

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL052220\
 Data File : VL035090.D
 Acq On : 22 May 2020 18:44
 Operator : SY/AP
 Sample : L2739-04
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: May 22 23:17:33 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

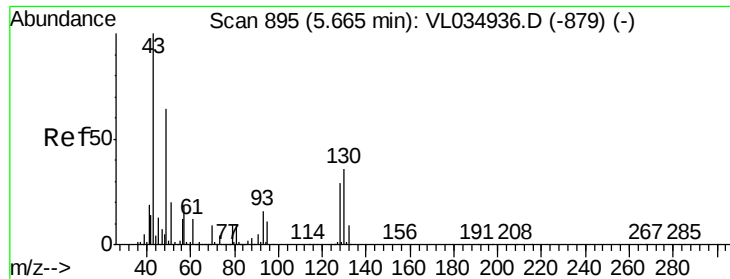
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.65	49	1005558	10.00	ppbv	-0.02
33) 1,4-Difluorobenzene	7.17	114	2377480	10.00	ppbv	-0.02
55) Chlorobenzene-d5	12.10	117	2256703	10.00	ppbv	-0.02

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.44	95	1927090	10.55	ppbv	-0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	105.50%

Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.00	85	35192	0.247 ppbv	100
3) Chlorodifluoromethane	2.94	51	53732	0.468 ppbv #	83
4) Chloromethane	3.09	50	37654	0.572 ppbv	94
9) Propene	2.97	41	23527	0.472 ppbv	87
10) Heptane	8.12	43	46721	0.374 ppbv	91
11) Trichlorofluoromethane	3.91	101	41448	0.282 ppbv	97
12) 1,1,2-Trichlorotrifluoroet	4.46	101	8136	0.078 ppbv	89
13) Ethanol	3.56	45	1070364	65.111 ppbv	98
15) Acetone	3.82	43	412574	3.103 ppbv #	70
16) 1,3-Butadiene	3.28	39	2063	0.036 ppbv #	12
17) tert-Butyl alcohol	4.27	59	28581	0.242 ppbv #	71
19) Isopropyl Alcohol	3.93	45	1416372	15.976 ppbv	99
20) Methylene Chloride	4.31	84	53725	1.221 ppbv	89
21) Allyl Chloride	4.10	41	1723075	22.946 ppbv #	51
23) Vinyl Acetate	5.04	43	34802	0.206 ppbv #	17
25) Ethyl Acetate	5.66	43	310828	1.392 ppbv	98
26) Hexane	5.67	57	170608	1.762 ppbv	82
30) Cyclohexane	7.11	84	6699	0.090 ppbv #	1
34) 2-Butanone	5.22	43	94020	0.636 ppbv	98
36) Benzene	6.88	78	53934	0.275 ppbv #	90
37) 1,2-Dichloroethane	6.30	62	9419	0.078 ppbv	100
38) Trichloroethene	7.83	130	2398	0.032 ppbv #	46
39) 1,2-Dichloropropane	7.17	63	654973	8.335 ppbv #	25
44) 2,2,4-Trimethylpentane	7.87	57	33234	0.095 ppbv #	1
50) 4-Methyl-2-Pentanone	8.75	43	76070	0.361 ppbv	98
52) Tetrachloroethene	11.23	164	9170	0.132 ppbv	92
53) Toluene	9.82	91	3215174	15.473 ppbv	99
58) Ethyl Benzene	12.73	91	314593	1.127 ppbv	93
59) m/p-Xylene	13.01	91	64844	0.264 ppbv #	8
60) o-Xylene	13.71	91	87250	0.360 ppbv	96
61) Styrene	13.55	104	122502	0.799 ppbv	98

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 min Scan# 890

Delta R.T. -0.02 min

Lab File: VL035090.D

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ClientSampleId :

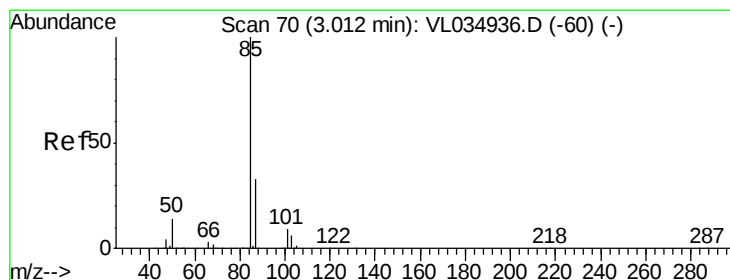
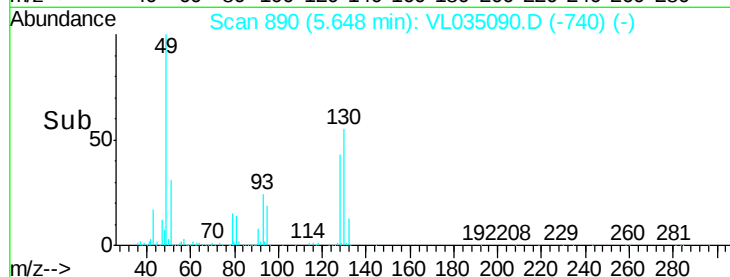
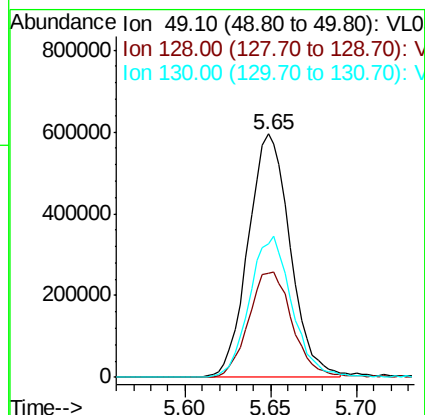
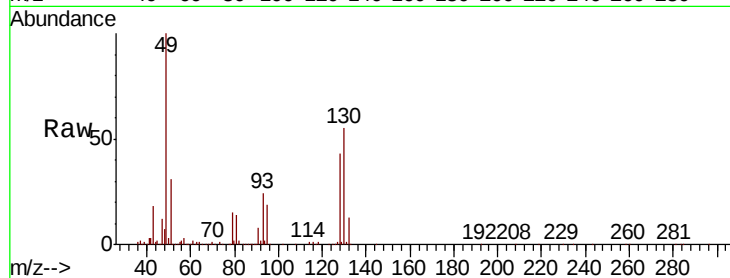
Tot Ion: 49 Resp: 1005558

Ion Ratio Lower Upper

49 100

128 45.2 22.1 66.5

130 59.3 29.1 87.3



#2

Dichlorodifluoromethane

Concen: 0.247 ppbv

RT: 3.00 min Scan# 67

Delta R.T. -0.01 min

Lab File: VL035090.D

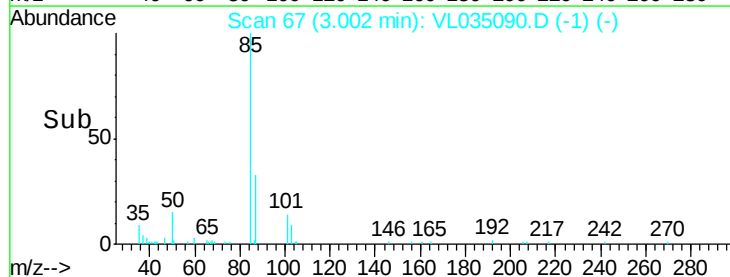
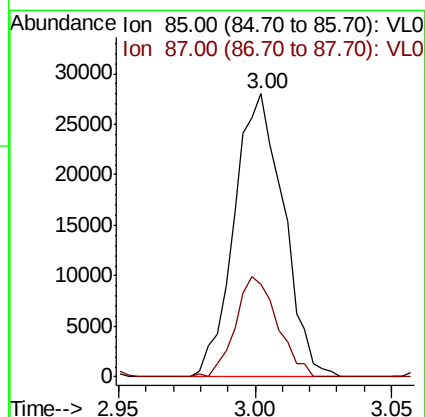
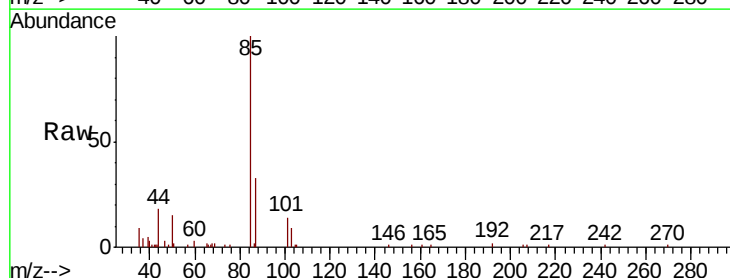
Acq: 22 May 2020 18:44

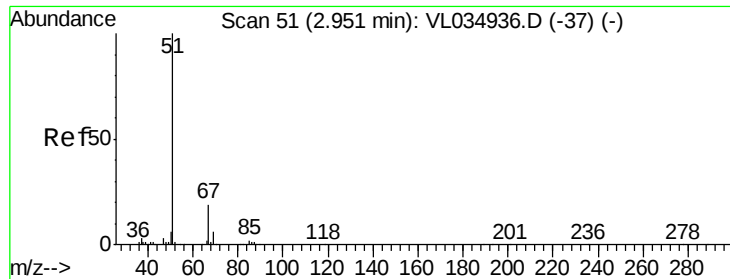
Tgt Ion: 85 Resp: 35192

Ion Ratio Lower Upper

85 100

87 32.6 26.2 39.2





#3

Chlorodifluoromethane

Concen: 0.468 ppbv

RT: 2.94 min Scan# 48

Delta R.T. -0.01 min

Lab File: VL035090.D

Acq: 22 May 2020 18:44

Instrument :

MSVOA_L

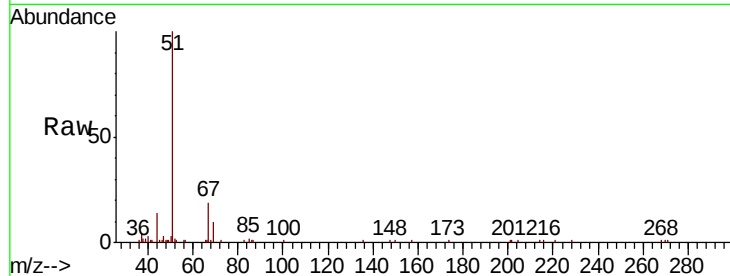
ClientSampleId :

Tot Ion: 51 Resp: 53732

Ion Ratio Lower Upper

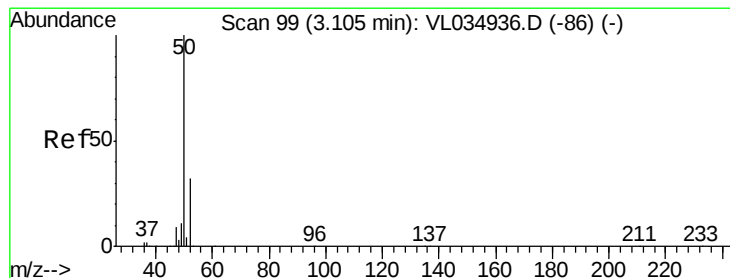
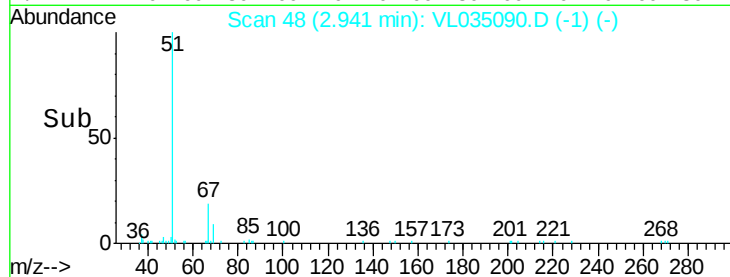
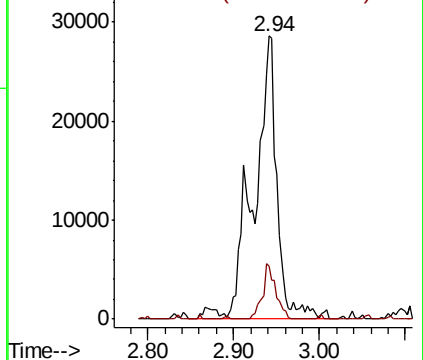
51 100

67 11.3 15.0 22.6#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.572 ppbv

RT: 3.09 min Scan# 95

Delta R.T. -0.01 min

Lab File: VL035090.D

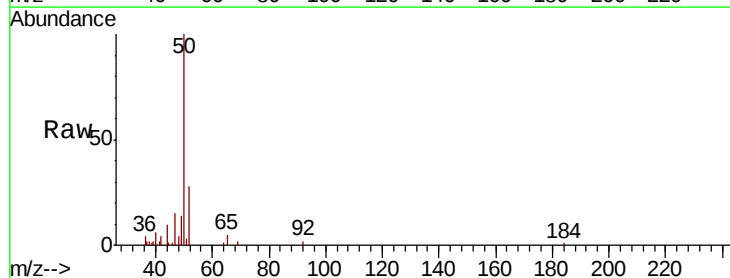
Acq: 22 May 2020 18:44

Tgt Ion: 50 Resp: 37654

Ion Ratio Lower Upper

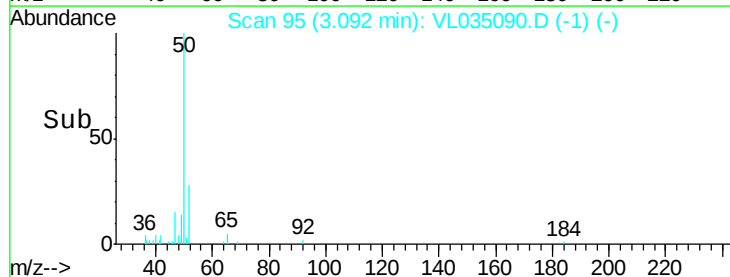
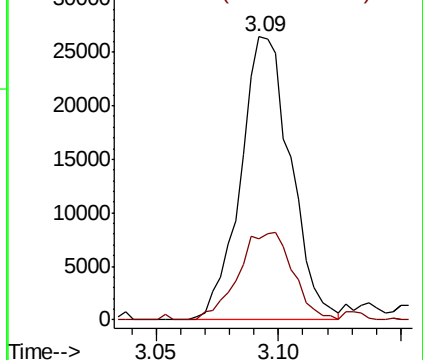
50 100

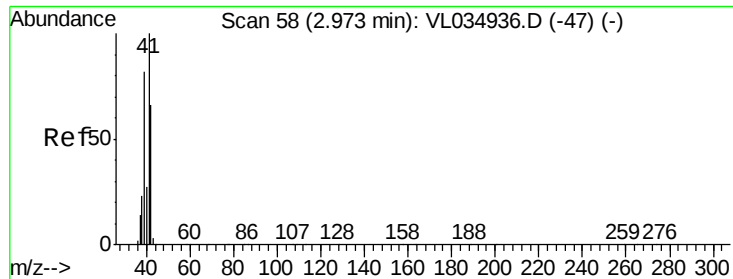
52 28.5 25.4 38.2



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 0.472 ppbv

RT: 2.97 min Scan# 58

Delta R.T. -0.00 min

Lab File: VL035090.D

Acq: 22 May 2020 18:44

Instrument :

MSVOA_L

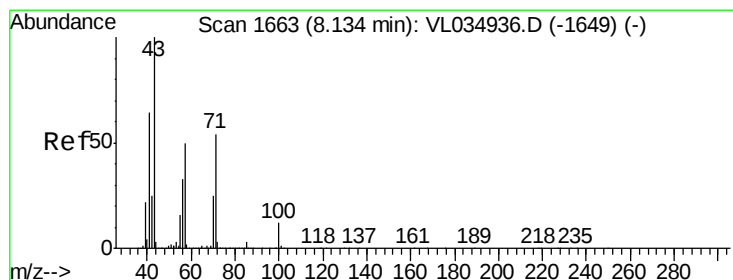
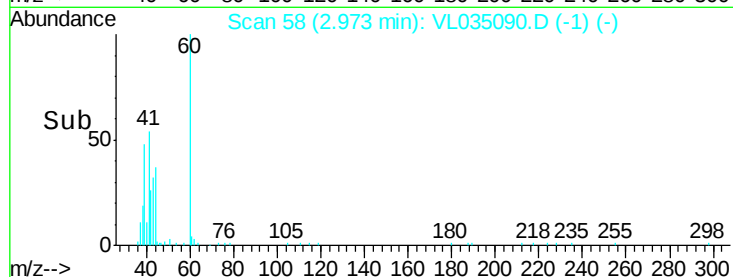
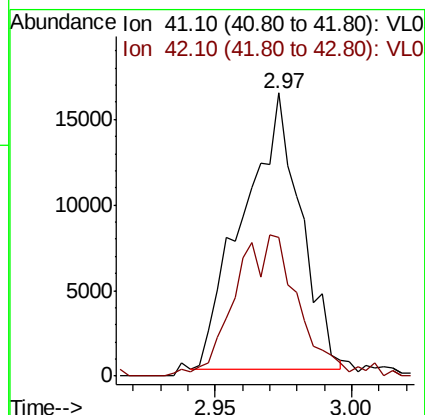
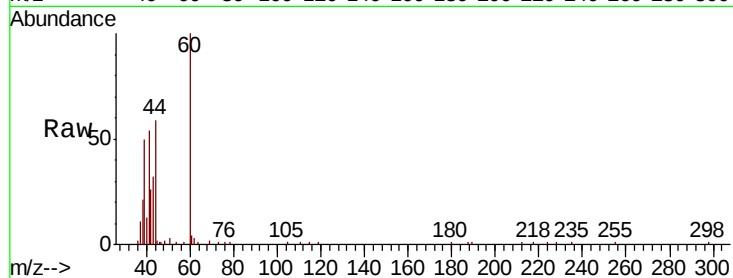
ClientSampleId :

Tot Ion: 41 Resp: 23527

Ion Ratio Lower Upper

41 100

42 57.7 54.5 81.7



#10

Heptane

Concen: 0.374 ppbv

RT: 8.12 min Scan# 1658

Delta R.T. -0.02 min

Lab File: VL035090.D

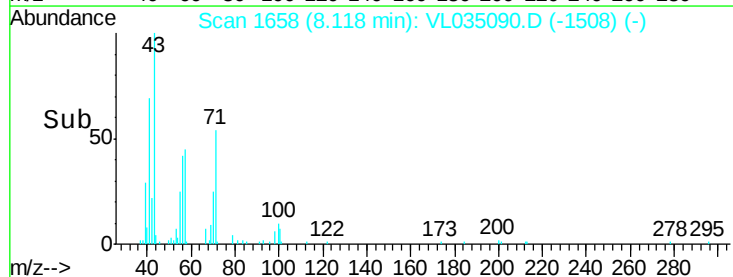
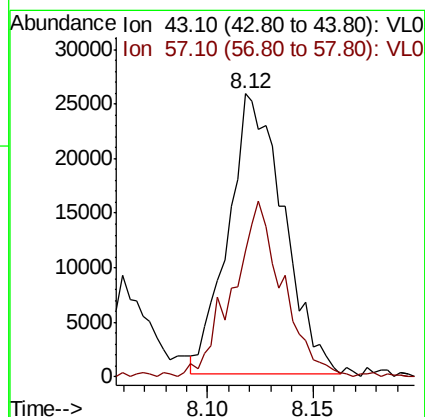
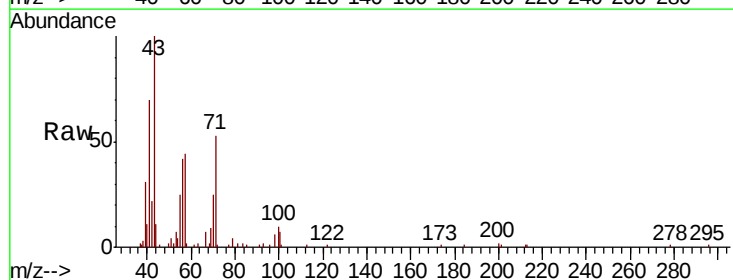
Acq: 22 May 2020 18:44

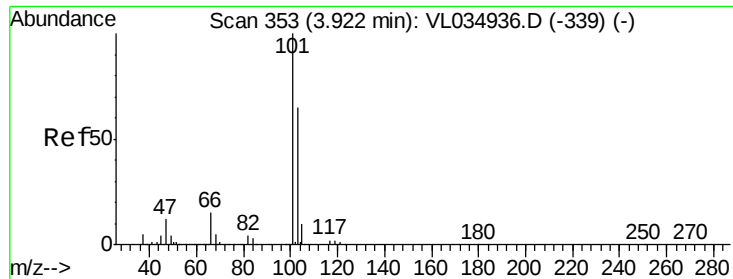
Tgt Ion: 43 Resp: 46721

Ion Ratio Lower Upper

43 100

57 57.6 41.1 61.7





#11

Trichlorofluoromethane

Concen: 0.282 ppbv

RT: 3.91 min Scan# 350

Delta R.T. -0.01 min

Lab File: VL035090.D

Acq: 22 May 2020 18:44

Instrument :

MSVOA_L

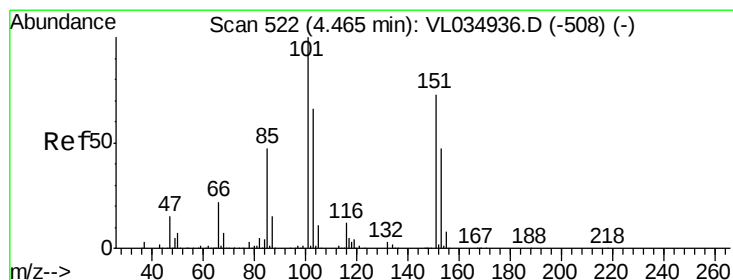
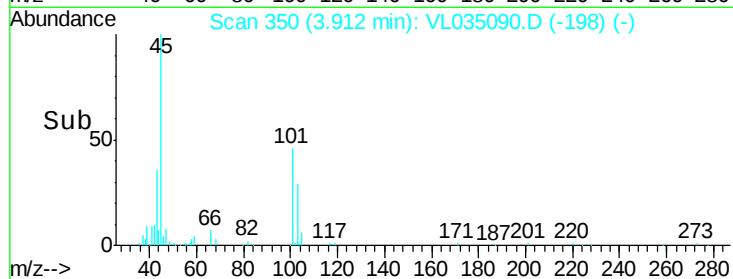
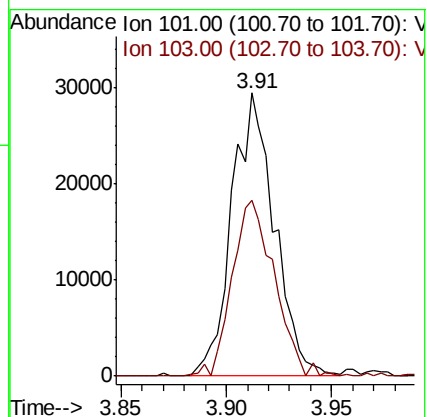
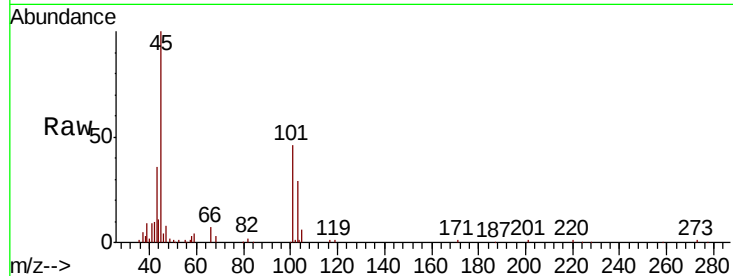
ClientSampleId :

Tot Ion:101 Resp: 41448

Ion Ratio Lower Upper

101 100

103 62.2 51.9 77.9



#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.078 ppbv

RT: 4.46 min Scan# 519

Delta R.T. -0.01 min

Lab File: VL035090.D

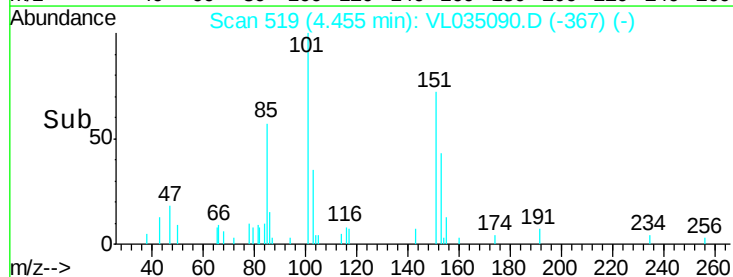
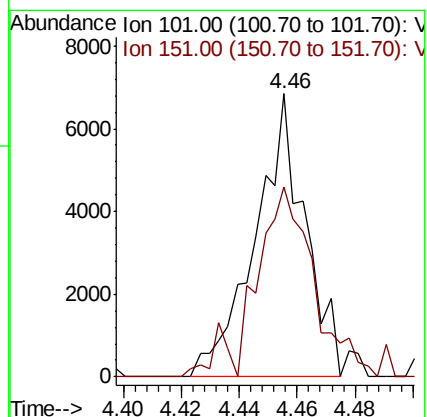
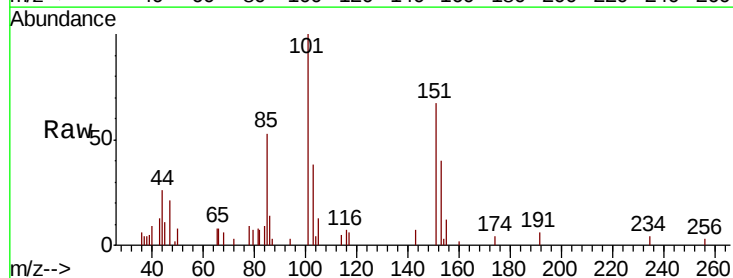
Acq: 22 May 2020 18:44

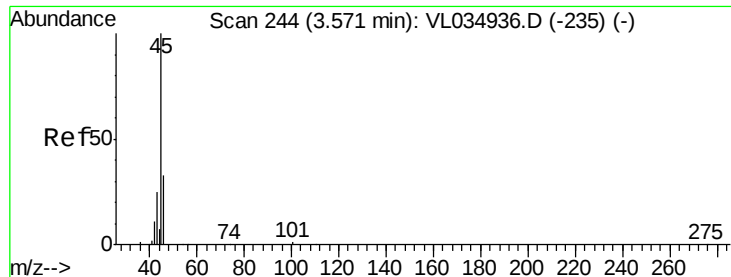
Tgt Ion:101 Resp: 8136

Ion Ratio Lower Upper

101 100

151 81.5 57.6 86.4

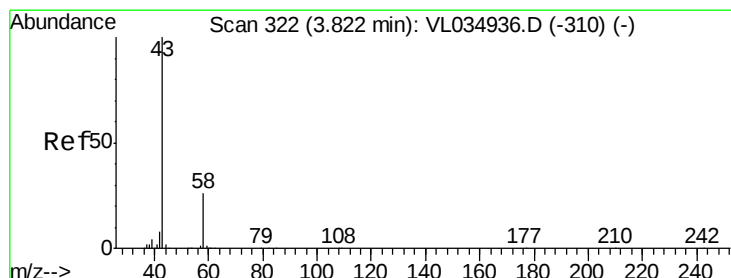
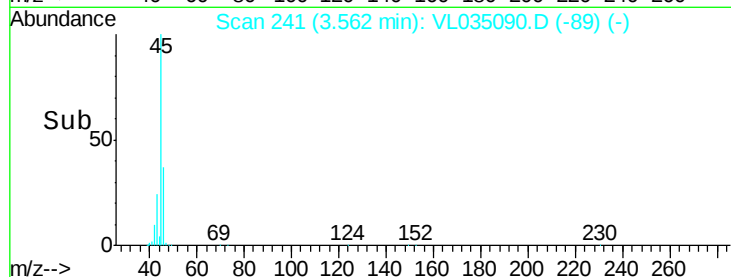
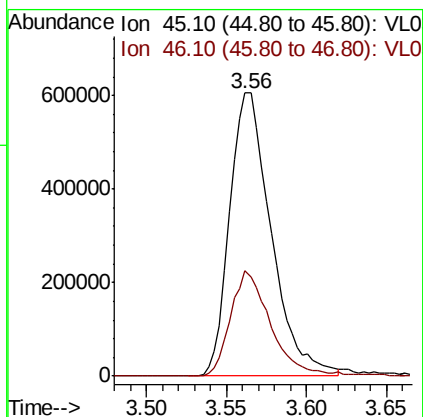
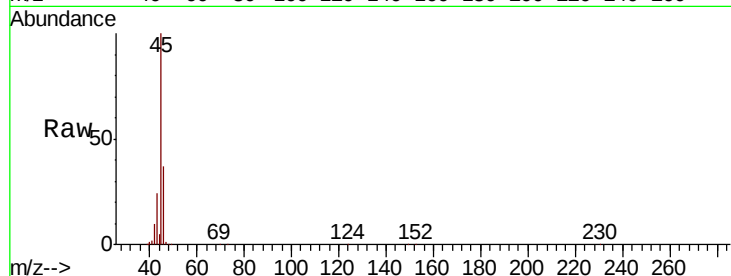




#13
Ethanol
Concen: 65.111 ppbv
RT: 3.56 min Scan# 241
Delta R.T. -0.01 min
Lab File: VL035090.D
Acq: 22 May 2020 18:44

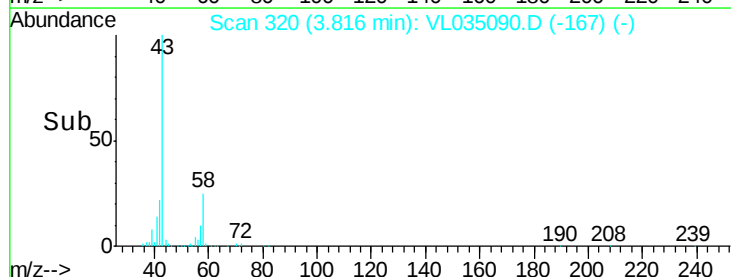
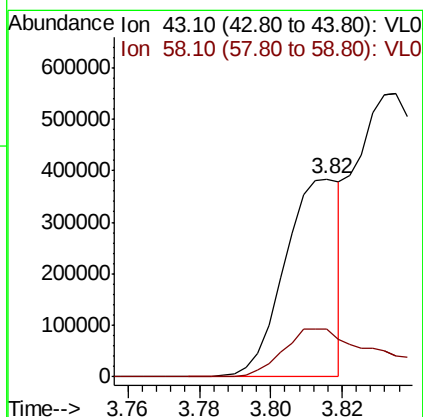
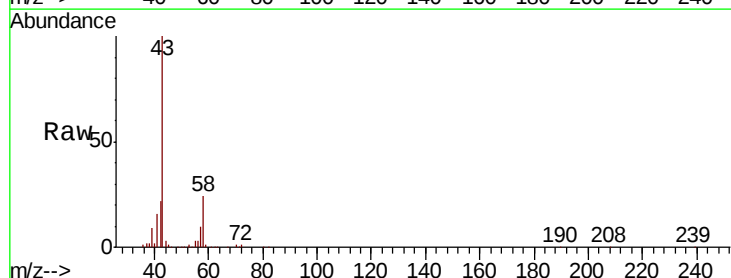
Instrument :
MSVOA_L
ClientSampleId :

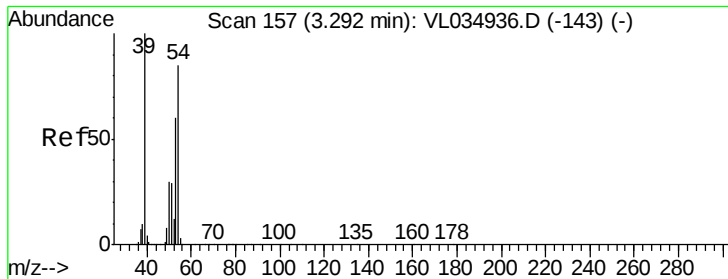
Tot Ion: 45 Resp: 1070364
Ion Ratio Lower Upper
45 100
46 37.0 14.3 57.3



#15
Acetone
Concen: 3.103 ppbv
RT: 3.82 min Scan# 320
Delta R.T. -0.01 min
Lab File: VL035090.D
Acq: 22 May 2020 18:44

Tgt Ion: 43 Resp: 412574
Ion Ratio Lower Upper
43 100
58 42.5 21.7 32.5#

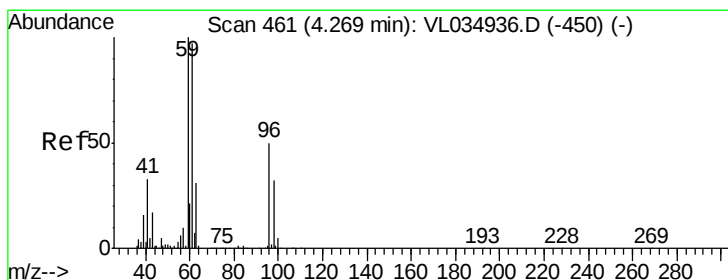
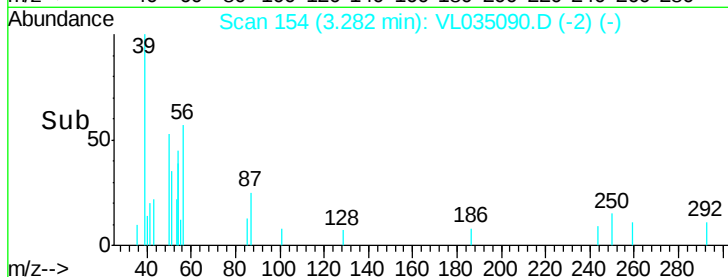
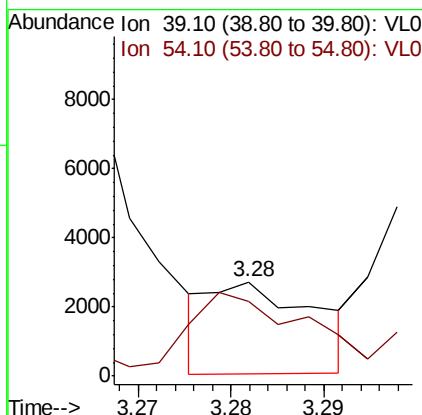
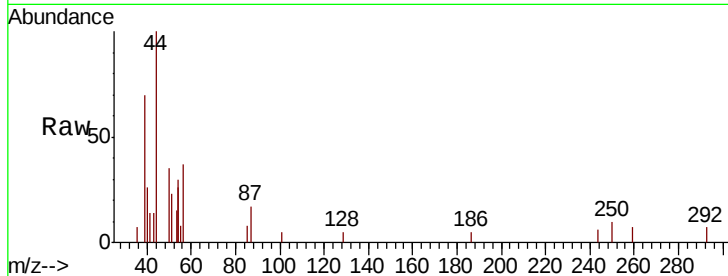




#16
1,3-Butadiene
Concen: 0.036 ppbv
RT: 3.28 min Scan# 154
Delta R.T. -0.01 min
Lab File: VL035090.D
Acq: 22 May 2020 18:44

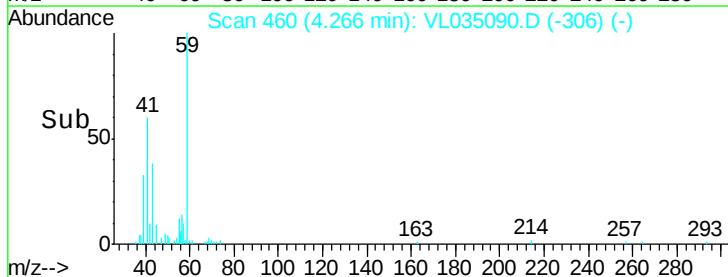
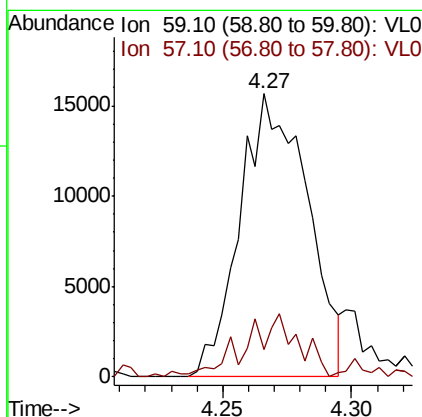
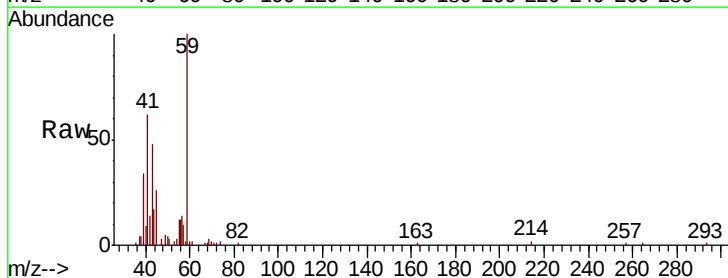
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MSVOA_L
ClientSampleId :

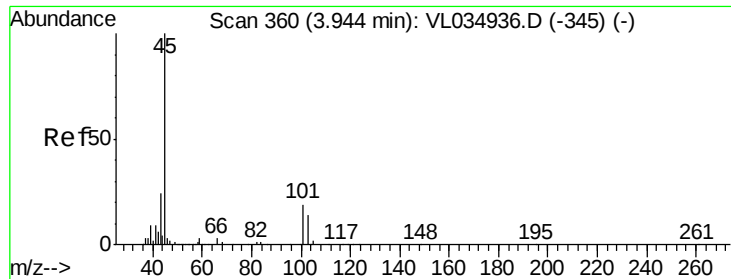
Tot Ion: 39 Resp: 2063
Ion Ratio Lower Upper
39 100
54 162.5 66.6 100.0#



#17
tert-Butyl alcohol
Concen: 0.242 ppbv
RT: 4.27 min Scan# 460
Delta R.T. -0.00 min
Lab File: VL035090.D
Acq: 22 May 2020 18:44

Tgt Ion: 59 Resp: 28581
Ion Ratio Lower Upper
59 100
57 0.0 8.7 13.1#



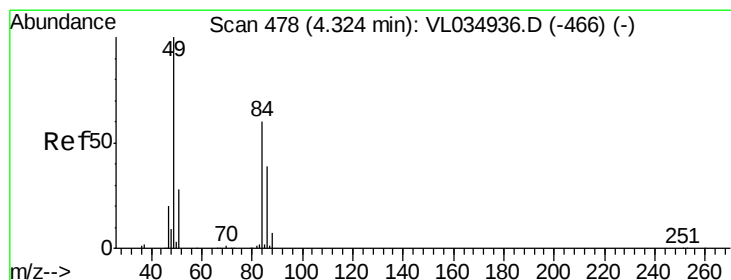
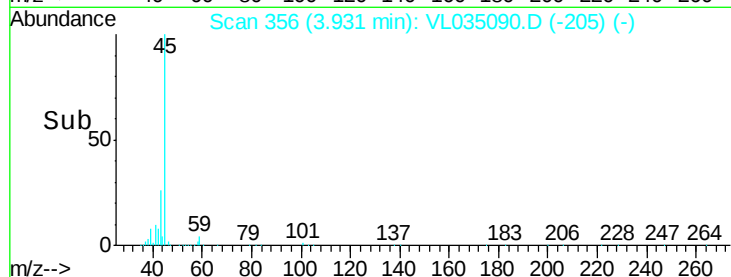
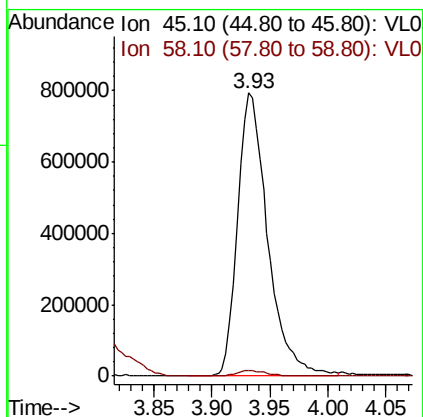
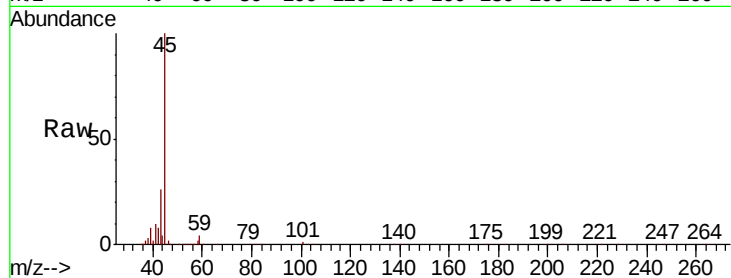


#19

Isopropyl Alcohol
 Concen: 15.976 ppbv
 RT: 3.93 min Scan# 356
 Delta R.T. -0.01 min
 Lab File: VL035090.D
 Acq: 22 May 2020 18:44

Instrument :
 MSVOA_L
 ClientSampleId :

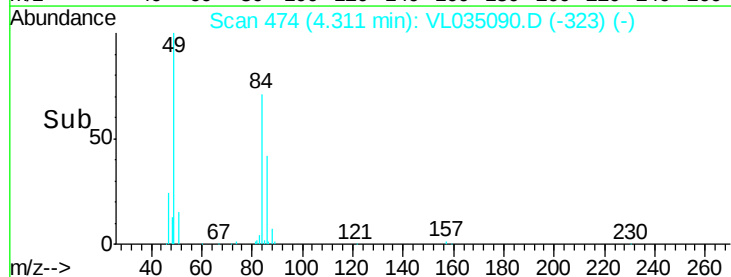
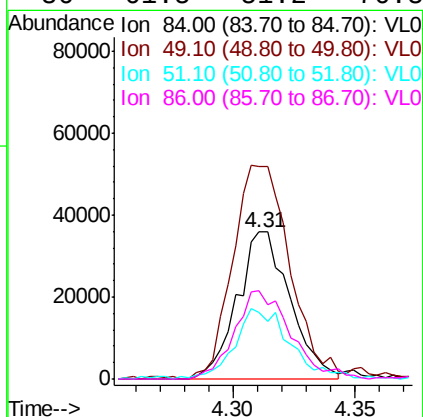
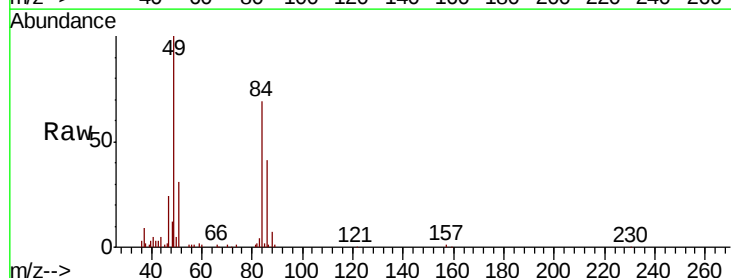
Tot Ion: 45 Resp: 1416372
 Ion Ratio Lower Upper
 45 100
 58 2.3 1.7 2.5

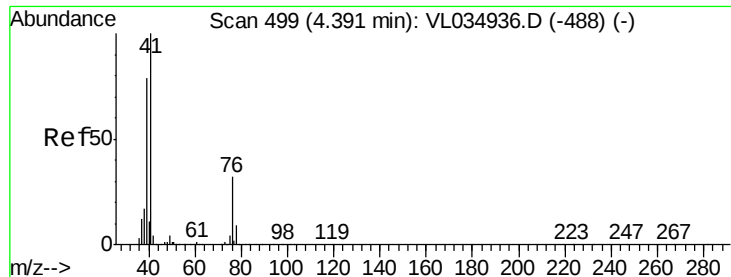


#20

Methylene Chloride
 Concen: 1.221 ppbv
 RT: 4.31 min Scan# 474
 Delta R.T. -0.01 min
 Lab File: VL035090.D
 Acq: 22 May 2020 18:44

Tgt Ion: 84 Resp: 53725
 Ion Ratio Lower Upper
 84 100
 49 144.8 132.5 198.7
 51 43.5 38.4 57.6
 86 61.5 51.2 76.8





#21

Allvl Chloride

Concen: 22.946 ppbv

RT: 4.10 min Scan# 407

Delta R.T. -0.30 min

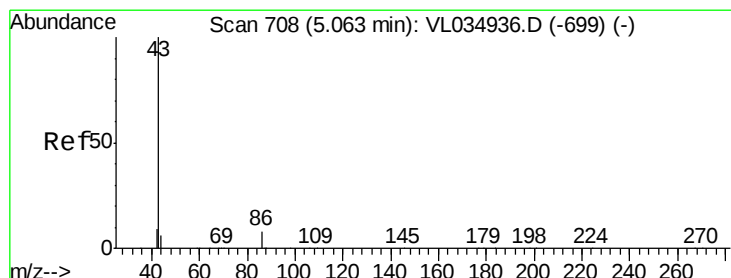
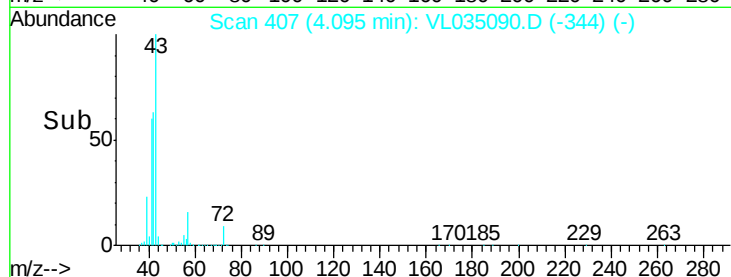
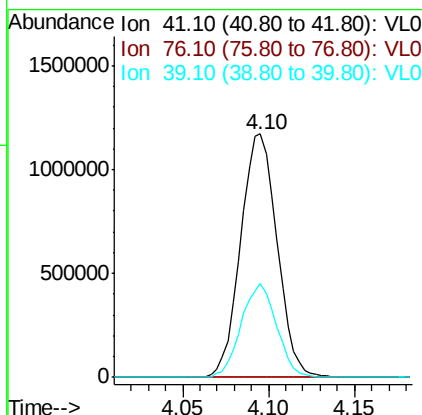
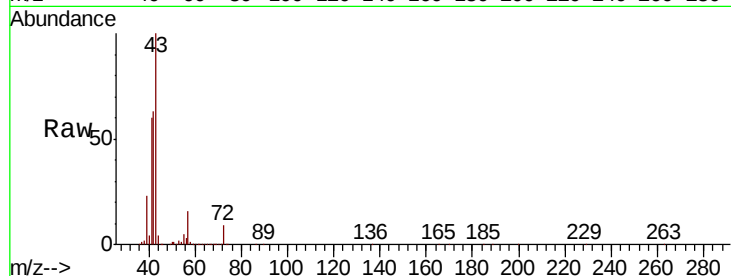
Lab File: VL035090.D

Acq: 22 May 2020 18:44

Instrument :
MSVOA_L
ClientSampleId :

Tot Ion: 41 Resp: 1723075

Ion	Ratio	Lower	Upper
41	100		
76	0.0	23.6	35.4#
39	37.3	61.9	92.9#



#23

Vinyl Acetate

Concen: 0.206 ppbv

RT: 5.04 min Scan# 700

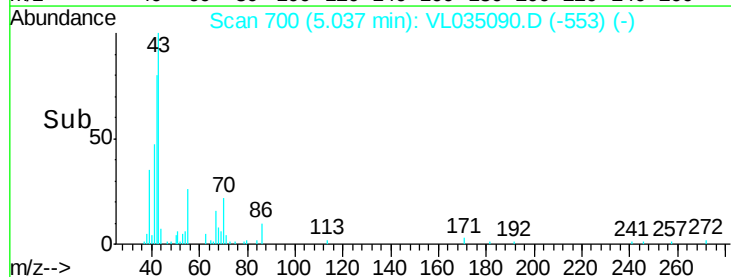
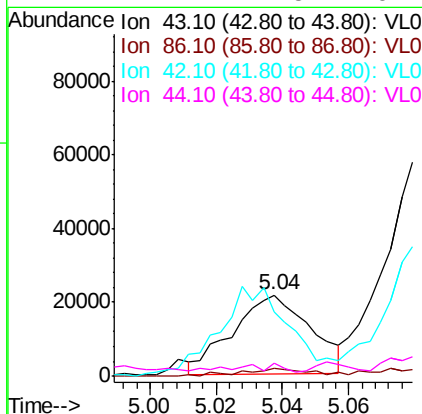
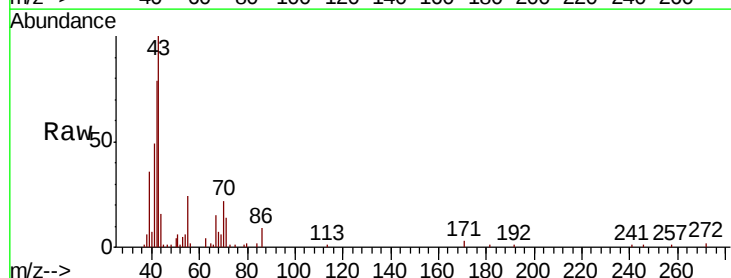
Delta R.T. -0.03 min

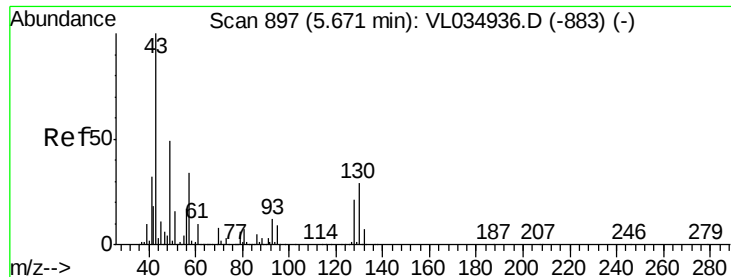
Lab File: VL035090.D

Acq: 22 May 2020 18:44

Tgt Ion: 43 Resp: 34802

Ion	Ratio	Lower	Upper
43	100		
86	10.2	5.5	8.3#
42	71.9	8.0	12.0#
44	12.7	4.5	6.7#





#25

Ethyl Acetate

Concen: 1.392 ppbv

RT: 5.66 min Scan# 894

Delta R.T. -0.01 min

Lab File: VL035090.D

Acq: 22 May 2020 18:44

Instrument :
MSVOA_L
ClientSampleID :

Tot Ion: 43 Resp: 310828

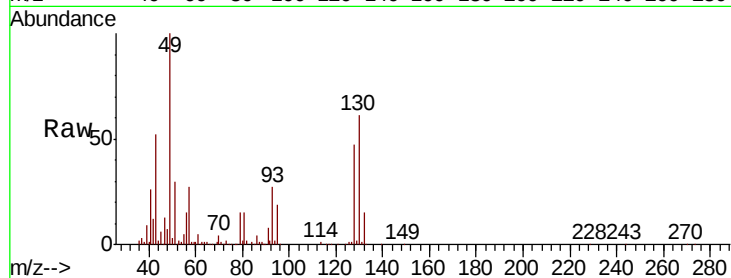
Ion Ratio Lower Upper

43 100

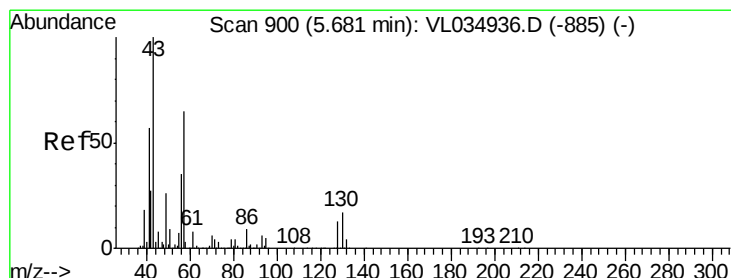
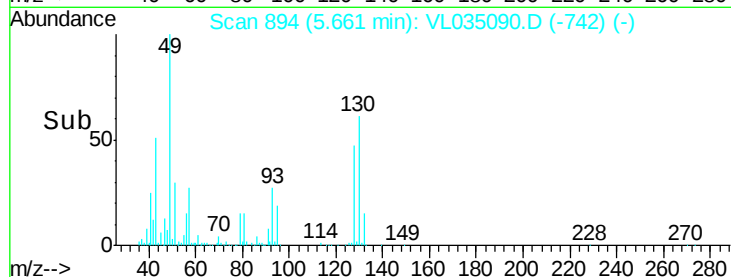
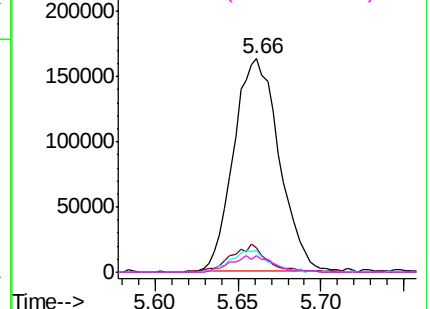
45 10.7 8.1 12.1

61 8.9 7.8 11.8

70 7.2 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: 1.762 ppbv

RT: 5.67 min Scan# 896

Delta R.T. -0.01 min

Lab File: VL035090.D

Acq: 22 May 2020 18:44

Tgt Ion: 57 Resp: 170608

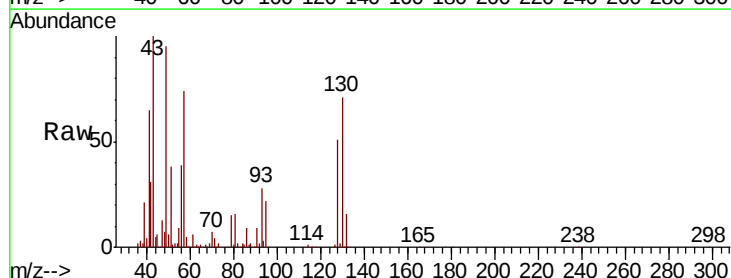
Ion Ratio Lower Upper

57 100

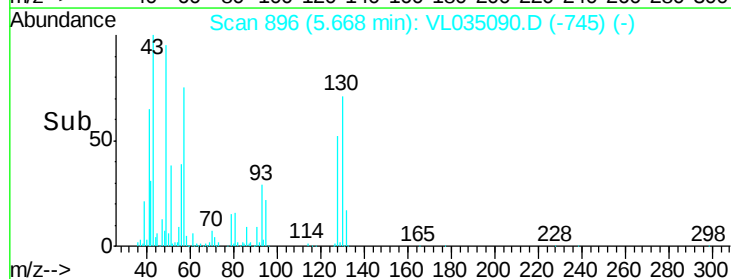
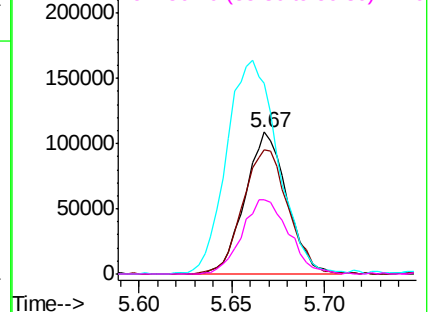
41 95.6 72.7 109.1

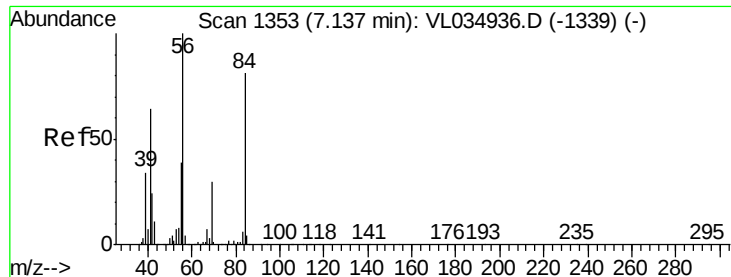
43 185.9 182.1 273.1

56 58.8 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





#30

Cyclohexane

Concen: 0.090 ppbv

RT: 7.11 min Scan# 1346

Delta R.T. -0.02 min

Lab File: VL035090.D

Acq: 22 May 2020 18:44

Instrument :

MSVOA_L

ClientSampleId :

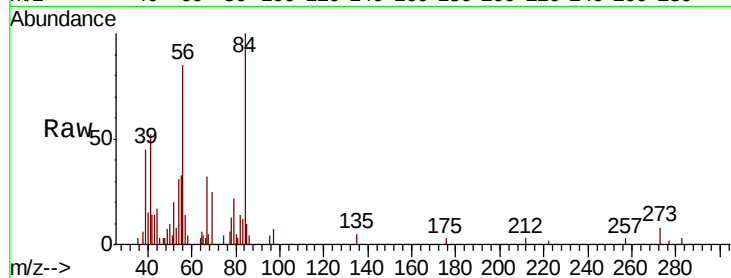
Tot Ion: 84 Resp: 6699

Ion Ratio Lower Upper

84 100

56 0.0 111.4 167.2#

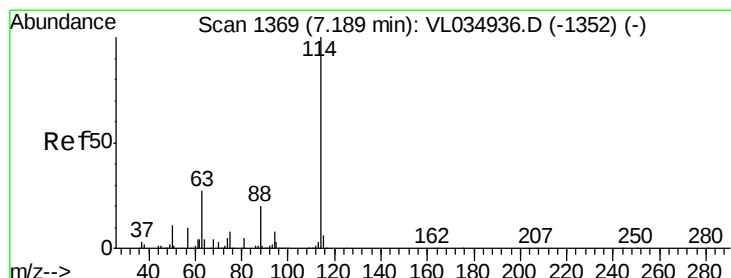
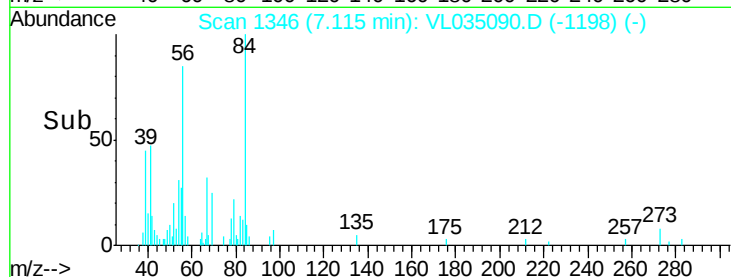
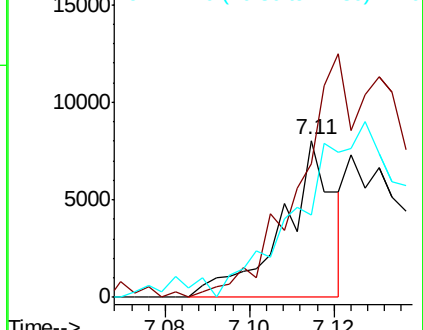
41 0.0 66.7 100.1#



Abundance Ion 84.20 (83.90 to 84.90): VL0

Ion 56.10 (55.80 to 56.80): VL0

Ion 41.10 (40.80 to 41.80): VL0



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.17 min Scan# 1364

Delta R.T. -0.02 min

Lab File: VL035090.D

Acq: 22 May 2020 18:44

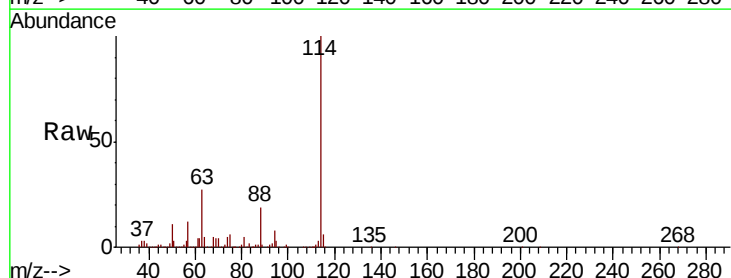
Tgt Ion: 114 Resp: 2377480

Ion Ratio Lower Upper

114 100

63 27.8 22.2 33.4

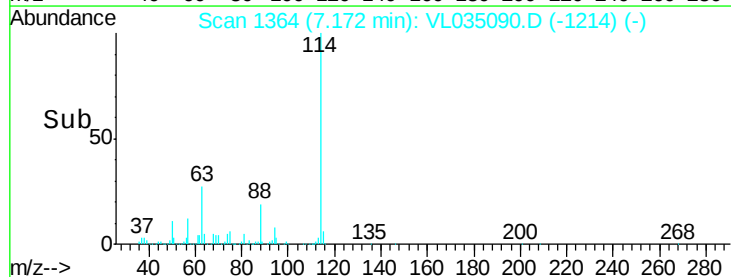
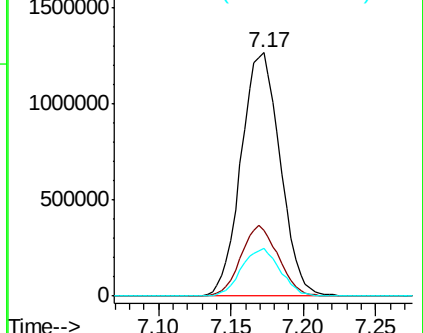
88 19.3 15.5 23.3

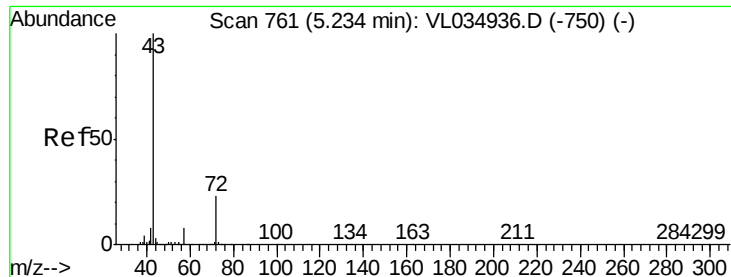


Abundance Ion 114.10 (113.80 to 114.80): V

Ion 63.10 (62.80 to 63.80): VL0

Ion 88.10 (87.80 to 88.80): VL0

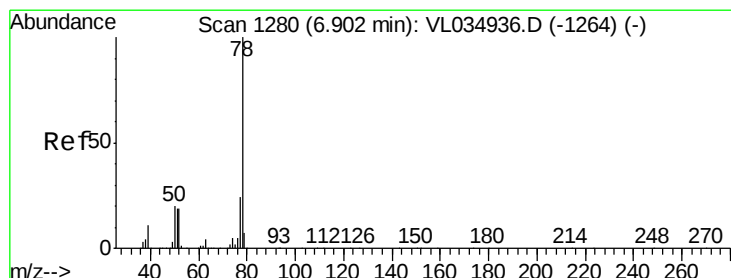
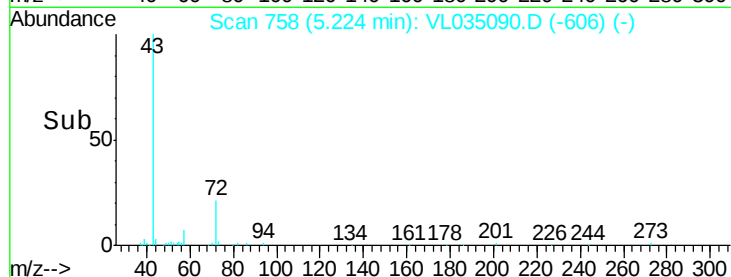
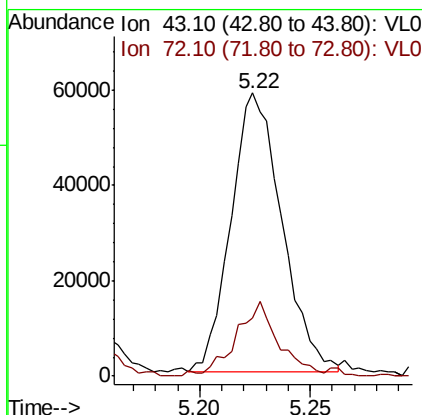
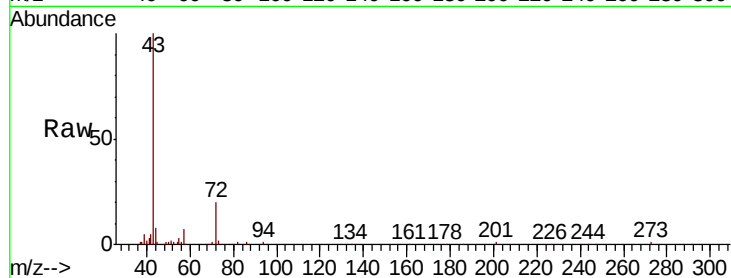




#34
 2-Butanone
 Concen: 0.636 ppbv
 RT: 5.22 min Scan# 758
 Delta R.T. -0.01 min
 Lab File: VL035090.D
 Acq: 22 May 2020 18:44

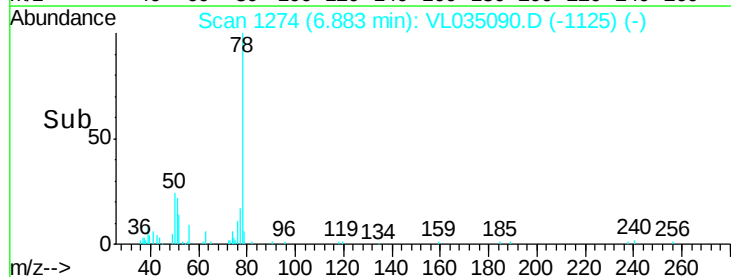
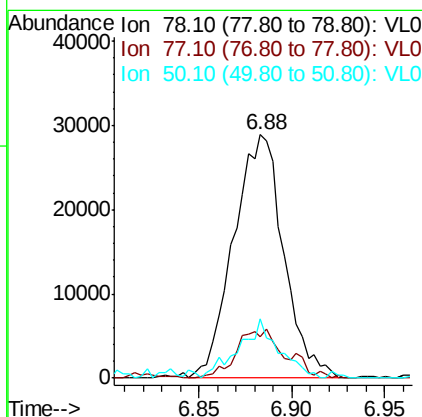
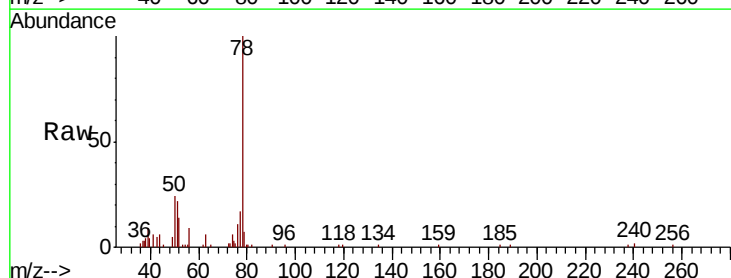
Instrument :
 MSVOA_L
 ClientSampleId :

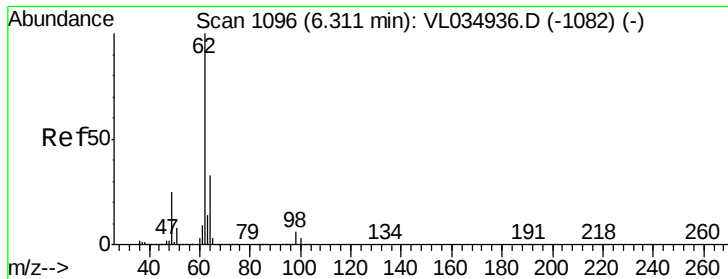
Tot Ion: 43 Resp: 94020
 Ion Ratio Lower Upper
 43 100
 72 23.6 18.0 27.0



#36
 Benzene
 Concen: 0.275 ppbv
 RT: 6.88 min Scan# 1274
 Delta R.T. -0.02 min
 Lab File: VL035090.D
 Acq: 22 May 2020 18:44

Tgt Ion: 78 Resp: 53934
 Ion Ratio Lower Upper
 78 100
 77 15.9 19.0 28.6#
 50 20.8 15.8 23.8





#37

1,2-Dichloroethane

Concen: 0.078 ppbv

RT: 6.30 min Scan# 1092

Delta R.T. -0.01 min

Lab File: VL035090.D

Acq: 22 May 2020 18:44

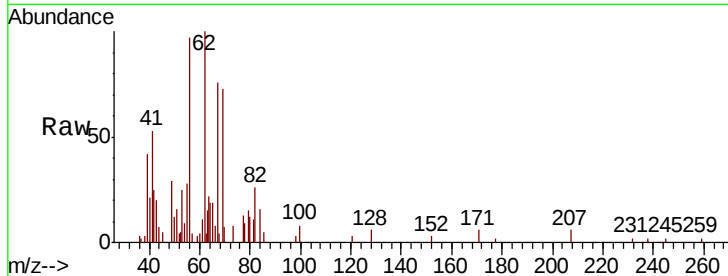
Instrument :
MSVOA_L
ClientSampleId :

Tot Ion: 62 Resp: 9419

Ion Ratio Lower Upper

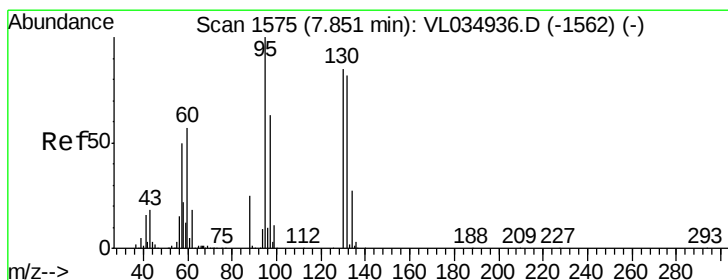
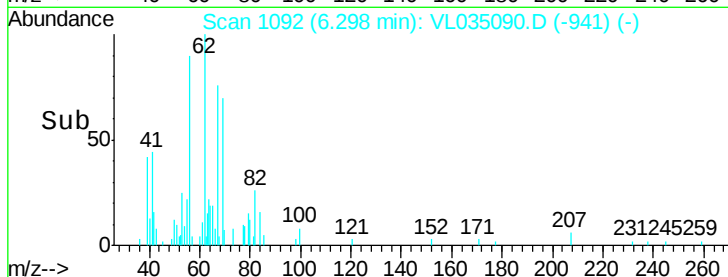
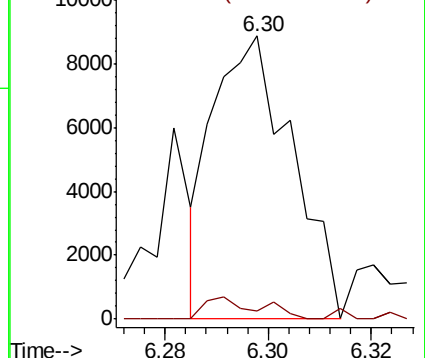
62 100

98 6.0 4.8 7.2



Abundance Ion 62.10 (61.80 to 62.80): VL0

Ion 98.00 (97.70 to 98.70): VL0



#38

Trichloroethene

Concen: 0.032 ppbv

RT: 7.83 min Scan# 1570

Delta R.T. -0.02 min

Lab File: VL035090.D

Acq: 22 May 2020 18:44

Tgt Ion: 130 Resp: 2398

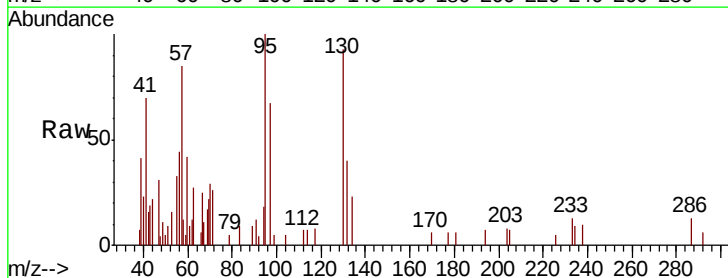
Ion Ratio Lower Upper

130 100

95 82.0 93.4 140.0#

132 0.0 76.4 114.6#

97 47.1 58.5 87.7#

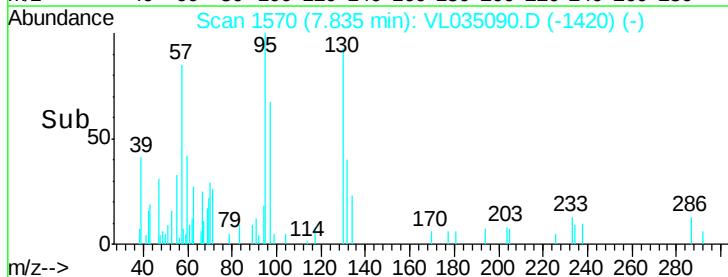
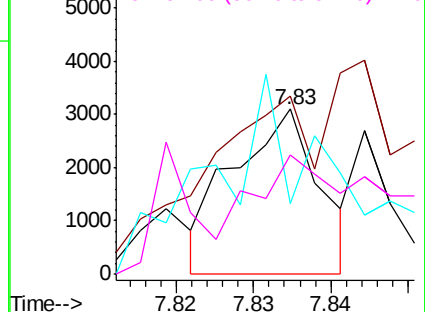


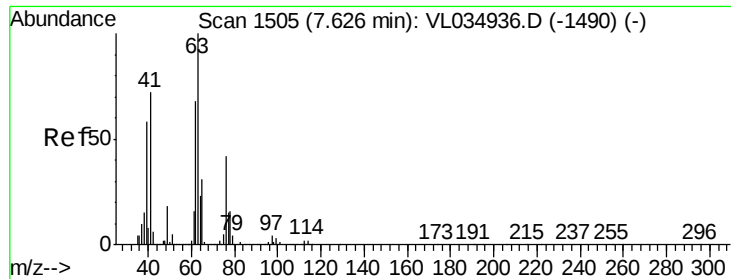
Abundance Ion 130.00 (129.70 to 130.70): V

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

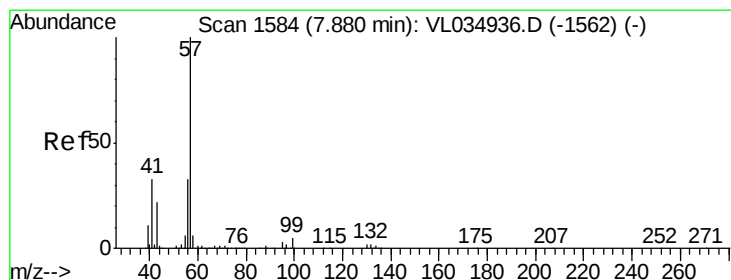
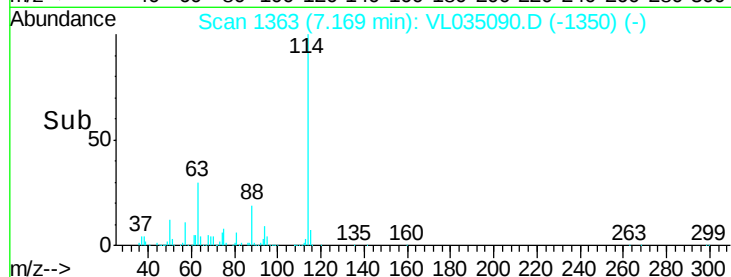
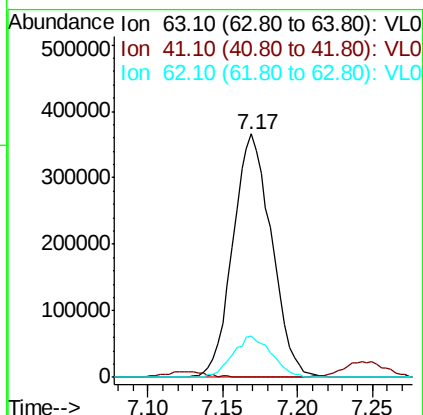
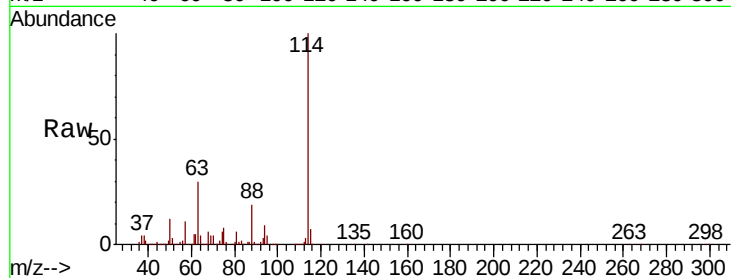




#39
 1,2-Dichloropropane
 Concen: 8.335 ppbv
 RT: 7.17 min Scan# 1363
 Delta R.T. -0.46 min
 Lab File: VL035090.D
 Acq: 22 May 2020 18:44

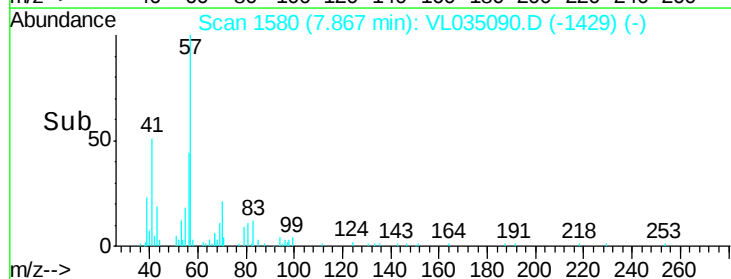
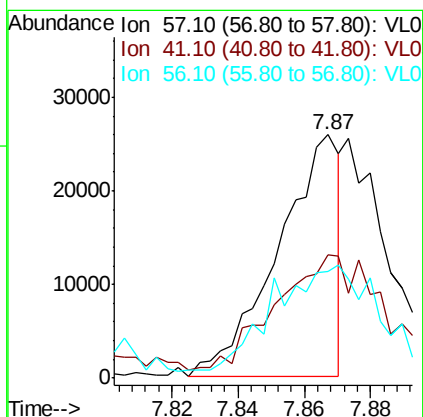
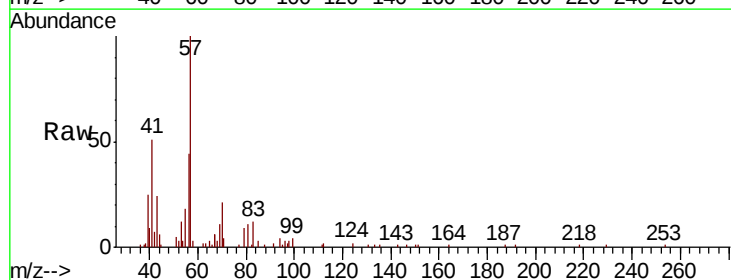
Instrument :
 MSVOA_L
 ClientSampleId :

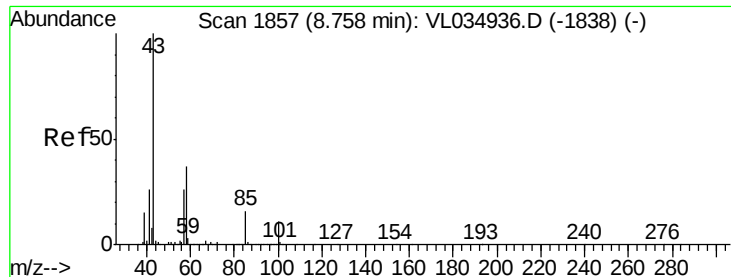
Tot Ion	Ratio	Lower	Upper
63	100		
41	0.0	57.8	86.8#
62	16.7	54.2	81.2#



#44
 2,2,4-Trimethylpentane
 Concen: 0.095 ppbv
 RT: 7.87 min Scan# 1580
 Delta R.T. -0.01 min
 Lab File: VL035090.D
 Acq: 22 May 2020 18:44

Tgt Ion	Ratio	Lower	Upper
57	100		
41	95.5	26.4	39.6#
56	88.1	25.5	38.3#

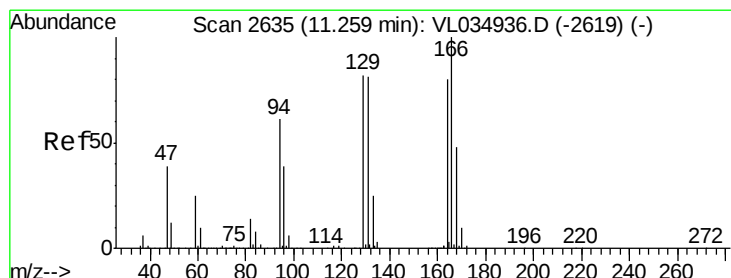
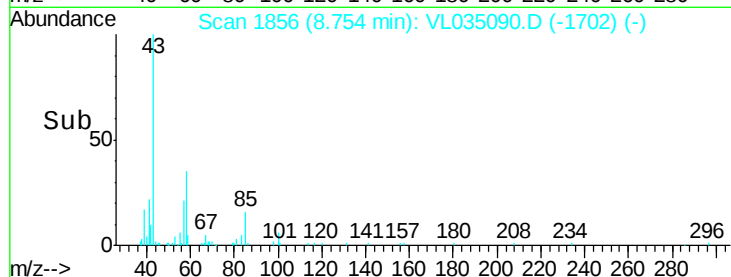
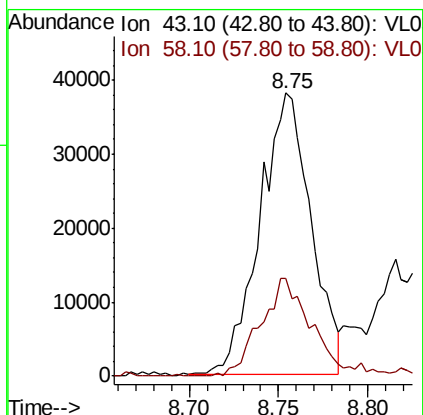
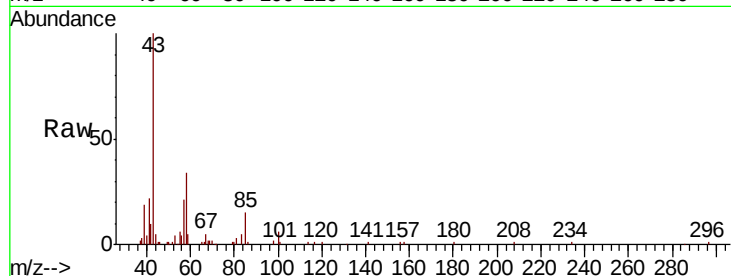




#50
4-Methyl-2-Pentanone
Concen: 0.361 ppbv
RT: 8.75 min Scan# 1856
Delta R.T. -0.00 min
Lab File: VL035090.D
Acq: 22 May 2020 18:44

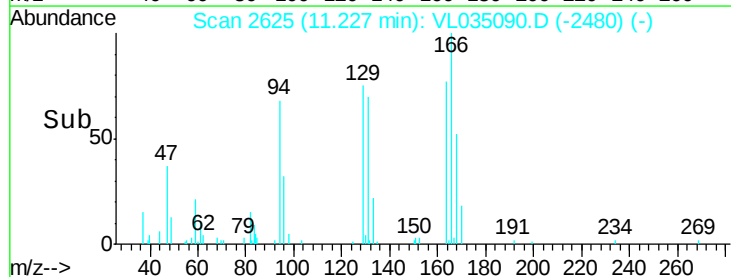
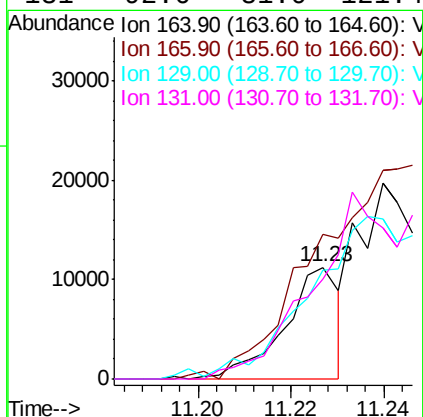
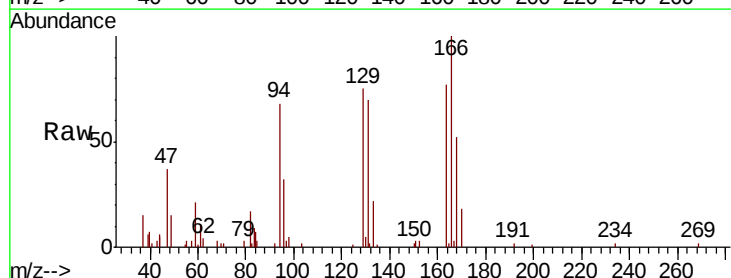
Instrument :
MSVOA_L
ClientSampleId :

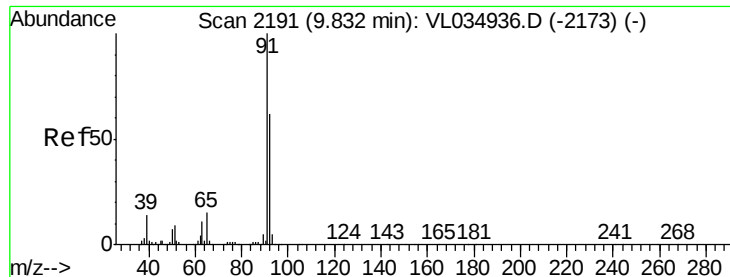
Tot Ion: 43 Resp: 76070
Ion Ratio Lower Upper
43 100
58 34.9 29.1 43.7



#52
Tetrachloroethene
Concen: 0.132 ppbv
RT: 11.23 min Scan# 2625
Delta R.T. -0.03 min
Lab File: VL035090.D
Acq: 22 May 2020 18:44

Tgt Ion: 164 Resp: 9170
Ion Ratio Lower Upper
164 100
166 129.3 100.7 151.1
129 88.7 83.0 124.4
131 92.6 81.0 121.4





#53

Toluene

Concen: 15.473 ppbv

RT: 9.82 min Scan# 2186

Delta R.T. -0.02 min

Lab File: VL035090.D

Acq: 22 May 2020 18:44

Instrument :

MSVOA_L

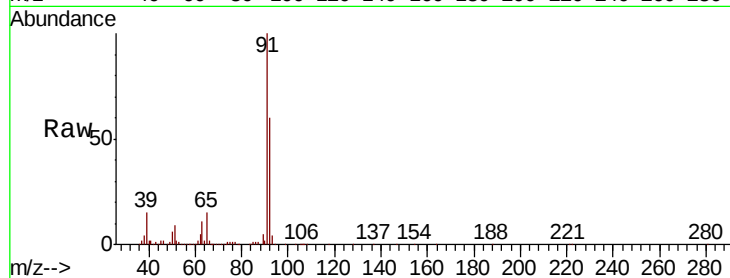
ClientSampleId :

Tot Ion: 91 Resp: 3215174

Ion Ratio Lower Upper

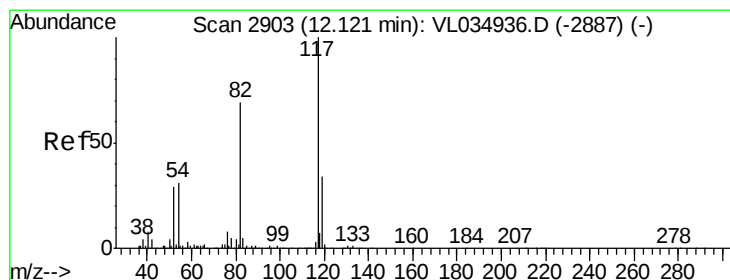
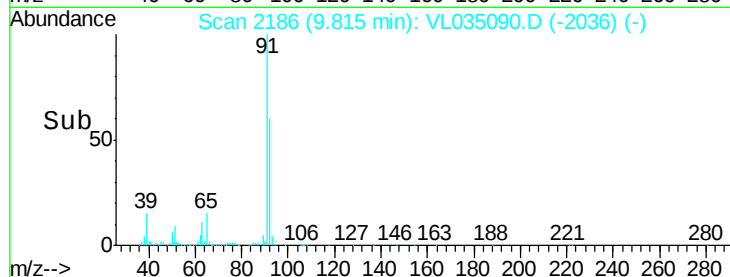
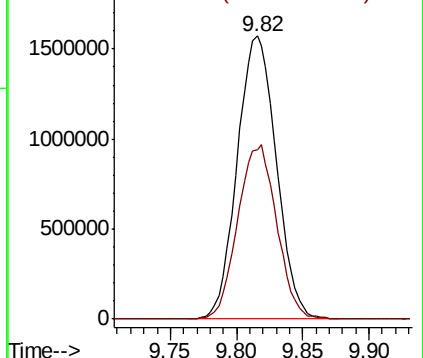
91 100

92 61.7 48.6 73.0



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# 2898

Delta R.T. -0.02 min

Lab File: VL035090.D

Acq: 22 May 2020 18:44

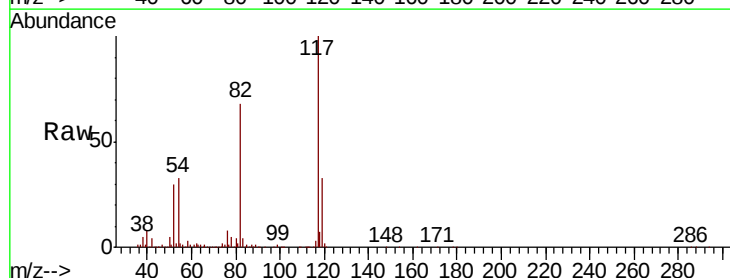
Tgt Ion: 117 Resp: 2256703

Ion Ratio Lower Upper

117 100

82 69.4 53.1 79.7

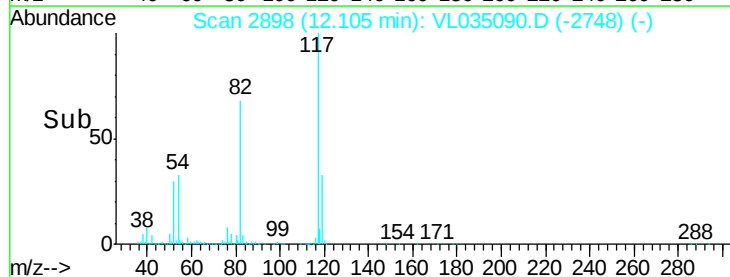
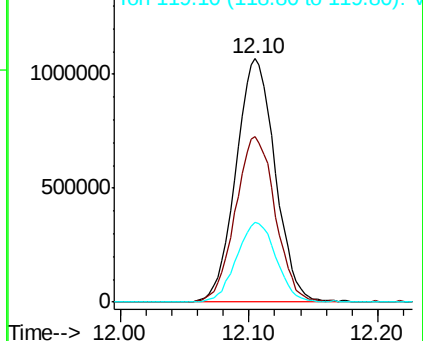
119 33.5 26.7 40.1

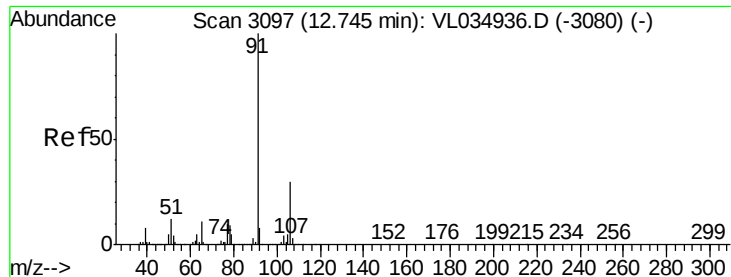


Abundance Ion 117.10 (116.80 to 117.80): V

Ion 82.10 (81.80 to 82.80): VL0

Ion 119.10 (118.80 to 119.80): V





#58

Ethyl Benzene

Concen: 1.127 ppbv

RT: 12.73 min Scan# 3093

Delta R.T. -0.01 min

Lab File: VL035090.D

Acq: 22 May 2020 18:44

Instrument :

MSVOA_L

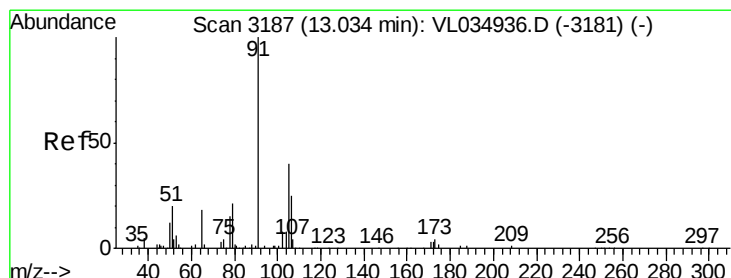
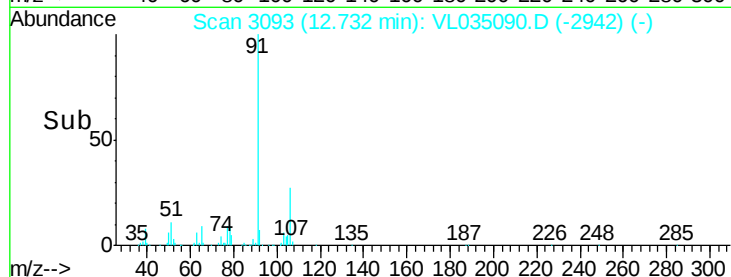
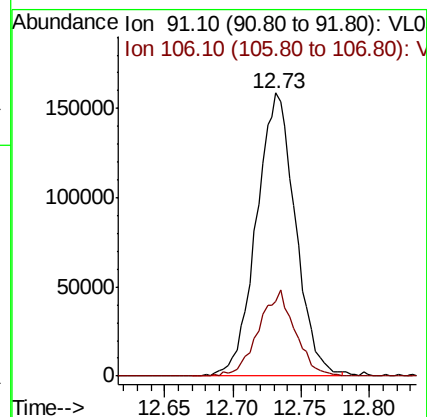
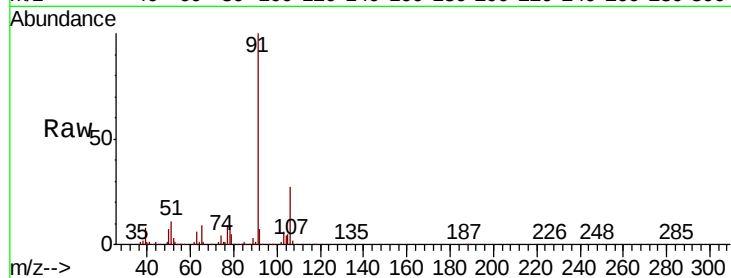
ClientSampleId :

Tot Ion: 91 Resp: 314593

Ion Ratio Lower Upper

91 100

106 26.6 24.2 36.4



#59

m/p-Xylene

Concen: 0.264 ppbv

RT: 13.01 min Scan# 3180

Delta R.T. -0.02 min

Lab File: VL035090.D

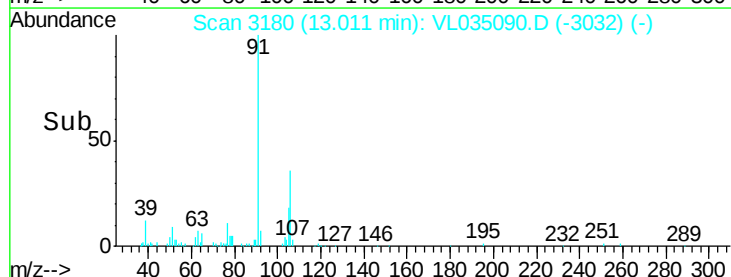
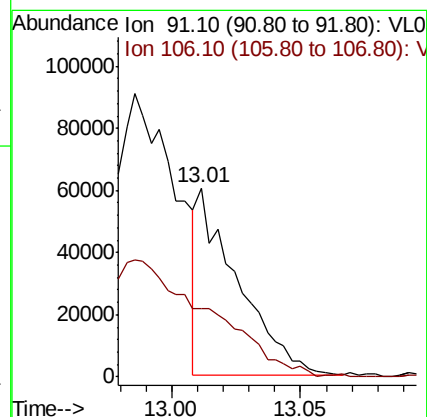
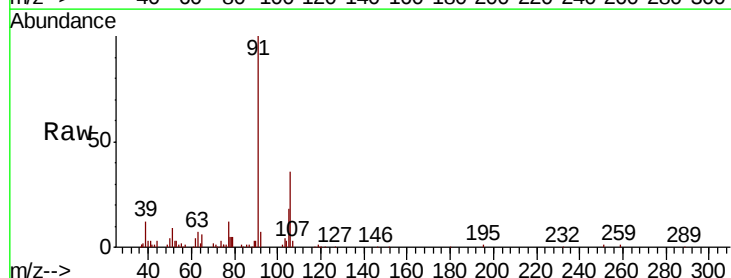
Acq: 22 May 2020 18:44

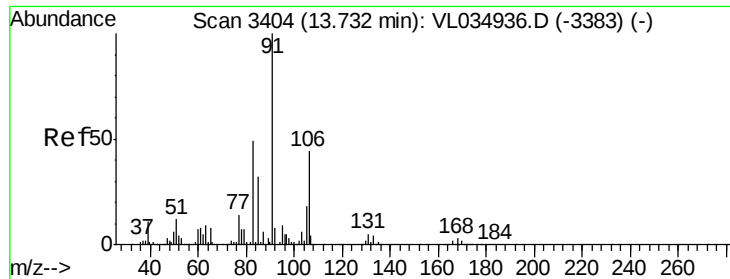
Tgt Ion: 91 Resp: 64844

Ion Ratio Lower Upper

91 100

106 0.0 66.0 99.0#

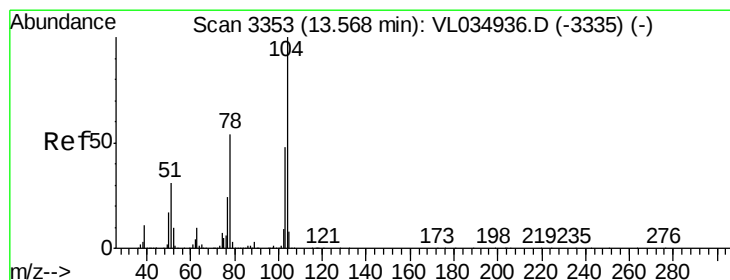
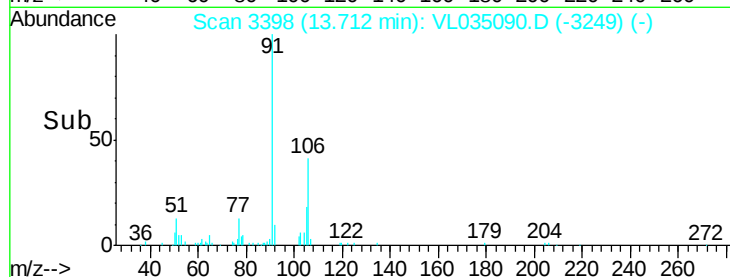
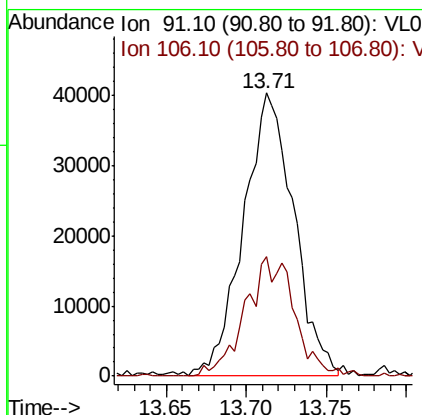
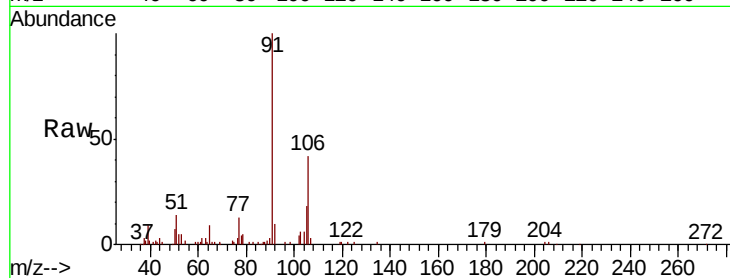




#60
o-Xylene
Concen: 0.360 ppbv
RT: 13.71 min Scan# 3398
Delta R.T. -0.02 min
Lab File: VL035090.D
Acq: 22 May 2020 18:44

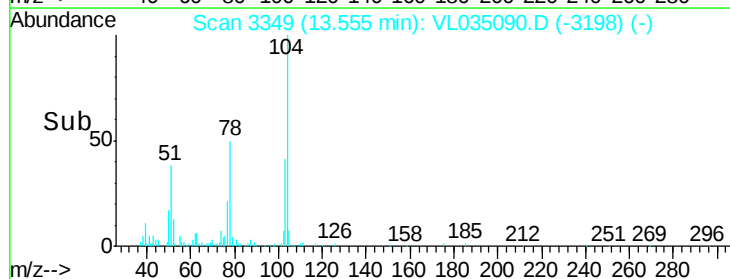
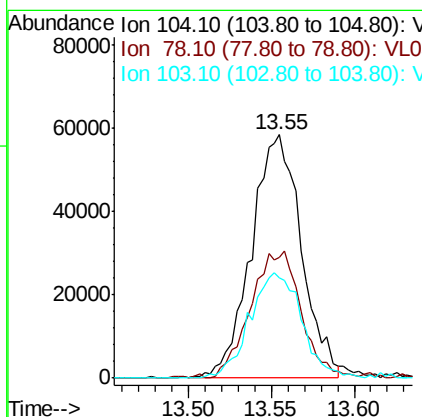
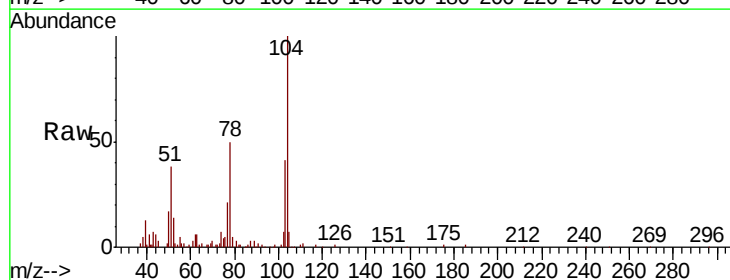
Instrument :
MSVOA_L
ClientSampled :

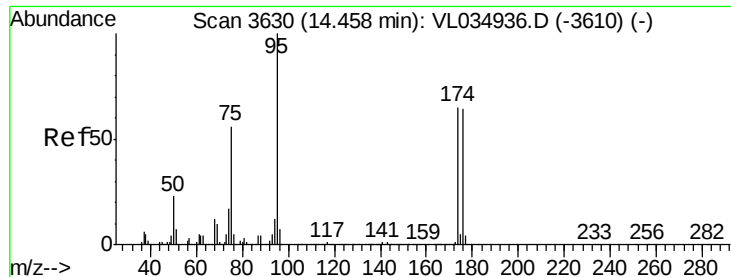
Tot Ion: 91 Resp: 87250
Ion Ratio Lower Upper
91 100
106 41.2 21.9 65.5



#61
Styrene
Concen: 0.799 ppbv
RT: 13.55 min Scan# 3349
Delta R.T. -0.01 min
Lab File: VL035090.D
Acq: 22 May 2020 18:44

Tgt Ion: 104 Resp: 122502
Ion Ratio Lower Upper
104 100
78 54.1 43.7 65.5
103 45.6 38.8 58.2





#68

1-Bromo-4-Fluorobenzene

Concen: 10.550 ppbv

RT: 14.44 min Scan# 3625

Delta R.T. -0.02 min

Lab File: VL035090.D

Acq: 22 May 2020 18:44

Instrument :

MSVOA_L

ClientSampleId :

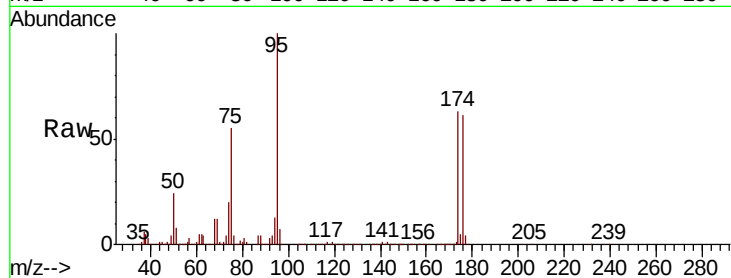
Tot Ion: 95 Resp: 1927090

Ion Ratio Lower Upper

95 100

174 65.0 51.5 77.3

175 4.7 3.8 5.8



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

