

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL032822\
 Data File : VL038775.D
 Acq On : 28 Mar 2022 17:37
 Operator : SY/AP
 Sample : N2078-04
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 V-5

Quant Time: Mar 29 06:11:16 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	5.67	49	767154	10.00	ppbv	0.01
33) 1,4-Difluorobenzene	7.18	114	1963562	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.09	117	1647900	10.00	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.41	95	1219115	9.65	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	96.50%

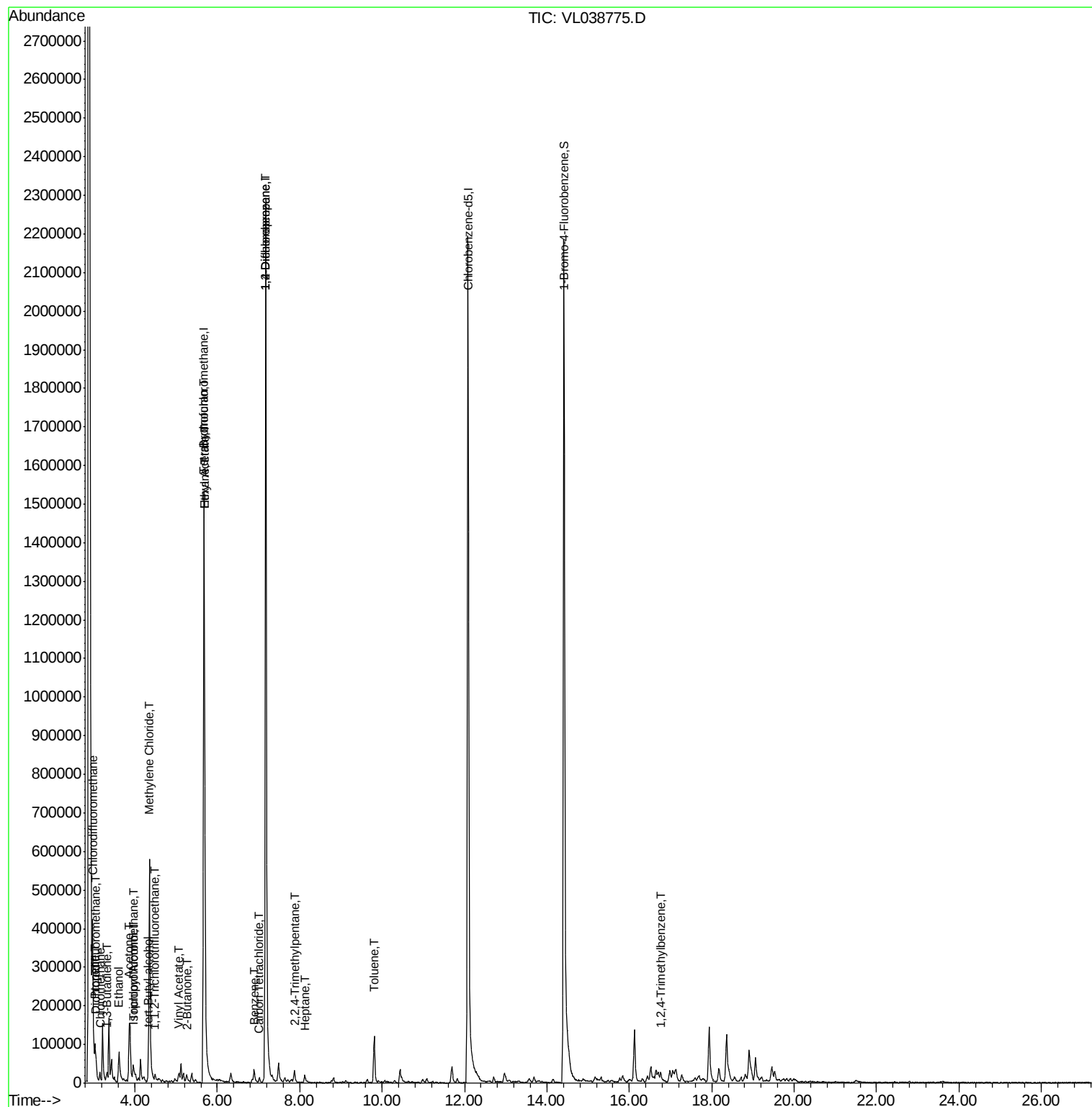
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.06	85	33811	0.328	ppbv	97
3) Chlorodifluoromethane	2.97	51	89148	1.100	ppbv #	71
4) Chloromethane	3.15	50	22676	0.510	ppbv	95
9) Propene	3.03	41	12304	0.315	ppbv #	51
10) Heptane	8.12	43	6311	0.067	ppbv #	79
11) Trichlorofluoromethane	3.96	101	25594	0.281	ppbv	95
12) 1,1,2-Trichlorotrifluoroet	4.49	101	4171	0.060	ppbv #	47
13) Ethanol	3.61	45	113638	26.336	ppbv	96
15) Acetone	3.85	43	218102	3.295	ppbv	99
16) 1,3-Butadiene	3.32	39	8210	0.219	ppbv #	30
17) tert-Butyl alcohol	4.31	59	2834	0.049	ppbv #	73
19) Isopropyl Alcohol	3.98	45	22672	0.618	ppbv #	83
20) Methylene Chloride	4.35	84	263907	9.465	ppbv	99
23) Vinyl Acetate	5.07	43	7685	0.120	ppbv #	28
25) Ethyl Acetate	5.69	43	150353	0.902	ppbv #	86
26) Hexane	5.69	57	197689	2.650	ppbv #	41
34) 2-Butanone	5.26	43	25468	0.328	ppbv #	88
35) Carbon Tetrachloride	7.02	117	3971	0.035	ppbv #	96
36) Benzene	6.89	78	28407	0.187	ppbv	97
39) 1,2-Dichloropropane	7.18	63	450018	7.596	ppbv #	29
41) Tetrahydrofuran	5.69	42	76055	1.315	ppbv #	49
44) 2,2,4-Trimethylpentane	7.87	57	13022	0.051	ppbv #	26
53) Toluene	9.81	91	45325	0.278	ppbv #	6
74) 1,2,4-Trimethylbenzene	16.76	105	15604	0.083	ppbv #	73

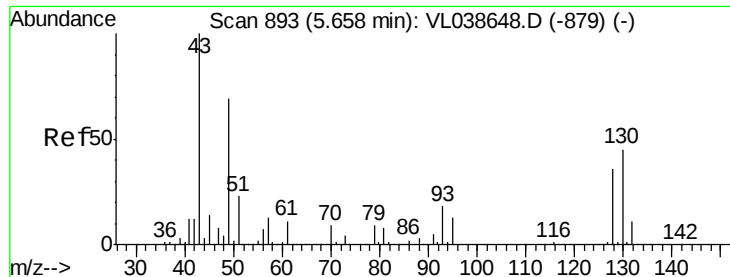
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.67 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 28 Mar 2022 17:37

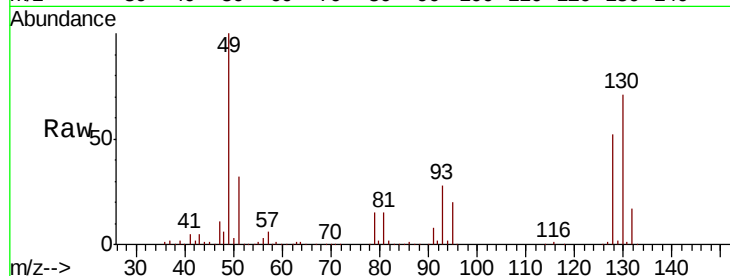
Tot Ion: 49 Resp: 767154

Ion Ratio Lower Upper

49 100

128 54.3 26.2 78.6

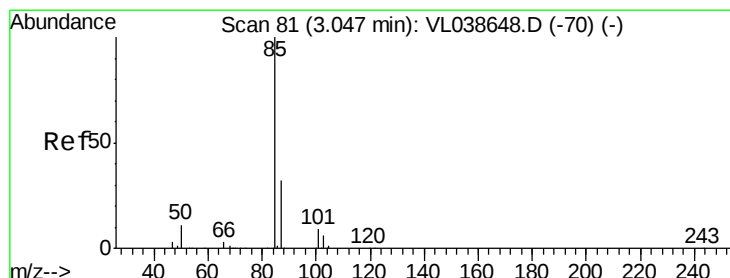
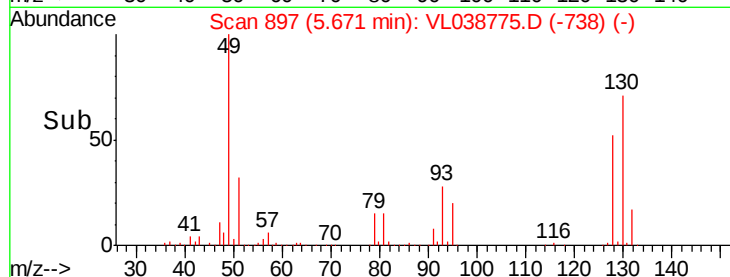
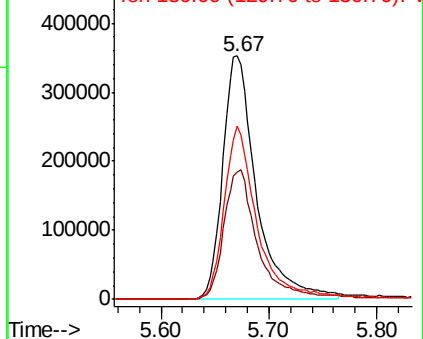
130 71.4 33.7 101.1



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): VL0

Ion 130.00 (129.70 to 130.70): VL0



#2

Dichlorodifluoromethane

Concen: 0.328 ppbv

RT: 3.06 min Scan# 85

Delta R.T. 0.01 min

Lab File: VL038775.D

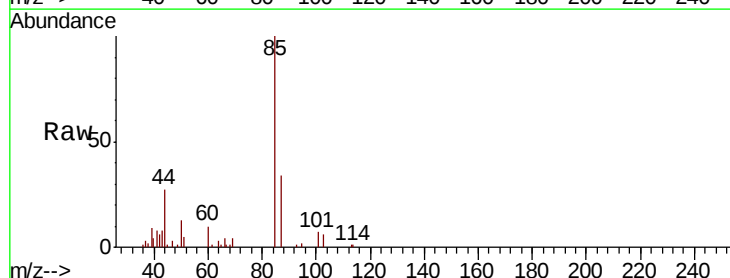
Acq: 28 Mar 2022 17:37

Tgt Ion: 85 Resp: 33811

Ion Ratio Lower Upper

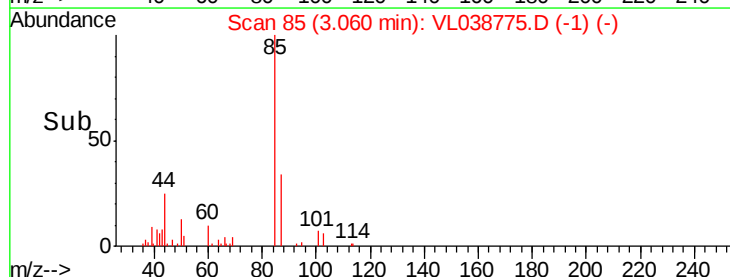
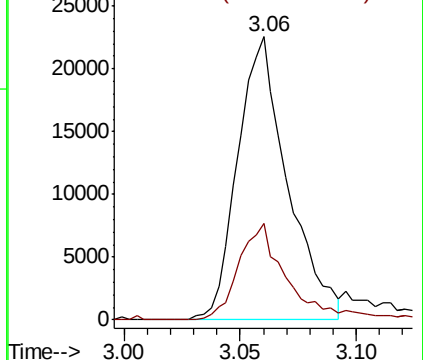
85 100

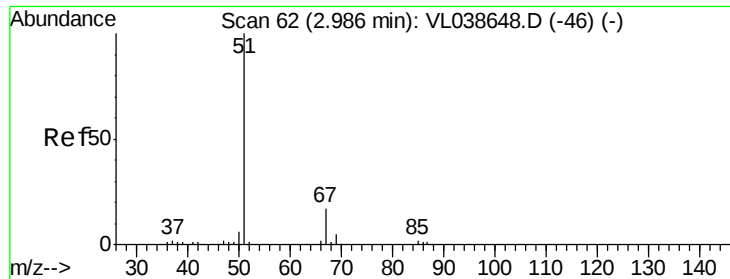
87 34.0 26.0 39.0



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 1.100 ppbv

RT: 2.97 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

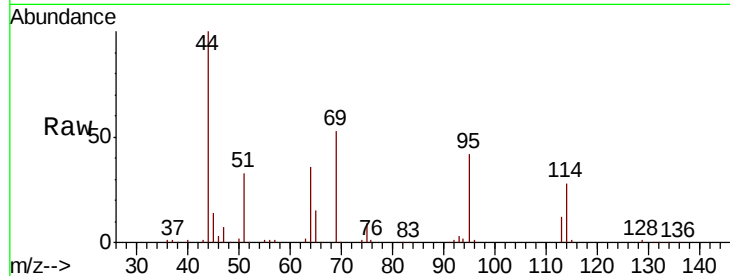
Acq: 28 Mar 2022 17:37

Tot Ion: 51 Resp: 89148

Ion Ratio Lower Upper

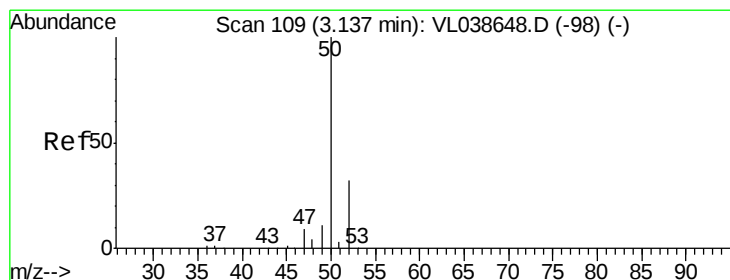
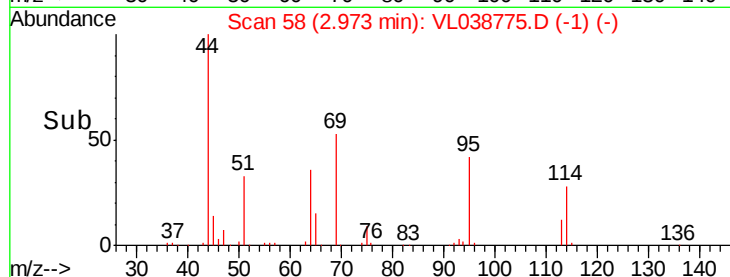
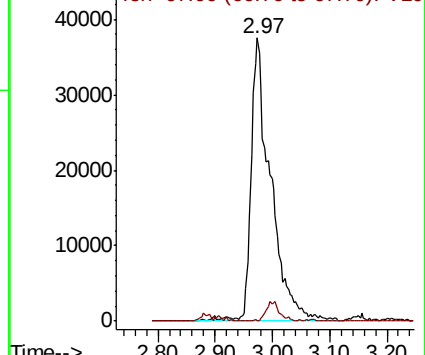
51 100

67 4.7 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: 0.510 ppbv

RT: 3.15 min Scan# 113

Delta R.T. 0.01 min

Lab File: VL038775.D

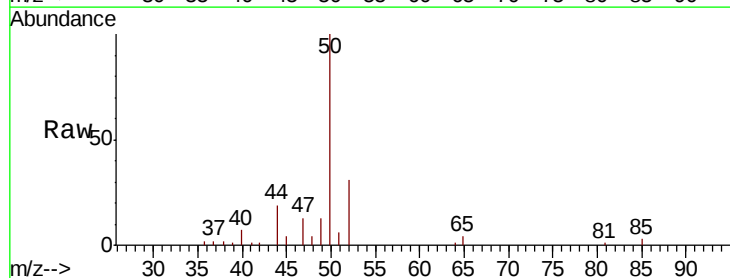
Acq: 28 Mar 2022 17:37

Tgt Ion: 50 Resp: 22676

Ion Ratio Lower Upper

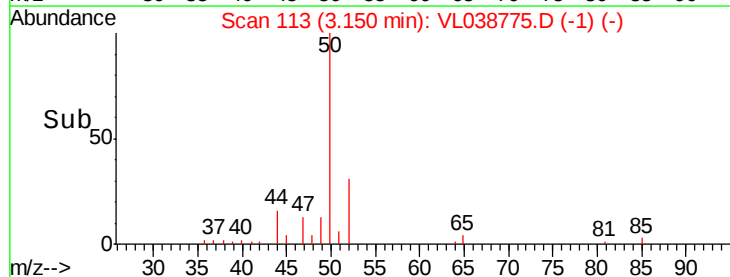
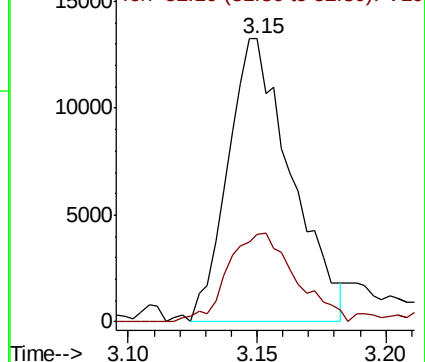
50 100

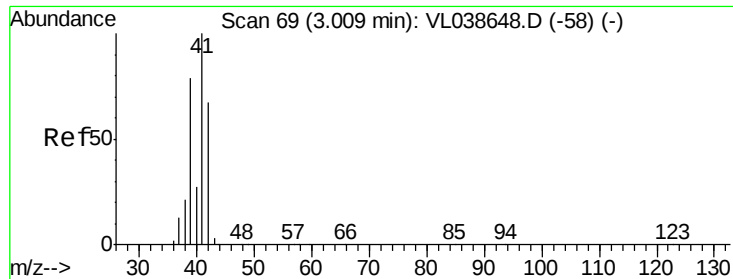
52 29.0 25.5 38.3



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 0.315 ppbv

RT: 3.03 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

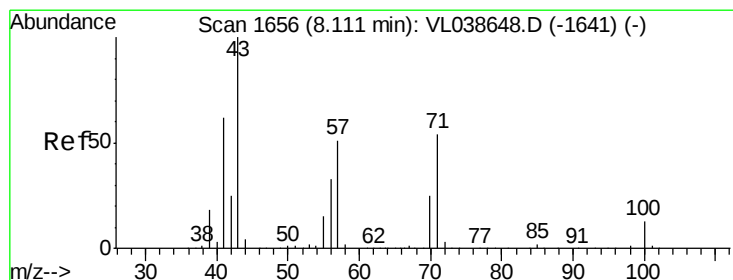
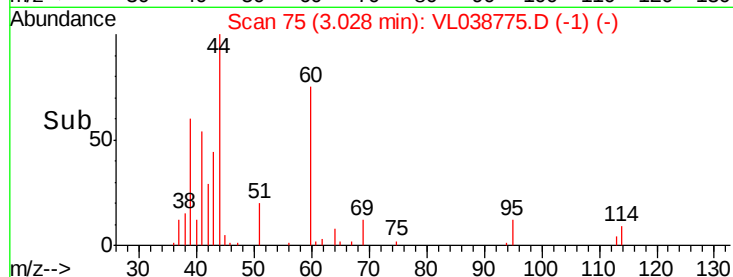
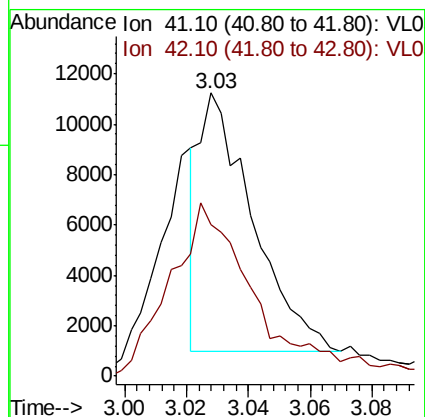
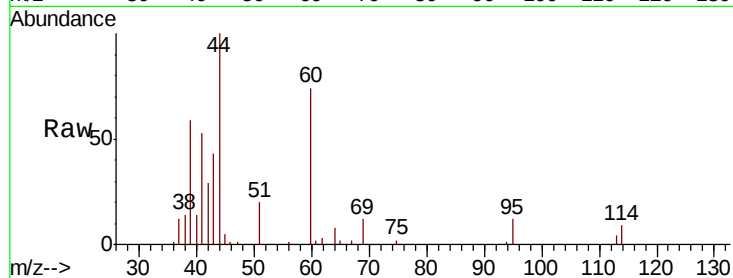
Acq: 28 Mar 2022 17:37

Tot Ion: 41 Resp: 12304

Ion Ratio Lower Upper

41 100

42 110.6 56.2 84.4#



#10

Heptane

Concen: 0.067 ppbv

RT: 8.12 min Scan# 1660

Delta R.T. 0.01 min

Lab File: VL038775.D

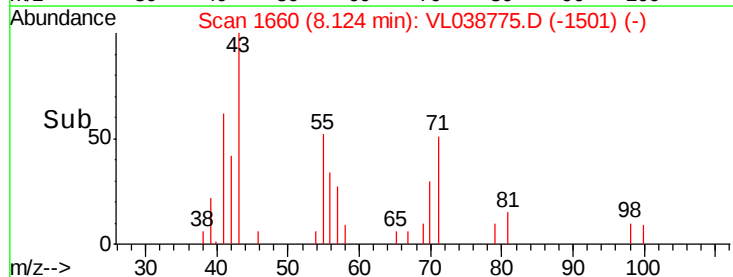
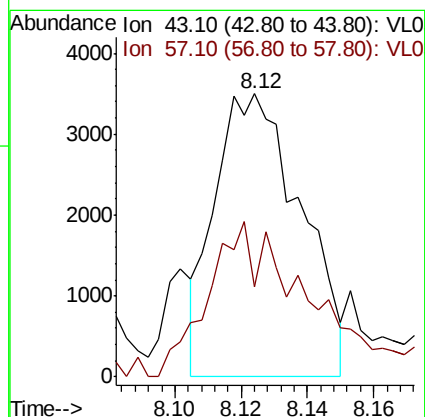
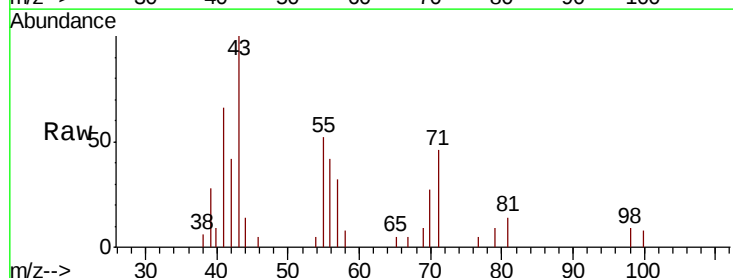
Acq: 28 Mar 2022 17:37

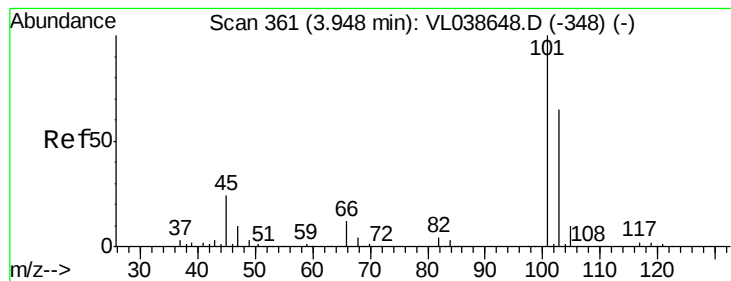
Tgt Ion: 43 Resp: 6311

Ion Ratio Lower Upper

43 100

57 66.3 41.4 62.2#





#11

Trichlorofluoromethane

Concen: 0.281 ppbv

RT: 3.96 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

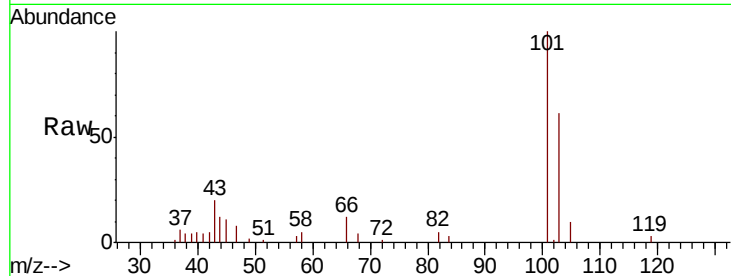
Acq: 28 Mar 2022 17:37

Tot Ion:101 Resp: 25594

Ion Ratio Lower Upper

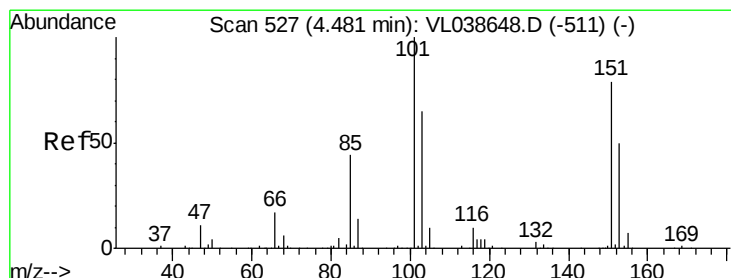
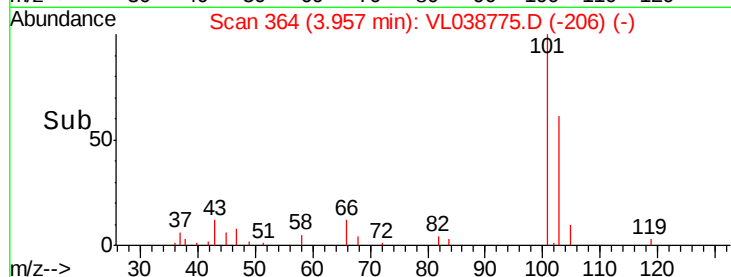
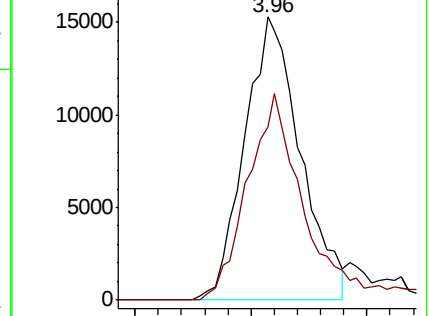
101 100

103 61.2 51.9 77.9



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: 0.060 ppbv

RT: 4.49 min Scan# 531

Delta R.T. 0.01 min

Lab File: VL038775.D

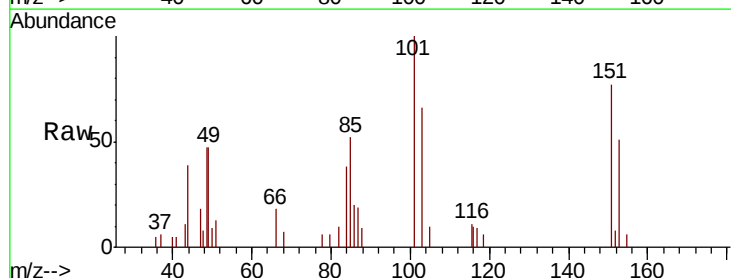
Acq: 28 Mar 2022 17:37

Tgt Ion:101 Resp: 4171

Ion Ratio Lower Upper

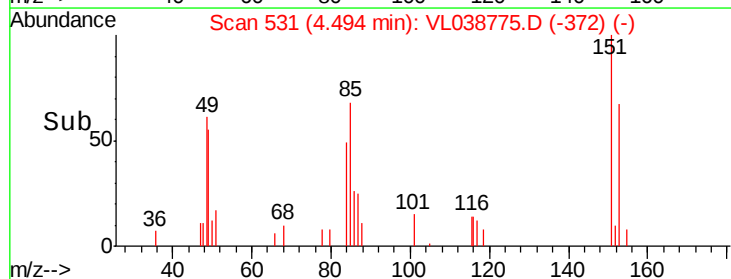
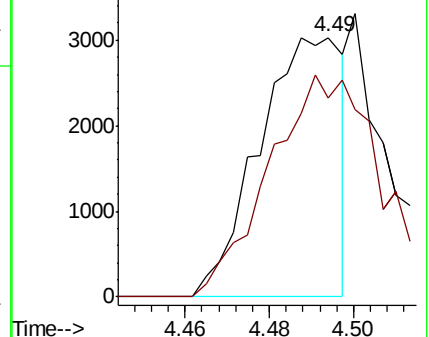
101 100

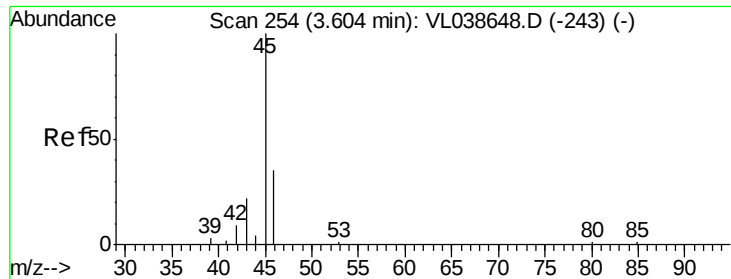
151 124.5 62.9 94.3#



Abundance Ion 101.00 (100.70 to 101.70): V

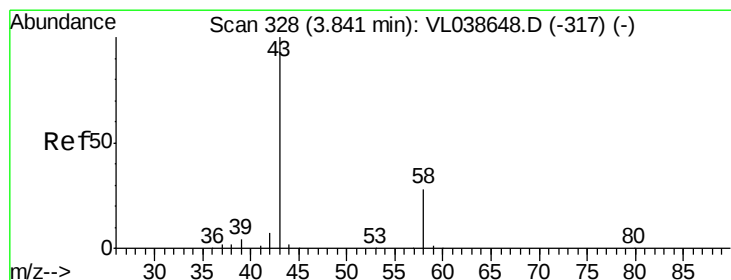
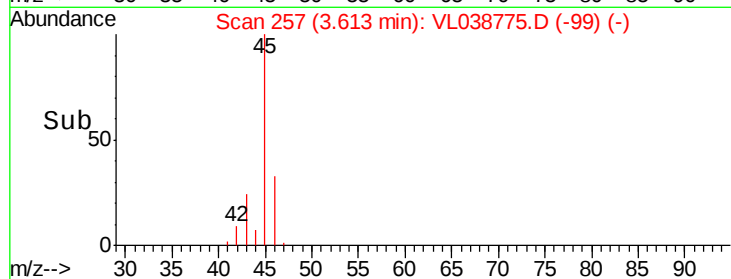
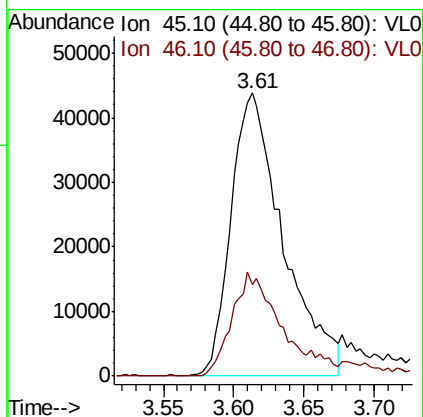
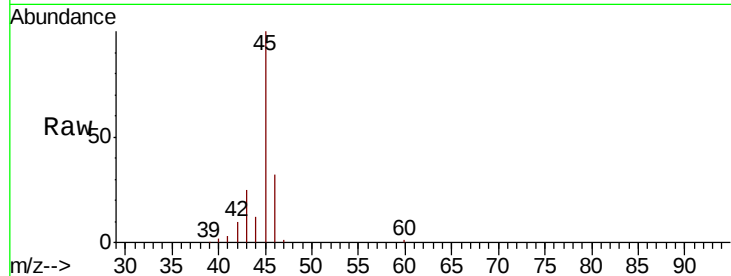
Ion 151.00 (150.70 to 151.70): V





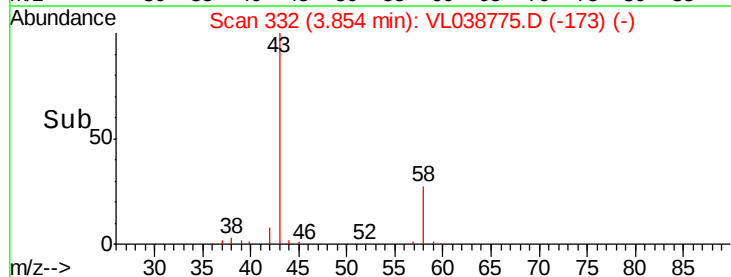
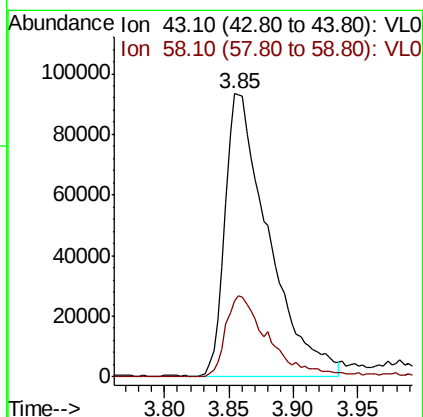
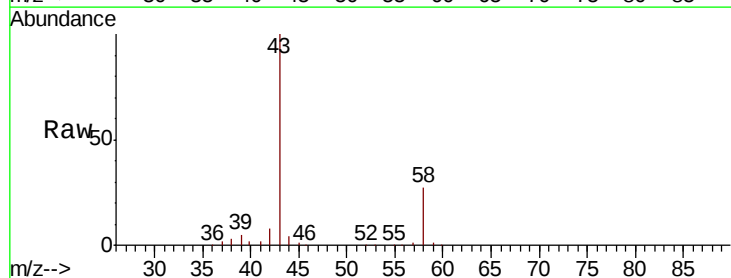
#13
Ethanol
Concen: 26.336 ppbv
RT: 3.61
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 28 Mar 2022 17:37

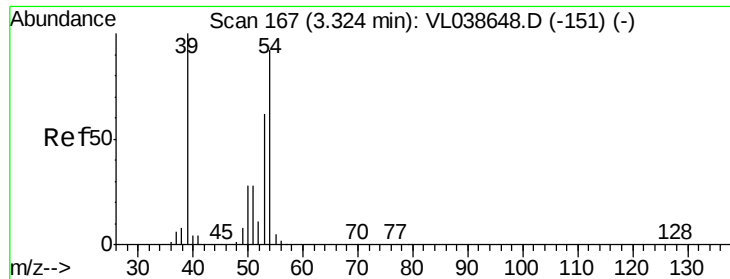
Tot Ion: 45 Resp: 113638
Ion Ratio Lower Upper
45 100
46 40.5 15.1 60.5



#15
Acetone
Concen: 3.295 ppbv
RT: 3.85 min Scan# 332
Delta R.T. 0.01 min
Lab File: VL038775.D
Acq: 28 Mar 2022 17:37

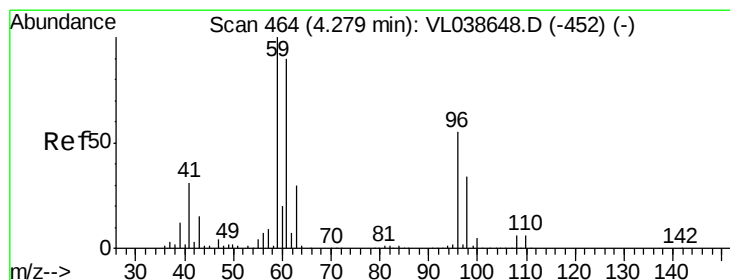
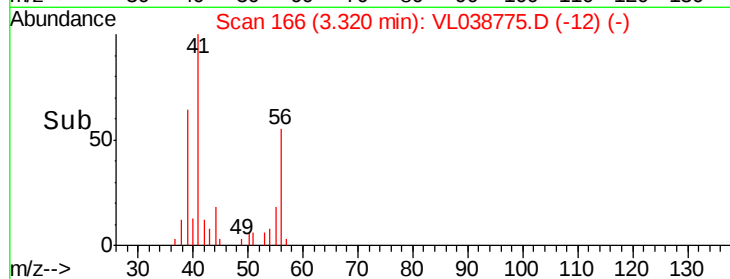
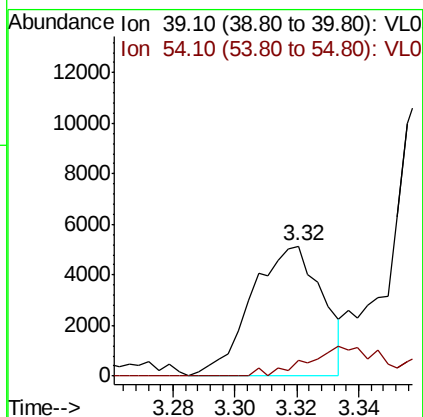
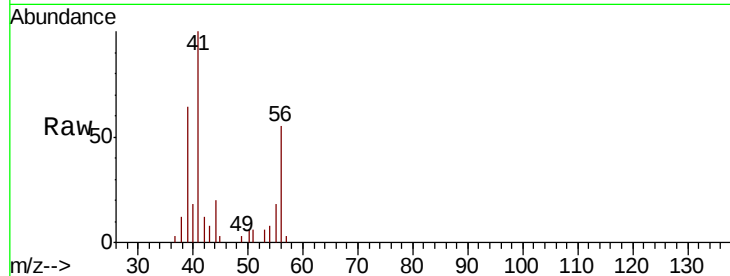
Tgt Ion: 43 Resp: 218102
Ion Ratio Lower Upper
43 100
58 28.8 23.3 34.9





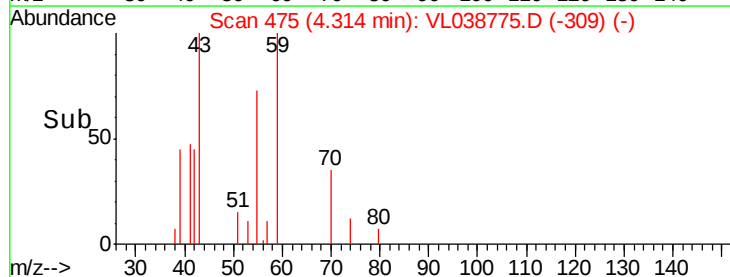
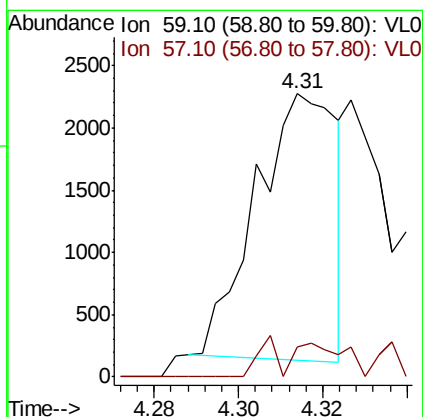
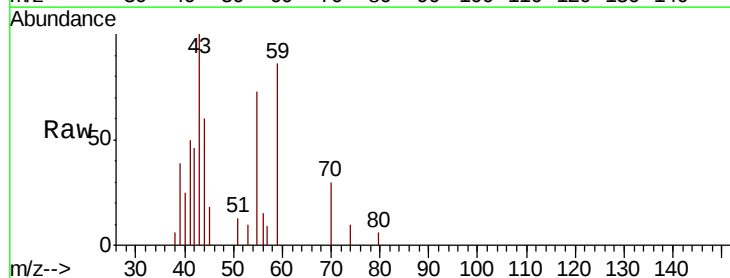
#16
 1,3-Butadiene
 Concen: 0.219 ppbv
 RT: 3.32
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 V-5
 Acq: 28 Mar 2022 17:37

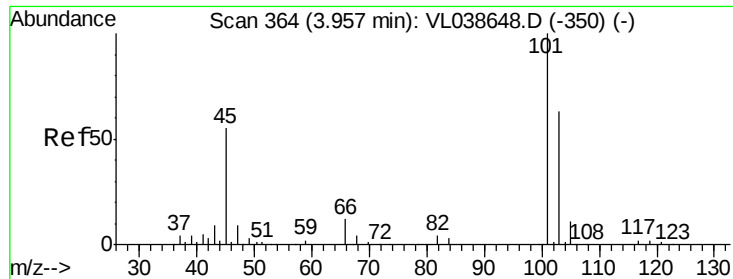
Tot Ion: 39 Resp: 8210
 Ion Ratio Lower Upper
 39 100
 54 22.2 69.1 103.7#



#17
 tert-Butyl alcohol
 Concen: 0.049 ppbv
 RT: 4.31 min Scan# 475
 Delta R.T. 0.04 min
 Lab File: VL038775.D
 Acq: 28 Mar 2022 17:37

Tgt Ion: 59 Resp: 2834
 Ion Ratio Lower Upper
 59 100
 57 0.0 8.2 12.2#





#19

Isopropyl Alcohol

Concen: 0.618 ppbv

RT: 3.98 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

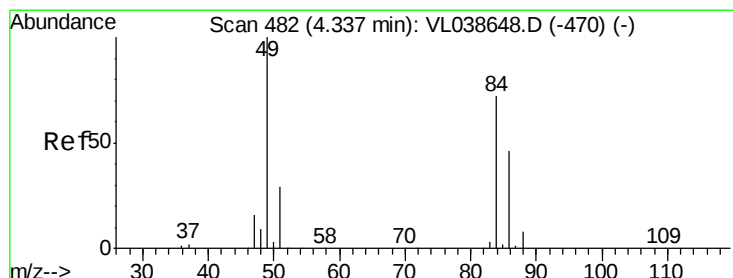
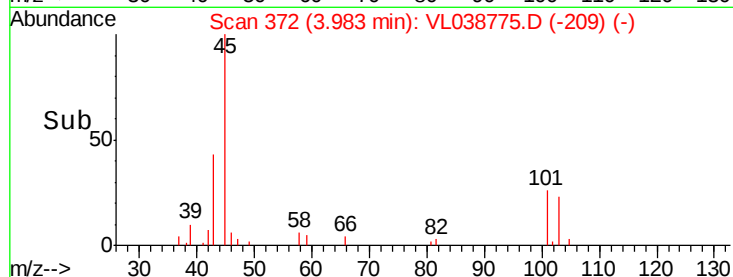
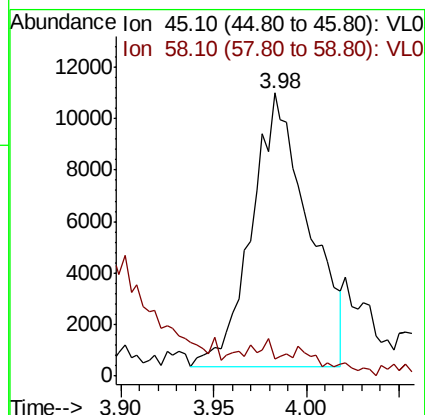
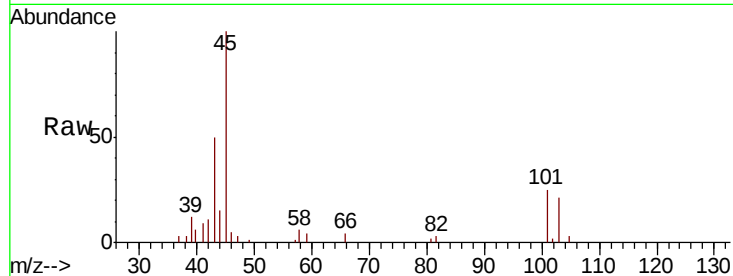
Acq: 28 Mar 2022 17:37

Tot Ion: 45 Resp: 22672

Ion Ratio Lower Upper

45 100

58 8.5 2.3 3.5#



#20

Methylene Chloride

Concen: 9.465 ppbv

RT: 4.35 min Scan# 486

Delta R.T. 0.01 min

Lab File: VL038775.D

Acq: 28 Mar 2022 17:37

Tgt Ion: 84 Resp: 263907

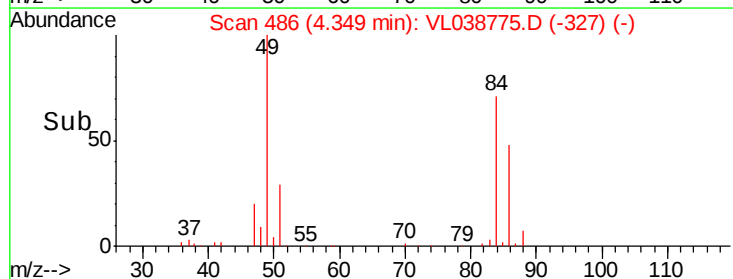
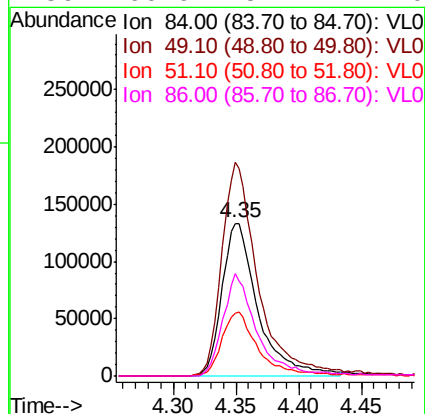
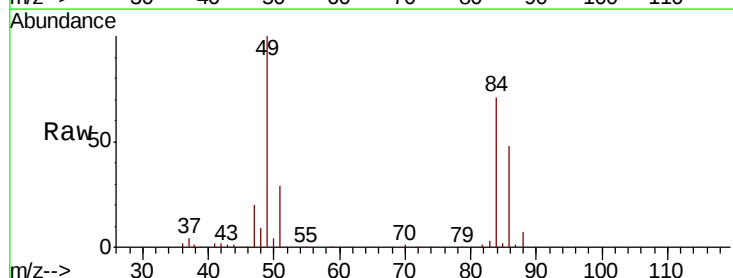
Ion Ratio Lower Upper

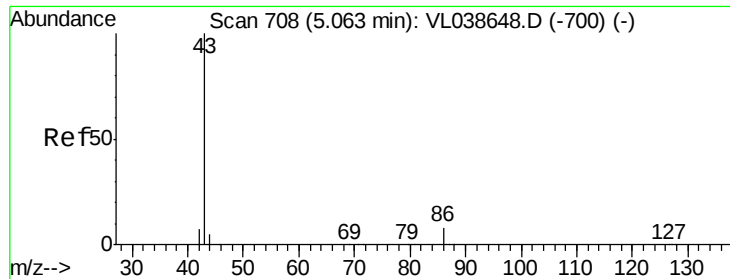
84 100

49 140.1 111.2 166.8

51 41.0 32.8 49.2

86 66.9 51.4 77.0





#23

Vinyl Acetate

Concen: 0.120 ppbv

RT: 5.07 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 28 Mar 2022 17:37

Tot Ion: 43 Resp: 7685

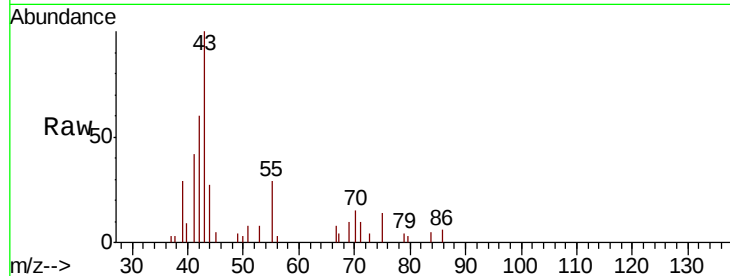
Ion Ratio Lower Upper

43 100

86 11.6 5.6 8.4#

42 63.6 6.8 10.2#

44 0.0 4.2 6.2#

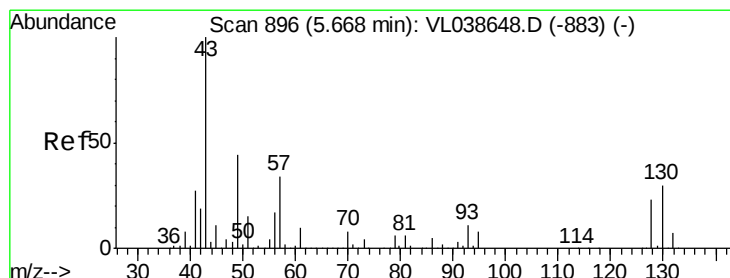
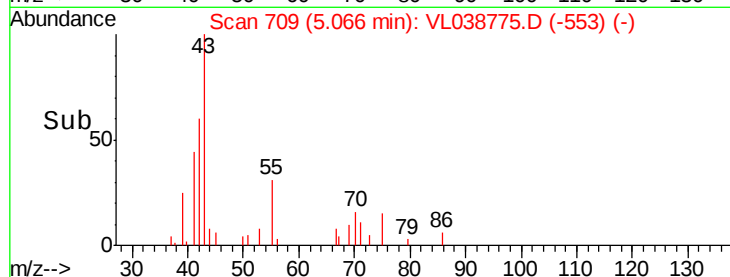
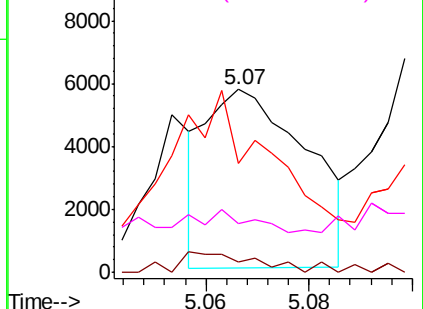


Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 0.902 ppbv

RT: 5.69 min Scan# 903

Delta R.T. 0.02 min

Lab File: VL038775.D

Acq: 28 Mar 2022 17:37

Tgt Ion: 43 Resp: 150353

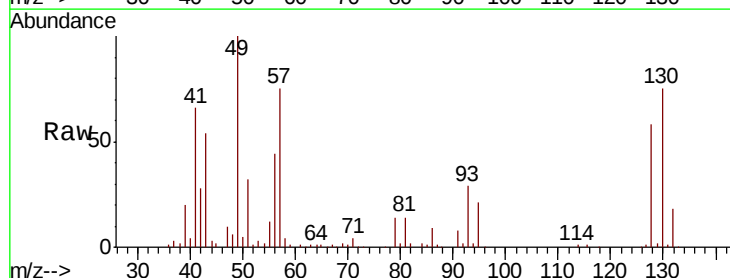
Ion Ratio Lower Upper

43 100

45 7.8 8.2 12.4#

61 1.8 8.3 12.5#

70 2.5 5.6 8.4#

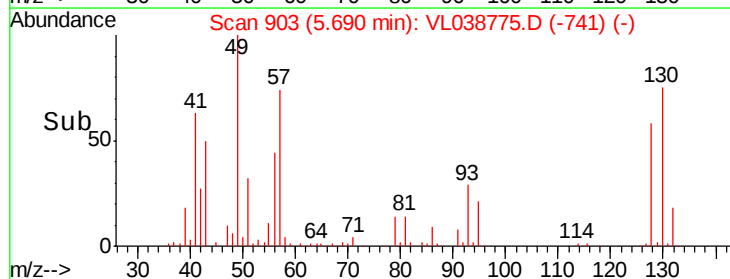
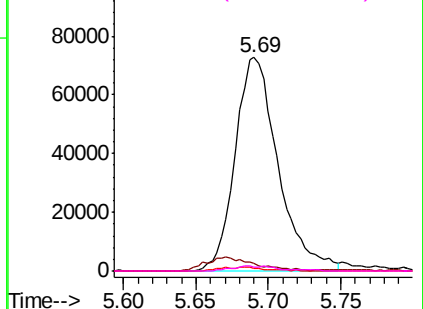


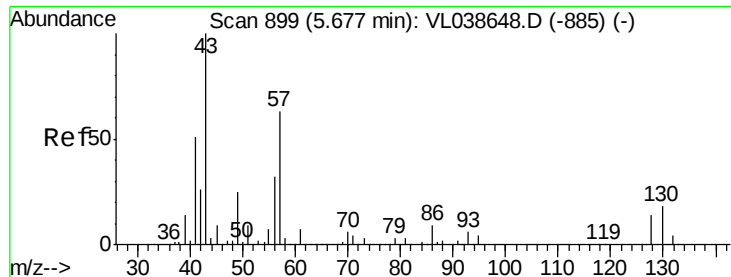
Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 45.10 (44.80 to 45.80): VL0

Ion 61.10 (60.80 to 61.80): VL0

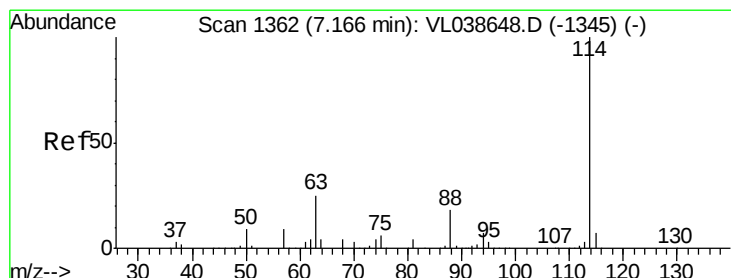
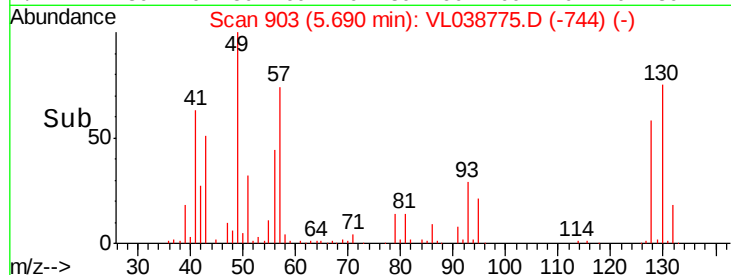
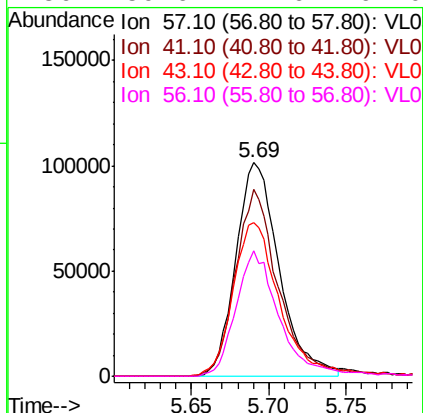
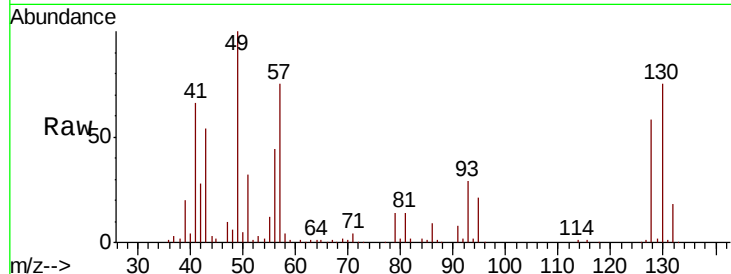
Ion 70.10 (69.80 to 70.80): VL0





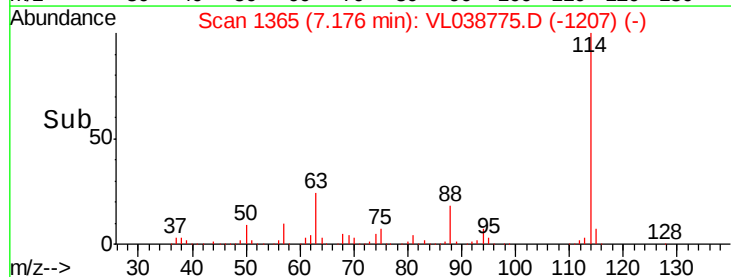
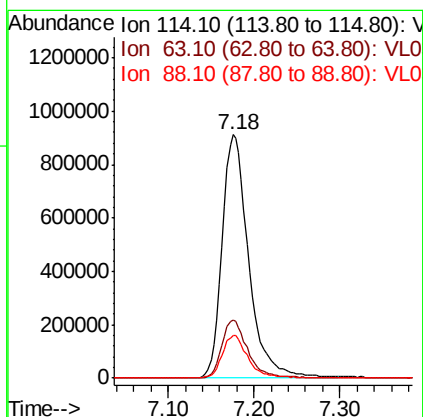
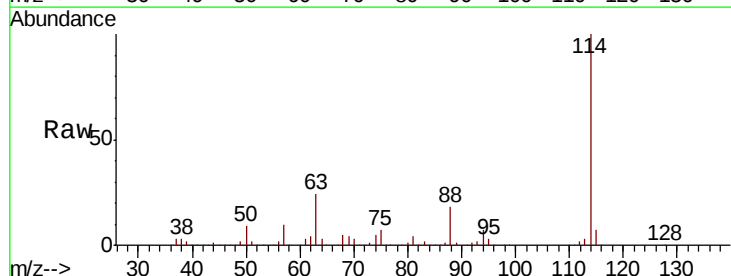
#26
Hexane
Concen: 2.650 ppbv
RT: 5.69
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 28 Mar 2022 17:37

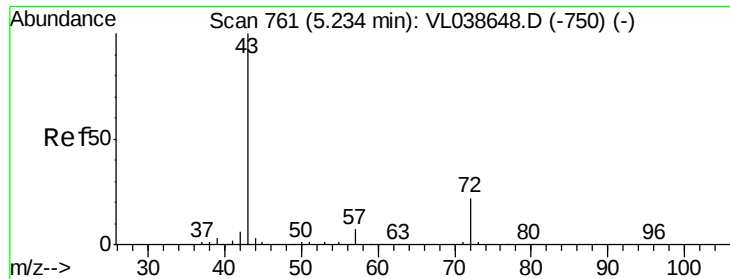
Tot Ion	57	Resp	197689
Ion	Ratio	Lower	Upper
57	100		
41	87.9	67.0	100.4
43	79.6	184.2	276.2#
56	59.6	42.6	64.0



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.18 min Scan# 1365
Delta R.T.: 0.01 min
Lab File: VL038775.D
Acq: 28 Mar 2022 17:37

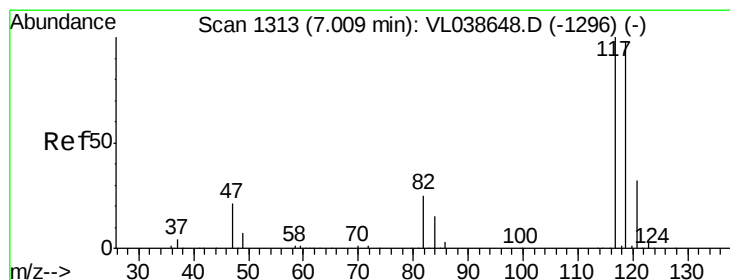
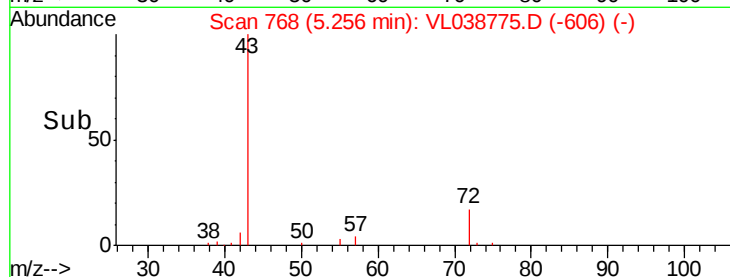
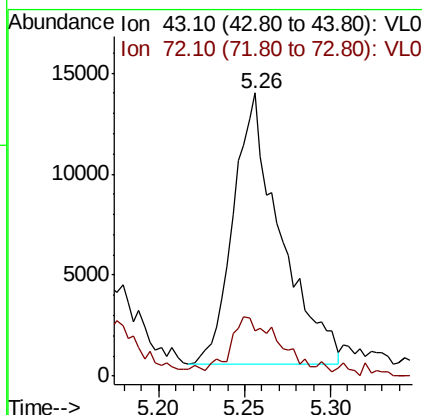
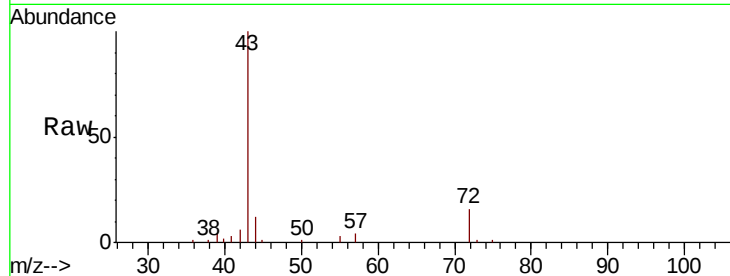
Tgt Ion	114	Resp	1963562
Ion	Ratio	Lower	Upper
114	100		
63	23.5	19.4	29.0
88	17.3	13.9	20.9





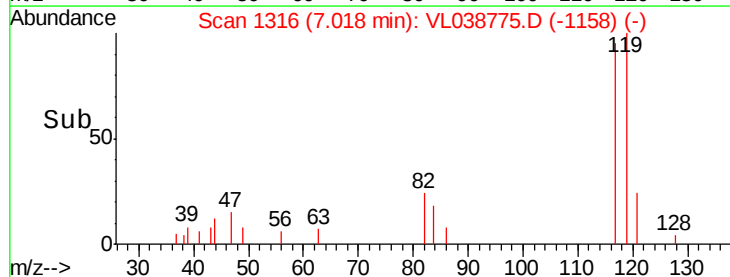
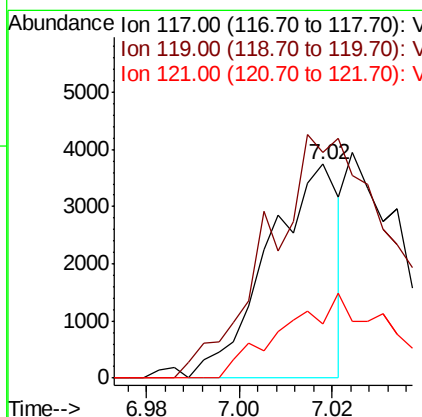
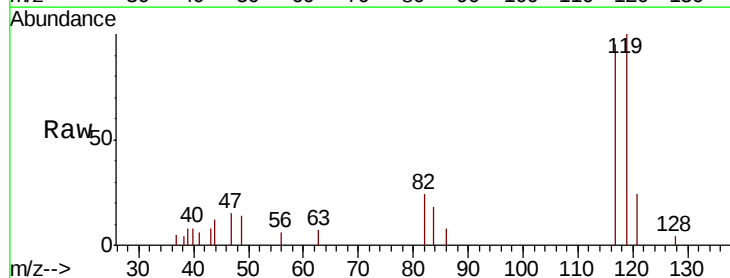
#34
2-Butanone
Concen: 0.328 ppbv
RT: 5.26
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 28 Mar 2022 17:37

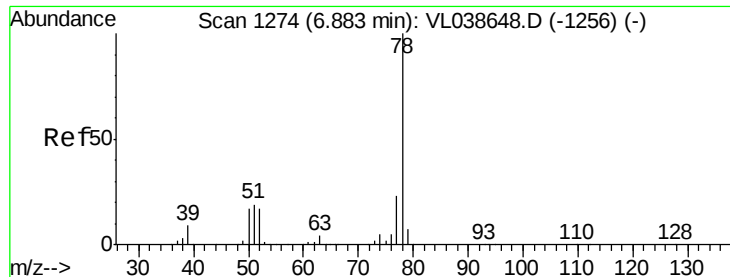
Tot Ion: 43 Resp: 25468
Ion Ratio Lower Upper
43 100
72 28.1 17.8 26.8#



#35
Carbon Tetrachloride
Concen: 0.035 ppbv
RT: 7.02 min Scan# 1316
Delta R.T. 0.01 min
Lab File: VL038775.D
Acq: 28 Mar 2022 17:37

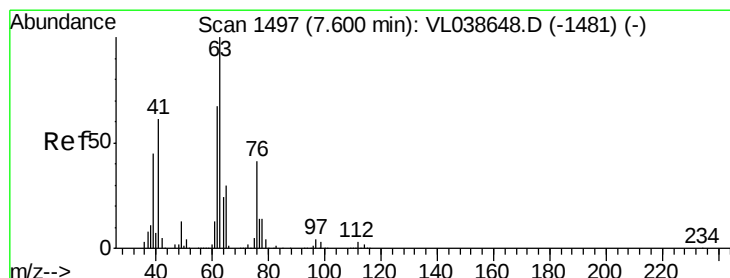
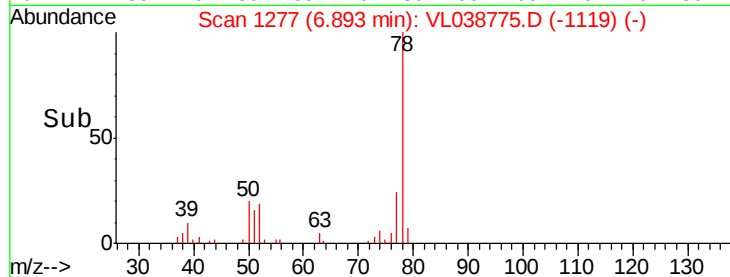
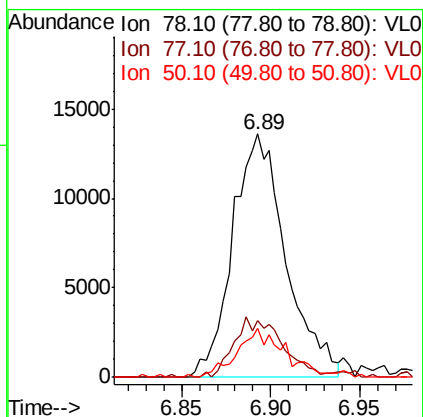
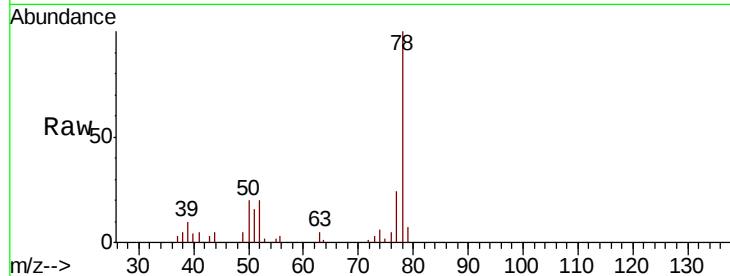
Tgt Ion: 117 Resp: 3971
Ion Ratio Lower Upper
117 100
119 98.2 78.1 117.1
121 25.2 25.8 38.6#





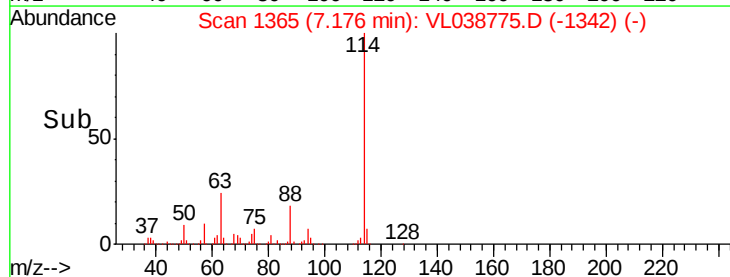
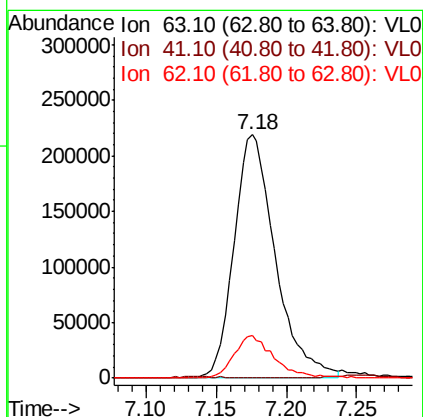
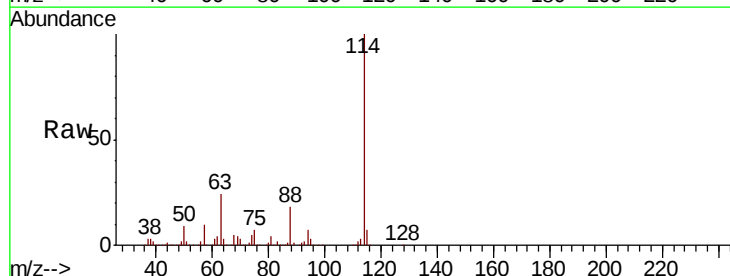
#36
Benzene
Concen: 0.187 ppbv
RT: 6.89
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 28 Mar 2022 17:37

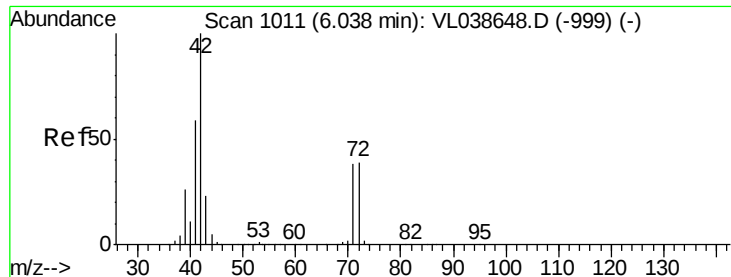
Tot Ion	78	Resp	28407
Ion Ratio	Lower	Upper	
78	100		
77	23.5	18.1	27.1
50	18.6	13.6	20.4



#39
1,2-Dichloropropane
Concen: 7.596 ppbv
RT: 7.18 min Scan# 1365
Delta R.T. -0.42 min
Lab File: VL038775.D
Acq: 28 Mar 2022 17:37

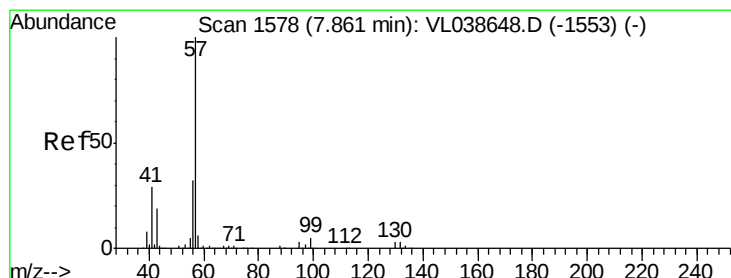
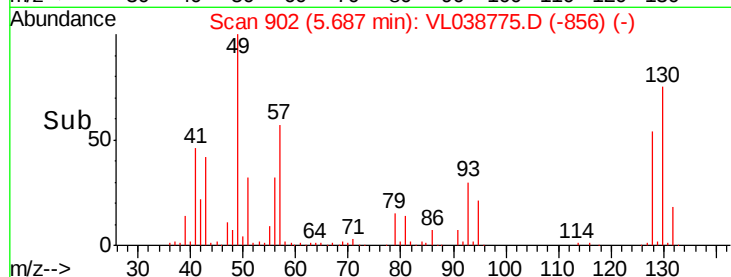
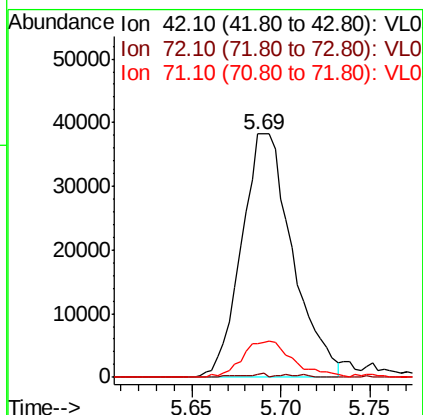
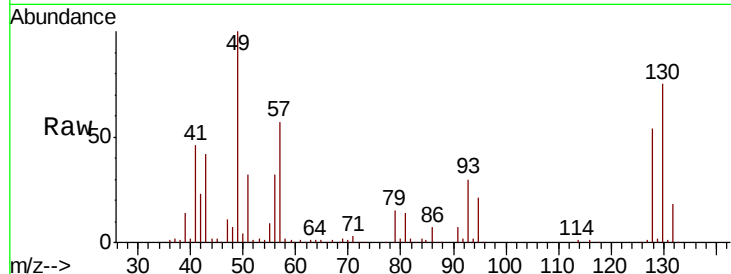
Tgt Ion	63	Resp	450018
Ion Ratio	Lower	Upper	
63	100		
41	0.0	49.0	73.6#
62	17.5	53.9	80.9#





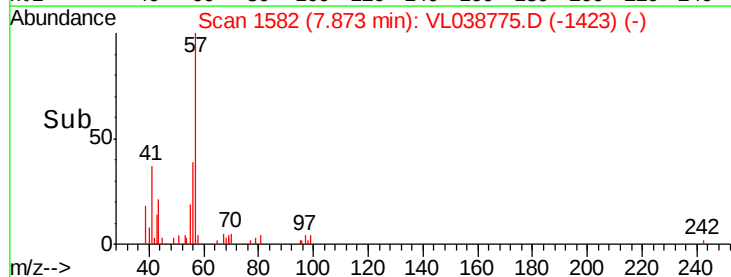
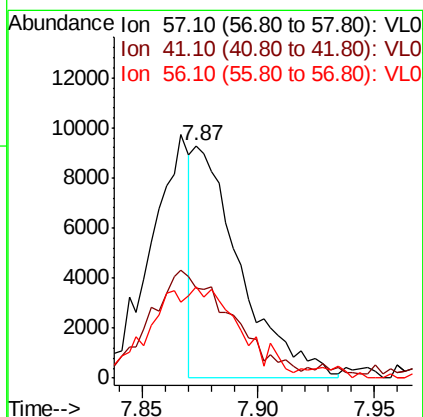
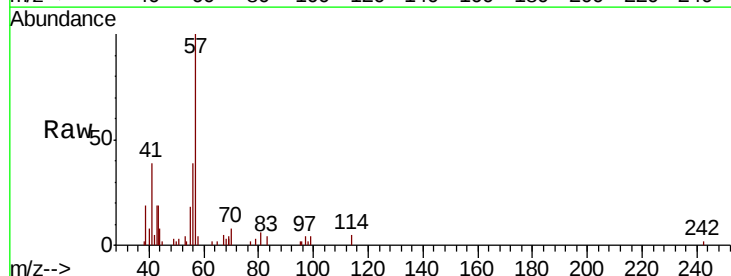
#41
Tetrahydrofuran
Concen: 1.315 ppbv
RT: 5.69
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
V-5
Acq: 28 Mar 2022 17:37

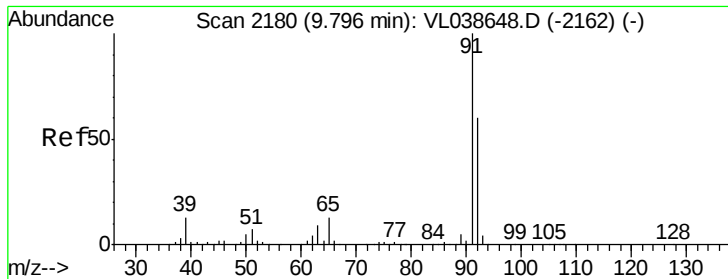
Tot Ion	Ratio	Lower	Upper
42	100		
72	1.3	32.5	48.7#
71	15.3	31.4	47.2#



#44
2,2,4-Trimethylpentane
Concen: 0.051 ppbv
RT: 7.87 min Scan# 1582
Delta R.T.: 0.01 min
Lab File: VL038775.D
Acq: 28 Mar 2022 17:37

Tgt Ion	Ratio	Lower	Upper
57	100		
41	0.0	23.0	34.4#
56	82.8	25.3	37.9#





#53

Toluene

Concen: 0.278 ppbv

RT: 9.81 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

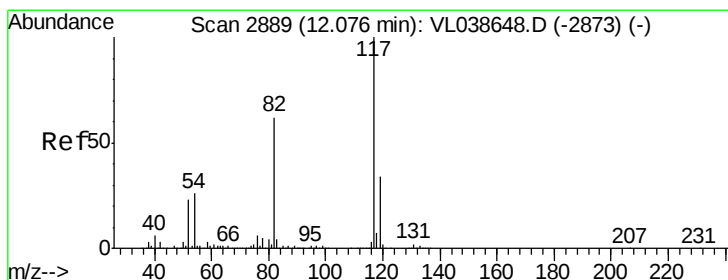
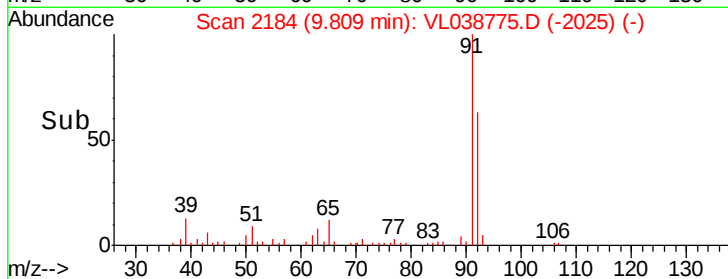
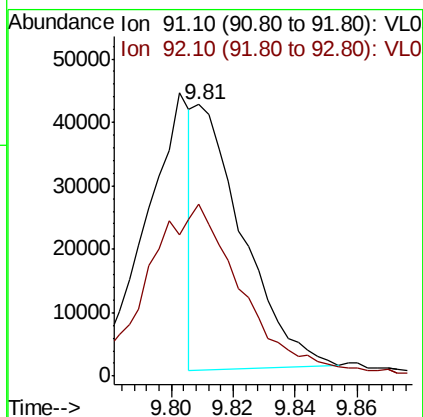
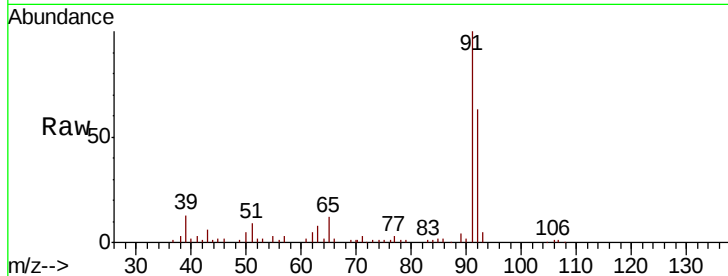
Acq: 28 Mar 2022 17:37

Tot Ion: 91 Resp: 45325

Ion Ratio Lower Upper

91 100

92 132.2 48.7 73.1#



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.09 min Scan# 2892

Delta R.T. 0.01 min

Lab File: VL038775.D

Acq: 28 Mar 2022 17:37

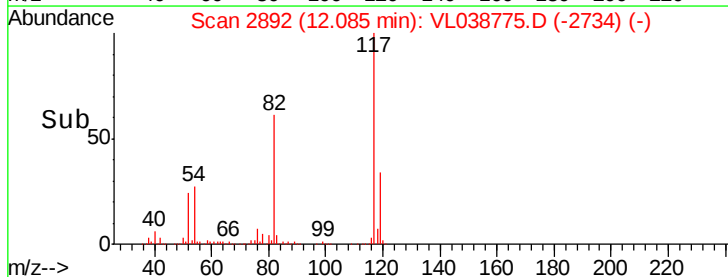
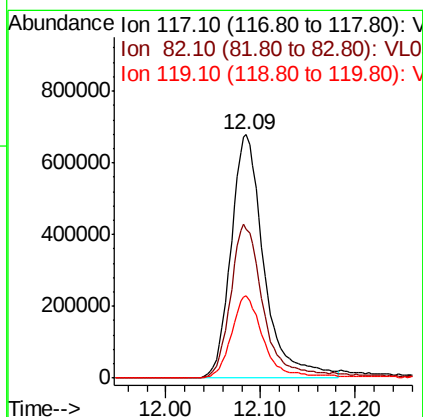
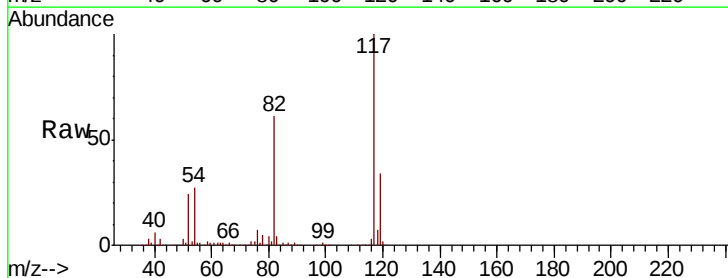
Tgt Ion: 117 Resp: 1647900

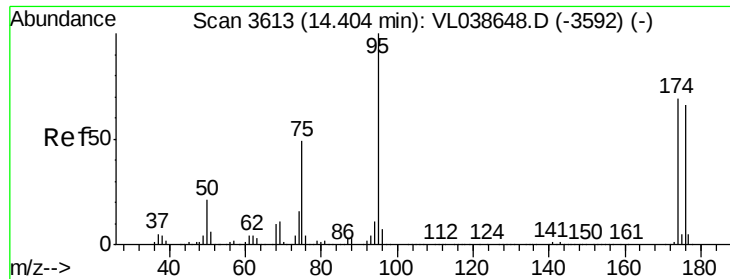
Ion Ratio Lower Upper

117 100

82 65.3 51.6 77.4

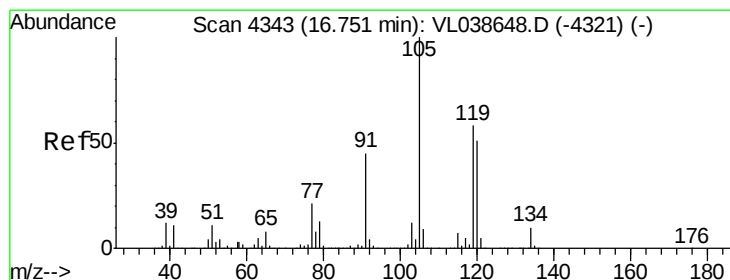
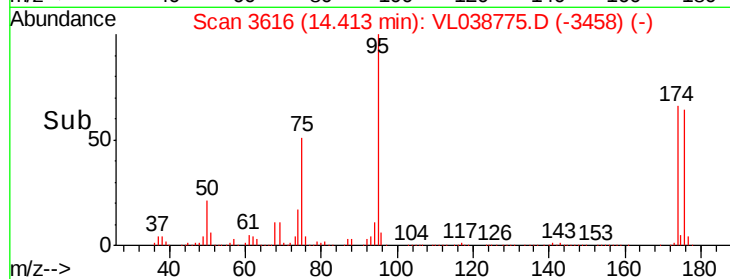
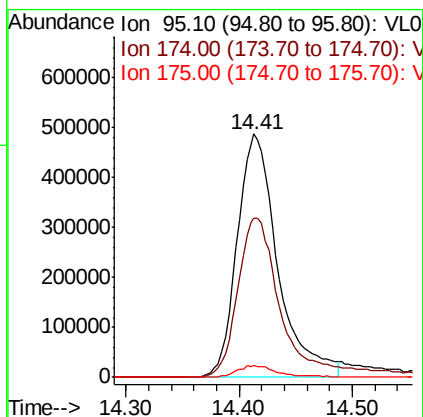
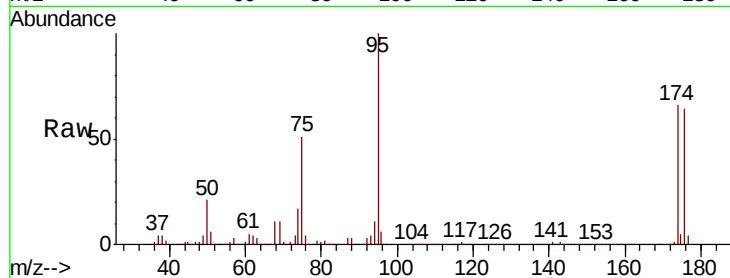
119 34.5 26.9 40.3





#68
 1-Bromo-4-Fluorobenzene
 Concen: 9.649 ppbv
 RT: 14.41 min
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 V-5
 Acq: 28 Mar 2022 17:37

Tot Ion:	95	Resp:	1219115
Ion	Ratio	Lower	Upper
95	100		
174	73.2	56.1	84.1
175	5.0	4.2	6.2



#74
 1,2,4-Trimethylbenzene
 Concen: 0.083 ppbv
 RT: 16.76 min Scan# 4346
 Delta R.T. 0.01 min
 Lab File: VL038775.D
 Acq: 28 Mar 2022 17:37

Tgt Ion:	105	Resp:	15604
Ion	Ratio	Lower	Upper
105	100		
120	39.1	40.5	60.7#
91	13.2	35.9	53.9#
77	17.3	16.6	25.0

