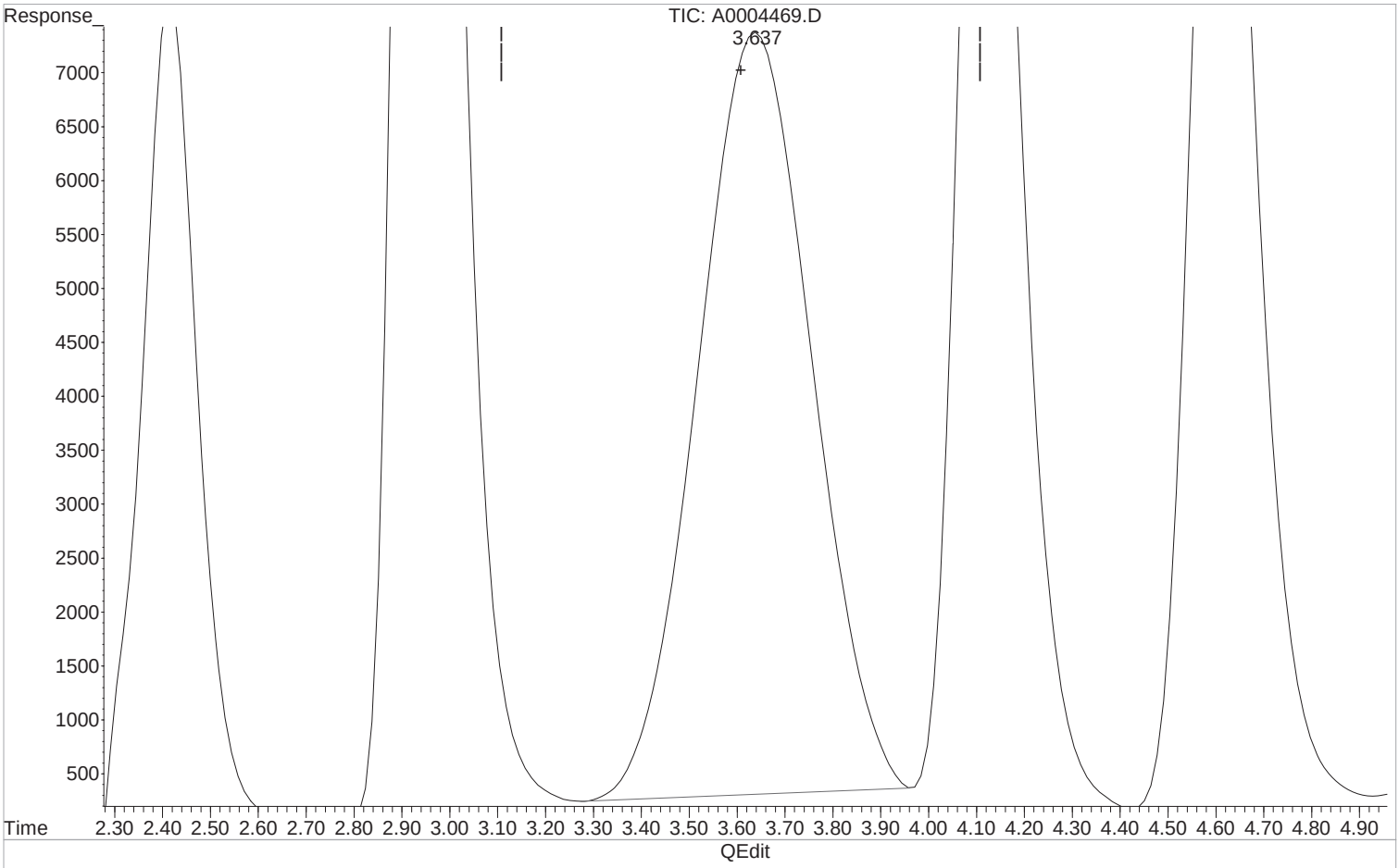
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.637min 2.190 ppm m

response 1165741

Manual Integration:

After

Poor integration.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

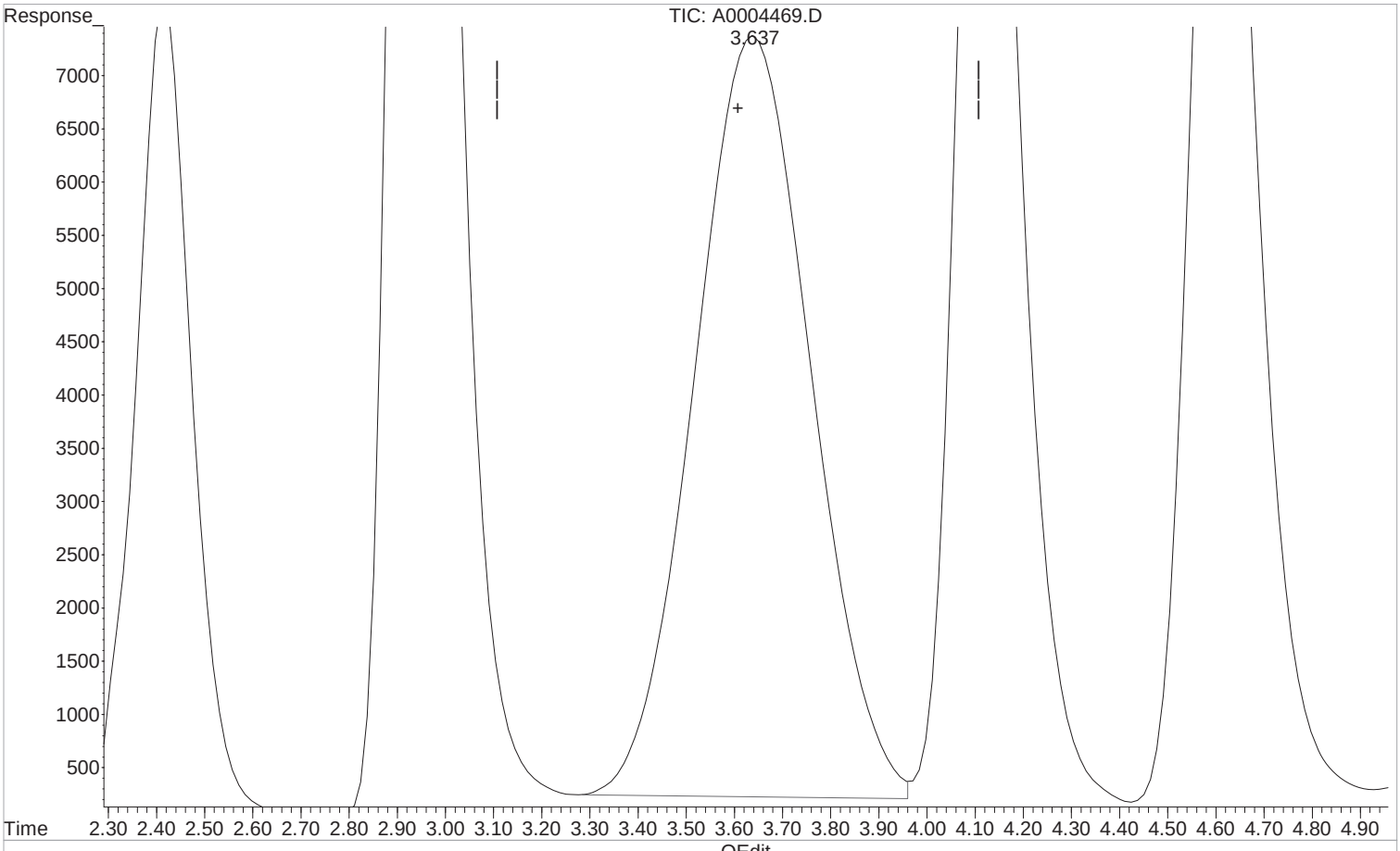
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.642min 2.250 ppm

response 1197650

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

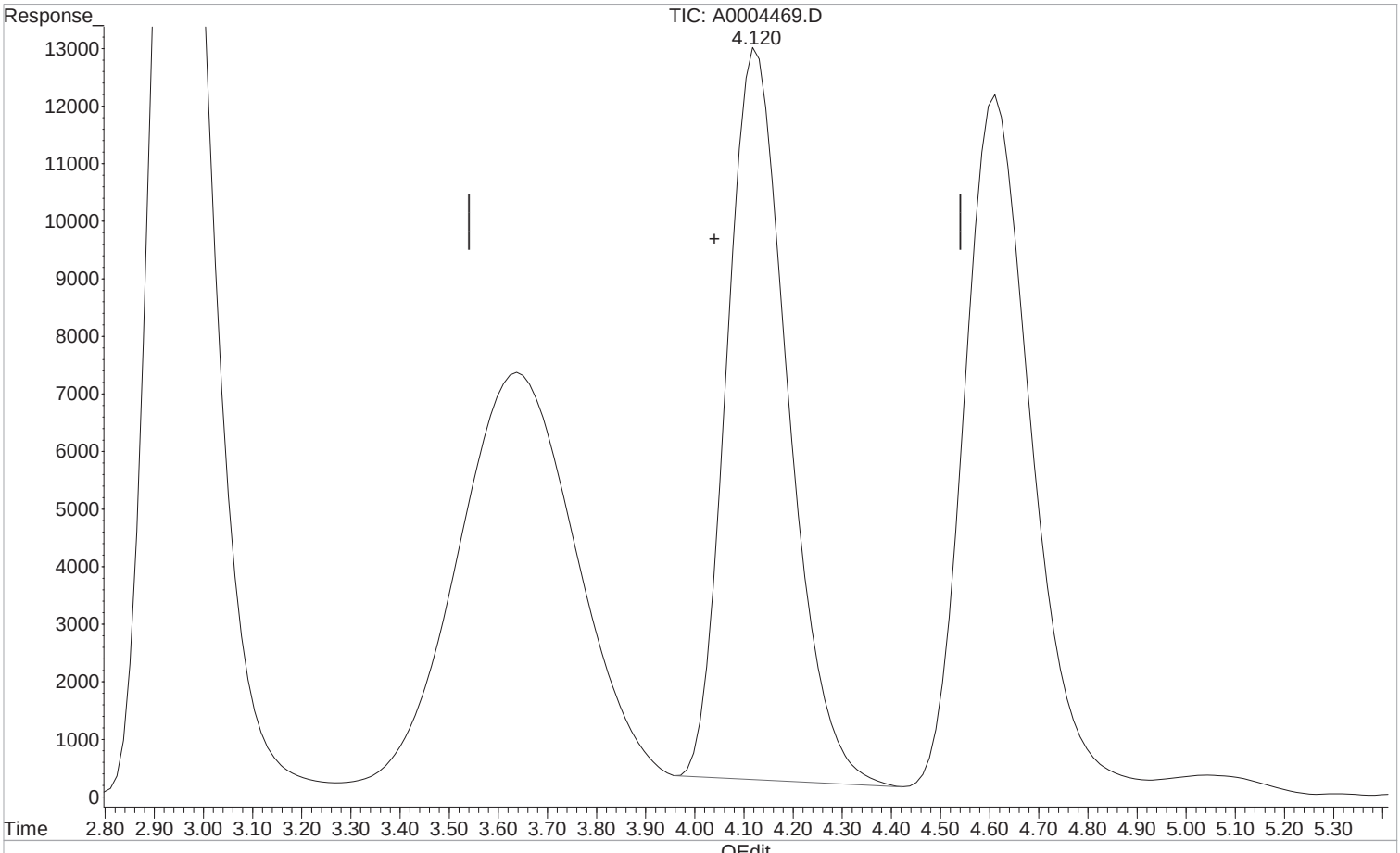
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.120min 21.482 ppm m

response 1107931

Manual Integration:

After

Poor integration.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

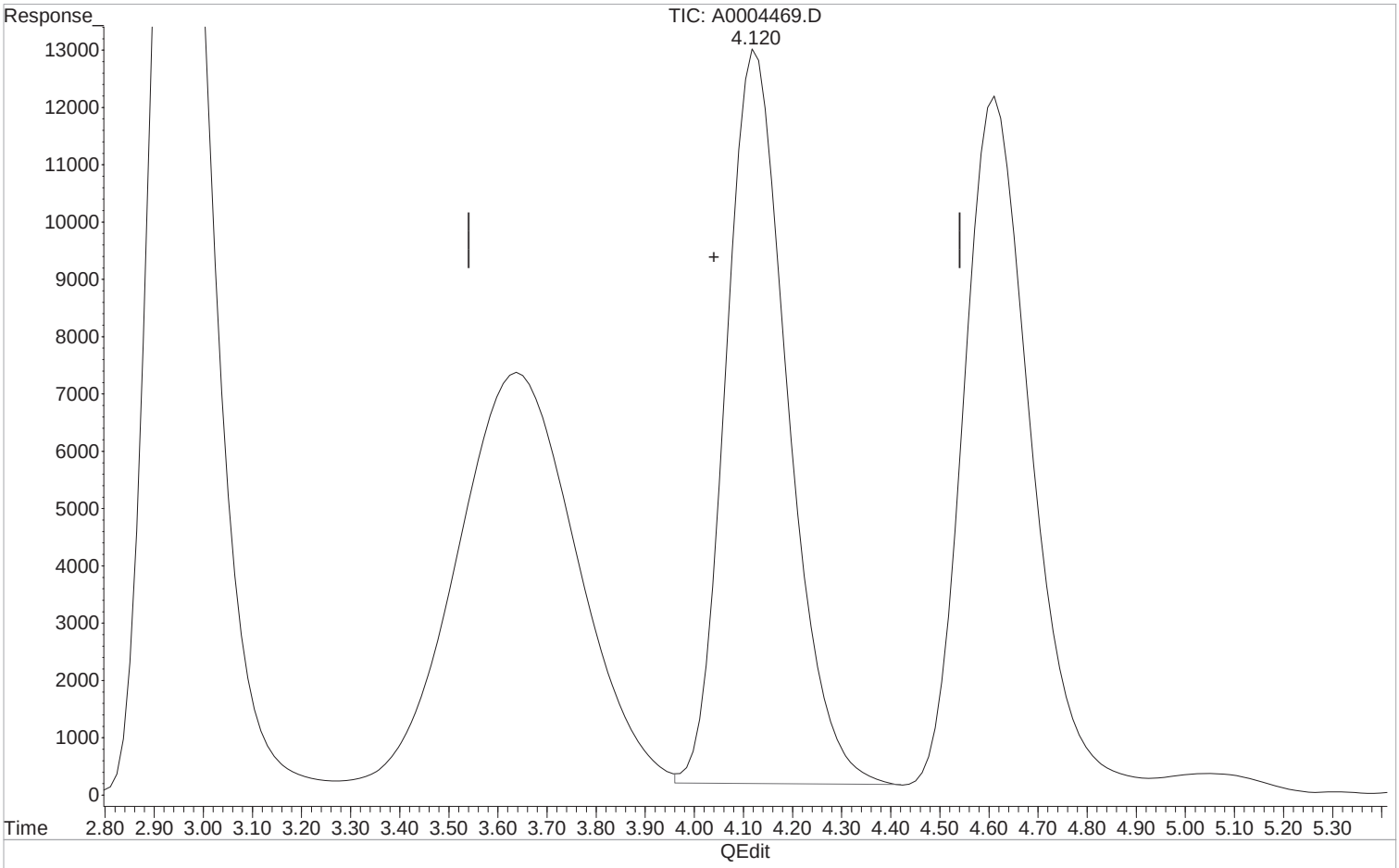
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.127min 21.898 ppm

response 1129421

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

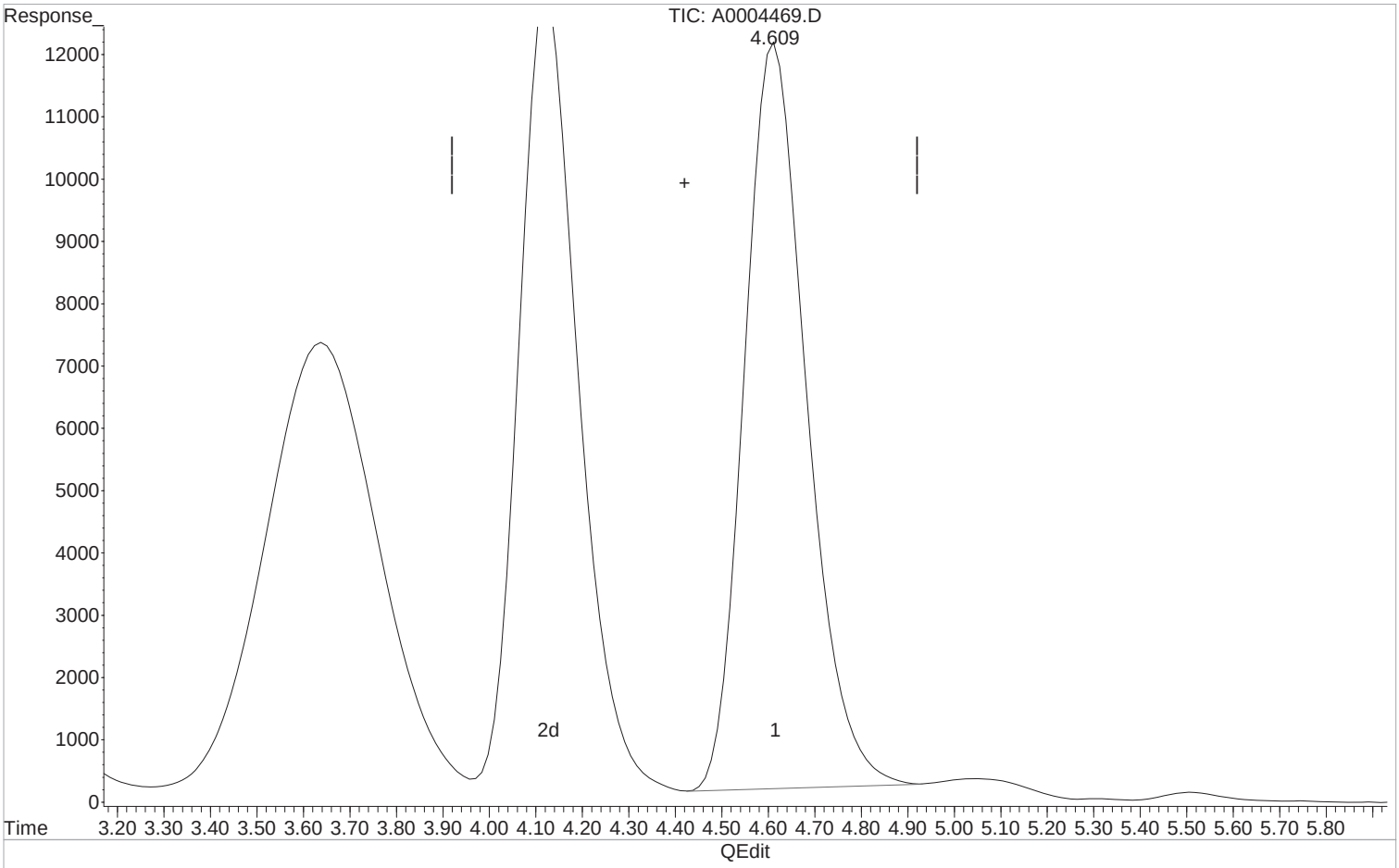
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.609min 19.276 ppm m

response 1115994

Manual Integration:

After

Poor integration.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

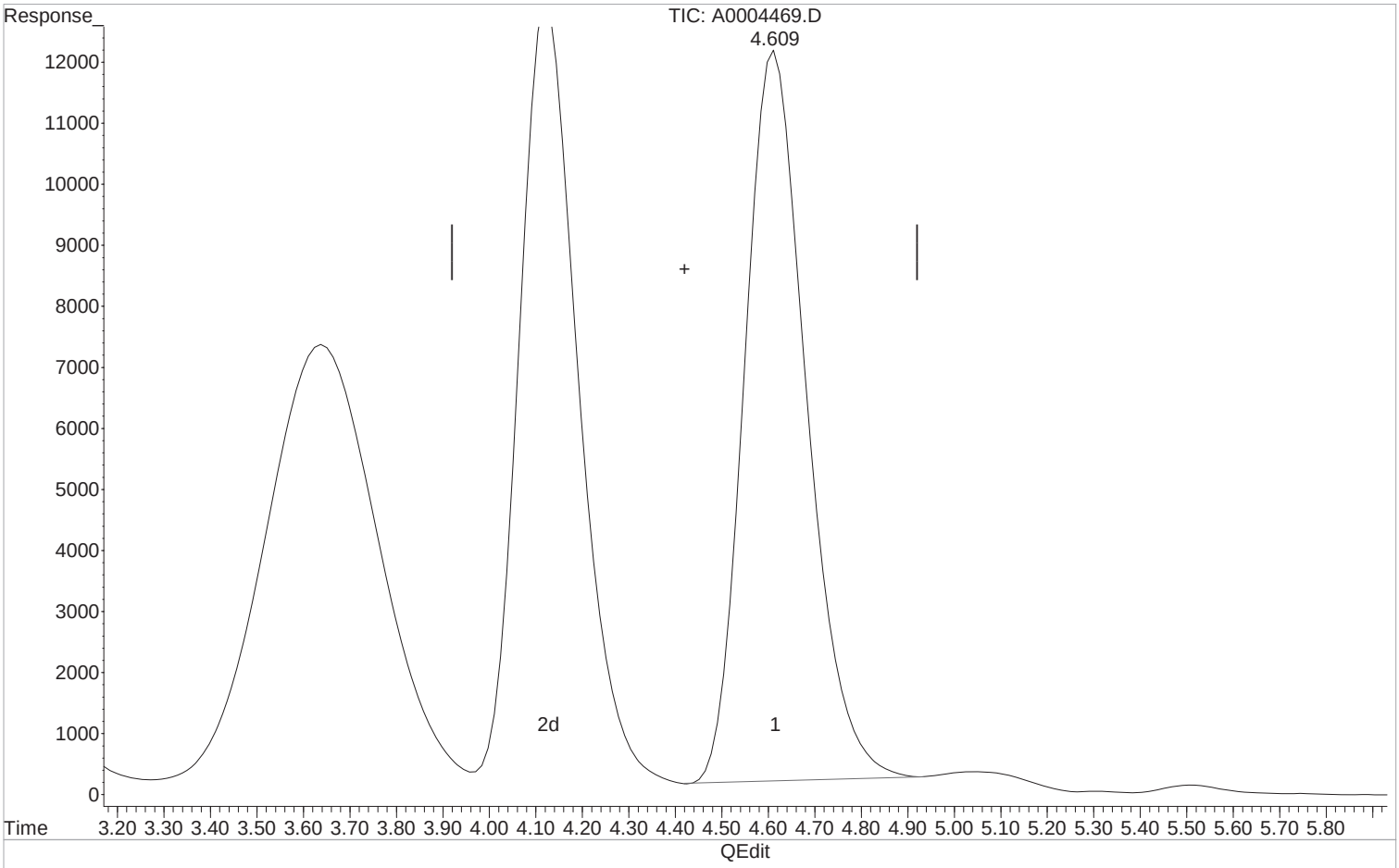
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.615min 19.234 ppm

response 1113595

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

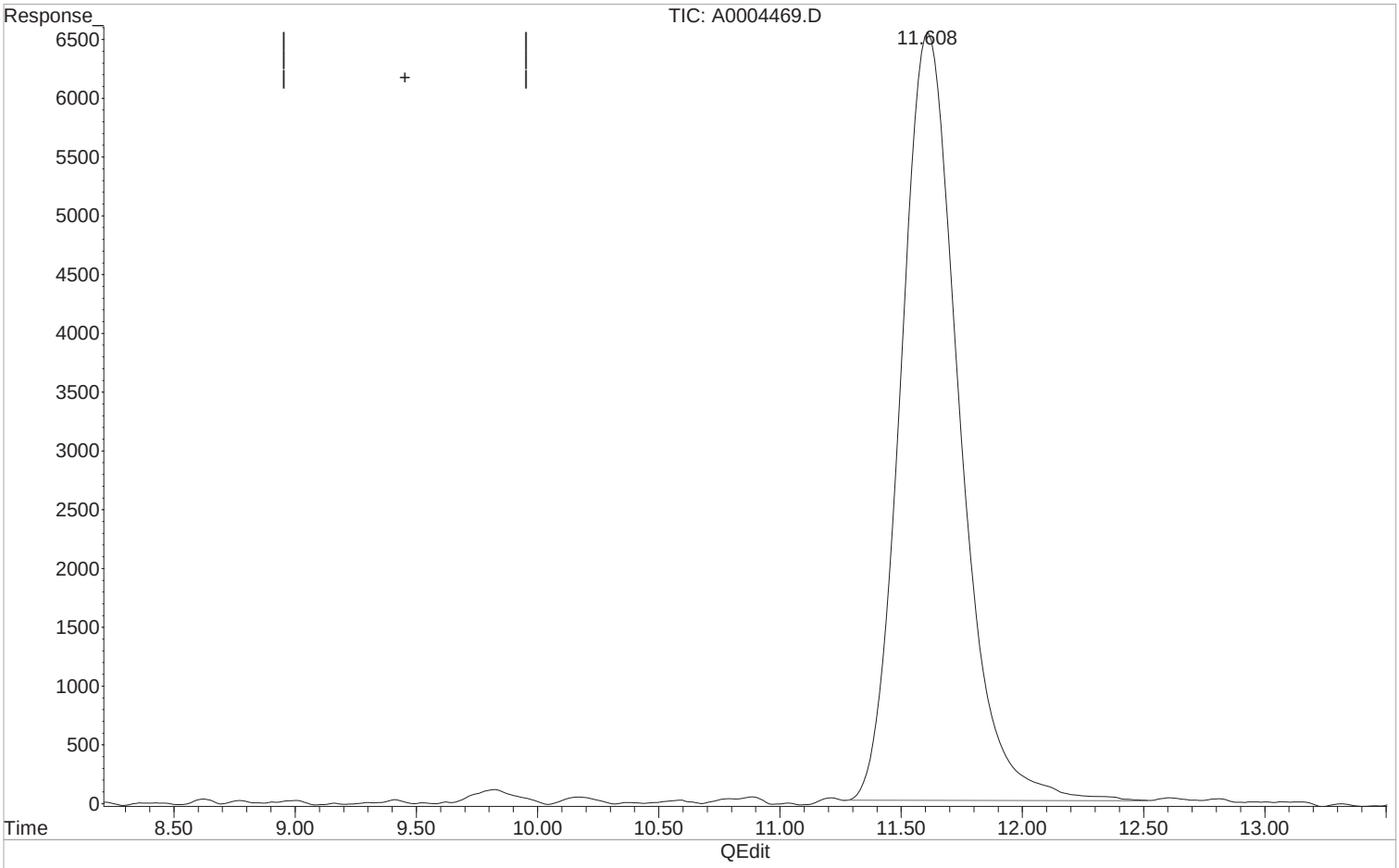
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

11.608min 19.595 ppm m

response 1098741

Manual Integration:

After

Peak not found.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

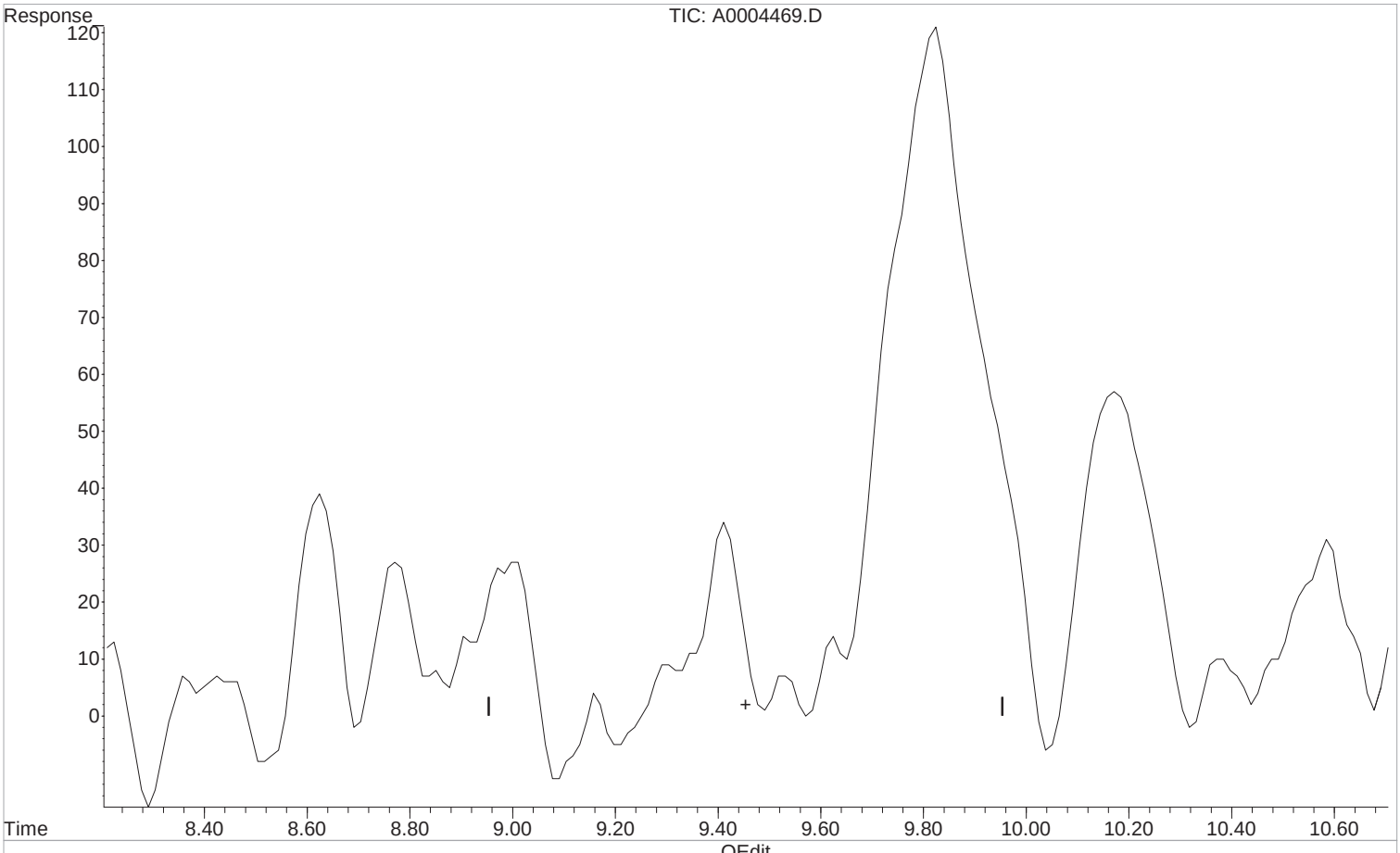
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

9.454min 0.000 ppm

response 0

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

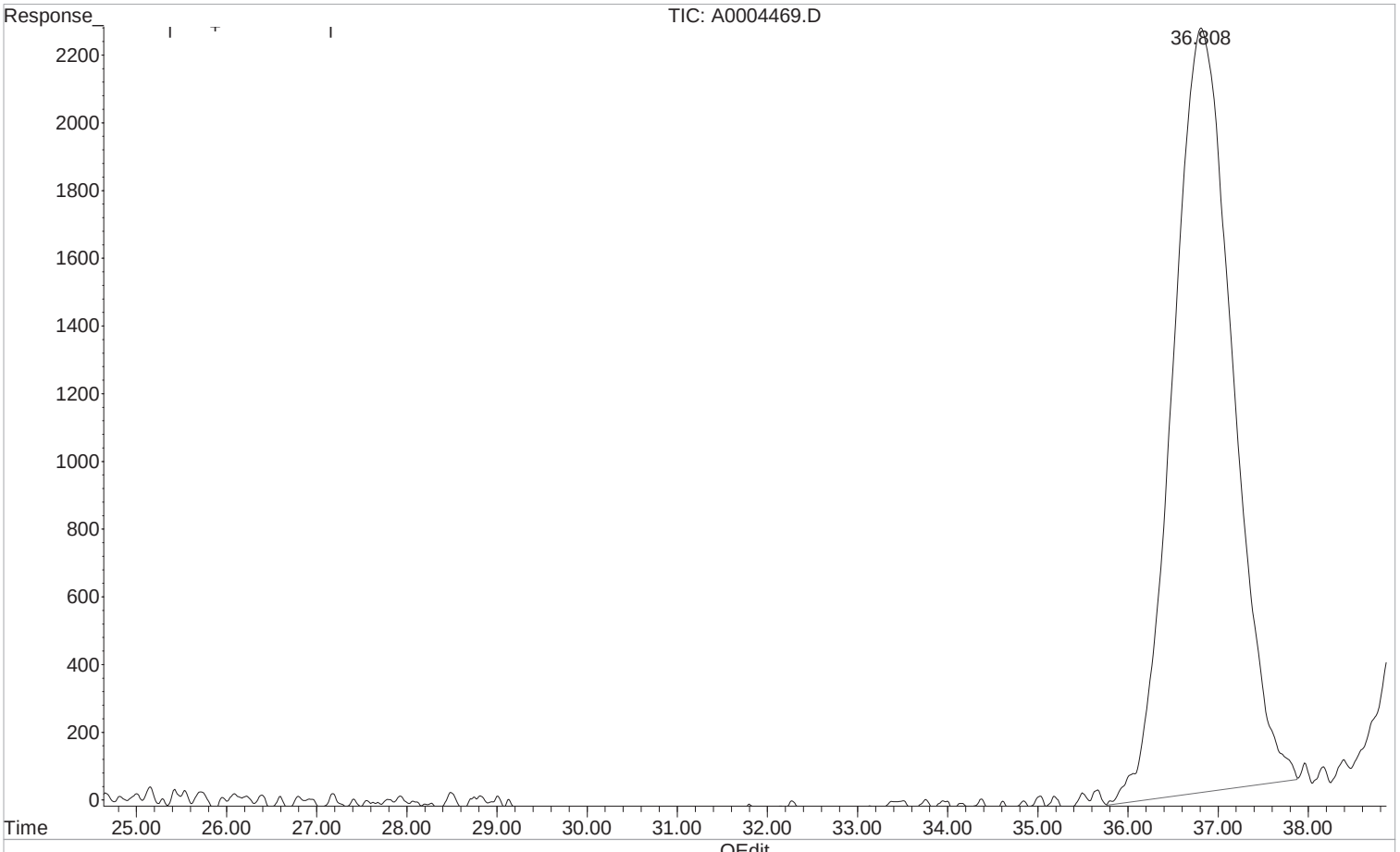
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

36.808min 19.370 ppm m

response 1052332

Manual Integration:

After

Peak not found.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

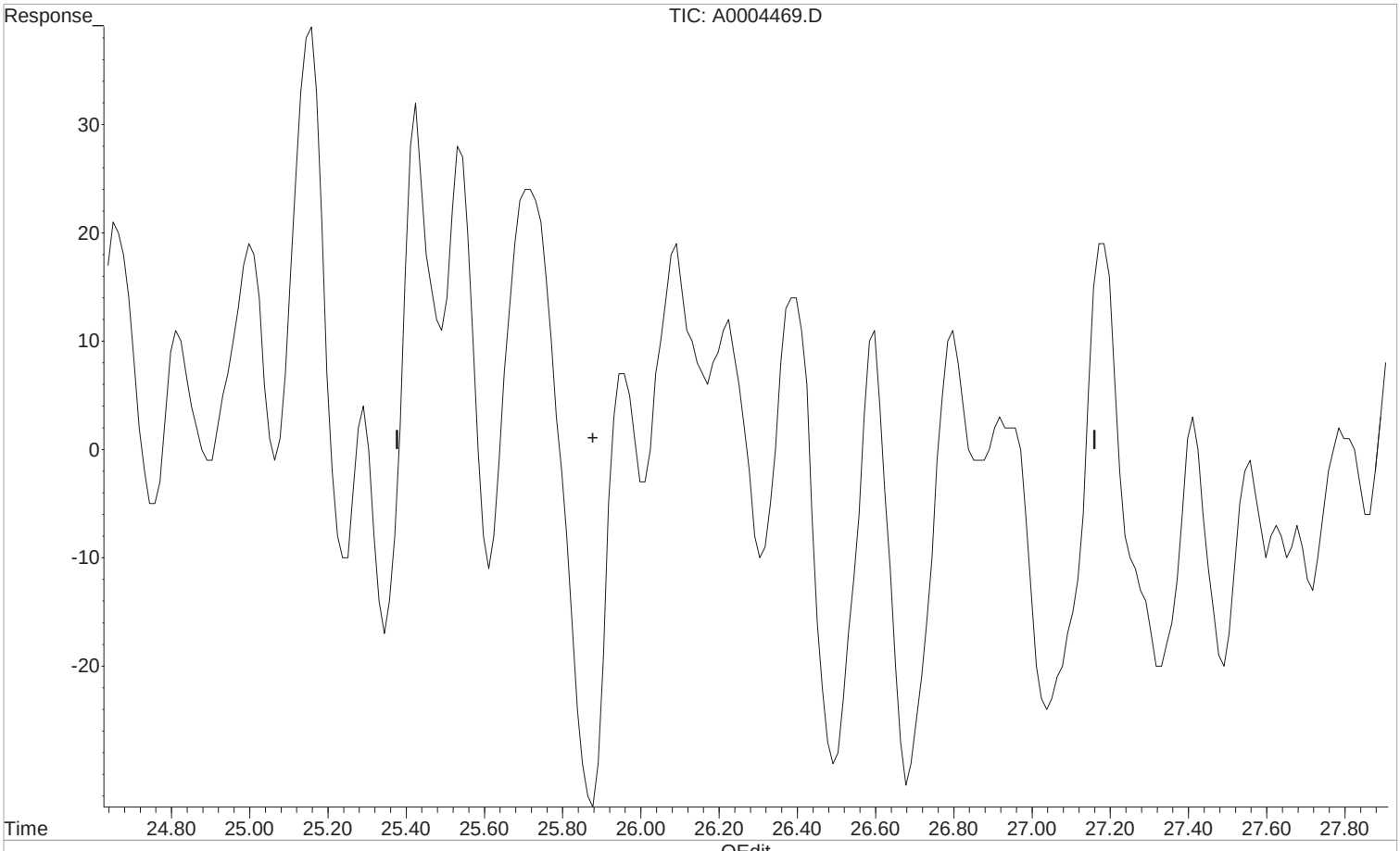
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

25.877min 0.000 ppm

response 0

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : ~~30-Dec-2000, 17:48:02~~ 12-Mar-2020, 16:48
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	2.946	1830133	19.154	ppm	m
2) T	Pyruvic acid	3.637	1165741	2.190	ppm	m
3) T	Lactic Acid	4.120	1107931	21.482	ppm	m
4) T	Acetic Acid	4.609	1115994	19.276	ppm	m
5) T	Propionic Acid	11.608f	1098741	19.595	ppm	m
6) T	Butyric Acid	36.808f	1052332	19.370	ppm	m

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

RIGHT SOLUTIONS | RIGHT PARTNER

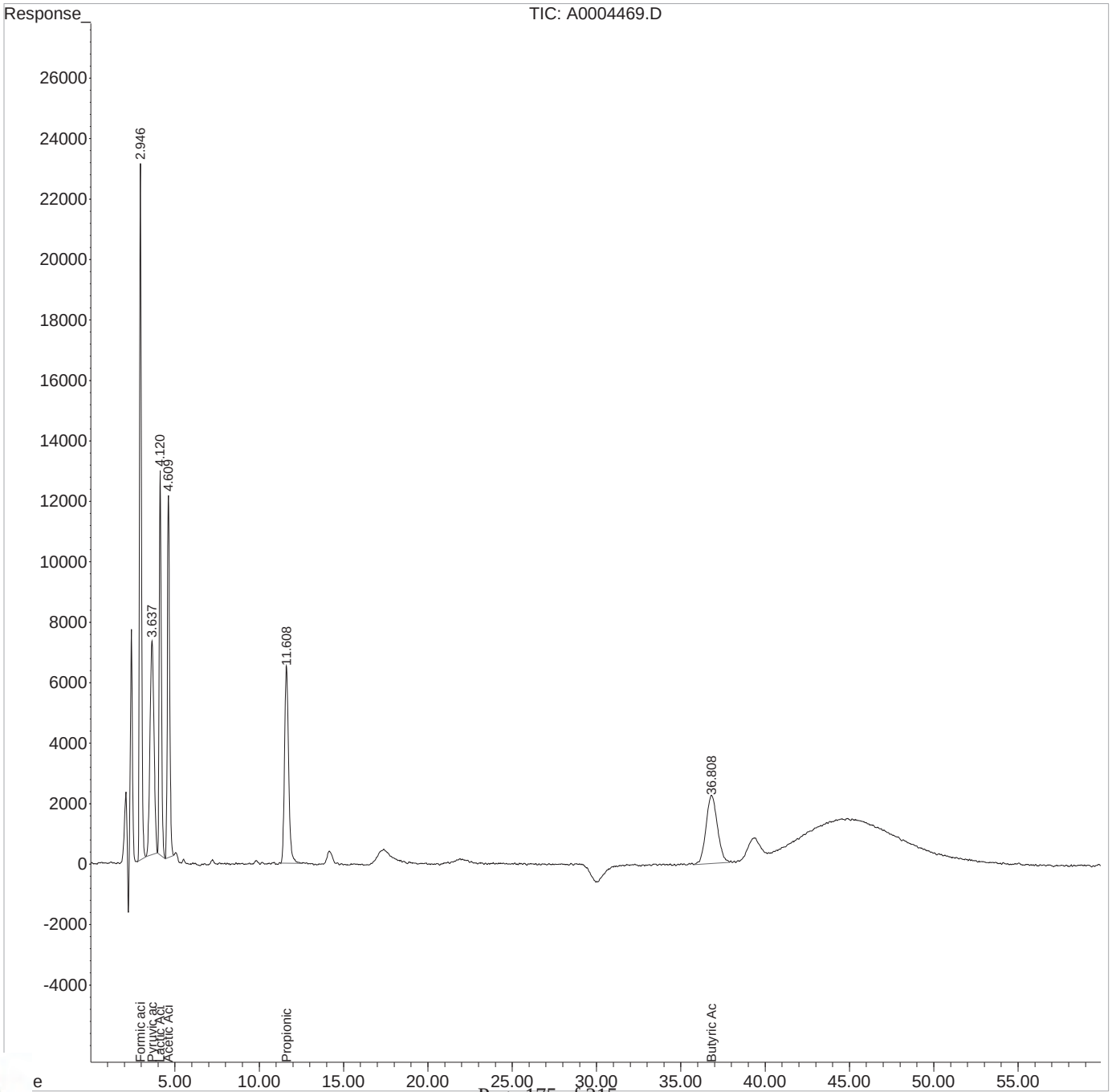
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



RIGHT SOLUTIONS | RIGHT PARTNER

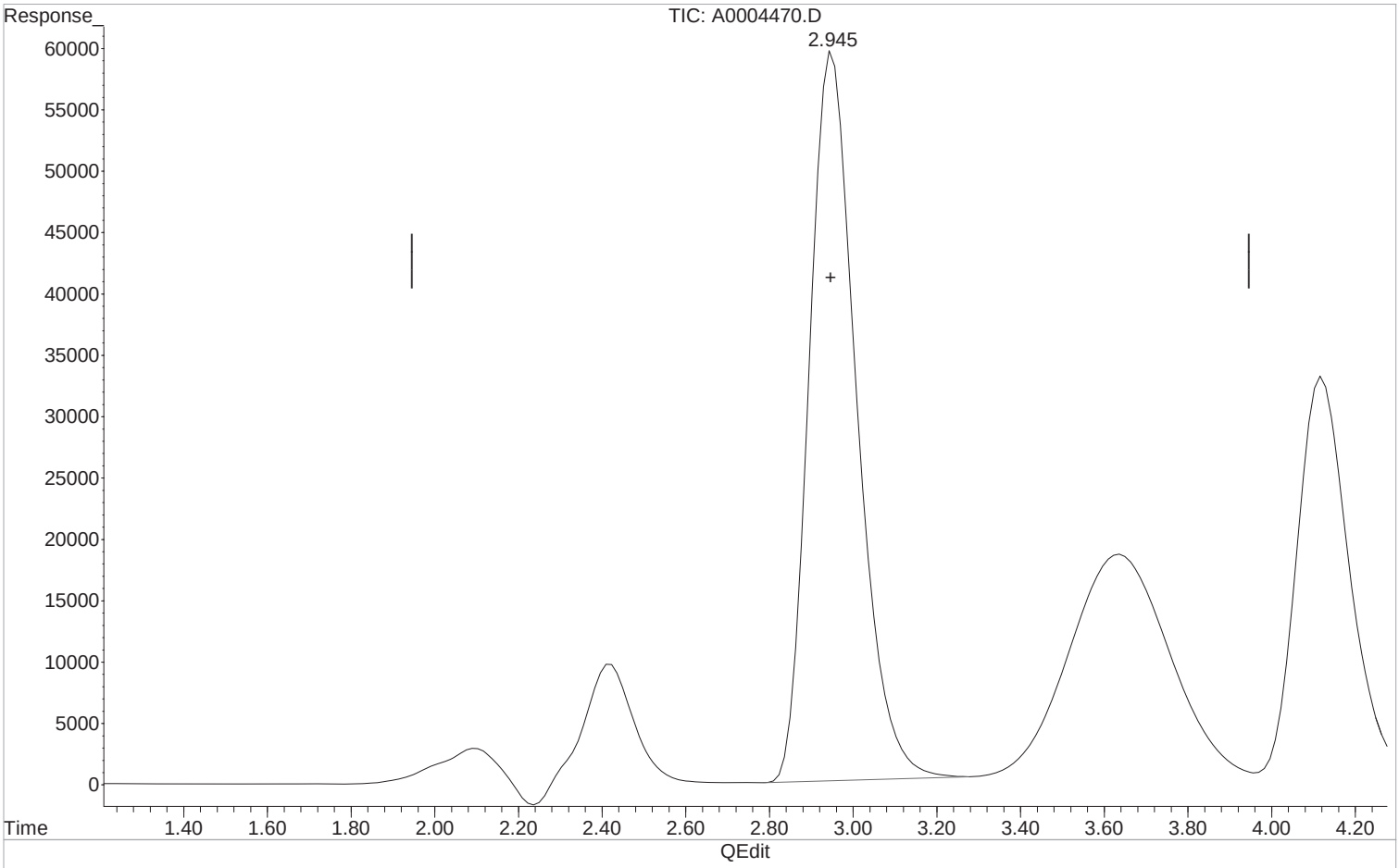
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004470.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:47:58
Operator : A.Felser
Sample : STD 6
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:24 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.945min 51.436 ppm m

response 4706776

Manual Integration:

After

Poor integration.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

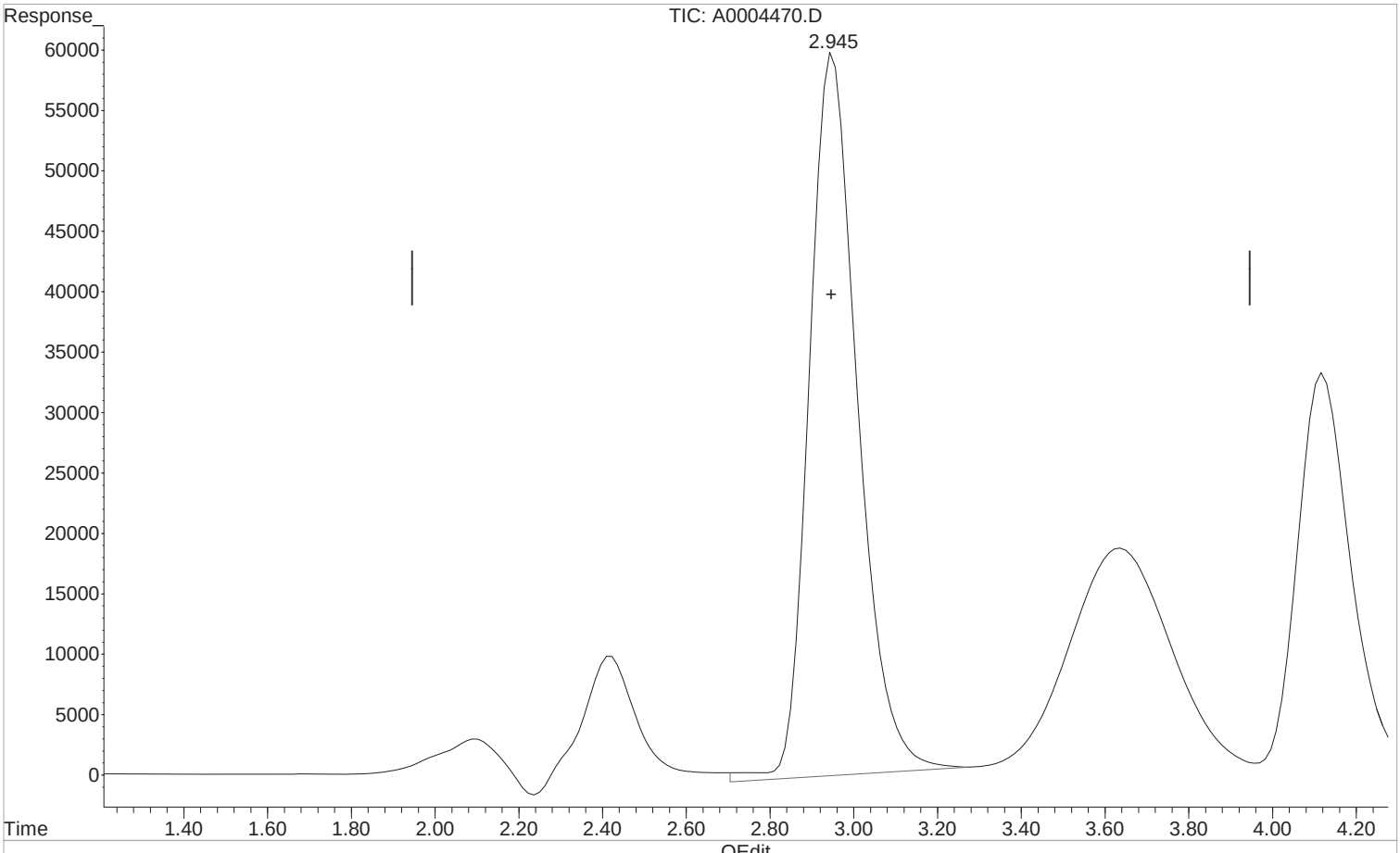
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004470.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:47:58
Operator : A.Felser
Sample : STD 6
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:24 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.952min 52.682 ppm

response 4820746

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

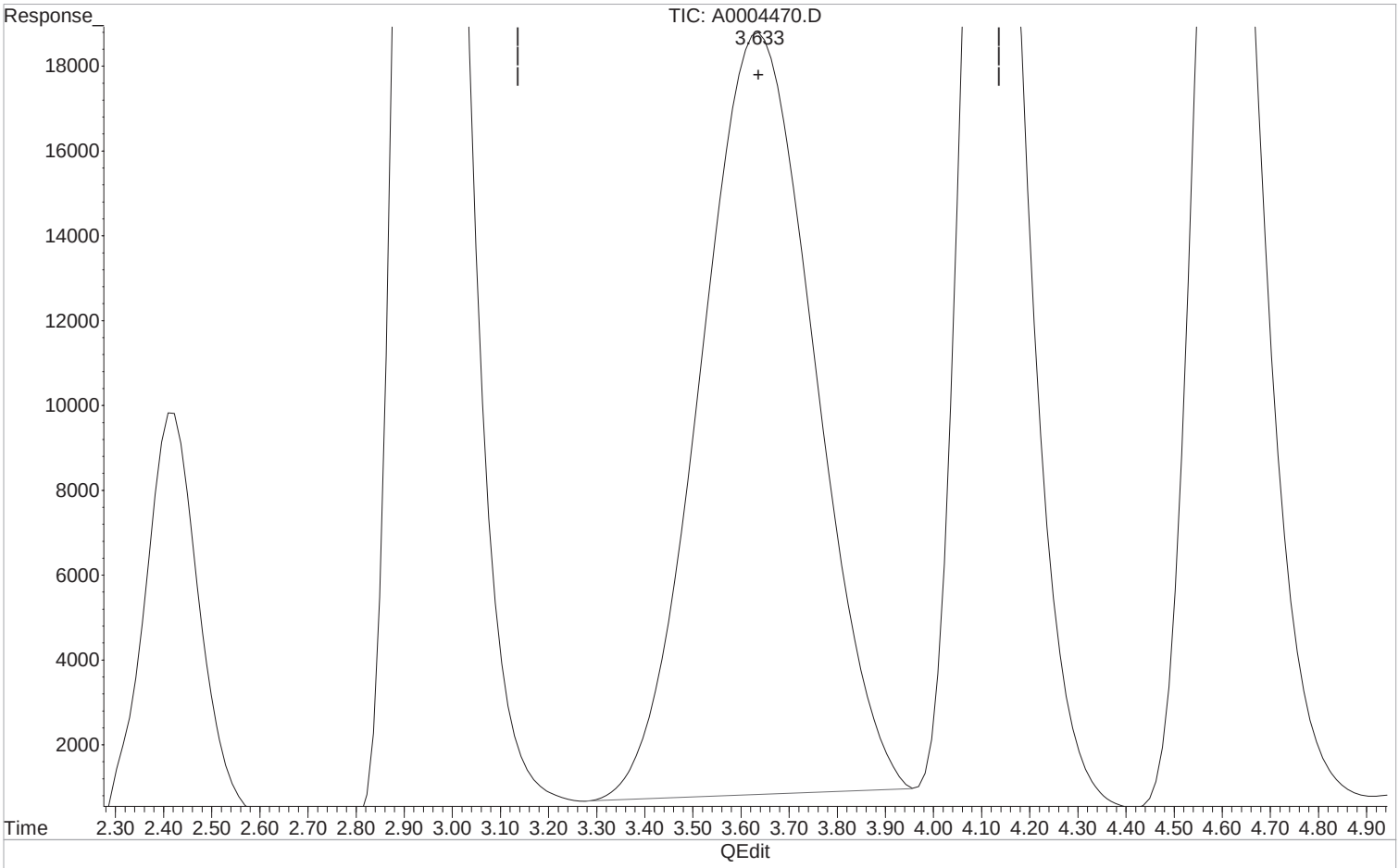
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004470.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:47:58
Operator : A.Felser
Sample : STD 6
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:24 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.633min 5.066 ppm m

response 2952886

Manual Integration:

After

Poor integration.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

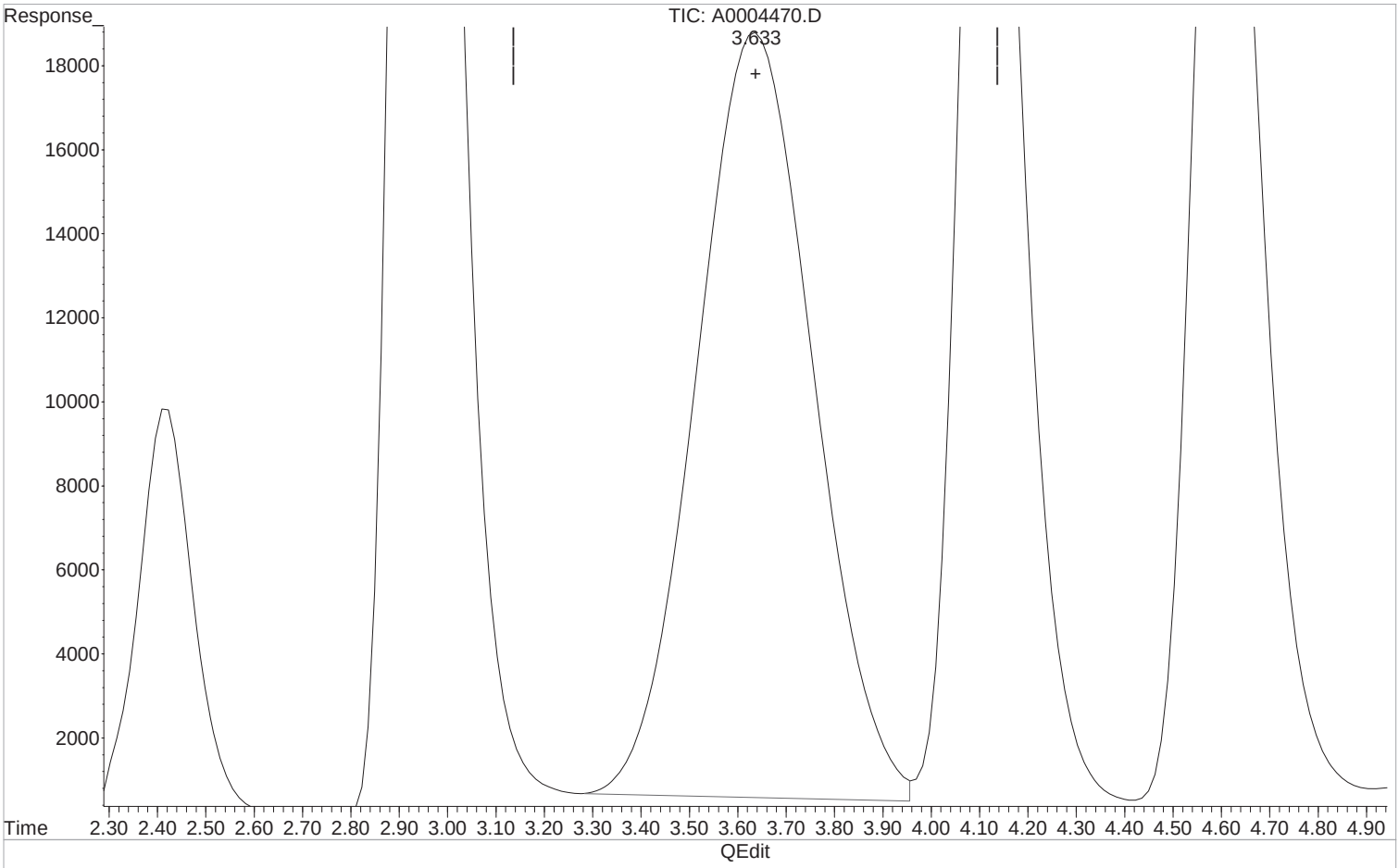
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004470.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:47:58
Operator : A.Felser
Sample : STD 6
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:24 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.639min 5.230 ppm

response 3048306

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

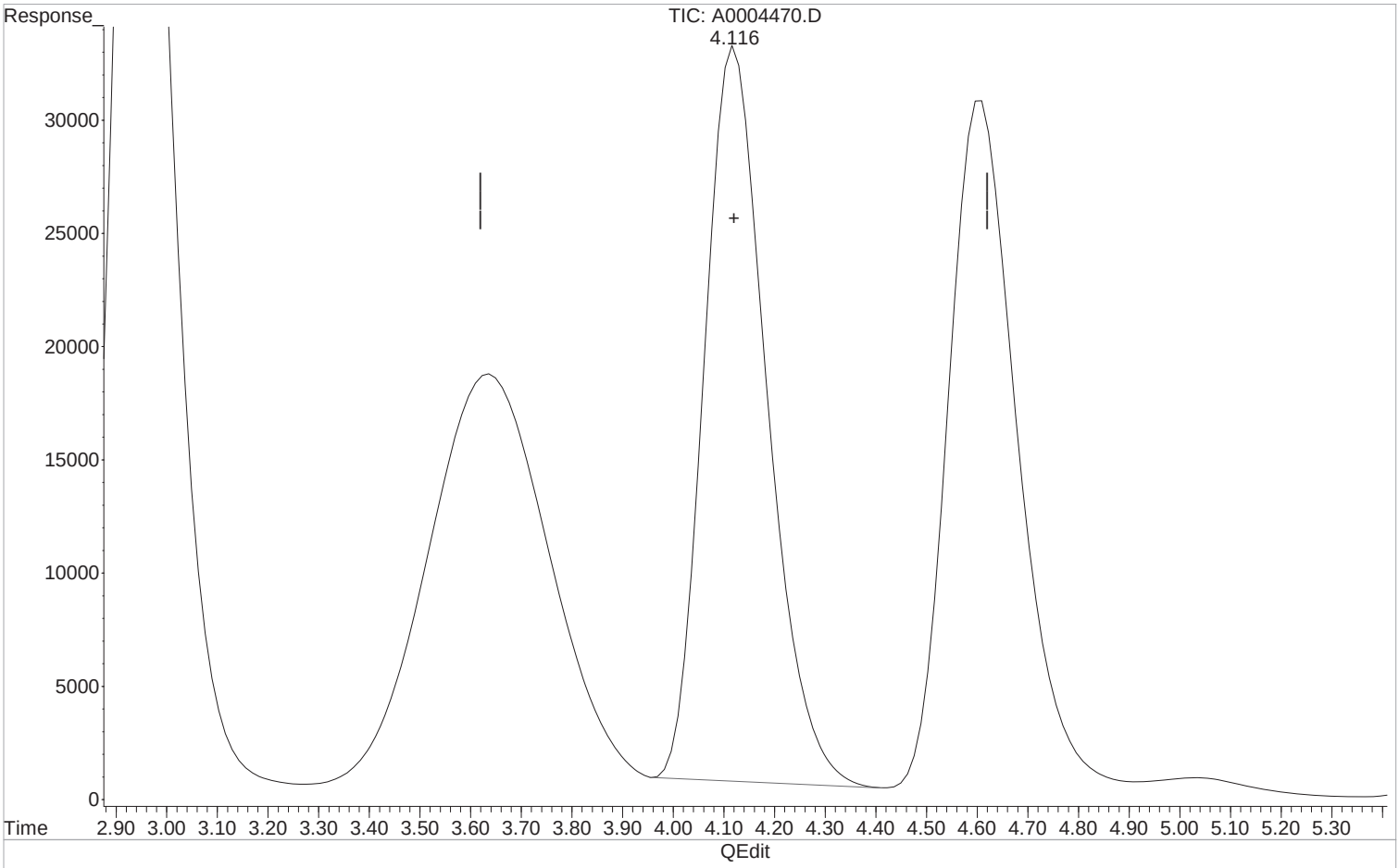
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004470.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:47:58
Operator : A.Felser
Sample : STD 6
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:24 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.116min 50.780 ppm m

response 2813056

Manual Integration:

After

Poor integration.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

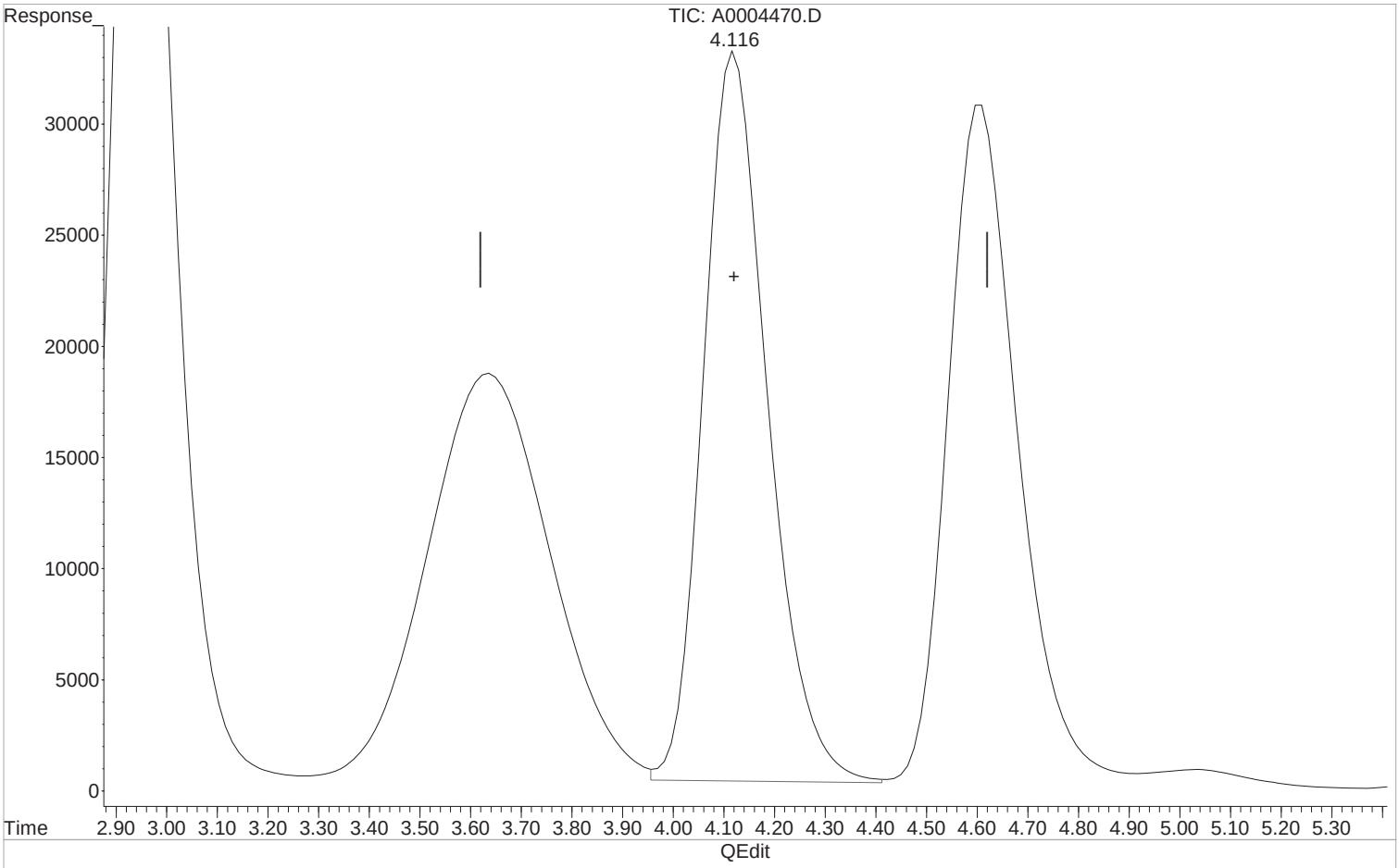
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004470.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:47:58
Operator : A.Felser
Sample : STD 6
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:24 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.123min 52.344 ppm

response 2899673

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

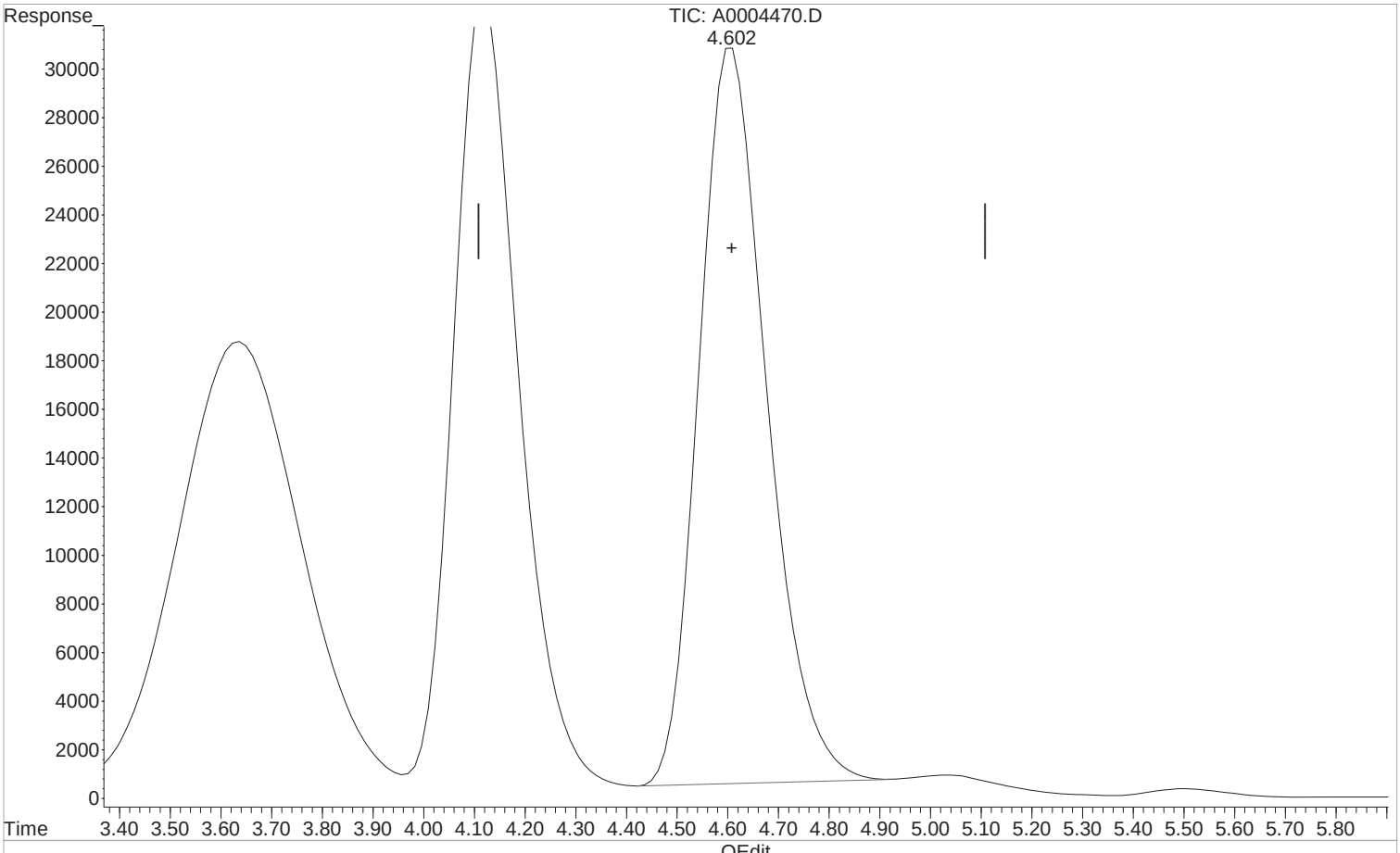
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004470.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:47:58
Operator : A.Felser
Sample : STD 6
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:24 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.602min 50.675 ppm m

response 2827626

Manual Integration:

After

Poor integration.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

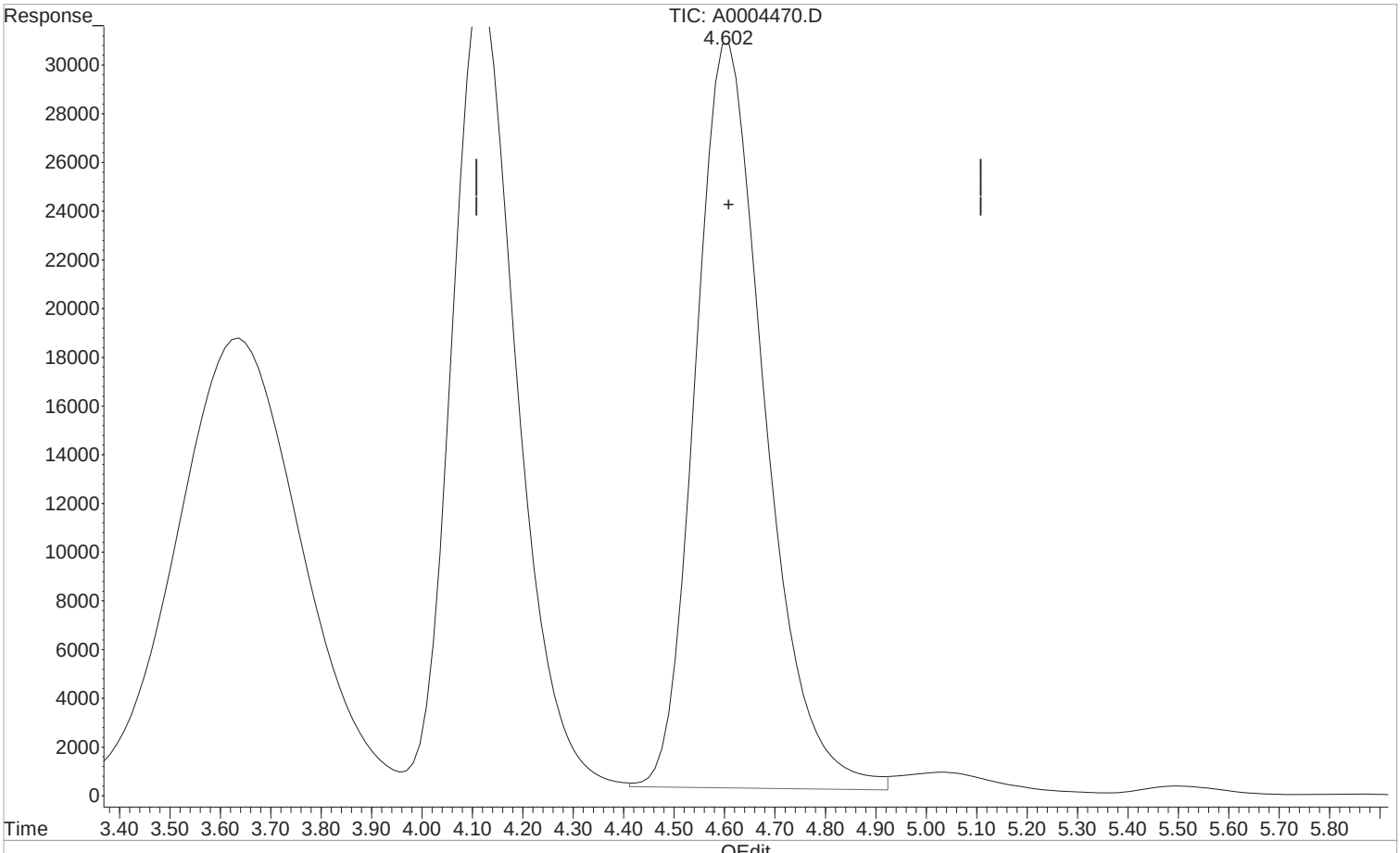
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004470.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:47:58
Operator : A.Felser
Sample : STD 6
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:24 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.610min 52.537 ppm

response 2931536

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

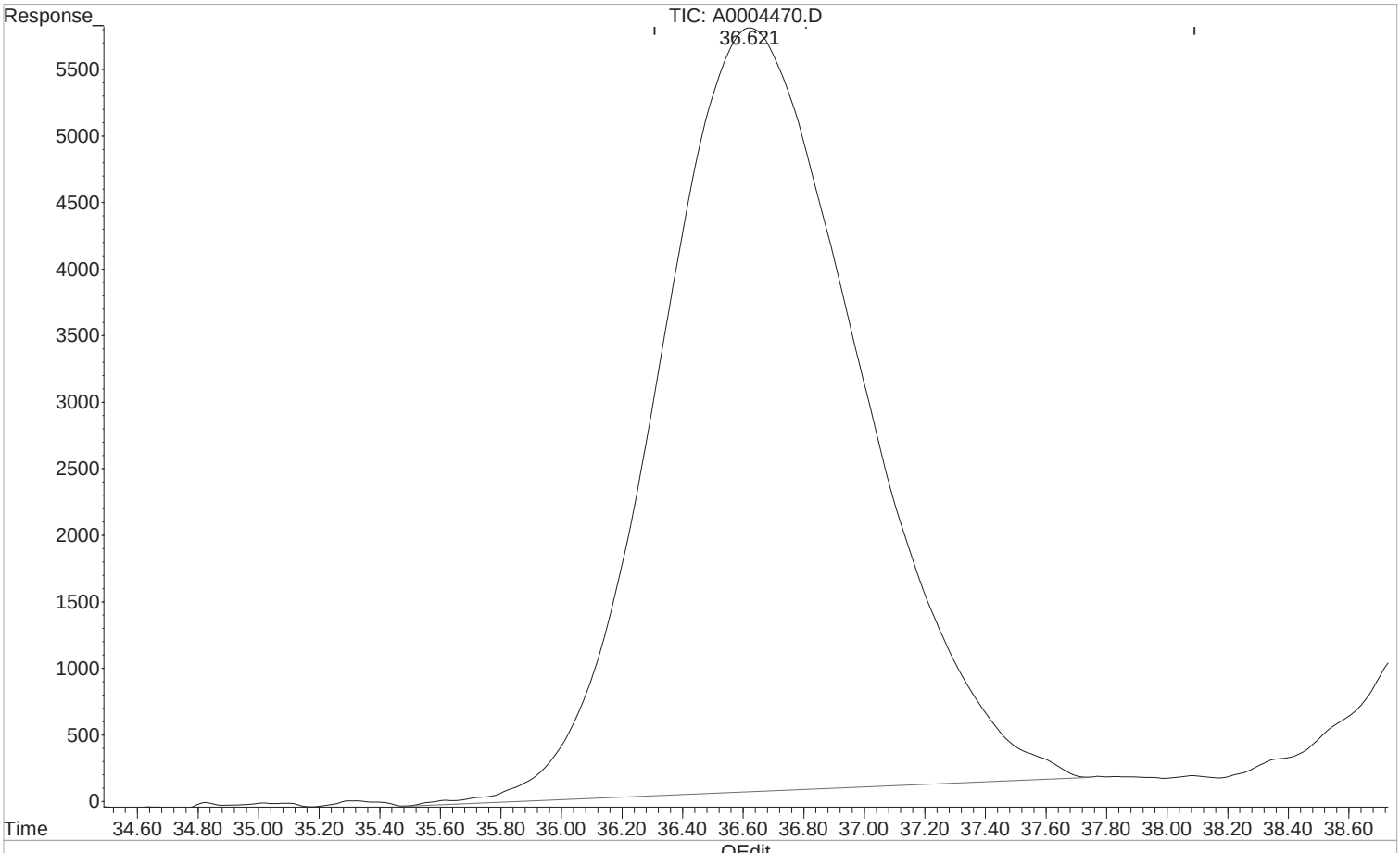
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004470.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:47:58
Operator : A.Felser
Sample : STD 6
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:24 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

36.621min 50.484 ppm m

response 2656312

Manual Integration:

After

Poor integration.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

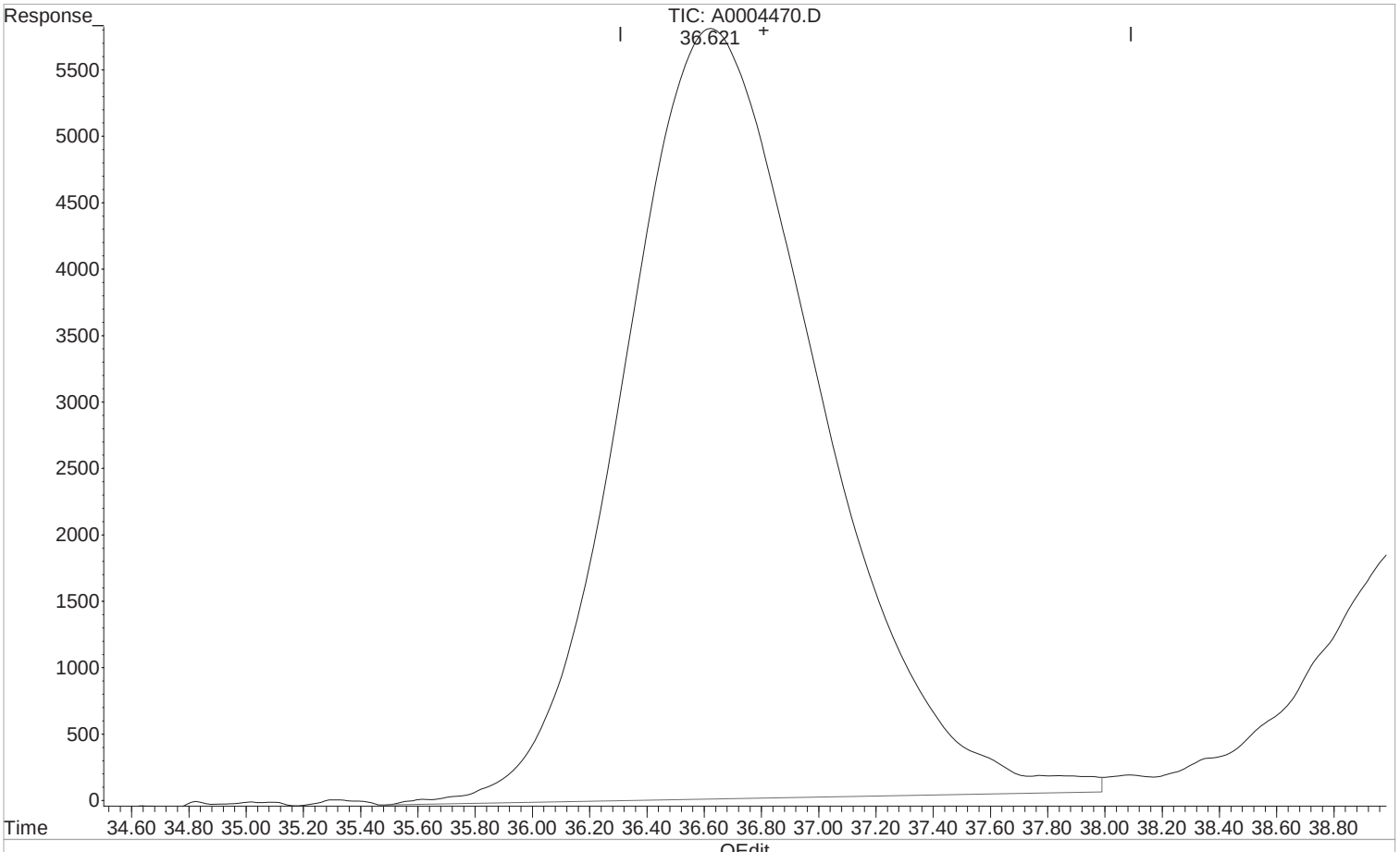
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004470.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:47:58
Operator : A.Felser
Sample : STD 6
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:24 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

36.628min 52.351 ppm

response 2754505

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004470.D
Signal(s) : dad1C.ch
Acq On : ~~30-Dec-2000, 17:47:58~~ 12-Mar-2020, 17:51
Operator : A.Felser
Sample : STD 6
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:24 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	2.945	4706776	51.436	ppm	m
2) T	Pyruvic acid	3.633	2952886	5.066	ppm	m
3) T	Lactic Acid	4.116	2813056	50.780	ppm	m
4) T	Acetic Acid	4.602	2827626	50.675	ppm	m
5) T	Propionic Acid	11.574	2794775	50.872	ppm	
6) T	Butyric Acid	36.621	2656312	50.484	ppm	m

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

RIGHT SOLUTIONS | RIGHT PARTNER

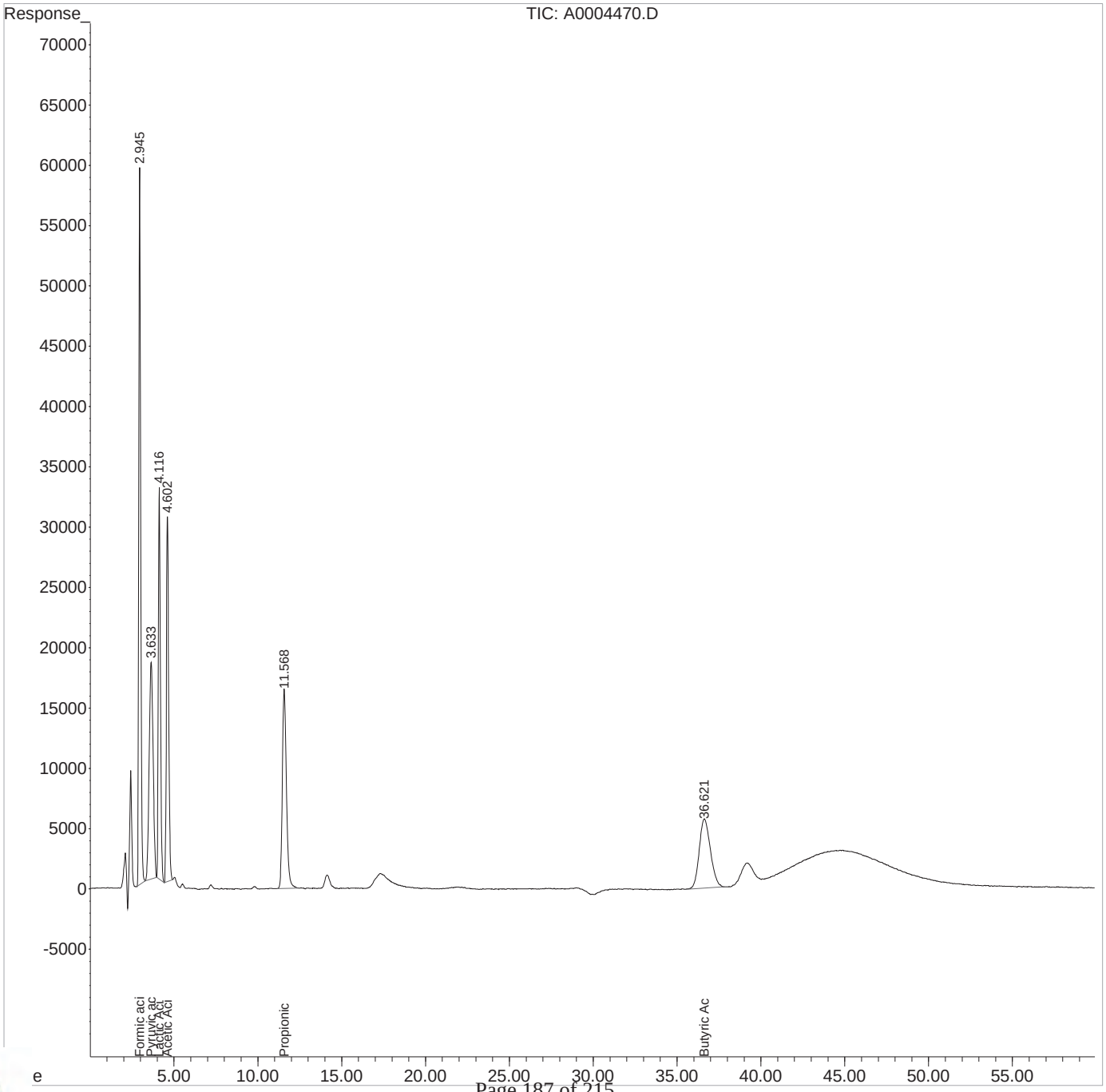
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004470.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:47:58
Operator : A.Felser
Sample : STD 6
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:24 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



RIGHT SOLUTIONS | RIGHT PARTNER

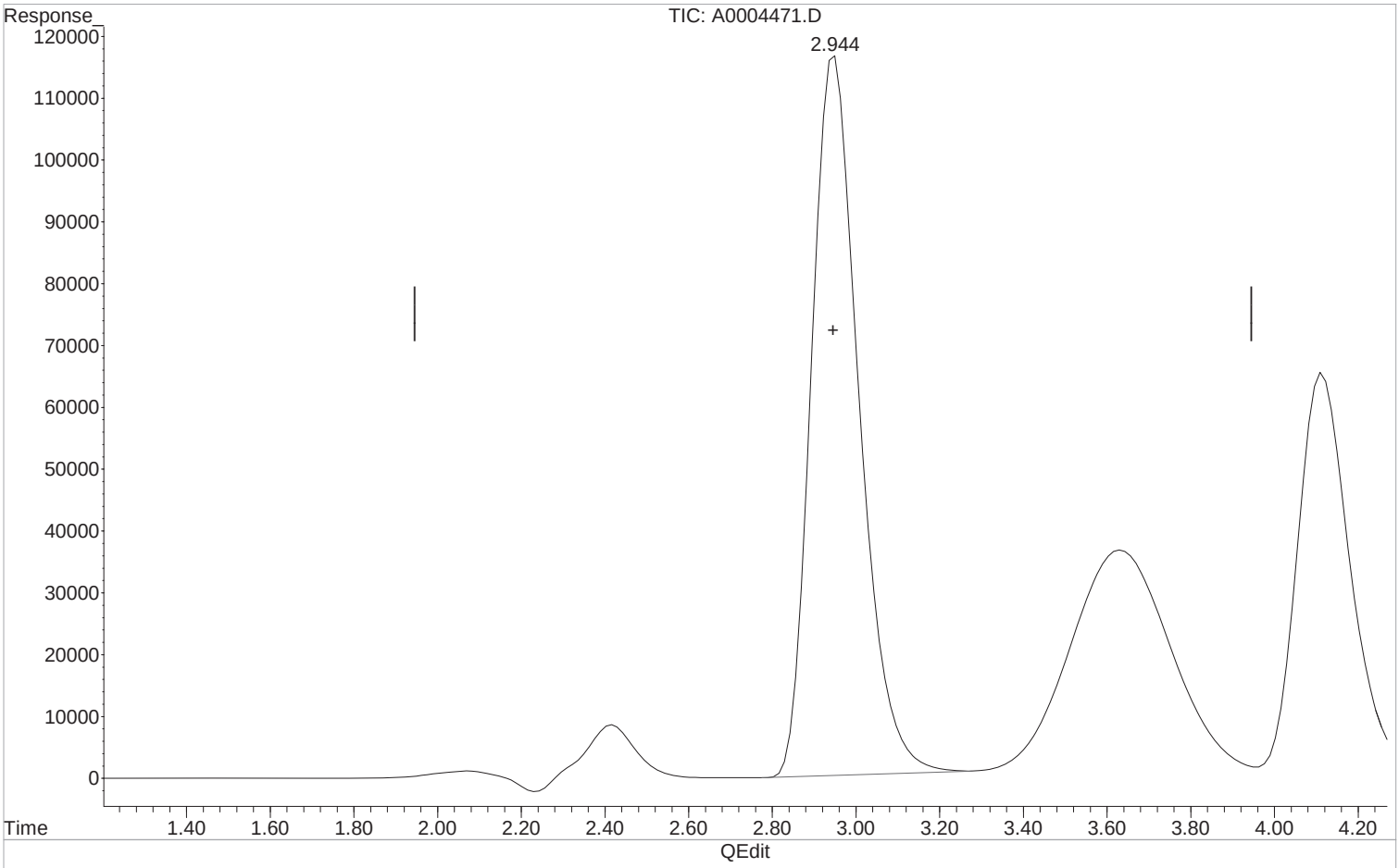
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004471.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 18:57:42
Operator : A.Felser
Sample : STD 7
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.944min 101.099 ppm m

response 9251260

Manual Integration:

After

Poor integration.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

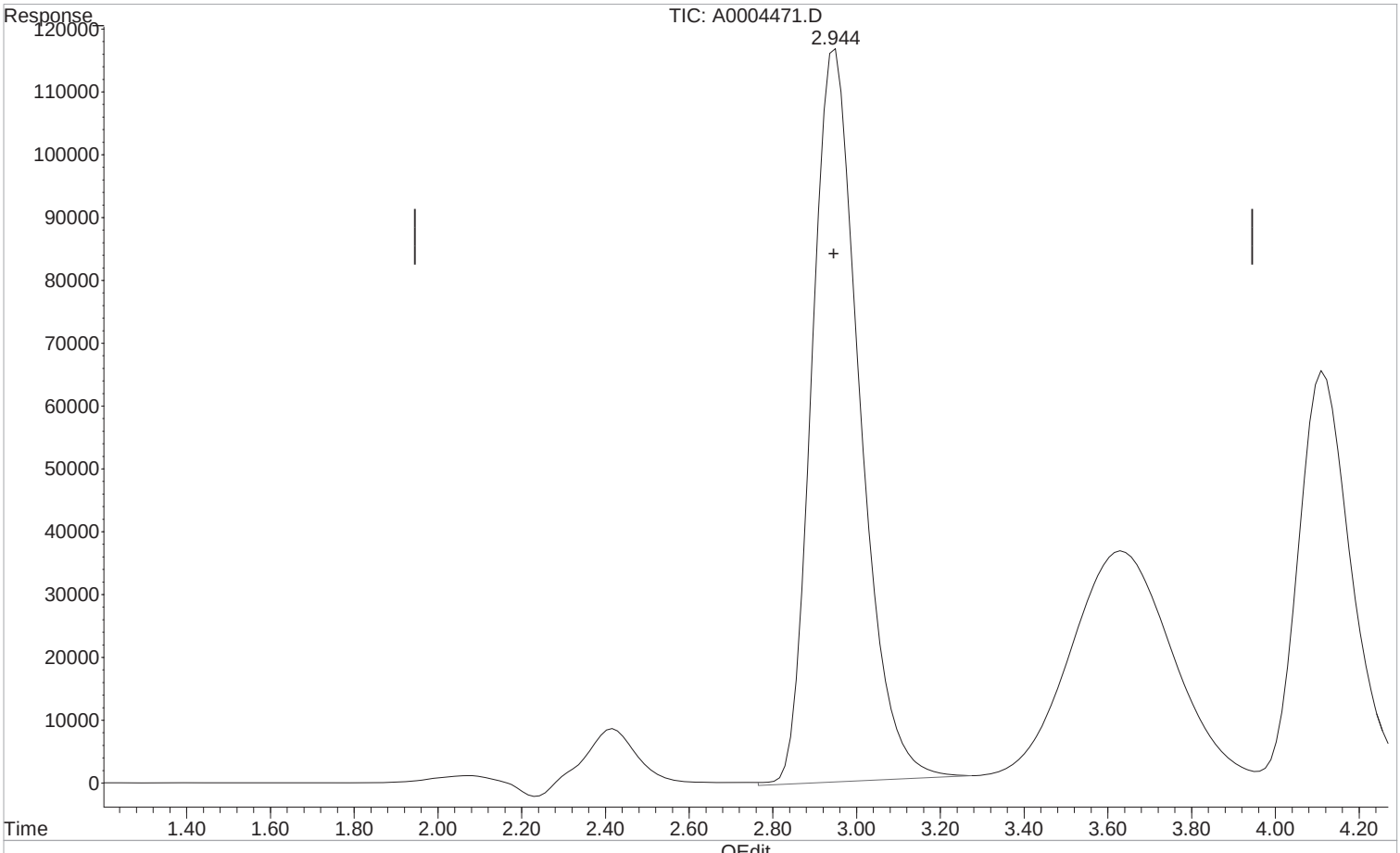
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004471.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 18:57:42
Operator : A.Felser
Sample : STD 7
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.950min 101.826 ppm

response 9317801

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

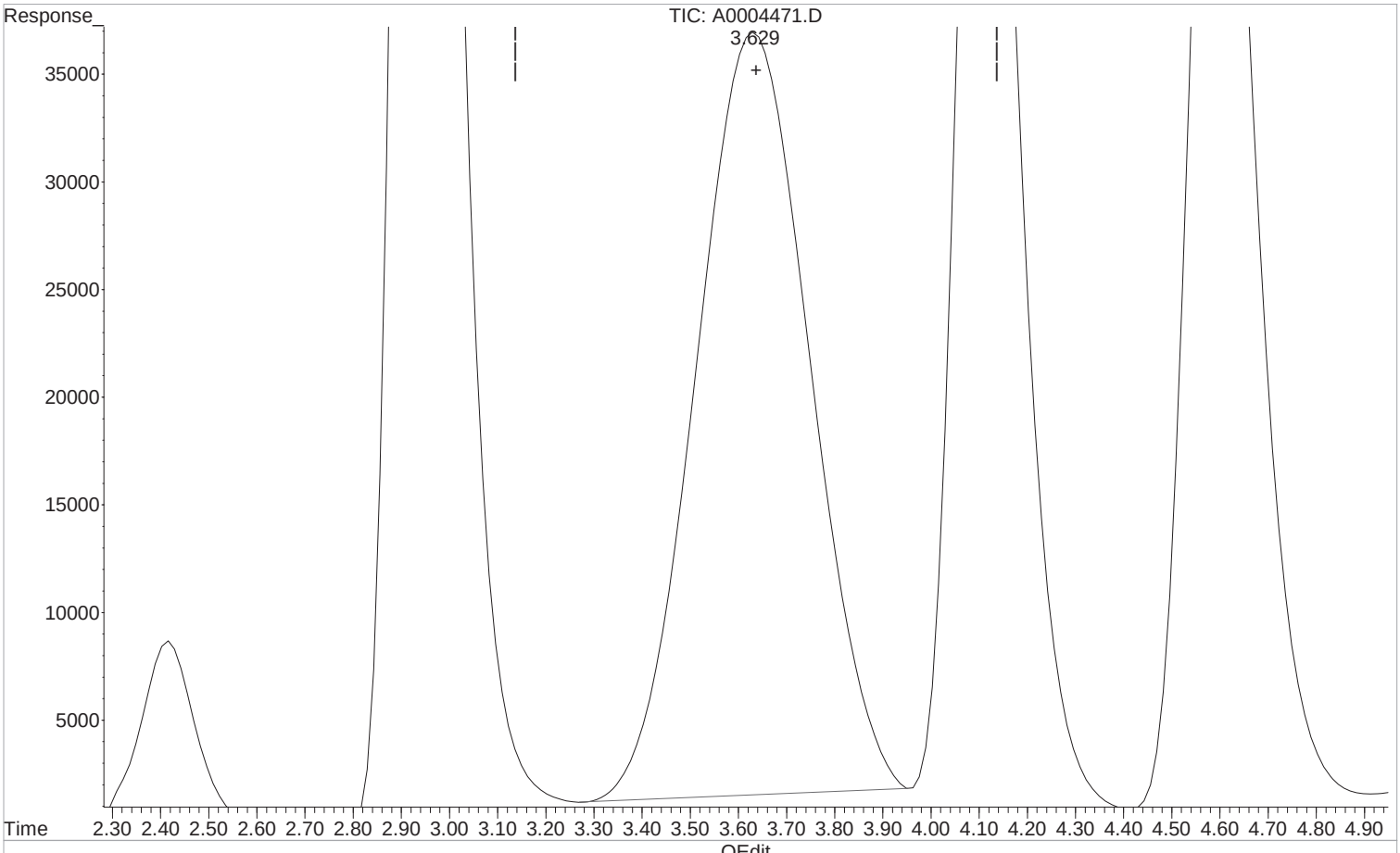
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004471.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 18:57:42
Operator : A.Felser
Sample : STD 7
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.629min 9.964 ppm m

response 5807459

Manual Integration:

After

Poor integration.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

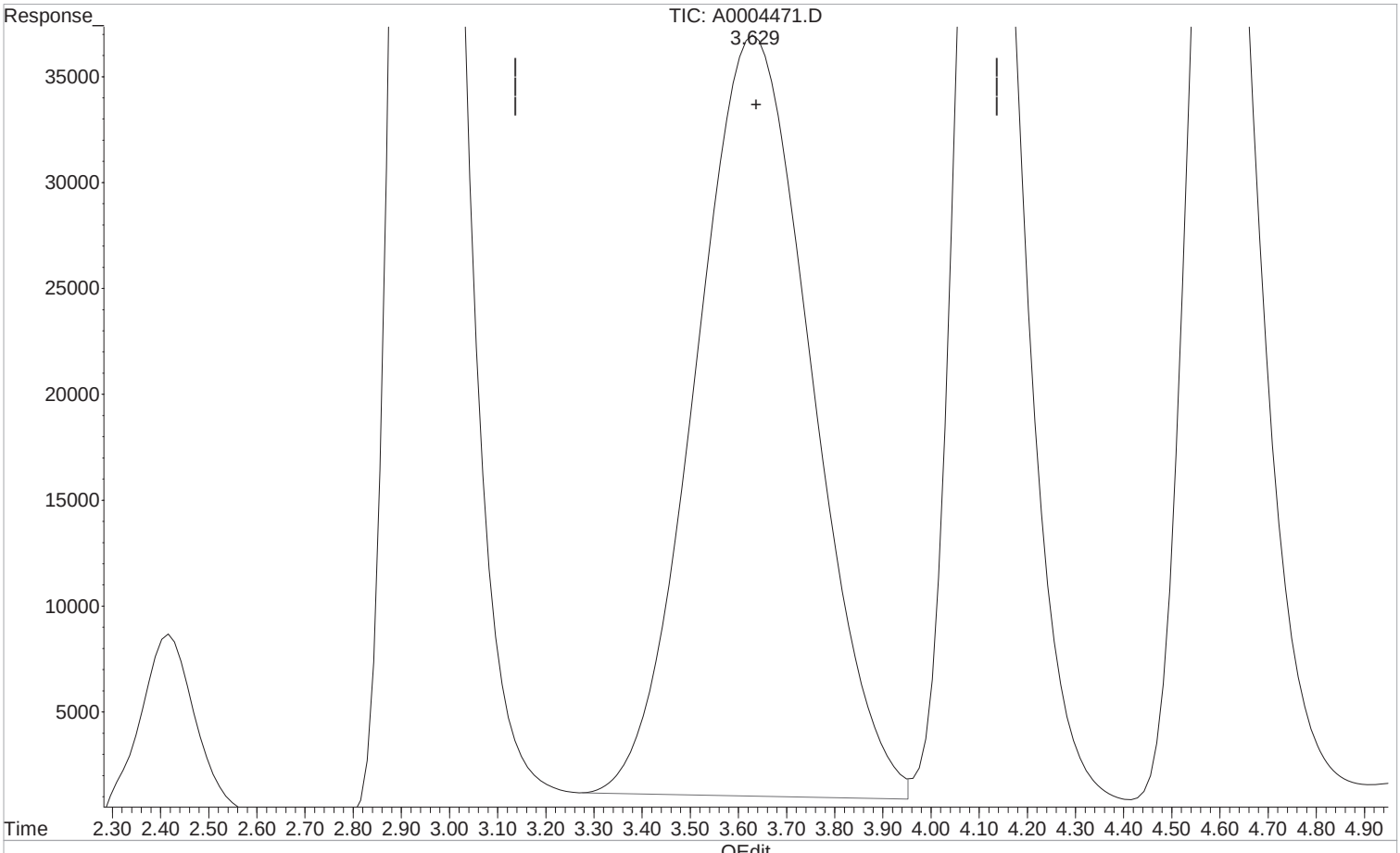
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004471.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 18:57:42
Operator : A.Felser
Sample : STD 7
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.635min 10.292 ppm

response 5999073

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

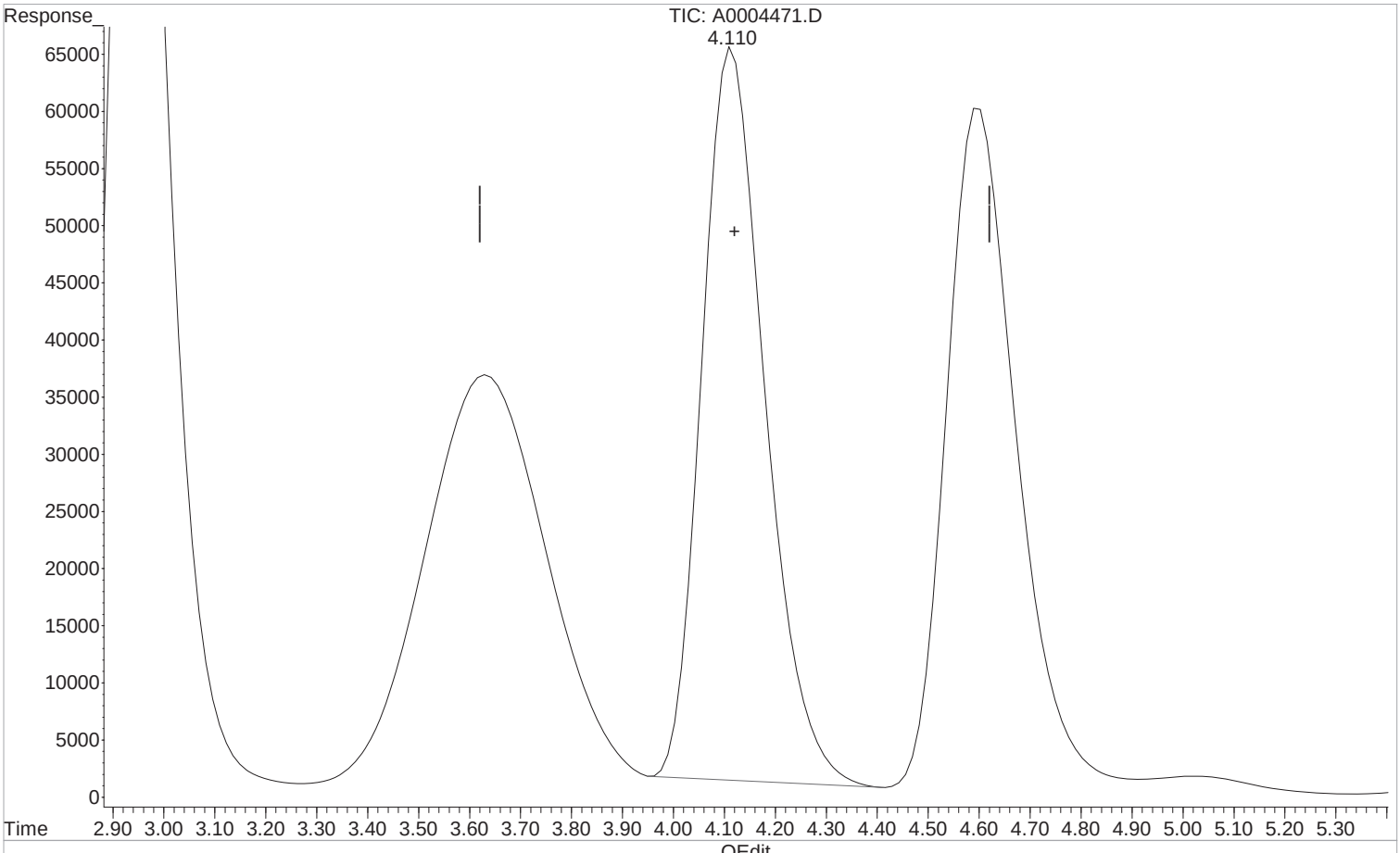
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004471.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 18:57:42
Operator : A.Felser
Sample : STD 7
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.110min 100.101 ppm m

response 5545238

Manual Integration:

After

Poor integration.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

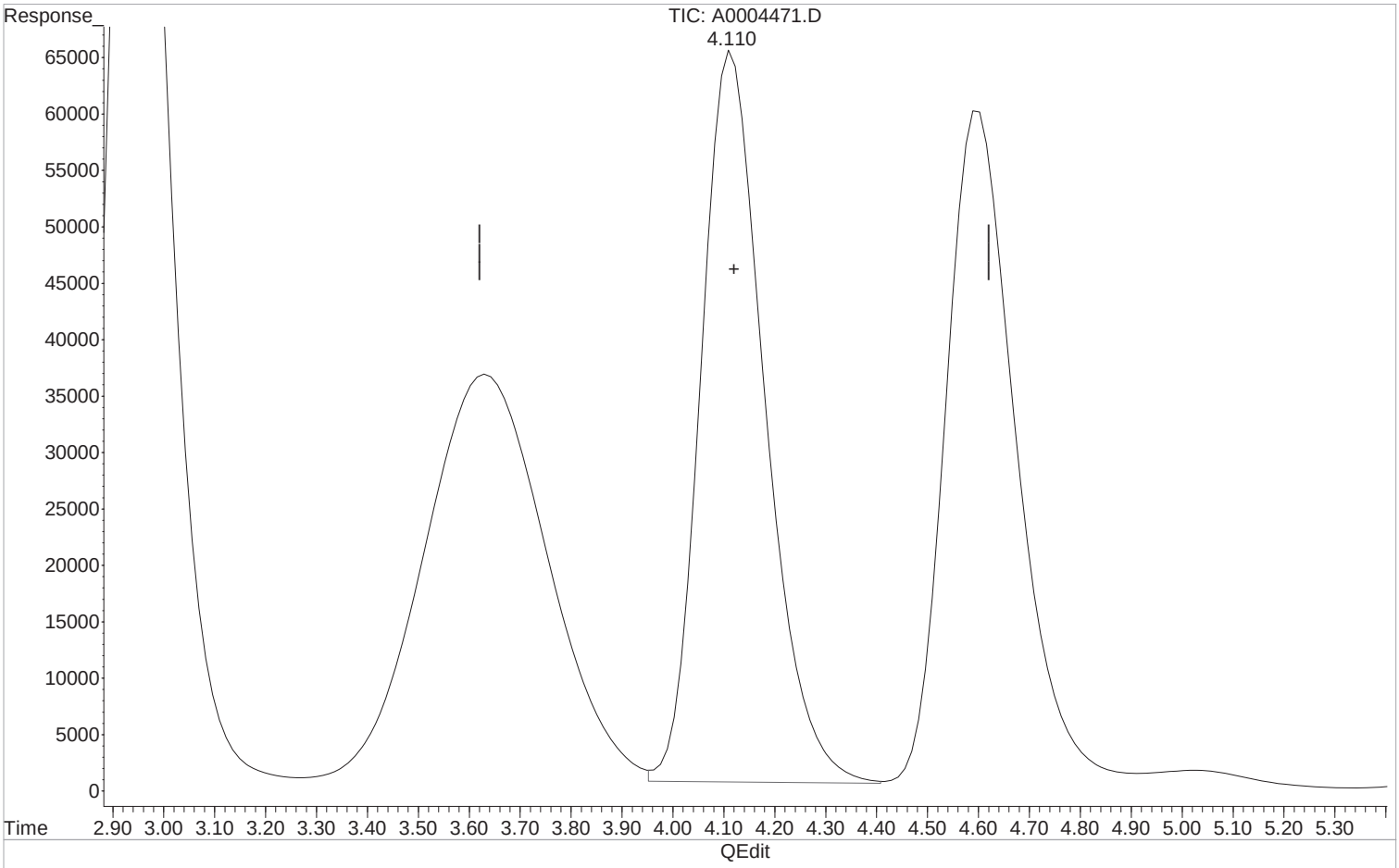
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004471.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 18:57:42
Operator : A.Felser
Sample : STD 7
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.117min 102.879 ppm

response 5699157

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

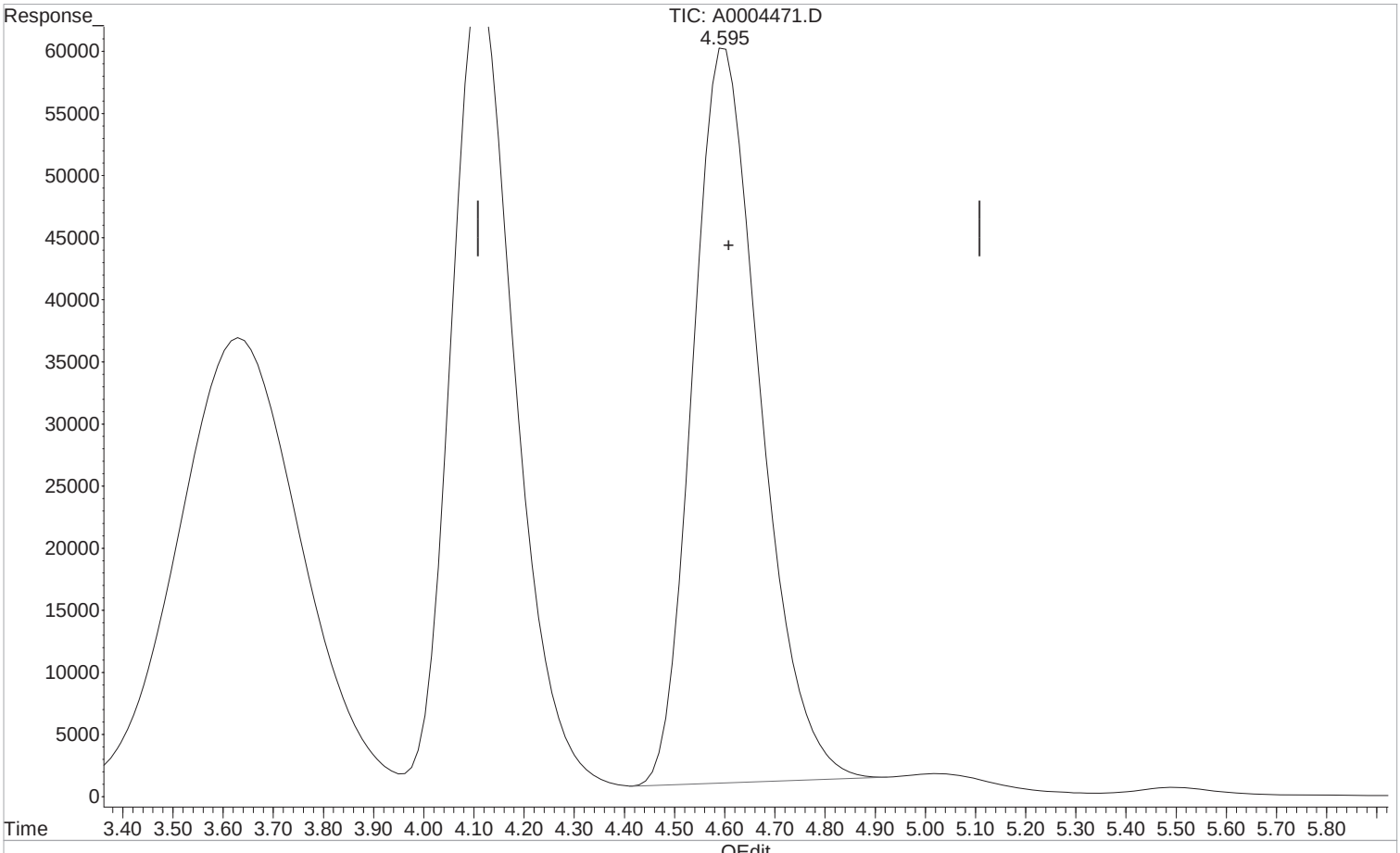
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004471.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 18:57:42
Operator : A.Felser
Sample : STD 7
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.595min 99.609 ppm m

response 5558142

Manual Integration:

After

Poor integration.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

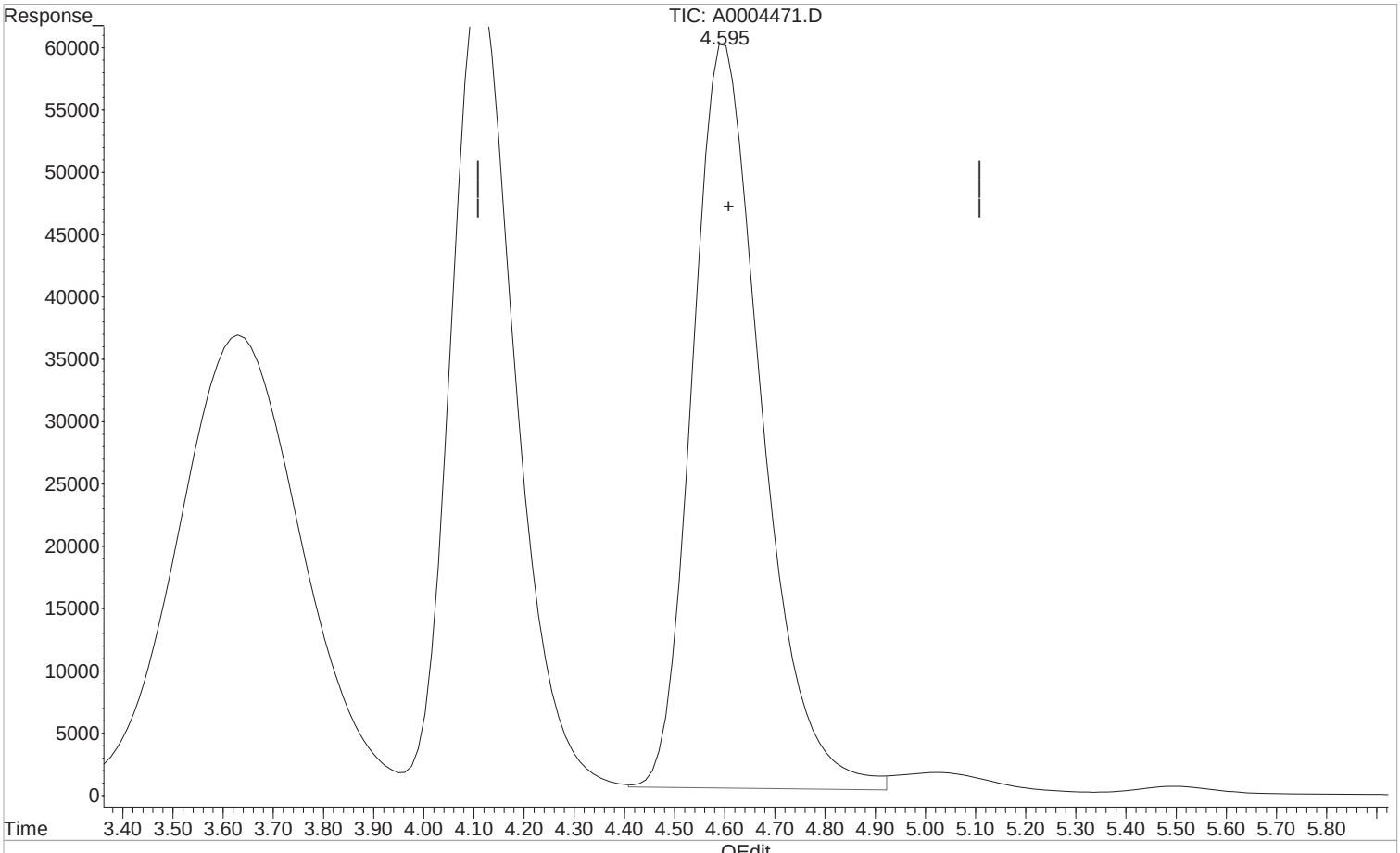
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004471.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 18:57:42
Operator : A.Felser
Sample : STD 7
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.602min 103.031 ppm

response 5749108

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

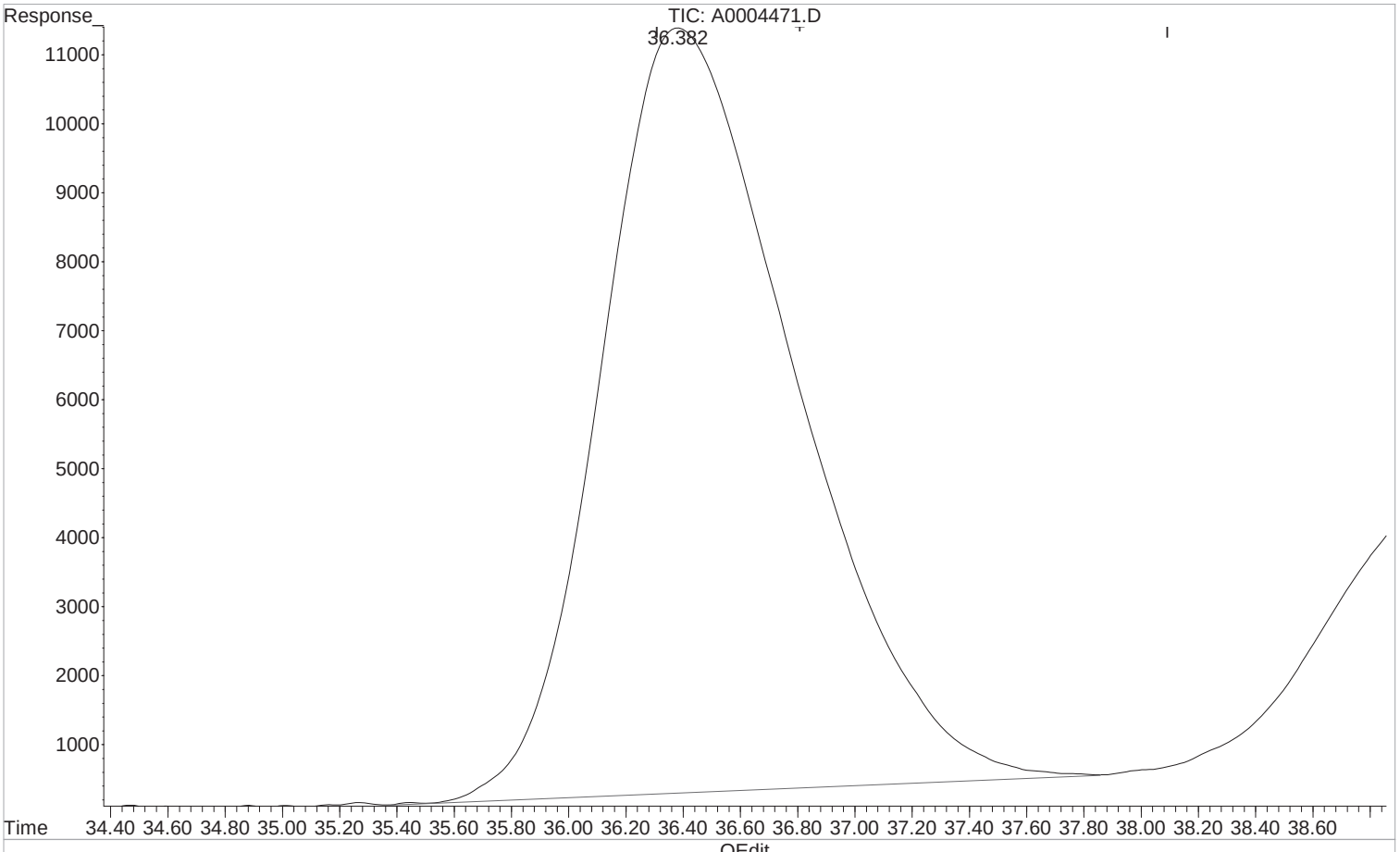
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004471.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 18:57:42
Operator : A.Felser
Sample : STD 7
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

36.382min 99.663 ppm m

response 5243902

Manual Integration:

After

Poor integration.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

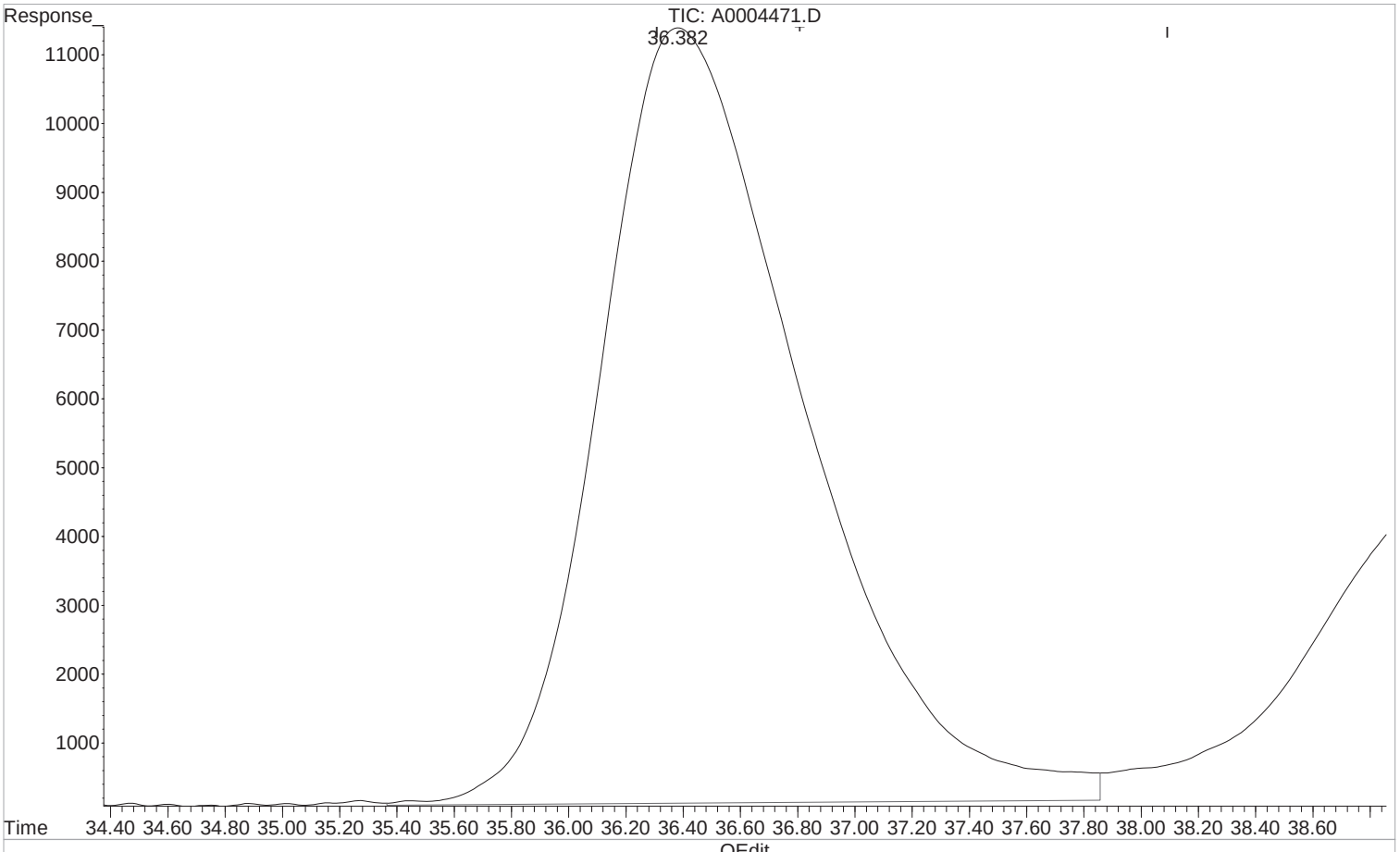
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004471.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 18:57:42
Operator : A.Felser
Sample : STD 7
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

36.387min 105.508 ppm

response 5551464

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004471.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 18:57:42
Operator : A.Felser
Sample : STD 7
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	2.944	9251260	101.099	ppm	m
2) T	Pyruvic acid	3.629	5807459	9.964	ppm	m
3) T	Lactic Acid	4.110	5545238	100.101	ppm	m
4) T	Acetic Acid	4.595	5558142	99.609	ppm	m
5) T	Propionic Acid	11.528	5536155	100.773	ppm	
6) T	Butyric Acid	36.382	5243902	99.663	ppm	m

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

RIGHT SOLUTIONS | RIGHT PARTNER

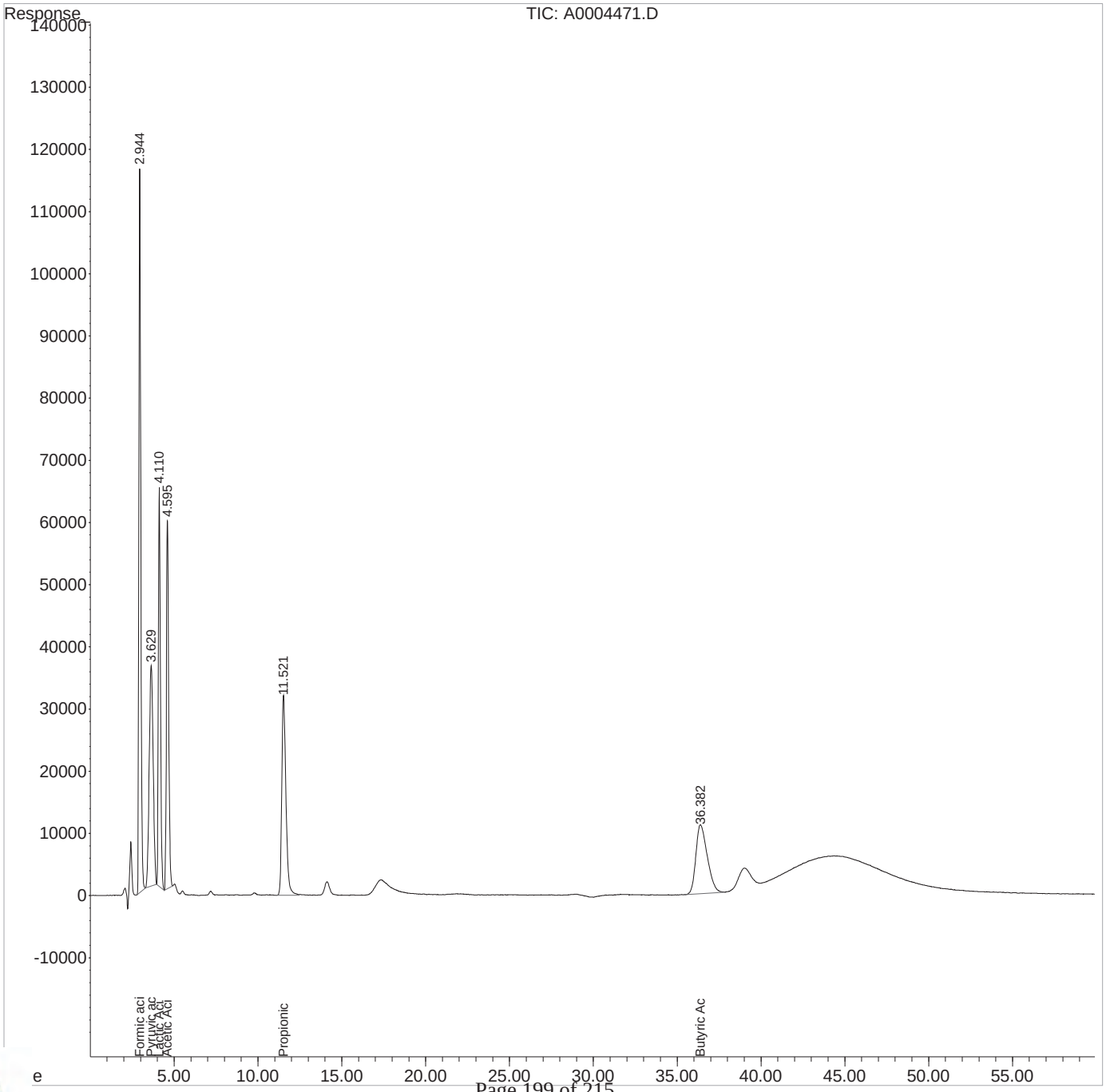
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004471.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 18:57:42
Operator : A.Felser
Sample : STD 7
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



RIGHT SOLUTIONS | RIGHT PARTNER

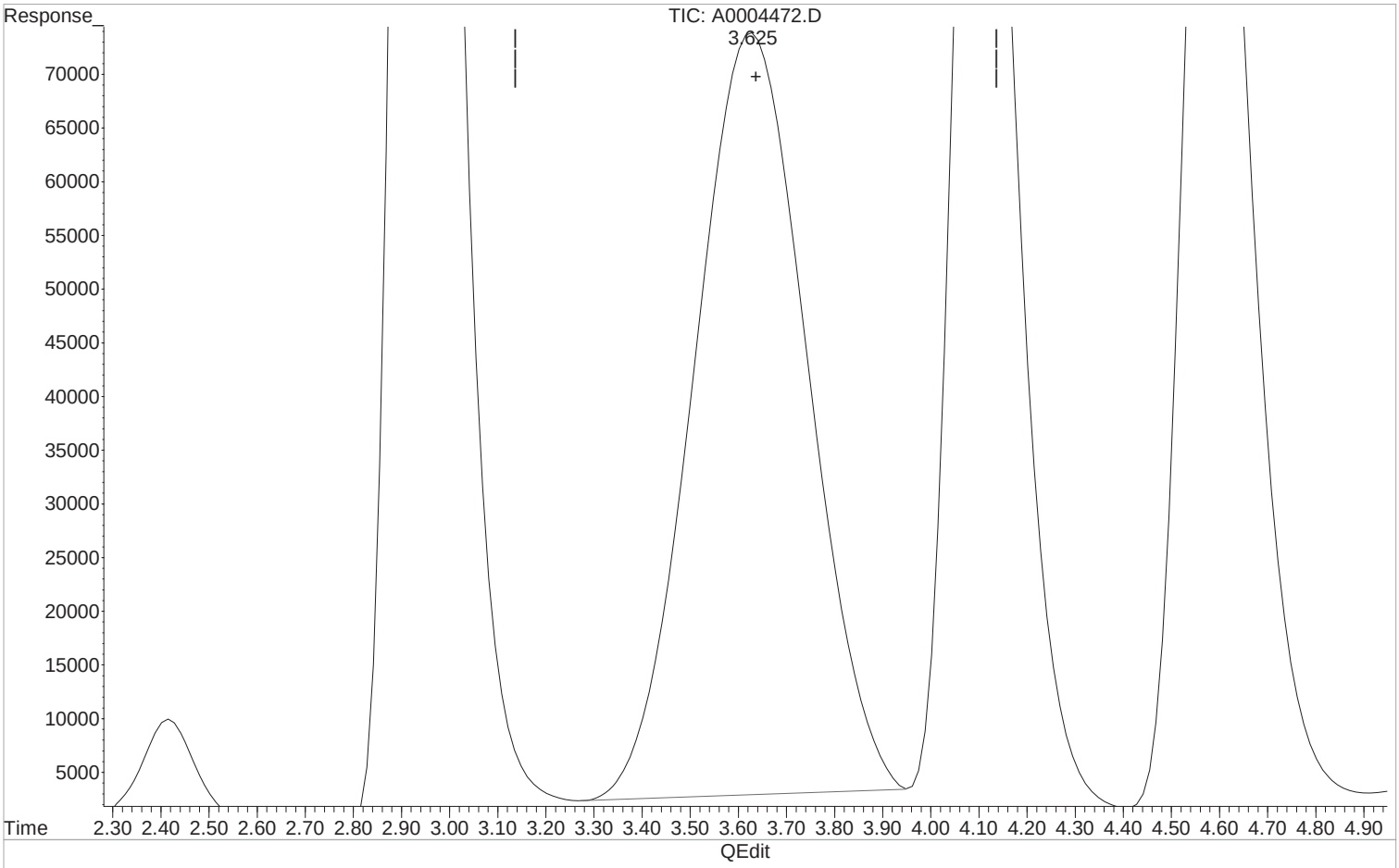
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004472.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 20:00:49
Operator : A.Felser
Sample : STD 8
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.625min 19.912 ppm m

response 11605902

Manual Integration:

After

Poor integration.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

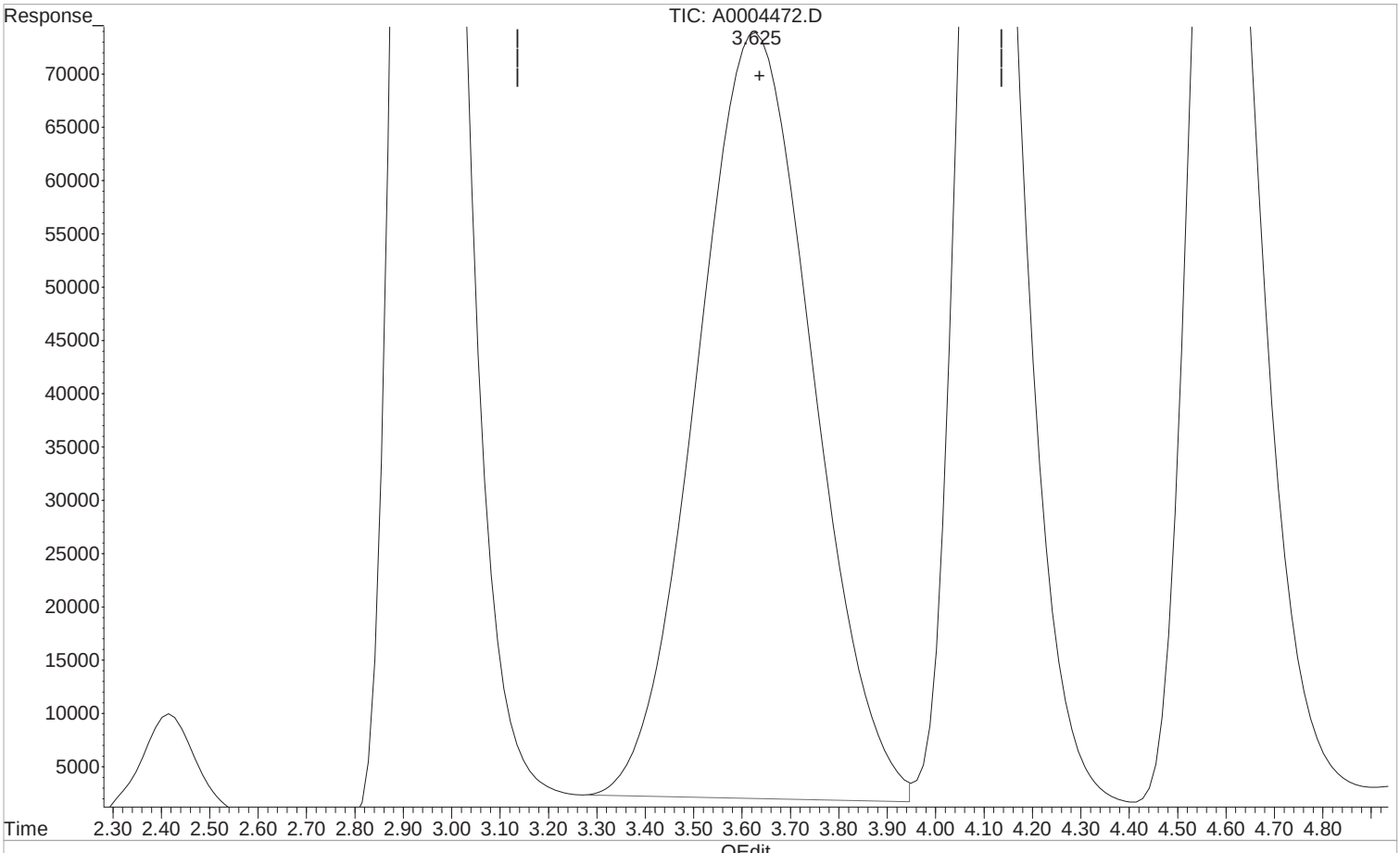
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004472.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 20:00:49
Operator : A.Felser
Sample : STD 8
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.630min 20.492 ppm

response 11944441

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

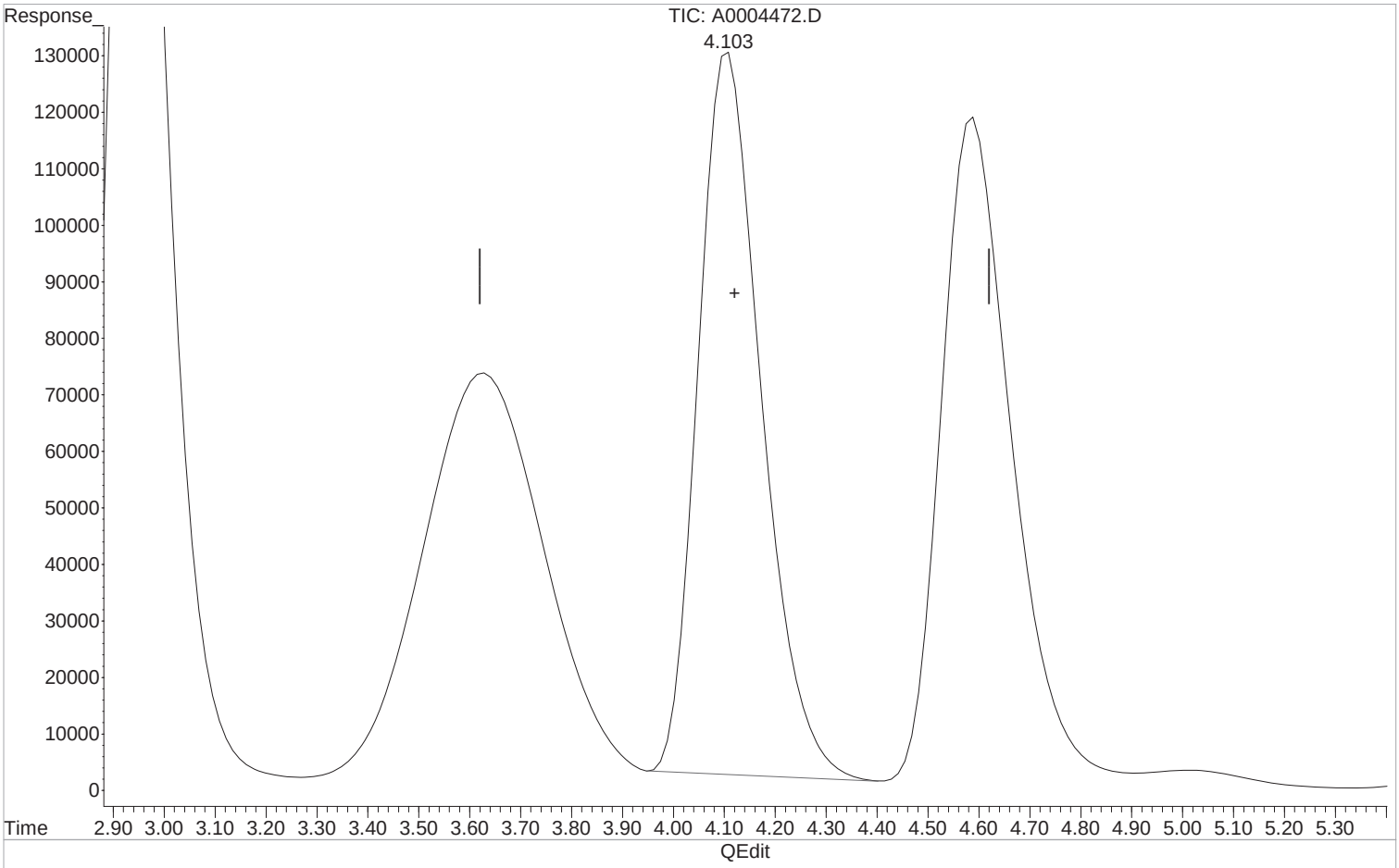
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004472.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 20:00:49
Operator : A.Felser
Sample : STD 8
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.103min 199.720 ppm m

response 11063811

Manual Integration:

After

Poor integration.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

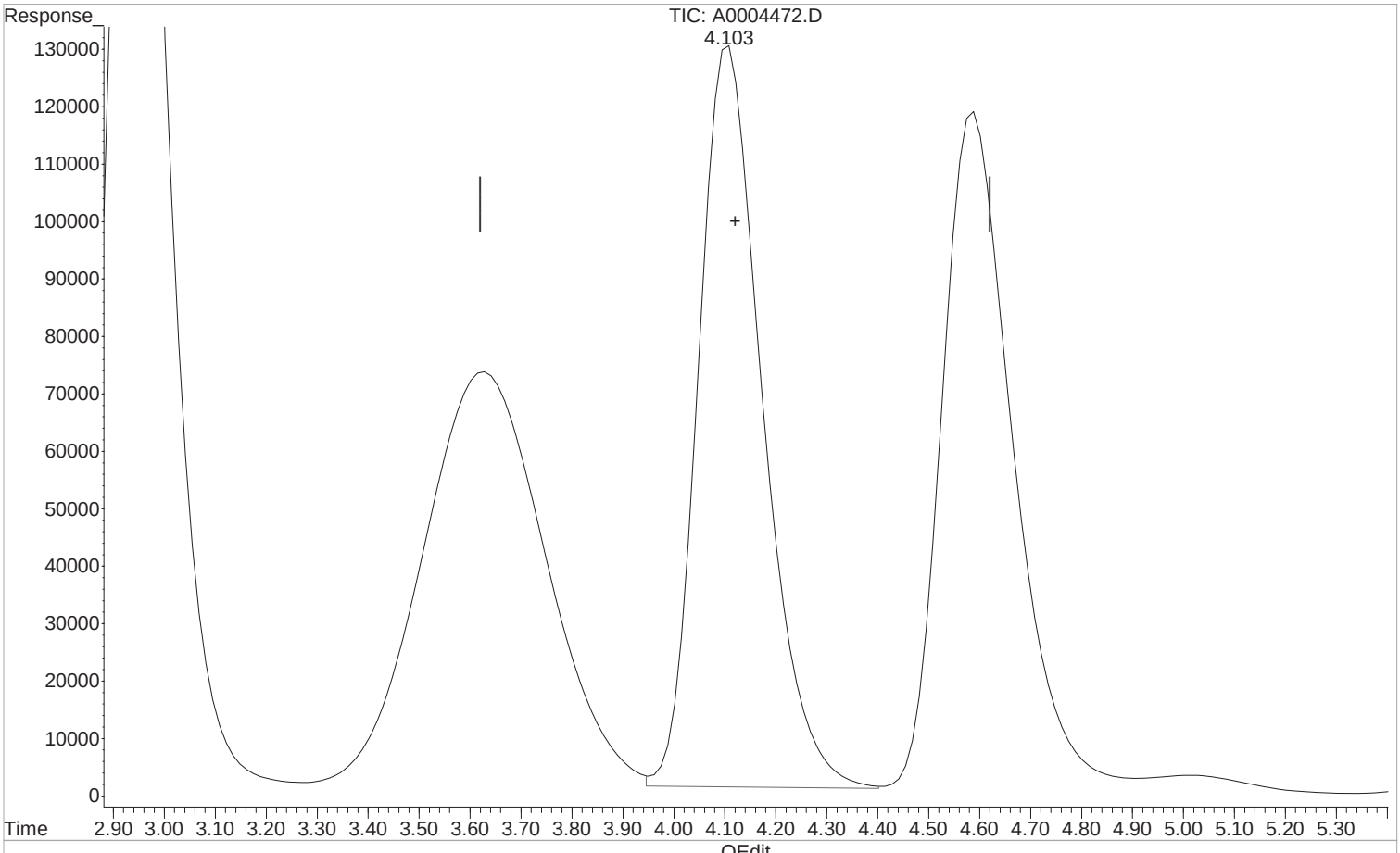
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004472.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 20:00:49
Operator : A.Felser
Sample : STD 8
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.110min 205.006 ppm

response 11356650

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

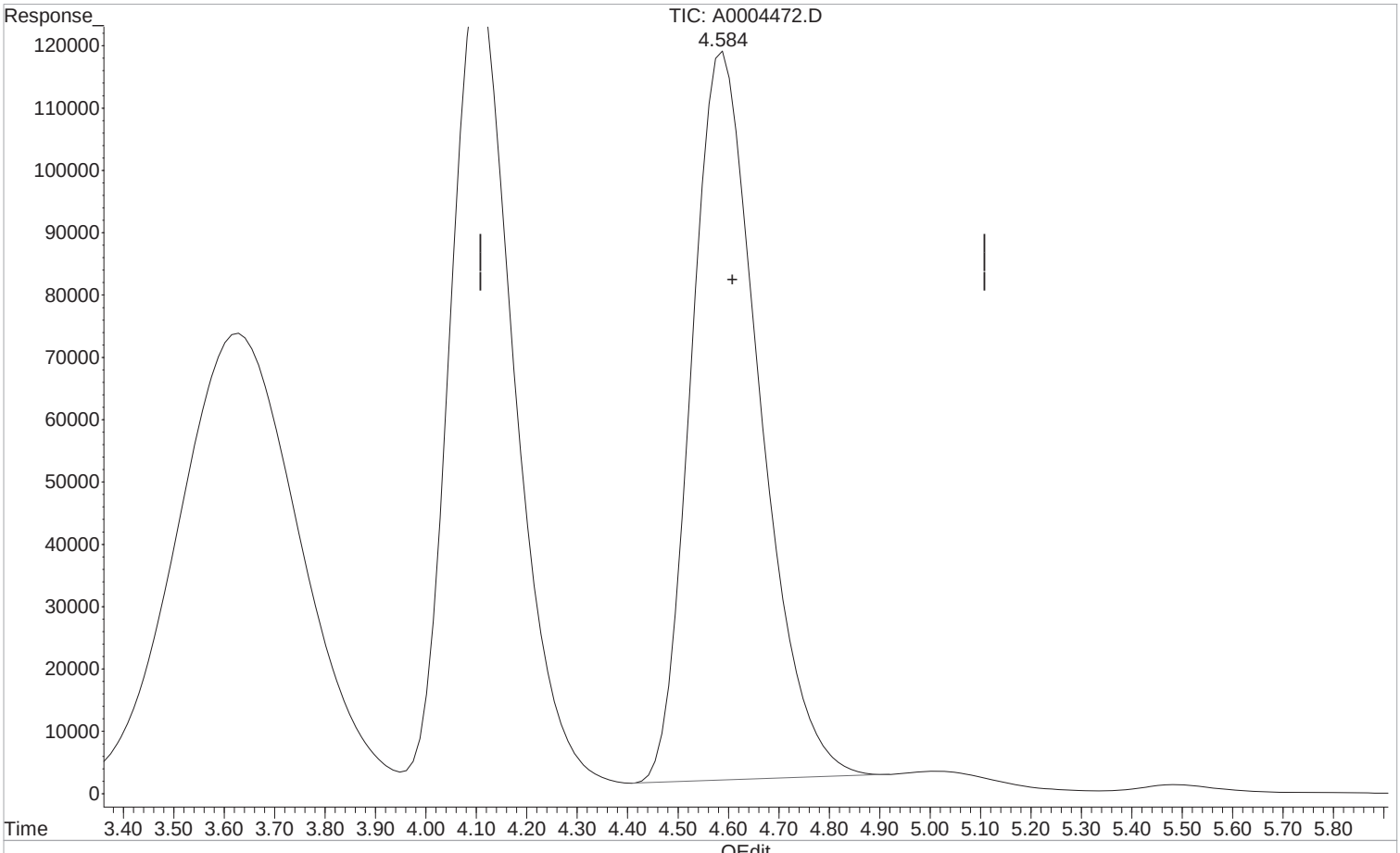
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004472.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 20:00:49
Operator : A.Felser
Sample : STD 8
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.584min 197.987 ppm m

response 11047591

Manual Integration:

After

Poor integration.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

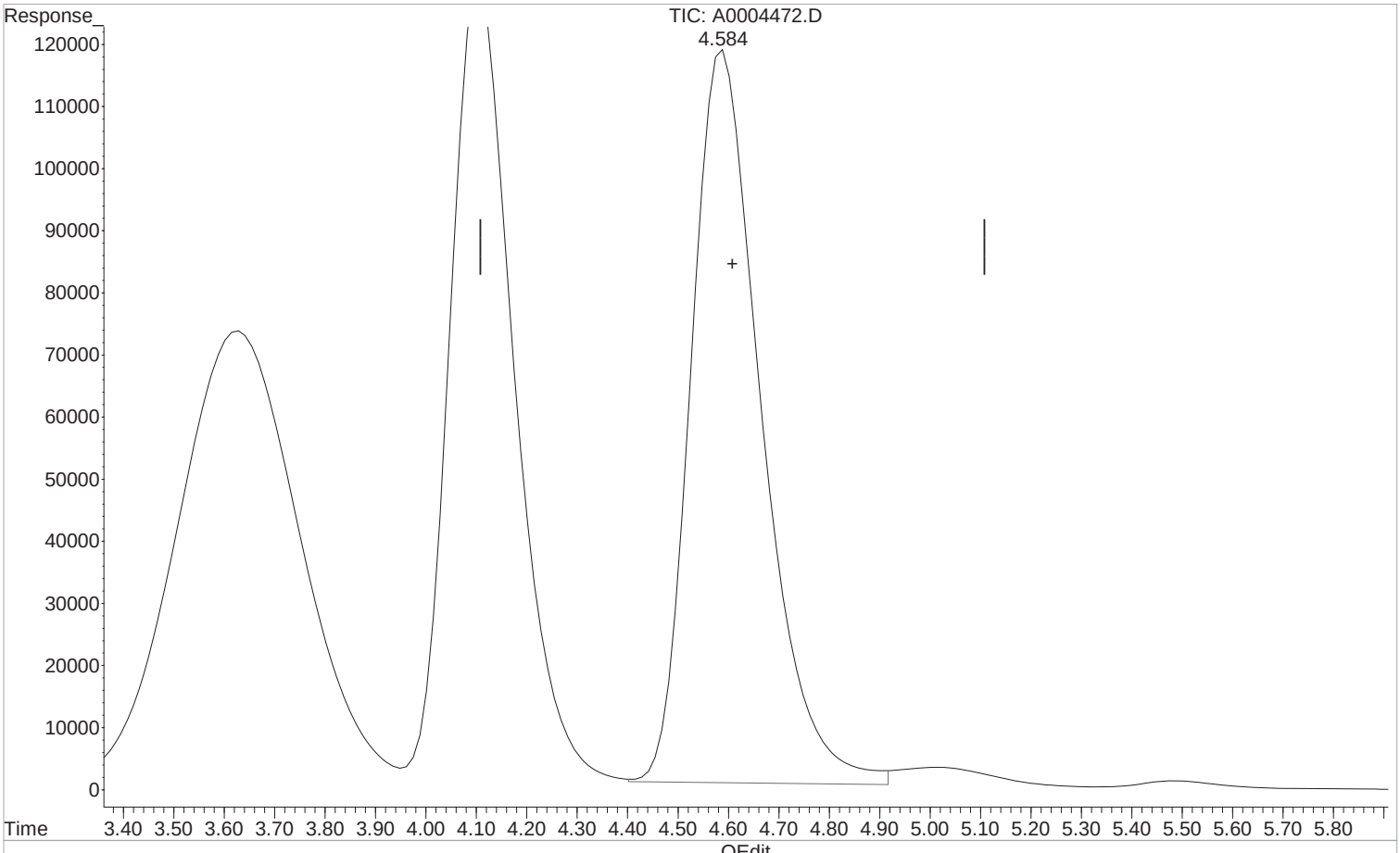
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004472.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 20:00:49
Operator : A.Felser
Sample : STD 8
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.592min 205.148 ppm

response 11447174

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

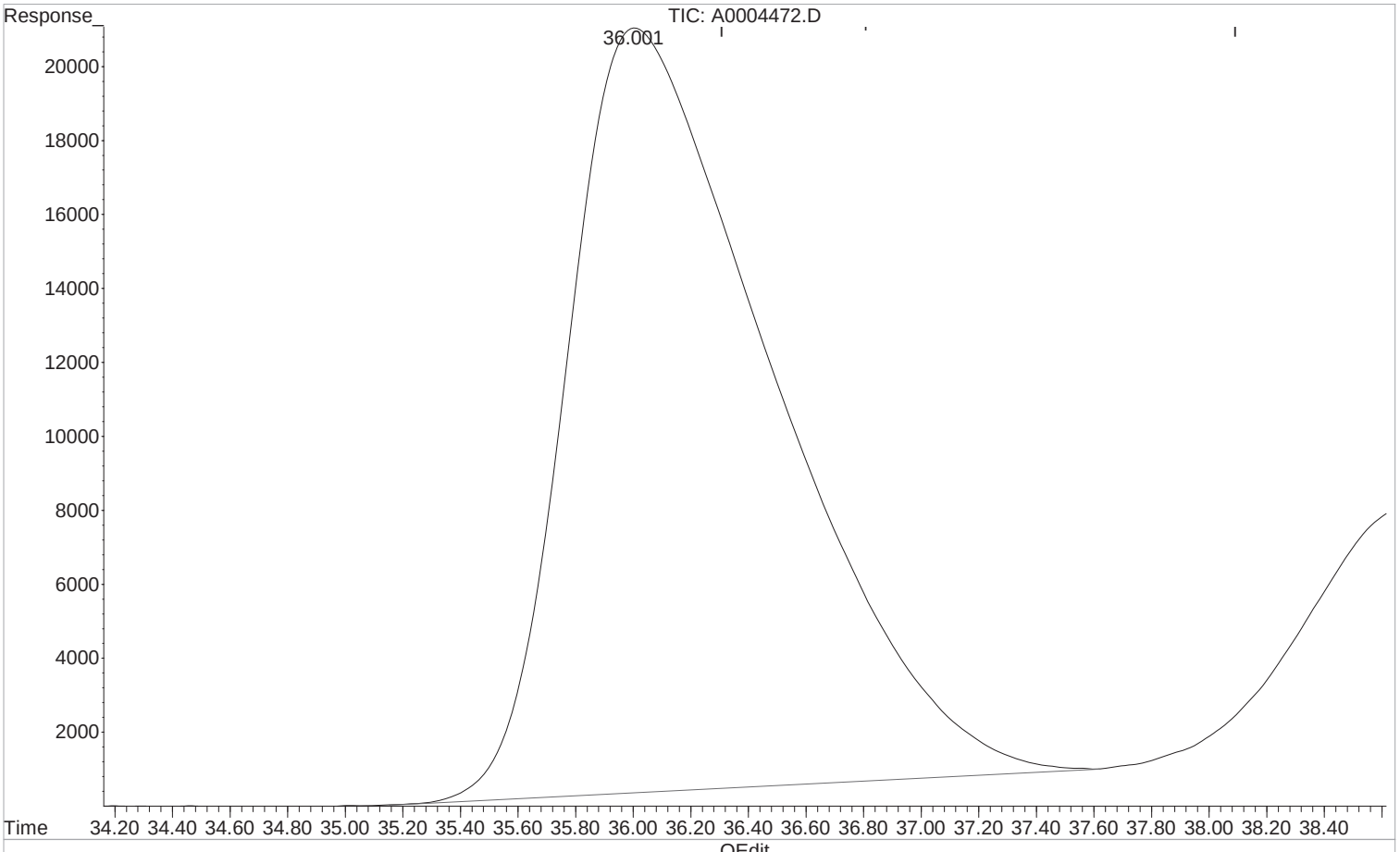
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004472.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 20:00:49
Operator : A.Felser
Sample : STD 8
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

36.001min 196.253 ppm m

response 10326182

Manual Integration:

After

Poor integration.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

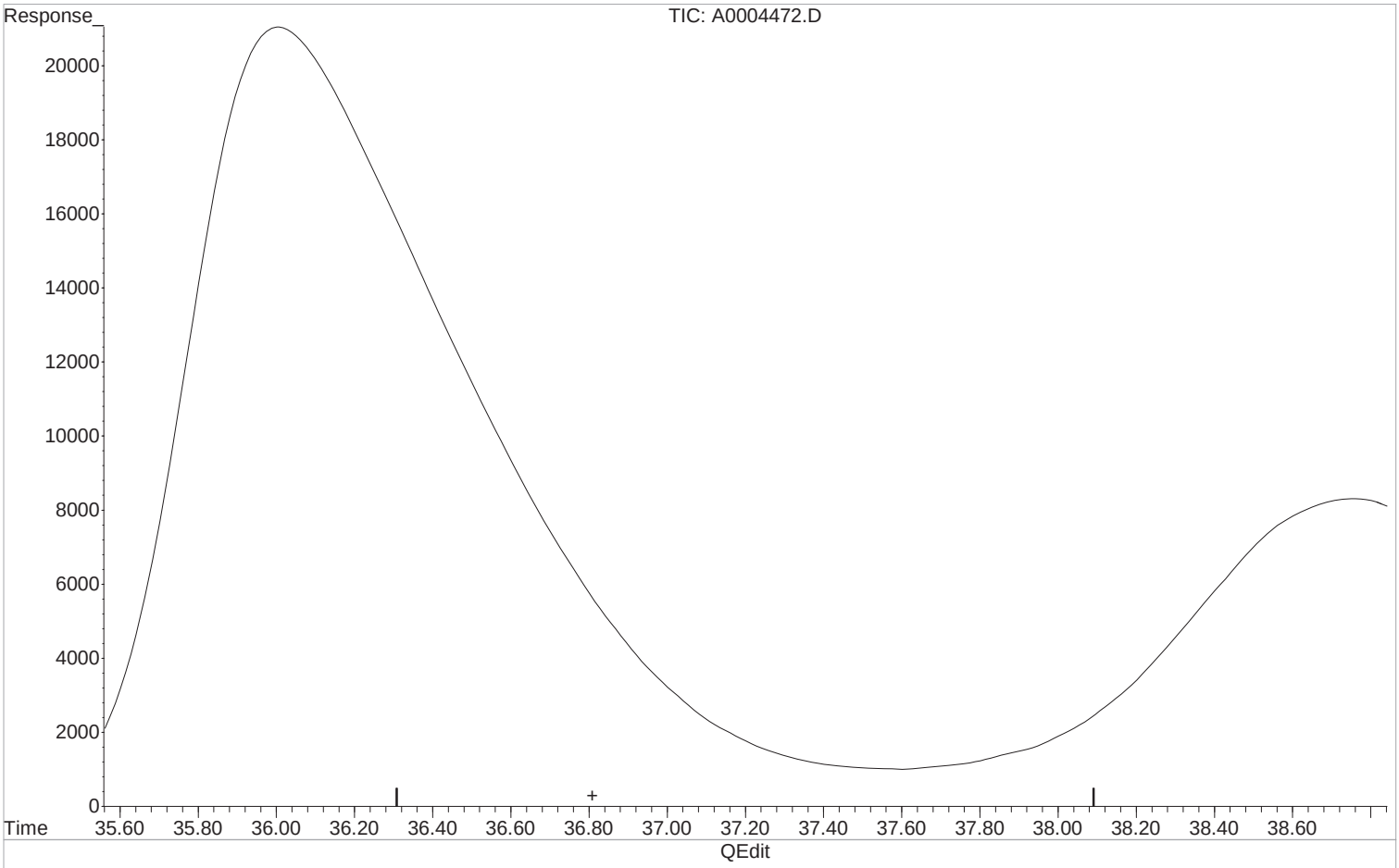
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004472.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 20:00:49
Operator : A.Felser
Sample : STD 8
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

36.808min 0.000 ppm

response 0

Manual Integration:

Before

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

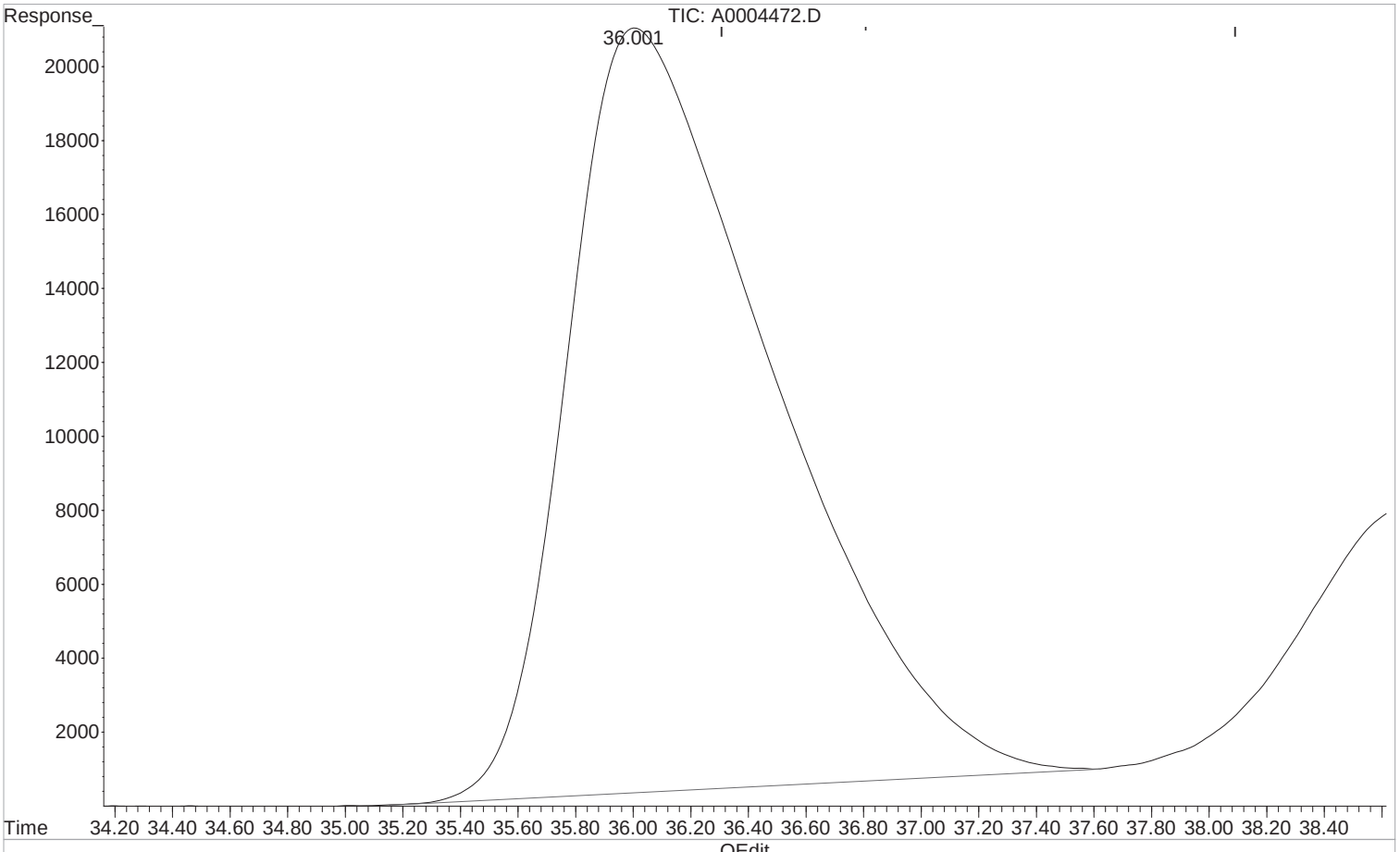
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004472.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 20:00:49
Operator : A.Felser
Sample : STD 8
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

36.001min 196.253 ppm m

response 10326182

Manual Integration:

After

Peak not found.

03/16/20

Expected Retention Time

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: LHAAP / Site 58

Service Request: R2002879
Calibration Date: 12/30/2000

Initial Calibration Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Calibration ID: RC2000053
Instrument ID: R-HPLC-05

Signal ID: 1

#	Lab Code	Sample Name	File Location	Acquisition Date
01	RC2000053-01	STD 1	I:\ACQUDATA\hplc05\data\031220\A0004465.D	03/12/2020 12:39
02	RC2000053-02	STD 2	I:\ACQUDATA\hplc05\data\031220\A0004466.D	03/12/2020 13:42
04	RC2000053-04	STD 4	I:\ACQUDATA\hplc05\data\031220\A0004468.D	03/12/2020 15:48
07	RC2000053-07	STD 7	I:\ACQUDATA\hplc05\data\031220\A0004471.D	03/12/2020 18:57
08	RC2000053-08	STD 8	I:\ACQUDATA\hplc05\data\031220\A0004472.D	03/12/2020 20:00
03	RC2000053-03	STD 3	I:\ACQUDATA\hplc05\data\031220\A0004467.D	12/30/2000 02:48
06	RC2000053-06	STD 6	I:\ACQUDATA\hplc05\data\031220\A0004470.D	12/30/2000 17:47
05	RC2000053-05	STD 5	I:\ACQUDATA\hplc05\data\031220\A0004469.D	12/30/2000 17:48

Analyte

Acetic Acid

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	1	5.521E4	02	2	5.659E4	03	5	5.611E4	04	10	5.731E4
05	20	5.58E4	06	50	5.655E4	07	100	5.558E4	08	200	5.524E4

Butanoic Acid (Butyric Acid)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	1	5.323E4	02	2	5.338E4	03	5	5.087E4	04	10	5.32E4
05	20	5.262E4	06	50	5.313E4	07	100	5.244E4	08	200	5.163E4

Lactic Acid

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	1	6.266E4	02	2	5.467E4	03	5	5.515E4	04	10	5.641E4
05	20	5.54E4	06	50	5.626E4	07	100	5.545E4	08	200	5.532E4

Propionic Acid

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	1	5.153E4	02	2	5.435E4	03	5	5.182E4	04	10	5.598E4
05	20	5.494E4	06	50	5.59E4	07	100	5.536E4	08	200	5.497E4

Pyruvic Acid

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	.1	6.507E5	02	.2	5.665E5	03	.5	5.865E5	04	1	5.943E5
05	2	5.829E5	06	5	5.906E5	07	10	5.807E5	08	20	5.803E5

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: LHAAP / Site 58

Service Request: R2002879
Calibration Date: 12/30/2000

Initial Calibration Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Calibration ID: RC2000053
Instrument ID: R-HPLC-05

Signal ID: 1

		Calibration Evaluation				Calibration Evaluation	
Analyte Name	Compound Type	Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
Acetic Acid	TRG	Average RF	% RSD	1.3	≤	5.605E4	
Butanoic Acid (Butyric Acid)	TRG	Average RF	% RSD	1.7	≤	5.256E4	
Lactic Acid	TRG	Average RF	% RSD	4.6	≤	5.642E4	
Propionic Acid	TRG	Average RF	% RSD	3.2	≤	5.436E4	
Pyruvic Acid	TRG	Average RF	% RSD	4.3	≤	5.916E5	

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: LHAAP / Site 58

Service Request: R2002879
Calibration Date: 12/30/2000

Initial Calibration Verification Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Calibration ID: RC2000053
Instrument ID: R-HPLC-05

Signal ID: 1

#	Lab Code	Sample Name	File Location	Acquisition Date
09	RC2000053-09	ICV	I:\ACQUDATA\hplc05\data\031620\A0004777.D	12/30/2000 00:01

Analyte Name	Expected	Result	Average RF	SSV RF	Rec.	Criteria	Curve Fit
Pyruvic Acid	2.00	1.80	5.916E5	5.334E5	90.0	85-115	Average RF
Acetic Acid	20.0	18.9	5.605E4	5.295E4	94.5	85-115	Average RF
Butanoic Acid (Butyric Acid)	20.0	19.4	5.256E4	5.089E4	97.0	85-115	Average RF
Lactic Acid	20.0	18.8	5.642E4	5.298E4	94.0	85-115	Average RF
Propionic Acid	20.0	20.4	5.436E4	5.533E4	102	85-115	Average RF

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: LHAAP / Site 58/NW01312.0150

Service Request: R2002879
Date Analyzed: 04/09/20 11:29

Continuing Calibration Verification (CCV) Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids
File ID: I:\ACQUDATA\hplc05\data\040920\A0004922.D\
Signal ID: 1

Calibration Date: 12/30/2000
Calibration ID: RC2000053
Analysis Lot: 676686
Units: mg/L

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Pyruvic Acid	5.00	5.48	5.916E5	6.486E5	9.6	NA	±15	Average RF
Acetic Acid	50.0	50.2	5.605E4	5.624E4	0.3	NA	±15	Average RF
Butanoic Acid (Butyric Acid)	50.0	52.1	5.256E4	5.48E4	4.3	NA	±15	Average RF
Lactic Acid	50.0	44.4	5.642E4	5.015E4	-11.1	NA	±15	Average RF
Propionic Acid	50.0	54.4	5.436E4	5.913E4	8.8	NA	±15	Average RF

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: LHAAP / Site 58/NW01312.0150

Service Request: R2002879
Date Analyzed: 04/09/20 20:59

Continuing Calibration Verification (CCV) Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids
File ID: I:\ACQUDATA\hplc05\data\040920\A0004931.D\
Signal ID: 1

Calibration Date: 12/30/2000
Calibration ID: RC2000053
Analysis Lot: 676686
Units: mg/L

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Pyruvic Acid	5.00	5.49	5.916E5	6.495E5	9.8	NA	±15	Average RF
Acetic Acid	50.0	50.2	5.605E4	5.627E4	0.4	NA	±15	Average RF
Butanoic Acid (Butyric Acid)	50.0	51.7	5.256E4	5.436E4	3.4	NA	±15	Average RF
Lactic Acid	50.0	45.0	5.642E4	5.076E4	-10.0	NA	±15	Average RF
Propionic Acid	50.0	53.9	5.436E4	5.852E4	7.7	NA	±15	Average RF

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:**R2002879
Project: LHAAP / Site 58/NW01312.0150

Analysis Run Log
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids **Analysis Lot:**676686
Instrument ID:R-HPLC-05

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
I:\ACQUDATA\hplc05\data\040920\A0004922.D\	Continuing Calibration Verification	RQ2003624-01	12/30/2000	01:47:53	
I:\ACQUDATA\hplc05\data\040920\A0004930.D\	ZZZZZZZ	ZZZZZZZ	12/30/2000	01:47:55	
I:\ACQUDATA\hplc05\data\040920\A0004928.D\	35AWW06_040720 DMS	RQ2003624-06	12/31/2000	02:47:45	
I:\ACQUDATA\hplc05\data\040920\A0004922.D\	Continuing Calibration Verification	RQ2003624-01	4/9/2020	11:29:00	
I:\ACQUDATA\hplc05\data\040920\A0004923.D\	Method Blank	RQ2003624-02	4/9/2020	12:35:28	
I:\ACQUDATA\hplc05\data\040920\A0004924.D\	Lab Control Sample	RQ2003624-03	4/9/2020	13:38:30	
I:\ACQUDATA\hplc05\data\040920\A0004925.D\	Duplicate Lab Control Sample	RQ2003624-04	4/9/2020	14:41:36	
I:\ACQUDATA\hplc05\data\040920\A0004926.D\	35AWW06_040720	R2002879-001	4/9/2020	15:44:31	
I:\ACQUDATA\hplc05\data\040920\A0004927.D\	35AWW06_040720 MS	RQ2003624-05	4/9/2020	16:47:25	
I:\ACQUDATA\hplc05\data\040920\A0004928.D\	35AWW06_040720 DMS	RQ2003624-06	4/9/2020	17:47:00	
I:\ACQUDATA\hplc05\data\040920\A0004930.D\	ZZZZZZZ	ZZZZZZZ	4/9/2020	19:53:00	
I:\ACQUDATA\hplc05\data\040920\A0004931.D\	Continuing Calibration Verification	RQ2003624-07	4/9/2020	20:59:35	

RIGHT SOLUTIONS | RIGHT PARTNER

Analysis: Metabolic Acids Analyst: AGelber Run Method: NEWMETA.M

Date: 04/09/2020 Instr. _HPLC05_ Quant Method: MA031220.M

LIMS Run#: 676686

Setup: Column: Synergi Hydro RP 150x4.6 Col.Temp: 35°C Flow: 0.6ml/min

Mobile Phase: 0.02M KH2PO4 pH 2.1m PO4 ul Inj.: 50

Mobile Phase ID: 0-760-766

Pos.	Sample	Dil'n.	Stds. ID	File#	OK?	Comments
2	BLK			A0004920	—	
2	BLK			21	—	
1	CCV	100µL/1mL	208066	22	Y	
2	MB			23	Y	
3	LCS	100µL/1mL	208621	24	Y	
4	DLCS	↓	↓	25	Y	
5	L2002879-001			26	Y	
6	↓ -001 MS		208621	27	Y	
7	↓ -001 DMS		↓	28	Y	
8	L2002910-001	5		29	N	repeat 8th analysis
9	↓ -001			30	Y	
1	CCV	100µL/1mL	208066	31	Y	

AGelber 04/10/2020

Primary : 208066 exp: 4/30/2020 Secondary : 208621 exp: 9/19/2020

pH Paper: 205502 Acid: 203916

Runlog HPLCr2 3/23/18

RIGHT SOLUTIONS | RIGHT PARTNER

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WorkOrder: HS20061178

LHAAP-58

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

21-Jul-2020

ALS Environmental
ALS Group USA, Corp
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HS20061178 Wet Chem Raw Data (IC)

HS20061178 LHAAP58 Final

ALS WO# HS20061178

10450 Stancliff Rd. Suite 210
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July 13, 2020

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

Work Order: **HS20061178**

Laboratory Results for: **LHAAP-58**

Dear Marcia Olive,

ALS Environmental received 5 sample(s) on Jun 24, 2020 for the analysis presented in the following report.

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

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

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

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 13-Jul-20

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

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20061178-01	35AWW09_062320	Groundwater		23-Jun-2020 10:05	24-Jun-2020 09:30	☐
HS20061178-02	03WW01_062320	Groundwater		23-Jun-2020 11:00	24-Jun-2020 09:30	☐
HS20061178-03	35AWW08_062320	Groundwater		23-Jun-2020 12:05	24-Jun-2020 09:30	☐
HS20061178-04	35AWW11_062320	Groundwater		23-Jun-2020 13:25	24-Jun-2020 09:30	☐
HS20061178-05	Trip Blank	Water	CG-032420-141	23-Jun-2020 00:00	24-Jun-2020 09:30	☐

ALS Houston, US Date: 13-Jul-20

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

CASE NARRATIVE

Work Order Comments

- The analyses for Volatile Fatty Acids were subcontracted to ALS Environmental in Rochester, NY. Final Report attached.

  The analysis for TOC was subcontracted to ALS Environmental in Kelso, WA. Final Report attached.

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

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

  The analyses for DHC/DHB were subcontracted to Microbial Insights in Knoxville, TN. Final Report attached.

GCMS Volatiles by Method SW8260

Batch ID: R364190

Sample ID: 35AWW08_062320 (HS20061178-03)

- Lowest practical dilution for sample Hs20061178-03. Sample is foamy.

Sample ID: VLCSW-200629

- 1,2,4-Trichlorobenzene, 1,2,3-Trichlorobenzene, Hexachlorobutadiene and Naphthalene exceeded QC limits for LCS. Samples are ND for these compounds.

Sample ID: HS20061208-15MS

- MS and MSD were performed on unrelated sample

Batch ID: R364080

Sample ID: 03WW01_062320 (HS20061178-02)

- Lowest practical dilution for sample HS20061178-02. Sample is foamy.

Sample ID: 35AWW11_062320 (HS20061178-04)

- Toluene-d8 (SURR) exceeded QC recovery limits. Sample is ND.

Sample ID: VLCSW-200626

- 1,2,4-Trichlorobenzene, 1,2,3-Trichlorobenzene, Hexachlorobutadiene and Naphthalene exceeded QC limits for LCS. Samples are ND for these compounds.

Sample ID: HS20061206-02MS

- MS and MSD were performed on unrelated sample

Metals by Method SW6020

Batch ID: 154955

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

WetChemistry by Method SW9056

Batch ID: R364313

Sample ID: 03WW01_062320 (HS20061178-02)

ALS Houston, US Date: 13-Jul-20

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

CASE NARRATIVE

WetChemistry by Method SW9056

Batch ID: R364313

- Sample ran at 2X due to high concentration of Chloride

Sample ID: 35AWW08_062320 (HS20061178-03)

- Sample ran at 2X due to high concentration of Chloride

Batch ID: R364738

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

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW09_062320
Collection Date: 23-Jun-2020 10:05

ANALYTICAL REPORT
WorkOrder:HS20061178
Lab ID:HS20061178-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 17:32
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 17:32
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	26-Jun-2020 17:32
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 17:32
1,1-Dichloroethane	**0.77**	J	**0.20**	**0.50**	**1.0**	**UG/L**	1	26-Jun-2020 17:32
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 17:32
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 17:32
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	26-Jun-2020 17:32
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	26-Jun-2020 17:32
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	26-Jun-2020 17:32
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 17:32
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 17:32
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 17:32
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	26-Jun-2020 17:32
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 17:32
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	26-Jun-2020 17:32
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 17:32
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	26-Jun-2020 17:32
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 17:32
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	26-Jun-2020 17:32
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 17:32
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	26-Jun-2020 17:32
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 17:32
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	26-Jun-2020 17:32
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	26-Jun-2020 17:32
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 17:32
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	26-Jun-2020 17:32
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	26-Jun-2020 17:32
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 17:32
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	26-Jun-2020 17:32
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 17:32
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 17:32
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	26-Jun-2020 17:32
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	26-Jun-2020 17:32
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	26-Jun-2020 17:32
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	26-Jun-2020 17:32
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 17:32
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 17:32
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 17:32

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

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW09_062320
Collection Date: 23-Jun-2020 10:05

ANALYTICAL REPORT
WorkOrder:HS20061178
Lab ID:HS20061178-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 17:32
cis-1,2-Dichloroethene	**1.1**		**0.20**	**0.50**	**1.0**	**UG/L**	1	26-Jun-2020 17:32
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	26-Jun-2020 17:32
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 17:32
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 17:32
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 17:32
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 17:32
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	26-Jun-2020 17:32
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 17:32
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	26-Jun-2020 17:32
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	26-Jun-2020 17:32
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	26-Jun-2020 17:32
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 17:32
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 17:32
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 17:32
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 17:32
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 17:32
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 17:32
Tetrachloroethene	**440**		**6.0**	**20**	**20**	**UG/L**	20	26-Jun-2020 18:43
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 17:32
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 17:32
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 17:32
Trichloroethene	**140**		**0.20**	**0.50**	**1.0**	**UG/L**	1	26-Jun-2020 17:32
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 17:32
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 17:32
Surr: 1,2-Dichloroethane-d4	*90.0*			**0**	*81-118*	*%REC*	*1*	*26-Jun-2020 17:32*
Surr: 1,2-Dichloroethane-d4	*108*			**0**	*81-118*	*%REC*	*20*	*26-Jun-2020 18:43*
Surr: 4-Bromofluorobenzene	*95.9*			**0**	*85-114*	*%REC*	*1*	*26-Jun-2020 17:32*
Surr: 4-Bromofluorobenzene	*109*			**0**	*85-114*	*%REC*	*20*	*26-Jun-2020 18:43*
Surr: Dibromofluoromethane	*91.2*			**0**	*80-119*	*%REC*	*1*	*26-Jun-2020 17:32*
Surr: Dibromofluoromethane	*107*			**0**	*80-119*	*%REC*	*20*	*26-Jun-2020 18:43*
Surr: Toluene-d8	*112*			**0**	*89-112*	*%REC*	*20*	*26-Jun-2020 18:43*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*1*	*26-Jun-2020 17:32*
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 29-Jun-2020		Analyst: JHD
Arsenic	0.000500	U	0.000400	0.000500	0.00500	mg/L	1	02-Jul-2020 12:54

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

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW09_062320
Collection Date: 23-Jun-2020 10:05

ANALYTICAL REPORT
WorkOrder:HS20061178
Lab ID:HS20061178-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Chloride	**1,490**		**10.0**	**25.0**	**25.0**	**mg/L**	50	08-Jul-2020 03:48
Nitrogen, Nitrate (As N)	0.100	U	0.0300	0.100	0.100	mg/L	1	25-Jun-2020 04:40
Nitrogen, Nitrite (As N)	0.100	U	0.0300	0.100	0.100	mg/L	1	25-Jun-2020 04:40
Sulfate	**1,060**		**10.0**	**25.0**	**25.0**	**mg/L**	50	08-Jul-2020 03:48
SUBCONTRACT ANALYSIS - RSK		**Method:NA**						Analyst: SUBCA
Subcontract Analysis	See Attached		0	0		NA	1	09-Jul-2020 10:18
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	13-Jul-2020 09:42

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

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 03WW01_062320
Collection Date: 23-Jun-2020 11:00

ANALYTICAL REPORT
WorkOrder:HS20061178
Lab ID:HS20061178-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	5.0	U	1.5	5.0	5.0	UG/L	5	26-Jun-2020 20:43
1,1,1-Trichloroethane	2.5	U	1.0	2.5	5.0	UG/L	5	26-Jun-2020 20:43
1,1,2,2-Tetrachloroethane	5.0	U	2.5	5.0	5.0	UG/L	5	26-Jun-2020 20:43
1,1,2-Trichloroethane	5.0	U	1.5	5.0	5.0	UG/L	5	26-Jun-2020 20:43
1,1-Dichloroethane	2.5	U	1.0	2.5	5.0	UG/L	5	26-Jun-2020 20:43
1,1-Dichloroethene	2.5	U	1.0	2.5	5.0	UG/L	5	26-Jun-2020 20:43
1,1-Dichloropropene	5.0	U	1.5	5.0	5.0	UG/L	5	26-Jun-2020 20:43
1,2,3-Trichlorobenzene	5.0	U	2.0	5.0	5.0	UG/L	5	26-Jun-2020 20:43
1,2,3-Trichloropropane	5.0	U	2.5	5.0	5.0	UG/L	5	26-Jun-2020 20:43
1,2,4-Trichlorobenzene	5.0	U	2.5	5.0	5.0	UG/L	5	26-Jun-2020 20:43
1,2,4-Trimethylbenzene	5.0	U	1.5	5.0	5.0	UG/L	5	26-Jun-2020 20:43
1,2-Dibromo-3-chloropropane	2.5	U	1.0	2.5	5.0	UG/L	5	26-Jun-2020 20:43
1,2-Dibromoethane	2.5	U	1.0	2.5	5.0	UG/L	5	26-Jun-2020 20:43
1,2-Dichlorobenzene	5.0	U	2.5	5.0	5.0	UG/L	5	26-Jun-2020 20:43
1,2-Dichloroethane	2.5	U	1.0	2.5	5.0	UG/L	5	26-Jun-2020 20:43
1,2-Dichloropropane	5.0	U	2.5	5.0	5.0	UG/L	5	26-Jun-2020 20:43
1,3,5-Trimethylbenzene	5.0	U	1.5	5.0	5.0	UG/L	5	26-Jun-2020 20:43
1,3-Dichlorobenzene	5.0	U	2.0	5.0	5.0	UG/L	5	26-Jun-2020 20:43
1,3-Dichloropropane	5.0	U	1.5	5.0	5.0	UG/L	5	26-Jun-2020 20:43
1,4-Dichlorobenzene	5.0	U	2.0	5.0	5.0	UG/L	5	26-Jun-2020 20:43
2,2-Dichloropropane	2.5	U	1.0	2.5	5.0	UG/L	5	26-Jun-2020 20:43
2-Butanone	5.0	U	2.5	5.0	10	UG/L	5	26-Jun-2020 20:43
2-Chlorotoluene	5.0	U	1.5	5.0	5.0	UG/L	5	26-Jun-2020 20:43
2-Hexanone	10	U	5.0	10	10	UG/L	5	26-Jun-2020 20:43
4-Chlorotoluene	5.0	U	2.0	5.0	5.0	UG/L	5	26-Jun-2020 20:43
4-Isopropyltoluene	5.0	U	1.5	5.0	5.0	UG/L	5	26-Jun-2020 20:43
4-Methyl-2-pentanone	10	U	3.5	10	10	UG/L	5	26-Jun-2020 20:43
Acetone	5.0	U	2.0	5.0	10	UG/L	5	26-Jun-2020 20:43
Benzene	2.5	U	1.0	2.5	5.0	UG/L	5	26-Jun-2020 20:43
Bromobenzene	5.0	U	2.0	5.0	5.0	UG/L	5	26-Jun-2020 20:43
Bromochloromethane	2.5	U	1.0	2.5	5.0	UG/L	5	26-Jun-2020 20:43
Bromodichloromethane	2.5	U	1.0	2.5	5.0	UG/L	5	26-Jun-2020 20:43
Bromoform	5.0	U	2.0	5.0	5.0	UG/L	5	26-Jun-2020 20:43
Bromomethane	5.0	U	2.0	5.0	5.0	UG/L	5	26-Jun-2020 20:43
Carbon disulfide	5.0	U	3.0	5.0	10	UG/L	5	26-Jun-2020 20:43
Carbon tetrachloride	5.0	U	2.5	5.0	5.0	UG/L	5	26-Jun-2020 20:43
Chlorobenzene	5.0	U	1.5	5.0	5.0	UG/L	5	26-Jun-2020 20:43
Chloroethane	5.0	U	1.5	5.0	5.0	UG/L	5	26-Jun-2020 20:43
Chloroform	2.5	U	1.0	2.5	5.0	UG/L	5	26-Jun-2020 20:43

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

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 03WW01_062320
Collection Date: 23-Jun-2020 11:00

ANALYTICAL REPORT
WorkOrder:HS20061178
Lab ID:HS20061178-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	2.5	U	1.0	2.5	5.0	UG/L	5	26-Jun-2020 20:43
cis-1,2-Dichloroethene	**17**		**1.0**	**2.5**	**5.0**	**UG/L**	5	26-Jun-2020 20:43
cis-1,3-Dichloropropene	2.5	U	0.50	2.5	5.0	UG/L	5	26-Jun-2020 20:43
Dibromochloromethane	5.0	U	1.5	5.0	5.0	UG/L	5	26-Jun-2020 20:43
Dibromomethane	2.5	U	1.0	2.5	5.0	UG/L	5	26-Jun-2020 20:43
Dichlorodifluoromethane	5.0	U	1.5	5.0	5.0	UG/L	5	26-Jun-2020 20:43
Ethylbenzene	5.0	U	1.5	5.0	5.0	UG/L	5	26-Jun-2020 20:43
Hexachlorobutadiene	5.0	U	5.0	5.0	5.0	UG/L	5	26-Jun-2020 20:43
Isopropylbenzene	5.0	U	1.5	5.0	5.0	UG/L	5	26-Jun-2020 20:43
m,p-Xylene	5.0	U	2.5	5.0	10	UG/L	5	26-Jun-2020 20:43
Methylene chloride	5.0	U	2.0	5.0	10	UG/L	5	26-Jun-2020 20:43
n-Butylbenzene	5.0	U	2.0	5.0	5.0	UG/L	5	26-Jun-2020 20:43
n-Propylbenzene	5.0	U	1.5	5.0	5.0	UG/L	5	26-Jun-2020 20:43
Naphthalene	5.0	U	1.5	5.0	5.0	UG/L	5	26-Jun-2020 20:43
o-Xylene	5.0	U	1.5	5.0	5.0	UG/L	5	26-Jun-2020 20:43
sec-Butylbenzene	5.0	U	1.5	5.0	5.0	UG/L	5	26-Jun-2020 20:43
Styrene	5.0	U	1.5	5.0	5.0	UG/L	5	26-Jun-2020 20:43
tert-Butylbenzene	5.0	U	1.5	5.0	5.0	UG/L	5	26-Jun-2020 20:43
Tetrachloroethene	**4.5**	J	**1.5**	**5.0**	**5.0**	**UG/L**	5	26-Jun-2020 20:43
Toluene	2.5	U	1.0	2.5	5.0	UG/L	5	26-Jun-2020 20:43
trans-1,2-Dichloroethene	2.5	U	1.0	2.5	5.0	UG/L	5	26-Jun-2020 20:43
trans-1,3-Dichloropropene	2.5	U	1.0	2.5	5.0	UG/L	5	26-Jun-2020 20:43
Trichloroethene	**4.5**	J	**1.0**	**2.5**	**5.0**	**UG/L**	5	26-Jun-2020 20:43
Trichlorofluoromethane	5.0	U	1.5	5.0	5.0	UG/L	5	26-Jun-2020 20:43
Vinyl chloride	**7.2**		**1.0**	**2.5**	**5.0**	**UG/L**	5	26-Jun-2020 20:43
Surr: 1,2-Dichloroethane-d4	*106*			**0**	*81-118*	*%REC*	*5*	*26-Jun-2020 20:43*
Surr: 4-Bromofluorobenzene	*106*			**0**	*85-114*	*%REC*	*5*	*26-Jun-2020 20:43*
Surr: Dibromofluoromethane	*105*			**0**	*80-119*	*%REC*	*5*	*26-Jun-2020 20:43*
Surr: Toluene-d8	*109*			**0**	*89-112*	*%REC*	*5*	*26-Jun-2020 20:43*
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 29-Jun-2020		Analyst: JHD
Arsenic	**0.00936**		**0.000400**	**0.000500**	**0.00500**	**mg/L**	1	02-Jul-2020 12:56
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Chloride	**965**		**2.00**	**5.00**	**5.00**	**mg/L**	10	08-Jul-2020 04:06
Nitrogen, Nitrate (As N)	0.200	U	0.0600	0.200	0.200	mg/L	2	25-Jun-2020 04:58
Nitrogen, Nitrite (As N)	0.200	U	0.0600	0.200	0.200	mg/L	2	25-Jun-2020 04:58
Sulfate	**231**		**2.00**	**5.00**	**5.00**	**mg/L**	10	08-Jul-2020 04:06
SUBCONTRACT ANALYSIS - DHC/DHB		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	01-Jul-2020 12:17

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

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 03WW01_062320
Collection Date: 23-Jun-2020 11:00

ANALYTICAL REPORT
WorkOrder:HS20061178
Lab ID:HS20061178-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - RSK		**Method:NA**						Analyst: SUBCA
Subcontract Analysis	See Attached		0	0		NA	1	09-Jul-2020 10:18
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	13-Jul-2020 09:42
SUBCONTRACT ANALYSIS - VOLATILE FATTY ACIDS		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	09-Jul-2020 10:22

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

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW08_062320
Collection Date: 23-Jun-2020 12:05

ANALYTICAL REPORT
WorkOrder:HS20061178
Lab ID:HS20061178-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	5.0	U	1.5	5.0	5.0	UG/L	5	29-Jun-2020 15:38
1,1,1-Trichloroethane	2.5	U	1.0	2.5	5.0	UG/L	5	29-Jun-2020 15:38
1,1,2,2-Tetrachloroethane	5.0	U	2.5	5.0	5.0	UG/L	5	29-Jun-2020 15:38
1,1,2-Trichloroethane	5.0	U	1.5	5.0	5.0	UG/L	5	29-Jun-2020 15:38
1,1-Dichloroethane	2.5	U	1.0	2.5	5.0	UG/L	5	29-Jun-2020 15:38
1,1-Dichloroethene	2.5	U	1.0	2.5	5.0	UG/L	5	29-Jun-2020 15:38
1,1-Dichloropropene	5.0	U	1.5	5.0	5.0	UG/L	5	29-Jun-2020 15:38
1,2,3-Trichlorobenzene	5.0	U	2.0	5.0	5.0	UG/L	5	29-Jun-2020 15:38
1,2,3-Trichloropropane	5.0	U	2.5	5.0	5.0	UG/L	5	29-Jun-2020 15:38
1,2,4-Trichlorobenzene	5.0	U	2.5	5.0	5.0	UG/L	5	29-Jun-2020 15:38
1,2,4-Trimethylbenzene	5.0	U	1.5	5.0	5.0	UG/L	5	29-Jun-2020 15:38
1,2-Dibromo-3-chloropropane	2.5	U	1.0	2.5	5.0	UG/L	5	29-Jun-2020 15:38
1,2-Dibromoethane	2.5	U	1.0	2.5	5.0	UG/L	5	29-Jun-2020 15:38
1,2-Dichlorobenzene	5.0	U	2.5	5.0	5.0	UG/L	5	29-Jun-2020 15:38
1,2-Dichloroethane	2.5	U	1.0	2.5	5.0	UG/L	5	29-Jun-2020 15:38
1,2-Dichloropropane	5.0	U	2.5	5.0	5.0	UG/L	5	29-Jun-2020 15:38
1,3,5-Trimethylbenzene	5.0	U	1.5	5.0	5.0	UG/L	5	29-Jun-2020 15:38
1,3-Dichlorobenzene	5.0	U	2.0	5.0	5.0	UG/L	5	29-Jun-2020 15:38
1,3-Dichloropropane	5.0	U	1.5	5.0	5.0	UG/L	5	29-Jun-2020 15:38
1,4-Dichlorobenzene	5.0	U	2.0	5.0	5.0	UG/L	5	29-Jun-2020 15:38
2,2-Dichloropropane	2.5	U	1.0	2.5	5.0	UG/L	5	29-Jun-2020 15:38
2-Butanone	5.0	U	2.5	5.0	10	UG/L	5	29-Jun-2020 15:38
2-Chlorotoluene	5.0	U	1.5	5.0	5.0	UG/L	5	29-Jun-2020 15:38
2-Hexanone	10	U	5.0	10	10	UG/L	5	29-Jun-2020 15:38
4-Chlorotoluene	5.0	U	2.0	5.0	5.0	UG/L	5	29-Jun-2020 15:38
4-Isopropyltoluene	5.0	U	1.5	5.0	5.0	UG/L	5	29-Jun-2020 15:38
4-Methyl-2-pentanone	10	U	3.5	10	10	UG/L	5	29-Jun-2020 15:38
Acetone	**54**		**2.0**	**5.0**	**10**	**UG/L**	5	29-Jun-2020 15:38
Benzene	2.5	U	1.0	2.5	5.0	UG/L	5	29-Jun-2020 15:38
Bromobenzene	5.0	U	2.0	5.0	5.0	UG/L	5	29-Jun-2020 15:38
Bromochloromethane	2.5	U	1.0	2.5	5.0	UG/L	5	29-Jun-2020 15:38
Bromodichloromethane	2.5	U	1.0	2.5	5.0	UG/L	5	29-Jun-2020 15:38
Bromoform	5.0	U	2.0	5.0	5.0	UG/L	5	29-Jun-2020 15:38
Bromomethane	5.0	U	2.0	5.0	5.0	UG/L	5	29-Jun-2020 15:38
Carbon disulfide	5.0	U	3.0	5.0	10	UG/L	5	29-Jun-2020 15:38
Carbon tetrachloride	5.0	U	2.5	5.0	5.0	UG/L	5	29-Jun-2020 15:38
Chlorobenzene	5.0	U	1.5	5.0	5.0	UG/L	5	29-Jun-2020 15:38
Chloroethane	5.0	U	1.5	5.0	5.0	UG/L	5	29-Jun-2020 15:38
Chloroform	2.5	U	1.0	2.5	5.0	UG/L	5	29-Jun-2020 15:38

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

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW08_062320
Collection Date: 23-Jun-2020 12:05

ANALYTICAL REPORT
WorkOrder:HS20061178
Lab ID:HS20061178-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	2.5	U	1.0	2.5	5.0	UG/L	5	29-Jun-2020 15:38
cis-1,2-Dichloroethene	**7.3**		**1.0**	**2.5**	**5.0**	**UG/L**	5	29-Jun-2020 15:38
cis-1,3-Dichloropropene	2.5	U	0.50	2.5	5.0	UG/L	5	29-Jun-2020 15:38
Dibromochloromethane	5.0	U	1.5	5.0	5.0	UG/L	5	29-Jun-2020 15:38
Dibromomethane	2.5	U	1.0	2.5	5.0	UG/L	5	29-Jun-2020 15:38
Dichlorodifluoromethane	5.0	U	1.5	5.0	5.0	UG/L	5	29-Jun-2020 15:38
Ethylbenzene	5.0	U	1.5	5.0	5.0	UG/L	5	29-Jun-2020 15:38
Hexachlorobutadiene	5.0	U	5.0	5.0	5.0	UG/L	5	29-Jun-2020 15:38
Isopropylbenzene	5.0	U	1.5	5.0	5.0	UG/L	5	29-Jun-2020 15:38
m,p-Xylene	5.0	U	2.5	5.0	10	UG/L	5	29-Jun-2020 15:38
Methylene chloride	5.0	U	2.0	5.0	10	UG/L	5	29-Jun-2020 15:38
n-Butylbenzene	5.0	U	2.0	5.0	5.0	UG/L	5	29-Jun-2020 15:38
n-Propylbenzene	5.0	U	1.5	5.0	5.0	UG/L	5	29-Jun-2020 15:38
Naphthalene	5.0	U	1.5	5.0	5.0	UG/L	5	29-Jun-2020 15:38
o-Xylene	5.0	U	1.5	5.0	5.0	UG/L	5	29-Jun-2020 15:38
sec-Butylbenzene	5.0	U	1.5	5.0	5.0	UG/L	5	29-Jun-2020 15:38
Styrene	5.0	U	1.5	5.0	5.0	UG/L	5	29-Jun-2020 15:38
tert-Butylbenzene	5.0	U	1.5	5.0	5.0	UG/L	5	29-Jun-2020 15:38
Tetrachloroethene	**6.7**		**1.5**	**5.0**	**5.0**	**UG/L**	5	29-Jun-2020 15:38
Toluene	2.5	U	1.0	2.5	5.0	UG/L	5	29-Jun-2020 15:38
trans-1,2-Dichloroethene	**4.5**	J	**1.0**	**2.5**	**5.0**	**UG/L**	5	29-Jun-2020 15:38
trans-1,3-Dichloropropene	2.5	U	1.0	2.5	5.0	UG/L	5	29-Jun-2020 15:38
Trichloroethene	**17**		**1.0**	**2.5**	**5.0**	**UG/L**	5	29-Jun-2020 15:38
Trichlorofluoromethane	5.0	U	1.5	5.0	5.0	UG/L	5	29-Jun-2020 15:38
Vinyl chloride	2.5	U	1.0	2.5	5.0	UG/L	5	29-Jun-2020 15:38
Surr: 1,2-Dichloroethane-d4	*87.8*			**0**	*81-118*	*%REC*	*5*	*29-Jun-2020 15:38*
Surr: 4-Bromofluorobenzene	*90.9*			**0**	*85-114*	*%REC*	*5*	*29-Jun-2020 15:38*
Surr: Dibromofluoromethane	*89.2*			**0**	*80-119*	*%REC*	*5*	*29-Jun-2020 15:38*
Surr: Toluene-d8	*94.2*			**0**	*89-112*	*%REC*	*5*	*29-Jun-2020 15:38*
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 29-Jun-2020		Analyst: JHD
Arsenic	**0.0210**		**0.000800**	**0.00100**	**0.0100**	**mg/L**	2	02-Jul-2020 12:58
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Chloride	**2,510**		**20.0**	**50.0**	**50.0**	**mg/L**	100	08-Jul-2020 04:42
Nitrogen, Nitrate (As N)	0.200	U	0.0600	0.200	0.200	mg/L	2	25-Jun-2020 05:16
Nitrogen, Nitrite (As N)	0.200	U	0.0600	0.200	0.200	mg/L	2	25-Jun-2020 05:16
Sulfate	**15.5**		**0.400**	**1.00**	**1.00**	**mg/L**	2	25-Jun-2020 05:16
SUBCONTRACT ANALYSIS - DHC/DHB		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	01-Jul-2020 12:17

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

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW08_062320
Collection Date: 23-Jun-2020 12:05

ANALYTICAL REPORT
WorkOrder:HS20061178
Lab ID:HS20061178-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - RSK		**Method:NA**						Analyst: SUBCA
Subcontract Analysis	See Attached		0	0		NA	1	09-Jul-2020 10:18
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	13-Jul-2020 09:42
SUBCONTRACT ANALYSIS - VOLATILE FATTY ACIDS		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	09-Jul-2020 10:22

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

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW11_062320
Collection Date: 23-Jun-2020 13:25

ANALYTICAL REPORT
WorkOrder:HS20061178
Lab ID:HS20061178-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 20:19
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 20:19
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	26-Jun-2020 20:19
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 20:19
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 20:19
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 20:19
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 20:19
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	26-Jun-2020 20:19
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	26-Jun-2020 20:19
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	26-Jun-2020 20:19
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 20:19
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 20:19
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 20:19
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	26-Jun-2020 20:19
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 20:19
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	26-Jun-2020 20:19
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 20:19
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	26-Jun-2020 20:19
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 20:19
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	26-Jun-2020 20:19
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 20:19
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	26-Jun-2020 20:19
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 20:19
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	26-Jun-2020 20:19
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	26-Jun-2020 20:19
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 20:19
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	26-Jun-2020 20:19
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	26-Jun-2020 20:19
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 20:19
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	26-Jun-2020 20:19
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 20:19
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 20:19
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	26-Jun-2020 20:19
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	26-Jun-2020 20:19
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	26-Jun-2020 20:19
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	26-Jun-2020 20:19
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 20:19
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 20:19
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 20:19

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

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW11_062320
Collection Date: 23-Jun-2020 13:25

ANALYTICAL REPORT
WorkOrder:HS20061178
Lab ID:HS20061178-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 20:19
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 20:19
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	26-Jun-2020 20:19
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 20:19
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 20:19
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 20:19
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 20:19
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	26-Jun-2020 20:19
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 20:19
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	26-Jun-2020 20:19
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	26-Jun-2020 20:19
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	26-Jun-2020 20:19
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 20:19
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 20:19
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 20:19
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 20:19
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 20:19
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 20:19
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 20:19
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 20:19
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 20:19
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 20:19
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 20:19
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 20:19
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 20:19
Surr: 1,2-Dichloroethane-d4	*98.1*			**0**	*81-118*	*%REC*	*1*	*26-Jun-2020 20:19*
Surr: 4-Bromofluorobenzene	*105*			**0**	*85-114*	*%REC*	*1*	*26-Jun-2020 20:19*
Surr: Dibromofluoromethane	*98.9*			**0**	*80-119*	*%REC*	*1*	*26-Jun-2020 20:19*
Surr: Toluene-d8	*113*	*S*		**0**	*89-112*	*%REC*	*1*	*26-Jun-2020 20:19*
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Chloride	**2,040**		**20.0**	**50.0**	**50.0**	**mg/L**	100	08-Jul-2020 05:18
Nitrogen, Nitrate (As N)	0.100	U	0.0300	0.100	0.100	mg/L	1	25-Jun-2020 05:34
Nitrogen, Nitrite (As N)	0.100	U	0.0300	0.100	0.100	mg/L	1	25-Jun-2020 05:34
Sulfate	**416**		**2.00**	**5.00**	**5.00**	**mg/L**	10	08-Jul-2020 05:00
SUBCONTRACT ANALYSIS - DHC/DHB		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	01-Jul-2020 12:17
SUBCONTRACT ANALYSIS - RSK		**Method:NA**						Analyst: SUBCA
Subcontract Analysis	See Attached		0	0		NA	1	09-Jul-2020 10:18

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

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW11_062320
Collection Date: 23-Jun-2020 13:25

ANALYTICAL REPORT
WorkOrder:HS20061178
Lab ID:HS20061178-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	13-Jul-2020 09:42
SUBCONTRACT ANALYSIS - VOLATILE FATTY ACIDS		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	09-Jul-2020 10:22

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

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: Trip Blank
Collection Date: 23-Jun-2020 00:00

ANALYTICAL REPORT
WorkOrder:HS20061178
Lab ID:HS20061178-05
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	26-Jun-2020 19:31
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 19:31
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	26-Jun-2020 19:31
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 19:31
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 19:31
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 19:31
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 19:31
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	26-Jun-2020 19:31
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	26-Jun-2020 19:31
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	26-Jun-2020 19:31
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 19:31
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 19:31
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 19:31
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	26-Jun-2020 19:31
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 19:31
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	26-Jun-2020 19:31
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 19:31
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	26-Jun-2020 19:31
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 19:31
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	26-Jun-2020 19:31
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 19:31
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	26-Jun-2020 19:31
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 19:31
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	26-Jun-2020 19:31
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	26-Jun-2020 19:31
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 19:31
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	26-Jun-2020 19:31
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	26-Jun-2020 19:31
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 19:31
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	26-Jun-2020 19:31
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 19:31
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 19:31
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	26-Jun-2020 19:31
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	26-Jun-2020 19:31
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	26-Jun-2020 19:31
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	26-Jun-2020 19:31
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 19:31
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 19:31
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 19:31

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

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: Trip Blank
Collection Date: 23-Jun-2020 00:00

ANALYTICAL REPORT
WorkOrder:HS20061178
Lab ID:HS20061178-05
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	26-Jun-2020 19:31
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 19:31
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	26-Jun-2020 19:31
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 19:31
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 19:31
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 19:31
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 19:31
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	26-Jun-2020 19:31
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 19:31
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	26-Jun-2020 19:31
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	26-Jun-2020 19:31
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	26-Jun-2020 19:31
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 19:31
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 19:31
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 19:31
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 19:31
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 19:31
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 19:31
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 19:31
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 19:31
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 19:31
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 19:31
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 19:31
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	26-Jun-2020 19:31
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	26-Jun-2020 19:31
Surr: 1,2-Dichloroethane-d4	*100*			**0**	*81-118*	*%REC*	*1*	*26-Jun-2020 19:31*
Surr: 4-Bromofluorobenzene	*103*			**0**	*85-114*	*%REC*	*1*	*26-Jun-2020 19:31*
Surr: Dibromofluoromethane	*103*			**0**	*80-119*	*%REC*	*1*	*26-Jun-2020 19:31*
Surr: Toluene-d8	*108*			**0**	*89-112*	*%REC*	*1*	*26-Jun-2020 19:31*

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

Weight / Prep Log

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

Batch ID: 154955 **Start Date:** 29 Jun 2020 10:30 **End Date:** 29 Jun 2020 14:30
Method: WATER - SW3010A **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20061178-01		10 (mL)	10 (mL)	1
HS20061178-02		10 (mL)	10 (mL)	1
HS20061178-03		10 (mL)	10 (mL)	1

ALS Houston, US Date: 13-Jul-20

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

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 154955 (0)	**Test Name :** METALS BY ICPMS BY SW6020A				**Matrix:** Groundwater	
HS20061178-01	35AWW09_062320	23 Jun 2020 10:05		29 Jun 2020 14:30	02 Jul 2020 12:54	1
HS20061178-02	03WW01_062320	23 Jun 2020 11:00		29 Jun 2020 14:30	02 Jul 2020 12:56	1
HS20061178-03	35AWW08_062320	23 Jun 2020 12:05		29 Jun 2020 14:30	02 Jul 2020 12:58	2
Batch ID: R364080 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS20061178-05	Trip Blank	23 Jun 2020 00:00			26 Jun 2020 19:31	1
Batch ID: R364080 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Groundwater	
HS20061178-01	35AWW09_062320	23 Jun 2020 10:05			26 Jun 2020 18:43	20
HS20061178-01	35AWW09_062320	23 Jun 2020 10:05			26 Jun 2020 17:32	1
HS20061178-02	03WW01_062320	23 Jun 2020 11:00			26 Jun 2020 20:43	5
HS20061178-04	35AWW11_062320	23 Jun 2020 13:25			26 Jun 2020 20:19	1
Batch ID: R364190 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Groundwater	
HS20061178-03	35AWW08_062320	23 Jun 2020 12:05			29 Jun 2020 15:38	5
Batch ID: R364313 (0)	**Test Name :** ANIONS BY SW9056A				**Matrix:** Groundwater	
HS20061178-01	35AWW09_062320	23 Jun 2020 10:05			25 Jun 2020 04:40	1
HS20061178-02	03WW01_062320	23 Jun 2020 11:00			25 Jun 2020 04:58	2
HS20061178-03	35AWW08_062320	23 Jun 2020 12:05			25 Jun 2020 05:16	2
HS20061178-04	35AWW11_062320	23 Jun 2020 13:25			25 Jun 2020 05:34	1
Batch ID: R364318 (0)	**Test Name :** SUBCONTRACT ANALYSIS - DHC/DHB				**Matrix:** Groundwater	
HS20061178-02	03WW01_062320	23 Jun 2020 11:00			01 Jul 2020 12:17	1
HS20061178-03	35AWW08_062320	23 Jun 2020 12:05			01 Jul 2020 12:17	1
HS20061178-04	35AWW11_062320	23 Jun 2020 13:25			01 Jul 2020 12:17	1
Batch ID: R364738 (0)	**Test Name :** ANIONS BY SW9056A				**Matrix:** Groundwater	
HS20061178-01	35AWW09_062320	23 Jun 2020 10:05			08 Jul 2020 03:48	50
HS20061178-02	03WW01_062320	23 Jun 2020 11:00			08 Jul 2020 04:06	10
HS20061178-03	35AWW08_062320	23 Jun 2020 12:05			08 Jul 2020 04:42	100
HS20061178-04	35AWW11_062320	23 Jun 2020 13:25			08 Jul 2020 05:18	100
HS20061178-04	35AWW11_062320	23 Jun 2020 13:25			08 Jul 2020 05:00	10
Batch ID: R364756 (0)	**Test Name :** SUBCONTRACT ANALYSIS - RSK				**Matrix:** Groundwater	
HS20061178-01	35AWW09_062320	23 Jun 2020 10:05			09 Jul 2020 10:18	1
HS20061178-02	03WW01_062320	23 Jun 2020 11:00			09 Jul 2020 10:18	1
HS20061178-03	35AWW08_062320	23 Jun 2020 12:05			09 Jul 2020 10:18	1
HS20061178-04	35AWW11_062320	23 Jun 2020 13:25			09 Jul 2020 10:18	1
Batch ID: R364759 (0)	**Test Name :** SUBCONTRACT ANALYSIS - VOLATILE FATTY ACIDS				**Matrix:** Groundwater	
HS20061178-02	03WW01_062320	23 Jun 2020 11:00			09 Jul 2020 10:22	1
HS20061178-03	35AWW08_062320	23 Jun 2020 12:05			09 Jul 2020 10:22	1
HS20061178-04	35AWW11_062320	23 Jun 2020 13:25			09 Jul 2020 10:22	1

ALS Houston, US Date: 13-Jul-20

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

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R364906 (0)	**Test Name :** SUBCONTRACT ANALYSIS - TOC ANALYSIS				**Matrix:** Groundwater	
HS20061178-01	35AWW09_062320	23 Jun 2020 10:05			13 Jul 2020 09:42	1
HS20061178-02	03WW01_062320	23 Jun 2020 11:00			13 Jul 2020 09:42	1
HS20061178-03	35AWW08_062320	23 Jun 2020 12:05			13 Jul 2020 09:42	1
HS20061178-04	35AWW11_062320	23 Jun 2020 13:25			13 Jul 2020 09:42	1

ALS Houston, US Date: 13-Jul-20

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

QC BATCH REPORT

Batch ID: 154955 (0) **Instrument: ICPMS06** **Method: METALS BY ICPMS BY SW6020A**

MBLK Sample ID: **MBLK-154955** Units: **mg/L** Analysis Date: **02-Jul-2020 12:25**
Client ID: Run ID: **ICPMS06_364391** SeqNo: **5648603** PrepDate: **29-Jun-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.000500	0.00500								U

LCS Sample ID: **LCS-154955** Units: **mg/L** Analysis Date: **02-Jul-2020 12:27**
Client ID: Run ID: **ICPMS06_364391** SeqNo: **5648604** PrepDate: **29-Jun-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.04816	0.00500	0.05	0	96.3	84 - 116				

MS Sample ID: **HS20061218-02MS** Units: **mg/L** Analysis Date: **02-Jul-2020 12:37**
Client ID: Run ID: **ICPMS06_364391** SeqNo: **5648607** PrepDate: **29-Jun-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.04966	0.00500	0.05	0.001189	96.9	84 - 116				

MSD Sample ID: **HS20061218-02MSD** Units: **mg/L** Analysis Date: **02-Jul-2020 12:39**
Client ID: Run ID: **ICPMS06_364391** SeqNo: **5648608** PrepDate: **29-Jun-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.04875	0.00500	0.05	0.001189	95.1	84 - 116	0.04966	1.85	20	

PDS Sample ID: **HS20061218-02PDS** Units: **mg/L** Analysis Date: **02-Jul-2020 12:41**
Client ID: Run ID: **ICPMS06_364391** SeqNo: **5648609** PrepDate: **29-Jun-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.1122	0.00500	0.1	0.001189	111	80 - 120				

SD Sample ID: **HS20061218-02SD** Units: **mg/L** Analysis Date: **02-Jul-2020 12:35**
Client ID: Run ID: **ICPMS06_364391** SeqNo: **5648606** PrepDate: **29-Jun-2020** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Arsenic	0.00250	0.0250					0.001189	0	10	U

The following samples were analyzed in this batch: HS20061178-01 HS20061178-02 HS20061178-03

ALS Houston, US Date: 13-Jul-20

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

QC BATCH REPORT

Batch ID: R364080 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-200626** Units: **UG/L** Analysis Date: **26-Jun-2020 13:57**
Client ID: Run ID: **VOA6_364080** SeqNo: **5640386** PrepDate: DF: **1**

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

ALS Houston, US Date: 13-Jul-20

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

QC BATCH REPORT

Batch ID: R364080 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-200626** Units: **UG/L** Analysis Date: **26-Jun-2020 13:57**
Client ID: Run ID: **VOA6_364080** SeqNo: **5640386** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	1.0	2.0								U
Carbon tetrachloride	1.0	1.0								U
Chlorobenzene	1.0	1.0								U
Chloroethane	1.0	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	1.0	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	1.0	1.0								U
Ethylbenzene	1.0	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	1.0	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	1.0	2.0								U
Naphthalene	1.0	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	1.0	1.0								U
o-Xylene	1.0	1.0								U
sec-Butylbenzene	1.0	1.0								U
Styrene	1.0	1.0								U
tert-Butylbenzene	1.0	1.0								U
Tetrachloroethene	1.0	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	1.0	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*45.16*	*1.0*	*50*	*0*	*90.3*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*47.9*	*1.0*	*50*	*0*	*95.8*	*85 - 114*				
Surr: Dibromofluoromethane	*46.98*	*1.0*	*50*	*0*	*94.0*	*80 - 119*				
Surr: Toluene-d8	*50.93*	*1.0*	*50*	*0*	*102*	*89 - 112*				

ALS Houston, US Date: 13-Jul-20

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

QC BATCH REPORT

Batch ID: R364080 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-200626** Units: **UG/L** Analysis Date: **26-Jun-2020 13:09**
Client ID: Run ID: **VOA6_364080** SeqNo: **5640385** 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	20.62	1.0	20	0	103	78 - 124				
1,1,1-Trichloroethane	20.51	1.0	20	0	103	74 - 131				
1,1,2,2-Tetrachloroethane	21.5	1.0	20	0	107	71 - 121				
1,1,2-Trichloroethane	20.94	1.0	20	0	105	80 - 119				
1,1-Dichloroethane	19.96	1.0	20	0	99.8	77 - 125				
1,1-Dichloroethene	20.16	1.0	20	0	101	71 - 131				
1,1-Dichloropropene	19.74	1.0	20	0	98.7	78 - 125				
1,2,3-Trichlorobenzene	28.29	1.0	20	0	141	69 - 129				S
1,2,3-Trichloropropane	20.77	1.0	20	0	104	73 - 122				
1,2,4-Trichlorobenzene	27.16	1.0	20	0	136	69 - 130				S
1,2,4-Trimethylbenzene	20.02	1.0	20	0	100	76 - 124				
1,2-Dibromo-3-chloropropane	22.91	1.0	20	0	115	62 - 128				
1,2-Dibromoethane	21.07	1.0	20	0	105	77 - 121				
1,2-Dichlorobenzene	21.17	1.0	20	0	106	80 - 119				
1,2-Dichloroethane	20.76	1.0	20	0	104	73 - 128				
1,2-Dichloropropane	21.32	1.0	20	0	107	78 - 122				
1,3,5-Trimethylbenzene	20.06	1.0	20	0	100	75 - 124				
1,3-Dichlorobenzene	20.4	1.0	20	0	102	80 - 119				
1,3-Dichloropropane	20.91	1.0	20	0	105	80 - 119				
1,4-Dichlorobenzene	20.62	1.0	20	0	103	79 - 118				
2,2-Dichloropropane	20.85	1.0	20	0	104	60 - 139				
2-Butanone	39.78	2.0	40	0	99.4	56 - 143				
2-Chlorotoluene	19.91	1.0	20	0	99.6	79 - 122				
2-Hexanone	43.6	2.0	40	0	109	57 - 139				
4-Chlorotoluene	20.03	1.0	20	0	100	78 - 122				
4-Isopropyltoluene	19.43	1.0	20	0	97.1	77 - 127				
4-Methyl-2-pentanone	43.56	2.0	40	0	109	67 - 130				
Acetone	48.89	2.0	40	0	122	39 - 160				
Benzene	20.8	1.0	20	0	104	79 - 120				
Bromobenzene	20.36	1.0	20	0	102	80 - 120				
Bromochloromethane	20.02	1.0	20	0	100	78 - 123				
Bromodichloromethane	21.09	1.0	20	0	105	79 - 125				
Bromoform	21.31	1.0	20	0	107	66 - 130				
Bromomethane	20.25	1.0	20	0	101	53 - 141				

ALS Houston, US Date: 13-Jul-20

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

QC BATCH REPORT

Batch ID: R364080 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-200626** Units: **UG/L** Analysis Date: **26-Jun-2020 13:09**
Client ID: Run ID: **VOA6_364080** SeqNo: **5640385** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	40.74	2.0	40	0	102	64 - 133				
Carbon tetrachloride	19.47	1.0	20	0	97.4	72 - 136				
Chlorobenzene	20.65	1.0	20	0	103	82 - 118				
Chloroethane	20.94	1.0	20	0	105	60 - 138				
Chloroform	20.36	1.0	20	0	102	79 - 124				
Chloromethane	19.95	1.0	20	0	99.8	50 - 139				
cis-1,2-Dichloroethene	20.49	1.0	20	0	102	78 - 123				
cis-1,3-Dichloropropene	21.03	1.0	20	0	105	75 - 124				
Dibromochloromethane	20.94	1.0	20	0	105	74 - 126				
Dibromomethane	21.13	1.0	20	0	106	79 - 123				
Dichlorodifluoromethane	18.76	1.0	20	0	93.8	32 - 152				
Ethylbenzene	20.3	1.0	20	0	101	79 - 121				
Hexachlorobutadiene	26.97	1.0	20	0	135	66 - 134				S
Isopropylbenzene	20.14	1.0	20	0	101	72 - 131				
m,p-Xylene	41.63	2.0	40	0	104	80 - 121				
Methylene chloride	19.93	2.0	20	0	99.7	74 - 124				
Naphthalene	25.75	1.0	20	0	129	61 - 128				S
n-Butylbenzene	19.68	1.0	20	0	98.4	75 - 128				
n-Propylbenzene	19.92	1.0	20	0	99.6	76 - 126				
o-Xylene	20.52	1.0	20	0	103	78 - 122				
sec-Butylbenzene	19.52	1.0	20	0	97.6	77 - 126				
Styrene	21.25	1.0	20	0	106	78 - 123				
tert-Butylbenzene	19.39	1.0	20	0	96.9	78 - 124				
Tetrachloroethene	20.21	1.0	20	0	101	74 - 129				
Toluene	20.59	1.0	20	0	103	80 - 121				
trans-1,2-Dichloroethene	21.3	1.0	20	0	106	75 - 124				
trans-1,3-Dichloropropene	21.37	1.0	20	0	107	73 - 127				
Trichloroethene	21.06	1.0	20	0	105	79 - 123				
Trichlorofluoromethane	21.27	1.0	20	0	106	65 - 141				
Vinyl chloride	18.9	1.0	20	0	94.5	58 - 137				
Surr: 1,2-Dichloroethane-d4	*48.11*	*1.0*	*50*	*0*	*96.2*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*46.89*	*1.0*	*50*	*0*	*93.8*	*85 - 114*				
Surr: Dibromofluoromethane	*49.3*	*1.0*	*50*	*0*	*98.6*	*80 - 119*				
Surr: Toluene-d8	*48.51*	*1.0*	*50*	*0*	*97.0*	*89 - 112*				

ALS Houston, US Date: 13-Jul-20

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

QC BATCH REPORT

Batch ID: R364080 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20061206-02MS** Units: **UG/L** Analysis Date: **26-Jun-2020 17:56**
Client ID: Run ID: **VOA6_364080** SeqNo: **5640396** 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	21.36	1.0	20	0	107	78 - 124				
1,1,1-Trichloroethane	21.44	1.0	20	0	107	74 - 131				
1,1,2,2-Tetrachloroethane	22.21	1.0	20	0	111	71 - 121				
1,1,2-Trichloroethane	21.56	1.0	20	0	108	80 - 119				
1,1-Dichloroethane	20.02	1.0	20	0	100	77 - 125				
1,1-Dichloroethene	20.48	1.0	20	0	102	71 - 131				
1,1-Dichloropropene	20.34	1.0	20	0	102	78 - 125				
1,2,3-Trichlorobenzene	17.55	1.0	20	0	87.7	69 - 129				
1,2,3-Trichloropropane	21.02	1.0	20	0	105	73 - 122				
1,2,4-Trichlorobenzene	18.32	1.0	20	0	91.6	69 - 130				
1,2,4-Trimethylbenzene	21.35	1.0	20	0	107	76 - 124				
1,2-Dibromo-3-chloropropane	22.35	1.0	20	0	112	62 - 128				
1,2-Dibromoethane	21.8	1.0	20	0	109	77 - 121				
1,2-Dichlorobenzene	21.56	1.0	20	0	108	80 - 119				
1,2-Dichloroethane	20.52	1.0	20	0	103	73 - 128				
1,2-Dichloropropane	20.74	1.0	20	0	104	78 - 122				
1,3,5-Trimethylbenzene	21.87	1.0	20	0	109	75 - 124				
1,3-Dichlorobenzene	21.31	1.0	20	0	107	80 - 119				
1,3-Dichloropropane	20.94	1.0	20	0	105	80 - 119				
1,4-Dichlorobenzene	21.08	1.0	20	0	105	79 - 118				
2,2-Dichloropropane	19.81	1.0	20	0	99.1	60 - 139				
2-Butanone	93.02	2.0	40	68.16	62.2	56 - 143				
2-Chlorotoluene	21.28	1.0	20	0	106	79 - 122				
2-Hexanone	44.02	2.0	40	0	110	57 - 139				
4-Chlorotoluene	21.22	1.0	20	0	106	78 - 122				
4-Isopropyltoluene	21.75	1.0	20	0	109	77 - 127				
4-Methyl-2-pentanone	44.14	2.0	40	0	110	67 - 130				
Acetone	45.03	2.0	40	6.281	96.9	39 - 160				
Benzene	20.73	1.0	20	0	104	79 - 120				
Bromobenzene	20.9	1.0	20	0	105	80 - 120				
Bromochloromethane	19.04	1.0	20	0	95.2	78 - 123				
Bromodichloromethane	20.9	1.0	20	0	105	79 - 125				
Bromoform	21.37	1.0	20	0	107	66 - 130				
Bromomethane	18.34	1.0	20	0	91.7	53 - 141				

ALS Houston, US Date: 13-Jul-20

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

QC BATCH REPORT

Batch ID: R364080 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20061206-02MS** Units: **UG/L** Analysis Date: **26-Jun-2020 17:56**
Client ID: Run ID: **VOA6_364080** SeqNo: **5640396** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	40.19	2.0	40	0	100	64 - 133				
Carbon tetrachloride	20.25	1.0	20	0	101	72 - 136				
Chlorobenzene	20.87	1.0	20	0	104	82 - 118				
Chloroethane	19.41	1.0	20	0	97.1	60 - 138				
Chloroform	20.75	1.0	20	0	104	79 - 124				
Chloromethane	16.41	1.0	20	0	82.0	50 - 139				
cis-1,2-Dichloroethene	21.22	1.0	20	0	106	78 - 123				
cis-1,3-Dichloropropene	20.71	1.0	20	0	104	75 - 124				
Dibromochloromethane	21.47	1.0	20	0	107	74 - 126				
Dibromomethane	20.3	1.0	20	0	101	79 - 123				
Dichlorodifluoromethane	13.65	1.0	20	0	68.2	32 - 152				
Ethylbenzene	21.46	1.0	20	0	107	79 - 121				
Hexachlorobutadiene	19.91	1.0	20	0	99.5	66 - 134				
Isopropylbenzene	22.03	1.0	20	0	110	72 - 131				
m,p-Xylene	43.76	2.0	40	0	109	80 - 121				
Methylene chloride	19.24	2.0	20	0	96.2	74 - 124				
Naphthalene	19.92	1.0	20	0	99.6	61 - 128				
n-Butylbenzene	21.52	1.0	20	0	108	75 - 128				
n-Propylbenzene	21.72	1.0	20	0	109	76 - 126				
o-Xylene	21.19	1.0	20	0	106	78 - 122				
sec-Butylbenzene	21.91	1.0	20	0	110	77 - 126				
Styrene	21.67	1.0	20	0	108	78 - 123				
tert-Butylbenzene	22.07	1.0	20	0	110	78 - 124				
Tetrachloroethene	22.52	1.0	20	0	113	74 - 129				
Toluene	21.88	1.0	20	0	109	80 - 121				
trans-1,2-Dichloroethene	21.24	1.0	20	0	106	75 - 124				
trans-1,3-Dichloropropene	20.05	1.0	20	0	100	73 - 127				
Trichloroethene	23.11	1.0	20	1.465	108	79 - 123				
Trichlorofluoromethane	20.59	1.0	20	0	103	65 - 141				
Vinyl chloride	18.79	1.0	20	0	93.9	58 - 137				
Surr: 1,2-Dichloroethane-d4	*54.5*	*1.0*	*50*	*0*	*109*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*53.82*	*1.0*	*50*	*0*	*108*	*85 - 114*				
Surr: Dibromofluoromethane	*54.3*	*1.0*	*50*	*0*	*109*	*80 - 119*				
Surr: Toluene-d8	*56.24*	*1.0*	*50*	*0*	*112*	*89 - 112*				S

ALS Houston, US Date: 13-Jul-20

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

QC BATCH REPORT

Batch ID: R364080 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20061206-02MDS** Units: **UG/L** Analysis Date: **26-Jun-2020 18:19**
Client ID: Run ID: **VOA6_364080** SeqNo: **5640397** 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	21.46	1.0	20	0	107	78 - 124	21.36	0.483	20	
1,1,1-Trichloroethane	21.19	1.0	20	0	106	74 - 131	21.44	1.16	20	
1,1,2,2-Tetrachloroethane	21.93	1.0	20	0	110	71 - 121	22.21	1.31	20	
1,1,2-Trichloroethane	21.3	1.0	20	0	107	80 - 119	21.56	1.22	20	
1,1-Dichloroethane	19.39	1.0	20	0	97.0	77 - 125	20.02	3.2	20	
1,1-Dichloroethene	20.9	1.0	20	0	105	71 - 131	20.48	2.03	20	
1,1-Dichloropropene	20.85	1.0	20	0	104	78 - 125	20.34	2.46	20	
1,2,3-Trichlorobenzene	23.49	1.0	20	0	117	69 - 129	17.55	29	20	R
1,2,3-Trichloropropane	20.22	1.0	20	0	101	73 - 122	21.02	3.89	20	
1,2,4-Trichlorobenzene	21.45	1.0	20	0	107	69 - 130	18.32	15.7	20	
1,2,4-Trimethylbenzene	21.84	1.0	20	0	109	76 - 124	21.35	2.24	20	
1,2-Dibromo-3-chloropropane	21.26	1.0	20	0	106	62 - 128	22.35	5.01	20	
1,2-Dibromoethane	21.08	1.0	20	0	105	77 - 121	21.8	3.32	20	
1,2-Dichlorobenzene	21.36	1.0	20	0	107	80 - 119	21.56	0.941	20	
1,2-Dichloroethane	20.06	1.0	20	0	100	73 - 128	20.52	2.24	20	
1,2-Dichloropropane	20.96	1.0	20	0	105	78 - 122	20.74	1.04	20	
1,3,5-Trimethylbenzene	22.51	1.0	20	0	113	75 - 124	21.87	2.87	20	
1,3-Dichlorobenzene	21.43	1.0	20	0	107	80 - 119	21.31	0.526	20	
1,3-Dichloropropane	20.78	1.0	20	0	104	80 - 119	20.94	0.793	20	
1,4-Dichlorobenzene	21.25	1.0	20	0	106	79 - 118	21.08	0.819	20	
2,2-Dichloropropane	19.1	1.0	20	0	95.5	60 - 139	19.81	3.65	20	
2-Butanone	84.04	2.0	40	68.16	39.7	56 - 143	93.02	10.1	20	S
2-Chlorotoluene	21.26	1.0	20	0	106	79 - 122	21.28	0.102	20	
2-Hexanone	43.18	2.0	40	0	108	57 - 139	44.02	1.93	20	
4-Chlorotoluene	21.19	1.0	20	0	106	78 - 122	21.22	0.104	20	
4-Isopropyltoluene	22.72	1.0	20	0	114	77 - 127	21.75	4.39	20	
4-Methyl-2-pentanone	42.64	2.0	40	0	107	67 - 130	44.14	3.45	20	
Acetone	42.11	2.0	40	6.281	89.6	39 - 160	45.03	6.71	20	
Benzene	20.71	1.0	20	0	104	79 - 120	20.73	0.0882	20	
Bromobenzene	20.98	1.0	20	0	105	80 - 120	20.9	0.345	20	
Bromochloromethane	19.2	1.0	20	0	96.0	78 - 123	19.04	0.794	20	
Bromodichloromethane	20.73	1.0	20	0	104	79 - 125	20.9	0.842	20	
Bromoform	21.13	1.0	20	0	106	66 - 130	21.37	1.12	20	
Bromomethane	18.29	1.0	20	0	91.4	53 - 141	18.34	0.318	20	

ALS Houston, US Date: 13-Jul-20

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

QC BATCH REPORT

Batch ID: R364080 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20061206-02MDS** Units: **UG/L** Analysis Date: **26-Jun-2020 18:19**
Client ID: Run ID: **VOA6_364080** SeqNo: **5640397** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	39.84	2.0	40	0	99.6	64 - 133	40.19	0.873	20	
Carbon tetrachloride	21.26	1.0	20	0	106	72 - 136	20.25	4.87	20	
Chlorobenzene	21.17	1.0	20	0	106	82 - 118	20.87	1.43	20	
Chloroethane	19.28	1.0	20	0	96.4	60 - 138	19.41	0.711	20	
Chloroform	19.92	1.0	20	0	99.6	79 - 124	20.75	4.11	20	
Chloromethane	16.2	1.0	20	0	81.0	50 - 139	16.41	1.25	20	
cis-1,2-Dichloroethene	20.34	1.0	20	0	102	78 - 123	21.22	4.25	20	
cis-1,3-Dichloropropene	19.98	1.0	20	0	99.9	75 - 124	20.71	3.6	20	
Dibromochloromethane	20.94	1.0	20	0	105	74 - 126	21.47	2.5	20	
Dibromomethane	20.12	1.0	20	0	101	79 - 123	20.3	0.869	20	
Dichlorodifluoromethane	14.23	1.0	20	0	71.1	32 - 152	13.65	4.15	20	
Ethylbenzene	22.06	1.0	20	0	110	79 - 121	21.46	2.77	20	
Hexachlorobutadiene	21.99	1.0	20	0	110	66 - 134	19.91	9.92	20	
Isopropylbenzene	23.08	1.0	20	0	115	72 - 131	22.03	4.67	20	
m,p-Xylene	44.4	2.0	40	0	111	80 - 121	43.76	1.45	20	
Methylene chloride	18.47	2.0	20	0	92.3	74 - 124	19.24	4.09	20	
Naphthalene	24.21	1.0	20	0	121	61 - 128	19.92	19.5	20	
n-Butylbenzene	23.06	1.0	20	0	115	75 - 128	21.52	6.92	20	
n-Propylbenzene	22.81	1.0	20	0	114	76 - 126	21.72	4.9	20	
o-Xylene	21.29	1.0	20	0	106	78 - 122	21.19	0.473	20	
sec-Butylbenzene	23.55	1.0	20	0	118	77 - 126	21.91	7.23	20	
Styrene	21.75	1.0	20	0	109	78 - 123	21.67	0.387	20	
tert-Butylbenzene	23.13	1.0	20	0	116	78 - 124	22.07	4.7	20	
Tetrachloroethene	23.12	1.0	20	0	116	74 - 129	22.52	2.64	20	
Toluene	22.06	1.0	20	0	110	80 - 121	21.88	0.824	20	
trans-1,2-Dichloroethene	20.51	1.0	20	0	103	75 - 124	21.24	3.47	20	
trans-1,3-Dichloropropene	19.52	1.0	20	0	97.6	73 - 127	20.05	2.67	20	
Trichloroethene	23.51	1.0	20	1.465	110	79 - 123	23.11	1.72	20	
Trichlorofluoromethane	20.61	1.0	20	0	103	65 - 141	20.59	0.111	20	
Vinyl chloride	17.67	1.0	20	0	88.3	58 - 137	18.79	6.13	20	
Surr: 1,2-Dichloroethane-d4	*49.58*	*1.0*	*50*	*0*	*99.2*	*81 - 118*	*54.5*	*9.44*	*20*	
Surr: 4-Bromofluorobenzene	*53.37*	*1.0*	*50*	*0*	*107*	*85 - 114*	*53.82*	*0.839*	*20*	
Surr: Dibromofluoromethane	*51.38*	*1.0*	*50*	*0*	*103*	*80 - 119*	*54.3*	*5.52*	*20*	
Surr: Toluene-d8	*55.93*	*1.0*	*50*	*0*	*112*	*89 - 112*	*56.24*	*0.55*	*20*	

ALS Houston, US Date: 13-Jul-20

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

QC BATCH REPORT

Batch ID: R364080 (0)	Instrument: VOA6	Method: VOLATILES ORGANICS BY METHOD 8260C

The following samples were analyzed in this batch:	HS20061178-01	HS20061178-02	HS20061178-04	HS20061178-05

ALS Houston, US Date: 13-Jul-20

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

QC BATCH REPORT

Batch ID: R364190 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-200629** Units: **UG/L** Analysis Date: **29-Jun-2020 12:26**
Client ID: Run ID: **VOA6_364190** SeqNo: **5643344** PrepDate: DF: **1**

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

ALS Houston, US Date: 13-Jul-20

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

QC BATCH REPORT

Batch ID: R364190 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-200629** Units: **UG/L** Analysis Date: **29-Jun-2020 12:26**
Client ID: Run ID: **VOA6_364190** SeqNo: **5643344** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	1.0	2.0								U
Carbon tetrachloride	1.0	1.0								U
Chlorobenzene	1.0	1.0								U
Chloroethane	1.0	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	1.0	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	1.0	1.0								U
Ethylbenzene	1.0	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	1.0	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	1.0	2.0								U
Naphthalene	1.0	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	1.0	1.0								U
o-Xylene	1.0	1.0								U
sec-Butylbenzene	1.0	1.0								U
Styrene	1.0	1.0								U
tert-Butylbenzene	1.0	1.0								U
Tetrachloroethene	1.0	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	1.0	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*43.09*	*1.0*	*50*	*0*	*86.2*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*46.7*	*1.0*	*50*	*0*	*93.4*	*85 - 114*				
Surr: Dibromofluoromethane	*44.82*	*1.0*	*50*	*0*	*89.6*	*80 - 119*				
Surr: Toluene-d8	*50.66*	*1.0*	*50*	*0*	*101*	*89 - 112*				

ALS Houston, US Date: 13-Jul-20

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

QC BATCH REPORT

Batch ID: R364190 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-200629** Units: **UG/L** Analysis Date: **29-Jun-2020 11:38**
Client ID: Run ID: **VOA6_364190** SeqNo: **5643343** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19	1.0	20	0	95.0	78 - 124				
1,1,1-Trichloroethane	18.88	1.0	20	0	94.4	74 - 131				
1,1,2,2-Tetrachloroethane	19.6	1.0	20	0	98.0	71 - 121				
1,1,2-Trichloroethane	19.42	1.0	20	0	97.1	80 - 119				
1,1-Dichloroethane	17.71	1.0	20	0	88.5	77 - 125				
1,1-Dichloroethene	18.47	1.0	20	0	92.3	71 - 131				
1,1-Dichloropropene	18.31	1.0	20	0	91.6	78 - 125				
1,2,3-Trichlorobenzene	29.76	1.0	20	0	149	69 - 129				S
1,2,3-Trichloropropane	18.93	1.0	20	0	94.7	73 - 122				
1,2,4-Trichlorobenzene	26.32	1.0	20	0	132	69 - 130				S
1,2,4-Trimethylbenzene	18.72	1.0	20	0	93.6	76 - 124				
1,2-Dibromo-3-chloropropane	21.07	1.0	20	0	105	62 - 128				
1,2-Dibromoethane	19.55	1.0	20	0	97.8	77 - 121				
1,2-Dichlorobenzene	19.72	1.0	20	0	98.6	80 - 119				
1,2-Dichloroethane	18.72	1.0	20	0	93.6	73 - 128				
1,2-Dichloropropane	19.31	1.0	20	0	96.6	78 - 122				
1,3,5-Trimethylbenzene	18.8	1.0	20	0	94.0	75 - 124				
1,3-Dichlorobenzene	19.18	1.0	20	0	95.9	80 - 119				
1,3-Dichloropropane	19.14	1.0	20	0	95.7	80 - 119				
1,4-Dichlorobenzene	18.52	1.0	20	0	92.6	79 - 118				
2,2-Dichloropropane	18.43	1.0	20	0	92.2	60 - 139				
2-Butanone	34.9	2.0	40	0	87.2	56 - 143				
2-Chlorotoluene	18.39	1.0	20	0	91.9	79 - 122				
2-Hexanone	39.82	2.0	40	0	99.6	57 - 139				
4-Chlorotoluene	18.41	1.0	20	0	92.1	78 - 122				
4-Isopropyltoluene	18.6	1.0	20	0	93.0	77 - 127				
4-Methyl-2-pentanone	39.23	2.0	40	0	98.1	67 - 130				
Acetone	50.02	2.0	40	0	125	39 - 160				
Benzene	19.26	1.0	20	0	96.3	79 - 120				
Bromobenzene	18.36	1.0	20	0	91.8	80 - 120				
Bromochloromethane	17.91	1.0	20	0	89.5	78 - 123				
Bromodichloromethane	18.86	1.0	20	0	94.3	79 - 125				
Bromoform	19.96	1.0	20	0	99.8	66 - 130				
Bromomethane	18.03	1.0	20	0	90.1	53 - 141				

ALS Houston, US Date: 13-Jul-20

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

QC BATCH REPORT

Batch ID: R364190 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-200629** Units: **UG/L** Analysis Date: **29-Jun-2020 11:38**
Client ID: Run ID: **VOA6_364190** SeqNo: **5643343** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	36.7	2.0	40	0	91.8	64 - 133				
Carbon tetrachloride	17.88	1.0	20	0	89.4	72 - 136				
Chlorobenzene	18.81	1.0	20	0	94.0	82 - 118				
Chloroethane	18.45	1.0	20	0	92.3	60 - 138				
Chloroform	18.55	1.0	20	0	92.7	79 - 124				
Chloromethane	16.93	1.0	20	0	84.6	50 - 139				
cis-1,2-Dichloroethene	18.51	1.0	20	0	92.6	78 - 123				
cis-1,3-Dichloropropene	19.34	1.0	20	0	96.7	75 - 124				
Dibromochloromethane	19.4	1.0	20	0	97.0	74 - 126				
Dibromomethane	18.92	1.0	20	0	94.6	79 - 123				
Dichlorodifluoromethane	17.34	1.0	20	0	86.7	32 - 152				
Ethylbenzene	18.83	1.0	20	0	94.1	79 - 121				
Hexachlorobutadiene	30.36	1.0	20	0	152	66 - 134				S
Isopropylbenzene	18.93	1.0	20	0	94.6	72 - 131				
m,p-Xylene	38.87	2.0	40	0	97.2	80 - 121				
Methylene chloride	17.91	2.0	20	0	89.6	74 - 124				
Naphthalene	25.67	1.0	20	0	128	61 - 128				S
n-Butylbenzene	19.03	1.0	20	0	95.1	75 - 128				
n-Propylbenzene	18.59	1.0	20	0	92.9	76 - 126				
o-Xylene	19.15	1.0	20	0	95.8	78 - 122				
sec-Butylbenzene	18.95	1.0	20	0	94.8	77 - 126				
Styrene	19.65	1.0	20	0	98.2	78 - 123				
tert-Butylbenzene	18.29	1.0	20	0	91.4	78 - 124				
Tetrachloroethene	19.61	1.0	20	0	98.1	74 - 129				
Toluene	19.47	1.0	20	0	97.4	80 - 121				
trans-1,2-Dichloroethene	19.54	1.0	20	0	97.7	75 - 124				
trans-1,3-Dichloropropene	19.29	1.0	20	0	96.5	73 - 127				
Trichloroethene	19.32	1.0	20	0	96.6	79 - 123				
Trichlorofluoromethane	18.67	1.0	20	0	93.3	65 - 141				
Vinyl chloride	17.75	1.0	20	0	88.7	58 - 137				
Surr: 1,2-Dichloroethane-d4	*44.44*	*1.0*	*50*	*0*	*88.9*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*45.3*	*1.0*	*50*	*0*	*90.6*	*85 - 114*				
Surr: Dibromofluoromethane	*45.67*	*1.0*	*50*	*0*	*91.3*	*80 - 119*				
Surr: Toluene-d8	*47.41*	*1.0*	*50*	*0*	*94.8*	*89 - 112*				

ALS Houston, US Date: 13-Jul-20

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

QC BATCH REPORT

Batch ID: R364190 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20061208-15MS** Units: **UG/L** Analysis Date: **29-Jun-2020 14:02**
Client ID: Run ID: **VOA6_364190** SeqNo: **5643346** 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	21.37	1.0	20	0	107	78 - 124				
1,1,1-Trichloroethane	19.18	1.0	20	0	95.9	74 - 131				
1,1,2,2-Tetrachloroethane	21.46	1.0	20	0	107	71 - 121				
1,1,2-Trichloroethane	20.57	1.0	20	0	103	80 - 119				
1,1-Dichloroethane	35.42	1.0	20	16.74	93.4	77 - 125				
1,1-Dichloroethene	60.21	1.0	20	35.55	123	71 - 131				
1,1-Dichloropropene	21.12	1.0	20	0	106	78 - 125				
1,2,3-Trichlorobenzene	21.69	1.0	20	0	108	69 - 129				
1,2,3-Trichloropropane	19.5	1.0	20	0	97.5	73 - 122				
1,2,4-Trichlorobenzene	21.6	1.0	20	0	108	69 - 130				
1,2,4-Trimethylbenzene	23.01	1.0	20	0	115	76 - 124				
1,2-Dibromo-3-chloropropane	19.7	1.0	20	0	98.5	62 - 128				
1,2-Dibromoethane	21.15	1.0	20	0	106	77 - 121				
1,2-Dichlorobenzene	22.17	1.0	20	0	111	80 - 119				
1,2-Dichloroethane	19.23	1.0	20	0	96.2	73 - 128				
1,2-Dichloropropane	20.12	1.0	20	0	101	78 - 122				
1,3,5-Trimethylbenzene	23.49	1.0	20	0	117	75 - 124				
1,3-Dichlorobenzene	22.68	1.0	20	0	113	80 - 119				
1,3-Dichloropropane	20.11	1.0	20	0	101	80 - 119				
1,4-Dichlorobenzene	22.03	1.0	20	0	110	79 - 118				
2,2-Dichloropropane	18.94	1.0	20	0	94.7	60 - 139				
2-Butanone	30.05	2.0	40	0	75.1	56 - 143				
2-Chlorotoluene	22.04	1.0	20	0	110	79 - 122				
2-Hexanone	40.59	2.0	40	0	101	57 - 139				
4-Chlorotoluene	22.07	1.0	20	0	110	78 - 122				
4-Isopropyltoluene	24.71	1.0	20	0	124	77 - 127				
4-Methyl-2-pentanone	39.89	2.0	40	0	99.7	67 - 130				
Acetone	38.29	2.0	40	6.049	80.6	39 - 160				
Benzene	20.38	1.0	20	0	102	79 - 120				
Bromobenzene	21.1	1.0	20	0	106	80 - 120				
Bromochloromethane	16.5	1.0	20	0	82.5	78 - 123				
Bromodichloromethane	19.76	1.0	20	0	98.8	79 - 125				
Bromoform	20.98	1.0	20	0	105	66 - 130				
Bromomethane	15.67	1.0	20	0	78.4	53 - 141				

ALS Houston, US Date: 13-Jul-20

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

QC BATCH REPORT

Batch ID: R364190 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20061208-15MS** Units: **UG/L** Analysis Date: **29-Jun-2020 14:02**
Client ID: Run ID: **VOA6_364190** SeqNo: **5643346** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	37.32	2.0	40	0	93.3	64 - 133				
Carbon tetrachloride	21.33	1.0	20	0	107	72 - 136				
Chlorobenzene	21.2	1.0	20	0	106	82 - 118				
Chloroethane	21.55	1.0	20	0	108	60 - 138				
Chloroform	17.54	1.0	20	0	87.7	79 - 124				
Chloromethane	13.98	1.0	20	0	69.9	50 - 139				
cis-1,2-Dichloroethene	21.76	1.0	20	3.49	91.3	78 - 123				
cis-1,3-Dichloropropene	20.1	1.0	20	0	101	75 - 124				
Dibromochloromethane	20.93	1.0	20	0	105	74 - 126				
Dibromomethane	19.35	1.0	20	0	96.8	79 - 123				
Dichlorodifluoromethane	13.47	1.0	20	0	67.4	32 - 152				
Ethylbenzene	22.56	1.0	20	0	113	79 - 121				
Hexachlorobutadiene	26.44	1.0	20	0	132	66 - 134				
Isopropylbenzene	24.04	1.0	20	0	120	72 - 131				
m,p-Xylene	46.5	2.0	40	0	116	80 - 121				
Methylene chloride	15.79	2.0	20	0	79.0	74 - 124				
Naphthalene	21.08	1.0	20	0	105	61 - 128				
n-Butylbenzene	25.21	1.0	20	0	126	75 - 128				
n-Propylbenzene	24.08	1.0	20	0	120	76 - 126				
o-Xylene	22.66	1.0	20	0	113	78 - 122				
sec-Butylbenzene	24.98	1.0	20	0	125	77 - 126				
Styrene	22.07	1.0	20	0	110	78 - 123				
tert-Butylbenzene	24.14	1.0	20	0	121	78 - 124				
Tetrachloroethene	24.53	1.0	20	0	123	74 - 129				
Toluene	22.15	1.0	20	0	111	80 - 121				
trans-1,2-Dichloroethene	19.05	1.0	20	0	95.3	75 - 124				
trans-1,3-Dichloropropene	19.47	1.0	20	0	97.3	73 - 127				
Trichloroethene	25.04	1.0	20	1.378	118	79 - 123				
Trichlorofluoromethane	19.5	1.0	20	0	97.5	65 - 141				
Vinyl chloride	18.6	1.0	20	2.431	80.8	58 - 137				
Surr: 1,2-Dichloroethane-d4	*38.66*	*1.0*	*50*	*0*	*77.3*	*81 - 118*				S
Surr: 4-Bromofluorobenzene	*48.2*	*1.0*	*50*	*0*	*96.4*	*85 - 114*				
Surr: Dibromofluoromethane	*42.99*	*1.0*	*50*	*0*	*86.0*	*80 - 119*				
Surr: Toluene-d8	*54.83*	*1.0*	*50*	*0*	*110*	*89 - 112*				

ALS Houston, US Date: 13-Jul-20

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

QC BATCH REPORT

Batch ID: R364190 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20061208-15MSD** Units: **UG/L** Analysis Date: **29-Jun-2020 14:26**
Client ID: Run ID: **VOA6_364190** SeqNo: **5643347** 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	20.62	1.0	20	0	103	78 - 124	21.37	3.6	20	
1,1,1-Trichloroethane	18.88	1.0	20	0	94.4	74 - 131	19.18	1.61	20	
1,1,2,2-Tetrachloroethane	20.74	1.0	20	0	104	71 - 121	21.46	3.39	20	
1,1,2-Trichloroethane	19.97	1.0	20	0	99.8	80 - 119	20.57	3	20	
1,1-Dichloroethane	34.34	1.0	20	16.74	88.0	77 - 125	35.42	3.11	20	
1,1-Dichloroethene	59.63	1.0	20	35.55	120	71 - 131	60.21	0.965	20	
1,1-Dichloropropene	20.45	1.0	20	0	102	78 - 125	21.12	3.23	20	
1,2,3-Trichlorobenzene	26.03	1.0	20	0	130	69 - 129	21.69	18.2	20	S
1,2,3-Trichloropropane	19.46	1.0	20	0	97.3	73 - 122	19.5	0.229	20	
1,2,4-Trichlorobenzene	23.64	1.0	20	0	118	69 - 130	21.6	9.04	20	
1,2,4-Trimethylbenzene	21.1	1.0	20	0	105	76 - 124	23.01	8.67	20	
1,2-Dibromo-3-chloropropane	22.01	1.0	20	0	110	62 - 128	19.7	11.1	20	
1,2-Dibromoethane	20.4	1.0	20	0	102	77 - 121	21.15	3.58	20	
1,2-Dichlorobenzene	21.09	1.0	20	0	105	80 - 119	22.17	5.03	20	
1,2-Dichloroethane	18.42	1.0	20	0	92.1	73 - 128	19.23	4.32	20	
1,2-Dichloropropane	19.19	1.0	20	0	95.9	78 - 122	20.12	4.77	20	
1,3,5-Trimethylbenzene	21.82	1.0	20	0	109	75 - 124	23.49	7.35	20	
1,3-Dichlorobenzene	20.99	1.0	20	0	105	80 - 119	22.68	7.7	20	
1,3-Dichloropropane	19.58	1.0	20	0	97.9	80 - 119	20.11	2.68	20	
1,4-Dichlorobenzene	20.45	1.0	20	0	102	79 - 118	22.03	7.42	20	
2,2-Dichloropropane	18.17	1.0	20	0	90.8	60 - 139	18.94	4.16	20	
2-Butanone	30.77	2.0	40	0	76.9	56 - 143	30.05	2.35	20	
2-Chlorotoluene	20.63	1.0	20	0	103	79 - 122	22.04	6.64	20	
2-Hexanone	40.29	2.0	40	0	101	57 - 139	40.59	0.744	20	
4-Chlorotoluene	20.65	1.0	20	0	103	78 - 122	22.07	6.64	20	
4-Isopropyltoluene	22.64	1.0	20	0	113	77 - 127	24.71	8.76	20	
4-Methyl-2-pentanone	40.53	2.0	40	0	101	67 - 130	39.89	1.58	20	
Acetone	37.44	2.0	40	6.049	78.5	39 - 160	38.29	2.24	20	
Benzene	19.88	1.0	20	0	99.4	79 - 120	20.38	2.45	20	
Bromobenzene	19.95	1.0	20	0	99.7	80 - 120	21.1	5.63	20	
Bromochloromethane	15.82	1.0	20	0	79.1	78 - 123	16.5	4.21	20	
Bromodichloromethane	19.1	1.0	20	0	95.5	79 - 125	19.76	3.38	20	
Bromoform	19.74	1.0	20	0	98.7	66 - 130	20.98	6.09	20	
Bromomethane	15.44	1.0	20	0	77.2	53 - 141	15.67	1.47	20	

ALS Houston, US Date: 13-Jul-20

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

QC BATCH REPORT

Batch ID: R364190 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20061208-15MSD** Units: **UG/L** Analysis Date: **29-Jun-2020 14:26**
Client ID: Run ID: **VOA6_364190** SeqNo: **5643347** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	36.99	2.0	40	0	92.5	64 - 133	37.32	0.901	20	
Carbon tetrachloride	21.17	1.0	20	0	106	72 - 136	21.33	0.752	20	
Chlorobenzene	20.46	1.0	20	0	102	82 - 118	21.2	3.54	20	
Chloroethane	22.48	1.0	20	0	112	60 - 138	21.55	4.21	20	
Chloroform	16.85	1.0	20	0	84.2	79 - 124	17.54	4.02	20	
Chloromethane	13.52	1.0	20	0	67.6	50 - 139	13.98	3.33	20	
cis-1,2-Dichloroethene	21.08	1.0	20	3.49	88.0	78 - 123	21.76	3.14	20	
cis-1,3-Dichloropropene	19.41	1.0	20	0	97.1	75 - 124	20.1	3.49	20	
Dibromochloromethane	19.81	1.0	20	0	99.1	74 - 126	20.93	5.49	20	
Dibromomethane	18.61	1.0	20	0	93.1	79 - 123	19.35	3.91	20	
Dichlorodifluoromethane	13.61	1.0	20	0	68.0	32 - 152	13.47	1.01	20	
Ethylbenzene	21.36	1.0	20	0	107	79 - 121	22.56	5.44	20	
Hexachlorobutadiene	27.08	1.0	20	0	135	66 - 134	26.44	2.39	20	S
Isopropylbenzene	21.93	1.0	20	0	110	72 - 131	24.04	9.16	20	
m,p-Xylene	43.64	2.0	40	0	109	80 - 121	46.5	6.36	20	
Methylene chloride	15.07	2.0	20	0	75.4	74 - 124	15.79	4.68	20	
Naphthalene	24.03	1.0	20	0	120	61 - 128	21.08	13.1	20	
n-Butylbenzene	23.35	1.0	20	0	117	75 - 128	25.21	7.69	20	
n-Propylbenzene	21.91	1.0	20	0	110	76 - 126	24.08	9.42	20	
o-Xylene	20.96	1.0	20	0	105	78 - 122	22.66	7.8	20	
sec-Butylbenzene	22.72	1.0	20	0	114	77 - 126	24.98	9.46	20	
Styrene	20.94	1.0	20	0	105	78 - 123	22.07	5.25	20	
tert-Butylbenzene	22.2	1.0	20	0	111	78 - 124	24.14	8.38	20	
Tetrachloroethene	23.14	1.0	20	0	116	74 - 129	24.53	5.84	20	
Toluene	21.5	1.0	20	0	108	80 - 121	22.15	2.94	20	
trans-1,2-Dichloroethene	18.4	1.0	20	0	92.0	75 - 124	19.05	3.49	20	
trans-1,3-Dichloropropene	19.06	1.0	20	0	95.3	73 - 127	19.47	2.09	20	
Trichloroethene	23.32	1.0	20	1.378	110	79 - 123	25.04	7.11	20	
Trichlorofluoromethane	19.84	1.0	20	0	99.2	65 - 141	19.5	1.73	20	
Vinyl chloride	18.52	1.0	20	2.431	80.4	58 - 137	18.6	0.443	20	
Surr: 1,2-Dichloroethane-d4	*38.28*	*1.0*	*50*	*0*	*76.6*	*81 - 118*	*38.66*	*0.981*	*20*	S
Surr: 4-Bromofluorobenzene	*48.96*	*1.0*	*50*	*0*	*97.9*	*85 - 114*	*48.2*	*1.56*	*20*	
Surr: Dibromofluoromethane	*42.57*	*1.0*	*50*	*0*	*85.1*	*80 - 119*	*42.99*	*0.989*	*20*	
Surr: Toluene-d8	*54.3*	*1.0*	*50*	*0*	*109*	*89 - 112*	*54.83*	*0.981*	*20*	

ALS Houston, US Date: 13-Jul-20

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

QC BATCH REPORT

Batch ID:	**R364190 (0)**	**Instrument:**	**VOA6**	**Method:**	**VOLATILES ORGANICS BY METHOD 8260C**

The following samples were analyzed in this batch: HS20061178-03

ALS Houston, US Date: 13-Jul-20

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

QC BATCH REPORT

Batch ID: R364313 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY SW9056A**

MBLK Sample ID: **WBLKW1-062420** Units: **mg/L** Analysis Date: **24-Jun-2020 11:19**
Client ID: Run ID: **ICS-Integrion_364313** SeqNo: **5646076** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate (As N)	0.100	0.100								U
Nitrogen, Nitrite (As N)	0.100	0.100								U
Sulfate	0.2308	0.500								J

LCS Sample ID: **WLCSW1-062420** Units: **mg/L** Analysis Date: **24-Jun-2020 11:37**
Client ID: Run ID: **ICS-Integrion_364313** SeqNo: **5646077** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate (As N)	3.947	0.100	4	0	98.7	80 - 120				
Nitrogen, Nitrite (As N)	4.35	0.100	4	0	109	80 - 120				
Sulfate	19.6	0.500	20	0	98.0	80 - 120				

MS Sample ID: **HS20061149-01MS** Units: **mg/L** Analysis Date: **25-Jun-2020 02:33**
Client ID: Run ID: **ICS-Integrion_364313** SeqNo: **5646105** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate (As N)	2.507	0.100	2	0.5108	99.8	80 - 120				
Nitrogen, Nitrite (As N)	2.271	0.100	2	0	114	80 - 120				
Sulfate	11.02	0.500	10	1.388	96.4	80 - 120				

MSD Sample ID: **HS20061149-01MSD** Units: **mg/L** Analysis Date: **25-Jun-2020 02:51**
Client ID: Run ID: **ICS-Integrion_364313** SeqNo: **5646106** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate (As N)	2.47	0.100	2	0.5108	98.0	80 - 120	2.507	1.5	20	
Nitrogen, Nitrite (As N)	2.245	0.100	2	0	112	80 - 120	2.271	1.15	20	
Sulfate	10.85	0.500	10	1.388	94.6	80 - 120	11.02	1.6	20	

The following samples were analyzed in this batch: HS20061178-01 HS20061178-02 HS20061178-03 HS20061178-04

ALS Houston, US Date: 13-Jul-20

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

QC BATCH REPORT

Batch ID: R364738 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY SW9056A**

MBLK Sample ID: **MBLK-070820** Units: **mg/L** Analysis Date: **08-Jul-2020 00:29**
Client ID: Run ID: **ICS-Integrion_364738** SeqNo: **5655203** 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	0.225	0.500								J

LCS Sample ID: **LCS-070820** Units: **mg/L** Analysis Date: **08-Jul-2020 01:23**
Client ID: Run ID: **ICS-Integrion_364738** SeqNo: **5655206** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.83	0.500	20	0	99.2	80 - 120				
Sulfate	19.61	0.500	20	0	98.0	80 - 120				

MS Sample ID: **HS20061283-02MS** Units: **mg/L** Analysis Date: **08-Jul-2020 07:25**
Client ID: Run ID: **ICS-Integrion_364738** SeqNo: **5655221** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	49.3	0.500	10	39.16	101	80 - 120				
Sulfate	33.07	0.500	10	23.77	93.0	80 - 120				

MSD Sample ID: **HS20061283-02MSD** Units: **mg/L** Analysis Date: **08-Jul-2020 07:43**
Client ID: Run ID: **ICS-Integrion_364738** SeqNo: **5655222** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	48.93	0.500	10	39.16	97.7	80 - 120	49.3	0.753	20	
Sulfate	32.91	0.500	10	23.77	91.5	80 - 120	33.07	0.475	20	

The following samples were analyzed in this batch: HS20061178-01 HS20061178-02 HS20061178-03 HS20061178-04

ALS Houston, US Date: 13-Jul-20

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

QUALIFIERS, ACRONYMS, UNITS

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

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

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
Dept of Defense	ANAB L2231 V009	22-Dec-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2019-2020	31-Jul-2020
North Carolina	624-2020	31-Dec-2020
Oklahoma	2019-141	31-Aug-2020
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 13-Jul-20

Sample Receipt Checklist

Work Order ID: HS20061178 **Date/Time Received:** 24-Jun-2020 09:30

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

Completed By: /S/ Paresh M. Giga (eSignature) 24-Jun-2020 16:30 (Date/Time) **Reviewed by:** (eSignature) (Date/Time)

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

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	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):	1.1C U/c	IR25
Cooler(s)/Kit(s):	44254	
Date/Time sample(s) sent to storage:	6/24/2020 16:50	

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

Login Notes: 35AWW08_062320 Metals pH >2 (5).
Preserved with 0.5ml HNO3
6/24/2020 15:45 Final pH (1)

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

bhate

1608 13th Avenue South, Suite 300
Birmingham Alabama 35205
Tel: 205-918-4000
Fax: 205-918-4050

Chain of Custody and Analytical Request

Page: _____ of _____

Project/Phase No: NWO1312.0150

COC Number(1): _____

LIMS Number: _____

Facility/Base I.D.: LHAAP

Project/Site Name: LHAAP / Site 58

Client Name:

Collected by: Scott Beesinger

Sample Analysis Requested [5] | Quality Assurance Samples [6]

Field Sample ID (30 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code [2]	Sample Number [3]	Sample Matrix [4]	Number of containers	VOC	MEE	TOC	Carbon Dioxide	Anions	Alkalinity	Ambient Blank Lot Control Number	Equipment Blank Lot Control Number	Trip Blank Lot Control Number	Cooler ID
35AWW09_062320	23JUN2020	1005	-	N		WG	12	X	X	X	X	X	X				
03WW01_062320	23JUN2020	1100	-	N		WG	12	X	X	X	X	X	X				
35AWW08_062320	23JUN2020	1205	-	N		WG	12	X	X	X	X	X	X				
35AWW11_062320	23JUN2020	1325		N		WG	11	X	X	X	X	X					
TRIP BLANK	23JUN2020			TB		W	2	X									
			-														
			-														
			-														
			-														
			-														
			-														

HS20061178
Bhate Environmental Associates, Inc.
LHAAP-58

COMMENTS: Cooler 44254 1225
Temp 1.1°C CFOU

Custody Transfers Prior to Receipt by Laboratory

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1. Scott Beesinger	6/23/20	1430	1. B. Mann	6/24/20	09:30
2.			2.		
3.			3.		

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: _____ Shipped No.:

_____ Method of Shipment: _____

_____ Fed Ex _____ Airbill Number:

_____ Analytical Lab: ALS 10450 Stanglift Rd. Suite 210 Houston, TX 77099 (281) 530-5656

ATTN: SONIA WEST Lab Recipient: Delivery Date/Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)

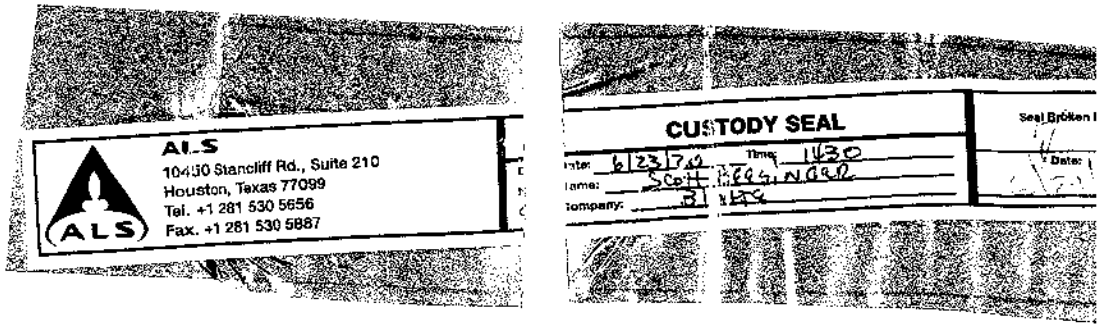
2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-c) Sample, FD = Field Duplicate (-a) Samples, FR = Field Replicate (-b) Samples, EB = Equipment Blank (-d) Samples, MS = Matrix Spike, SD = Matrix Spike Duplicate, AB = Ambient Blank (-e)

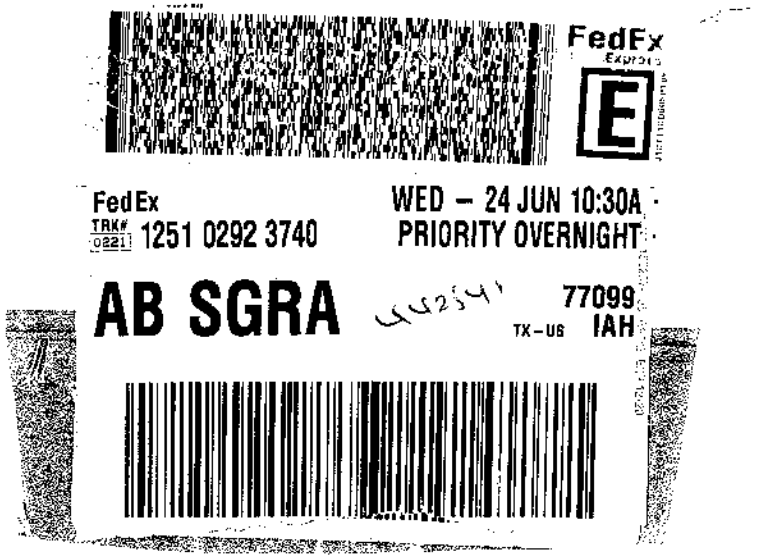
3.) Sample Number: Unique sample number collected from a particular location per day. (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01, if sampled again on 10/10/99 = 02, etc.)

4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc), SQ = Soil Blanks

5.) Sample Analysis Requested: Analytical method requested and number of containers provided for each.

6.) Quality assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipment Blank Lot Control


ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887
CUSTODY SEAL
Seal Broken
Date: 6/23/10
Time: 1630
Name: Scott
Company:


FedEx
FedEx
TRK# 0221 1251 0292 3740
WED – 24 JUN 10:30A
PRIORITY OVERNIGHT
AB SGRA
77099
TX-US IAH

July 08, 2020 Service Request No:R2005353

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

Laboratory Results for: LHAAP / Site 58

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory June 24, 2020
For your reference, these analyses have been assigned our service request number **R2005353.**

All testing was performed according to our laboratory's quality assurance program and met the requirements of the TNI standards except as noted in the case narrative report. Any testing not included in the lab's accreditation is identified on a Non-Certified Analytes report. All results are intended to be considered in their entirety. ALS Environmental is not responsible for use of less than the complete report. Results apply only to the individual samples submitted to the lab for analysis, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s), and represented by Laboratory Control Sample control limits. Any events, such as QC failures or Holding Time exceedances, which may add to the uncertainty are explained in the report narrative or are flagged with qualifiers. The flags are explained in the Report Qualifiers and Definitions page of this report.

Please contact me if you have any questions. My extension is 7471. You may also contact me via email at Brady.Kalkman@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Brady Kalkman
Project Manager

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Client: ALS Environmental - US
Project: LHAAP / Site 58
Sample Matrix: Water

Service Request: R2005353
Date Received: 06/24/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

Sample Receipt:

Three water samples were received for analysis at ALS Environmental on 06/24/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Semivoa GC:

No significant anomalies were noted with this analysis.

Approved by _____ Date 07/08/2020

SAMPLE DETECTION SUMMARY

CLIENT ID: 35AWW08_062320			Lab ID: R2005353-002			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Acetic Acid	6.1		0.56	4.0	mg/L	Organic Acids
Lactic Acid	1.8	J	0.14	2.0	mg/L	Organic Acids

CLIENT ID: 35AWW11_062320			Lab ID: R2005353-003			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Acetic Acid	0.65	J	0.56	4.0	mg/L	Organic Acids

Sample Receipt Information

ALS Environmental—Rochester Laboratory
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Client: ALS Environmental - US **Service Request:**R2005353
Project: LHAAP / Site 58

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
R2005353-001	03WW01_062320	6/23/2020	1100
R2005353-002	35AWW08_062320	6/23/2020	1205
R2005353-003	35AWW11_062320	6/23/2020	1325

bhate ENVIRONMENTAL CONSTRUCTION UNLIMITED

1608 13th Avenue South, Suite 300
Birmingham Alabama 35205
Tel: 205-918-4000
Fax: 205-918-4050

Chain of Custody and Analytical Request

Page: _____ of _____

Project/Phase No: NWO1312.0150

COC Number(1): _____

UMS Number: _____

Facility/Base I.D.: LHAAP

Project/Site Name: LHAAP / Site 58

Client Name:

Collected by: Scott Beesinger

Field Sample ID (30 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code (2)	Sample Number (3)	Sample Matrix (4)	Sample Analysis Requested (5): Number of containers	Volatile Fatty Acids										Quality Assurance Samples (6): Ambient Blank Lot Control Number	Equipment Blank Lot Control Number	Trip Blank Lot Control Number	Cooler ID
03WW01-062320	23Jun2020	1100	-		N	WG	1	X													
35AWW08-062320	23Jun2020	1205	-		N	WG	1	X													
35AWW11-062320	23Jun2020	1325	-		N	WG	1	X													
			-																		
			-																		
			-																		
			-																		
			-																		
			-																		

COMMENTS: _____

Custody Transfers Prior to Receipt by Laboratory

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1. Scott Beesinger	6/23/20	1430	1. [signature]	6/24/2020	0910
2.			2.		
3.			3.		

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: _____ Shipped No.: _____

Method of Shipment: _____

_____ Fed Ex _____ Airbill Number: _____

Analytical Lab: ALS 10450 Stanclift Rd. Suite 210 Houston TX 77099 (281) 530-5656

ATTN: SONJA WEST Lab Recipient: Delivery Date/Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)

2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-c) Sample, FD = Field Duplicate (-a) Samples, FR = Field Replicate (-b) Samples, EB = Equipment Blank (-d) Samples, MS = Matrix Spike, SD= Matrix Spike Duplicate, AB = Ambient Bl

3.) Sample Number: Unique sample number collected from a particular location per day. (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01, if sampled again on 10/10/99 = 02, etc.)

4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc), SQ = Soil Blanks

5.) Sample Analysis Requested: Analytical method requested and number of containers provided for each.

6.) Quality assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipment I

R2005353 5
ALS Laboratory Group
LHAAP / Site 58

Cooler Receipt and Preservation Check Form

R2005353 5
ALS Laboratory Group
LHAAP / Site 68

Project/Client Shaw Folder Number

Cooler received on 6/24/2020 by: @

COURIER: ALS UPS (FEDEX) VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	(Y) N	5a	**Perchlorate** samples have required headspace?	Y N (NA)
2	**Custody papers** properly completed (ink, signed)?	(Y) N	5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	Y N (NA)
3	Did all bottles arrive in good **condition** (unbroken)?	(Y) N	6	Where did the bottles originate?	(ALS/ROC) CLIENT
4	Circle: (**Wet Ice**) **Dry Ice** **Gel packs** present?	(Y) N	7	Soil VOA received as: Bulk Encore 5035set	(NA)

3. Temperature Readings Date: 6/24/2020 Time: 0953 ID: IR#7 (IR#10) From: (Temp Blank) Sample Bottle

Observed Temp (°C)	4.6						
Within 0-6°C?	(Y) N	Y N	Y N	Y N	Y N	Y N	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: Ice melted Poorly Packed (described below) Same Day Rule

&Client Approval to Run Samples: Standing Approval Client aware at drop-off Client notified by:

All samples held in storage location: R002 by @ on 6/24/2020 at 1000
5035 samples placed in storage location: by on at within 48 hours of sampling? Y N

Cooler Breakdown/Preservation Check**: Date: 6/24/2020 Time: 1635 by:

9.	Were all bottle labels complete (*i.e.* analysis, preservation, etc.)?	(YES)	NO
10.	Did all bottle labels and tags agree with custody papers?	(YES)	NO
11.	Were correct containers used for the tests indicated?	(YES)	NO
12.	Were 5035 vials acceptable (no extra labels, not leaking)?	YES	NO (N/A)
13.	Air Samples: Cassettes / Tubes Intact with MS? Canisters Pressurized		Tedlar® Bags Inflated (N/A)

pH	Lot of test paper	Reagent	Preserved? Yes	Preserved? No	Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
≥12		NaOH								
≤2		HNO_3								
≤2		H_2SO_4								
<4		$NaHSO_4$								
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522			If +, contact PM to add $Na_2S_2O_3$ (625, 608, CN), ascorbic (phenol).					
		$Na_2S_2O_3$								
		ZnAcetate	-	-						
		HCl	**	**						

**VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).

Bottle lot numbers: 041370-15mC
Explain all Discrepancies/ Other Comments:

HPROD	BULK
HTR	FLDT
SUB	HGFB
ALS	LL3541

Labels secondary reviewed by:
PC Secondary Review:

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

ALS Group USA, Corp.
dba ALS Environmental

Internal Chain of Custody Report

Client: ALS Laboratory Group **Service Request:** R2005353
Project: LHAAP / Site 58

Bottle ID	Methods	Date	Time	Sample Location / User	Disposed On
R2005353-001.01					
	Organic Acids				
		6/24/2020	1639	SMO / DWARD	
		6/24/2020	1646	R-002 / DWARD	
		6/30/2020	1550	In Lab / AFELSER	
		6/30/2020	1648	R-002 / AFELSER	
R2005353-002.01					
	Organic Acids				
		6/24/2020	1639	SMO / DWARD	
		6/24/2020	1646	R-002 / DWARD	
		6/30/2020	1550	In Lab / AFELSER	
		6/30/2020	1648	R-002 / AFELSER	
R2005353-003.01					
	Organic Acids				
		6/24/2020	1639	SMO / DWARD	
		6/24/2020	1646	R-002 / DWARD	
		6/30/2020	1550	In Lab / AFELSER	
		6/30/2020	1648	R-002 / AFELSER	

Miscellaneous Forms

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REPORT QUALIFIERS AND DEFINITIONS

U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).

B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.

E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.

E Organics- Concentration has exceeded the calibration range for that specific analysis.

D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.

* Indicates that a quality control parameter has exceeded laboratory limits. Under the ñNotesò column of the Form I, this qualifier denotes analysis was performed out of Holding Time.

H Analysis was performed out of hold time for tests that have an ñimmediateò hold time criteria.

Spike was diluted out.

\+ Correlation coefficient for MSA is <0.995.

N Inorganics- Matrix spike recovery was outside laboratory limits.

N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.

S Concentration has been determined using Method of Standard Additions (MSA).

W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.

P Concentration >40% difference between the two GC columns.

C Confirmed by GC/MS

Q DoD reports: indicates a pesticide/Aroclor is not confirmed (Ó100% Difference between two GC columns).

X See Case Narrative for discussion.

MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.

MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).

LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.

ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

Rochester Lab ID # for State Certifications[1]

Connecticut ID # PH0556	Maine ID #NY0032	Pennsylvania ID# 68-786
Delaware Approved	New Hampshire ID # 2941	Rhode Island ID # 158
DoD ELAP #65817	New York ID # 10145	Virginia #460167
Florida ID # E87674	North Carolina #676	

[1] Analyses were performed according to our laboratoryôs NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to https://www.alsglobal.com/locations/americas/north-america/usa/new-york/rochester-environmental

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: ALS Environmental - US
Project: LHAAP / Site 58/
Service Request: R2005353

Sample Name: 03WW01_062320
Lab Code: R2005353-001
Sample Matrix: Water
Date Collected: 06/23/20
Date Received: 06/24/20

Analysis Method	Extracted/Digested By	Analyzed By
Organic Acids		AFELSER

Sample Name: 35AWW08_062320
Lab Code: R2005353-002
Sample Matrix: Water
Date Collected: 06/23/20
Date Received: 06/24/20

Analysis Method	Extracted/Digested By	Analyzed By
Organic Acids		AFELSER

Sample Name: 35AWW11_062320
Lab Code: R2005353-003
Sample Matrix: Water
Date Collected: 06/23/20
Date Received: 06/24/20

Analysis Method	Extracted/Digested By	Analyzed By
Organic Acids		AFELSER

INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9034 Sulfide Acid Soluble	9030B
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7199	3060A
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction
For analytical methods not listed, the preparation method is the same as the analytical method reference.	

Sample Results

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Semivolatile Organic Compounds by GC

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R2005353
Project:	LHAAP / Site 58	**Date Collected:**	06/23/20 11:00
Sample Matrix:	Water	**Date Received:**	06/24/20 09:40
Sample Name:	03WW01_062320	**Units:**	mg/L
Lab Code:	R2005353-001	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids

Analyte Name	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
Pyruvic Acid	ND U	0.20	0.10	0.016	1	07/02/20 03:32	
Acetic Acid	ND U	4.0	2.0	0.56	1	07/02/20 03:32	
Butanoic Acid (Butyric Acid)	ND U	2.0	1.0	0.32	1	07/02/20 03:32	
Lactic Acid	ND U	2.0	1.0	0.14	1	07/02/20 03:32	
Propionic Acid	ND U	2.0	1.0	0.19	1	07/02/20 03:32	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R2005353
Project:	LHAAP / Site 58	**Date Collected:**	06/23/20 12:05
Sample Matrix:	Water	**Date Received:**	06/24/20 09:40
Sample Name:	35AWW08_062320	**Units:**	mg/L
Lab Code:	R2005353-002	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids

Analyte Name	Result		LOQ	LOD	MDL	Dil.	Date Analyzed	Q
Pyruvic Acid	ND	U	0.20	0.10	0.016	1	07/02/20 04:38	
Acetic Acid	**6.1**		4.0	2.0	0.56	1	07/02/20 04:38	
Butanoic Acid (Butyric Acid)	ND	U	2.0	1.0	0.32	1	07/02/20 04:38	
Lactic Acid	**1.8**	**J**	2.0	1.0	0.14	1	07/02/20 04:38	
Propionic Acid	ND	U	2.0	1.0	0.19	1	07/02/20 04:38	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R2005353
Project:	LHAAP / Site 58	**Date Collected:**	06/23/20 13:25
Sample Matrix:	Water	**Date Received:**	06/24/20 09:40
Sample Name:	35AWW11_062320	**Units:**	mg/L
Lab Code:	R2005353-003	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids

Analyte Name	Result		LOQ	LOD	MDL	Dil.	Date Analyzed	Q
Pyruvic Acid	ND	U	0.20	0.10	0.016	1	07/02/20 05:41	
Acetic Acid	**0.65**	**J**	4.0	2.0	0.56	1	07/02/20 05:41	
Butanoic Acid (Butyric Acid)	ND	U	2.0	1.0	0.32	1	07/02/20 05:41	
Lactic Acid	ND	U	2.0	1.0	0.14	1	07/02/20 05:41	
Propionic Acid	ND	U	2.0	1.0	0.19	1	07/02/20 05:41	

QC Summary Forms

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Semivolatile Organic Compounds by GC

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ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	R2005353
Project:	LHAAP / Site 58	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	07/2/20

Duplicate Matrix Spike Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	R2005464-001	**Basis:**	NA
Analysis Method:	Organic Acids		

		Matrix Spike RQ2007136-07			Duplicate Matrix Spike RQ2007136-08					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Pyruvic Acid	ND U	1.52	2.00	76	1.43	2.00	72 *	73-122	6	30
Acetic Acid	ND U	19.8	20.1	99	18.4	20.1	92	80-130	8	30
Butanoic Acid (Butyric Acid)	ND U	20.1	20.1	100	17.8	20.1	89	86-128	12	30
Lactic Acid	ND U	19.0	20.0	95	17.7	20.0	89	81-114	7	30
Propionic Acid	ND U	20.5	20.0	102	18.6	20.0	93	63-153	10	30

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

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

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

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: LHAAP / Site 58
Sample Matrix: Water

Service Request: R2005353
Date Analyzed: 07/01/20 14:56

Method Blank Summary

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Sample Name: Method Blank
Lab Code: RQ2007136-02
Instrument ID: R-HPLC-05
File ID: I:\ACQUDATA\hplc05\data\070120\A0005449.D\

Analysis Method: Organic Acids
Analysis Lot: 686010

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	RQ2007136-03	I:\ACQUDATA\hplc05\data\070120\A0005450.D\	07/01/20 16:02
Duplicate Lab Control Sample	RQ2007136-04	I:\ACQUDATA\hplc05\data\070120\A0005451.D\	07/01/20 17:05
03WW01_062320	R2005353-001	I:\ACQUDATA\hplc05\data\070120\A0005461.D\	07/02/20 03:32
35AWW08_062320	R2005353-002	I:\ACQUDATA\hplc05\data\070120\A0005462.D\	07/02/20 04:38
35AWW11_062320	R2005353-003	I:\ACQUDATA\hplc05\data\070120\A0005463.D\	07/02/20 05:41
Batch QC	R2005464-001	I:\ACQUDATA\hplc05\data\070120\A0005464.D\	07/02/20 06:44
Batch QCMS	RQ2007136-07	I:\ACQUDATA\hplc05\data\070120\A0005465.D\	07/02/20 07:44
Batch QCDMS	RQ2007136-08	I:\ACQUDATA\hplc05\data\070120\A0005467.D\	07/02/20 09:50

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R2005353
Project:	LHAAP / Site 58	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	mg/L
Lab Code:	RQ2007136-02	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids

Analyte Name	Result		LOQ	LOD	MDL	Dil.	Date Analyzed	Q
Pyruvic Acid	ND	U	0.20	0.10	0.016	1	07/01/20 14:56	
Acetic Acid	ND	U	4.0	2.0	0.56	1	07/01/20 14:56	
Butanoic Acid (Butyric Acid)	ND	U	2.0	1.0	0.32	1	07/01/20 14:56	
Lactic Acid	ND	U	2.0	1.0	0.14	1	07/01/20 14:56	
Propionic Acid	ND	U	2.0	1.0	0.19	1	07/01/20 14:56	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: LHAAP / Site 58
Sample Matrix: Water

Service Request: R2005353
Date Analyzed: 07/01/20 16:02

Lab Control Sample Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Sample Name: Lab Control Sample
Lab Code: RQ2007136-03

Instrument ID:R-HPLC-05
File ID:I:\ACQUDATA\hplc05\data\070120\A0005450.D\

Analysis Method: Organic Acids

Analysis Lot:686010

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Method Blank	RQ2007136-02	I:\ACQUDATA\hplc05\data\070120\A0005449.D\	07/01/20 14:56
Duplicate Lab Control Sample	RQ2007136-04	I:\ACQUDATA\hplc05\data\070120\A0005451.D\	07/01/20 17:05
03WW01_062320	R2005353-001	I:\ACQUDATA\hplc05\data\070120\A0005461.D\	07/02/20 03:32
35AWW08_062320	R2005353-002	I:\ACQUDATA\hplc05\data\070120\A0005462.D\	07/02/20 04:38
35AWW11_062320	R2005353-003	I:\ACQUDATA\hplc05\data\070120\A0005463.D\	07/02/20 05:41
Batch QC	R2005464-001	I:\ACQUDATA\hplc05\data\070120\A0005464.D\	07/02/20 06:44
Batch QCMS	RQ2007136-07	I:\ACQUDATA\hplc05\data\070120\A0005465.D\	07/02/20 07:44
Batch QCDMS	RQ2007136-08	I:\ACQUDATA\hplc05\data\070120\A0005467.D\	07/02/20 09:50

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: LHAAP / Site 58
Sample Matrix: Water

Service Request: R2005353
Date Analyzed: 07/01/20

Duplicate Lab Control Sample Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Units:mg/L
Basis:NA

		Lab Control Sample			Duplicate Lab Control Sample					
		RQ2007136-03			RQ2007136-04					
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Pyruvic Acid	Organic Acids	1.95	2.00	98	1.74	2.00	87	73-122	11	30
Acetic Acid	Organic Acids	24.8	20.1	123	22.1	20.1	110	80-130	11	30
Butanoic Acid (Butyric Acid)	Organic Acids	23.5	20.1	117	21.2	20.1	106	86-128	10	30
Lactic Acid	Organic Acids	22.9	20.0	114	21.0	20.0	105	81-114	9	30
Propionic Acid	Organic Acids	25.3	20.0	126	22.7	20.0	113	63-153	11	30

Raw Data

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Semivolatile Organic Compounds by GC

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R2005353
Project:	LHAAP / Site 58	**Date Collected:**	06/23/20 11:00
Sample Matrix:	Water	**Date Received:**	06/24/20 09:40
Sample Name:	03WW01_062320	**Units:**	mg/L
Lab Code:	R2005353-001	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids

Analyte Name	Result		LOQ	LOD	MDL	Dil.	Date Analyzed	Q
Pyruvic Acid	ND	U	0.20	0.10	0.016	1	07/02/20 03:32	
Acetic Acid	ND	U	4.0	2.0	0.56	1	07/02/20 03:32	
Butanoic Acid (Butyric Acid)	ND	U	2.0	1.0	0.32	1	07/02/20 03:32	
Lactic Acid	ND	U	2.0	1.0	0.14	1	07/02/20 03:32	
Propionic Acid	ND	U	2.0	1.0	0.19	1	07/02/20 03:32	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R2005353
Project:	LHAAP / Site 58	**Date Collected:**	06/23/20 12:05
Sample Matrix:	Water	**Date Received:**	06/24/20 09:40
Sample Name:	35AWW08_062320	**Units:**	mg/L
Lab Code:	R2005353-002	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids

Analyte Name	Result		LOQ	LOD	MDL	Dil.	Date Analyzed	Q
Pyruvic Acid	ND	U	0.20	0.10	0.016	1	07/02/20 04:38	
Acetic Acid	**6.1**		4.0	2.0	0.56	1	07/02/20 04:38	
Butanoic Acid (Butyric Acid)	ND	U	2.0	1.0	0.32	1	07/02/20 04:38	
Lactic Acid	**1.8**	**J**	2.0	1.0	0.14	1	07/02/20 04:38	
Propionic Acid	ND	U	2.0	1.0	0.19	1	07/02/20 04:38	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R2005353
Project:	LHAAP / Site 58	**Date Collected:**	06/23/20 13:25
Sample Matrix:	Water	**Date Received:**	06/24/20 09:40
Sample Name:	35AWW11_062320	**Units:**	mg/L
Lab Code:	R2005353-003	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids

Analyte Name	Result		LOQ	LOD	MDL	Dil.	Date Analyzed	Q
Pyruvic Acid	ND	U	0.20	0.10	0.016	1	07/02/20 05:41	
Acetic Acid	**0.65**	**J**	4.0	2.0	0.56	1	07/02/20 05:41	
Butanoic Acid (Butyric Acid)	ND	U	2.0	1.0	0.32	1	07/02/20 05:41	
Lactic Acid	ND	U	2.0	1.0	0.14	1	07/02/20 05:41	
Propionic Acid	ND	U	2.0	1.0	0.19	1	07/02/20 05:41	

1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005461.D
Signal(s) : dad1C.ch
Acq On : ~~30-Dec-2000, 02:47:58~~ 02-Jul-2020, 03:32
Operator : A.Felser
Sample : R2005353-001
Misc :
ALS Vial : 12 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:06:09 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	0.000	0	N.D.	ppm	
2) T	Pyruvic acid	0.000	0	N.D.	ppm	
3) T	Lactic Acid	0.000	0	N.D.	ppm	d
4) T	Acetic Acid	0.000	0	N.D.	ppm	d
5) T	Propionic Acid	0.000	0	N.D.	ppm	d
6) T	Butyric Acid	0.000	0	N.D.	ppm	

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

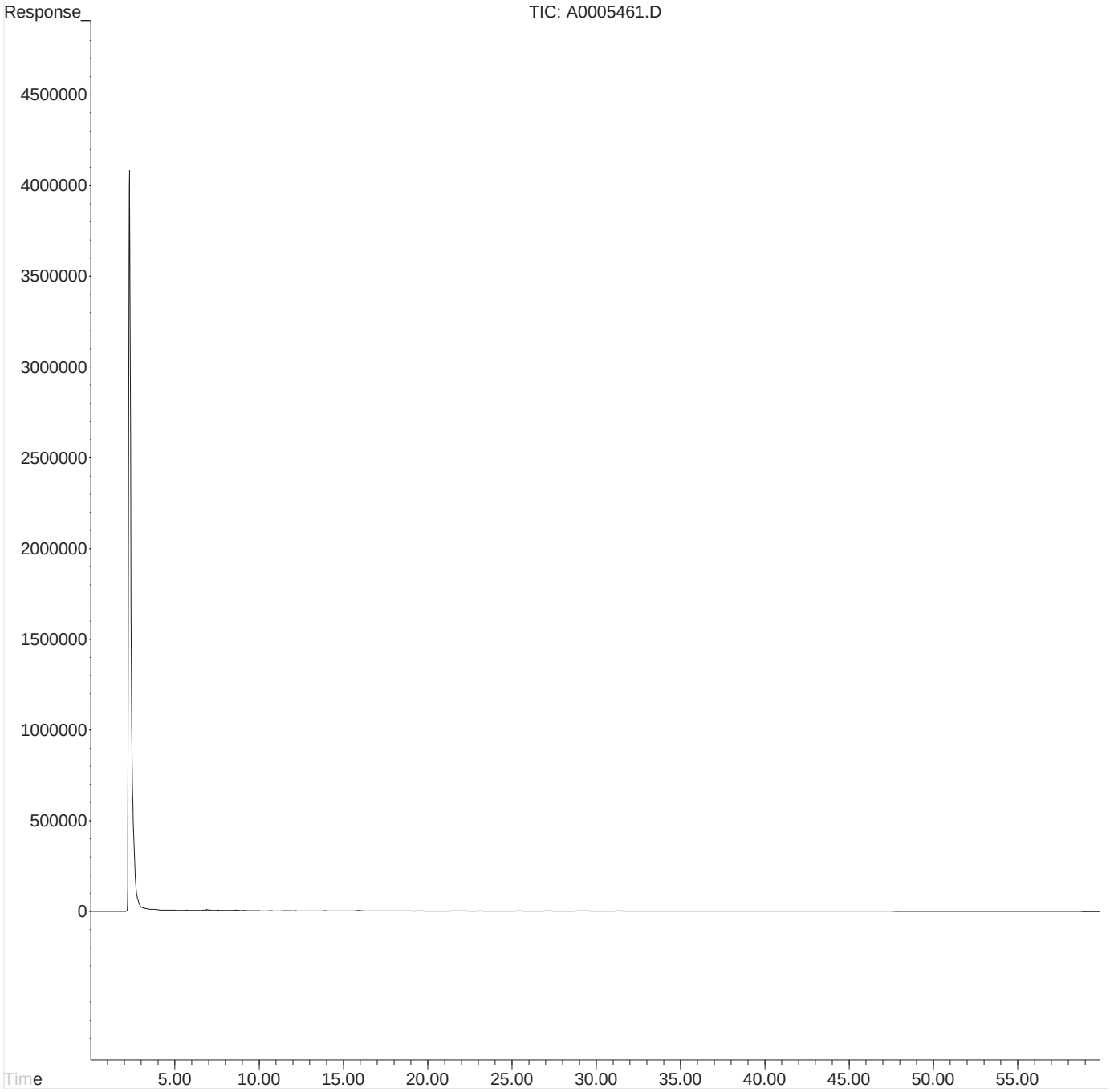
1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005461.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:47:58
Operator : A.Felser
Sample : R2005353-001
Misc :
ALS Vial : 12 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:06:09 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



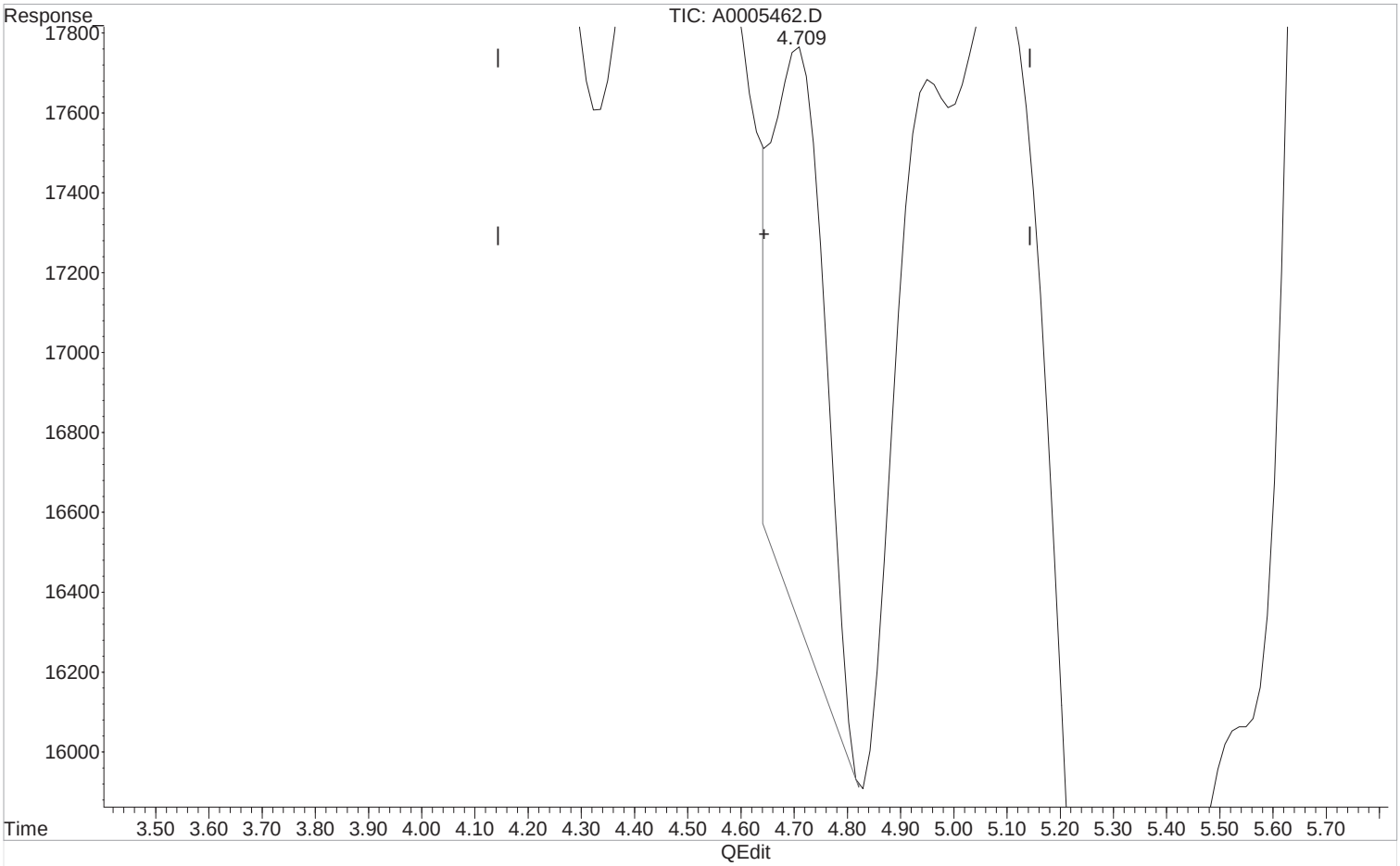
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005462.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 04:38:45
Operator : A.Felser
Sample : R2005353-002
Misc :
ALS Vial : 13 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:06:12 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.709min 1.756 ppm m

response 99041

Manual Integration:

After

Poor integration.

07/02/20

(R) - Expected Retention Time
MA031220.M Thu Jul 02 16:46:02 2020

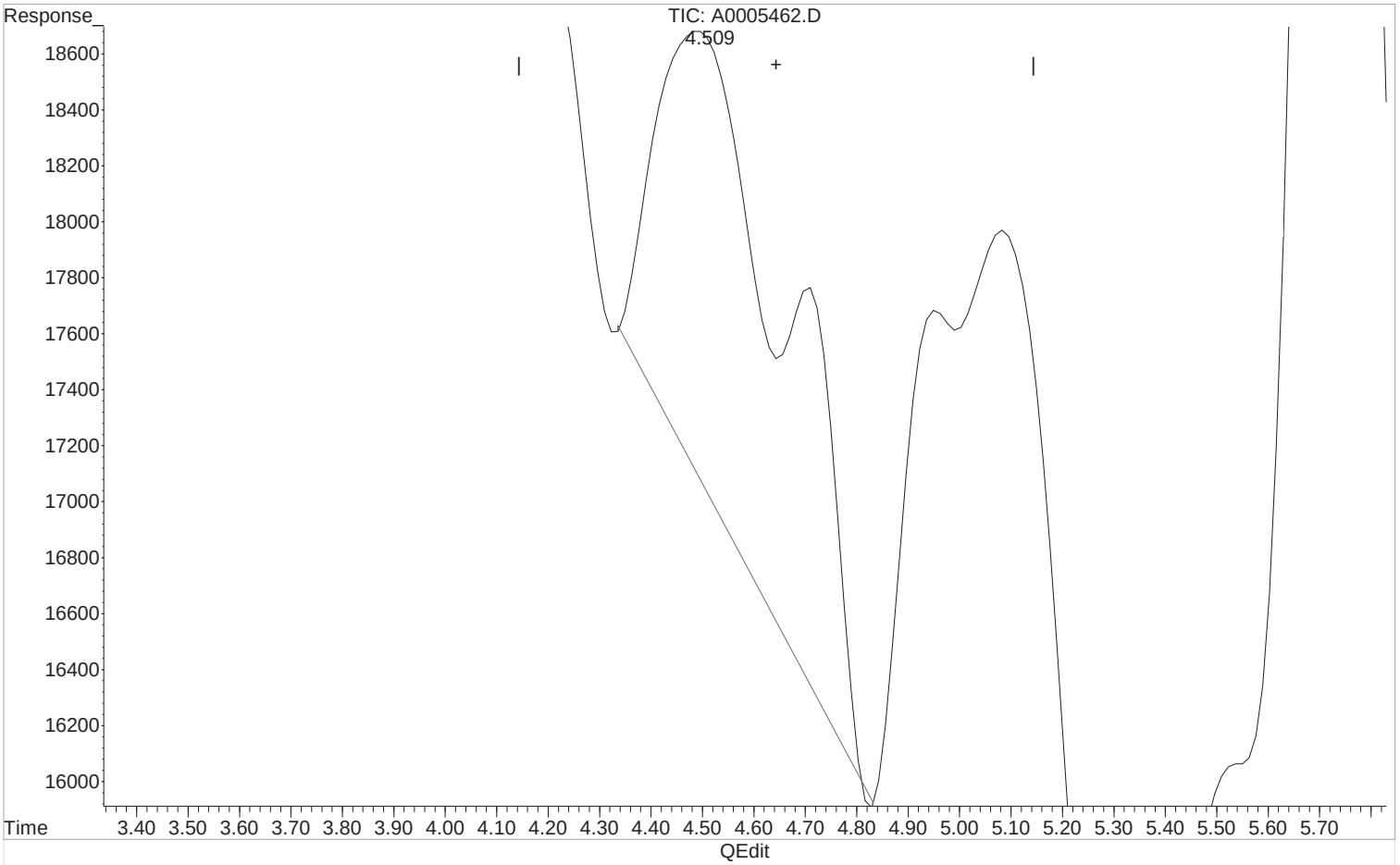
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005462.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 04:38:45
Operator : A.Felser
Sample : R2005353-002
Misc :
ALS Vial : 13 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:06:12 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.492min 5.435 ppm

response 306641

Manual Integration:

Before

07/02/20

(T) = Expected Retention Time
MA031220.M Thu Jul 02 16:45:48 2020

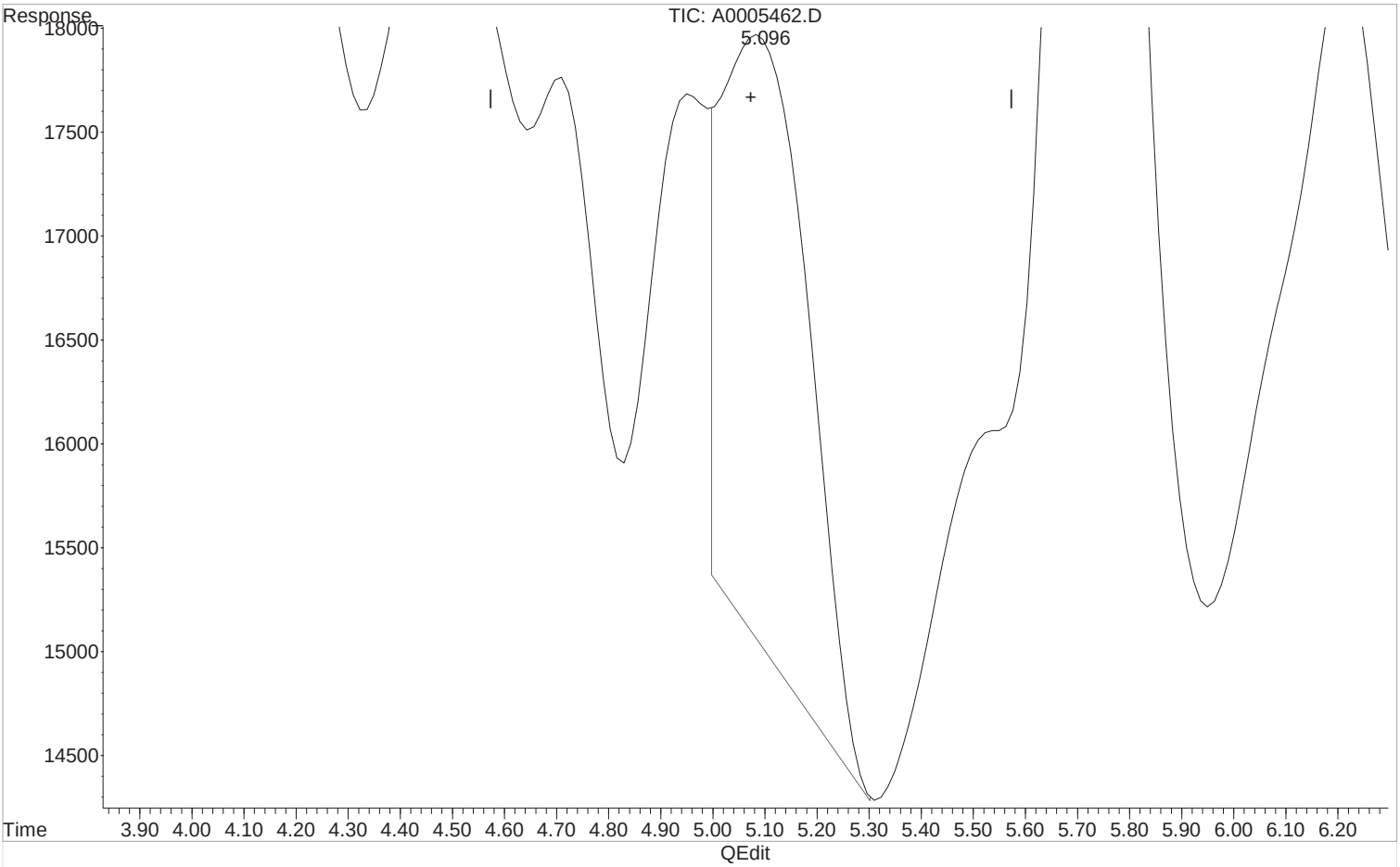
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005462.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 04:38:45
Operator : A.Felser
Sample : R2005353-002
Misc :
ALS Vial : 13 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:06:12 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

5.096min 6.113 ppm m

response 342597

Manual Integration:

After

Poor integration.

07/02/20

(5) - Expected Retention Time

MA031220.M Thu Jul 02 16:46:16 2020

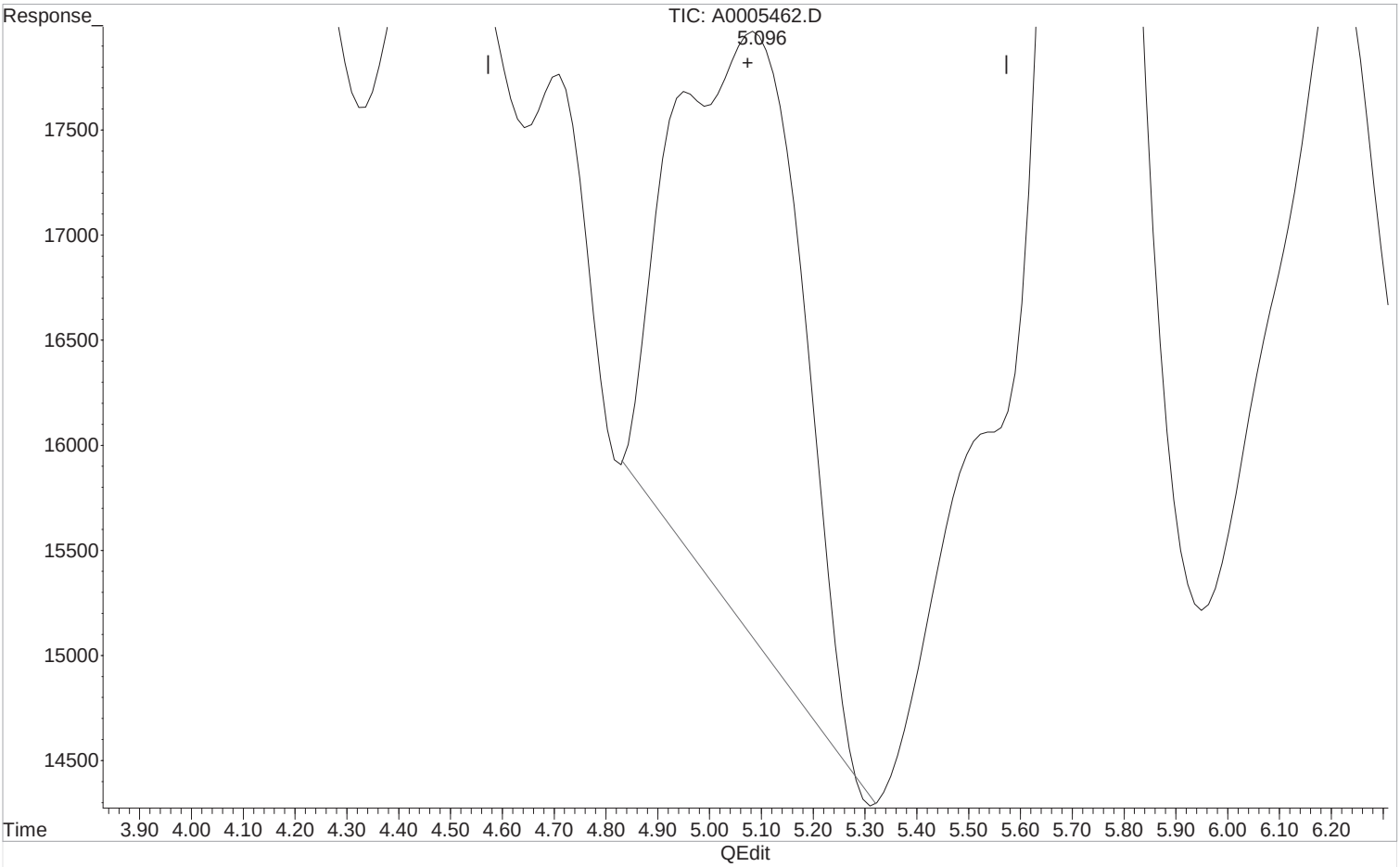
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005462.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 04:38:45
Operator : A.Felser
Sample : R2005353-002
Misc :
ALS Vial : 13 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:06:12 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

5.085min 8.675 ppm

response 486217

Manual Integration:

Before

07/02/20

(5) - Expected Retention Time
MA031220.M Thu Jul 02 16:46:06 2020

1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005462.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 04:38:45
Operator : A.Felser
Sample : R2005353-002
Misc :
ALS Vial : 13 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:06:12 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	3.318	226428	2.429	ppm	
2) T	Pyruvic acid	0.000	0	N.D.	ppm	d
3) T	Lactic Acid	4.709	99041	1.756	ppm	m
4) T	Acetic Acid	5.096	342597	6.113	ppm	m
5) T	Propionic Acid	0.000	0	N.D.	ppm	d
6) T	Butyric Acid	0.000	0	N.D.	ppm	

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

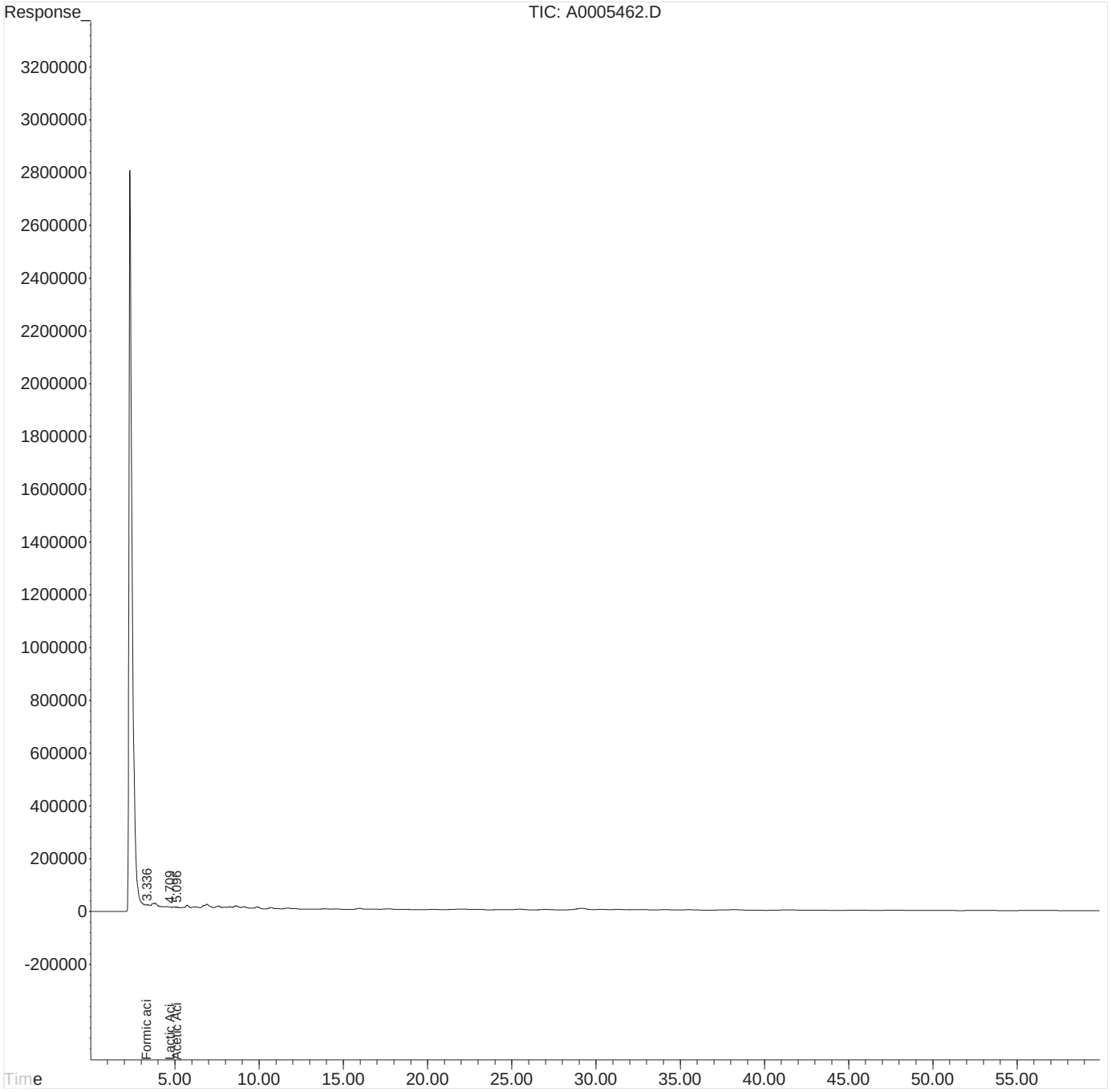
1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005462.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 04:38:45
Operator : A.Felser
Sample : R2005353-002
Misc :
ALS Vial : 13 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:06:12 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



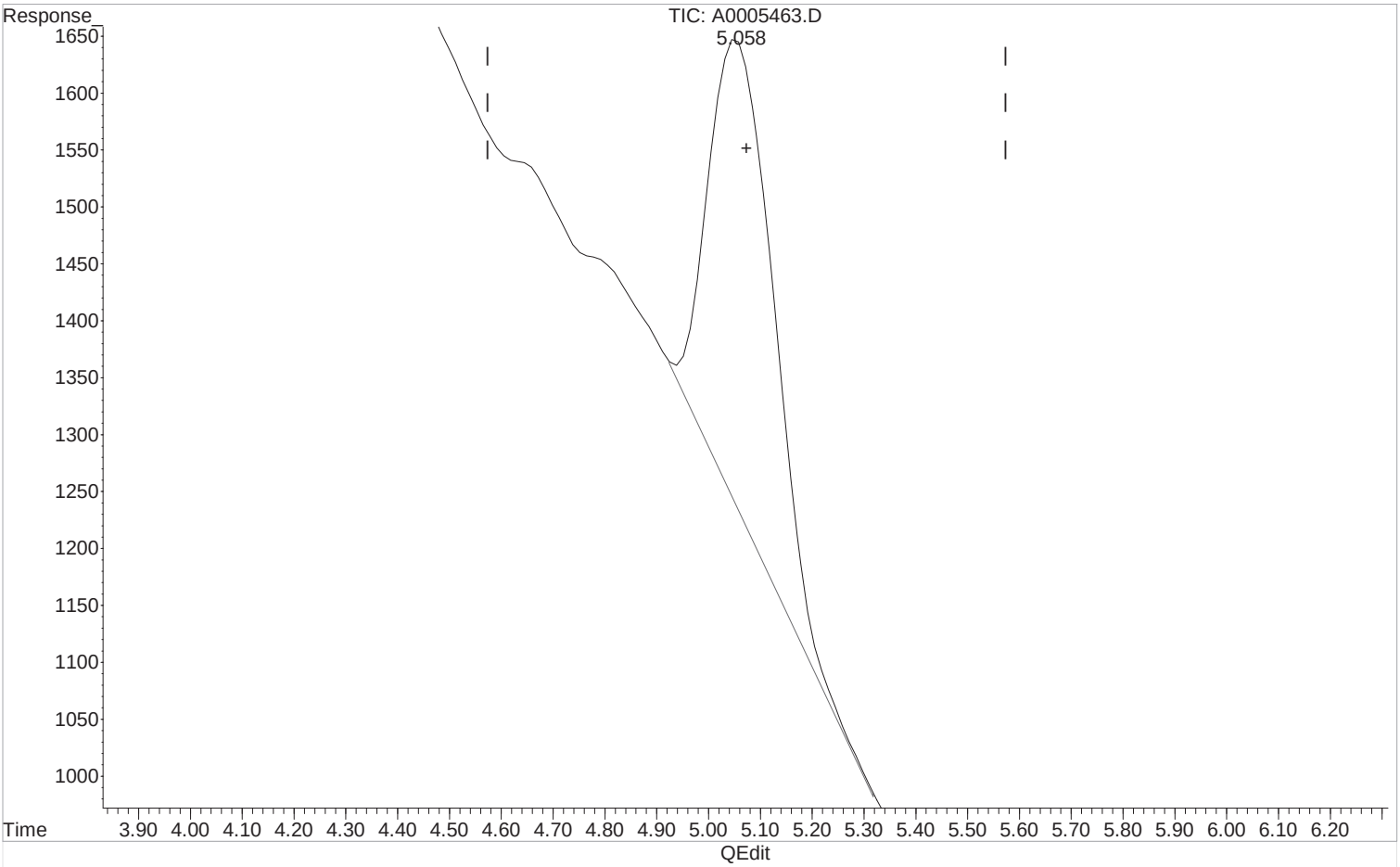
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005463.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 05:41:40
Operator : A.Felser
Sample : R2005353-003
Misc :
ALS Vial : 14 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:06:14 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

5.058min 0.649 ppm m

response 36361

Manual Integration:

After

Poor integration.

07/02/20

(T) = Expected Retention Time

MA031220.M Thu Jul 02 16:46:38 2020

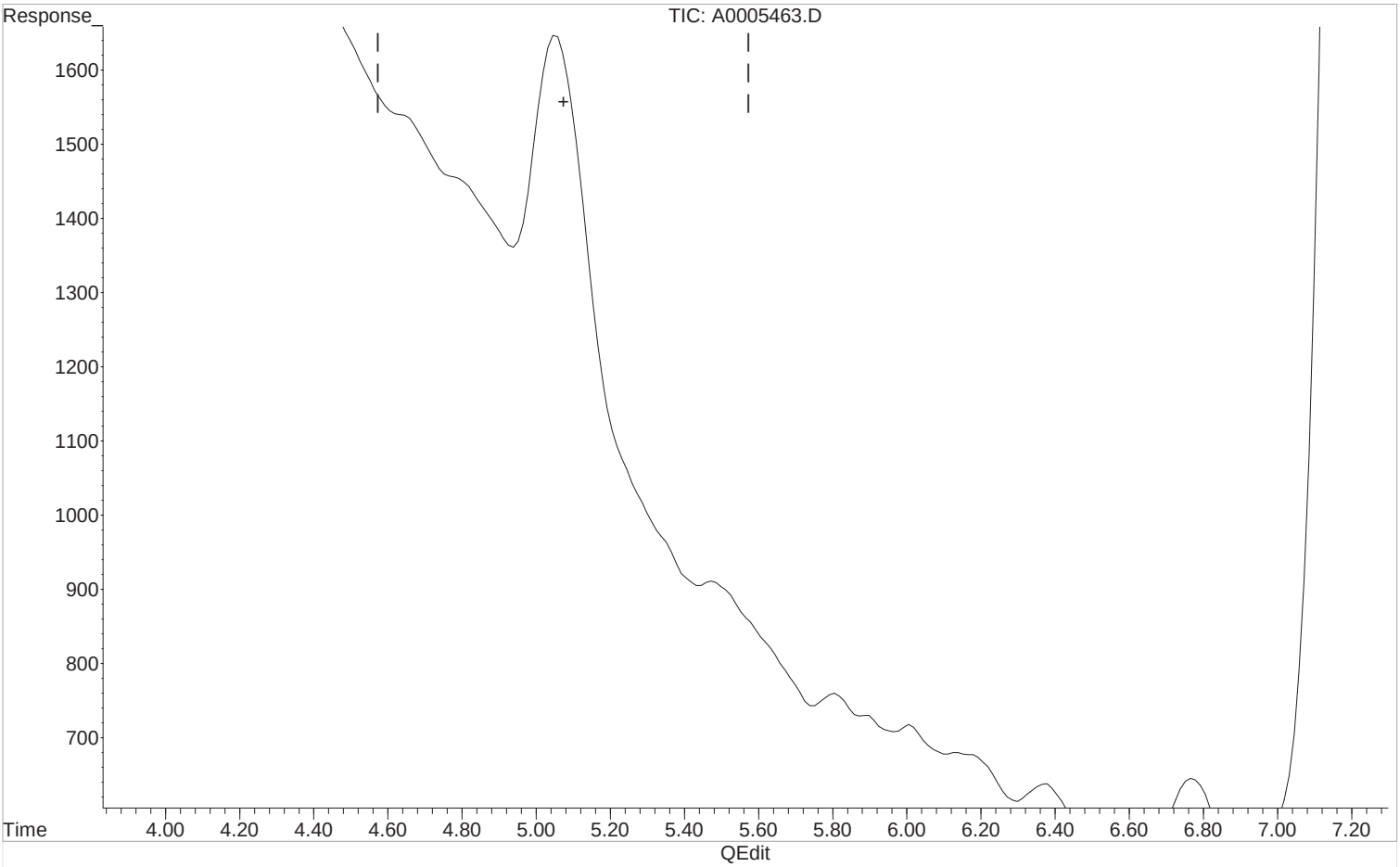
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005463.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 05:41:40
Operator : A.Felser
Sample : R2005353-003
Misc :
ALS Vial : 14 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:06:14 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

5.056min -0.828 ppm

response -46385

Manual Integration:

Before

07/02/20

(+) = Expected Retention Time
MA031220.M Thu Jul 02 16:46:32 2020

1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005463.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 05:41:40
Operator : A.Felser
Sample : R2005353-003
Misc :
ALS Vial : 14 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:06:14 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	0.000	0	N.D.	ppm	
2) T	Pyruvic acid	0.000	0	N.D.	ppm	
3) T	Lactic Acid	0.000	0	N.D.	ppm	
4) T	Acetic Acid	5.058	36361	0.649	ppm	m
5) T	Propionic Acid	0.000	0	N.D.	ppm	
6) T	Butyric Acid	0.000	0	N.D.	ppm	

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

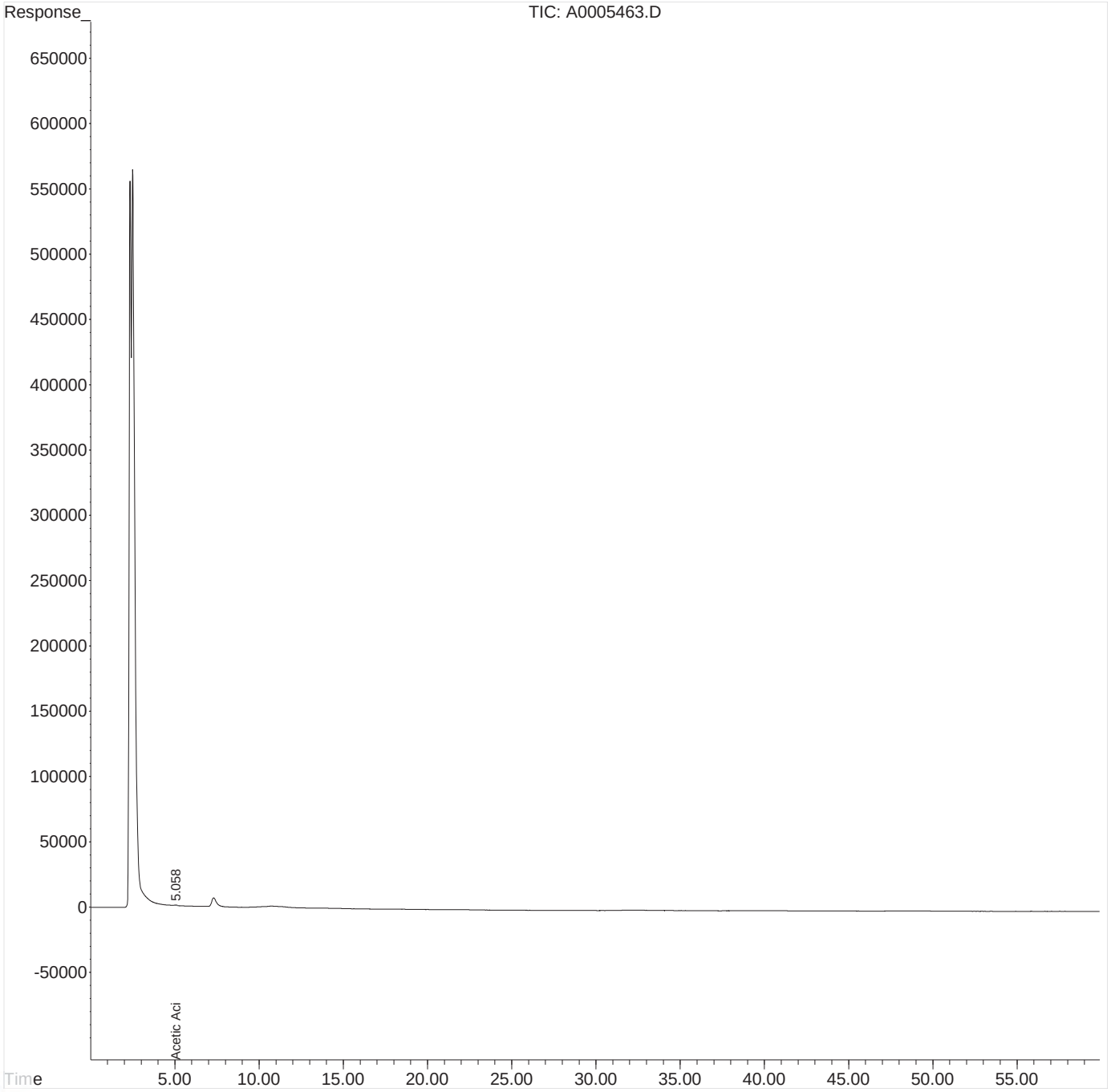
1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005463.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 05:41:40
Operator : A.Felser
Sample : R2005353-003
Misc :
ALS Vial : 14 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:06:14 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005464.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 06:44:40
Operator : A.Felser
Sample : R2005464-001
Misc :
ALS Vial : 15 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:06:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1) t	Formic acid	0.000	0	N.D.	ppm
2) T	Pyruvic acid	0.000	0	N.D.	ppm
3) T	Lactic Acid	0.000	0	N.D.	ppm
4) T	Acetic Acid	0.000	0	N.D.	ppm
5) T	Propionic Acid	0.000	0	N.D.	ppm
6) T	Butyric Acid	0.000	0	N.D.	ppm

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

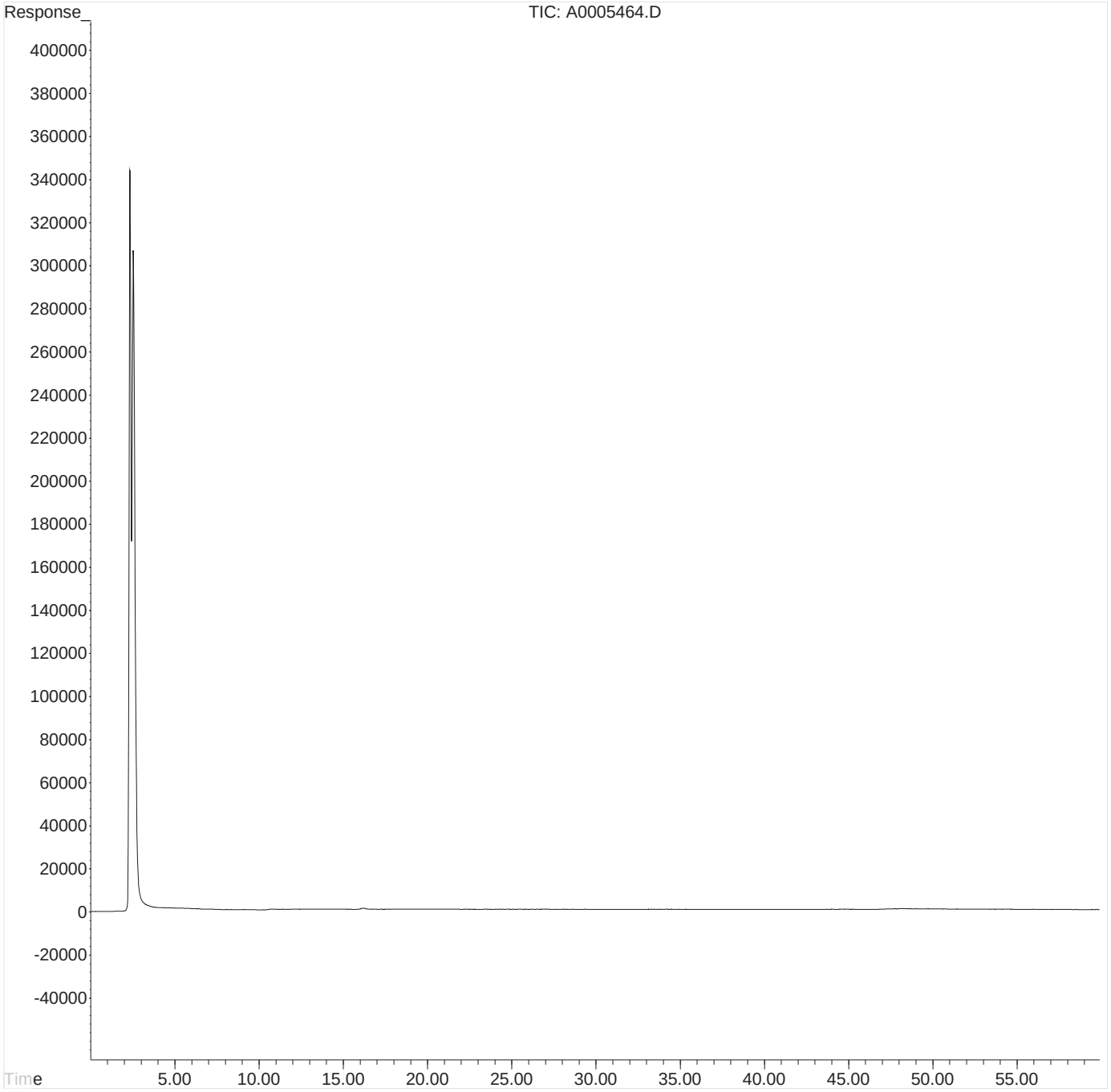
1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005464.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 06:44:40
Operator : A.Felser
Sample : R2005464-001
Misc :
ALS Vial : 15 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:06:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005449.D
Signal(s) : dad1C.ch
Acq On : ~~31-Dec-2000, 02:48:24~~ 01-Jul-2020, 14:56
Operator : A.Felser
Sample : MB
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:04:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:03:09 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1) t	Formic acid	0.000	0	N.D.	ppm
2) T	Pyruvic acid	0.000	0	N.D.	ppm
3) T	Lactic Acid	0.000	0	N.D.	ppm
4) T	Acetic Acid	0.000	0	N.D.	ppm
5) T	Propionic Acid	0.000	0	N.D.	ppm
6) T	Butyric Acid	0.000	0	N.D.	ppm

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

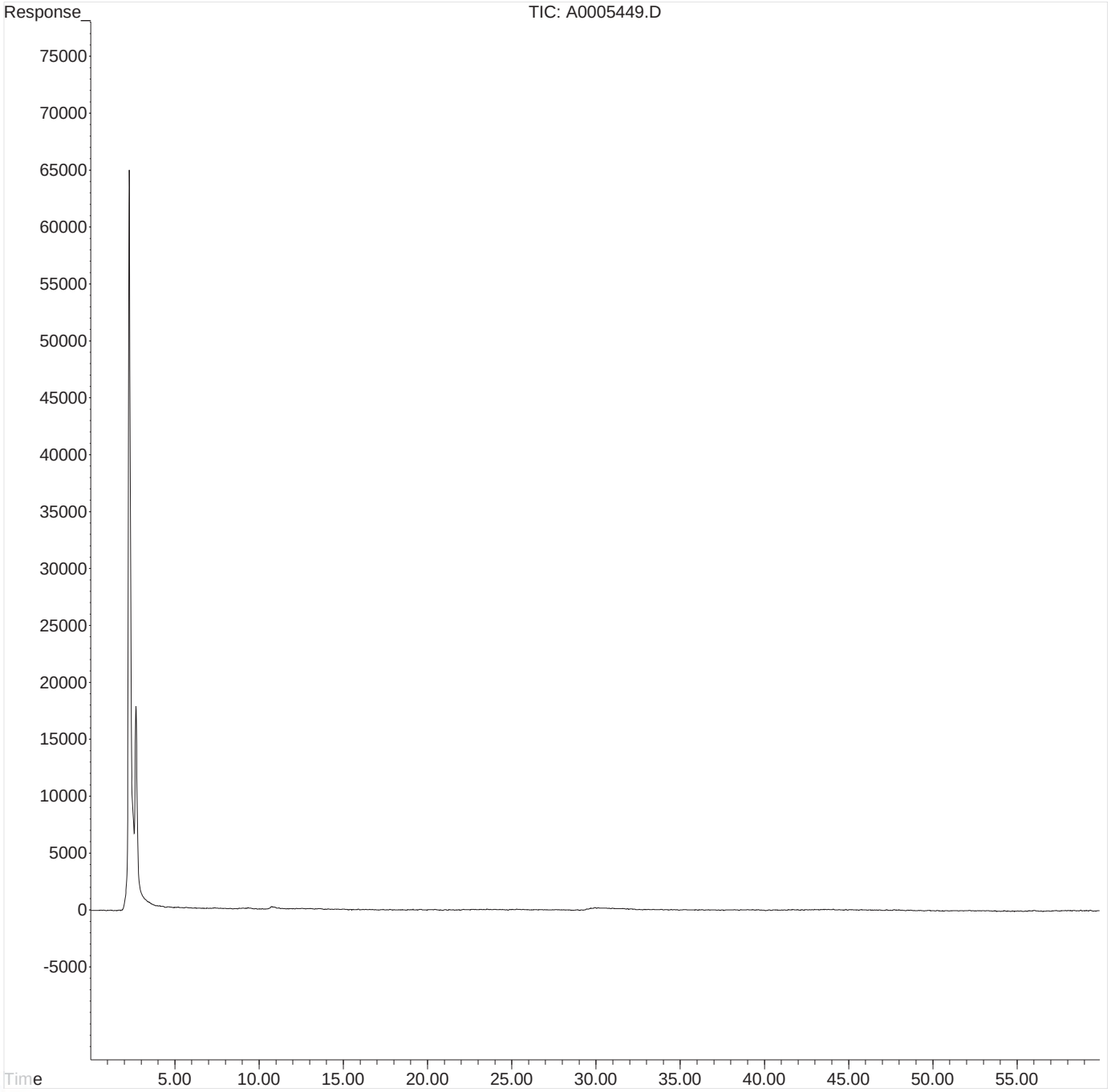
1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005449.D
Signal(s) : dad1C.ch
Acq On : 31-Dec-2000, 02:48:24
Operator : A.Felser
Sample : MB
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:04:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:03:09 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



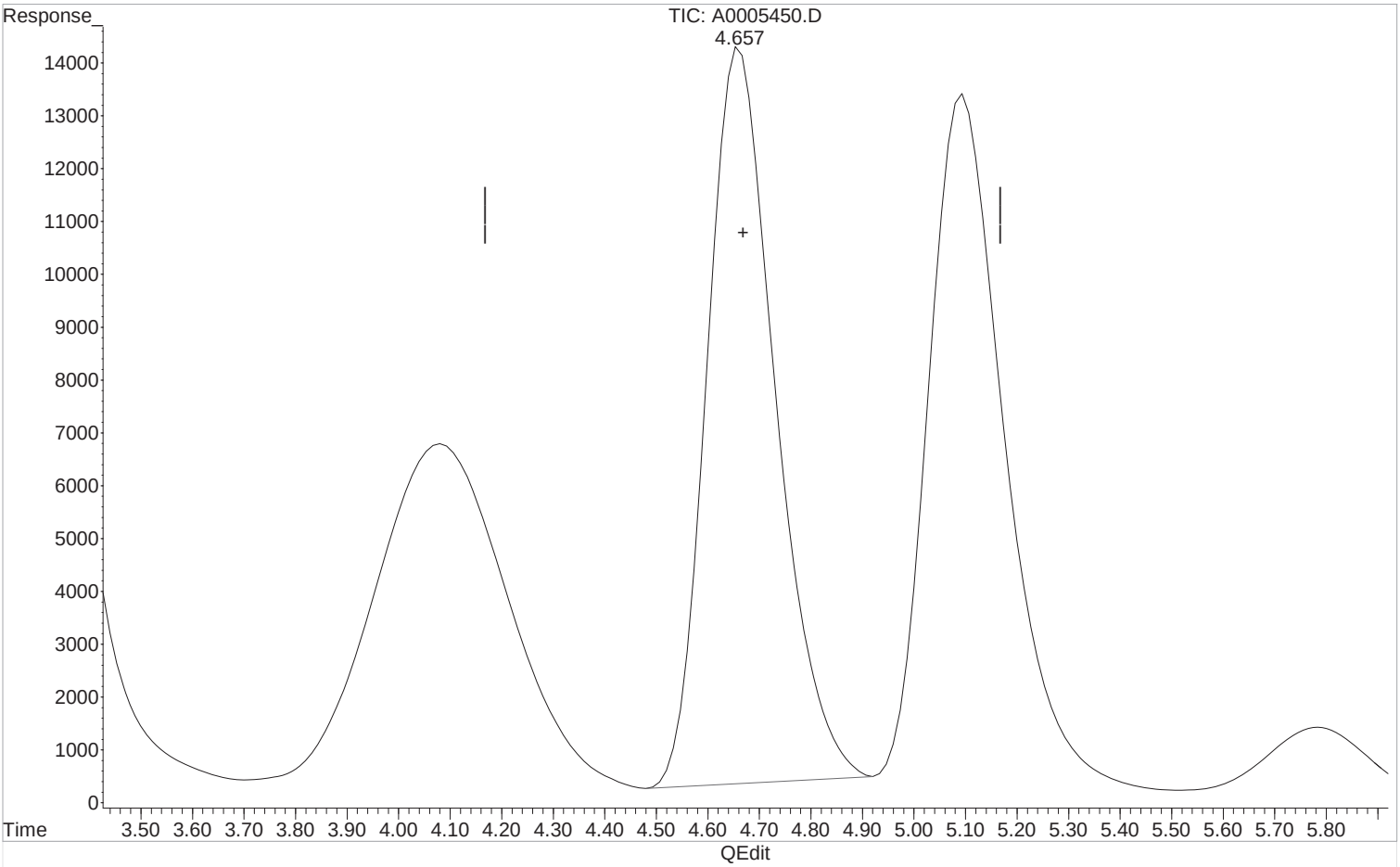
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005450.D
Signal(s) : dad1C.ch
Acq On : 01-Jul-2020, 16:02:18
Operator : A.Felser
Sample : LCS
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:04:31 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:03:09 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.657min 22.937 ppm m

response 1294019

Manual Integration:

After

Poor integration.

07/06/20

(T) = Expected Retention Time
MA031220.M Mon Jul 06 12:43:22 2020

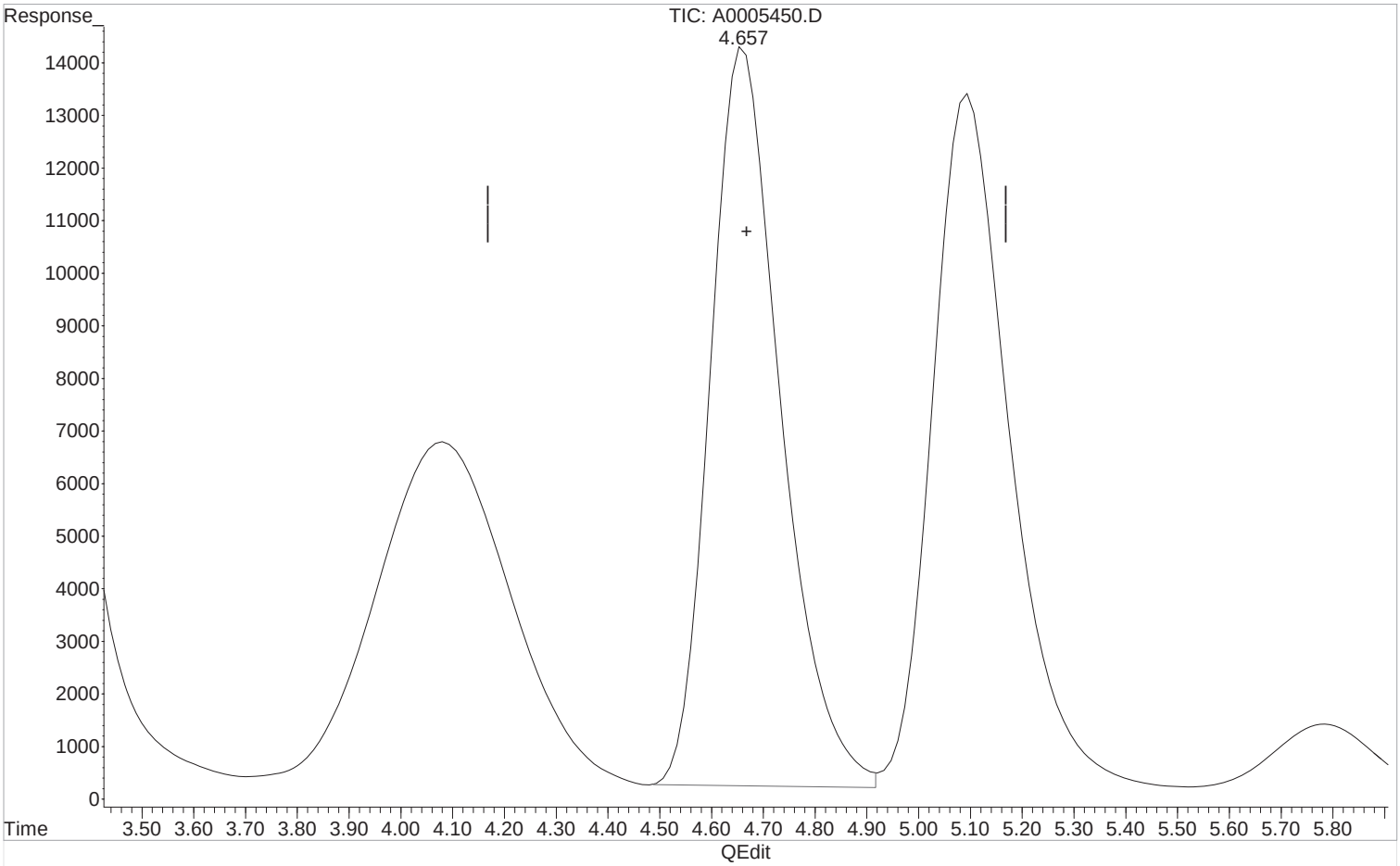
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005450.D
Signal(s) : dad1C.ch
Acq On : 01-Jul-2020, 16:02:18
Operator : A.Felser
Sample : LCS
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:04:31 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:03:09 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.664min 23.528 ppm

response 1327346

Manual Integration:

Before

07/06/20

(T) = Expected Retention Time
MA031220.M Mon Jul 06 12:42:16 2020

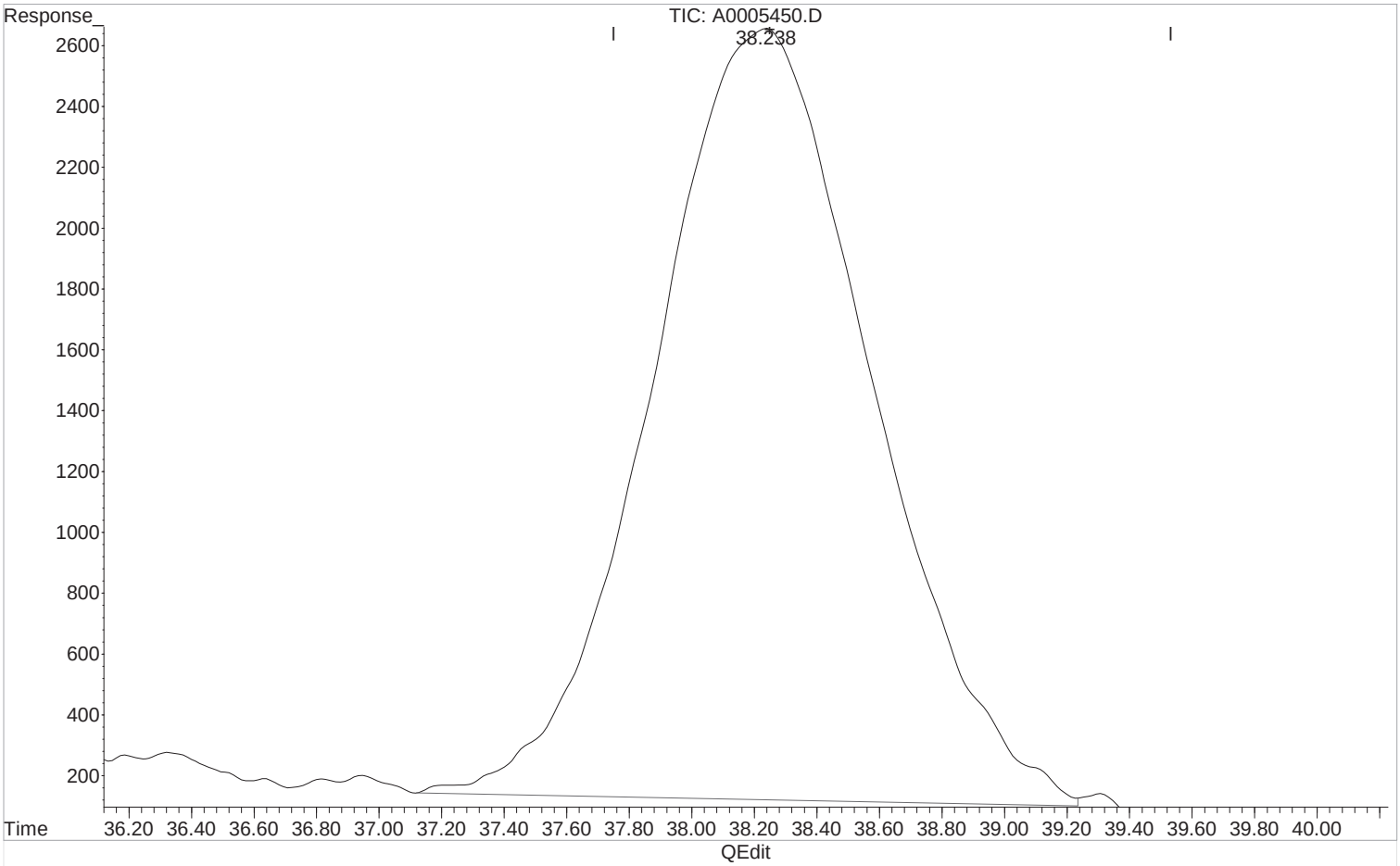
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005450.D
Signal(s) : dad1C.ch
Acq On : 01-Jul-2020, 16:02:18
Operator : A.Felser
Sample : LCS
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:04:31 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:03:09 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

38.238min 23.480 ppm m

response 1234140

Manual Integration:

After

Poor integration.

07/02/20

(6) - Expected Retention Time
MA031220.M Thu Jul 02 16:40:15 2020

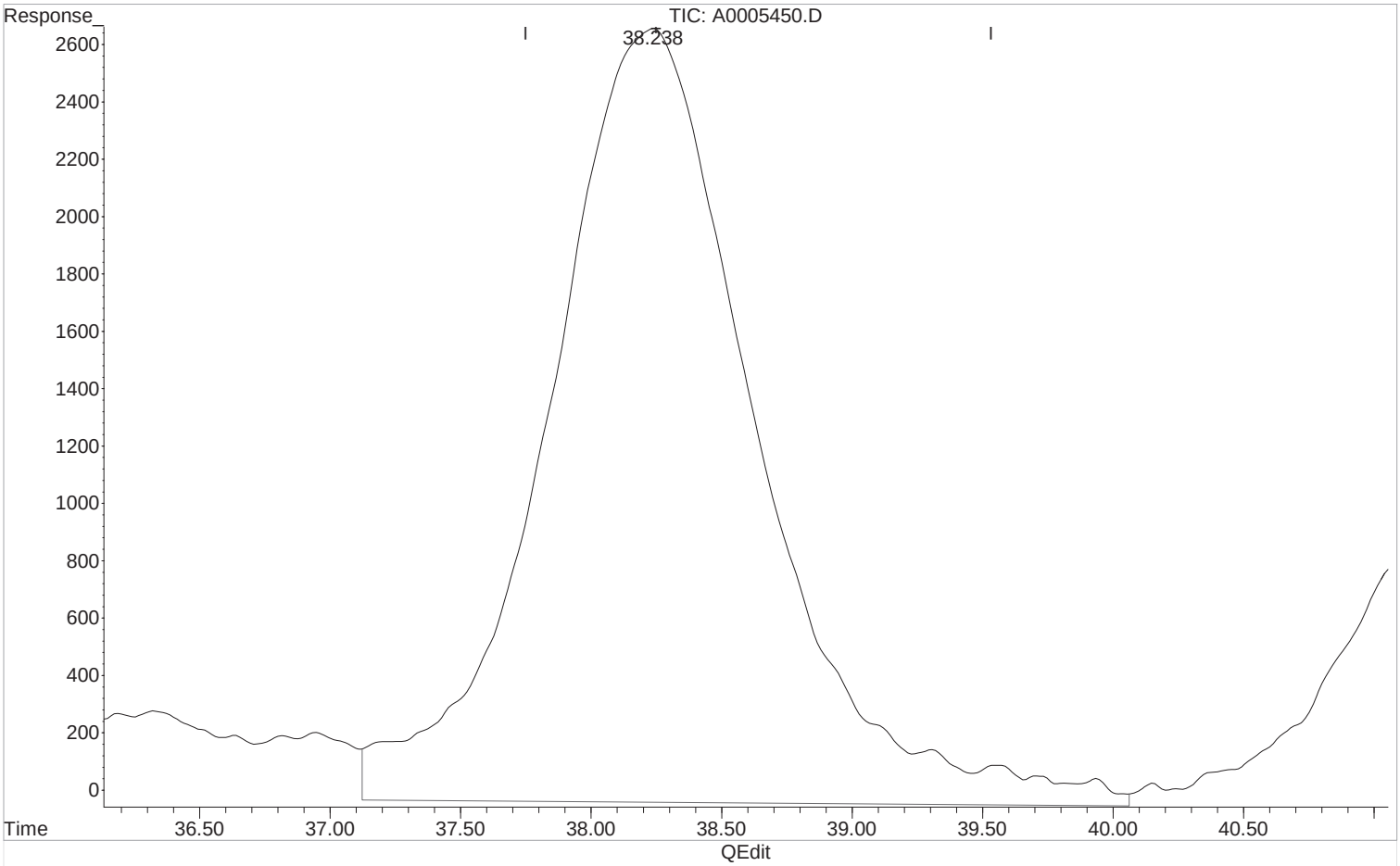
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005450.D
Signal(s) : dad1C.ch
Acq On : 01-Jul-2020, 16:02:18
Operator : A.Felser
Sample : LCS
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:04:31 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:03:09 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

38.230min 28.477 ppm

response 1496779

Manual Integration:

Before

07/02/20

(6) - Expected Retention Time
MA031220.M Thu Jul 02 16:40:04 2020

1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005450.D
Signal(s) : dad1C.ch
Acq On : 01-Jul-2020, 16:02:18
Operator : A.Felser
Sample : LCS
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:04:31 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:03:09 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	3.289	2115098	22.686	ppm	
2) T	Pyruvic acid	4.084	1152581	1.948	ppm	
3) T	Lactic Acid	4.657	1294019	22.937	ppm	m
4) T	Acetic Acid	5.097	1387411	24.754	ppm	
5) T	Propionic Acid	12.474	1373396	25.266	ppm	
6) T	Butyric Acid	38.238	1234140	23.480	ppm	m

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

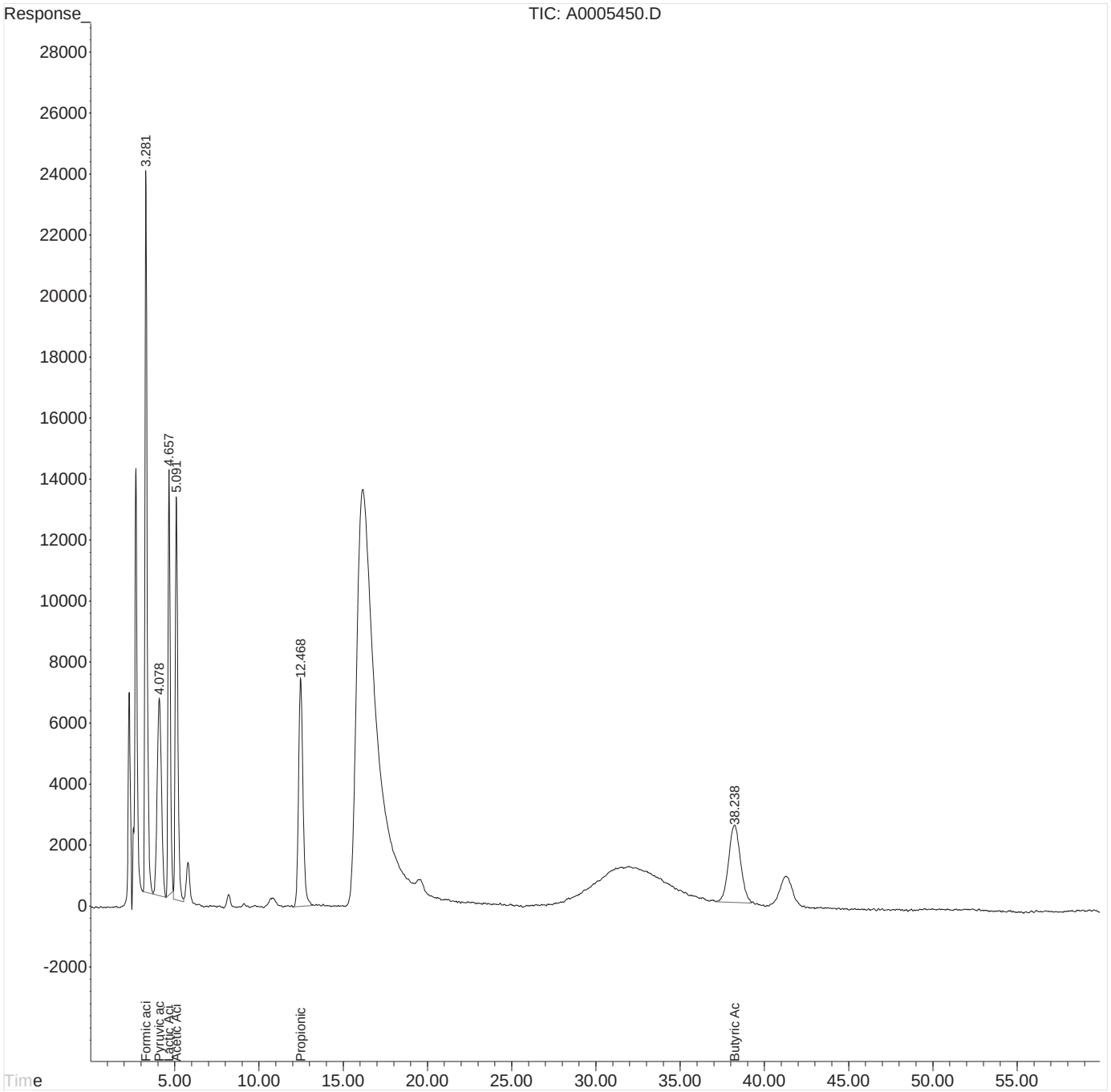
1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005450.D
Signal(s) : dad1C.ch
Acq On : 01-Jul-2020, 16:02:18
Operator : A.Felser
Sample : LCS
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:04:31 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:03:09 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



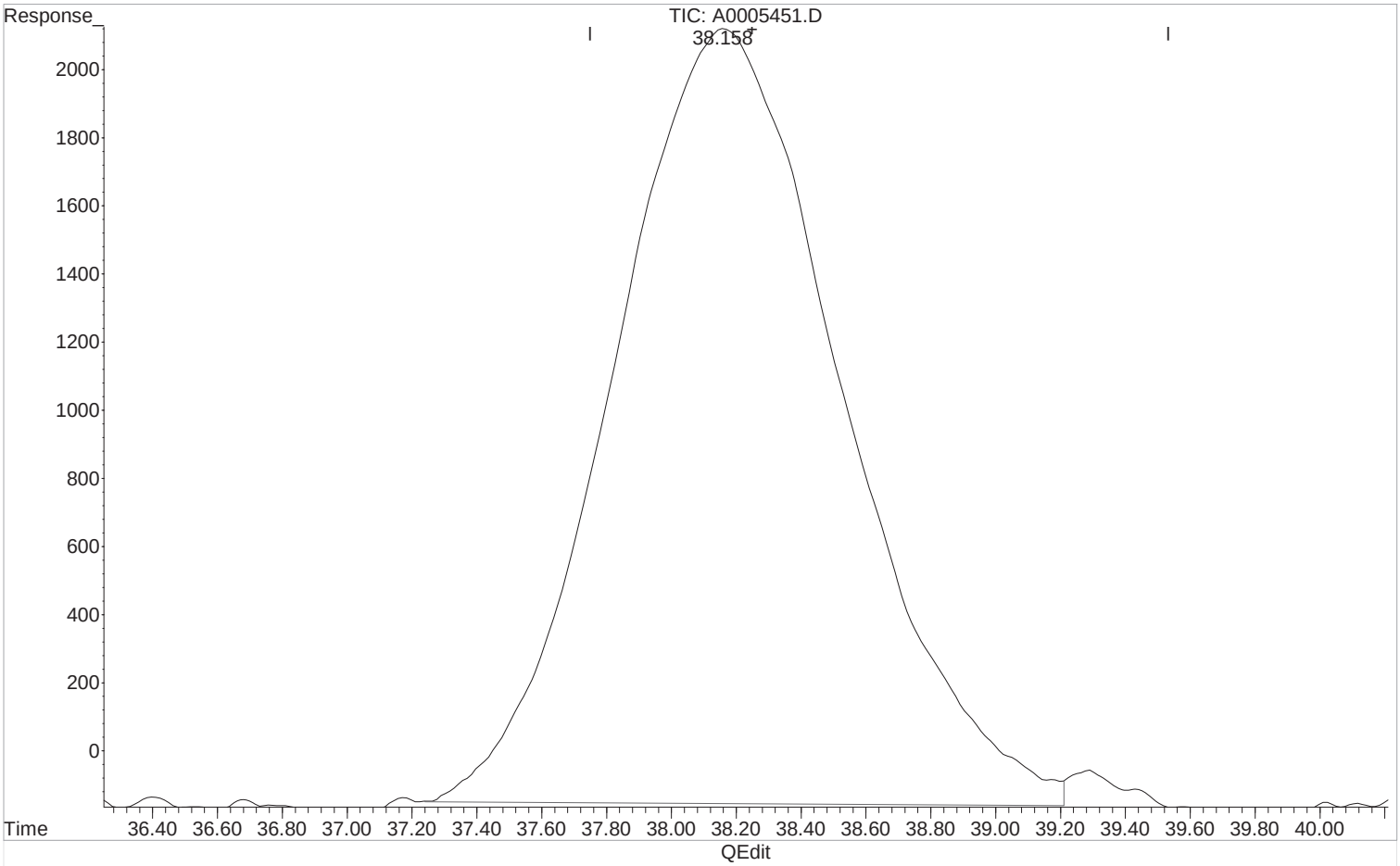
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005451.D
Signal(s) : dad1C.ch
Acq On : 01-Jul-2020, 17:05:25
Operator : A.Felser
Sample : DLCS
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:04:33 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:03:09 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

38.158min 21.205 ppm m

response 1114586

Manual Integration:

After

Poor integration.

07/02/20

(6) - Expected Retention Time
MA031220.M Thu Jul 02 16:40:38 2020

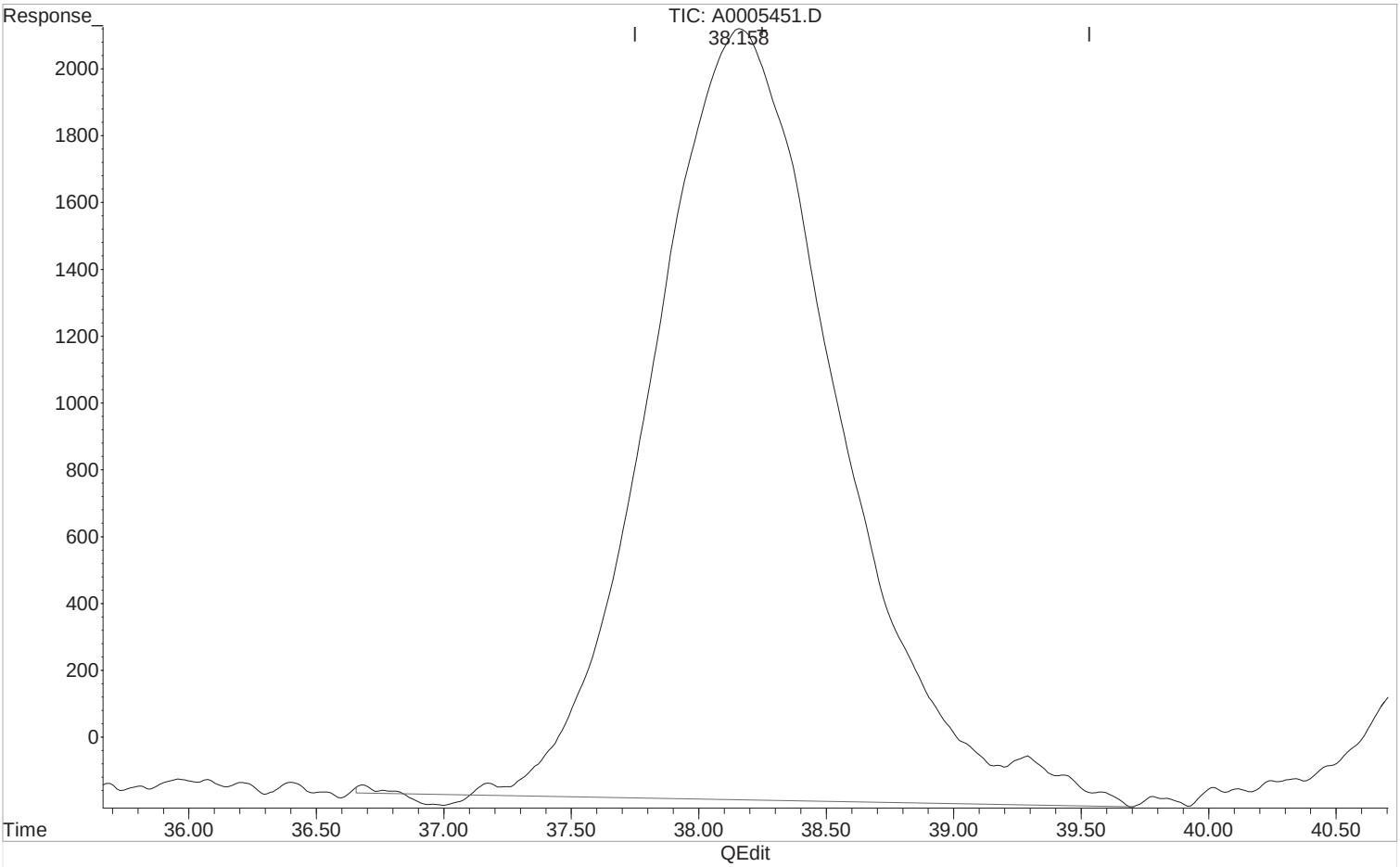
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005451.D
Signal(s) : dad1C.ch
Acq On : 01-Jul-2020, 17:05:25
Operator : A.Felser
Sample : DLCS
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:04:33 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:03:09 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

38.165min 22.339 ppm

response 1174190

Manual Integration:

Before

07/02/20

(6) - Expected Retention Time
MA031220.M Thu Jul 02 16:40:31 2020

1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005451.D
Signal(s) : dad1C.ch
Acq On : 01-Jul-2020, 17:05:25
Operator : A.Felser
Sample : DLCS
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:04:33 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:03:09 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	3.289	1896917	20.346	ppm	
2) T	Pyruvic acid	4.085	1031900	1.744	ppm	
3) T	Lactic Acid	4.663	1185702	21.017	ppm	
4) T	Acetic Acid	5.097	1237397	22.077	ppm	
5) T	Propionic Acid	12.463	1235919	22.737	ppm	
6) T	Butyric Acid	38.158	1114586	21.205	ppm	m

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

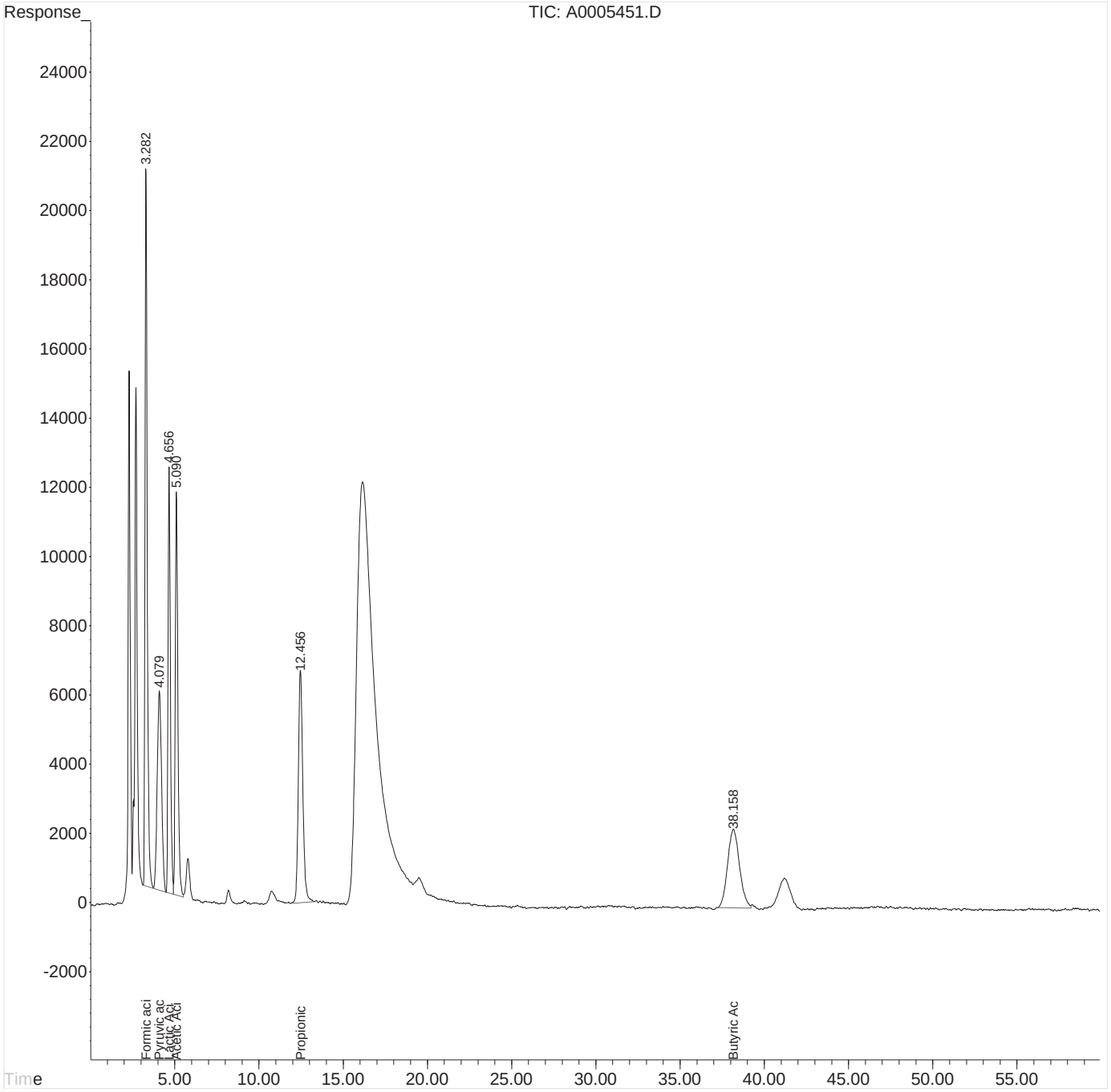
1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005451.D
Signal(s) : dad1C.ch
Acq On : 01-Jul-2020, 17:05:25
Operator : A.Felser
Sample : DLCS
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:04:33 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:03:09 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



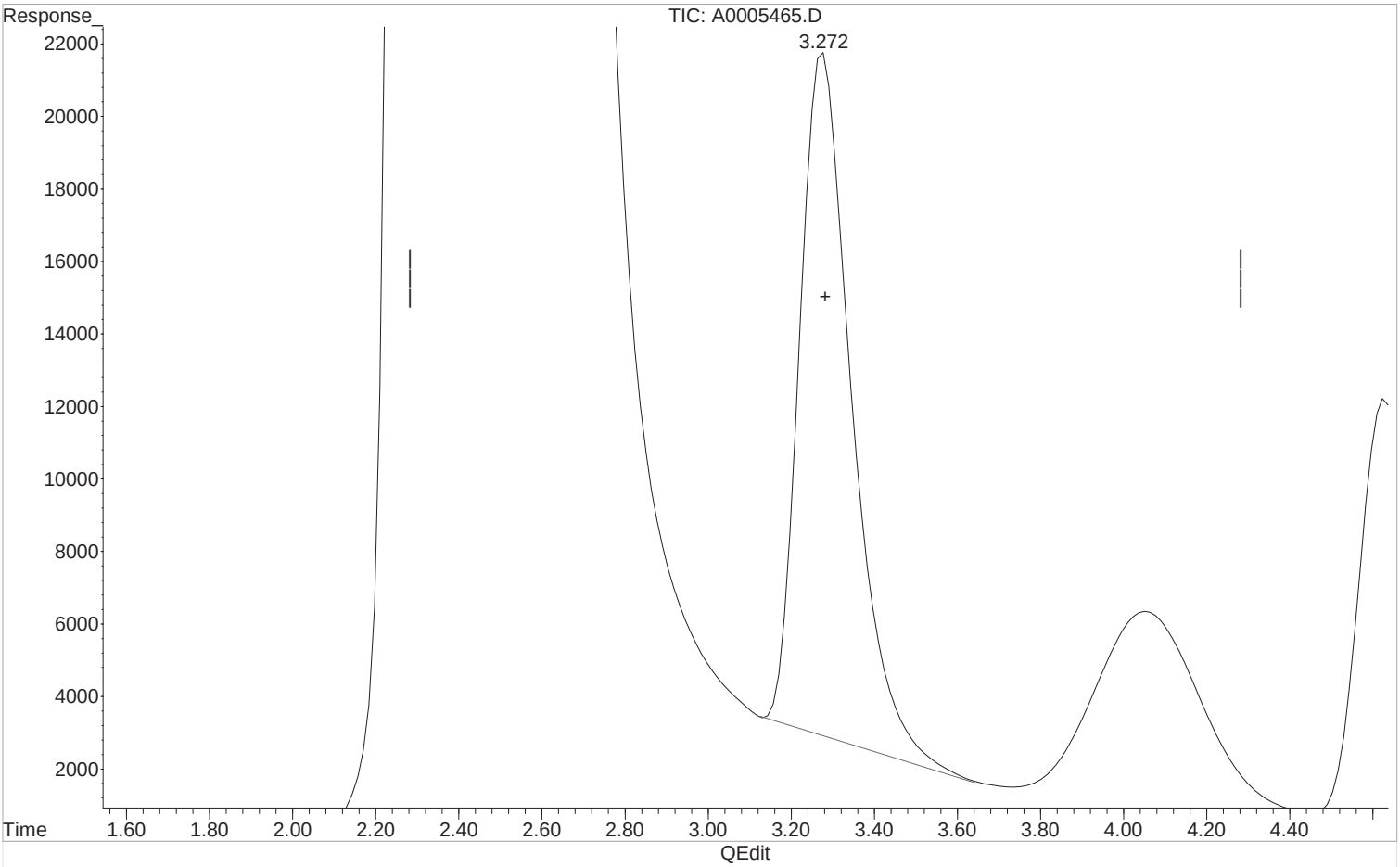
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005465.D
Signal(s) : dad1C.ch
Acq On : 29-Dec-2000, 23:47:48
Operator : A.Felser
Sample : R2005464-001MS
Misc :
ALS Vial : 16 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:06:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

3.272min 17.714 ppm m

response 1651539

Manual Integration:

After

Poor integration.

07/02/20

(1) - Expected Retention Time

MA031220.M Thu Jul 02 16:47:07 2020

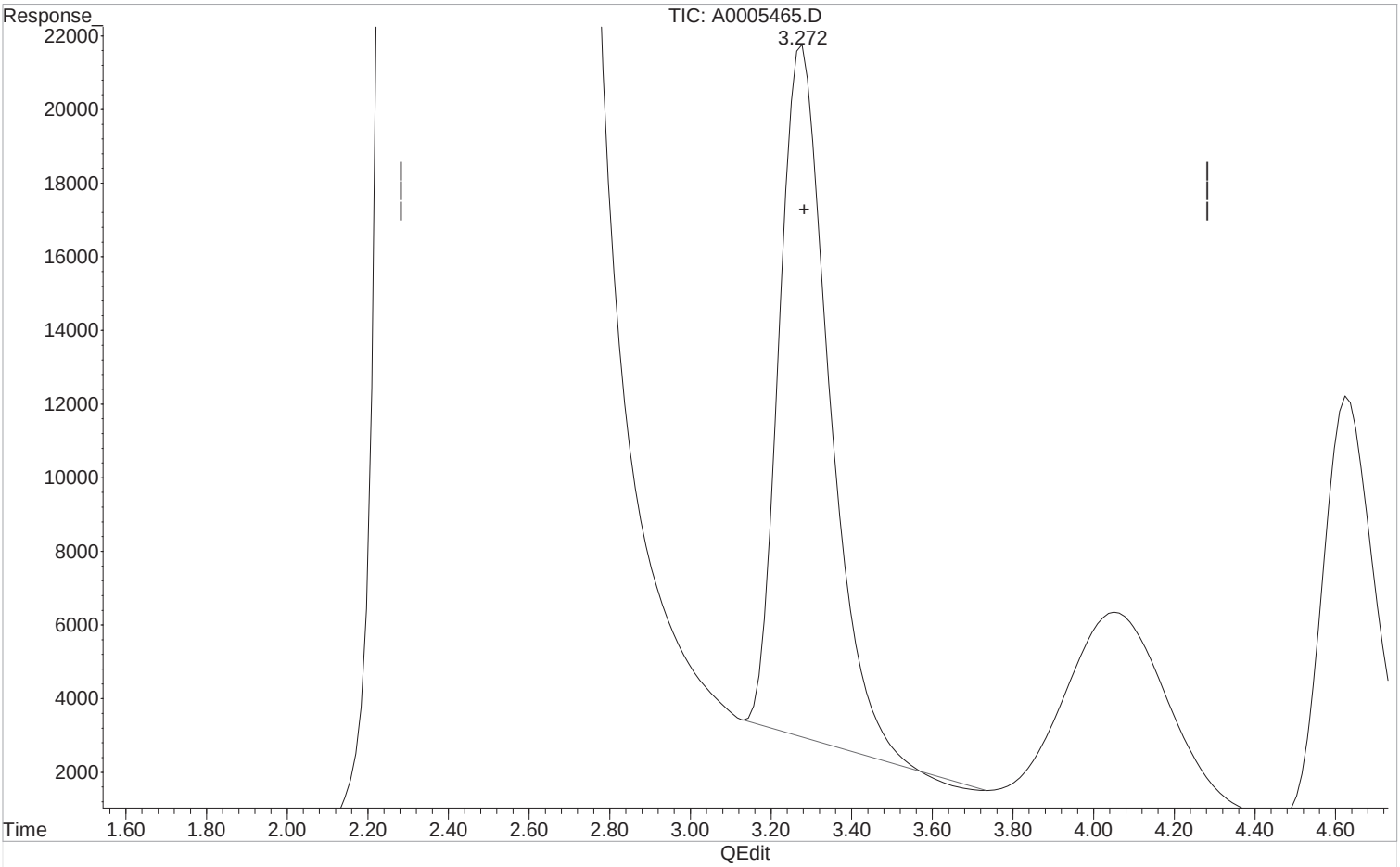
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005465.D
Signal(s) : dad1C.ch
Acq On : 29-Dec-2000, 23:47:48
Operator : A.Felser
Sample : R2005464-001MS
Misc :
ALS Vial : 16 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:06:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

3.280min 17.465 ppm

response 1628331

Manual Integration:

Before

07/02/20

(1) - Expected Retention Time

MA031220.M Thu Jul 02 16:47:02 2020

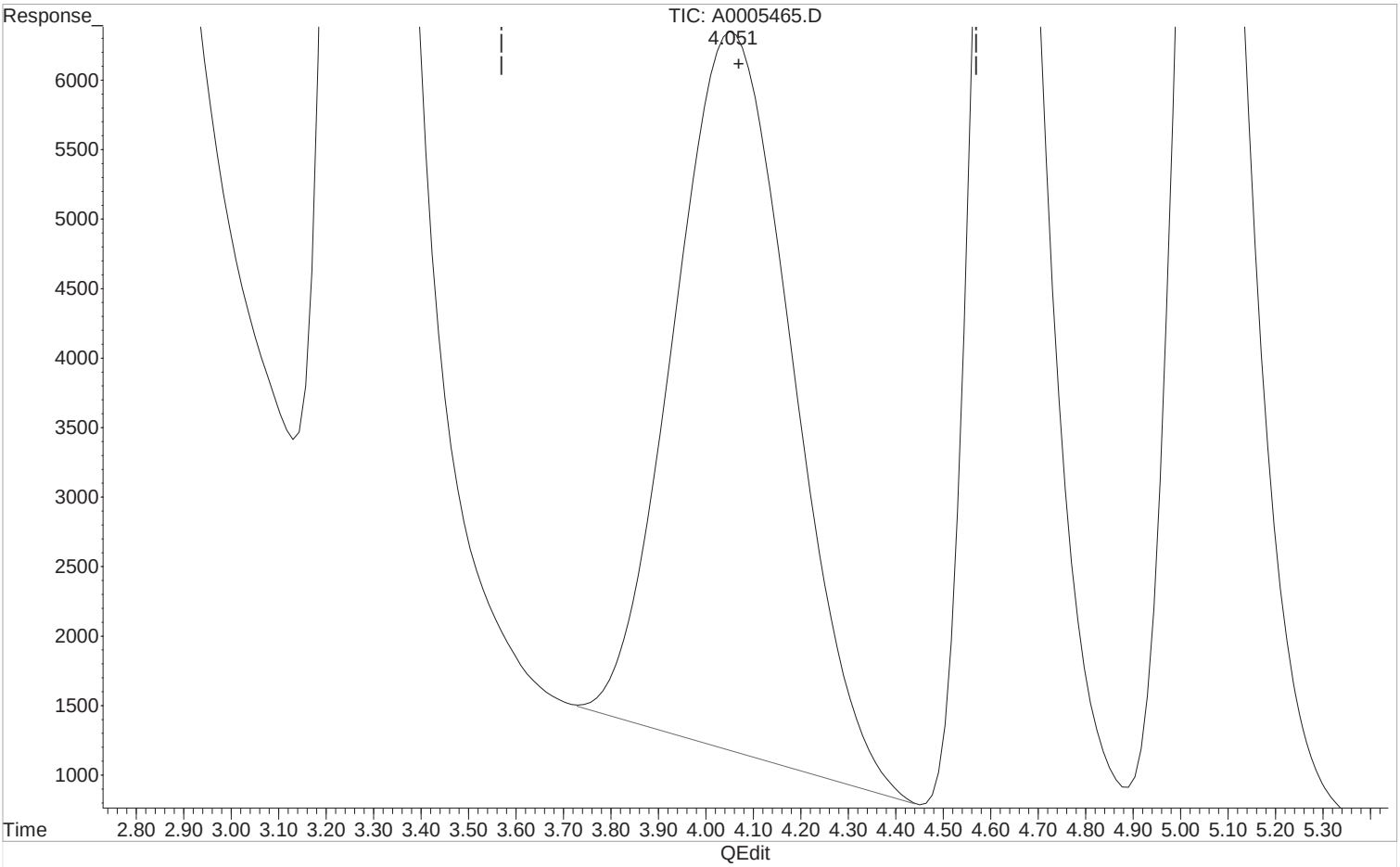
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005465.D
Signal(s) : dad1C.ch
Acq On : 29-Dec-2000, 23:47:48
Operator : A.Felser
Sample : R2005464-001MS
Misc :
ALS Vial : 16 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:06:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

4.051min 1.519 ppm m

response 898843

Manual Integration:

After

Poor integration.

07/02/20

(T) - Expected Retention Time
MA031220.M Thu Jul 02 16:47:17 2020

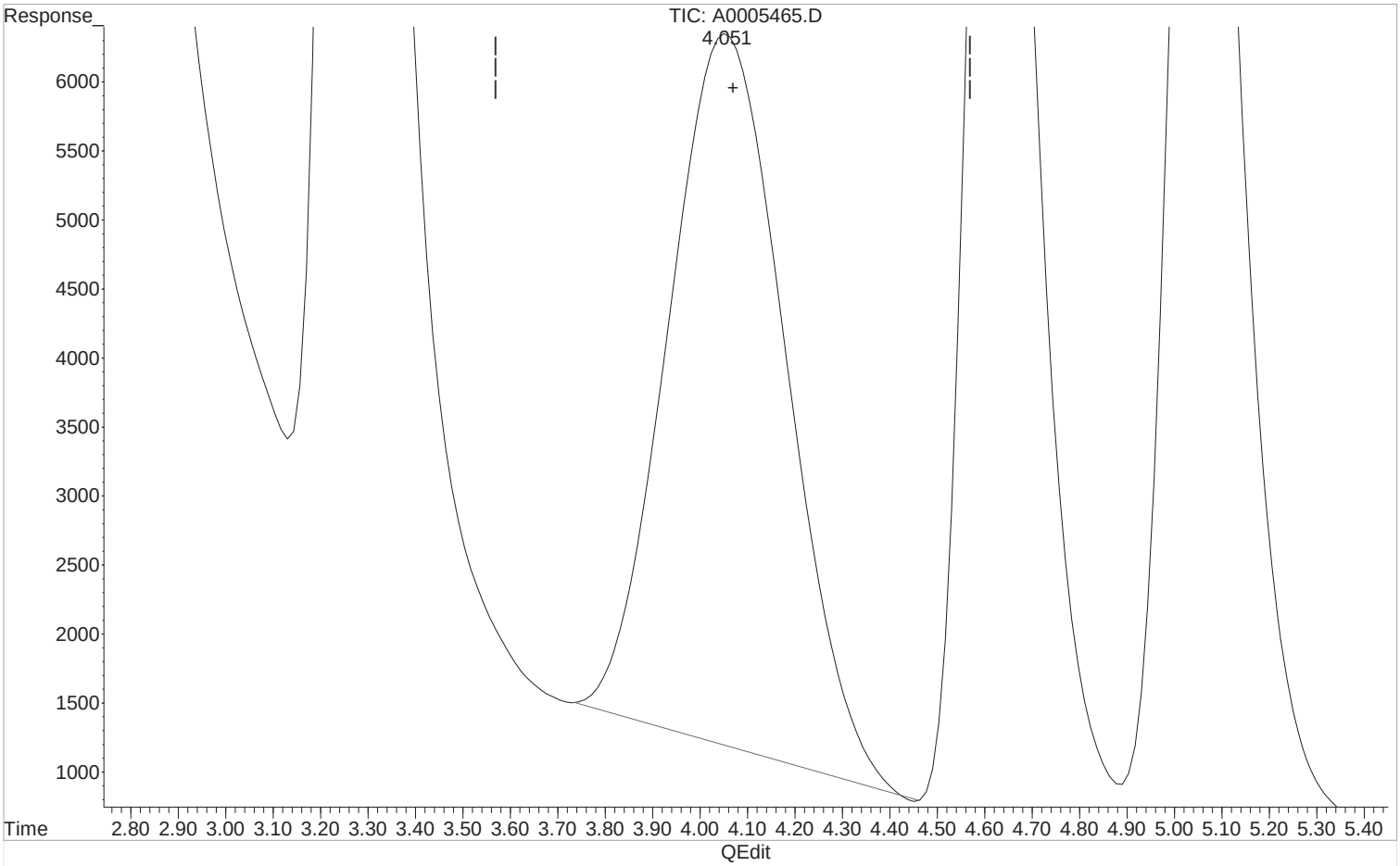
1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005465.D
Signal(s) : dad1C.ch
Acq On : 29-Dec-2000, 23:47:48
Operator : A.Felser
Sample : R2005464-001MS
Misc :
ALS Vial : 16 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:06:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

4.057min 1.510 ppm

response 893225

Manual Integration:

Before

07/02/20

(F) - Expected Retention Time
MA031220.M Thu Jul 02 16:47:11 2020

1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005465.D
Signal(s) : dad1C.ch
Acq On : ~~29-Dec-2000, 23:47:48~~ 02-Jul-2020, 07:44
Operator : A.Felser
Sample : R2005464-001MS
Misc :
ALS Vial : 16 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:06:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	3.272	1651539	17.714	ppm	m
2) T	Pyruvic acid	4.051	898843	1.519	ppm	m
3) T	Lactic Acid	4.633	1073735	19.032	ppm	
4) T	Acetic Acid	5.062	1111098	19.824	ppm	
5) T	Propionic Acid	12.298	1116418	20.538	ppm	
6) T	Butyric Acid	37.433	1058060	20.130	ppm	

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

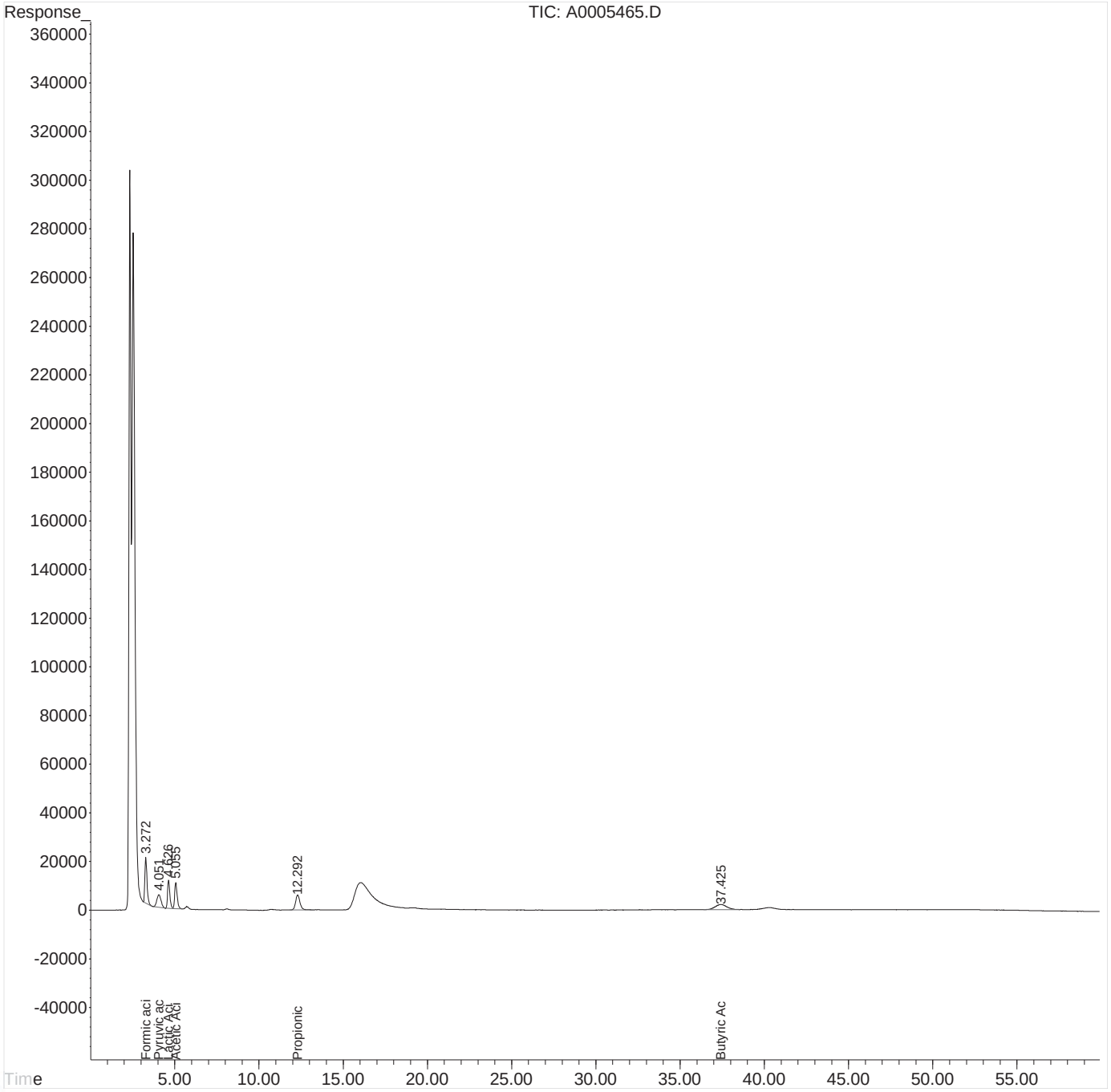
1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005465.D
Signal(s) : dad1C.ch
Acq On : 29-Dec-2000, 23:47:48
Operator : A.Felser
Sample : R2005464-001MS
Misc :
ALS Vial : 16 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:06:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



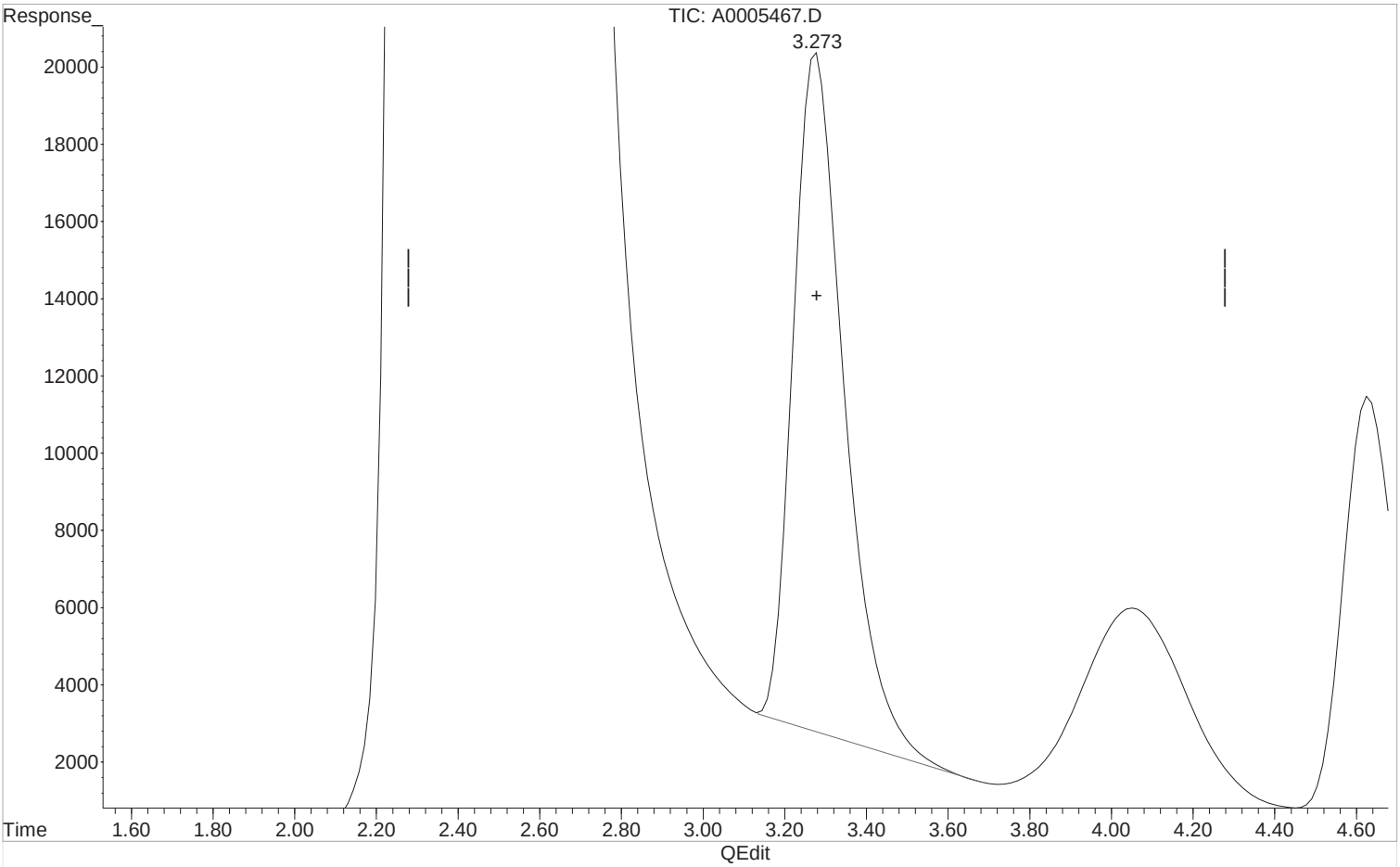
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 16:48:42
Operator : A.Felser
Sample : R2005464-001DMS
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 16:38:59 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 16:38:47 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

3.273min 16.526 ppm m

response 1540796

Manual Integration:

After

Poor integration.

07/02/20

(t) - Expected Retention Time

MA031220.M Thu Jul 02 16:47:42 2020

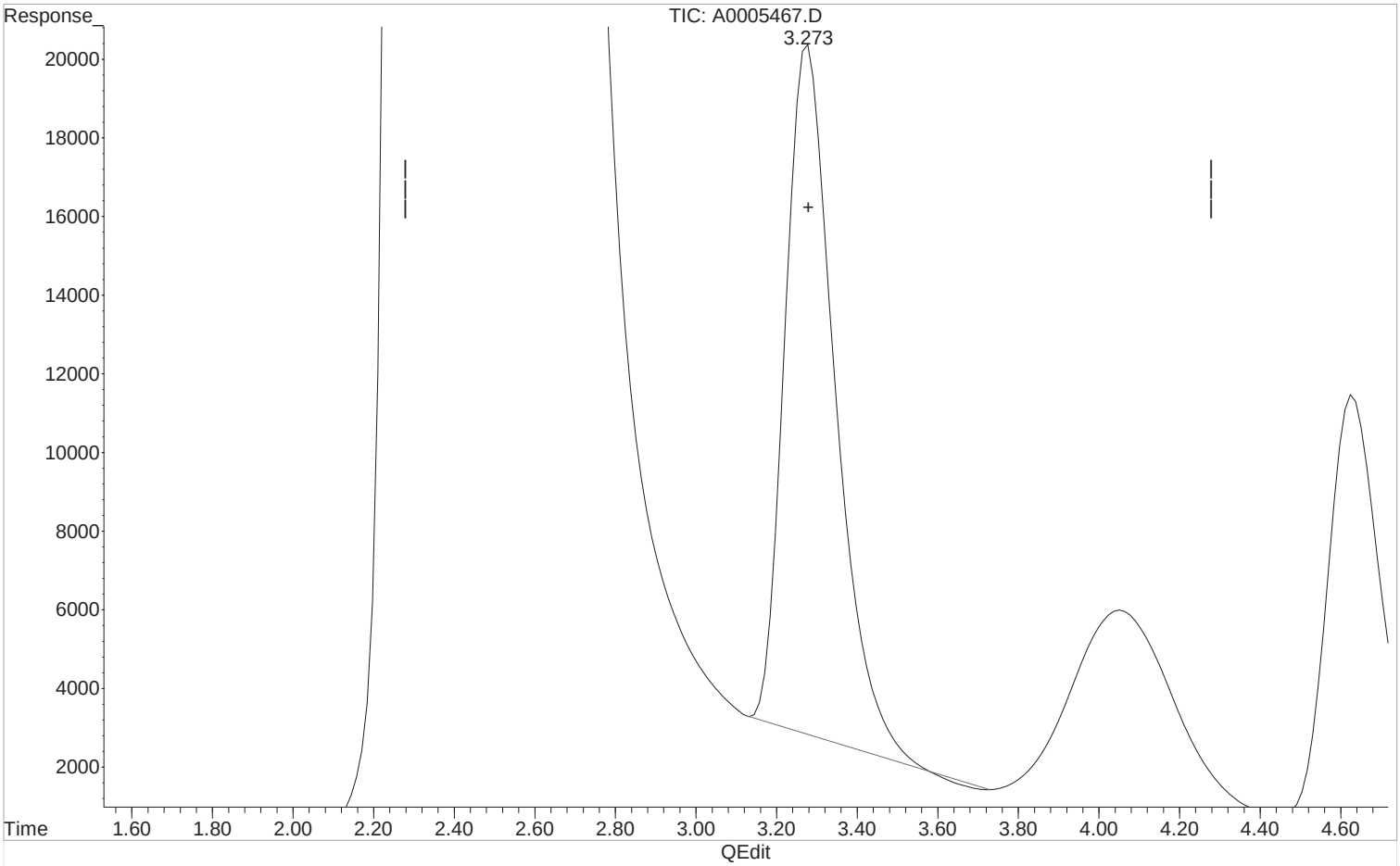
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 16:48:42
Operator : A.Felser
Sample : R2005464-001DMS
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 16:38:59 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 16:38:47 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

3.280min 16.370 ppm

response 1526176

Manual Integration:

Before

07/02/20

(F) = Expected Retention Time
MA031220.M Thu Jul 02 16:47:31 2020

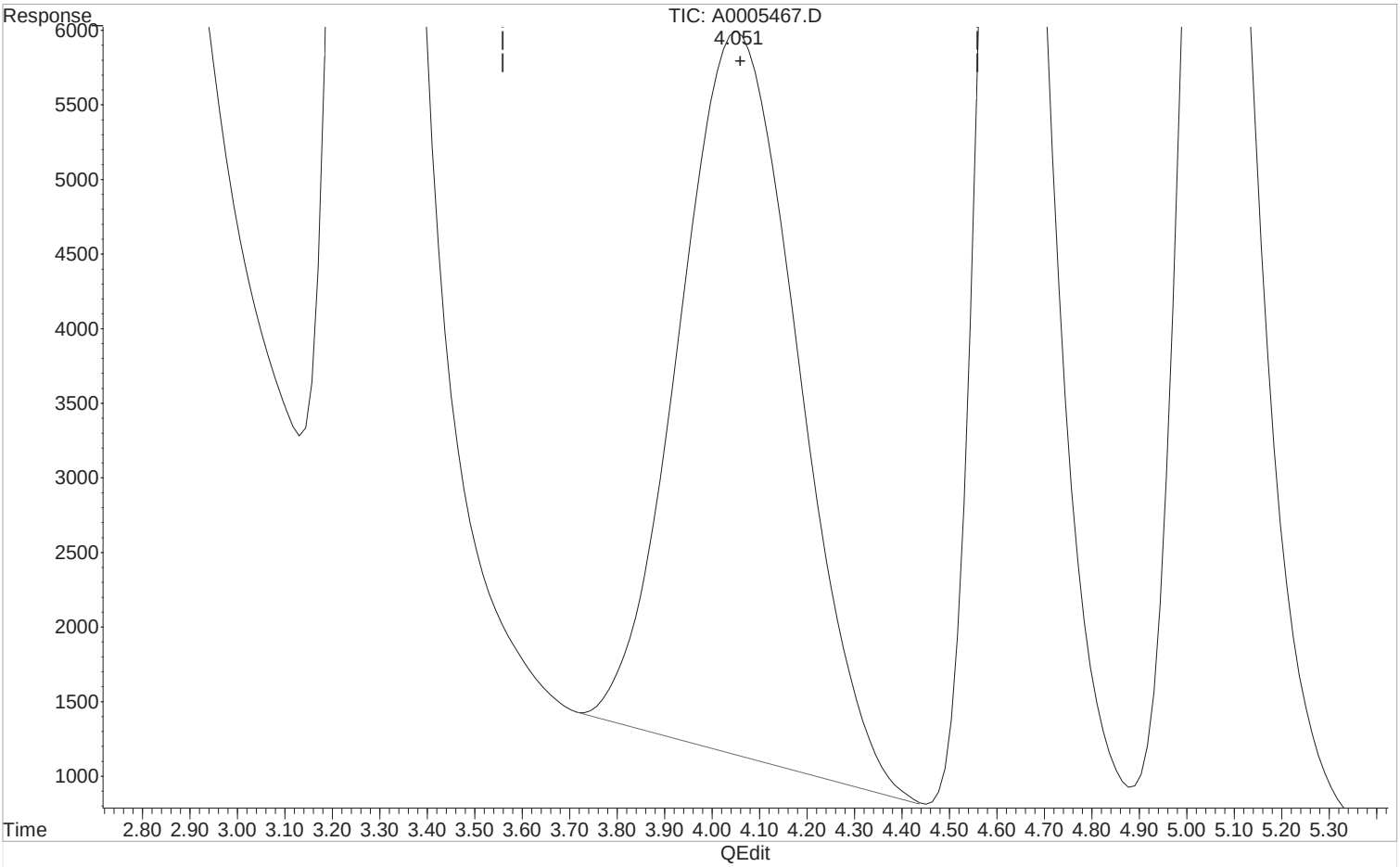
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 16:48:42
Operator : A.Felser
Sample : R2005464-001DMS
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 16:38:59 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 16:38:47 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

4.051min 1.433 ppm m

response 847838

Manual Integration:

After

Poor integration.

07/02/20

(T) = Expected Retention Time
MA031220.M Thu Jul 02 16:47:51 2020

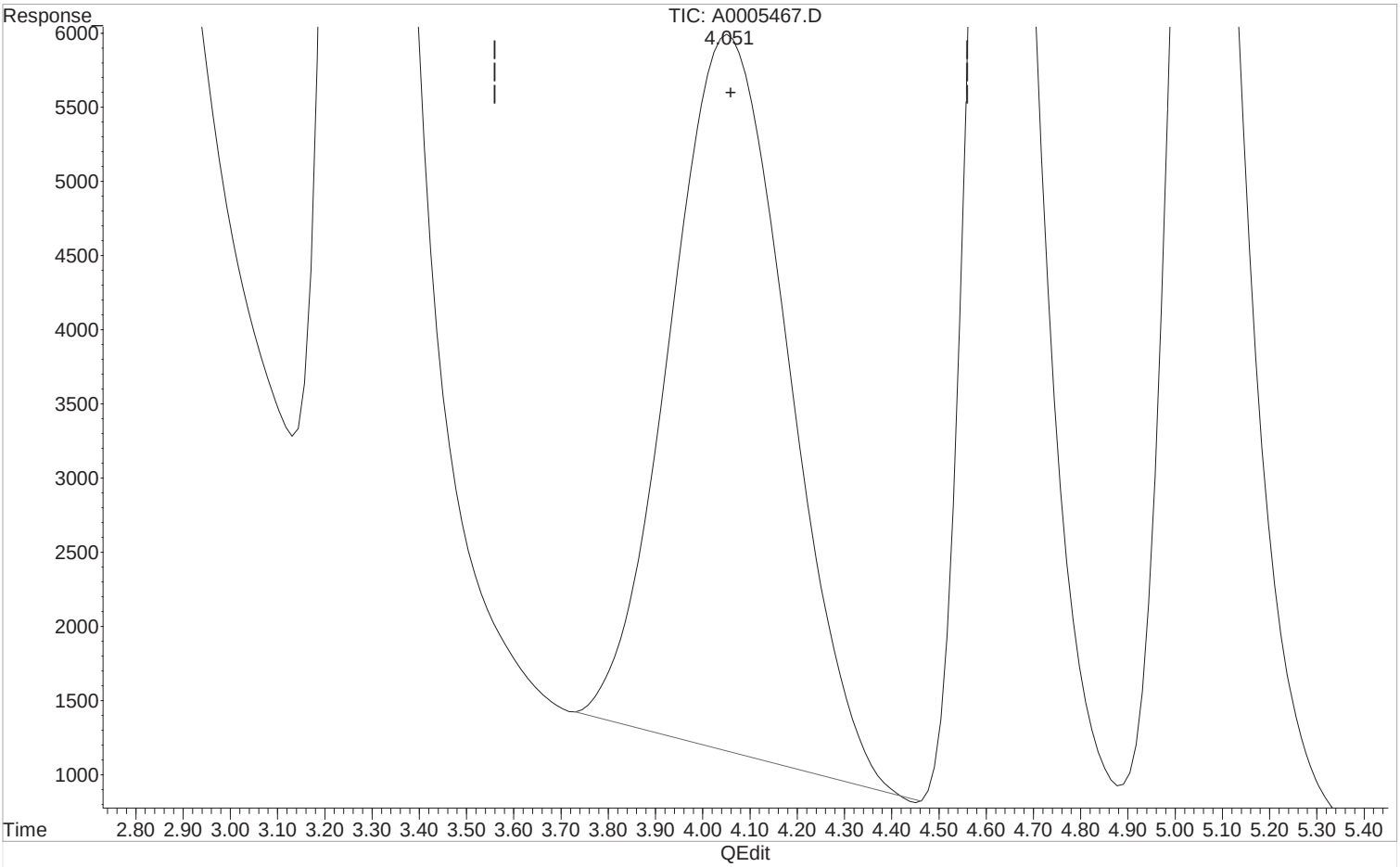
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 16:48:42
Operator : A.Felser
Sample : R2005464-001DMS
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 16:38:59 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 16:38:47 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

4.056min 1.422 ppm

response 840986

Manual Integration:

Before

07/02/20

(E) - Expected Retention Time
MA031220.M Thu Jul 02 16:47:46 2020

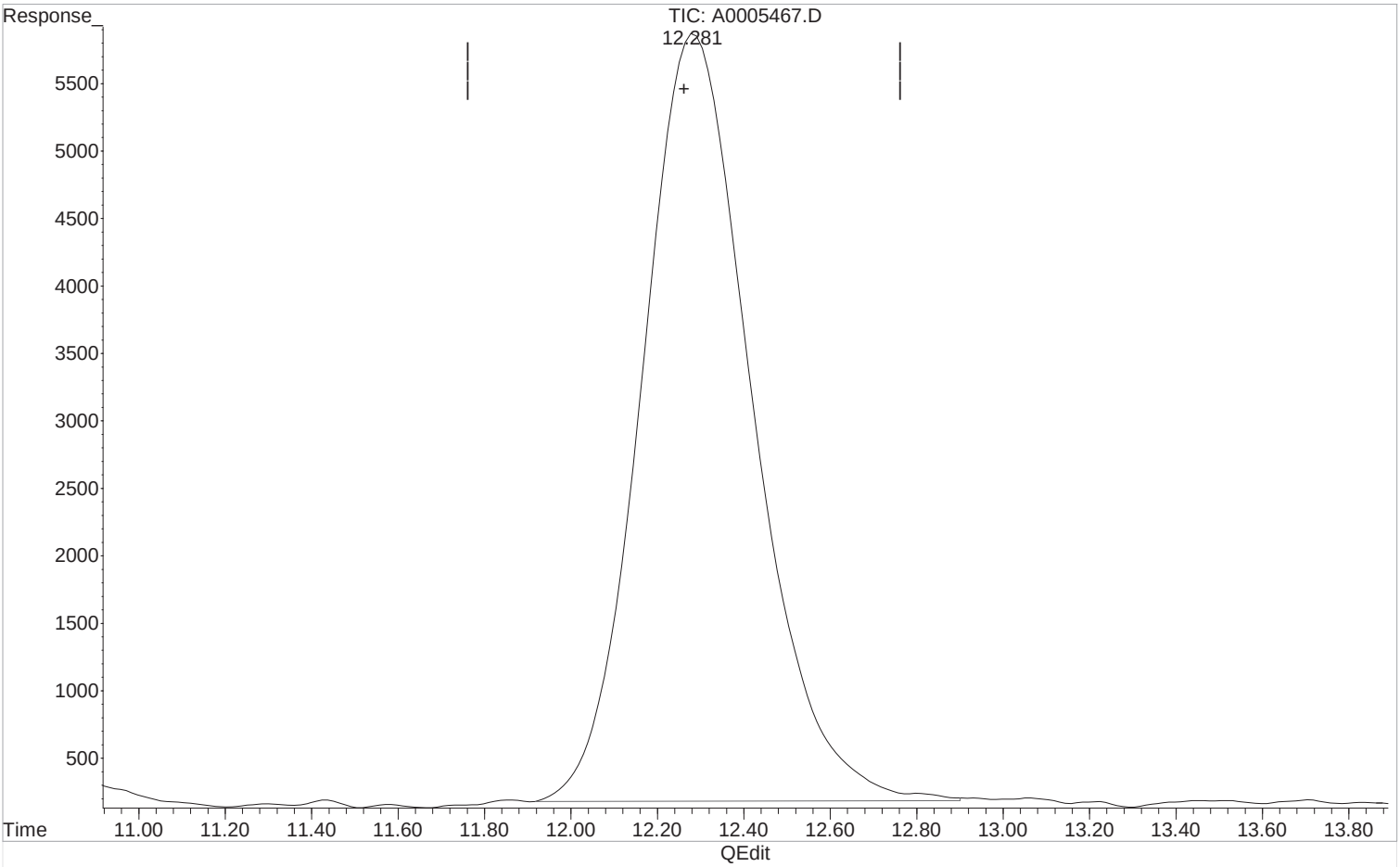
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 16:48:42
Operator : A.Felser
Sample : R2005464-001DMS
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 16:38:59 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 16:38:47 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

12.281min 18.610 ppm m

response 1011590

Manual Integration:

After

Poor integration.

07/02/20

(5) - Expected Retention Time
MA031220.M Thu Jul 02 16:48:03 2020

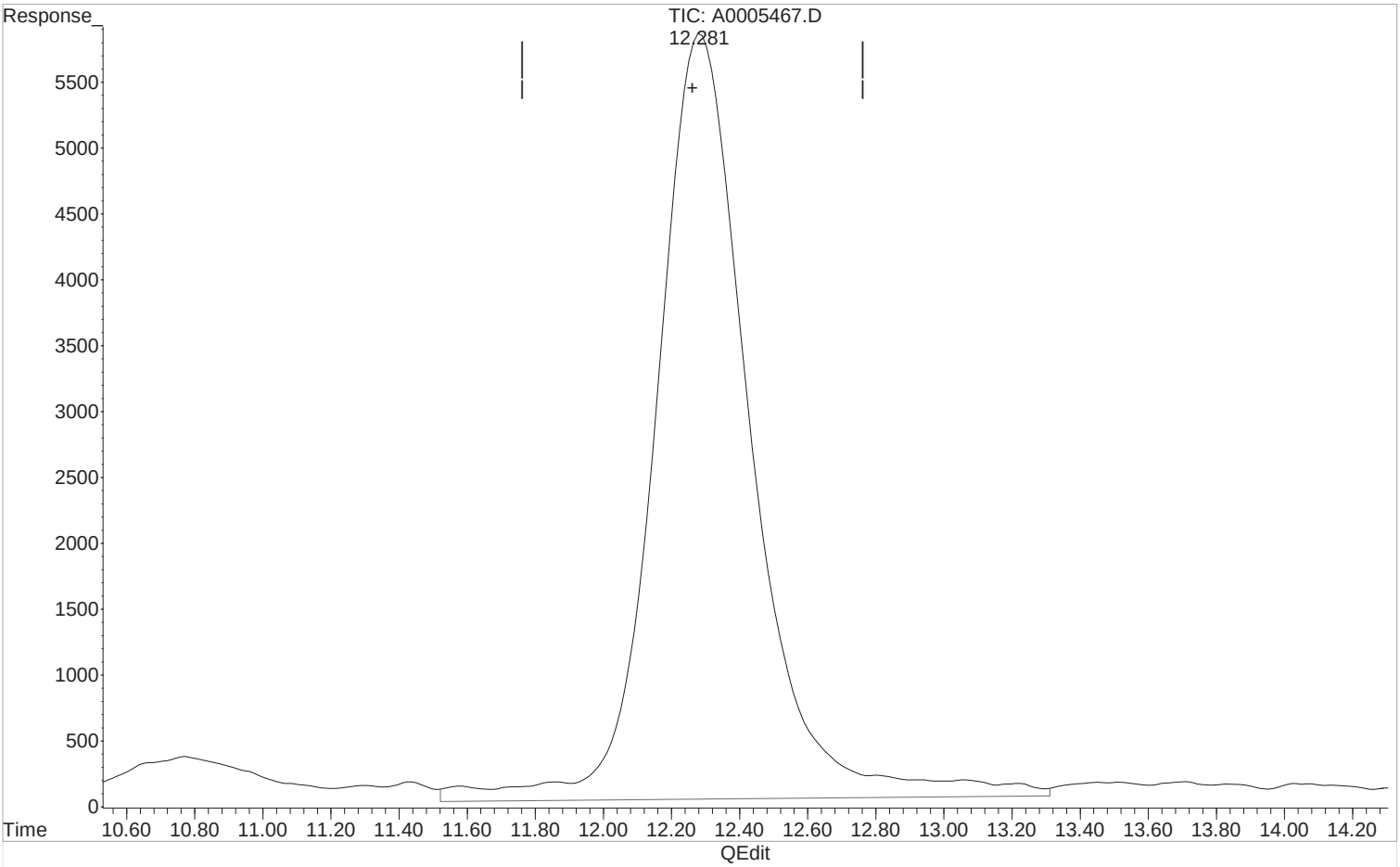
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 16:48:42
Operator : A.Felser
Sample : R2005464-001DMS
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 16:38:59 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 16:38:47 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

12.287min 20.889 ppm

response 1135459

Manual Integration:

Before

07/02/20

(T) = Expected Retention Time
MA031220.M Thu Jul 02 16:47:57 2020

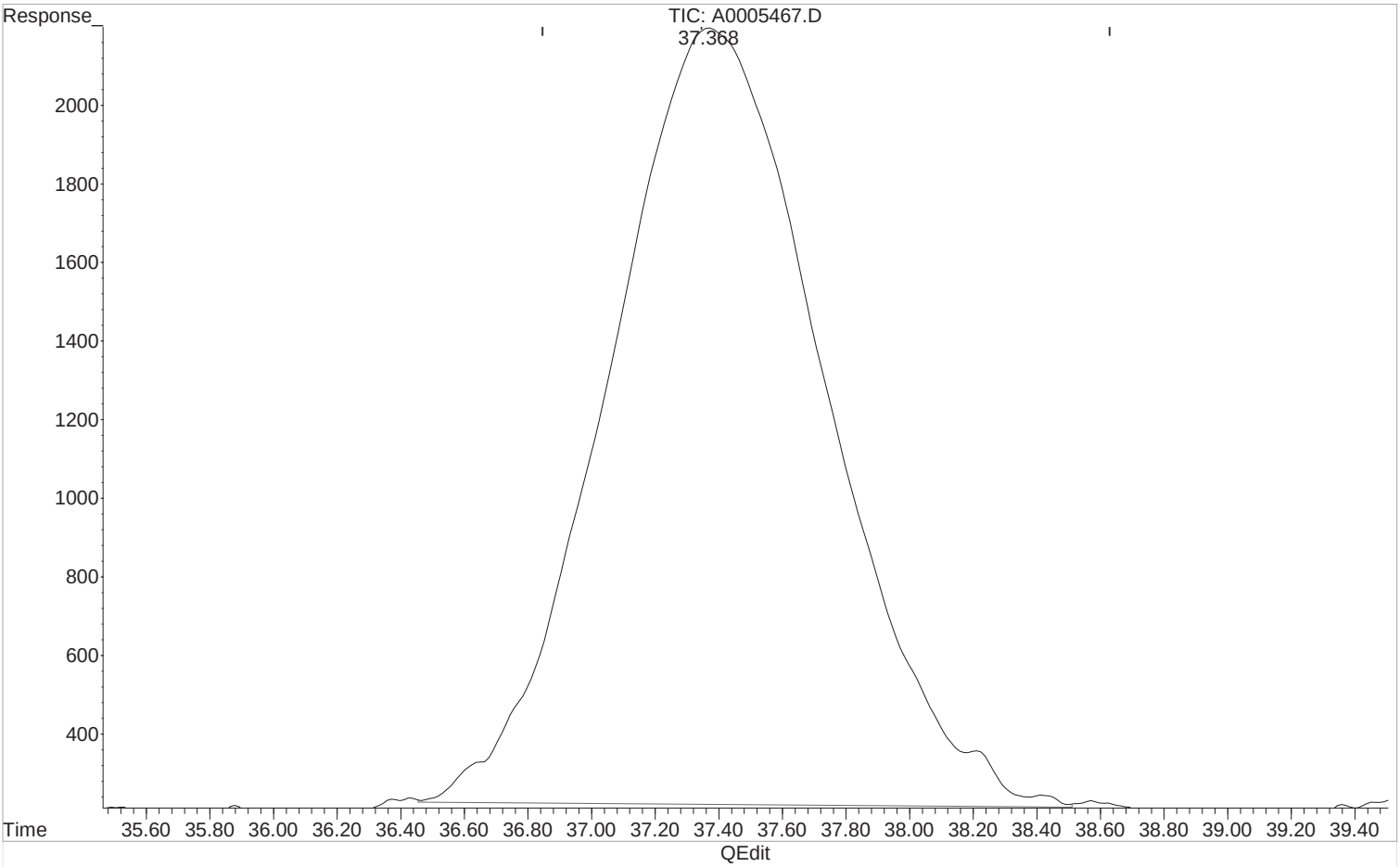
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 16:48:42
Operator : A.Felser
Sample : R2005464-001DMS
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 16:38:59 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 16:38:47 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

37.368min 17.788 ppm m

response 934955

Manual Integration:

After

Poor integration.

07/02/20

(6) - Expected Retention Time
MA031220.M Thu Jul 02 16:48:10 2020

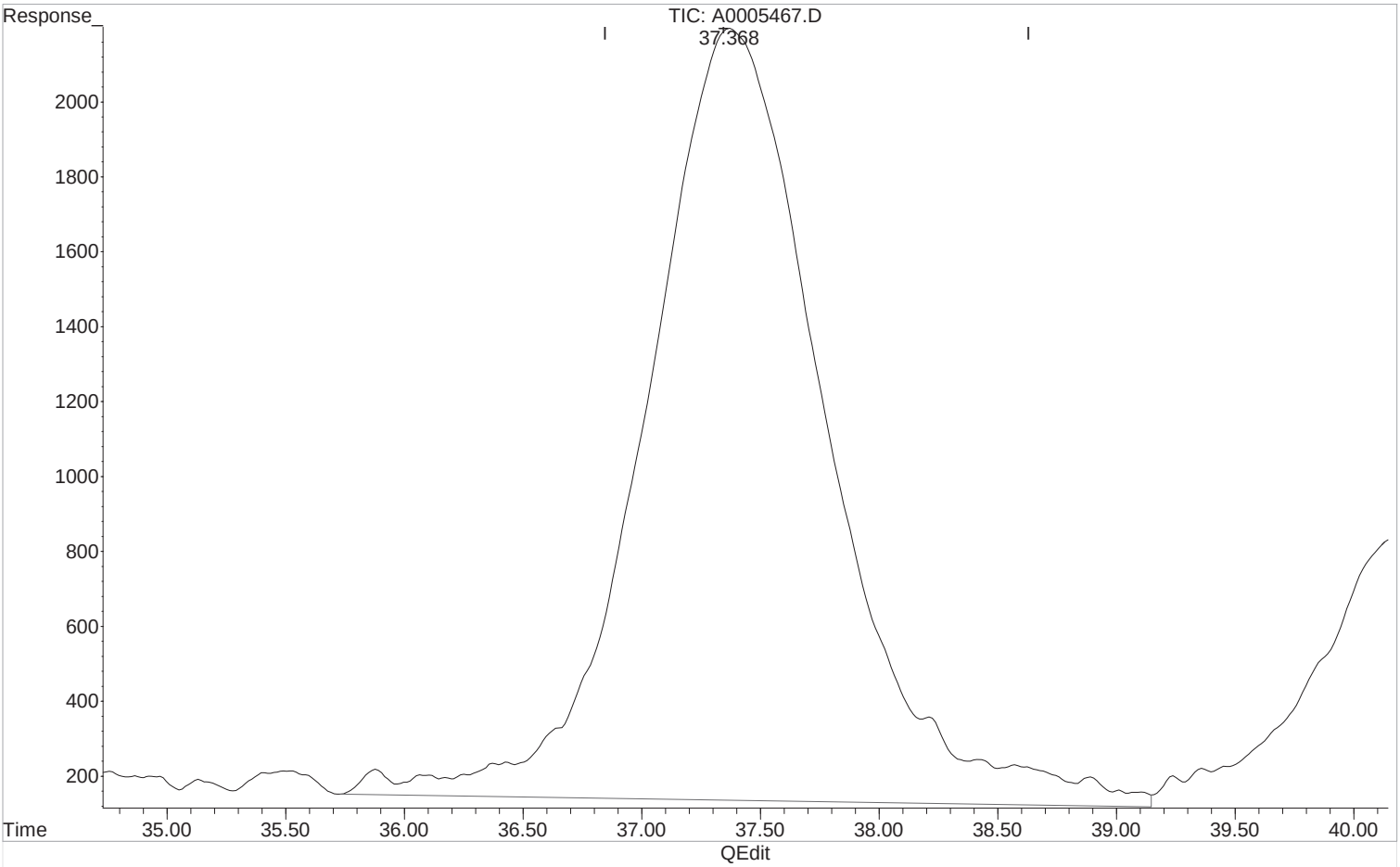
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 16:48:42
Operator : A.Felser
Sample : R2005464-001DMS
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 16:38:59 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 16:38:47 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

37.380min 20.725 ppm

response 1089360

Manual Integration:

Before

07/02/20

(6) - Expected Retention Time
MA031220.M Thu Jul 02 16:48:06 2020

1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005467.D
Signal(s) : dad1C.ch
Acq On : ~~30-Dec-2000, 16:48:42~~ 02-Jul-2020, 09:50
Operator : A.Felser
Sample : R2005464-001DMS
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 16:38:59 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 16:38:47 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	3.273	1540796	16.526	ppm	m
2) T	Pyruvic acid	4.051	847838	1.433	ppm	m
3) T	Lactic Acid	4.633	1001154	17.746	ppm	
4) T	Acetic Acid	5.062	1029809	18.374	ppm	
5) T	Propionic Acid	12.281	1011590	18.610	ppm	m
6) T	Butyric Acid	37.368	934955	17.788	ppm	m

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

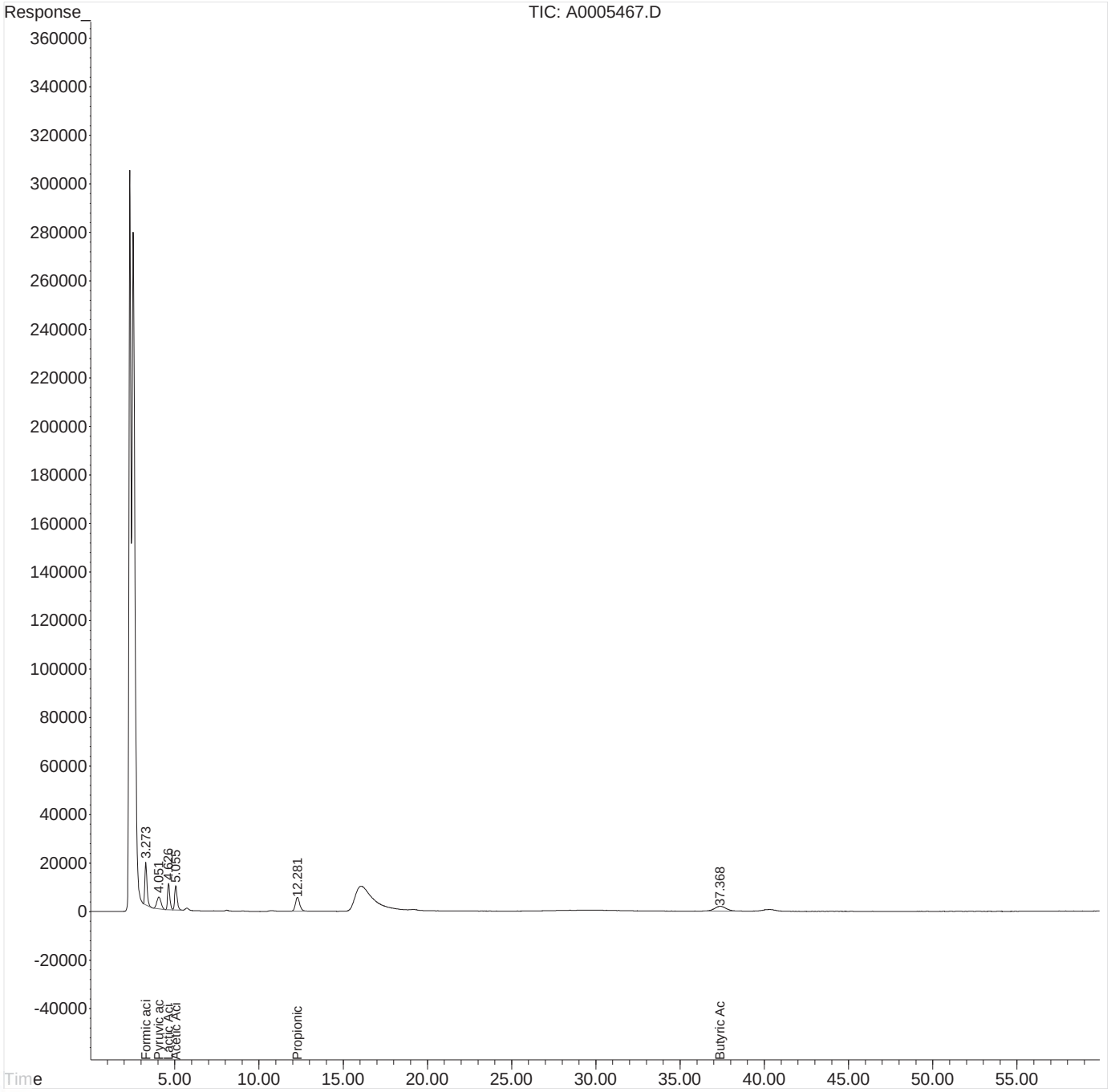
1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 16:48:42
Operator : A.Felser
Sample : R2005464-001DMS
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 16:38:59 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 16:38:47 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



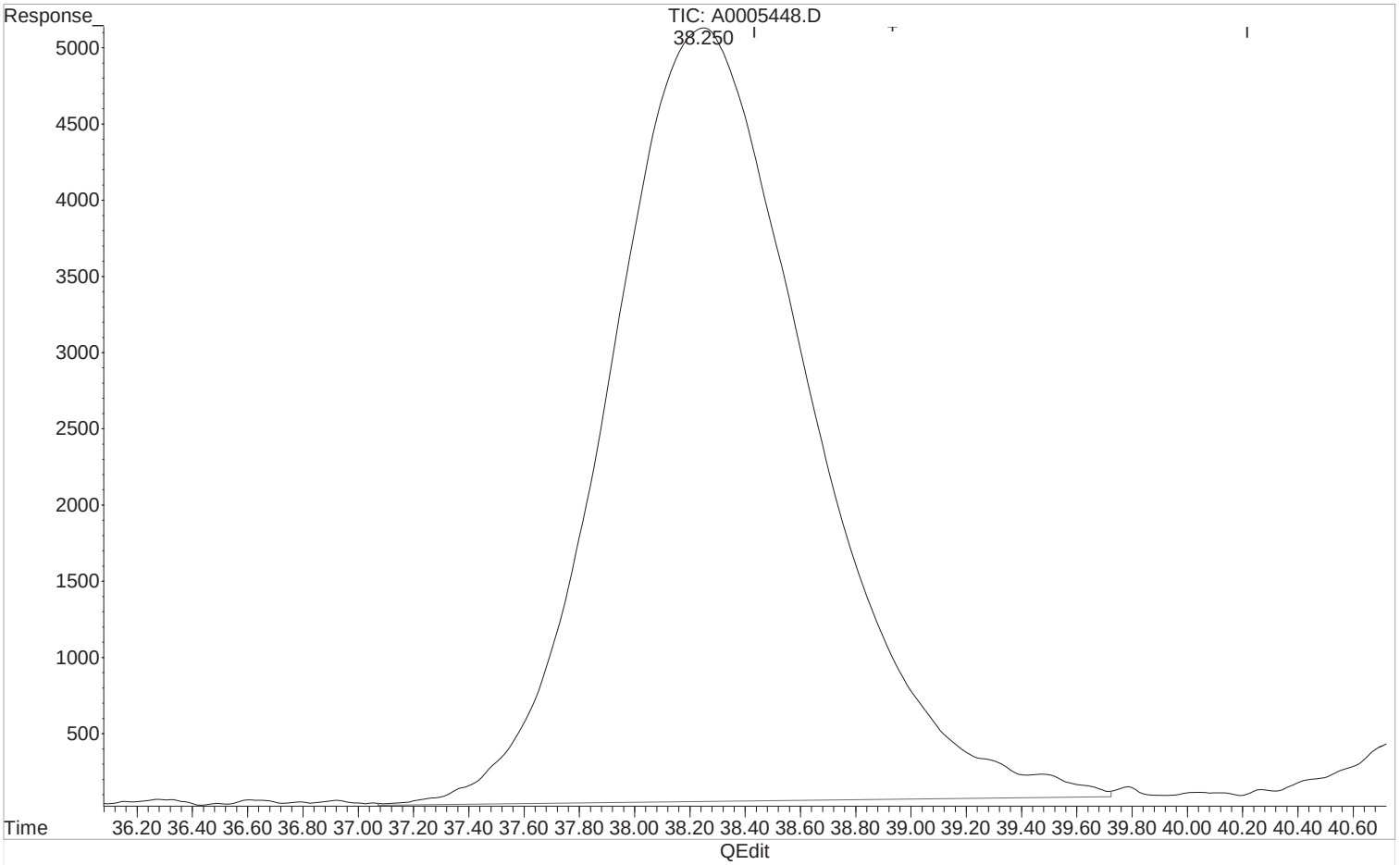
1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005448.D
Signal(s) : dad1C.ch
Acq On : 01-Jul-2020, 13:56:19
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:02:43 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Wed Jul 01 11:45:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

38.250min 48.980 ppm m

response 2574498

Manual Integration:

After

Peak not found.

07/02/20

(F) - Expected Retention Time
MA031220.M Thu Jul 02 11:03:02 2020

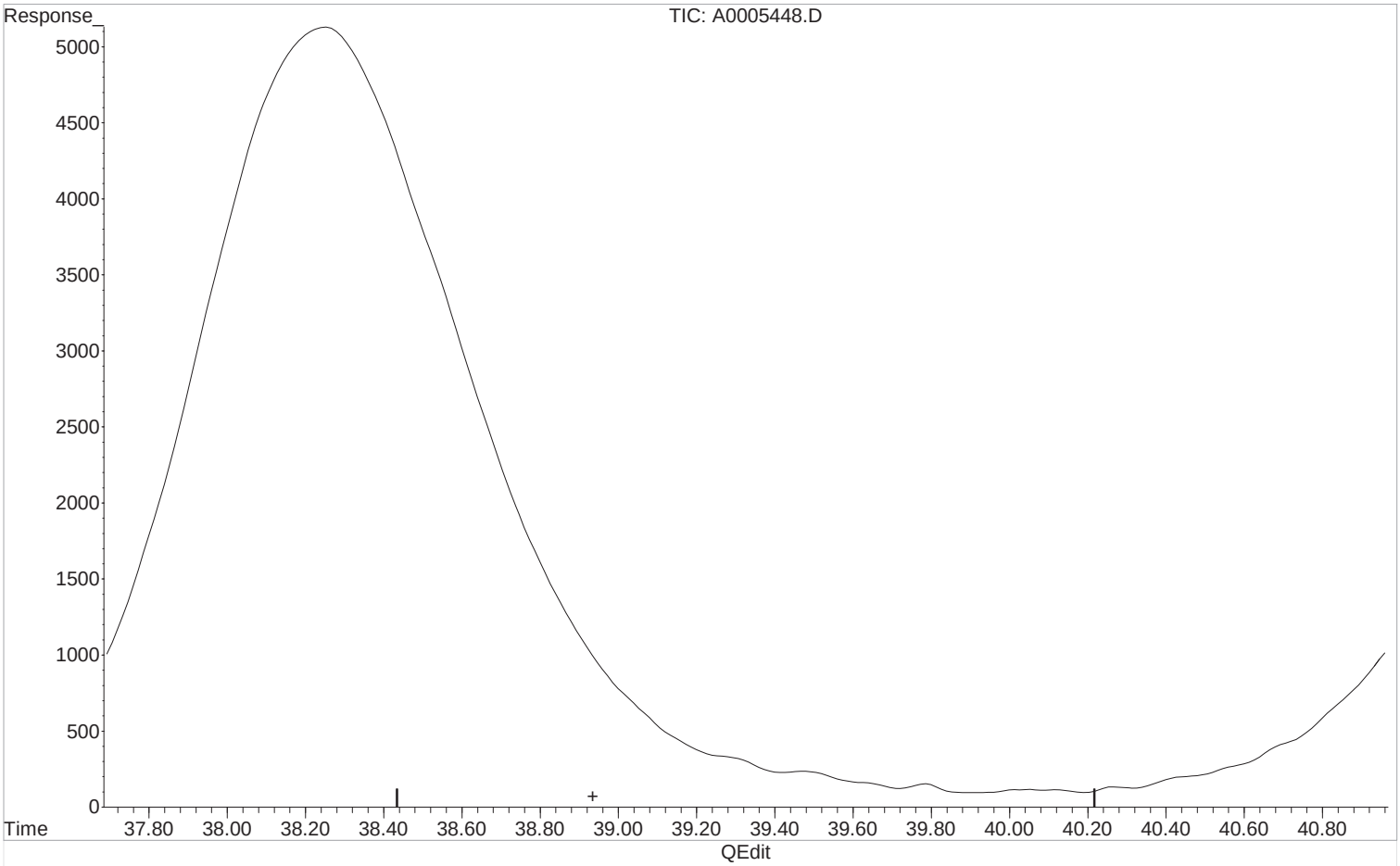
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005448.D
Signal(s) : dad1C.ch
Acq On : 01-Jul-2020, 13:56:19
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:02:43 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Wed Jul 01 11:45:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

38.935min 0.000 ppm

response 0

Manual Integration:

Before

07/02/20

(6) - Expected Retention Time
MA031220.M Thu Jul 02 11:02:53 2020

1st AF 07/06/20
2nd BA 07/06/20

Evaluate Continuing Calibration Report

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005448.D
Signal(s) : dad1C.ch
Acq On : 01-Jul-2020, 13:56:19
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:02:43 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Wed Jul 01 11:45:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1 t	Formic acid	93.232	87.923 E3	5.7	93	0.00
2 T	Pyruvic acid	591.568	618.910 E3	-4.6	105	0.00
3 T	Lactic Acid	56.417	53.048 E3	6.0	94	0.00
4 T	Acetic Acid	56.048	55.724 E3	0.6	99	0.00
5 T	Propionic Acid	54.357	53.918 E3	0.8	96	0.00
6 T	Butyric Acid	52.562	51.490 E3	2.0	97	0.00

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0

1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005448.D
Signal(s) : dad1C.ch
Acq On : 01-Jul-2020, 13:56:19
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:02:43 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Wed Jul 01 11:45:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	3.289	4396140	47.153	ppm	
2) T	Pyruvic acid	4.087	3094550	5.231	ppm	
3) T	Lactic Acid	4.668	2652410	47.015	ppm	
4) T	Acetic Acid	5.103	2786198	49.711	ppm	
5) T	Propionic Acid	12.491	2695880	49.595	ppm	
6) T	Butyric Acid	38.250f	2574498	48.980	ppm	m

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

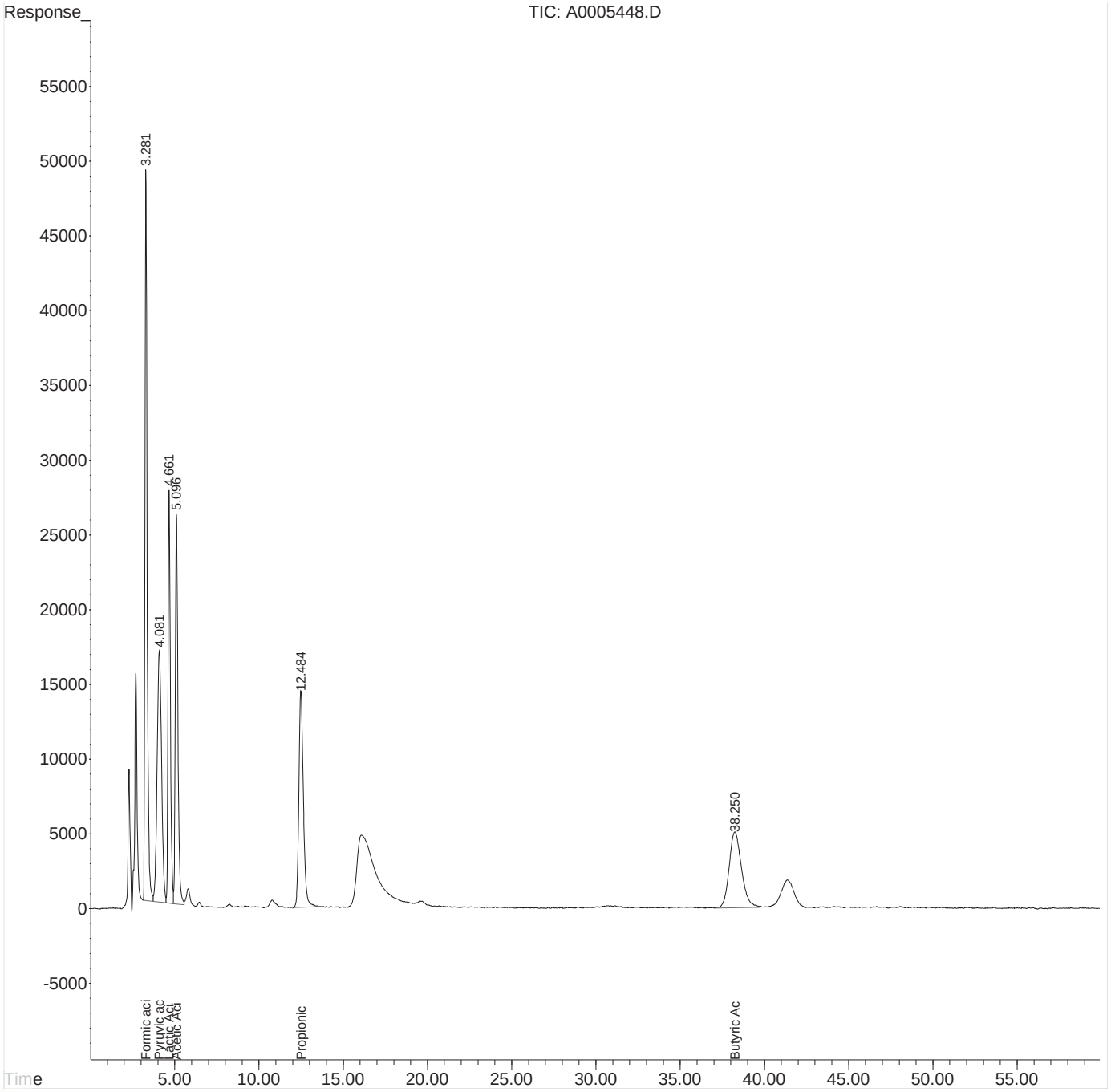
1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005448.D
Signal(s) : dad1C.ch
Acq On : 01-Jul-2020, 13:56:19
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:02:43 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Wed Jul 01 11:45:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



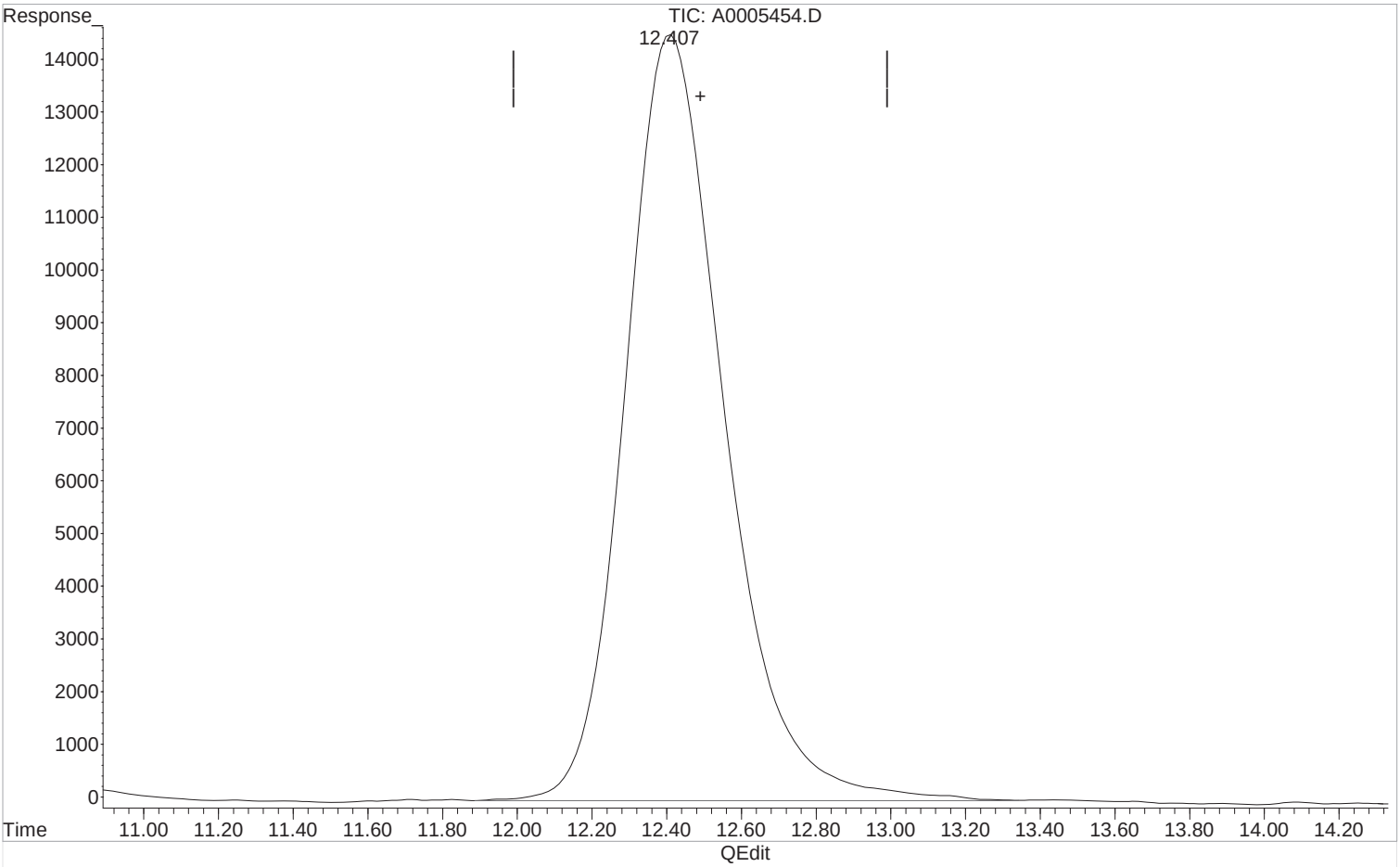
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005454.D
Signal(s) : dad1C.ch
Acq On : 31-Dec-2000, 02:48:28
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:04:39 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:03:09 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

12.407min 49.189 ppm m

response 2673803

Manual Integration:

After

Poor integration.

07/02/20

(5) - Expected Retention Time

MA031220.M Thu Jul 02 11:05:01 2020

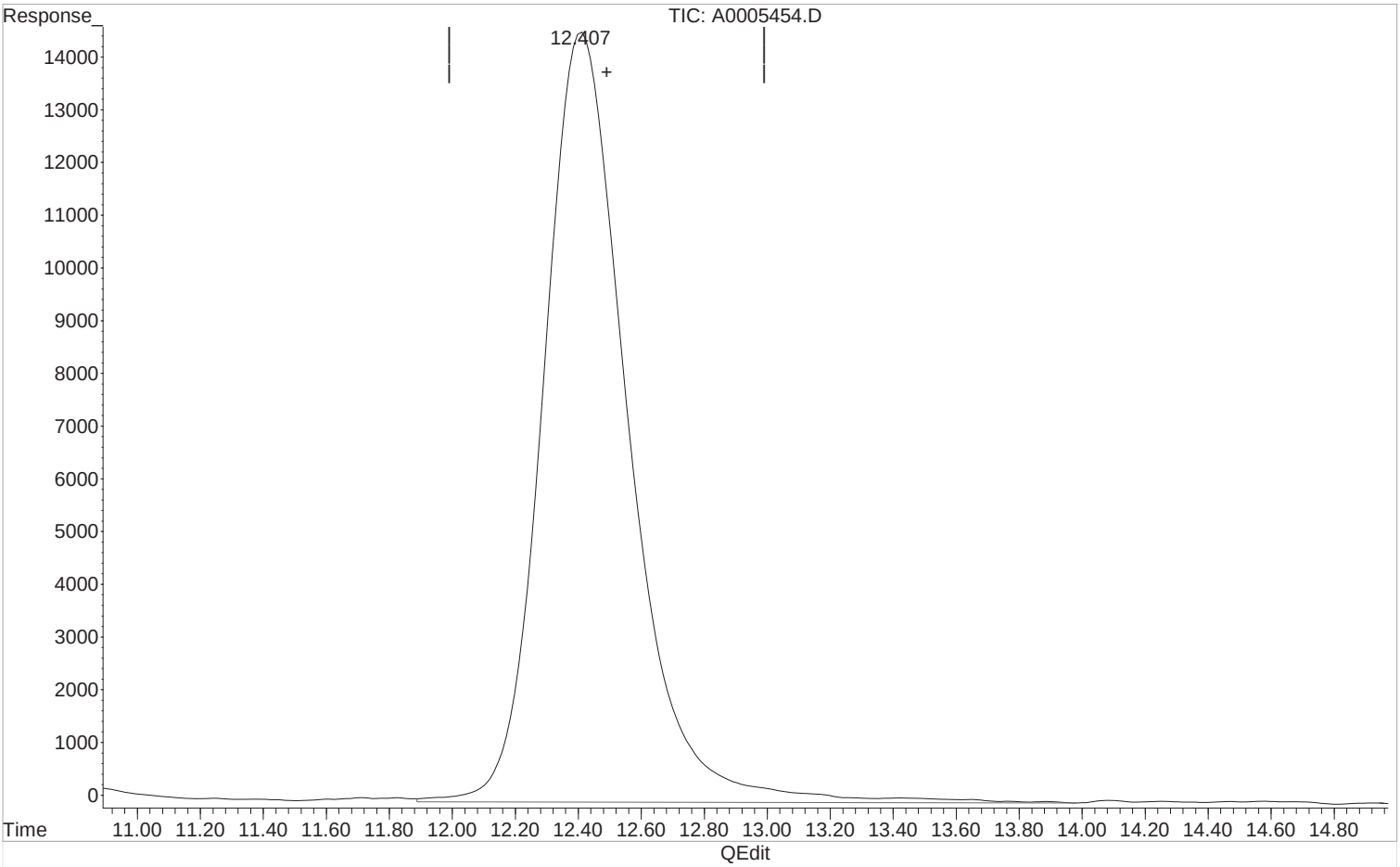
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005454.D
Signal(s) : dad1C.ch
Acq On : 31-Dec-2000, 02:48:28
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:04:39 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:03:09 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

12.413min 50.550 ppm

response 2747773

Manual Integration:

Before

07/02/20

(5) - Expected Retention Time

MA031220.M Thu Jul 02 11:04:53 2020

1st AF 07/06/20
2nd BA 07/06/20

Evaluate Continuing Calibration Report

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005454.D
Signal(s) : dad1C.ch
Acq On : ~~31-Dec-2000, 02:48:28~~ 01-Jul-2020, 20:11
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:04:39 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:03:09 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1 t	Formic acid	93.232	87.036 E3	6.6	92	0.00
2 T	Pyruvic acid	591.568	615.694 E3	-4.1	104	0.00
3 T	Lactic Acid	56.417	53.445 E3	5.3	95	-0.01
4 T	Acetic Acid	56.048	55.634 E3	0.7	98	-0.01
5 T	Propionic Acid	54.357	53.476 E3	1.6	96	-0.08
6 T	Butyric Acid	52.562	49.573 E3	5.7	93	-0.31

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0

1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005454.D
Signal(s) : dad1C.ch
Acq On : ~~31-Dec-2000, 02:48:28~~ 01-Jul-2020, 20:11
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:04:39 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:03:09 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	3.286	4351784	46.677	ppm	
2) T	Pyruvic acid	4.078	3078468	5.204	ppm	
3) T	Lactic Acid	4.656	2672249	47.366	ppm	
4) T	Acetic Acid	5.088	2781679	49.630	ppm	
5) T	Propionic Acid	12.407	2673803	49.189	ppm	m
6) T	Butyric Acid	37.941	2478649	47.157	ppm	

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

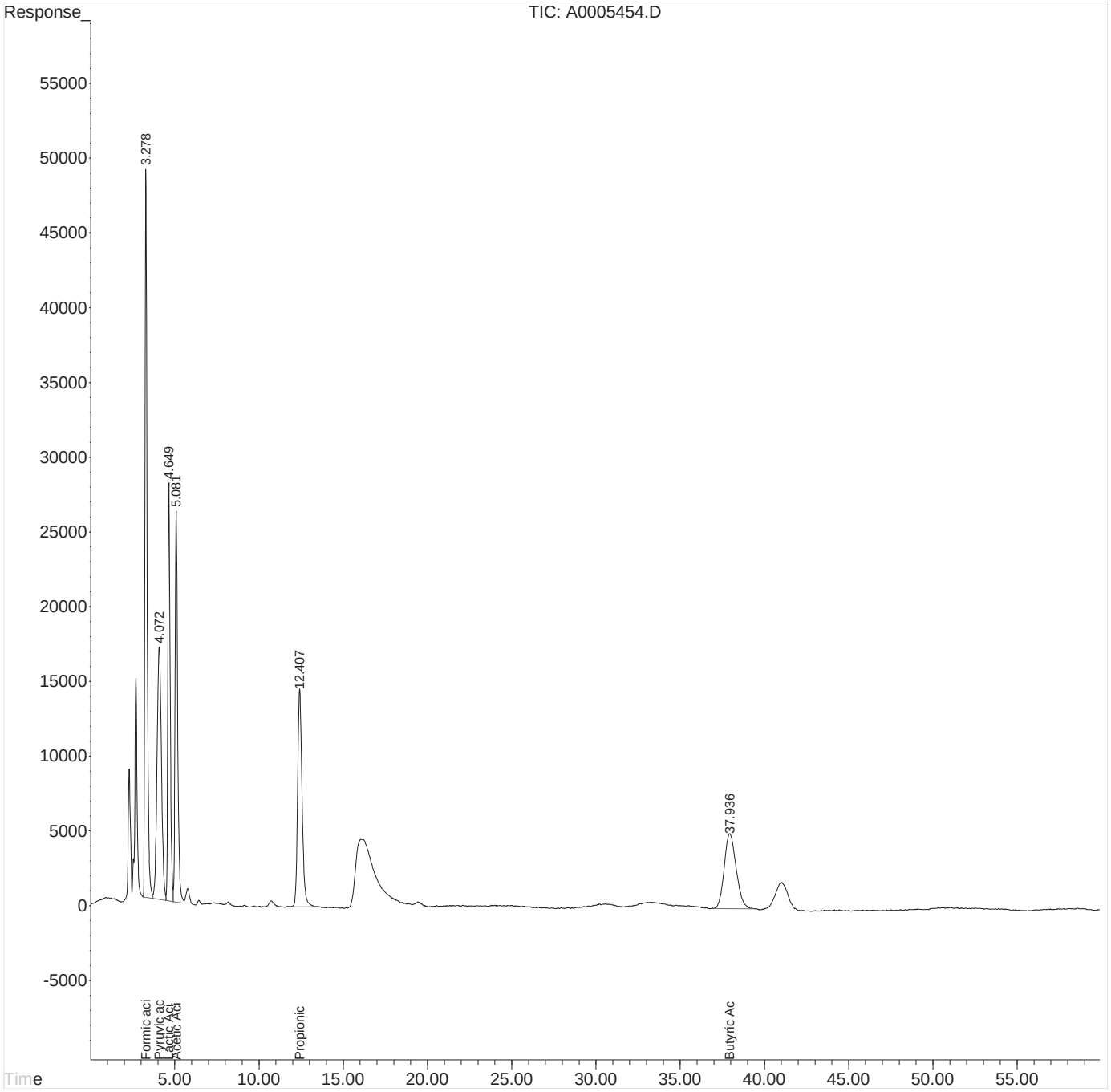
1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005454.D
Signal(s) : dad1C.ch
Acq On : 31-Dec-2000, 02:48:28
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:04:39 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:03:09 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



1st AF 07/06/20
2nd BA 07/06/20

Evaluate Continuing Calibration Report

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005460.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 02:32:48
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:05:35 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:13 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1 t	Formic acid	93.232	86.967 E3	6.7	92	0.00
2 T	Pyruvic acid	591.568	618.225 E3	-4.5	105	0.00
3 T	Lactic Acid	56.417	53.615 E3	5.0	95	-0.01
4 T	Acetic Acid	56.048	55.562 E3	0.9	98	-0.01
5 T	Propionic Acid	54.357	53.174 E3	2.2	95	-0.07
6 T	Butyric Acid	52.562	50.719 E3	3.5	95	-0.34

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0

1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005460.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 02:32:48
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:05:35 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:13 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc Units
Target Compounds				
1) t	Formic acid	3.283	4348362	46.640 ppm
2) T	Pyruvic acid	4.070	3091124	5.225 ppm
3) T	Lactic Acid	4.644	2680731	47.517 ppm
4) T	Acetic Acid	5.074	2778090	49.566 ppm
5) T	Propionic Acid	12.337	2658692	48.911 ppm
6) T	Butyric Acid	37.600	2535956	48.247 ppm

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

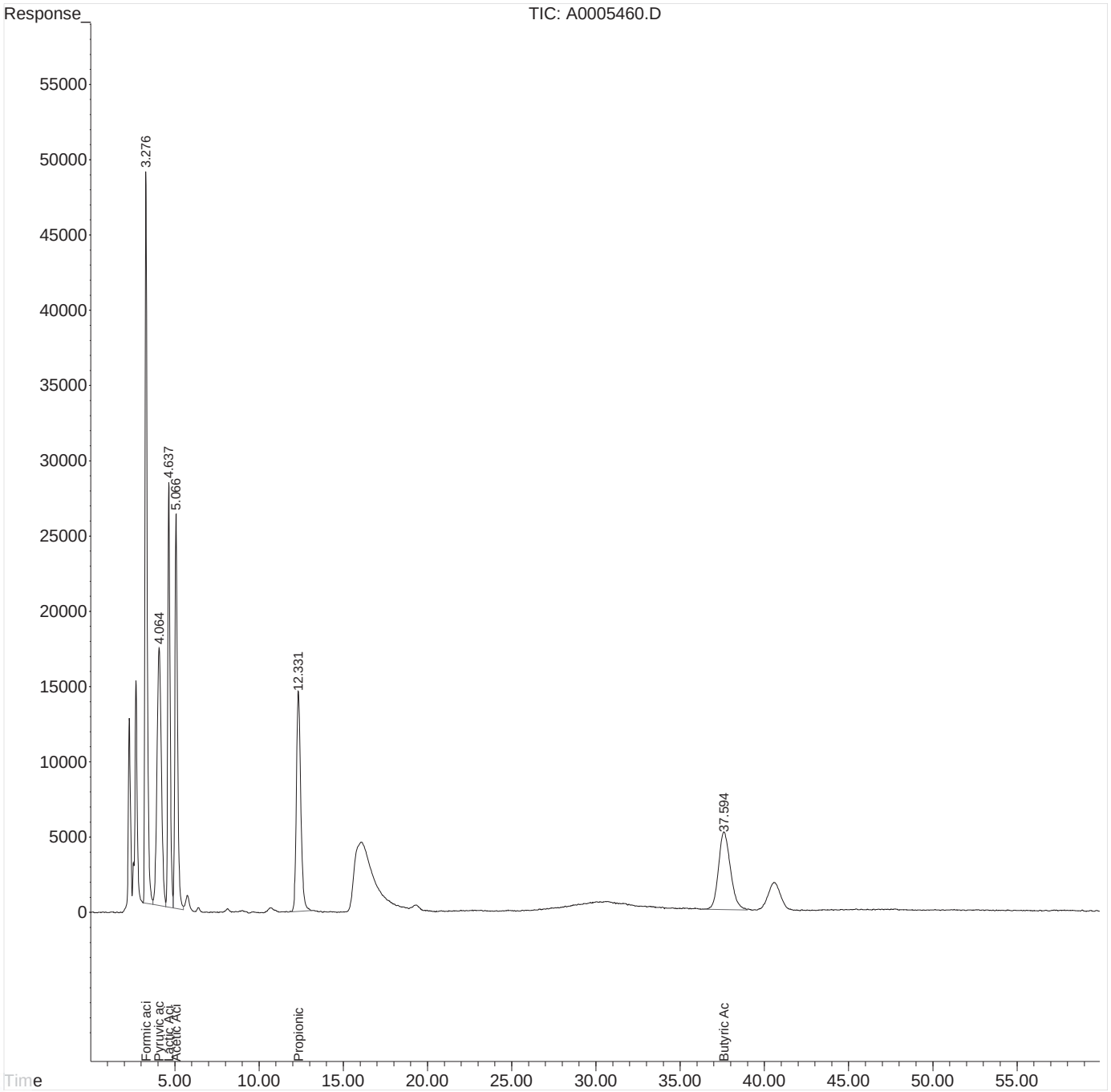
1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005460.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 02:32:48
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:05:35 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:13 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



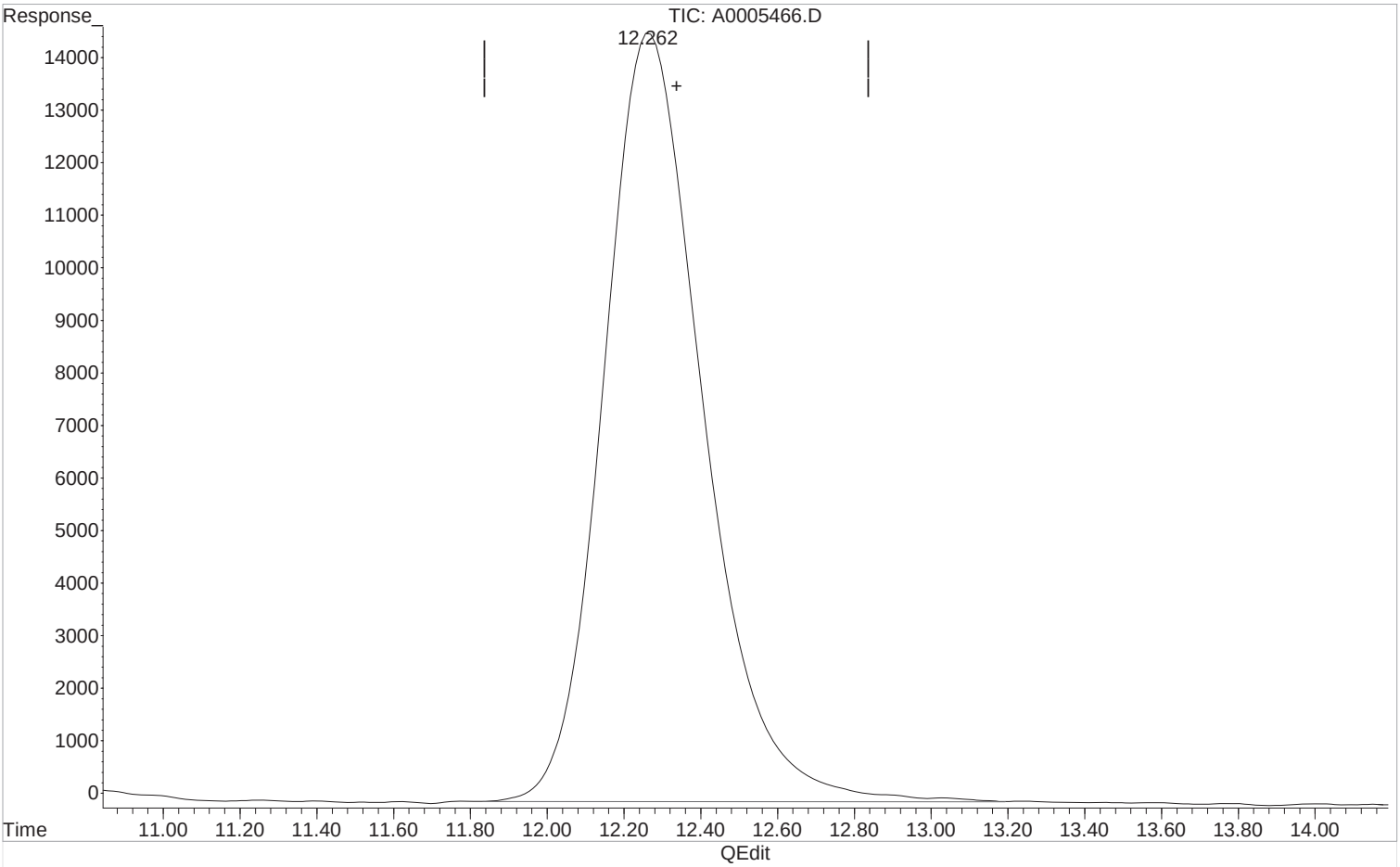
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005466.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 08:50:41
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:06:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

12.262min 48.691 ppm m

response 2646708

Manual Integration:

After

Poor integration.

07/02/20

(5) - Expected Retention Time

MA031220.M Thu Jul 02 11:06:38 2020

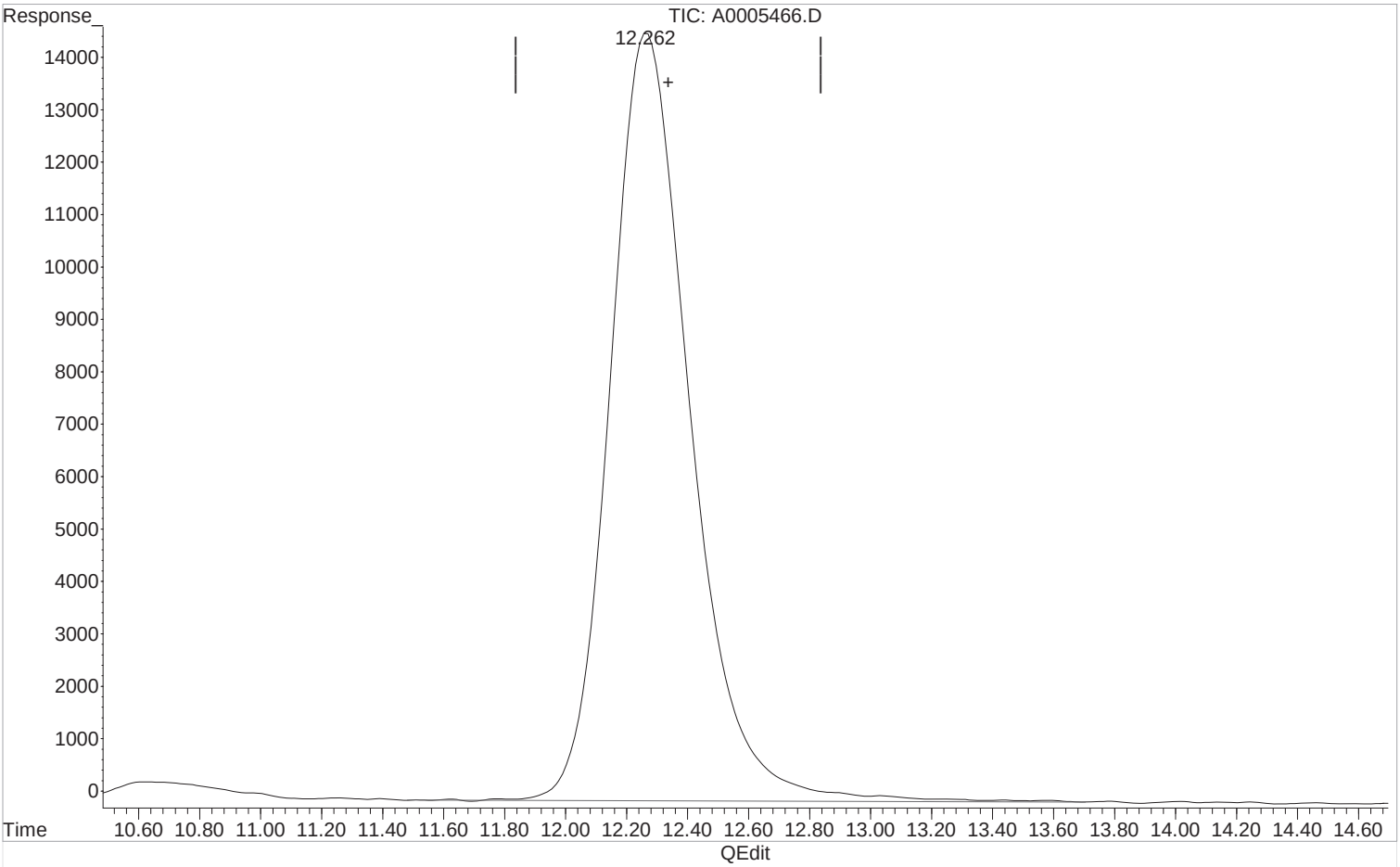
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005466.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 08:50:41
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:06:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

12.268min 49.322 ppm

response 2681012

Manual Integration:

Before

07/02/20

(5) - Expected Retention Time
MA031220.M Thu Jul 02 11:06:31 2020

1st AF 07/06/20
2nd BA 07/06/20

Evaluate Continuing Calibration Report

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005466.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 08:50:41
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:06:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1 t	Formic acid	93.232	85.866 E3	7.9	91	0.00
2 T	Pyruvic acid	591.568	594.210 E3	-0.4	101	0.00
3 T	Lactic Acid	56.417	52.771 E3	6.5	94	-0.01
4 T	Acetic Acid	56.048	54.437 E3	2.9	96	-0.02
5 T	Propionic Acid	54.357	52.934 E3	2.6	95	-0.07
6 T	Butyric Acid	52.562	52.270 E3	0.6	98	-0.25

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0

1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005466.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 08:50:41
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:06:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	3.279	4293319	46.050	ppm	
2) T	Pyruvic acid	4.060	2971052	5.022	ppm	
3) T	Lactic Acid	4.630	2638527	46.769	ppm	
4) T	Acetic Acid	5.057	2721854	48.563	ppm	
5) T	Propionic Acid	12.262	2646708	48.691	ppm	m
6) T	Butyric Acid	37.347	2613511	49.723	ppm	

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

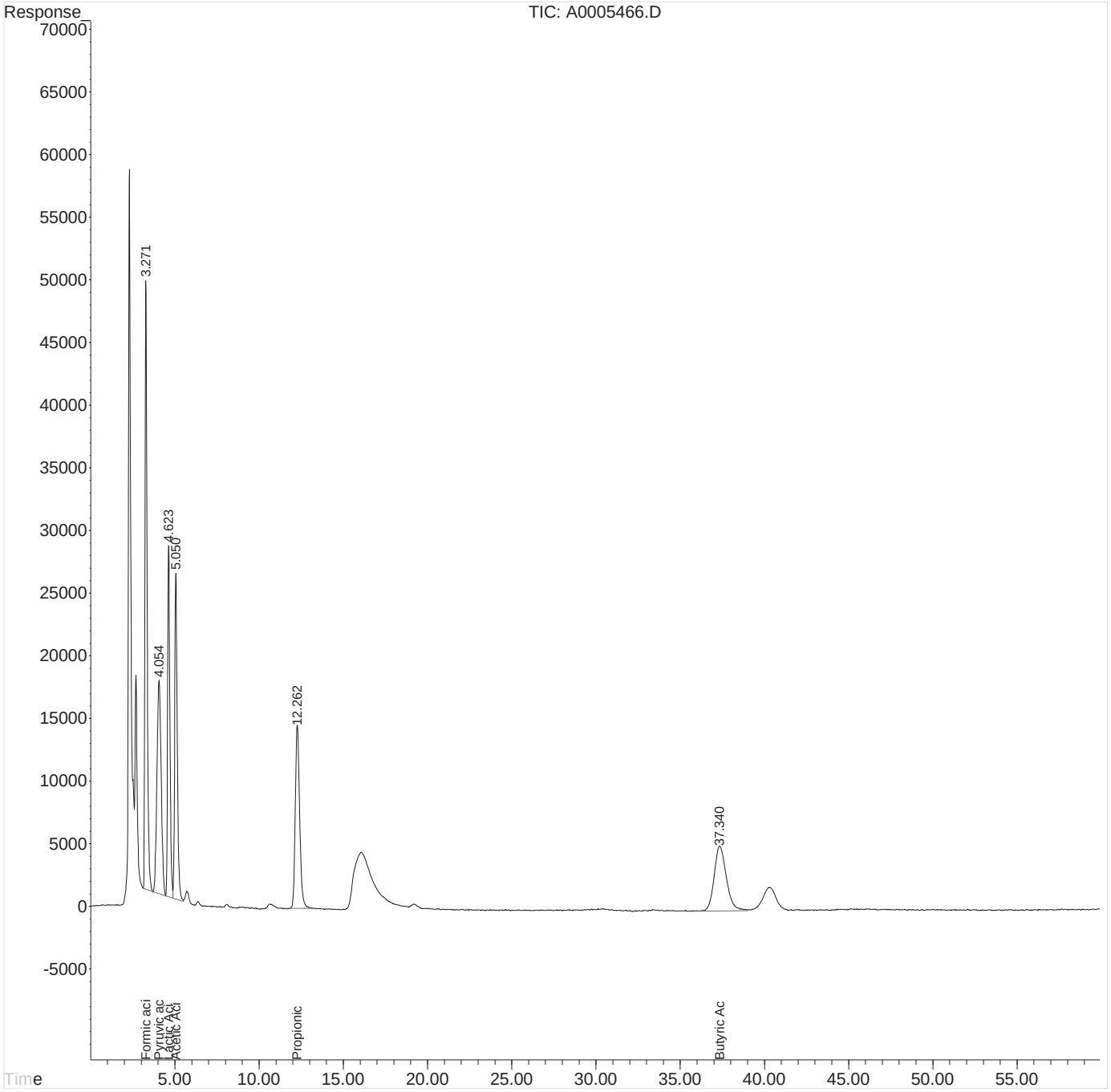
1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005466.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 08:50:41
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:06:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



1st AF 07/06/20
2nd BA 07/06/20

Evaluate Continuing Calibration Report

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005472.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 15:08:24
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 16:39:09 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 16:38:47 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1 t	Formic acid	93.232	85.492 E3	8.3	91	0.00
2 T	Pyruvic acid	591.568	593.597 E3	-0.3	101	0.00
3 T	Lactic Acid	56.417	53.078 E3	5.9	94	0.00
4 T	Acetic Acid	56.048	54.351 E3	3.0	96	0.00
5 T	Propionic Acid	54.357	53.792 E3	1.0	96	-0.02
6 T	Butyric Acid	52.562	52.259 E3	0.6	98	-0.19

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0

1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005472.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 15:08:24
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 16:39:09 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 16:38:47 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc Units
Target Compounds				
1) t	Formic acid	3.279	4274586	45.849 ppm
2) T	Pyruvic acid	4.054	2967984	5.017 ppm
3) T	Lactic Acid	4.627	2653881	47.041 ppm
4) T	Acetic Acid	5.055	2717571	48.486 ppm
5) T	Propionic Acid	12.242	2689612	49.480 ppm
6) T	Butyric Acid	37.161	2612962	49.712 ppm

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

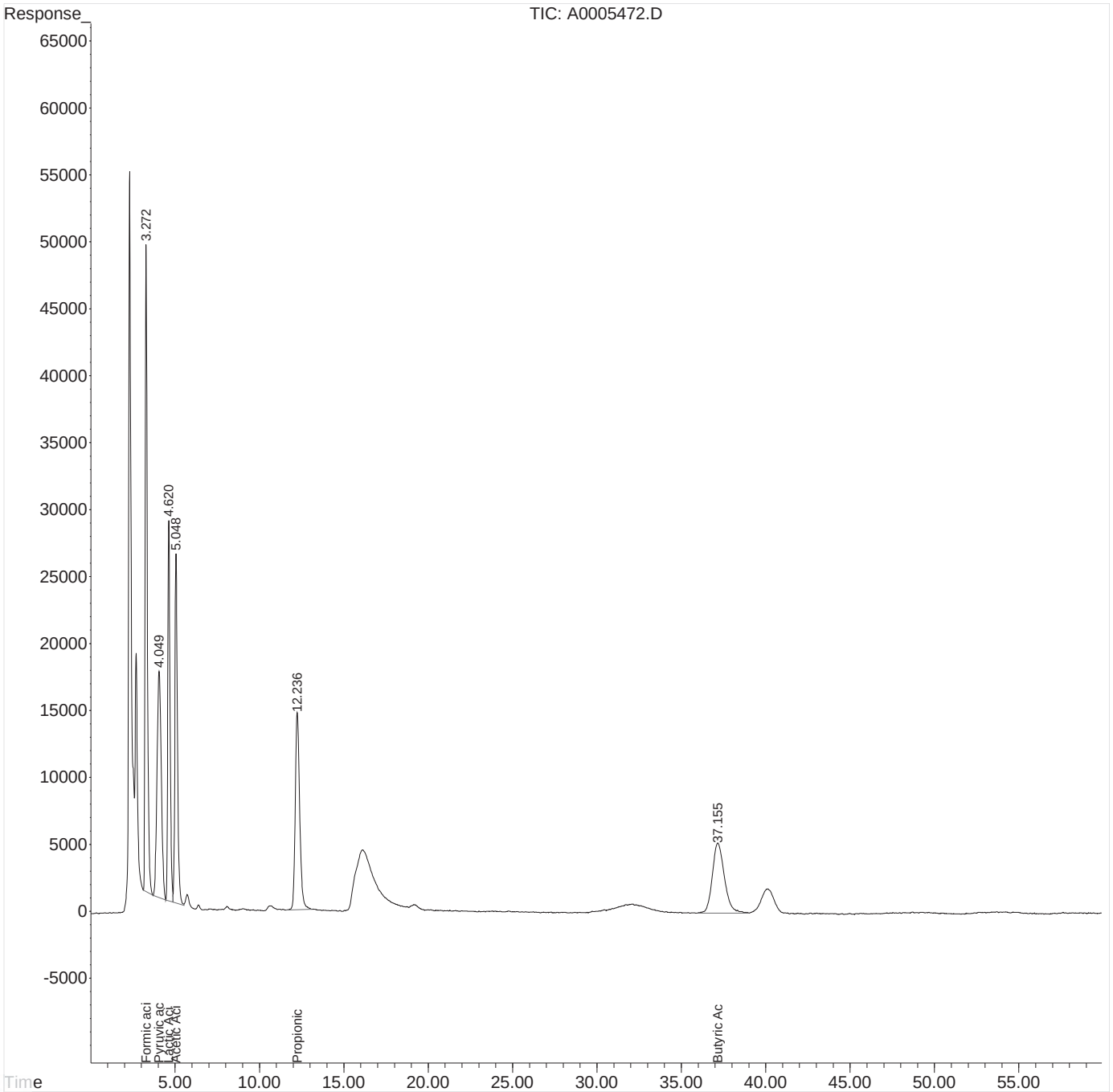
1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005472.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 15:08:24
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 16:39:09 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 16:38:47 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



Analysis: Met Acids Analyst: Parker Run Method: NEWMETA.M
Date: 03/12/2020 Instr. HPLC05 Quant Method: MA03/220.M
LIMS Run#:
Setup: Column: Synergi Hydro-RP 150x4.6 Col.Temp: 35°C Flow: 0.6ml/min
Mobile Phase: 0.02M KH2PO4 prep 0.1M PO4 ul Inj.: 50
Mobile Phase ID: O-760-76 03/12/2020

Pos.	Sample	Diln.	Stds. ID	File#	OK?	Comments
1	BLK			A0004461	—	
1	BLK			62	—	
1	BLK			63	—	
1	last BLK			64	Y	
2	STD 1	2µl/1ml	205268	65	Y	
3	2	4µl/1ml		66	Y	
4	3	10µl/1ml		67	Y	
5	4	20µl/1ml		68	Y	
6	5	40µl/1ml		69	Y	
7	6	0.1ml/1ml		70	Y	
8	7	0.2ml/1ml		71	Y	
9	8	0.4ml/1ml	↓	72	Y	
10	ICV	100µl/1ml	203153	73	N	Interference w/ Butyric

Parker 03/27/2020

Primary: 205268 exp: 03/21/20 Secondary: 203153 exp: 03/21/20
pH Paper: 205508 Acid: 203550

Runlog HPLCr2
3/23/18

Analysis: Nut Acids Analyst: AFelker Run Method: NEWMETA.M

Date: 03/16/2020 Instr.: HPLC05 Quant Method: MA031220.M

LIMS Run#: 673626

Setup: Column: Synergi Hydro RP 150 x 4.6 Col.Temp: 35°C Flow: 0.6ml/min

Mobile Phase: 0.02M KH2PO4 pH 6.0 in DI ul Inj.: 50

Mobile Phase ID: O-7668-76 03/12/2020

Pos.	Sample	Diln.	Stds. ID	File#	OK?	Comments
1	DLK			A0004774	—	
1	DLK			75	—	
2	CCV	100ppm/1mL	205268	76	Y	
3	ICV	↓	203153	77	Y	
4	CCV	100ppm/1mL	205268	78	Y	Drift 2 ↑
5	MD			79	Y	
6	LCS	100ppm/1mL	203153	80	Y	
7	DLCV	↓	↓	81	Y	
8	K2001981-001			82	N	Acetic >LR, dilute 1/2
9	↓ -001 MS		203153	83	N	↓
4	CCV	100ppm/1mL	205268	84	Y	
10	K2001981-001 Dup		203153	85	N	Acetic >LR
11	K2001990-001	2		86	Y	
12	R2001765-012			87	Y	
13	↓ -022			88	Y	
14	↓ -023			89	Y	
4	CCV	100ppm/1mL	205268	90	Y	
15	LOQ/MDL	10ppm/1mL	203153	91	Y	
16	LODV	5ppm/1mL	↓	92	Y	
17	R2002223-001			93	Y	
18	↓ -003			94	Y	
19	↓ -005			95	Y	
4	CCV	100ppm/1mL	205268	96	Y	
20	K2001981-001	2		97		
4	CCV	100ppm/1mL	205268	98	Y	

05/17/2020

Primary: 205268 exp: 03/21/20 Secondary: 203153 exp: 03/25/20

pH Paper: 205502 Acid: 203940

Runlog HPLCr2
3/23/18

O-998 Page 21

1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004472.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 20:00:49
Operator : A.Felser
Sample : STD 8
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	2.949	18444040	201.560	ppm	
2) T	Pyruvic acid	3.625	11605902	19.912	ppm	m
3) T	Lactic Acid	4.103	11063811	199.720	ppm	m
4) T	Acetic Acid	4.584	11047591	197.987	ppm	m
5) T	Propionic Acid	11.450	10994386	200.127	ppm	
6) T	Butyric Acid	36.001f	10326182	196.253	ppm	m

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

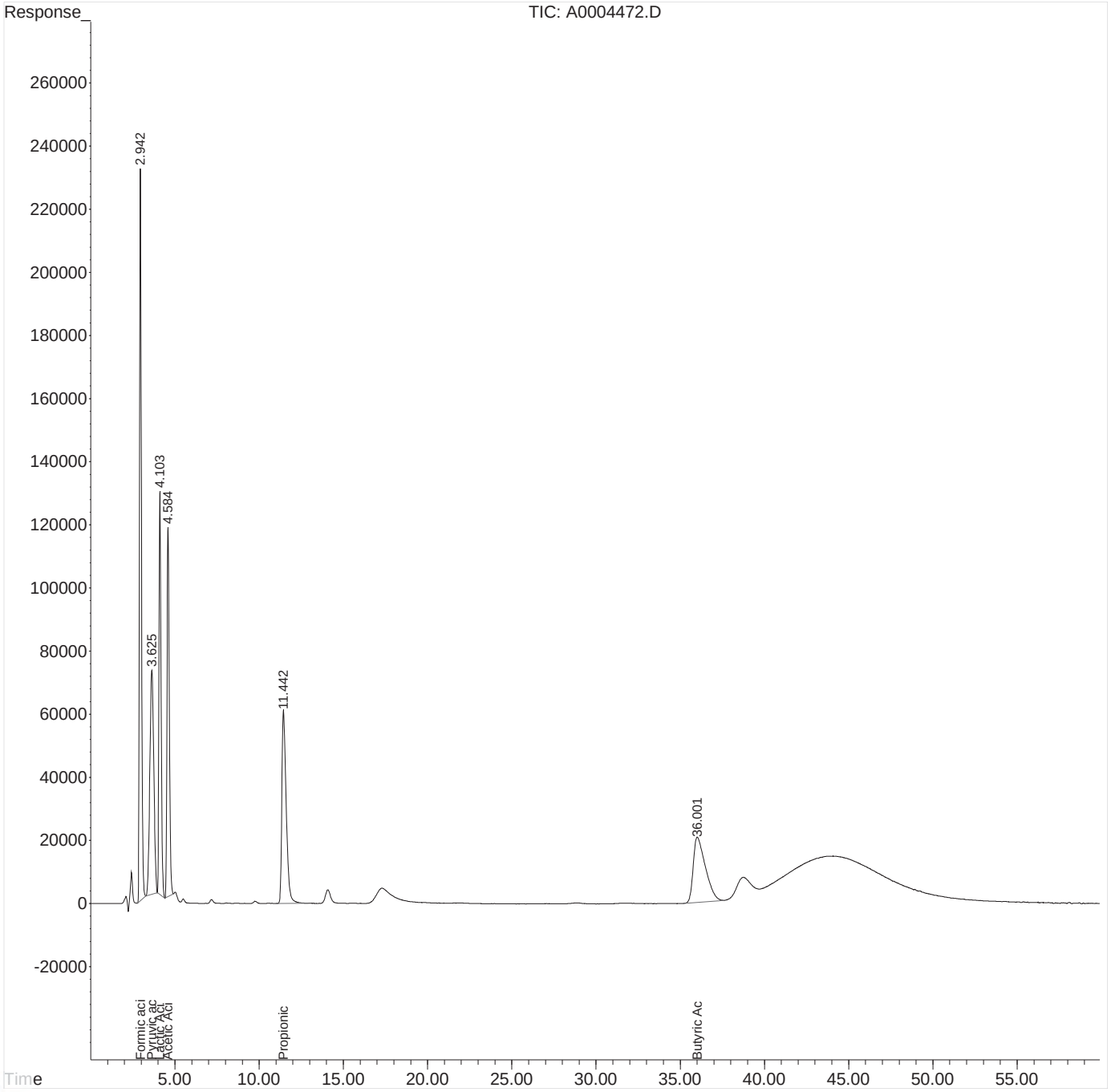
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004472.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 20:00:49
Operator : A.Felser
Sample : STD 8
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004464.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 11:36:51
Operator : A.Felser
Sample : INST BLK
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:30:23 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:29:26 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1) t	Formic acid	0.000	0	N.D.	ppm
2) T	Pyruvic acid	0.000	0	N.D.	ppm
3) T	Lactic Acid	0.000	0	N.D.	ppm
4) T	Acetic Acid	0.000	0	N.D.	ppm
5) T	Propionic Acid	0.000	0	N.D.	ppm
6) T	Butyric Acid	0.000	0	N.D.	ppm

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

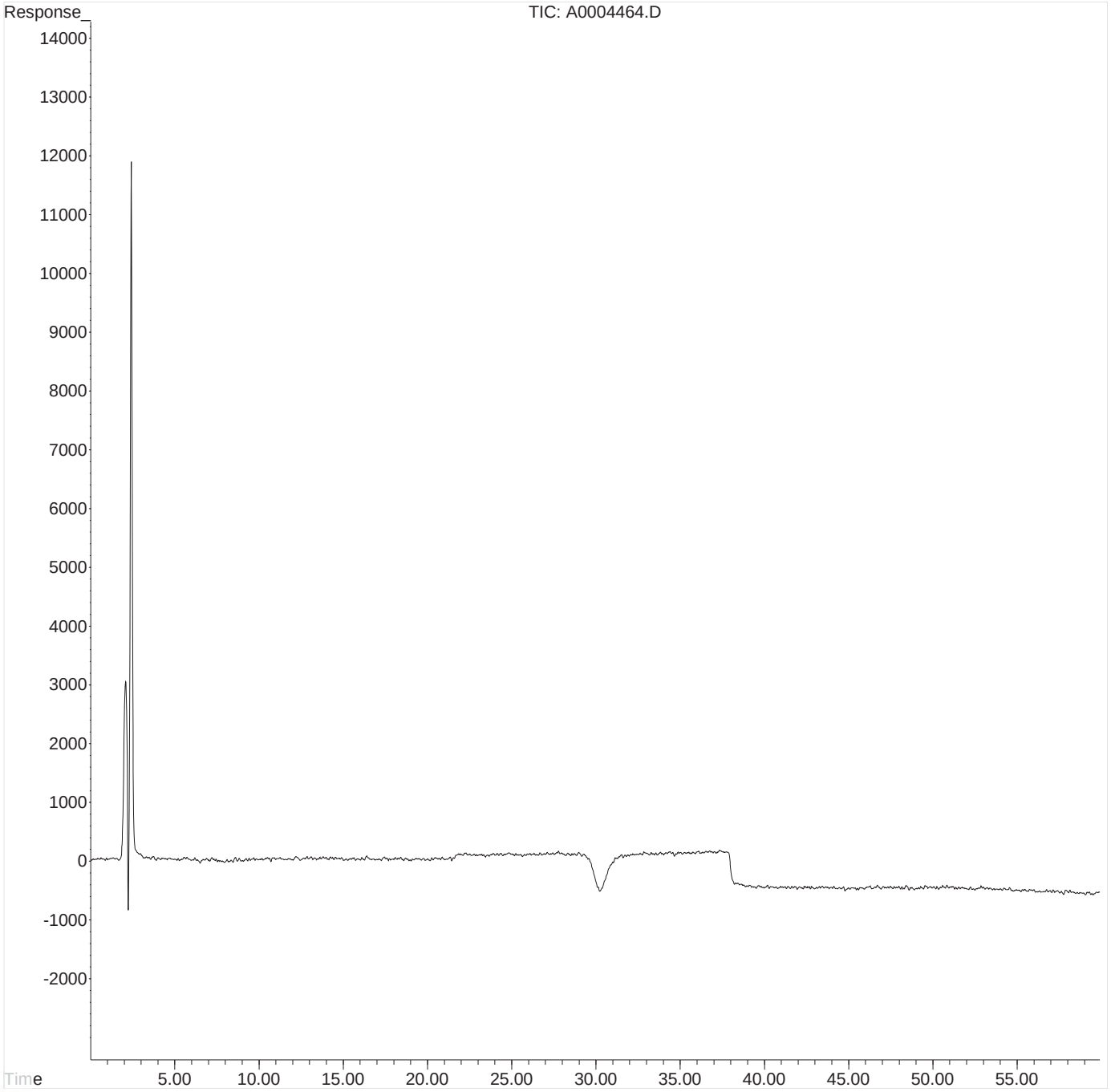
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004464.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 11:36:51
Operator : A.Felser
Sample : INST BLK
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:30:23 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:29:26 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



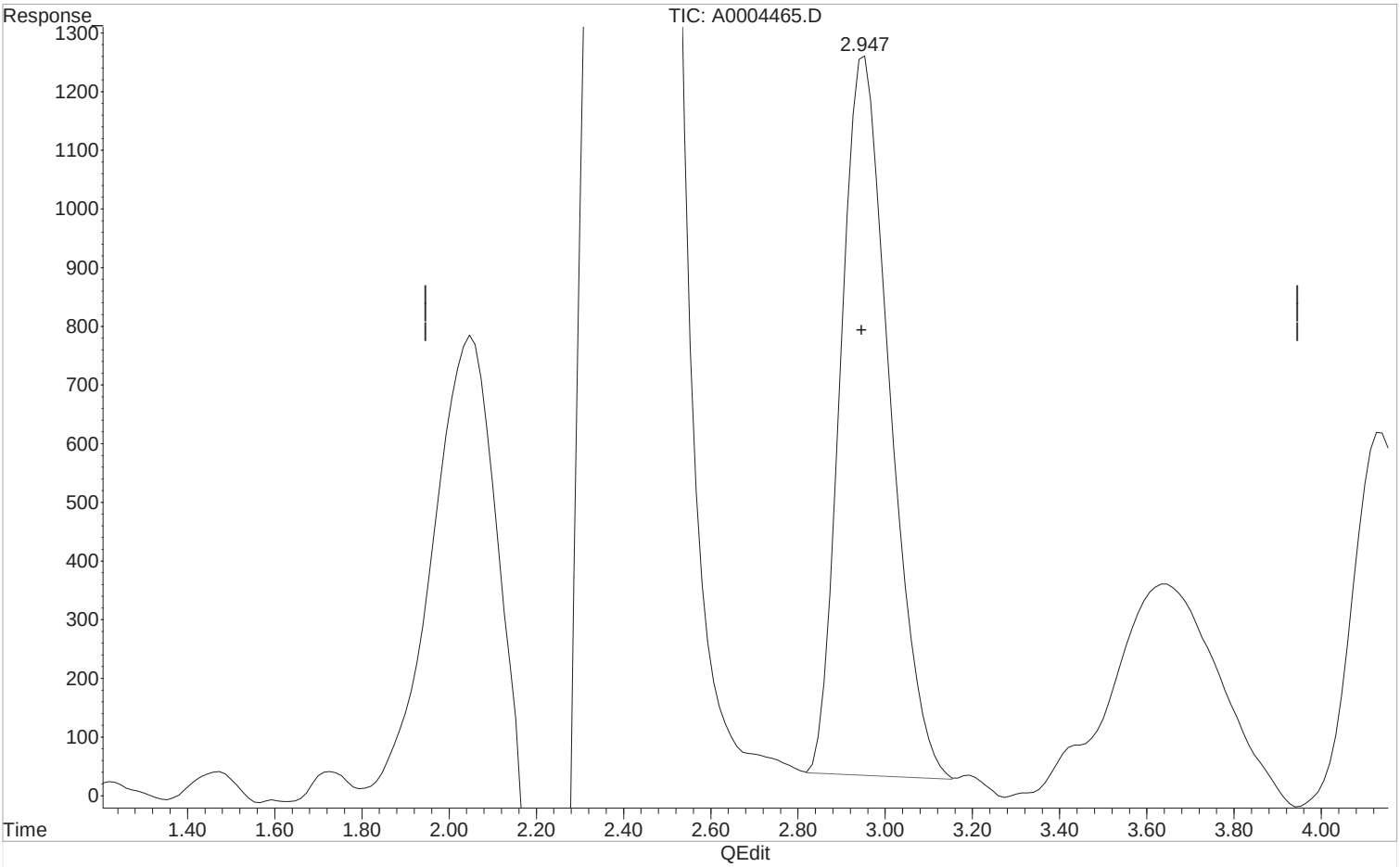
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.947min 1.051 ppm m

response 96141

Manual Integration:

After

Peak not found.

03/16/20

(1) - Expected Retention Time

MA031220.M Mon Mar 16 09:18:53 2020

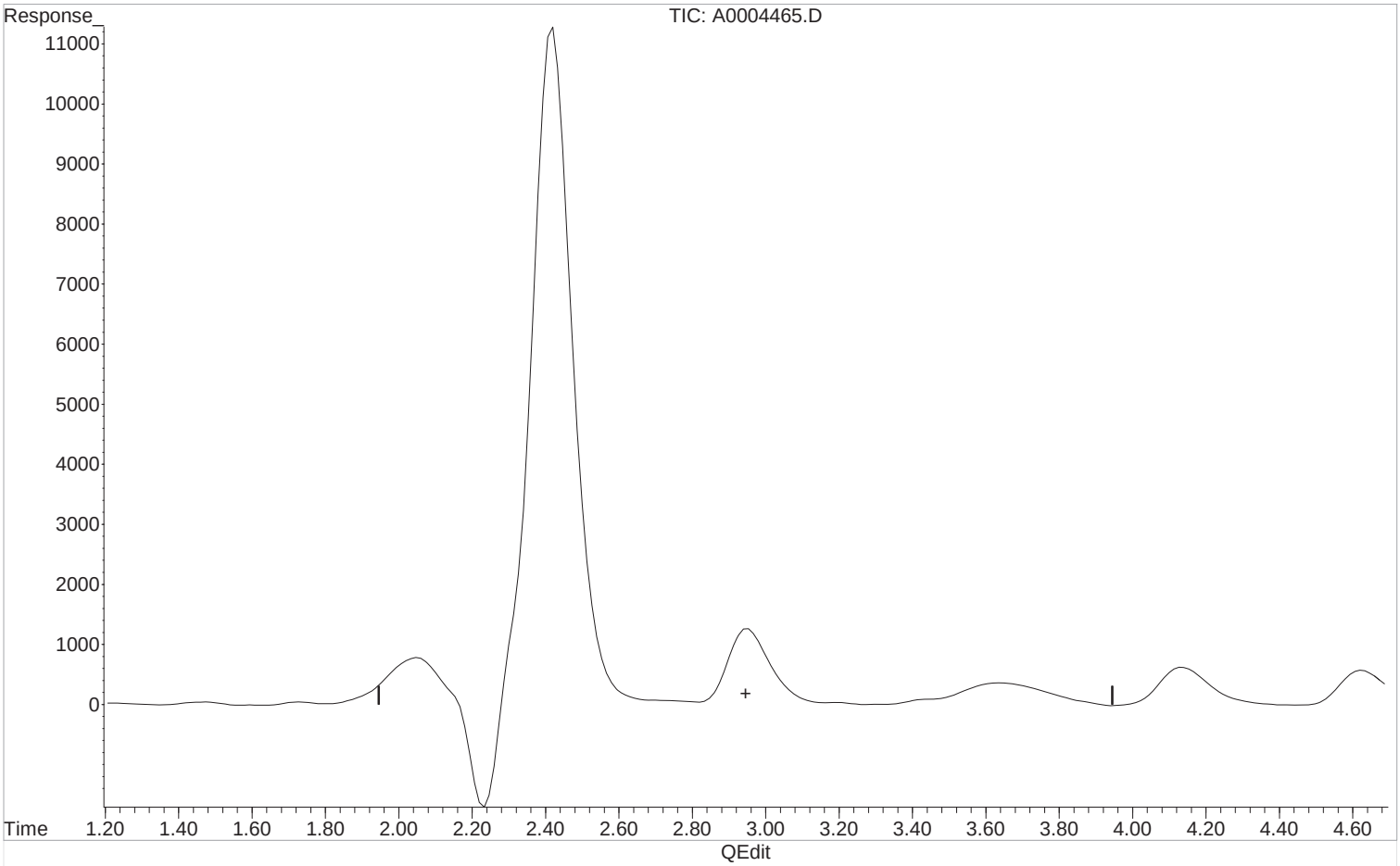
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.946min 0.000 ppm

response 0

Manual Integration:

Before

03/16/20

(t) = Expected Retention Time
MA031220.M Mon Mar 16 09:18:43 2020

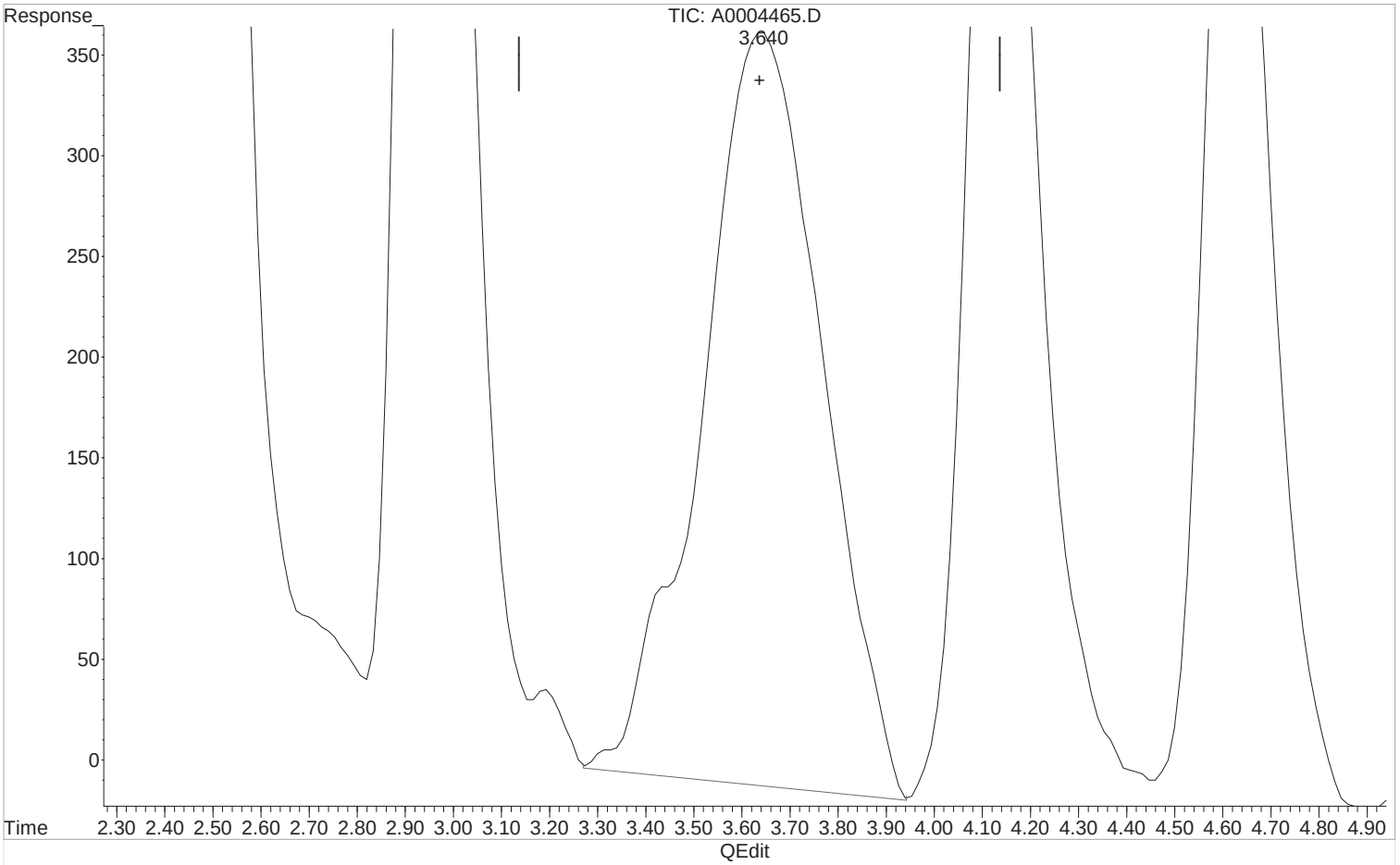
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.640min 0.112 ppm m

response 65073

Manual Integration:

After

Peak not found.

03/16/20

(T) - Expected Retention Time
MA031220.M Mon Mar 16 09:19:08 2020

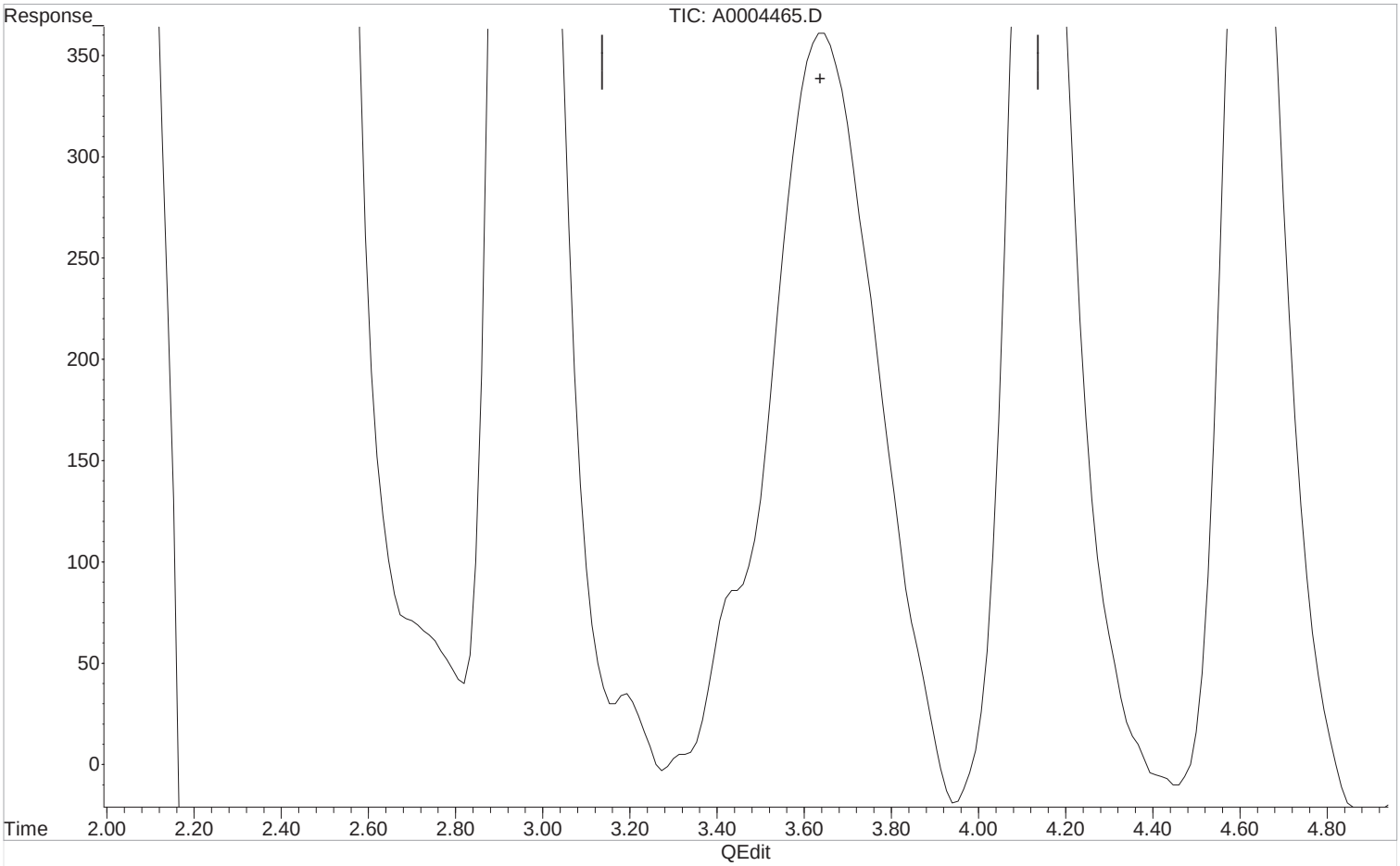
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.645min -0.100 ppm

response -58358

Manual Integration:

Before

03/16/20

(T) - Expected Retention Time
MA031220.M Mon Mar 16 09:18:56 2020

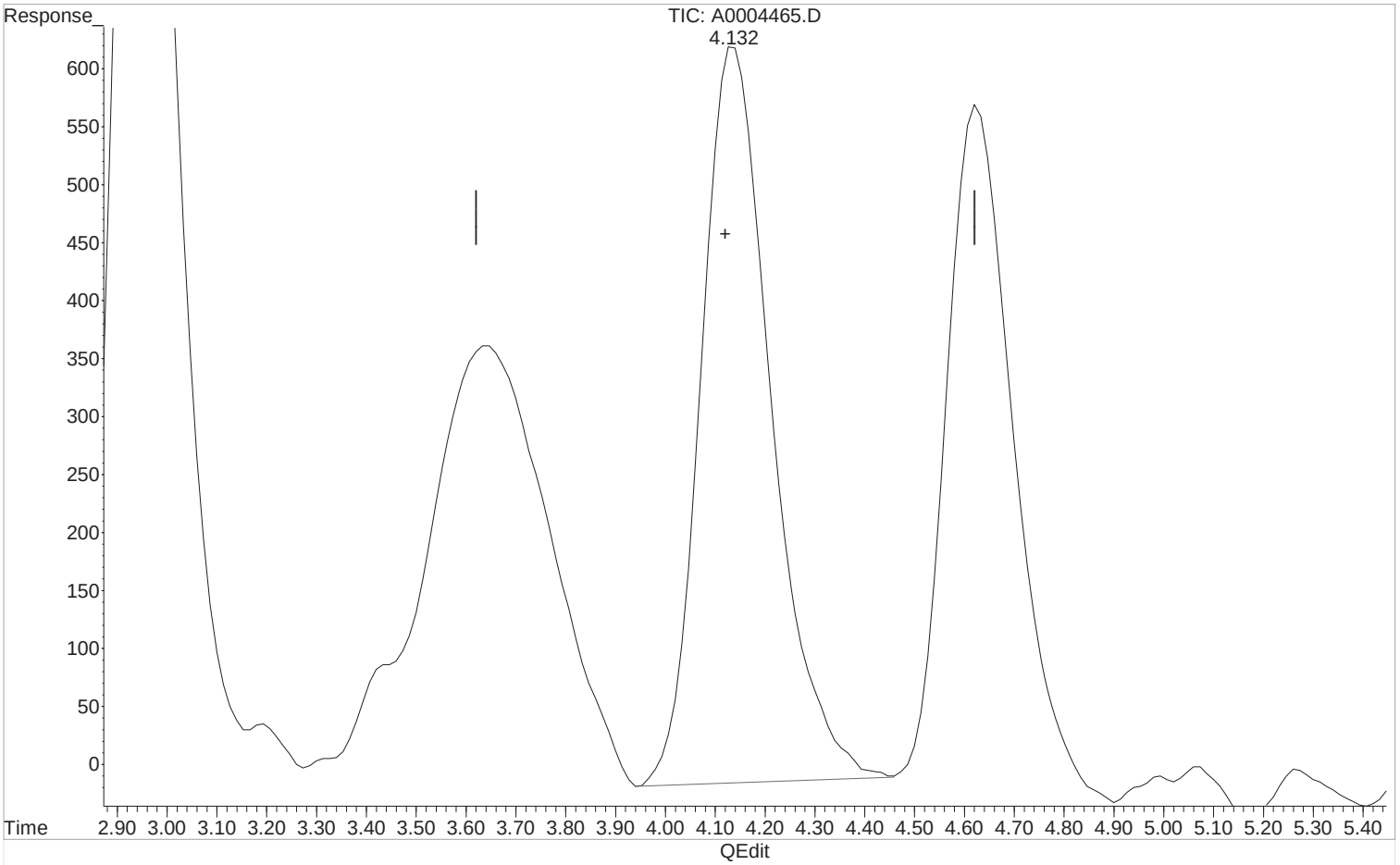
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.132min 1.131 ppm m

response 62664

Manual Integration:

After

Poor integration.

03/16/20

(T) = Expected Retention Time
MA031220.M Mon Mar 16 09:19:38 2020

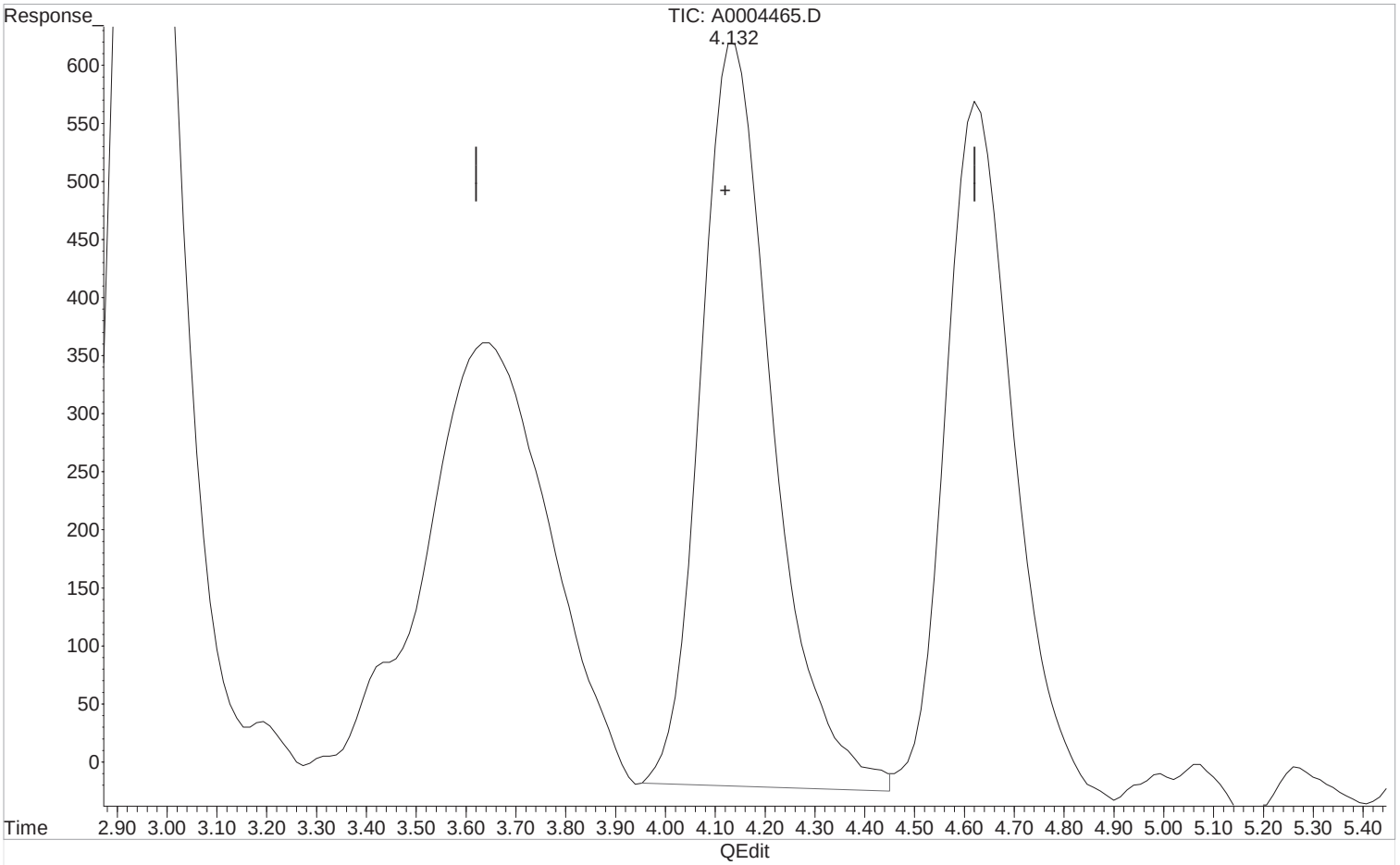
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.140min 1.165 ppm

response 64524

Manual Integration:

Before

03/16/20

(T) = Expected Retention Time
MA031220.M Mon Mar 16 09:19:12 2020

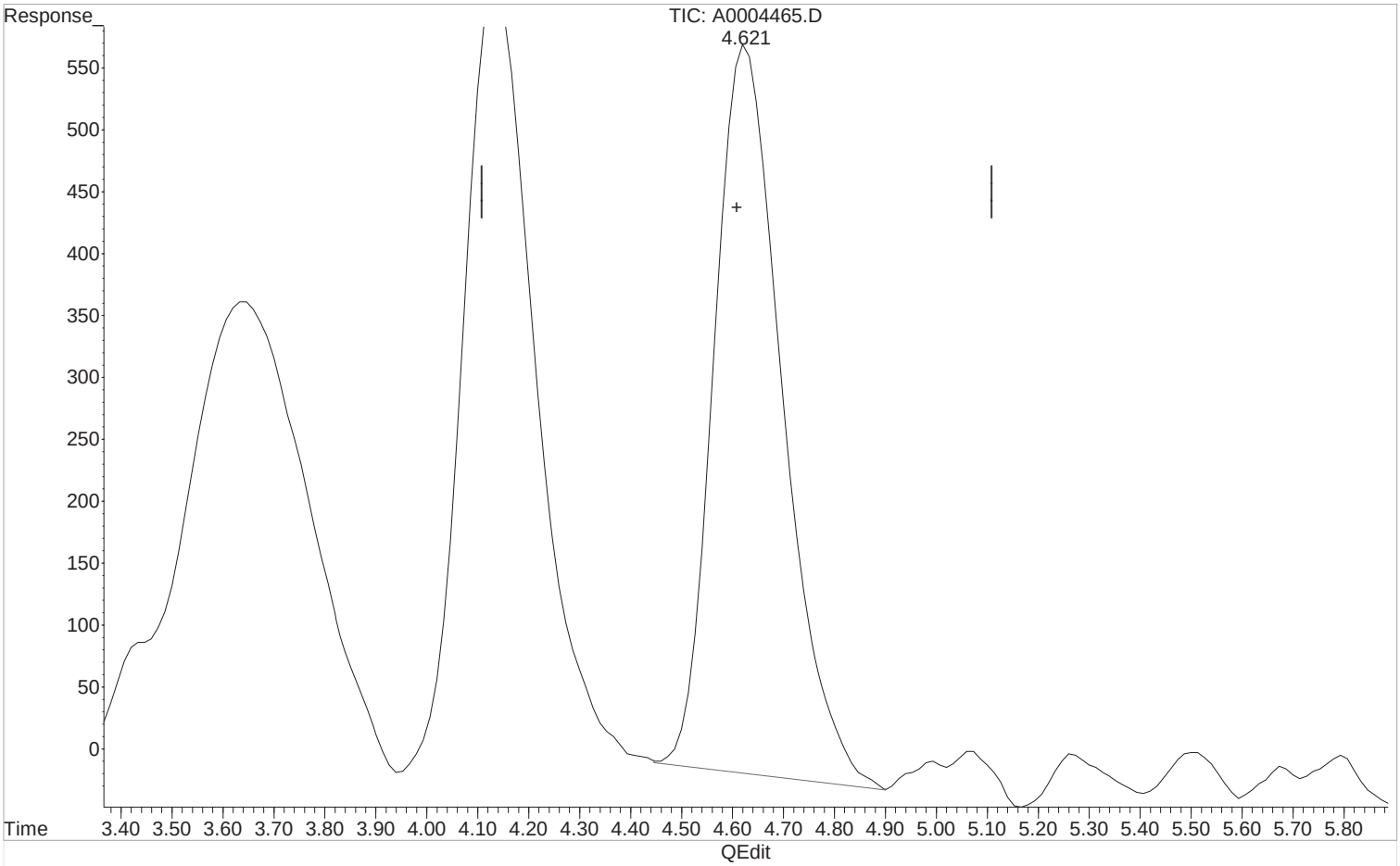
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.621min 0.989 ppm m

response 55208

Manual Integration:

After

Poor integration.

03/16/20

(T) = Expected Retention Time
MA031220.M Mon Mar 16 09:19:51 2020

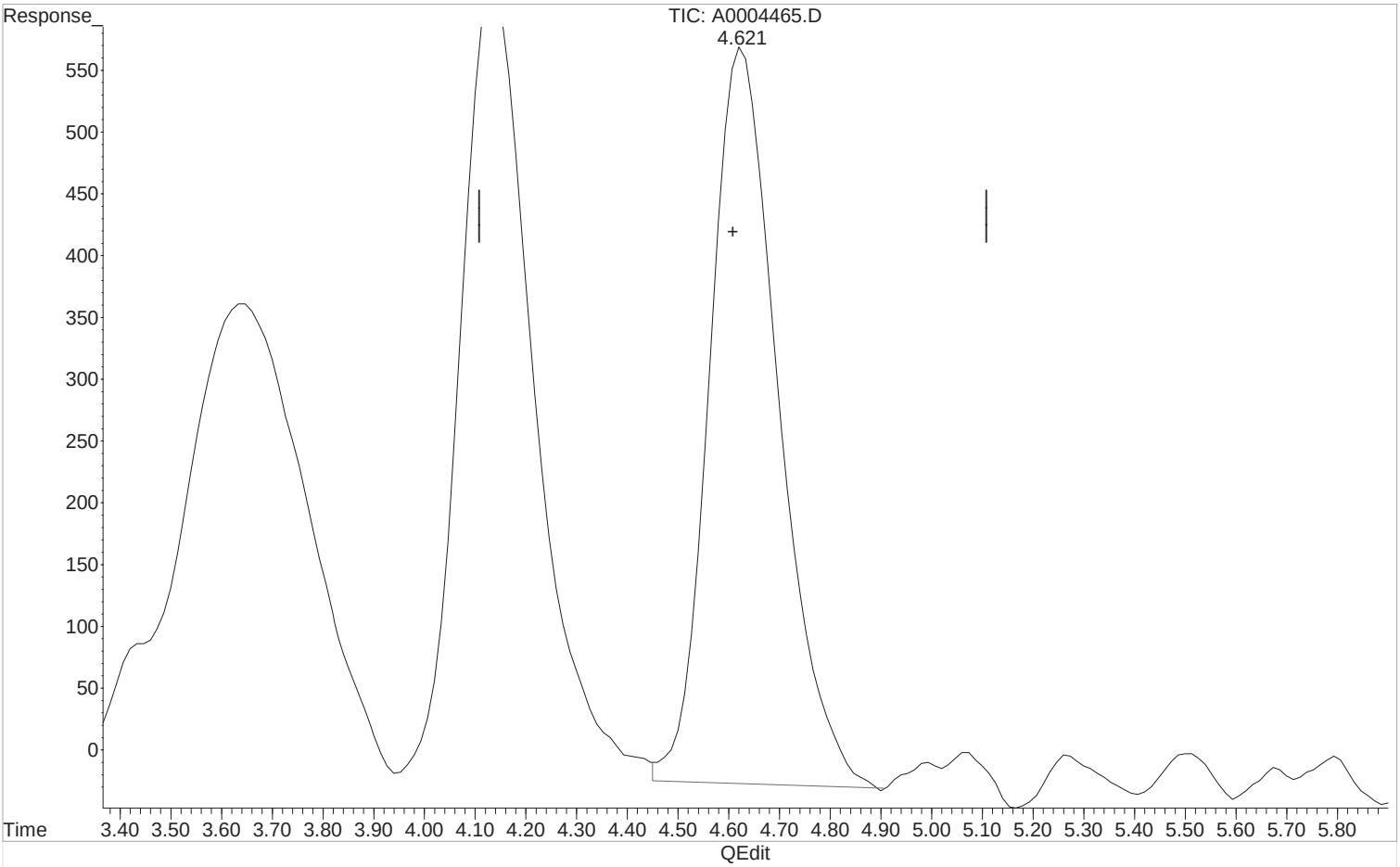
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.629min 1.019 ppm

response 56862

Manual Integration:

Before

03/16/20

(T) = Expected Retention Time
MA031220.M Mon Mar 16 09:19:41 2020

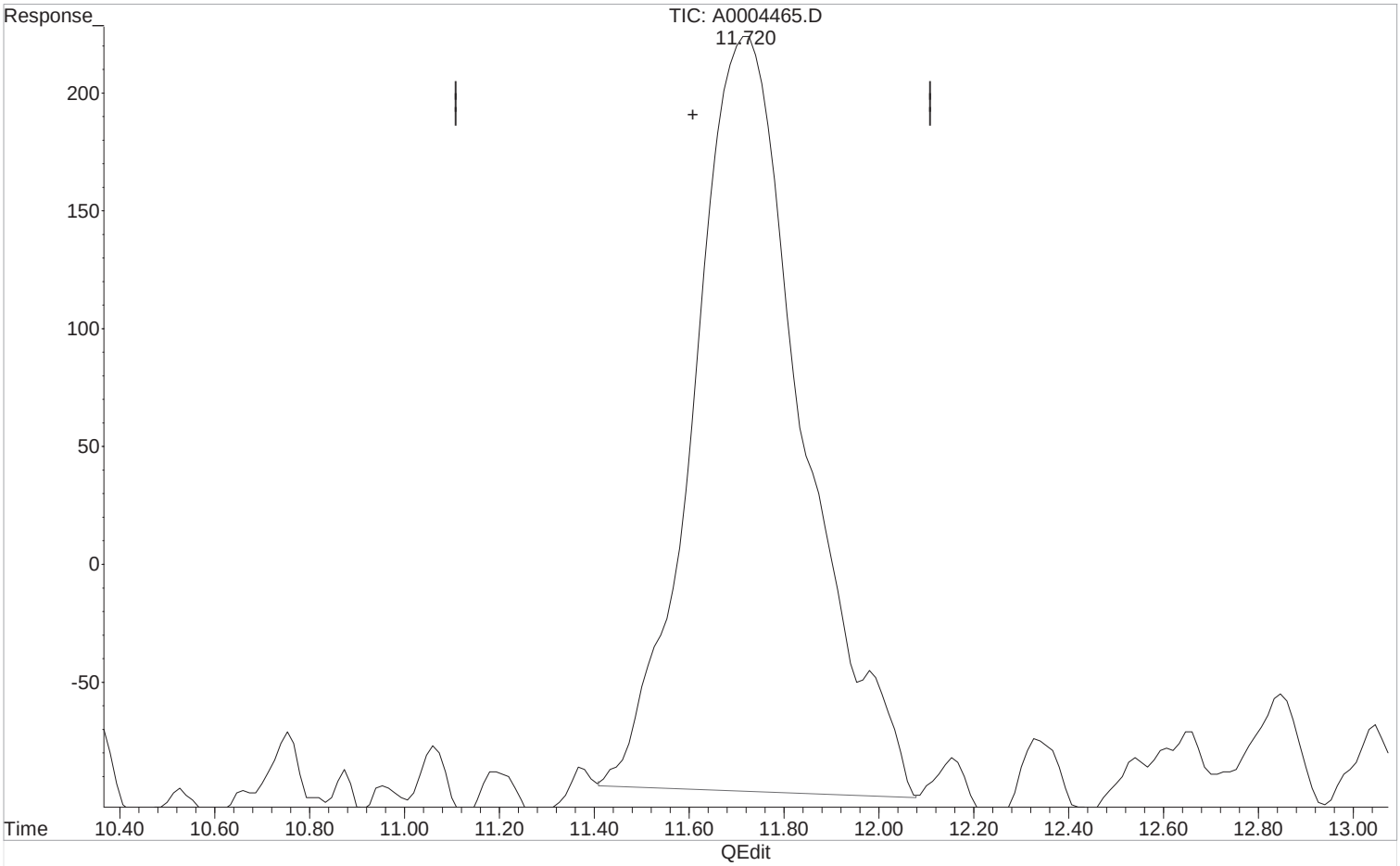
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

11.720min 0.938 ppm m

response 51534

Manual Integration:

After

Poor integration.

03/16/20

(5) - Expected Retention Time
MA031220.M Mon Mar 16 09:20:06 2020

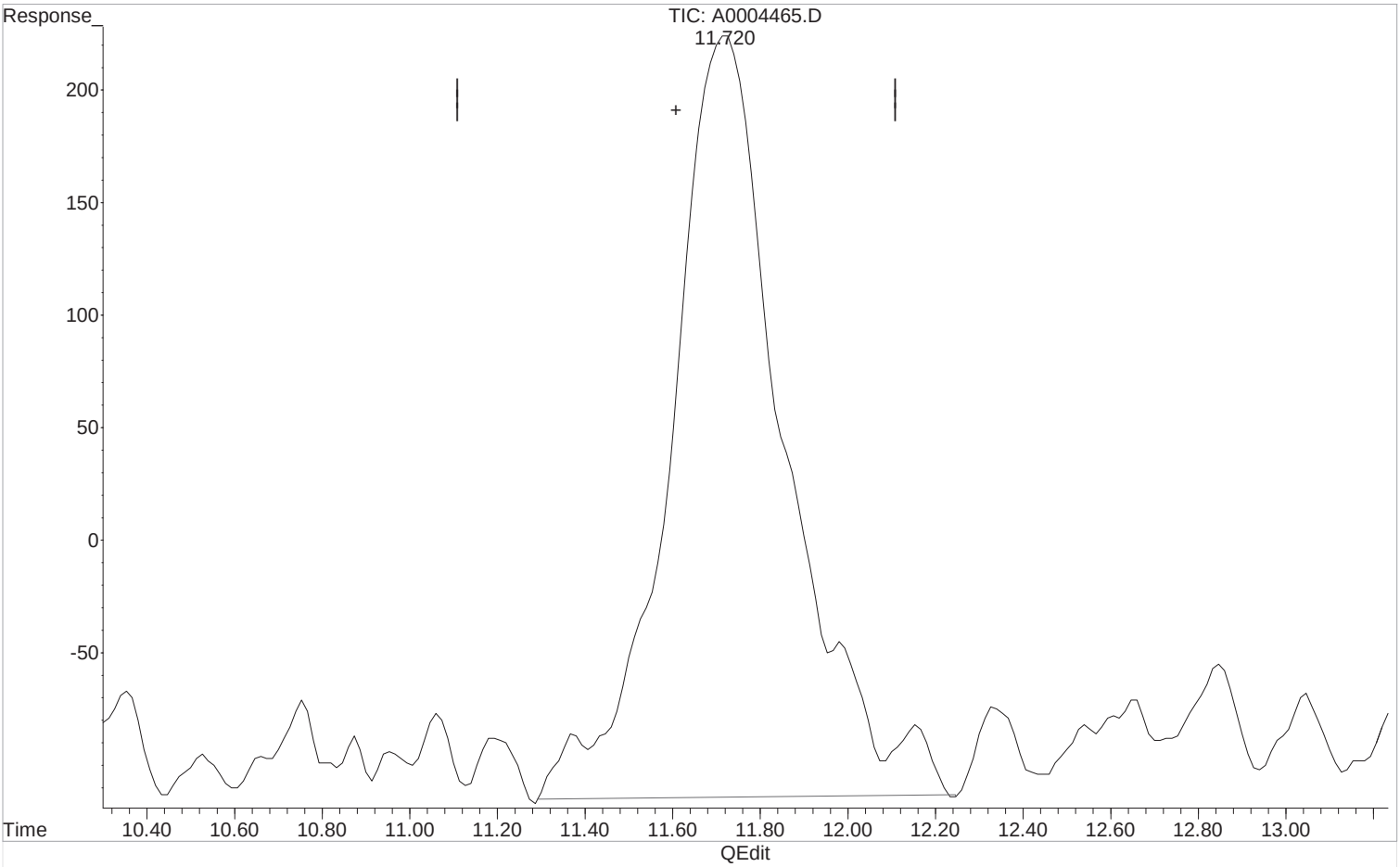
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

11.721min 1.124 ppm

response 61737

Manual Integration:

Before

03/16/20

(5) - Expected Retention Time
MA031220.M Mon Mar 16 09:19:59 2020

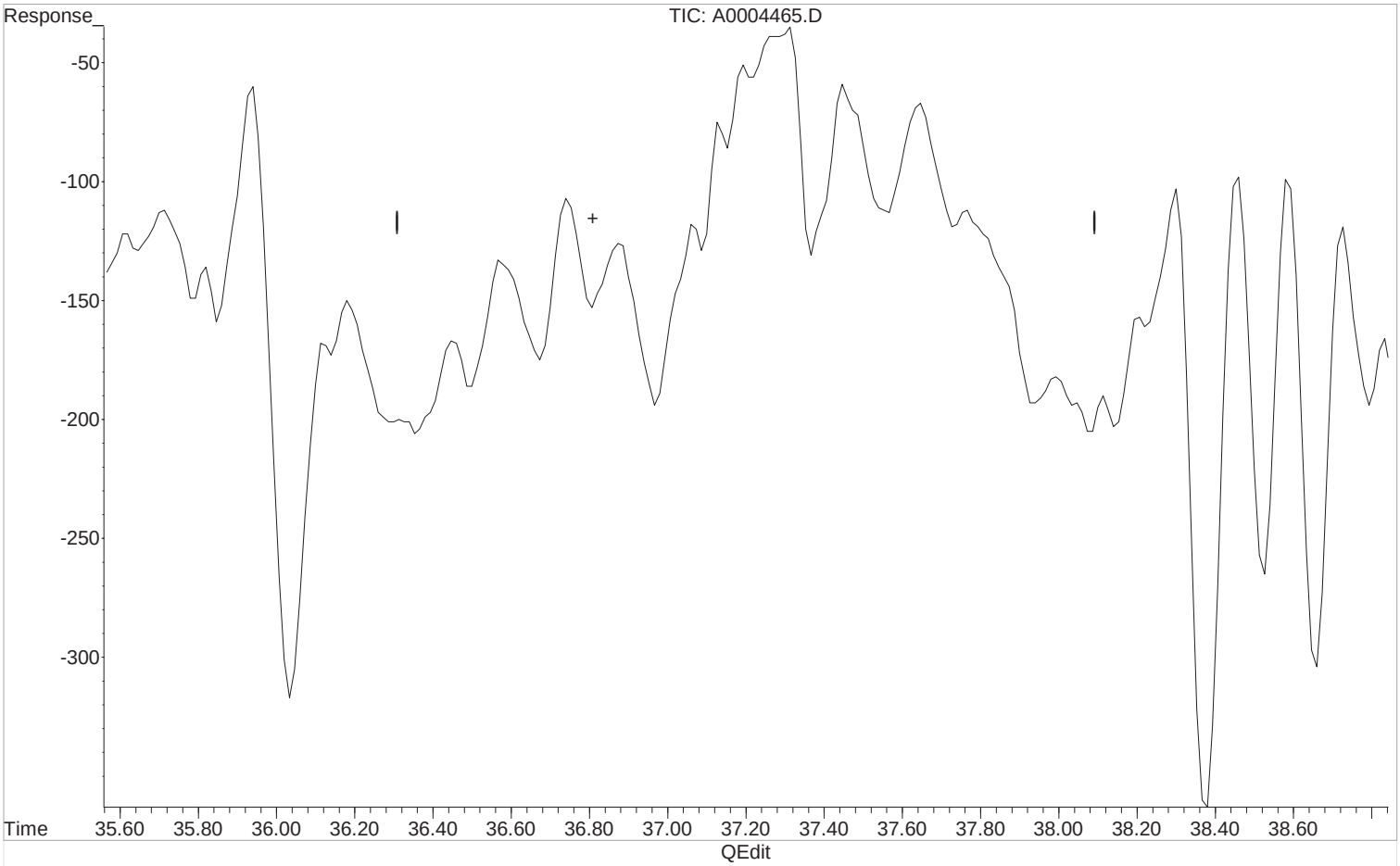
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

37.309min 1.012 ppm m

response 53231

Manual Integration:

After

Peak not found.

03/16/20

(T) - Expected Retention Time
MA031220.M Mon Mar 16 09:20:41 2020

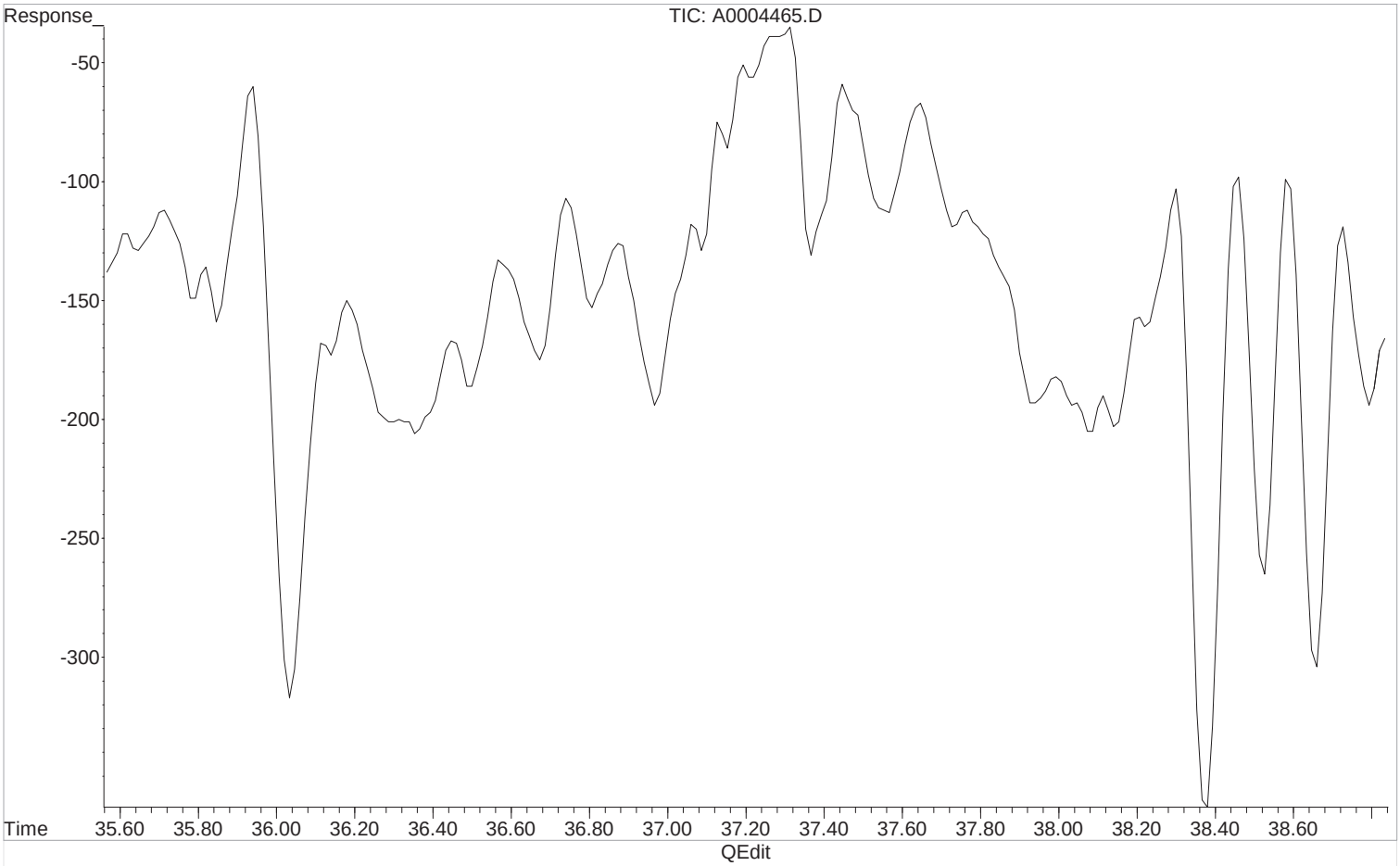
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

0.000min 0.000 ppm d

response 0

Manual Integration:

Before

03/16/20

(T) - Expected Retention Time
MA031220.M Mon Mar 16 09:20:28 2020

1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	2.947	96141	1.051	ppm	m
2) T	Pyruvic acid	3.640	65073	0.112	ppm	m
3) T	Lactic Acid	4.132	62664	1.131	ppm	m
4) T	Acetic Acid	4.621	55208	0.989	ppm	m
5) T	Propionic Acid	11.720	51534	0.938	ppm	m
6) T	Butyric Acid	37.309f	53231	1.012	ppm	m

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

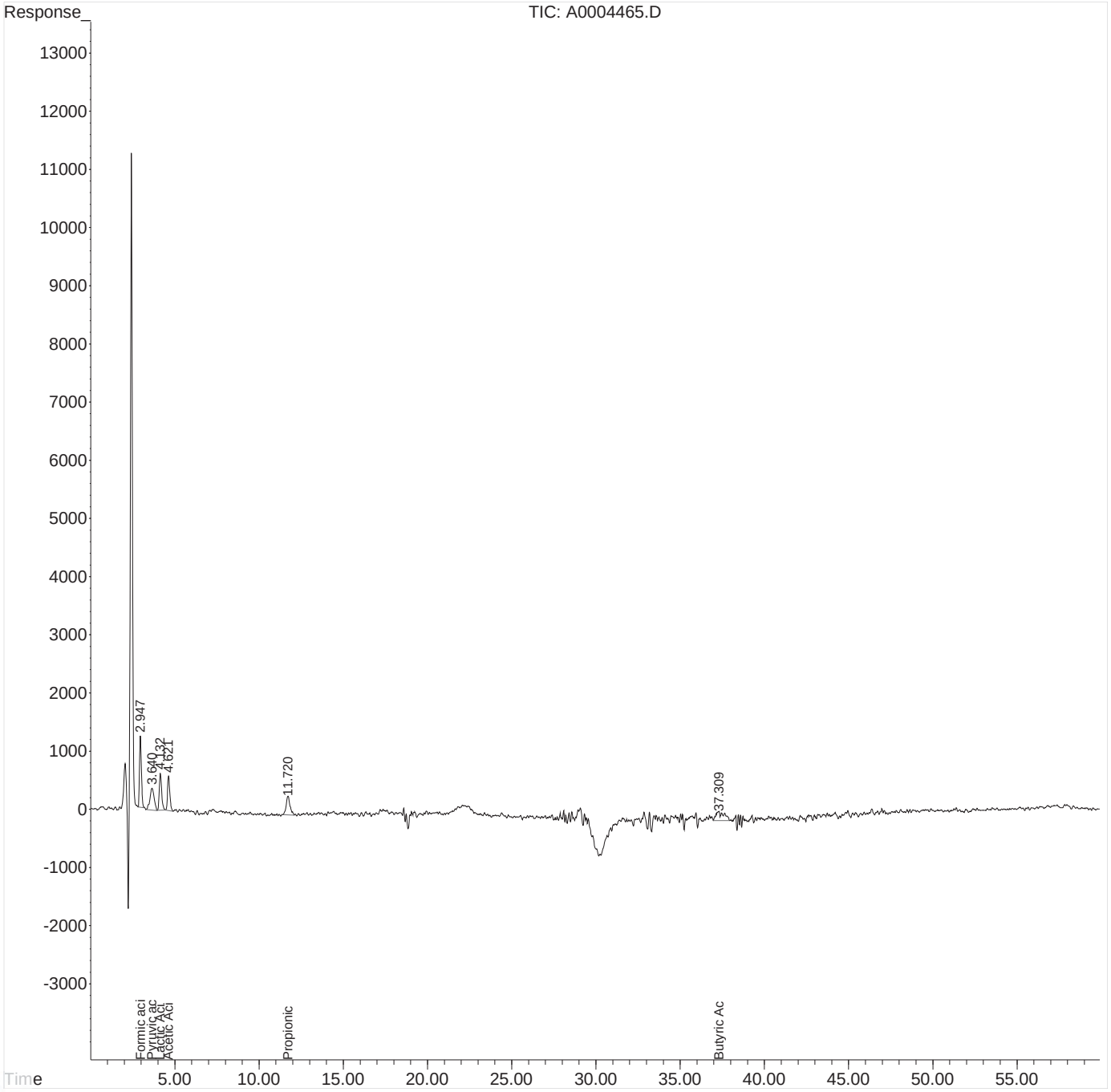
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



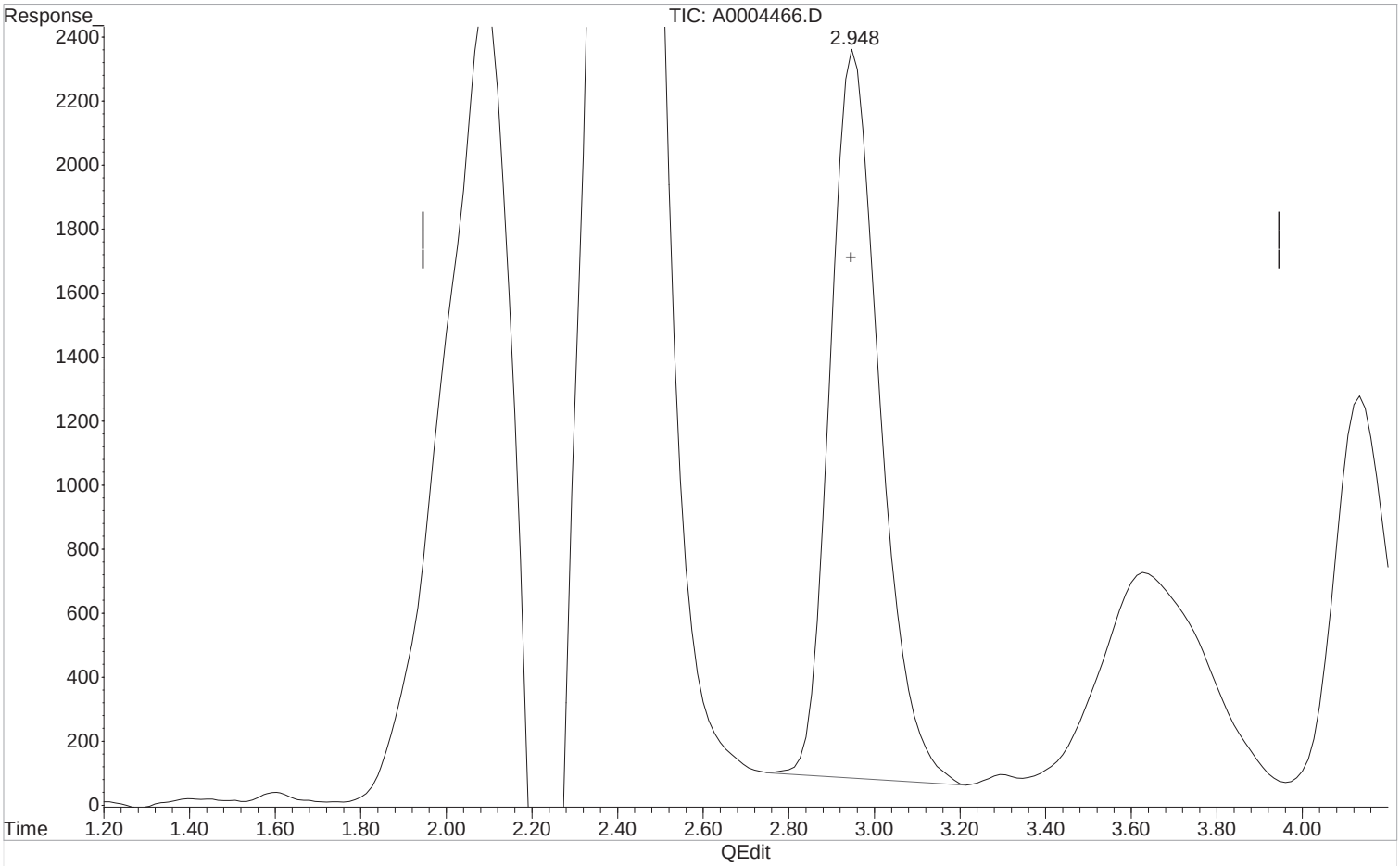
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.948min 2.019 ppm m

response 184745

Manual Integration:

After

Poor integration.

03/16/20

(t) - Expected Retention Time
MA031220.M Mon Mar 16 09:21:12 2020

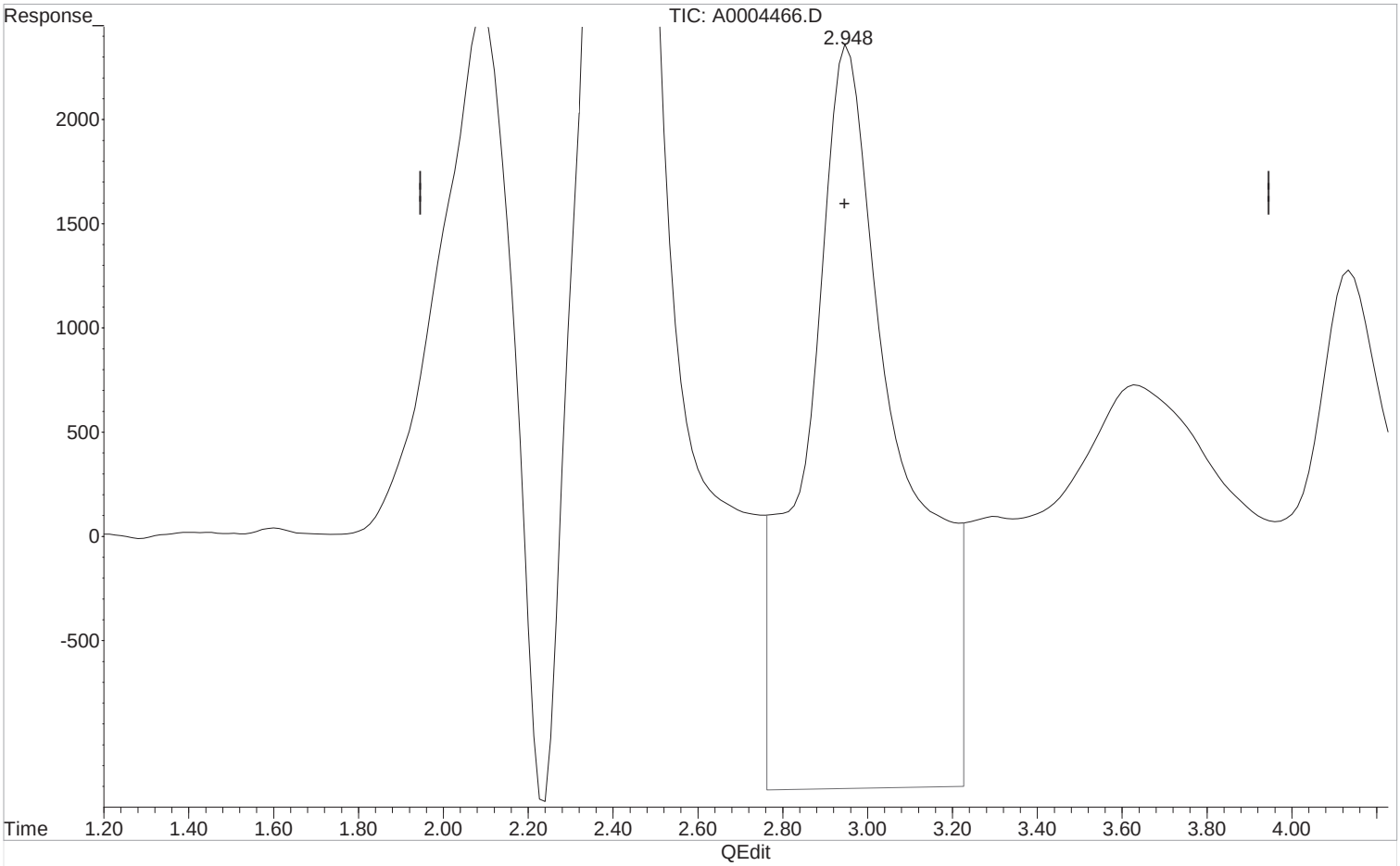
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.955min 5.943 ppm

response 543858

Manual Integration:

Before

03/16/20

(F) = Expected Retention Time
MA031220.M Mon Mar 16 09:21:04 2020

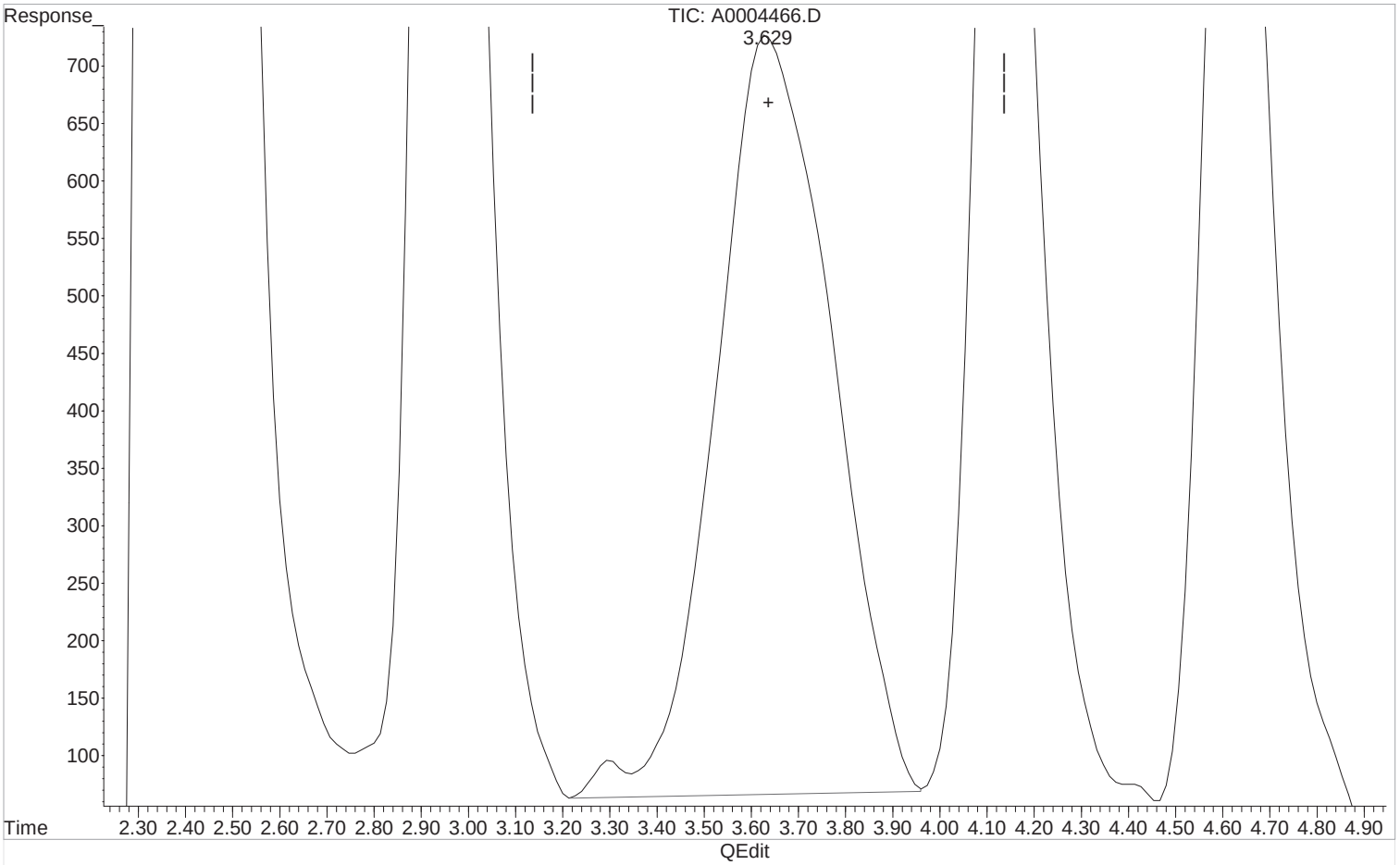
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.629min 0.194 ppm m

response 113308

Manual Integration:

After

Poor integration.

03/16/20

(T) - Expected Retention Time

MA031220.M Mon Mar 16 09:21:23 2020

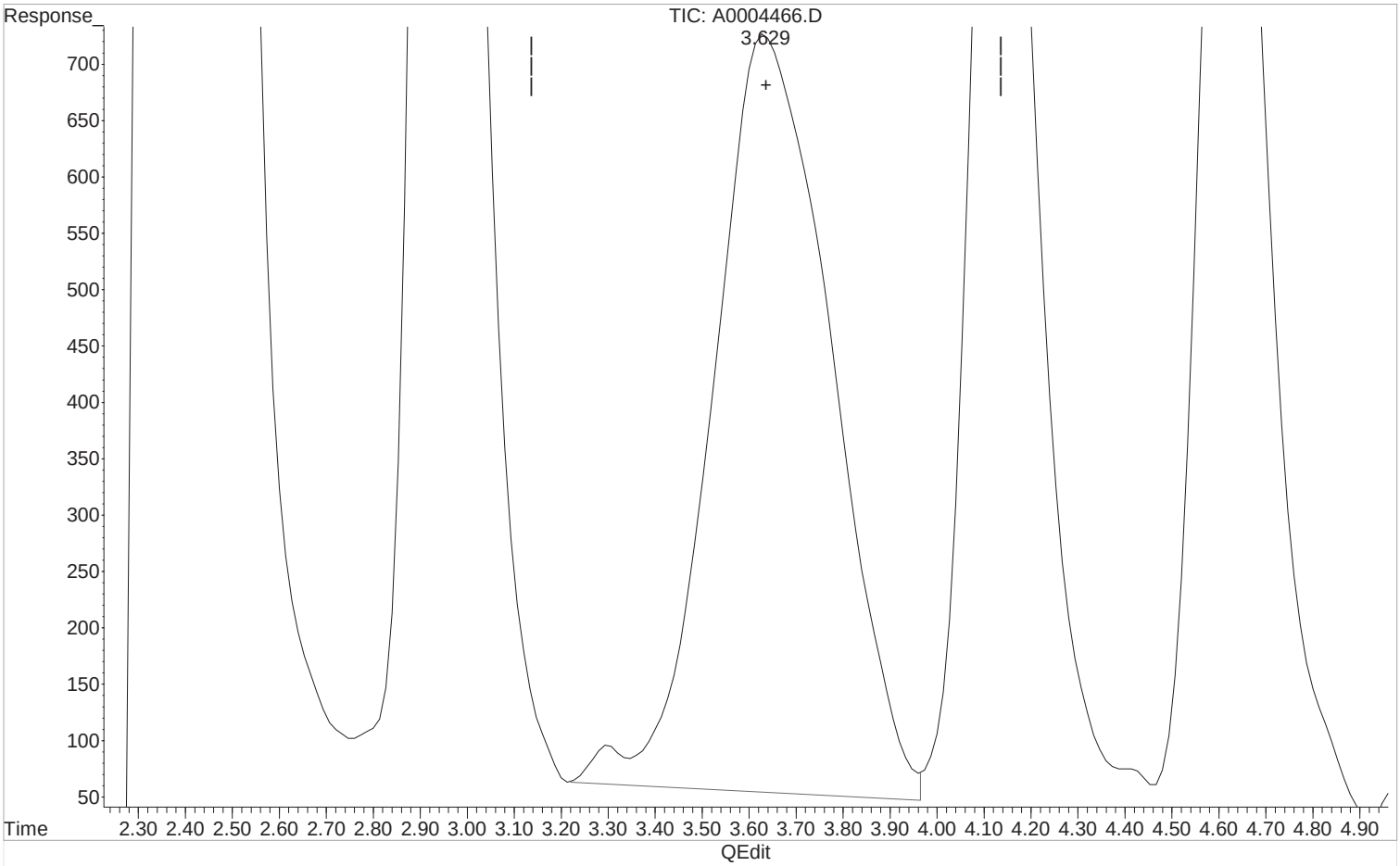
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.639min 0.203 ppm

response 118180

Manual Integration:

Before

03/16/20

(F) = Expected Retention Time
MA031220.M Mon Mar 16 09:21:16 2020

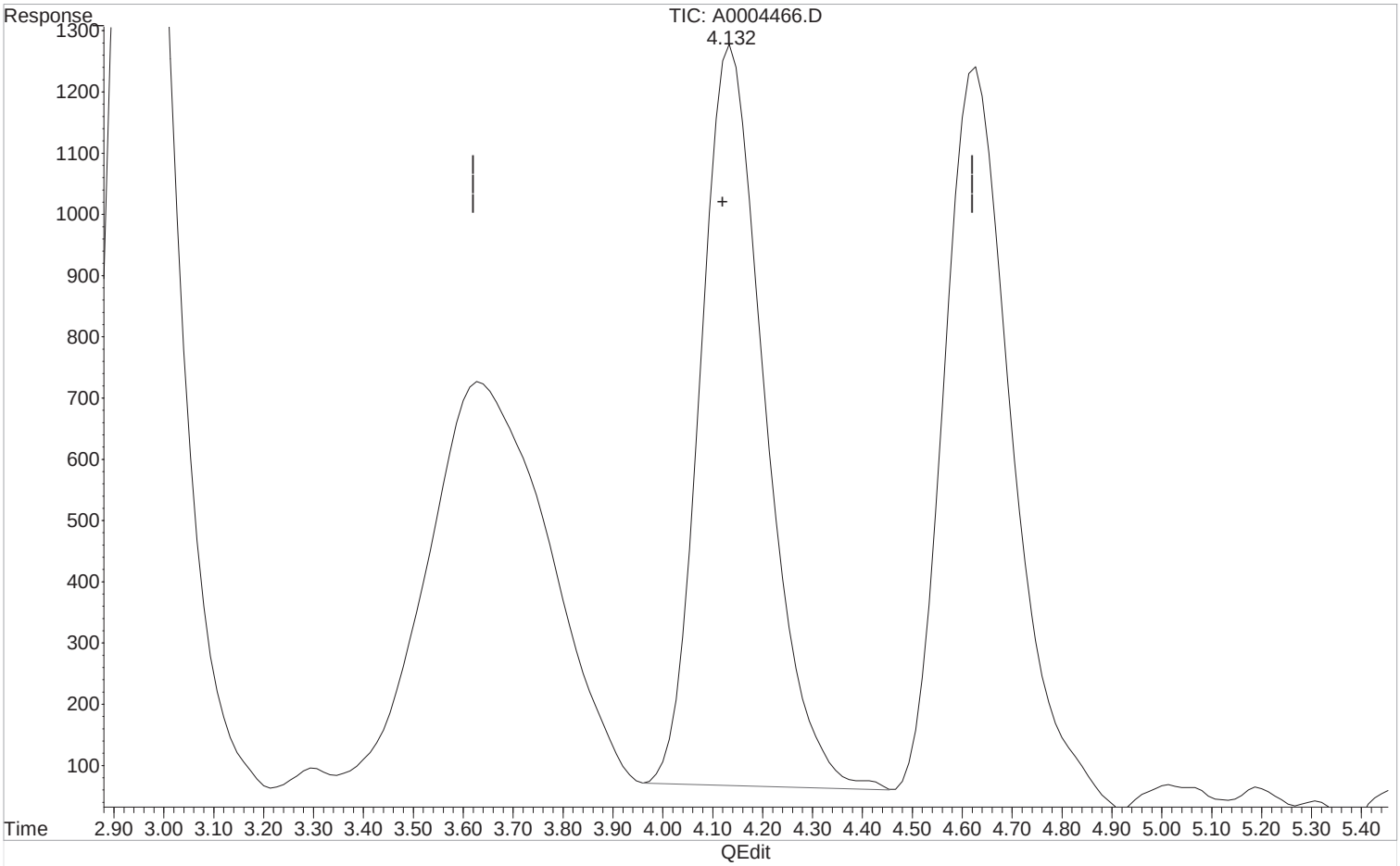
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.132min 1.974 ppm m

response 109344

Manual Integration:

After

Poor integration.

03/16/20

(T) = Expected Retention Time
MA031220.M Mon Mar 16 09:21:37 2020

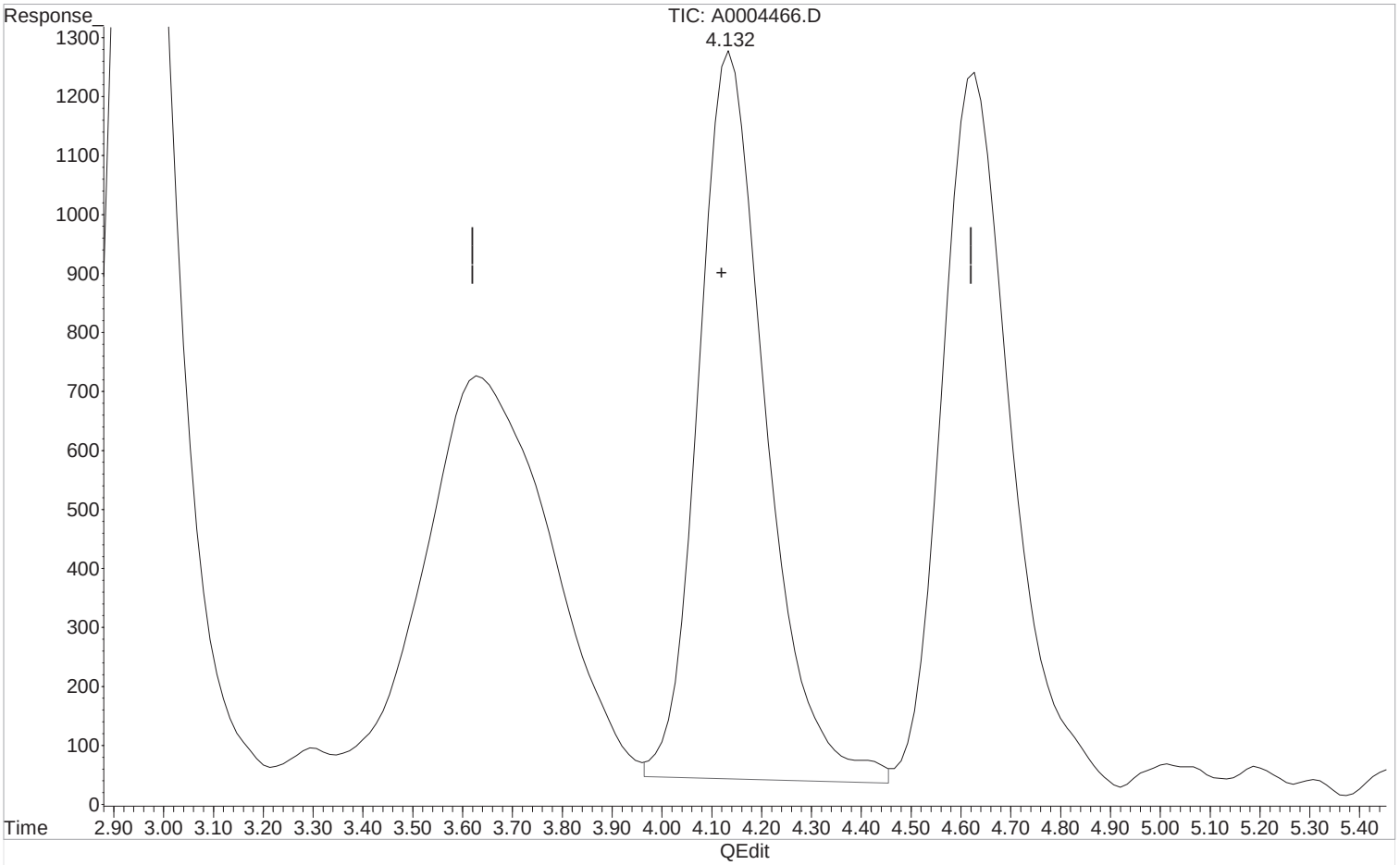
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.139min 2.102 ppm

response 116418

Manual Integration:

Before

03/16/20

(T) = Expected Retention Time
MA031220.M Mon Mar 16 09:21:26 2020

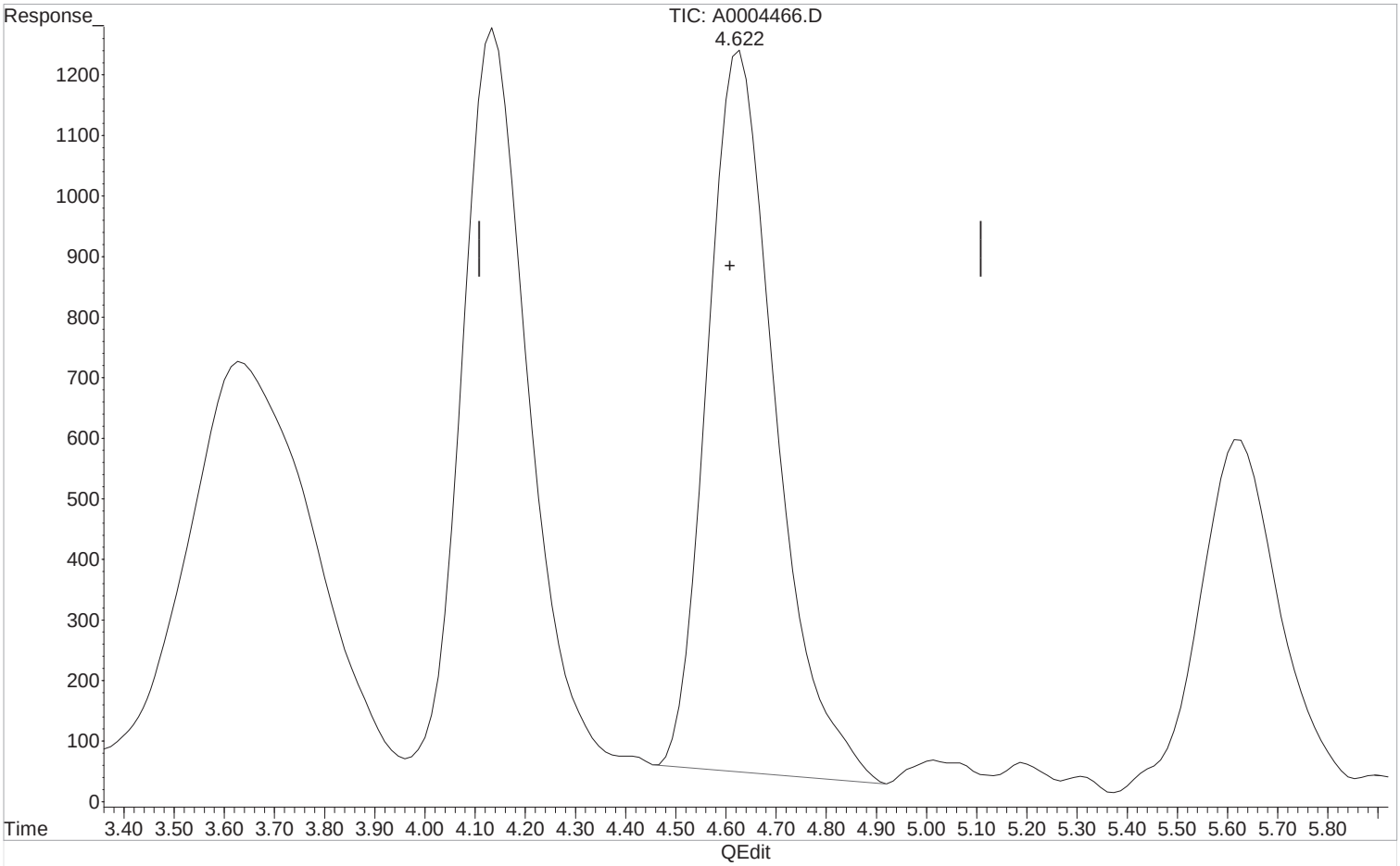
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.622min 2.028 ppm m

response 113173

Manual Integration:

After

Poor integration.

03/16/20

(4) - Expected Retention Time
MA031220.M Mon Mar 16 09:21:48 2020

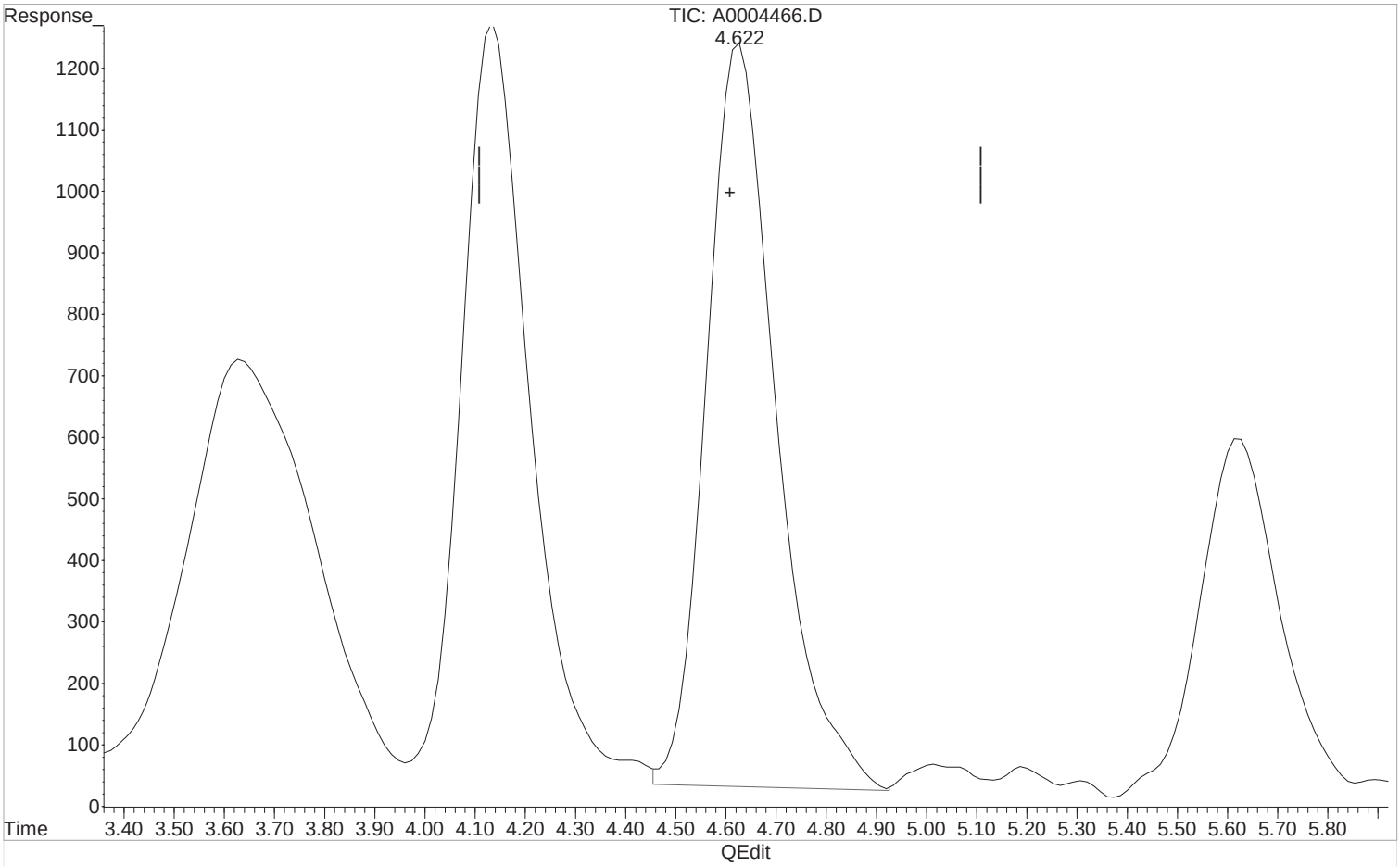
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.629min 2.100 ppm

response 117200

Manual Integration:

Before

03/16/20

(T) = Expected Retention Time
MA031220.M Mon Mar 16 09:21:40 2020

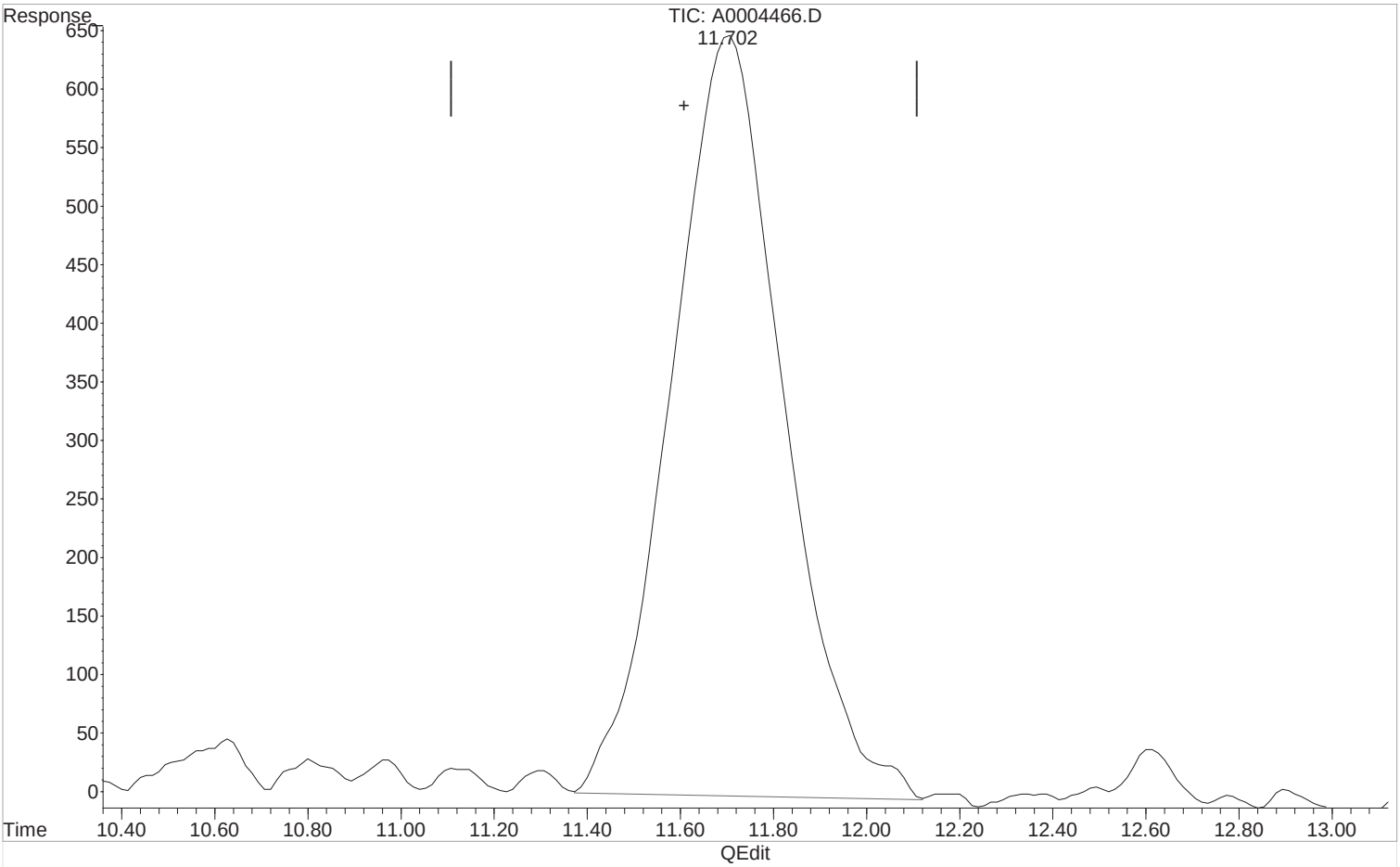
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

11.702min 1.979 ppm m

response 108705

Manual Integration:

After

Poor integration.

03/16/20

(5) - Expected Retention Time
MA031220.M Mon Mar 16 09:22:02 2020

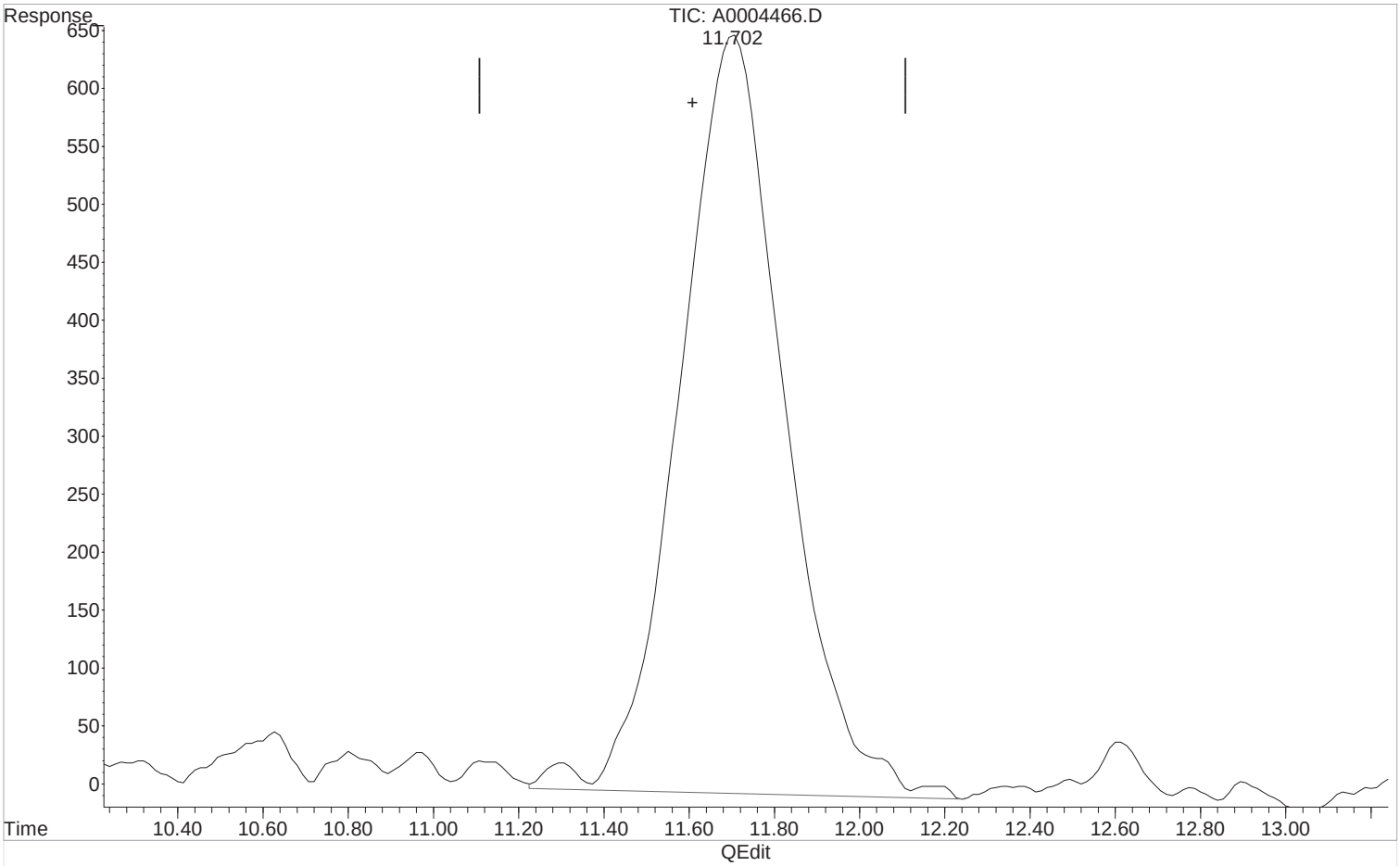
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

11.707min 2.047 ppm

response 112454

Manual Integration:

Before

03/16/20

(5) - Expected Retention Time
MA031220.M Mon Mar 16 09:21:52 2020

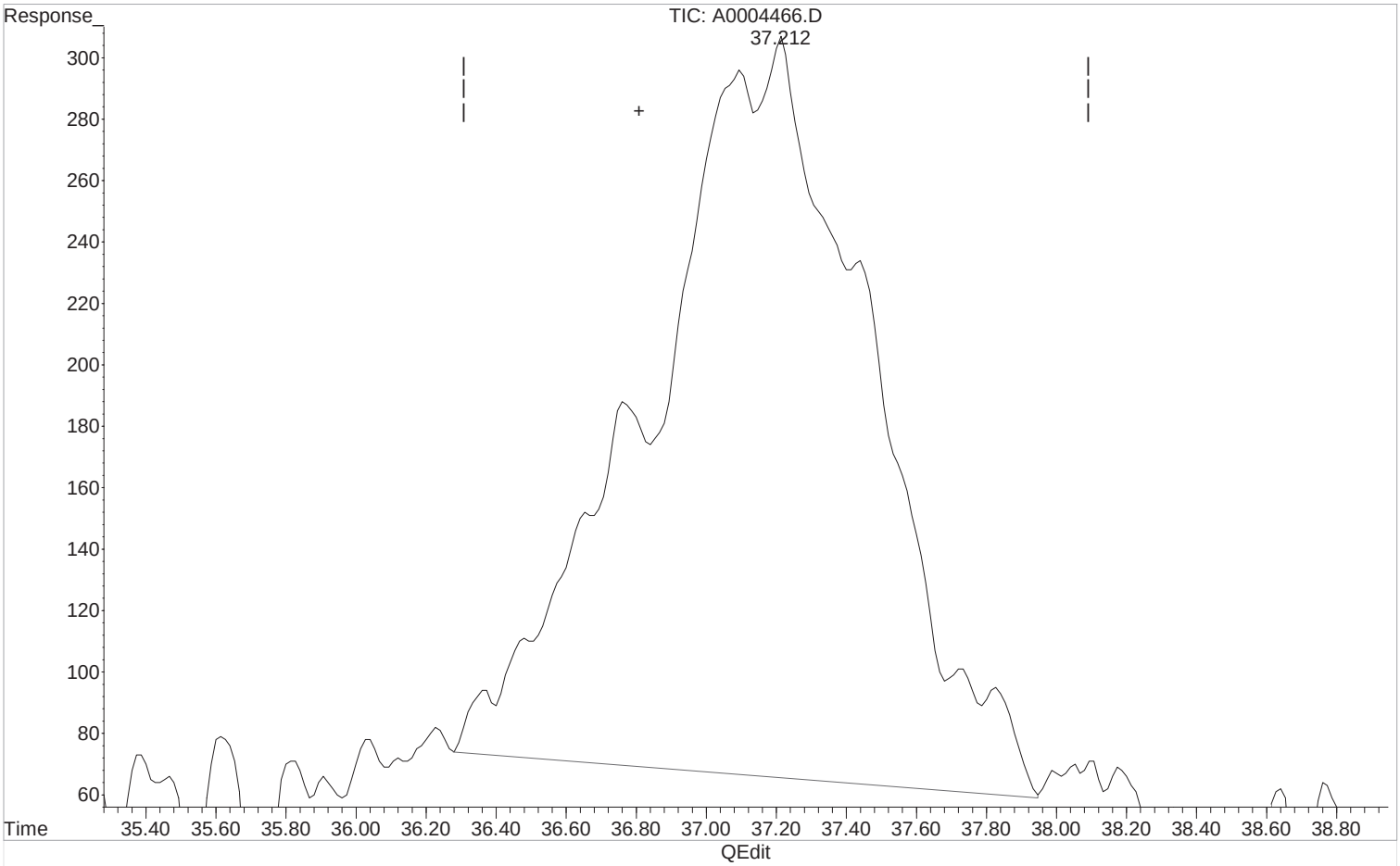
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

37.212min 2.029 ppm m

response 106761

Manual Integration:

After

Poor integration.

03/16/20

(6) - Expected Retention Time
MA031220.M Mon Mar 16 09:22:18 2020

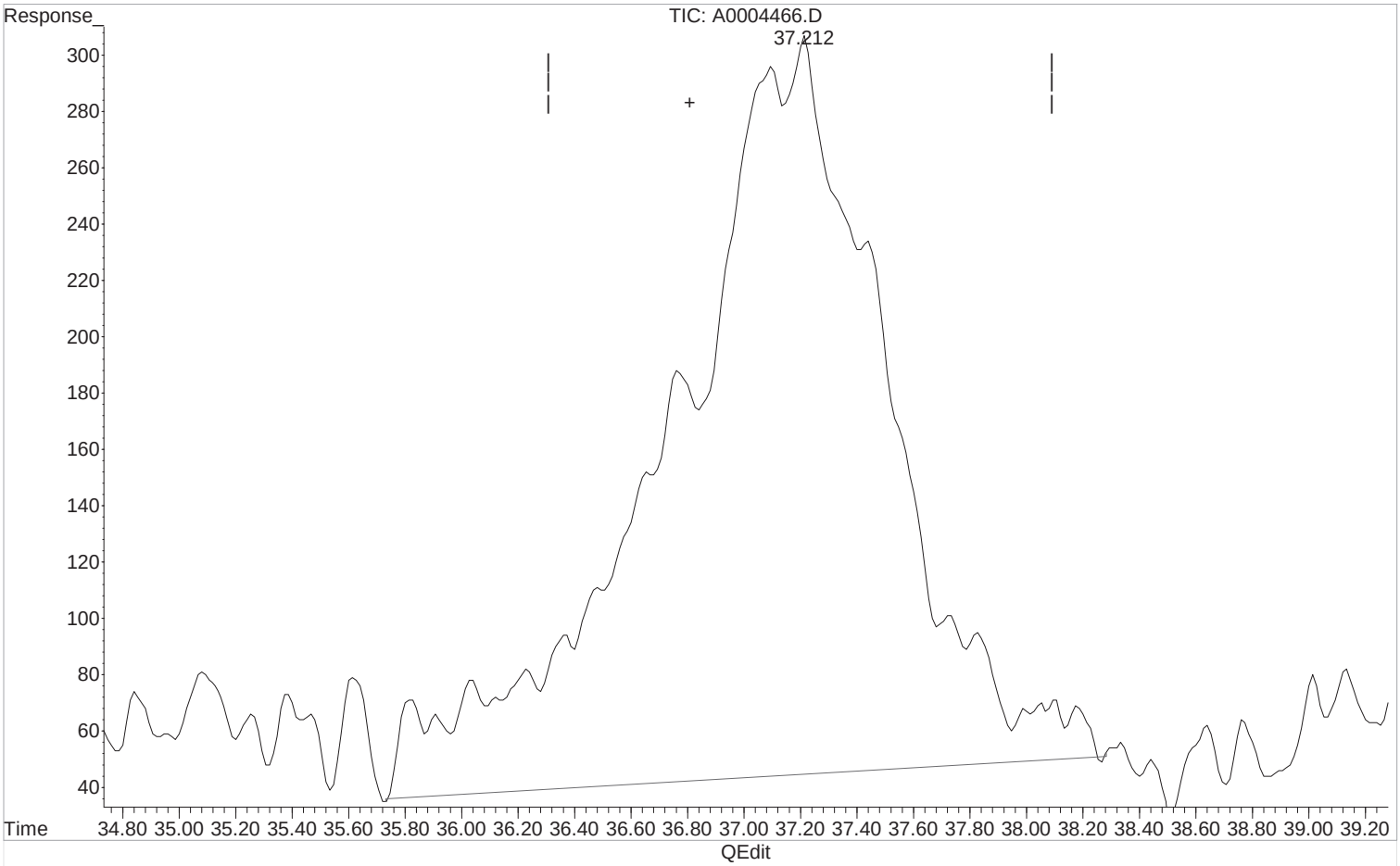
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

37.213min 2.698 ppm

response 141960

Manual Integration:

Before

03/16/20

(6) - Expected Retention Time
MA031220.M Mon Mar 16 09:22:06 2020

1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	2.948	184745	2.019	ppm	m
2) T	Pyruvic acid	3.629	113308	0.194	ppm	m
3) T	Lactic Acid	4.132	109344	1.974	ppm	m
4) T	Acetic Acid	4.622	113173	2.028	ppm	m
5) T	Propionic Acid	11.702	108705	1.979	ppm	m
6) T	Butyric Acid	37.212	106761	2.029	ppm	m

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

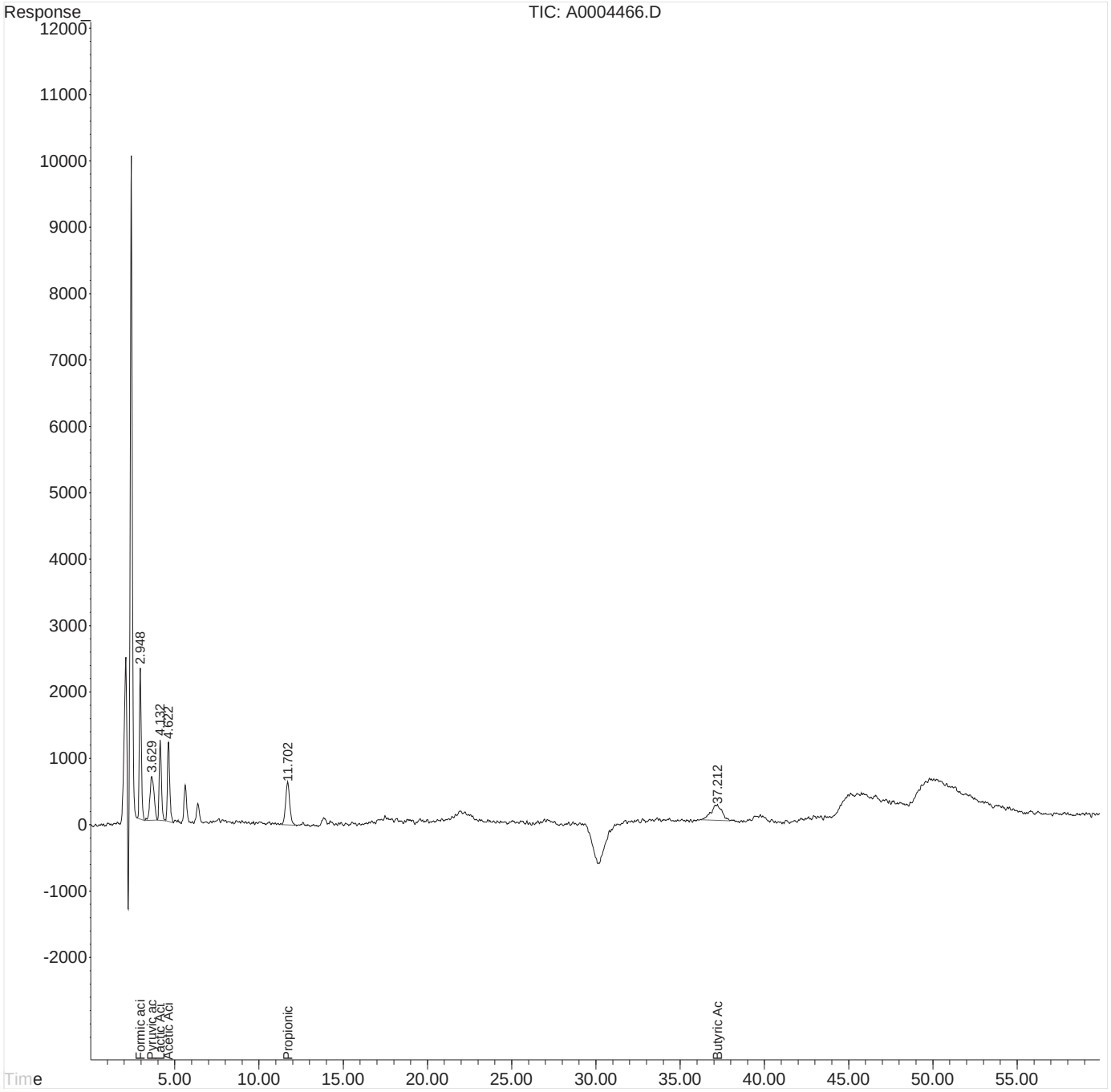
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



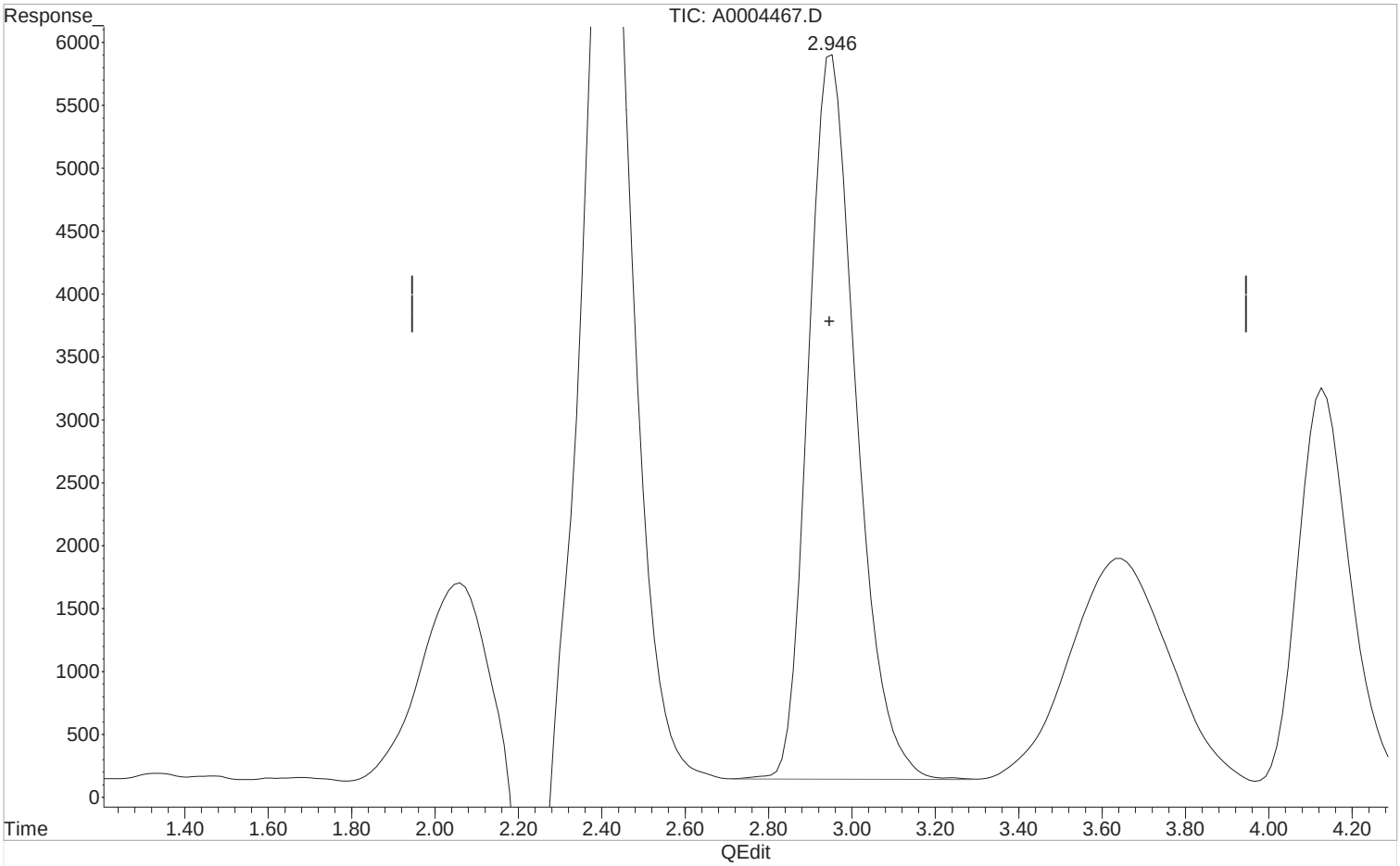
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.946min 5.032 ppm m

response 460497

Manual Integration:

After

Poor integration.

03/16/20

(t) - Expected Retention Time

MA031220.M Mon Mar 16 09:22:46 2020

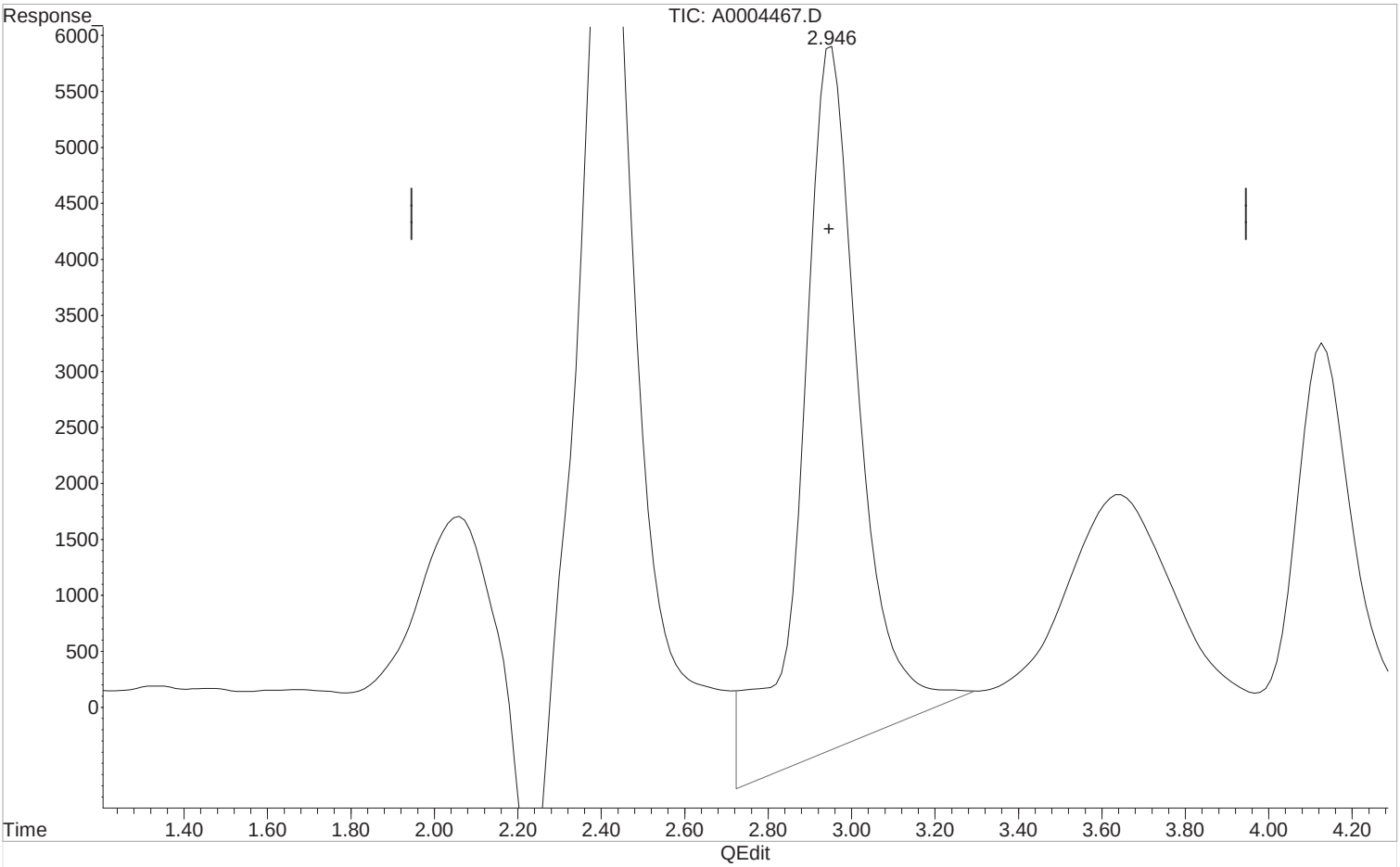
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.953min 6.666 ppm

response 609950

Manual Integration:

Before

03/16/20

(t) - Expected Retention Time
MA031220.M Mon Mar 16 09:22:36 2020

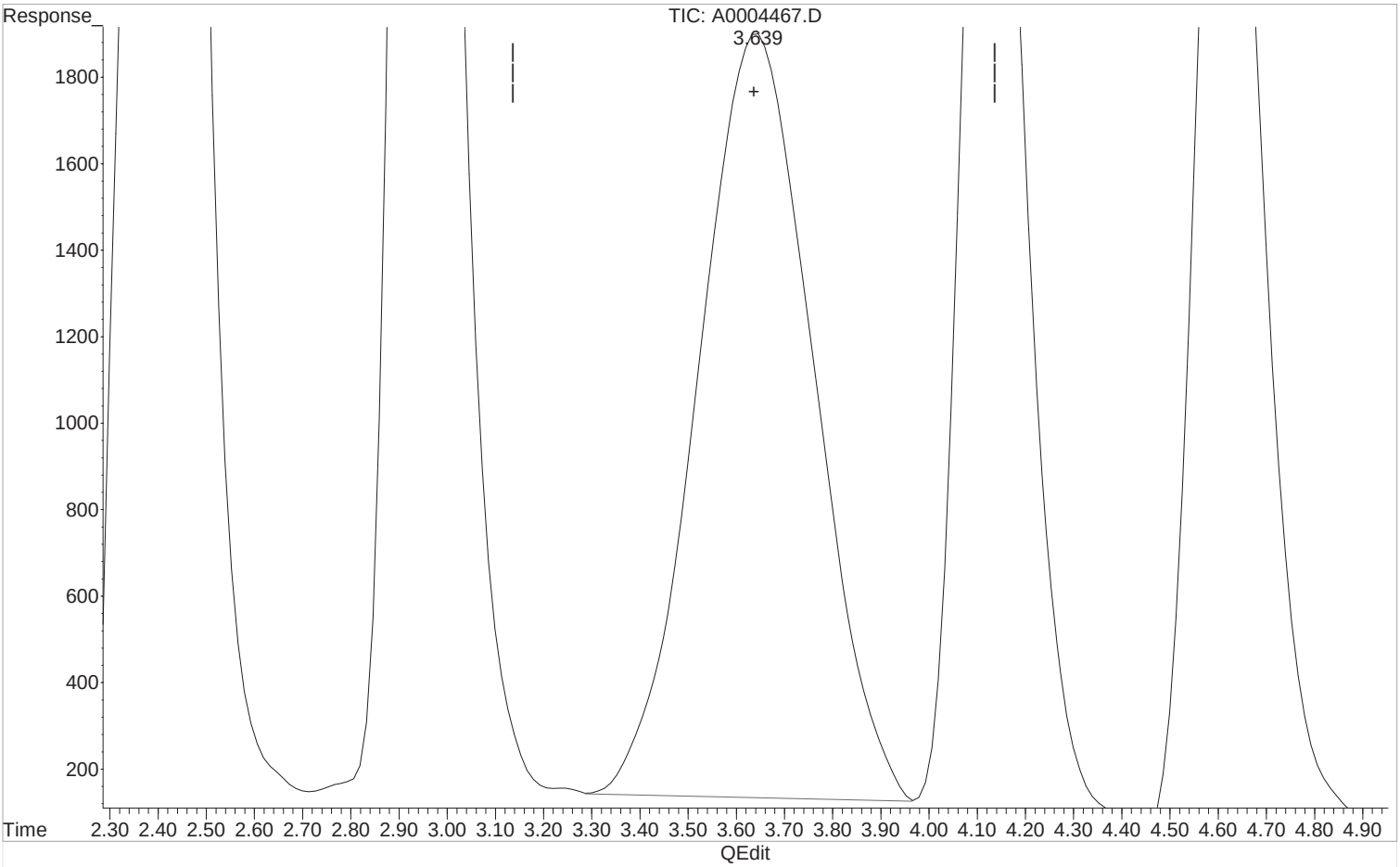
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.639min 0.503 ppm m

response 293242

Manual Integration:

After

Poor integration.

03/16/20

(T) = Expected Retention Time
MA031220.M Mon Mar 16 09:23:00 2020

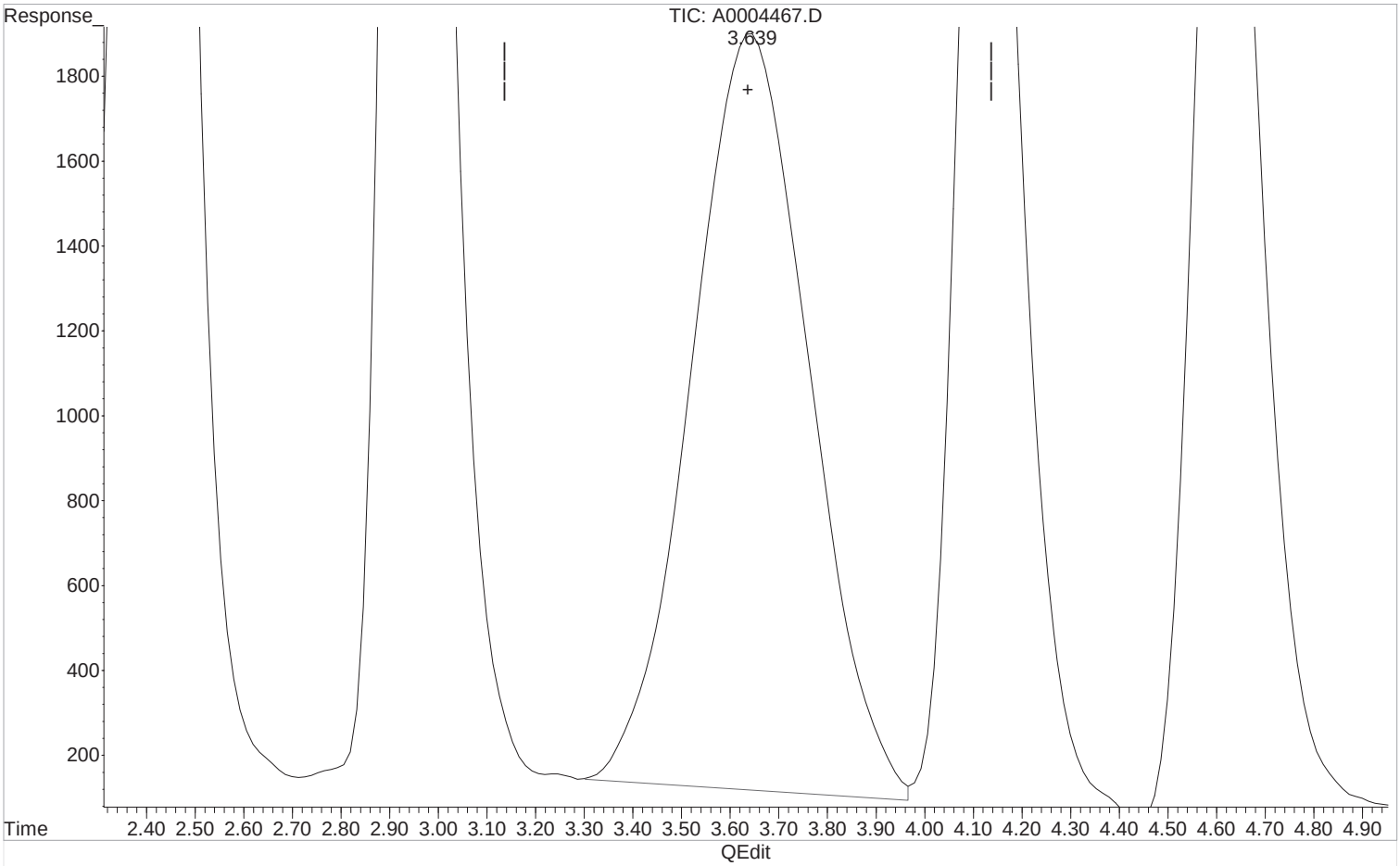
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.645min 0.513 ppm

response 299276

Manual Integration:

Before

03/16/20

(T) - Expected Retention Time
MA031220.M Mon Mar 16 09:22:50 2020

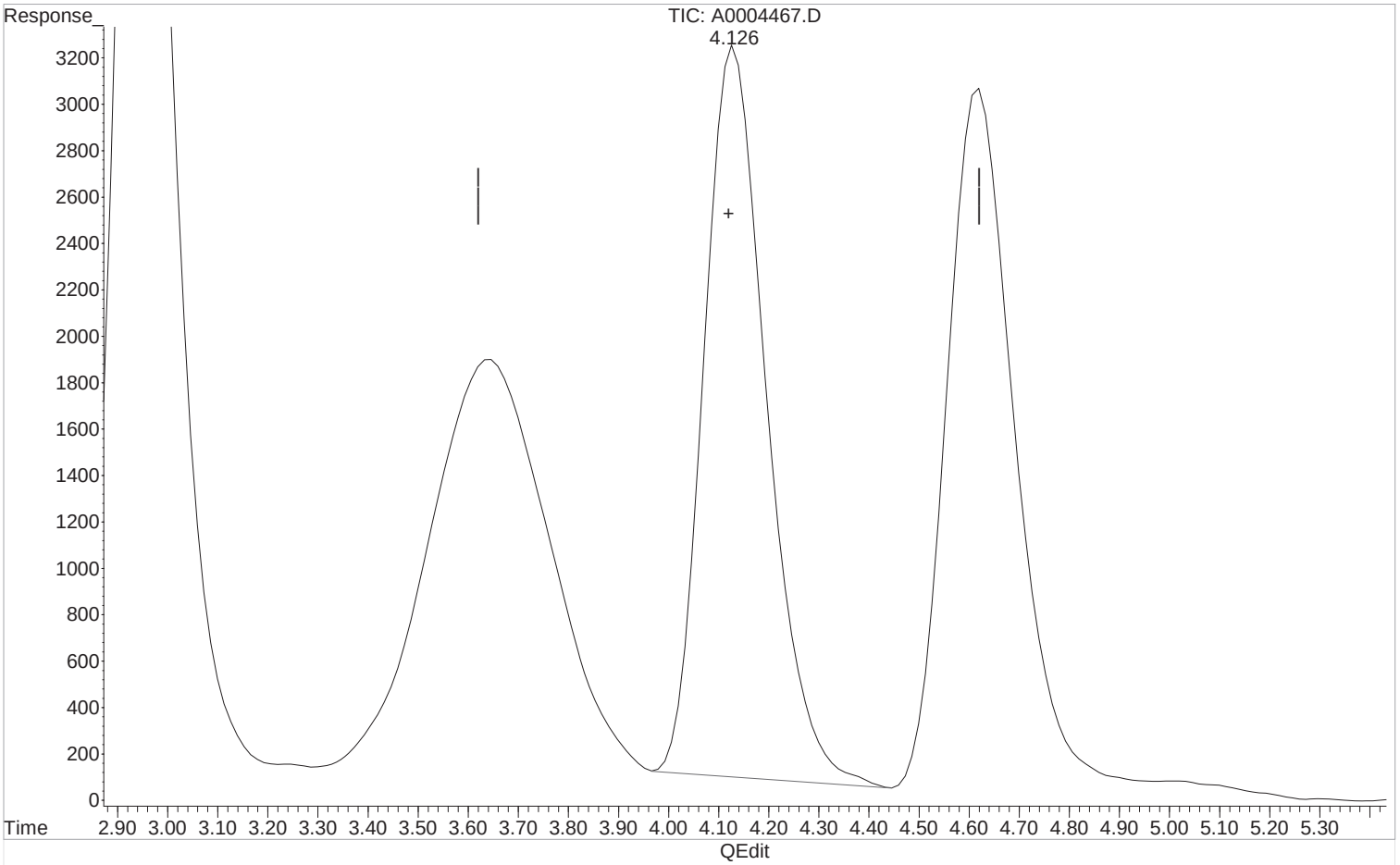
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.126min 4.978 ppm m

response 275770

Manual Integration:

After

Poor integration.

03/16/20

(T) = Expected Retention Time
MA031220.M Mon Mar 16 09:23:13 2020

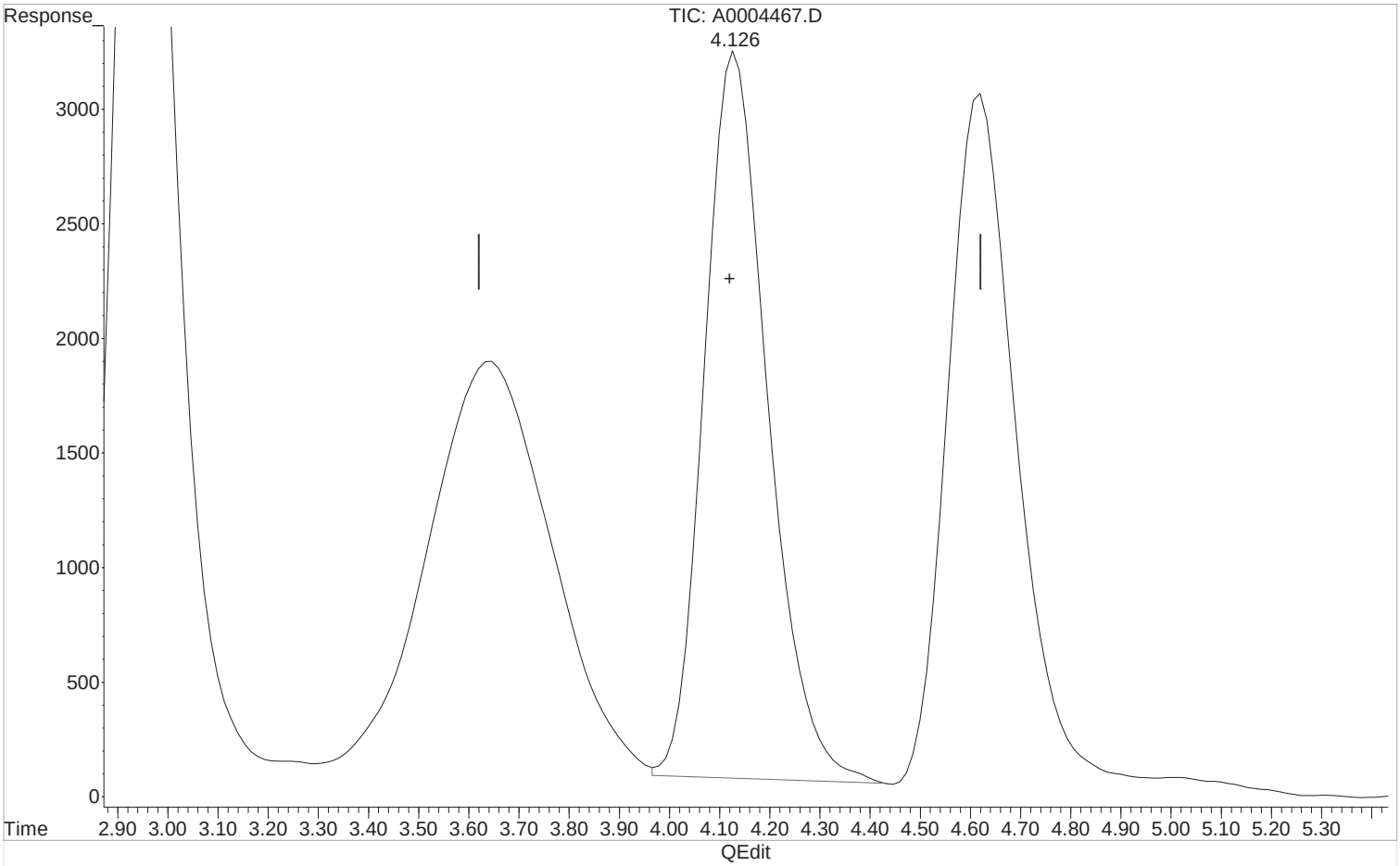
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.132min 5.051 ppm

response 279806

Manual Integration:

Before

03/16/20

(T) = Expected Retention Time
MA031220.M Mon Mar 16 09:23:03 2020

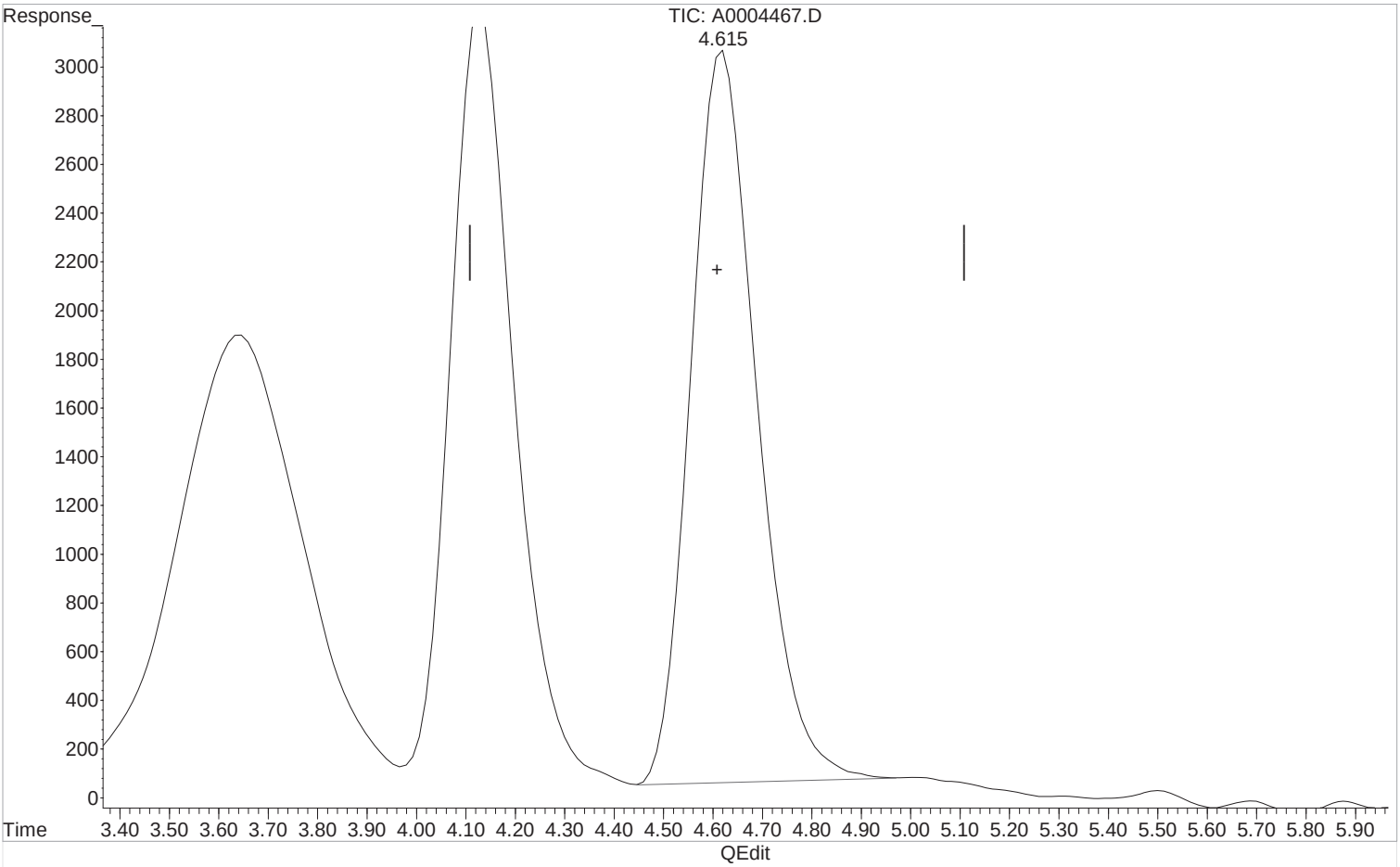
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.615min 5.028 ppm m

response 280536

Manual Integration:

After

Poor integration.

03/16/20

(T) = Expected Retention Time
MA031220.M Mon Mar 16 09:23:24 2020

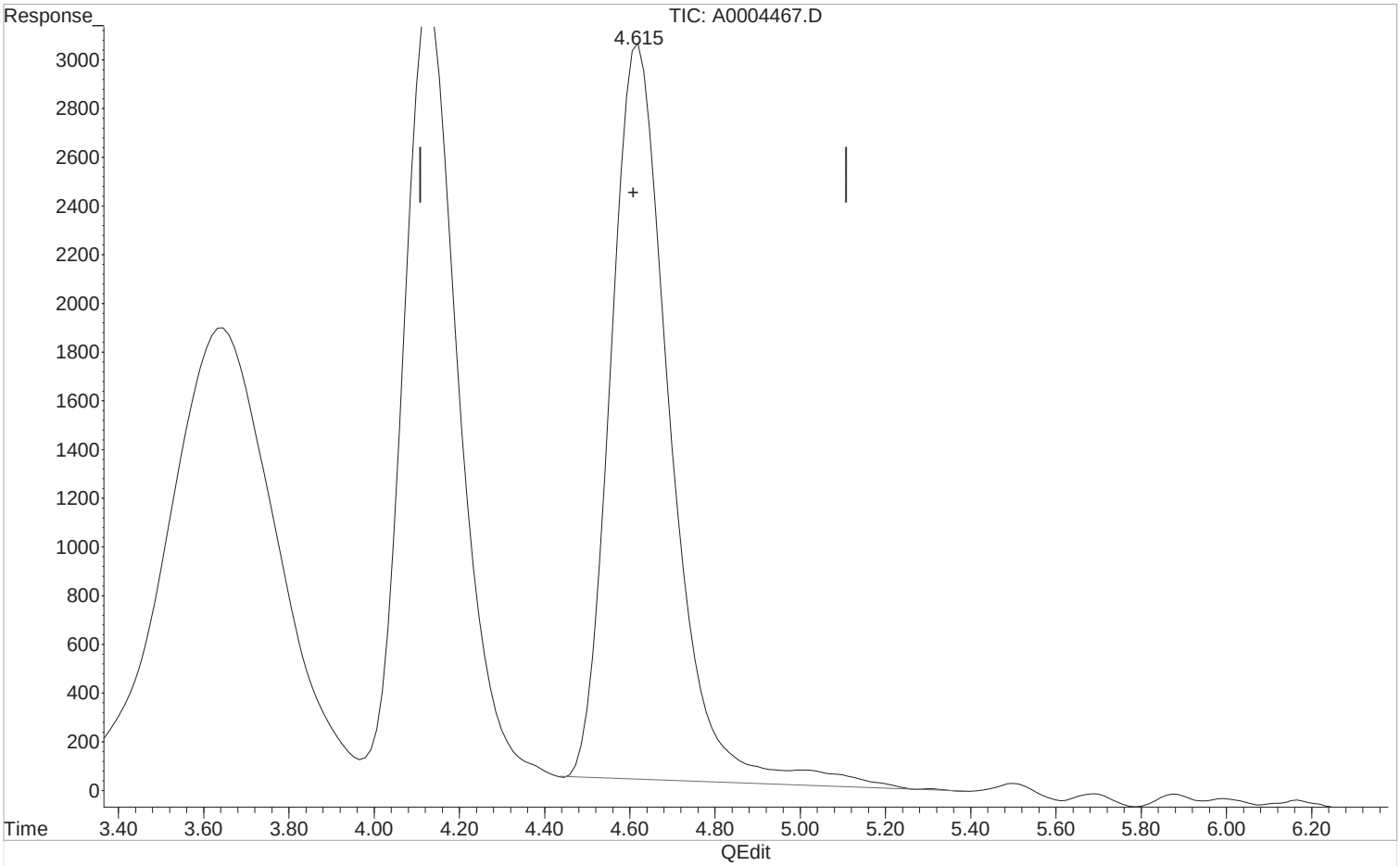
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.622min 5.292 ppm

response 295308

Manual Integration:

Before

03/16/20

(T) = Expected Retention Time
MA031220.M Mon Mar 16 09:23:16 2020

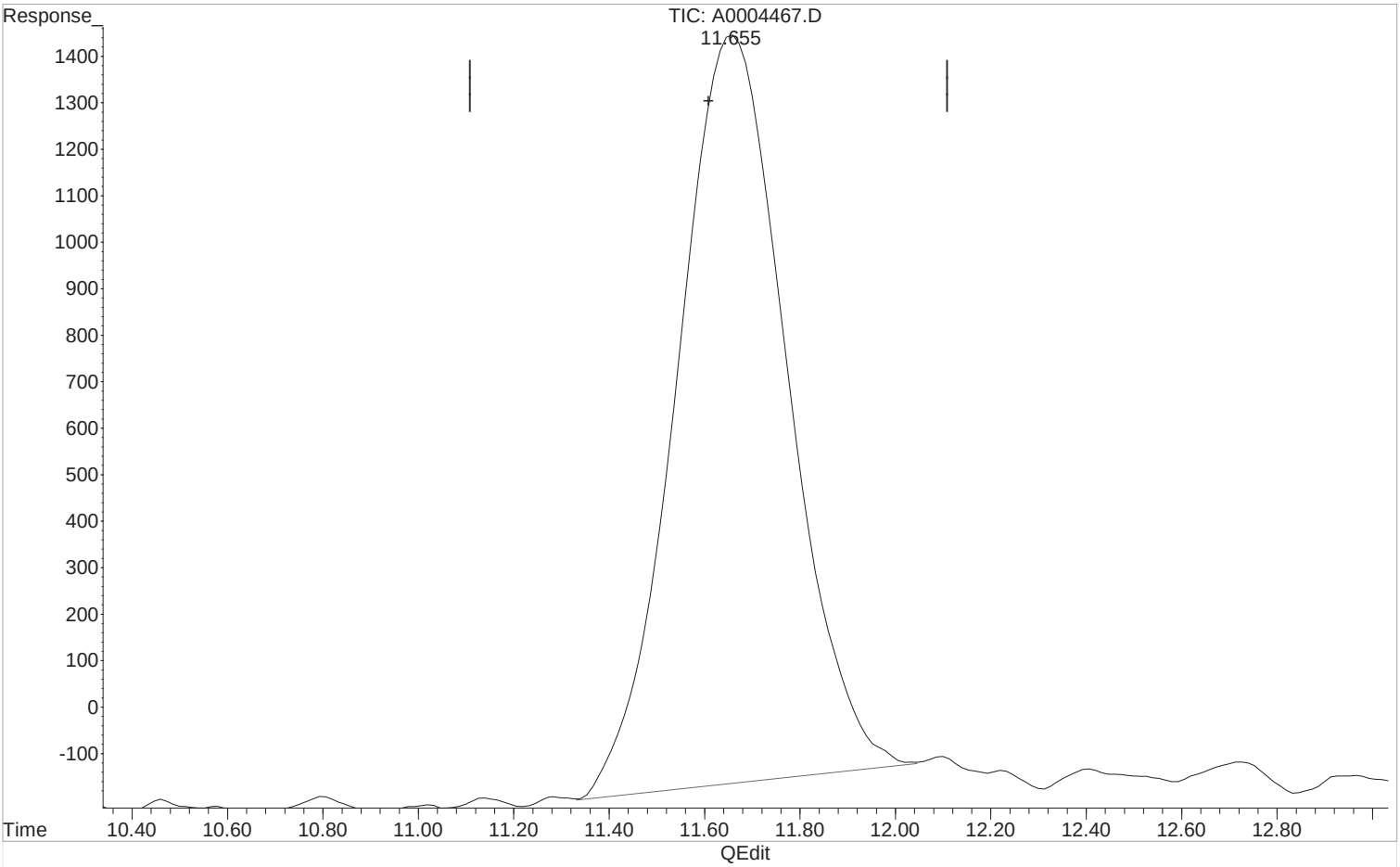
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

11.655min 4.717 ppm m

response 259122

Manual Integration:

After

Poor integration.

03/16/20

(T) = Expected Retention Time
MA031220.M Mon Mar 16 09:23:37 2020

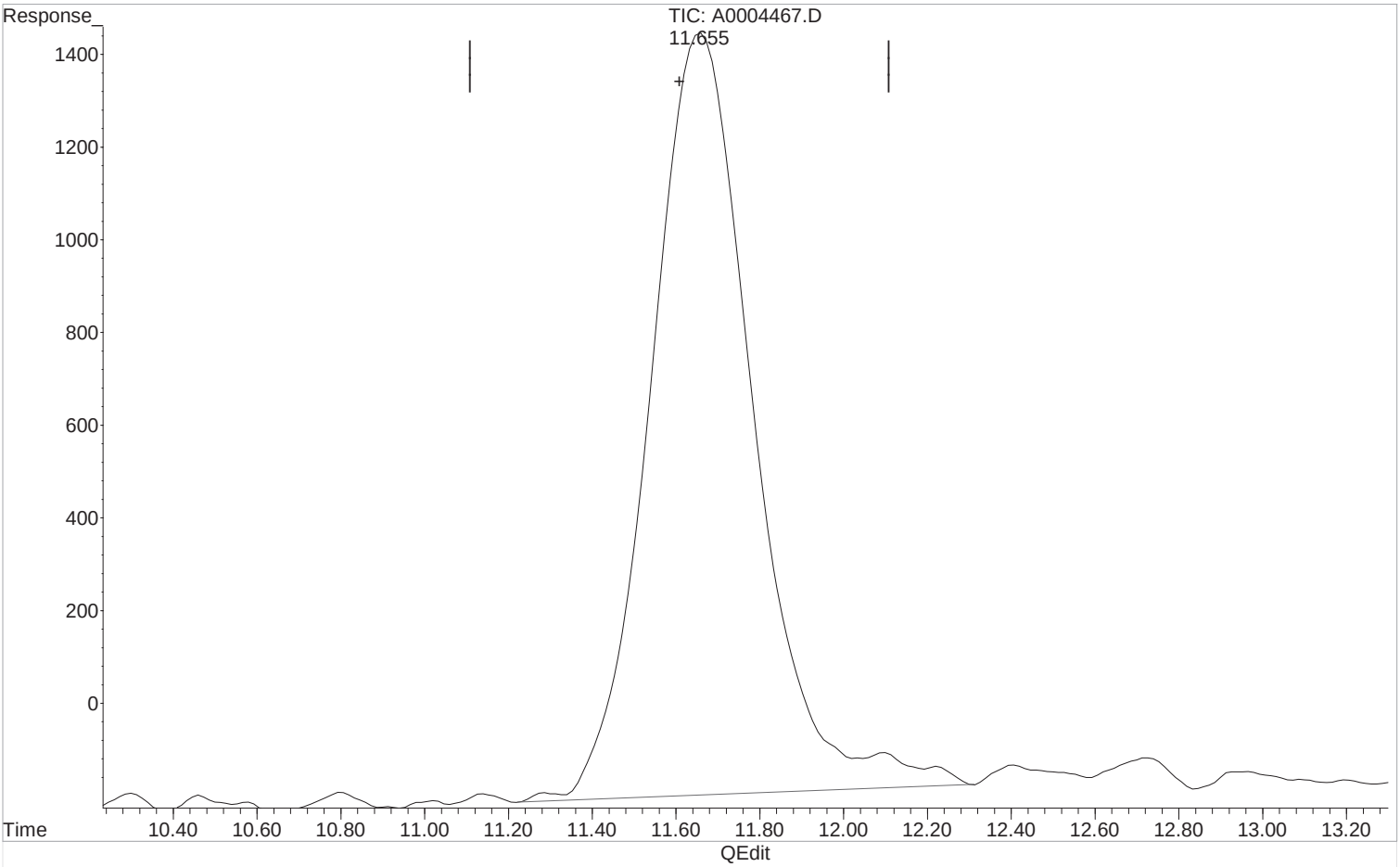
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

11.661min 5.138 ppm

response 282253

Manual Integration:

Before

03/16/20

(5) - Expected Retention Time
MA031220.M Mon Mar 16 09:23:28 2020

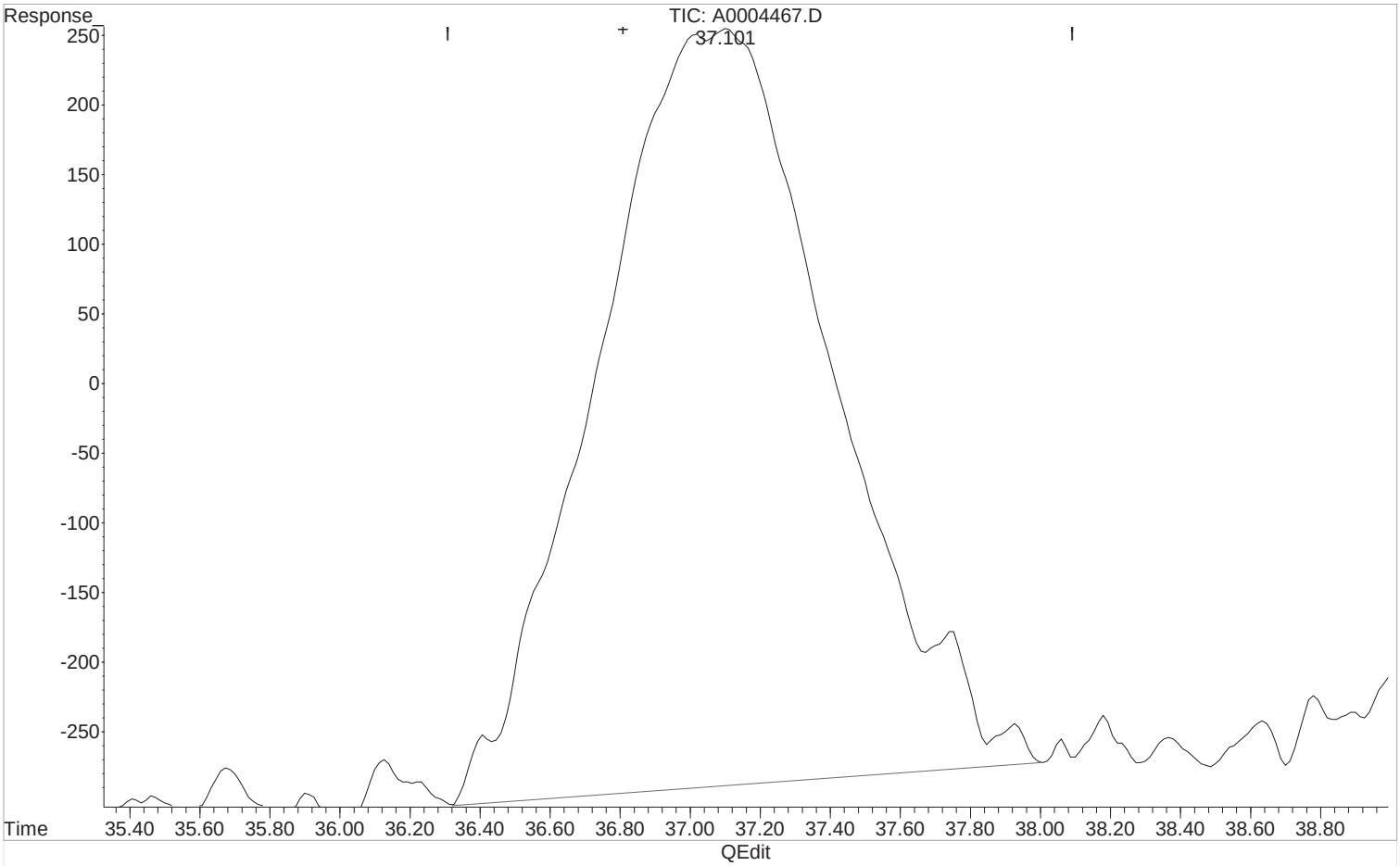
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

37.101min 4.834 ppm m

response 254345

Manual Integration:

After

Poor integration.

03/16/20

(T) = Expected Retention Time
MA031220.M Mon Mar 16 09:23:53 2020

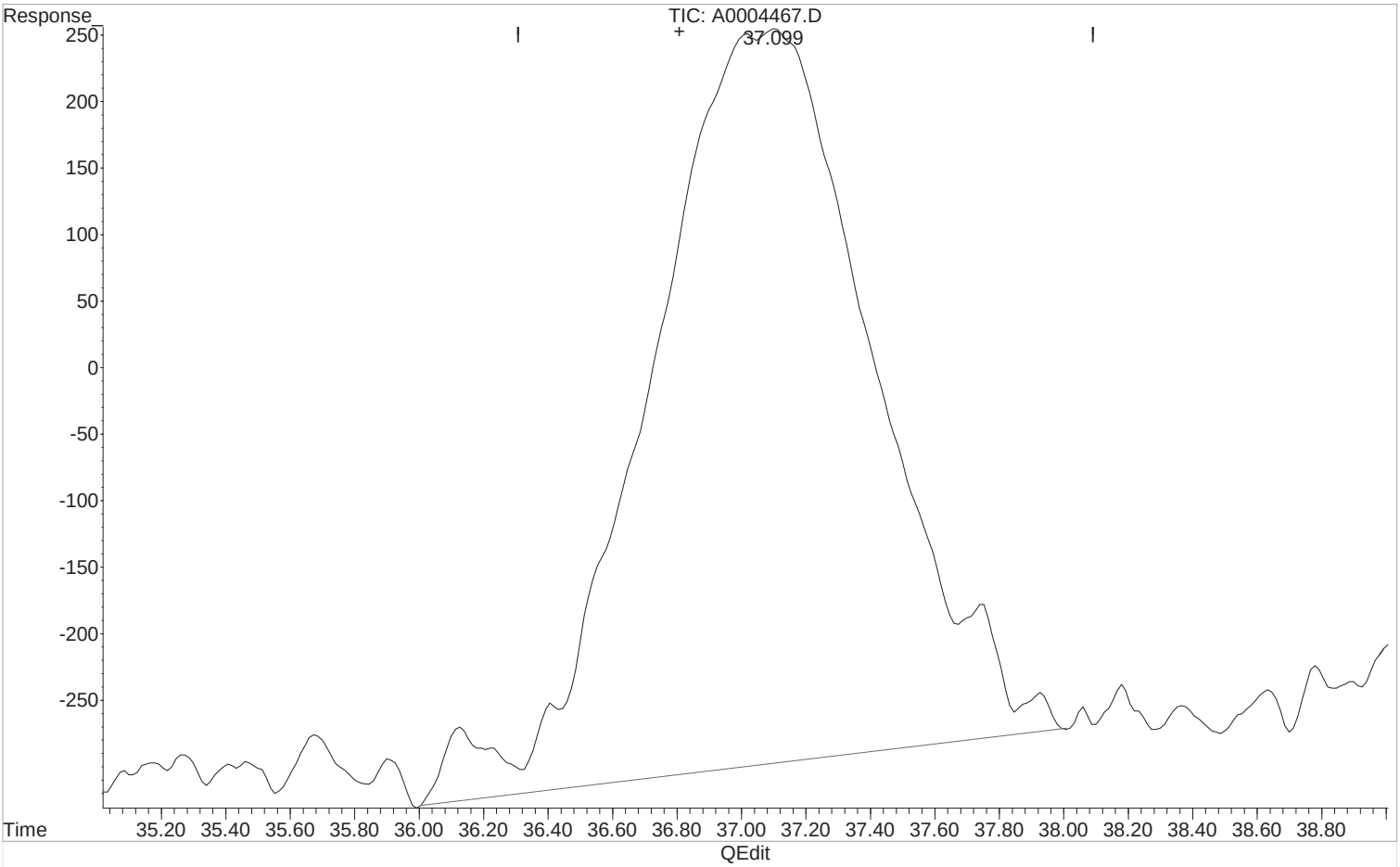
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

37.103min 5.106 ppm

response 268658

Manual Integration:

Before

03/16/20

(6) - Expected Retention Time
MA031220.M Mon Mar 16 09:23:41 2020

1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : ~~30-Dec-2000, 02:48:14~~ 12-Mar-2020, 14:42
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	2.946	460497	5.032	ppm	m
2) T	Pyruvic acid	3.639	293242	0.503	ppm	m
3) T	Lactic Acid	4.126	275770	4.978	ppm	m
4) T	Acetic Acid	4.615	280536	5.028	ppm	m
5) T	Propionic Acid	11.655	259122	4.717	ppm	m
6) T	Butyric Acid	37.101	254345	4.834	ppm	m

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

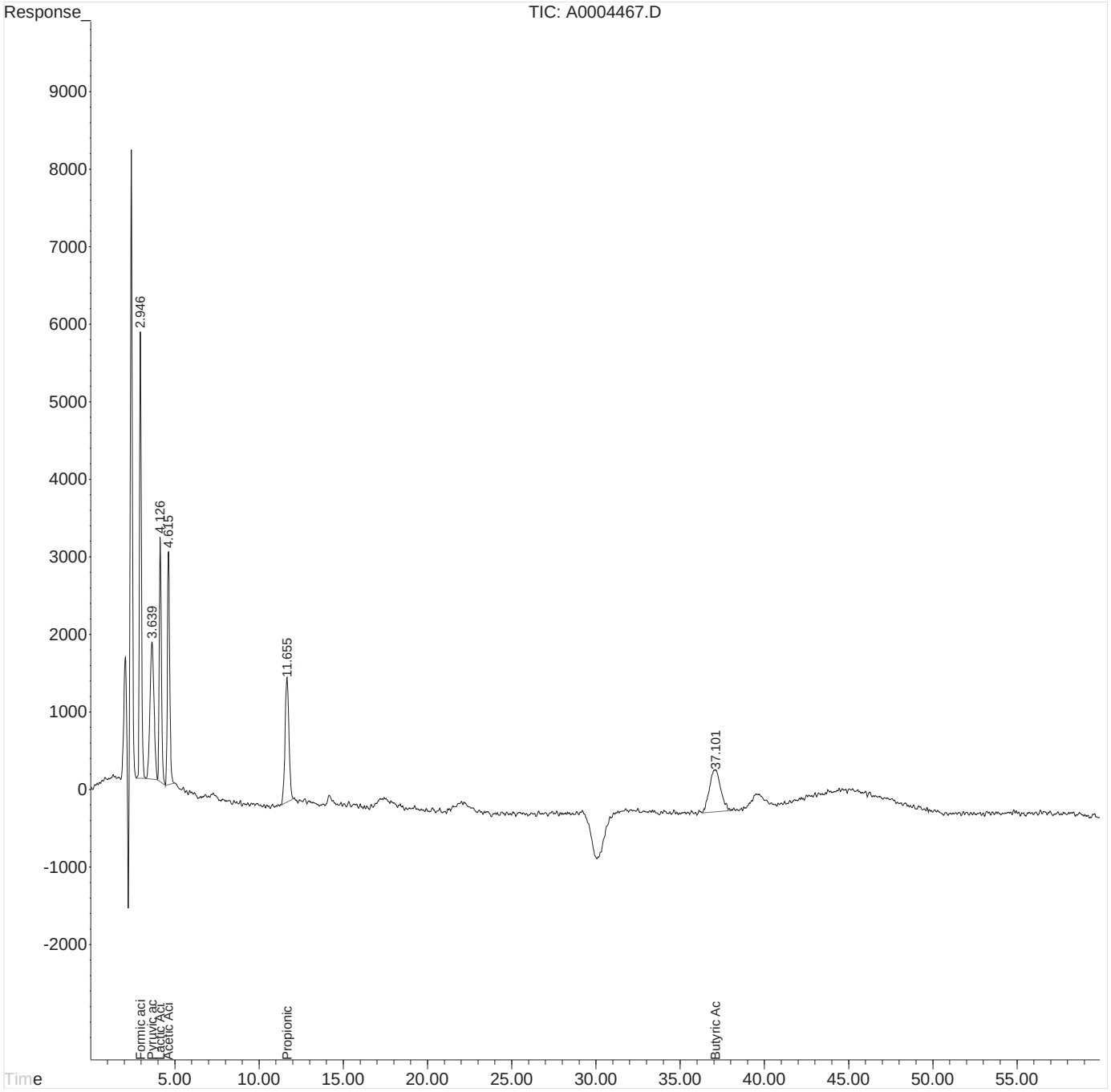
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



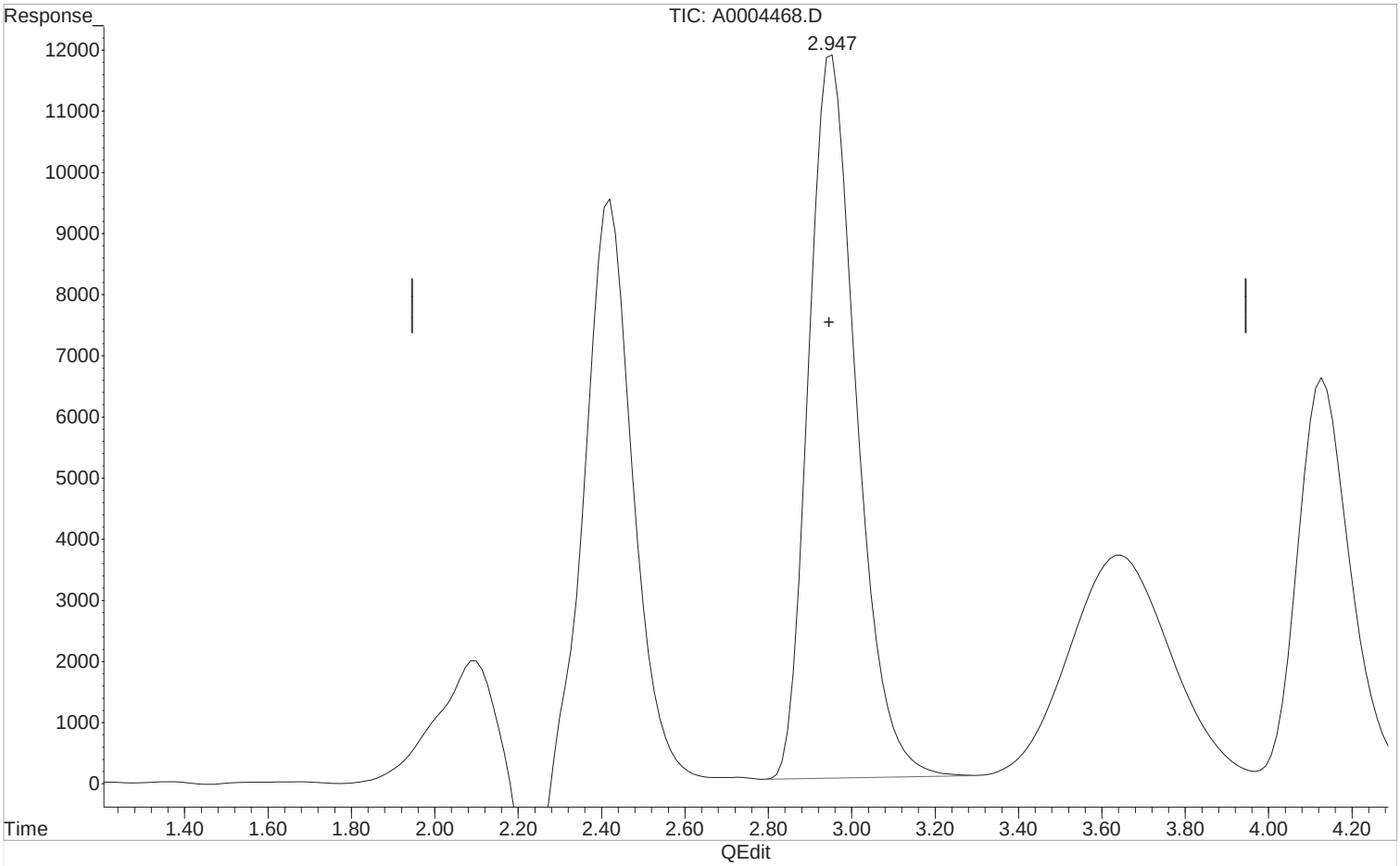
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004468.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 15:48:46
Operator : A.Felser
Sample : STD 4
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:22 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.947min 10.368 ppm m

response 948710

Manual Integration:

After

Poor integration.

03/16/20

(1) - Expected Retention Time

MA031220.M Mon Mar 16 09:24:19 2020

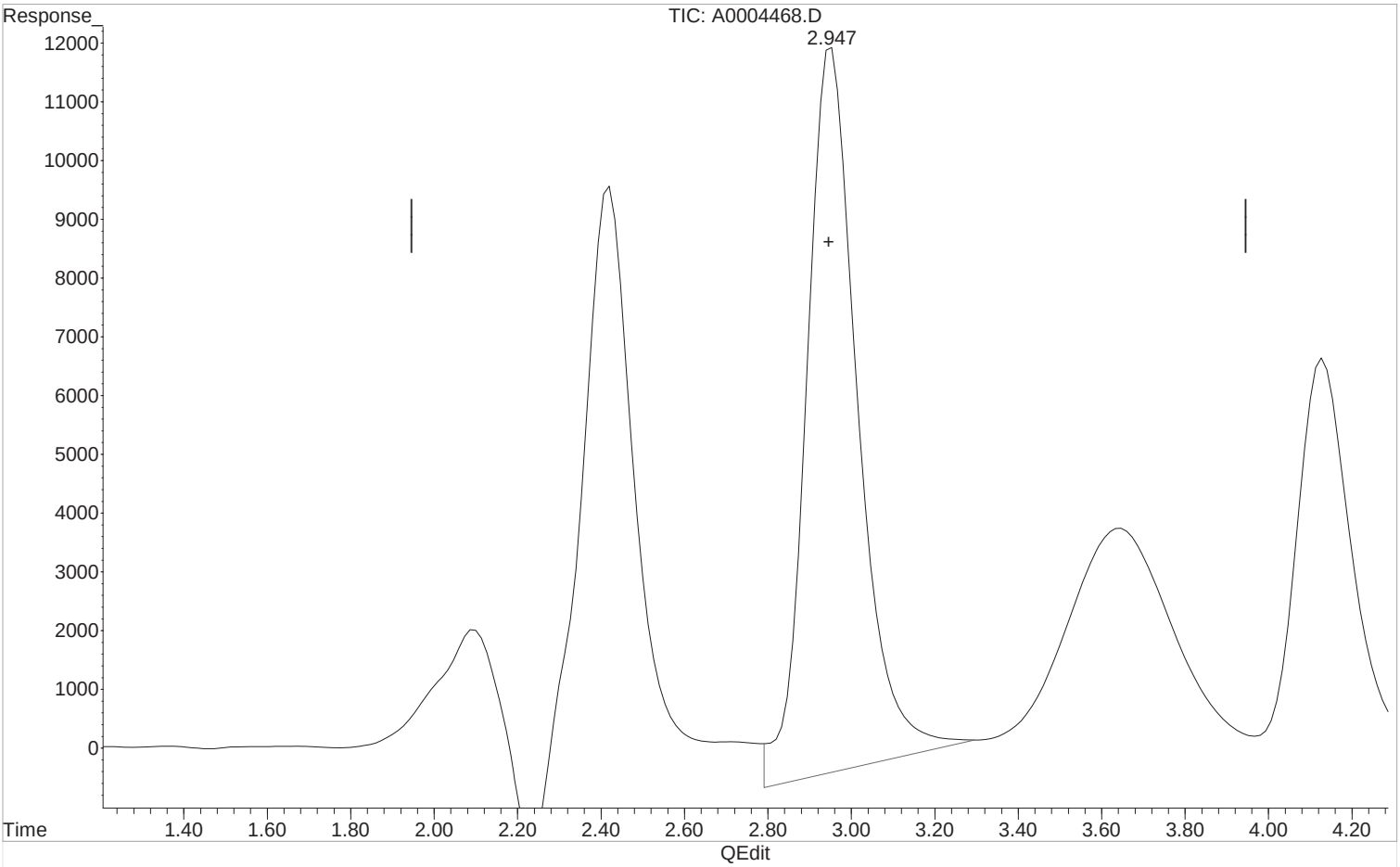
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004468.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 15:48:46
Operator : A.Felser
Sample : STD 4
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:22 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.954min 11.593 ppm

response 1060848

Manual Integration:

Before

03/16/20

(T) = Expected Retention Time
MA031220.M Mon Mar 16 09:24:12 2020

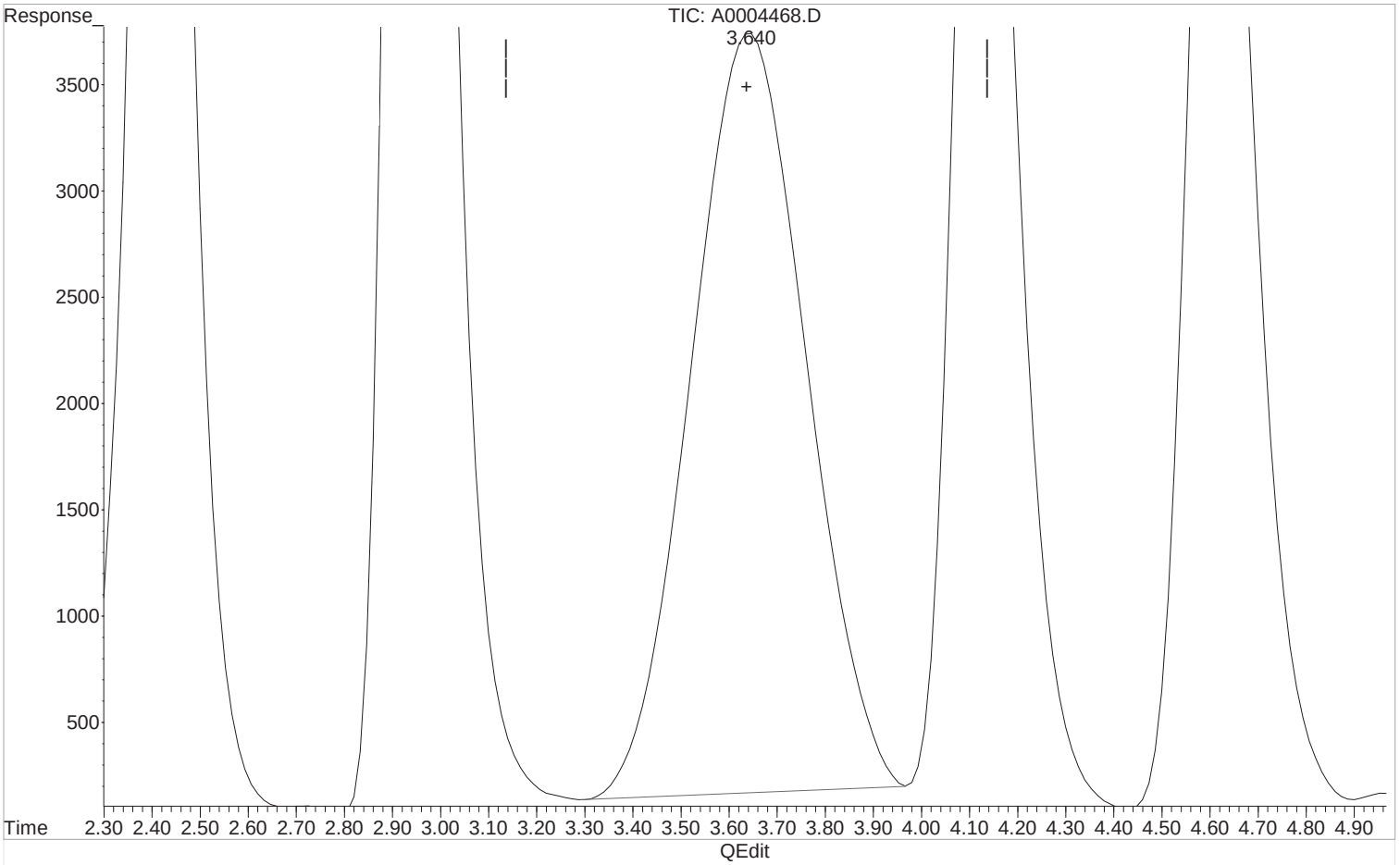
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004468.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 15:48:46
Operator : A.Felser
Sample : STD 4
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:22 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.640min 1.020 ppm m

response 594304

Manual Integration:

After

Poor integration.

03/16/20

(T) - Expected Retention Time
MA031220.M Mon Mar 16 09:24:37 2020

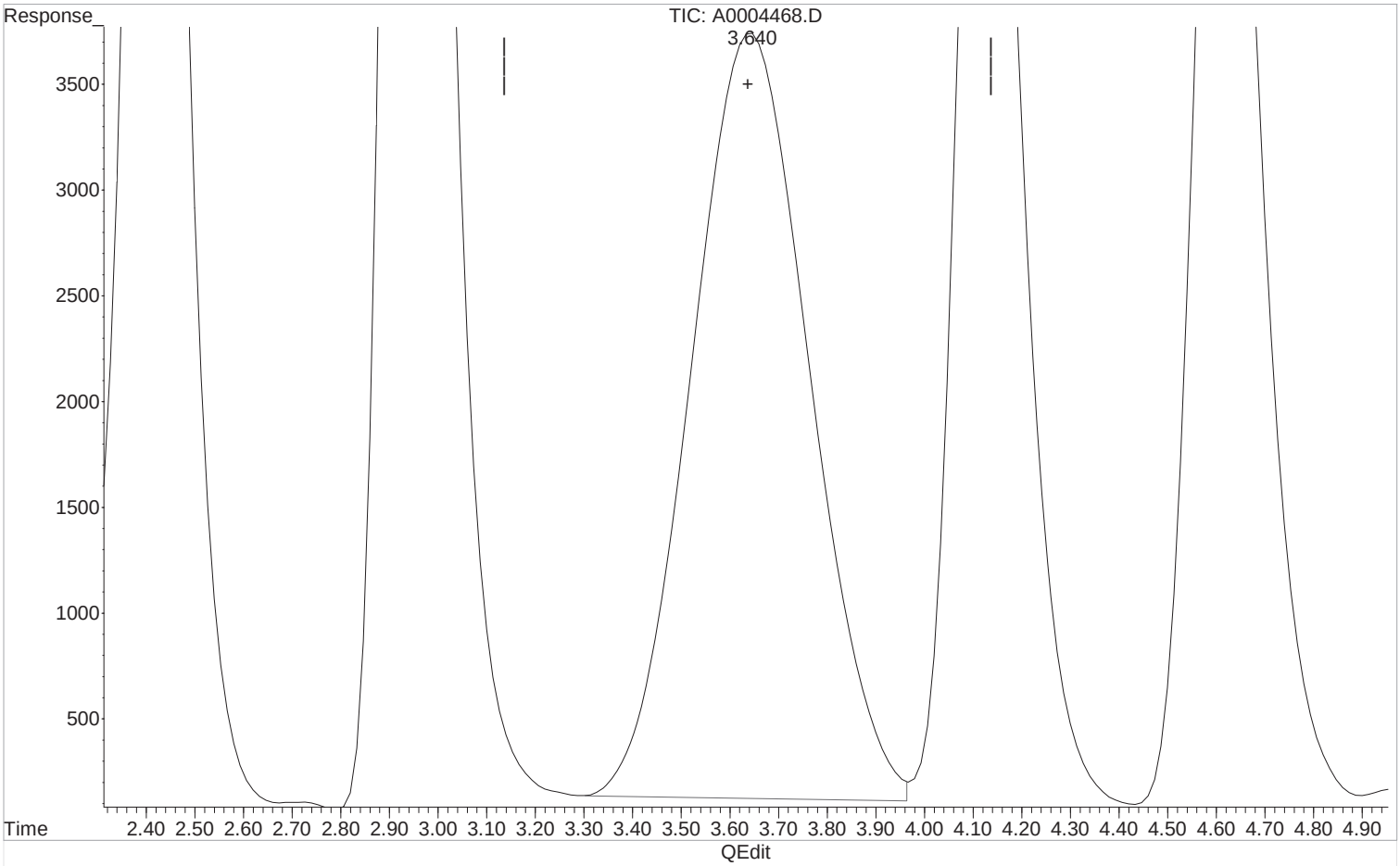
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004468.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 15:48:46
Operator : A.Felser
Sample : STD 4
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:22 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.646min 1.048 ppm

response 611122

Manual Integration:

Before

03/16/20

(T) - Expected Retention Time
MA031220.M Mon Mar 16 09:24:22 2020

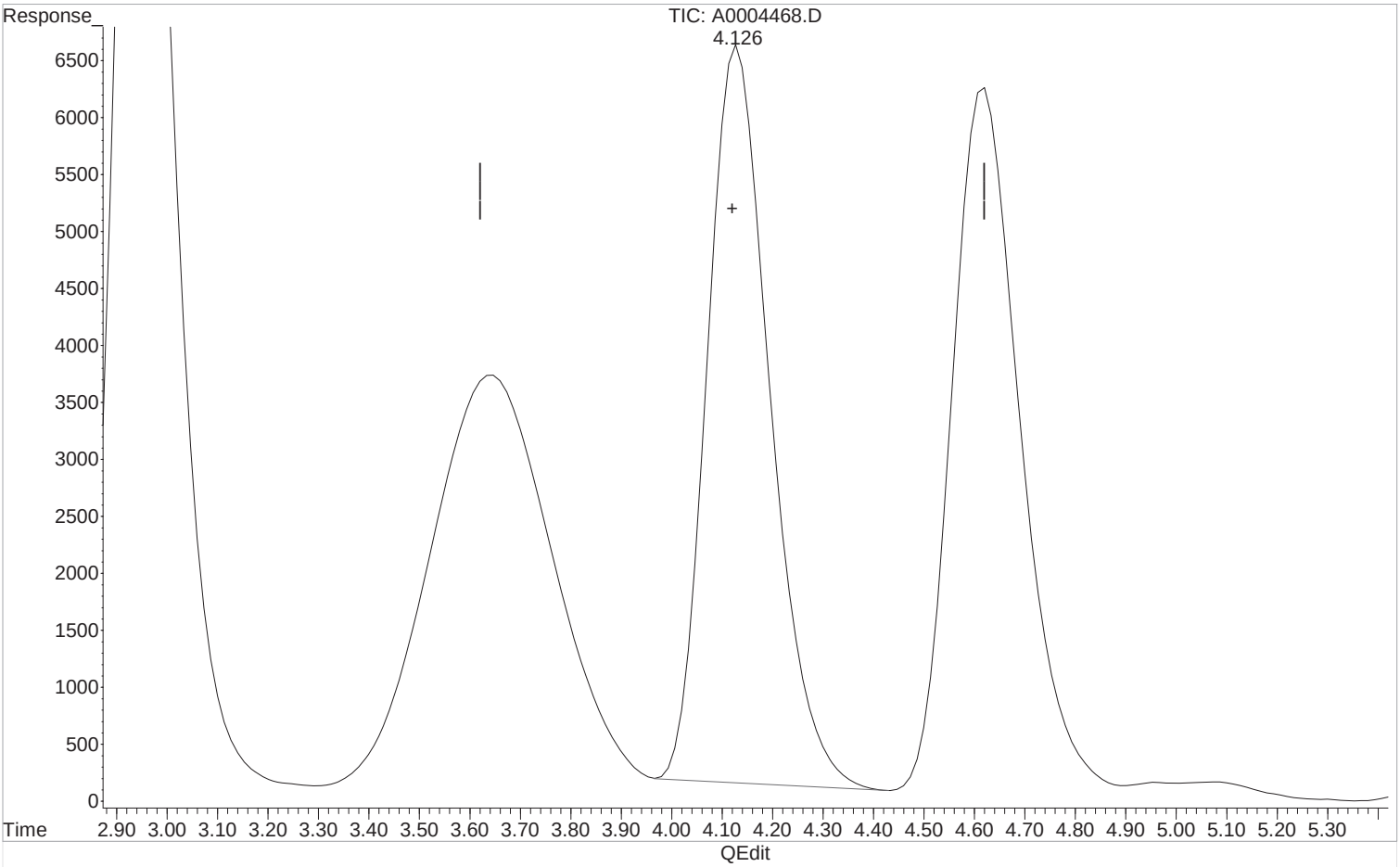
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004468.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 15:48:46
Operator : A.Felser
Sample : STD 4
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:22 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.126min 10.183 ppm m

response 564128

Manual Integration:

After

Poor integration.

03/16/20

(T) = Expected Retention Time
MA031220.M Mon Mar 16 09:24:48 2020

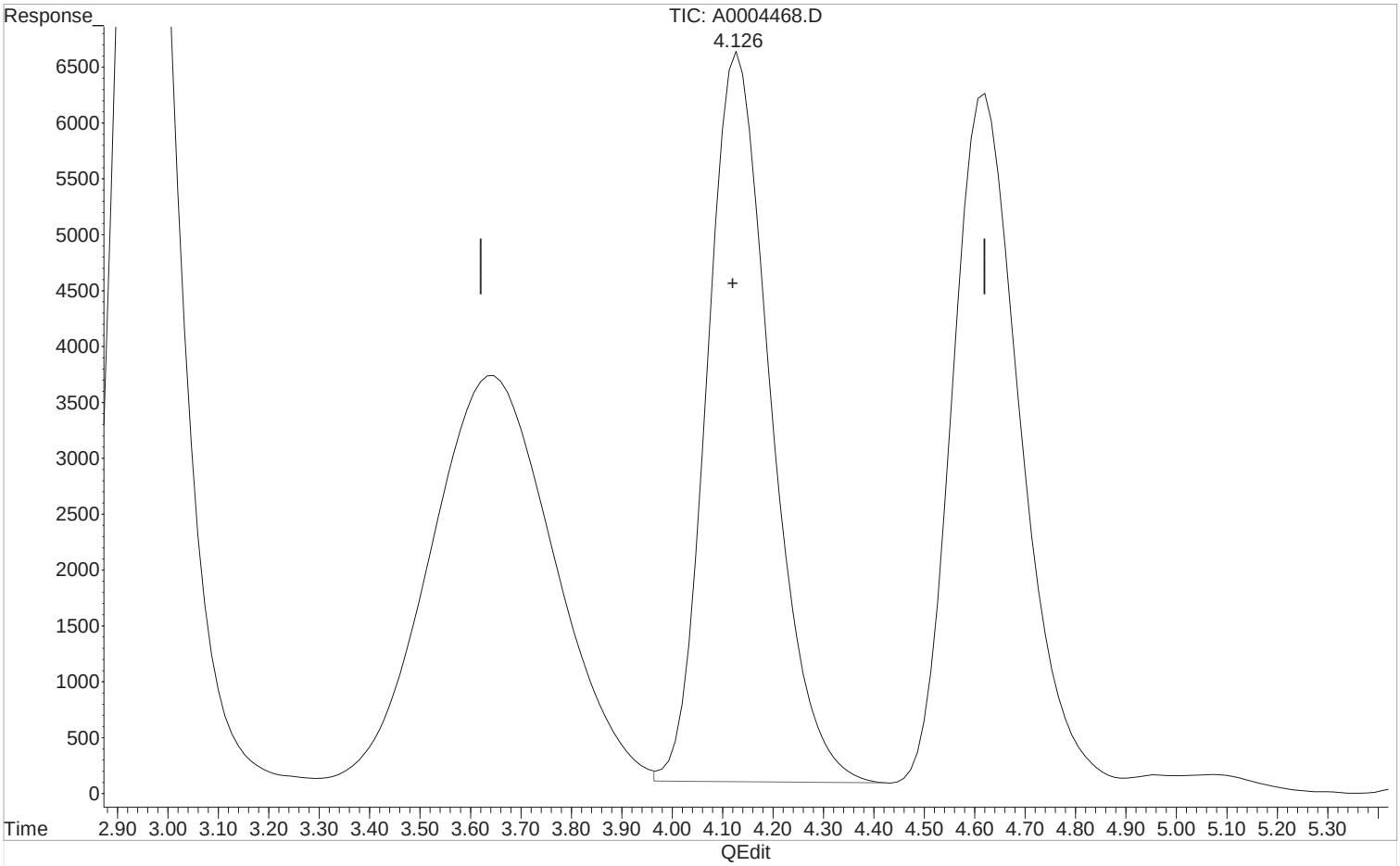
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004468.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 15:48:46
Operator : A.Felser
Sample : STD 4
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:22 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.132min 10.406 ppm

response 576451

Manual Integration:

Before

03/16/20

(T) = Expected Retention Time
MA031220.M Mon Mar 16 09:24:40 2020

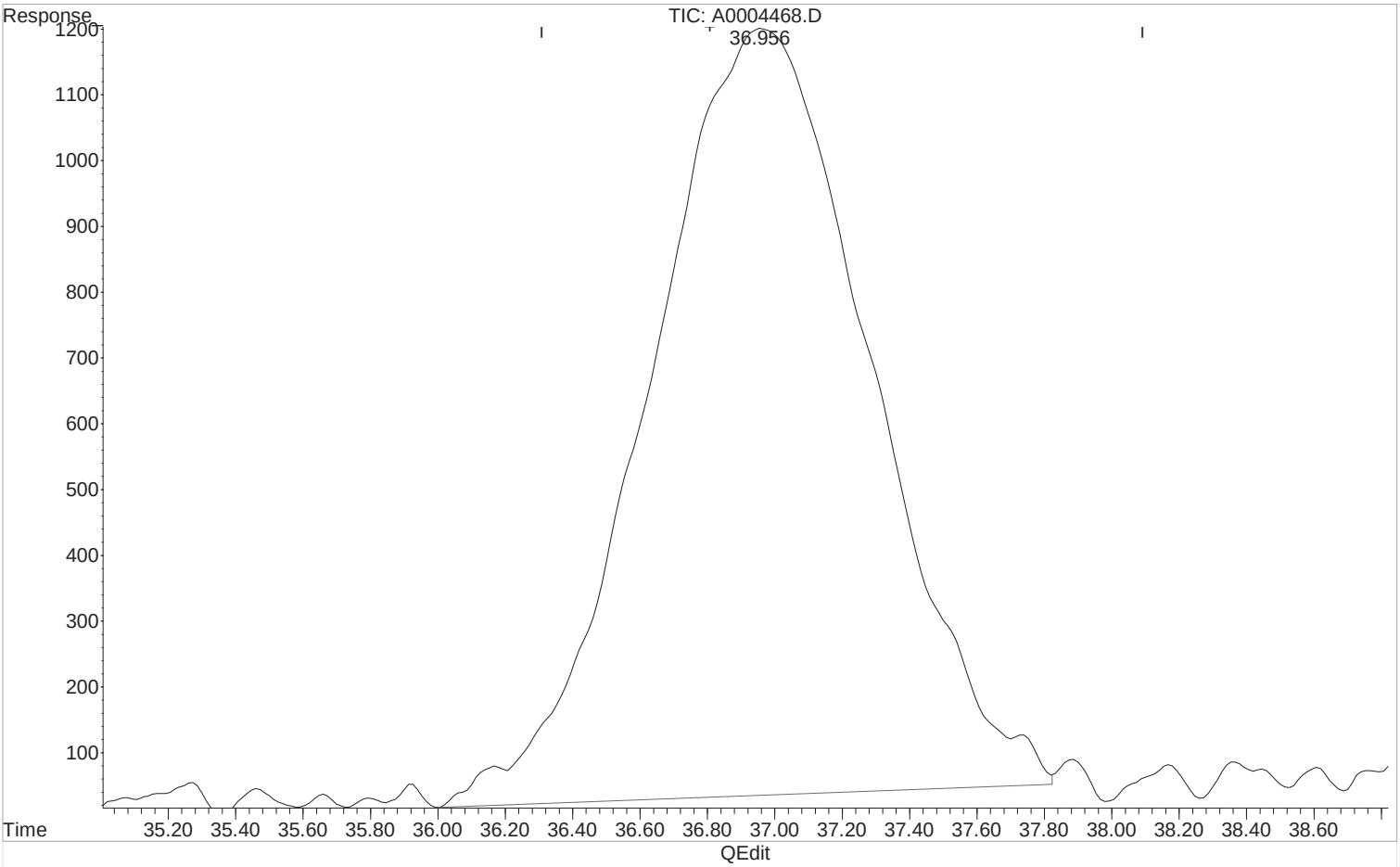
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004468.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 15:48:46
Operator : A.Felser
Sample : STD 4
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:22 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

36.956min 10.111 ppm m

response 532016

Manual Integration:

After

Poor integration.

03/16/20

(6) - Expected Retention Time
MA031220.M Mon Mar 16 09:25:14 2020

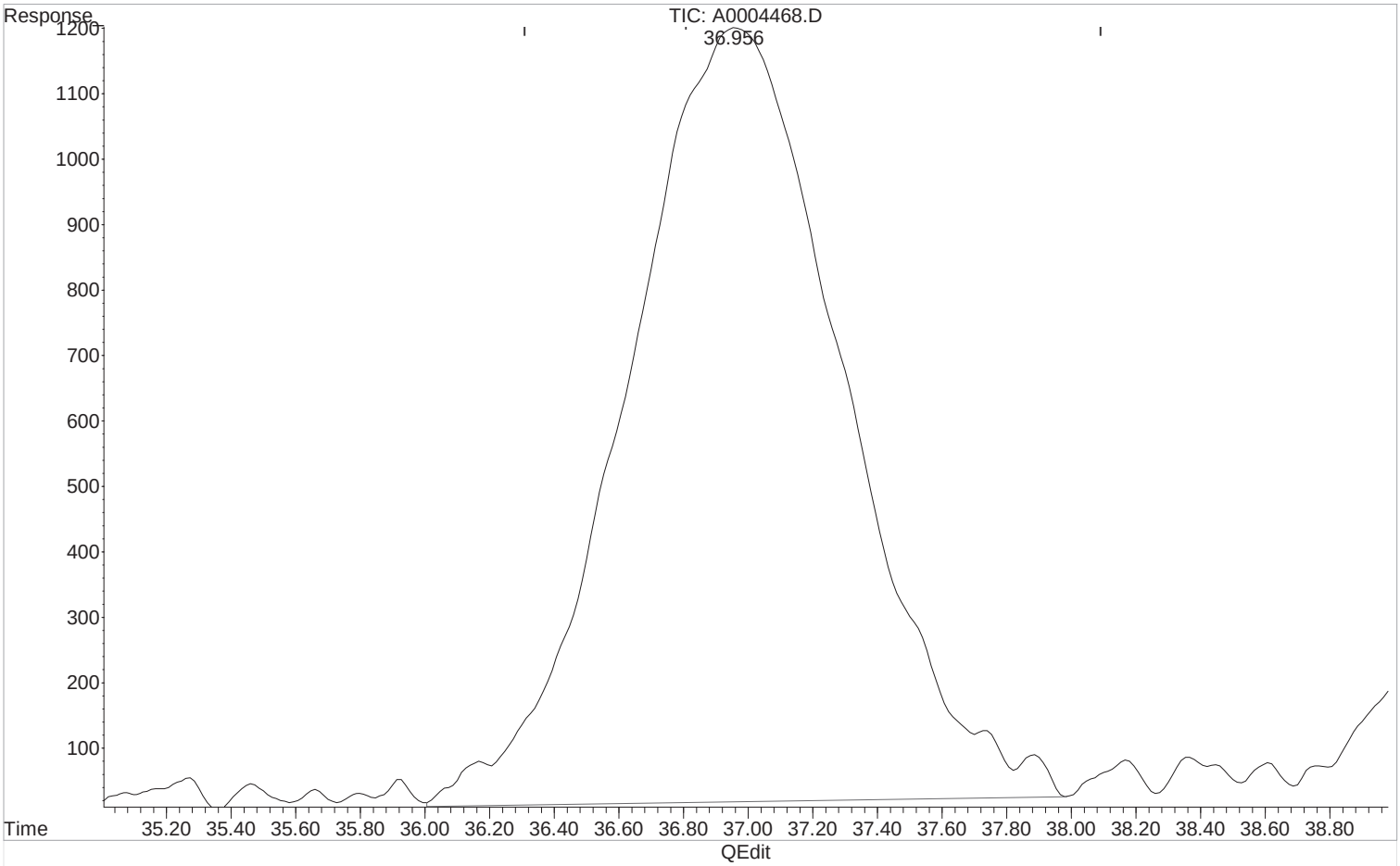
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004468.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 15:48:46
Operator : A.Felser
Sample : STD 4
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:22 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

36.967min 10.515 ppm

response 553241

Manual Integration:

Before

03/16/20

(F) = Expected Retention Time
MA031220.M Mon Mar 16 09:24:57 2020

1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004468.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 15:48:46
Operator : A.Felser
Sample : STD 4
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:22 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	2.947	948710	10.368	ppm	m
2) T	Pyruvic acid	3.640	594304	1.020	ppm	m
3) T	Lactic Acid	4.126	564128	10.183	ppm	m
4) T	Acetic Acid	4.622	573121	10.271	ppm	
5) T	Propionic Acid	11.654	559828	10.190	ppm	
6) T	Butyric Acid	36.956	532016	10.111	ppm	m

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

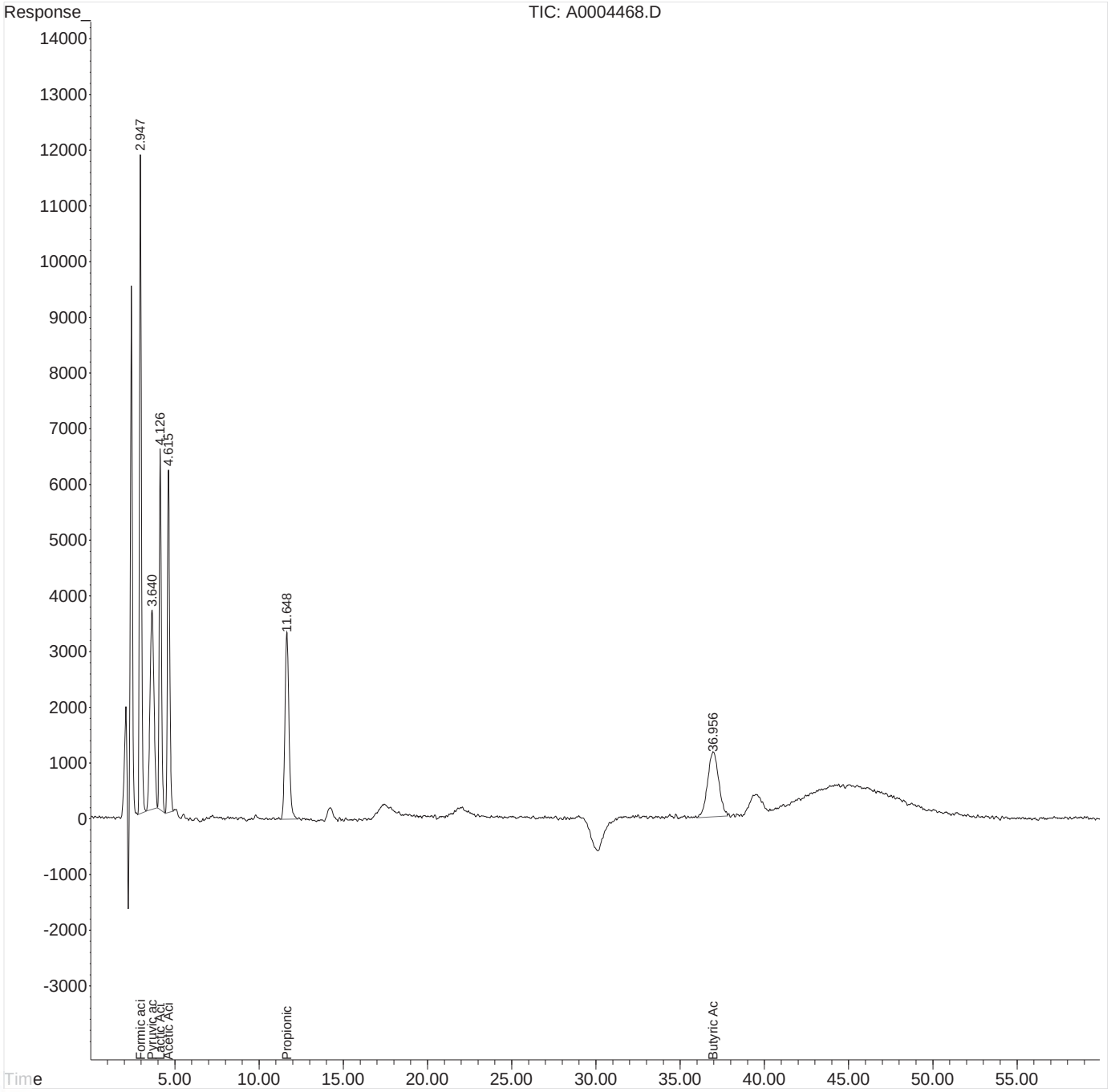
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004468.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 15:48:46
Operator : A.Felser
Sample : STD 4
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:22 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



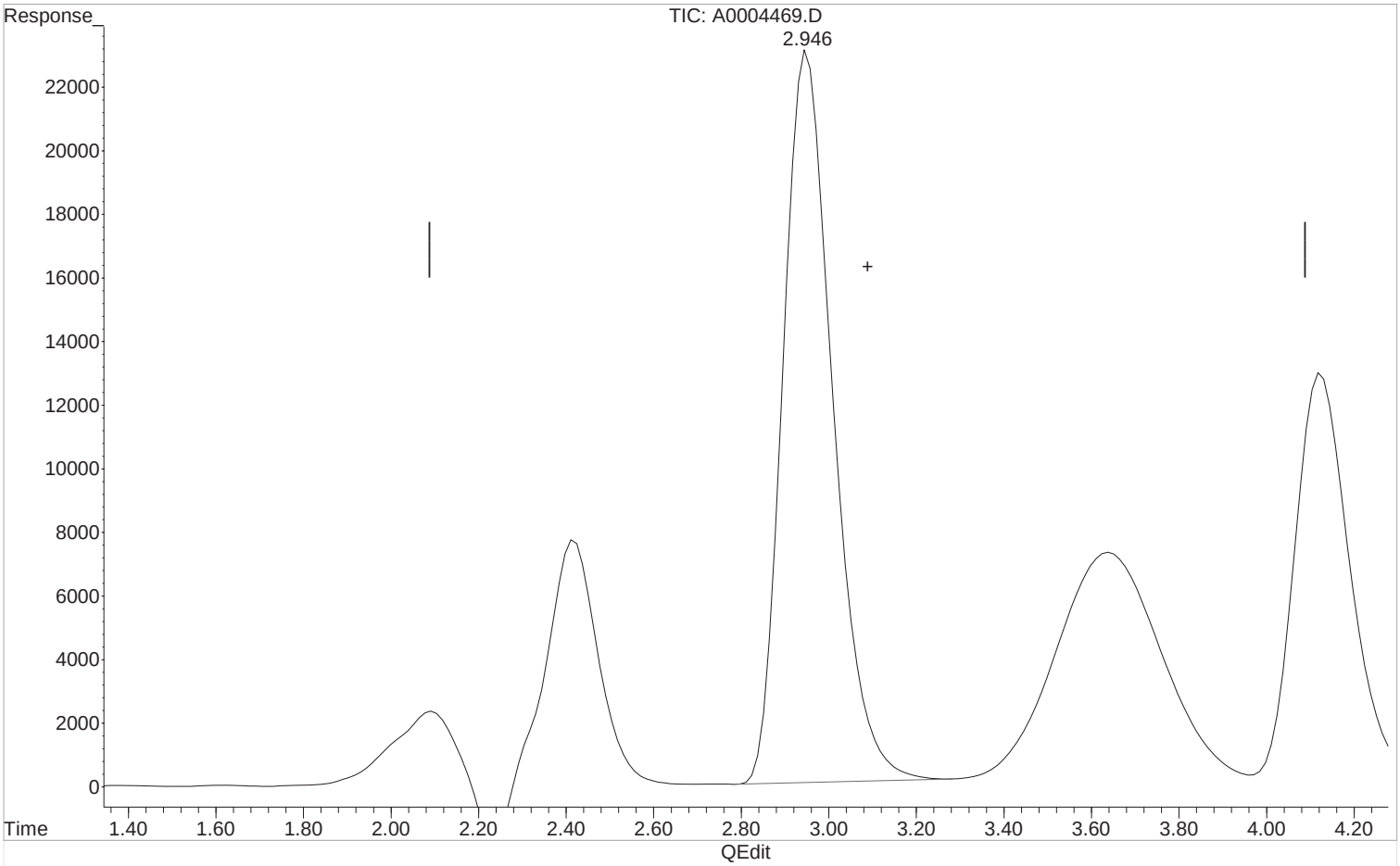
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.946min 19.154 ppm m

response 1830133

Manual Integration:

After

Poor integration.

03/16/20

(t) - Expected Retention Time

MA031220.M Mon Mar 16 09:16:12 2020

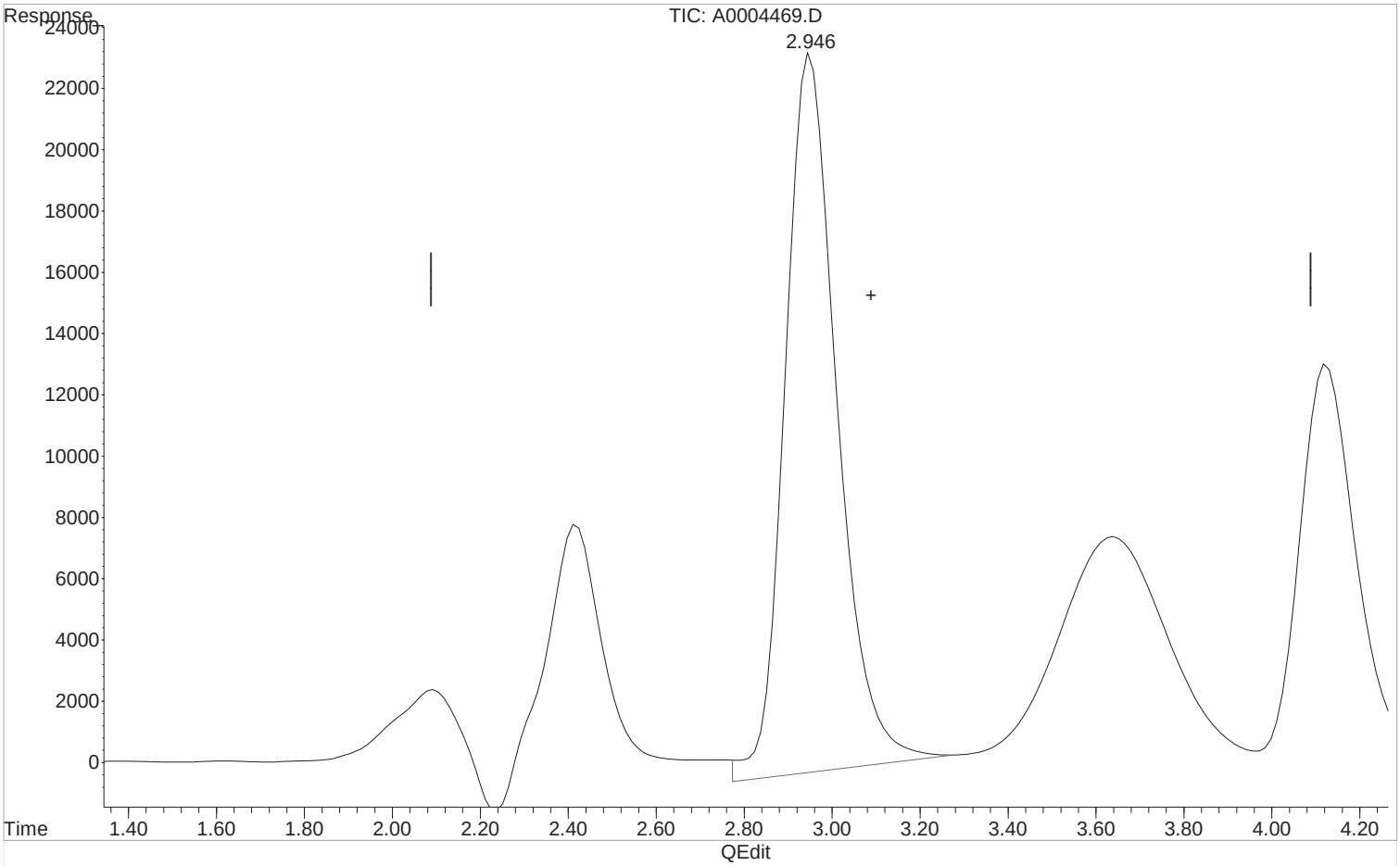
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.953min 20.256 ppm

response 1935353

Manual Integration:

Before

03/16/20

(1) - Expected Retention Time
MA031220.M Mon Mar 16 09:15:56 2020

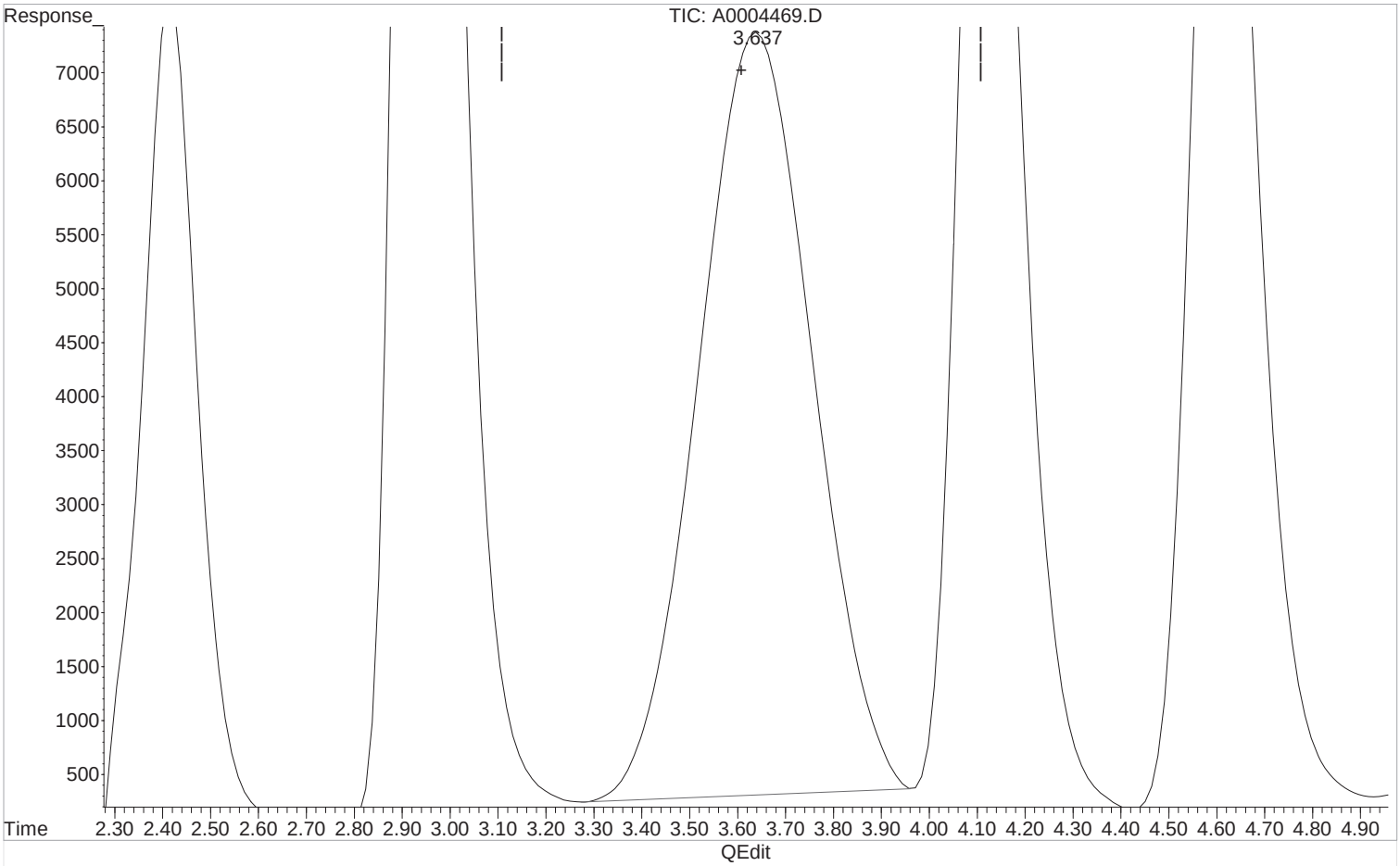
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.637min 2.190 ppm m

response 1165741

Manual Integration:

After

Poor integration.

03/16/20

(T) - Expected Retention Time
MA031220.M Mon Mar 16 09:16:25 2020

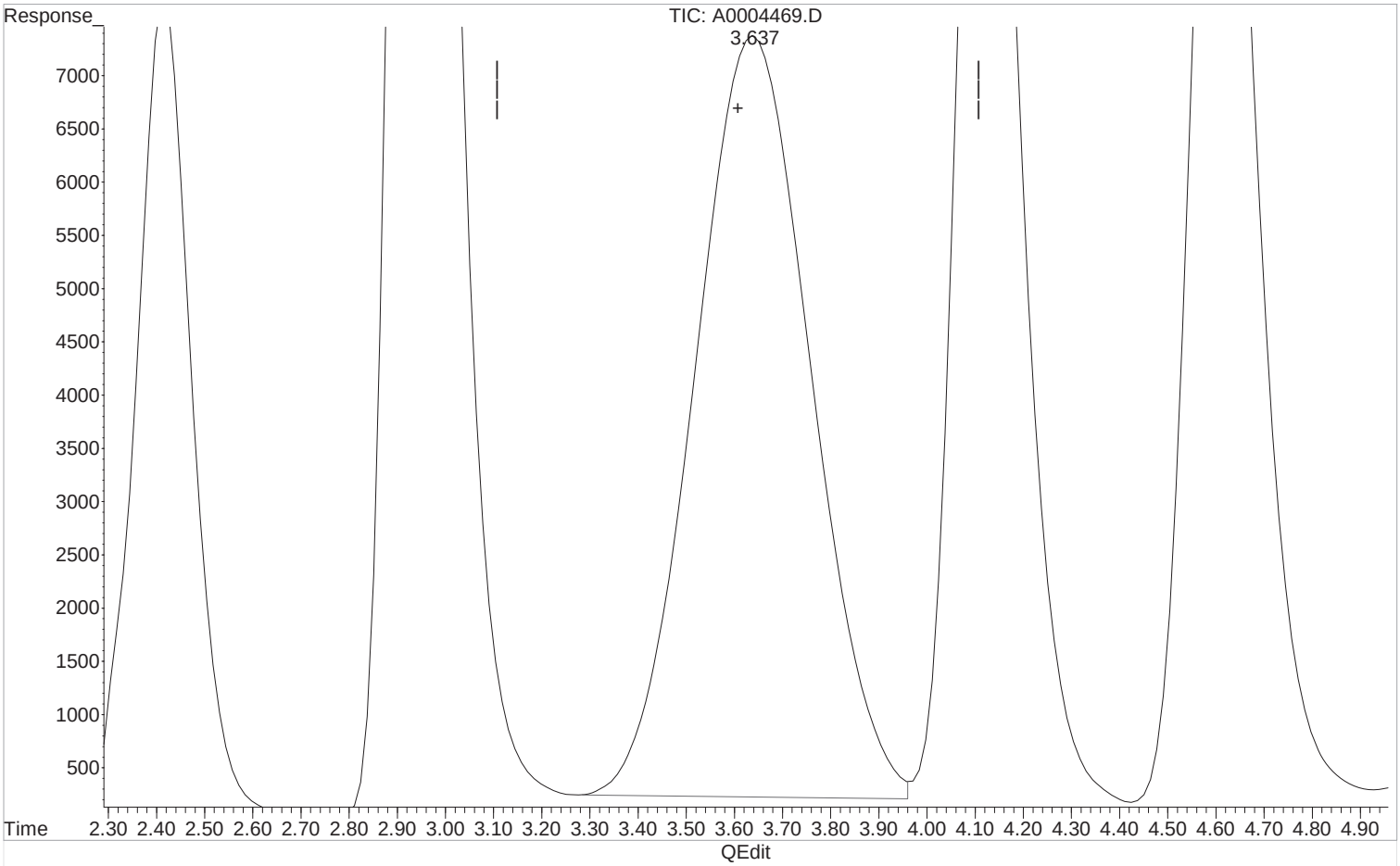
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.642min 2.250 ppm

response 1197650

Manual Integration:

Before

03/16/20

(T) - Expected Retention Time
MA031220.M Mon Mar 16 09:16:15 2020

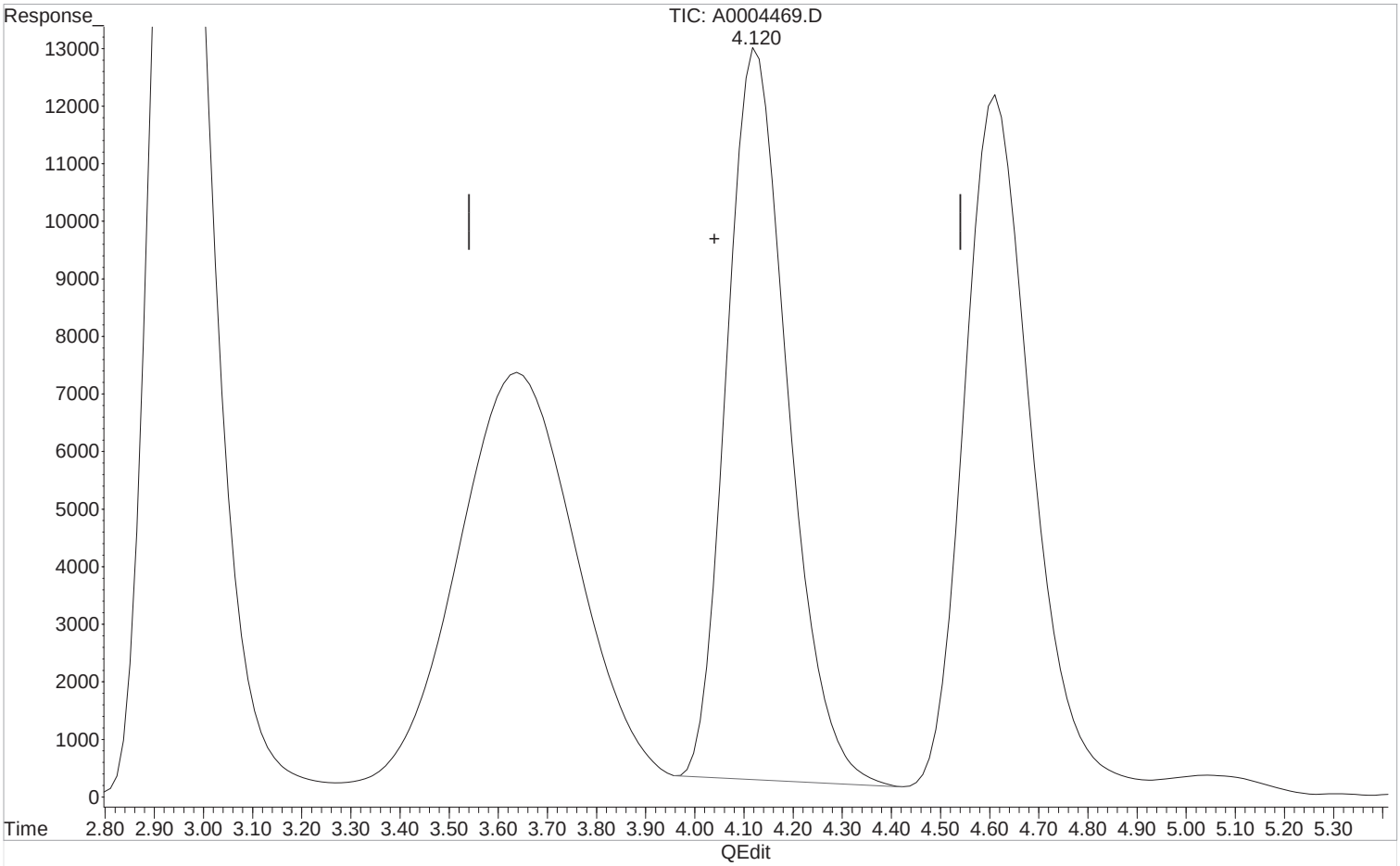
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.120min 21.482 ppm m

response 1107931

Manual Integration:

After

Poor integration.

03/16/20

(T) - Expected Retention Time
MA031220.M Mon Mar 16 09:16:36 2020

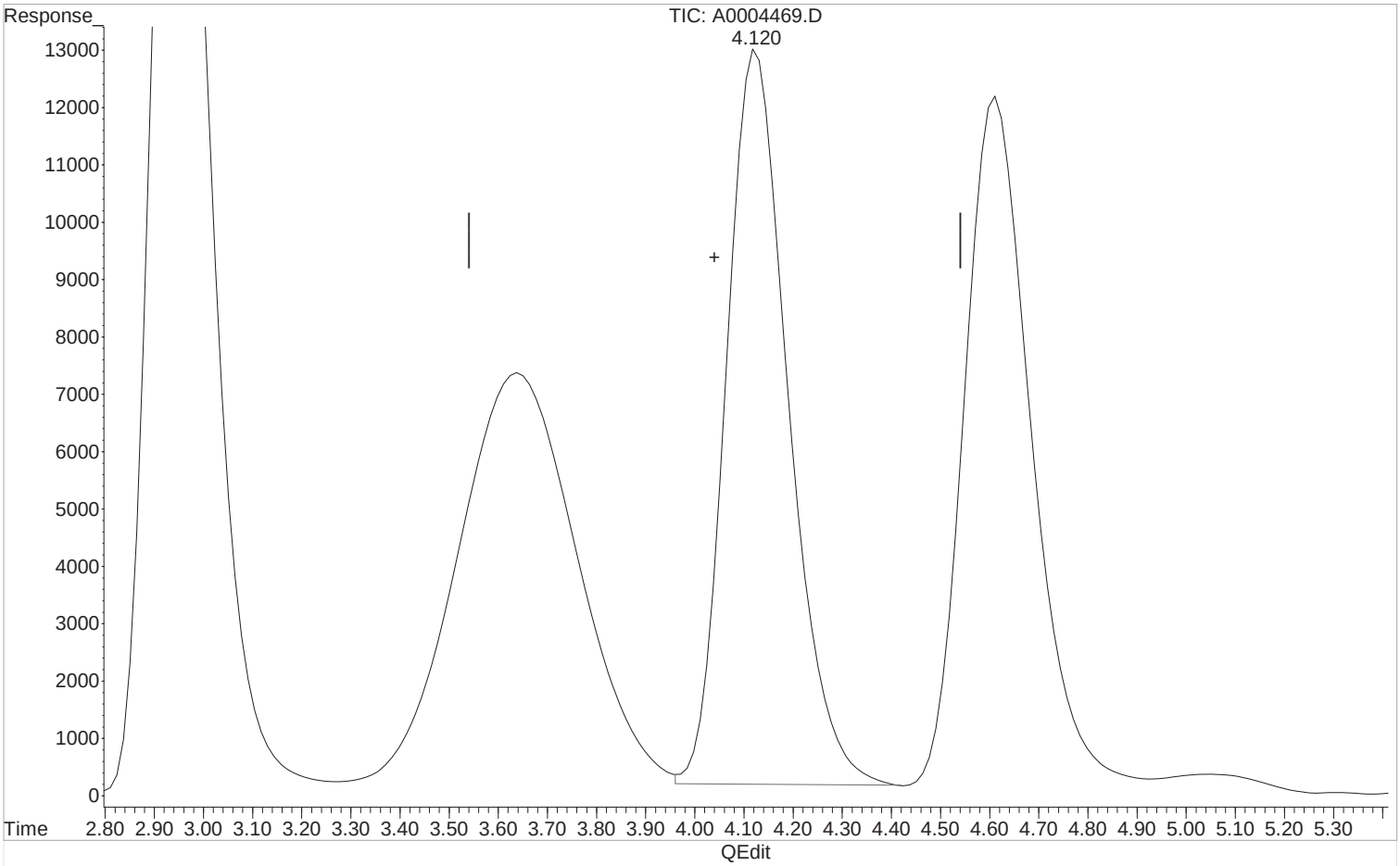
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.127min 21.898 ppm

response 1129421

Manual Integration:

Before

03/16/20

(T) = Expected Retention Time
MA031220.M Mon Mar 16 09:16:28 2020

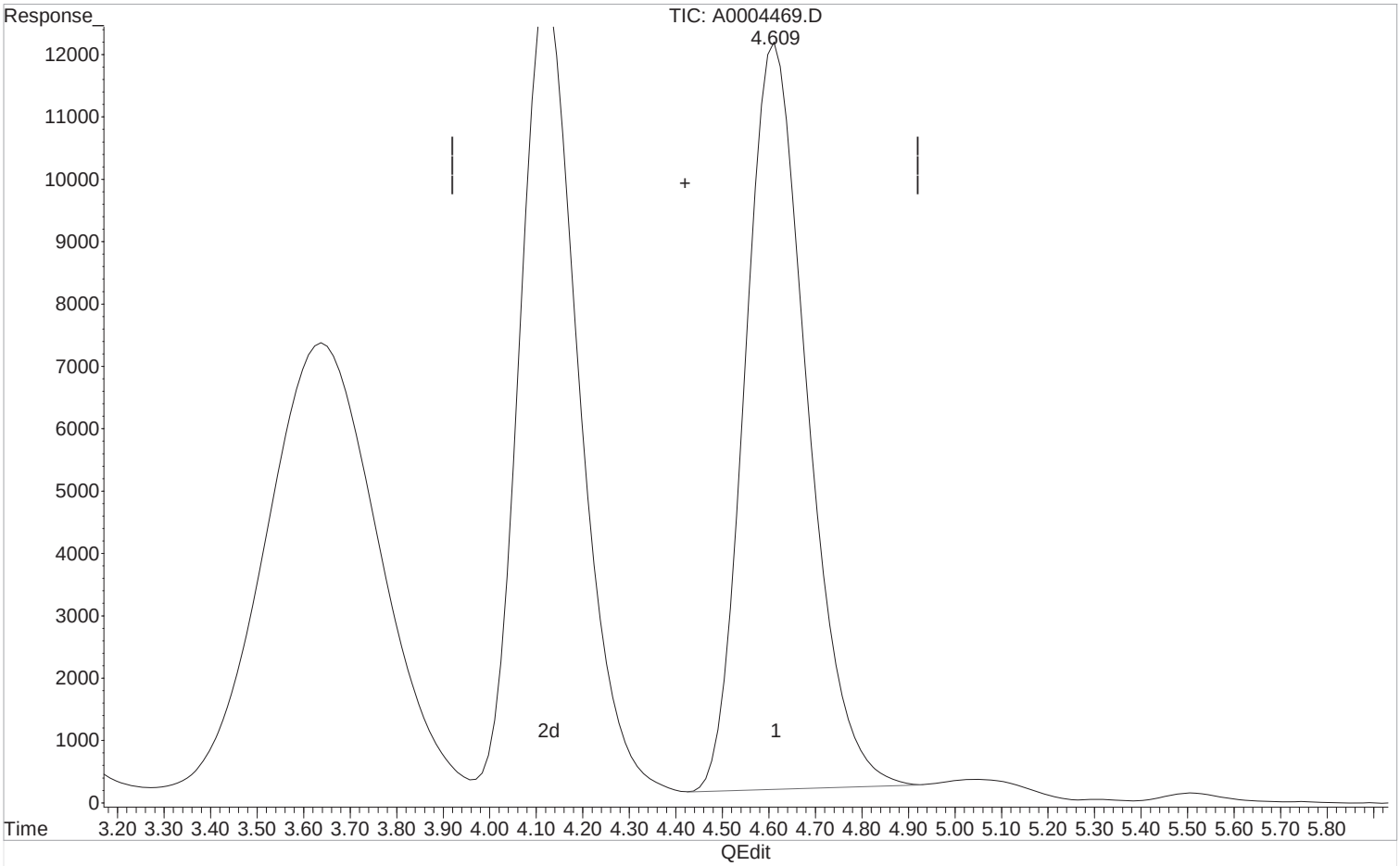
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.609min 19.276 ppm m

response 1115994

Manual Integration:

After

Poor integration.

03/16/20

(T) - Expected Retention Time
MA031220.M Mon Mar 16 09:16:51 2020

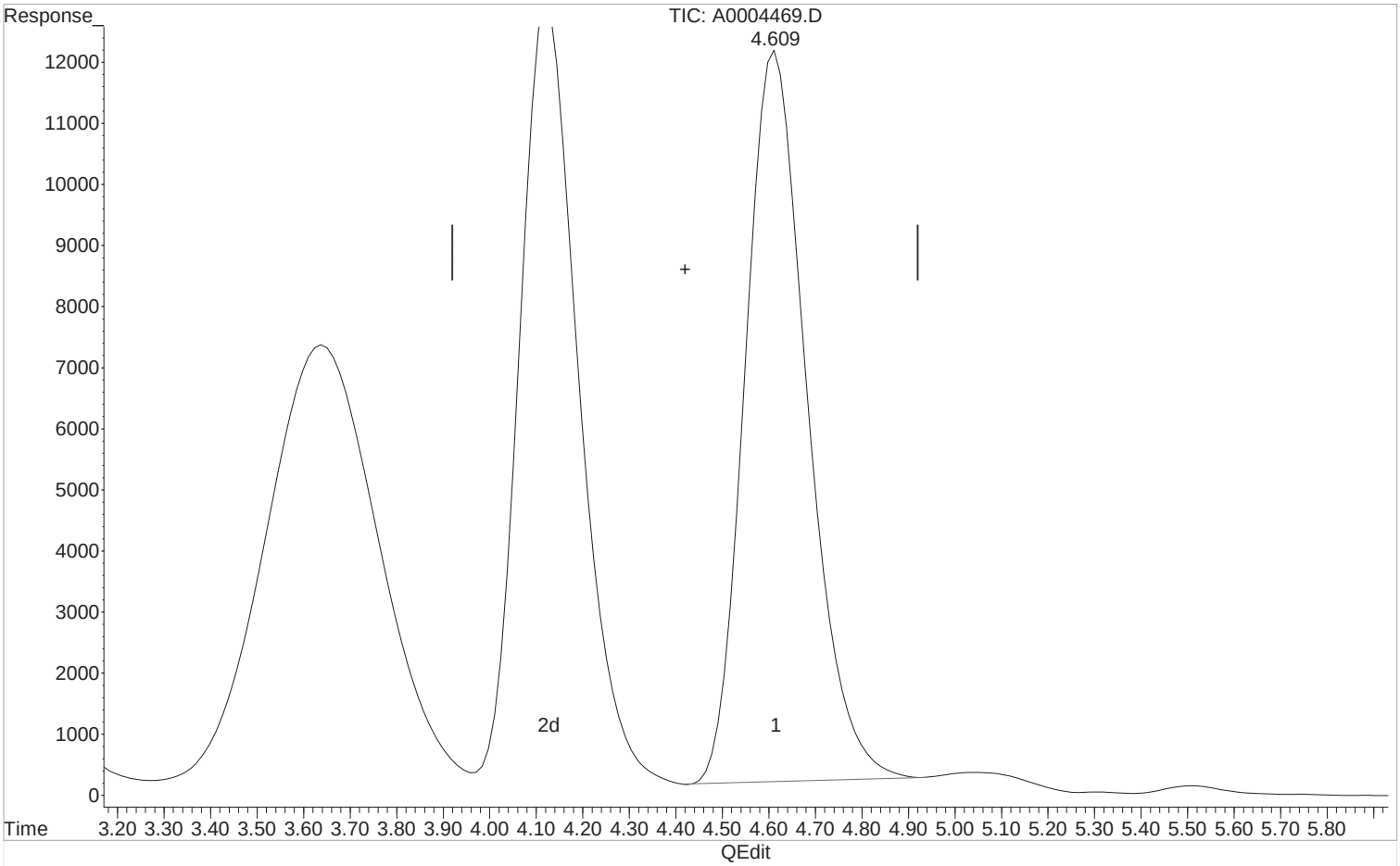
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.615min 19.234 ppm

response 1113595

Manual Integration:

Before

03/16/20

(T) = Expected Retention Time
MA031220.M Mon Mar 16 09:16:43 2020

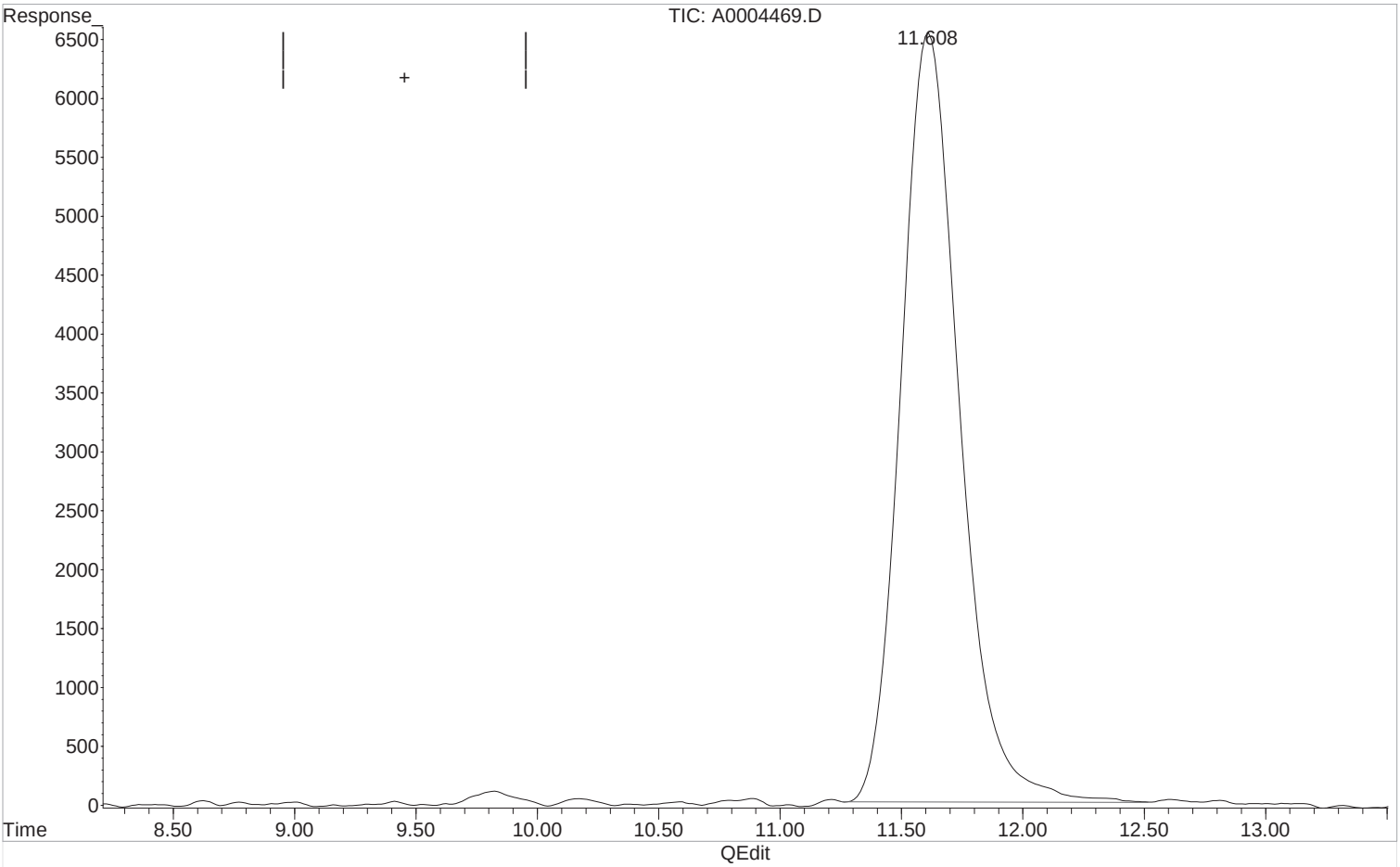
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

11.608min 19.595 ppm m

response 1098741

Manual Integration:

After

Peak not found.

03/16/20

(5) - Expected Retention Time
MA031220.M Mon Mar 16 09:17:21 2020

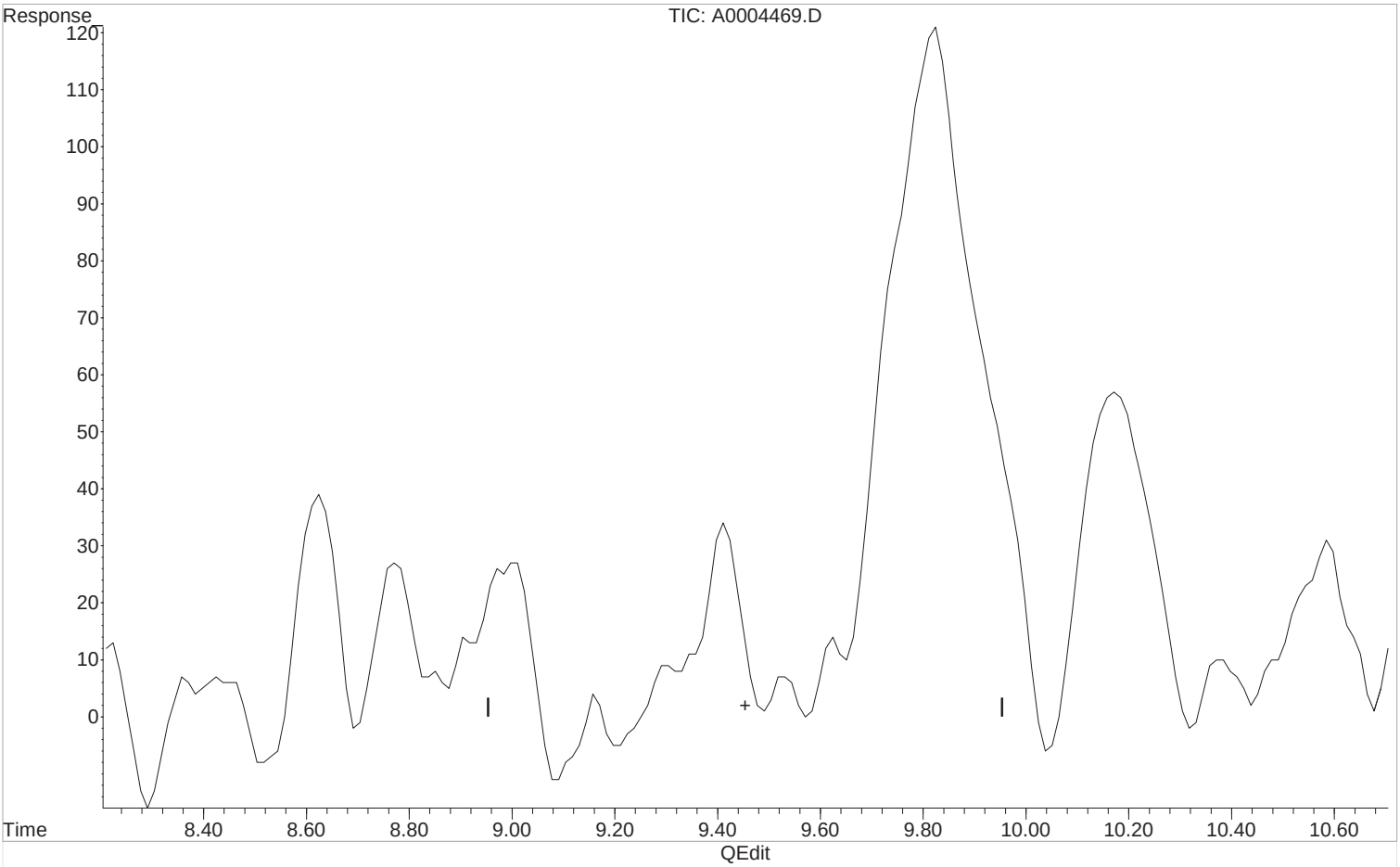
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

9.454min 0.000 ppm

response 0

Manual Integration:

Before

03/16/20

(T) - Expected Retention Time
MA031220.M Mon Mar 16 09:16:55 2020

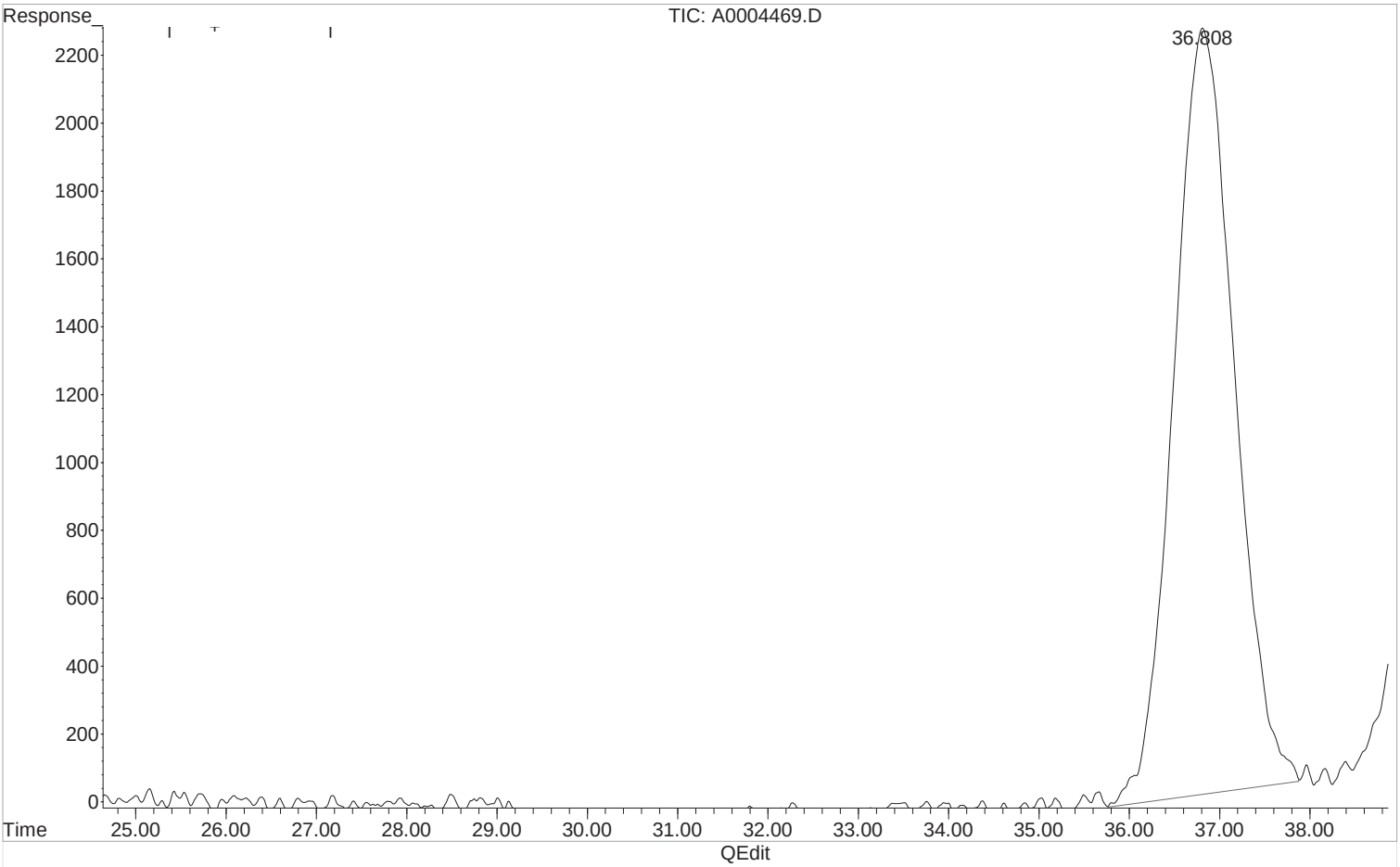
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

36.808min 19.370 ppm m

response 1052332

Manual Integration:

After

Peak not found.

03/16/20

(6) - Expected Retention Time
MA031220.M Mon Mar 16 09:17:46 2020

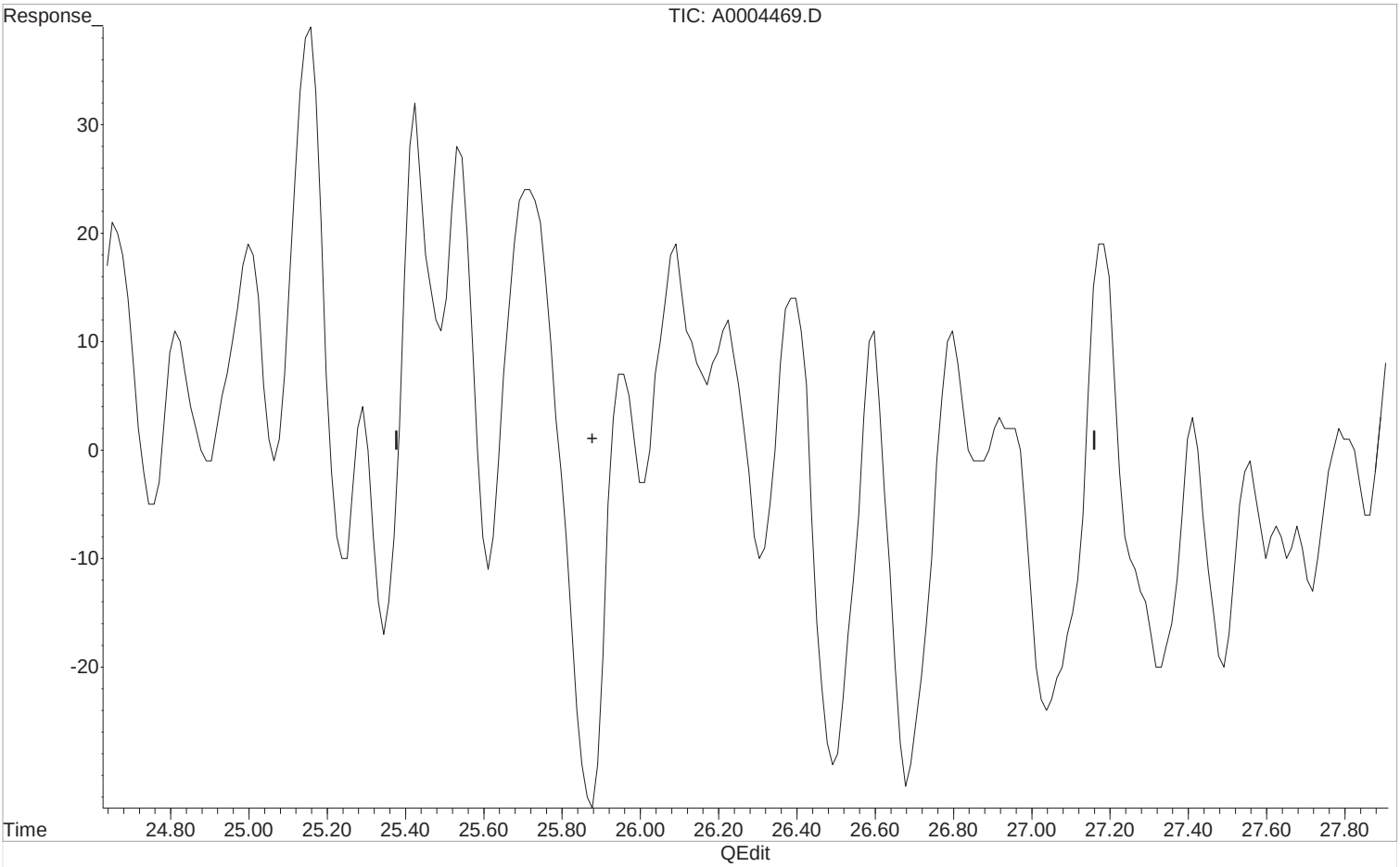
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

25.877min 0.000 ppm

response 0

Manual Integration:

Before

03/16/20

(R) - Expected Retention Time
MA031220.M Mon Mar 16 09:17:25 2020

1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : ~~30-Dec-2000, 17:48:02~~ 12-Mar-2020, 16:48
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	2.946	1830133	19.154	ppm	m
2) T	Pyruvic acid	3.637	1165741	2.190	ppm	m
3) T	Lactic Acid	4.120	1107931	21.482	ppm	m
4) T	Acetic Acid	4.609	1115994	19.276	ppm	m
5) T	Propionic Acid	11.608f	1098741	19.595	ppm	m
6) T	Butyric Acid	36.808f	1052332	19.370	ppm	m

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

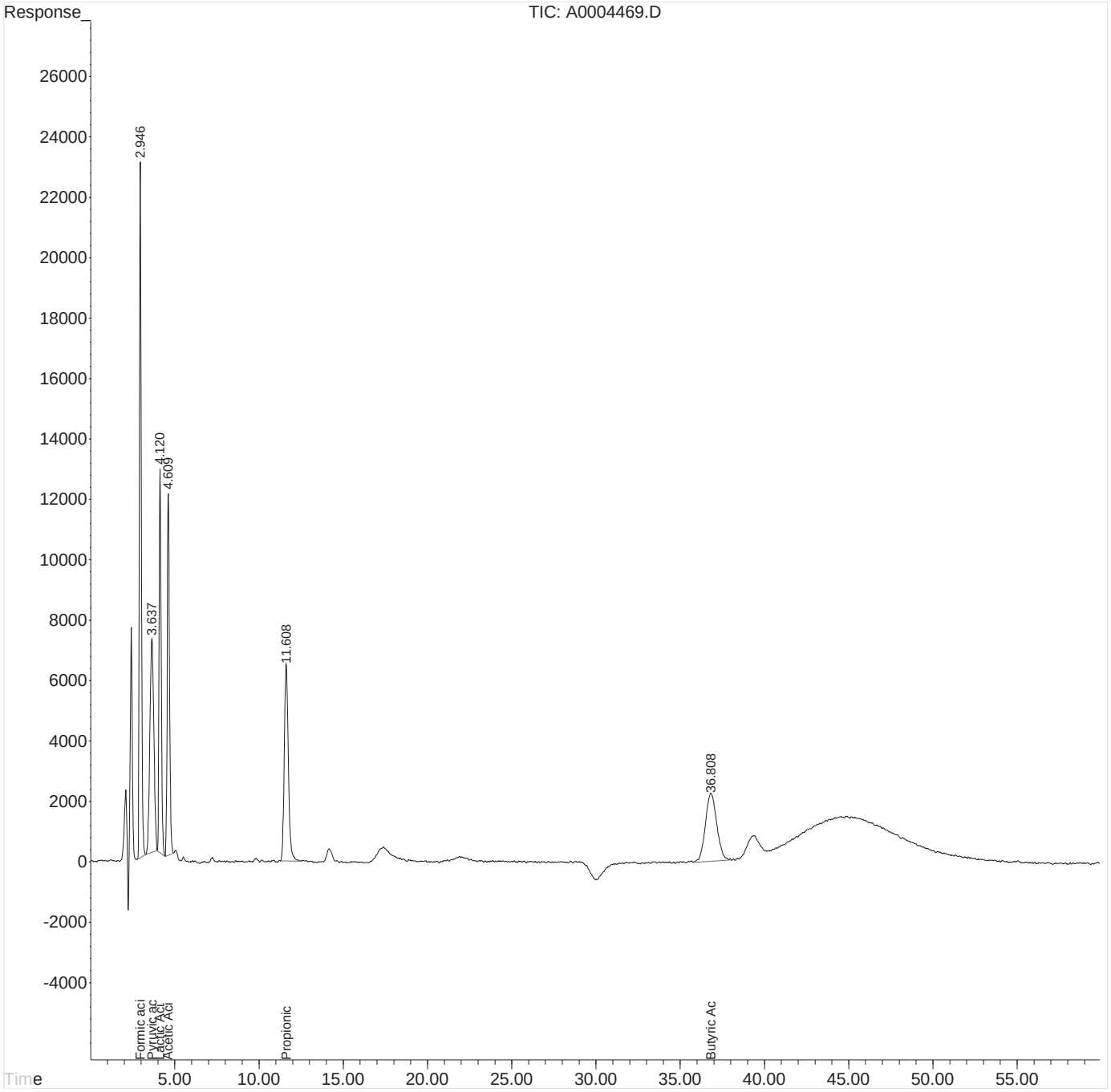
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



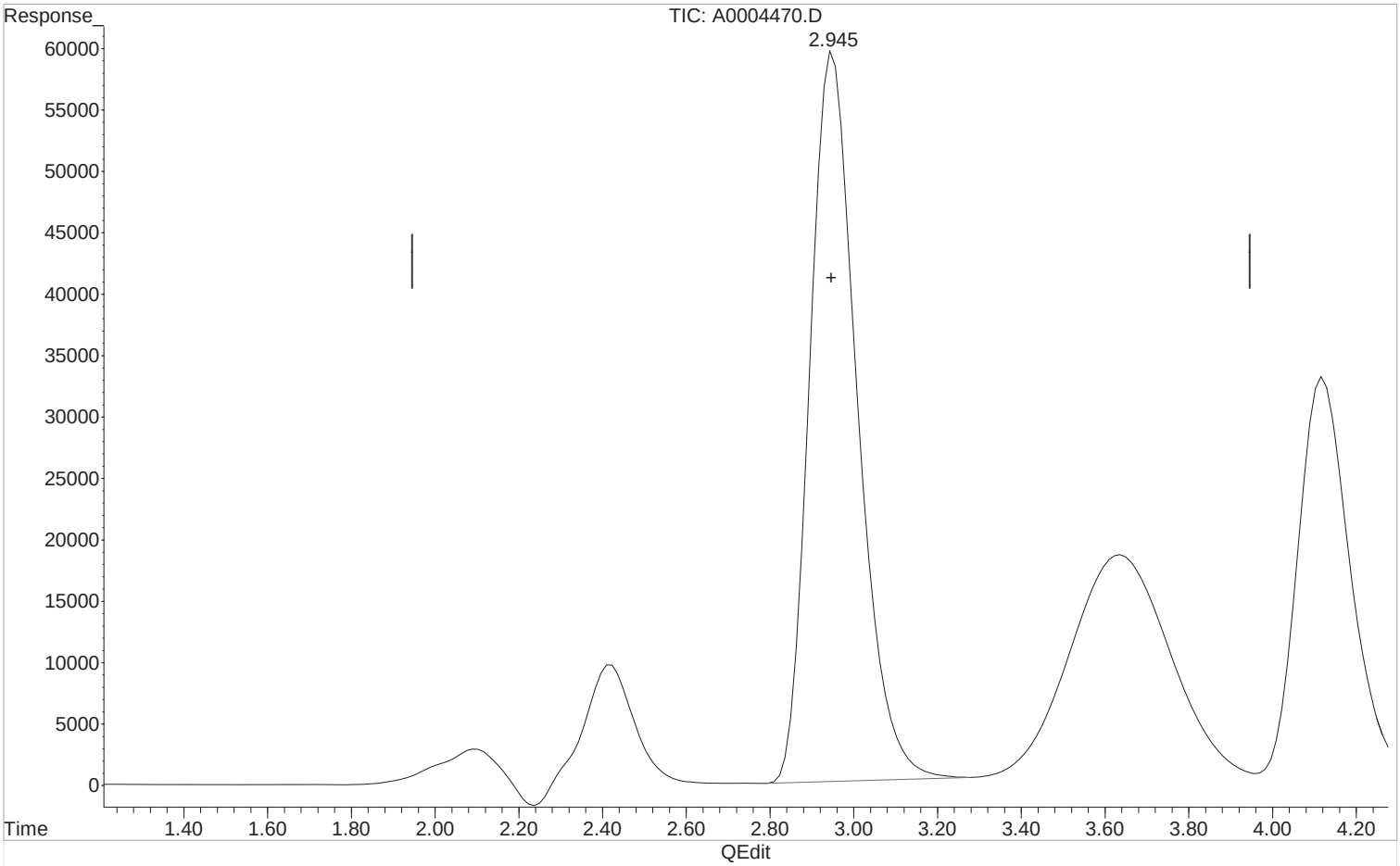
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004470.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:47:58
Operator : A.Felser
Sample : STD 6
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:24 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.945min 51.436 ppm m

response 4706776

Manual Integration:

After

Poor integration.

03/16/20

(1) - Expected Retention Time

MA031220.M Mon Mar 16 09:25:42 2020

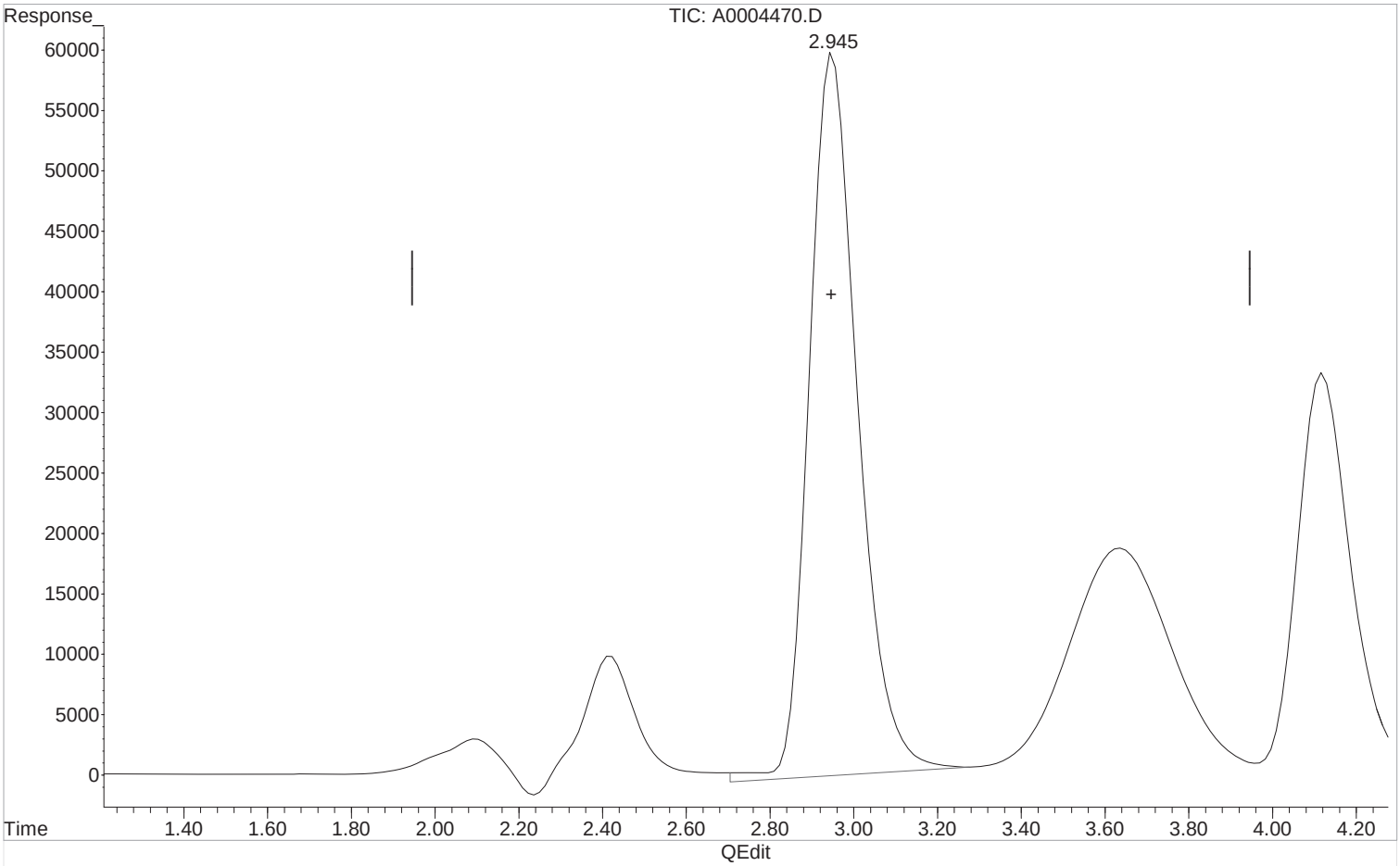
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004470.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:47:58
Operator : A.Felser
Sample : STD 6
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:24 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.952min 52.682 ppm

response 4820746

Manual Integration:

Before

03/16/20

(1) - Expected Retention Time
MA031220.M Mon Mar 16 09:25:34 2020

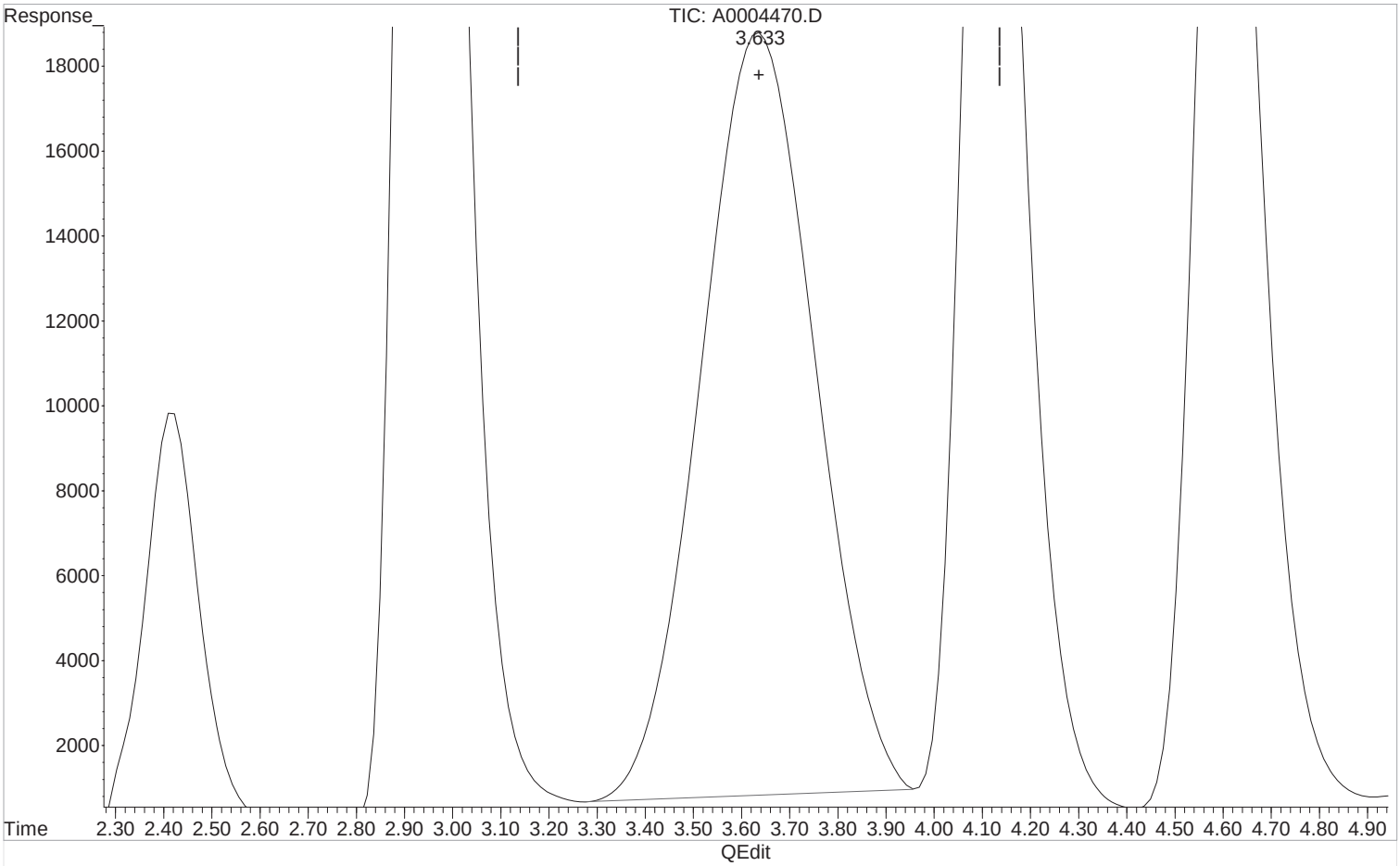
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004470.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:47:58
Operator : A.Felser
Sample : STD 6
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:24 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.633min 5.066 ppm m

response 2952886

Manual Integration:

After

Poor integration.

03/16/20

(E) - Expected Retention Time
MA031220.M Mon Mar 16 09:25:53 2020

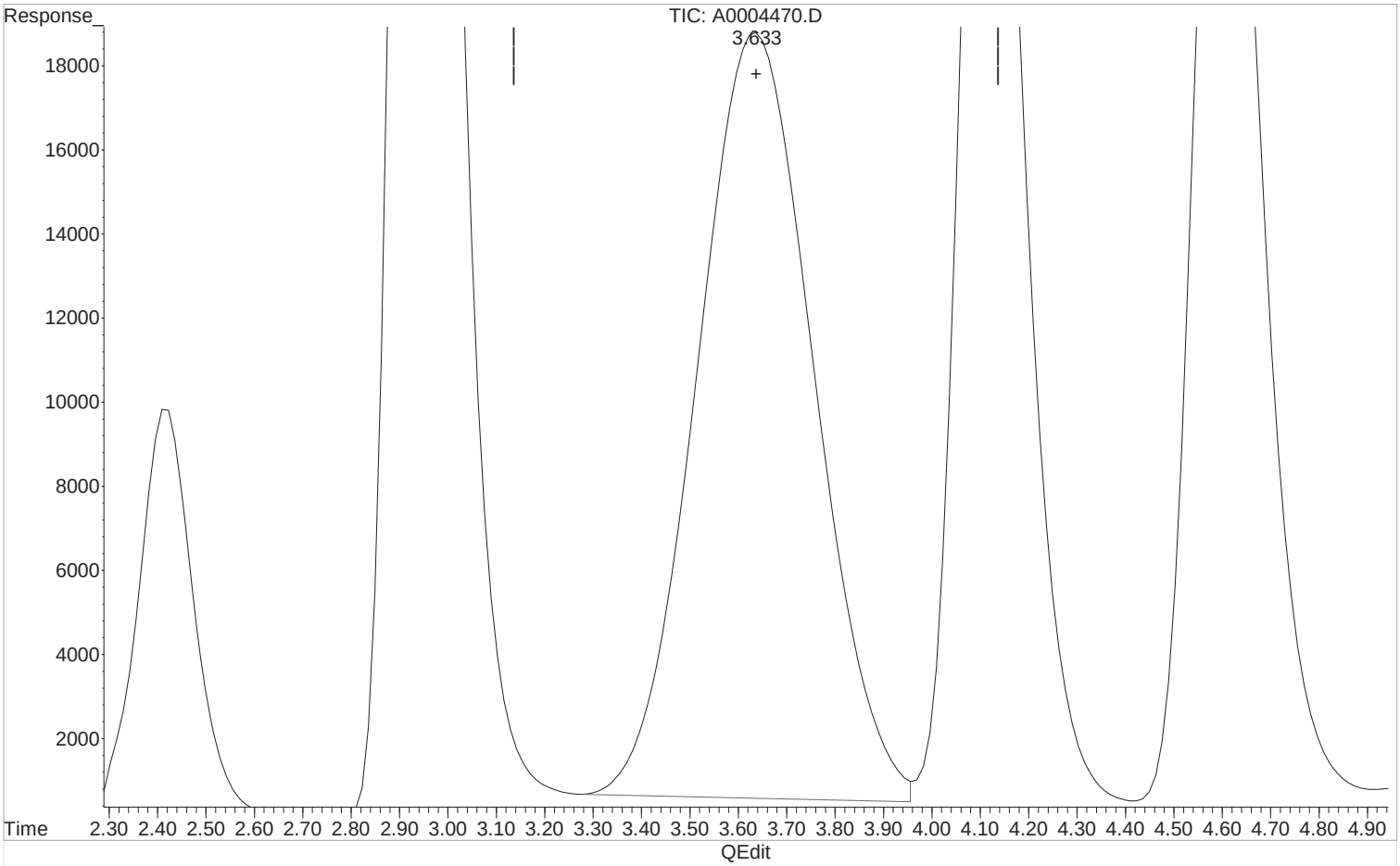
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004470.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:47:58
Operator : A.Felser
Sample : STD 6
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:24 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.639min 5.230 ppm

response 3048306

Manual Integration:

Before

03/16/20

(F) - Expected Retention Time
MA031220.M Mon Mar 16 09:25:46 2020

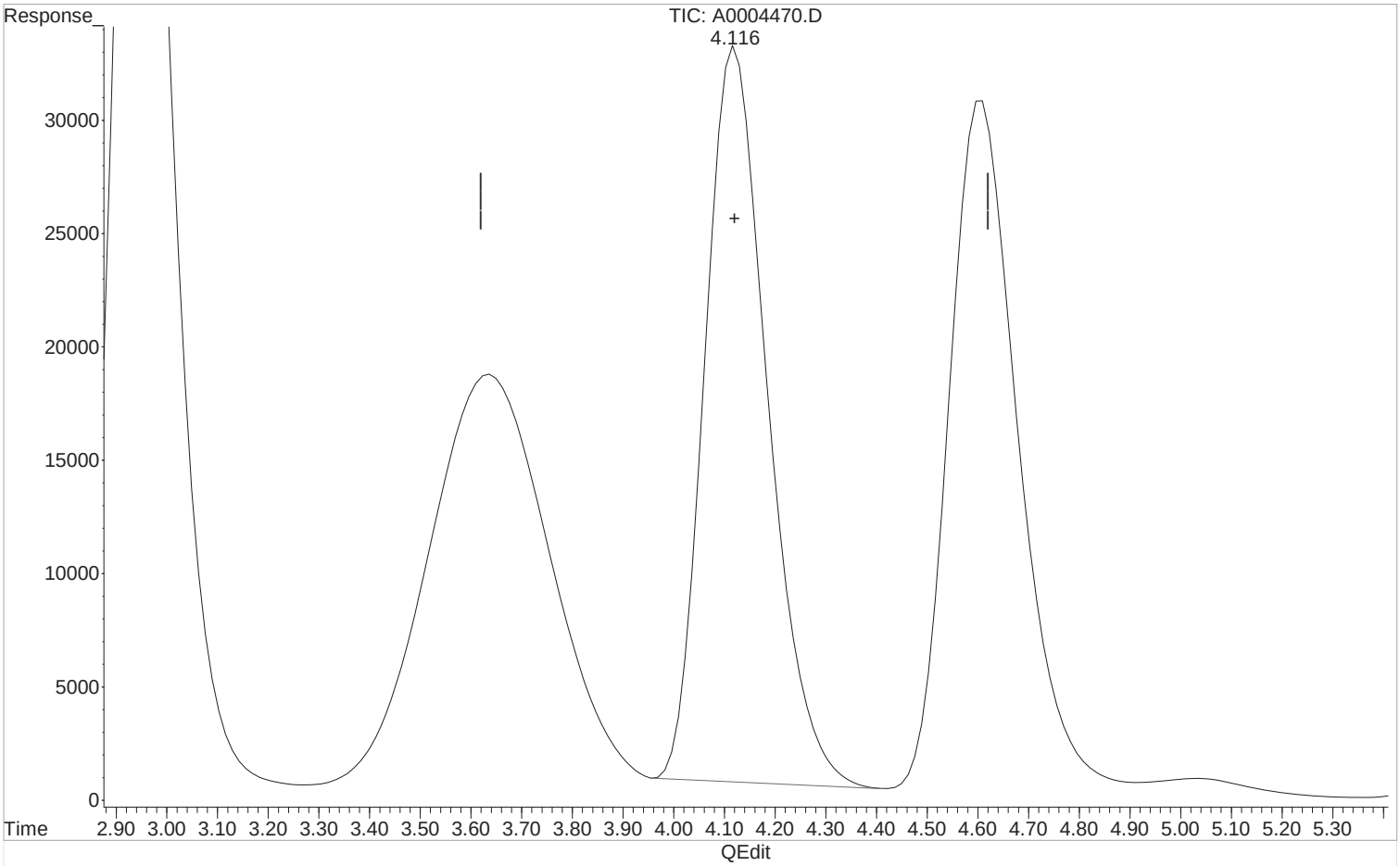
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004470.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:47:58
Operator : A.Felser
Sample : STD 6
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:24 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.116min 50.780 ppm m

response 2813056

Manual Integration:

After

Poor integration.

03/16/20

(T) = Expected Retention Time
MA031220.M Mon Mar 16 09:26:03 2020

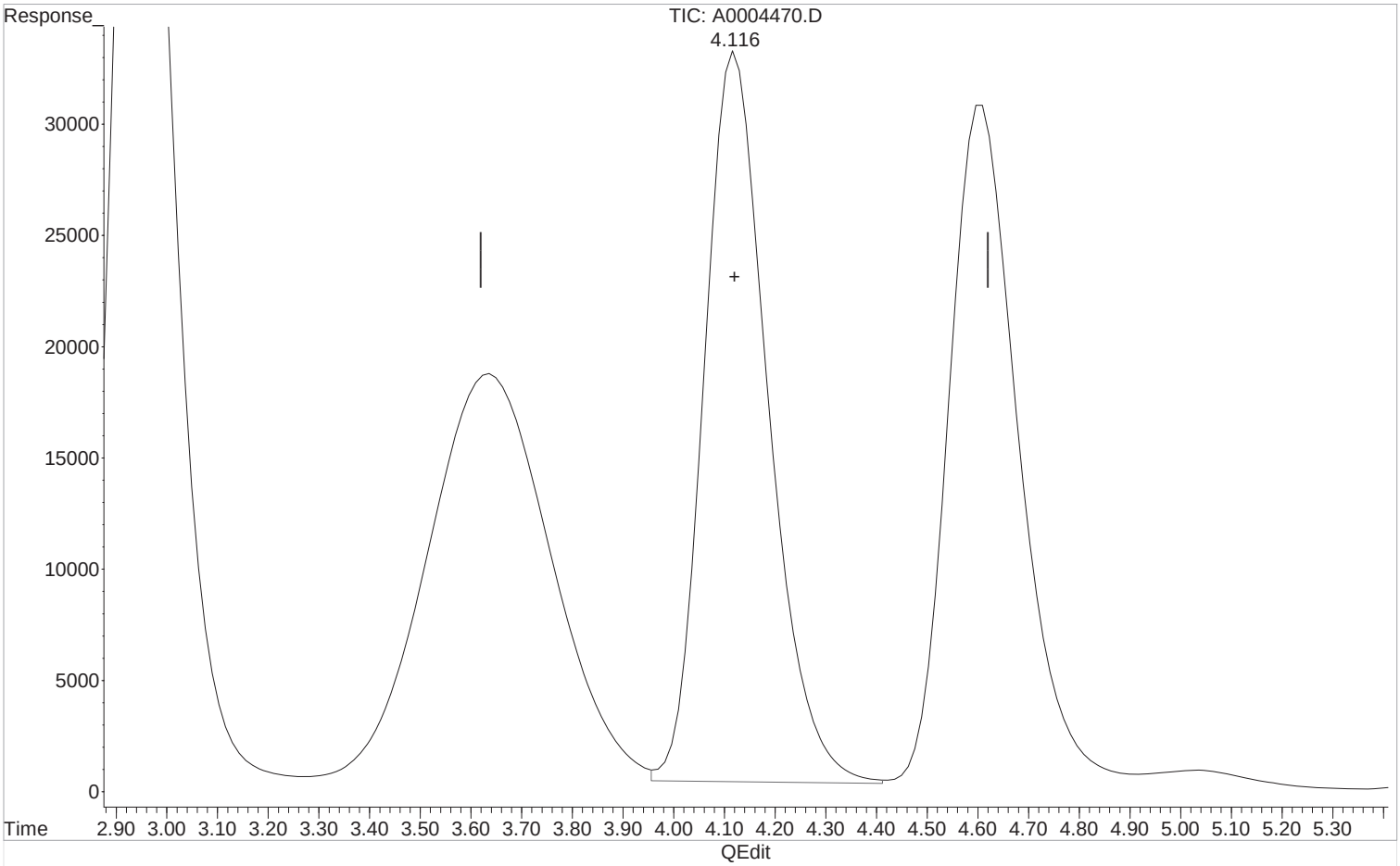
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004470.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:47:58
Operator : A.Felser
Sample : STD 6
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:24 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.123min 52.344 ppm

response 2899673

Manual Integration:

Before

03/16/20

(T) = Expected Retention Time
MA031220.M Mon Mar 16 09:25:56 2020

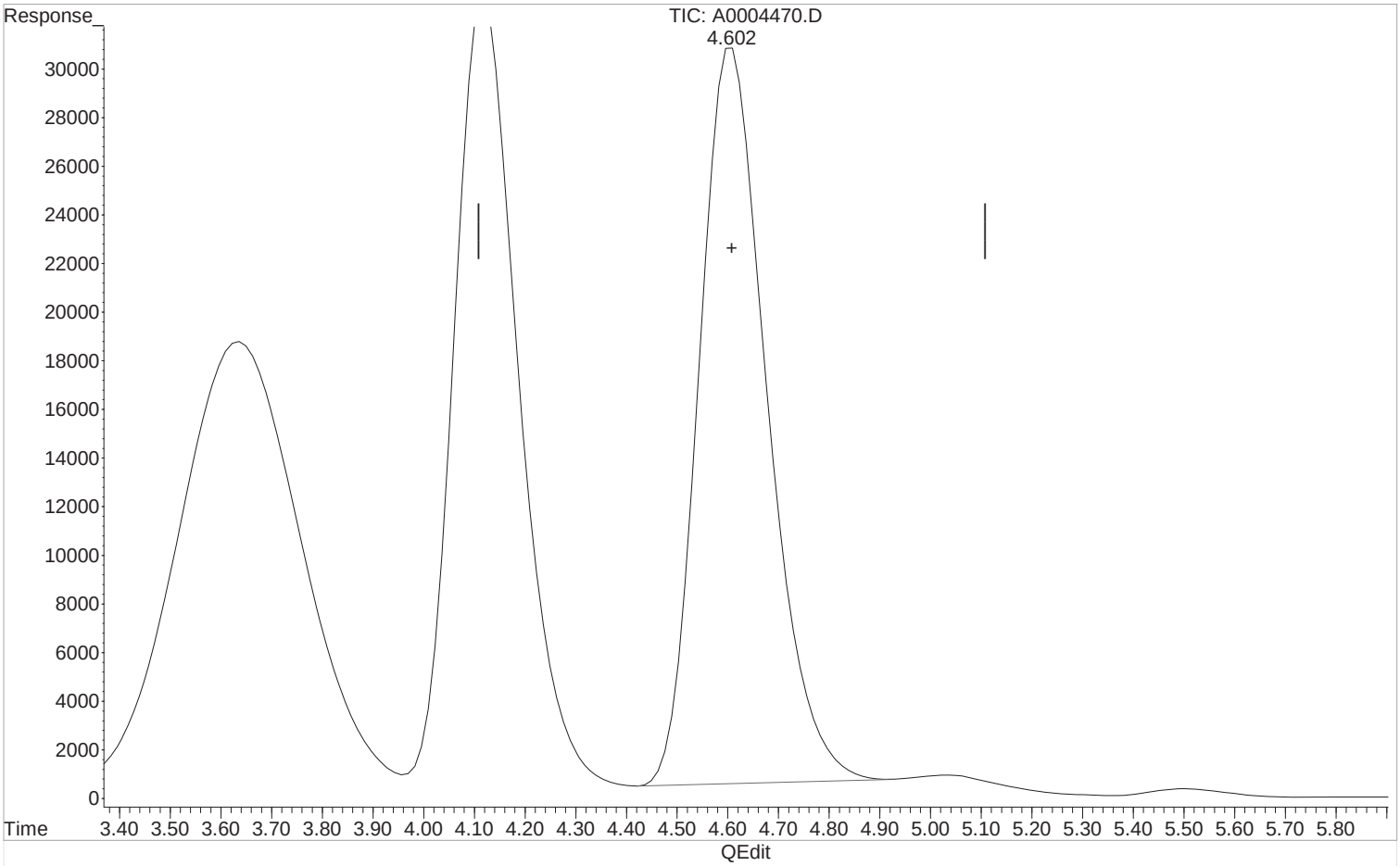
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004470.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:47:58
Operator : A.Felser
Sample : STD 6
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:24 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.602min 50.675 ppm m

response 2827626

Manual Integration:

After

Poor integration.

03/16/20

(T) = Expected Retention Time
MA031220.M Mon Mar 16 09:26:13 2020

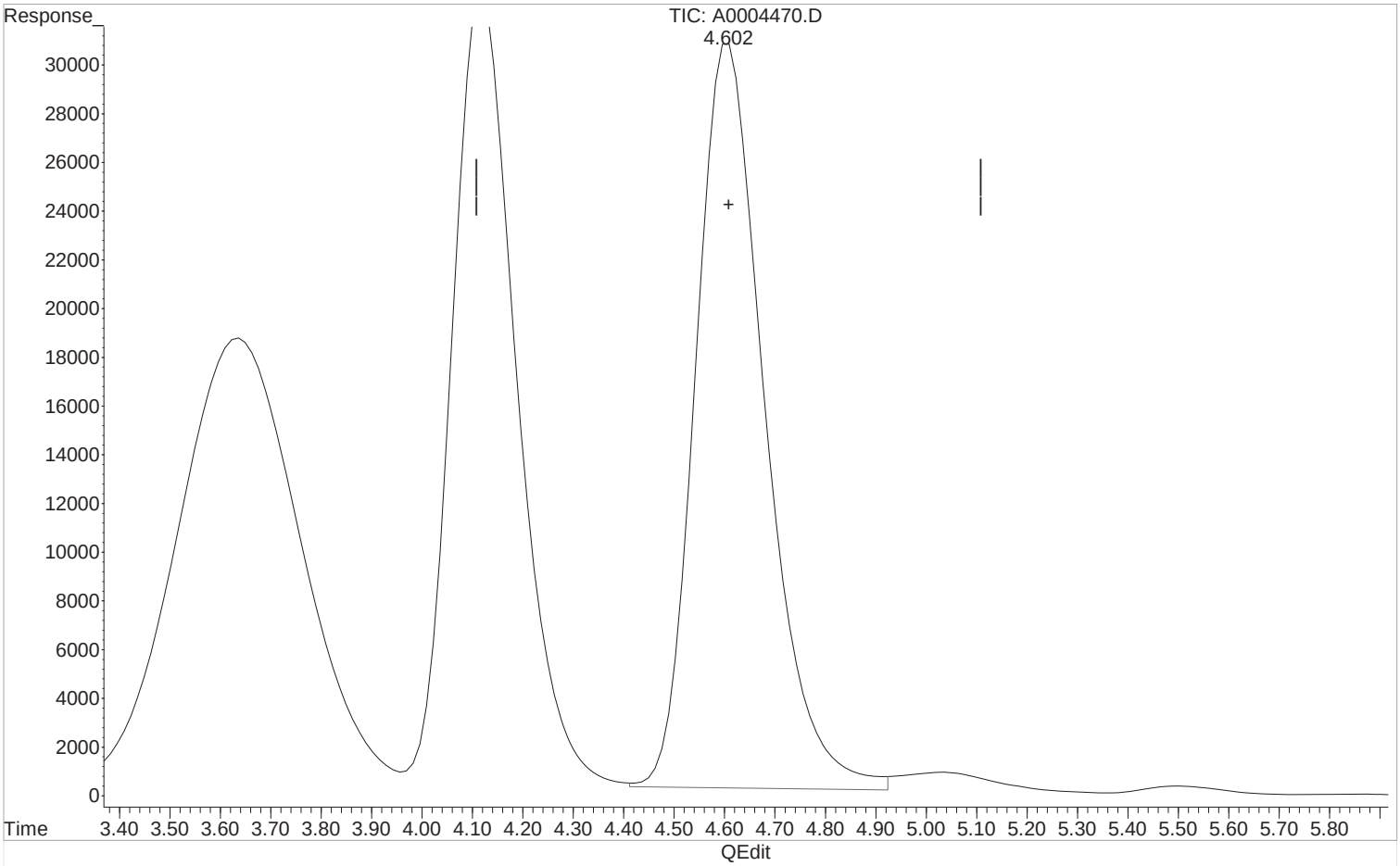
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004470.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:47:58
Operator : A.Felser
Sample : STD 6
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:24 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.610min 52.537 ppm

response 2931536

Manual Integration:

Before

03/16/20

(T) - Expected Retention Time
MA031220.M Mon Mar 16 09:26:06 2020

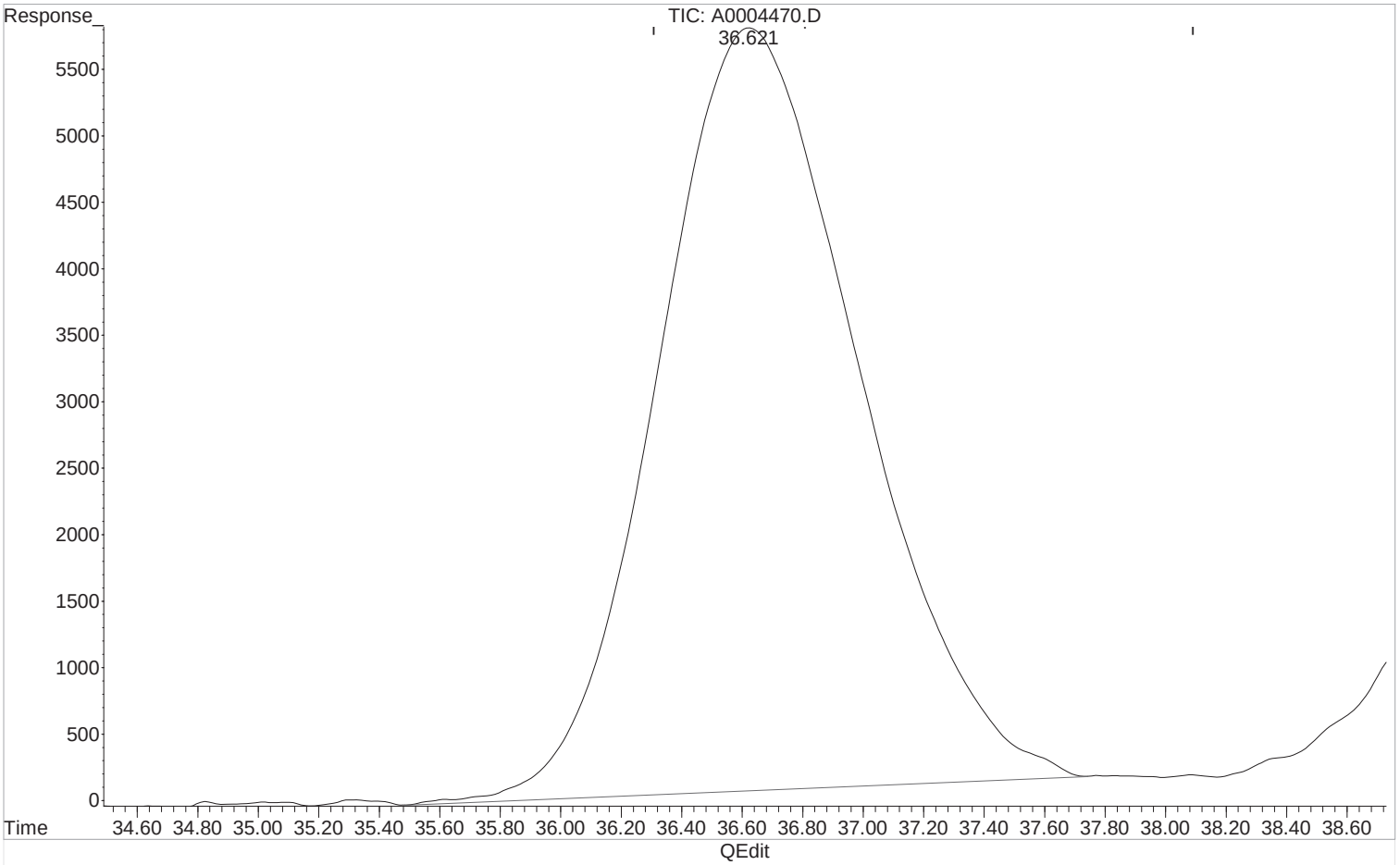
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004470.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:47:58
Operator : A.Felser
Sample : STD 6
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:24 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

36.621min 50.484 ppm m

response 2656312

Manual Integration:

After

Poor integration.

03/16/20

(F) - Expected Retention Time
MA031220.M Mon Mar 16 09:26:34 2020

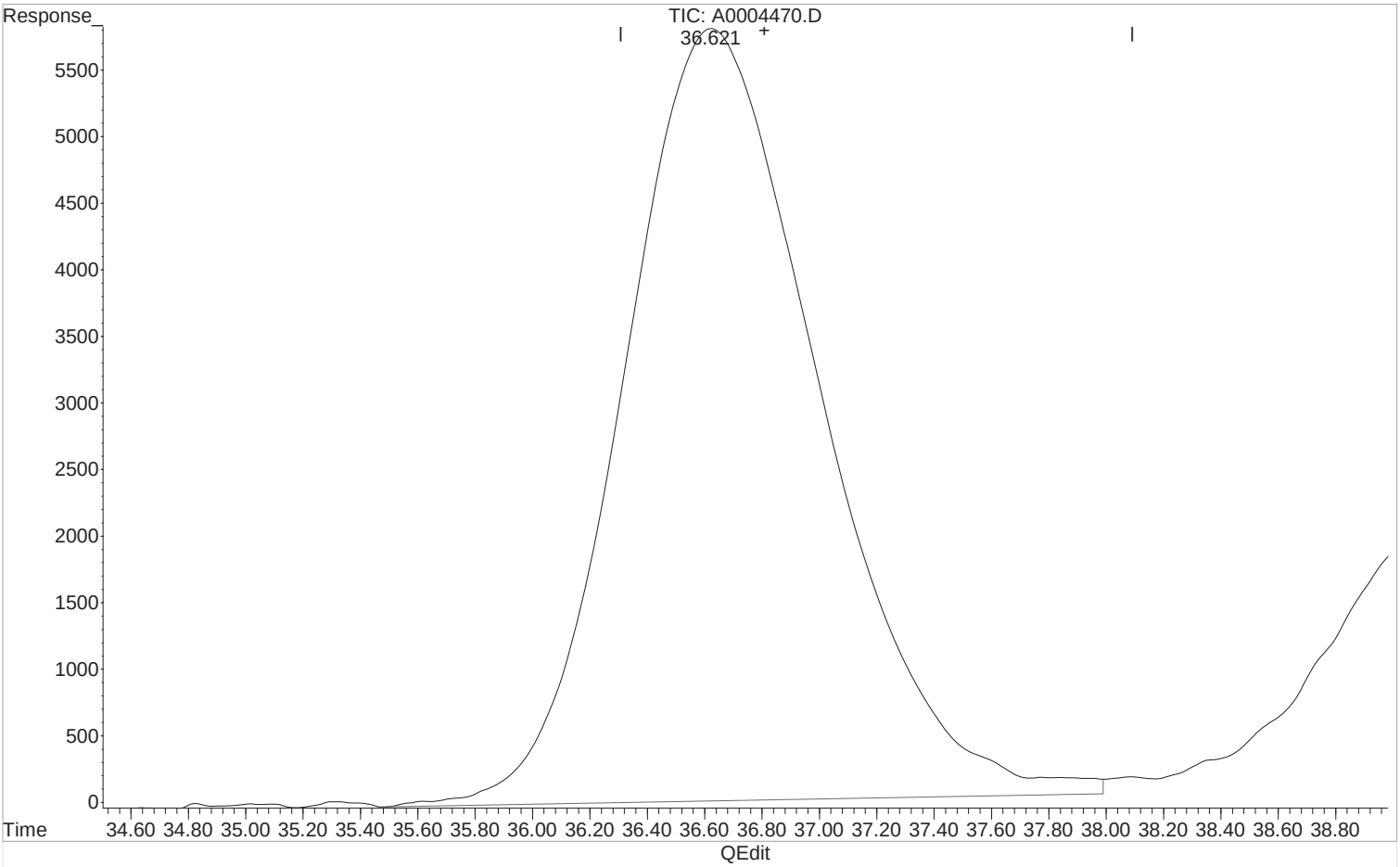
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004470.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:47:58
Operator : A.Felser
Sample : STD 6
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:24 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

36.628min 52.351 ppm

response 2754505

Manual Integration:

Before

03/16/20

(6) - Expected Retention Time
MA031220.M Mon Mar 16 09:26:20 2020

1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004470.D
Signal(s) : dad1C.ch
Acq On : ~~30-Dec-2000, 17:47:58~~ 12-Mar-2020, 17:51
Operator : A.Felser
Sample : STD 6
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:24 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	2.945	4706776	51.436	ppm	m
2) T	Pyruvic acid	3.633	2952886	5.066	ppm	m
3) T	Lactic Acid	4.116	2813056	50.780	ppm	m
4) T	Acetic Acid	4.602	2827626	50.675	ppm	m
5) T	Propionic Acid	11.574	2794775	50.872	ppm	
6) T	Butyric Acid	36.621	2656312	50.484	ppm	m

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

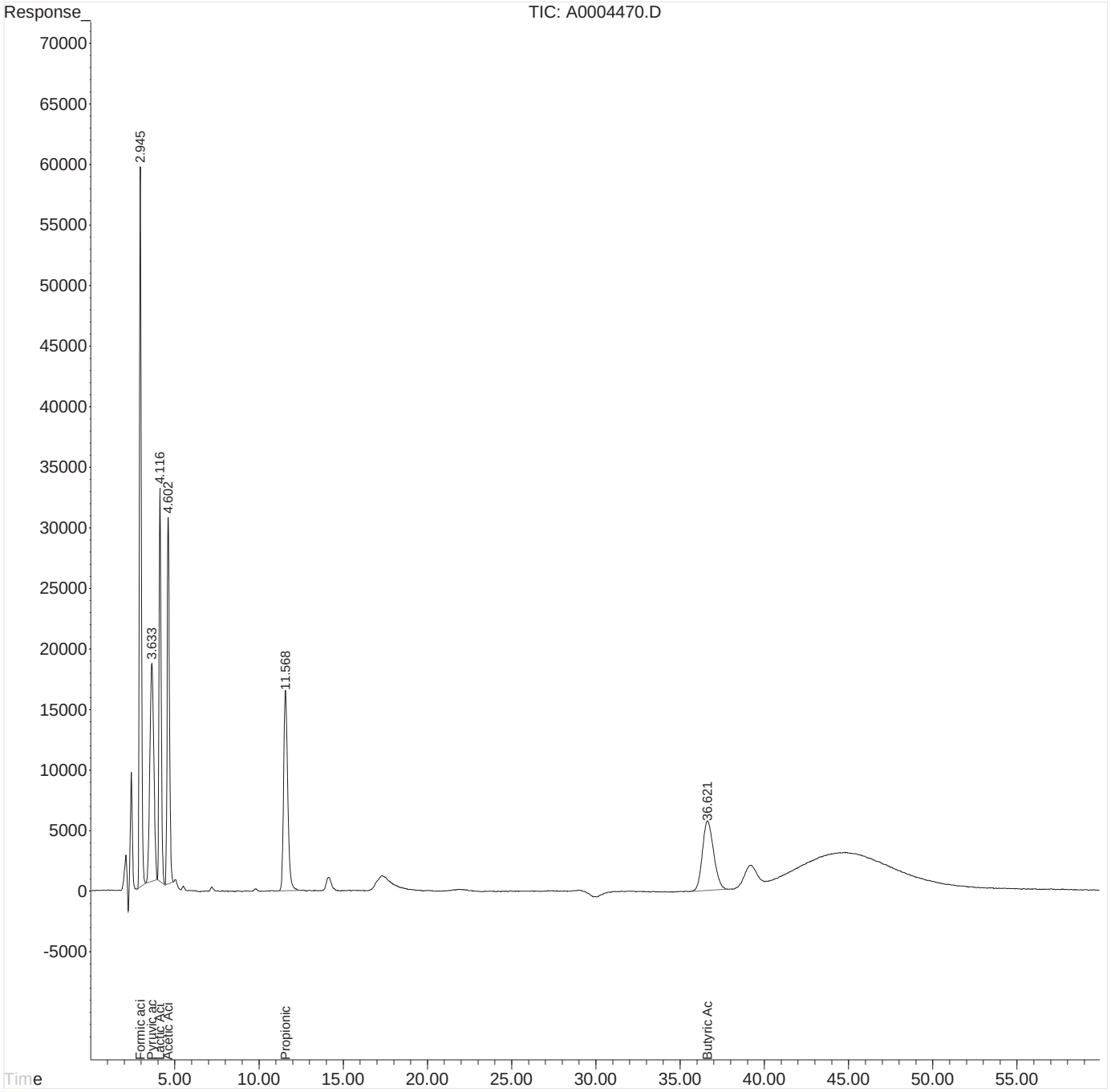
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004470.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:47:58
Operator : A.Felser
Sample : STD 6
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:24 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



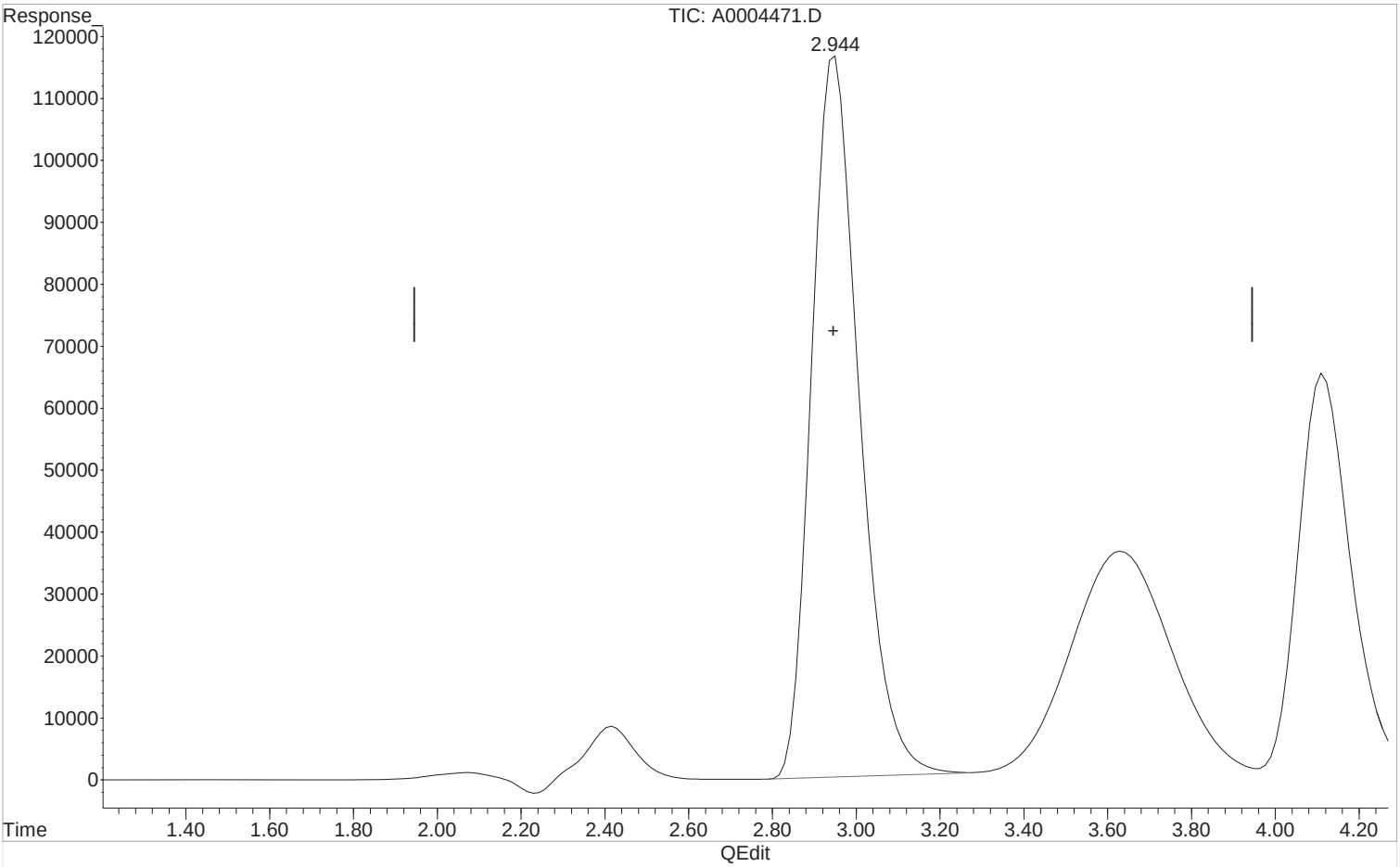
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004471.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 18:57:42
Operator : A.Felser
Sample : STD 7
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.944min 101.099 ppm m

response 9251260

Manual Integration:

After

Poor integration.

03/16/20

(t) - Expected Retention Time
MA031220.M Mon Mar 16 09:27:00 2020

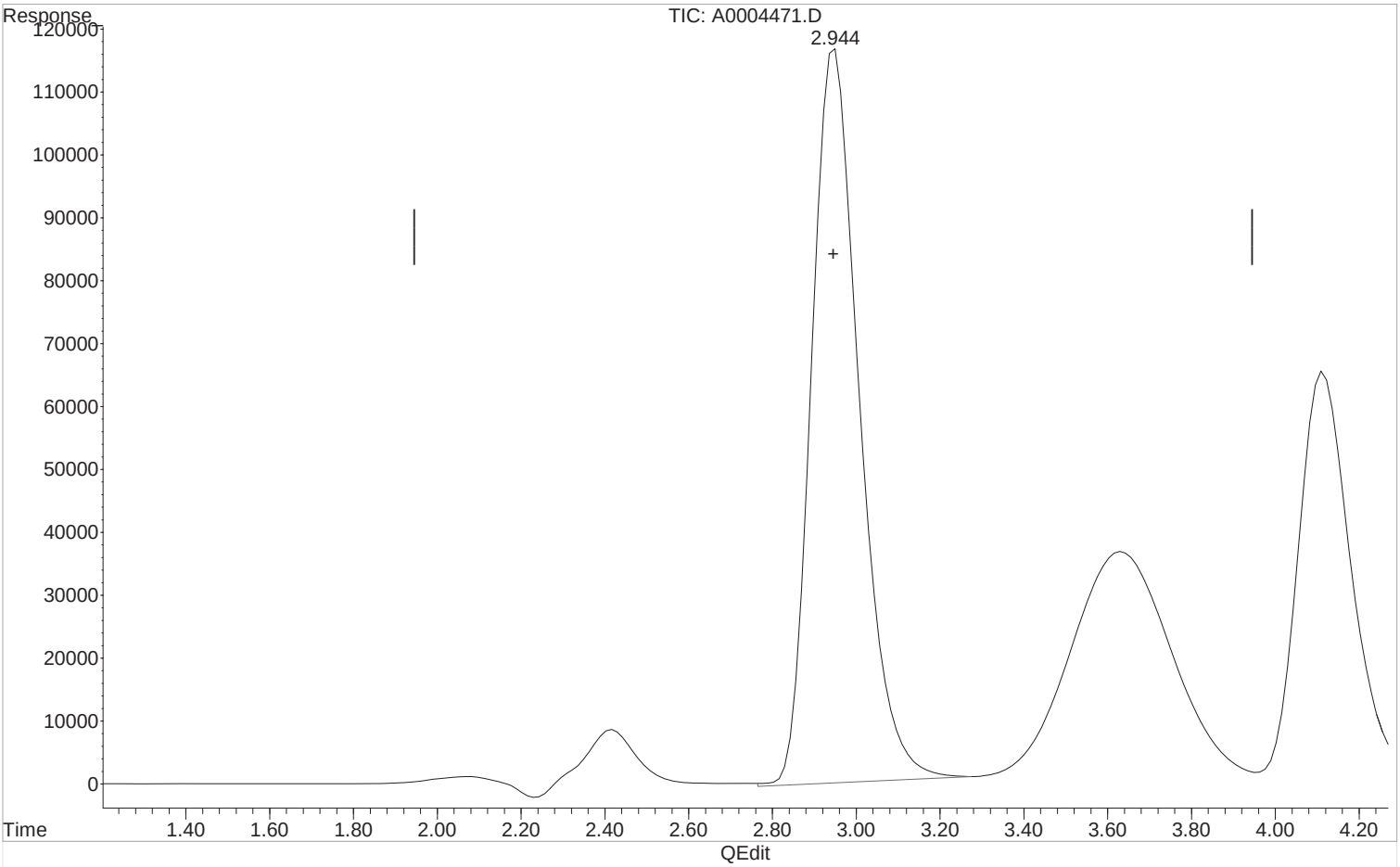
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004471.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 18:57:42
Operator : A.Felser
Sample : STD 7
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.950min 101.826 ppm

response 9317801

Manual Integration:

Before

03/16/20

(1) - Expected Retention Time

MA031220.M Mon Mar 16 09:26:51 2020

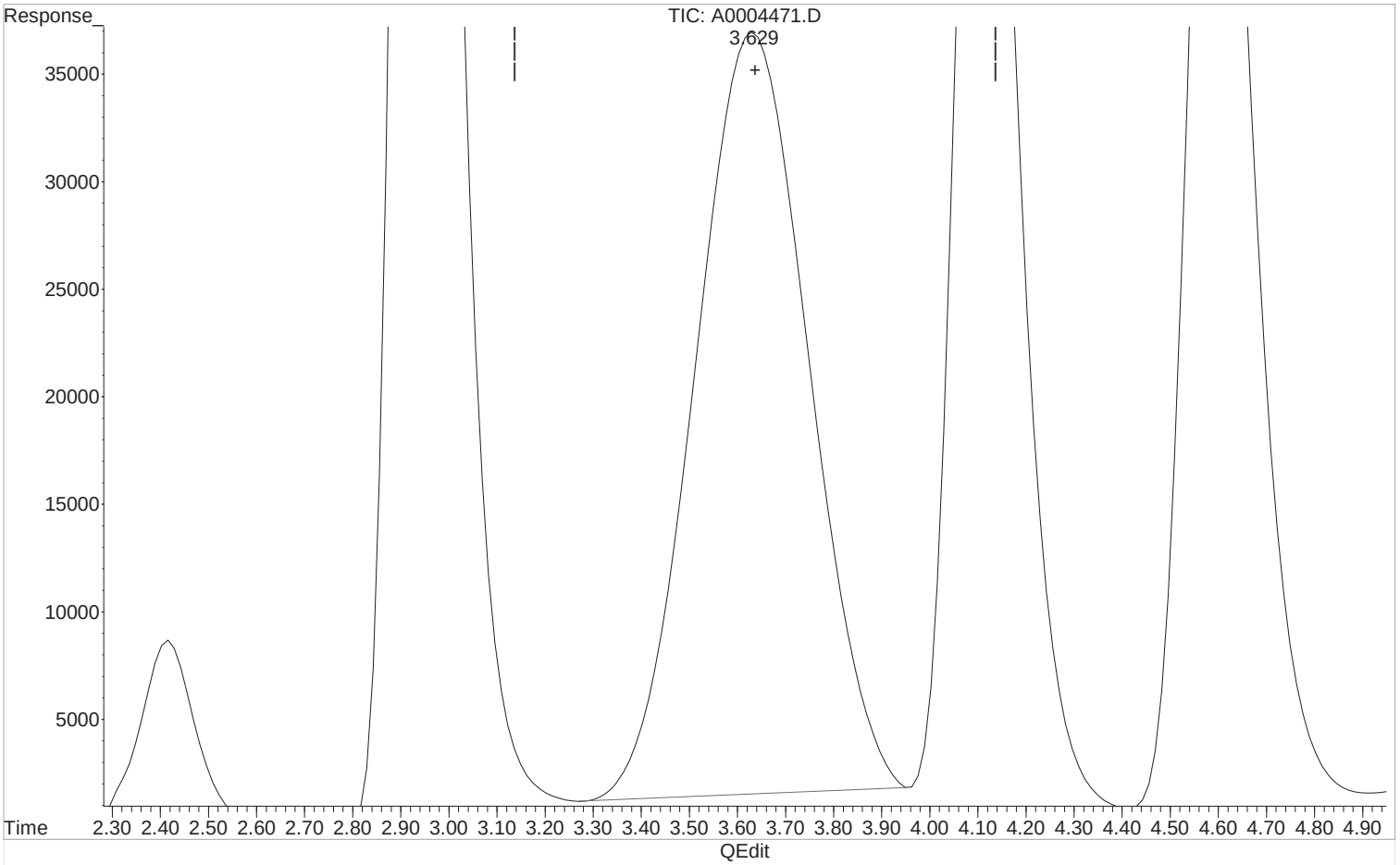
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004471.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 18:57:42
Operator : A.Felser
Sample : STD 7
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.629min 9.964 ppm m

response 5807459

Manual Integration:

After

Poor integration.

03/16/20

(F) - Expected Retention Time
MA031220.M Mon Mar 16 09:27:13 2020

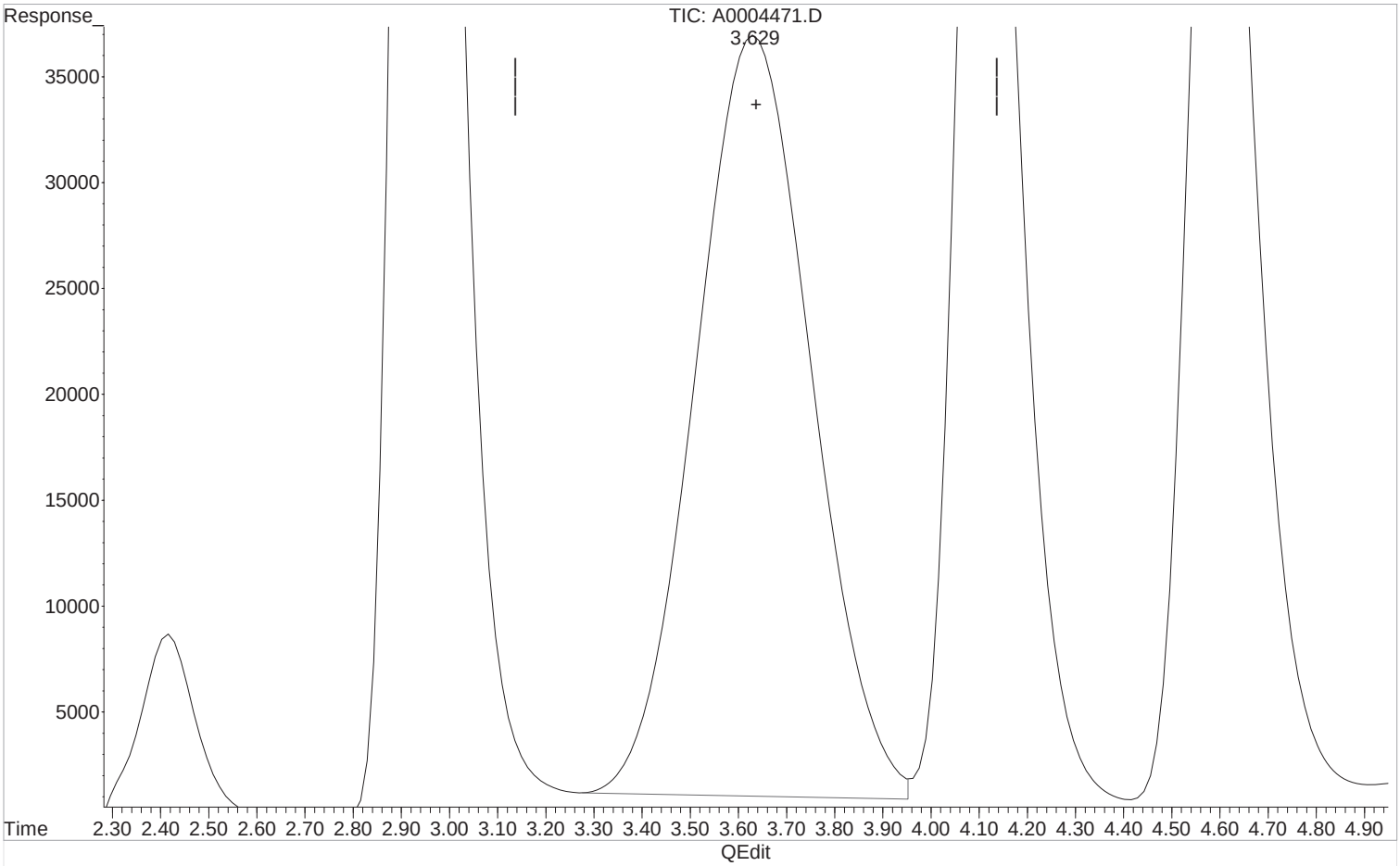
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004471.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 18:57:42
Operator : A.Felser
Sample : STD 7
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.635min 10.292 ppm

response 5999073

Manual Integration:

Before

03/16/20

(T) - Expected Retention Time
MA031220.M Mon Mar 16 09:27:04 2020

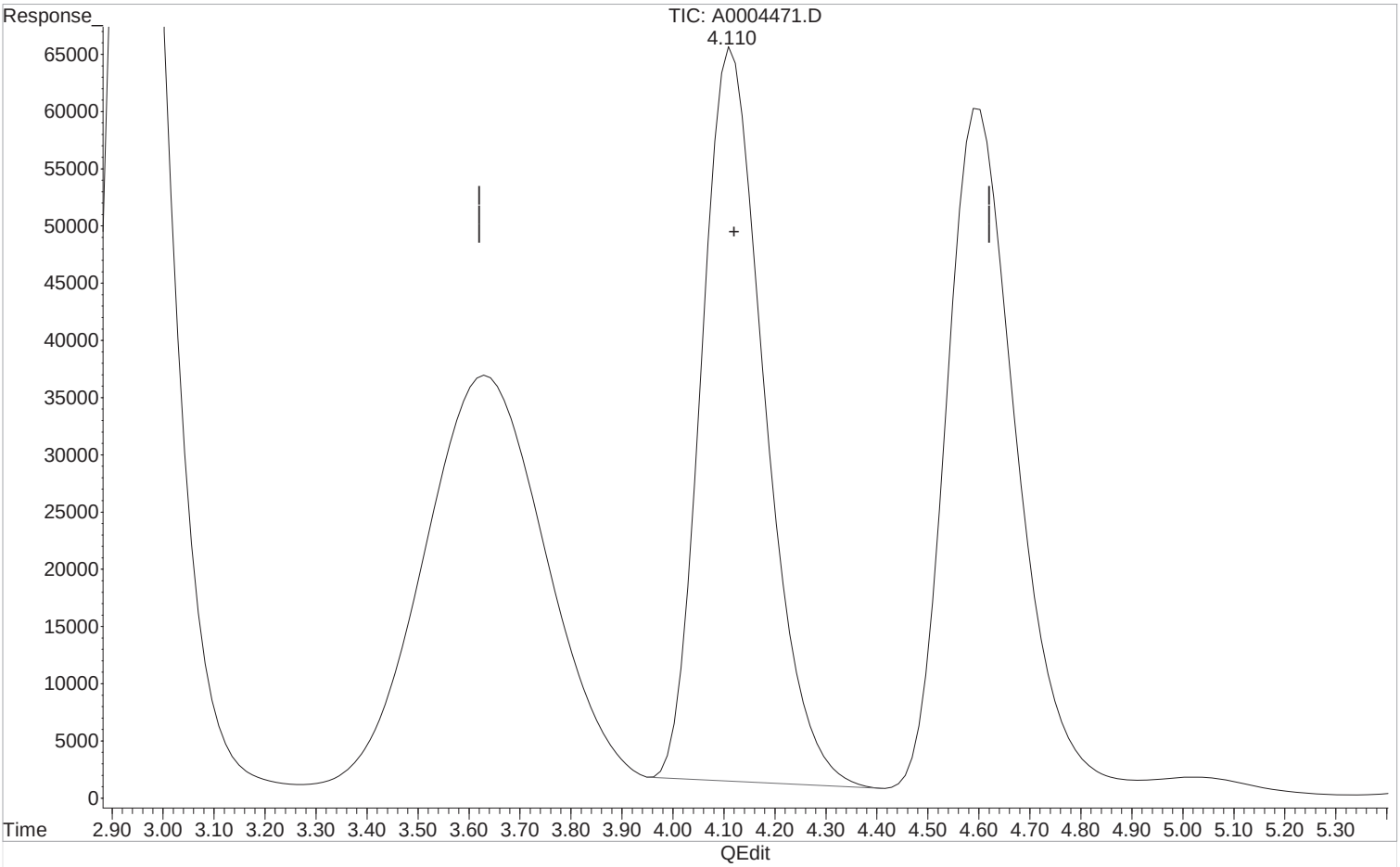
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004471.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 18:57:42
Operator : A.Felser
Sample : STD 7
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.110min 100.101 ppm m

response 5545238

Manual Integration:

After

Poor integration.

03/16/20

(T) = Expected Retention Time
MA031220.M Mon Mar 16 09:27:28 2020

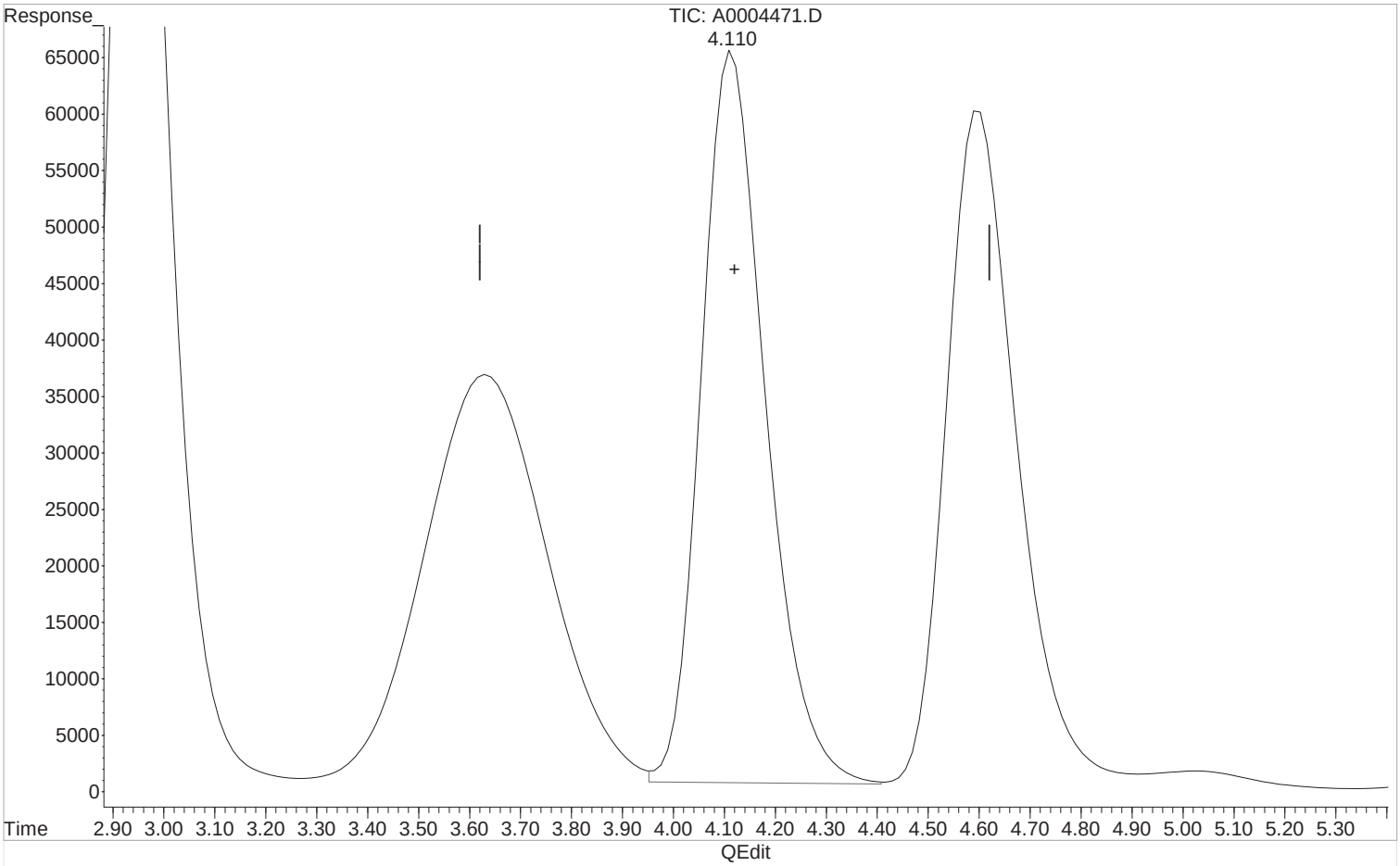
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004471.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 18:57:42
Operator : A.Felser
Sample : STD 7
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.117min 102.879 ppm

response 5699157

Manual Integration:

Before

03/16/20

(T) = Expected Retention Time
MA031220.M Mon Mar 16 09:27:16 2020

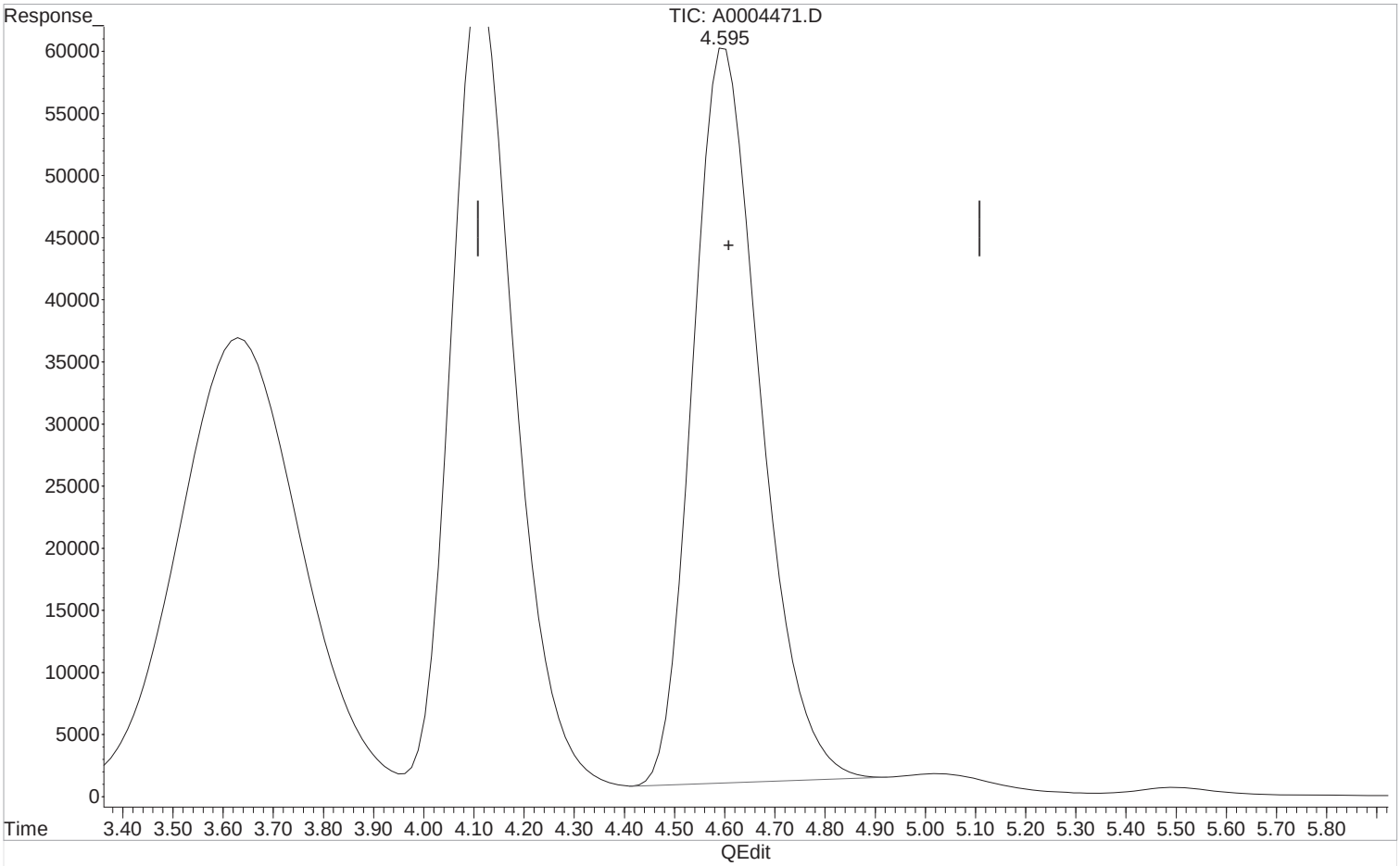
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004471.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 18:57:42
Operator : A.Felser
Sample : STD 7
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.595min 99.609 ppm m

response 5558142

Manual Integration:

After

Poor integration.

03/16/20

(T) = Expected Retention Time
MA031220.M Mon Mar 16 09:27:39 2020

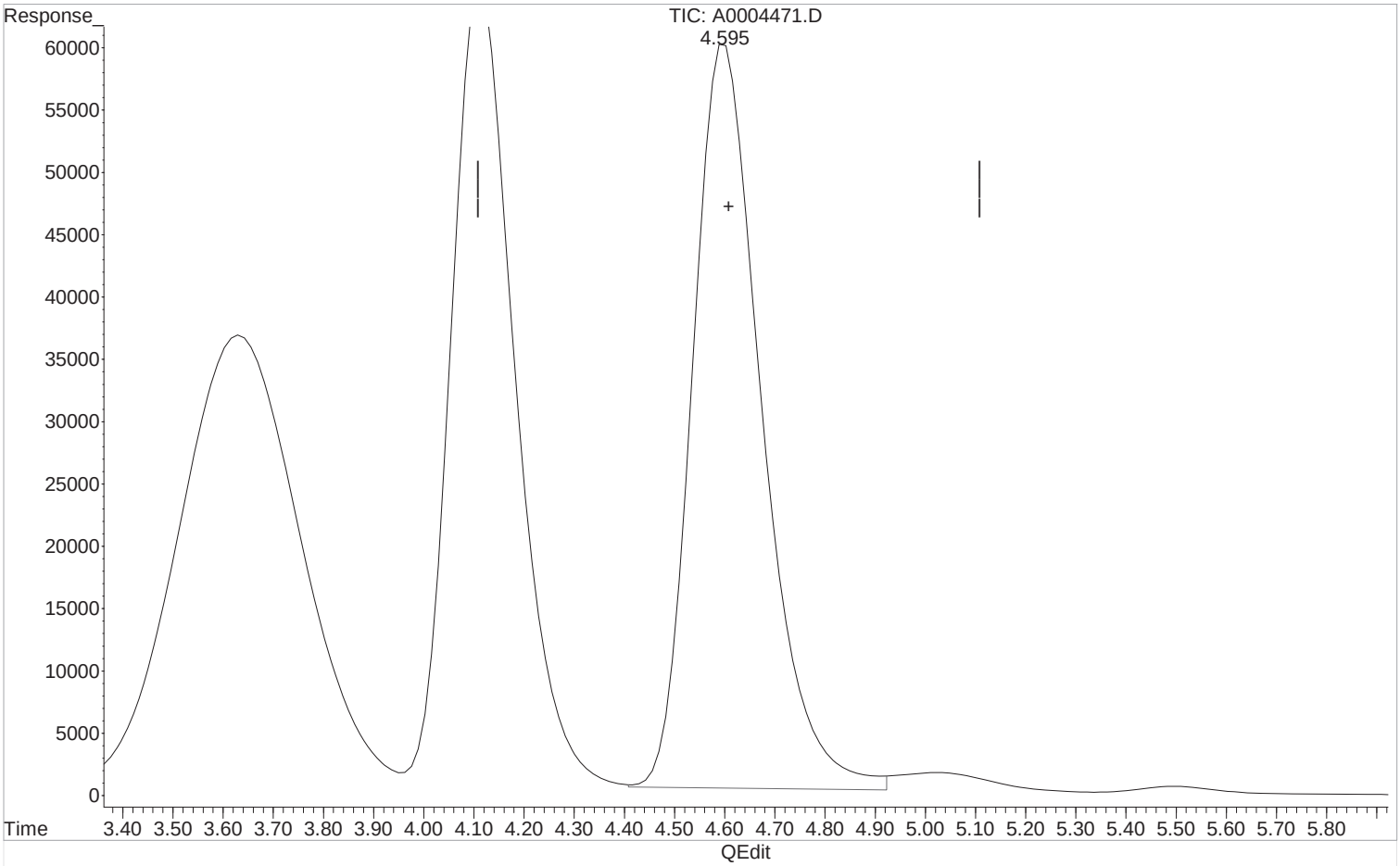
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004471.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 18:57:42
Operator : A.Felser
Sample : STD 7
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.602min 103.031 ppm

response 5749108

Manual Integration:

Before

03/16/20

(T) = Expected Retention Time
MA031220.M Mon Mar 16 09:27:31 2020

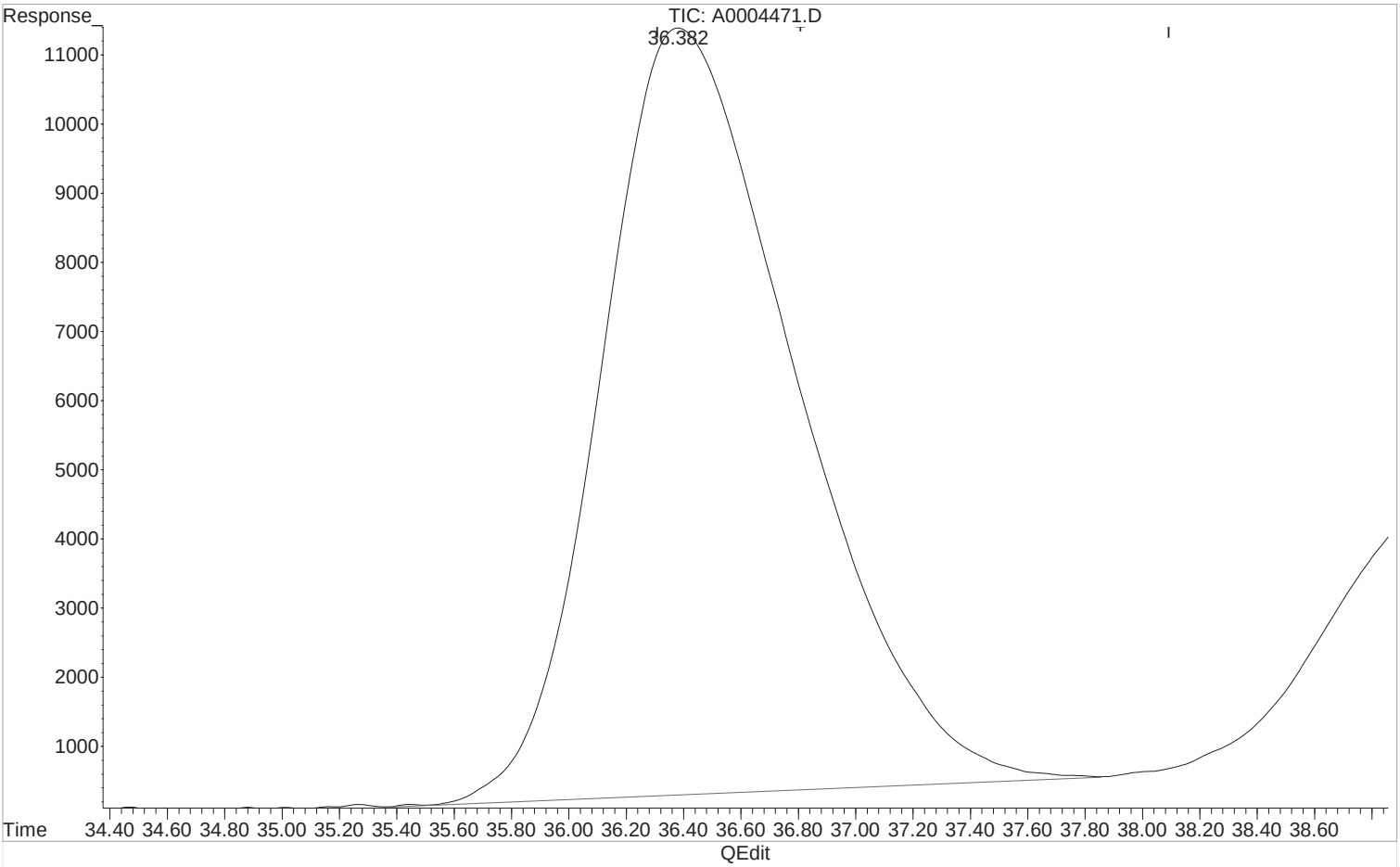
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004471.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 18:57:42
Operator : A.Felser
Sample : STD 7
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

36.382min 99.663 ppm m

response 5243902

Manual Integration:

After

Poor integration.

03/16/20

(F) - Expected Retention Time
MA031220.M Mon Mar 16 09:27:56 2020

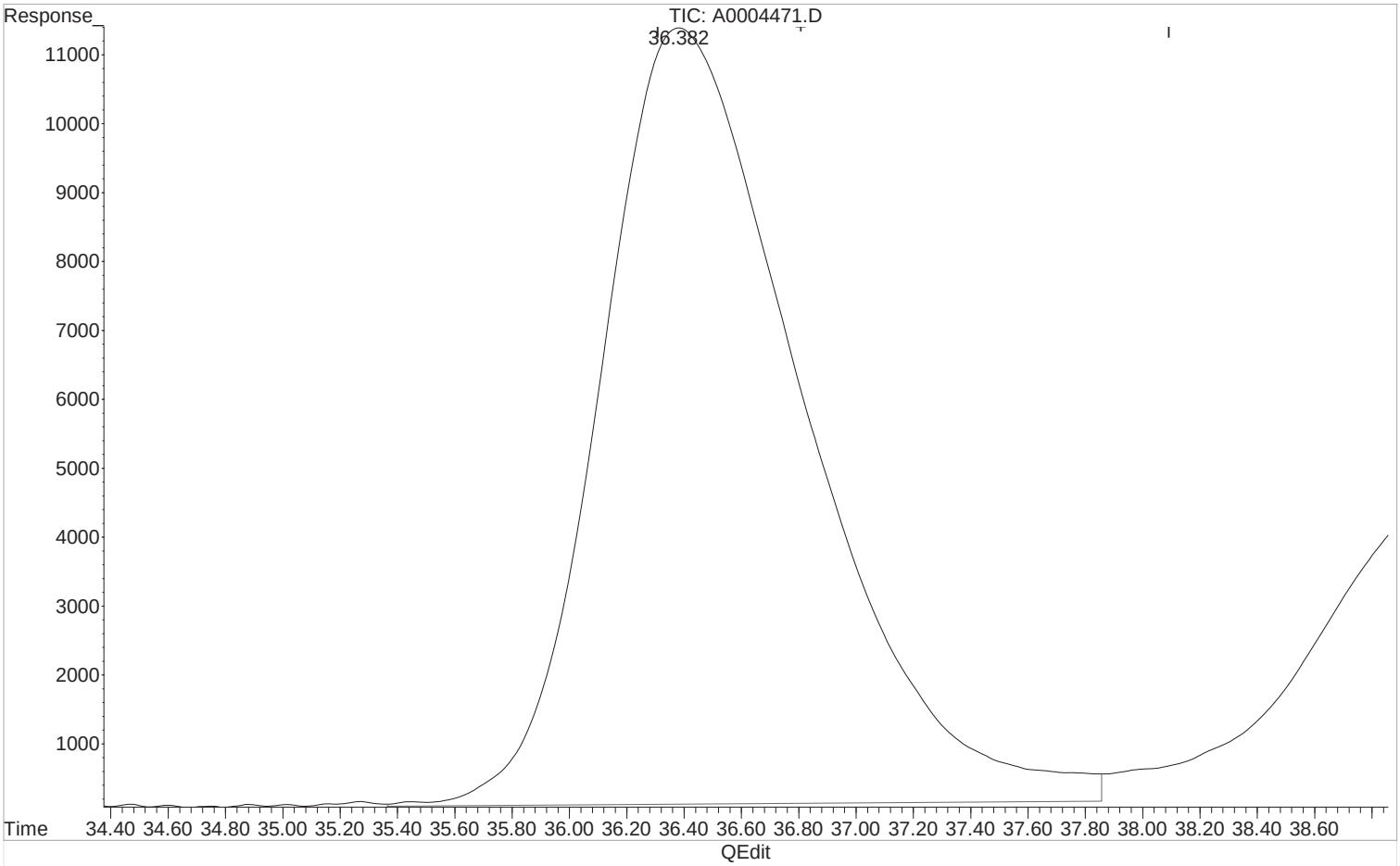
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004471.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 18:57:42
Operator : A.Felser
Sample : STD 7
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

36.387min 105.508 ppm

response 5551464

Manual Integration:

Before

03/16/20

(6) - Expected Retention Time
MA031220.M Mon Mar 16 09:27:45 2020

1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004471.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 18:57:42
Operator : A.Felser
Sample : STD 7
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	2.944	9251260	101.099	ppm	m
2) T	Pyruvic acid	3.629	5807459	9.964	ppm	m
3) T	Lactic Acid	4.110	5545238	100.101	ppm	m
4) T	Acetic Acid	4.595	5558142	99.609	ppm	m
5) T	Propionic Acid	11.528	5536155	100.773	ppm	
6) T	Butyric Acid	36.382	5243902	99.663	ppm	m

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

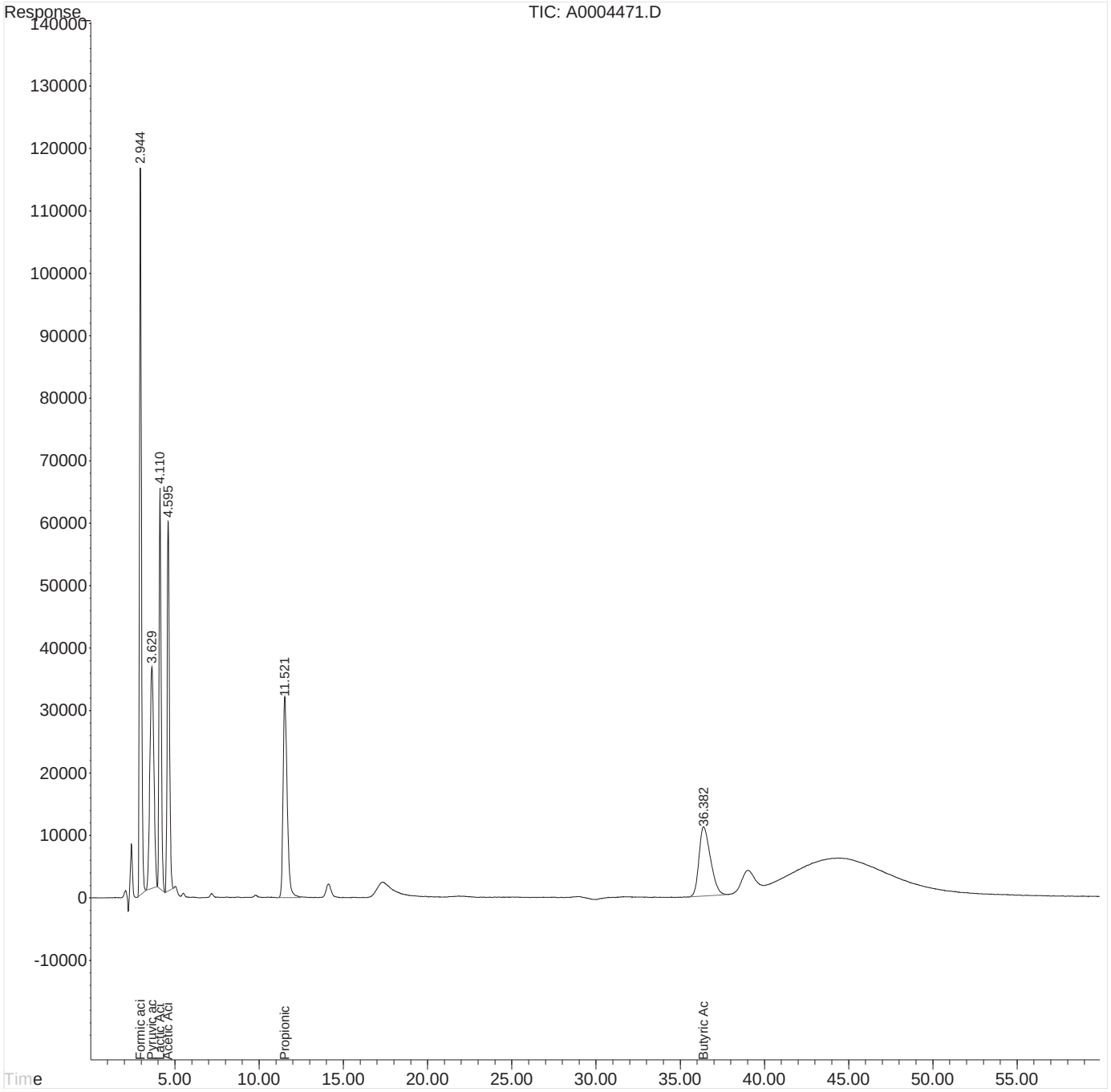
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004471.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 18:57:42
Operator : A.Felser
Sample : STD 7
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



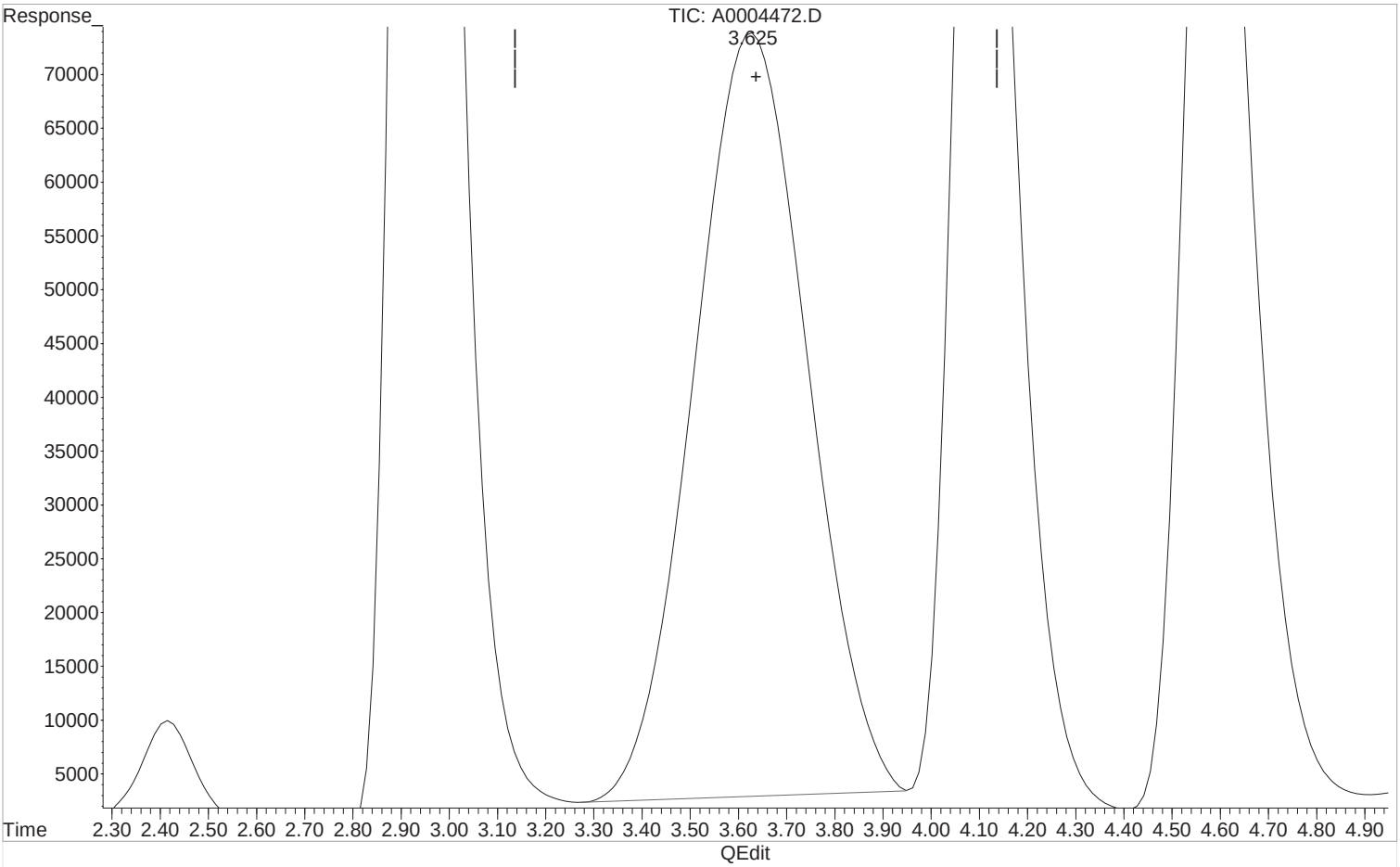
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004472.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 20:00:49
Operator : A.Felser
Sample : STD 8
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.625min 19.912 ppm m

response 11605902

Manual Integration:

After

Poor integration.

03/16/20

(F) = Expected Retention Time
MA031220.M Mon Mar 16 09:28:32 2020

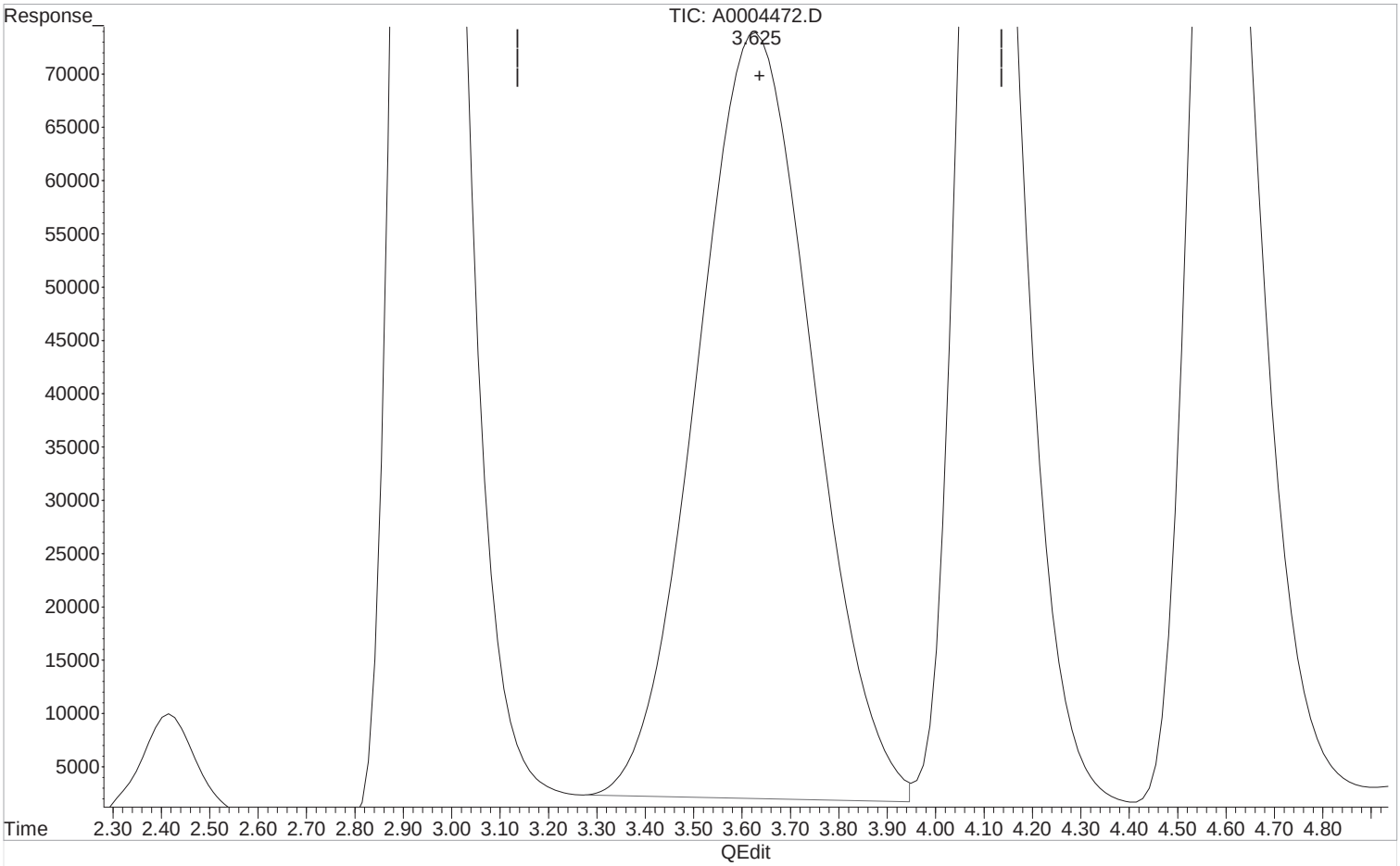
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004472.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 20:00:49
Operator : A.Felser
Sample : STD 8
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.630min 20.492 ppm

response 11944441

Manual Integration:

Before

03/16/20

(F) - Expected Retention Time
MA031220.M Mon Mar 16 09:28:15 2020

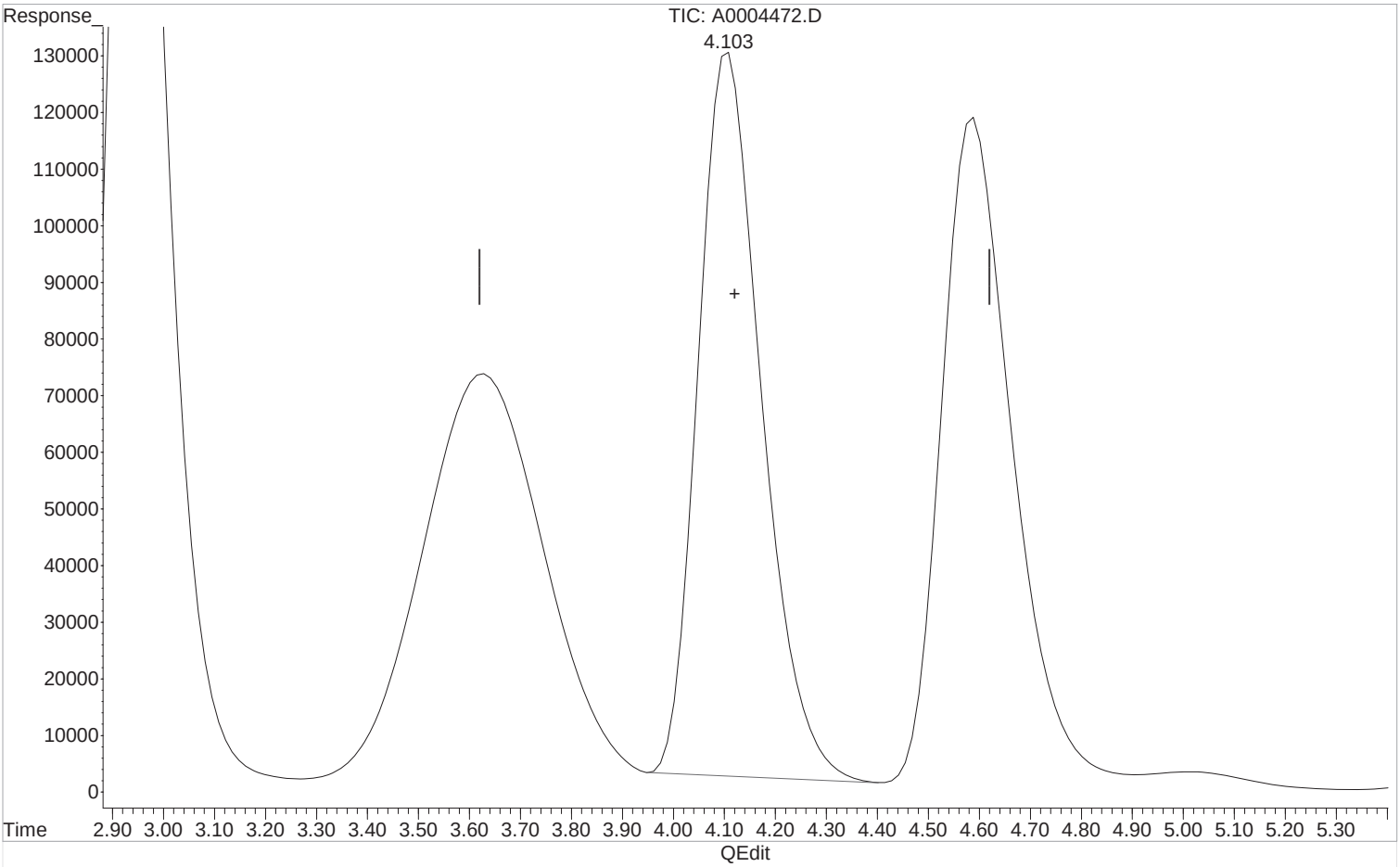
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004472.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 20:00:49
Operator : A.Felser
Sample : STD 8
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.103min 199.720 ppm m

response 11063811

Manual Integration:

After

Poor integration.

03/16/20

(T) = Expected Retention Time
MA031220.M Mon Mar 16 09:28:43 2020

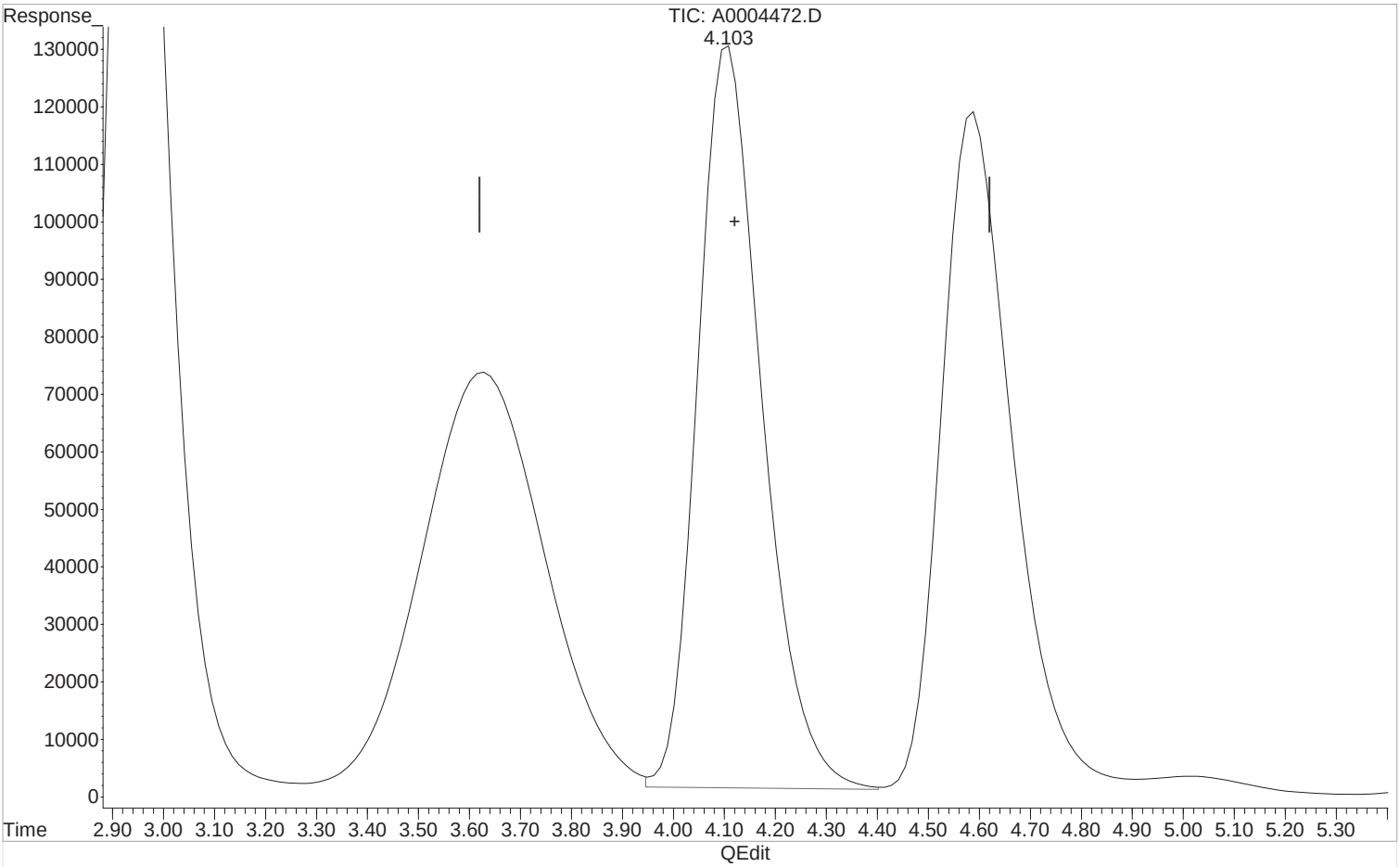
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004472.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 20:00:49
Operator : A.Felser
Sample : STD 8
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.110min 205.006 ppm

response 11356650

Manual Integration:

Before

03/16/20

(T) = Expected Retention Time
MA031220.M Mon Mar 16 09:28:35 2020

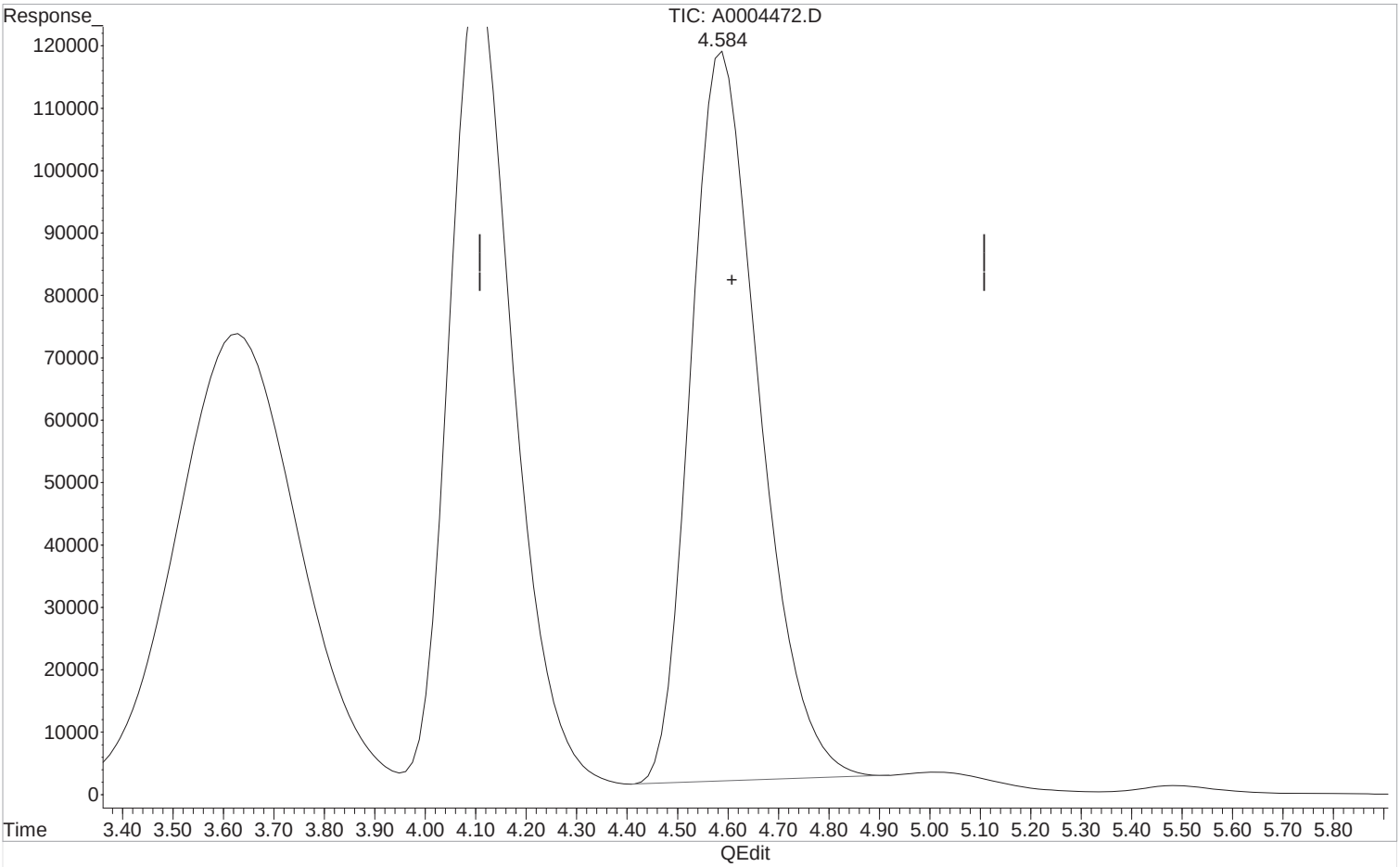
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004472.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 20:00:49
Operator : A.Felser
Sample : STD 8
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.584min 197.987 ppm m

response 11047591

Manual Integration:

After

Poor integration.

03/16/20

(T) - Expected Retention Time
MA031220.M Mon Mar 16 09:28:54 2020

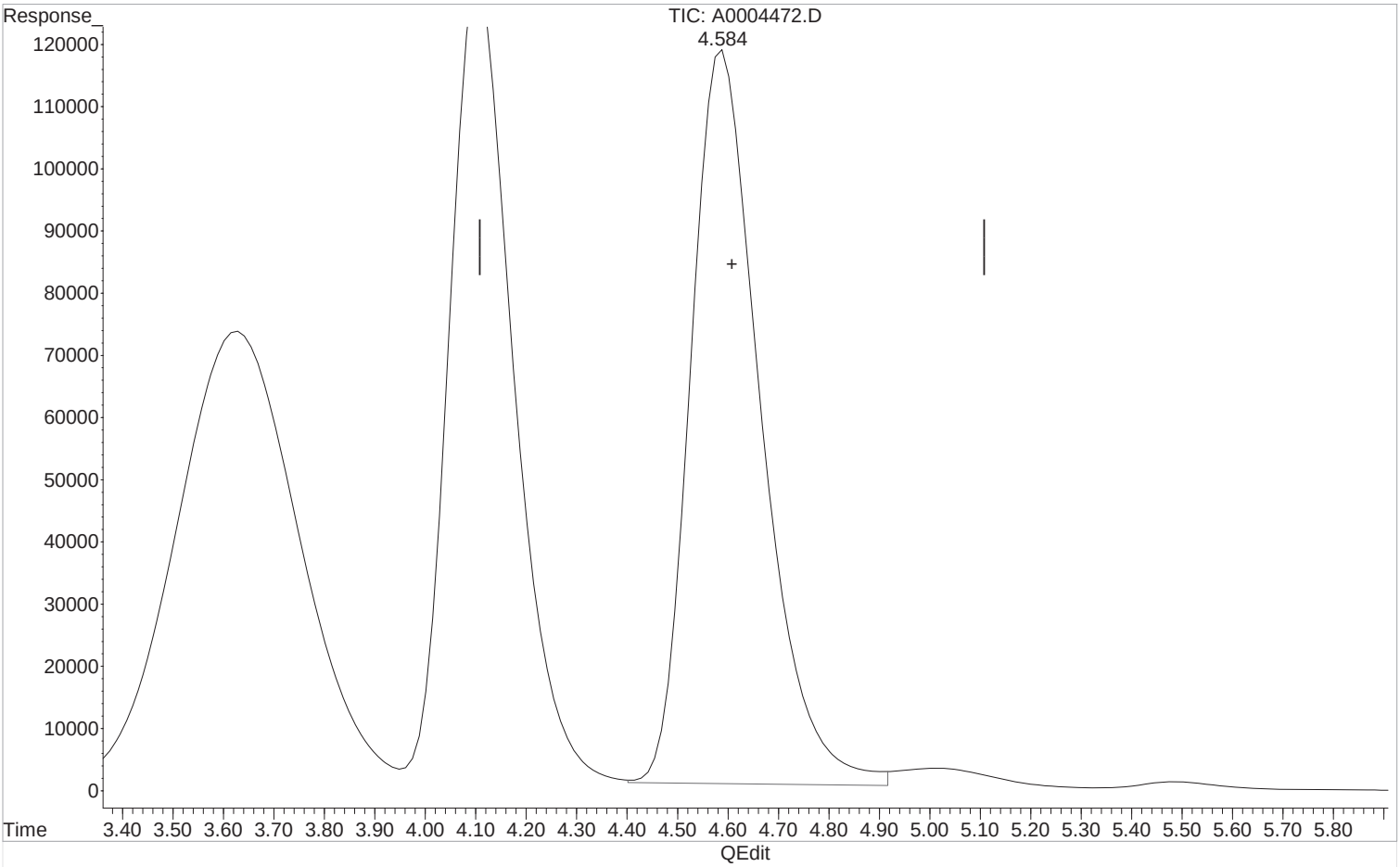
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004472.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 20:00:49
Operator : A.Felser
Sample : STD 8
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.592min 205.148 ppm

response 11447174

Manual Integration:

Before

03/16/20

(T) = Expected Retention Time
MA031220.M Mon Mar 16 09:28:46 2020

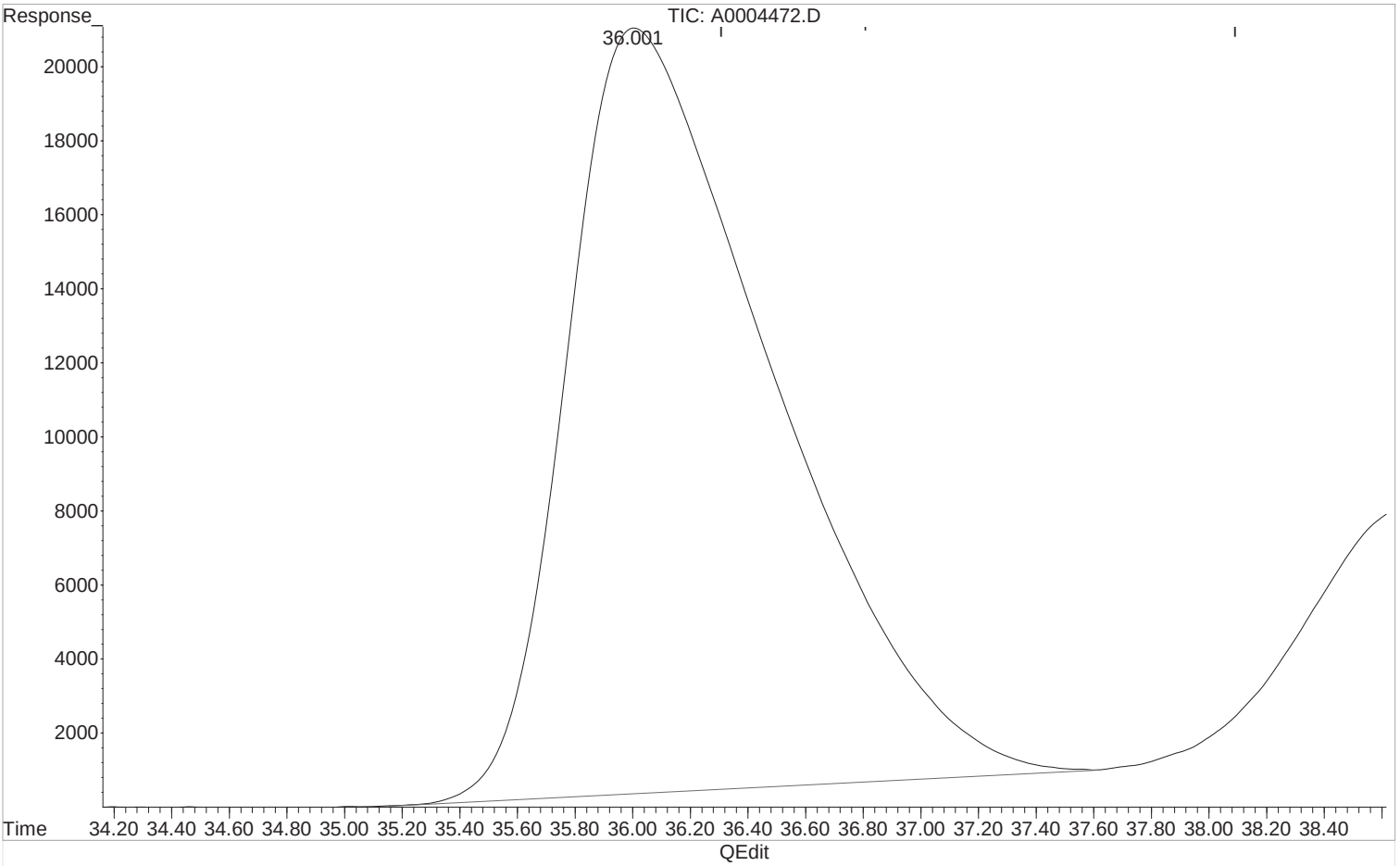
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004472.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 20:00:49
Operator : A.Felser
Sample : STD 8
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

36.001min 196.253 ppm m

response 10326182

Manual Integration:

After

Poor integration.

03/16/20

(T) - Expected Retention Time
MA031220.M Mon Mar 16 09:29:16 2020

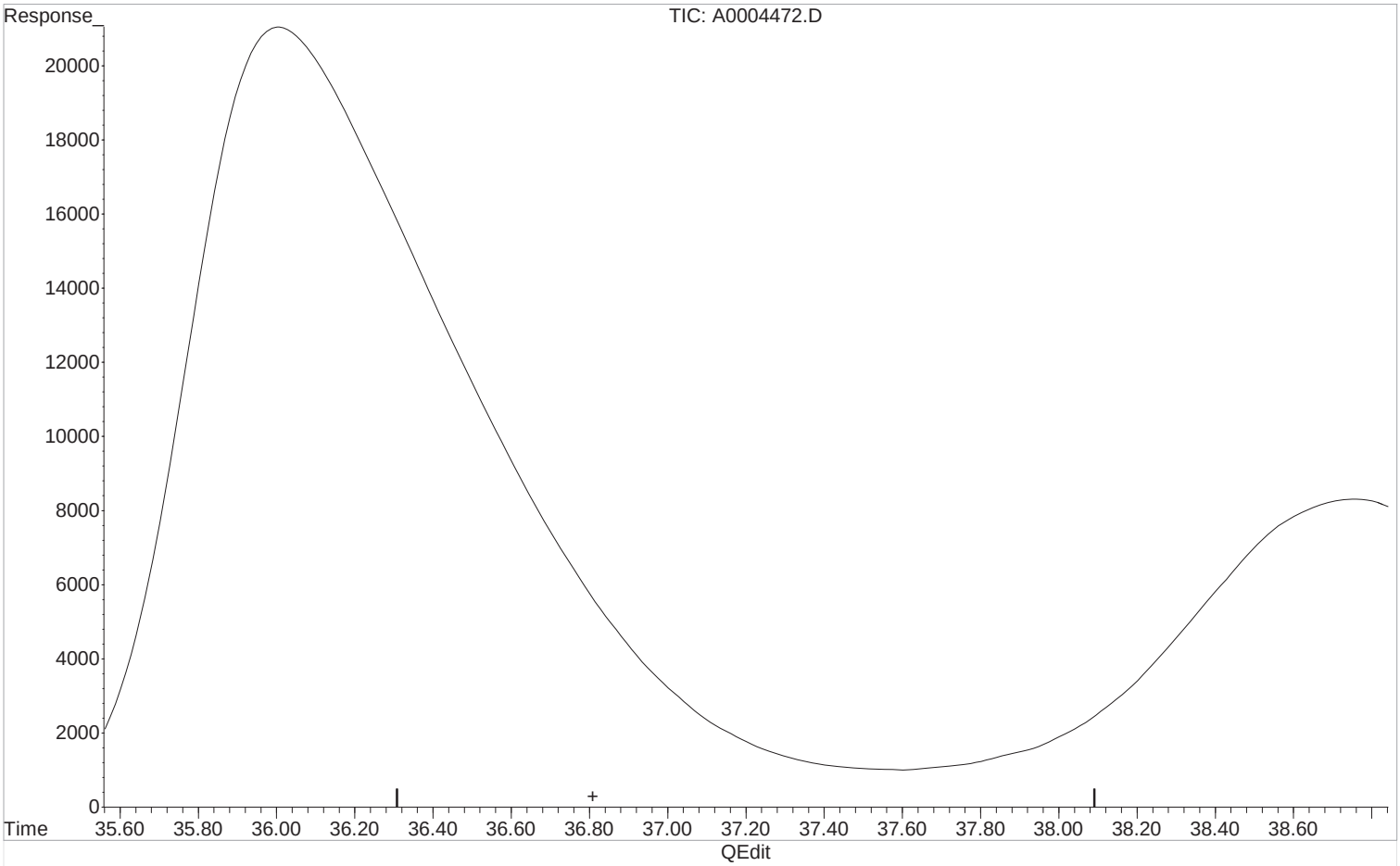
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004472.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 20:00:49
Operator : A.Felser
Sample : STD 8
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

36.808min 0.000 ppm

response 0

Manual Integration:

Before

03/16/20

(F) - Expected Retention Time
MA031220.M Mon Mar 16 09:28:59 2020

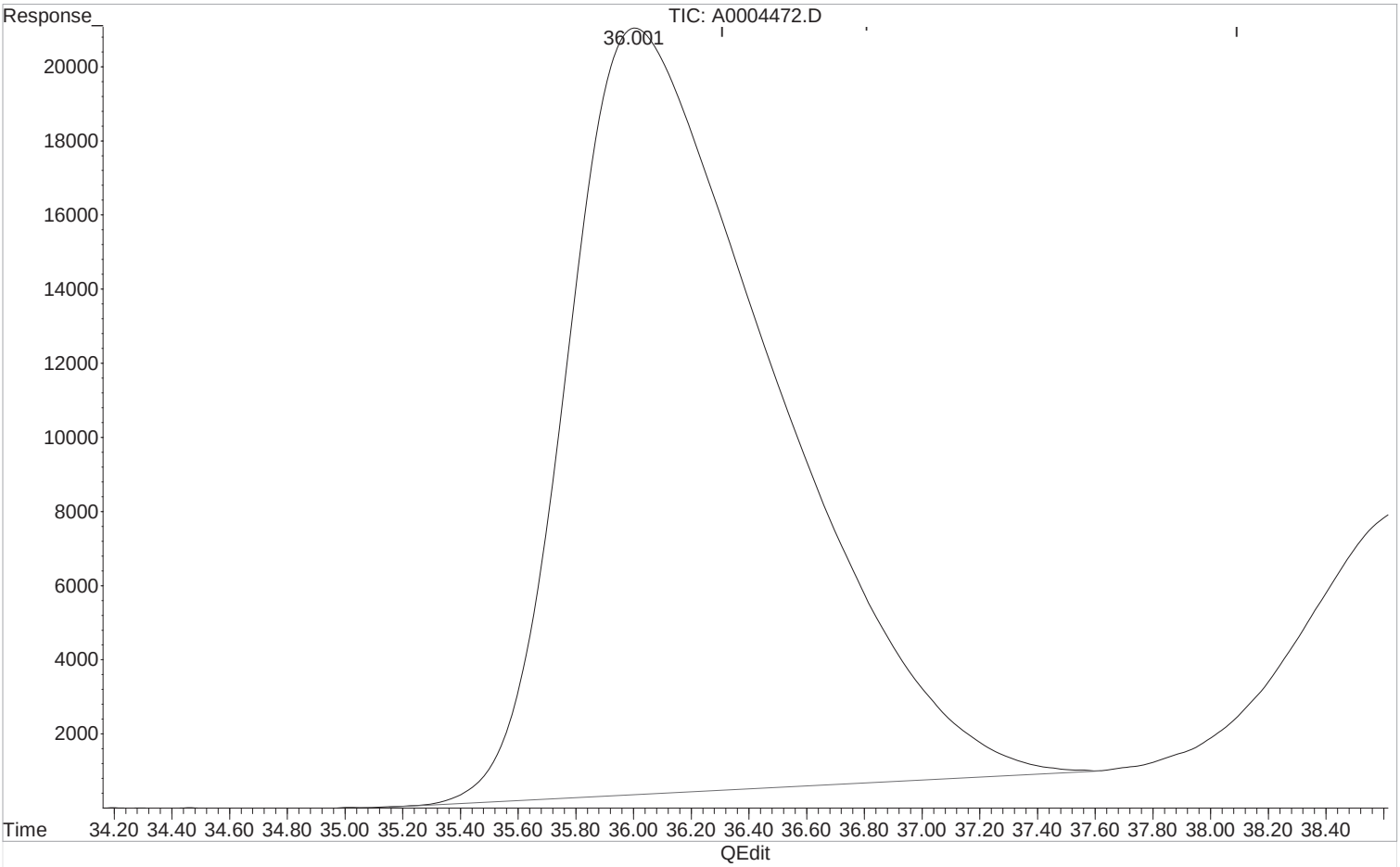
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004472.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 20:00:49
Operator : A.Felser
Sample : STD 8
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

36.001min 196.253 ppm m

response 10326182

Manual Integration:

After

Peak not found.

03/16/20

(6) - Expected Retention Time
MA031220.M Mon Mar 16 09:29:21 2020

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: LHAAP / Site 58

Service Request: R2005353
Calibration Date: 12/30/2000

Initial Calibration Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Calibration ID: RC2000053
Instrument ID: R-HPLC-05

Signal ID: 1

#	Lab Code	Sample Name	File Location	Acquisition Date
01	RC2000053-01	STD 1	I:\ACQUDATA\hplc05\data\031220\A0004465.D	03/12/2020 12:39
02	RC2000053-02	STD 2	I:\ACQUDATA\hplc05\data\031220\A0004466.D	03/12/2020 13:42
04	RC2000053-04	STD 4	I:\ACQUDATA\hplc05\data\031220\A0004468.D	03/12/2020 15:48
07	RC2000053-07	STD 7	I:\ACQUDATA\hplc05\data\031220\A0004471.D	03/12/2020 18:57
08	RC2000053-08	STD 8	I:\ACQUDATA\hplc05\data\031220\A0004472.D	03/12/2020 20:00
03	RC2000053-03	STD 3	I:\ACQUDATA\hplc05\data\031220\A0004467.D	12/30/2000 02:48
06	RC2000053-06	STD 6	I:\ACQUDATA\hplc05\data\031220\A0004470.D	12/30/2000 17:47
05	RC2000053-05	STD 5	I:\ACQUDATA\hplc05\data\031220\A0004469.D	12/30/2000 17:48

Analyte

Acetic Acid

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	1	5.521E4	02	2	5.659E4	03	5	5.611E4	04	10	5.731E4
05	20	5.58E4	06	50	5.655E4	07	100	5.558E4	08	200	5.524E4

Butanoic Acid (Butyric Acid)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	1	5.323E4	02	2	5.338E4	03	5	5.087E4	04	10	5.32E4
05	20	5.262E4	06	50	5.313E4	07	100	5.244E4	08	200	5.163E4

Lactic Acid

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	1	6.266E4	02	2	5.467E4	03	5	5.515E4	04	10	5.641E4
05	20	5.54E4	06	50	5.626E4	07	100	5.545E4	08	200	5.532E4

Propionic Acid

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	1	5.153E4	02	2	5.435E4	03	5	5.182E4	04	10	5.598E4
05	20	5.494E4	06	50	5.59E4	07	100	5.536E4	08	200	5.497E4

Pyruvic Acid

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	.1	6.507E5	02	.2	5.665E5	03	.5	5.865E5	04	1	5.943E5
05	2	5.829E5	06	5	5.906E5	07	10	5.807E5	08	20	5.803E5

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: LHAAP / Site 58

Service Request: R2005353
Calibration Date: 12/30/2000

Initial Calibration Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Calibration ID: RC2000053
Instrument ID: R-HPLC-05

Signal ID: 1

Analyte Name	Compound Type	Calibration Evaluation				Calibration Evaluation	
		Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
Acetic Acid	TRG	Average RF	% RSD	1.3	≤	5.605E4	
Butanoic Acid (Butyric Acid)	TRG	Average RF	% RSD	1.7	≤	5.256E4	
Lactic Acid	TRG	Average RF	% RSD	4.6	≤	5.642E4	
Propionic Acid	TRG	Average RF	% RSD	3.2	≤	5.436E4	
Pyruvic Acid	TRG	Average RF	% RSD	4.3	≤	5.916E5	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: LHAAP / Site 58

Service Request: R2005353
Calibration Date: 12/30/2000

Initial Calibration Verification Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Calibration ID: RC2000053
Instrument ID: R-HPLC-05

Signal ID: 1

#	Lab Code	Sample Name	File Location	Acquisition Date
09	RC2000053-09	ICV	I:\ACQUDATA\hplc05\data\031620\A0004777.D	12/30/2000 00:01

Analyte Name	Expected	Result	Average RF	SSV RF	Rec.	Criteria	Curve Fit
Pyruvic Acid	2.00	1.80	5.916E5	5.334E5	90.0	85-115	Average RF
Acetic Acid	20.0	18.9	5.605E4	5.295E4	94.5	85-115	Average RF
Butanoic Acid (Butyric Acid)	20.0	19.4	5.256E4	5.089E4	97.0	85-115	Average RF
Lactic Acid	20.0	18.8	5.642E4	5.298E4	94.0	85-115	Average RF
Propionic Acid	20.0	20.4	5.436E4	5.533E4	102	85-115	Average RF

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: LHAAP / Site 58

Service Request: R2005353
Date Analyzed: 07/01/20 13:56

Continuing Calibration Verification (CCV) Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids
File ID: I:\ACQUDATA\hplc05\data\070120\A0005448.D\
Signal ID: 1

Calibration Date: 12/30/2000
Calibration ID: RC2000053
Analysis Lot: 686010
Units: mg/L

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Pyruvic Acid	5.00	5.23	5.916E5	6.194E5	4.7	NA	±15	Average RF
Acetic Acid	50.0	49.7	5.605E4	5.568E4	-0.7	NA	±15	Average RF
Butanoic Acid (Butyric Acid)	50.0	49.0	5.256E4	5.154E4	-1.9	NA	±15	Average RF
Lactic Acid	50.0	47.0	5.642E4	5.305E4	-6.0	NA	±15	Average RF
Propionic Acid	50.0	49.6	5.436E4	5.387E4	-0.9	NA	±15	Average RF

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: LHAAP / Site 58

Service Request: R2005353
Date Analyzed: 07/01/20 20:11

Continuing Calibration Verification (CCV) Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids
File ID: I:\ACQUDATA\hplc05\data\070120\A0005454.D\
Signal ID: 1

Calibration Date: 12/30/2000
Calibration ID: RC2000053
Analysis Lot: 686010
Units: mg/L

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Pyruvic Acid	5.00	5.20	5.916E5	6.161E5	4.2	NA	±15	Average RF
Acetic Acid	50.0	49.6	5.605E4	5.559E4	-0.8	NA	±15	Average RF
Butanoic Acid (Butyric Acid)	50.0	47.2	5.256E4	4.962E4	-5.6	NA	±15	Average RF
Lactic Acid	50.0	47.4	5.642E4	5.345E4	-5.3	NA	±15	Average RF
Propionic Acid	50.0	49.2	5.436E4	5.343E4	-1.7	NA	±15	Average RF

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: LHAAP / Site 58

Service Request: R2005353
Date Analyzed: 07/02/20 02:32

Continuing Calibration Verification (CCV) Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids
File ID: I:\ACQUDATA\hplc05\data\070120\A0005460.D\
Signal ID: 1

Calibration Date: 12/30/2000
Calibration ID: RC2000053
Analysis Lot: 686010
Units: mg/L

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Pyruvic Acid	5.00	5.23	5.916E5	6.187E5	4.6	NA	±15	Average RF
Acetic Acid	50.0	49.6	5.605E4	5.552E4	-0.9	NA	±15	Average RF
Butanoic Acid (Butyric Acid)	50.0	48.2	5.256E4	5.077E4	-3.4	NA	±15	Average RF
Lactic Acid	50.0	47.5	5.642E4	5.362E4	-5.0	NA	±15	Average RF
Propionic Acid	50.0	48.9	5.436E4	5.313E4	-2.3	NA	±15	Average RF

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: LHAAP / Site 58

Service Request: R2005353
Date Analyzed: 07/02/20 08:50

Continuing Calibration Verification (CCV) Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids
File ID: I:\ACQUDATA\hplc05\data\070120\A0005466.D\
Signal ID: 1

Calibration Date: 12/30/2000
Calibration ID: RC2000053
Analysis Lot: 686010
Units: mg/L

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Pyruvic Acid	5.00	5.02	5.916E5	5.947E5	0.5	NA	±15	Average RF
Acetic Acid	50.0	48.6	5.605E4	5.439E4	-3.0	NA	±15	Average RF
Butanoic Acid (Butyric Acid)	50.0	49.7	5.256E4	5.232E4	-0.5	NA	±15	Average RF
Lactic Acid	50.0	46.8	5.642E4	5.278E4	-6.5	NA	±15	Average RF
Propionic Acid	50.0	48.7	5.436E4	5.289E4	-2.7	NA	±15	Average RF

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: LHAAP / Site 58

Service Request: R2005353
Date Analyzed: 07/02/20 15:08

Continuing Calibration Verification (CCV) Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids
File ID: I:\ACQUDATA\hplc05\data\070120\A0005472.D\
Signal ID: 1

Calibration Date: 12/30/2000
Calibration ID: RC2000053
Analysis Lot: 686010
Units: mg/L

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Pyruvic Acid	5.00	5.02	5.916E5	5.94E5	0.4	NA	±15	Average RF
Acetic Acid	50.0	48.5	5.605E4	5.431E4	-3.1	NA	±15	Average RF
Butanoic Acid (Butyric Acid)	50.0	49.7	5.256E4	5.231E4	-0.5	NA	±15	Average RF
Lactic Acid	50.0	47.0	5.642E4	5.308E4	-5.9	NA	±15	Average RF
Propionic Acid	50.0	49.5	5.436E4	5.375E4	-1.1	NA	±15	Average RF

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:**R2005353
Project: LHAAP / Site 58

Analysis Run Log

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids **Analysis Lot:**686010
Instrument ID:R-HPLC-05

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
I:\ACQUDATA\hplc05\data\070120\A0005465.D\	Batch QC MS	RQ2007136-07	12/29/2000	23:47:48	
I:\ACQUDATA\hplc05\data\070120\A0005455.D\	ZZZZZZZ	ZZZZZZZ	12/29/2000	23:48:29	
I:\ACQUDATA\hplc05\data\070120\A0005461.D\	03WW01_062320	R2005353-001	12/30/2000	02:47:58	
I:\ACQUDATA\hplc05\data\070120\A0005456.D\	ZZZZZZZ	ZZZZZZZ	12/30/2000	16:48:33	
I:\ACQUDATA\hplc05\data\070120\A0005467.D\	Batch QC DMS	RQ2007136-08	12/30/2000	16:48:42	
I:\ACQUDATA\hplc05\data\070120\A0005449.D\	Method Blank	RQ2007136-02	12/31/2000	02:48:24	
I:\ACQUDATA\hplc05\data\070120\A0005454.D\	Continuing Calibration Verification	RQ2007136-05	12/31/2000	02:48:28	
I:\ACQUDATA\hplc05\data\070120\A0005469.D\	ZZZZZZZ	ZZZZZZZ	12/31/2000	02:48:33	
I:\ACQUDATA\hplc05\data\070120\A0005471.D\	ZZZZZZZ	ZZZZZZZ	12/31/2000	02:48:34	
I:\ACQUDATA\hplc05\data\070120\A0005448.D\	Continuing Calibration Verification	RQ2007136-01	7/1/2020	13:56:19	
I:\ACQUDATA\hplc05\data\070120\A0005449.D\	Method Blank	RQ2007136-02	7/1/2020	14:56:00	
I:\ACQUDATA\hplc05\data\070120\A0005450.D\	Lab Control Sample	RQ2007136-03	7/1/2020	16:02:18	
I:\ACQUDATA\hplc05\data\070120\A0005451.D\	Duplicate Lab Control Sample	RQ2007136-04	7/1/2020	17:05:25	
I:\ACQUDATA\hplc05\data\070120\A0005452.D\	ZZZZZZZ	ZZZZZZZ	7/1/2020	18:08:24	
I:\ACQUDATA\hplc05\data\070120\A0005453.D\	ZZZZZZZ	ZZZZZZZ	7/1/2020	19:11:21	
I:\ACQUDATA\hplc05\data\070120\A0005454.D\	Continuing Calibration Verification	RQ2007136-05	7/1/2020	20:11:00	
I:\ACQUDATA\hplc05\data\070120\A0005455.D\	ZZZZZZZ	ZZZZZZZ	7/1/2020	21:14:00	
I:\ACQUDATA\hplc05\data\070120\A0005456.D\	ZZZZZZZ	ZZZZZZZ	7/1/2020	22:17:00	
I:\ACQUDATA\hplc05\data\070120\A0005460.D\	Continuing Calibration Verification	RQ2007136-06	7/2/2020	02:32:48	
I:\ACQUDATA\hplc05\data\070120\A0005461.D\	03WW01_062320	R2005353-001	7/2/2020	03:32:00	
I:\ACQUDATA\hplc05\data\070120\A0005462.D\	35AWW08_062320	R2005353-002	7/2/2020	04:38:45	
I:\ACQUDATA\hplc05\data\070120\A0005463.D\	35AWW11_062320	R2005353-003	7/2/2020	05:41:40	
I:\ACQUDATA\hplc05\data\070120\A0005464.D\	Batch QC	R2005464-001	7/2/2020	06:44:40	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:**R2005353
Project: LHAAP / Site 58

Analysis Run Log
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids **Analysis Lot:**686010
Instrument ID:R-HPLC-05

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
I:\ACQUDATA\hplc05\data\070120\A0005465.D\	Batch QC MS	RQ2007136-07	7/2/2020	07:44:00	
I:\ACQUDATA\hplc05\data\070120\A0005466.D\	Continuing Calibration Verification	RQ2007136-09	7/2/2020	08:50:41	
I:\ACQUDATA\hplc05\data\070120\A0005467.D\	Batch QC DMS	RQ2007136-08	7/2/2020	09:50:00	
I:\ACQUDATA\hplc05\data\070120\A0005468.D\	ZZZZZZZ	ZZZZZZZ	7/2/2020	10:56:30	
I:\ACQUDATA\hplc05\data\070120\A0005469.D\	ZZZZZZZ	ZZZZZZZ	7/2/2020	11:56:00	
I:\ACQUDATA\hplc05\data\070120\A0005470.D\	ZZZZZZZ	ZZZZZZZ	7/2/2020	13:02:27	
I:\ACQUDATA\hplc05\data\070120\A0005471.D\	ZZZZZZZ	ZZZZZZZ	7/2/2020	14:02:00	
I:\ACQUDATA\hplc05\data\070120\A0005472.D\	Continuing Calibration Verification	RQ2007136-10	7/2/2020	15:08:24	

Analysis: Organic Acids Analyst: AFelix Run Method: NEUMETA.M
Date: 07/01/2020 Instr. HPLC05 Quant Method: MAD31220.M
LIMS Run#: 686010
Setup: Column: Synergi Hydro RP 150x4.6 Col.Temp: 35 Flow: 0.6 mL/min
Mobile Phase: 0.05% KH2PO4 pH 2.5 in H2O ul Inj.: 50
Mobile Phase ID: O-766-77G

Pos.	Sample	Diln.	Stds. ID	File#	OK?	Comments
2	BLK			A000 5446	—	
2	BLK			47	—	
1	CCV	100µL/1mL	209218	48	Y	
2	MB			49	Y	
3	LCS	100µL/1mL	208621	50	Y	
4	DLCS	〃	〃	51	Y	
5	R2005448-001			52	Y	
6	〃 -002			53	Y	
1	CCV	100µL/1mL	209218	54	Y	
7	R2005448-003			55	Y	
8	R2005449-001			56	Y	
9	〃 -002			57	N	>LR, repeat @ 1/2
10	〃 -002 MS		208621	58	N	
11	〃 -002 DMS		〃	59	N	
1	CCV	100µL/1mL	209218	60	Y	
12	R2005353-001			61	Y	
13	〃 -002			62	Y	
14	〃 -003			63	Y	
15	R2005464-001			64	Y	
16	〃 -001 MS		208621	65	Y	
1	CCV	100µL/1mL	209218	66	Y	
17	R2005464-001 DMS		208621	67	Y	Pyruvic 〃
18	〃 -002			68	Y	
19	〃 -003			69	Y	
20	〃 -004			70	Y	
21	〃 -005			71	Y	
1	CCV	100µL/1mL	209218	72	Y	

AFelix 07/06/2020

Primary: 209218 exp: 09/19/2020 Secondary: 208621 exp: 09/19/2020
pH Paper: 208628 Acid: 209896

Runlog HPLCr2
3/23/18
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ALS Environmental
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July 10, 2020

Analytical Report for Service Request No: K2005295

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

RE: HS20061178

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory June 25, 2020
For your reference, these analyses have been assigned our service request number **K2005295.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3350. You may also contact me via email at Kelley.Lovejoy@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Kelley Lovejoy

Kelley Lovejoy
Project Manager

RIGHT SOLUTIONS | RIGHT PARTNER

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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

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1317 South 13th Ave, Kelso, WA 98626 | 1-360-577-7222 | www.alsglobal.com

Client: ALS Environmental - US
Project: HS20061178
Sample Matrix: Ground Water

Service Request: K2005295
Date Received: 06/25/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

Sample Receipt:

Four ground water samples were received for analysis at ALS Environmental on 06/25/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

General Chemistry:

No significant anomalies were noted with this analysis.

Approved by Kelley Lovejoy Date 07/10/2020

Chain of Custody

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K2005295

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Subcontract Chain of Custody

SAMPLING STATE: **Texas** **COC ID:** **14188**

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:	HS20061178
TSR:	Danielle Winnings

	LAB SAMPLE ID / ANALYSIS REQUESTED	CLIENT SAMPLE ID	MATRIX	COLLECT DATE / DUE DATE
1.	**HS20061178-01**	**35AWW09_062320**	**Groundwater**	**23 Jun 2020 10:05**
	TOC Analysis for DOD Level IV/Excel EDD			09 Jul 2020
2.	**HS20061178-02**	**03WW01_062320**	**Groundwater**	**23 Jun 2020 11:00**
	TOC Analysis for DOD Level IV/Excel EDD			09 Jul 2020
3.	**HS20061178-03**	**35AWW08_062320**	**Groundwater**	**23 Jun 2020 12:05**
	TOC Analysis for DOD Level IV/Excel EDD			09 Jul 2020
4.	**HS20061178-04**	**35AWW11_062320**	**Groundwater**	**23 Jun 2020 13:25**
	TOC Analysis for DOD Level IV/Excel EDD			09 Jul 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: 6/24/2020 1800

Received By: _____ Date/Time: 6/25/20 0935

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

01002625

PC KL

Cooler Receipt and Preservation Form

Client AIR - HOUSTON Service Request K20 05295

Received: 6/25/20 Opened: 6/25/20 By: BR Unloaded: 6/25/20 By: BR

1. Samples were received via? *USPS* ~~*Fed Ex*~~ *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA ~~Y~~ N If yes, how many and where? 2 front
   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Temp Blank	Sample 1	Sample 2	Sample 3	Sample 4	IR GUN	Cooler / COC ID NA	Tracking Number NA	Filed
1.3	–	–	–	–	1802		189188778603	

4. Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* _____
5. Were custody papers properly ~~filled out~~ (ink, signed, etc.)? NA Y N
6. Were samples received in good condition (temperature, unbroken)? *Indicate in the table below.* NA Y N
   If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA Y N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* NA Y N
12. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

General Chemistry

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	K2005295
Project:	HS20061178	**Date Collected:**	06/23/20
Sample Matrix:	Ground Water	**Date Received:**	06/25/20
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
35AWW09_062320	K2005295-001	**3.17**	0.50	0.20	0.07	1	06/26/20 16:56	
03WW01_062320	K2005295-002	**69.8**	0.50	0.20	0.07	1	07/02/20 10:33	
35AWW08_062320	K2005295-003	**208**	0.50	0.20	0.07	1	07/02/20 10:33	
35AWW11_062320	K2005295-004	**7.28**	0.50	0.20	0.07	1	06/26/20 16:56	
Method Blank	K2005295-MB1	ND U	0.50	0.20	0.07	1	06/25/20 16:56	
Method Blank	K2005295-MB2	ND U	0.50	0.20	0.07	1	06/26/20 16:56	
Method Blank	K2005295-MB3	ND U	0.50	0.20	0.07	1	07/02/20 10:33	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2005295
Project:	HS20061178	**Date Analyzed:**	06/25/20
Sample Matrix:	Ground Water	**Date Extracted:**	NA

Lab Control Sample Summary
Carbon, Total Organic

Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	685091

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2005295-LCS1	21.2	25.0	85	83-117
Lab Control Sample	K2005295-LCS2	21.1	25.0	84	83-117

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2005295
Project:	HS20061178	**Date Analyzed:**	07/02/20
Sample Matrix:	Ground Water	**Date Extracted:**	NA

Lab Control Sample Summary
Carbon, Total Organic

Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	685526

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2005295-LCS3	82.8	87.5	95	83-117

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:** K2005295
Project: HS20061178

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	685091	KQ2008648-01	06/25/20 16:56	25.0	25.3	101	90-110
CCV2	685091	KQ2008648-02	06/25/20 16:56	25.0	25.1	101	90-110
CCV3	685091	KQ2008648-03	06/25/20 16:56	25.0	25.7	103	90-110
CCV4	685091	KQ2008648-04	06/26/20 16:56	25.0	24.7	99	90-110
CCV5	685526	KQ2009226-06	07/02/20 10:33	25.0	26.1	105	90-110
CCV6	685526	KQ2009226-07	07/02/20 10:33	25.0	25.1	101	90-110
CCV7	685526	KQ2009226-08	07/02/20 10:33	25.0	25.3	101	90-110
CCV8	685526	KQ2009226-09	07/02/20 10:33	25.0	24.9	100	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:**K2005295
Project: HS20061178

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	685091	KQ2008648-05	06/25/20 16:56	0.50	0.20	0.07	ND	U
CCB2	685091	KQ2008648-06	06/25/20 16:56	0.50	0.20	0.07	ND	U
CCB3	685091	KQ2008648-07	06/25/20 16:56	0.50	0.20	0.07	ND	U
CCB4	685091	KQ2008648-08	06/26/20 16:56	0.50	0.20	0.07	ND	U
CCB5	685526	KQ2009226-10	07/02/20 10:33	0.50	0.20	0.07	0.45	J
CCB6	685526	KQ2009226-11	07/02/20 10:33	0.50	0.20	0.07	ND	U
CCB7	685526	KQ2009226-12	07/02/20 10:33	0.50	0.20	0.07	ND	U
CCB8	685526	KQ2009226-13	07/02/20 10:33	0.50	0.20	0.07	ND	U

Raw Data

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General Chemistry

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Work Request # Original (4984) 5020 5185 5260 5295 5296 5111 5174

Tier: II II I II N N II II

Date Analyzed: 6/25/20

Analyst: MK/GB

Run # 1085091 1085092

Analysis: TOC/DOC

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	yes/no/NA
2.	Holding times met for all analyses and for all samples?	yes/no/NA
3.	Are calculations correct?	yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)	yes/no/NA
5.	All quality control criteria met?	yes/no
6.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
7.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
8.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
9.	Are results for methods blanks all ND?	yes/no/NA
10.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
11.	Are all exceptions explained?	yes/no/NA
12.	Have all applicable service requests been reviewed?	yes/no/NA
13.	Are all samples labeled correctly?	yes/no/NA
14.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample, Form V)	yes/no/NA
15.	Are detection limits and units reported correctly?	yes/no/NA
16.	Is the unused space on the benchsheet crossed out?	yes/no/NA
17.	Was analysis turned in by the due date? (n-2) (If not record SR#)	yes/no/NA

COMMENTS:

Rerun 5174 DOC DIL
Rerun 5295-2,3 DIL
Rerun 5020-2,4 DOC Due to carryover

Final Approved by: _____ Date: 6/30/20

DQREPORT

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** MKANALY **Analysis Lot:** 685091 **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
K2004984-001	Carbon, Total Organic	N/A		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			6/25/20 16:56:00	N	II
K2004984-002	Carbon, Total Organic	N/A		Water	0.48 mg/L	10 mL	0.48 mg/L J	1	0.07	0.50			6/25/20 16:56:00	N	II
K2004984-003	Carbon, Total Organic	N/A		Water	0.50 mg/L	10 mL	0.50 mg/L J	1	0.07	0.50			6/25/20 16:56:00	N	II
K2004984-004	Carbon, Total Organic	N/A		Water	0.40 mg/L	10 mL	0.40 mg/L J	1	0.07	0.50			6/25/20 16:56:00	N	II
K2004984-005	Carbon, Total Organic	N/A		Water	0.50 mg/L	10 mL	0.50 mg/L	1	0.07	0.50			6/25/20 16:56:00	N	II
K2004984-006	Carbon, Total Organic	N/A		Water	0.19 mg/L	10 mL	0.19 mg/L J	1	0.07	0.50			6/25/20 16:56:00	N	II
K2004984-007	Carbon, Total Organic	N/A		Water	0.96 mg/L	10 mL	0.96 mg/L	1	0.07	0.50			6/25/20 16:56:00	N	II
K2004984-008	Carbon, Total Organic	N/A		Water	0.41 mg/L	10 mL	0.41 mg/L J	1	0.07	0.50			6/25/20 16:56:00	N	II
K2005020-001	Carbon, Total Organic	N/A		Water	3.97 mg/L	10 mL	3.97 mg/L	1	0.07	0.50			6/25/20 16:56:00	N	II
K2005020-003	Carbon, Total Organic	N/A		Water	2.87 mg/L	10 mL	2.87 mg/L	1	0.07	0.50			6/25/20 16:56:00	N	II
K2005185-002	Carbon, Total Organic	N/A		Drinking Water	0.45 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			6/26/20 16:56:00	N	I
K2005260-001	Carbon, Total Organic	N/A		Water	2.10 mg/L	10 mL	2.10 mg/L	1	0.07	0.50			6/26/20 16:56:00	N	II
K2005295-001	Carbon, Total Organic	N/A		Ground Water	3.17 mg/L	10 mL	3.17 mg/L	1	0.07	0.50			6/26/20 16:56:00	N	IV
K2005295-002.R01	Carbon, Total Organic	N/A		Ground Water	50.22 mg/L	10 mL	50.2 mg/L	1	0.07	0.50			6/26/20 16:56:00	N	IV
K2005295-003.R01	Carbon, Total Organic	N/A		Ground Water	57.82 mg/L	10 mL	57.8 mg/L	1	0.07	0.50			6/26/20 16:56:00	N	IV
K2005295-004	Carbon, Total Organic	N/A		Ground Water	7.28 mg/L	10 mL	7.28 mg/L	1	0.07	0.50			6/26/20 16:56:00	N	IV
K2005296-001	Carbon, Total Organic	N/A		Water	2.10 mg/L	10 mL	2.10 mg/L	1	0.07	0.50			6/26/20 16:56:00	N	IV
KQ2008648-01	Carbon, Total Organic	CCV		Water	25.34 mg/L	10 mL	25.3 mg/L	1					6/25/20 16:56:00	N	II
KQ2008648-02	Carbon, Total Organic	CCV		Water	25.13 mg/L	10 mL	25.1 mg/L	1					6/25/20 16:56:00	N	II
KQ2008648-03	Carbon, Total Organic	CCV		Water	25.73 mg/L	10 mL	25.7 mg/L	1					6/25/20 16:56:00	N	II
KQ2008648-04	Carbon, Total Organic	CCV		Water	24.66 mg/L	10 mL	24.7 mg/L	1					6/26/20 16:56:00	N	II
KQ2008648-05	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			6/25/20 16:56:00	N	II
KQ2008648-06	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			6/25/20 16:56:00	N	II
KQ2008648-07	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			6/25/20 16:56:00	N	II
KQ2008648-08	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			6/26/20 16:56:00	N	II
KQ2008648-09	Carbon, Total Organic	LCS		Water	21.24 mg/L	10 mL	21.2 mg/L	1	0.07	0.50	85		6/25/20 16:56:00	N	II
KQ2008648-10	Carbon, Total Organic	LCS		Water	21.07 mg/L	10 mL	21.1 mg/L	1	0.07	0.50	84		6/26/20 16:56:00	N	II
KQ2008648-11	Carbon, Total Organic	MB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			6/25/20 16:56:00	N	II
KQ2008648-12	Carbon, Total Organic	MB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			6/26/20 16:56:00	N	II
KQ2008648-13	Carbon, Total Organic	DUP	K2004984-001	Water	0.47 mg/L	10 mL	0.47 mg/L J	1	0.07	0.50		NC	6/25/20 16:56:00	N	II
KQ2008648-14	Carbon, Total Organic	MS	K2004984-001	Water	27.49 mg/L	10 mL	27.5 mg/L	1	0.07	0.50	110		6/25/20 16:56:00	N	II

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** MKANALY **Analysis Lot:** 685092 **Method/Testcode:** SM 5310 C/TOC D

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K2005020-002.R01	Carbon, Dissolved Organic (DOC)	N/A		Water	14.51 mg/L	10 mL	14.5 mg/L	1	0.07	0.50			6/26/20 2 :27:00	N	II
K2005020-004.R01	Carbon, Dissolved Organic (DOC)	N/A		Water	4.42 mg/L	10 mL	4.42 mg/L	1	0.07	0.50			6/26/20 2 :27:00	N	II
K2005111-001	Carbon, Dissolved Organic (DOC)	N/A		Water	5.11 mg/L	10 mL	5.11 mg/L	1	0.07	0.50			6/26/20 2 :27:00	N	II
K2005111-002	Carbon, Dissolved Organic (DOC)	N/A		Water	2.15 mg/L	10 mL	2.15 mg/L	1	0.07	0.50			6/26/20 2 :27:00	N	II
K2005174-001.R01	Carbon, Dissolved Organic (DOC)	N/A		Water	61.16 mg/L	10 mL	61.2 mg/L	1	0.07	0.50			6/26/20 2 :27:00	N	II
KQ2008788-01	Carbon, Dissolved Organic (DOC)	CCV		Water	25.73 mg/L	10 mL	25.7 mg/L	1					6/26/20 2 :27:00	N	II
KQ2008788-02	Carbon, Dissolved Organic (DOC)	CCV		Water	24.66 mg/L	10 mL	24.7 mg/L	1					6/26/20 2 :27:00	N	II
KQ2008788-03	Carbon, Dissolved Organic (DOC)	CCV		Water	25.01 mg/L	10 mL	25.0 mg/L	1					6/26/20 2 :27:00	N	II
KQ2008788-04	Carbon, Dissolved Organic (DOC)	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			6/26/20 2 :27:00	N	II
KQ2008788-05	Carbon, Dissolved Organic (DOC)	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			6/26/20 2 :27:00	N	II
KQ2008788-06	Carbon, Dissolved Organic (DOC)	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			6/26/20 2 :27:00	N	II
KQ2008788-07	Carbon, Dissolved Organic (DOC)	MB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			6/26/20 2 :27:00	N	II
KQ2008788-08	Carbon, Dissolved Organic (DOC)	LCS		Water	21.07 mg/L	10 mL	21.1 mg/L	1	0.07	0.50	84		6/26/20 2 :27:00	N	II
KQ2008788-09	Carbon, Dissolved Organic (DOC)	DUP	K2005111-002	Water	2.27 mg/L	10 mL	2.27 mg/L	1	0.07	0.50		5	6/26/20 2 :27:00	N	II
KQ2008788-10	Carbon, Dissolved Organic (DOC)	MS	K2005111-002	Water	28.50 mg/L	10 mL	28.5 mg/L	1	0.07	0.50	105		6/26/20 2 :27:00	N	II

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

685091
685092

Schedule: 062520

Version: 2
Instrument: Fusion1
Last Saved by: Fusion1 (Fusion1)
Last Saved on: 2020/06/25 15:21 - 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
(Blank)	Blank	Reagent/Acid Blank		1	True	Ready
D	Sample	RB	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
1	Sample	MB1	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
C	Check Standard	[TOC] LCS [24.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
2	Sample	ICS	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
3	Sample	K2004984-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
4	Sample	K2004984-00DD	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
5	Sample	K2004984-001MS	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
6	Sample	K2004984-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
7	Sample	K2004984-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
8	Sample	K2004984-004	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
9	Sample	K2004984-005	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	K2004984-006	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
11	Sample	K2004984-007	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
12	Sample	K2004984-008	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
13	Sample	K2005020-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
14	Sample	K2005020-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
15	Sample	K2005185-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
16	Sample	K2005296-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
17	Sample	K2005260-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
18	Sample	K2005295-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
19	Sample	K2005295-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
20	Sample	MB2	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
C	Check Standard	[TOC] LCS [24.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
21	Sample	IB	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
22	Sample	K2005295-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
23	Sample	K2005295-004	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
24	Sample	K2005174-001 DOC	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
25	Sample	K2005020-002 DOC	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
26	Sample	K2005020-004 DOC	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
27	Sample	K2005111-002 DOC	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
28	Sample	K2005111-002D DOC	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
29	Sample	K2005111-002MS DOC	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
30	Sample	K2005211-001 10X DOC	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
31	Sample	FILTER BLANK	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
32	Sample	IB	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		CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
					False	

Fusion Report - 062520
Thursday, June 25, 2020 03:24 PM

(View - Reps, Unused Reps, Meta-Data, Signature, History)
Printed on 2020/06/26 10:19 - Friday

Report Summary Information

Company Location:	Gen Chem Lab		
Schedule Name:	062520	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	2020/06/25 15:24

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	14.94	19.26	4.32	49.76	05:21
2	TC Clean	8.82	12.52	3.70	50.02	04:04
3	TC Clean	2.22	6.13	3.90	50.04	03:47
4	TC Clean	1.89	5.61	3.72	50.02	03:56

Sample Type: Clean — From Schedule Version 2

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/06/25 15:46

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	0.76	4.31	3.55	49.48	05:20
2	TC Clean	4.53	7.90	3.37	49.87	04:00
3	TC Clean	1.94	5.54	3.60	49.99	03:52
4	TC Clean	1.69	5.47	3.78	49.91	03:54

Sample Type: Blank (Creating v1400) From Schedule Version 2

	Pos	Analysis Type	Sample ID	Start Time
◆	(blank)		Reagent/Acid Blank	2020/06/25 16:08

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	0.91	4.46	3.55	49.55	05:20
2	TC Clean	4.31	7.97	3.66	50.02	04:01
3	TC Clean	2.02	5.68	3.67	49.96	03:45
4	TC Clean	1.71	5.49	3.78	49.97	03:44
5	Reagent Blank	2.82	6.71	3.90	50.00	05:06
6	Acid Blank	0.73	4.31	3.58	49.69	05:29

Sample Type: Sample From Schedule Version 2

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	D	TOC	RB	0.0055 ppm	0.0000 ppm	0.0000%	2020/06/25 16:42

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0055	0.0547	9.13	12.70	3.58	49.98	10:33

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.0906 (IC) (v1400)	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)	25.3442 ppm (PASS)	0.0000 ppm	0%	2020/06/25 16:56

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.3442	253.4417	187.68	191.37	3.70	50.02	10:33

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 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%	2020/06/25 17:11

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	7.17	10.77	3.60	49.94	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 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%	2020/06/25 17:26

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	6.44	10.00	3.56	49.95	10:35

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.0906 (IC) (v1400)	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 [24.0 ppm]	0 / infinity (NA / NA)	21.2411 ppm (PASS)	0.0000 ppm	0%	2020/06/25 17:41

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	21.2411	212.4114	158.89	162.69	3.79	50.01	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	0.0926 ppm	0.0000 ppm	0.0000%	2020/06/25 17:55

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time

1	TOC	0.0926	0.9257	9.74	13.21	3.47	49.99	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.0906 (IC) (v1400)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	3	TOC	K2004984-001	0.0000 ppm	0.0000 ppm	0.0000%	2020/06/25 18:10

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	6.50	9.96	3.46	50.00	10:27
2	TOC	0.0000	0.0000	5.98	9.59	3.62	50.06	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.0906 (IC) (v1400)	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
◈	4	TOC	K2004984-00DD	0.4748 ppm	0.0104 ppm	2.1900%	2020/06/25 18:38

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.4675	4.6749	12.37	15.79	3.42	49.98	10:28
2	TOC	0.4822	4.8217	12.47	15.95	3.48	50.09	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.0906 (IC) (v1400)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	5	TOC	K2004984-001MS	27.4888 ppm	0.1546 ppm	0.5600%	2020/06/25 19:07

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	27.3795	273.7949	201.15	204.74	3.59	50.08	10:31
2	TOC	27.5982	275.9817	202.69	206.30	3.61	49.99	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.0906 (IC) (v1400)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	6	TOC	K2004984-002	0.4829 ppm	0.0931 ppm	19.2900%	2020/06/25 19:35

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.5487	5.4875	12.94	16.57	3.63	50.08	10:26
2	TOC	0.4170	4.1702	12.02	15.65	3.64	49.98	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.0906 (IC)	CAS_salt_010711	CAS_salt_010711

(v1400) (v4) (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	7	TOC	K2004984-003	0.4982 ppm	0.0350 ppm	7.0200%	2020/06/25 20:03

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.5229	5.2294	12.76	16.42	3.66	49.98	10:25
2	TOC	0.4735	4.7348	12.41	16.10	3.69	49.95	10:22

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.0906 (IC) (v1400)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	8	TOC	K2004984-004	0.3952 ppm	0.0381 ppm	9.6400%	2020/06/25 20:31

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.4222	4.2216	12.05	15.77	3.72	49.95	10:26
2	TOC	0.3683	3.6827	11.67	15.34	3.67	49.88	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.0906 (IC) (v1400)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	9	TOC	K2004984-005	0.5046 ppm	0.0254 ppm	5.0300%	2020/06/25 20:59

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.5225	5.2251	12.76	16.12	3.36	49.92	10:25
2	TOC	0.4866	4.8659	12.50	15.94	3.44	49.85	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.0906 (IC) (v1400)	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)	25.1288 ppm (PASS)	0.0000 ppm	0%	2020/06/25 21:27

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.1288	251.2877	186.17	189.68	3.51	49.93	10:28

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%	2020/06/25 21:41

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	6.67	10.19	3.52	49.85	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
◆	10	TOC	K2004984-006	0.1907 ppm	0.0027 ppm	1.4300%	2020/06/25 21:56

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.1926	1.9264	10.44	13.96	3.51	49.79	10:26
2	TOC	0.1888	1.8879	10.42	13.98	3.57	49.94	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.0906 (IC) (v1400)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	11	TOC	K2004984-007	0.9631 ppm	0.0021 ppm	0.2200%	2020/06/25 22:24

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.9616	9.6158	15.84	19.48	3.65	49.87	10:28
2	TOC	0.9646	9.6458	15.86	19.55	3.70	49.84	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.0906 (IC) (v1400)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	12	TOC	K2004984-008	0.4122 ppm	0.0103 ppm	2.4900%	2020/06/25 22:52

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.4194	4.1945	12.03	15.85	3.82	49.79	10:28
2	TOC	0.4049	4.0491	11.93	15.64	3.71	49.78	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.0906 (IC) (v1400)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	13	TOC	K2005020-001	3.9743 ppm	0.0053 ppm	0.1300%	2020/06/25 23:20

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.9781	39.7805	37.00	40.60	3.60	49.78	10:30
2	TOC	3.9705	39.7050	36.94	40.62	3.67	49.77	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.0906 (IC) (v1400)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	14	TOC	K2005020-003	2.8653 ppm	0.0288 ppm	1.0100%	2020/06/25 23:49

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.8857	28.8565	29.33	32.82	3.49	49.79	10:26
2	TOC	2.8449	28.4488	29.05	32.63	3.58	49.79	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.0906 (IC) (v1400)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	15	TOC	K2005185-002	0.4475 ppm	0.0095 ppm	2.1200%	2020/06/26 00:17

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.4542	4.5423	12.28	15.97	3.70	49.79	10:29
2	TOC	0.4408	4.4083	12.18	15.68	3.50	49.81	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.0906 (IC) (v1400)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	16	TOC	K2005296-001	2.0951 ppm	0.0493 ppm	2.3500%	2020/06/26 00:45

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.1300	21.2997	24.03	27.63	3.60	49.83	10:26
2	TOC	2.0603	20.6026	23.54	27.20	3.66	49.83	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.0906 (IC) (v1400)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	17	TOC	K2005260-001	2.2722 ppm	0.0678 ppm	2.9900%	2020/06/26 01:13

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.3201	23.2014	25.37	29.04	3.67	49.85	10:29

2	TOC	2.2242	22.2420	24.69	28.35	3.66	49.87	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.0906 (IC) (v1400)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	18	TOC	K2005295-001	3.1720 ppm	0.1152 ppm	3.6300%	2020/06/26 01:41

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.2534	32.5344	31.91	35.57	3.65	49.87	10:26
2	TOC	3.0905	30.9050	30.77	34.40	3.63	49.89	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.0906 (IC) (v1400)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	19	TOC	K2005295-002	50.2197 ppm	0.3945 ppm	0.7900%	2020/06/26 02:09

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	50.4987	504.9866	363.33	366.83	3.50	49.91	10:29
2	TOC	49.9407	499.4070	359.42	363.12	3.71	49.91	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.0906 (IC) (v1400)	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)	25.7335 ppm (PASS)	0.0000 ppm	0%	2020/06/26 02:37

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.7335	257.3349	190.41	194.00	3.60	49.92	10:33

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 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%	2020/06/26 02:52

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	8.30	12.00	3.70	49.93	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 3

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	20	TOC	MB2	0.0000 ppm	0.0000 ppm	0.0000%	2020/06/26 03:06

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	7.33	11.06	3.74	49.94	10:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.0906 (IC) (v1400)	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 [24.0 ppm]	0 / infinity (NA / NA)	21.0675 ppm (PASS)	0.0000 ppm	0%	2020/06/26 03:21

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	21.0675	210.6751	157.68	161.41	3.74	49.94	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 3

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	21	TOC	IB	0.0000 ppm	0.0000 ppm	0.0000%	2020/06/26 03:36

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	6.71	10.50	3.79	49.96	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.0906 (IC) (v1400)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time

◆	22	TOC	K2005295-003	67.8166 ppm	1.4457 ppm	2.1300%	2020/06/26 03:50

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	68.8388	688.3882	491.98	495.74	3.76	49.98	10:28
2	TOC	66.7943	667.9429	477.64	481.82	4.18	49.97	10:24

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.0906 (IC) (v1400)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	23	TOC	K2005295-004	7.2813 ppm	1.5161 ppm	20.8200%	2020/06/26 04:18

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	8.3534	83.5336	67.69	71.69	4.00	50.00	10:29
2	TOC	6.2093	62.0933	52.65	56.38	3.73	50.00	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.0906 (IC) (v1400)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	24	TOC	K2005174-001 DOC	61.1599 ppm	1.2078 ppm	1.9700%	2020/06/26 04:46

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	60.3059	603.0589	432.13	435.72	3.59	50.00	10:27
2	TOC	62.0140	620.1399	444.11	448.93	4.82	50.02	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.0906 (IC) (v1400)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	25	TOC	K2005020-002 DOC	14.5105 ppm	7.9724 ppm	54.9400%	2020/06/26 05:14

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	20.1478	201.4780	150.42	154.82	4.39	50.00	10:29
2	TOC	8.8731	88.7311	71.33	75.08	3.75	50.02	10:24

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.0906 (IC) (v1400)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	26	TOC	K2005020-004 DOC	4.4208 ppm	0.8373 ppm	18.9400%	2020/06/26 05:42

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	5.0129	50.1286	44.26	47.98	3.72	50.01	10:30
2	TOC	3.8288	38.2880	35.95	39.70	3.75	50.01	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.0906 (IC) (v1400)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	27	TOC	K2005111-002 DOC	2.1483 ppm	0.2378 ppm	11.0700%	2020/06/26 06:10

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.3164	23.1643	25.34	28.97	3.63	50.03	10:31
2	TOC	1.9801	19.8014	22.98	26.61	3.63	50.02	10:23

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.0906 (IC) (v1400)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	28	TOC	K2005111-002D DOC	2.2685 ppm	0.1670 ppm	7.3600%	2020/06/26 06:38

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.1504	21.5035	24.17	27.84	3.66	50.00	10:27
2	TOC	2.3866	23.8657	25.83	29.51	3.67	49.98	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.0906 (IC) (v1400)	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)	24.6638 ppm (PASS)	0.0000 ppm	0%	2020/06/26 07:07

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.6638	246.6375	182.90	186.48	3.58	49.99	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 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%	2020/06/26 07:21

Pos	Base Analysis	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time

	Type									
D	TOC	0 ppm	1	0.0000	0.0000	8.34	12.02	3.69	49.98	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 3

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	29	TOC	K2005111-002MS DOC	28.4988 ppm	0.2181 ppm	0.7700%	2020/06/26 07:36

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	28.3446	283.4459	207.92	211.83	3.91	49.99	10:29
2	TOC	28.6531	286.5308	210.09	213.86	3.78	49.96	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.0906 (IC) (v1400)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	30	TOC	K2005211-001 10X DOC	5.1054 ppm	0.2121 ppm	4.1500%	2020/06/26 08:04

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	5.2553	52.5535	45.96	49.55	3.59	49.95	10:27
2	TOC	4.9554	49.5541	43.85	47.49	3.64	49.94	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.0906 (IC) (v1400)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	31	TOC	FILTER BLANK	0.0985 ppm	0.1392 ppm	141.4200%	2020/06/26 08:32

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.96	12.59	3.63	49.96	10:28
2	TOC	0.1969	1.9692	10.47	13.90	3.43	49.95	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.0906 (IC) (v1400)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	32	TOC	IB	0.0000 ppm	0.0000 ppm	0.0000%	2020/06/26 09:01

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	7.18	10.77	3.59	49.93	10:29
2	TOC	0.0000	0.0000	6.76	10.33	3.57	49.90	10:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.0906 (IC) (v1400)	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)	25.0070 ppm (PASS)	0.0000 ppm	0%	2020/06/26 09:29

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.0070	250.0703	185.31	188.55	3.24	49.86	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 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%	2020/06/26 09:43

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	7.25	10.86	3.61	49.81	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 3

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	1	TOC		0.0000 ppm	0.0000 ppm	0.0000%	2020/06/26 09:58

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	7.33	10.70	3.37	49.76	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.0906 (IC) (v1400)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Meta Data Used in this Report

Blanks

Version	Reagent (Abs)	Acid (Abs)	DI IC (Abs)	DI TC (Abs)	DI TOC (Abs)	Save Time	Operator
v1399	1.3330	1.3500	0.0000	0.0000	0.0000	2020/06/24 15:24	Fusion1 (Fusion1)
v1400	0.9390	0.7310	0.0000	0.0000	0.0000	2020/06/25 16:42	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

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

PreSpargeTime	2.00 mins	SyringeSpeedDIWater	7
SystemFlow	500 ml/min	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	2020/06/26 10:13

Work Request # Original (5353) 5357 5466 5295 5204 | 5480 5020 5459

Tier: IV II I IV I II II II

5174 5453 5455
II II II

Date Analyzed: 7/2/20

Analyst: MK

Run # 685526 / 686606

Analysis: TOC / DOC

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	yes/no/NA
2.	Holding times met for all analyses and for all samples?	yes/no/NA
3.	Are calculations correct?	yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)	yes/no/NA
5.	All quality control criteria met?	yes/no
6.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
7.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
8.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
9.	Are results for methods blanks all ND?	yes/no/NA
10.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
11.	Are all exceptions explained?	yes/no/NA
12.	Have all applicable service requests been reviewed?	yes/no/NA
13.	Are all samples labeled correctly?	yes/no/NA
14.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample, Form V)	yes/no/NA
15.	Are detection limits and units reported correctly?	yes/no/NA
16.	Is the unused space on the benchsheet crossed out?	yes/no/NA
17.	Was analysis turned in by the due date? (n-2) (If not record SR#)	yes/no/NA

COMMENTS:
686606 - LCS is low 82%
5480-1 Dup 11% < 5x MRL

Final Approved by: _____ Date: 7/10/20

DQREPORT

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** MKANALY **Analysis Lot:** 685526 **Method/Testcode:** SM 5310 C/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K2005204-002	Carbon, Total Organic	N/A		Water	2.01 mg/L	10 mL	2.01 mg/L	1	0.07	0.50			7/2/20 10:33:00	N	I
K2005295-002	Carbon, Total Organic	N/A		Ground Water	69.82 mg/L	10 mL	69.8 mg/L	1	0.07	0.50			7/2/20 10:33:00	N	IV
K2005295-003	Carbon, Total Organic	N/A		Ground Water	207.90 mg/L	10 mL	208 mg/L	1	0.07	0.50			7/2/20 10:33:00	N	IV
K2005353-001	Carbon, Total Organic	N/A		Ground Water	1.75 mg/L	10 mL	1.75 mg/L	1	0.07	0.50			7/2/20 10:33:00	N	IV
K2005353-002	Carbon, Total Organic	N/A		Ground Water	13.87 mg/L	10 mL	13.9 mg/L	1	0.07	0.50			7/2/20 10:33:00	N	IV
K2005353-003	Carbon, Total Organic	N/A		Ground Water	3.00 mg/L	10 mL	3.00 mg/L	1	0.07	0.50			7/2/20 10:33:00	N	IV
K2005353-004	Carbon, Total Organic	N/A		Ground Water	10.18 mg/L	10 mL	10.2 mg/L	1	0.07	0.50			7/2/20 10:33:00	N	IV
K2005353-005	Carbon, Total Organic	N/A		Ground Water	84.93 mg/L	10 mL	849 mg/L	10	0.7	5.0			7/2/20 10:33:00	N	IV
K2005357-001	Carbon, Total Organic	N/A		Water	2.03 mg/L	10 mL	2.03 mg/L	1	0.07	0.50			7/2/20 10:33:00	N	II
K2005466-001	Carbon, Total Organic	N/A		Water	3.82 mg/L	10 mL	3.82 mg/L	1	0.07	0.50			7/2/20 10:33:00	N	I
K2005466-002	Carbon, Total Organic	N/A		Water	2.78 mg/L	10 mL	2.78 mg/L	1	0.07	0.50			7/2/20 10:33:00	N	I
K2005466-003	Carbon, Total Organic	N/A		Water	2.75 mg/L	10 mL	2.75 mg/L	1	0.07	0.50			7/2/20 10:33:00	N	I
K2005466-004	Carbon, Total Organic	N/A		Water	2.80 mg/L	10 mL	2.80 mg/L	1	0.07	0.50			7/2/20 10:33:00	N	I
K2005466-005	Carbon, Total Organic	N/A		Water	2.62 mg/L	10 mL	2.62 mg/L	1	0.07	0.50			7/2/20 10:33:00	N	I
KQ2009226-02	Carbon, Total Organic	MS	K2005357-001	Water	29.02 mg/L	10 mL	29.0 mg/L	1	0.07	0.50	108		7/2/20 10:33:00	N	II
KQ2009226-03	Carbon, Total Organic	DUP	K2005357-001	Water	1.95 mg/L	10 mL	1.95 mg/L	1	0.07	0.50		4	7/2/20 10:33:00	N	II
KQ2009226-04	Carbon, Total Organic	MB		Ground Water	0.02 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			7/2/20 10:33:00	N	IV
KQ2009226-05	Carbon, Total Organic	LCS		Ground Water	20.70 mg/L	10 mL	82.8 mg/L	4	0.3	2.0	95		7/2/20 10:33:00	N	IV
KQ2009226-06	Carbon, Total Organic	CCV		Water	26.14 mg/L	10 mL	26.1 mg/L	1					7/2/20 10:33:00	N	I
KQ2009226-07	Carbon, Total Organic	CCV		Water	25.14 mg/L	10 mL	25.1 mg/L	1					7/2/20 10:33:00	N	I
KQ2009226-08	Carbon, Total Organic	CCV		Water	25.28 mg/L	10 mL	25.3 mg/L	1					7/2/20 10:33:00	N	I
KQ2009226-09	Carbon, Total Organic	CCV		Water	24.90 mg/L	10 mL	24.9 mg/L	1					7/2/20 10:33:00	N	I
KQ2009226-10	Carbon, Total Organic	CCB		Water	0.45 mg/L	10 mL	0.45 mg/L J	1	0.07	0.50			7/2/20 10:33:00	N	I
KQ2009226-11	Carbon, Total Organic	CCB		Water	-0.02 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			7/2/20 10:33:00	N	I
KQ2009226-12	Carbon, Total Organic	CCB		Water	-0.13 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			7/2/20 10:33:00	N	I
KQ2009226-13	Carbon, Total Organic	CCB		Water	-0.34 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			7/2/20 10:33:00	N	I

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** MKANALY **Analysis Lot:** 686666 **Method/Testcode:** SM 5310 C/TOC D

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K2005020-002	Carbon, Dissolved Organic (DOC)	N/A		Water	5.25 mg/L	10 mL	5.25 mg/L	1	0.07	0.50			7/2/20 10:30:00	N	II
K2005020-004	Carbon, Dissolved Organic (DOC)	N/A		Water	2.56 mg/L	10 mL	2.56 mg/L	1	0.07	0.50			7/2/20 10:30:00	N	II
K2005174-001	Carbon, Dissolved Organic (DOC)	N/A		Water	8.90 mg/L	10 mL	890 mg/L	100	7	50			7/2/20 10:30:00	N	II
K2005453-001	Carbon, Dissolved Organic (DOC)	N/A		Water	4901.30 mg/L	10 mL	490000 mg/L	100	7	50			7/2/20 10:30:00	N	II
K2005455-001	Carbon, Dissolved Organic (DOC)	N/A		Water	705.71 mg/L	10 mL	70600 mg/L	100	7	50			7/2/20 10:30:00	N	II
K2005459-001	Carbon, Dissolved Organic (DOC)	N/A		Effluent	0.98 mg/L	10 mL	0.98 mg/L	1	0.07	0.50			7/2/20 10:30:00	N	II
K2005459-002	Carbon, Dissolved Organic (DOC)	N/A		Water	0.98 mg/L	10 mL	0.98 mg/L	1	0.07	0.50			7/2/20 10:30:00	N	II
K2005480-001	Carbon, Total Organic	N/A		Water	0.48 mg/L	10 mL	0.48 mg/L J	1	0.07	0.50			7/2/20 10:30:00	N	II
K2005480-002	Carbon, Total Organic	N/A		Water	0.03 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			7/2/20 10:30:00	N	II
K2005480-003	Carbon, Total Organic	N/A		Water	0.08 mg/L	10 mL	0.08 mg/L J	1	0.07	0.50			7/2/20 10:30:00	N	II
K2005480-004	Carbon, Total Organic	N/A		Water	0.04 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			7/2/20 10:30:00	N	II
K2005480-005	Carbon, Total Organic	N/A		Water	-0.06 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			7/2/20 10:30:00	N	II
K2005480-006	Carbon, Total Organic	N/A		Water	-0.34 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			7/2/20 10:30:00	N	II
K2005480-007	Carbon, Total Organic	N/A		Water	0.37 mg/L	10 mL	0.37 mg/L J	1	0.07	0.50			7/2/20 10:30:00	N	II
K2005480-008	Carbon, Total Organic	N/A		Water	-0.28 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			7/2/20 10:30:00	N	II
KQ2009240-01	Carbon, Dissolved Organic (DOC)	DUP	K2005020-002	Water	5.39 mg/L	10 mL	5.39 mg/L	1	0.07	0.50		3	7/2/20 10:30:00	N	II
KQ2009240-02	Carbon, Dissolved Organic (DOC)	MS	K2005020-002	Water	31.99 mg/L	10 mL	32.0 mg/L	1	0.07	0.50	107		7/2/20 10:30:00	N	II
KQ2009240-03	Carbon, Total Organic	DUP	K2005480-001	Water	0.54 mg/L	10 mL	0.54 mg/L	1	0.07	0.50		11*	7/2/20 10:30:00	N	II
KQ2009240-04	Carbon, Total Organic	MS	K2005480-001	Water	28.68 mg/L	10 mL	28.7 mg/L	1	0.07	0.50	113		7/2/20 10:30:00	N	II
KQ2009240-05	Carbon, Dissolved Organic (DOC)	CCV		Water	25.28 mg/L	10 mL	25.3 mg/L	1					7/2/20 10:30:00	N	II
KQ2009240-05	Carbon, Total Organic	CCV		Water	25.28 mg/L	10 mL	25.3 mg/L	1					7/2/20 10:30:00	N	II
KQ2009240-06	Carbon, Dissolved Organic (DOC)	CCV		Water	24.90 mg/L	10 mL	24.9 mg/L	1					7/2/20 10:30:00	N	II
KQ2009240-06	Carbon, Total Organic	CCV		Water	24.90 mg/L	10 mL	24.9 mg/L	1					7/2/20 10:30:00	N	II
KQ2009240-07	Carbon, Dissolved Organic (DOC)	CCV		Water	24.90 mg/L	10 mL	24.9 mg/L	1					7/2/20 10:30:00	N	II
KQ2009240-07	Carbon, Total Organic	CCV		Water	24.90 mg/L	10 mL	24.9 mg/L	1					7/2/20 10:30:00	N	II
KQ2009240-08	Carbon, Dissolved Organic (DOC)	CCV		Water	24.53 mg/L	10 mL	24.5 mg/L	1					7/2/20 10:30:00	N	II
KQ2009240-08	Carbon, Total Organic	CCV		Water	24.53 mg/L	10 mL	24.5 mg/L	1					7/2/20 10:30:00	N	II
KQ2009240-09	Carbon, Dissolved Organic (DOC)	CCB		Water	-0.13 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			7/2/20 10:30:00	N	II
KQ2009240-09	Carbon, Total Organic	CCB		Water	-0.13 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			7/2/20 10:30:00	N	II

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** MKANALY **Analysis Lot:** 686666 **Method/Testcode:** SM 5310 C/TOC D

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
KQ2009240-10	Carbon, Dissolved Organic (DOC)	CCB		Water	-0.34 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			7/2/20 10:30:00	N	II
KQ2009240-10	Carbon, Total Organic	CCB		Water	-0.34 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			7/2/20 10:30:00	N	II
KQ2009240-11	Carbon, Dissolved Organic (DOC)	CCB		Water	-0.34 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			7/2/20 10:30:00	N	II
KQ2009240-11	Carbon, Total Organic	CCB		Water	-0.34 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			7/2/20 10:30:00	N	II
KQ2009240-12	Carbon, Dissolved Organic (DOC)	CCB		Water	-0.34 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			7/2/20 10:30:00	N	II
KQ2009240-12	Carbon, Total Organic	CCB		Water	-0.34 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			7/2/20 10:30:00	N	II
KQ2009240-13	Carbon, Dissolved Organic (DOC)	MB		Water	-0.34 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			7/2/20 10:30:00	N	II
KQ2009240-13	Carbon, Total Organic	MB		Water	-0.34 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			7/2/20 10:30:00	N	II
KQ2009240-14	Carbon, Dissolved Organic (DOC)	LCS		Water	17.97 mg/L	10 mL	18.0 mg/L	1	0.07	0.50	82*		7/2/20 10:30:00	N	II
KQ2009240-14	Carbon, Total Organic	LCS		Water	17.97 mg/L	10 mL	18.0 mg/L	1	0.07	0.50	82*		7/2/20 10:30:00	N	II

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

ALS ENVIRONMENTAL

Matrix: WATER

Analysis: Total Organic Carbon (WATER) Method:Oxidation EPA 415.1/9060/5310C

Printout	Sample #	Dil. Factor	Solution Conc.,mg/L	Blank Correction, mg/L	Net mg/L	TOC mg/L	Reported TOC mg/L	
CBA	RB	1			0.0000	0	<0.5	
2	CCV	1	26.484	0.3393	26.1444	26.14435	26.1	7/2/2020
3	CCB	1	0.786	0.3393	0.4470	0.44695	<0.5	7/2/2020
4	MB1	1	0.354	0.3393	0.0150	0.01495	<0.5	7/2/2020
5	LCS	1	21.061	0.3393	20.7215	20.72145	20.7	7/2/2020
6	5353-1	1	2.091	0.3393	1.7522	1.75215	1.75	7/2/2020
7	5353-2	1	14.207	0.3393	13.8678	13.86775	13.9	7/2/2020
8	5353-3	1	3.339	0.3393	3.0001	3.00005	3	7/2/2020
9	5353-4	1	10.524	0.3393	10.1847	10.18465	10.18	7/2/2020
10	5353-5	10	8.832	0.3393	8.4932	84.9315	84.93	7/2/2020
11	5357-1	1	2.367	0.3393	2.0278	2.02775	2.0	7/2/2020
12	5357-1D	1	2.291	0.3393	1.9514	1.95135	1.95	7/2/2020
13	ccv	1	25.475	0.3393	25.1361	25.13605	25.14	7/2/2020
14	ccb	1	0.324	0.3393	-0.0150	-0.01495	<0.5	7/2/2020
15	5357-1MS	1	29.360	0.3393	29.0208	29.02075	29.0	7/2/2020
16	5466-1	1	4.155	0.3393	3.8160	3.81595	3.8	7/2/2020
17	5466-2	1	3.121	0.3393	2.7822	2.78215	2.78	7/2/2020
18	5466-3	1	3.092	0.3393	2.7527	2.75265	2.8	7/2/2020
19	5466-4	1	3.141	0.3393	2.8021	2.80205	2.8	7/2/2020
20	5466-5	1	2.963	0.3393	2.6233	2.62325	2.62	7/2/2020
21	5527-1	1	2.354	0.3393	2.0148	2.01475	2.01	7/2/2020
22	LCS2	1	18.306	0.3393	17.9672	17.96715	18.0	7/2/2020
23	RB	1	0.000	0.3393	-0.3393	-0.33925	<0.5	7/2/2020
24	IB	1	0.000	0.3393	-0.3393	-0.33925	<0.5	7/2/2020
25	CCV	1	25.621	0.3393	25.2818	25.28175	25.28	7/2/2020

ICAL Date 06/13/20 ICAL ID#:11-GEN-05-51A

LCS =21.9 ppm Lot (REF# 19-GEN-08-24F)

CCV = 25.0 ppm (Ref.#13-GEN-8-23F)

Spike: 0.05 ml of 5000 ppm stock ----> 10.0 ml =25.0 ppm x Dilution Factor (Ref.# 13-GEN-08-15B)

date time

Analyzed By:	Date Analyzed
Reviewed By:	Date Reviewed 7/10/20

Revision 1, 2010 R:\WET\ANALYSES\TOC\TEMPLATE\TOCwaterLIMS

ALS ENVIRONMENTAL

Matrix: WATER

Analysis: Total Organic Carbon (WATER) Method:Oxidation EPA 415.1/9060/5310C

Printout	Sample #	Dil. Factor	Solution Conc.,mg/L	Blank Correction, mg/L	Net mg/L	TOC mg/L	Reported TOC mg/L	
26	CCB	1	0.2114	0.3393	-0.1279	-0.12785	<0.5	7/2/2020
27	MB	1	0.0000	0.3393	-0.3393	-0.33925	<0.5	7/2/2020
28	LCS	1	17.4088	0.3393	17.0696	17.06955	17.1	7/2/2020
29	ib	1	0.0000	0.3393	-0.3393	-0.33925	<0.5	7/2/2020
30	ib	1	0.0000	0.3393	-0.3393	-0.33925	<0.5	7/2/2020
31	5295-2	10	7.3216	0.3393	6.9824	69.8235	69.8	7/2/2020
32	5295-3	20	10.7357	0.3393	10.3965	207.929	207.9	7/2/2020
33	5204-2	1	2.3509	0.3393	2.0117	2.01165	2.0	7/2/2020
34	5480-1	1	0.8224	0.3393	0.4832	0.48315	<0.5	7/2/2020
35	5480-1D	1	0.8790	0.3393	0.5398	0.53975	0.5	7/2/2020
36	5480-1MS	1	29.0198	0.3393	28.6806	28.68055	28.7	7/2/2020
37	CCV	1	25.2427	0.3393	24.9035	24.90345	24.9	7/2/2020
38	CCB	1	0.0000	0.3393	-0.3393	-0.33925	<0.5	7/2/2020
39	5480-2	1	0.3701	0.3393	0.0309	0.03085	<0.5	7/2/2020
40	5480-3	1	0.4217	0.3393	0.0825	0.08245	<0.5	7/2/2020
41	5480-4	1	0.3797	0.3393	0.0405	0.04045	<0.5	7/2/2020
42	5480-5	1	0.2763	0.3393	-0.0630	-0.063	<0.5	7/2/2020
43	5480-6	1	0.0000	0.3393	-0.3393	-0.33925	<0.5	7/2/2020
44	5480-7	1	0.7055	0.3393	0.3663	0.36625	<0.5	7/2/2020
45	5480-8	1	0.0620	0.3393	-0.2773	-0.27725	<0.5	7/2/2020
46	5020-2	1	5.5916	0.3393	5.2524	5.25235	5.3	7/2/2020
47	5020-2D	1	5.7299	0.3393	5.3907	5.39065	5.4	7/2/2020
48	5020-2MS	1	32.3279	0.3393	31.9887	31.98865	32.0	7/2/2020
49	CCV	1	25.2354	0.3393	24.8962	24.89615	24.9	7/2/2020
50	CCB	1	0.0000	0.3393	-0.3393	-0.33925	<0.5	7/2/2020

Analyzed By:	Date Analyzed
Reviewed By:	Date Reviewed 7/10/20

ALS ENVIRONMENTAL

Matrix: WATER

Analysis: Total Organic Carbon (WATER) Method:Oxidation EPA 415.1/9060/5310C

Printout	Sample #	Dil. Factor	Solution Conc.,mg/L	Blank Correction, mg/L	Net mg/L	TOC mg/L	Reported TOC mg/L	
51	MB	1	0.0000	0.3393	-0.3393	-0.33925	<0.5	7/2/2020
52	LCS	1	13.9973	0.3393	13.6581	13.65805	13.7	7/2/2020
53	5020-4	1	2.9015	0.3393	2.5623	2.56225	2.6	7/2/2020
54	5459-1	1	1.3180	0.3393	0.9788	0.97875	1.0	7/2/2020
55	5459-2	1	1.3232	0.3393	0.9840	0.98395	1.0	7/2/2020
56	5174-1	100	8.9021	0.3393	8.5629	856.285	856.3	7/2/2020
57	5453-1	100	49.3522	0.3393	49.0130	4901.295	4901.3	7/2/2020
58	5455-1	100	7.3963	0.3393	7.0571	705.705	705.7	7/2/2020
59	RB	1	0.0000	0.3393	-0.3393	-0.33925	<0.5	7/2/2020
60	RB	1	0.0000	0.3393	-0.3393	-0.33925	<0.5	7/2/2020
61	CCV	1	24.8697	0.3393	24.5305	24.53045	24.5	7/2/2020
62	CCB	1	0.0000	0.3393	-0.3393	-0.33925	<0.5	7/2/2020
63		1		0.3393	-0.3393	-0.33925	<0.5	7/2/2020
64		1		0.3393	-0.3393	-0.33925	<0.5	7/2/2020
65		1		0.0000	0.0000	0	<0.5	7/2/2020
66		1		0.0000	0.0000	0	<0.5	7/2/2020
67		1		0.0000	0.0000	0	<0.5	7/2/2020
68		1		0.0000	0.0000	0	<0.5	7/2/2020
69		1		0.0000	0.0000	0	<0.5	7/2/2020
70		1		0.0000	0.0000	0	<0.5	7/2/2020
71		1		0.0000	0.0000	0	<0.5	7/2/2020
72		1		0.0000	0.0000	0	<0.5	7/2/2020
73		1		0.0000	0.0000	0	<0.5	7/2/2020
74		1		0.0000	0.0000	0	<0.5	7/2/2020
75		1		0.0000	0.0000	0	<0.5	7/2/2020

Analyzed By:	Date Analyzed
Reviewed By:	Date Reviewed 7/10/20

ALS ENVIRONMENTAL

0 Carbon
0 Carbon

0.736	0.736			OBSERVATIONS	5	0.7356
0.786				STD Deviation	0.26042	ABOVE
0.354	0.354	0.354	0.354	AVERAGE	0.48234	0.3542
0.324	0.324	0.324	0.324	UCL	0.74276	0.3243
0.211				LCL	0.22192	BELOW
						BELOW
						BELOW
				OBSERVATIONS	3	BELOW
				STD Deviation	0.22932	BELOW
				AVERAGE	0.47137	BELOW
				UCL	0.70069	BELOW
				LCL	0.24205	BELOW
						BELOW
						BELOW
				OBSERVATIONS	2	BELOW
				STD Deviation	0.02114	BELOW
				AVERAGE	0.33925	BELOW
				UCL	0.36039	BELOW
				LCL	0.31811	BELOW
						BELOW
						BELOW
				OBSERVATIONS	2	BELOW
				STD Deviation	0.02990	BELOW
				AVERAGE	0.33925	BELOW
						BELOW
						BELOW
						BELOW
						BELOW
						BELOW
						BELOW
						BELOW

685526

Schedule: 070220

Version: 7
Instrument: Fusion1
Last Saved by: Fusion1 (Fusion1)
Last Saved on: 2020/07/02 17:58 - Thursday

Position	Sample Type	Sample ID	Method ID (Calibration ID)	Reps	Use	State
(Clean)	Clean	Clean		1	True	Ready
(Clean)	Clean	Clean		1	True	Ready
(Clean)	Clean	Clean		1	True	Ready
(Blank)	Blank	Reagent/Acid Blank		1	True	Ready
D	Sample	RB	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
1	Sample	MB1	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
C	Check Standard	[TOC] LCS [24.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
2	Sample	ICS	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
3	Sample	K2005353-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
4	Sample	K2005353-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
5	Sample	K2005353-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
6	Sample	K2005353-004	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
7	Sample	K2005353-005 10X	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
8	Sample	K2005357-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
9	Sample	K2005357-001D	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
10	Sample	K2005357-001MS	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
11	Sample	K2005466-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
12	Sample	K2005466-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
13	Sample	K2005466-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
14	Sample	K2005466-004	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
15	Sample	K2005466-005	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
16	Sample	K2005527-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
C	Check Standard	[TOC] LCS [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
18	Sample	IB	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
19	Sample	RB	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
20	Sample	MB2	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
C	Check Standard	[TOC] LCS [24.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
21	Sample	~~K2005375-009~~ IB	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
22	Sample	~~K2005375-010~~ IB	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
23	Sample	K2005295-002 10X	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
24	Sample	K2005295-003 20X	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
25	Sample	K2005204-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
26	Sample	K2005480-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
27	Sample	K2005480-001DUP	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
28	Sample	K2005480-001MS	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
29	Sample	K2005480-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
30	Sample	K2005480-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
31	Sample	K2005480-004	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
32	Sample	K2005480-005	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
33	Sample	K2005480-006	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
34	Sample	K2005480-007	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
35	Sample	K2005480-008	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
36	Sample	K2005020-002 DOC	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
37	Sample	K2005020-002 DUP	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
38	Sample	K2005020-002 MS	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready

Schedule: 070220

Position	Sample Type	Sample ID	Method ID (Calibration ID)	Reps	Use	State
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
39	Sample	MB3	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
C	Check Standard	[TOC] LCS [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
40	Sample	K2005020-004 DOC	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
41	Sample	K2005459-001 DOC	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
42	Sample	K2005459-002 DOC	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
43	Sample	K2005174-001 100X	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
44	Sample	K2005453-001 100X	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
45	Sample	K2005453-001 100X	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
46	Sample	RB	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
47	Sample	RB	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
48	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
49	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
50	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
51	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
52	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
53	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
54	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
55	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
56	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
57	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
58	Sample	MB4	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
C	Check Standard	[TOC] LCS [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
59	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
60	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
61	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
62	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
63	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
64	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
65	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
66	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
67	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
68	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
69	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
70	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
71	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
72	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
73	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
74	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
75	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
					False	

Fusion Report - 070220
Thursday, July 02, 2020 10:33 AM

(View - Reps, Unused Reps, Meta-Data, Signature, History)
Printed on 2020/07/06 08:18 - Monday

Report Summary Information

Company Location:	Gen Chem Lab		
Schedule Name:	070220	Engine Version:	1.1.5.1
Instrument Name:	Fusion1	Firmware Version:	1.2.0696
Report Version:	1 of 1	Connection:	RS232 COM1
Report Creation by Operators (schedule version):	Fusion1 (Fusion1) (v4) Fusion1 (Fusion1) (v5) Fusion1 (Fusion1) (v6) Fusion1 (Fusion1) (v7)		
Comment:			

Report Results

Sample Type: Clean — From Schedule Version 4

	Pos	Analysis Type	Sample ID	Start Time
◈	(clean)		Clean	2020/07/02 10:33

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	16.57	20.54	3.97	49.66	05:25
2	TC Clean	16.80	20.49	3.70	49.79	07:19
3	TC Clean	2.80	6.54	3.74	49.81	07:01
4	TC Clean	1.41	5.23	3.81	49.80	07:01

Sample Type: Clean — From Schedule Version 5

	Pos	Analysis Type	Sample ID	Start Time
◈	(clean)		Clean	2020/07/02 11:05

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	4.14	7.83	3.69	49.68	05:24
2	TC Clean	9.03	12.60	3.57	49.79	07:18
3	TC Clean	2.16	5.86	3.70	49.77	07:00

4	TC Clean	1.88	5.63	3.75	49.78	07:02

Sample Type: Clean — From Schedule Version 5

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/07/02 11:36

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	2.49	6.22	3.73	49.65	05:25
2	TC Clean	7.09	10.67	3.58	49.76	07:16
3	TC Clean	2.36	5.90	3.55	49.74	07:04
4	TC Clean	2.07	5.65	3.58	49.75	07:03

Sample Type: Blank (Creating v1404) — From Schedule Version 5

	Pos	Analysis Type	Sample ID	Start Time
◆	(blank)		Reagent/Acid Blank	2020/07/02 12:08

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	1.90	5.50	3.59	49.76	05:19
2	TC Clean	7.90	11.59	3.69	49.75	07:16
3	TC Clean	2.67	6.30	3.62	49.73	07:00
4	TC Clean	2.59	6.12	3.53	49.74	07:01
5	Reagent Blank	18.31	22.13	3.82	49.72	08:11
6	Acid Blank	2.84	6.38	3.54	49.87	08:03

Sample Type: Sample — From Schedule Version 5

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	D	TOC	RB	0.7356 ppm	0.0000 ppm	0.0000%	2020/07/02 12:57

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.7356	7.3563	17.37	20.98	3.61	49.82	10:32

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm — From Schedule Version 5

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	26.4836 ppm (PASS)	0.0000 ppm	0%	2020/07/02 13:12

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	26.4836	264.8361	195.67	199.41	3.74	49.80	10:33

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB — From Schedule Version 5

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.7862 ppm (PASS)	0.0000 ppm	0%	2020/07/02 13:26

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.7862	7.8618	15.41	19.00	3.60	49.86	10:34

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample — From Schedule Version 5

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	1	TOC	MB1	0.3542 ppm	0.0000 ppm	0.0000%	2020/07/02 13:41

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.3542	3.5415	14.69	18.43	3.74	49.84	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> LCS — From Schedule Version 5

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [24.0 ppm]	0 / infinity (NA / NA)	21.0607 ppm (PASS)	0.0000 ppm	0%	2020/07/02 13:56

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	21.0607	210.6067	157.63	161.14	3.51	49.82	10:33

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Sample From Schedule Version 5

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	2	TOC	ICS	0.7298 ppm	0.0000 ppm	0.0000%	2020/07/02 14:11

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.7298	7.2979	17.33	21.04	3.71	49.81	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	3	TOC	K2005353-001	2.0914 ppm	0.1019 ppm	4.8700%	2020/07/02 14:25

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.1635	21.6347	27.38	30.98	3.60	49.81	10:25
2	TOC	2.0193	20.1934	26.37	30.19	3.81	49.79	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	4	TOC	K2005353-002	14.2070 ppm	0.0275 ppm	0.1900%	2020/07/02 14:53

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	14.2265	142.2649	112.00	115.76	3.76	49.89	10:27
2	TOC	14.1876	141.8757	111.73	115.39	3.66	50.03	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	5	TOC	K2005353-003	3.3393 ppm	0.2545 ppm	7.6200%	2020/07/02 15:21

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.5193	35.1931	36.89	40.69	3.80	50.06	10:28
2	TOC	3.1594	31.5936	34.37	38.20	3.83	50.22	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	6	TOC	K2005353-004	10.5239 ppm	0.0292 ppm	0.2800%	2020/07/02 15:49

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	10.5032	105.0323	85.88	89.65	3.76	50.32	10:29
2	TOC	10.5446	105.4457	86.18	89.88	3.71	50.42	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	7	TOC	K2005353-005 10X	8.8324 ppm	0.3003 ppm	3.4000%	2020/07/02 16:18

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	9.0447	90.4475	75.65	79.17	3.51	50.50	10:30
2	TOC	8.6201	86.2008	72.68	76.38	3.70	50.57	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	8	TOC	K2005357-001	2.3670 ppm	0.0746 ppm	3.1500%	2020/07/02 16:46

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.4198	24.1978	29.18	32.71	3.53	50.63	10:29
2	TOC	2.3143	23.1429	28.44	32.20	3.76	50.65	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	9	TOC	K2005357-001D	2.2906 ppm	0.0053 ppm	0.2300%	2020/07/02 17:14

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.2943	22.9433	28.30	31.95	3.65	50.69	10:29
2	TOC	2.2868	22.8678	28.25	32.05	3.80	50.61	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 5

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.4753 ppm (PASS)	0.0000 ppm	0%	2020/07/02 17:42

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.4753	254.7532	188.60	192.34	3.74	50.59	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 6

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.3243 ppm (PASS)	0.0000 ppm	0%	2020/07/02 17:57

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.3243	3.2431	12.17	16.00	3.83	50.52	10:29

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 7

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	10	TOC	K2005357-001MS	29.3600 ppm	0.3828 ppm	1.3000%	2020/07/02 18:11

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	29.0893	290.8929	216.26	219.80	3.54	50.44	10:32
2	TOC	29.6307	296.3072	220.06	223.87	3.81	50.35	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	11	TOC	K2005466-001	4.1552 ppm	0.0957 ppm	2.3000%	2020/07/02 18:40

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.2228	42.2282	41.83	45.64	3.81	50.25	10:29
2	TOC	4.0875	40.8753	40.88	44.62	3.74	50.19	10:28

Dilution	Blank Contribution	Method	Calibration

1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	12	TOC	K2005466-002	3.1214 ppm	0.0203 ppm	0.6500%	2020/07/02 19:08

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.1357	31.3569	34.20	37.88	3.68	50.08	10:26
2	TOC	3.1070	31.0704	34.00	37.63	3.63	50.02	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	13	TOC	K2005466-003	3.0919 ppm	0.0094 ppm	0.3000%	2020/07/02 19:36

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.0852	30.8523	33.85	37.57	3.72	49.98	10:26
2	TOC	3.0985	30.9848	33.94	37.65	3.71	49.94	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	14	TOC	K2005466-004	3.1413 ppm	0.0101 ppm	0.3200%	2020/07/02 20:04

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.1484	31.4838	34.29	38.04	3.75	49.92	10:29
2	TOC	3.1341	31.3412	34.19	37.95	3.76	49.92	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	15	TOC	K2005466-005	2.9625 ppm	0.0554 ppm	1.8700%	2020/07/02 20:32

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.0017	30.0169	33.26	37.04	3.78	49.96	10:28
2	TOC	2.9233	29.2328	32.71	36.58	3.86	49.96	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	16	TOC	K2005527-001	2.3540 ppm	0.0146 ppm	0.6200%	2020/07/02 21:00

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.3643	23.6433	28.79	32.53	3.74	49.97	10:30
2	TOC	2.3437	23.4366	28.65	32.46	3.81	49.99	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> LCS From Schedule Version 7

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [25.0 ppm]	0 / infinity (NA / NA)	18.3064 ppm (PASS)	0.0000 ppm	0%	2020/07/02 21:28

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	18.3064	183.0636	138.31	142.18	3.88	49.99	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Sample From Schedule Version 7

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	18	TOC	IB	0.0000 ppm	0.0000 ppm	0.0000%	2020/07/02 21:42

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	11.68	15.63	3.95	50.01	10:29
2	TOC	0.0000	0.0000	11.56	15.56	4.00	50.02	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	19	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2020/07/02 22:10

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	11.36	15.34	3.98	50.04	10:27
2	TOC	0.0000	0.0000	11.30	15.20	3.89	50.07	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 7

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.6210 ppm (PASS)	0.0000 ppm	0%	2020/07/02 22:39

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.6210	256.2101	189.62	193.44	3.82	50.08	10:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 7

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.2114 ppm (PASS)	0.0000 ppm	0%	2020/07/02 22:53

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.2114	2.1140	11.38	15.30	3.92	50.09	10:34

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 7

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	20	TOC	MB2	0.0000 ppm	0.0000 ppm	0.0000%	2020/07/02 23:08

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	10.75	14.56	3.81	50.10	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> LCS From Schedule Version 7

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [24.0 ppm]	0 / infinity (NA / NA)	17.4088 ppm (PASS)	0.0000 ppm	0%	2020/07/02 23:23

Pos	Base Analysis	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time

	Type									
C	TOC	25.0 ppm	1	17.4088	174.0883	132.01	135.94	3.92	50.11	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Sample From Schedule Version 7

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	21	TOC	K2005375-009	0.0000 ppm	0.0000 ppm	0.0000%	2020/07/02 23:37

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	10.77	14.54	3.78	50.15	10:29
2	TOC	0.0000	0.0000	10.03	13.80	3.77	50.15	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	22	TOC	K2005375-010	0.0000 ppm	0.0000 ppm	0.0000%	2020/07/03 00:05

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	10.17	13.91	3.74	50.17	10:27
2	TOC	0.0000	0.0000	9.80	13.74	3.95	50.18	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	23	TOC	K2005295-002 10X	7.3216 ppm	0.0162 ppm	0.2200%	2020/07/03 00:33

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	7.3331	73.3309	63.65	67.59	3.94	50.18	10:31
2	TOC	7.3101	73.1014	63.49	67.64	4.16	50.21	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	24	TOC	K2005295-003 20X	10.7357 ppm	0.1529 ppm	1.4200%	2020/07/03 01:01

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	10.6275	106.2754	86.76	90.72	3.96	50.20	10:30
2	TOC	10.8438	108.4379	88.27	92.20	3.92	50.22	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	25	TOC	K2005204-002	2.3509 ppm	0.0088 ppm	0.3700%	2020/07/03 01:30

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.3571	23.5706	28.74	32.75	4.01	50.21	10:30
2	TOC	2.3447	23.4465	28.65	32.47	3.82	50.22	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	26	TOC	K2005480-001	0.8224 ppm	0.0062 ppm	0.7600%	2020/07/03 01:58

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.8269	8.2687	18.01	22.03	4.02	50.23	10:27
2	TOC	0.8180	8.1803	17.94	21.78	3.83	50.22	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	27	TOC	K2005480-001DUP	0.8790 ppm	0.0249 ppm	2.8300%	2020/07/03 02:26

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.8614	8.6137	18.25	22.22	3.97	50.22	10:26
2	TOC	0.8966	8.9658	18.50	22.45	3.96	50.25	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	28	TOC	K2005480-001MS	29.0198 ppm	0.0027 ppm	0.0100%	2020/07/03 02:54

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	29.0179	290.1787	215.76	219.59	3.83	50.24	10:25
2	TOC	29.0217	290.2172	215.79	219.74	3.95	50.23	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 7

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.2427 ppm (PASS)	0.0000 ppm	0%	2020/07/03 03:22

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.2427	252.4267	186.96	190.97	4.00	50.23	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 7

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/07/03 03:37

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	9.86	13.92	4.06	50.23	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 7

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	29	TOC	K2005480-002	0.3701 ppm	0.0192 ppm	5.1700%	2020/07/03 03:52

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.3837	3.8366	14.90	18.90	4.00	50.25	10:28
2	TOC	0.3566	3.5658	14.71	18.62	3.92	50.24	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	30	TOC	K2005480-003	0.4217 ppm	0.0010 ppm	0.2400%	2020/07/03 04:20

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.4224	4.2244	15.17	19.10	3.93	50.23	10:29
2	TOC	0.4210	4.2101	15.16	19.28	4.12	50.23	10:32

Dilution	Blank Contribution	Method	Calibration

1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	31	TOC	K2005480-004	0.3797 ppm	0.0185 ppm	4.8900%	2020/07/03 04:48

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.3928	3.9279	14.96	18.88	3.92	50.25	10:27
2	TOC	0.3666	3.6656	14.78	18.73	3.95	50.24	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	32	TOC	K2005480-005	0.2762 ppm	0.0380 ppm	13.7600%	2020/07/03 05:16

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.2494	2.4938	13.96	17.95	4.00	50.24	10:27
2	TOC	0.3031	3.0312	14.33	17.93	3.60	50.24	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	33	TOC	K2005480-006	0.0000 ppm	0.0000 ppm	0.0000%	2020/07/03 05:44

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	12.17	15.98	3.82	50.24	10:32
2	TOC	0.0000	0.0000	11.90	15.65	3.75	50.25	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	34	TOC	K2005480-007	0.7055 ppm	0.0326 ppm	4.6200%	2020/07/03 06:12

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.7285	7.2850	17.32	21.01	3.69	50.24	10:29
2	TOC	0.6825	6.8246	16.99	20.90	3.90	50.23	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	35	TOC	K2005480-008	0.0620 ppm	0.0489 ppm	78.8700%	2020/07/03 06:40

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0966	0.9656	12.88	16.61	3.72	50.24	10:30
2	TOC	0.0274	0.2742	12.40	16.02	3.62	50.23	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	36	TOC	K2005020-002 DOC	5.5916 ppm	0.0571 ppm	1.0200%	2020/07/03 07:08

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	5.5513	55.5129	51.15	54.95	3.80	50.22	10:30
2	TOC	5.6320	56.3198	51.71	55.35	3.64	50.22	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	37	TOC	K2005020-002 DUP	5.7299 ppm	0.0306 ppm	0.5300%	2020/07/03 07:37

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	5.7516	57.5158	52.55	56.13	3.58	50.19	10:30
2	TOC	5.7082	57.0824	52.25	55.99	3.74	50.19	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	38	TOC	K2005020-002 MS	32.3279 ppm	0.2808 ppm	0.8700%	2020/07/03 08:05

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	32.5264	325.2644	240.37	244.27	3.90	50.18	10:26
2	TOC	32.1293	321.2928	237.59	241.48	3.90	50.17	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 7

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.2354 ppm (PASS)	0.0000 ppm	0%	2020/07/03 08:33

Pos	Base Analysis	ID	Rep	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run

	Type		#							Time
B	TOC	25 ppm	1	25.2354	252.3540	186.91	190.63	3.72	50.14	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 7

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/07/03 08:47

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	9.64	13.17	3.54	50.12	10:34

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 7

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	39	TOC	MB3	0.0000 ppm	0.0000 ppm	0.0000%	2020/07/03 09:02

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	9.19	12.81	3.62	50.12	10:32

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> LCS From Schedule Version 7

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [25.0 ppm]	0 / infinity (NA / NA)	13.9973 ppm (PASS)	0.0000 ppm	0%	2020/07/03 09:17

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	13.9973	139.9734	108.08	111.62	3.54	50.12	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Sample From Schedule Version 7

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	40	TOC	K2005020-004 DOC	2.9015 ppm	0.0669 ppm	2.3100%	2020/07/03 09:31

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.9488	29.4880	32.89	36.47	3.58	50.09	10:34
2	TOC	2.8541	28.5415	32.23	35.81	3.58	50.09	10:24

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	41	TOC	K2005459-001 DOC	1.3180 ppm	0.0121 ppm	0.9200%	2020/07/03 09:59

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.3094	13.0942	21.39	24.97	3.58	50.08	10:30
2	TOC	1.3265	13.2652	21.51	25.23	3.72	50.07	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	42	TOC	K2005459-002 DOC	1.3232 ppm	0.0044 ppm	0.3400%	2020/07/03 10:28

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.3264	13.2638	21.51	25.23	3.72	50.05	10:28
2	TOC	1.3201	13.2011	21.47	25.18	3.71	50.04	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	43	TOC	K2005174-001 100X	8.9021 ppm	0.0563 ppm	0.6300%	2020/07/03 10:56

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	8.9420	89.4197	74.93	78.66	3.73	50.03	10:26
2	TOC	8.8623	88.6228	74.37	77.98	3.60	50.03	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	44	TOC	K2005453-001 100X	49.3522 ppm	0.1170 ppm	0.2400%	2020/07/03 11:24

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time

1	TOC	49.4349	494.3491	358.98	362.57	3.58	50.02	10:27
2	TOC	49.2694	492.6941	357.82	361.69	3.86	50.01	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	45	TOC	K2005453-001 100X	7.3963 ppm	0.1878 ppm	2.5400%	2020/07/03 11:52

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	7.5291	75.2910	65.02	68.53	3.51	50.01	10:28
2	TOC	7.2635	72.6352	63.16	66.81	3.66	50.00	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	46	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2020/07/03 12:20

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	9.01	12.53	3.52	49.99	10:28
2	TOC	0.0000	0.0000	9.06	12.47	3.41	49.99	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	47	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2020/07/03 12:48

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.51	11.96	3.45	49.98	10:27
2	TOC	0.0000	0.0000	8.30	11.88	3.58	49.97	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm — From Schedule Version 7

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	24.8697 ppm (PASS)	0.0000 ppm	0%	2020/07/03 13:16

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.8697	248.6975	184.35	187.98	3.63	49.96	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 7

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/07/03 13:31

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	8.84	12.35	3.51	49.96	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 7

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	48	TOC		0.0000 ppm	0.0000 ppm	0.0000%	2020/07/03 13:45

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.36	11.89	3.53	49.93	10:26
2	TOC	0.0000	0.0000	8.20	11.72	3.52	49.92	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	49	TOC		0.0000 ppm	0.0000 ppm	0.0000%	2020/07/03 14:14

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.06	11.60	3.53	49.92	10:30
2	TOC	0.0000	0.0000	8.01	11.61	3.60	49.92	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	50	TOC		0.0000 ppm	0.0000 ppm	0.0000%	2020/07/03 14:42

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.03	11.73	3.70	49.90	10:28

LABORATORY REPORT

July 8, 2020

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

RE: HS20061178

Dear RJ:

Enclosed are the results of the samples submitted to our laboratory on June 25, 2020. For your reference, these analyses have been assigned our service request number P2003560.

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

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

Respectfully submitted,

ALS | Environmental

By Hayden Akers at 4:03 pm, Jul 08, 2020

Hayden Akers
Project Manager

Client: ALS Laboratory Group Service Request No: P2003560
Project: HS20061178

CASE NARRATIVE

The samples were received intact under chain of custody on June 25, 2020 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Carbon Dioxide Analysis

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

Methane, Ethene and Ethane Analysis

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

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

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

ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Alaska DEC	http://dec.alaska.gov/eh/lab.aspx	17-019
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.floridahealth.gov/licensing-and-regulation/environmental-laboratories/index.html	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/page/la-lab-accreditation	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml	2018027
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1776326
New Jersey DEP (NELAP)	http://www.nj.gov/dep/enforcement/oqa.html	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://www.oregon.gov/oha/ph/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-007
Pennsylvania DEP	http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/agency/qa/env_lab_accreditation.html	T104704413-19-10
Utah DOH (NELAP)	http://health.utah.gov/lab/lab_cert_env	CA016272019-10
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

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

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

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: ALS Laboratory Group
Project ID: HS20061178

Service Request: P2003560

Date Received: 6/25/2020
Time Received: 09:15

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	RSK 175 - CO2	RSK 175 - Gases
35AWW09_062320	P2003560-001	Water	6/23/2020	10:05	X	X
03AWW01_062320	P2003560-002	Water	6/23/2020	11:00	X	X
35AWW08_062320	P2003560-003	Water	6/23/2020	12:05	X	X
35AWW11_062320	P2003560-004	Water	6/23/2020	13:25	X	X

P1003560

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

Subcontract Chain of Custody

SAMPLING STATE: **Texas** **COC ID:** **14187**

SUBCONTRACT TO:

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

Phone: +1 805 526 7161

CUSTOMER INFORMATION:

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

INVOICE INFORMATION:

Company: ALS Houston
Contact: Accounts Payable
Address: 10450 Stancliff Rd, Ste 210
Phone: +1 281 530 5656
Reference: HS20061178
TSR: Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20061178-01**	**35AWW09_062320**	**Groundwater**	**23 Jun 2020 10:05**
	MEE plus CO2 Sub to ALS SimiValley			09 Jul 2020
2.	**HS20061178-02**	**03WW01_062320**	**Groundwater**	**23 Jun 2020 11:00**
	MEE plus CO2 Sub to ALS SimiValley			09 Jul 2020
3.	**HS20061178-03**	**35AWW08_062320**	**Groundwater**	**23 Jun 2020 12:05**
	MEE plus CO2 Sub to ALS SimiValley			09 Jul 2020
4.	**HS20061178-04**	**35AWW11_062320**	**Groundwater**	**23 Jun 2020 13:25**
	MEE plus CO2 Sub to ALS SimiValley			09 Jul 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: 6/24/2020 1800

Received By: _____ Date/Time: 6-25-20 0815 2° wet

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

ALS Environmental
Sample Acceptance Check Form

Client: ALS Laboratory Group Work order: P2003560
Project: HS20061178
Sample(s) received on: 06/25/20 Date opened: 06/25/20 by: ADAVID

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

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Did **sample containers** arrive in good condition?	☒	☐	☐
3	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
4	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
5	Was **sample volume** received adequate for analysis?	☒	☐	☐
6	Are samples within specified holding times?	☒	☐	☐
7	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☒	☐	☐
	Cooler Temperature: 2° C Blank Temperature: ° C Thermometer ID T-111 Wet Ic			
8	Were **custody seals** on outside of cooler/Box/Container?	☒	☐	☐
	Location of seal(s)? _____ Sealing Lid?	☒	☐	☐
	Were signature and date included?	☒	☐	☐
	Were seals intact?	☒	☐	☐
9	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☒	☐	☐
	Is there a client indication that the submitted samples are **pH** preserved?	☒	☐	☐
	Were **VOA vials** checked for presence/absence of air bubbles?	☒	☐	☐
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☒	☐
10	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
11	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P2003560-001.01	40mL VOA NP		7		A	LD 06/30/2020
P2003560-001.04	40ml VOA HCL		1		A	LD 07/01/2020
P2003560-001.05	40ml VOA HCL				A	
P2003560-001.06	40ml VOA HCL				A	
P2003560-001.07	40mL VOA NP				A	
P2003560-002.01	40mL VOA NP		7		A	LD 06/30/2020
P2003560-002.04	40ml VOA HCL		1		A	LD 07/01/2020
P2003560-002.05	40ml VOA HCL				A	
P2003560-002.06	40ml VOA HCL				A	
P2003560-002.07	40mL VOA NP				A	
P2003560-003.01	40mL VOA NP		7		A	LD 06/30/2020
P2003560-003.04	40ml VOA HCL		1		A	LD 07/01/2020
P2003560-003.05	40ml VOA HCL				A	
P2003560-003.06	40ml VOA HCL				A	
P2003560-003.07	40mL VOA NP				A	

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

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

ALS Environmental
Sample Acceptance Check Form

Client: ALS Laboratory Group Work order: P2003560

Project: HS20061178

Sample(s) received on: 06/25/20 Date opened: 06/25/20 by: ADAVID

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P2003560-004.01	40mL VOA NP		7		A	LD 06/30/2020
P2003560-004.04	40ml VOA HCL		1		A	LD 07/01/2020
P2003560-004.05	40ml VOA HCL				A	
P2003560-004.06	40ml VOA HCL				A	
P2003560-004.07	40mL VOA NP					

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

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

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Project ID: **HS20061178** ALS Project ID: P2003560

Carbon Dioxide

Test Code: RSK 175
Instrument ID: HP5890A/GC10/TCD
Analyst: Li Donghao
Matrix: Liquid
Test Notes:

Date(s) Collected: 6/23/20
Date Received: 6/25/20
Date Analyzed: 6/30/20

Client Sample ID	ALS Sample ID	Injection Volume ml(s)	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
35AWW09_062320	P2003560-001	0.10	**100,000**	1,000	860	370	
03AWW01_062320	P2003560-002	0.10	**300,000**	1,000	860	370	
35AWW08_062320	P2003560-003	0.10	**230,000**	1,000	860	370	
35AWW11_062320	P2003560-004	0.10	**390,000**	1,000	860	370	
Method Control Sample	P200630-MB	0.10	860	1,000	860	370	**U**

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

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **ALS Laboratory Group**
Client Sample ID: **Duplicate Lab Control Sample**
Client Project ID: **HS20061178**

ALS Project ID: P2003560
ALS Sample ID: P200630-DLCS

Test Code: RSK 175
Instrument ID: HP5890A/GC10/TCD
Analyst: Li Donghao
Matrix: Liquid
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 6/30/20
Volume(s) Analyzed: NA ml(s)

CAS #	Compound	Spike Amount LCS / DLCS ug/L	Result$_1$ LCS ug/L	Result$_1$ DLCS ug/L	% Recovery LCS	% Recovery DLCS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
124-38-9	Carbon Dioxide	22,900	19,500	19,200	**85**	**84**	80-122	1	12	

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

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **35AWW09_062320**
Client Project ID: **HS20061178**

ALS Project ID: P2003560
ALS Sample ID: P2003560-001

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Li Donghao
Matrix: Water
Test Notes:

Date Collected: 06/23/20
Date Received: 06/25/20
Date Analyzed: 07/01/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	**1.9**	1.3	1.0	0.51	
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

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

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **03AWW01_062320**
Client Project ID: **HS20061178**

ALS Project ID: P2003560
ALS Sample ID: P2003560-002

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Li Donghao
Matrix: Water
Test Notes:

Date Collected: 06/23/20
Date Received: 06/25/20
Date Analyzed: 07/01/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	**640**	1.3	1.0	0.51	
74-85-1	Ethene	**0.46**	1.0	0.55	0.24	**J**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **35AWW08_062320**
Client Project ID: **HS20061178**

ALS Project ID: P2003560
ALS Sample ID: P2003560-003

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Li Donghao
Matrix: Water
Test Notes:

Date Collected: 06/23/20
Date Received: 06/25/20
Date Analyzed: 07/01/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	**1,500**	1.3	1.0	0.51	
74-85-1	Ethene	**12**	1.0	0.55	0.24	
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

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

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **35AWW11_062320**
Client Project ID: **HS20061178**

ALS Project ID: P2003560
ALS Sample ID: P2003560-004

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Li Donghao
Matrix: Water
Test Notes:

Date Collected: 06/23/20
Date Received: 06/25/20
Date Analyzed: 07/01/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	**1,000**	1.3	1.0	0.51	
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

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

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **Method Control Sample**
Client Project ID: **HS20061178**

ALS Project ID: P2003560
ALS Sample ID: P200701-MB

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Li Donghao
Matrix: Water
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 7/01/20
Volume(s) Analyzed: 0.10 ml(s)

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

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

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **ALS Laboratory Group**
Client Sample ID: **Duplicate Lab Control Sample**
Client Project ID: **HS20061178**

ALS Project ID: P2003560
ALS Sample ID: P200701-LCS
P200701-DLCS

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Li Donghao
Matrix: Water
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 7/01/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Spike Amount LCS / DLCS µg/L	Result$_1$ LCS µg/L	Result$_1$ DLCS µg/L	% Recovery LCS	% Recovery DLCS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
74-82-8	Methane	2.52	2.72	2.70	**108**	**107**	73-125	0.9	26	
74-85-1	Ethene	4.40	4.68	4.60	**106**	**105**	72-133	0.9	11	
74-84-0	Ethane	4.72	4.52	4.38	**96**	**93**	74-131	3	10	

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

01002697

Data Path : I:\GC10\DATA\RSK_FID\2020_06\30CO2\
Data File : 06302007.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Jun-2020, 17:15:13
Operator : LD
Sample : P2003560-001 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 30 17:57:56 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

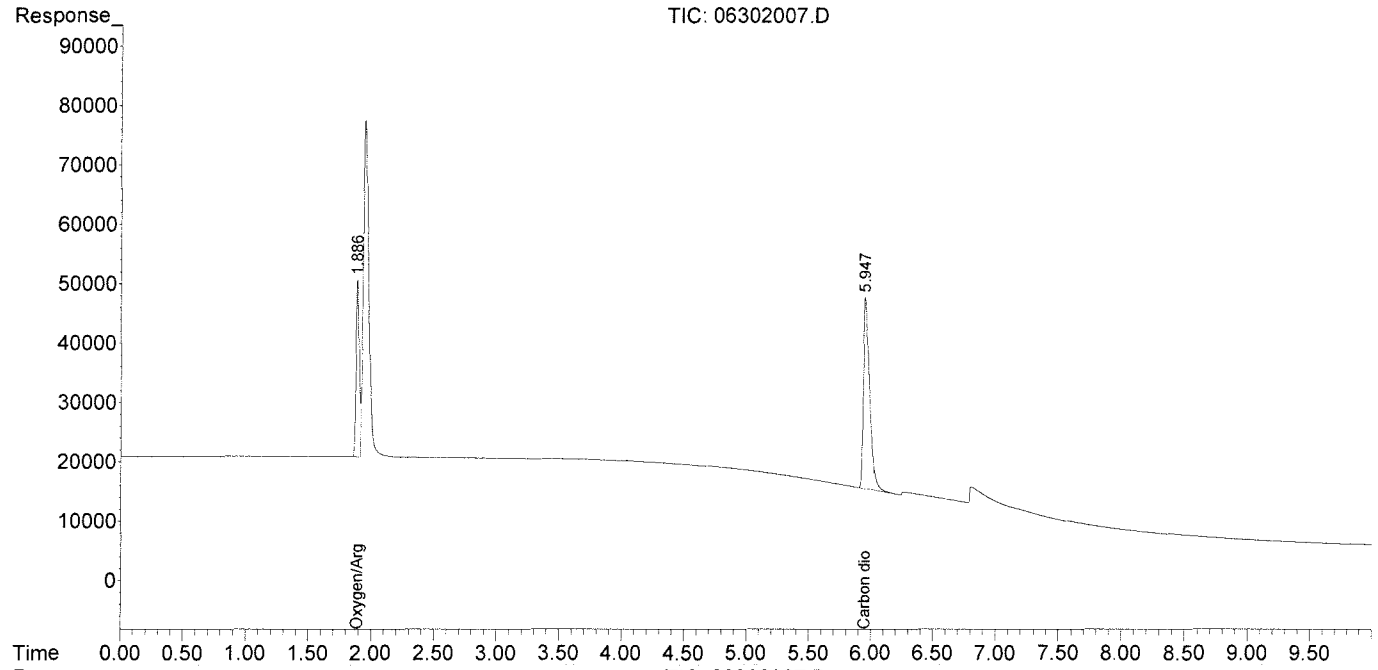
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.886	515586	0.108	ppm
2)	Carbon monoxide	1.886	515586	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	5.948	1123512	4786.418	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

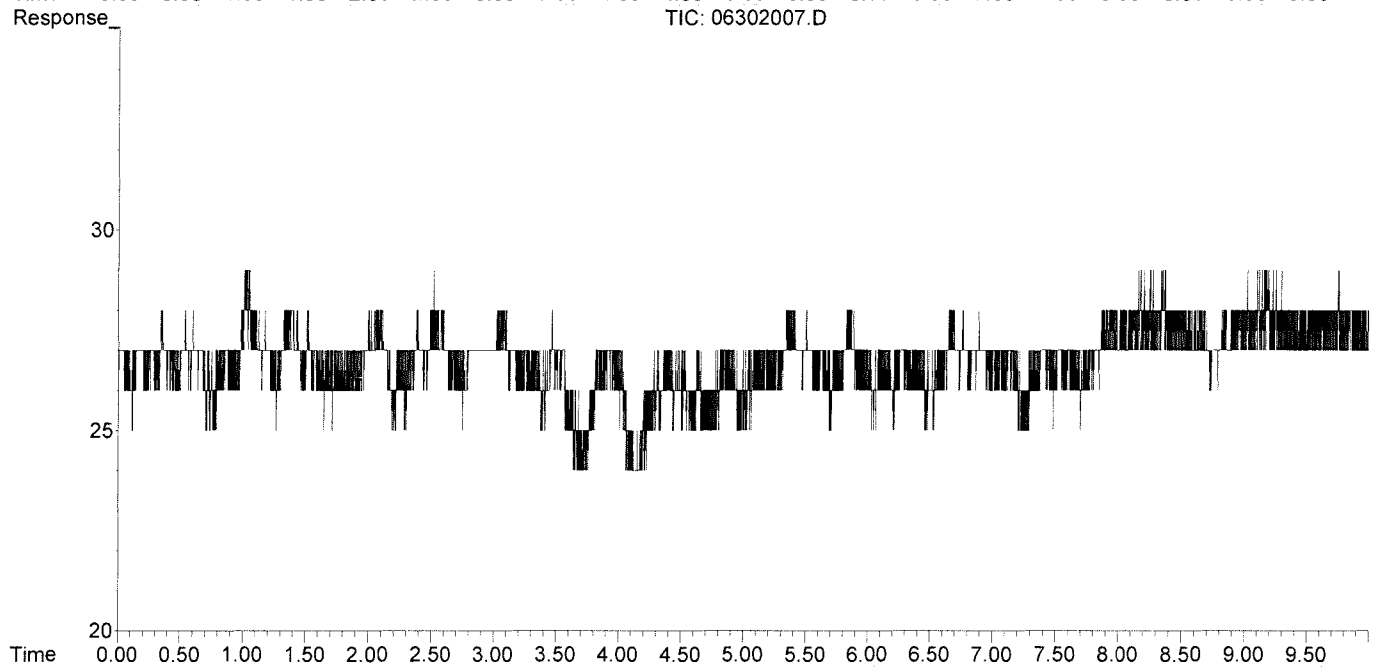
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Data Path : I:\GC10\DATA\RSK_FID\2020_06\30CO2\
Data File : 06302007.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Jun-2020, 17:15:13
Operator : LD
Sample : P2003560-001 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 30 17:57:56 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : I:\GC10\DATA\RSK_FID\2020_06\30CO2\
Data File : 06302008.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Jun-2020, 17:29:19
Operator : LD
Sample : P2003560-002 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 30 17:58:07 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

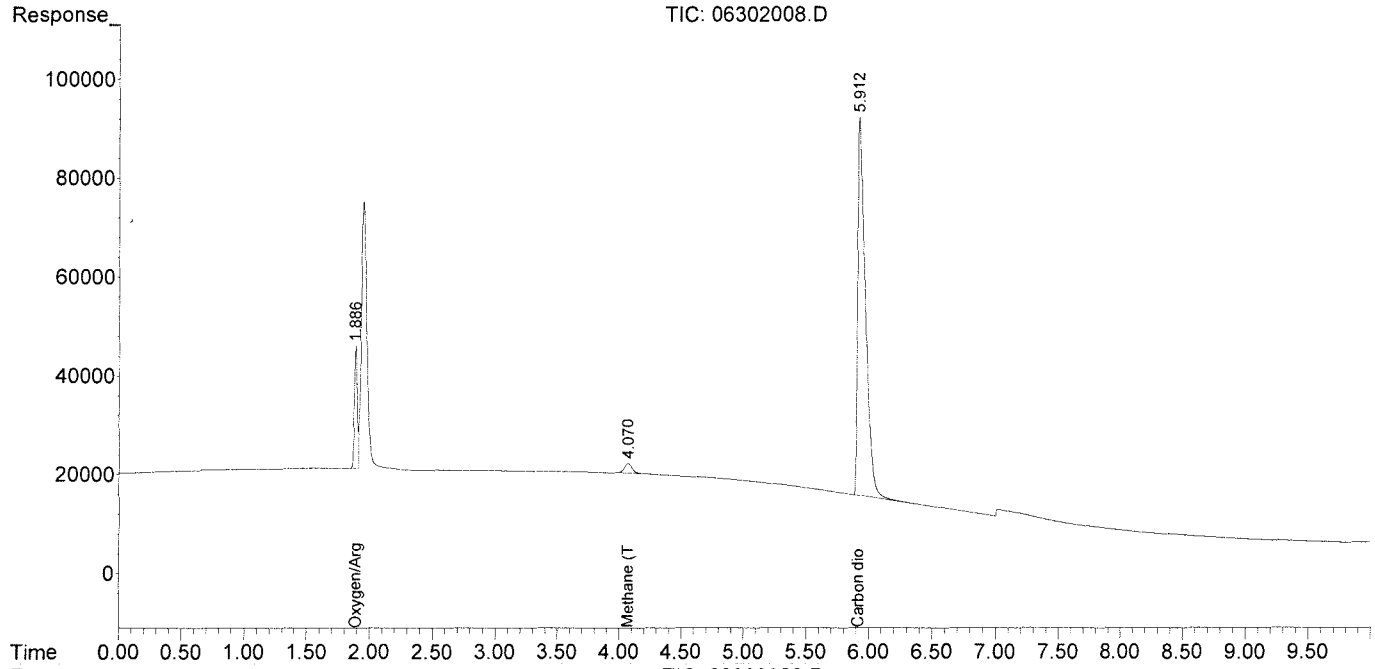
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.886	422537	0.089	ppm
2)	Carbon monoxide	1.886	422537	N.D.	ppm
3)	Methane (TCD)	4.069f	84302	8913.896	ppm
4)	Carbon dioxide	5.913	3269126	13927.224	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

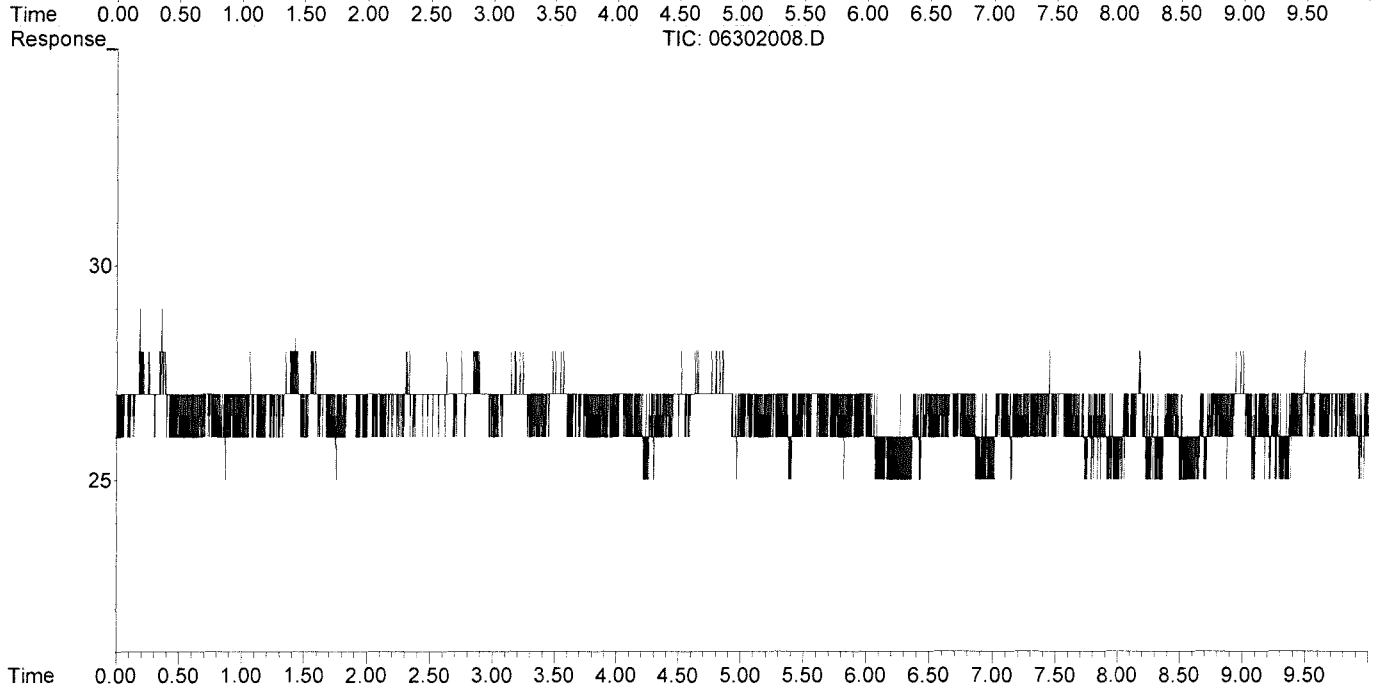
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_06\30CO2\
Data File : 06302008.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Jun-2020, 17:29:19
Operator : LD
Sample : P2003560-002 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 30 17:58:07 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : I:\GC10\DATA\RSK_FID\2020_06\30CO2\
Data File : 06302009.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Jun-2020, 17:42:46
Operator : LD
Sample : P2003560-003 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 30 17:58:20 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

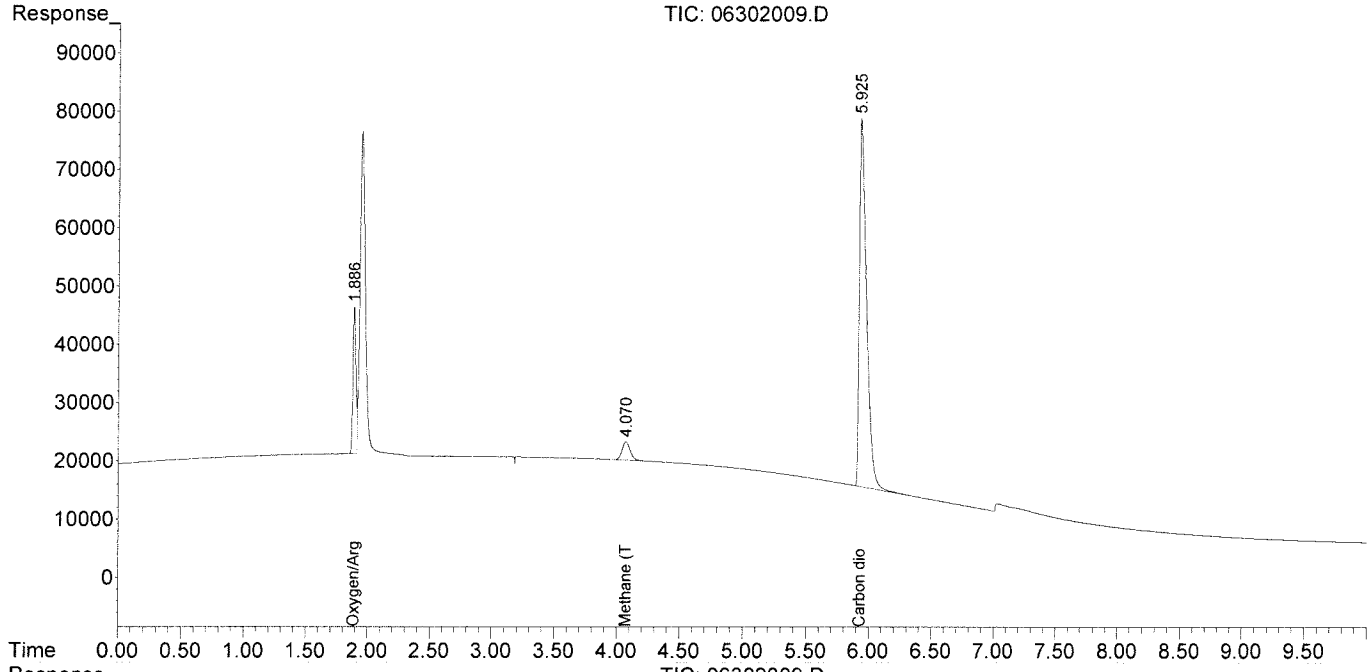
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.887	428110	0.090	ppm
2)	Carbon monoxide	1.887	428110	N.D.	ppm
3)	Methane (TCD)	4.070f	139836	14785.929	ppm
4)	Carbon dioxide	5.926	2498558	10644.430	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

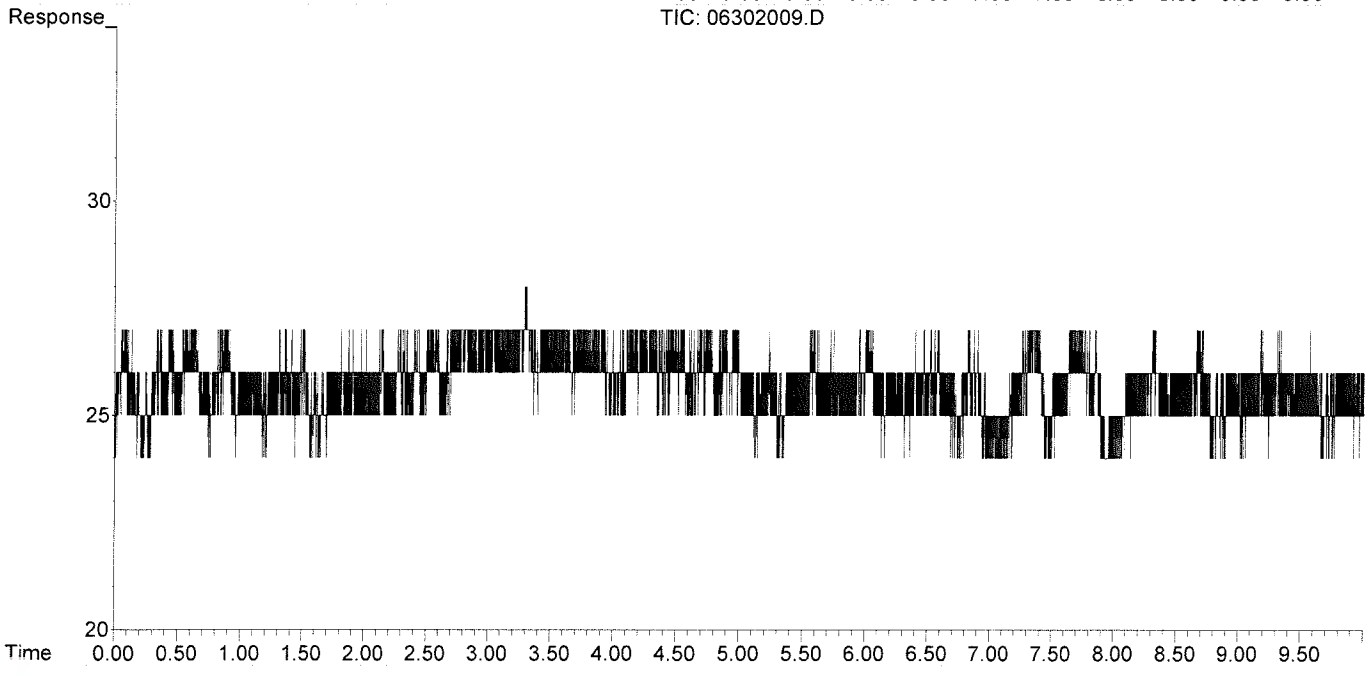
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_06\30CO2\
Data File : 06302009.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Jun-2020, 17:42:46
Operator : LD
Sample : P2003560-003 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 30 17:58:20 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : I:\GC10\DATA\RSK_FID\2020_06\30CO2\
Data File : 06302010.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Jun-2020, 17:55:45
Operator : LD
Sample : P2003560-004 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 30 18:54:53 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

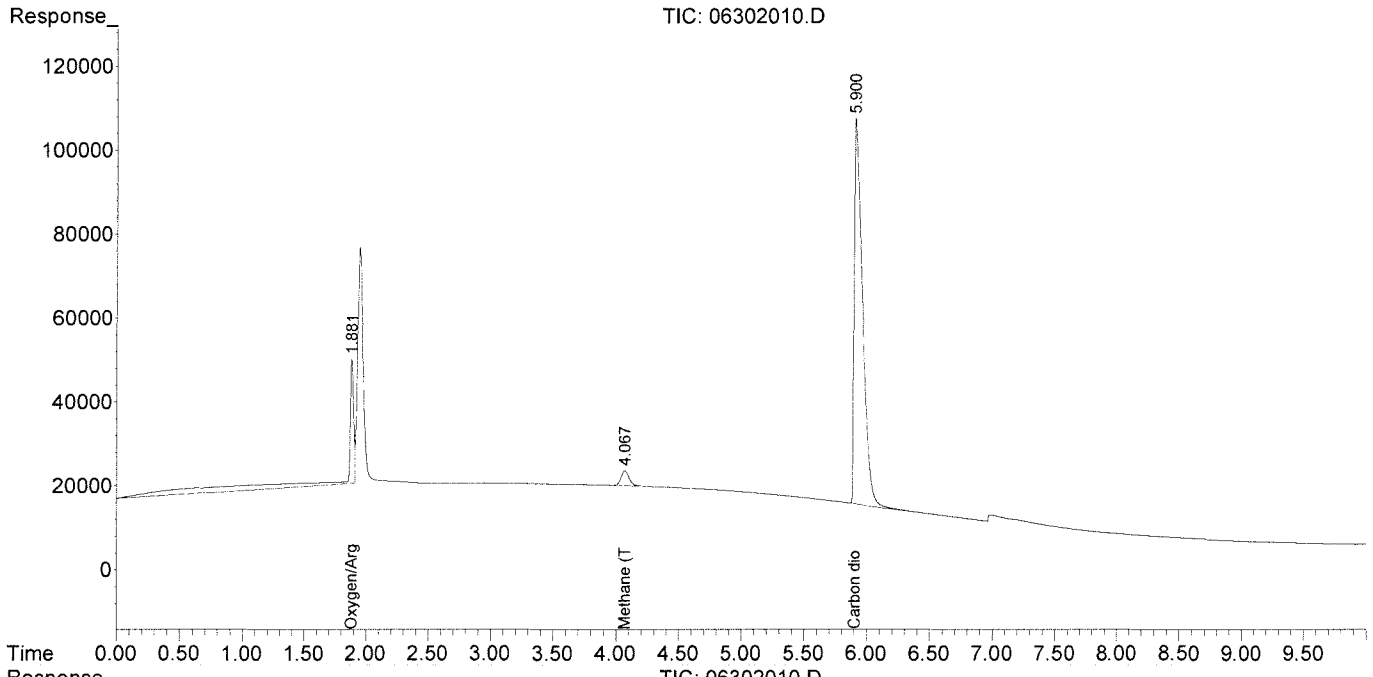
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.882	1534639	0.322	ppm
2)	Carbon monoxide	1.882	1534639	N.D.	ppm
3)	Methane (TCD)	4.068f	160664	16988.274	ppm
4)	Carbon dioxide	5.902	4192820	17862.373	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

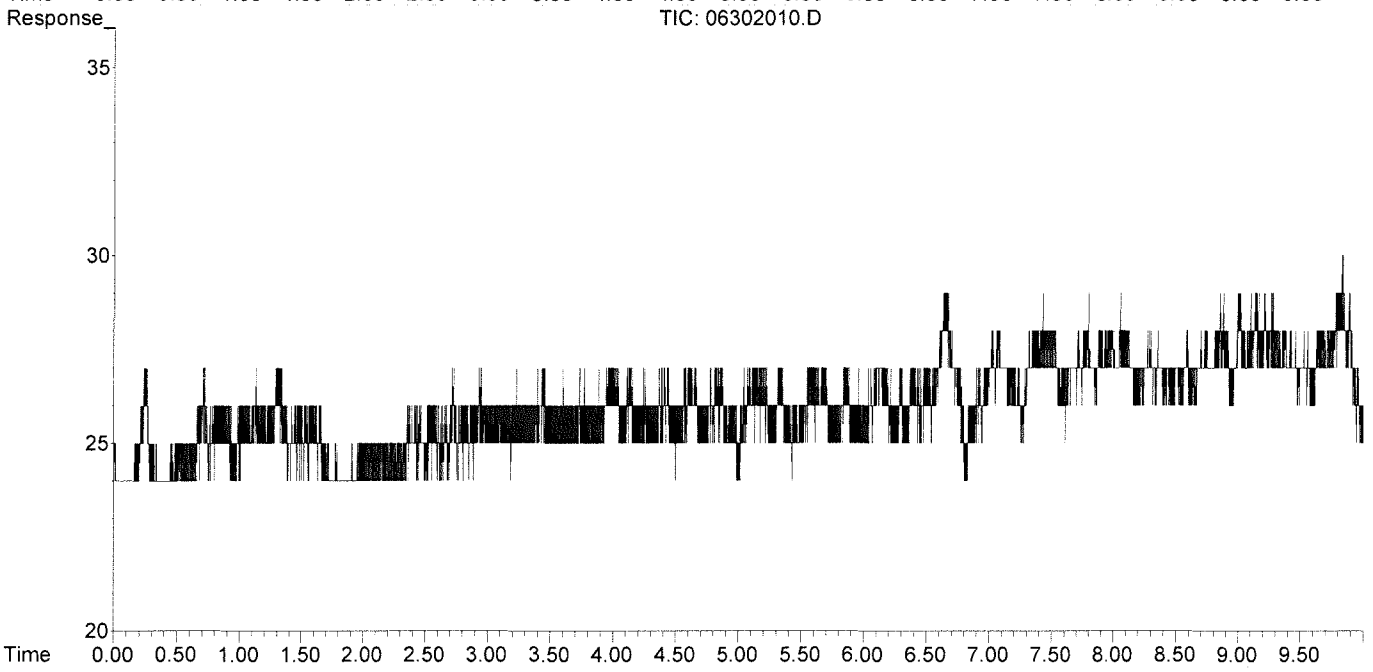
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_06\30CO2\
Data File : 06302010.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Jun-2020, 17:55:45
Operator : LD
Sample : P2003560-004 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 30 18:54:53 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_06\30CO2\
Data File : 06302003.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Jun-2020, 15:53:39
Operator : LD
Sample : MCS 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 30 16:06:51 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

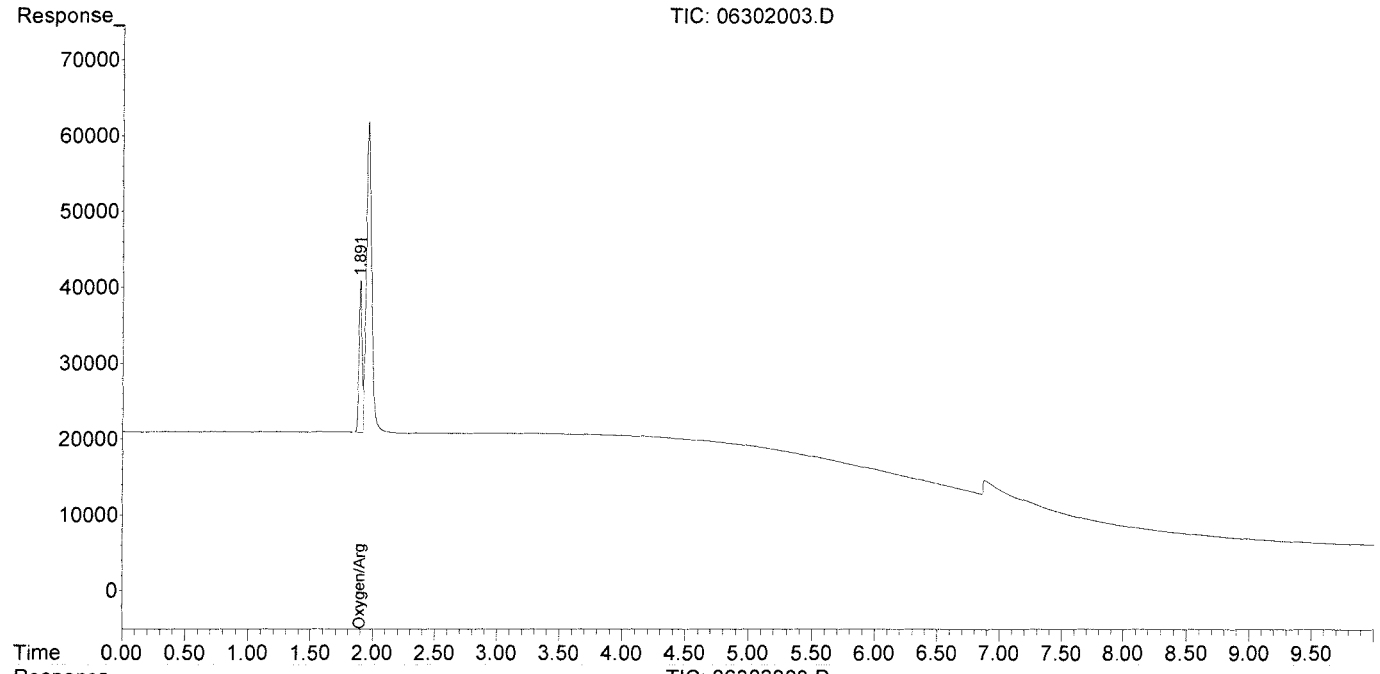
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.892	355521	0.075	ppm
2)	Carbon monoxide	1.892	355521	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

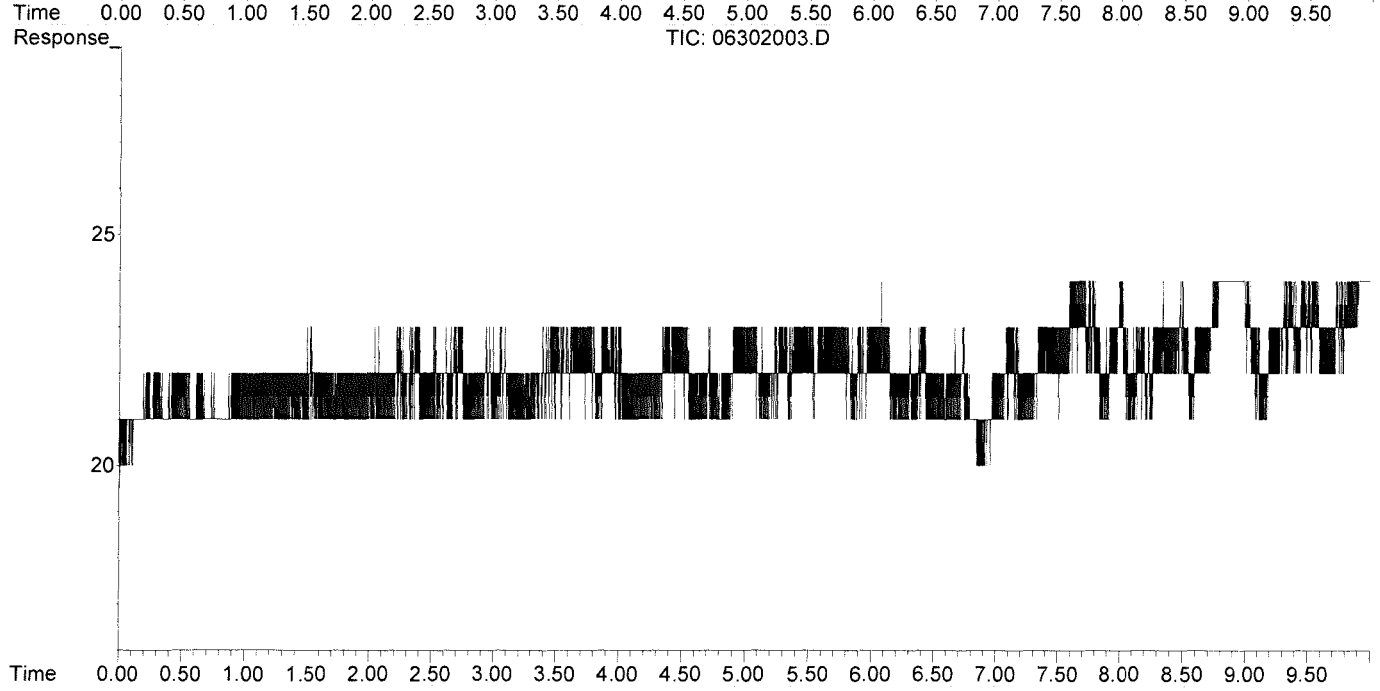
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_06\30CO2\
Data File : 06302003.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Jun-2020, 15:53:39
Operator : LD
Sample : MCS 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 30 16:06:51 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_06\30CO2\
Data File : 06302005.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Jun-2020, 16:21:46
Operator : LD
Sample : LCS S32-01212003
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 30 16:34:35 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

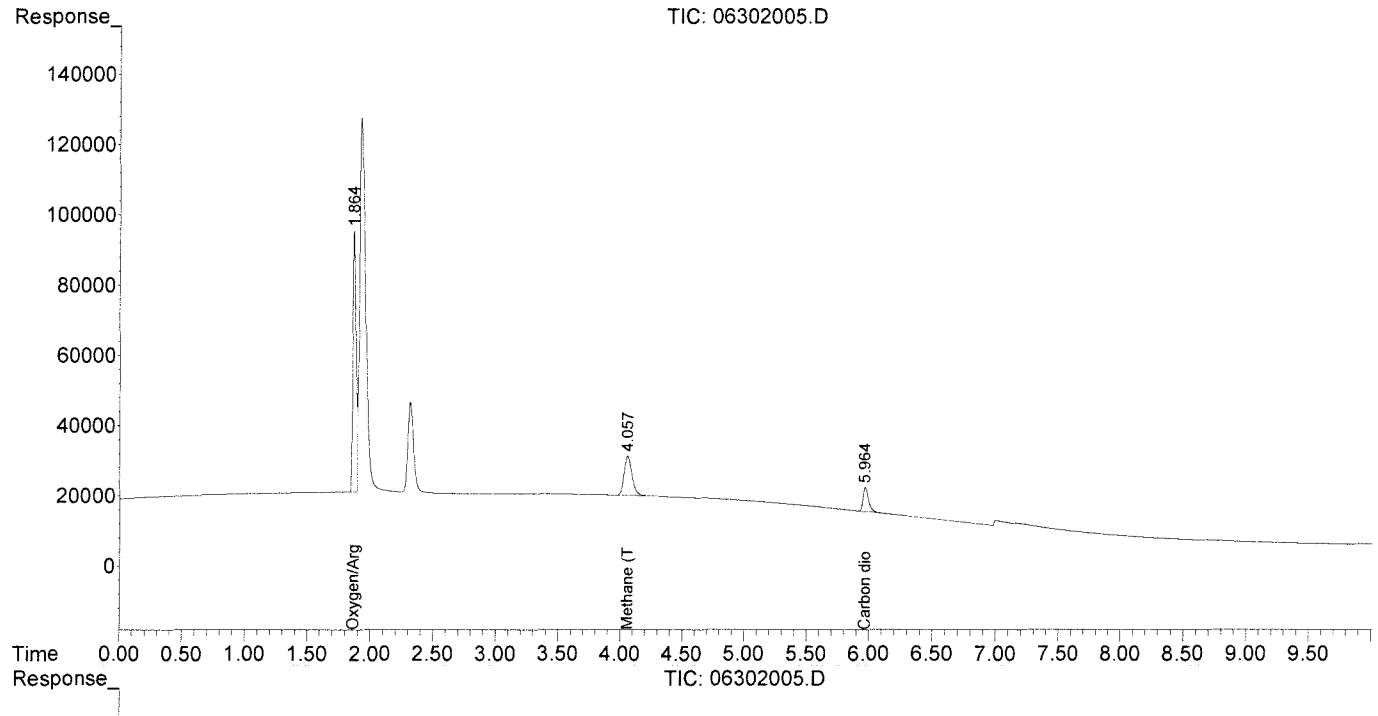
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.864	1294617	0.272	ppm
2)	Carbon monoxide	1.864	1294617	N.D.	ppm
3)	Methane (TCD)	4.058f	508271	53743.498	ppm
4)	Carbon dioxide	5.965	209388	892.043	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

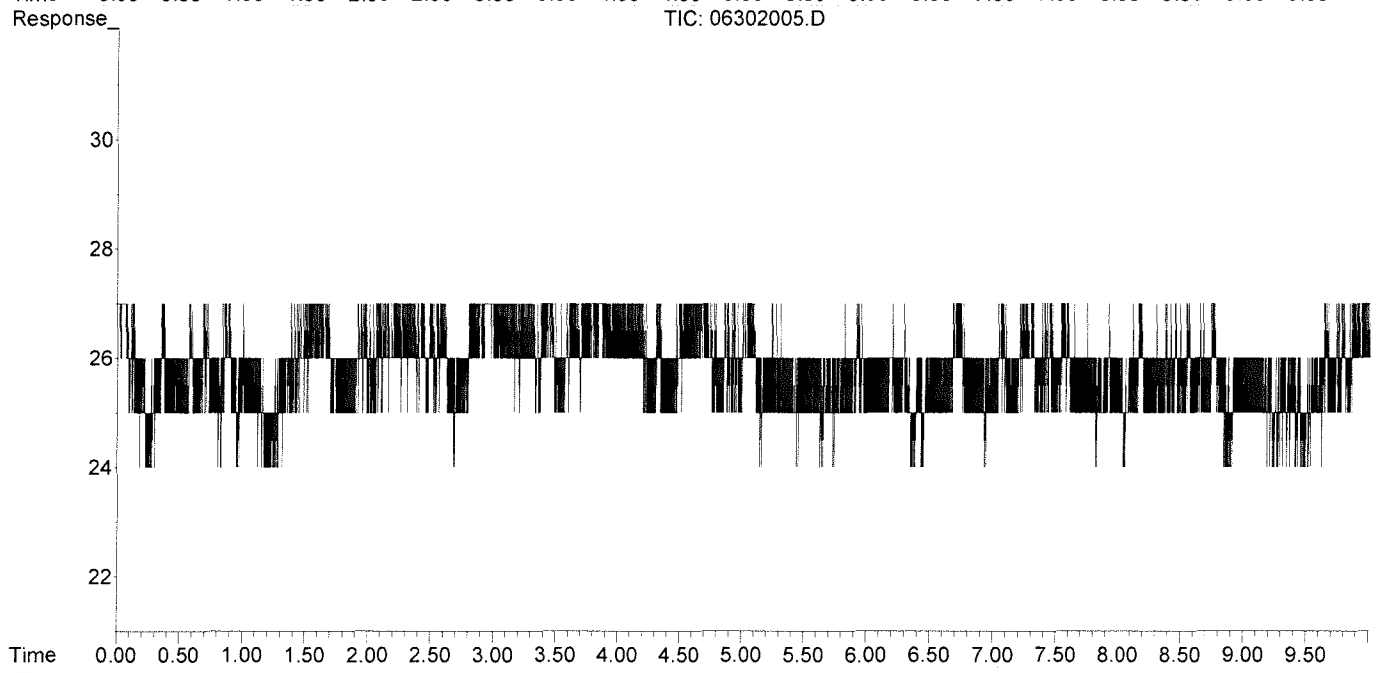
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_06\30CO2\
Data File : 06302005.D
Signal(s) : Signal #1: TCDIA.CH Signal #2: FID2B.CH
Acq On : 30-Jun-2020, 16:21:46
Operator : LD
Sample : LCS S32-01212003
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 30 16:34:35 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : I:\GC10\DATA\RSK_FID\2020_06\30CO2\
Data File : 06302006.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Jun-2020, 16:35:59
Operator : LD
Sample : LCSD S32-01212003
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 30 17:12:43 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.860	1335935	0.281	ppm
2)	Carbon monoxide	1.860	1335935	N.D.	ppm
3)	Methane (TCD)	4.058f	508224	53738.492	ppm
4)	Carbon dioxide	5.969	206148	878.239	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

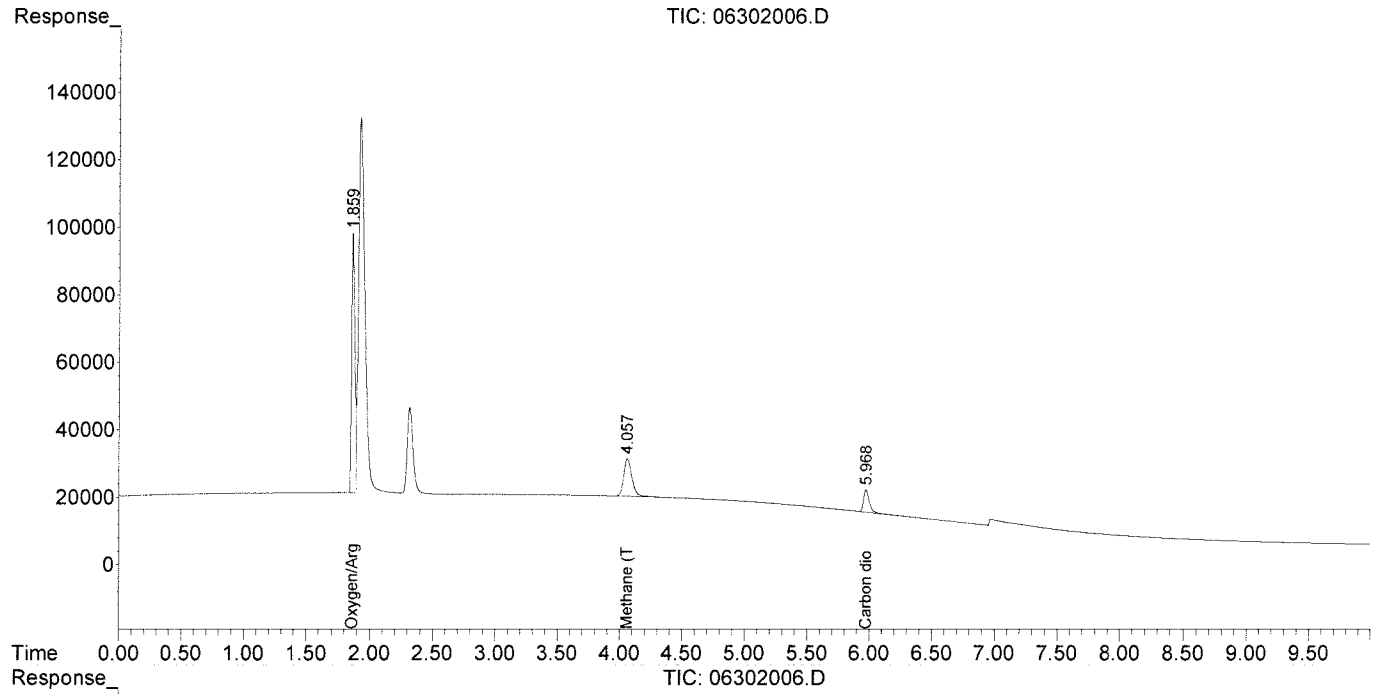
(f)=RT Delta > 1/2 Window (m)=manual int.

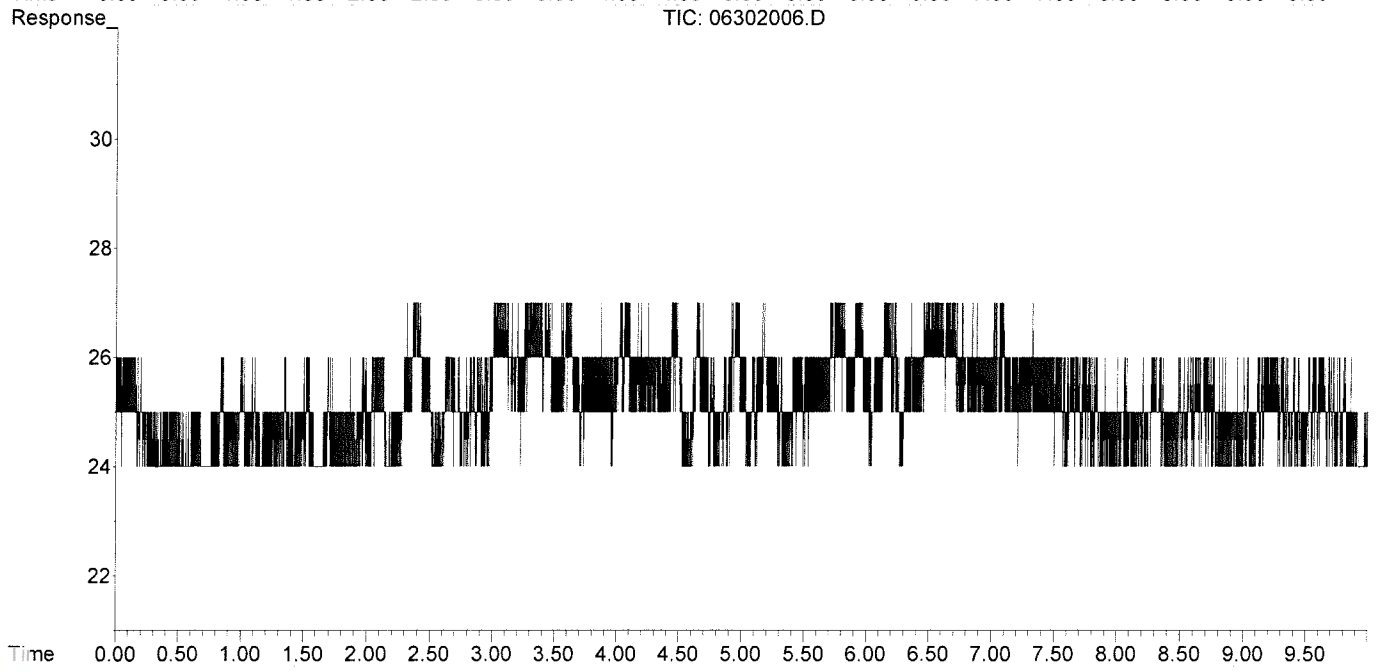
Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_06\30CO2\
Data File : 06302006.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Jun-2020, 16:35:59
Operator : LD
Sample : LCSD S32-01212003
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 30 17:12:43 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Response Factor Report HP5890

Method Path : I:\GC10\METHODS\
Method File : RS082817_CO2.M
Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
Last Update : Tue Aug 29 16:13:13 2017
Response Via : Initial Calibration

Calibration Files
1 =08291715.D 2 =08291716.D 3 =08291717.D
4 =08291719.D 5 =08291720.D 6 =08291721.D

	Compound	1	2	3	4	5	6	Avg		%RSD
1)	Oxygen/Argon	4.760						4.760	E6	0.00
2)	Carbon monoxide	2.775		1.066	0.043	0.033	0.027	0.657	E6	170.12
3)	Methane (TCD)							9.457		0.00
4)	Carbon dioxide	2.717	2.193	2.338	2.272	2.265	2.298	2.347	E2	7.99

Signal #2 Calibration Files
1 =08291715.D 2 =08291716.D 3 =08291717.D
4 =08291719.D 5 =08291720.D 6 =08291721.D

	Compound	1	2	3	4	5	6	Avg		%RSD
6)	Methane (FID)	1.253	1.160	1.005	0.927	0.848	0.848	0.945	E4	15.85
7)	Ethylene	1.677	1.605	1.900	1.749	1.597	1.579	1.684	E4	7.30
8)	Ethane	1.769	1.631	1.866	1.767	1.639	1.667	1.723	E4	5.40
9)	Propylene	2.402	2.309	2.767	2.551	2.331	2.333	2.449	E4	7.32
10)	Propane	2.906	2.737	2.817	2.639	2.410	2.420	2.655	E4	7.75
11)	Isobutylene							0.000		-1.00
12)	Isobutane							0.000		-1.00
13)	n-Butane							0.000		-1.00

(#) = Out of Range ### Number of calibration levels exceeded format ###

RS082817_CO2.M Wed Aug 30 13:24:19 2017

Compounds -- Compound #4 -- Carbon dioxide

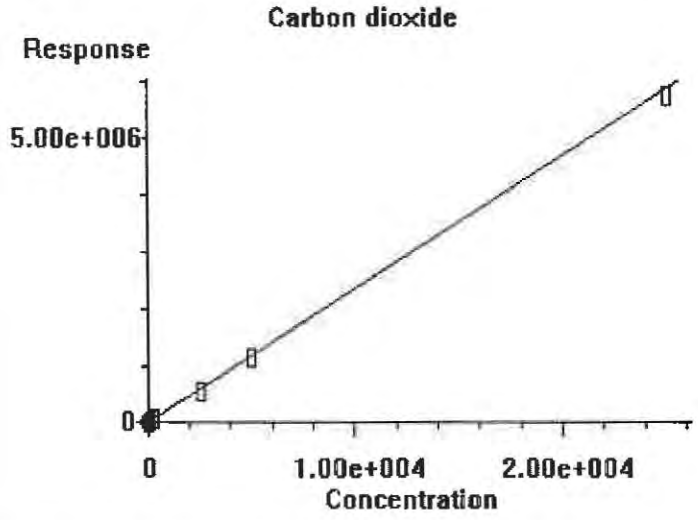
Search by: Ret Time | Name | Index — Find Compound

- Compound Database
- External Standard Compoun
  - Oxygen/Argon
  - Carbon monoxide
  - Methane (TCD)
  - Carbon dioxide
  - Signal #2
  - Methane (FID)
  - Ethylene
  - Ethane
  - Propylene
  - Propane
  - Isobutylene
  - Isobutane
  - n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response
1	25.000000	6793.665186
2	100.000000	21932.418000
3	250.000000	58460.642510
4	2500.000000	568043.388750
5	5000.000000	1132363.215937
6	25000.000000	5744294.891563
7	25000.000000	
8	25000.000000	
9	2000.000000	
10	30000.000000	

Lvl ID	Concentration	Response



0.000e+000	Quadratic term
2.347e+002	Linear term
0.000e+000	Constant term
7.987%	RF Rel Std Dev

OK | Cancel | Help | Print Calibration Curve | Copy Calibration Curve

Calibration Status Report HP5890

Method Path : I:\GC10\METHODS\
Method File : RS082817_CO2.M
Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
Last Update : Tue Aug 29 16:13:13 2017
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	0	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291715.D
2	2	0	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291716.D
3	3	3	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291717.D
4	4	10	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291719.D
5	5	25	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291720.D
6	6	125	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291721.D
7	7	5000	0	J:\GC10\DATA\RSK_FID\2017_08\24\08241708.D
8	8	25000	0	J:\GC10\DATA\RSK_FID\2017_08\24\08241709.D
9	9	2000	0	J:\GC10\DATA\RSK_FID\2017_08\24\08241710.D
10	10	30000	0	J:\GC10\DATA\RSK_FID\2017_08\24\08241711.D

#	ID	Update Time	Quant Time	Acquisition Time
1	1	Aug 29 14:21 2017	Aug 29 14:20 2017	29-Aug-2017, 14:07
2	2	Aug 29 14:52 2017	Aug 29 14:51 2017	29-Aug-2017, 14:22
3	3	Aug 29 15:04 2017	Aug 29 15:04 2017	29-Aug-2017, 14:53
4	4	Aug 29 15:36 2017	Aug 29 15:36 2017	29-Aug-2017, 15:23
5	5	Aug 29 15:57 2017	Aug 29 15:57 2017	29-Aug-2017, 15:44
6	6	Aug 29 16:13 2017	Aug 29 16:13 2017	29-Aug-2017, 16:00
7	7	Aug 25 09:05 2017	Aug 24 16:00 2017	24-Aug-2017, 15:44
8	8	Aug 25 09:06 2017	Aug 24 16:13 2017	24-Aug-2017, 16:02
9	9	Aug 25 09:06 2017	Aug 24 16:31 2017	24-Aug-2017, 16:16
10	10	Aug 25 09:07 2017	Aug 24 16:42 2017	24-Aug-2017, 16:33

RS082817_CO2.M Wed Aug 30 13:24:30 2017

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291715.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:07
Operator : MC
Sample : 25ppm s32-08291701 0.25ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 14:20:06 2017
Quant Method : I:\GC10\METHODS\RS082417.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Fri Aug 25 09:19:14 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

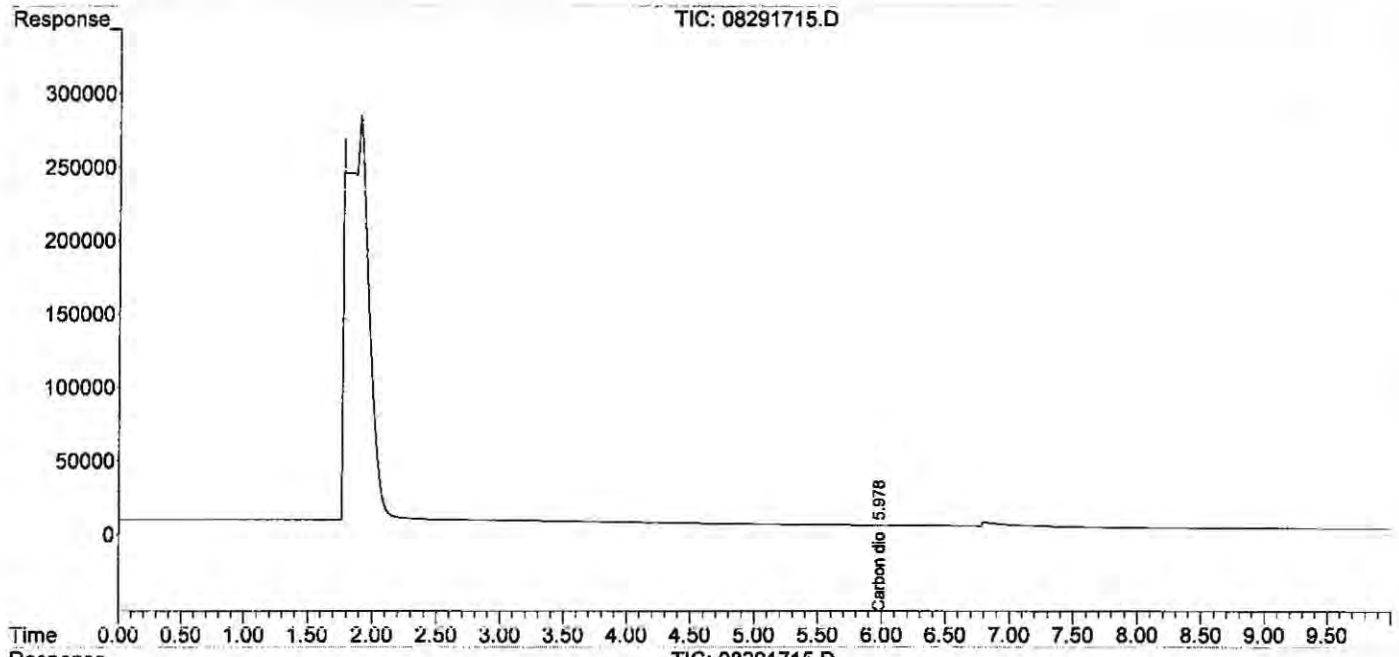
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	1.776	277465	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	5.978	6794	27.870	ppm	m
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

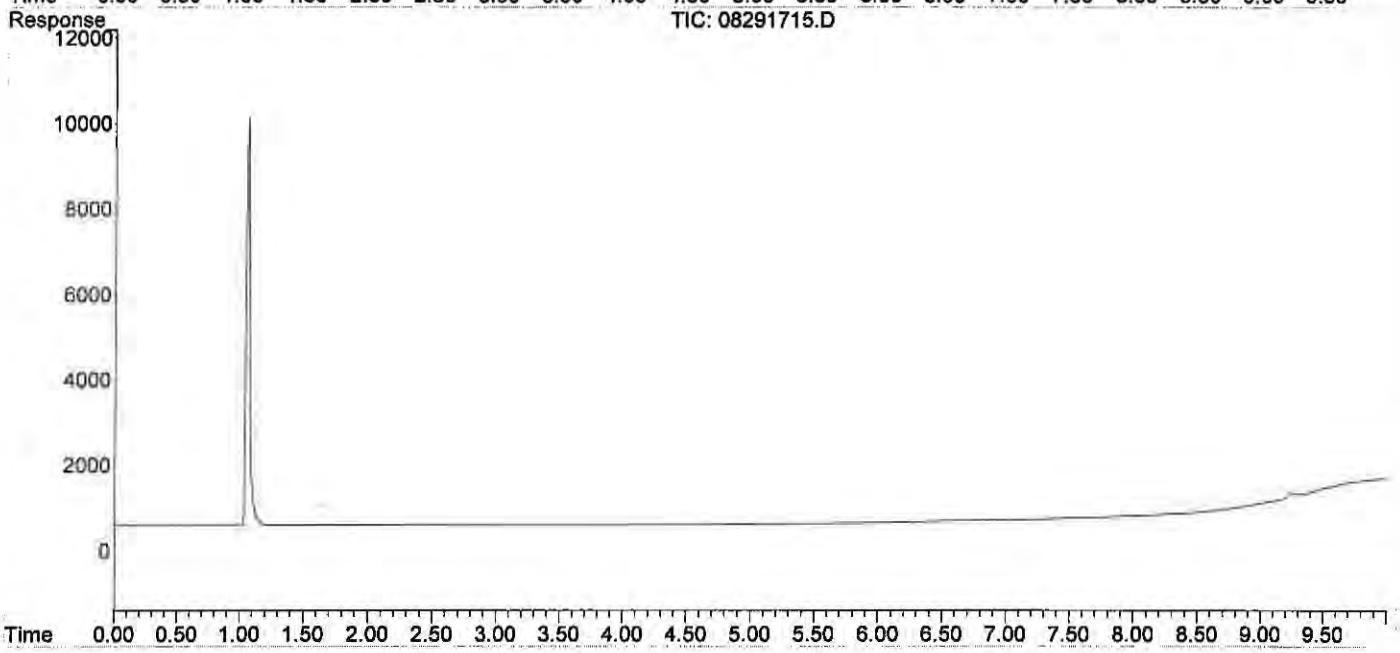
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291715.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:07
Operator : MC
Sample : 25ppm s32-08291701 0.25ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 14:20:06 2017
Quant Method : I:\GC10\METHODS\RS082417.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Fri Aug 25 09:19:14 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



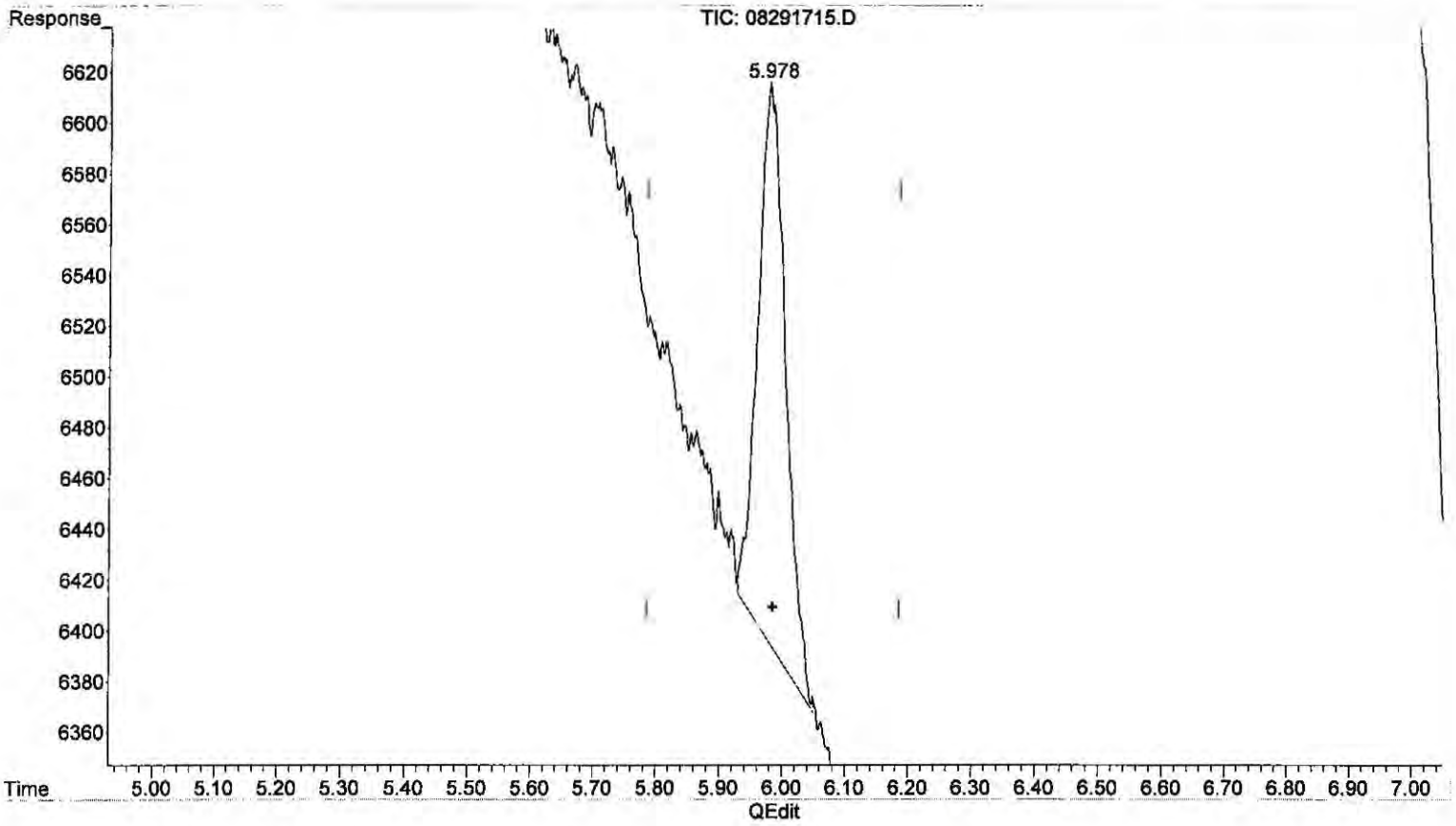


Quantitation Report (Qedit)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291715.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:07
Operator : MC
Sample : 25ppm s32-08291701 0.25ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 14:20:06 2017
Quant Method : I:\GC10\METHODS\RS082417.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Fri Aug 25 09:19:14 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



(4) Carbon dioxide

5.978min 27.870 ppm m

response 6794

8/30/17
BW
M.
prelim

8/4/17

(+) = Expected Retention Time

RS082817_CO2.M Wed Aug 30 13:17:47 2017

Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291716.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:22
Operator : MC
Sample : 100ppm s32-08291702 0.2ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 14:51:38 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 14:21:08 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

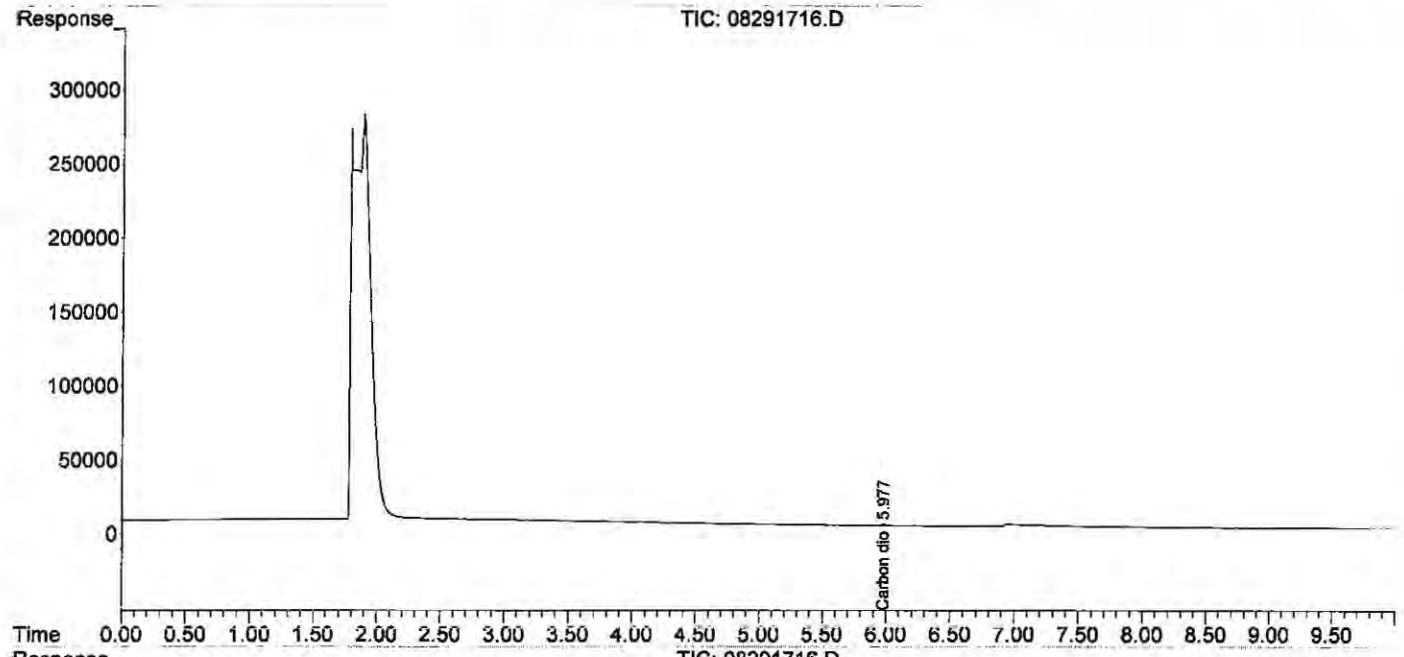
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.790	-598962	N.D.	ppm	
2)	Carbon monoxide	0.000	0	N.D.	ppm	d
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	5.978	21932	87.858	ppm	
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

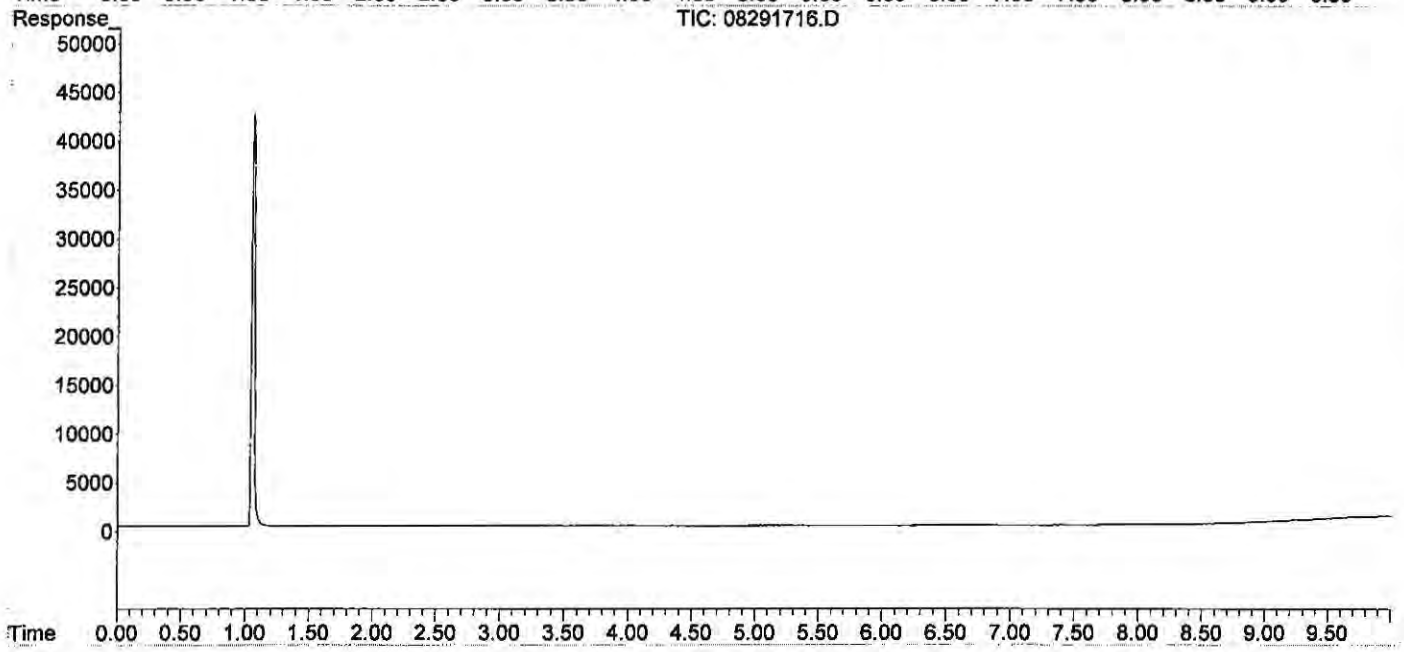
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291716.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:22
Operator : MC
Sample : 100ppm s32-08291702 0.2ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 14:51:38 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 14:21:08 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291717.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:53
Operator : MC
Sample : 250ppm s32-08291702 0.5ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:03:42 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 14:52:06 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

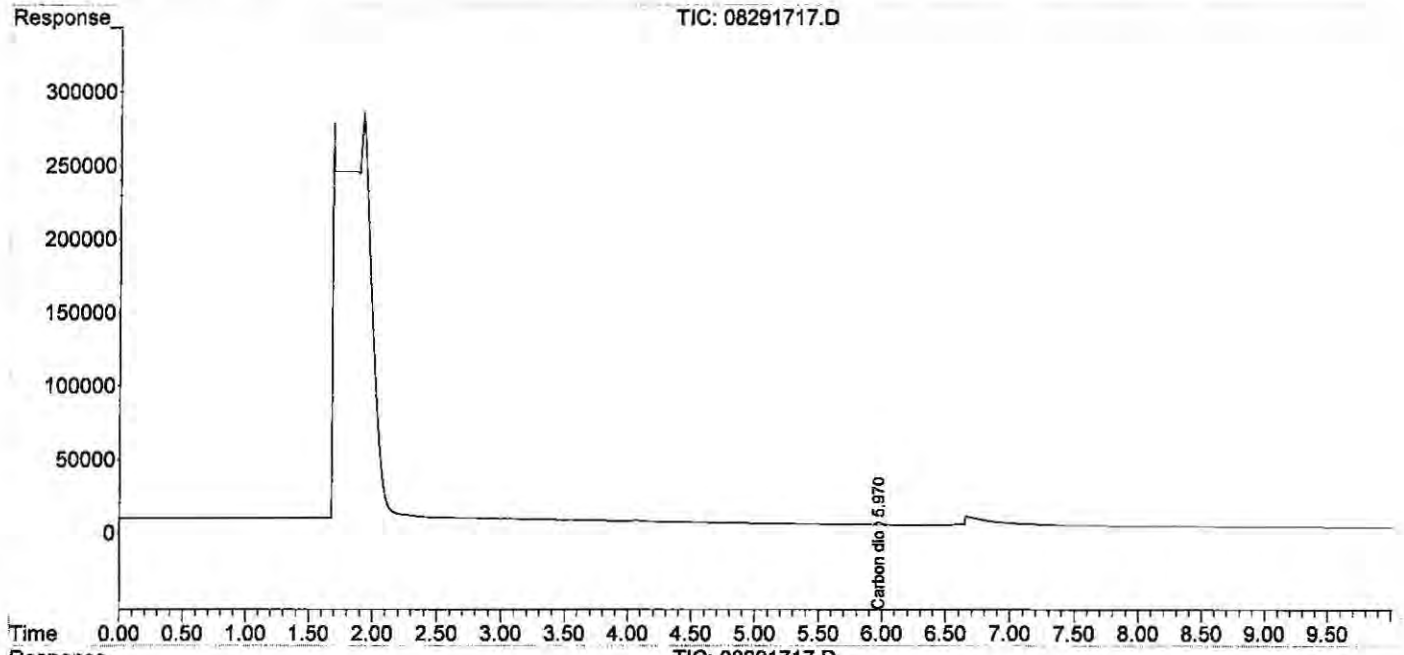
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.920f	-30716454	N.D.	ppm	
2)	Carbon monoxide	0.000	0	N.D.	ppm	d
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	5.970	58461	240.204	ppm	m
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

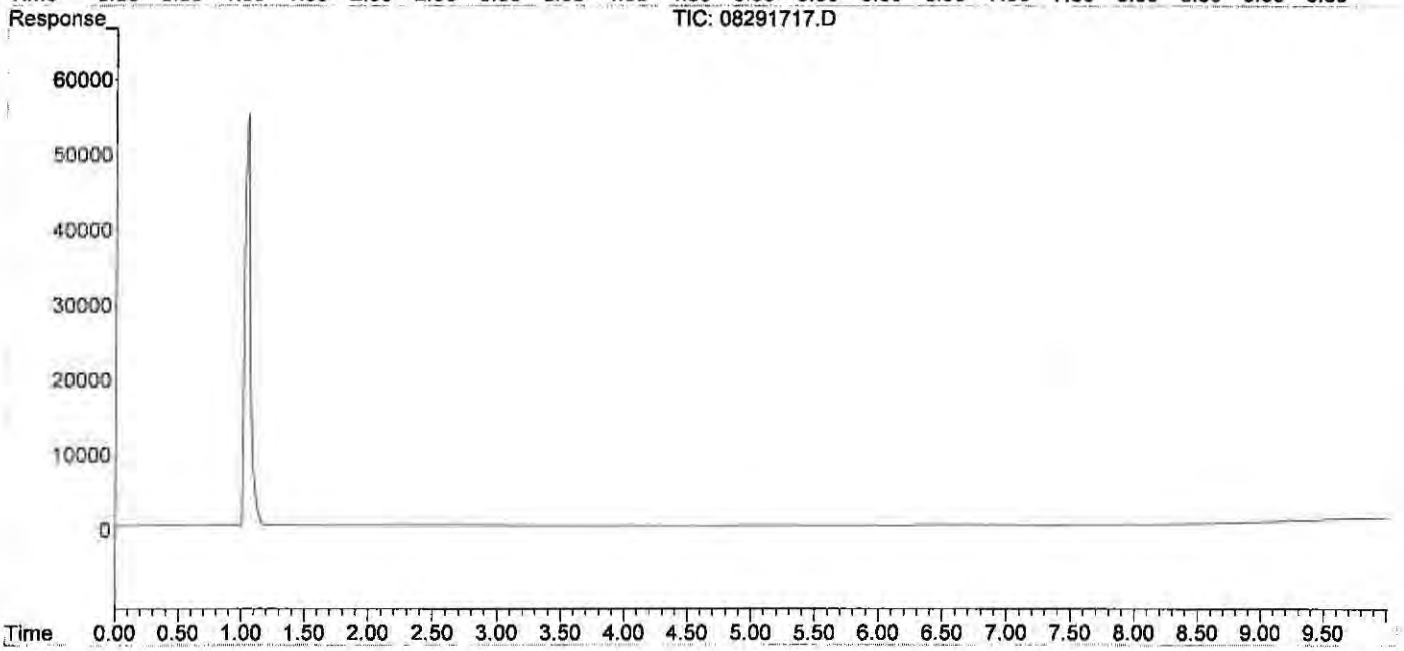
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291717.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:53
Operator : MC
Sample : 250ppm s32-08291702 0.5ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:03:42 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 14:52:06 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



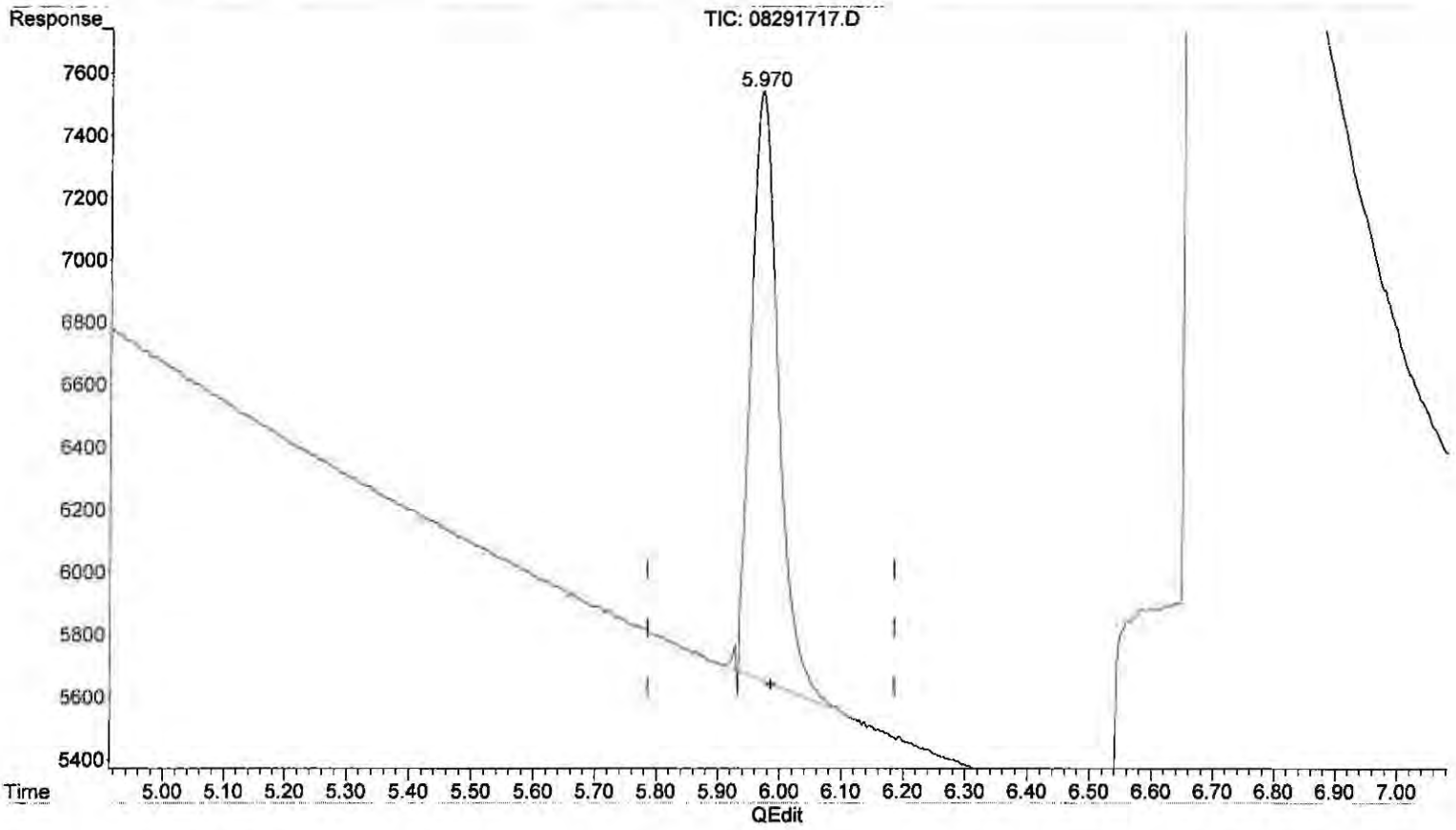


Quantitation Report (Qedit)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291717.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:53
Operator : MC
Sample : 250ppm s32-08291702 0.5ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:03:42 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 14:52:06 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



(4) Carbon dioxide

5.970min 240.204 ppm m

response 58461

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291719.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 15:23
Operator : MC
Sample : 2500ppm s32-08231701 50ul
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:35:50 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:04:14 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

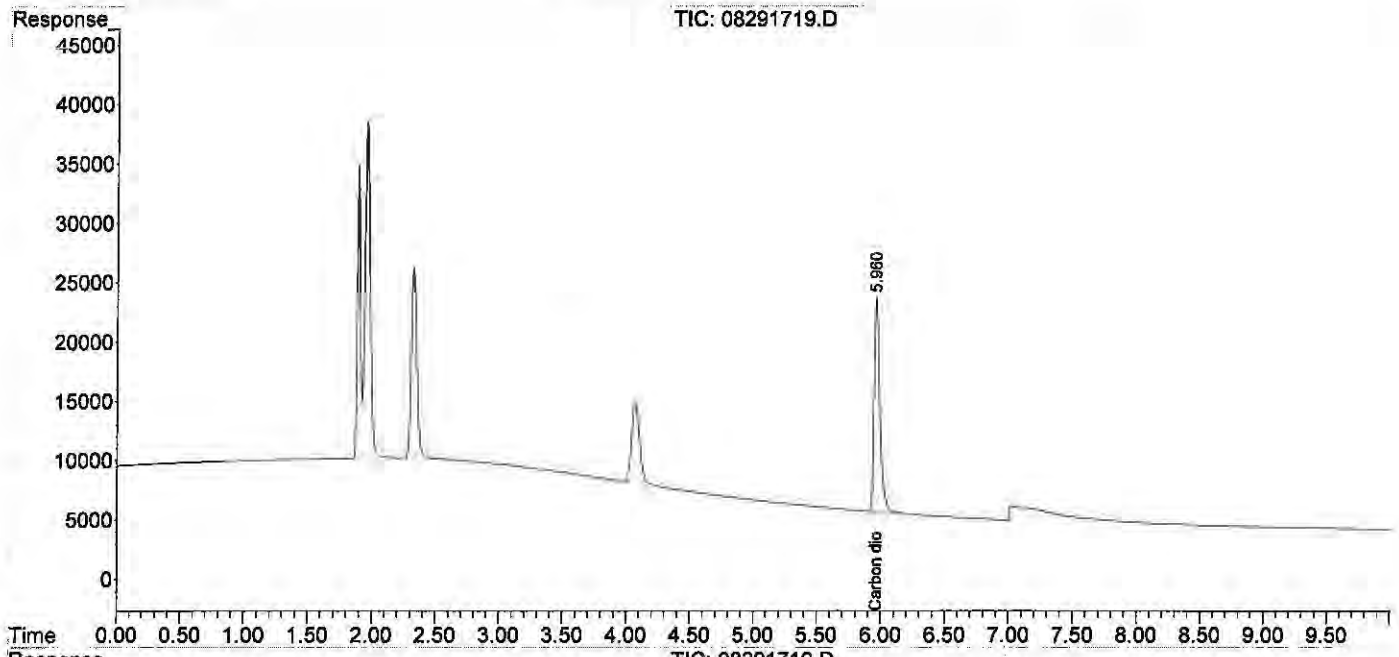
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	1.891	425113	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	5.962	568043	2369.673	ppm	
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

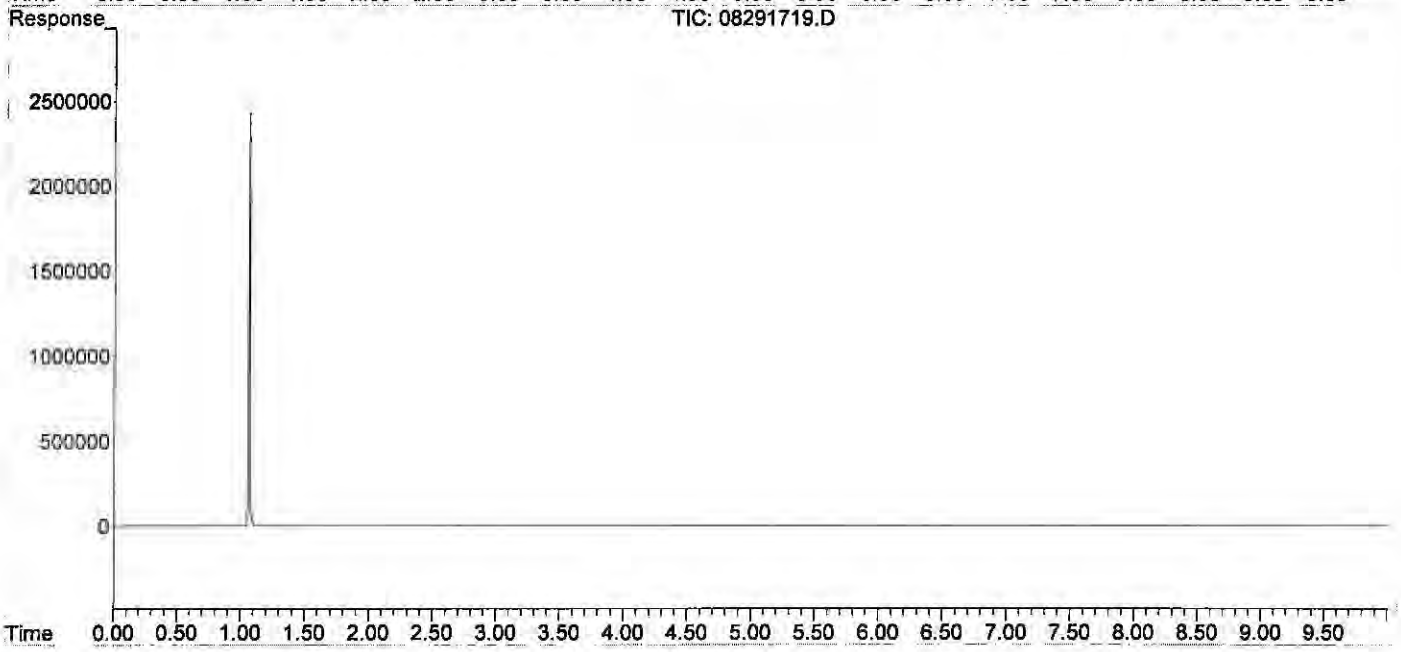
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291719.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 15:23
Operator : MC
Sample : 2500ppm s32-08231701 50ul
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:35:50 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:04:14 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291720.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 15:44
Operator : MC
Sample : 5000ppm s32-08231701 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:57:17 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:36:14 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	1.880	819221	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	5.948	1132363	4753.126	ppm	
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

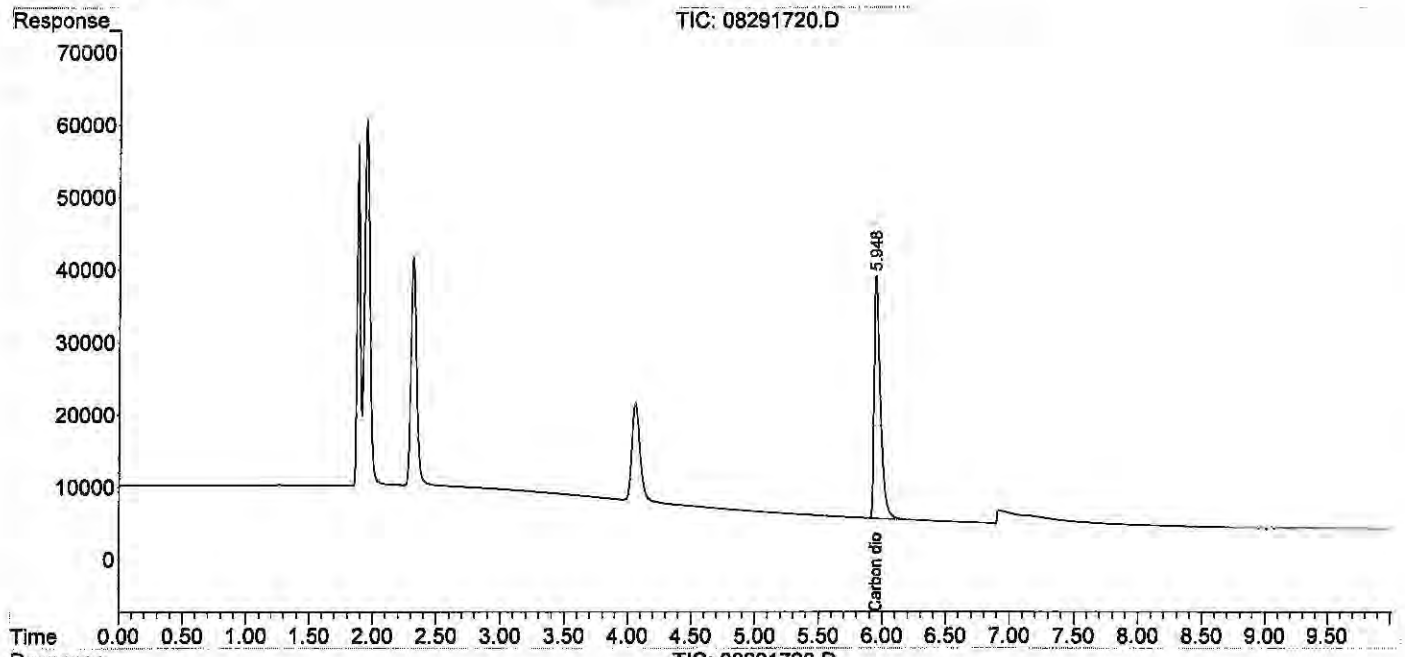
(f)=RT Delta > 1/2 Window (m)=manual int.

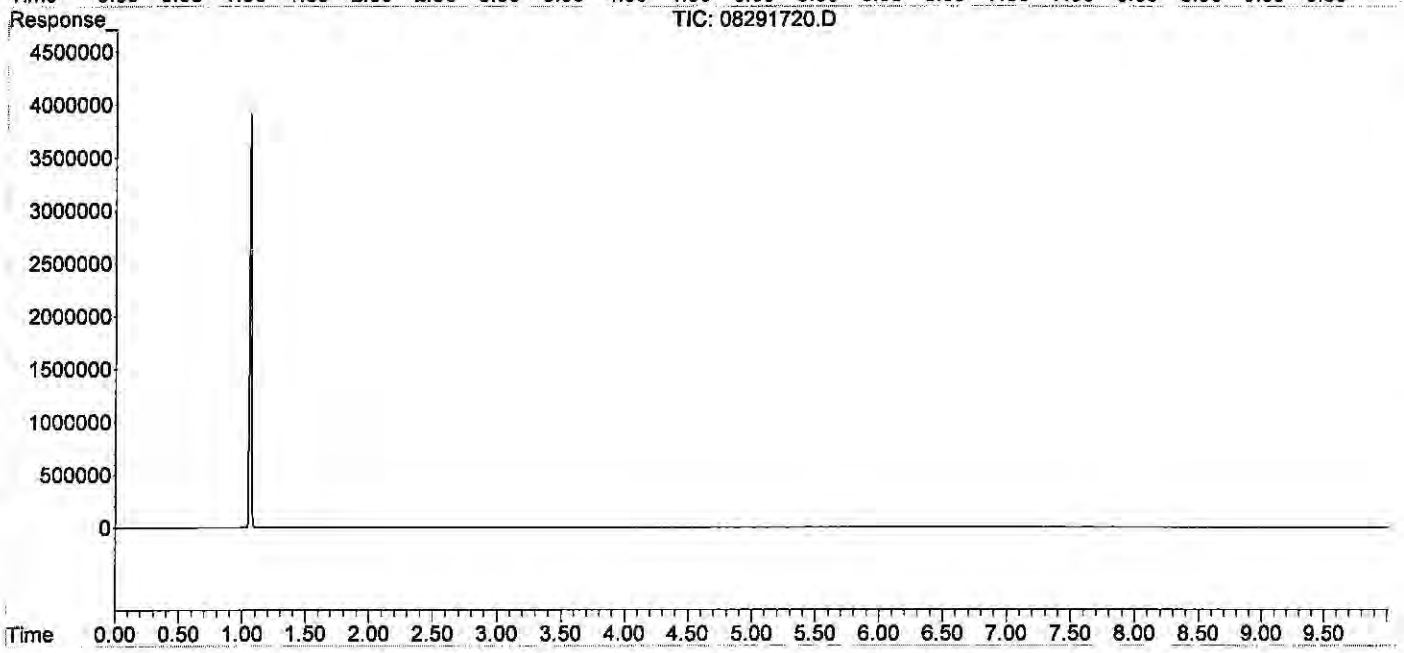
Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291720.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 15:44
Operator : MC
Sample : 5000ppm s32-08231701 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:57:17 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:36:14 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291721.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 16:00
Operator : MC
Sample : 25000ppm s32-08231701 0.5ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 16:12:53 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:57:37 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	1.827	3325463	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	5.879f	5744295	24443.288	ppm	
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

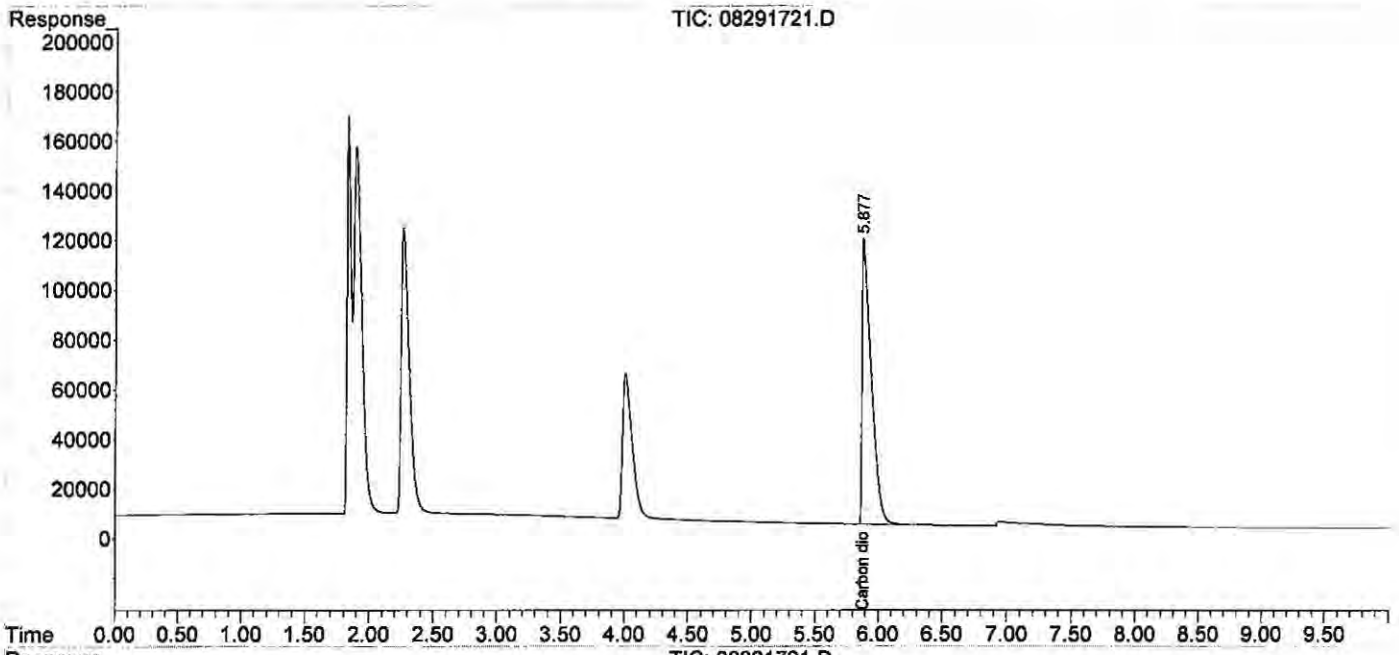
(f)=RT Delta > 1/2 Window (m)=manual int.

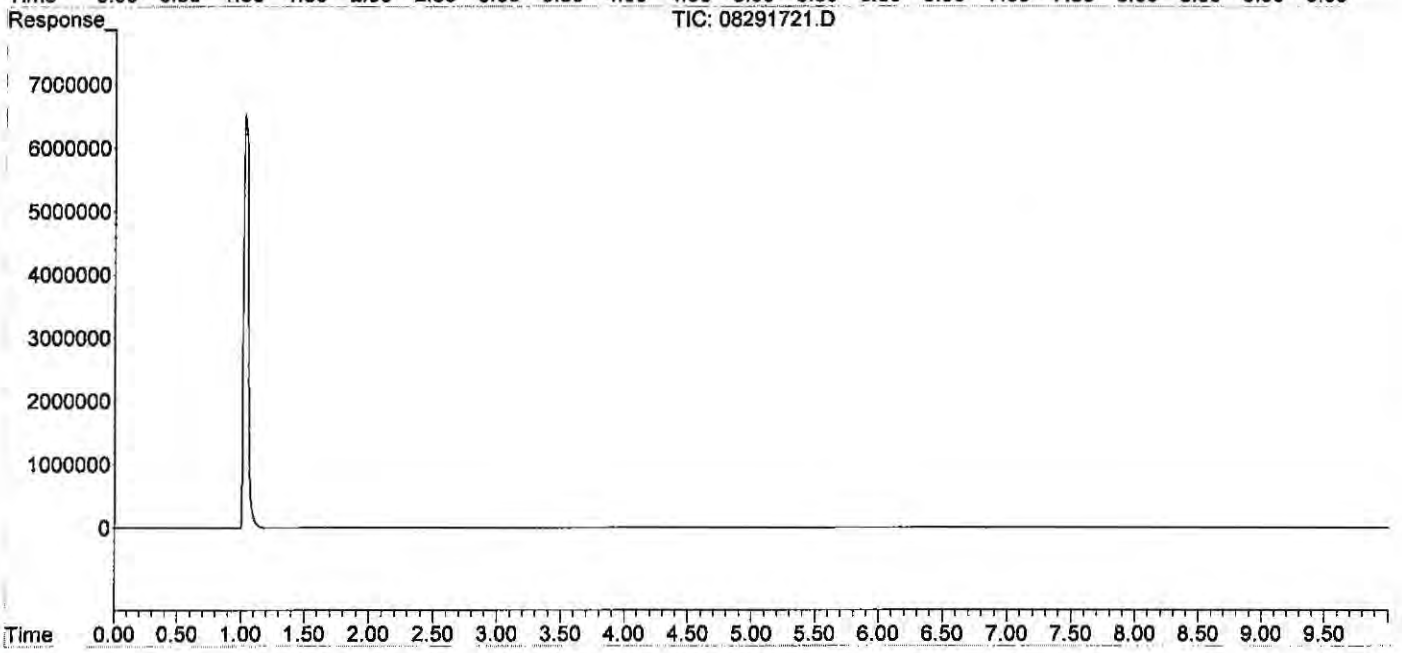
Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291721.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 16:00
Operator : MC
Sample : 25000ppm s32-08231701 0.5ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 16:12:53 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:57:37 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291723.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 16:35
Operator : MC
Sample : icv s30-07071701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 16:54:07 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.886	536422	0.113	ppm
2)	Carbon monoxide	1.886	536422	N.D.	ppm
3)	Methane (TCD)	4.059f	626500	66244.710	ppm
4)	Carbon dioxide	5.947	1163775	4957.948	ppm
6)	Methane (FID)	1.062	37290742	3947.023	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

Actual %D
5000 99.16

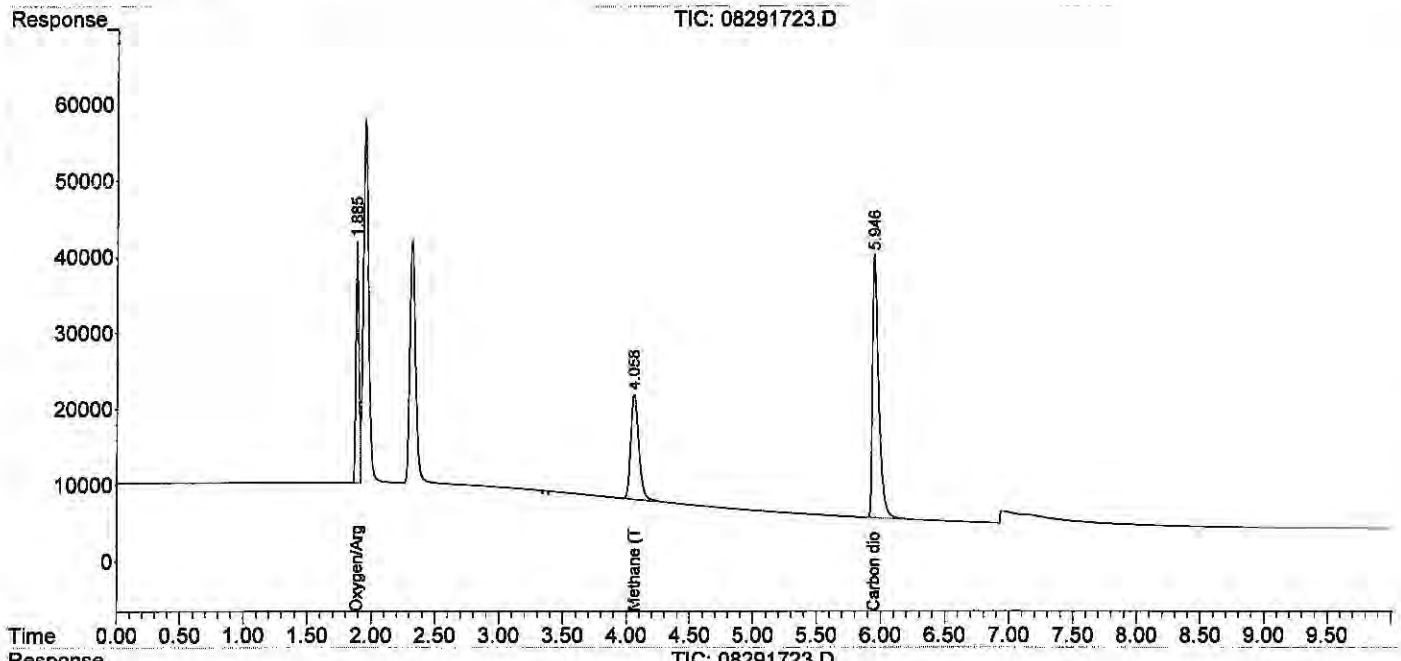
(f)=RT Delta > 1/2 Window (m)=manual int.

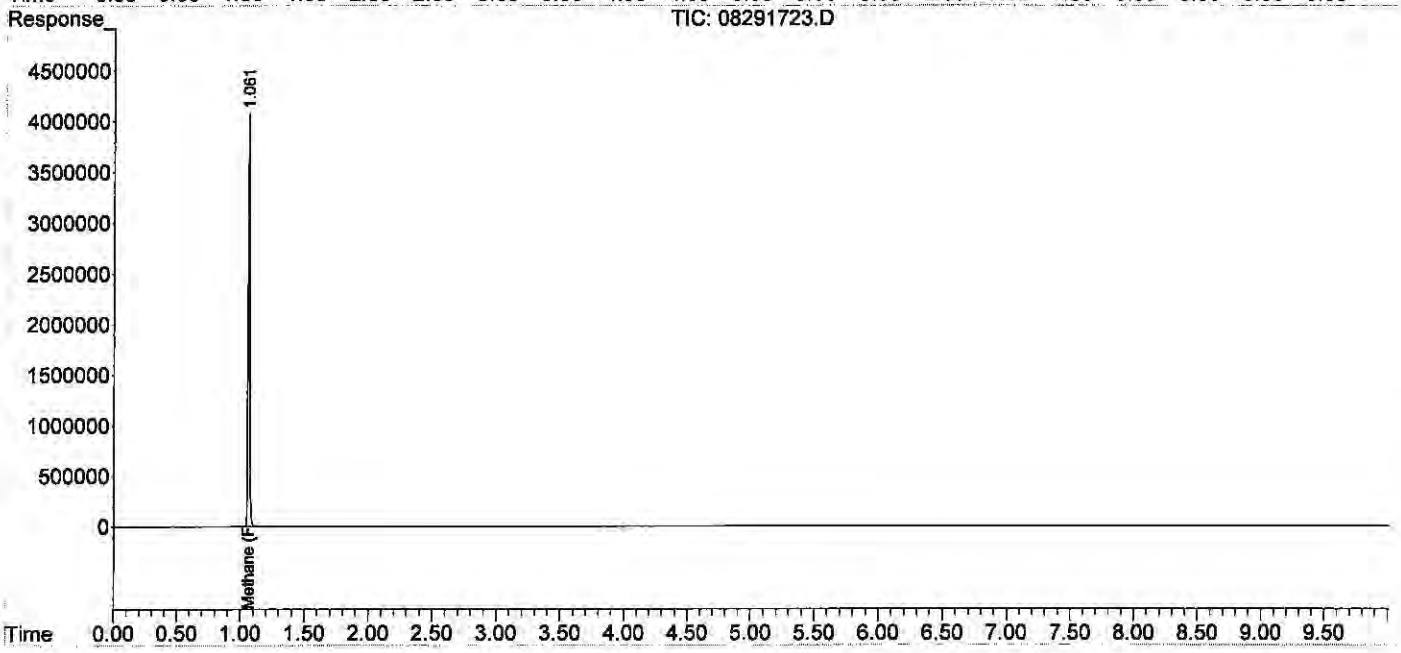
W 9/4/17

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291723.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 16:35
Operator : MC
Sample : icv s30-07071701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 16:54:07 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Dissolved Gases by RSK175

ALS Environmental

Method : RSK175 Headspace Method for Dissolved Hydrocarbon in Water by FID/TCD

Client : ALS Laboratory Group
Service Request: P2003560
Sample Vol. (ml) : 32.00 ml

Analyst : LD
Date Analysis : 06/30/20
Head Space Vol.(ml) : 8.00 ml

Instrument : GC#10
Detector : FID#10, TCD#10
Gas Constant : 24.05684 (20°C)

HEAD SPACE RESULT (ppm)

Sample ID	Inj. Vol.	Carbon Dioxide
STD S32-06222001	0.100	4877.612
ACTUAL		5000.00
%Difference		2.4%
MCS 0.1ml	0.100	0.000
RB 0.1ml	0.100	0.000
LCS S32-01212003	0.100	892.043
LCSD S32-01212003	0.100	878.239
P2003560-001 0.1ml	0.100	4786.418
P2003560-002 0.1ml	0.100	13927.22
P2003560-003 0.1ml	0.100	10644.43
P2003560-004 0.1ml	0.100	17862.37

FINAL HEAD SPACE RESULT (ppm)

		Carbon Dioxide
WWt.		44.10
HENRY'S CONSTANT		1.42E+03
RL		100.00
MCS 0.1ml		0.000
LCS S32-01212003		8920.430
LCSD S32-01212003		8782.390
P2003560-001 0.1ml		47364.180
P2003560-002 0.1ml		139272.24
P2003560-003 0.1ml		106444.30
P2003560-004 0.1ml		178623.73

LP 06/30

STD S32-06222001	4778.670
ACTUAL	5000.00
%Difference	4.4%

Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_06\30CO2\
Data File : 06302001.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Jun-2020, 12:47:00
Operator : LD
Sample : STD S32-06222001
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 30 13:05:55 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

LD 06/30

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

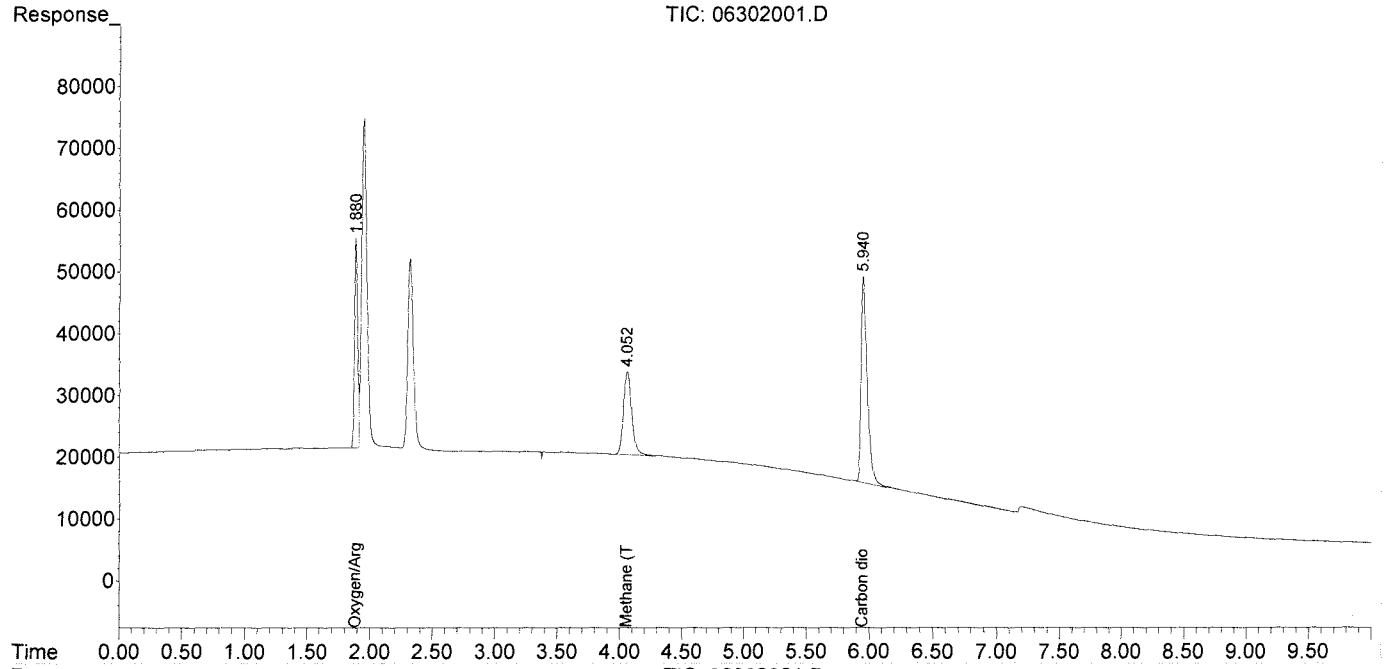
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.881	581272	0.122	ppm
2)	Carbon monoxide	1.881	581272	N.D.	ppm
3)	Methane (TCD)	4.053f	611602	64669.487	ppm
4)	Carbon dioxide	5.941	1144918	4877.612	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

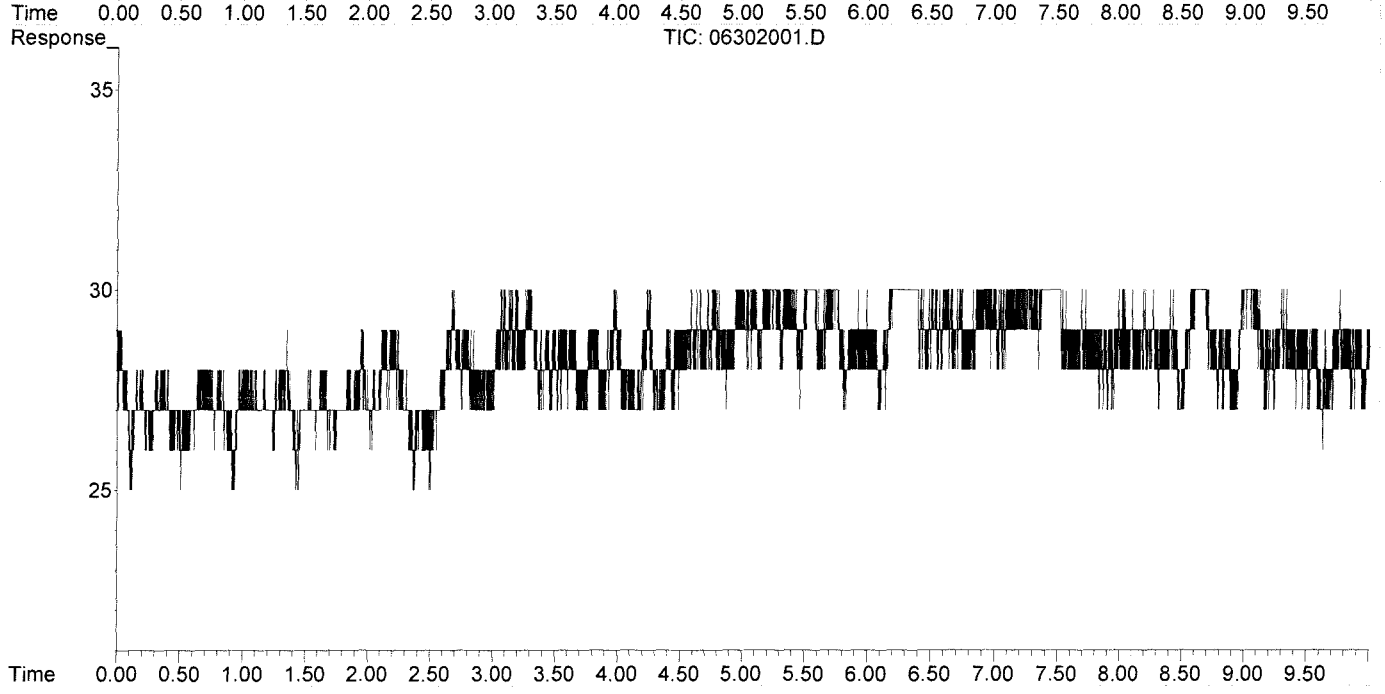
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_06\30CO2\
Data File : 06302001.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Jun-2020, 12:47:00
Operator : LD
Sample : STD S32-06222001
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 30 13:05:55 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_06\30CO2\
Data File : 06302016.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Jun-2020, 19:40:55
Operator : LD
Sample : STD S32-06222001
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 30 19:52:35 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

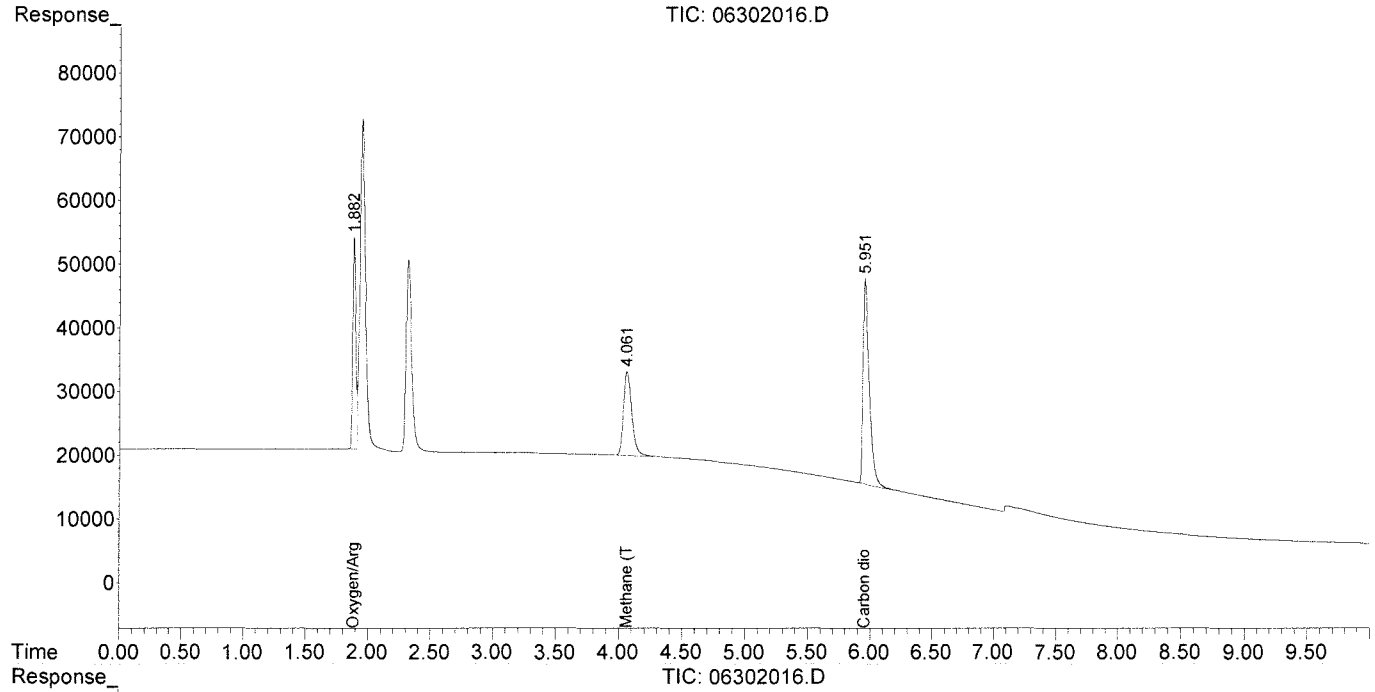
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.883	577214	0.121	ppm
2)	Carbon monoxide	1.883	577214	N.D.	ppm
3)	Methane (TCD)	4.061f	607023	64185.278	ppm
4)	Carbon dioxide	5.952	1121693	4778.670	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

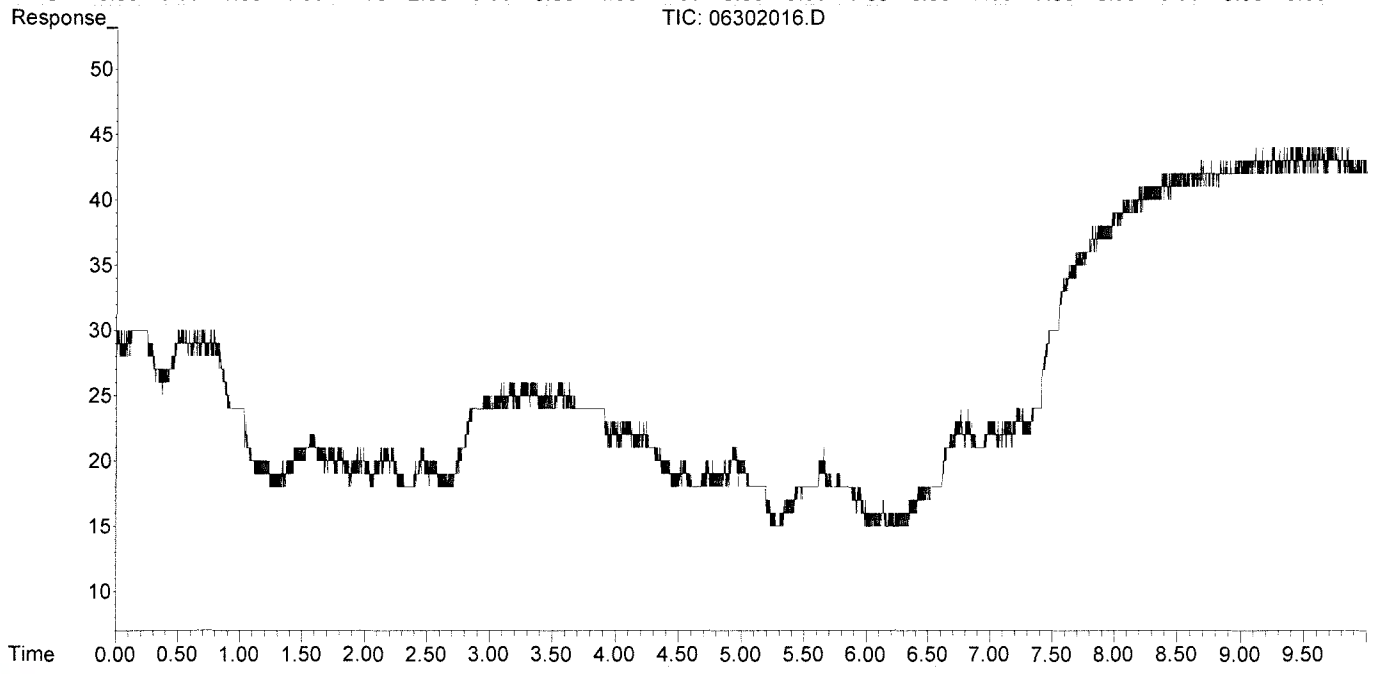
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_06\30CO2\
Data File : 06302016.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Jun-2020, 19:40:55
Operator : LD
Sample : STD S32-06222001
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 30 19:52:35 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Injection Log

Directory: I:\GC10\DATA\RSK_FID\2017_08\29\

	Date/Time	File Name	Sample ID	Misc Info	Operator	Acquisition Method	Comments
1	29-Aug-17, 07:58:00	08291701.D	std s30-06161601		MC	RSKBOTH.M	Pass
2	29-Aug-17, 08:11:02	08291702.D	mb 0.5ml		MC	RSKBOTH.M	Pass
3	29-Aug-17, 08:24:13	08291703.D	4089-001 0.5ml		MC	RSKBOTH.M	
4	29-Aug-17, 08:39:29	08291704.D	4089-002 0.5ml		MC	RSKBOTH.M	
5	29-Aug-17, 08:53:38	08291705.D	4089-003 0.5ml		MC	RSKBOTH.M	
6	29-Aug-17, 09:33:52	08291706.D	4089-004 0.5ml		MC	RSKBOTH.M	
7	29-Aug-17, 09:50:51	08291707.D	4089-005 0.5ml		MC	RSKBOTH.M	
8	29-Aug-17, 10:07:54	08291708.D	4089-006 0.5ml		MC	RSKBOTH.M	
9	29-Aug-17, 10:42:34	08291709.D	4089-007 0.5ml		MC	RSKBOTH.M	
10	29-Aug-17, 11:06:01	08291710.D	4089-008 0.5ml		MC	RSKBOTH.M	
11	29-Aug-17, 11:23:53	08291711.D	4089-009 0.5ml		MC	RSKBOTH.M	
12	29-Aug-17, 11:37:17	08291712.D	lcs s30-05241604		MC	RSKBOTH.M	Pass
13	29-Aug-17, 11:50:31	08291713.D	lcs s30-05241604		MC	RSKBOTH.M	Pass
14	29-Aug-17, 12:29:45	08291714.D	std s30-06161601		MC	RSKBOTH.M	Pass
15	29-Aug-17, 14:07:01	08291715.D	25ppm s32-08291701 0.25ml		MC	RSKBOTH.M	Curve
16	29-Aug-17, 14:22:12	08291716.D	100ppm s32-08291702 0.2ml		MC	RSKBOTH.M	Curve
17	29-Aug-17, 14:53:00	08291717.D	250ppm s32-08291702 0.5ml		MC	RSKBOTH.M	Curve
18	29-Aug-17, 15:07:43	08291718.D	mls inject		MC	RSKBOTH.M	
19	29-Aug-17, 15:23:21	08291719.D	2500ppm s32-08231701 50ul		MC	RSKBOTH.M	Curve
20	29-Aug-17, 15:44:54	08291720.D	5000ppm s32-08231701 0.1ml		MC	RSKBOTH.M	Curve
21	29-Aug-17, 16:00:09	08291721.D	25000ppm s32-08231701 0.5ml		MC	RSKBOTH.M	Curve
22	29-Aug-17, 16:15:43	08291722.D	mb 0.1ml		MC	RSKBOTH.M	Pass
23	29-Aug-17, 16:35:37	08291723.D	lcv s30-07071701		MC	RSKBOTH.M	Pass

Injection Log

Directory: I:\GC10\DATA\RSK_TCD\2020_06\30\

	Date/Time	File Name	Sample ID	Misc Info	Operator	Acquisition Method	Comments
1	30-Jun-20, 12:47:00	06302001.D	STD S32-06222001		LD	RSKBOTH.M	pass
2	30-Jun-20, 13:20:23	06302002.D	RB 0.1ml		LD	RSKBOTH.M	pass
3	30-Jun-20, 15:53:39	06302003.D	MCS 0.1ml		LD	RSKBOTH.M	pass
4	30-Jun-20, 16:08:23	06302004.D	xxxxLCS S32-01212003		LD	RSKBOTH.M	pass
5	30-Jun-20, 16:21:46	06302005.D	LCS S32-01212003		LD	RSKBOTH.M	pass
6	30-Jun-20, 16:35:59	06302006.D	LCSD S32-01212003		LD	RSKBOTH.M	pass
7	30-Jun-20, 17:15:13	06302007.D	P2003560-001 0.1ml		LD	RSKBOTH.M	
8	30-Jun-20, 17:29:19	06302008.D	P2003560-002 0.1ml		LD	RSKBOTH.M	
9	30-Jun-20, 17:42:46	06302009.D	P2003560-003 0.1ml		LD	RSKBOTH.M	
10	30-Jun-20, 17:55:45	06302010.D	P2003560-004 0.1ml		LD	RSKBOTH.M	
11	30-Jun-20, 18:11:05	06302011.D	P2003597-001 0.1ml		LD	RSKBOTH.M	
12	30-Jun-20, 18:24:23	06302012.D	P2003597-002 0.1ml		LD	RSKBOTH.M	
13	30-Jun-20, 18:51:47	06302013.D	P2003597-003 0.1ml		LD	RSKBOTH.M	
14	30-Jun-20, 19:04:54	06302014.D	P2003597-004 0.1ml		LD	RSKBOTH.M	
15	30-Jun-20, 19:23:20	06302015.D	P2003597-005 0.1ml		LD	RSKBOTH.M	
16	30-Jun-20, 19:40:55	06302016.D	STD S32-06222001		LD	RSKBOTH.M	pass

Data Path : I:\GC10\DATA\RSK_FID\2020_07\01\
Data File : 07012006.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 01-Jul-2020, 14:41:02
Operator : LD
Sample : P2003560-001 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jul 01 15:10:18 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

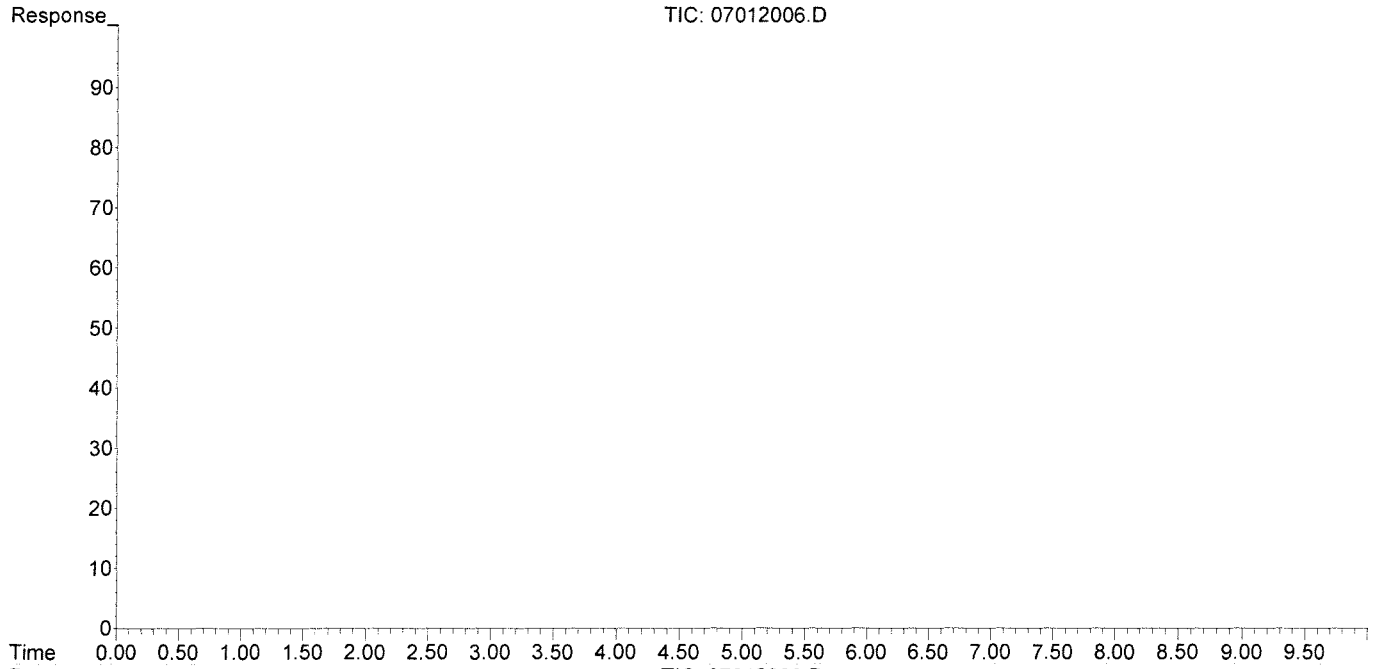
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.103	9198	1.014	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

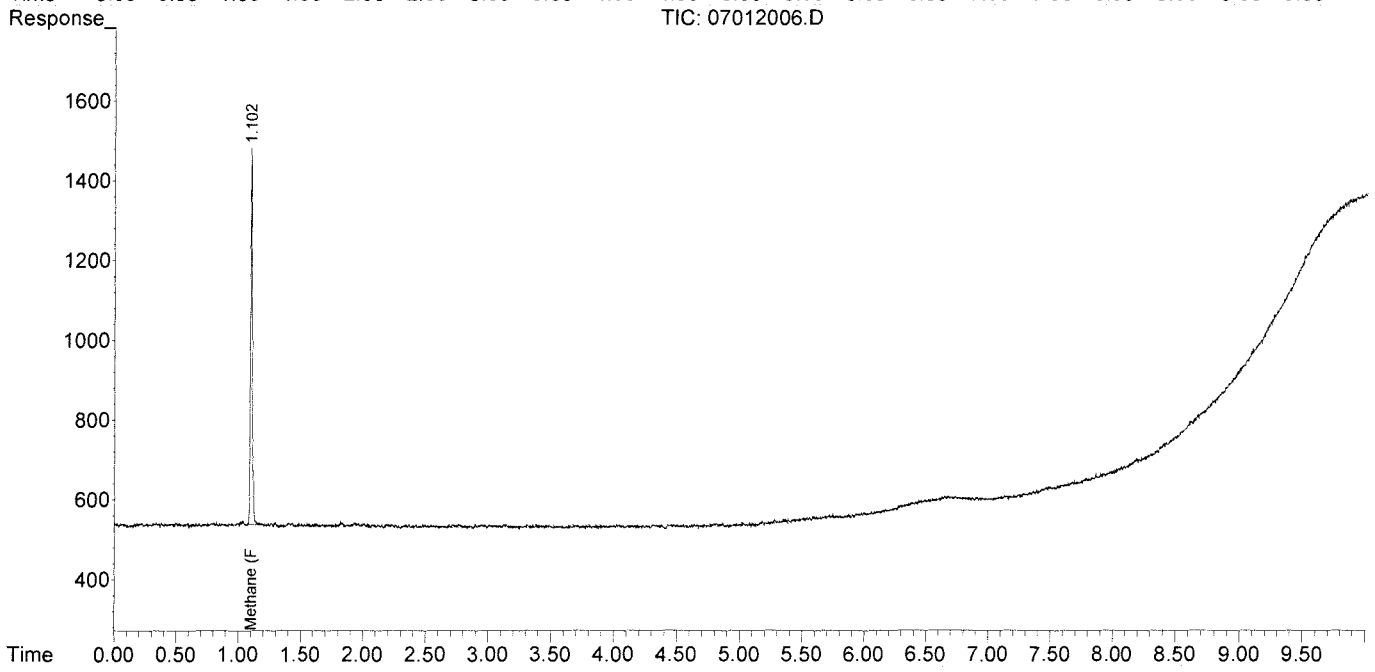
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_07\01\
Data File : 07012006.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 01-Jul-2020, 14:41:02
Operator : LD
Sample : P2003560-001 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jul 01 15:10:18 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : I:\GC10\DATA\RSK_FID\2020_07\01\
Data File : 07012007.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 01-Jul-2020, 14:54:52
Operator : LD
Sample : P2003560-002 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jul 01 15:10:36 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

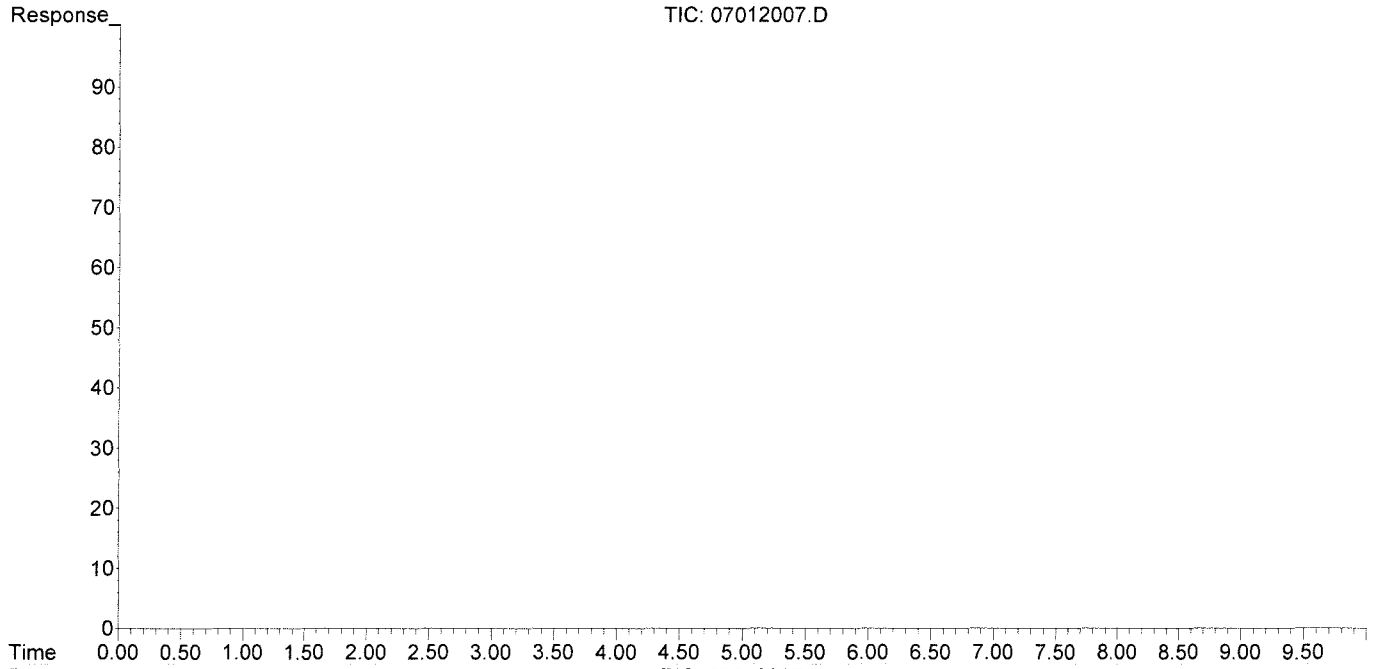
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.099	3037679	334.891	ppm
7)	Ethylene	1.667	1744	0.104	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

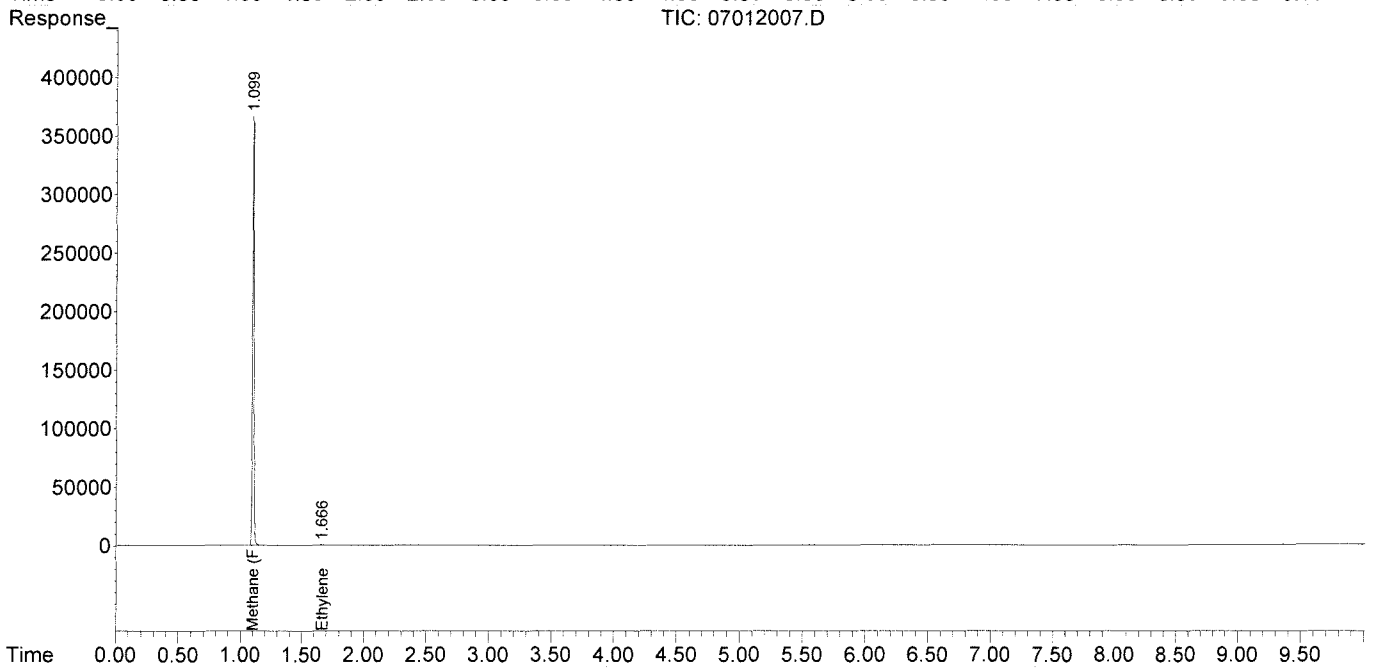
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_07\01\
Data File : 07012007.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 01-Jul-2020, 14:54:52
Operator : LD
Sample : P2003560-002 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jul 01 15:10:36 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : I:\GC10\DATA\RSK_FID\2020_07\01\
Data File : 07012008.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 01-Jul-2020, 15:07:49
Operator : LD
Sample : P2003560-003 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jul 01 16:06:25 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

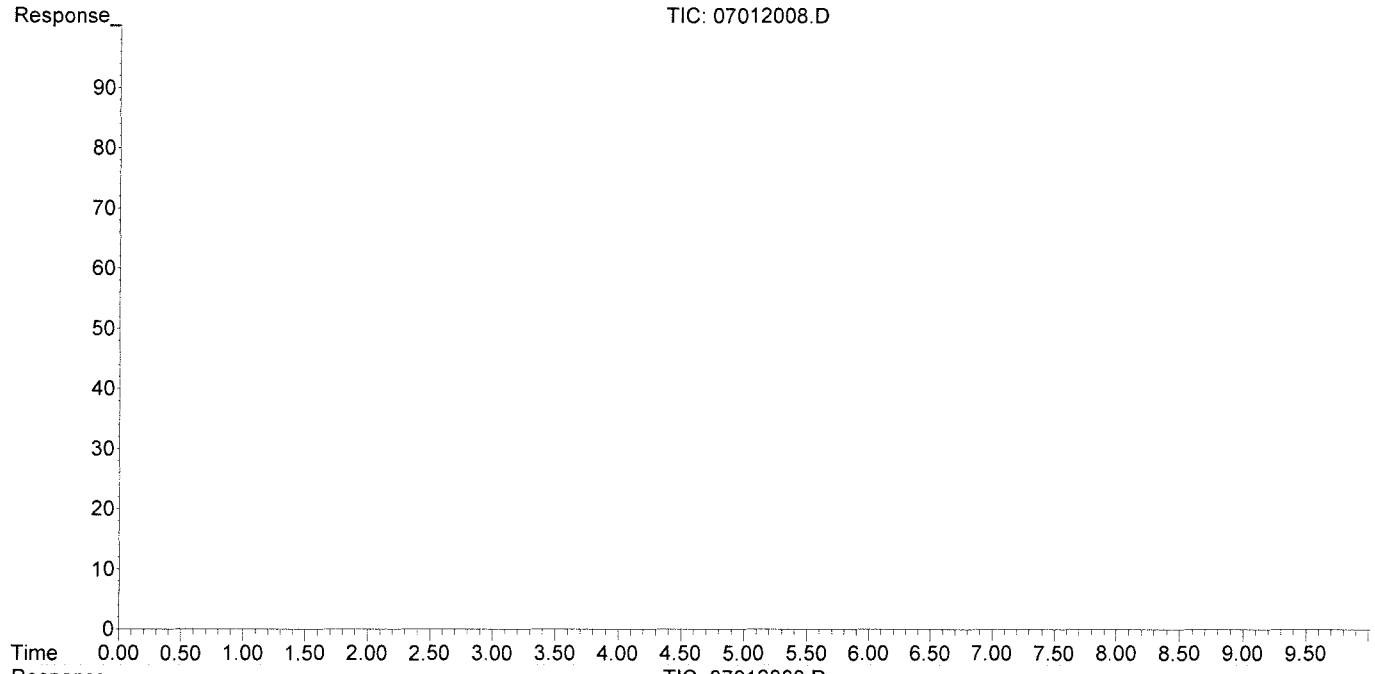
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.096	6982321	769.772	ppm
7)	Ethylene	1.656	45643	2.727	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

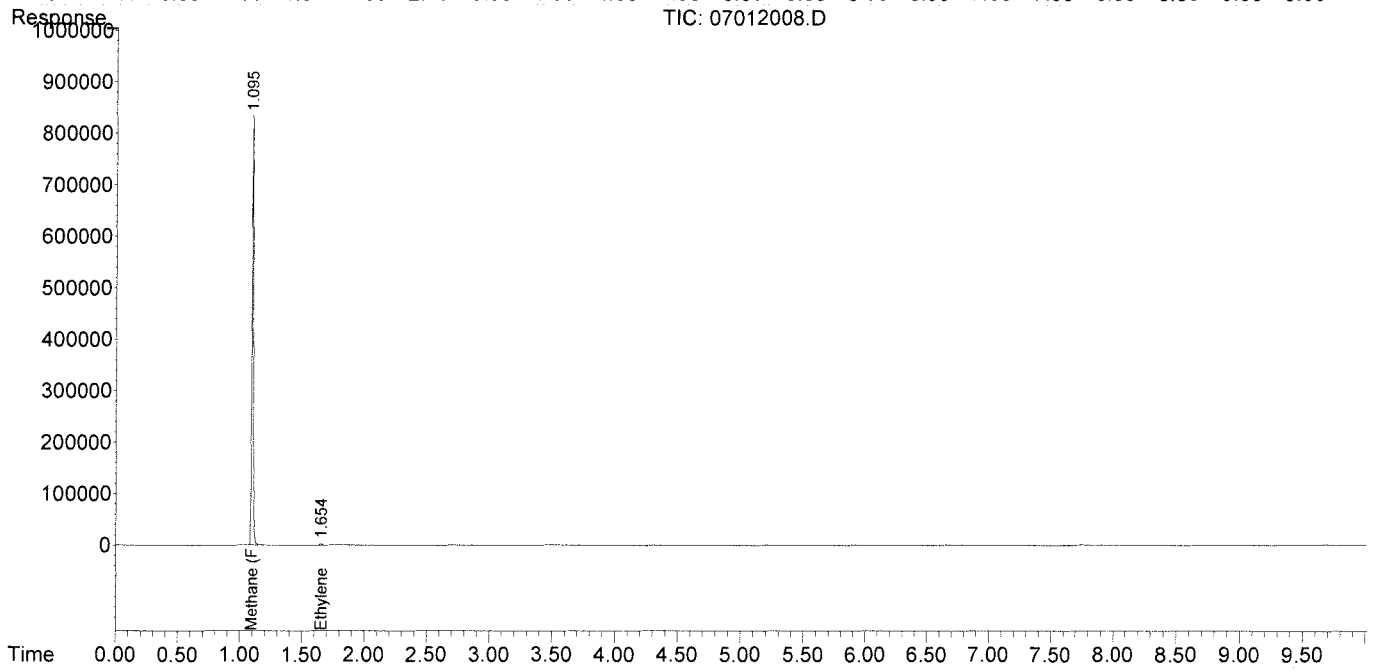
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_07\01\
Data File : 07012008.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 01-Jul-2020, 15:07:49
Operator : LD
Sample : P2003560-003 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jul 01 16:06:25 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : I:\GC10\DATA\RSK_FID\2020_07\01\
Data File : 07012009.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 01-Jul-2020, 15:27:11
Operator : LD
Sample : P2003560-004 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jul 01 16:06:44 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

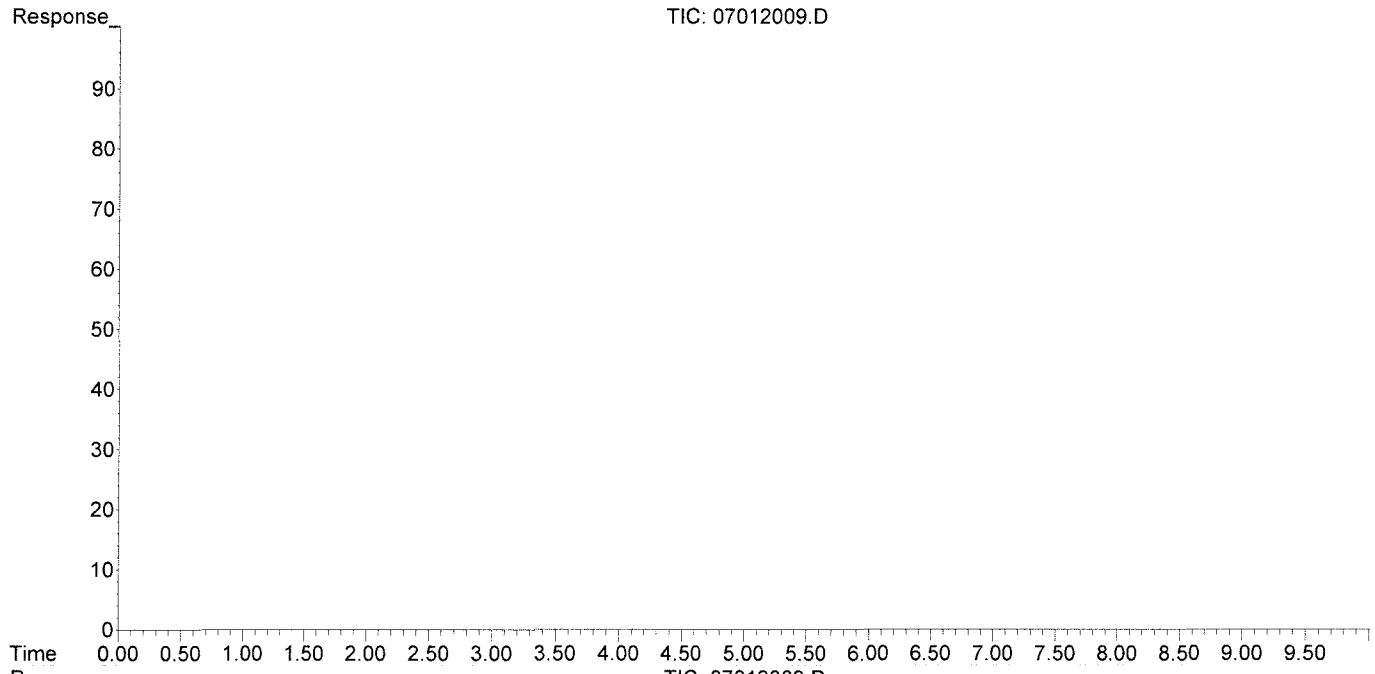
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.103	4907090	540.986	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

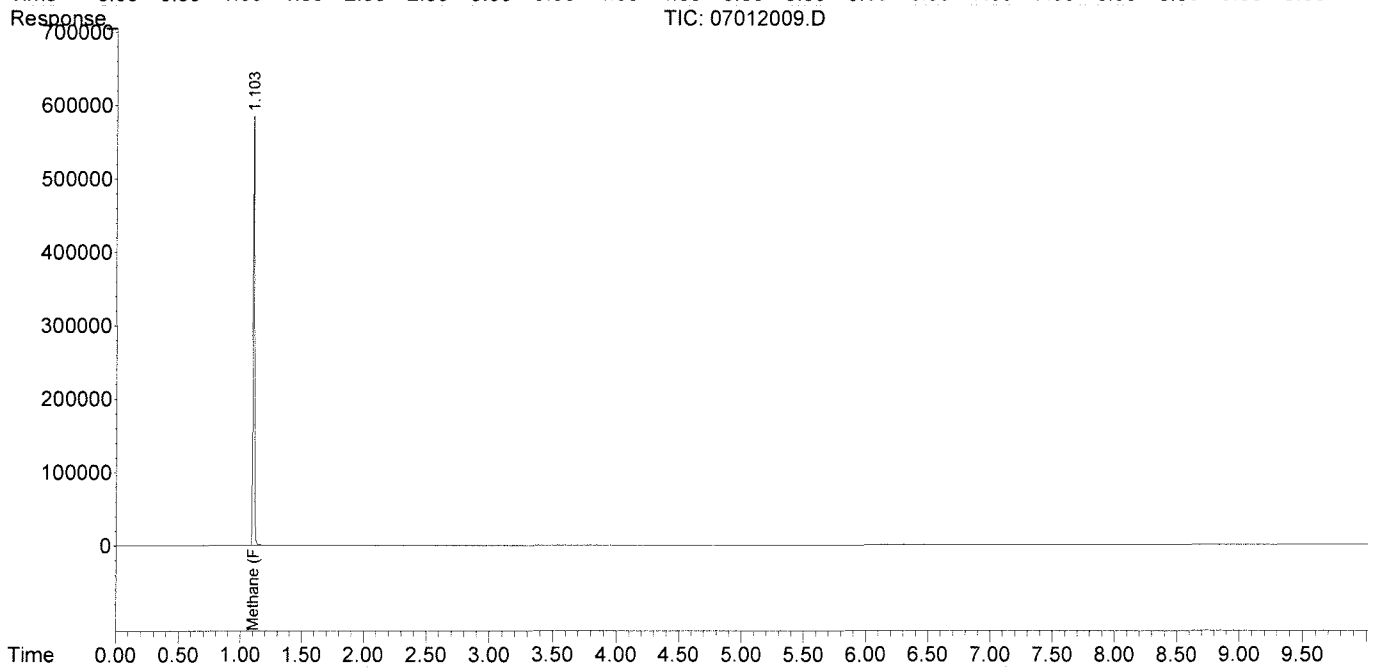
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_07\01\
Data File : 07012009.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 01-Jul-2020, 15:27:11
Operator : LD
Sample : P2003560-004 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jul 01 16:06:44 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : I:\GC10\DATA\RSK_FID\2020_07\01\
Data File : 07012003.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 01-Jul-2020, 13:48:06
Operator : LD
Sample : MCS 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jul 01 14:08:21 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

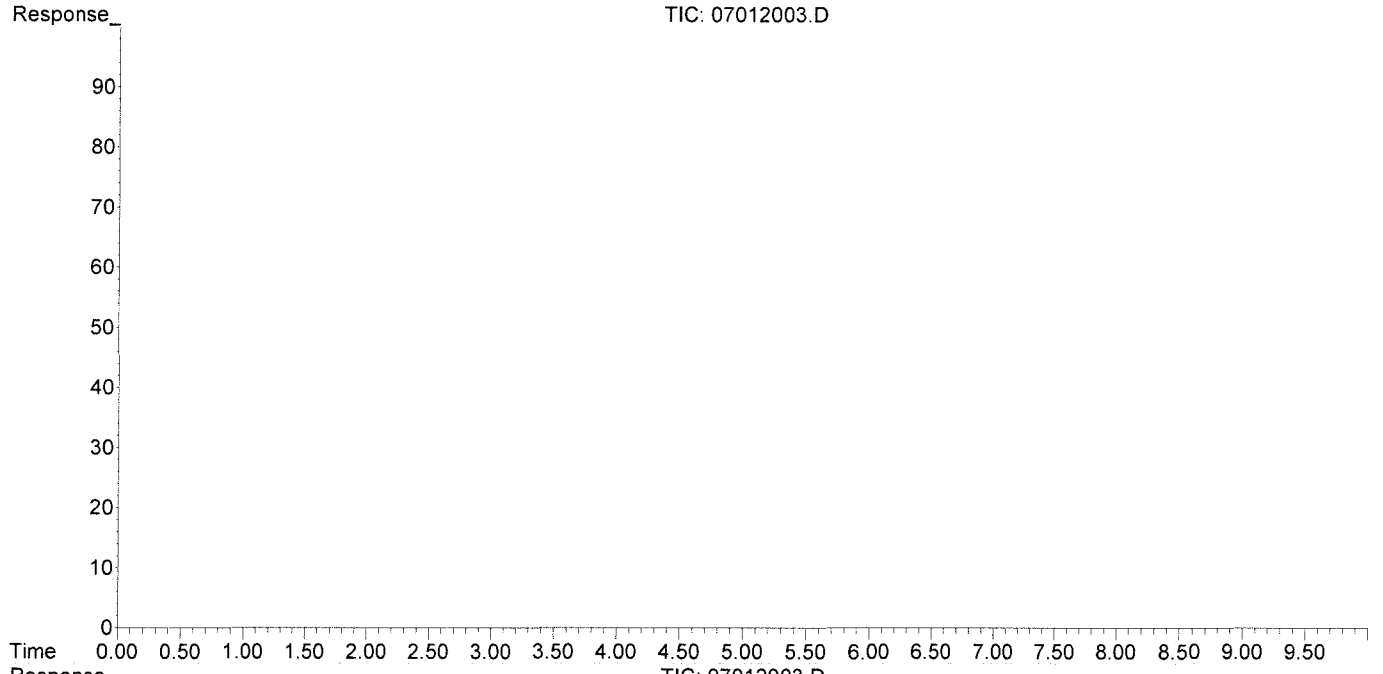
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

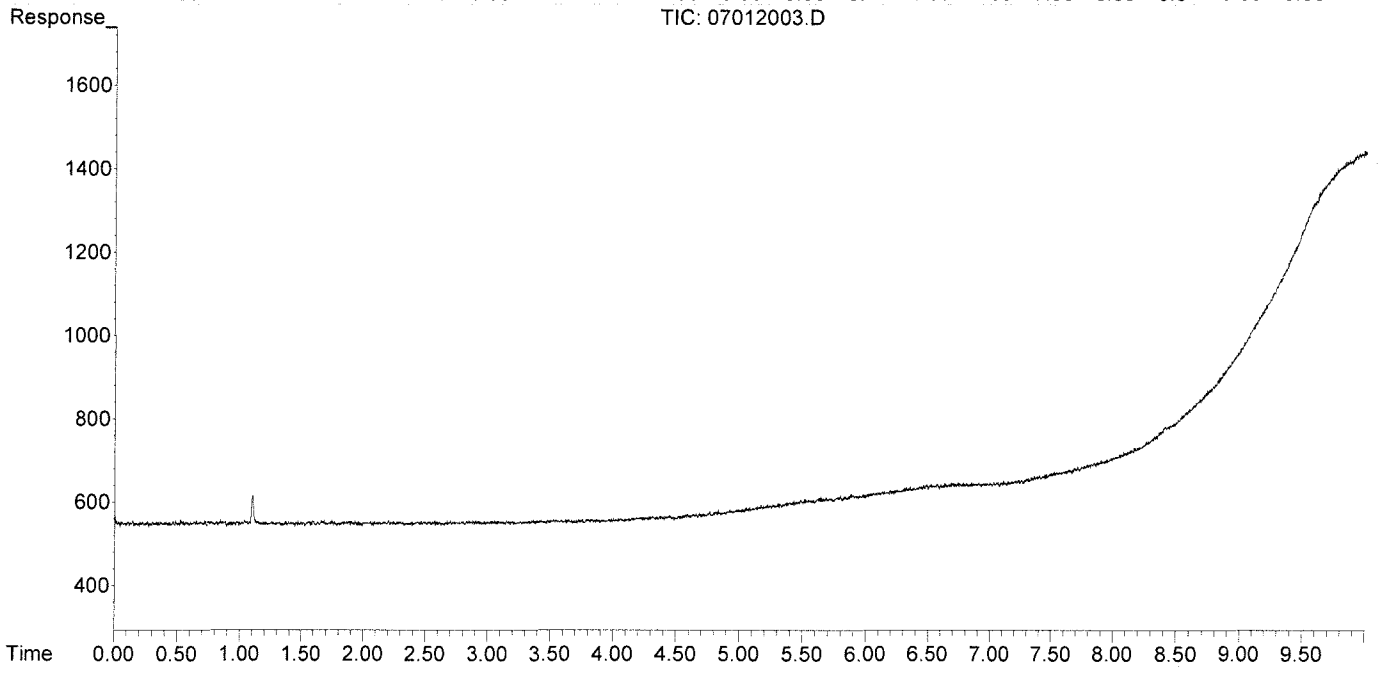
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_07\01\
Data File : 07012003.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 01-Jul-2020, 13:48:06
Operator : LD
Sample : MCS 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jul 01 14:08:21 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : I:\GC10\DATA\RSK_FID\2020_07\01\
Data File : 07012004.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 01-Jul-2020, 14:01:52
Operator : LD
Sample : LCS FID 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jul 01 14:18:37 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

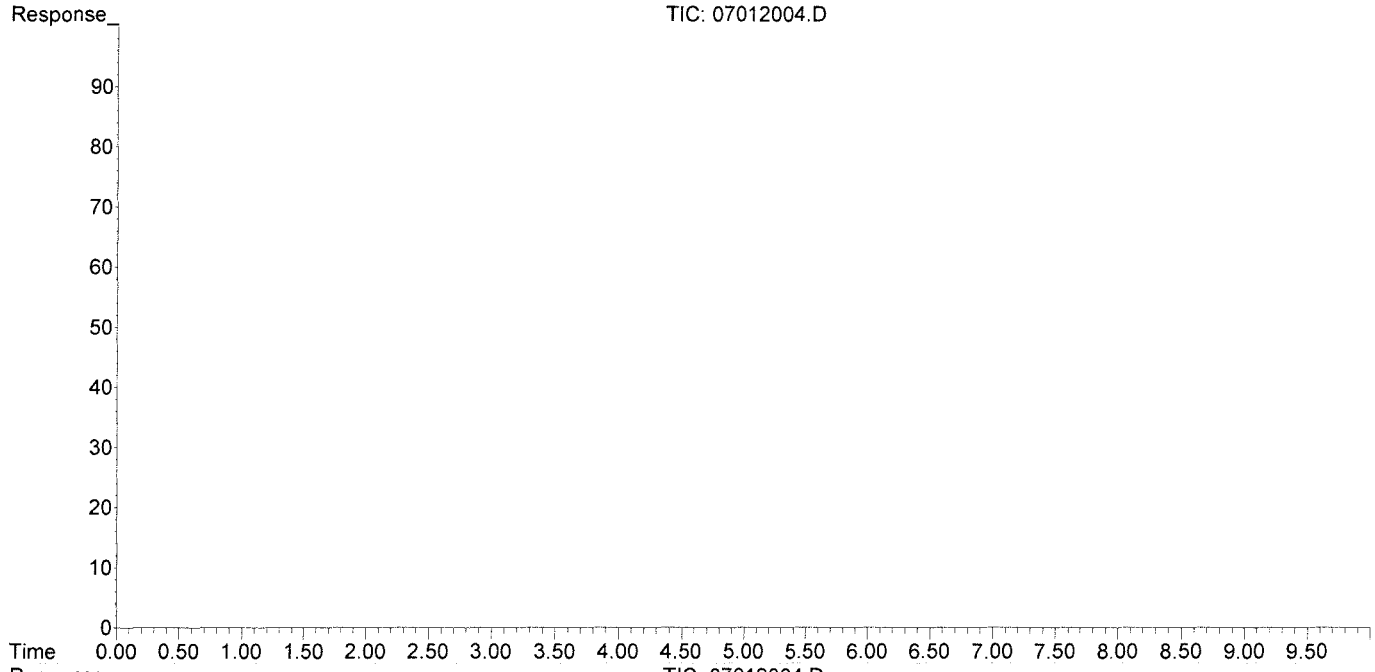
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	
2)	Carbon monoxide	0.000	0	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	1.097	12970	1.430	ppm	
7)	Ethylene	1.664	17638	1.054	ppm	
8)	Ethane	1.928	20361	1.201	ppm	
9)	Propylene	4.313	23705	1.012	ppm	
10)	Propane	4.435	30311	1.218	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	d
13)	n-Butane	0.000	0	N.D.	ppm	d

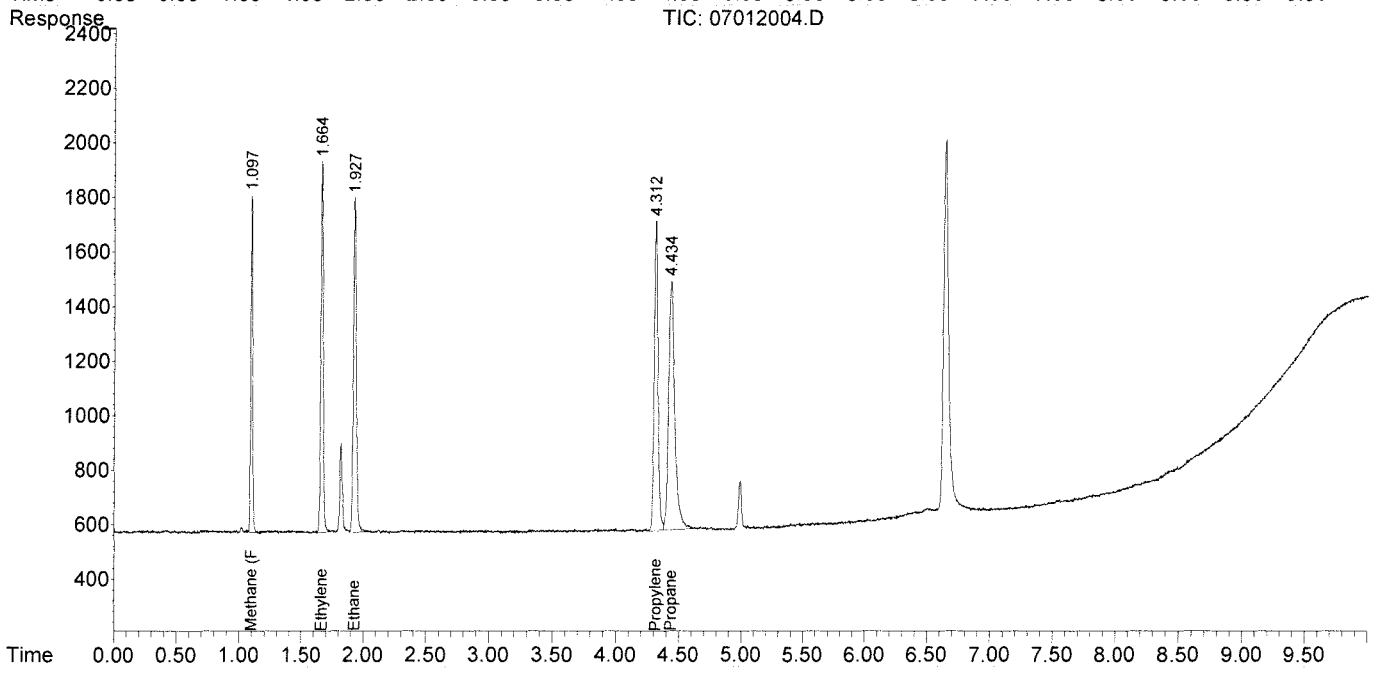
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_07\01\
Data File : 07012004.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 01-Jul-2020, 14:01:52
Operator : LD
Sample : LCS FID 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jul 01 14:18:37 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : I:\GC10\DATA\RSK_FID\2020_07\01\
Data File : 07012005.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 01-Jul-2020, 14:21:34
Operator : LD
Sample : LCSD FID 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jul 01 14:39:02 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

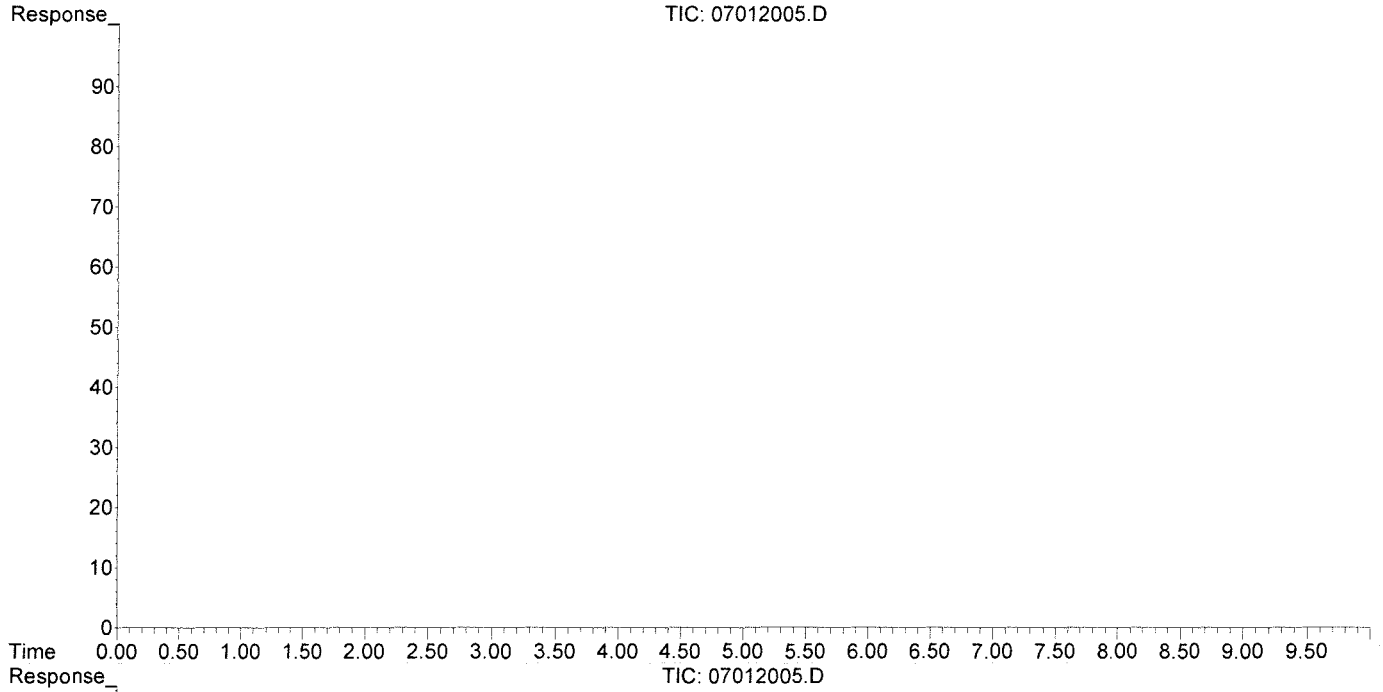
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	
2)	Carbon monoxide	0.000	0	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	1.098	12856	1.417	ppm	
7)	Ethylene	1.665	17341	1.036	ppm	
8)	Ethane	1.928	19739	1.165	ppm	
9)	Propylene	4.311	23012	0.982	ppm	
10)	Propane	4.433	29429	1.183	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	d
13)	n-Butane	0.000	0	N.D.	ppm	d

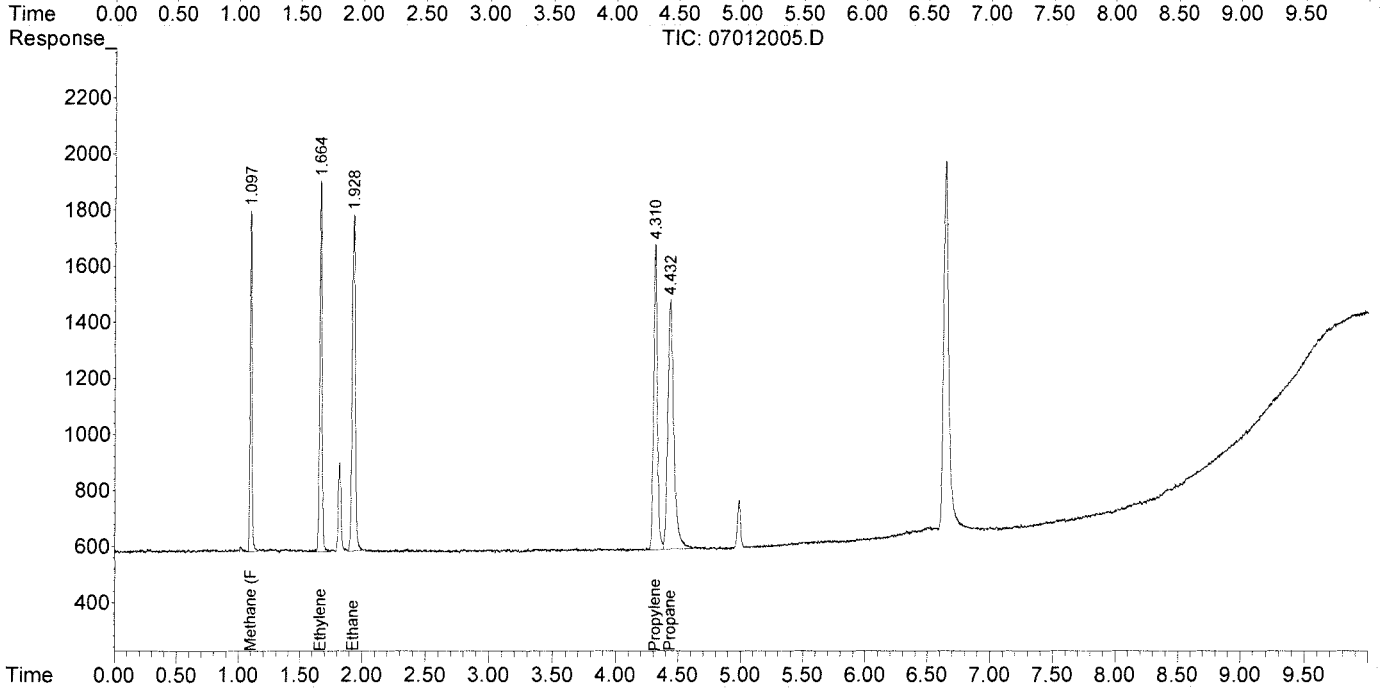
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_07\01\
Data File : 07012005.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 01-Jul-2020, 14:21:34
Operator : LD
Sample : LCSD FID 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jul 01 14:39:02 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Method Path : J:\GC10\METHODS\
Method File : RS091217_R.M
Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
Last Update : Wed Sep 13 11:14:47 2017
Response Via : Initial Calibration

Calibration Files
1 =09121702.D 2 =09121703.D 3 =09121704.D
4 =09121705.D 5 =09121706.D 6 =09121707.D

	Compound	1	2	3	4	5	6	Avg	%RSD
1)	Oxygen/Argon	3.739		1.014			0.001	0.793 E6	189.17
2)	Carbon monoxide	3.739		1.014			0.001	0.594 E6	221.92
3)	Methane (TCD)						2.161	0.951 E2	106.37
4)	Carbon dioxide	2.365	2.569	2.558	2.361	2.459	2.314	2.438 E2	4.44

Signal #2 Calibration Files
1 =09121702.D 2 =09121703.D 3 =09121704.D
4 =09121705.D 5 =09121706.D 6 =09121707.D

	Compound	1	2	3	4	5	6	Avg	%RSD
6)	Methane (FID)		1.180	0.975	0.908	0.870	0.868	0.907 E4	11.66
7)	Ethylene	1.736	1.638	1.780	1.720	1.628	1.670	1.673 E4	3.90
8)	Ethane	1.781	1.676	1.784	1.730	1.692	1.675	1.695 E4	3.83
9)	Propylene	2.505	2.296	2.592	2.480	2.346	2.252	2.343 E4	6.56
10)	Propane	2.439	2.283	2.645	2.555	2.433	2.522	2.488 E4	4.20
11)	Isobutylene							0.652 E1	138.46
12)	Isobutane	6.058	4.793	2.214	1.553	1.353		2.662 E4	86.17
13)	n-Butane	6.058	4.793	2.214	1.553	1.353		2.662 E4	86.17

(#) = Out of Range ### Number of calibration levels exceeded format ###

RS091217_R.M Wed Sep 13 15:11:48 2017

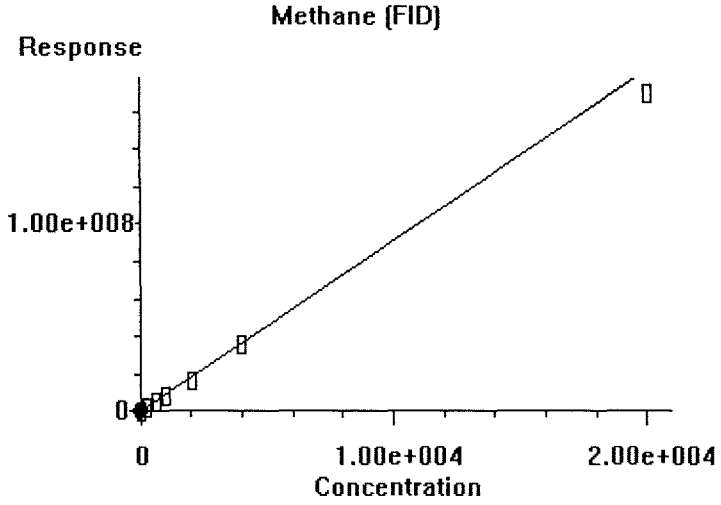
Edit Compounds -- Compound #6 -- Methane (FID)

Search by: Ret Time Name Index Find Compound

- Compound Database
- External Standard Compoun
  - Oxygen/Argon
  - Carbon monoxide
  - Methane (TCD)
  - Carbon dioxide
  - Signal #2
  - Methane (FID)
  - Ethylene
  - Ethane
  - Propylene
  - Propane
  - Isobutylene
  - Isobutane
  - n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response	Lvl ID	Concentration	Response
1	0.151000		11	20000.000000	169009160.49199
2	0.302000	3564.400000			
3	1.510000	14725.268625			
4	4.530000	41128.575000			
5	10.570000	91966.784531			
6	200.000000	1735997.497500			
7	600.000000	5189848.900000			
8	1000.000000	8598533.570000			
9	2000.000000	16098209.390000			
10	4000.000000	35776839.311362			



0.000e+000	Quadratic term
9.071e+003	Linear term
0.000e+000	Constant term
11.657%	RF Rel Std Dev

OK Cancel Help Print Calibration Curve Copy Calibration Curve

Edit Compounds -- Compound #7 -- Ethylene

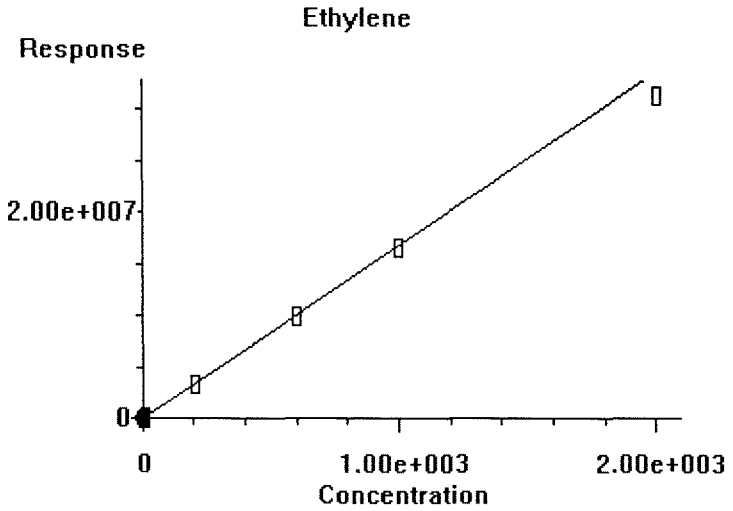
Search by: (•) Ret Time ( ) Name ( ) Index [ ] Find Compound

- Compound Database
- External Standard Compoun
  - Oxygen/Argon
  - Carbon monoxide
  - Methane (TCD)
  - Carbon dioxide
  - Signal #2
  - Methane (FID)
  - Ethylene
  - Ethane
  - Propylene
  - Propane
  - Isobutylene
  - Isobutane
  - n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response
1	0.151000	2621.970000
2	0.302000	4946.731301
3	1.510000	26884.746847
4	4.530000	77902.721497
5	10.570000	172085.529560
6	200.000000	3339702.313219
7	600.000000	10007758.776971
8	1000.000000	16608503.805988
9	2000.000000	31192443.898600
10	4000.000000	

Lvl ID	Concentration	Response
11	20000.000000	



0.000e+000	Quadratic term
1.673e+004	Linear term
0.000e+000	Constant term
3.897%	RF Rel Std Dev

[OK] [Cancel] [Help] [Print Calibration Curve] [Copy Calibration Curve]

Edit Compounds -- Compound #8 -- Ethane

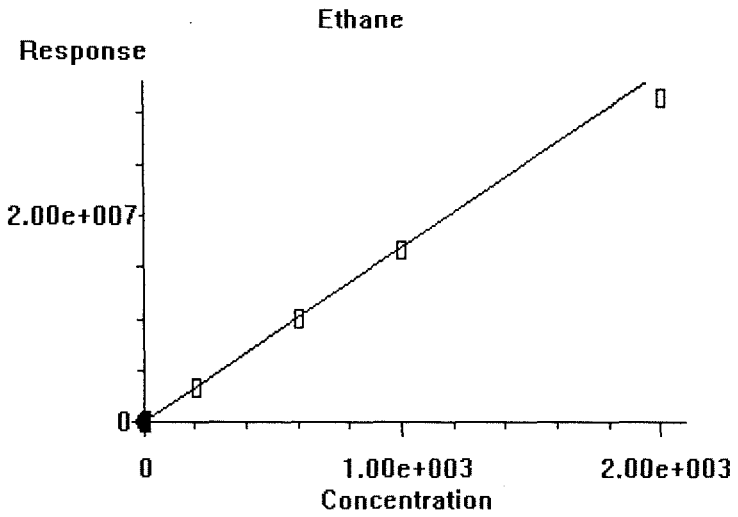
Search by: Ret Time Name Index Find Compound

- Compound Database
- External Standard Compoun
  - Oxygen/Argon
  - Carbon monoxide
  - Methane (TCD)
  - Carbon dioxide
  - Signal #2
  - Methane (FID)
  - Ethylene
  - Ethane
  - Propylene
  - Propane
  - Isobutylene
  - Isobutane
  - n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response
1	0.151000	2689.928008
2	0.302000	5060.331943
3	1.510000	26943.667500
4	4.530000	78353.525045
5	10.570000	178840.731148
6	200.000000	3350442.319129
7	600.000000	10048964.218029
8	1000.000000	16709164.879012
9	2000.000000	31424217.938900
10	4000.000000	

Lvl ID	Concentration	Response
11	20000.000000	



0.000e+000	Quadratic term
1.695e+004	Linear term
0.000e+000	Constant term
3.831%	RF Rel Std Dev

OK Cancel Help Print Calibration Curve Copy Calibration Curve

Edit Compounds -- Compound #9 -- Propylene

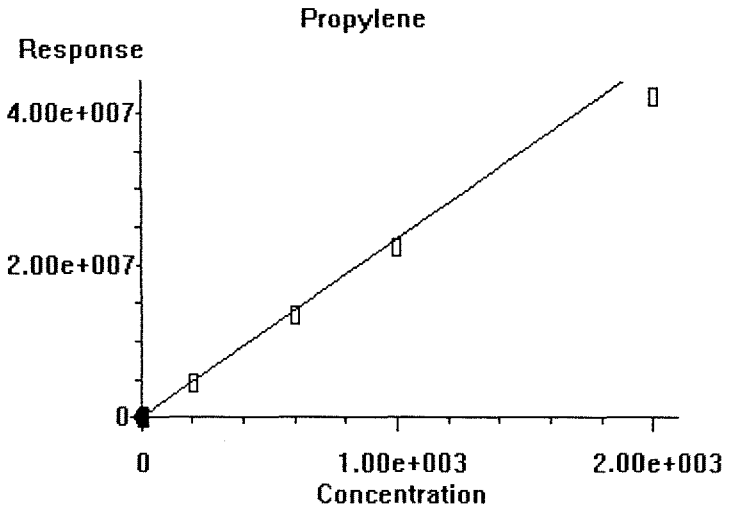
Search by: Ret Time | Name | Index | Find Compound

- Compound Database
- External Standard Compoun
  - Oxygen/Argon
  - Carbon monoxide
  - Methane (TCD)
  - Carbon dioxide
  - Signal #2
  - Methane (FID)
  - Ethylene
  - Ethane
  - Propylene
  - Propane
  - Isobutylene
  - Isobutane
  - n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response
1	0.151000	3782.537646
2	0.302000	6933.285530
3	1.510000	39139.518208
4	4.530000	112341.896872
5	10.570000	248003.903623
6	200.000000	4504060.086084
7	600.000000	13569342.761419
8	1000.000000	22494887.720990
9	2000.000000	42124689.656800
10	4000.000000	

Lvl ID	Concentration	Response
11	20000.000000	



0.000e+000	Quadratic term
2.343e+004	Linear term
0.000e+000	Constant term
6.559%	RF Rel Std Dev

OK | Cancel | Help | Print Calibration Curve | Copy Calibration Curve

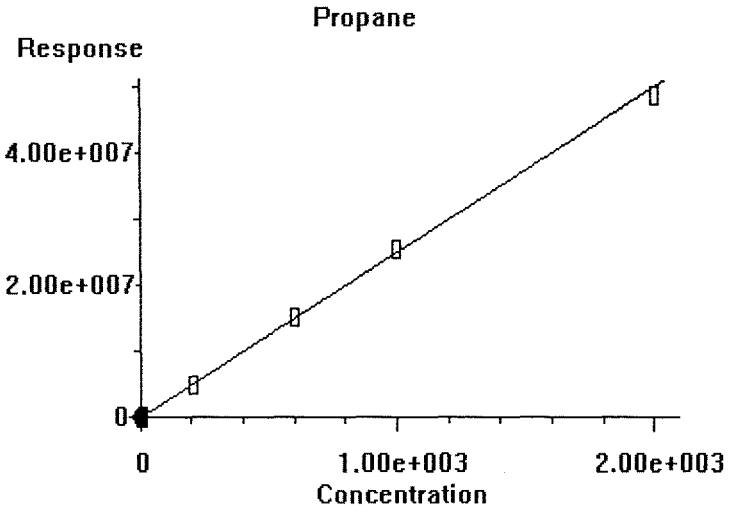
Edit Compounds -- Compound #10 -- Propane

Search by: Ret Time | Name | Index | Find Compound

- Compound Database
- External Standard Compoun
  - Oxygen/Argon
  - Carbon monoxide
  - Methane (TCD)
  - Carbon dioxide
  - Signal #2
  - Methane (FID)
  - Ethylene
  - Ethane
  - Propylene
  - Propane
  - Isobutylene
  - Isobutane
  - n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response	Lvl ID	Concentration	Response
1	0.151000	3682.897354	11	20000.000000	
2	0.302000	6894.237803			
3	1.510000	39934.166792			
4	4.530000	115723.428128			
5	10.570000	257124.432806			
6	200.000000	5043035.663916			
7	600.000000	15251325.797404			
8	1000.000000	25459410.657938			
9	2000.000000	48583085.287451			
10	4000.000000				



0.000e+000	Quadratic term
2.488e+004	Linear term
0.000e+000	Constant term
4.200%	RF Rel Std Dev

OK | Cancel | Help | Print Calibration Curve | Copy Calibration Curve

Method Path : J:\GC10\METHODS\
Method File : RS091217_R.M
Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
Last Update : Wed Sep 13 11:14:47 2017
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	0	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121702.D
2	2	0	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121703.D
3	3	3	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121704.D
4	4	10	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121705.D
5	5	25	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121706.D
6	6	125	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121707.D
7	7	5000	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121708.D
8	8	25000	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121709.D
9	9	2000	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121710.D
10	10	30000	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121711.D
11	11	20000	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121712.D

#	ID	Update Time	Quant Time	Acquisition Time
1	1	Sep 13 11:04 2017	Sep 12 15:03 2017	12-Sep-2017, 10:52
2	2	Sep 13 11:05 2017	Sep 13 11:05 2017	12-Sep-2017, 11:05
3	3	Sep 13 11:06 2017	Sep 13 11:05 2017	12-Sep-2017, 11:45
4	4	Sep 13 11:09 2017	Sep 13 11:06 2017	12-Sep-2017, 12:09
5	5	Sep 13 11:09 2017	Sep 13 11:09 2017	12-Sep-2017, 12:30
6	6	Sep 13 11:10 2017	Sep 13 11:10 2017	12-Sep-2017, 12:47
7	7	Sep 13 11:11 2017	Sep 13 11:10 2017	12-Sep-2017, 13:00
8	8	Sep 13 11:12 2017	Sep 13 11:11 2017	12-Sep-2017, 13:47
9	9	Sep 13 11:12 2017	Sep 13 11:12 2017	12-Sep-2017, 14:07
10	10	Sep 13 11:14 2017	Sep 13 11:13 2017	12-Sep-2017, 14:48
11	11	Sep 13 11:14 2017	Sep 13 11:14 2017	12-Sep-2017, 15:21

RS091217_R.M Wed Sep 13 15:11:22 2017

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121702.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 10:52
Operator : MC
Sample : 0.151ppm 0.250ml s32-09121702
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 12 11:03:15 2017
Quant Method : I:\GC10\METHODS\RS082417.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Fri Aug 25 09:19:14 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.767	373920	0.128	ppm	
2)	Carbon monoxide	1.767	373920	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	1.595	2622	0.156	ppm	
8)	Ethane	1.848	2690	0.156	ppm	
9)	Propylene	4.222	3783	0.154	ppm	
10)	Propane	4.348	3683	0.139	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	6.582f	6058	NoCal	ppm	
13)	n-Butane	6.582f	6058	NoCal	ppm	

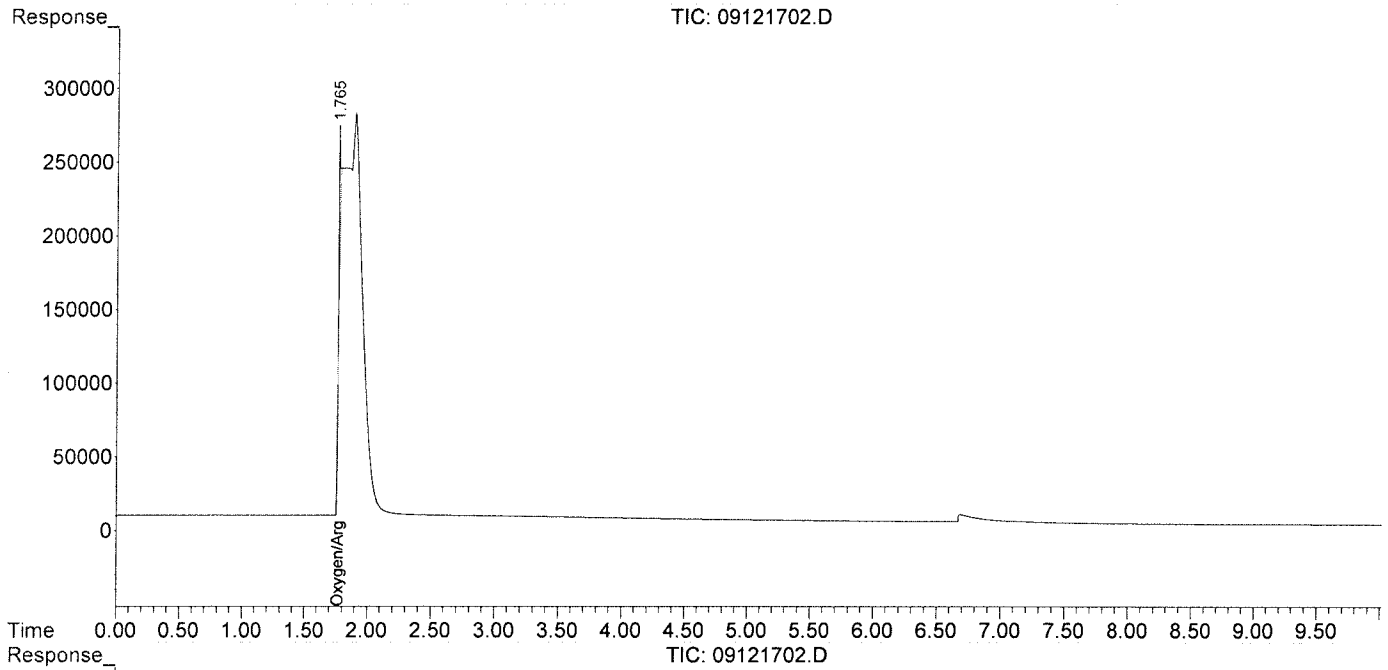
(f)=RT Delta > 1/2 Window (m)=manual int.

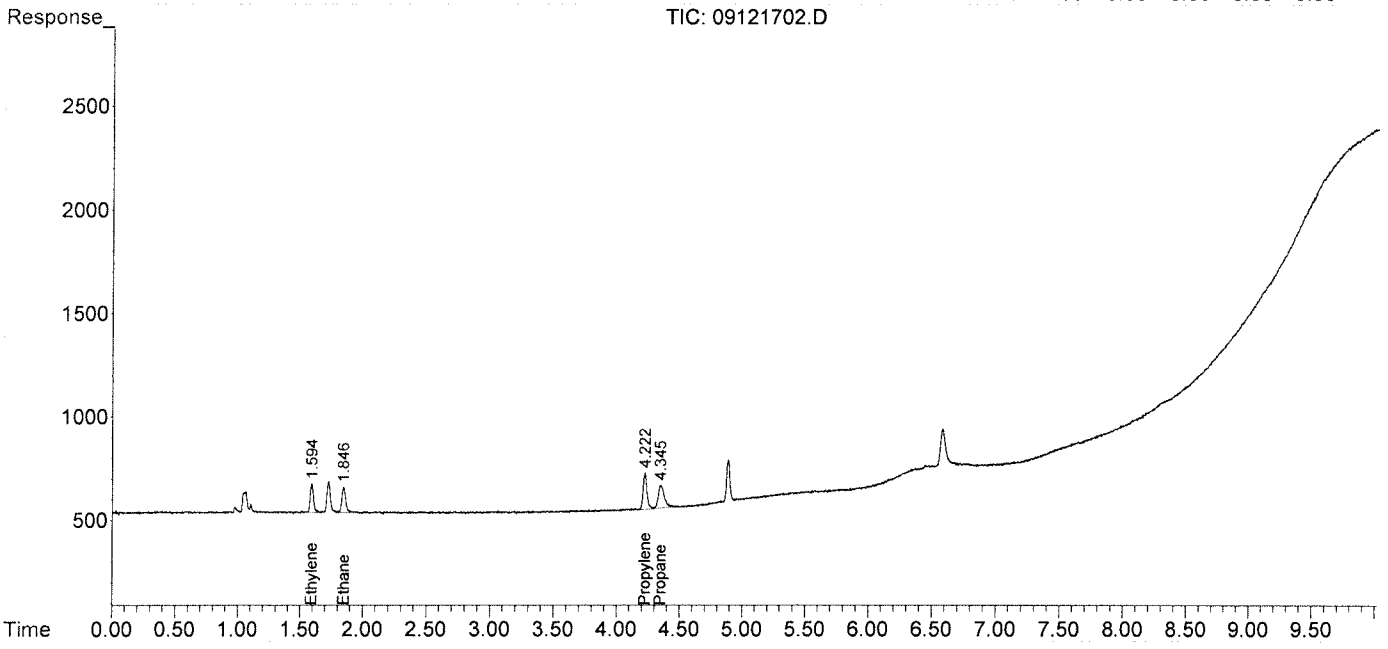
9/13/17

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121702.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 10:52
Operator : MC
Sample : 0.151ppm 0.250ml s32-09121702
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 12 11:03:15 2017
Quant Method : I:\GC10\METHODS\RS082417.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Fri Aug 25 09:19:14 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121703.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 11:05
Operator : MC
Sample : 0.302ppm 0.5ml s32-09121702
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:05:03 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

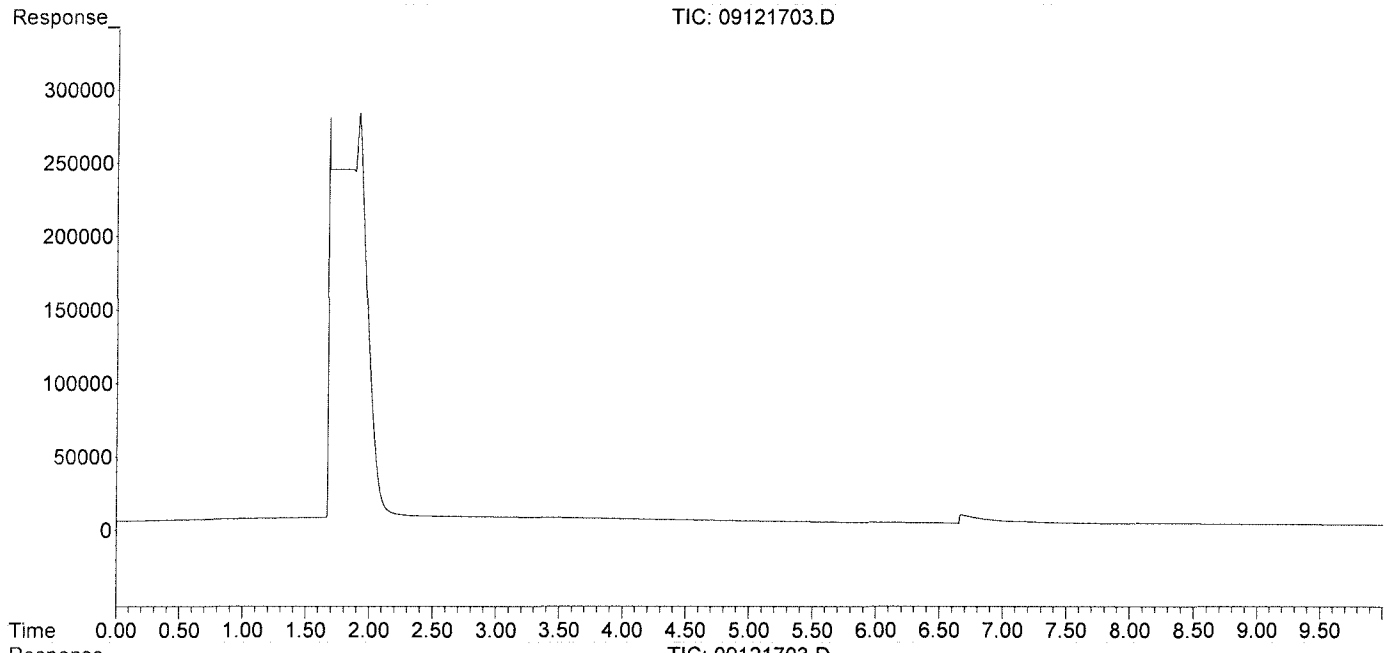
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.913f	-25181981	N.D.	ppm	
2)	Carbon monoxide	1.913f	-25181981	1.089	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	1.049	3564	0.391	ppm	m
7)	Ethylene	1.577	4947	0.292	ppm	
8)	Ethane	1.828	5060	0.293	ppm	
9)	Propylene	4.207	6933	0.281	ppm	
10)	Propane	4.337	6894	0.268	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	6.579f	9587	0.158	ppm	
13)	n-Butane	6.579f	9587	0.158	ppm	

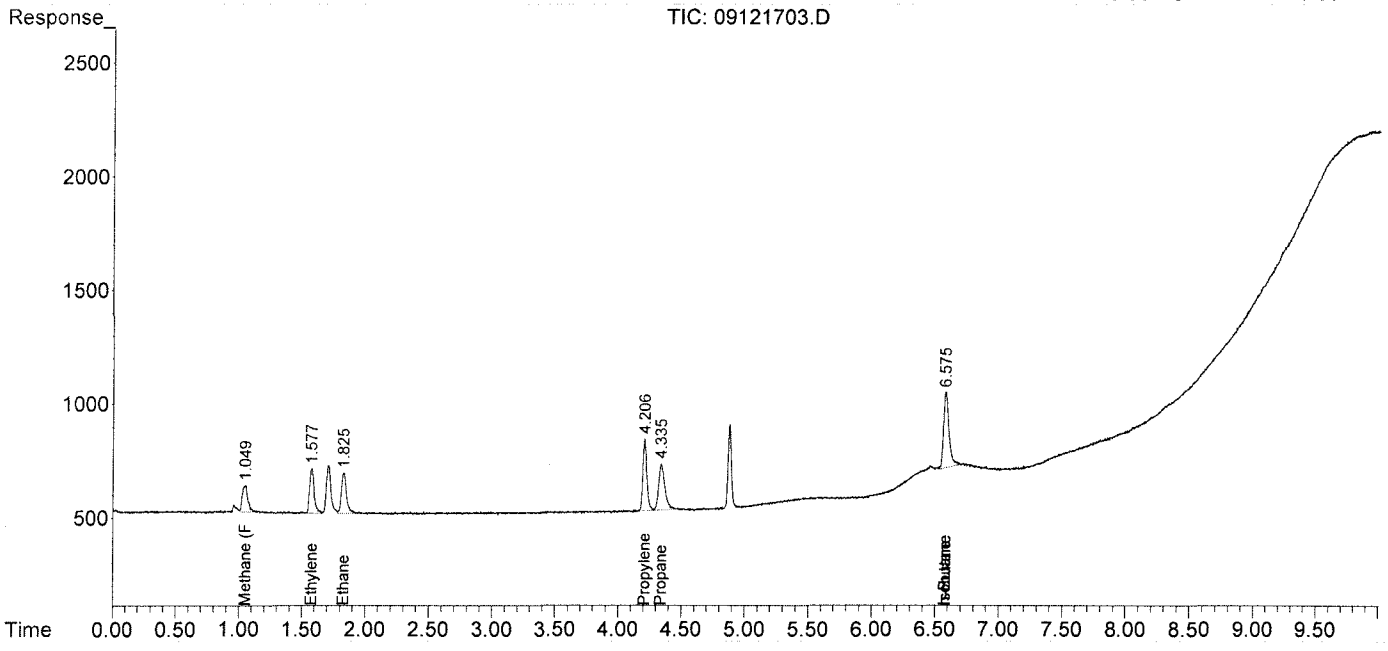
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121703.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 11:05
Operator : MC
Sample : 0.302ppm 0.5ml s32-09121702
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:05:03 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



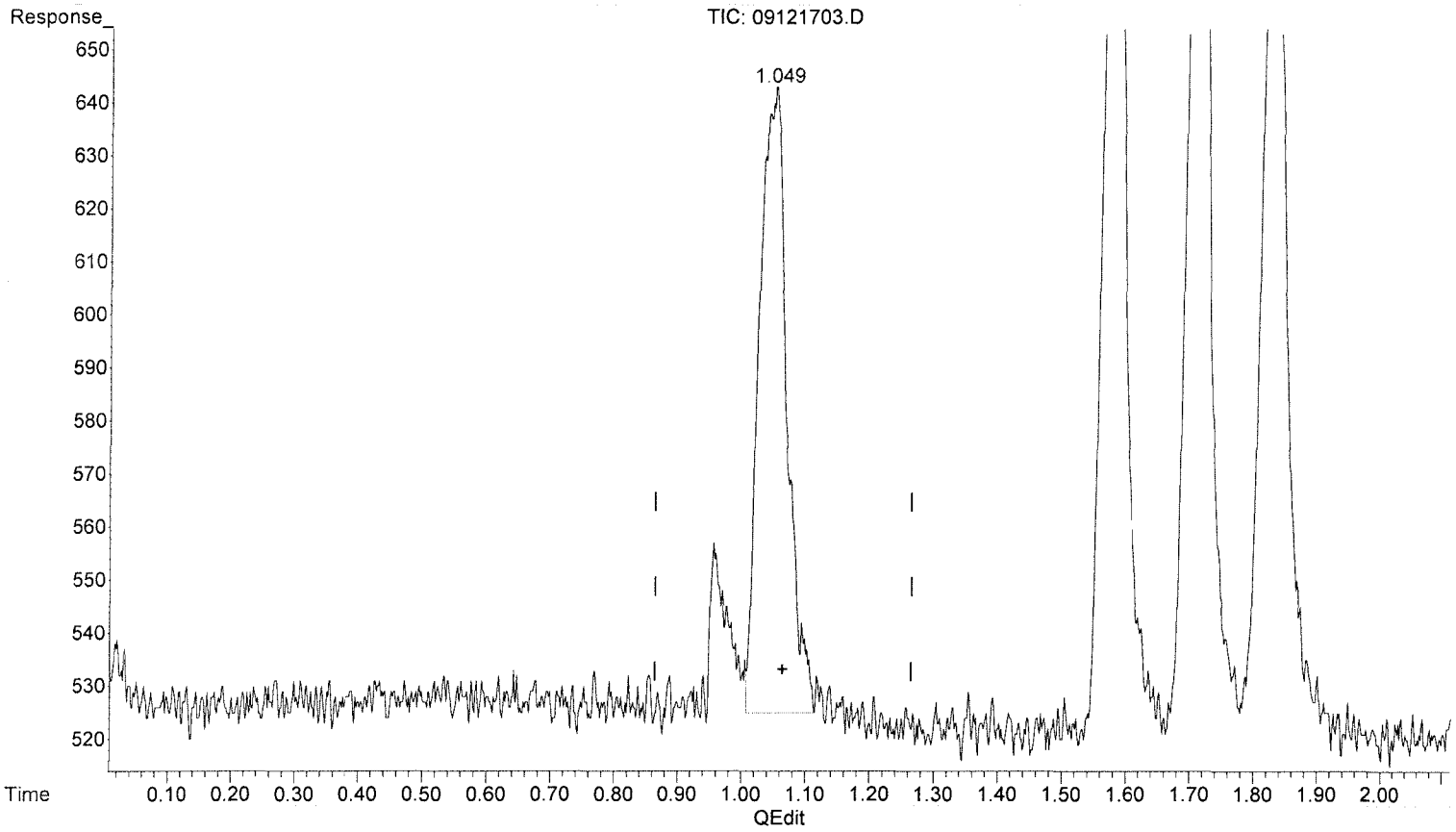


01002762

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121703.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 11:05
Operator : MC
Sample : 0.302ppm 0.5ml s32-09121702
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:05:03 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



(6) Methane (FID)

1.049min 0.391 ppm m

response 3564

(+) = Expected Retention Time

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121704.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 11:45
Operator : MC
Sample : 1.51ppm 0.1ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:05:55 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

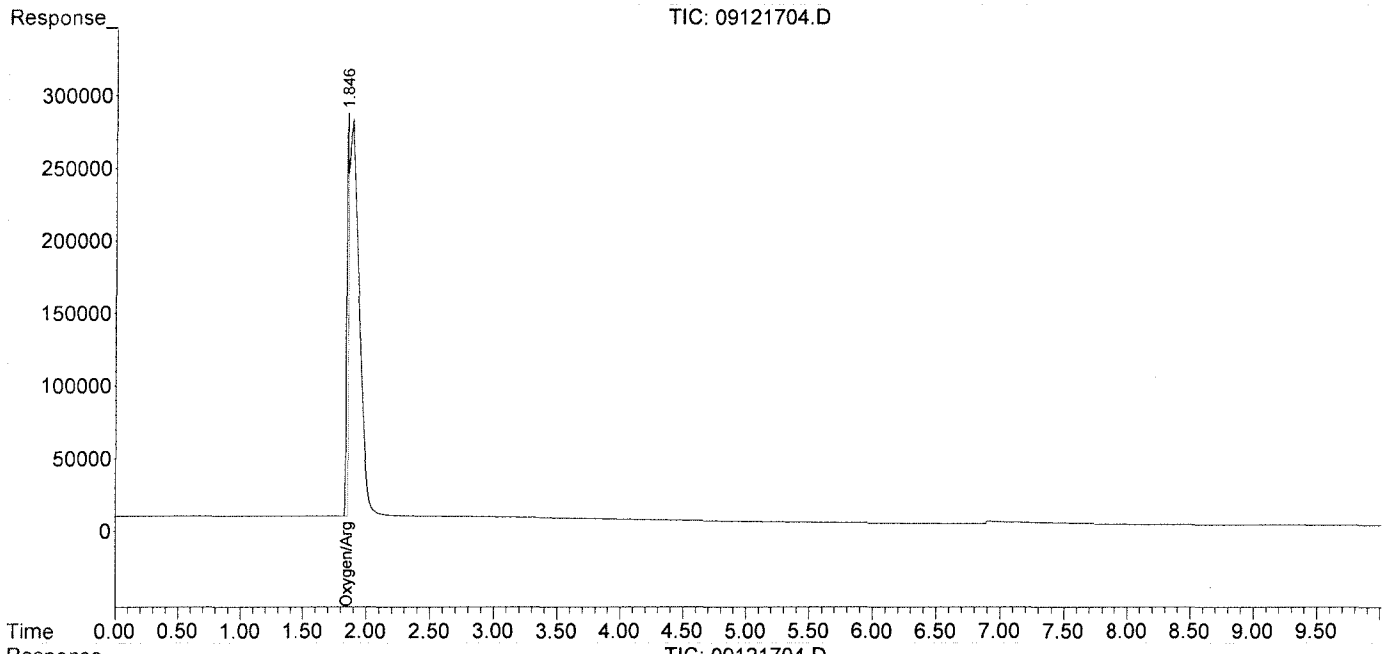
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.847	2536230	1.056	ppm
2)	Carbon monoxide	1.847	2536230	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.064	14725	1.613	ppm
7)	Ethylene	1.598	26885	1.582	ppm
8)	Ethane	1.851	26944	1.555	ppm
9)	Propylene	4.220	39140	1.589	ppm
10)	Propane	4.349	39934	1.596	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	6.578f	55348	1.020	ppm
13)	n-Butane	6.578f	55348	1.020	ppm

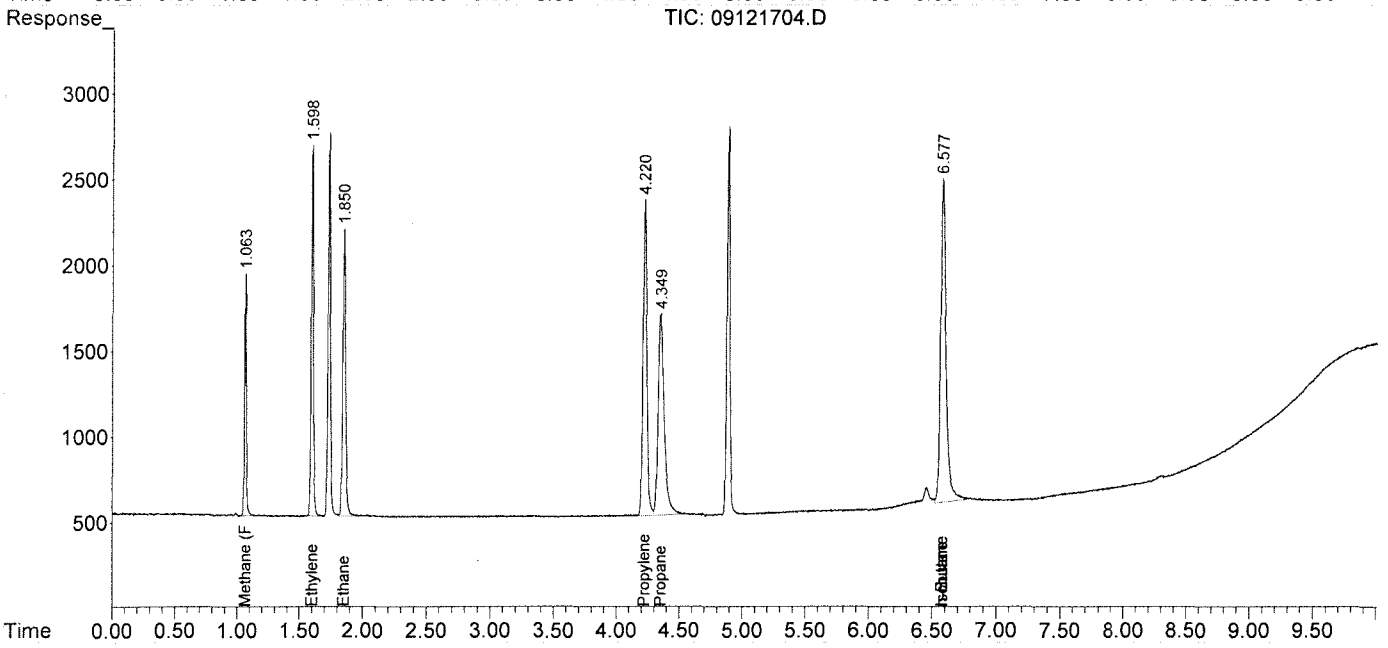
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121704.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 11:45
Operator : MC
Sample : 1.51ppm 0.1ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:05:55 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121705.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:09
Operator : MC
Sample : 4.53ppm 0.3ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:06:32 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

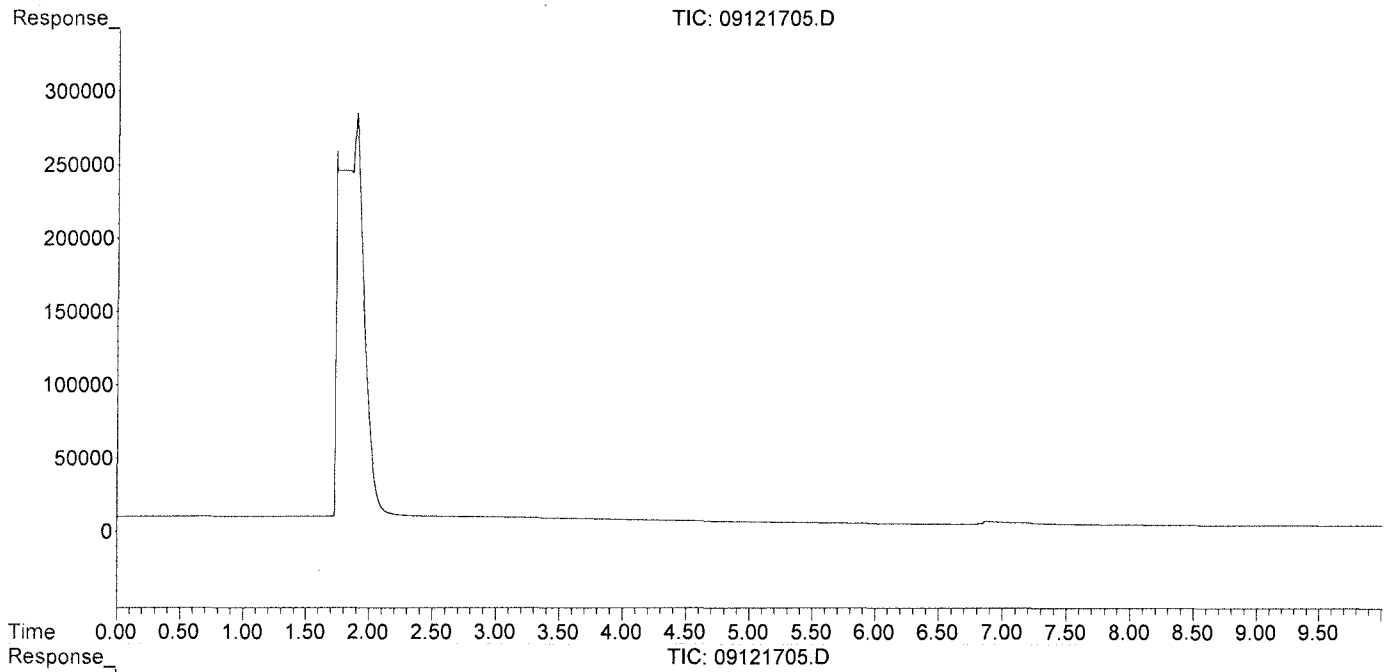
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.738	-331216	N.D.	ppm
2)	Carbon monoxide	1.738	-331216	0.019	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.052	41129	4.522	ppm
7)	Ethylene	1.586	77903	4.637	ppm
8)	Ethane	1.838	78354	4.558	ppm
9)	Propylene	4.218	112342	4.614	ppm
10)	Propane	4.347	115723	4.680	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	6.580f	155256	3.565	ppm
13)	n-Butane	6.580f	155256	3.565	ppm

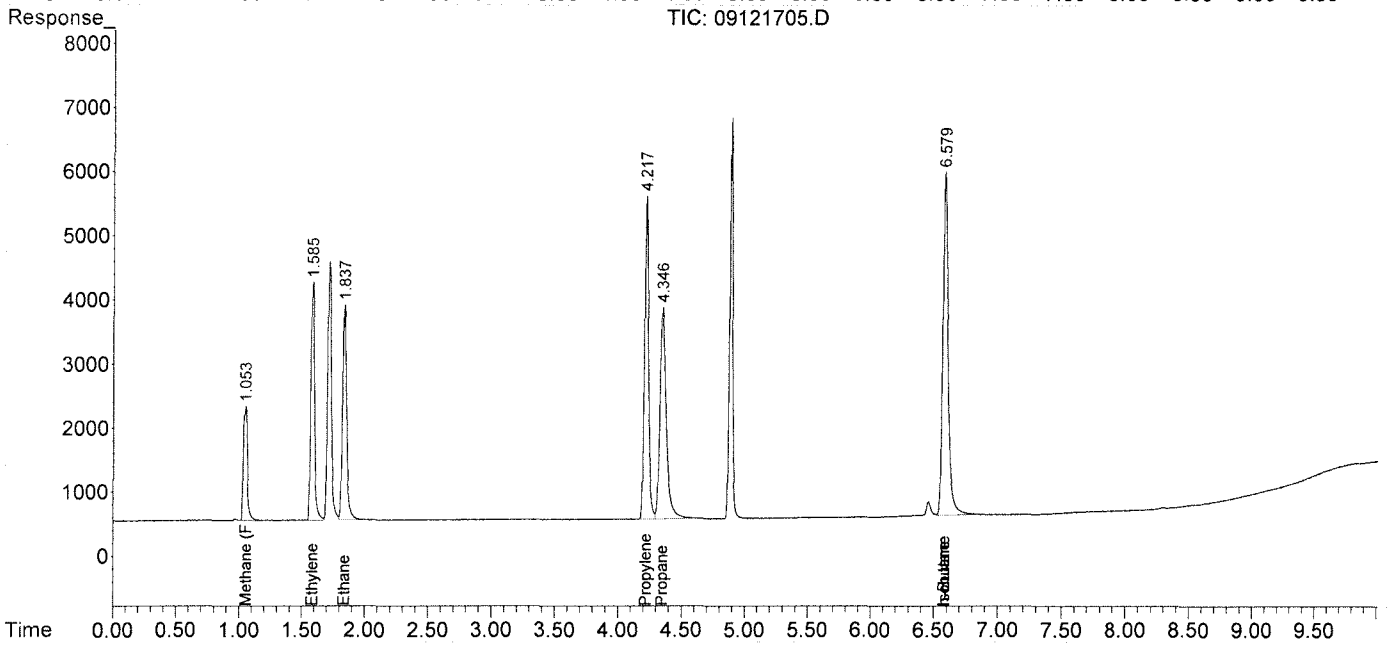
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121705.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:09
Operator : MC
Sample : 4.53ppm 0.3ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:06:32 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121706.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:30
Operator : MC
Sample : 10.57ppm 0.7ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:09:24 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

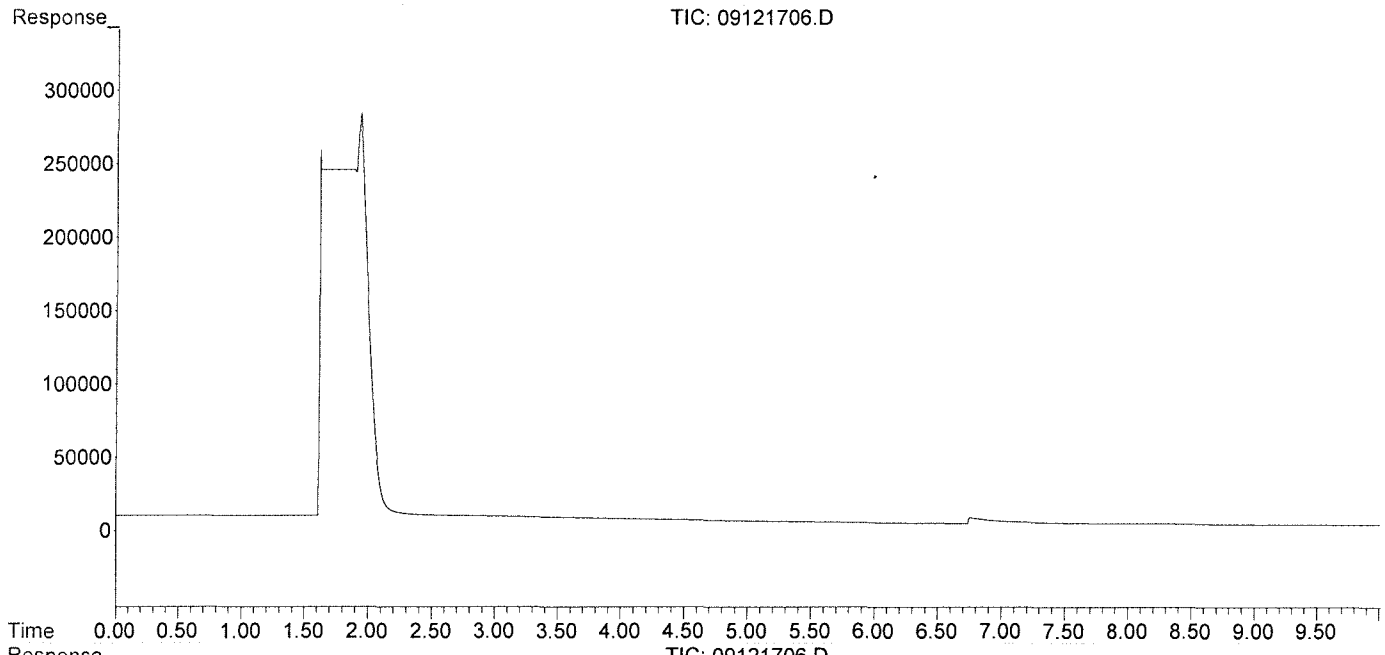
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.929f	-31871242	N.D.	ppm
2)	Carbon monoxide	1.929f	-31871242	1.818	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.025	91967	10.135	ppm
7)	Ethylene	1.568	172086	10.273	ppm
8)	Ethane	1.822	178841	10.441	ppm
9)	Propylene	4.214	248004	10.236	ppm
10)	Propane	4.344	257124	10.458	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	6.578f	338181	9.254	ppm
13)	n-Butane	6.578f	338181	9.254	ppm

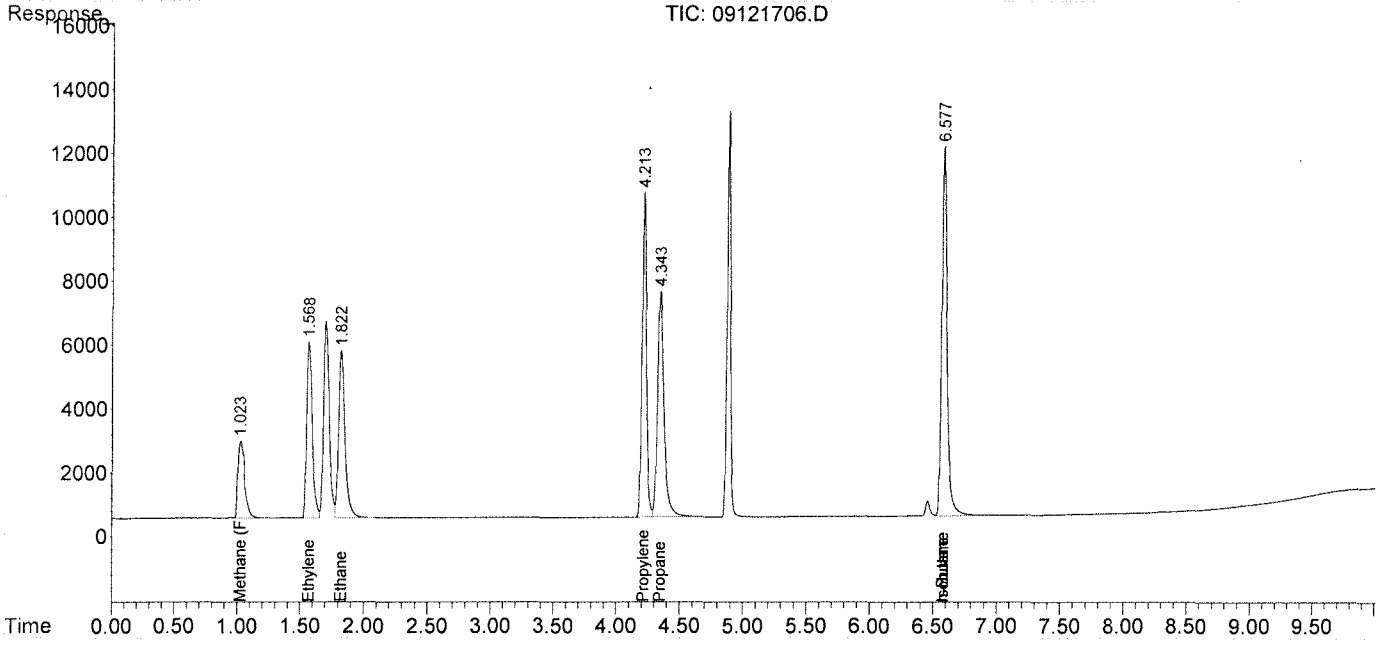
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121706.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:30
Operator : MC
Sample : 10.57ppm 0.7ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:09:24 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121707.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:47
Operator : MC
Sample : 200ppm 0.1ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:09:59 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

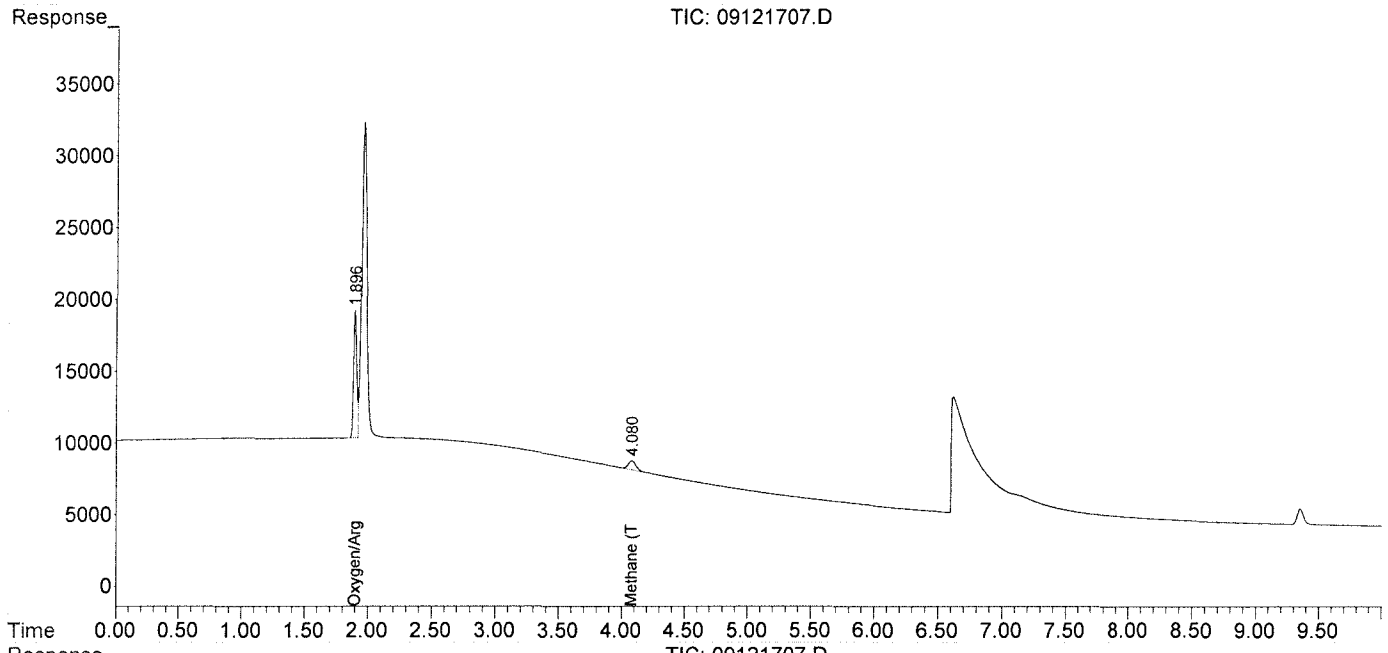
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.897	155286	0.065	ppm
2)	Carbon monoxide	1.897	155286	N.D.	ppm
3)	Methane (TCD)	4.079f	27015	2856.472	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.063	1735997	190.792	ppm
7)	Ethylene	1.597	3339702	198.758	ppm
8)	Ethane	1.849	3350442	194.597	ppm
9)	Propylene	4.201	4504060	185.706	ppm
10)	Propane	4.333	5043036	204.809	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

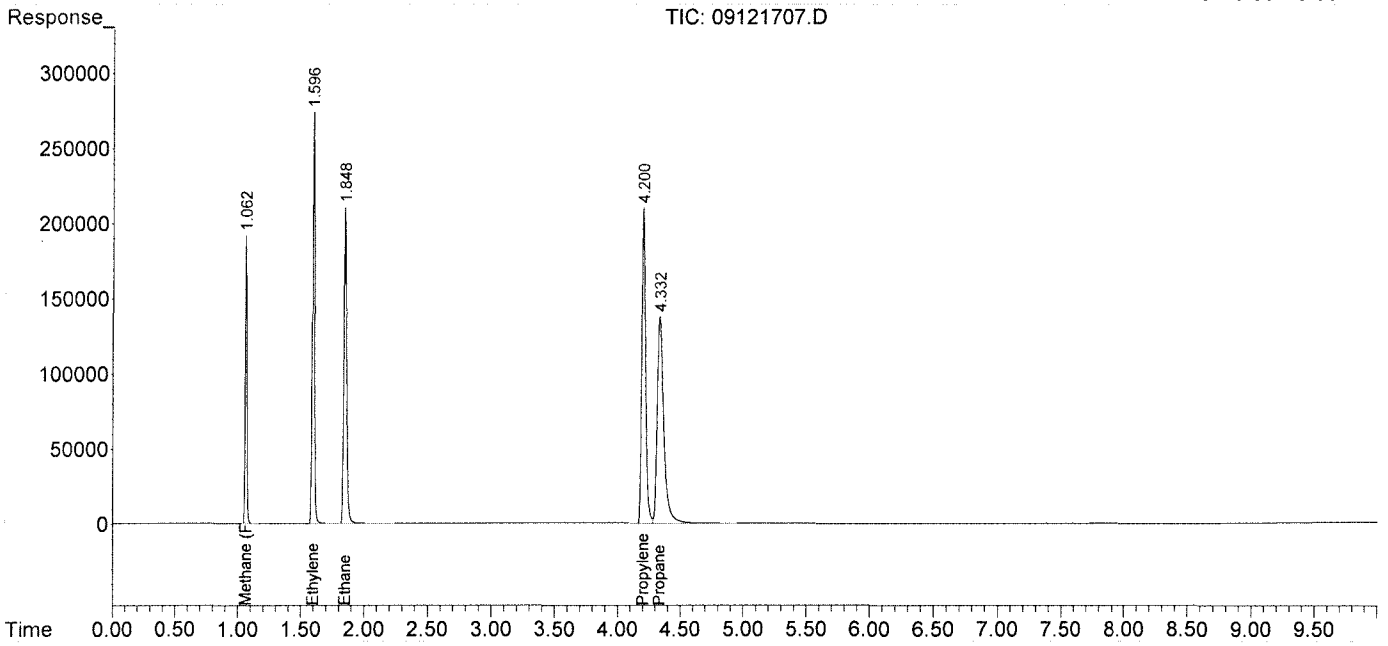
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121707.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:47
Operator : MC
Sample : 200ppm 0.1ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:09:59 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121708.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 13:00
Operator : MC
Sample : 600ppm 0.3ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:10:57 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:10:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

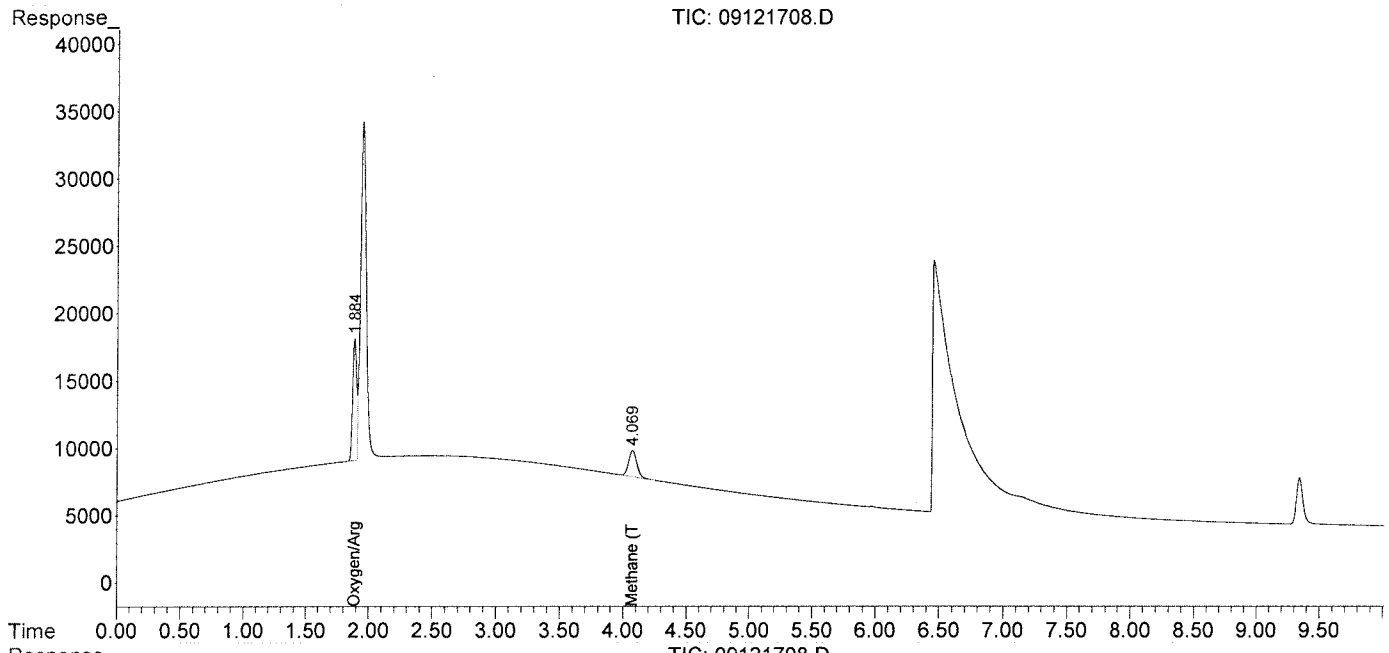
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.884	196022	0.124	ppm
2)	Carbon monoxide	1.884	196022	N.D.	ppm
3)	Methane (TCD)	4.070f	88282	782.730	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.044	5189849	539.759	ppm
7)	Ethylene	1.573	10007759	590.286	ppm
8)	Ethane	1.822	10048964	583.213	ppm
9)	Propylene	4.160	13569343	562.612	ppm
10)	Propane	4.300	15251326	615.171	ppm
11)	Isobutylene	6.143	9815	NoCal	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

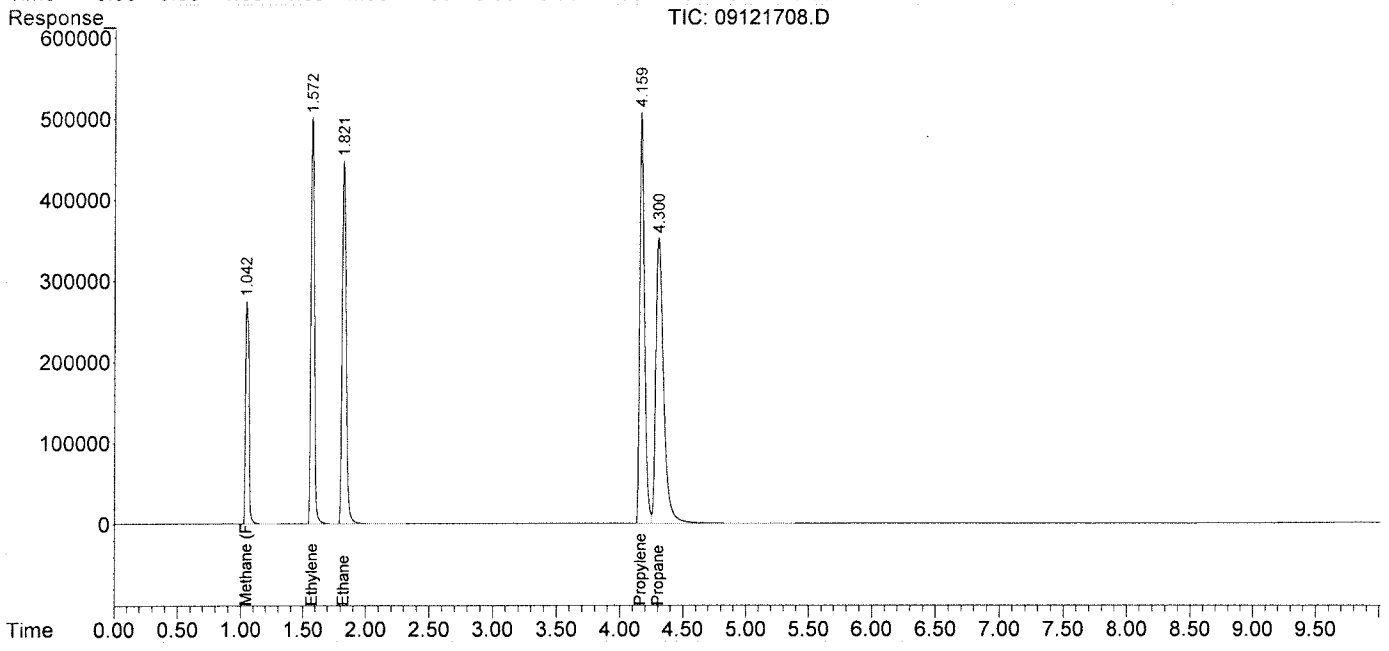
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121708.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 13:00
Operator : MC
Sample : 600ppm 0.3ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:10:57 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:10:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121709.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 13:47
Operator : MC
Sample : 1000ppm 0.5ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:11:46 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:11:38 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

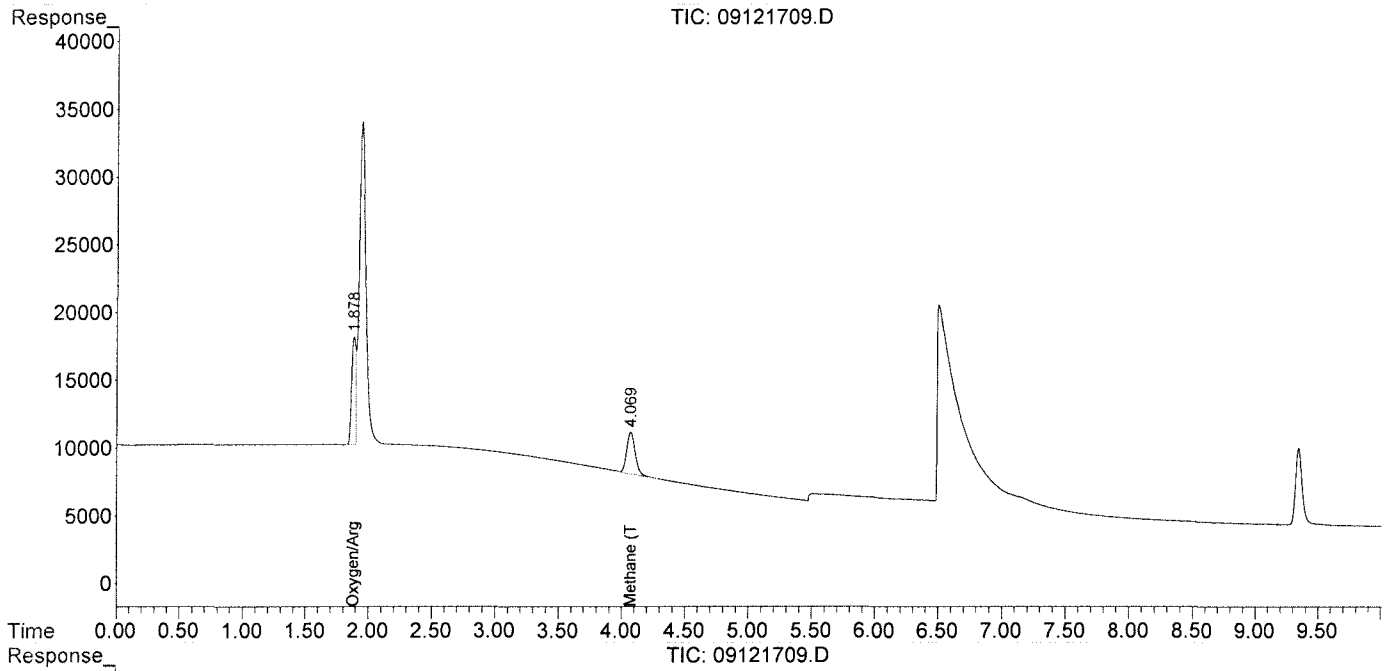
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.879	192611	0.162	ppm
2)	Carbon monoxide	1.879	192611	N.D.	ppm
3)	Methane (TCD)	4.070f	145492	1244.729	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.039	8598534	945.644	ppm
7)	Ethylene	1.576	16608504	981.887	ppm
8)	Ethane	1.827	16709165	973.644	ppm
9)	Propylene	4.161	22494888	941.060	ppm
10)	Propane	4.298	25459411	1023.223	ppm
11)	Isobutylene	6.138	16970	8645.243	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

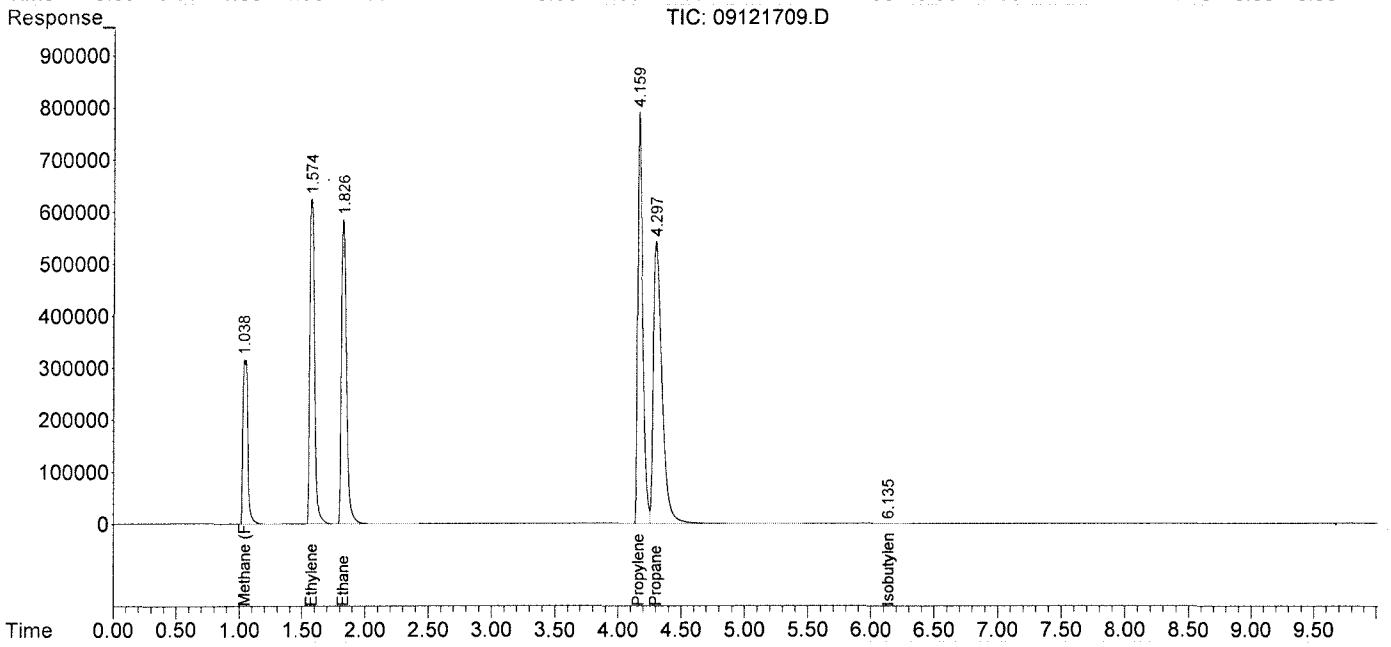
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121709.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 13:47
Operator : MC
Sample : 1000ppm 0.5ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:11:46 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:11:38 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121710.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 14:07
Operator : MC
Sample : 2000ppm 1ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:12:33 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:12:25 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

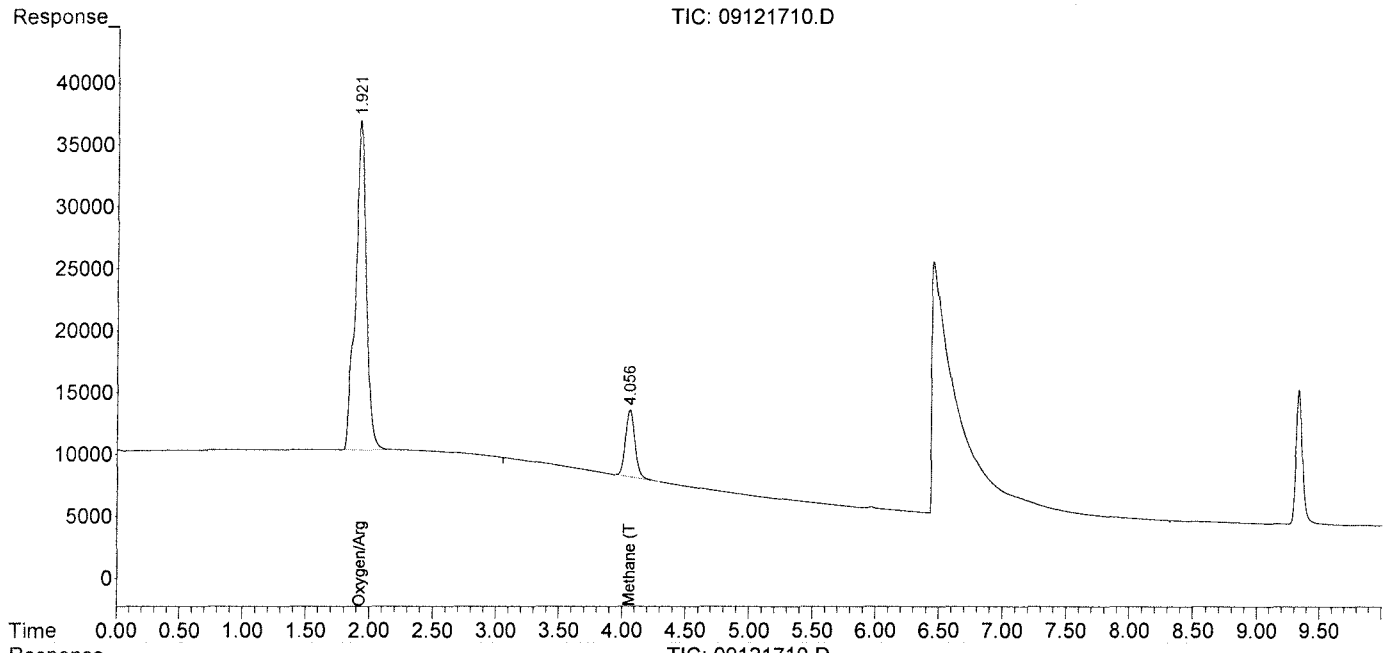
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.922f	1578147	1.659	ppm	
2)	Carbon monoxide	1.922f	1578147	N.D.	ppm	
3)	Methane (TCD)	4.057f	281651	3526.607	ppm	
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	1.016	16098209	1763.622	ppm	
7)	Ethylene	1.552	31192444	1848.268	ppm	
8)	Ethane	1.801	31424218	1837.143	ppm	
9)	Propylene	4.129	42124690	1775.341	ppm	m
10)	Propane	4.269	48583085	1946.921	ppm	
11)	Isobutylene	6.136	33832	25613.603	ppm	
12)	Isobutane	6.576f	3845	0.120	ppm	
13)	n-Butane	6.576f	3845	0.120	ppm	

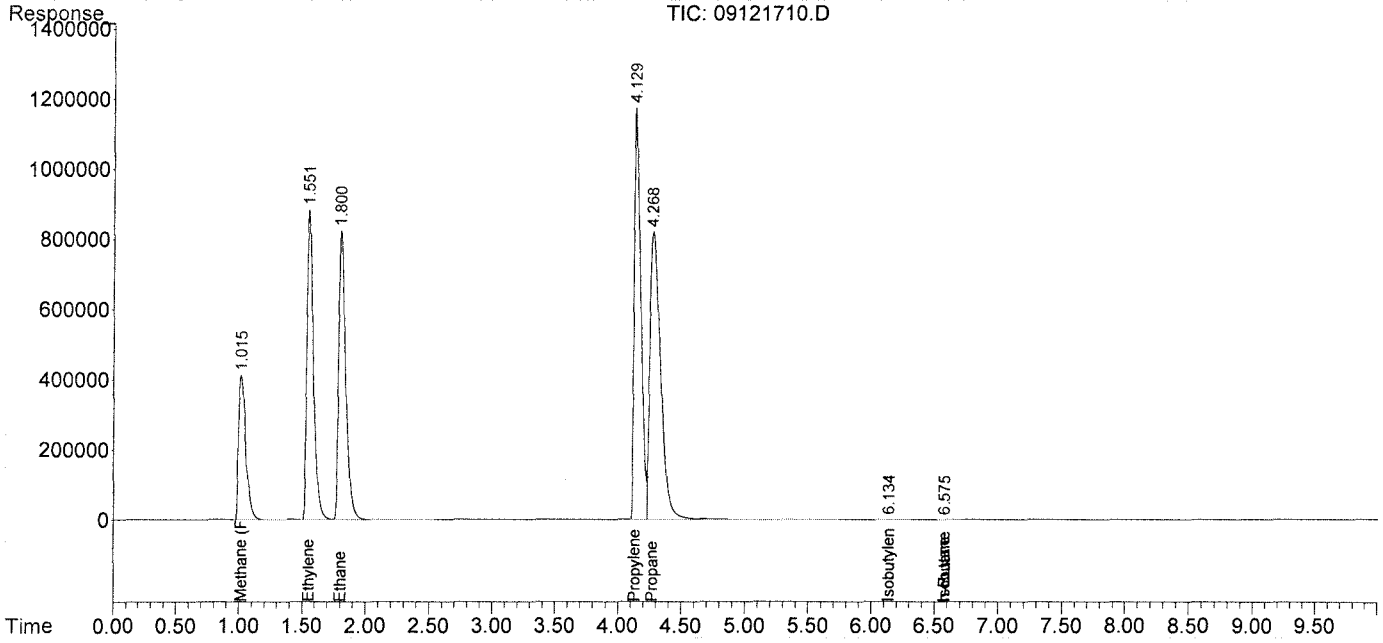
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121710.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 14:07
Operator : MC
Sample : 2000ppm 1ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:12:33 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:12:25 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

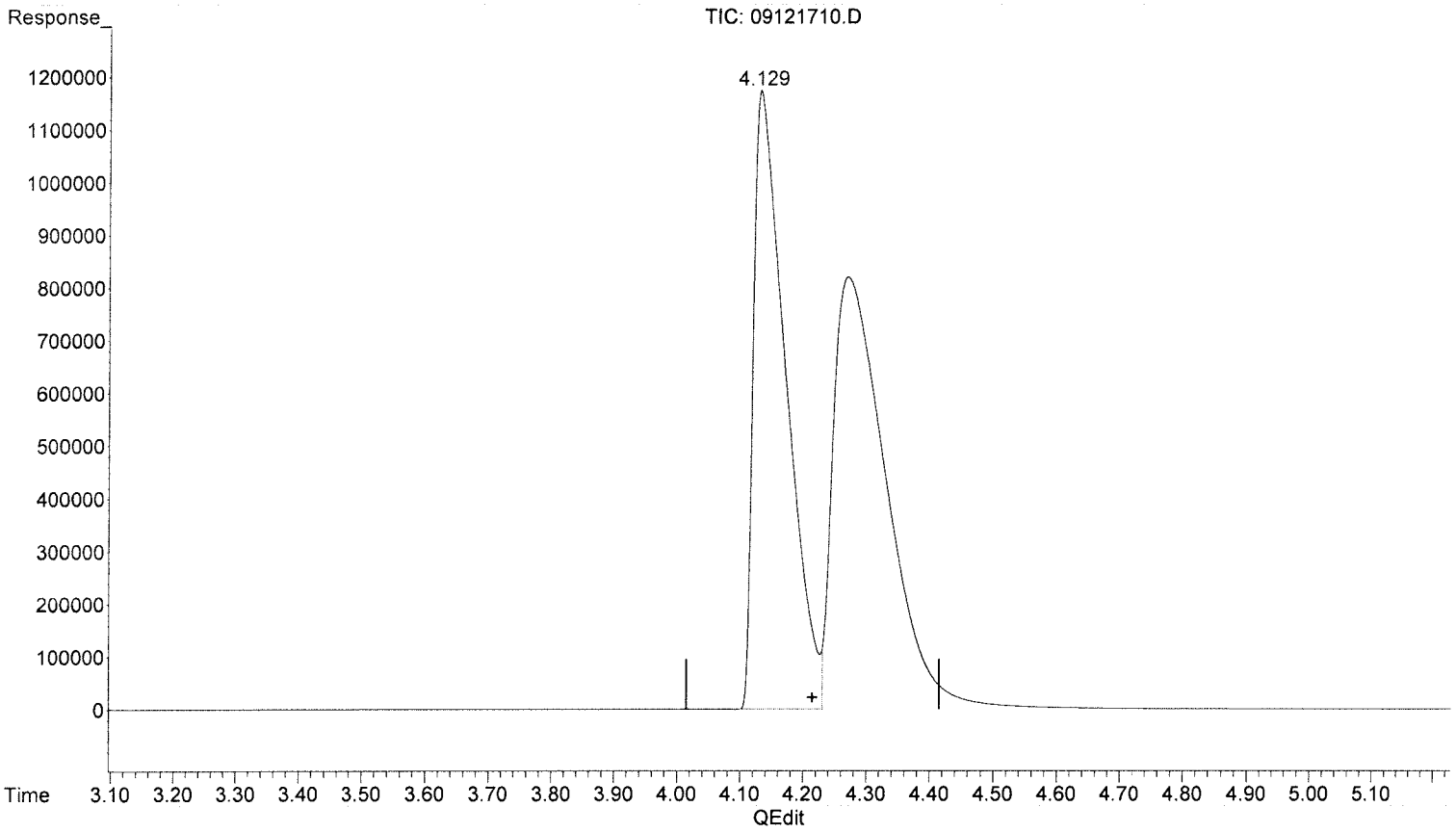




Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121710.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 14:07
Operator : MC
Sample : 2000ppm 1ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:12:33 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:12:25 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



(9) Propylene

4.129min 1775.341 ppm m

response 42124690

(+) = Expected Retention Time

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121711.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 14:48
Operator : MC
Sample : 4000ppm 0.1ml s32-08231701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:13:37 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:13:29 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	0.000	0	N.D.	ppm	d
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	0.000	0	N.D.	ppm	d
6)	Methane (FID)	1.059	35776839	3925.122	ppm	
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

(f)=RT Delta > 1/2 Window (m)=manual int.