

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL060121\
 Data File : VL037071.D
 Acq On : 1 Jun 2021 15:45
 Operator : SY/AP
 Sample : M2559-02DL 10X
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Jun 02 03:00:49 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL051821AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Tue May 18 12:00:15 2021
 QLast Update : Tue May 18 12:00:15 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.65	49	1579492	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.16	114	4798712	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.07	117	4314600	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.40	95	3256702	10.05	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	100.50%

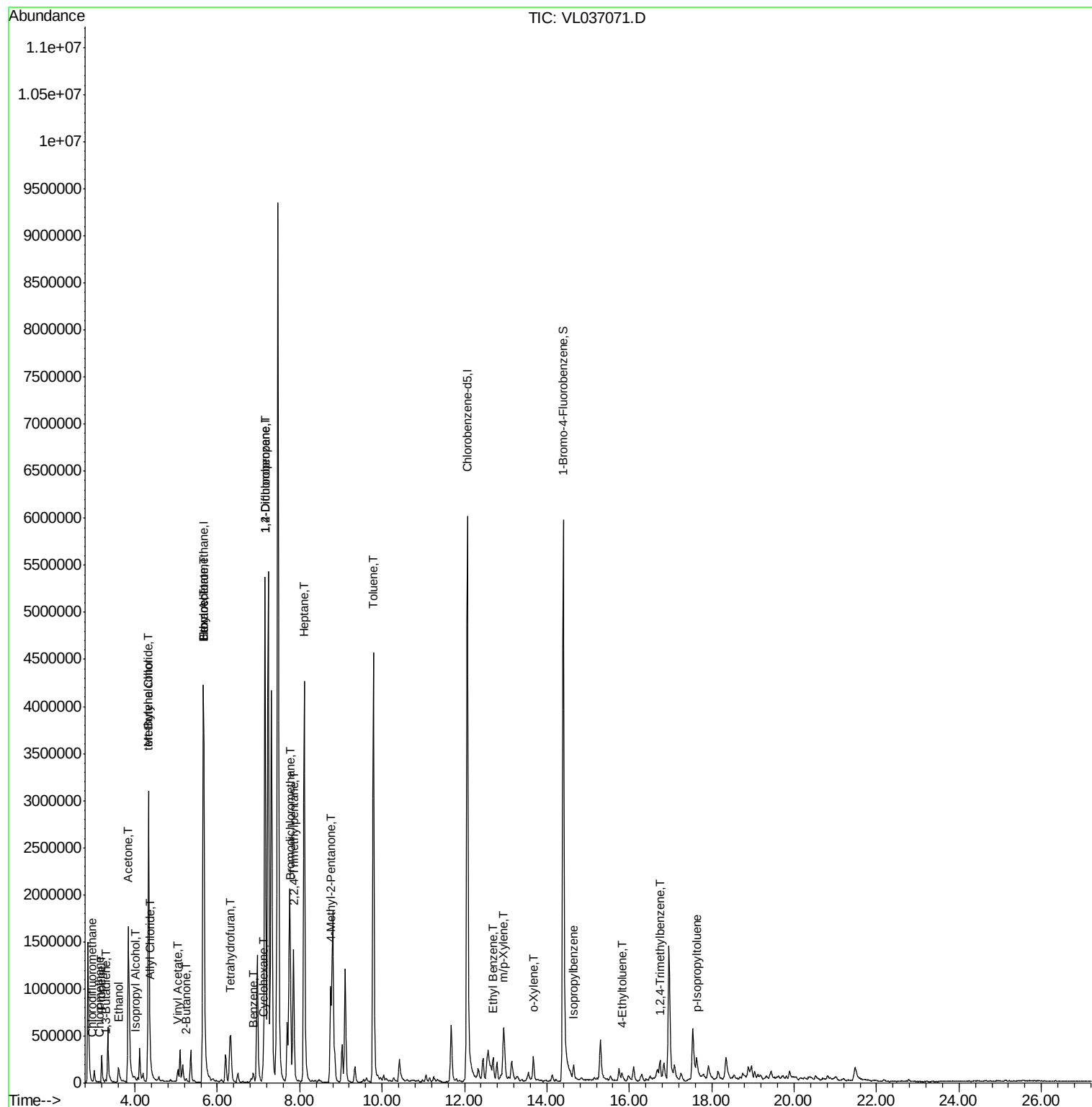
Target Compounds					Ovalue
3) Chlorodifluoromethane	2.97	51	9280	0.032	ppbv 92
4) Chloromethane	3.13	50	3158	0.032	ppbv 97
9) Propene	3.19	41	88280	0.852	ppbv 86
10) Heptane	8.11	43	2151007	8.330	ppbv 99
13) Ethanol	3.60	45	244342	17.674	ppbv 99
15) Acetone	3.83	43	2531073	15.645	ppbv 94
16) 1,3-Butadiene	3.29	39	9276	0.092	ppbv # 22
17) tert-Butyl alcohol	4.32	59	31490	0.212	ppbv # 75
19) Isopropyl Alcohol	4.01	45	2856	0.033	ppbv # 30
20) Methylene Chloride	4.33	84	1335916	15.405	ppbv 98
21) Allyl Chloride	4.37	41	4040	0.033	ppbv # 19
23) Vinyl Acetate	5.04	43	61120	0.238	ppbv # 1
25) Ethyl Acetate	5.67	43	922589	2.373	ppbv # 77
26) Hexane	5.67	57	1313516	6.614	ppbv # 47
30) Cyclohexane	7.11	84	35189	0.209	ppbv # 2
34) 2-Butanone	5.24	43	28480	0.163	ppbv # 45
36) Benzene	6.87	78	62686	0.152	ppbv # 94
39) 1,2-Dichloropropane	7.16	63	1136732	7.139	ppbv # 25
41) Tetrahydrofuran	6.30	42	29278	0.294	ppbv # 36
42) Bromodichloromethane	7.78	83	87209	0.281	ppbv # 29
44) 2,2,4-Trimethylpentane	7.85	57	215764	0.304	ppbv # 1
50) 4-Methyl-2-Pentanone	8.75	43	142438	0.494	ppbv 96
53) Toluene	9.79	91	4117042	8.371	ppbv 99
58) Ethyl Benzene	12.69	91	204571	0.336	ppbv 97
59) m/p-Xylene	12.95	91	596030	1.184	ppbv 98
60) o-Xylene	13.67	91	129383	0.270	ppbv # 64
62) Isopropylbenzene	14.64	105	86660	0.126	ppbv # 62
69) p-Isopropyltoluene	17.63	119	137104	0.188	ppbv # 92
72) 4-Ethyltoluene	15.82	105	64837	0.114	ppbv # 95
74) 1,2,4-Trimethylbenzene	16.74	105	155585	0.281	ppbv # 67

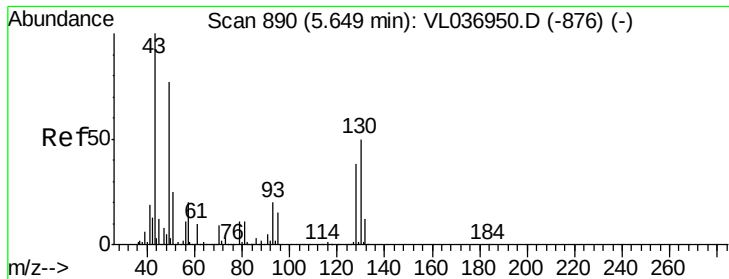
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Tue May 18 12:00:15 2021
QLast Update : Tue May 18 12:00:15 2021
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 min Scan# 891

Delta R.T. 0.00 min

Lab File: VL037071.D

Acq: 1 Jun 2021 15:45

Instrument :

MSVOA_L

ClientSampleId :

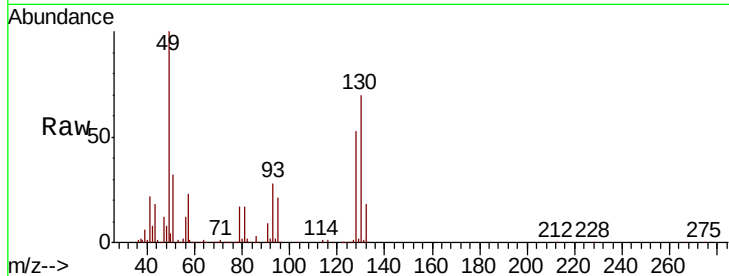
Tot Ion: 49 Resp: 1579492

Ion Ratio Lower Upper

49 100

128 57.8 26.9 80.7

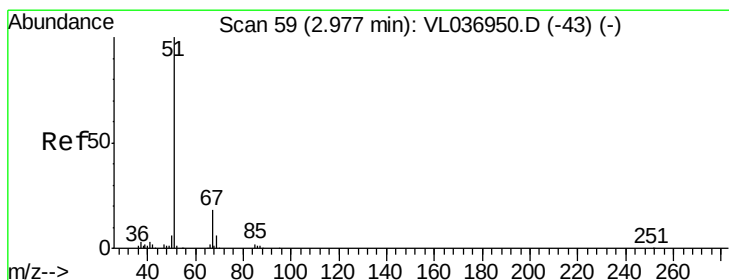
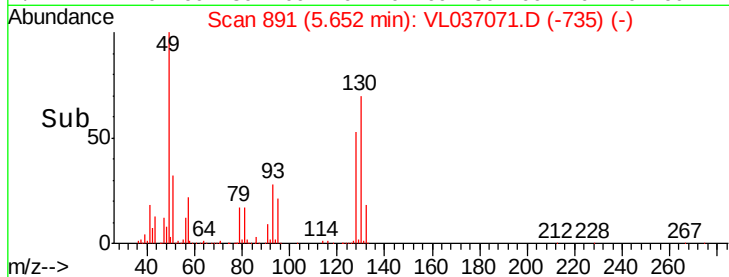
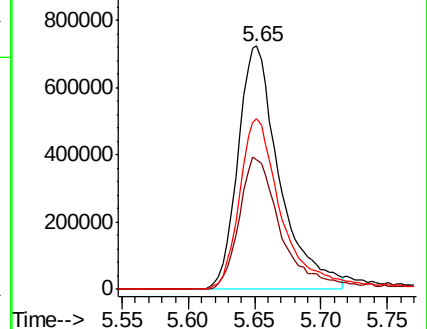
130 74.4 33.8 101.4



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



#3

Chlorodifluoromethane

Concen: 0.032 ppbv

RT: 2.97 min Scan# 57

Delta R.T. -0.01 min

Lab File: VL037071.D

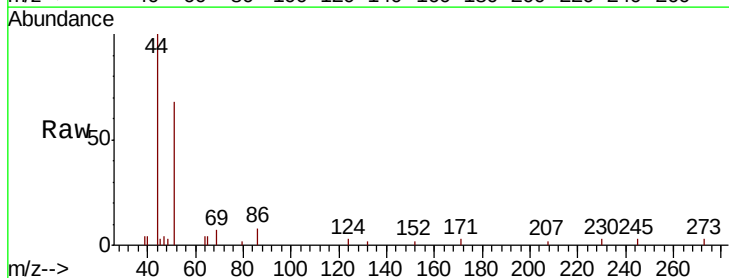
Acq: 1 Jun 2021 15:45

Tgt Ion: 51 Resp: 9280

Ion Ratio Lower Upper

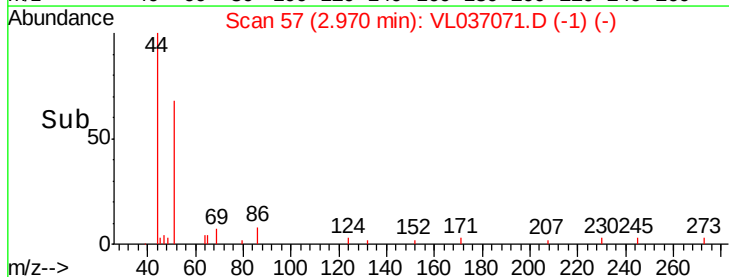
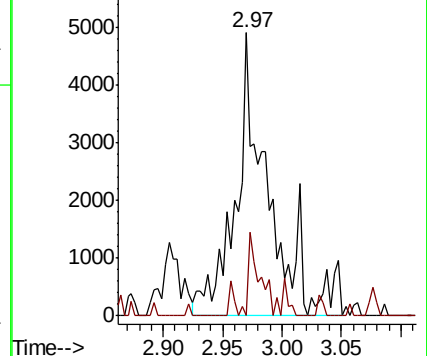
51 100

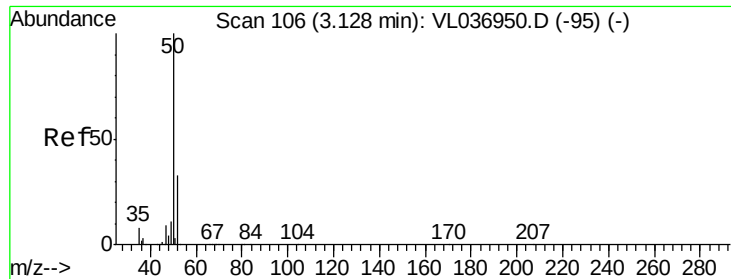
67 14.7 14.6 21.8



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0





#4

Chloromethane

Concen: 0.032 ppbv

RT: 3.13 min Scan# 106

Delta R.T. -0.00 min

Lab File: VL037071.D

Acq: 1 Jun 2021 15:45

Instrument :

MSVOA_L

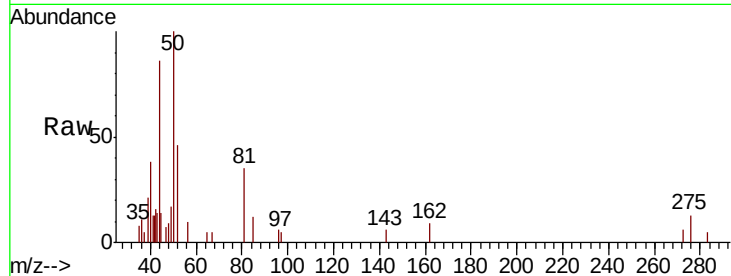
ClientSampled :

Tot Ion: 50 Resp: 3158

Ion Ratio Lower Upper

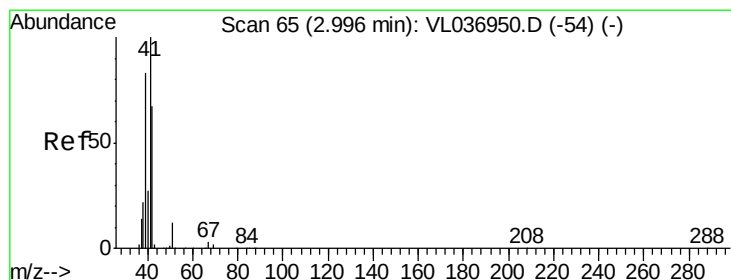
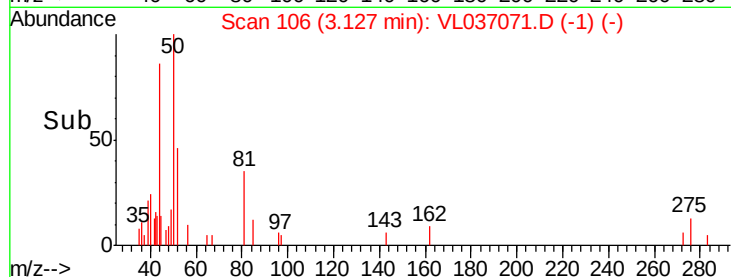
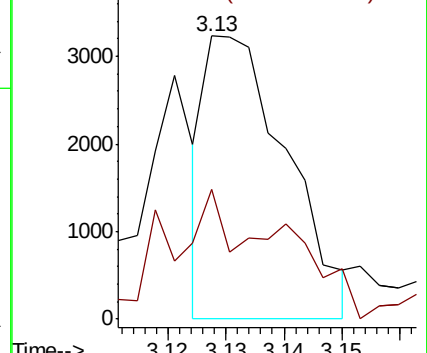
50 100

52 34.0 26.1 39.1



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0



#9

Propene

Concen: 0.852 ppbv

RT: 3.19 min Scan# 125

Delta R.T. 0.19 min

Lab File: VL037071.D

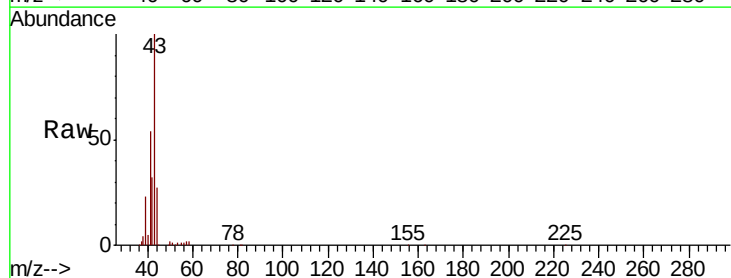
Acq: 1 Jun 2021 15:45

Tgt Ion: 41 Resp: 88280

Ion Ratio Lower Upper

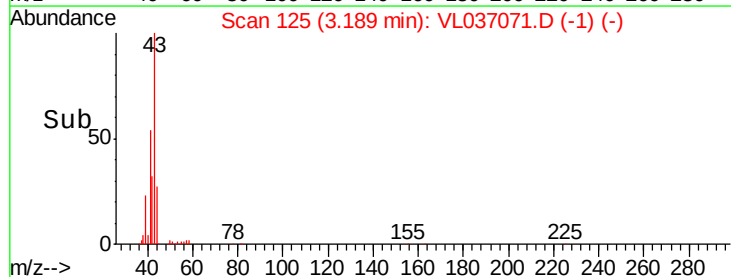
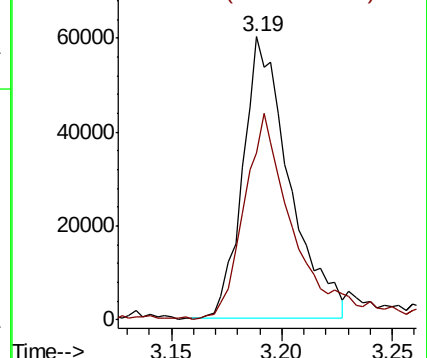
41 100

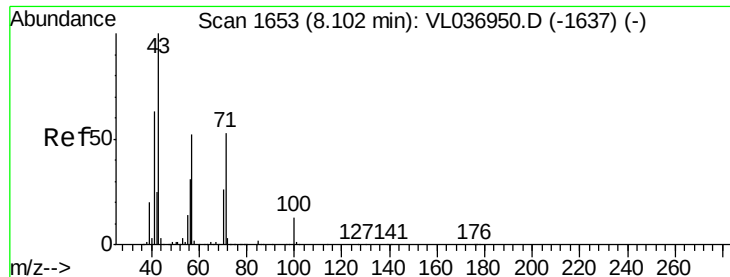
42 79.0 53.9 80.9



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

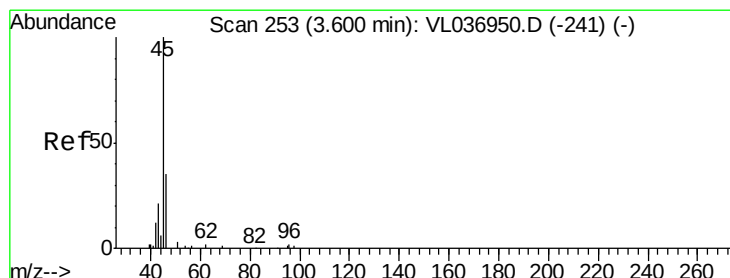
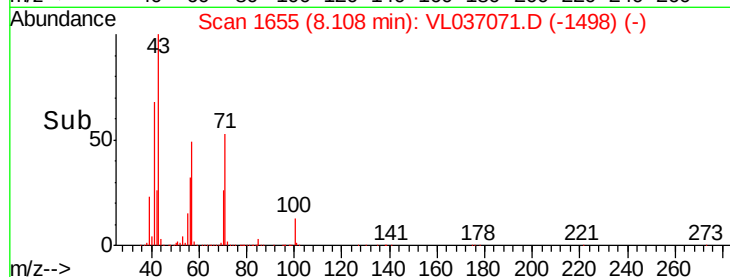
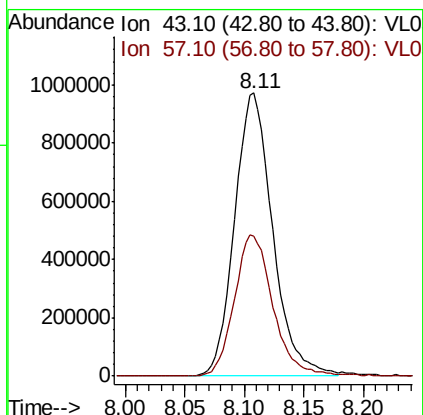
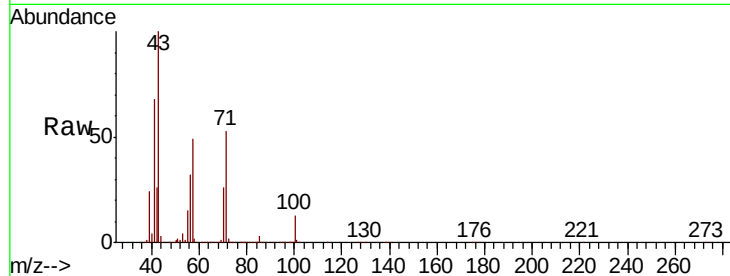




#10
Heptane
Concen: 8.330 ppbv
RT: 8.11 min Scan# 1655
Delta R.T. 0.01 min
Lab File: VL037071.D
Acq: 1 Jun 2021 15:45

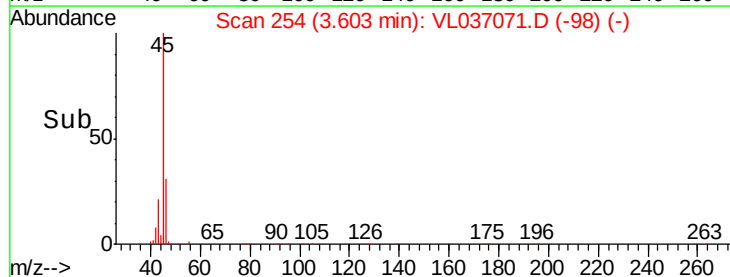
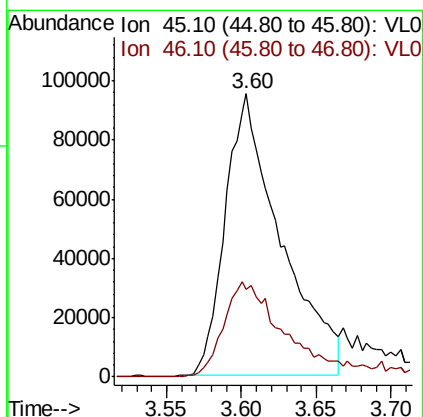
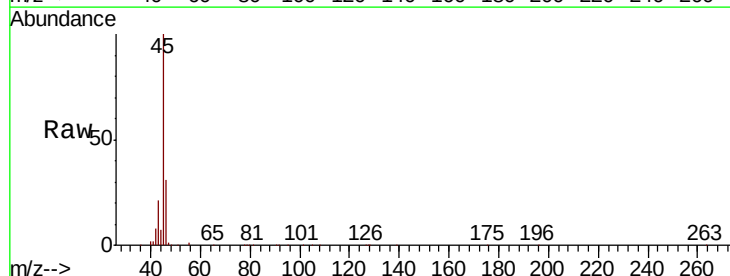
Instrument :
MSVOA_L
ClientSampleId :

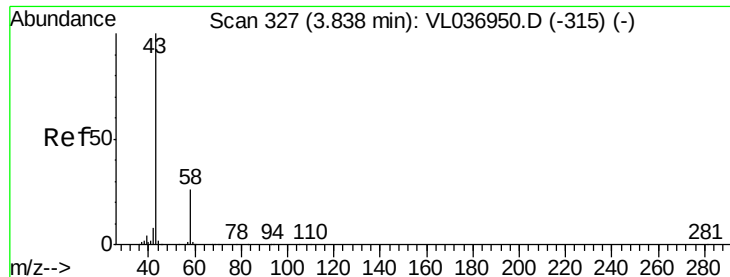
Tot Ion: 43 Resp: 2151007
Ion Ratio Lower Upper
43 100
57 50.8 41.0 61.6



#13
Ethanol
Concen: 17.674 ppbv
RT: 3.60 min Scan# 254
Delta R.T. 0.00 min
Lab File: VL037071.D
Acq: 1 Jun 2021 15:45

Tgt Ion: 45 Resp: 244342
Ion Ratio Lower Upper
45 100
46 41.2 16.3 65.3

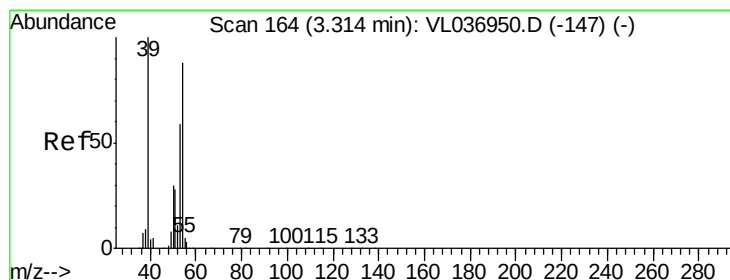
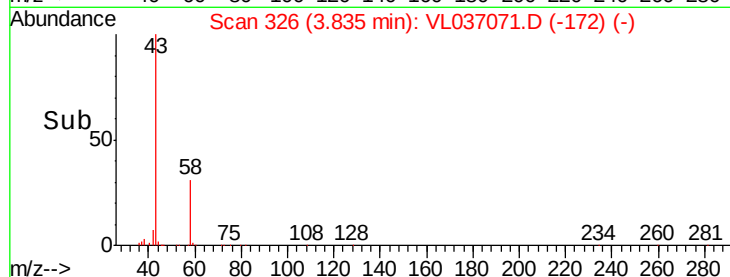
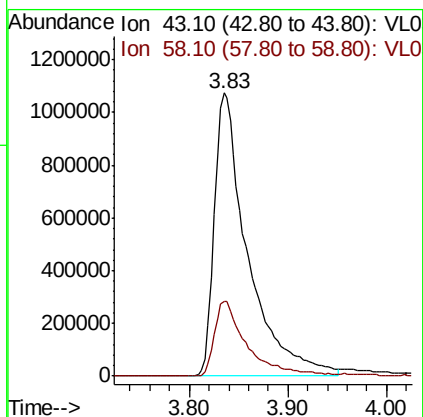
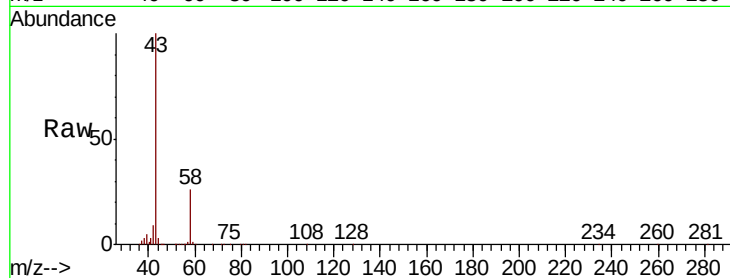




#15
Acetone
Concen: 15.645 ppbv
RT: 3.83 min Scan# 326
Delta R.T. -0.00 min
Lab File: VL037071.D
Acq: 1 Jun 2021 15:45

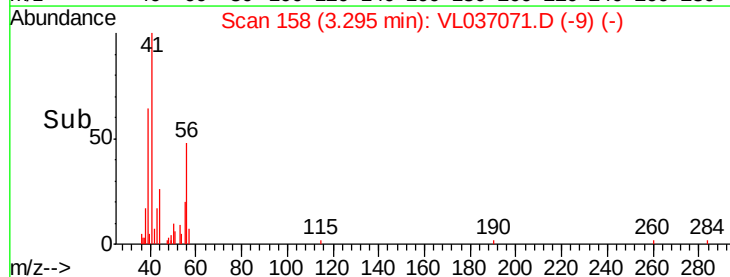
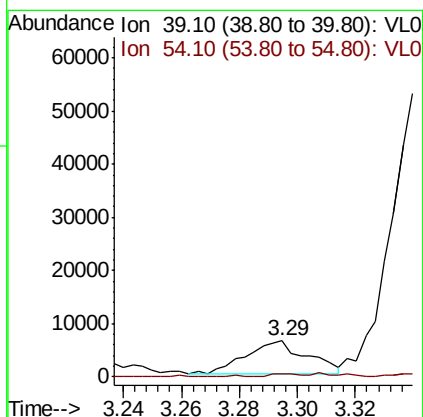
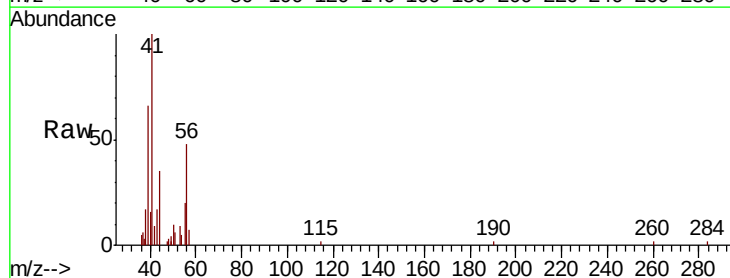
Instrument :
MSVOA_L
ClientSampleId :

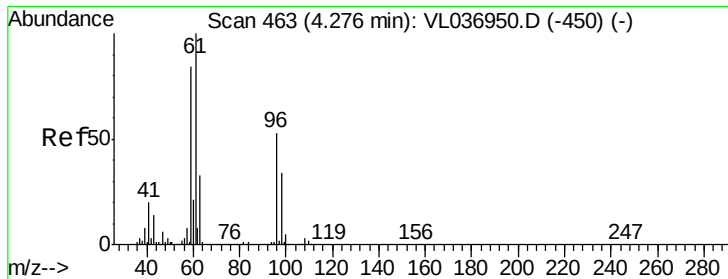
Tot Ion: 43 Resp: 2531073
Ion Ratio Lower Upper
43 100
58 27.0 24.0 36.0



#16
1,3-Butadiene
Concen: 0.092 ppbv
RT: 3.29 min Scan# 158
Delta R.T. -0.02 min
Lab File: VL037071.D
Acq: 1 Jun 2021 15:45

Tgt Ion: 39 Resp: 9276
Ion Ratio Lower Upper
39 100
54 11.0 63.2 94.8#



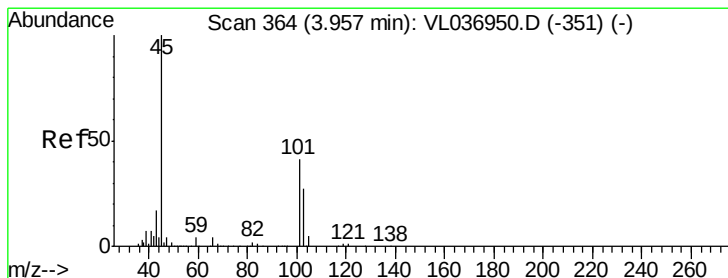
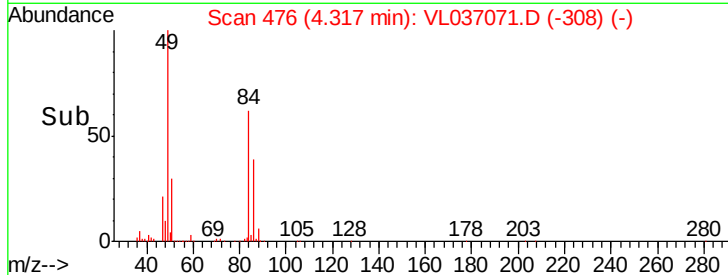
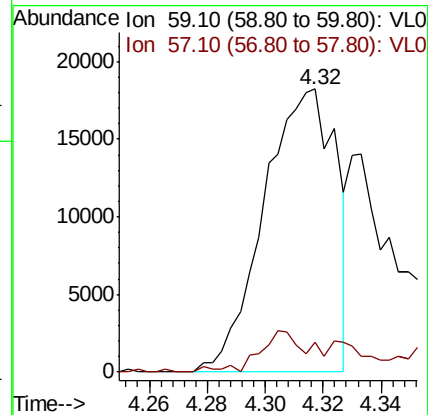
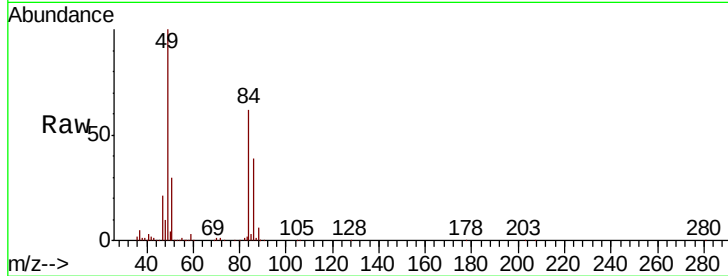


#17

tert-Butyl alcohol
Concen: 0.212 ppbv
RT: 4.32 min Scan# 476
Delta R.T. 0.04 min
Lab File: VL037071.D
Acq: 1 Jun 2021 15:45

Instrument :
MSVOA_L
ClientSampleId :

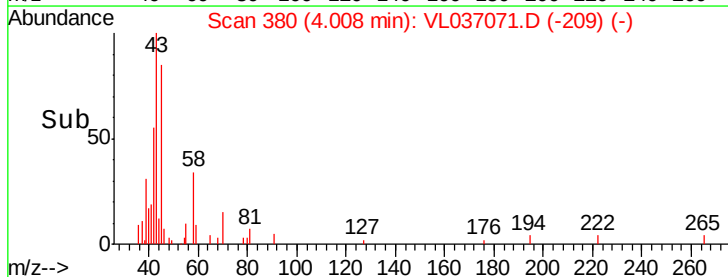
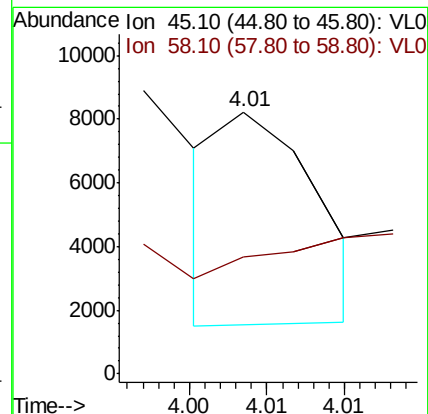
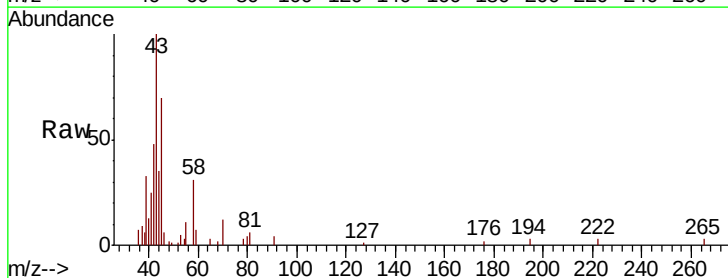
Tot Ion: 59 Resp: 31490
Ion Ratio Lower Upper
59 100
57 19.6 8.3 12.5#

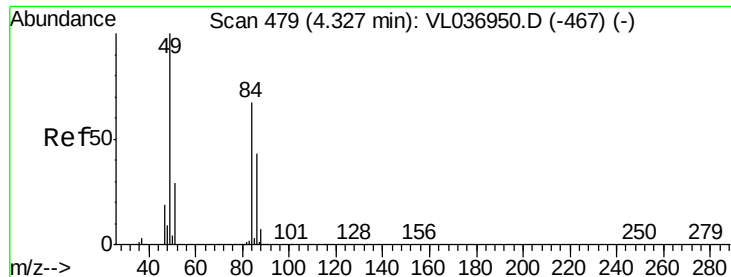


#19

Isopropyl Alcohol
Concen: 0.033 ppbv
RT: 4.01 min Scan# 380
Delta R.T. 0.05 min
Lab File: VL037071.D
Acq: 1 Jun 2021 15:45

Tgt Ion: 45 Resp: 2856
Ion Ratio Lower Upper
45 100
58 0.0 37.2 55.8#





#20

Methylene Chloride

Concen: 15.405 ppbv

RT: 4.33 min Scan# 479

Delta R.T. -0.00 min

Lab File: VL037071.D

Acq: 1 Jun 2021 15:45

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion: 84 Resp: 1335916

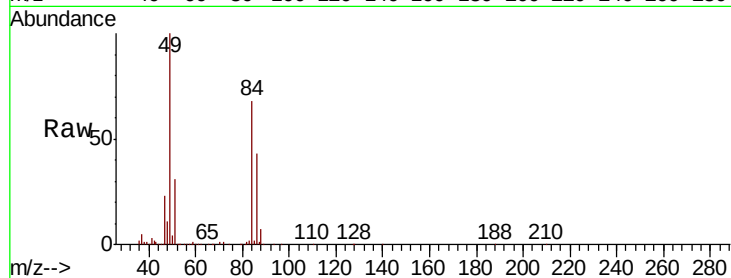
Ion Ratio Lower Upper

84 100

49 147.2 119.8 179.6

51 45.9 35.1 52.7

86 64.0 50.9 76.3

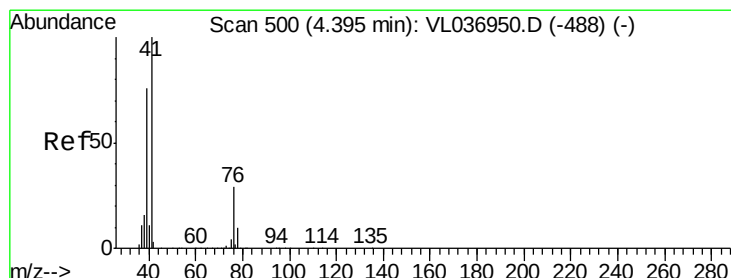
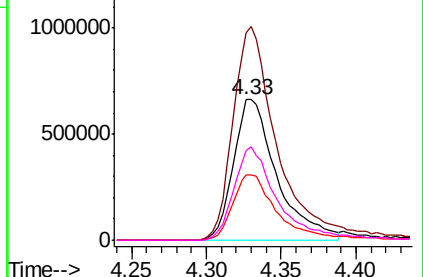
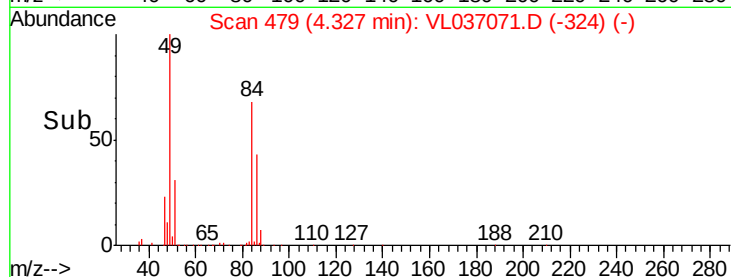


Abundance Ion 84.00 (83.70 to 84.70): VL0

Ion 49.10 (48.80 to 49.80): VL0

Ion 51.10 (50.80 to 51.80): VL0

Ion 86.00 (85.70 to 86.70): VL0



#21

Allyl Chloride

Concen: 0.033 ppbv

RT: 4.37 min Scan# 493

Delta R.T. -0.02 min

Lab File: VL037071.D

Acq: 1 Jun 2021 15:45

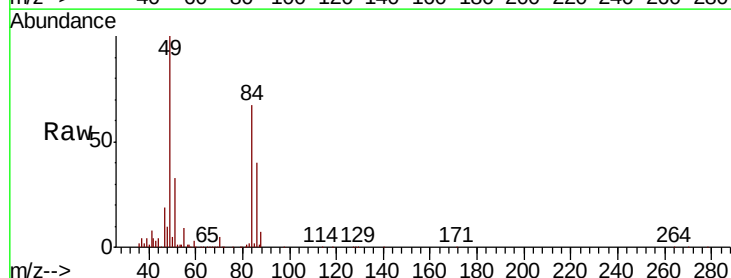
Tgt Ion: 41 Resp: 4040

Ion Ratio Lower Upper

41 100

76 0.0 24.9 37.3#

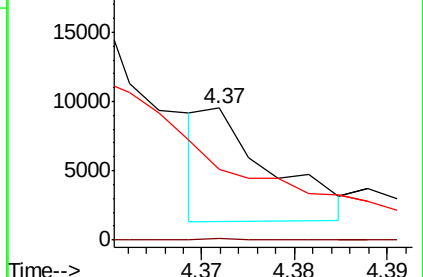
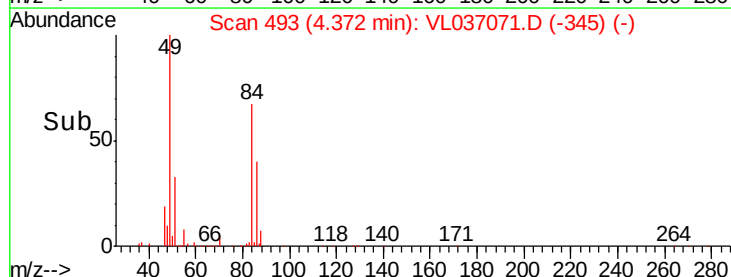
39 0.0 63.7 95.5#

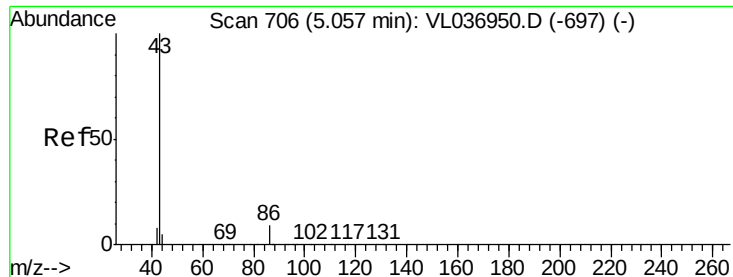


Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 76.10 (75.80 to 76.80): VL0

Ion 39.10 (38.80 to 39.80): VL0

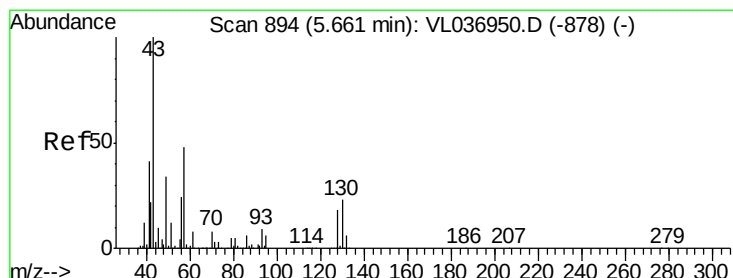
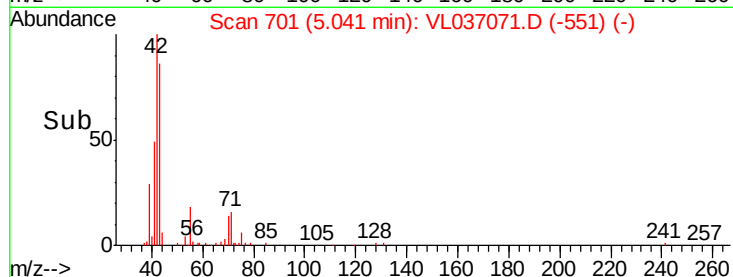
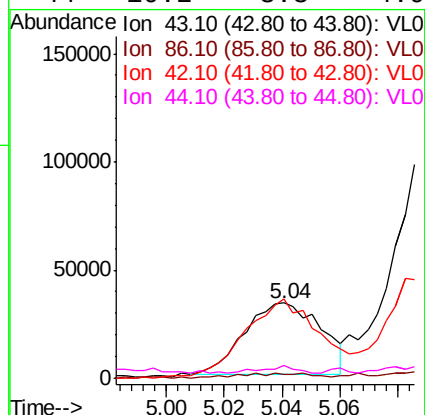
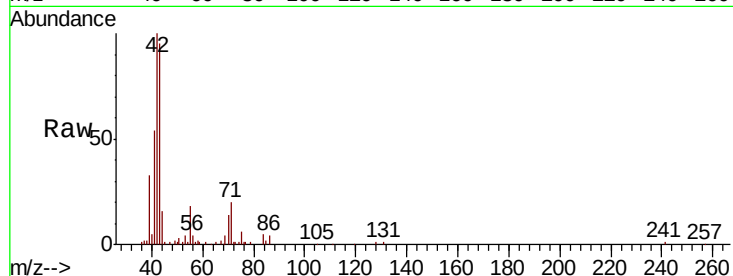




#23
 Vinyl Acetate
 Concen: 0.238 ppbv
 RT: 5.04 min Scan# 701
 Delta R.T. -0.02 min
 Lab File: VL037071.D
 Acq: 1 Jun 2021 15:45

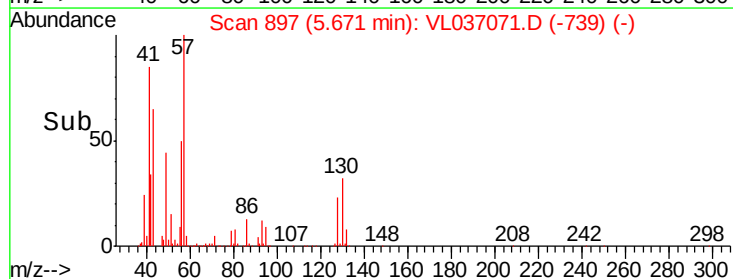
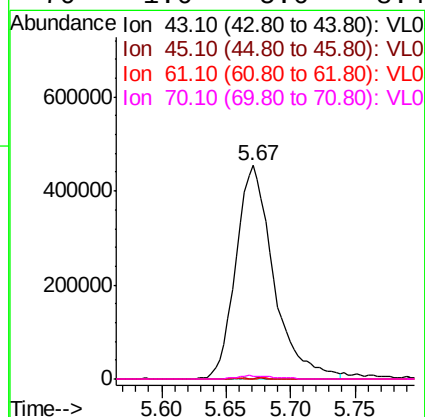
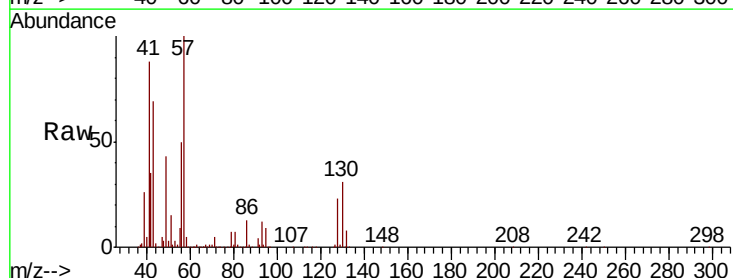
Instrument :
 MSVOA_L
 ClientSampled :

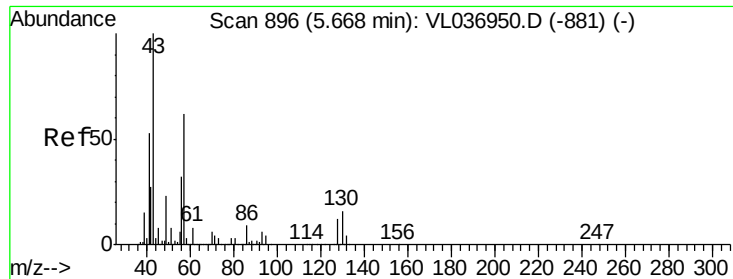
Tot Ion:	43	Resp:	61120
Ion	Ratio	Lower	Upper
43	100		
86	5.0	5.8	8.8#
42	106.3	7.4	11.2#
44	10.2	3.3	4.9#



#25
 Ethyl Acetate
 Concen: 2.373 ppbv
 RT: 5.67 min Scan# 897
 Delta R.T. 0.01 min
 Lab File: VL037071.D
 Acq: 1 Jun 2021 15:45

Tgt Ion:	43	Resp:	922589
Ion	Ratio	Lower	Upper
43	100		
45	0.5	7.8	11.8#
61	0.3	7.8	11.8#
70	1.6	5.6	8.4#

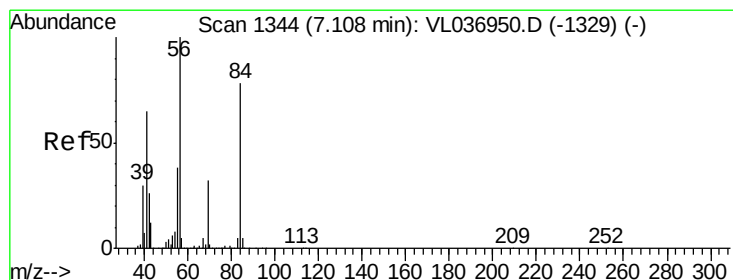
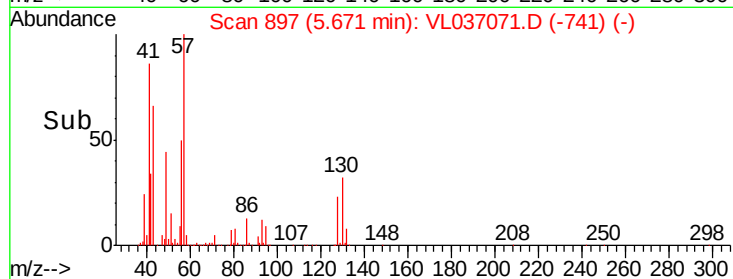
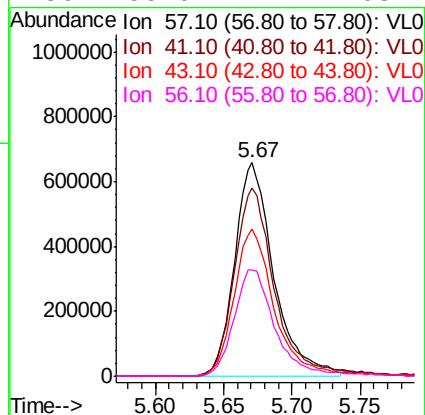
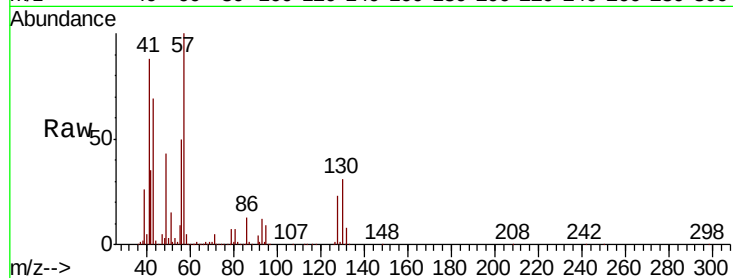




#26
Hexane
Concen: 6.614 ppbv
RT: 5.67 min Scan# 897
Delta R.T. 0.00 min
Lab File: VL037071.D
Acq: 1 Jun 2021 15:45

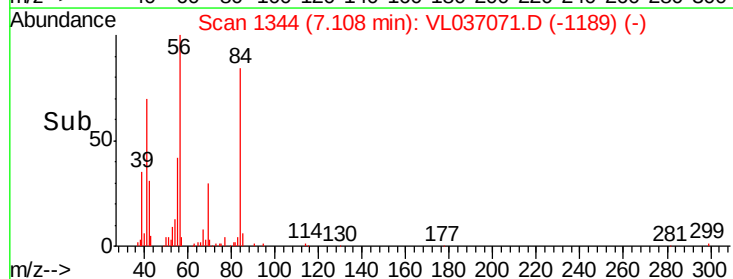
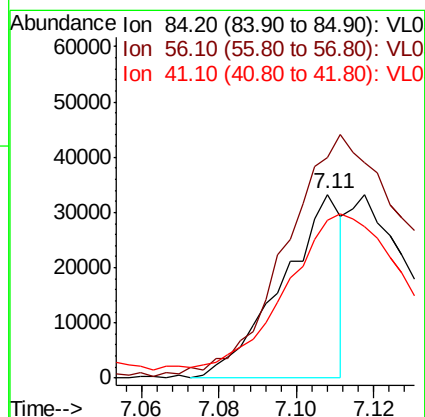
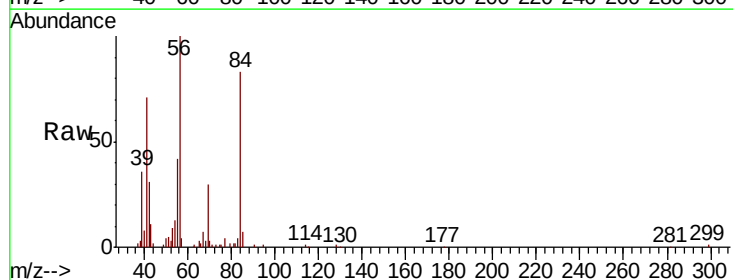
Instrument :
MSVOA_L
ClientSampled :

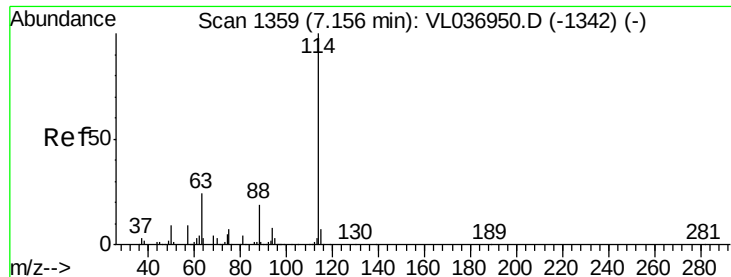
Tot Ion: 57 Resp: 1313516
Ion Ratio Lower Upper
57 100
41 91.4 70.5 105.7
43 71.5 165.8 248.8#
56 53.0 42.2 63.4



#30
Cyclohexane
Concen: 0.209 ppbv
RT: 7.11 min Scan# 1344
Delta R.T. -0.00 min
Lab File: VL037071.D
Acq: 1 Jun 2021 15:45

Tgt Ion: 84 Resp: 35189
Ion Ratio Lower Upper
84 100
56 252.1 107.9 161.9#
41 169.8 65.5 98.3#

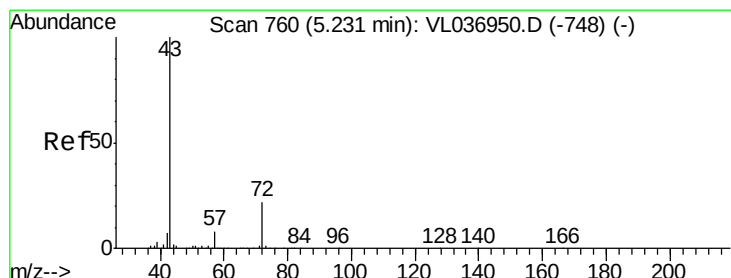
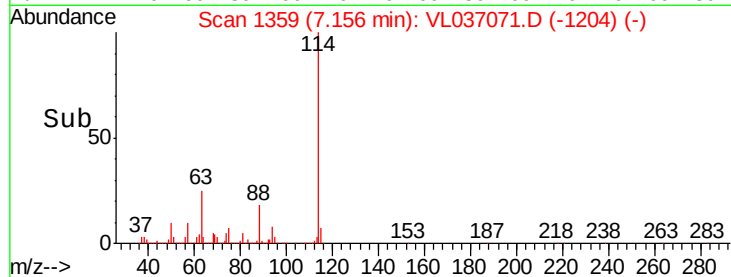
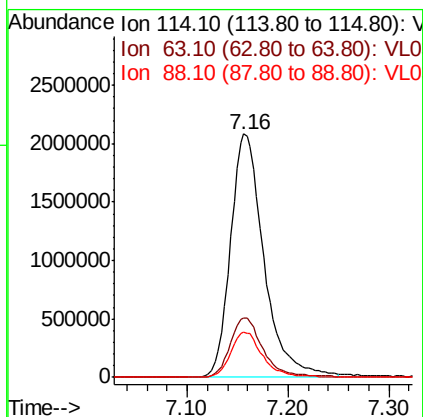
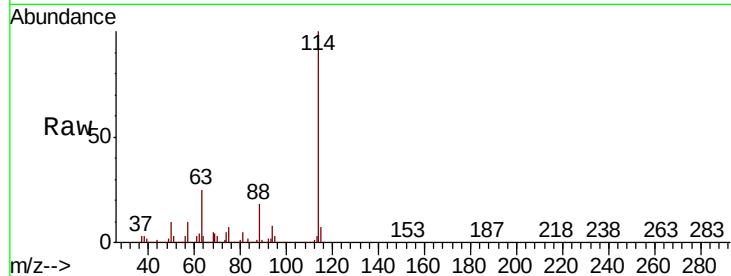




#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.16 min Scan# 1359
 Delta R.T. -0.00 min
 Lab File: VL037071.D
 Acq: 1 Jun 2021 15:45

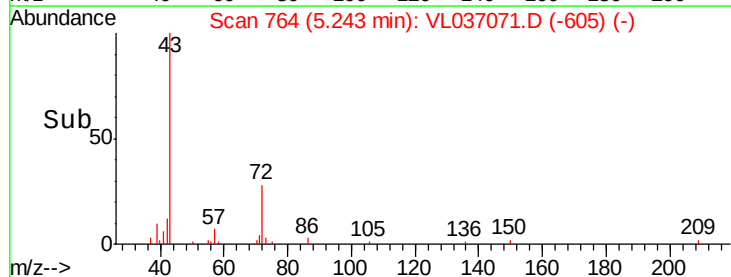
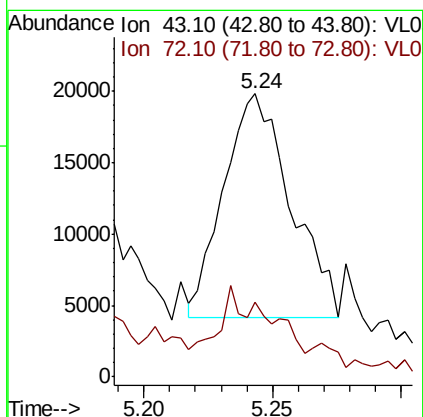
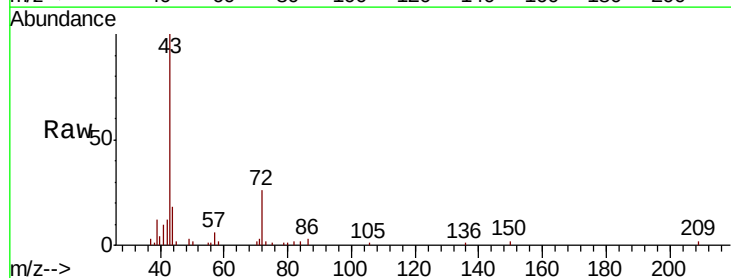
Instrument :
 MSVOA_L
 ClientSampleId :

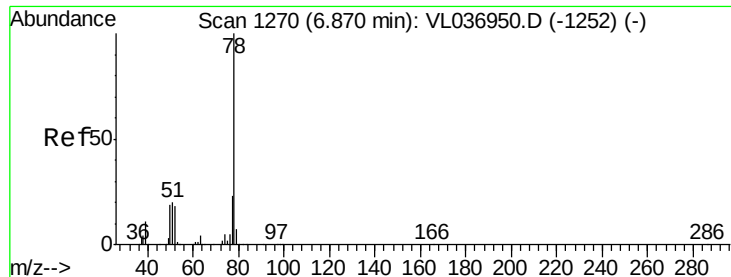
Tot Ion:114 Resp: 4798712
 Ion Ratio Lower Upper
 114 100
 63 24.4 19.6 29.4
 88 17.9 14.6 21.8



#34
 2-Butanone
 Concen: 0.163 ppbv
 RT: 5.24 min Scan# 764
 Delta R.T. 0.01 min
 Lab File: VL037071.D
 Acq: 1 Jun 2021 15:45

Tgt Ion: 43 Resp: 28480
 Ion Ratio Lower Upper
 43 100
 72 50.6 19.0 28.4#

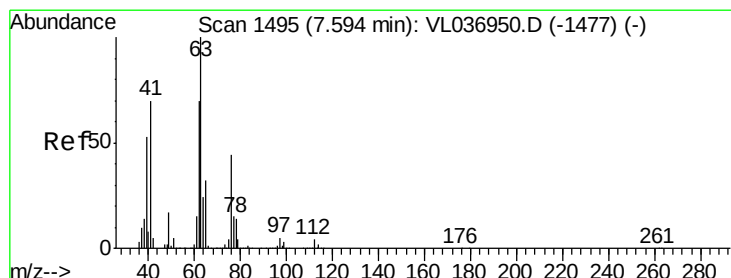
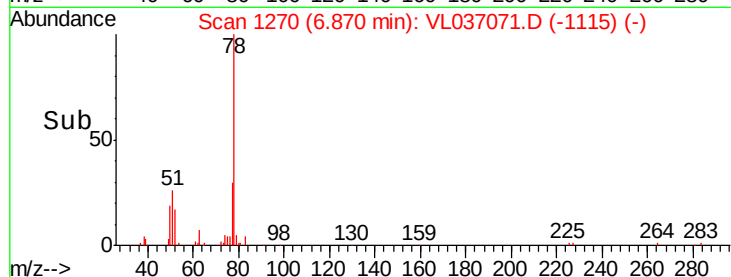
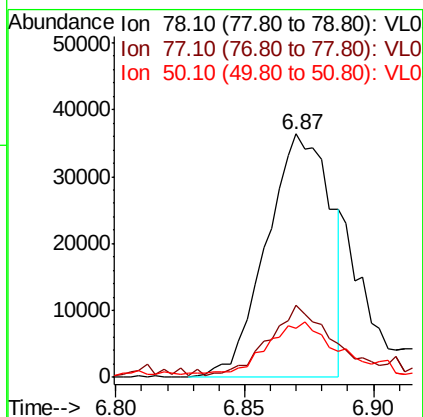
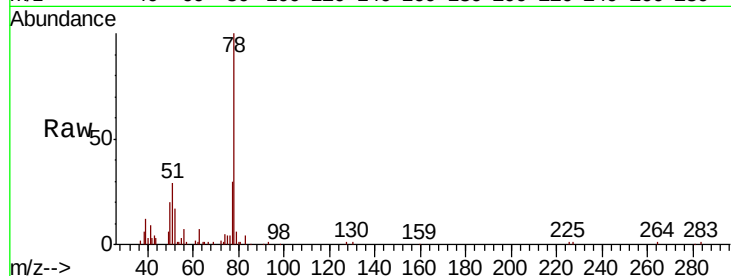




#36
Benzene
Concen: 0.152 ppbv
RT: 6.87 min Scan# 1270
Delta R.T. -0.00 min
Lab File: VL037071.D
Acq: 1 Jun 2021 15:45

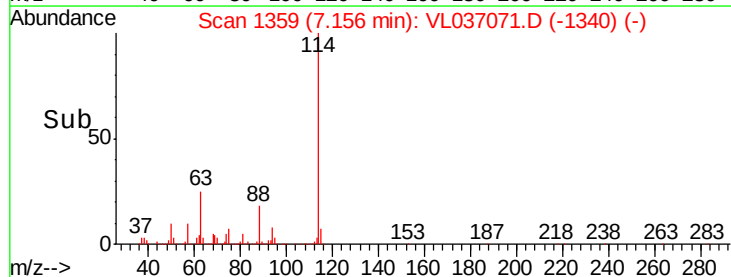
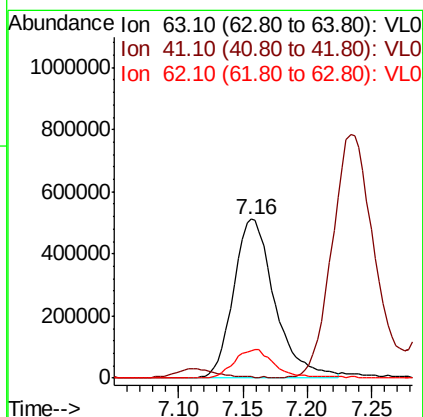
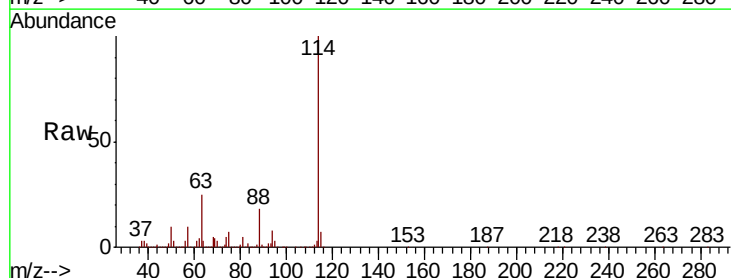
Instrument :
MSVOA_L
ClientSampleId :

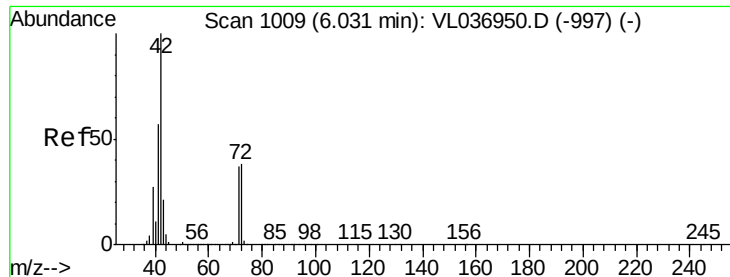
Tot Ion: 78 Resp: 62686
Ion Ratio Lower Upper
78 100
77 28.7 18.6 28.0#
50 18.8 15.0 22.4



#39
1,2-Dichloropropane
Concen: 7.139 ppbv
RT: 7.16 min Scan# 1359
Delta R.T. -0.44 min
Lab File: VL037071.D
Acq: 1 Jun 2021 15:45

Tgt Ion: 63 Resp: 1136732
Ion Ratio Lower Upper
63 100
41 0.0 55.7 83.5#
62 16.9 56.2 84.4#

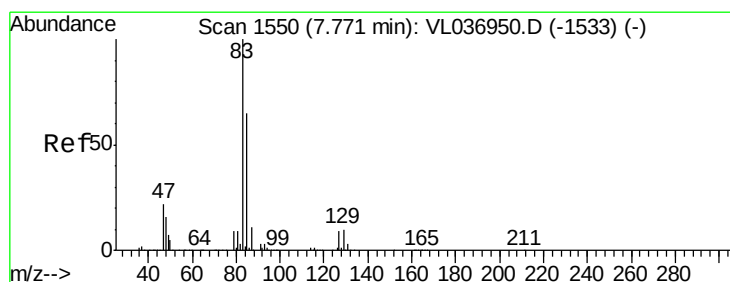
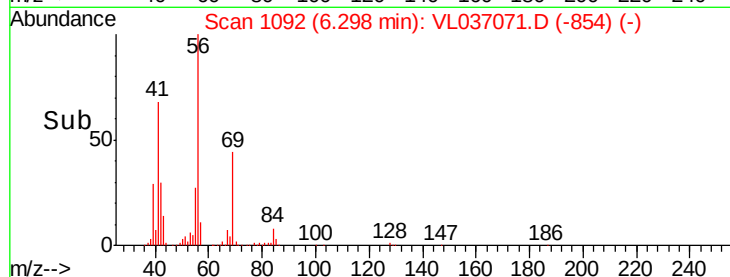
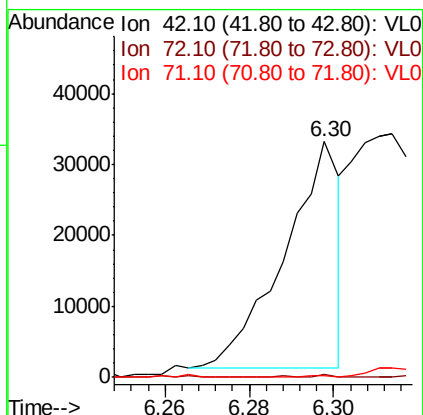
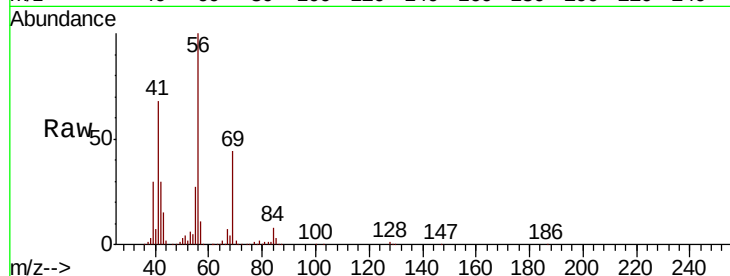




#41
Tetrahydrofuran
Concen: 0.294 ppbv
RT: 6.30 min Scan# 1092
Delta R.T. 0.27 min
Lab File: VL037071.D
Acq: 1 Jun 2021 15:45

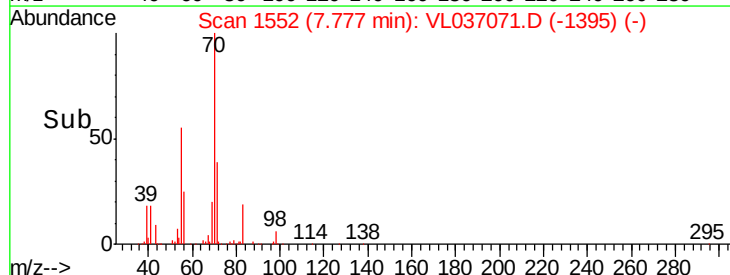
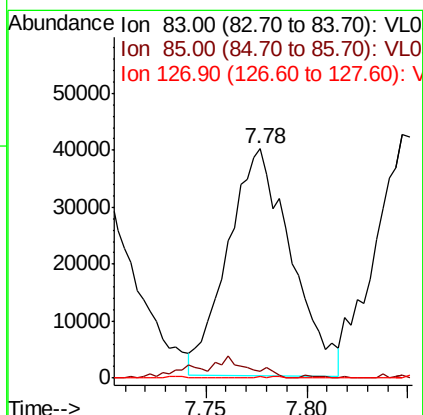
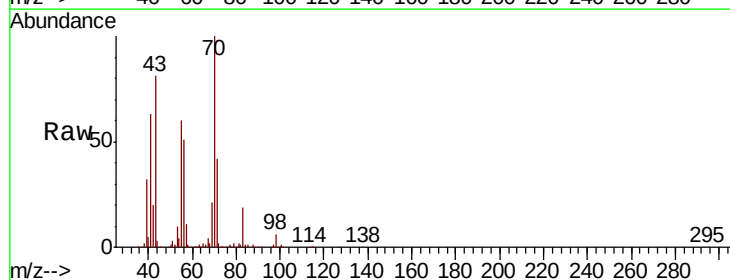
Instrument :
MSVOA_L
ClientSampleId :

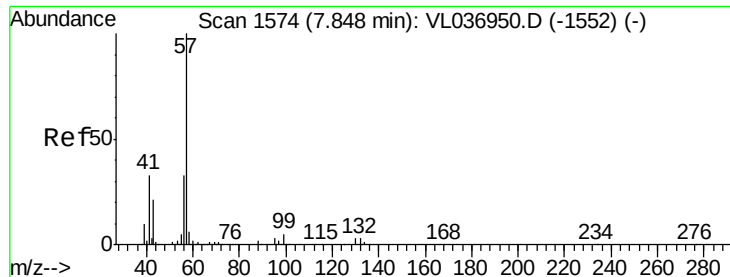
Tot Ion: 42 Resp: 29278
Ion Ratio Lower Upper
42 100
72 0.0 31.4 47.2#
71 0.0 30.4 45.6#



#42
Bromodichloromethane
Concen: 0.281 ppbv
RT: 7.78 min Scan# 1552
Delta R.T. 0.01 min
Lab File: VL037071.D
Acq: 1 Jun 2021 15:45

Tgt Ion: 83 Resp: 87209
Ion Ratio Lower Upper
83 100
85 3.5 51.7 77.5#
127 1.1 6.9 10.3#

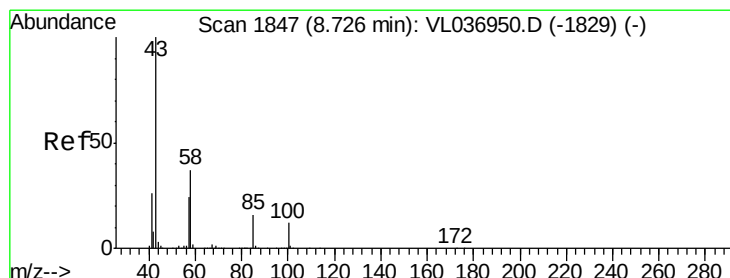
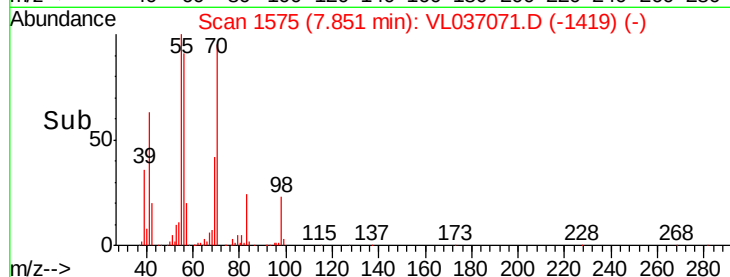
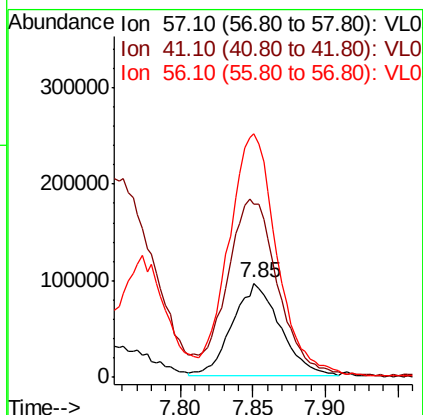
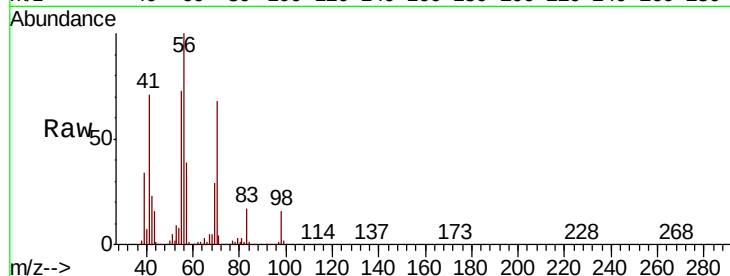




#44
 2,2,4-Trimethylpentane
 Concen: 0.304 ppbv
 RT: 7.85 min Scan# 1575
 Delta R.T. 0.00 min
 Lab File: VL037071.D
 Acq: 1 Jun 2021 15:45

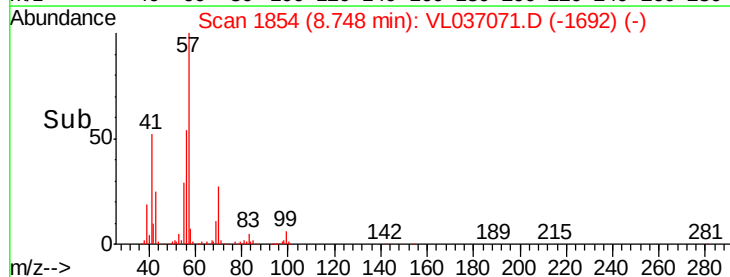
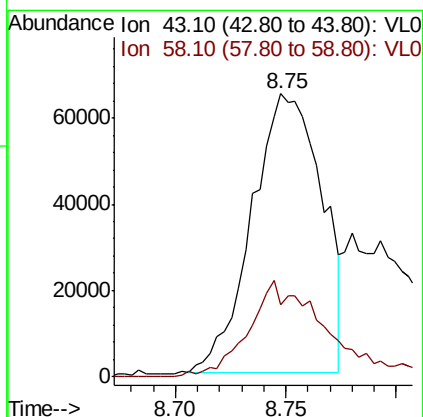
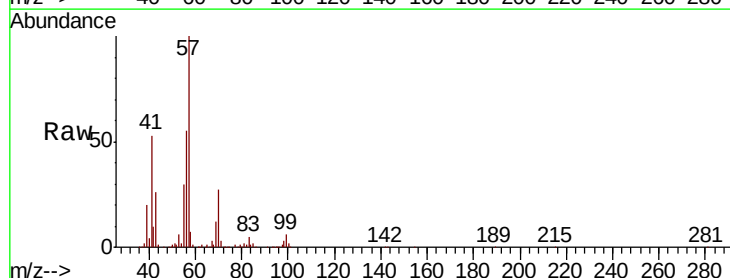
Instrument :
 MSVOA_L
 ClientSampleId :

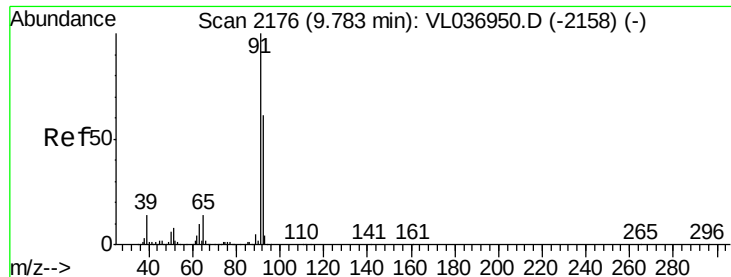
Tot Ion: 57 Resp: 215764
 Ion Ratio Lower Upper
 57 100
 41 207.4 27.0 40.4#
 56 274.3 25.4 38.2#



#50
 4-Methyl-2-Pentanone
 Concen: 0.494 ppbv
 RT: 8.75 min Scan# 1854
 Delta R.T. 0.02 min
 Lab File: VL037071.D
 Acq: 1 Jun 2021 15:45

Tgt Ion: 43 Resp: 142438
 Ion Ratio Lower Upper
 43 100
 58 39.2 29.4 44.2





#53

Toluene

Concen: 8.371 ppbv

RT: 9.79 min Scan# 2177

Delta R.T. 0.00 min

Lab File: VL037071.D

Acq: 1 Jun 2021 15:45

Instrument :

MSVOA_L

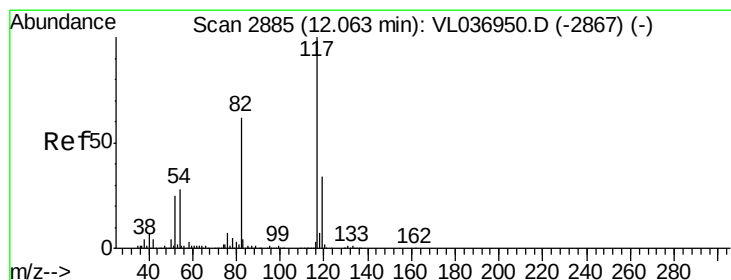
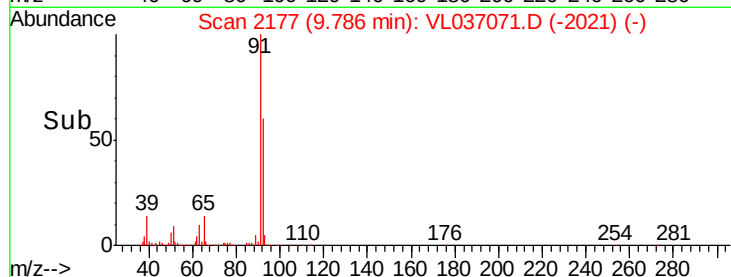
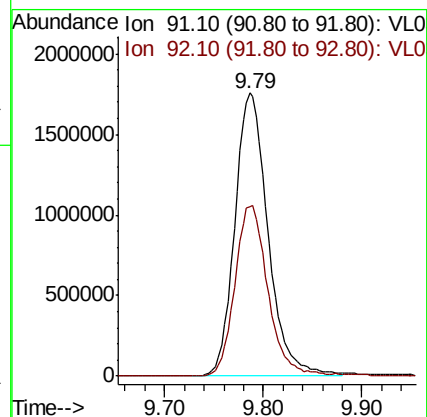
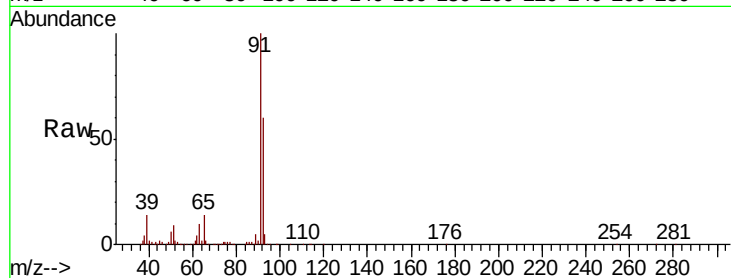
ClientSampleId :

Tot Ion: 91 Resp: 4117042

Ion Ratio Lower Upper

91 100

92 60.8 49.5 74.3



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.07 min Scan# 2886

Delta R.T. 0.00 min

Lab File: VL037071.D

Acq: 1 Jun 2021 15:45

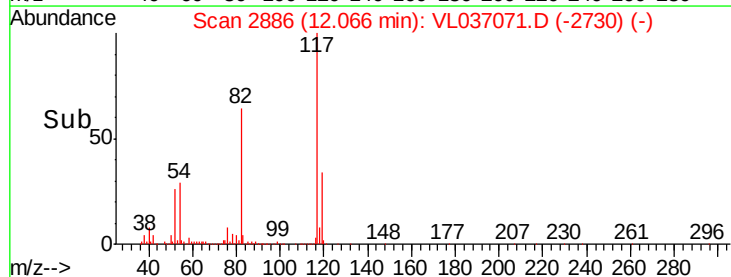
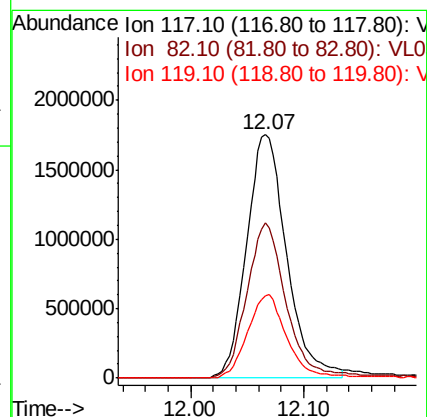
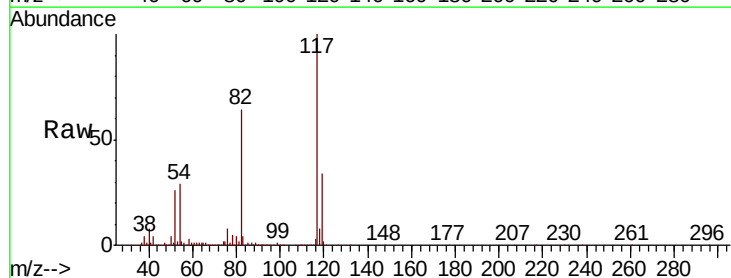
Tgt Ion: 117 Resp: 4314600

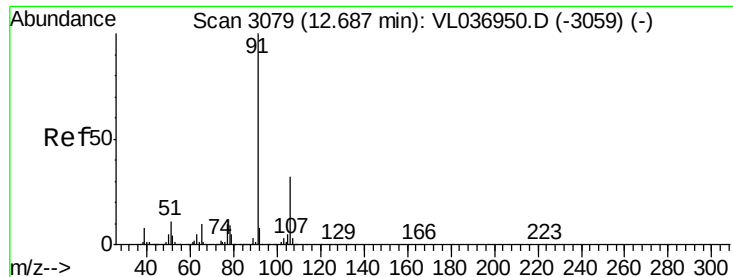
Ion Ratio Lower Upper

117 100

82 64.1 52.6 79.0

119 34.6 46.6 70.0#





#58

Ethyl Benzene

Concen: 0.336 ppbv

RT: 12.69 min Scan# 3081

Delta R.T. 0.01 min

Lab File: VL037071.D

Acq: 1 Jun 2021 15:45

Instrument :

MSVOA_L

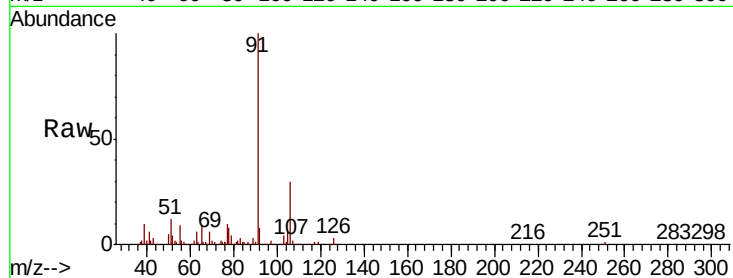
ClientSampleId :

Tot Ion: 91 Resp: 204571

Ion Ratio Lower Upper

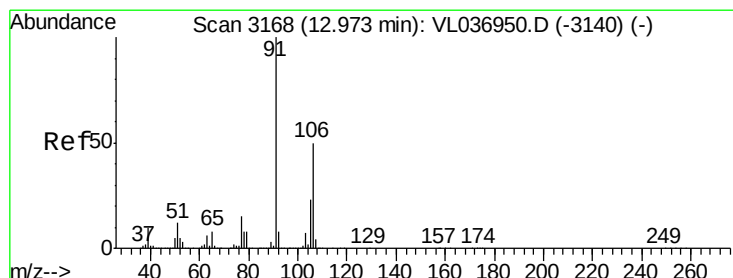
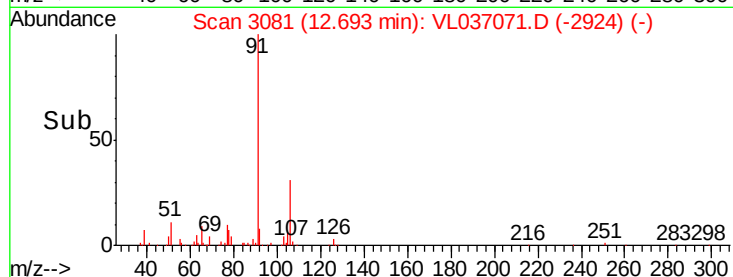
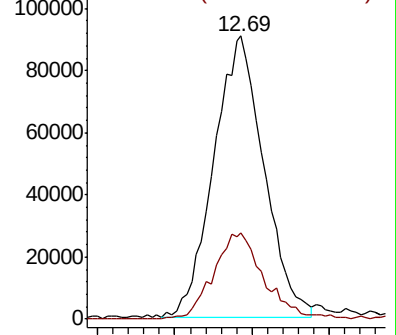
91 100

106 30.5 25.6 38.4



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V



#59

m/p-Xylene

Concen: 1.184 ppbv

RT: 12.95 min Scan# 3160

Delta R.T. -0.03 min

Lab File: VL037071.D

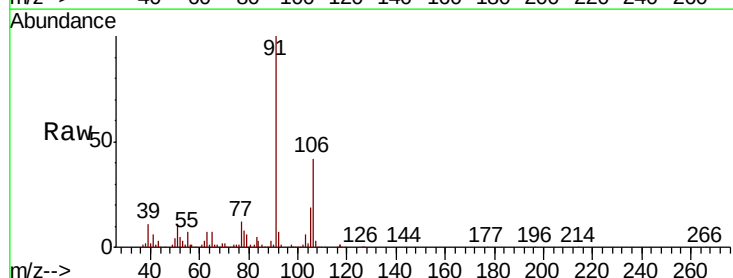
Acq: 1 Jun 2021 15:45

Tgt Ion: 91 Resp: 596030

Ion Ratio Lower Upper

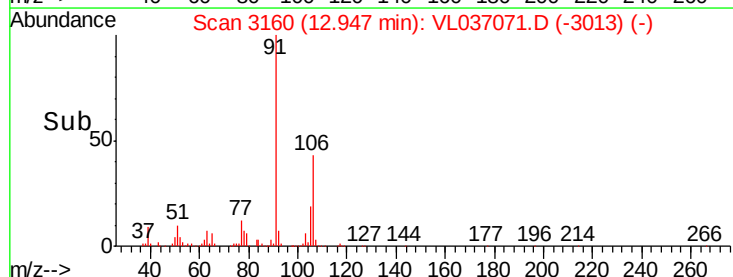
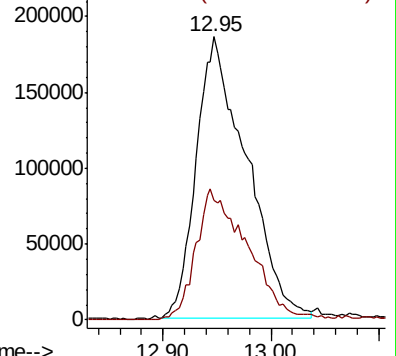
91 100

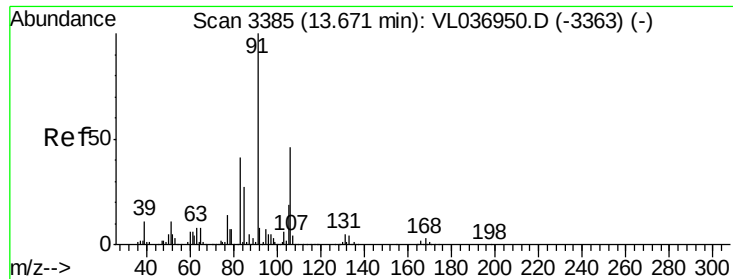
106 48.4 37.4 56.2



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V

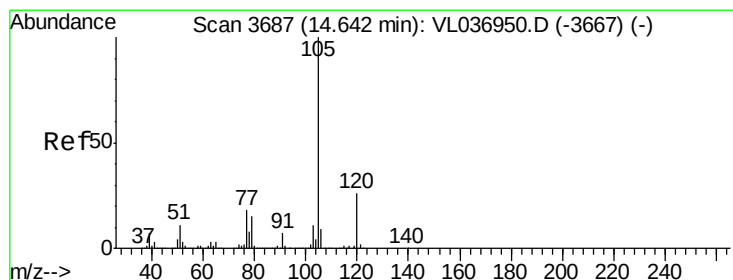
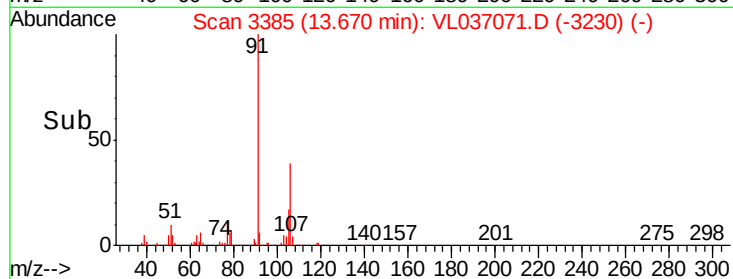
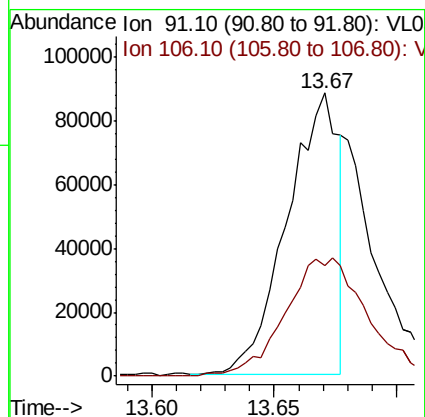
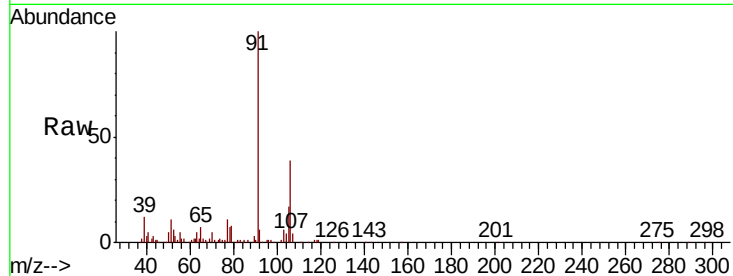




#60
o-Xylene
Concen: 0.270 ppbv
RT: 13.67 min Scan# 3385
Delta R.T. -0.00 min
Lab File: VL037071.D
Acq: 1 Jun 2021 15:45

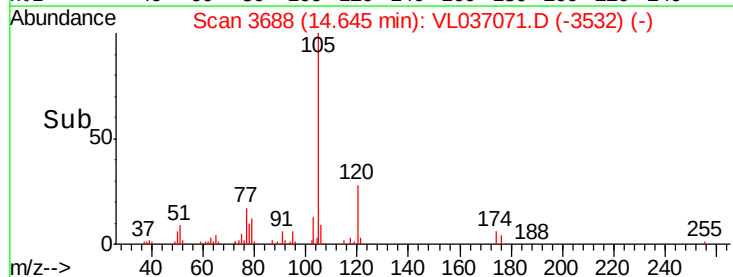
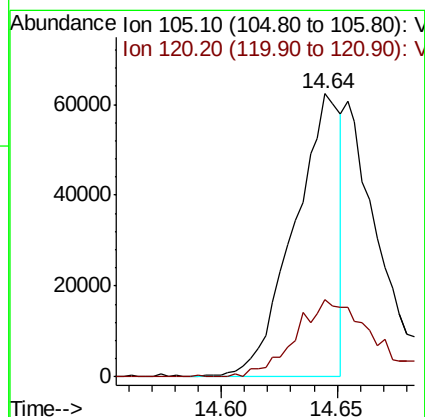
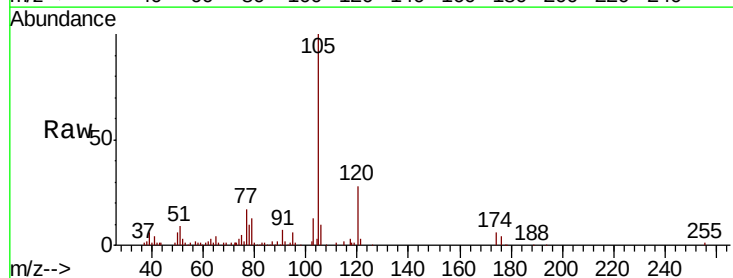
Instrument :
MSVOA_L
ClientSampled :

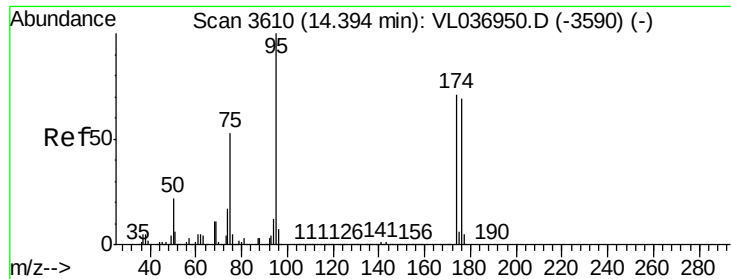
Tot Ion: 91 Resp: 129383
Ion Ratio Lower Upper
91 100
106 71.0 23.4 70.3#



#62
Isopropylbenzene
Concen: 0.126 ppbv
RT: 14.64 min Scan# 3688
Delta R.T. 0.00 min
Lab File: VL037071.D
Acq: 1 Jun 2021 15:45

Tgt Ion: 105 Resp: 86660
Ion Ratio Lower Upper
105 100
120 46.7 21.7 32.5#

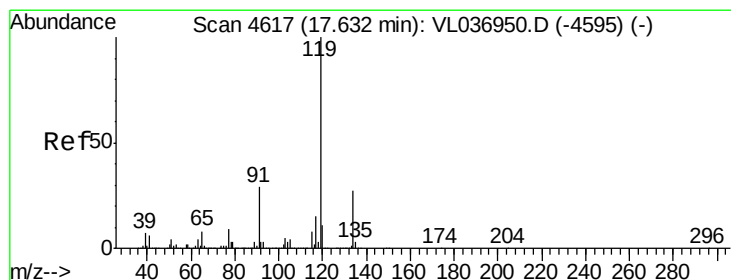
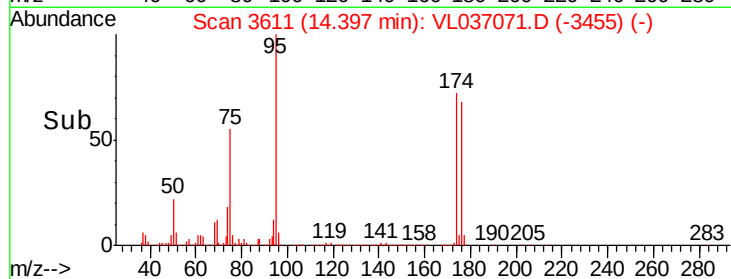
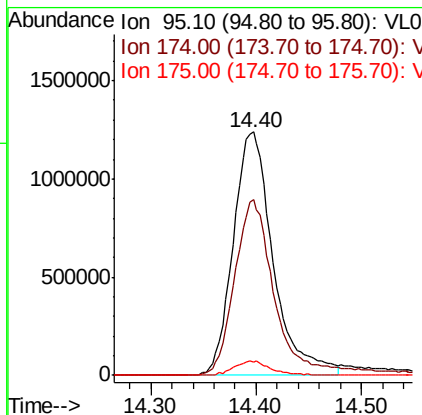
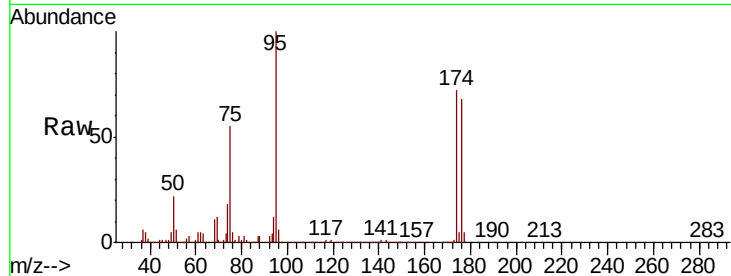




#68
 1-Bromo-4-Fluorobenzene
 Concen: 10.048 ppbv
 RT: 14.40 min Scan# 3611
 Delta R.T. 0.00 min
 Lab File: VL037071.D
 Acq: 1 Jun 2021 15:45

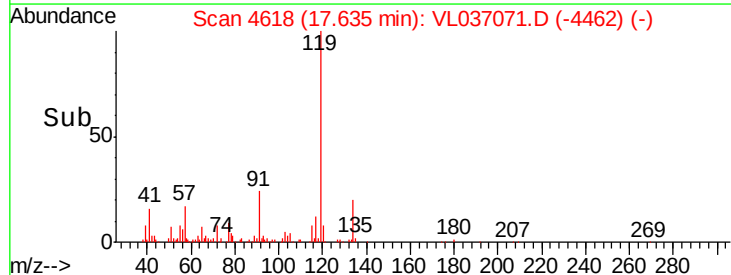
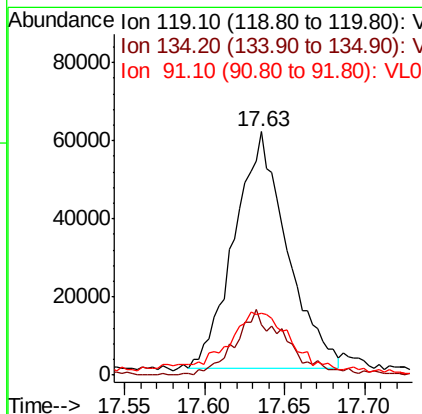
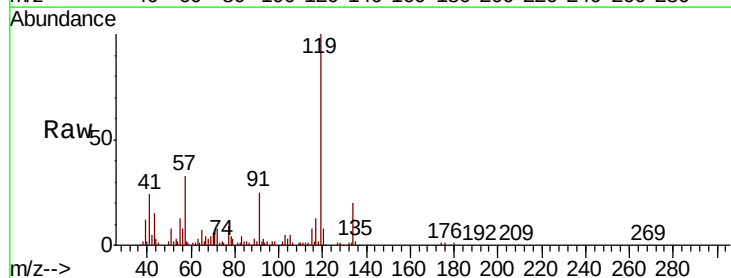
Instrument :
 MSVOA_L
 ClientSampleId :

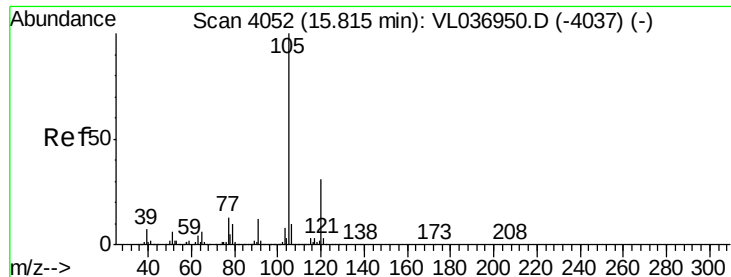
Tot Ion: 95 Resp: 3256702
 Ion Ratio Lower Upper
 95 100
 174 75.5 58.4 87.6
 175 5.8 4.4 6.6



#69
 p-Isopropyltoluene
 Concen: 0.188 ppbv
 RT: 17.63 min Scan# 4618
 Delta R.T. 0.00 min
 Lab File: VL037071.D
 Acq: 1 Jun 2021 15:45

Tgt Ion: 119 Resp: 137104
 Ion Ratio Lower Upper
 119 100
 134 27.4 21.2 31.8
 91 35.3 22.2 33.4#





#72

4-Ethyltoluene

Concen: 0.114 ppbv

RT: 15.82 min Scan# 4053

Delta R.T. 0.00 min

Lab File: VL037071.D

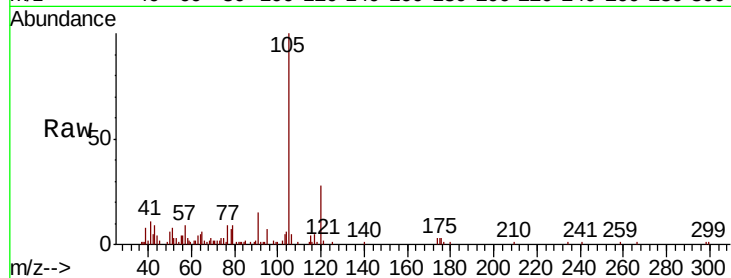
Acq: 1 Jun 2021 15:45

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion:	105	Resp:	64837
Ion	Ratio	Lower	Upper
105	100		
120	33.7	24.6	37.0
91	11.7	9.8	14.6
77	16.1	10.4	15.6#

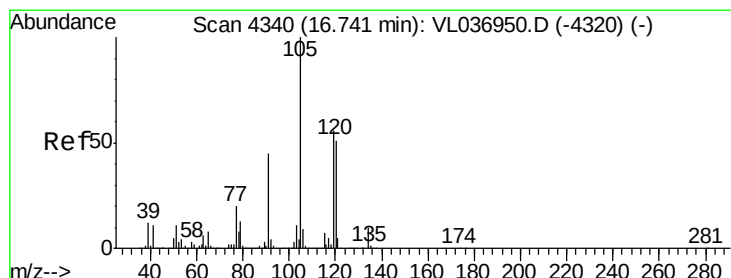
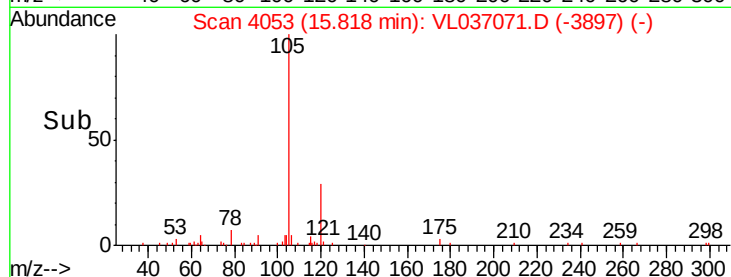
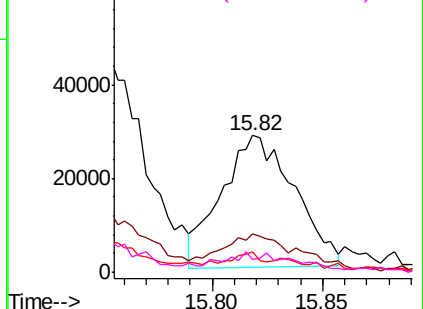


Abundance Ion 105.10 (104.80 to 105.80): V

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



#74

1,2,4-Trimethylbenzene

Concen: 0.281 ppbv

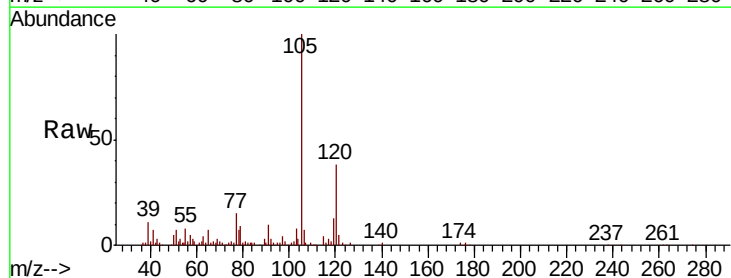
RT: 16.74 min Scan# 4341

Delta R.T. 0.00 min

Lab File: VL037071.D

Acq: 1 Jun 2021 15:45

Tgt Ion:	105	Resp:	155585
Ion	Ratio	Lower	Upper
105	100		
120	37.7	40.6	61.0#
91	8.9	37.4	56.0#
77	14.7	16.2	24.4#



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

