

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL031722\
 Data File : VL038637.D
 Acq On : 17 Mar 2022 22:26
 Operator : SY/AP
 Sample : N2003-01
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 C0PA4

Quant Time: Mar 18 03:38:06 2022
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL030822AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Tue Mar 08 21:18:44 2022
 QLast Update : Tue Mar 08 21:18:44 2022
 Response via : Initial Calibration

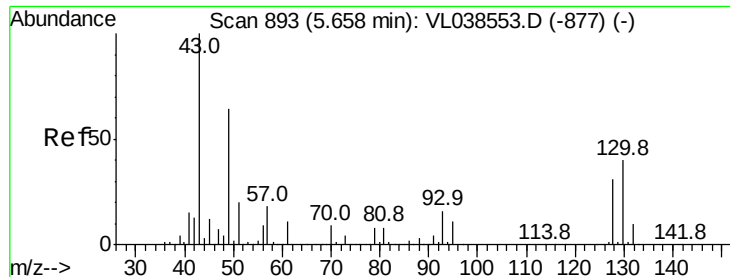
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.67	49	821803	10.00	ppbv	0.01
33) 1,4-Difluorobenzene	7.18	114	2113965	10.00	ppbv	0.02
55) Chlorobenzene-d5	12.09	117	1865217	10.00	ppbv	0.02

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.42	95	1284097	9.06	ppbv	0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	90.60%

Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.06	85	22329	0.18	ppbv	94
3) Chlorodifluoromethane	3.00	51	18238	0.13	ppbv #	90
4) Chloromethane	3.15	50	4012	0.07	ppbv	92
9) Propene	3.02	41	13518	0.26	ppbv	97
11) Trichlorofluoromethane	3.96	101	25018	0.23	ppbv	88
12) 1,1,2-Trichlorotrifluoroet	4.49	101	3263	0.04	ppbv #	53
13) Ethanol	3.61	45	108051	18.40	ppbv	99
15) Acetone	3.86	43	177019	3.05	ppbv #	83
16) 1,3-Butadiene	3.31	39	6764	0.15	ppbv #	22
17) tert-Butyl alcohol	4.32	59	4302	0.07	ppbv #	73
19) Isopropyl Alcohol	3.98	45	25364	0.66	ppbv #	1
20) Methylene Chloride	4.35	84	132141	3.79	ppbv	97
23) Vinyl Acetate	5.07	43	34758	0.42	ppbv #	86
25) Ethyl Acetate	5.69	43	80021	0.41	ppbv #	79
26) Hexane	5.70	57	108966	1.19	ppbv #	43
27) Carbon Disulfide	4.56	76	4067	0.04	ppbv #	1
29) Chloroform	5.76	83	123633	0.87	ppbv	99
34) 2-Butanone	5.25	43	121213	2.21	ppbv #	86
36) Benzene	6.90	78	11708	0.06	ppbv	98
38) Trichloroethene	7.84	130	80680	1.06	ppbv	95
39) 1,2-Dichloropropane	7.18	63	498362	6.79	ppbv #	27
41) Tetrahydrofuran	6.07	42	18999	0.42	ppbv	89
51) 2-Hexanone	10.15	43	5251	0.11	ppbv #	24
52) Tetrachloroethene	11.23	164	3049099	43.61	ppbv	96
53) Toluene	9.81	91	31979	0.16	ppbv	96
59) m/p-Xylene	13.00	91	5301	0.03	ppbv #	30
74) 1,2,4-Trimethylbenzene	16.77	105	5008	0.02	ppbv #	60
75) 1,3-Dichlorobenzene	17.00	146	2877	0.02	ppbv #	24

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



#1

Bromochloromethane

Concen: 10.00 ppbv

RT: 5.67 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 17 Mar 2022 22:26

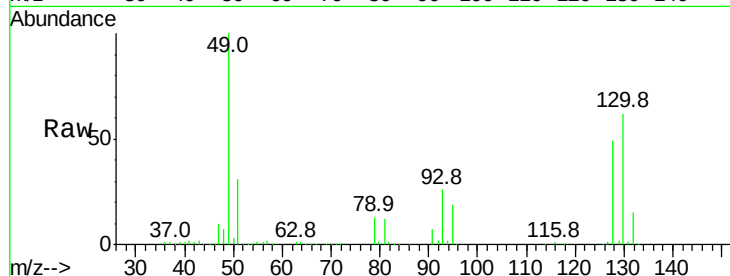
Tgt Ion: 49 Resp: 821803

Ion Ratio Lower Upper

49 100

128 52.3 26.4 79.2

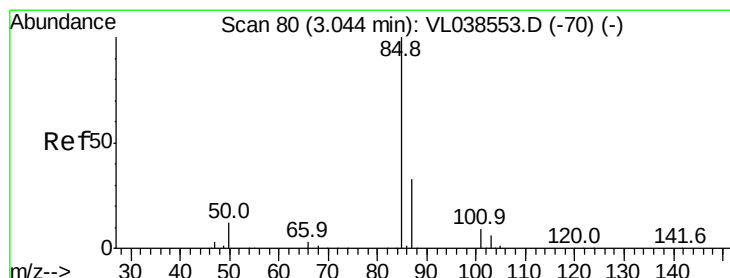
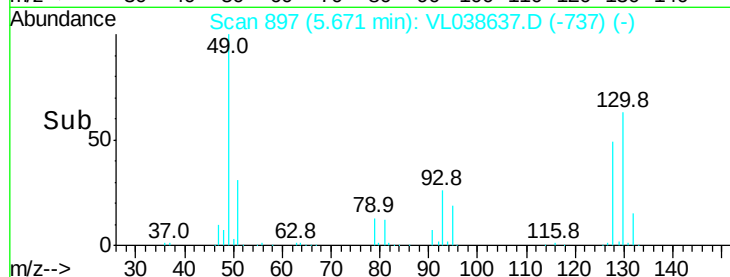
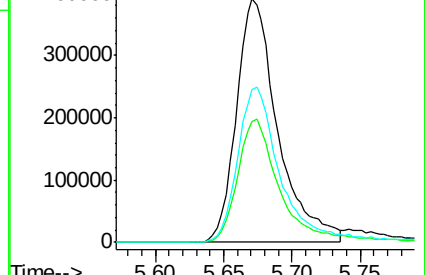
130 68.2 33.0 98.9



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: 0.18 ppbv

RT: 3.06 min Scan# 84

Delta R.T. 0.01 min

Lab File: VL038637.D

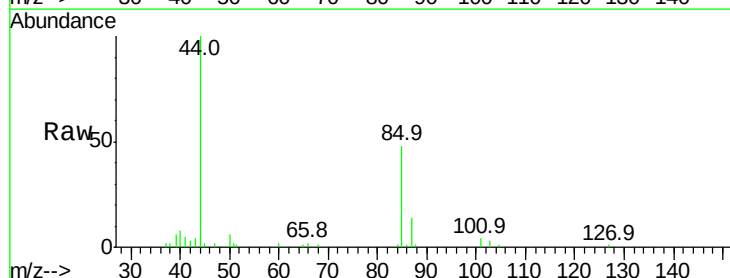
Acq: 17 Mar 2022 22:26

Tgt Ion: 85 Resp: 22329

Ion Ratio Lower Upper

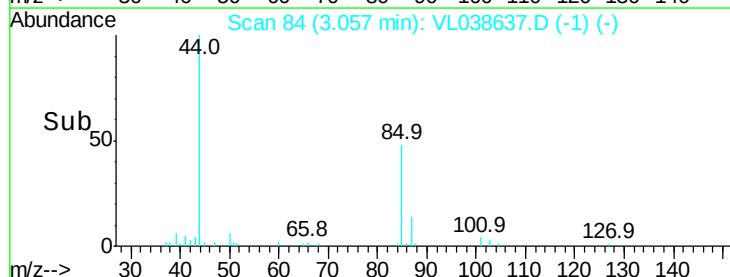
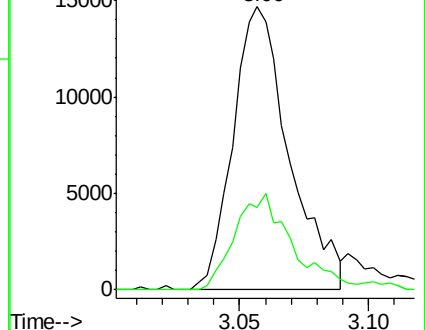
85 100

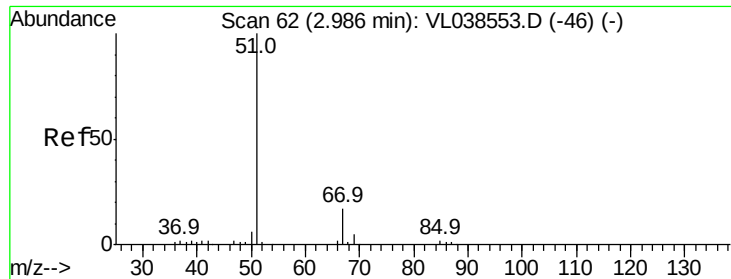
87 29.3 26.2 39.2



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.13 ppbv

RT: 3.00 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

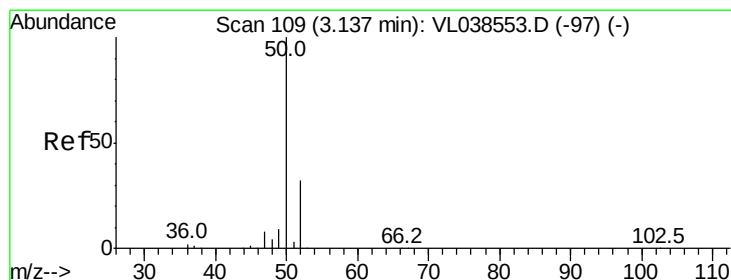
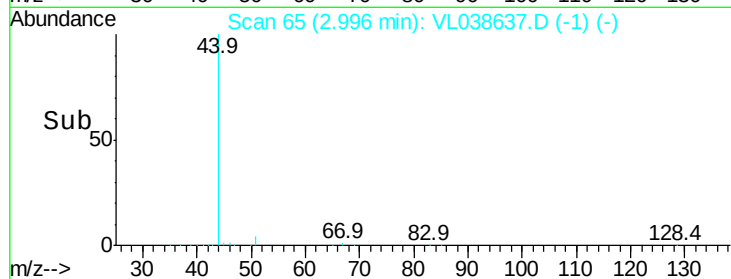
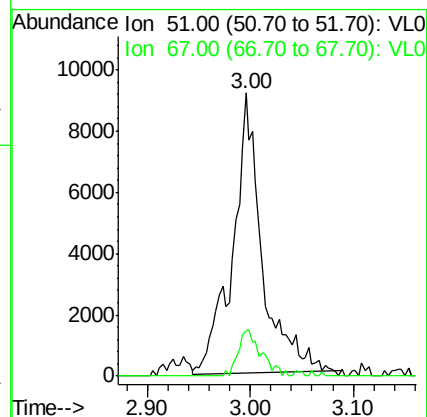
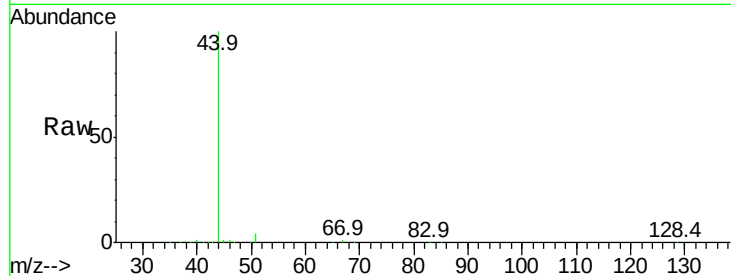
Acq: 17 Mar 2022 22:20

Tgt Ion: 51 Resp: 18238

Ion Ratio Lower Upper

51 100

67 12.7 13.6 20.4#



#4

Chloromethane

Concen: 0.07 ppbv

RT: 3.15 min Scan# 113

Delta R.T. 0.01 min

Lab File: VL038637.D

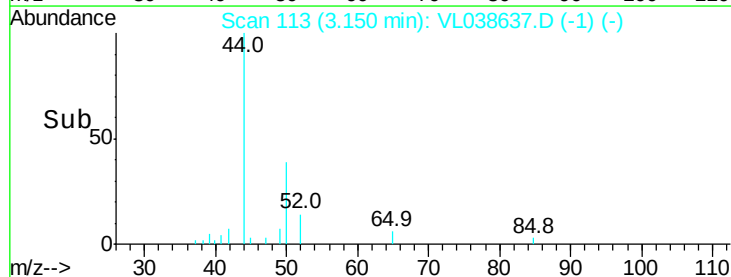
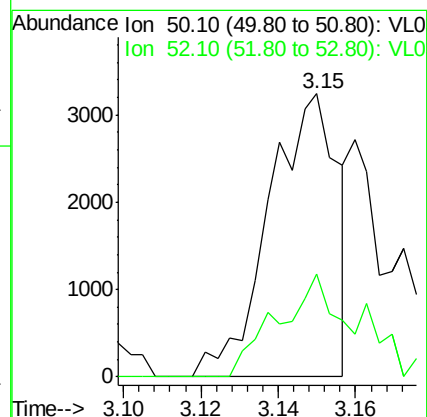
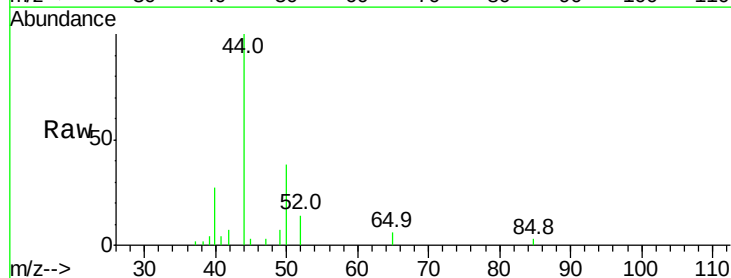
Acq: 17 Mar 2022 22:26

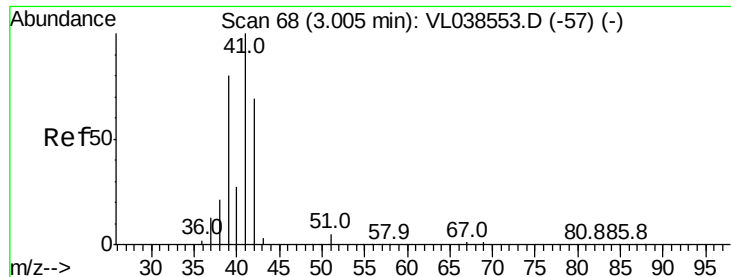
Tgt Ion: 50 Resp: 4012

Ion Ratio Lower Upper

50 100

52 36.4 25.6 38.4





#9

Propene

Concen: 0.26 ppbv

RT: 3.02 Instrument: MSVOA_1

Delta R.T.

Lab File: ClientSampleId:

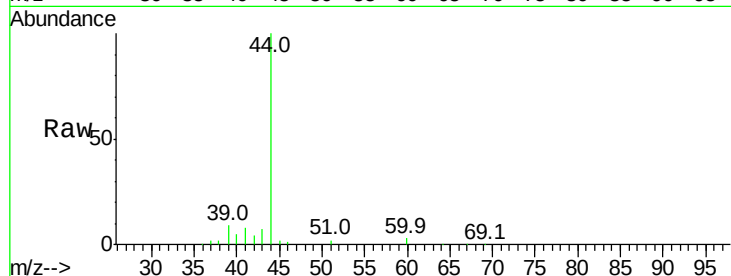
Acq: 17 Mar 2022 22:26

Tgt Ion: 41 Resp: 13518

Ion Ratio Lower Upper

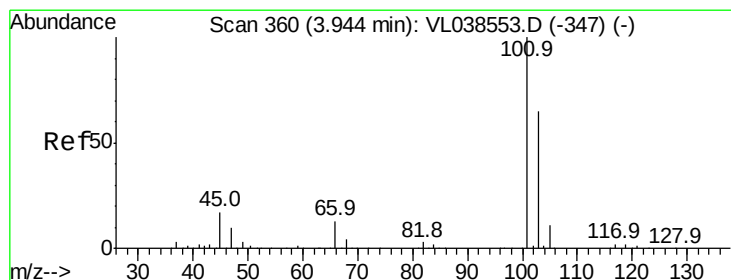
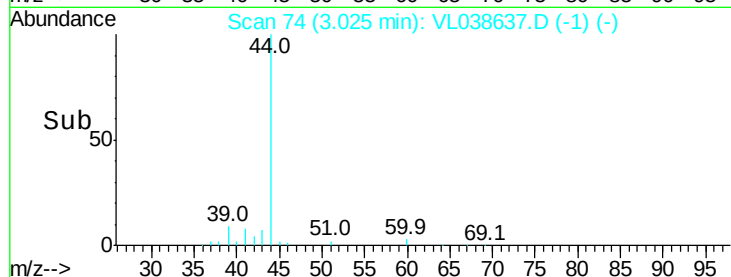
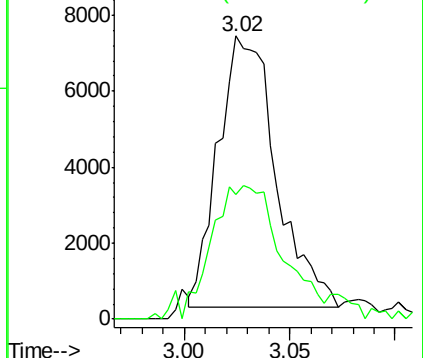
41 100

42 67.1 55.7 83.5



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0



#11

Trichlorofluoromethane

Concen: 0.23 ppbv

RT: 3.96 min Scan# 364

Delta R.T. 0.01 min

Lab File: VL038637.D

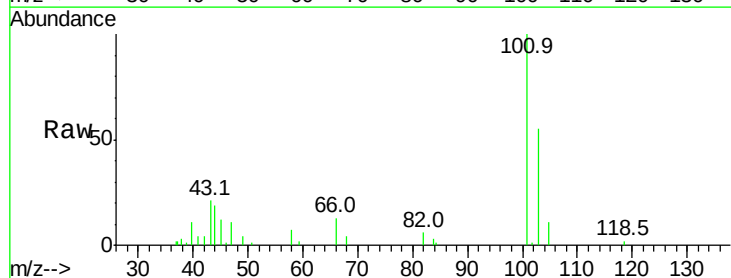
Acq: 17 Mar 2022 22:26

Tgt Ion: 101 Resp: 25018

Ion Ratio Lower Upper

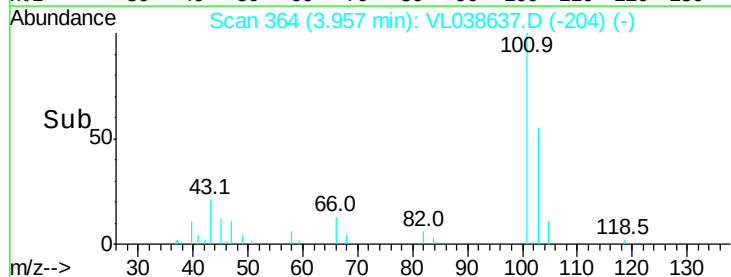
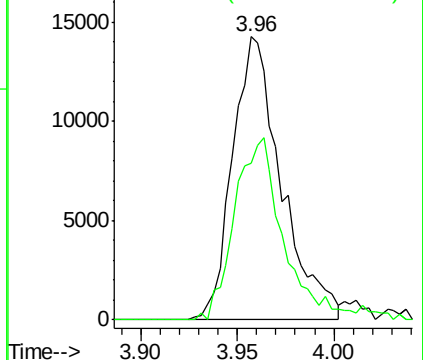
101 100

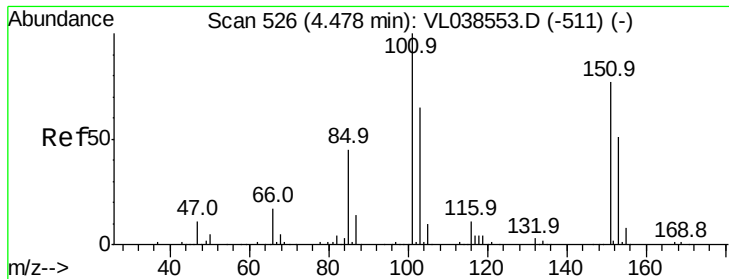
103 55.3 52.0 78.0



Abundance Ion 101.00 (100.70 to 101.70): V

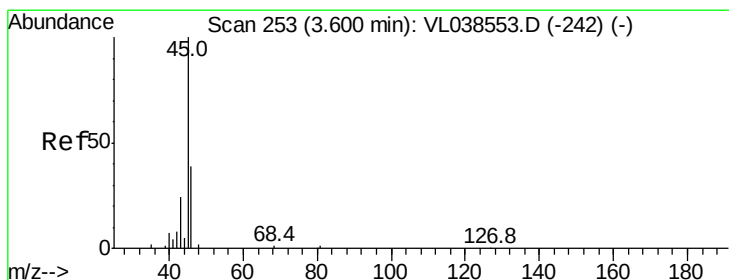
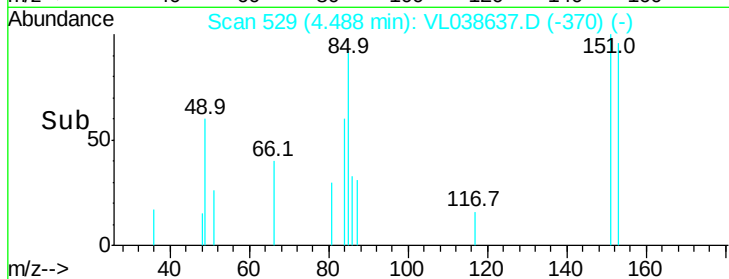
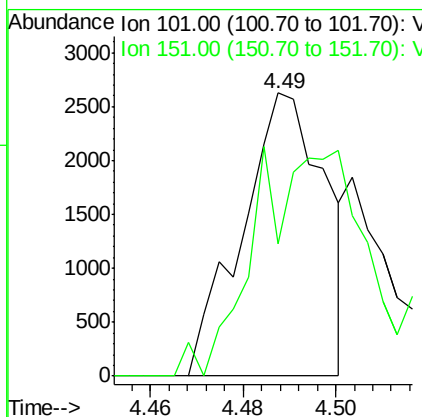
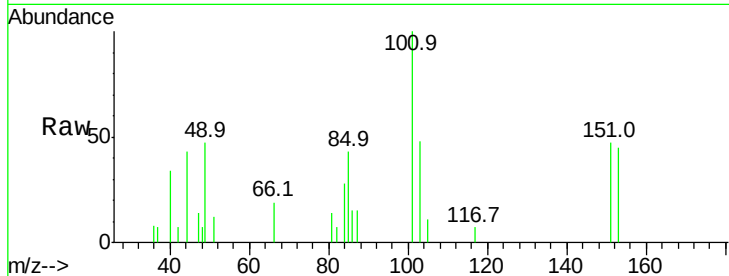
Ion 103.00 (102.70 to 103.70): V





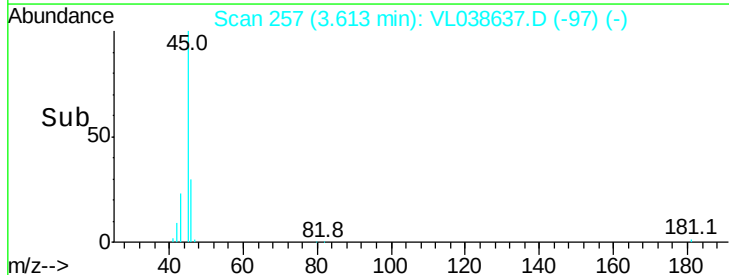
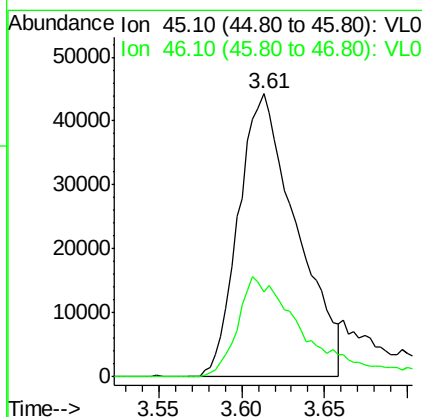
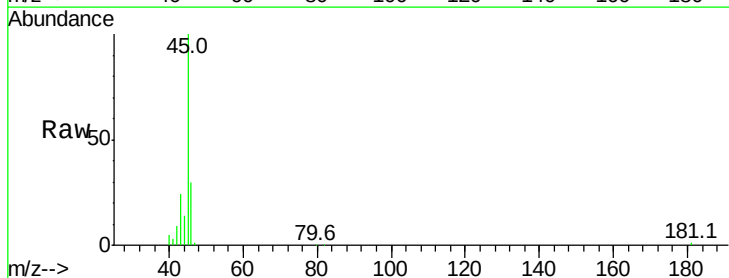
#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.04 ppbv
 RT: 4.49
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 17 Mar 2022 22:26

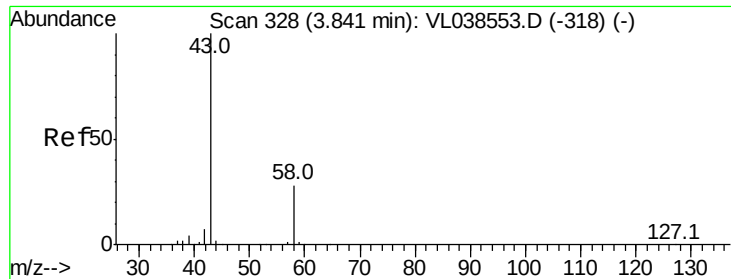
Tgt Ion: 101 Resp: 3263
 Ion Ratio Lower Upper
 101 100
 151 120.3 63.4 95.0#



#13
 Ethanol
 Concen: 18.40 ppbv
 RT: 3.61 min Scan# 257
 Delta R.T. 0.01 min
 Lab File: VL038637.D
 Acq: 17 Mar 2022 22:26

Tgt Ion: 45 Resp: 108051
 Ion Ratio Lower Upper
 45 100
 46 41.0 16.8 67.0





#15

Acetone

Concen: 3.05 ppbv

RT: 3.86 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

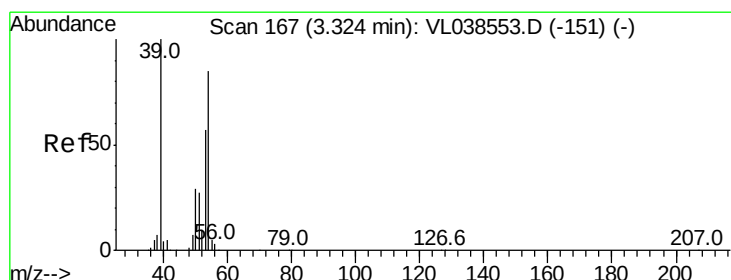
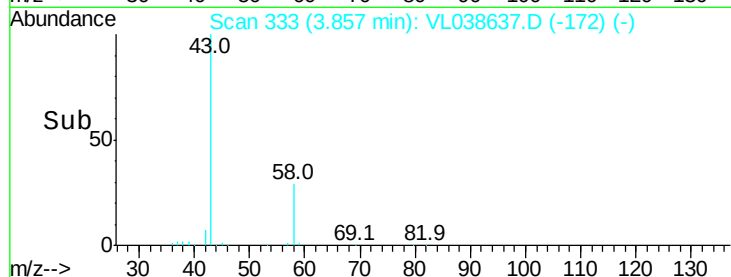
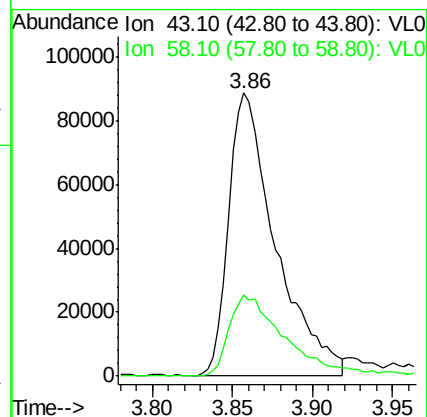
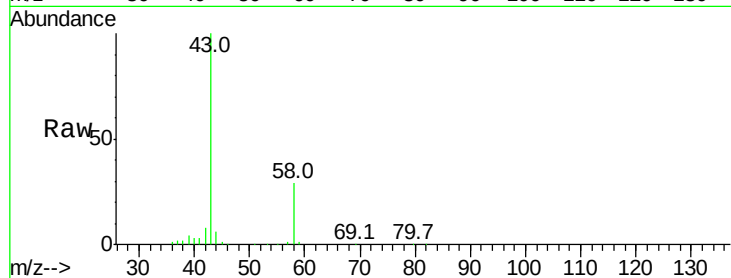
Acq: 17 Mar 2022 22:26

Tgt Ion: 43 Resp: 177019

Ion Ratio Lower Upper

43 100

58 37.3 22.7 34.1#



#16

1,3-Butadiene

Concen: 0.15 ppbv

RT: 3.31 min Scan# 164

Delta R.T. -0.01 min

Lab File: VL038637.D

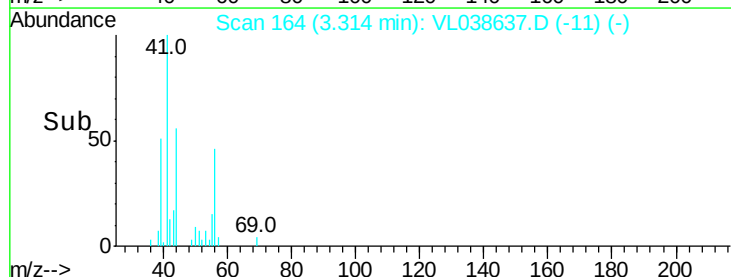
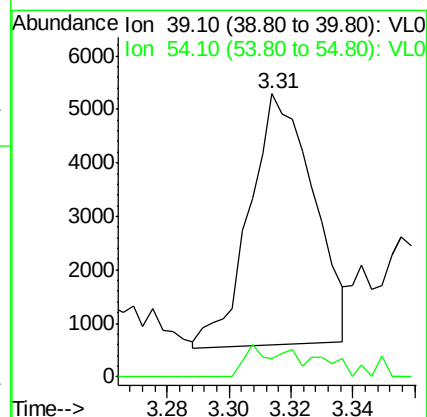
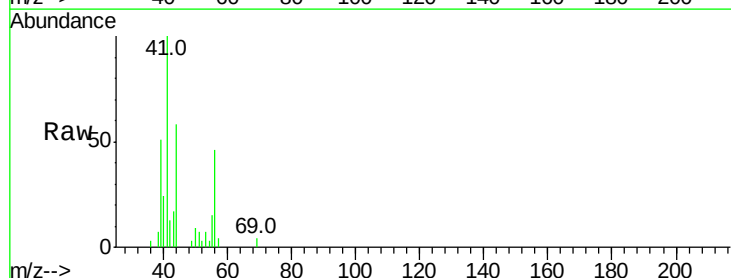
Acq: 17 Mar 2022 22:26

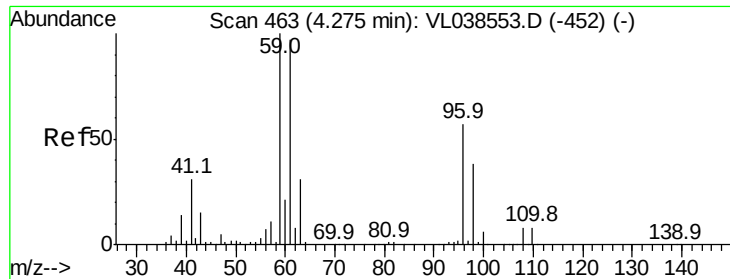
Tgt Ion: 39 Resp: 6764

Ion Ratio Lower Upper

39 100

54 11.7 64.2 96.2#





#17

tert-Butyl alcohol

Concen: 0.07 ppbv

RT: 4.32 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: COPA4

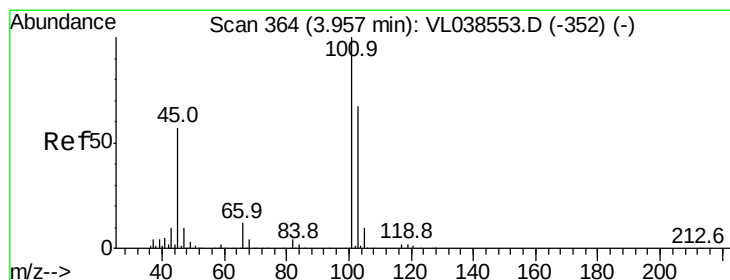
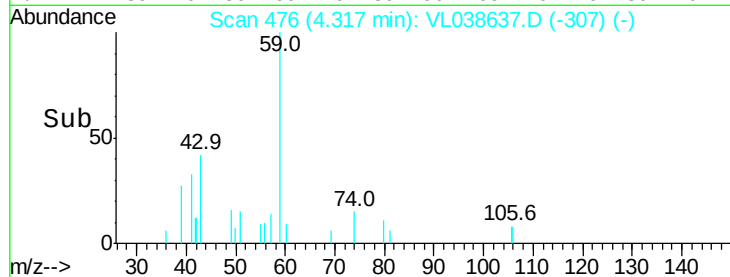
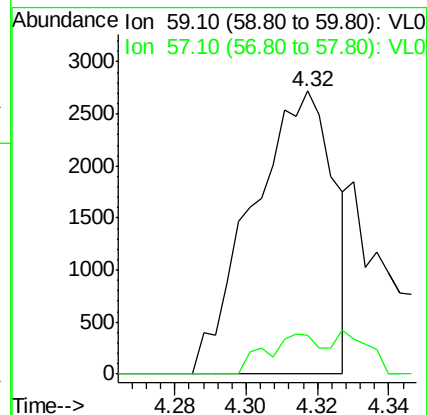
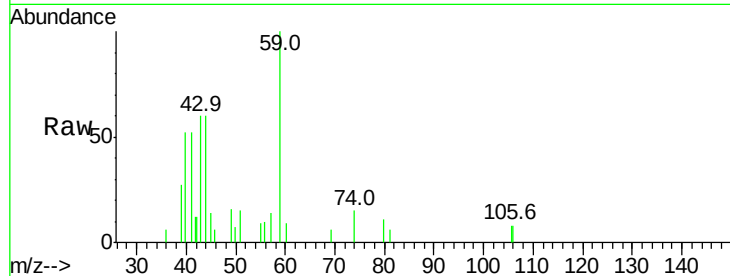
Acq: 17 Mar 2022 22:20

Tgt Ion: 59 Resp: 4302

Ion Ratio Lower Upper

59 100

57 0.0 8.1 12.1#



#19

Isopropyl Alcohol

Concen: 0.66 ppbv

RT: 3.98 min Scan# 371

Delta R.T. 0.02 min

Lab File: VL038637.D

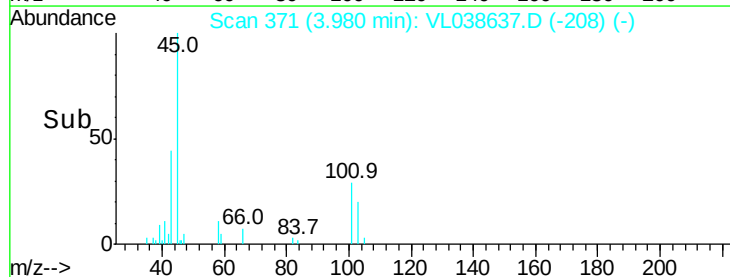
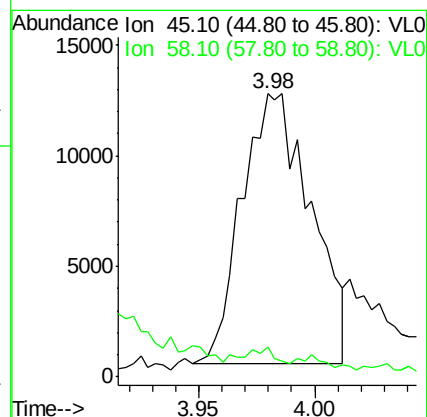
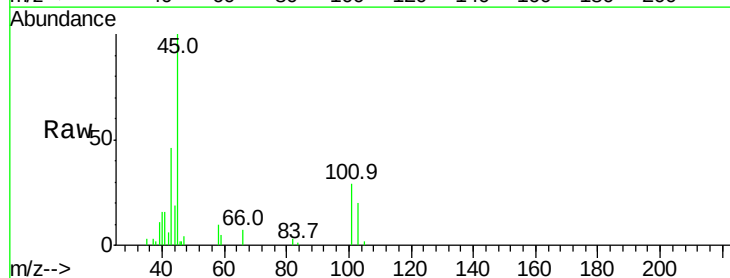
Acq: 17 Mar 2022 22:26

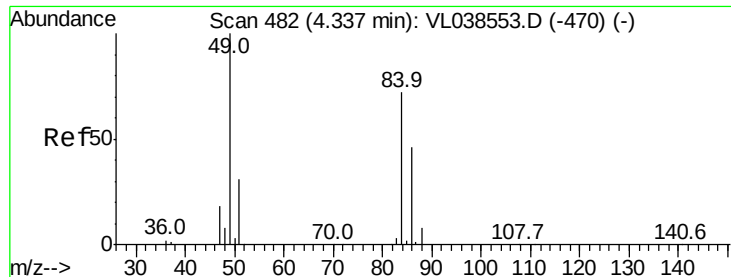
Tgt Ion: 45 Resp: 25364

Ion Ratio Lower Upper

45 100

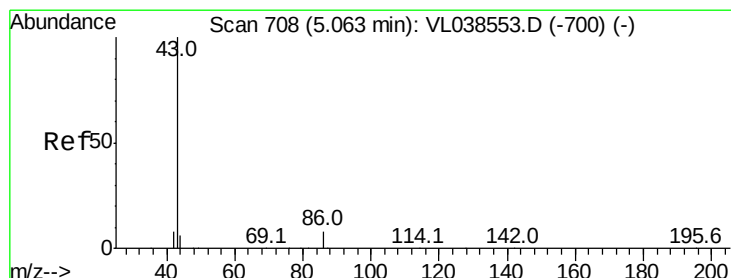
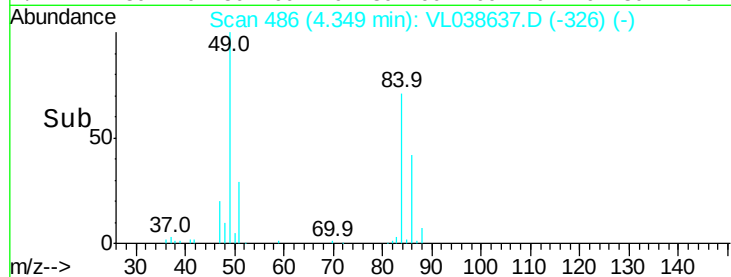
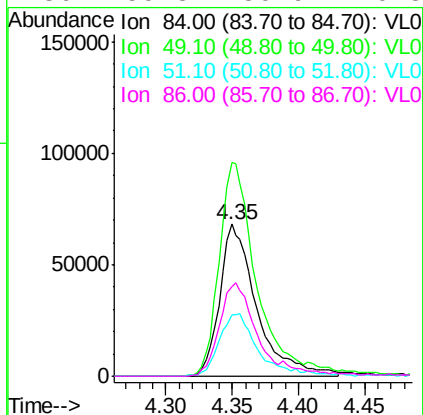
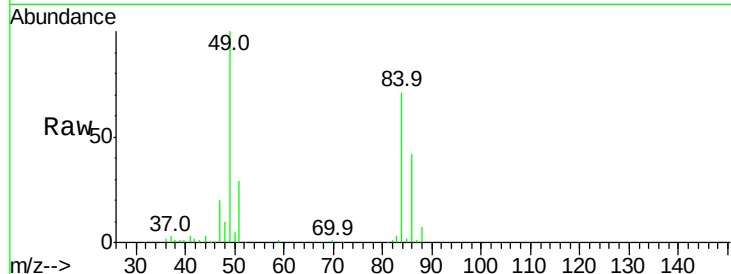
58 260.1 2.2 3.2#





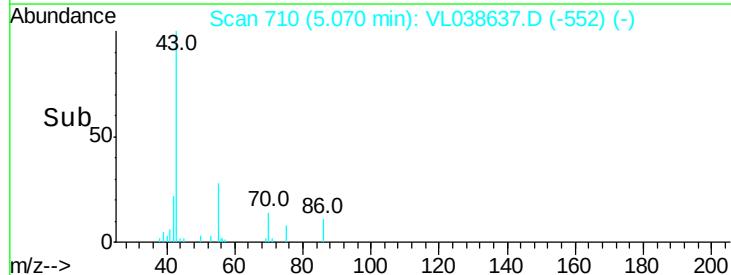
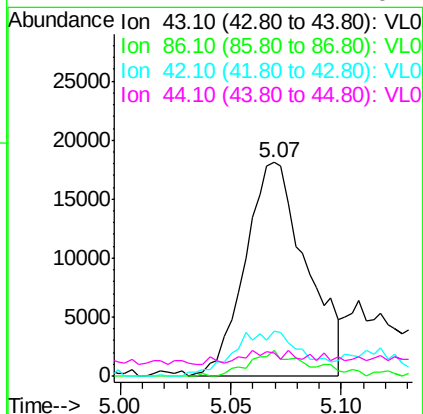
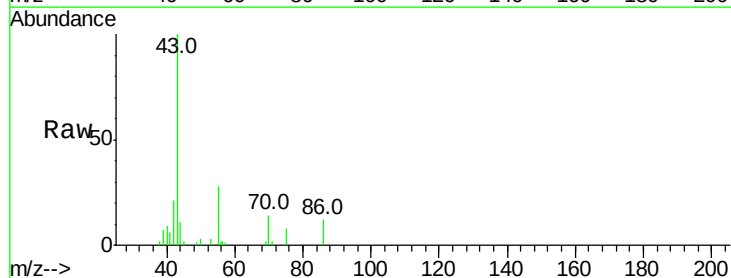
#20
Methylene Chloride
Concen: 3.79 ppbv
RT: 4.35
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
COPA4
Acq: 17 Mar 2022 22:26

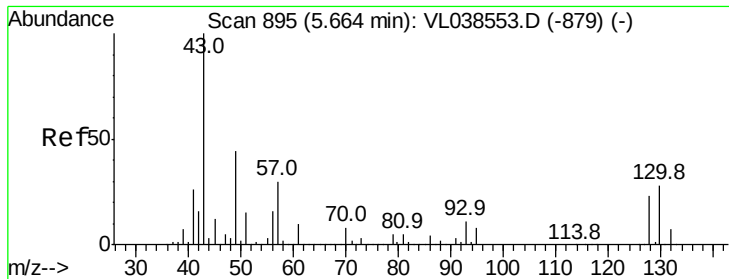
Tgt Ion:	84	Resp:	132141
Ion	Ratio	Lower	Upper
84	100		
49	139.7	111.1	166.7
51	39.7	34.0	51.0
86	59.3	50.9	76.3



#23
Vinyl Acetate
Concen: 0.42 ppbv
RT: 5.07 min Scan# 710
Delta R.T. 0.01 min
Lab File: VL038637.D
Acq: 17 Mar 2022 22:26

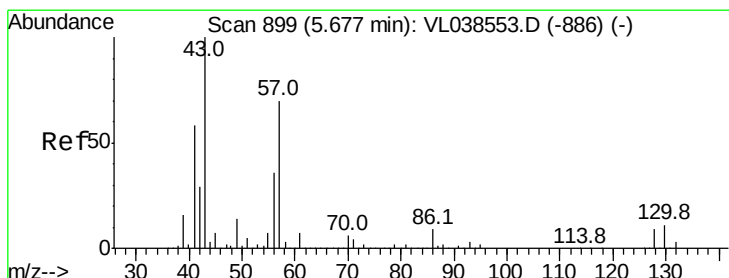
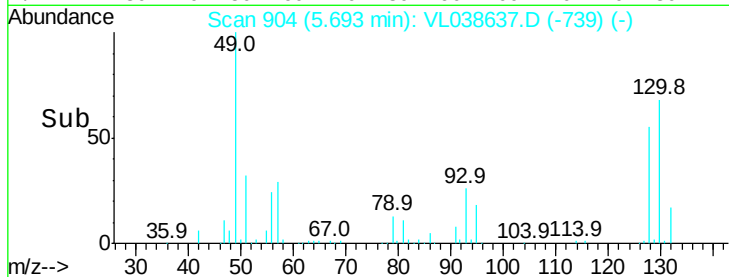
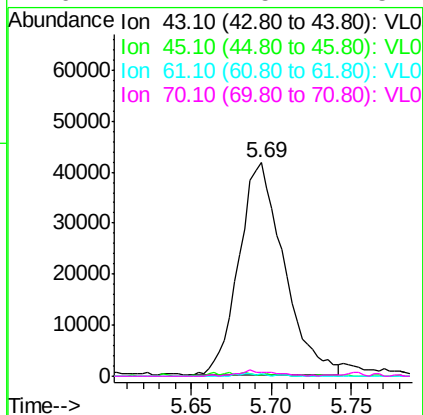
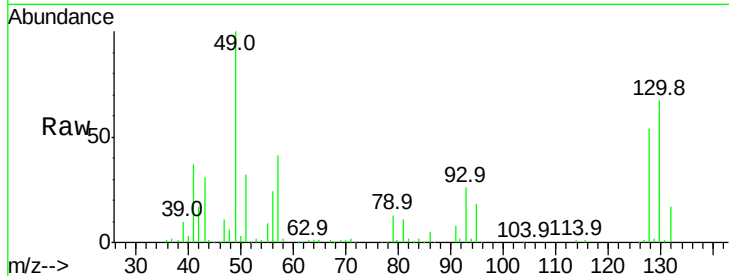
Tgt Ion:	43	Resp:	34758
Ion	Ratio	Lower	Upper
43	100		
86	11.1	5.6	8.4#
42	17.3	7.1	10.7#
44	4.4	4.1	6.1





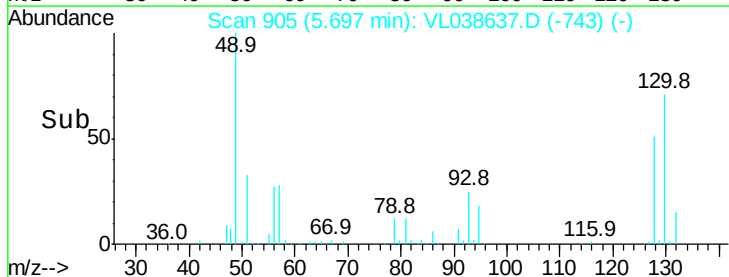
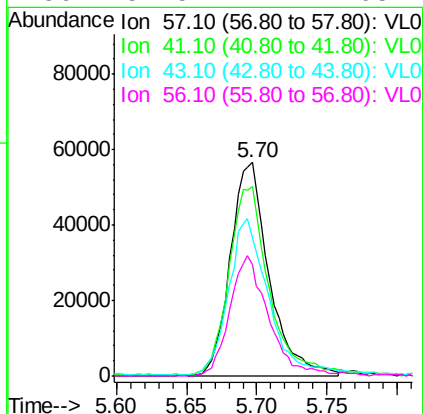
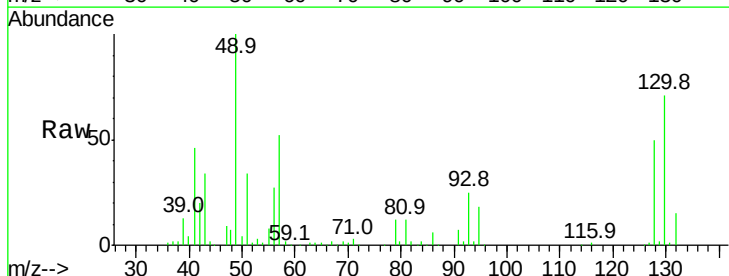
#25
Ethyl Acetate
Concen: 0.41 ppbv
RT: 5.69
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId :
COPA4
Acq: 17 Mar 2022 22:20

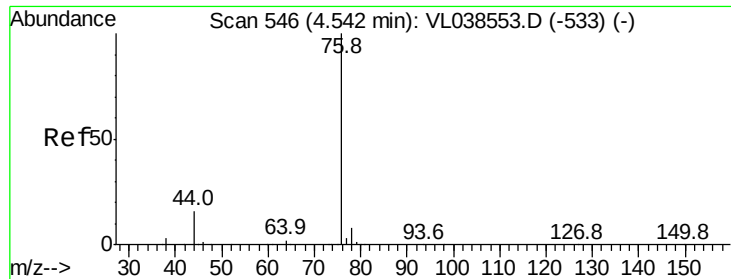
Tgt Ion:	43	Resp:	80021
Ion Ratio	Lower	Upper	
43	100		
45	1.9	8.0	12.0#
61	0.8	8.2	12.4#
70	2.2	5.4	8.2#



#26
Hexane
Concen: 1.19 ppbv
RT: 5.70 min Scan# 905
Delta R.T.: 0.02 min
Lab File: VL038637.D
Acq: 17 Mar 2022 22:26

Tgt Ion:	57	Resp:	108966
Ion Ratio	Lower	Upper	
57	100		
41	92.7	67.8	101.6
43	75.4	173.6	260.4#
56	57.5	42.2	63.2





#27

Carbon Disulfide

Concen: 0.04 ppbv

RT: 4.56 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 17 Mar 2022 22:26

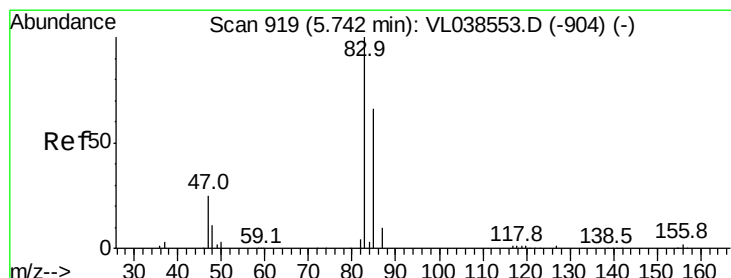
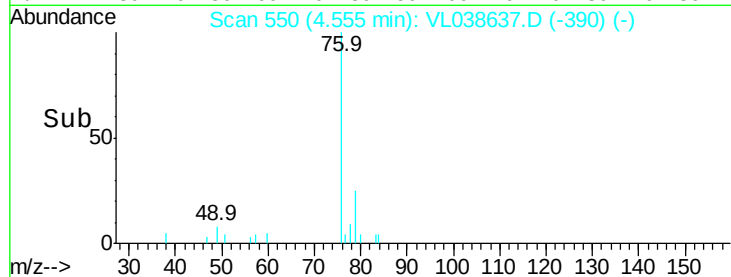
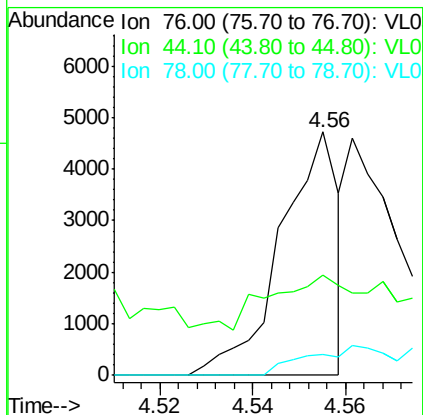
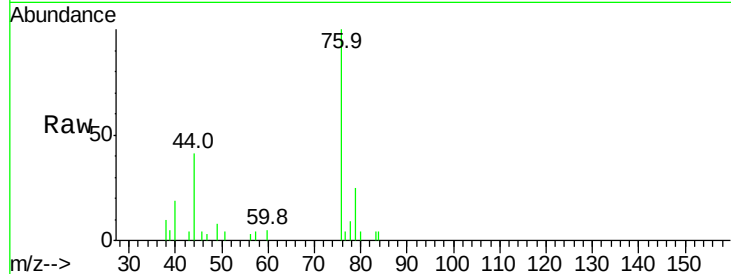
Tgt Ion: 76 Resp: 4067

Ion Ratio Lower Upper

76 100

44 86.5 12.9 19.3#

78 0.0 7.8 11.6#



#29

Chloroform

Concen: 0.87 ppbv

RT: 5.76 min Scan# 924

Delta R.T. 0.02 min

Lab File: VL038637.D

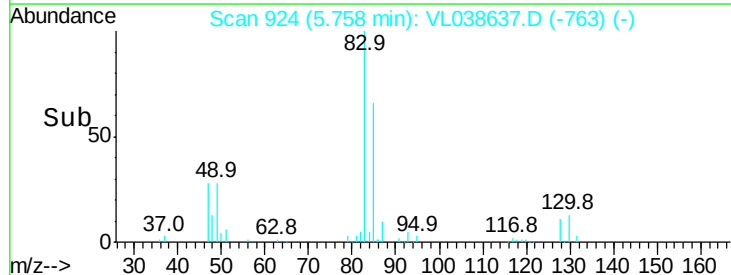
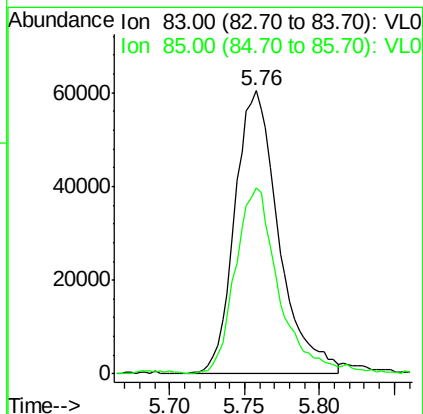
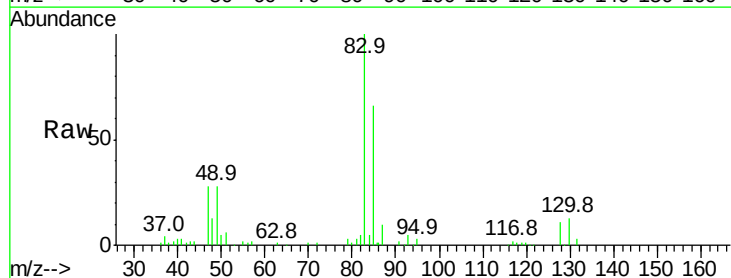
Acq: 17 Mar 2022 22:26

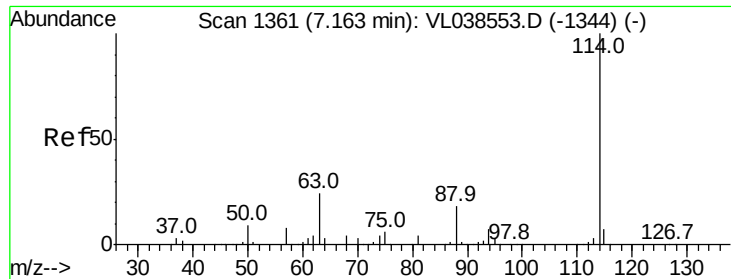
Tgt Ion: 83 Resp: 123633

Ion Ratio Lower Upper

83 100

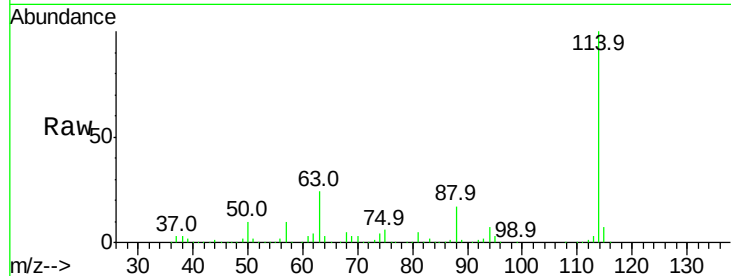
85 65.2 52.8 79.2



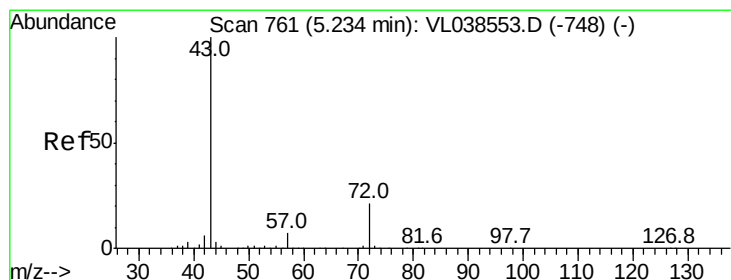
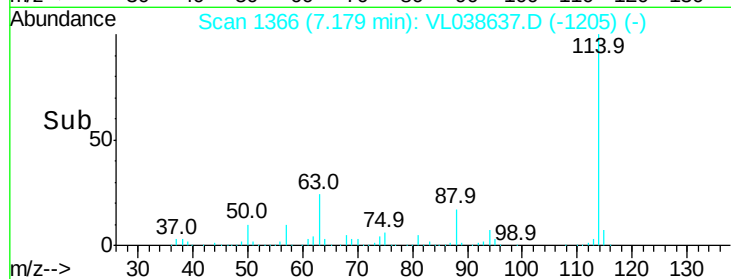
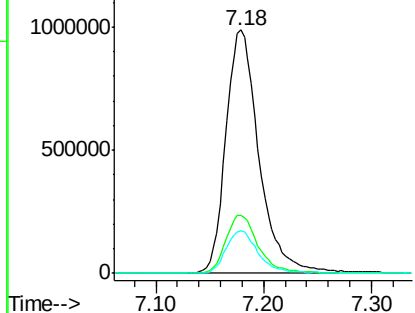


#33
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 7.18
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 C0PA4
 Acq: 17 Mar 2022 22:26

Tgt Ion: 114 Resp: 2113965
 Ion Ratio Lower Upper
 114 100
 63 24.0 19.6 29.4
 88 17.3 13.9 20.9

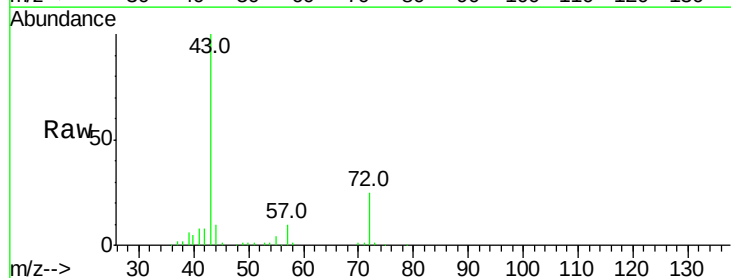


Abundance Ion 114.10 (113.80 to 114.80): VL0
 Ion 63.10 (62.80 to 63.80): VL0
 Ion 88.10 (87.80 to 88.80): VL0

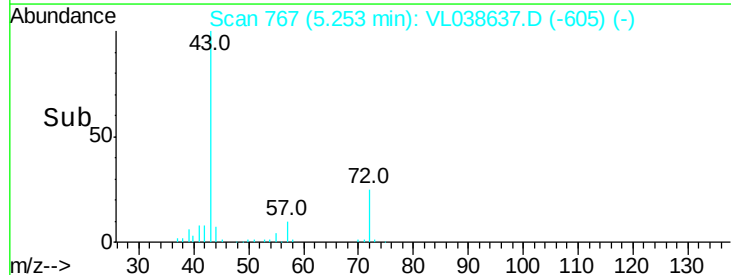
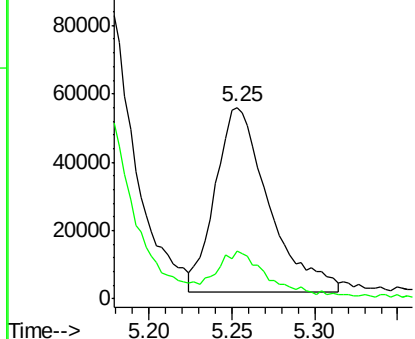


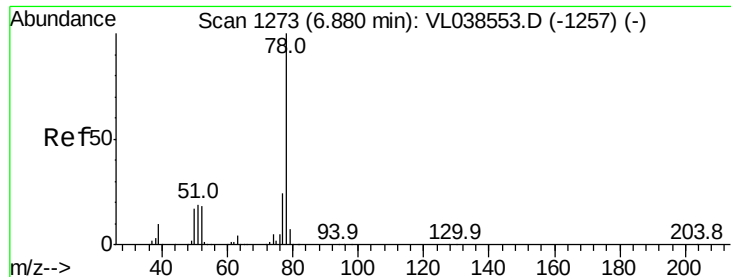
#34
 2-Butanone
 Concen: 2.21 ppbv
 RT: 5.25 min Scan# 767
 Delta R.T. 0.02 min
 Lab File: VL038637.D
 Acq: 17 Mar 2022 22:26

Tgt Ion: 43 Resp: 121213
 Ion Ratio Lower Upper
 43 100
 72 28.8 17.8 26.6#



Abundance Ion 43.10 (42.80 to 43.80): VL0
 Ion 72.10 (71.80 to 72.80): VL0





#36

Benzene

Concen: 0.06 ppbv

RT: 6.90 Instrument: MSVOA_1

Delta R.T.

Lab File: ClientSampleId:

Acq: 17 Mar 2022 22:26

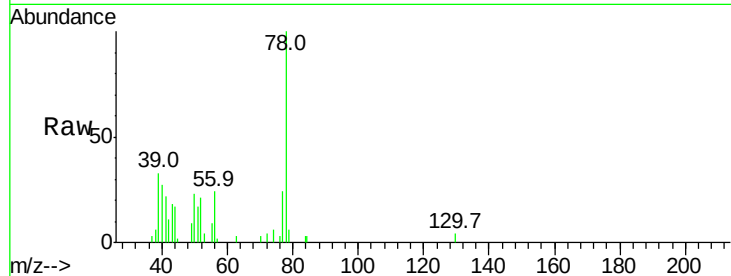
Tgt Ion: 78 Resp: 11708

Ion Ratio Lower Upper

78 100

77 24.4 19.0 28.4

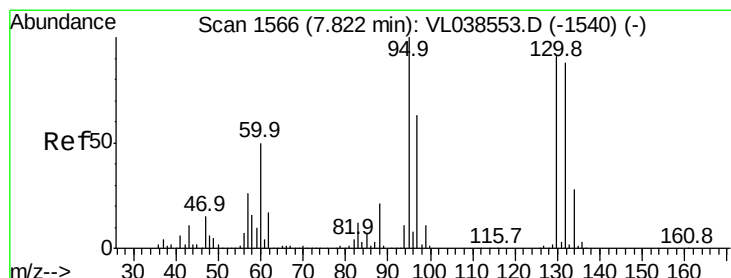
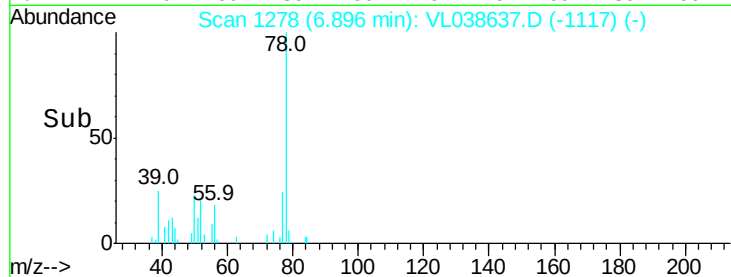
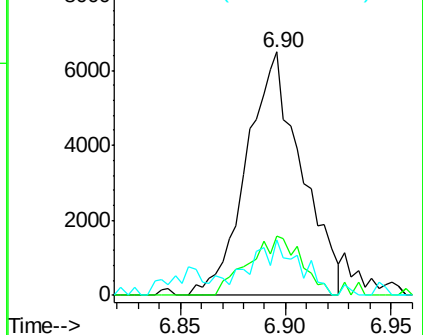
50 18.4 13.9 20.9



Abundance Ion 78.10 (77.80 to 78.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

Ion 50.10 (49.80 to 50.80): VL0



#38

Trichloroethene

Concen: 1.06 ppbv

RT: 7.84 min Scan# 1571

Delta R.T. 0.02 min

Lab File: VL038637.D

Acq: 17 Mar 2022 22:26

Tgt Ion: 130 Resp: 80680

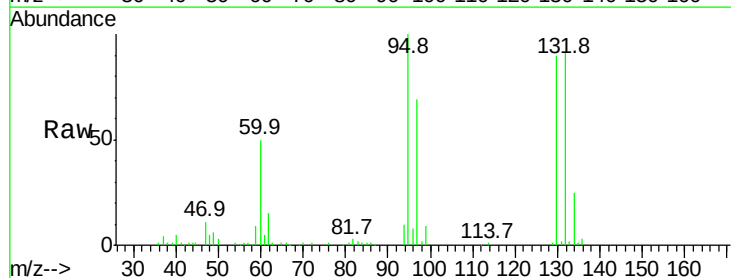
Ion Ratio Lower Upper

130 100

95 111.7 87.8 131.8

132 101.1 77.5 116.3

97 77.5 55.4 83.2

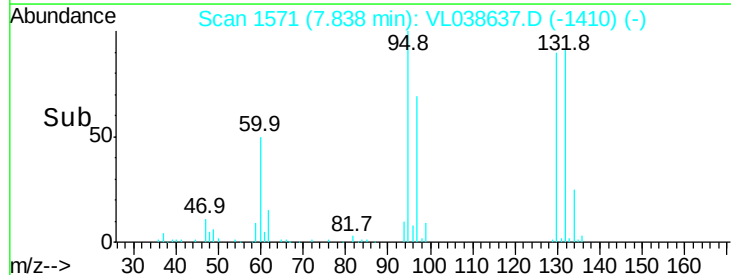
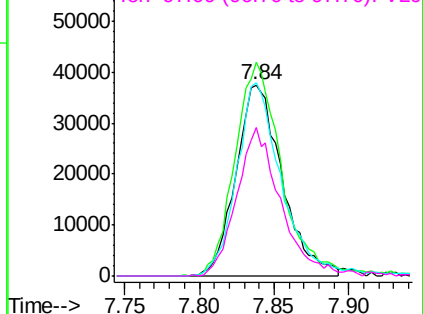


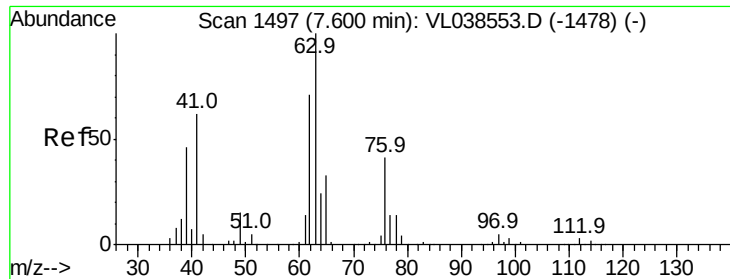
Abundance Ion 130.00 (129.70 to 130.70): V

Ion 95.00 (94.70 to 95.70): VL0

Ion 132.00 (131.70 to 132.70): V

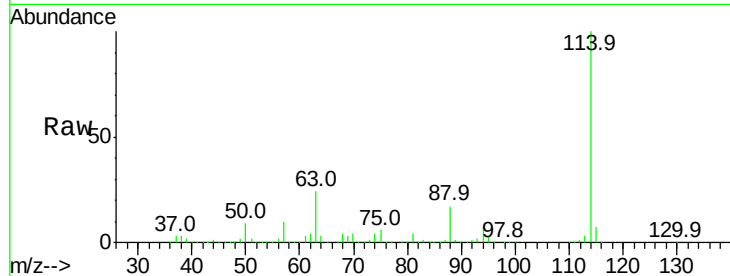
Ion 97.00 (96.70 to 97.70): VL0



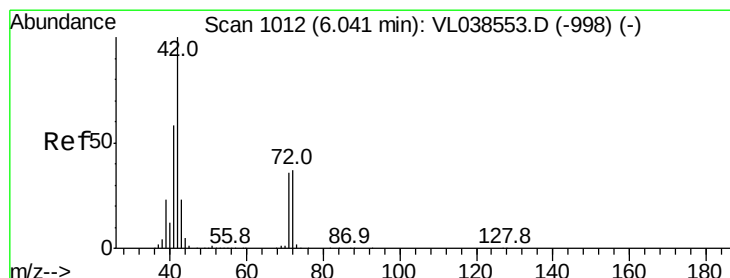
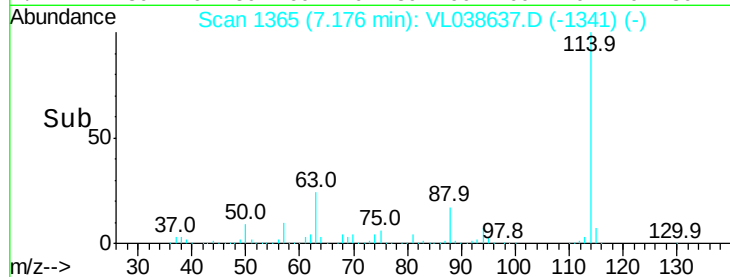
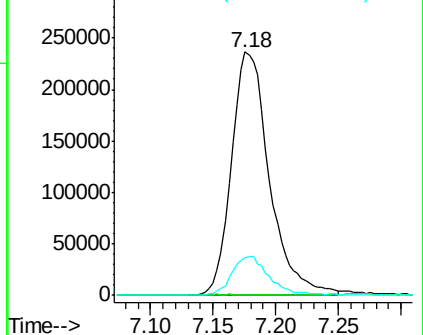


#39
 1,2-Dichloropropane
 Concen: 6.79 ppbv
 RT: 7.18
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 C0PA4
 Acq: 17 Mar 2022 22:20

Tgt Ion	Ratio	Lower	Upper
63	100		
41	0.0	49.8	74.6#
62	15.5	56.7	85.1#

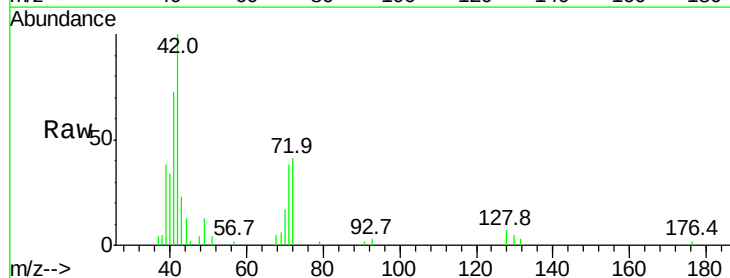


Abundance Ion 63.10 (62.80 to 63.80): VL0
 Ion 41.10 (40.80 to 41.80): VL0
 Ion 62.10 (61.80 to 62.80): VL0

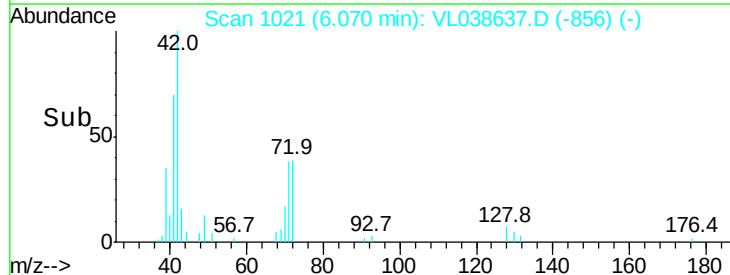
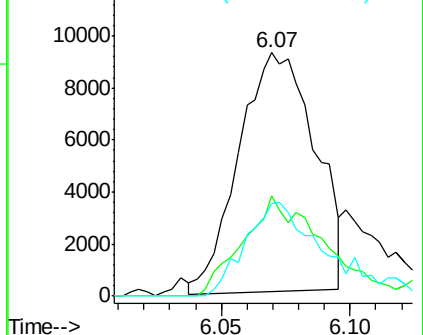


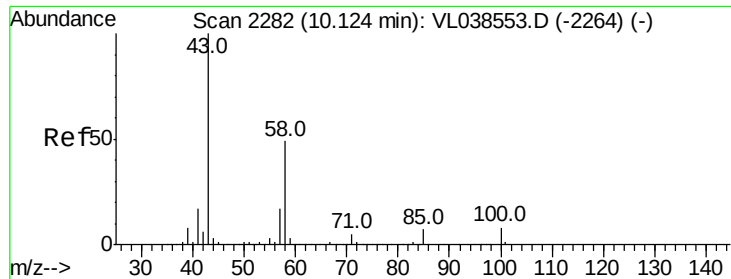
#41
 Tetrahydrofuran
 Concen: 0.42 ppbv
 RT: 6.07 min Scan# 1021
 Delta R.T. 0.03 min
 Lab File: VL038637.D
 Acq: 17 Mar 2022 22:26

Tgt Ion	Ratio	Lower	Upper
42	100		
72	44.9	30.9	46.3
71	42.9	29.1	43.7



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





#51

2-Hexanone

Concen: 0.11 ppbv

RT: 10.15

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 17 Mar 2022 22:20

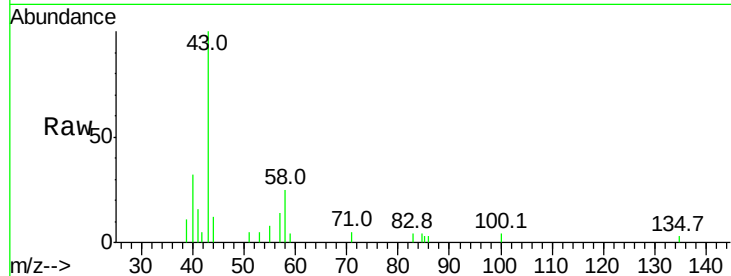
Tgt Ion: 43 Resp: 5251

Ion Ratio Lower Upper

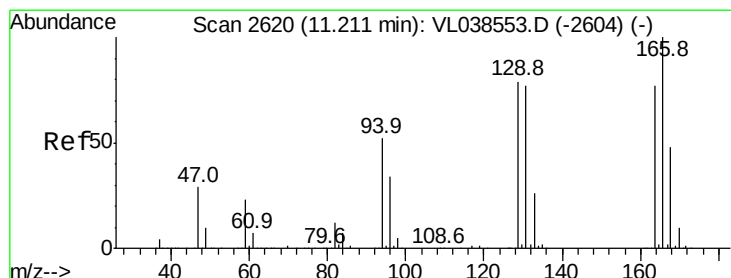
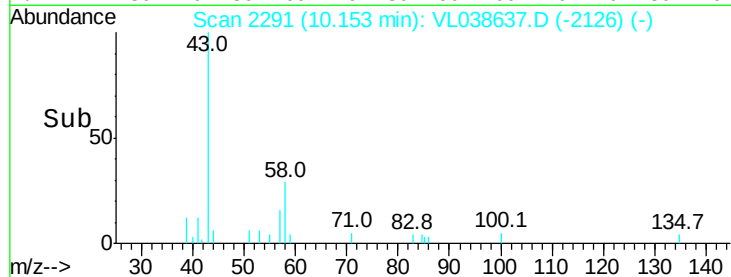
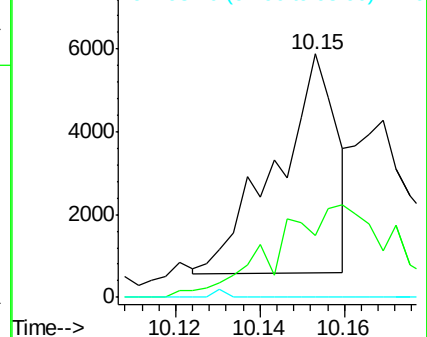
43 100

58 103.4 40.1 60.1#

98 0.0 0.4 0.6#



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: 43.61 ppbv

RT: 11.23 min Scan# 2626

Delta R.T. 0.02 min

Lab File: VL038637.D

Acq: 17 Mar 2022 22:26

Tgt Ion: 164 Resp: 3049099

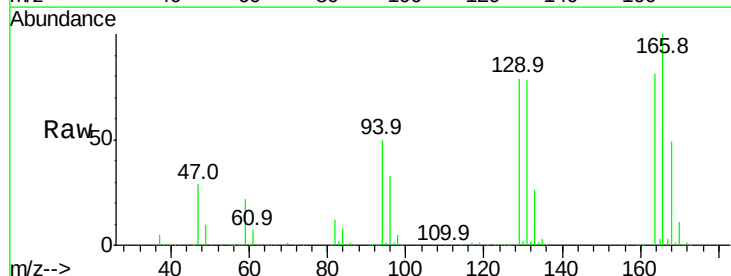
Ion Ratio Lower Upper

164 100

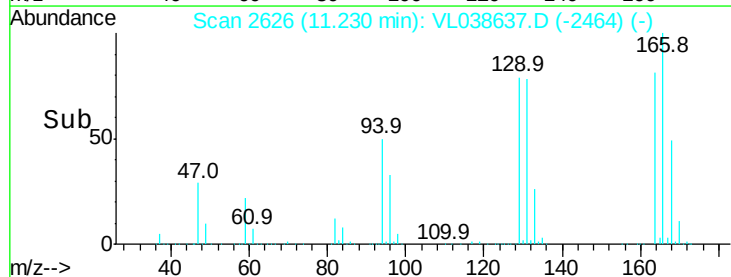
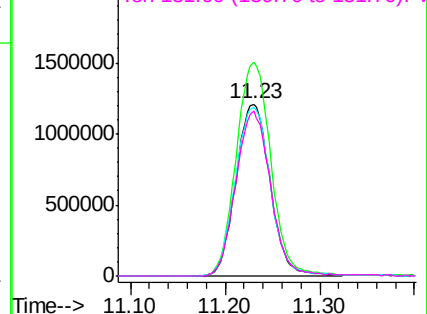
166 124.1 103.4 155.2

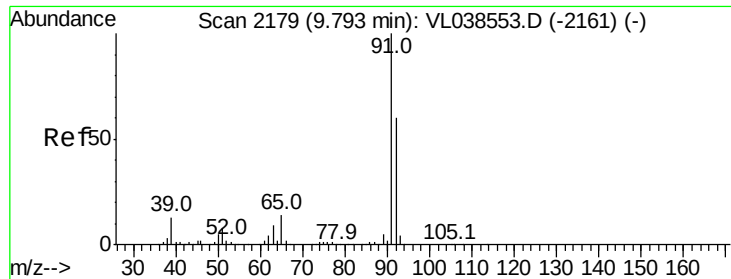
129 98.4 81.3 121.9

131 96.2 79.8 119.8



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: 0.16 ppbv

RT: 9.81 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

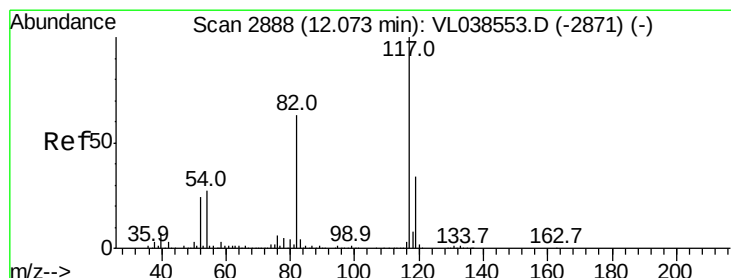
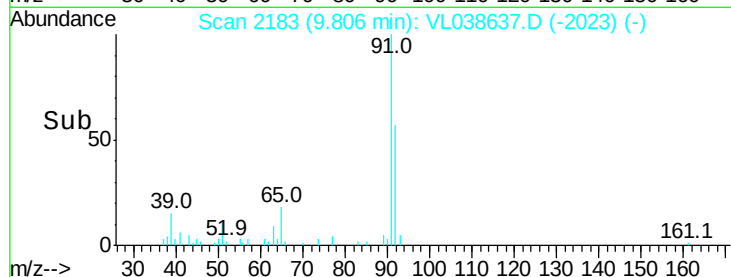
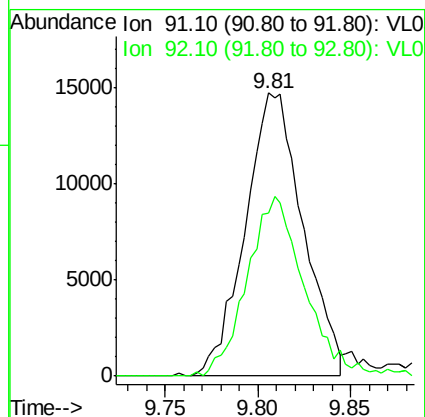
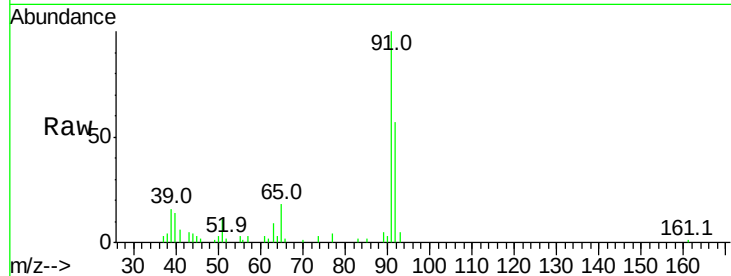
Acq: 17 Mar 2022 22:26

Tgt Ion: 91 Resp: 31979

Ion Ratio Lower Upper

91 100

92 63.2 48.1 72.1



#55

Chlorobenzene-d5

Concen: 10.00 ppbv

RT: 12.09 min Scan# 2893

Delta R.T. 0.02 min

Lab File: VL038637.D

Acq: 17 Mar 2022 22:26

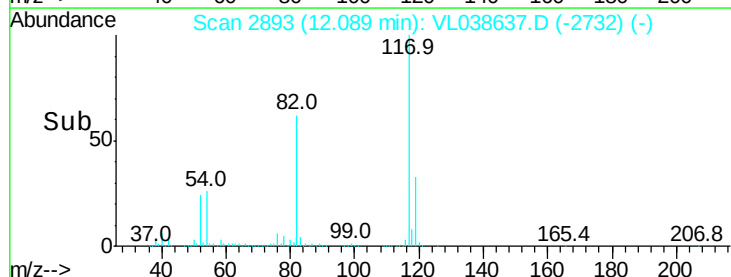
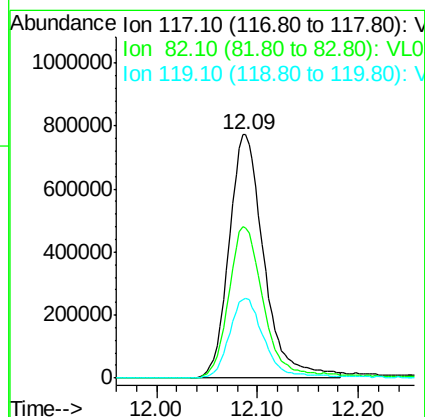
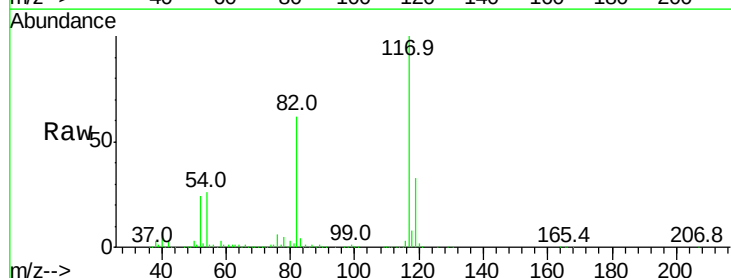
Tgt Ion: 117 Resp: 1865217

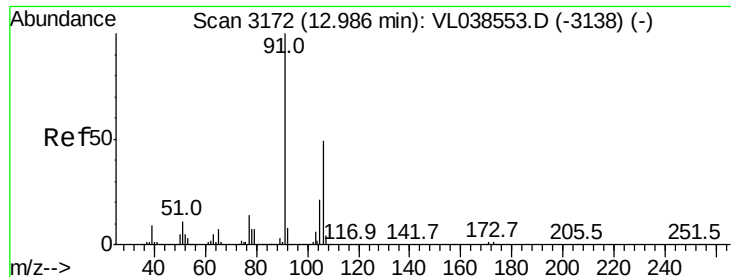
Ion Ratio Lower Upper

117 100

82 64.3 52.5 78.7

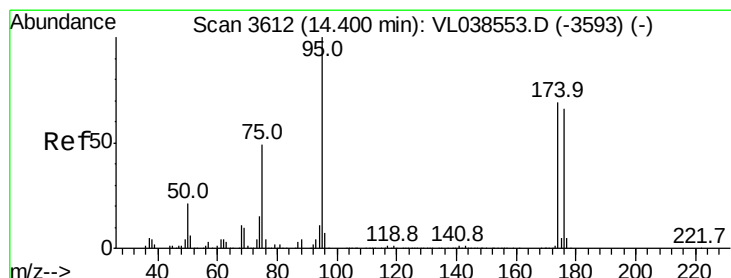
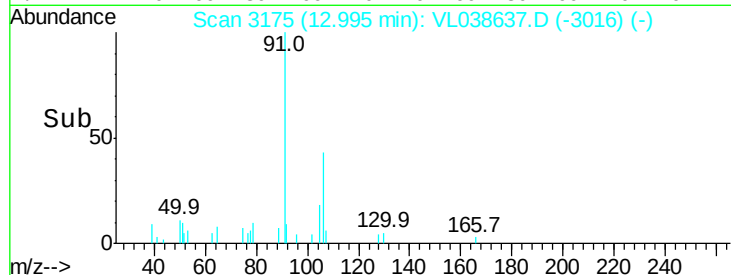
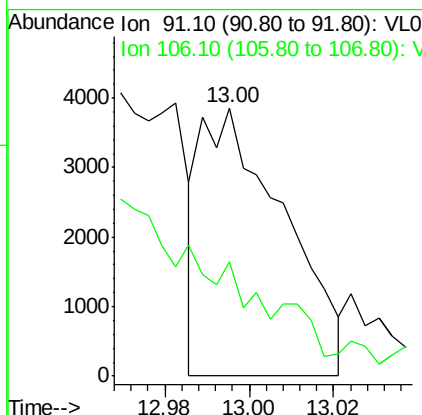
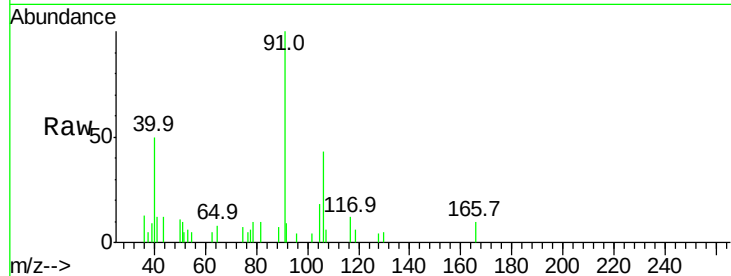
119 33.7 46.4 69.6#





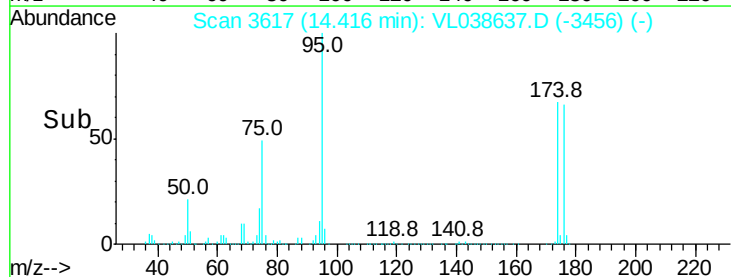
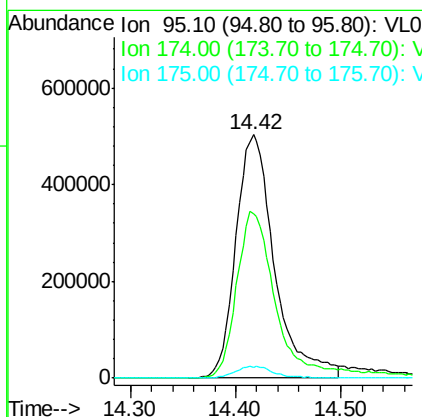
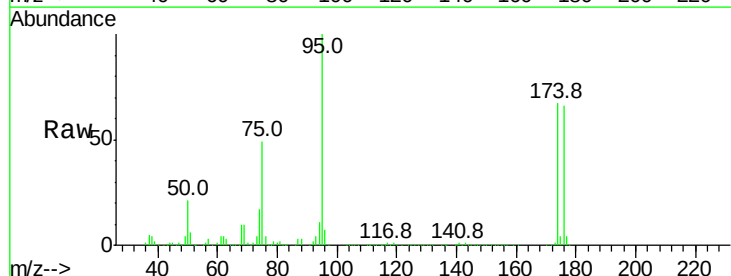
#59
m/p-Xylene
Concen: 0.03 ppbv
RT: 13.00
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
COPA4
Acq: 17 Mar 2022 22:28

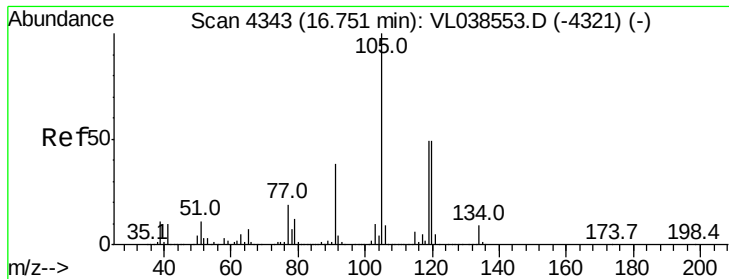
Tgt Ion: 91 Resp: 5301
Ion Ratio Lower Upper
91 100
106 0.0 37.1 55.7#



#68
1-Bromo-4-Fluorobenzene
Concen: 9.06 ppbv
RT: 14.42 min Scan# 3617
Delta R.T. 0.02 min
Lab File: VL038637.D
Acq: 17 Mar 2022 22:26

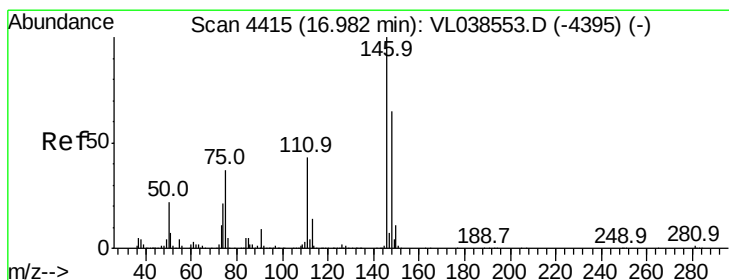
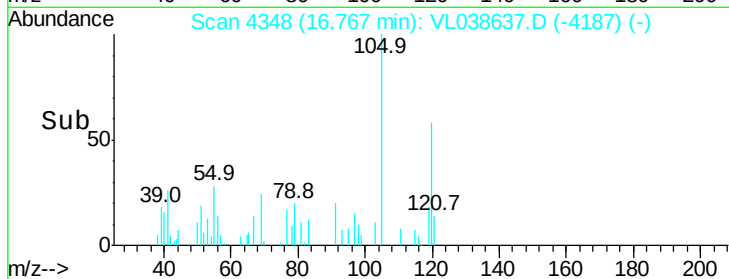
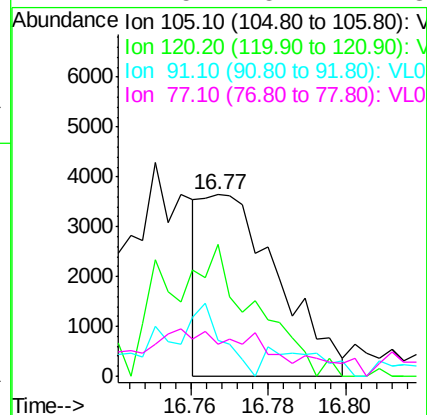
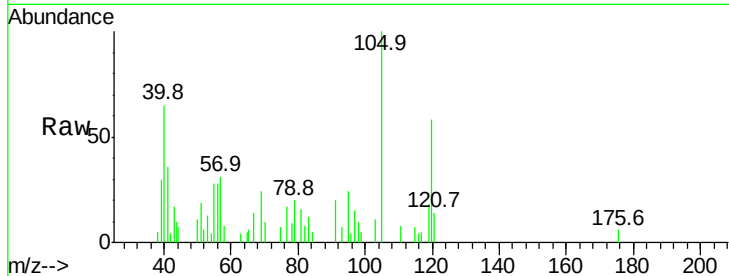
Tgt Ion: 95 Resp: 1284097
Ion Ratio Lower Upper
95 100
174 72.8 56.2 84.4
175 5.2 4.2 6.2





#74
 1,2,4-Trimethylbenzene
 Concen: 0.02 ppbv
 RT: 16.77 min
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 COPA4
 Acq: 17 Mar 2022 22:26

Tgt Ion:	105	Resp:	5008
Ion Ratio	Lower	Upper	
105	100		
120	80.3	38.9	58.3#
91	12.6	30.6	46.0#
77	11.5	15.2	22.8#



#75
 1,3-Dichlorobenzene
 Concen: 0.02 ppbv
 RT: 17.00 min Scan# 4421
 Delta R.T. 0.02 min
 Lab File: VL038637.D
 Acq: 17 Mar 2022 22:26

Tgt Ion:	146	Resp:	2877
Ion Ratio	Lower	Upper	
146	100		
111	0.0	21.9	65.8#
148	0.0	32.2	96.6#

