

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL060122\
 Data File : VL039145.D
 Acq On : 1 Jun 2022 13:06
 Operator : SY/AP
 Sample : N3106-09
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 OA1

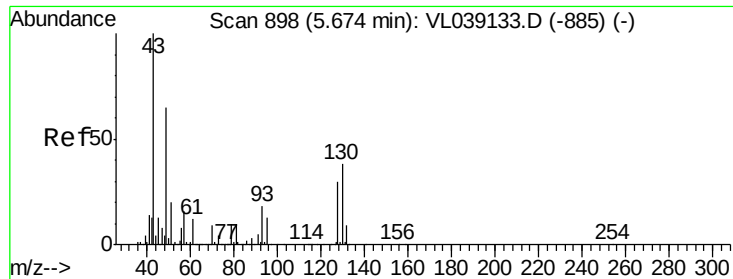
Quant Time: Jun 02 00:36:46 2022
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL053122AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed Jun 01 01:22:18 2022
 QLast Update : Wed Jun 01 01:22:18 2022
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.67	49	1109728	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.18	114	2694560	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.08	117	2274381	10.00	ppbv	-0.01

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.41	95	1873427	9.96	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	99.60%

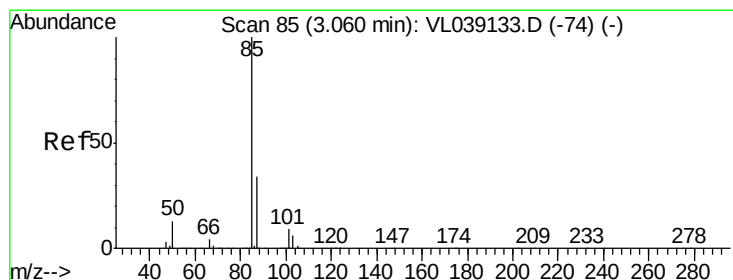
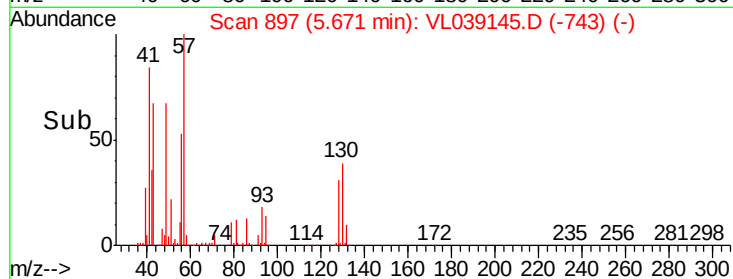
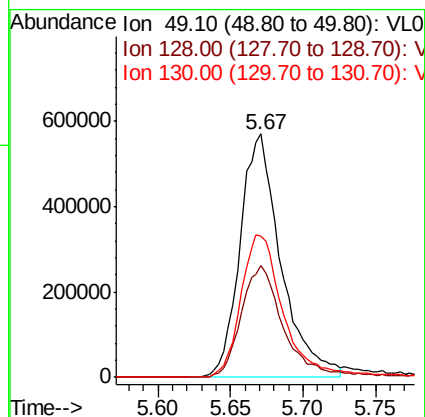
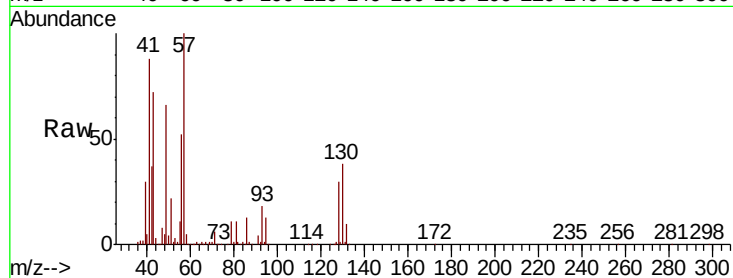
Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.06	85	61236	0.314	ppbv 92
3) Chlorodifluoromethane	2.99	51	89771	0.636	ppbv # 88
4) Chloromethane	3.15	50	33557	0.463	ppbv 94
7) Chloroethane	3.56	64	795	0.034	ppbv # 45
9) Propene	3.21	41	296091	4.809	ppbv 96
10) Heptane	8.12	43	6822	0.047	ppbv # 1
11) Trichlorofluoromethane	3.96	101	43271	0.245	ppbv 88
12) 1,1,2-Trichlorotrifluoroet	4.49	101	8408	0.072	ppbv 91
13) Ethanol	3.61	45	295769	88.088	ppbv # 100
15) Acetone	3.85	43	966877	8.364	ppbv 99
16) 1,3-Butadiene	3.36	39	21648	0.348	ppbv # 22
19) Isopropyl Alcohol	3.97	45	161793	2.984	ppbv # 1
20) Methylene Chloride	4.35	84	6194769	127.164	ppbv 97
21) Allyl Chloride	4.35	41	231898	2.974	ppbv # 21
23) Vinyl Acetate	5.07	43	49731	0.520	ppbv # 68
25) Ethyl Acetate	5.69	43	4254256	16.328	ppbv # 76
26) Hexane	5.69	57	6108815	53.354	ppbv # 39
30) Cyclohexane	7.13	84	12932	0.134	ppbv # 1
34) 2-Butanone	5.25	43	57190	0.391	ppbv # 69
35) Carbon Tetrachloride	7.01	117	7596	0.039	ppbv # 84
36) Benzene	6.89	78	34825	0.159	ppbv 94
39) 1,2-Dichloropropane	7.18	63	734873	8.446	ppbv # 25
41) Tetrahydrofuran	5.69	42	2237443	25.413	ppbv # 50
44) 2,2,4-Trimethylpentane	7.87	57	35737	0.093	ppbv # 43
52) Tetrachloroethene	11.21	164	2961	0.035	ppbv # 25
53) Toluene	9.81	91	119038	0.473	ppbv 98
59) m/p-Xylene	12.97	91	52131	0.189	ppbv # 60
60) o-Xylene	13.68	91	14343	0.055	ppbv # 8
73) 1,3,5-Trimethylbenzene	15.99	105	8516	0.031	ppbv # 69
74) 1,2,4-Trimethylbenzene	16.75	105	37586	0.123	ppbv # 65

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



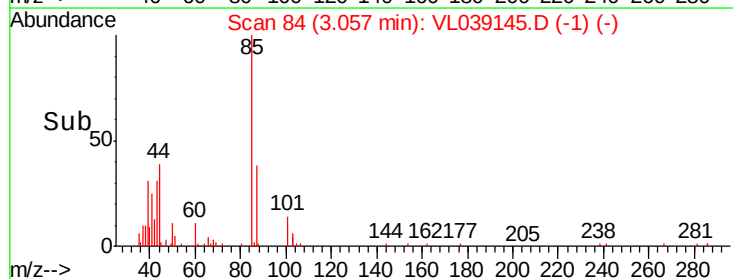
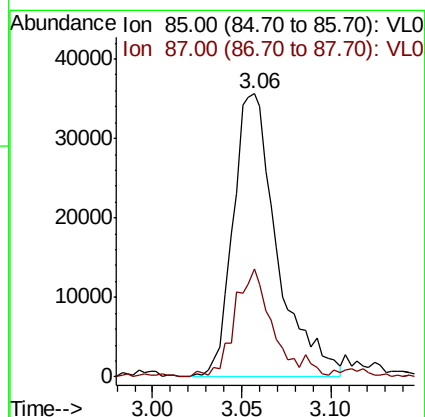
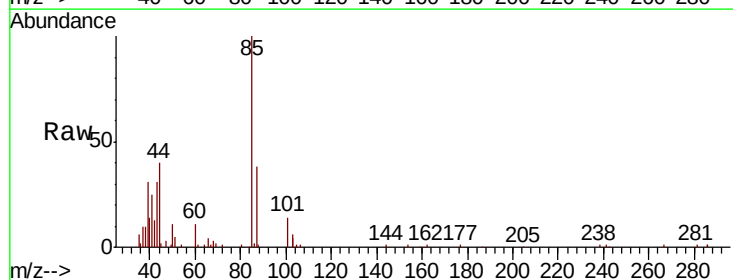
#1
 Bromochloromethane
 Concen: 10.000 ppbv
 RT: 5.67
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId :
 Acq: 1 Jun 2022 13:00

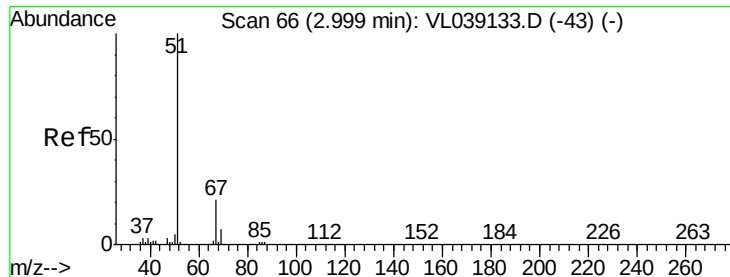
Tot Ion: 49 Resp: 1109728
 Ion Ratio Lower Upper
 49 100
 128 49.3 24.7 74.1
 130 63.2 31.4 94.0



#2
 Dichlorodifluoromethane
 Concen: 0.314 ppbv
 RT: 3.06 min Scan# 84
 Delta R.T. -0.00 min
 Lab File: VL039145.D
 Acq: 1 Jun 2022 13:06

Tgt Ion: 85 Resp: 61236
 Ion Ratio Lower Upper
 85 100
 87 38.1 26.9 40.3





#3

Chlorodifluoromethane

Concen: 0.636 ppbv

RT: 2.99 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: OA1

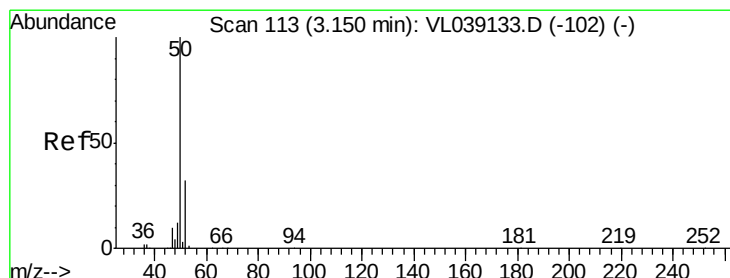
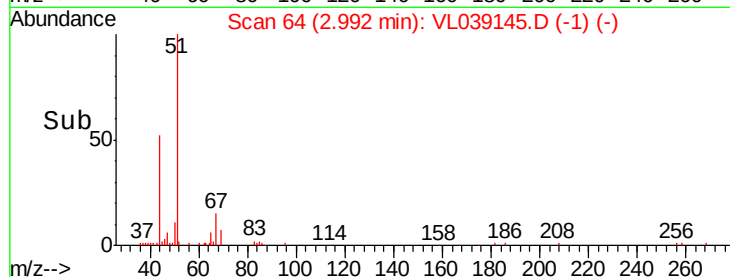
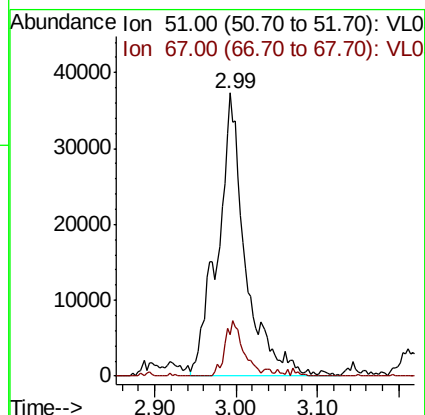
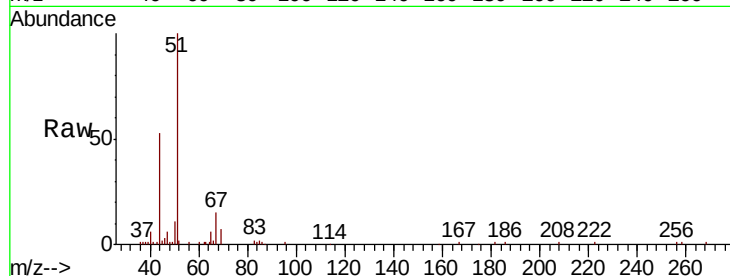
Acq: 1 Jun 2022 13:00

Tot Ion: 51 Resp: 89771

Ion Ratio Lower Upper

51 100

67 14.8 16.2 24.4#



#4

Chloromethane

Concen: 0.463 ppbv

RT: 3.15 min Scan# 112

Delta R.T. -0.00 min

Lab File: VL039145.D

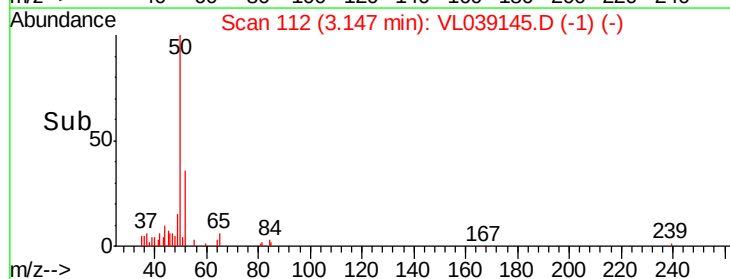
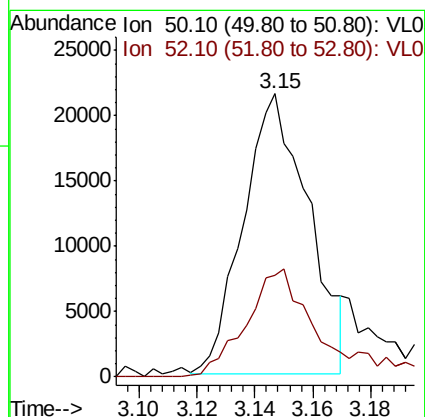
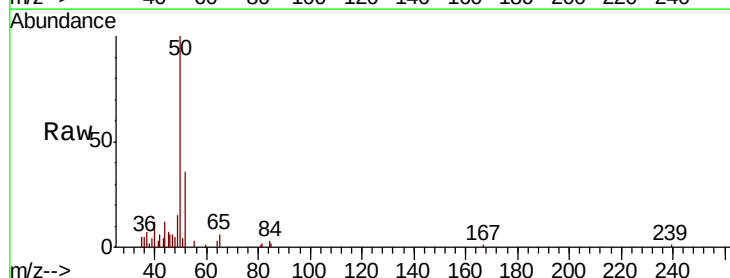
Acq: 1 Jun 2022 13:06

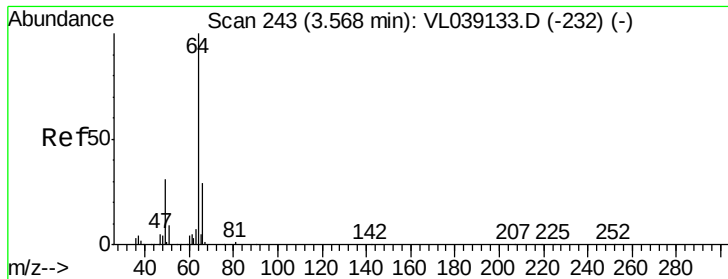
Tgt Ion: 50 Resp: 33557

Ion Ratio Lower Upper

50 100

52 35.8 25.9 38.9





#7

Chloroethane

Concen: 0.034 ppbv

RT: 3.56 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: OA1

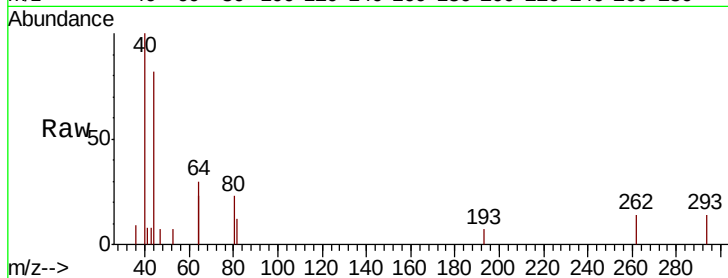
Acq: 1 Jun 2022 13:00

Tot Ion: 64 Resp: 795

Ion Ratio Lower Upper

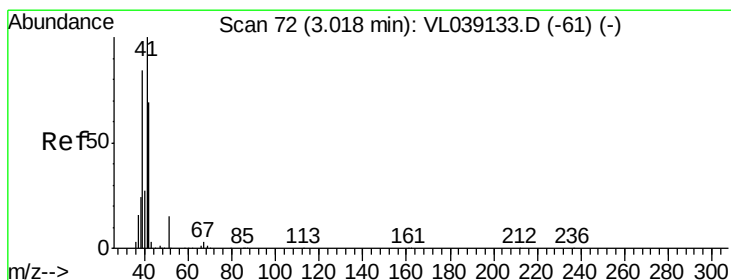
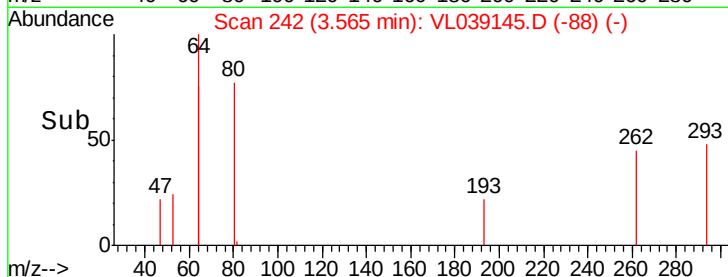
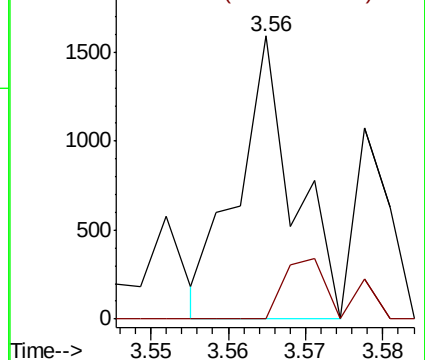
64 100

66 0.0 23.6 35.4#



Abundance Ion 64.10 (63.80 to 64.80): VL0

Ion 66.10 (65.80 to 66.80): VL0



#9

Propene

Concen: 4.809 ppbv

RT: 3.21 min Scan# 132

Delta R.T. 0.19 min

Lab File: VL039145.D

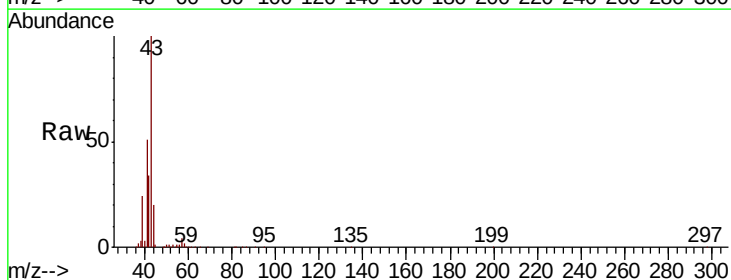
Acq: 1 Jun 2022 13:06

Tgt Ion: 41 Resp: 296091

Ion Ratio Lower Upper

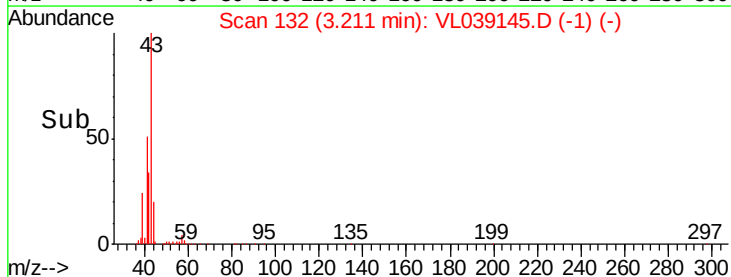
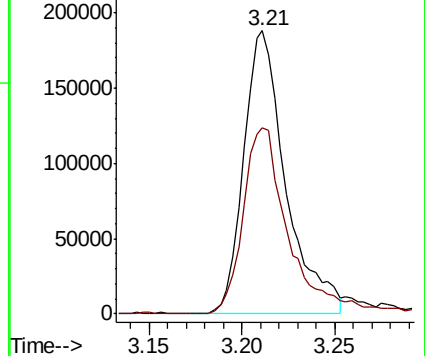
41 100

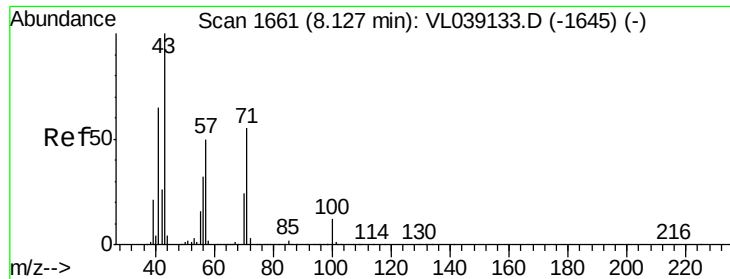
42 72.8 55.4 83.2



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0





#10

Heptane

Concen: 0.047 ppbv

RT: 8.12 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

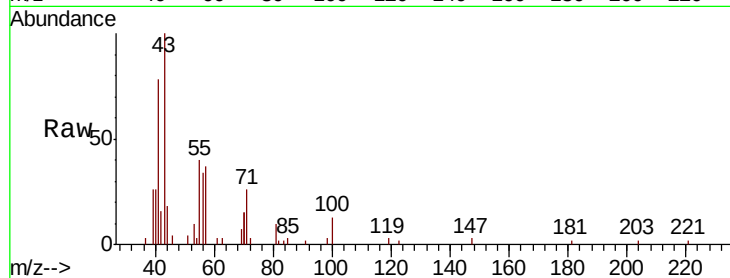
Acq: 1 Jun 2022 13:00

Tot Ion: 43 Resp: 6822

Ion Ratio Lower Upper

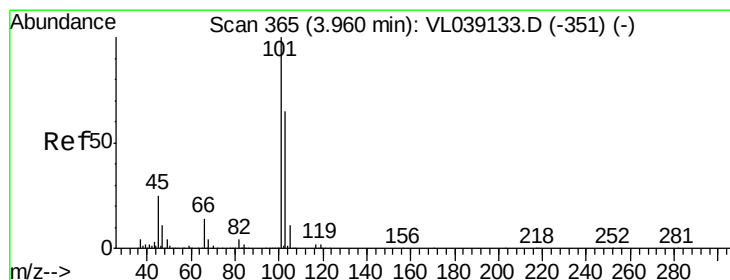
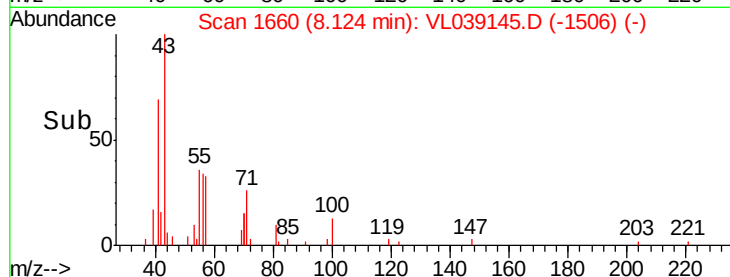
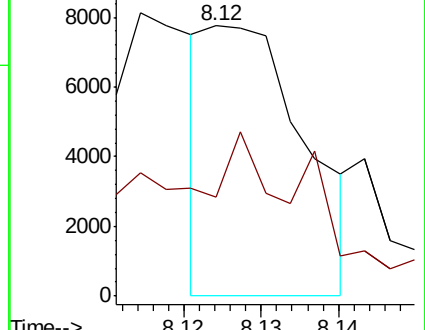
43 100

57 133.7 41.4 62.2#



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 57.10 (56.80 to 57.80): VL0



#11

Trichlorofluoromethane

Concen: 0.245 ppbv

RT: 3.96 min Scan# 364

Delta R.T. -0.00 min

Lab File: VL039145.D

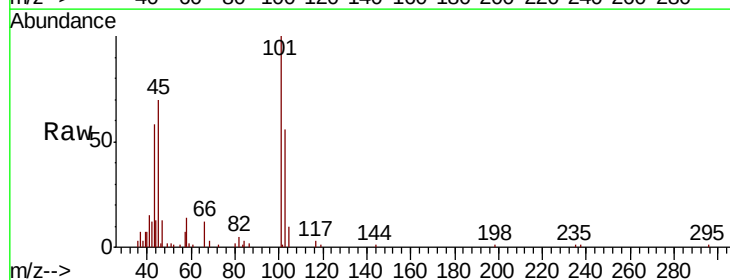
Acq: 1 Jun 2022 13:06

Tgt Ion:101 Resp: 43271

Ion Ratio Lower Upper

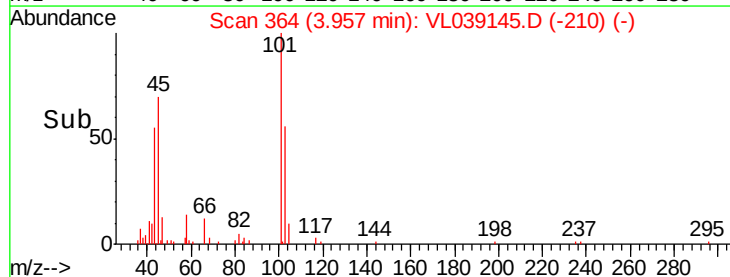
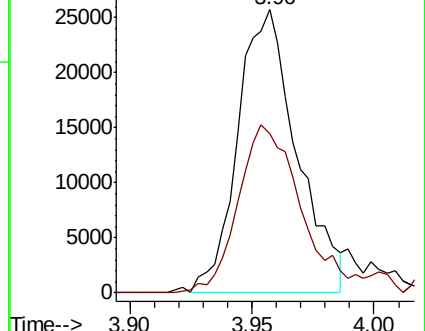
101 100

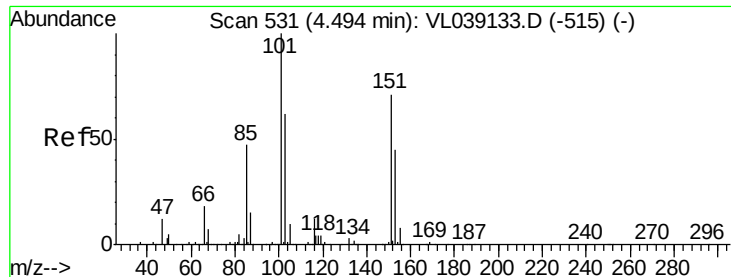
103 55.1 51.7 77.5



Abundance Ion 101.00 (100.70 to 101.70): V

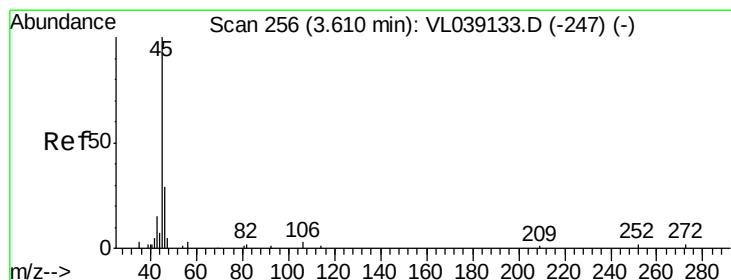
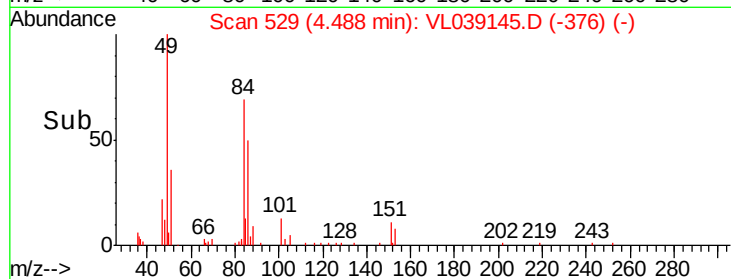
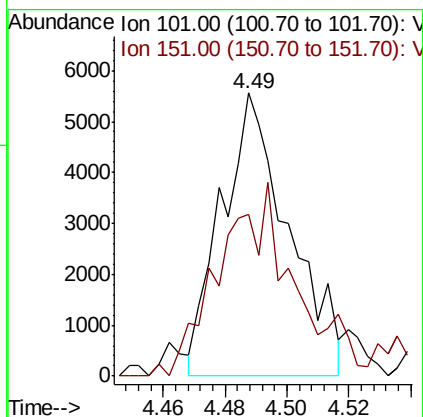
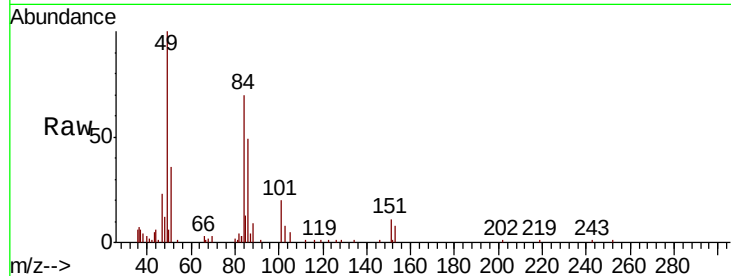
Ion 103.00 (102.70 to 103.70): V





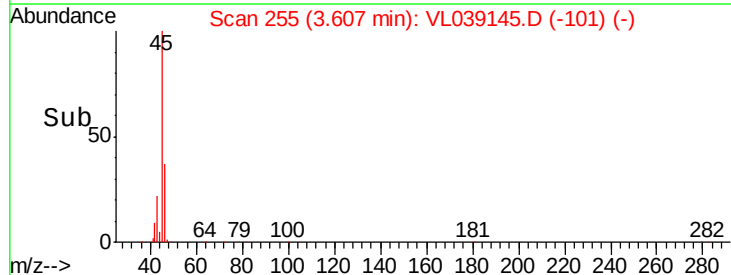
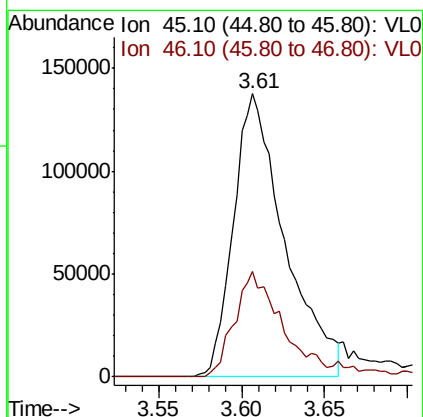
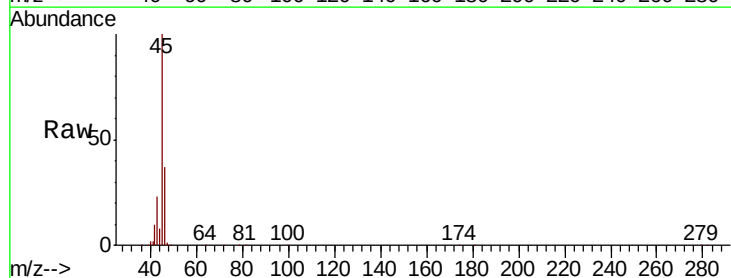
#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.072 ppbv
 RT: 4.49
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 1 Jun 2022 13:00

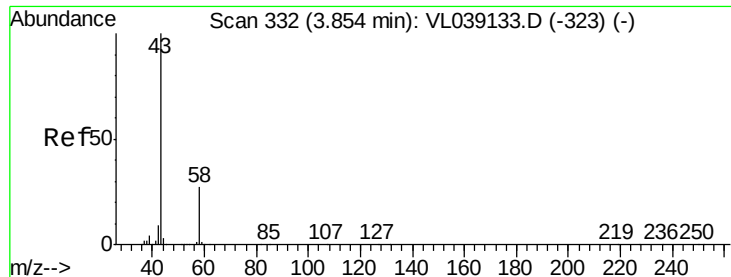
Tot Ion: 101 Resp: 8408
 Ion Ratio Lower Upper
 101 100
 151 81.8 59.4 89.0



#13
 Ethanol
 Concen: 88.088 ppbv
 RT: 3.61 min Scan# 255
 Delta R.T. -0.00 min
 Lab File: VL039145.D
 Acq: 1 Jun 2022 13:06

Tgt Ion: 45 Resp: 295769
 Ion Ratio Lower Upper
 45 100
 46 39.7 0.0 0.0#





#15

Acetone

Concen: 8.364 ppbv

RT: 3.85 Instrument :

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

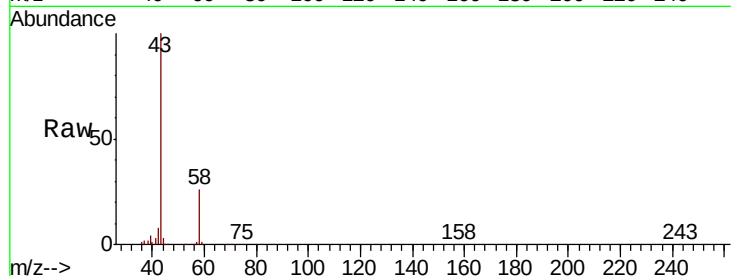
Acq: 1 Jun 2022 13:00

Tot Ion: 43 Resp: 966877

Ion Ratio Lower Upper

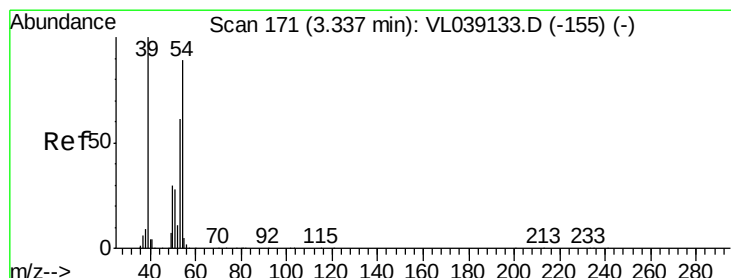
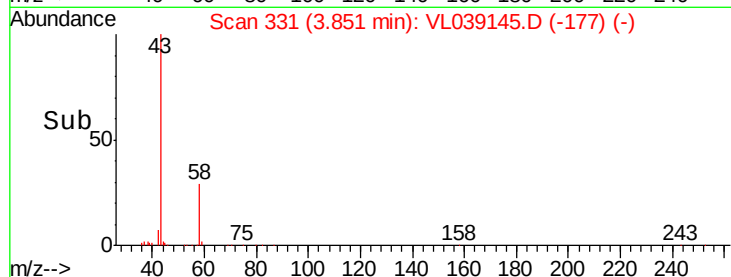
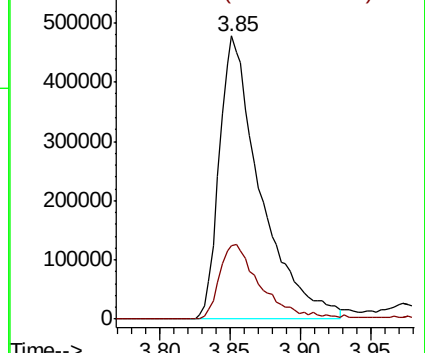
43 100

58 28.4 22.5 33.7



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#16

1,3-Butadiene

Concen: 0.348 ppbv

RT: 3.36 min Scan# 179

Delta R.T. 0.03 min

Lab File: VL039145.D

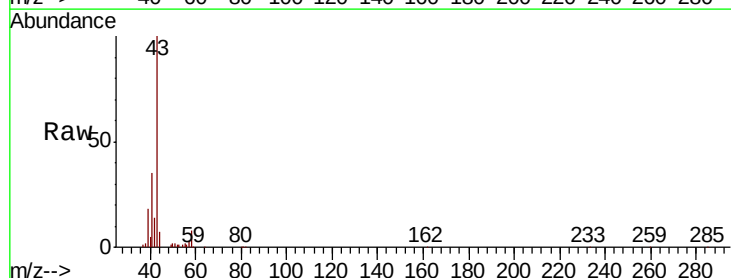
Acq: 1 Jun 2022 13:06

Tgt Ion: 39 Resp: 21648

Ion Ratio Lower Upper

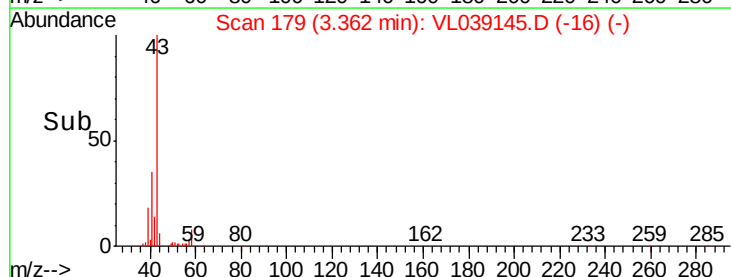
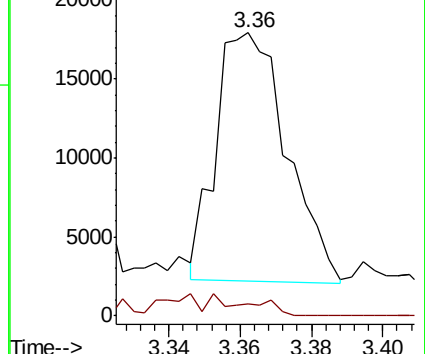
39 100

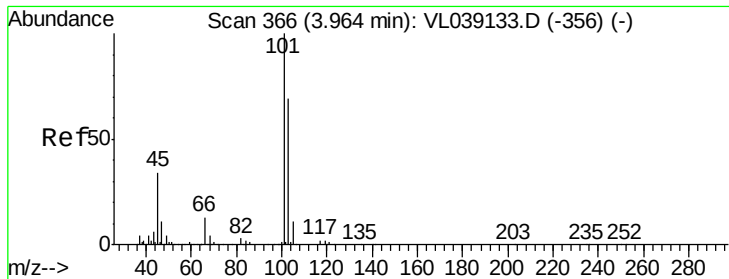
54 12.4 65.8 98.6#



Abundance Ion 39.10 (38.80 to 39.80): VL0

Ion 54.10 (53.80 to 54.80): VL0





#19

Isopropyl Alcohol

Concen: 2.984 ppbv

RT: 3.97 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

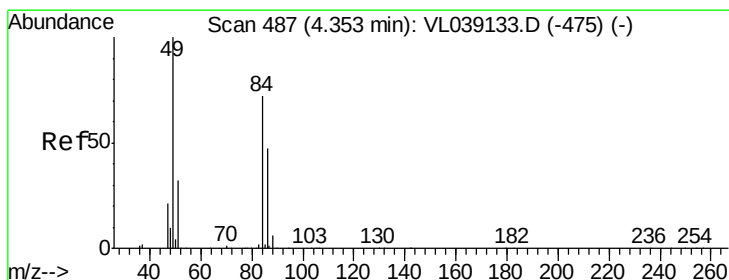
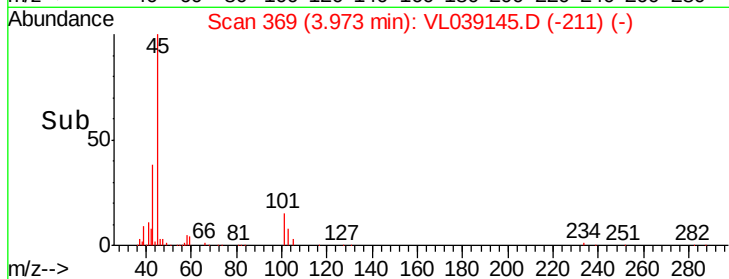
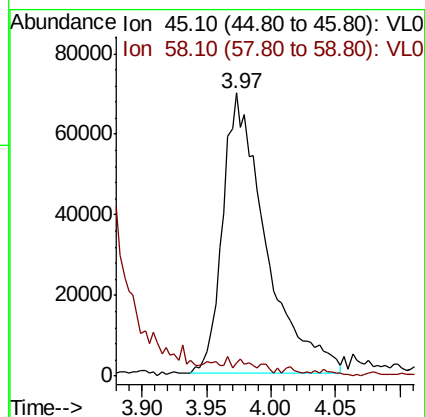
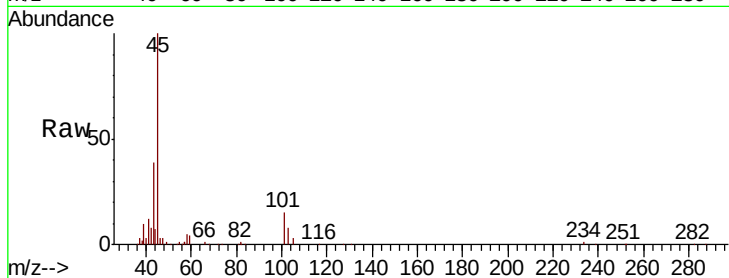
Acq: 1 Jun 2022 13:00

Tot Ion: 45 Resp: 161793

Ion Ratio Lower Upper

45 100

58 160.9 1.8 2.8#



#20

Methylene Chloride

Concen: 127.164 ppbv

RT: 4.35 min Scan# 485

Delta R.T. -0.01 min

Lab File: VL039145.D

Acq: 1 Jun 2022 13:06

Tgt Ion: 84 Resp: 6194769

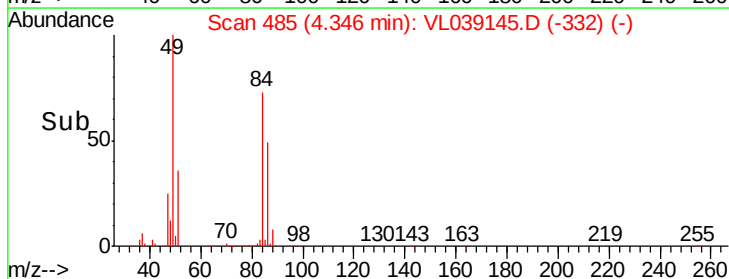
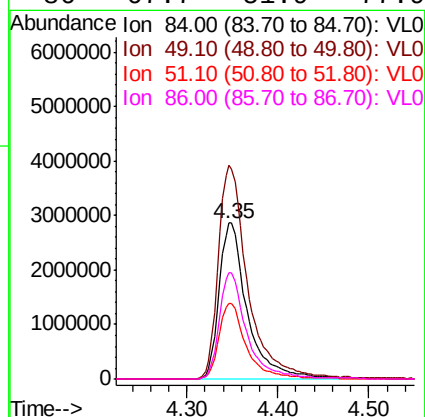
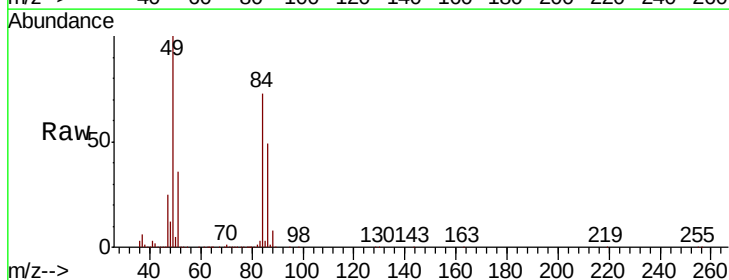
Ion Ratio Lower Upper

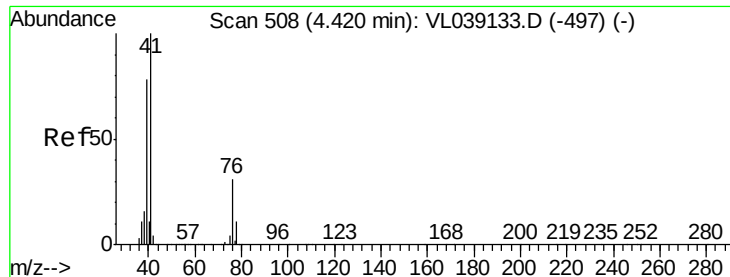
84 100

49 136.8 111.1 166.7

51 48.8 35.3 52.9

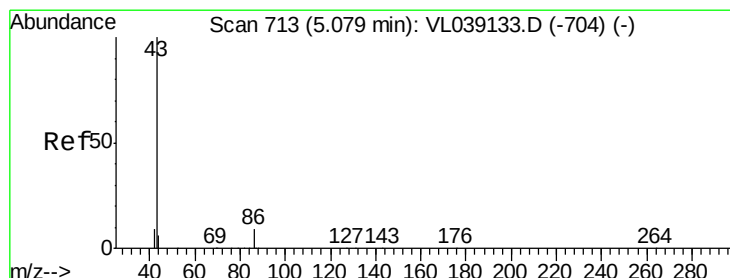
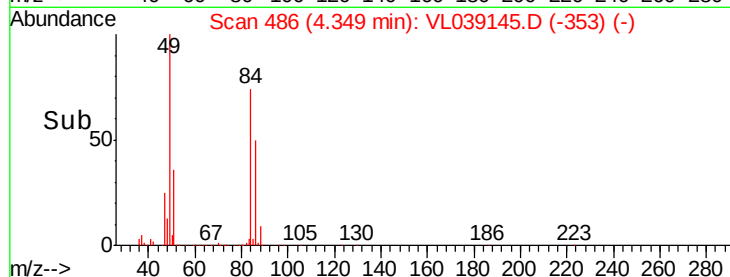
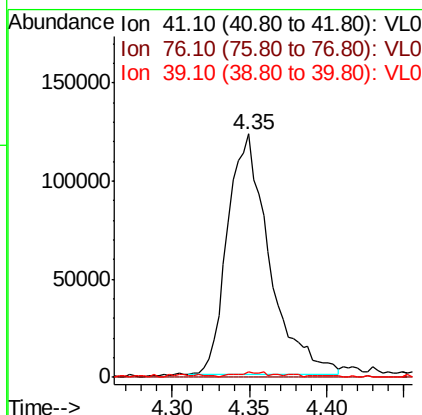
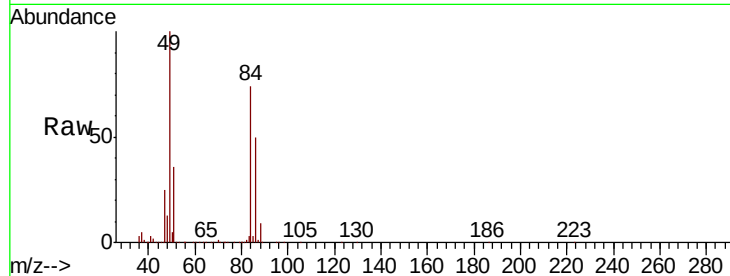
86 67.7 51.9 77.9





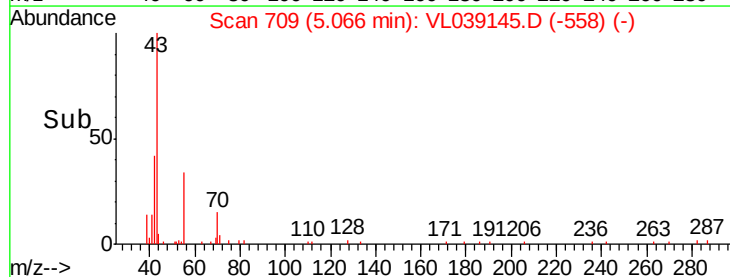
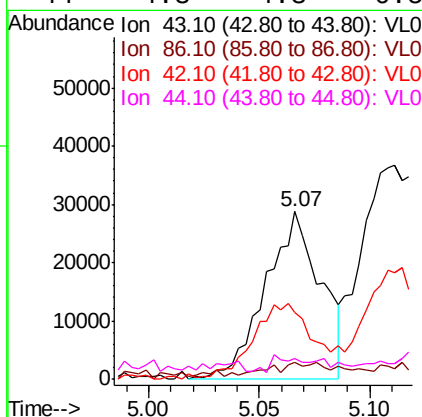
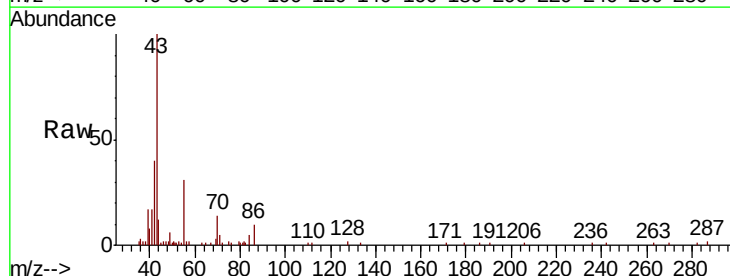
#21
Allvl Chloride
Concen: 2.974 ppbv
RT: 4.35
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 1 Jun 2022 13:00

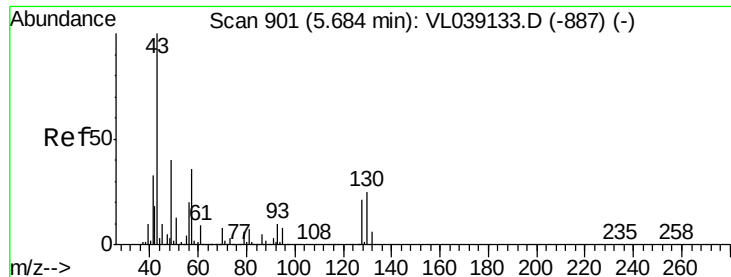
Tot Ion	Ratio	Lower	Upper
41	100		
76	0.1	24.2	36.2#
39	1.4	62.2	93.2#



#23
Vinyl Acetate
Concen: 0.520 ppbv
RT: 5.07 min Scan# 709
Delta R.T. -0.01 min
Lab File: VL039145.D
Acq: 1 Jun 2022 13:06

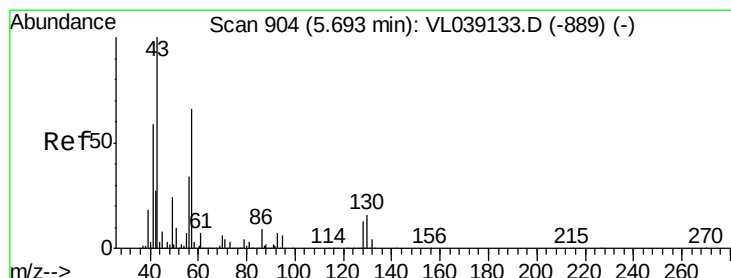
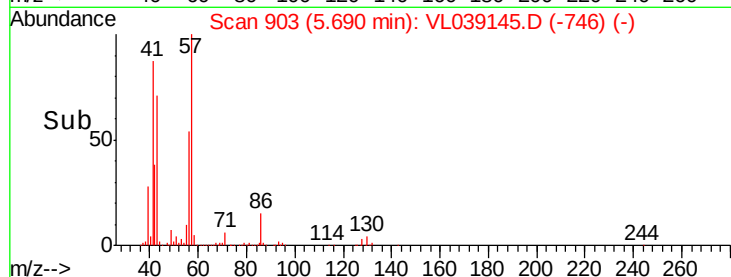
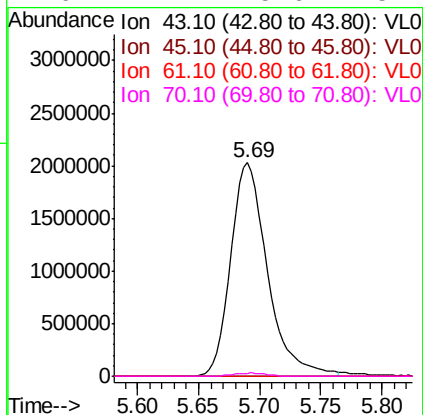
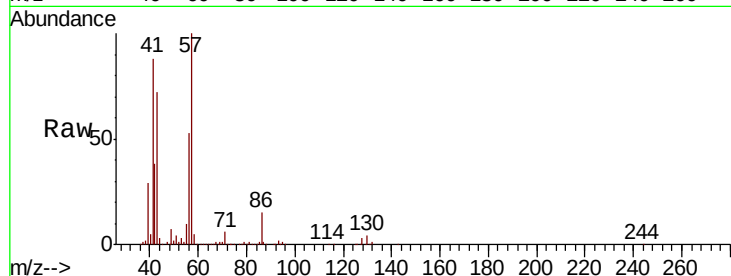
Tgt Ion	Ratio	Lower	Upper
43	100		
86	7.7	6.0	9.0
42	36.6	8.2	12.4#
44	4.3	4.3	6.5#





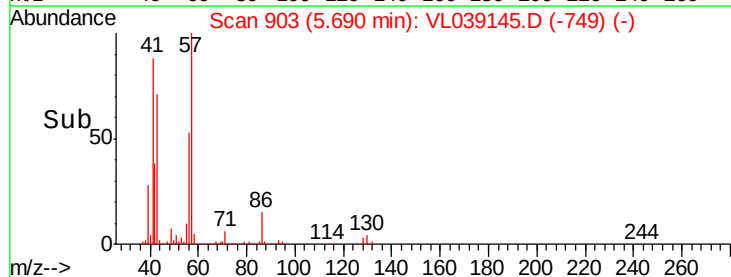
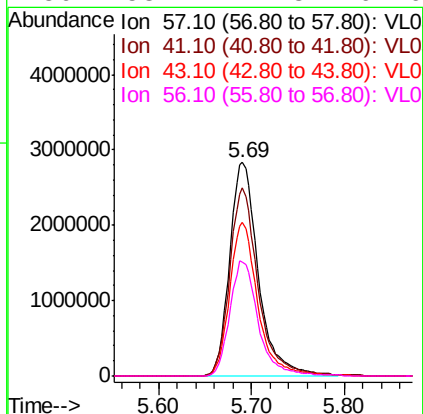
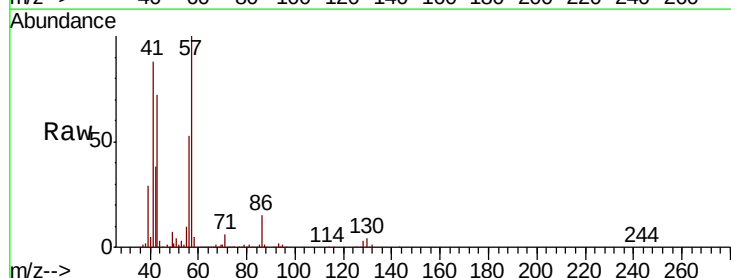
#25
Ethyl Acetate
Concen: 16.328 ppbv
RT: 5.69 min
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId :
Acq: 1 Jun 2022 13:00

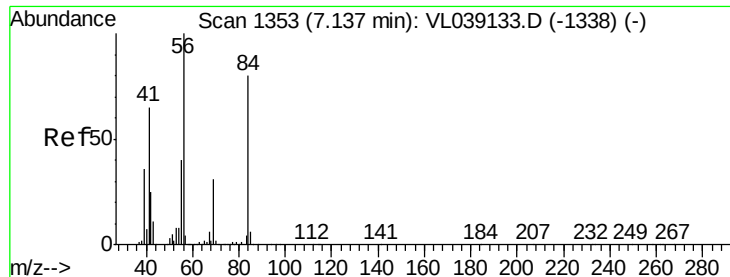
Tot Ion: 43 Resp: 4254256
Ion Ratio Lower Upper
43 100
45 0.2 8.2 12.2#
61 0.2 8.4 12.6#
70 1.4 5.6 8.4#



#26
Hexane
Concen: 53.354 ppbv
RT: 5.69 min Scan# 903
Delta R.T.: -0.00 min
Lab File: VL039145.D
Acq: 1 Jun 2022 13:06

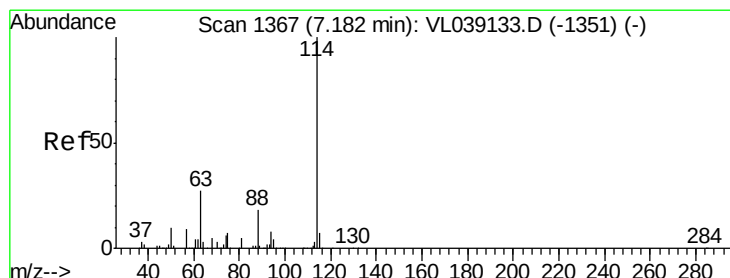
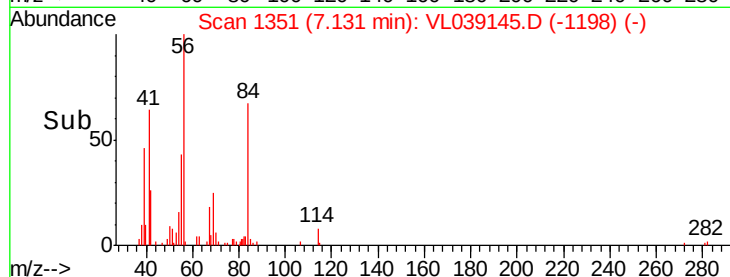
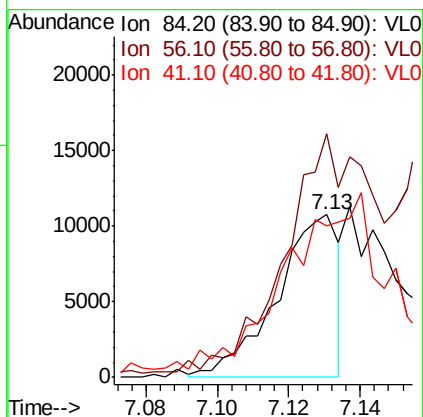
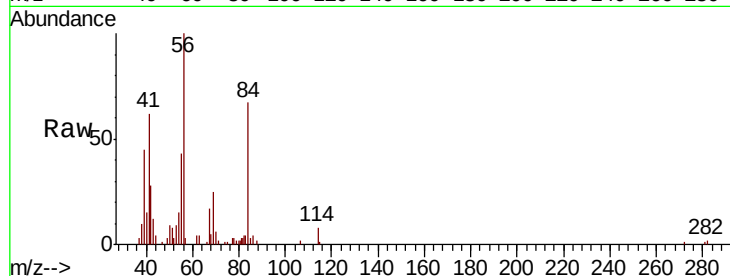
Tgt Ion: 57 Resp: 6108815
Ion Ratio Lower Upper
57 100
41 88.2 72.4 108.6
43 70.8 187.0 280.6#
56 53.7 41.8 62.6





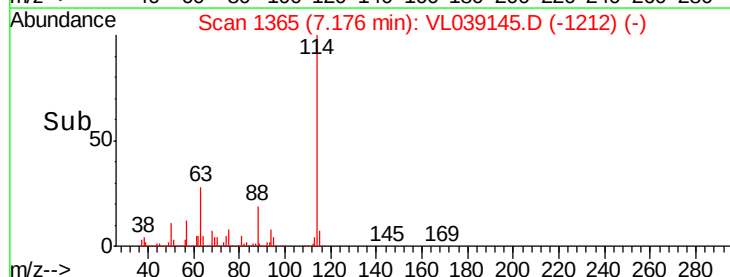
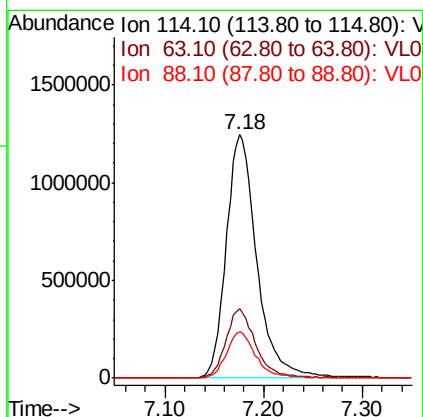
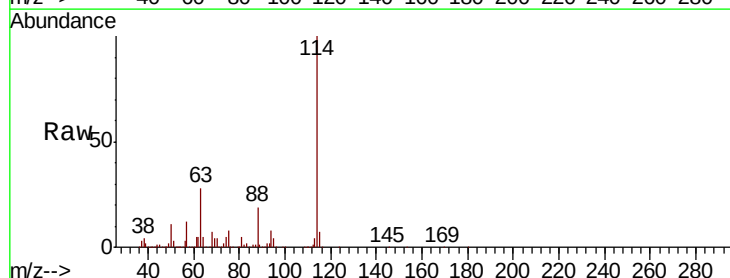
#30
Cvclohexane
Concen: 0.134 ppbv
RT: 7.13
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 1 Jun 2022 13:00

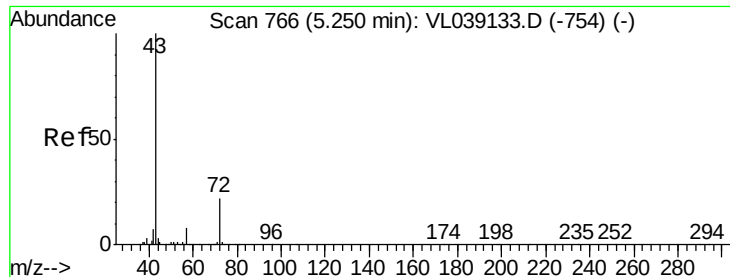
Tot Ion	Ratio	Lower	Upper
84	100		
56	0.0	110.6	165.8#
41	0.0	68.9	103.3#



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.18 min Scan# 1365
Delta R.T. -0.01 min
Lab File: VL039145.D
Acq: 1 Jun 2022 13:06

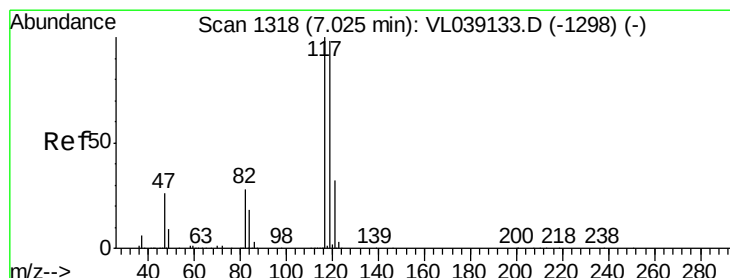
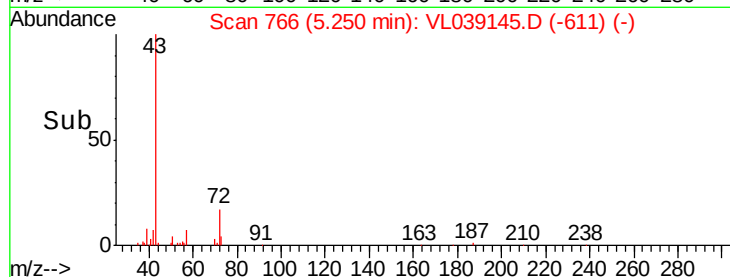
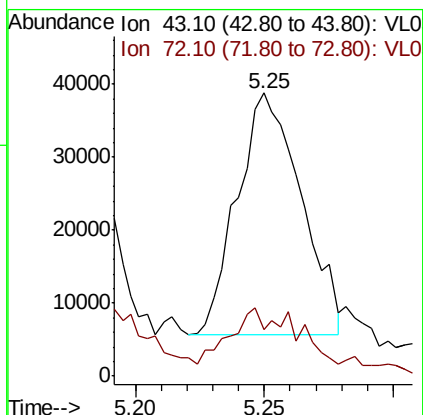
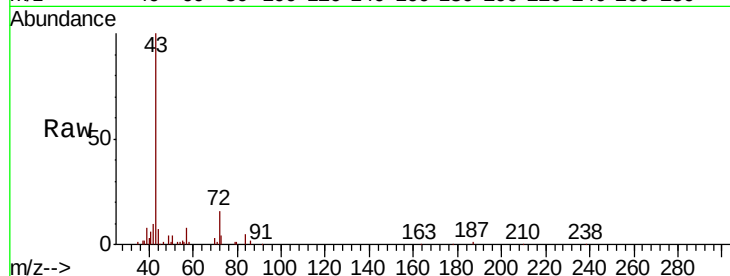
Tgt Ion	Ratio	Lower	Upper
114	100		
63	28.2	21.7	32.5
88	18.6	14.8	22.2





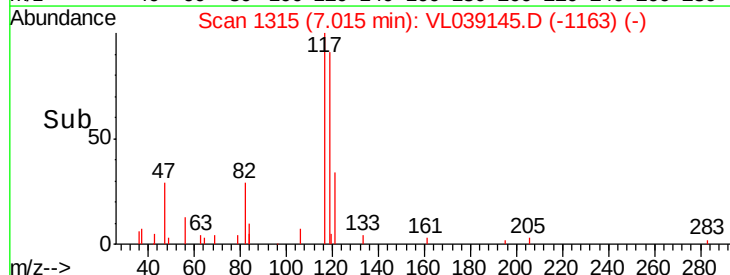
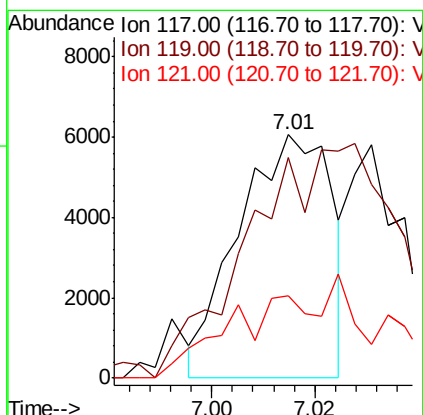
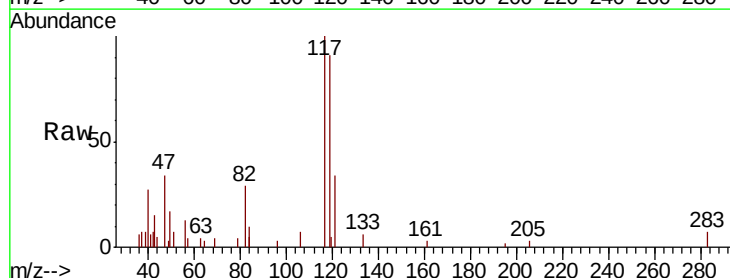
#34
 2-Butanone
 Concen: 0.391 ppbv
 RT: 5.25
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 1 Jun 2022 13:00

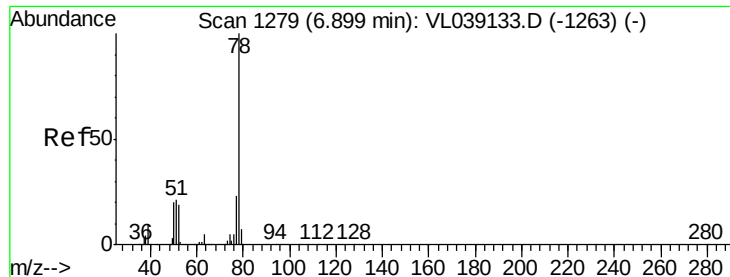
Tot Ion: 43 Resp: 57190
 Ion Ratio Lower Upper
 43 100
 72 37.8 18.2 27.2#



#35
 Carbon Tetrachloride
 Concen: 0.039 ppbv
 RT: 7.01 min Scan# 1315
 Delta R.T. -0.01 min
 Lab File: VL039145.D
 Acq: 1 Jun 2022 13:06

Tgt Ion: 117 Resp: 7596
 Ion Ratio Lower Upper
 117 100
 119 81.9 78.6 118.0
 121 24.7 25.4 38.0#





#36

Benzene

Concen: 0.159 ppbv

RT: 6.89 Instrument: MSVOA_1

Delta R.T.

Lab File: ClientSampleId:

Acq: 1 Jun 2022 13:00

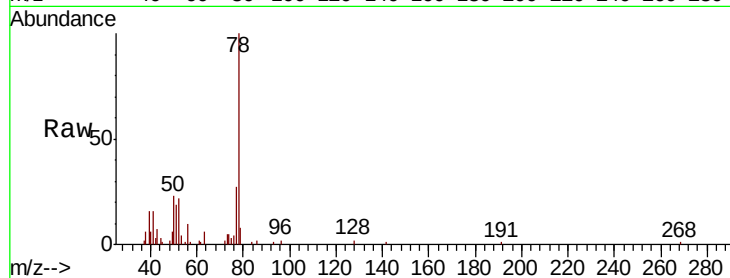
Tot Ion: 78 Resp: 34825

Ion Ratio Lower Upper

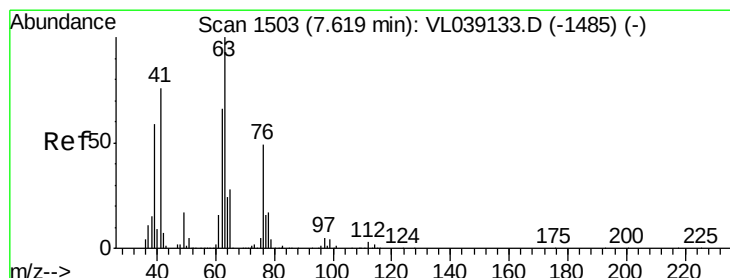
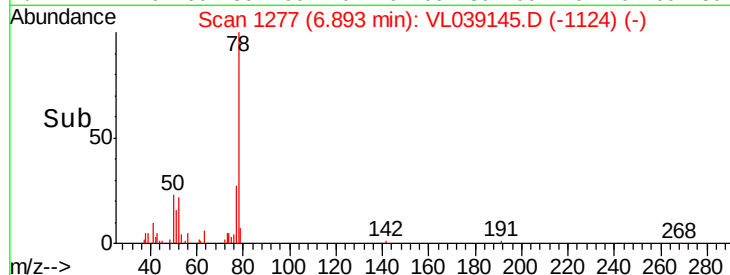
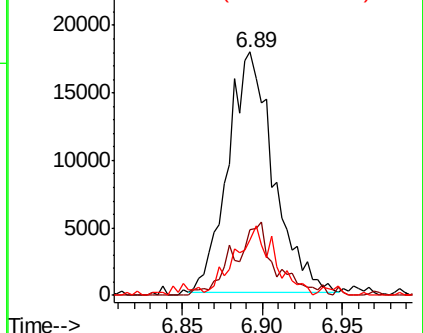
78 100

77 27.4 18.6 27.8

50 18.3 15.8 23.8



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: 8.446 ppbv

RT: 7.18 min Scan# 1365

Delta R.T. -0.44 min

Lab File: VL039145.D

Acq: 1 Jun 2022 13:06

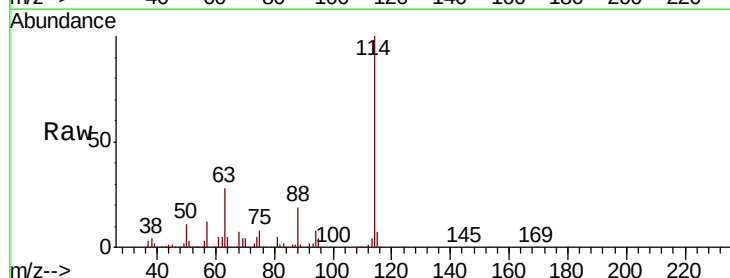
Tgt Ion: 63 Resp: 734873

Ion Ratio Lower Upper

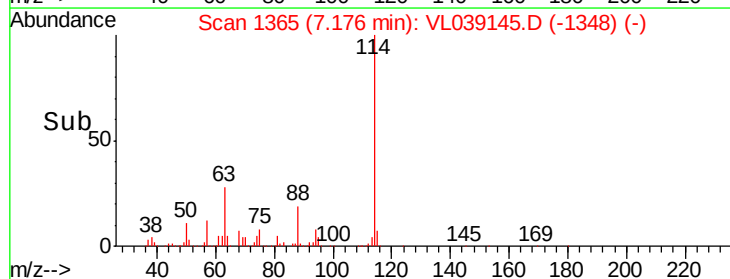
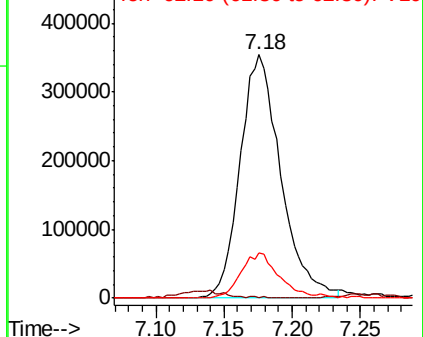
63 100

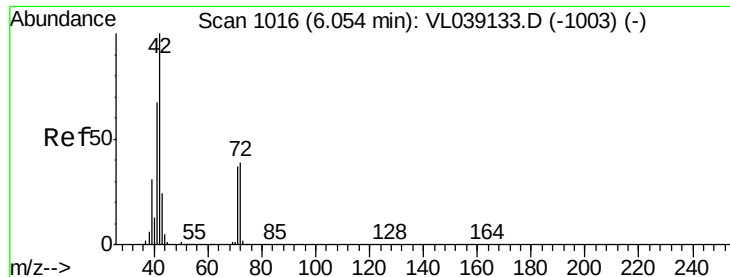
41 0.0 60.8 91.2#

62 18.7 52.9 79.3#



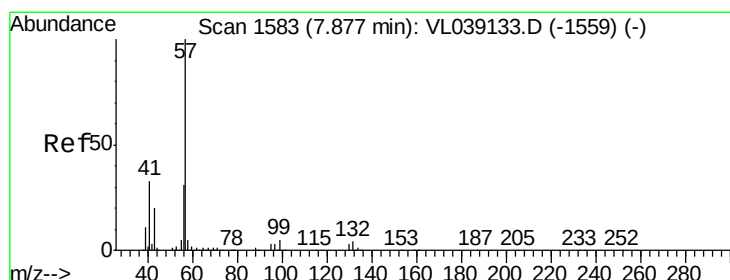
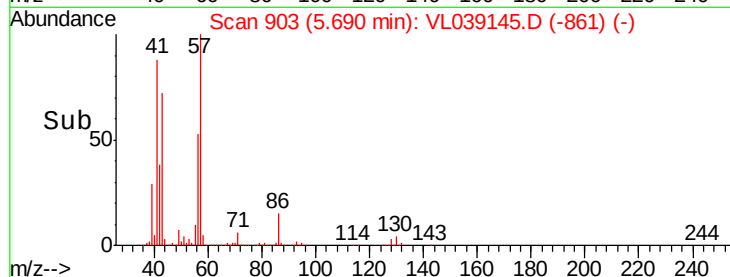
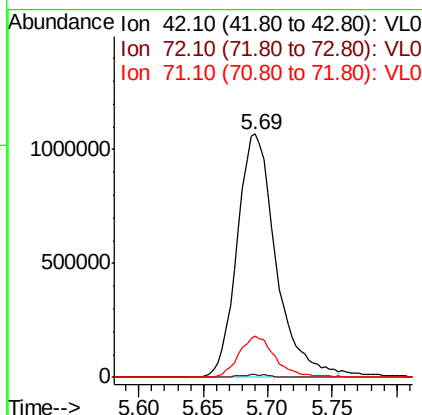
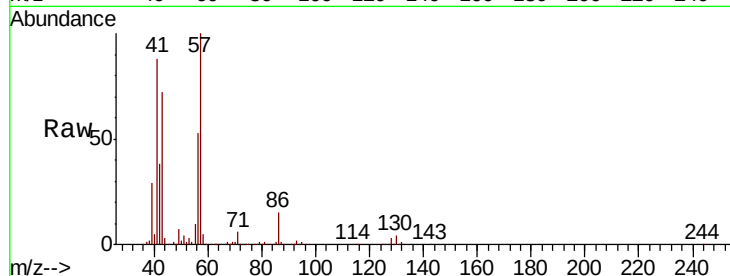
Abundance Ion 63.10 (62.80 to 63.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 62.10 (61.80 to 62.80): VL0





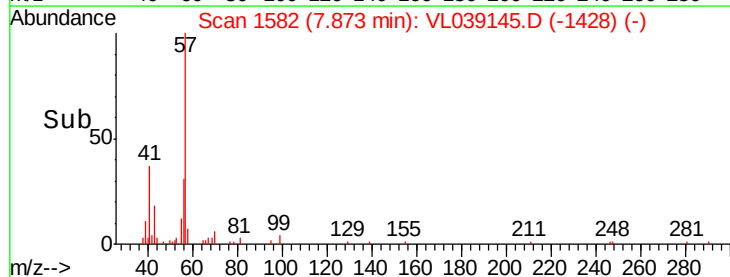
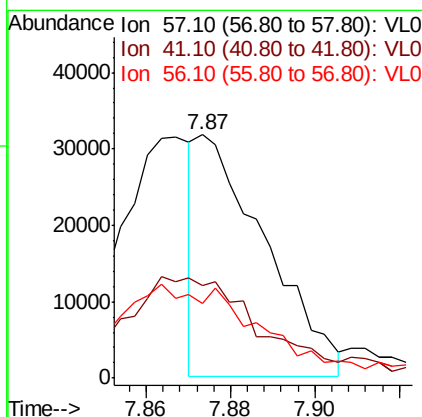
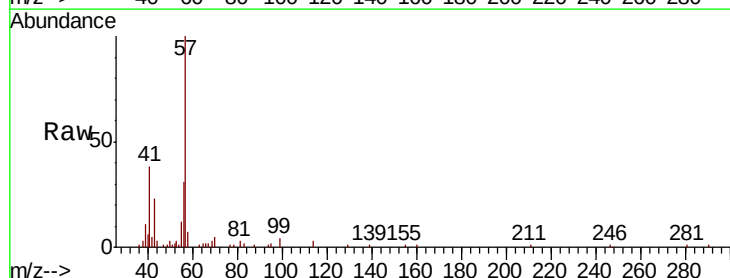
#41
 Tetrahydrofuran
 Concen: 25.413 ppbv
 RT: 5.69
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId :
 Acq: 1 Jun 2022 13:06

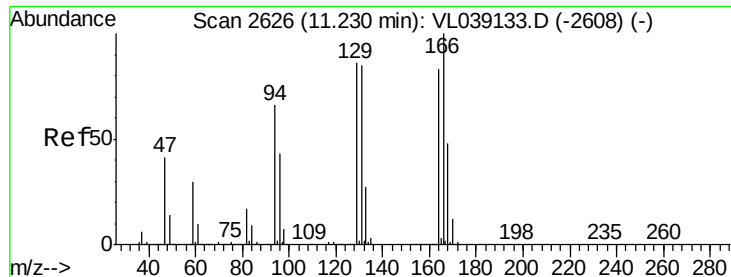
Tot Ion: 42 Resp: 2237443
 Ion Ratio Lower Upper
 42 100
 72 0.9 32.0 48.0#
 71 16.3 31.1 46.7#



#44
 2,2,4-Trimethylpentane
 Concen: 0.093 ppbv
 RT: 7.87 min Scan# 1582
 Delta R.T.: -0.00 min
 Lab File: VL039145.D
 Acq: 1 Jun 2022 13:06

Tgt Ion: 57 Resp: 35737
 Ion Ratio Lower Upper
 57 100
 41 0.0 26.2 39.4#
 56 0.0 24.7 37.1#





#52

Tetrachloroethene

Concen: 0.035 ppbv

RT: 11.21

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 1 Jun 2022 13:00

Tot Ion:164 Resp: 2961

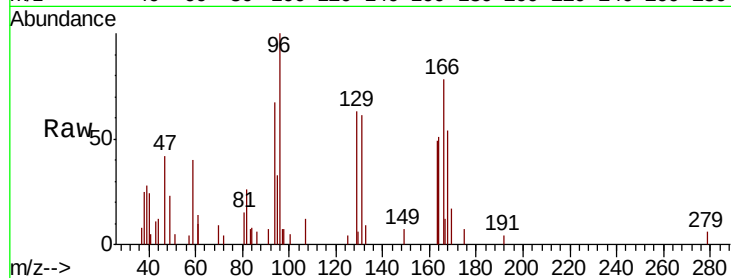
Ion Ratio Lower Upper

164 100

166 40.8 96.3 144.5#

129 16.5 82.5 123.7#

131 33.4 82.1 123.1#

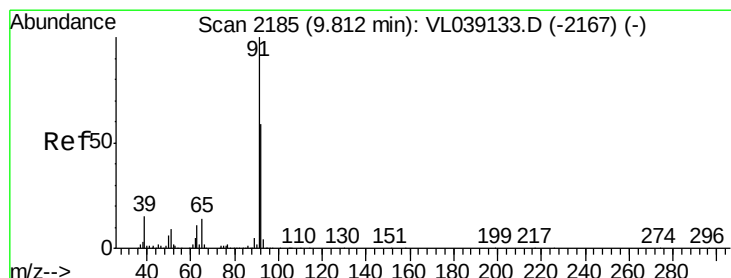
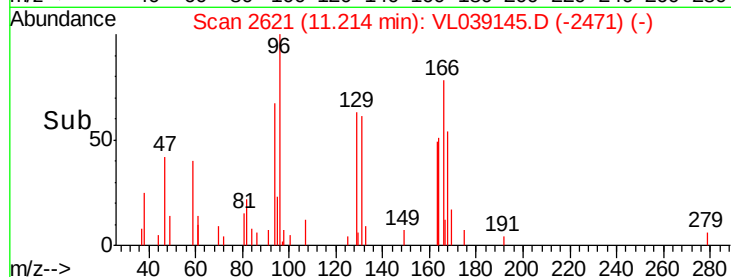
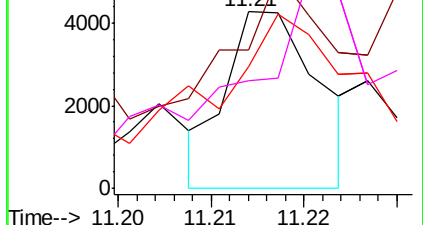


Abundance Ion 163.90 (163.60 to 164.60): V

Ion 165.90 (165.60 to 166.60): V

Ion 129.00 (128.70 to 129.70): V

Ion 131.00 (130.70 to 131.70): V



#53

Toluene

Concen: 0.473 ppbv

RT: 9.81 min Scan# 2184

Delta R.T. -0.00 min

Lab File: VL039145.D

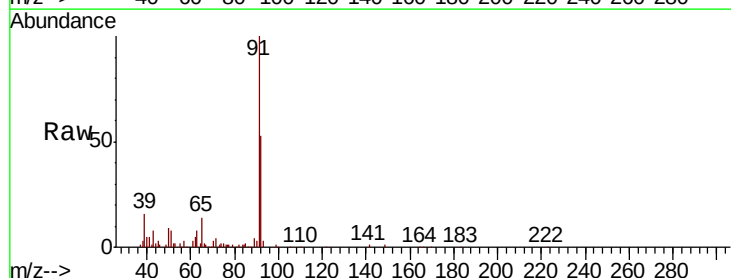
Acq: 1 Jun 2022 13:06

Tgt Ion: 91 Resp: 119038

Ion Ratio Lower Upper

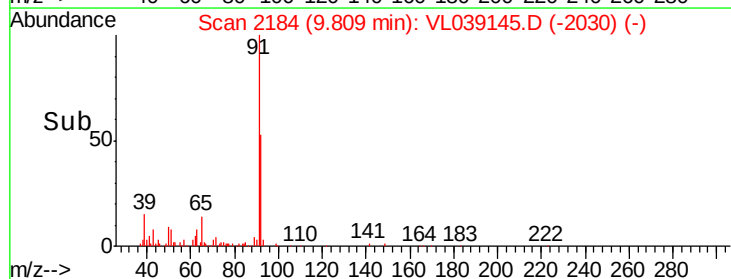
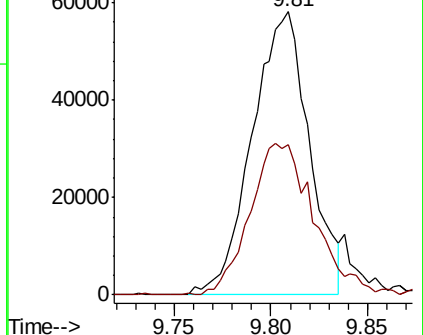
91 100

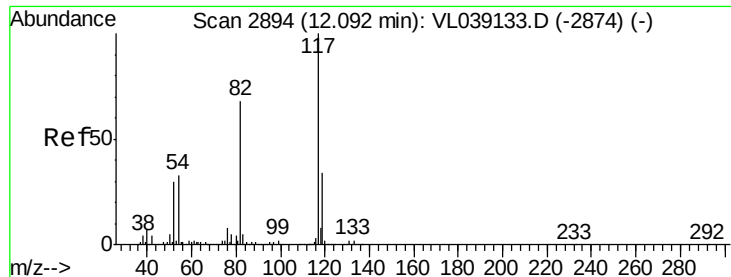
92 61.4 48.1 72.1



Abundance Ion 91.10 (90.80 to 91.80): VL0

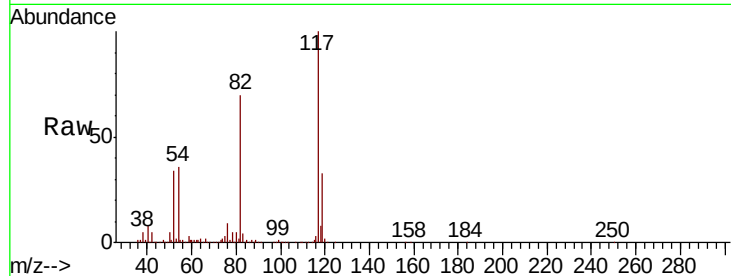
Ion 92.10 (91.80 to 92.80): VL0



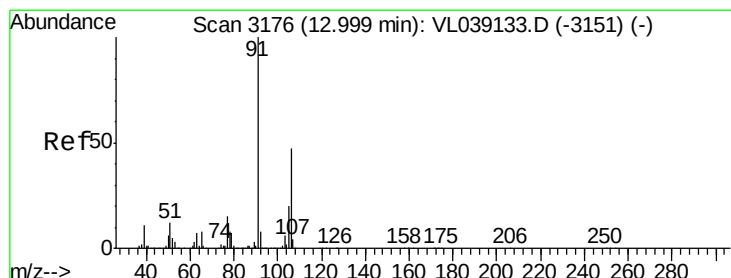
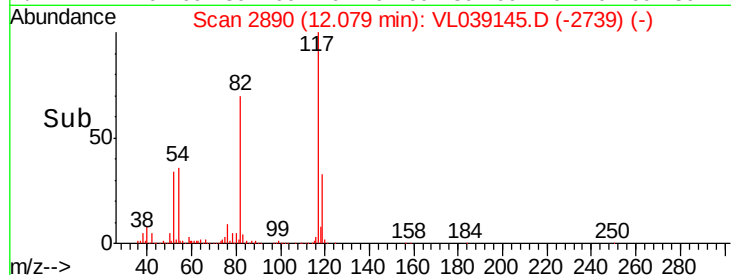
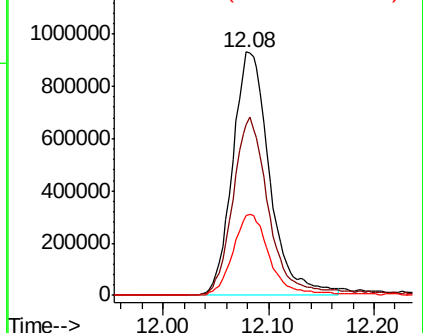


#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.08 min
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId :
Acq: 1 Jun 2022 13:00

Tot Ion:117 Resp: 2274381
Ion Ratio Lower Upper
117 100
82 72.6 55.1 82.7
119 34.3 24.7 37.1

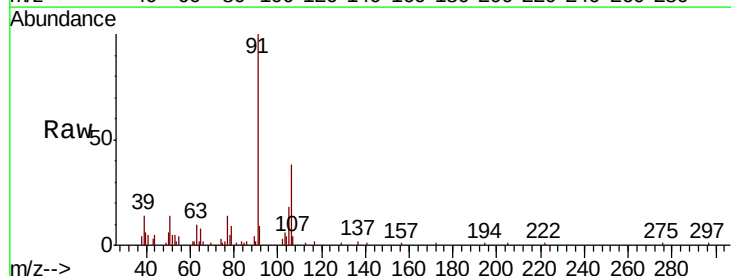


Abundance Ion 117.10 (116.80 to 117.80): V
Ion 82.10 (81.80 to 82.80): VL0
Ion 119.10 (118.80 to 119.80): V

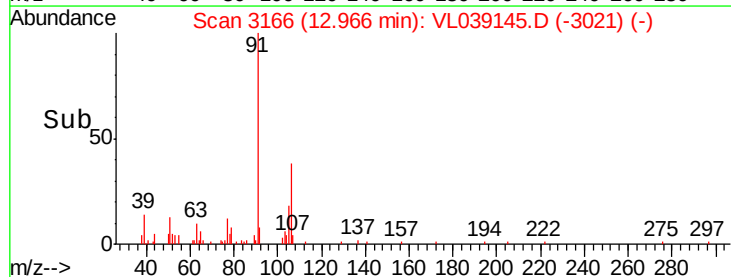
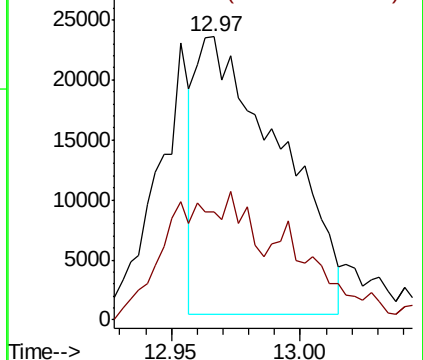


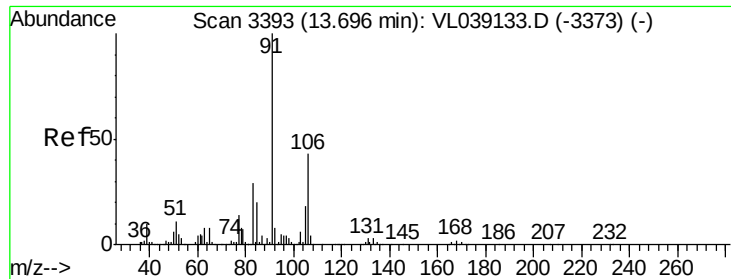
#59
m/p-Xylene
Concen: 0.189 ppbv
RT: 12.97 min Scan# 3166
Delta R.T. -0.03 min
Lab File: VL039145.D
Acq: 1 Jun 2022 13:06

Tgt Ion: 91 Resp: 52131
Ion Ratio Lower Upper
91 100
106 68.5 34.3 51.5#



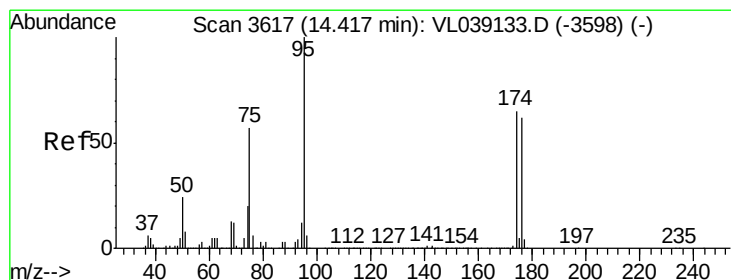
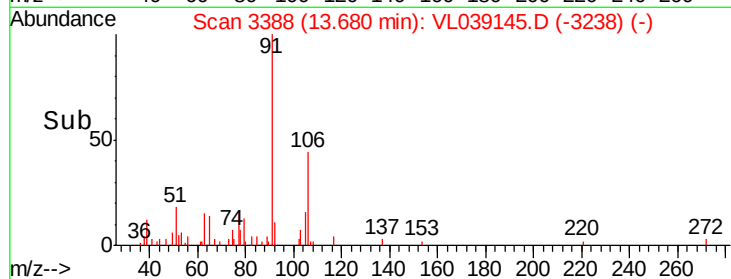
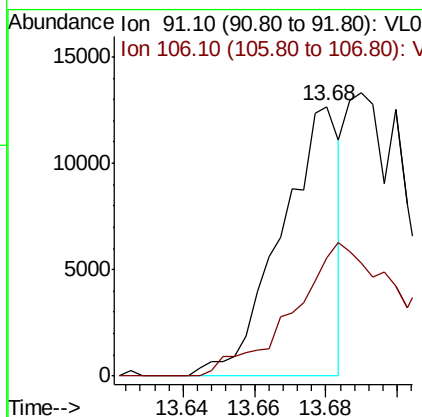
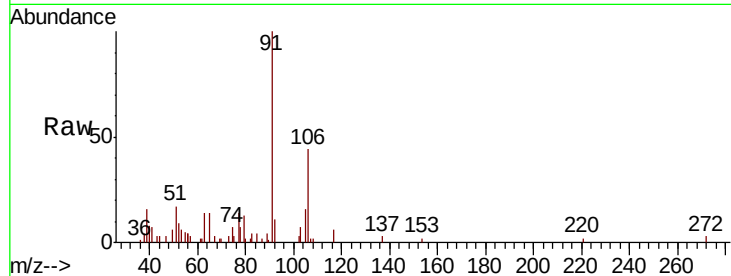
Abundance Ion 91.10 (90.80 to 91.80): VL0
Ion 106.10 (105.80 to 106.80): V





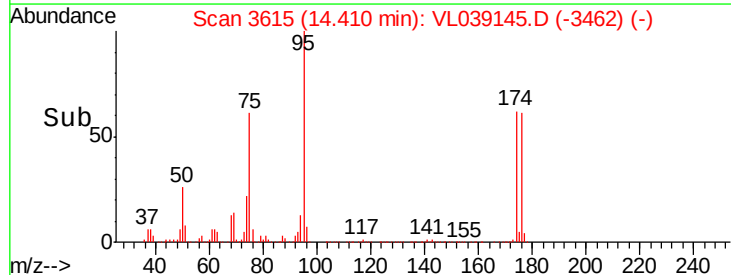
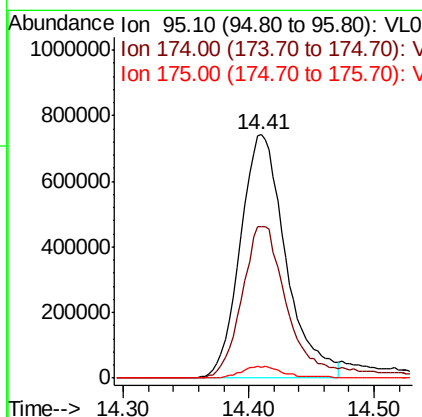
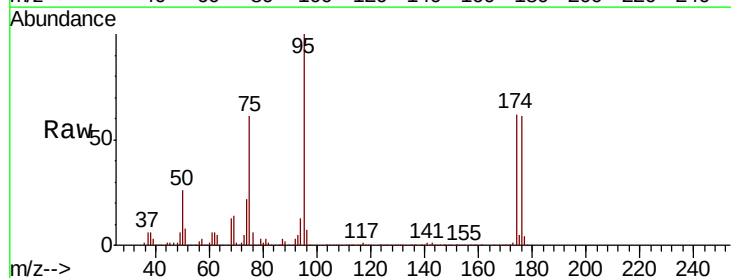
#60
o-Xylene
Concen: 0.055 ppbv
RT: 13.68
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 1 Jun 2022 13:00

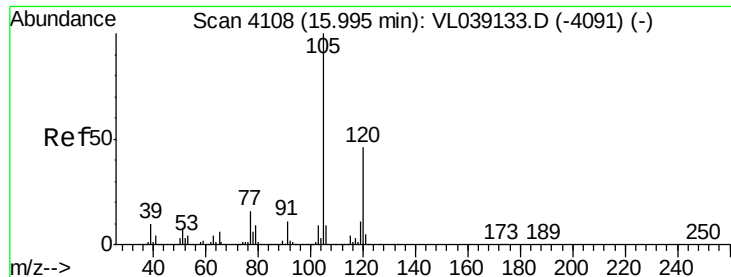
Tot Ion: 91 Resp: 14343
Ion Ratio Lower Upper
91 100
106 104.3 22.3 66.9#



#68
1-Bromo-4-Fluorobenzene
Concen: 9.963 ppbv
RT: 14.41 min Scan# 3615
Delta R.T. -0.01 min
Lab File: VL039145.D
Acq: 1 Jun 2022 13:06

Tgt Ion: 95 Resp: 1873427
Ion Ratio Lower Upper
95 100
174 67.1 53.8 80.8
175 4.8 4.1 6.1





#73

1,3,5-Trimethylbenzene

Concen: 0.031 ppbv

RT: 15.99 min

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

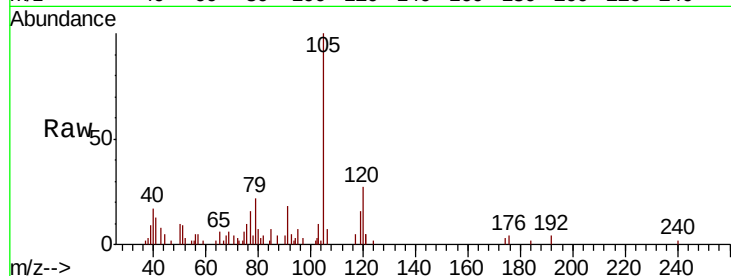
Acq: 1 Jun 2022 13:00

Tot Ion:105 Resp: 8516

Ion Ratio Lower Upper

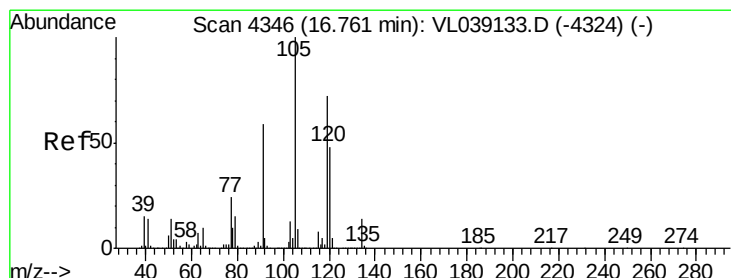
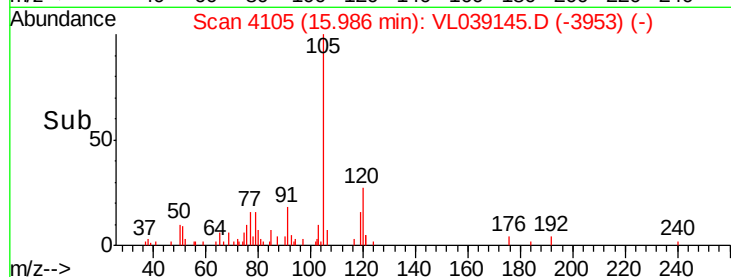
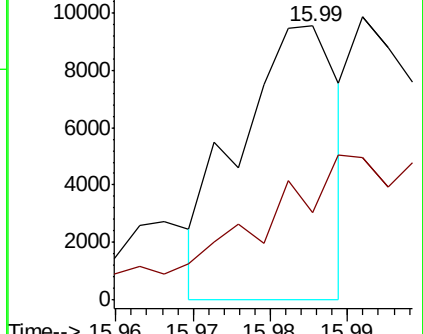
105 100

120 25.6 36.7 55.1#



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V



#74

1,2,4-Trimethylbenzene

Concen: 0.123 ppbv

RT: 16.75 min Scan# 4343

Delta R.T. -0.01 min

Lab File: VL039145.D

Acq: 1 Jun 2022 13:06

Tgt Ion:105 Resp: 37586

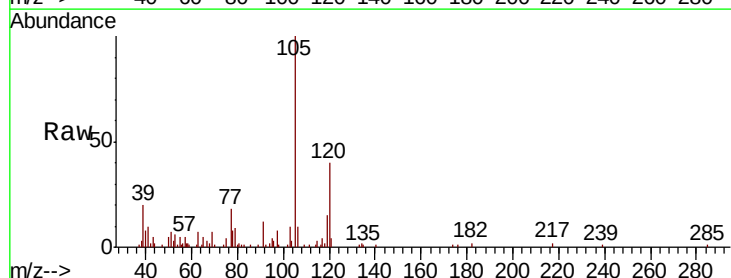
Ion Ratio Lower Upper

105 100

120 41.1 38.1 57.1

91 12.7 47.4 71.0#

77 15.5 19.5 29.3#



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

