

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL111821\
 Data File : VL038073.D
 Acq On : 19 Nov 2021 3:34
 Operator : SY/AP
 Sample : M4751-02 10X
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SVP-2

Quant Time: Nov 22 05:24:54 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL111821AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu Nov 18 13:16:09 2021
 QLast Update : Thu Nov 18 13:16:09 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	802424	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.17	114	2302976	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.08	117	1945355	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.41	95	1542498	10.99	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	109.90%

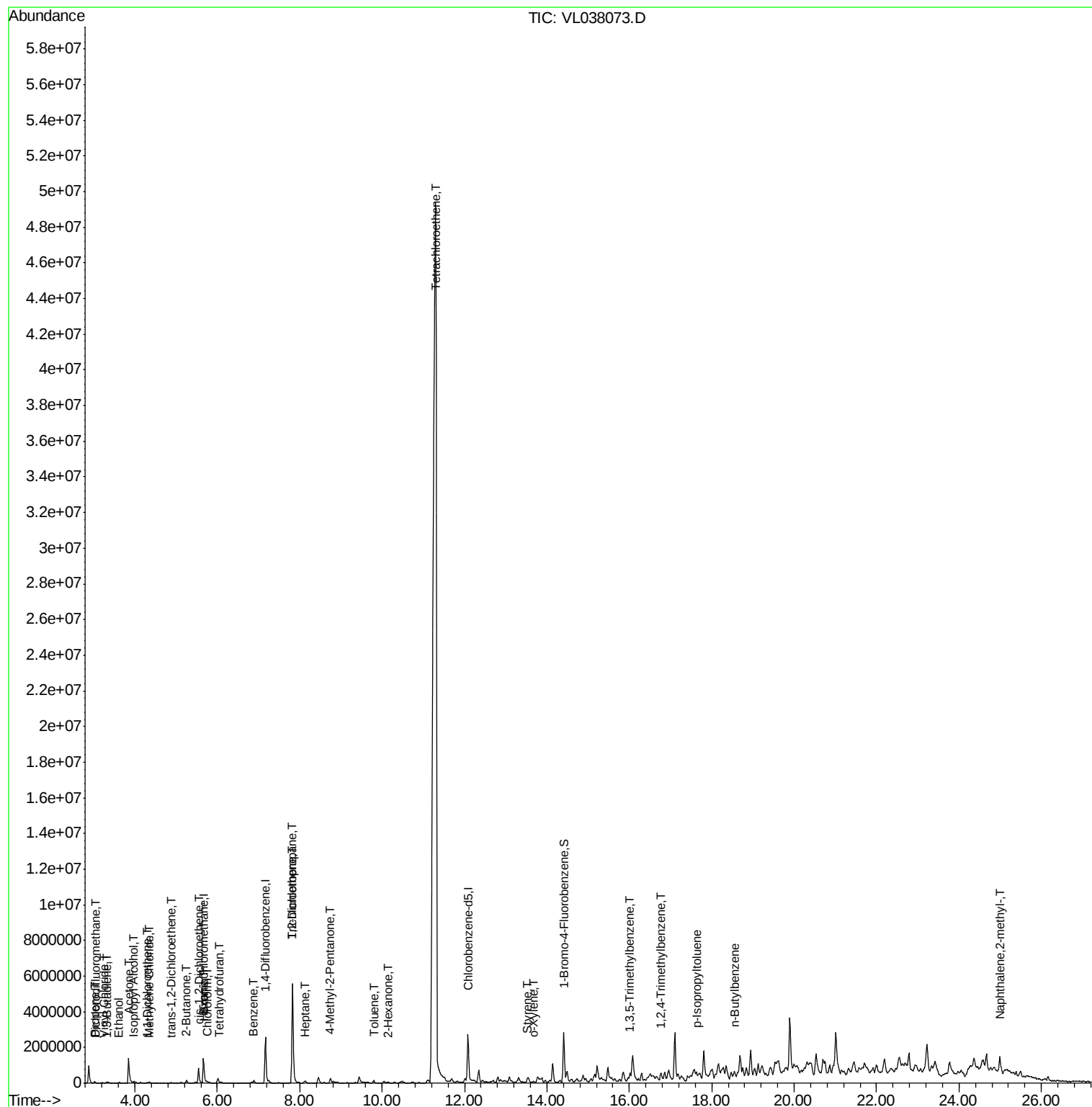
Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.05	85	7728	0.058 ppbv #	88
5) Vinyl Chloride	3.26	62	7473	0.133 ppbv #	83
9) Propene	3.01	41	38038	0.613 ppbv	98
10) Heptane	8.11	43	10697	0.070 ppbv #	27
13) Ethanol	3.61	45	34966	5.830 ppbv	79
15) Acetone	3.85	43	1949106	28.016 ppbv	99
16) 1,3-Butadiene	3.33	39	2431	0.045 ppbv #	1
18) 1,1-Dichloroethene	4.28	96	1951	0.048 ppbv #	49
19) Isopropyl Alcohol	3.97	45	104089	2.071 ppbv #	95
20) Methylene Chloride	4.34	84	14409	0.370 ppbv	92
22) trans-1,2-Dichloroethene	4.89	96	4353	0.105 ppbv #	81
26) Hexane	5.68	57	13452	0.121 ppbv #	42
29) Chloroform	5.75	83	54726	0.333 ppbv	92
31) cis-1,2-Dichloroethene	5.55	61	548173	5.171 ppbv	97
34) 2-Butanone	5.25	43	217726	2.345 ppbv	100
36) Benzene	6.88	78	129901	0.565 ppbv	98
38) Trichloroethene	7.83	130	2164450	24.978 ppbv	98
39) 1,2-Dichloropropane	7.83	63	7532	0.085 ppbv #	1
41) Tetrahydrofuran	6.06	42	9345	0.162 ppbv #	36
50) 4-Methyl-2-Pentanone	8.74	43	237099	1.681 ppbv	98
51) 2-Hexanone	10.13	43	5851	0.088 ppbv #	27
52) Tetrachloroethene	11.30	164	30155152	354.758 ppbv	87
53) Toluene	9.79	91	54669	0.207 ppbv #	19
60) o-Xylene	13.68	91	20551	0.082 ppbv	95
61) Styrene	13.52	104	20201	0.150 ppbv #	90
69) p-Isopropyltoluene	17.64	119	12737	0.037 ppbv #	56
70) n-Butylbenzene	18.55	91	13069	0.040 ppbv #	77
73) 1,3,5-Trimethylbenzene	15.99	105	17831	0.067 ppbv #	77
74) 1,2,4-Trimethylbenzene	16.75	105	36184	0.132 ppbv #	74
80) Naphthalene,2-methyl-	25.02	142	1803	0.058 ppbv #	1

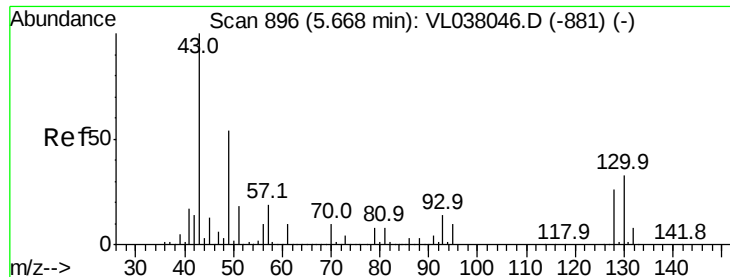
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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QLast Update : Thu Nov 18 13:16:09 2021
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.66 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: SVP-2

Acq: 19 Nov 2021 3:34

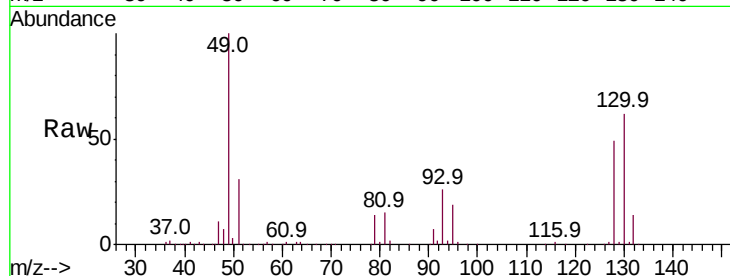
Tot Ion: 49 Resp: 802424

Ion Ratio Lower Upper

49 100

128 48.8 26.5 79.5

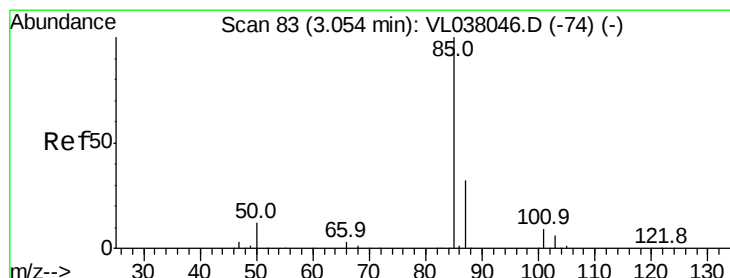
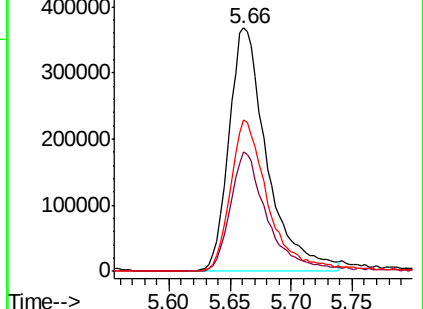
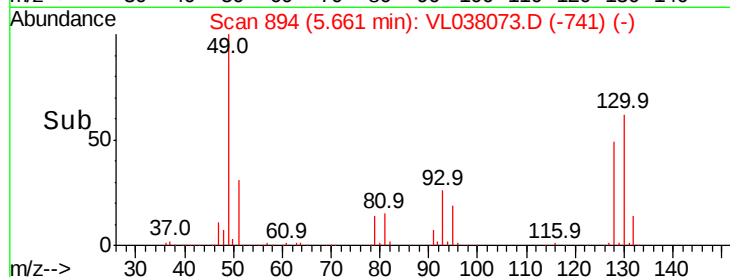
130 62.8 32.5 97.4



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): VL0

Ion 130.00 (129.70 to 130.70): VL0



#2

Dichlorodifluoromethane

Concen: 0.058 ppbv

RT: 3.05 min Scan# 83

Delta R.T. -0.00 min

Lab File: VL038073.D

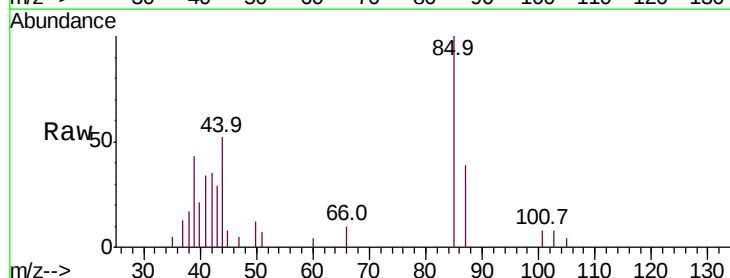
Acq: 19 Nov 2021 3:34

Tgt Ion: 85 Resp: 7728

Ion Ratio Lower Upper

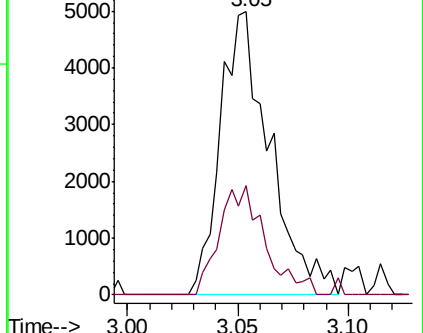
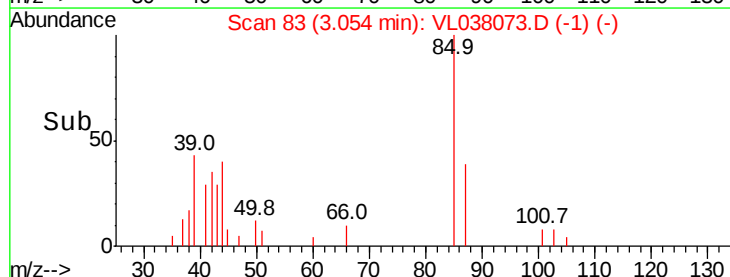
85 100

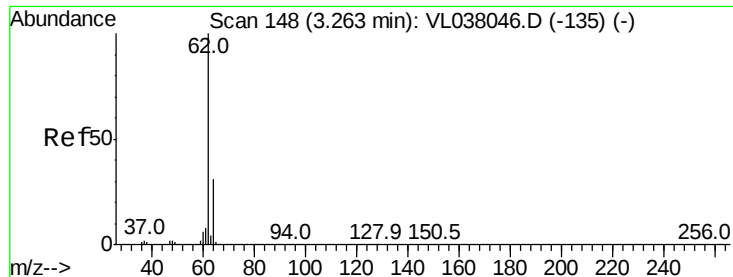
87 38.8 25.8 38.6#



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#5

Vinyl Chloride

Concen: 0.133 ppbv

RT: 3.26 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

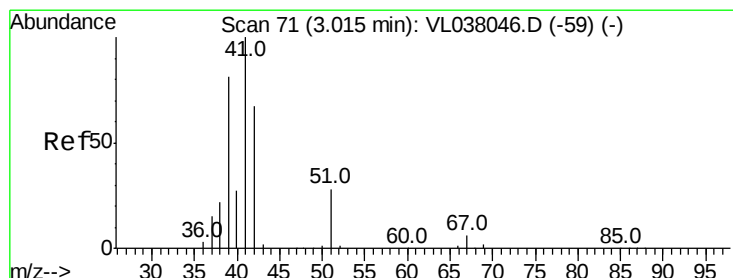
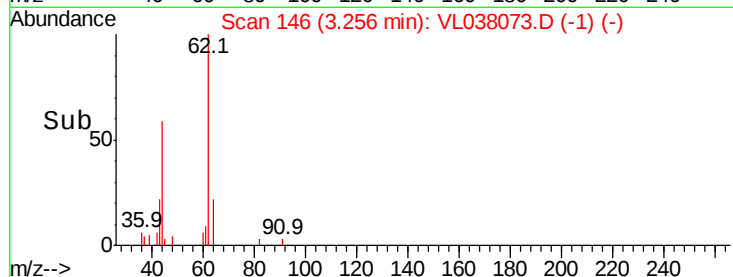
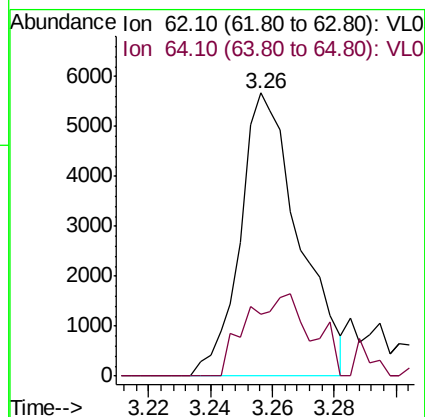
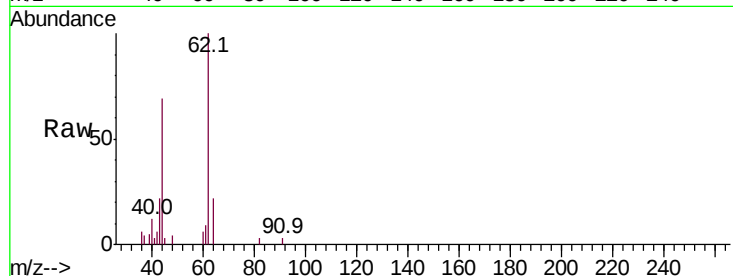
Acq: 19 Nov 2021 3:34

Tot Ion: 62 Resp: 7473

Ion Ratio Lower Upper

62 100

64 21.9 25.1 37.7#



#9

Propene

Concen: 0.613 ppbv

RT: 3.01 min Scan# 70

Delta R.T. -0.00 min

Lab File: VL038073.D

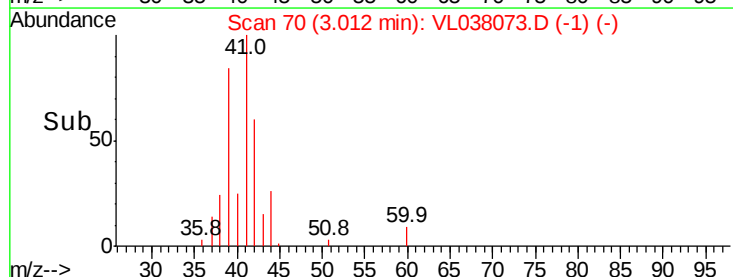
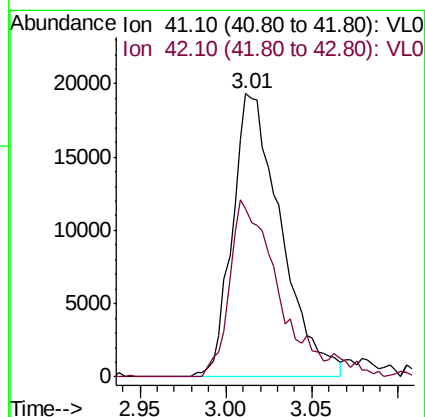
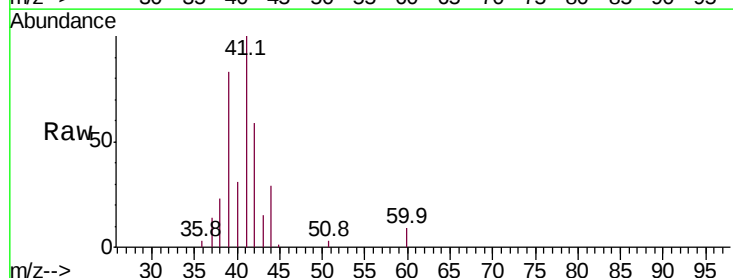
Acq: 19 Nov 2021 3:34

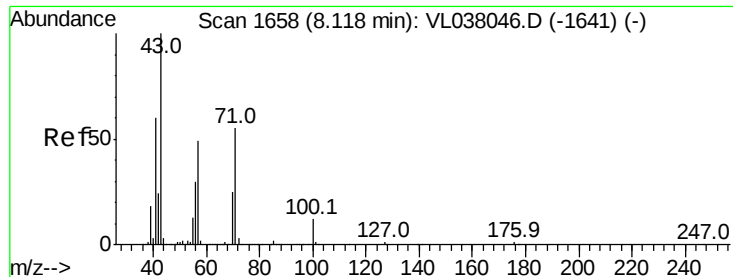
Tgt Ion: 41 Resp: 38038

Ion Ratio Lower Upper

41 100

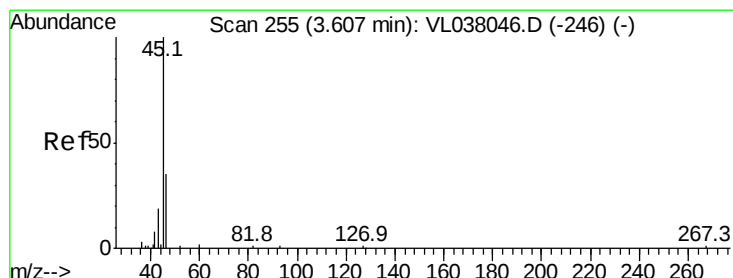
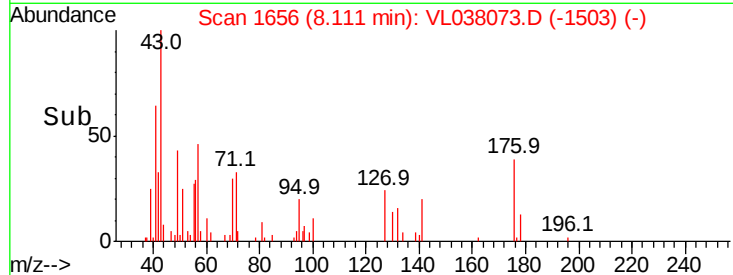
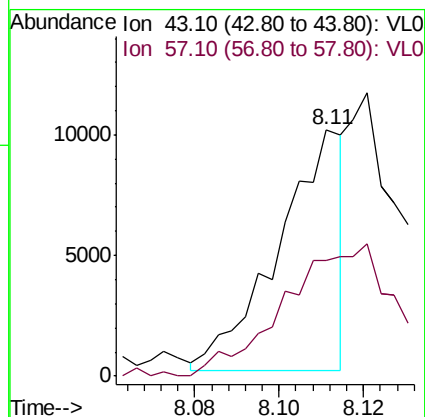
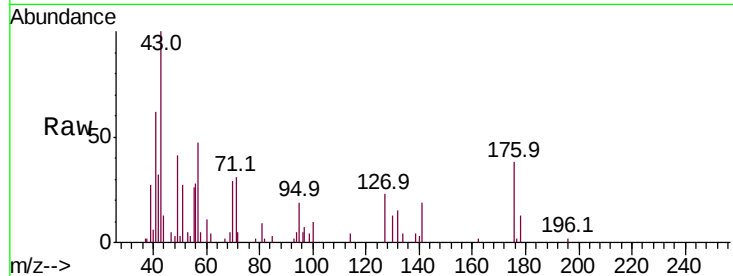
42 65.5 53.8 80.8





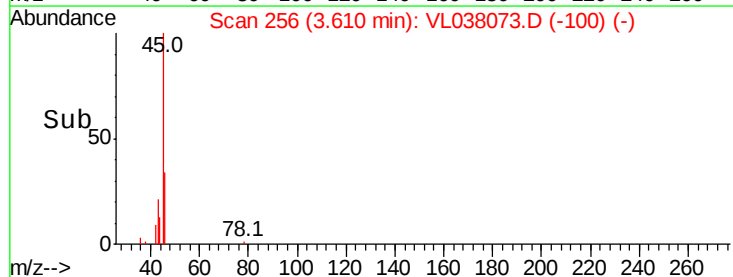
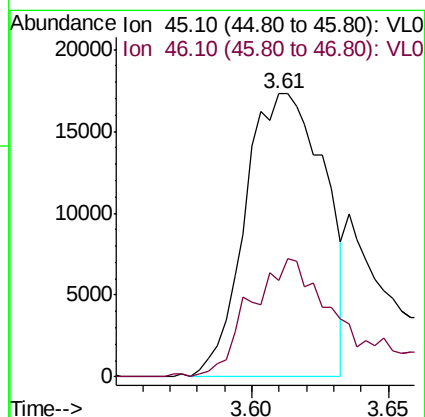
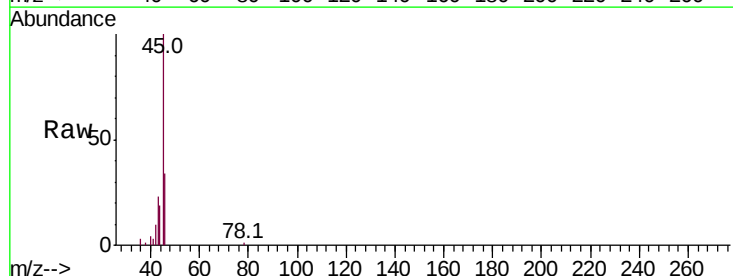
#10
Heptane
Concen: 0.070 ppbv
RT: 8.11
Delta R.T. MSVOA_L
Lab File: ClientSampleId:
Acq: 19 Nov 2021 3:34

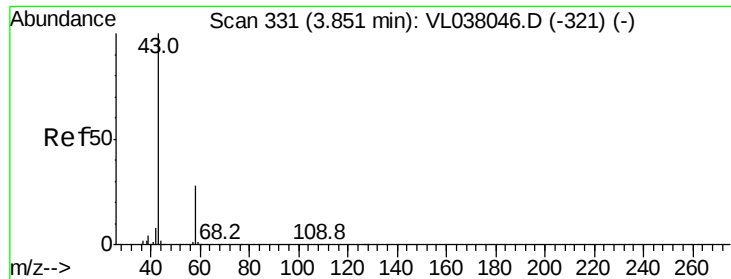
Tot Ion: 43 Resp: 10697
Ion Ratio Lower Upper
43 100
57 0.0 40.4 60.6#



#13
Ethanol
Concen: 5.830 ppbv
RT: 3.61 min Scan# 256
Delta R.T. 0.00 min
Lab File: VL038073.D
Acq: 19 Nov 2021 3:34

Tgt Ion: 45 Resp: 34966
Ion Ratio Lower Upper
45 100
46 57.4 17.6 70.2





#15

Acetone

Concen: 28.016 ppbv

RT: 3.85 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

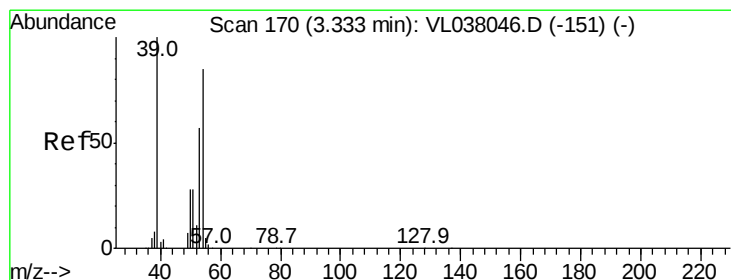
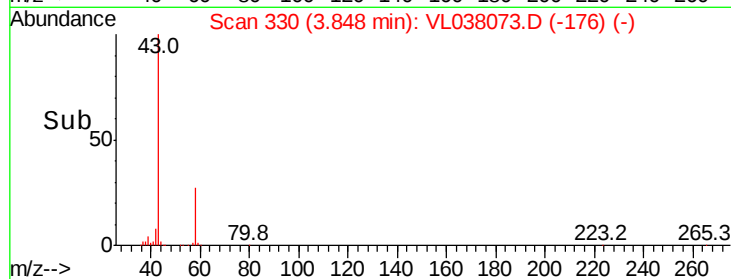
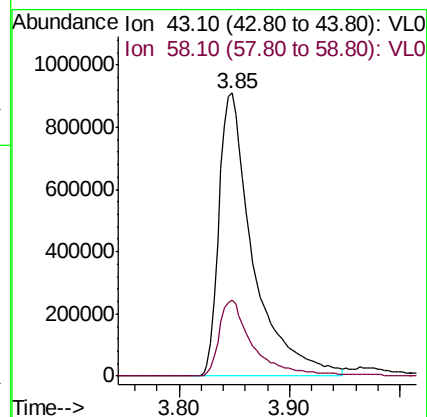
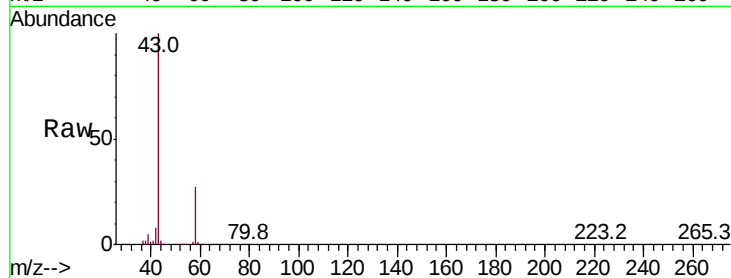
Acq: 19 Nov 2021 3:34

Tot Ion: 43 Resp: 1949106

Ion Ratio Lower Upper

43 100

58 27.6 22.4 33.6



#16

1,3-Butadiene

Concen: 0.045 ppbv

RT: 3.33 min Scan# 168

Delta R.T. -0.01 min

Lab File: VL038073.D

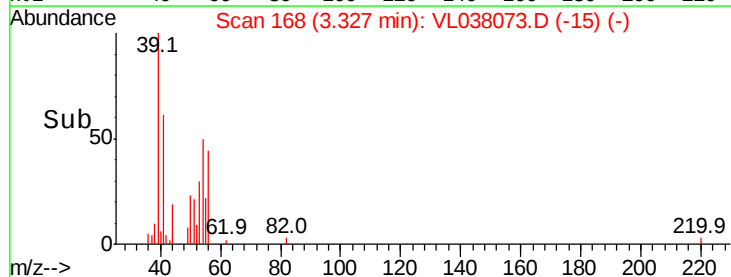
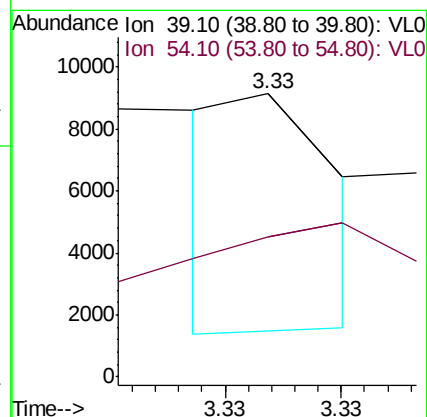
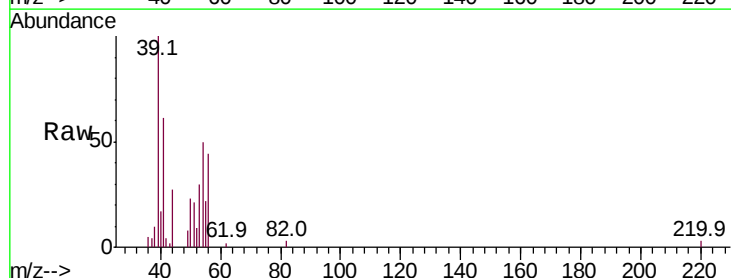
Acq: 19 Nov 2021 3:34

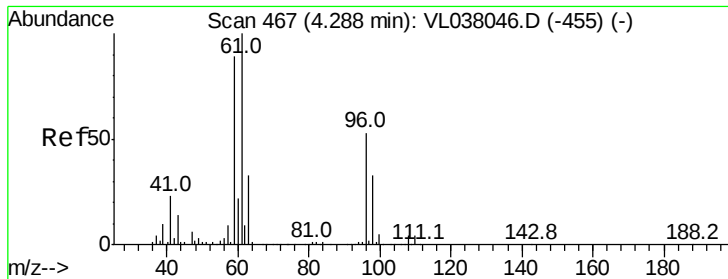
Tgt Ion: 39 Resp: 2431

Ion Ratio Lower Upper

39 100

54 382.8 64.4 96.6#





#18

1,1-Dichloroethene

Concen: 0.048 ppbv

RT: 4.28 Instrument: MSVOA_1

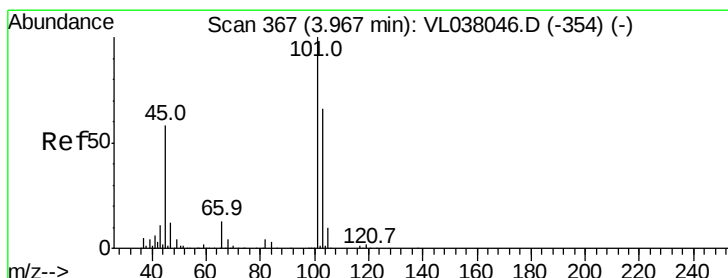
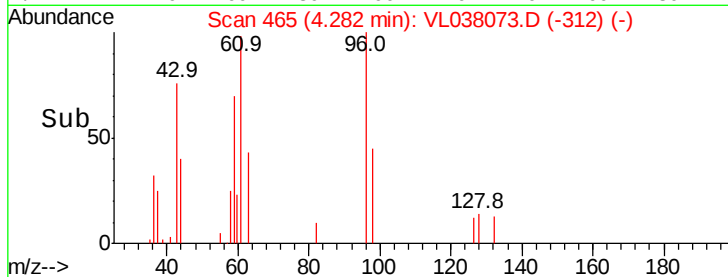
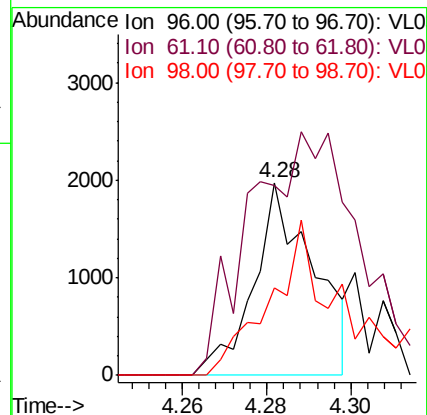
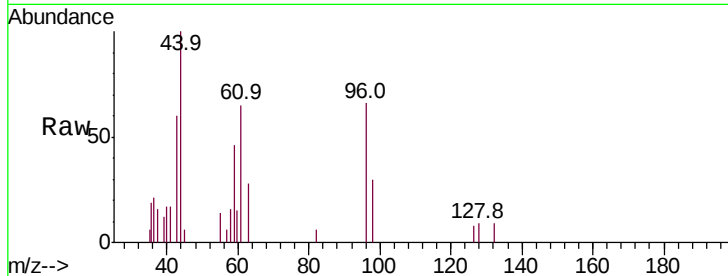
Delta R.T. ClientSampleId:

Lab File: SVP-2

Acq: 19 Nov 2021 3:34

Tot Ion: 96 Resp: 1951

Ion	Ratio	Lower	Upper
96	100		
61	98.4	149.8	224.8#
98	45.4	50.2	75.2#



#19

Isopropyl Alcohol

Concen: 2.071 ppbv

RT: 3.97 min Scan# 368

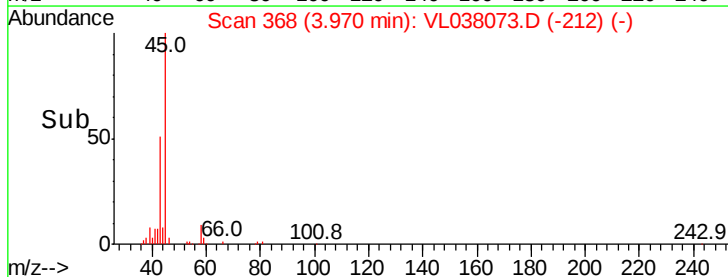
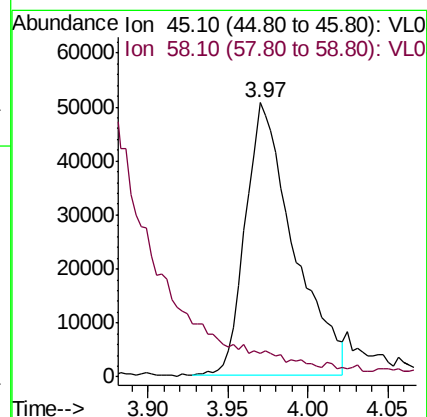
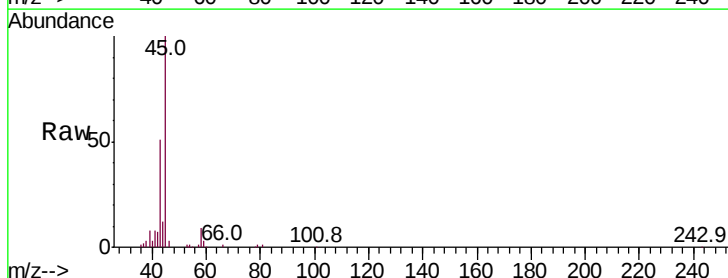
Delta R.T. 0.00 min

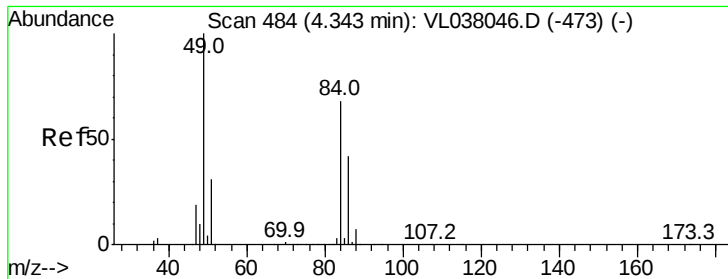
Lab File: VL038073.D

Acq: 19 Nov 2021 3:34

Tgt Ion: 45 Resp: 104089

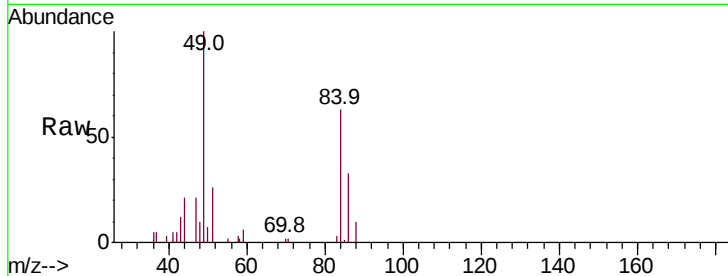
Ion	Ratio	Lower	Upper
45	100		
58	0.0	1.4	2.0#





#20
Methylene Chloride
Concen: 0.370 ppbv
RT: 4.34
Delta R.T. MSVOA_1
Lab File: ClientSampleId :
Acq: 19 Nov 2021 3:34

Tot Ion	84	Resp	14409
Ion Ratio	Lower	Upper	
84	100		
49	156.5	118.2	177.2
51	41.5	36.8	55.2
86	52.6	49.0	73.6



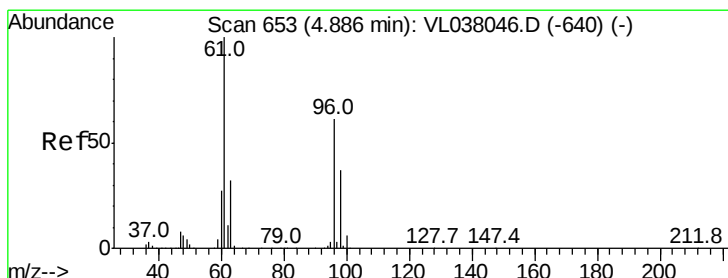
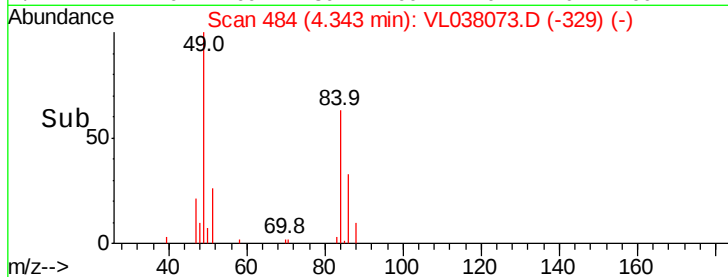
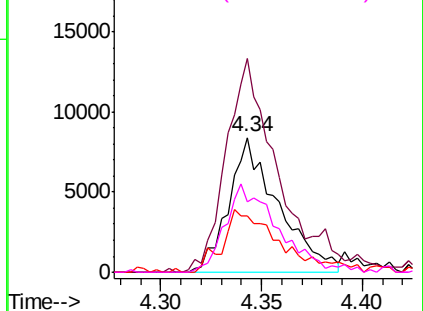
Abundance

Ion 84.00 (83.70 to 84.70): VL0

Ion 49.10 (48.80 to 49.80): VL0

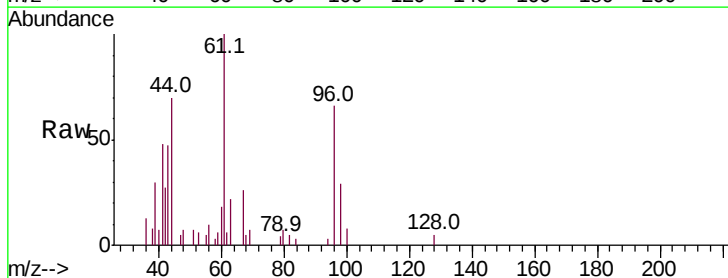
Ion 51.10 (50.80 to 51.80): VL0

Ion 86.00 (85.70 to 86.70): VL0



#22
trans-1,2-Dichloroethene
Concen: 0.105 ppbv
RT: 4.89 min Scan# 653
Delta R.T. -0.00 min
Lab File: VL038073.D
Acq: 19 Nov 2021 3:34

Tgt Ion	96	Resp	4353
Ion Ratio	Lower	Upper	
96	100		
61	150.2	131.6	197.4
98	30.3	48.4	72.6

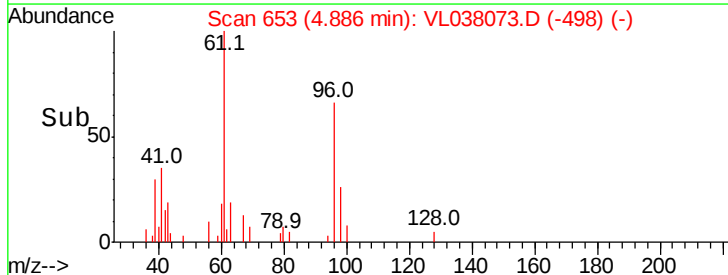
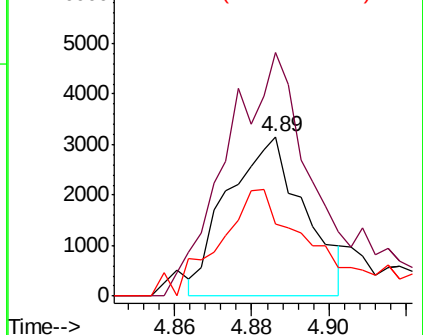


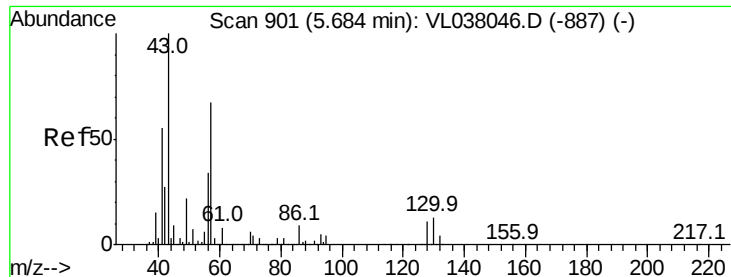
Abundance

Ion 96.00 (95.70 to 96.70): VL0

Ion 61.10 (60.80 to 61.80): VL0

Ion 98.00 (97.70 to 98.70): VL0





#26

Hexane

Concen: 0.121 ppbv

RT: 5.68 Instrument:

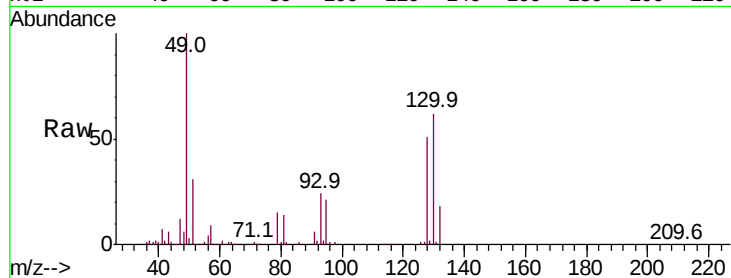
Delta R.T. MSVOA_1

Lab File: ClientSampleId:

Acq: 19 Nov 2021 3:34

Tot Ion: 57 Resp: 13452

Ion	Ratio	Lower	Upper
57	100		
41	156.5	71.4	107.2#
43	140.9	174.6	261.8#
56	0.0	43.2	64.8#

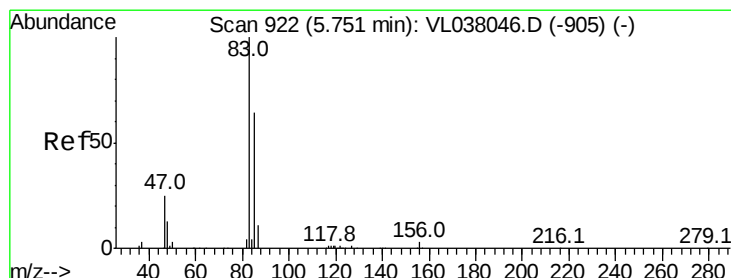
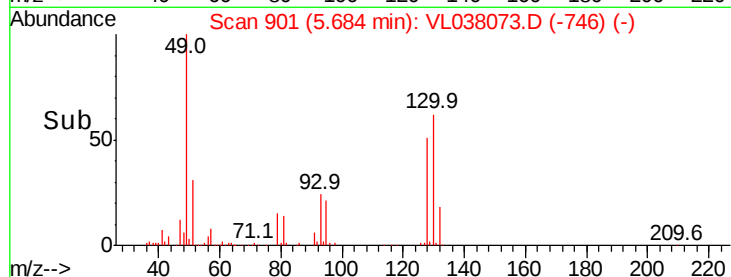
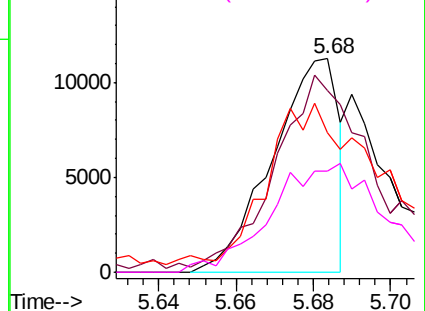


Abundance Ion 57.10 (56.80 to 57.80): VL0

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



#29

Chloroform

Concen: 0.333 ppbv

RT: 5.75 min Scan# 921

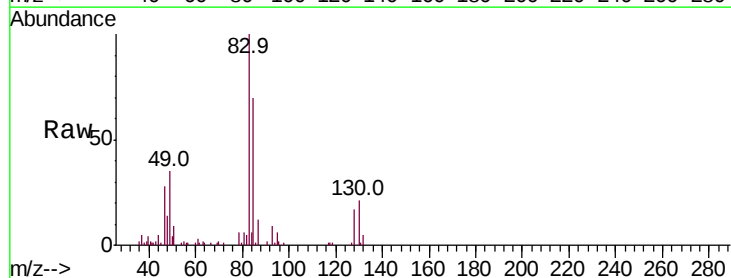
Delta R.T. -0.00 min

Lab File: VL038073.D

Acq: 19 Nov 2021 3:34

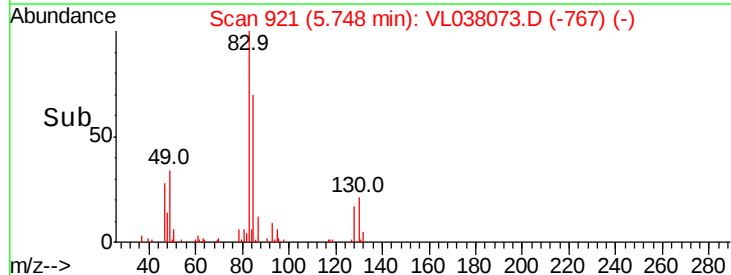
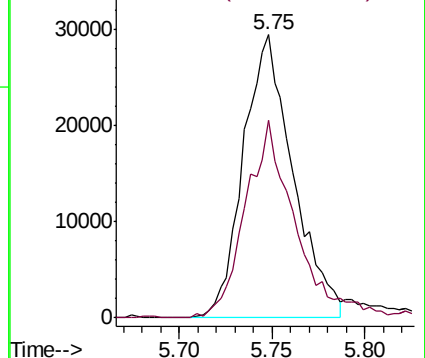
Tgt Ion: 83 Resp: 54726

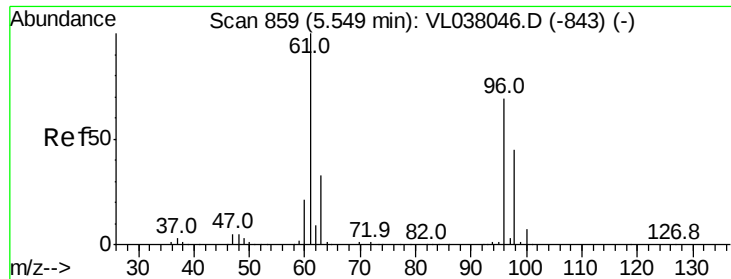
Ion	Ratio	Lower	Upper
83	100		
85	69.9	51.0	76.6



Abundance Ion 83.00 (82.70 to 83.70): VL0

Ion 85.00 (84.70 to 85.70): VL0





#31

cis-1,2-Dichloroethene

Concen: 5.171 ppbv

RT: 5.55 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: SVP-2

Acq: 19 Nov 2021 3:34

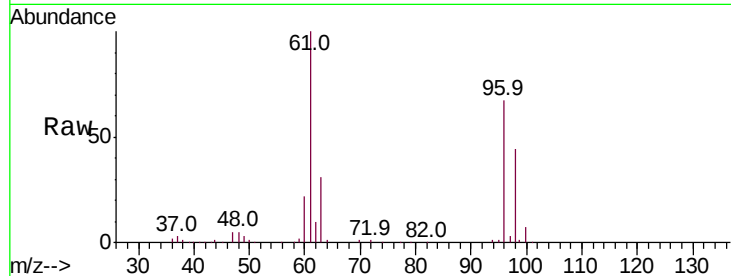
Tot Ion: 61 Resp: 548173

Ion Ratio Lower Upper

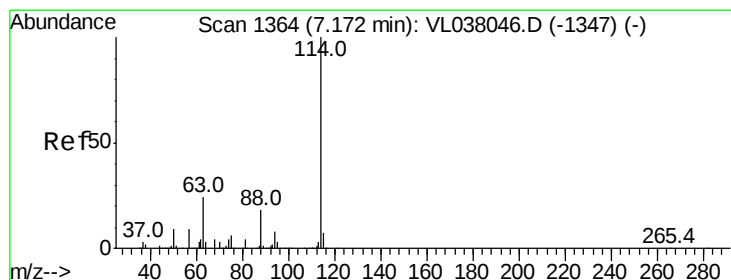
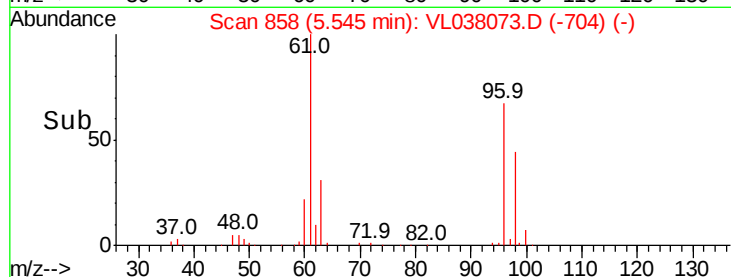
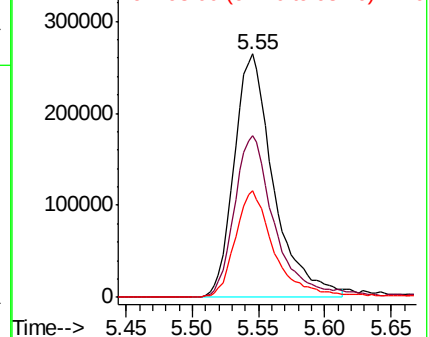
61 100

96 66.6 55.4 83.2

98 43.6 35.7 53.5



Abundance Ion 61.10 (60.80 to 61.80): VL0
Ion 96.00 (95.70 to 96.70): VL0
Ion 98.00 (97.70 to 98.70): VL0



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.17 min Scan# 1363

Delta R.T. -0.00 min

Lab File: VL038073.D

Acq: 19 Nov 2021 3:34

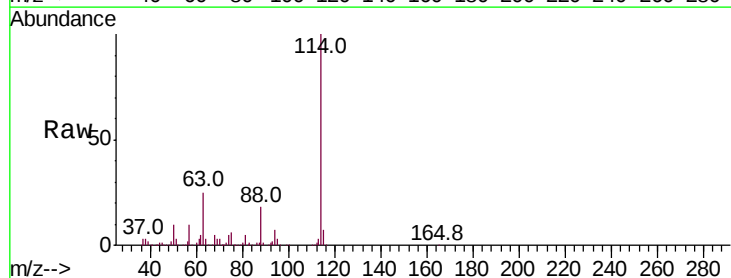
Tgt Ion:114 Resp: 2302976

Ion Ratio Lower Upper

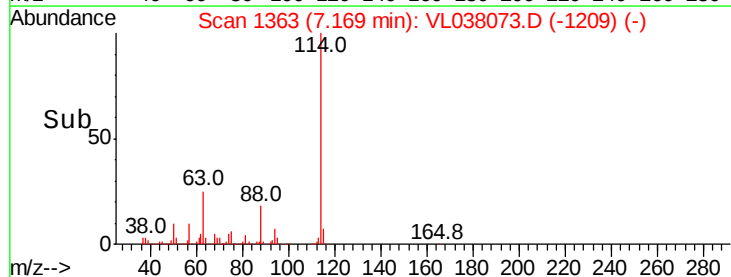
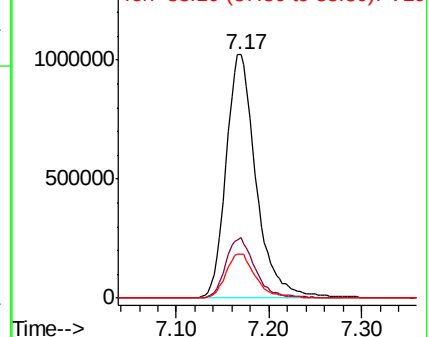
114 100

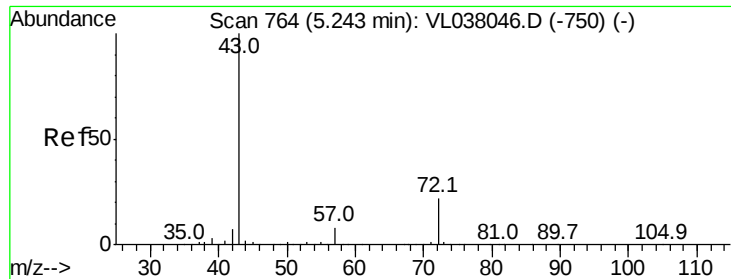
63 24.8 19.7 29.5

88 18.2 14.4 21.6



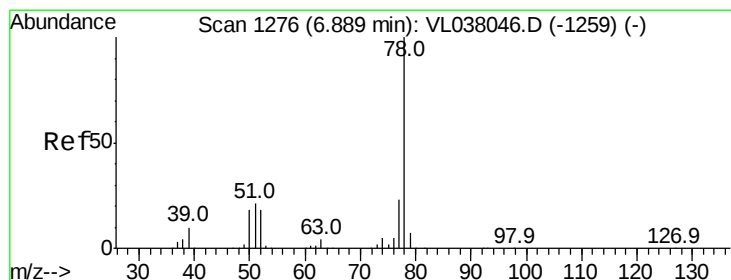
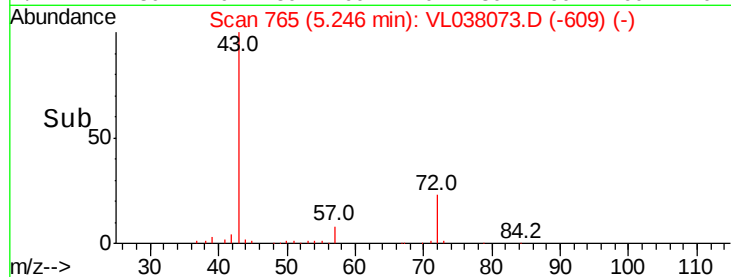
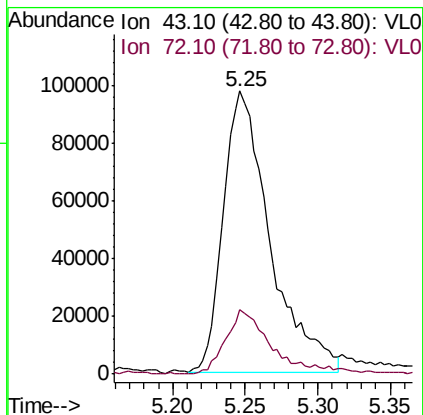
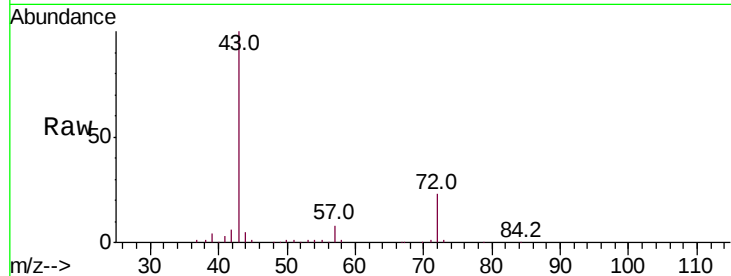
Abundance Ion 114.10 (113.80 to 114.80): V
Ion 63.10 (62.80 to 63.80): VL0
Ion 88.10 (87.80 to 88.80): VL0





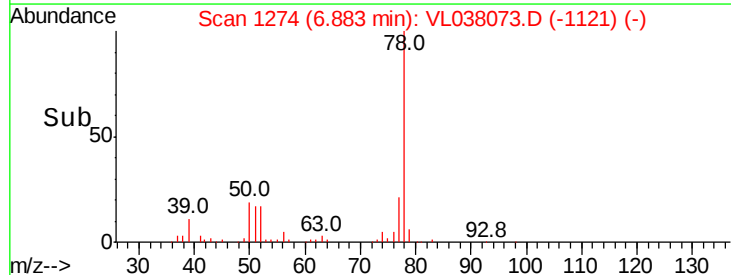
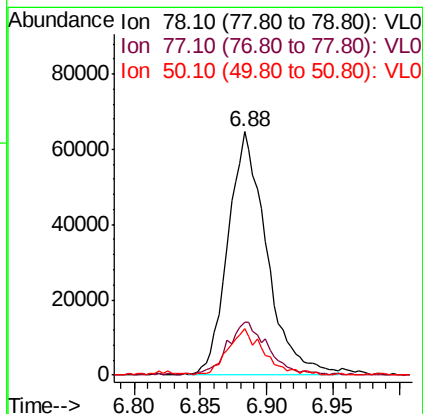
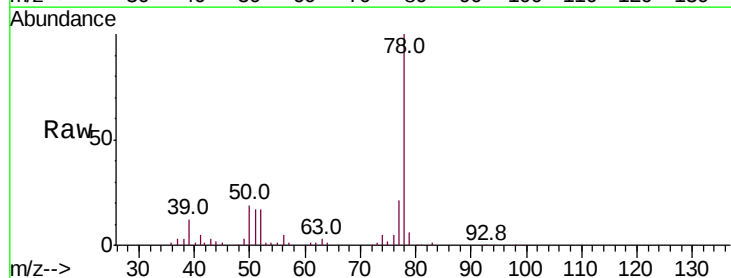
#34
2-Butanone
Concen: 2.345 ppbv
RT: 5.25
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 19 Nov 2021 3:34

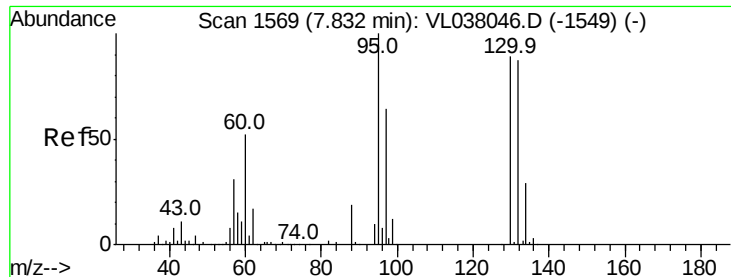
Tot Ion: 43 Resp: 217726
Ion Ratio Lower Upper
43 100
72 23.5 18.8 28.2



#36
Benzene
Concen: 0.565 ppbv
RT: 6.88 min Scan# 1274
Delta R.T. -0.01 min
Lab File: VL038073.D
Acq: 19 Nov 2021 3:34

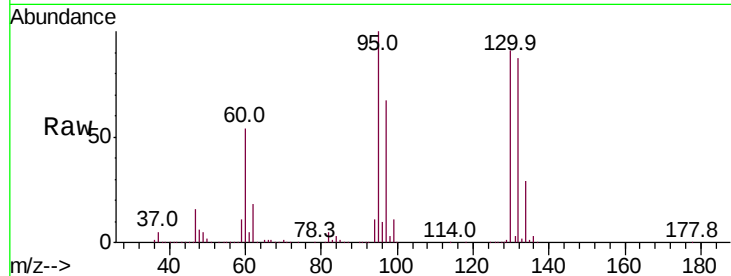
Tgt Ion: 78 Resp: 129901
Ion Ratio Lower Upper
78 100
77 20.9 18.2 27.4
50 18.7 14.7 22.1



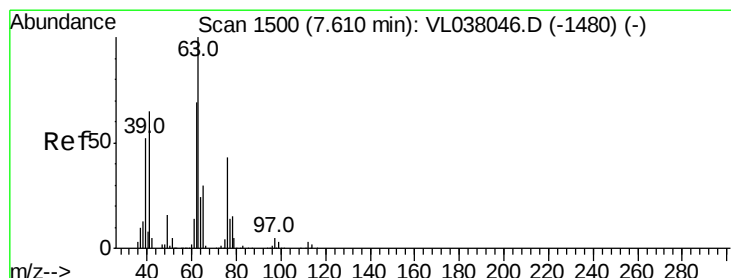
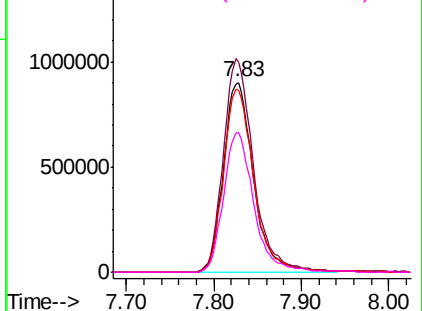
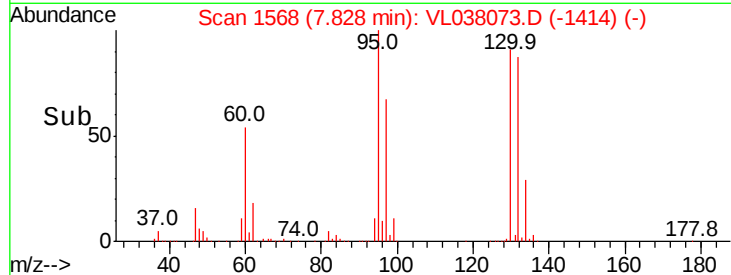


#38
 Trichloroethene
 Concen: 24.978 ppbv
 RT: 7.83
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 19 Nov 2021 3:34

Tot Ion:130 Resp: 2164450
 Ion Ratio Lower Upper
 130 100
 95 110.5 89.4 134.2
 132 95.8 78.2 117.2
 97 73.6 57.0 85.4

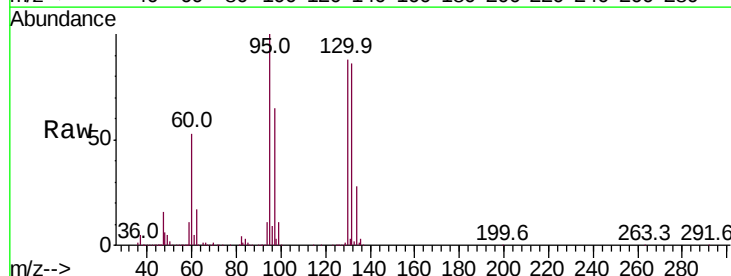


Abundance Ion 130.00 (129.70 to 130.70): V
 Ion 95.00 (94.70 to 95.70): VL0
 Ion 132.00 (131.70 to 132.70): V
 Ion 97.00 (96.70 to 97.70): VL0

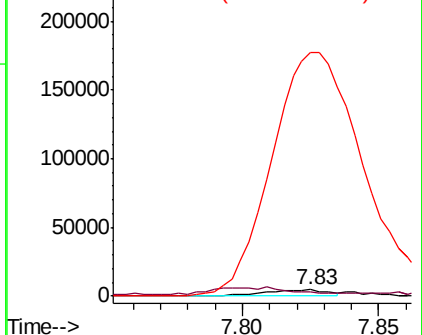
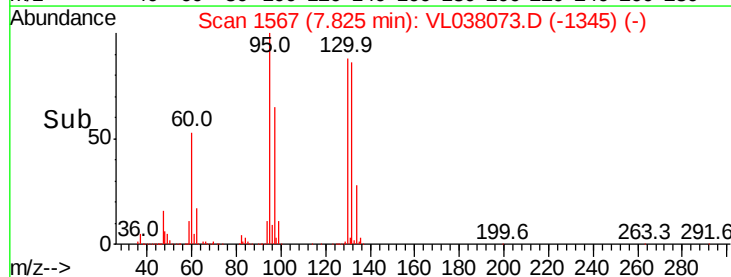


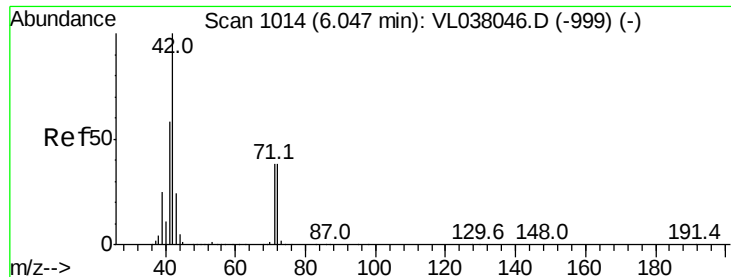
#39
 1,2-Dichloropropane
 Concen: 0.085 ppbv
 RT: 7.83 min Scan# 1567
 Delta R.T. 0.22 min
 Lab File: VL038073.D
 Acq: 19 Nov 2021 3:34

Tgt Ion: 63 Resp: 7532
 Ion Ratio Lower Upper
 63 100
 41 26.8 52.3 78.5#
 62 3899.7 55.1 82.7#



Abundance Ion 63.10 (62.80 to 63.80): VL0
 Ion 41.10 (40.80 to 41.80): VL0
 Ion 62.10 (61.80 to 62.80): VL0





#41

Tetrahydrofuran

Concen: 0.162 ppbv

RT: 6.06 Instrument: MSVOA_1

Delta R.T.

Lab File: ClientSampleId:

Acq: 19 Nov 2021 3:34

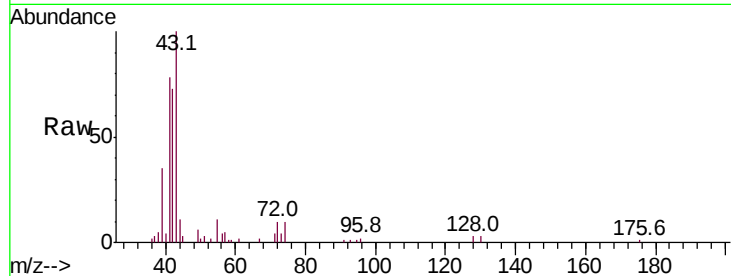
Tot Ion: 42 Resp: 9345

Ion Ratio Lower Upper

42 100

72 0.0 31.7 47.5#

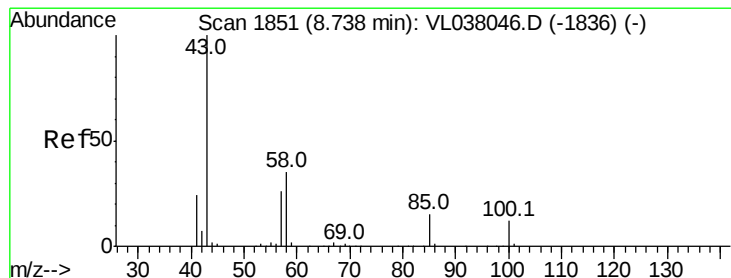
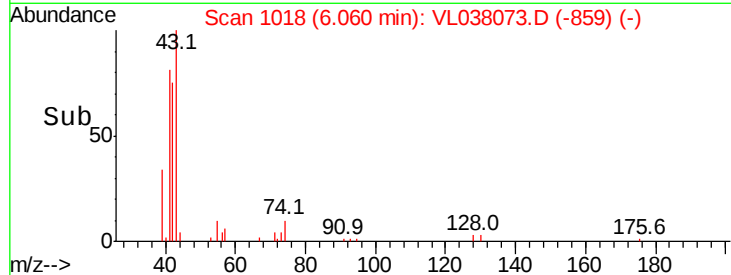
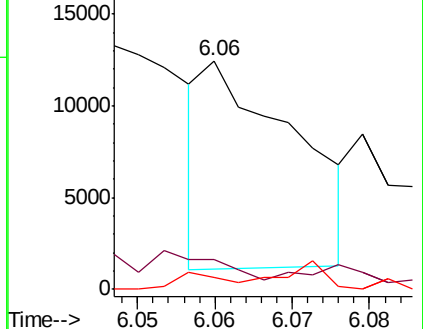
71 0.0 30.6 46.0#



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



#50

4-Methyl-2-Pentanone

Concen: 1.681 ppbv

RT: 8.74 min Scan# 1853

Delta R.T. 0.01 min

Lab File: VL038073.D

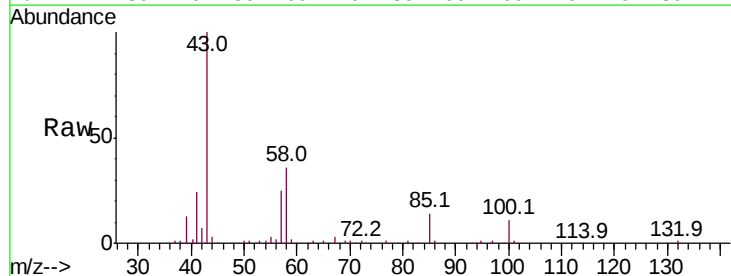
Acq: 19 Nov 2021 3:34

Tgt Ion: 43 Resp: 237099

Ion Ratio Lower Upper

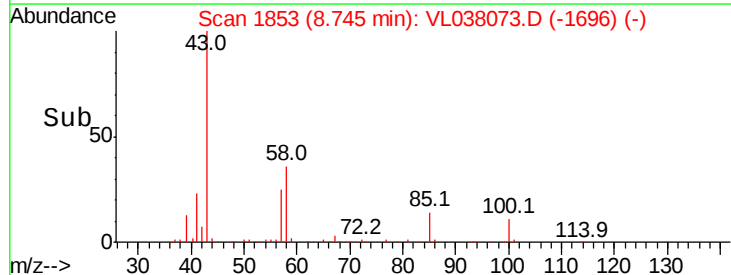
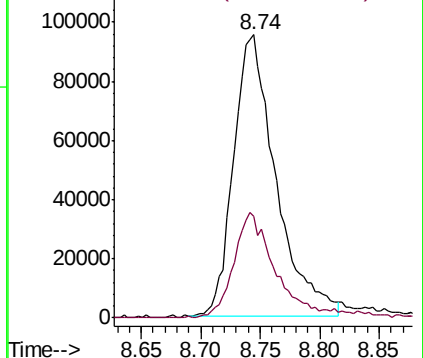
43 100

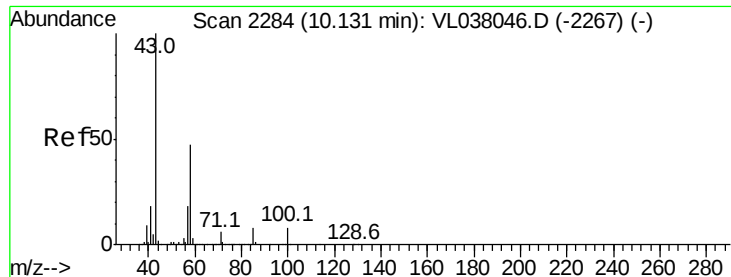
58 37.8 29.4 44.2



Abundance Ion 43.10 (42.80 to 43.80): VL0

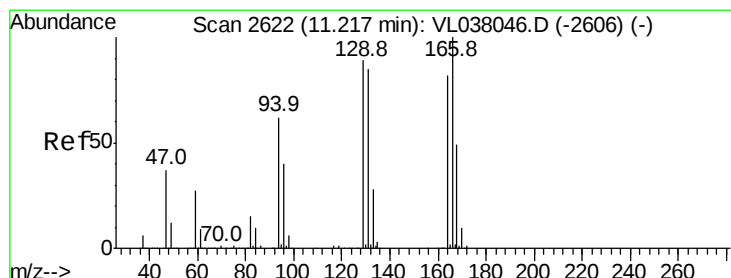
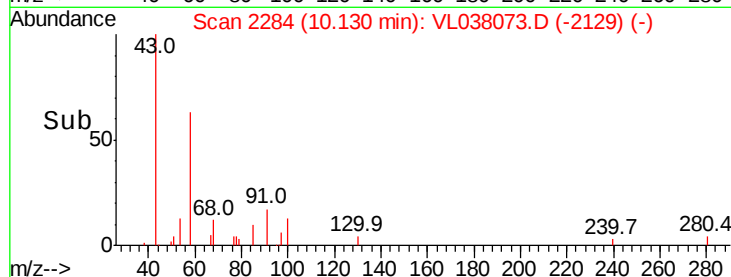
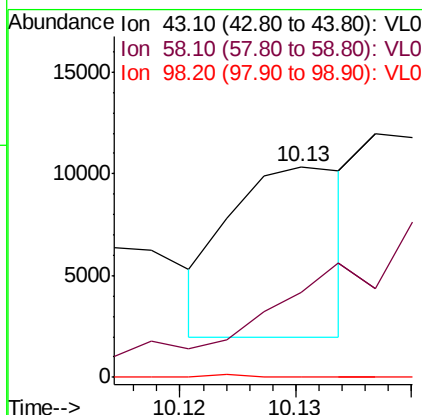
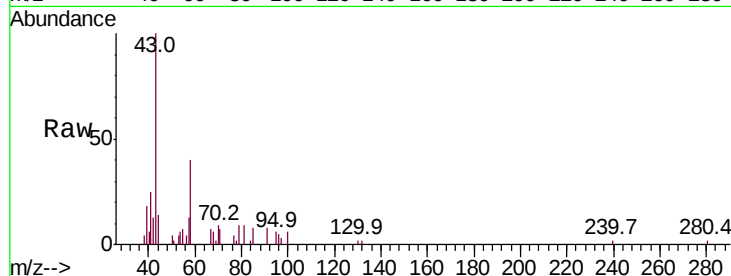
Ion 58.10 (57.80 to 58.80): VL0





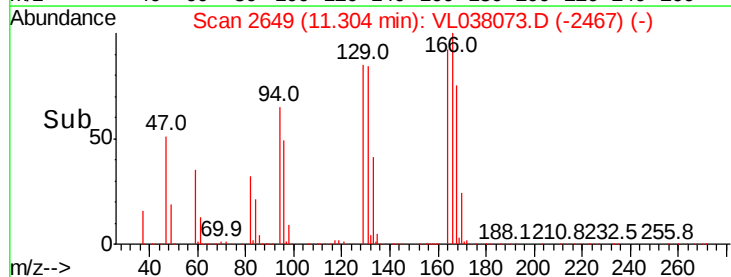
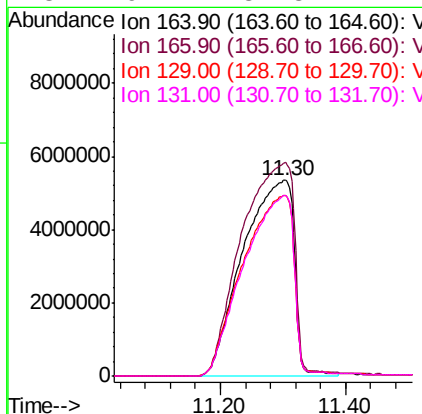
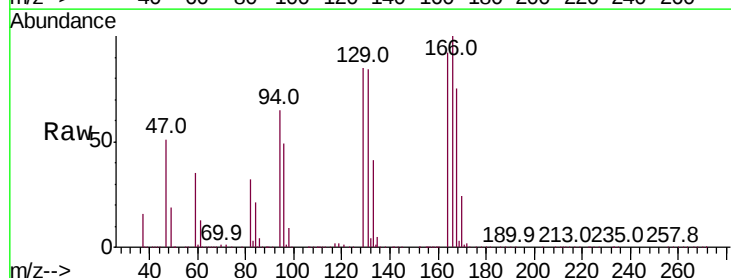
#51
2-Hexanone
Concen: 0.088 ppbv
RT: 10.13 min
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 19 Nov 2021 3:34

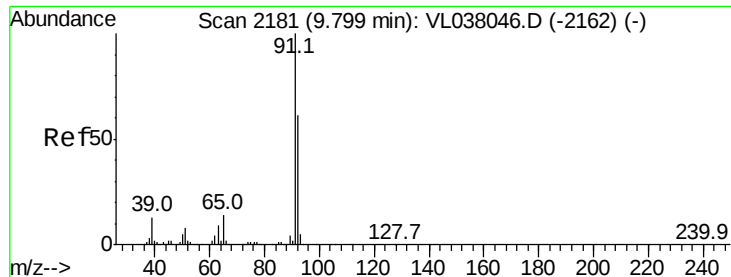
Tot Ion: 43 Resp: 5851
Ion Ratio Lower Upper
43 100
58 0.0 41.1 61.7#
98 0.0 0.1 0.1#



#52
Tetrachloroethene
Concen: 354.758 ppbv
RT: 11.30 min Scan# 2649
Delta R.T. 0.09 min
Lab File: VL038073.D
Acq: 19 Nov 2021 3:34

Tgt Ion: 164 Resp: 30155152
Ion Ratio Lower Upper
164 100
166 109.1 97.2 145.8
129 92.3 86.9 130.3
131 92.1 82.8 124.2





#53

Toluene

Concen: 0.207 ppbv

RT: 9.79 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

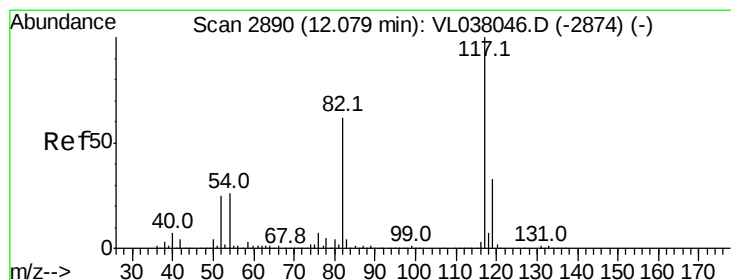
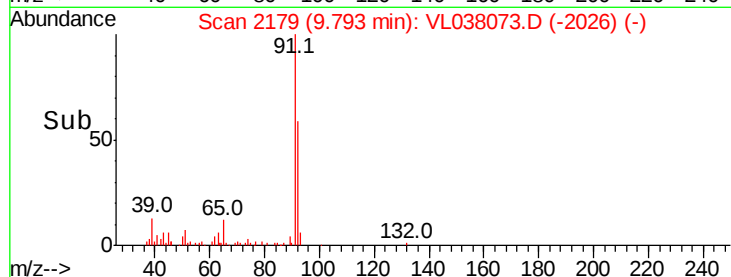
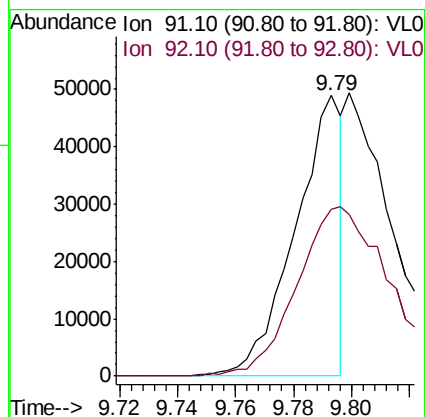
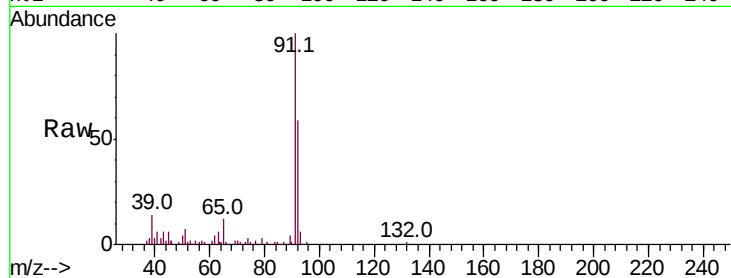
Acq: 19 Nov 2021 3:34

Tot Ion: 91 Resp: 54669

Ion Ratio Lower Upper

91 100

92 0.0 49.7 74.5#



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.08 min Scan# 2891

Delta R.T. 0.00 min

Lab File: VL038073.D

Acq: 19 Nov 2021 3:34

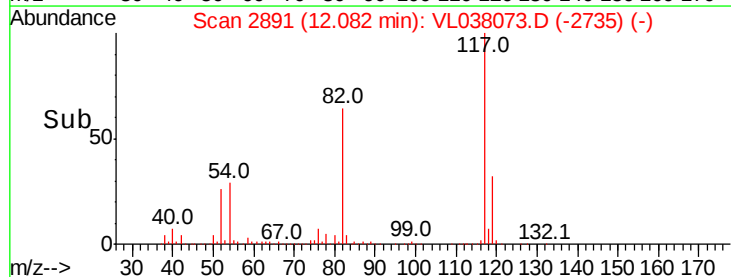
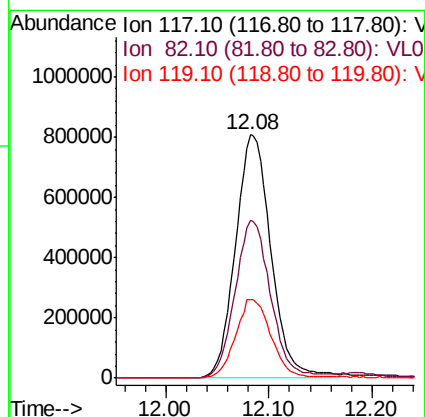
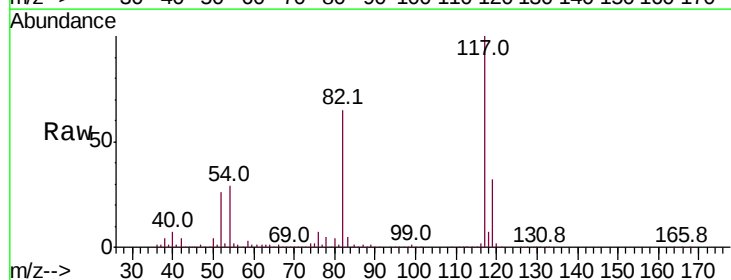
Tgt Ion: 117 Resp: 1945355

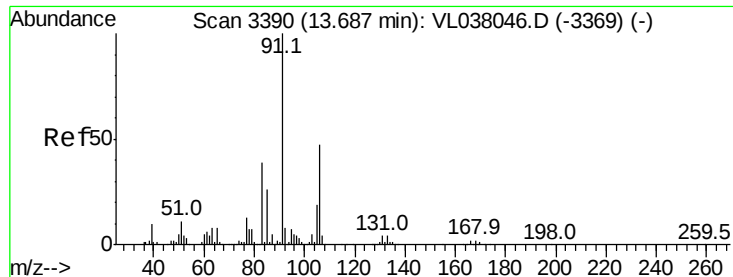
Ion Ratio Lower Upper

117 100

82 65.4 52.8 79.2

119 33.1 26.8 40.2





#60

o-Xylene

Concen: 0.082 ppbv

RT: 13.68

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

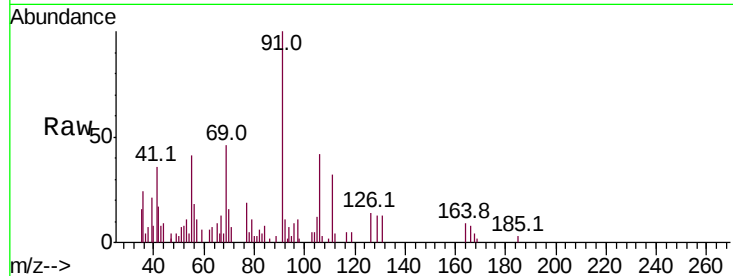
Acq: 19 Nov 2021 3:34

Tot Ion: 91 Resp: 20551

Ion Ratio Lower Upper

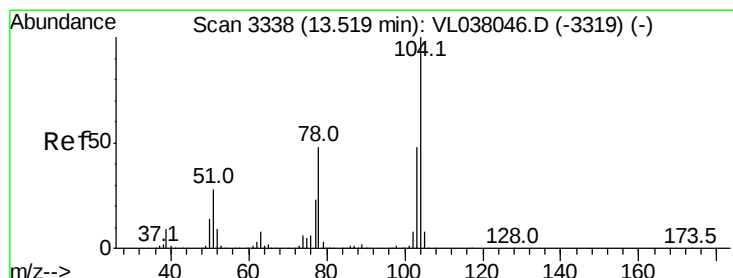
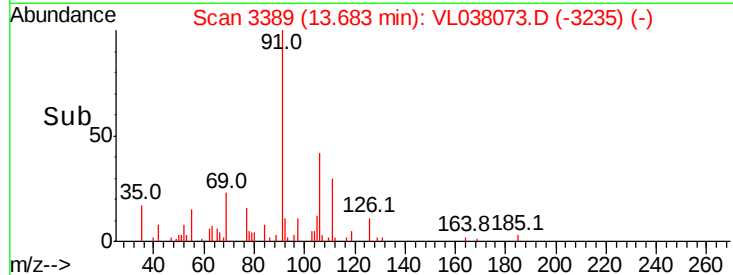
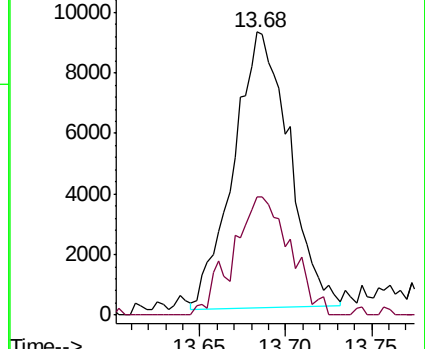
91 100

106 44.9 24.2 72.6



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V



#61

Styrene

Concen: 0.150 ppbv

RT: 13.52 min Scan# 3339

Delta R.T. 0.00 min

Lab File: VL038073.D

Acq: 19 Nov 2021 3:34

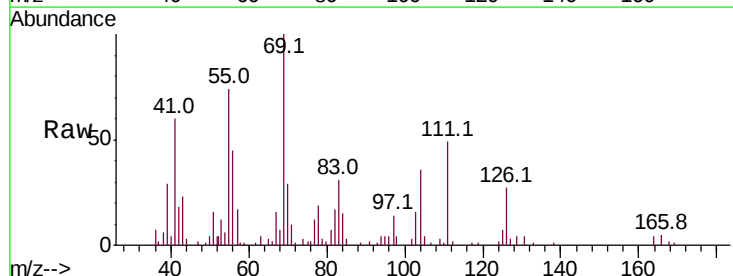
Tgt Ion: 104 Resp: 20201

Ion Ratio Lower Upper

104 100

78 60.5 39.8 59.6#

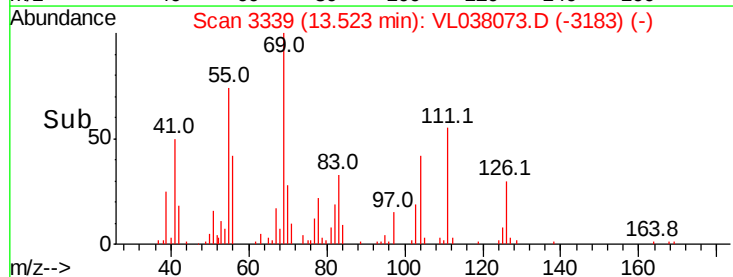
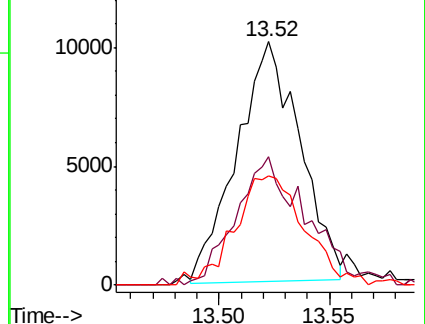
103 51.0 38.2 57.2

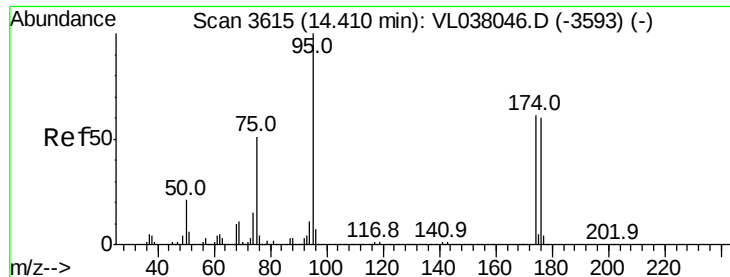


Abundance Ion 104.10 (103.80 to 104.80): V

Ion 78.10 (77.80 to 78.80): VL0

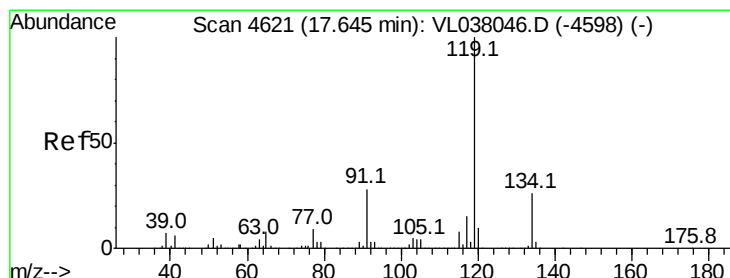
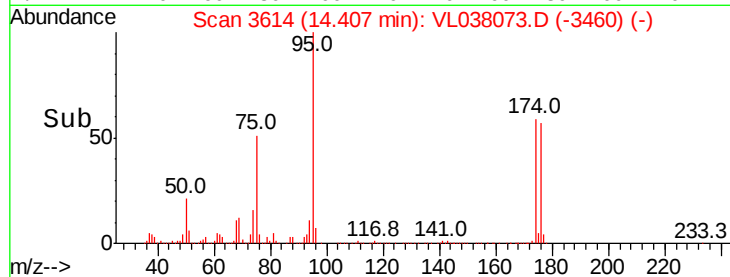
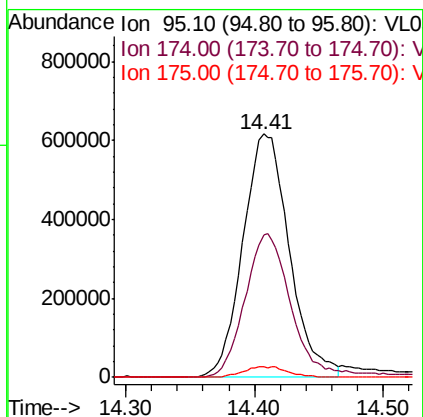
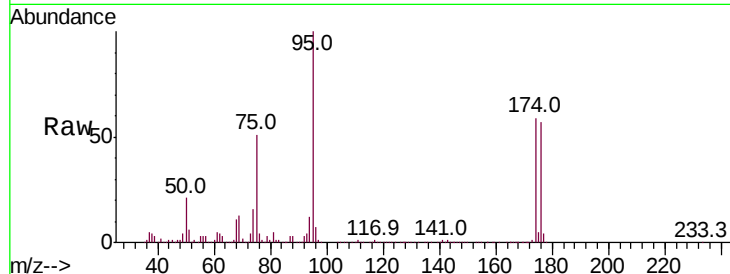
Ion 103.10 (102.80 to 103.80): V





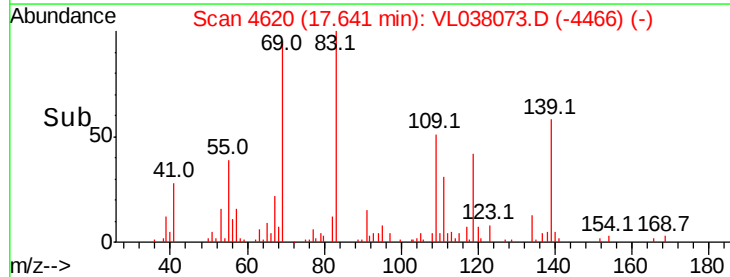
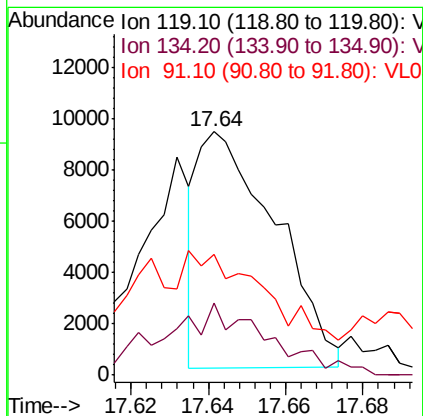
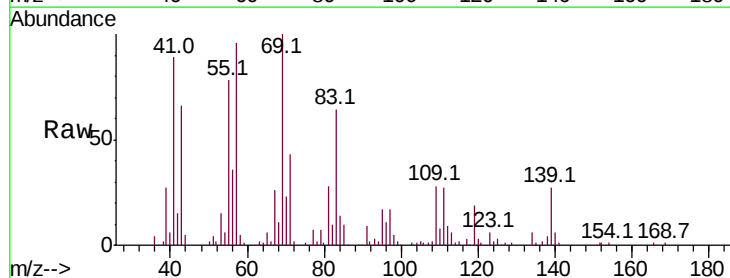
#68
 1-Bromo-4-Fluorobenzene
 Concen: 10.993 ppbv
 RT: 14.41 min
 Delta R.T. MSVOA_1
 Lab File: ClientSampleId :
 SVP-2
 Acq: 19 Nov 2021 3:34

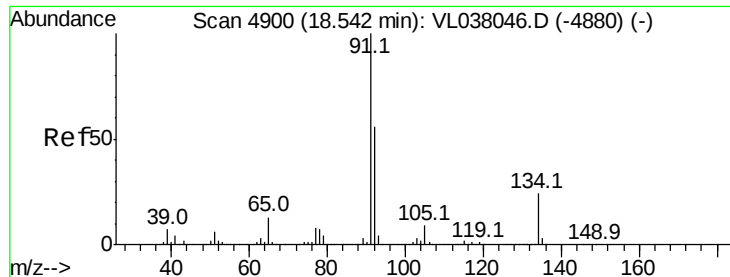
Tot Ion: 95 Resp: 1542498
 Ion Ratio Lower Upper
 95 100
 174 60.9 53.1 79.7
 175 4.4 4.0 6.0



#69
 p-Isopropyltoluene
 Concen: 0.037 ppbv
 RT: 17.64 min Scan# 4620
 Delta R.T. -0.00 min
 Lab File: VL038073.D
 Acq: 19 Nov 2021 3:34

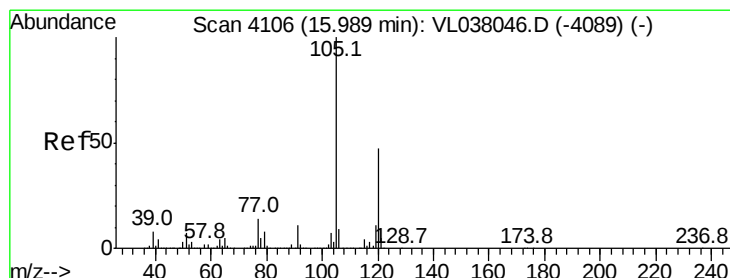
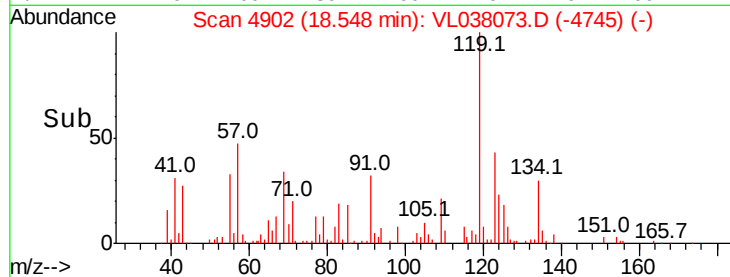
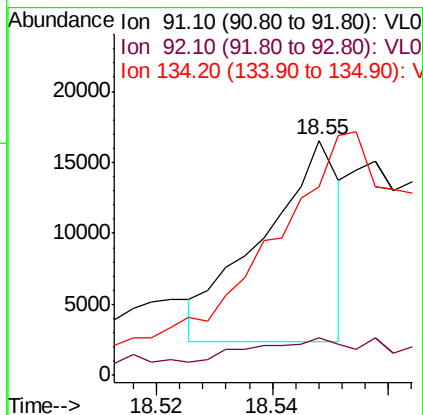
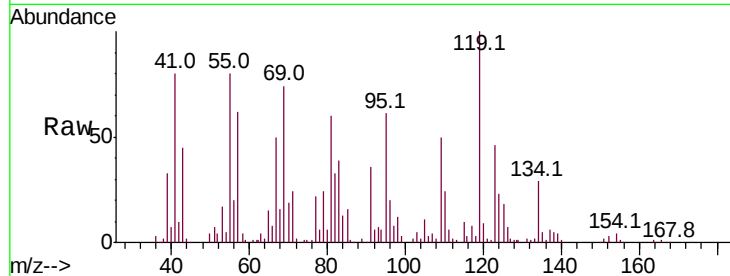
Tgt Ion: 119 Resp: 12737
 Ion Ratio Lower Upper
 119 100
 134 43.4 20.6 30.8#
 91 0.0 22.2 33.4#





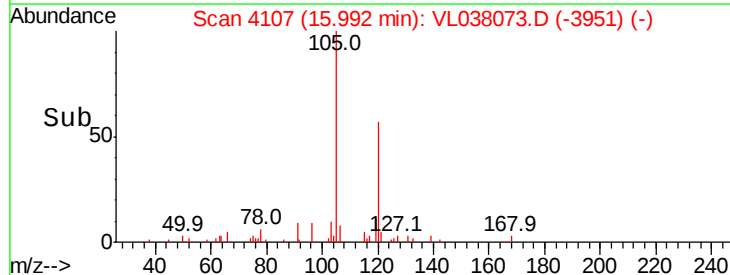
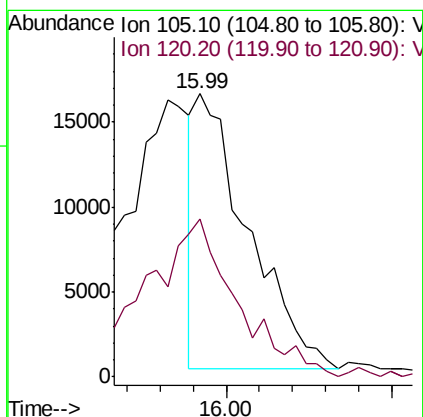
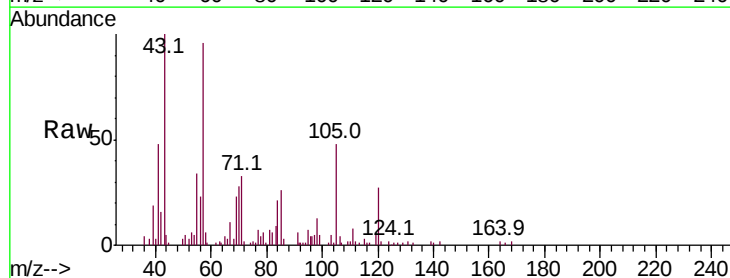
#70
 n-Butylbenzene
 Concen: 0.040 ppbv
 RT: 18.55
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId:
 SVP-2
 Acq: 19 Nov 2021 3:34

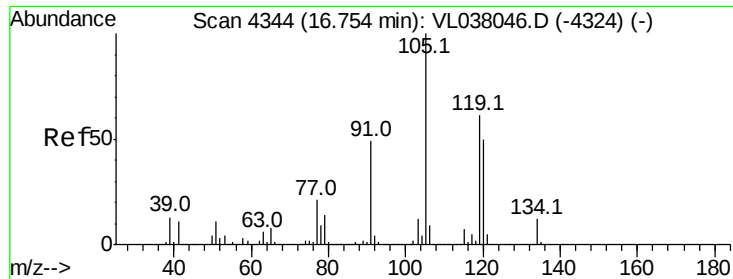
Tot Ion: 91 Resp: 13069
 Ion Ratio Lower Upper
 91 100
 92 63.5 44.1 66.1
 134 0.0 18.9 28.3#



#73
 1,3,5-Trimethylbenzene
 Concen: 0.067 ppbv
 RT: 15.99 min Scan# 4107
 Delta R.T.: 0.00 min
 Lab File: VL038073.D
 Acq: 19 Nov 2021 3:34

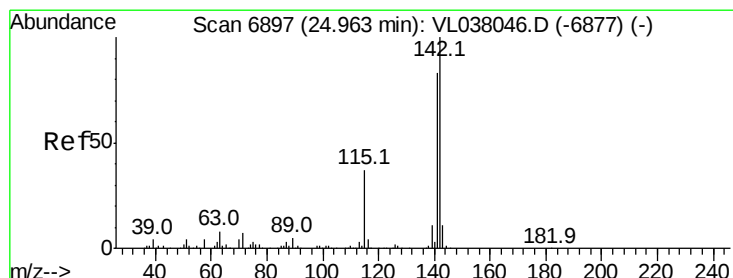
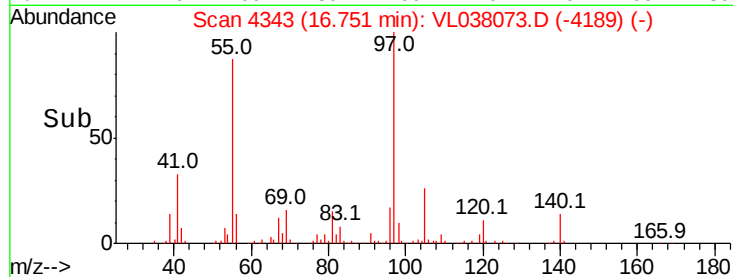
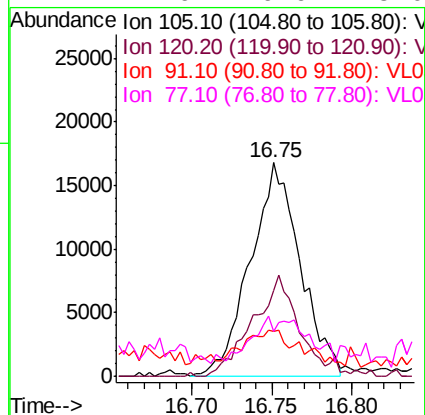
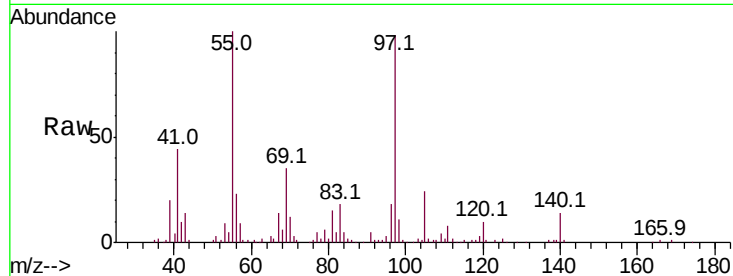
Tgt Ion: 105 Resp: 17831
 Ion Ratio Lower Upper
 105 100
 120 62.4 37.8 56.6#





#74
 1,2,4-Trimethylbenzene
 Concen: 0.132 ppbv
 RT: 16.75 min
 Delta R.T. MSVOA_1
 Lab File: ClientSampleId :
 SVP-2
 Acq: 19 Nov 2021 3:34

Tot Ion:	105	Resp:	36184
Ion Ratio	Lower	Upper	
105	100		
120	43.0	40.1	60.1
91	17.1	39.8	59.8#
77	14.6	16.6	25.0#



#80
 Naphthalene, 2-methyl-
 Concen: 0.058 ppbv
 RT: 25.02 min Scan# 6915
 Delta R.T. 0.06 min
 Lab File: VL038073.D
 Acq: 19 Nov 2021 3:34

Tgt Ion:	142	Resp:	1803
Ion Ratio	Lower	Upper	
142	100		
141	158.7	67.3	100.9#
115	351.1	28.9	43.3#

