

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL032322\
 Data File : VL038719.D
 Acq On : 23 Mar 2022 17:12
 Operator : SY/AP
 Sample : N2047-02
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Mar 24 04:34:17 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	720932	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.16	114	1891161	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.07	117	1768829	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.39	95	1278763	9.43	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	94.30%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.05	85	23736	0.245	ppbv	92
3) Chlorodifluoromethane	2.99	51	25025	0.329	ppbv #	91
4) Chloromethane	3.13	50	4240	0.101	ppbv	91
9) Propene	3.01	41	50144	1.364	ppbv	96
11) Trichlorofluoromethane	3.94	101	25641	0.300	ppbv	97
12) 1,1,2-Trichlorotrifluoroet	4.48	101	3070	0.047	ppbv #	1
13) Ethanol	3.60	45	133396	32.897	ppbv	91
15) Acetone	3.84	43	907501	14.588	ppbv #	89
16) 1,3-Butadiene	3.34	39	5551	0.157	ppbv #	6
17) tert-Butyl alcohol	4.29	59	24607	0.453	ppbv #	86
19) Isopropyl Alcohol	4.00	45	2619	0.076	ppbv #	91
20) Methylene Chloride	4.33	84	78490	2.996	ppbv	98
21) Allyl Chloride	4.35	41	2376	0.053	ppbv #	75
23) Vinyl Acetate	5.05	43	14503	0.241	ppbv #	66
25) Ethyl Acetate	5.67	43	45243	0.289	ppbv #	76
26) Hexane	5.67	57	57416	0.819	ppbv #	36
27) Carbon Disulfide	4.54	76	3009	0.044	ppbv #	73
29) Chloroform	5.74	83	84563	0.753	ppbv	95
34) 2-Butanone	5.23	43	837632	11.191	ppbv	98
35) Carbon Tetrachloride	7.00	117	5124	0.047	ppbv #	81
36) Benzene	6.87	78	24225	0.166	ppbv #	90
39) 1,2-Dichloropropane	7.16	63	429256	7.523	ppbv #	29
51) 2-Hexanone	10.13	43	68745	0.688	ppbv #	100
52) Tetrachloroethene	11.20	164	845160	15.823	ppbv	96
53) Toluene	9.79	91	86749	0.553	ppbv	99
59) m/p-Xylene	12.96	91	10699	0.059	ppbv #	19
65) tert-Butylbenzene	16.97	119	214418	0.924	ppbv #	25
75) 1,3-Dichlorobenzene	16.96	146	11777	0.092	ppbv #	1
79) Naphthalene	22.18	128	14826	0.096	ppbv #	82
80) Naphthalene,2-methyl-	24.96	142	4410	0.107	ppbv #	58

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 23 Mar 2022 17:12

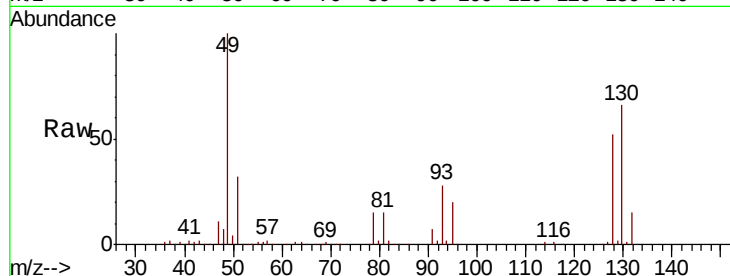
Tot Ion: 49 Resp: 720932

Ion Ratio Lower Upper

49 100

128 55.0 26.2 78.6

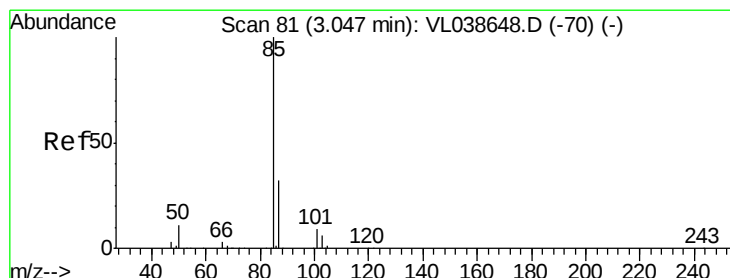
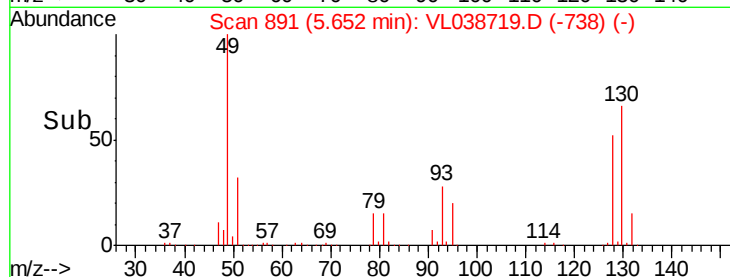
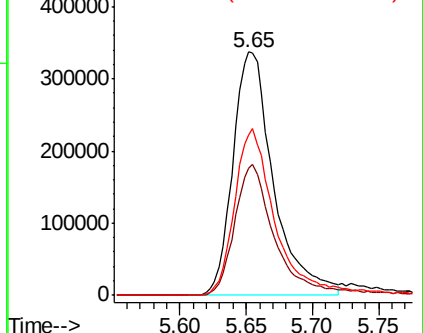
130 69.6 33.7 101.1



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): V

Ion 130.00 (129.70 to 130.70): V



#2

Dichlorodifluoromethane

Concen: 0.245 ppbv

RT: 3.05 min Scan# 81

Delta R.T. -0.00 min

Lab File: VL038719.D

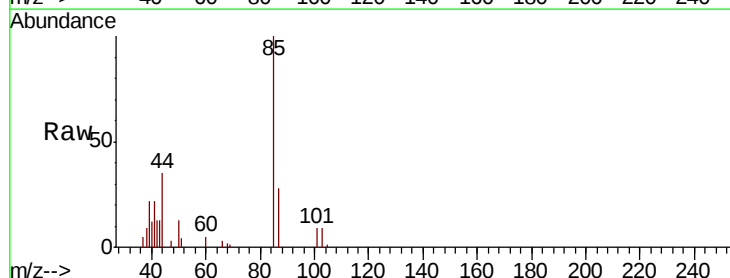
Acq: 23 Mar 2022 17:12

Tgt Ion: 85 Resp: 23736

Ion Ratio Lower Upper

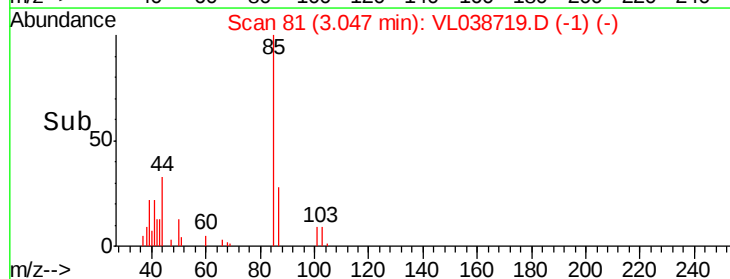
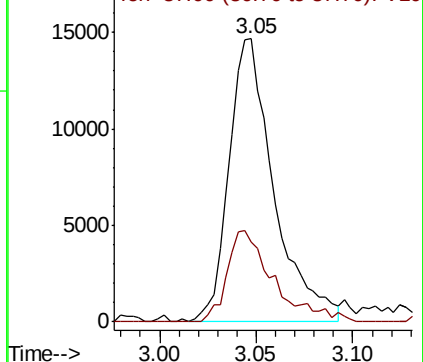
85 100

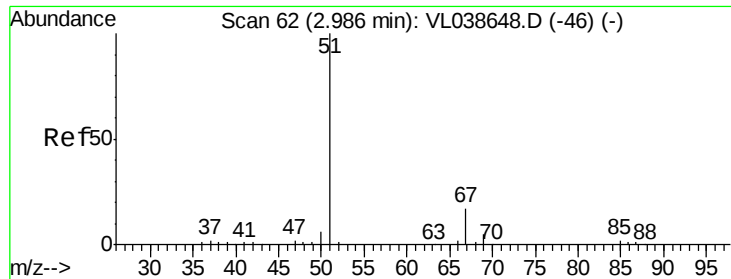
87 28.3 26.0 39.0



Abundance Ion 85.00 (84.70 to 85.70): VL0

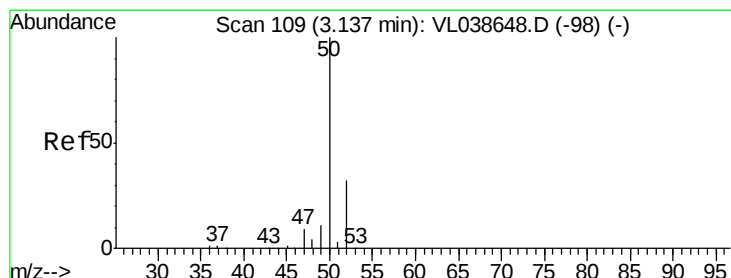
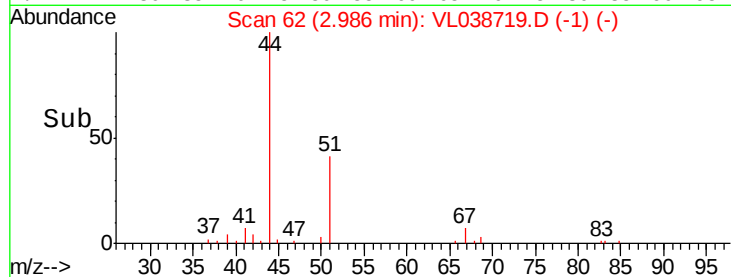
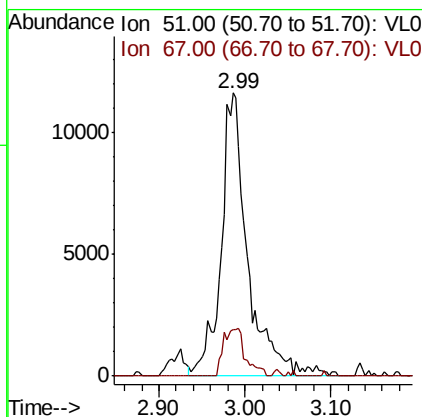
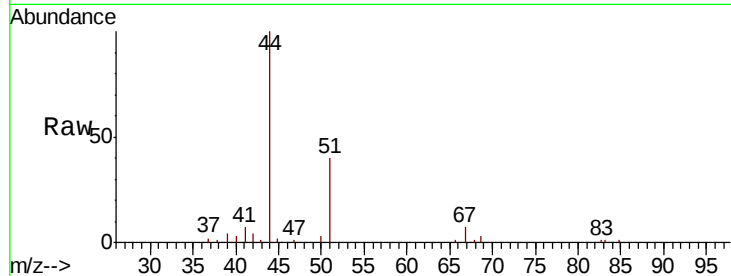
Ion 87.00 (86.70 to 87.70): VL0





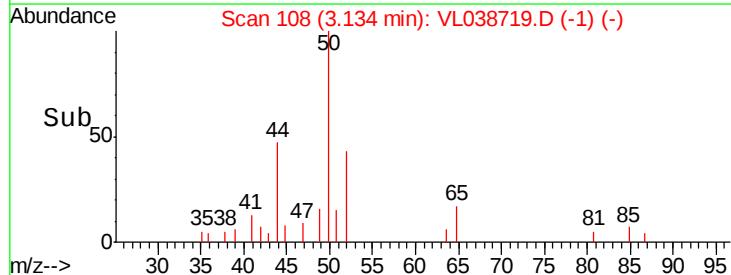
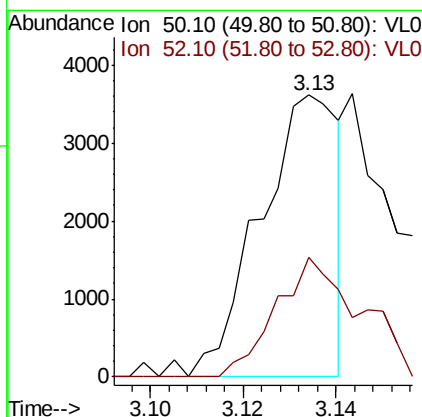
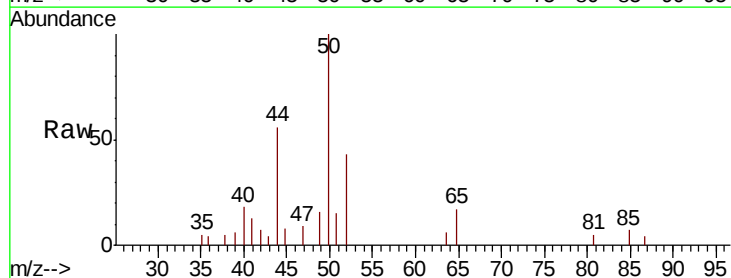
#3
 Chlorodifluoromethane
 Concen: 0.329 ppbv
 RT: 2.99 Instrument : MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId :
 Acq: 23 Mar 2022 17:12

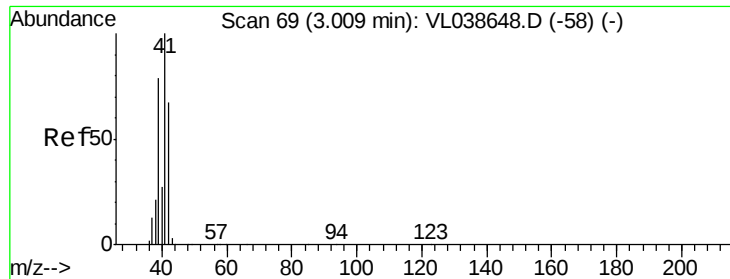
Tot Ion: 51 Resp: 25025
 Ion Ratio Lower Upper
 51 100
 67 13.8 14.1 21.1#



#4
 Chloromethane
 Concen: 0.101 ppbv
 RT: 3.13 min Scan# 108
 Delta R.T. -0.00 min
 Lab File: VL038719.D
 Acq: 23 Mar 2022 17:12

Tgt Ion: 50 Resp: 4240
 Ion Ratio Lower Upper
 50 100
 52 36.9 25.5 38.3





#9

Propene

Concen: 1.364 ppbv

RT: 3.01 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

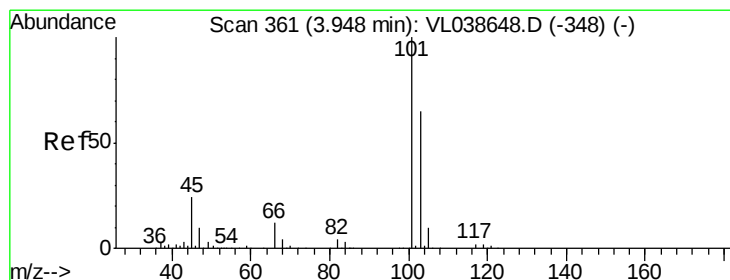
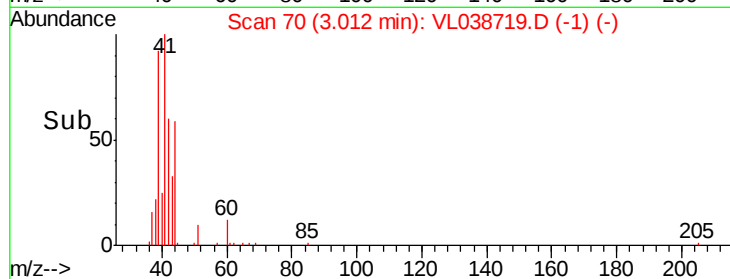
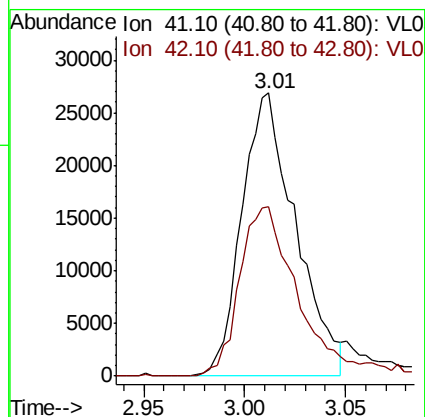
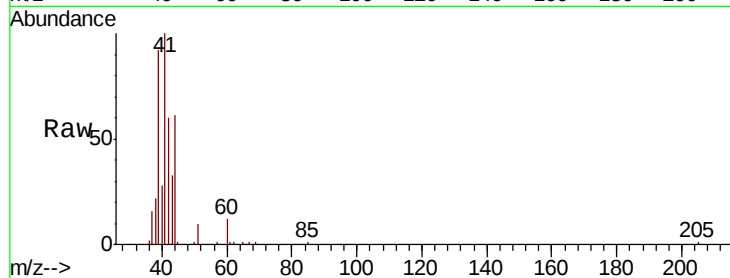
Acq: 23 Mar 2022 17:12

Tot Ion: 41 Resp: 50144

Ion Ratio Lower Upper

41 100

42 66.8 56.2 84.4



#11

Trichlorofluoromethane

Concen: 0.300 ppbv

RT: 3.94 min Scan# 360

Delta R.T. -0.00 min

Lab File: VL038719.D

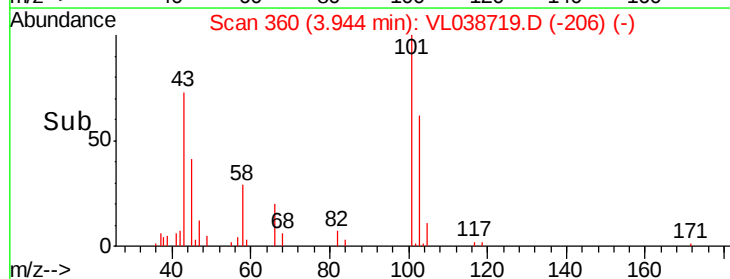
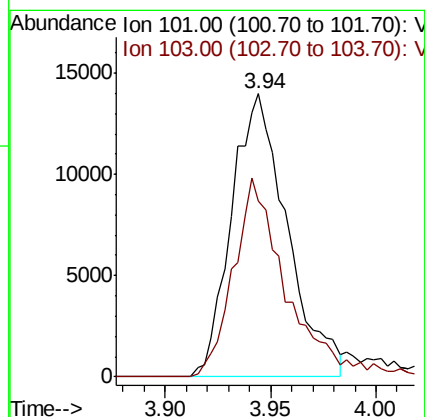
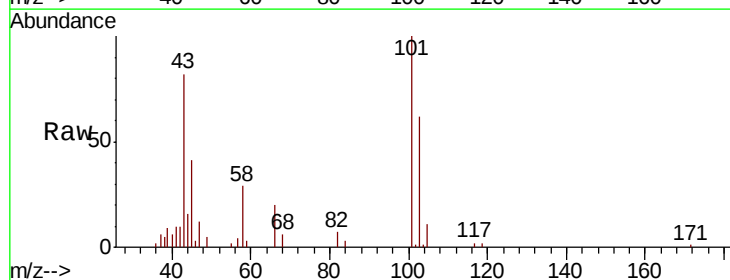
Acq: 23 Mar 2022 17:12

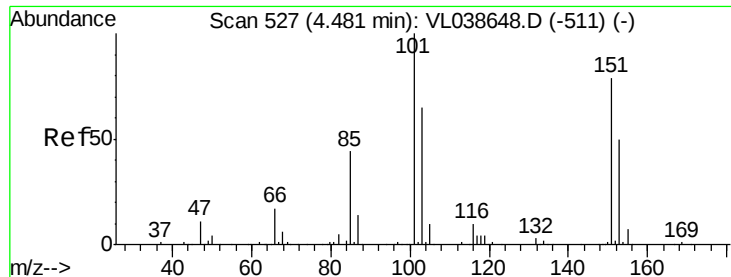
Tgt Ion: 101 Resp: 25641

Ion Ratio Lower Upper

101 100

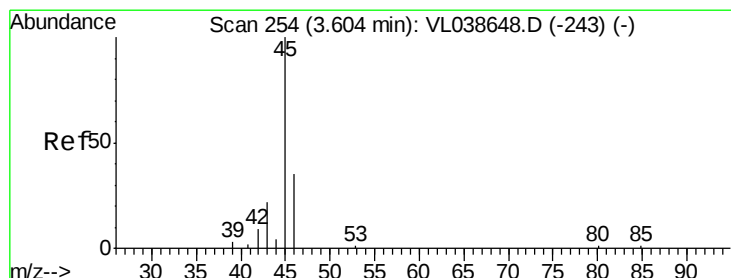
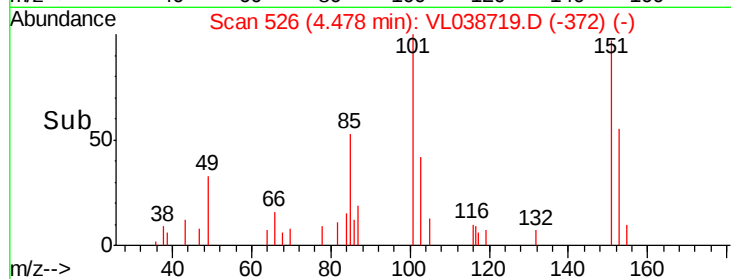
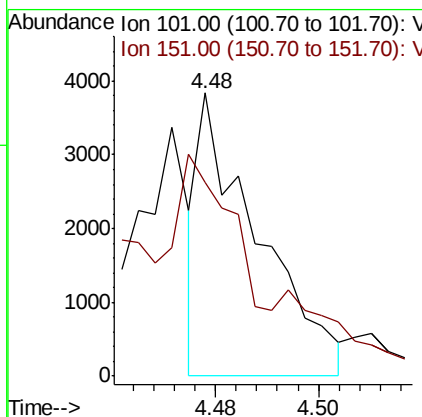
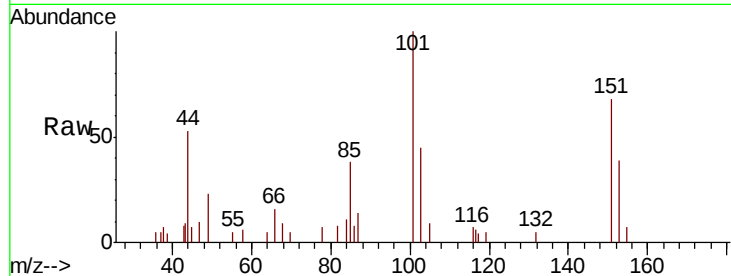
103 62.2 51.9 77.9





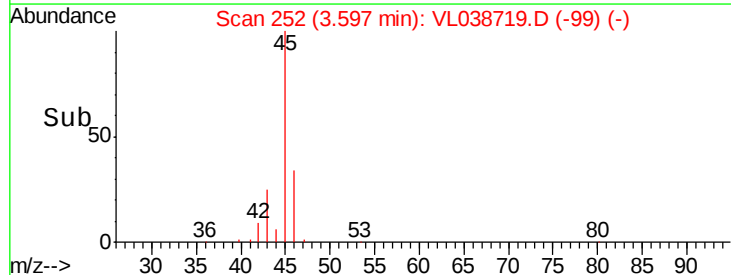
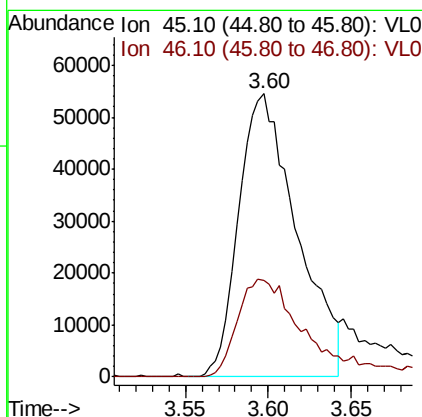
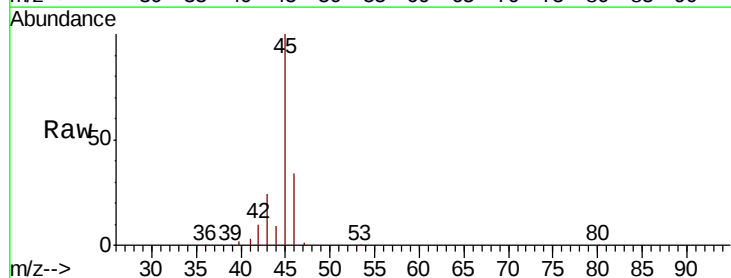
#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.047 ppbv
 RT: 4.48
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 23 Mar 2022 17:12

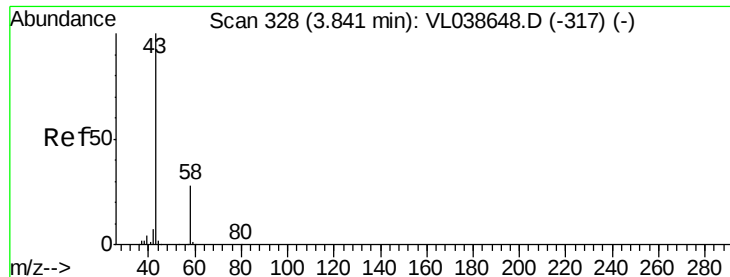
Tot Ion: 101 Resp: 3070
 Ion Ratio Lower Upper
 101 100
 151 165.4 62.9 94.3#



#13
 Ethanol
 Concen: 32.897 ppbv
 RT: 3.60 min Scan# 252
 Delta R.T. -0.01 min
 Lab File: VL038719.D
 Acq: 23 Mar 2022 17:12

Tgt Ion: 45 Resp: 133396
 Ion Ratio Lower Upper
 45 100
 46 43.3 15.1 60.5





#15

Acetone

Concen: 14.588 ppbv

RT: 3.84 Instrument :

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

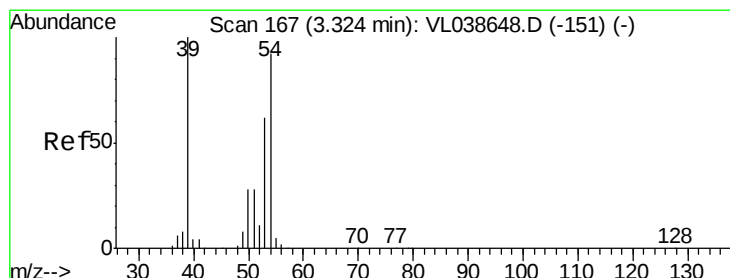
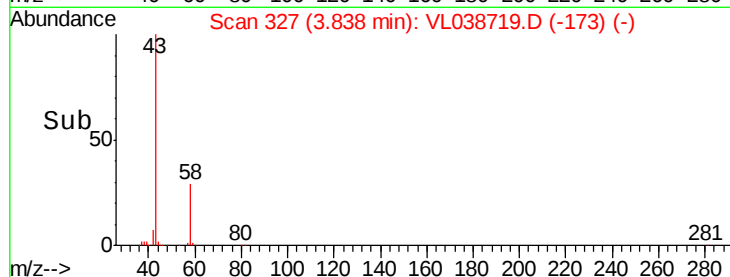
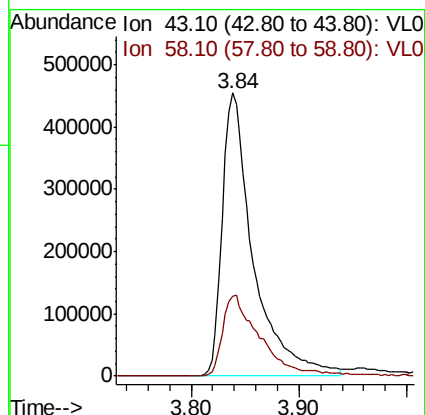
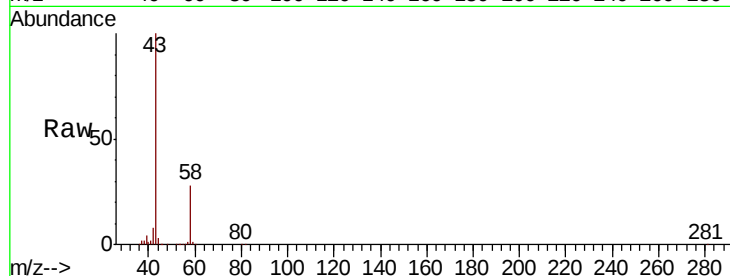
Acq: 23 Mar 2022 17:12

Tot Ion: 43 Resp: 907501

Ion Ratio Lower Upper

43 100

58 35.2 23.3 34.9#



#16

1,3-Butadiene

Concen: 0.157 ppbv

RT: 3.34 min Scan# 171

Delta R.T. 0.01 min

Lab File: VL038719.D

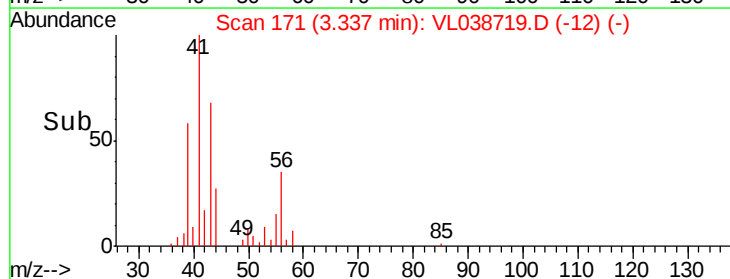
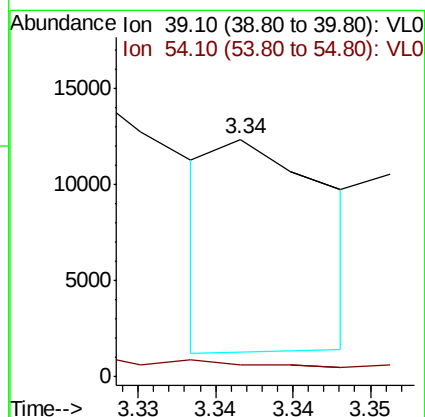
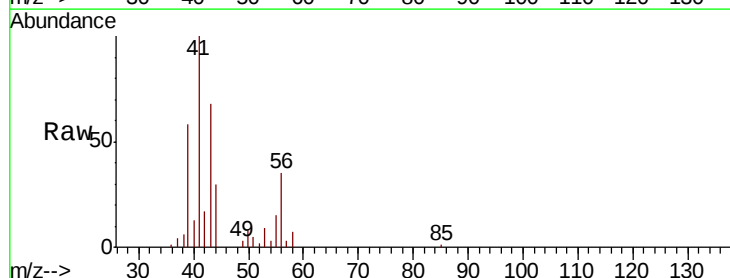
Acq: 23 Mar 2022 17:12

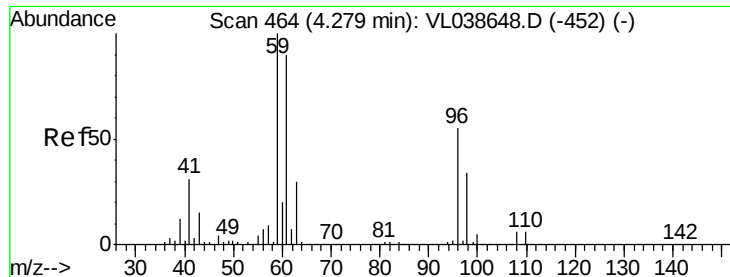
Tgt Ion: 39 Resp: 5551

Ion Ratio Lower Upper

39 100

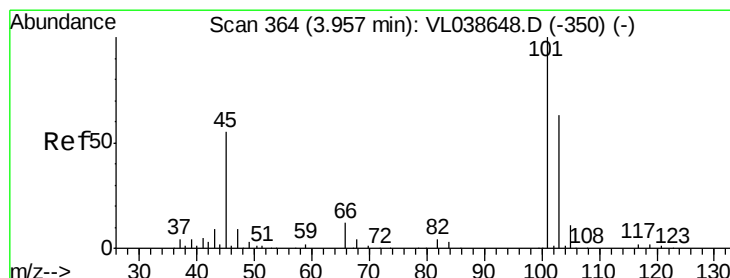
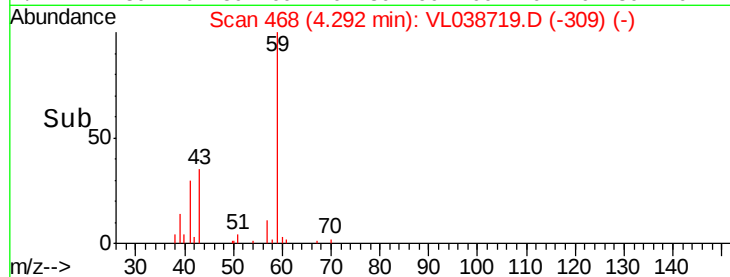
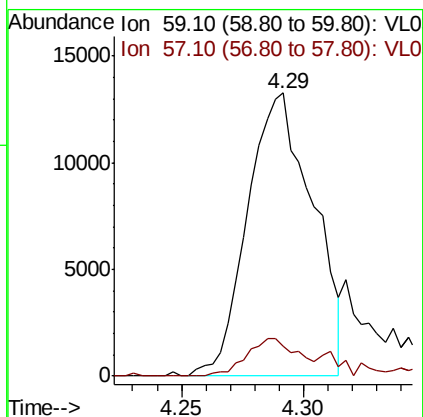
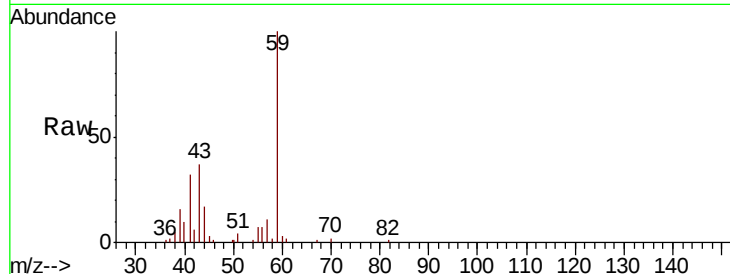
54 0.0 69.1 103.7#





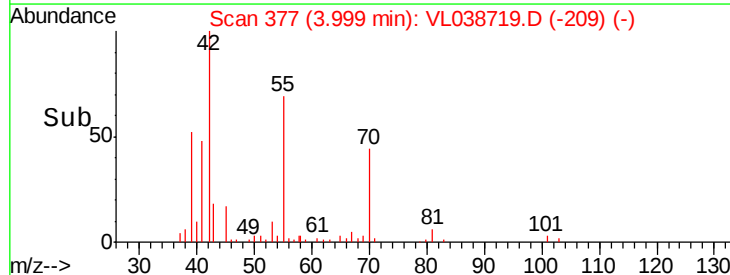
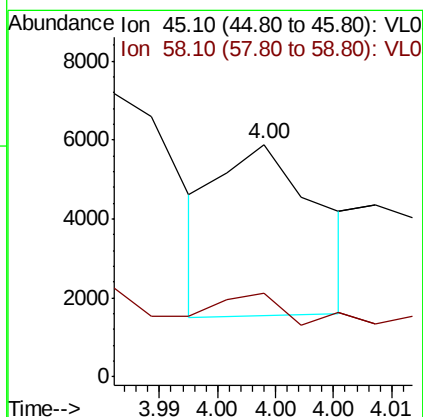
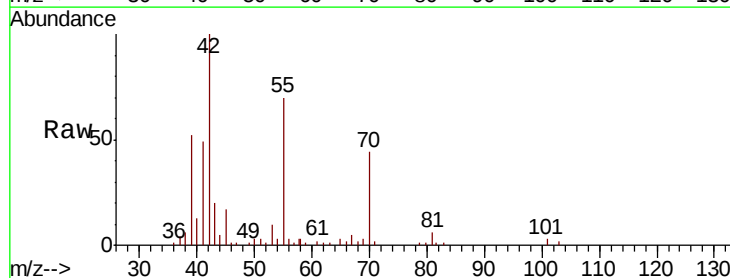
#17
 tert-Butyl alcohol
 Concen: 0.453 ppbv
 RT: 4.29
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId:
 Acq: 23 Mar 2022 17:12

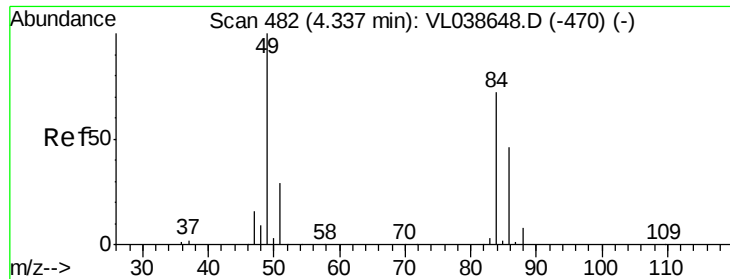
Tot Ion: 59 Resp: 24607
 Ion Ratio Lower Upper
 59 100
 57 15.5 8.2 12.2#



#19
 Isopropyl Alcohol
 Concen: 0.076 ppbv
 RT: 4.00 min Scan# 377
 Delta R.T.: 0.04 min
 Lab File: VL038719.D
 Acq: 23 Mar 2022 17:12

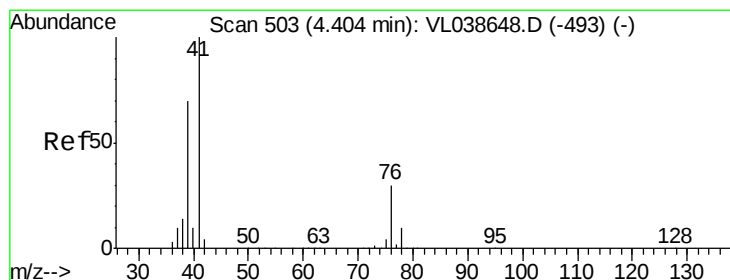
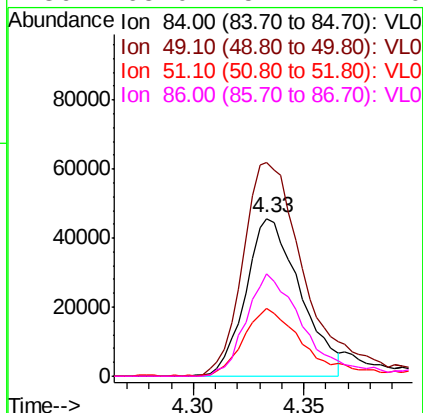
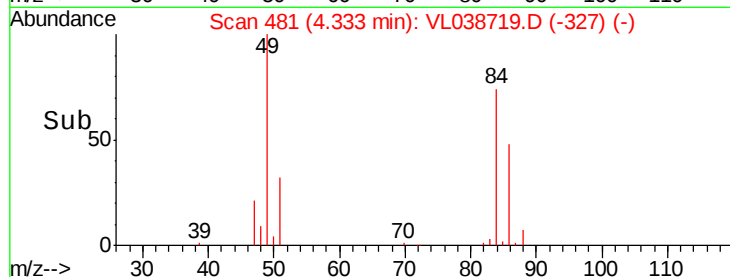
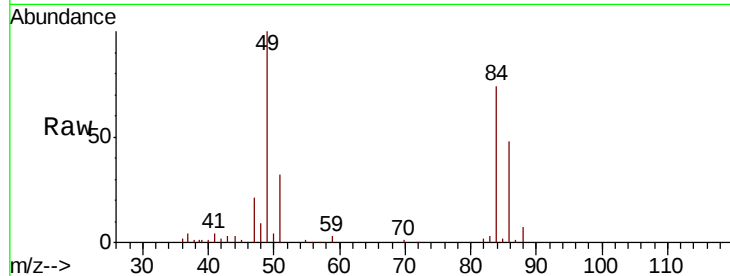
Tgt Ion: 45 Resp: 2619
 Ion Ratio Lower Upper
 45 100
 58 0.0 2.3 3.5#





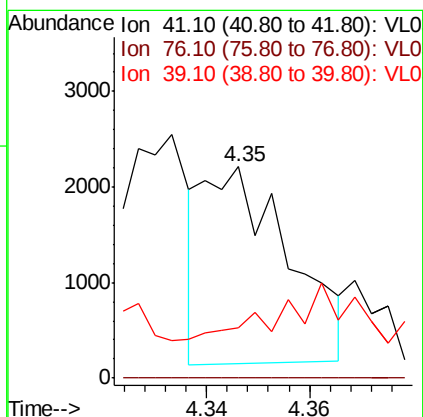
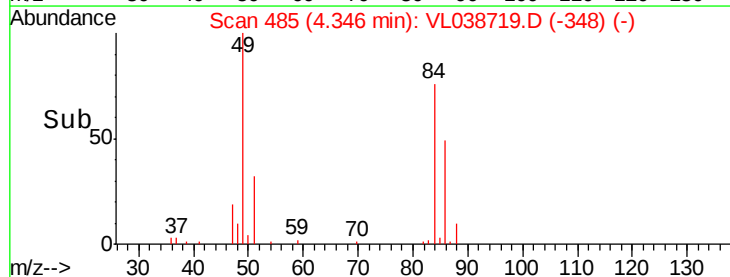
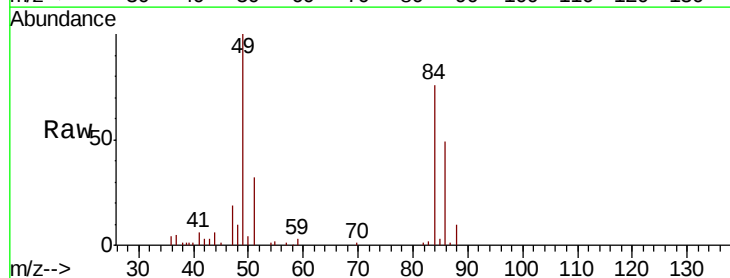
#20
Methylene Chloride
Concen: 2.996 ppbv
RT: 4.33
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 23 Mar 2022 17:12

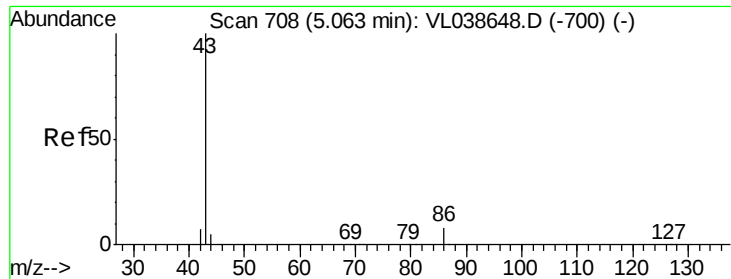
Tot Ion:	84	Resp:	78490
Ion	Ratio	Lower	Upper
84	100		
49	135.2	111.2	166.8
51	42.2	32.8	49.2
86	65.0	51.4	77.0



#21
Allyl Chloride
Concen: 0.053 ppbv
RT: 4.35 min Scan# 485
Delta R.T. -0.06 min
Lab File: VL038719.D
Acq: 23 Mar 2022 17:12

Tgt Ion:	41	Resp:	2376
Ion	Ratio	Lower	Upper
41	100		
76	0.0	25.0	37.6#
39	80.0	56.6	85.0





#23

Vinyl Acetate

Concen: 0.241 ppbv

RT: 5.05 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 23 Mar 2022 17:12

Tot Ion: 43 Resp: 14503

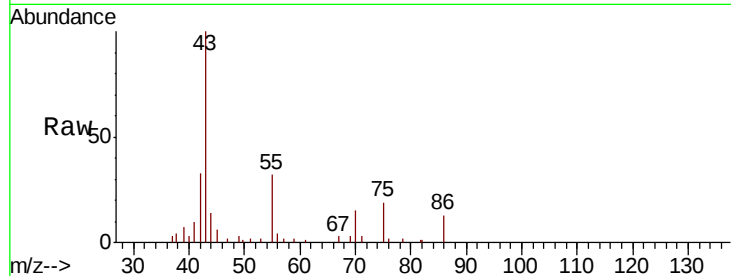
Ion Ratio Lower Upper

43 100

86 13.7 5.6 8.4#

42 29.7 6.8 10.2#

44 1.6 4.2 6.2#

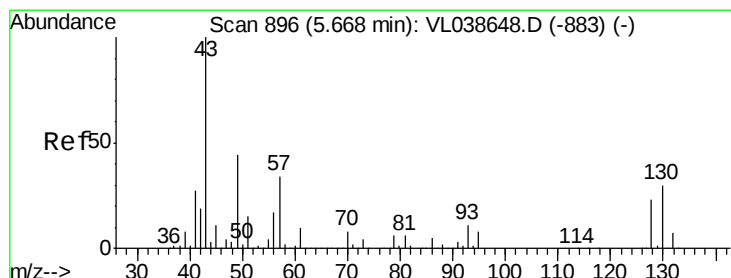
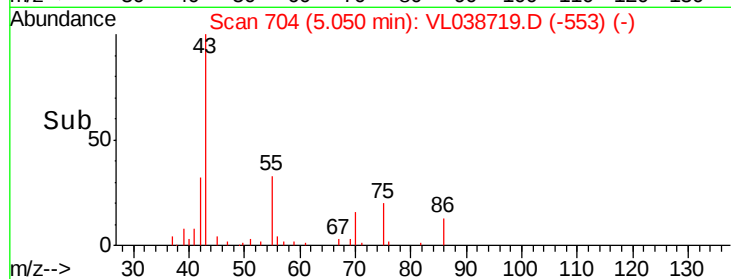
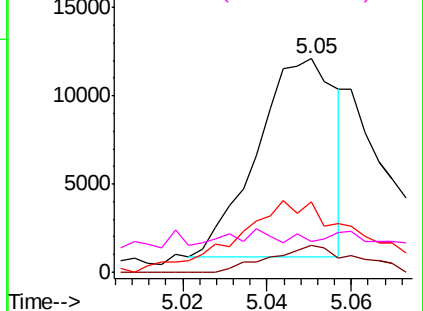


Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 0.289 ppbv

RT: 5.67 min Scan# 898

Delta R.T. 0.01 min

Lab File: VL038719.D

Acq: 23 Mar 2022 17:12

Tgt Ion: 43 Resp: 45243

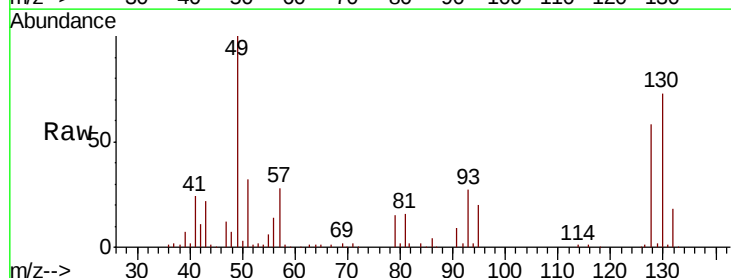
Ion Ratio Lower Upper

43 100

45 0.0 8.2 12.4#

61 0.9 8.3 12.5#

70 1.0 5.6 8.4#

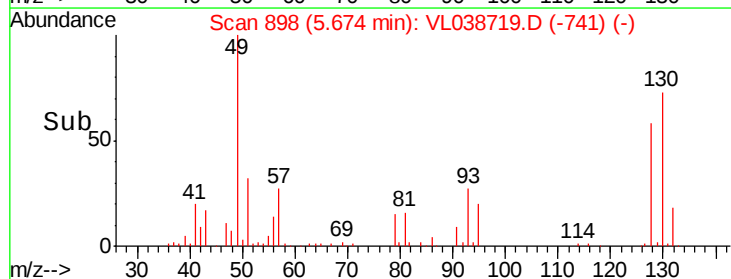
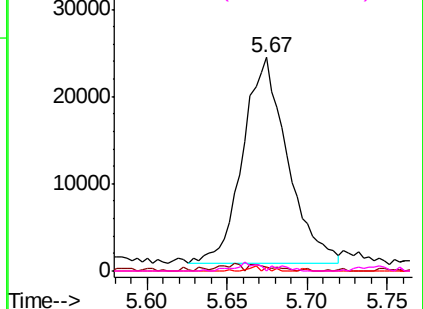


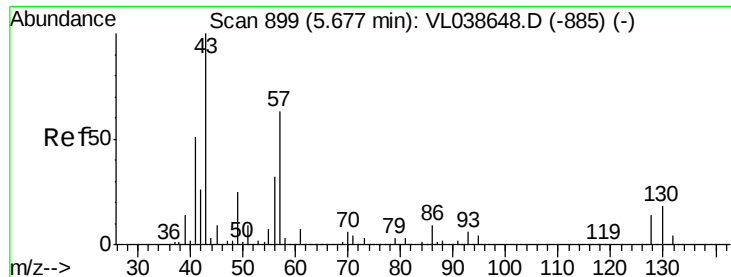
Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 45.10 (44.80 to 45.80): VL0

Ion 61.10 (60.80 to 61.80): VL0

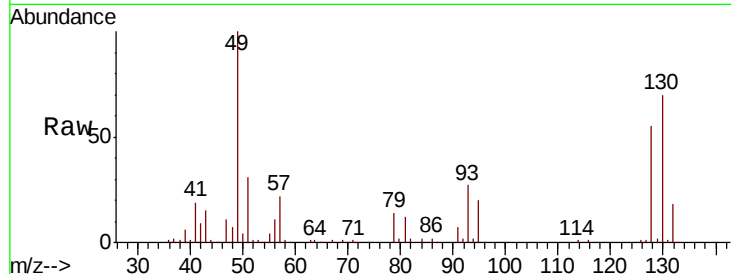
Ion 70.10 (69.80 to 70.80): VL0





#26
Hexane
Concen: 0.819 ppbv
RT: 5.67
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 23 Mar 2022 17:12

Tot Ion	57	Resp	57416
Ion Ratio	Lower	Upper	
57	100		
41	107.6	67.0	100.4#
43	82.4	184.2	276.2#
56	61.5	42.6	64.0



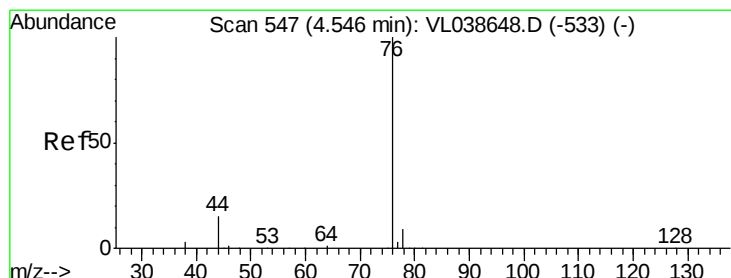
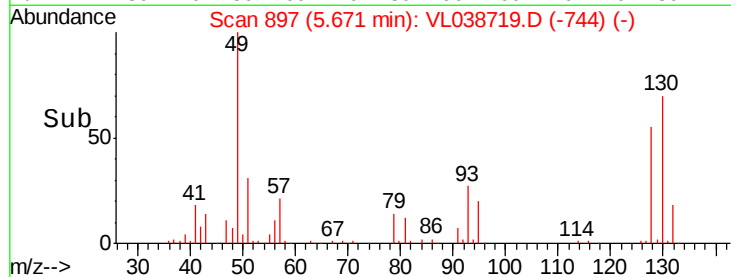
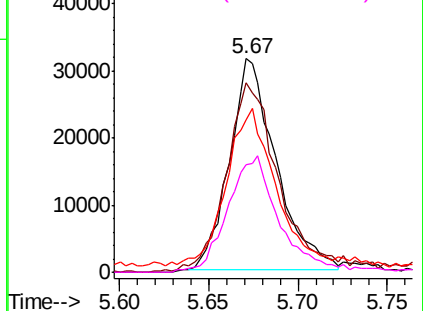
Abundance

Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

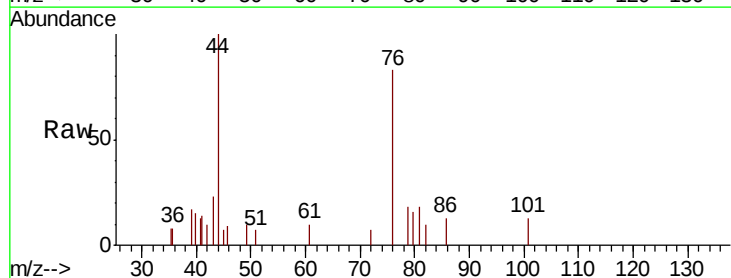
Ion 43.10 (42.80 to 43.80): VL0

Ion 56.10 (55.80 to 56.80): VL0



#27
Carbon Disulfide
Concen: 0.044 ppbv
RT: 4.54 min Scan# 545
Delta R.T. -0.01 min
Lab File: VL038719.D
Acq: 23 Mar 2022 17:12

Tgt Ion	76	Resp	3009
Ion Ratio	Lower	Upper	
76	100		
44	26.7	12.4	18.6#
78	0.0	7.8	11.8#

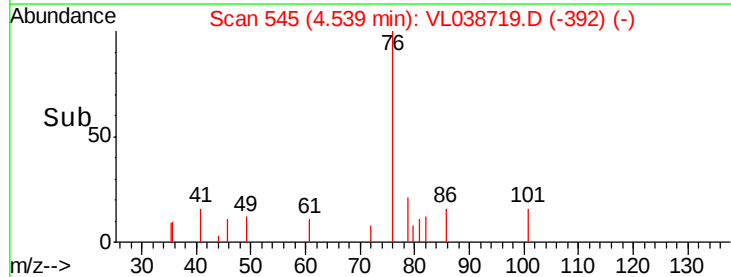
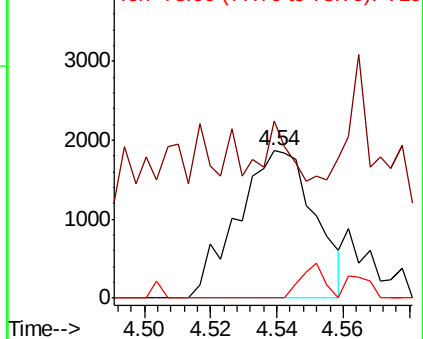


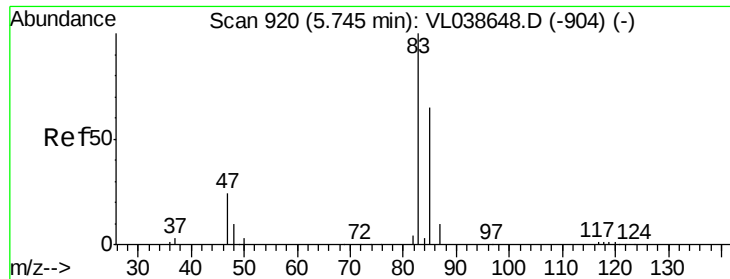
Abundance

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





#29

Chloroform

Concen: 0.753 ppbv

RT: 5.74 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

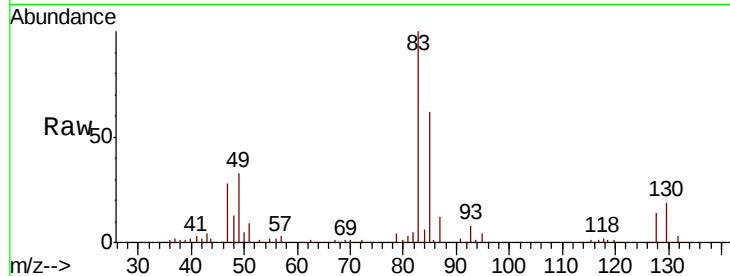
Acq: 23 Mar 2022 17:12

Tot Ion: 83 Resp: 84563

Ion Ratio Lower Upper

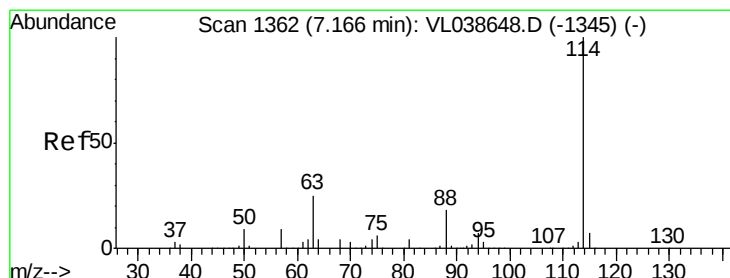
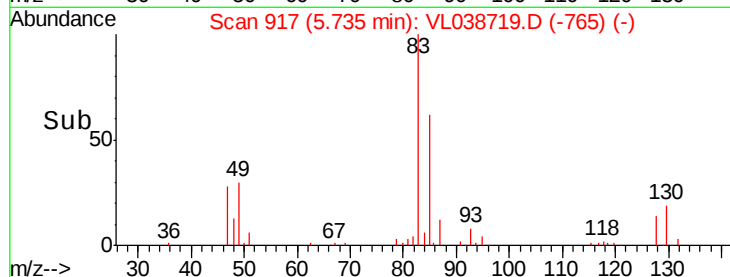
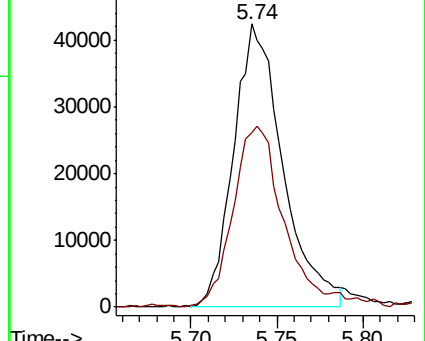
83 100

85 61.0 51.7 77.5



Abundance Ion 83.00 (82.70 to 83.70): VL0

Ion 85.00 (84.70 to 85.70): VL0



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.16 min Scan# 1360

Delta R.T. -0.01 min

Lab File: VL038719.D

Acq: 23 Mar 2022 17:12

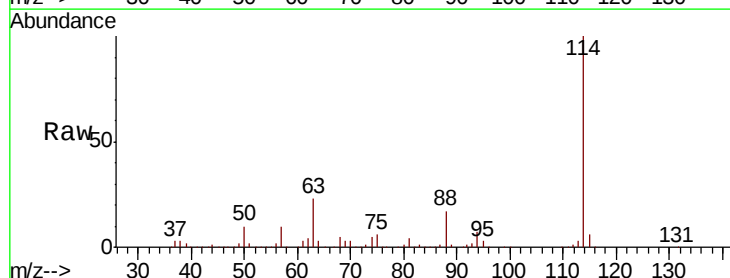
Tgt Ion: 114 Resp: 1891161

Ion Ratio Lower Upper

114 100

63 23.2 19.4 29.0

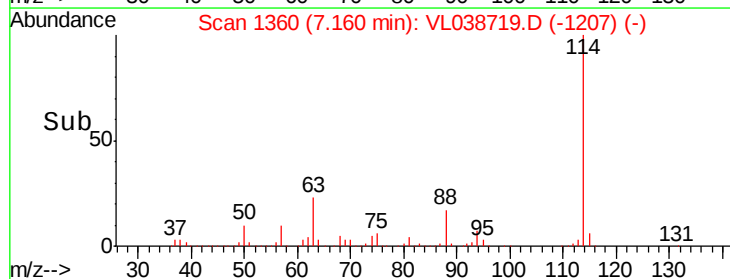
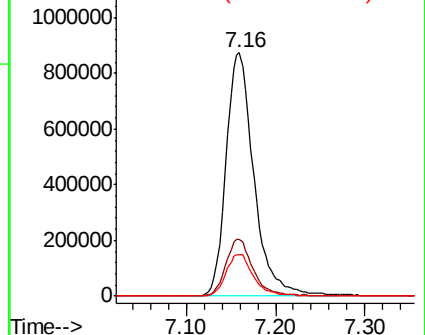
88 17.3 13.9 20.9

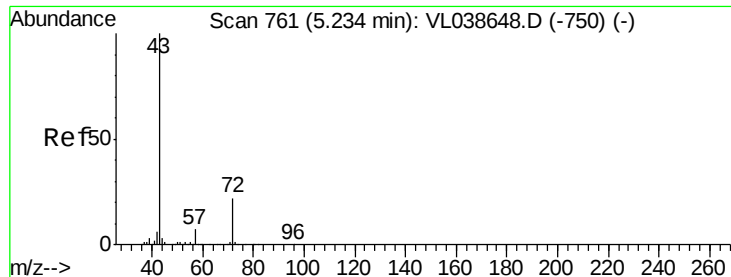


Abundance Ion 114.10 (113.80 to 114.80): V

Ion 63.10 (62.80 to 63.80): VL0

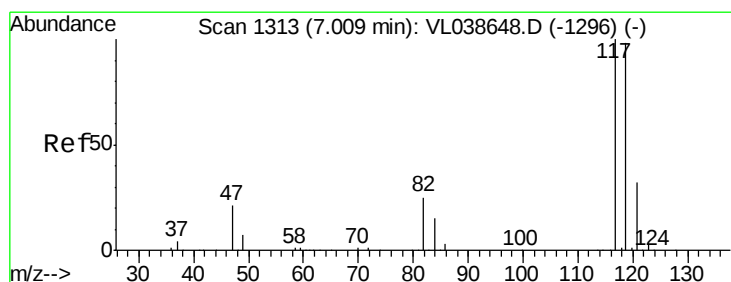
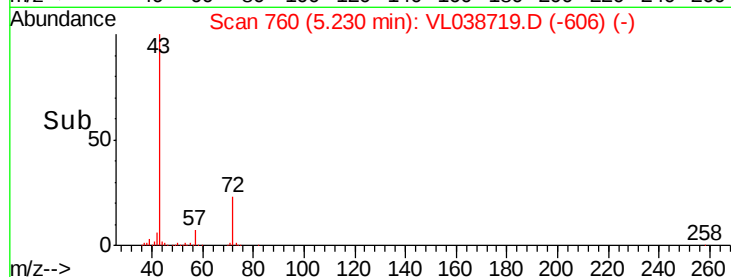
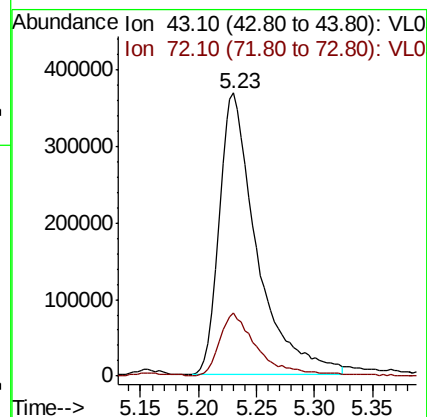
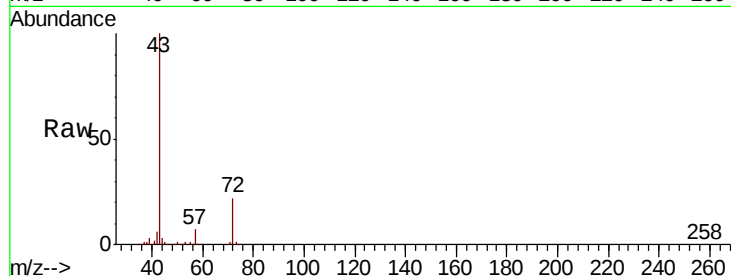
Ion 88.10 (87.80 to 88.80): VL0





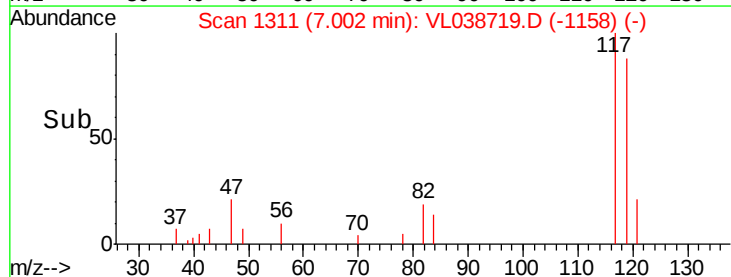
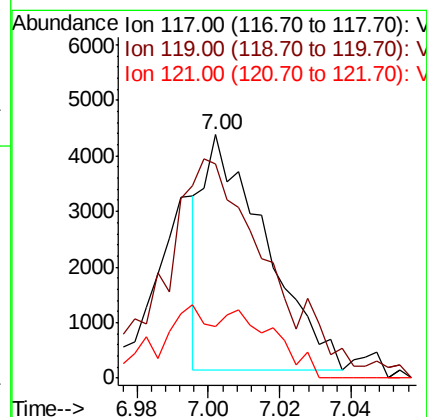
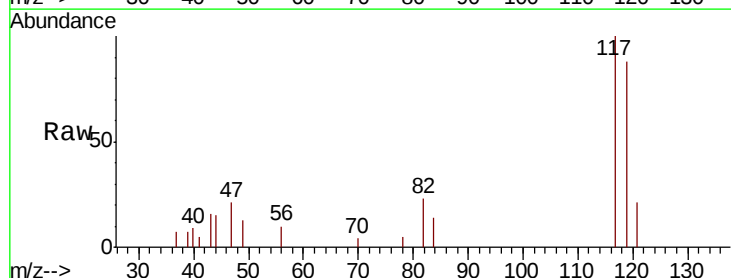
#34
2-Butanone
Concen: 11.191 ppbv
RT: 5.23
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 23 Mar 2022 17:12

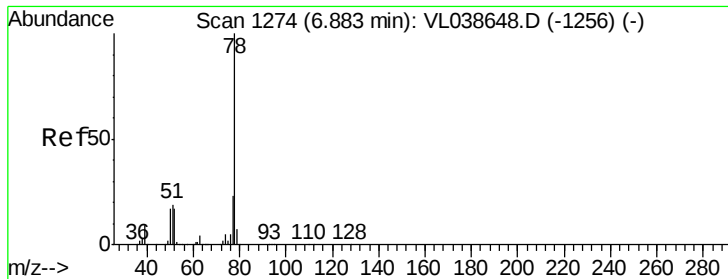
Tot Ion: 43 Resp: 837632
Ion Ratio Lower Upper
43 100
72 23.1 17.8 26.8



#35
Carbon Tetrachloride
Concen: 0.047 ppbv
RT: 7.00 min Scan# 1311
Delta R.T. -0.01 min
Lab File: VL038719.D
Acq: 23 Mar 2022 17:12

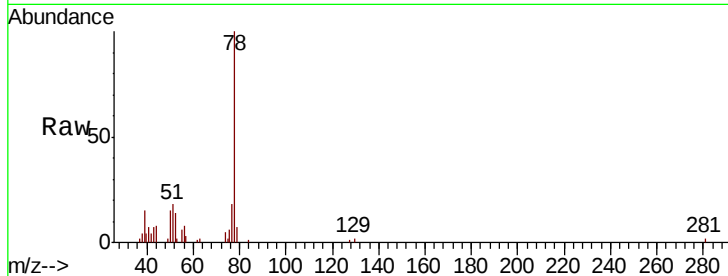
Tgt Ion: 117 Resp: 5124
Ion Ratio Lower Upper
117 100
119 78.5 78.1 117.1
121 22.2 25.8 38.6#



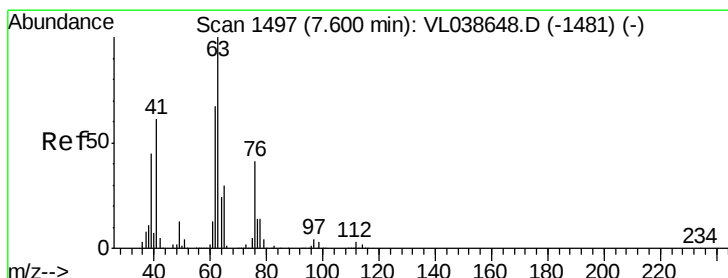
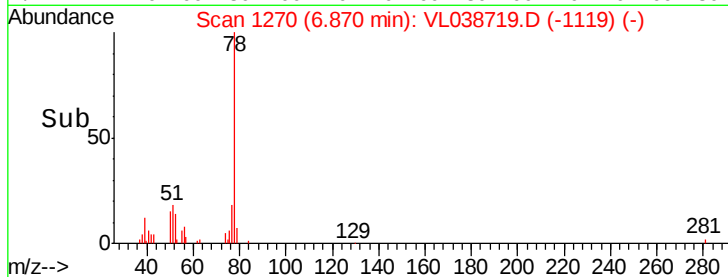
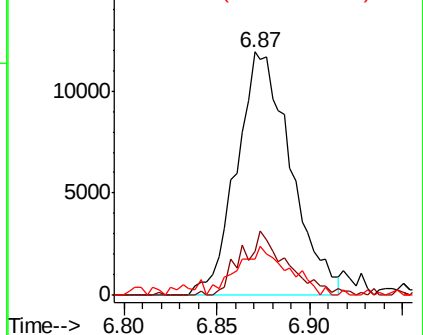


#36
Benzene
Concen: 0.166 ppbv
RT: 6.87
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 23 Mar 2022 17:12

Tot Ion: 78 Resp: 24225
Ion Ratio Lower Upper
78 100
77 18.1 18.1 27.1#
50 12.0 13.6 20.4#

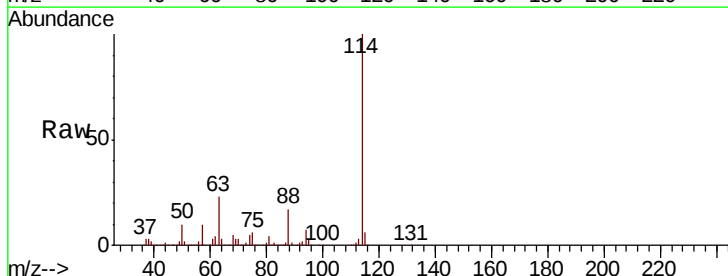


Abundance Ion 78.10 (77.80 to 78.80): VL0
Ion 77.10 (76.80 to 77.80): VL0
Ion 50.10 (49.80 to 50.80): VL0

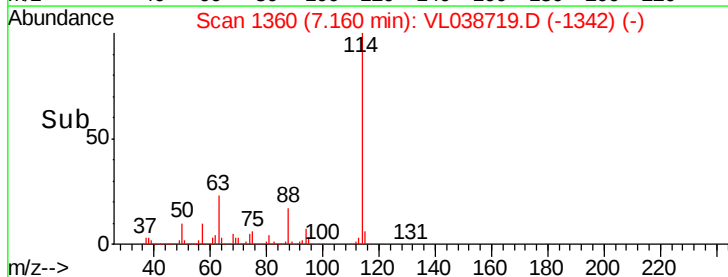
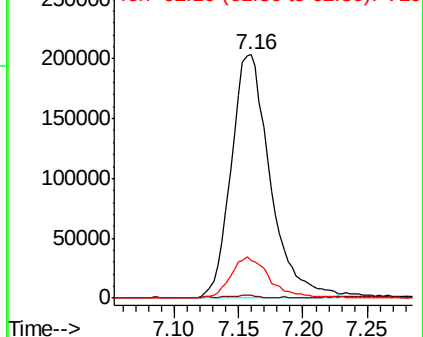


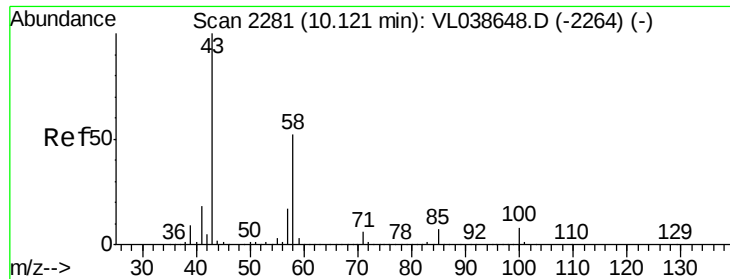
#39
1,2-Dichloropropane
Concen: 7.523 ppbv
RT: 7.16 min Scan# 1360
Delta R.T. -0.44 min
Lab File: VL038719.D
Acq: 23 Mar 2022 17:12

Tgt Ion: 63 Resp: 429256
Ion Ratio Lower Upper
63 100
41 0.8 49.0 73.6#
62 15.7 53.9 80.9#



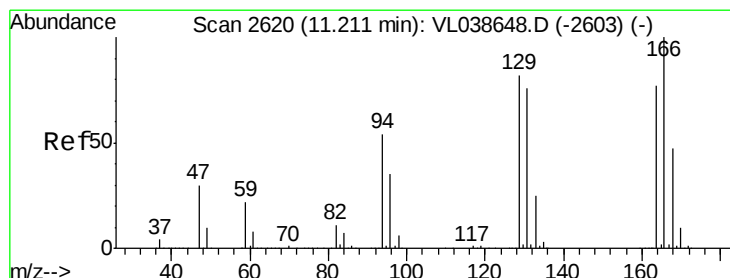
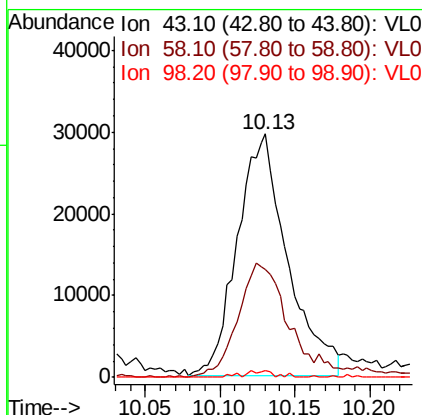
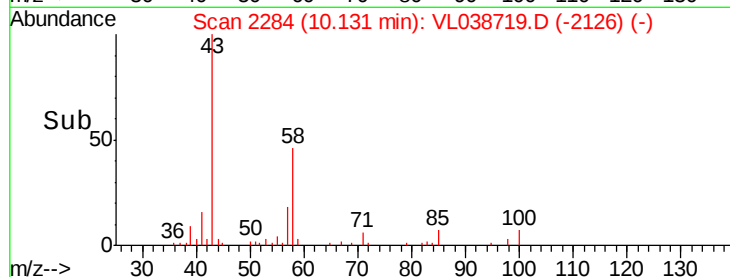
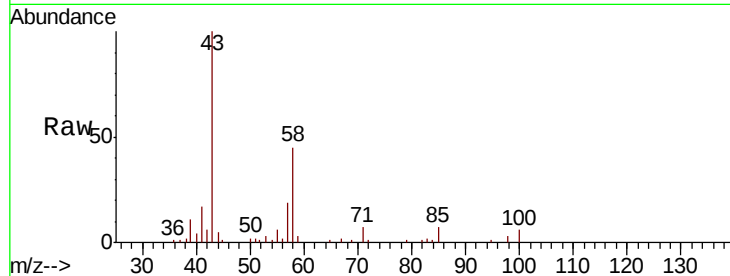
Abundance Ion 63.10 (62.80 to 63.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 62.10 (61.80 to 62.80): VL0





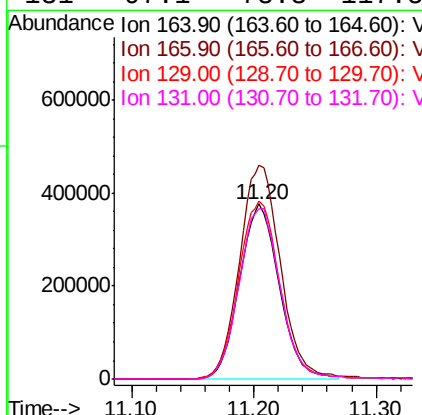
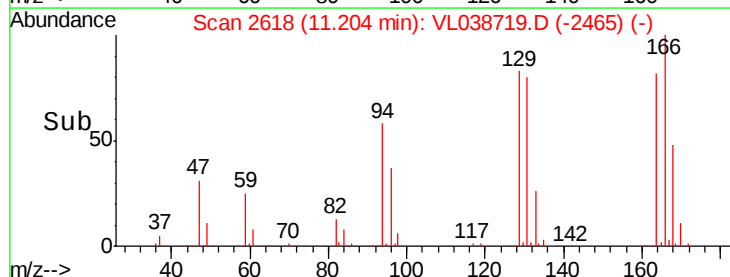
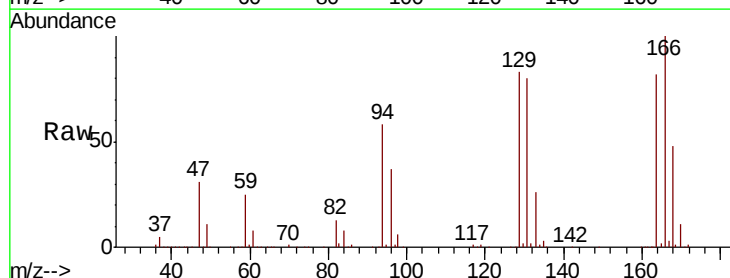
#51
 2-Hexanone
 Concen: 0.688 ppbv
 RT: 10.13
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId:
 Acq: 23 Mar 2022 17:12

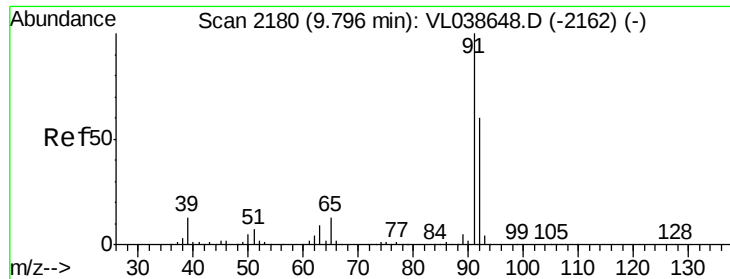
Tot Ion	43	58	98
Resp	68745		
Ratio	100	51.5	1.6
Lower		41.2	0.2
Upper		61.8	0.4#



#52
 Tetrachloroethene
 Concen: 15.823 ppbv
 RT: 11.20 min Scan# 2618
 Delta R.T. -0.01 min
 Lab File: VL038719.D
 Acq: 23 Mar 2022 17:12

Tgt Ion	164	166	129	131
Resp	845160			
Ratio	100	122.1	101.6	97.1
Lower		103.3	85.2	78.3
Upper		154.9	127.8	117.5





#53

Toluene

Concen: 0.553 ppbv

RT: 9.79 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

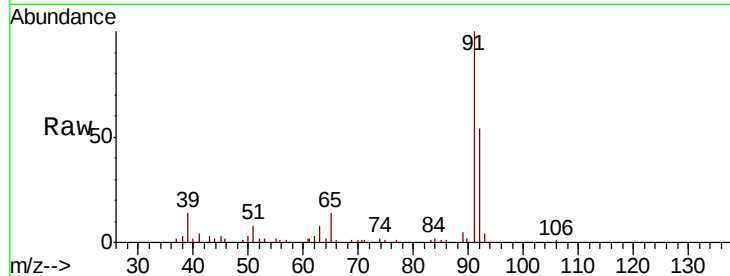
Acq: 23 Mar 2022 17:12

Tot Ion: 91 Resp: 86749

Ion Ratio Lower Upper

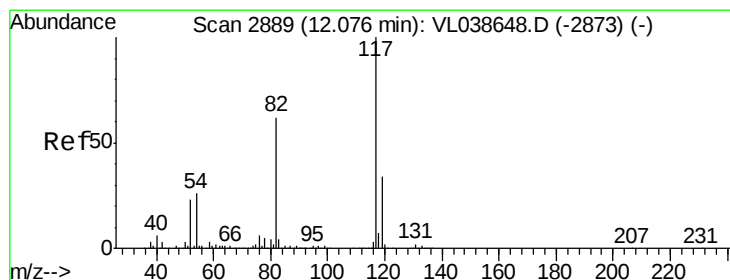
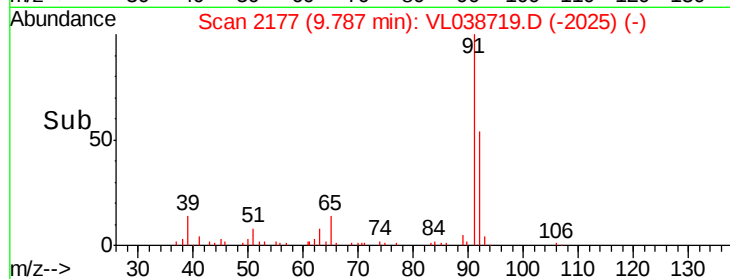
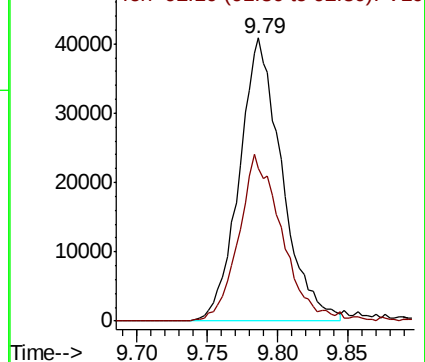
91 100

92 60.3 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: 12.07 min Scan# 2886

Delta R.T. -0.01 min

Lab File: VL038719.D

Acq: 23 Mar 2022 17:12

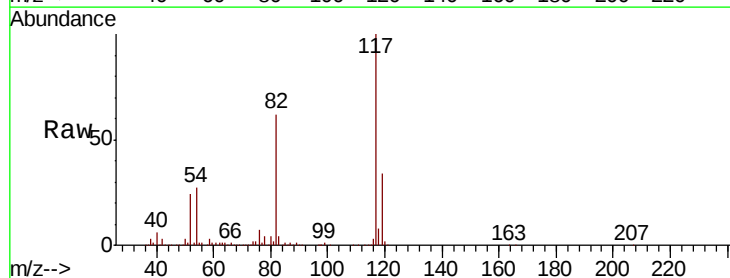
Tgt Ion: 117 Resp: 1768829

Ion Ratio Lower Upper

117 100

82 64.6 51.6 77.4

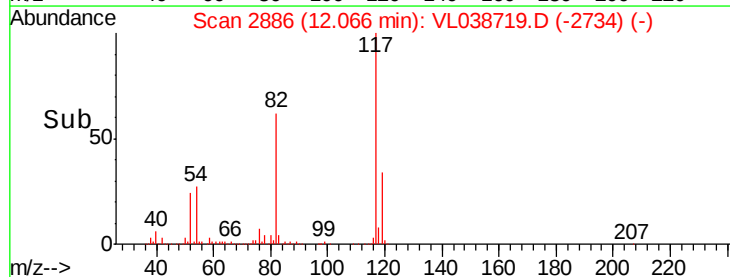
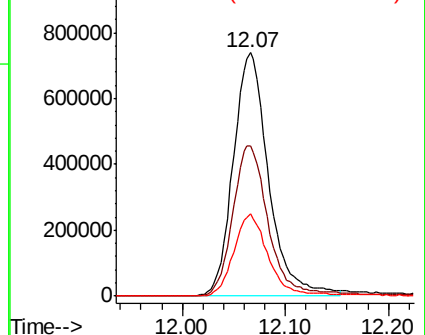
119 33.8 26.9 40.3

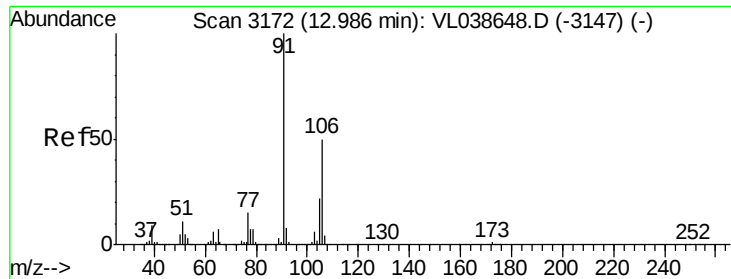


Abundance Ion 117.10 (116.80 to 117.80): V

Ion 82.10 (81.80 to 82.80): VL0

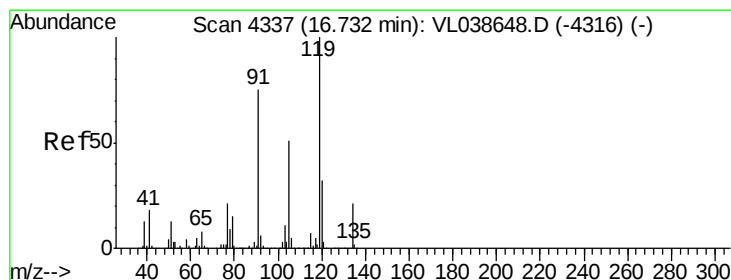
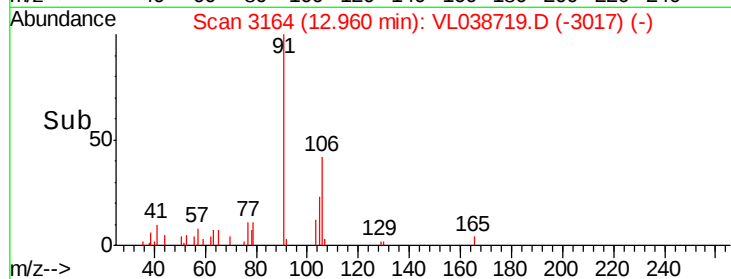
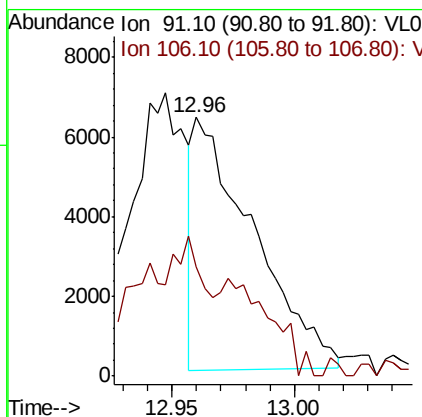
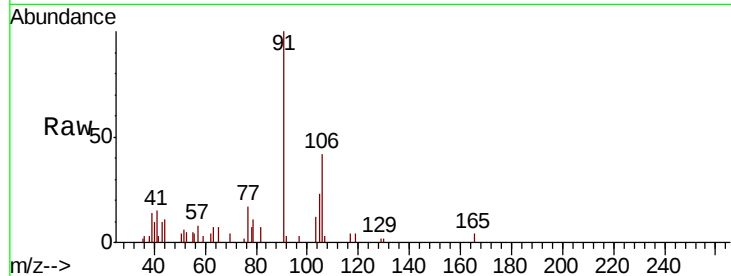
Ion 119.10 (118.80 to 119.80): V





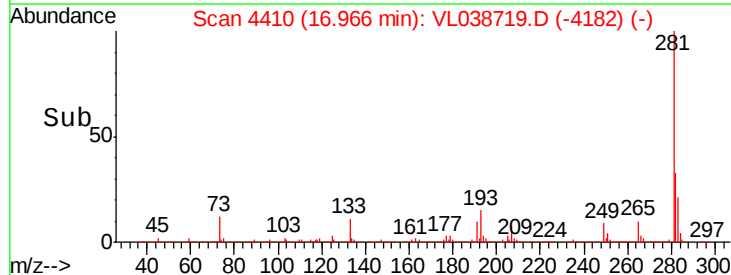
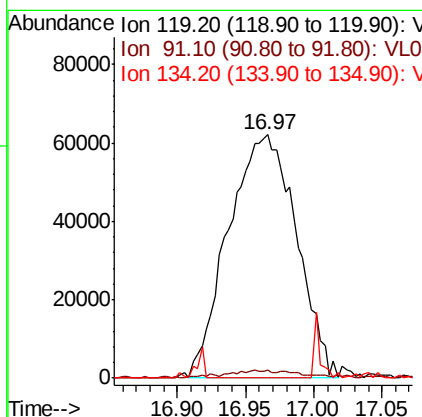
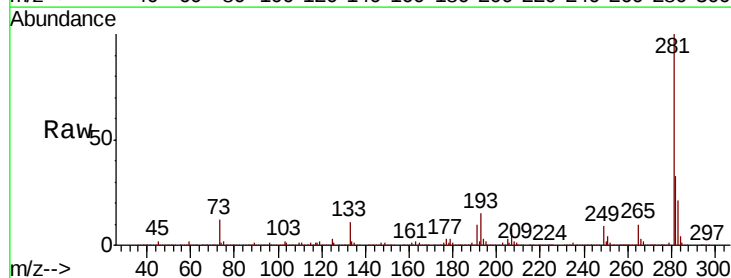
#59
m/p-Xylene
Concen: 0.059 ppbv
RT: 12.96 min
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 23 Mar 2022 17:12

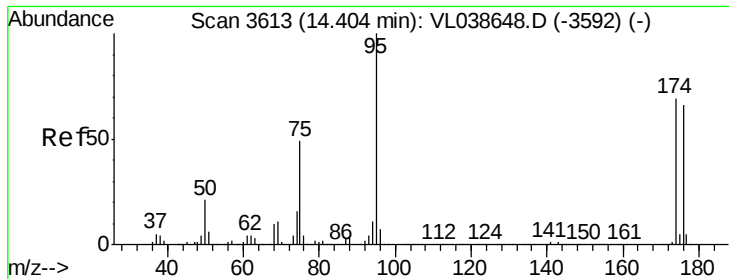
Tot Ion: 91 Resp: 10699
Ion Ratio Lower Upper
91 100
106 100.5 37.2 55.8#



#65
tert-Butylbenzene
Concen: 0.924 ppbv
RT: 16.97 min Scan# 4410
Delta R.T. 0.23 min
Lab File: VL038719.D
Acq: 23 Mar 2022 17:12

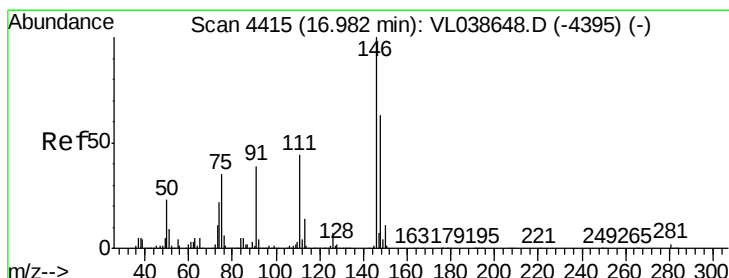
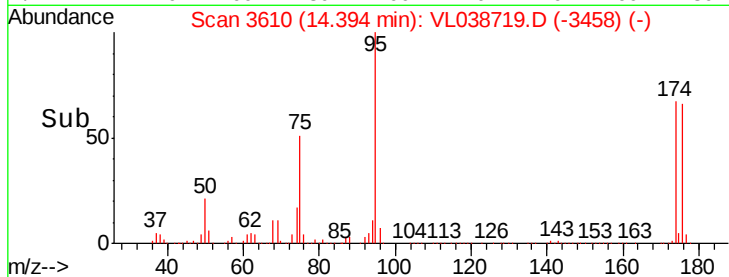
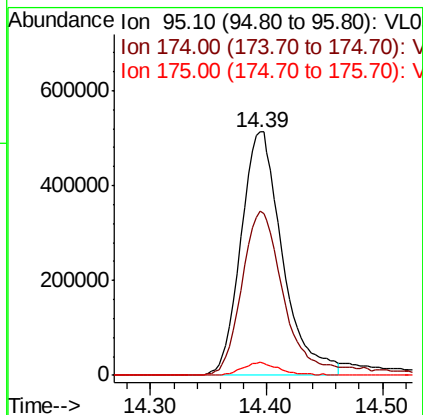
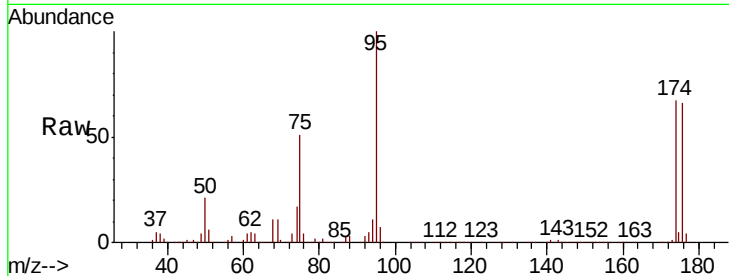
Tgt Ion: 119 Resp: 214418
Ion Ratio Lower Upper
119 100
91 3.4 61.2 91.8#
134 2.5 16.3 24.5#





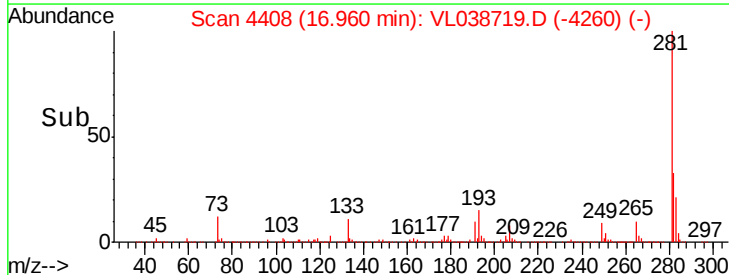
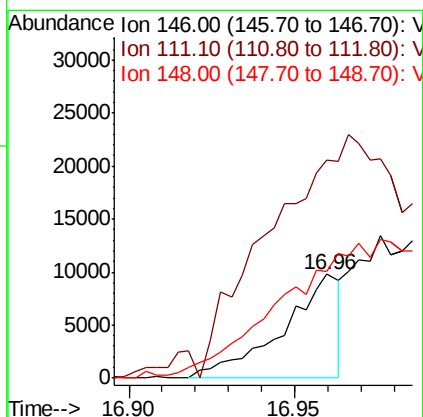
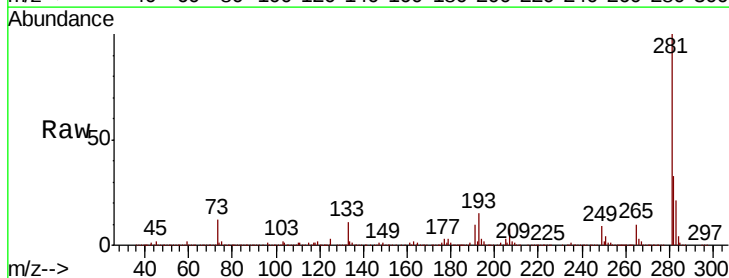
#68
 1-Bromo-4-Fluorobenzene
 Concen: 9.429 ppbv
 RT: 14.39
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 23 Mar 2022 17:12

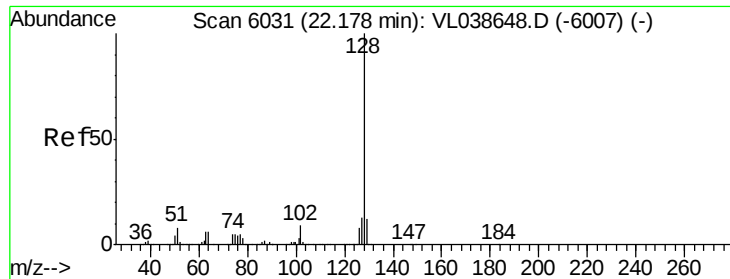
Tot Ion: 95 Resp: 1278763
 Ion Ratio Lower Upper
 95 100
 174 72.7 56.1 84.1
 175 5.2 4.2 6.2



#75
 1,3-Dichlorobenzene
 Concen: 0.092 ppbv
 RT: 16.96 min Scan# 4408
 Delta R.T. -0.02 min
 Lab File: VL038719.D
 Acq: 23 Mar 2022 17:12

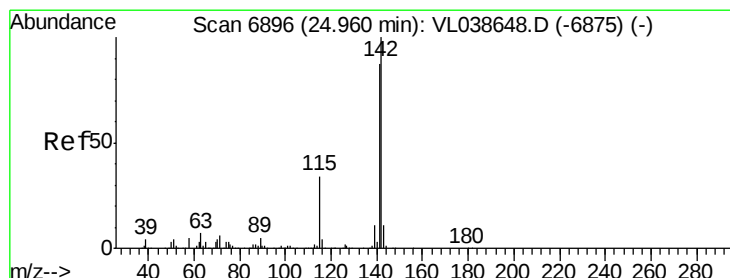
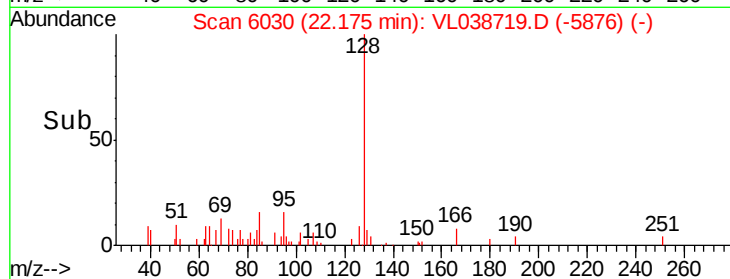
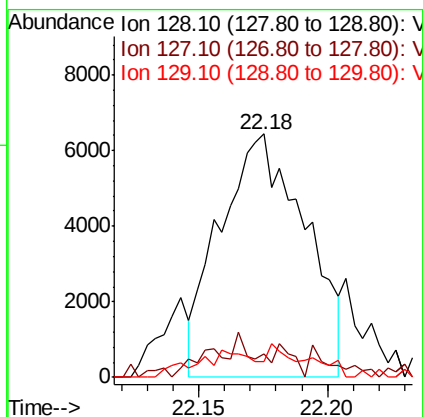
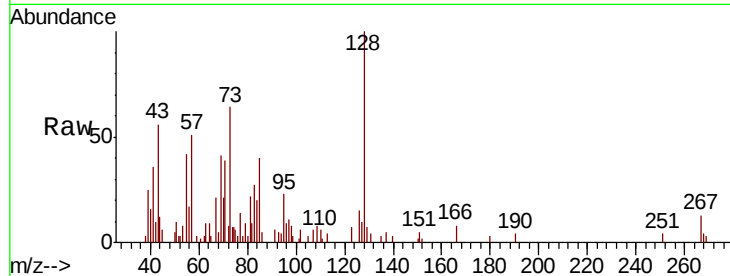
Tgt Ion: 146 Resp: 11777
 Ion Ratio Lower Upper
 146 100
 111 659.2 22.2 66.6#
 148 0.0 32.5 97.5#





#79
Naphthalene
Concen: 0.096 ppbv
RT: 22.18
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 23 Mar 2022 17:12

Tot Ion	Ratio	Lower	Upper
128	100		
127	6.6	10.2	15.4#
129	3.9	9.2	13.8#



#80
Naphthalene, 2-methyl-
Concen: 0.107 ppbv
RT: 24.96 min Scan# 6896
Delta R.T. 0.00 min
Lab File: VL038719.D
Acq: 23 Mar 2022 17:12

Tgt Ion	Ratio	Lower	Upper
142	100		
141	117.0	66.4	99.6#
115	65.2	27.8	41.6#

