

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL080421\
 Data File : VL037336.D
 Acq On : 5 Aug 2021 9:57
 Operator : SY/AP
 Sample : M3239-02
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Aug 05 10:27:27 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL080421AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Wed Aug 04 22:53:01 2021
 QLast Update : Wed Aug 04 22:53:01 2021
 Response via : Initial Calibration

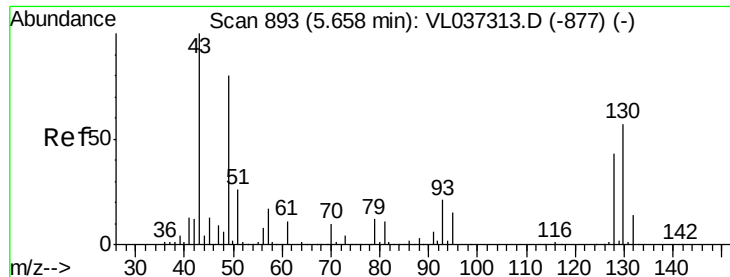
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	1021565	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.16	114	3378453	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.07	117	2848603	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.40	95	1982158	10.19	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	101.90%

Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.04	85	46513	0.224	ppbv 100
3) Chlorodifluoromethane	2.99	51	197286	0.950	ppbv 94
4) Chloromethane	3.13	50	35398	0.476	ppbv 89
9) Propene	3.02	41	45931	0.612	ppbv # 80
10) Heptane	8.11	43	24354	0.139	ppbv # 68
11) Trichlorofluoromethane	3.94	101	20412	0.107	ppbv 97
12) 1,1,2-Trichlorotrifluoroet	4.48	101	4445	0.032	ppbv # 19
13) Ethanol	3.61	45	100651	8.898	ppbv # 34
15) Acetone	3.84	43	890019	8.021	ppbv 97
16) 1,3-Butadiene	3.30	39	4550	0.064	ppbv # 49
17) tert-Butyl alcohol	4.30	59	7725	0.069	ppbv # 72
19) Isopropyl Alcohol	3.97	45	150834	2.456	ppbv # 1
20) Methylene Chloride	4.34	84	969219	10.550	ppbv 98
21) Allyl Chloride	4.34	41	36795	0.410	ppbv # 36
23) Vinyl Acetate	5.06	43	13280	0.079	ppbv # 12
25) Ethyl Acetate	5.68	43	634147	2.198	ppbv # 77
26) Hexane	5.68	57	883186	5.470	ppbv # 48
29) Chloroform	5.74	83	98083	0.480	ppbv 98
30) Cyclohexane	7.11	84	5818	0.047	ppbv # 1
34) 2-Butanone	5.24	43	31000	0.264	ppbv # 1
36) Benzene	6.88	78	125947	0.414	ppbv 96
39) 1,2-Dichloropropane	7.17	63	731678	6.462	ppbv # 29
41) Tetrahydrofuran	5.68	42	307298	4.713	ppbv # 49
44) 2,2,4-Trimethylpentane	7.86	57	93499	0.186	ppbv # 81
51) 2-Hexanone	10.15	43	8411	0.103	ppbv # 1
53) Toluene	9.79	91	551457	1.536	ppbv 100
59) m/p-Xylene	12.95	91	65422	0.186	ppbv # 52
60) o-Xylene	13.68	91	19859	0.062	ppbv # 26
61) Styrene	13.51	104	248032	1.413	ppbv 94
69) p-Isopropyltoluene	17.64	119	32155	0.066	ppbv # 39
72) 4-Ethyltoluene	15.83	105	13373	0.035	ppbv # 54
74) 1,2,4-Trimethylbenzene	16.75	105	60985	0.164	ppbv # 78

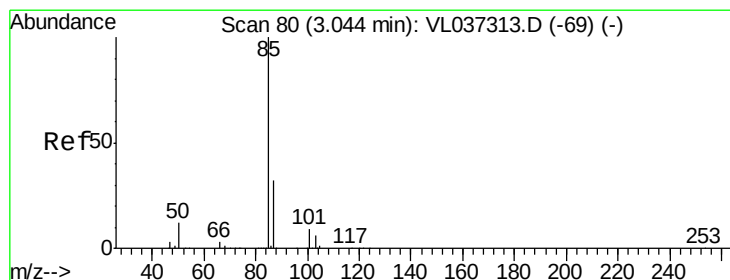
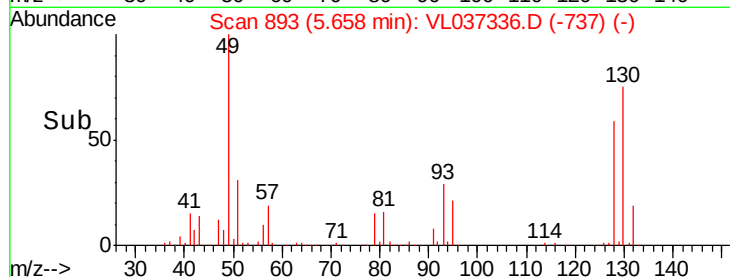
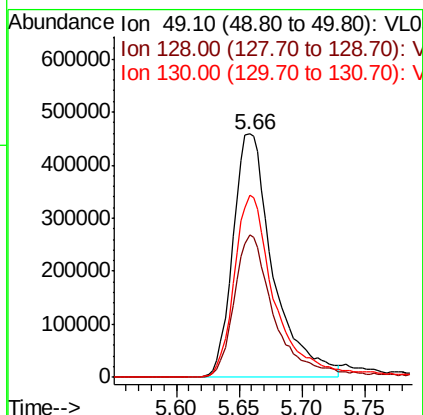
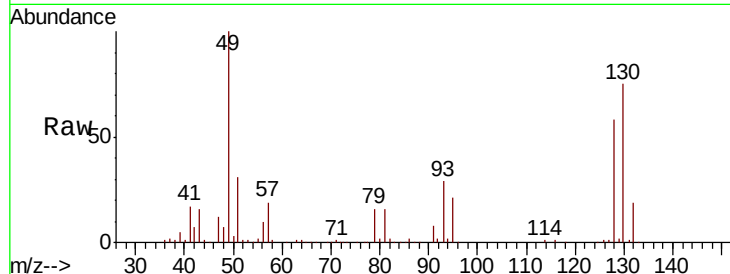
(#) = qualifier out of range (m) = manual integration (+) = signals summed



#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 5.66 min Scan# 893
Delta R.T. 0.00 min
Lab File: VL037336.D
Acq: 5 Aug 2021 9:57

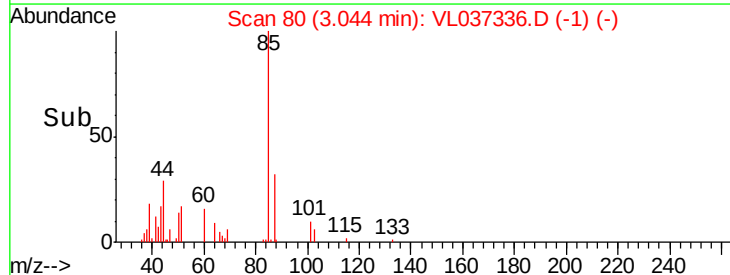
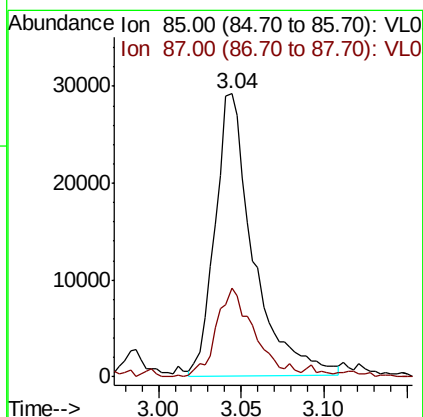
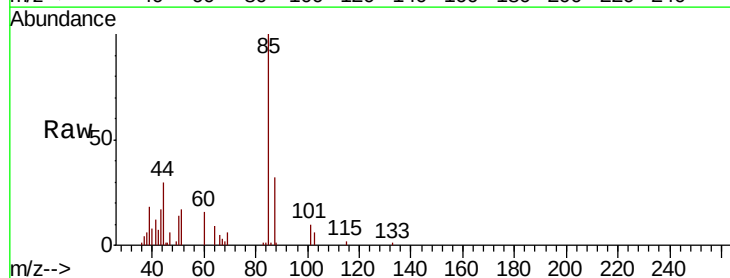
Instrument :
MSVOA_L
ClientSampleId :

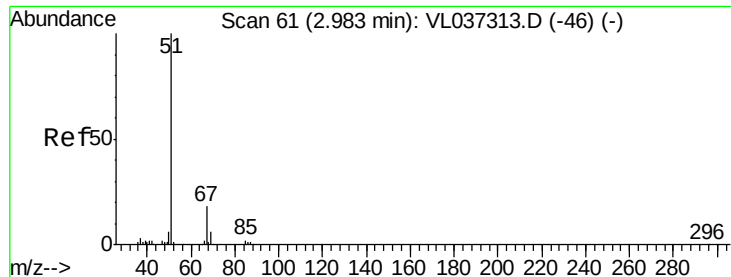
Tot Ion: 49 Resp: 1021565
Ion Ratio Lower Upper
49 100
128 60.6 29.8 89.5
130 77.9 37.5 112.7



#2
Dichlorodifluoromethane
Concen: 0.224 ppbv
RT: 3.04 min Scan# 80
Delta R.T. 0.00 min
Lab File: VL037336.D
Acq: 5 Aug 2021 9:57

Tgt Ion: 85 Resp: 46513
Ion Ratio Lower Upper
85 100
87 31.7 25.5 38.3

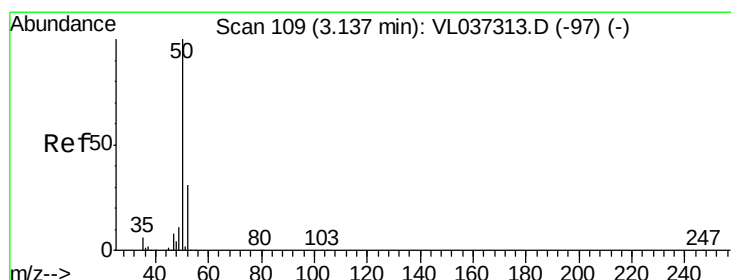
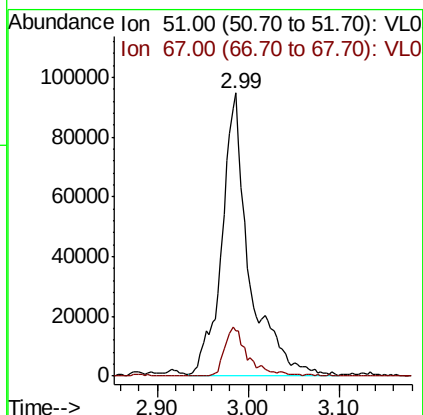
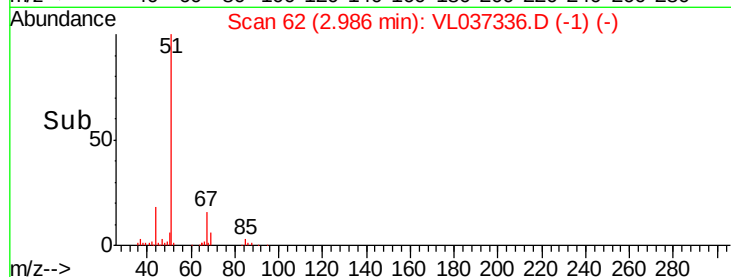
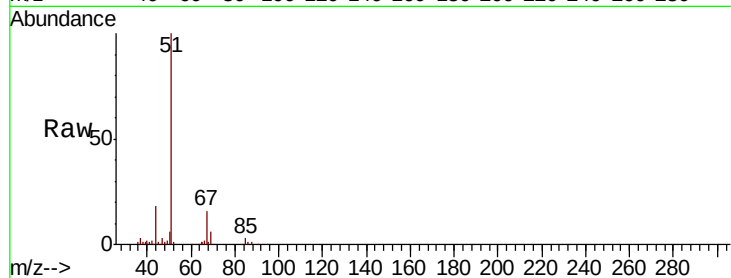




#3
Chlorodifluoromethane
Concen: 0.950 ppbv
RT: 2.99 min Scan# 62
Delta R.T. 0.00 min
Lab File: VL037336.D
Acq: 5 Aug 2021 9:57

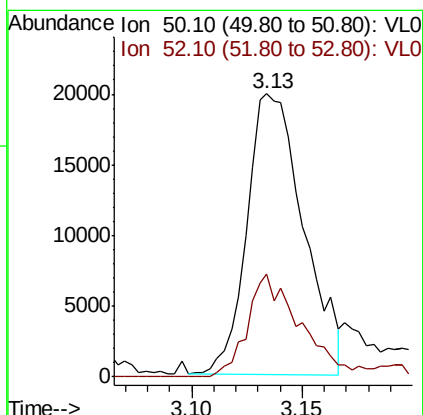
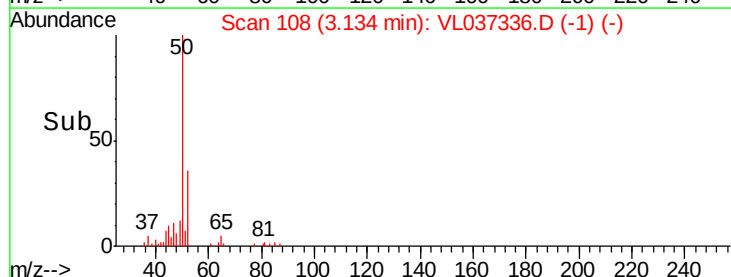
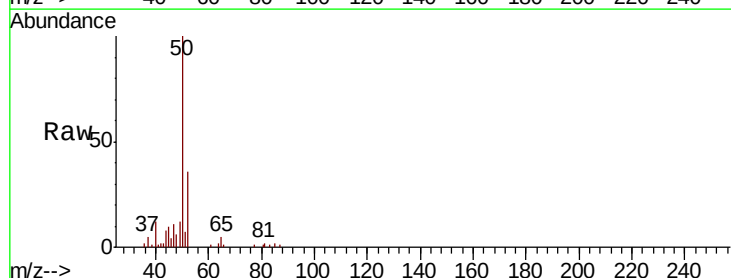
Instrument :
MSVOA_L
ClientSampleId :

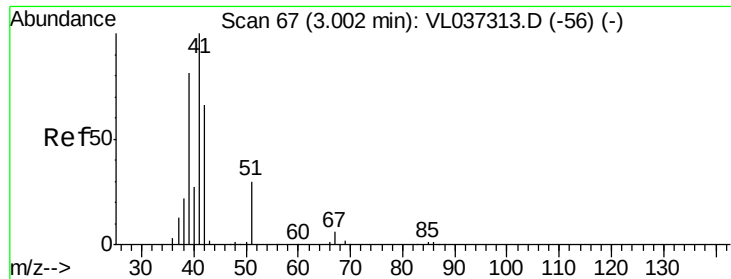
Tot Ion: 51 Resp: 197286
Ion Ratio Lower Upper
51 100
67 14.9 14.2 21.2



#4
Chloromethane
Concen: 0.476 ppbv
RT: 3.13 min Scan# 108
Delta R.T. -0.00 min
Lab File: VL037336.D
Acq: 5 Aug 2021 9:57

Tgt Ion: 50 Resp: 35398
Ion Ratio Lower Upper
50 100
52 37.2 25.1 37.7





#9

Propene

Concen: 0.612 ppbv

RT: 3.02 min Scan# 71

Delta R.T. 0.01 min

Lab File: VL037336.D

Acq: 5 Aug 2021 9:57

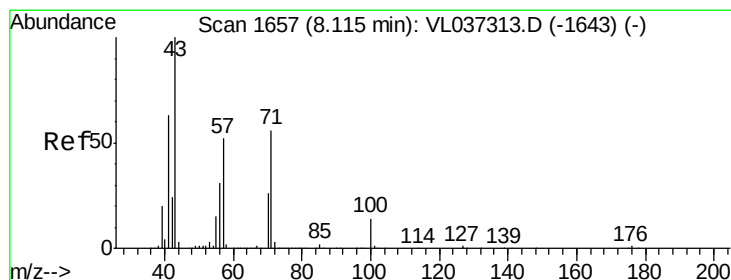
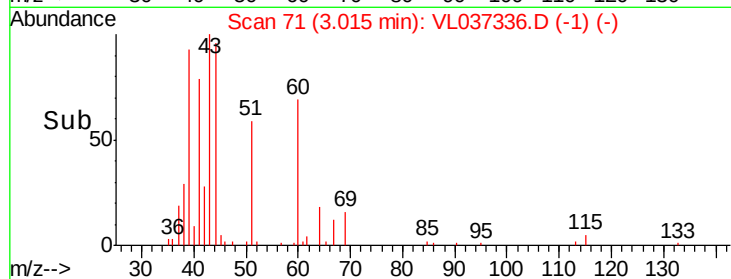
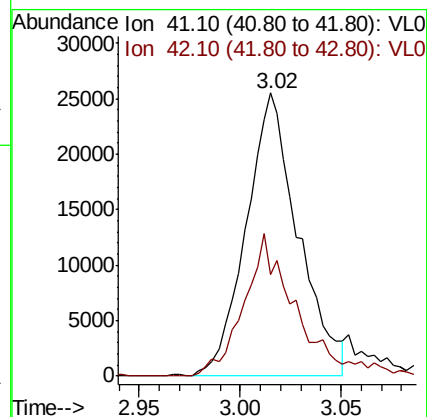
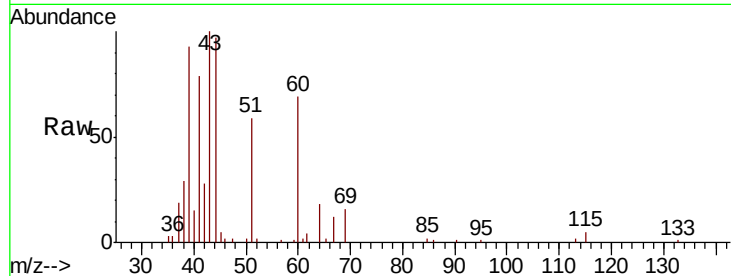
Instrument :
MSVOA_L
ClientSampled :

Tot Ion: 41 Resp: 45931

Ion Ratio Lower Upper

41 100

42 51.5 53.8 80.8#



#10

Heptane

Concen: 0.139 ppbv

RT: 8.11 min Scan# 1656

Delta R.T. -0.00 min

Lab File: VL037336.D

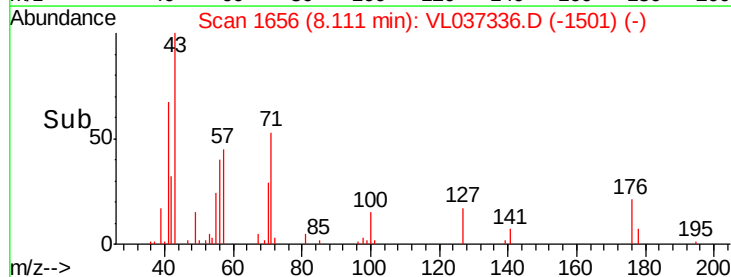
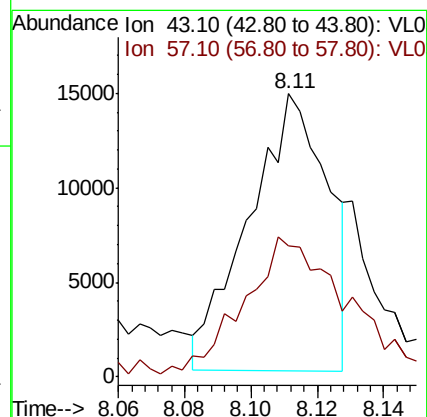
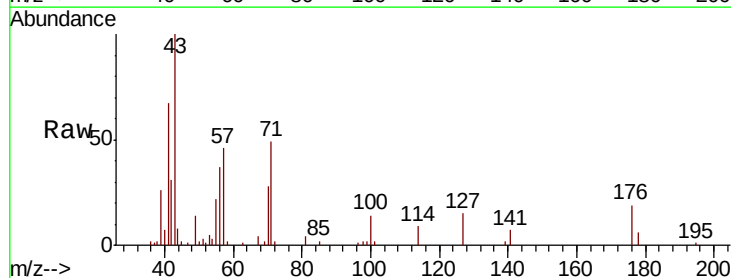
Acq: 5 Aug 2021 9:57

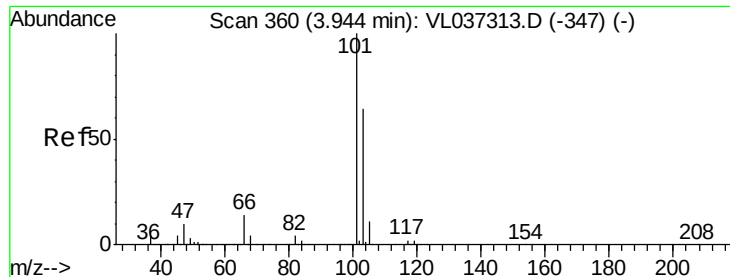
Tgt Ion: 43 Resp: 24354

Ion Ratio Lower Upper

43 100

57 75.9 42.4 63.6#

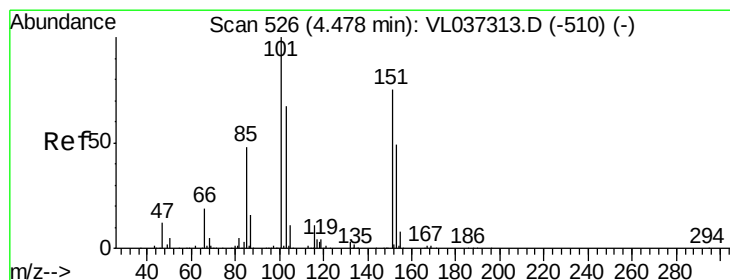
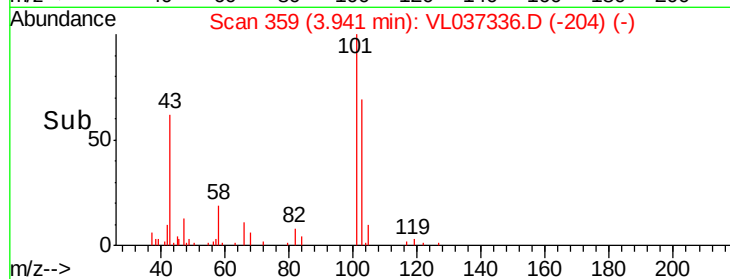
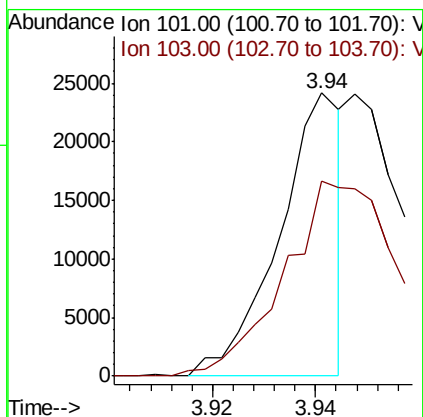
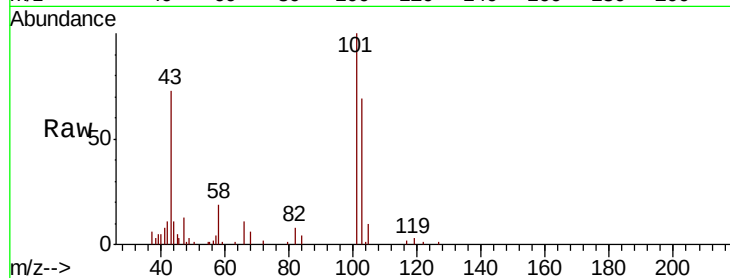




#11
 Trichlorofluoromethane
 Concen: 0.107 ppbv
 RT: 3.94 min Scan# 359
 Delta R.T. -0.00 min
 Lab File: VL037336.D
 Acq: 5 Aug 2021 9:57

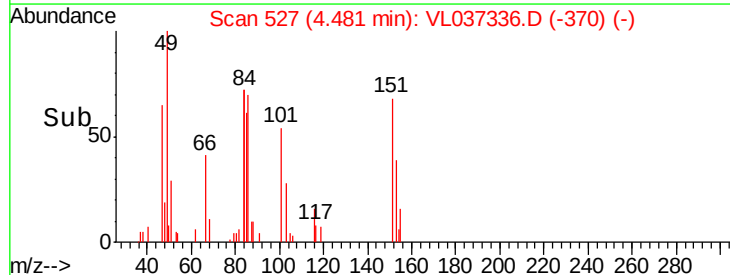
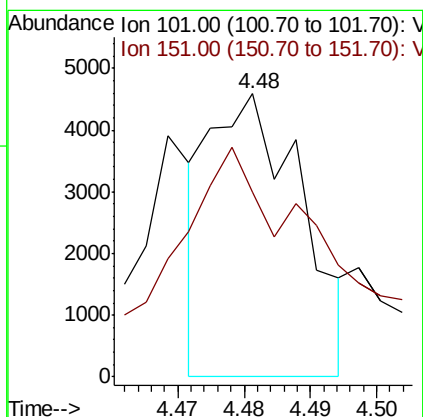
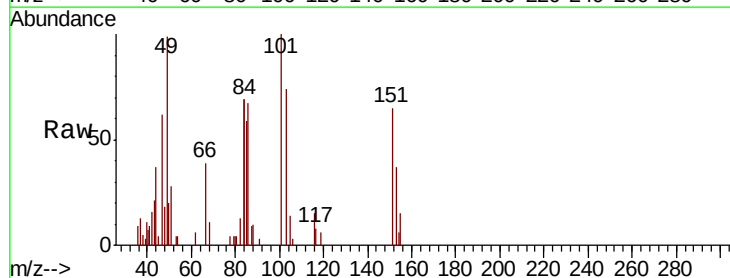
Instrument :
 MSVOA_L
 ClientSampleId :

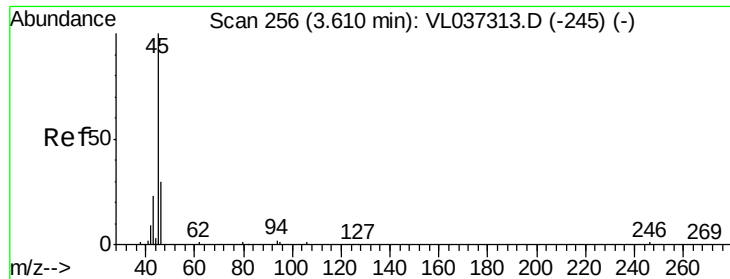
Tot Ion:101 Resp: 20412
 Ion Ratio Lower Upper
 101 100
 103 66.9 51.6 77.4



#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.032 ppbv
 RT: 4.48 min Scan# 527
 Delta R.T. 0.00 min
 Lab File: VL037336.D
 Acq: 5 Aug 2021 9:57

Tgt Ion:101 Resp: 4445
 Ion Ratio Lower Upper
 101 100
 151 144.9 60.6 91.0#

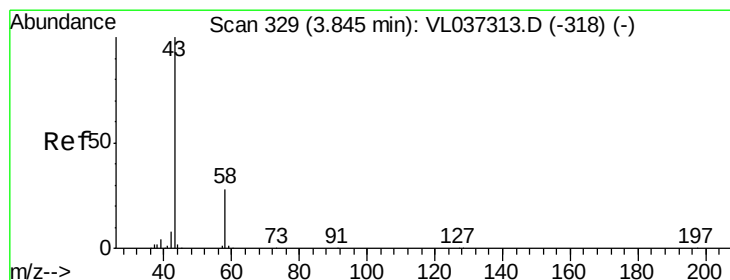
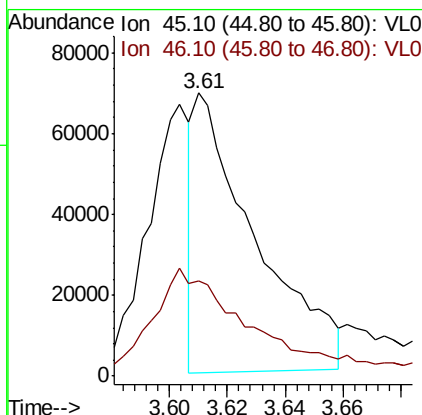
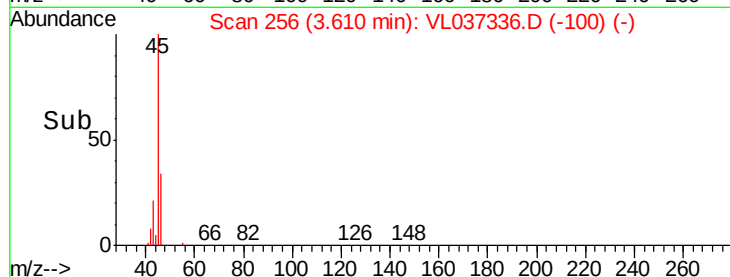
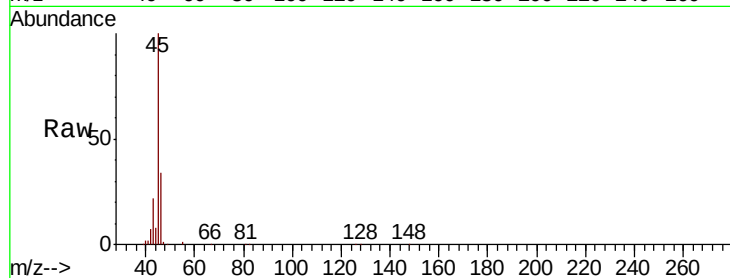




#13
Ethanol
Concen: 8.898 ppbv
RT: 3.61 min Scan# 256
Delta R.T. 0.00 min
Lab File: VL037336.D
Acq: 5 Aug 2021 9:57

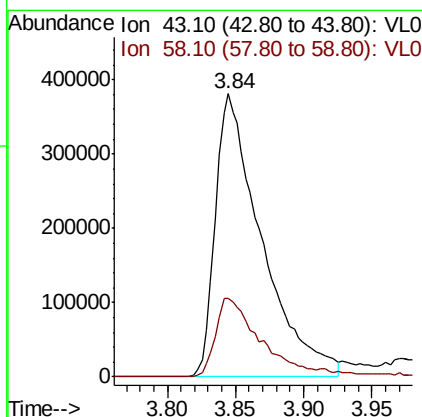
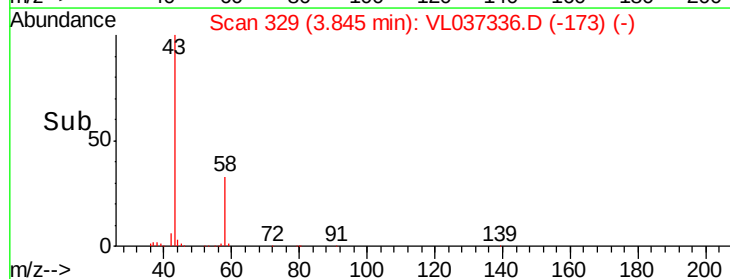
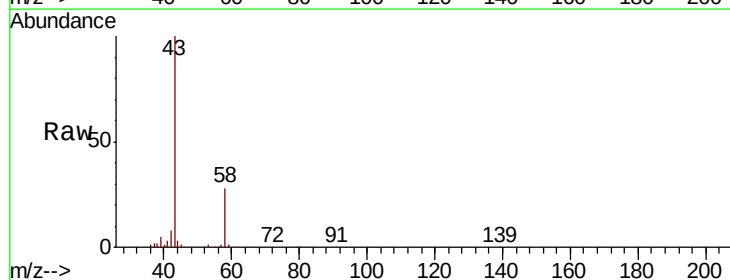
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MSVOA_L
ClientSampleId :

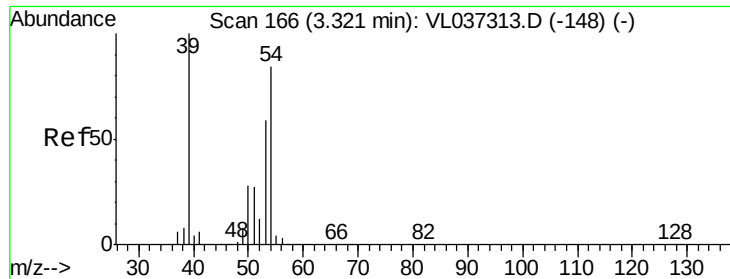
Tot Ion: 45 Resp: 100651
Ion Ratio Lower Upper
45 100
46 0.0 16.6 66.4#



#15
Acetone
Concen: 8.021 ppbv
RT: 3.84 min Scan# 329
Delta R.T. 0.00 min
Lab File: VL037336.D
Acq: 5 Aug 2021 9:57

Tgt Ion: 43 Resp: 890019
Ion Ratio Lower Upper
43 100
58 30.0 25.3 37.9





#16

1,3-Butadiene

Concen: 0.064 ppbv

RT: 3.30 min Scan# 160

Delta R.T. -0.02 min

Lab File: VL037336.D

Acq: 5 Aug 2021 9:57

Instrument :

MSVOA_L

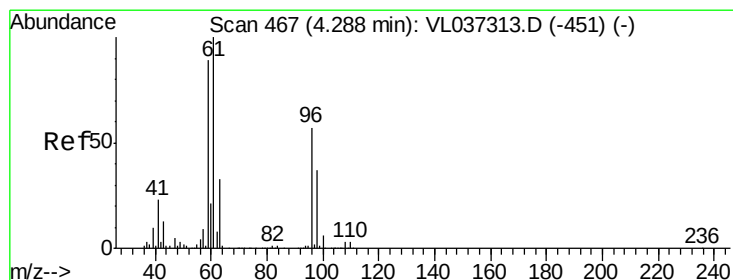
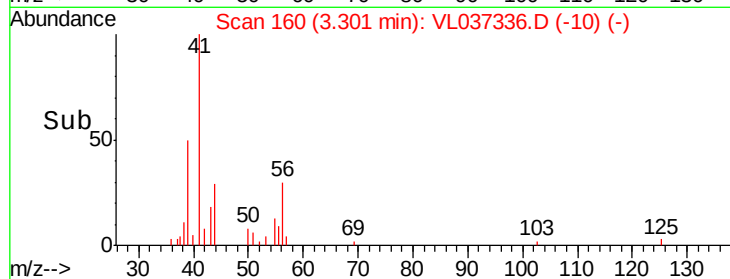
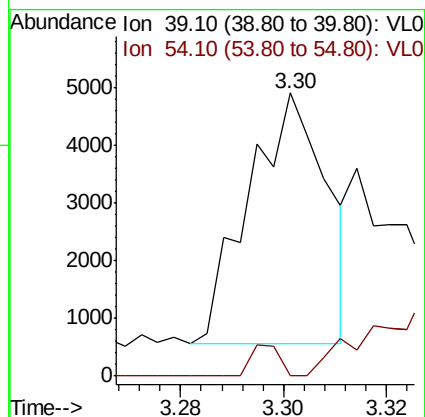
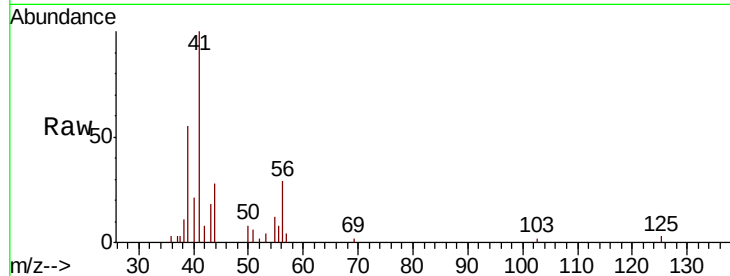
ClientSampleId :

Tot Ion: 39 Resp: 4550

Ion Ratio Lower Upper

39 100

54 36.4 66.1 99.1#



#17

tert-Butyl alcohol

Concen: 0.069 ppbv

RT: 4.30 min Scan# 471

Delta R.T. 0.01 min

Lab File: VL037336.D

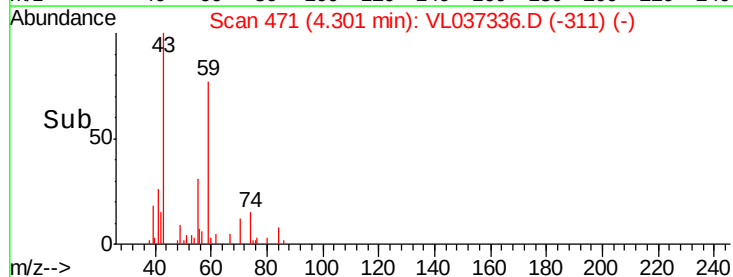
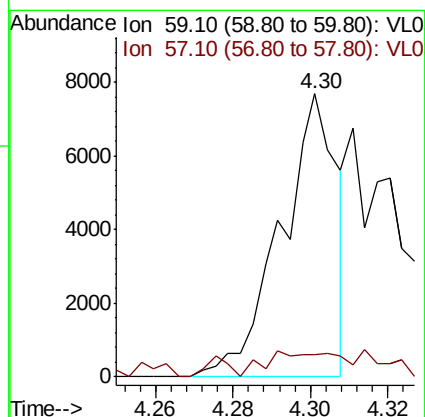
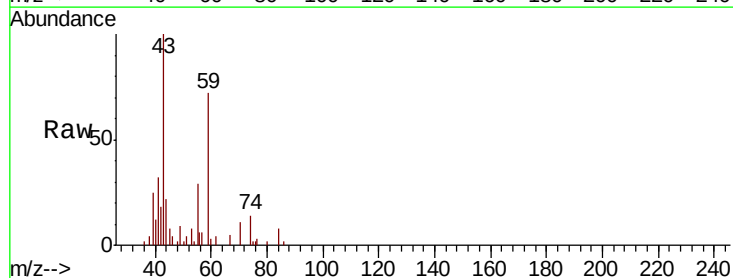
Acq: 5 Aug 2021 9:57

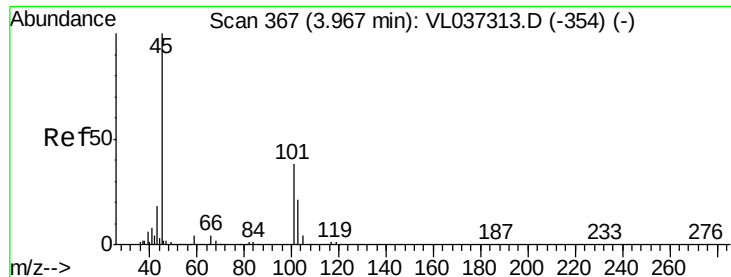
Tgt Ion: 59 Resp: 7725

Ion Ratio Lower Upper

59 100

57 0.0 8.6 12.8#





#19

Isopropyl Alcohol

Concen: 2.456 ppbv

RT: 3.97 min Scan# 369

Delta R.T. 0.01 min

Lab File: VL037336.D

Acq: 5 Aug 2021 9:57

Instrument :

MSVOA_L

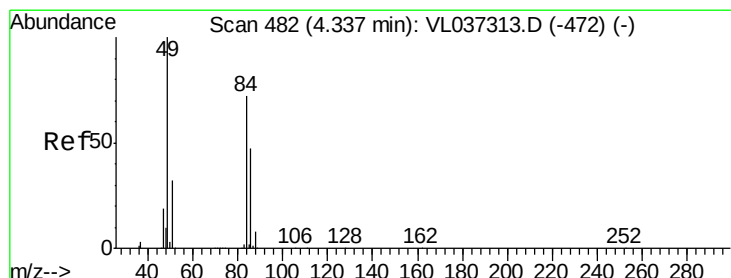
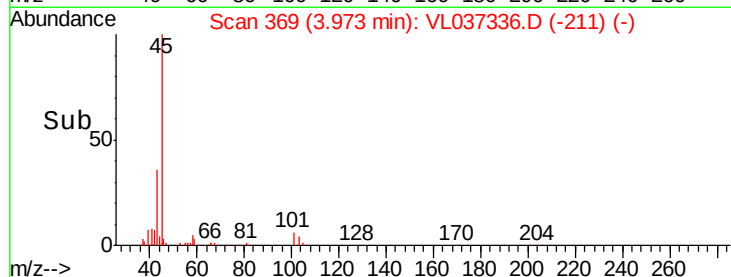
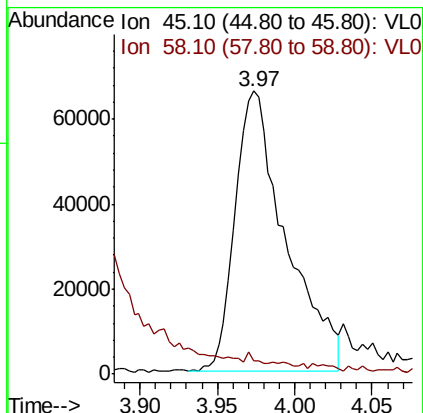
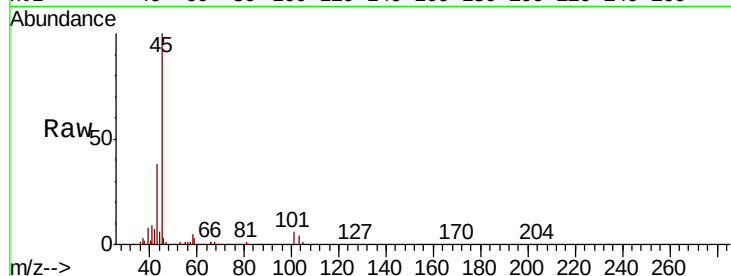
ClientSampleId :

Tot Ion: 45 Resp: 150834

Ion Ratio Lower Upper

45 100

58 178.0 1.8 2.8#



#20

Methylene Chloride

Concen: 10.550 ppbv

RT: 4.34 min Scan# 482

Delta R.T. 0.00 min

Lab File: VL037336.D

Acq: 5 Aug 2021 9:57

Tgt Ion: 84 Resp: 969219

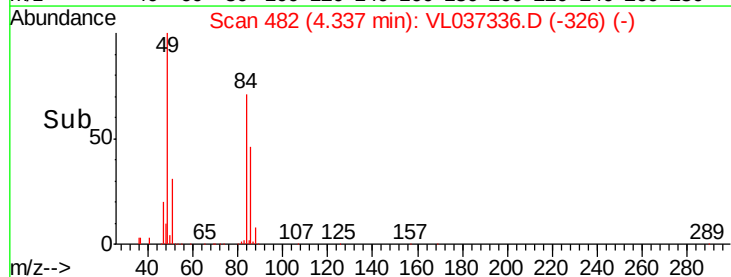
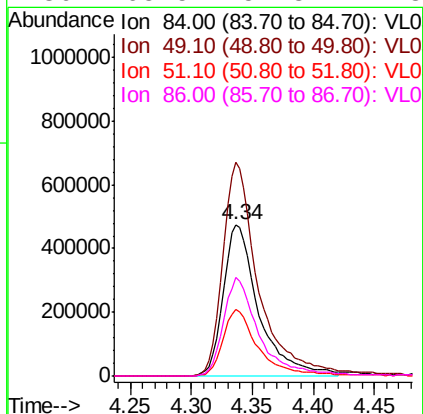
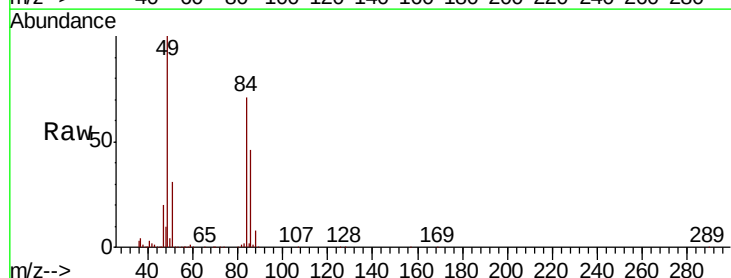
Ion Ratio Lower Upper

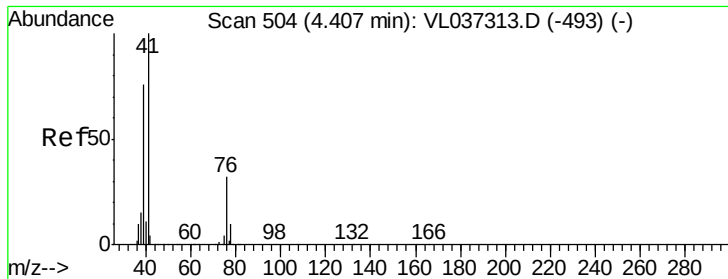
84 100

49 141.3 110.4 165.6

51 44.4 35.8 53.6

86 65.5 51.8 77.8

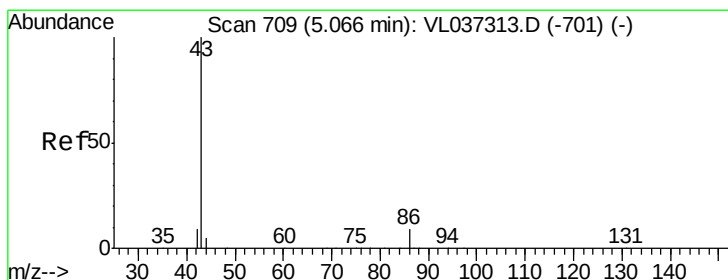
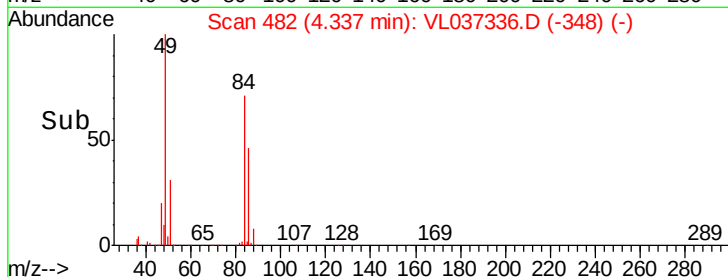
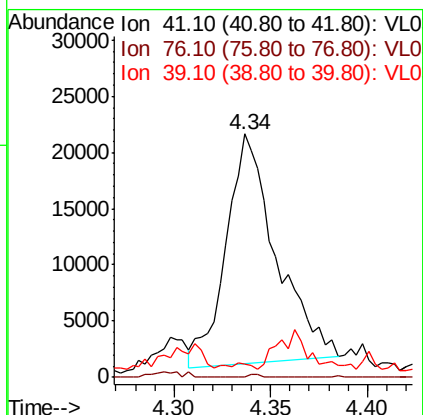
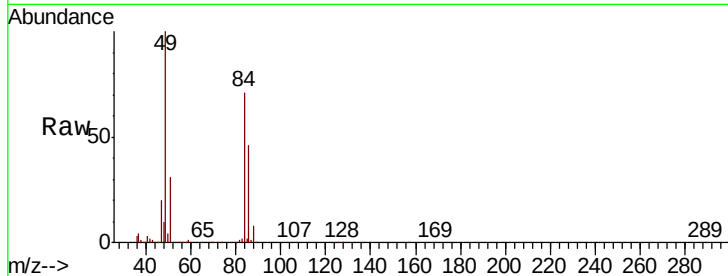




#21
Allvl Chloride
Concen: 0.410 ppbv
RT: 4.34 min Scan# 482
Delta R.T. -0.07 min
Lab File: VL037336.D
Acq: 5 Aug 2021 9:57

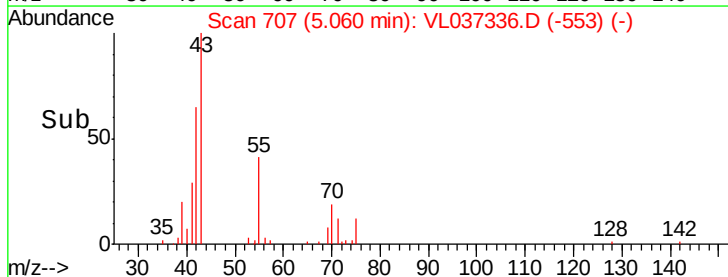
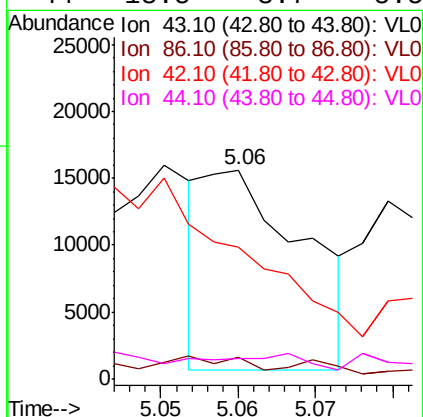
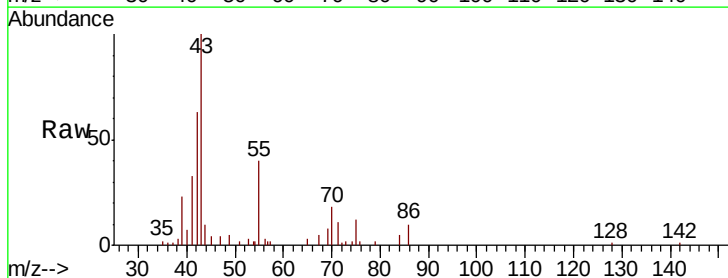
Instrument :
MSVOA_L
ClientSampleId :

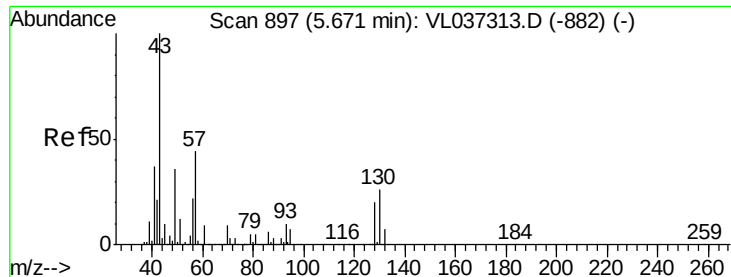
Tot Ion: 41 Resp: 36795
Ion Ratio Lower Upper
41 100
76 0.3 25.7 38.5#
39 17.6 59.0 88.4#



#23
Vinyl Acetate
Concen: 0.079 ppbv
RT: 5.06 min Scan# 707
Delta R.T. -0.01 min
Lab File: VL037336.D
Acq: 5 Aug 2021 9:57

Tgt Ion: 43 Resp: 13280
Ion Ratio Lower Upper
43 100
86 11.0 6.2 9.2#
42 75.9 7.7 11.5#
44 13.5 3.7 5.5#

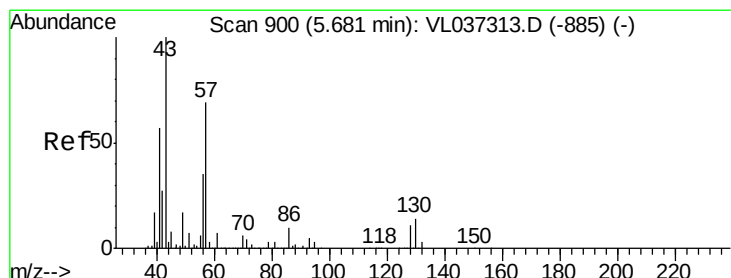
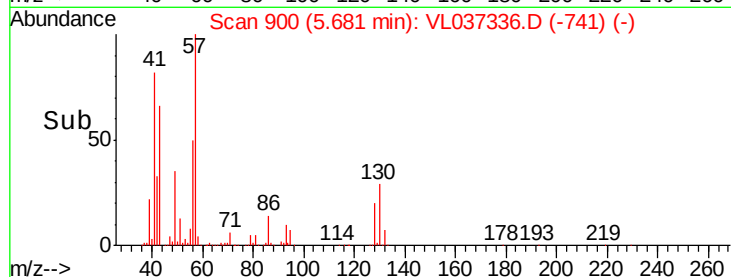
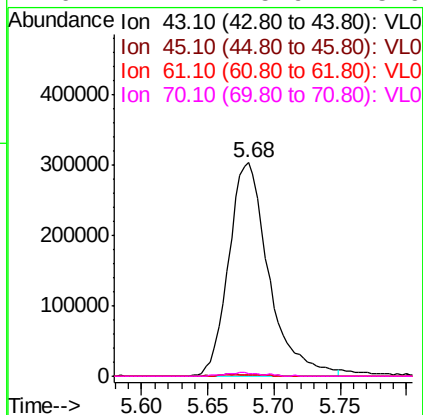
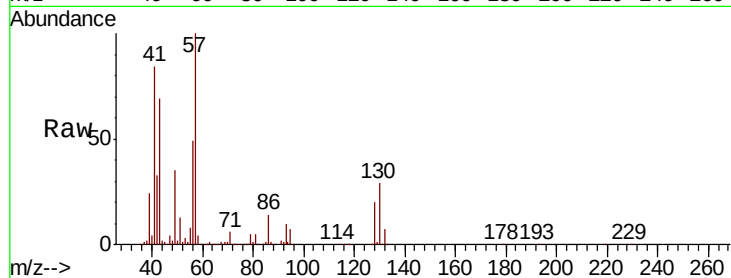




#25
Ethyl Acetate
Concen: 2.198 ppbv
RT: 5.68 min Scan# 900
Delta R.T. 0.01 min
Lab File: VL037336.D
Acq: 5 Aug 2021 9:57

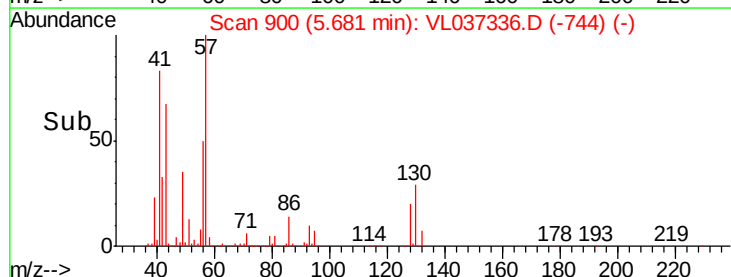
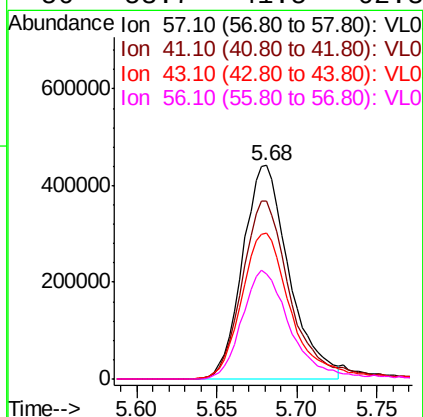
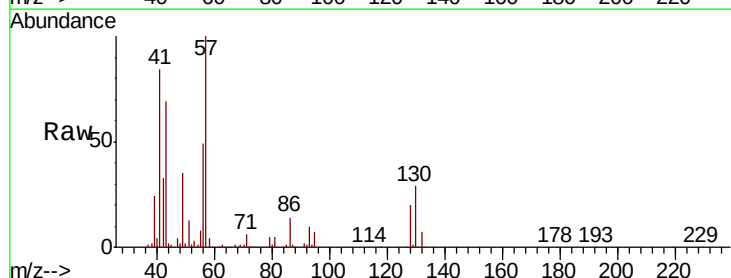
Instrument :
MSVOA_L
ClientSampleId :

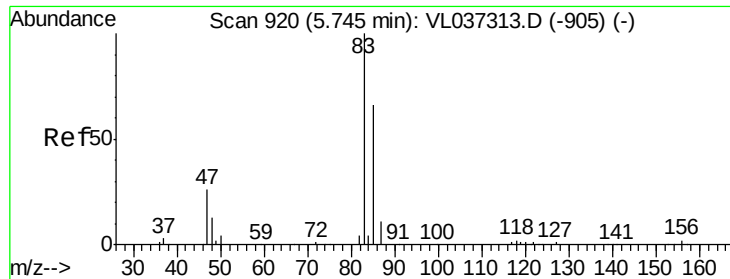
Tot Ion:	43	Resp:	634147
Ion	Ratio	Lower	Upper
43	100		
45	1.1	7.8	11.8#
61	0.8	8.6	12.8#
70	1.7	5.9	8.9#



#26
Hexane
Concen: 5.470 ppbv
RT: 5.68 min Scan# 900
Delta R.T. 0.00 min
Lab File: VL037336.D
Acq: 5 Aug 2021 9:57

Tgt Ion:	57	Resp:	883186
Ion	Ratio	Lower	Upper
57	100		
41	87.3	67.5	101.3
43	73.9	163.0	244.4#
56	53.7	41.5	62.3

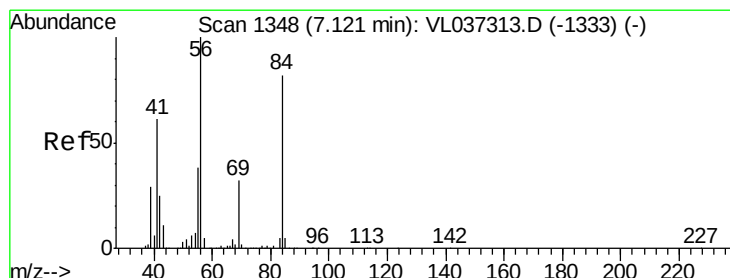
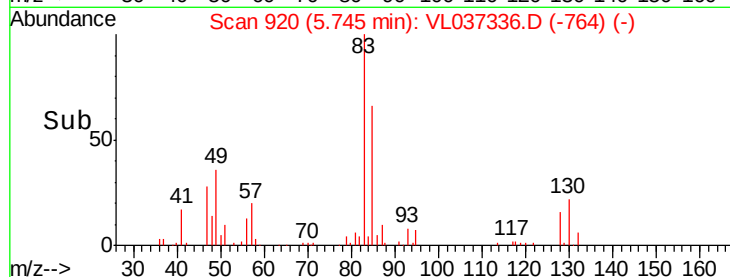
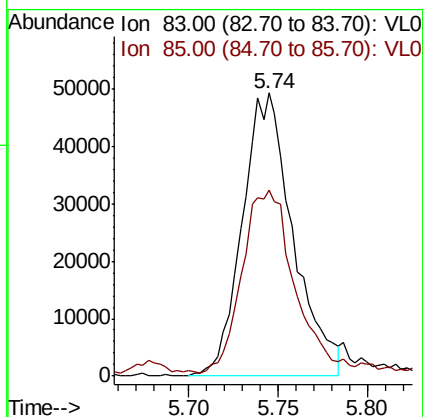
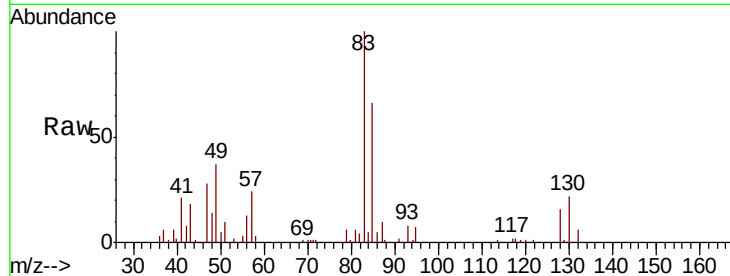




#29
Chloroform
Concen: 0.480 ppbv
RT: 5.74 min Scan# 920
Delta R.T. 0.00 min
Lab File: VL037336.D
Acq: 5 Aug 2021 9:57

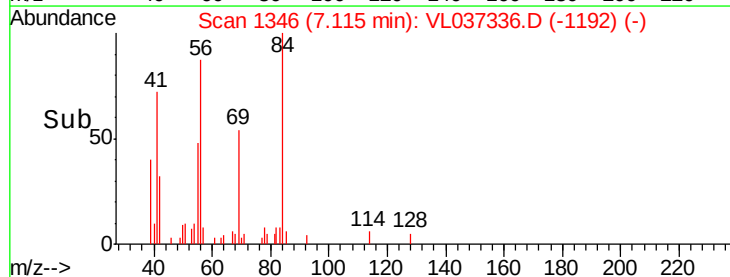
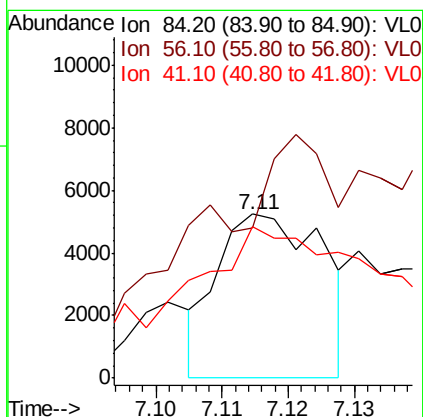
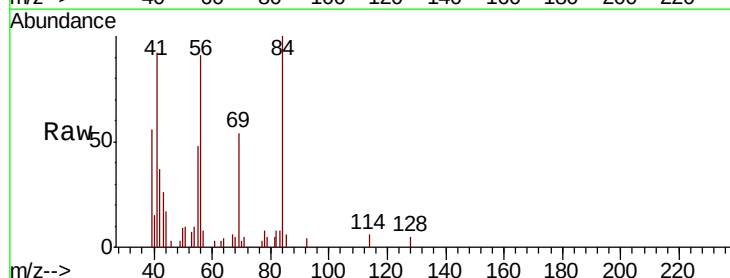
Instrument :
MSVOA_L
ClientSampleId :

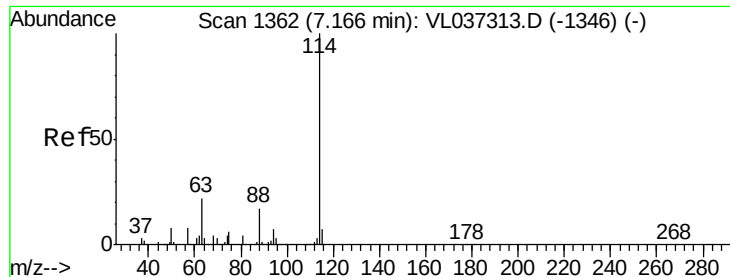
Tot Ion: 83 Resp: 98083
Ion Ratio Lower Upper
83 100
85 63.9 52.6 79.0



#30
Cyclohexane
Concen: 0.047 ppbv
RT: 7.11 min Scan# 1346
Delta R.T. -0.01 min
Lab File: VL037336.D
Acq: 5 Aug 2021 9:57

Tgt Ion: 84 Resp: 5818
Ion Ratio Lower Upper
84 100
56 0.0 105.2 157.8#
41 169.2 61.3 91.9#

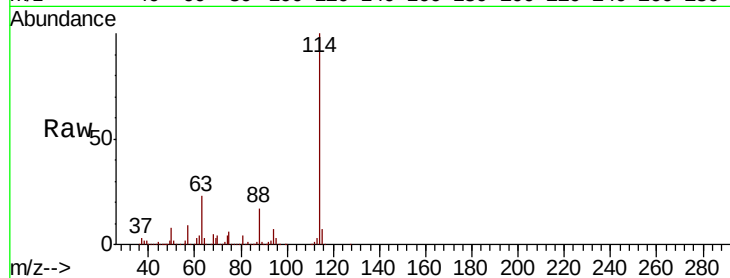




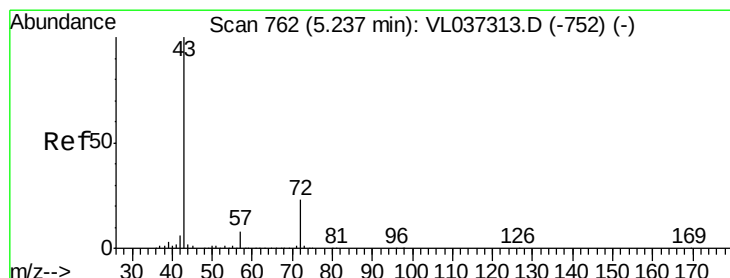
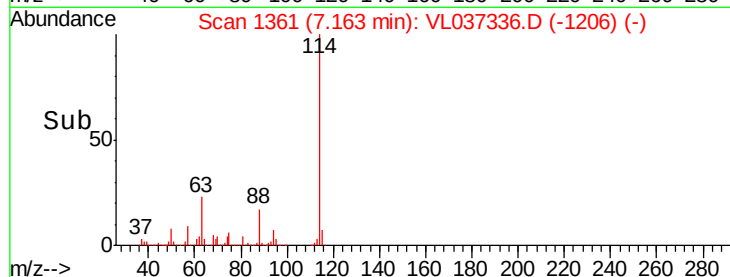
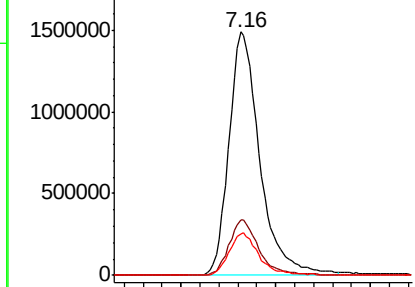
#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.16 min Scan# 1361
 Delta R.T. -0.00 min
 Lab File: VL037336.D
 Acq: 5 Aug 2021 9:57

Instrument :
 MSVOA_L
 ClientSampleId :

Tot Ion:114 Resp: 3378453
 Ion Ratio Lower Upper
 114 100
 63 22.5 18.1 27.1
 88 17.2 13.8 20.8

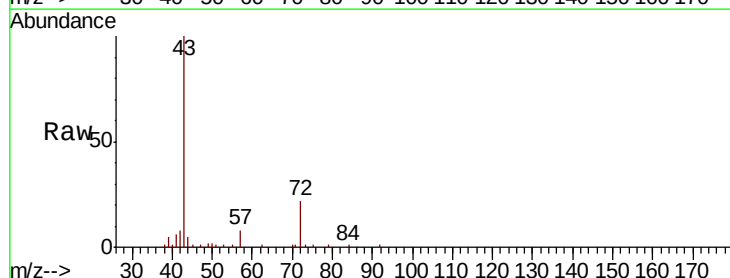


Abundance Ion 114.10 (113.80 to 114.80): VL0
 Ion 63.10 (62.80 to 63.80): VL0
 Ion 88.10 (87.80 to 88.80): VL0

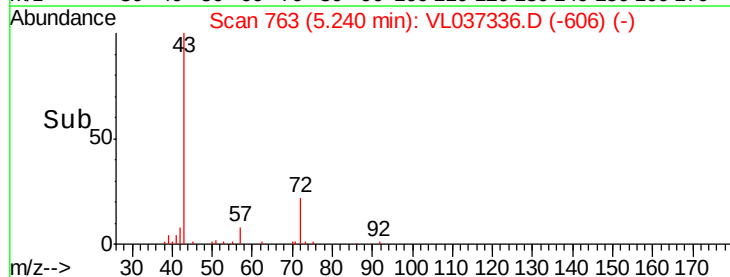
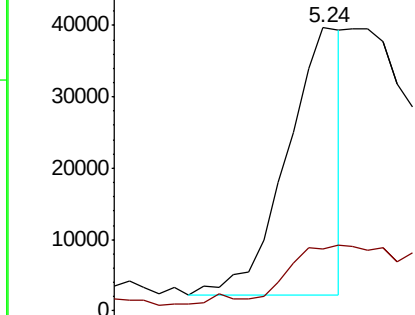


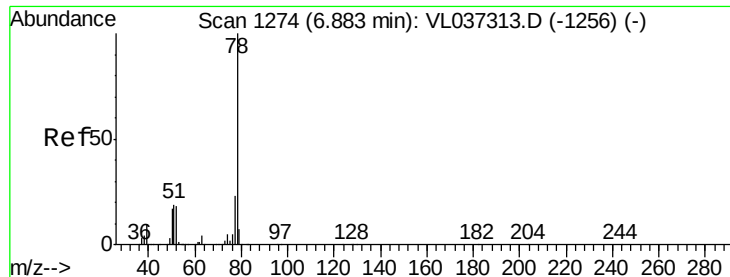
#34
 2-Butanone
 Concen: 0.264 ppbv
 RT: 5.24 min Scan# 763
 Delta R.T. 0.00 min
 Lab File: VL037336.D
 Acq: 5 Aug 2021 9:57

Tgt Ion: 43 Resp: 31000
 Ion Ratio Lower Upper
 43 100
 72 78.5 20.3 30.5#



Abundance Ion 43.10 (42.80 to 43.80): VL0
 Ion 72.10 (71.80 to 72.80): VL0





#36

Benzene

Concen: 0.414 ppbv

RT: 6.88 min Scan# 1273

Delta R.T. -0.00 min

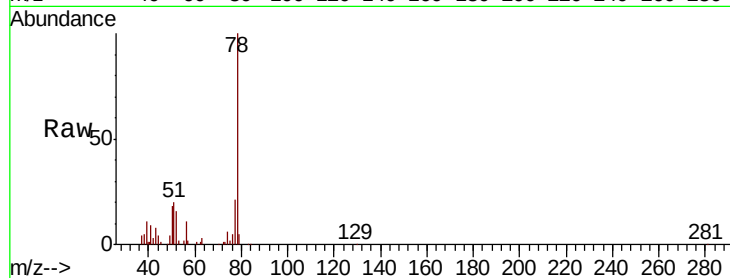
Lab File: VL037336.D

Acq: 5 Aug 2021 9:57

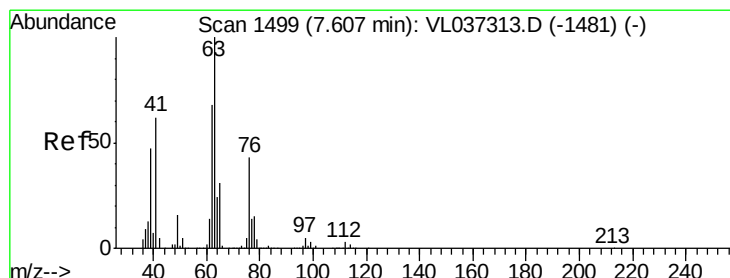
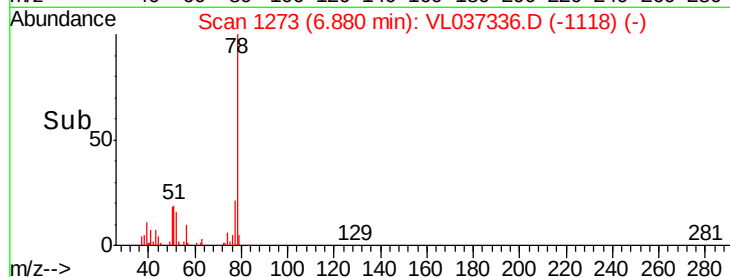
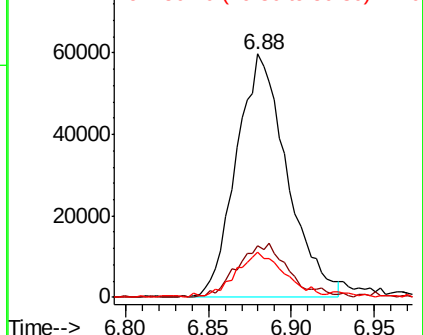
Instrument :
MSVOA_L
ClientSampleId :

Tot Ion: 78 Resp: 125947

Ion	Ratio	Lower	Upper
78	100		
77	21.3	18.7	28.1
50	18.1	13.7	20.5



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: 6.462 ppbv

RT: 7.17 min Scan# 1362

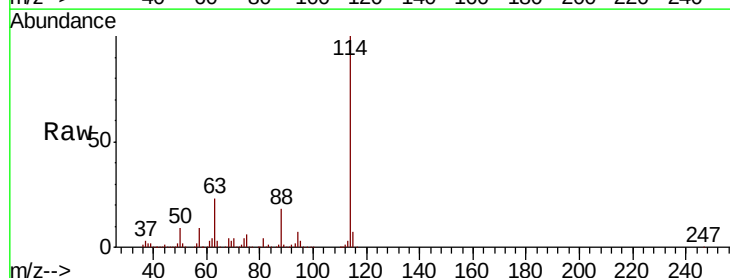
Delta R.T. -0.44 min

Lab File: VL037336.D

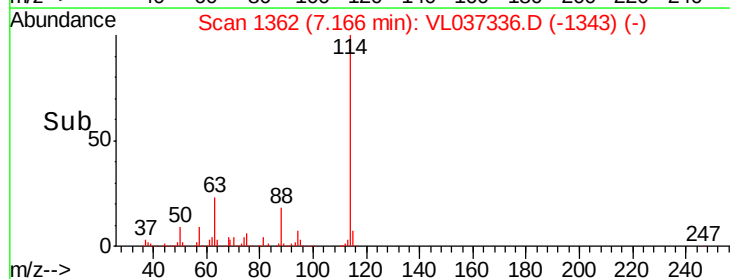
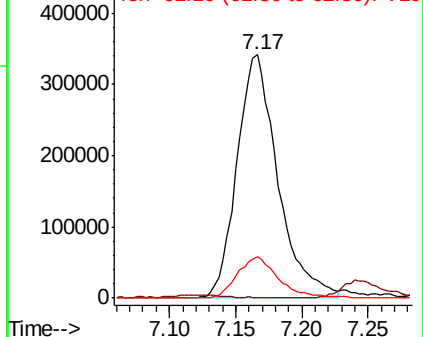
Acq: 5 Aug 2021 9:57

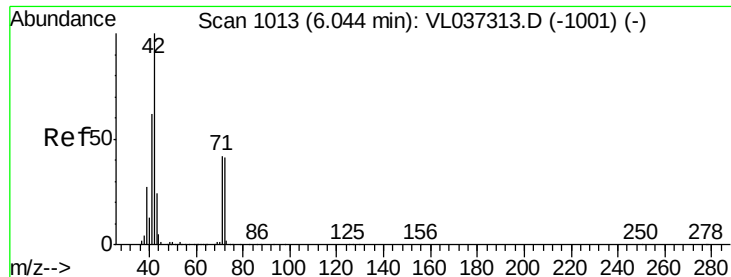
Tgt Ion: 63 Resp: 731678

Ion	Ratio	Lower	Upper
63	100		
41	0.0	49.2	73.8#
62	16.8	54.2	81.4#



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

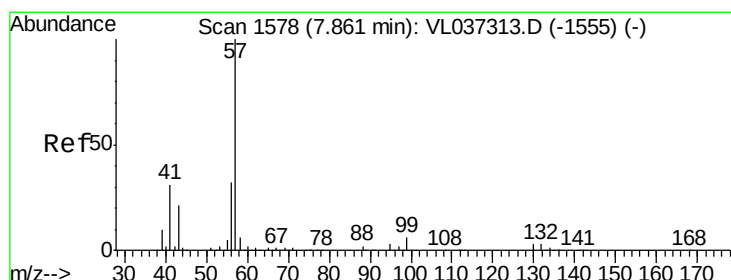
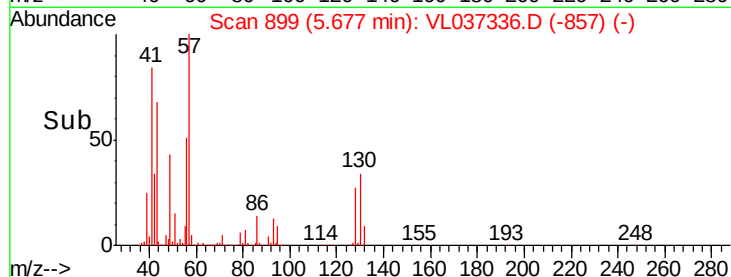
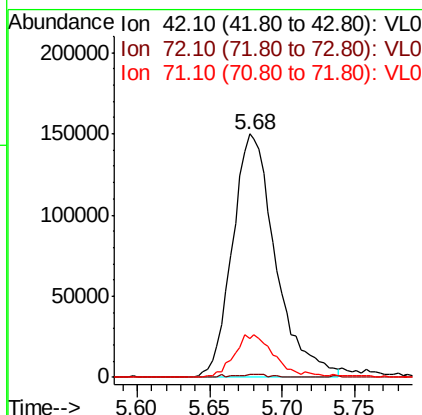
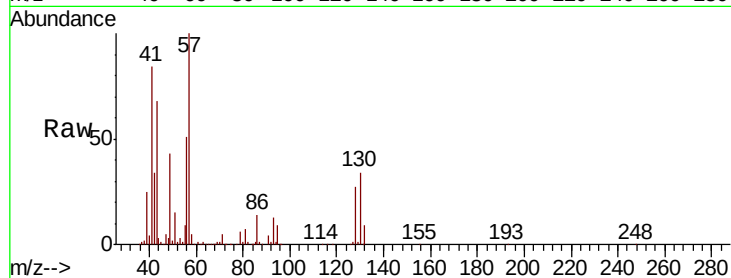




#41
Tetrahydrofuran
Concen: 4.713 ppbv
RT: 5.68 min Scan# 899
Delta R.T. -0.37 min
Lab File: VL037336.D
Acq: 5 Aug 2021 9:57

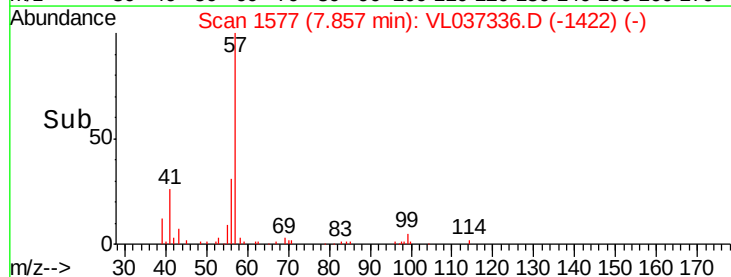
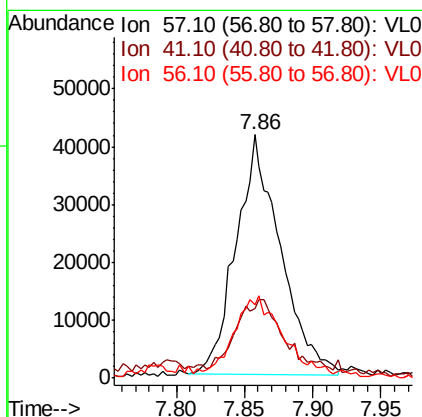
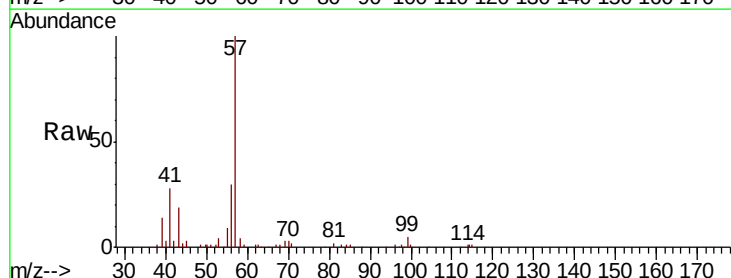
Instrument :
MSVOA_L
ClientSampleId :

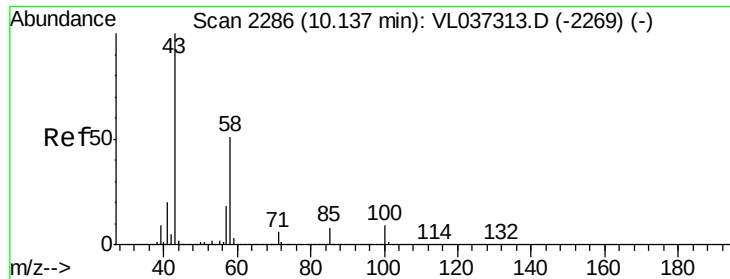
Tot Ion: 42 Resp: 307298
Ion Ratio Lower Upper
42 100
72 1.1 33.6 50.4#
71 17.6 33.0 49.4#



#44
2,2,4-Trimethylpentane
Concen: 0.186 ppbv
RT: 7.86 min Scan# 1577
Delta R.T. -0.00 min
Lab File: VL037336.D
Acq: 5 Aug 2021 9:57

Tgt Ion: 57 Resp: 93499
Ion Ratio Lower Upper
57 100
41 40.6 24.3 36.5#
56 42.3 25.0 37.6#

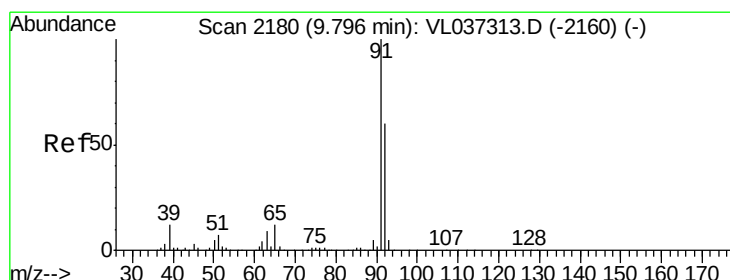
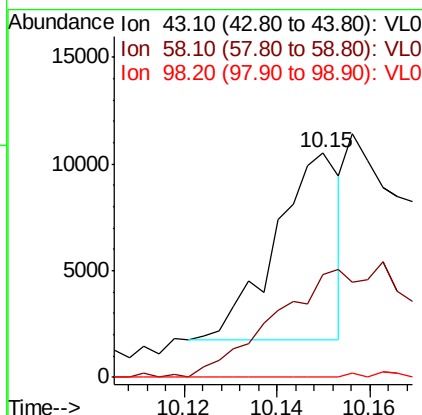
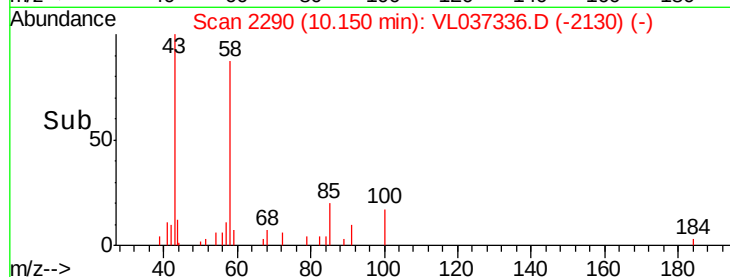
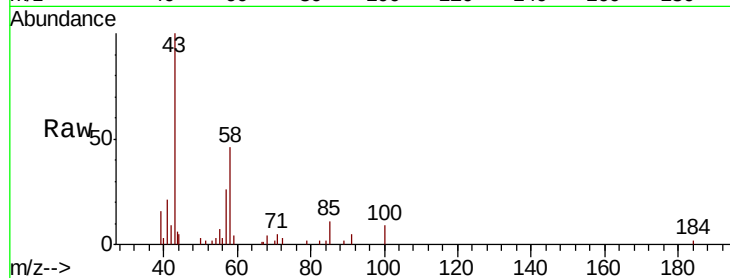




#51
2-Hexanone
Concen: 0.103 ppbv
RT: 10.15 min Scan# 2290
Delta R.T. 0.01 min
Lab File: VL037336.D
Acq: 5 Aug 2021 9:57

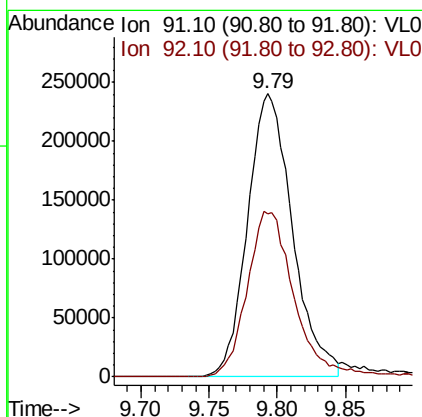
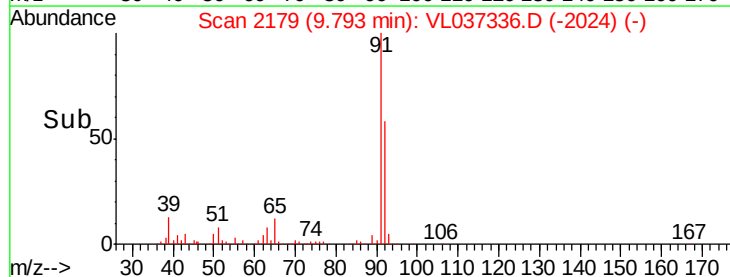
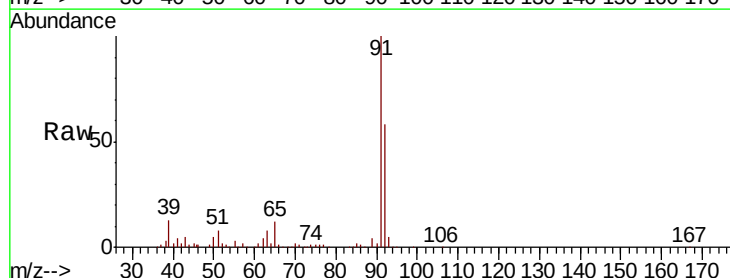
Instrument :
MSVOA_L
ClientSampled :

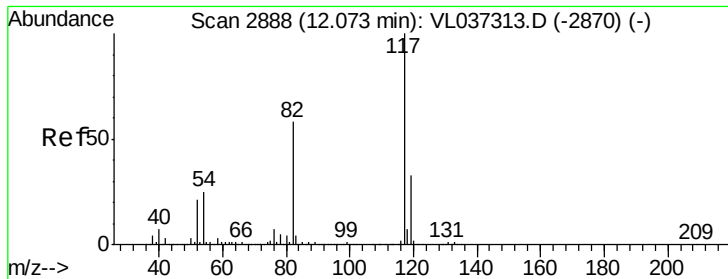
Tot Ion: 43 Resp: 8411
Ion Ratio Lower Upper
43 100
58 191.0 40.9 61.3#
98 1.6 0.1 0.1#



#53
Toluene
Concen: 1.536 ppbv
RT: 9.79 min Scan# 2179
Delta R.T. -0.00 min
Lab File: VL037336.D
Acq: 5 Aug 2021 9:57

Tgt Ion: 91 Resp: 551457
Ion Ratio Lower Upper
91 100
92 61.0 48.8 73.2

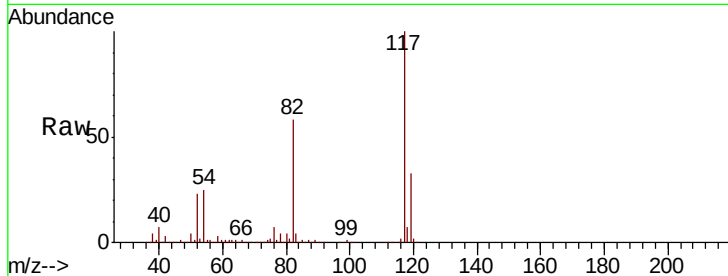




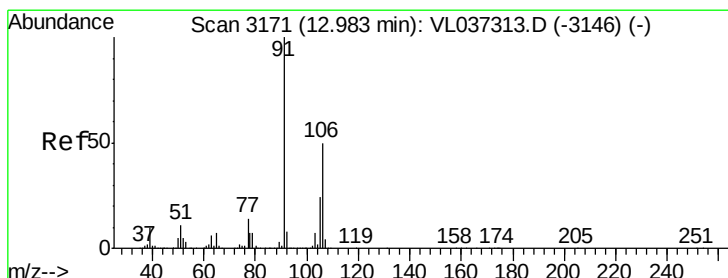
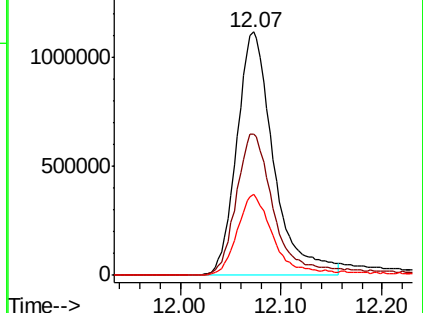
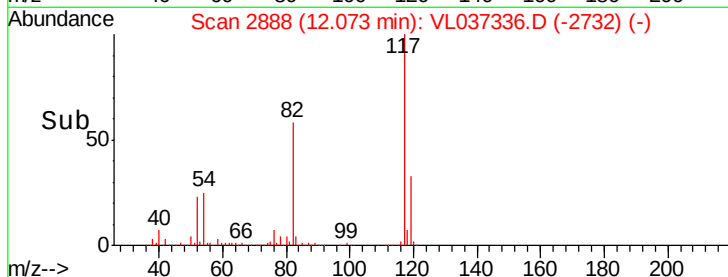
#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.07 min Scan# 2888
Delta R.T. 0.00 min
Lab File: VL037336.D
Acq: 5 Aug 2021 9:57

Instrument :
MSVOA_L
ClientSampled :

Tot Ion:117 Resp: 2848603
Ion Ratio Lower Upper
117 100
82 64.6 50.3 75.5
119 35.2 48.2 72.2#

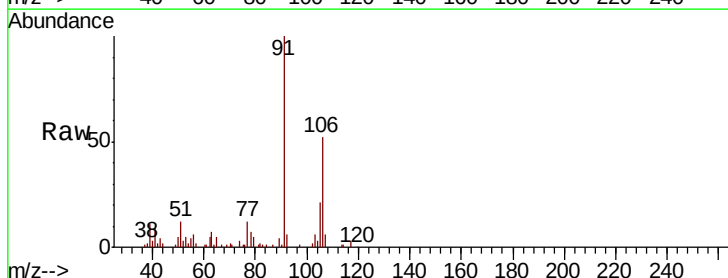


Abundance Ion 117.10 (116.80 to 117.80): V
1500000 Ion 82.10 (81.80 to 82.80): VL0
Ion 119.10 (118.80 to 119.80): V

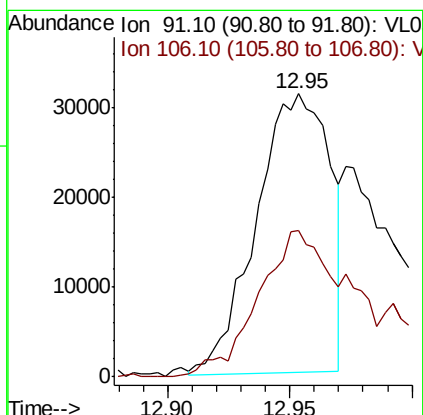
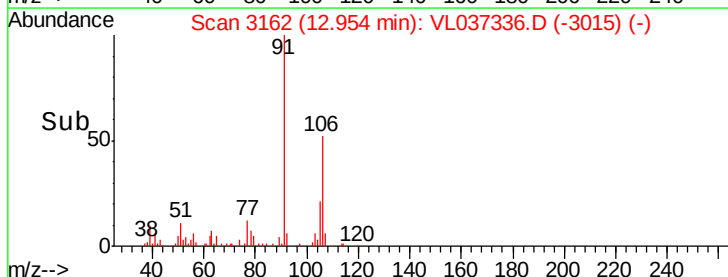


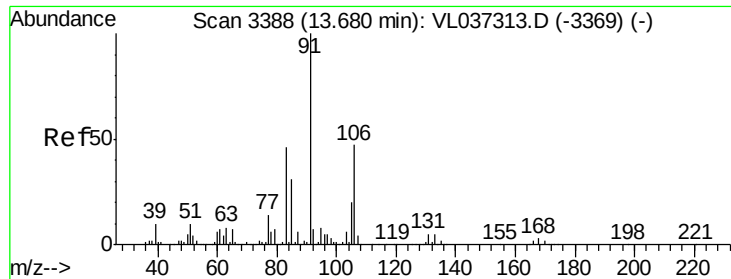
#59
m/p-Xylene
Concen: 0.186 ppbv
RT: 12.95 min Scan# 3162
Delta R.T. -0.03 min
Lab File: VL037336.D
Acq: 5 Aug 2021 9:57

Tgt Ion: 91 Resp: 65422
Ion Ratio Lower Upper
91 100
106 79.5 37.8 56.8#



Abundance Ion 91.10 (90.80 to 91.80): VL0
Ion 106.10 (105.80 to 106.80): V

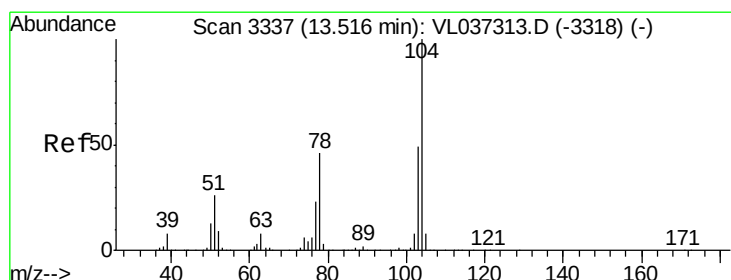
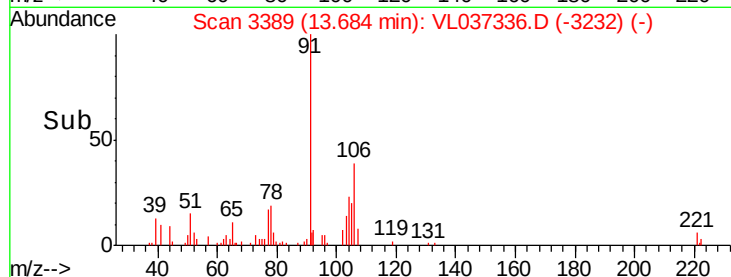
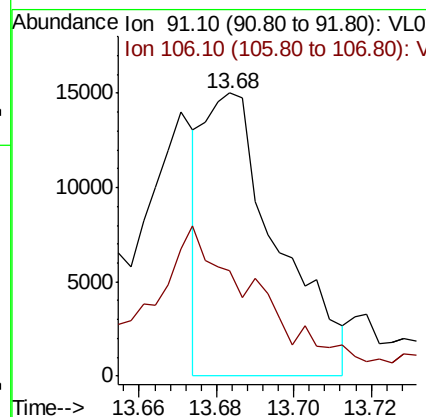
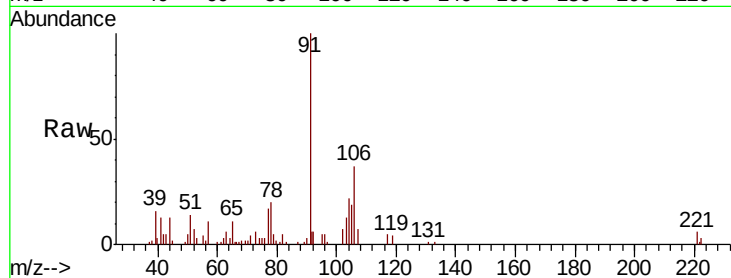




#60
o-Xylene
Concen: 0.062 ppbv
RT: 13.68 min Scan# 3389
Delta R.T. 0.00 min
Lab File: VL037336.D
Acq: 5 Aug 2021 9:57

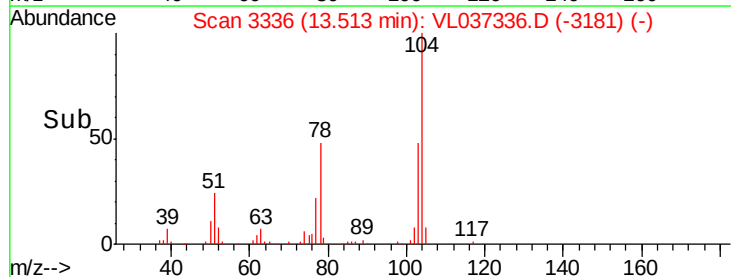
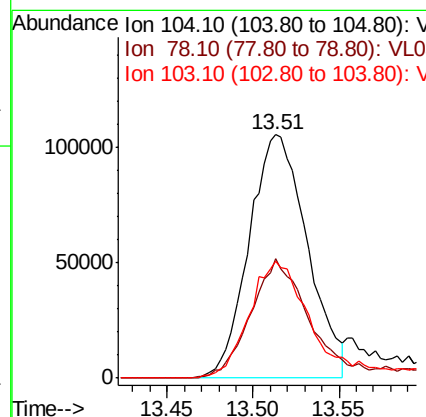
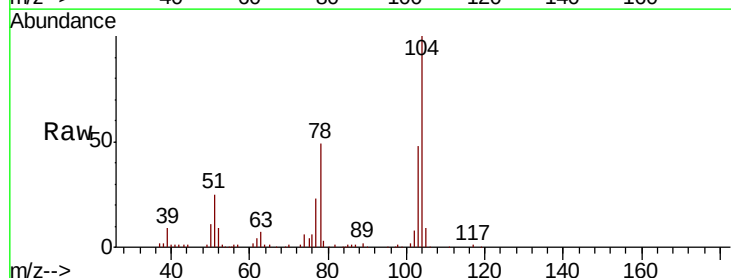
Instrument :
MSVOA_L
ClientSampled :

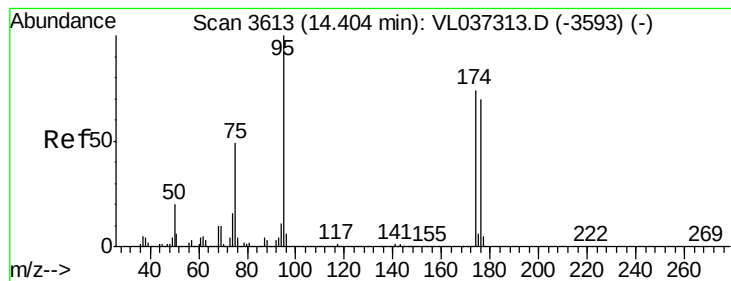
Tot Ion: 91 Resp: 19859
Ion Ratio Lower Upper
91 100
106 0.0 26.3 78.8#



#61
Styrene
Concen: 1.413 ppbv
RT: 13.51 min Scan# 3336
Delta R.T. -0.00 min
Lab File: VL037336.D
Acq: 5 Aug 2021 9:57

Tgt Ion: 104 Resp: 248032
Ion Ratio Lower Upper
104 100
78 55.0 39.3 58.9
103 53.4 40.6 60.8





#68

1-Bromo-4-Fluorobenzene

Concen: 10.187 ppbv

RT: 14.40 min Scan# 3612

Delta R.T. -0.00 min

Lab File: VL037336.D

Acq: 5 Aug 2021 9:57

Instrument :

MSVOA_L

ClientSampleId :

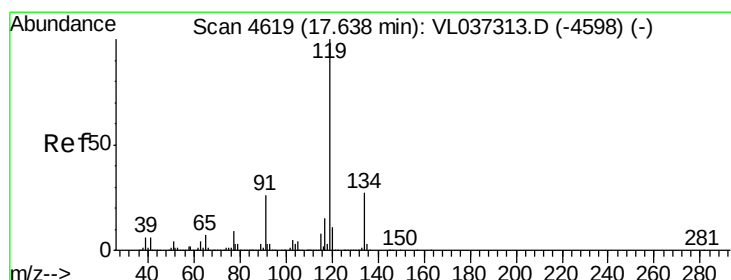
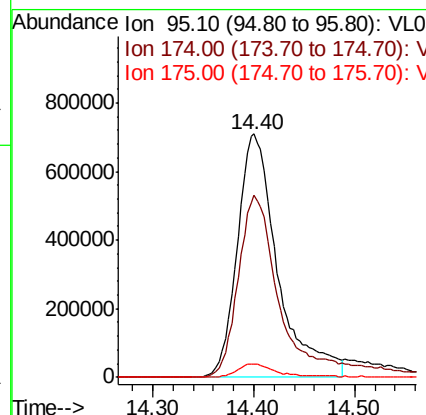
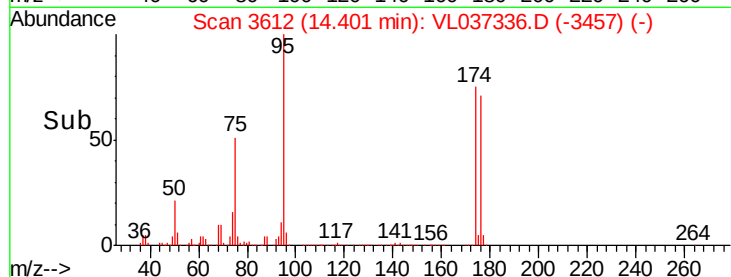
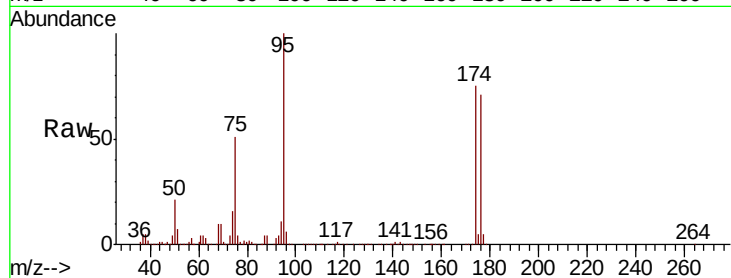
Tot Ion: 95 Resp: 1982158

Ion Ratio Lower Upper

95 100

174 81.4 66.9 100.3

175 6.0 5.1 7.7



#69

p-Isopropyltoluene

Concen: 0.066 ppbv

RT: 17.64 min Scan# 4621

Delta R.T. 0.01 min

Lab File: VL037336.D

Acq: 5 Aug 2021 9:57

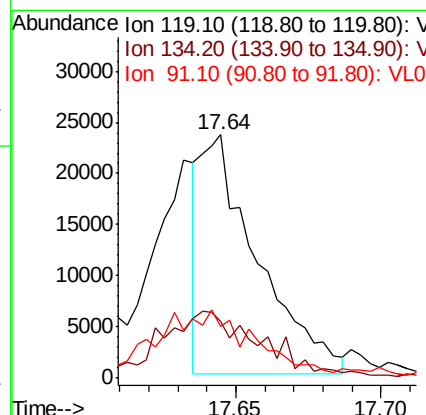
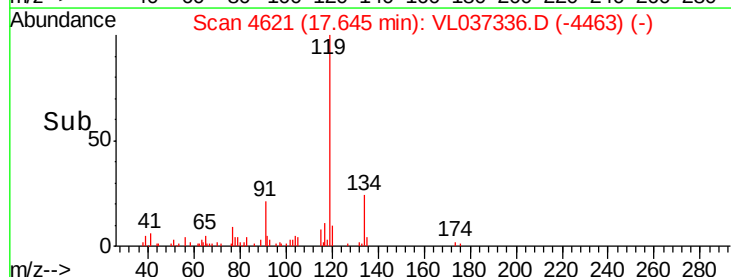
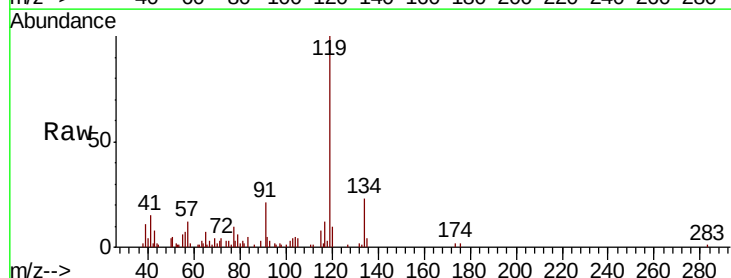
Tgt Ion: 119 Resp: 32155

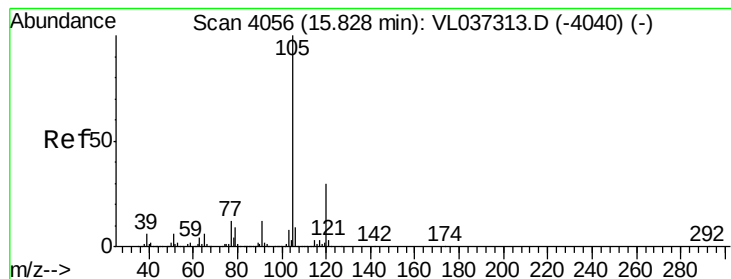
Ion Ratio Lower Upper

119 100

134 51.2 21.0 31.6#

91 63.5 20.5 30.7#





#72

4-Ethyltoluene

Concen: 0.035 ppbv

RT: 15.83 min Scan# 4057

Delta R.T. 0.00 min

Lab File: VL037336.D

Acq: 5 Aug 2021 9:57

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion:105 Resp: 13373

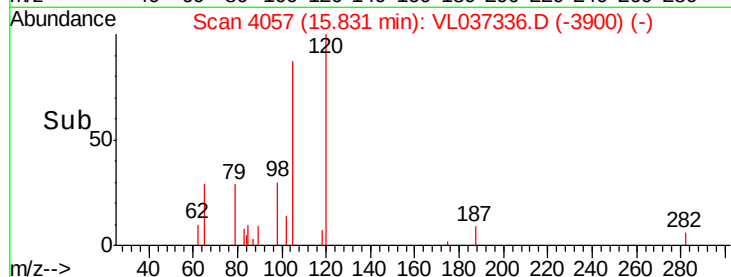
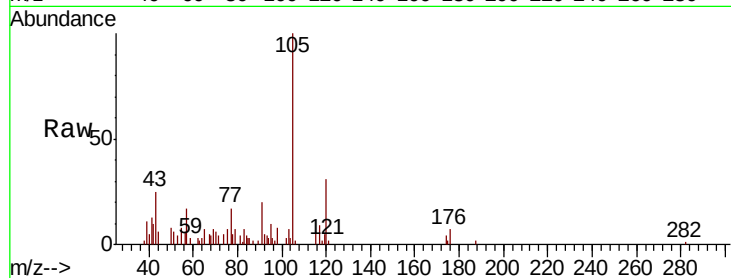
Ion Ratio Lower Upper

105 100

120 0.0 25.6 38.4#

91 0.0 9.4 14.2#

77 0.0 10.2 15.4#

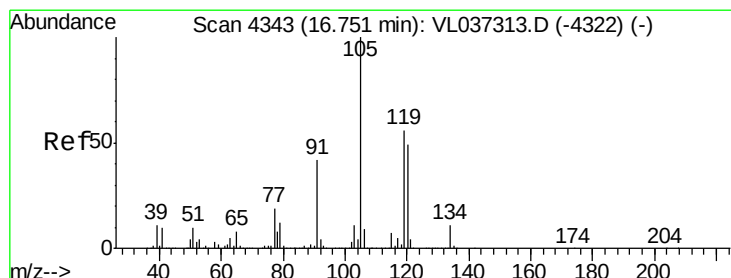
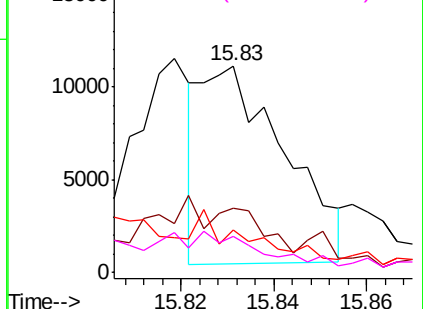


Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 77.10 (76.80 to 77.80): VL0



#74

1,2,4-Trimethylbenzene

Concen: 0.164 ppbv

RT: 16.75 min Scan# 4342

Delta R.T. -0.00 min

Lab File: VL037336.D

Acq: 5 Aug 2021 9:57

Tgt Ion:105 Resp: 60985

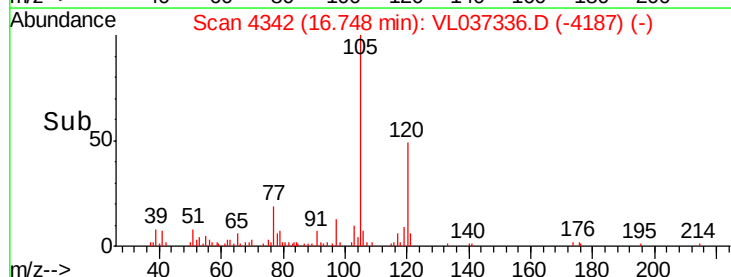
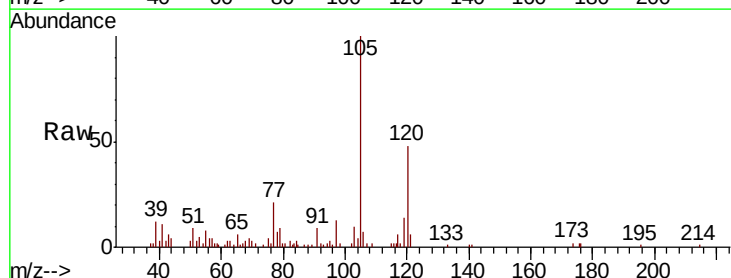
Ion Ratio Lower Upper

105 100

120 48.1 39.6 59.4

91 8.7 34.5 51.7#

77 19.7 15.3 22.9



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

