

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL032122\
 Data File : VL038669.D
 Acq On : 22 Mar 2022 3:18
 Operator : SY/AP
 Sample : N1964-13
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 C0P83

Quant Time: Mar 22 04:02:13 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	890209	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.17	114	2187970	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.08	117	1953223	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.40	95	1437430	9.60	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	96.00%

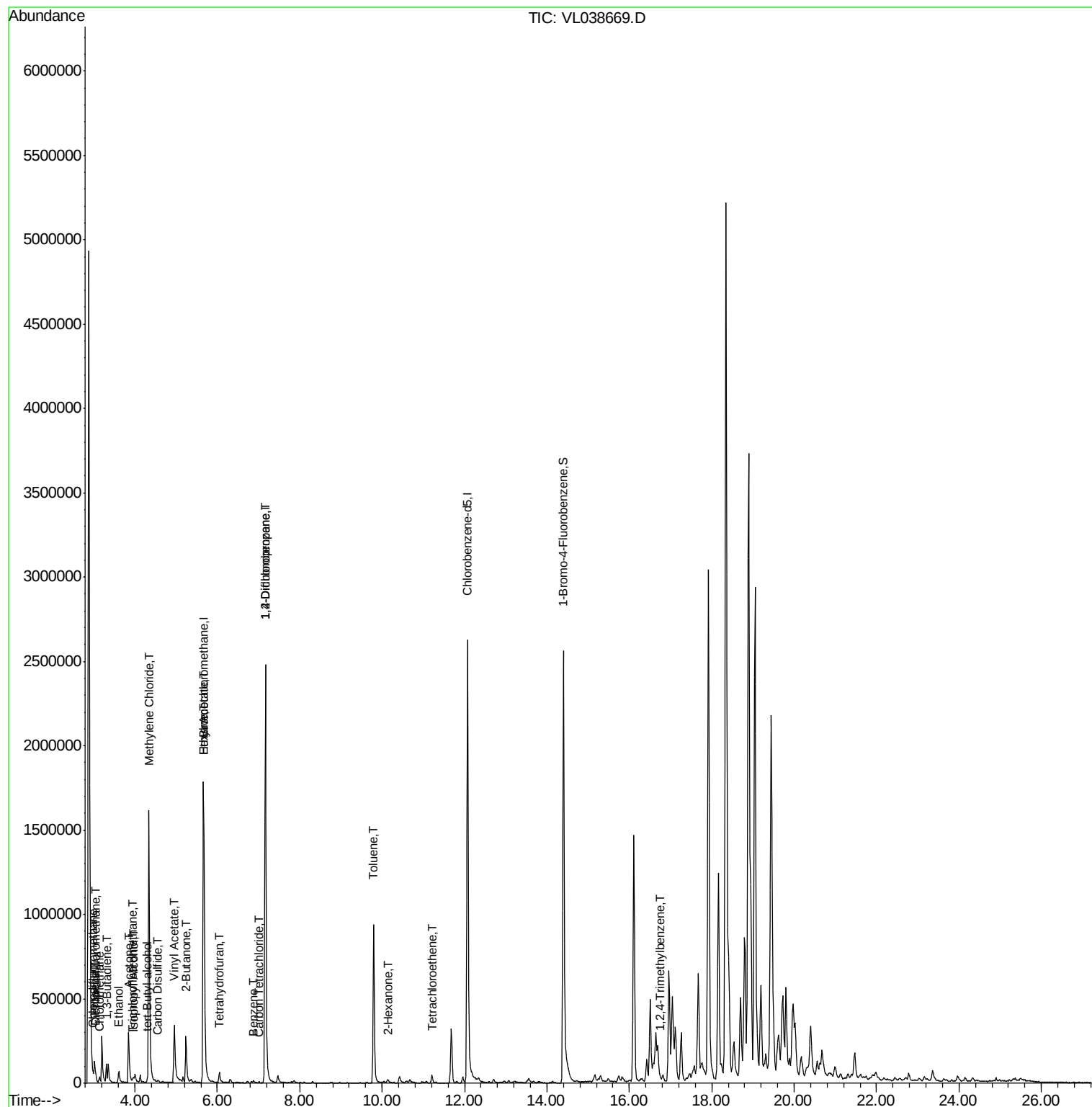
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.05	85	31096	0.26	ppbv #	86
3) Chlorodifluoromethane	2.99	51	41028	0.44	ppbv #	88
4) Chloromethane	3.14	50	36719	0.71	ppbv	97
9) Propene	3.02	41	39358	0.87	ppbv	92
11) Trichlorofluoromethane	3.95	101	17798	0.17	ppbv	88
13) Ethanol	3.61	45	85519	17.08	ppbv	95
15) Acetone	3.84	43	375394	4.89	ppbv	89
16) 1,3-Butadiene	3.31	39	29889	0.69	ppbv #	13
17) tert-Butyl alcohol	4.30	59	16525	0.25	ppbv #	90
19) Isopropyl Alcohol	3.98	45	1303	0.03	ppbv #	91
20) Methylene Chloride	4.34	84	750023	23.18	ppbv	96
23) Vinyl Acetate	4.96	43	6673	0.09	ppbv #	80
25) Ethyl Acetate	5.68	43	251530	1.30	ppbv #	77
26) Hexane	5.68	57	358780	4.14	ppbv #	40
27) Carbon Disulfide	4.55	76	6362	0.07	ppbv #	53
34) 2-Butanone	5.24	43	360929	4.17	ppbv	98
35) Carbon Tetrachloride	7.01	117	3327	0.03	ppbv	98
36) Benzene	6.88	78	9997	0.06	ppbv #	85
39) 1,2-Dichloropropane	7.17	63	518873	7.86	ppbv #	29
41) Tetrahydrofuran	6.05	42	20644	0.32	ppbv #	35
51) 2-Hexanone	10.14	43	9952	0.09	ppbv #	27
52) Tetrachloroethene	11.22	164	3249	0.05	ppbv	82
53) Toluene	9.79	91	835309	4.60	ppbv	100
74) 1,2,4-Trimethylbenzene	16.75	105	12215	0.05	ppbv #	79

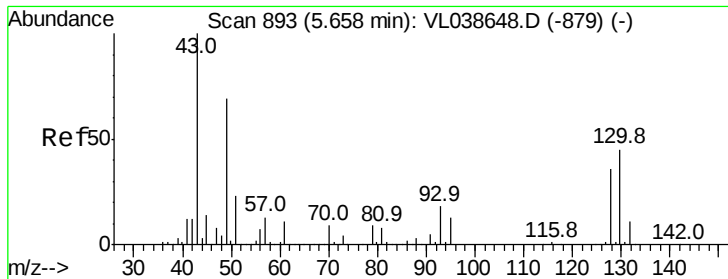
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.00 ppbv

RT: 5.66 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 22 Mar 2022 3:18

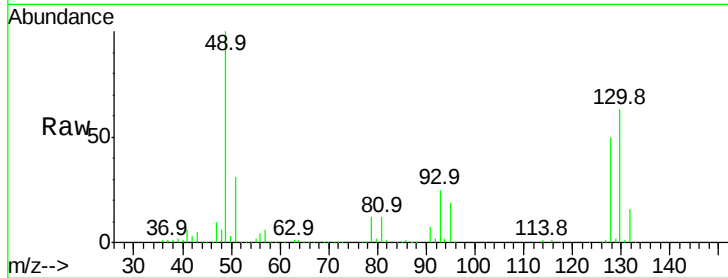
Tgt Ion: 49 Resp: 890209

Ion Ratio Lower Upper

49 100

128 52.4 26.2 78.6

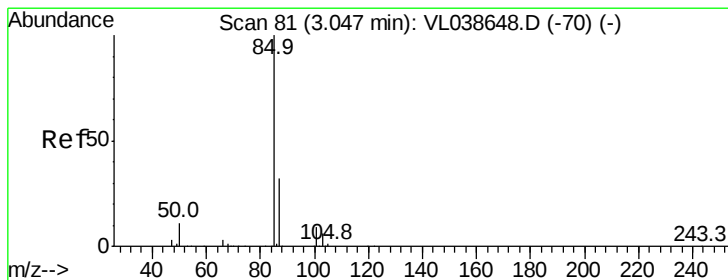
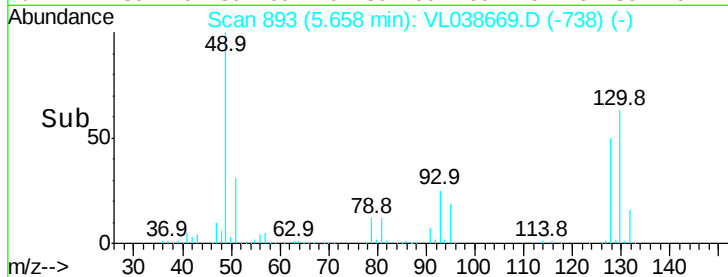
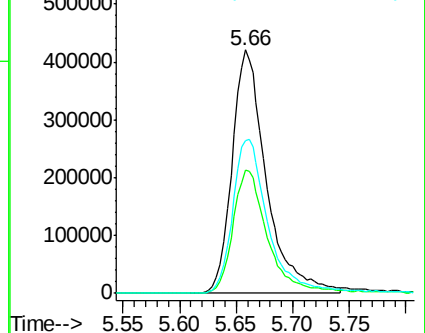
130 66.8 33.7 101.1



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# 81

Delta R.T. -0.00 min

Lab File: VL038669.D

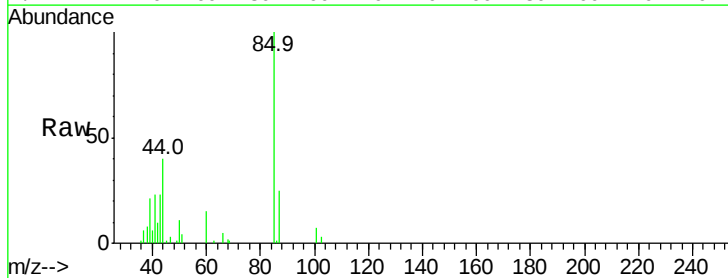
Acq: 22 Mar 2022 3:18

Tgt Ion: 85 Resp: 31096

Ion Ratio Lower Upper

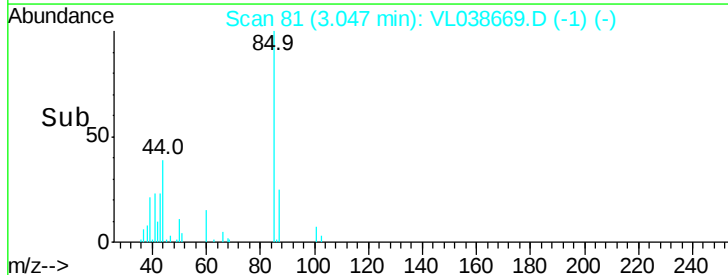
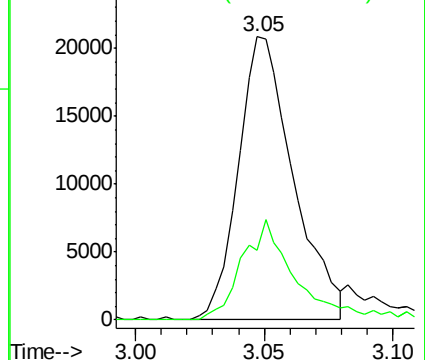
85 100

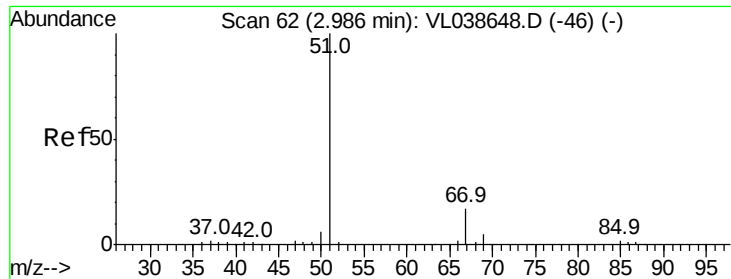
87 24.8 26.0 39.0#



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.44 ppbv

RT: 2.99 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

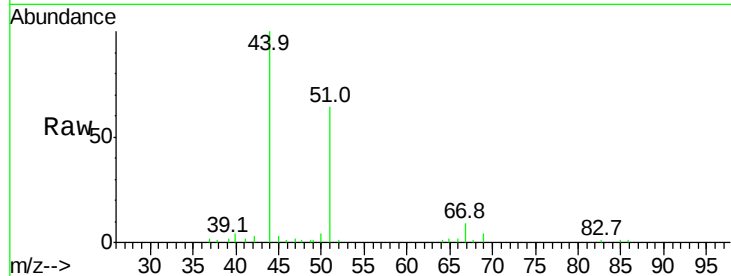
Acq: 22 Mar 2022 3:18

Tgt Ion: 51 Resp: 41028

Ion Ratio Lower Upper

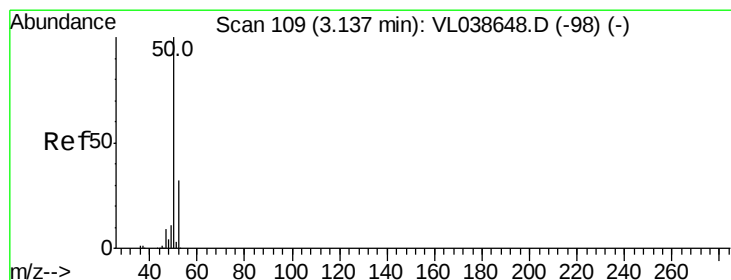
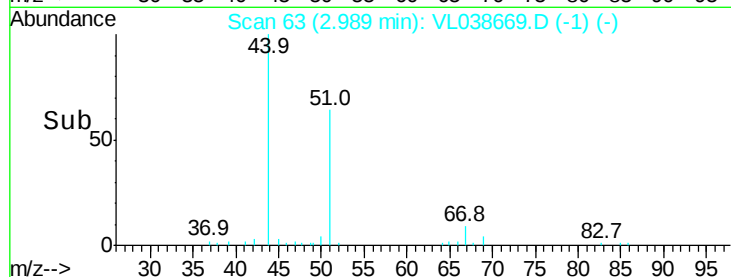
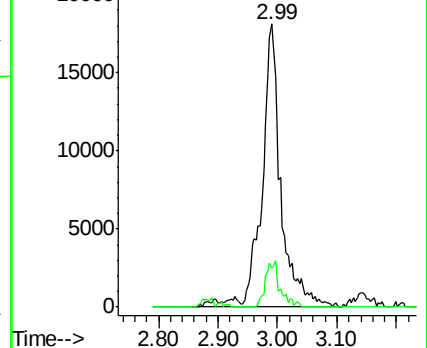
51 100

67 12.4 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: 0.71 ppbv

RT: 3.14 min Scan# 110

Delta R.T. 0.00 min

Lab File: VL038669.D

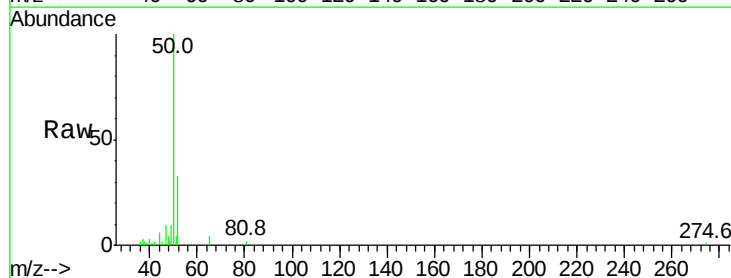
Acq: 22 Mar 2022 3:18

Tgt Ion: 50 Resp: 36719

Ion Ratio Lower Upper

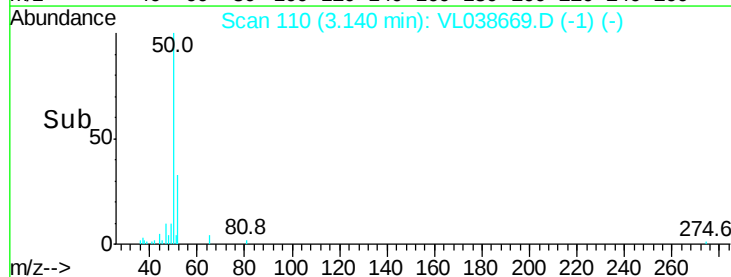
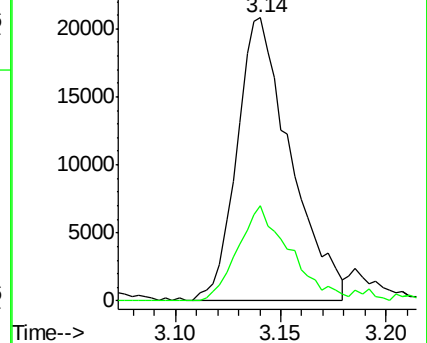
50 100

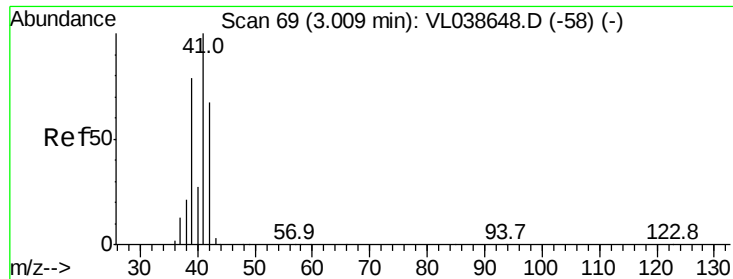
52 33.4 25.5 38.3



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 0.87 ppbv

RT: 3.02 Instrument: MSVOA_1

Delta R.T.

Lab File: ClientSampleId:

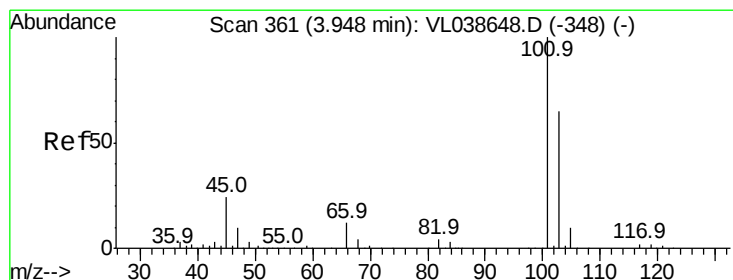
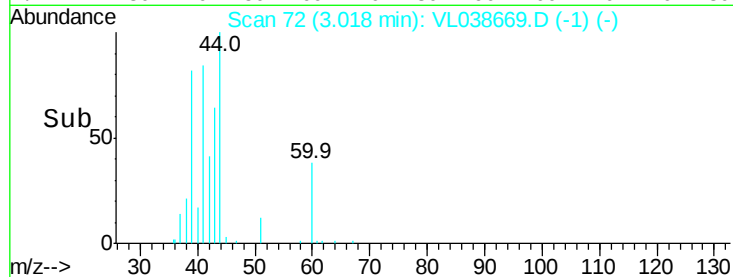
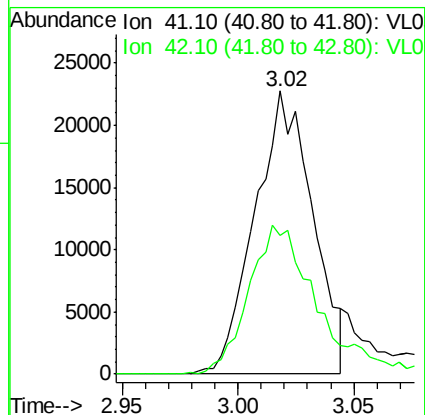
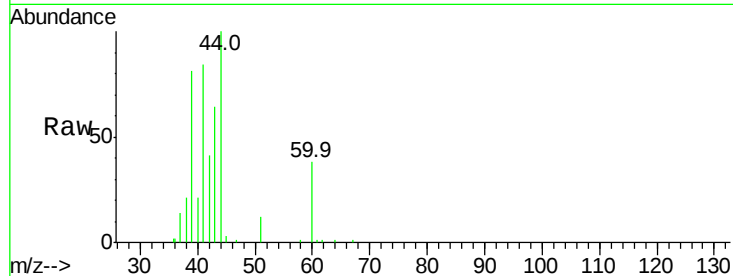
Acq: 22 Mar 2022 3:18

Tgt Ion: 41 Resp: 39358

Ion Ratio Lower Upper

41 100

42 63.5 56.2 84.4



#11

Trichlorofluoromethane

Concen: 0.17 ppbv

RT: 3.95 min Scan# 362

Delta R.T. 0.00 min

Lab File: VL038669.D

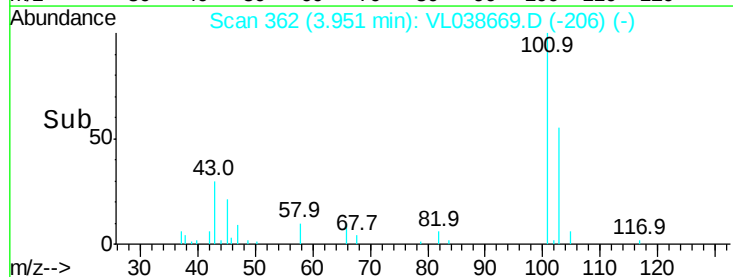
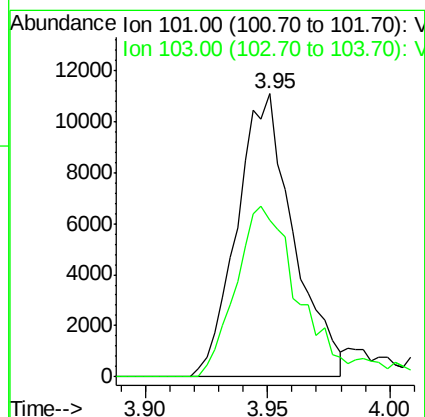
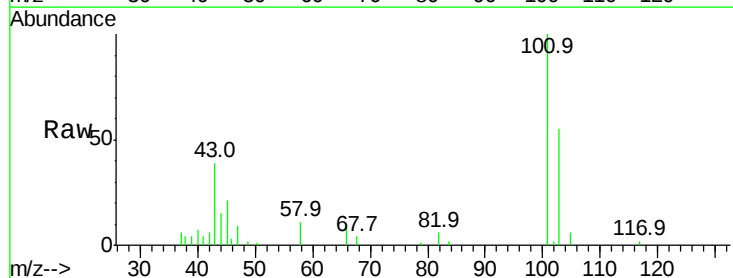
Acq: 22 Mar 2022 3:18

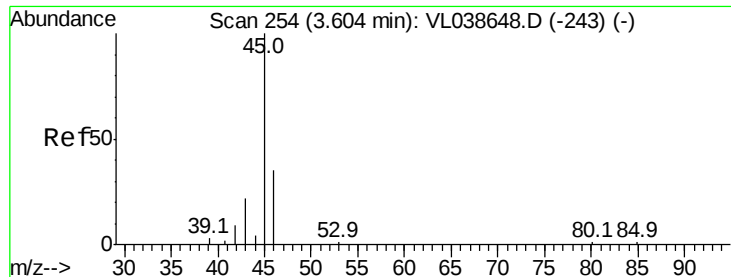
Tgt Ion: 101 Resp: 17798

Ion Ratio Lower Upper

101 100

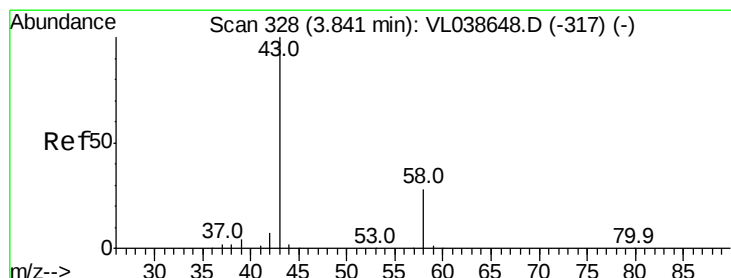
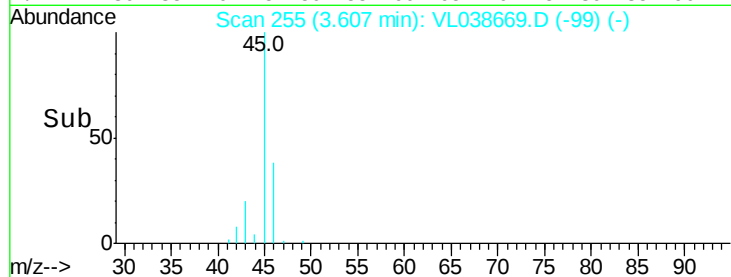
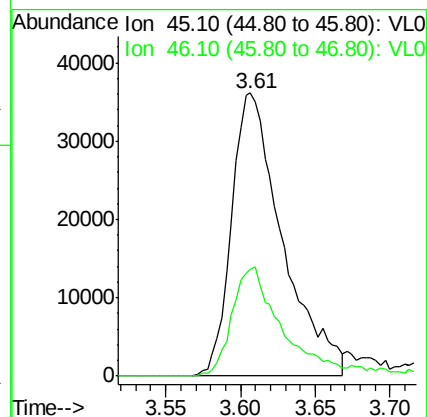
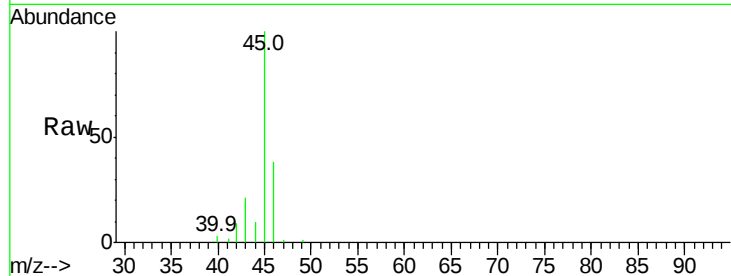
103 55.3 51.9 77.9





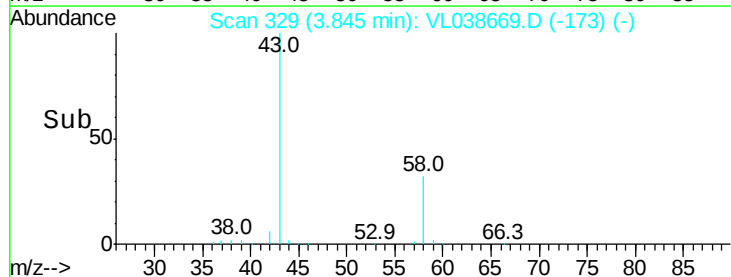
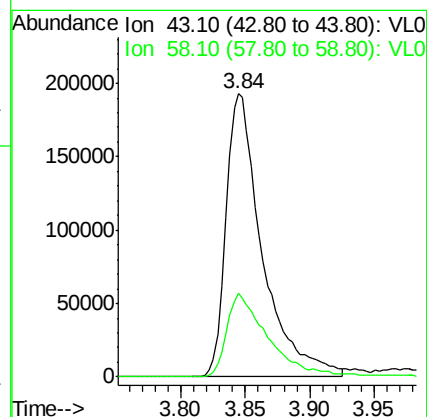
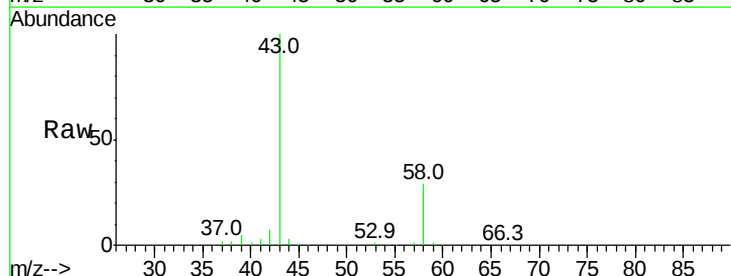
#13
Ethanol
Concen: 17.08 ppbv
RT: 3.61
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
COP83
Acq: 22 Mar 2022 3:18

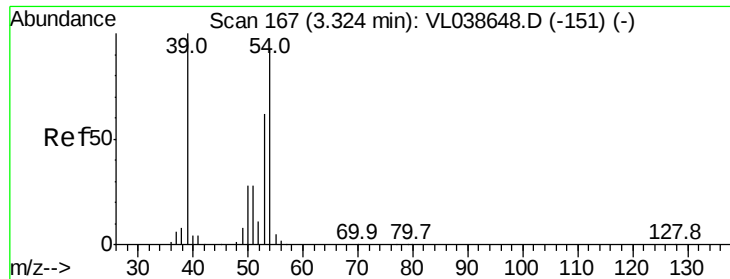
Tgt Ion: 45 Resp: 85519
Ion Ratio Lower Upper
45 100
46 40.7 15.1 60.5



#15
Acetone
Concen: 4.89 ppbv
RT: 3.84 min Scan# 329
Delta R.T. 0.00 min
Lab File: VL038669.D
Acq: 22 Mar 2022 3:18

Tgt Ion: 43 Resp: 375394
Ion Ratio Lower Upper
43 100
58 34.8 23.3 34.9





#16

1,3-Butadiene

Concen: 0.69 ppbv

RT: 3.31 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

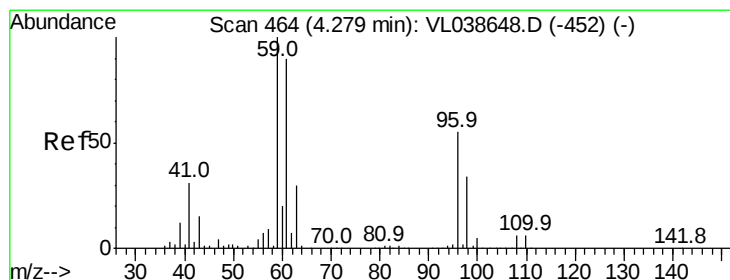
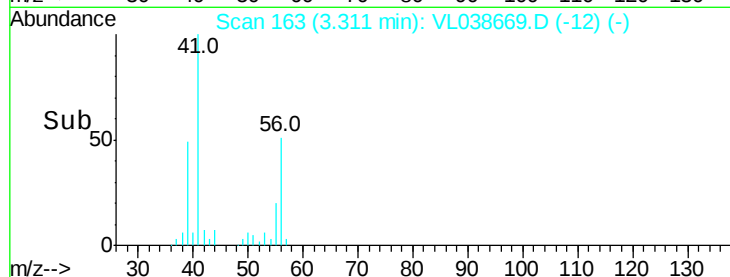
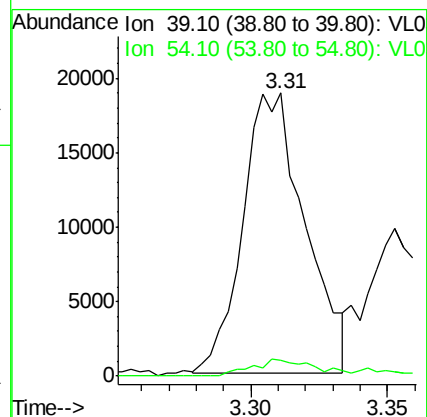
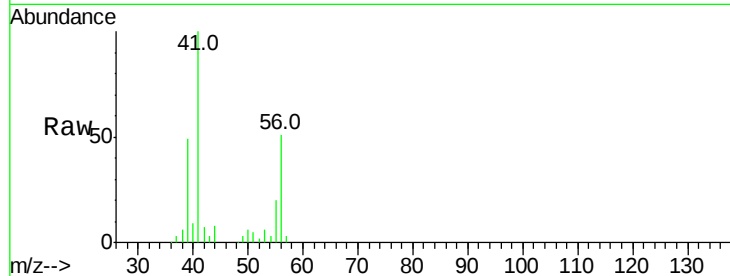
Acq: 22 Mar 2022 3:18

Tgt Ion: 39 Resp: 29889

Ion Ratio Lower Upper

39 100

54 6.1 69.1 103.7#



#17

tert-Butyl alcohol

Concen: 0.25 ppbv

RT: 4.30 min Scan# 471

Delta R.T. 0.02 min

Lab File: VL038669.D

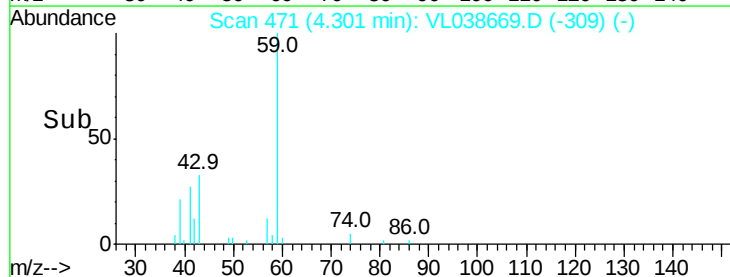
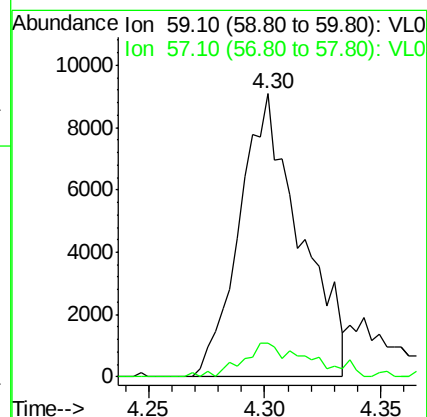
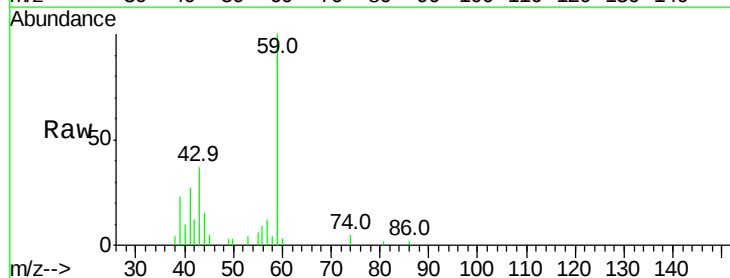
Acq: 22 Mar 2022 3:18

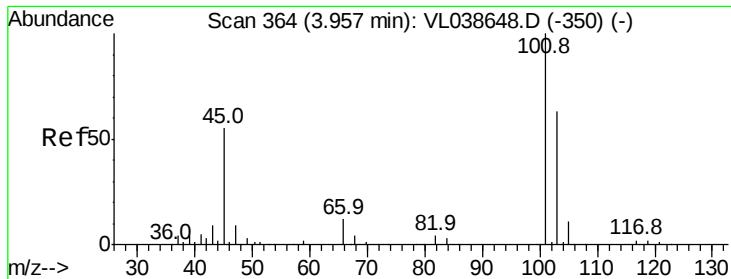
Tgt Ion: 59 Resp: 16525

Ion Ratio Lower Upper

59 100

57 13.9 8.2 12.2#





#19

Isopropyl Alcohol

Concen: 0.03 ppbv

RT: 3.98 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

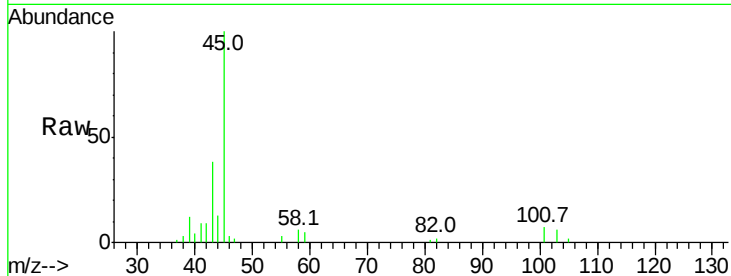
Acq: 22 Mar 2022 3:18

Tgt Ion: 45 Resp: 1303

Ion Ratio Lower Upper

45 100

58 0.0 2.3 3.5#



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

3.98

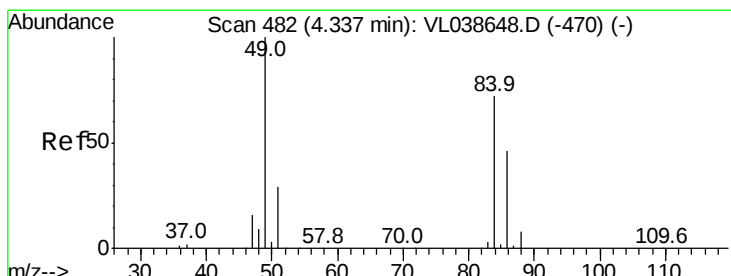
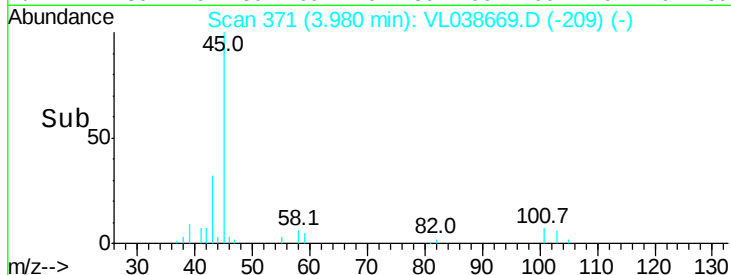
15000

10000

5000

0

Time-->



#20

Methylene Chloride

Concen: 23.18 ppbv

RT: 4.34 min Scan# 483

Delta R.T. 0.00 min

Lab File: VL038669.D

Acq: 22 Mar 2022 3:18

Tgt Ion: 84 Resp: 750023

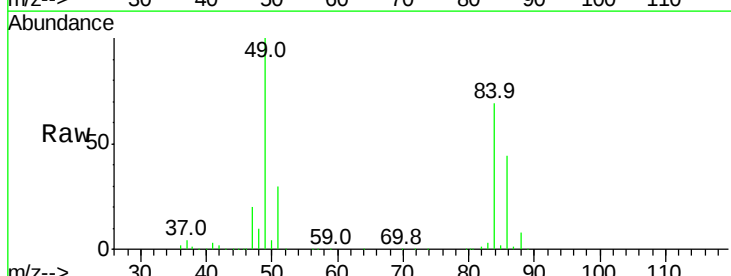
Ion Ratio Lower Upper

84 100

49 145.4 111.2 166.8

51 43.3 32.8 49.2

86 64.5 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

800000

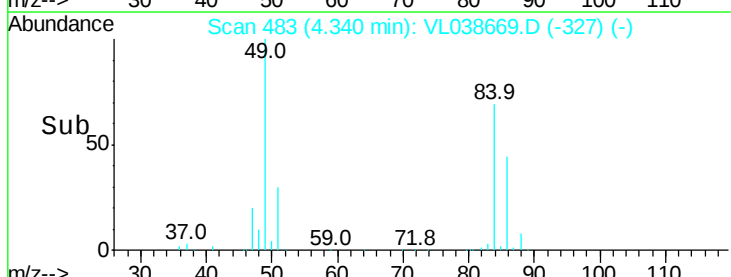
600000

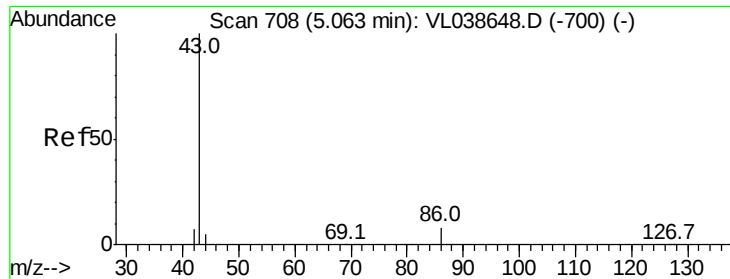
400000

200000

0

Time-->





#23

Vinyl Acetate

Concen: 0.09 ppbv

RT: 4.96 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: COP83

Acq: 22 Mar 2022 3:18

Tgt Ion: 43 Resp: 6673

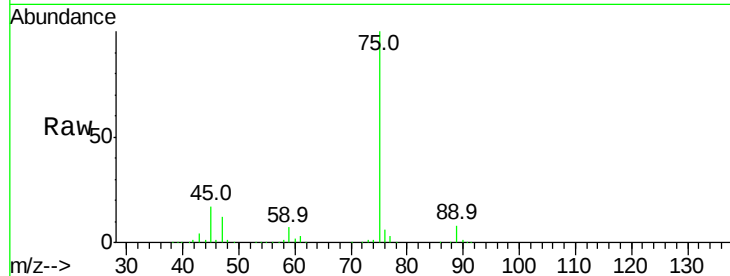
Ion Ratio Lower Upper

43 100

86 3.3 5.6 8.4#

42 19.4 6.8 10.2#

44 10.9 4.2 6.2#

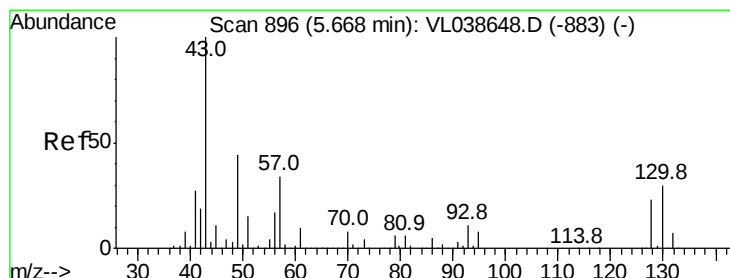
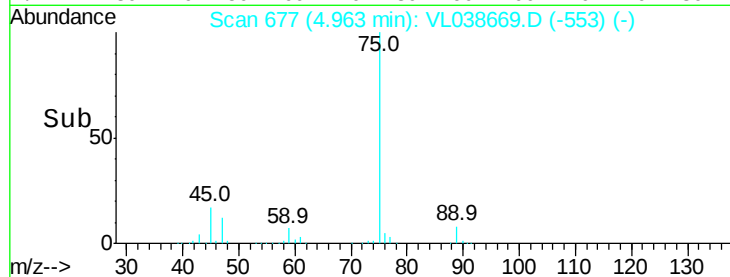
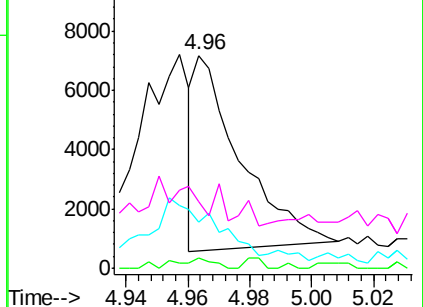


Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 86.10 (85.80 to 86.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

Ion 44.10 (43.80 to 44.80): VL0



#25

Ethyl Acetate

Concen: 1.30 ppbv

RT: 5.68 min Scan# 900

Delta R.T. 0.01 min

Lab File: VL038669.D

Acq: 22 Mar 2022 3:18

Tgt Ion: 43 Resp: 251530

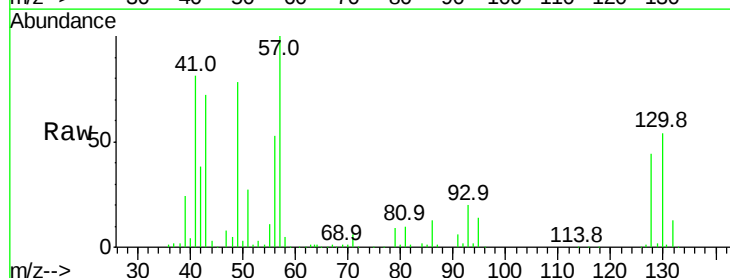
Ion Ratio Lower Upper

43 100

45 0.8 8.2 12.4#

61 0.6 8.3 12.5#

70 1.8 5.6 8.4#

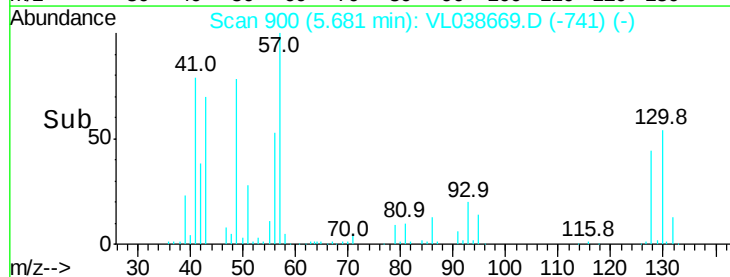
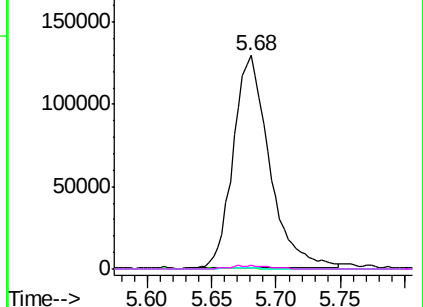


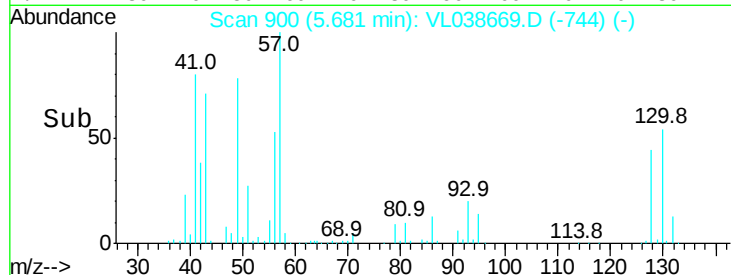
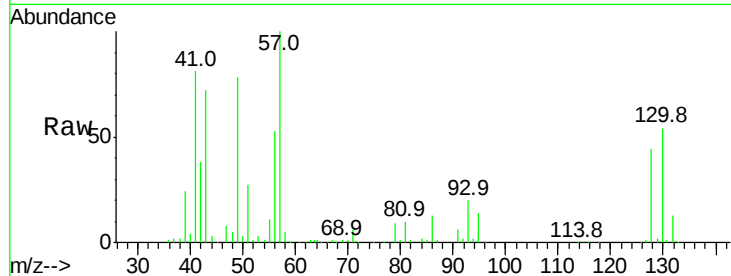
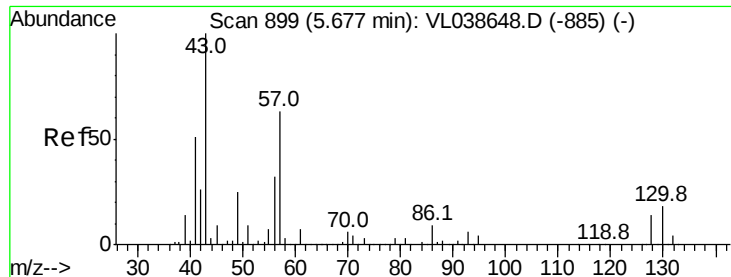
Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 45.10 (44.80 to 45.80): VL0

Ion 61.10 (60.80 to 61.80): VL0

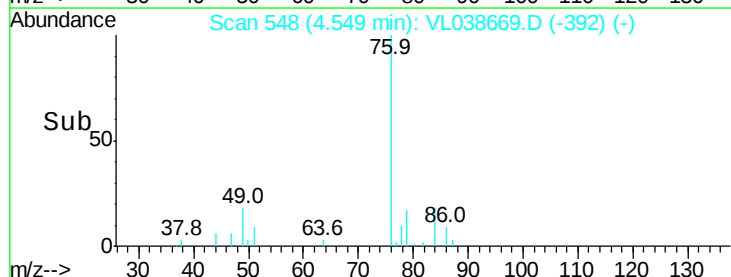
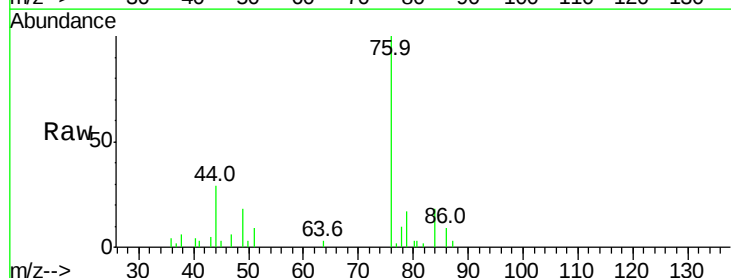
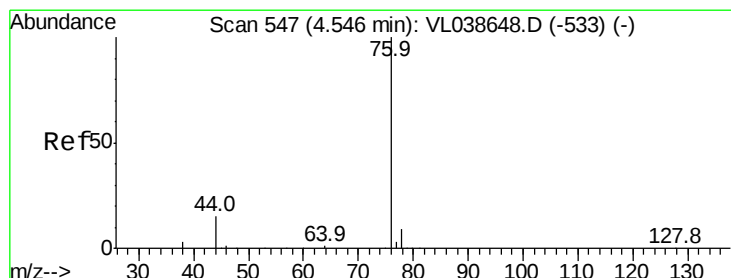
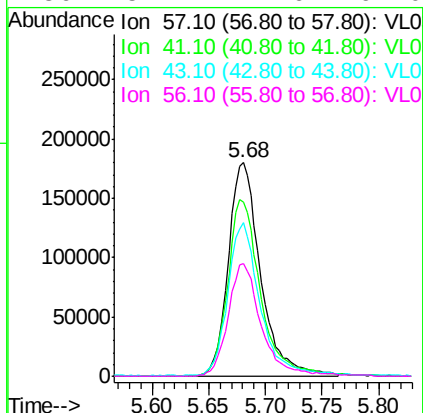
Ion 70.10 (69.80 to 70.80): VL0





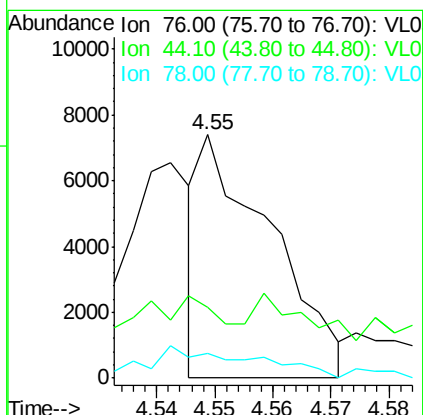
#26
Hexane
Concen: 4.14 ppbv
RT: 5.68
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 22 Mar 2022 3:18
COP83

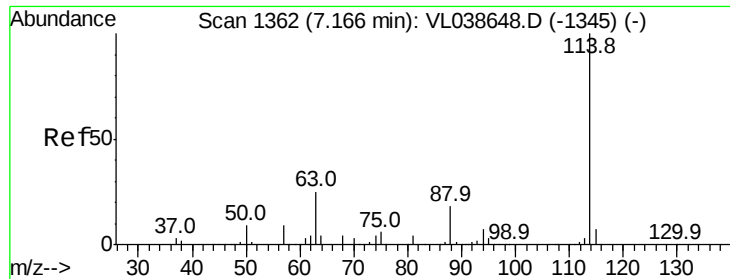
Tgt Ion	Ratio	Lower	Upper
57	100		
41	85.1	67.0	100.4
43	73.1	184.2	276.2#
56	54.2	42.6	64.0



#27
Carbon Disulfide
Concen: 0.07 ppbv
RT: 4.55 min Scan# 548
Delta R.T. 0.00 min
Lab File: VL038669.D
Acq: 22 Mar 2022 3:18

Tgt Ion	Ratio	Lower	Upper
76	100		
44	40.7	12.4	18.6#
78	0.0	7.8	11.8#

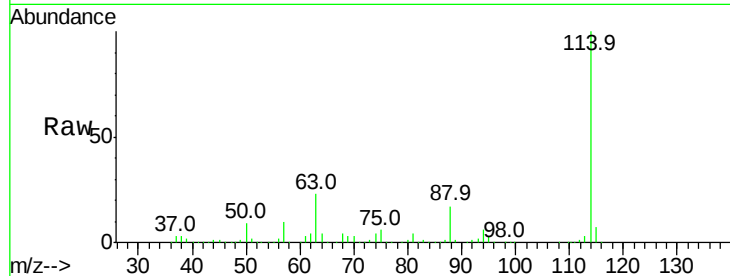




#33
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 7.17
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 COP83
 Acq: 22 Mar 2022 3:18

Tgt Ion: 114 Resp: 2187970

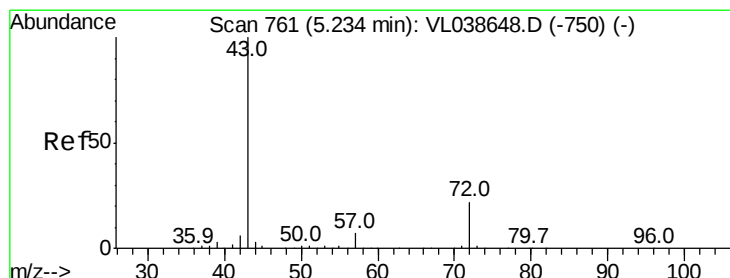
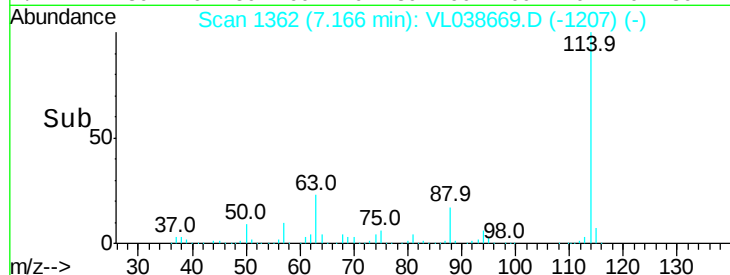
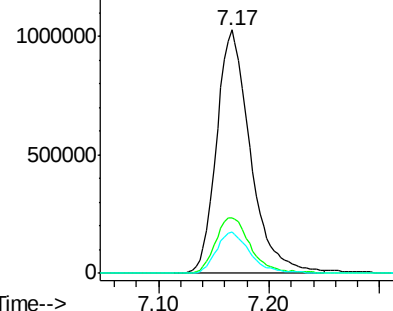
Ion	Ratio	Lower	Upper
114	100		
63	24.0	19.4	29.0
88	17.3	13.9	20.9



Abundance Ion 114.10 (113.80 to 114.80): VL0

Ion 63.10 (62.80 to 63.80): VL0

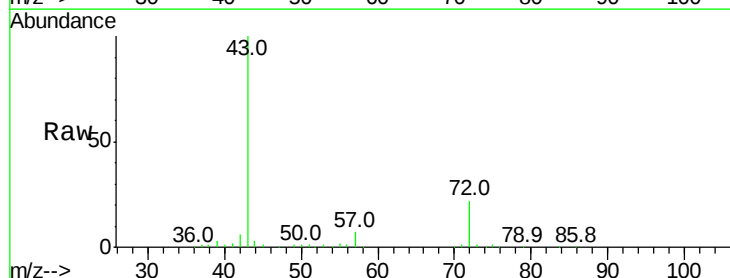
Ion 88.10 (87.80 to 88.80): VL0



#34
 2-Butanone
 Concen: 4.17 ppbv
 RT: 5.24 min Scan# 762
 Delta R.T. 0.00 min
 Lab File: VL038669.D
 Acq: 22 Mar 2022 3:18

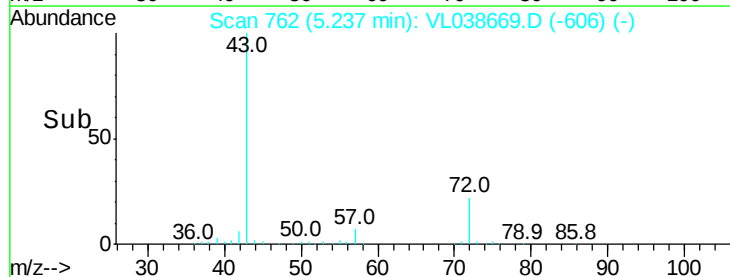
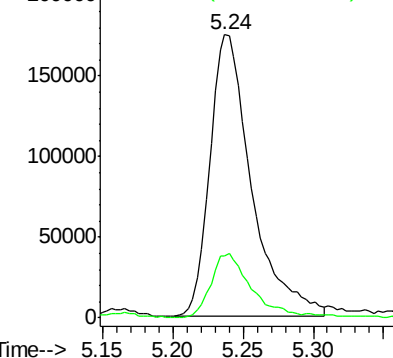
Tgt Ion: 43 Resp: 360929

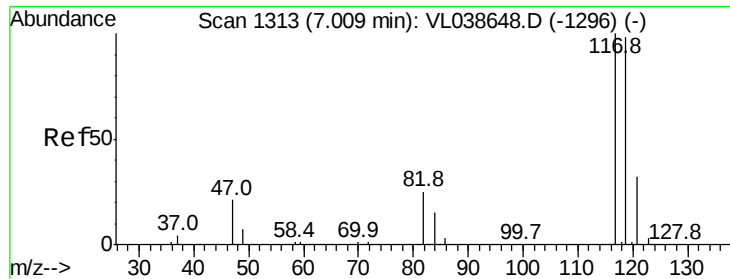
Ion	Ratio	Lower	Upper
43	100		
72	23.3	17.8	26.8



Abundance Ion 43.10 (42.80 to 43.80): VL0

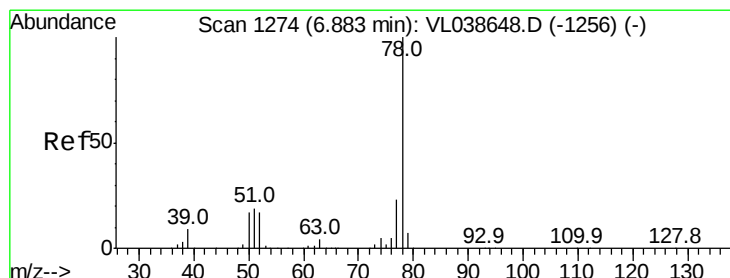
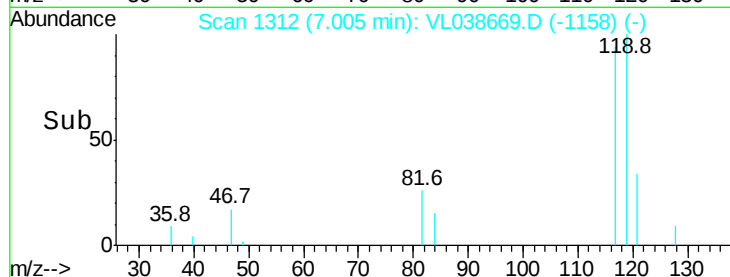
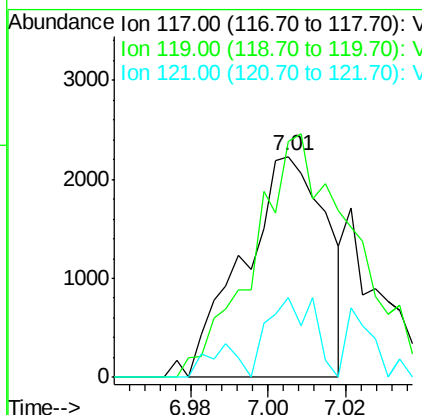
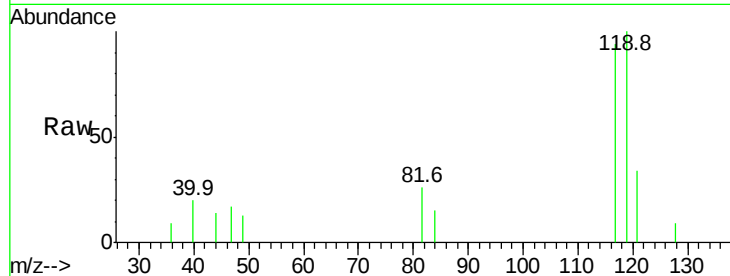
Ion 72.10 (71.80 to 72.80): VL0





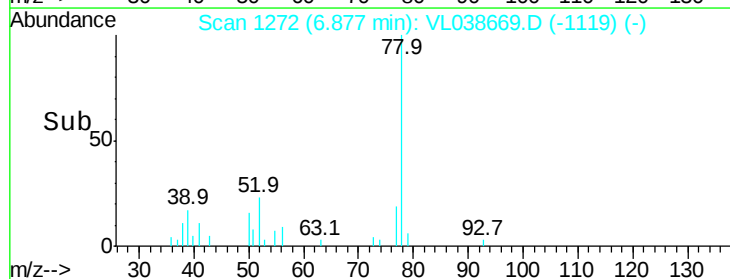
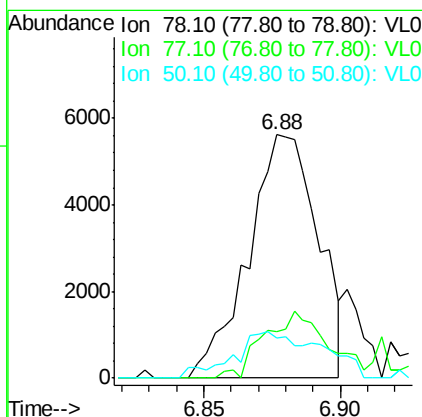
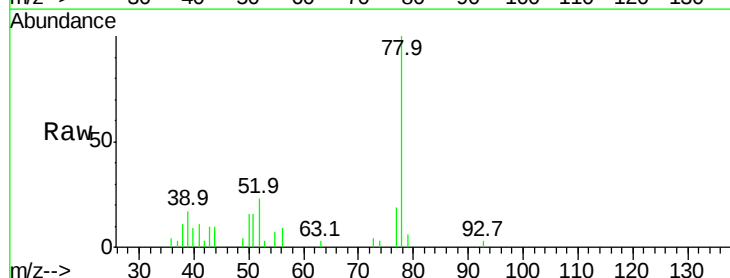
#35
Carbon Tetrachloride
Concen: 0.03 ppbv
RT: 7.01
Delta R.T. MSVOA_L
Lab File: ClientSampled :
Acq: 22 Mar 2022 3:18

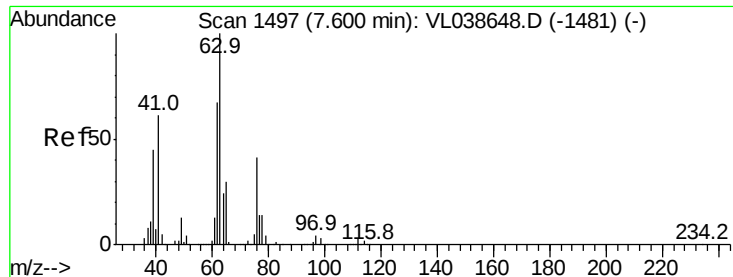
Tgt Ion: 117 Resp: 3327
Ion Ratio Lower Upper
117 100
119 97.8 78.1 117.1
121 36.3 25.8 38.6



#36
Benzene
Concen: 0.06 ppbv
RT: 6.88 min Scan# 1272
Delta R.T. -0.01 min
Lab File: VL038669.D
Acq: 22 Mar 2022 3:18

Tgt Ion: 78 Resp: 9997
Ion Ratio Lower Upper
78 100
77 19.3 18.1 27.1
50 28.4 13.6 20.4#





#39

1,2-Dichloropropane

Concen: 7.86 ppbv

RT: 7.17 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 22 Mar 2022 3:18 COP83

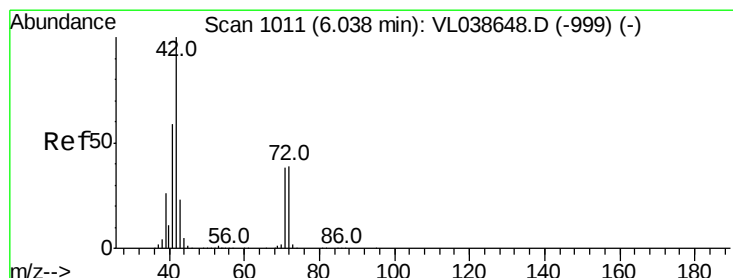
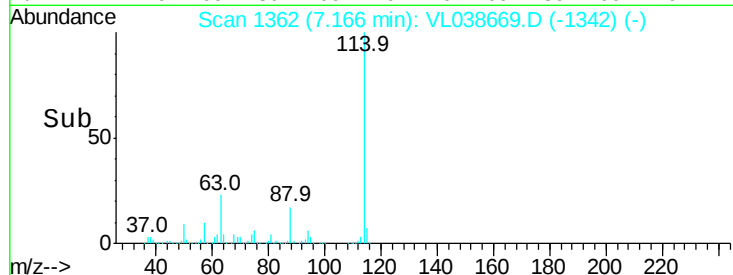
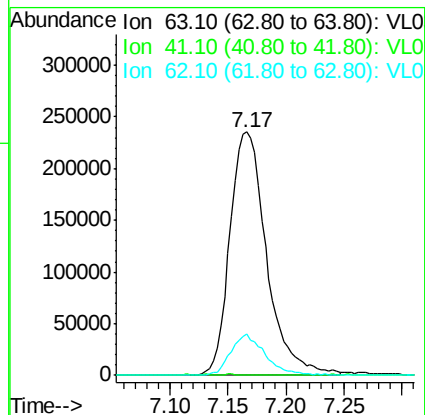
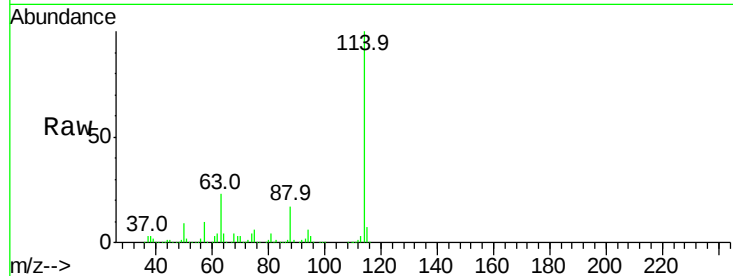
Tgt Ion: 63 Resp: 518873

Ion Ratio Lower Upper

63 100

41 0.0 49.0 73.6#

62 16.8 53.9 80.9#



#41

Tetrahydrofuran

Concen: 0.32 ppbv

RT: 6.05 min Scan# 1014

Delta R.T. 0.01 min

Lab File: VL038669.D

Acq: 22 Mar 2022 3:18

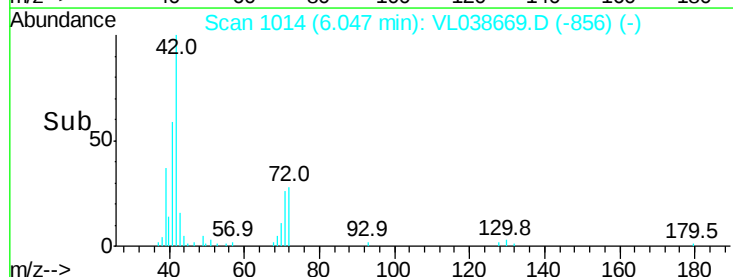
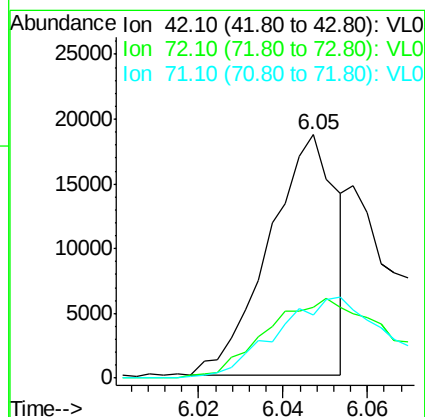
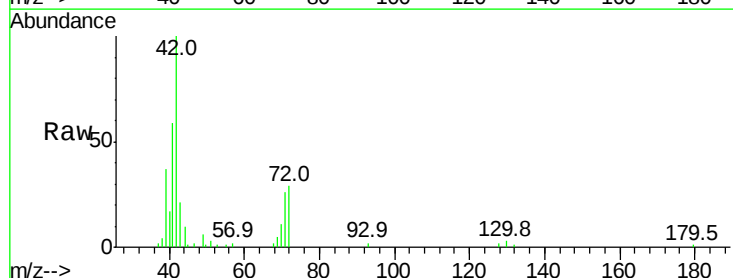
Tgt Ion: 42 Resp: 20644

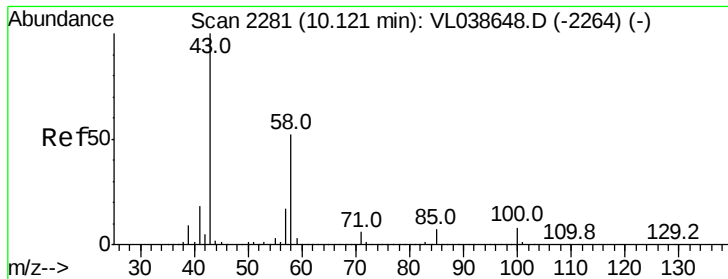
Ion Ratio Lower Upper

42 100

72 0.0 32.5 48.7#

71 0.0 31.4 47.2#





#51

2-Hexanone

Concen: 0.09 ppbv

RT: 10.14

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 22 Mar 2022 3:18

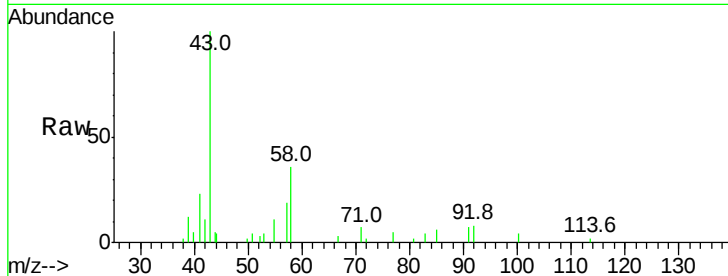
Tgt Ion: 43 Resp: 9952

Ion Ratio Lower Upper

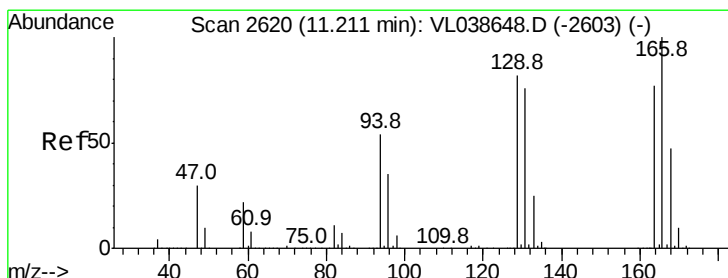
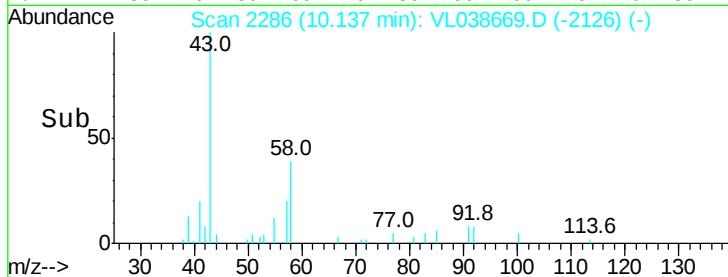
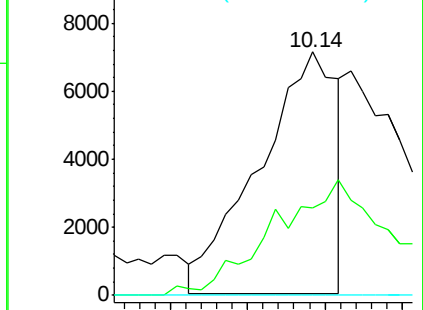
43 100

58 0.0 41.2 61.8#

98 0.0 0.2 0.4#



Abundance Ion 43.10 (42.80 to 43.80): VL0
Ion 58.10 (57.80 to 58.80): VL0
Ion 98.20 (97.90 to 98.90): VL0



#52

Tetrachloroethene

Concen: 0.05 ppbv

RT: 11.22 min Scan# 2624

Delta R.T. 0.01 min

Lab File: VL038669.D

Acq: 22 Mar 2022 3:18

Tgt Ion: 164 Resp: 3249

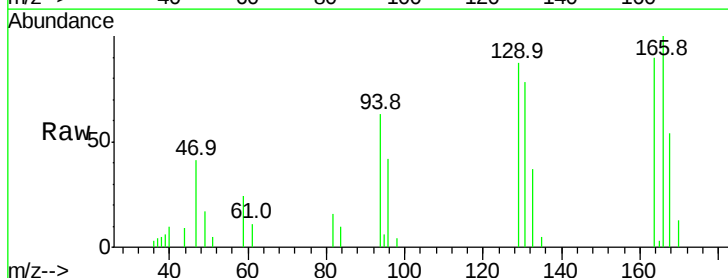
Ion Ratio Lower Upper

164 100

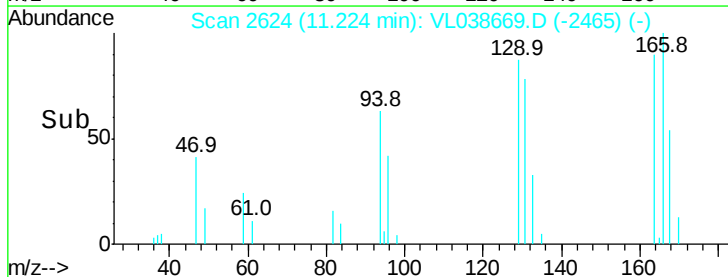
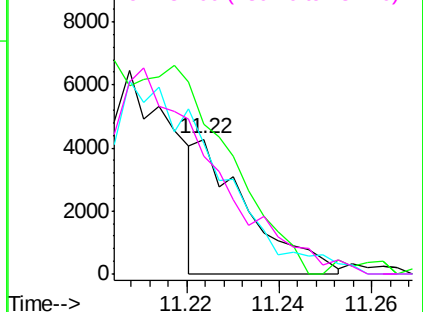
166 103.8 103.3 154.9

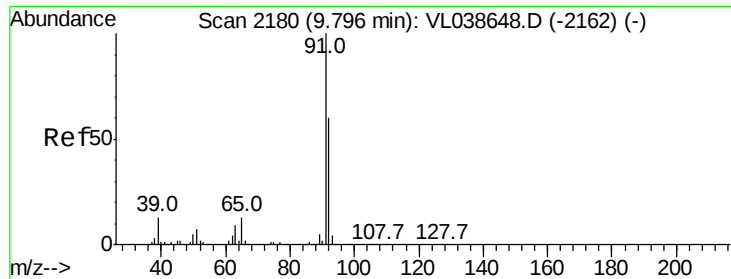
129 92.3 85.2 127.8

131 79.2 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: 4.60 ppbv

RT: 9.79 Instrument: MSVOA_1

Delta R.T. -0.00 min

Lab File: ClientSampleId: C0P83

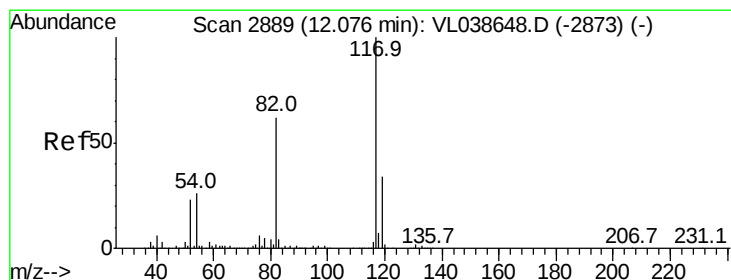
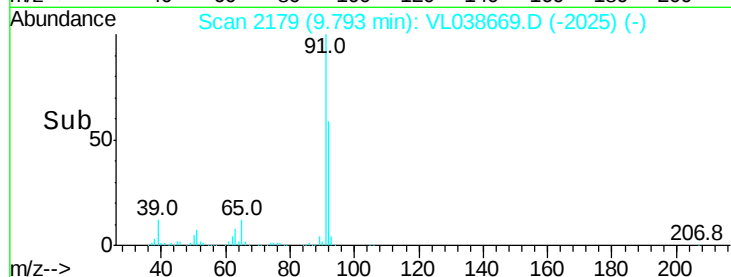
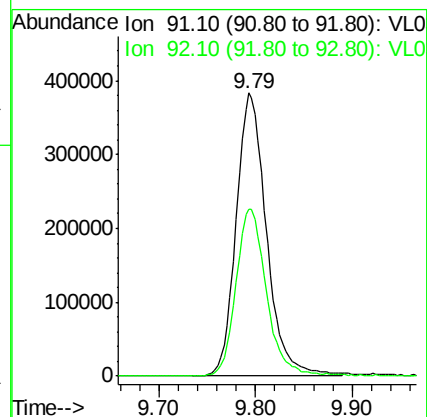
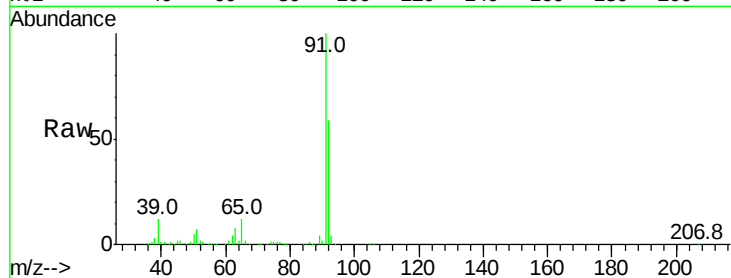
Acq: 22 Mar 2022 3:18

Tgt Ion: 91 Resp: 835309

Ion Ratio Lower Upper

91 100

92 60.7 48.7 73.1



#55

Chlorobenzene-d5

Concen: 10.00 ppbv

RT: 12.08 min Scan# 2889

Delta R.T. -0.00 min

Lab File: VL038669.D

Acq: 22 Mar 2022 3:18

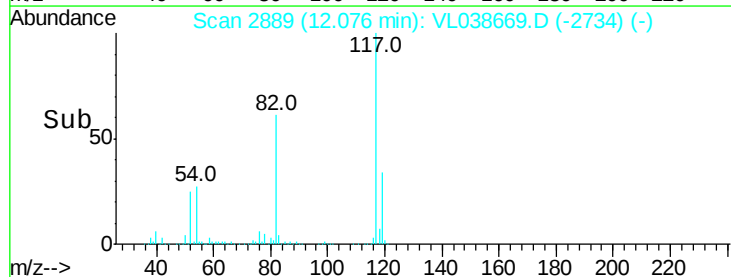
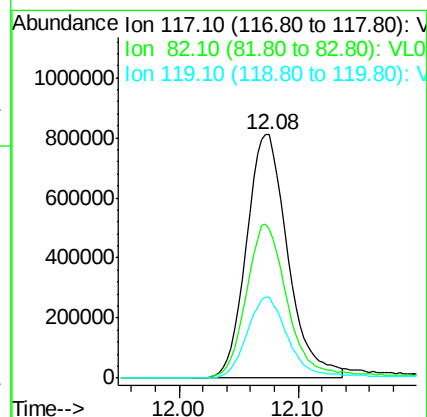
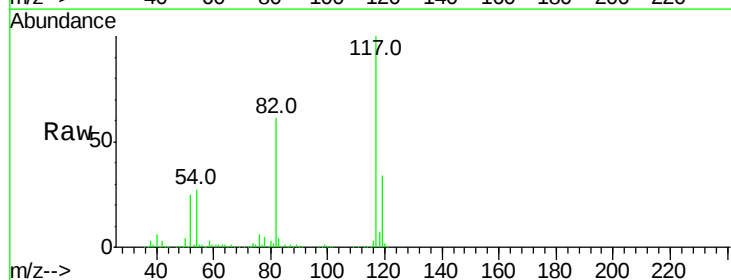
Tgt Ion: 117 Resp: 1953223

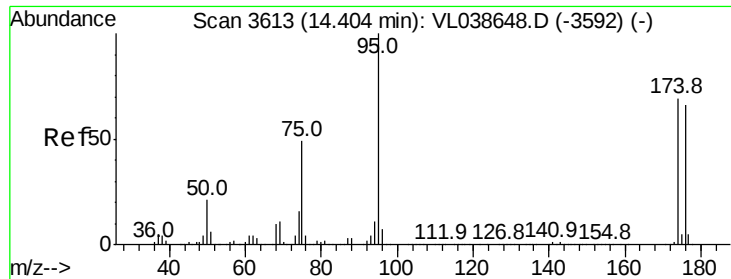
Ion Ratio Lower Upper

117 100

82 66.8 51.6 77.4

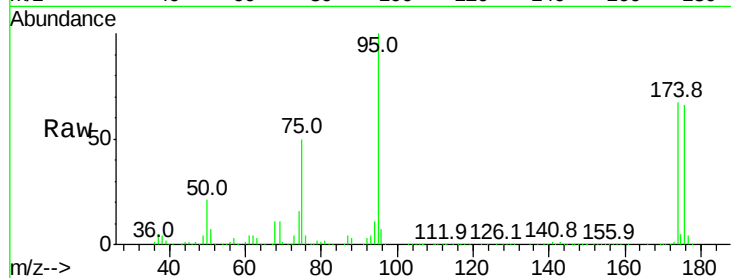
119 35.0 26.9 40.3



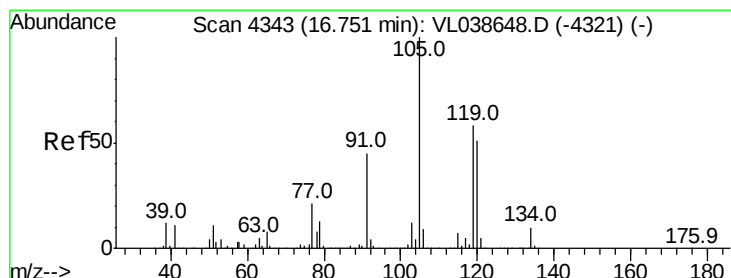
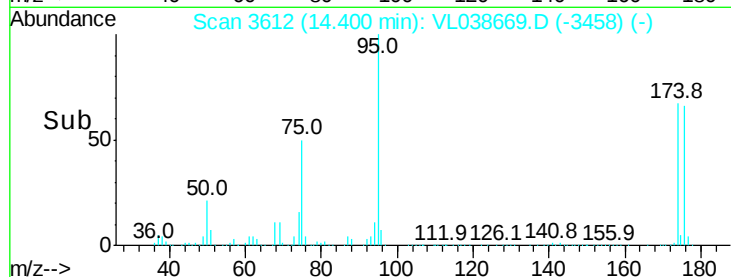
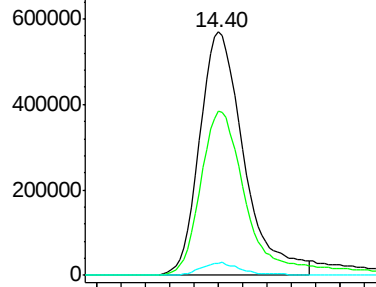


#68
 1-Bromo-4-Fluorobenzene
 Concen: 9.60 ppbv
 RT: 14.40 min
 Delta R.T.: MSVOA_L
 Lab File: ClientSampleId :
 C0P83
 Acq: 22 Mar 2022 3:18

Tgt Ion: 95 Resp: 1437430
 Ion Ratio Lower Upper
 95 100
 174 72.9 56.1 84.1
 175 5.1 4.2 6.2

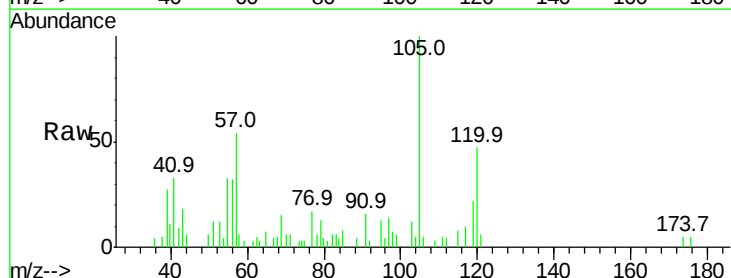


Abundance Ion 95.10 (94.80 to 95.80): VL0
 Ion 174.00 (173.70 to 174.70): V
 Ion 175.00 (174.70 to 175.70): V



#74
 1,2,4-Trimethylbenzene
 Concen: 0.05 ppbv
 RT: 16.75 min Scan# 4342
 Delta R.T.: -0.00 min
 Lab File: VL038669.D
 Acq: 22 Mar 2022 3:18

Tgt Ion: 105 Resp: 12215
 Ion Ratio Lower Upper
 105 100
 120 50.4 40.5 60.7
 91 13.8 35.9 53.9#
 77 13.5 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

