

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL111621\
 Data File : VL038039.D
 Acq On : 16 Nov 2021 14:30
 Operator : SY/AP
 Sample : M3277-01DL 4X
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Nov 17 06:40:53 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL111621AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LTue Nov 16 09:59:16 2021
 QLast Update : Tue Nov 16 09:59:16 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	874034	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.17	114	2565427	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.07	117	2304565	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.40	95	1734152	10.42	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	104.20%

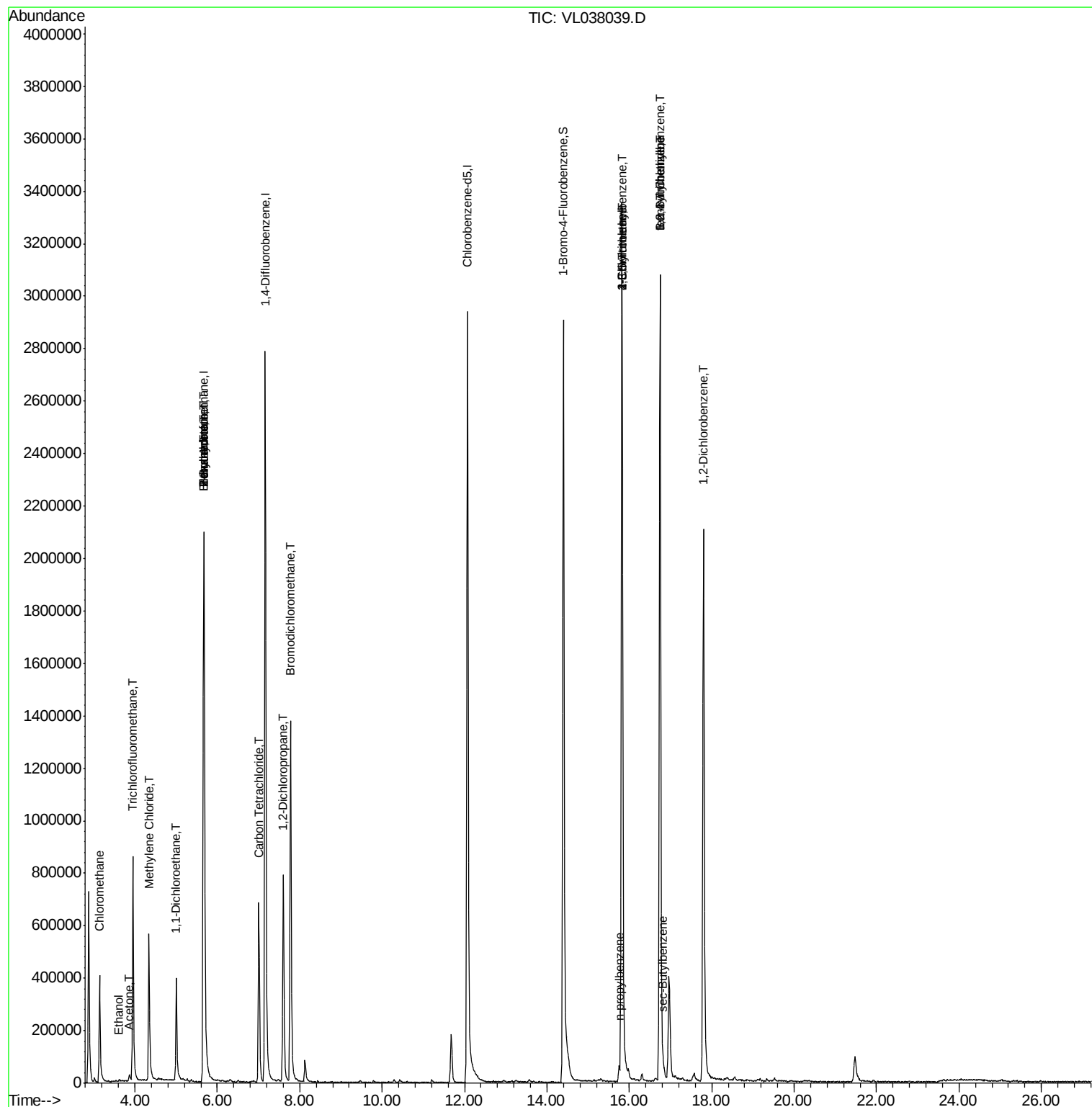
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
4) Chloromethane	3.14	50	484833	5.997	ppbv	99
11) Trichlorofluoromethane	3.95	101	698128	3.974	ppbv	99
13) Ethanol	3.61	45	2190	0.288	ppbv #	100
15) Acetone	3.86	43	13531	0.132	ppbv #	1
20) Methylene Chloride	4.34	84	240718	3.993	ppbv	98
24) 1,1-Dichloroethane	5.01	63	381634	2.875	ppbv	98
25) Ethyl Acetate	5.68	43	486166	2.011	ppbv #	76
26) Hexane	5.68	57	719791	5.927	ppbv #	45
34) 2-Butanone	5.68	43	470244	5.557	ppbv #	53
35) Carbon Tetrachloride	7.01	117	469062	2.645	ppbv	99
39) 1,2-Dichloropropane	7.60	63	347865	3.688	ppbv	93
41) Tetrahydrofuran	5.68	42	250900	4.132	ppbv #	50
42) Bromodichloromethane	7.78	83	1109151	6.220	ppbv	99
64) n-propylbenzene	15.75	120	12972	0.130	ppbv #	1
65) tert-Butylbenzene	16.74	119	316374	0.924	ppbv #	69
66) Benzyl Chloride	16.74	91	309008	12.918	ppbv #	62
67) sec-Butylbenzene	16.83	105	19645	0.042	ppbv	92
71) 2-Chlorotoluene	15.82	91	387005	1.385	ppbv #	41
72) 4-Ethyltoluene	15.82	105	3320680	10.316	ppbv	98
73) 1,3,5-Trimethylbenzene	15.82	105	3320680	11.278	ppbv #	74
74) 1,2,4-Trimethylbenzene	16.75	105	2786917	9.401	ppbv #	71
77) 1,2-Dichlorobenzene	17.80	146	1287924	8.209	ppbv	99

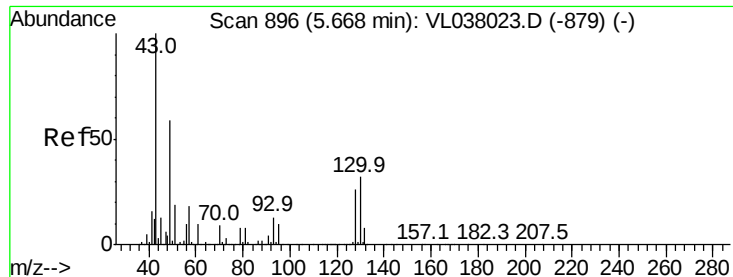
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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QLast Update : Tue Nov 16 09:59:16 2021
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.66 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 16 Nov 2021 14:30

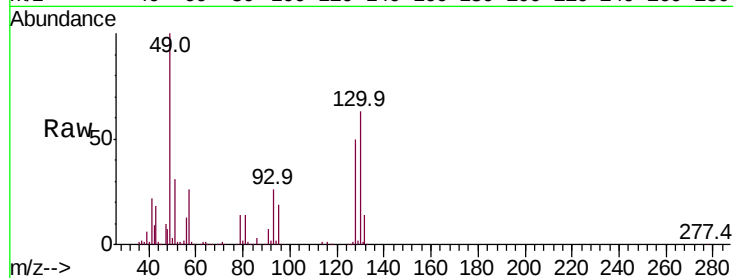
Tot Ion: 49 Resp: 874034

Ion Ratio Lower Upper

49 100

128 49.4 23.4 70.2

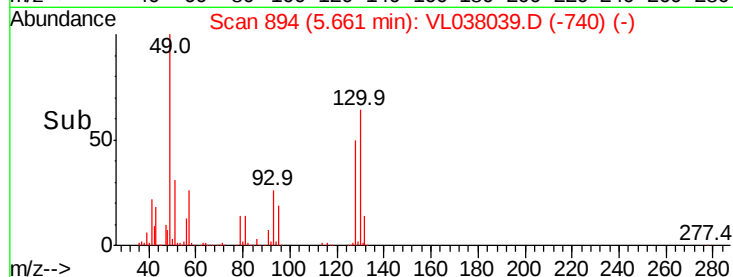
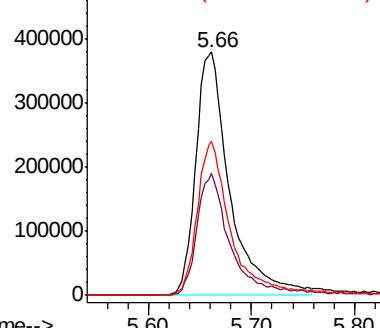
130 64.8 29.1 87.3



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



#4

Chloromethane

Concen: 5.997 ppbv

RT: 3.14 min Scan# 111

Delta R.T. 0.00 min

Lab File: VL038039.D

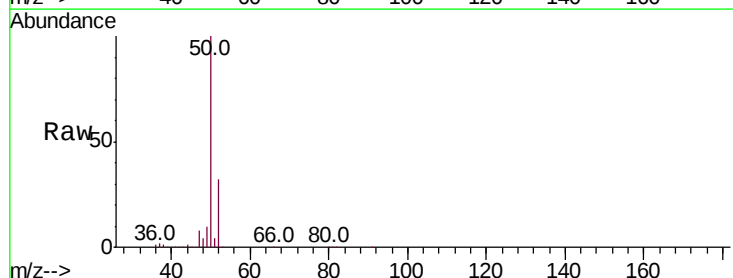
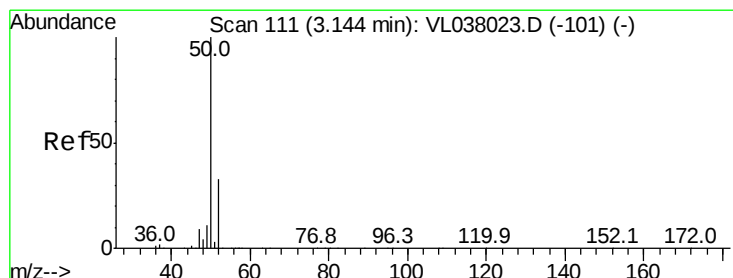
Acq: 16 Nov 2021 14:30

Tgt Ion: 50 Resp: 484833

Ion Ratio Lower Upper

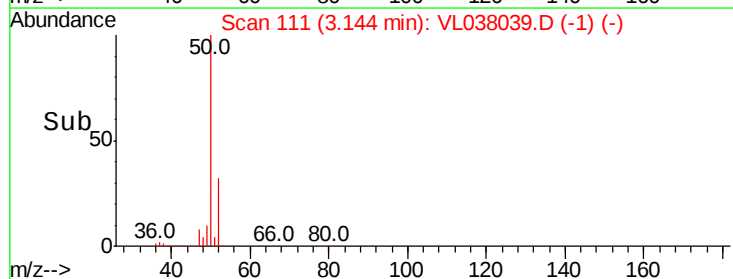
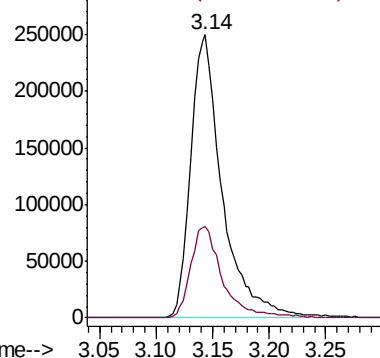
50 100

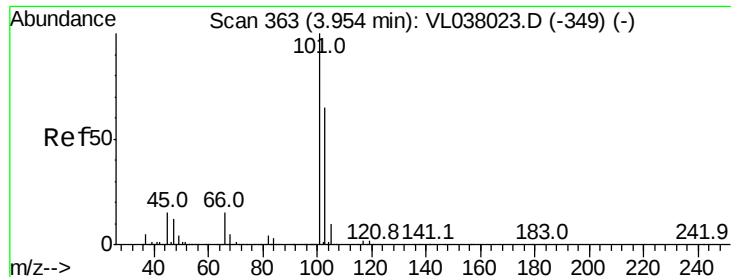
52 32.3 26.4 39.6



Abundance Ion 50.10 (49.80 to 50.80): VL0

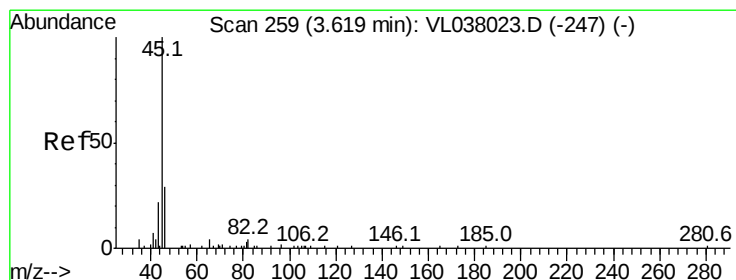
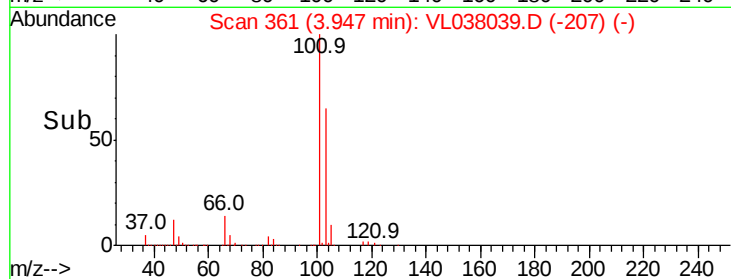
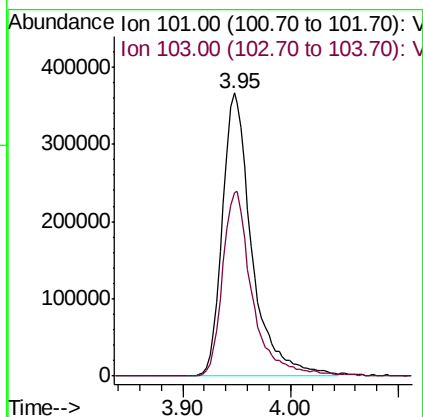
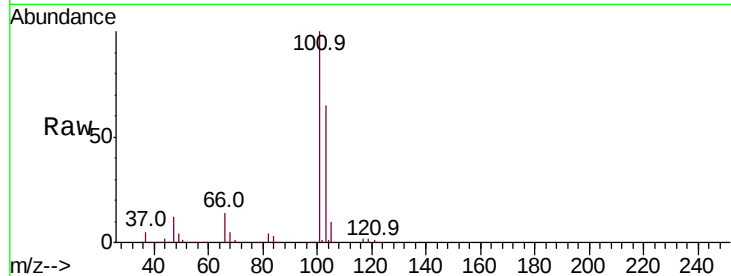
Ion 52.10 (51.80 to 52.80): VL0





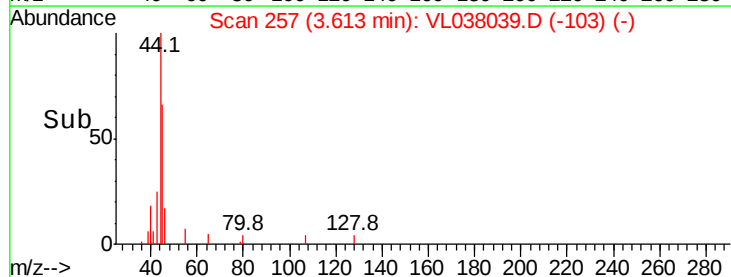
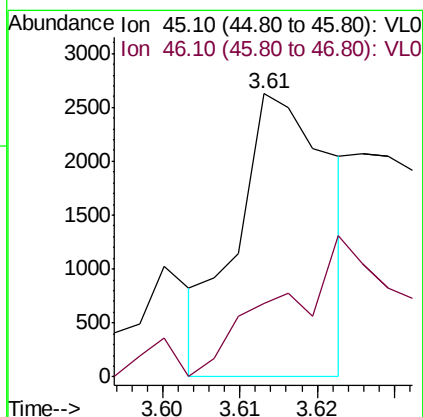
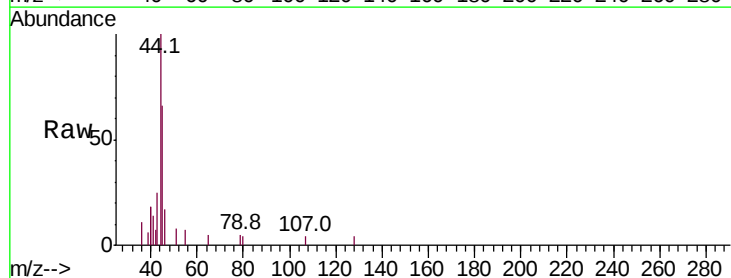
#11
 Trichlorofluoromethane
 Concen: 3.974 ppbv
 RT: 3.95
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 16 Nov 2021 14:30

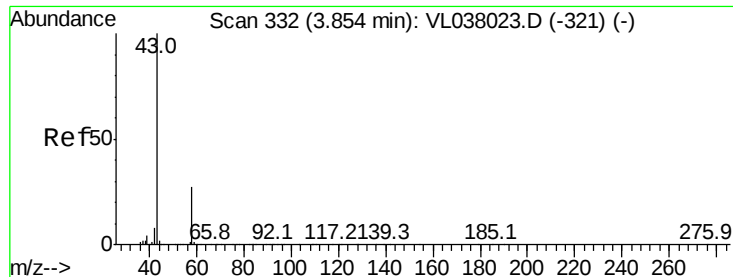
Tot Ion: 101 Resp: 698128
 Ion Ratio Lower Upper
 101 100
 103 64.9 52.3 78.5



#13
 Ethanol
 Concen: 0.288 ppbv
 RT: 3.61 min Scan# 257
 Delta R.T. -0.01 min
 Lab File: VL038039.D
 Acq: 16 Nov 2021 14:30

Tgt Ion: 45 Resp: 2190
 Ion Ratio Lower Upper
 45 100
 46 0.0 0.0 0.0





#15

Acetone

Concen: 0.132 ppbv

RT: 3.86 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

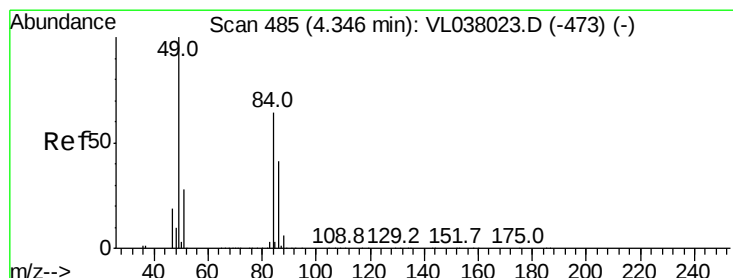
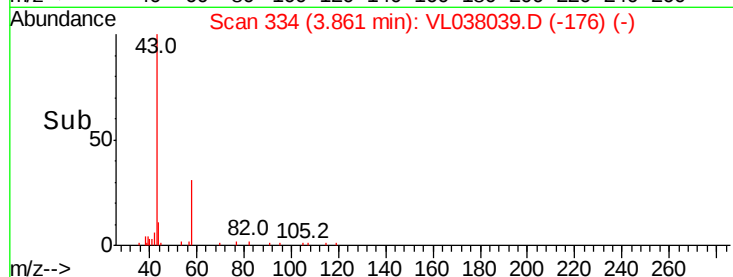
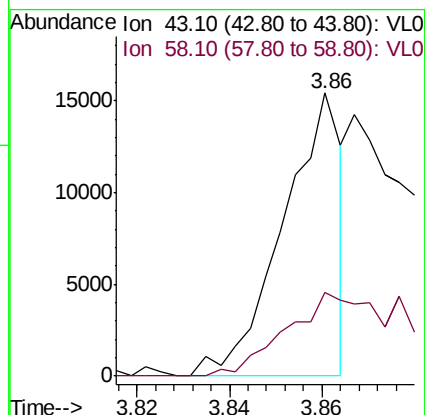
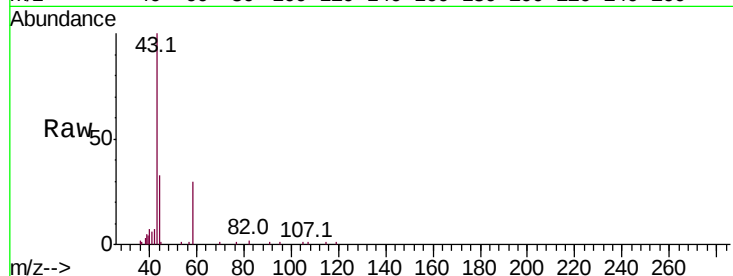
Acq: 16 Nov 2021 14:30

Tot Ion: 43 Resp: 13531

Ion Ratio Lower Upper

43 100

58 83.0 23.0 34.4#



#20

Methylene Chloride

Concen: 3.993 ppbv

RT: 4.34 min Scan# 483

Delta R.T. -0.01 min

Lab File: VL038039.D

Acq: 16 Nov 2021 14:30

Tgt Ion: 84 Resp: 240718

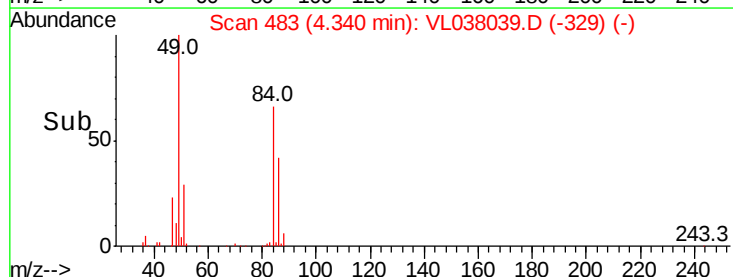
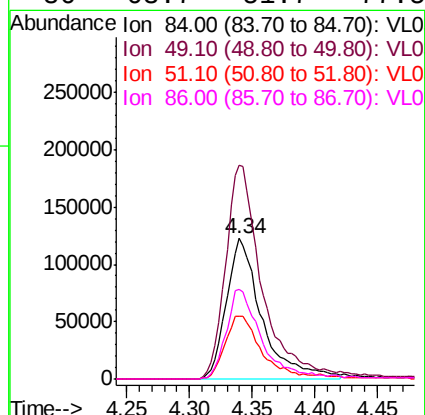
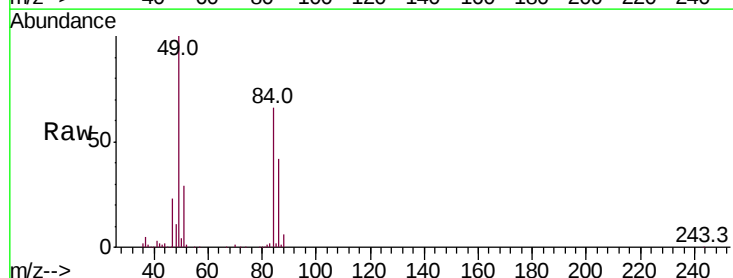
Ion Ratio Lower Upper

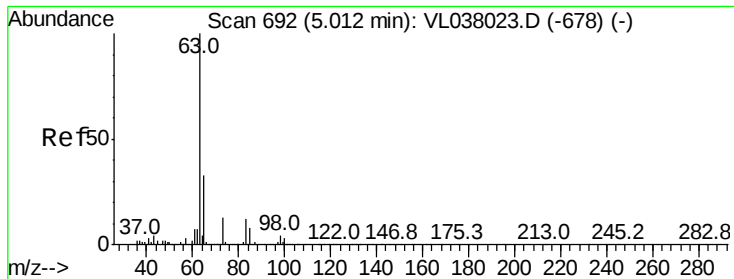
84 100

49 152.3 125.1 187.7

51 44.5 35.3 52.9

86 63.7 51.7 77.5





#24

1,1-Dichloroethane

Concen: 2.875 ppbv

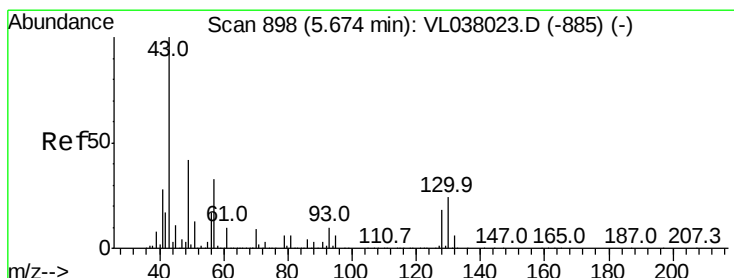
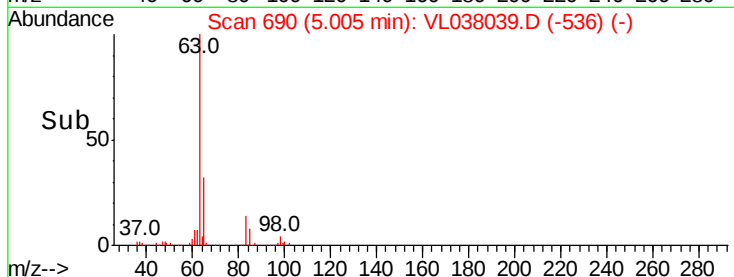
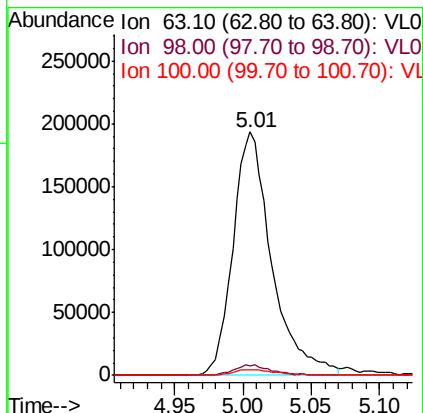
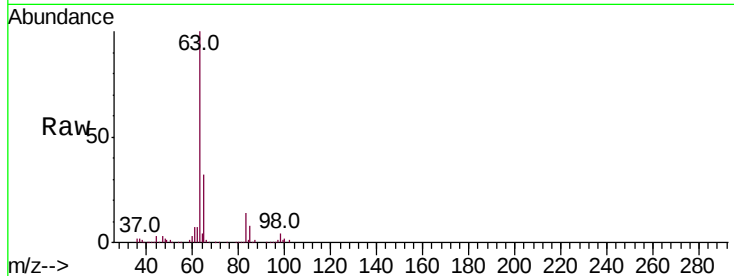
RT: 5.01 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 16 Nov 2021 14:30

Tot Ion:	63	Resp:	381634
Ion	Ratio	Lower	Upper
63	100		
98	3.9	2.3	6.9
100	2.4	1.5	4.4



#25

Ethyl Acetate

Concen: 2.011 ppbv

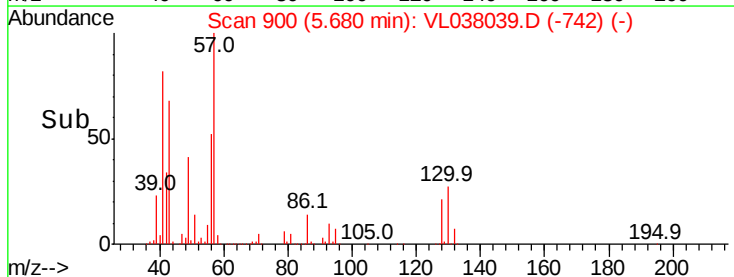
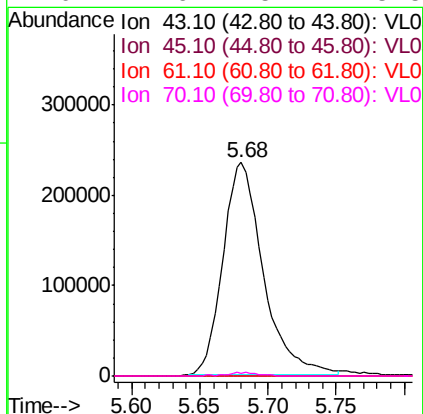
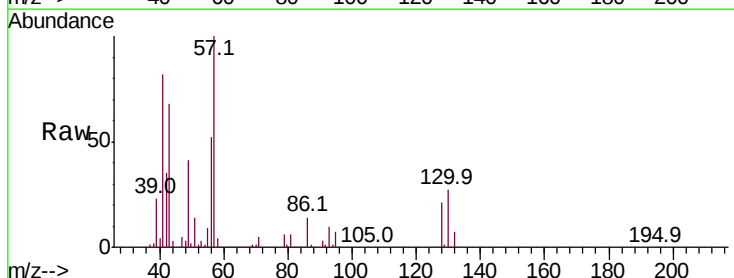
RT: 5.68 min Scan# 900

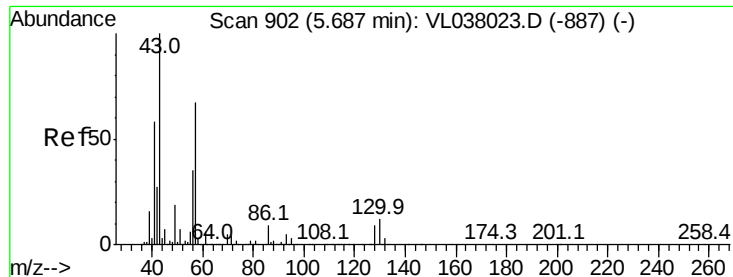
Delta R.T. 0.01 min

Lab File: VL038039.D

Acq: 16 Nov 2021 14:30

Tgt Ion:	43	Resp:	486166
Ion	Ratio	Lower	Upper
43	100		
45	0.0	8.0	12.0#
61	0.1	8.3	12.5#
70	1.6	5.7	8.5#





#26

Hexane

Concen: 5.927 ppbv

RT: 5.68 Instrument:

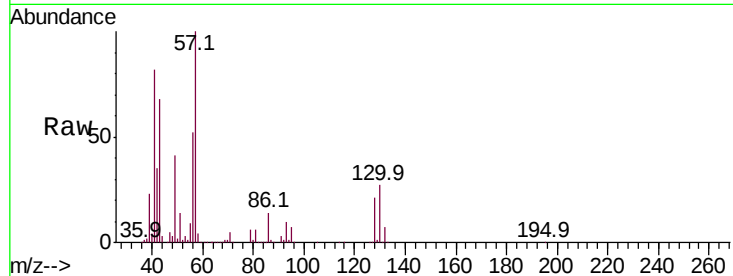
Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 16 Nov 2021 14:30

Tot Ion: 57 Resp: 719791

Ion	Ratio	Lower	Upper
57	100		
41	84.9	70.8	106.2
43	70.0	169.4	254.0#
56	52.4	41.8	62.8

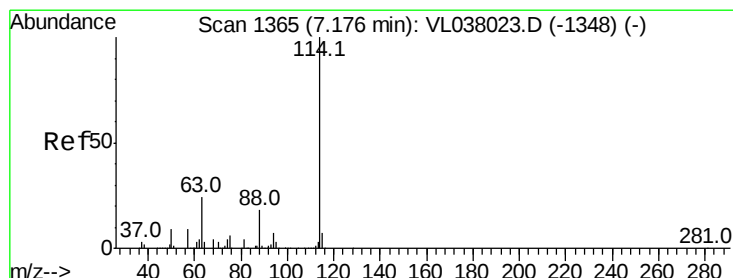
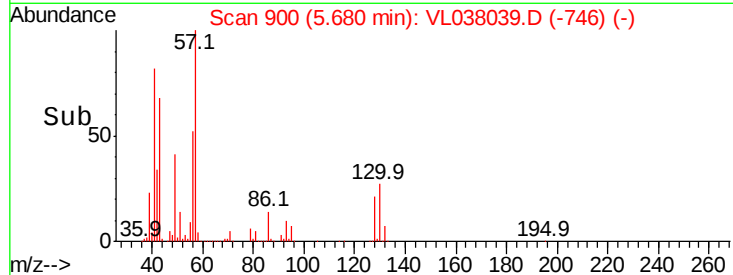
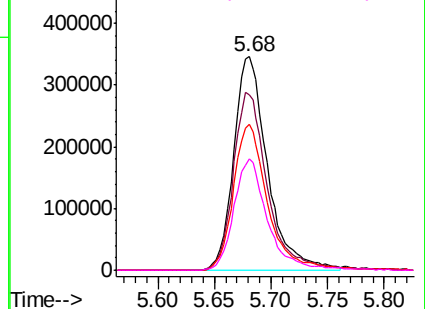


Abundance Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 43.10 (42.80 to 43.80): VL0

Ion 56.10 (55.80 to 56.80): VL0



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.17 min Scan# 1362

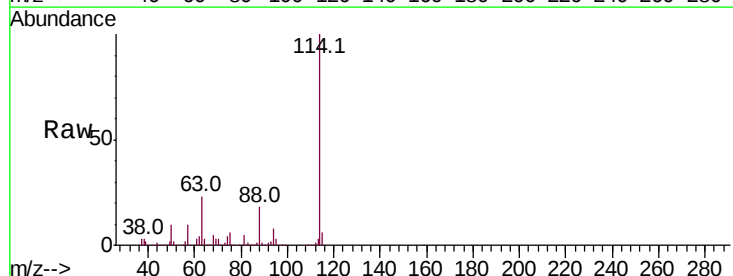
Delta R.T. -0.01 min

Lab File: VL038039.D

Acq: 16 Nov 2021 14:30

Tgt Ion: 114 Resp: 2565427

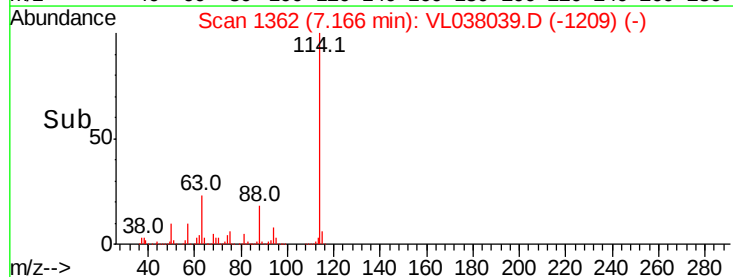
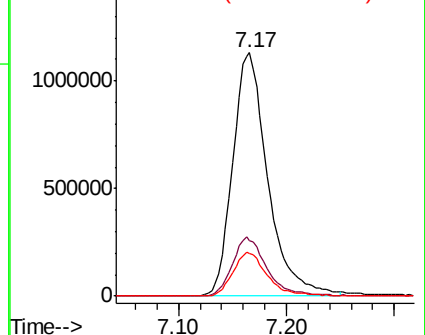
Ion	Ratio	Lower	Upper
114	100		
63	23.9	19.8	29.6
88	18.0	14.6	21.8

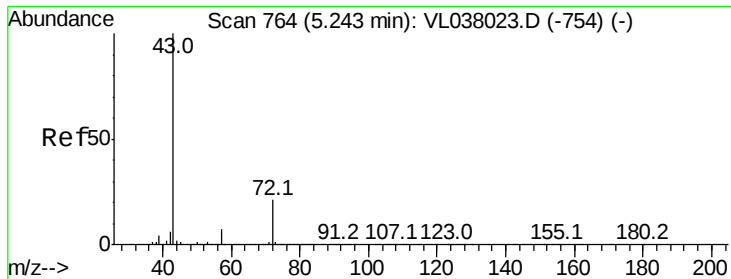


Abundance Ion 114.10 (113.80 to 114.80): V

Ion 63.10 (62.80 to 63.80): VL0

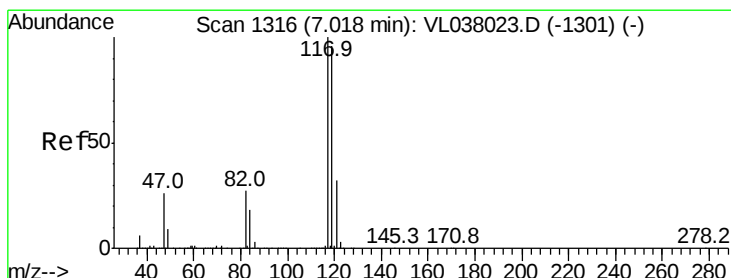
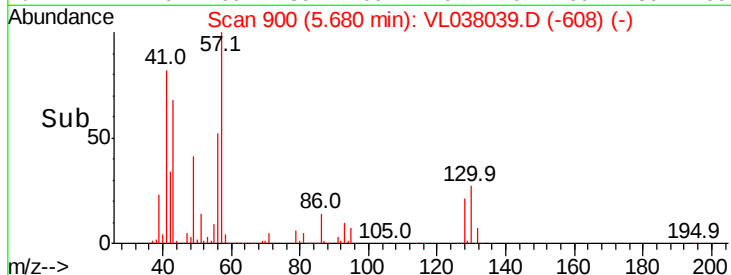
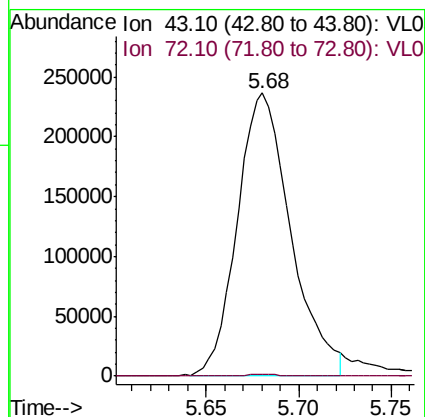
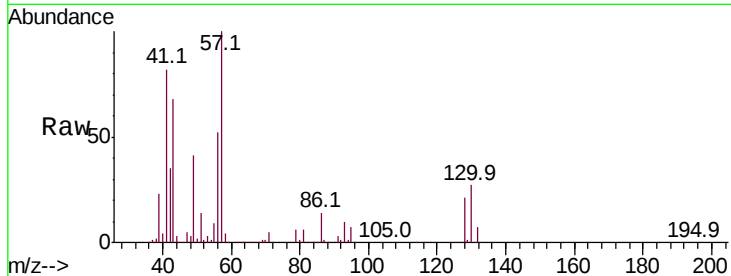
Ion 88.10 (87.80 to 88.80): VL0





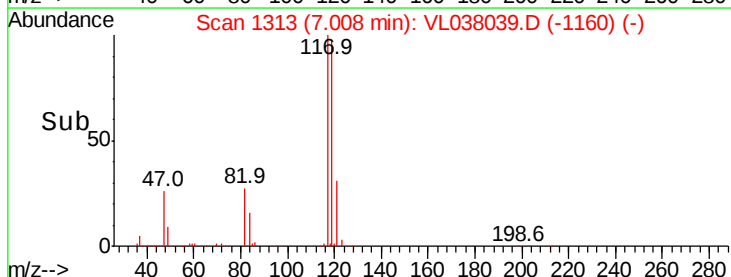
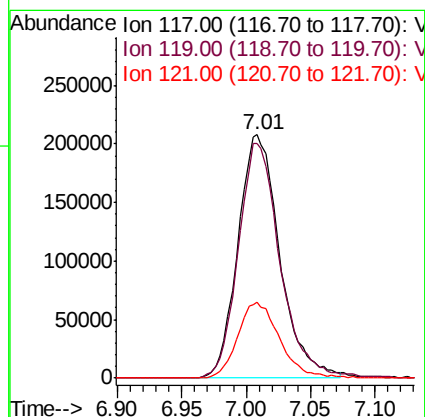
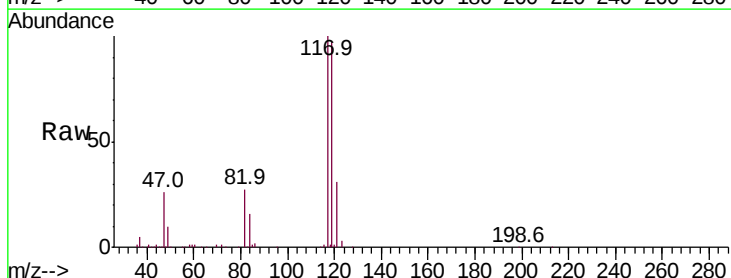
#34
 2-Butanone
 Concen: 5.557 ppbv
 RT: 5.68
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 16 Nov 2021 14:30

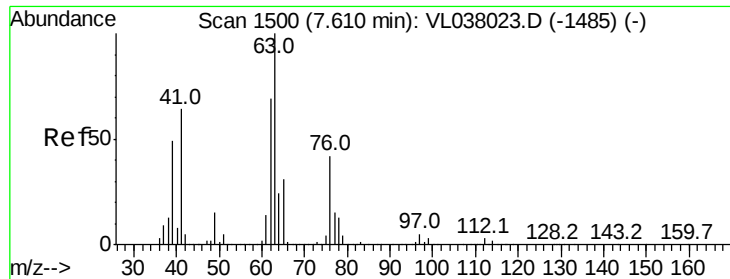
Tot Ion: 43 Resp: 470244
 Ion Ratio Lower Upper
 43 100
 72 0.0 18.2 27.2#



#35
 Carbon Tetrachloride
 Concen: 2.645 ppbv
 RT: 7.01 min Scan# 1313
 Delta R.T. -0.01 min
 Lab File: VL038039.D
 Acq: 16 Nov 2021 14:30

Tgt Ion: 117 Resp: 469062
 Ion Ratio Lower Upper
 117 100
 119 96.4 76.5 114.7
 121 31.2 25.3 37.9





#39

1,2-Dichloropropane

Concen: 3.688 ppbv

RT: 7.60 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 16 Nov 2021 14:30

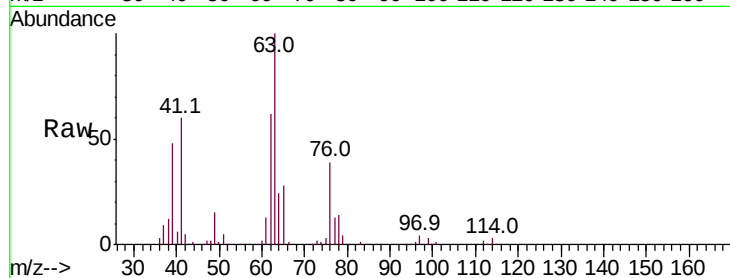
Tot Ion: 63 Resp: 347865

Ion Ratio Lower Upper

63 100

41 59.6 51.1 76.7

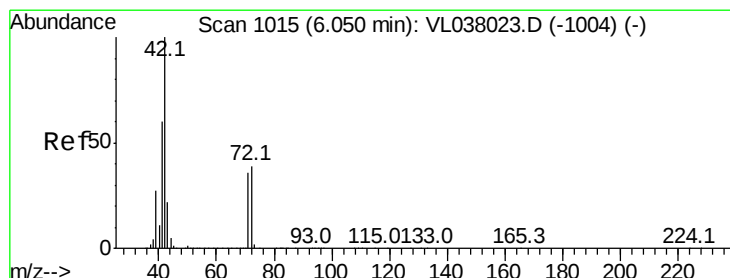
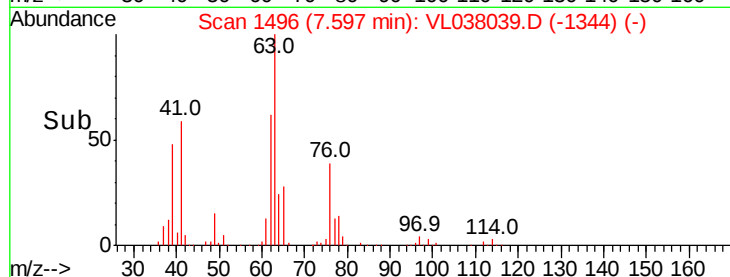
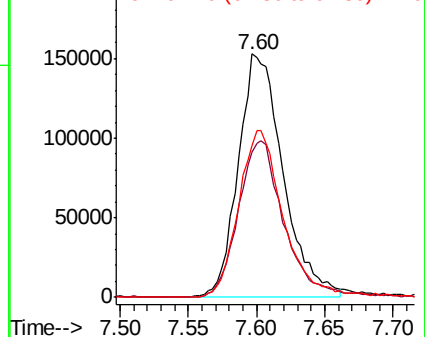
62 61.9 55.2 82.8



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: 4.132 ppbv

RT: 5.68 min Scan# 899

Delta R.T. -0.37 min

Lab File: VL038039.D

Acq: 16 Nov 2021 14:30

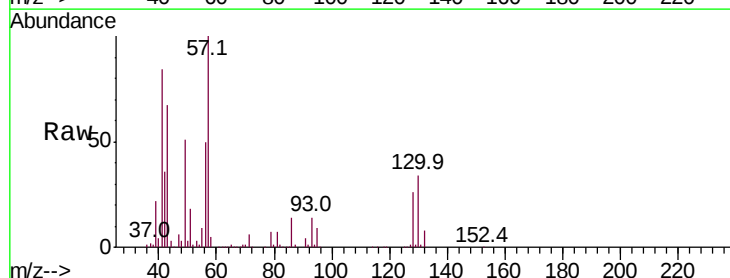
Tgt Ion: 42 Resp: 250900

Ion Ratio Lower Upper

42 100

72 0.8 31.3 46.9#

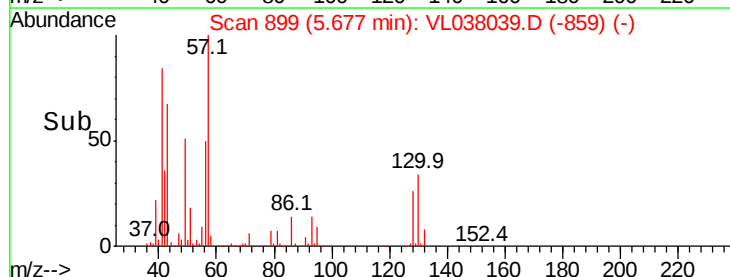
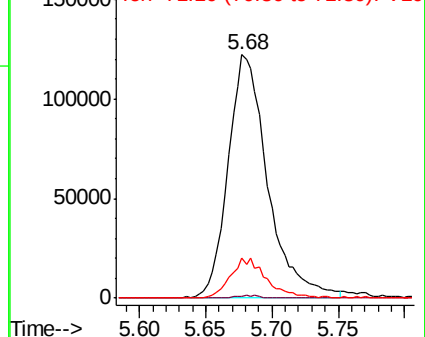
71 15.1 29.7 44.5#

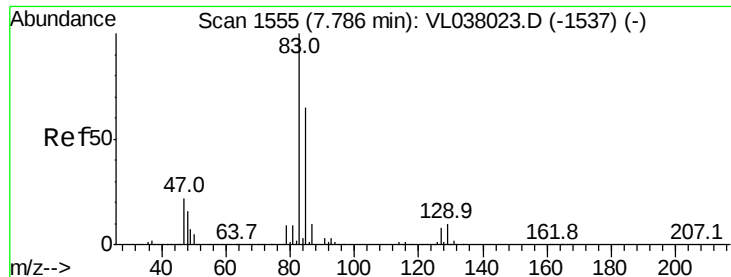


Abundance Ion 42.10 (41.80 to 42.80): VL0

Ion 72.10 (71.80 to 72.80): VL0

Ion 71.10 (70.80 to 71.80): VL0

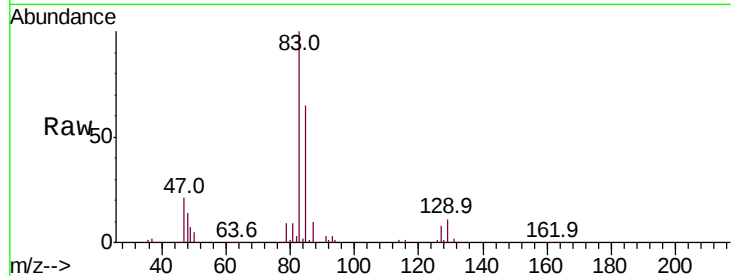




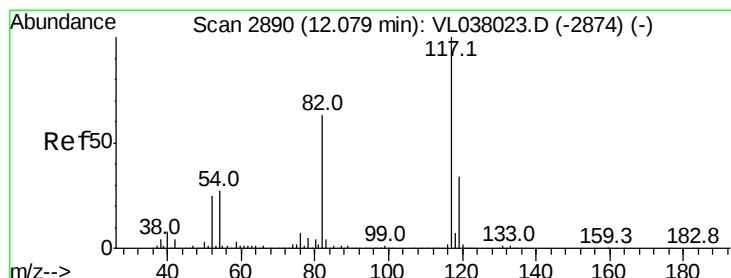
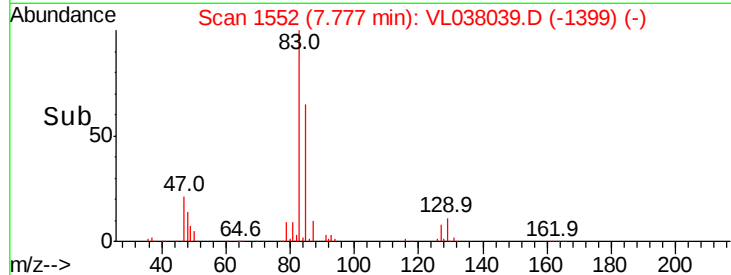
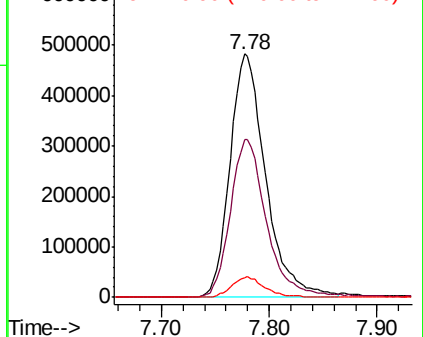
#42

Bromodichloromethane
 Concen: 6.220 ppbv
 RT: 7.78 min
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId:
 Acq: 16 Nov 2021 14:30

Tot Ion: 83 Resp: 1109151
 Ion Ratio Lower Upper
 83 100
 85 64.9 51.6 77.4
 127 8.0 6.6 10.0



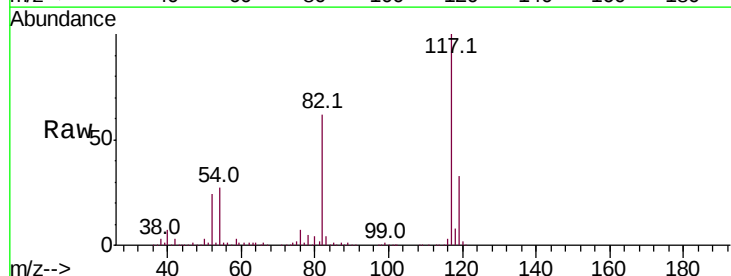
Abundance Ion 83.00 (82.70 to 83.70): VL0
 Ion 85.00 (84.70 to 85.70): VL0
 Ion 126.90 (126.60 to 127.60): V



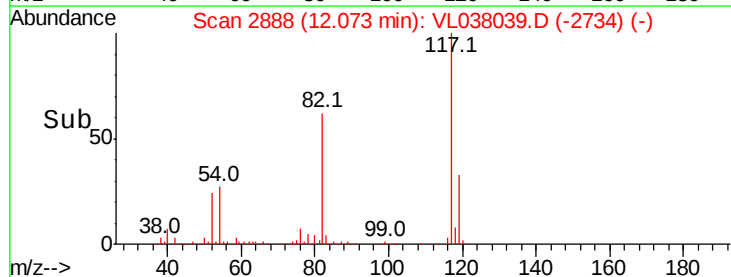
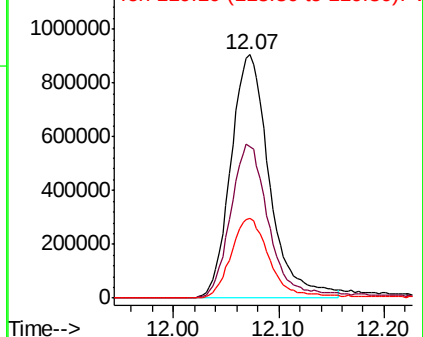
#55

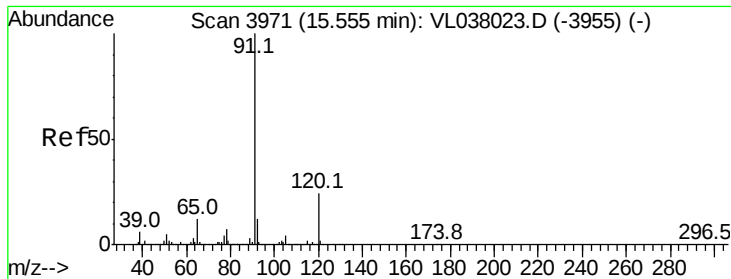
Chlorobenzene-d5
 Concen: 10.000 ppbv
 RT: 12.07 min Scan# 2888
 Delta R.T.: -0.01 min
 Lab File: VL038039.D
 Acq: 16 Nov 2021 14:30

Tgt Ion: 117 Resp: 2304565
 Ion Ratio Lower Upper
 117 100
 82 66.7 50.0 75.0
 119 34.4 44.6 67.0#



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





#64

n-propylbenzene

Concen: 0.130 ppbv

RT: 15.75

Delta R.T. MSVOA_1

Lab File:

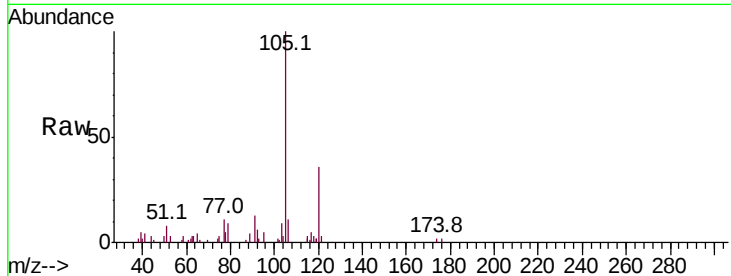
Acq: 16 Nov 2021 14:30

Tot Ion:120 Resp: 12972

Ion Ratio Lower Upper

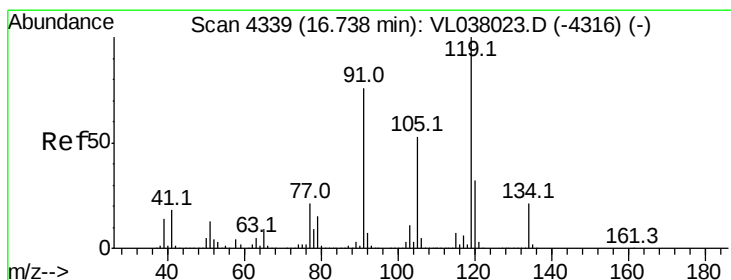
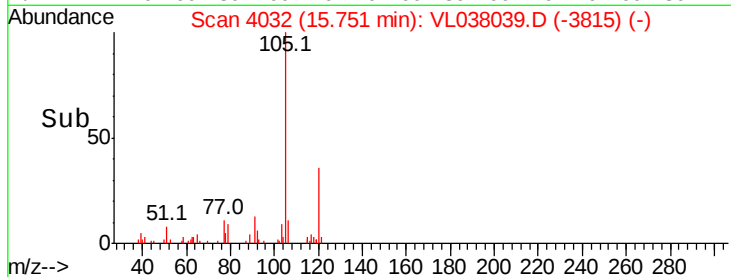
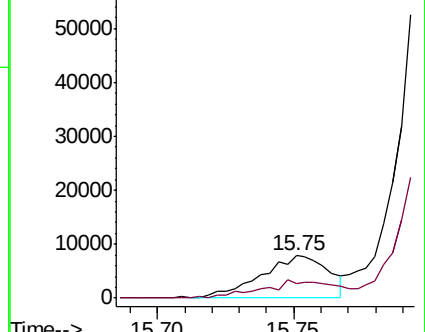
120 100

91 0.0 366.7 550.1#



Abundance Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0



#65

tert-Butylbenzene

Concen: 0.924 ppbv

RT: 16.74 min Scan# 4341

Delta R.T. 0.01 min

Lab File: VL038039.D

Acq: 16 Nov 2021 14:30

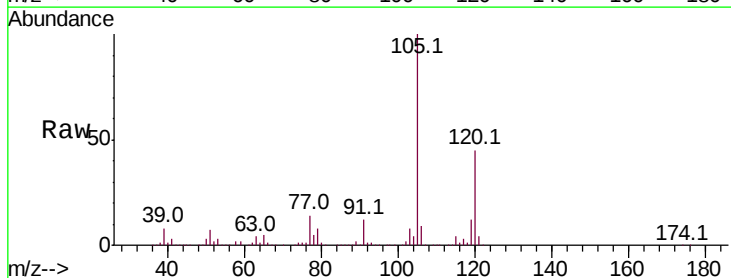
Tgt Ion:119 Resp: 316374

Ion Ratio Lower Upper

119 100

91 102.2 62.6 94.0#

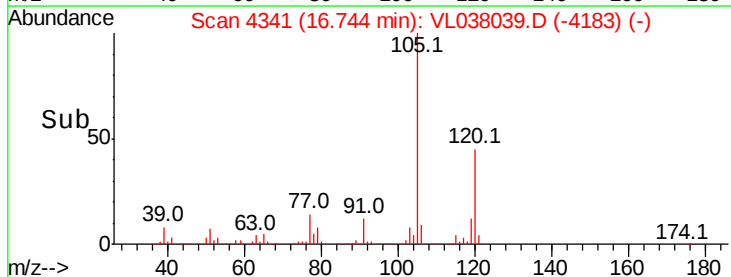
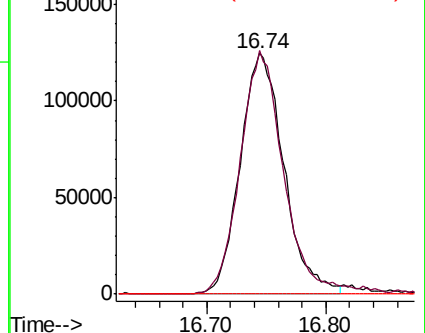
134 0.0 16.1 24.1#

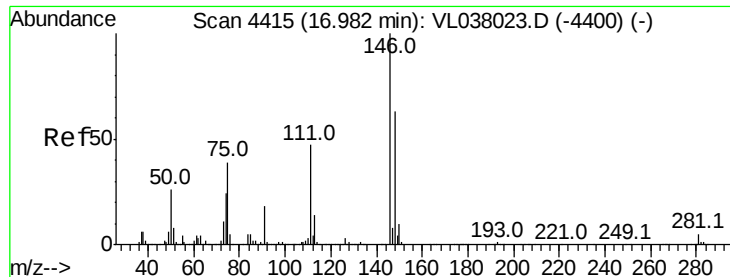


Abundance Ion 119.20 (118.90 to 119.90): V

Ion 91.10 (90.80 to 91.80): VL0

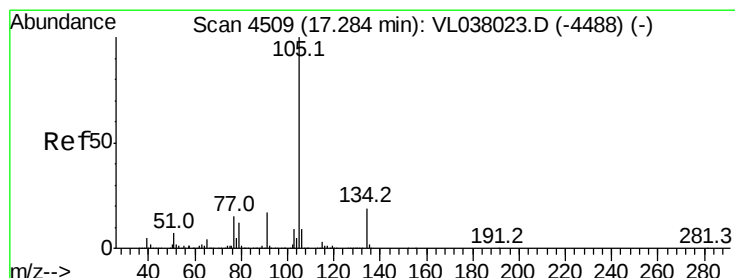
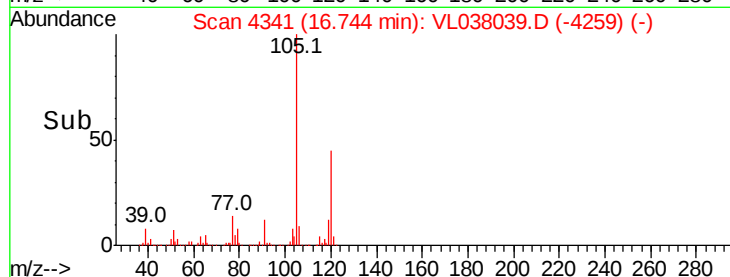
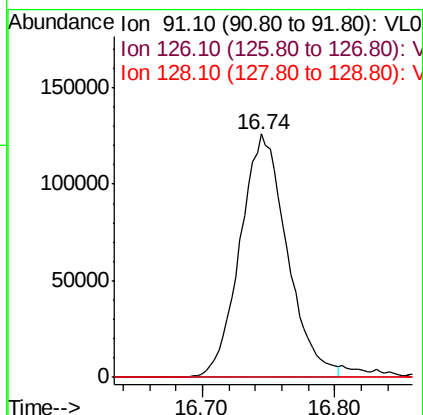
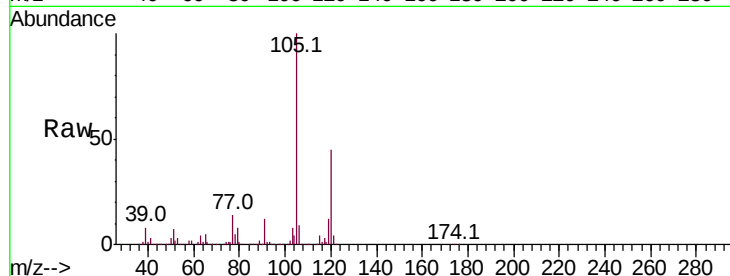
Ion 134.20 (133.90 to 134.90): V





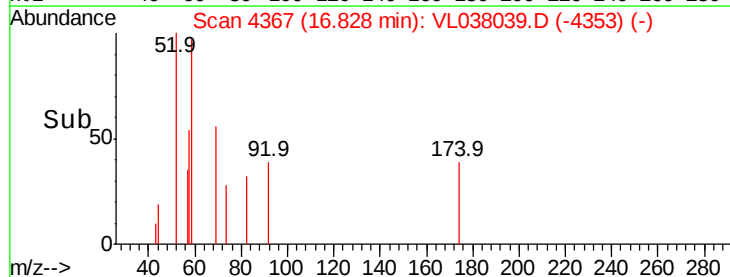
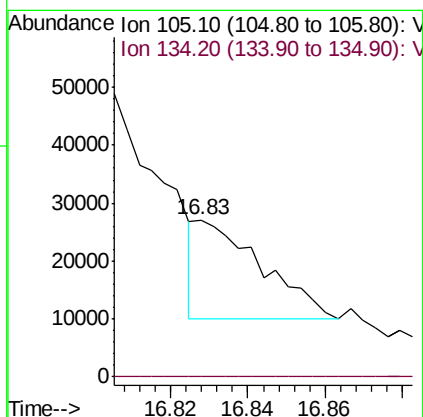
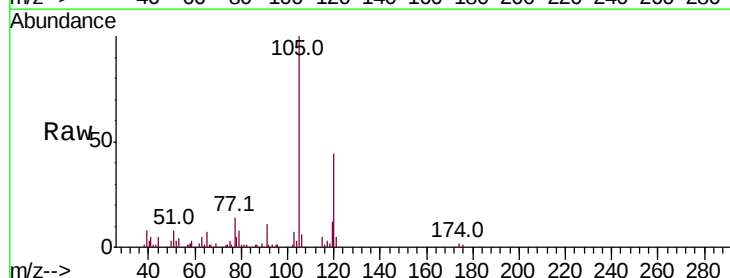
#66
Benzyl Chloride
Concen: 12.918 ppbv
RT: 16.74
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 16 Nov 2021 14:30

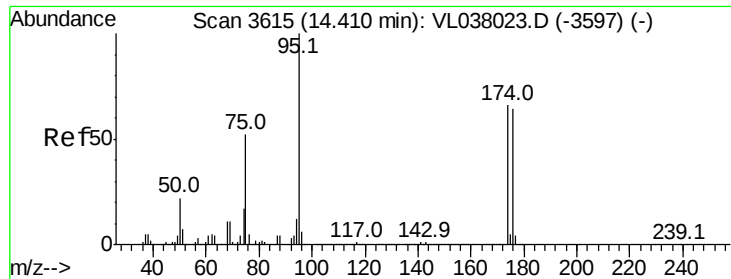
Tot Ion	Ratio	Lower	Upper
91	100		
126	0.0	16.4	24.6#
128	0.0	5.6	8.4#



#67
sec-Butylbenzene
Concen: 0.042 ppbv
RT: 16.83 min Scan# 4367
Delta R.T. -0.46 min
Lab File: VL038039.D
Acq: 16 Nov 2021 14:30

Tgt Ion	Ratio	Lower	Upper
105	100		
134	15.4	15.3	22.9





#68

1-Bromo-4-Fluorobenzene

Concen: 10.415 ppbv

RT: 14.40 min

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 16 Nov 2021 14:30

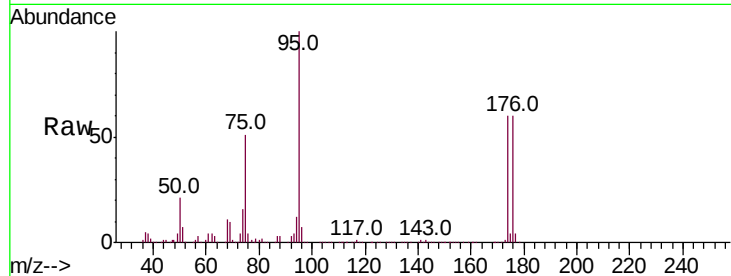
Tot Ion: 95 Resp: 1734152

Ion Ratio Lower Upper

95 100

174 66.2 55.0 82.6

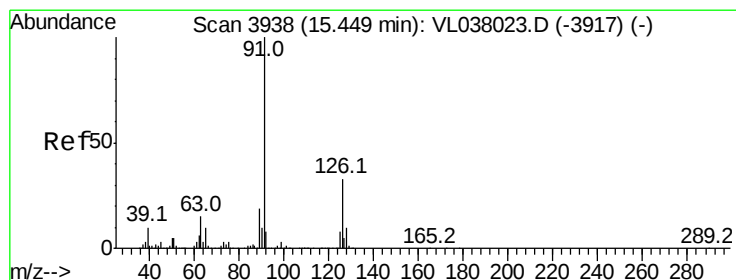
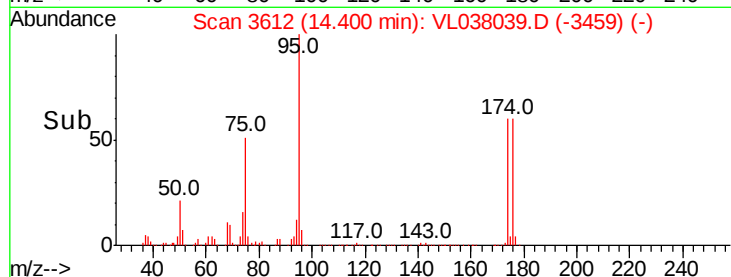
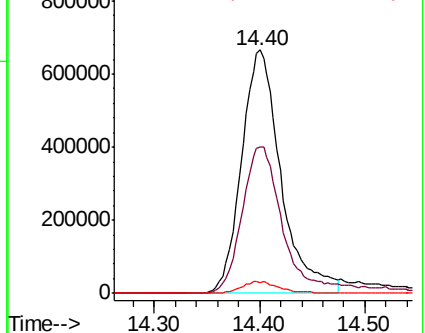
175 4.9 4.2 6.2



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



#71

2-Chlorotoluene

Concen: 1.385 ppbv

RT: 15.82 min Scan# 4054

Delta R.T. 0.37 min

Lab File: VL038039.D

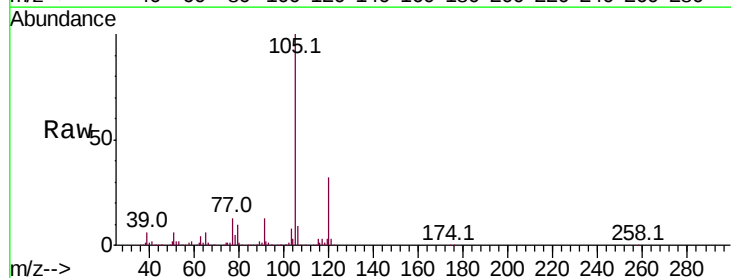
Acq: 16 Nov 2021 14:30

Tgt Ion: 91 Resp: 387005

Ion Ratio Lower Upper

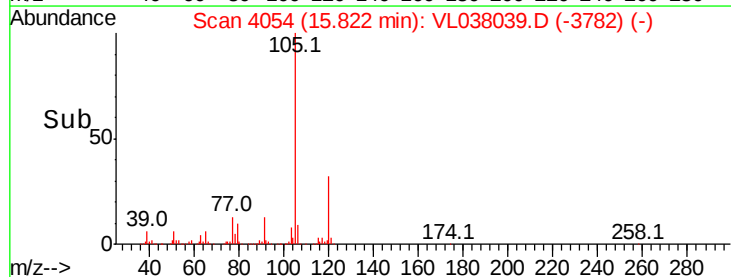
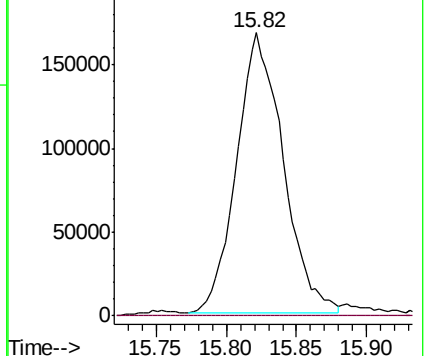
91 100

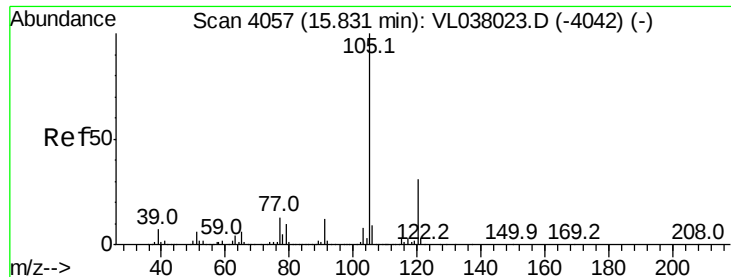
126 0.0 13.6 54.2#



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 126.10 (125.80 to 126.80): V





#72

4-Ethyltoluene

Concen: 10.316 ppbv

RT: 15.82

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 16 Nov 2021 14:30

Tot Ion:105 Resp: 3320680

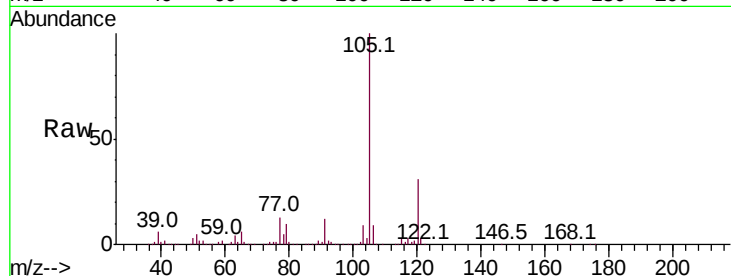
Ion Ratio Lower Upper

105 100

120 31.8 24.7 37.1

91 12.5 9.3 13.9

77 13.5 10.2 15.4

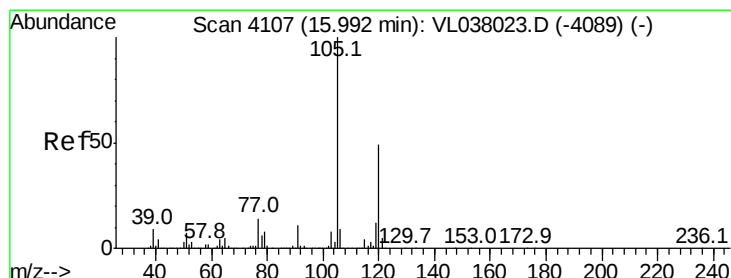
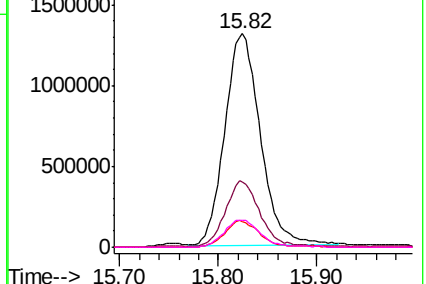
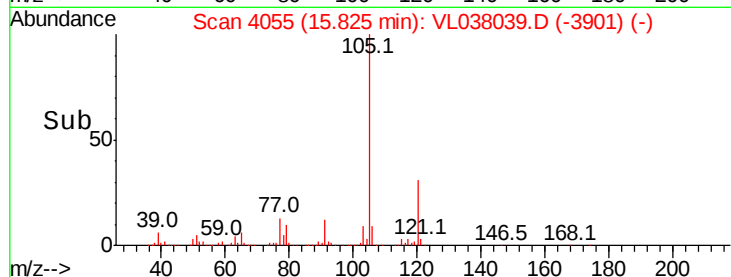


Abundance Ion 105.10 (104.80 to 105.80): V

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: 11.278 ppbv

RT: 15.82 min Scan# 4055

Delta R.T. -0.17 min

Lab File: VL038039.D

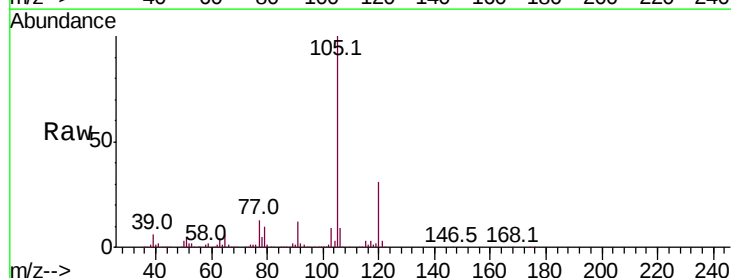
Acq: 16 Nov 2021 14:30

Tgt Ion:105 Resp: 3320680

Ion Ratio Lower Upper

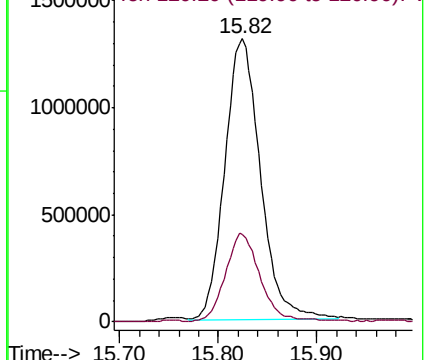
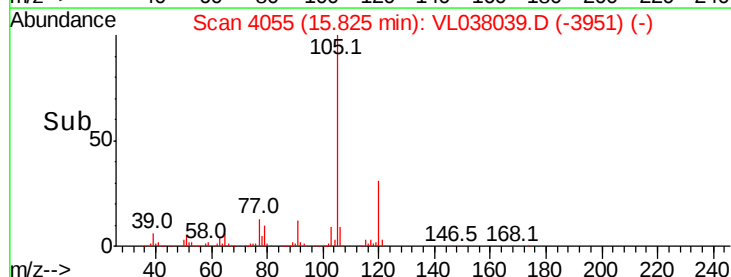
105 100

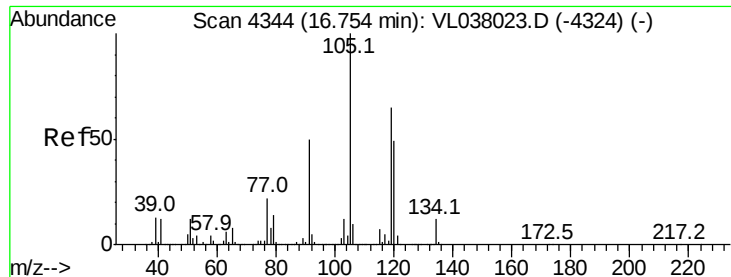
120 30.8 38.8 58.2#



Abundance Ion 105.10 (104.80 to 105.80): V

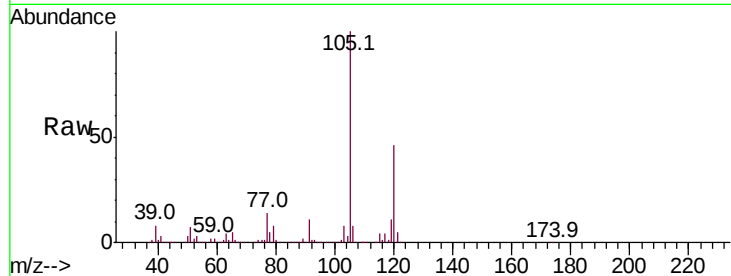
Ion 120.20 (119.90 to 120.90): V





#74
 1,2,4-Trimethylbenzene
 Concen: 9.401 ppbv
 RT: 16.75 min
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId:
 Acq: 16 Nov 2021 14:30

Tot Ion:	105	Resp:	2786917
Ion	Ratio	Lower	Upper
105	100		
120	45.9	39.5	59.3
91	11.2	40.9	61.3#
77	13.6	17.2	25.8#



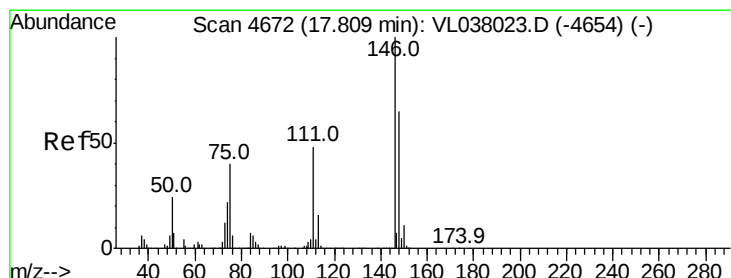
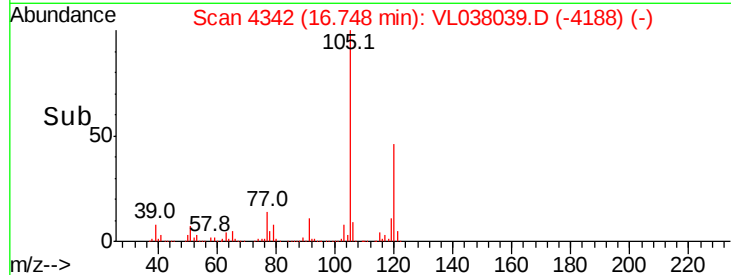
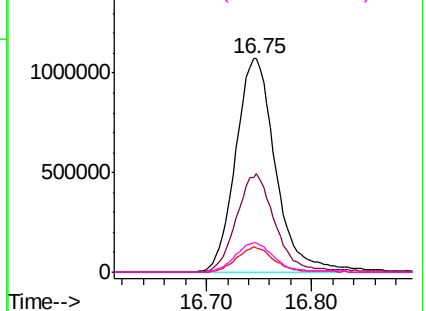
Abundance

Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

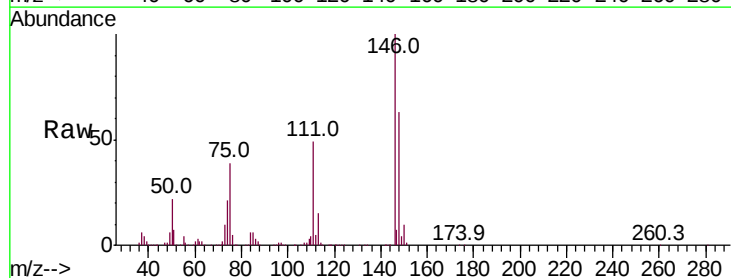
Ion 91.10 (90.80 to 91.80): VL0

Ion 77.10 (76.80 to 77.80): VL0



#77
 1,2-Dichlorobenzene
 Concen: 8.209 ppbv
 RT: 17.80 min Scan# 4670
 Delta R.T.: -0.01 min
 Lab File: VL038039.D
 Acq: 16 Nov 2021 14:30

Tgt Ion:	146	Resp:	1287924
Ion	Ratio	Lower	Upper
146	100		
111	49.6	24.3	73.0
148	65.0	32.5	97.4



Abundance

Ion 146.00 (145.70 to 146.70): V

Ion 111.10 (110.80 to 111.80): V

Ion 148.00 (147.70 to 148.70): V

