

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL040921\
 Data File : VL036777.D
 Acq On : 9 Apr 2021 16:49
 Operator : SY/AP
 Sample : M1987-02
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 GOI-IA-6(2021)

Quant Time: Apr 10 02:00:47 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL032521AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu Mar 25 09:42:40 2021
 QLast Update : Thu Mar 25 09:42:40 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.65	49	1273040	10.00	ppbv	-0.02
33) 1,4-Difluorobenzene	7.16	114	2964182	10.00	ppbv	-0.02
55) Chlorobenzene-d5	12.08	117	2361956	10.00	ppbv	-0.02

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.41	95	1501579	7.98	ppbv	-0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	79.80%

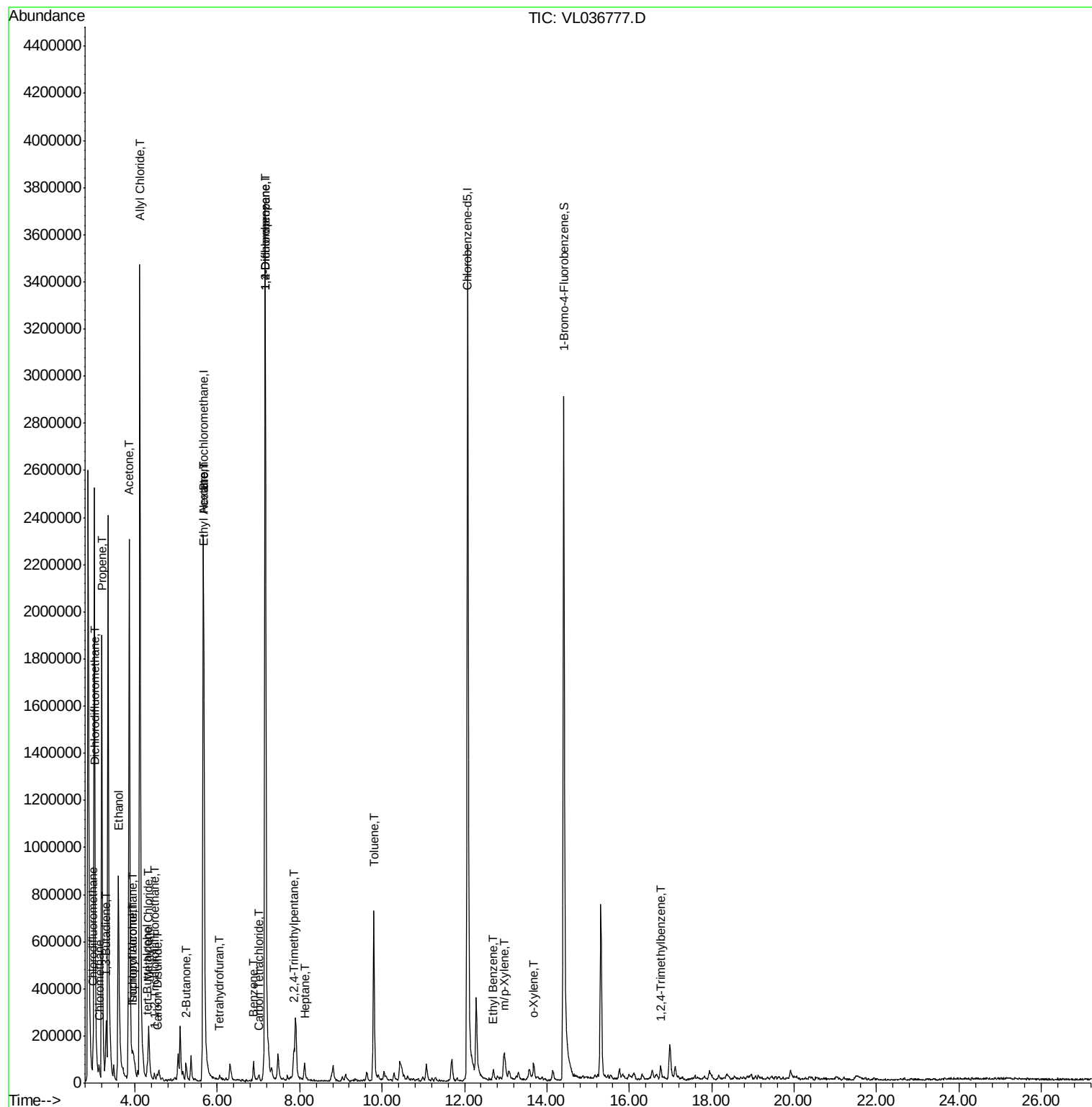
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.04	85	38131	0.184	ppbv	95
3) Chlorodifluoromethane	2.98	51	92084	0.387	ppbv	99
4) Chloromethane	3.13	50	44841	0.534	ppbv	95
9) Propene	3.19	41	701875	9.256	ppbv	91
10) Heptane	8.11	43	6756	0.035	ppbv #	1
11) Trichlorofluoromethane	3.94	101	38131	0.180	ppbv	84
12) 1,1,2-Trichlorotrifluoroet	4.47	101	6658	0.049	ppbv #	59
13) Ethanol	3.59	45	1277790	141.511	ppbv	94
15) Acetone	3.86	43	1298995	10.367	ppbv #	72
16) 1,3-Butadiene	3.29	39	70106	0.804	ppbv #	13
17) tert-Butyl alcohol	4.30	59	14835	0.136	ppbv #	72
19) Isopropyl Alcohol	3.96	45	37777	0.548	ppbv #	51
20) Methylene Chloride	4.34	84	73851	1.259	ppbv	98
21) Allyl Chloride	4.12	41	1257241	12.587	ppbv #	52
25) Ethyl Acetate	5.68	43	248414	0.834	ppbv #	83
26) Hexane	5.67	57	300943	2.177	ppbv #	48
27) Carbon Disulfide	4.54	76	31745	0.233	ppbv #	63
34) 2-Butanone	5.24	43	47794	0.330	ppbv #	57
35) Carbon Tetrachloride	7.00	117	7896	0.035	ppbv #	74
36) Benzene	6.88	78	61199	0.224	ppbv	95
39) 1,2-Dichloropropane	7.16	63	788070	7.106	ppbv #	25
41) Tetrahydrofuran	6.05	42	2408	0.036	ppbv #	1
44) 2,2,4-Trimethylpentane	7.86	57	47631	0.099	ppbv #	40
53) Toluene	9.80	91	510255	1.753	ppbv	98
58) Ethyl Benzene	12.70	91	18305	0.053	ppbv	92
59) m/p-Xylene	12.98	91	29340	0.098	ppbv #	32
60) o-Xylene	13.68	91	19755	0.068	ppbv #	31
74) 1,2,4-Trimethylbenzene	16.75	105	12071	0.038	ppbv #	74

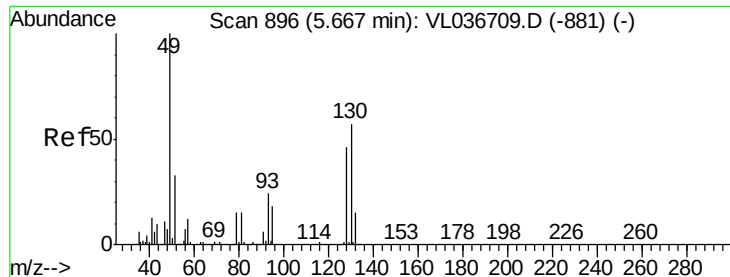
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 min Scan# 892

Delta R.T. -0.02 min

Lab File: VL036777.D

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Instrument :
MSVOA_L
ClientSampleId :
GOI-IA-6(2021)

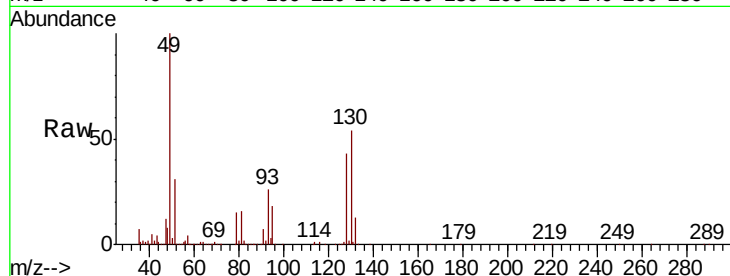
Tot Ion: 49 Resp: 1273040

Ion Ratio Lower Upper

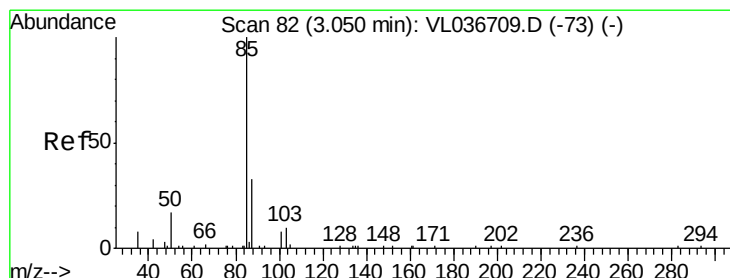
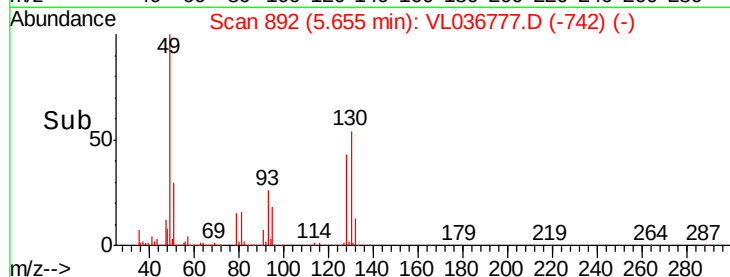
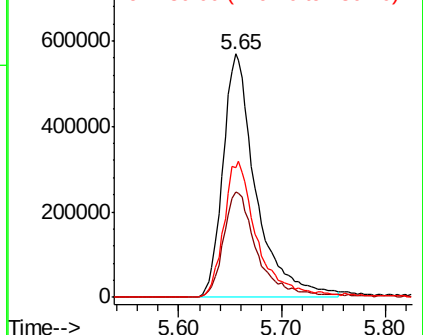
49 100

128 44.8 23.5 70.6

130 57.1 29.1 87.4



Abundance Ion 49.10 (48.80 to 49.80): VL0
Ion 128.00 (127.70 to 128.70): V
Ion 130.00 (129.70 to 130.70): V



#2

Dichlorodifluoromethane

Concen: 0.184 ppbv

RT: 3.04 min Scan# 78

Delta R.T. -0.01 min

Lab File: VL036777.D

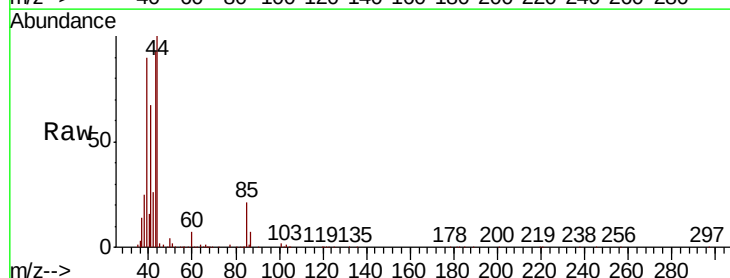
Acq: 9 Apr 2021 16:49

Tgt Ion: 85 Resp: 38131

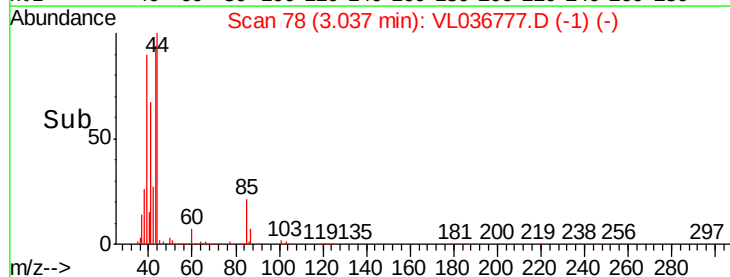
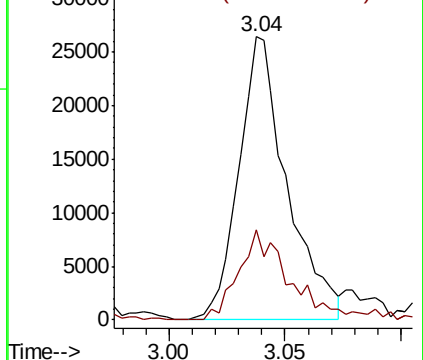
Ion Ratio Lower Upper

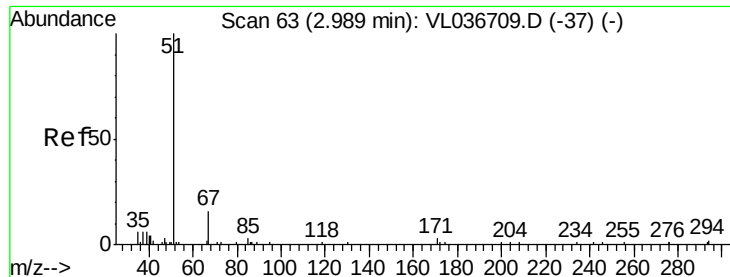
85 100

87 31.9 27.8 41.8



Abundance Ion 85.00 (84.70 to 85.70): VL0
Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.387 ppbv

RT: 2.98 min Scan# 60

Delta R.T. -0.01 min

Lab File: VL036777.D

Acq: 9 Apr 2021 16:49

Instrument :

MSVOA_L

ClientSampleId :

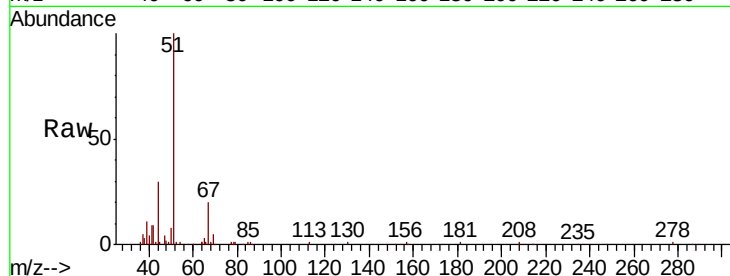
GOI-IA-6(2021)

Tot Ion: 51 Resp: 92084

Ion Ratio Lower Upper

51 100

67 17.8 14.7 22.1



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0

2.98

50000

40000

30000

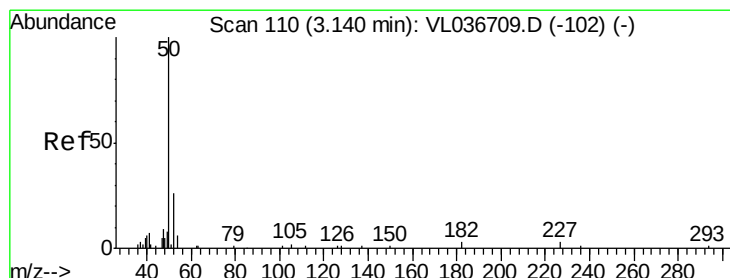
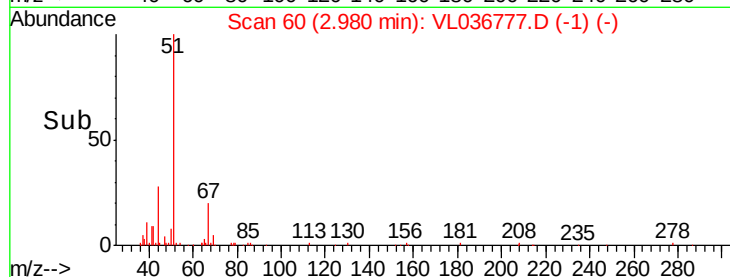
20000

10000

0

Time-->

2.90 3.00 3.10



#4

Chloromethane

Concen: 0.534 ppbv

RT: 3.13 min Scan# 108

Delta R.T. -0.01 min

Lab File: VL036777.D

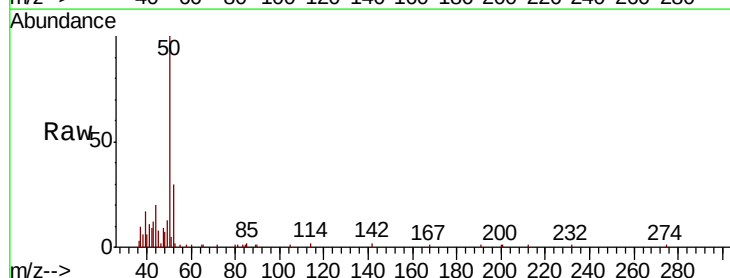
Acq: 9 Apr 2021 16:49

Tgt Ion: 50 Resp: 44841

Ion Ratio Lower Upper

50 100

52 31.1 27.0 40.6



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0

3.13

30000

25000

20000

15000

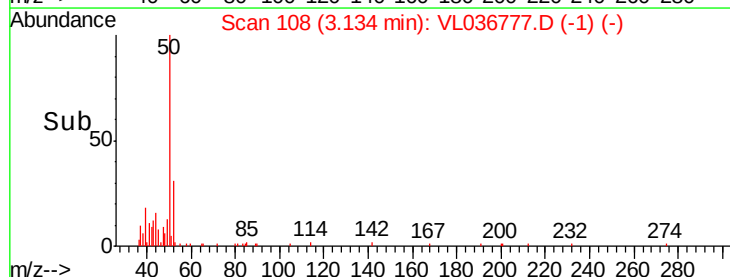
10000

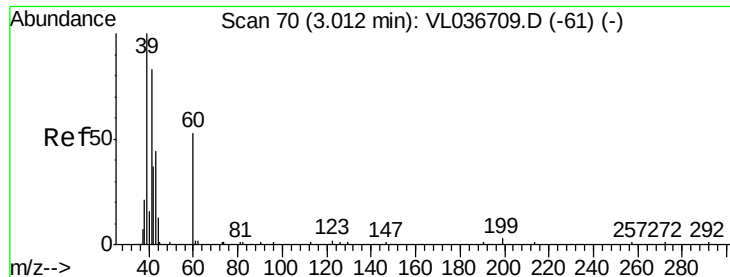
5000

0

Time-->

3.10 3.15





#9

Propene

Concen: 9.256 ppbv

RT: 3.19 min Scan# 127

Delta R.T. 0.19 min

Lab File: VL036777.D

Acq: 9 Apr 2021 16:49

Instrument :

MSVOA_L

ClientSampleId :

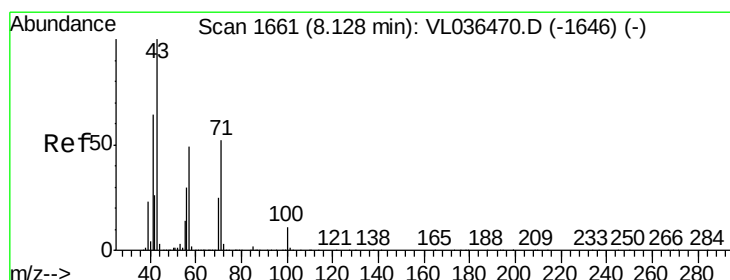
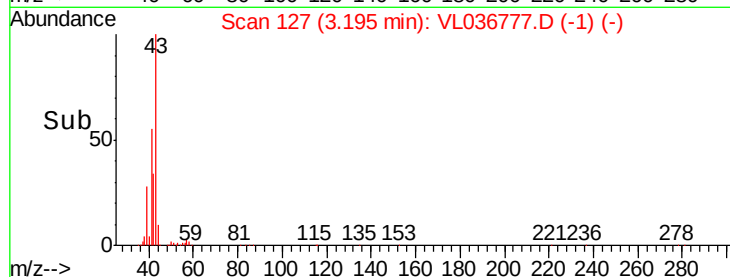
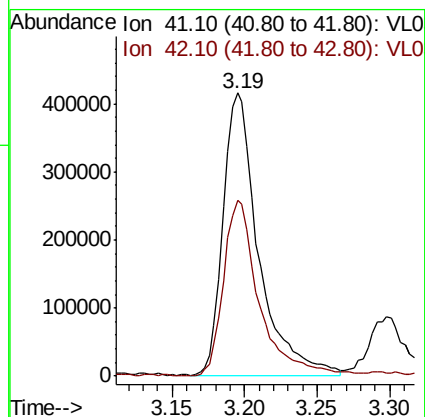
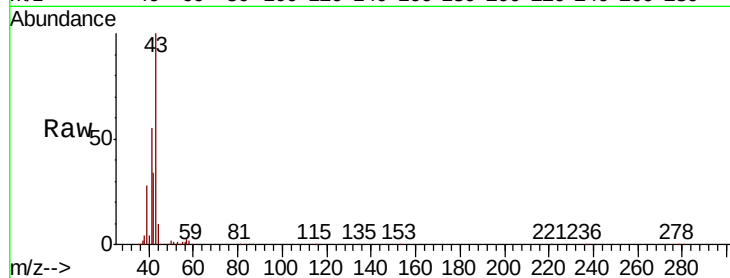
GOI-IA-6(2021)

Tot Ion: 41 Resp: 701875

Ion Ratio Lower Upper

41 100

42 63.6 57.0 85.4



#10

Heptane

Concen: 0.035 ppbv

RT: 8.11 min Scan# 1656

Delta R.T. -0.02 min

Lab File: VL036777.D

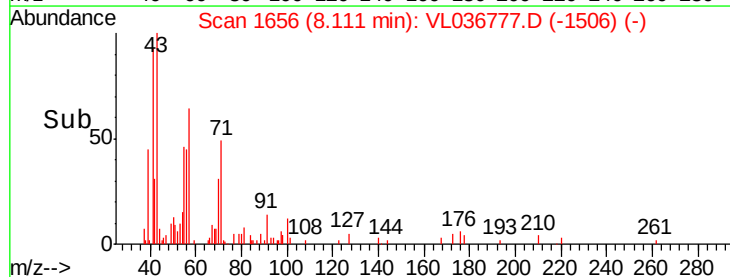
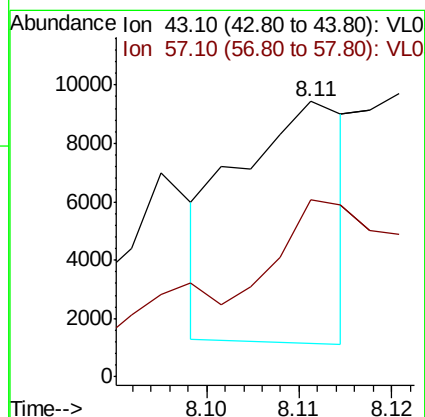
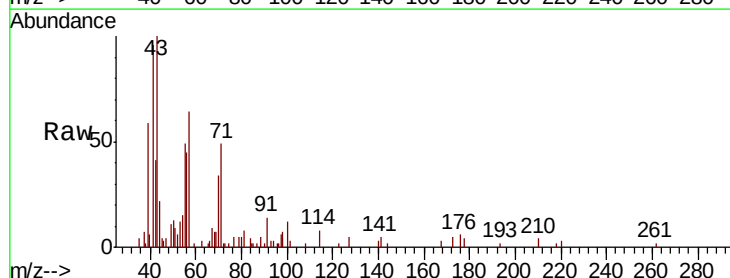
Acq: 9 Apr 2021 16:49

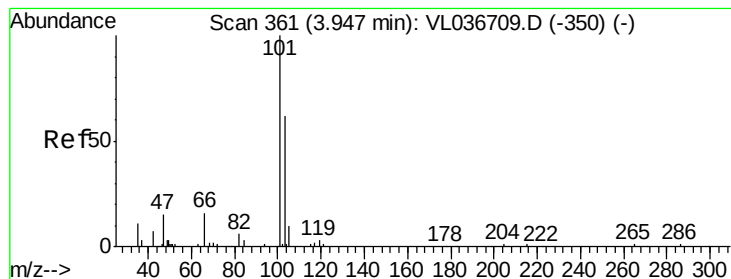
Tgt Ion: 43 Resp: 6756

Ion Ratio Lower Upper

43 100

57 185.9 39.0 58.6#





#11

Trichlorofluoromethane

Concen: 0.180 ppbv

RT: 3.94 min Scan# 359

Delta R.T. -0.01 min

Lab File: VL036777.D

Acq: 9 Apr 2021 16:49

Instrument :

MSVOA_L

ClientSampleId :

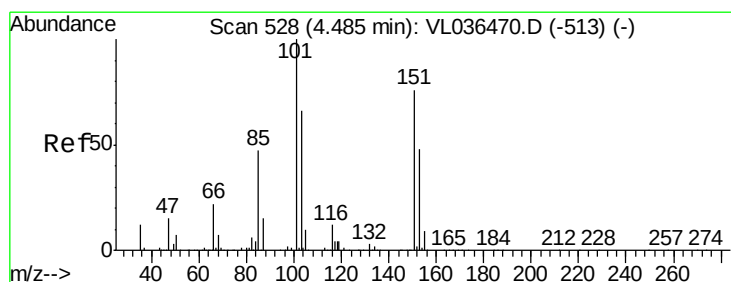
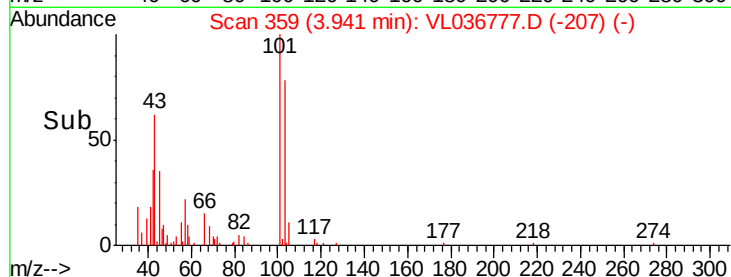
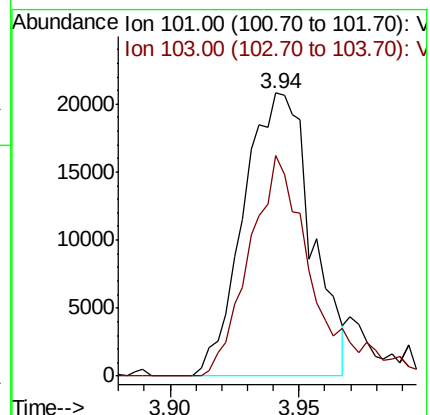
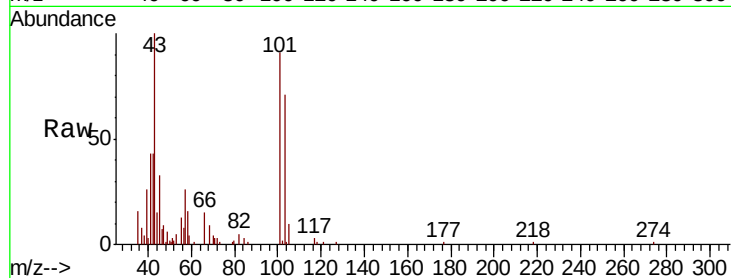
GOI-IA-6(2021)

Tot Ion:101 Resp: 38131

Ion Ratio Lower Upper

101 100

103 78.1 52.5 78.7



#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.049 ppbv

RT: 4.47 min Scan# 525

Delta R.T. -0.01 min

Lab File: VL036777.D

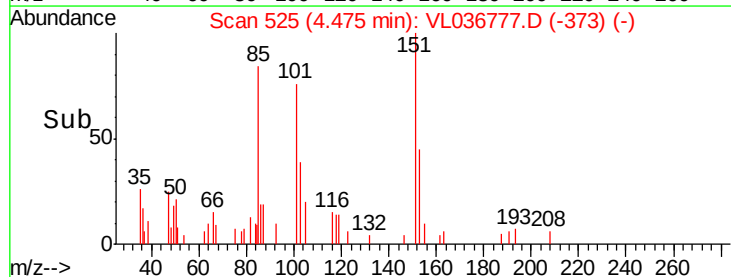
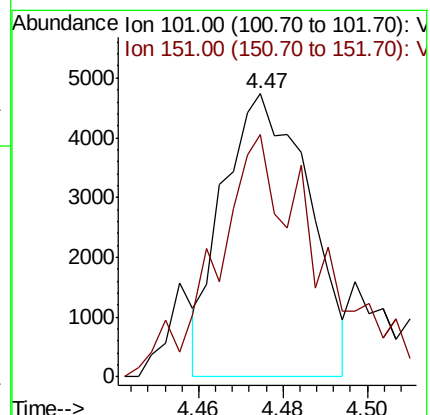
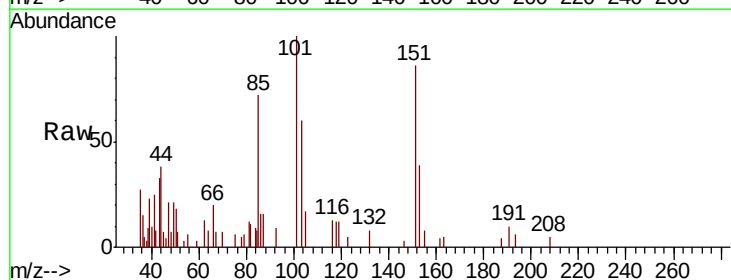
Acq: 9 Apr 2021 16:49

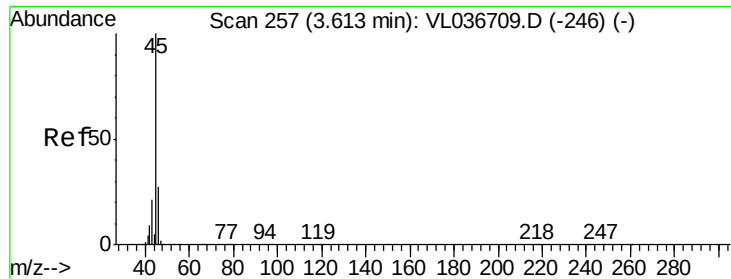
Tgt Ion:101 Resp: 6658

Ion Ratio Lower Upper

101 100

151 111.6 60.9 91.3#

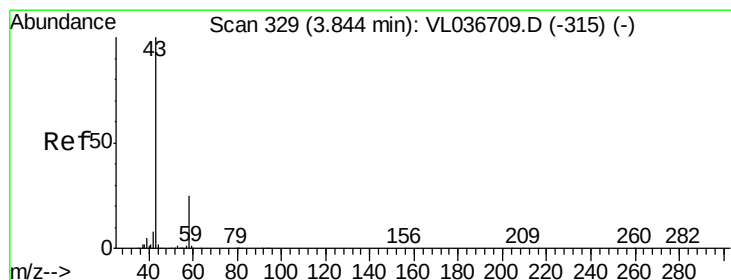
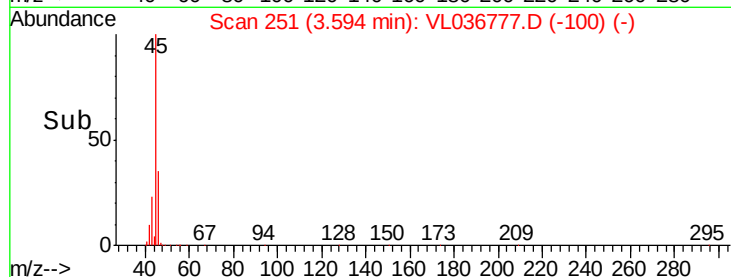
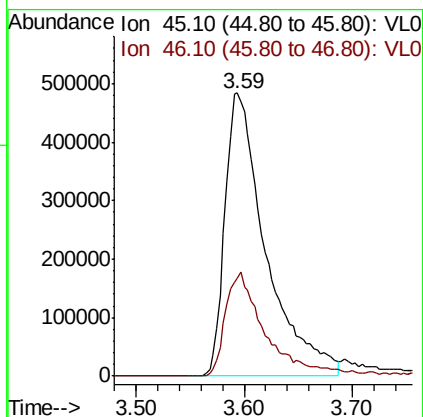
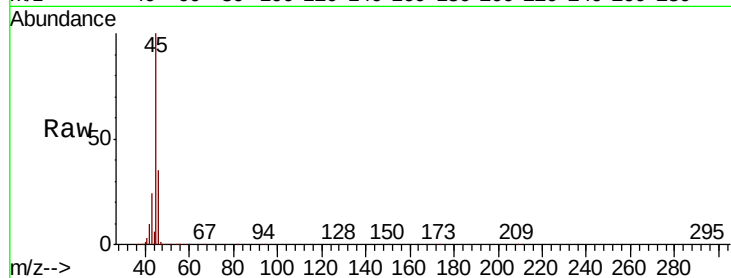




#13
Ethanol
Concen: 141.511 ppbv
RT: 3.59 min Scan# 251
Delta R.T. -0.01 min
Lab File: VL036777.D
Acq: 9 Apr 2021 16:49

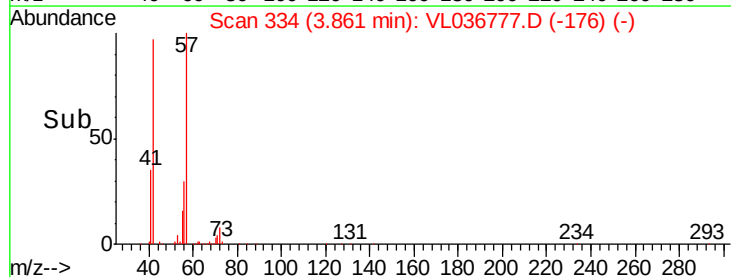
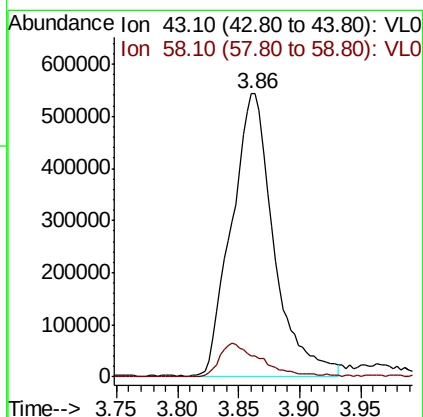
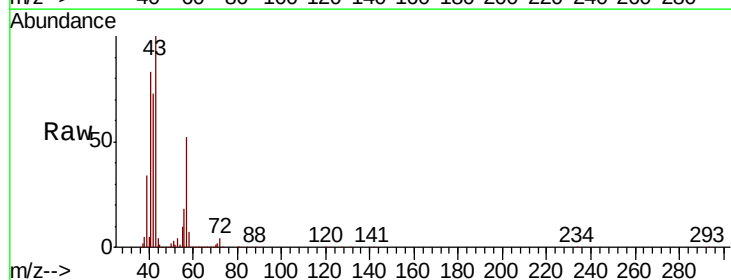
Instrument :
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GOI-IA-6(2021)

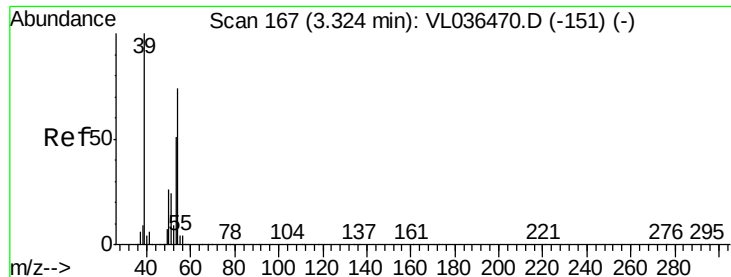
Tot Ion: 45 Resp: 1277790
Ion Ratio Lower Upper
45 100
46 37.6 16.6 66.2



#15
Acetone
Concen: 10.367 ppbv
RT: 3.86 min Scan# 334
Delta R.T. 0.01 min
Lab File: VL036777.D
Acq: 9 Apr 2021 16:49

Tgt Ion: 43 Resp: 1298995
Ion Ratio Lower Upper
43 100
58 12.3 21.2 31.8#





#16

1,3-Butadiene

Concen: 0.804 ppbv

RT: 3.29 min Scan# 158

Delta R.T. -0.03 min

Lab File: VL036777.D

Acq: 9 Apr 2021 16:49

Instrument :

MSVOA_L

ClientSampleId :

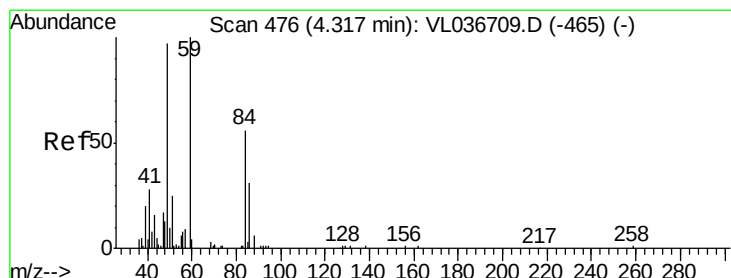
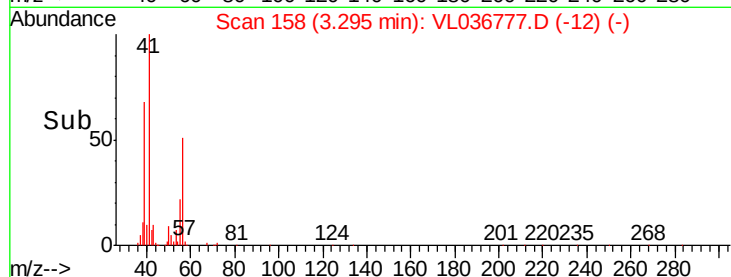
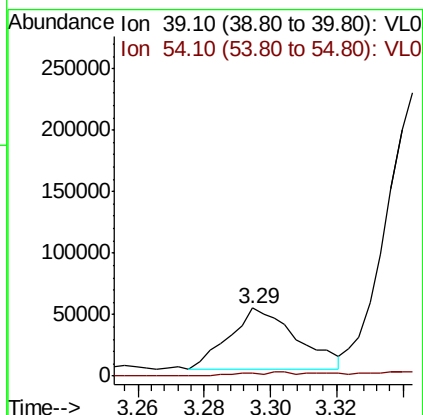
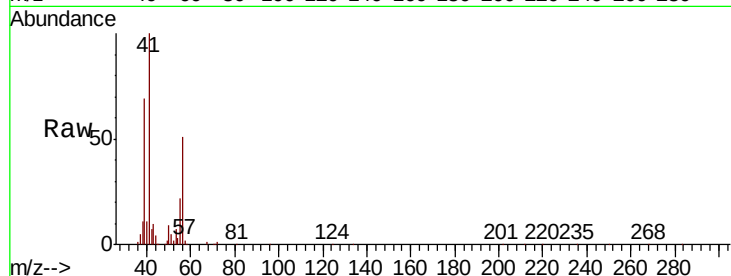
GOI-IA-6(2021)

Tot Ion: 39 Resp: 70106

Ion Ratio Lower Upper

39 100

54 0.0 58.8 88.2#



#17

tert-Butyl alcohol

Concen: 0.136 ppbv

RT: 4.30 min Scan# 471

Delta R.T. 0.01 min

Lab File: VL036777.D

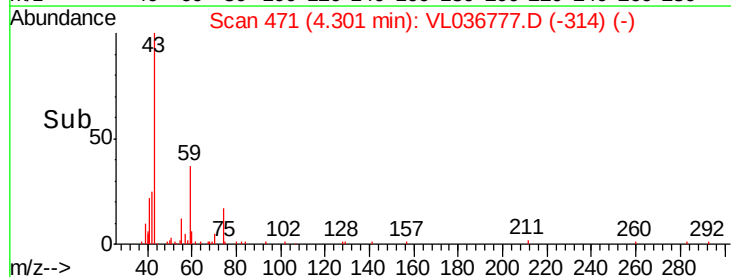
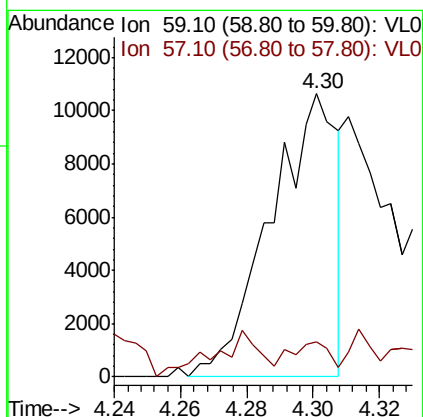
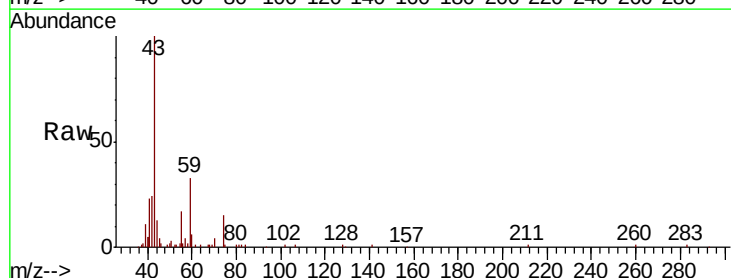
Acq: 9 Apr 2021 16:49

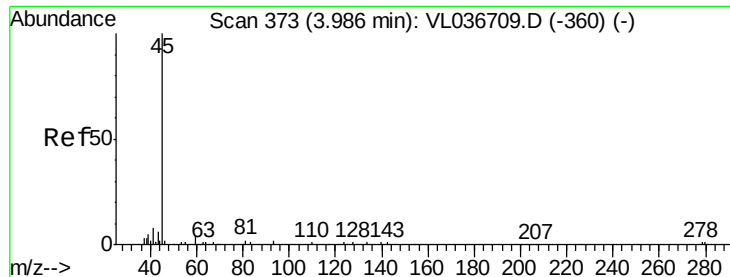
Tgt Ion: 59 Resp: 14835

Ion Ratio Lower Upper

59 100

57 0.0 8.6 12.8#





#19

Isopropyl Alcohol

Concen: 0.548 ppbv

RT: 3.96 min Scan# 365

Delta R.T. -0.01 min

Lab File: VL036777.D

Acq: 9 Apr 2021 16:49

Instrument :

MSVOA_L

ClientSampleId :

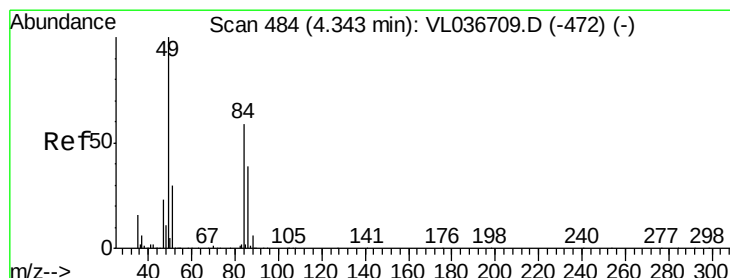
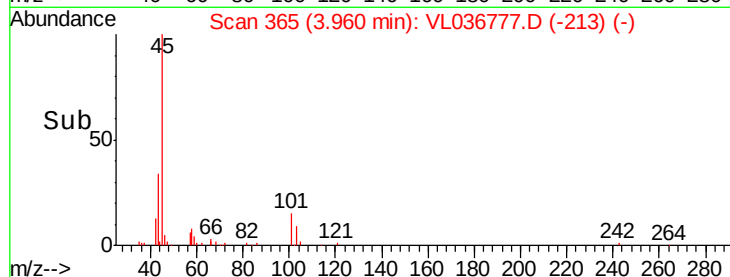
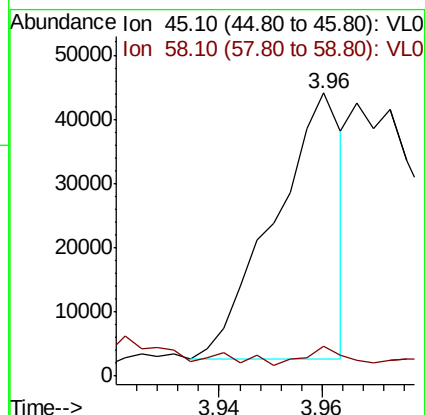
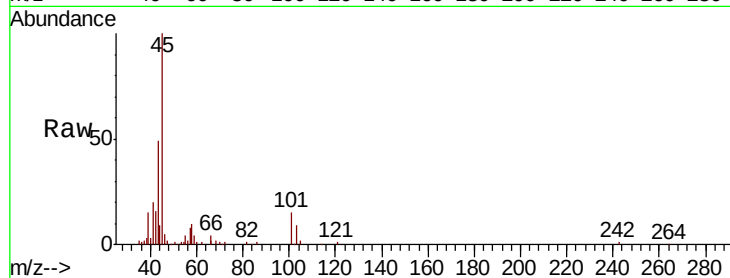
GOI-IA-6(2021)

Tot Ion: 45 Resp: 37777

Ion Ratio Lower Upper

45 100

58 19.9 2.9 4.3#



#20

Methylene Chloride

Concen: 1.259 ppbv

RT: 4.34 min Scan# 482

Delta R.T. -0.01 min

Lab File: VL036777.D

Acq: 9 Apr 2021 16:49

Tgt Ion: 84 Resp: 73851

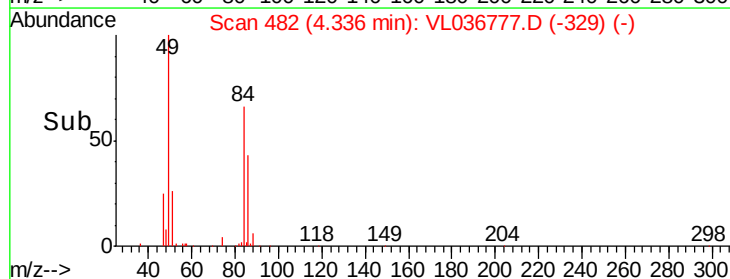
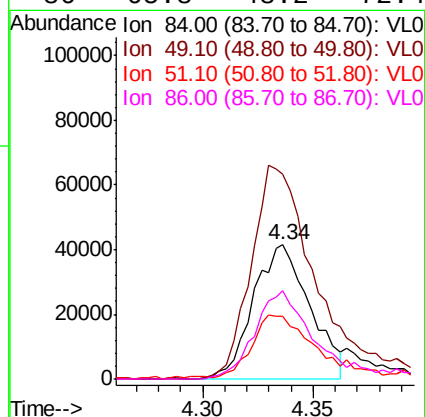
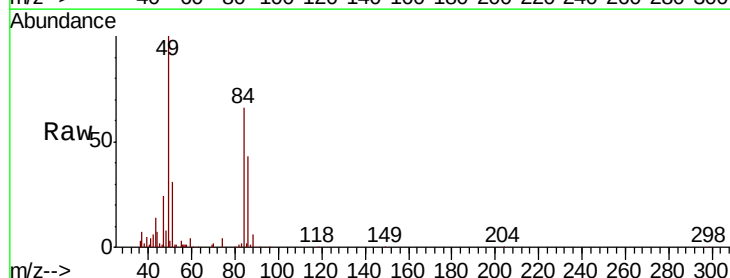
Ion Ratio Lower Upper

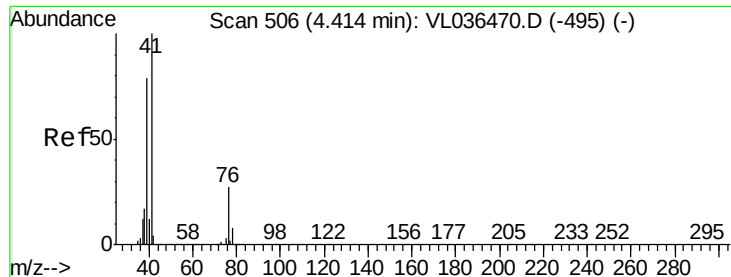
84 100

49 152.6 122.9 184.3

51 45.7 36.9 55.3

86 65.8 48.2 72.4

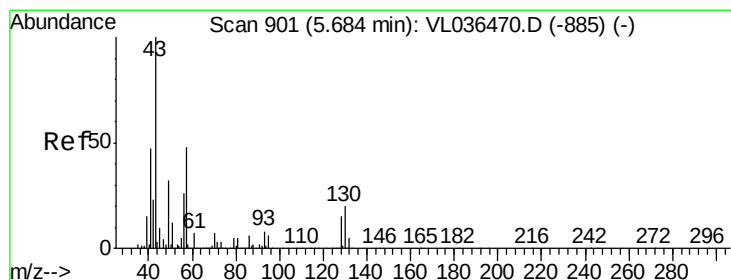
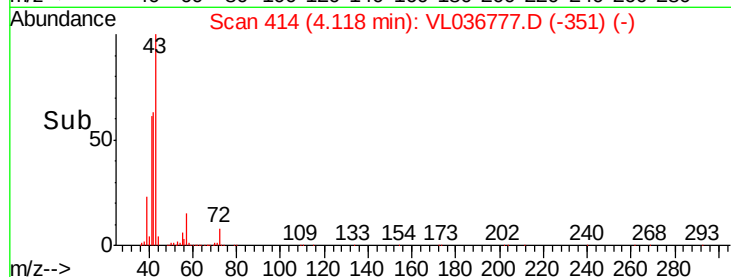
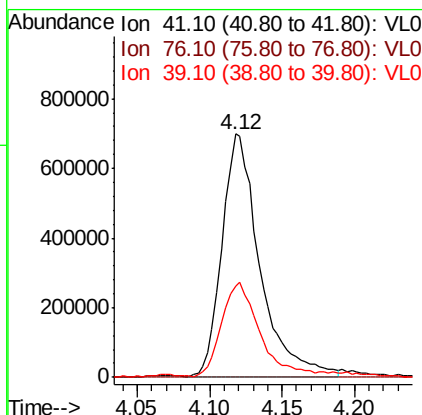
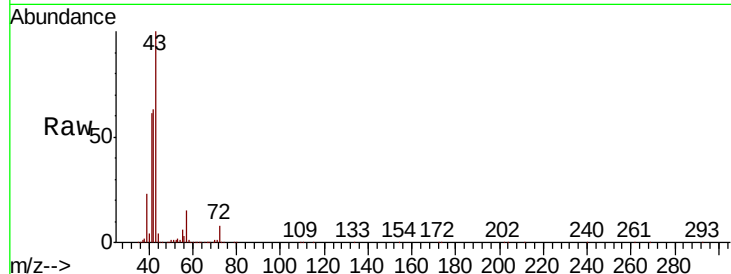




#21
Allvl Chloride
Concen: 12.587 ppbv
RT: 4.12 min Scan# 414
Delta R.T. -0.30 min
Lab File: VL036777.D
Acq: 9 Apr 2021 16:49

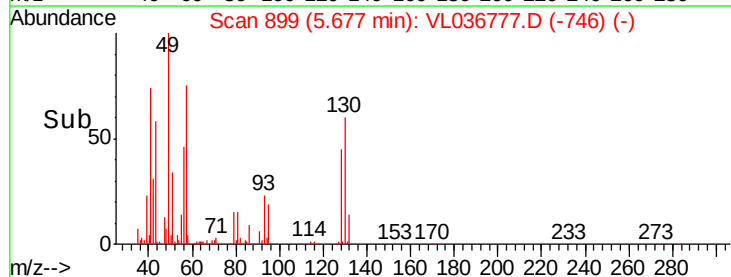
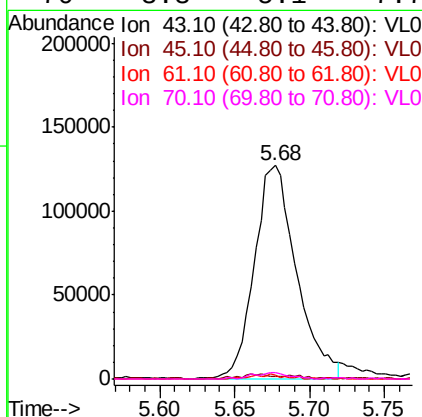
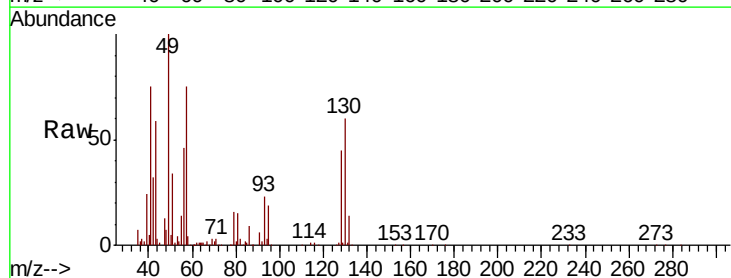
Instrument :
MSVOA_L
ClientSampleId :
GOI-IA-6(2021)

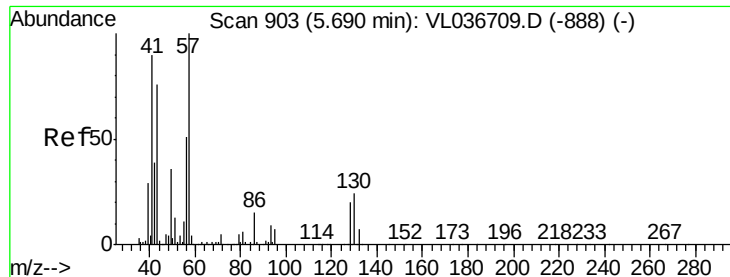
Tot Ion: 41 Resp: 1257241
Ion Ratio Lower Upper
41 100
76 0.1 22.9 34.3#
39 42.5 67.3 100.9#



#25
Ethyl Acetate
Concen: 0.834 ppbv
RT: 5.68 min Scan# 899
Delta R.T. -0.01 min
Lab File: VL036777.D
Acq: 9 Apr 2021 16:49

Tgt Ion: 43 Resp: 248414
Ion Ratio Lower Upper
43 100
45 3.3 7.9 11.9#
61 1.9 7.4 11.2#
70 3.3 5.1 7.7#

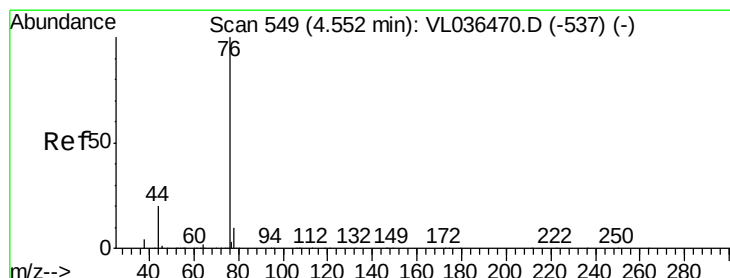
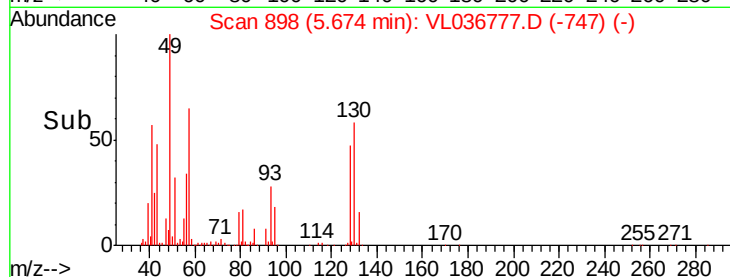
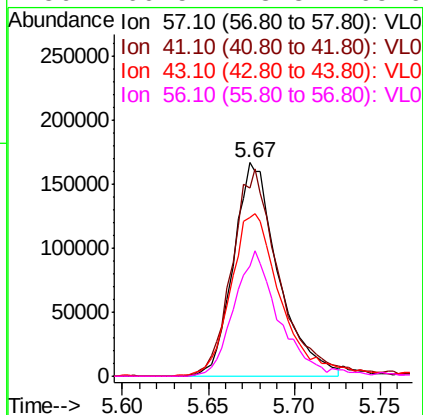
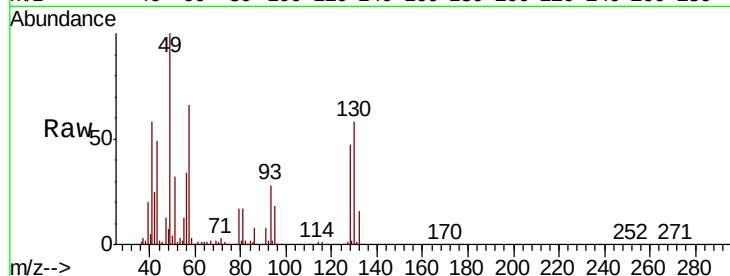




#26
Hexane
Concen: 2.177 ppbv
RT: 5.67 min Scan# 898
Delta R.T. -0.01 min
Lab File: VL036777.D
Acq: 9 Apr 2021 16:49

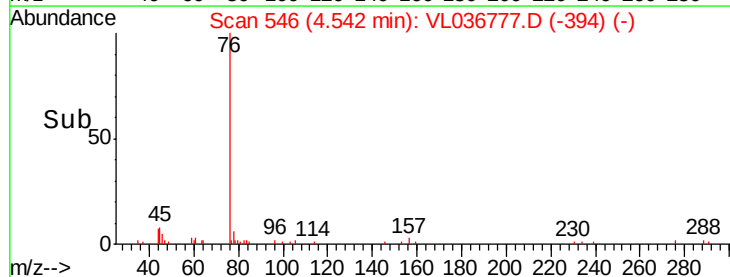
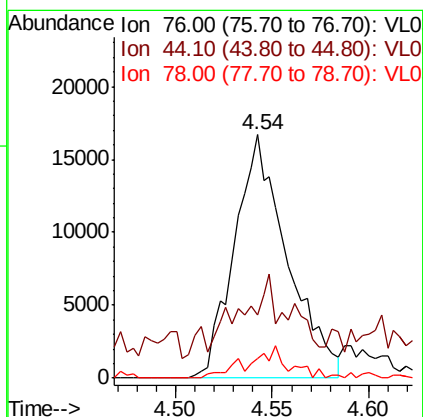
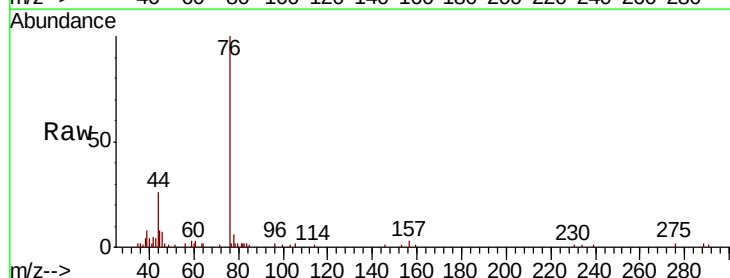
Instrument :
MSVOA_L
ClientSampleId :
GOI-IA-6(2021)

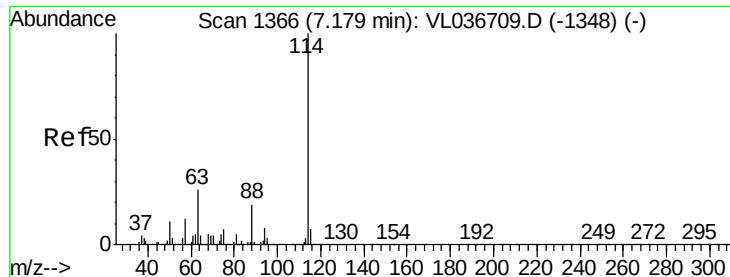
Tot Ion: 57 Resp: 300943
Ion Ratio Lower Upper
57 100
41 105.7 77.2 115.8
43 87.5 173.8 260.6#
56 60.5 43.8 65.6



#27
Carbon Disulfide
Concen: 0.233 ppbv
RT: 4.54 min Scan# 546
Delta R.T. -0.01 min
Lab File: VL036777.D
Acq: 9 Apr 2021 16:49

Tgt Ion: 76 Resp: 31745
Ion Ratio Lower Upper
76 100
44 47.7 17.5 26.3#
78 9.9 8.6 13.0

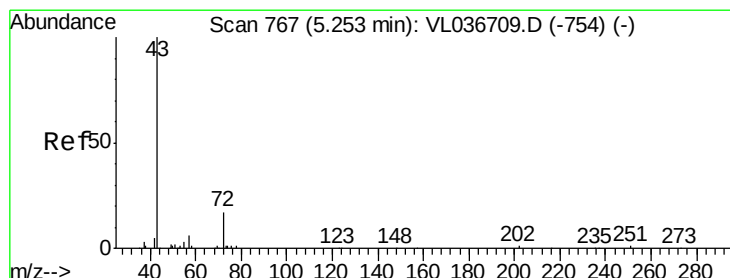
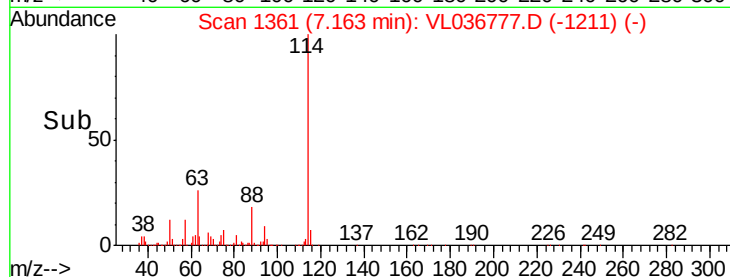
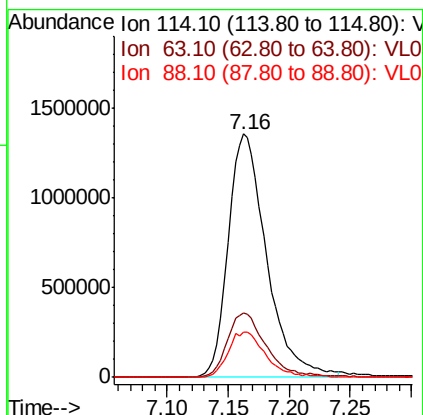
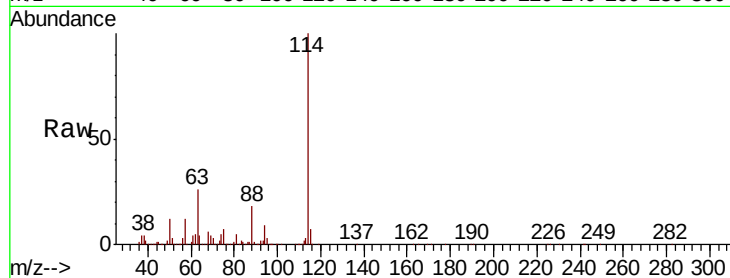




#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.16 min Scan# 1361
 Delta R.T. -0.02 min
 Lab File: VL036777.D
 Acq: 9 Apr 2021 16:49

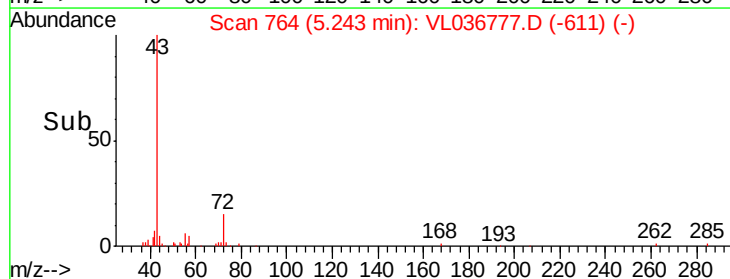
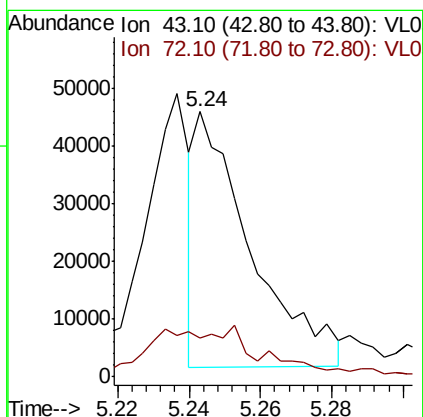
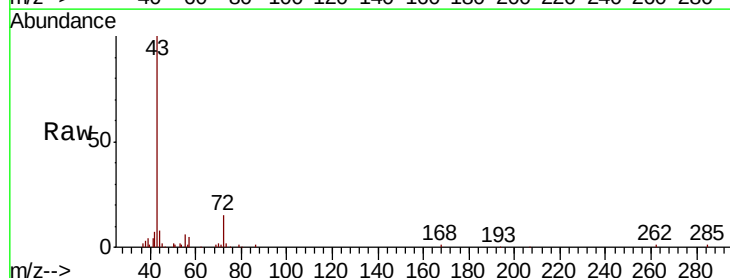
Instrument :
 MSVOA_L
 ClientSampleId :
 GOI-IA-6(2021)

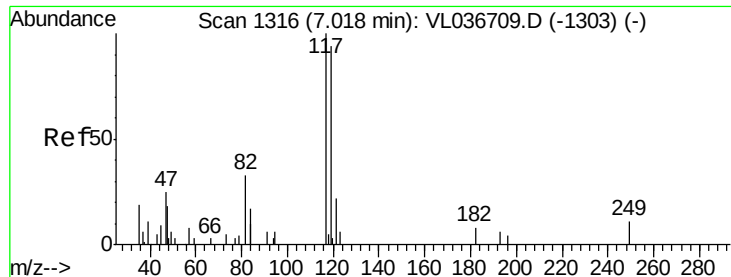
Tot Ion:114 Resp: 2964182
 Ion Ratio Lower Upper
 114 100
 63 27.5 22.4 33.6
 88 18.5 15.4 23.0



#34
 2-Butanone
 Concen: 0.330 ppbv
 RT: 5.24 min Scan# 764
 Delta R.T. -0.01 min
 Lab File: VL036777.D
 Acq: 9 Apr 2021 16:49

Tgt Ion: 43 Resp: 47794
 Ion Ratio Lower Upper
 43 100
 72 41.8 17.0 25.6#

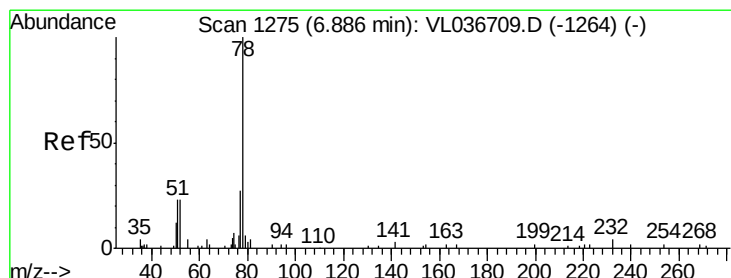
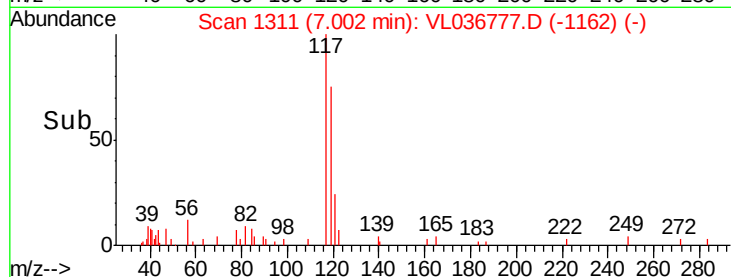
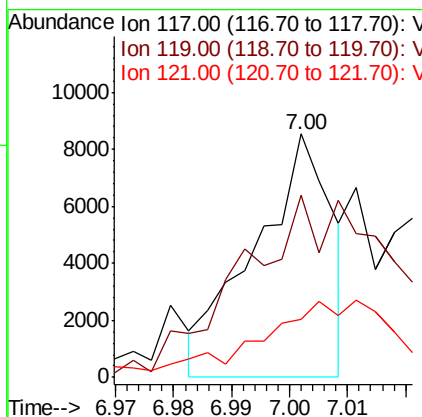
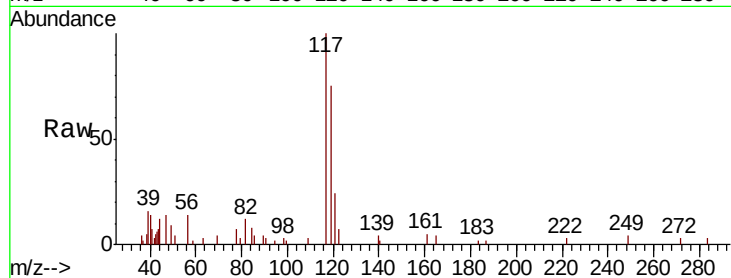




#35
Carbon Tetrachloride
Concen: 0.035 ppbv
RT: 7.00 min Scan# 1311
Delta R.T. -0.02 min
Lab File: VL036777.D
Acq: 9 Apr 2021 16:49

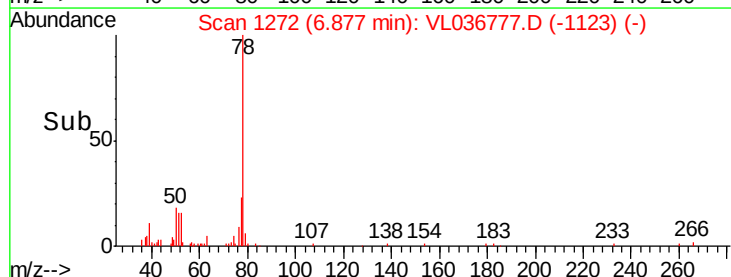
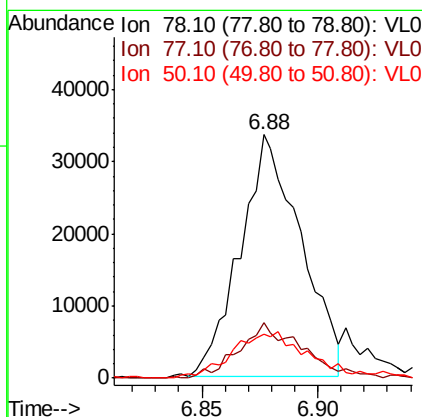
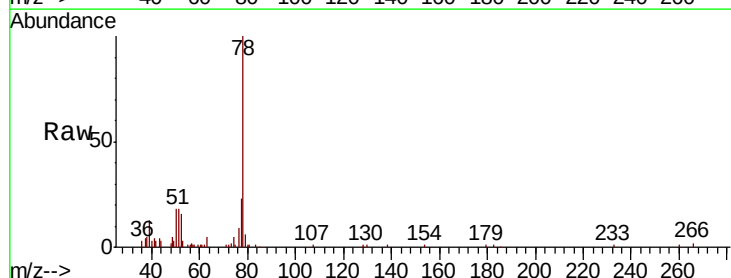
Instrument :
MSVOA_L
ClientSampleId :
GOI-IA-6(2021)

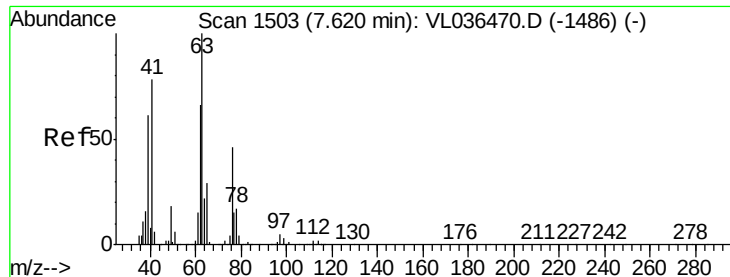
Tot Ion:117 Resp: 7896
Ion Ratio Lower Upper
117 100
119 70.0 78.2 117.2#
121 20.5 24.5 36.7#



#36
Benzene
Concen: 0.224 ppbv
RT: 6.88 min Scan# 1272
Delta R.T. -0.02 min
Lab File: VL036777.D
Acq: 9 Apr 2021 16:49

Tgt Ion: 78 Resp: 61199
Ion Ratio Lower Upper
78 100
77 22.9 18.0 27.0
50 16.6 16.5 24.7





#39

1,2-Dichloropropane

Concen: 7.106 ppbv

RT: 7.16 min Scan# 1361

Delta R.T. -0.46 min

Lab File: VL036777.D

Acq: 9 Apr 2021 16:49

Instrument :

MSVOA_L

ClientSampleId :

GOI-IA-6(2021)

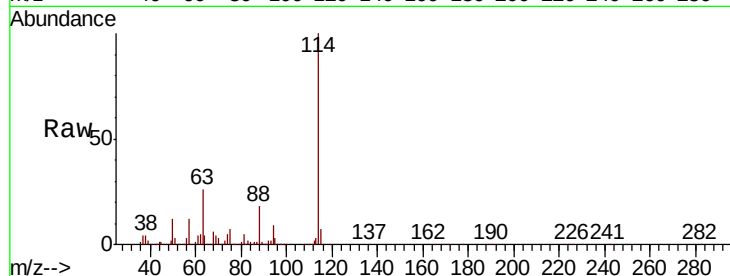
Tot Ion: 63 Resp: 788070

Ion Ratio Lower Upper

63 100

41 0.0 62.4 93.6#

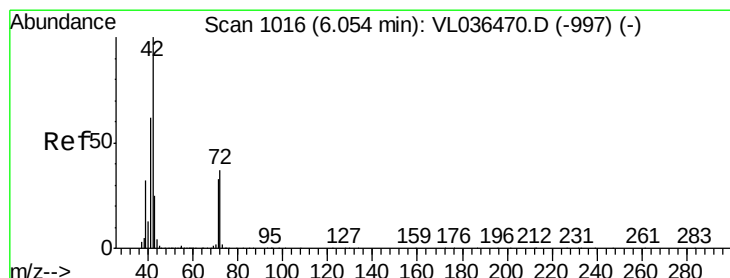
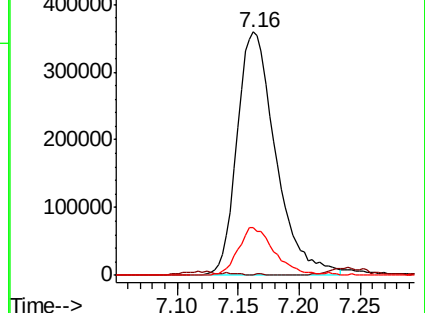
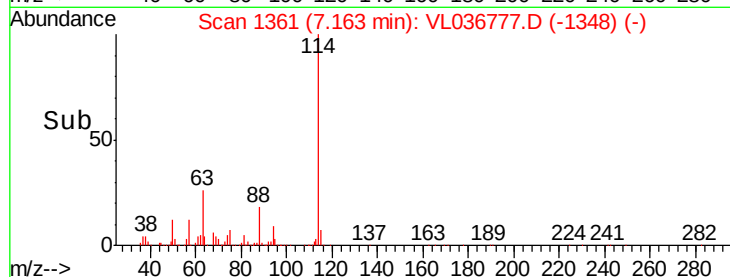
62 19.6 52.8 79.2#



Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 62.10 (61.80 to 62.80): VL0



#41

Tetrahydrofuran

Concen: 0.036 ppbv

RT: 6.05 min Scan# 1016

Delta R.T. -0.00 min

Lab File: VL036777.D

Acq: 9 Apr 2021 16:49

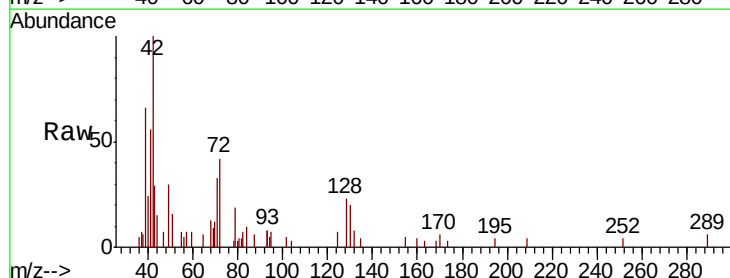
Tgt Ion: 42 Resp: 2408

Ion Ratio Lower Upper

42 100

72 145.3 27.6 41.4#

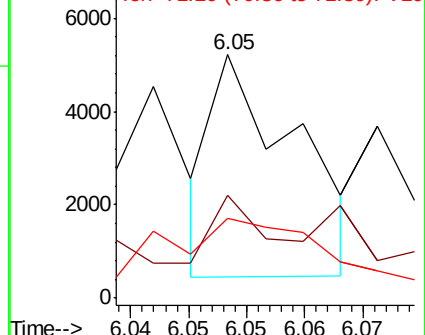
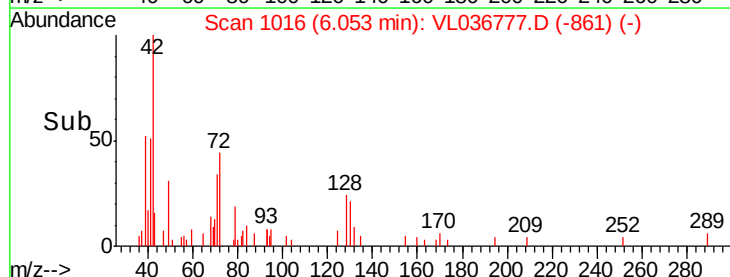
71 144.7 27.0 40.4#

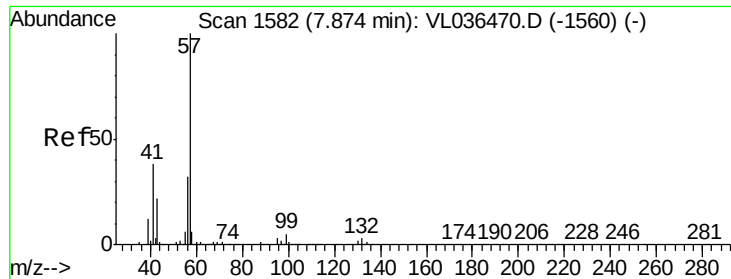


Abundance Ion 42.10 (41.80 to 42.80): VL0

Ion 72.10 (71.80 to 72.80): VL0

Ion 71.10 (70.80 to 71.80): VL0

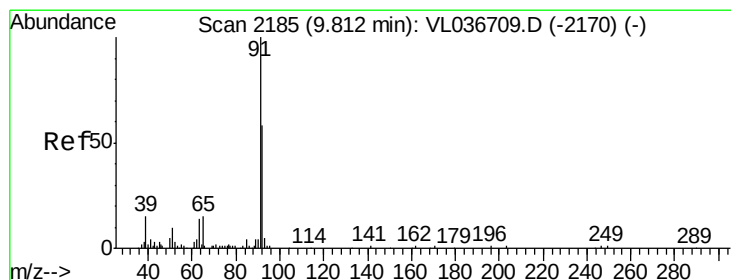
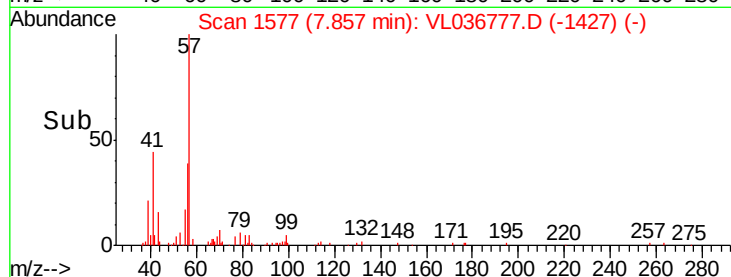
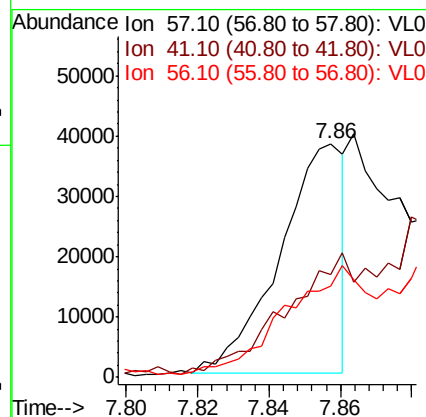
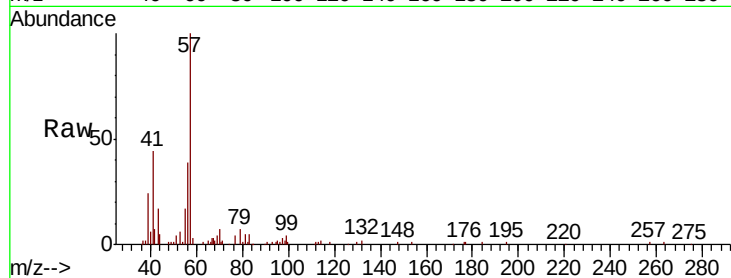




#44
 2,2,4-Trimethylpentane
 Concen: 0.099 ppbv
 RT: 7.86 min Scan# 1577
 Delta R.T. -0.02 min
 Lab File: VL036777.D
 Acq: 9 Apr 2021 16:49

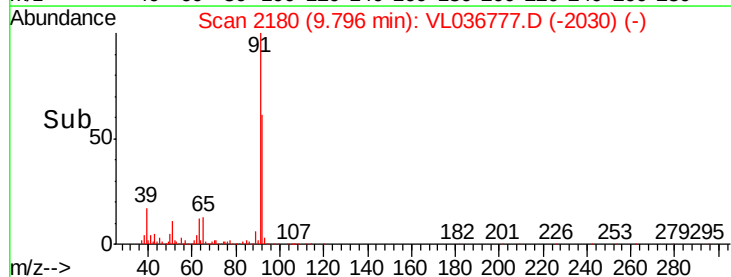
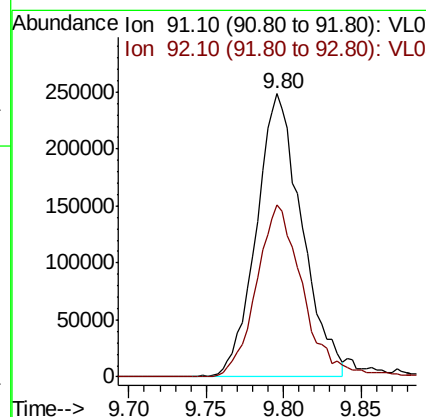
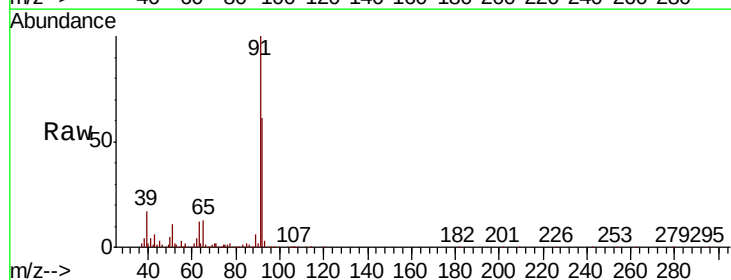
Instrument :
 MSVOA_L
 ClientSampleId :
 GOI-IA-6(2021)

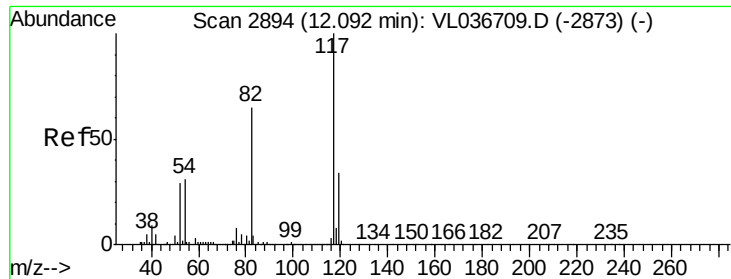
Tot Ion	57	Resp	47631
Ion Ratio	Lower	Upper	
57	100		
41	0.0	28.8	43.2#
56	0.0	26.1	39.1#



#53
 Toluene
 Concen: 1.753 ppbv
 RT: 9.80 min Scan# 2180
 Delta R.T. -0.02 min
 Lab File: VL036777.D
 Acq: 9 Apr 2021 16:49

Tgt Ion	91	Resp	510255
Ion Ratio	Lower	Upper	
91	100		
92	62.6	48.8	73.2

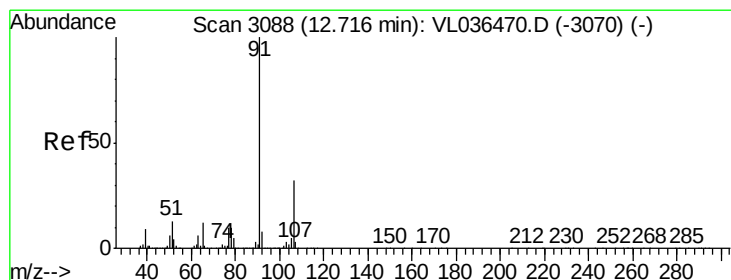
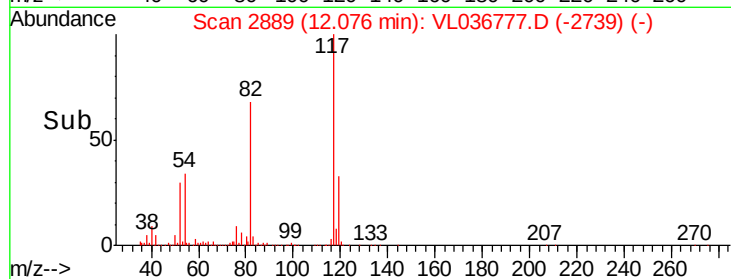
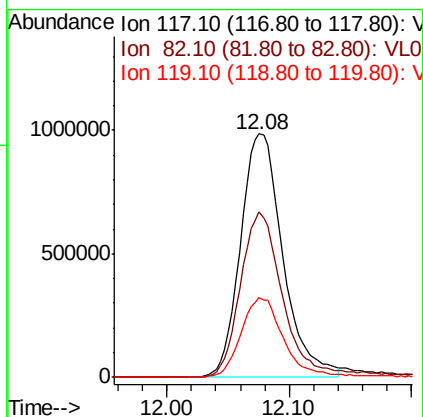
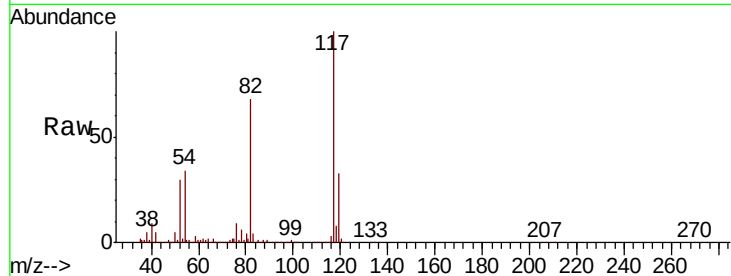




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.08 min Scan# 2889
Delta R.T. -0.02 min
Lab File: VL036777.D
Acq: 9 Apr 2021 16:49

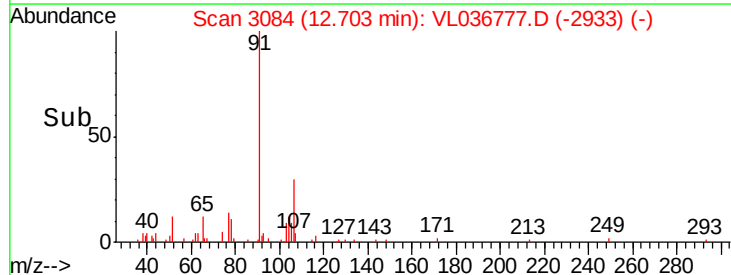
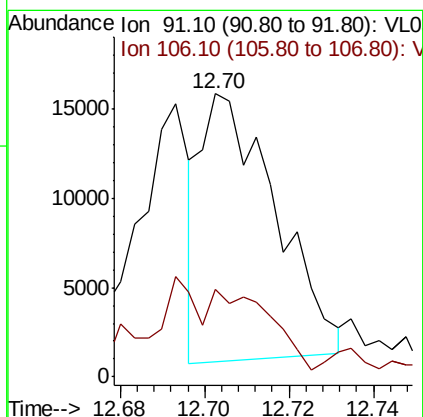
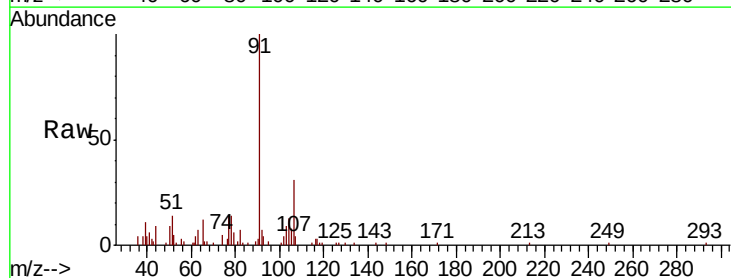
Instrument :
MSVOA_L
ClientSampleId :
GOI-IA-6(2021)

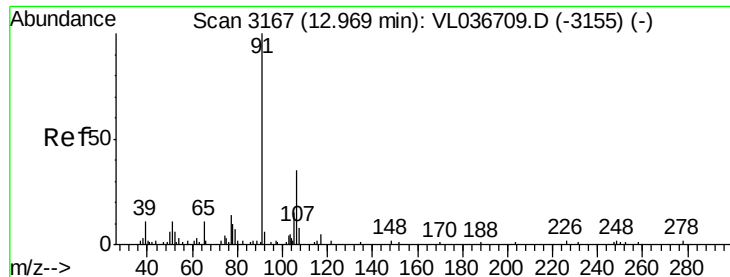
Tot Ion:117 Resp: 2361956
Ion Ratio Lower Upper
117 100
82 70.1 57.4 86.0
119 33.7 47.4 71.0#



#58
Ethyl Benzene
Concen: 0.053 ppbv
RT: 12.70 min Scan# 3084
Delta R.T. -0.01 min
Lab File: VL036777.D
Acq: 9 Apr 2021 16:49

Tgt Ion: 91 Resp: 18305
Ion Ratio Lower Upper
91 100
106 26.9 25.3 37.9





#59

m/p-Xylene

Concen: 0.098 ppbv

RT: 12.98 min Scan# 3170

Delta R.T. -0.02 min

Lab File: VL036777.D

Acq: 9 Apr 2021 16:49

Instrument :

MSVOA_L

ClientSampleId :

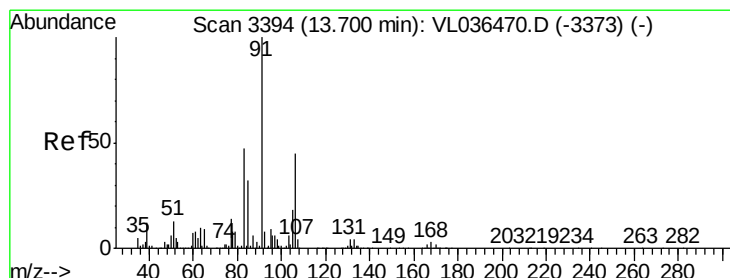
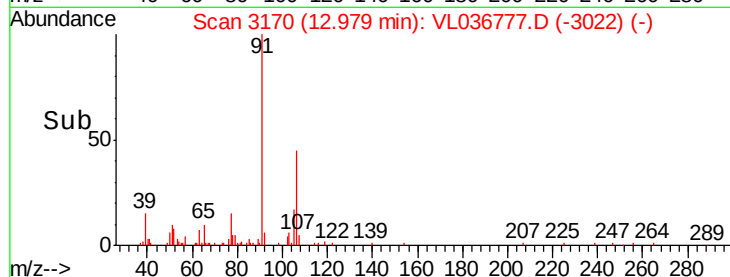
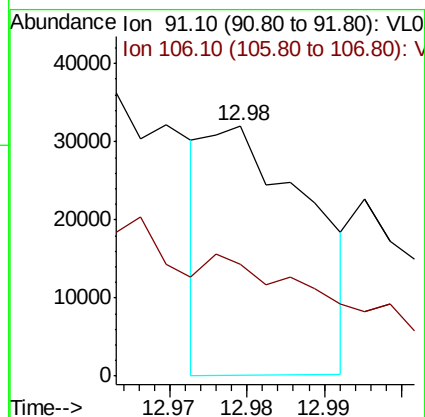
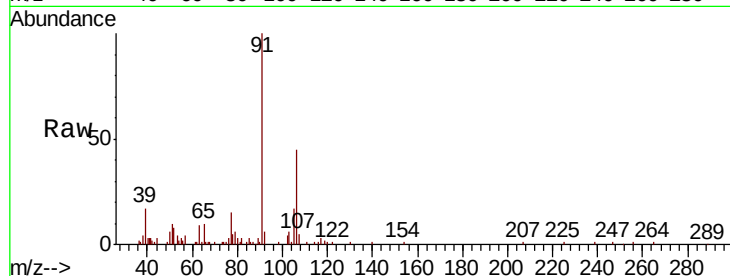
GOI-IA-6(2021)

Tot Ion: 91 Resp: 29340

Ion Ratio Lower Upper

91 100

106 0.0 35.3 52.9#



#60

o-Xylene

Concen: 0.068 ppbv

RT: 13.68 min Scan# 3387

Delta R.T. -0.02 min

Lab File: VL036777.D

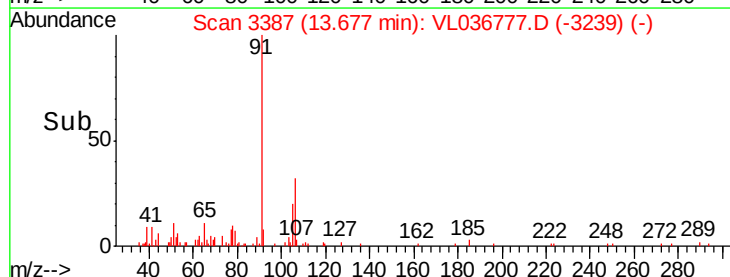
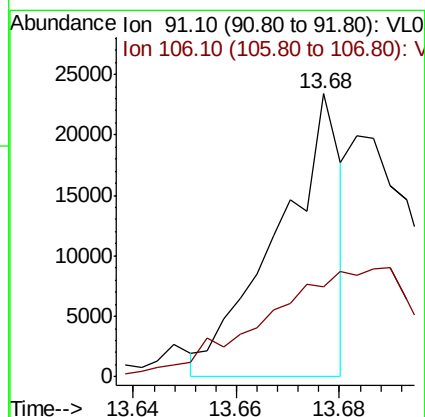
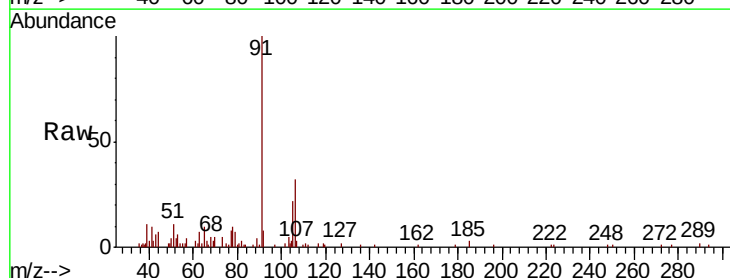
Acq: 9 Apr 2021 16:49

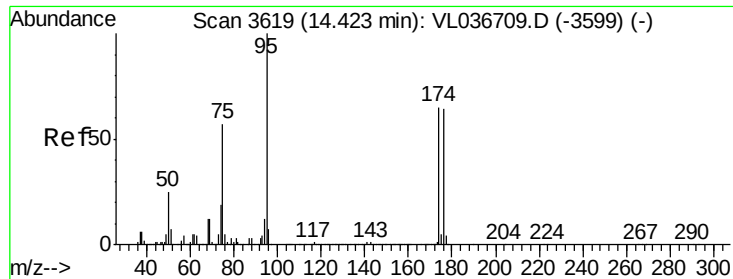
Tgt Ion: 91 Resp: 19755

Ion Ratio Lower Upper

91 100

106 0.0 22.3 66.9#





#68

1-Bromo-4-Fluorobenzene

Concen: 7.977 ppbv

RT: 14.41 min Scan# 3614

Delta R.T. -0.02 min

Lab File: VL036777.D

Acq: 9 Apr 2021 16:49

Instrument :

MSVOA_L

ClientSampleId :

GOI-IA-6(2021)

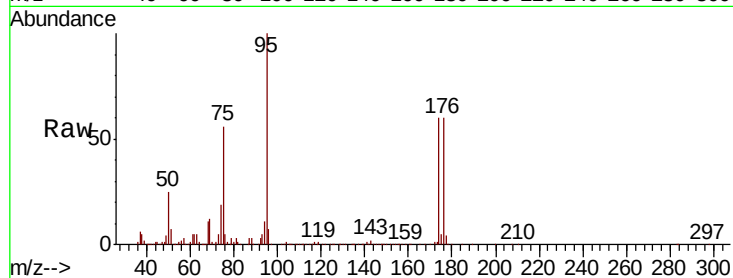
Tot Ion: 95 Resp: 1501579

Ion Ratio Lower Upper

95 100

174 68.0 51.0 76.6

175 4.8 3.9 5.9

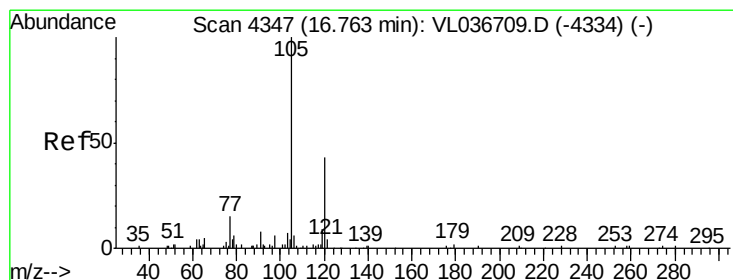
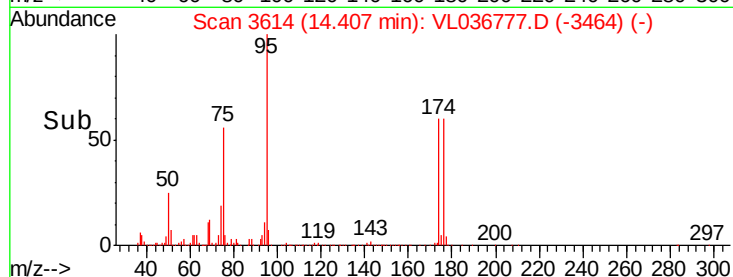
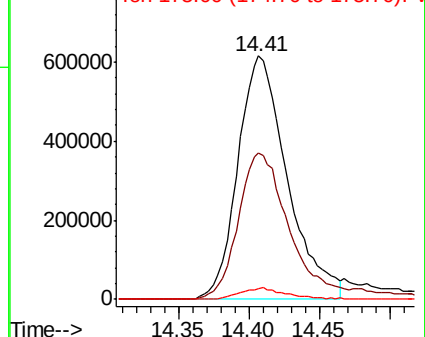


Abundance

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



#74

1,2,4-Trimethylbenzene

Concen: 0.038 ppbv

RT: 16.75 min Scan# 4343

Delta R.T. -0.02 min

Lab File: VL036777.D

Acq: 9 Apr 2021 16:49

Tgt Ion:105 Resp: 12071

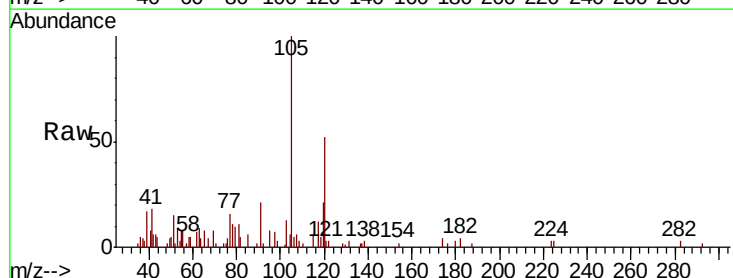
Ion Ratio Lower Upper

105 100

120 49.4 39.2 58.8

91 18.9 42.6 64.0#

77 8.5 18.6 28.0#



Abundance

Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

