

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL032122\
 Data File : VL038671.D
 Acq On : 22 Mar 2022 4:36
 Operator : SY/AP
 Sample : N1964-14
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 C0P84

Quant Time: Mar 22 05:08:49 2022
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL032122AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Mar 21 17:09:26 2022
 QLast Update : Mon Mar 21 17:09:26 2022
 Response via : Initial Calibration

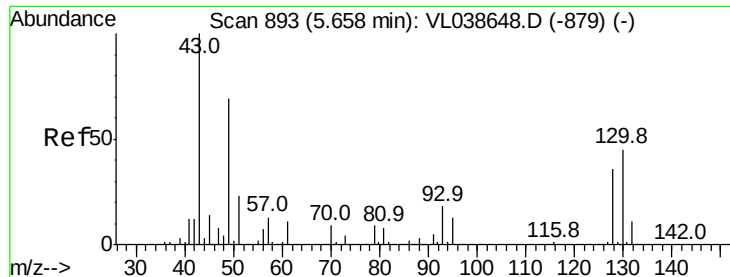
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	832915	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.16	114	2163567	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.07	117	1892419	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.40	95	1380191	9.51	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	95.10%

Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.05	85	29079	0.26	ppbv	92
3) Chlorodifluoromethane	2.99	51	52299	0.59	ppbv #	83
4) Chloromethane	3.14	50	19516	0.40	ppbv	91
9) Propene	3.02	41	31358	0.74	ppbv	86
11) Trichlorofluoromethane	3.94	101	23163	0.23	ppbv	96
12) 1,1,2-Trichlorotrifluoroet	4.48	101	1540	0.02	ppbv #	28
13) Ethanol	3.60	45	51040	10.89	ppbv	92
15) Acetone	3.84	43	152118	2.12	ppbv	94
16) 1,3-Butadiene	3.31	39	8936	0.22	ppbv #	36
17) tert-Butyl alcohol	4.29	59	1922	0.03	ppbv #	79
19) Isopropyl Alcohol	3.98	45	3247	0.08	ppbv #	91
20) Methylene Chloride	4.34	84	248423	8.21	ppbv	99
22) trans-1,2-Dichloroethene	4.87	96	971	0.03	ppbv	92
23) Vinyl Acetate	5.05	43	2451	0.04	ppbv #	68
25) Ethyl Acetate	5.68	43	84215	0.47	ppbv #	77
26) Hexane	5.68	57	107206	1.32	ppbv #	40
29) Chloroform	5.74	83	4666	0.04	ppbv #	80
31) cis-1,2-Dichloroethene	5.54	61	106350	1.40	ppbv	92
34) 2-Butanone	5.24	43	35465	0.41	ppbv #	53
35) Carbon Tetrachloride	7.01	117	4244	0.03	ppbv	91
36) Benzene	6.88	78	8420	0.05	ppbv #	74
39) 1,2-Dichloropropane	7.16	63	503860	7.72	ppbv #	29
41) Tetrahydrofuran	6.05	42	68638	1.08	ppbv	98
44) 2,2,4-Trimethylpentane	7.86	57	6240	0.02	ppbv #	24
52) Tetrachloroethene	11.21	164	3767	0.06	ppbv #	76
53) Toluene	9.79	91	502951	2.80	ppbv	99
74) 1,2,4-Trimethylbenzene	16.74	105	5566	0.03	ppbv #	92

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



#1

Bromochloromethane

Concen: 10.00 ppbv

RT: 5.66 Instrument: MSVOA_1

Delta R.T. 0.00 min

Lab File: ClientSampleId :

Acq: 22 Mar 2022 4:30

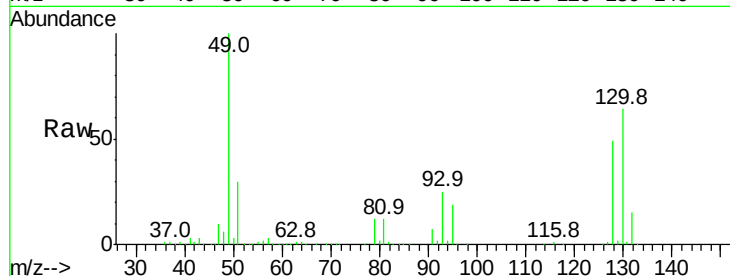
Tgt Ion: 49 Resp: 832915

Ion Ratio Lower Upper

49 100

128 53.5 26.2 78.6

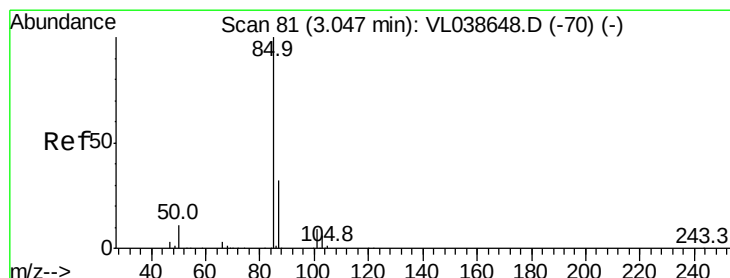
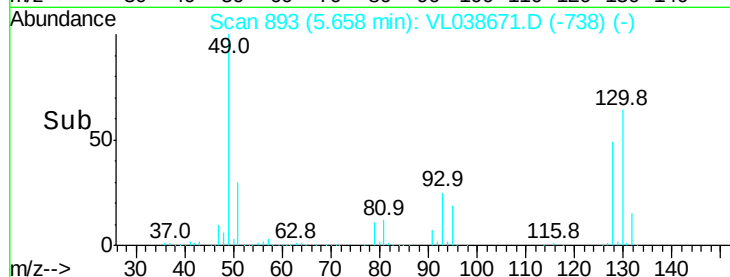
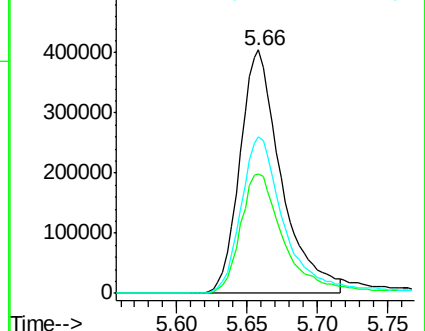
130 69.8 33.7 101.1



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: 0.26 ppbv

RT: 3.05 min Scan# 82

Delta R.T. 0.00 min

Lab File: VL038671.D

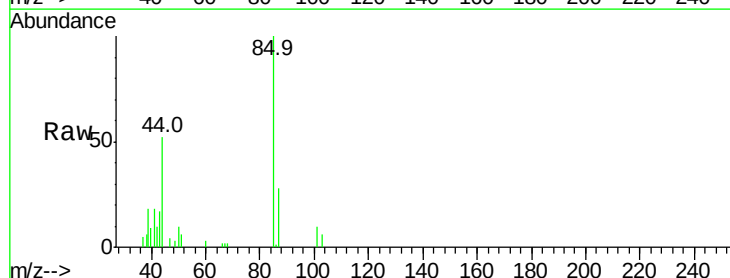
Acq: 22 Mar 2022 4:36

Tgt Ion: 85 Resp: 29079

Ion Ratio Lower Upper

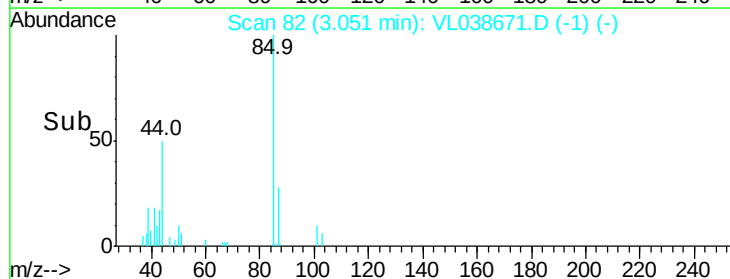
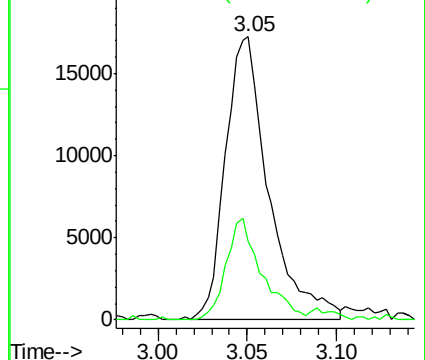
85 100

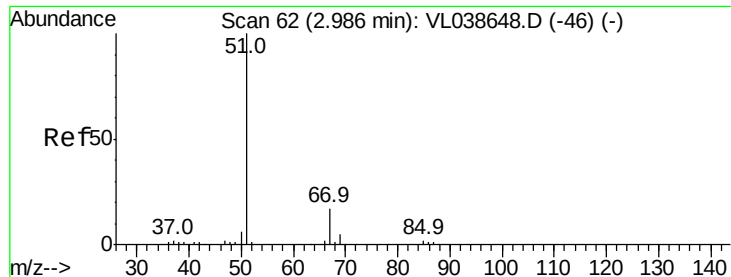
87 27.8 26.0 39.0



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.59 ppbv

RT: 2.99 Instrument: MSVOA_1

Delta R.T. -0.00 min

Lab File: ClientSampleId: COP84

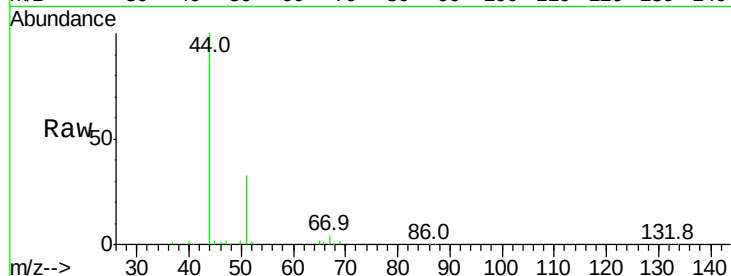
Acq: 22 Mar 2022 4:30

Tgt Ion: 51 Resp: 52299

Ion Ratio Lower Upper

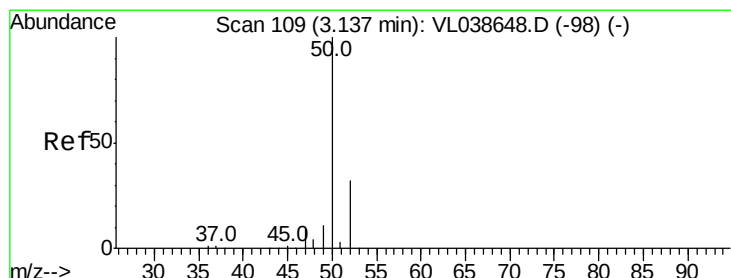
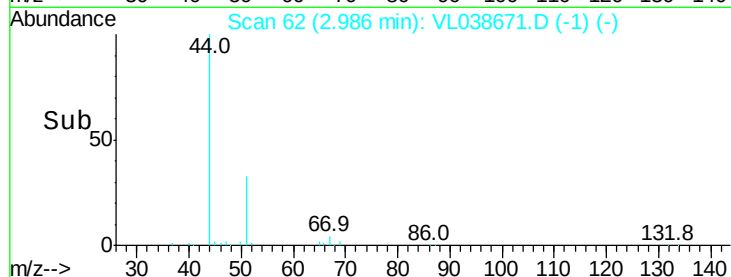
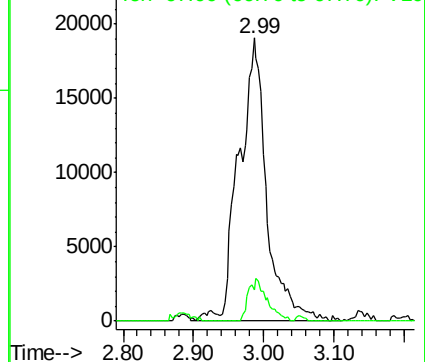
51 100

67 10.0 14.1 21.1#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.40 ppbv

RT: 3.14 min Scan# 109

Delta R.T. -0.00 min

Lab File: VL038671.D

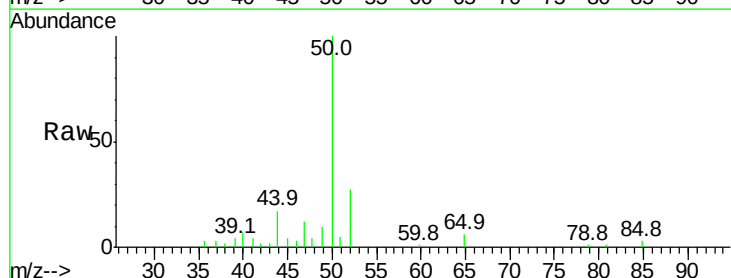
Acq: 22 Mar 2022 4:36

Tgt Ion: 50 Resp: 19516

Ion Ratio Lower Upper

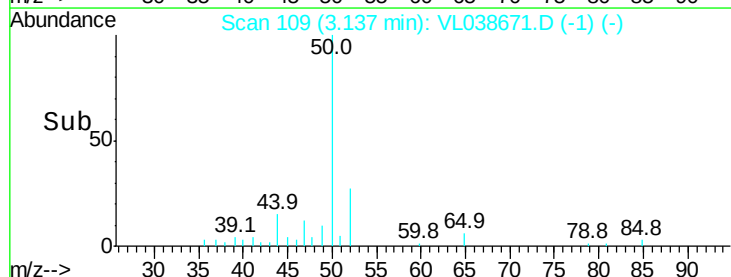
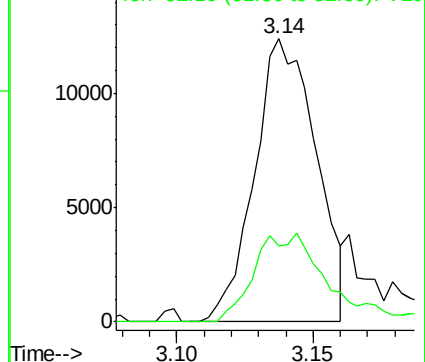
50 100

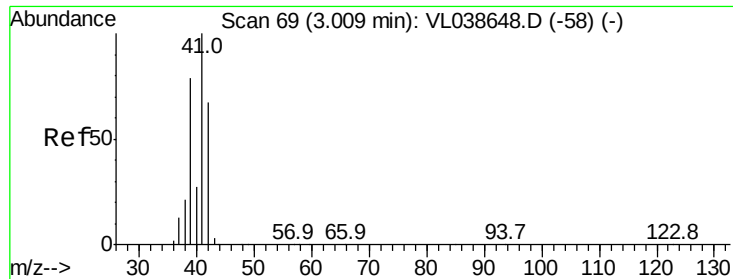
52 26.8 25.5 38.3



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 0.74 ppbv

RT: 3.02 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: COP84

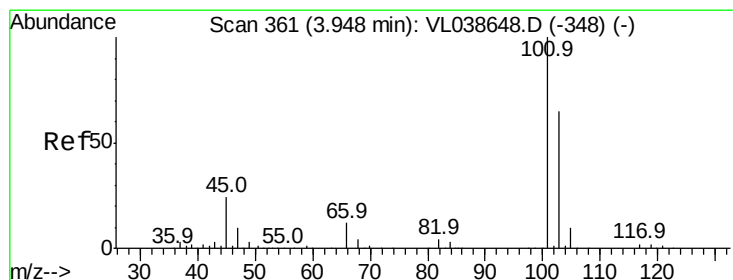
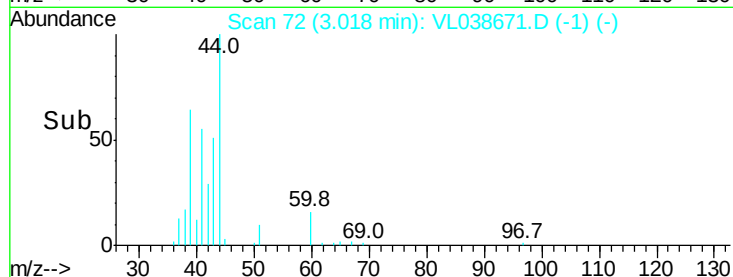
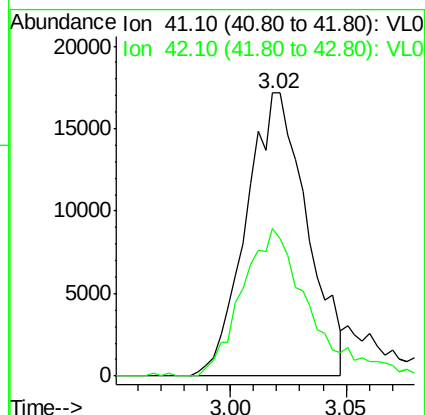
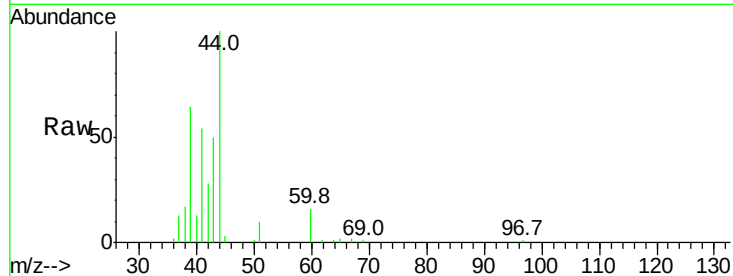
Acq: 22 Mar 2022 4:30

Tgt Ion: 41 Resp: 31358

Ion Ratio Lower Upper

41 100

42 59.1 56.2 84.4



#11

Trichlorofluoromethane

Concen: 0.23 ppbv

RT: 3.94 min Scan# 360

Delta R.T. -0.00 min

Lab File: VL038671.D

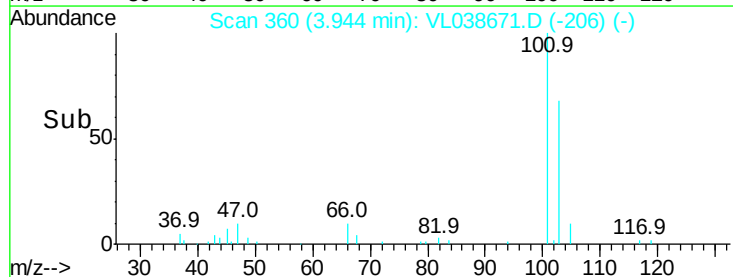
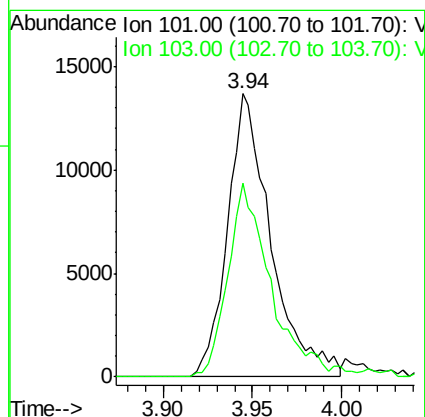
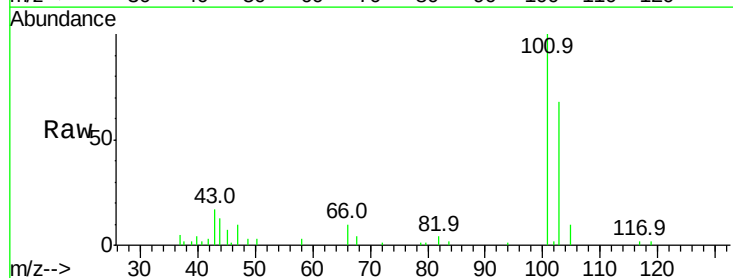
Acq: 22 Mar 2022 4:36

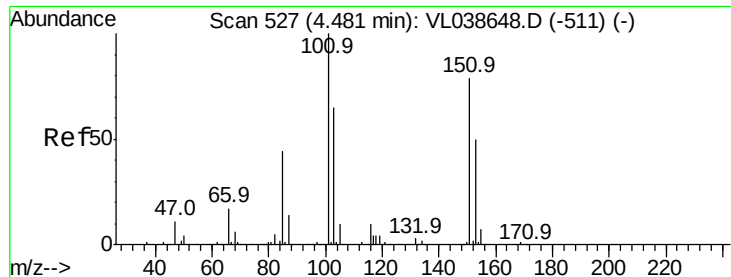
Tgt Ion: 101 Resp: 23163

Ion Ratio Lower Upper

101 100

103 68.3 51.9 77.9





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.02 ppbv

RT: 4.48 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

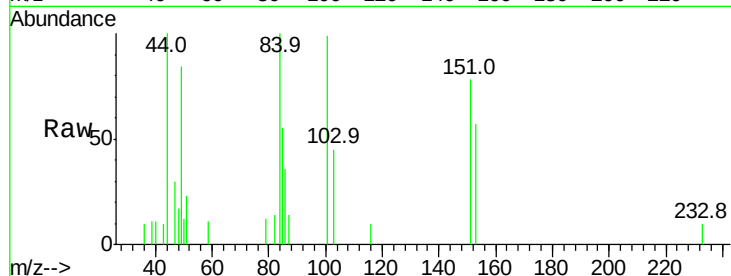
Acq: 22 Mar 2022 4:30

Tgt Ion: 101 Resp: 1540

Ion Ratio Lower Upper

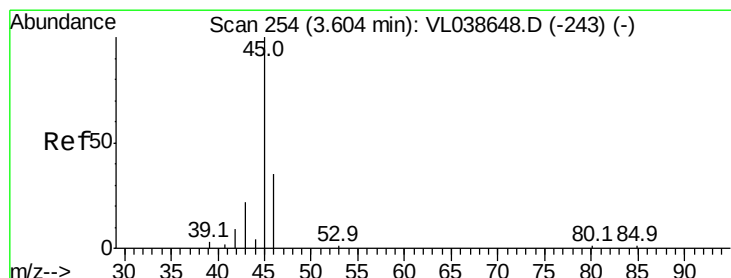
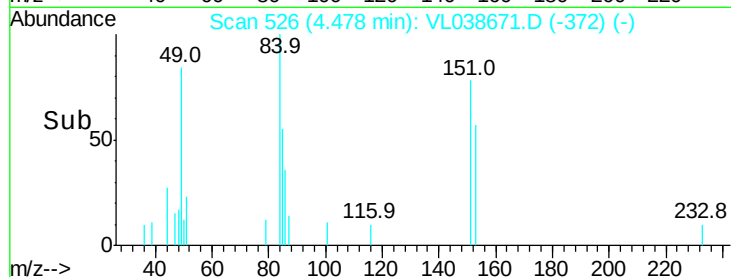
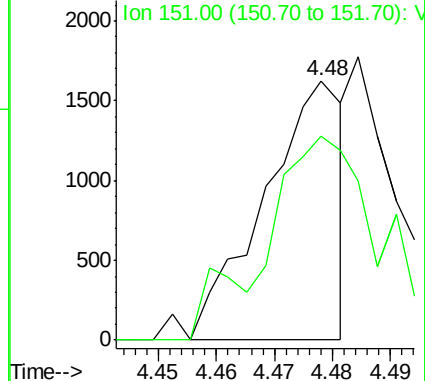
101 100

151 141.7 62.9 94.3#



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V



#13

Ethanol

Concen: 10.89 ppbv

RT: 3.60 min Scan# 253

Delta R.T. -0.00 min

Lab File: VL038671.D

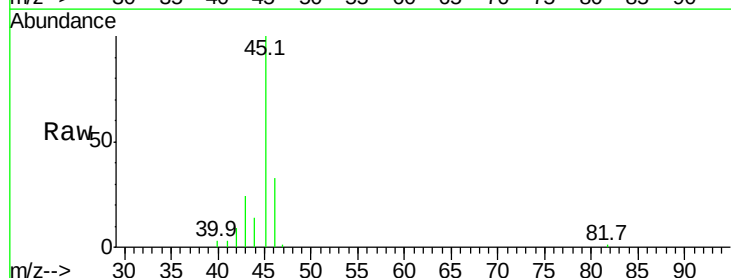
Acq: 22 Mar 2022 4:36

Tgt Ion: 45 Resp: 51040

Ion Ratio Lower Upper

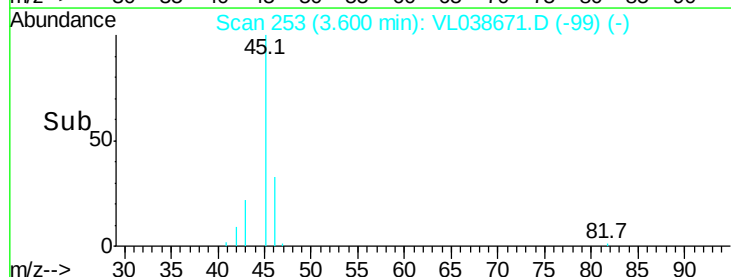
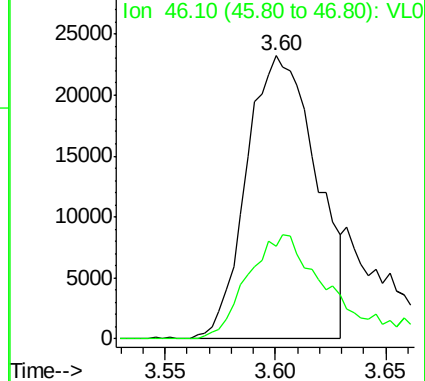
45 100

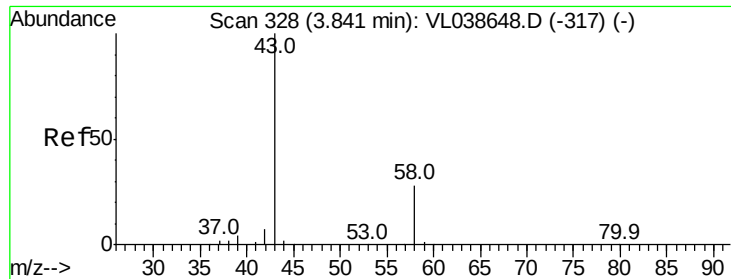
46 42.6 15.1 60.5



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0





#15

Acetone

Concen: 2.12 ppbv

RT: 3.84 Instrument: MSVOA_1

Delta R.T. -0.01 min

Lab File: ClientSampleId: COP84

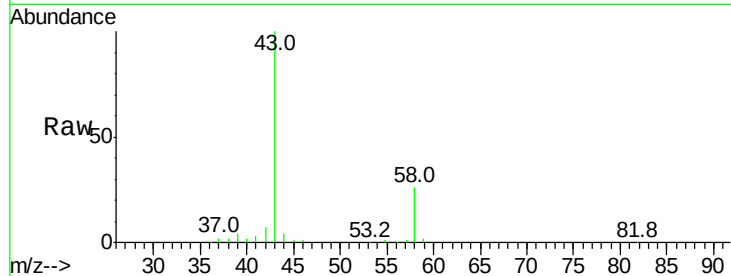
Acq: 22 Mar 2022 4:30

Tgt Ion: 43 Resp: 152118

Ion Ratio Lower Upper

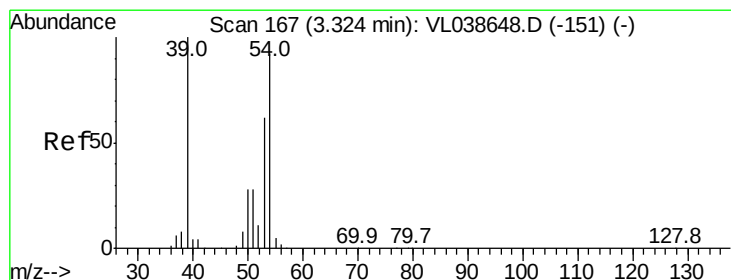
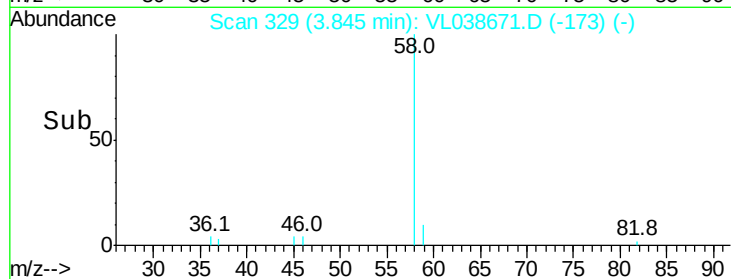
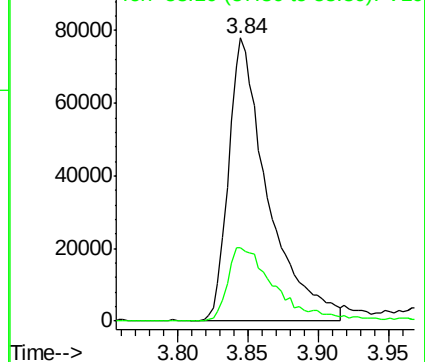
43 100

58 32.3 23.3 34.9



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#16

1,3-Butadiene

Concen: 0.22 ppbv

RT: 3.31 min Scan# 163

Delta R.T. -0.01 min

Lab File: VL038671.D

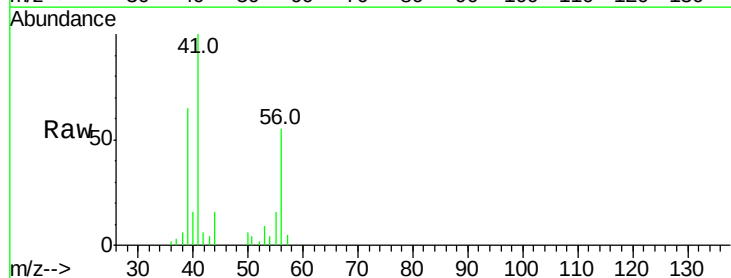
Acq: 22 Mar 2022 4:36

Tgt Ion: 39 Resp: 8936

Ion Ratio Lower Upper

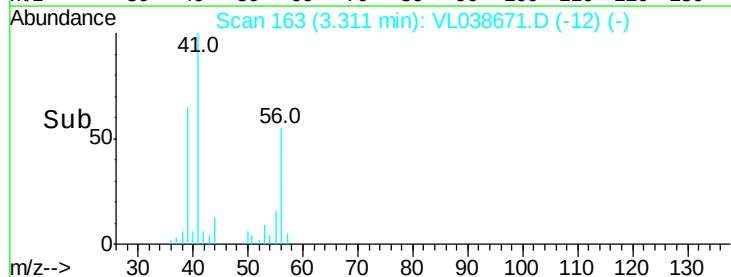
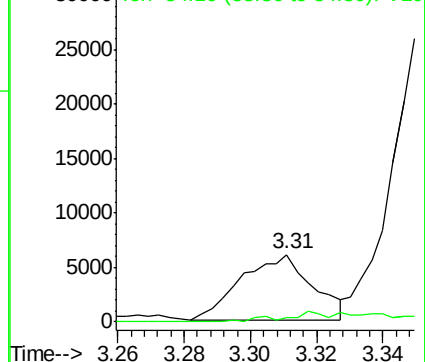
39 100

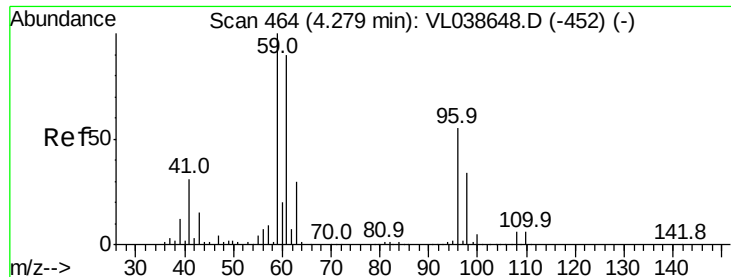
54 27.8 69.1 103.7#



Abundance Ion 39.10 (38.80 to 39.80): VL0

Ion 54.10 (53.80 to 54.80): VL0





#17

tert-Butyl alcohol

Concen: 0.03 ppbv

RT: 4.29 Instrument: MSVOA_1

Delta R.T. 0.02 min

Lab File: ClientSampleId: C0P84

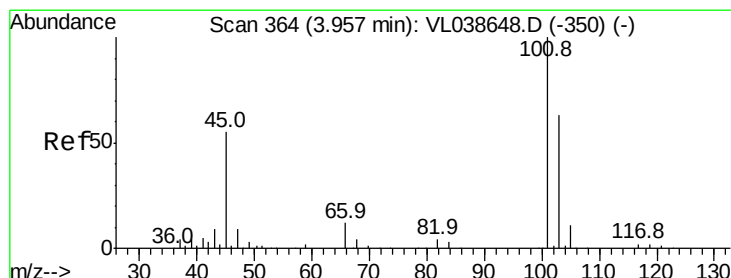
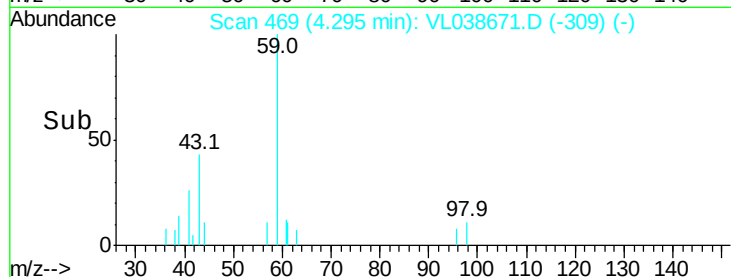
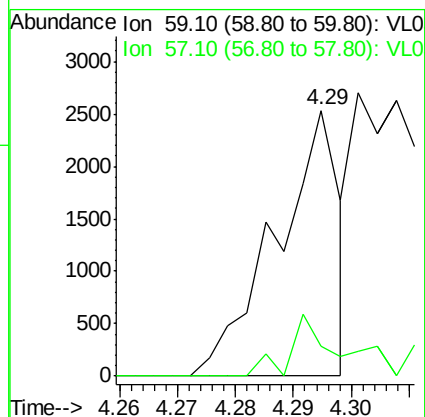
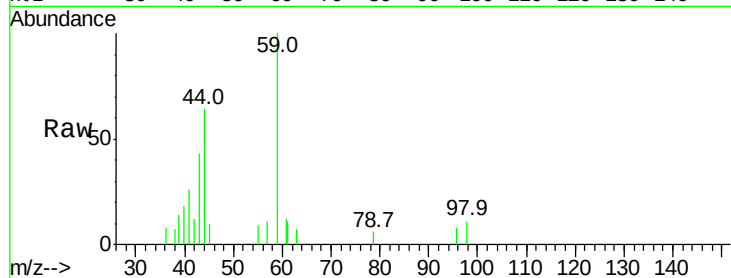
Acq: 22 Mar 2022 4:30

Tgt Ion: 59 Resp: 1922

Ion Ratio Lower Upper

59 100

57 18.0 8.2 12.2#



#19

Isopropyl Alcohol

Concen: 0.08 ppbv

RT: 3.98 min Scan# 371

Delta R.T. 0.02 min

Lab File: VL038671.D

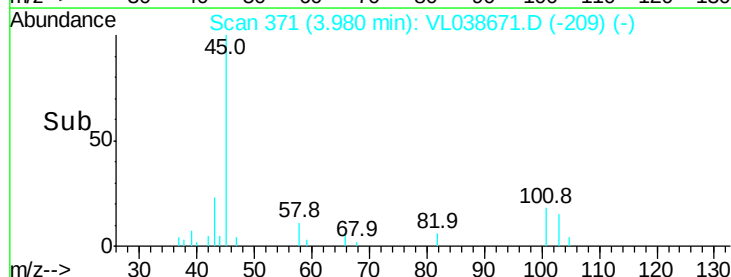
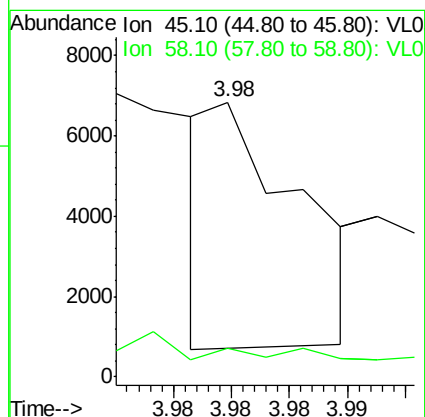
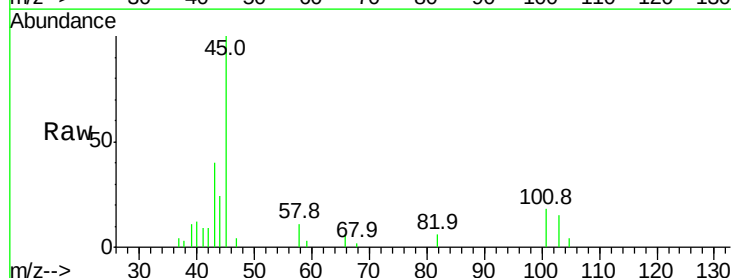
Acq: 22 Mar 2022 4:36

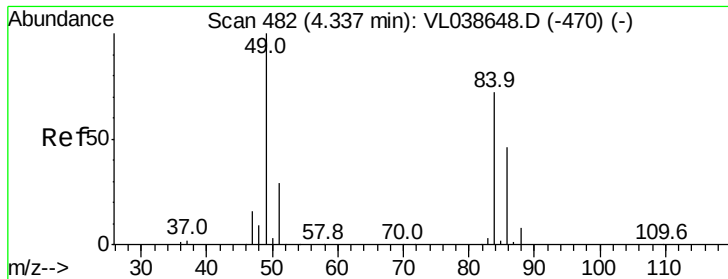
Tgt Ion: 45 Resp: 3247

Ion Ratio Lower Upper

45 100

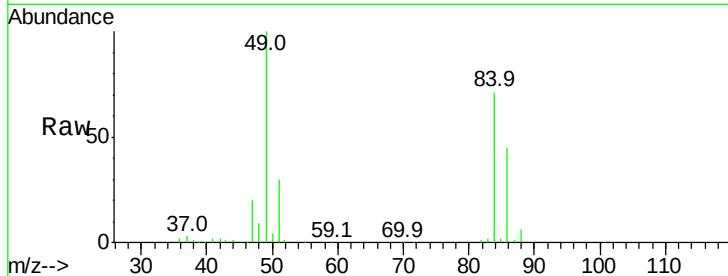
58 0.0 2.3 3.5#



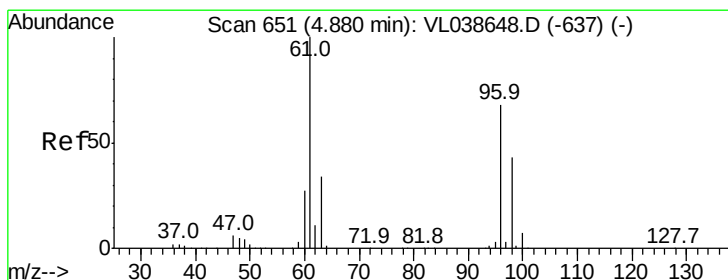
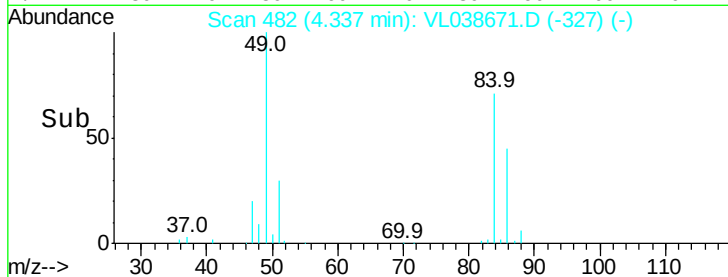
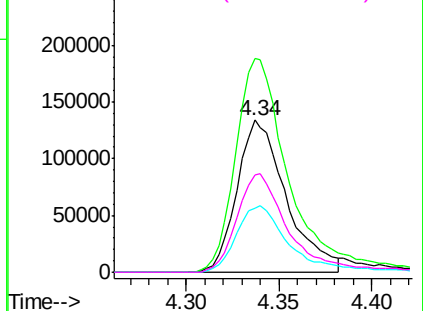


#20
Methylene Chloride
Concen: 8.21 ppbv
RT: 4.34
Delta R.T. MSVOA_1
Lab File: ClientSampleId :
Acq: 22 Mar 2022 4:30

Tgt Ion:	84	Resp:	248423
Ion	Ratio	Lower	Upper
84	100		
49	140.4	111.2	166.8
51	42.2	32.8	49.2
86	63.8	51.4	77.0

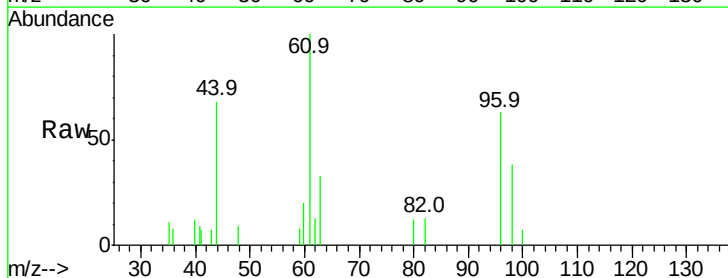


Abundance Ion 84.00 (83.70 to 84.70): VL0
Ion 49.10 (48.80 to 49.80): VL0
Ion 51.10 (50.80 to 51.80): VL0
Ion 86.00 (85.70 to 86.70): VL0

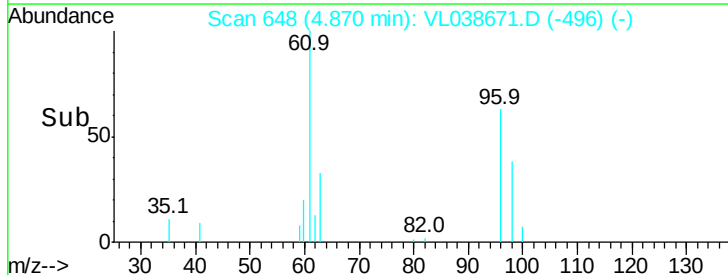
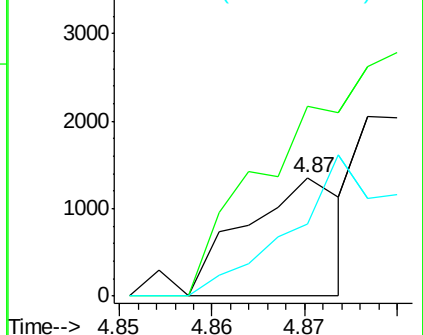


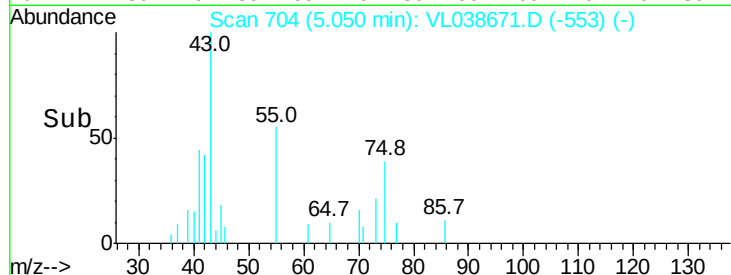
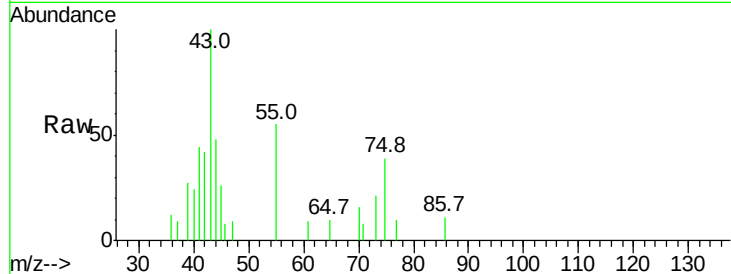
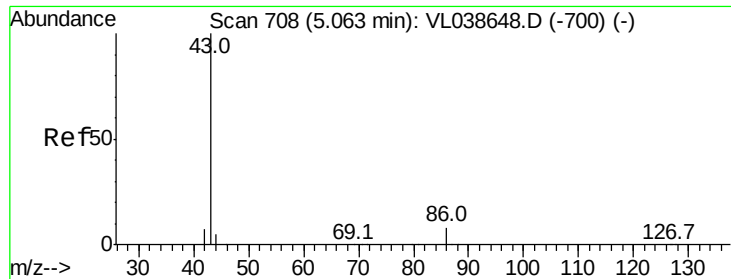
#22
trans-1,2-Dichloroethene
Concen: 0.03 ppbv
RT: 4.87 min Scan# 648
Delta R.T. -0.01 min
Lab File: VL038671.D
Acq: 22 Mar 2022 4:36

Tgt Ion:	96	Resp:	971
Ion	Ratio	Lower	Upper
96	100		
61	159.9	118.3	177.5
98	61.1	51.3	76.9



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





#23

Vinyl Acetate

Concen: 0.04 ppbv

RT: 5.05 Instrument: MSVOA_1

Delta R.T.

Lab File: ClientSampleId:

Acq: 22 Mar 2022 4:30

Tgt Ion: 43 Resp: 2451

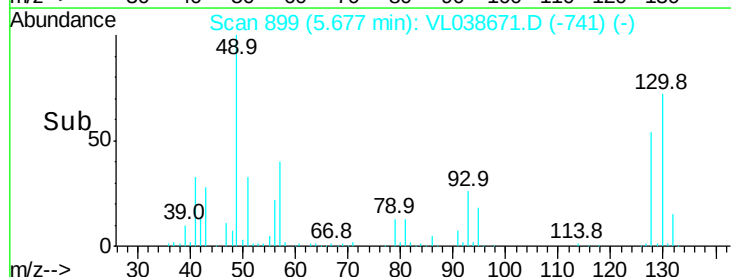
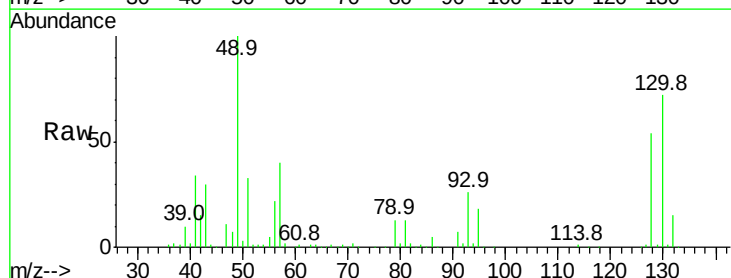
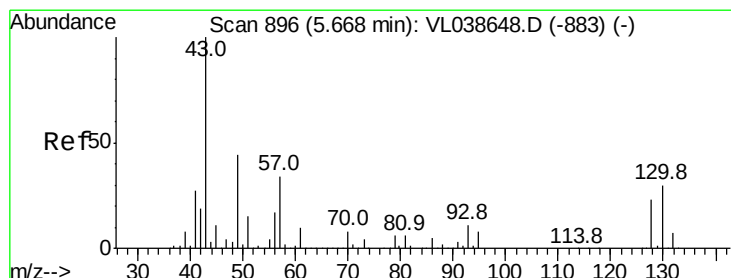
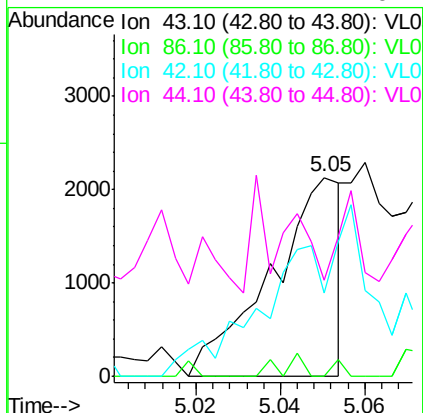
Ion Ratio Lower Upper

43 100

86 0.0 5.6 8.4#

42 28.6 6.8 10.2#

44 2.1 4.2 6.2#



#25

Ethyl Acetate

Concen: 0.47 ppbv

RT: 5.68 min Scan# 899

Delta R.T. 0.01 min

Lab File: VL038671.D

Acq: 22 Mar 2022 4:36

Tgt Ion: 43 Resp: 84215

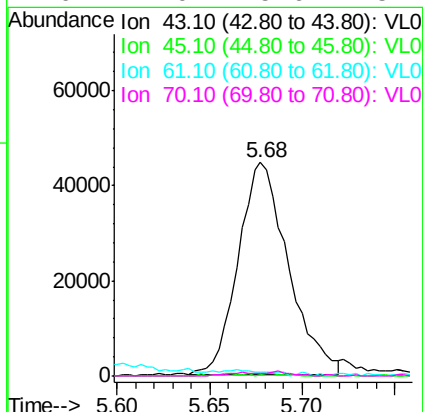
Ion Ratio Lower Upper

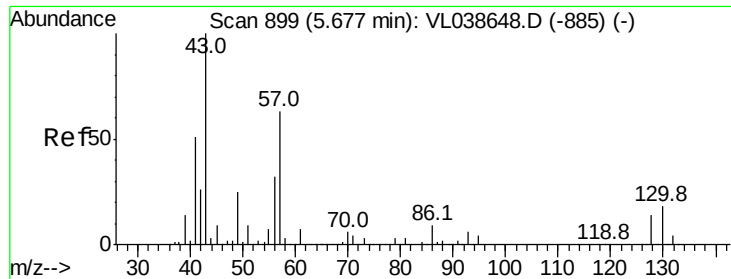
43 100

45 1.4 8.2 12.4#

61 0.0 8.3 12.5#

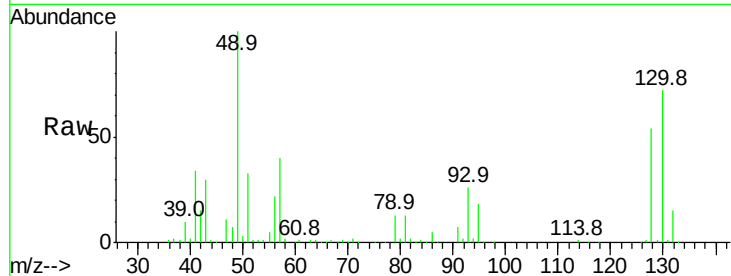
70 2.0 5.6 8.4#



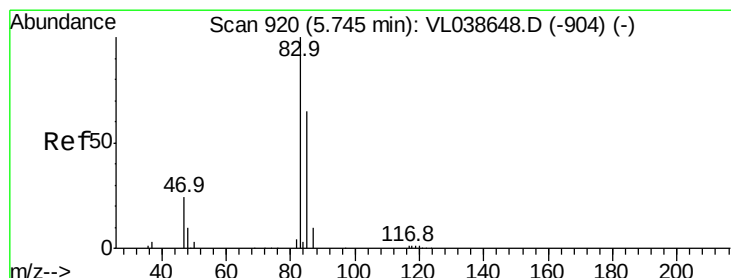
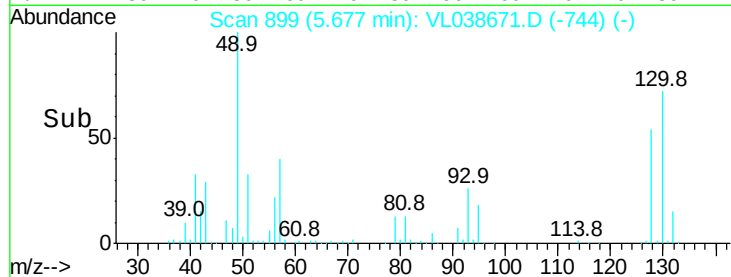
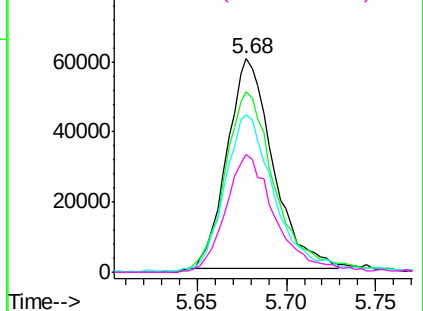


#26
Hexane
Concen: 1.32 ppbv
RT: 5.68
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 22 Mar 2022 4:30

Tgt Ion:	57	Resp:	107206
Ion	Ratio	Lower	Upper
57	100		
41	96.0	67.0	100.4
43	84.6	184.2	276.2#
56	61.5	42.6	64.0

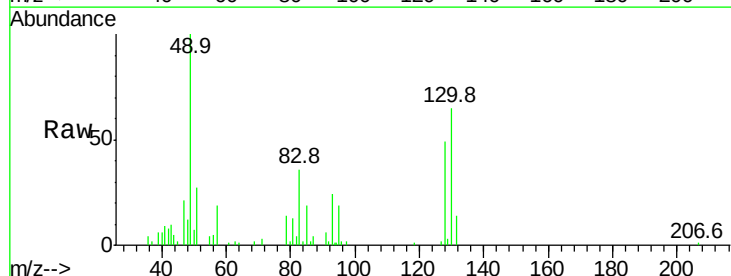


Abundance Ion 57.10 (56.80 to 57.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 43.10 (42.80 to 43.80): VL0
Ion 56.10 (55.80 to 56.80): VL0

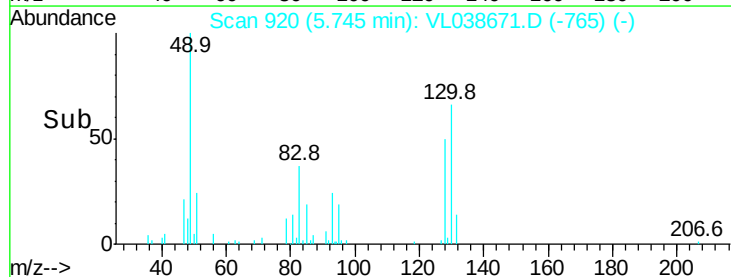
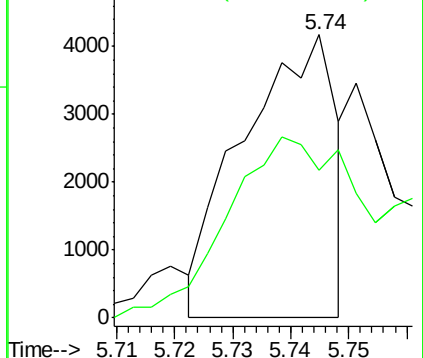


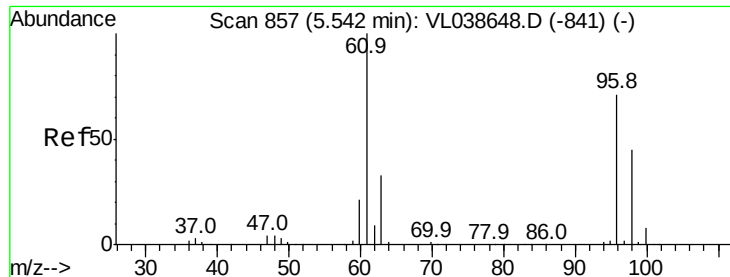
#29
Chloroform
Concen: 0.04 ppbv
RT: 5.74 min Scan# 920
Delta R.T. -0.00 min
Lab File: VL038671.D
Acq: 22 Mar 2022 4:36

Tgt Ion:	83	Resp:	4666
Ion	Ratio	Lower	Upper
83	100		
85	48.7	51.7	77.5#



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: 1.40 ppbv

RT: 5.54 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 22 Mar 2022 4:30

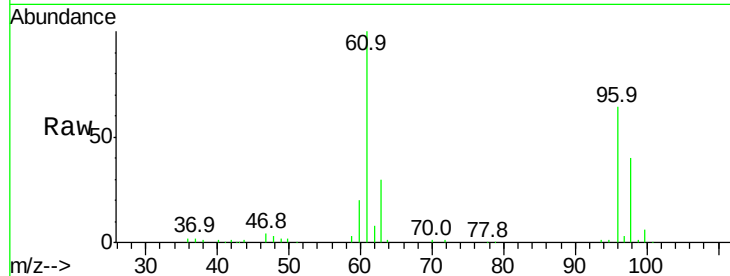
Tgt Ion: 61 Resp: 106350

Ion Ratio Lower Upper

61 100

96 63.9 56.6 84.8

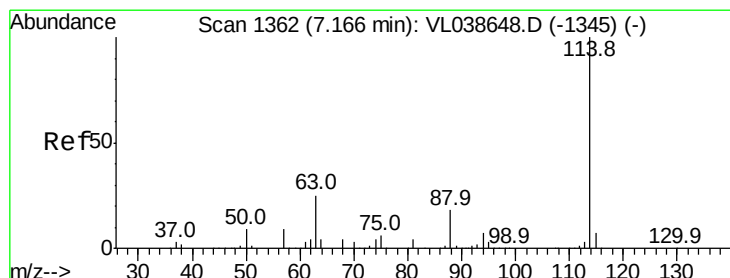
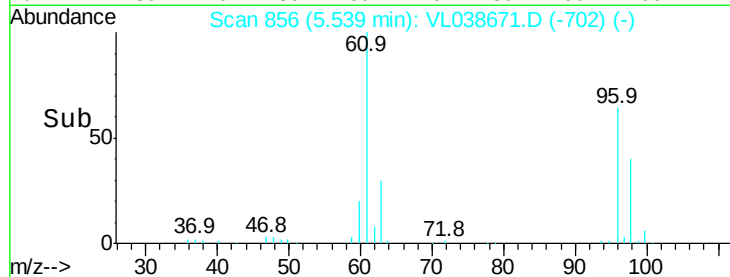
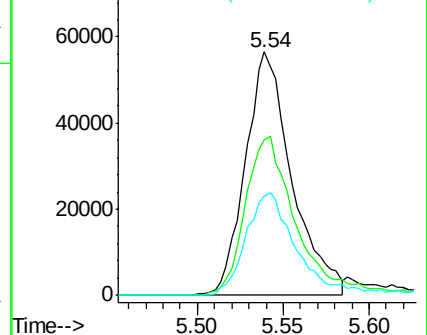
98 40.4 36.3 54.5



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: 10.00 ppbv

RT: 7.16 min Scan# 1361

Delta R.T. -0.00 min

Lab File: VL038671.D

Acq: 22 Mar 2022 4:36

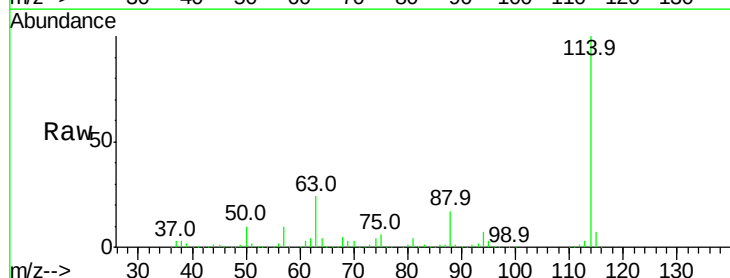
Tgt Ion: 114 Resp: 2163567

Ion Ratio Lower Upper

114 100

63 23.8 19.4 29.0

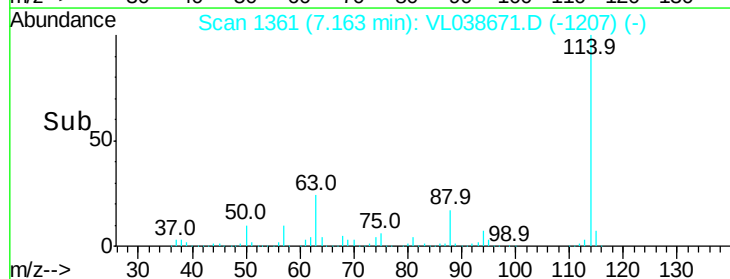
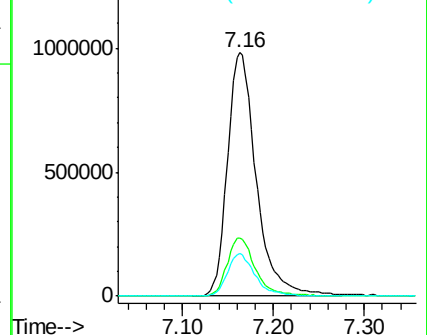
88 17.1 13.9 20.9

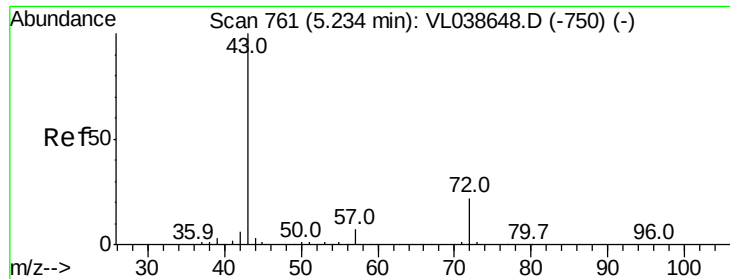


Abundance Ion 114.10 (113.80 to 114.80): V

Ion 63.10 (62.80 to 63.80): VL0

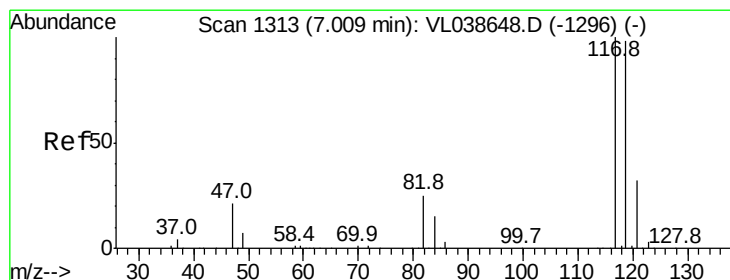
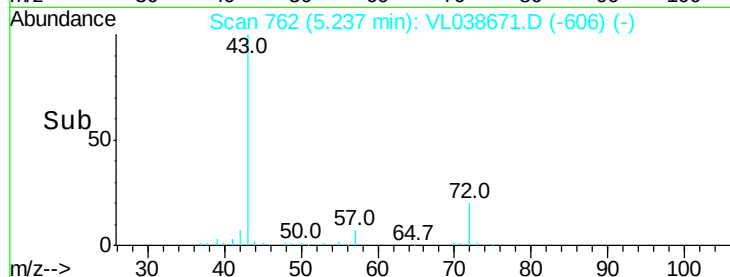
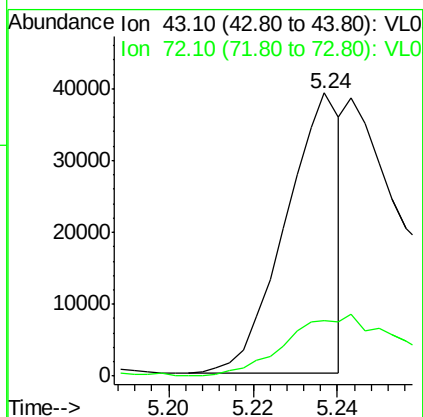
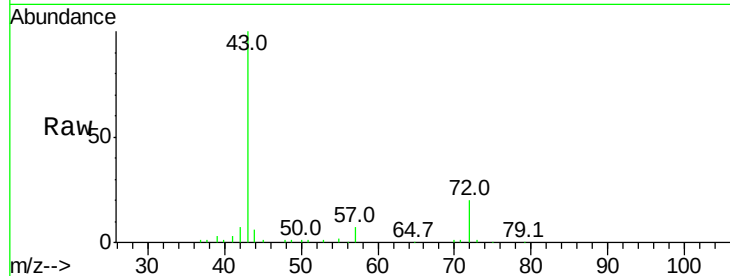
Ion 88.10 (87.80 to 88.80): VL0





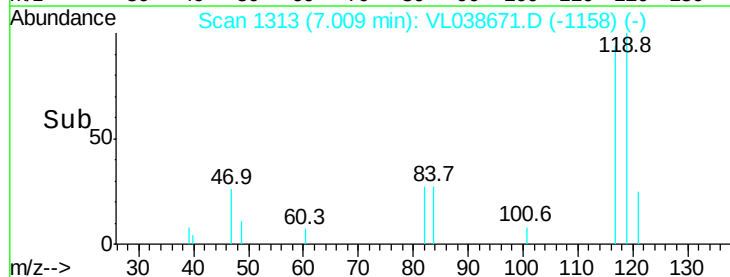
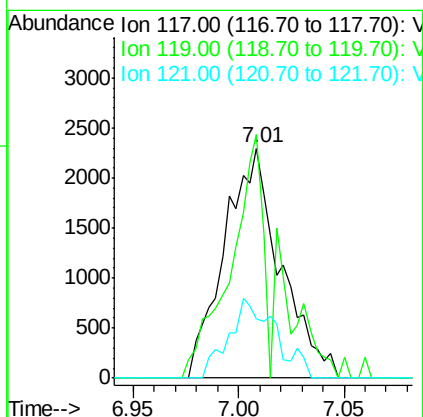
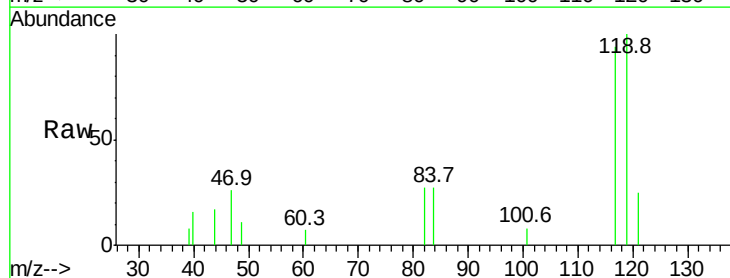
#34
2-Butanone
Concen: 0.41 ppbv
RT: 5.24
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
COP84
Acq: 22 Mar 2022 4:30

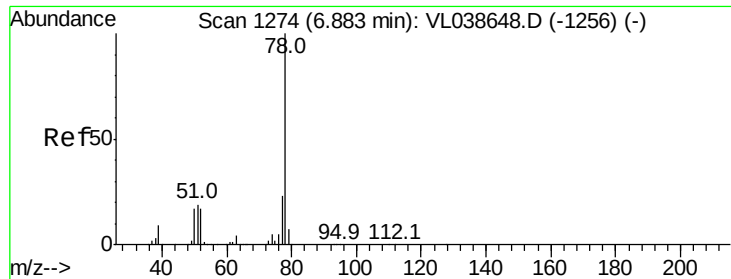
Tgt Ion: 43 Resp: 35465
Ion Ratio Lower Upper
43 100
72 0.0 17.8 26.8#



#35
Carbon Tetrachloride
Concen: 0.03 ppbv
RT: 7.01 min Scan# 1313
Delta R.T. -0.00 min
Lab File: VL038671.D
Acq: 22 Mar 2022 4:36

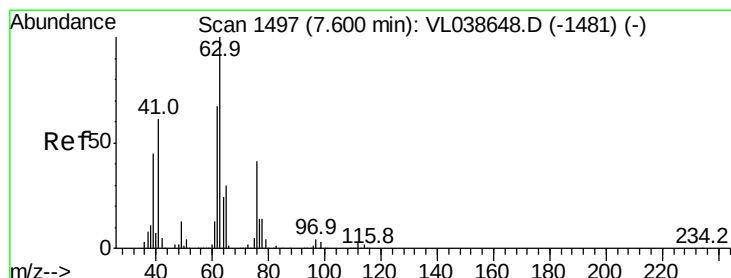
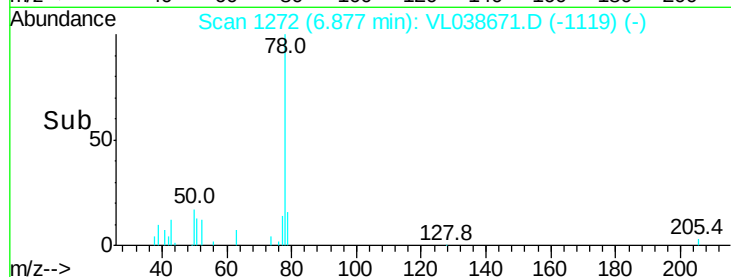
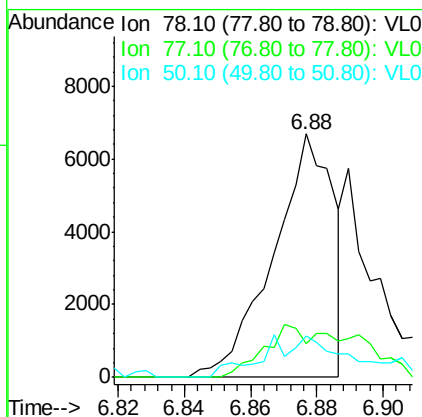
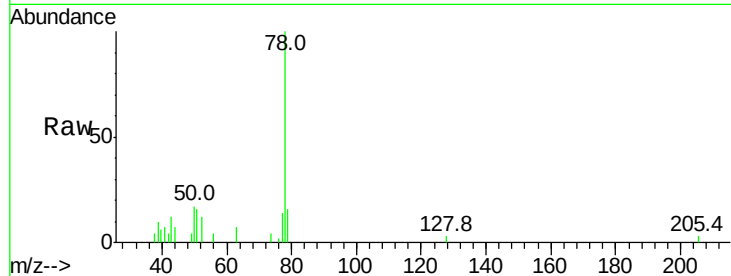
Tgt Ion: 117 Resp: 4244
Ion Ratio Lower Upper
117 100
119 105.9 78.1 117.1
121 26.0 25.8 38.6





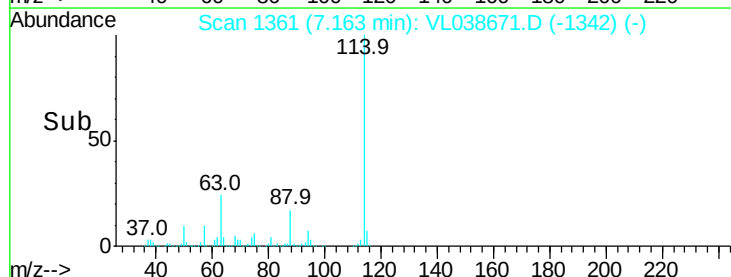
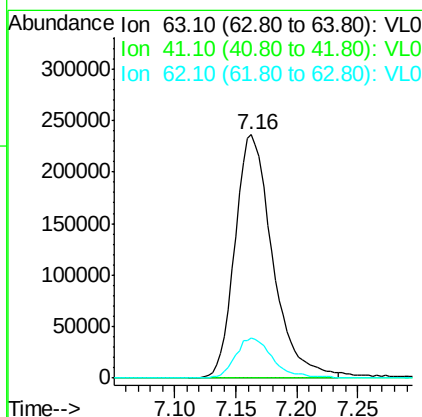
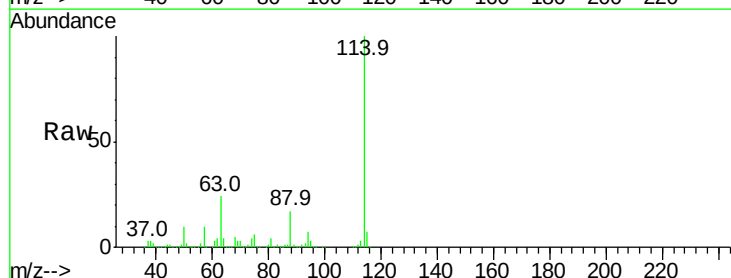
#36
Benzene
Concen: 0.05 ppbv
RT: 6.88
Delta R.T. MSVOA_L
Lab File: ClientSampleId:
Acq: 22 Mar 2022 4:30

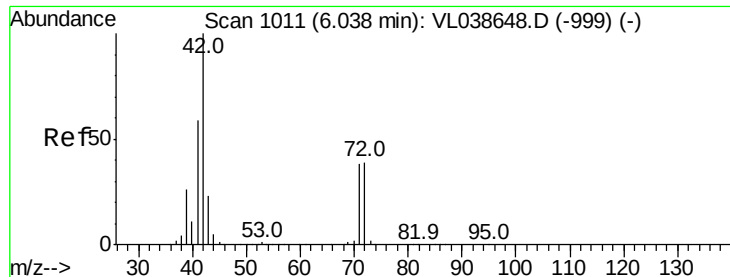
Tgt Ion: 78 Resp: 8420
Ion Ratio Lower Upper
78 100
77 14.0 18.1 27.1#
50 33.2 13.6 20.4#



#39
1,2-Dichloropropane
Concen: 7.72 ppbv
RT: 7.16 min Scan# 1361
Delta R.T. -0.44 min
Lab File: VL038671.D
Acq: 22 Mar 2022 4:36

Tgt Ion: 63 Resp: 503860
Ion Ratio Lower Upper
63 100
41 0.0 49.0 73.6#
62 16.6 53.9 80.9#





#41

Tetrahydrofuran

Concen: 1.08 ppbv

RT: 6.05 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: C0P84

Acq: 22 Mar 2022 4:30

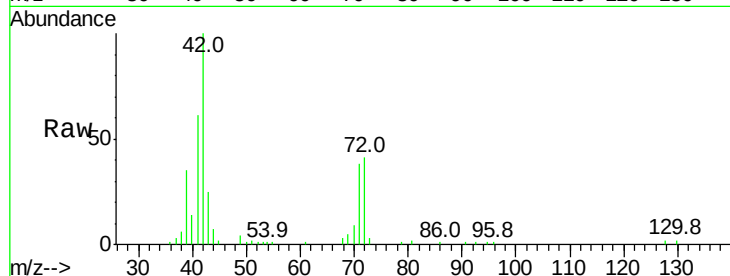
Tgt Ion: 42 Resp: 68638

Ion Ratio Lower Upper

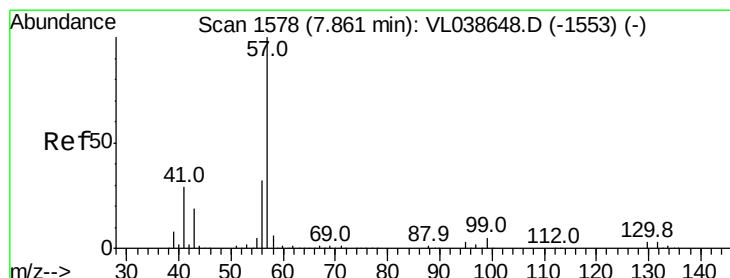
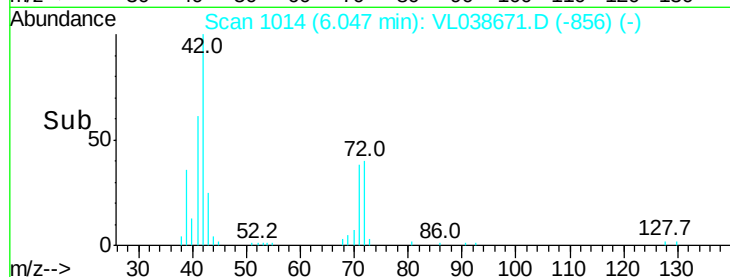
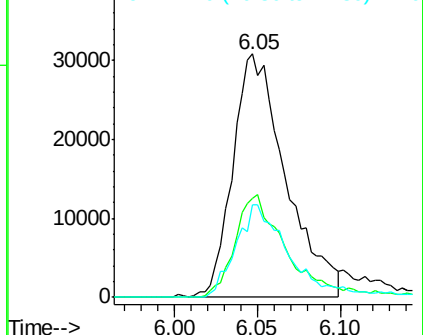
42 100

72 42.4 32.5 48.7

71 39.2 31.4 47.2



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



#44

2,2,4-Trimethylpentane

Concen: 0.02 ppbv

RT: 7.86 min Scan# 1577

Delta R.T. -0.00 min

Lab File: VL038671.D

Acq: 22 Mar 2022 4:36

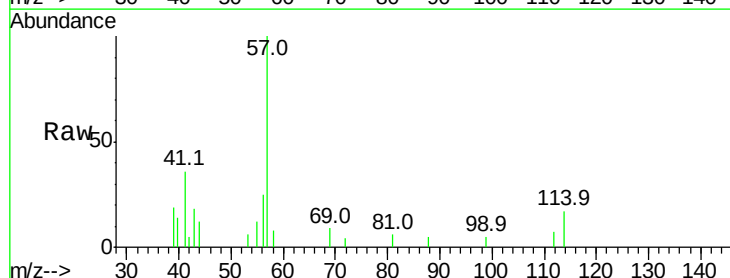
Tgt Ion: 57 Resp: 6240

Ion Ratio Lower Upper

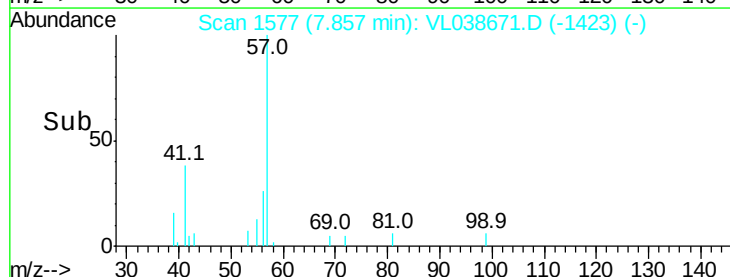
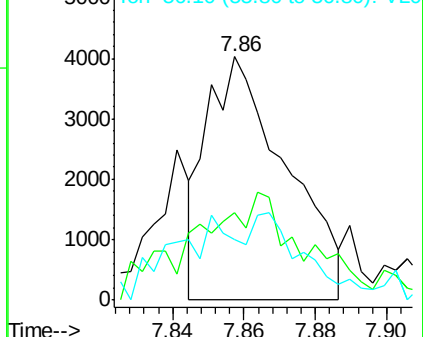
57 100

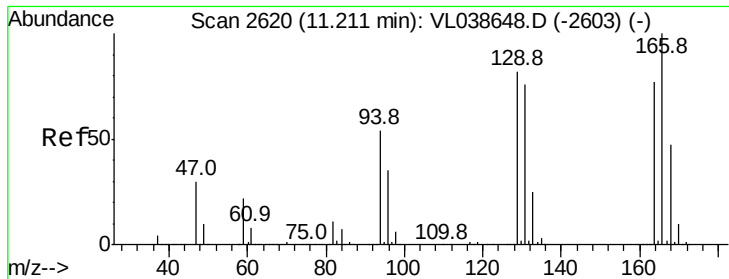
41 87.3 23.0 34.4#

56 56.5 25.3 37.9#



Abundance Ion 57.10 (56.80 to 57.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 56.10 (55.80 to 56.80): VL0





#52

Tetrachloroethene

Concen: 0.06 ppbv

RT: 11.21

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 22 Mar 2022 4:30

Tgt Ion: 164 Resp: 3767

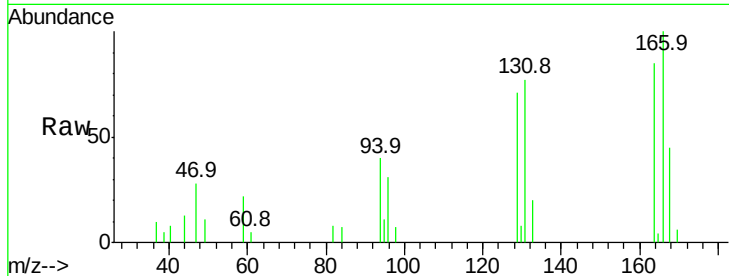
Ion Ratio Lower Upper

164 100

166 112.9 103.3 154.9

129 62.4 85.2 127.8#

131 81.1 78.3 117.5

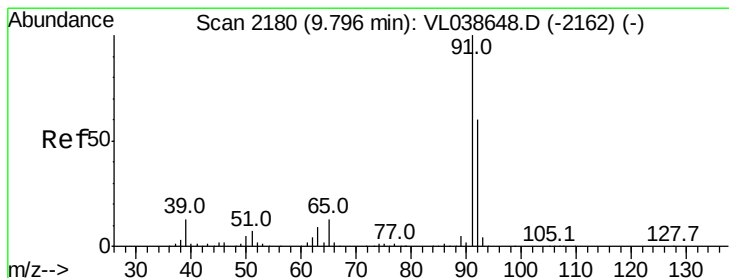
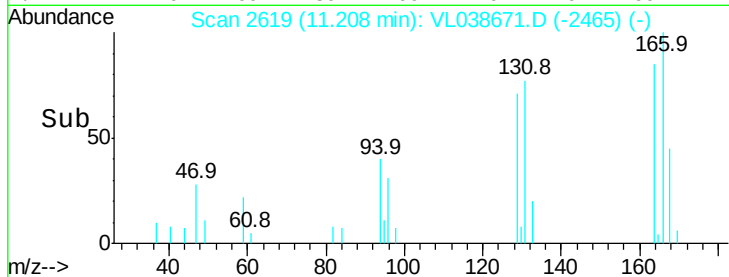
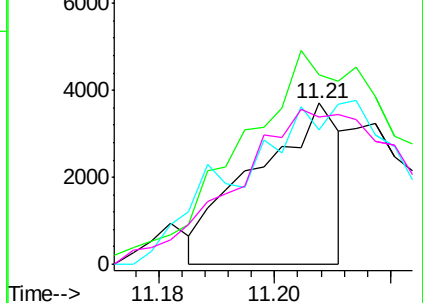


Abundance Ion 163.90 (163.60 to 164.60): V

Ion 165.90 (165.60 to 166.60): V

Ion 129.00 (128.70 to 129.70): V

Ion 131.00 (130.70 to 131.70): V



#53

Toluene

Concen: 2.80 ppbv

RT: 9.79 min Scan# 2179

Delta R.T. -0.00 min

Lab File: VL038671.D

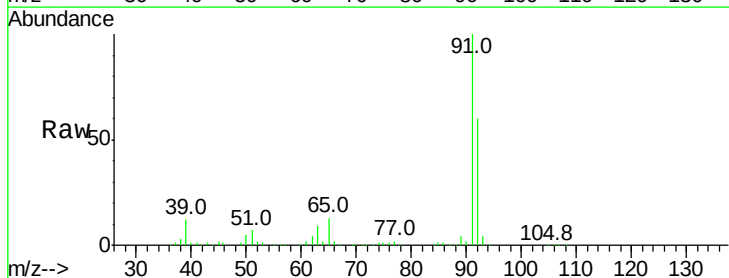
Acq: 22 Mar 2022 4:36

Tgt Ion: 91 Resp: 502951

Ion Ratio Lower Upper

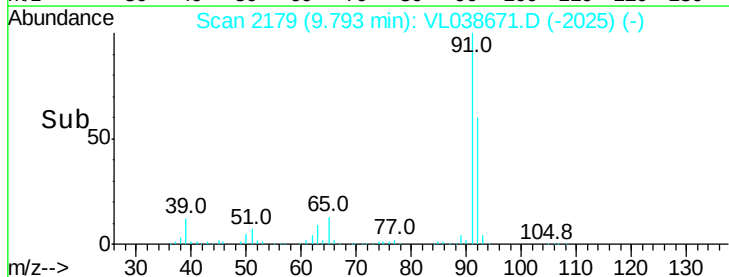
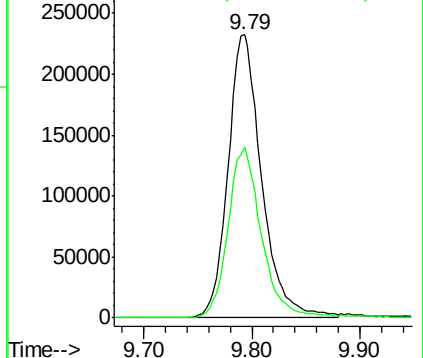
91 100

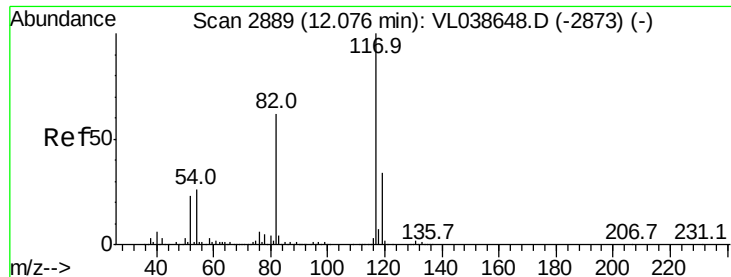
92 60.4 48.7 73.1



Abundance Ion 91.10 (90.80 to 91.80): VL0

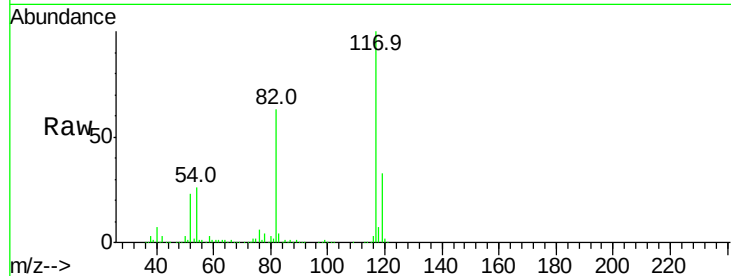
Ion 92.10 (91.80 to 92.80): VL0



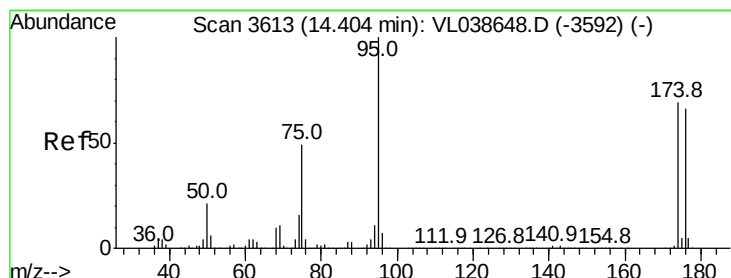
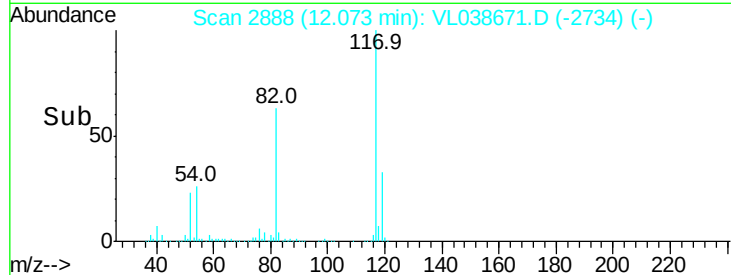
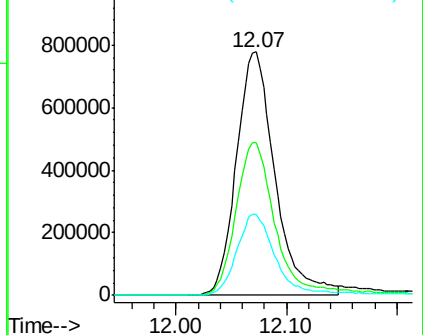


#55
 Chlorobenzene-d5
 Concen: 10.00 ppbv
 RT: 12.07 min
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId :
 COP84
 Acq: 22 Mar 2022 4:30

Tgt Ion: 117 Resp: 1892419
 Ion Ratio Lower Upper
 117 100
 82 67.2 51.6 77.4
 119 35.2 26.9 40.3

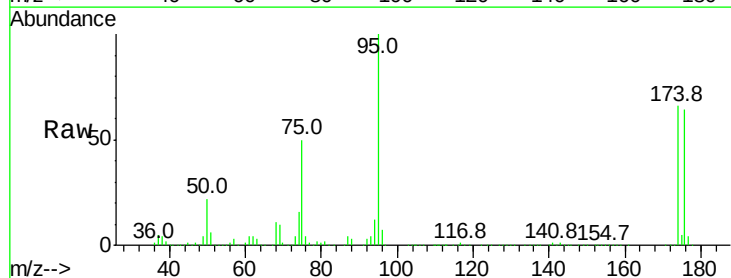


Abundance Ion 117.10 (116.80 to 117.80): V
 Ion 82.10 (81.80 to 82.80): V
 Ion 119.10 (118.80 to 119.80): V

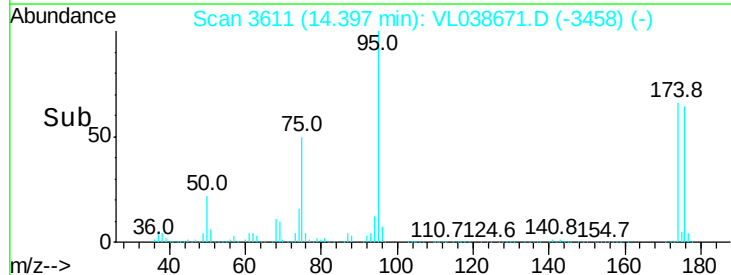
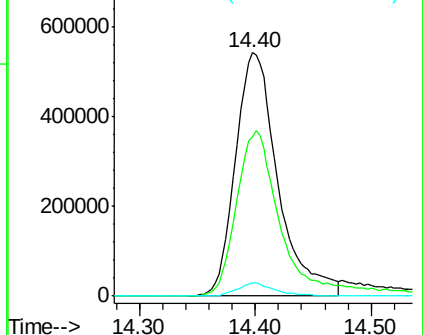


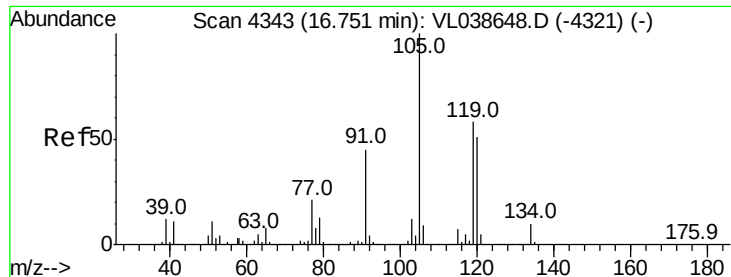
#68
 1-Bromo-4-Fluorobenzene
 Concen: 9.51 ppbv
 RT: 14.40 min Scan# 3611
 Delta R.T.: -0.01 min
 Lab File: VL038671.D
 Acq: 22 Mar 2022 4:36

Tgt Ion: 95 Resp: 1380191
 Ion Ratio Lower Upper
 95 100
 174 73.9 56.1 84.1
 175 5.4 4.2 6.2



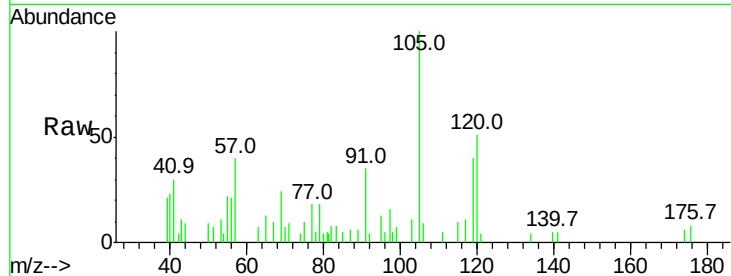
Abundance Ion 95.10 (94.80 to 95.80): V
 Ion 174.00 (173.70 to 174.70): V
 Ion 175.00 (174.70 to 175.70): V





#74
 1,2,4-Trimethylbenzene
 Concen: 0.03 ppbv
 RT: 16.74
 Delta R.T: MSVOA_L
 Lab File: ClientSampleId :
 Acq: 22 Mar 2022 4:30

Tgt Ion:	105	Resp:	5566
Ion Ratio	Lower	Upper	
105	100		
120	48.1	40.5	60.7
91	33.4	35.9	53.9#
77	20.8	16.6	25.0



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

