

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL111020\
 Data File : VL035902.D
 Acq On : 10 Nov 2020 23:53
 Operator : SY/AP
 Sample : L4618-05
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Nov 11 01:24:49 2020
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL110320AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed Nov 04 02:40:06 2020
 QLast Update : Wed Nov 04 02:40:06 2020
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	1130807	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.17	114	3921966	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.09	117	3636586	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.42	95	2711483	10.49	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	104.90%

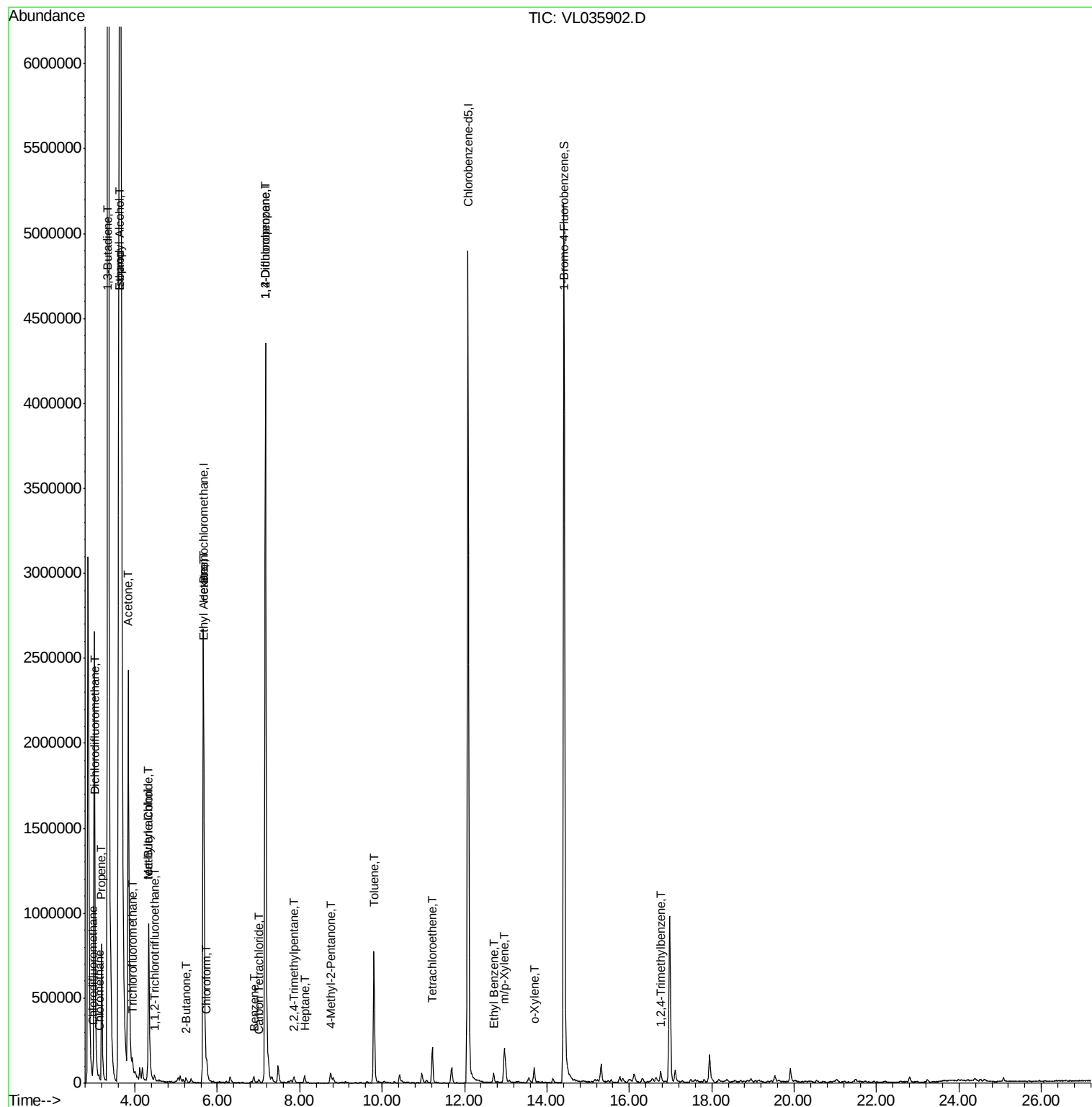
Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.03	85	54610	0.257 ppbv	98
3) Chlorodifluoromethane	2.98	51	43675	0.323 ppbv #	91
4) Chloromethane	3.13	50	29544	0.449 ppbv	96
9) Propene	3.19	41	282700	5.704 ppbv	94
10) Heptane	8.11	43	11900	0.087 ppbv	94
11) Trichlorofluoromethane	3.94	101	58871	0.220 ppbv	93
12) 1,1,2-Trichlorotrifluoroet	4.47	101	13107	0.066 ppbv	100
13) Ethanol	3.64	45	20518438	1908.205 ppbv	94
15) Acetone	3.83	43	3045184	25.189 ppbv	99
16) 1,3-Butadiene	3.34	39	2472578	47.505 ppbv #	1
17) tert-Butyl alcohol	4.34	59	58523	0.365 ppbv #	72
19) Isopropyl Alcohol	3.64	45	20518438	276.183 ppbv #	94
20) Methylene Chloride	4.33	84	475959	5.593 ppbv	99
25) Ethyl Acetate	5.68	43	127058	0.533 ppbv #	77
26) Hexane	5.67	57	186694	1.421 ppbv #	48
29) Chloroform	5.74	83	56808	0.220 ppbv	94
34) 2-Butanone	5.24	43	27332	0.215 ppbv	97
35) Carbon Tetrachloride	7.01	117	11298	0.054 ppbv	85
36) Benzene	6.88	78	30552	0.105 ppbv	93
39) 1,2-Dichloropropane	7.17	63	804501	8.195 ppbv #	30
44) 2,2,4-Trimethylpentane	7.86	57	12345	0.032 ppbv #	1
50) 4-Methyl-2-Pentanone	8.75	43	46800	0.240 ppbv	92
52) Tetrachloroethene	11.22	164	58471	0.423 ppbv	96
53) Toluene	9.80	91	649795	1.847 ppbv	97
58) Ethyl Benzene	12.71	91	48872	0.110 ppbv	92
59) m/p-Xylene	12.97	91	222666	0.594 ppbv	98
60) o-Xylene	13.69	91	36352	0.100 ppbv #	42
74) 1,2,4-Trimethylbenzene	16.76	105	40651	0.094 ppbv #	66

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

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QLast Update : Wed Nov 04 02:40:06 2020
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.66 min Scan# 893

Delta R.T. -0.01 min

Lab File: VL035902.D

Acq: 10 Nov 2020 23:53

Instrument :

MSVOA_L

ClientSampleId :

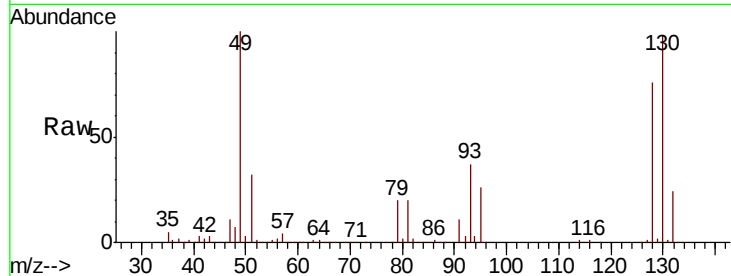
Tot Ion: 49 Resp: 1130807

Ion Ratio Lower Upper

49 100

128 77.0 41.5 124.6

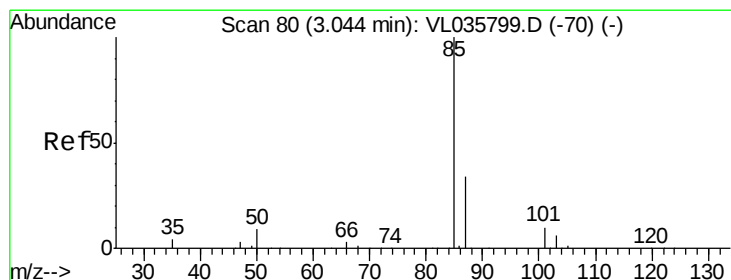
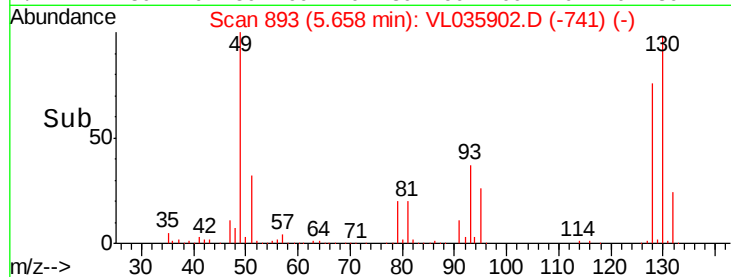
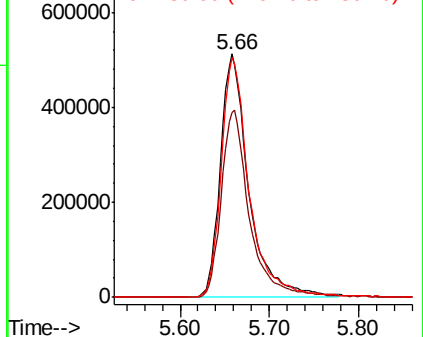
130 98.0 53.7 161.1



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: 0.257 ppbv

RT: 3.03 min Scan# 77

Delta R.T. -0.01 min

Lab File: VL035902.D

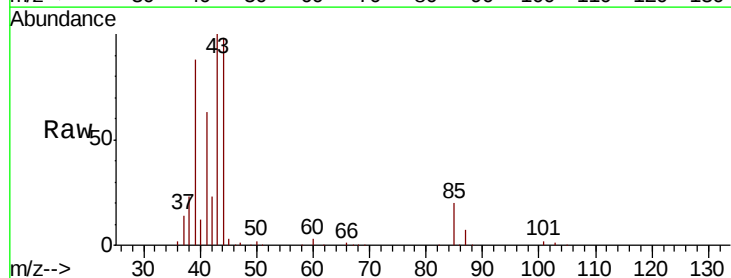
Acq: 10 Nov 2020 23:53

Tgt Ion: 85 Resp: 54610

Ion Ratio Lower Upper

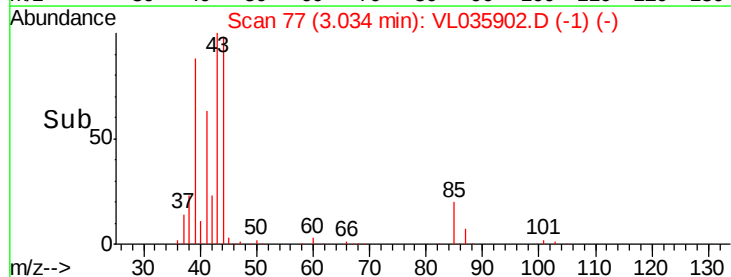
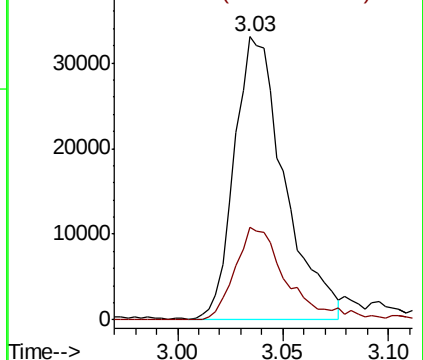
85 100

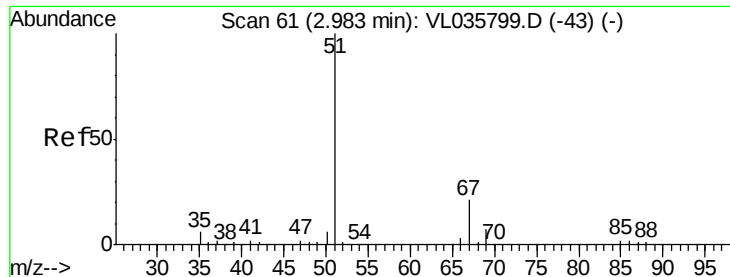
87 32.8 27.1 40.7



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.323 ppbv

RT: 2.98 min Scan# 59

Delta R.T. -0.01 min

Lab File: VL035902.D

Acq: 10 Nov 2020 23:53

Instrument :

MSVOA_L

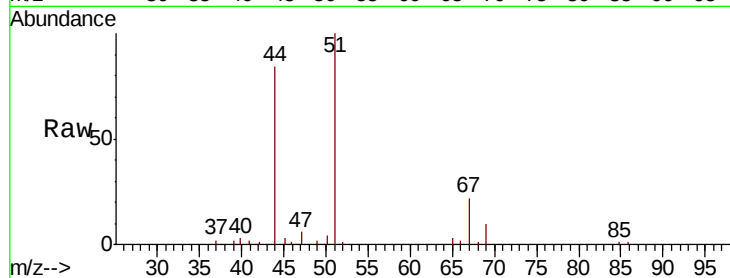
ClientSampled :

Tot Ion: 51 Resp: 43675

Ion Ratio Lower Upper

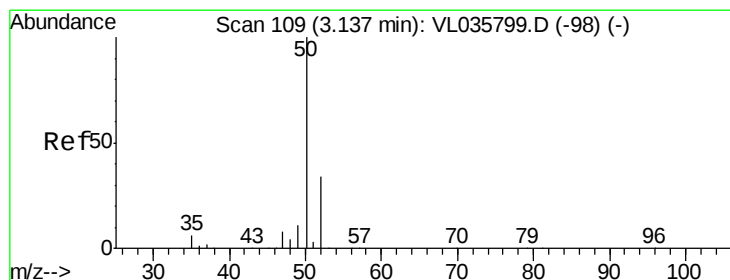
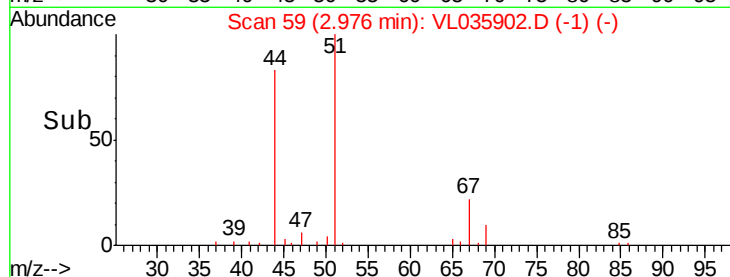
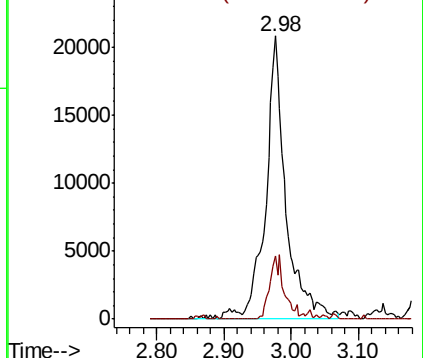
51 100

67 16.8 17.0 25.4#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.449 ppbv

RT: 3.13 min Scan# 106

Delta R.T. -0.01 min

Lab File: VL035902.D

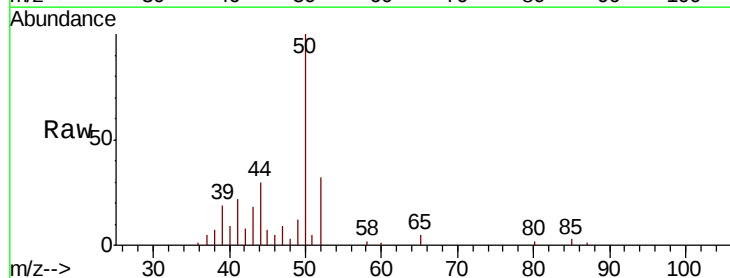
Acq: 10 Nov 2020 23:53

Tgt Ion: 50 Resp: 29544

Ion Ratio Lower Upper

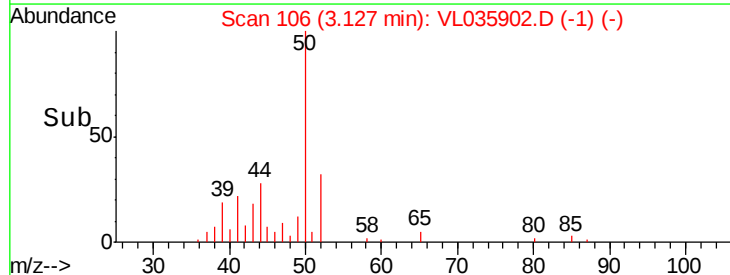
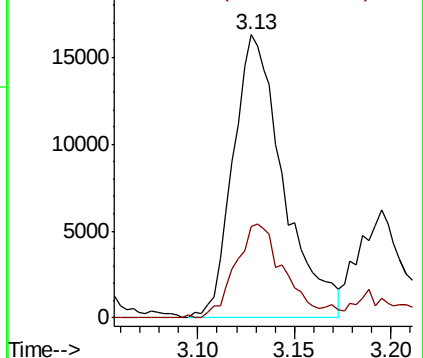
50 100

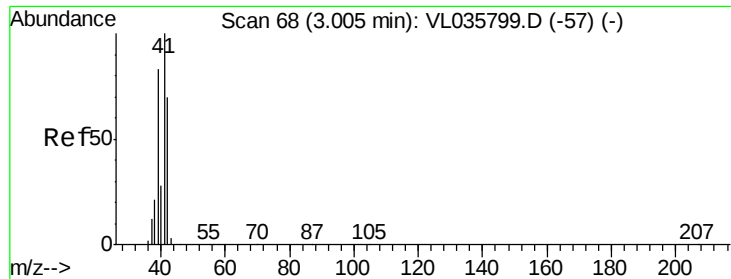
52 31.5 27.1 40.7



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 5.704 ppbv

RT: 3.19 min Scan# 126

Delta R.T. 0.19 min

Lab File: VL035902.D

Acq: 10 Nov 2020 23:53

Instrument :

MSVOA_L

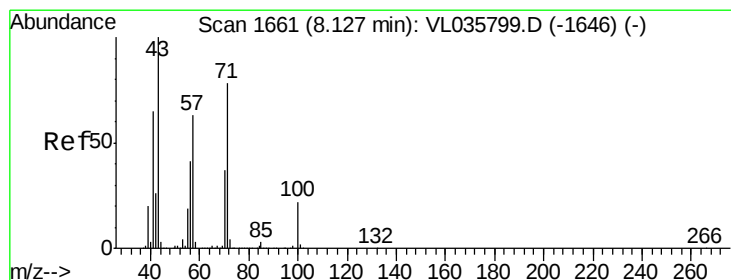
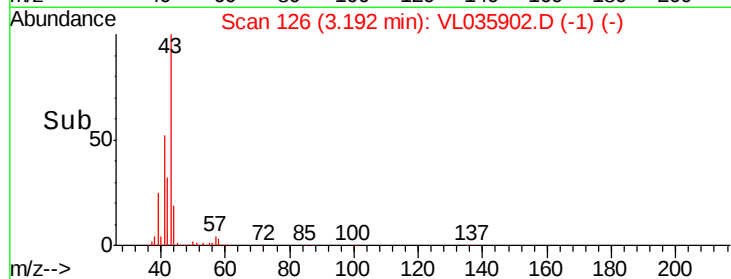
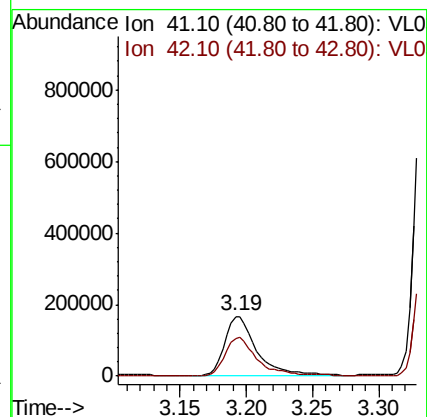
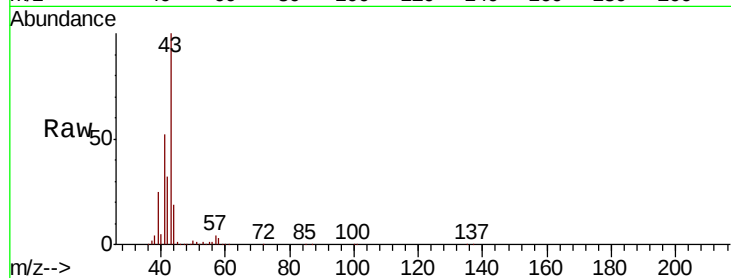
ClientSampleId :

Tot Ion: 41 Resp: 282700

Ion Ratio Lower Upper

41 100

42 65.2 56.2 84.4



#10

Heptane

Concen: 0.087 ppbv

RT: 8.11 min Scan# 1657

Delta R.T. -0.01 min

Lab File: VL035902.D

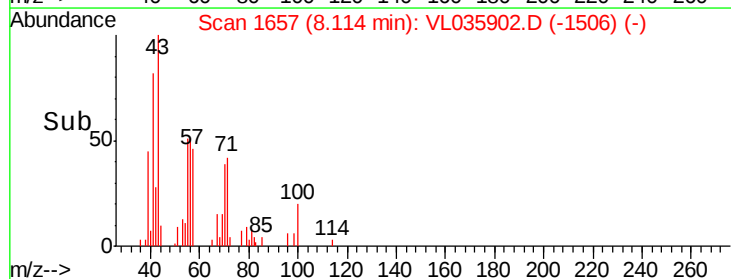
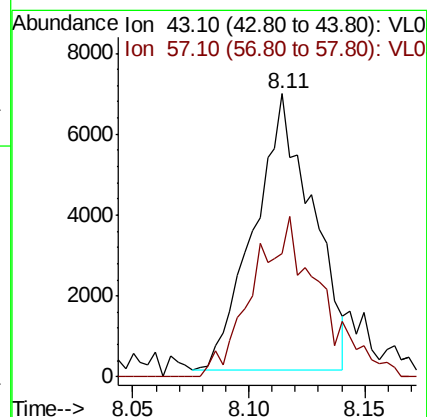
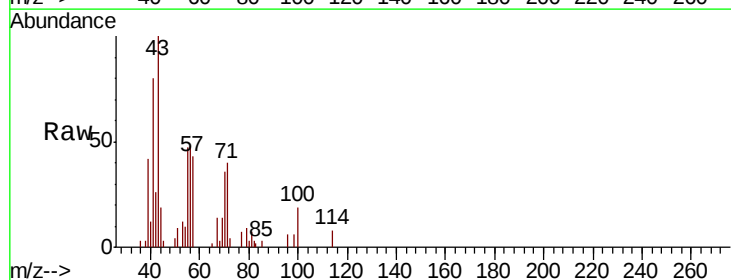
Acq: 10 Nov 2020 23:53

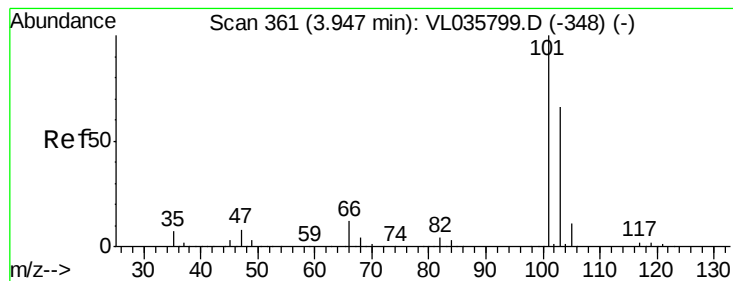
Tgt Ion: 43 Resp: 11900

Ion Ratio Lower Upper

43 100

57 67.2 50.0 75.0





#11

Trichlorofluoromethane

Concen: 0.220 ppbv

RT: 3.94 min Scan# 359

Delta R.T. -0.01 min

Lab File: VL035902.D

Acq: 10 Nov 2020 23:53

Instrument :

MSVOA_L

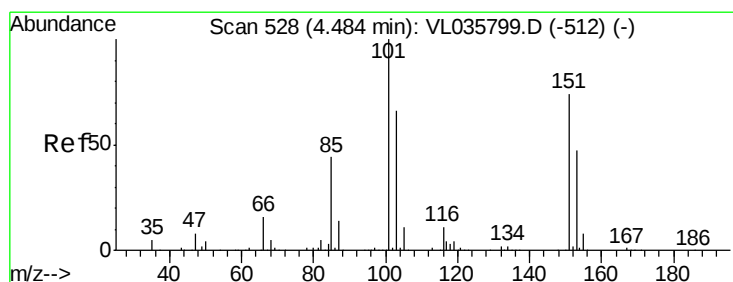
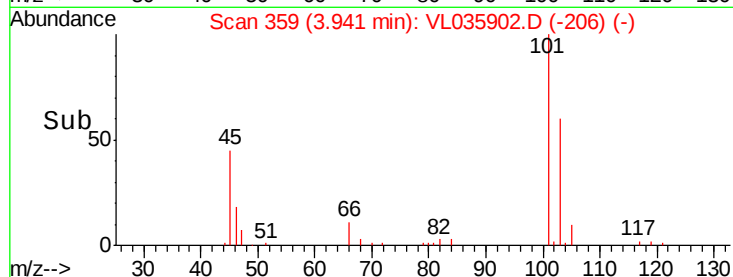
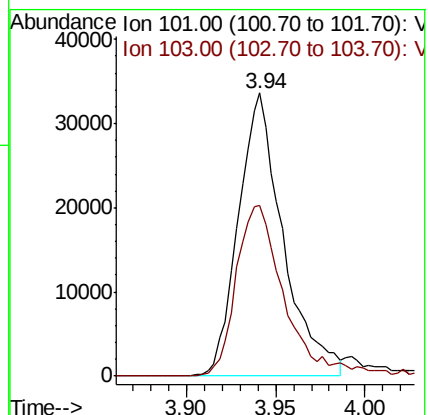
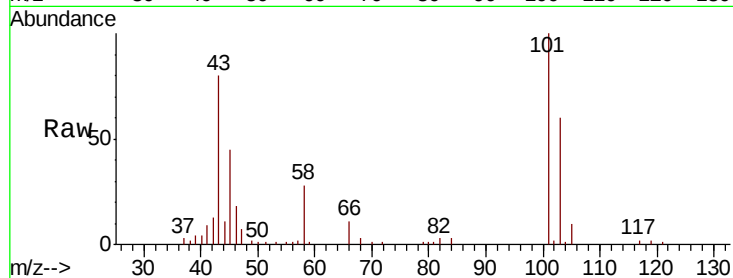
ClientSampleId :

Tot Ion:101 Resp: 58871

Ion Ratio Lower Upper

101 100

103 60.5 53.0 79.4



#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.066 ppbv

RT: 4.47 min Scan# 525

Delta R.T. -0.01 min

Lab File: VL035902.D

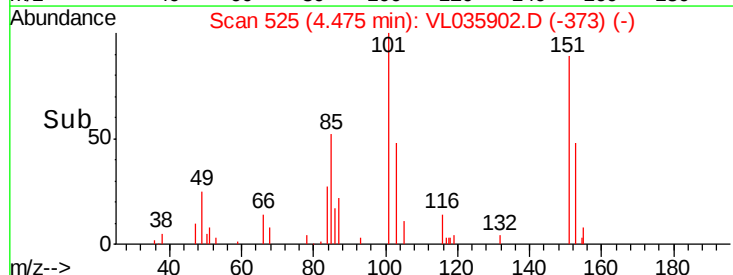
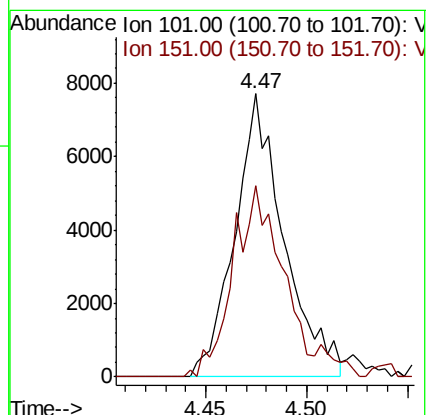
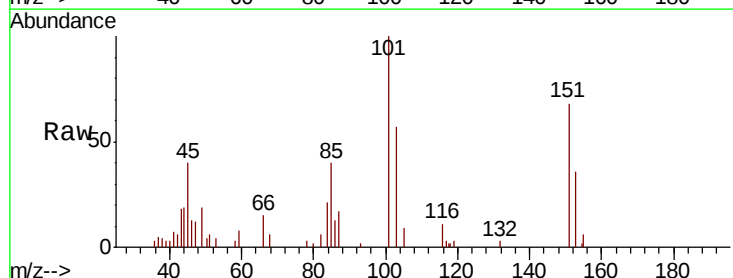
Acq: 10 Nov 2020 23:53

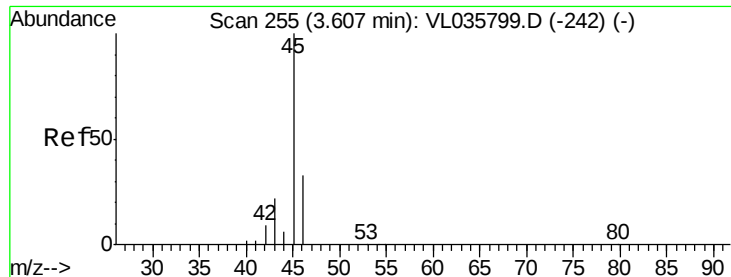
Tgt Ion:101 Resp: 13107

Ion Ratio Lower Upper

101 100

151 73.8 58.9 88.3





#13

Ethanol

Concen: 1908.205 ppbv

RT: 3.64 min Scan# 265

Delta R.T. 0.03 min

Lab File: VL035902.D

Acq: 10 Nov 2020 23:53

Instrument :

MSVOA_L

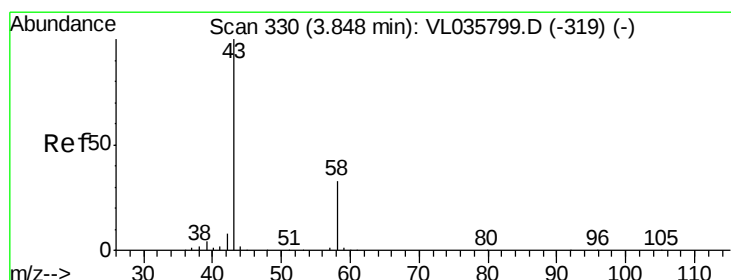
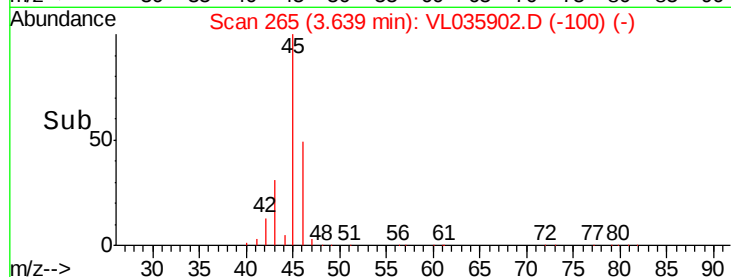
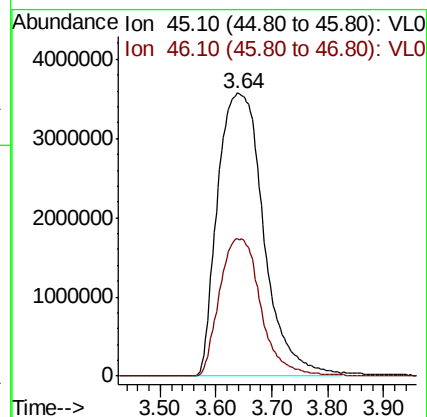
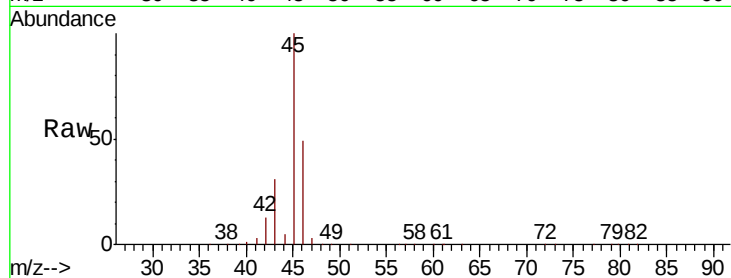
ClientSampleId :

Tot Ion: 45 Resp: 20518438

Ion Ratio Lower Upper

45 100

46 43.9 16.1 64.5



#15

Acetone

Concen: 25.189 ppbv

RT: 3.83 min Scan# 326

Delta R.T. -0.01 min

Lab File: VL035902.D

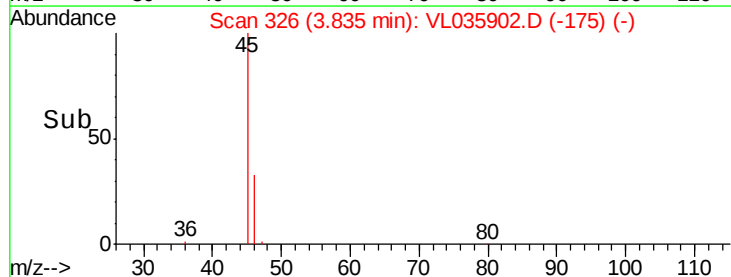
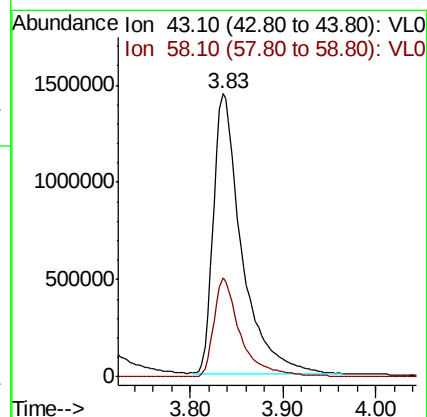
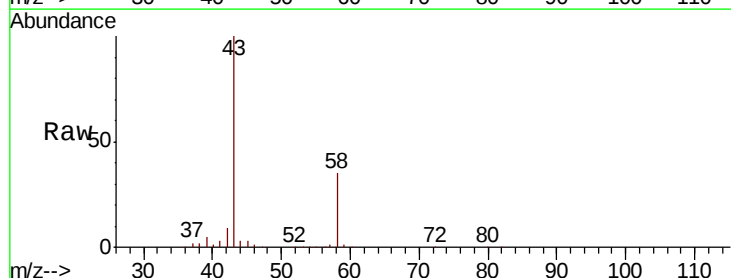
Acq: 10 Nov 2020 23:53

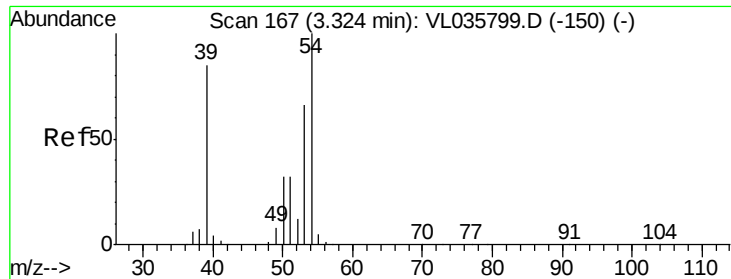
Tgt Ion: 43 Resp: 3045184

Ion Ratio Lower Upper

43 100

58 33.9 27.5 41.3

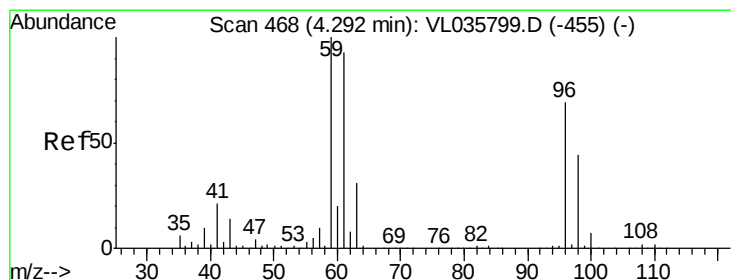
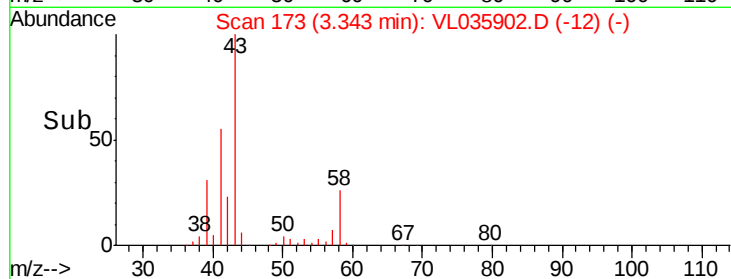
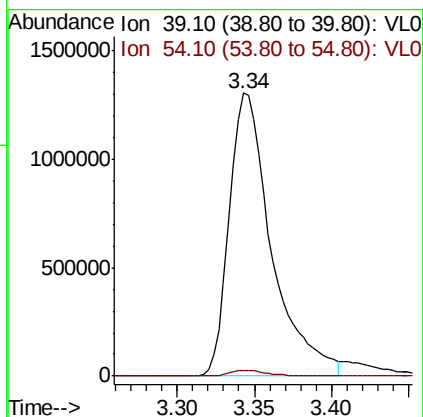
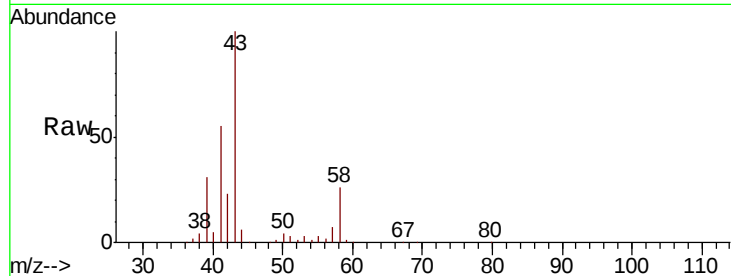




#16
1,3-Butadiene
Concen: 47.505 ppbv
RT: 3.34 min Scan# 173
Delta R.T. 0.02 min
Lab File: VL035902.D
Acq: 10 Nov 2020 23:53

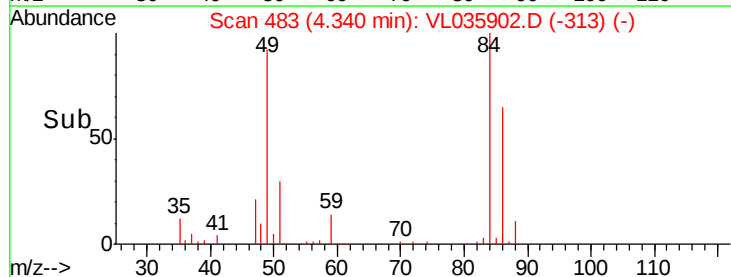
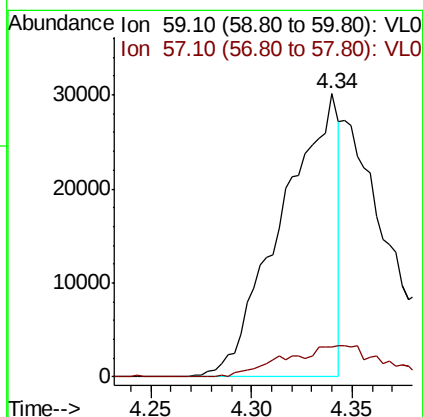
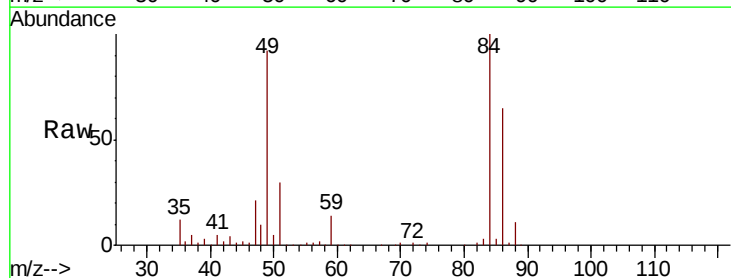
Instrument :
MSVOA_L
ClientSampled :

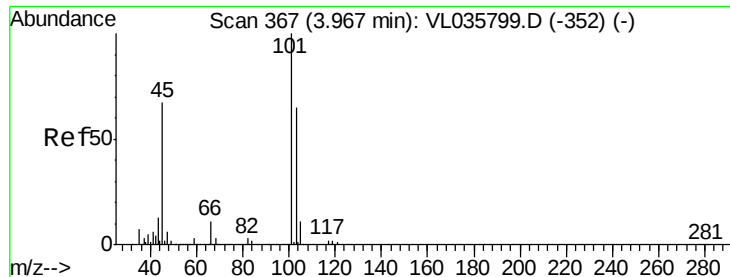
Tot Ion: 39 Resp: 2472578
Ion Ratio Lower Upper
39 100
54 2.1 87.1 130.7#



#17
tert-Butyl alcohol
Concen: 0.365 ppbv
RT: 4.34 min Scan# 483
Delta R.T. 0.05 min
Lab File: VL035902.D
Acq: 10 Nov 2020 23:53

Tgt Ion: 59 Resp: 58523
Ion Ratio Lower Upper
59 100
57 0.0 8.2 12.4#





#19

Isopropyl Alcohol

Concen: 276.183 ppbv

RT: 3.64 min Scan# 265

Delta R.T. -0.33 min

Lab File: VL035902.D

Acq: 10 Nov 2020 23:53

Instrument :

MSVOA_L

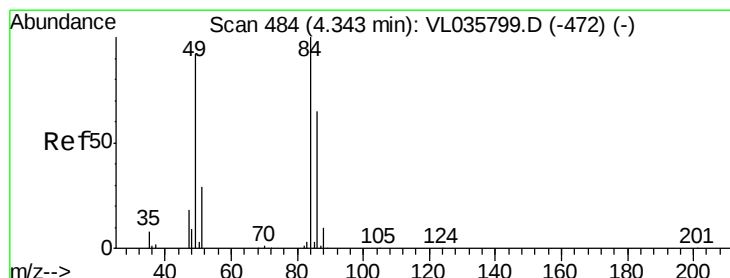
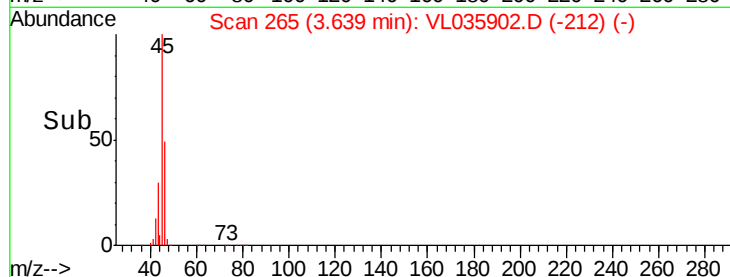
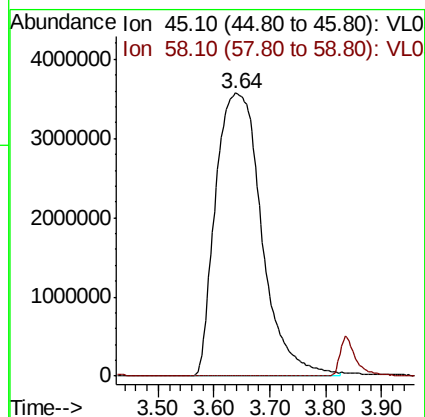
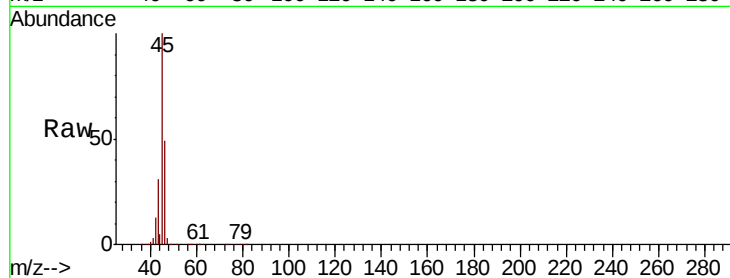
ClientSampleId :

Tot Ion: 45 Resp:20518438

Ion Ratio Lower Upper

45 100

58 5.1 2.6 3.8#



#20

Methylene Chloride

Concen: 5.593 ppbv

RT: 4.33 min Scan# 481

Delta R.T. -0.01 min

Lab File: VL035902.D

Acq: 10 Nov 2020 23:53

Tgt Ion: 84 Resp: 475959

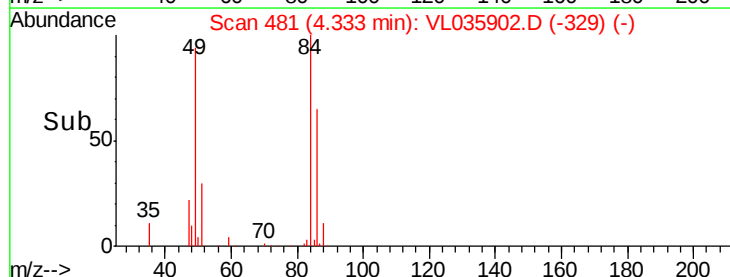
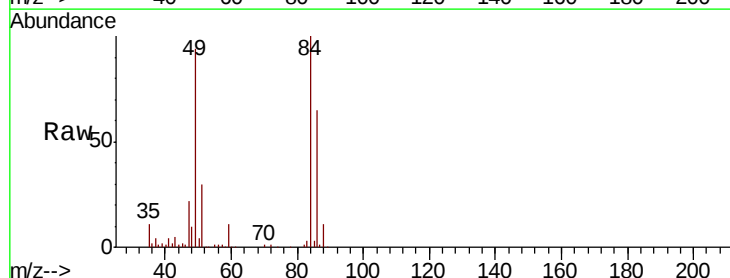
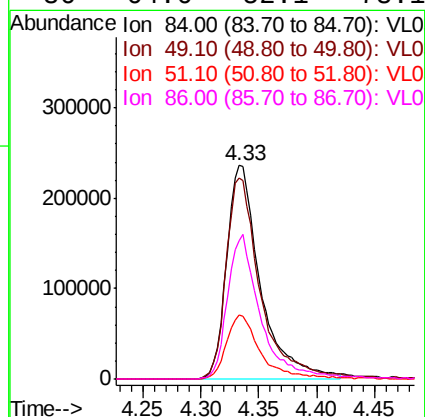
Ion Ratio Lower Upper

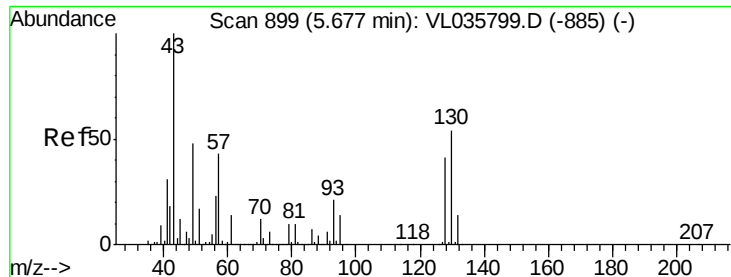
84 100

49 93.8 73.8 110.8

51 30.2 23.0 34.4

86 64.6 52.1 78.1

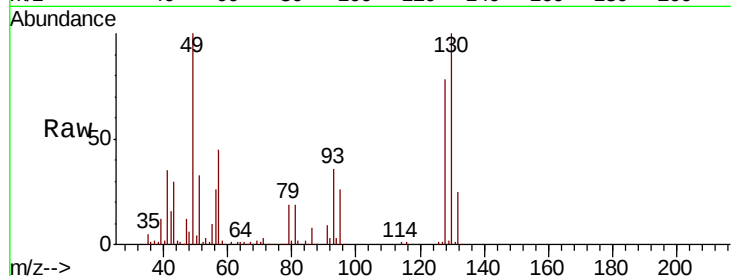




#25
Ethyl Acetate
Concen: 0.533 ppbv
RT: 5.68 min Scan# 899
Delta R.T. -0.00 min
Lab File: VL035902.D
Acq: 10 Nov 2020 23:53

Instrument :
MSVOA_L
ClientSampleId :

Tot Ion:	43	Resp:	127058
Ion	Ratio	Lower	Upper
43	100		
45	3.2	8.5	12.7#
61	2.0	10.7	16.1#
70	3.7	8.6	12.8#



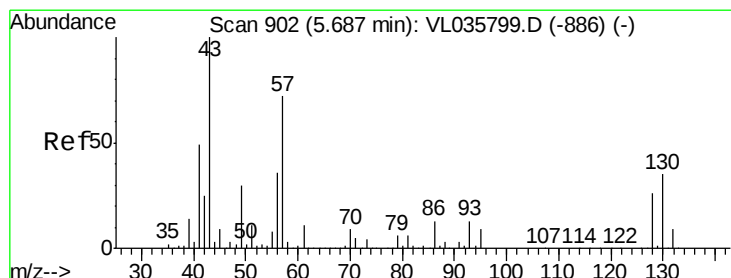
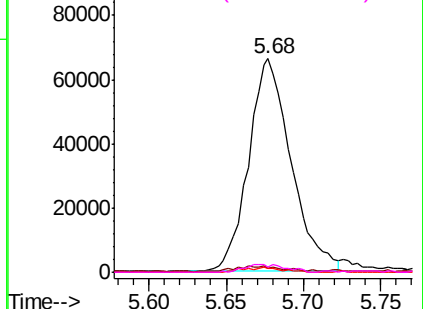
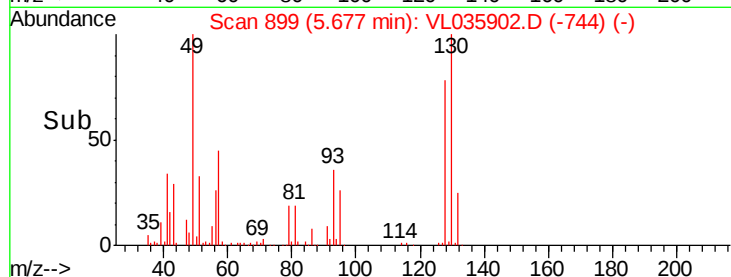
Abundance

Ion 43.10 (42.80 to 43.80): VL0

Ion 45.10 (44.80 to 45.80): VL0

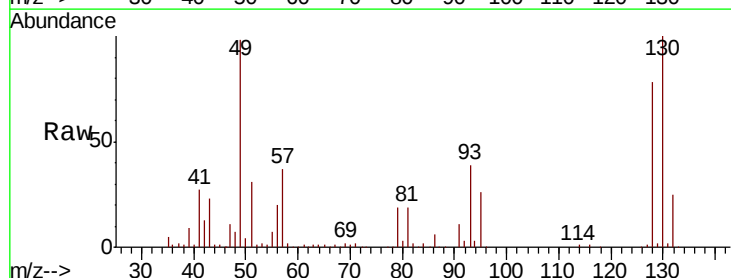
Ion 61.10 (60.80 to 61.80): VL0

Ion 70.10 (69.80 to 70.80): VL0



#26
Hexane
Concen: 1.421 ppbv
RT: 5.67 min Scan# 898
Delta R.T. -0.01 min
Lab File: VL035902.D
Acq: 10 Nov 2020 23:53

Tgt Ion:	57	Resp:	186694
Ion	Ratio	Lower	Upper
57	100		
41	82.5	58.9	88.3
43	70.6	150.2	225.2#
56	60.4	42.4	63.6



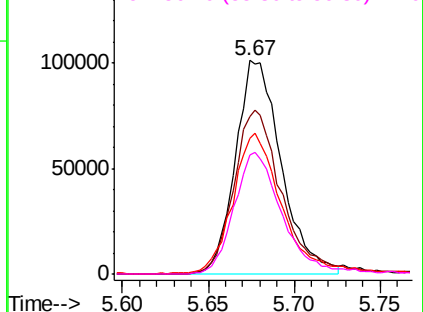
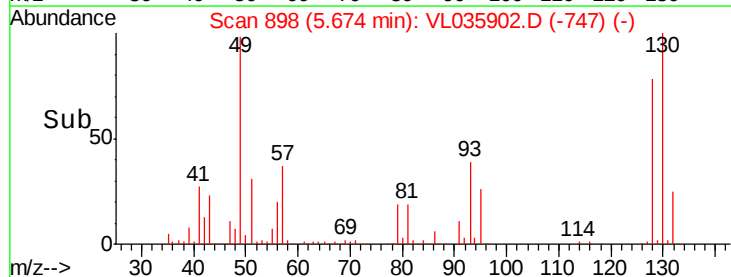
Abundance

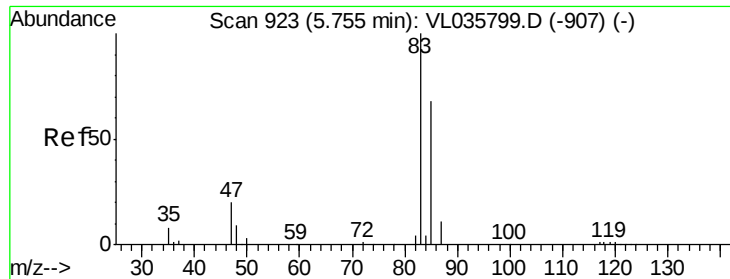
Ion 57.10 (56.80 to 57.80): VL0

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





#29

Chloroform

Concen: 0.220 ppbv

RT: 5.74 min Scan# 919

Delta R.T. -0.01 min

Lab File: VL035902.D

Acq: 10 Nov 2020 23:53

Instrument :

MSVOA_L

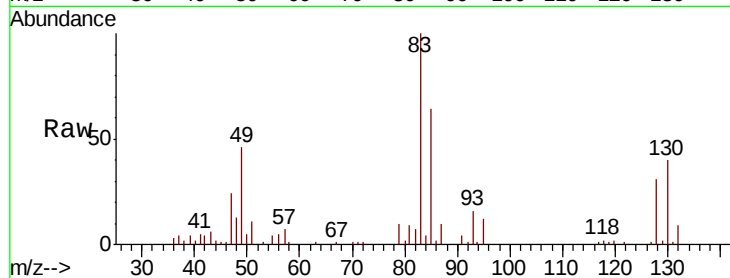
ClientSampleId :

Tot Ion: 83 Resp: 56808

Ion Ratio Lower Upper

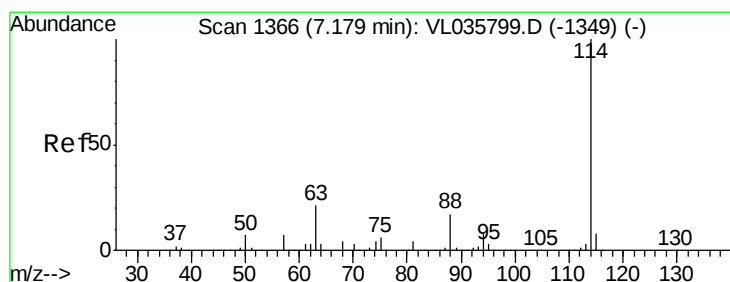
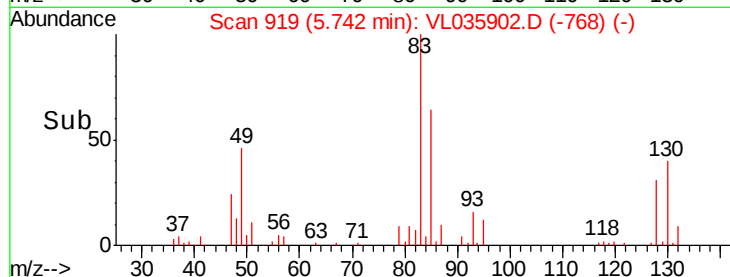
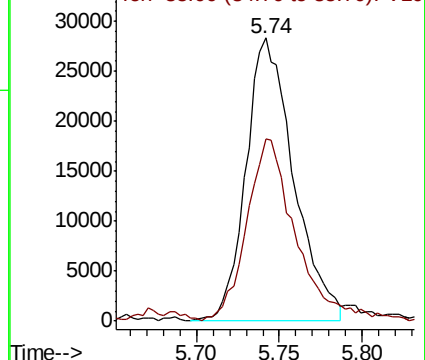
83 100

85 63.1 54.6 81.8



Abundance Ion 83.00 (82.70 to 83.70): VL0

Ion 85.00 (84.70 to 85.70): VL0



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.17 min Scan# 1363

Delta R.T. -0.01 min

Lab File: VL035902.D

Acq: 10 Nov 2020 23:53

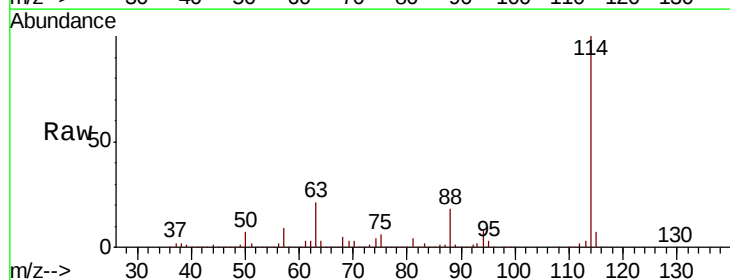
Tgt Ion: 114 Resp: 3921966

Ion Ratio Lower Upper

114 100

63 20.7 16.1 24.1

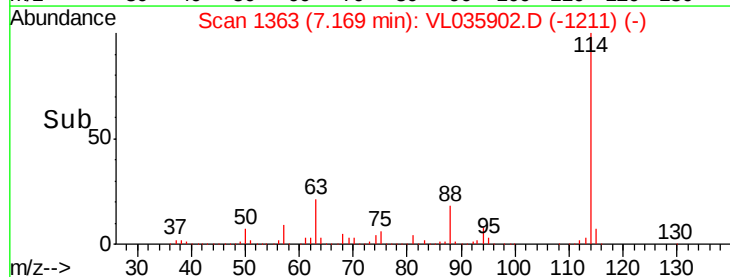
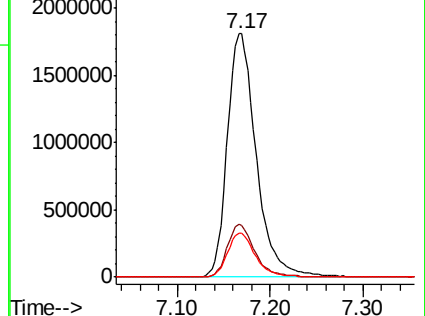
88 17.4 13.7 20.5

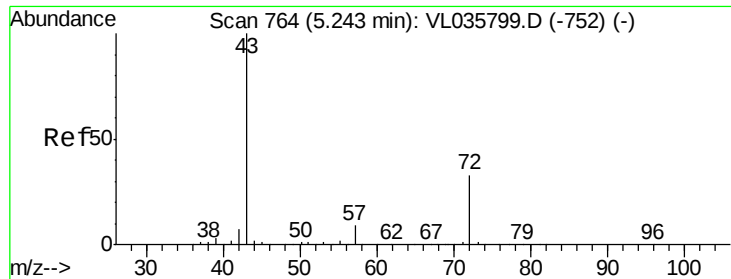


Abundance Ion 114.10 (113.80 to 114.80): V

Ion 63.10 (62.80 to 63.80): VL0

Ion 88.10 (87.80 to 88.80): VL0

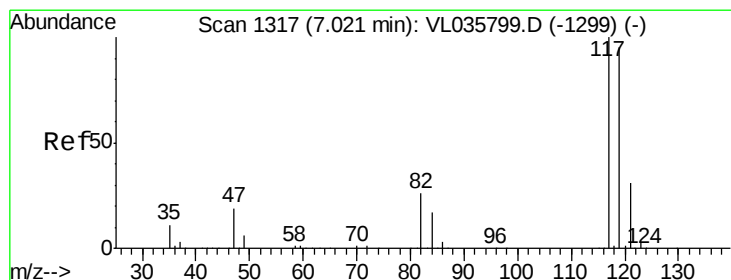
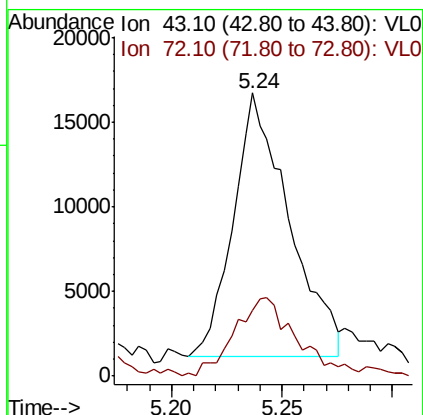
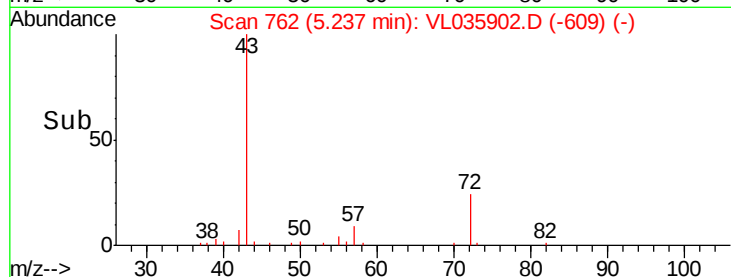
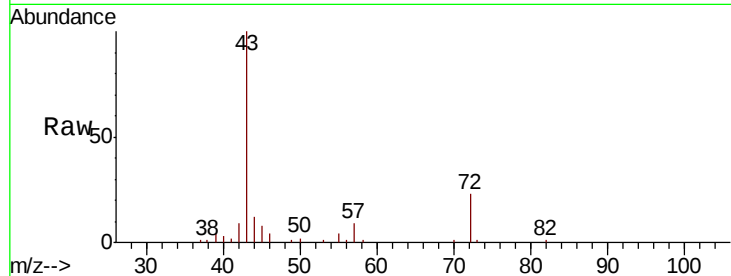




#34
2-Butanone
Concen: 0.215 ppbv
RT: 5.24 min Scan# 762
Delta R.T. -0.01 min
Lab File: VL035902.D
Acq: 10 Nov 2020 23:53

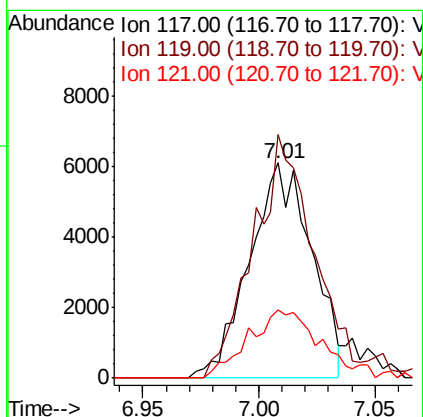
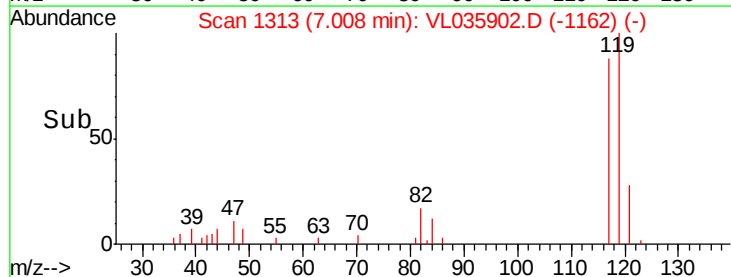
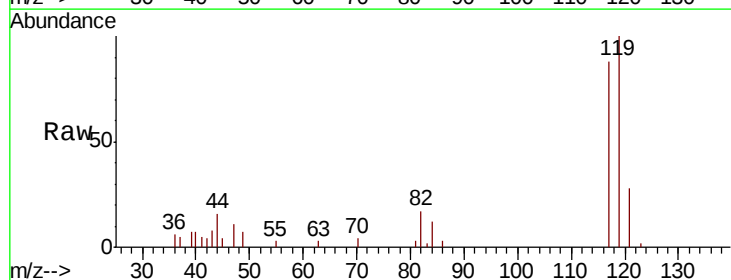
Instrument :
MSVOA_L
ClientSampleId :

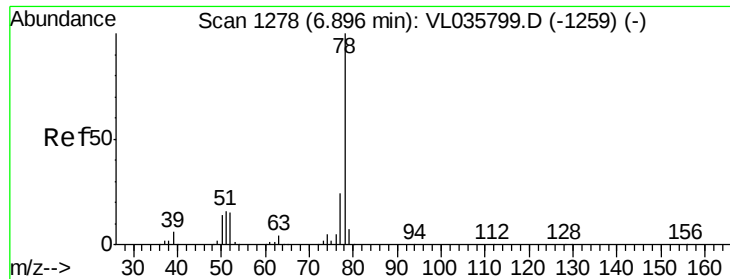
Tot Ion: 43 Resp: 27332
Ion Ratio Lower Upper
43 100
72 35.0 26.5 39.7



#35
Carbon Tetrachloride
Concen: 0.054 ppbv
RT: 7.01 min Scan# 1313
Delta R.T. -0.01 min
Lab File: VL035902.D
Acq: 10 Nov 2020 23:53

Tgt Ion: 117 Resp: 11298
Ion Ratio Lower Upper
117 100
119 113.3 75.6 113.4
121 31.5 25.1 37.7





#36

Benzene

Concen: 0.105 ppbv

RT: 6.88 min Scan# 1274

Delta R.T. -0.01 min

Lab File: VL035902.D

Acq: 10 Nov 2020 23:53

Instrument :

MSVOA_L

ClientSampleId :

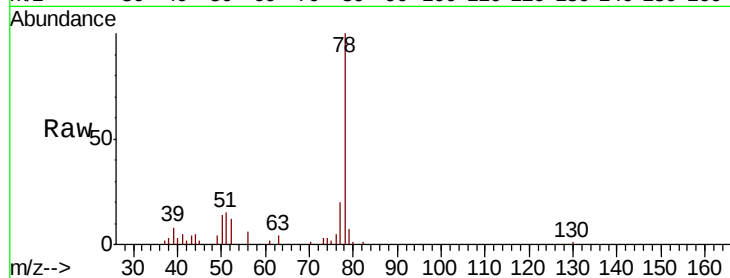
Tot Ion: 78 Resp: 30552

Ion Ratio Lower Upper

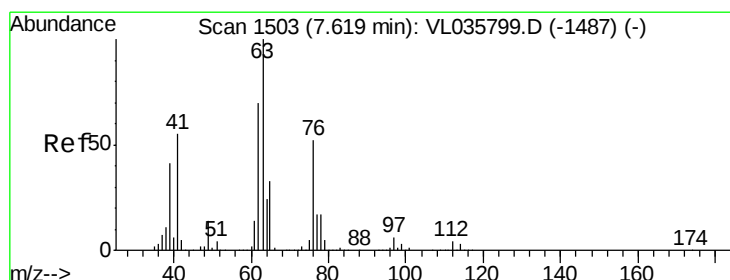
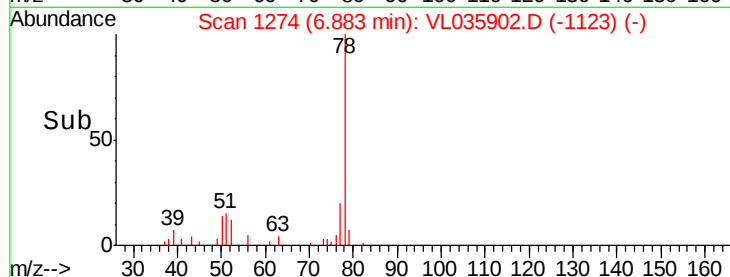
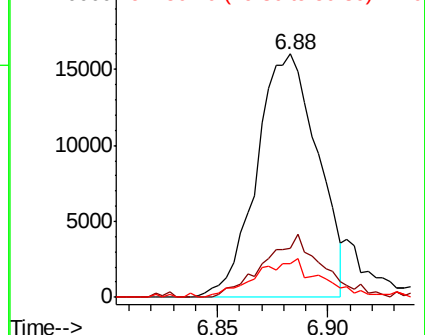
78 100

77 20.3 19.3 28.9

50 12.3 11.4 17.2



Abundance Ion 78.10 (77.80 to 78.80): VL0
Ion 77.10 (76.80 to 77.80): VL0
Ion 50.10 (49.80 to 50.80): VL0



#39

1,2-Dichloropropane

Concen: 8.195 ppbv

RT: 7.17 min Scan# 1362

Delta R.T. -0.45 min

Lab File: VL035902.D

Acq: 10 Nov 2020 23:53

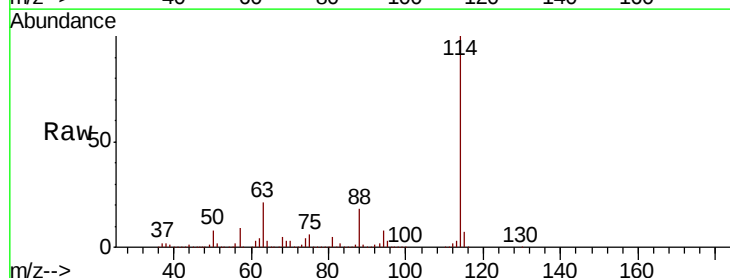
Tgt Ion: 63 Resp: 804501

Ion Ratio Lower Upper

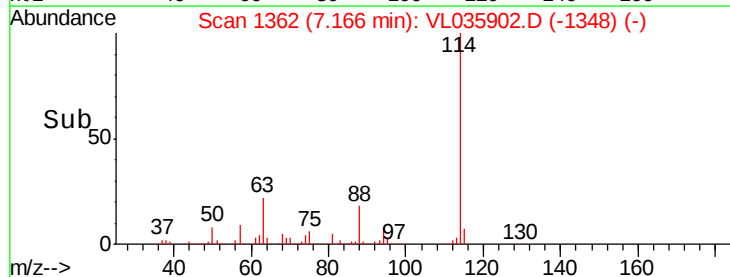
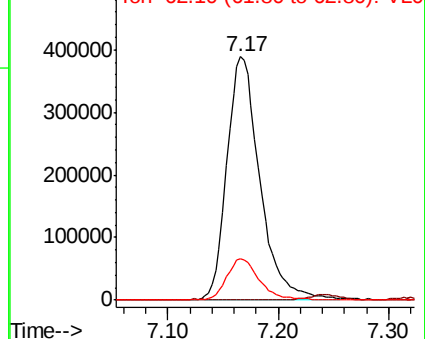
63 100

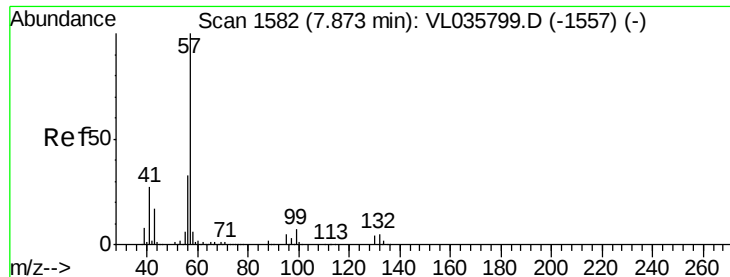
41 0.0 43.8 65.6#

62 16.8 56.2 84.2#



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





#44

2,2,4-Trimethylpentane

Concen: 0.032 ppbv

RT: 7.86 min Scan# 1578

Delta R.T. -0.01 min

Lab File: VL035902.D

Acq: 10 Nov 2020 23:53

Instrument :

MSVOA_L

ClientSampled :

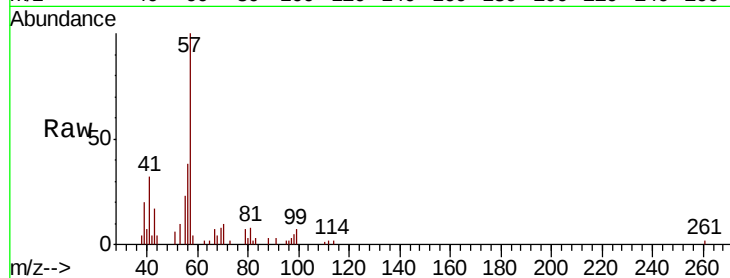
Tot Ion: 57 Resp: 12345

Ion Ratio Lower Upper

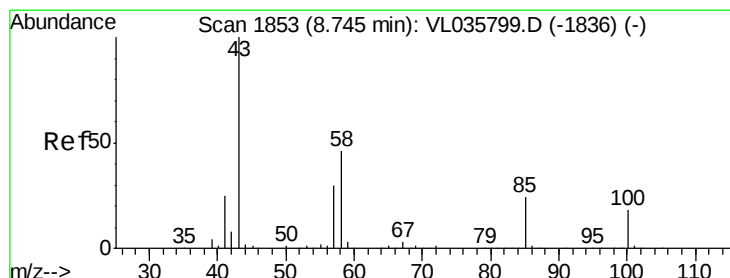
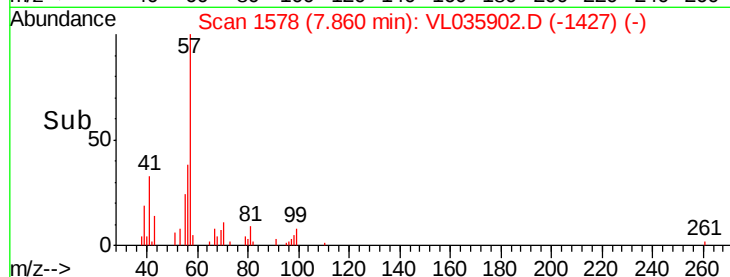
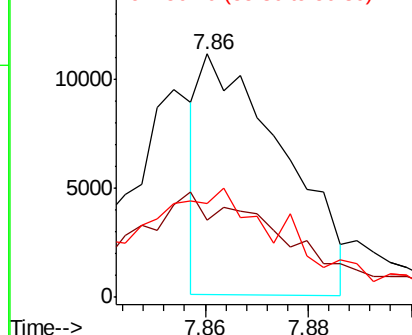
57 100

41 95.8 21.0 31.4#

56 95.1 25.4 38.0#



Abundance Ion 57.10 (56.80 to 57.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 56.10 (55.80 to 56.80): VL0



#50

4-Methyl-2-Pentanone

Concen: 0.240 ppbv

RT: 8.75 min Scan# 1855

Delta R.T. 0.01 min

Lab File: VL035902.D

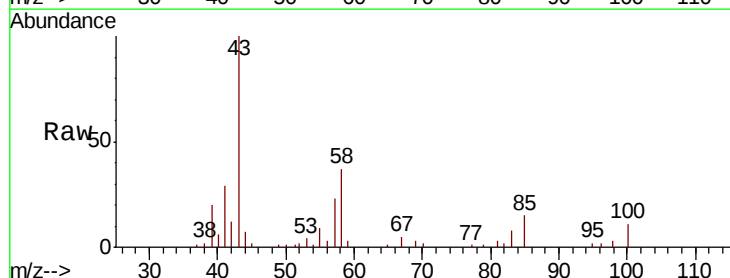
Acq: 10 Nov 2020 23:53

Tgt Ion: 43 Resp: 46800

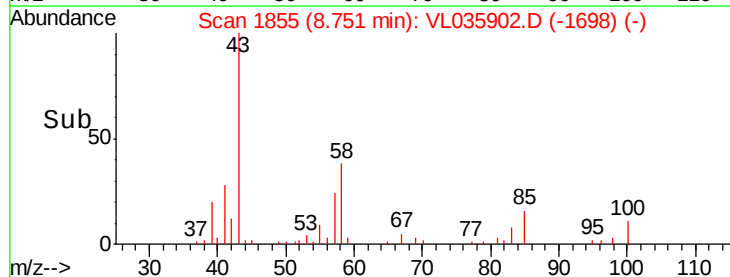
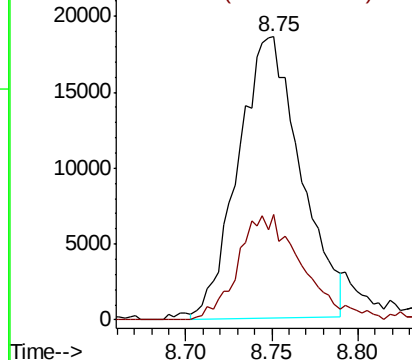
Ion Ratio Lower Upper

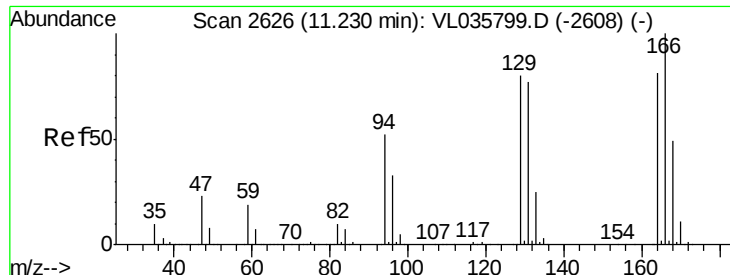
43 100

58 39.4 36.0 54.0



Abundance Ion 43.10 (42.80 to 43.80): VL0
Ion 58.10 (57.80 to 58.80): VL0





#52

Tetrachloroethene

Concen: 0.423 ppbv

RT: 11.22 min Scan# 2623

Delta R.T. -0.01 min

Lab File: VL035902.D

Acq: 10 Nov 2020 23:53

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion:164 Resp: 58471

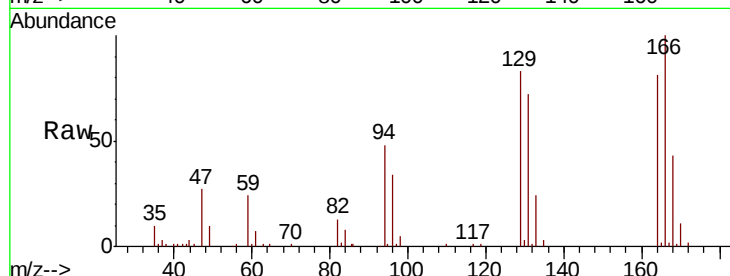
Ion Ratio Lower Upper

164 100

166 121.9 99.3 148.9

129 101.3 79.3 118.9

131 87.6 76.5 114.7

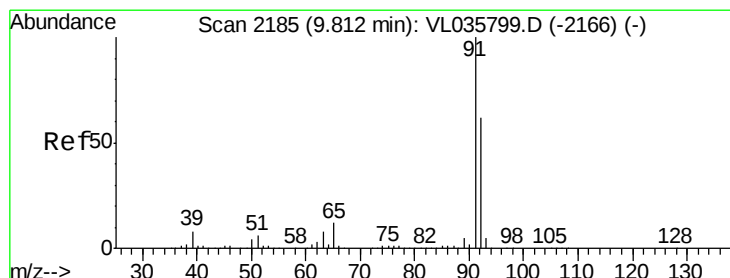
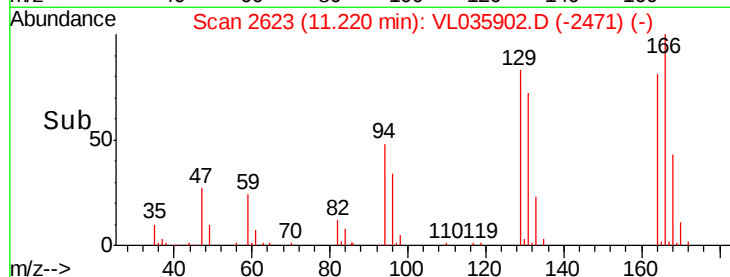
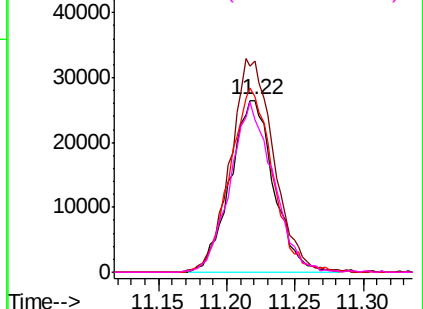


Abundance Ion 163.90 (163.60 to 164.60): V

Ion 165.90 (165.60 to 166.60): V

Ion 129.00 (128.70 to 129.70): V

Ion 131.00 (130.70 to 131.70): V



#53

Toluene

Concen: 1.847 ppbv

RT: 9.80 min Scan# 2182

Delta R.T. -0.01 min

Lab File: VL035902.D

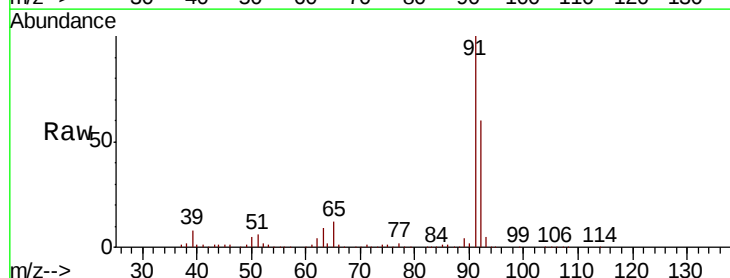
Acq: 10 Nov 2020 23:53

Tgt Ion: 91 Resp: 649795

Ion Ratio Lower Upper

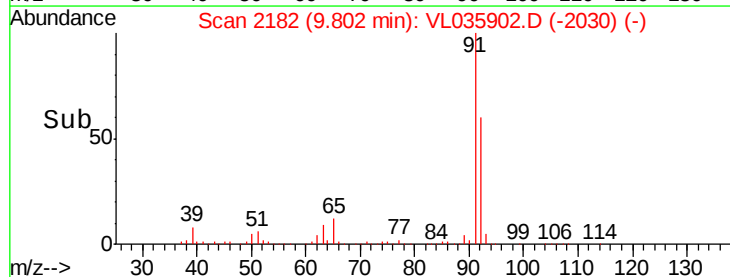
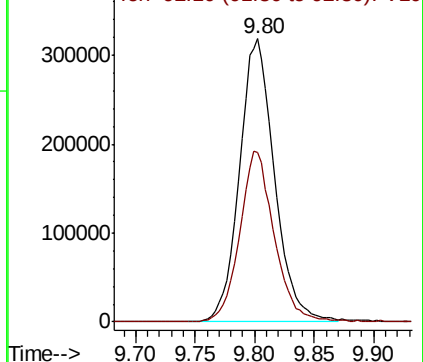
91 100

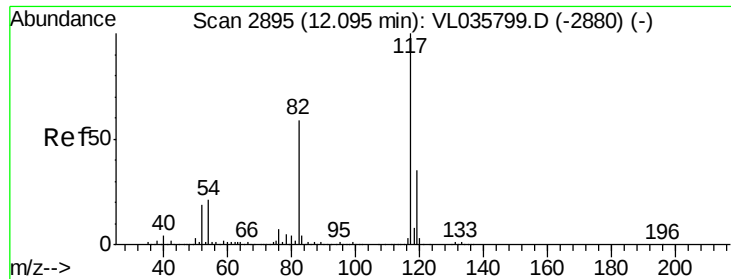
92 59.7 49.8 74.6



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

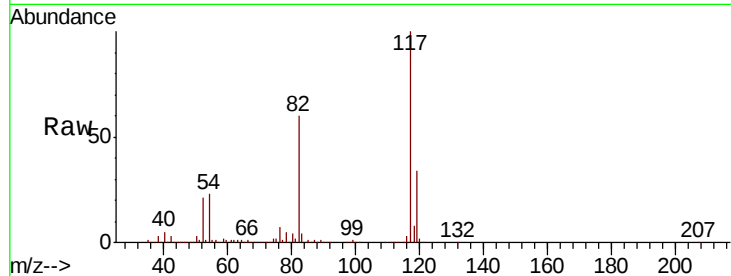




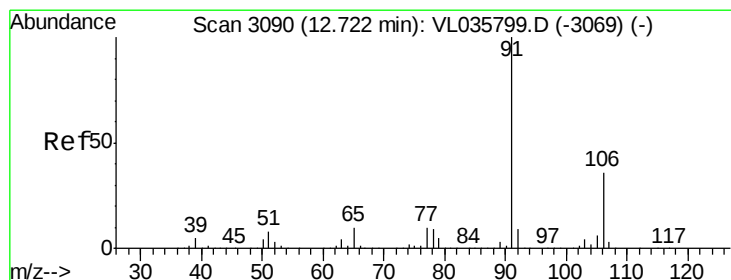
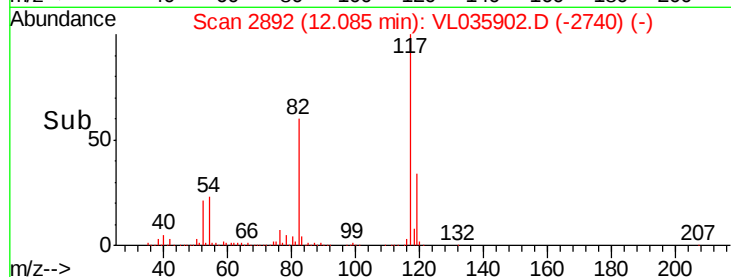
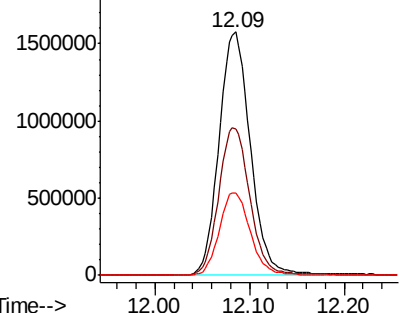
#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.09 min Scan# 2892
Delta R.T. -0.01 min
Lab File: VL035902.D
Acq: 10 Nov 2020 23:53

Instrument :
MSVOA_L
ClientSampleId :

Tot Ion:117 Resp: 3636586
Ion Ratio Lower Upper
117 100
82 61.1 50.6 76.0
119 34.0 52.6 78.8#

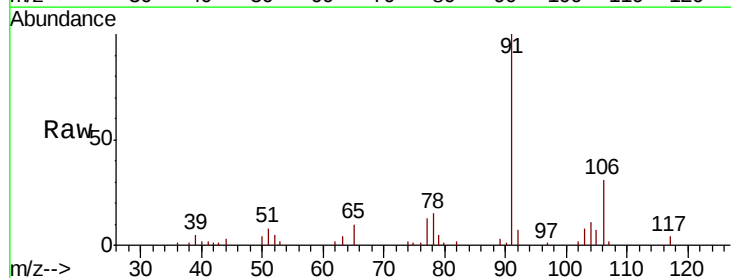


Abundance Ion 117.10 (116.80 to 117.80): V
Ion 82.10 (81.80 to 82.80): VL0
Ion 119.10 (118.80 to 119.80): V

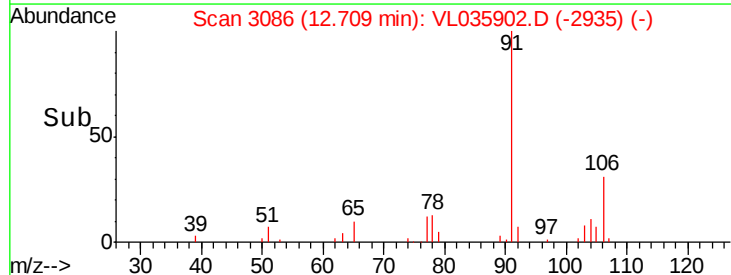
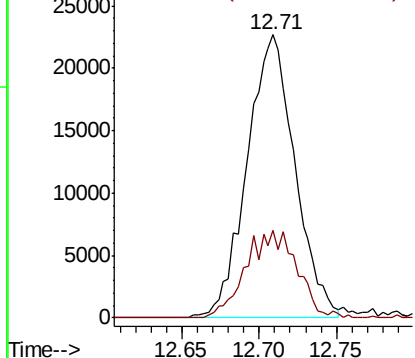


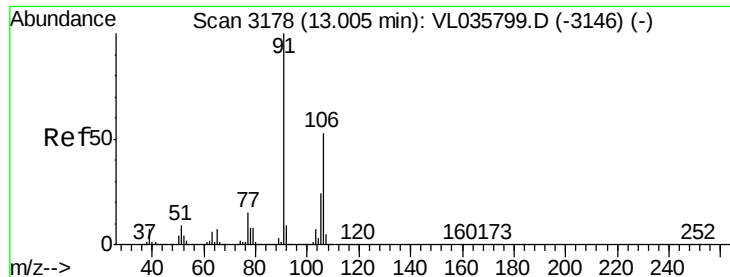
#58
Ethyl Benzene
Concen: 0.110 ppbv
RT: 12.71 min Scan# 3086
Delta R.T. -0.01 min
Lab File: VL035902.D
Acq: 10 Nov 2020 23:53

Tgt Ion: 91 Resp: 48872
Ion Ratio Lower Upper
91 100
106 30.8 28.6 43.0



Abundance Ion 91.10 (90.80 to 91.80): VL0
Ion 106.10 (105.80 to 106.80): V

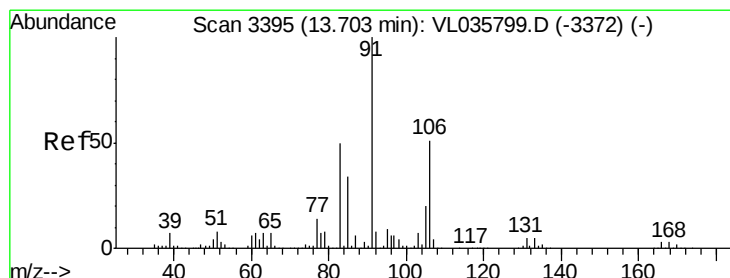
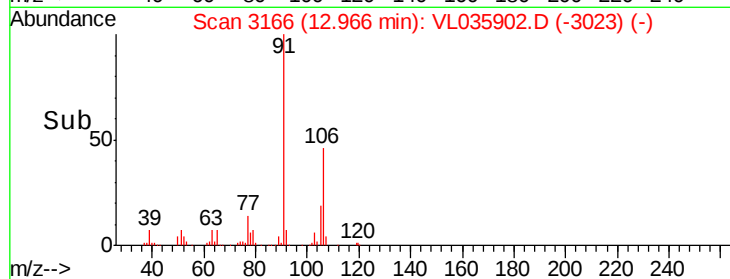
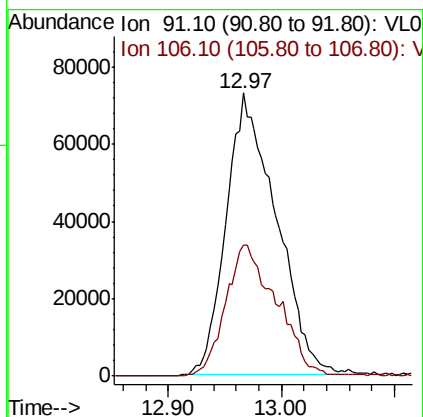
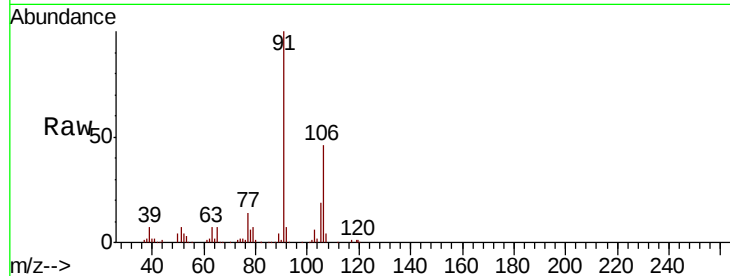




#59
m/p-Xylene
Concen: 0.594 ppbv
RT: 12.97 min Scan# 3166
Delta R.T. -0.04 min
Lab File: VL035902.D
Acq: 10 Nov 2020 23:53

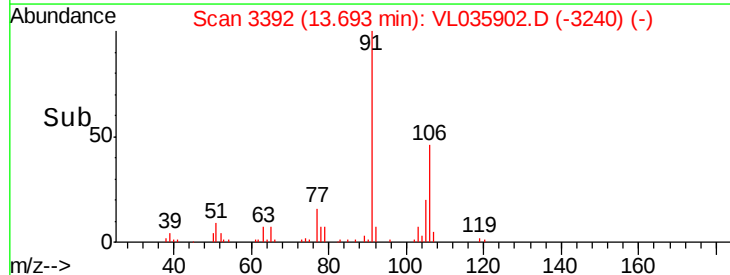
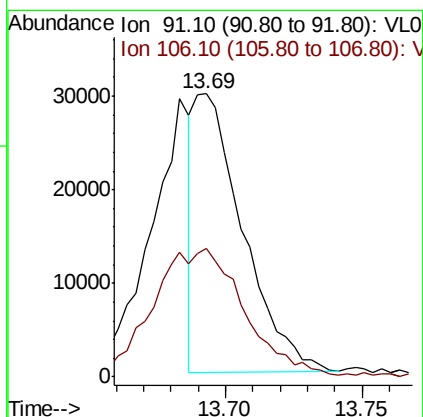
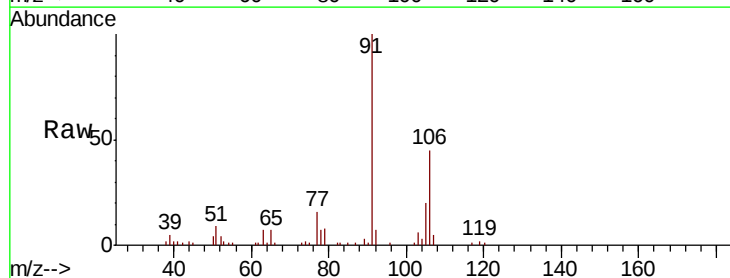
Instrument :
MSVOA_L
ClientSampled :

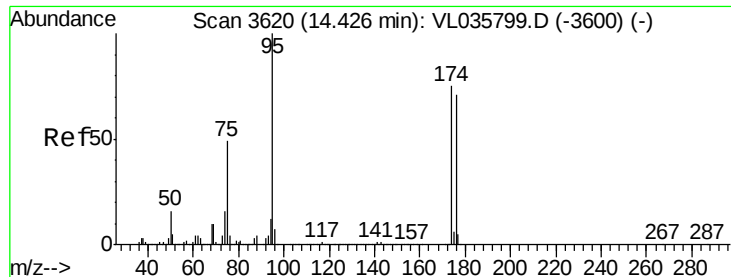
Tot Ion: 91 Resp: 222666
Ion Ratio Lower Upper
91 100
106 47.9 39.5 59.3



#60
o-Xylene
Concen: 0.100 ppbv
RT: 13.69 min Scan# 3392
Delta R.T. -0.01 min
Lab File: VL035902.D
Acq: 10 Nov 2020 23:53

Tgt Ion: 91 Resp: 36352
Ion Ratio Lower Upper
91 100
106 89.7 24.8 74.4#





#68

1-Bromo-4-Fluorobenzene

Concen: 10.495 ppbv

RT: 14.42 min Scan# 3617

Delta R.T. -0.01 min

Lab File: VL035902.D

Acq: 10 Nov 2020 23:53

Instrument :

MSVOA_L

ClientSampleId :

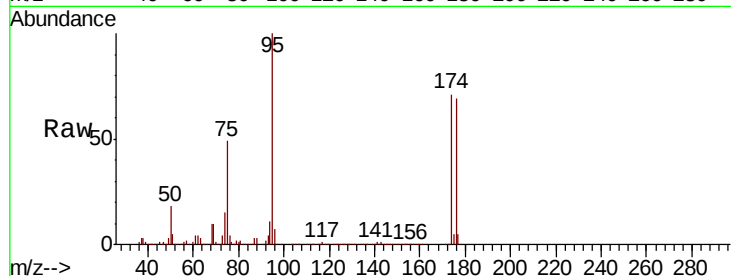
Tot Ion: 95 Resp: 2711483

Ion Ratio Lower Upper

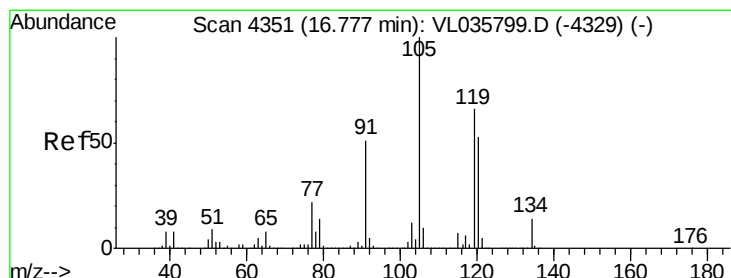
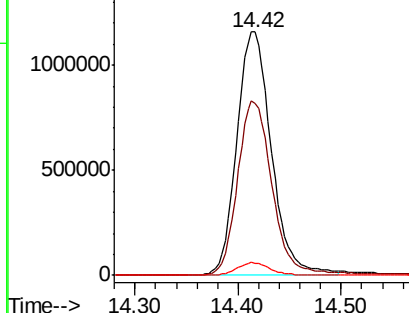
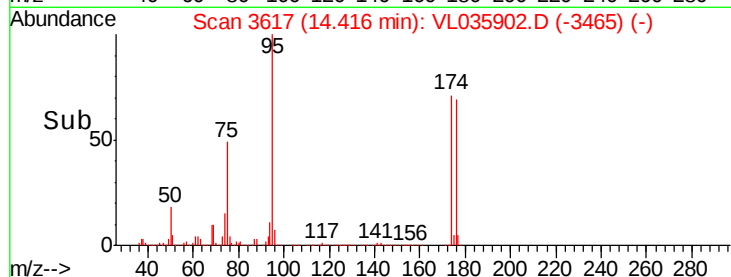
95 100

174 73.0 59.8 89.6

175 5.2 4.3 6.5



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: 0.094 ppbv

RT: 16.76 min Scan# 4346

Delta R.T. -0.02 min

Lab File: VL035902.D

Acq: 10 Nov 2020 23:53

Tgt Ion: 105 Resp: 40651

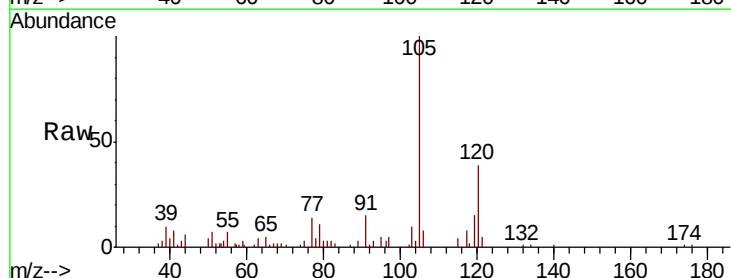
Ion Ratio Lower Upper

105 100

120 37.7 42.0 63.0#

91 13.6 41.0 61.6#

77 13.6 17.3 25.9#



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

