

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL091721\
 Data File : VL037645.D
 Acq On : 17 Sep 2021 17:23
 Operator : SY/AP
 Sample : M3801-02DUP
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Sep 18 06:18:40 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL091621AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu Sep 16 13:42:46 2021
 QLast Update : Thu Sep 16 13:42:46 2021
 Response via : Initial Calibration

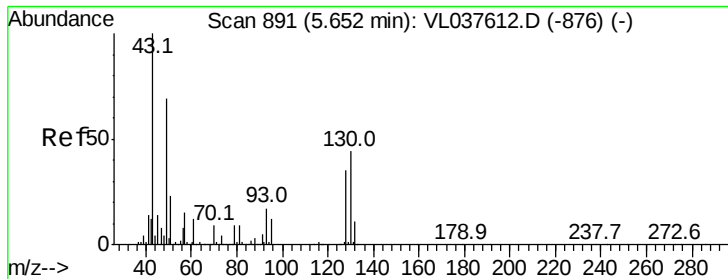
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.65	49	1400841	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.16	114	4025009	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.07	117	3480900	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.40	95	2423512	9.63	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	96.30%

Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.04	85	65769	0.259	ppbv 92
3) Chlorodifluoromethane	2.98	51	260260	0.985	ppbv # 90
4) Chloromethane	3.13	50	52921	0.542	ppbv # 77
9) Propene	3.01	41	85051	0.913	ppbv 86
10) Heptane	8.11	43	15829	0.073	ppbv # 16
11) Trichlorofluoromethane	3.94	101	214218	1.053	ppbv 94
13) Ethanol	3.59	45	3960097	434.375	ppbv 91
15) Acetone	3.84	43	1464086	10.059	ppbv 99
16) 1,3-Butadiene	3.31	39	5923	0.065	ppbv # 28
17) tert-Butyl alcohol	3.96	59	267054	2.164	ppbv 99
19) Isopropyl Alcohol	3.95	45	7653759	96.648	ppbv # 93
20) Methylene Chloride	4.33	84	2142679	30.837	ppbv 98
21) Allyl Chloride	4.33	41	83783	0.771	ppbv # 21
23) Vinyl Acetate	5.05	43	125018	0.621	ppbv # 70
25) Ethyl Acetate	5.67	43	676847	1.920	ppbv # 84
26) Hexane	5.67	57	789340	4.714	ppbv # 51
30) Cyclohexane	7.12	84	4306	0.030	ppbv # 1
34) 2-Butanone	5.23	43	152102	0.930	ppbv # 90
36) Benzene	6.87	78	71858	0.214	ppbv # 90
39) 1,2-Dichloropropane	7.16	63	956681	7.442	ppbv # 27
41) Tetrahydrofuran	6.05	42	3976	0.052	ppbv # 1
44) 2,2,4-Trimethylpentane	7.85	57	80140	0.142	ppbv # 83
50) 4-Methyl-2-Pentanone	8.74	43	19129	0.092	ppbv # 37
52) Tetrachloroethene	11.20	164	5317	0.041	ppbv # 67
53) Toluene	9.79	91	70353	0.189	ppbv # 17
58) Ethyl Benzene	12.69	91	15599	0.034	ppbv 94
59) m/p-Xylene	12.98	91	13924	0.035	ppbv # 31
60) o-Xylene	13.68	91	36807	0.096	ppbv 97
61) Styrene	13.51	104	34678	0.183	ppbv # 33
76) 1,4-Dichlorobenzene	17.12	146	37884	0.143	ppbv # 5
80) Naphthalene,2-methyl-	24.96	142	2588	0.043	ppbv # 63

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 min Scan# 892

Delta R.T. 0.00 min

Lab File: VL037645.D

Acq: 17 Sep 2021 17:23

Instrument :
MSVOA_L
ClientSampleId :

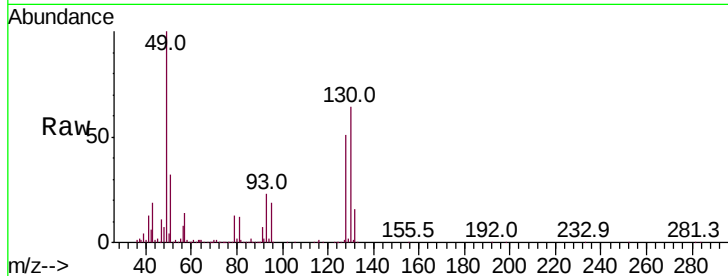
Tot Ion: 49 Resp: 1400841

Ion Ratio Lower Upper

49 100

128 54.2 27.9 83.6

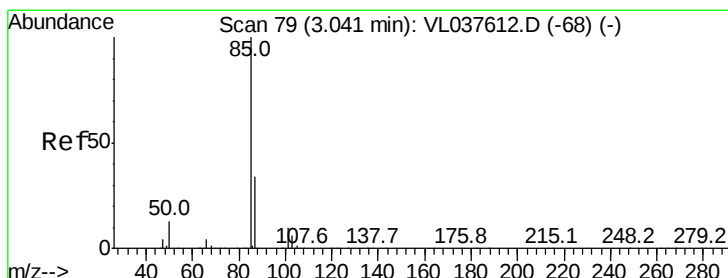
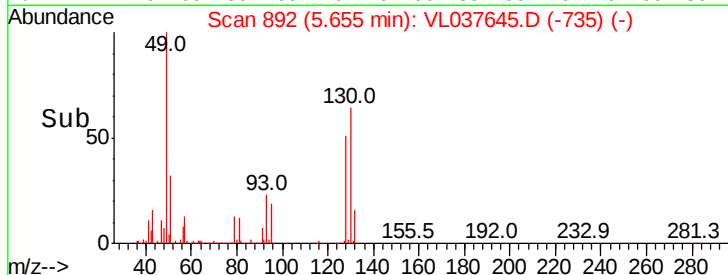
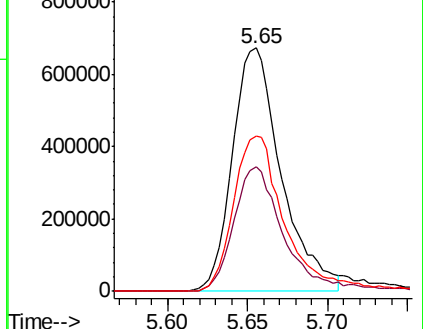
130 68.4 33.9 101.7



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: 0.259 ppbv

RT: 3.04 min Scan# 79

Delta R.T. 0.00 min

Lab File: VL037645.D

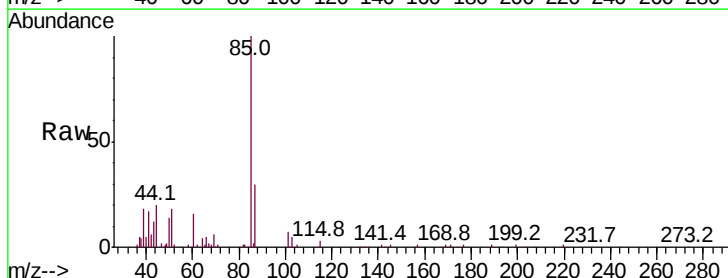
Acq: 17 Sep 2021 17:23

Tgt Ion: 85 Resp: 65769

Ion Ratio Lower Upper

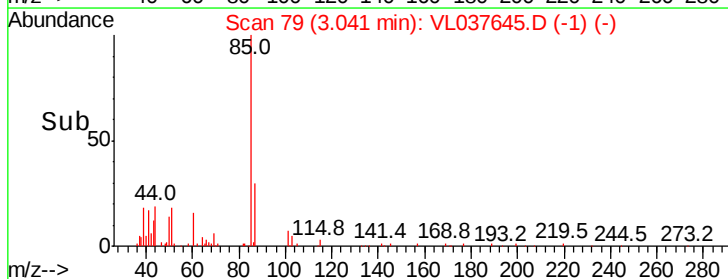
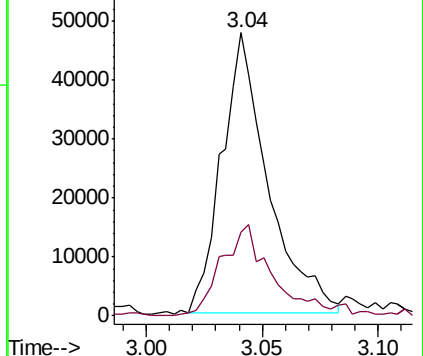
85 100

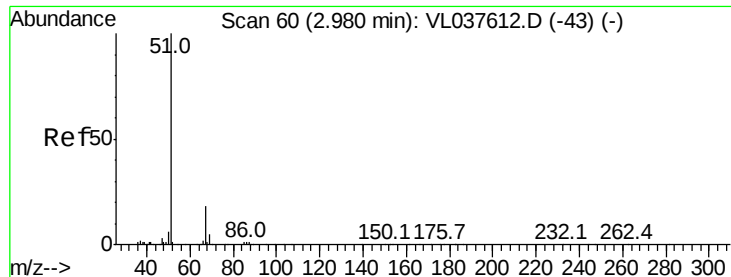
87 28.9 26.8 40.2



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

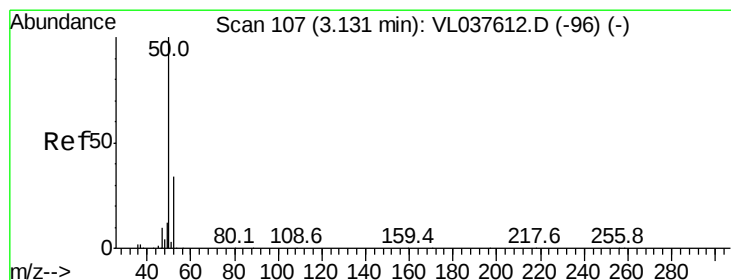
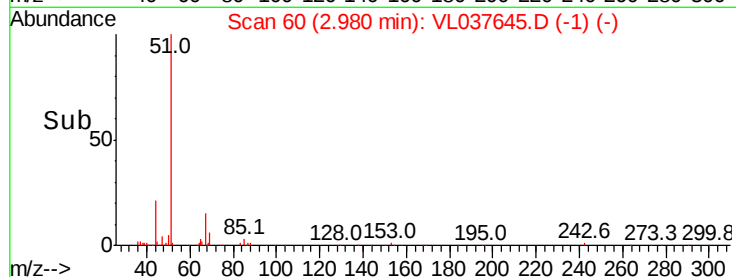
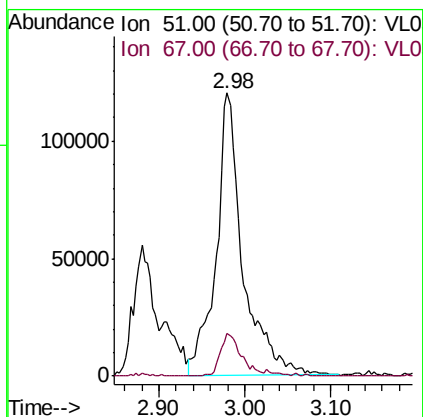
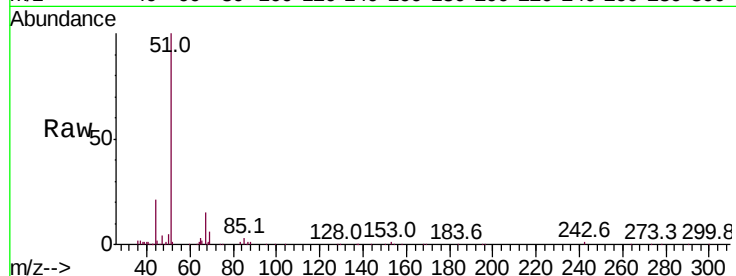




#3
 Chlorodifluoromethane
 Concen: 0.985 ppbv
 RT: 2.98 min Scan# 60
 Delta R.T. 0.00 min
 Lab File: VL037645.D
 Acq: 17 Sep 2021 17:23

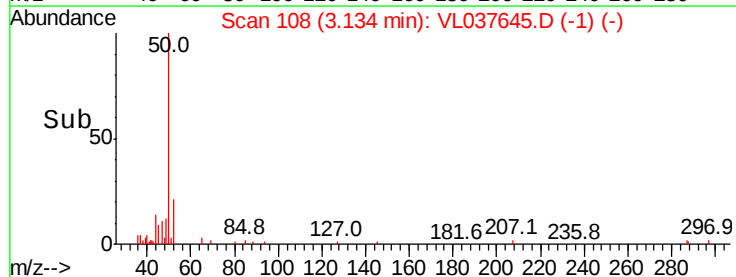
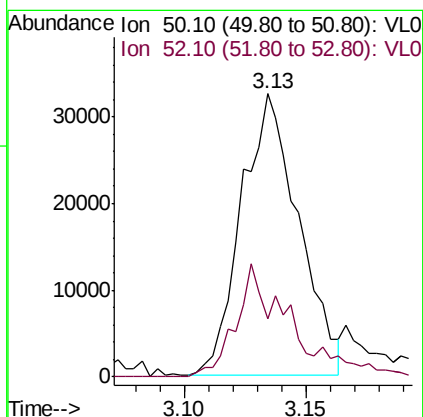
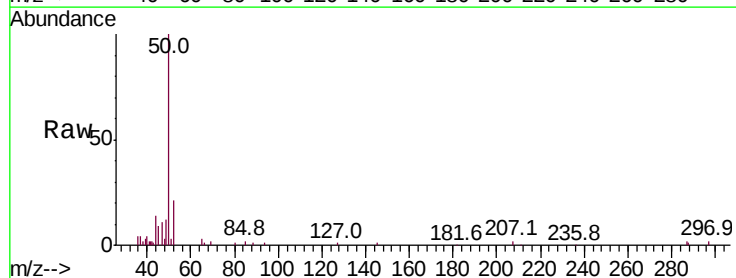
Instrument :
 MSVOA_L
 ClientSampleId :

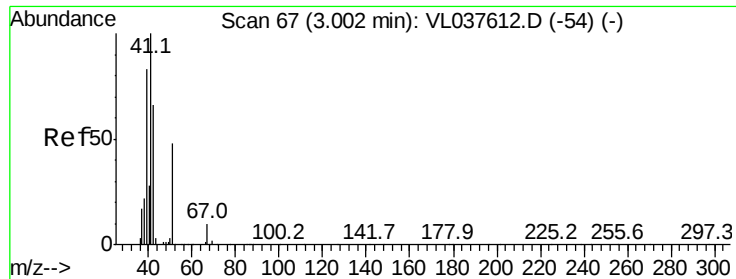
Tot Ion: 51 Resp: 260260
 Ion Ratio Lower Upper
 51 100
 67 13.0 14.0 21.0#



#4
 Chloromethane
 Concen: 0.542 ppbv
 RT: 3.13 min Scan# 108
 Delta R.T. 0.00 min
 Lab File: VL037645.D
 Acq: 17 Sep 2021 17:23

Tgt Ion: 50 Resp: 52921
 Ion Ratio Lower Upper
 50 100
 52 20.7 27.1 40.7#





#9

Propene

Concen: 0.913 ppbv

RT: 3.01 min Scan# 69

Delta R.T. 0.01 min

Lab File: VL037645.D

Acq: 17 Sep 2021 17:23

Instrument :

MSVOA_L

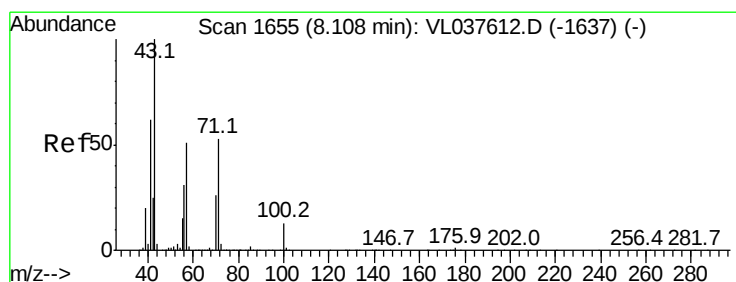
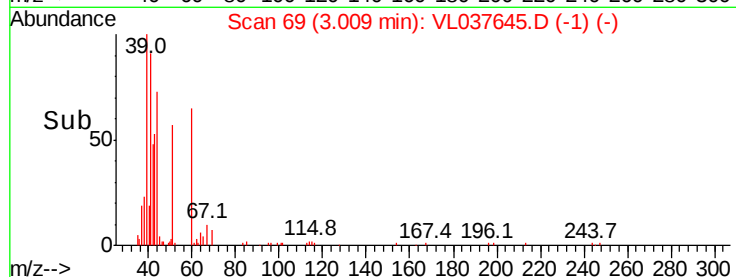
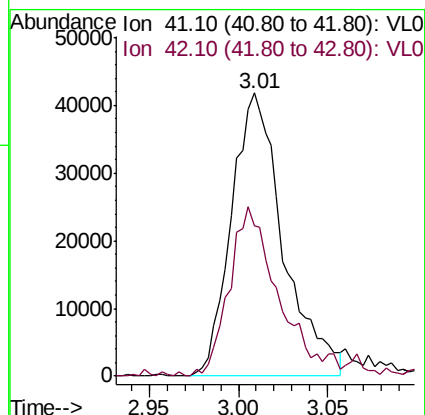
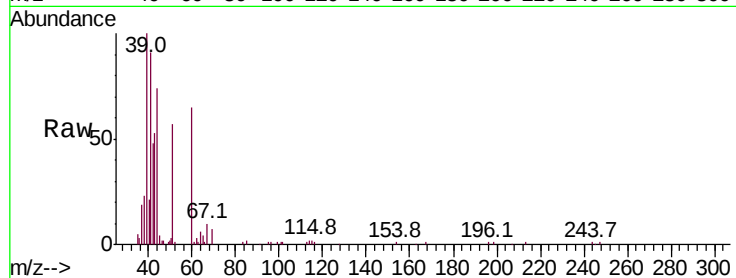
ClientSampleId :

Tot Ion: 41 Resp: 85051

Ion Ratio Lower Upper

41 100

42 60.0 57.2 85.8



#10

Heptane

Concen: 0.073 ppbv

RT: 8.11 min Scan# 1655

Delta R.T. 0.00 min

Lab File: VL037645.D

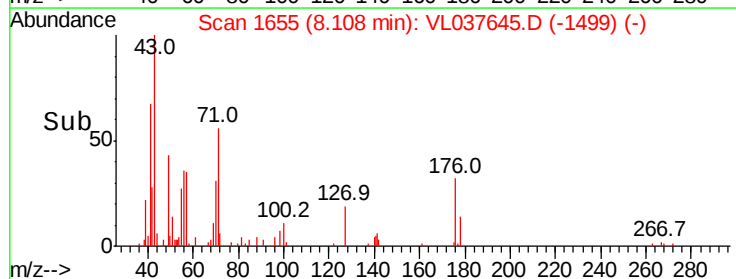
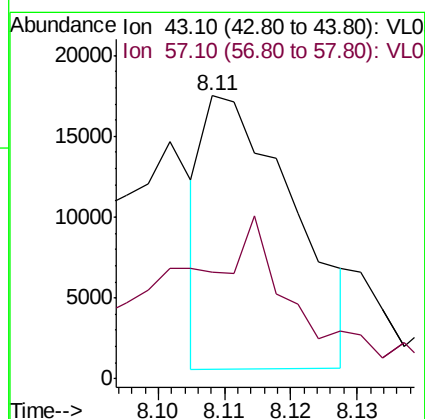
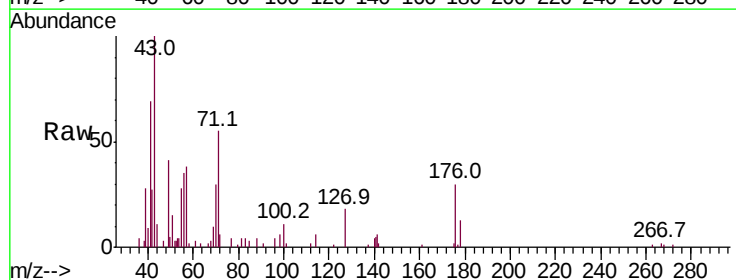
Acq: 17 Sep 2021 17:23

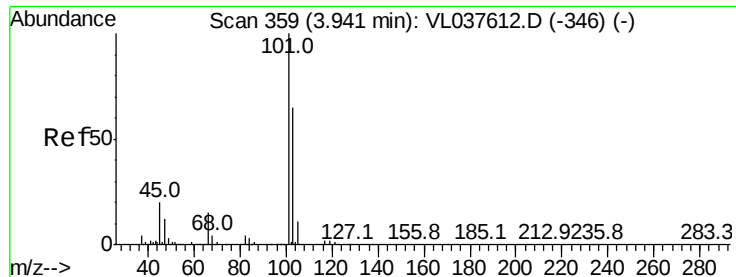
Tgt Ion: 43 Resp: 15829

Ion Ratio Lower Upper

43 100

57 108.1 40.1 60.1#

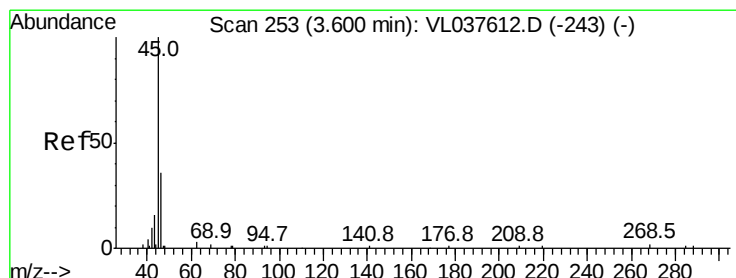
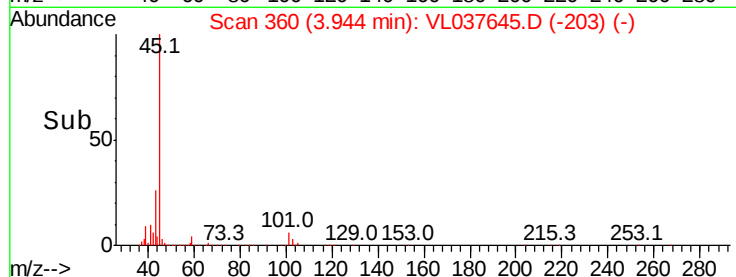
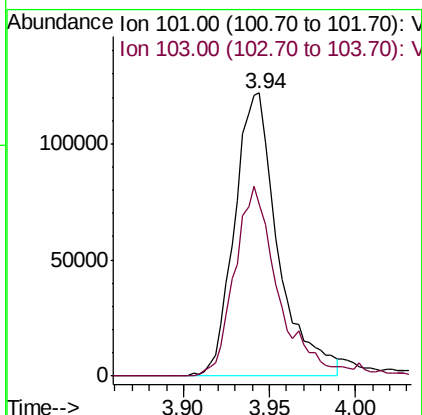
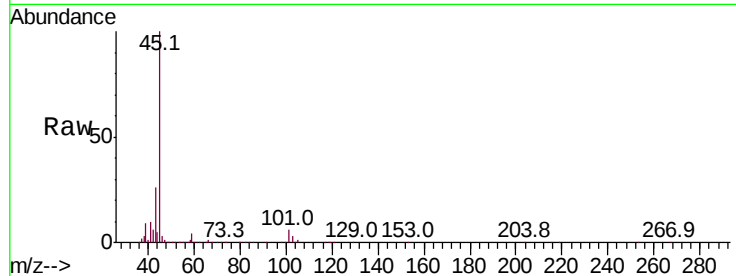




#11
 Trichlorofluoromethane
 Concen: 1.053 ppbv
 RT: 3.94 min Scan# 360
 Delta R.T. 0.00 min
 Lab File: VL037645.D
 Acq: 17 Sep 2021 17:23

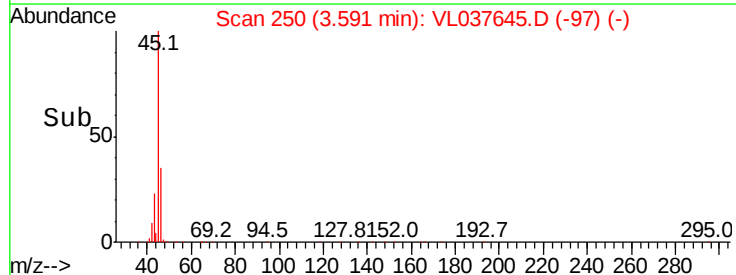
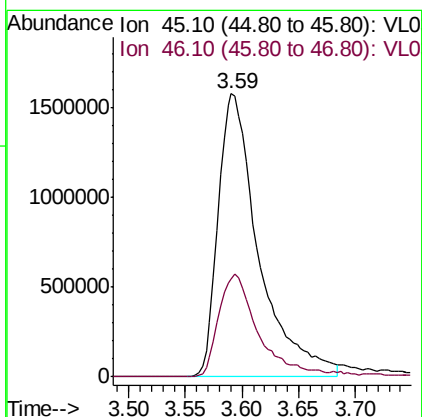
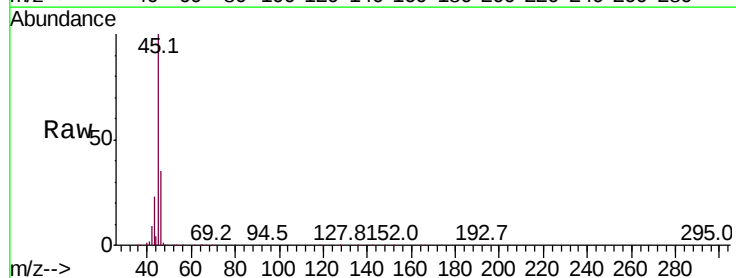
Instrument :
 MSVOA_L
 ClientSampleId :

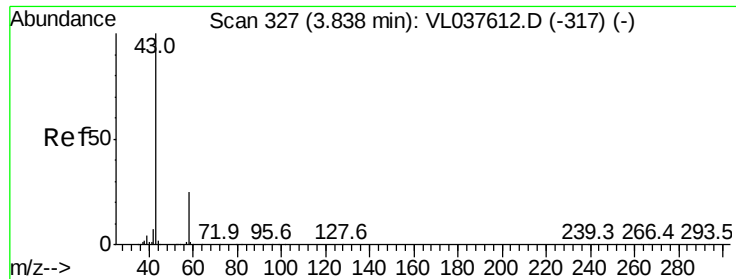
Tot Ion: 101 Resp: 214218
 Ion Ratio Lower Upper
 101 100
 103 60.4 51.9 77.9



#13
 Ethanol
 Concen: 434.375 ppbv
 RT: 3.59 min Scan# 250
 Delta R.T. -0.01 min
 Lab File: VL037645.D
 Acq: 17 Sep 2021 17:23

Tgt Ion: 45 Resp: 3960097
 Ion Ratio Lower Upper
 45 100
 46 37.5 17.2 68.8





#15

Acetone

Concen: 10.059 ppbv

RT: 3.84 min Scan# 327

Delta R.T. 0.00 min

Lab File: VL037645.D

Acq: 17 Sep 2021 17:23

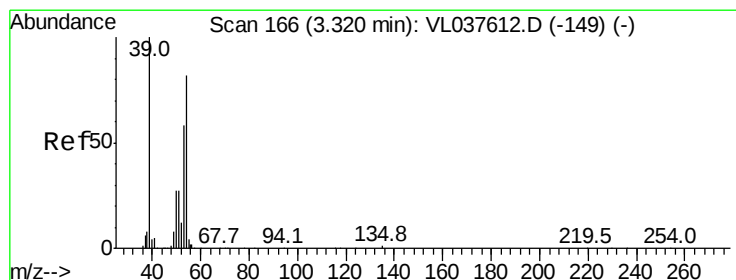
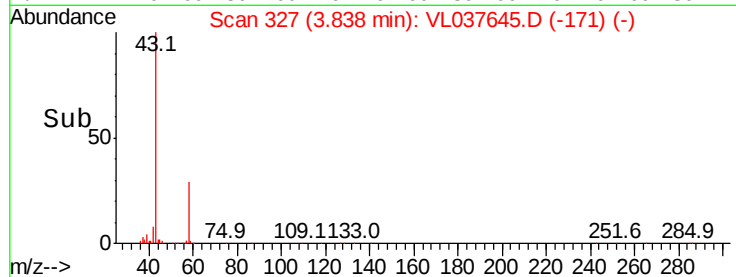
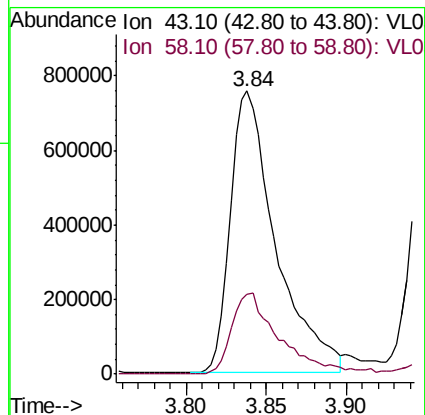
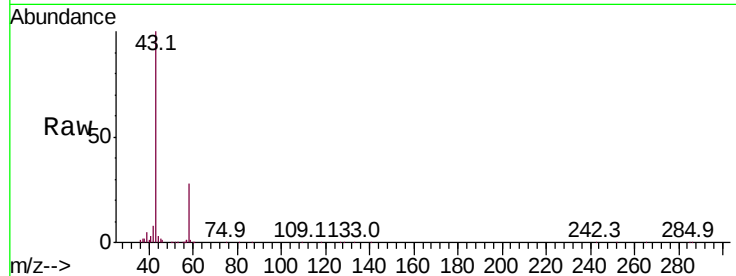
Instrument :
MSVOA_L
ClientSampled :

Tot Ion: 43 Resp: 1464086

Ion Ratio Lower Upper

43 100

58 30.6 24.9 37.3



#16

1,3-Butadiene

Concen: 0.065 ppbv

RT: 3.31 min Scan# 164

Delta R.T. -0.01 min

Lab File: VL037645.D

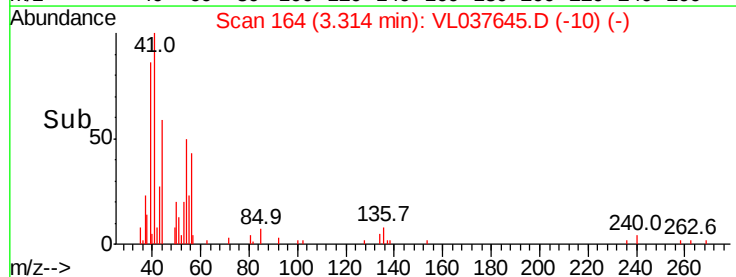
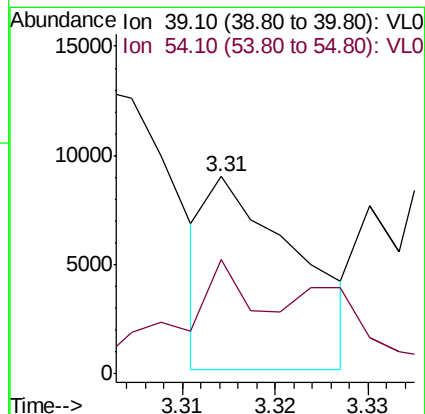
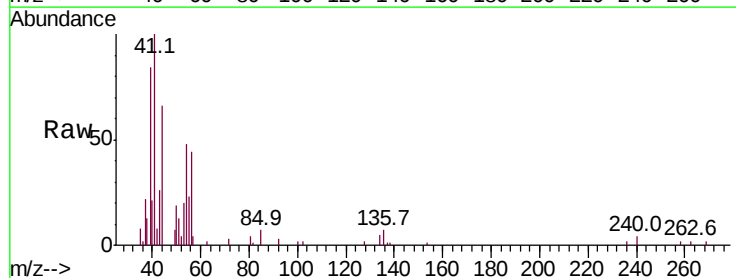
Acq: 17 Sep 2021 17:23

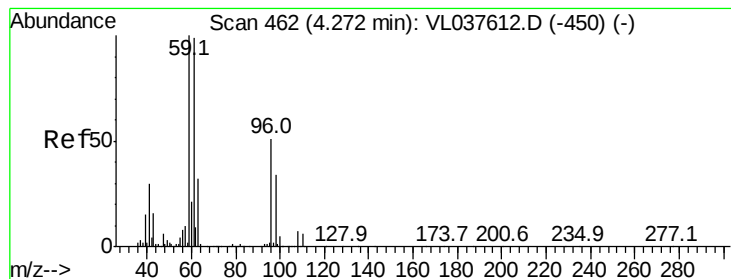
Tgt Ion: 39 Resp: 5923

Ion Ratio Lower Upper

39 100

54 141.0 62.6 93.8#



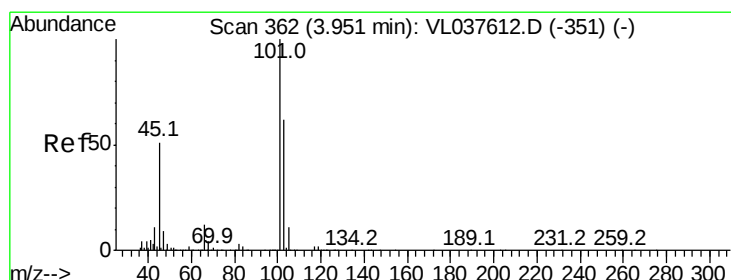
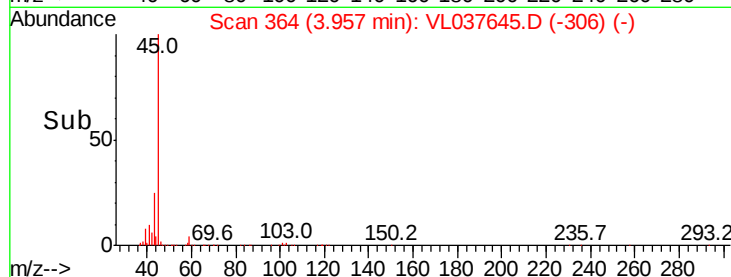
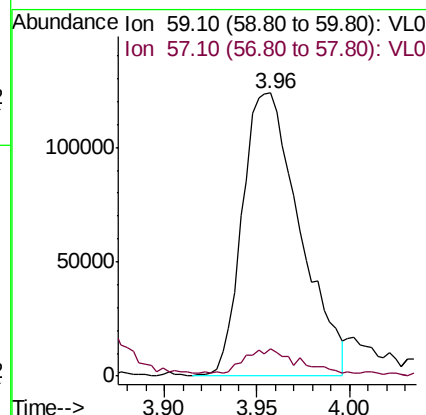
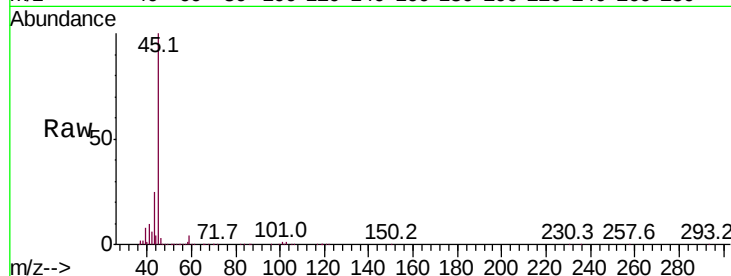


#17

tert-Butyl alcohol
 Concen: 2.164 ppbv
 RT: 3.96 min Scan# 364
 Delta R.T. -0.31 min
 Lab File: VL037645.D
 Acq: 17 Sep 2021 17:23

Instrument :
 MSVOA_L
 ClientSampled :

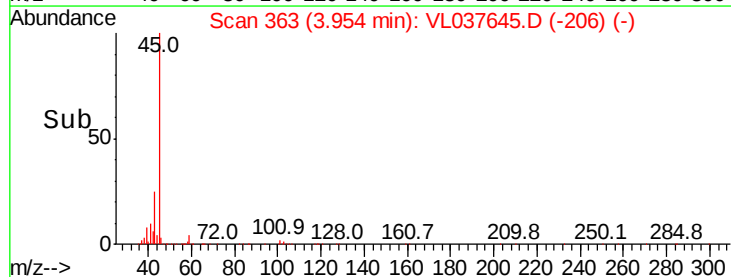
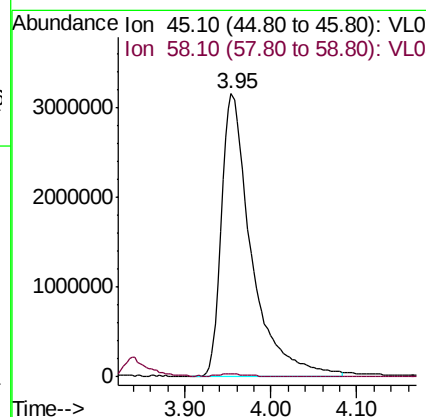
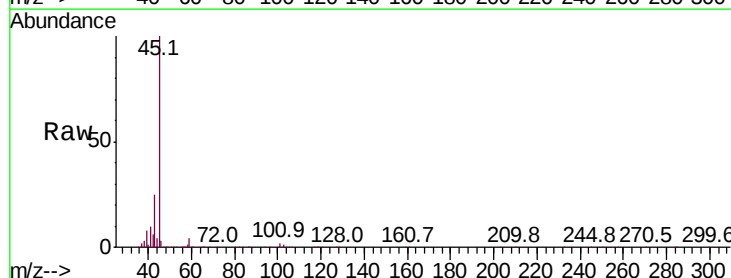
Tot Ion: 59 Resp: 267054
 Ion Ratio Lower Upper
 59 100
 57 10.0 8.4 12.6

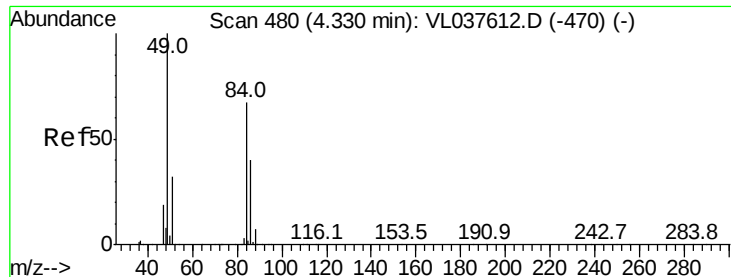


#19

Isopropyl Alcohol
 Concen: 96.648 ppbv
 RT: 3.95 min Scan# 363
 Delta R.T. 0.00 min
 Lab File: VL037645.D
 Acq: 17 Sep 2021 17:23

Tgt Ion: 45 Resp: 7653759
 Ion Ratio Lower Upper
 45 100
 58 1.3 2.9 4.3#



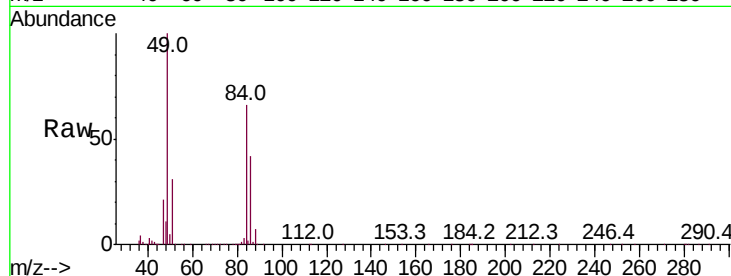


#20
Methylene Chloride
Concen: 30.837 ppbv
RT: 4.33 min Scan# 481
Delta R.T. 0.00 min
Lab File: VL037645.D
Acq: 17 Sep 2021 17:23

Instrument :
MSVOA_L
ClientSampleId :

Tot Ion: 84 Resp: 2142679

Ion	Ratio	Lower	Upper
84	100		
49	151.5	120.0	180.0
51	47.3	38.0	57.0
86	64.1	48.2	72.2



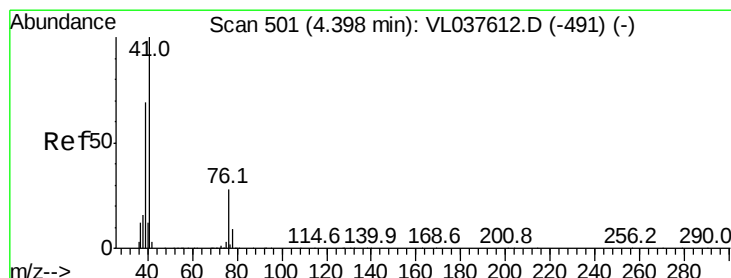
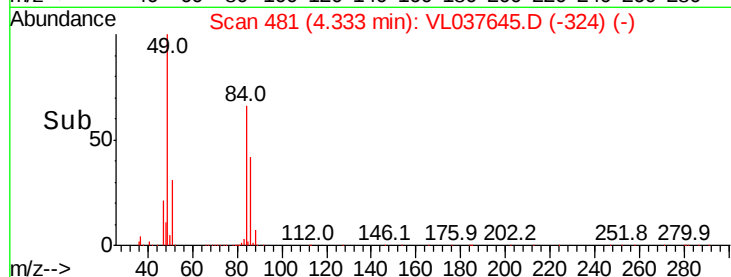
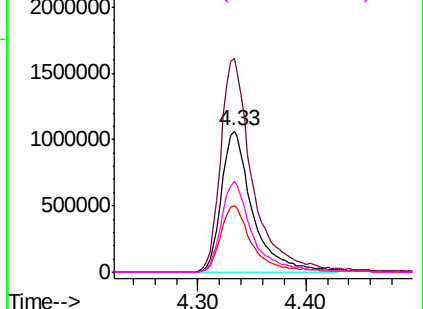
Abundance

Ion 84.00 (83.70 to 84.70): VL0

Ion 49.10 (48.80 to 49.80): VL0

Ion 51.10 (50.80 to 51.80): VL0

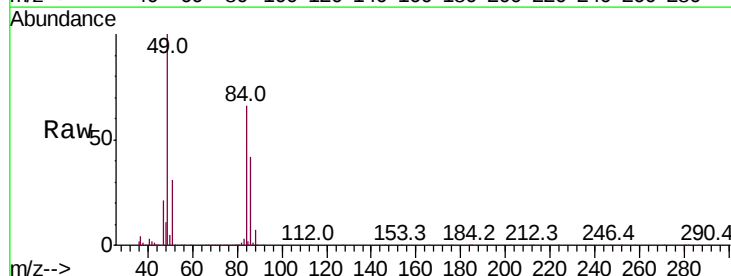
Ion 86.00 (85.70 to 86.70): VL0



#21
Allyl Chloride
Concen: 0.771 ppbv
RT: 4.33 min Scan# 481
Delta R.T. -0.06 min
Lab File: VL037645.D
Acq: 17 Sep 2021 17:23

Tgt Ion: 41 Resp: 83783

Ion	Ratio	Lower	Upper
41	100		
76	0.0	23.1	34.7#
39	0.0	61.0	91.6#

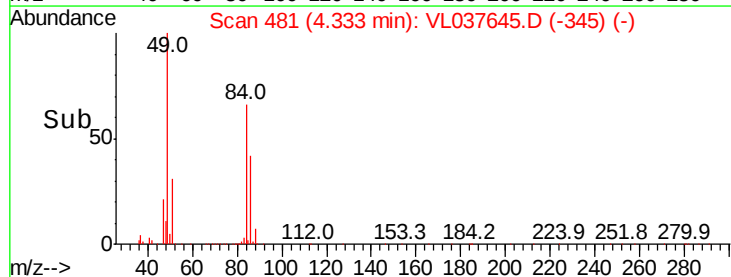
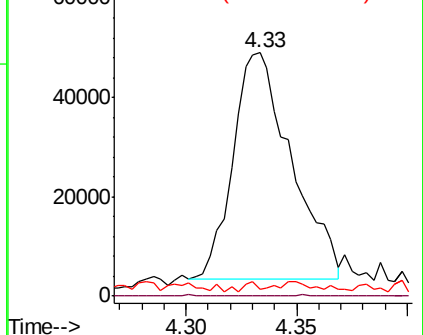


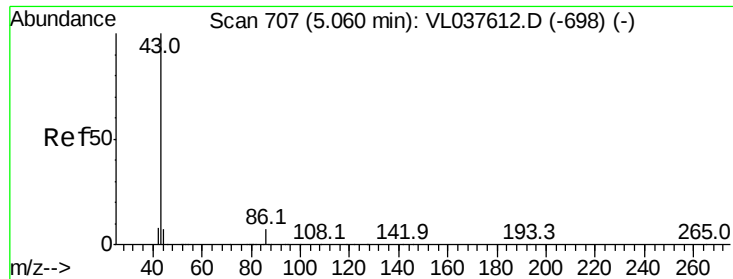
Abundance

Ion 41.10 (40.80 to 41.80): VL0

Ion 76.10 (75.80 to 76.80): VL0

Ion 39.10 (38.80 to 39.80): VL0

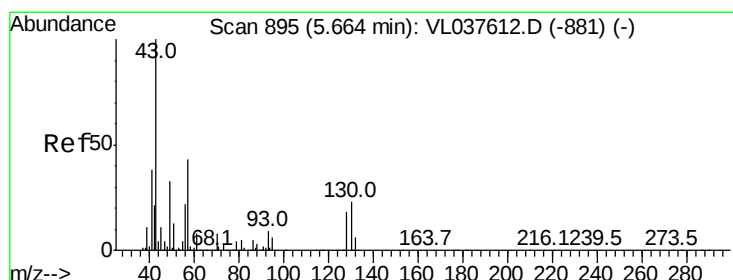
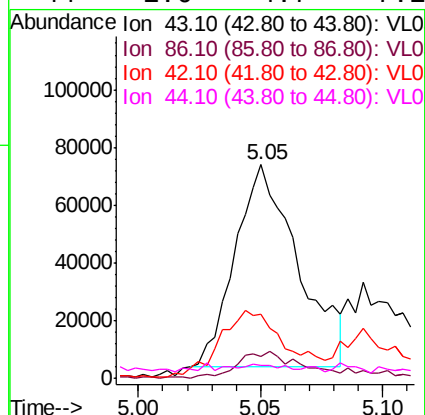
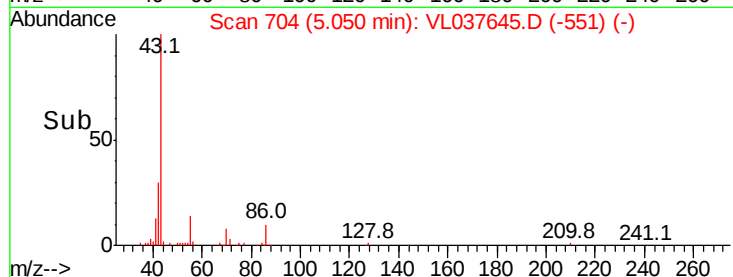
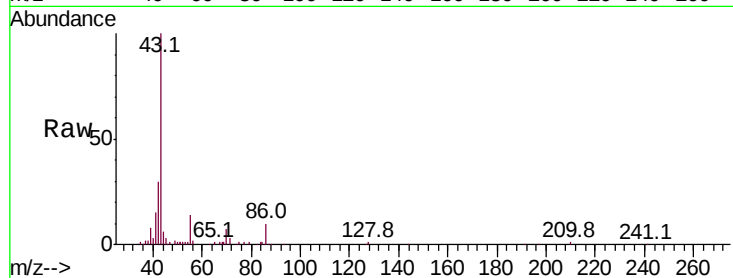




#23
 Vinyl Acetate
 Concen: 0.621 ppbv
 RT: 5.05 min Scan# 704
 Delta R.T. -0.01 min
 Lab File: VL037645.D
 Acq: 17 Sep 2021 17:23

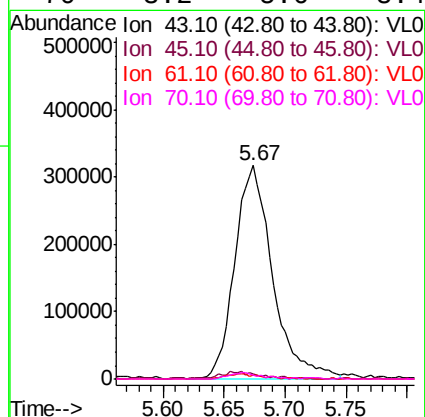
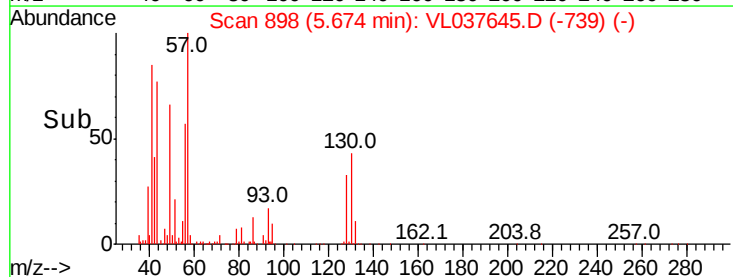
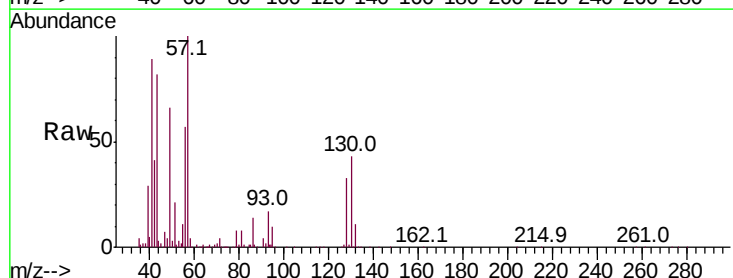
Instrument :
 MSVOA_L
 ClientSampleId :

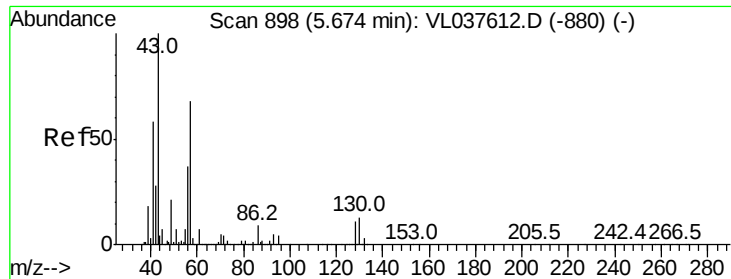
Tot Ion:	43	Resp:	125018
Ion	Ratio	Lower	Upper
43	100		
86	11.2	5.0	7.6#
42	28.0	7.5	11.3#
44	1.6	4.7	7.1#



#25
 Ethyl Acetate
 Concen: 1.920 ppbv
 RT: 5.67 min Scan# 898
 Delta R.T. 0.01 min
 Lab File: VL037645.D
 Acq: 17 Sep 2021 17:23

Tgt Ion:	43	Resp:	676847
Ion	Ratio	Lower	Upper
43	100		
45	3.9	8.0	12.0#
61	2.5	7.5	11.3#
70	3.2	5.6	8.4#

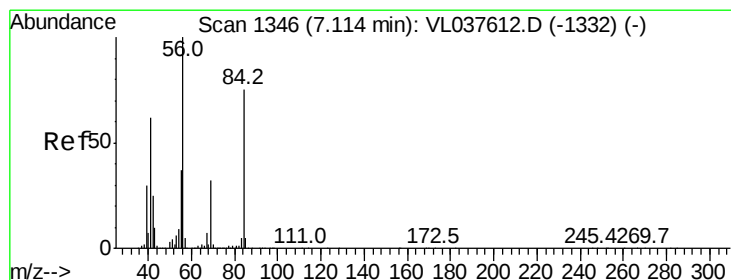
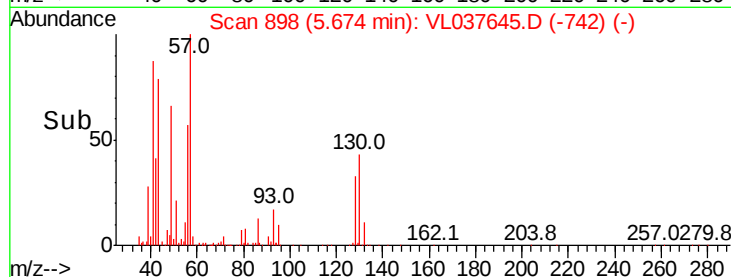
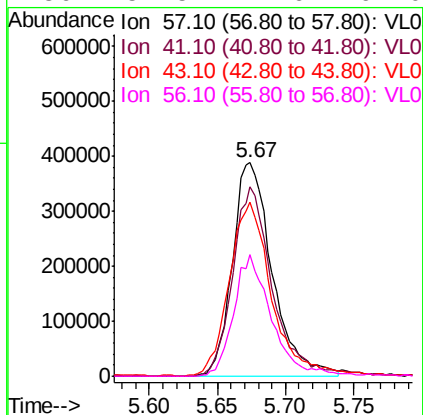
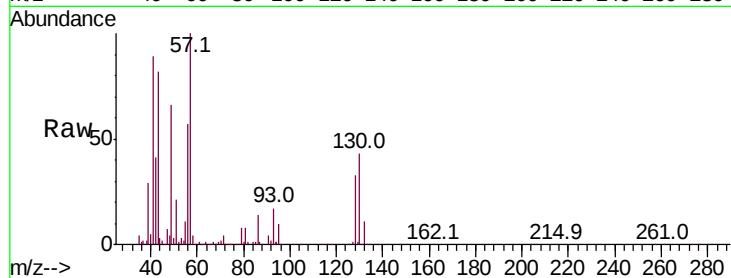




#26
Hexane
Concen: 4.714 ppbv
RT: 5.67 min Scan# 898
Delta R.T. 0.00 min
Lab File: VL037645.D
Acq: 17 Sep 2021 17:23

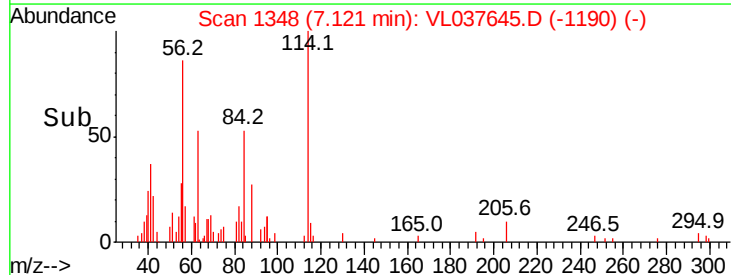
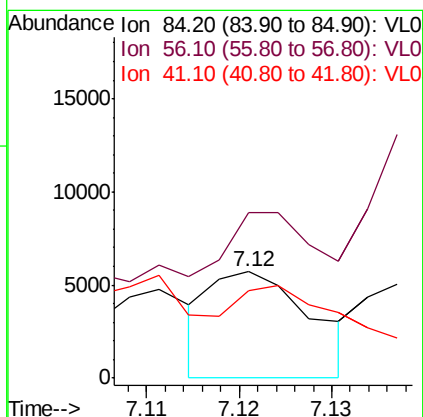
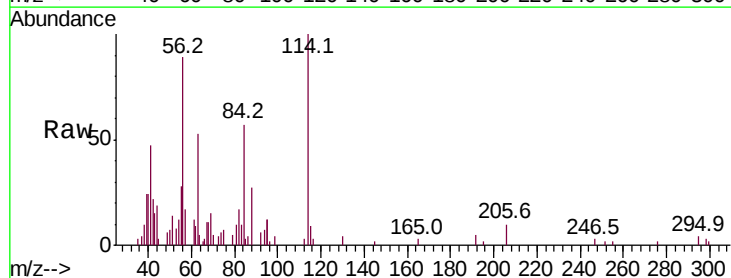
Instrument :
MSVOA_L
ClientSampleId :

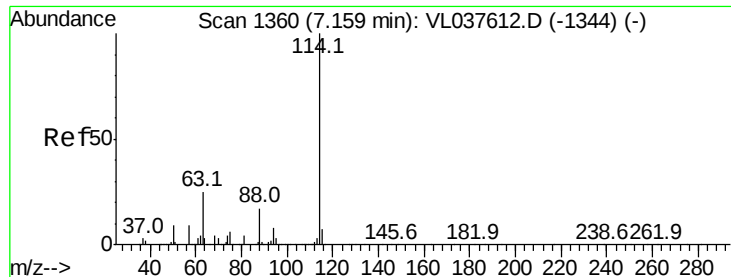
Tot Ion:	57	Resp:	789340
Ion	Ratio	Lower	Upper
57	100		
41	89.5	70.9	106.3
43	86.5	170.4	255.6#
56	54.5	42.6	64.0



#30
Cyclohexane
Concen: 0.030 ppbv
RT: 7.12 min Scan# 1348
Delta R.T. 0.01 min
Lab File: VL037645.D
Acq: 17 Sep 2021 17:23

Tgt Ion:	84	Resp:	4306
Ion	Ratio	Lower	Upper
84	100		
56	0.0	113.6	170.4#
41	0.0	67.9	101.9#





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.16 min Scan# 1360

Delta R.T. 0.00 min

Lab File: VL037645.D

Acq: 17 Sep 2021 17:23

Instrument :

MSVOA_L

ClientSampleId :

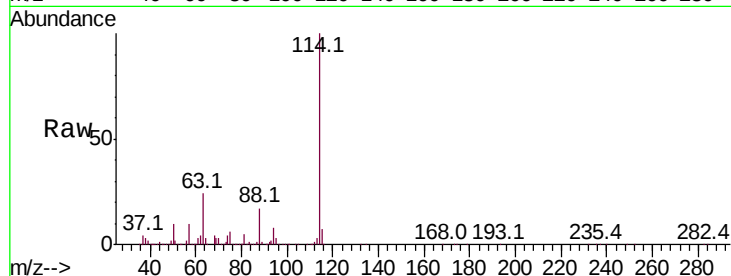
Tot Ion:114 Resp: 4025009

Ion Ratio Lower Upper

114 100

63 24.2 19.6 29.4

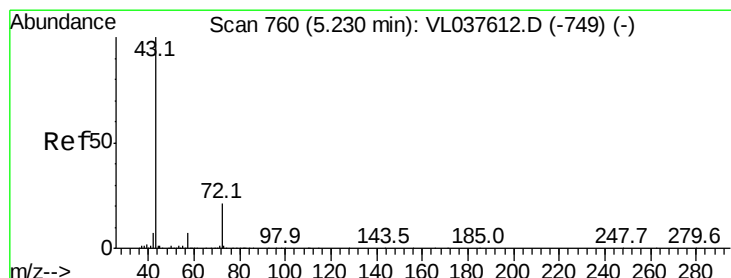
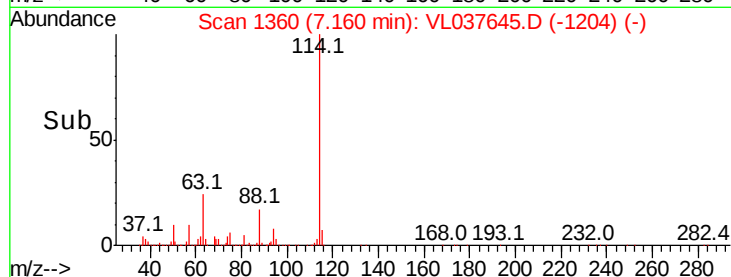
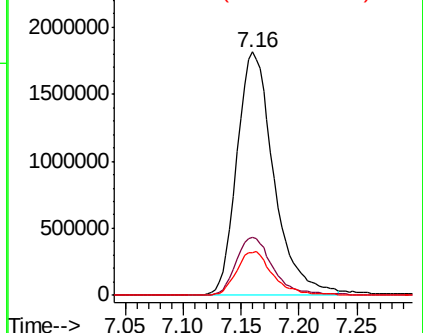
88 17.9 14.2 21.4



Abundance Ion 114.10 (113.80 to 114.80): VL0

Ion 63.10 (62.80 to 63.80): VL0

Ion 88.10 (87.80 to 88.80): VL0



#34

2-Butanone

Concen: 0.930 ppbv

RT: 5.23 min Scan# 761

Delta R.T. 0.00 min

Lab File: VL037645.D

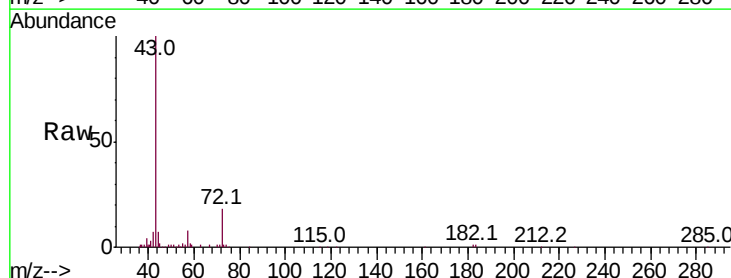
Acq: 17 Sep 2021 17:23

Tgt Ion: 43 Resp: 152102

Ion Ratio Lower Upper

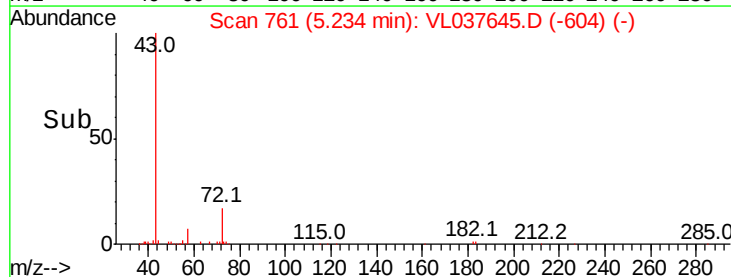
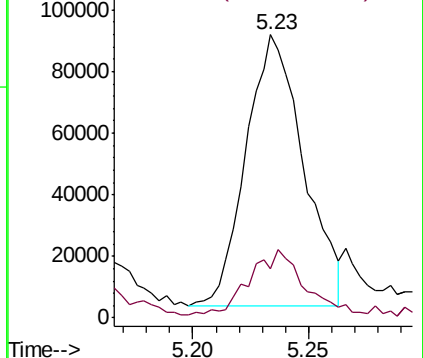
43 100

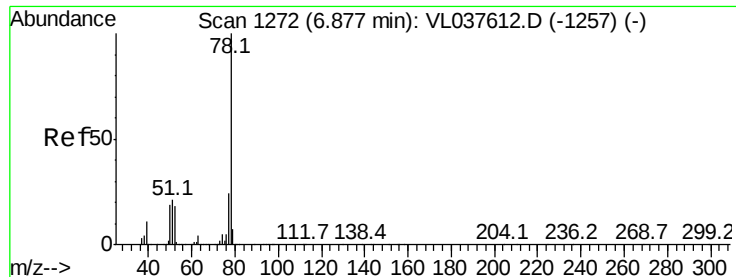
72 28.0 18.4 27.6#



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 72.10 (71.80 to 72.80): VL0

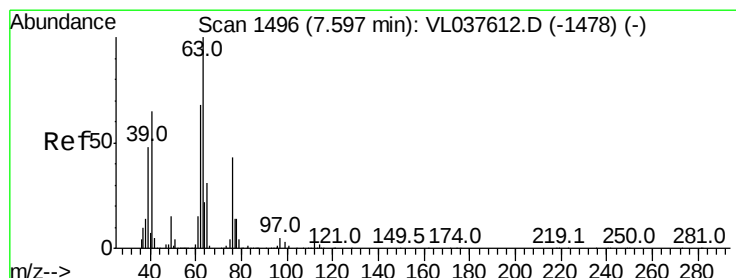
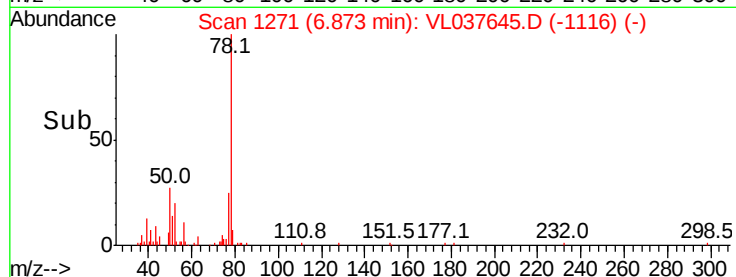
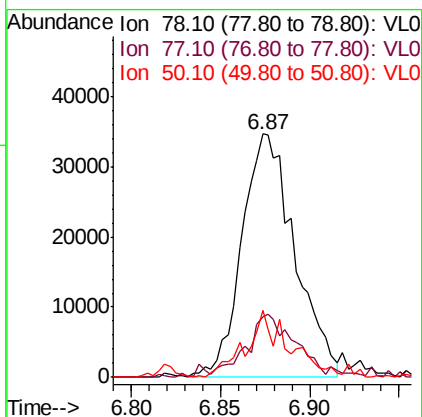
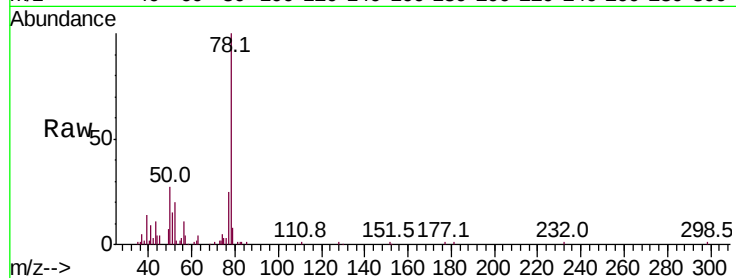




#36
Benzene
Concen: 0.214 ppbv
RT: 6.87 min Scan# 1271
Delta R.T. -0.00 min
Lab File: VL037645.D
Acq: 17 Sep 2021 17:23

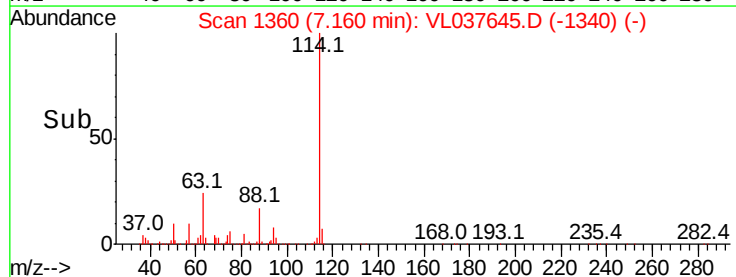
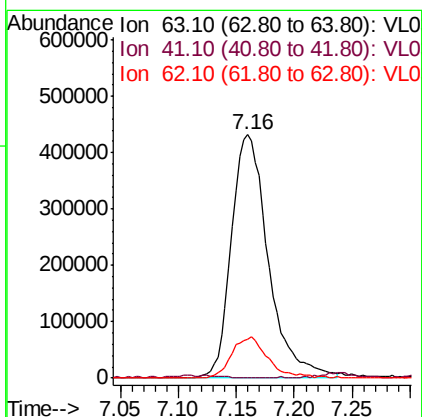
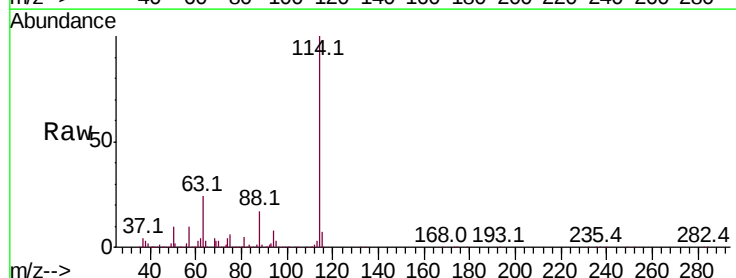
Instrument :
MSVOA_L
ClientSampleId :

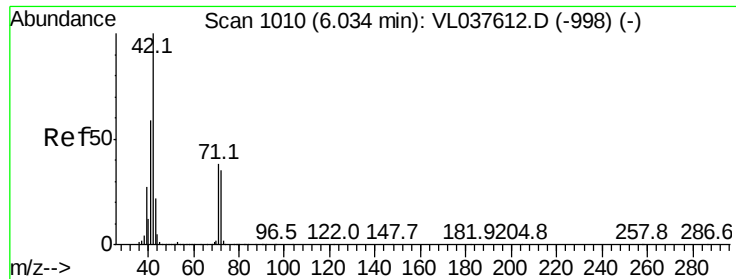
Tot Ion: 78 Resp: 71858
Ion Ratio Lower Upper
78 100
77 25.1 19.0 28.4
50 26.7 14.8 22.2#



#39
1,2-Dichloropropane
Concen: 7.442 ppbv
RT: 7.16 min Scan# 1360
Delta R.T. -0.44 min
Lab File: VL037645.D
Acq: 17 Sep 2021 17:23

Tgt Ion: 63 Resp: 956681
Ion Ratio Lower Upper
63 100
41 0.0 51.6 77.4#
62 16.0 54.6 81.8#

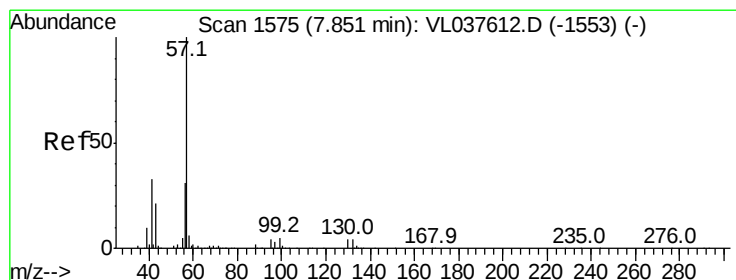
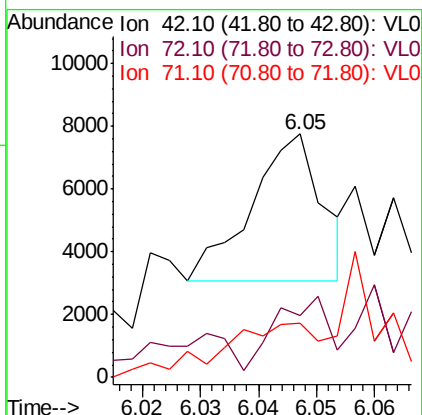
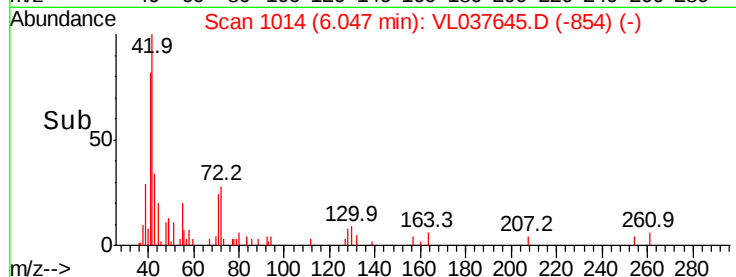
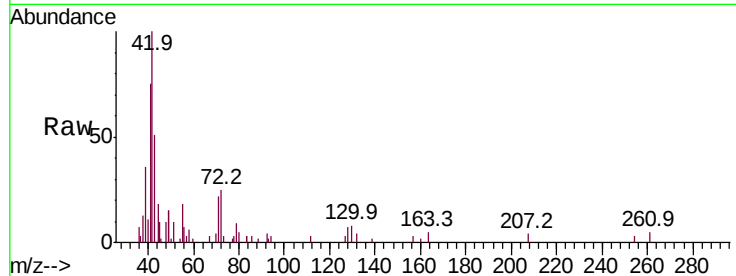




#41
Tetrahydrofuran
Concen: 0.052 ppbv
RT: 6.05 min Scan# 1014
Delta R.T. 0.01 min
Lab File: VL037645.D
Acq: 17 Sep 2021 17:23

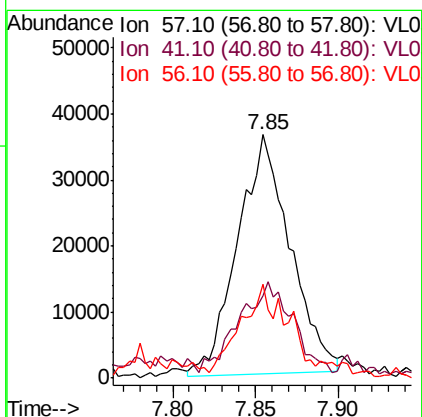
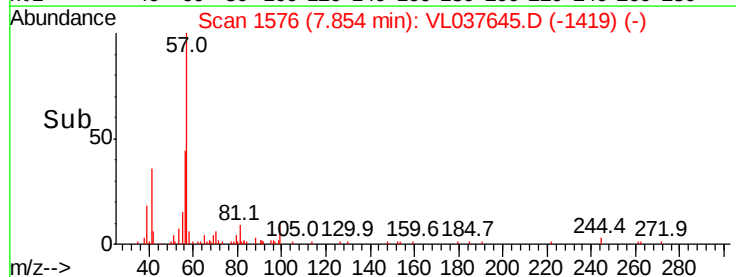
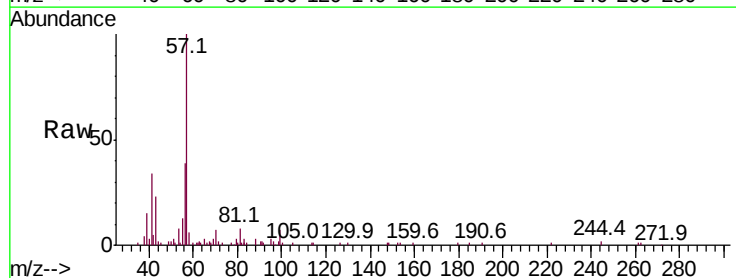
Instrument :
MSVOA_L
ClientSampleId :

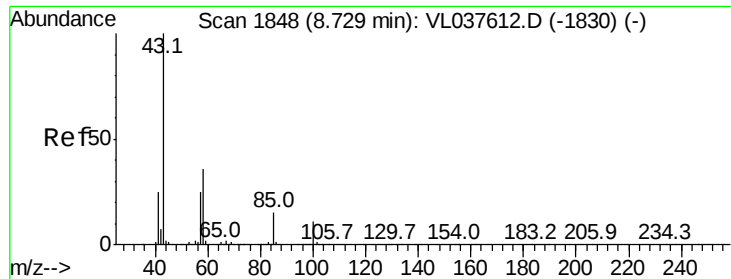
Tot Ion: 42 Resp: 3976
Ion Ratio Lower Upper
42 100
72 130.9 31.4 47.2#
71 125.4 30.6 46.0#



#44
2,2,4-Trimethylpentane
Concen: 0.142 ppbv
RT: 7.85 min Scan# 1576
Delta R.T. 0.00 min
Lab File: VL037645.D
Acq: 17 Sep 2021 17:23

Tgt Ion: 57 Resp: 80140
Ion Ratio Lower Upper
57 100
41 44.6 26.1 39.1#
56 38.9 25.7 38.5#

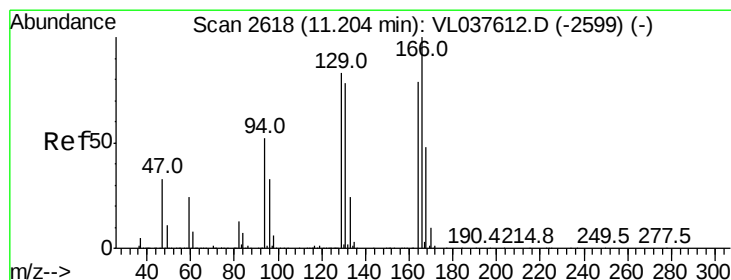
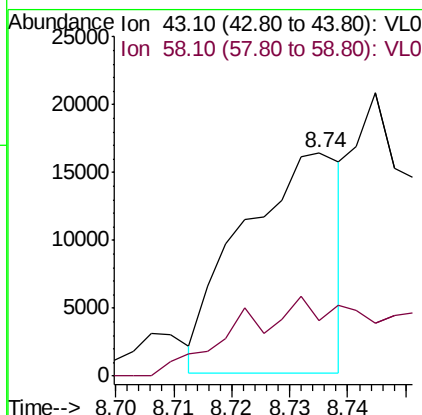
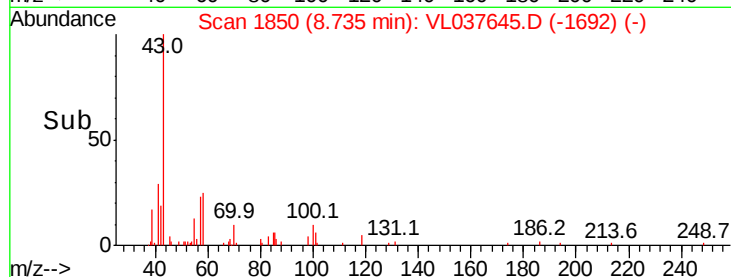
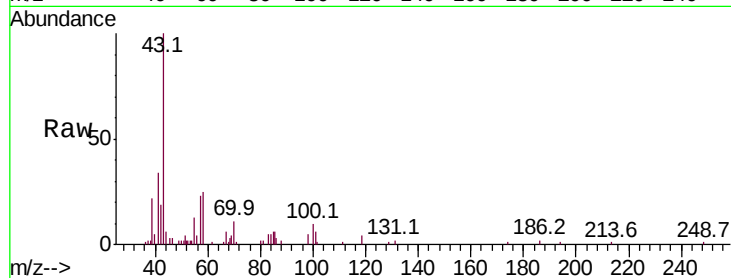




#50
4-Methyl-2-Pentanone
Concen: 0.092 ppbv
RT: 8.74 min Scan# 1850
Delta R.T. 0.01 min
Lab File: VL037645.D
Acq: 17 Sep 2021 17:23

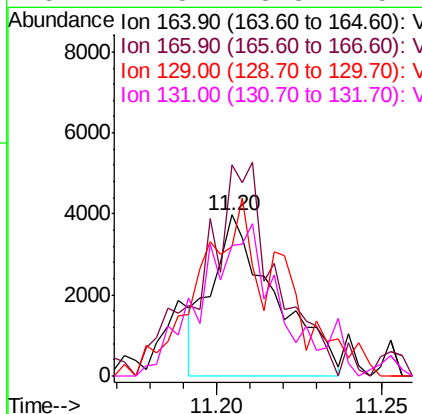
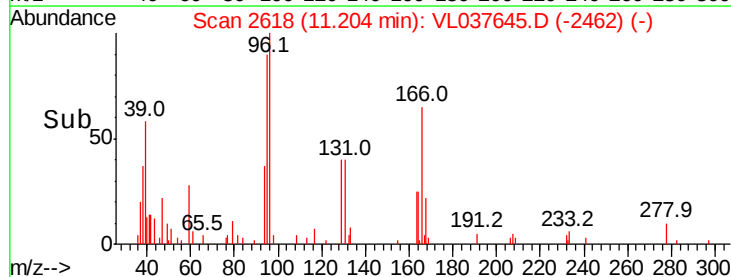
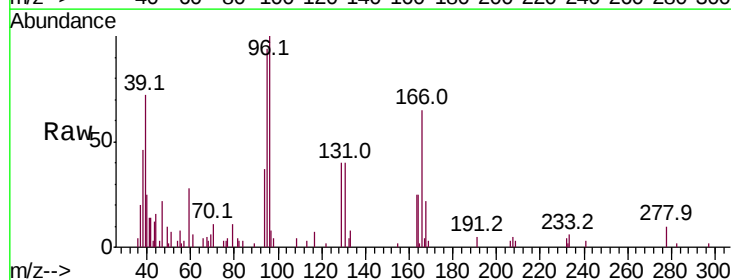
Instrument :
MSVOA_L
ClientSampleId :

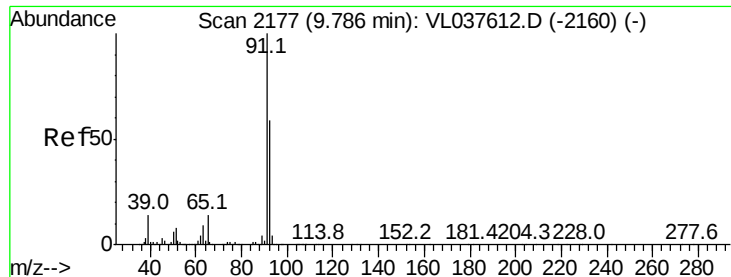
Tot Ion: 43 Resp: 19129
Ion Ratio Lower Upper
43 100
58 74.3 29.4 44.2#



#52
Tetrachloroethene
Concen: 0.041 ppbv
RT: 11.20 min Scan# 2618
Delta R.T. 0.00 min
Lab File: VL037645.D
Acq: 17 Sep 2021 17:23

Tgt Ion: 164 Resp: 5317
Ion Ratio Lower Upper
164 100
166 138.1 101.2 151.8
129 60.5 84.0 126.0#
131 47.8 78.8 118.2#





#53

Toluene

Concen: 0.189 ppbv

RT: 9.79 min Scan# 2177

Delta R.T. 0.00 min

Lab File: VL037645.D

Acq: 17 Sep 2021 17:23

Instrument :

MSVOA_L

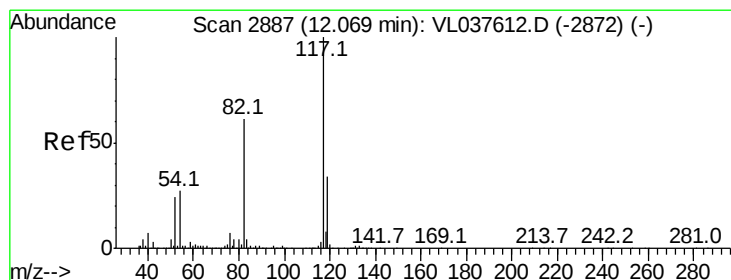
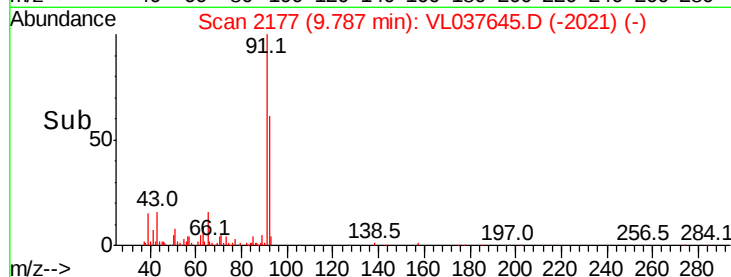
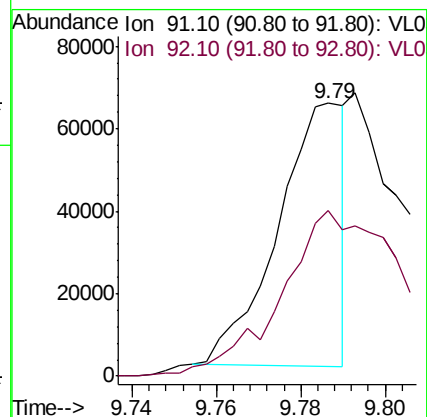
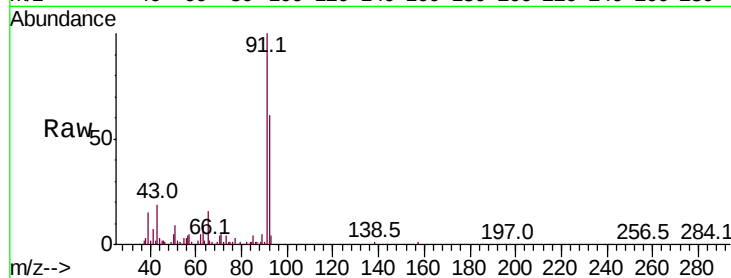
ClientSampleId :

Tot Ion: 91 Resp: 70353

Ion Ratio Lower Upper

91 100

92 124.5 48.9 73.3#



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.07 min Scan# 2887

Delta R.T. 0.00 min

Lab File: VL037645.D

Acq: 17 Sep 2021 17:23

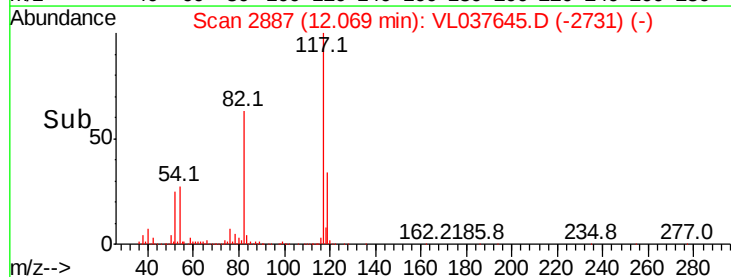
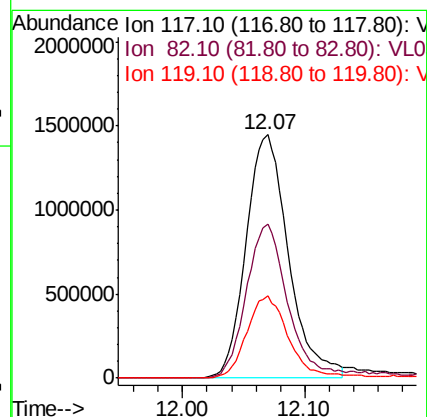
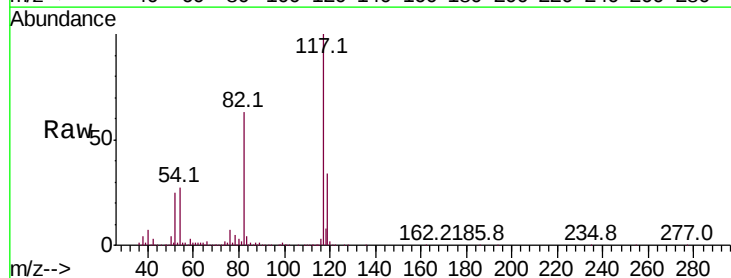
Tgt Ion: 117 Resp: 3480900

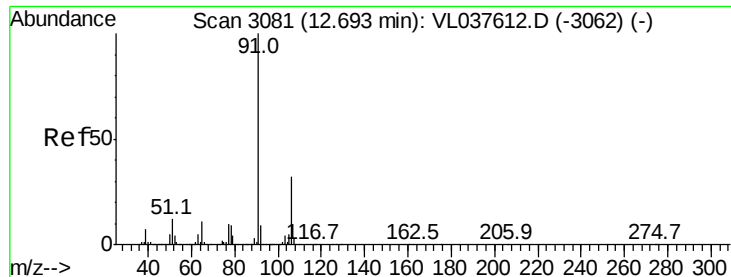
Ion Ratio Lower Upper

117 100

82 65.8 50.6 75.8

119 34.6 26.2 39.2





#58

Ethyl Benzene

Concen: 0.034 ppbv

RT: 12.69 min Scan# 3080

Delta R.T. -0.00 min

Lab File: VL037645.D

Acq: 17 Sep 2021 17:23

Instrument :

MSVOA_L

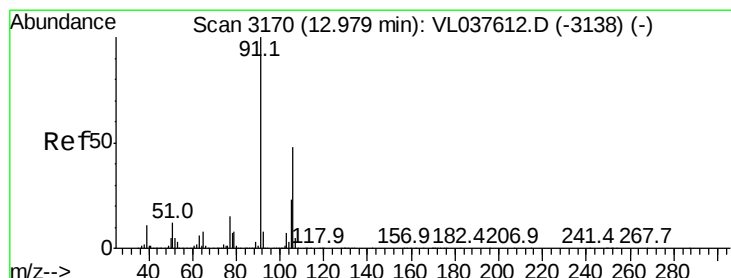
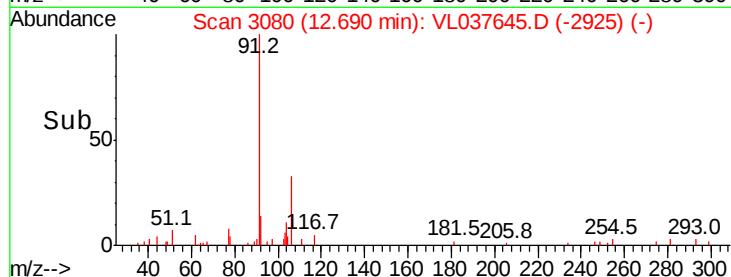
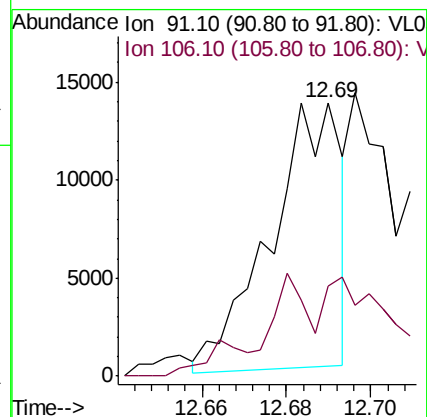
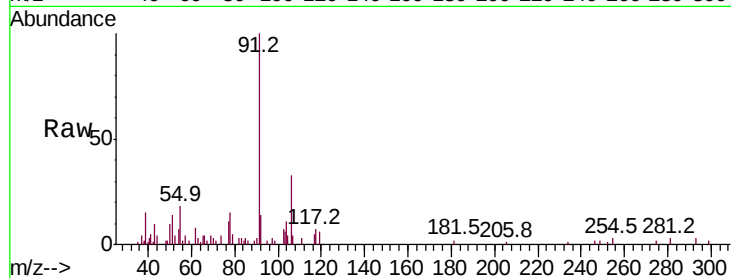
ClientSampleId :

Tot Ion: 91 Resp: 15599

Ion Ratio Lower Upper

91 100

106 34.9 25.3 37.9



#59

m/p-Xylene

Concen: 0.035 ppbv

RT: 12.98 min Scan# 3171

Delta R.T. 0.00 min

Lab File: VL037645.D

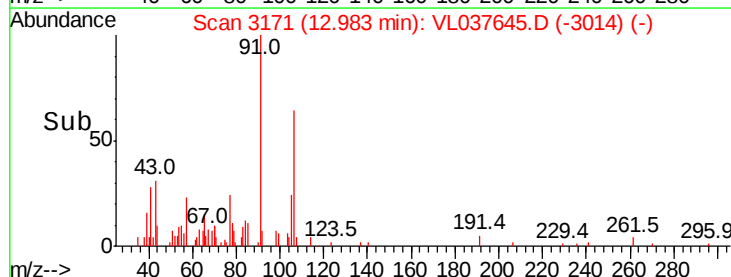
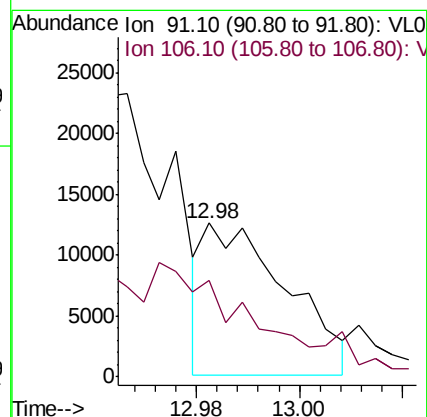
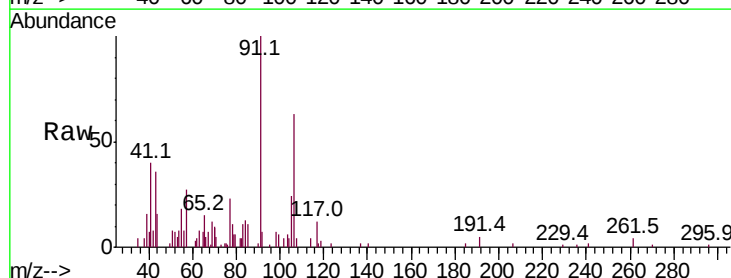
Acq: 17 Sep 2021 17:23

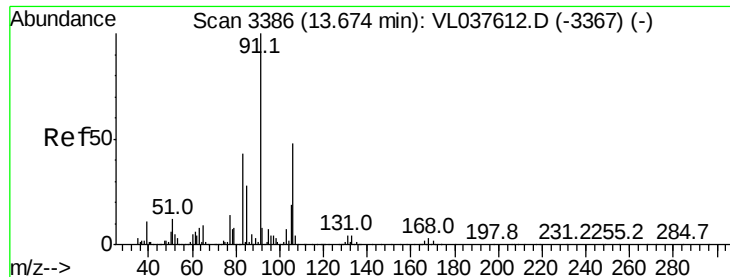
Tgt Ion: 91 Resp: 13924

Ion Ratio Lower Upper

91 100

106 0.0 36.6 55.0#

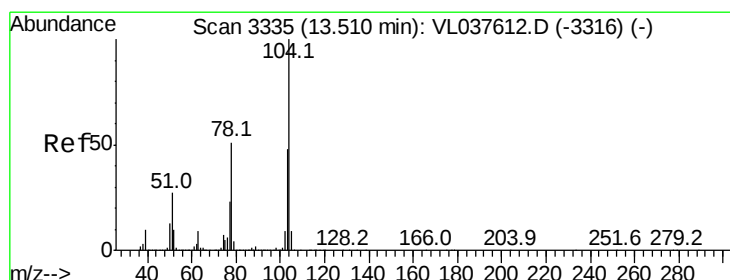
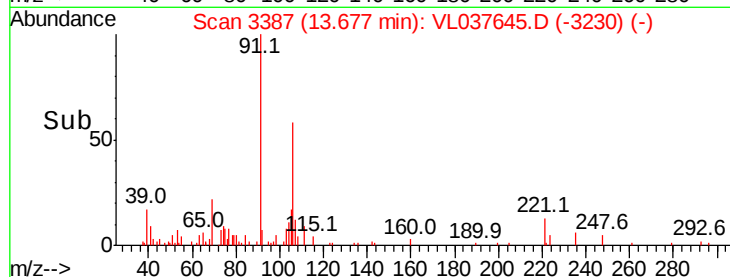
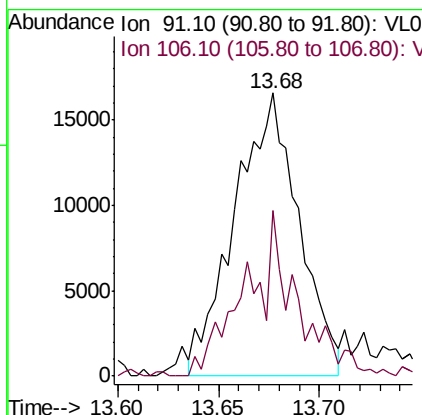
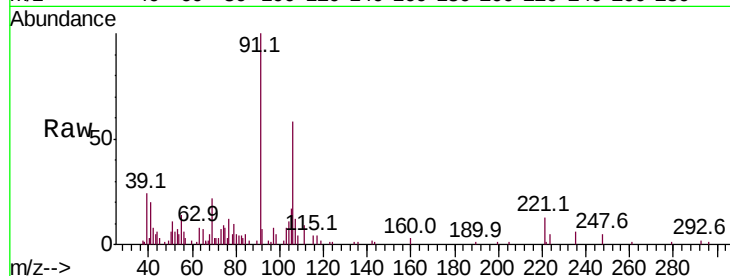




#60
o-Xylene
Concen: 0.096 ppbv
RT: 13.68 min Scan# 3387
Delta R.T. 0.00 min
Lab File: VL037645.D
Acq: 17 Sep 2021 17:23

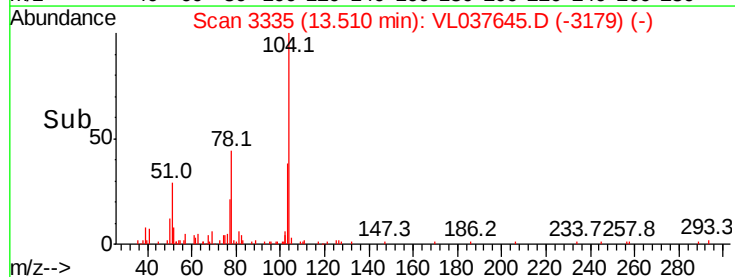
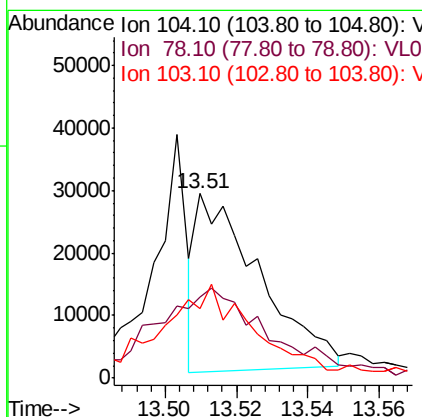
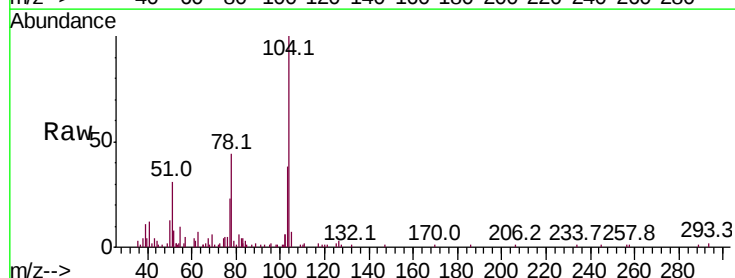
Instrument :
MSVOA_L
ClientSampleId :

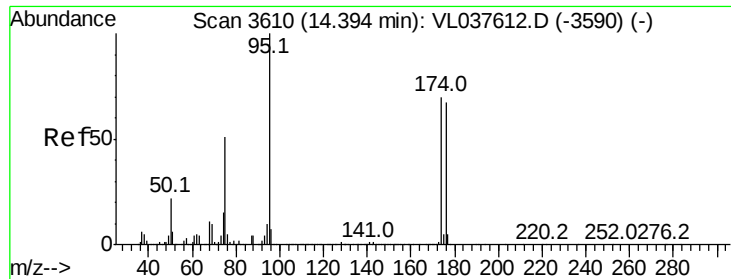
Tot Ion: 91 Resp: 36807
Ion Ratio Lower Upper
91 100
106 48.1 23.0 69.0



#61
Styrene
Concen: 0.183 ppbv
RT: 13.51 min Scan# 3335
Delta R.T. 0.00 min
Lab File: VL037645.D
Acq: 17 Sep 2021 17:23

Tgt Ion:104 Resp: 34678
Ion Ratio Lower Upper
104 100
78 104.4 39.7 59.5#
103 84.7 38.8 58.2#

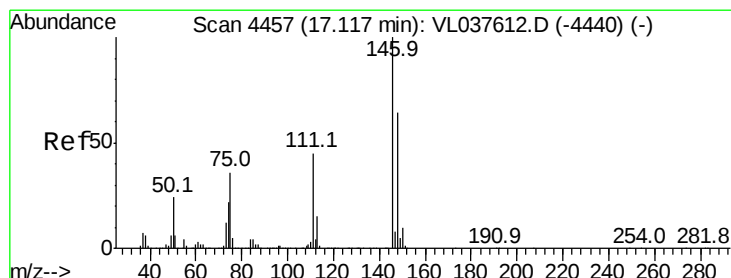
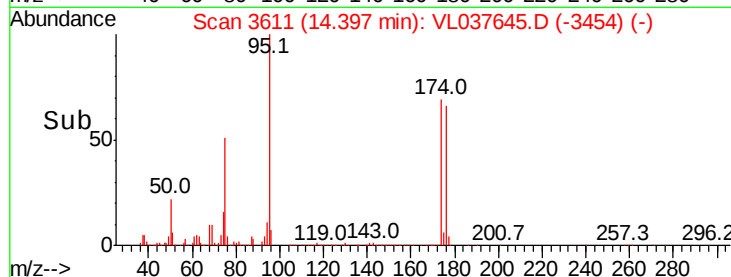
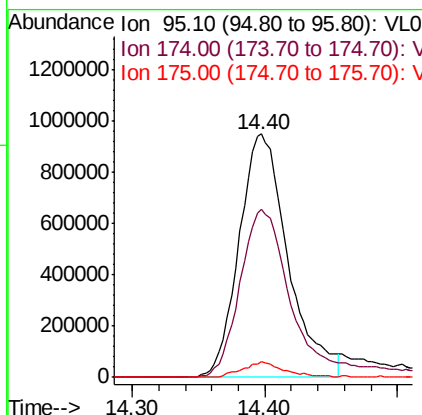
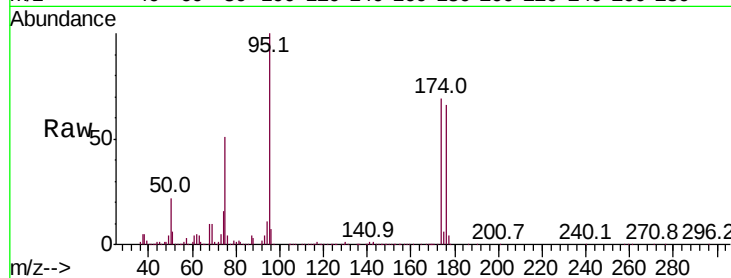




#68
 1-Bromo-4-Fluorobenzene
 Concen: 9.634 ppbv
 RT: 14.40 min Scan# 3611
 Delta R.T. 0.00 min
 Lab File: VL037645.D
 Acq: 17 Sep 2021 17:23

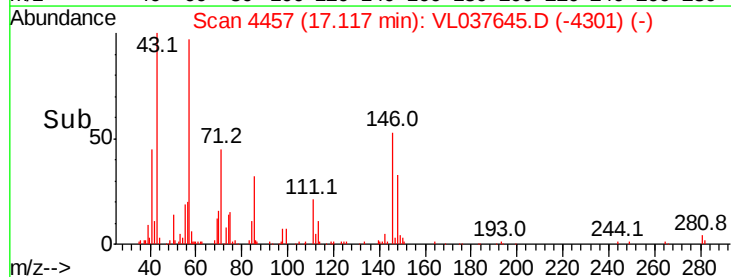
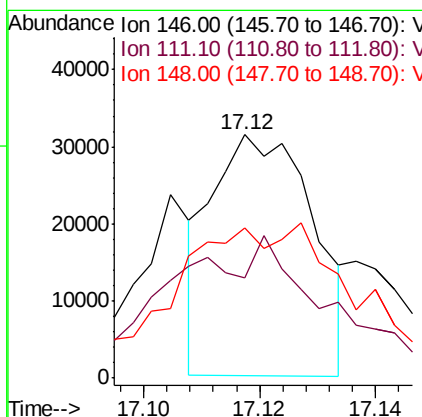
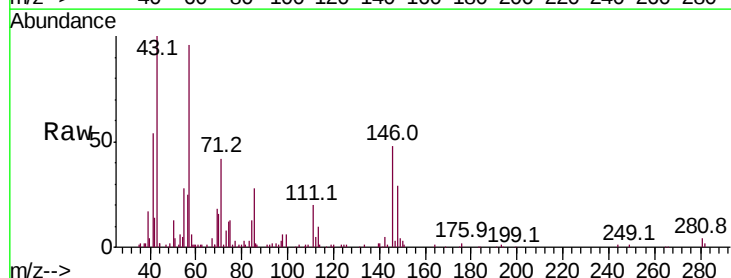
Instrument :
 MSVOA_L
 ClientSampleId :

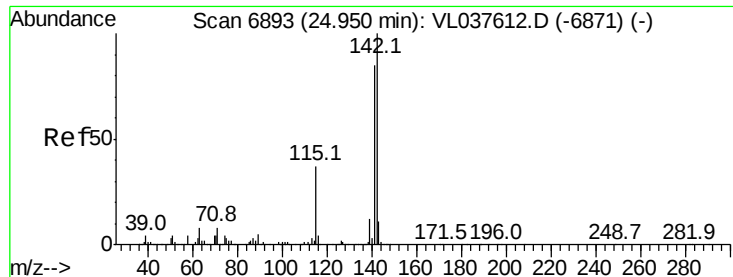
Tot Ion: 95 Resp: 2423512
 Ion Ratio Lower Upper
 95 100
 174 78.4 56.3 84.5
 175 5.5 4.4 6.6



#76
 1,4-Dichlorobenzene
 Concen: 0.143 ppbv
 RT: 17.12 min Scan# 4457
 Delta R.T. 0.00 min
 Lab File: VL037645.D
 Acq: 17 Sep 2021 17:23

Tgt Ion: 146 Resp: 37884
 Ion Ratio Lower Upper
 146 100
 111 119.3 22.5 67.5#
 148 0.0 32.9 98.6#





#80

Naphthalene, 2-methyl-

Concen: 0.043 ppbv

RT: 24.96 min Scan# 6895

Delta R.T. 0.01 min

Lab File: VL037645.D

Acq: 17 Sep 2021 17:23

Instrument :

MSVOA_L

ClientSampleId :

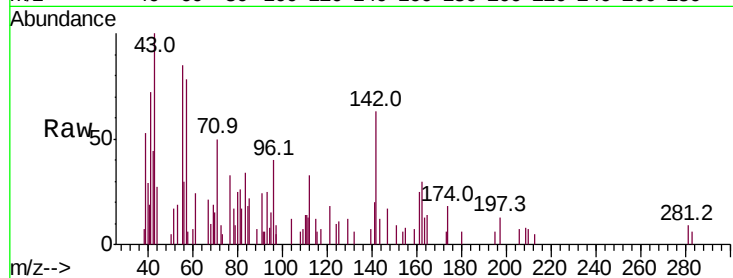
Tot Ion: 142 Resp: 2588

Ion Ratio Lower Upper

142 100

141 51.0 70.9 106.3#

115 19.8 29.6 44.4#



Abundance Ion 142.00 (141.70 to 142.70): V

Ion 141.00 (140.70 to 141.70): V

Ion 115.00 (114.70 to 115.70): V

