

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL101220\
 Data File : VL035778.D
 Acq On : 13 Oct 2020 1:29
 Operator : SY/AP
 Sample : L4347-01DL 20X
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 1DL

Quant Time: Oct 13 02:04:55 2020
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL092320AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Wed Sep 23 07:38:05 2020
 QLast Update : Wed Sep 23 07:38:05 2020
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.67	49	988525	10.00	ppbv	-0.01
33) 1,4-Difluorobenzene	7.18	114	3675191	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.10	117	3675255	10.00	ppbv	-0.01

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.44	95	2800254	10.17	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	101.70%

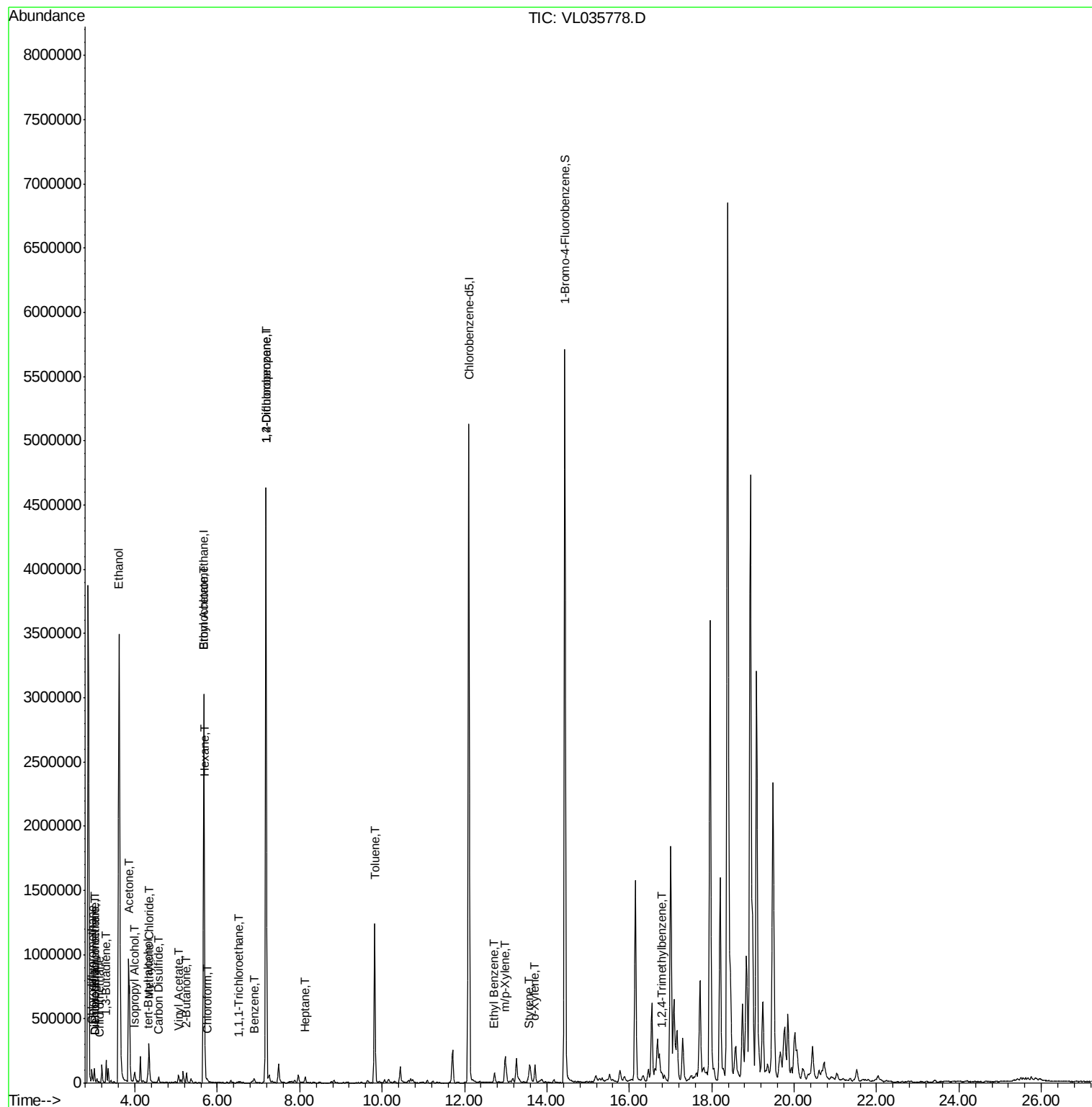
Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.04	85	6597	0.041 ppbv	99
3) Chlorodifluoromethane	2.96	51	55532	0.522 ppbv #	58
4) Chloromethane	3.14	50	2181	0.038 ppbv #	74
8) Dichlorotetrafluoroethane	3.04	85	6597	0.034 ppbv #	9
9) Propene	3.02	41	37477	0.971 ppbv	90
10) Heptane	8.13	43	13719	0.127 ppbv	99
13) Ethanol	3.62	45	5095464	535.114 ppbv	98
15) Acetone	3.85	43	1000599	9.407 ppbv	94
16) 1,3-Butadiene	3.30	39	45457	1.168 ppbv #	12
17) tert-Butyl alcohol	4.31	59	63012	0.544 ppbv	97
19) Isopropyl Alcohol	3.99	45	79397	1.372 ppbv #	1
20) Methylene Chloride	4.34	84	122906	1.573 ppbv	97
23) Vinyl Acetate	5.06	43	15509	0.119 ppbv #	1
25) Ethyl Acetate	5.68	43	127536	0.666 ppbv	98
26) Hexane	5.69	57	50401	0.481 ppbv #	63
27) Carbon Disulfide	4.56	76	10705	0.068 ppbv #	66
29) Chloroform	5.75	83	13792	0.065 ppbv	98
32) 1,1,1-Trichloroethane	6.52	97	5820	0.031 ppbv	96
34) 2-Butanone	5.25	43	72769	0.599 ppbv	98
36) Benzene	6.89	78	28004	0.117 ppbv	97
39) 1,2-Dichloropropane	7.18	63	729268	8.402 ppbv #	30
53) Toluene	9.82	91	973163	3.446 ppbv	97
58) Ethyl Benzene	12.73	91	63693	0.173 ppbv #	86
59) m/p-Xylene	12.99	91	199082	0.618 ppbv	96
60) o-Xylene	13.71	91	96729	0.297 ppbv	98
61) Styrene	13.55	104	6921	0.031 ppbv #	1
74) 1,2,4-Trimethylbenzene	16.78	105	19787	0.048 ppbv #	67

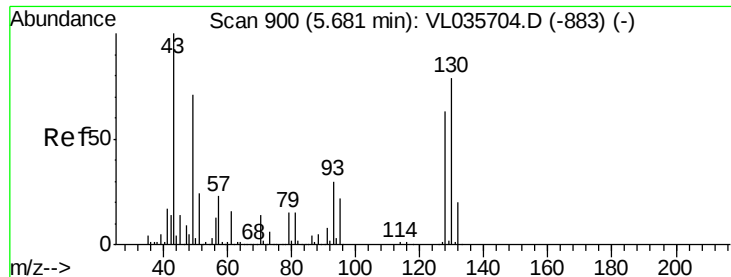
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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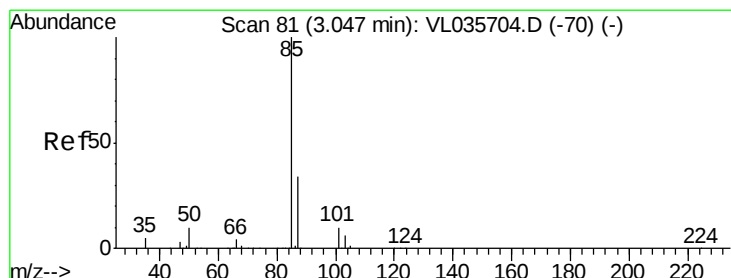
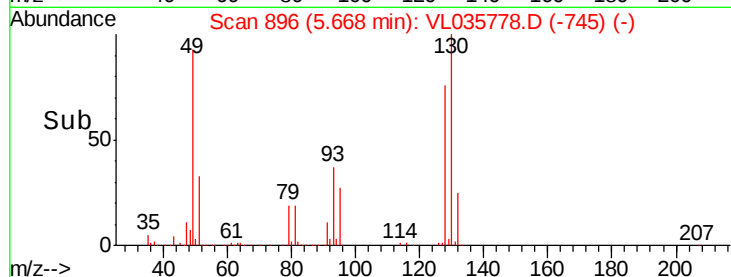
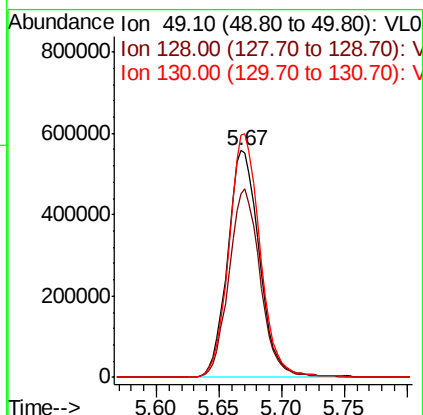
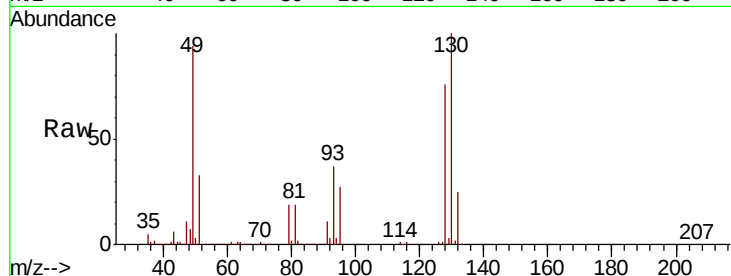




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 5.67 min Scan# 896
Delta R.T. -0.01 min
Lab File: VL035778.D
Acq: 13 Oct 2020 1:29

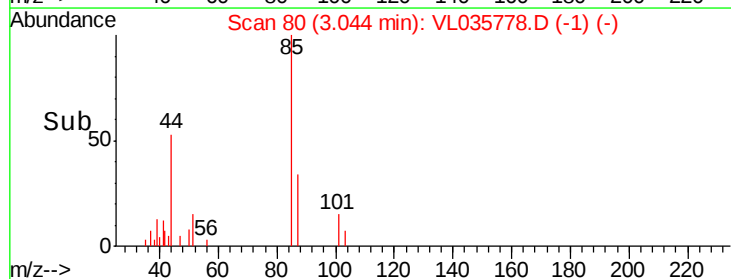
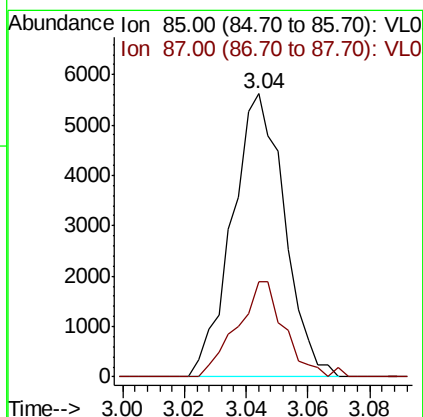
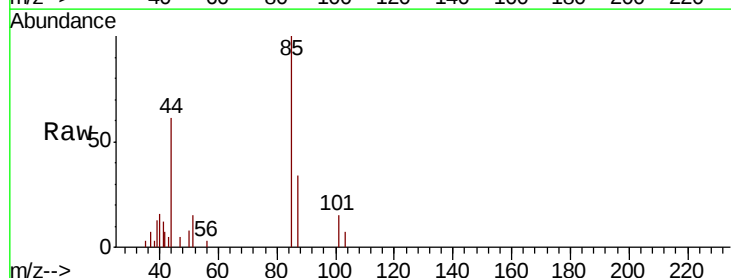
Instrument :
MSVOA_L
ClientSampleId :
1DL

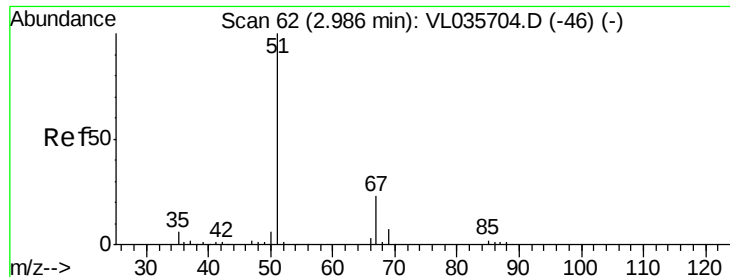
Tot Ion: 49 Resp: 988525
Ion Ratio Lower Upper
49 100
128 82.1 43.1 129.4
130 105.6 54.9 164.7



#2
Dichlorodifluoromethane
Concen: 0.041 ppbv
RT: 3.04 min Scan# 80
Delta R.T. -0.00 min
Lab File: VL035778.D
Acq: 13 Oct 2020 1:29

Tgt Ion: 85 Resp: 6597
Ion Ratio Lower Upper
85 100
87 33.6 27.3 40.9





#3

Chlorodifluoromethane

Concen: 0.522 ppbv

RT: 2.96 min Scan# 53

Delta R.T. -0.03 min

Lab File: VL035778.D

Acq: 13 Oct 2020 1:29

Instrument :

MSVOA_L

ClientSampleId :

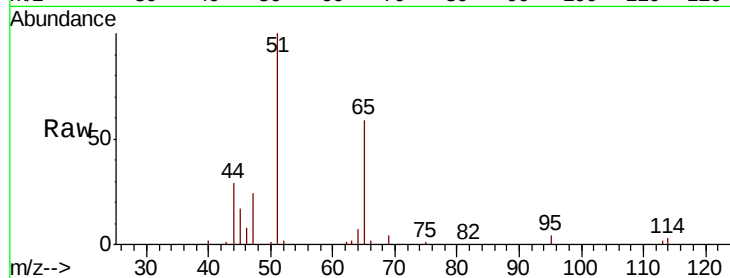
1DL

Tot Ion: 51 Resp: 55532

Ion Ratio Lower Upper

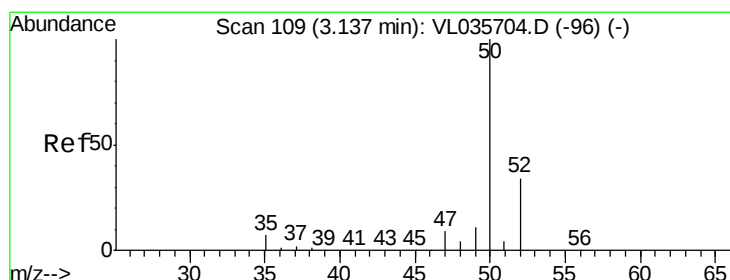
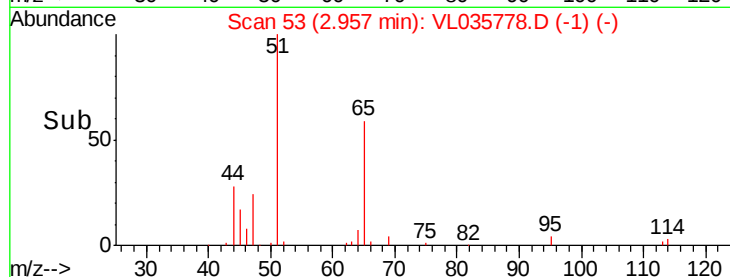
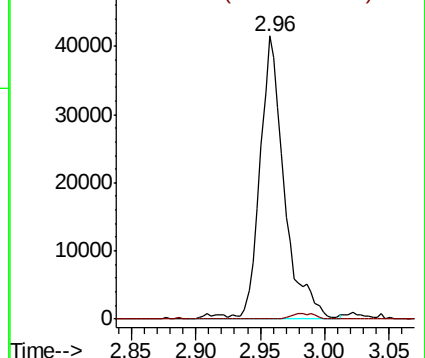
51 100

67 1.9 17.8 26.8#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.038 ppbv

RT: 3.14 min Scan# 109

Delta R.T. -0.00 min

Lab File: VL035778.D

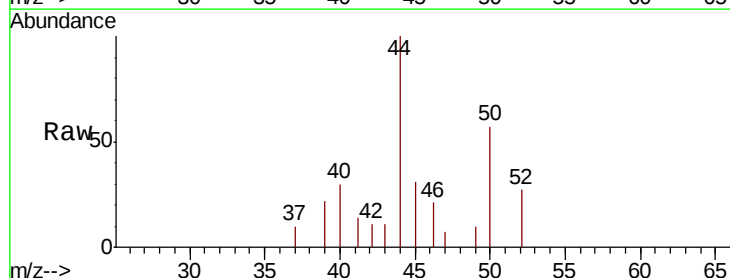
Acq: 13 Oct 2020 1:29

Tgt Ion: 50 Resp: 2181

Ion Ratio Lower Upper

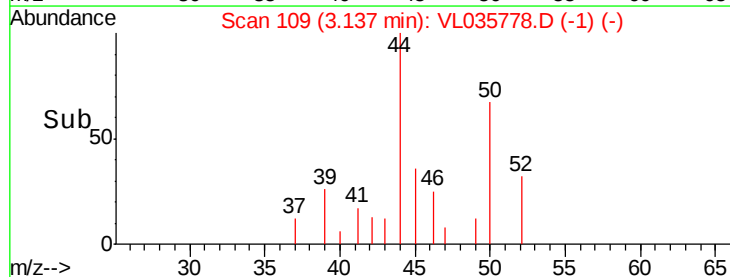
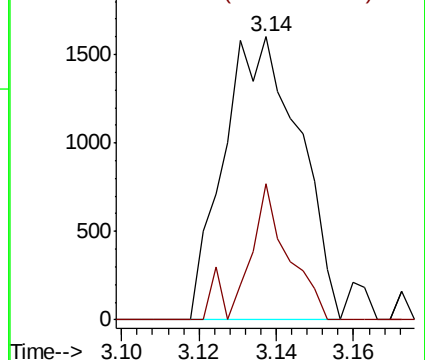
50 100

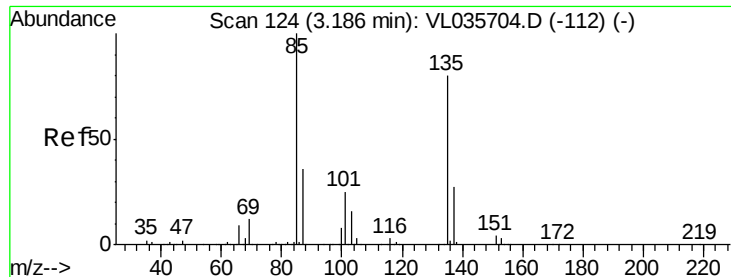
52 48.1 26.8 40.2#



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#8

Dichlorotetrafluoroethane

Concen: 0.034 ppbv

RT: 3.04 min Scan# 80

Delta R.T. -0.14 min

Lab File: VL035778.D

Acq: 13 Oct 2020 1:29

Instrument :

MSVOA_L

ClientSampleId :

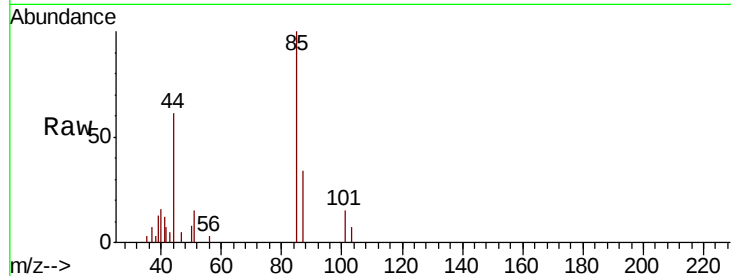
1DL

Tot Ion: 85 Resp: 6597

Ion Ratio Lower Upper

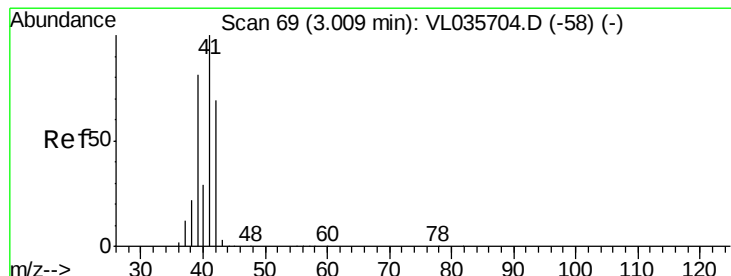
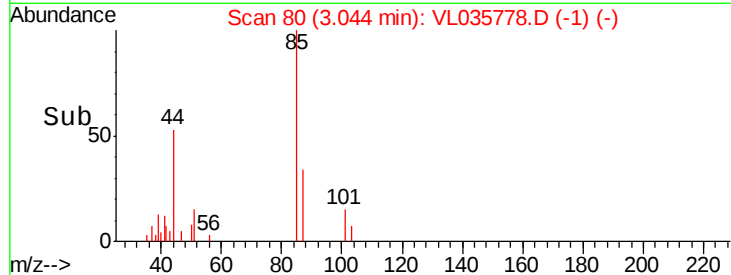
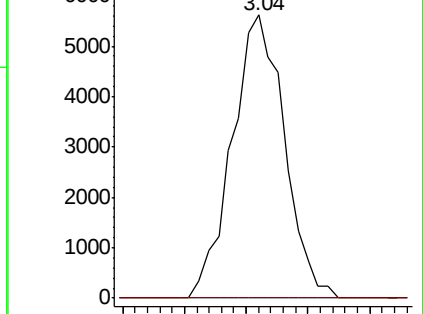
85 100

135 0.0 64.3 96.5#



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 135.00 (134.70 to 135.70): VL0



#9

Propene

Concen: 0.971 ppbv

RT: 3.02 min Scan# 71

Delta R.T. 0.01 min

Lab File: VL035778.D

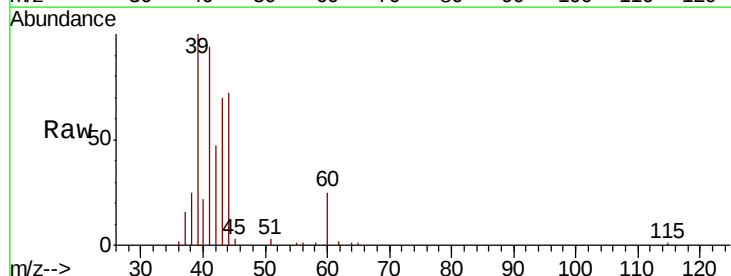
Acq: 13 Oct 2020 1:29

Tgt Ion: 41 Resp: 37477

Ion Ratio Lower Upper

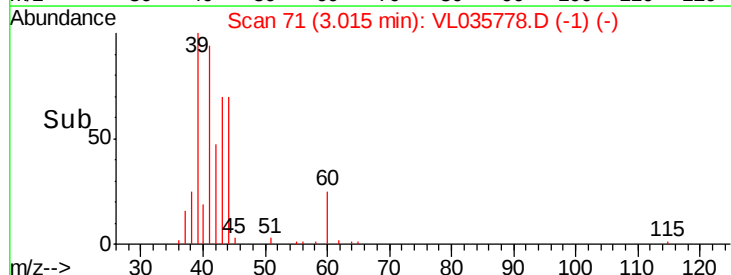
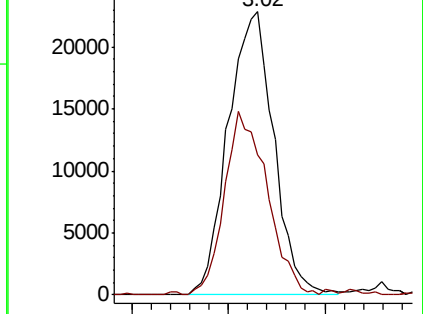
41 100

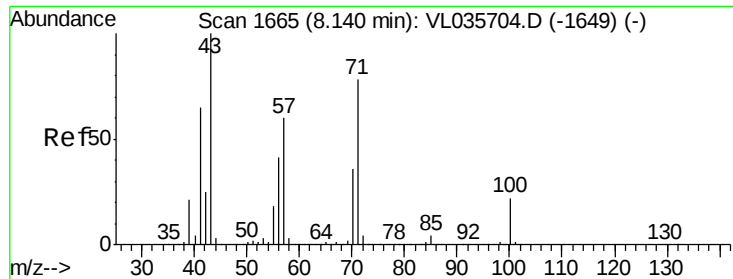
42 62.1 56.2 84.4



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

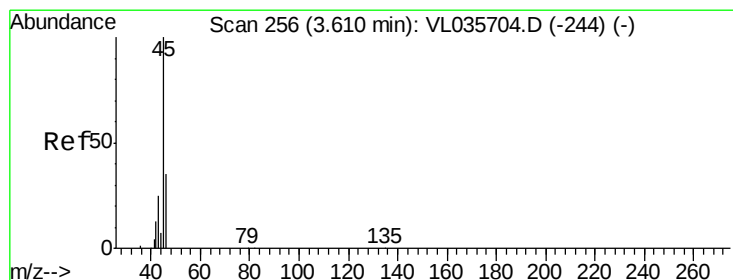
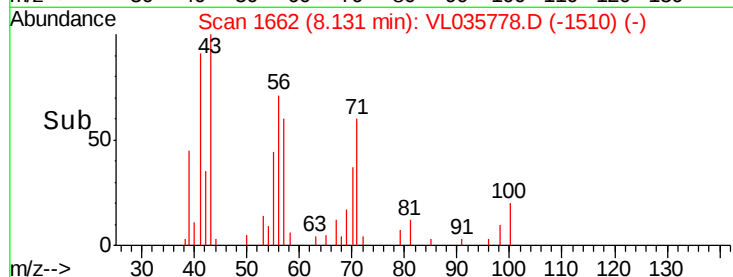
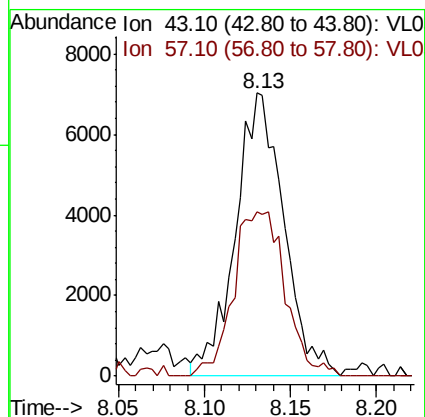
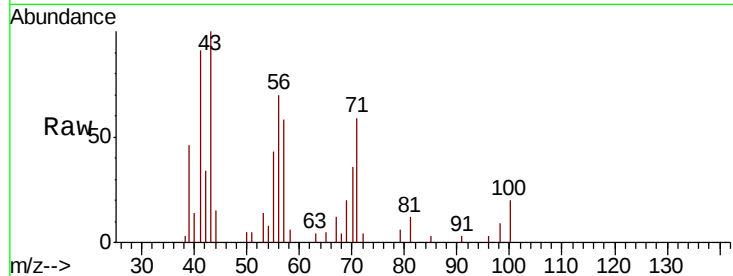




#10
Heptane
Concen: 0.127 ppbv
RT: 8.13 min Scan# 1662
Delta R.T. -0.01 min
Lab File: VL035778.D
Acq: 13 Oct 2020 1:29

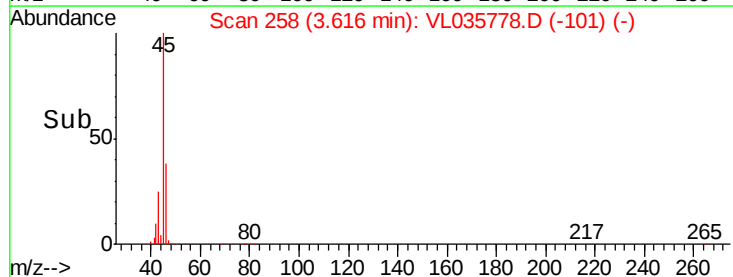
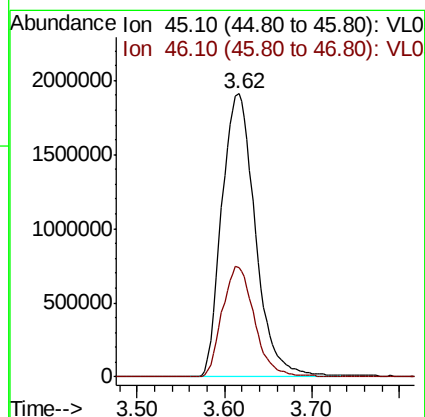
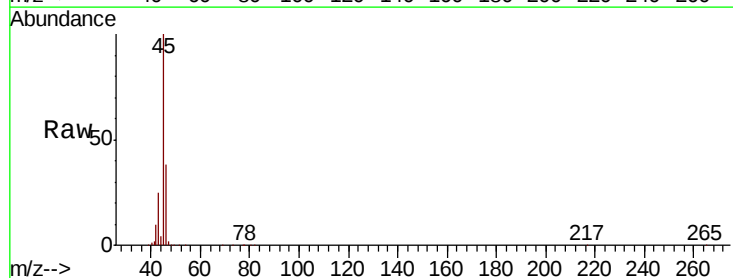
Instrument :
MSVOA_L
ClientSampleId :
1DL

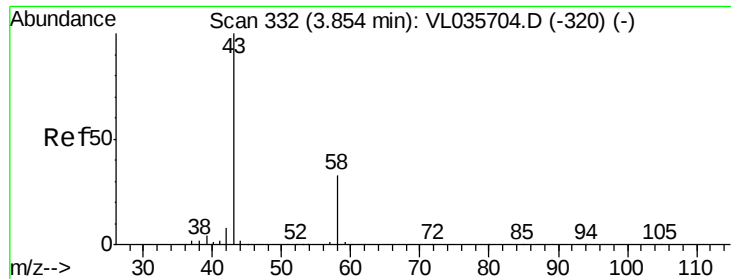
Tot Ion: 43 Resp: 13719
Ion Ratio Lower Upper
43 100
57 62.4 50.4 75.6



#13
Ethanol
Concen: 535.114 ppbv
RT: 3.62 min Scan# 258
Delta R.T. 0.01 min
Lab File: VL035778.D
Acq: 13 Oct 2020 1:29

Tgt Ion: 45 Resp: 5095464
Ion Ratio Lower Upper
45 100
46 37.8 14.7 58.7





#15

Acetone

Concen: 9.407 ppbv

RT: 3.85 min Scan# 330

Delta R.T. -0.01 min

Lab File: VL035778.D

Acq: 13 Oct 2020 1:29

Instrument :

MSVOA_L

ClientSampled :

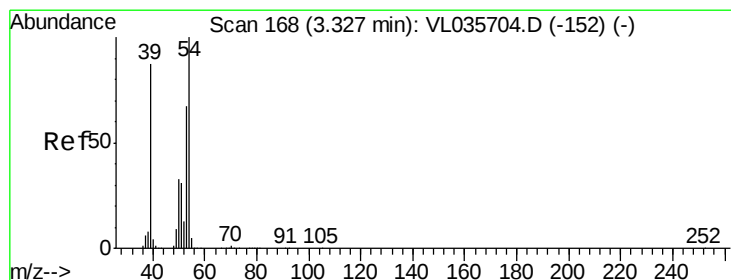
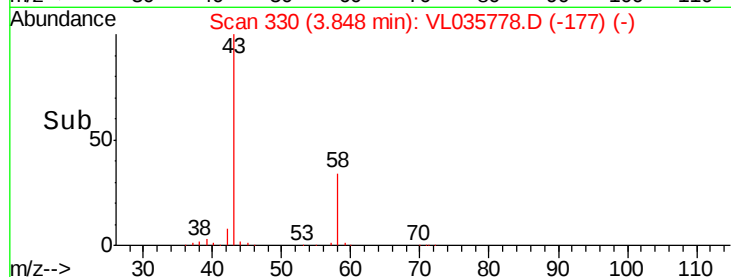
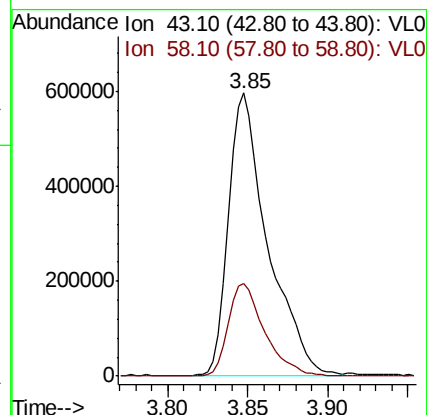
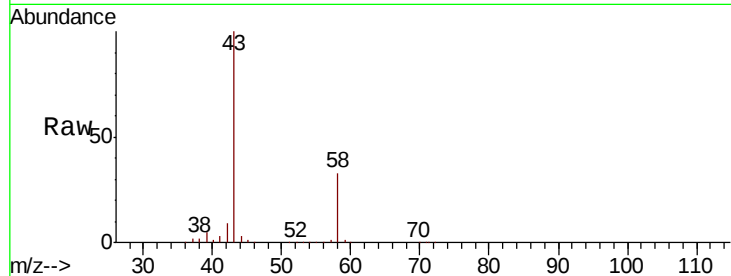
1DL

Tot Ion: 43 Resp: 1000599

Ion Ratio Lower Upper

43 100

58 30.7 27.3 40.9



#16

1,3-Butadiene

Concen: 1.168 ppbv

RT: 3.30 min Scan# 161

Delta R.T. -0.02 min

Lab File: VL035778.D

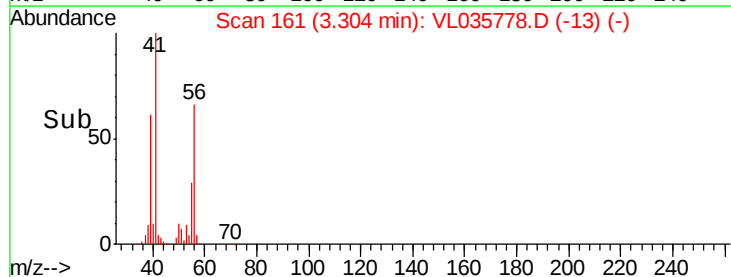
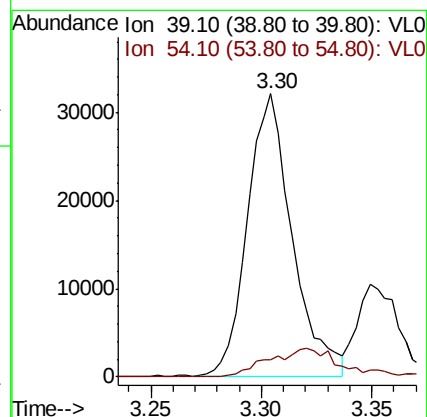
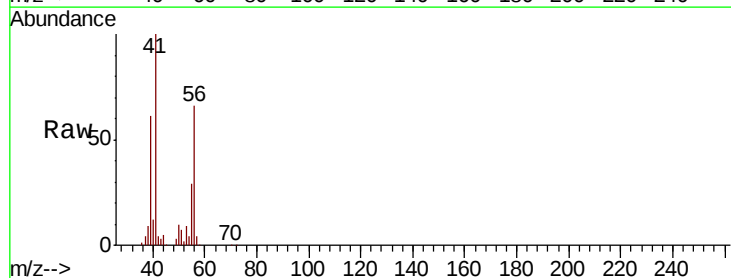
Acq: 13 Oct 2020 1:29

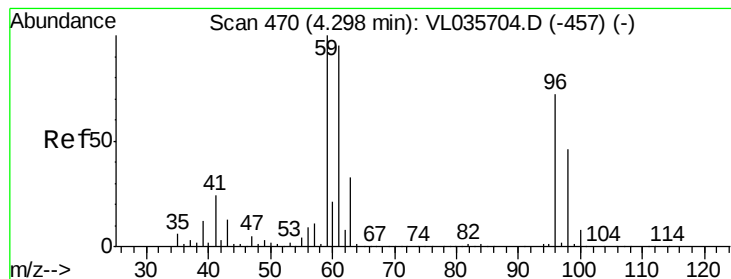
Tgt Ion: 39 Resp: 45457

Ion Ratio Lower Upper

39 100

54 16.3 87.4 131.0#





#17

tert-Butyl alcohol

Concen: 0.544 ppbv

RT: 4.31 min Scan# 474

Delta R.T. 0.01 min

Lab File: VL035778.D

Acq: 13 Oct 2020 1:29

Instrument :

MSVOA_L

ClientSampled :

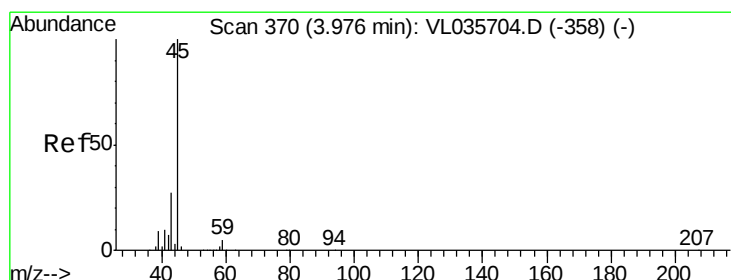
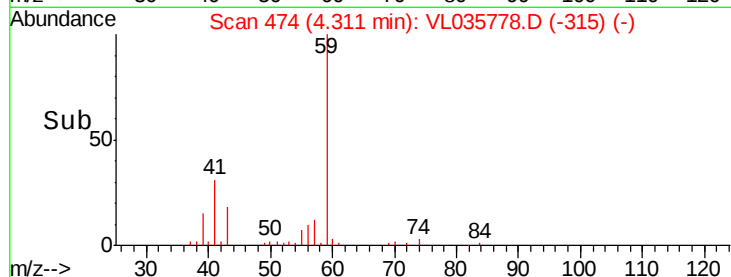
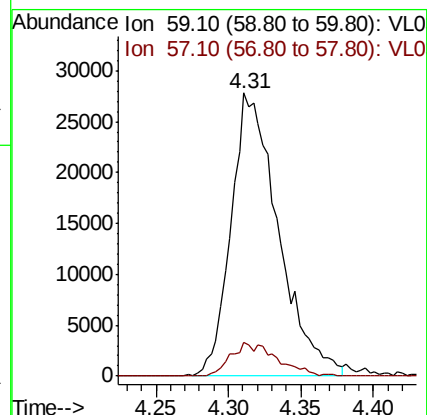
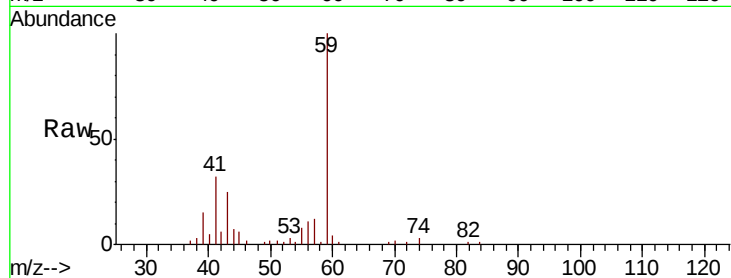
1DL

Tot Ion: 59 Resp: 63012

Ion Ratio Lower Upper

59 100

57 11.6 8.5 12.7



#19

Isopropyl Alcohol

Concen: 1.372 ppbv

RT: 3.99 min Scan# 373

Delta R.T. 0.01 min

Lab File: VL035778.D

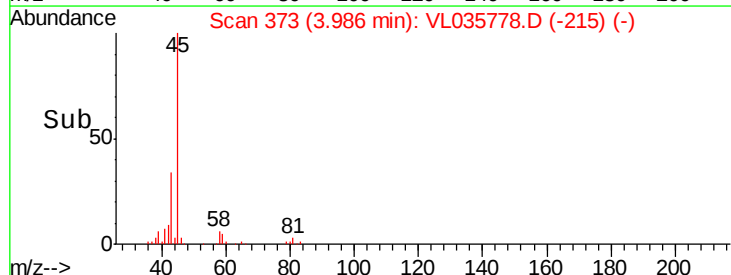
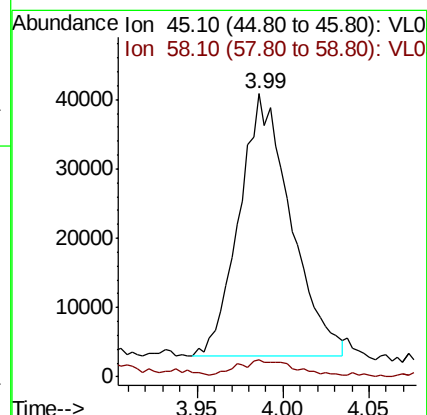
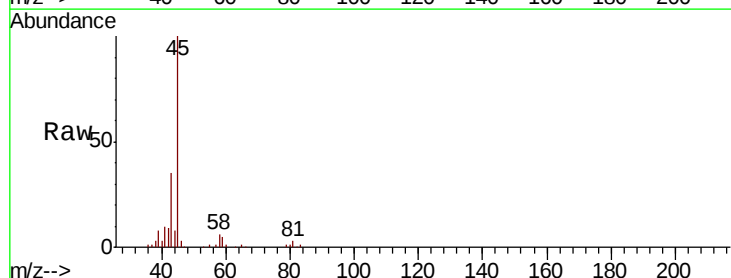
Acq: 13 Oct 2020 1:29

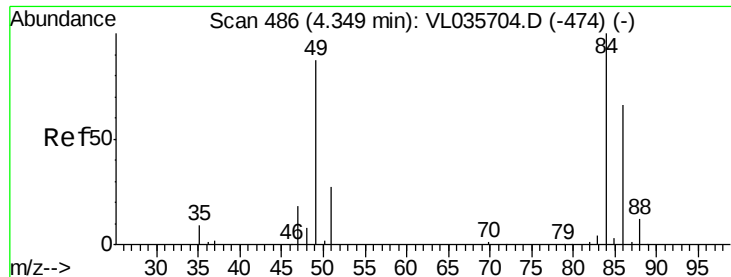
Tgt Ion: 45 Resp: 79397

Ion Ratio Lower Upper

45 100

58 387.4 2.8 4.2#





#20

Methvlene Chloride

Concen: 1.573 ppbv

RT: 4.34 min Scan# 484

Delta R.T. -0.01 min

Lab File: VL035778.D

Acq: 13 Oct 2020 1:29

Instrument :

MSVOA_L

ClientSampleId :

1DL

Tot Ion: 84 Resp: 122906

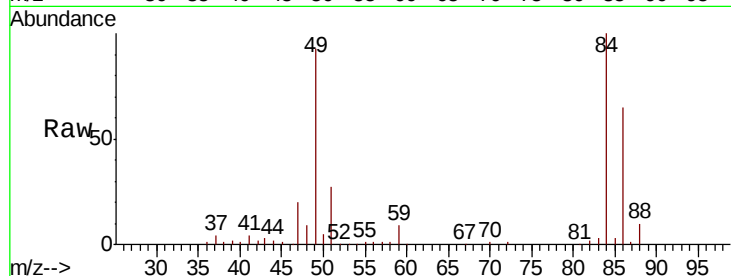
Ion Ratio Lower Upper

84 100

49 92.5 69.8 104.6

51 26.8 21.8 32.8

86 64.8 52.6 78.8

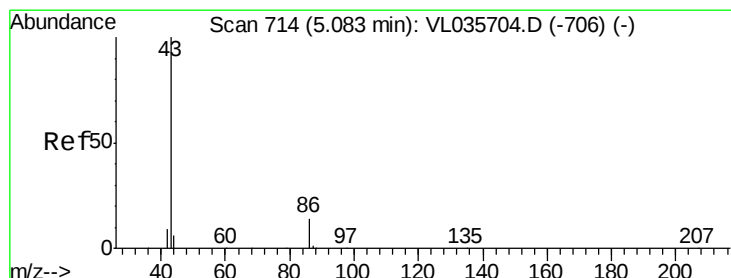
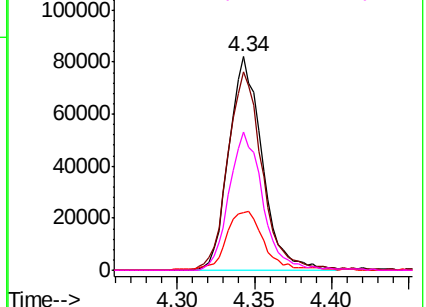
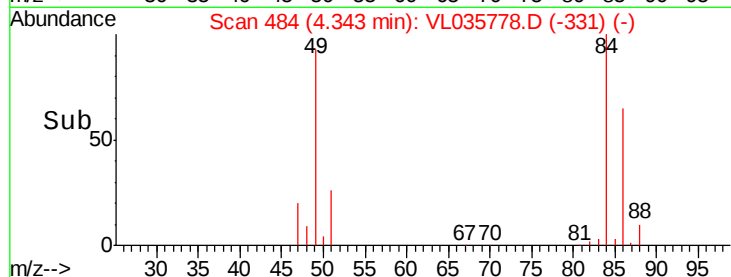


Abundance Ion 84.00 (83.70 to 84.70): VL0

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



#23

Vinyl Acetate

Concen: 0.119 ppbv

RT: 5.06 min Scan# 708

Delta R.T. -0.02 min

Lab File: VL035778.D

Acq: 13 Oct 2020 1:29

Tgt Ion: 43 Resp: 15509

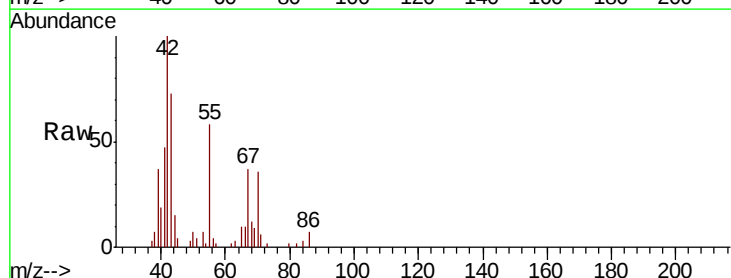
Ion Ratio Lower Upper

43 100

86 9.7 9.7 14.5

42 135.7 7.9 11.9#

44 7.4 4.8 7.2#

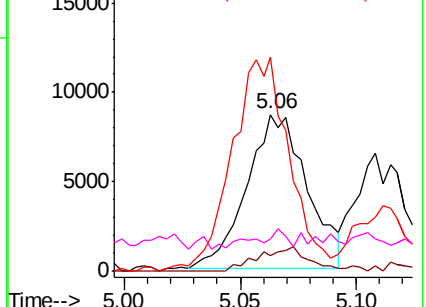
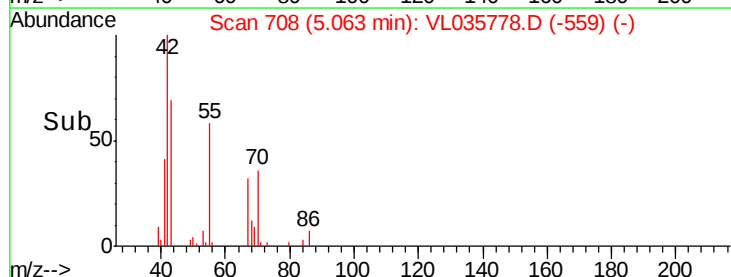


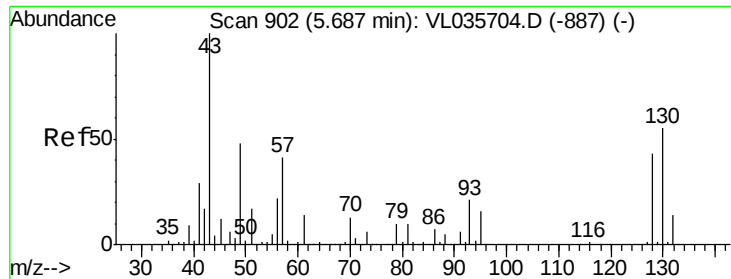
Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 86.10 (85.80 to 86.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

Ion 44.10 (43.80 to 44.80): VL0





#25

Ethyl Acetate

Concen: 0.666 ppbv

RT: 5.68 min Scan# 900

Delta R.T. -0.01 min

Lab File: VL035778.D

Acq: 13 Oct 2020 1:29

Instrument :
MSVOA_L
ClientSampleId :
1DL

Tot Ion: 43 Resp: 127536

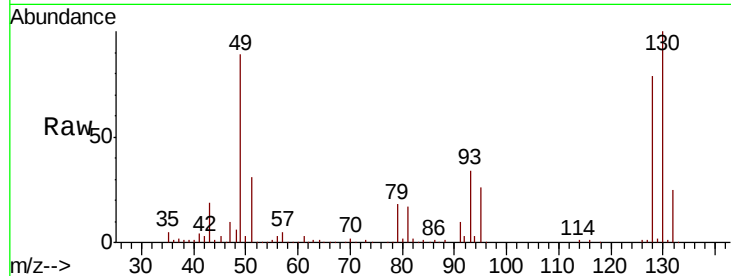
Ion Ratio Lower Upper

43 100

45 12.4 8.6 12.8

61 12.9 10.4 15.6

70 10.3 8.9 13.3



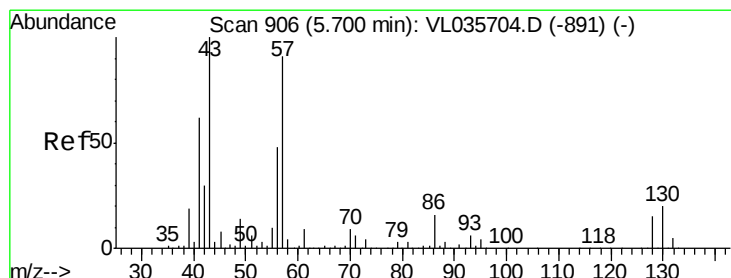
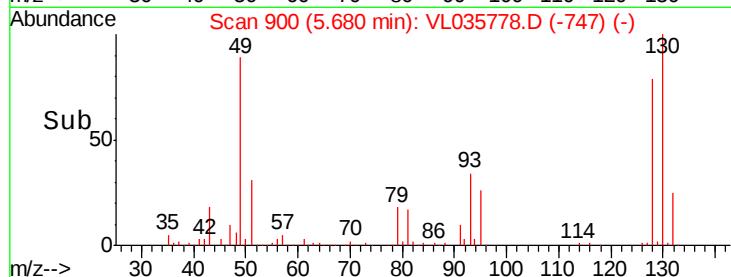
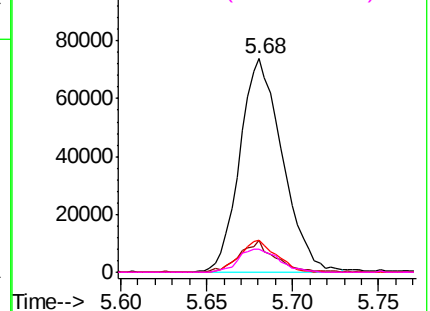
Abundance

Ion 43.10 (42.80 to 43.80): VL0

Ion 45.10 (44.80 to 45.80): VL0

Ion 61.10 (60.80 to 61.80): VL0

Ion 70.10 (69.80 to 70.80): VL0



#26

Hexane

Concen: 0.481 ppbv

RT: 5.69 min Scan# 903

Delta R.T. -0.01 min

Lab File: VL035778.D

Acq: 13 Oct 2020 1:29

Tgt Ion: 57 Resp: 50401

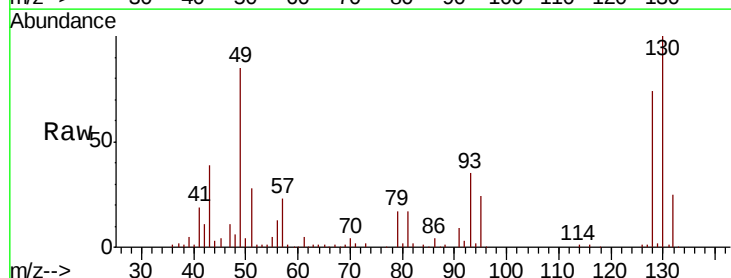
Ion Ratio Lower Upper

57 100

41 84.6 57.9 86.9

43 256.7 143.8 215.6#

56 59.9 43.0 64.6



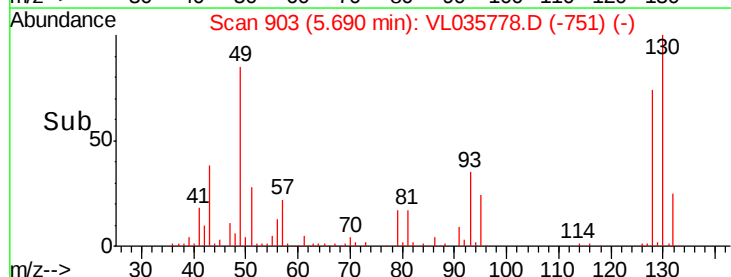
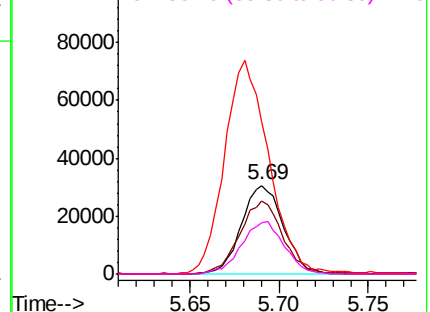
Abundance

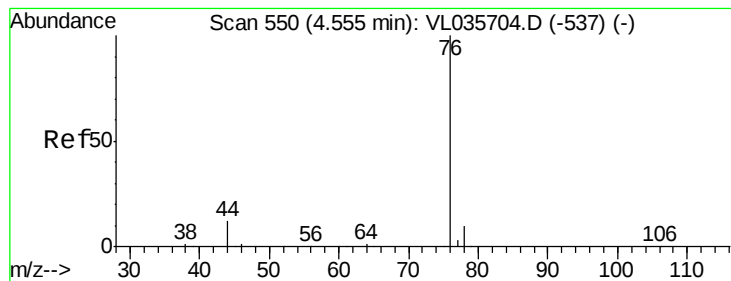
Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 43.10 (42.80 to 43.80): VL0

Ion 56.10 (55.80 to 56.80): VL0





#27

Carbon Disulfide

Concen: 0.068 ppbv

RT: 4.56 min Scan# 550

Delta R.T. -0.00 min

Lab File: VL035778.D

Acq: 13 Oct 2020 1:29

Instrument :

MSVOA_L

ClientSampleId :

1DL

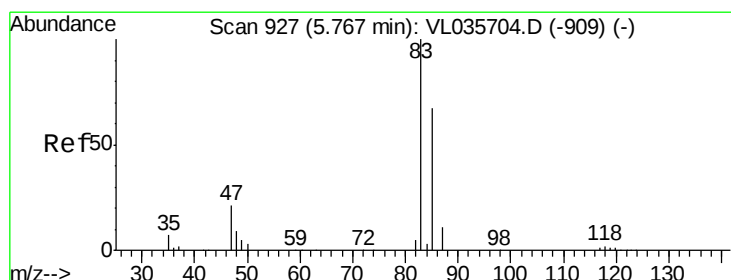
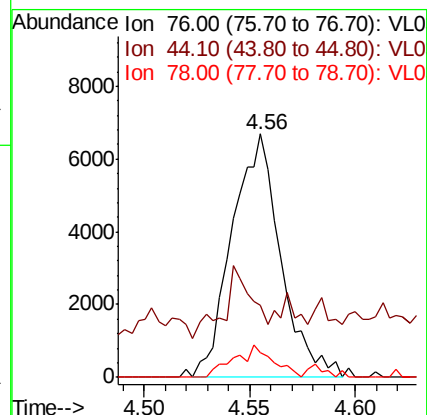
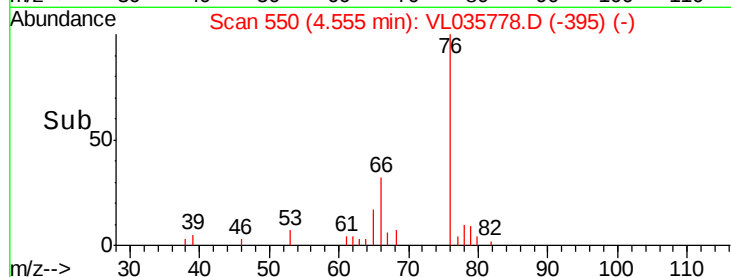
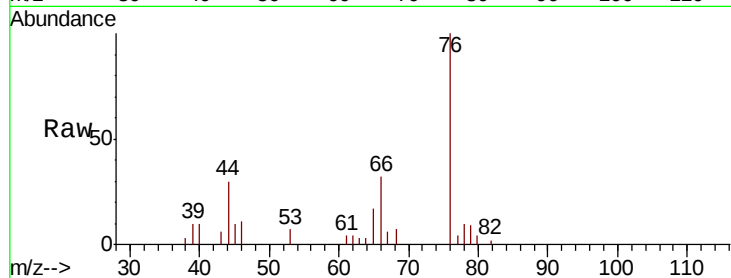
Tot Ion: 76 Resp: 10705

Ion Ratio Lower Upper

76 100

44 33.6 9.7 14.5#

78 12.5 7.8 11.8#



#29

Chloroform

Concen: 0.065 ppbv

RT: 5.75 min Scan# 922

Delta R.T. -0.02 min

Lab File: VL035778.D

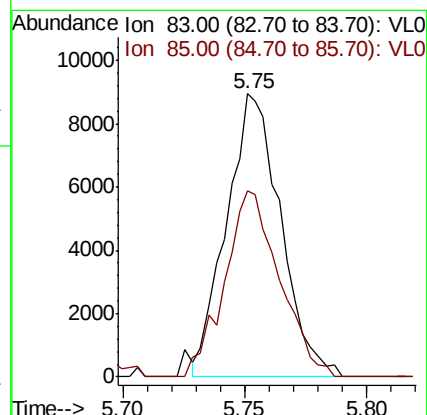
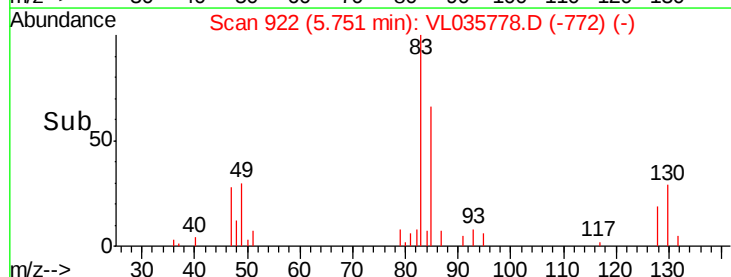
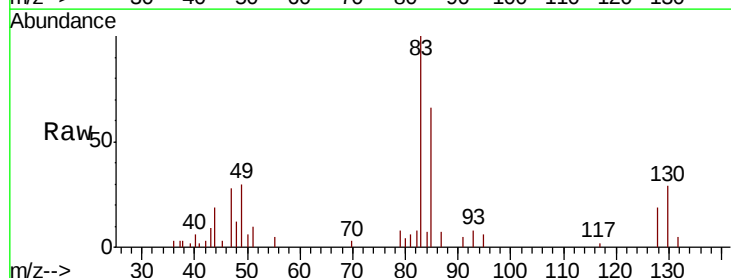
Acq: 13 Oct 2020 1:29

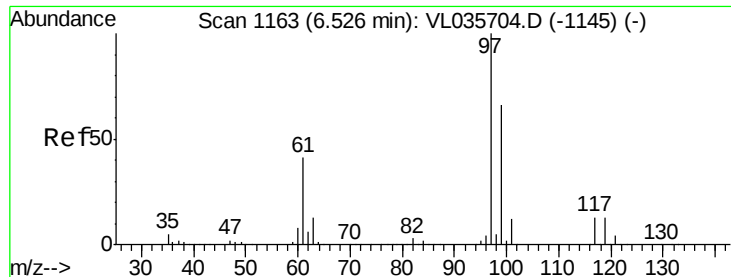
Tgt Ion: 83 Resp: 13792

Ion Ratio Lower Upper

83 100

85 65.6 54.0 81.0





#32

1,1,1-Trichloroethane

Concen: 0.031 ppbv

RT: 6.52 min Scan# 1160

Delta R.T. -0.01 min

Lab File: VL035778.D

Acq: 13 Oct 2020 1:29

Instrument :

MSVOA_L

ClientSampleId :

1DL

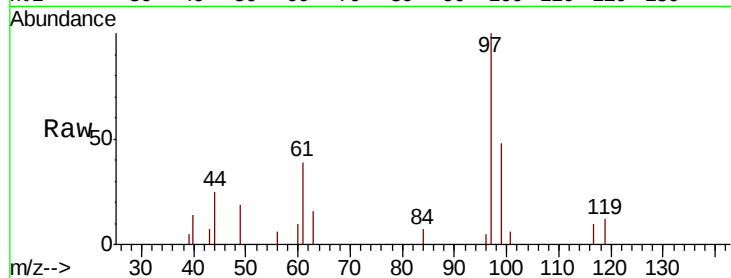
Tot Ion: 97 Resp: 5820

Ion Ratio Lower Upper

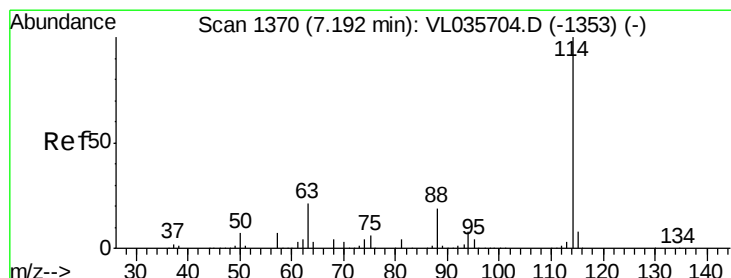
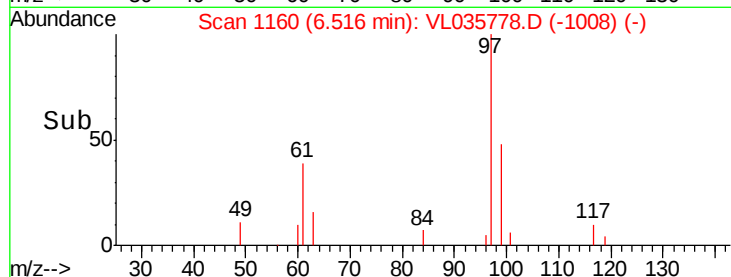
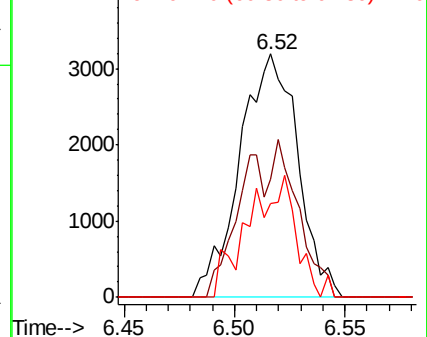
97 100

99 61.8 52.7 79.1

61 41.8 32.7 49.1



Abundance Ion 97.00 (96.70 to 97.70): VL0
Ion 99.00 (98.70 to 99.70): VL0
Ion 61.10 (60.80 to 61.80): VL0



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.18 min Scan# 1367

Delta R.T. -0.01 min

Lab File: VL035778.D

Acq: 13 Oct 2020 1:29

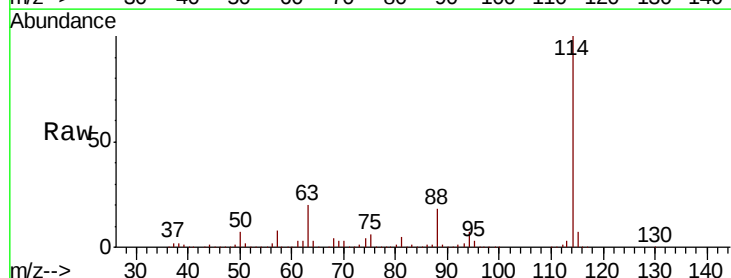
Tgt Ion: 114 Resp: 3675191

Ion Ratio Lower Upper

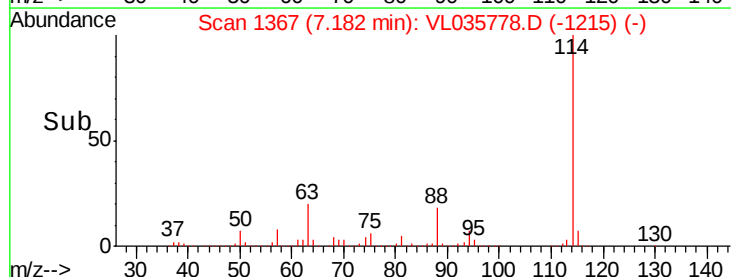
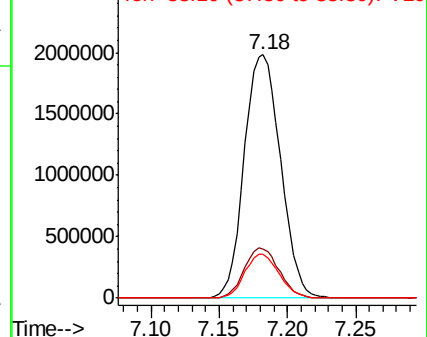
114 100

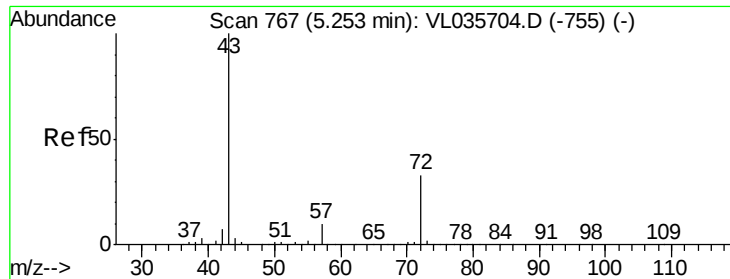
63 20.0 16.1 24.1

88 17.2 14.1 21.1



Abundance Ion 114.10 (113.80 to 114.80): V
Ion 63.10 (62.80 to 63.80): VL0
Ion 88.10 (87.80 to 88.80): VL0

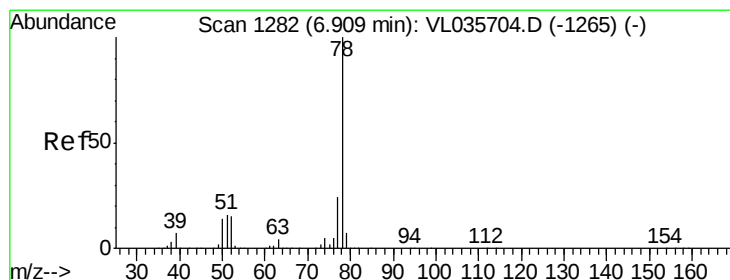
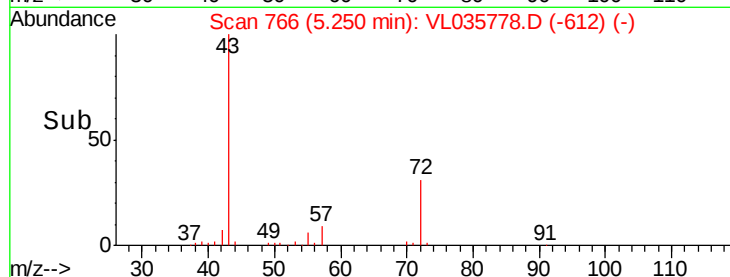
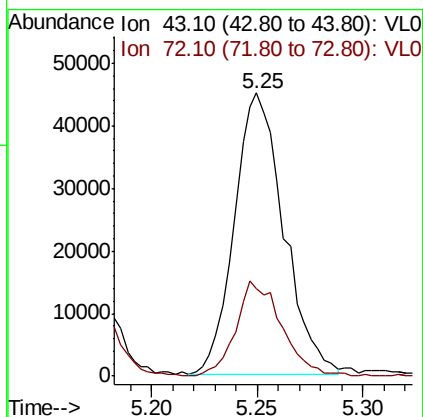
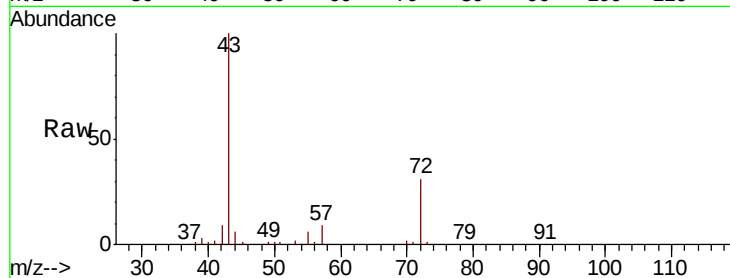




#34
2-Butanone
Concen: 0.599 ppbv
RT: 5.25 min Scan# 766
Delta R.T. -0.00 min
Lab File: VL035778.D
Acq: 13 Oct 2020 1:29

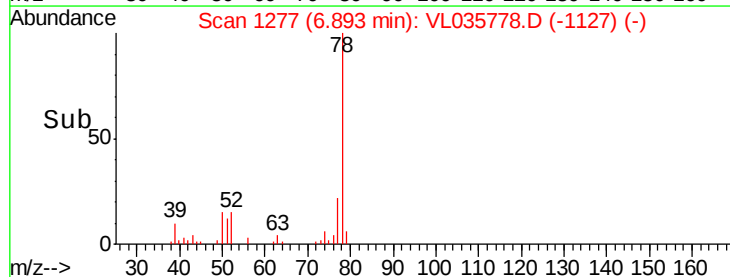
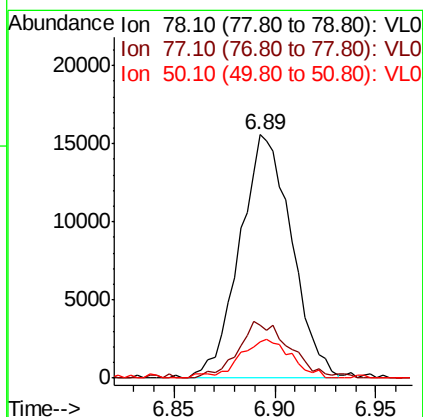
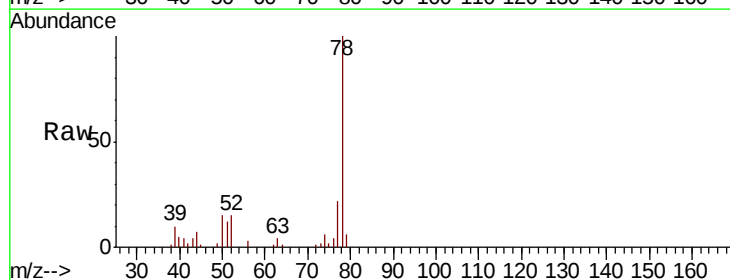
Instrument :
MSVOA_L
ClientSampleId :
1DL

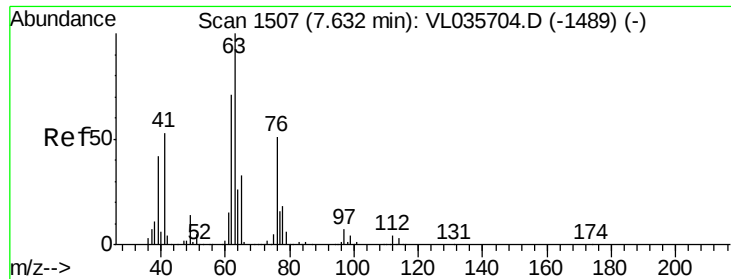
Tot Ion: 43 Resp: 72769
Ion Ratio Lower Upper
43 100
72 31.5 26.1 39.1



#36
Benzene
Concen: 0.117 ppbv
RT: 6.89 min Scan# 1277
Delta R.T. -0.02 min
Lab File: VL035778.D
Acq: 13 Oct 2020 1:29

Tgt Ion: 78 Resp: 28004
Ion Ratio Lower Upper
78 100
77 21.7 19.3 28.9
50 14.9 11.6 17.4

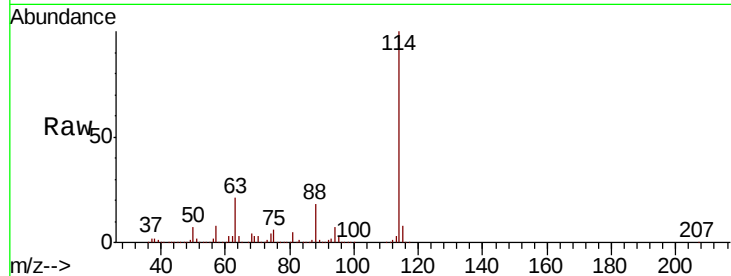




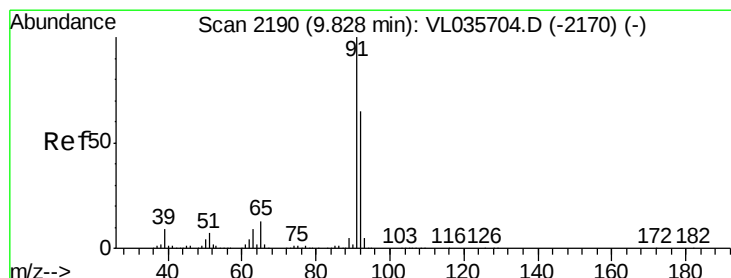
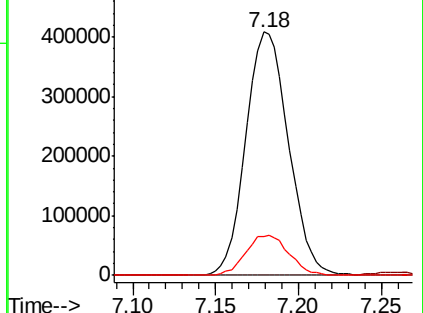
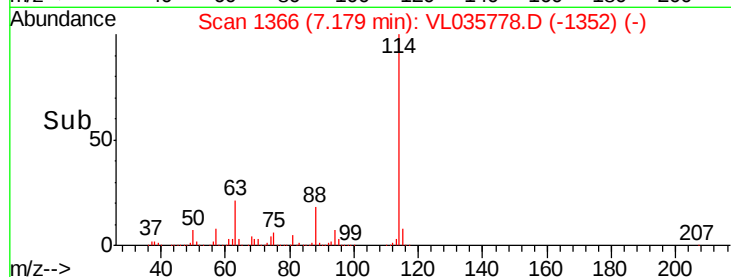
#39
 1,2-Dichloropropane
 Concen: 8.402 ppbv
 RT: 7.18 min Scan# 1366
 Delta R.T. -0.45 min
 Lab File: VL035778.D
 Acq: 13 Oct 2020 1:29

Instrument :
 MSVOA_L
 ClientSampleId :
 1DL

Tot Ion	63	Resp	729268
Ion Ratio	Lower	Upper	
63	100		
41	0.0	42.6	63.8#
62	16.2	56.5	84.7#

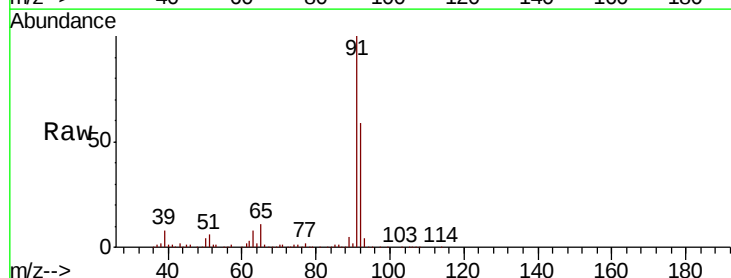


Abundance Ion 63.10 (62.80 to 63.80): VL0
 Ion 41.10 (40.80 to 41.80): VL0
 Ion 62.10 (61.80 to 62.80): VL0

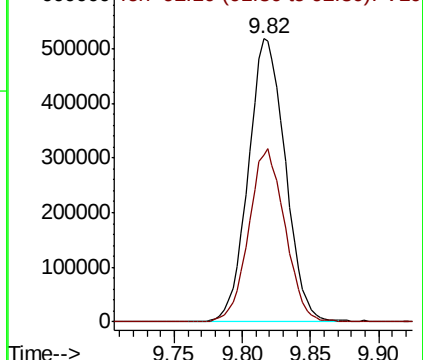
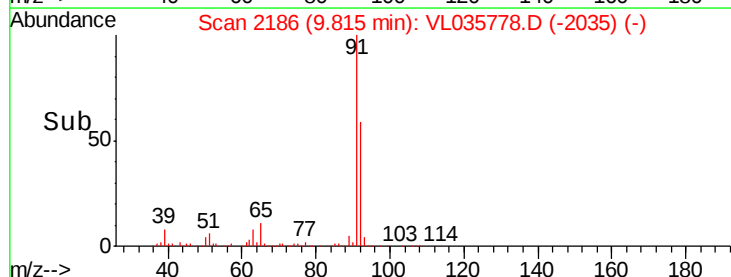


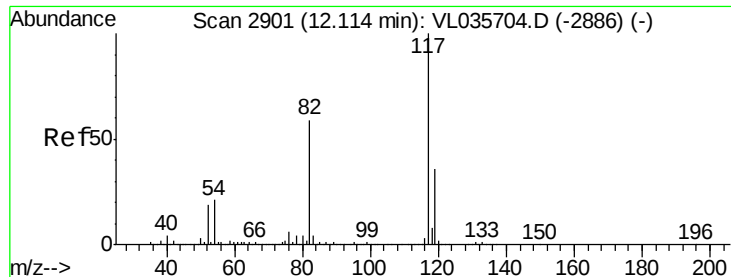
#53
 Toluene
 Concen: 3.446 ppbv
 RT: 9.82 min Scan# 2186
 Delta R.T. -0.01 min
 Lab File: VL035778.D
 Acq: 13 Oct 2020 1:29

Tgt Ion	91	Resp	973163
Ion Ratio	Lower	Upper	
91	100		
92	60.2	50.0	75.0



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: 12.10 min Scan# 2897

Delta R.T. -0.01 min

Lab File: VL035778.D

Acq: 13 Oct 2020 1:29

Instrument :

MSVOA_L

ClientSampled :

1DL

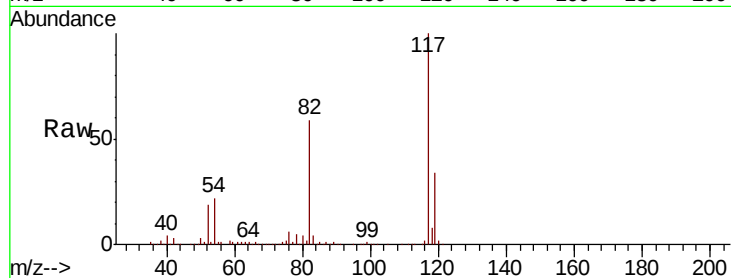
Tot Ion:117 Resp: 3675255

Ion Ratio Lower Upper

117 100

82 58.9 46.1 69.1

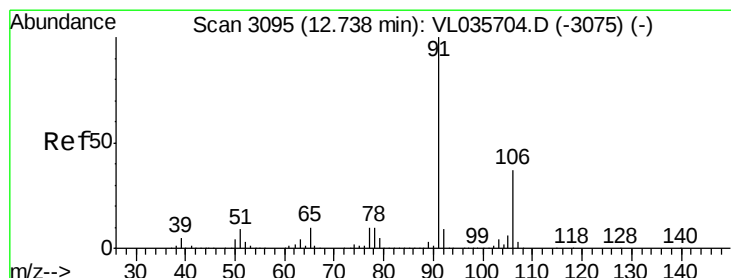
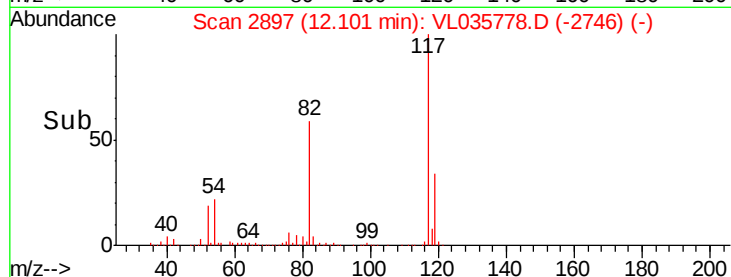
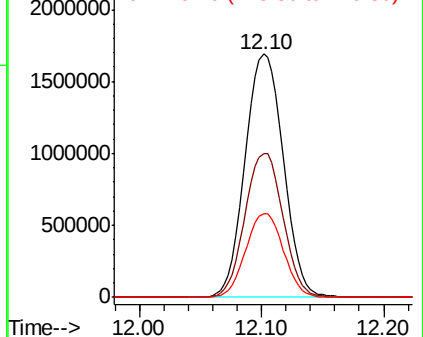
119 34.0 28.0 42.0



Abundance Ion 117.10 (116.80 to 117.80): V

Ion 82.10 (81.80 to 82.80): VL0

Ion 119.10 (118.80 to 119.80): V



#58

Ethyl Benzene

Concen: 0.173 ppbv

RT: 12.73 min Scan# 3091

Delta R.T. -0.01 min

Lab File: VL035778.D

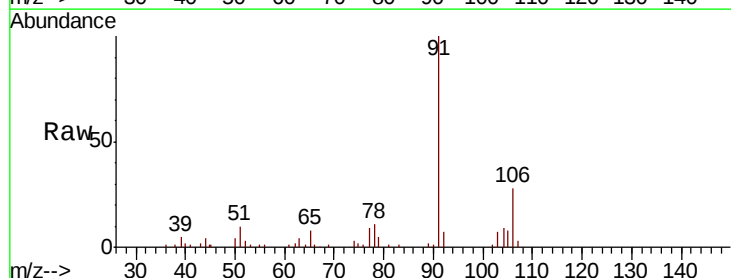
Acq: 13 Oct 2020 1:29

Tgt Ion: 91 Resp: 63693

Ion Ratio Lower Upper

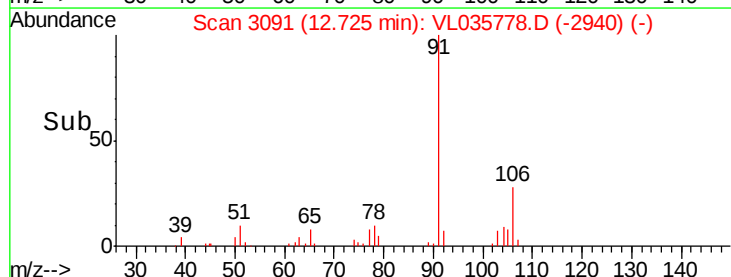
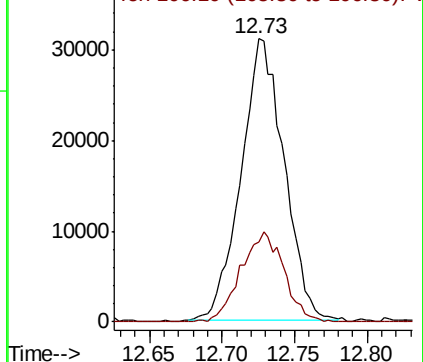
91 100

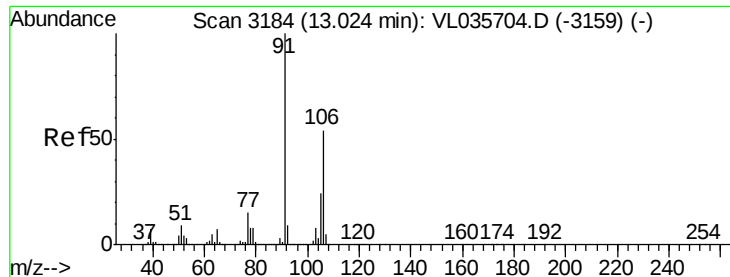
106 28.5 29.7 44.5#



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V

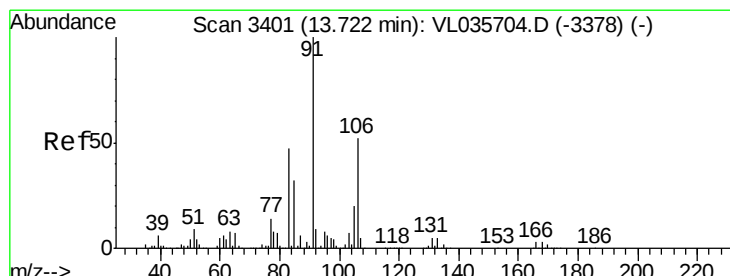
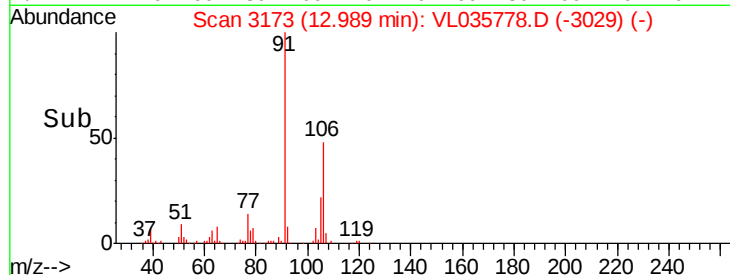
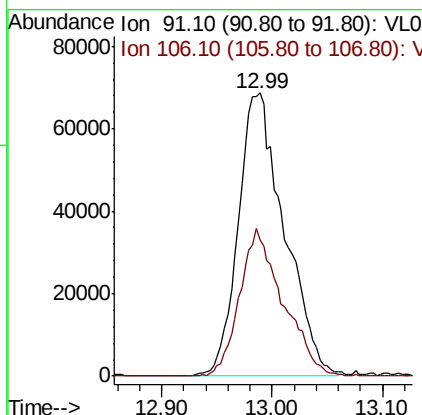
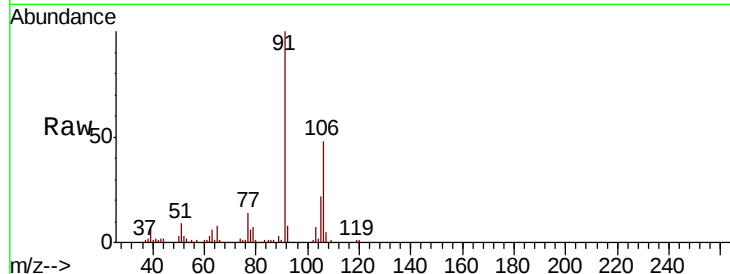




#59
m/p-Xylene
Concen: 0.618 ppbv
RT: 12.99 min Scan# 3173
Delta R.T. -0.04 min
Lab File: VL035778.D
Acq: 13 Oct 2020 1:29

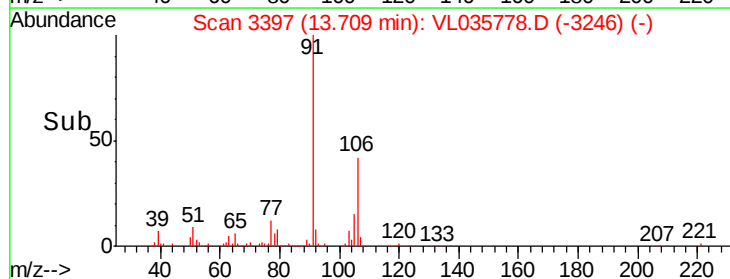
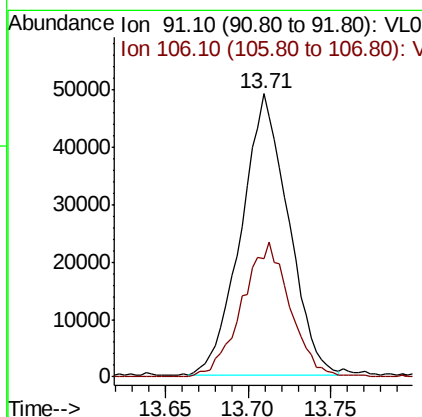
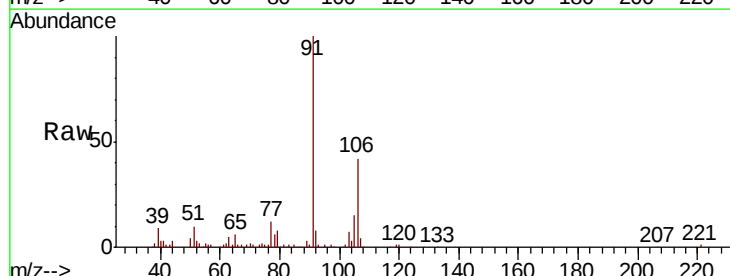
Instrument :
MSVOA_L
ClientSampled :
1DL

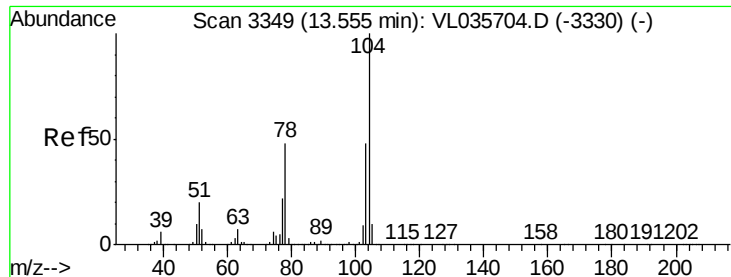
Tot Ion: 91 Resp: 199082
Ion Ratio Lower Upper
91 100
106 49.1 41.4 62.0



#60
o-Xylene
Concen: 0.297 ppbv
RT: 13.71 min Scan# 3397
Delta R.T. -0.01 min
Lab File: VL035778.D
Acq: 13 Oct 2020 1:29

Tgt Ion: 91 Resp: 96729
Ion Ratio Lower Upper
91 100
106 48.8 25.0 75.0

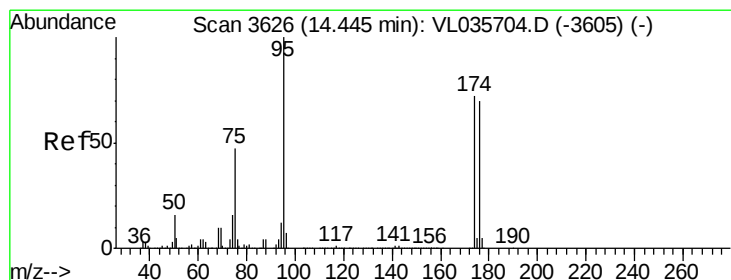
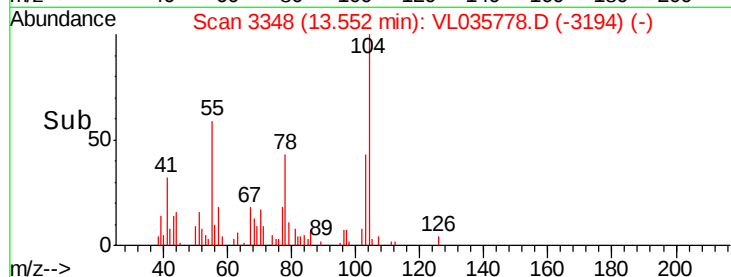
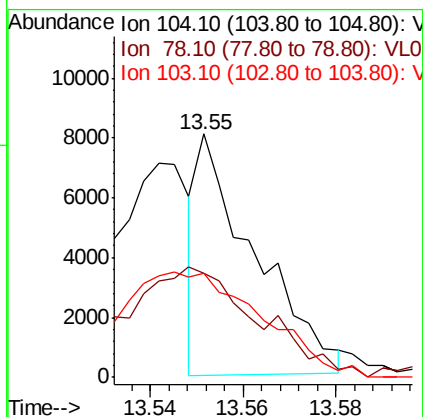
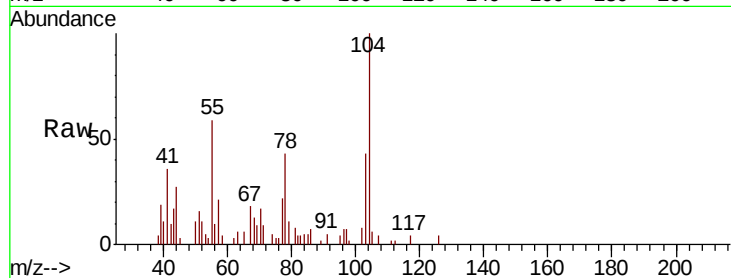




#61
Stvrene
Concen: 0.031 ppbv
RT: 13.55 min Scan# 3348
Delta R.T. -0.00 min
Lab File: VL035778.D
Acq: 13 Oct 2020 1:29

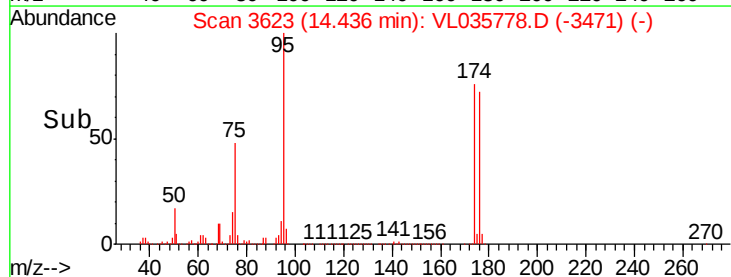
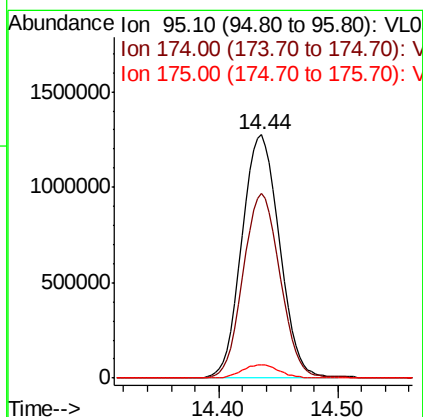
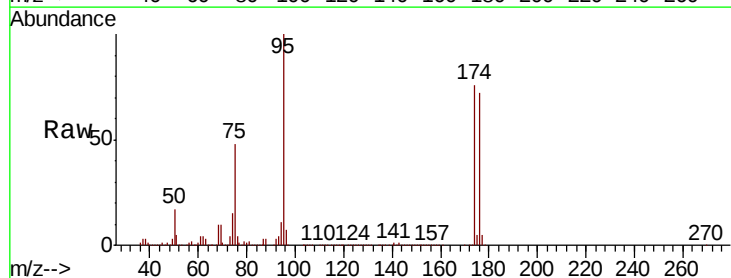
Instrument :
MSVOA_L
ClientSampled :
1DL

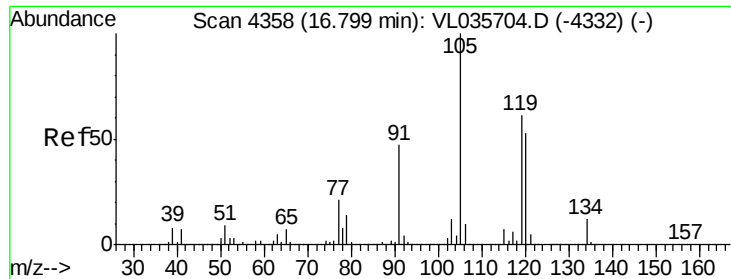
Tot Ion:104 Resp: 6921
Ion Ratio Lower Upper
104 100
78 128.9 37.2 55.8#
103 116.4 38.2 57.2#



#68
1-Bromo-4-Fluorobenzene
Concen: 10.168 ppbv
RT: 14.44 min Scan# 3623
Delta R.T. -0.01 min
Lab File: VL035778.D
Acq: 13 Oct 2020 1:29

Tgt Ion: 95 Resp: 2800254
Ion Ratio Lower Upper
95 100
174 75.2 59.6 89.4
175 5.4 4.2 6.4





#74
 1,2,4-Trimethylbenzene
 Concen: 0.048 ppbv
 RT: 16.78 min Scan# 4352
 Delta R.T. -0.02 min
 Lab File: VL035778.D
 Acq: 13 Oct 2020 1:29

Instrument :
 MSVOA_L
 ClientSampleId :
 1DL

Tot Ion:	105	Resp:	19787
Ion Ratio		Lower	Upper
105	100		
120	39.2	42.5	63.7#
91	14.9	37.7	56.5#
77	5.6	16.7	25.1#

