

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL102721\
 Data File : VL037920.D
 Acq On : 27 Oct 2021 17:42
 Operator : SY/AP
 Sample : M4377-03
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 FIRE-PUMP-ROOM-1A

Quant Time: Oct 28 05:18:44 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL100421AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Oct 04 17:43:54 2021
 QLast Update : Mon Oct 04 17:43:54 2021
 Response via : Initial Calibration

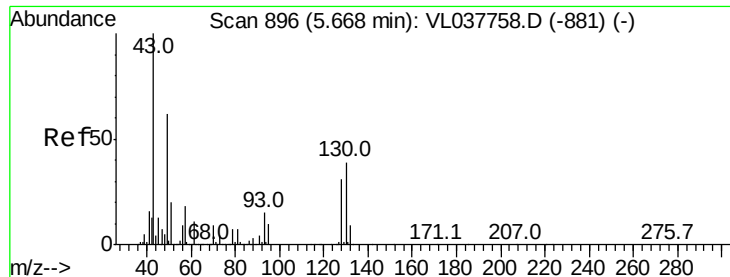
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.68	49	1306989	10.00	ppbv	0.02
33) 1,4-Difluorobenzene	7.19	114	3664279	10.00	ppbv	0.01
55) Chlorobenzene-d5	12.10	117	3022316	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.43	95	2198319	10.40	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	104.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.07	85	34592	0.166	ppbv	100
3) Chlorodifluoromethane	2.98	51	2537058	10.103	ppbv #	62
4) Chloromethane	3.15	50	36277	0.394	ppbv #	86
9) Propene	3.03	41	81450	0.881	ppbv	85
10) Heptane	8.14	43	23067	0.110	ppbv #	1
11) Trichlorofluoromethane	3.96	101	32675	0.175	ppbv	84
12) 1,1,2-Trichlorotrifluoroet	4.49	101	6491	0.046	ppbv #	44
13) Ethanol	3.62	45	641800	84.931	ppbv	84
15) Acetone	3.86	43	2921126	24.897	ppbv	96
16) 1,3-Butadiene	3.32	39	20874	0.245	ppbv #	11
17) tert-Butyl alcohol	3.99	59	297391	2.461	ppbv	96
19) Isopropyl Alcohol	3.98	45	8493286	116.357	ppbv	100
20) Methylene Chloride	4.36	84	2232403	37.657	ppbv	98
21) Allyl Chloride	4.36	41	95045	0.914	ppbv #	29
23) Vinyl Acetate	5.08	43	39731	0.226	ppbv #	1
25) Ethyl Acetate	5.70	43	1576210	4.787	ppbv #	78
26) Hexane	5.70	57	2200065	13.571	ppbv #	45
30) Cyclohexane	7.15	84	12372	0.090	ppbv #	1
34) 2-Butanone	5.26	43	136113	0.920	ppbv	95
35) Carbon Tetrachloride	7.03	117	9687	0.047	ppbv #	81
36) Benzene	6.90	78	53384	0.171	ppbv #	94
39) 1,2-Dichloropropane	7.19	63	841867	7.151	ppbv #	28
41) Tetrahydrofuran	6.07	42	66446	0.917	ppbv	90
44) 2,2,4-Trimethylpentane	7.89	57	52590	0.100	ppbv #	1
50) 4-Methyl-2-Pentanone	8.77	43	7497	0.039	ppbv #	20
53) Toluene	9.82	91	290991	0.839	ppbv	99
59) m/p-Xylene	13.00	91	22779	0.065	ppbv #	30
60) o-Xylene	13.70	91	74763	0.224	ppbv	92
61) Styrene	13.55	104	44568	0.276	ppbv #	85
74) 1,2,4-Trimethylbenzene	16.78	105	11532	0.032	ppbv #	57

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.68

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 27 Oct 2021 17:42

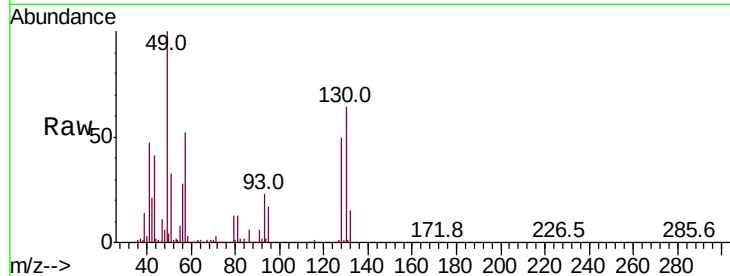
Tot Ion: 49 Resp: 1306989

Ion Ratio Lower Upper

49 100

128 50.7 27.1 81.3

130 65.9 33.2 99.6



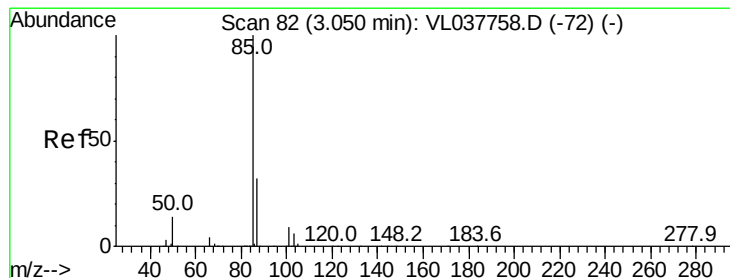
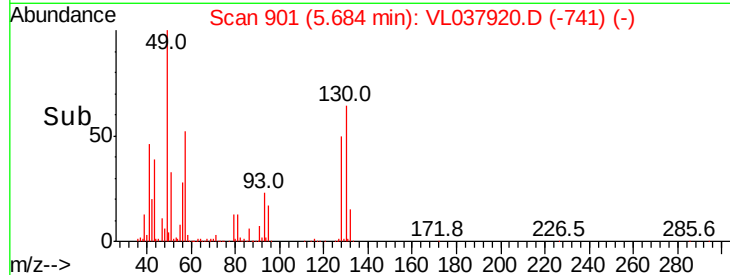
Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): VL0

Ion 130.00 (129.70 to 130.70): VL0

5.68

Time-->



#2

Dichlorodifluoromethane

Concen: 0.166 ppbv

RT: 3.07 min Scan# 87

Delta R.T. 0.02 min

Lab File: VL037920.D

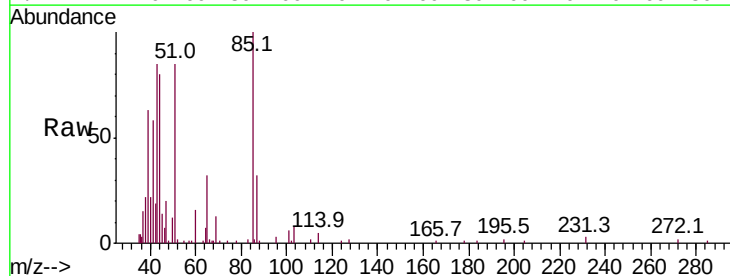
Acq: 27 Oct 2021 17:42

Tgt Ion: 85 Resp: 34592

Ion Ratio Lower Upper

85 100

87 31.9 25.7 38.5

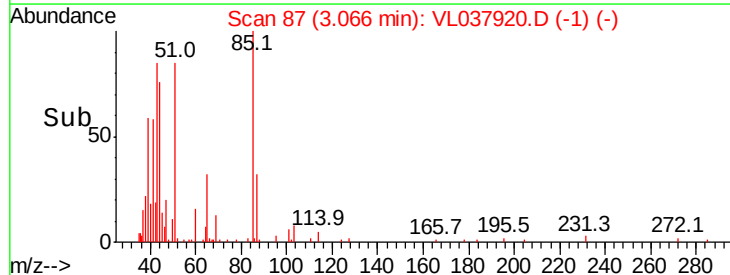


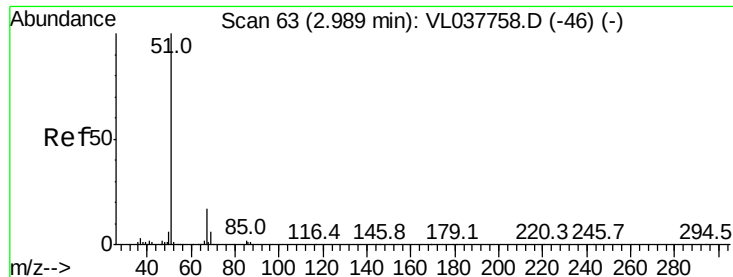
Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

3.07

Time-->





#3

Chlorodifluoromethane

Concen: 10.103 ppbv

RT: 2.98 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

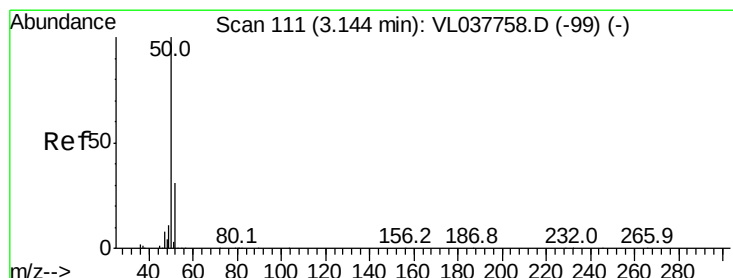
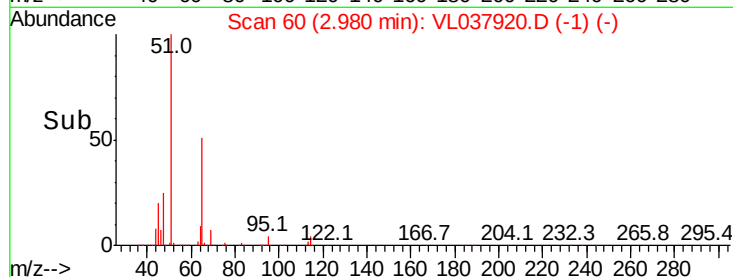
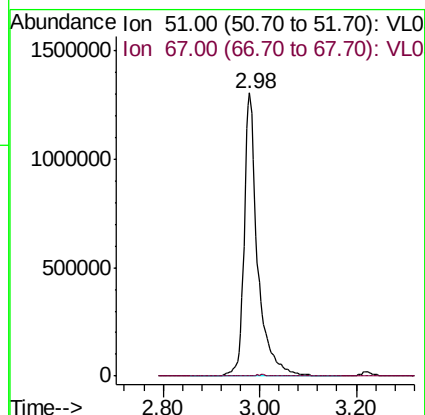
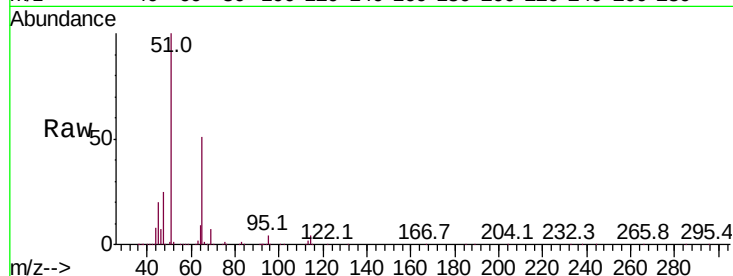
Acq: 27 Oct 2021 17:42 FIRE-PUMP-ROOM-1A

Tot Ion: 51 Resp: 2537058

Ion Ratio Lower Upper

51 100

67 0.5 13.5 20.3#



#4

Chloromethane

Concen: 0.394 ppbv

RT: 3.15 min Scan# 114

Delta R.T. 0.01 min

Lab File: VL037920.D

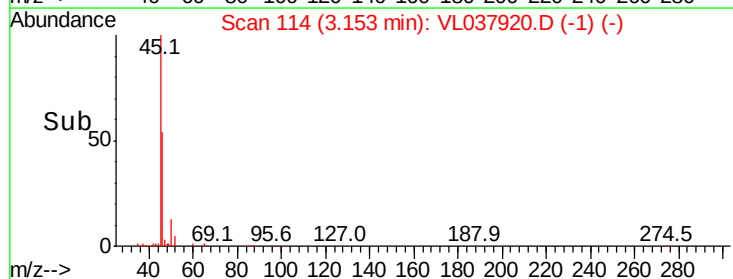
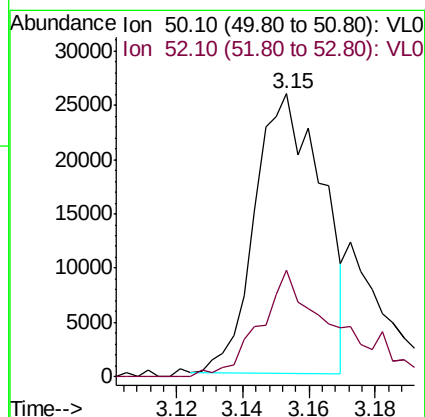
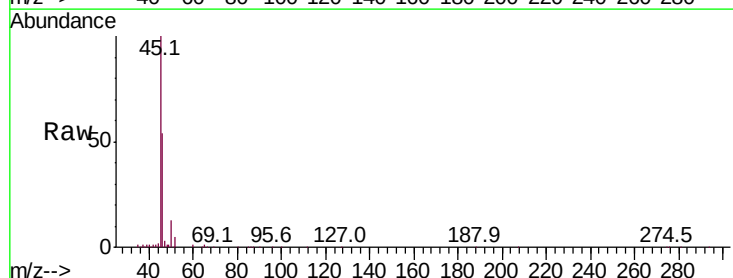
Acq: 27 Oct 2021 17:42

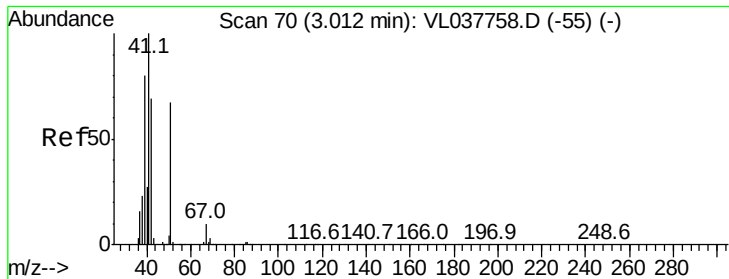
Tgt Ion: 50 Resp: 36277

Ion Ratio Lower Upper

50 100

52 38.3 24.4 36.6#





#9

Propene

Concen: 0.881 ppbv

RT: 3.03 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

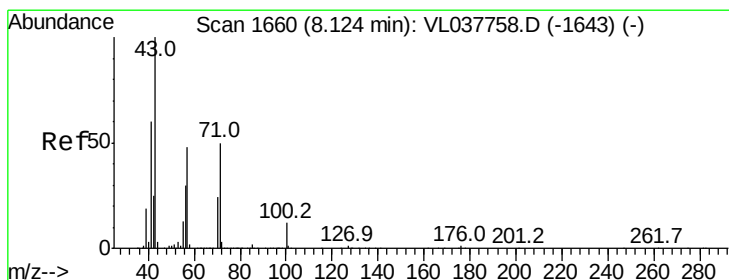
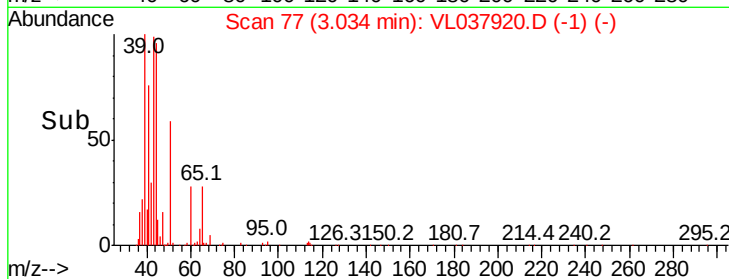
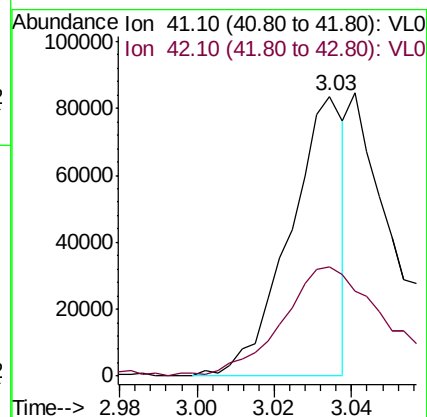
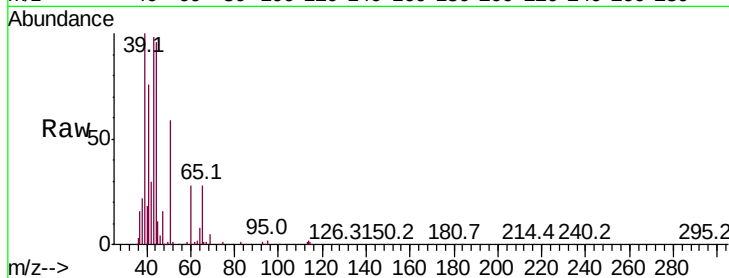
Acq: 27 Oct 2021 17:42 FIRE-PUMP-ROOM-1A

Tot Ion: 41 Resp: 81450

Ion Ratio Lower Upper

41 100

42 79.8 54.2 81.2



#10

Heptane

Concen: 0.110 ppbv

RT: 8.14 min Scan# 1666

Delta R.T. 0.02 min

Lab File: VL037920.D

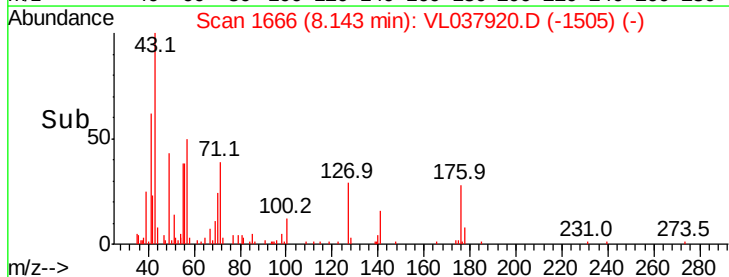
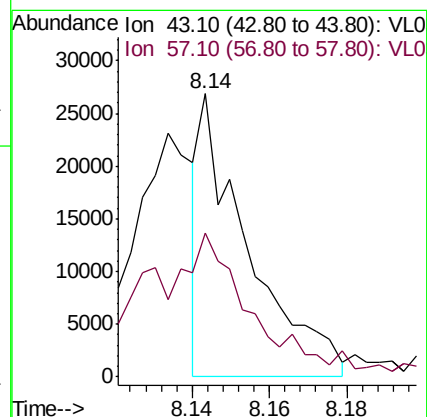
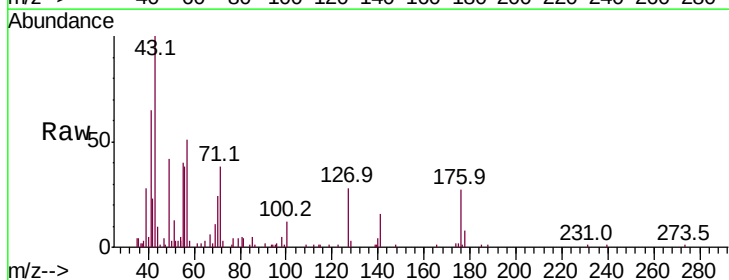
Acq: 27 Oct 2021 17:42

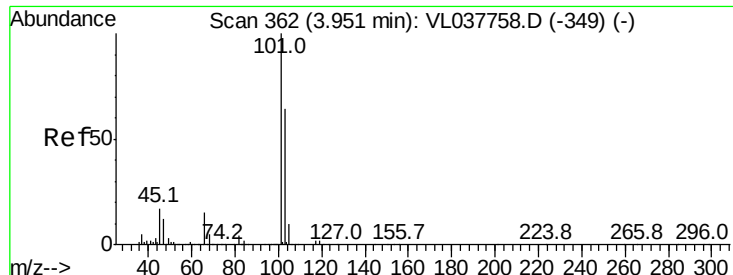
Tgt Ion: 43 Resp: 23067

Ion Ratio Lower Upper

43 100

57 125.1 40.0 60.0#





#11

Trichlorofluoromethane

Concen: 0.175 ppbv

RT: 3.96 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

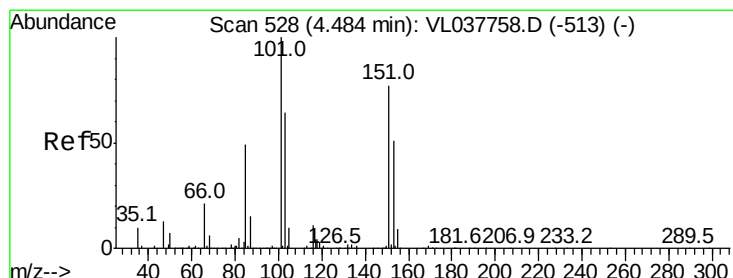
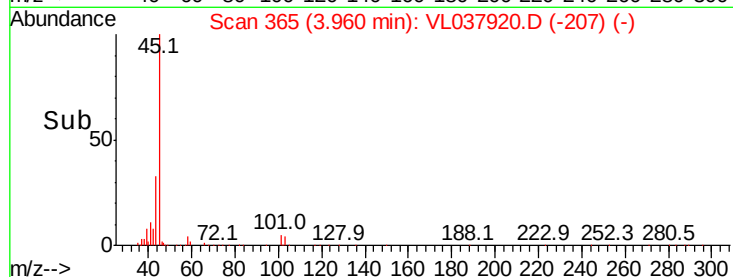
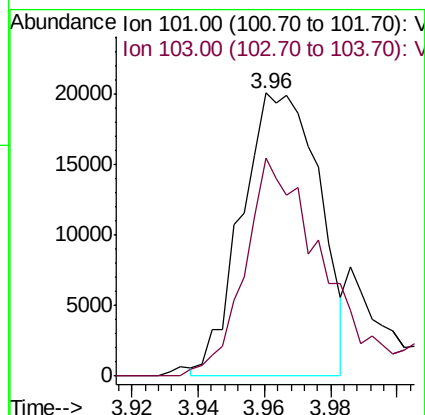
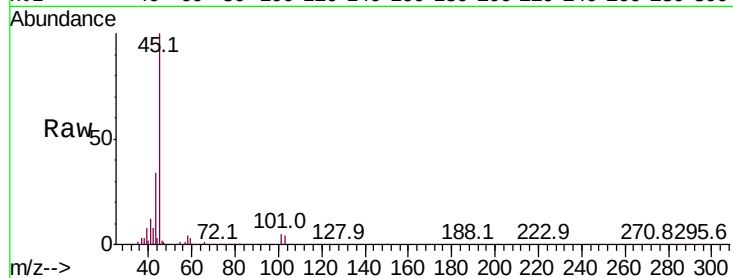
Acq: 27 Oct 2021 17:42 FIRE-PUMP-ROOM-1A

Tot Ion:101 Resp: 32675

Ion Ratio Lower Upper

101 100

103 77.0 51.5 77.3



#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.046 ppbv

RT: 4.49 min Scan# 531

Delta R.T. 0.01 min

Lab File: VL037920.D

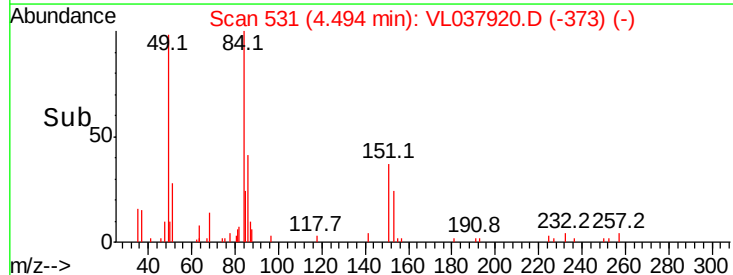
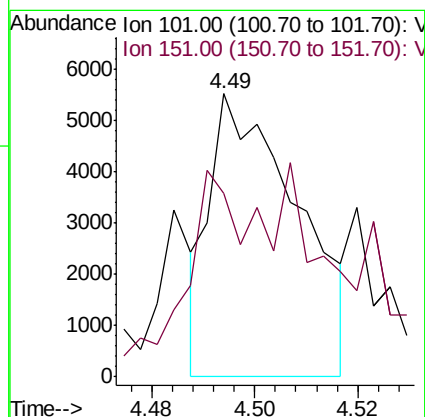
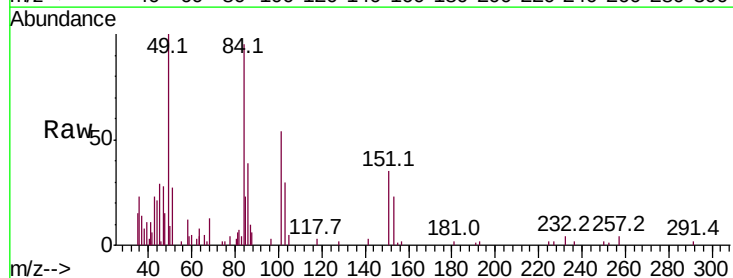
Acq: 27 Oct 2021 17:42

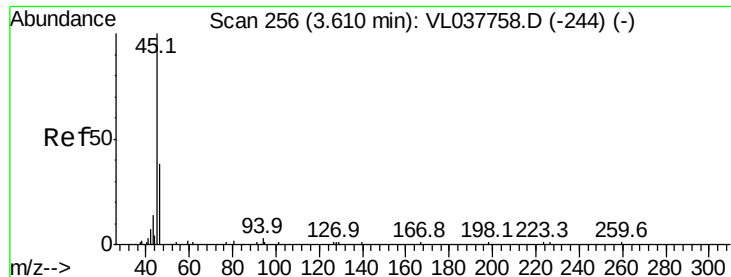
Tgt Ion:101 Resp: 6491

Ion Ratio Lower Upper

101 100

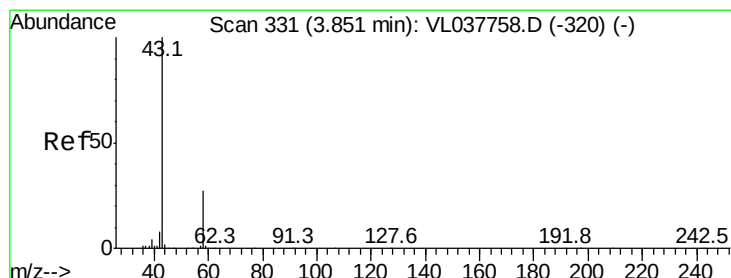
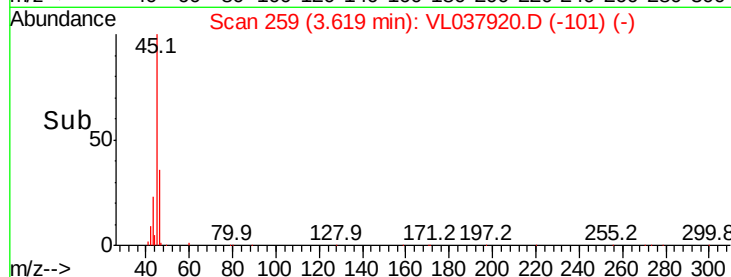
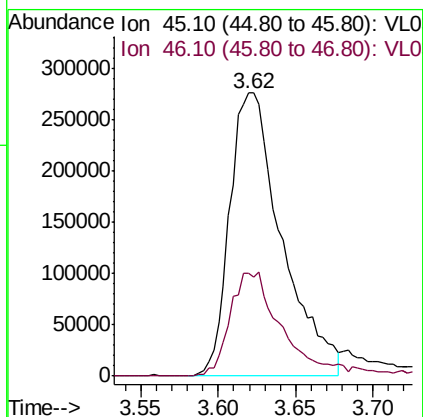
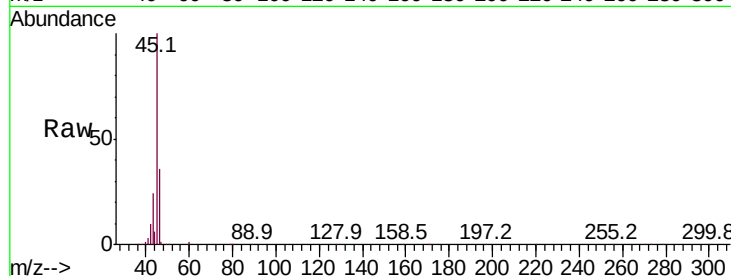
151 127.5 62.9 94.3#





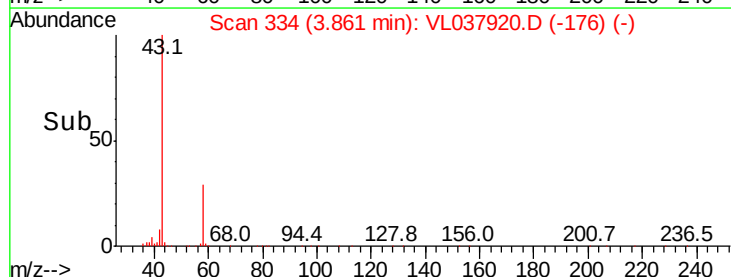
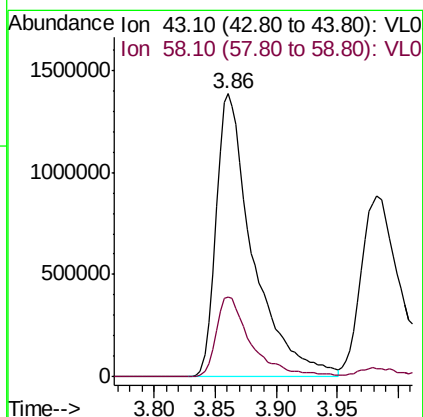
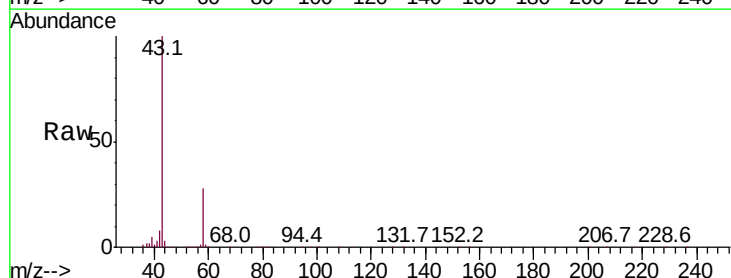
#13
 Ethanol
 Concen: 84.931 ppbv
 RT: 3.62
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 27 Oct 2021 17:42

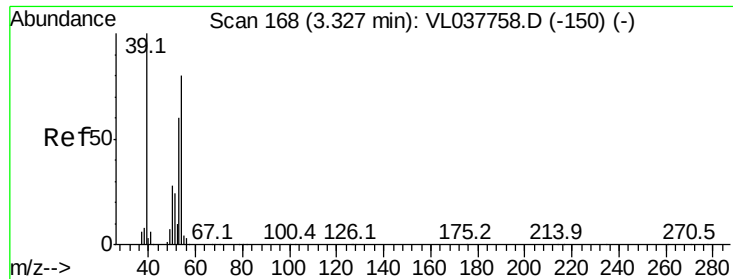
Tot Ion: 45 Resp: 641800
 Ion Ratio Lower Upper
 45 100
 46 39.6 20.2 81.0



#15
 Acetone
 Concen: 24.897 ppbv
 RT: 3.86 min Scan# 334
 Delta R.T. 0.01 min
 Lab File: VL037920.D
 Acq: 27 Oct 2021 17:42

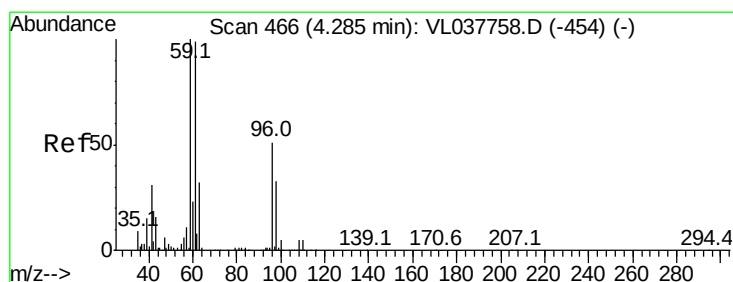
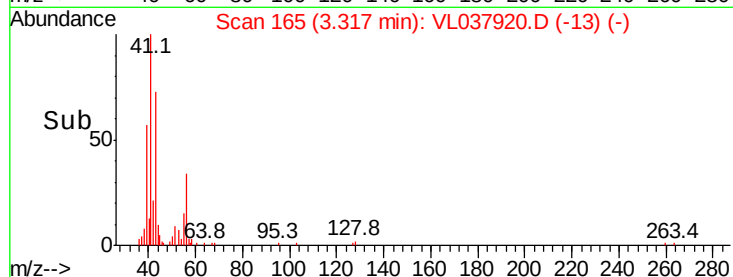
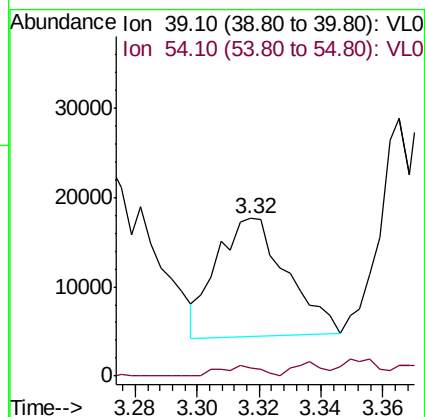
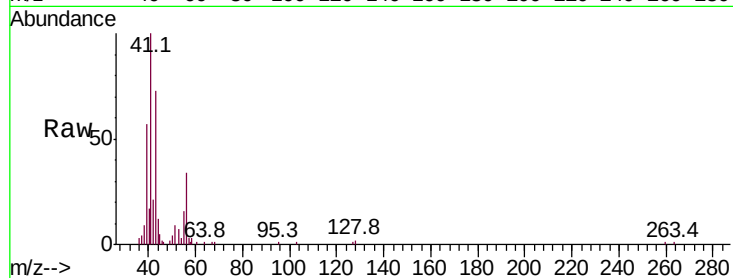
Tgt Ion: 43 Resp: 2921126
 Ion Ratio Lower Upper
 43 100
 58 26.9 23.0 34.6





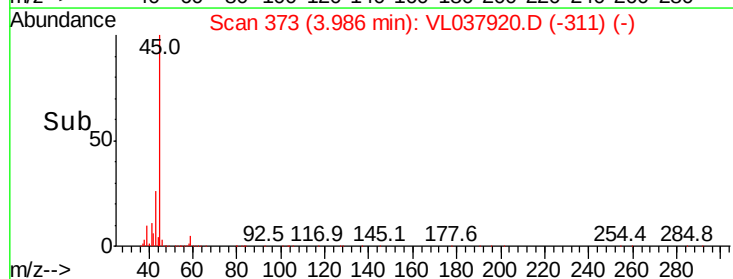
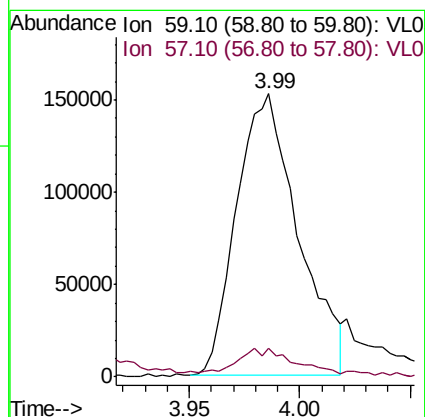
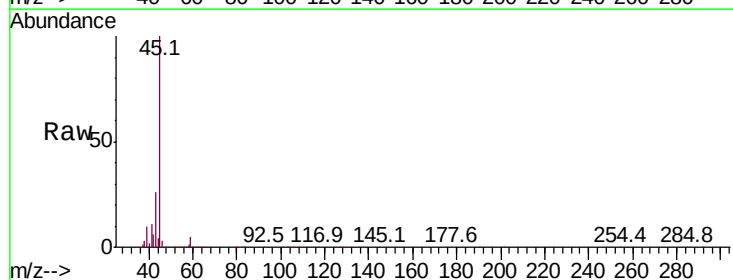
#16
 1,3-Butadiene
 Concen: 0.245 ppbv
 RT: 3.32
 Delta R.T. MSVOA_1
 Lab File: ClientSampleId :
 Acq: 27 Oct 2021 17:42

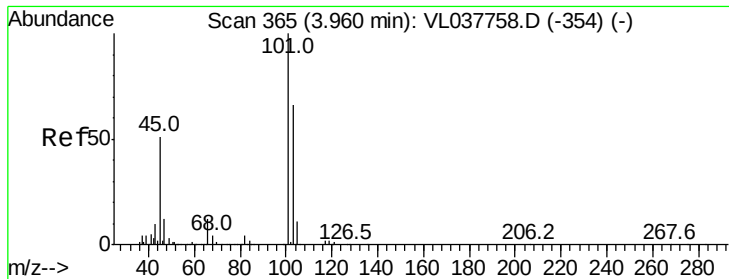
Tot Ion: 39 Resp: 20874
 Ion Ratio Lower Upper
 39 100
 54 0.0 61.7 92.5#



#17
 tert-Butyl alcohol
 Concen: 2.461 ppbv
 RT: 3.99 min Scan# 373
 Delta R.T. -0.30 min
 Lab File: VL037920.D
 Acq: 27 Oct 2021 17:42

Tgt Ion: 59 Resp: 297391
 Ion Ratio Lower Upper
 59 100
 57 12.4 8.6 13.0





#19

Isopropyl Alcohol

Concen: 116.357 ppbv

RT: 3.98 Instrument: MSVOA_1

Delta R.T.

Lab File: ClientSampleId:

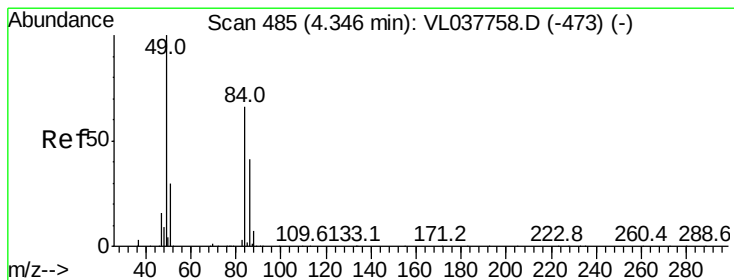
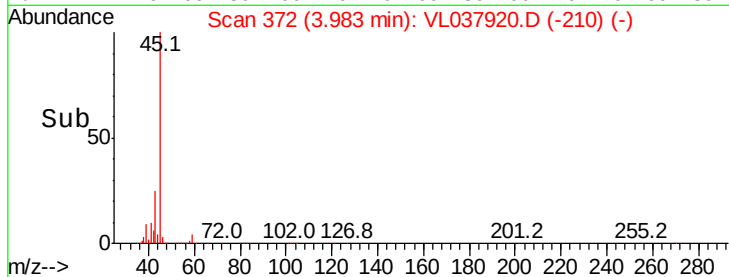
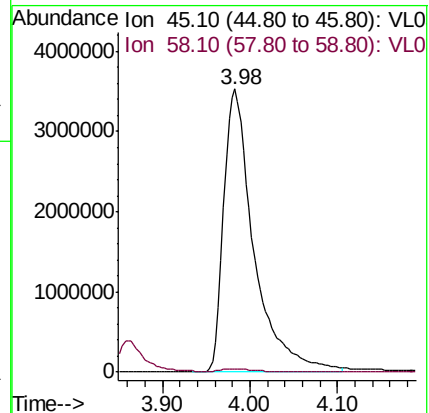
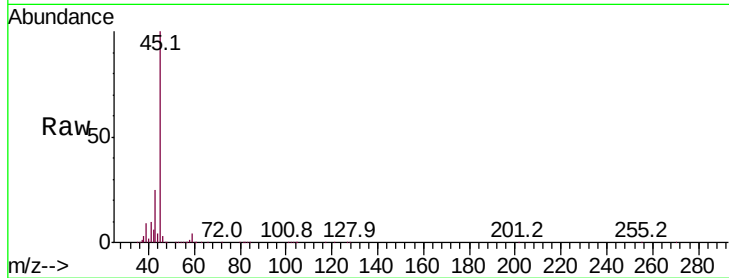
Acq: 27 Oct 2021 17:42 FIRE-PUMP-ROOM-1A

Tot Ion: 45 Resp: 8493286

Ion Ratio Lower Upper

45 100

58 1.6 1.1 1.7



#20

Methylene Chloride

Concen: 37.657 ppbv

RT: 4.36 min Scan# 489

Delta R.T. 0.01 min

Lab File: VL037920.D

Acq: 27 Oct 2021 17:42

Tgt Ion: 84 Resp: 2232403

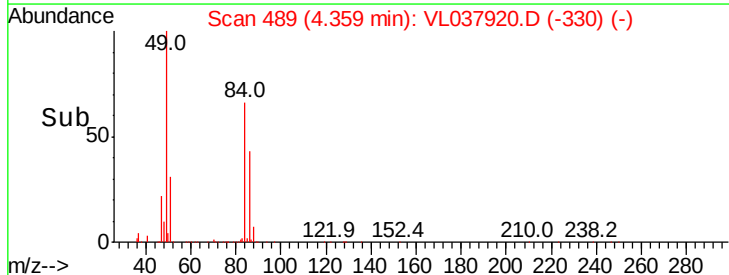
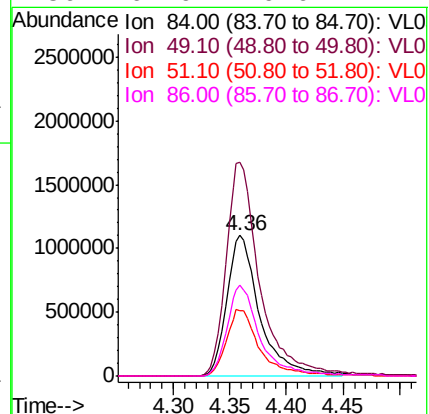
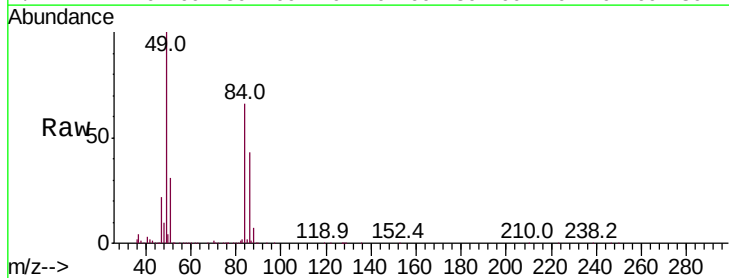
Ion Ratio Lower Upper

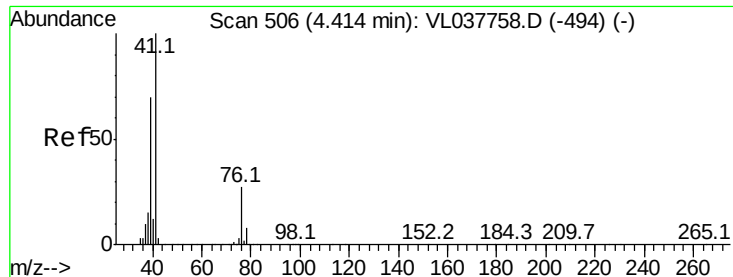
84 100

49 152.1 120.7 181.1

51 46.6 36.2 54.4

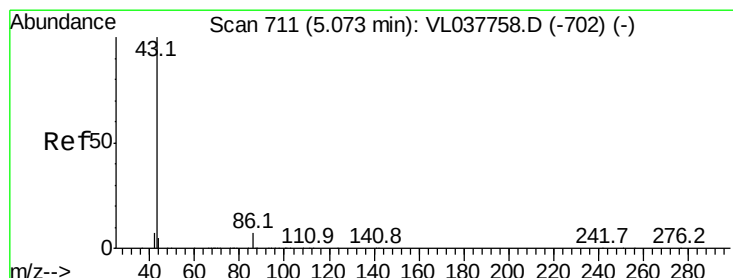
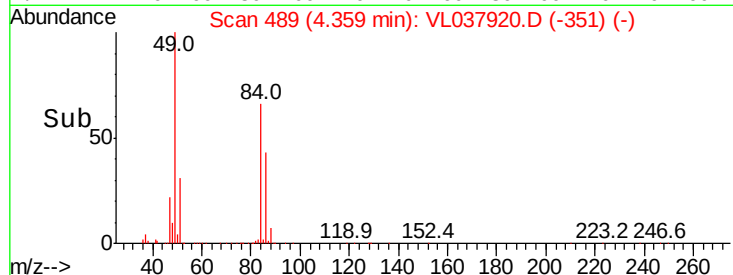
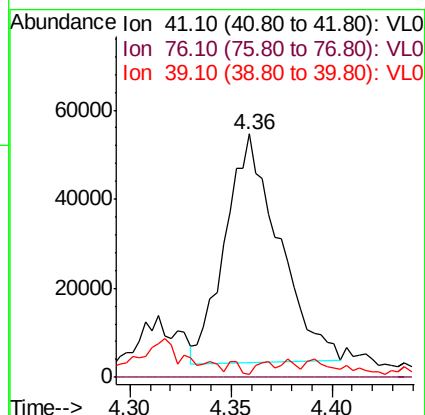
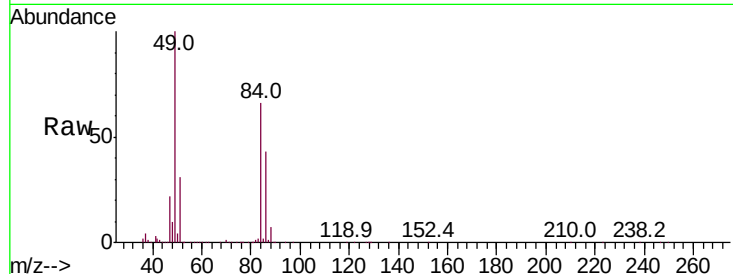
86 64.9 49.6 74.4





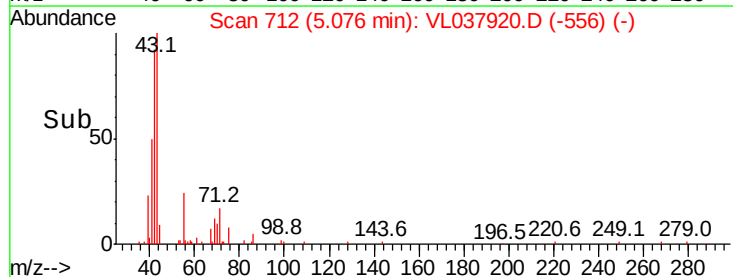
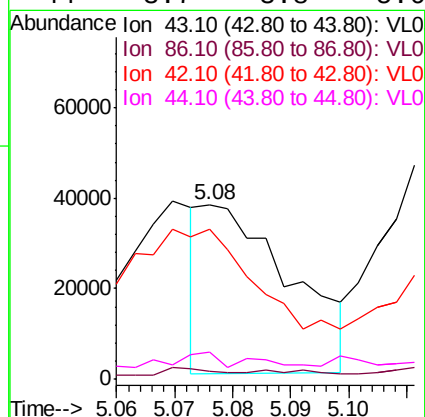
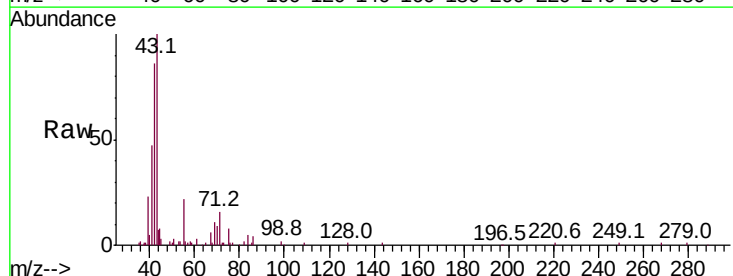
#21
Allvl Chloride
Concen: 0.914 ppbv
RT: 4.36
Delta R.T. MSVOA_L
Lab File: ClientSampleId:
Acq: 27 Oct 2021 17:42
FIRE-PUMP-ROOM-1A

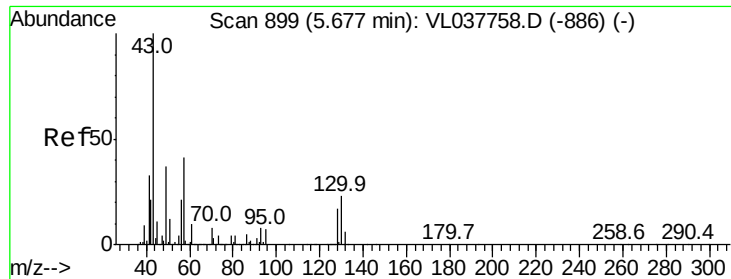
Tot Ion: 41 Resp: 95045
Ion Ratio Lower Upper
41 100
76 12.1 22.4 33.6#
39 0.0 58.0 87.0#



#23
Vinyl Acetate
Concen: 0.226 ppbv
RT: 5.08 min Scan# 712
Delta R.T. 0.00 min
Lab File: VL037920.D
Acq: 27 Oct 2021 17:42

Tgt Ion: 43 Resp: 39731
Ion Ratio Lower Upper
43 100
86 2.7 5.0 7.4#
42 102.3 7.4 11.0#
44 3.7 3.8 5.6#

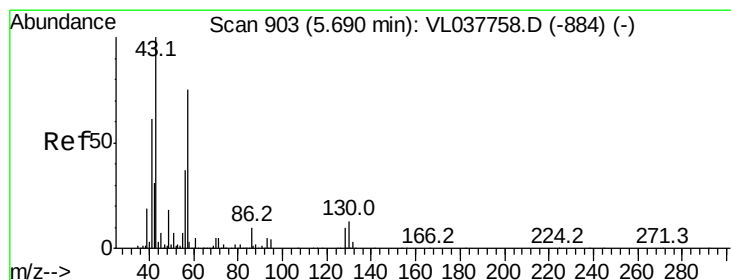
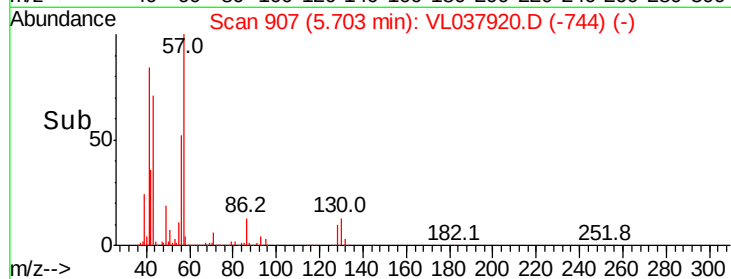
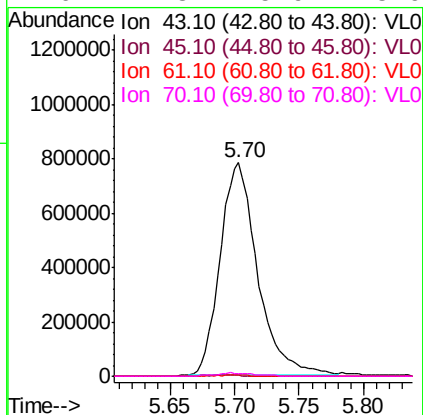
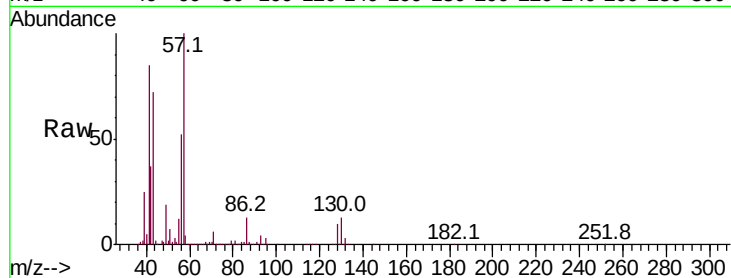




#25
Ethyl Acetate
Concen: 4.787 ppbv
RT: 5.70 min
Delta R.T. MSVOA_L
Lab File: ClientSampleId:
Acq: 27 Oct 2021 17:42 FIRE-PUMP-ROOM-1A

Tot Ion: 43 Resp: 1576210

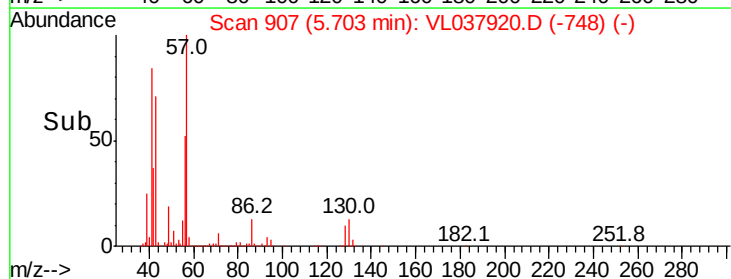
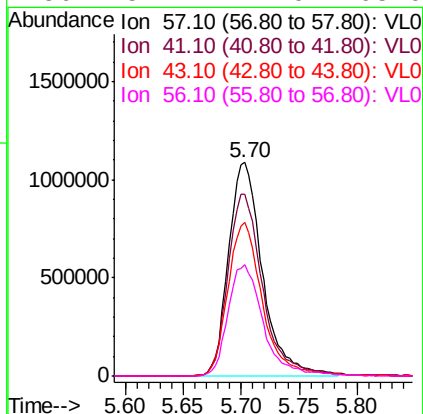
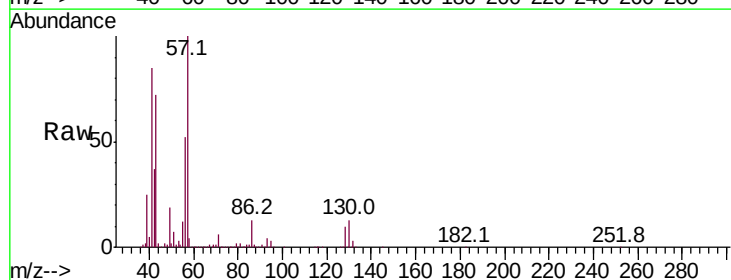
Ion	Ratio	Lower	Upper
43	100		
45	0.7	8.1	12.1#
61	0.6	7.5	11.3#
70	1.8	5.9	8.9#

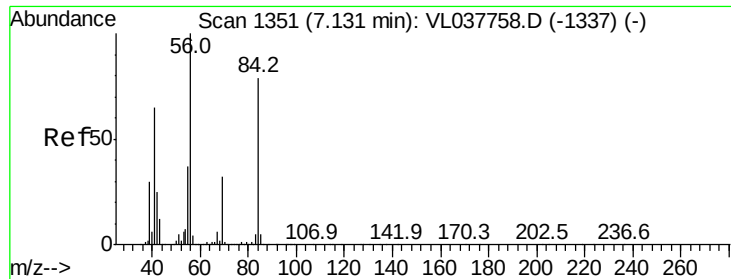


#26
Hexane
Concen: 13.571 ppbv
RT: 5.70 min Scan# 907
Delta R.T. 0.01 min
Lab File: VL037920.D
Acq: 27 Oct 2021 17:42

Tgt Ion: 57 Resp: 2200065

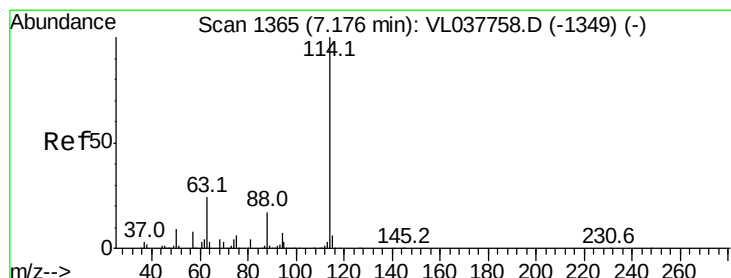
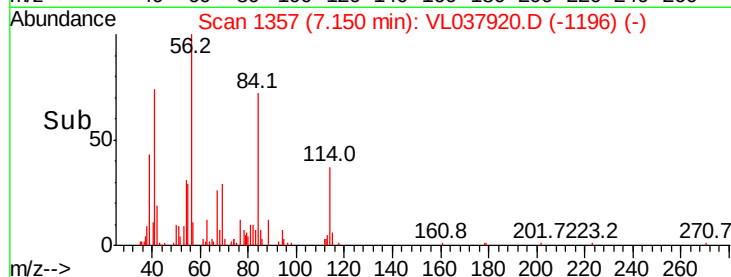
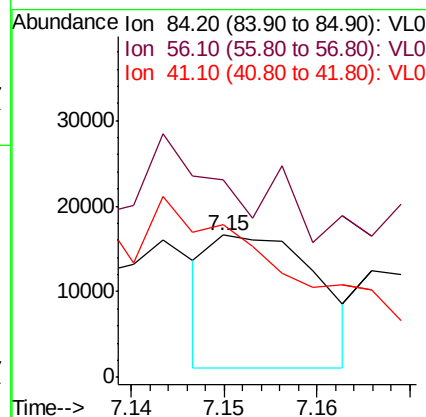
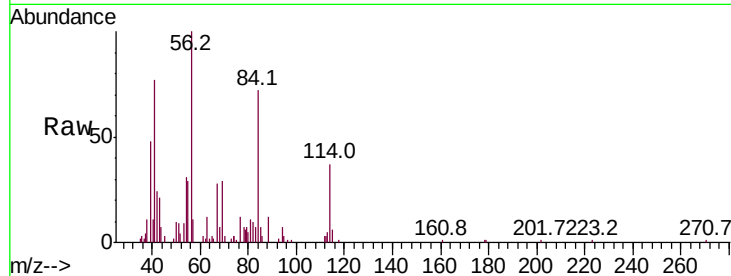
Ion	Ratio	Lower	Upper
57	100		
41	88.3	69.6	104.4
43	73.7	171.4	257.0#
56	54.4	42.0	63.0





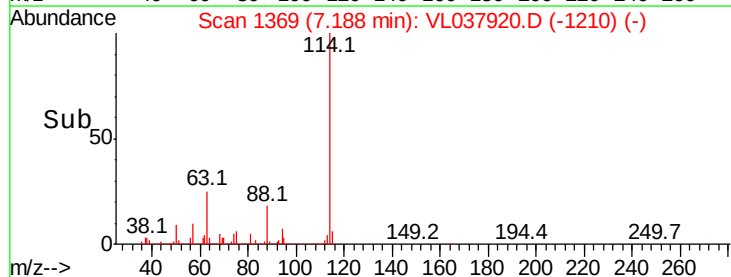
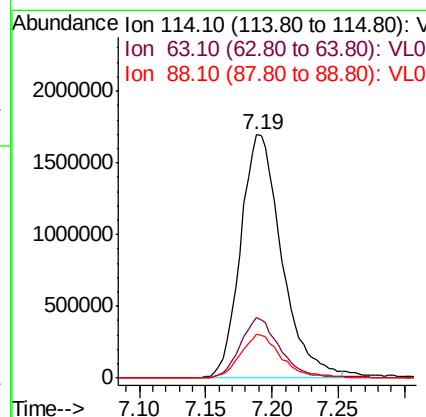
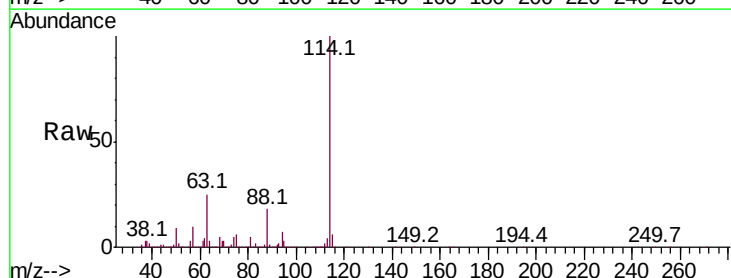
#30
Cvclohexane
Concen: 0.090 ppbv
RT: 7.15
Delta R.T. MSVOA_L
Lab File: ClientSampleId:
Acq: 27 Oct 2021 17:42

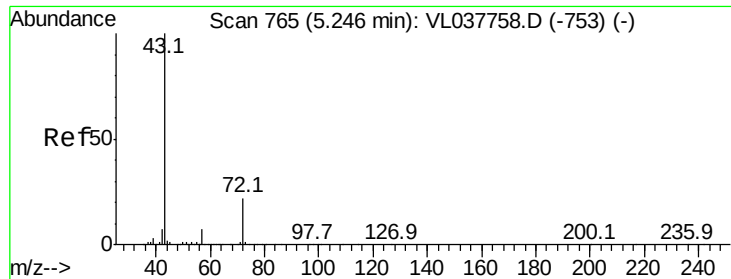
Tot Ion: 84 Resp: 12372
Ion Ratio Lower Upper
84 100
56 0.0 113.0 169.4#
41 0.0 69.1 103.7#



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.19 min Scan# 1369
Delta R.T. 0.01 min
Lab File: VL037920.D
Acq: 27 Oct 2021 17:42

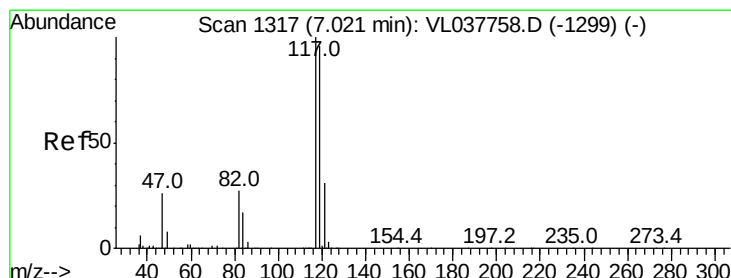
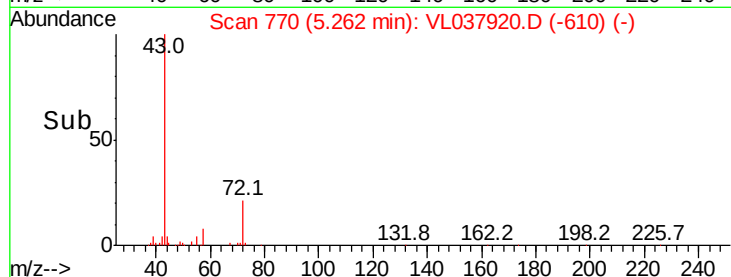
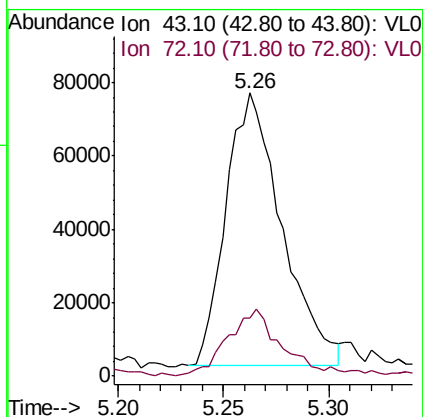
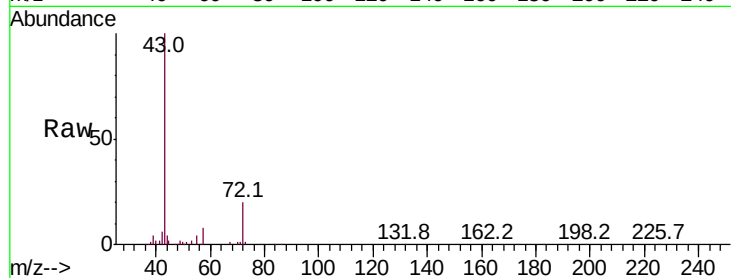
Tgt Ion: 114 Resp: 3664279
Ion Ratio Lower Upper
114 100
63 24.5 19.4 29.2
88 18.0 14.4 21.6





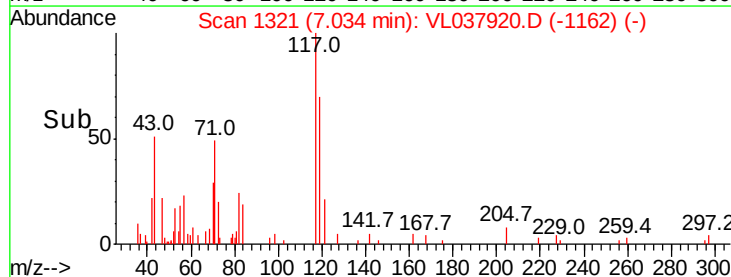
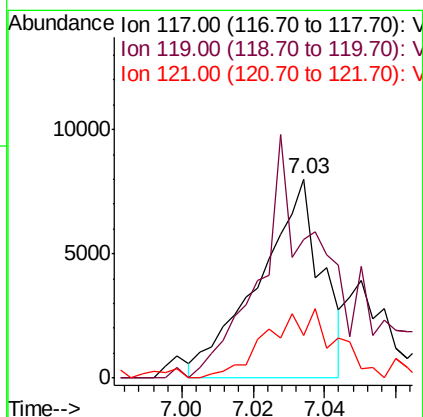
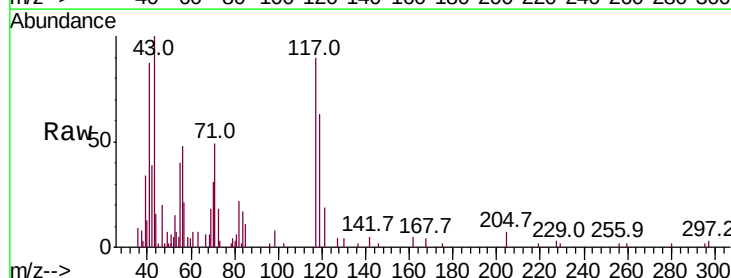
#34
2-Butanone
Concen: 0.920 ppbv
RT: 5.26
Delta R.T. MSVOA_1
Lab File: ClientSampleId:
Acq: 27 Oct 2021 17:42
FIRE-PUMP-ROOM-1A

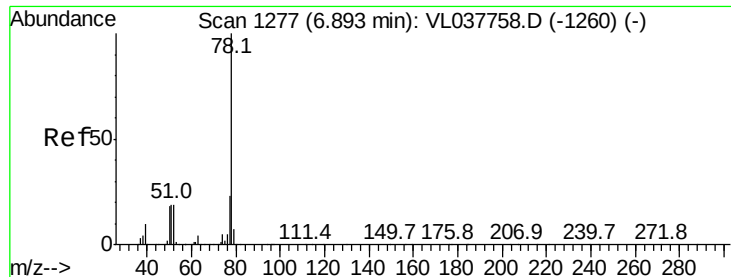
Tot Ion: 43 Resp: 136113
Ion Ratio Lower Upper
43 100
72 25.0 18.2 27.2



#35
Carbon Tetrachloride
Concen: 0.047 ppbv
RT: 7.03 min Scan# 1321
Delta R.T. 0.01 min
Lab File: VL037920.D
Acq: 27 Oct 2021 17:42

Tgt Ion: 117 Resp: 9687
Ion Ratio Lower Upper
117 100
119 75.4 76.5 114.7#
121 23.2 24.9 37.3#





#36

Benzene

Concen: 0.171 ppbv

RT: 6.90 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

Acq: 27 Oct 2021 17:42 FIRE-PUMP-ROOM-1A

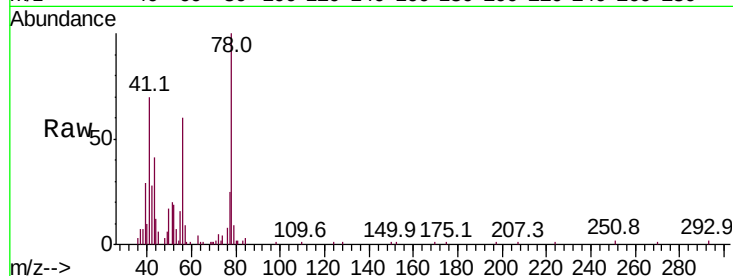
Tot Ion: 78 Resp: 53384

Ion Ratio Lower Upper

78 100

77 25.1 18.8 28.2

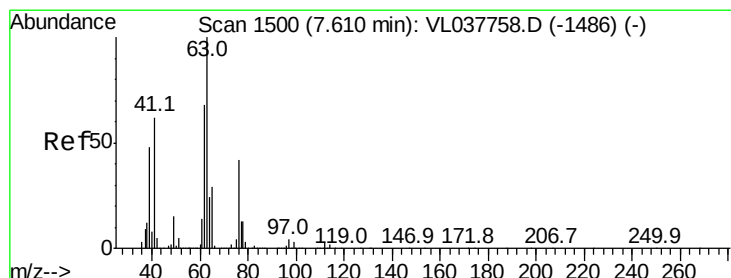
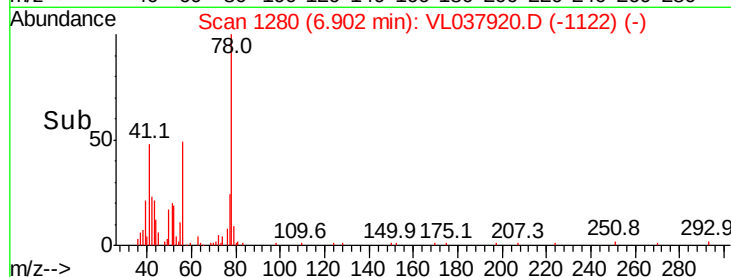
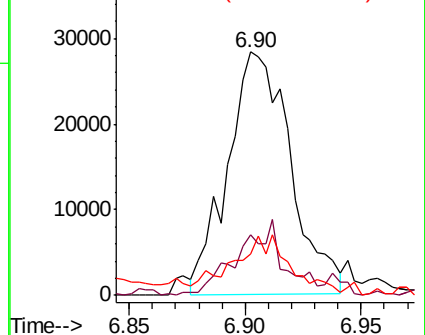
50 14.3 14.7 22.1#



Abundance Ion 78.10 (77.80 to 78.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

Ion 50.10 (49.80 to 50.80): VL0



#39

1,2-Dichloropropane

Concen: 7.151 ppbv

RT: 7.19 min Scan# 1369

Delta R.T. -0.42 min

Lab File: VL037920.D

Acq: 27 Oct 2021 17:42

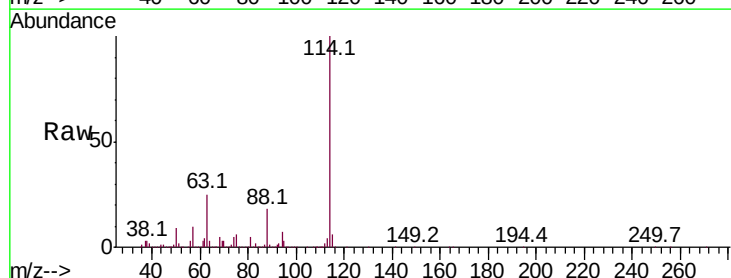
Tgt Ion: 63 Resp: 841867

Ion Ratio Lower Upper

63 100

41 0.0 49.8 74.6#

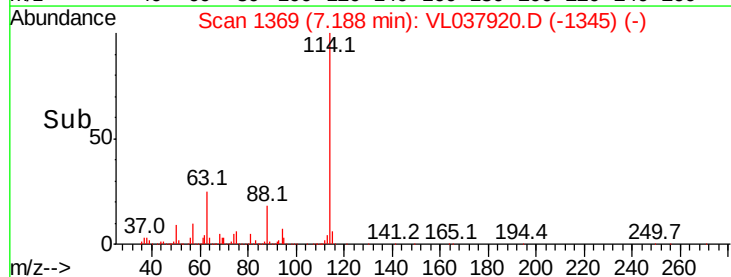
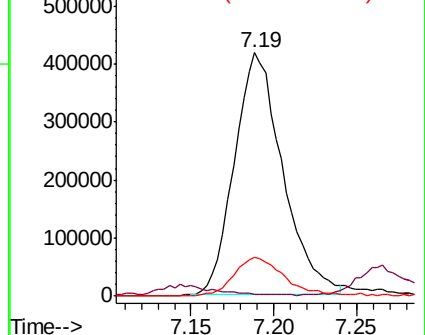
62 15.7 54.6 82.0#

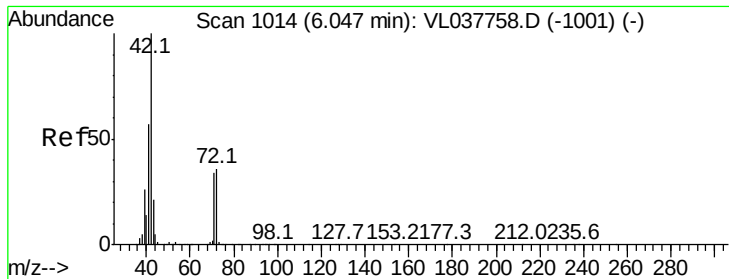


Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 62.10 (61.80 to 62.80): VL0





#41

Tetrahydrofuran

Concen: 0.917 ppbv

RT: 6.07

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

Acq: 27 Oct 2021 17:42

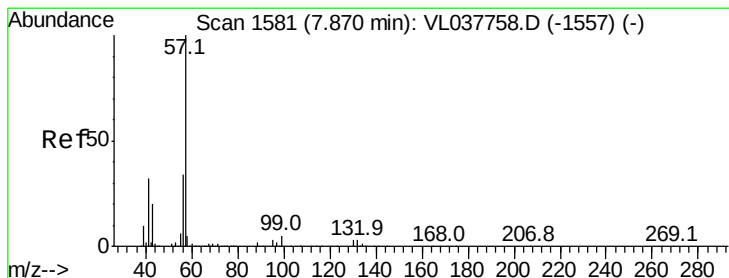
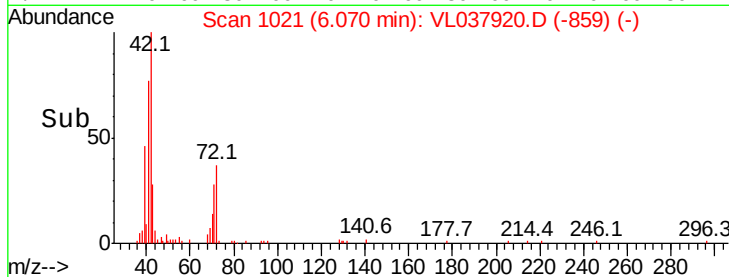
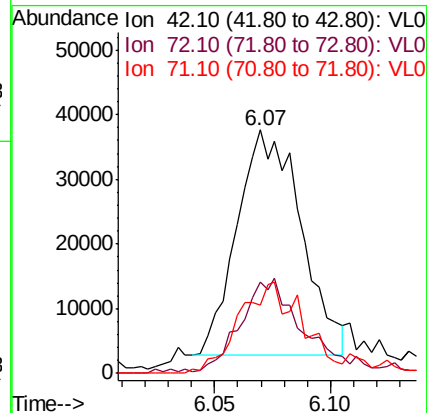
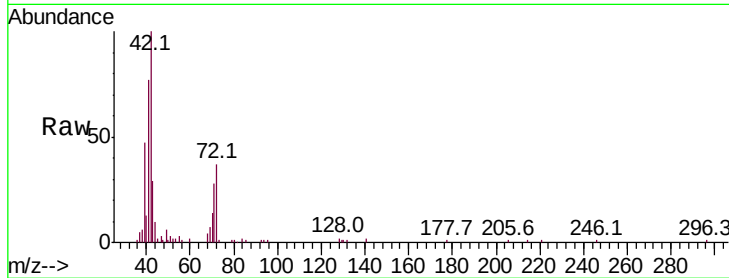
Tot Ion: 42 Resp: 66446

Ion Ratio Lower Upper

42 100

72 45.7 31.9 47.9

71 44.1 30.3 45.5



#44

2,2,4-Trimethylpentane

Concen: 0.100 ppbv

RT: 7.89 min Scan# 1586

Delta R.T. 0.02 min

Lab File: VL037920.D

Acq: 27 Oct 2021 17:42

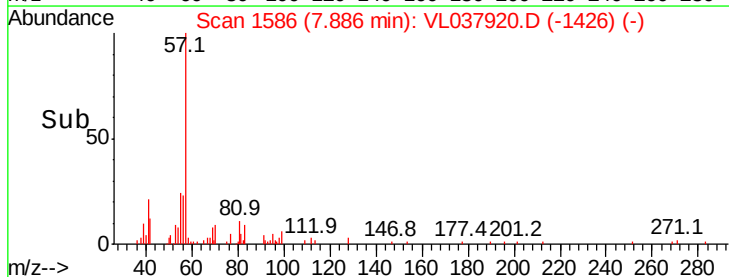
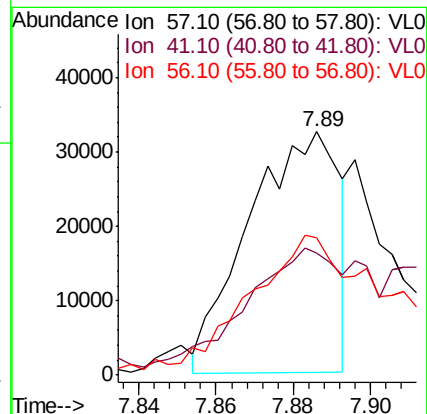
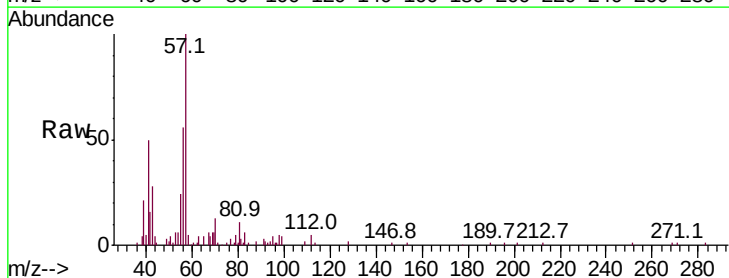
Tgt Ion: 57 Resp: 52590

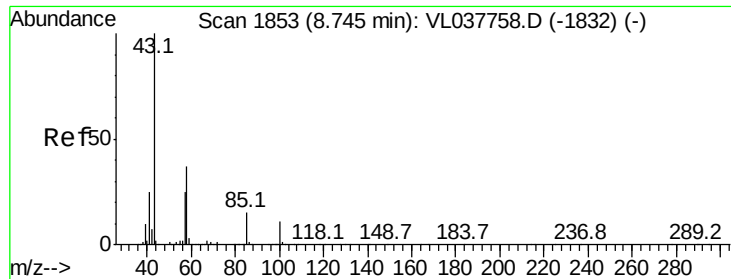
Ion Ratio Lower Upper

57 100

41 132.6 25.6 38.4#

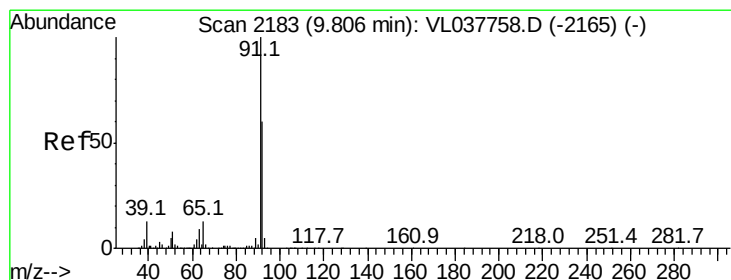
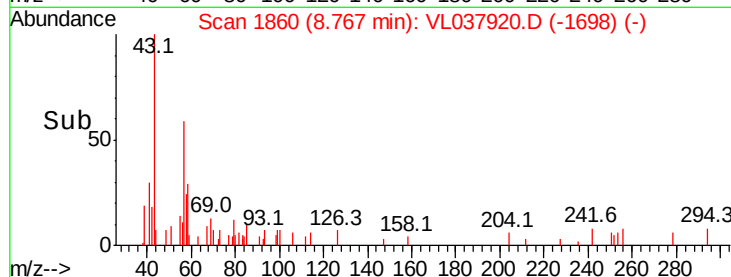
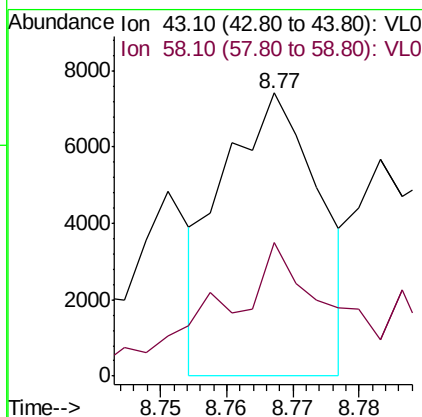
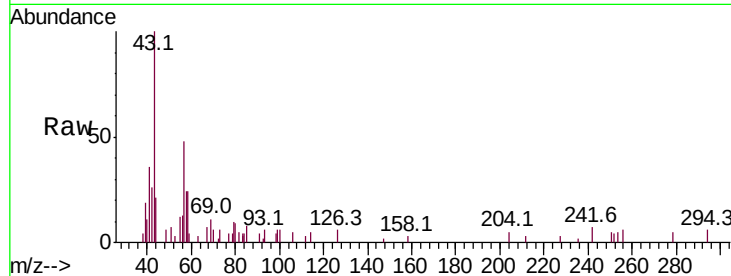
56 110.5 25.5 38.3#





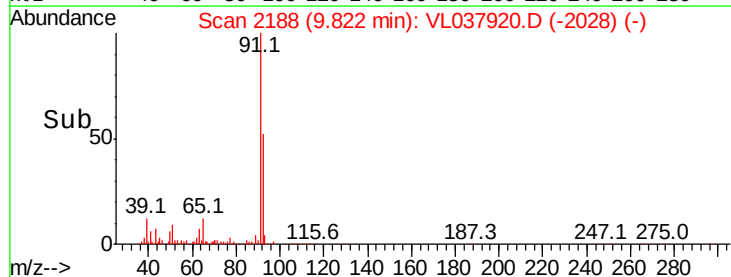
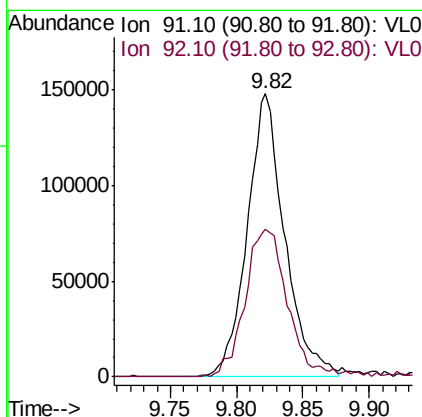
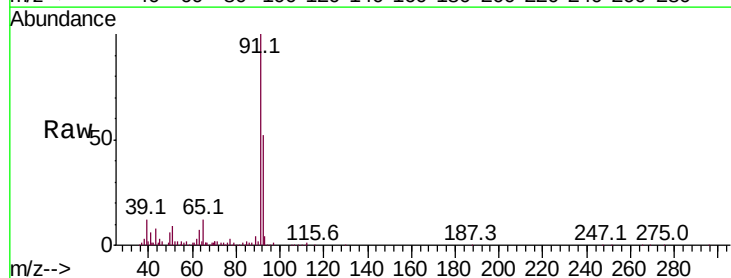
#50
 4-Methyl-2-Pentanone
 Concen: 0.039 ppbv
 RT: 8.77
 Delta R.T. MSVOA.L
 Lab File: ClientSampleId:
 Acq: 27 Oct 2021 17:42

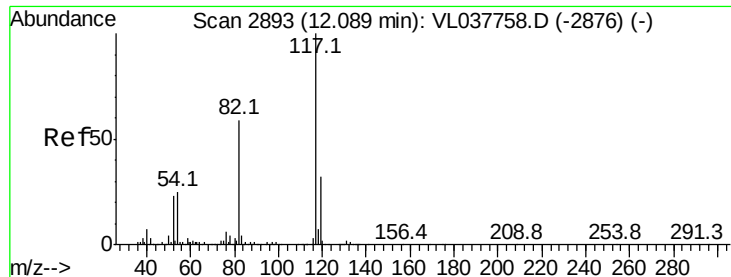
Tot Ion: 43 Resp: 7497
 Ion Ratio Lower Upper
 43 100
 58 84.1 29.4 44.0#



#53
 Toluene
 Concen: 0.839 ppbv
 RT: 9.82 min Scan# 2188
 Delta R.T. 0.02 min
 Lab File: VL037920.D
 Acq: 27 Oct 2021 17:42

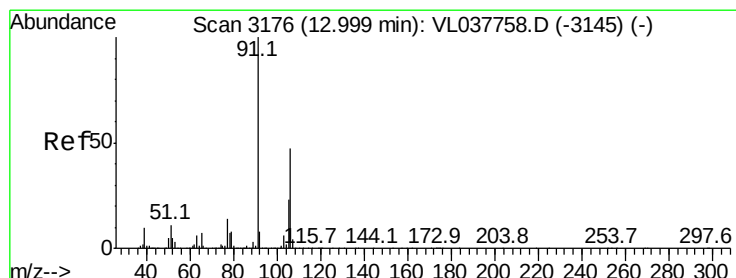
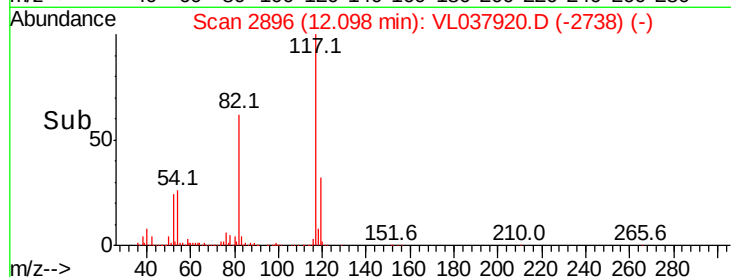
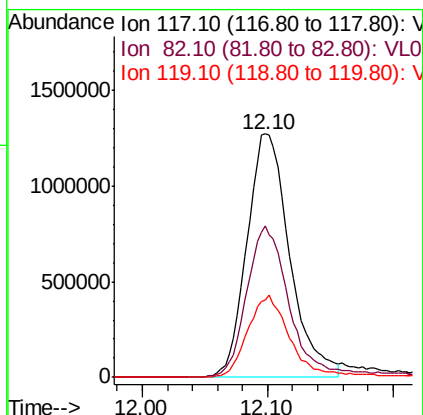
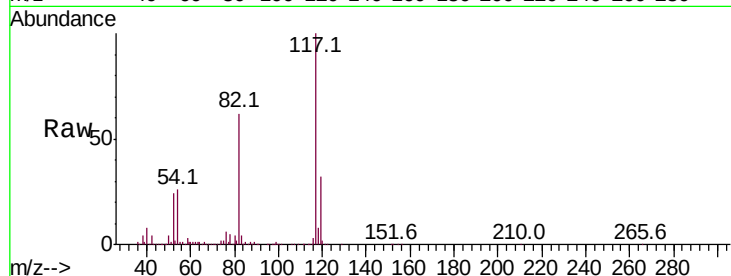
Tgt Ion: 91 Resp: 290991
 Ion Ratio Lower Upper
 91 100
 92 59.6 48.4 72.6





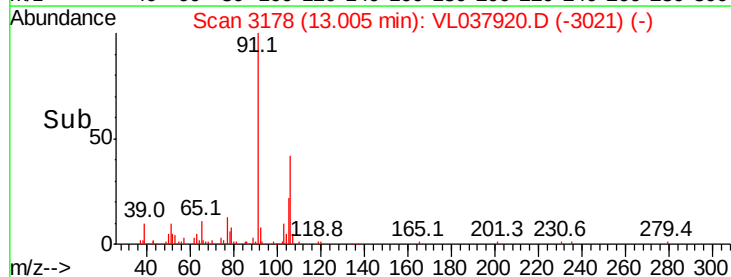
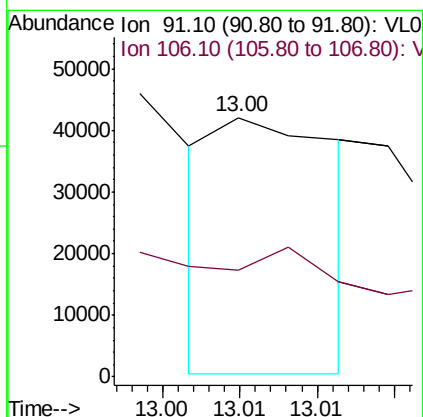
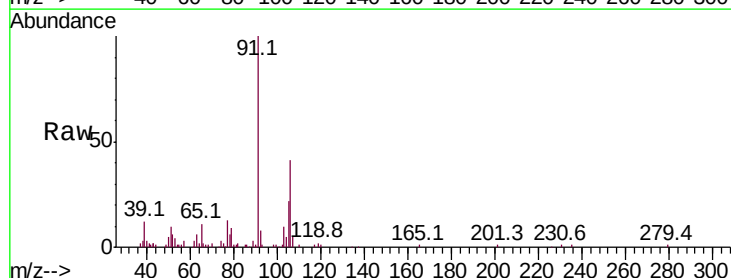
#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.10 min
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 27 Oct 2021 17:42
FIRE-PUMP-ROOM-1A

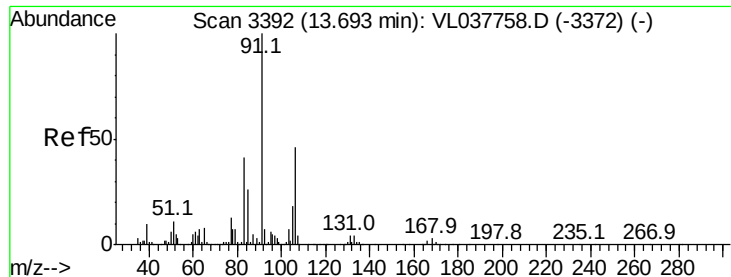
Tot Ion: 117 Resp: 3022316
Ion Ratio Lower Upper
117 100
82 65.0 52.2 78.2
119 34.5 26.0 39.0



#59
m/p-Xylene
Concen: 0.065 ppbv
RT: 13.00 min Scan# 3178
Delta R.T.: 0.01 min
Lab File: VL037920.D
Acq: 27 Oct 2021 17:42

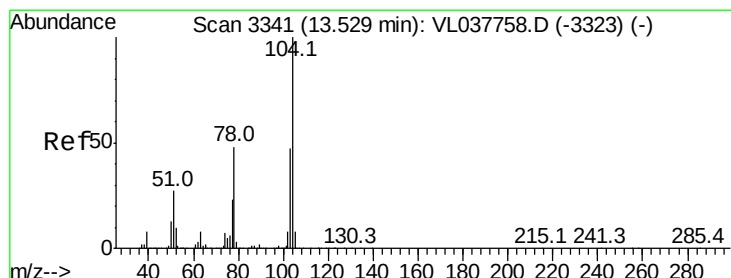
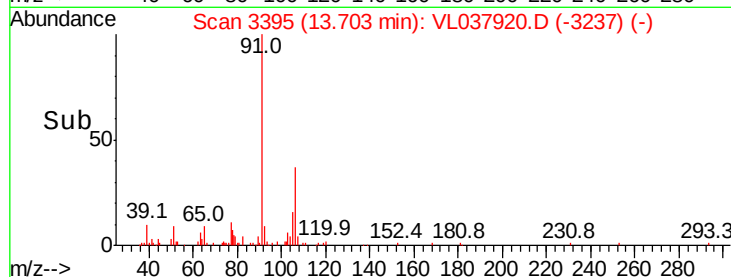
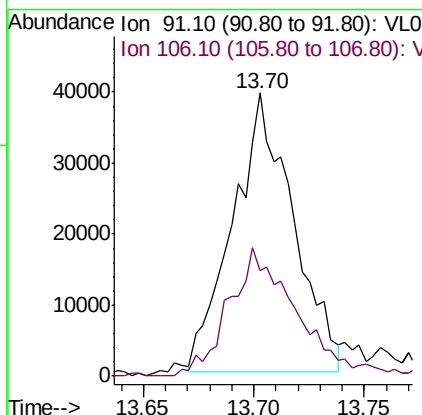
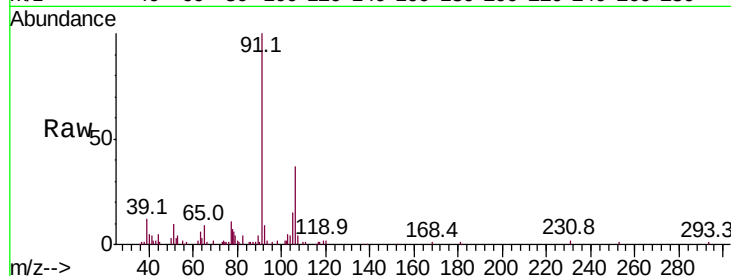
Tgt Ion: 91 Resp: 22779
Ion Ratio Lower Upper
91 100
106 0.0 36.7 55.1#





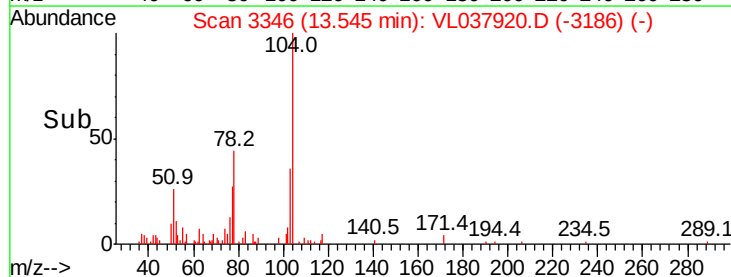
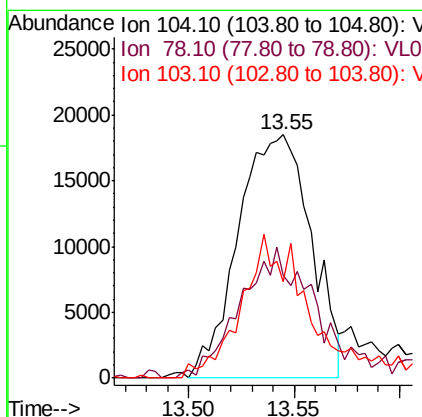
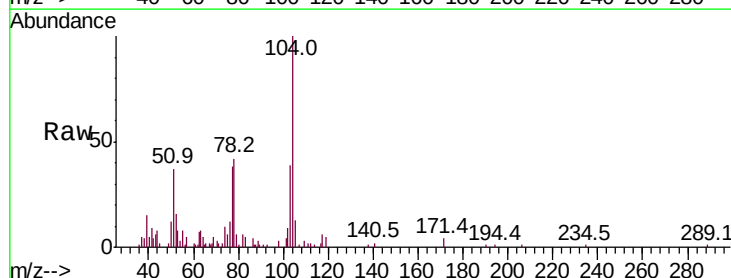
#60
o-Xylene
Concen: 0.224 ppbv
RT: 13.70
Delta R.T. MSVOA_L
Lab File: ClientSampleId:
Acq: 27 Oct 2021 17:42
FIRE-PUMP-ROOM-1A

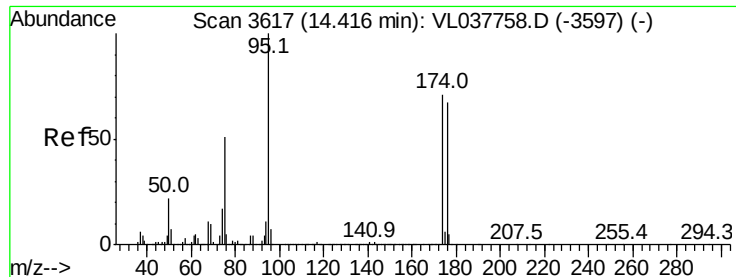
Tot Ion: 91 Resp: 74763
Ion Ratio Lower Upper
91 100
106 52.5 23.5 70.5



#61
Styrene
Concen: 0.276 ppbv
RT: 13.55 min Scan# 3346
Delta R.T. 0.02 min
Lab File: VL037920.D
Acq: 27 Oct 2021 17:42

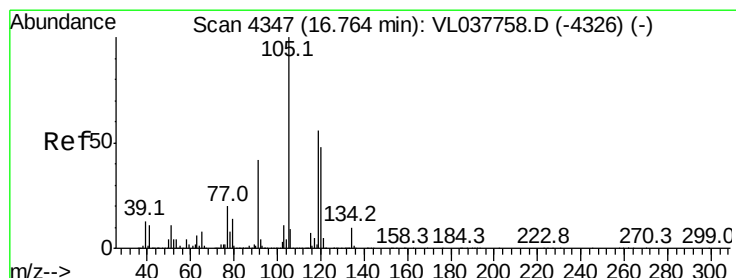
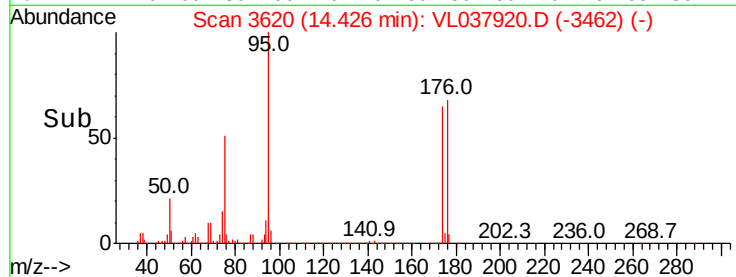
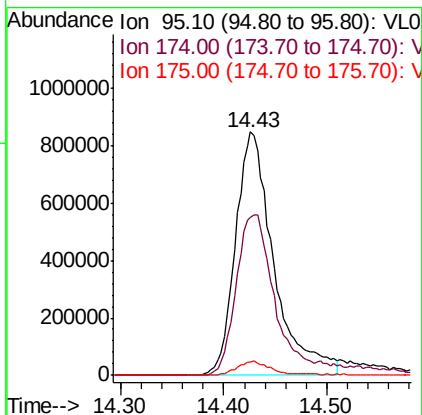
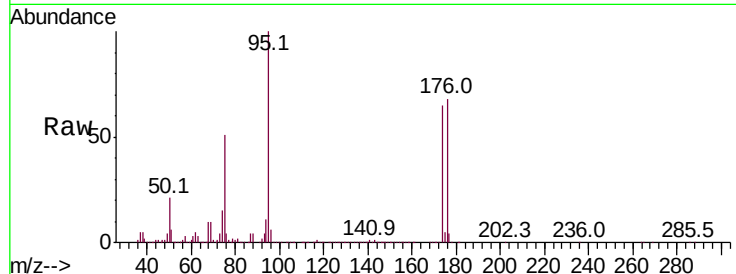
Tgt Ion: 104 Resp: 44568
Ion Ratio Lower Upper
104 100
78 63.8 40.6 61.0#
103 56.6 39.6 59.4





#68
 1-Bromo-4-Fluorobenzene
 Concen: 10.401 ppbv
 RT: 14.43 min
 Delta R.T.: 0.01 min
 Lab File: VL037920.D
 Acq: 27 Oct 2021 17:42

Tot Ion: 95 Resp: 2198319
 Ion Ratio Lower Upper
 95 100
 174 73.6 57.8 86.6
 175 5.4 4.7 7.1



#74
 1,2,4-Trimethylbenzene
 Concen: 0.032 ppbv
 RT: 16.78 min Scan# 4351
 Delta R.T.: 0.01 min
 Lab File: VL037920.D
 Acq: 27 Oct 2021 17:42

Tgt Ion: 105 Resp: 11532
 Ion Ratio Lower Upper
 105 100
 120 67.9 38.4 57.6#
 91 0.8 34.2 51.2#
 77 8.8 15.8 23.8#

