

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL102721\
 Data File : VL037917.D
 Acq On : 27 Oct 2021 15:38
 Operator : SY/AP
 Sample : M4377-01
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA L
 ClientSampleId :
 VMP-5-MANIFOLD

Quant Time: Oct 28 05:18:17 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

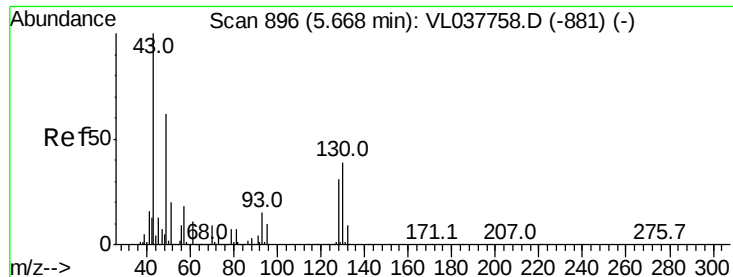
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.69	49	1276424	10.00	ppbv	0.02
33) 1,4-Difluorobenzene	7.19	114	3779274	10.00	ppbv	0.02
55) Chlorobenzene-d5	12.10	117	3308786	10.00	ppbv	0.02

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.43	95	2123417	9.18	ppbv	0.01
Spiked Amount	10.000	Range	65 - 135	Recovery	=	91.80%

Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.07	85	27990	0.137	ppbv 89
3) Chlorodifluoromethane	2.98	51	12780716	52.112	ppbv # 61
4) Chloromethane	3.16	50	13165	0.147	ppbv # 87
9) Propene	3.22	41	1502139	16.646	ppbv 99
10) Heptane	8.15	43	20093	0.098	ppbv # 1
11) Trichlorofluoromethane	3.97	101	19444	0.107	ppbv 95
13) Ethanol	3.62	45	5581337	756.281	ppbv 80
15) Acetone	3.87	43	1447197	12.630	ppbv 93
16) 1,3-Butadiene	3.38	39	465516	5.584	ppbv # 13
17) tert-Butyl alcohol	4.32	59	63226	0.536	ppbv 99
19) Isopropyl Alcohol	3.99	45	2503555	35.120	ppbv # 98
20) Methylene Chloride	4.36	84	301594	5.209	ppbv 98
21) Allyl Chloride	4.37	41	3415	0.034	ppbv # 1
23) Vinyl Acetate	5.08	43	103587	0.603	ppbv # 75
25) Ethyl Acetate	5.71	43	257203	0.800	ppbv # 85
26) Hexane	5.71	57	302623	1.911	ppbv # 49
27) Carbon Disulfide	4.58	76	4430	0.032	ppbv # 4
29) Chloroform	5.77	83	627171	2.771	ppbv 99
30) Cyclohexane	7.15	84	6425	0.048	ppbv # 1
34) 2-Butanone	5.26	43	219741	1.440	ppbv 92
35) Carbon Tetrachloride	7.04	117	7525	0.035	ppbv # 83
36) Benzene	6.91	78	50047	0.155	ppbv 92
39) 1,2-Dichloropropane	7.19	63	881739	7.262	ppbv # 27
41) Tetrahydrofuran	6.08	42	101785	1.362	ppbv 98
44) 2,2,4-Trimethylpentane	7.89	57	118196	0.218	ppbv # 59
52) Tetrachloroethene	11.24	164	4441	0.035	ppbv # 81
53) Toluene	9.82	91	330235	0.923	ppbv 100
58) Ethyl Benzene	12.73	91	27336	0.062	ppbv # 79
59) m/p-Xylene	13.00	91	84629	0.222	ppbv # 30
60) o-Xylene	13.71	91	78902	0.216	ppbv 99
61) Styrene	13.55	104	10294	0.058	ppbv # 27
74) 1,2,4-Trimethylbenzene	16.79	105	17860	0.045	ppbv # 70

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.69 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: VMP-5-MANIFOLD

Acq: 27 Oct 2021 15:38

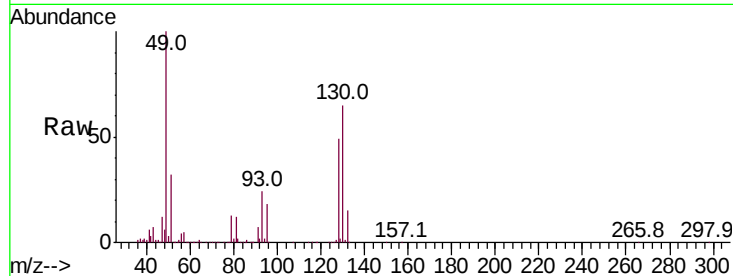
Tot Ion: 49 Resp: 1276424

Ion Ratio Lower Upper

49 100

128 51.7 27.1 81.3

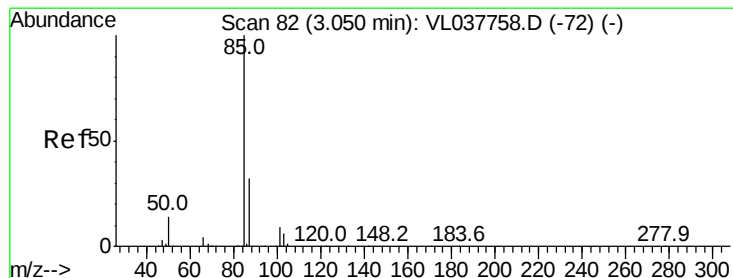
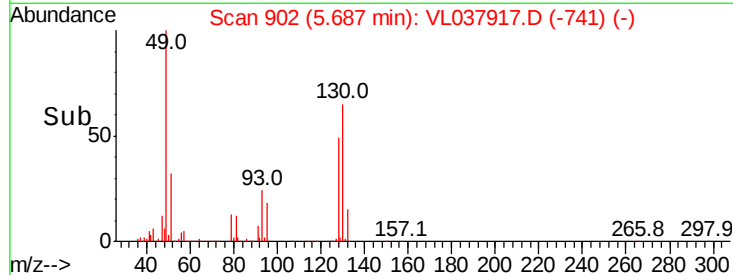
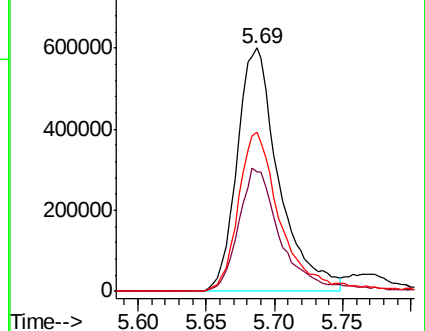
130 68.0 33.2 99.6



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



#2

Dichlorodifluoromethane

Concen: 0.137 ppbv

RT: 3.07 min Scan# 88

Delta R.T. 0.02 min

Lab File: VL037917.D

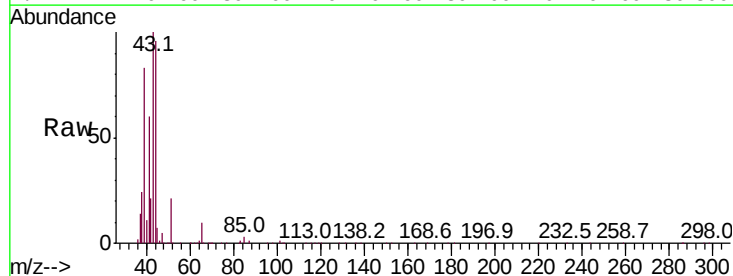
Acq: 27 Oct 2021 15:38

Tgt Ion: 85 Resp: 27990

Ion Ratio Lower Upper

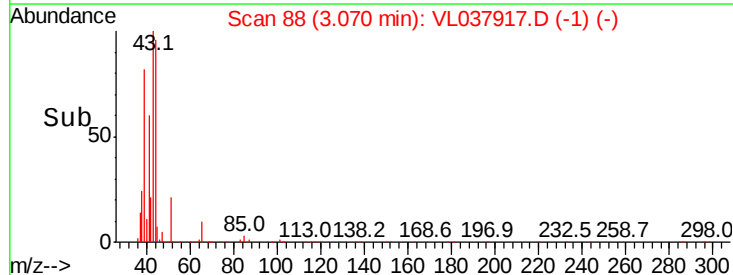
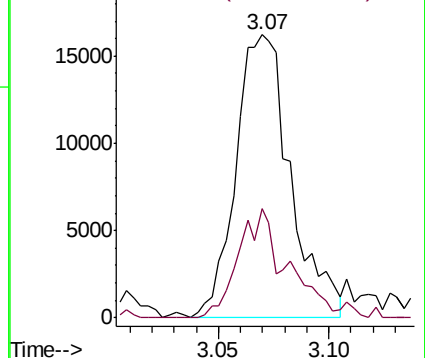
85 100

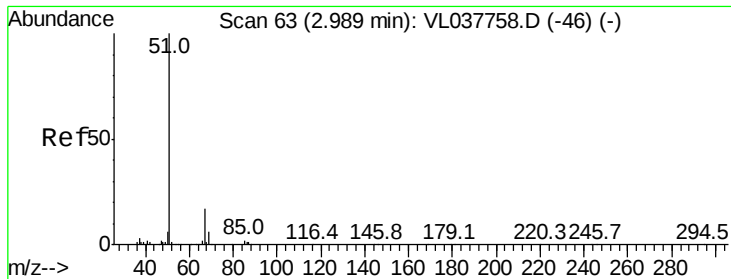
87 38.4 25.7 38.5



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 52.112 ppbv

RT: 2.98 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

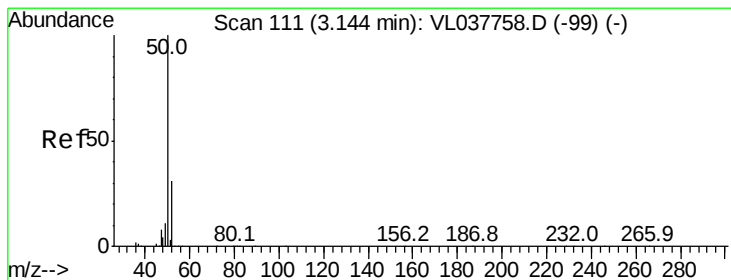
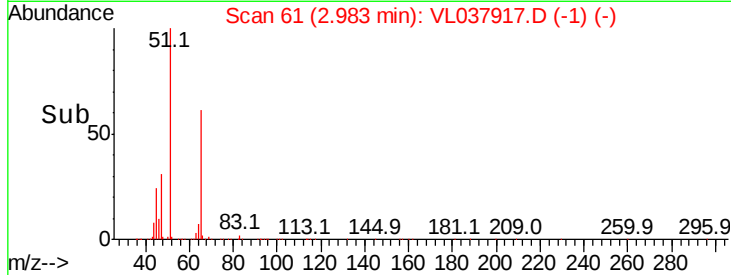
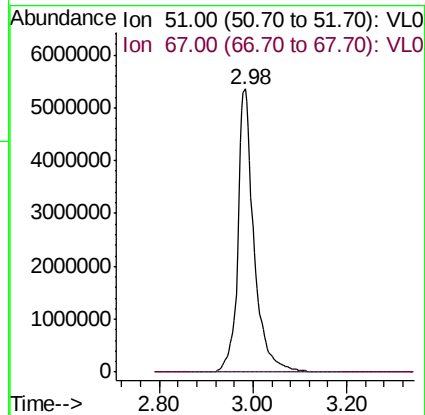
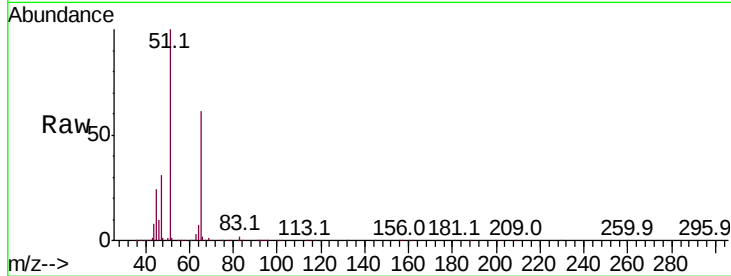
Acq: 27 Oct 2021 15:38 VMP-5-MANIFOLD

Tot Ion: 51 Resp: 12780716

Ion Ratio Lower Upper

51 100

67 0.1 13.5 20.3#



#4

Chloromethane

Concen: 0.147 ppbv

RT: 3.16 min Scan# 117

Delta R.T. 0.02 min

Lab File: VL037917.D

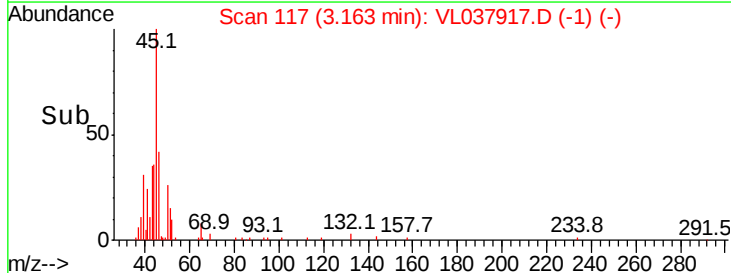
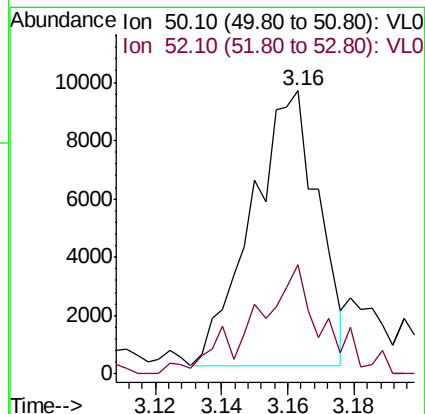
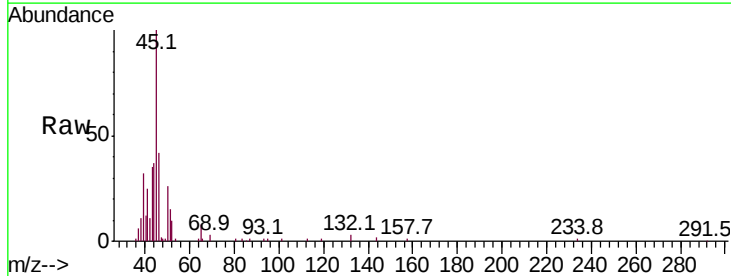
Acq: 27 Oct 2021 15:38

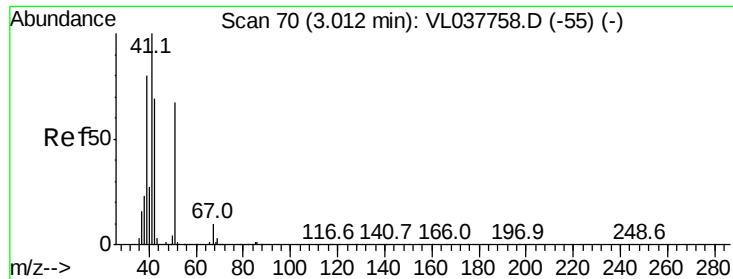
Tgt Ion: 50 Resp: 13165

Ion Ratio Lower Upper

50 100

52 37.6 24.4 36.6#





#9

Propene

Concen: 16.646 ppbv

RT: 3.22 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

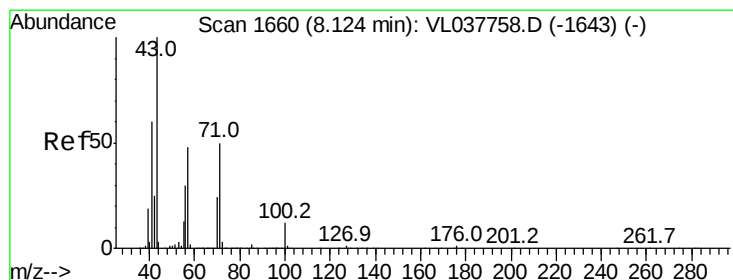
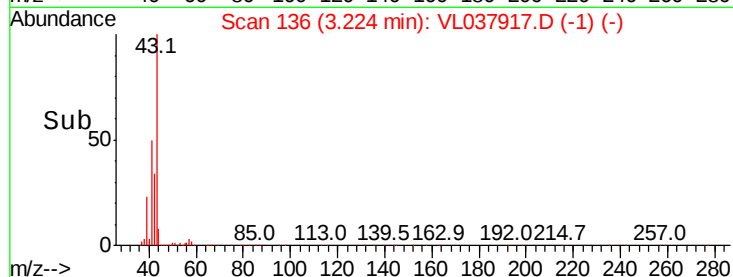
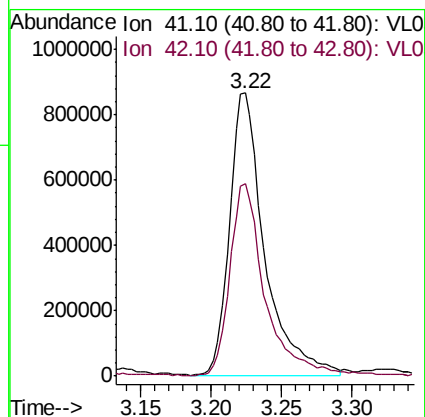
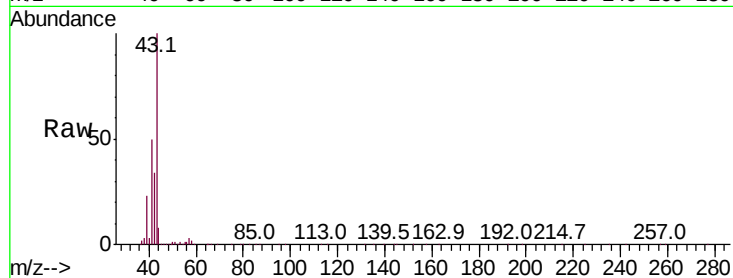
Acq: 27 Oct 2021 15:38 VMP-5-MANIFOLD

Tot Ion: 41 Resp: 1502139

Ion Ratio Lower Upper

41 100

42 68.4 54.2 81.2



#10

Heptane

Concen: 0.098 ppbv

RT: 8.15 min Scan# 1667

Delta R.T. 0.02 min

Lab File: VL037917.D

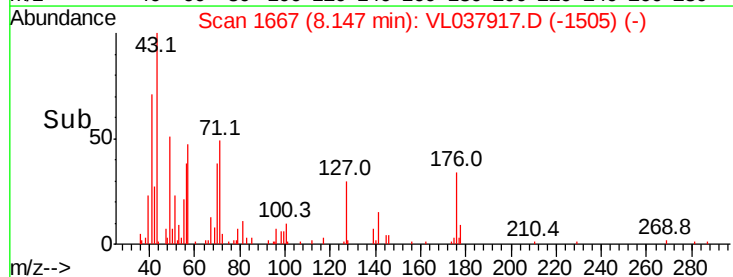
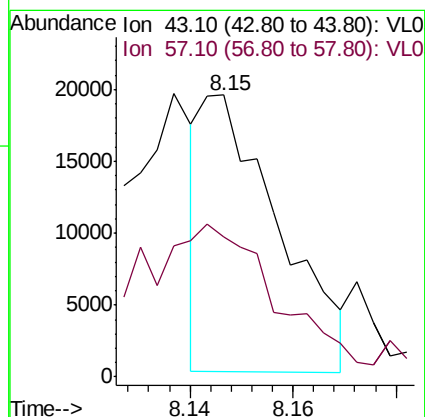
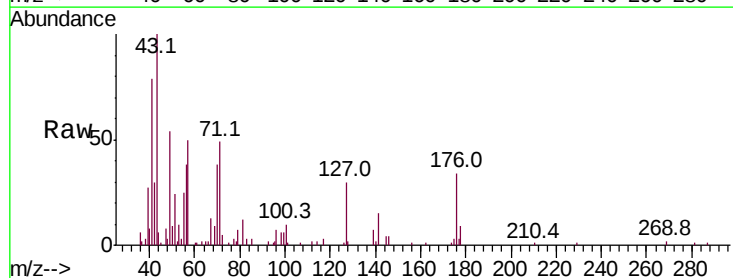
Acq: 27 Oct 2021 15:38

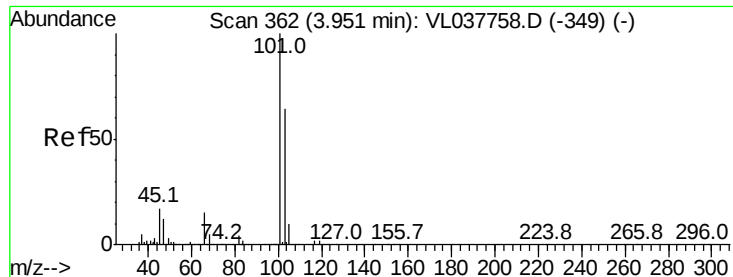
Tgt Ion: 43 Resp: 20093

Ion Ratio Lower Upper

43 100

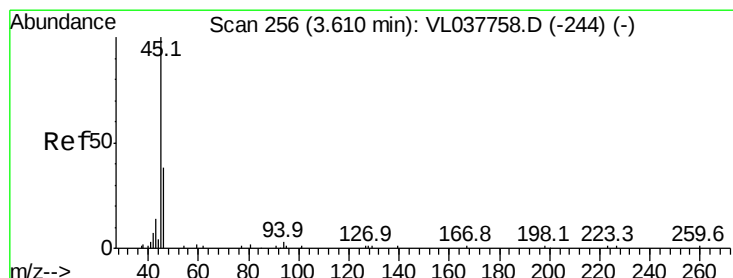
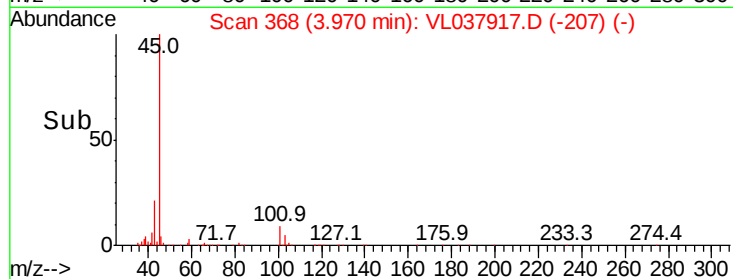
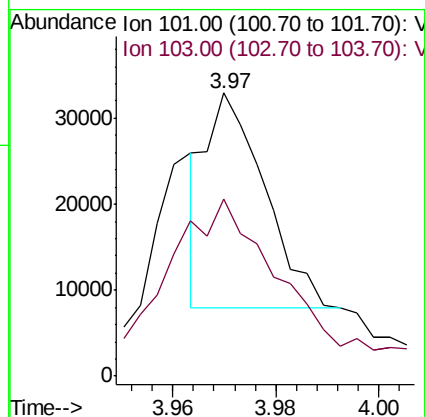
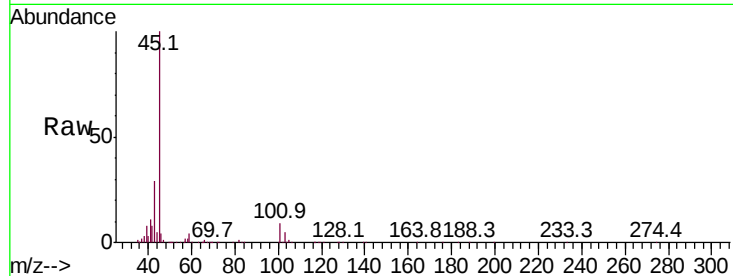
57 126.9 40.0 60.0#





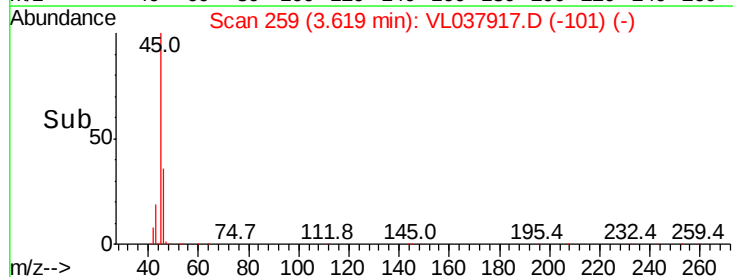
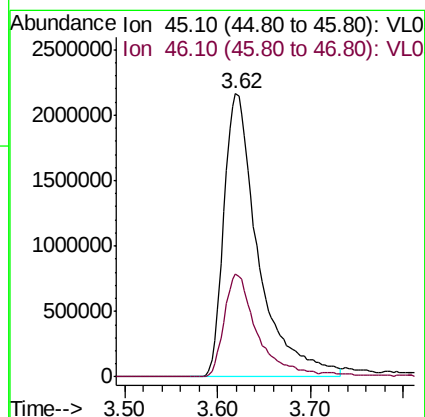
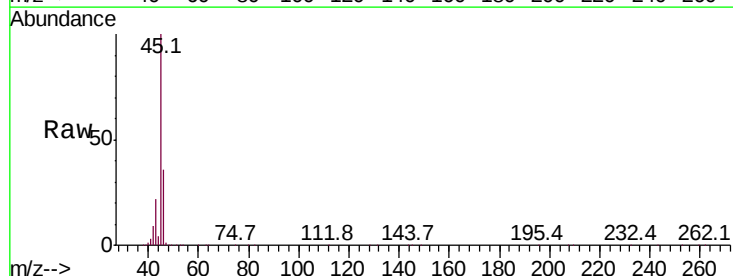
#11
 Trichlorofluoromethane
 Concen: 0.107 ppbv
 RT: 3.97
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 VMP-5-MANIFOLD
 Acq: 27 Oct 2021 15:38

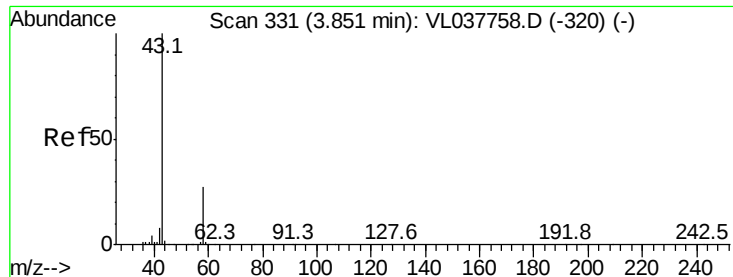
Tot Ion: 101 Resp: 19444
 Ion Ratio Lower Upper
 101 100
 103 68.3 51.5 77.3



#13
 Ethanol
 Concen: 756.281 ppbv
 RT: 3.62 min Scan# 259
 Delta R.T. 0.01 min
 Lab File: VL037917.D
 Acq: 27 Oct 2021 15:38

Tgt Ion: 45 Resp: 5581337
 Ion Ratio Lower Upper
 45 100
 46 37.1 20.2 81.0





#15

Acetone

Concen: 12.630 ppbv

RT: 3.87

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

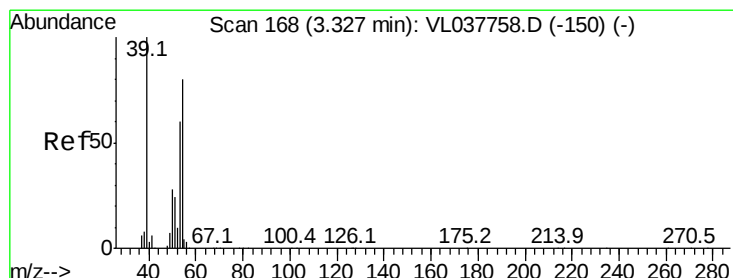
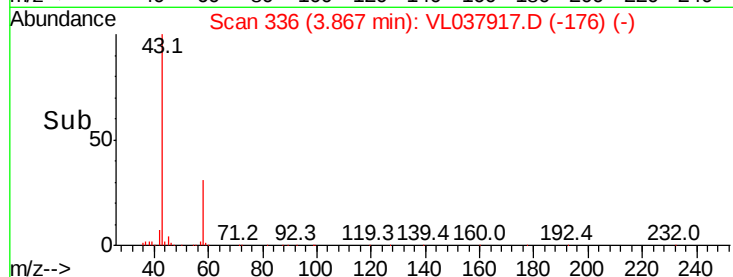
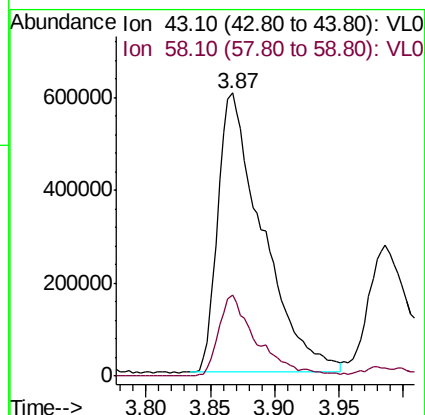
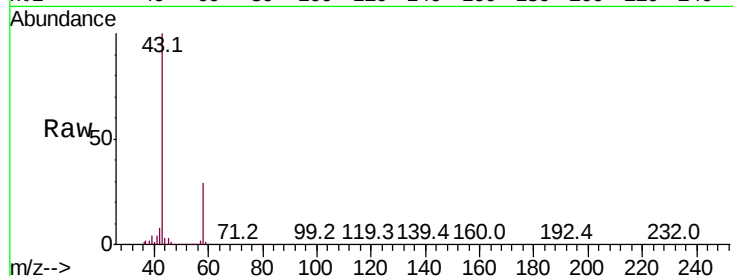
Acq: 27 Oct 2021 15:38

Tot Ion: 43 Resp: 1447197

Ion Ratio Lower Upper

43 100

58 25.0 23.0 34.6



#16

1,3-Butadiene

Concen: 5.584 ppbv

RT: 3.38 min Scan# 183

Delta R.T. 0.05 min

Lab File: VL037917.D

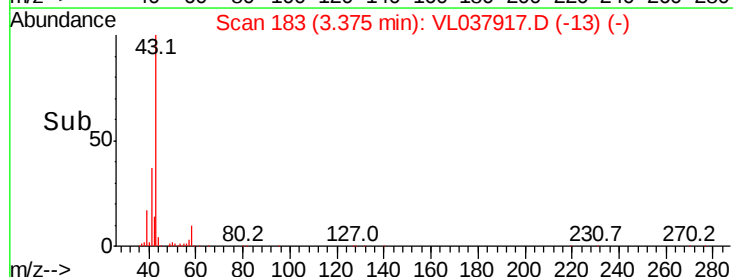
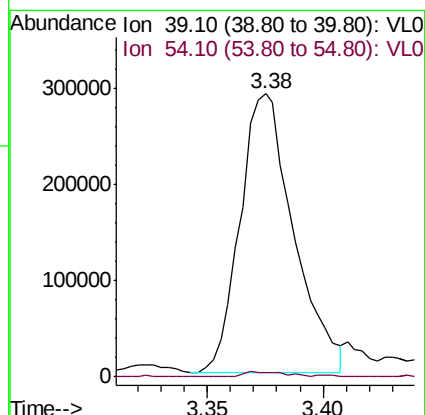
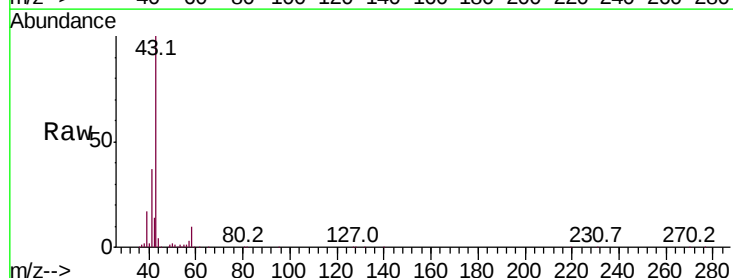
Acq: 27 Oct 2021 15:38

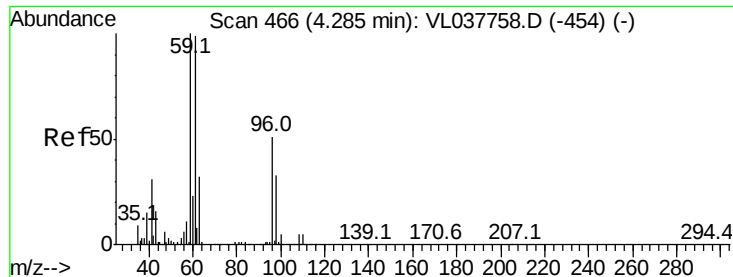
Tgt Ion: 39 Resp: 465516

Ion Ratio Lower Upper

39 100

54 2.2 61.7 92.5#





#17

tert-Butyl alcohol

Concen: 0.536 ppbv

RT: 4.32 Instrument: MSVOA_1

Delta R.T.

Lab File: ClientSampleId:

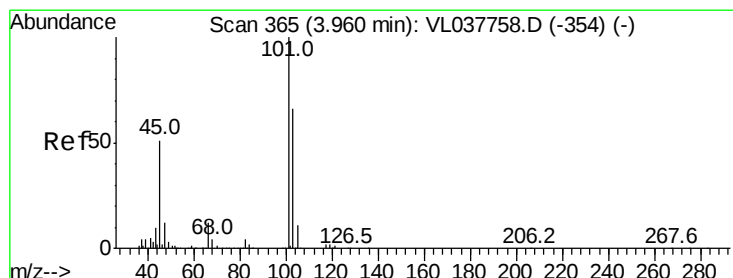
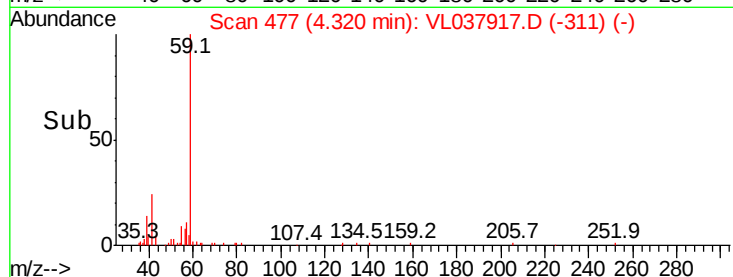
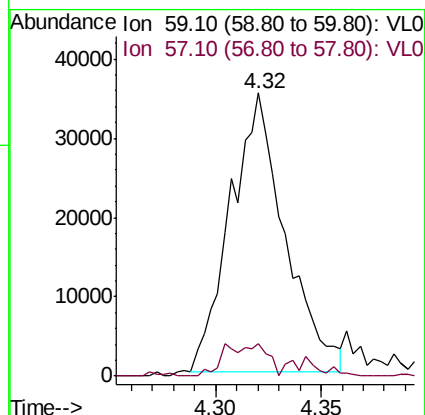
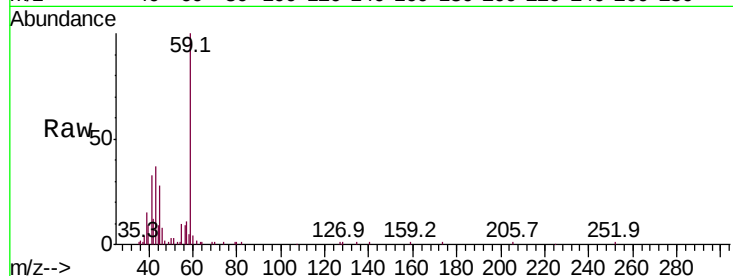
Acq: 27 Oct 2021 15:38 VMP-5-MANIFOLD

Tot Ion: 59 Resp: 63226

Ion Ratio Lower Upper

59 100

57 10.6 8.6 13.0



#19

Isopropyl Alcohol

Concen: 35.120 ppbv

RT: 3.99 min Scan# 373

Delta R.T. 0.03 min

Lab File: VL037917.D

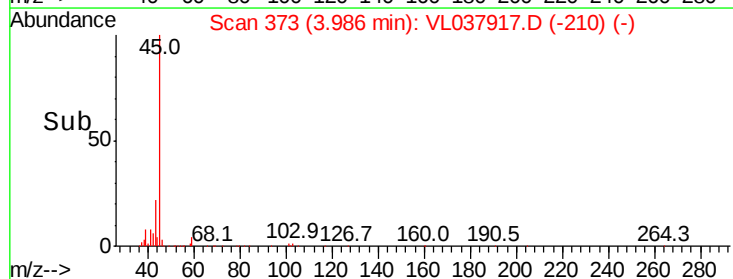
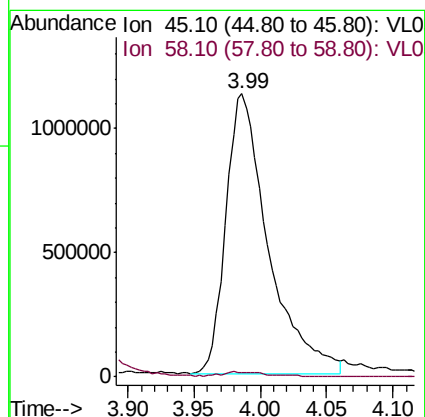
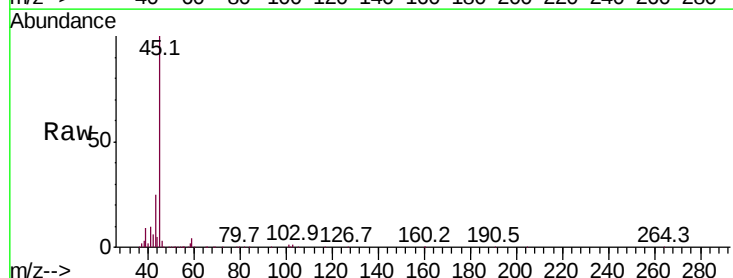
Acq: 27 Oct 2021 15:38

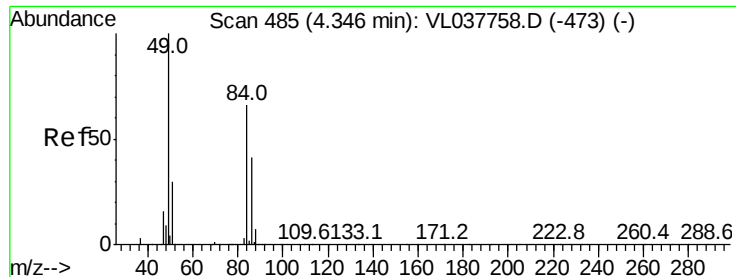
Tgt Ion: 45 Resp: 2503555

Ion Ratio Lower Upper

45 100

58 2.3 1.1 1.7#





#20

Methylene Chloride

Concen: 5.209 ppbv

RT: 4.36

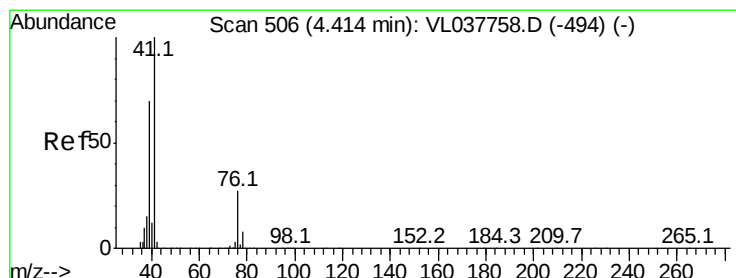
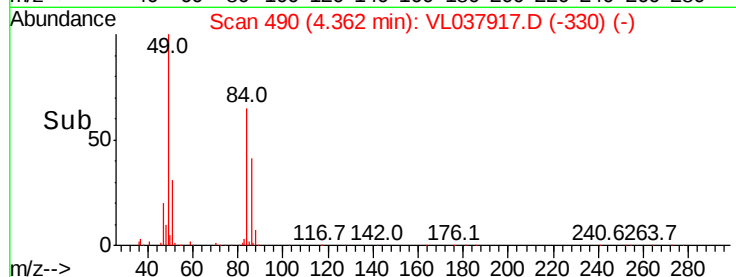
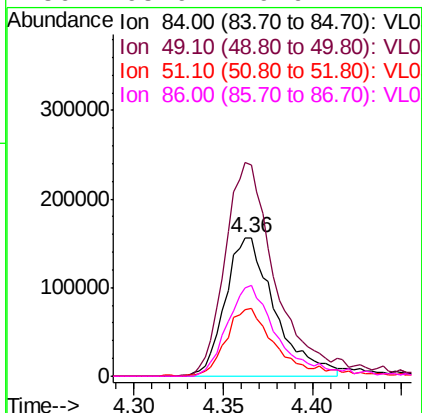
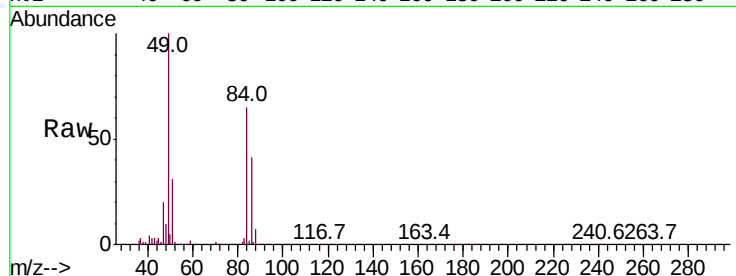
Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: VMP-5-MANIFOLD

Acq: 27 Oct 2021 15:38

Tot Ion:	84	Resp:	301594
Ion	Ratio	Lower	Upper
84	100		
49	153.8	120.7	181.1
51	47.6	36.2	54.4
86	63.6	49.6	74.4



#21

Allyl Chloride

Concen: 0.034 ppbv

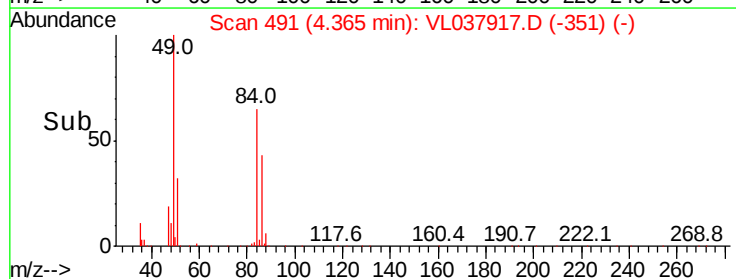
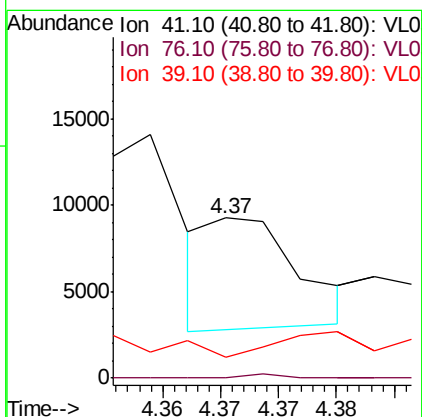
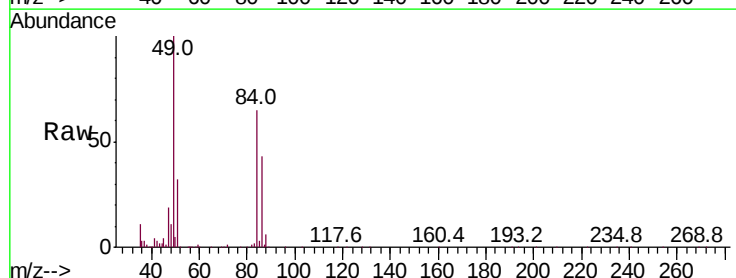
RT: 4.37 min Scan# 491

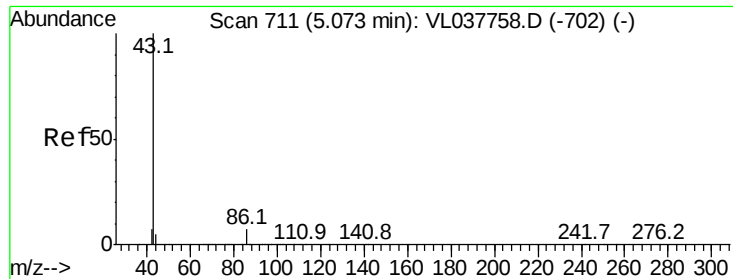
Delta R.T. -0.05 min

Lab File: VL037917.D

Acq: 27 Oct 2021 15:38

Tgt Ion:	41	Resp:	3415
Ion	Ratio	Lower	Upper
41	100		
76	0.0	22.4	33.6#
39	266.2	58.0	87.0#





#23

Vinyl Acetate

Concen: 0.603 ppbv

RT: 5.08 Instrument: MSVOA_1

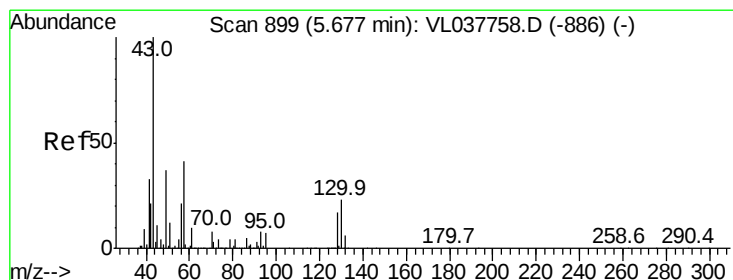
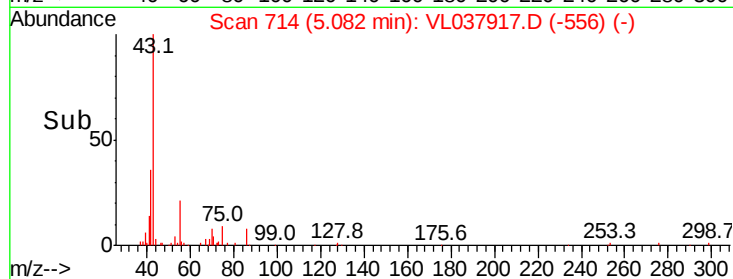
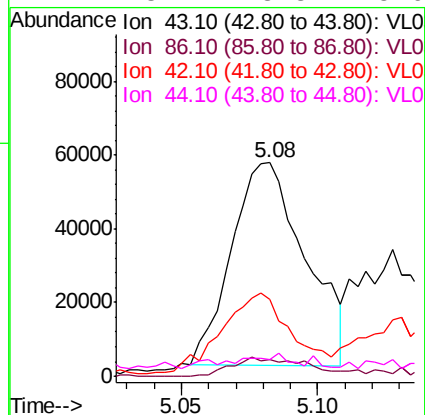
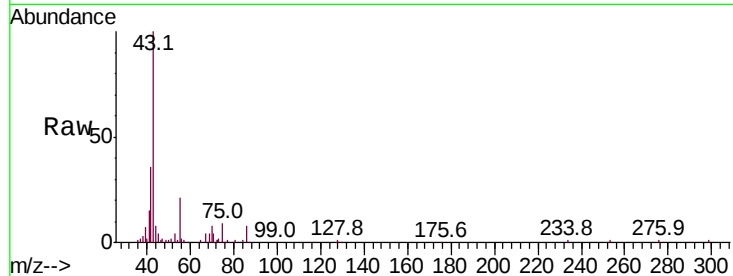
Delta R.T.

Lab File: ClientSampleId:

Acq: 27 Oct 2021 15:38 VMP-5-MANIFOLD

Tot Ion: 43 Resp: 103587

Ion	Ratio	Lower	Upper
43	100		
86	8.2	5.0	7.4#
42	26.8	7.4	11.0#
44	3.4	3.8	5.6#



#25

Ethyl Acetate

Concen: 0.800 ppbv

RT: 5.71 min Scan# 909

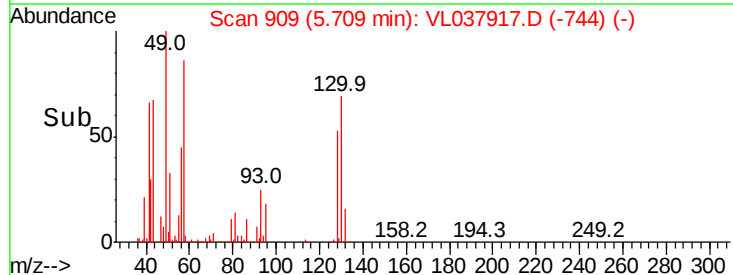
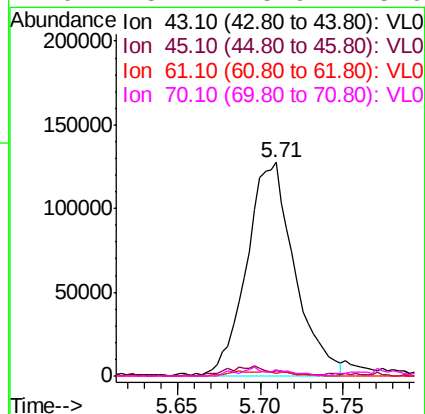
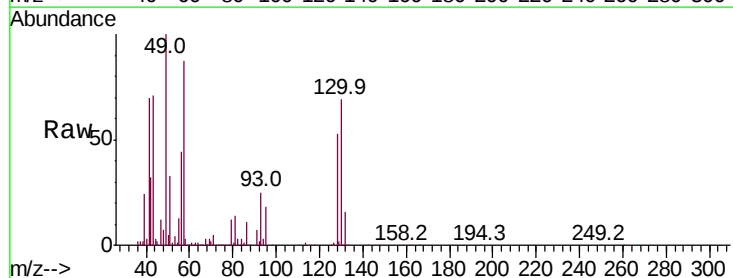
Delta R.T. 0.03 min

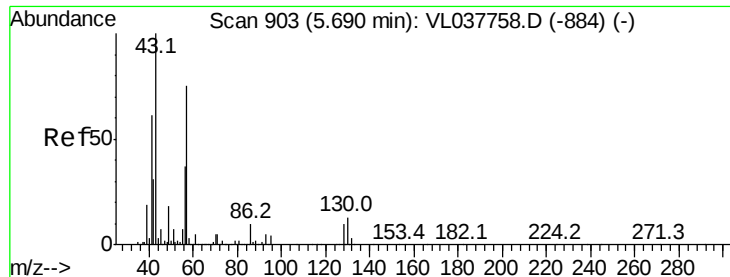
Lab File: VL037917.D

Acq: 27 Oct 2021 15:38

Tgt Ion: 43 Resp: 257203

Ion	Ratio	Lower	Upper
43	100		
45	4.9	8.1	12.1#
61	2.6	7.5	11.3#
70	3.4	5.9	8.9#





#26

Hexane

Concen: 1.911 ppbv

RT: 5.71 Instrument:

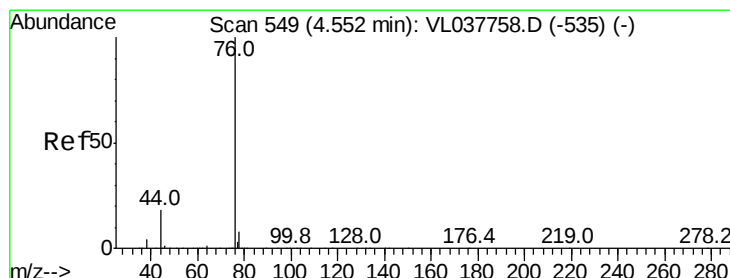
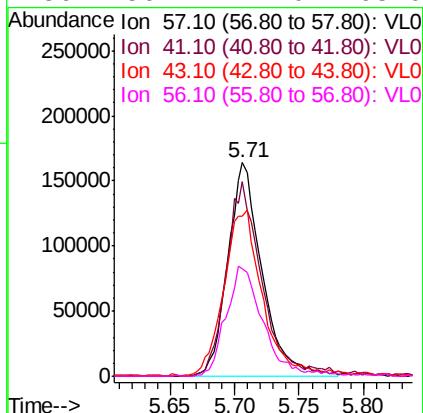
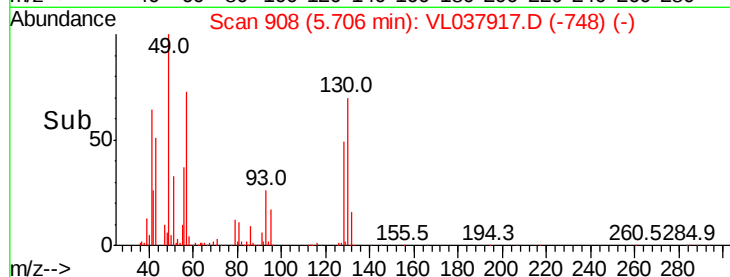
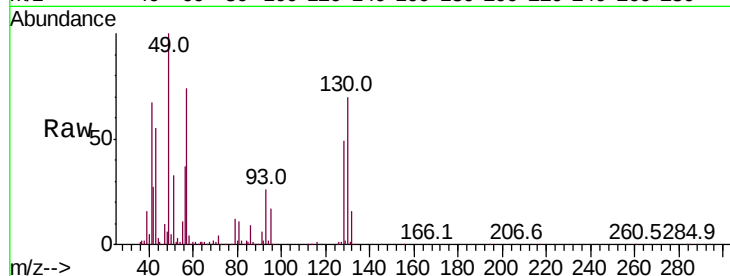
Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 27 Oct 2021 15:38 VMP-5-MANIFOLD

Tot Ion: 57 Resp: 302623

Ion	Ratio	Lower	Upper
57	100		
41	96.1	69.6	104.4
43	89.0	171.4	257.0#
56	56.1	42.0	63.0



#27

Carbon Disulfide

Concen: 0.032 ppbv

RT: 4.58 min Scan# 557

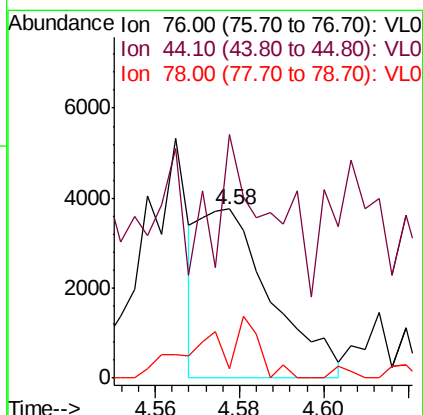
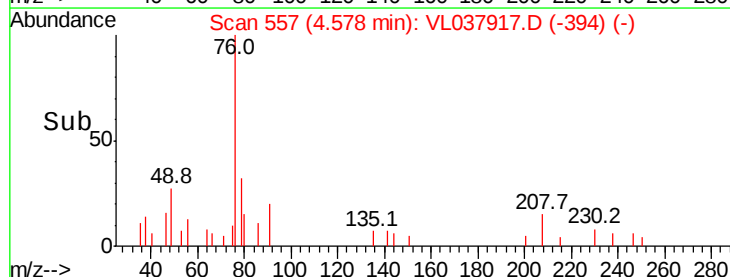
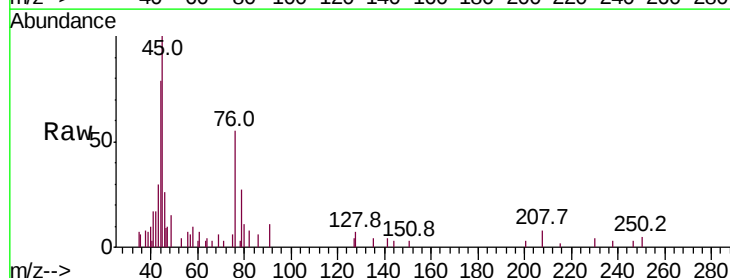
Delta R.T. 0.03 min

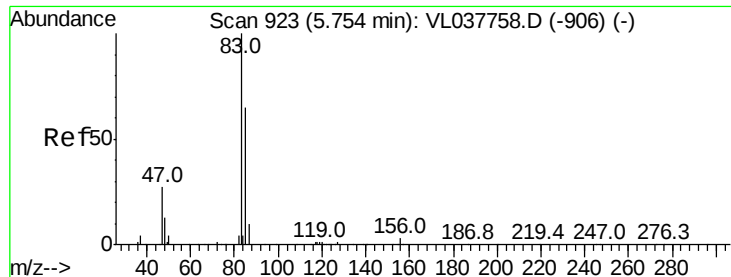
Lab File: VL037917.D

Acq: 27 Oct 2021 15:38

Tgt Ion: 76 Resp: 4430

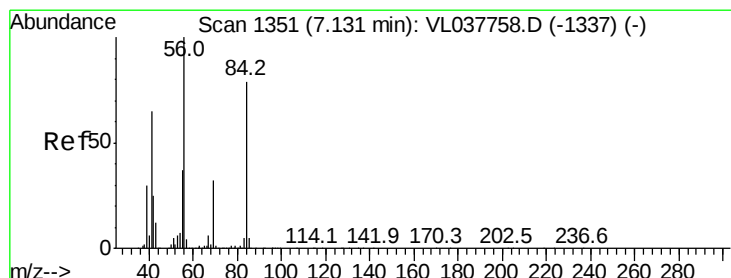
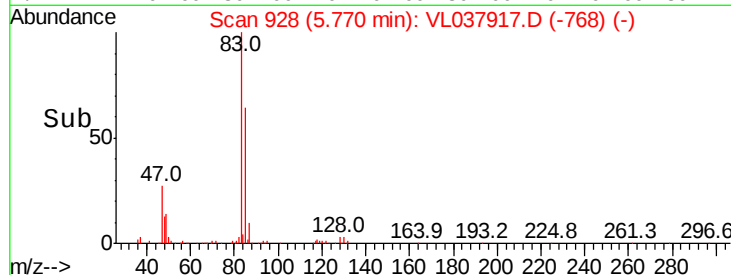
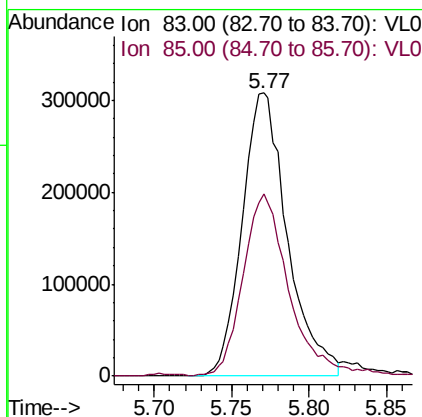
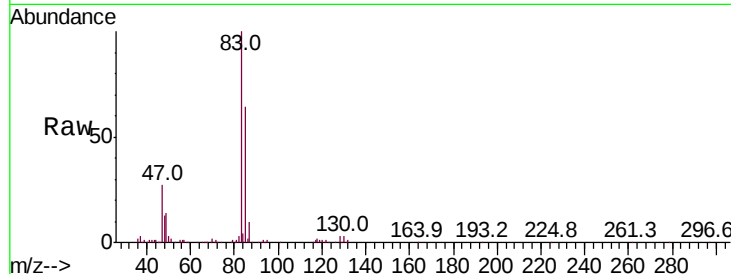
Ion	Ratio	Lower	Upper
76	100		
44	72.1	14.3	21.5#
78	26.6	7.8	11.6#





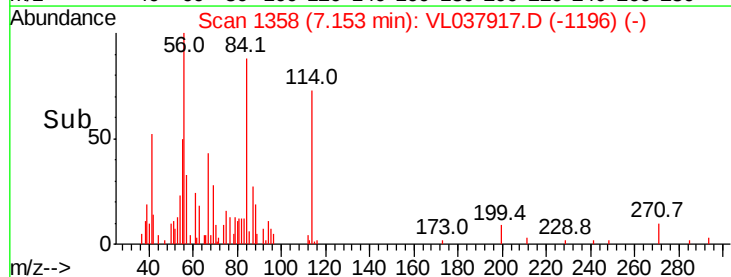
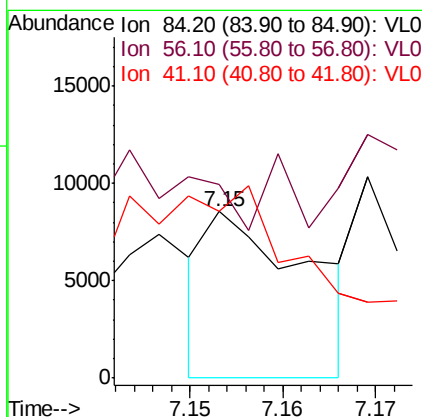
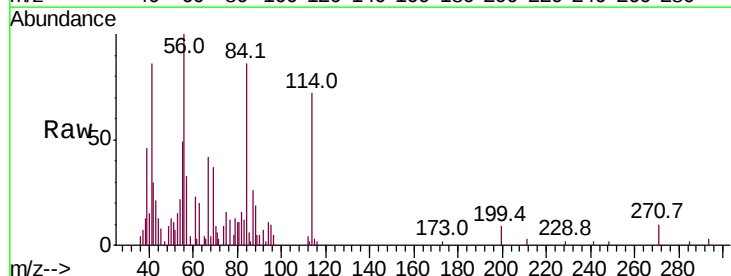
#29
Chloroform
Concen: 2.771 ppbv
RT: 5.77
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
VMP-5-MANIFOLD
Acq: 27 Oct 2021 15:38

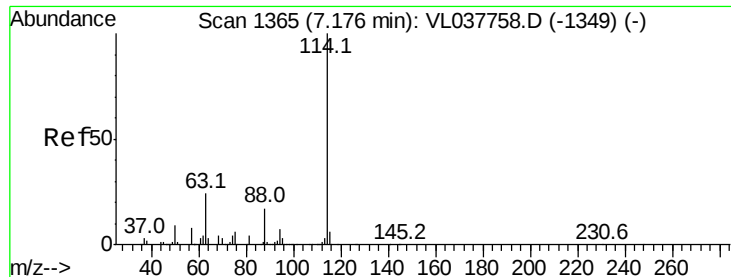
Tot Ion: 83 Resp: 627171
Ion Ratio Lower Upper
83 100
85 64.1 51.8 77.8



#30
Cyclohexane
Concen: 0.048 ppbv
RT: 7.15 min Scan# 1358
Delta R.T. 0.02 min
Lab File: VL037917.D
Acq: 27 Oct 2021 15:38

Tgt Ion: 84 Resp: 6425
Ion Ratio Lower Upper
84 100
56 0.0 113.0 169.4#
41 339.6 69.1 103.7#





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.19

Instrument: MSVOA_1

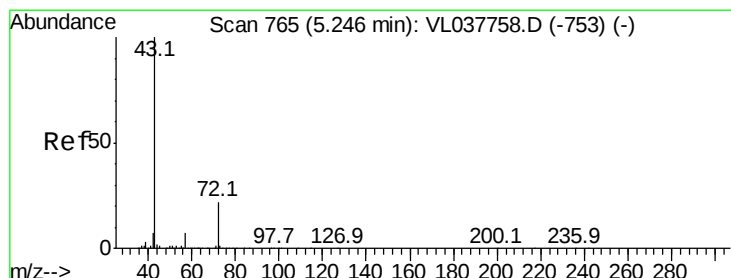
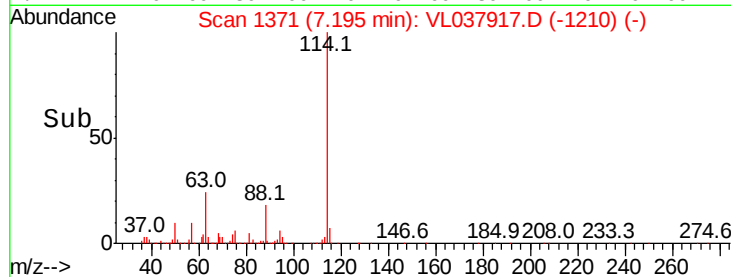
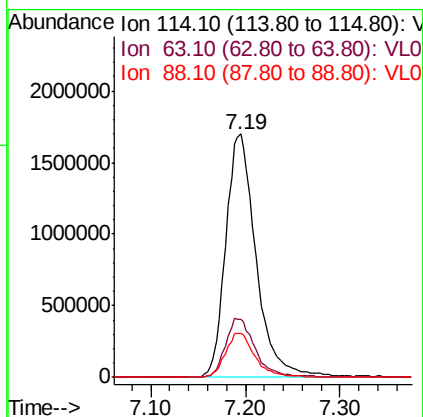
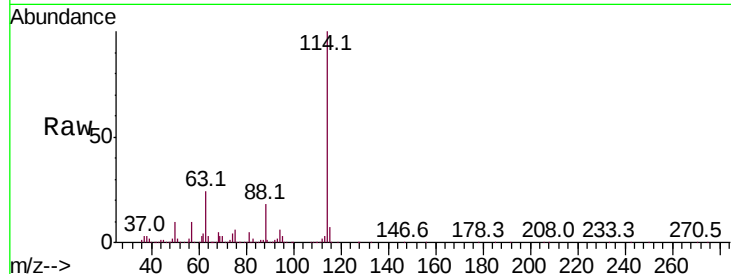
Delta R.T. ClientSampleId:

Lab File: VMP-5-MANIFOLD

Acq: 27 Oct 2021 15:38

Tot Ion:114 Resp: 3779274

Ion	Ratio	Lower	Upper
114	100		
63	23.9	19.4	29.2
88	17.9	14.4	21.6



#34

2-Butanone

Concen: 1.440 ppbv

RT: 5.26 min Scan# 770

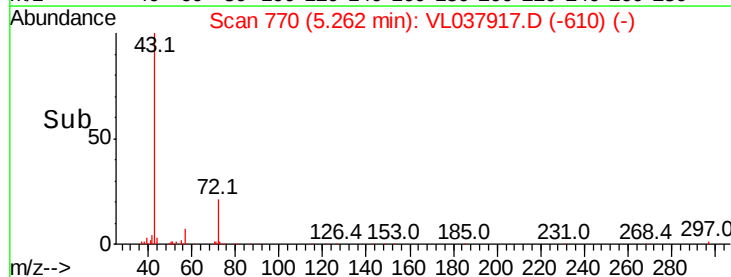
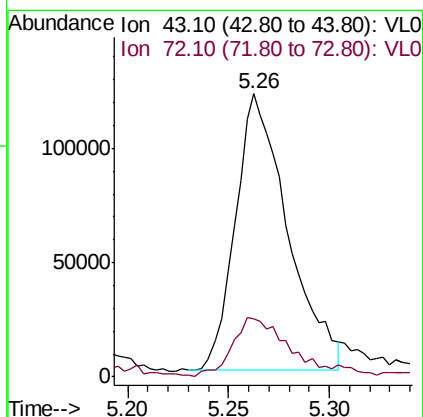
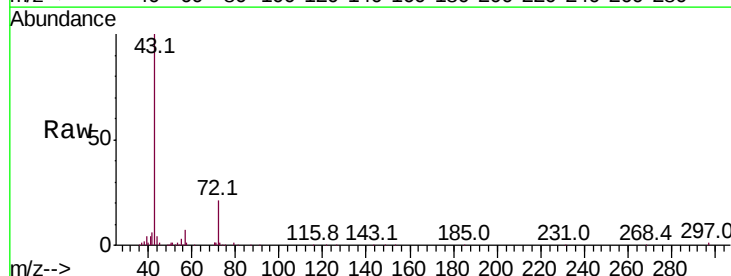
Delta R.T. 0.02 min

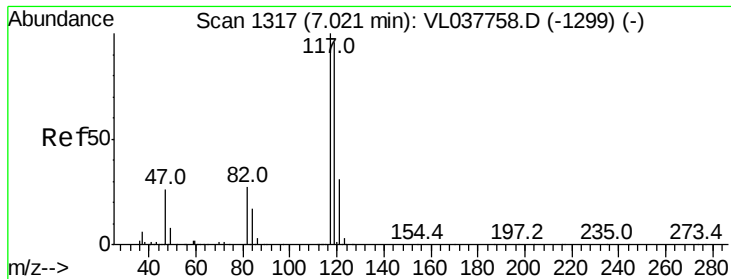
Lab File: VL037917.D

Acq: 27 Oct 2021 15:38

Tgt Ion: 43 Resp: 219741

Ion	Ratio	Lower	Upper
43	100		
72	26.7	18.2	27.2





#35

Carbon Tetrachloride

Concen: 0.035 ppbv

RT: 7.04 Instrument:

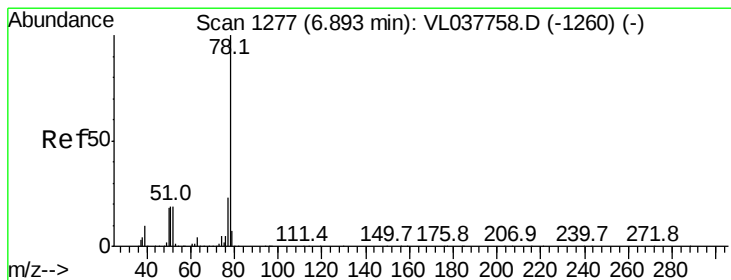
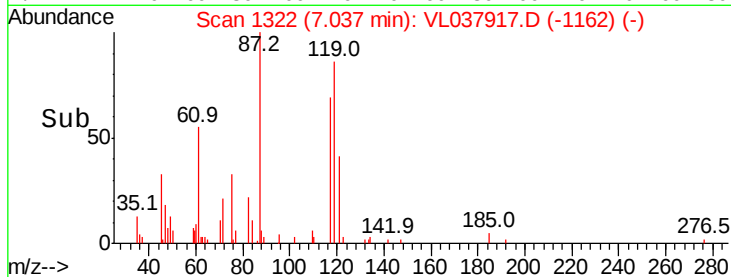
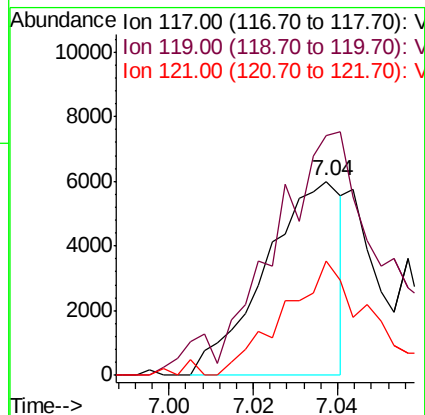
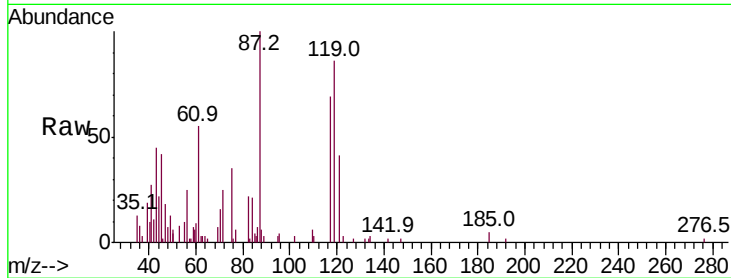
Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 27 Oct 2021 15:38 VMP-5-MANIFOLD

Tot Ion:117 Resp: 7525

Ion	Ratio	Lower	Upper
117	100		
119	106.2	76.5	114.7
121	50.7	24.9	37.3#



#36

Benzene

Concen: 0.155 ppbv

RT: 6.91 min Scan# 1282

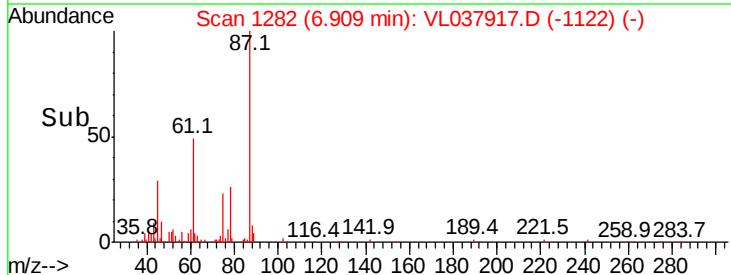
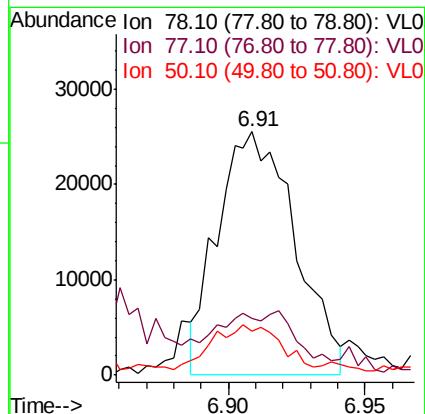
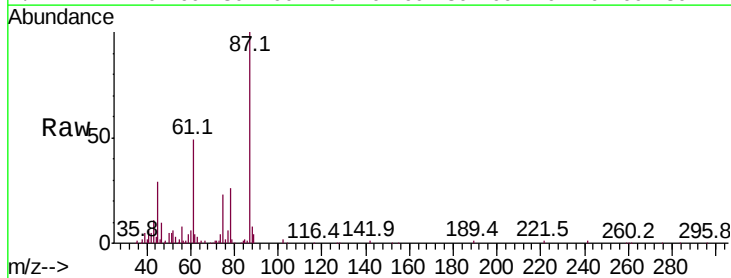
Delta R.T. 0.02 min

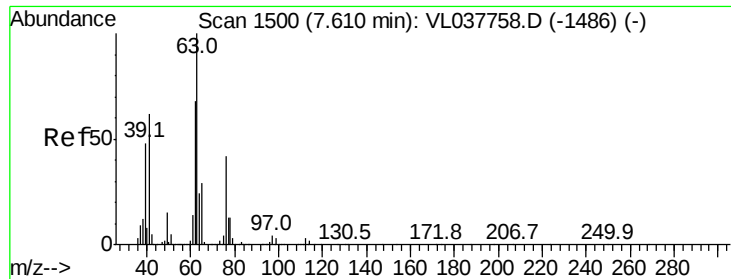
Lab File: VL037917.D

Acq: 27 Oct 2021 15:38

Tgt Ion: 78 Resp: 50047

Ion	Ratio	Lower	Upper
78	100		
77	19.3	18.8	28.2
50	15.3	14.7	22.1





#39

1,2-Dichloropropane

Concen: 7.262 ppbv

RT: 7.19

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

Acq: 27 Oct 2021 15:38

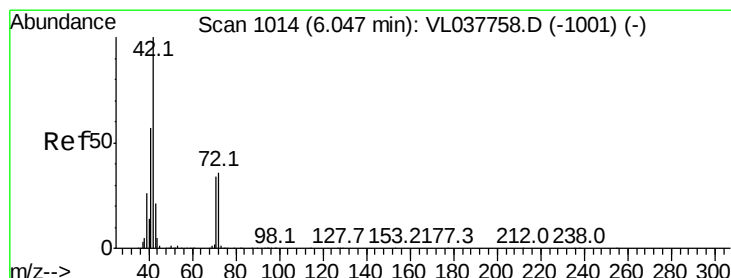
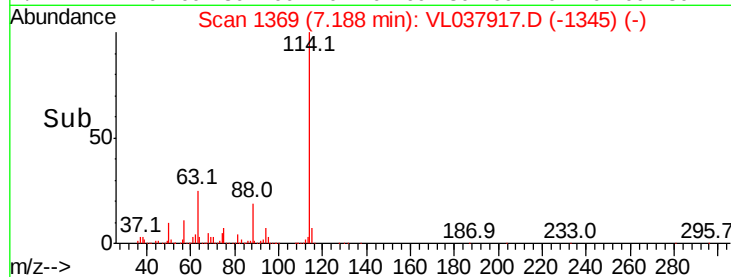
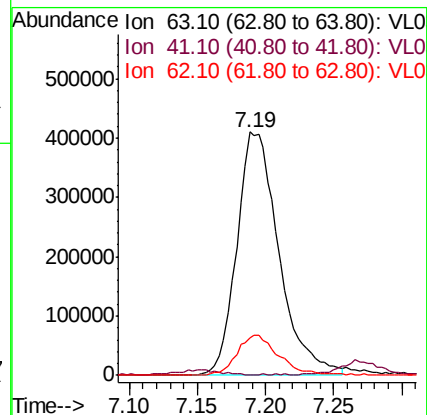
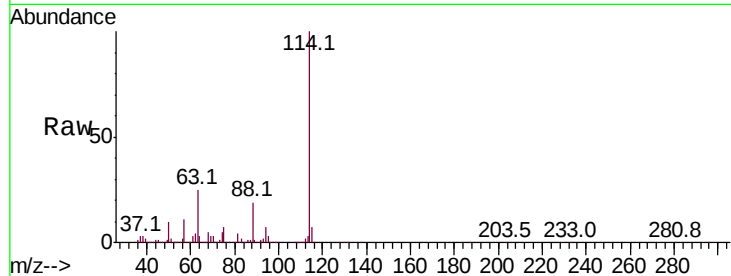
Tot Ion: 63 Resp: 881739

Ion Ratio Lower Upper

63 100

41 0.0 49.8 74.6#

62 15.1 54.6 82.0#



#41

Tetrahydrofuran

Concen: 1.362 ppbv

RT: 6.08 min Scan# 1023

Delta R.T. 0.03 min

Lab File: VL037917.D

Acq: 27 Oct 2021 15:38

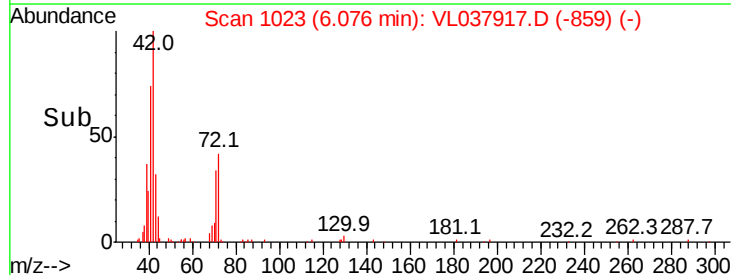
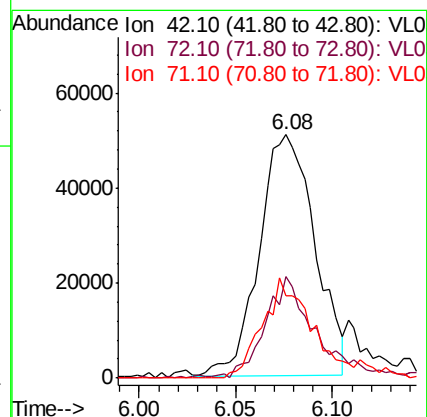
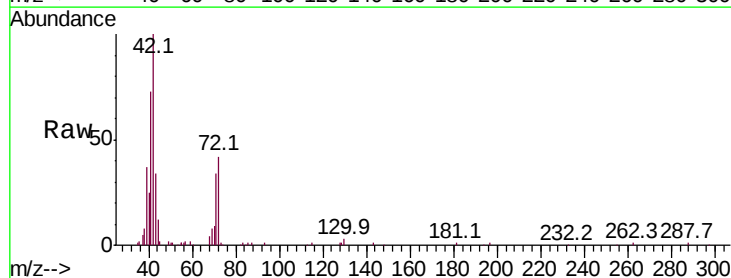
Tgt Ion: 42 Resp: 101785

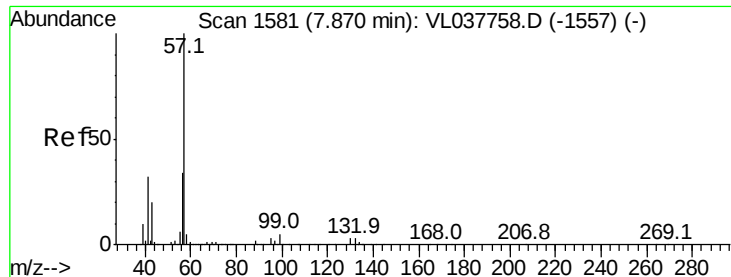
Ion Ratio Lower Upper

42 100

72 39.9 31.9 47.9

71 40.1 30.3 45.5





#44

2,2,4-Trimethylpentane

Concen: 0.218 ppbv

RT: 7.89 Instrument:

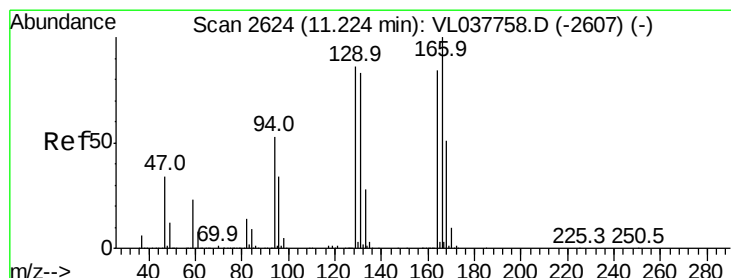
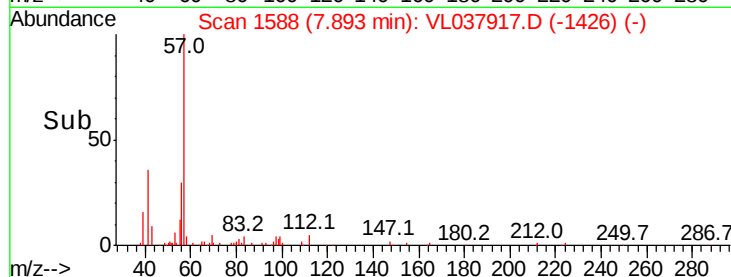
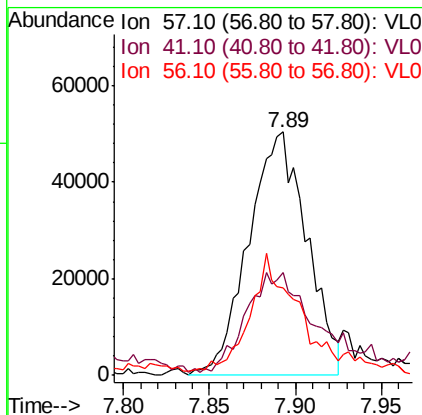
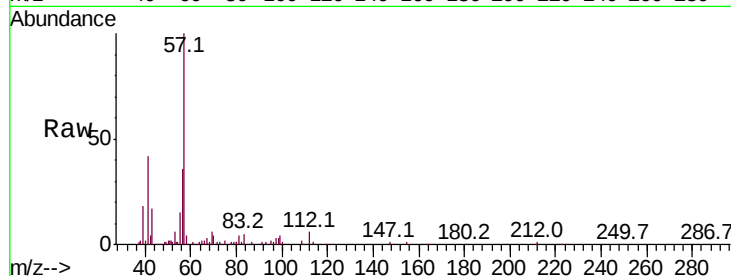
Delta R.T. MSVOA_1

Lab File: ClientSampleId:

Acq: 27 Oct 2021 15:38 VMP-5-MANIFOLD

Tot Ion: 57 Resp: 118196

Ion	Ratio	Lower	Upper
57	100		
41	60.2	25.6	38.4#
56	49.7	25.5	38.3#



#52

Tetrachloroethene

Concen: 0.035 ppbv

RT: 11.24 min Scan# 2630

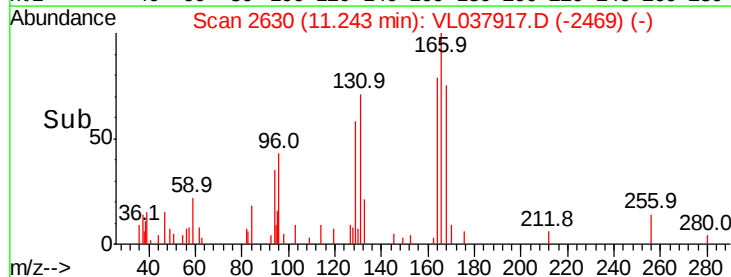
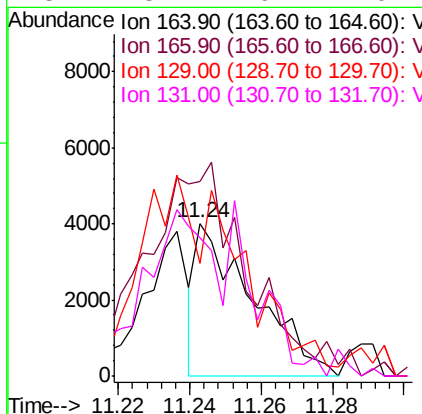
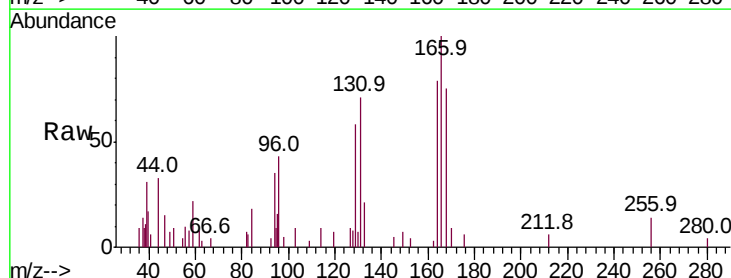
Delta R.T. 0.02 min

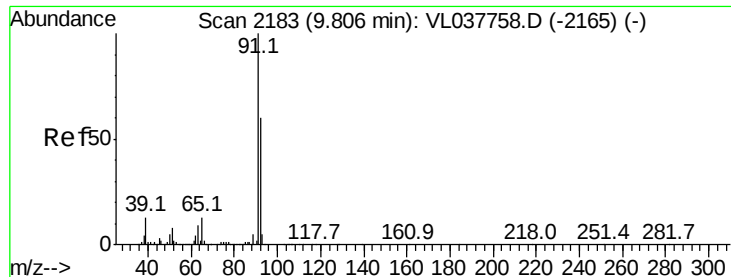
Lab File: VL037917.D

Acq: 27 Oct 2021 15:38

Tgt Ion:164 Resp: 4441

Ion	Ratio	Lower	Upper
164	100		
166	119.4	95.4	143.2
129	67.9	82.2	123.4#
131	73.1	79.4	119.2#





#53

Toluene

Concen: 0.923 ppbv

RT: 9.82 Instrument: MSVOA_1

Delta R.T. 0.02 min

Lab File: ClientSampleId:

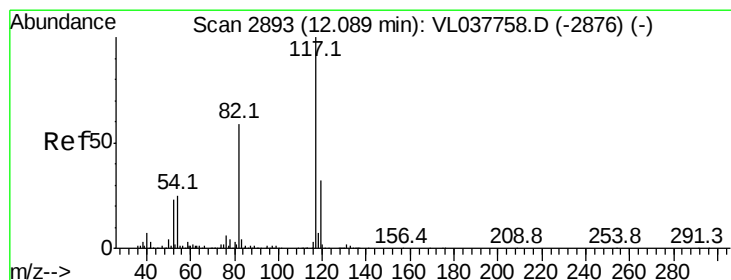
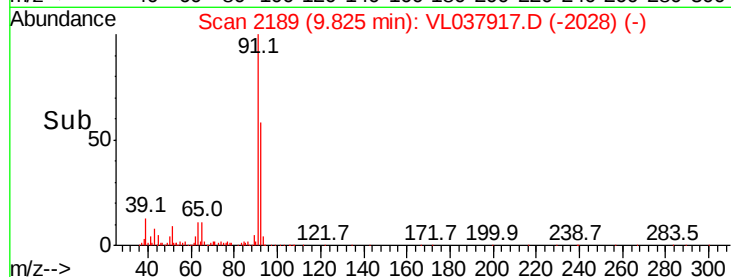
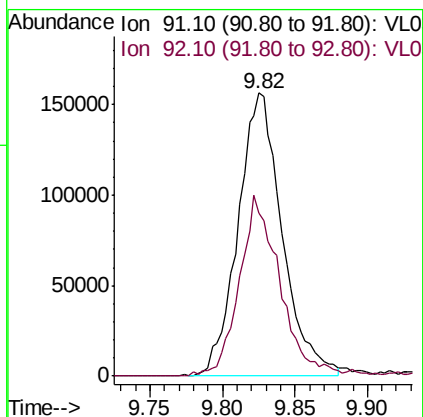
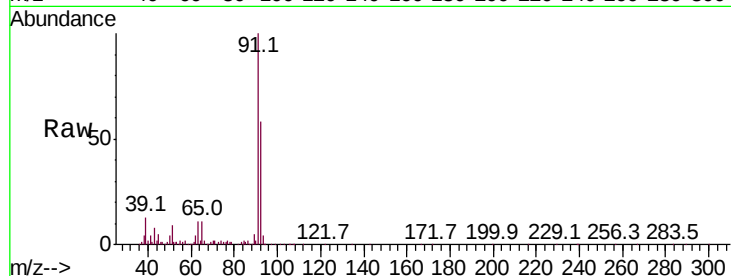
Acq: 27 Oct 2021 15:38

Tot Ion: 91 Resp: 330235

Ion Ratio Lower Upper

91 100

92 60.1 48.4 72.6



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.10 min Scan# 2898

Delta R.T. 0.02 min

Lab File: VL037917.D

Acq: 27 Oct 2021 15:38

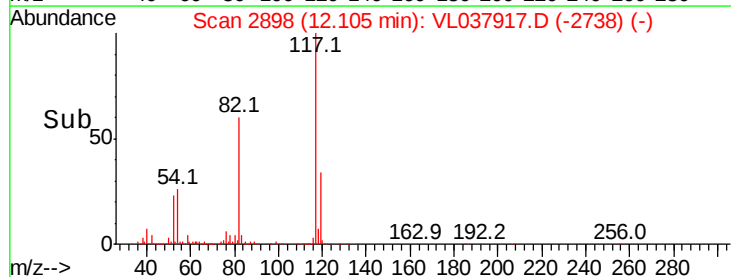
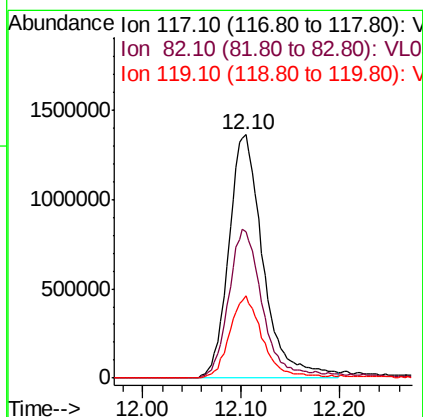
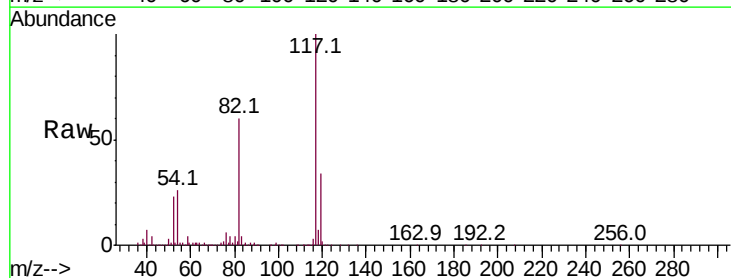
Tgt Ion: 117 Resp: 3308786

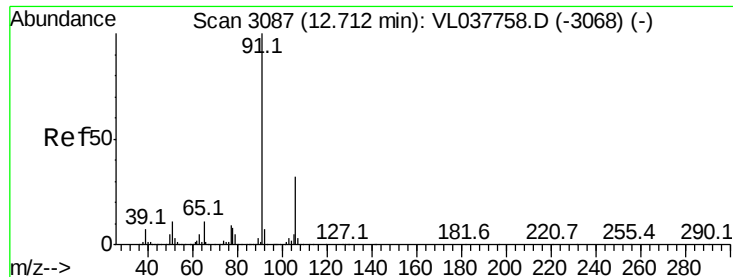
Ion Ratio Lower Upper

117 100

82 63.1 52.2 78.2

119 34.0 26.0 39.0





#58

Ethyl Benzene

Concen: 0.062 ppbv

RT: 12.73

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

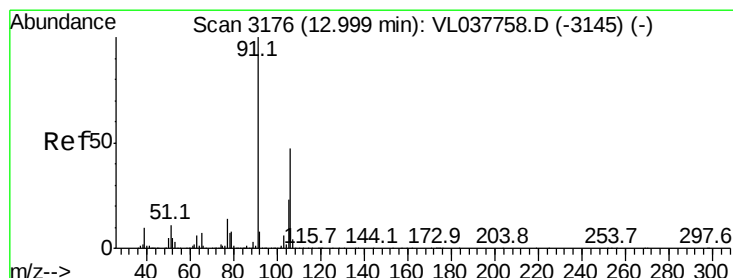
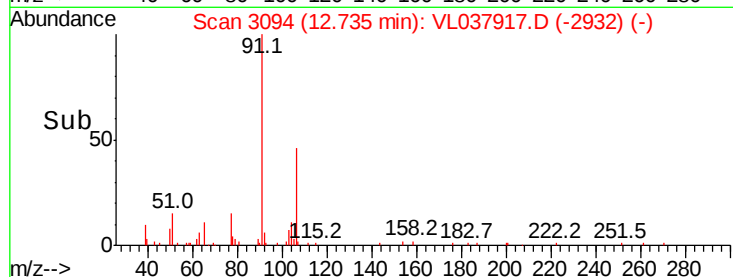
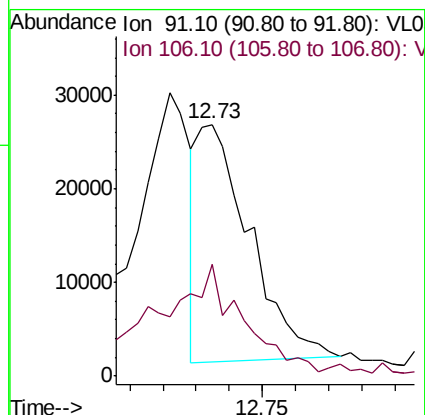
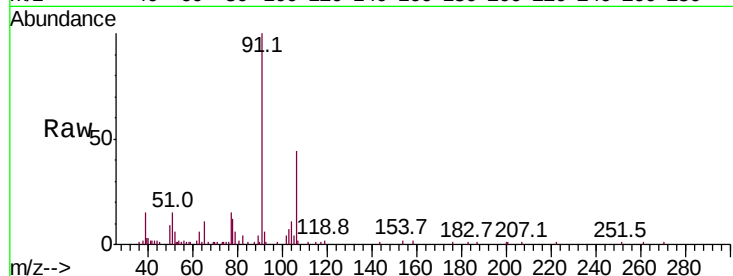
Acq: 27 Oct 2021 15:38

Tot Ion: 91 Resp: 27336

Ion Ratio Lower Upper

91 100

106 43.2 25.3 37.9#



#59

m/p-Xylene

Concen: 0.222 ppbv

RT: 13.00 min Scan# 3178

Delta R.T. 0.01 min

Lab File: VL037917.D

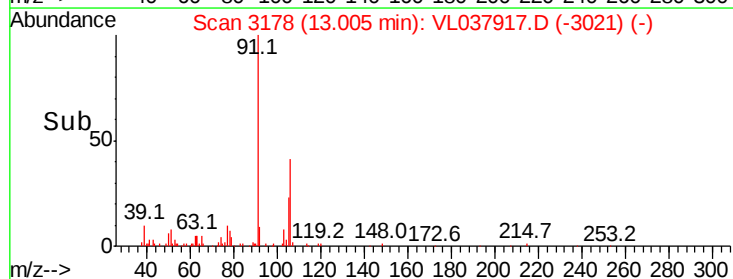
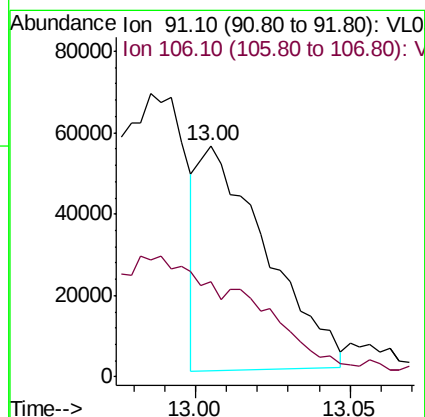
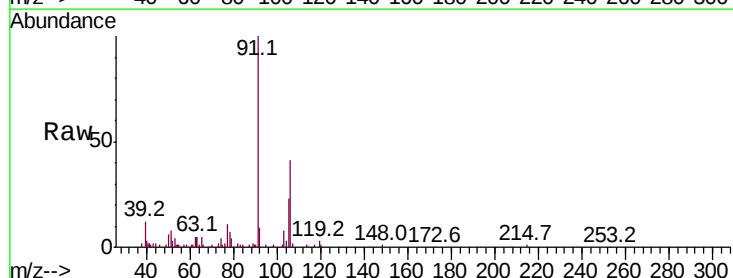
Acq: 27 Oct 2021 15:38

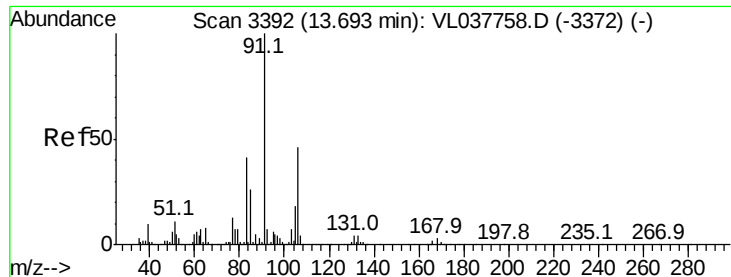
Tgt Ion: 91 Resp: 84629

Ion Ratio Lower Upper

91 100

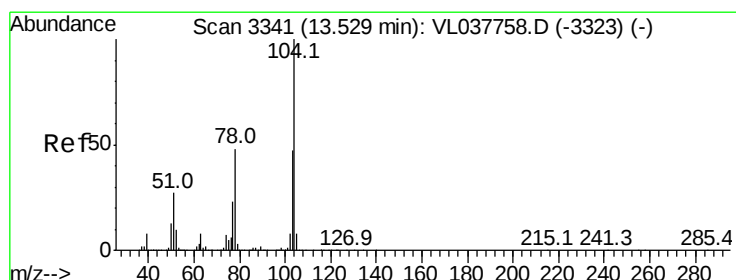
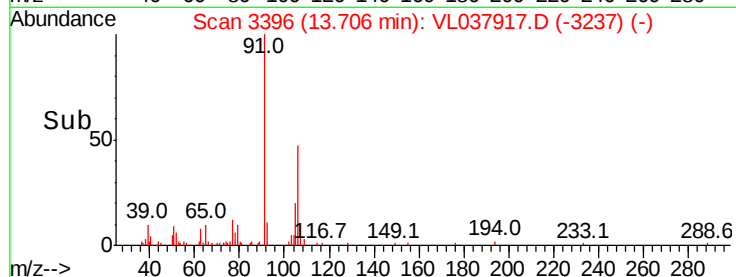
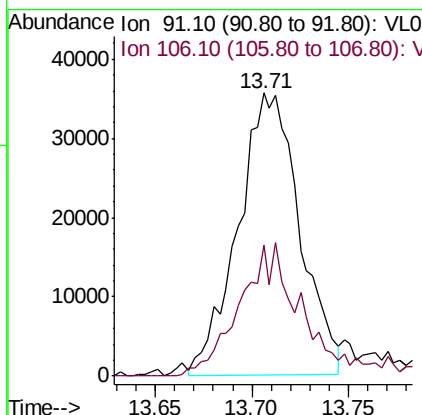
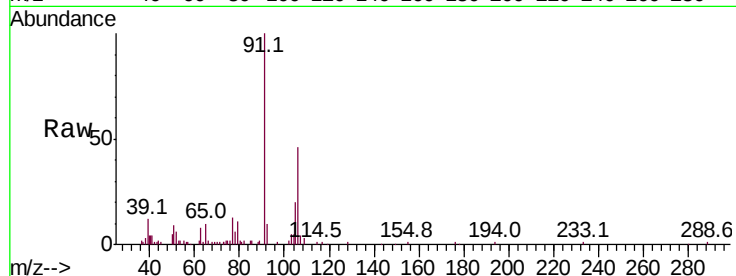
106 0.0 36.7 55.1#





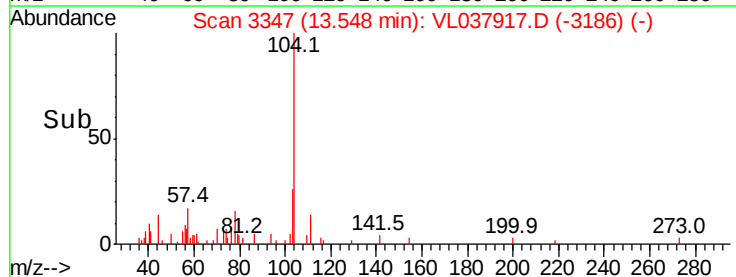
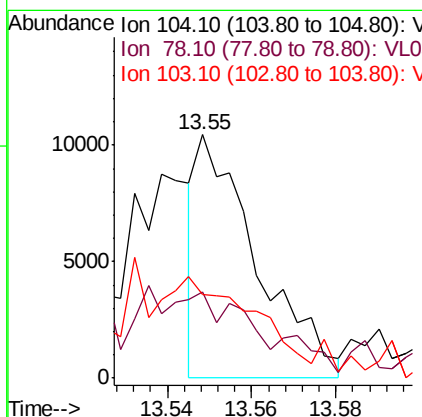
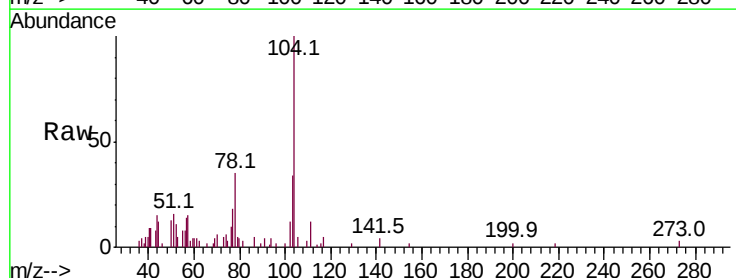
#60
o-Xylene
Concen: 0.216 ppbv
RT: 13.71
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
VMP-5-MANIFOLD
Acq: 27 Oct 2021 15:38

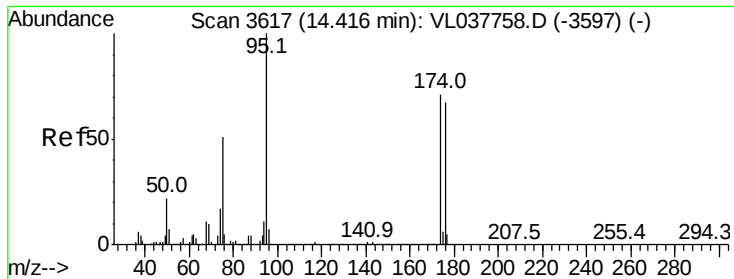
Tot Ion: 91 Resp: 78902
Ion Ratio Lower Upper
91 100
106 46.6 23.5 70.5



#61
Styrene
Concen: 0.058 ppbv
RT: 13.55 min Scan# 3347
Delta R.T. 0.02 min
Lab File: VL037917.D
Acq: 27 Oct 2021 15:38

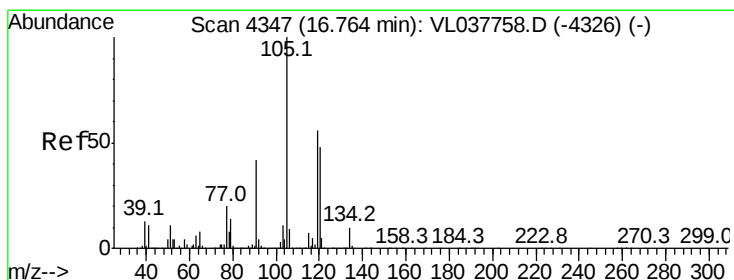
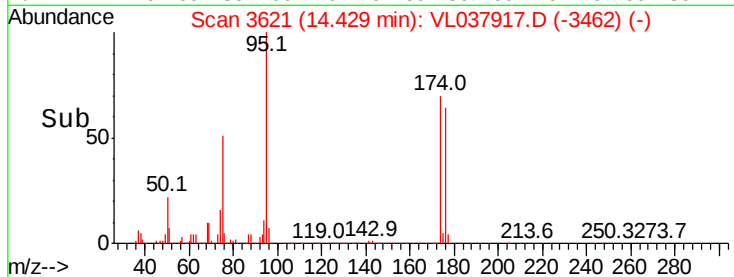
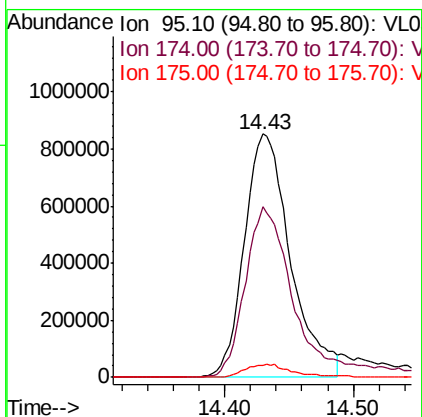
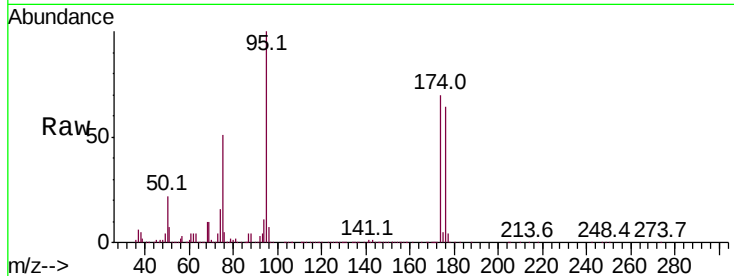
Tgt Ion:104 Resp: 10294
Ion Ratio Lower Upper
104 100
78 0.0 40.6 61.0#
103 0.0 39.6 59.4#





#68
 1-Bromo-4-Fluorobenzene
 Concen: 9.177 ppbv
 RT: 14.43 min
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 VMP-5-MANIFOLD
 Acq: 27 Oct 2021 15:38

Tot Ion:	95	Resp:	2123417
Ion	Ratio	Lower	Upper
95	100		
174	79.3	57.8	86.6
175	5.9	4.7	7.1



#74
 1,2,4-Trimethylbenzene
 Concen: 0.045 ppbv
 RT: 16.79 min Scan# 4354
 Delta R.T. 0.02 min
 Lab File: VL037917.D
 Acq: 27 Oct 2021 15:38

Tgt Ion:	105	Resp:	17860
Ion	Ratio	Lower	Upper
105	100		
120	45.4	38.4	57.6
91	7.9	34.2	51.2#
77	1.0	15.8	23.8#

