

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL032222\
 Data File : VL038689.D
 Acq On : 22 Mar 2022 18:24
 Operator : SY/AP
 Sample : N1961-11DL 5X
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 C0P74DL

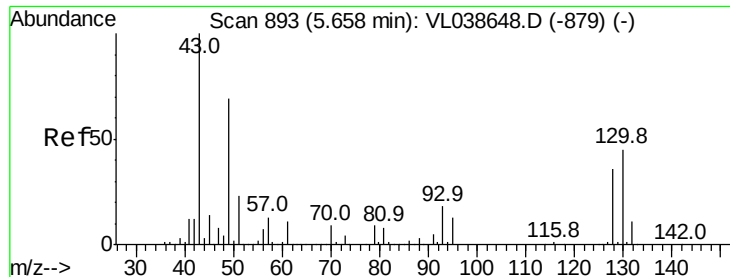
Quant Time: Mar 23 04:14:20 2022
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL032122AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Mar 21 17:09:26 2022
 QLast Update : Mon Mar 21 17:09:26 2022
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.65	49	878920	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.16	114	2380225	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.07	117	2090090	10.00	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.40	95	1488371	9.29	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	92.90%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.05	85	7886	0.07	ppbv	90
3) Chlorodifluoromethane	2.99	51	7867	0.08	ppbv #	85
9) Propene	3.02	41	43045	0.96	ppbv	84
11) Trichlorofluoromethane	3.95	101	4511	0.04	ppbv	90
13) Ethanol	3.60	45	28897	5.85	ppbv	94
15) Acetone	3.85	43	130712	1.72	ppbv #	31
16) 1,3-Butadiene	3.31	39	28004	0.65	ppbv #	14
17) tert-Butyl alcohol	4.30	59	2437	0.04	ppbv #	73
19) Isopropyl Alcohol	3.98	45	20670	0.49	ppbv #	91
20) Methylene Chloride	4.34	84	83029	2.60	ppbv	92
21) Allyl Chloride	4.20	41	4894	0.09	ppbv #	23
23) Vinyl Acetate	5.05	43	8203	0.11	ppbv #	1
25) Ethyl Acetate	5.68	43	84563	0.44	ppbv #	86
26) Hexane	5.68	57	97253	1.14	ppbv #	47
29) Chloroform	5.74	83	12242	0.09	ppbv	95
31) cis-1,2-Dichloroethene	5.54	61	3448	0.04	ppbv #	75
34) 2-Butanone	5.24	43	315130	3.35	ppbv	98
36) Benzene	6.87	78	42448	0.23	ppbv	96
38) Trichloroethene	7.82	130	12742	0.17	ppbv	86
39) 1,2-Dichloropropane	7.16	63	541403	7.54	ppbv #	28
41) Tetrahydrofuran	6.05	42	3212	0.05	ppbv #	35
44) 2,2,4-Trimethylpentane	7.86	57	13128	0.04	ppbv #	6
52) Tetrachloroethene	11.22	164	4823445	71.75	ppbv	95
53) Toluene	9.79	91	162311	0.82	ppbv	99
56) 1,1,1,2-Tetrachloroethane	12.10	131	2489	0.03	ppbv #	1
62) Isopropylbenzene	14.65	105	26688	0.09	ppbv #	75

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



#1

Bromochloromethane

Concen: 10.00 ppbv

RT: 5.65 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 22 Mar 2022 18:24

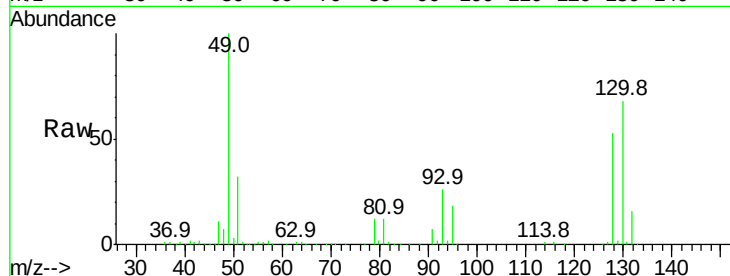
Tgt Ion: 49 Resp: 878920

Ion Ratio Lower Upper

49 100

128 54.7 26.2 78.6

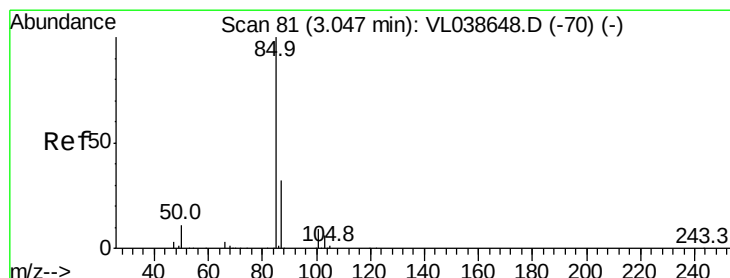
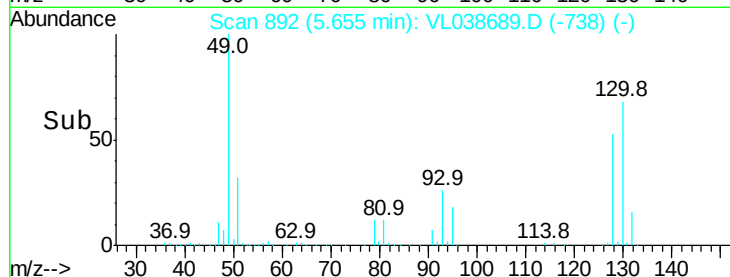
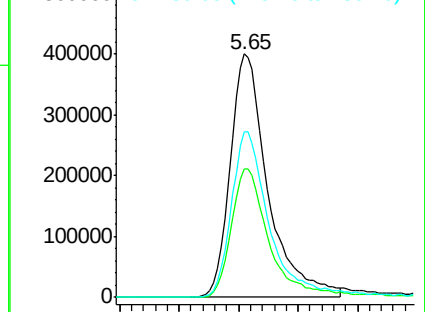
130 71.1 33.7 101.1



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: 0.07 ppbv

RT: 3.05 min Scan# 81

Delta R.T. -0.00 min

Lab File: VL038689.D

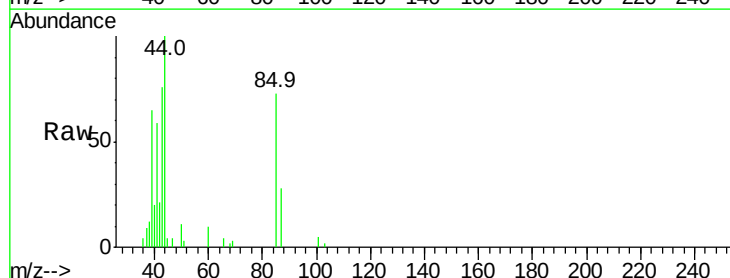
Acq: 22 Mar 2022 18:24

Tgt Ion: 85 Resp: 7886

Ion Ratio Lower Upper

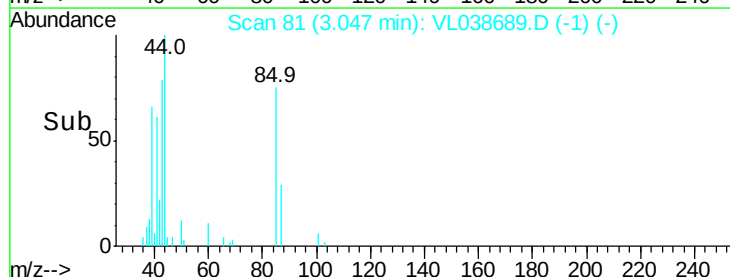
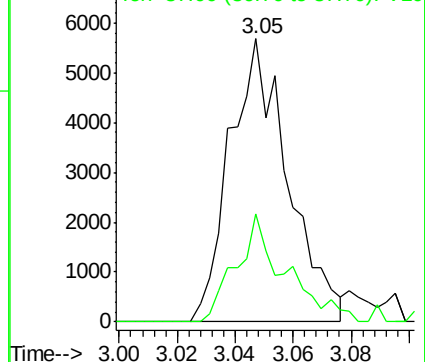
85 100

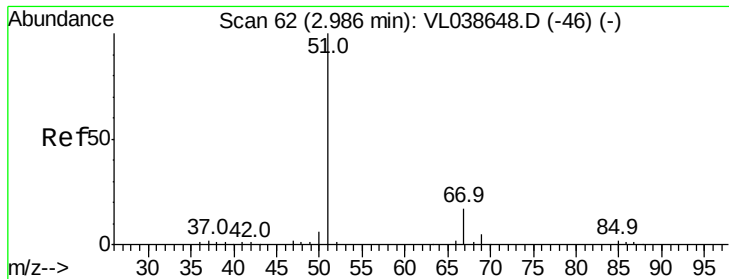
87 38.3 26.0 39.0



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.08 ppbv

RT: 2.99 Instrument: MSVOA_1

Delta R.T. 0.01

Lab File: ClientSampleId: C0P74DL

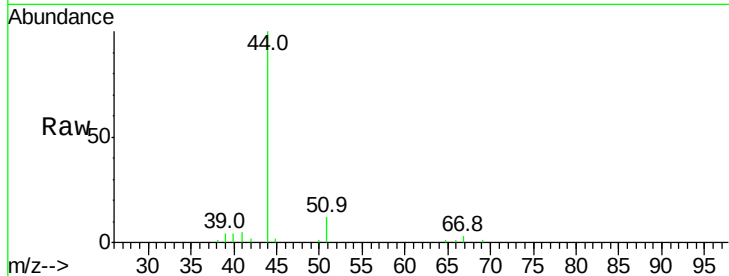
Acq: 22 Mar 2022 18:24

Tgt Ion: 51 Resp: 7867

Ion Ratio Lower Upper

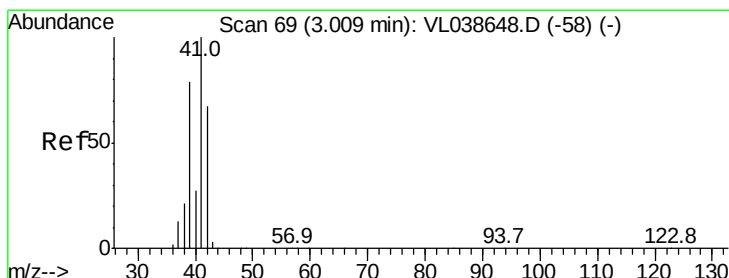
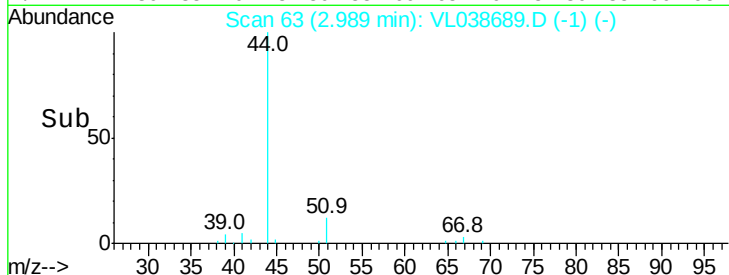
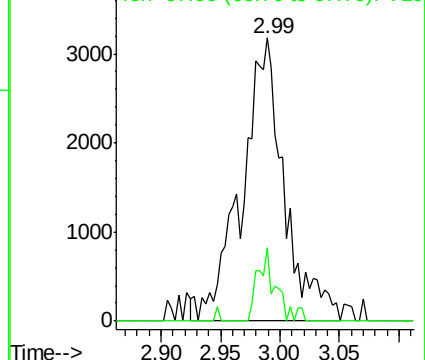
51 100

67 11.1 14.1 21.1#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#9

Propene

Concen: 0.96 ppbv

RT: 3.02 min Scan# 72

Delta R.T. 0.01 min

Lab File: VL038689.D

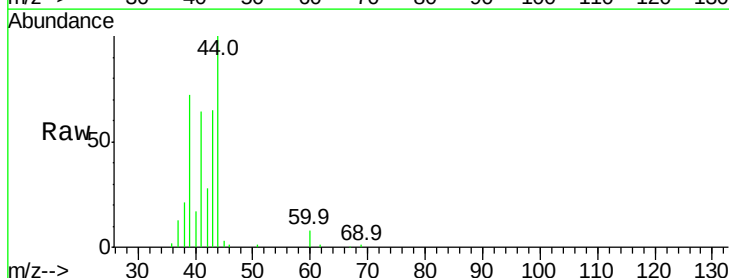
Acq: 22 Mar 2022 18:24

Tgt Ion: 41 Resp: 43045

Ion Ratio Lower Upper

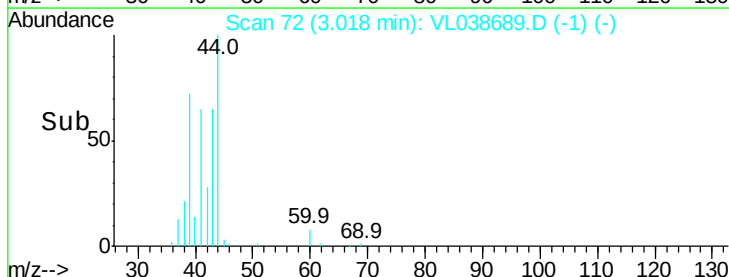
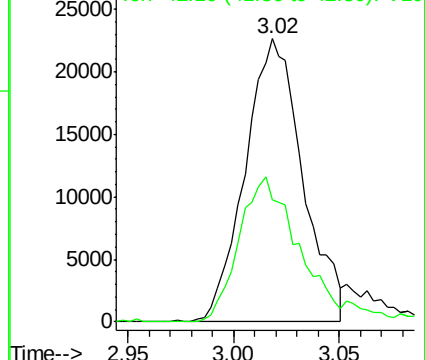
41 100

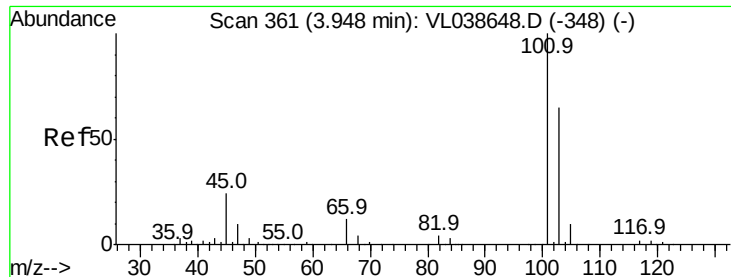
42 57.4 56.2 84.4



Abundance Ion 41.10 (40.80 to 41.80): VL0

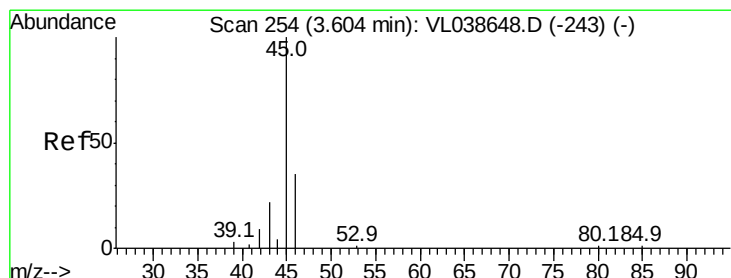
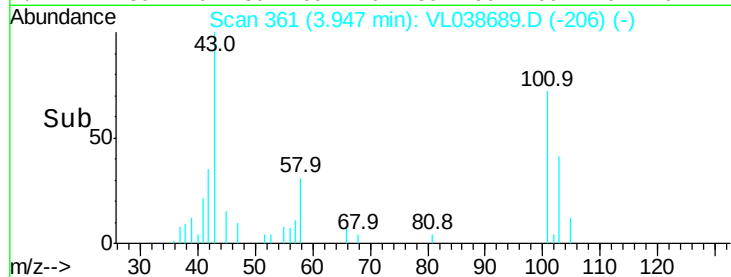
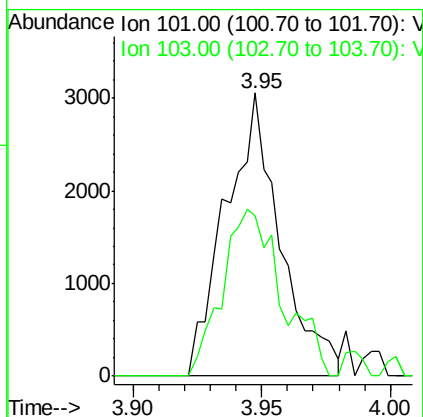
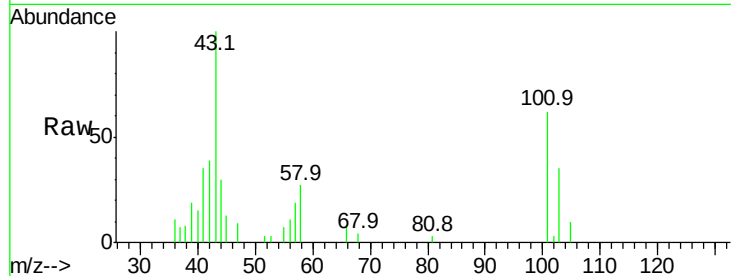
Ion 42.10 (41.80 to 42.80): VL0





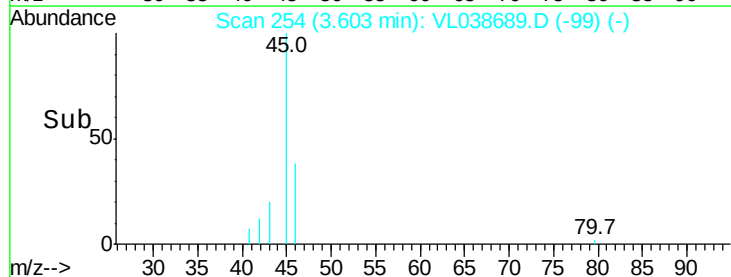
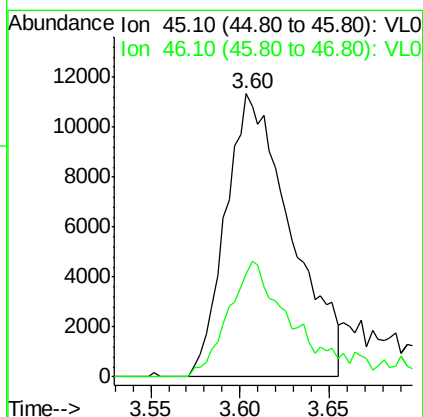
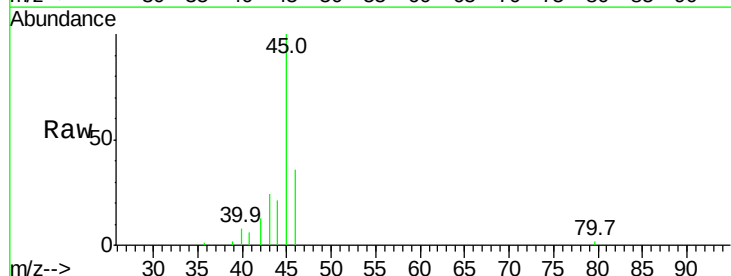
#11
 Trichlorofluoromethane
 Concen: 0.04 ppbv
 RT: 3.95
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 C0P74DL
 Acq: 22 Mar 2022 18:24

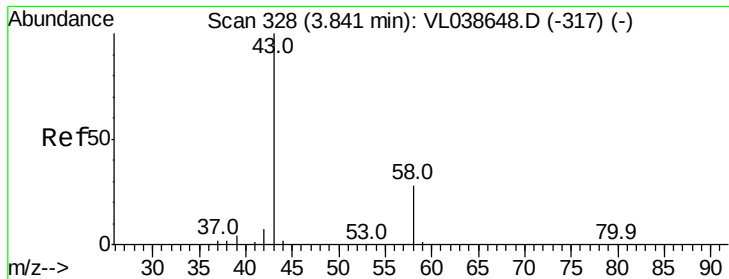
Tgt Ion: 101 Resp: 4511
 Ion Ratio Lower Upper
 101 100
 103 56.7 51.9 77.9



#13
 Ethanol
 Concen: 5.85 ppbv
 RT: 3.60 min Scan# 254
 Delta R.T. -0.00 min
 Lab File: VL038689.D
 Acq: 22 Mar 2022 18:24

Tgt Ion: 45 Resp: 28897
 Ion Ratio Lower Upper
 45 100
 46 41.3 15.1 60.5





#15

Acetone

Concen: 1.72 ppbv

RT: 3.85 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

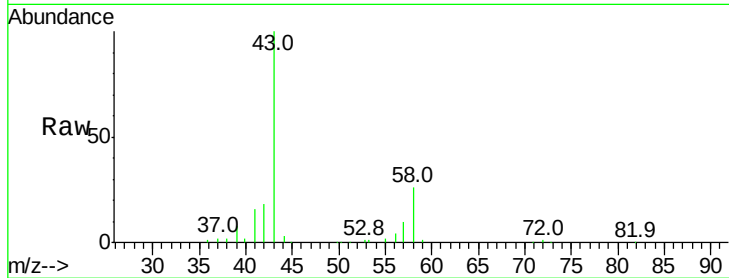
Acq: 22 Mar 2022 18:24

Tgt Ion: 43 Resp: 130712

Ion Ratio Lower Upper

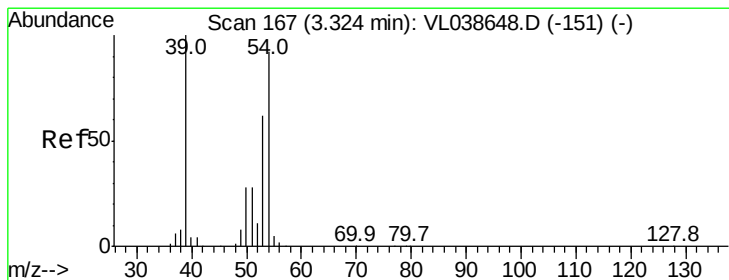
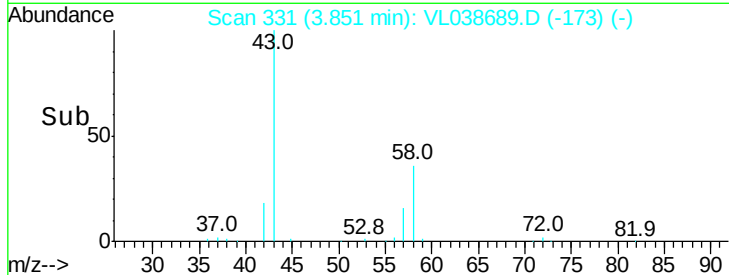
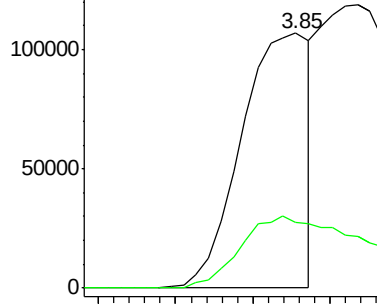
43 100

58 65.8 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: 0.65 ppbv

RT: 3.31 min Scan# 163

Delta R.T. -0.01 min

Lab File: VL038689.D

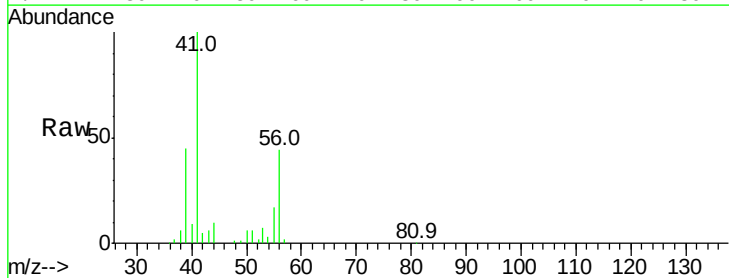
Acq: 22 Mar 2022 18:24

Tgt Ion: 39 Resp: 28004

Ion Ratio Lower Upper

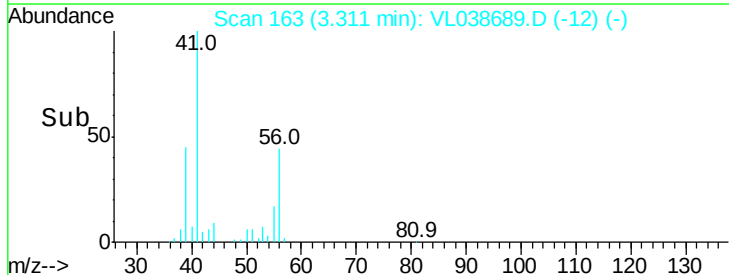
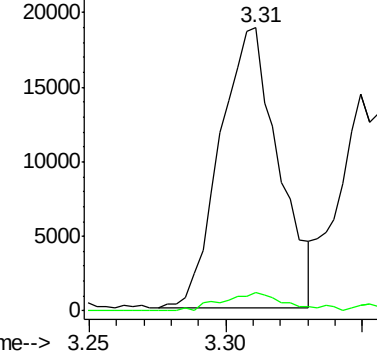
39 100

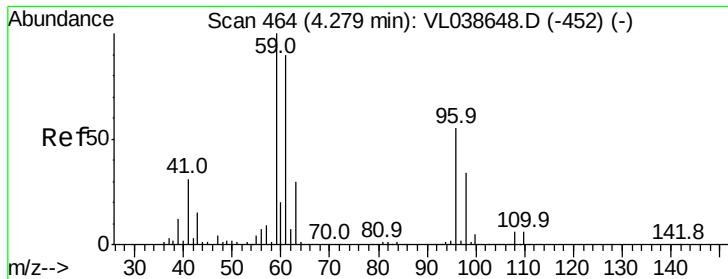
54 7.1 69.1 103.7#



Abundance Ion 39.10 (38.80 to 39.80): VL0

Ion 54.10 (53.80 to 54.80): VL0





#17

tert-Butyl alcohol

Concen: 0.04 ppbv

RT: 4.30 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

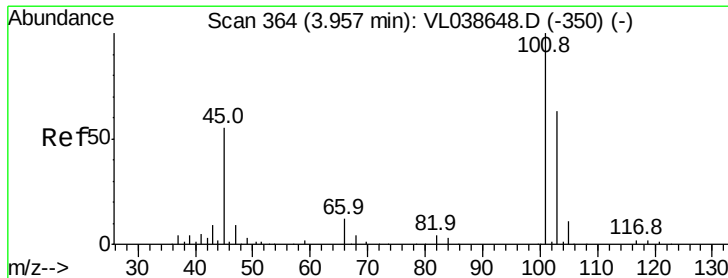
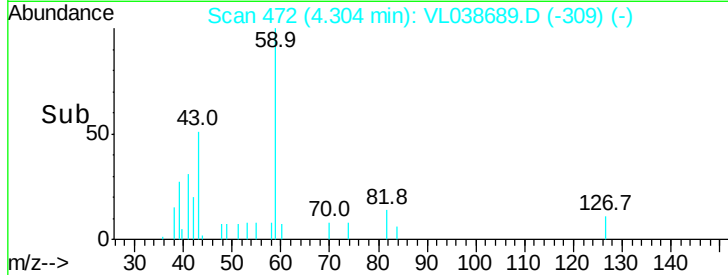
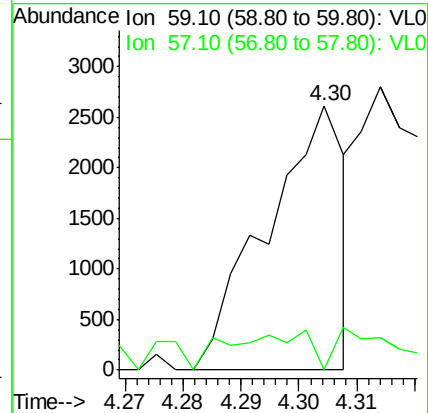
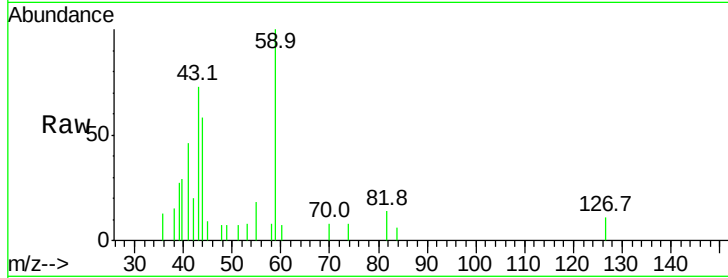
Acq: 22 Mar 2022 18:24

Tgt Ion: 59 Resp: 2437

Ion Ratio Lower Upper

59 100

57 0.0 8.2 12.2#



#19

Isopropyl Alcohol

Concen: 0.49 ppbv

RT: 3.98 min Scan# 370

Delta R.T. 0.02 min

Lab File: VL038689.D

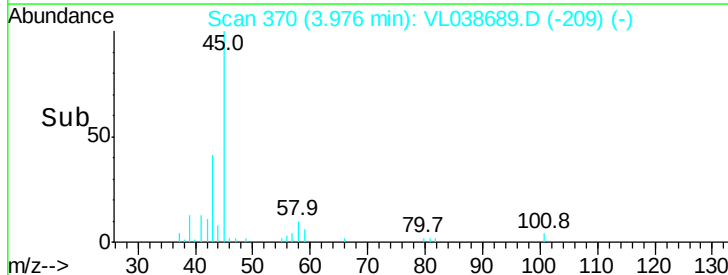
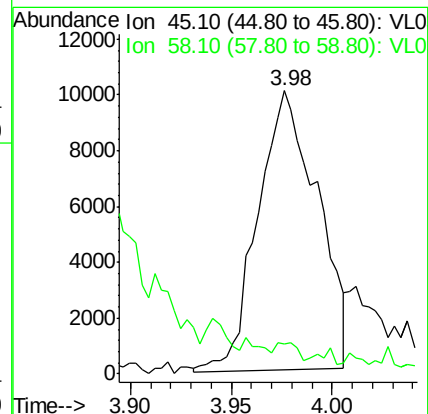
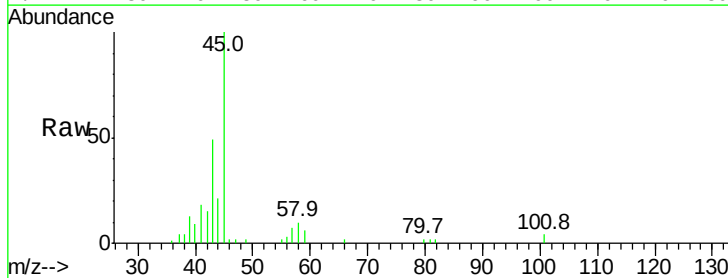
Acq: 22 Mar 2022 18:24

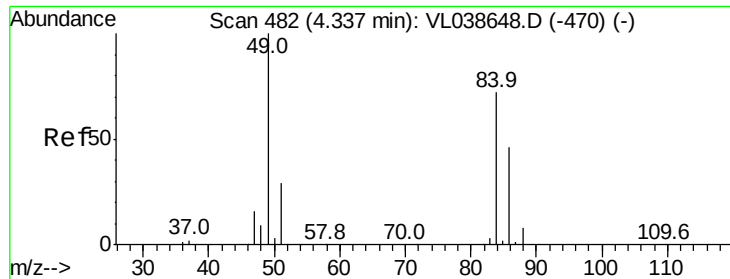
Tgt Ion: 45 Resp: 20670

Ion Ratio Lower Upper

45 100

58 0.0 2.3 3.5#





#20

Methylene Chloride

Concen: 2.60 ppbv

RT: 4.34 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: C0P74DL

Acq: 22 Mar 2022 18:24

Tgt Ion: 84 Resp: 83029

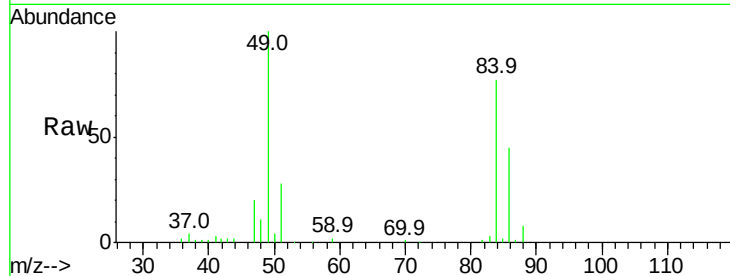
Ion Ratio Lower Upper

84 100

49 128.9 111.2 166.8

51 35.8 32.8 49.2

86 57.8 51.4 77.0

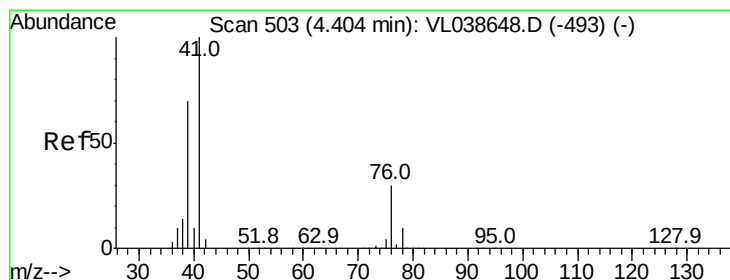
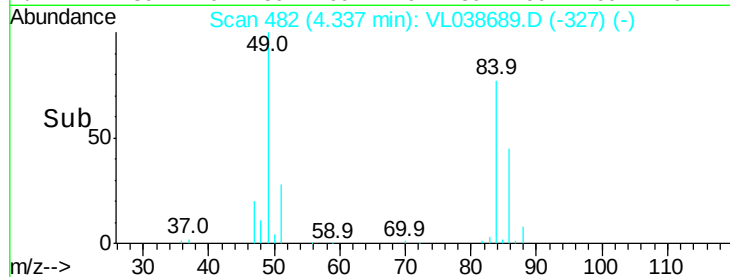
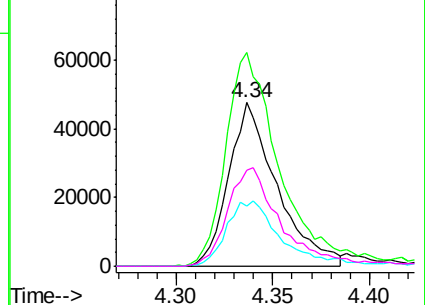


Abundance Ion 84.00 (83.70 to 84.70): VL0

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



#21

Allyl Chloride

Concen: 0.09 ppbv

RT: 4.20 min Scan# 440

Delta R.T. -0.20 min

Lab File: VL038689.D

Acq: 22 Mar 2022 18:24

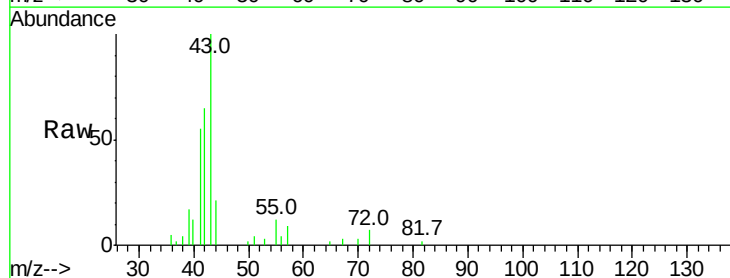
Tgt Ion: 41 Resp: 4894

Ion Ratio Lower Upper

41 100

76 0.0 25.0 37.6#

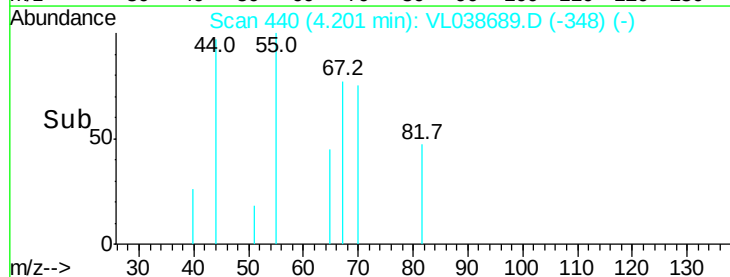
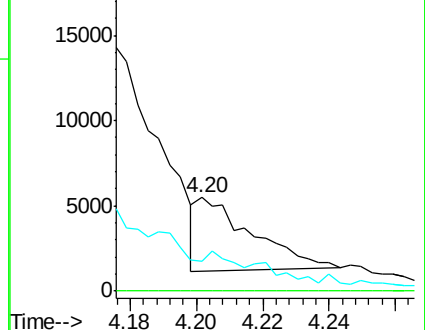
39 0.0 56.6 85.0#

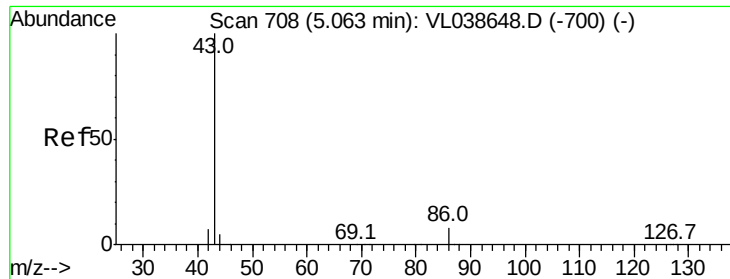


Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 76.10 (75.80 to 76.80): VL0

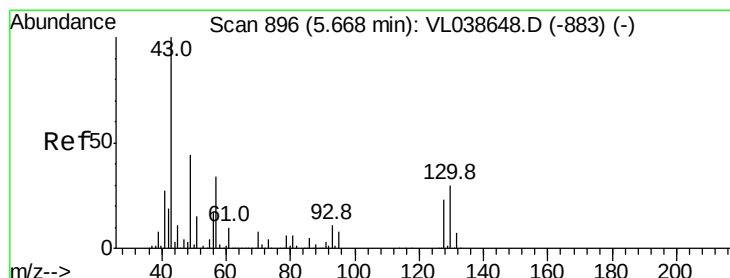
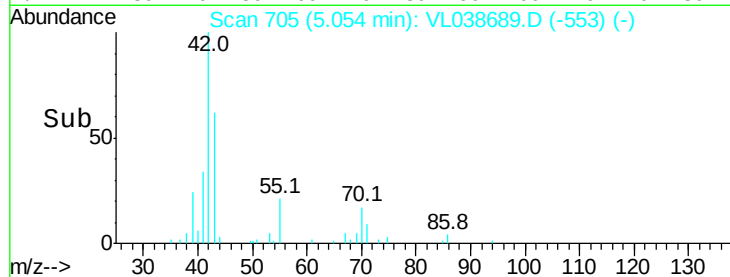
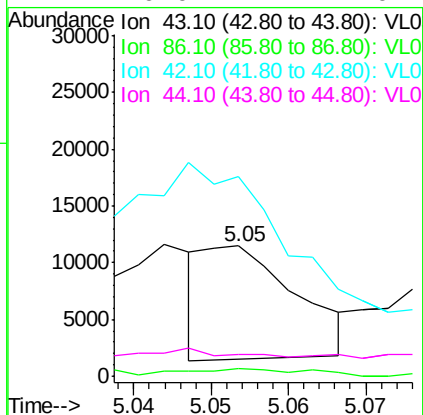
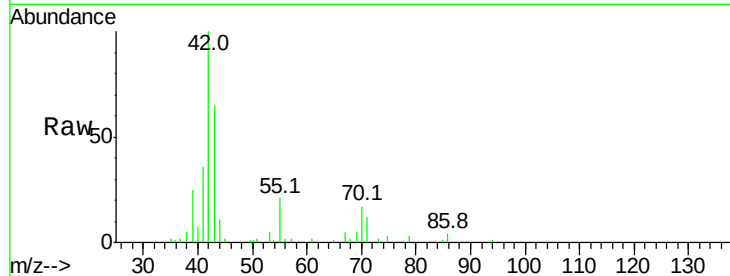
Ion 39.10 (38.80 to 39.80): VL0





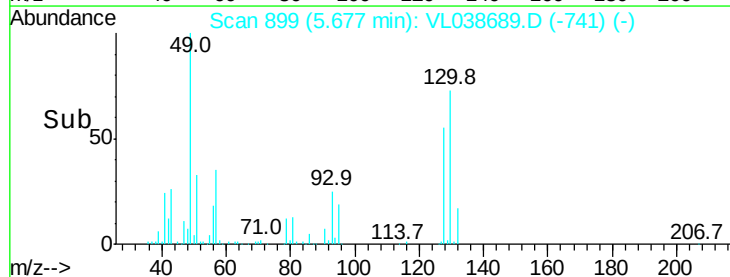
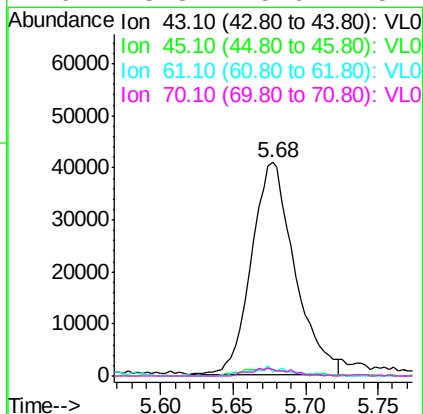
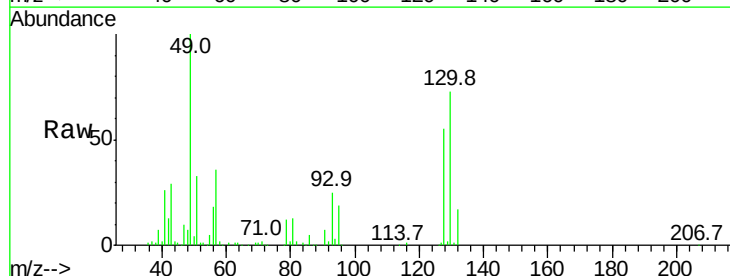
#23
 Vinyl Acetate
 Concen: 0.11 ppbv
 RT: 5.05
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 C0P74DL
 Acq: 22 Mar 2022 18:24

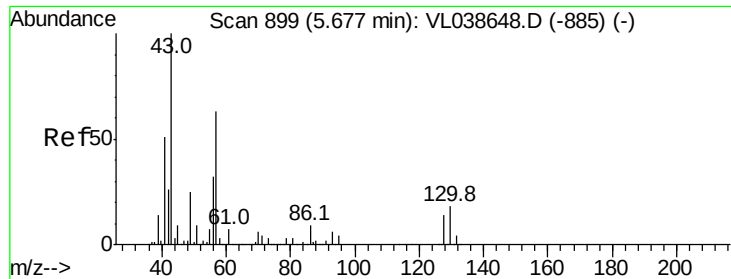
Tgt Ion:	43	Resp:	8203
Ion	Ratio	Lower	Upper
43	100		
86	5.9	5.6	8.4
42	167.9	6.8	10.2#
44	0.0	4.2	6.2#



#25
 Ethyl Acetate
 Concen: 0.44 ppbv
 RT: 5.68 min Scan# 899
 Delta R.T. 0.01 min
 Lab File: VL038689.D
 Acq: 22 Mar 2022 18:24

Tgt Ion:	43	Resp:	84563
Ion	Ratio	Lower	Upper
43	100		
45	4.7	8.2	12.4#
61	4.0	8.3	12.5#
70	3.8	5.6	8.4#





#26

Hexane

Concen: 1.14 ppbv

RT: 5.68

Delta R.T.

Lab File:

Acq: 22 Mar 2022

Instrument:

MSVOA_1

ClientSampleId:

COP74DL

18.24

Tgt Ion: 57 Resp: 97253

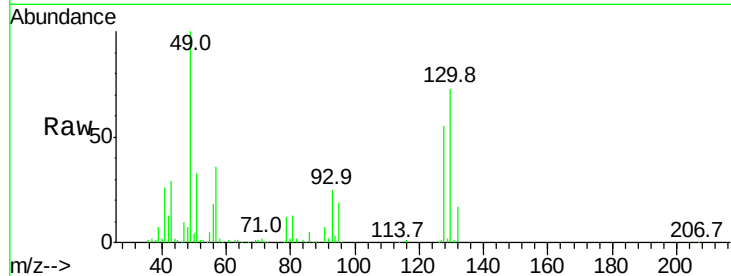
Ion Ratio Lower Upper

57 100

41 86.3 67.0 100.4

43 92.0 184.2 276.2#

56 55.6 42.6 64.0



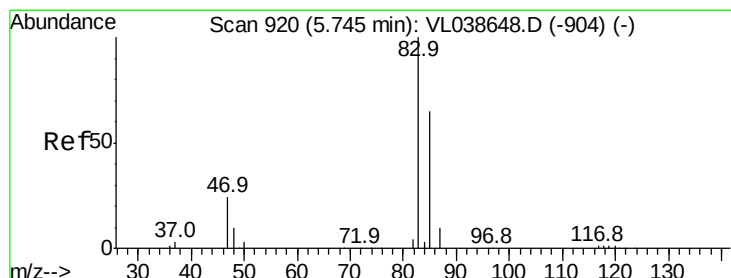
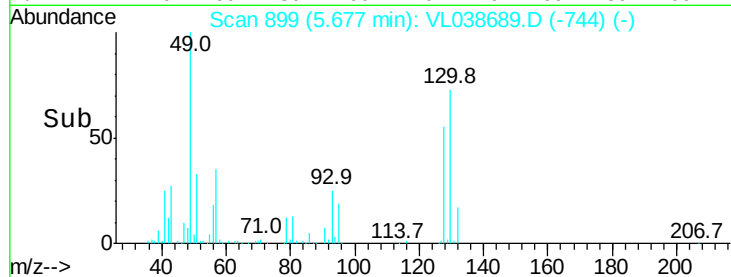
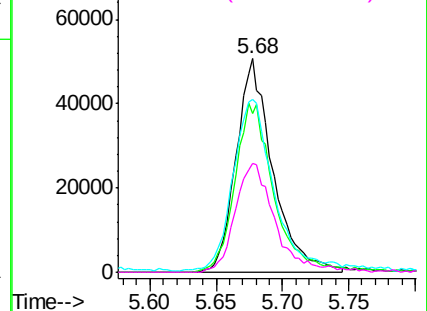
Abundance

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: 0.09 ppbv

RT: 5.74 min Scan# 919

Delta R.T. -0.00 min

Lab File: VL038689.D

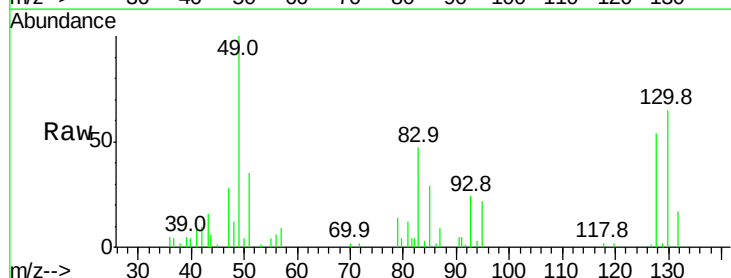
Acq: 22 Mar 2022 18:24

Tgt Ion: 83 Resp: 12242

Ion Ratio Lower Upper

83 100

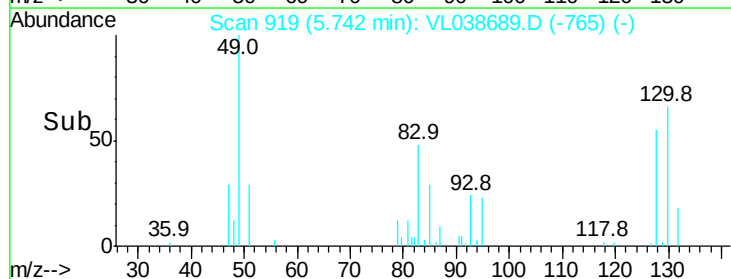
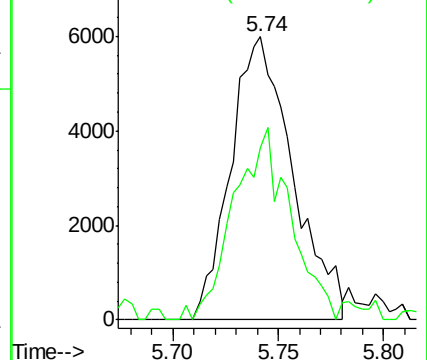
85 60.8 51.7 77.5

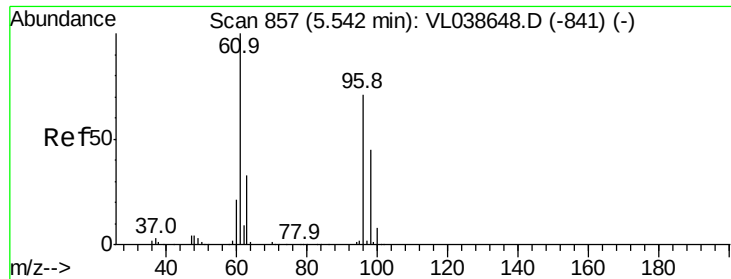


Abundance

Ion 83.00 (82.70 to 83.70): VL0

Ion 85.00 (84.70 to 85.70): VL0





#31

cis-1,2-Dichloroethene

Concen: 0.04 ppbv

RT: 5.54

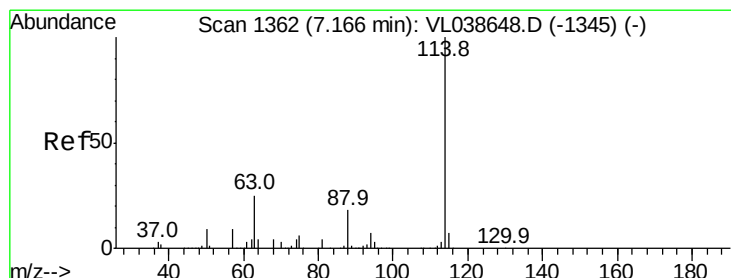
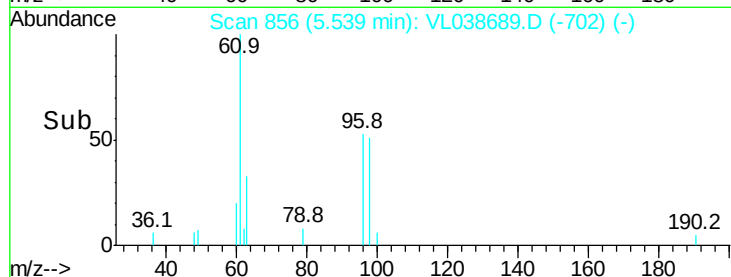
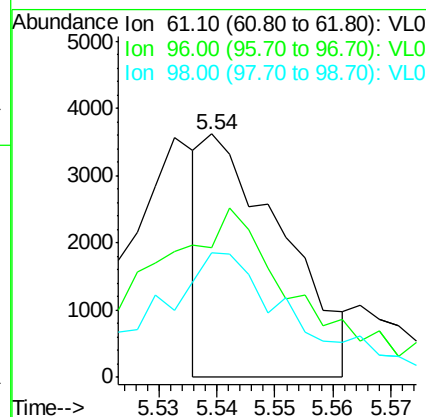
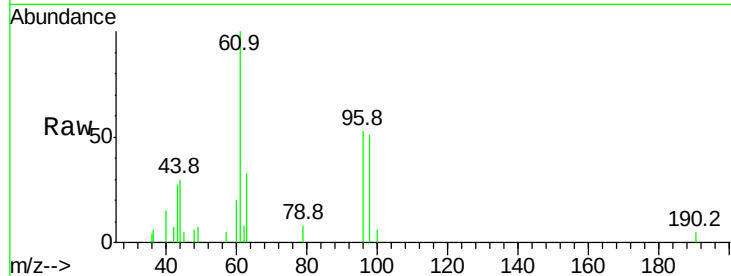
Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 22 Mar 2022 18:24

Tgt Ion: 61 Resp: 3448

Ion	Ratio	Lower	Upper
61	100		
96	40.0	56.6	84.8#
98	49.8	36.3	54.5



#33

1,4-Difluorobenzene

Concen: 10.00 ppbv

RT: 7.16 min Scan# 1361

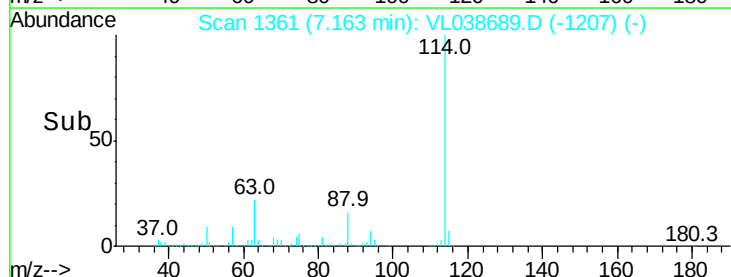
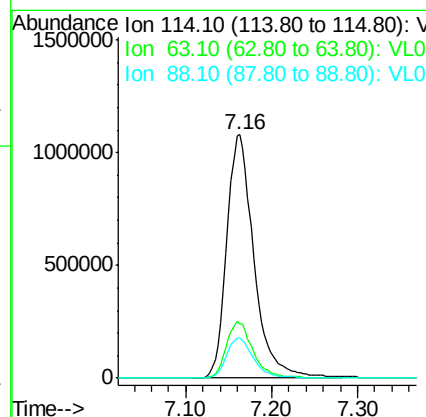
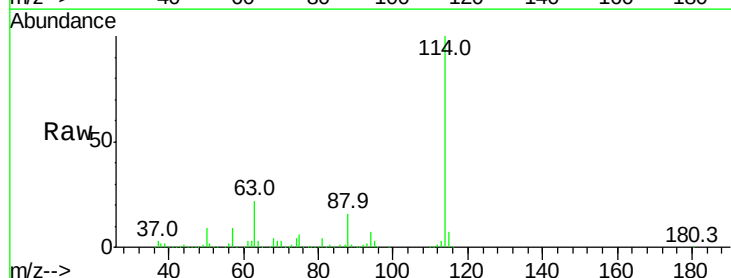
Delta R.T. -0.00 min

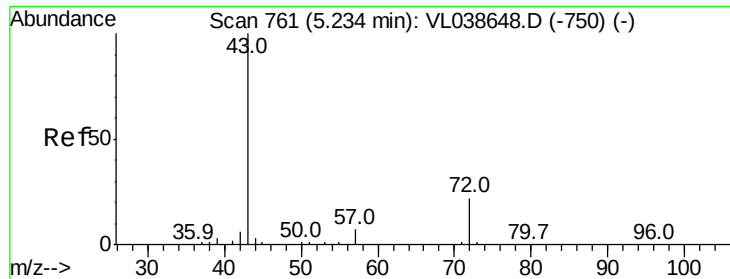
Lab File: VL038689.D

Acq: 22 Mar 2022 18:24

Tgt Ion: 114 Resp: 2380225

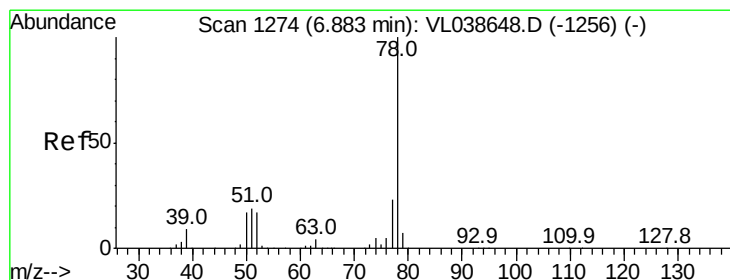
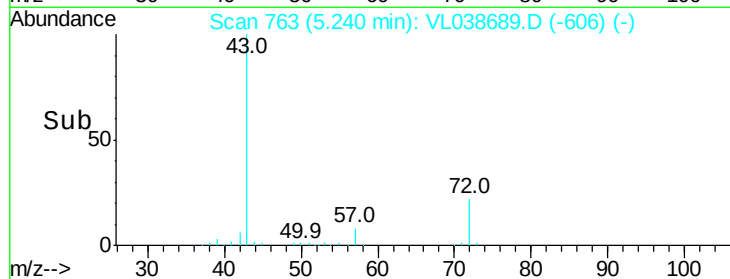
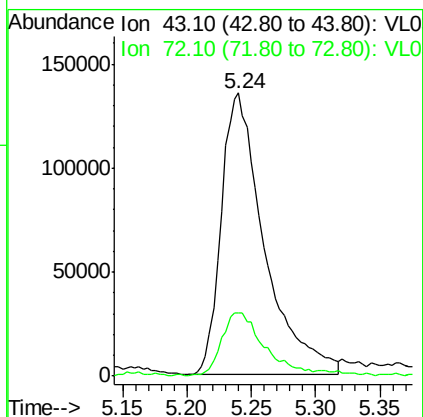
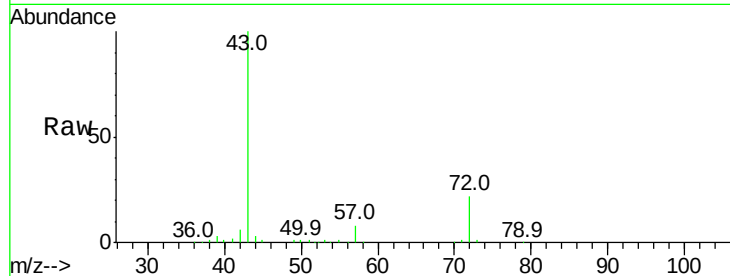
Ion	Ratio	Lower	Upper
114	100		
63	23.0	19.4	29.0
88	16.6	13.9	20.9





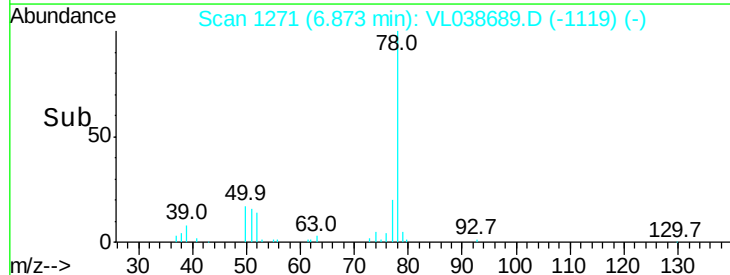
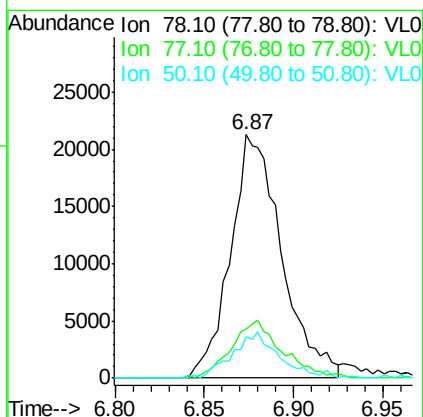
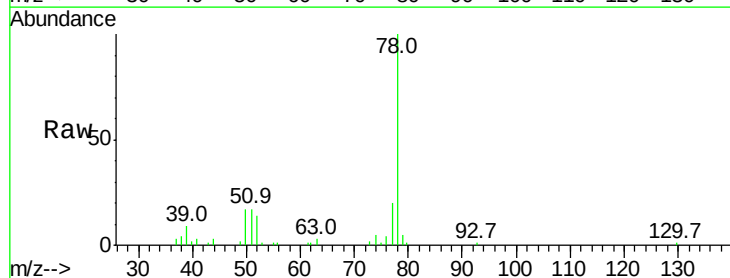
#34
 2-Butanone
 Concen: 3.35 ppbv
 RT: 5.24
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 C0P74DL
 Acq: 22 Mar 2022 18:24

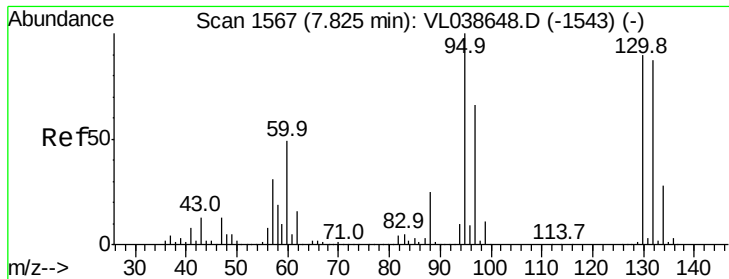
Tgt Ion: 43 Resp: 315130
 Ion Ratio Lower Upper
 43 100
 72 23.4 17.8 26.8



#36
 Benzene
 Concen: 0.23 ppbv
 RT: 6.87 min Scan# 1271
 Delta R.T. -0.01 min
 Lab File: VL038689.D
 Acq: 22 Mar 2022 18:24

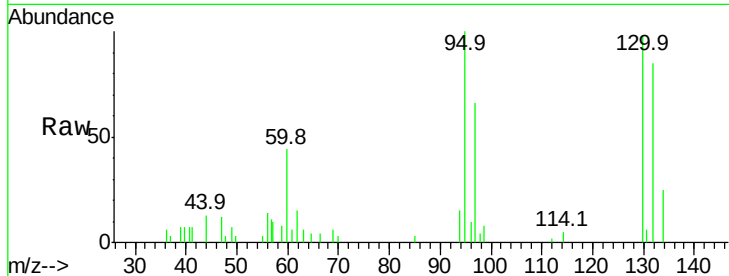
Tgt Ion: 78 Resp: 42448
 Ion Ratio Lower Upper
 78 100
 77 18.9 18.1 27.1
 50 17.0 13.6 20.4





#38
 Trichloroethene
 Concen: 0.17 ppbv
 RT: 7.82
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 22 Mar 2022 18:24

Tgt Ion:	130	Resp:	12742
Ion Ratio	Lower	Upper	
130	100		
95	96.0	88.9	133.3
132	82.0	77.4	116.0
97	63.6	58.2	87.4

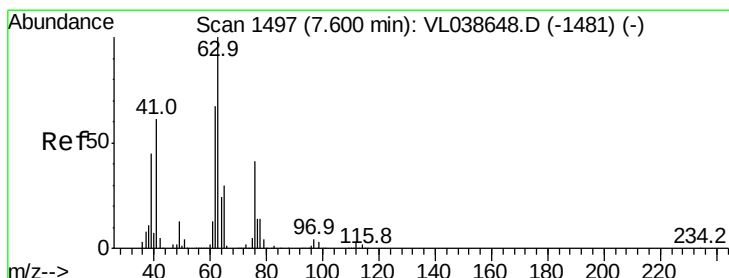
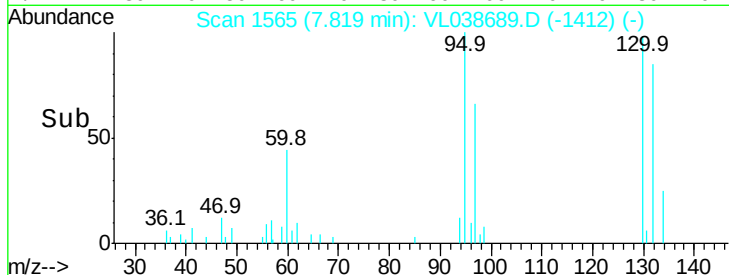
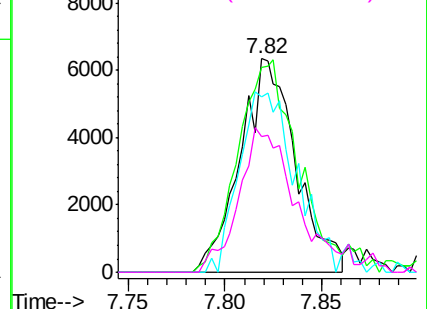


Abundance Ion 130.00 (129.70 to 130.70): V

Ion 95.00 (94.70 to 95.70): VL0

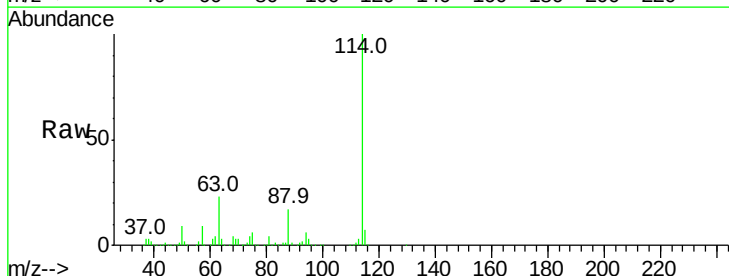
Ion 132.00 (131.70 to 132.70): V

Ion 97.00 (96.70 to 97.70): VL0



#39
 1,2-Dichloropropane
 Concen: 7.54 ppbv
 RT: 7.16 min Scan# 1360
 Delta R.T. -0.44 min
 Lab File: VL038689.D
 Acq: 22 Mar 2022 18:24

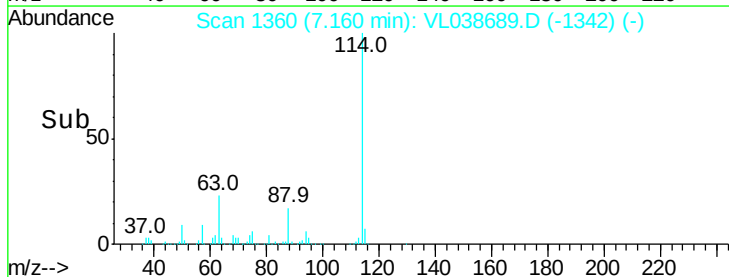
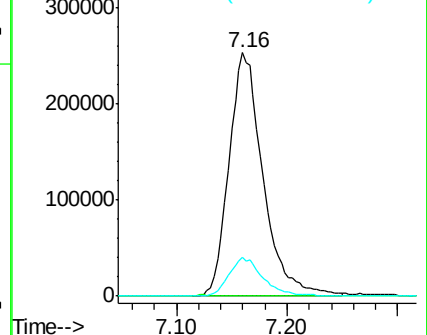
Tgt Ion:	63	Resp:	541403
Ion Ratio	Lower	Upper	
63	100		
41	0.0	49.0	73.6#
62	15.6	53.9	80.9#

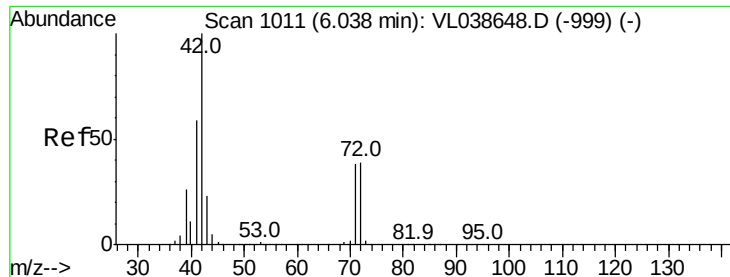


Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

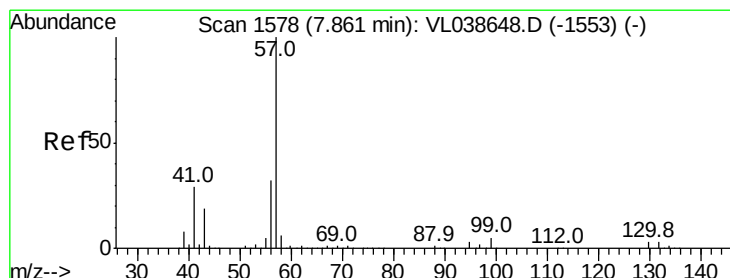
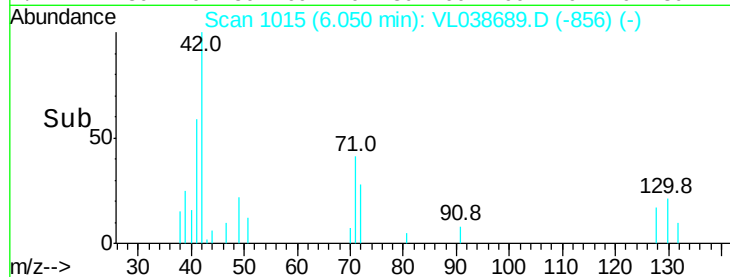
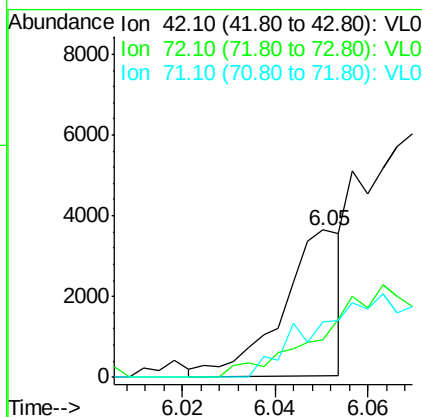
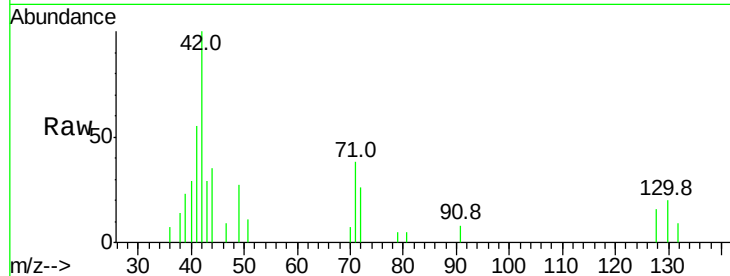
Ion 62.10 (61.80 to 62.80): VL0





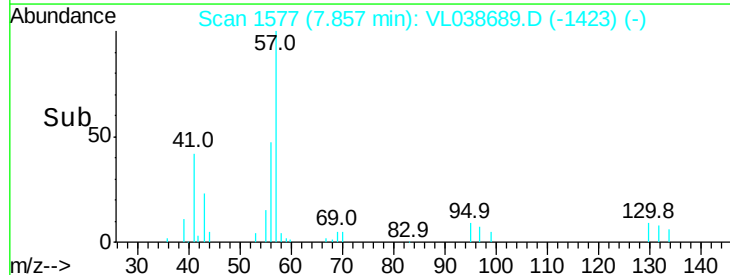
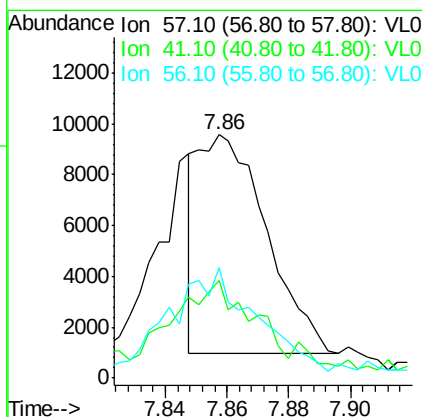
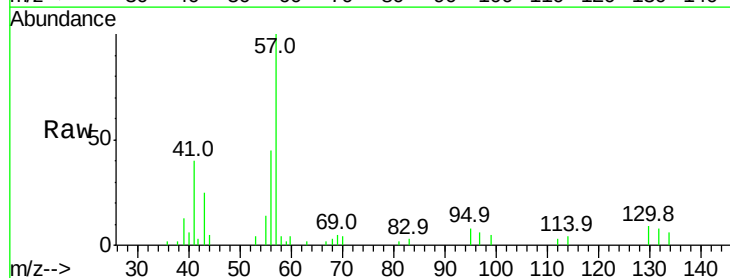
#41
Tetrahydrofuran
Concen: 0.05 ppbv
RT: 6.05
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
COP74DL
Acq: 22 Mar 2022 18:24

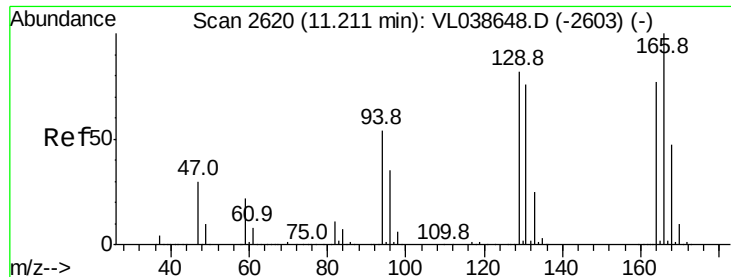
Tgt Ion: 42 Resp: 3212
Ion Ratio Lower Upper
42 100
72 0.0 32.5 48.7#
71 0.0 31.4 47.2#



#44
2,2,4-Trimethylpentane
Concen: 0.04 ppbv
RT: 7.86 min Scan# 1577
Delta R.T. -0.00 min
Lab File: VL038689.D
Acq: 22 Mar 2022 18:24

Tgt Ion: 57 Resp: 13128
Ion Ratio Lower Upper
57 100
41 86.4 23.0 34.4#
56 76.5 25.3 37.9#





#52

Tetrachloroethene

Concen: 71.75 ppbv

RT: 11.22

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 22 Mar 2022 18:24

Tgt Ion:164 Resp: 4823445

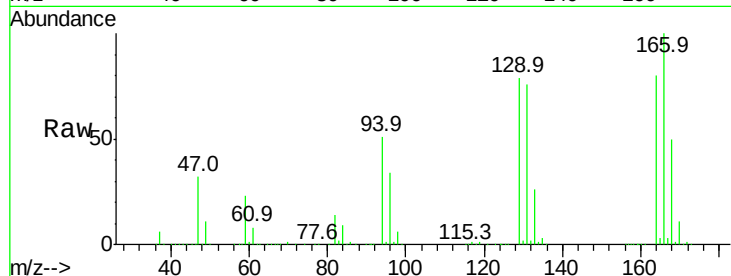
Ion Ratio Lower Upper

164 100

166 124.7 103.3 154.9

129 98.3 85.2 127.8

131 94.6 78.3 117.5

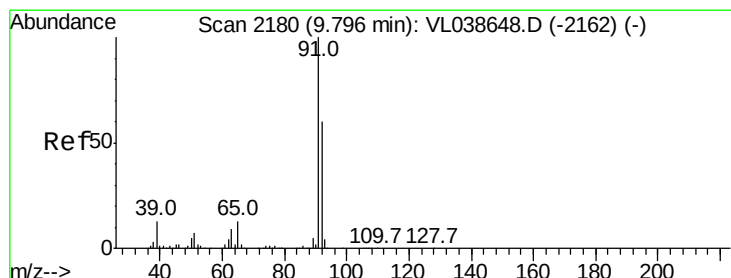
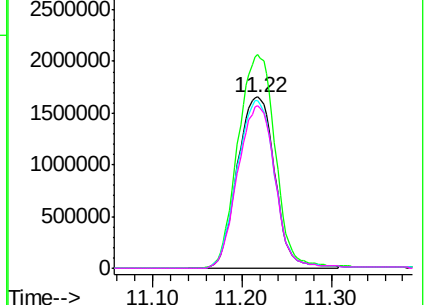
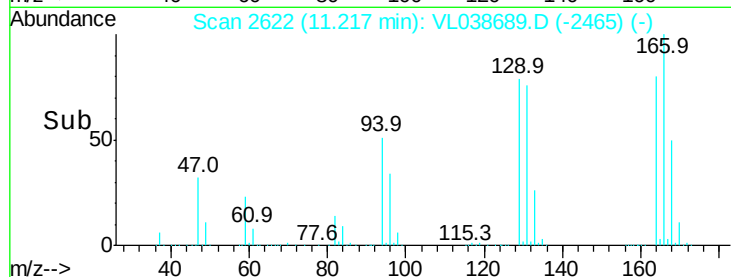


Abundance Ion 163.90 (163.60 to 164.60): V

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: 0.82 ppbv

RT: 9.79 min Scan# 2178

Delta R.T. -0.01 min

Lab File: VL038689.D

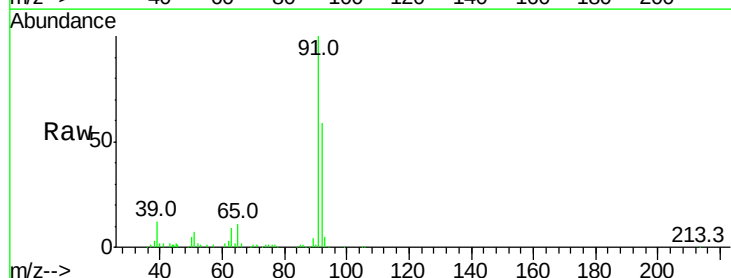
Acq: 22 Mar 2022 18:24

Tgt Ion: 91 Resp: 162311

Ion Ratio Lower Upper

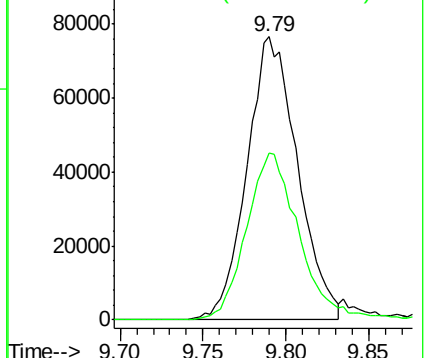
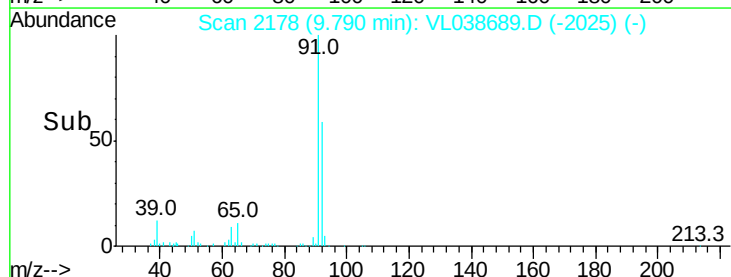
91 100

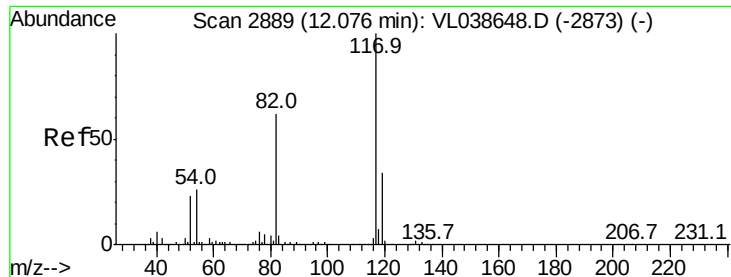
92 61.8 48.7 73.1



Abundance Ion 91.10 (90.80 to 91.80): VL0

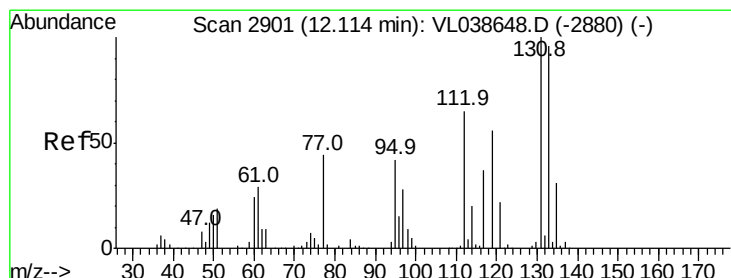
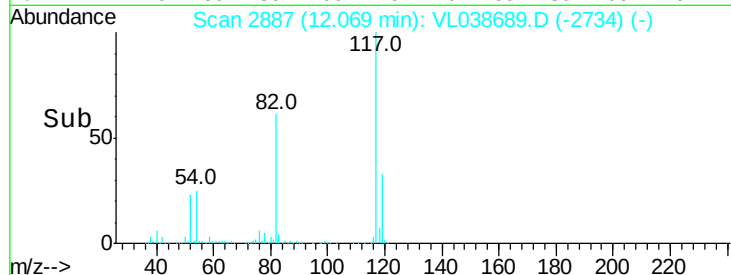
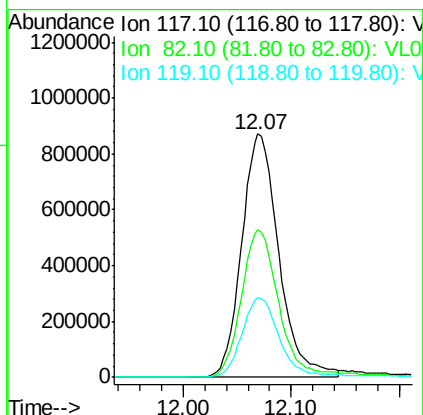
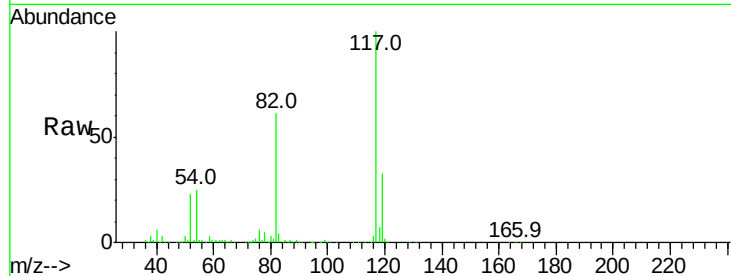
Ion 92.10 (91.80 to 92.80): VL0





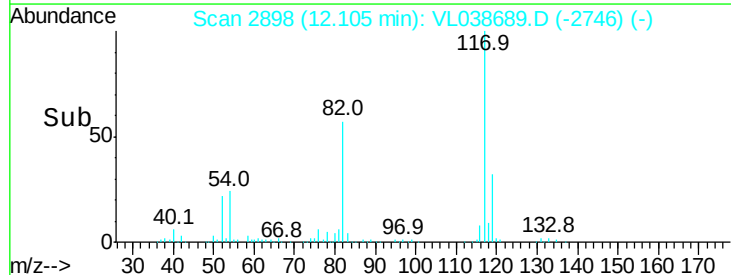
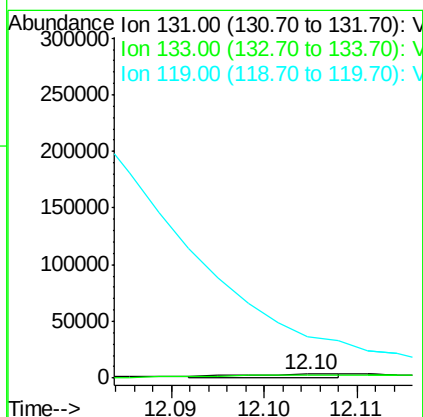
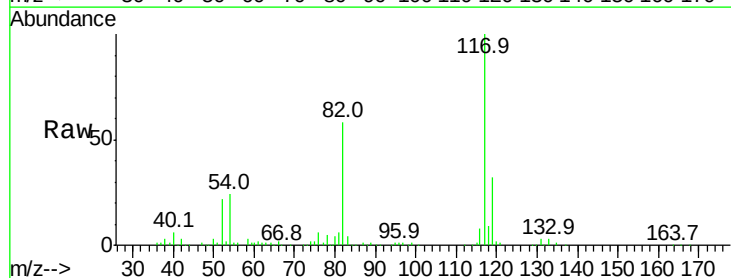
#55
 Chlorobenzene-d5
 Concen: 10.00 ppbv
 RT: 12.07 min
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId :
 C0P74DL
 Acq: 22 Mar 2022 18:24

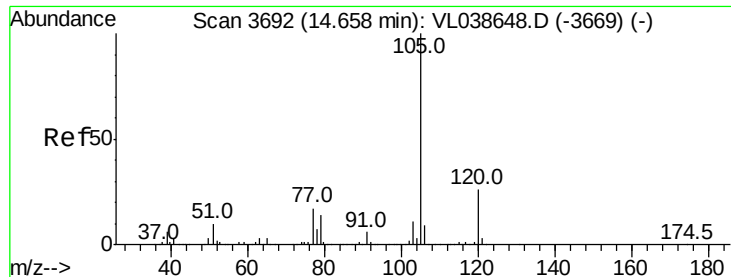
Tgt Ion:117 Resp: 2090090
 Ion Ratio Lower Upper
 117 100
 82 64.2 51.6 77.4
 119 34.1 26.9 40.3



#56
 1,1,1,2-Tetrachloroethane
 Concen: 0.03 ppbv
 RT: 12.10 min Scan# 2898
 Delta R.T.: -0.01 min
 Lab File: VL038689.D
 Acq: 22 Mar 2022 18:24

Tgt Ion:131 Resp: 2489
 Ion Ratio Lower Upper
 131 100
 133 310.0 77.3 115.9#
 119 0.0 53.0 79.6#





#62

Isopropylbenzene

Concen: 0.09 ppbv

RT: 14.65

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

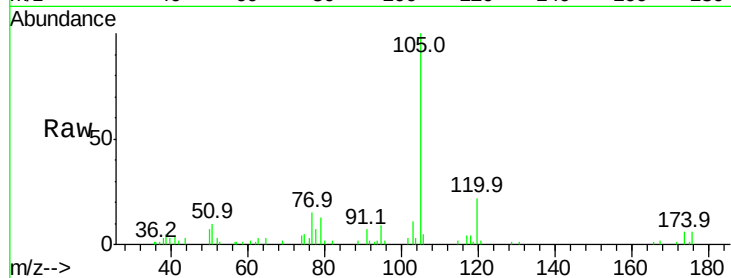
Acq: 22 Mar 2022 18:24

Tgt Ion: 105 Resp: 26688

Ion Ratio Lower Upper

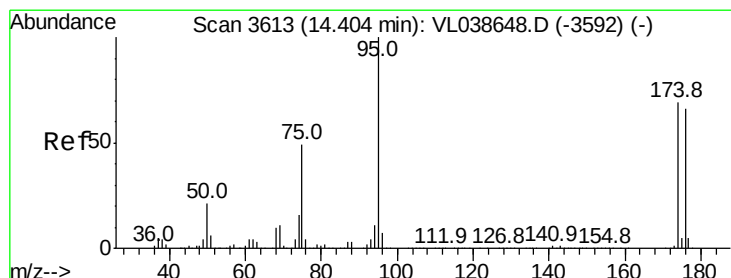
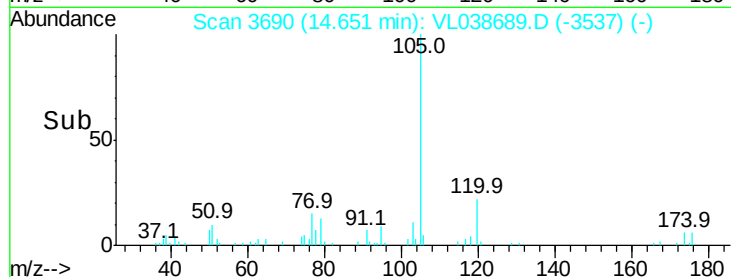
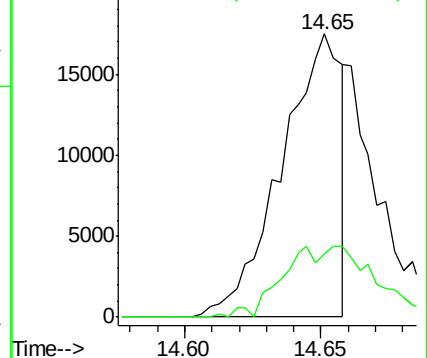
105 100

120 39.2 21.2 31.8#



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V



#68

1-Bromo-4-Fluorobenzene

Concen: 9.29 ppbv

RT: 14.40 min Scan# 3611

Delta R.T. -0.01 min

Lab File: VL038689.D

Acq: 22 Mar 2022 18:24

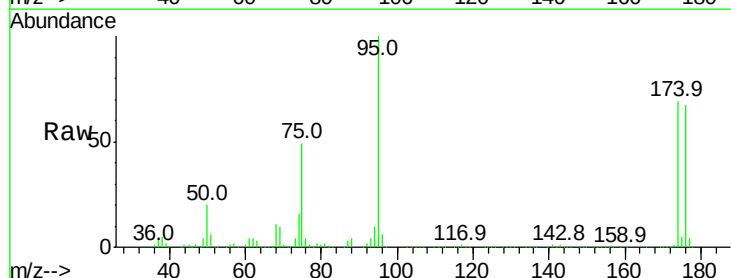
Tgt Ion: 95 Resp: 1488371

Ion Ratio Lower Upper

95 100

174 76.3 56.1 84.1

175 5.6 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

