

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL080421\
 Data File : VL037338.D
 Acq On : 5 Aug 2021 11:17
 Operator : SY/AP
 Sample : M3239-01DL 10X
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Aug 05 11:46:50 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL080421AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed Aug 04 22:53:01 2021
 QLast Update : Wed Aug 04 22:53:01 2021
 Response via : Initial Calibration

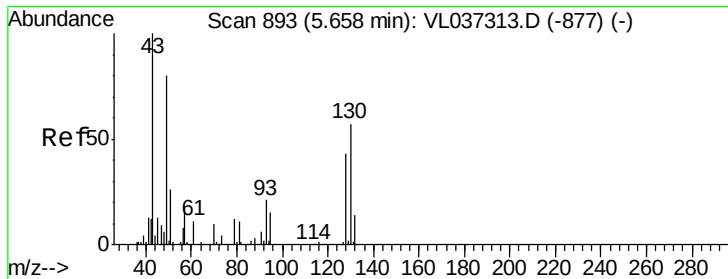
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	960350	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.17	114	3290276	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.07	117	2847700	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.40	95	2034508	10.46	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	104.60%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
3) Chlorodifluoromethane	2.99	51	23354	0.120	ppbv	98
7) Chloroethane	3.55	64	839	0.032	ppbv #	80
9) Propene	3.01	41	10621	0.150	ppbv #	59
10) Heptane	8.11	43	44183	0.268	ppbv	92
13) Ethanol	3.62	45	5182	0.487	ppbv #	34
15) Acetone	3.86	43	271996	2.607	ppbv #	83
20) Methylene Chloride	4.33	84	81656	0.945	ppbv	95
25) Ethyl Acetate	5.68	43	131307	0.484	ppbv #	78
26) Hexane	5.68	57	198345	1.307	ppbv #	47
29) Chloroform	5.74	83	31383	0.163	ppbv	84
34) 2-Butanone	5.26	43	61371	0.538	ppbv #	77
39) 1,2-Dichloropropane	7.16	63	708543	6.426	ppbv #	29
51) 2-Hexanone	10.14	43	11483	0.144	ppbv #	27
53) Toluene	9.80	91	236360	0.676	ppbv	99
58) Ethyl Benzene	12.70	91	37326	0.089	ppbv	97
59) m/p-Xylene	12.96	91	43064	0.122	ppbv #	29
60) o-Xylene	13.67	91	47213	0.147	ppbv	98
61) Styrene	13.51	104	17579	0.100	ppbv #	68
62) Isopropylbenzene	14.65	105	20623	0.044	ppbv #	82
64) n-propylbenzene	15.54	120	14723	0.121	ppbv	99
65) tert-Butylbenzene	16.73	119	20542	0.048	ppbv #	29
66) Benzyl Chloride	16.98	91	774	0.046	ppbv #	60
67) sec-Butylbenzene	17.28	105	56689	0.098	ppbv	98
69) p-Isopropyltoluene	17.64	119	52402	0.108	ppbv #	90
70) n-Butylbenzene	18.54	91	43634	0.098	ppbv #	8
71) 2-Chlorotoluene	15.44	91	12142	0.037	ppbv	79
72) 4-Ethyltoluene	15.82	105	28997	0.075	ppbv #	50
73) 1,3,5-Trimethylbenzene	15.99	105	66800	0.192	ppbv	88
74) 1,2,4-Trimethylbenzene	16.75	105	224927	0.606	ppbv #	76
78) Hexachloro-1,3-Butadiene	23.36	225	6945	0.035	ppbv #	1

(#) = 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: VL037338.D

Acq: 5 Aug 2021 11:17

Instrument :

MSVOA_L

ClientSampleId :

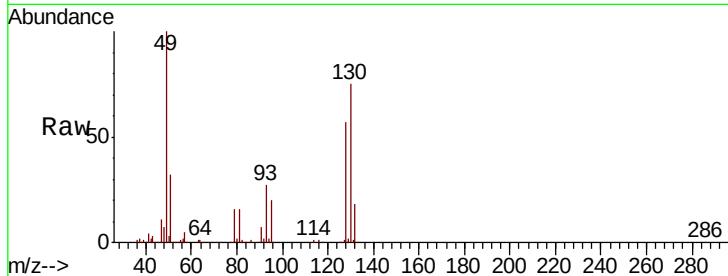
Tot Ion: 49 Resp: 960350

Ion Ratio Lower Upper

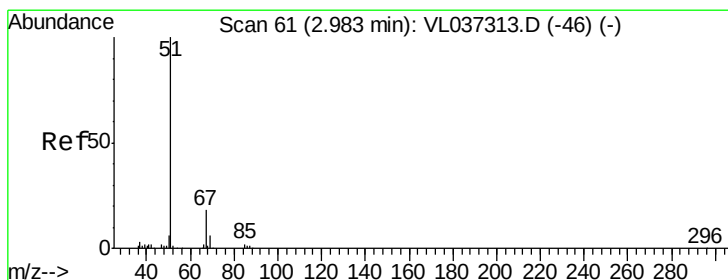
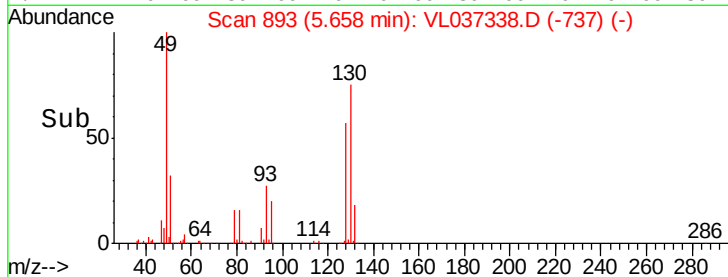
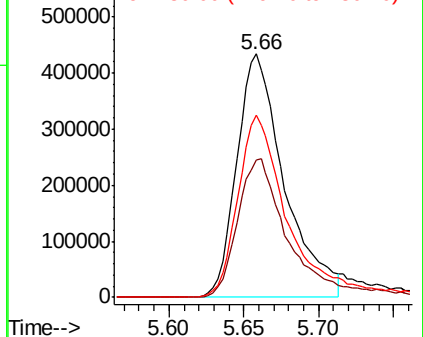
49 100

128 62.1 29.8 89.5

130 81.1 37.5 112.7



Abundance Ion 49.10 (48.80 to 49.80): VL0
Ion 128.00 (127.70 to 128.70): V
Ion 130.00 (129.70 to 130.70): V



#3

Chlorodifluoromethane

Concen: 0.120 ppbv

RT: 2.99 min Scan# 62

Delta R.T. 0.00 min

Lab File: VL037338.D

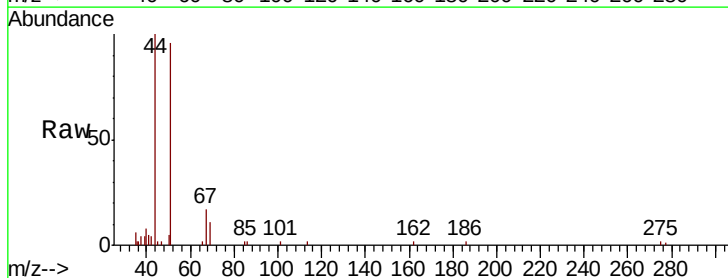
Acq: 5 Aug 2021 11:17

Tgt Ion: 51 Resp: 23354

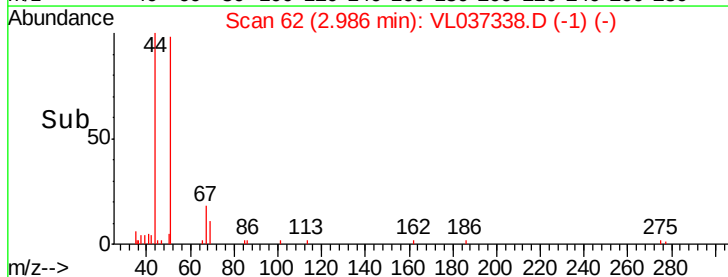
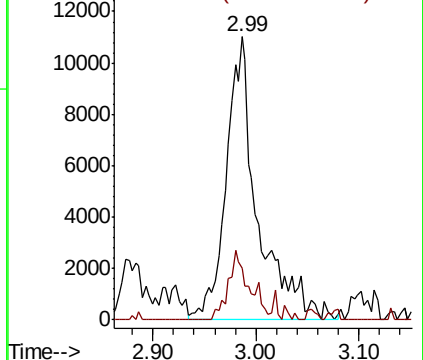
Ion Ratio Lower Upper

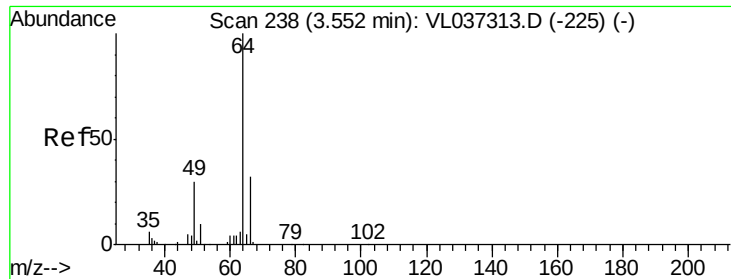
51 100

67 18.6 14.2 21.2



Abundance Ion 51.00 (50.70 to 51.70): VL0
Ion 67.00 (66.70 to 67.70): VL0





#7

Chloroethane

Concen: 0.032 ppbv

RT: 3.55 min Scan# 237

Delta R.T. -0.00 min

Lab File: VL037338.D

Acq: 5 Aug 2021 11:17

Instrument :

MSVOA_L

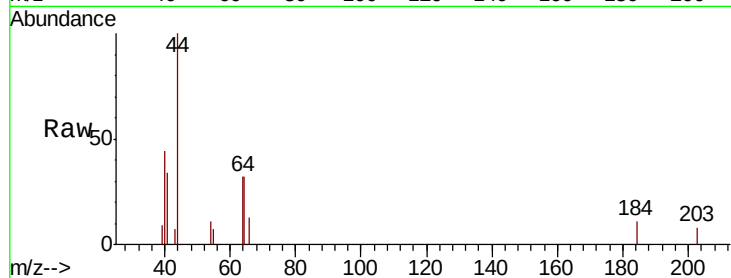
ClientSampled :

Tot Ion: 64 Resp: 839

Ion Ratio Lower Upper

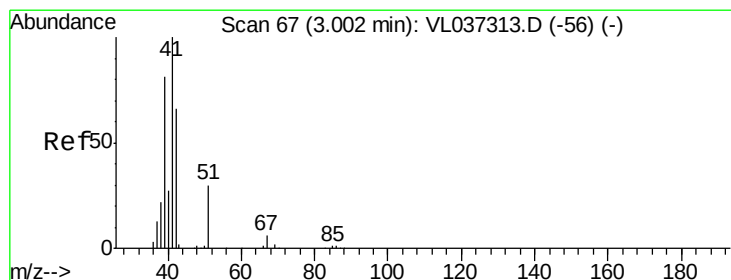
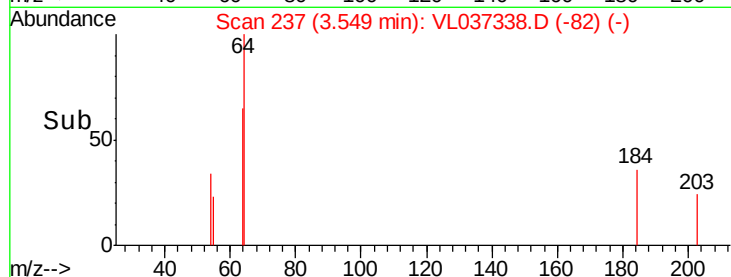
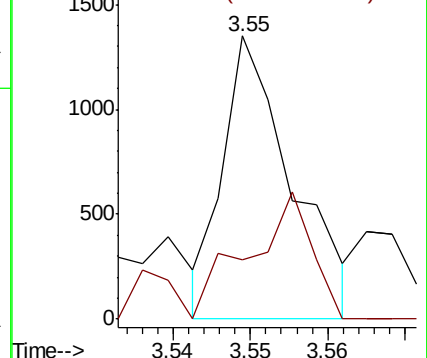
64 100

66 20.9 25.5 38.3#



Abundance Ion 64.10 (63.80 to 64.80): VL0

Ion 66.10 (65.80 to 66.80): VL0



#9

Propene

Concen: 0.150 ppbv

RT: 3.01 min Scan# 70

Delta R.T. 0.01 min

Lab File: VL037338.D

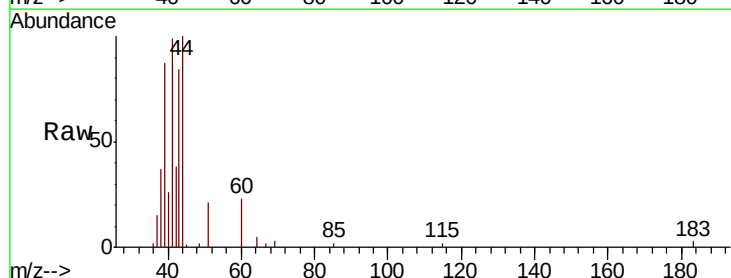
Acq: 5 Aug 2021 11:17

Tgt Ion: 41 Resp: 10621

Ion Ratio Lower Upper

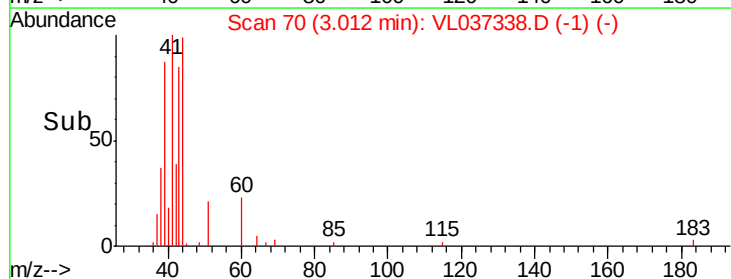
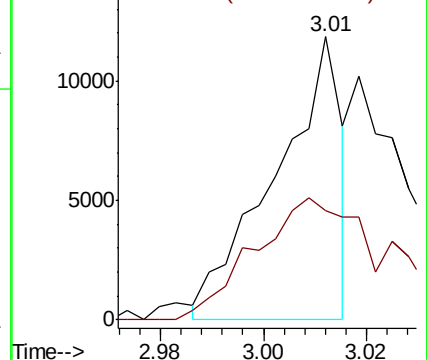
41 100

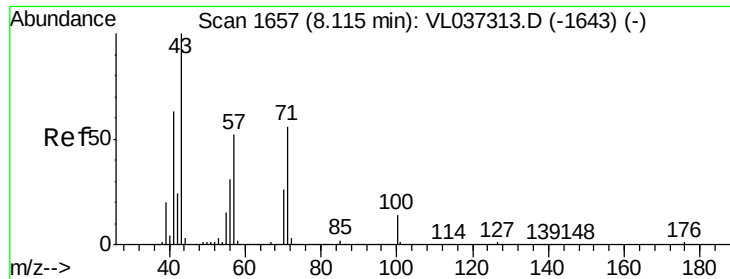
42 100.1 53.8 80.8#



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

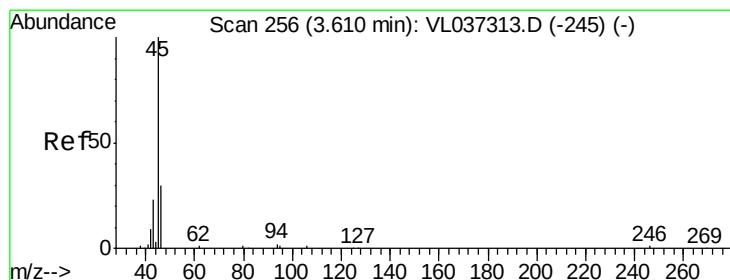
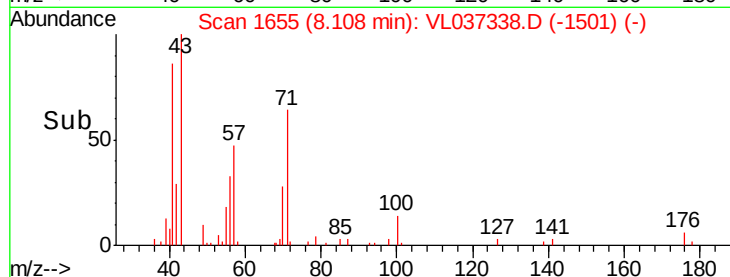
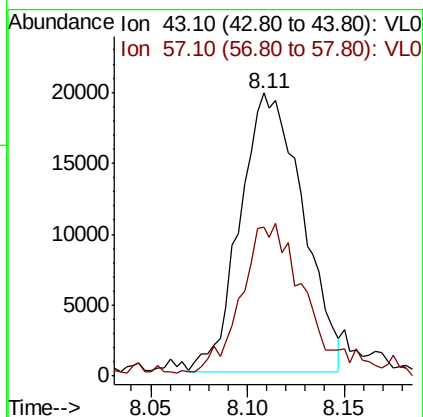
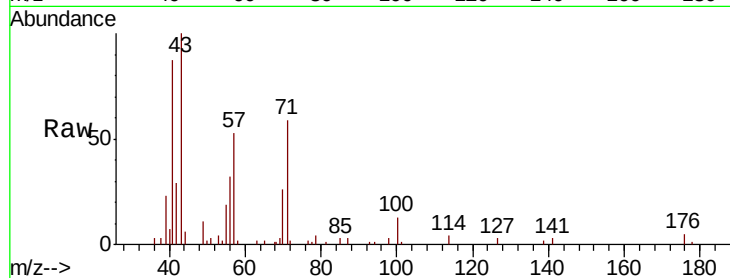




#10
Heptane
Concen: 0.268 ppbv
RT: 8.11 min Scan# 1655
Delta R.T. -0.01 min
Lab File: VL037338.D
Acq: 5 Aug 2021 11:17

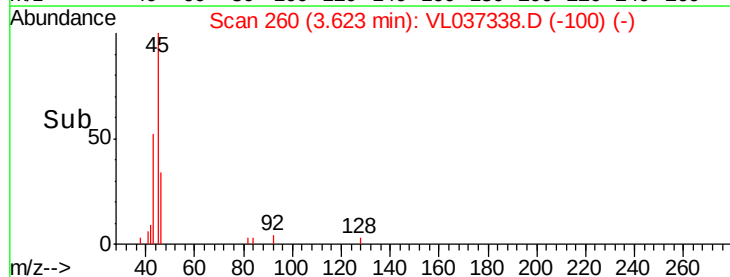
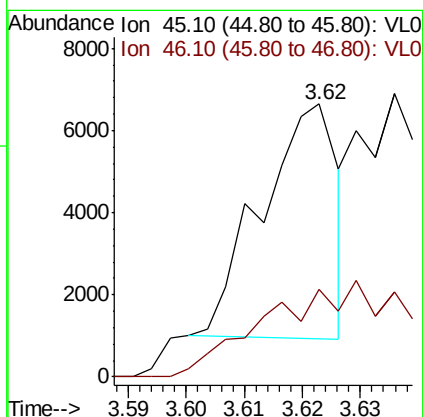
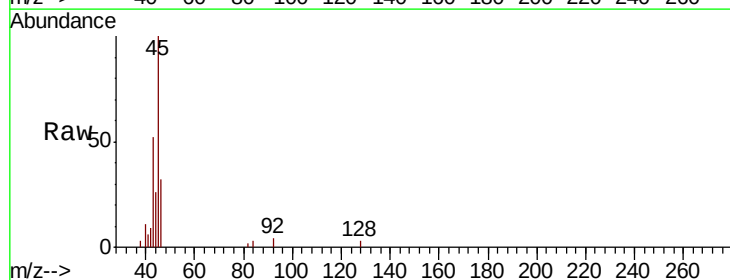
Instrument :
MSVOA_L
ClientSampleId :

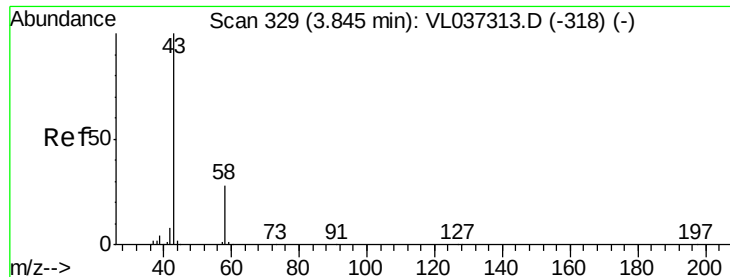
Tot Ion: 43 Resp: 44183
Ion Ratio Lower Upper
43 100
57 58.5 42.4 63.6



#13
Ethanol
Concen: 0.487 ppbv
RT: 3.62 min Scan# 260
Delta R.T. 0.01 min
Lab File: VL037338.D
Acq: 5 Aug 2021 11:17

Tgt Ion: 45 Resp: 5182
Ion Ratio Lower Upper
45 100
46 0.0 16.6 66.4#





#15

Acetone

Concen: 2.607 ppbv

RT: 3.86 min Scan# 335

Delta R.T. 0.02 min

Lab File: VL037338.D

Acq: 5 Aug 2021 11:17

Instrument :

MSVOA_L

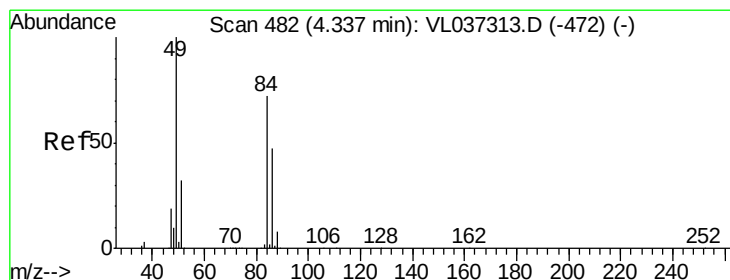
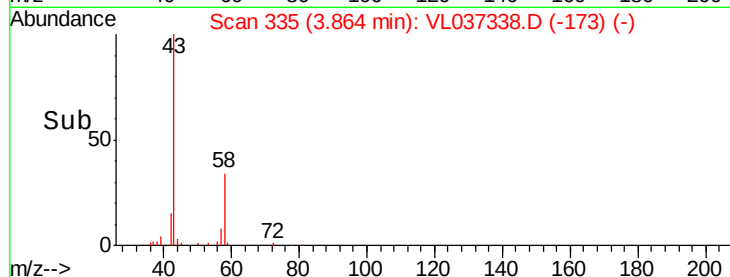
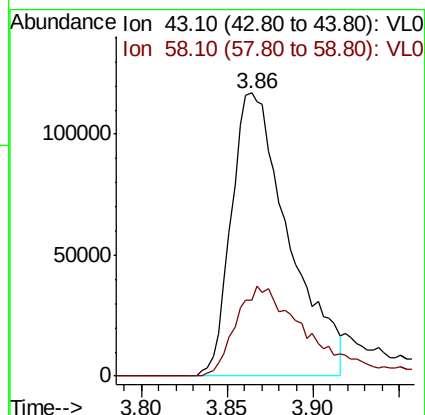
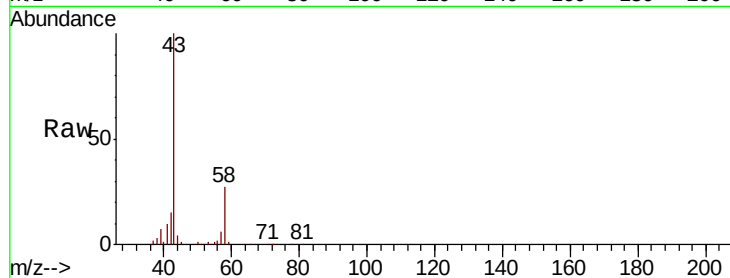
ClientSampleId :

Tot Ion: 43 Resp: 271996

Ion Ratio Lower Upper

43 100

58 41.1 25.3 37.9#



#20

Methylene Chloride

Concen: 0.945 ppbv

RT: 4.33 min Scan# 481

Delta R.T. -0.00 min

Lab File: VL037338.D

Acq: 5 Aug 2021 11:17

Tgt Ion: 84 Resp: 81656

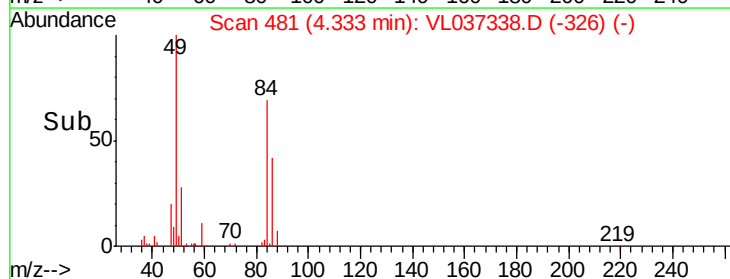
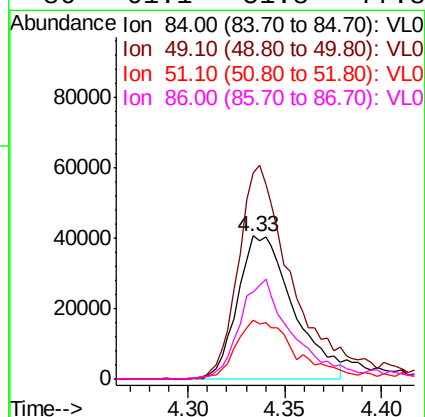
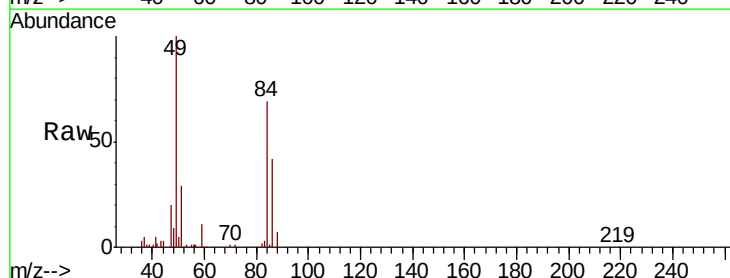
Ion Ratio Lower Upper

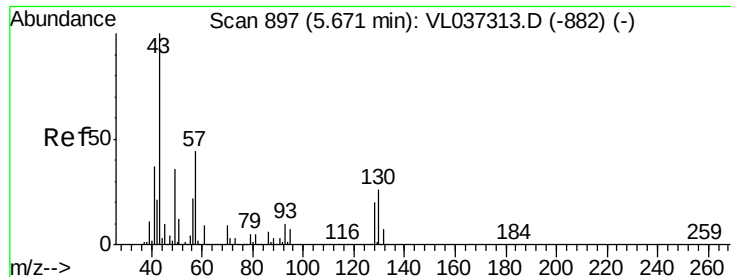
84 100

49 144.5 110.4 165.6

51 40.7 35.8 53.6

86 61.1 51.8 77.8

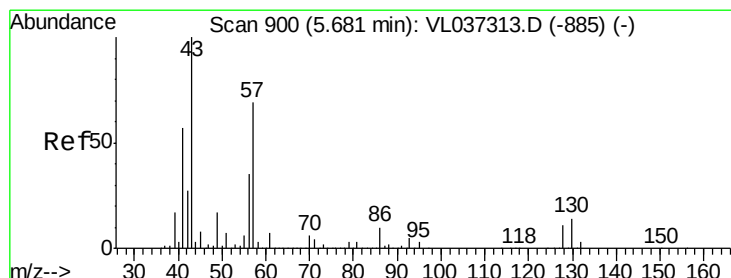
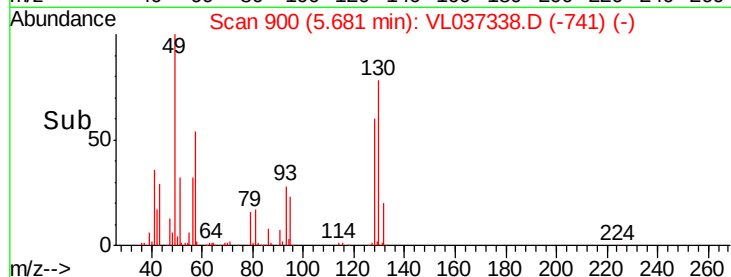
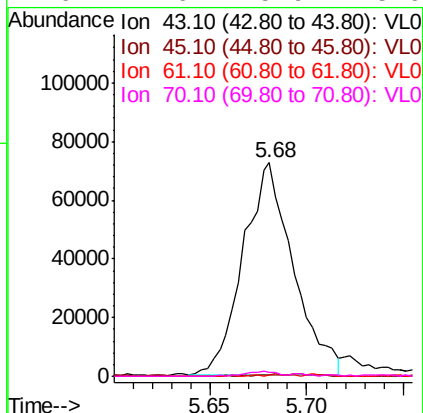
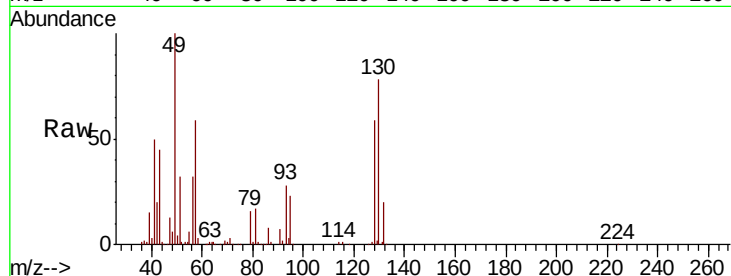




#25
Ethyl Acetate
Concen: 0.484 ppbv
RT: 5.68 min Scan# 900
Delta R.T. 0.01 min
Lab File: VL037338.D
Acq: 5 Aug 2021 11:17

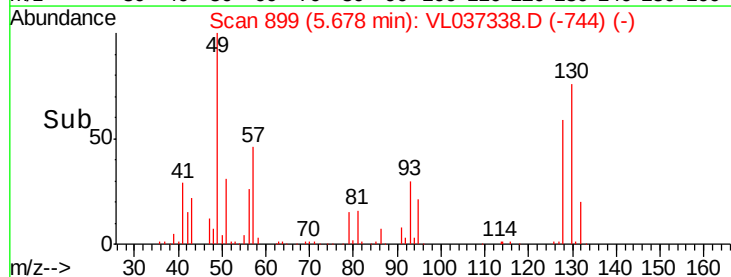
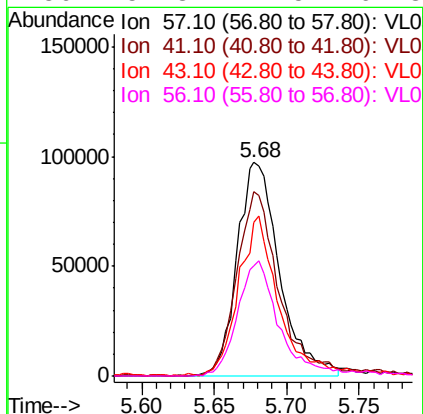
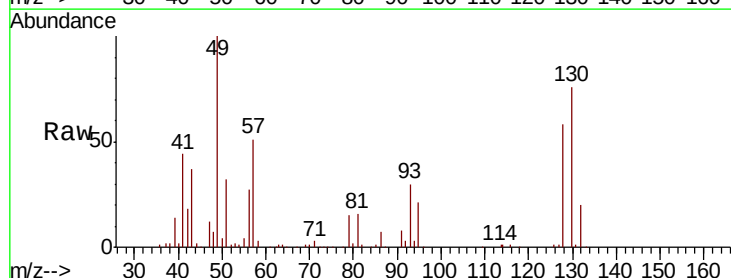
Instrument :
MSVOA_L
ClientSampleId :

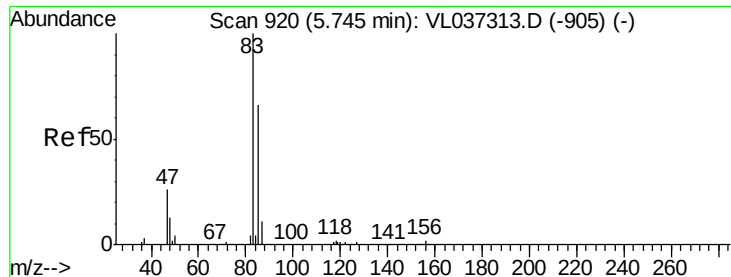
Tot Ion	43	Resp:	131307
Ion	Ratio	Lower	Upper
43	100		
45	1.1	7.8	11.8#
61	1.1	8.6	12.8#
70	2.6	5.9	8.9#



#26
Hexane
Concen: 1.307 ppbv
RT: 5.68 min Scan# 899
Delta R.T. -0.00 min
Lab File: VL037338.D
Acq: 5 Aug 2021 11:17

Tgt Ion	57	Resp:	198345
Ion	Ratio	Lower	Upper
57	100		
41	90.2	67.5	101.3
43	73.3	163.0	244.4#
56	54.3	41.5	62.3

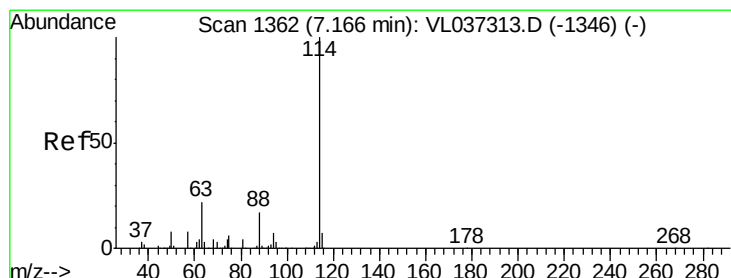
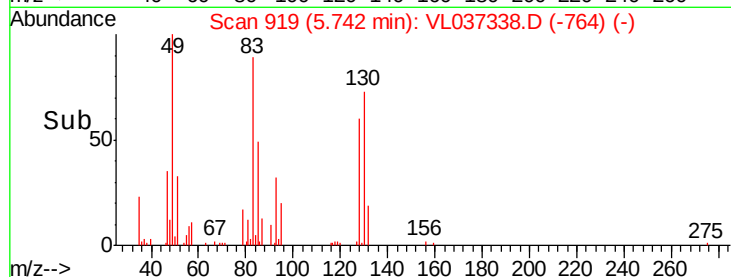
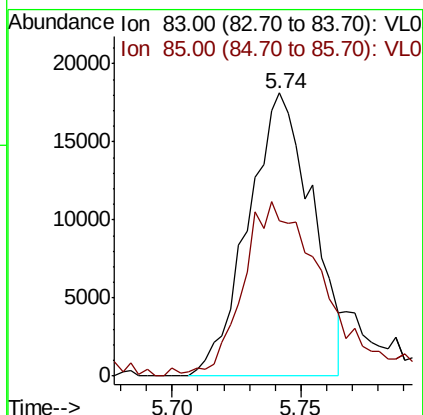
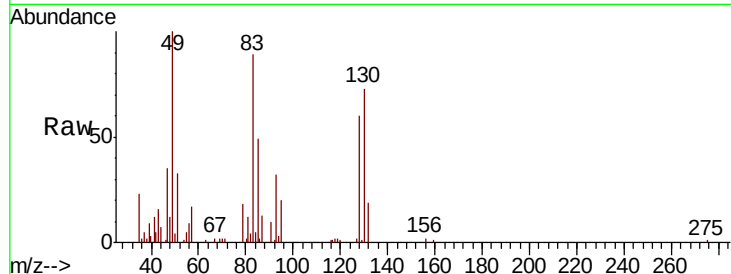




#29
Chloroform
Concen: 0.163 ppbv
RT: 5.74 min Scan# 919
Delta R.T. -0.00 min
Lab File: VL037338.D
Acq: 5 Aug 2021 11:17

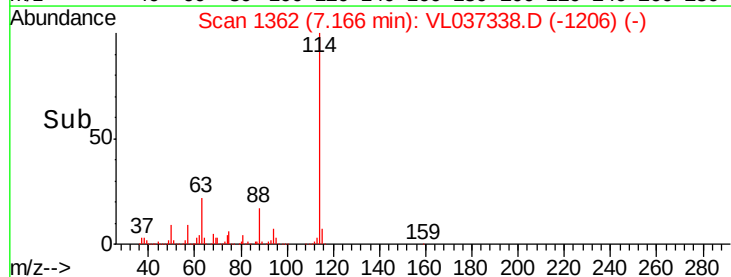
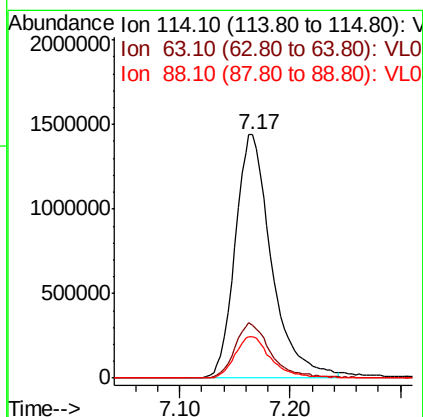
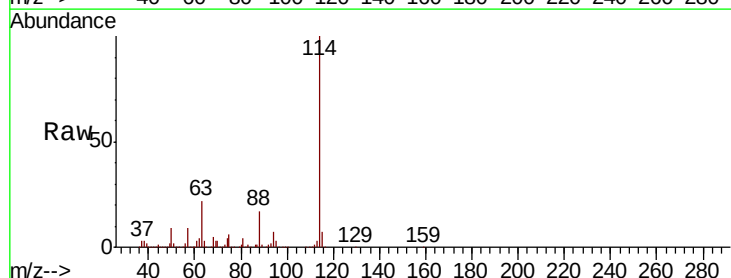
Instrument :
MSVOA_L
ClientSampleId :

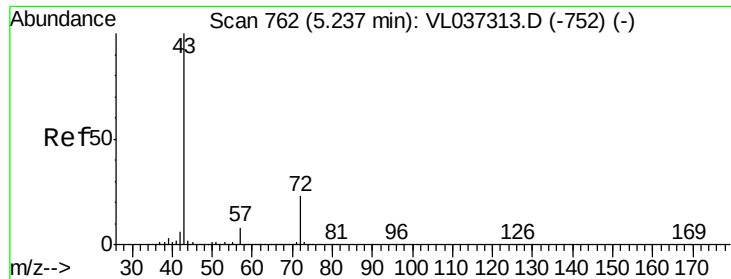
Tot Ion: 83 Resp: 31383
Ion Ratio Lower Upper
83 100
85 53.1 52.6 79.0



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.17 min Scan# 1362
Delta R.T. 0.00 min
Lab File: VL037338.D
Acq: 5 Aug 2021 11:17

Tgt Ion: 114 Resp: 3290276
Ion Ratio Lower Upper
114 100
63 22.7 18.1 27.1
88 17.3 13.8 20.8

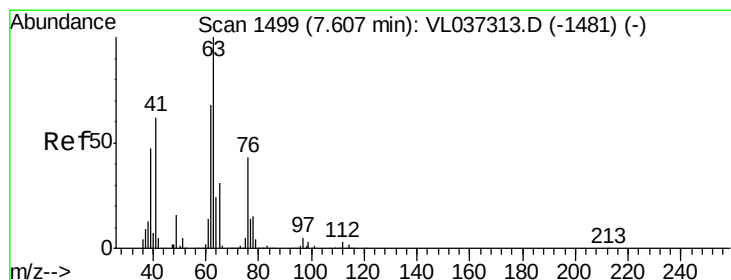
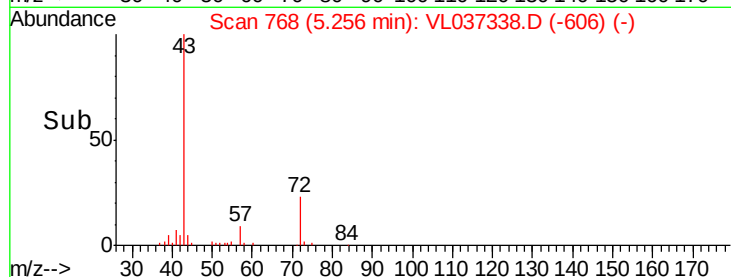
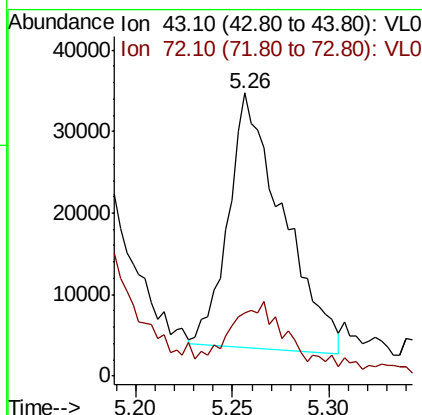
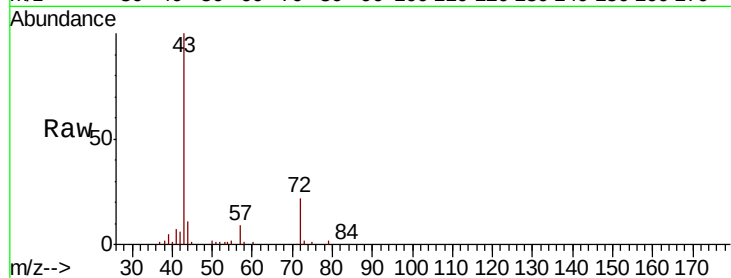




#34
2-Butanone
Concen: 0.538 ppbv
RT: 5.26 min Scan# 768
Delta R.T. 0.02 min
Lab File: VL037338.D
Acq: 5 Aug 2021 11:17

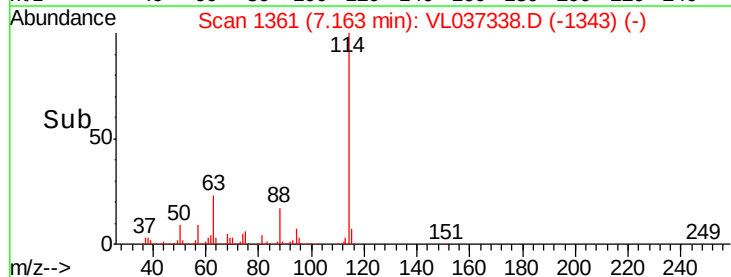
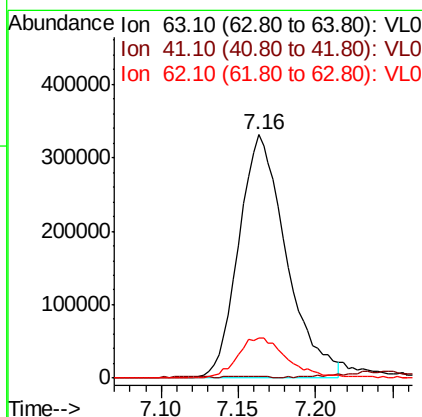
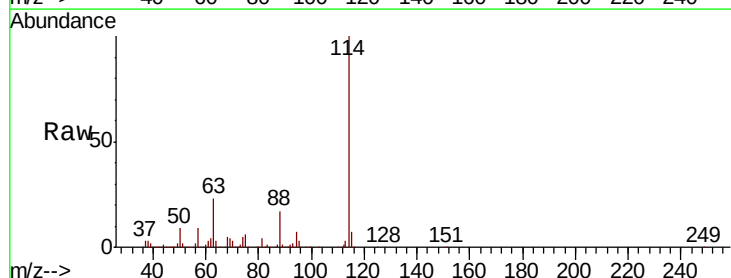
Instrument :
MSVOA_L
ClientSampleId :

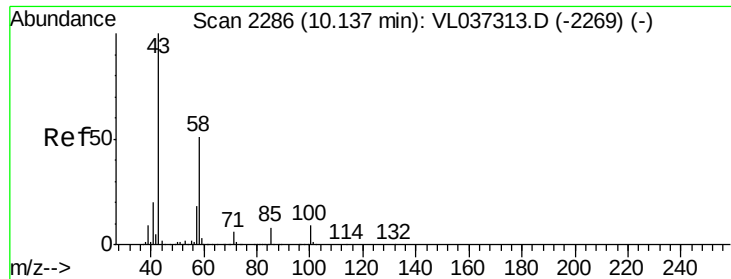
Tot Ion: 43 Resp: 61371
Ion Ratio Lower Upper
43 100
72 36.8 20.3 30.5#



#39
1,2-Dichloropropane
Concen: 6.426 ppbv
RT: 7.16 min Scan# 1361
Delta R.T. -0.44 min
Lab File: VL037338.D
Acq: 5 Aug 2021 11:17

Tgt Ion: 63 Resp: 708543
Ion Ratio Lower Upper
63 100
41 0.1 49.2 73.8#
62 16.5 54.2 81.4#

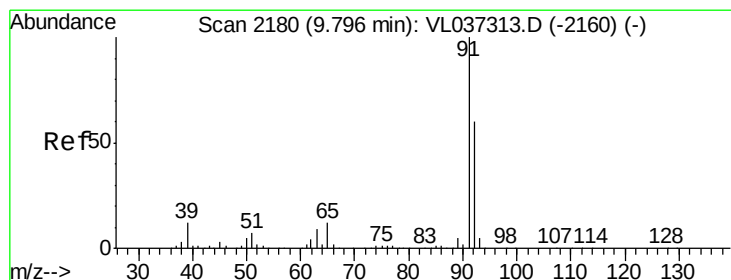
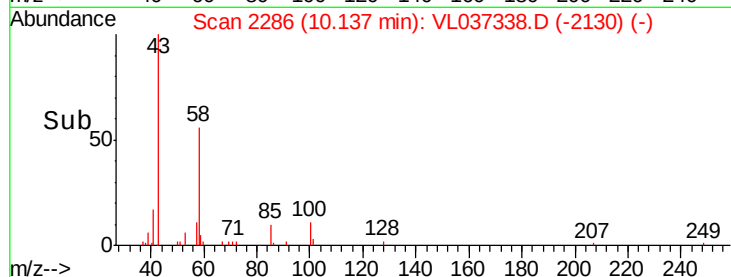
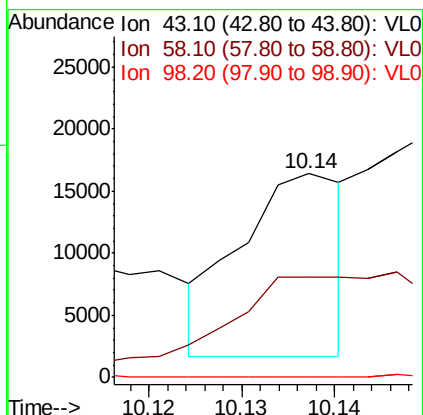
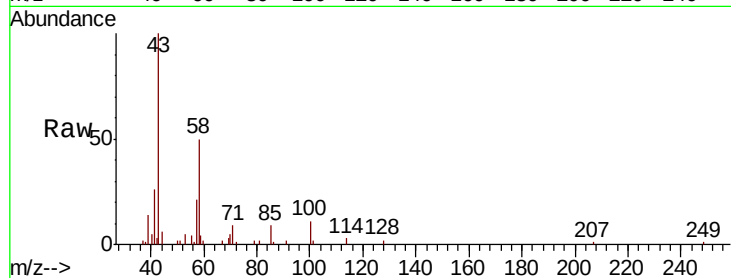




#51
2-Hexanone
Concen: 0.144 ppbv
RT: 10.14 min Scan# 2286
Delta R.T. 0.00 min
Lab File: VL037338.D
Acq: 5 Aug 2021 11:17

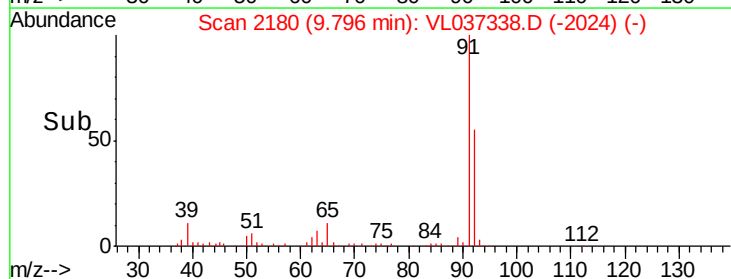
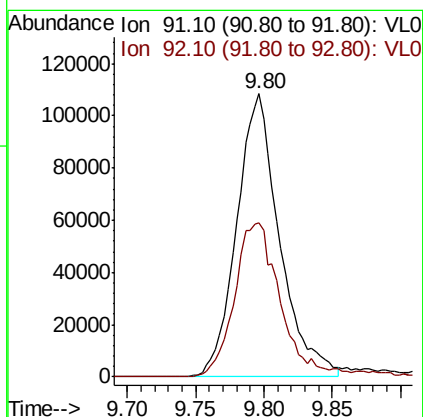
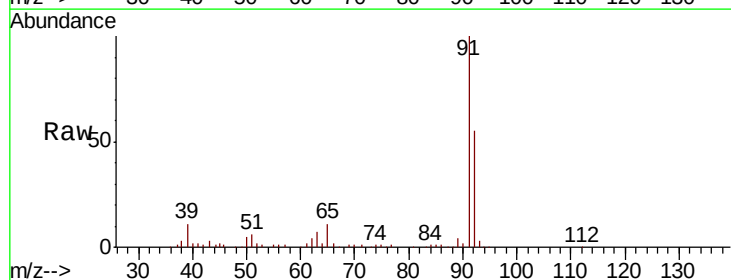
Instrument :
MSVOA_L
ClientSampled :

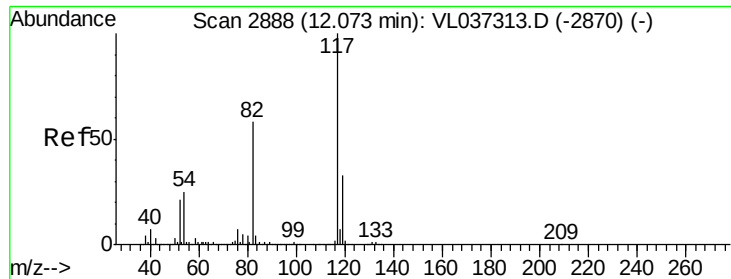
Tot Ion: 43 Resp: 11483
Ion Ratio Lower Upper
43 100
58 0.0 40.9 61.3#
98 0.0 0.1 0.1#



#53
Toluene
Concen: 0.676 ppbv
RT: 9.80 min Scan# 2180
Delta R.T. 0.00 min
Lab File: VL037338.D
Acq: 5 Aug 2021 11:17

Tgt Ion: 91 Resp: 236360
Ion Ratio Lower Upper
91 100
92 60.2 48.8 73.2

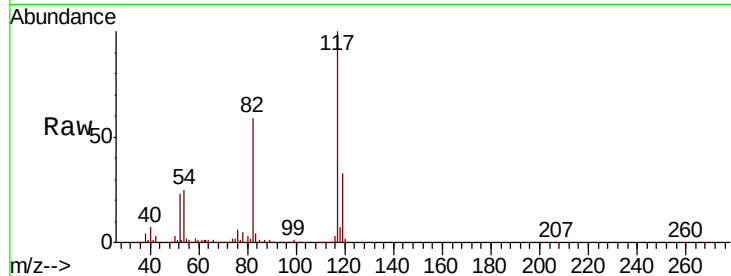




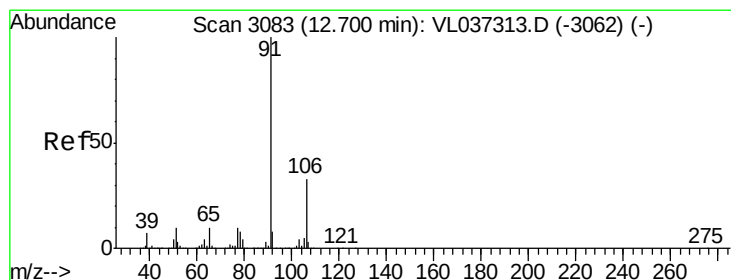
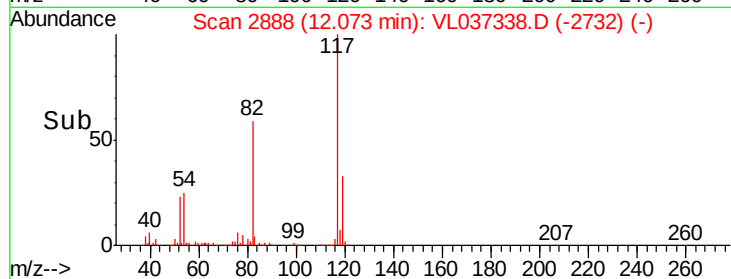
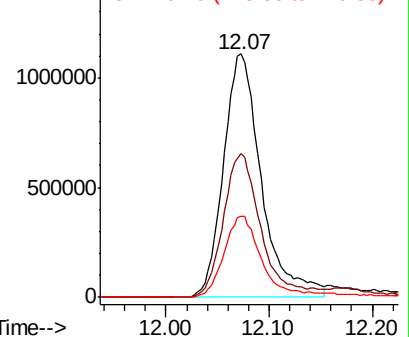
#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.07 min Scan# 2888
Delta R.T. 0.00 min
Lab File: VL037338.D
Acq: 5 Aug 2021 11:17

Instrument :
MSVOA_L
ClientSampled :

Tot Ion:117 Resp: 2847700
Ion Ratio Lower Upper
117 100
82 59.1 50.3 75.5
119 35.8 48.2 72.2#

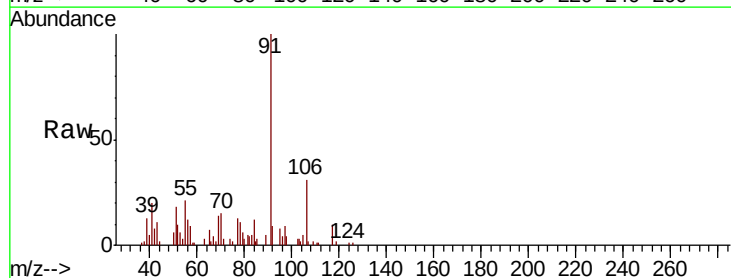


Abundance Ion 117.10 (116.80 to 117.80): V
Ion 82.10 (81.80 to 82.80): VL0
Ion 119.10 (118.80 to 119.80): V

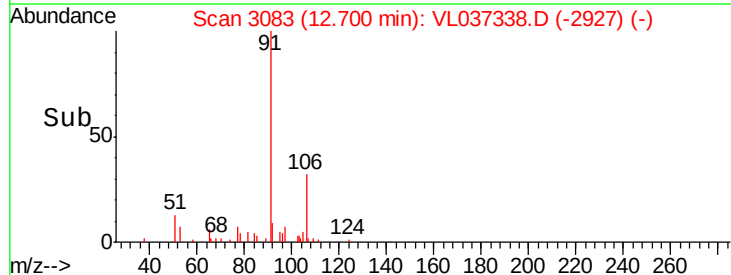
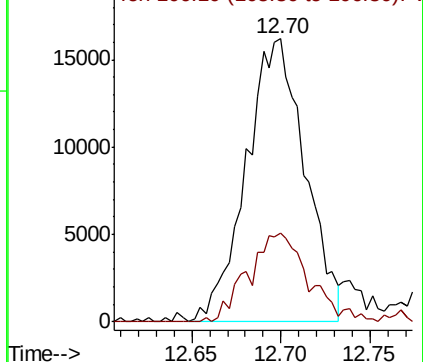


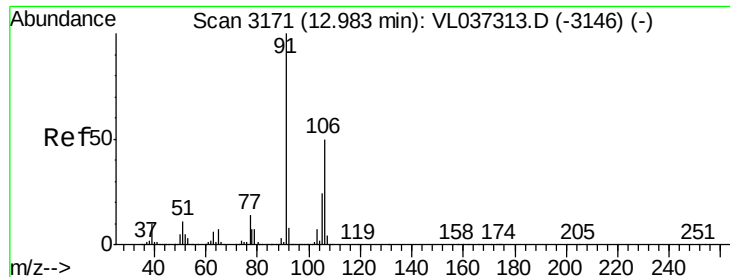
#58
Ethyl Benzene
Concen: 0.089 ppbv
RT: 12.70 min Scan# 3083
Delta R.T. 0.00 min
Lab File: VL037338.D
Acq: 5 Aug 2021 11:17

Tgt Ion: 91 Resp: 37326
Ion Ratio Lower Upper
91 100
106 31.2 26.2 39.2



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

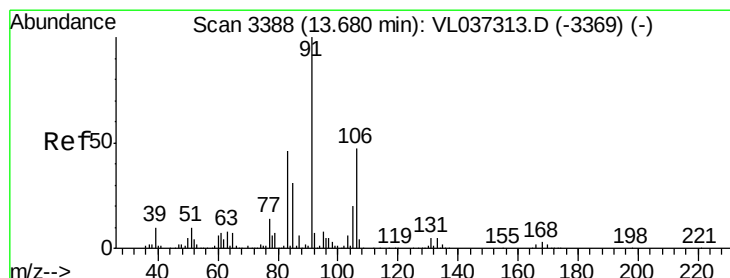
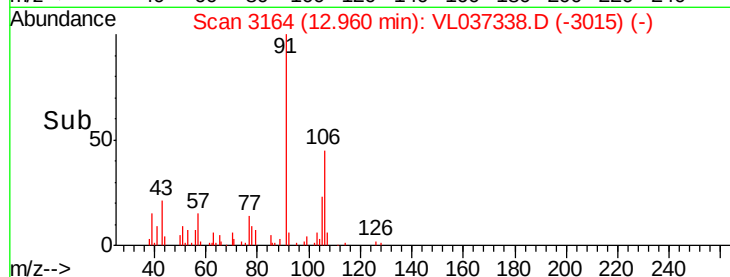
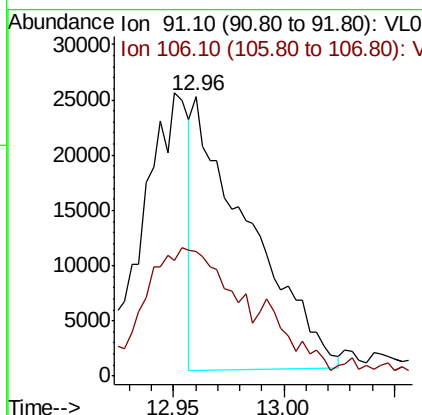
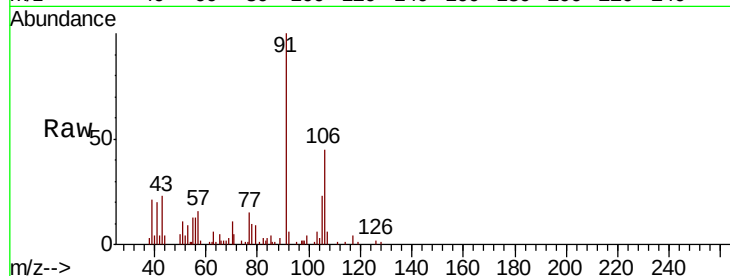




#59
m/p-Xylene
Concen: 0.122 ppbv
RT: 12.96 min Scan# 3164
Delta R.T. -0.02 min
Lab File: VL037338.D
Acq: 5 Aug 2021 11:17

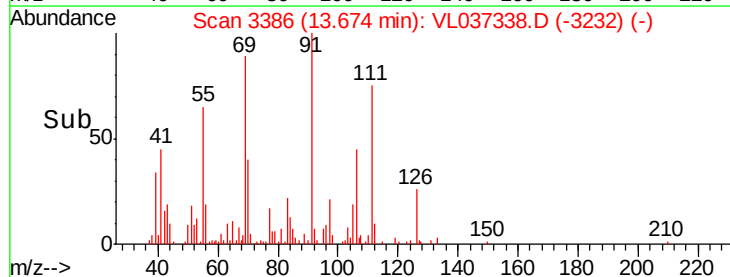
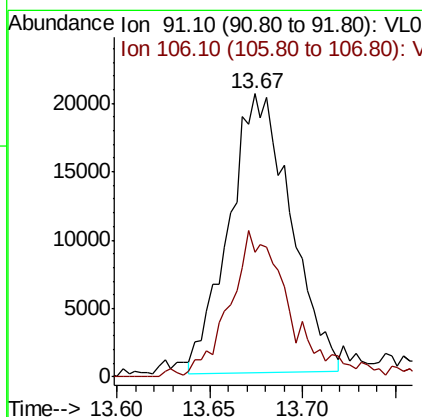
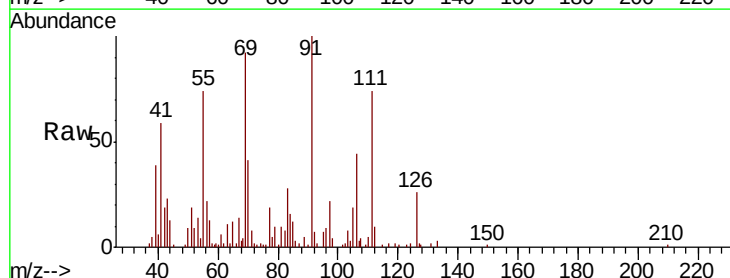
Instrument :
MSVOA_L
ClientSampleId :

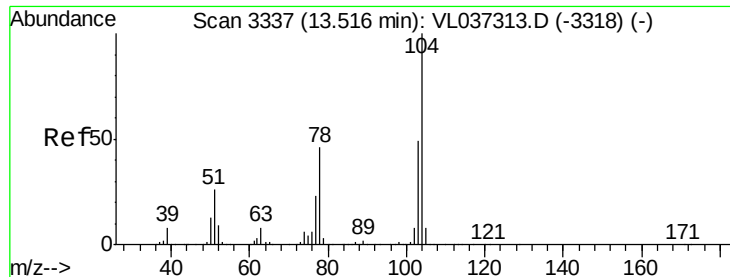
Tot Ion: 91 Resp: 43064
Ion Ratio Lower Upper
91 100
106 0.0 37.8 56.8#



#60
o-Xylene
Concen: 0.147 ppbv
RT: 13.67 min Scan# 3386
Delta R.T. -0.01 min
Lab File: VL037338.D
Acq: 5 Aug 2021 11:17

Tgt Ion: 91 Resp: 47213
Ion Ratio Lower Upper
91 100
106 51.1 26.3 78.8





#61

Stvrene

Concen: 0.100 ppbv

RT: 13.51 min Scan# 3336

Delta R.T. -0.00 min

Lab File: VL037338.D

Acq: 5 Aug 2021 11:17

Instrument :

MSVOA_L

ClientSampled :

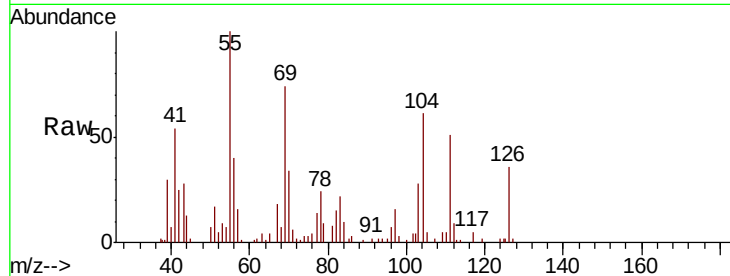
Tot Ion:104 Resp: 17579

Ion Ratio Lower Upper

104 100

78 74.7 39.3 58.9#

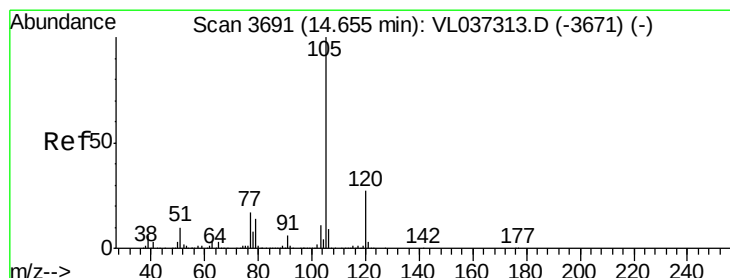
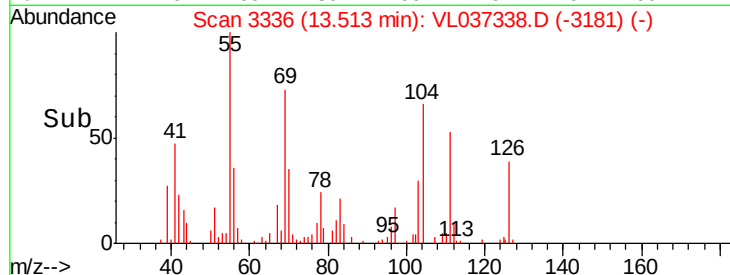
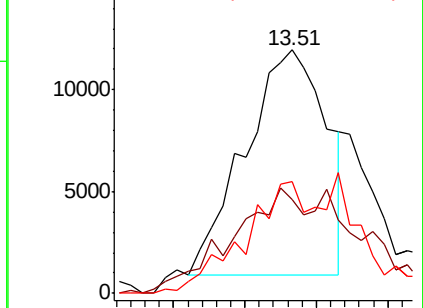
103 68.9 40.6 60.8#



Abundance Ion 104.10 (103.80 to 104.80): V

Ion 78.10 (77.80 to 78.80): VL0

Ion 103.10 (102.80 to 103.80): V



#62

Isopropylbenzene

Concen: 0.044 ppbv

RT: 14.65 min Scan# 3690

Delta R.T. -0.00 min

Lab File: VL037338.D

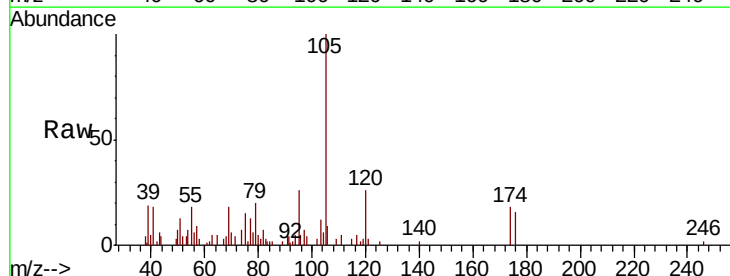
Acq: 5 Aug 2021 11:17

Tgt Ion:105 Resp: 20623

Ion Ratio Lower Upper

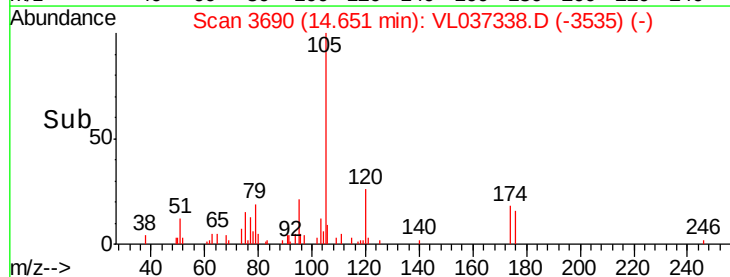
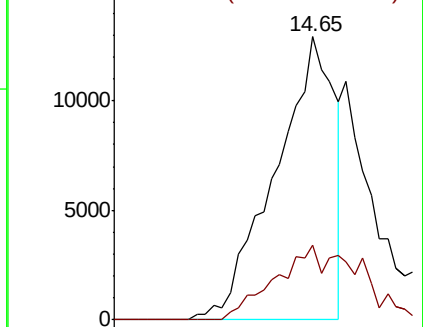
105 100

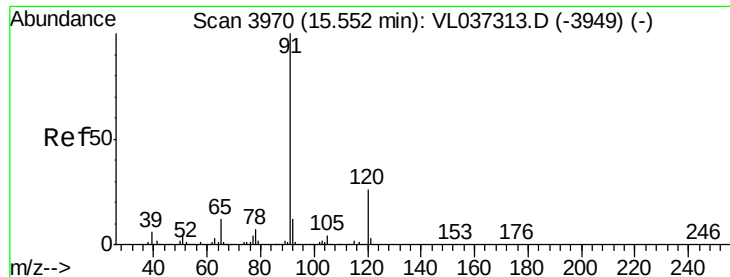
120 38.6 23.0 34.6#



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V





#64

n-propylbenzene

Concen: 0.121 ppbv

RT: 15.54 min Scan# 3967

Delta R.T. -0.01 min

Lab File: VL037338.D

Acq: 5 Aug 2021 11:17

Instrument :

MSVOA_L

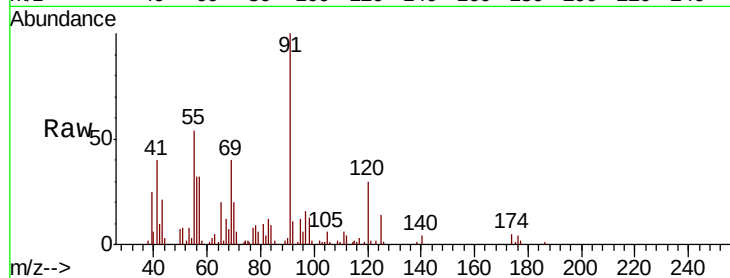
ClientSampleId :

Tot Ion:120 Resp: 14723

Ion Ratio Lower Upper

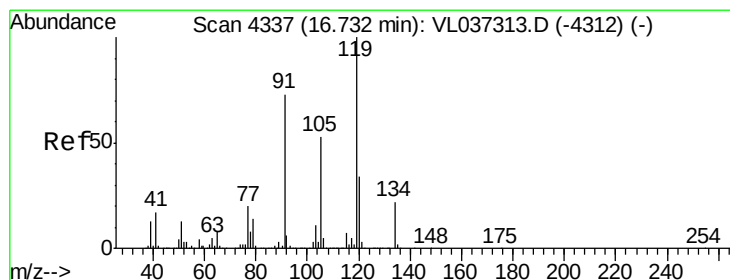
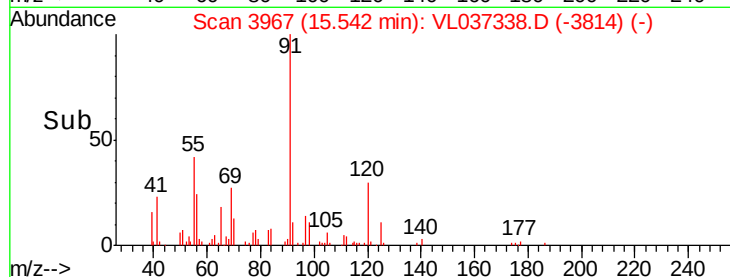
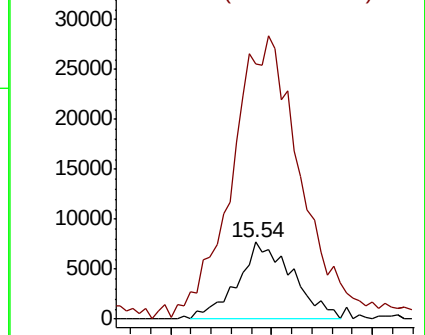
120 100

91 449.8 361.0 541.4



Abundance Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0



#65

tert-Butylbenzene

Concen: 0.048 ppbv

RT: 16.73 min Scan# 4336

Delta R.T. -0.00 min

Lab File: VL037338.D

Acq: 5 Aug 2021 11:17

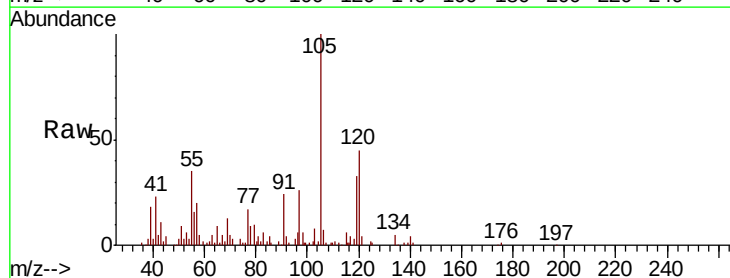
Tgt Ion:119 Resp: 20542

Ion Ratio Lower Upper

119 100

91 0.0 58.6 88.0#

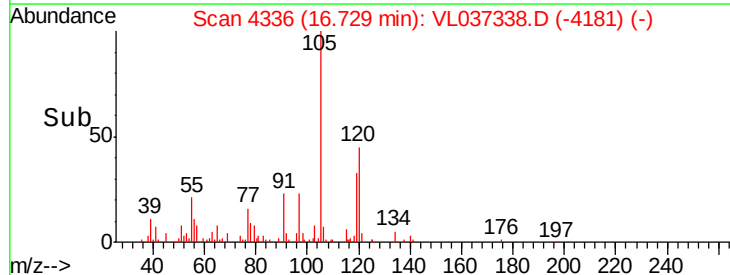
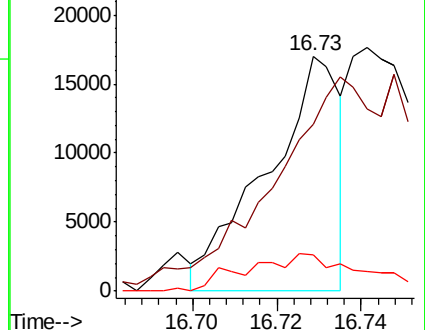
134 26.8 16.5 24.7#

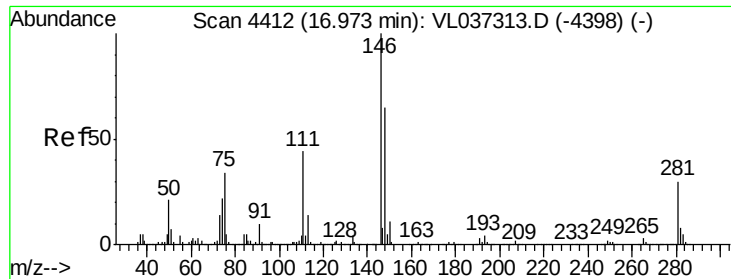


Abundance Ion 119.20 (118.90 to 119.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 134.20 (133.90 to 134.90): V

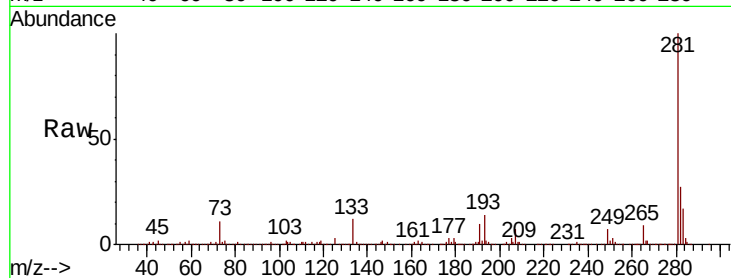




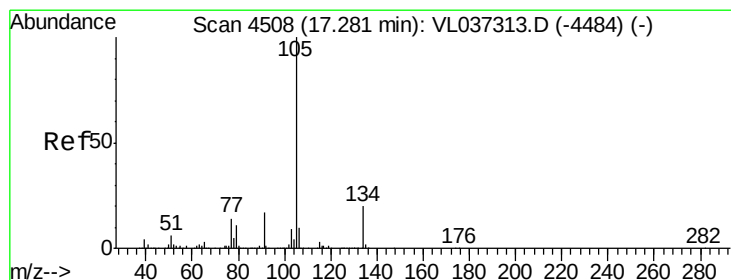
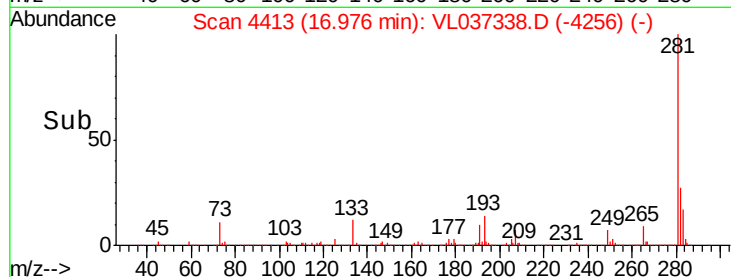
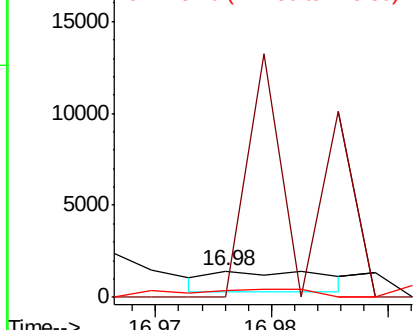
#66
Benzyl Chloride
Concen: 0.046 ppbv
RT: 16.98 min Scan# 4413
Delta R.T. 0.00 min
Lab File: VL037338.D
Acq: 5 Aug 2021 11:17

Instrument :
MSVOA_L
ClientSampleId :

Tot Ion	Ratio	Lower	Upper
91	100		
126	0.0	17.8	26.6#
128	0.0	5.8	8.6#

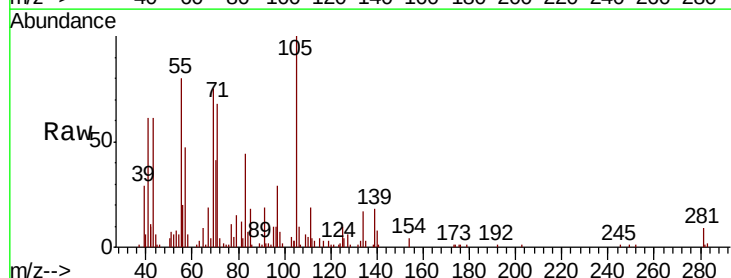


Abundance Ion 91.10 (90.80 to 91.80): VL0
Ion 126.10 (125.80 to 126.80): V
Ion 128.10 (127.80 to 128.80): V

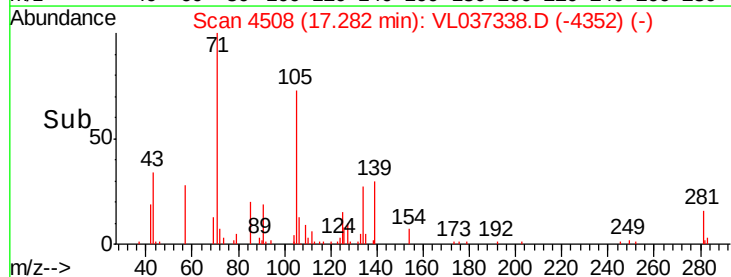
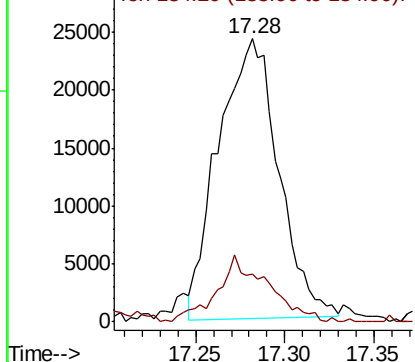


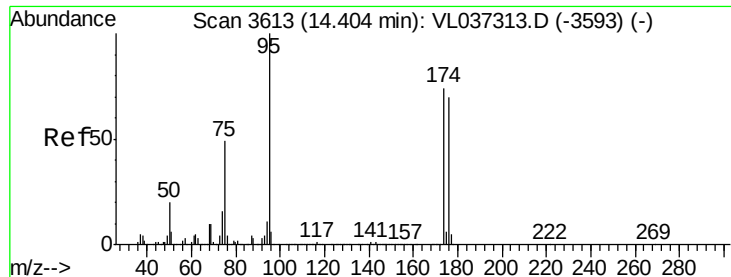
#67
sec-Butylbenzene
Concen: 0.098 ppbv
RT: 17.28 min Scan# 4508
Delta R.T. 0.00 min
Lab File: VL037338.D
Acq: 5 Aug 2021 11:17

Tgt Ion	Ratio	Lower	Upper
105	100		
134	20.2	15.4	23.2



Abundance Ion 105.10 (104.80 to 105.80): V
Ion 134.20 (133.90 to 134.90): V

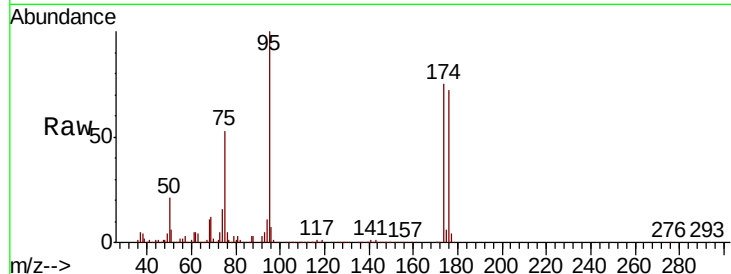




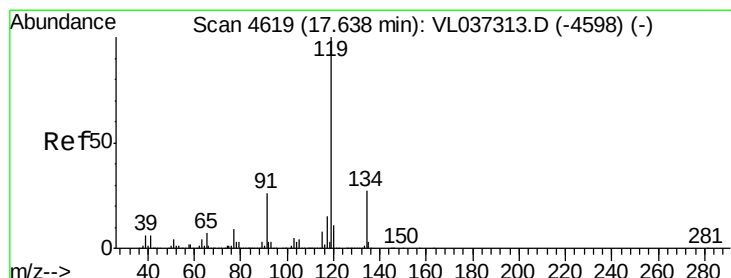
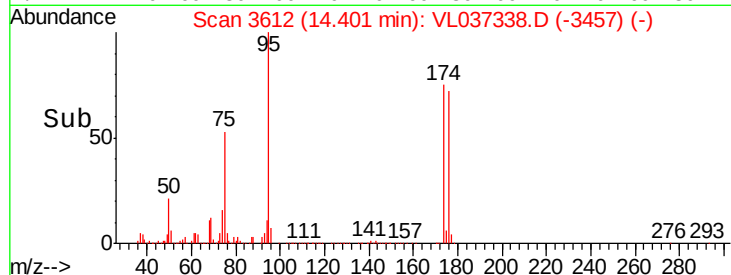
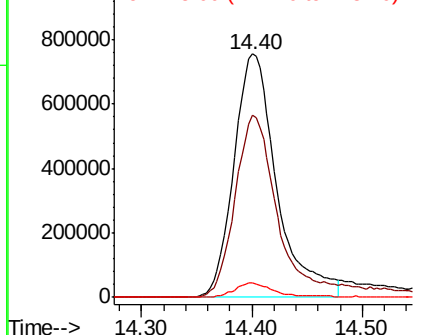
#68
1-Bromo-4-Fluorobenzene
Concen: 10.459 ppbv
RT: 14.40 min Scan# 3612
Delta R.T. -0.00 min
Lab File: VL037338.D
Acq: 5 Aug 2021 11:17

Instrument :
MSVOA_L
ClientSampleId :

Tot Ion: 95 Resp: 2034508
Ion Ratio Lower Upper
95 100
174 81.0 66.9 100.3
175 5.8 5.1 7.7

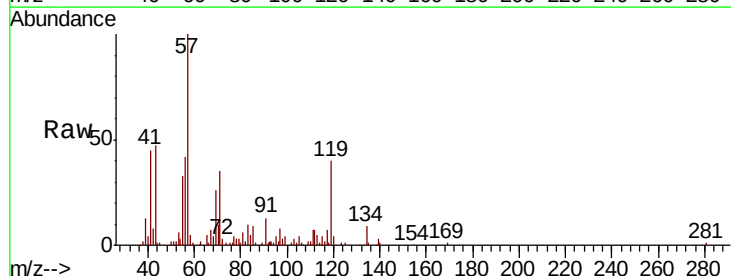


Abundance Ion 95.10 (94.80 to 95.80): VL0
Ion 174.00 (173.70 to 174.70): V
Ion 175.00 (174.70 to 175.70): V

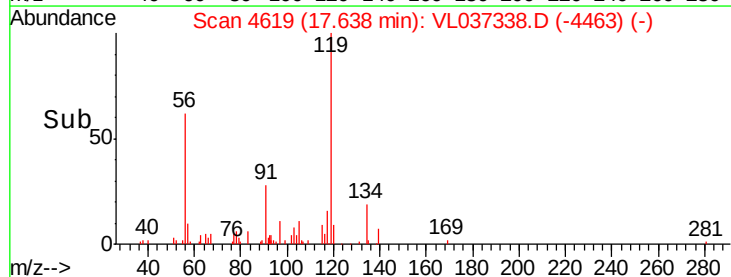
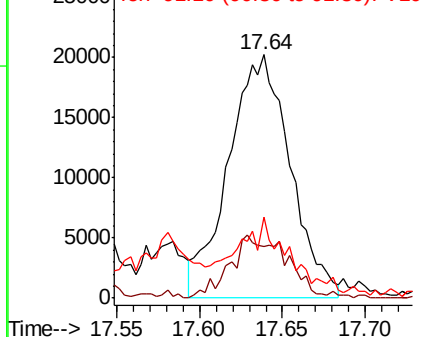


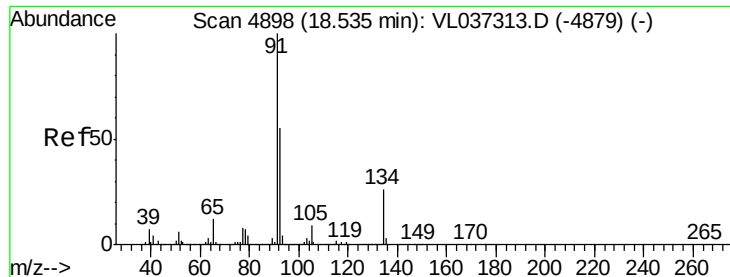
#69
p-Isopropyltoluene
Concen: 0.108 ppbv
RT: 17.64 min Scan# 4619
Delta R.T. 0.00 min
Lab File: VL037338.D
Acq: 5 Aug 2021 11:17

Tgt Ion: 119 Resp: 52402
Ion Ratio Lower Upper
119 100
134 24.3 21.0 31.6
91 33.4 20.5 30.7#



Abundance Ion 119.10 (118.80 to 119.80): V
Ion 134.20 (133.90 to 134.90): V
Ion 91.10 (90.80 to 91.80): VL0

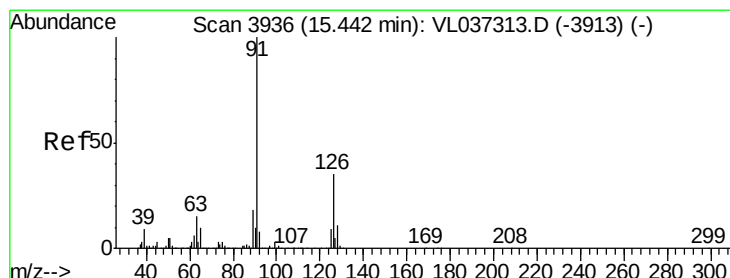
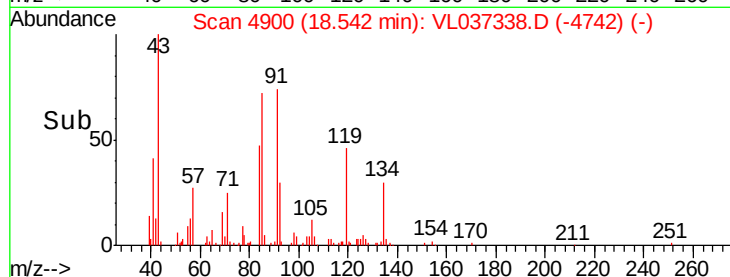
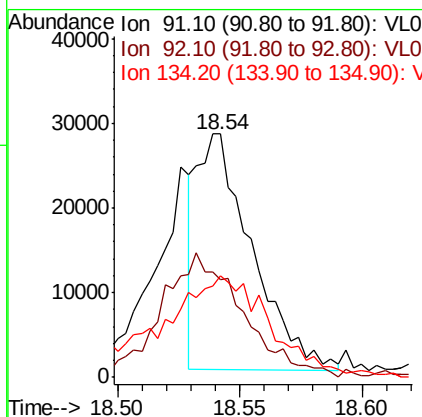
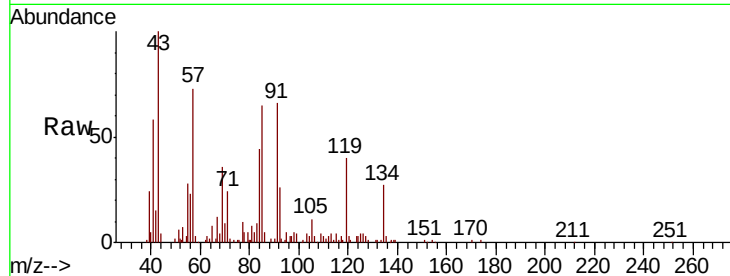




#70
n-Butylbenzene
Concen: 0.098 ppbv
RT: 18.54 min Scan# 4900
Delta R.T. 0.01 min
Lab File: VL037338.D
Acq: 5 Aug 2021 11:17

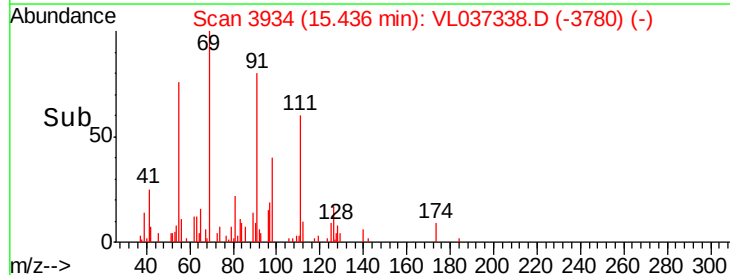
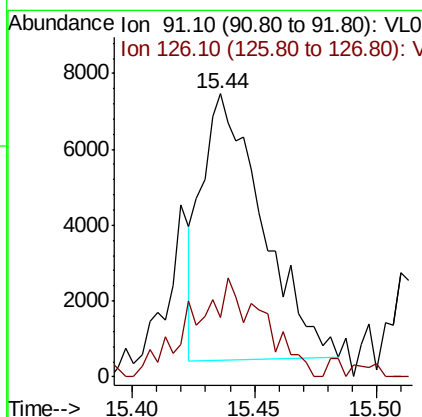
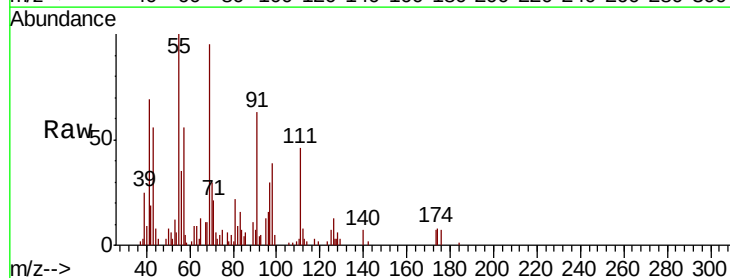
Instrument :
MSVOA_L
ClientSampled :

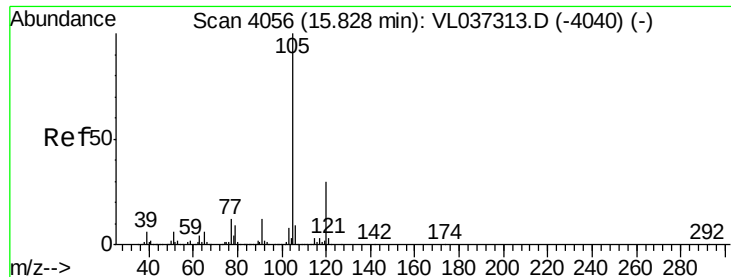
Tot Ion: 91 Resp: 43634
Ion Ratio Lower Upper
91 100
92 0.0 44.1 66.1#
134 90.3 20.6 31.0#



#71
2-Chlorotoluene
Concen: 0.037 ppbv
RT: 15.44 min Scan# 3934
Delta R.T. -0.01 min
Lab File: VL037338.D
Acq: 5 Aug 2021 11:17

Tgt Ion: 91 Resp: 12142
Ion Ratio Lower Upper
91 100
126 48.0 14.3 57.1





#72

4-Ethyltoluene

Concen: 0.075 ppbv

RT: 15.82 min Scan# 4055

Delta R.T. -0.00 min

Lab File: VL037338.D

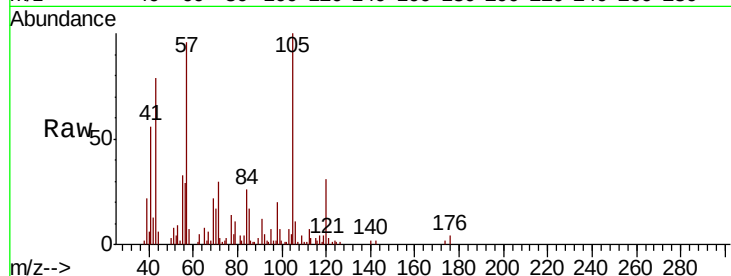
Acq: 5 Aug 2021 11:17

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion:105	Resp:	28997
Ion Ratio	Lower	Upper
105	100	
120	67.8	25.6 38.4#
91	0.0	9.4 14.2#
77	0.0	10.2 15.4#

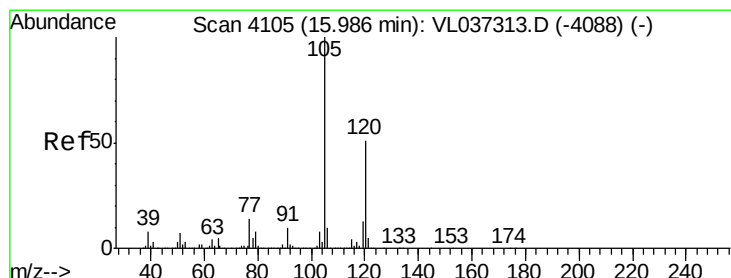
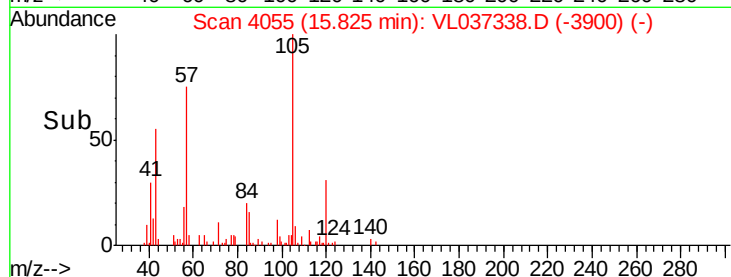
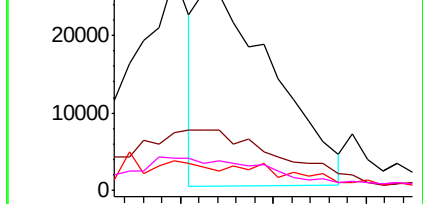


Abundance Ion 105.10 (104.80 to 105.80): V

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



#73

1,3,5-Trimethylbenzene

Concen: 0.192 ppbv

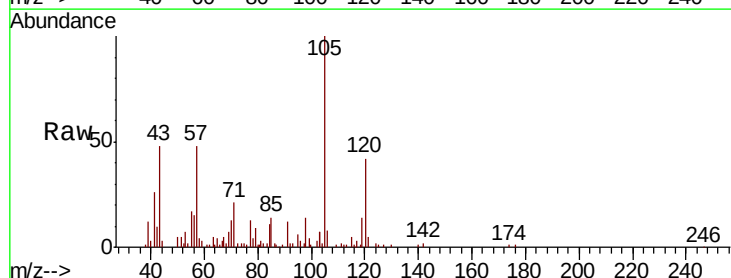
RT: 15.99 min Scan# 4105

Delta R.T. 0.00 min

Lab File: VL037338.D

Acq: 5 Aug 2021 11:17

Tgt Ion:105	Resp:	66800
Ion Ratio	Lower	Upper
105	100	
120	42.4	40.4 60.6

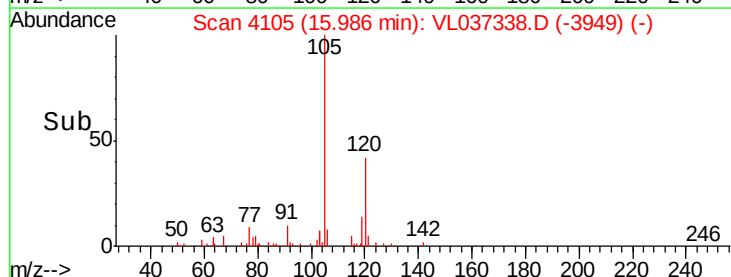
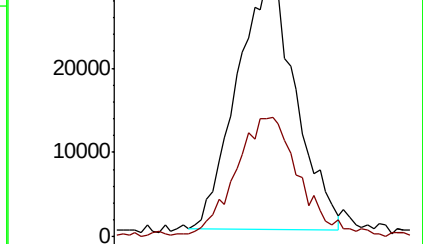


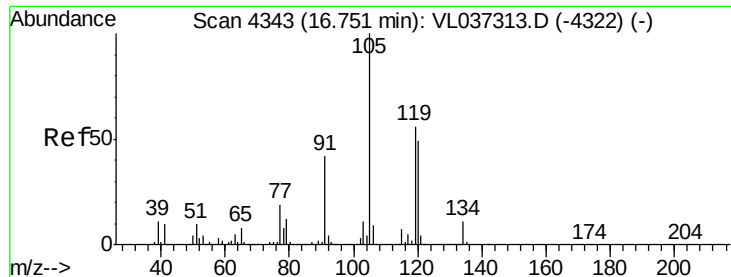
Abundance Ion 105.10 (104.80 to 105.80): V

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

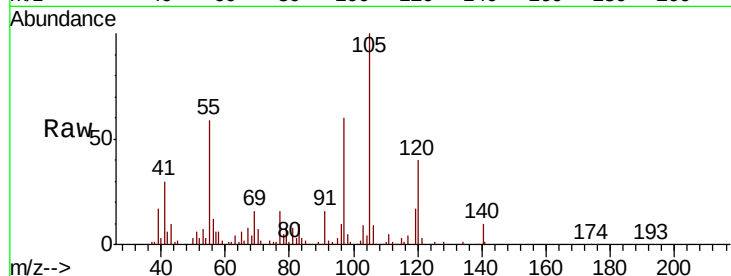




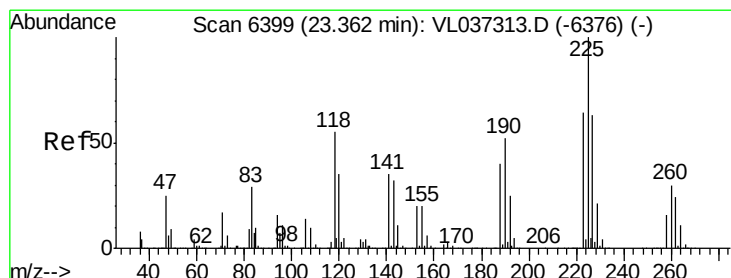
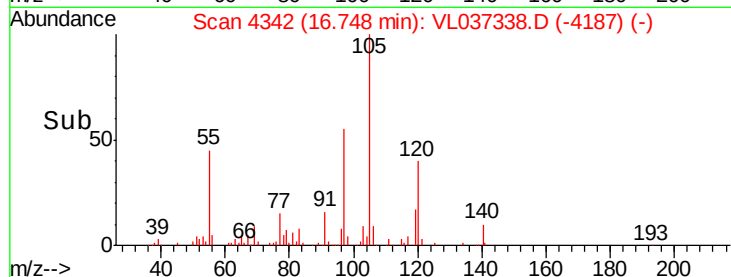
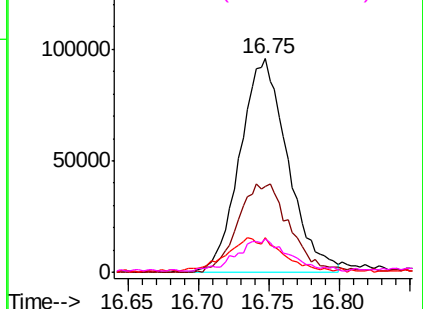
#74
 1,2,4-Trimethylbenzene
 Concen: 0.606 ppbv
 RT: 16.75 min Scan# 4342
 Delta R.T. -0.00 min
 Lab File: VL037338.D
 Acq: 5 Aug 2021 11:17

Instrument :
 MSVOA_L
 ClientSampled :

Tot Ion:	105	Resp:	224927
Ion	Ratio	Lower	Upper
105	100		
120	40.1	39.6	59.4
91	15.4	34.5	51.7#
77	14.7	15.3	22.9#

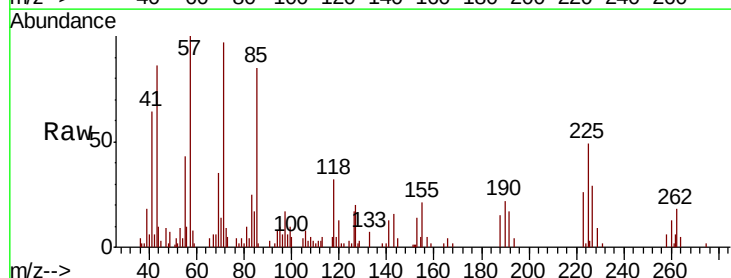


Abundance Ion 105.10 (104.80 to 105.80): V
 Ion 120.20 (119.90 to 120.90): V
 Ion 91.10 (90.80 to 91.80): VL0
 Ion 77.10 (76.80 to 77.80): VL0



#78
 Hexachloro-1,3-Butadiene
 Concen: 0.035 ppbv
 RT: 23.36 min Scan# 6399
 Delta R.T. 0.00 min
 Lab File: VL037338.D
 Acq: 5 Aug 2021 11:17

Tgt Ion:	225	Resp:	6945
Ion	Ratio	Lower	Upper
225	100		
223	142.8	51.1	76.7#
227	167.5	51.9	77.9#



Abundance Ion 224.90 (224.60 to 225.60): V
 Ion 222.90 (222.60 to 223.60): V
 Ion 226.90 (226.60 to 227.60): V

