

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL051220\
 Data File : VL035002.D
 Acq On : 13 May 2020 00:51
 Operator : SY/AP
 Sample : L2561-01DL 40X
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 BFB

Quant Time: May 13 06:55:15 2020
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL050620AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed May 06 14:49:39 2020
 QLast Update : Wed May 06 14:49:39 2020
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.65	49	997552	10.00	ppbv	-0.02
33) 1,4-Difluorobenzene	7.16	114	2339644	10.00	ppbv	-0.03
55) Chlorobenzene-d5	12.10	117	2187301	10.00	ppbv	-0.02

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.43	95	1818901	10.27	ppbv	-0.03
Spiked Amount	10.000	Range	65 - 135	Recovery	=	102.70%

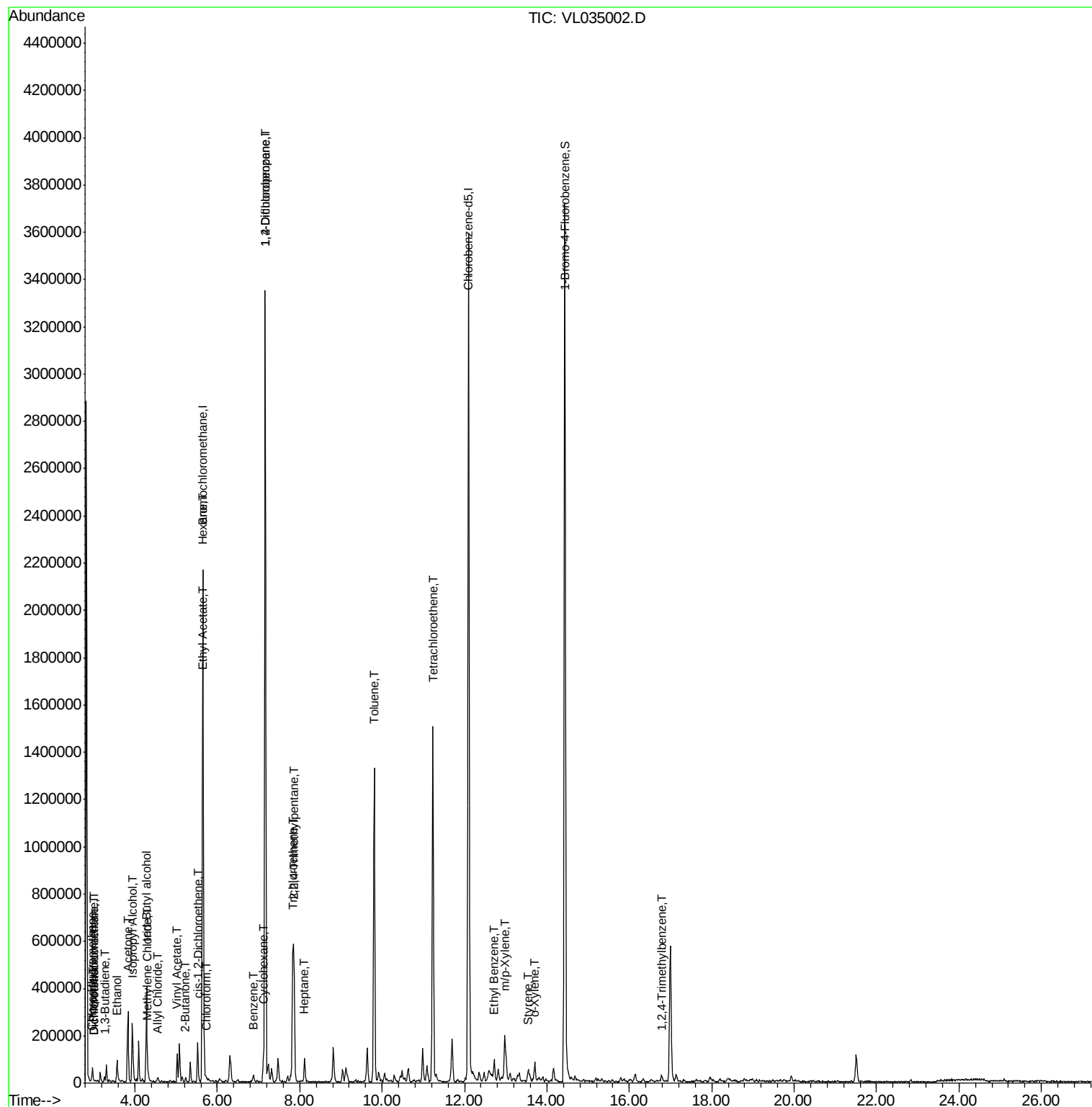
Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.00	85	3588	0.025 ppbv #	85
3) Chlorodifluoromethane	2.95	51	2735	0.024 ppbv #	85
8) Dichlorotetrafluoroethane	3.00	85	3588	0.024 ppbv #	21
9) Propene	2.96	41	16655	0.337 ppbv	96
10) Heptane	8.11	43	14930	0.121 ppbv #	4
13) Ethanol	3.56	45	81201	4.979 ppbv	83
15) Acetone	3.82	43	216114	1.639 ppbv #	86
16) 1,3-Butadiene	3.28	39	1389	0.024 ppbv	84
17) tert-Butyl alcohol	4.27	59	13324	0.114 ppbv #	71
19) Isopropyl Alcohol	3.93	45	280536	3.190 ppbv #	97
20) Methylene Chloride	4.31	84	12420	0.284 ppbv #	74
21) Allyl Chloride	4.56	41	2128	0.029 ppbv	93
23) Vinyl Acetate	5.03	43	45985	0.275 ppbv #	10
25) Ethyl Acetate	5.66	43	105974	0.478 ppbv	99
26) Hexane	5.66	57	28750	0.299 ppbv #	1
29) Chloroform	5.73	83	4270	0.027 ppbv	85
30) Cyclohexane	7.12	84	22611	0.305 ppbv #	86
31) cis-1,2-Dichloroethene	5.52	61	87609	0.935 ppbv	91
34) 2-Butanone	5.23	43	16974	0.117 ppbv #	85
36) Benzene	6.88	78	20550	0.107 ppbv #	90
38) Trichloroethene	7.83	130	140183	1.876 ppbv	96
39) 1,2-Dichloropropane	7.16	63	638071	8.252 ppbv #	24
44) 2,2,4-Trimethylpentane	7.86	57	480182	1.400 ppbv	95
52) Tetrachloroethene	11.23	164	362246	5.281 ppbv	97
53) Toluene	9.81	91	892303	4.364 ppbv	99
58) Ethyl Benzene	12.72	91	47206	0.175 ppbv	91
59) m/p-Xylene	12.98	91	110946	0.466 ppbv #	8
60) o-Xylene	13.70	91	37658	0.160 ppbv	75
61) Styrene	13.55	104	12624	0.085 ppbv #	47
74) 1,2,4-Trimethylbenzene	16.78	105	6133	0.022 ppbv #	83

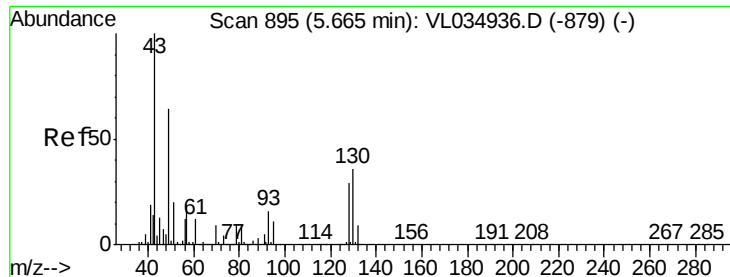
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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ClientSampled :
BFB

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QLast Update : Wed May 06 14:49:39 2020
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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 min Scan# 889

Delta R.T. -0.02 min

Lab File: VL035002.D

Acq: 13 May 2020 00:51

Instrument :

MSVOA_L

ClientSampled :

BFB

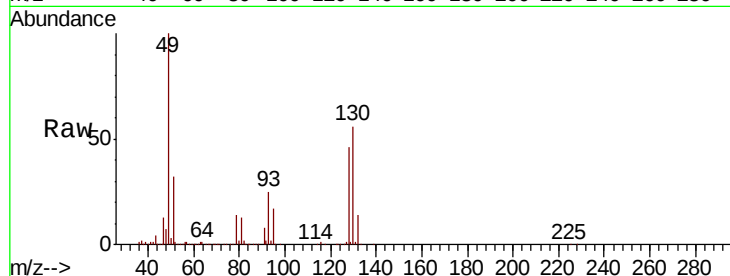
Tot Ion: 49 Resp: 997552

Ion Ratio Lower Upper

49 100

128 46.1 22.1 66.5

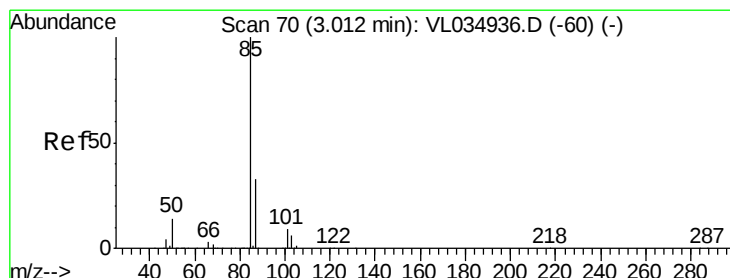
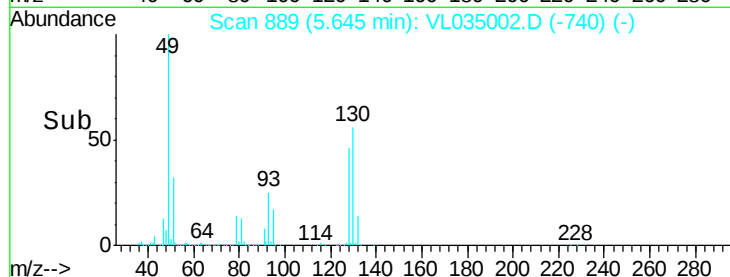
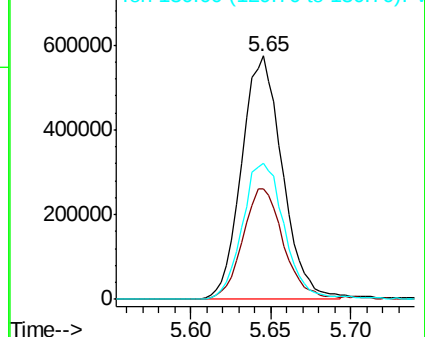
130 58.3 29.1 87.3



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



#2

Dichlorodifluoromethane

Concen: 0.025 ppbv

RT: 3.00 min Scan# 67

Delta R.T. -0.01 min

Lab File: VL035002.D

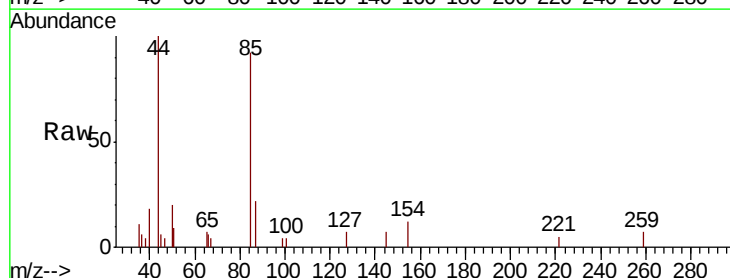
Acq: 13 May 2020 00:51

Tgt Ion: 85 Resp: 3588

Ion Ratio Lower Upper

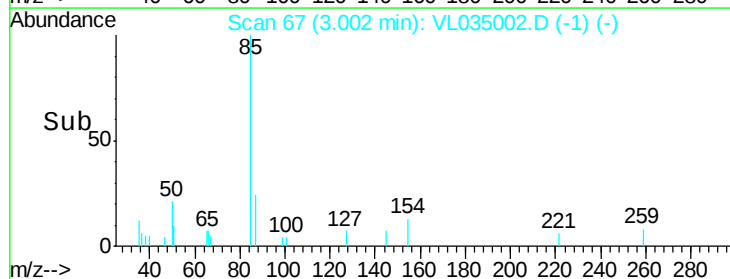
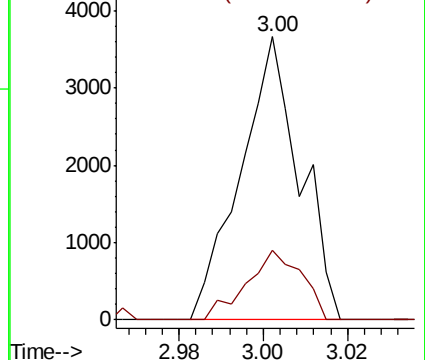
85 100

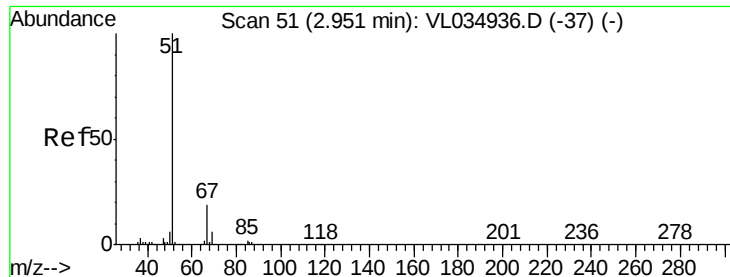
87 24.4 26.2 39.2#



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

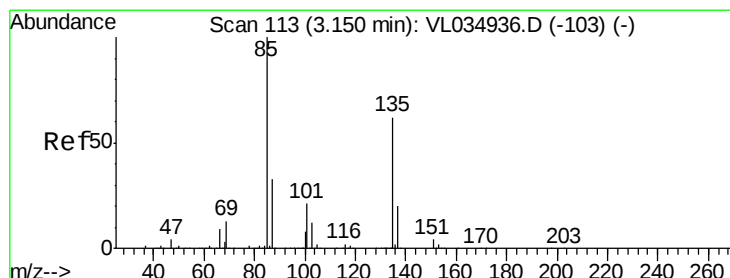
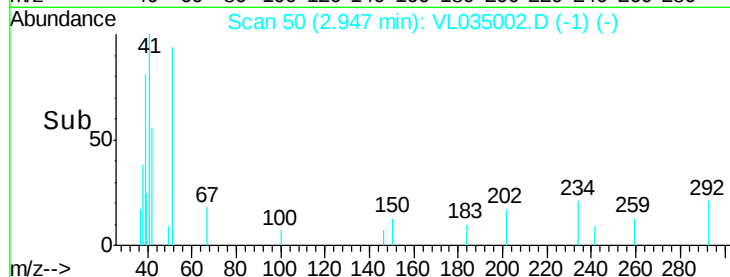
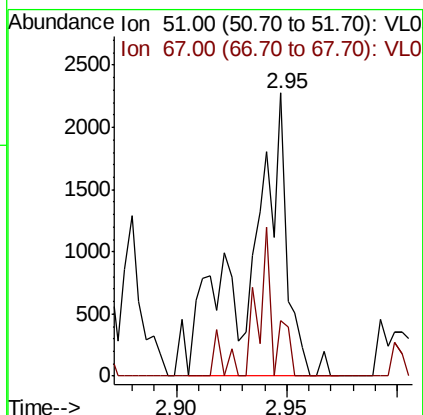
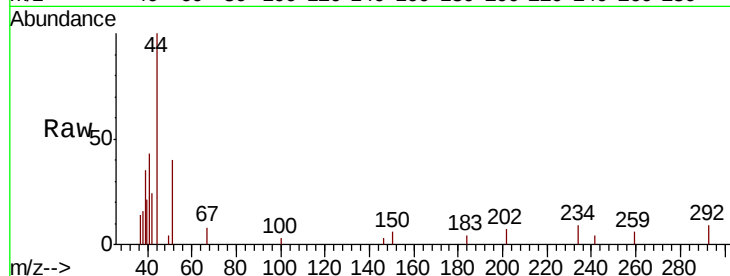




#3
Chlorodifluoromethane
Concen: 0.024 ppbv
RT: 2.95 min Scan# 50
Delta R.T. -0.00 min
Lab File: VL035002.D
Acq: 13 May 2020 00:51

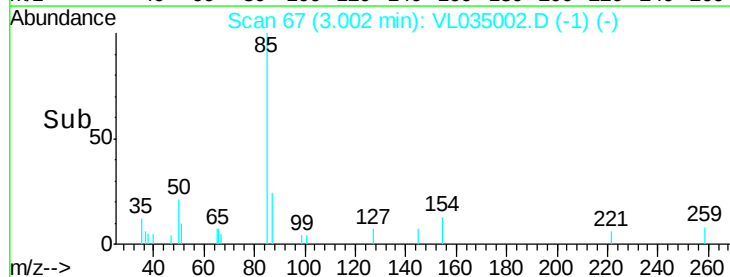
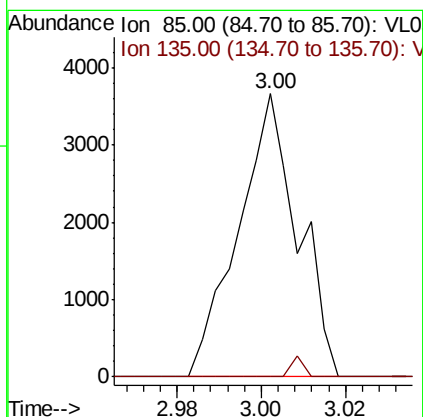
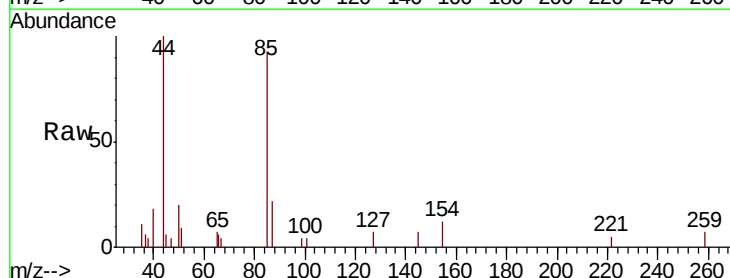
Instrument :
MSVOA_L
ClientSampleId :
BFB

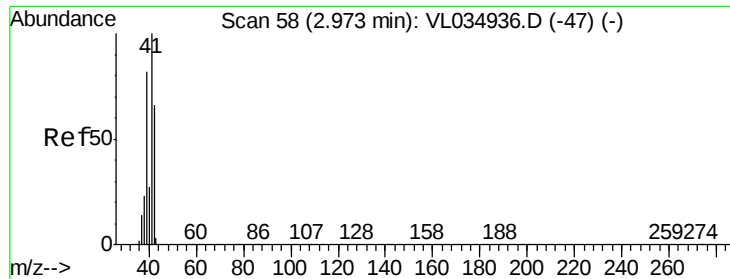
Tot Ion: 51 Resp: 2735
Ion Ratio Lower Upper
51 100
67 25.5 15.0 22.6#



#8
Dichlorotetrafluoroethane
Concen: 0.024 ppbv
RT: 3.00 min Scan# 67
Delta R.T. -0.15 min
Lab File: VL035002.D
Acq: 13 May 2020 00:51

Tgt Ion: 85 Resp: 3588
Ion Ratio Lower Upper
85 100
135 1.8 50.9 76.3#





#9

Propene

Concen: 0.337 ppbv

RT: 2.96 min Scan# 54

Delta R.T. -0.01 min

Lab File: VL035002.D

Acq: 13 May 2020 00:51

Instrument :

MSVOA_L

ClientSampleId :

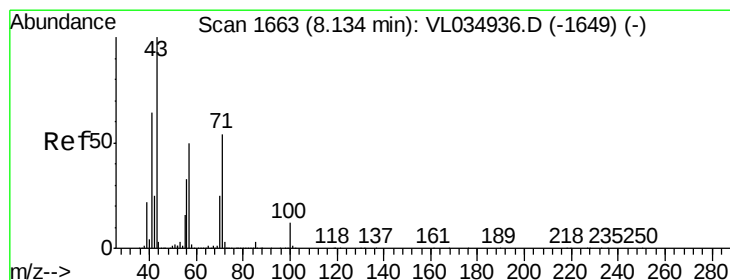
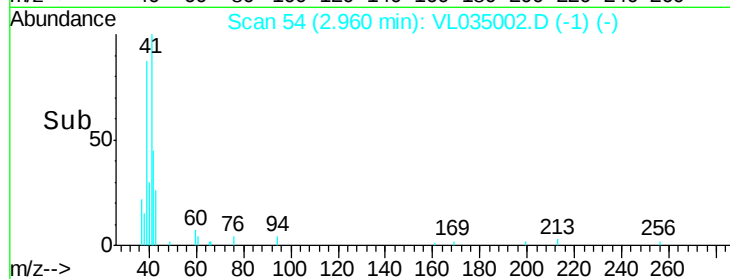
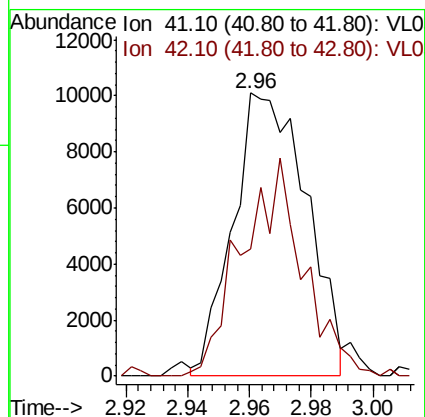
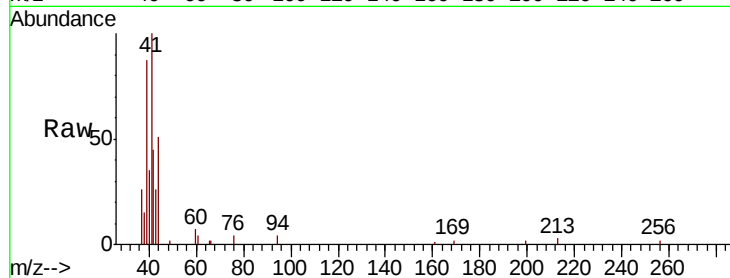
BFB

Tot Ion: 41 Resp: 16655

Ion Ratio Lower Upper

41 100

42 65.1 54.5 81.7



#10

Heptane

Concen: 0.121 ppbv

RT: 8.11 min Scan# 1656

Delta R.T. -0.02 min

Lab File: VL035002.D

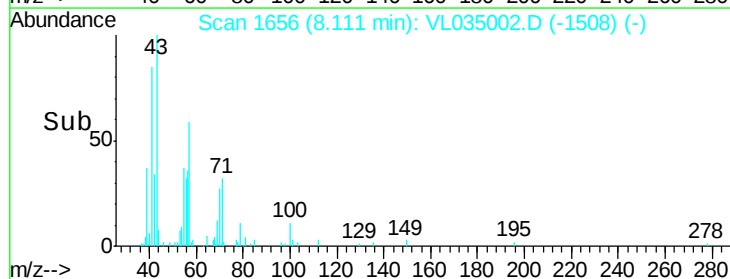
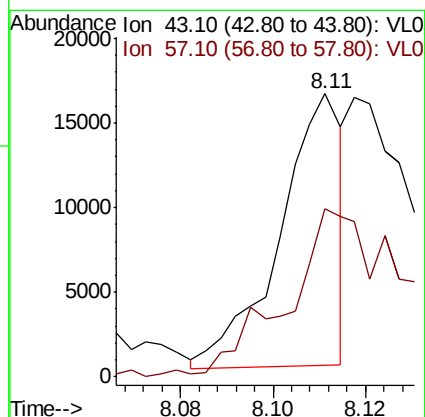
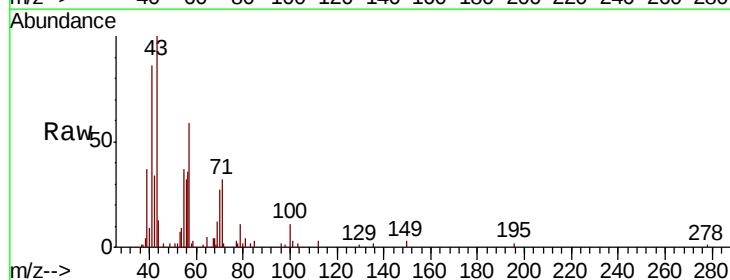
Acq: 13 May 2020 00:51

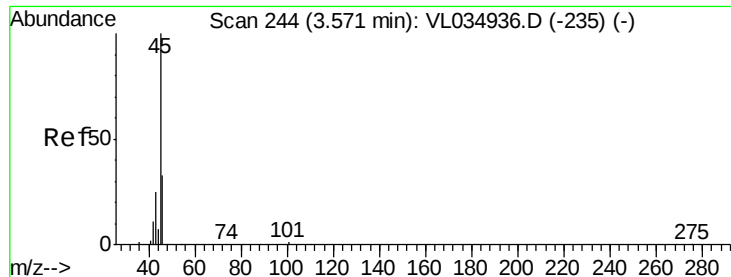
Tgt Ion: 43 Resp: 14930

Ion Ratio Lower Upper

43 100

57 118.5 41.1 61.7#





#13

Ethanol

Concen: 4.979 ppbv

RT: 3.56 min Scan# 242

Delta R.T. -0.01 min

Lab File: VL035002.D

Acq: 13 May 2020 00:51

Instrument :

MSVOA_L

ClientSampleId :

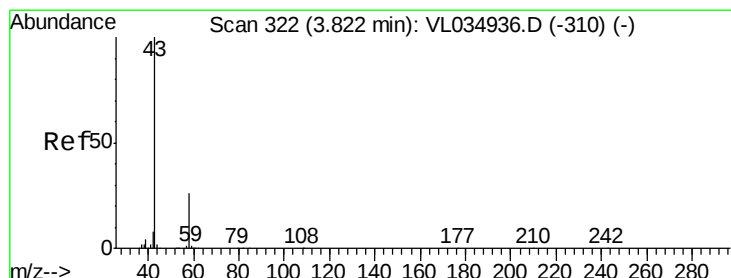
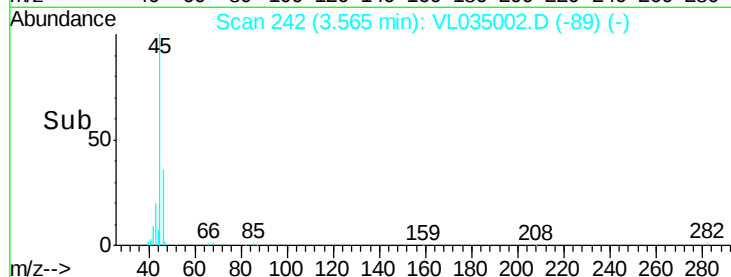
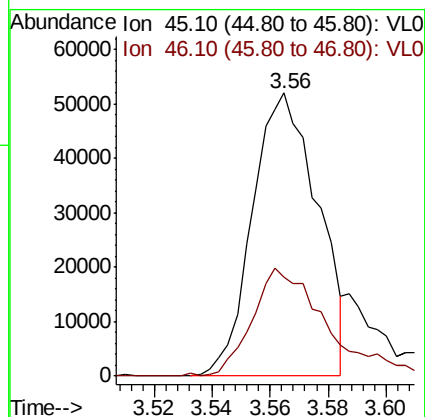
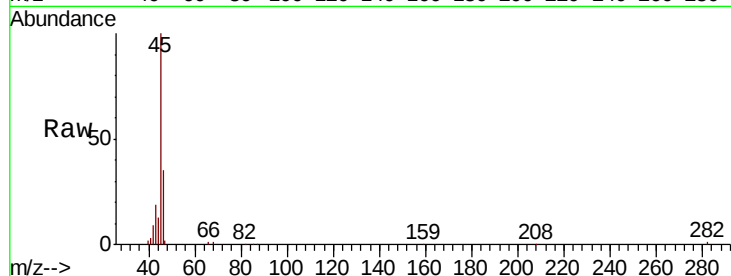
BFB

Tot Ion: 45 Resp: 81201

Ion Ratio Lower Upper

45 100

46 45.8 14.3 57.3



#15

Acetone

Concen: 1.639 ppbv

RT: 3.82 min Scan# 320

Delta R.T. -0.01 min

Lab File: VL035002.D

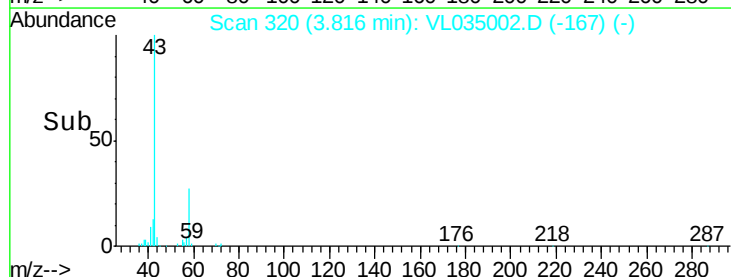
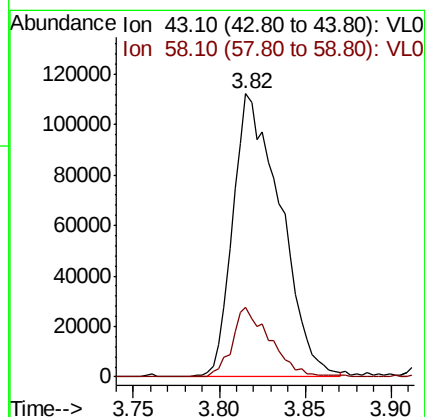
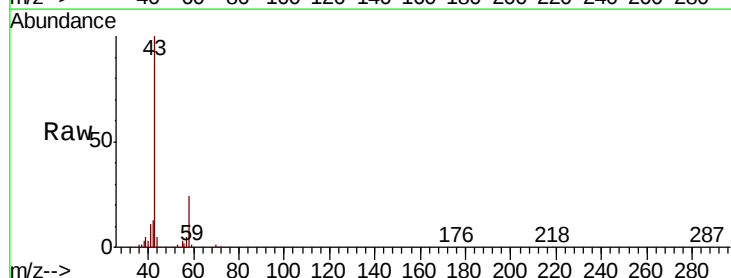
Acq: 13 May 2020 00:51

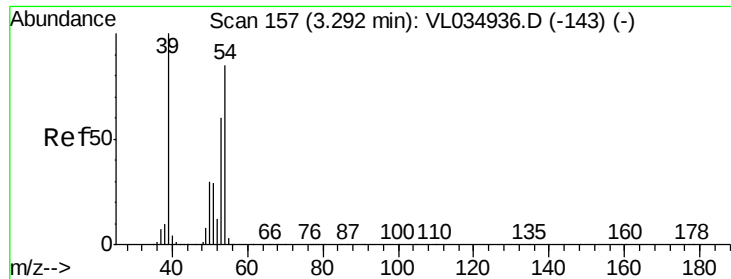
Tgt Ion: 43 Resp: 216114

Ion Ratio Lower Upper

43 100

58 19.9 21.7 32.5#





#16

1,3-Butadiene

Concen: 0.024 ppbv

RT: 3.28 min Scan# 153

Delta R.T. -0.01 min

Lab File: VL035002.D

Acq: 13 May 2020 00:51

Instrument :

MSVOA_L

ClientSampleId :

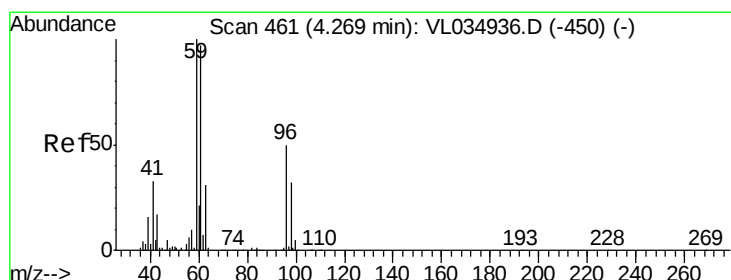
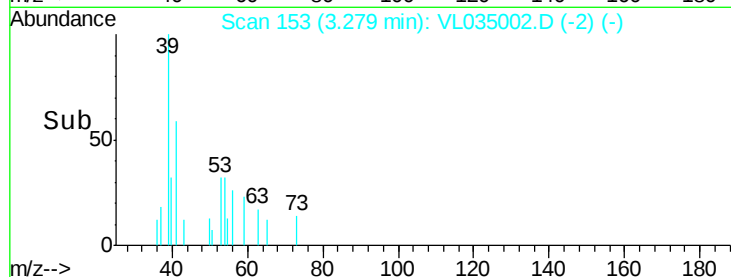
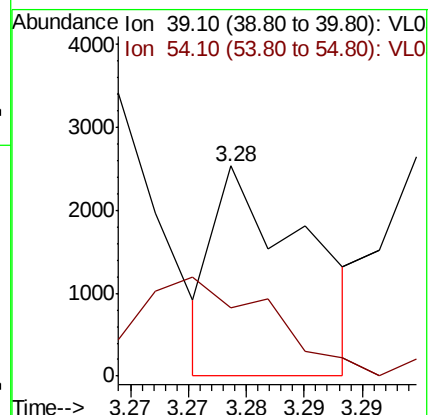
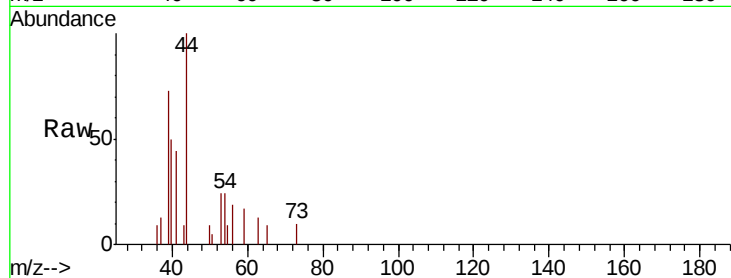
BFB

Tot Ion: 39 Resp: 1389

Ion Ratio Lower Upper

39 100

54 97.5 66.6 100.0



#17

tert-Butyl alcohol

Concen: 0.114 ppbv

RT: 4.27 min Scan# 462

Delta R.T. 0.00 min

Lab File: VL035002.D

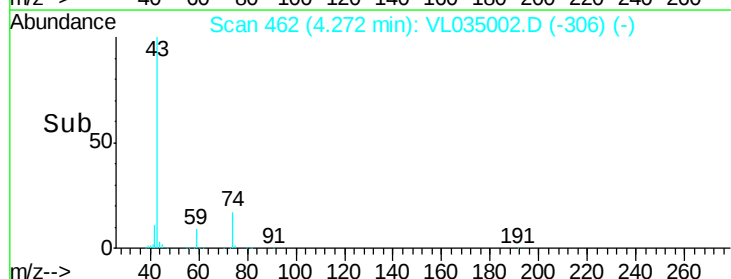
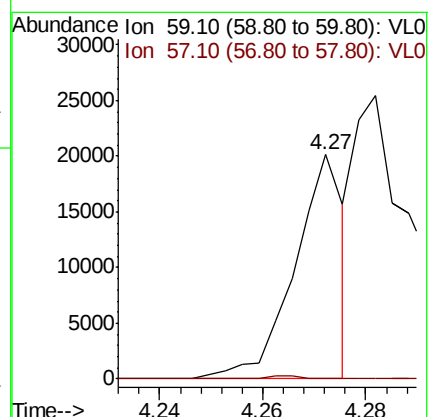
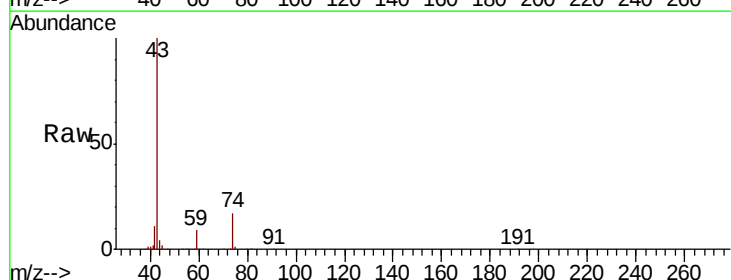
Acq: 13 May 2020 00:51

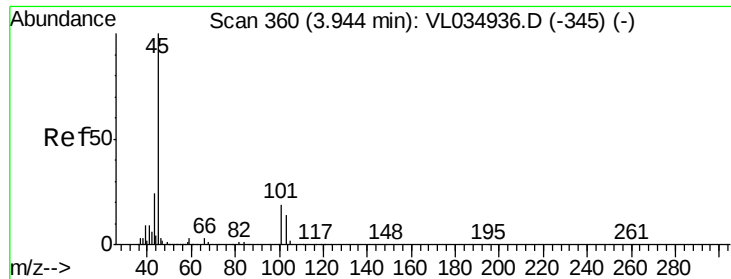
Tgt Ion: 59 Resp: 13324

Ion Ratio Lower Upper

59 100

57 0.0 8.7 13.1#





#19

Isopropyl Alcohol

Concen: 3.190 ppbv

RT: 3.93 min Scan# 357

Delta R.T. -0.01 min

Lab File: VL035002.D

Acq: 13 May 2020 00:51

Instrument :

MSVOA_L

ClientSampleId :

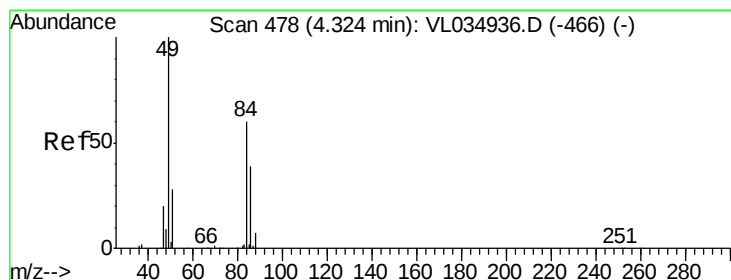
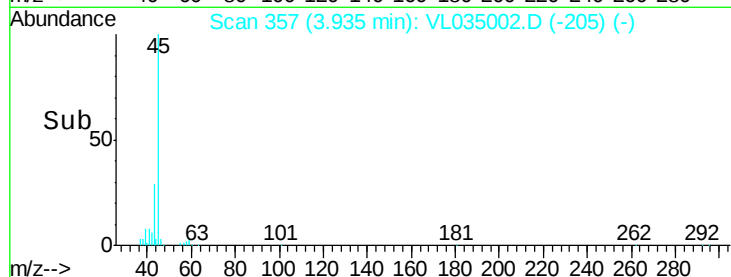
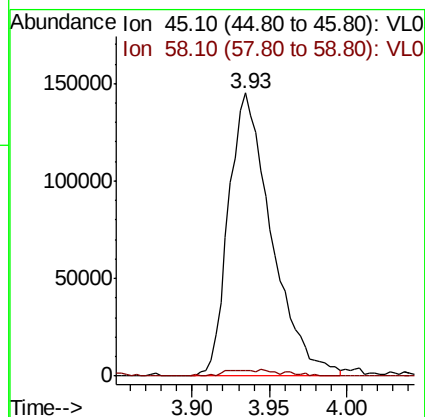
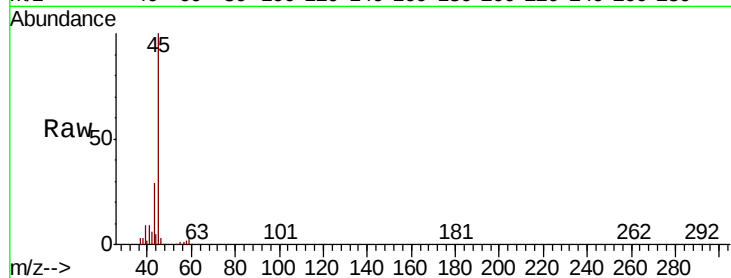
BFB

Tot Ion: 45 Resp: 280536

Ion Ratio Lower Upper

45 100

58 3.0 1.7 2.5#



#20

Methylene Chloride

Concen: 0.284 ppbv

RT: 4.31 min Scan# 475

Delta R.T. -0.01 min

Lab File: VL035002.D

Acq: 13 May 2020 00:51

Tgt Ion: 84 Resp: 12420

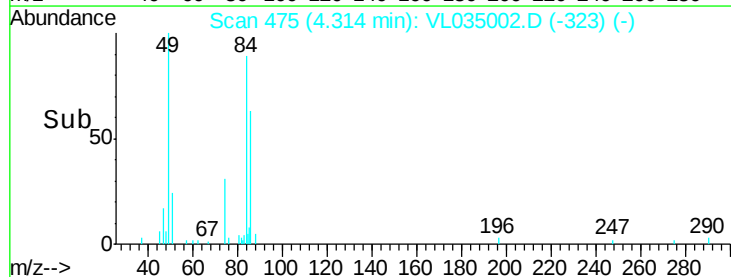
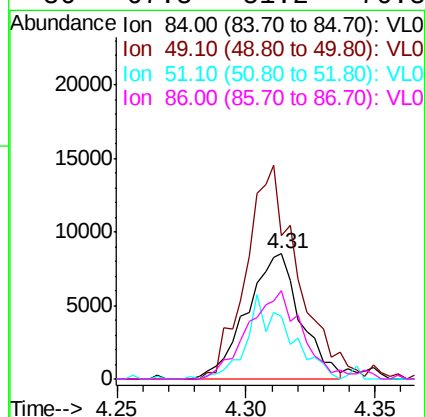
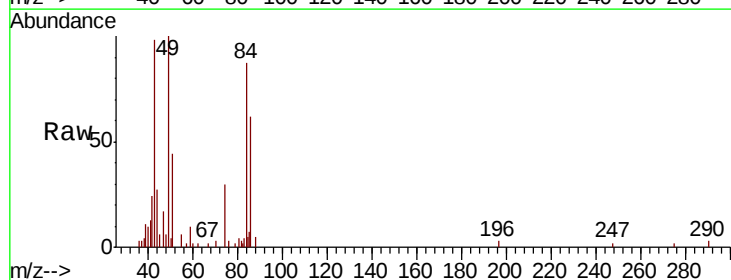
Ion Ratio Lower Upper

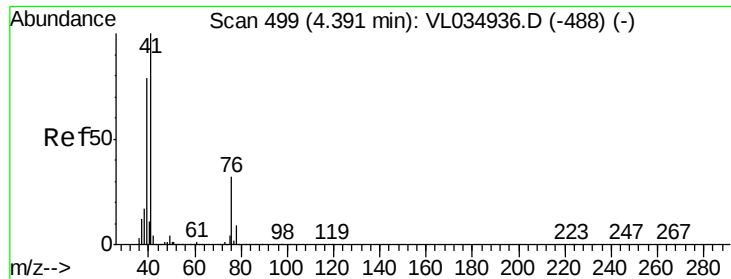
84 100

49 109.1 132.5 198.7#

51 47.6 38.4 57.6

86 67.5 51.2 76.8

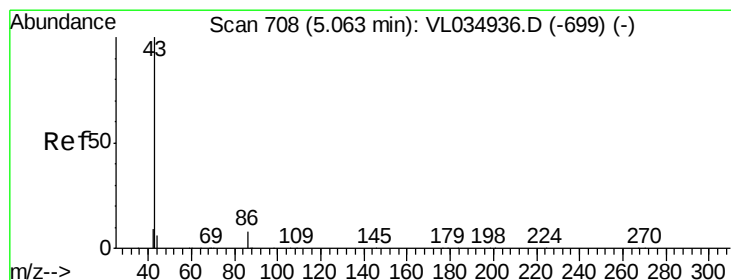
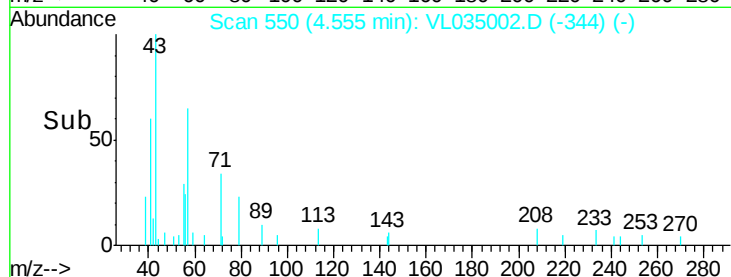
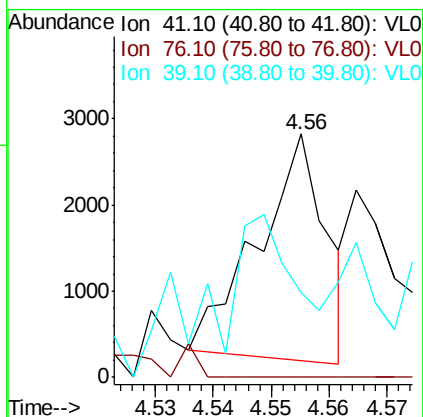
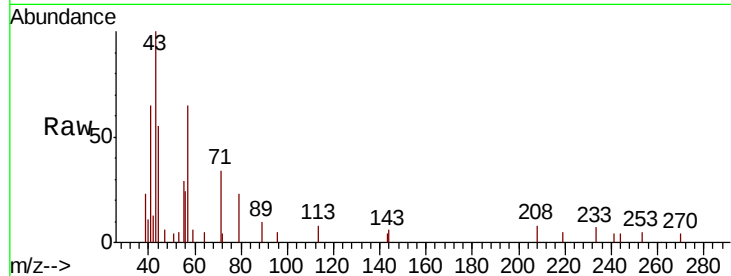




#21
Allvl Chloride
Concen: 0.029 ppbv
RT: 4.56 min Scan# 550
Delta R.T. 0.16 min
Lab File: VL035002.D
Acq: 13 May 2020 00:51

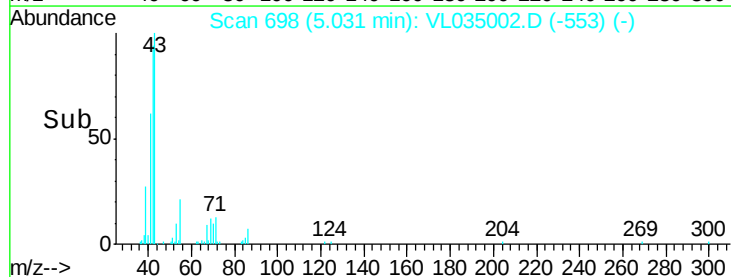
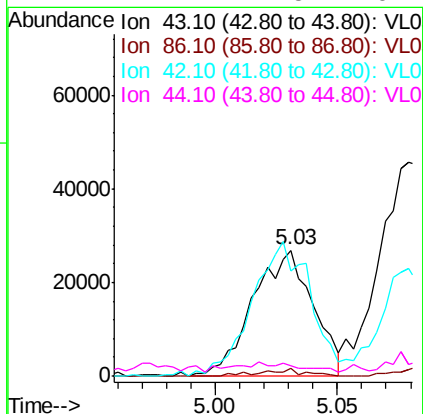
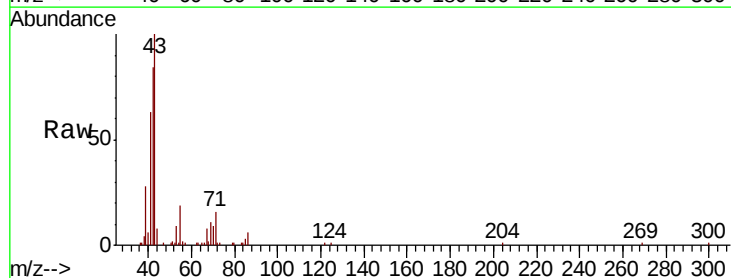
Instrument :
MSVOA_L
ClientSampleId :
BFB

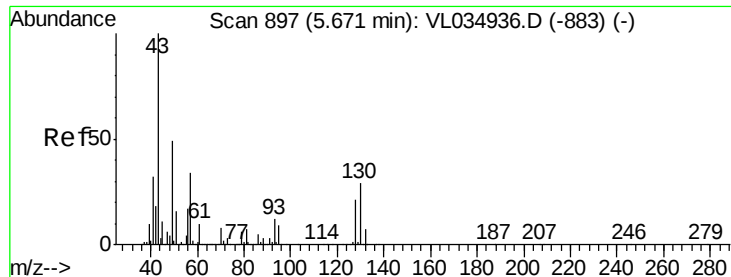
Tot Ion: 41 Resp: 2128
Ion Ratio Lower Upper
41 100
76 28.4 23.6 35.4
39 69.3 61.9 92.9



#23
Vinyl Acetate
Concen: 0.275 ppbv
RT: 5.03 min Scan# 698
Delta R.T. -0.03 min
Lab File: VL035002.D
Acq: 13 May 2020 00:51

Tgt Ion: 43 Resp: 45985
Ion Ratio Lower Upper
43 100
86 6.2 5.5 8.3
42 83.6 8.0 12.0#
44 4.2 4.5 6.7#





#25

Ethyl Acetate

Concen: 0.478 ppbv

RT: 5.66 min Scan# 895

Delta R.T. -0.01 min

Lab File: VL035002.D

Acq: 13 May 2020 00:51

Instrument :

MSVOA_L

ClientSampleId :

BFB

Tot Ion: 43 Resp: 105974

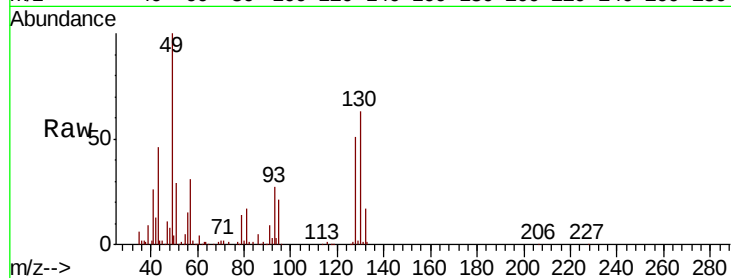
Ion Ratio Lower Upper

43 100

45 10.4 8.1 12.1

61 10.2 7.8 11.8

70 7.4 6.0 9.0

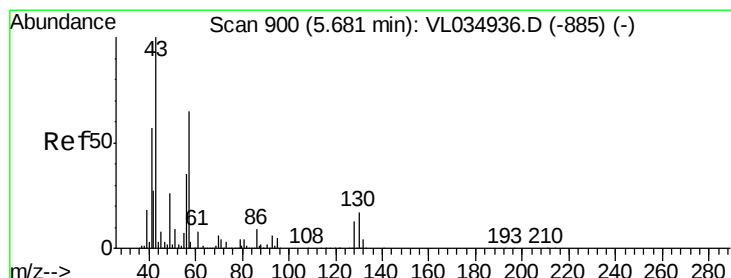
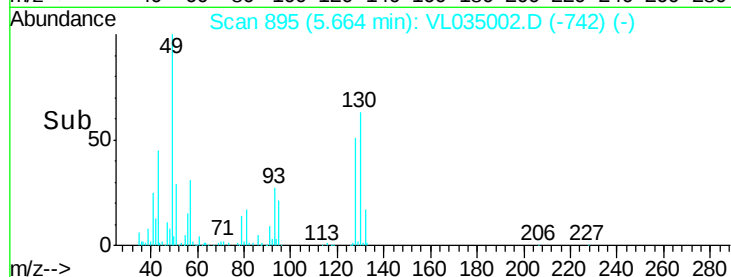
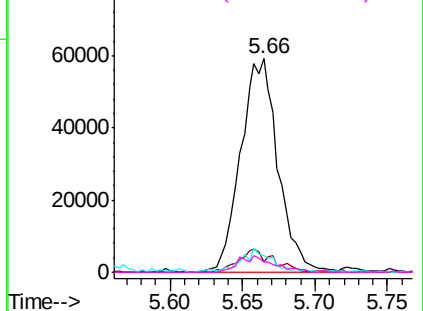


Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 0.299 ppbv

RT: 5.66 min Scan# 893

Delta R.T. -0.02 min

Lab File: VL035002.D

Acq: 13 May 2020 00:51

Tgt Ion: 57 Resp: 28750

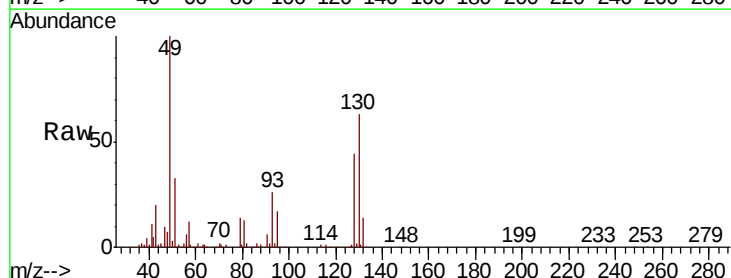
Ion Ratio Lower Upper

57 100

41 0.0 72.7 109.1#

43 0.0 182.1 273.1#

56 0.0 42.2 63.2#

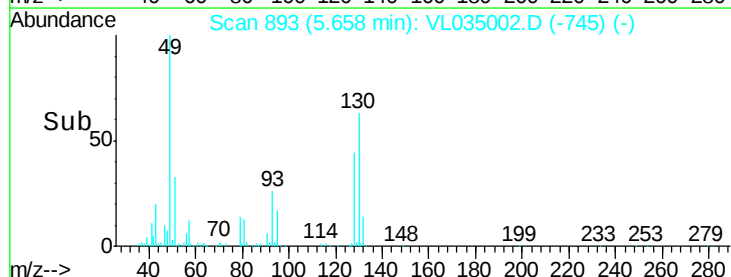
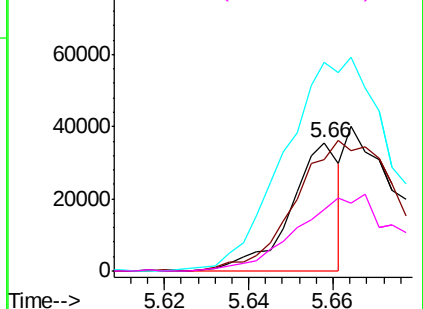


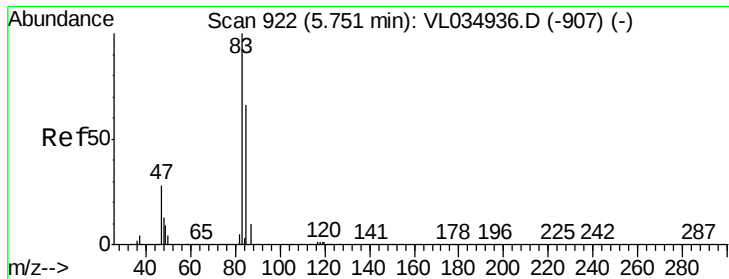
Abundance Ion 57.10 (56.80 to 57.80): VL0

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

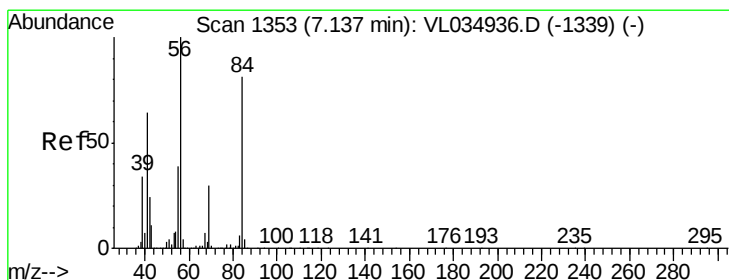
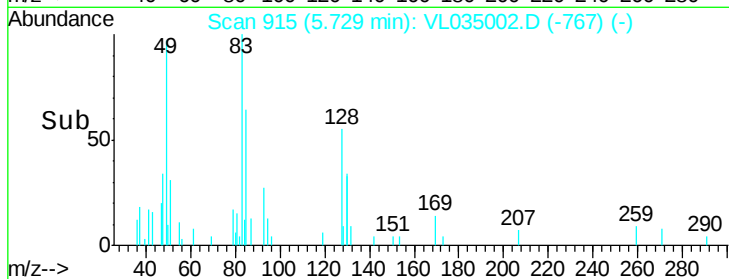
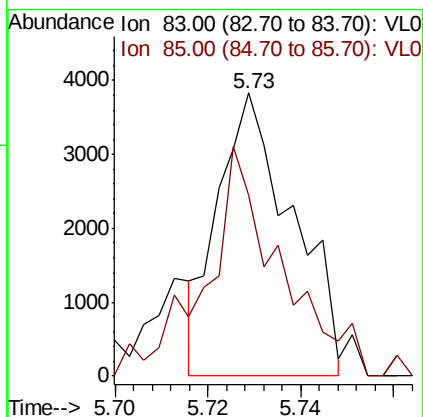
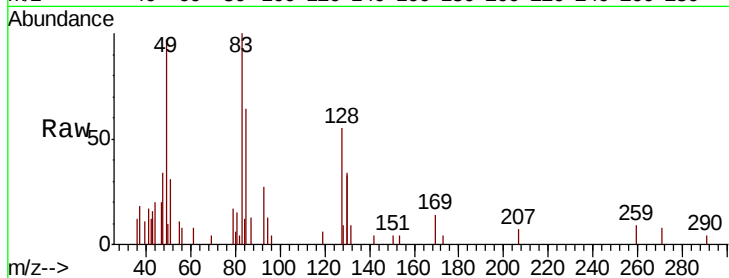




#29
Chloroform
Concen: 0.027 ppbv
RT: 5.73 min Scan# 915
Delta R.T. -0.02 min
Lab File: VL035002.D
Acq: 13 May 2020 00:51

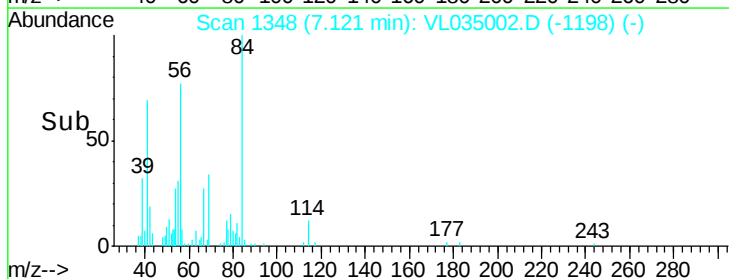
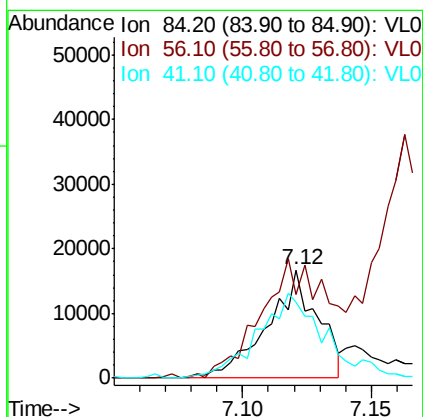
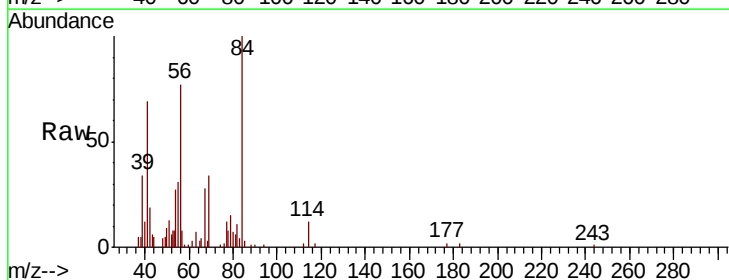
Instrument :
MSVOA_L
ClientSampleId :
BFB

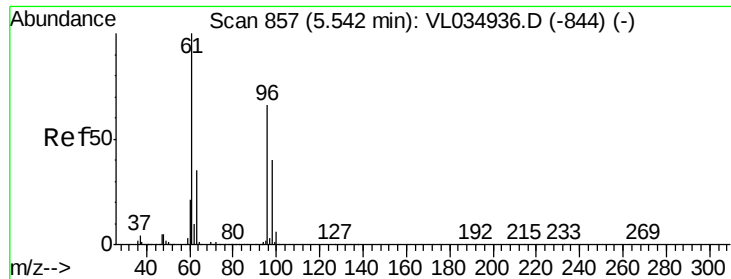
Tot Ion: 83 Resp: 4270
Ion Ratio Lower Upper
83 100
85 54.7 53.0 79.6



#30
Cyclohexane
Concen: 0.305 ppbv
RT: 7.12 min Scan# 1348
Delta R.T. -0.02 min
Lab File: VL035002.D
Acq: 13 May 2020 00:51

Tgt Ion: 84 Resp: 22611
Ion Ratio Lower Upper
84 100
56 129.9 111.4 167.2
41 105.7 66.7 100.1#



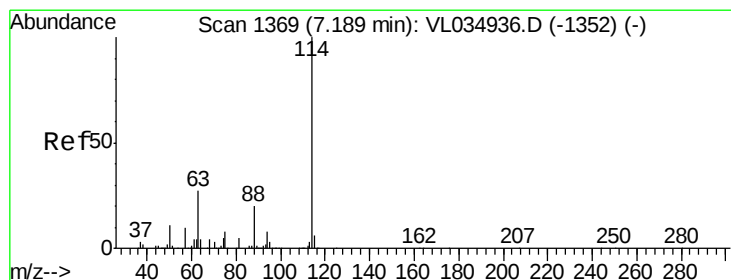
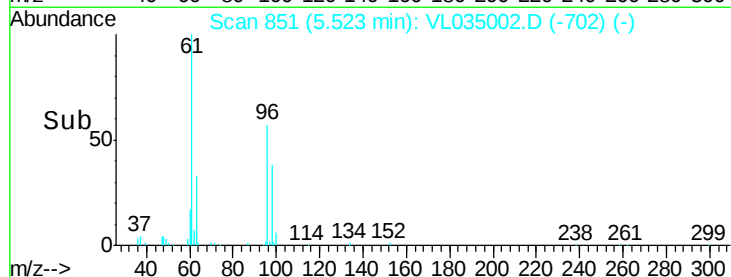
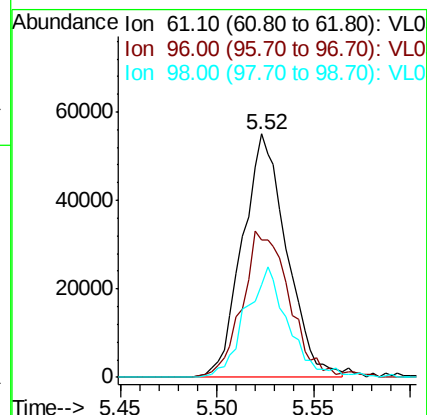
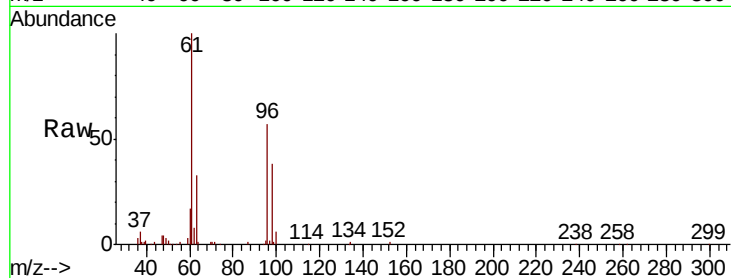


#31

cis-1,2-Dichloroethene
Concen: 0.935 ppbv
RT: 5.52 min Scan# 851
Delta R.T. -0.02 min
Lab File: VL035002.D
Acq: 13 May 2020 00:51

Instrument :
MSVOA_L
ClientSampleId :
BFB

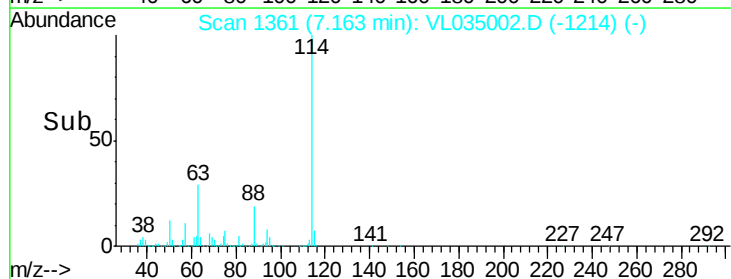
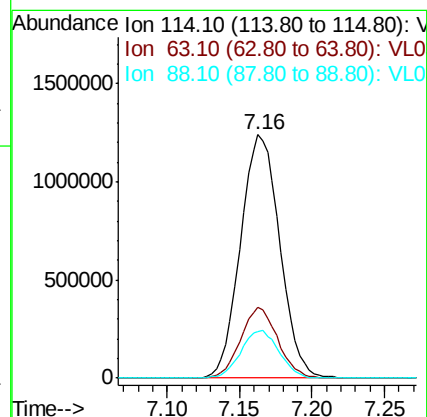
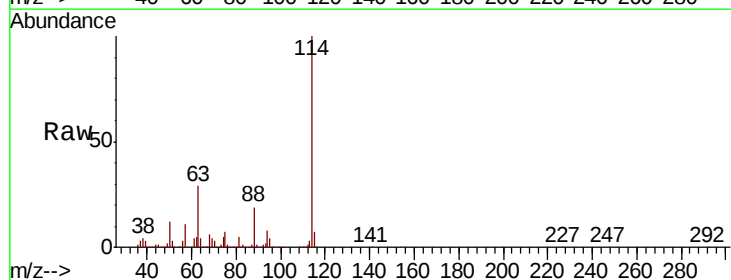
Tot Ion	Ratio	Lower	Upper
61	100		
96	56.6	53.0	79.6
98	38.0	32.2	48.2

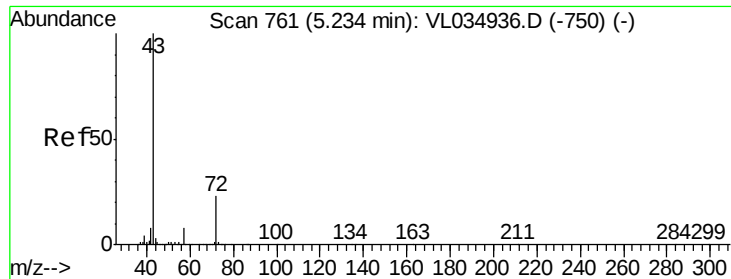


#33

1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.16 min Scan# 1361
Delta R.T. -0.03 min
Lab File: VL035002.D
Acq: 13 May 2020 00:51

Tgt Ion	Ratio	Lower	Upper
114	100		
63	27.4	22.2	33.4
88	19.3	15.5	23.3

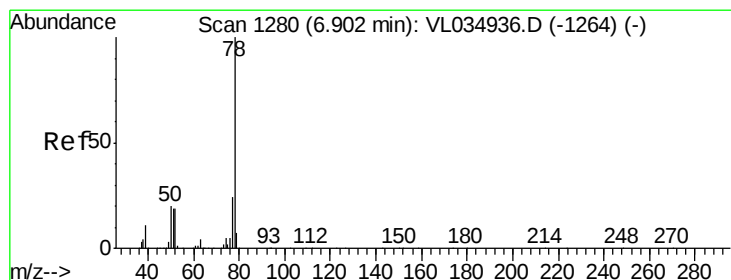
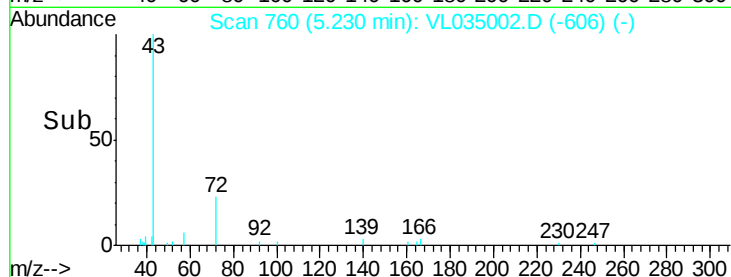
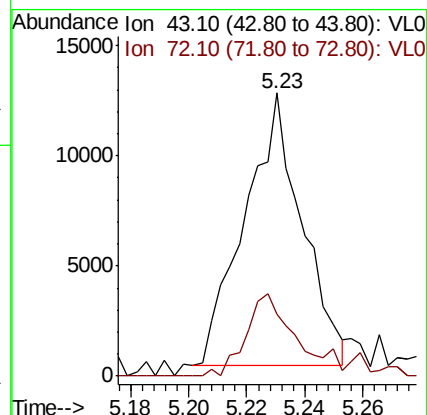
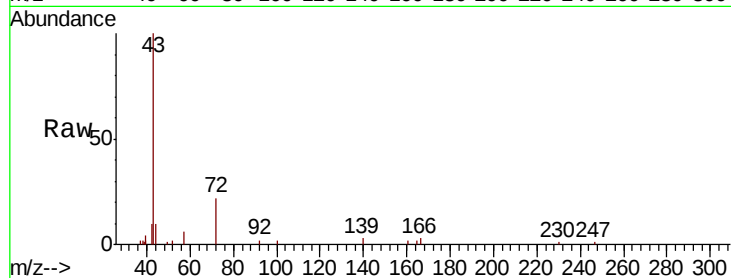




#34
2-Butanone
Concen: 0.117 ppbv
RT: 5.23 min Scan# 760
Delta R.T. -0.00 min
Lab File: VL035002.D
Acq: 13 May 2020 00:51

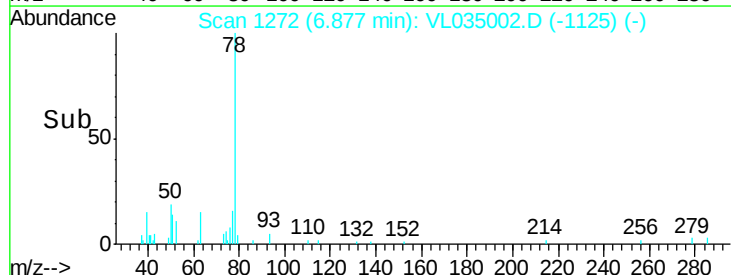
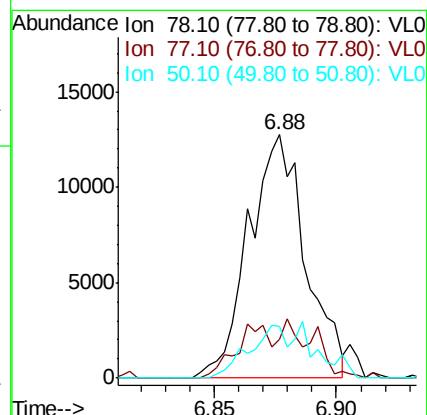
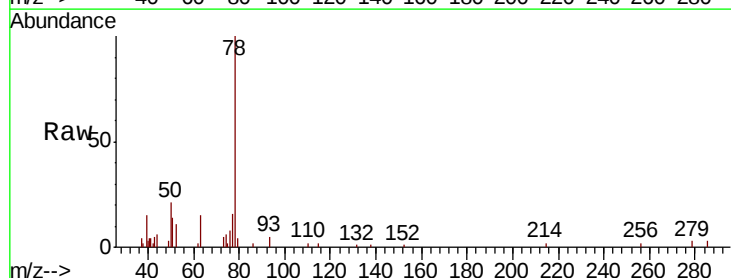
Instrument :
MSVOA_L
ClientSampleId :
BFB

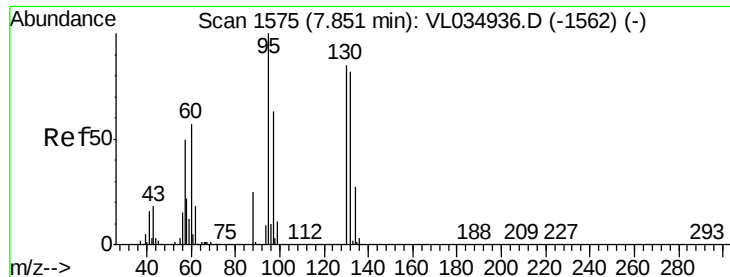
Tot Ion: 43 Resp: 16974
Ion Ratio Lower Upper
43 100
72 29.5 18.0 27.0#



#36
Benzene
Concen: 0.107 ppbv
RT: 6.88 min Scan# 1272
Delta R.T. -0.03 min
Lab File: VL035002.D
Acq: 13 May 2020 00:51

Tgt Ion: 78 Resp: 20550
Ion Ratio Lower Upper
78 100
77 16.0 19.0 28.6#
50 21.1 15.8 23.8





#38

Trichloroethene

Concen: 1.876 ppbv

RT: 7.83 min Scan# 1568

Delta R.T. -0.02 min

Lab File: VL035002.D

Acq: 13 May 2020 00:51

Instrument :

MSVOA_L

ClientSampleId :

BFB

Tot Ion:130 Resp: 140183

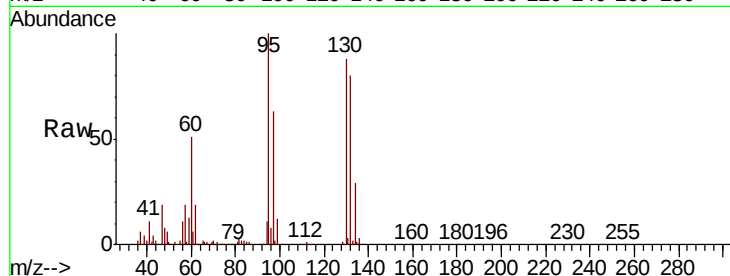
Ion Ratio Lower Upper

130 100

95 113.3 93.4 140.0

132 90.1 76.4 114.6

97 70.6 58.5 87.7

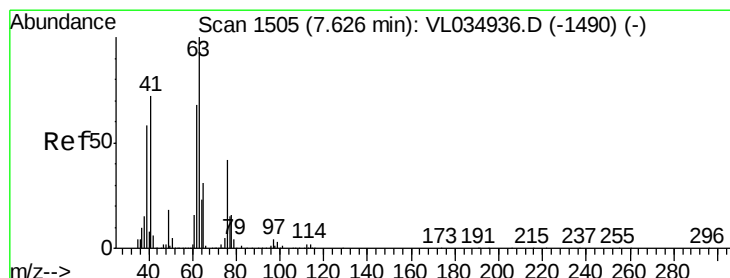
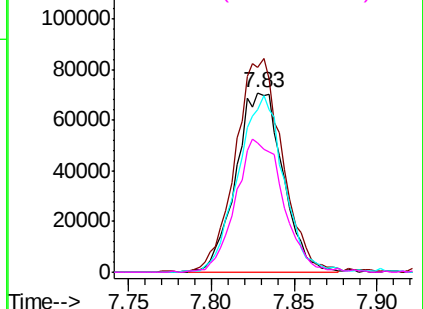
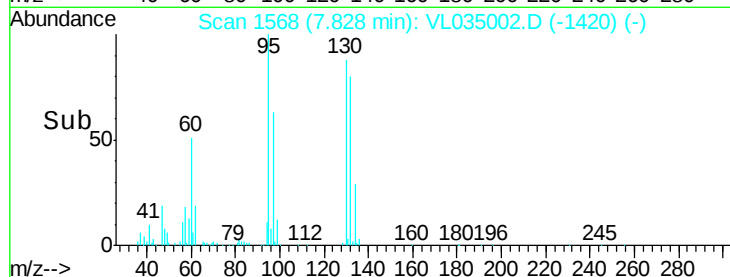


Abundance Ion 130.00 (129.70 to 130.70): V

Ion 95.00 (94.70 to 95.70): VL0

Ion 132.00 (131.70 to 132.70): V

Ion 97.00 (96.70 to 97.70): VL0



#39

1,2-Dichloropropane

Concen: 8.252 ppbv

RT: 7.16 min Scan# 1361

Delta R.T. -0.46 min

Lab File: VL035002.D

Acq: 13 May 2020 00:51

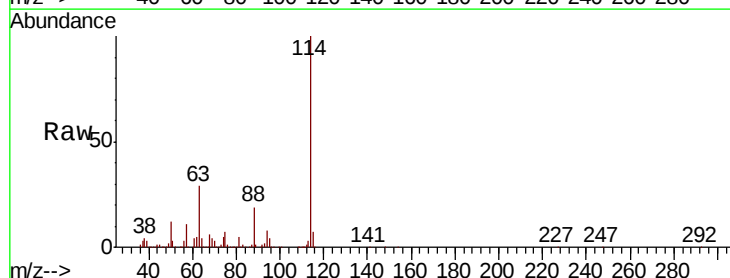
Tgt Ion: 63 Resp: 638071

Ion Ratio Lower Upper

63 100

41 0.0 57.8 86.8#

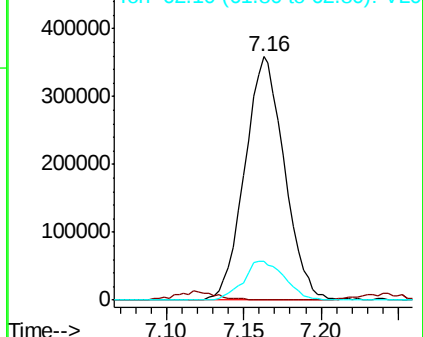
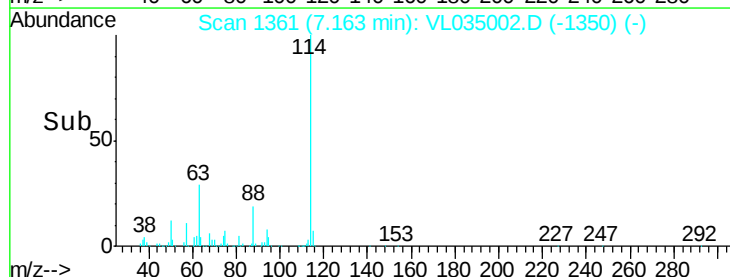
62 15.8 54.2 81.2#

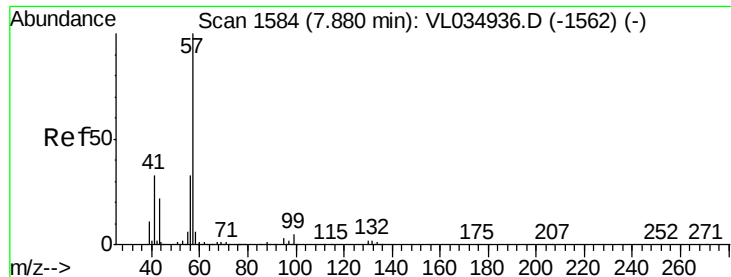


Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 62.10 (61.80 to 62.80): VL0





#44

2,2,4-Trimethylpentane

Concen: 1.400 ppbv

RT: 7.86 min Scan# 1578

Delta R.T. -0.02 min

Lab File: VL035002.D

Acq: 13 May 2020 00:51

Instrument :

MSVOA_L

ClientSampled :

BFB

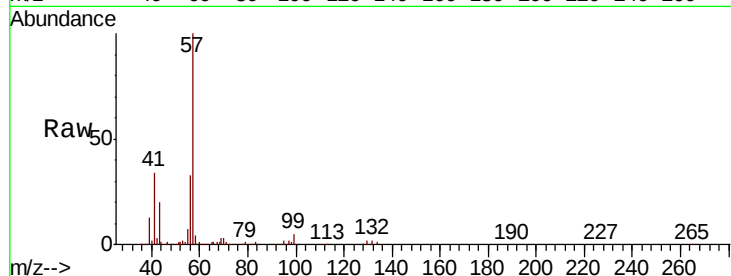
Tot Ion: 57 Resp: 480182

Ion Ratio Lower Upper

57 100

41 36.4 26.4 39.6

56 34.6 25.5 38.3

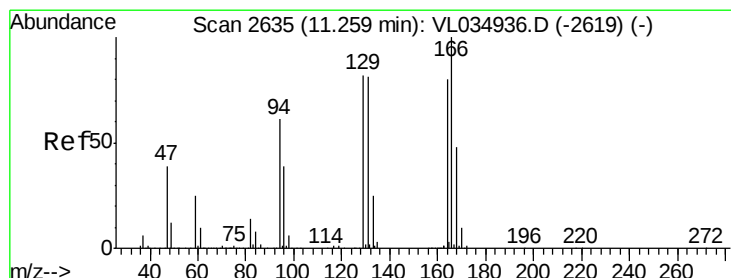
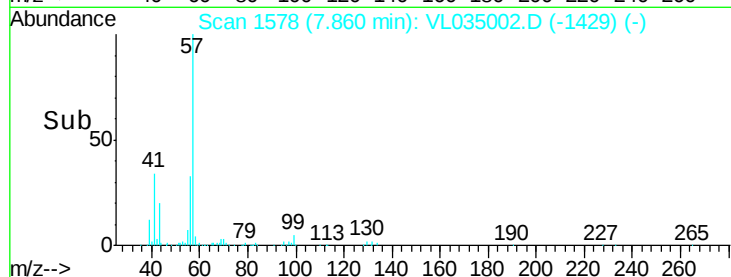
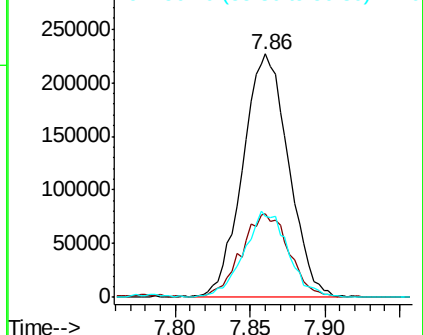


Abundance

Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 56.10 (55.80 to 56.80): VL0



#52

Tetrachloroethene

Concen: 5.281 ppbv

RT: 11.23 min Scan# 2627

Delta R.T. -0.03 min

Lab File: VL035002.D

Acq: 13 May 2020 00:51

Tgt Ion: 164 Resp: 362246

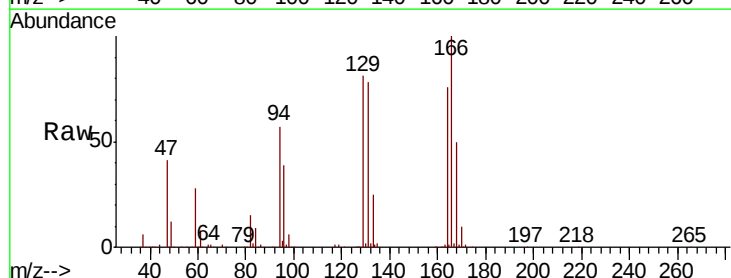
Ion Ratio Lower Upper

164 100

166 131.3 100.7 151.1

129 106.6 83.0 124.4

131 103.0 81.0 121.4



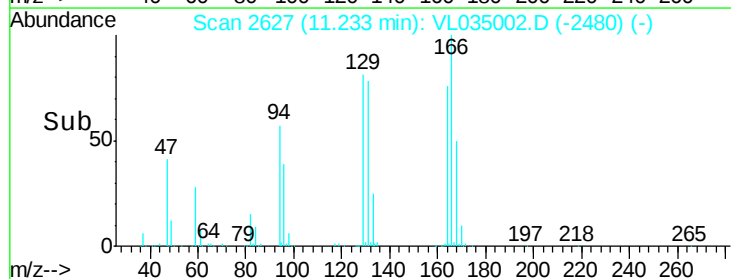
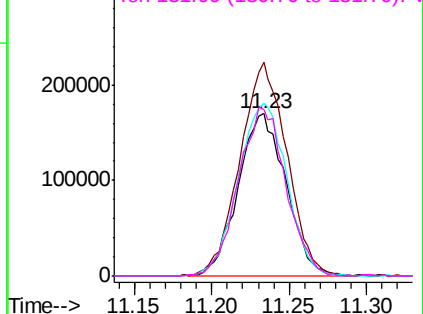
Abundance

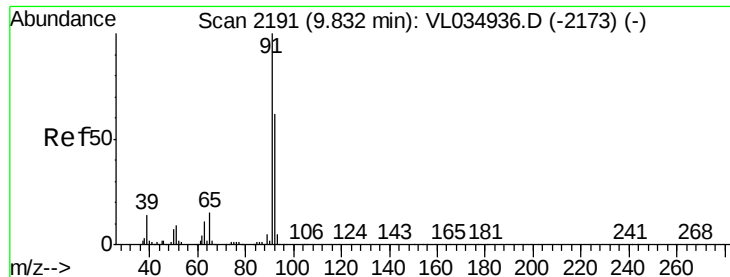
Ion 163.90 (163.60 to 164.60): V

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: 4.364 ppbv

RT: 9.81 min Scan# 2184

Delta R.T. -0.02 min

Lab File: VL035002.D

Acq: 13 May 2020 00:51

Instrument :

MSVOA_L

ClientSampleId :

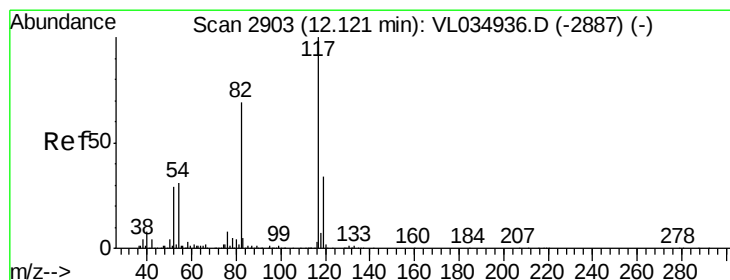
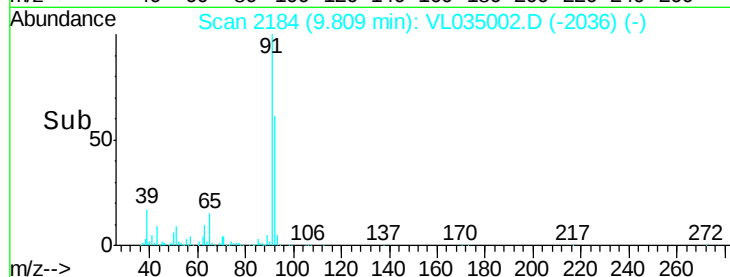
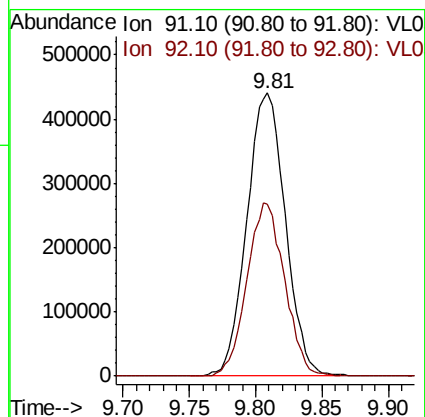
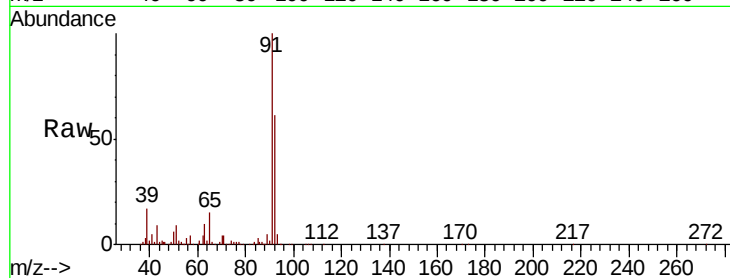
BFB

Tot Ion: 91 Resp: 892303

Ion Ratio Lower Upper

91 100

92 59.8 48.6 73.0



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.10 min Scan# 2896

Delta R.T. -0.02 min

Lab File: VL035002.D

Acq: 13 May 2020 00:51

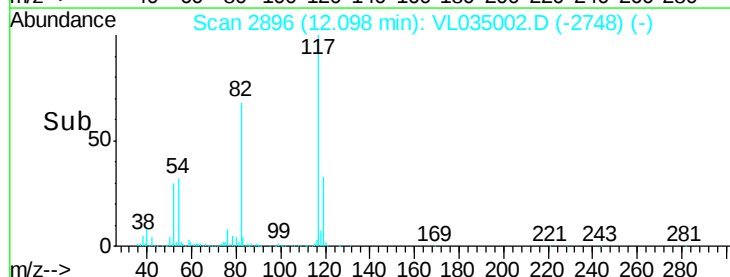
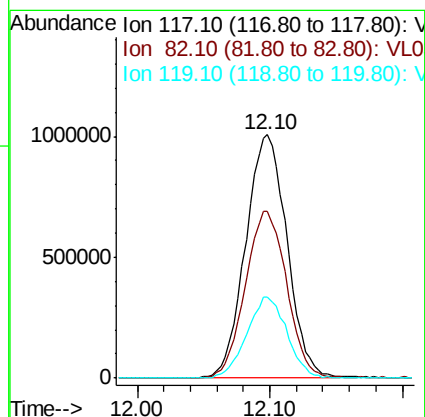
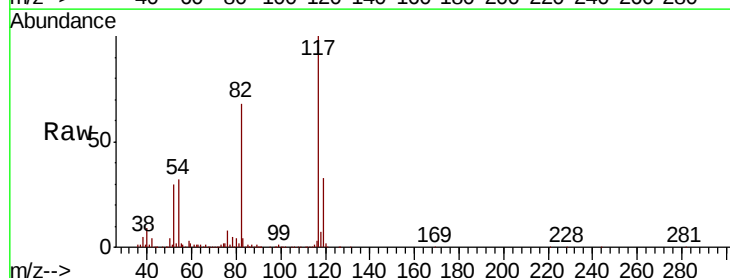
Tgt Ion: 117 Resp: 2187301

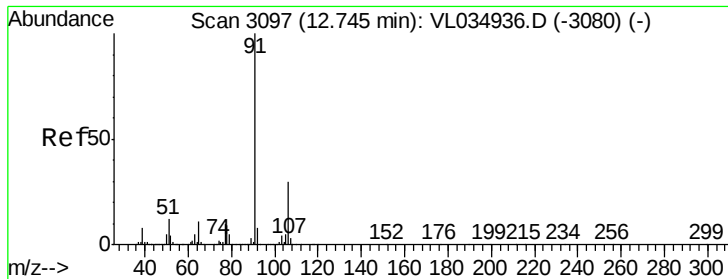
Ion Ratio Lower Upper

117 100

82 68.8 53.1 79.7

119 32.6 26.7 40.1





#58

Ethyl Benzene

Concen: 0.175 ppbv

RT: 12.72 min Scan# 3089

Delta R.T. -0.03 min

Lab File: VL035002.D

Acq: 13 May 2020 00:51

Instrument :

MSVOA_L

ClientSampleId :

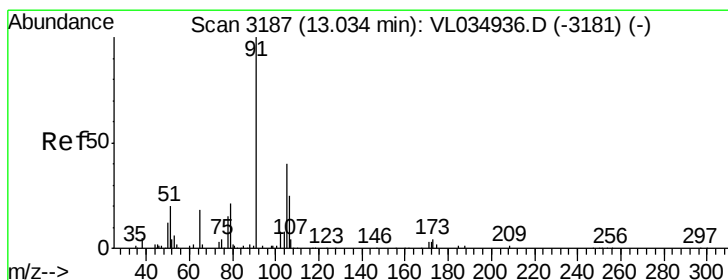
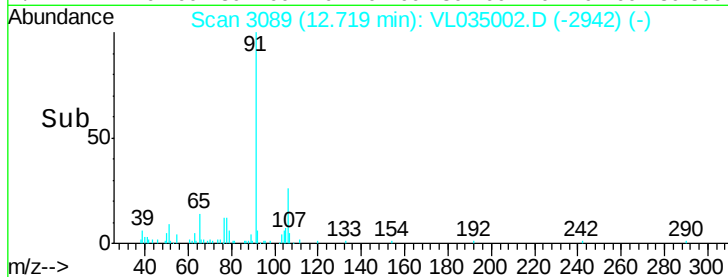
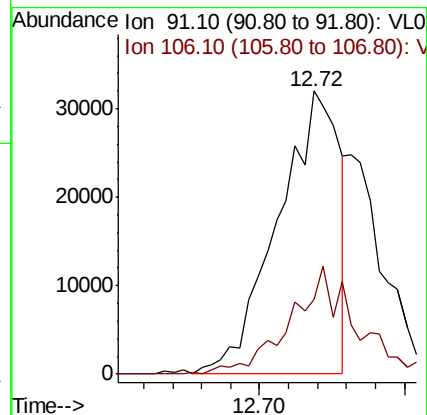
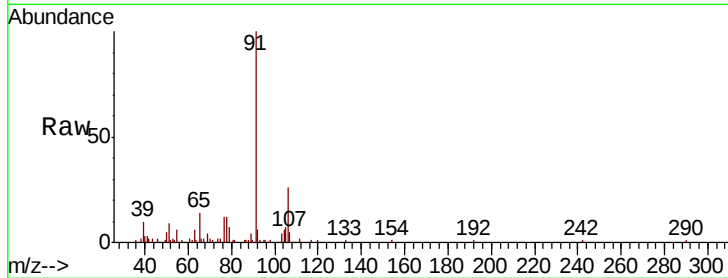
BFB

Tot Ion: 91 Resp: 47206

Ion Ratio Lower Upper

91 100

106 25.4 24.2 36.4



#59

m/p-Xylene

Concen: 0.466 ppbv

RT: 12.98 min Scan# 3171

Delta R.T. -0.05 min

Lab File: VL035002.D

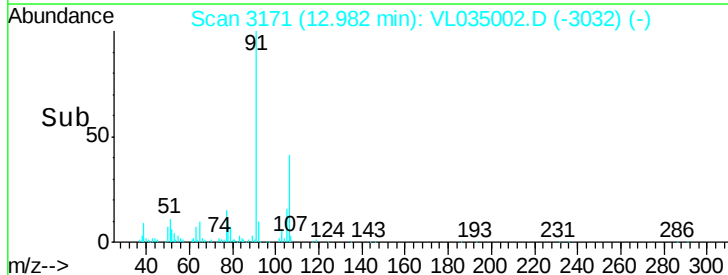
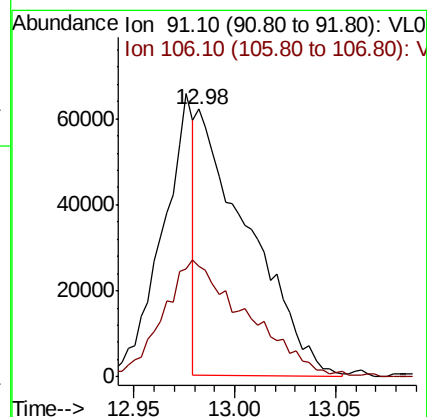
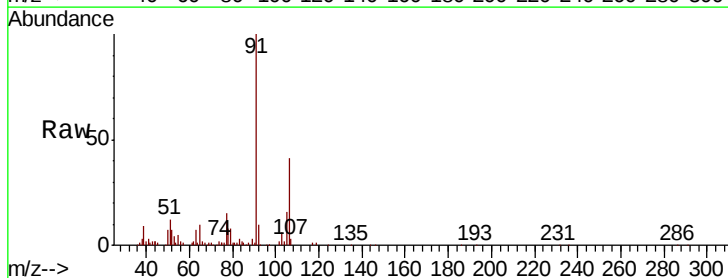
Acq: 13 May 2020 00:51

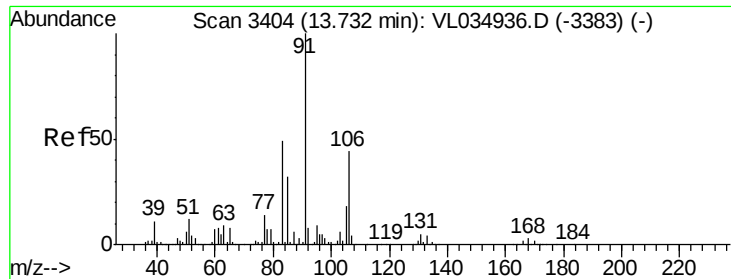
Tgt Ion: 91 Resp: 110946

Ion Ratio Lower Upper

91 100

106 0.0 66.0 99.0#

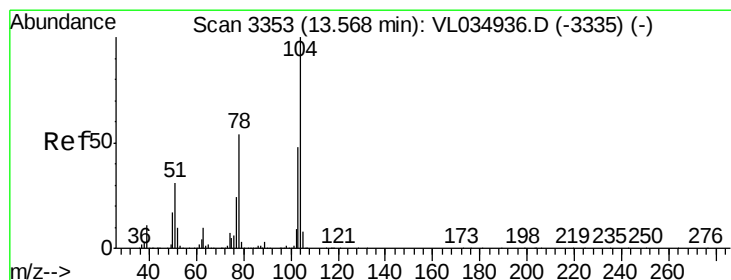
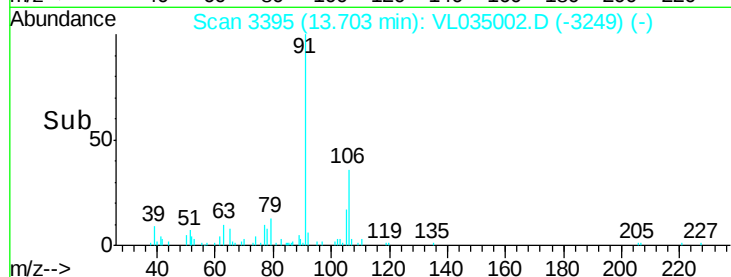
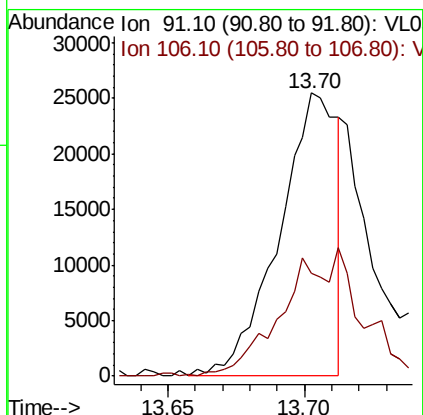
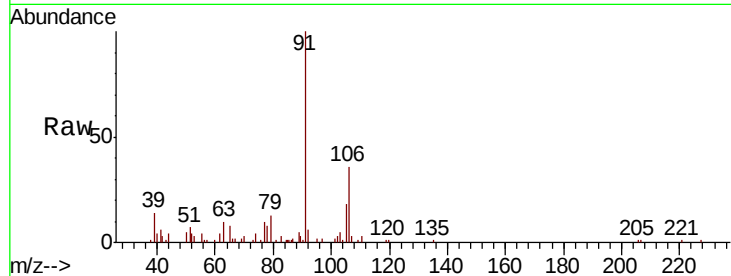




#60
o-Xylene
Concen: 0.160 ppbv
RT: 13.70 min Scan# 3395
Delta R.T. -0.03 min
Lab File: VL035002.D
Acq: 13 May 2020 00:51

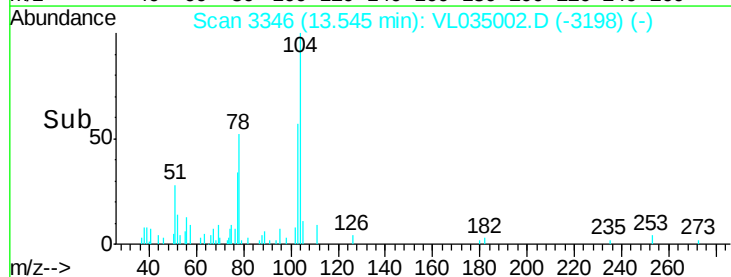
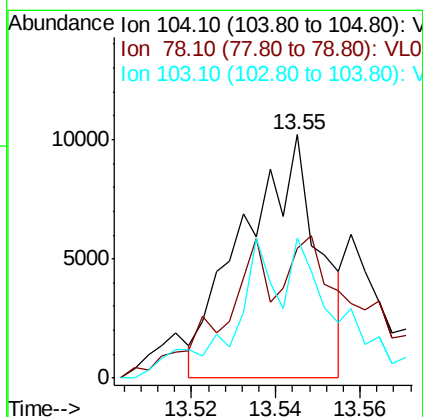
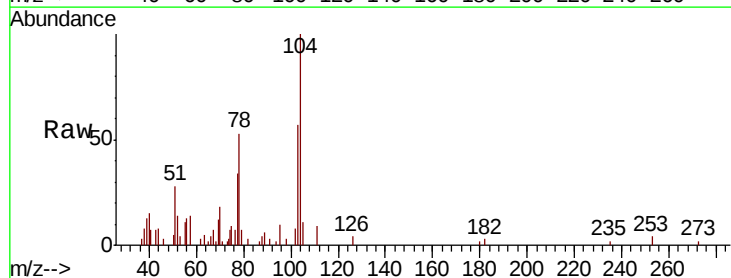
Instrument :
MSVOA_L
ClientSampled :
BFB

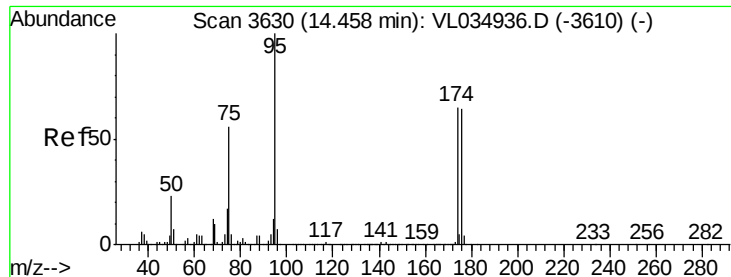
Tot Ion: 91 Resp: 37658
Ion Ratio Lower Upper
91 100
106 59.7 21.9 65.5



#61
Styrene
Concen: 0.085 ppbv
RT: 13.55 min Scan# 3346
Delta R.T. -0.02 min
Lab File: VL035002.D
Acq: 13 May 2020 00:51

Tgt Ion: 104 Resp: 12624
Ion Ratio Lower Upper
104 100
78 100.7 43.7 65.5#
103 76.4 38.8 58.2#

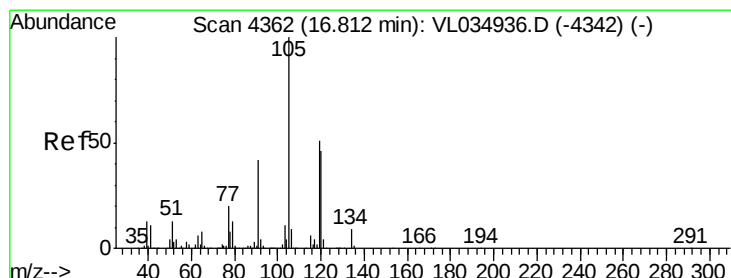
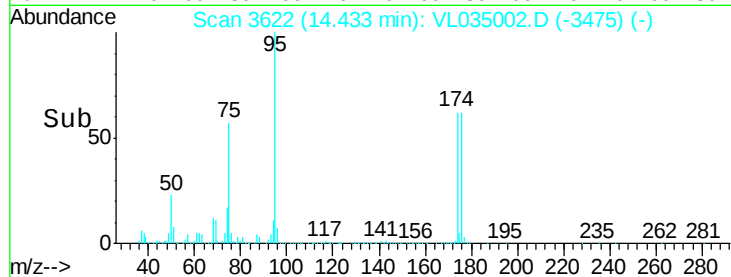
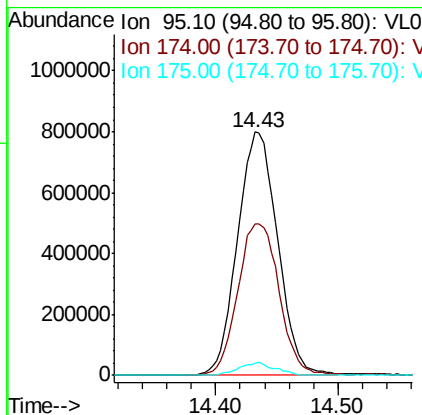
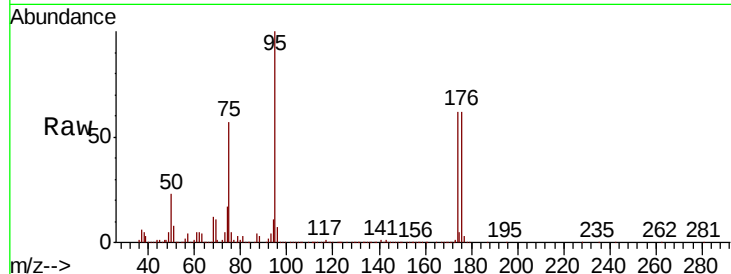




#68
 1-Bromo-4-Fluorobenzene
 Concen: 10.273 ppbv
 RT: 14.43 min Scan# 3622
 Delta R.T. -0.03 min
 Lab File: VL035002.D
 Acq: 13 May 2020 00:51

Instrument :
 MSVOA_L
 ClientSampleId :
 BFB

Tot Ion: 95 Resp: 1818901
 Ion Ratio Lower Upper
 95 100
 174 64.2 51.5 77.3
 175 4.8 3.8 5.8



#74
 1,2,4-Trimethylbenzene
 Concen: 0.022 ppbv
 RT: 16.78 min Scan# 4351
 Delta R.T. -0.04 min
 Lab File: VL035002.D
 Acq: 13 May 2020 00:51

Tgt Ion: 105 Resp: 6133
 Ion Ratio Lower Upper
 105 100
 120 45.2 36.8 55.2
 91 20.9 35.4 53.0#
 77 13.9 16.2 24.2#

