

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL012021\
 Data File : VL036251.D
 Acq On : 20 Jan 2021 17:53
 Operator : SY/AP
 Sample : M1171-03
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-3

Quant Time: Jan 21 01:35:53 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL011321AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LThu Jan 14 16:13:38 2021
 QLast Update : Thu Jan 14 16:13:38 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	1392747	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.17	114	2887338	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.08	117	2547759	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.41	95	2150092	10.20	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	102.00%

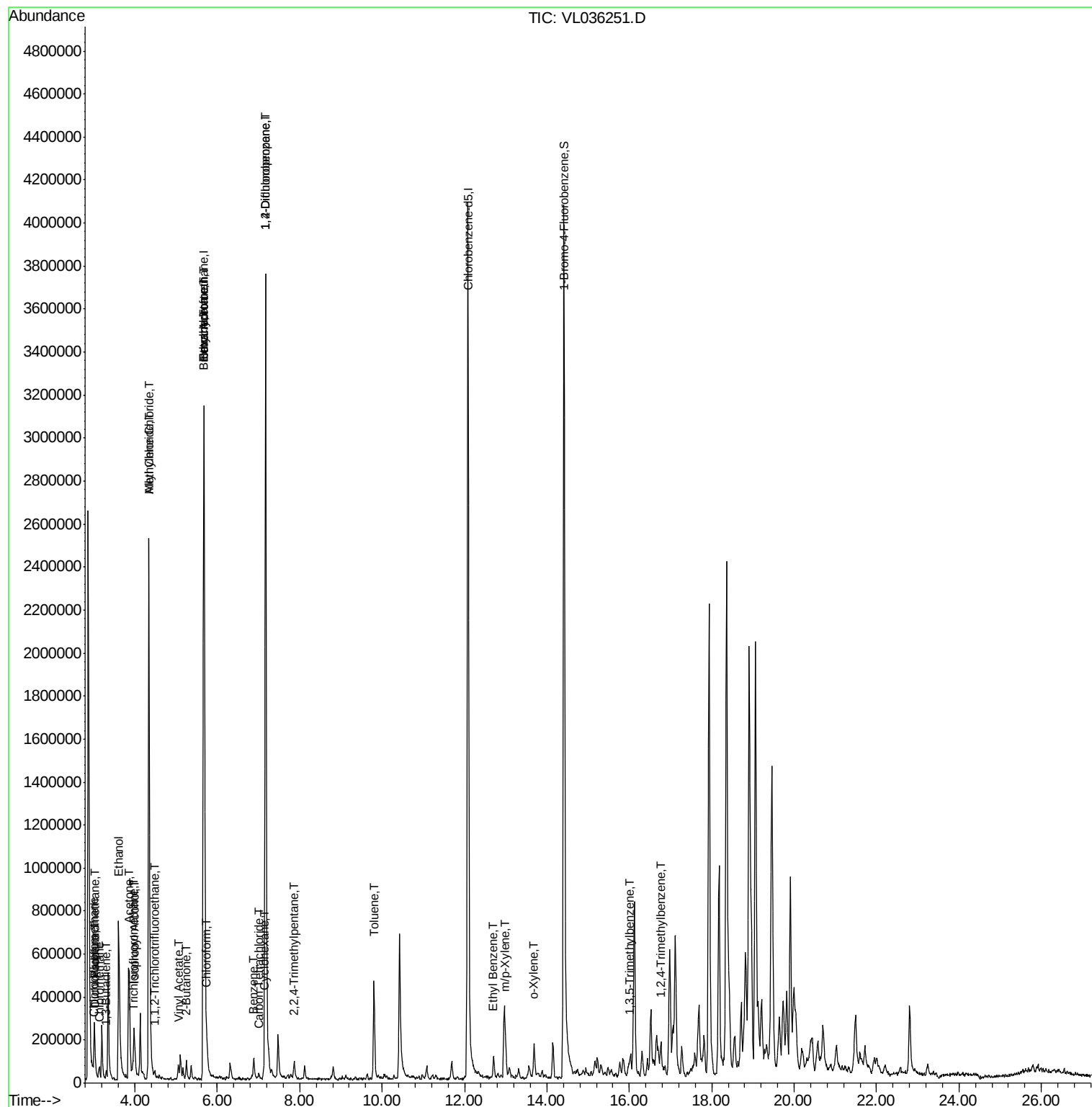
Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.04	85	31204	0.167 ppbv	94
3) Chlorodifluoromethane	2.99	51	82089	0.480 ppbv #	83
4) Chloromethane	3.14	50	35870	0.424 ppbv	91
9) Propene	3.01	41	69982	0.859 ppbv	87
11) Trichlorofluoromethane	3.95	101	30959	0.163 ppbv	99
12) 1,1,2-Trichlorotrifluoroet	4.48	101	3967	0.034 ppbv #	1
13) Ethanol	3.61	45	1059137	82.809 ppbv	84
15) Acetone	3.85	43	710982	4.168 ppbv	98
16) 1,3-Butadiene	3.31	39	4953	0.060 ppbv #	10
19) Isopropyl Alcohol	3.98	45	316672	3.079 ppbv #	98
20) Methylene Chloride	4.34	84	966665	17.756 ppbv	96
21) Allyl Chloride	4.34	41	39427	0.425 ppbv #	34
23) Vinyl Acetate	5.07	43	8663	0.042 ppbv #	46
25) Ethyl Acetate	5.68	43	700748	2.046 ppbv #	78
26) Hexane	5.68	57	911723	6.395 ppbv #	38
29) Chloroform	5.75	83	52851	0.259 ppbv	99
30) Cyclohexane	7.13	84	3402	0.031 ppbv #	1
34) 2-Butanone	5.24	43	112413	0.529 ppbv	96
35) Carbon Tetrachloride	7.01	117	7730	0.042 ppbv #	80
36) Benzene	6.88	78	37721	0.143 ppbv	96
39) 1,2-Dichloropropane	7.17	63	875243	8.148 ppbv #	21
41) Tetrahydrofuran	5.68	42	367934	2.994 ppbv #	51
44) 2,2,4-Trimethylpentane	7.86	57	23551	0.048 ppbv #	1
53) Toluene	9.80	91	333746	1.128 ppbv	96
58) Ethyl Benzene	12.70	91	35109	0.093 ppbv #	85
59) m/p-Xylene	13.00	91	48156	0.148 ppbv #	33
60) o-Xylene	13.68	91	116597	0.372 ppbv	99
73) 1,3,5-Trimethylbenzene	16.00	105	13606	0.040 ppbv #	57
74) 1,2,4-Trimethylbenzene	16.76	105	39366	0.114 ppbv #	68

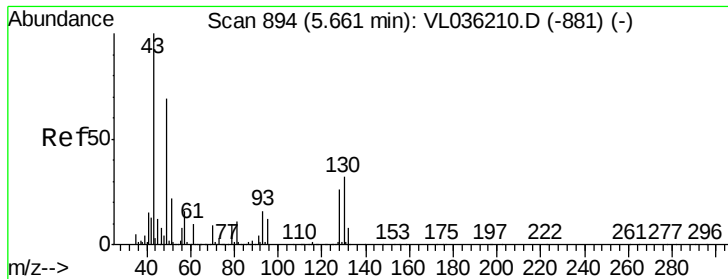
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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QLast Update : Thu Jan 14 16:13:38 2021
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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.66 min Scan# 894

Delta R.T. -0.00 min

Lab File: VL036251.D

Acq: 20 Jan 2021 17:53

Instrument :

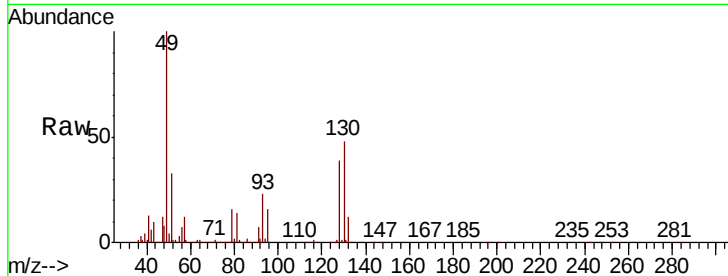
MSVOA_L

ClientSampleId :

IA-3

Tot Ion: 49 Resp: 1392747

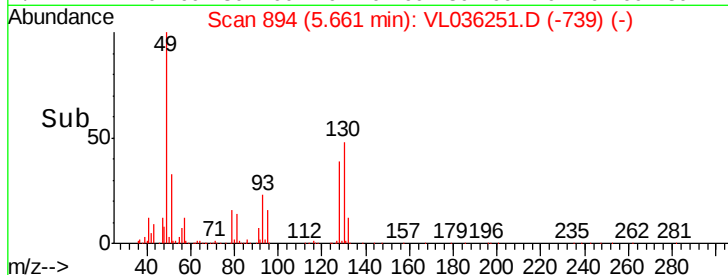
Ion	Ratio	Lower	Upper
49	100		
128	39.1	20.1	60.2
130	50.4	25.3	75.9



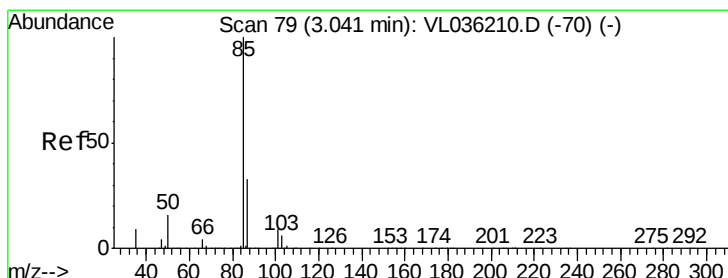
Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): VL0

Ion 130.00 (129.70 to 130.70): VL0



Time-->



#2

Dichlorodifluoromethane

Concen: 0.167 ppbv

RT: 3.04 min Scan# 80

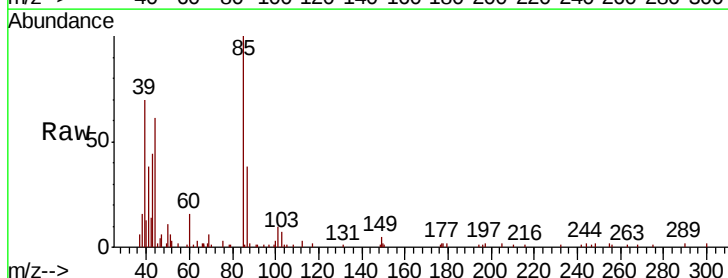
Delta R.T. 0.00 min

Lab File: VL036251.D

Acq: 20 Jan 2021 17:53

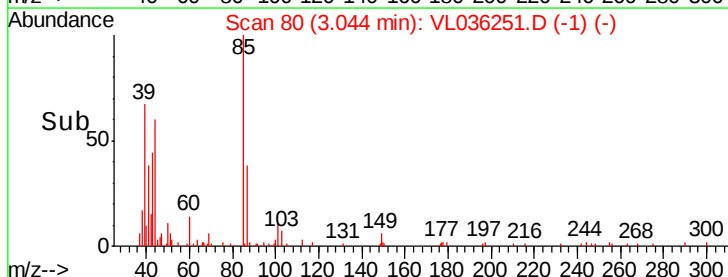
Tgt Ion: 85 Resp: 31204

Ion	Ratio	Lower	Upper
85	100		
87	36.6	26.4	39.6

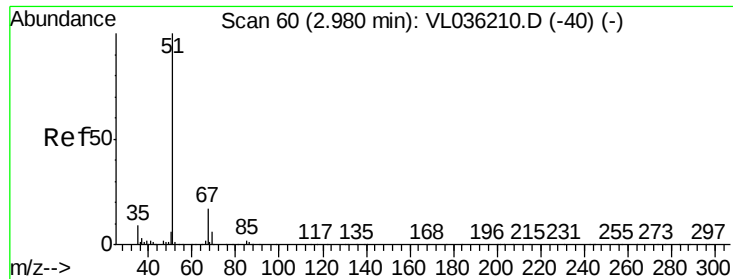


Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0



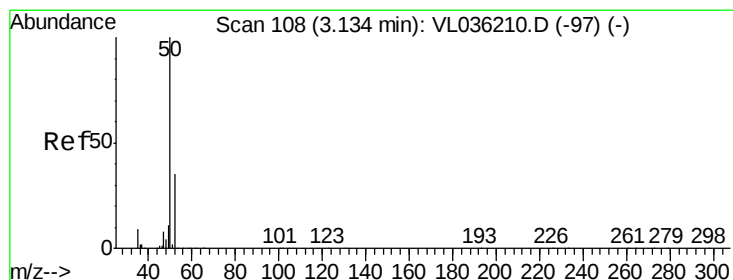
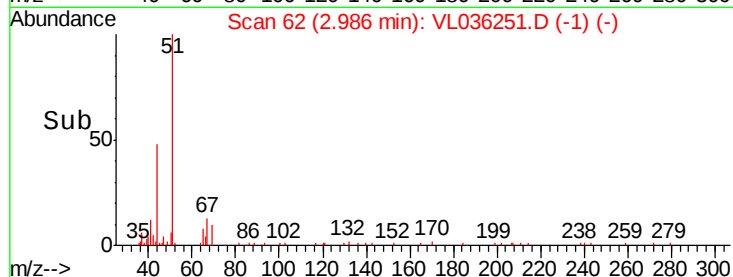
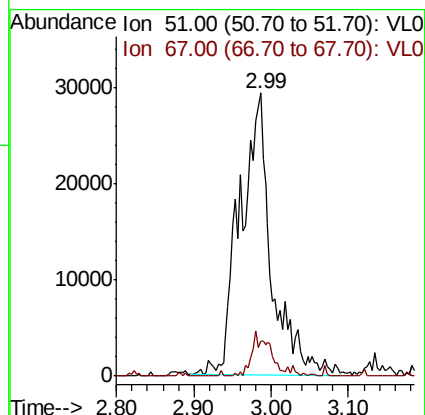
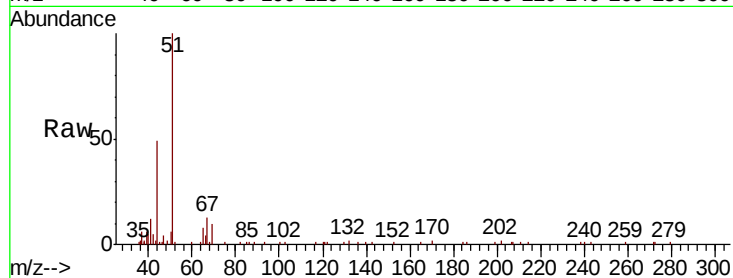
Time-->



#3
Chlorodifluoromethane
Concen: 0.480 ppbv
RT: 2.99 min Scan# 62
Delta R.T. 0.01 min
Lab File: VL036251.D
Acq: 20 Jan 2021 17:53

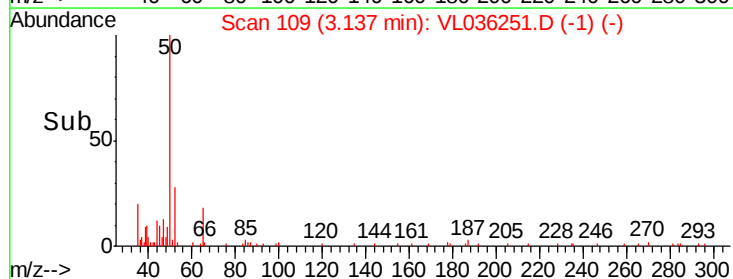
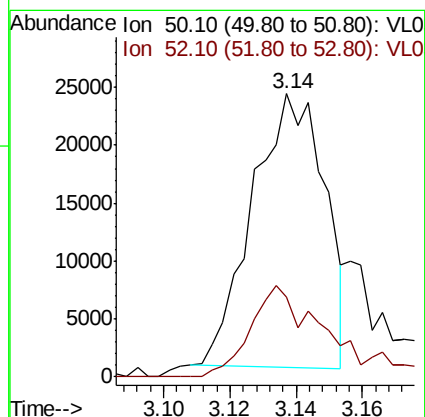
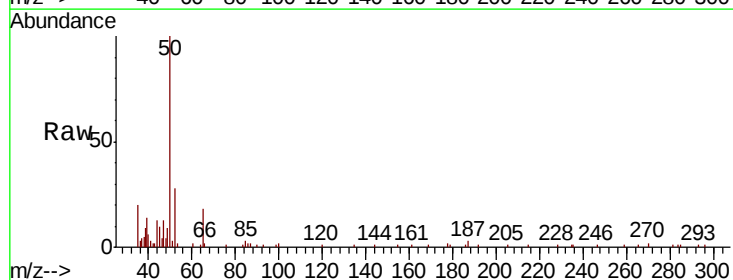
Instrument :
MSVOA_L
ClientSampleId :
IA-3

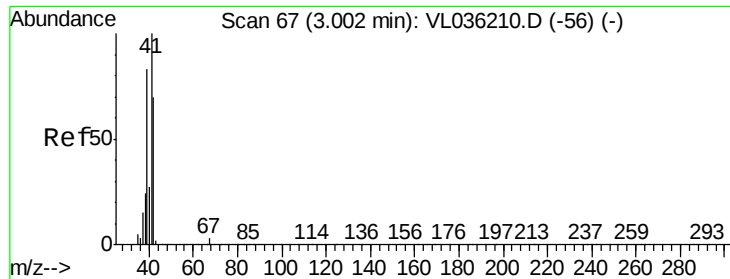
Tot Ion: 51 Resp: 82089
Ion Ratio Lower Upper
51 100
67 10.1 14.0 21.0#



#4
Chloromethane
Concen: 0.424 ppbv
RT: 3.14 min Scan# 109
Delta R.T. 0.00 min
Lab File: VL036251.D
Acq: 20 Jan 2021 17:53

Tgt Ion: 50 Resp: 35870
Ion Ratio Lower Upper
50 100
52 29.9 27.8 41.8





#9

Propene

Concen: 0.859 ppbv

RT: 3.01 min Scan# 71

Delta R.T. 0.01 min

Lab File: VL036251.D

Acq: 20 Jan 2021 17:53

Instrument :

MSVOA_L

ClientSampleId :

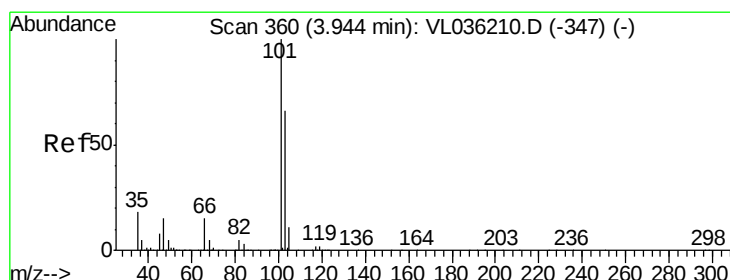
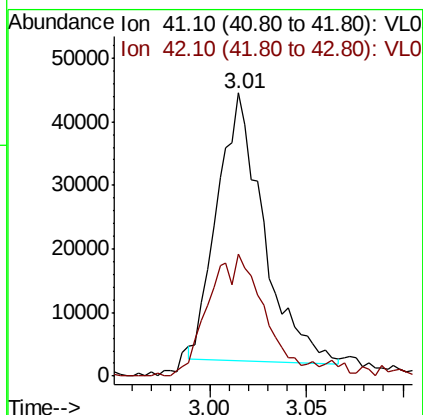
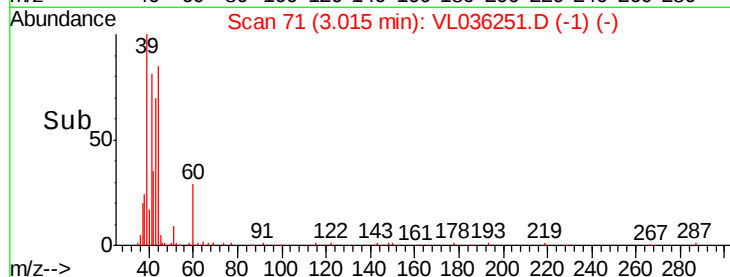
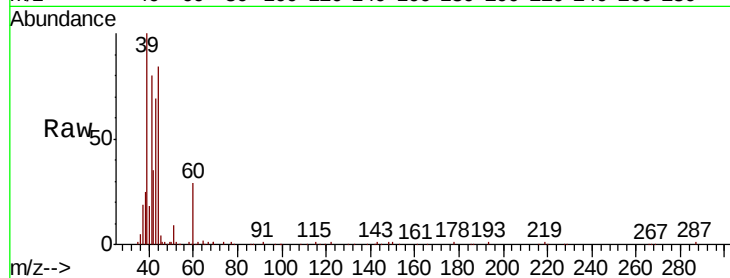
IA-3

Tot Ion: 41 Resp: 69982

Ion Ratio Lower Upper

41 100

42 60.5 57.1 85.7



#11

Trichlorofluoromethane

Concen: 0.163 ppbv

RT: 3.95 min Scan# 361

Delta R.T. 0.00 min

Lab File: VL036251.D

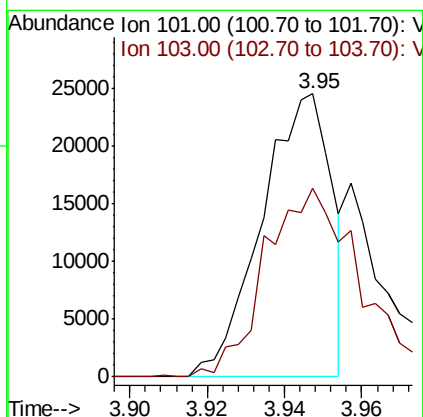
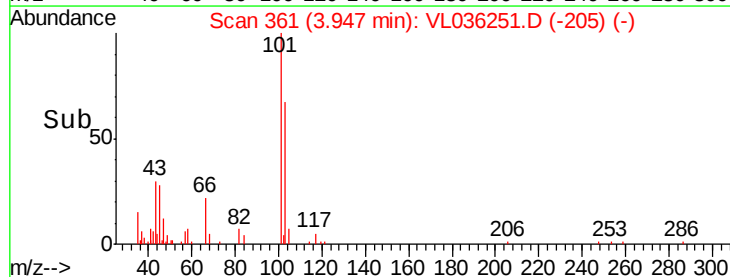
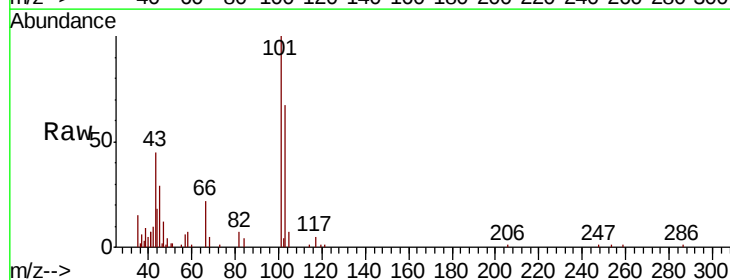
Acq: 20 Jan 2021 17:53

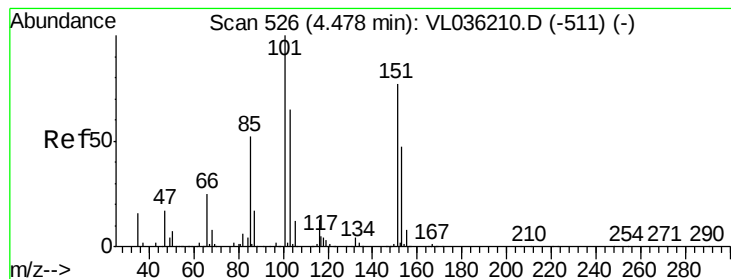
Tgt Ion: 101 Resp: 30959

Ion Ratio Lower Upper

101 100

103 66.7 52.6 78.8





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.034 ppbv

RT: 4.48 min Scan# 526

Delta R.T. -0.00 min

Lab File: VL036251.D

Acq: 20 Jan 2021 17:53

Instrument :

MSVOA_L

ClientSampleId :

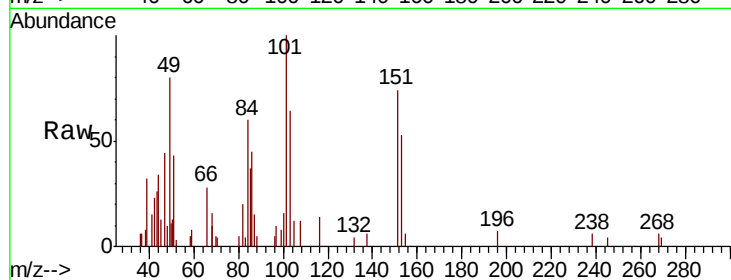
IA-3

Tot Ion:101 Resp: 3967

Ion Ratio Lower Upper

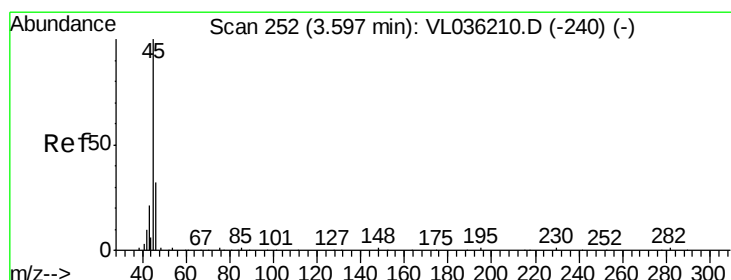
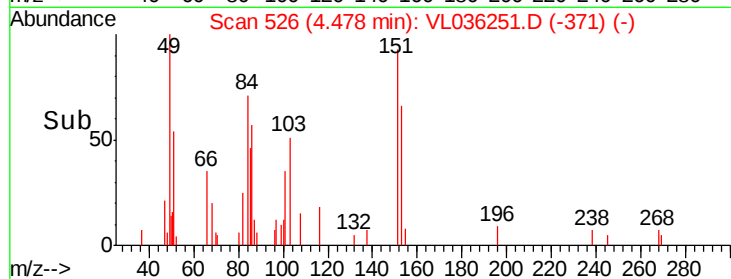
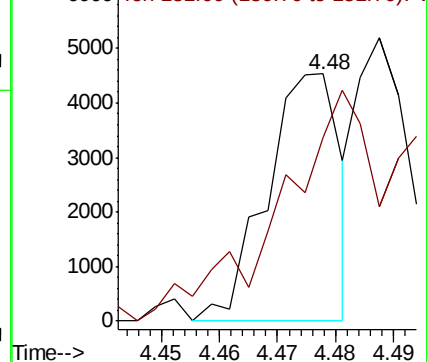
101 100

151 196.9 59.8 89.6#



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V



#13

Ethanol

Concen: 82.809 ppbv

RT: 3.61 min Scan# 255

Delta R.T. 0.01 min

Lab File: VL036251.D

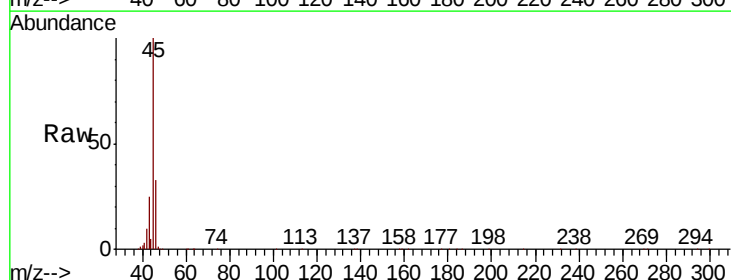
Acq: 20 Jan 2021 17:53

Tgt Ion: 45 Resp: 1059137

Ion Ratio Lower Upper

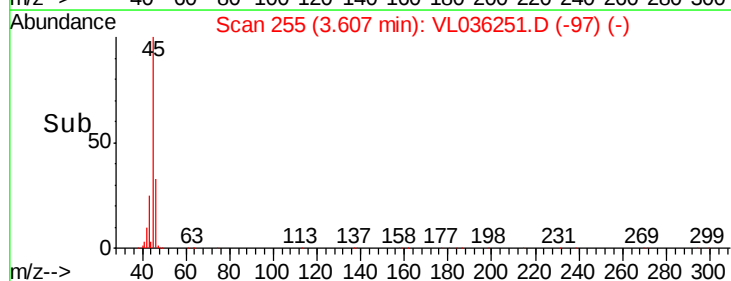
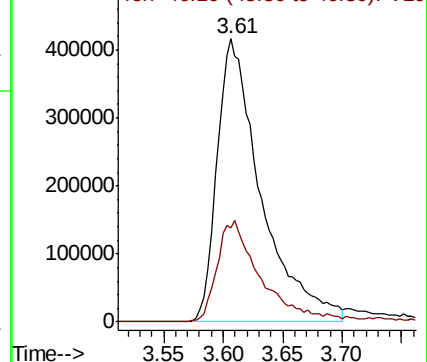
45 100

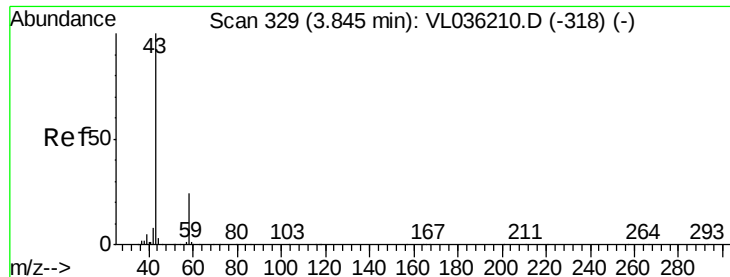
46 37.5 19.2 77.0



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0

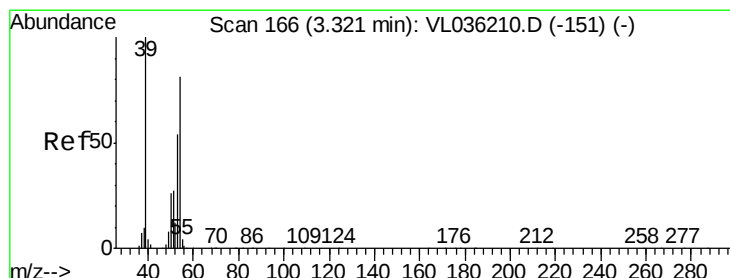
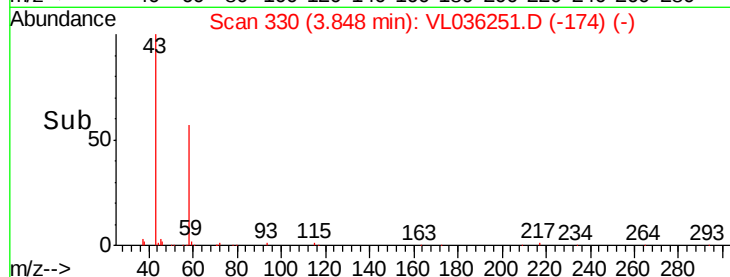
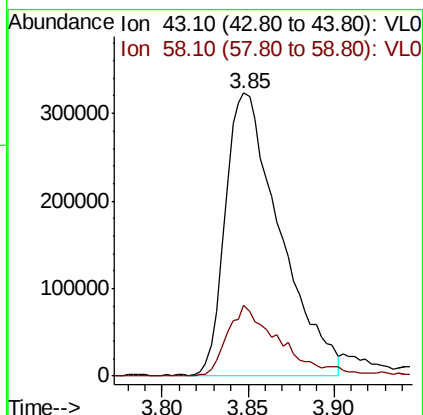
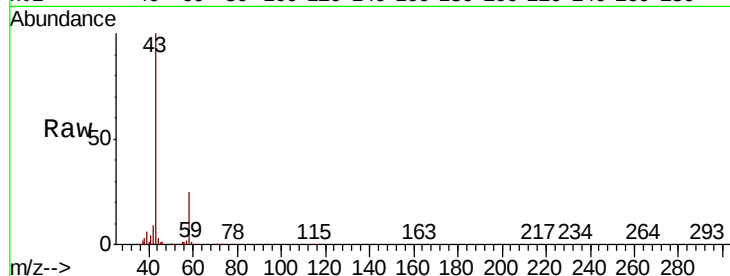




#15
Acetone
Concen: 4.168 ppbv
RT: 3.85 min Scan# 330
Delta R.T. 0.00 min
Lab File: VL036251.D
Acq: 20 Jan 2021 17:53

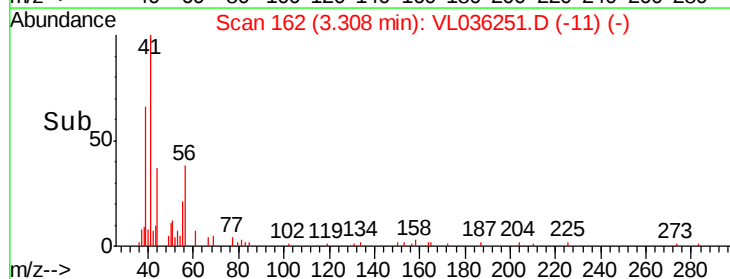
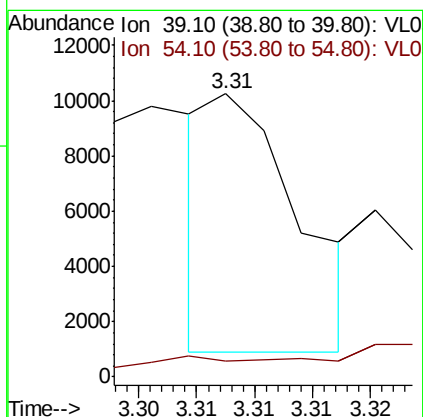
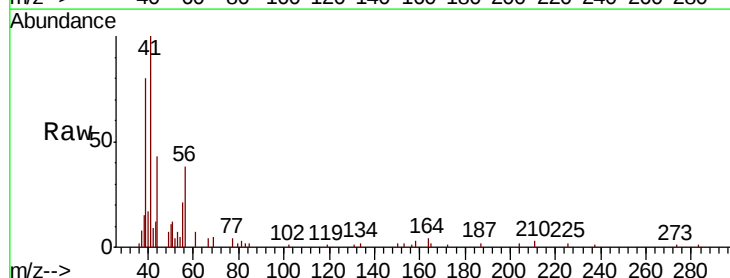
Instrument :
MSVOA_L
ClientSampleId :
IA-3

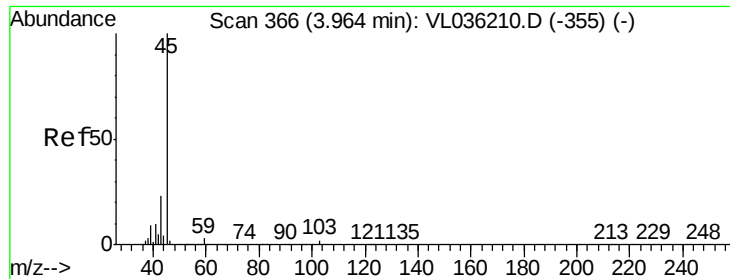
Tot Ion: 43 Resp: 710982
Ion Ratio Lower Upper
43 100
58 25.1 20.9 31.3



#16
1,3-Butadiene
Concen: 0.060 ppbv
RT: 3.31 min Scan# 162
Delta R.T. -0.01 min
Lab File: VL036251.D
Acq: 20 Jan 2021 17:53

Tgt Ion: 39 Resp: 4953
Ion Ratio Lower Upper
39 100
54 0.0 62.5 93.7#





#19

Isopropyl Alcohol

Concen: 3.079 ppbv

RT: 3.98 min Scan# 370

Delta R.T. 0.01 min

Lab File: VL036251.D

Acq: 20 Jan 2021 17:53

Instrument :

MSVOA_L

ClientSampled :

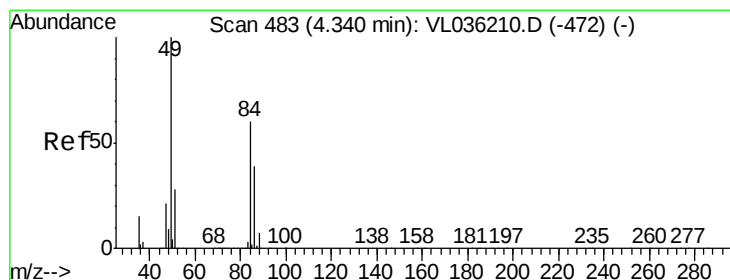
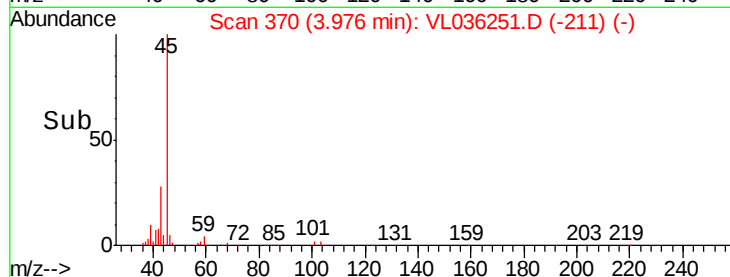
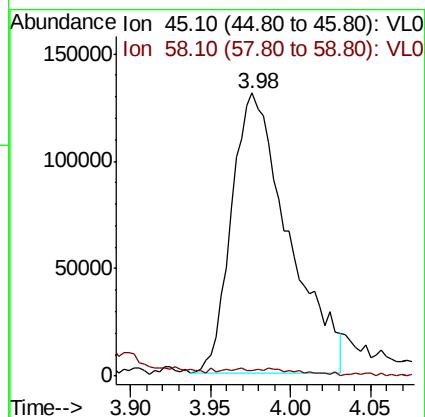
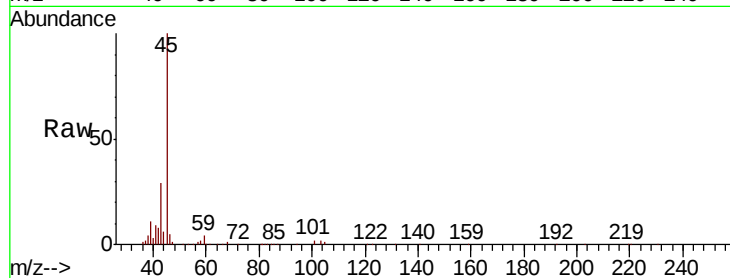
IA-3

Tot Ion: 45 Resp: 316672

Ion Ratio Lower Upper

45 100

58 3.1 1.9 2.9#



#20

Methylene Chloride

Concen: 17.756 ppbv

RT: 4.34 min Scan# 483

Delta R.T. -0.00 min

Lab File: VL036251.D

Acq: 20 Jan 2021 17:53

Tgt Ion: 84 Resp: 966665

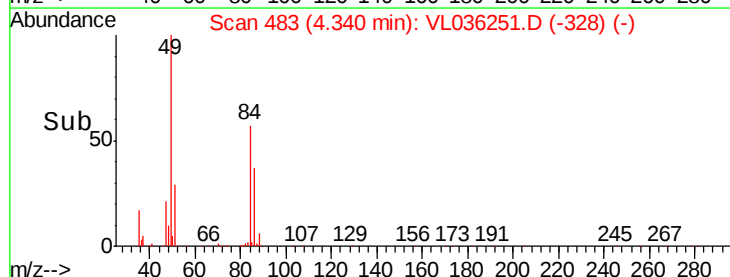
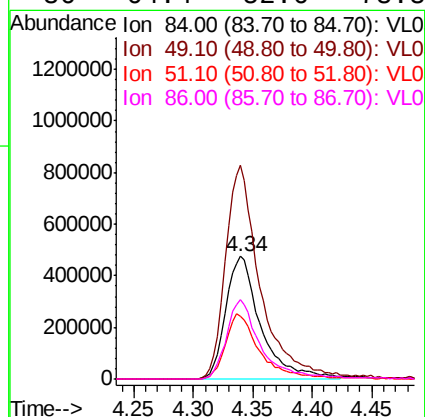
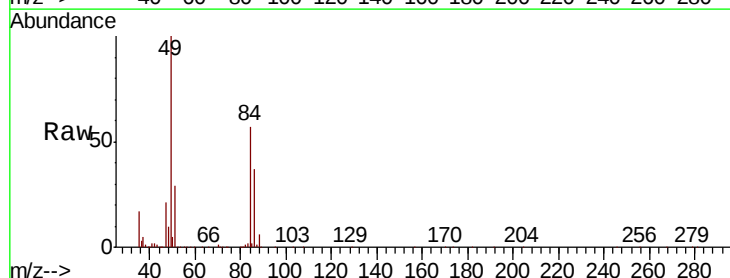
Ion Ratio Lower Upper

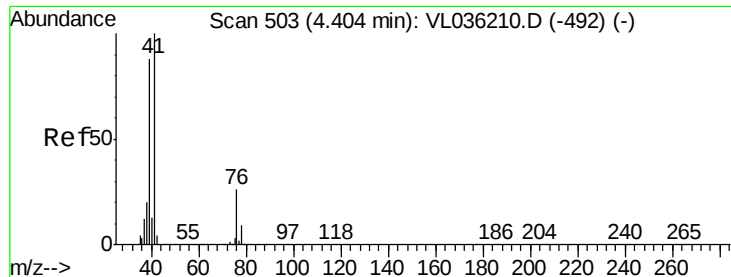
84 100

49 174.2 134.1 201.1

51 50.9 37.4 56.0

86 64.4 52.6 78.8





#21

Allvl Chloride

Concen: 0.425 ppbv

RT: 4.34 min Scan# 482

Delta R.T. -0.07 min

Lab File: VL036251.D

Acq: 20 Jan 2021 17:53

Instrument :

MSVOA_L

ClientSampled :

IA-3

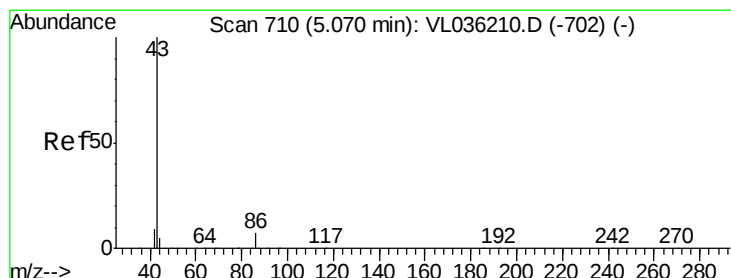
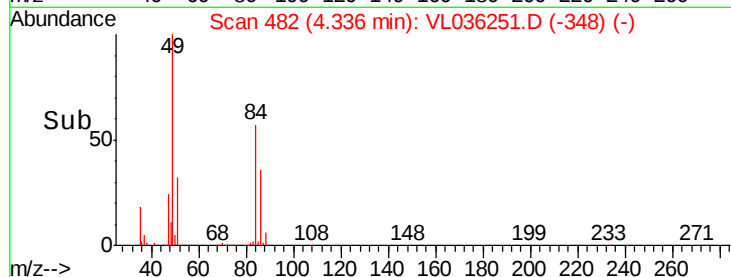
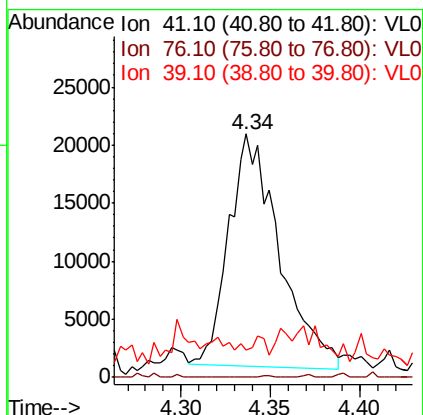
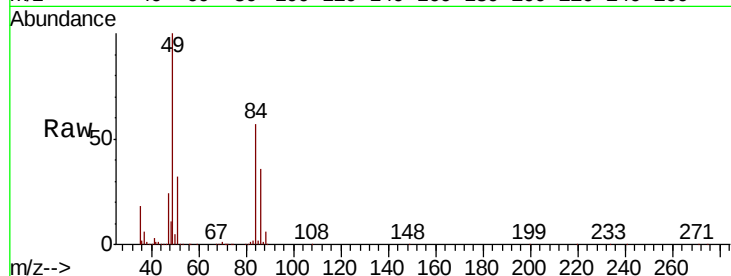
Tot Ion: 41 Resp: 39427

Ion Ratio Lower Upper

41 100

76 0.2 20.5 30.7#

39 20.6 67.8 101.8#



#23

Vinyl Acetate

Concen: 0.042 ppbv

RT: 5.07 min Scan# 710

Delta R.T. -0.00 min

Lab File: VL036251.D

Acq: 20 Jan 2021 17:53

Tgt Ion: 43 Resp: 8663

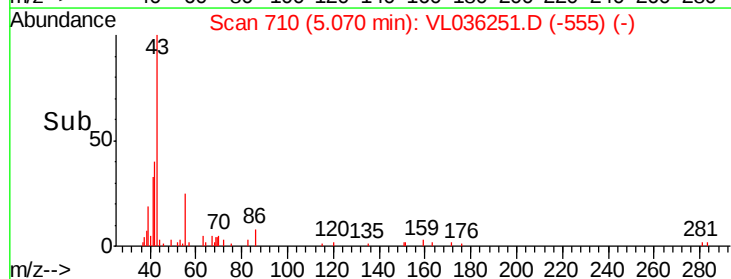
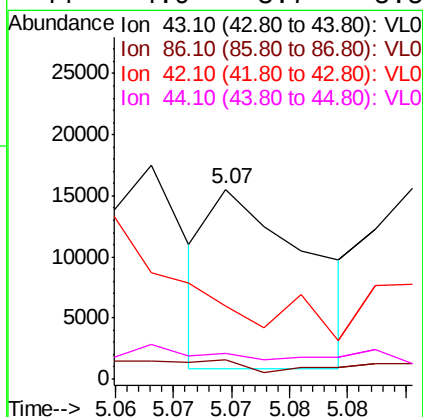
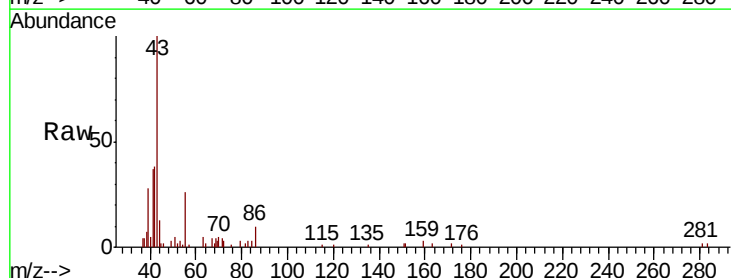
Ion Ratio Lower Upper

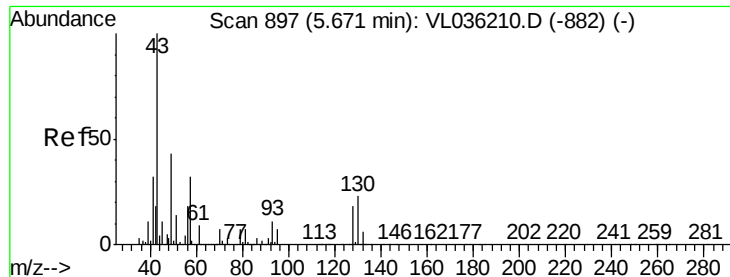
43 100

86 10.9 4.9 7.3#

42 48.3 7.8 11.6#

44 4.9 3.7 5.5

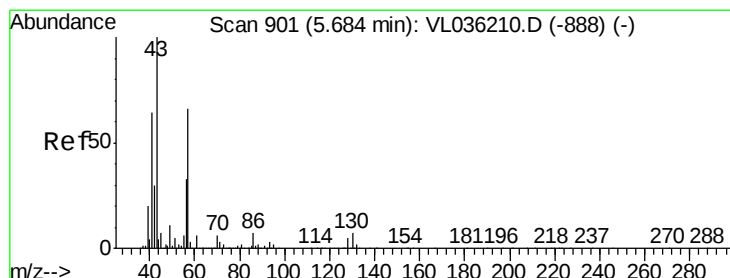
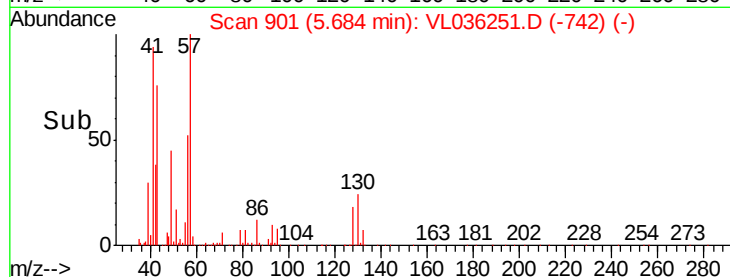
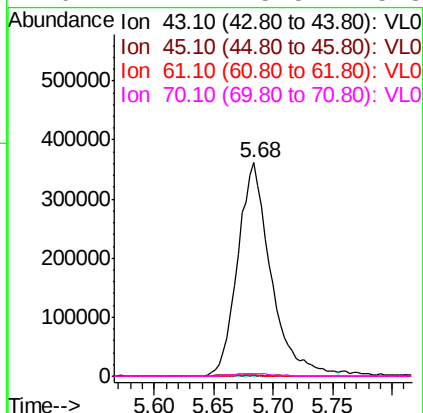
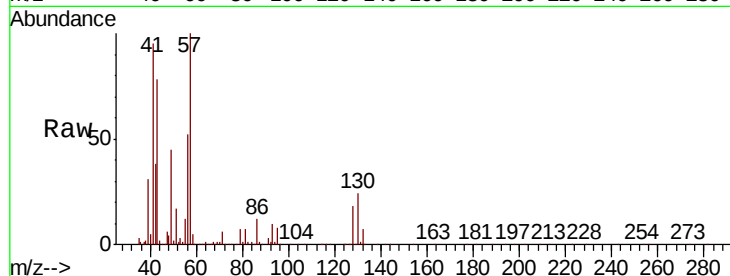




#25
Ethyl Acetate
Concen: 2.046 ppbv
RT: 5.68 min Scan# 901
Delta R.T. 0.01 min
Lab File: VL036251.D
Acq: 20 Jan 2021 17:53

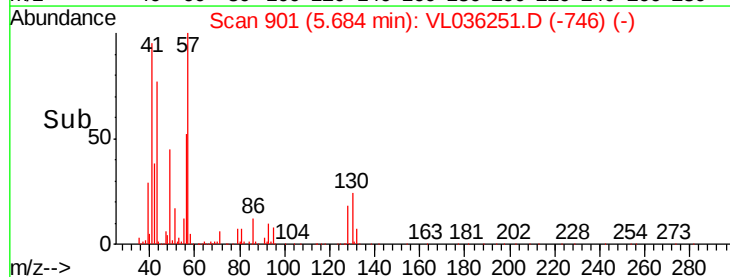
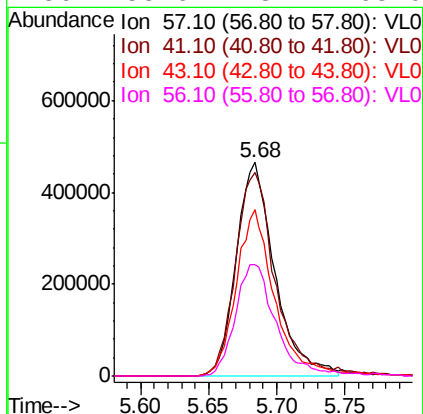
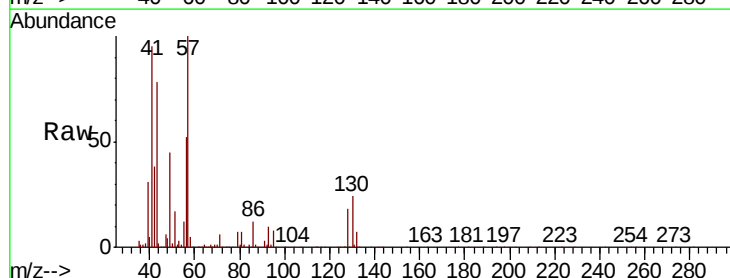
Instrument :
MSVOA_L
ClientSampled :
IA-3

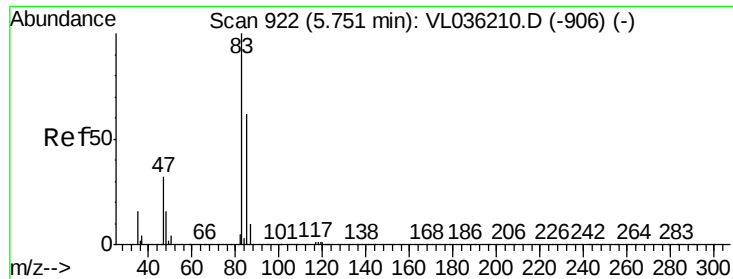
Tot Ion:	43	Resp:	700748
Ion	Ratio	Lower	Upper
43	100		
45	1.0	8.3	12.5#
61	0.5	7.4	11.2#
70	1.7	5.5	8.3#



#26
Hexane
Concen: 6.395 ppbv
RT: 5.68 min Scan# 901
Delta R.T. -0.00 min
Lab File: VL036251.D
Acq: 20 Jan 2021 17:53

Tgt Ion:	57	Resp:	911723
Ion	Ratio	Lower	Upper
57	100		
41	101.6	83.0	124.6
43	78.2	202.4	303.6#
56	55.6	43.4	65.0

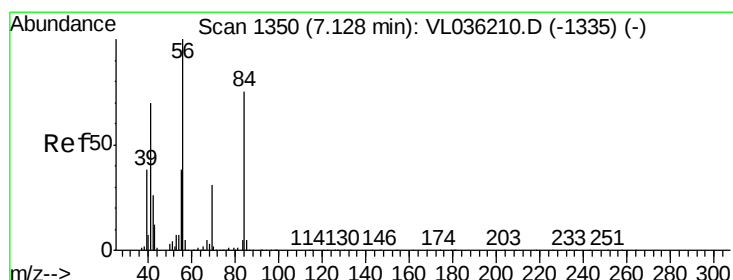
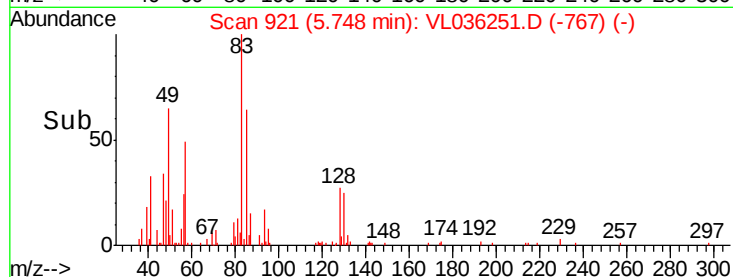
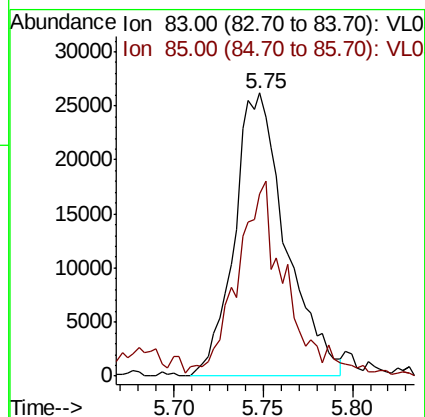
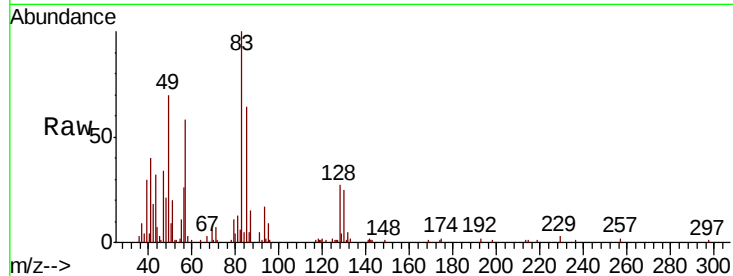




#29
Chloroform
Concen: 0.259 ppbv
RT: 5.75 min Scan# 921
Delta R.T. -0.00 min
Lab File: VL036251.D
Acq: 20 Jan 2021 17:53

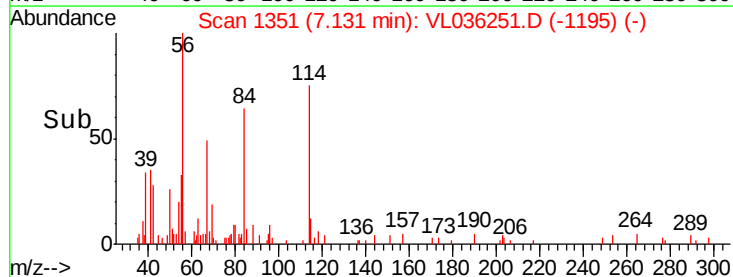
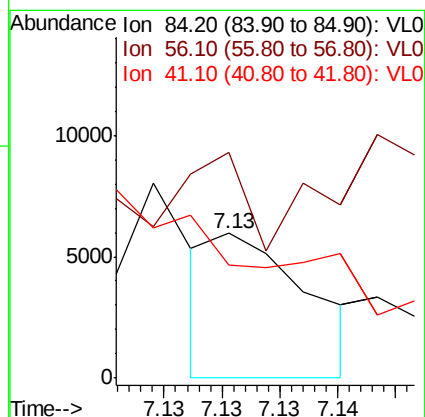
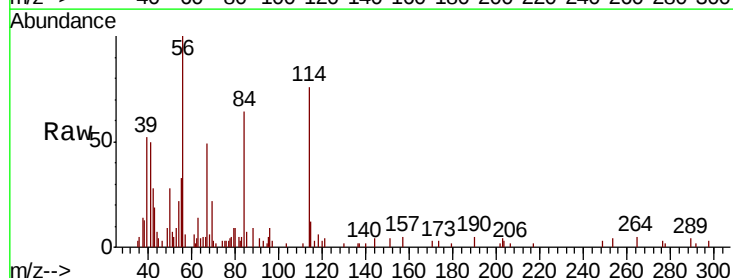
Instrument :
MSVOA_L
ClientSampleId :
IA-3

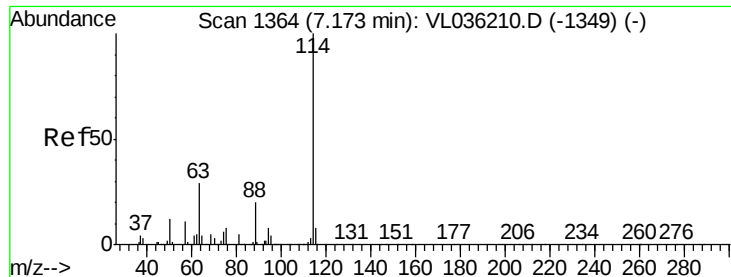
Tot Ion: 83 Resp: 52851
Ion Ratio Lower Upper
83 100
85 60.8 49.3 73.9



#30
Cyclohexane
Concen: 0.031 ppbv
RT: 7.13 min Scan# 1351
Delta R.T. 0.00 min
Lab File: VL036251.D
Acq: 20 Jan 2021 17:53

Tgt Ion: 84 Resp: 3402
Ion Ratio Lower Upper
84 100
56 0.0 119.4 179.0#
41 0.0 79.4 119.0#

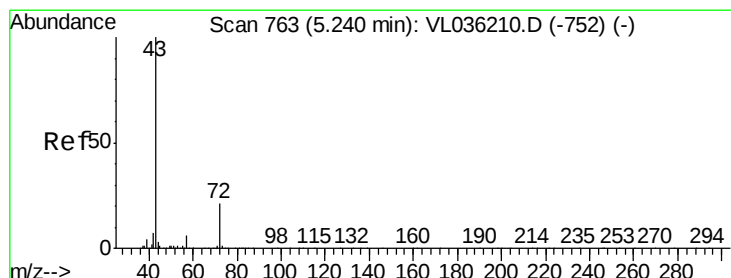
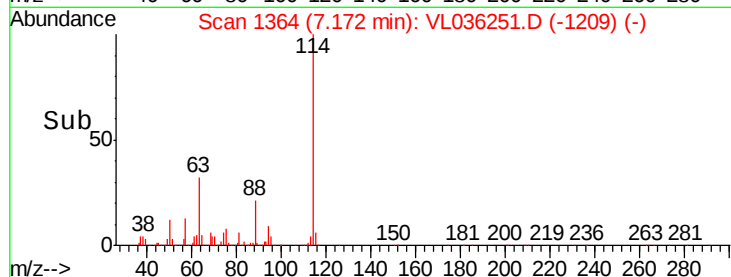
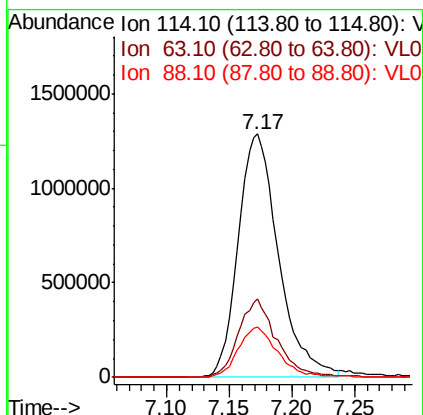
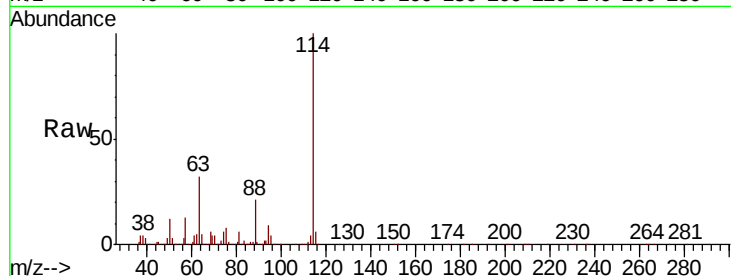




#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.17 min Scan# 1364
 Delta R.T. -0.00 min
 Lab File: VL036251.D
 Acq: 20 Jan 2021 17:53

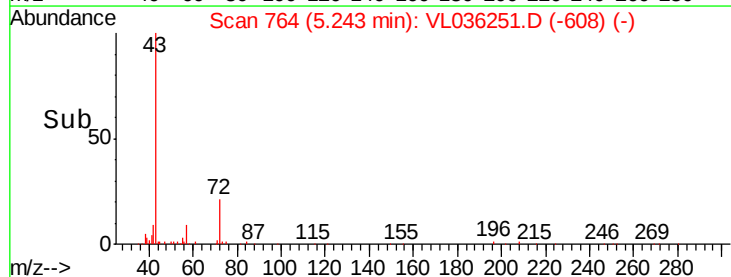
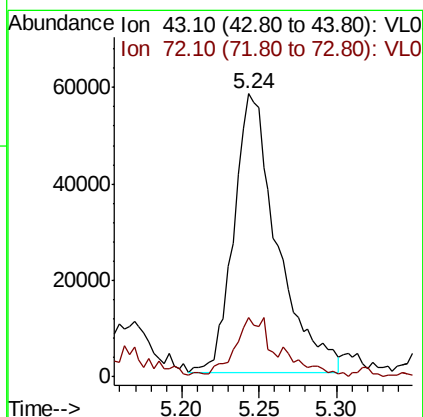
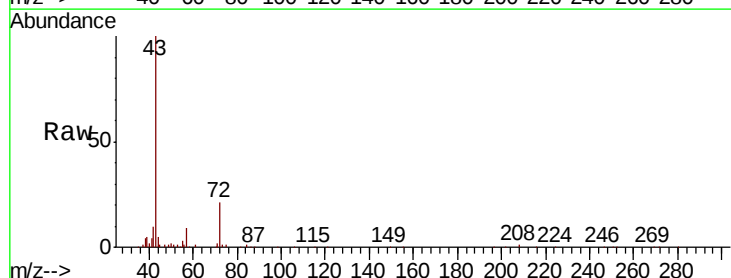
Instrument :
 MSVOA_L
 ClientSampleId :
 IA-3

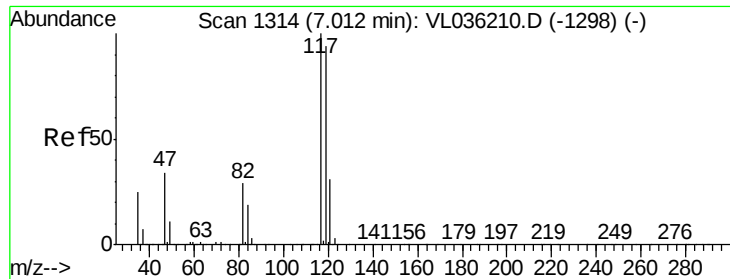
Tot Ion:114 Resp: 2887338
 Ion Ratio Lower Upper
 114 100
 63 30.9 24.7 37.1
 88 20.4 16.6 24.8



#34
 2-Butanone
 Concen: 0.529 ppbv
 RT: 5.24 min Scan# 764
 Delta R.T. 0.00 min
 Lab File: VL036251.D
 Acq: 20 Jan 2021 17:53

Tgt Ion: 43 Resp: 112413
 Ion Ratio Lower Upper
 43 100
 72 22.1 16.1 24.1

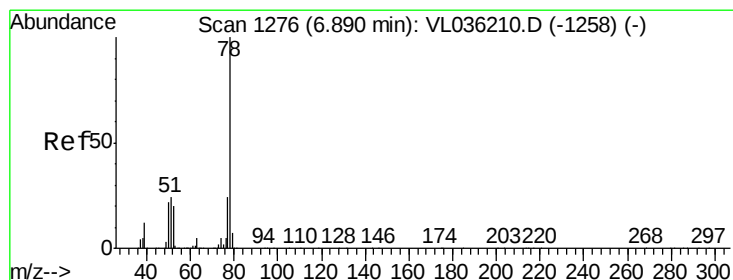
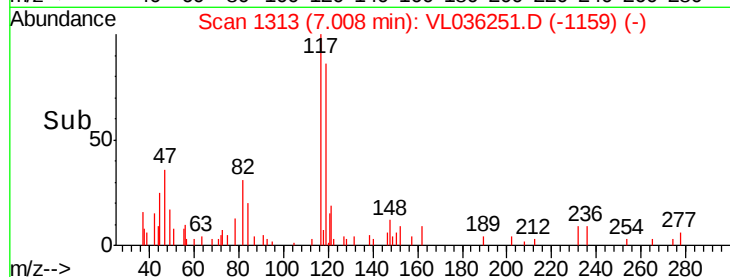
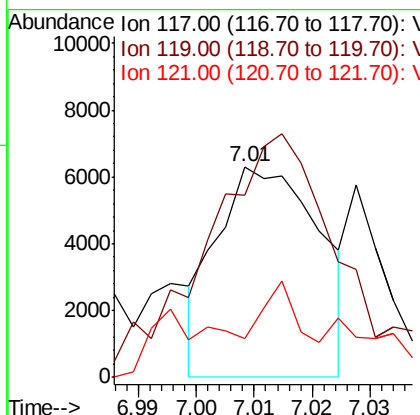
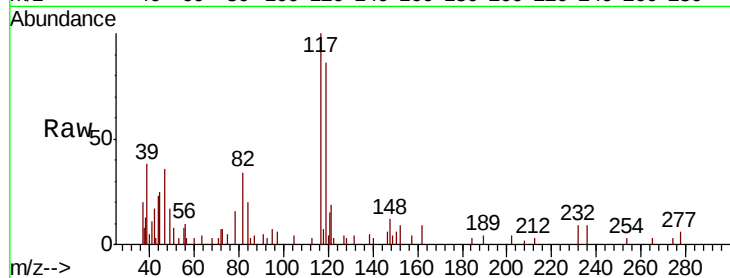




#35
Carbon Tetrachloride
Concen: 0.042 ppbv
RT: 7.01 min Scan# 1313
Delta R.T. -0.00 min
Lab File: VL036251.D
Acq: 20 Jan 2021 17:53

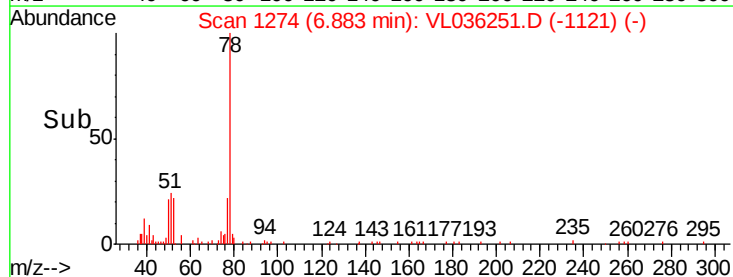
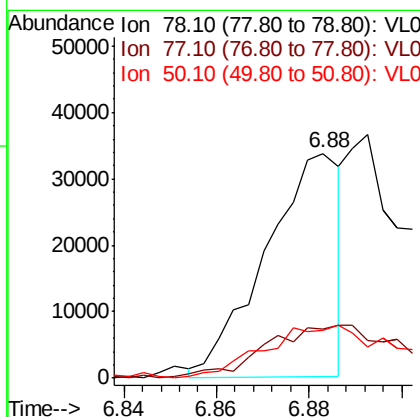
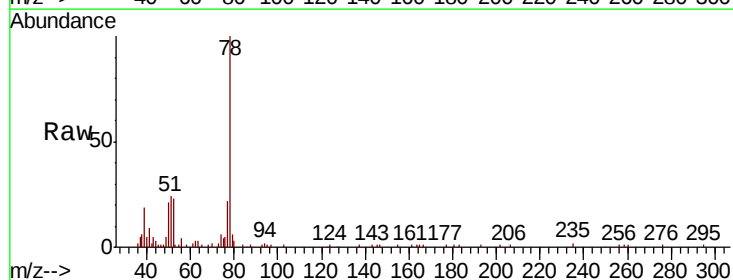
Instrument :
MSVOA_L
ClientSampleId :
IA-3

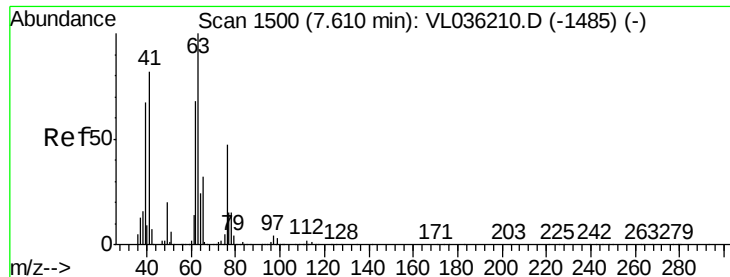
Tot Ion:117 Resp: 7730
Ion Ratio Lower Upper
117 100
119 85.8 74.9 112.3
121 1.0 25.0 37.6#



#36
Benzene
Concen: 0.143 ppbv
RT: 6.88 min Scan# 1274
Delta R.T. -0.01 min
Lab File: VL036251.D
Acq: 20 Jan 2021 17:53

Tgt Ion: 78 Resp: 37721
Ion Ratio Lower Upper
78 100
77 20.9 19.4 29.0
50 21.5 17.4 26.2

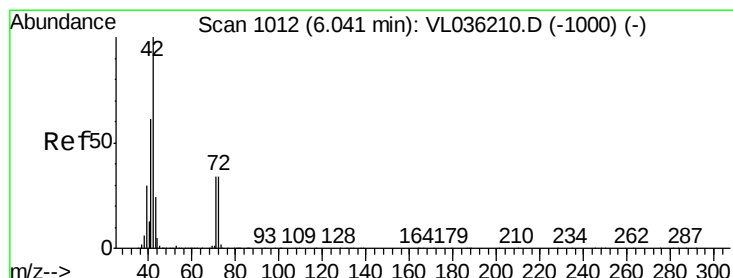
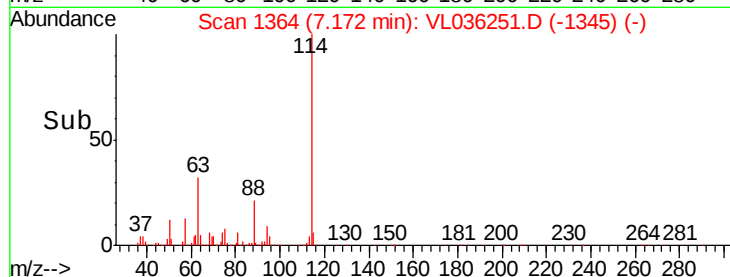
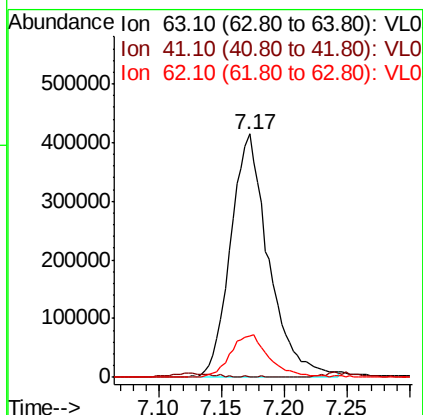
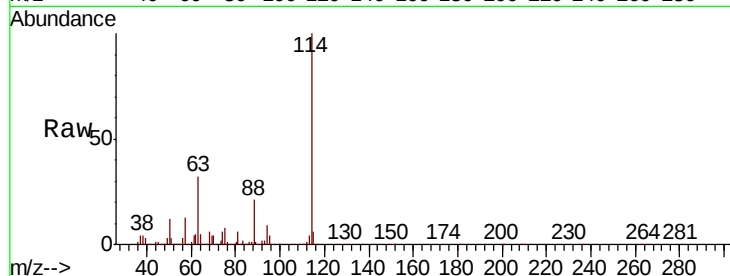




#39
 1,2-Dichloropropane
 Concen: 8.148 ppbv
 RT: 7.17 min Scan# 1364
 Delta R.T. -0.44 min
 Lab File: VL036251.D
 Acq: 20 Jan 2021 17:53

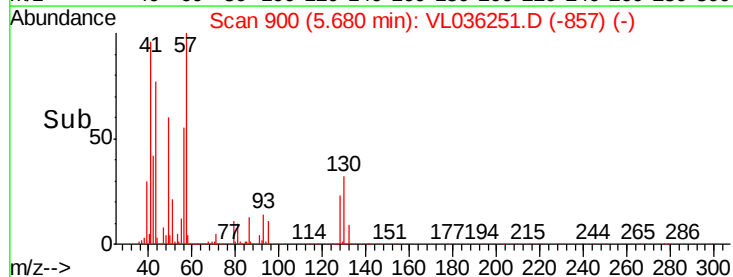
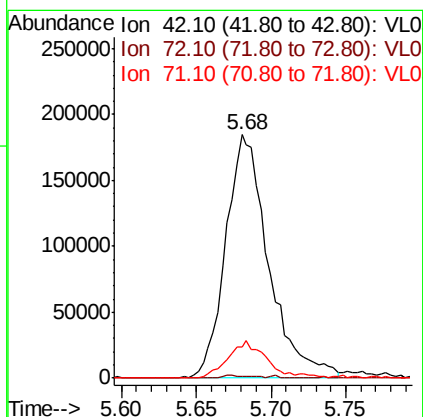
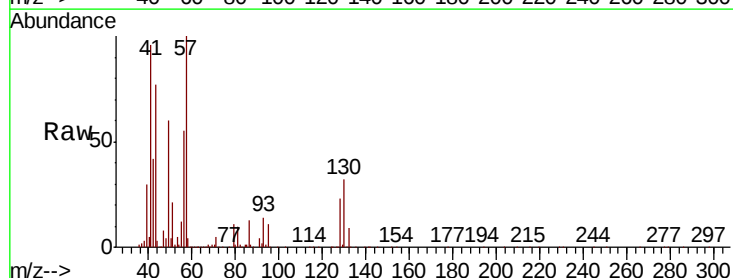
Instrument :
 MSVOA_L
 ClientSampled :
 IA-3

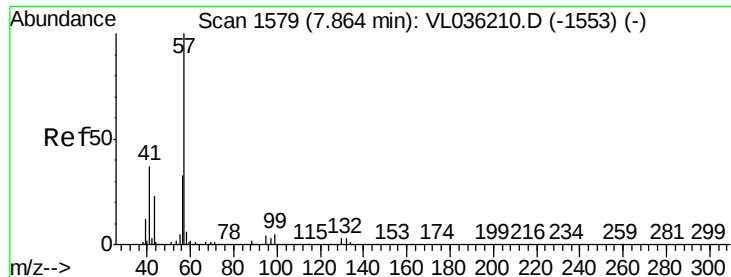
Tot Ion	Ratio	Lower	Upper
63	100		
41	0.0	66.1	99.1#
62	16.9	54.8	82.2#



#41
 Tetrahydrofuran
 Concen: 2.994 ppbv
 RT: 5.68 min Scan# 900
 Delta R.T. -0.36 min
 Lab File: VL036251.D
 Acq: 20 Jan 2021 17:53

Tgt Ion	Ratio	Lower	Upper
42	100		
72	1.0	29.5	44.3#
71	14.6	29.1	43.7#





#44

2,2,4-Trimethylpentane

Concen: 0.048 ppbv

RT: 7.86 min Scan# 1578

Delta R.T. -0.00 min

Lab File: VL036251.D

Acq: 20 Jan 2021 17:53

Instrument :

MSVOA_L

ClientSampleId :

IA-3

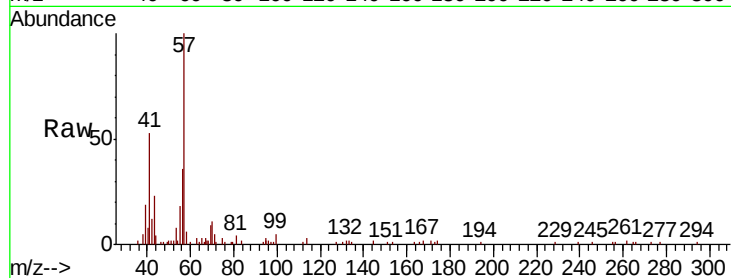
Tot Ion: 57 Resp: 23551

Ion Ratio Lower Upper

57 100

41 0.0 28.5 42.7#

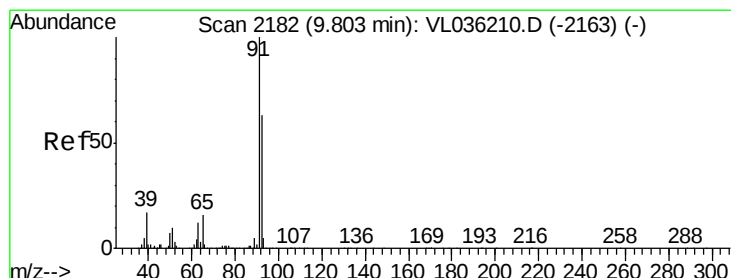
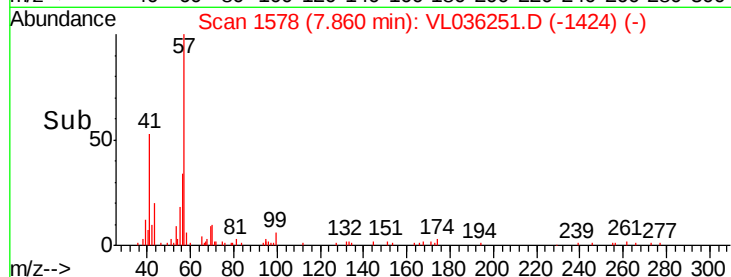
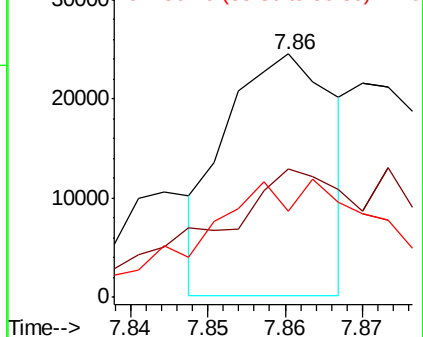
56 114.7 25.5 38.3#



Abundance Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 56.10 (55.80 to 56.80): VL0



#53

Toluene

Concen: 1.128 ppbv

RT: 9.80 min Scan# 2182

Delta R.T. -0.00 min

Lab File: VL036251.D

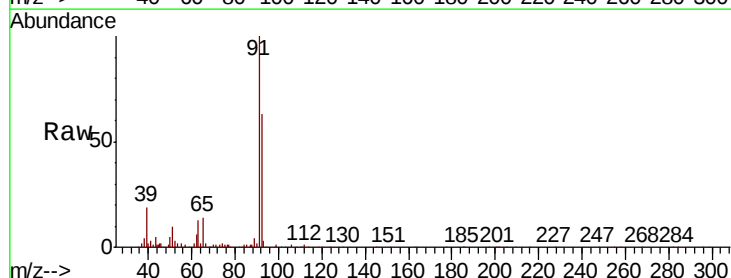
Acq: 20 Jan 2021 17:53

Tgt Ion: 91 Resp: 333746

Ion Ratio Lower Upper

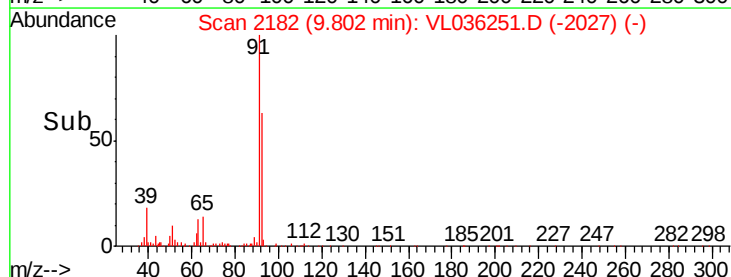
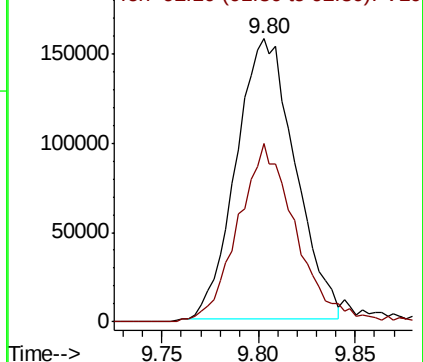
91 100

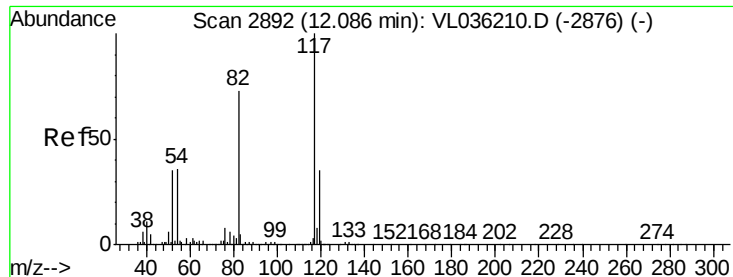
92 63.5 48.5 72.7



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

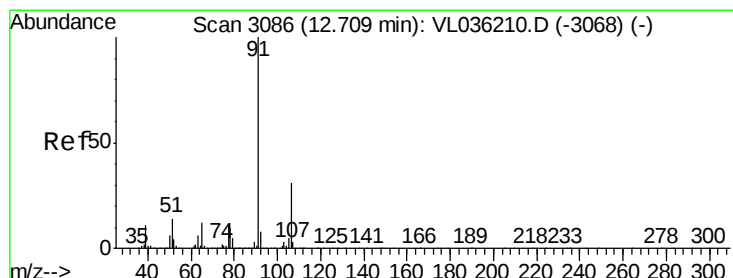
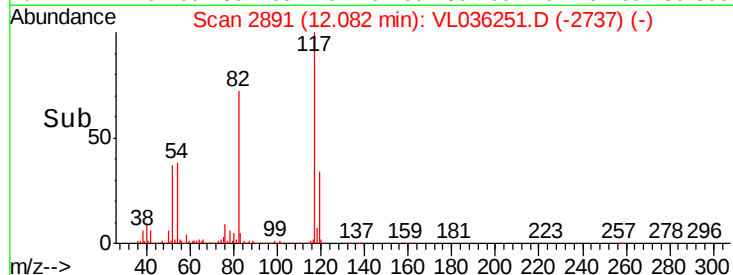
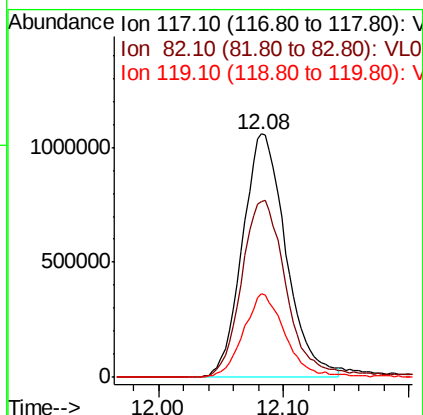
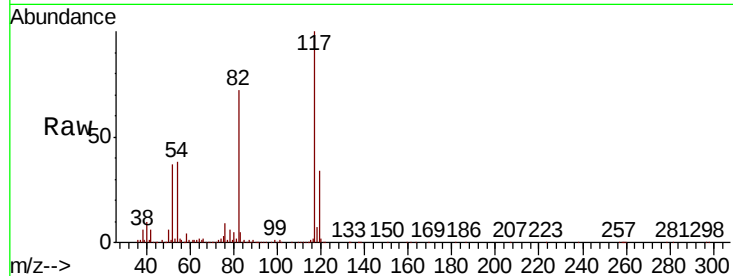




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.08 min Scan# 2891
Delta R.T. -0.00 min
Lab File: VL036251.D
Acq: 20 Jan 2021 17:53

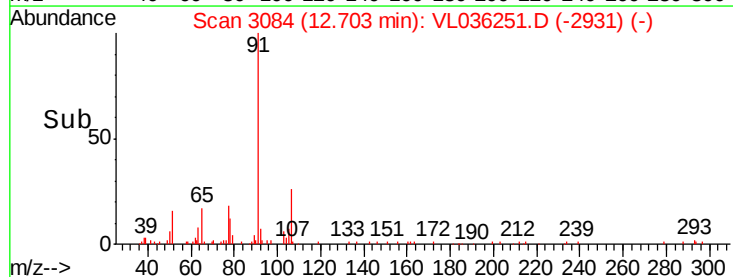
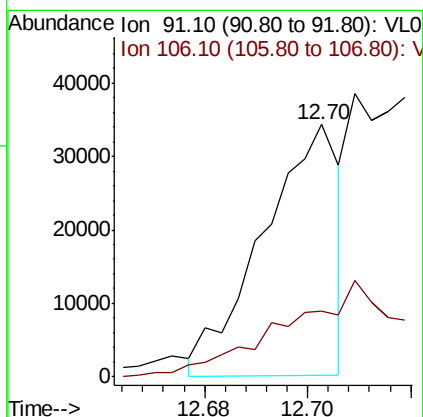
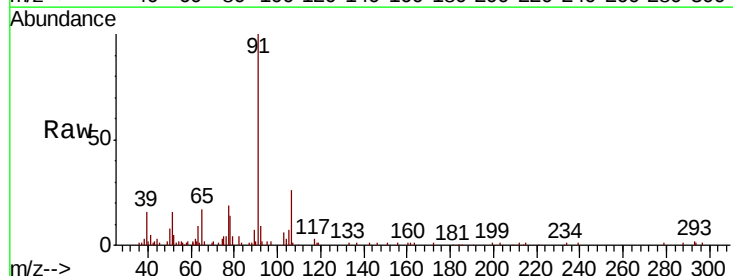
Instrument :
MSVOA_L
ClientSampled :
IA-3

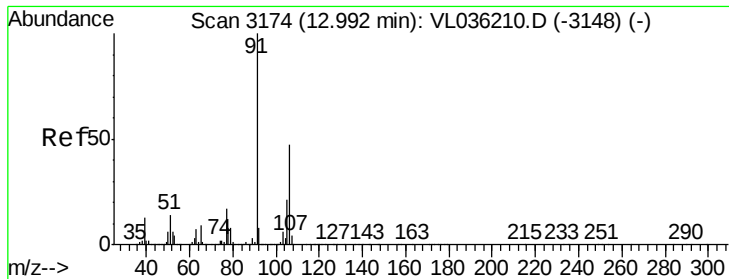
Tot Ion:117 Resp: 2547759
Ion Ratio Lower Upper
117 100
82 77.5 59.7 89.5
119 33.7 28.6 43.0



#58
Ethyl Benzene
Concen: 0.093 ppbv
RT: 12.70 min Scan# 3084
Delta R.T. -0.01 min
Lab File: VL036251.D
Acq: 20 Jan 2021 17:53

Tgt Ion: 91 Resp: 35109
Ion Ratio Lower Upper
91 100
106 22.9 24.8 37.2#

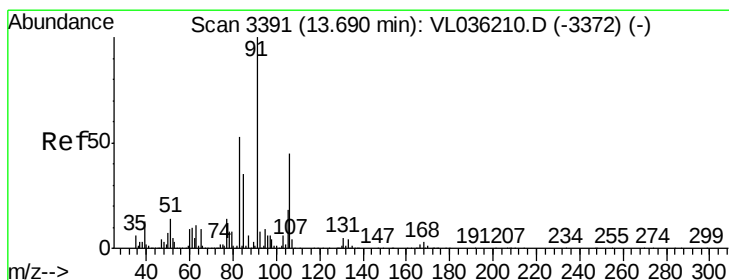
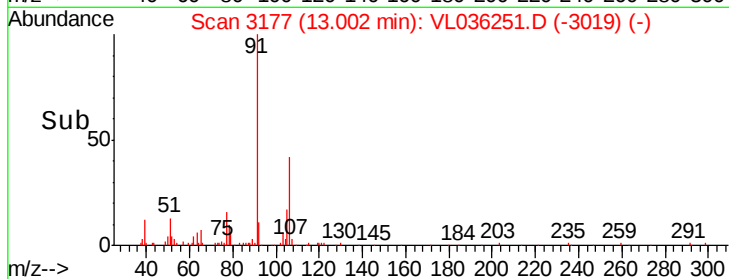
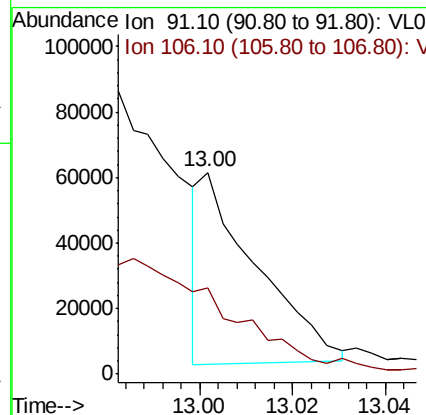
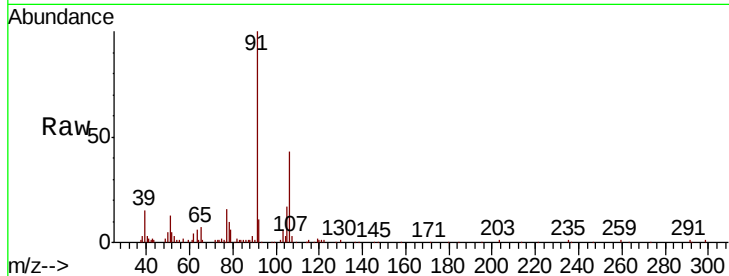




#59
m/p-Xylene
Concen: 0.148 ppbv
RT: 13.00 min Scan# 3177
Delta R.T. 0.01 min
Lab File: VL036251.D
Acq: 20 Jan 2021 17:53

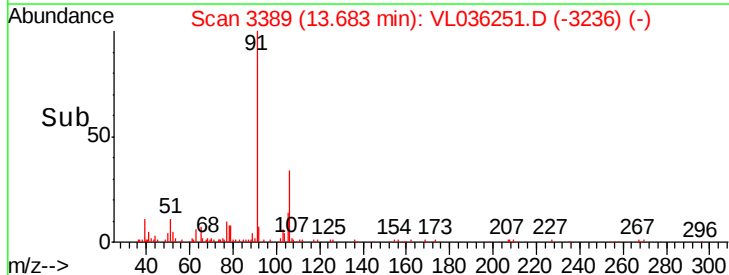
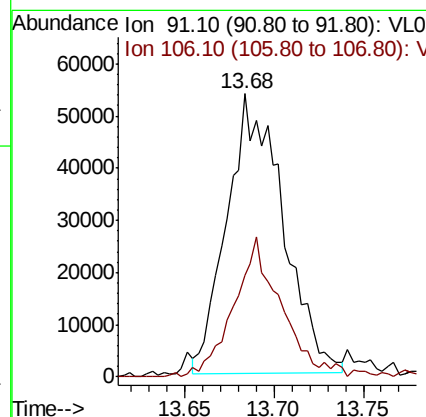
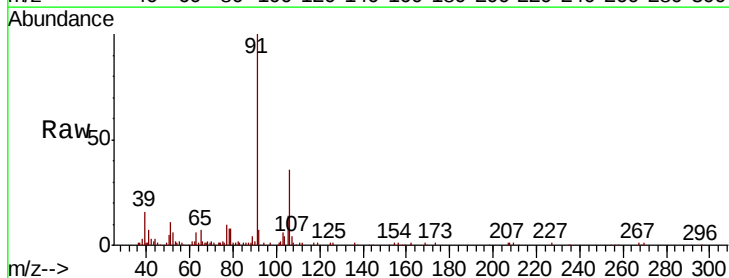
Instrument :
MSVOA_L
ClientSampleId :
IA-3

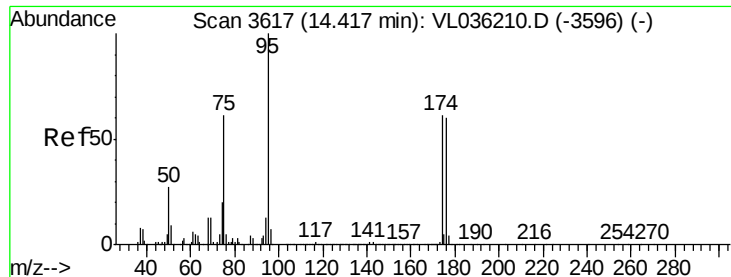
Tot Ion: 91 Resp: 48156
Ion Ratio Lower Upper
91 100
106 0.0 34.6 51.8#



#60
o-Xylene
Concen: 0.372 ppbv
RT: 13.68 min Scan# 3389
Delta R.T. -0.01 min
Lab File: VL036251.D
Acq: 20 Jan 2021 17:53

Tgt Ion: 91 Resp: 116597
Ion Ratio Lower Upper
91 100
106 44.4 21.9 65.8





#68

1-Bromo-4-Fluorobenzene

Concen: 10.196 ppbv

RT: 14.41 min Scan# 3616

Delta R.T. -0.00 min

Lab File: VL036251.D

Acq: 20 Jan 2021 17:53

Instrument :

MSVOA_L

ClientSampleId :

IA-3

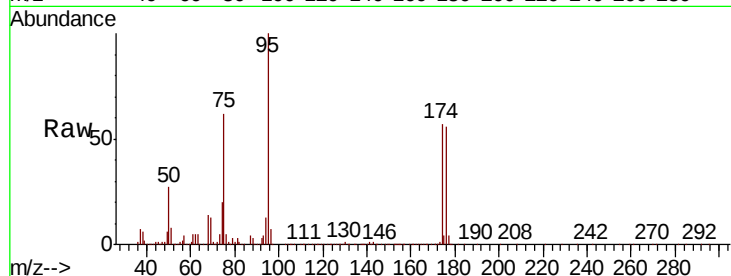
Tot Ion: 95 Resp: 2150092

Ion Ratio Lower Upper

95 100

174 60.8 49.4 74.0

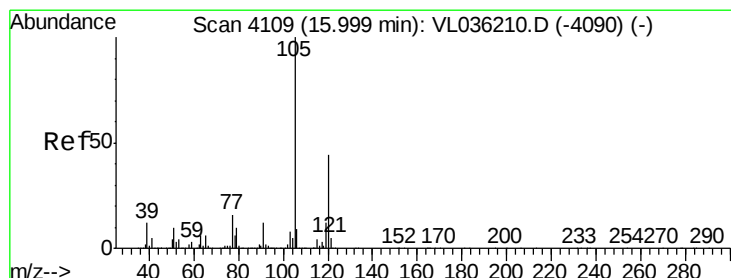
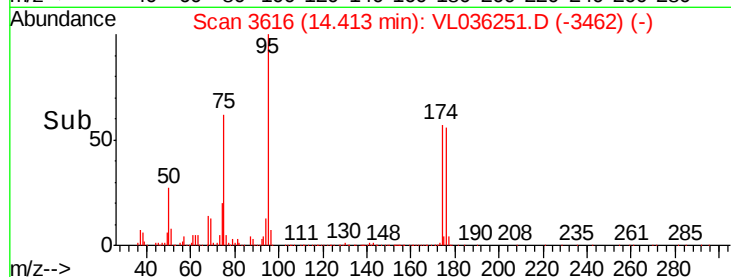
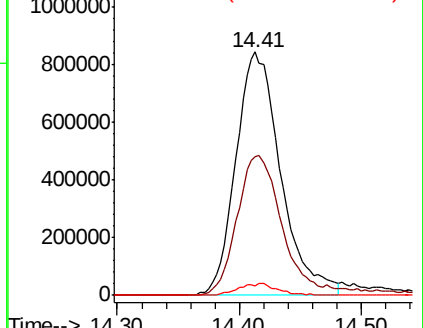
175 4.4 3.8 5.8



Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V



#73

1,3,5-Trimethylbenzene

Concen: 0.040 ppbv

RT: 16.00 min Scan# 4109

Delta R.T. -0.00 min

Lab File: VL036251.D

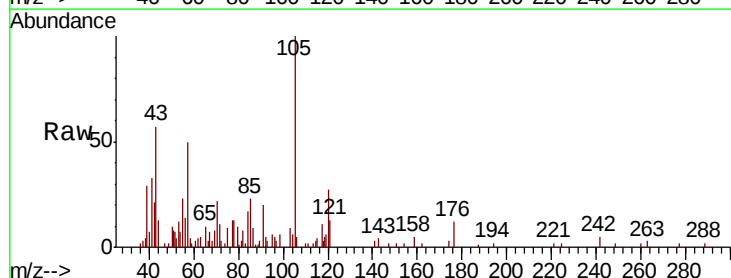
Acq: 20 Jan 2021 17:53

Tgt Ion: 105 Resp: 13606

Ion Ratio Lower Upper

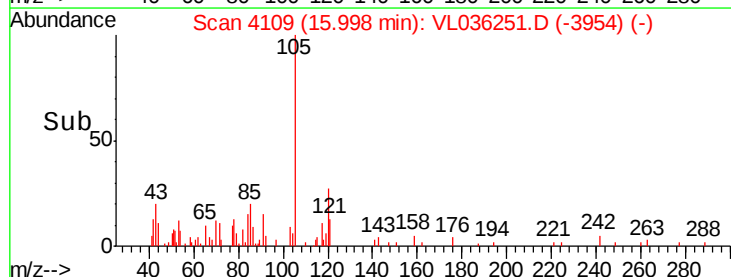
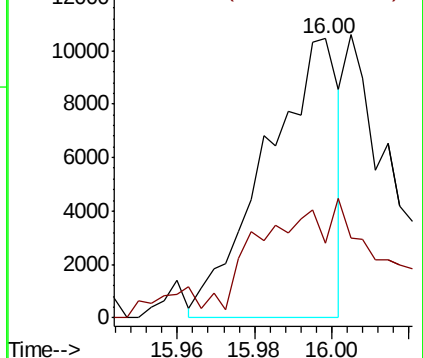
105 100

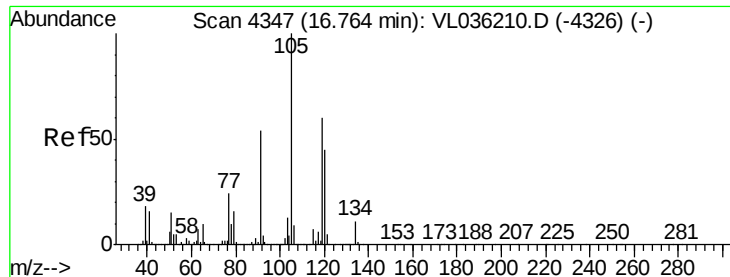
120 16.2 35.5 53.3#



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V





#74
 1,2,4-Trimethylbenzene
 Concen: 0.114 ppbv
 RT: 16.76 min Scan# 4346
 Delta R.T. -0.00 min
 Lab File: VL036251.D
 Acq: 20 Jan 2021 17:53

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-3

Tot Ion:	105	Resp:	39366
Ion	Ratio	Lower	Upper
105	100		
120	36.6	36.2	54.2
91	17.0	43.3	64.9#
77	13.3	19.1	28.7#

