

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL032322\
 Data File : VL038732.D
 Acq On : 24 Mar 2022 1:49
 Operator : SY/AP
 Sample : N2049-02
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

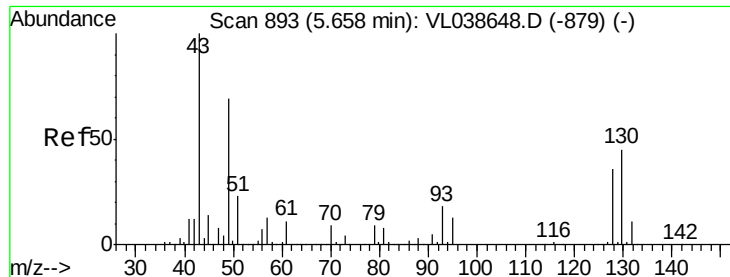
Quant Time: Mar 24 04:36:46 2022
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL032122AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Mar 21 17:09:26 2022
 QLast Update : Mon Mar 21 17:09:26 2022
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	738785	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.17	114	1967990	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.08	117	1714632	10.00	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.41	95	1225678	9.32	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	93.20%

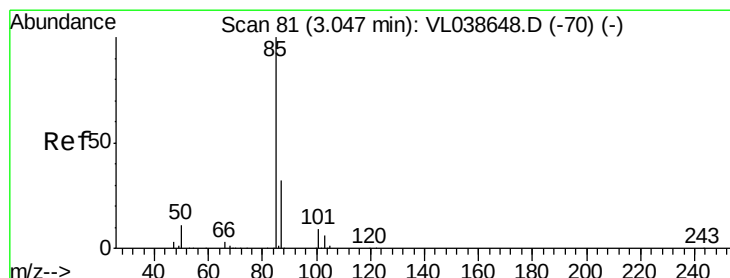
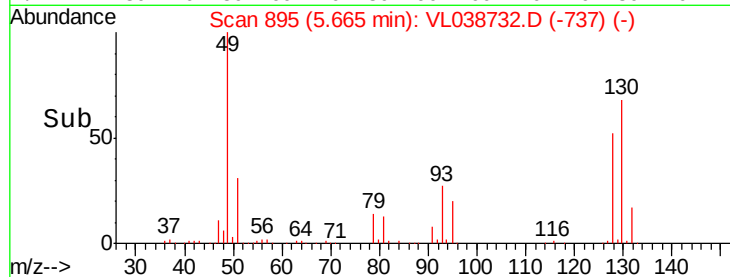
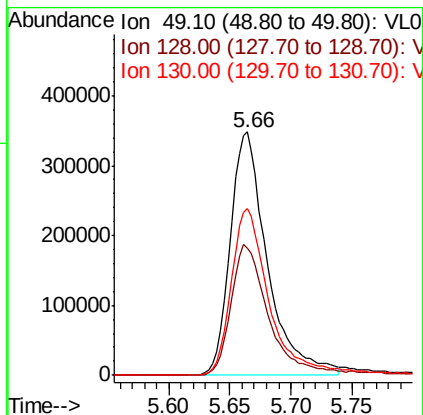
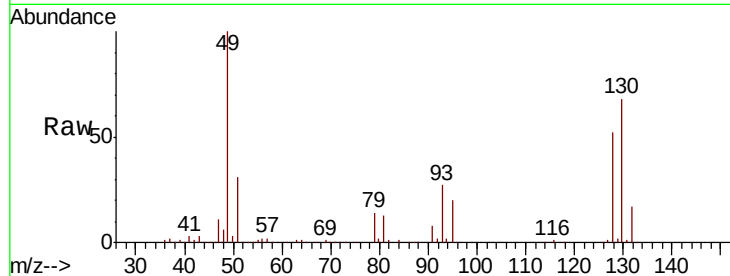
Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.05	85	31073	0.313	ppbv 97
3) Chlorodifluoromethane	2.99	51	26320	0.337	ppbv 96
4) Chloromethane	3.14	50	3595	0.084	ppbv 95
9) Propene	3.01	41	42767	1.135	ppbv 97
11) Trichlorofluoromethane	3.95	101	22919	0.261	ppbv 95
12) 1,1,2-Trichlorotrifluoroet	4.49	101	2599	0.039	ppbv # 1
13) Ethanol	3.60	45	114132	27.466	ppbv 93
15) Acetone	3.84	43	901785	14.146	ppbv # 87
16) 1,3-Butadiene	3.31	39	106938	2.956	ppbv # 13
17) tert-Butyl alcohol	4.29	59	29071	0.522	ppbv # 92
19) Isopropyl Alcohol	3.99	45	3706	0.105	ppbv # 91
20) Methylene Chloride	4.34	84	102976	3.835	ppbv 95
23) Vinyl Acetate	5.06	43	30964	0.502	ppbv # 82
25) Ethyl Acetate	5.68	43	53561	0.334	ppbv # 84
26) Hexane	5.68	57	66195	0.921	ppbv # 38
27) Carbon Disulfide	4.55	76	4294	0.061	ppbv # 37
34) 2-Butanone	5.24	43	829842	10.654	ppbv 94
35) Carbon Tetrachloride	7.01	117	5983	0.052	ppbv 96
36) Benzene	6.88	78	21230	0.140	ppbv # 90
39) 1,2-Dichloropropane	7.17	63	444638	7.488	ppbv # 29
51) 2-Hexanone	10.14	43	54885	0.528	ppbv # 99
52) Tetrachloroethene	11.22	164	2043	0.037	ppbv # 80
53) Toluene	9.80	91	45117	0.276	ppbv 96
60) o-Xylene	13.68	91	5464	0.033	ppbv # 30
65) tert-Butylbenzene	16.97	119	156536	0.696	ppbv # 24
67) sec-Butylbenzene	16.95	105	11347	0.035	ppbv 100
75) 1,3-Dichlorobenzene	16.98	146	12216	0.098	ppbv # 1

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



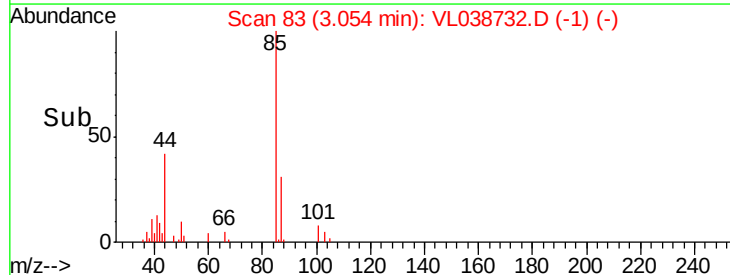
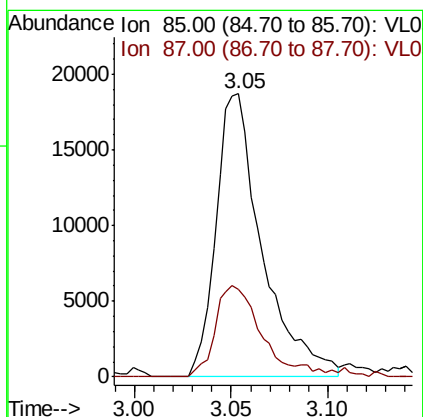
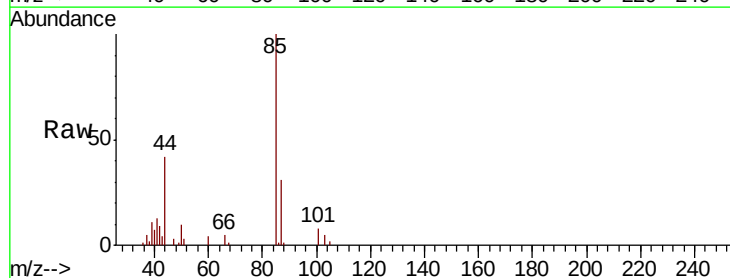
#1
 Bromochloromethane
 Concen: 10.000 ppbv
 RT: 5.66
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId :
 Acq: 24 Mar 2022 1:49

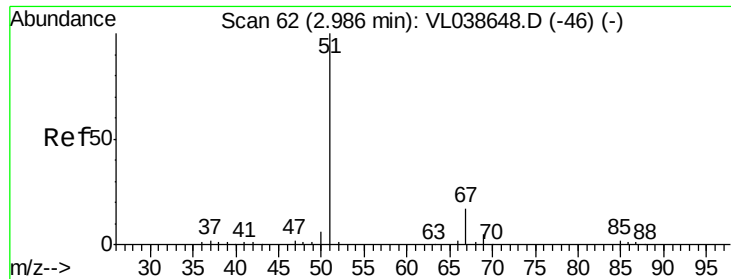
Tot Ion: 49 Resp: 738785
 Ion Ratio Lower Upper
 49 100
 128 56.2 26.2 78.6
 130 72.3 33.7 101.1



#2
 Dichlorodifluoromethane
 Concen: 0.313 ppbv
 RT: 3.05 min Scan# 83
 Delta R.T. 0.01 min
 Lab File: VL038732.D
 Acq: 24 Mar 2022 1:49

Tgt Ion: 85 Resp: 31073
 Ion Ratio Lower Upper
 85 100
 87 31.1 26.0 39.0





#3

Chlorodifluoromethane

Concen: 0.337 ppbv

RT: 2.99 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

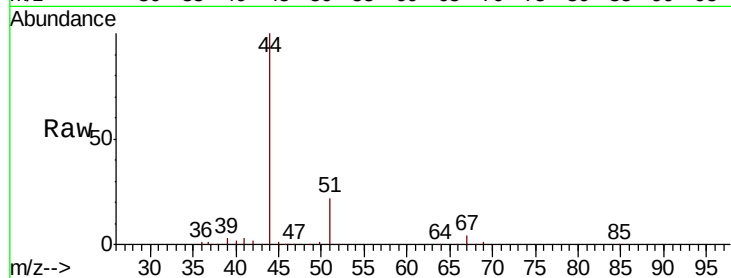
Acq: 24 Mar 2022 1:49

Tot Ion: 51 Resp: 26320

Ion Ratio Lower Upper

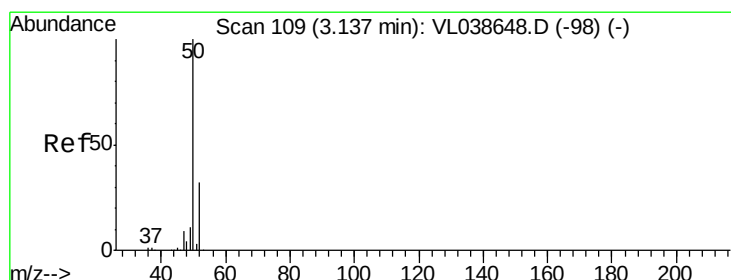
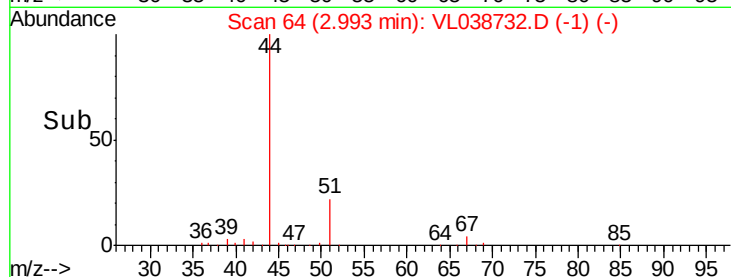
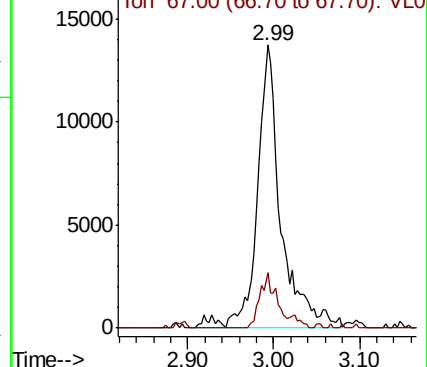
51 100

67 15.9 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: 0.084 ppbv

RT: 3.14 min Scan# 110

Delta R.T. 0.00 min

Lab File: VL038732.D

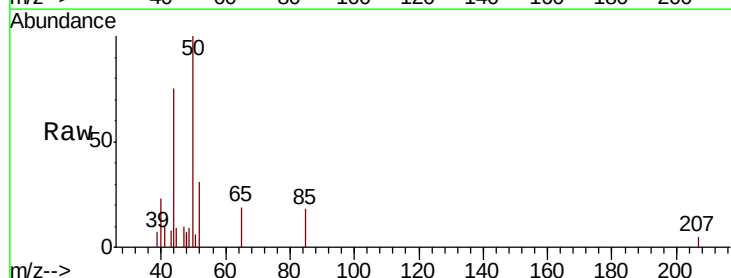
Acq: 24 Mar 2022 1:49

Tgt Ion: 50 Resp: 3595

Ion Ratio Lower Upper

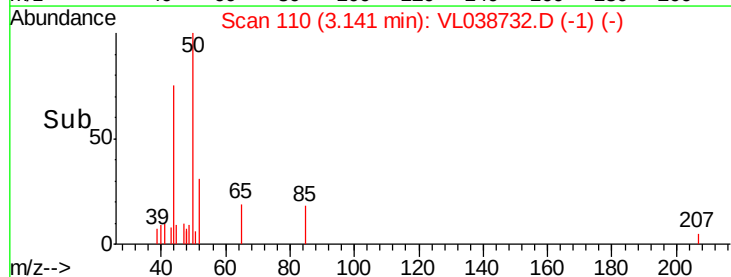
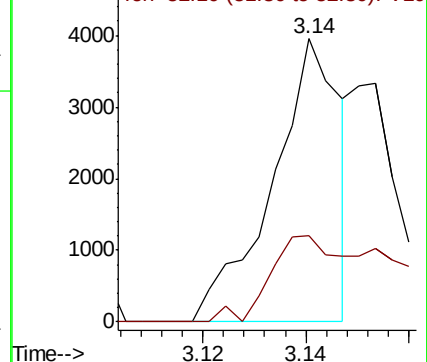
50 100

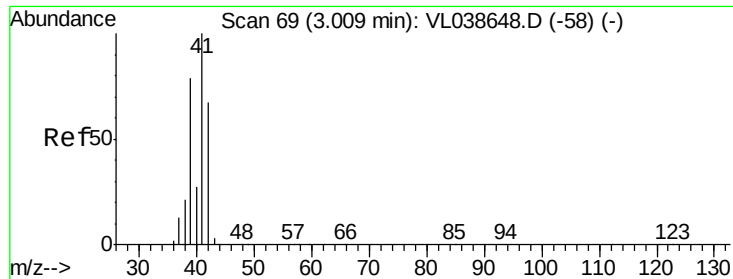
52 28.9 25.5 38.3



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 1.135 ppbv

RT: 3.01 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

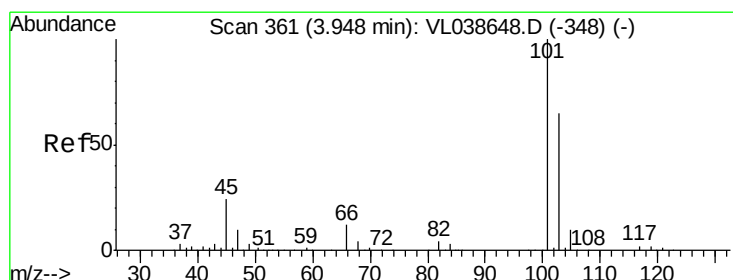
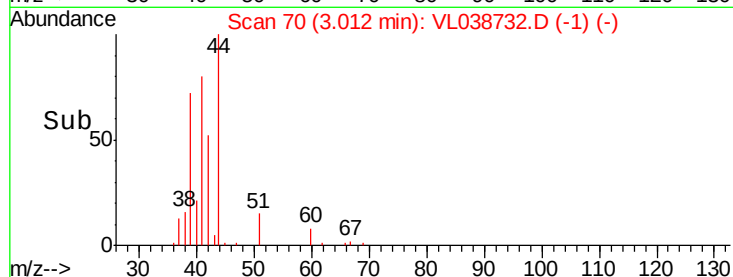
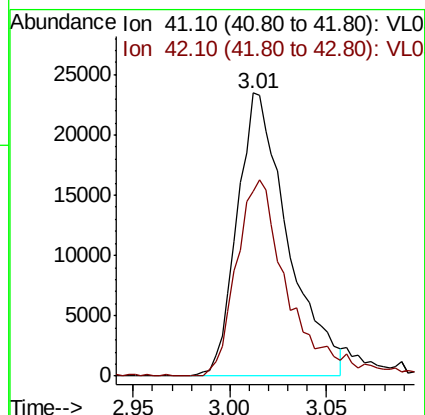
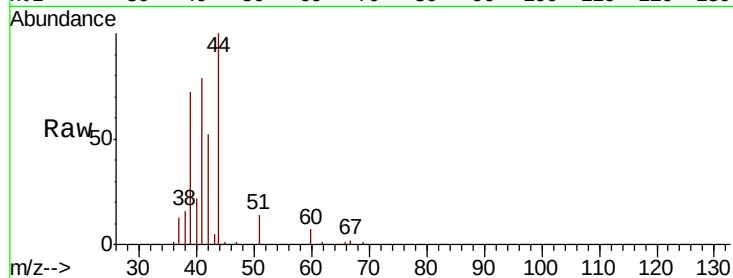
Acq: 24 Mar 2022 1:49

Tot Ion: 41 Resp: 42767

Ion Ratio Lower Upper

41 100

42 72.5 56.2 84.4



#11

Trichlorofluoromethane

Concen: 0.261 ppbv

RT: 3.95 min Scan# 362

Delta R.T. 0.00 min

Lab File: VL038732.D

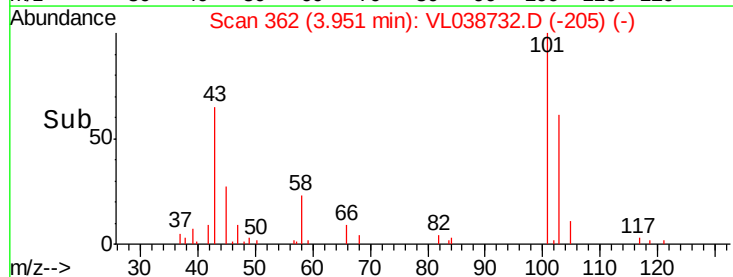
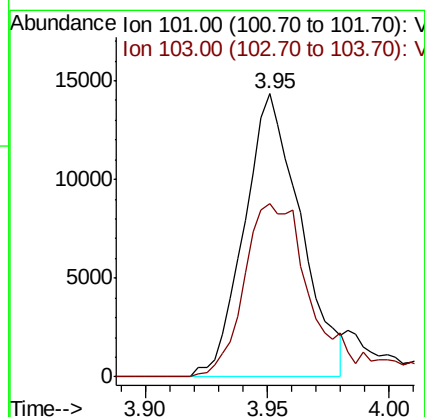
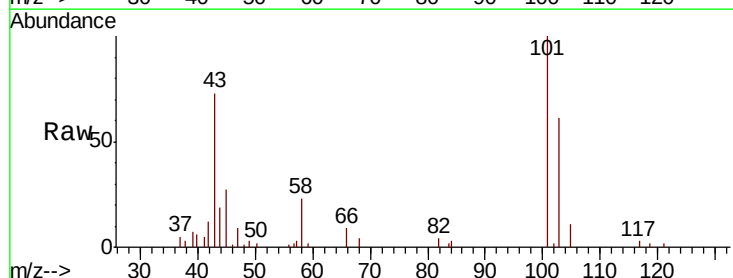
Acq: 24 Mar 2022 1:49

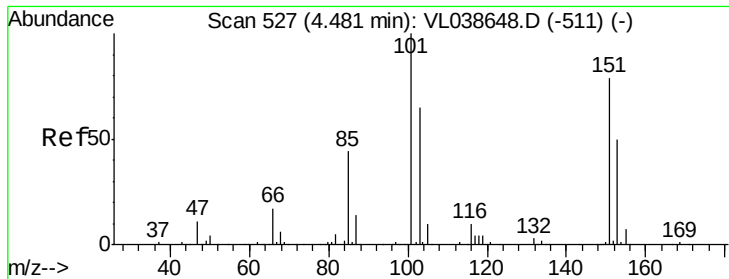
Tgt Ion: 101 Resp: 22919

Ion Ratio Lower Upper

101 100

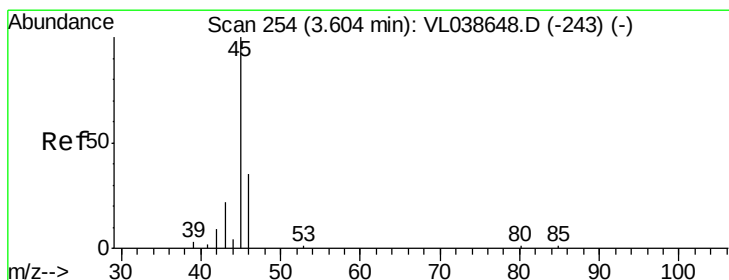
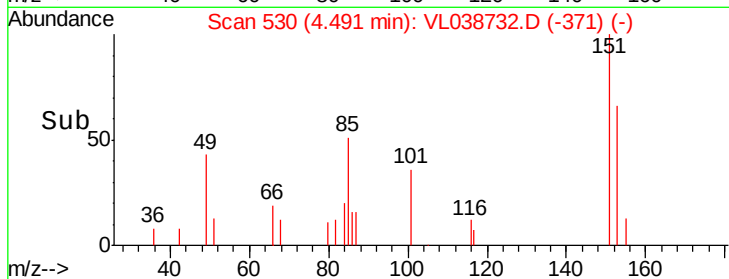
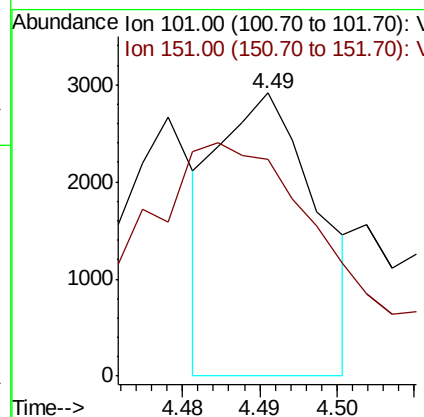
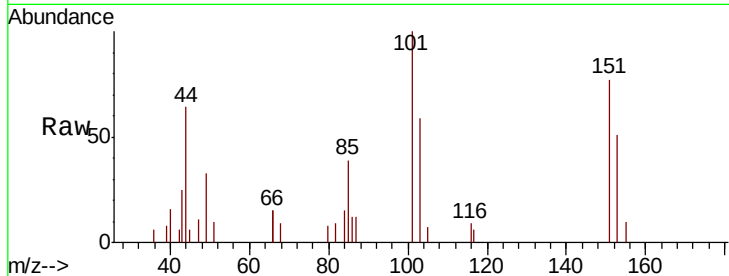
103 61.2 51.9 77.9





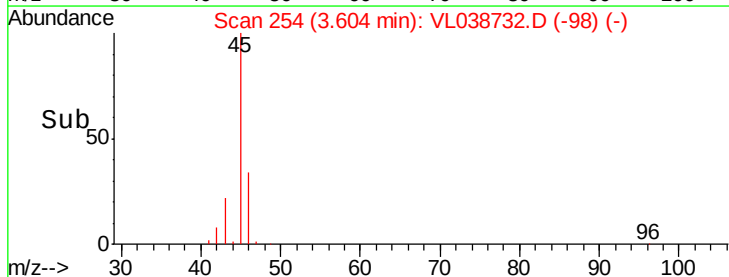
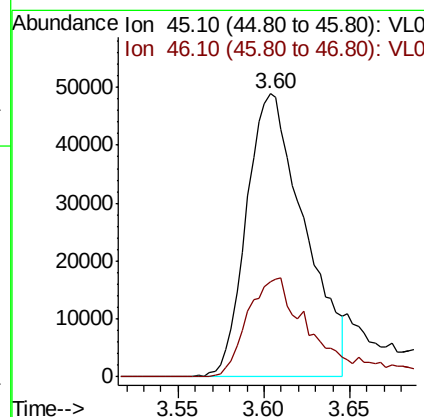
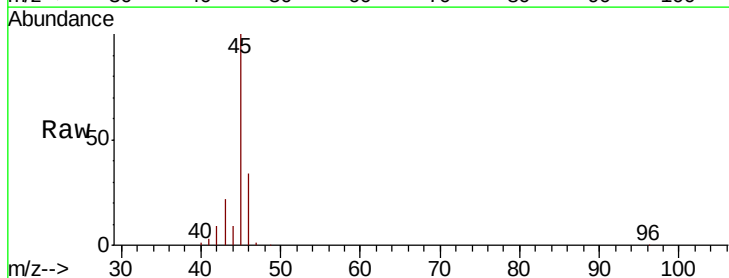
#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.039 ppbv
 RT: 4.49 min
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId:
 Acq: 24 Mar 2022 1:49

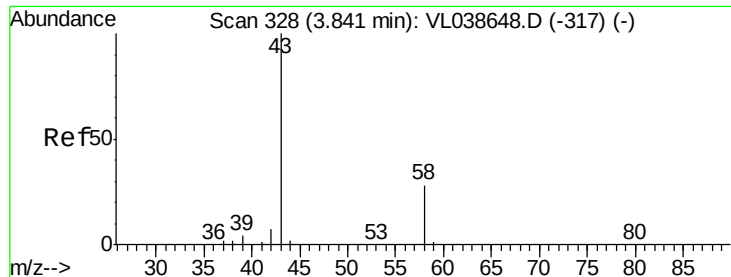
Tot Ion: 101 Resp: 2599
 Ion Ratio Lower Upper
 101 100
 151 179.0 62.9 94.3#



#13
 Ethanol
 Concen: 27.466 ppbv
 RT: 3.60 min Scan# 254
 Delta R.T. 0.00 min
 Lab File: VL038732.D
 Acq: 24 Mar 2022 1:49

Tgt Ion: 45 Resp: 114132
 Ion Ratio Lower Upper
 45 100
 46 41.7 15.1 60.5





#15

Acetone

Concen: 14.146 ppbv

RT: 3.84 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

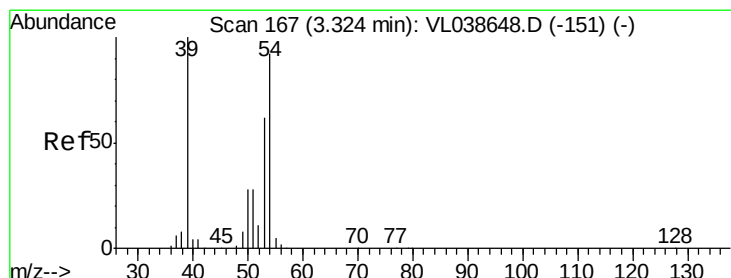
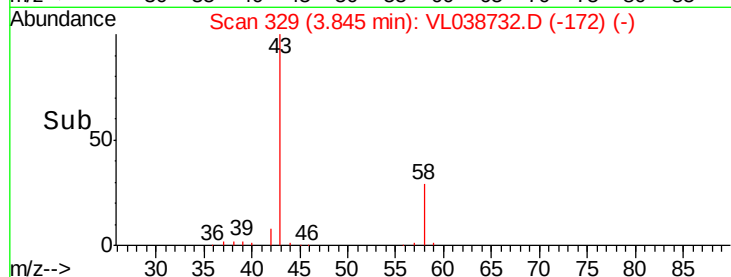
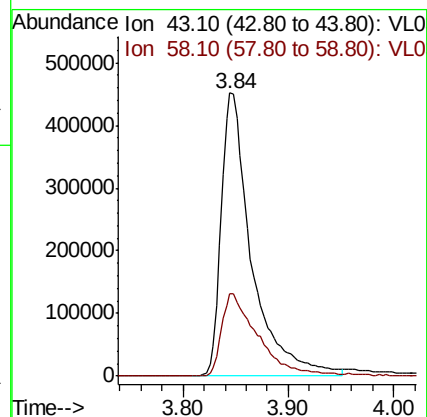
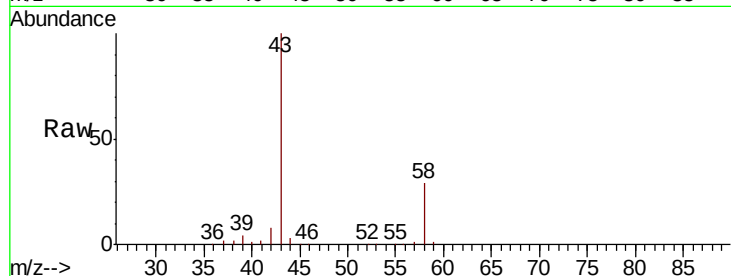
Acq: 24 Mar 2022 1:49

Tot Ion: 43 Resp: 901785

Ion Ratio Lower Upper

43 100

58 35.9 23.3 34.9#



#16

1,3-Butadiene

Concen: 2.956 ppbv

RT: 3.31 min Scan# 163

Delta R.T. -0.01 min

Lab File: VL038732.D

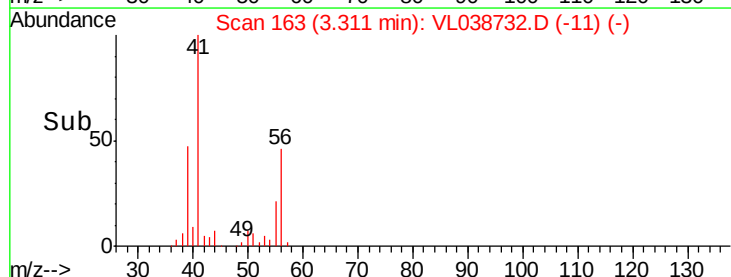
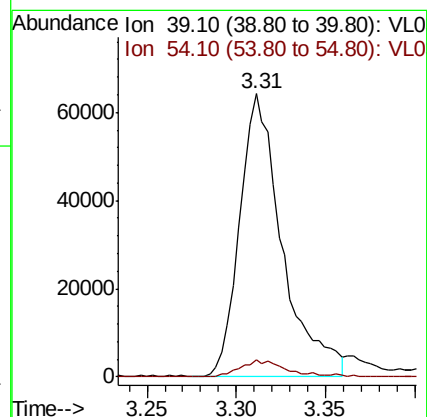
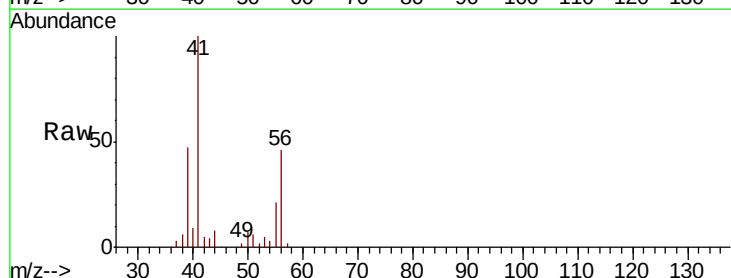
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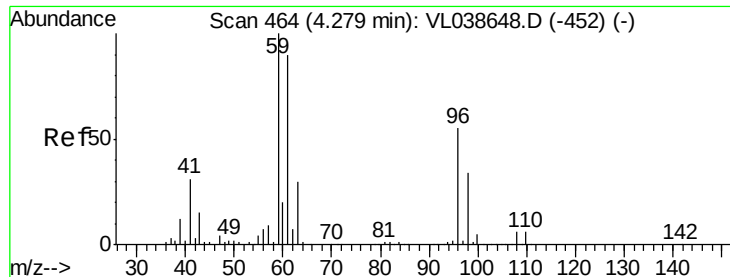
Tgt Ion: 39 Resp: 106938

Ion Ratio Lower Upper

39 100

54 6.6 69.1 103.7#





#17

tert-Butyl alcohol

Concen: 0.522 ppbv

RT: 4.29 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

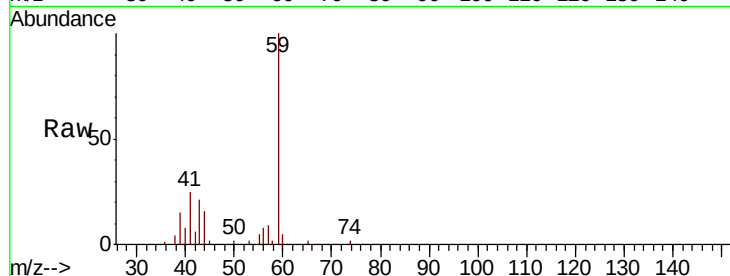
Acq: 24 Mar 2022 1:49

Tot Ion: 59 Resp: 29071

Ion Ratio Lower Upper

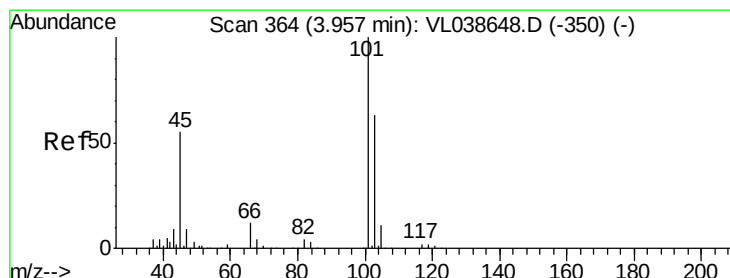
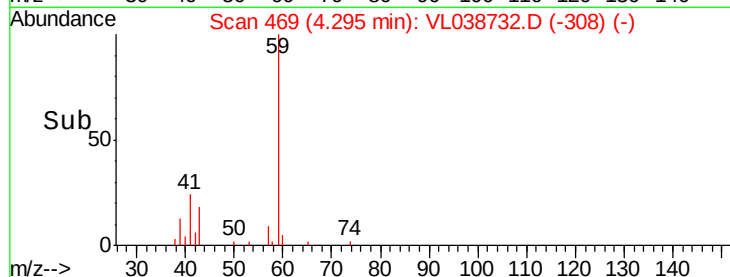
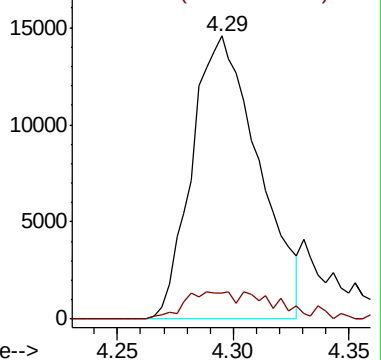
59 100

57 13.2 8.2 12.2#



Abundance Ion 59.10 (58.80 to 59.80): VL0

Ion 57.10 (56.80 to 57.80): VL0



#19

Isopropyl Alcohol

Concen: 0.105 ppbv

RT: 3.99 min Scan# 375

Delta R.T. 0.04 min

Lab File: VL038732.D

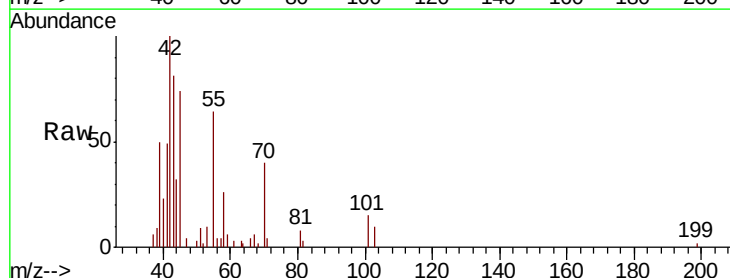
Acq: 24 Mar 2022 1:49

Tgt Ion: 45 Resp: 3706

Ion Ratio Lower Upper

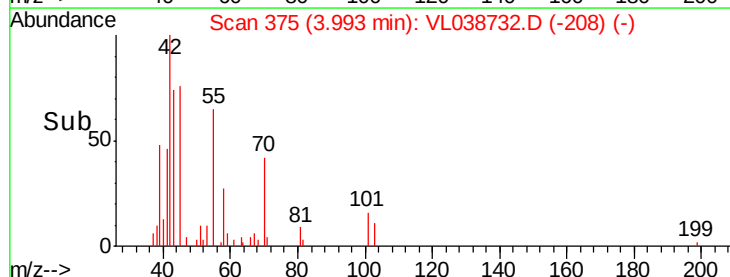
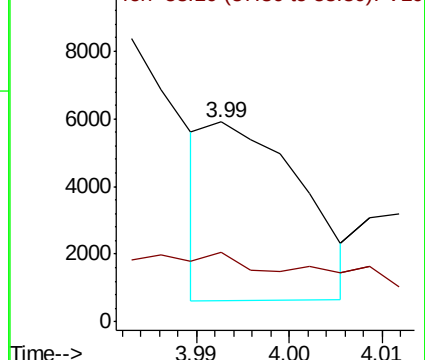
45 100

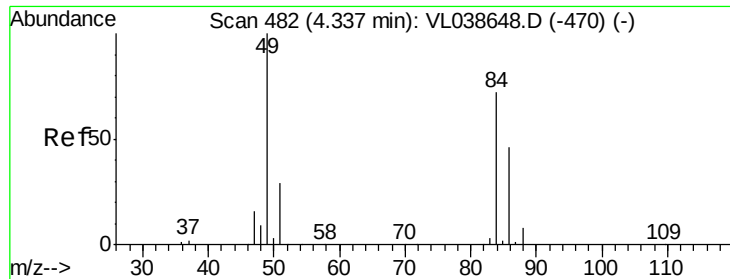
58 0.0 2.3 3.5#



Abundance Ion 45.10 (44.80 to 45.80): VL0

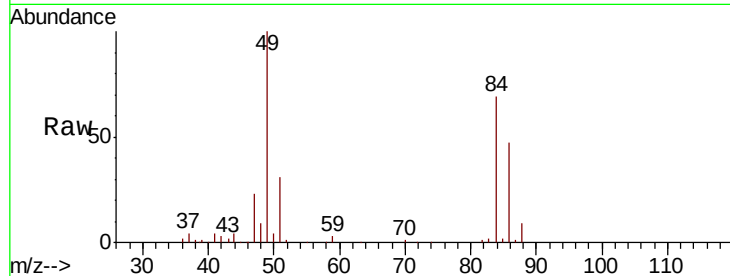
Ion 58.10 (57.80 to 58.80): VL0



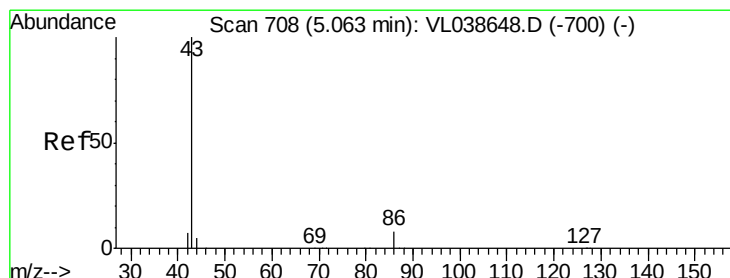
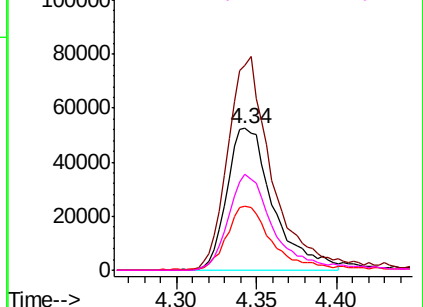
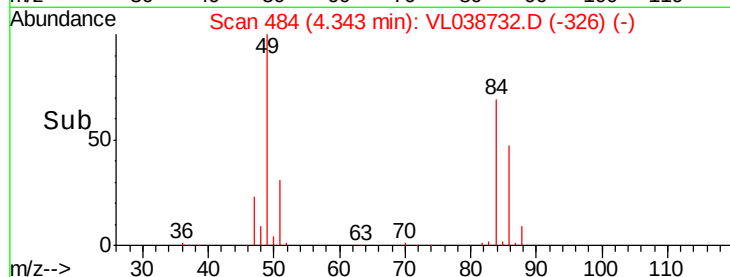


#20
Methvlene Chloride
Concen: 3.835 ppbv
RT: 4.34 Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId :
Acq: 24 Mar 2022 1:49

Tot Ion:	84	Resp:	102976
Ion	Ratio	Lower	Upper
84	100		
49	145.0	111.2	166.8
51	44.9	32.8	49.2
86	67.7	51.4	77.0

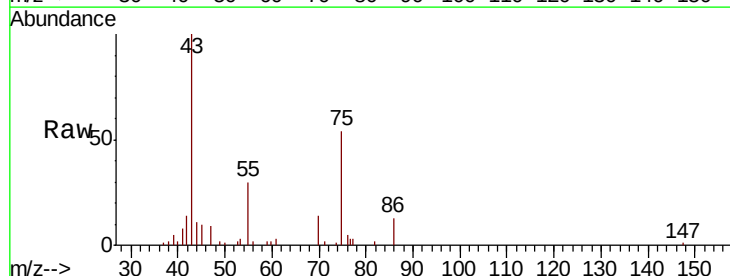


Abundance Ion 84.00 (83.70 to 84.70): VL0
Ion 49.10 (48.80 to 49.80): VL0
Ion 51.10 (50.80 to 51.80): VL0
Ion 86.00 (85.70 to 86.70): VL0

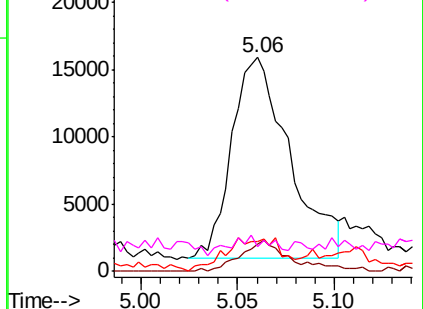
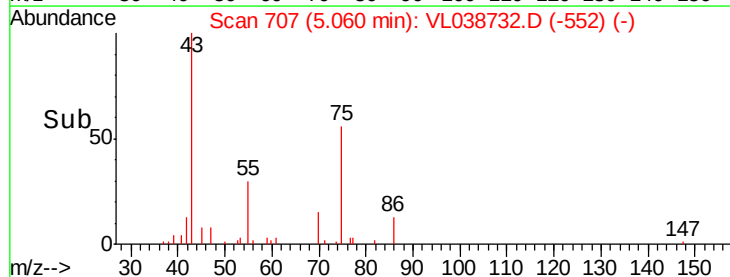


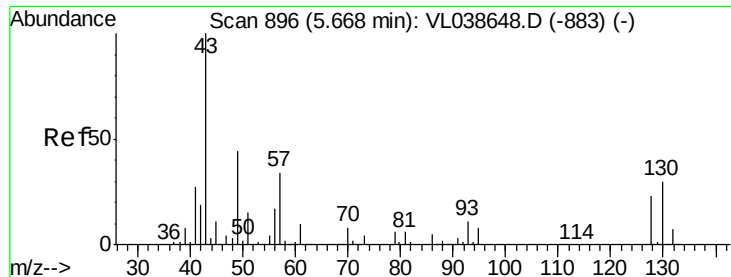
#23
Vinyl Acetate
Concen: 0.502 ppbv
RT: 5.06 min Scan# 707
Delta R.T. -0.00 min
Lab File: VL038732.D
Acq: 24 Mar 2022 1:49

Tgt Ion:	43	Resp:	30964
Ion	Ratio	Lower	Upper
43	100		
86	13.7	5.6	8.4#
42	14.9	6.8	10.2#
44	0.1	4.2	6.2#



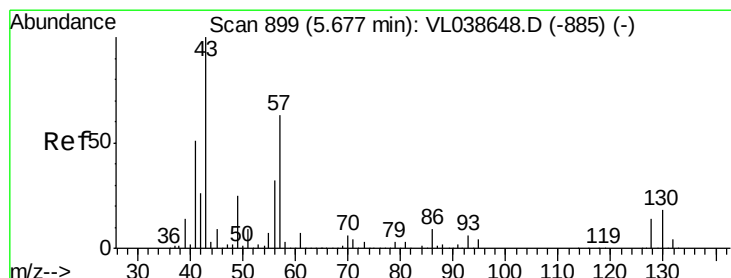
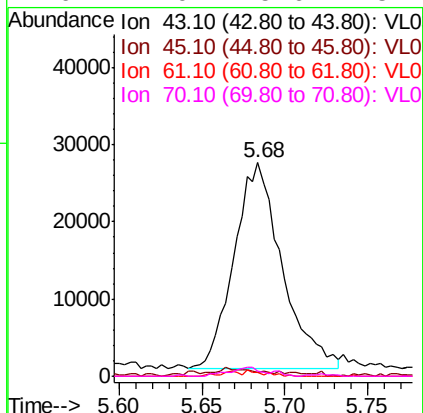
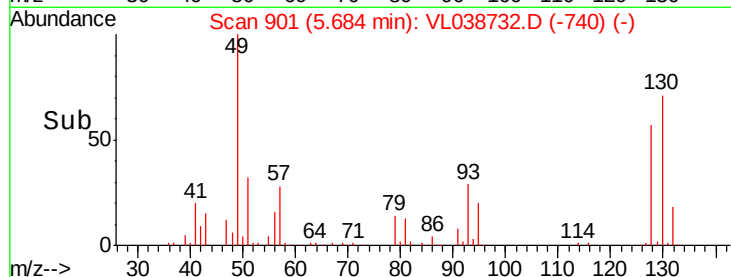
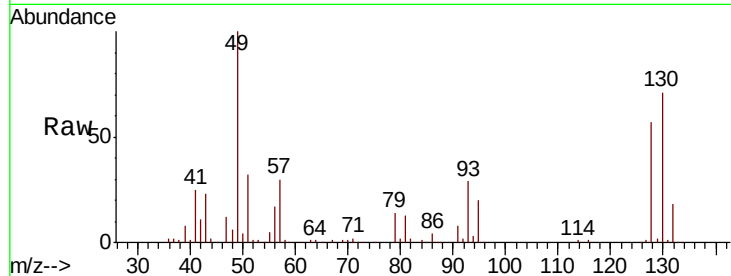
Abundance Ion 43.10 (42.80 to 43.80): VL0
Ion 86.10 (85.80 to 86.80): VL0
Ion 42.10 (41.80 to 42.80): VL0
Ion 44.10 (43.80 to 44.80): VL0





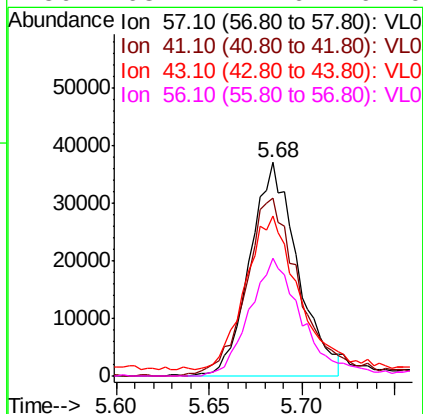
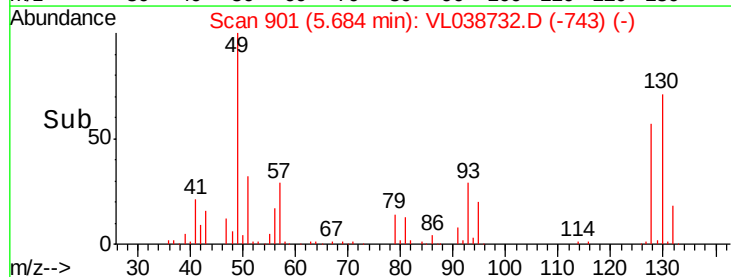
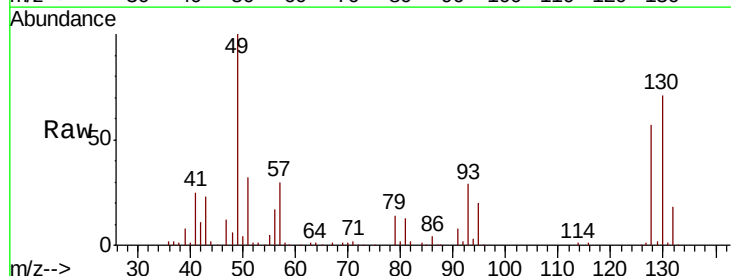
#25
Ethyl Acetate
Concen: 0.334 ppbv
RT: 5.68 min
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 24 Mar 2022 1:49

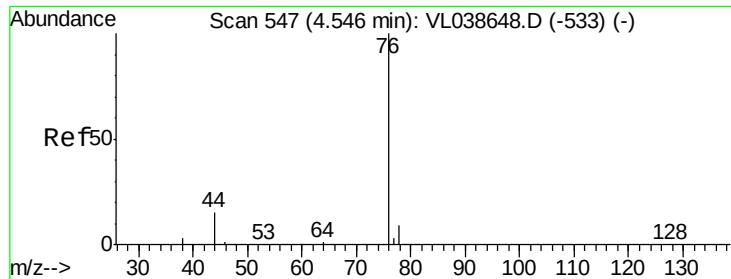
Tot Ion:	43	Resp:	53561
Ion	Ratio	Lower	Upper
43	100		
45	4.3	8.2	12.4#
61	2.1	8.3	12.5#
70	4.0	5.6	8.4#



#26
Hexane
Concen: 0.921 ppbv
RT: 5.68 min Scan# 901
Delta R.T.: 0.01 min
Lab File: VL038732.D
Acq: 24 Mar 2022 1:49

Tgt Ion:	57	Resp:	66195
Ion	Ratio	Lower	Upper
57	100		
41	100.1	67.0	100.4
43	82.4	184.2	276.2#
56	63.2	42.6	64.0





#27

Carbon Disulfide

Concen: 0.061 ppbv

RT: 4.55 Instrument:

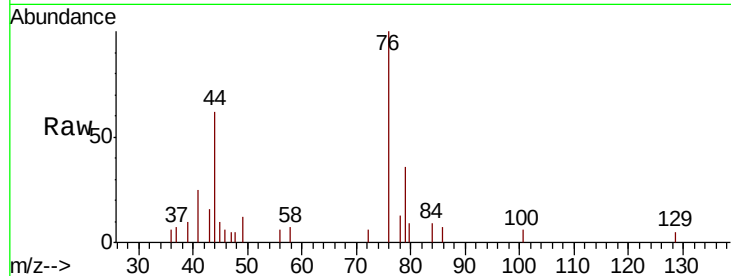
Delta R.T. MSVOA_L

Lab File: ClientSampleId:

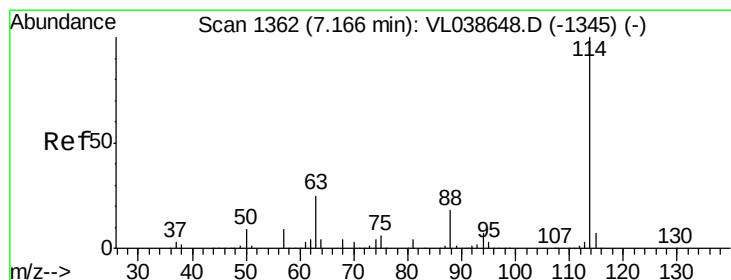
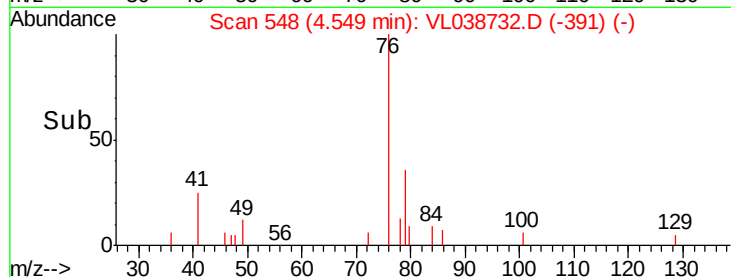
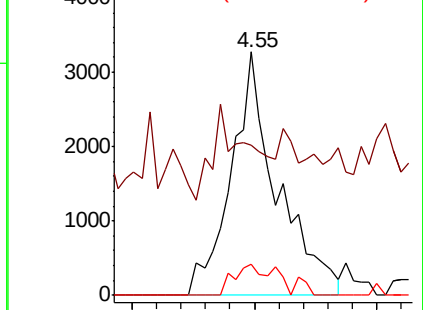
Acq: 24 Mar 2022 1:49

Tot Ion: 76 Resp: 4294

Ion	Ratio	Lower	Upper
76	100		
44	56.1	12.4	18.6#
78	13.0	7.8	11.8#



Abundance Ion 76.00 (75.70 to 76.70): VL0
Ion 44.10 (43.80 to 44.80): VL0
Ion 78.00 (77.70 to 78.70): VL0



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.17 min Scan# 1363

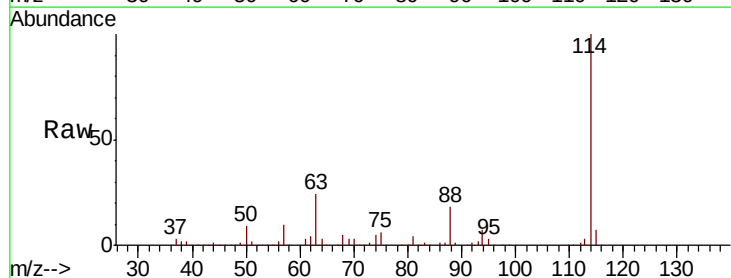
Delta R.T. 0.00 min

Lab File: VL038732.D

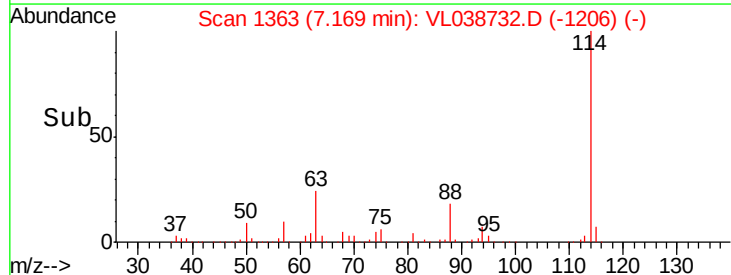
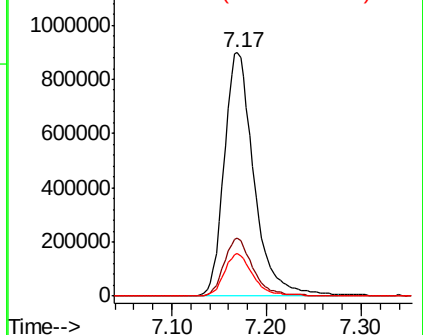
Acq: 24 Mar 2022 1:49

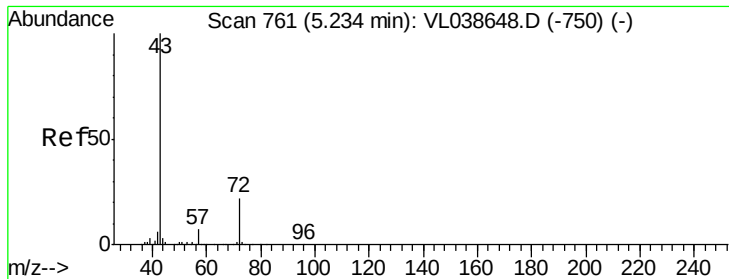
Tgt Ion: 114 Resp: 1967990

Ion	Ratio	Lower	Upper
114	100		
63	23.4	19.4	29.0
88	17.1	13.9	20.9



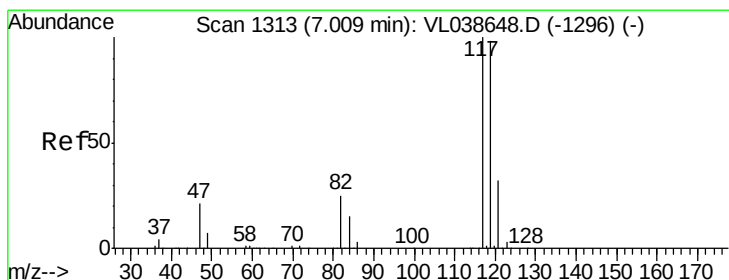
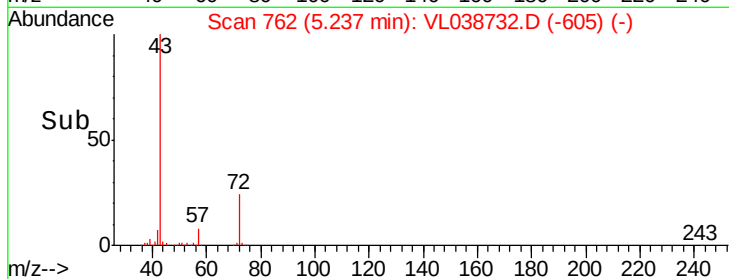
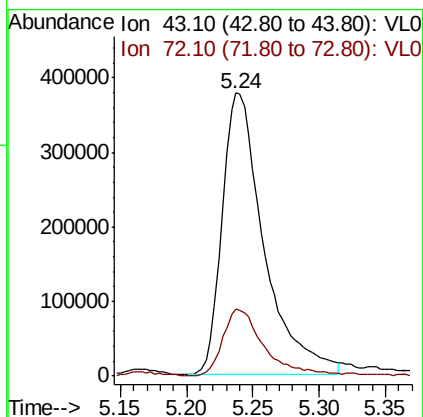
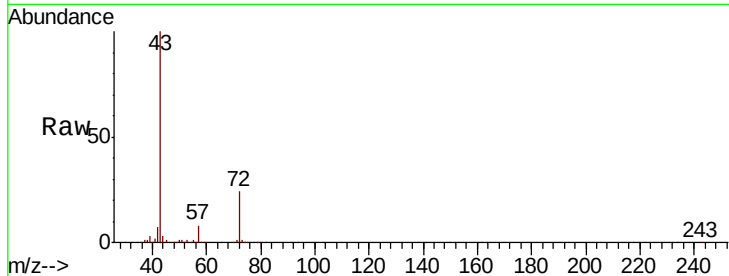
Abundance Ion 114.10 (113.80 to 114.80): V
Ion 63.10 (62.80 to 63.80): VL0
Ion 88.10 (87.80 to 88.80): VL0





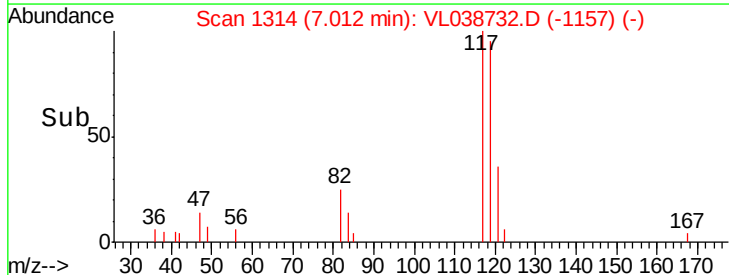
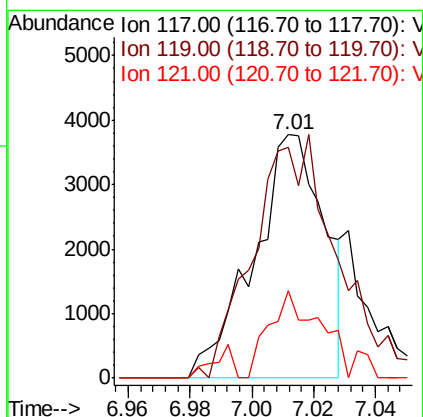
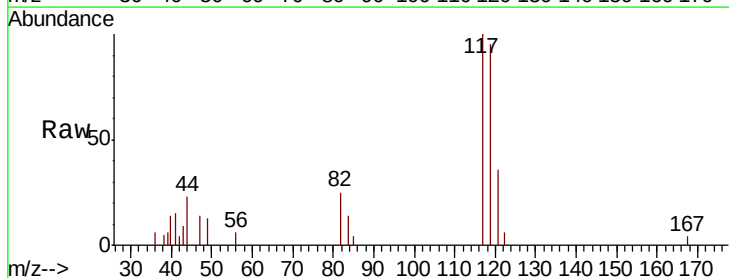
#34
 2-Butanone
 Concen: 10.654 ppbv
 RT: 5.24
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 24 Mar 2022 1:49

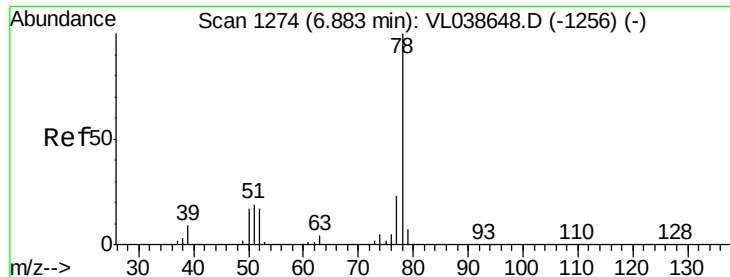
Tot Ion: 43 Resp: 829842
 Ion Ratio Lower Upper
 43 100
 72 25.2 17.8 26.8



#35
 Carbon Tetrachloride
 Concen: 0.052 ppbv
 RT: 7.01 min Scan# 1314
 Delta R.T. 0.00 min
 Lab File: VL038732.D
 Acq: 24 Mar 2022 1:49

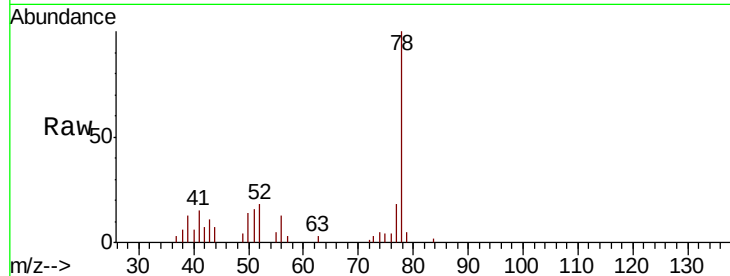
Tgt Ion: 117 Resp: 5983
 Ion Ratio Lower Upper
 117 100
 119 94.6 78.1 117.1
 121 35.7 25.8 38.6



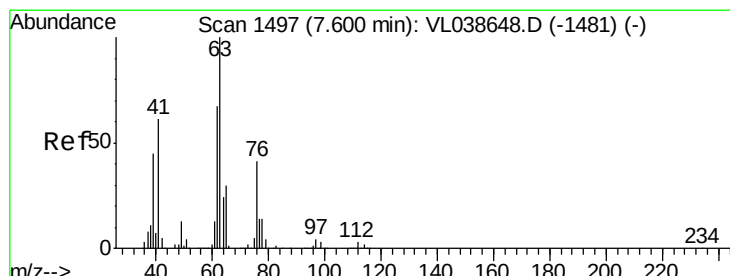
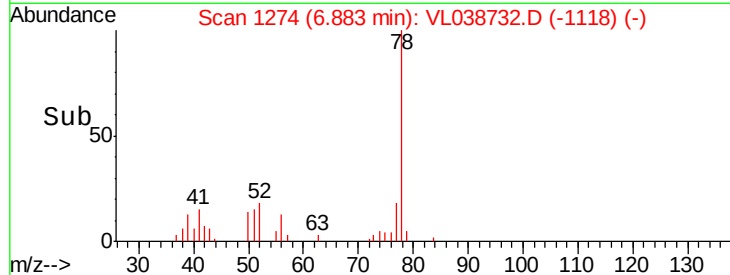
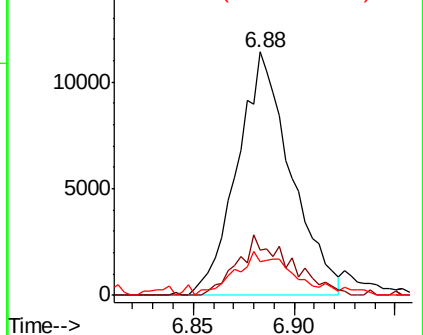


#36
Benzene
Concen: 0.140 ppbv
RT: 6.88
Instrument: MSVOA_L
Delta R.T.:
Lab File: ClientSampleId:
Acq: 24 Mar 2022 1:49

Tot Ion	78	Resp	21230
Ion Ratio	Lower	Upper	
78	100		
77	18.4	18.1	27.1
50	12.3	13.6	20.4#

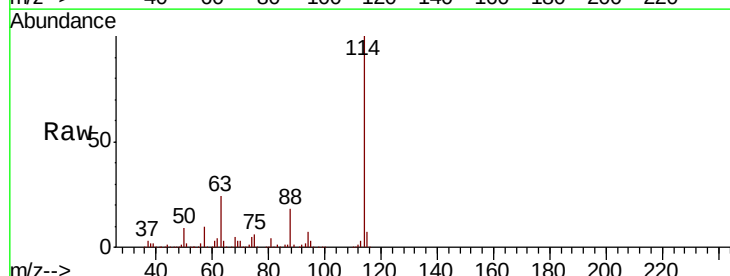


Abundance Ion 78.10 (77.80 to 78.80): VL0
Ion 77.10 (76.80 to 77.80): VL0
Ion 50.10 (49.80 to 50.80): VL0

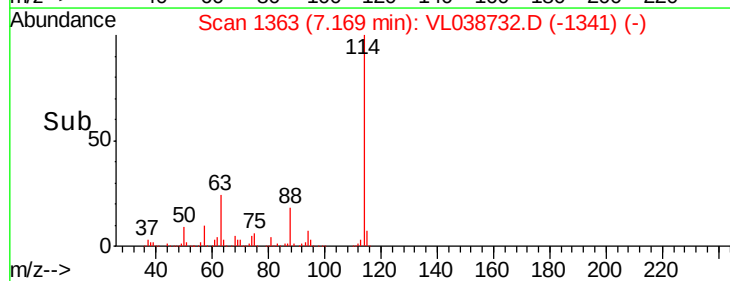
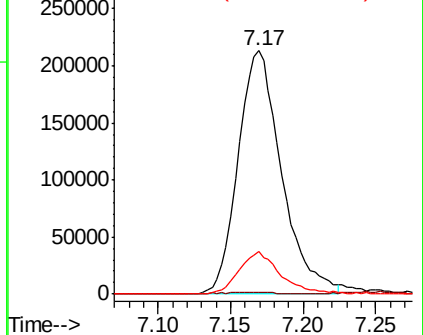


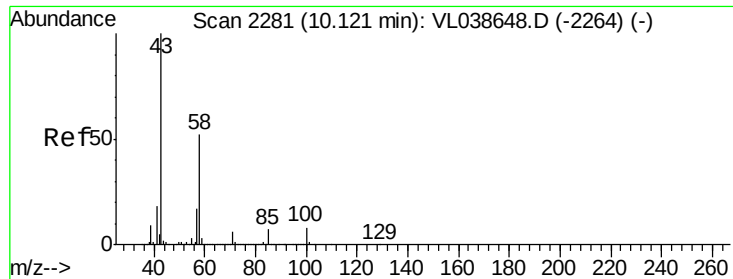
#39
1,2-Dichloropropane
Concen: 7.488 ppbv
RT: 7.17 min Scan# 1363
Delta R.T. -0.43 min
Lab File: VL038732.D
Acq: 24 Mar 2022 1:49

Tgt Ion	63	Resp	444638
Ion Ratio	Lower	Upper	
63	100		
41	0.4	49.0	73.6#
62	17.3	53.9	80.9#



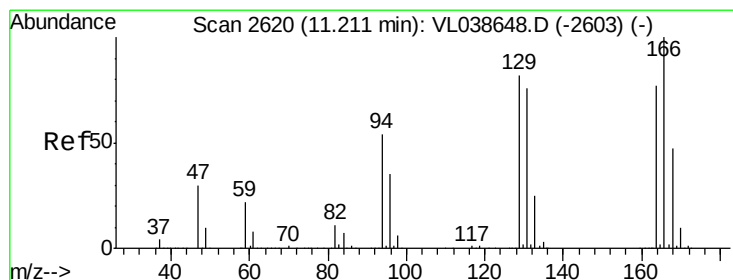
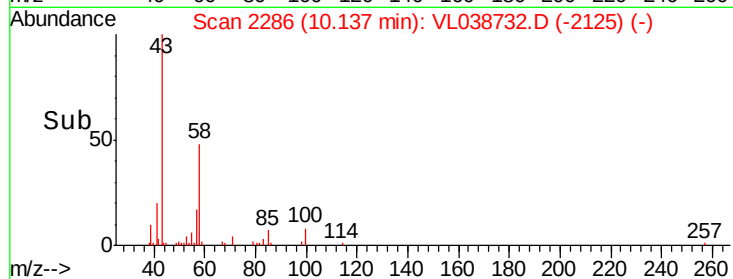
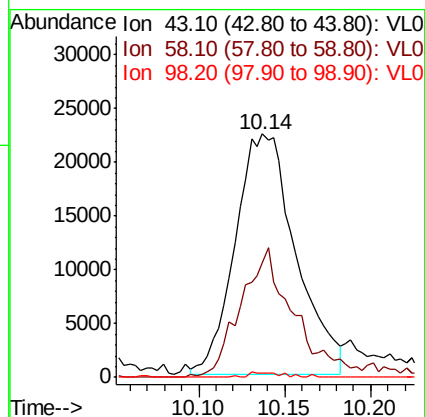
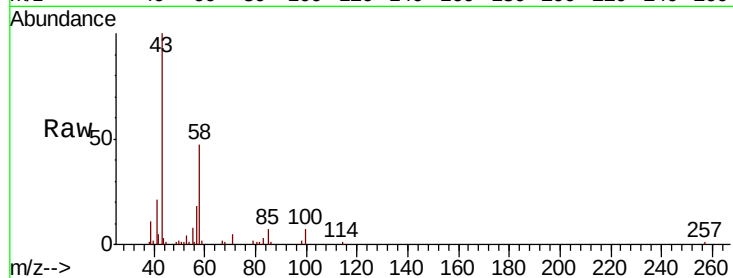
Abundance Ion 63.10 (62.80 to 63.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 62.10 (61.80 to 62.80): VL0





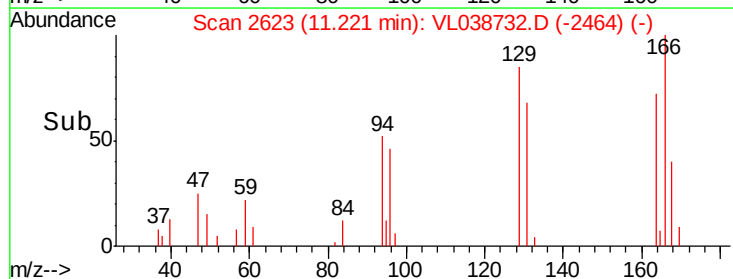
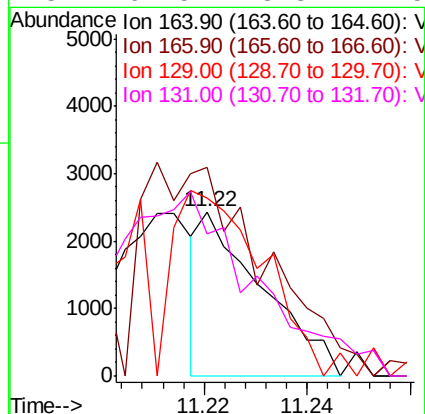
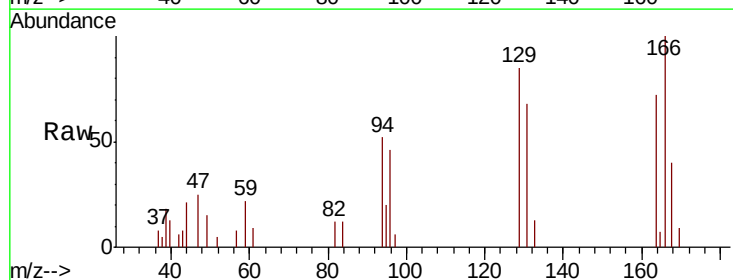
#51
 2-Hexanone
 Concen: 0.528 ppbv
 RT: 10.14 min
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 24 Mar 2022 1:49

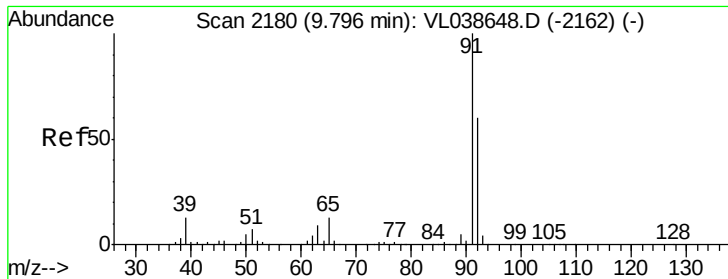
Tot Ion:	43	Resp:	54885
Ion Ratio	Lower	Upper	
43	100		
58	50.8	41.2	61.8
98	1.2	0.2	0.4#



#52
 Tetrachloroethene
 Concen: 0.037 ppbv
 RT: 11.22 min Scan# 2623
 Delta R.T. 0.01 min
 Lab File: VL038732.D
 Acq: 24 Mar 2022 1:49

Tgt Ion:	164	Resp:	2043
Ion Ratio	Lower	Upper	
164	100		
166	110.0	103.3	154.9
129	94.1	85.2	127.8
131	64.5	78.3	117.5#





#53

Toluene

Concen: 0.276 ppbv

RT: 9.80 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

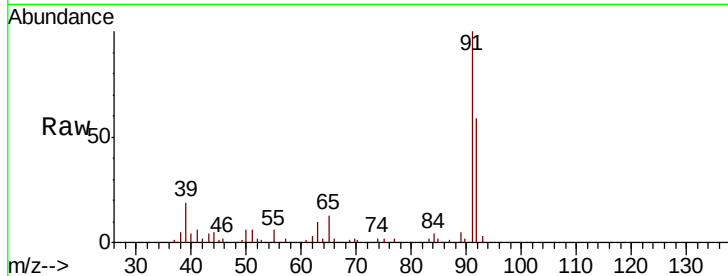
Acq: 24 Mar 2022 1:49

Tot Ion: 91 Resp: 45117

Ion Ratio Lower Upper

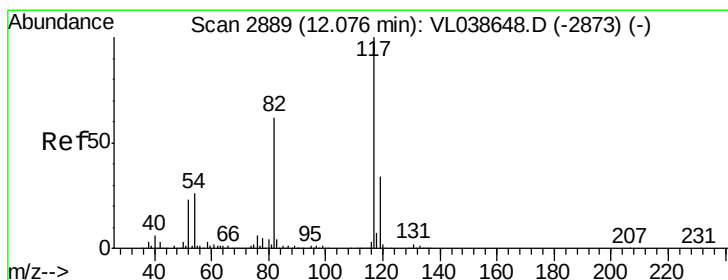
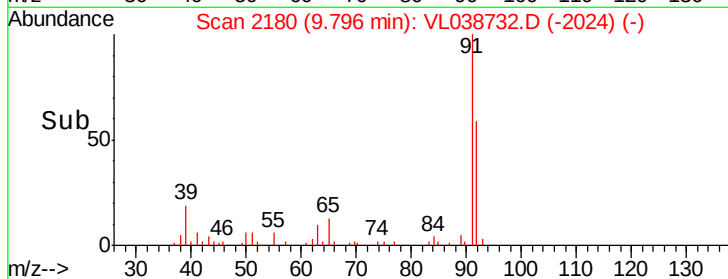
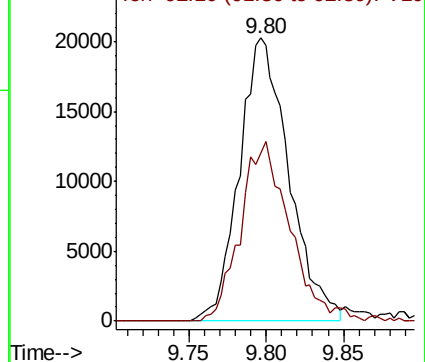
91 100

92 63.7 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: 10.000 ppbv

RT: 12.08 min Scan# 2889

Delta R.T. 0.00 min

Lab File: VL038732.D

Acq: 24 Mar 2022 1:49

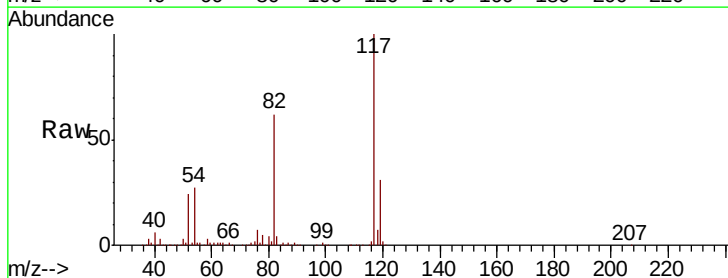
Tgt Ion: 117 Resp: 1714632

Ion Ratio Lower Upper

117 100

82 65.7 51.6 77.4

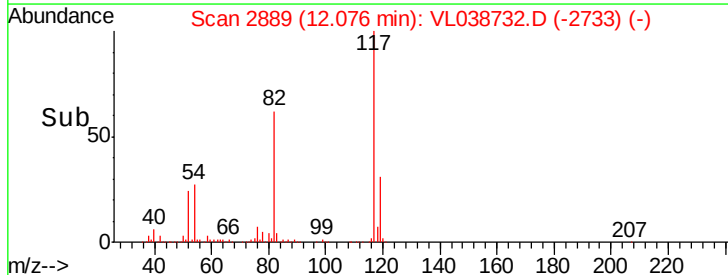
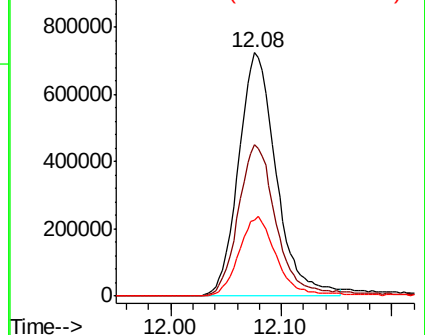
119 34.1 26.9 40.3

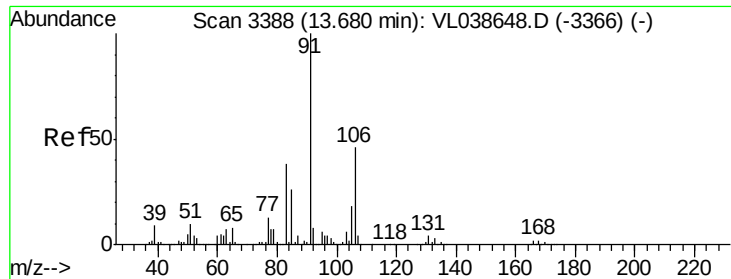


Abundance Ion 117.10 (116.80 to 117.80): V

Ion 82.10 (81.80 to 82.80): VL0

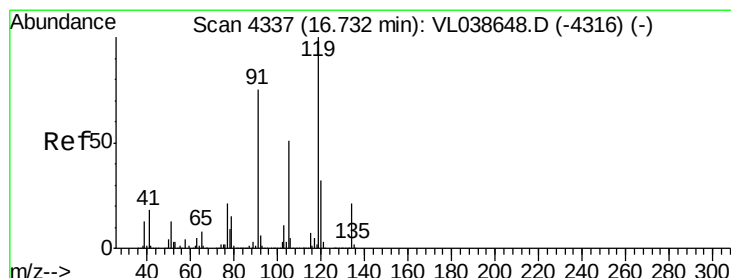
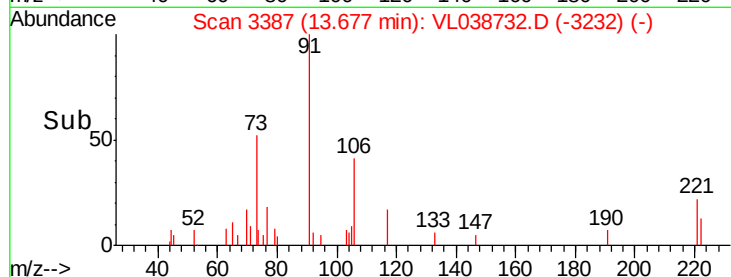
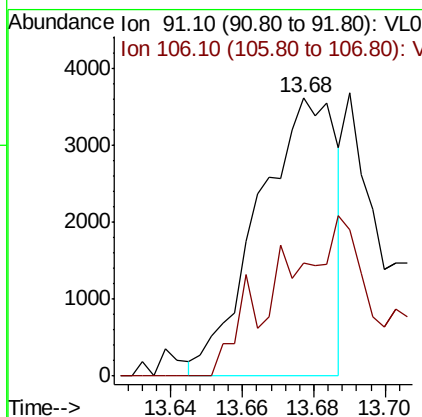
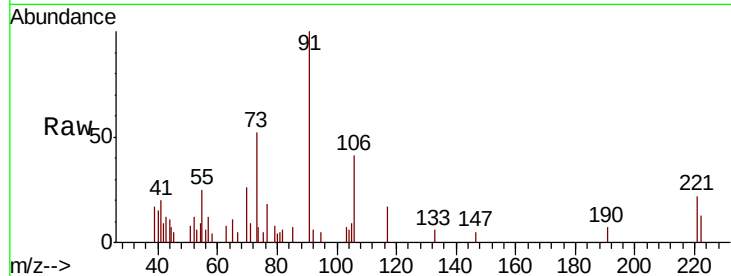
Ion 119.10 (118.80 to 119.80): V





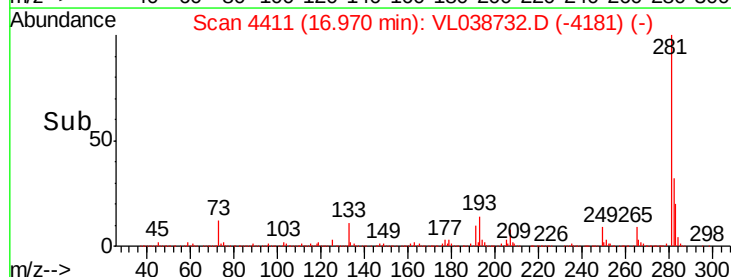
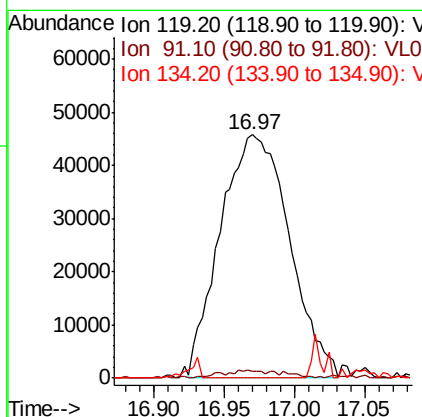
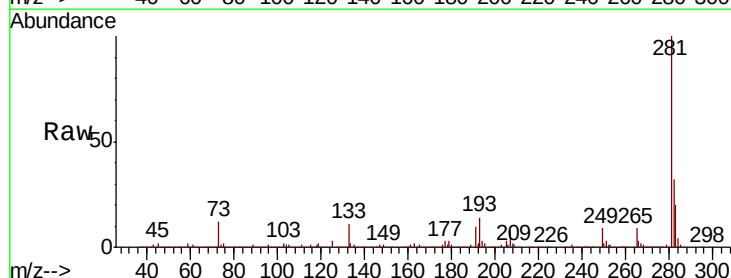
#60
o-Xylene
Concen: 0.033 ppbv
RT: 13.68 min
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 24 Mar 2022 1:49

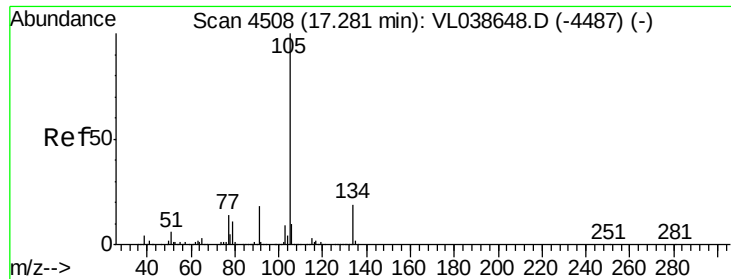
Tot Ion: 91 Resp: 5464
Ion Ratio Lower Upper
91 100
106 0.0 23.5 70.5#



#65
tert-Butylbenzene
Concen: 0.696 ppbv
RT: 16.97 min Scan# 4411
Delta R.T. 0.24 min
Lab File: VL038732.D
Acq: 24 Mar 2022 1:49

Tgt Ion: 119 Resp: 156536
Ion Ratio Lower Upper
119 100
91 3.1 61.2 91.8#
134 1.4 16.3 24.5#





#67

sec-Butylbenzene

Concen: 0.035 ppbv

RT: 16.95

Delta R.T. MSVOA_L

Lab File:

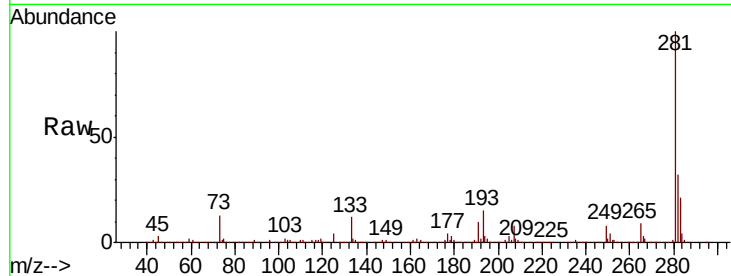
Acq: 24 Mar 2022 1:49

Tot Ion: 105 Resp: 11347

Ion Ratio Lower Upper

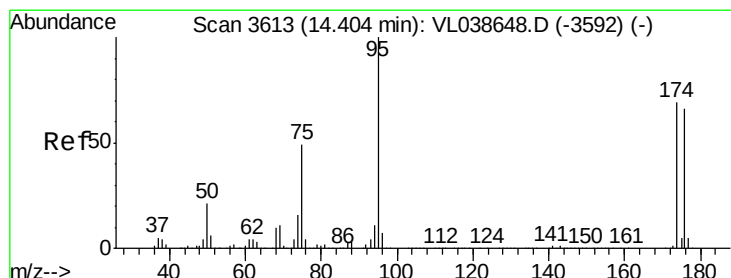
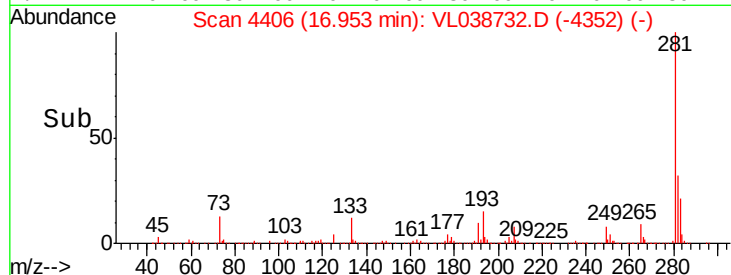
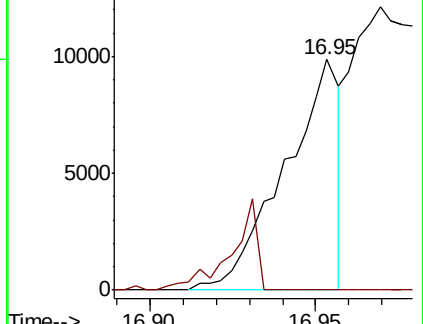
105 100

134 19.0 15.1 22.7



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 134.20 (133.90 to 134.90): V



#68

1-Bromo-4-Fluorobenzene

Concen: 9.324 ppbv

RT: 14.41 min Scan# 3614

Delta R.T. 0.00 min

Lab File: VL038732.D

Acq: 24 Mar 2022 1:49

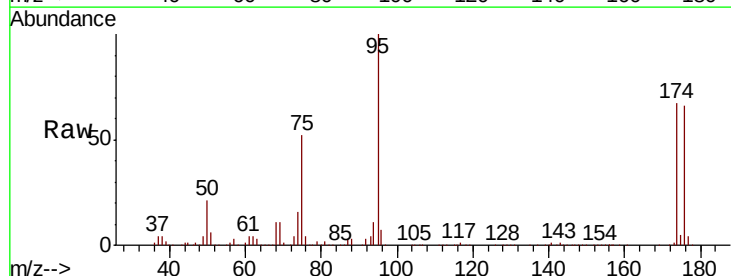
Tgt Ion: 95 Resp: 1225678

Ion Ratio Lower Upper

95 100

174 74.4 56.1 84.1

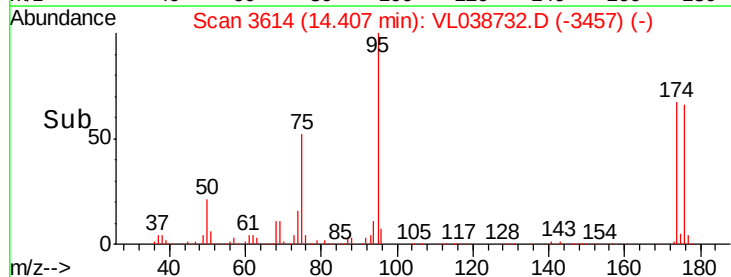
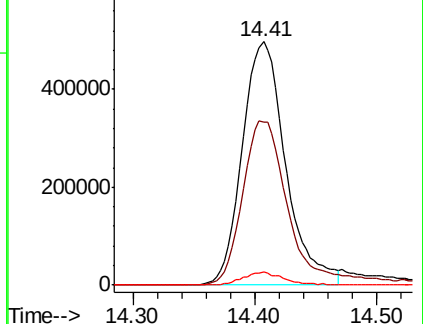
175 5.5 4.2 6.2

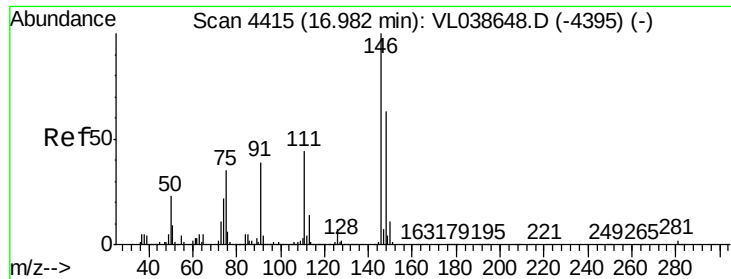


Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V





#75

1,3-Dichlorobenzene

Concen: 0.098 ppbv

RT: 16.98

Delta R.T: MSVOA_L

Lab File: ClientSampleId :

Acq: 24 Mar 2022 1.49

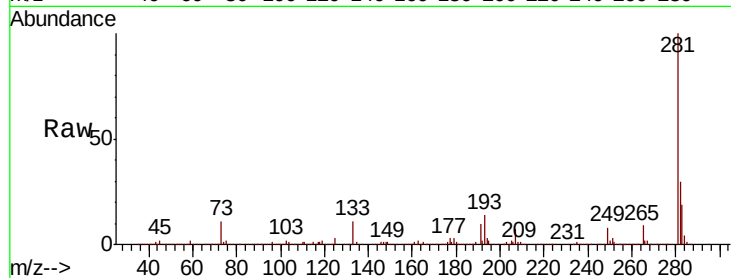
Tot Ion:146 Resp: 12216

Ion Ratio Lower Upper

146 100

111 0.0 22.2 66.6#

148 325.0 32.5 97.5#



Abundance Ion 146.00 (145.70 to 146.70): V

Ion 111.10 (110.80 to 111.80): V

Ion 148.00 (147.70 to 148.70): V

