

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL060722\
 Data File : VL039227.D
 Acq On : 8 Jun 2022 2:52
 Operator : SY/AP
 Sample : N3199-01 2X
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 08 05:03:45 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	584223	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.18	114	1369411	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.09	117	1249796	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.42	95	1190997	11.53	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	115.30%

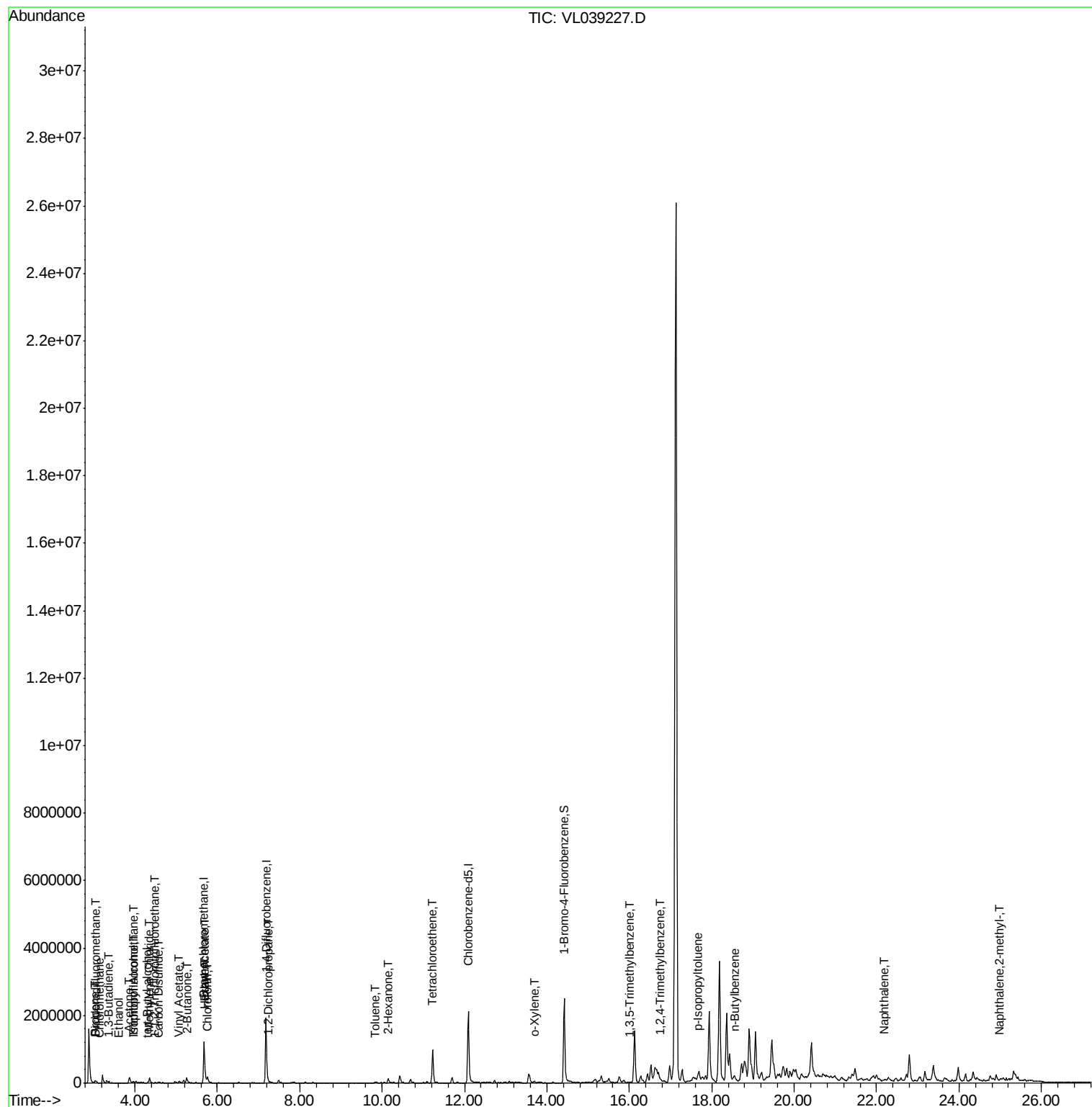
Target Compounds

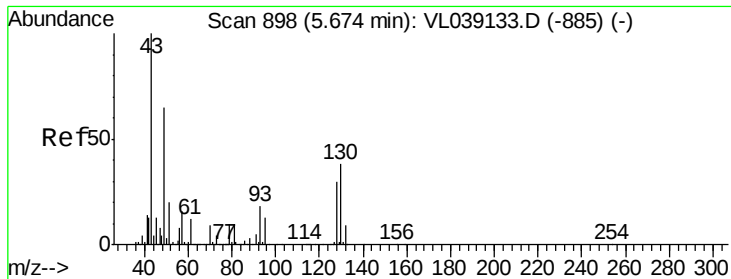
					Ovalue
2) Dichlorodifluoromethane	3.05	85	14981	0.146	ppbv 89
4) Chloromethane	3.15	50	1202	0.031	ppbv # 59
9) Propene	3.03	41	19309	0.596	ppbv # 81
11) Trichlorofluoromethane	3.96	101	19417	0.209	ppbv # 73
12) 1,1,2-Trichlorotrifluoroet	4.49	101	2499	0.041	ppbv # 49
13) Ethanol	3.61	45	3665	2.073	ppbv # 100
15) Acetone	3.86	43	239017	3.927	ppbv # 89
16) 1,3-Butadiene	3.35	39	2142	0.065	ppbv # 65
17) tert-Butyl alcohol	4.31	59	1841	0.039	ppbv # 1
19) Isopropyl Alcohol	3.97	45	2814	0.099	ppbv # 93
20) Methylene Chloride	4.35	84	67228	2.621	ppbv 96
23) Vinyl Acetate	5.08	43	66464	1.320	ppbv # 98
25) Ethyl Acetate	5.69	43	40046	0.292	ppbv # 79
26) Hexane	5.70	57	55472	0.920	ppbv # 27
27) Carbon Disulfide	4.56	76	17684	0.283	ppbv # 66
29) Chloroform	5.76	83	122505	1.208	ppbv 94
34) 2-Butanone	5.26	43	210329	2.827	ppbv 99
39) 1,2-Dichloropropane	7.24	63	7203	0.163	ppbv # 24
51) 2-Hexanone	10.15	43	103465	1.194	ppbv # 93
52) Tetrachloroethene	11.23	164	208748	4.809	ppbv 94
53) Toluene	9.81	91	8460	0.066	ppbv # 48
60) o-Xylene	13.70	91	9146	0.064	ppbv 84
69) p-Isopropyltoluene	17.65	119	7700	0.035	ppbv # 63
70) n-Butylbenzene	18.55	91	7605	0.033	ppbv # 67
73) 1,3,5-Trimethylbenzene	16.00	105	6422	0.043	ppbv # 86
74) 1,2,4-Trimethylbenzene	16.76	105	49224	0.293	ppbv # 70
79) Naphthalene	22.18	128	6599	0.051	ppbv # 86
80) Naphthalene,2-methyl-	24.98	142	8364	0.174	ppbv 87

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

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QLast Update : Wed Jun 01 01:22:18 2022
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.67 min Scan# 898

Delta R.T. 0.00 min

Lab File: VL039227.D

Acq: 8 Jun 2022 2:52

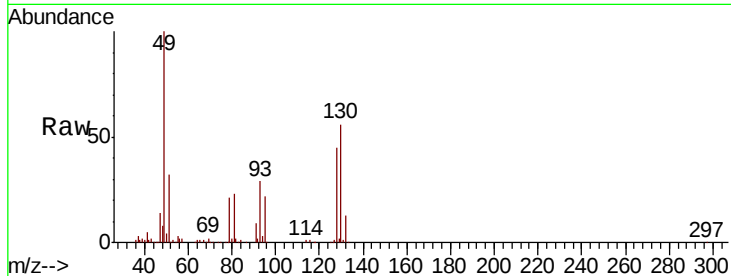
Tot Ion: 49 Resp: 584223

Ion Ratio Lower Upper

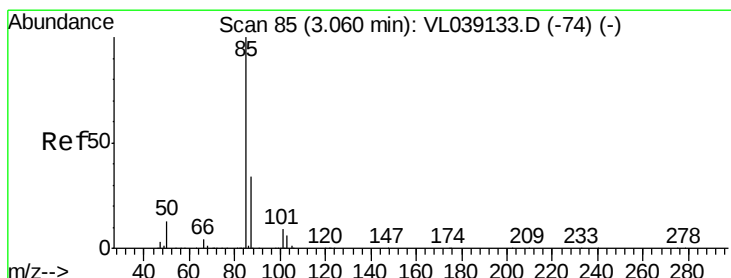
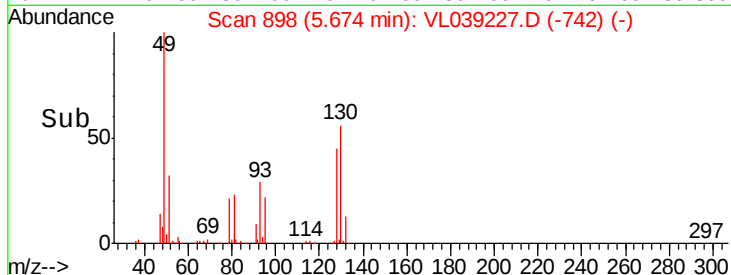
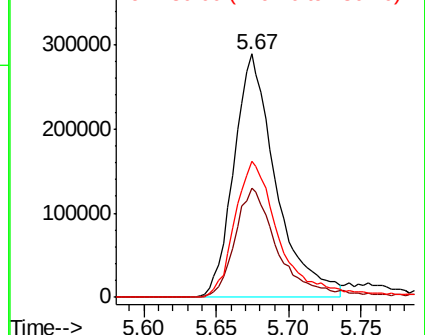
49 100

128 46.5 24.7 74.1

130 61.6 31.4 94.0



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: 0.146 ppbv

RT: 3.05 min Scan# 83

Delta R.T. -0.01 min

Lab File: VL039227.D

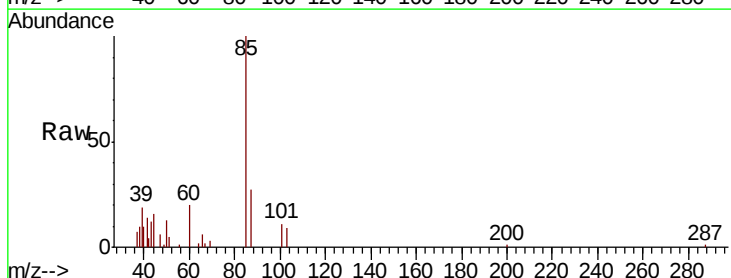
Acq: 8 Jun 2022 2:52

Tgt Ion: 85 Resp: 14981

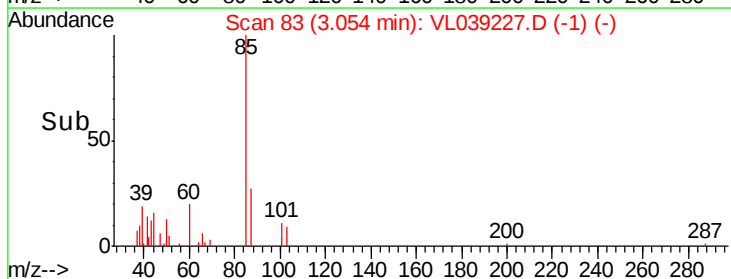
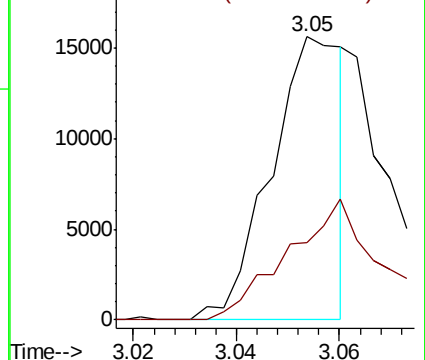
Ion Ratio Lower Upper

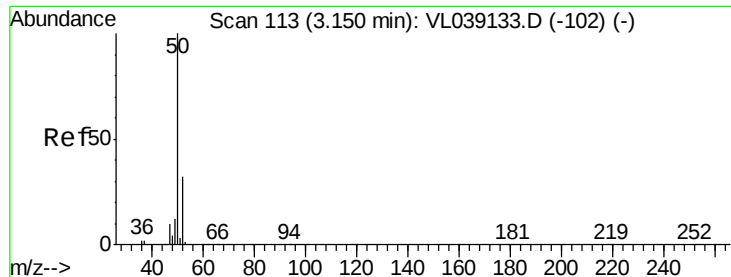
85 100

87 27.1 26.9 40.3



Abundance Ion 85.00 (84.70 to 85.70): VL0
Ion 87.00 (86.70 to 87.70): VL0





#4

Chloromethane

Concen: 0.031 ppbv

RT: 3.15 min Scan# 114

Delta R.T. 0.00 min

Lab File: VL039227.D

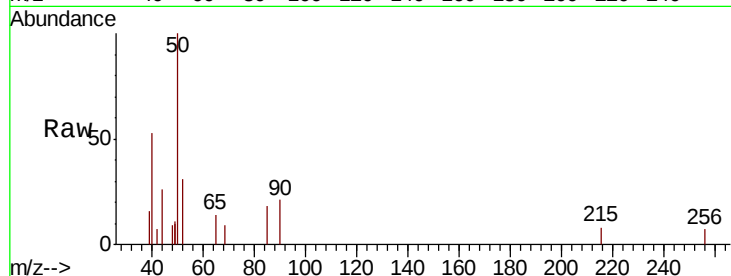
Acq: 8 Jun 2022 2:52

Tot Ion: 50 Resp: 1202

Ion Ratio Lower Upper

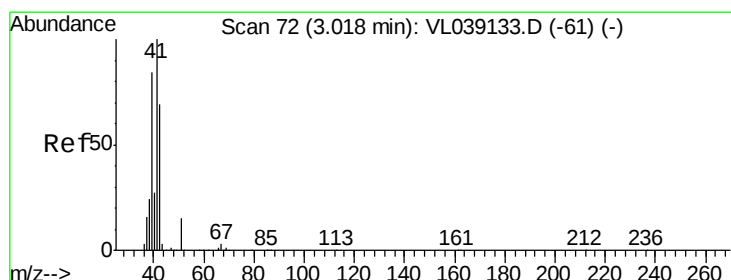
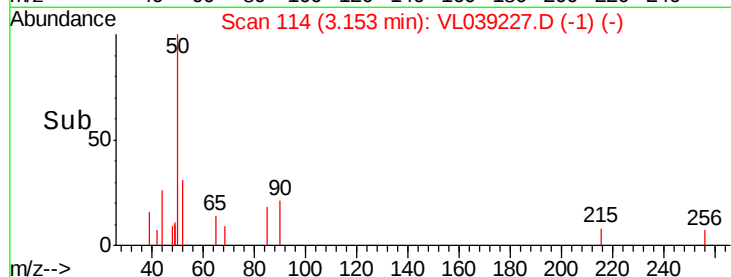
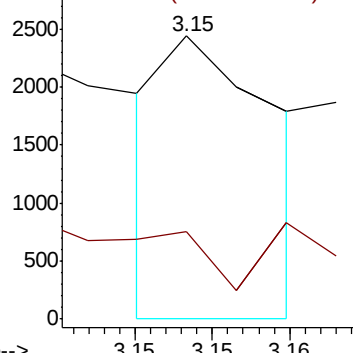
50 100

52 9.4 25.9 38.9#



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0



#9

Propene

Concen: 0.596 ppbv

RT: 3.03 min Scan# 76

Delta R.T. 0.01 min

Lab File: VL039227.D

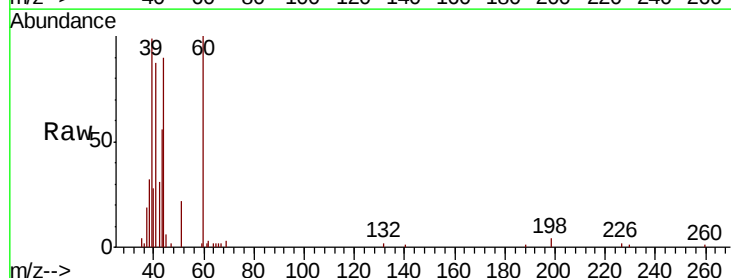
Acq: 8 Jun 2022 2:52

Tgt Ion: 41 Resp: 19309

Ion Ratio Lower Upper

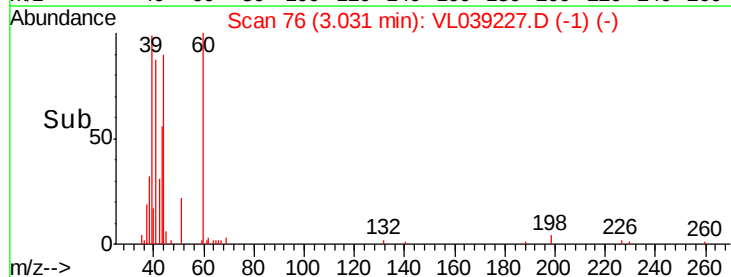
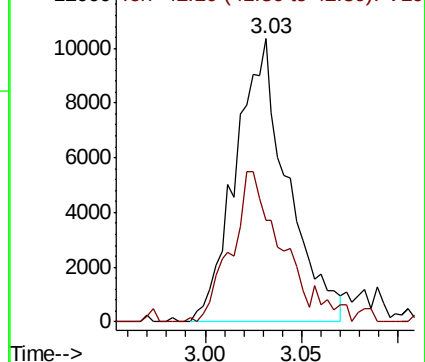
41 100

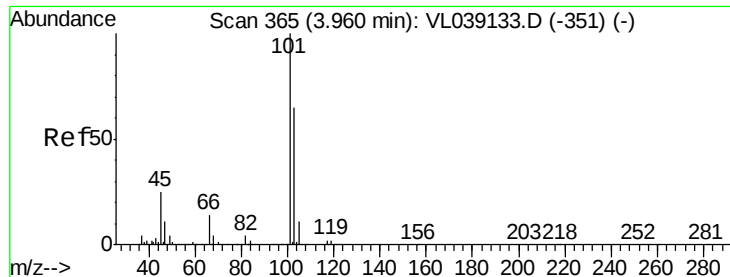
42 54.1 55.4 83.2#



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0





#11

Trichlorofluoromethane

Concen: 0.209 ppbv

RT: 3.96 min Scan# 365

Delta R.T. 0.00 min

Lab File: VL039227.D

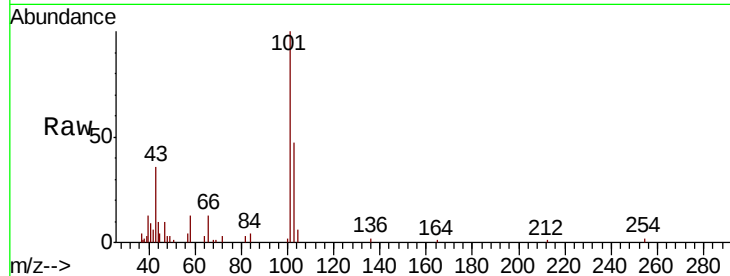
Acq: 8 Jun 2022 2:52

Tot Ion:101 Resp: 19417

Ion Ratio Lower Upper

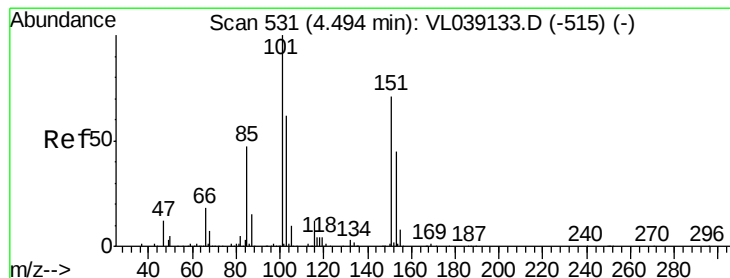
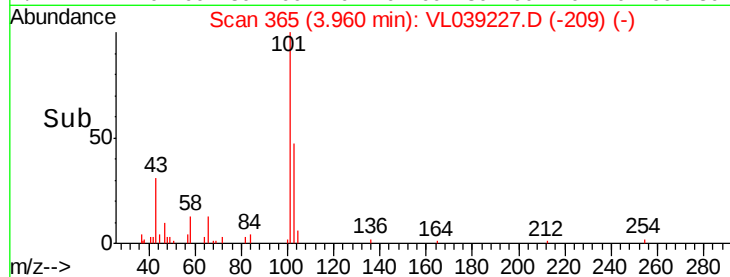
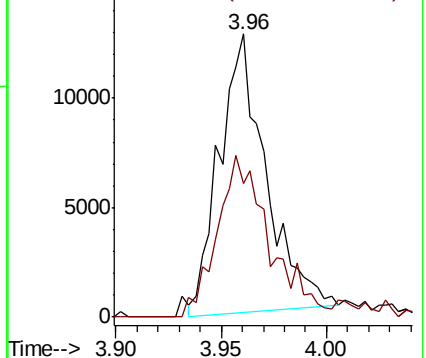
101 100

103 43.2 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: 0.041 ppbv

RT: 4.49 min Scan# 530

Delta R.T. -0.00 min

Lab File: VL039227.D

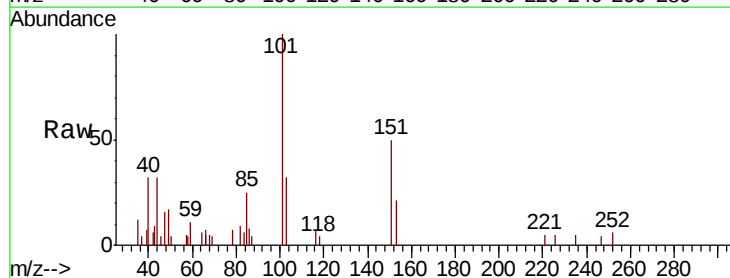
Acq: 8 Jun 2022 2:52

Tgt Ion:101 Resp: 2499

Ion Ratio Lower Upper

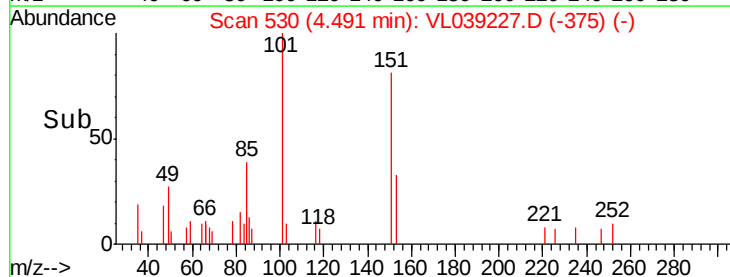
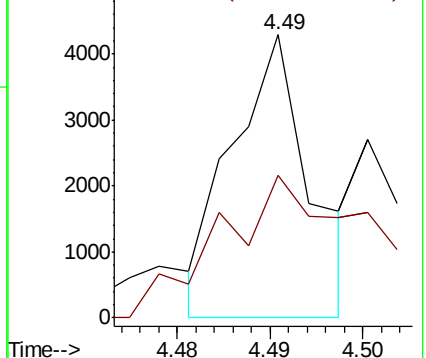
101 100

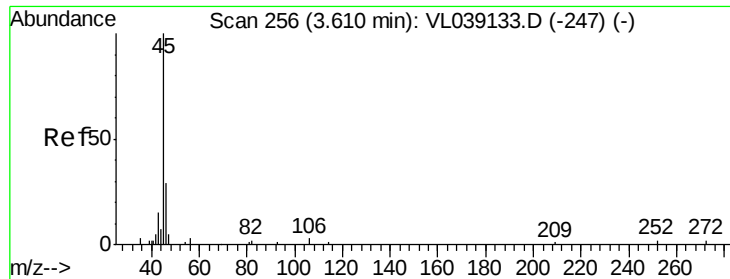
151 117.2 59.4 89.0#



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V





#13

Ethanol

Concen: 2.073 ppbv

RT: 3.61 min Scan# 256

Delta R.T. 0.00 min

Lab File: VL039227.D

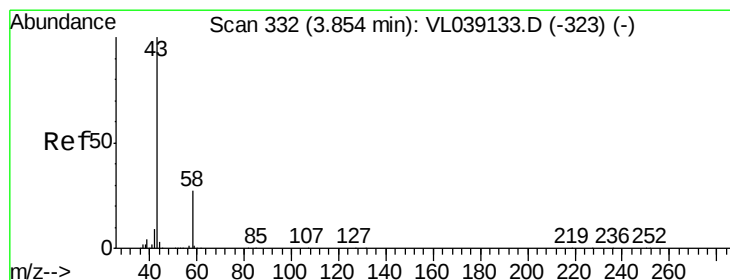
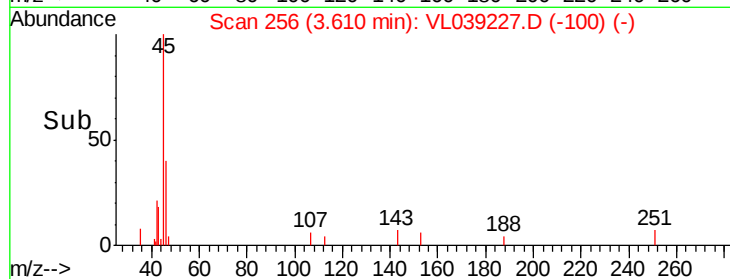
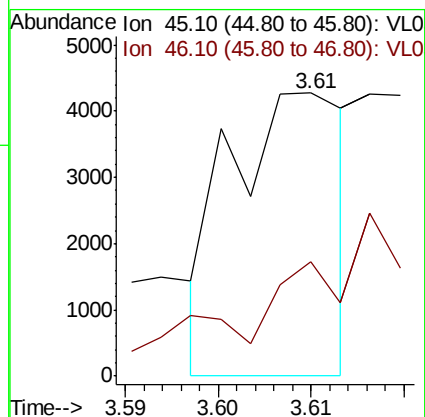
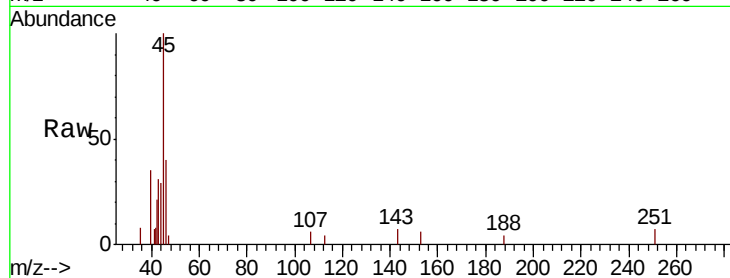
Acq: 8 Jun 2022 2:52

Tot Ion: 45 Resp: 3665

Ion Ratio Lower Upper

45 100

46 119.8 0.0 0.0#



#15

Acetone

Concen: 3.927 ppbv

RT: 3.86 min Scan# 334

Delta R.T. 0.01 min

Lab File: VL039227.D

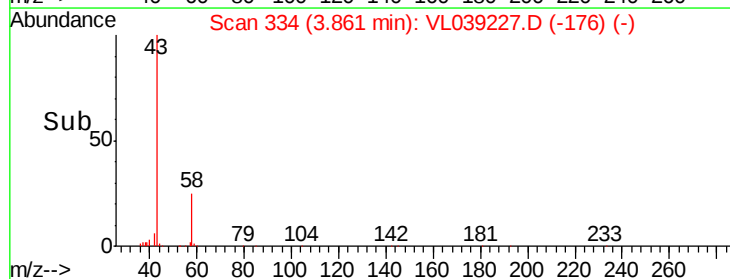
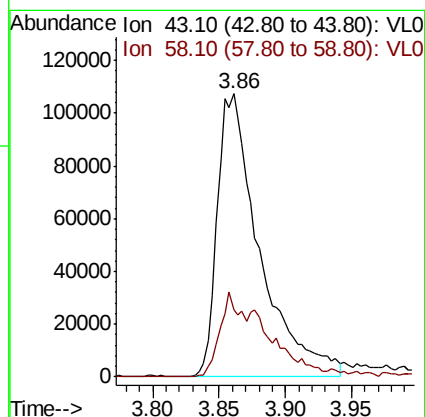
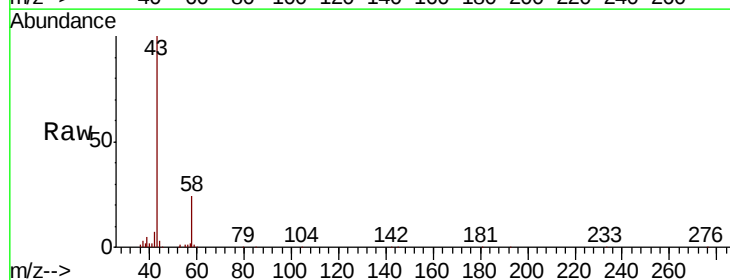
Acq: 8 Jun 2022 2:52

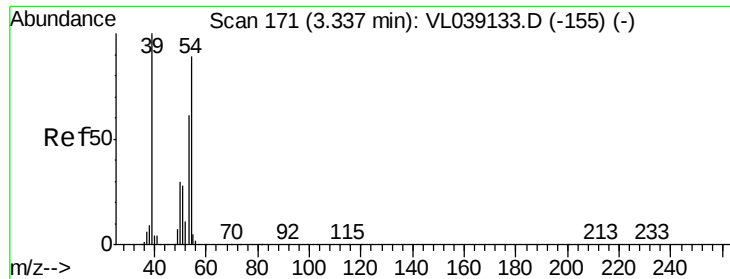
Tgt Ion: 43 Resp: 239017

Ion Ratio Lower Upper

43 100

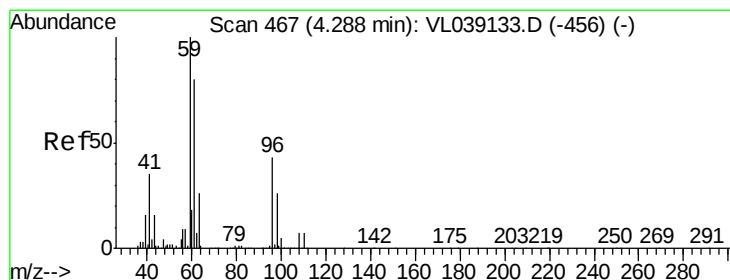
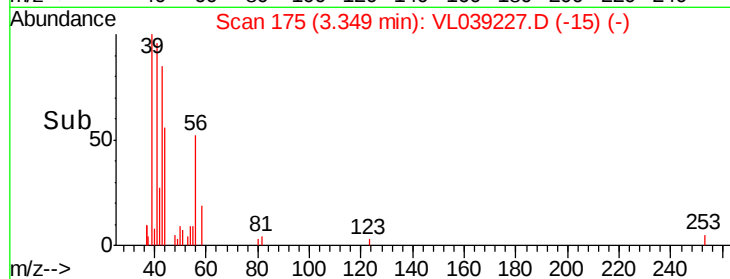
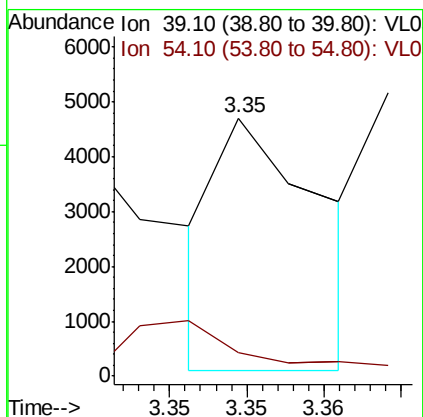
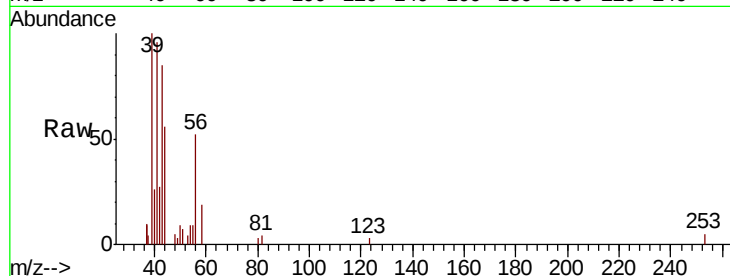
58 33.9 22.5 33.7#





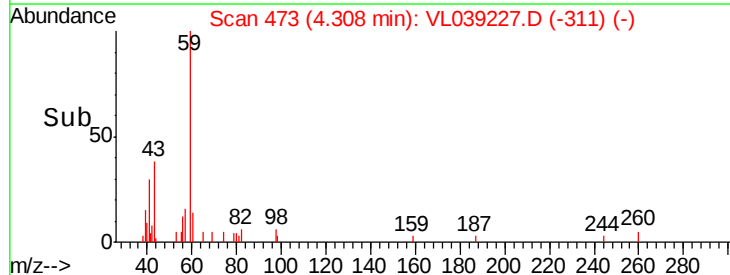
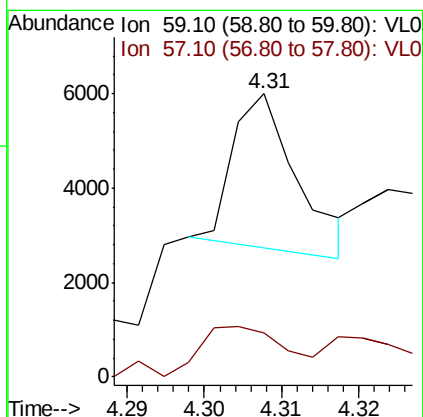
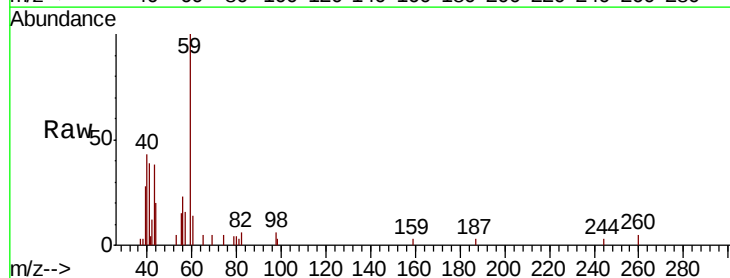
#16
1,3-Butadiene
Concen: 0.065 ppbv
RT: 3.35 min Scan# 175
Delta R.T. 0.01 min
Lab File: VL039227.D
Acq: 8 Jun 2022 2:52

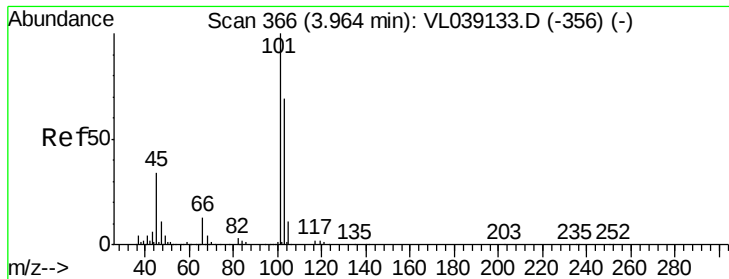
Tot Ion: 39 Resp: 2142
Ion Ratio Lower Upper
39 100
54 113.4 65.8 98.6#



#17
tert-Butyl alcohol
Concen: 0.039 ppbv
RT: 4.31 min Scan# 473
Delta R.T. 0.02 min
Lab File: VL039227.D
Acq: 8 Jun 2022 2:52

Tgt Ion: 59 Resp: 1841
Ion Ratio Lower Upper
59 100
57 105.2 9.1 13.7#





#19

Isopropyl Alcohol

Concen: 0.099 ppbv

RT: 3.97 min Scan# 369

Delta R.T. 0.01 min

Lab File: VL039227.D

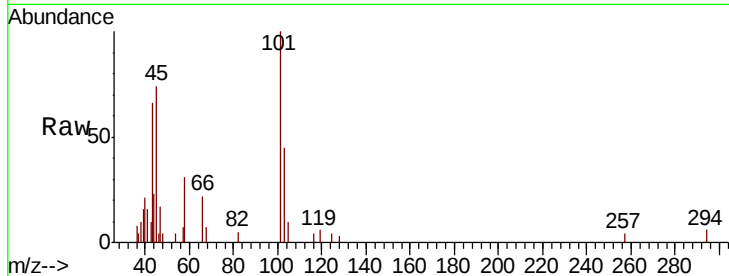
Acq: 8 Jun 2022 2:52

Tot Ion: 45 Resp: 2814

Ion Ratio Lower Upper

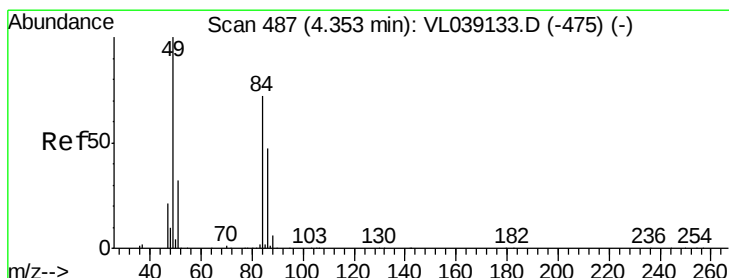
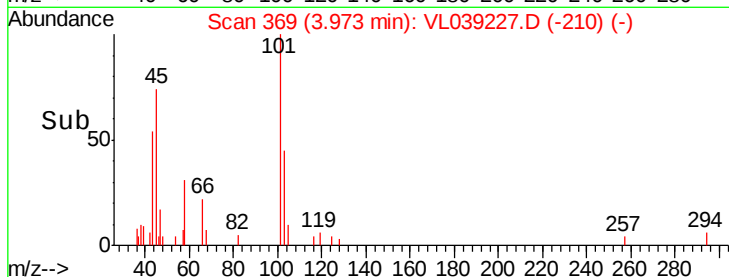
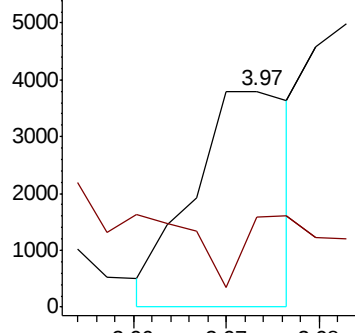
45 100

58 0.0 1.8 2.8#



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#20

Methylene Chloride

Concen: 2.621 ppbv

RT: 4.35 min Scan# 487

Delta R.T. 0.00 min

Lab File: VL039227.D

Acq: 8 Jun 2022 2:52

Tgt Ion: 84 Resp: 67228

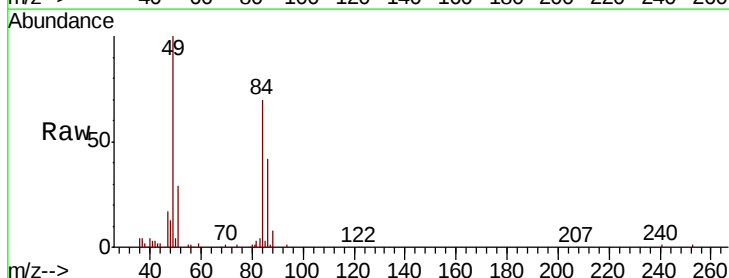
Ion Ratio Lower Upper

84 100

49 141.6 111.1 166.7

51 40.3 35.3 52.9

86 60.8 51.9 77.9

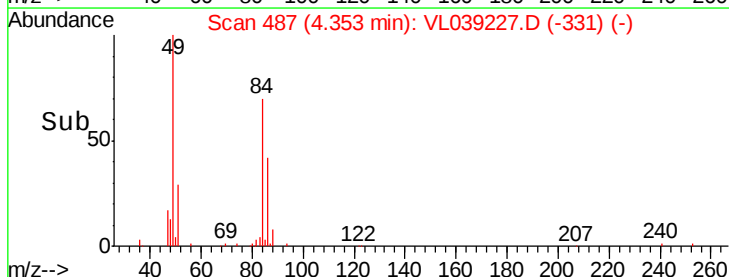
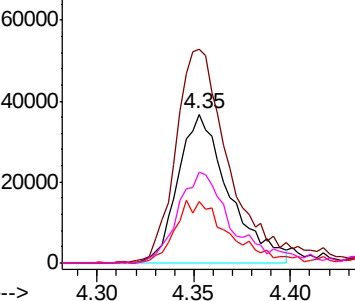


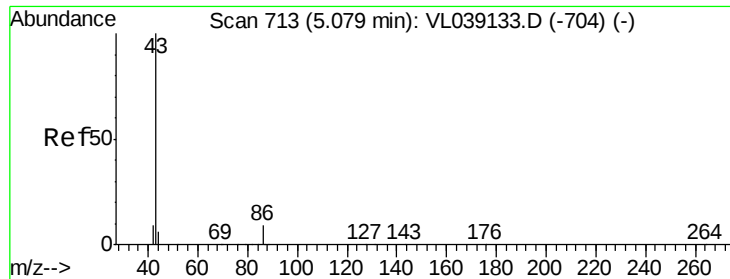
Abundance Ion 84.00 (83.70 to 84.70): VL0

Ion 49.10 (48.80 to 49.80): VL0

Ion 51.10 (50.80 to 51.80): VL0

Ion 86.00 (85.70 to 86.70): VL0





#23

Vinyl Acetate

Concen: 1.320 ppbv

RT: 5.08 min Scan# 714

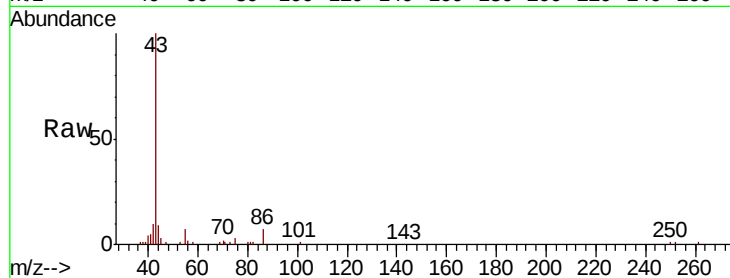
Delta R.T. 0.00 min

Lab File: VL039227.D

Acq: 8 Jun 2022 2:52

Tot Ion: 43 Resp: 66464

Ion	Ratio	Lower	Upper
43	100		
86	7.6	6.0	9.0
42	9.0	8.2	12.4
44	4.1	4.3	6.5#

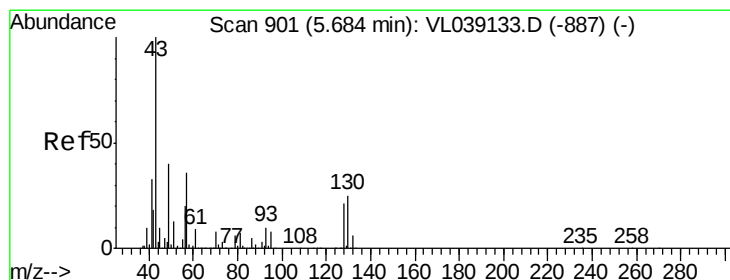
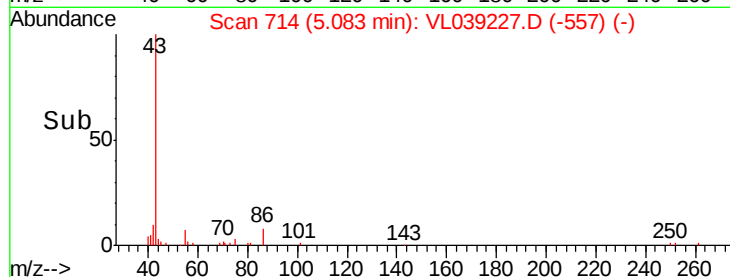
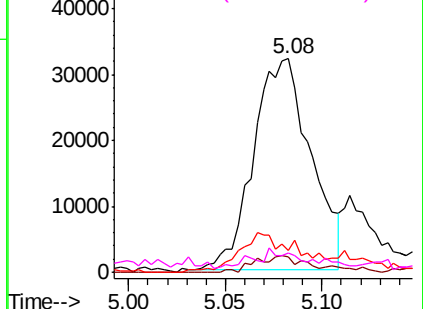


Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 0.292 ppbv

RT: 5.69 min Scan# 903

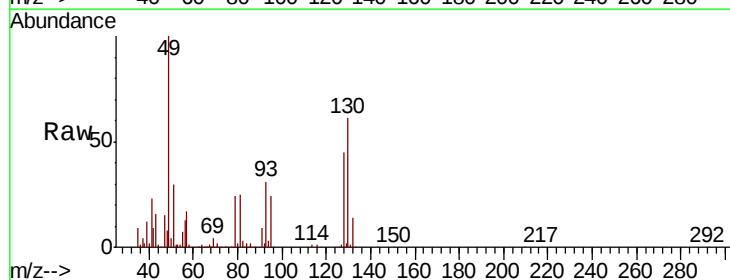
Delta R.T. 0.01 min

Lab File: VL039227.D

Acq: 8 Jun 2022 2:52

Tgt Ion: 43 Resp: 40046

Ion	Ratio	Lower	Upper
43	100		
45	1.5	8.2	12.2#
61	0.5	8.4	12.6#
70	3.8	5.6	8.4#

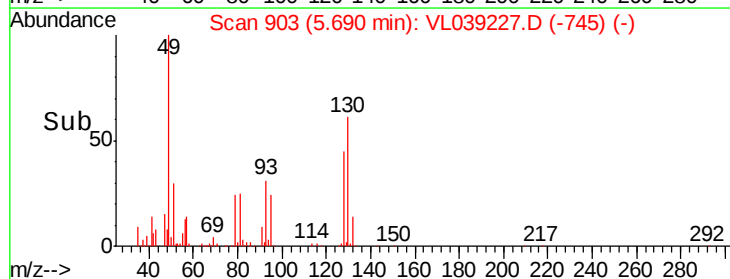
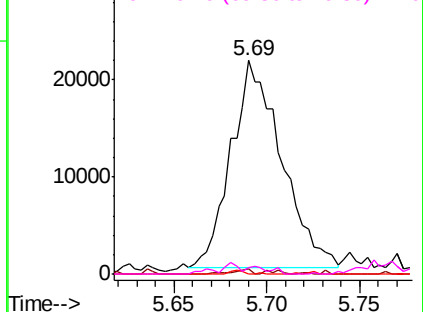


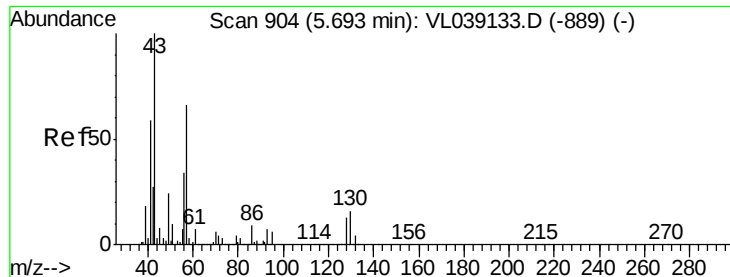
Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 0.920 ppbv

RT: 5.70 min Scan# 905

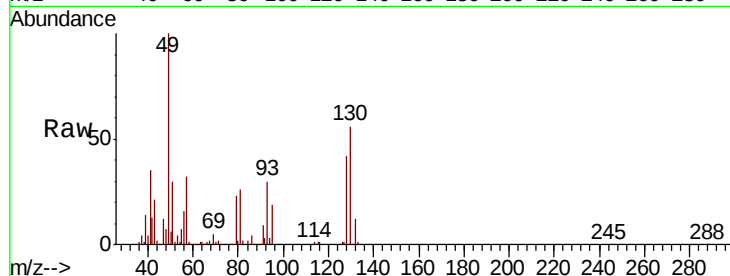
Delta R.T. 0.00 min

Lab File: VL039227.D

Acq: 8 Jun 2022 2:52

Tot Ion: 57 Resp: 55472

Ion	Ratio	Lower	Upper
57	100		
41	140.3	72.4	108.6#
43	79.1	187.0	280.6#
56	68.4	41.8	62.6#

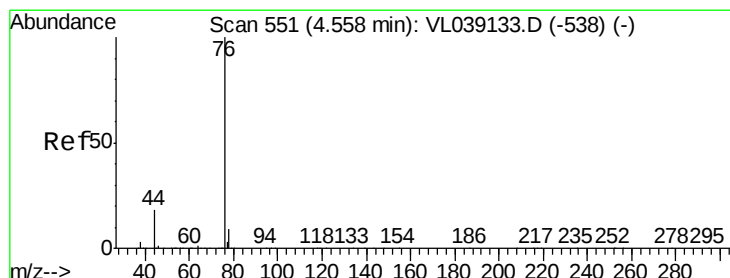
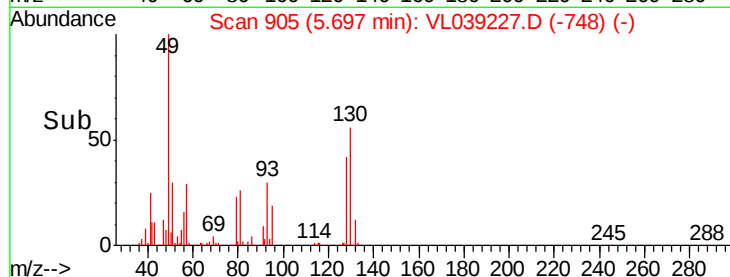
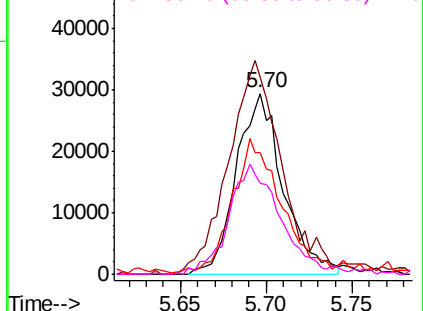


Abundance Ion 57.10 (56.80 to 57.80): VL0

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: 0.283 ppbv

RT: 4.56 min Scan# 553

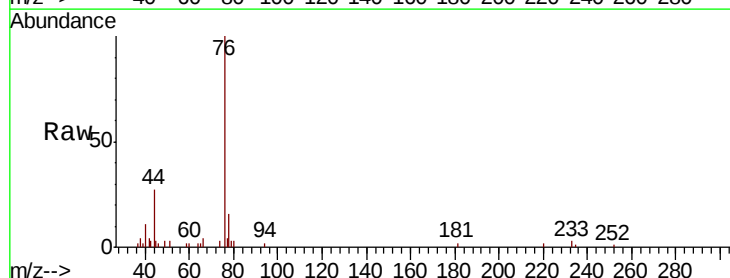
Delta R.T. 0.01 min

Lab File: VL039227.D

Acq: 8 Jun 2022 2:52

Tgt Ion: 76 Resp: 17684

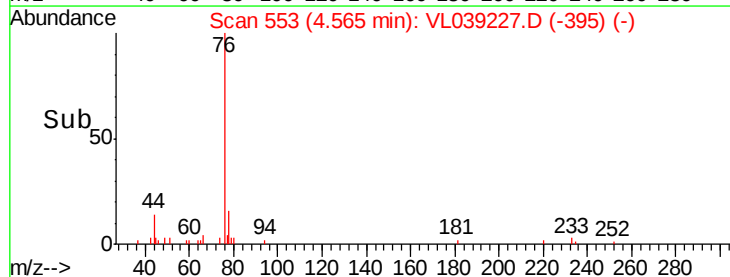
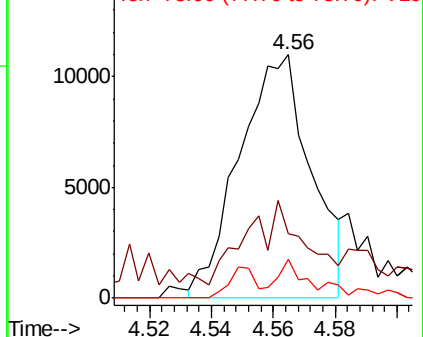
Ion	Ratio	Lower	Upper
76	100		
44	38.5	14.4	21.6#
78	13.6	7.7	11.5#

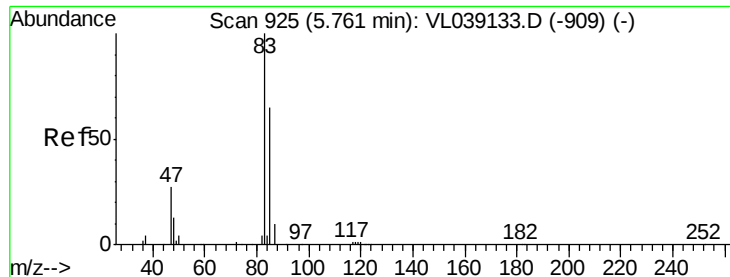


Abundance Ion 76.00 (75.70 to 76.70): VL0

Ion 44.10 (43.80 to 44.80): VL0

Ion 78.00 (77.70 to 78.70): VL0





#29

Chloroform

Concen: 1.208 ppbv

RT: 5.76 min Scan# 925

Delta R.T. 0.00 min

Lab File: VL039227.D

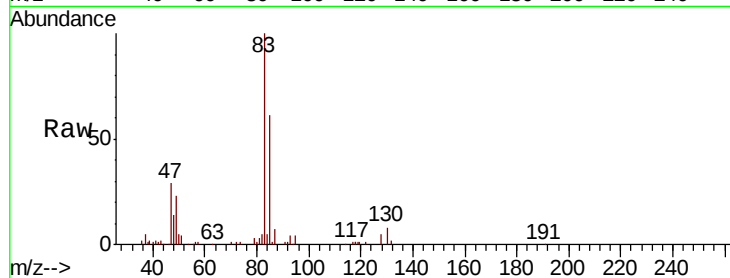
Acq: 8 Jun 2022 2:52

Tot Ion: 83 Resp: 122505

Ion Ratio Lower Upper

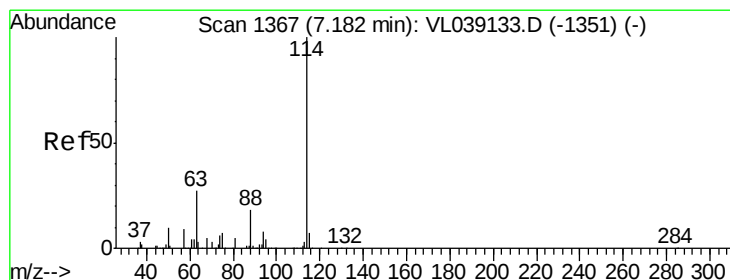
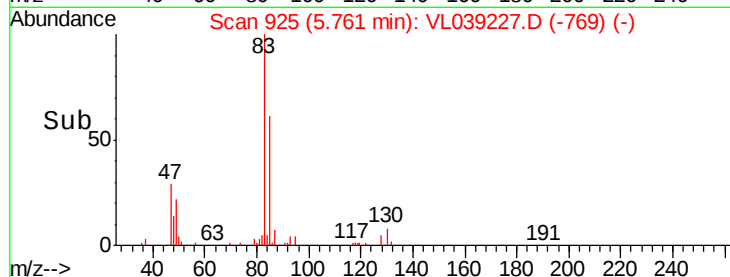
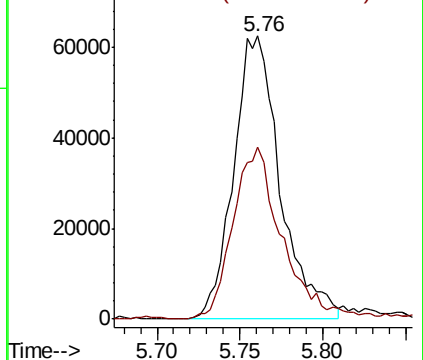
83 100

85 60.8 52.4 78.6



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: 7.18 min Scan# 1367

Delta R.T. 0.00 min

Lab File: VL039227.D

Acq: 8 Jun 2022 2:52

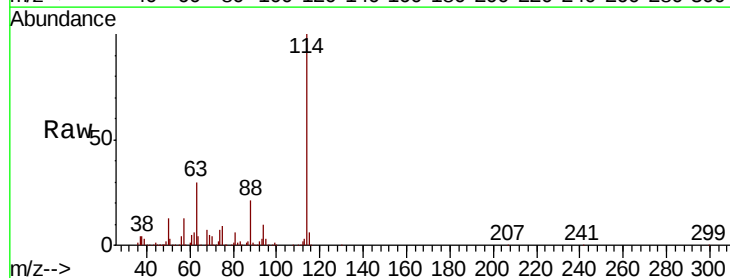
Tgt Ion: 114 Resp: 1369411

Ion Ratio Lower Upper

114 100

63 30.5 21.7 32.5

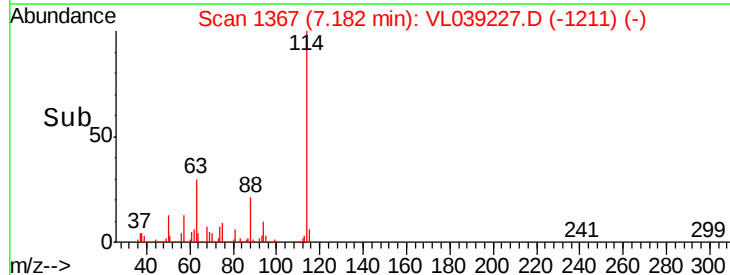
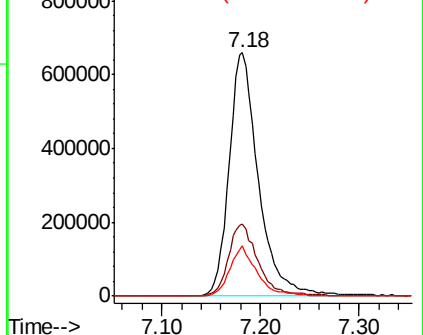
88 19.4 14.8 22.2

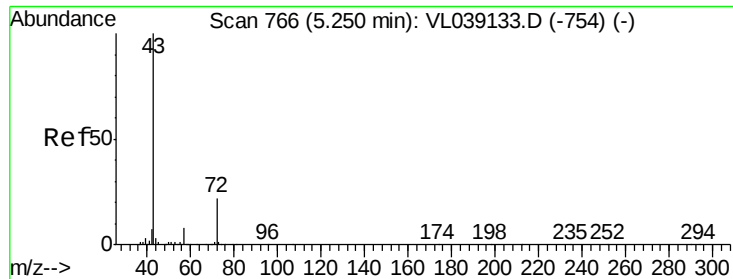


Abundance Ion 114.10 (113.80 to 114.80): V

Ion 63.10 (62.80 to 63.80): VL0

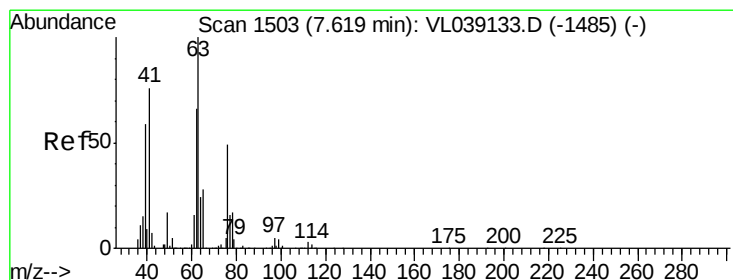
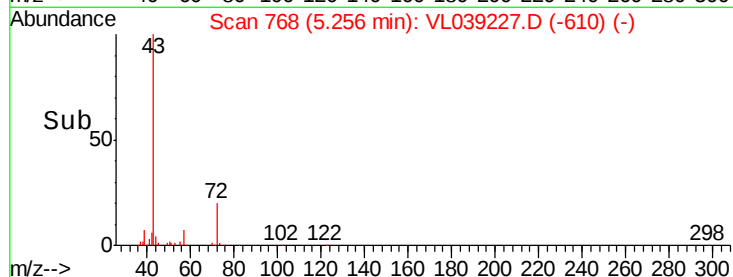
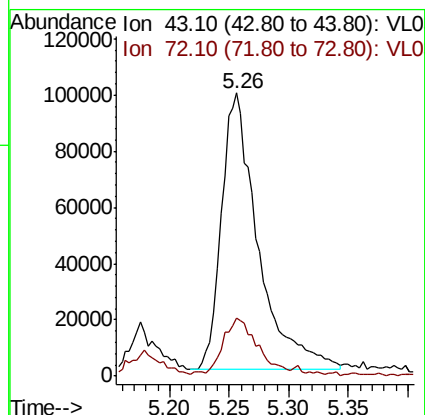
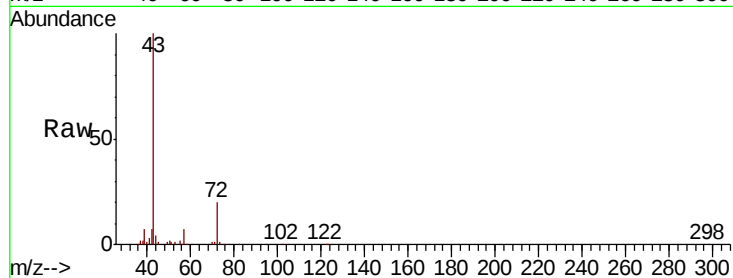
Ion 88.10 (87.80 to 88.80): VL0





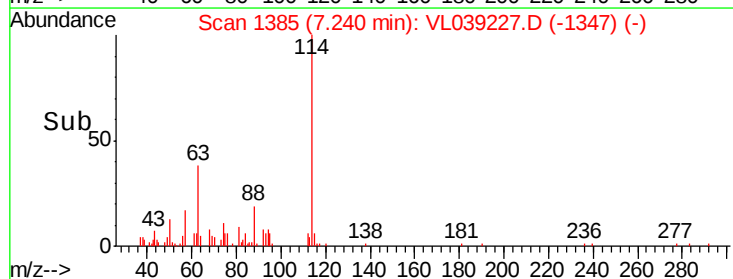
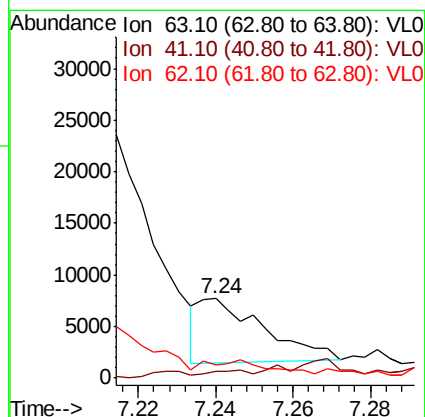
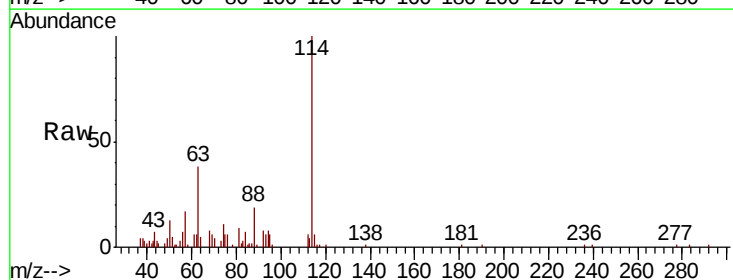
#34
 2-Butanone
 Concen: 2.827 ppbv
 RT: 5.26 min Scan# 768
 Delta R.T. 0.01 min
 Lab File: VL039227.D
 Acq: 8 Jun 2022 2:52

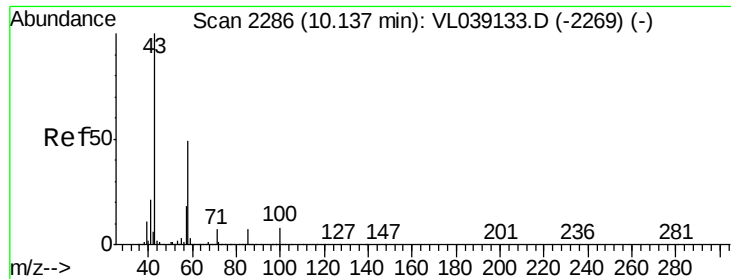
Tot Ion: 43 Resp: 210329
 Ion Ratio Lower Upper
 43 100
 72 22.0 18.2 27.2



#39
 1,2-Dichloropropane
 Concen: 0.163 ppbv
 RT: 7.24 min Scan# 1385
 Delta R.T. -0.38 min
 Lab File: VL039227.D
 Acq: 8 Jun 2022 2:52

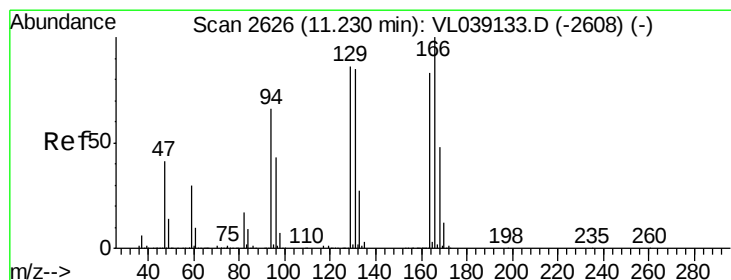
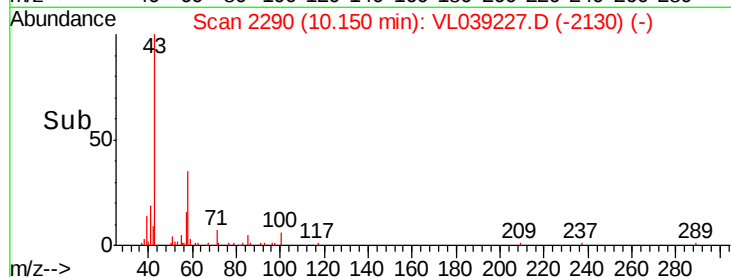
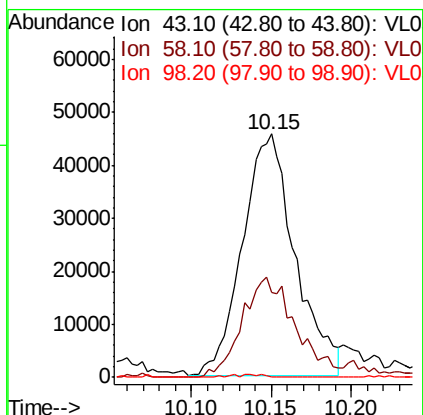
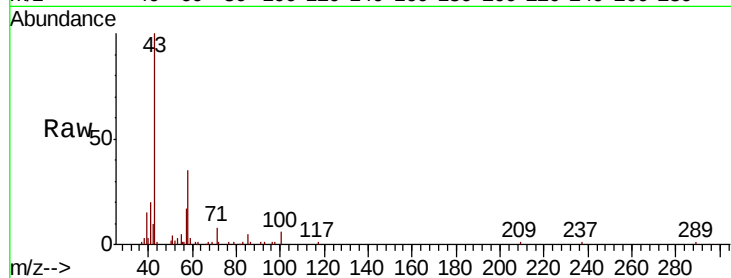
Tgt Ion: 63 Resp: 7203
 Ion Ratio Lower Upper
 63 100
 41 6.8 60.8 91.2#
 62 10.3 52.9 79.3#





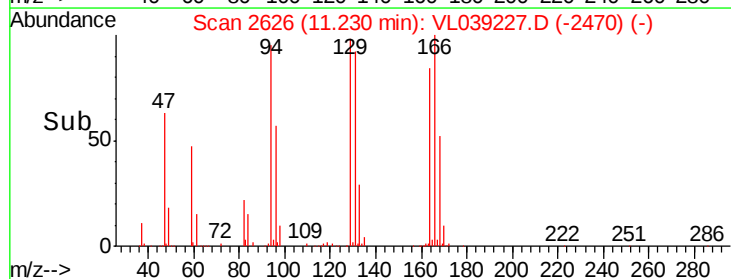
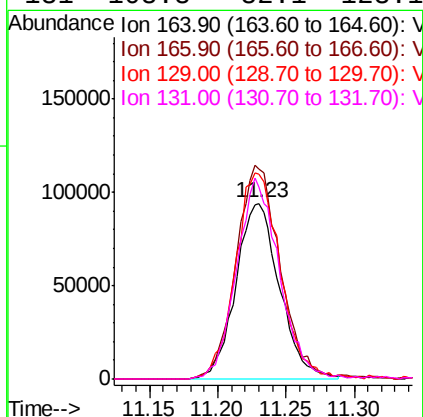
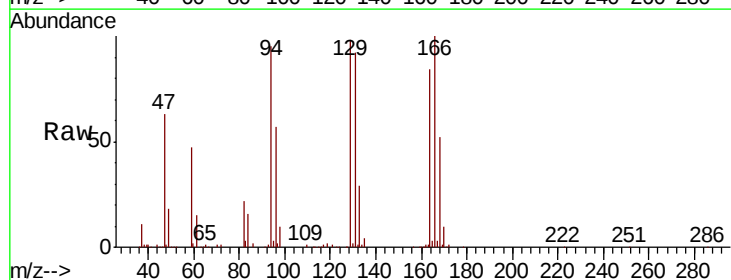
#51
 2-Hexanone
 Concen: 1.194 ppbv
 RT: 10.15 min Scan# 2290
 Delta R.T. 0.01 min
 Lab File: VL039227.D
 Acq: 8 Jun 2022 2:52

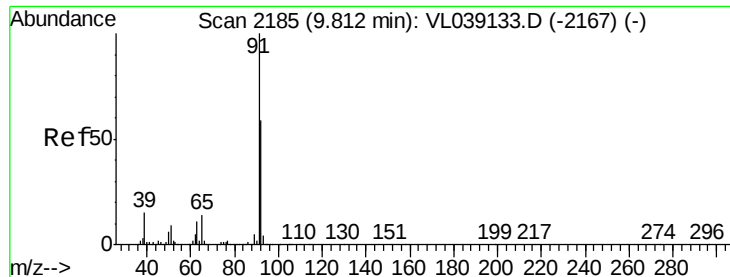
Tot Ion	Ratio	Lower	Upper
43	100		
58	45.5	40.0	60.0
98	0.7	0.1	0.1#



#52
 Tetrachloroethene
 Concen: 4.809 ppbv
 RT: 11.23 min Scan# 2626
 Delta R.T. 0.00 min
 Lab File: VL039227.D
 Acq: 8 Jun 2022 2:52

Tgt Ion	Ratio	Lower	Upper
164	100		
166	119.2	96.3	144.5
129	116.2	82.5	123.7
131	108.8	82.1	123.1





#53

Toluene

Concen: 0.066 ppbv

RT: 9.81 min Scan# 2184

Delta R.T. -0.00 min

Lab File: VL039227.D

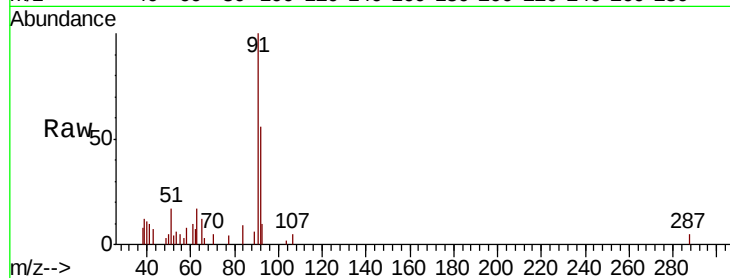
Acq: 8 Jun 2022 2:52

Tot Ion: 91 Resp: 8460

Ion Ratio Lower Upper

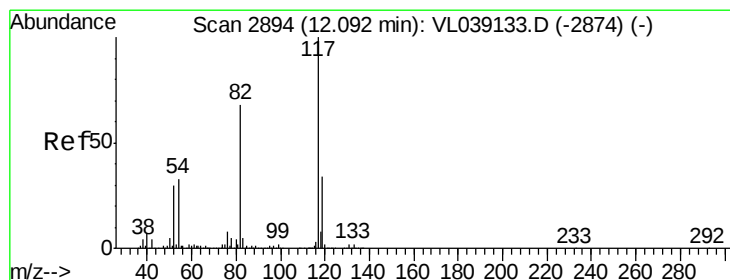
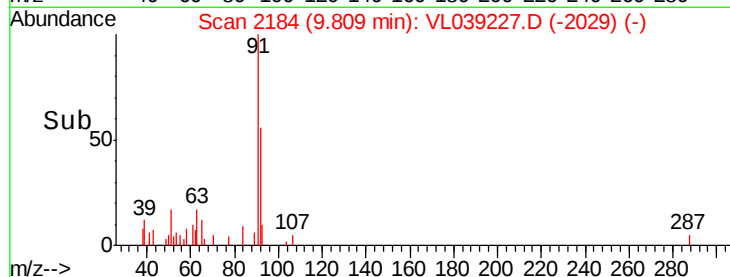
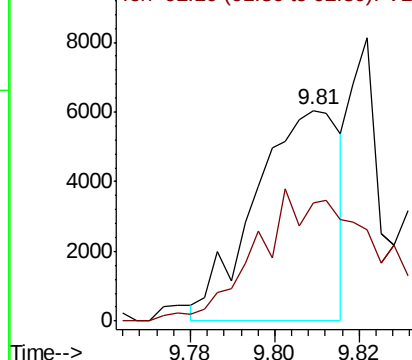
91 100

92 99.3 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: 12.09 min Scan# 2893

Delta R.T. -0.00 min

Lab File: VL039227.D

Acq: 8 Jun 2022 2:52

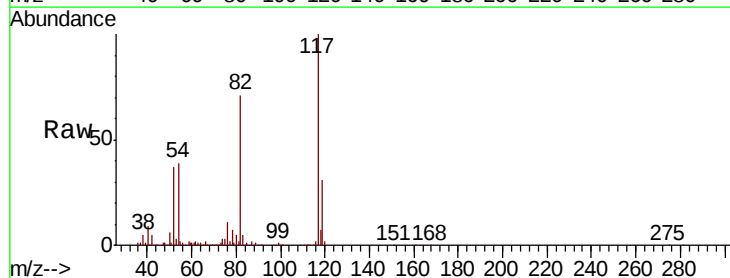
Tgt Ion: 117 Resp: 1249796

Ion Ratio Lower Upper

117 100

82 77.2 55.1 82.7

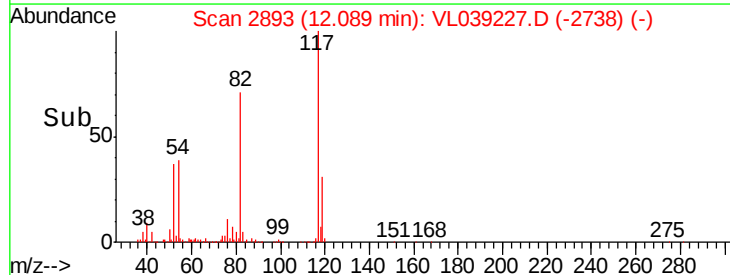
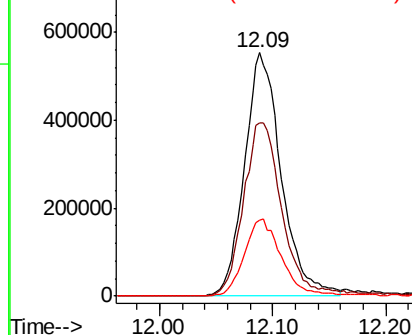
119 33.0 24.7 37.1

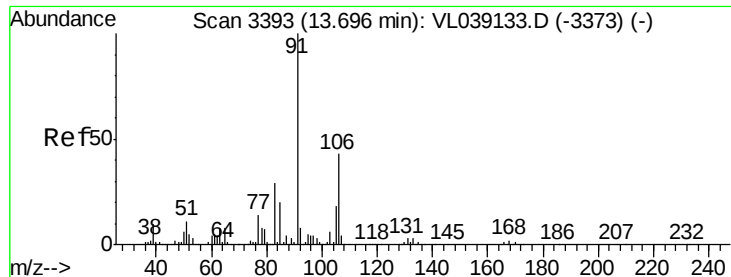


Abundance Ion 117.10 (116.80 to 117.80): V

Ion 82.10 (81.80 to 82.80): VL0

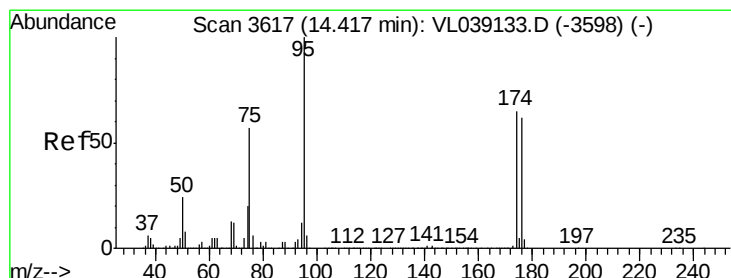
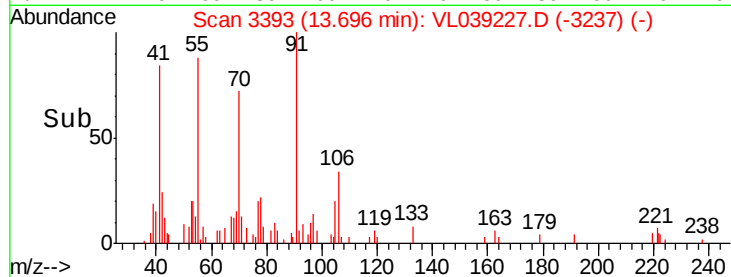
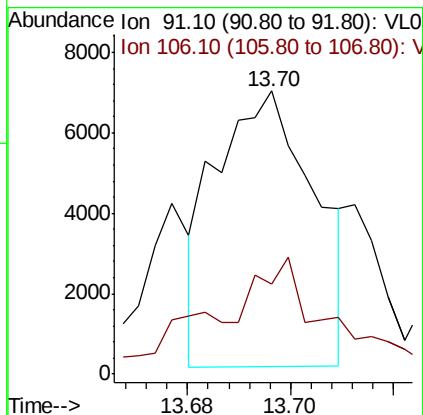
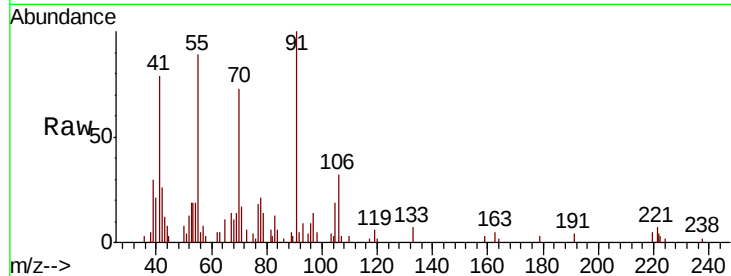
Ion 119.10 (118.80 to 119.80): V





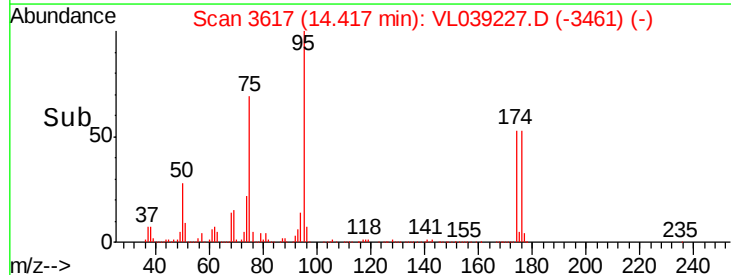
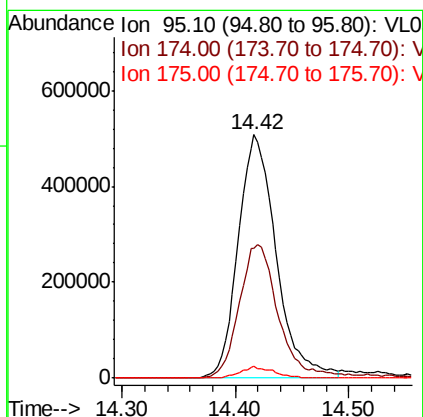
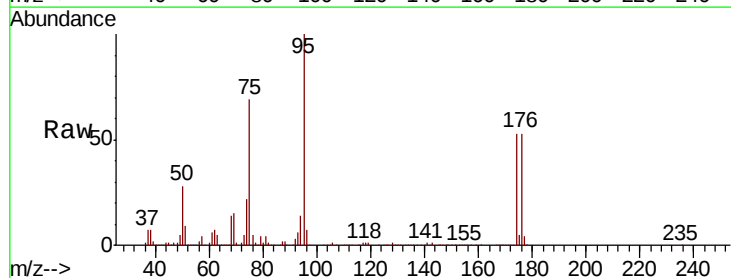
#60
o-Xylene
Concen: 0.064 ppbv
RT: 13.70 min Scan# 3393
Delta R.T. 0.00 min
Lab File: VL039227.D
Acq: 8 Jun 2022 2:52

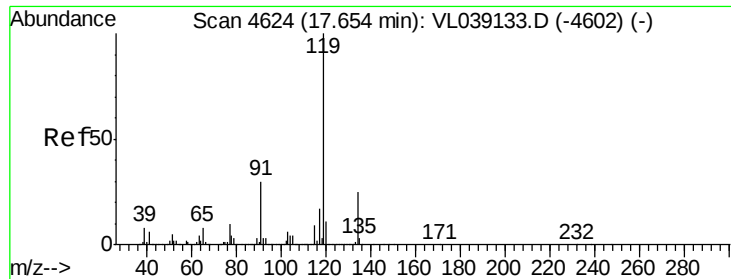
Tot Ion: 91 Resp: 9146
Ion Ratio Lower Upper
91 100
106 55.3 22.3 66.9



#68
1-Bromo-4-Fluorobenzene
Concen: 11.527 ppbv
RT: 14.42 min Scan# 3617
Delta R.T. 0.00 min
Lab File: VL039227.D
Acq: 8 Jun 2022 2:52

Tgt Ion: 95 Resp: 1190997
Ion Ratio Lower Upper
95 100
174 57.7 53.8 80.8
175 4.3 4.1 6.1





#69

p-Isopropyltoluene

Concen: 0.035 ppbv

RT: 17.65 min Scan# 4623

Delta R.T. -0.00 min

Lab File: VL039227.D

Acq: 8 Jun 2022 2:52

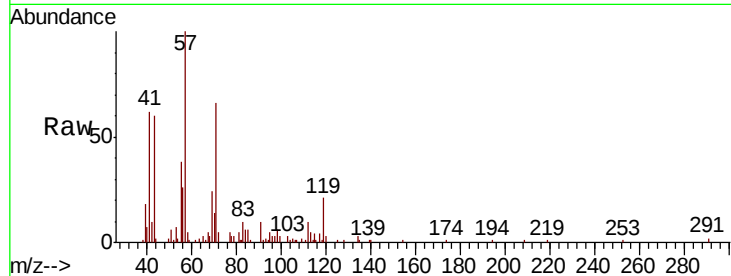
Tot Ion: 119 Resp: 7700

Ion Ratio Lower Upper

119 100

134 33.3 20.4 30.6#

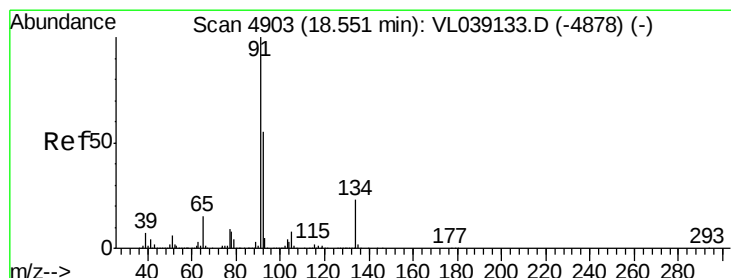
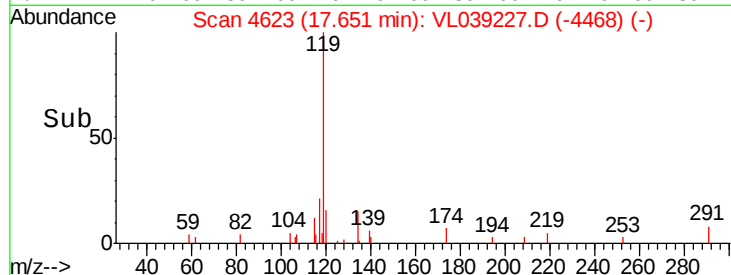
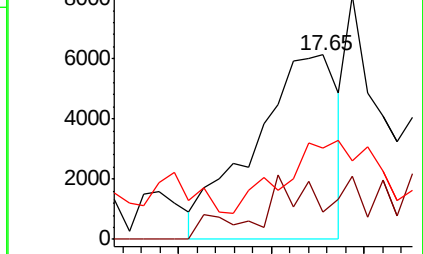
91 0.0 24.2 36.4#



Abundance Ion 119.10 (118.80 to 119.80): V

Ion 134.20 (133.90 to 134.90): V

Ion 91.10 (90.80 to 91.80): V



#70

n-Butylbenzene

Concen: 0.033 ppbv

RT: 18.55 min Scan# 4903

Delta R.T. 0.00 min

Lab File: VL039227.D

Acq: 8 Jun 2022 2:52

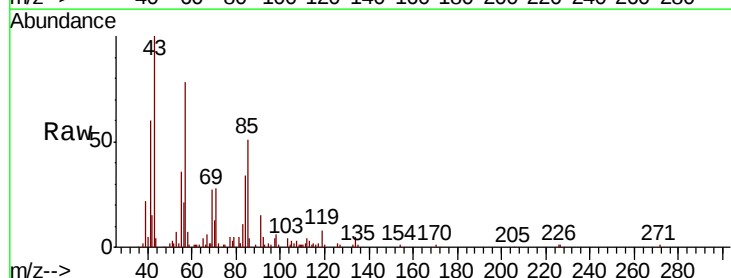
Tgt Ion: 91 Resp: 7605

Ion Ratio Lower Upper

91 100

92 78.1 43.6 65.4#

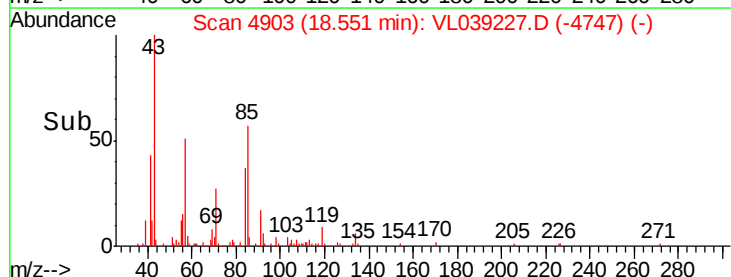
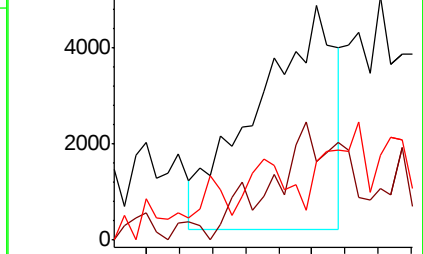
134 38.5 17.7 26.5#

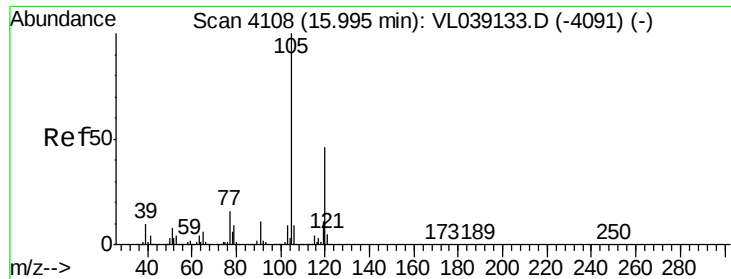


Abundance Ion 91.10 (90.80 to 91.80): V

Ion 92.10 (91.80 to 92.80): V

Ion 134.20 (133.90 to 134.90): V





#73

1,3,5-Trimethylbenzene

Concen: 0.043 ppbv

RT: 16.00 min Scan# 4109

Delta R.T. 0.00 min

Lab File: VL039227.D

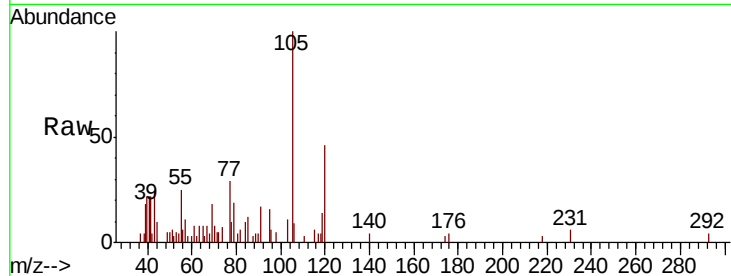
Acq: 8 Jun 2022 2:52

Tot Ion:105 Resp: 6422

Ion Ratio Lower Upper

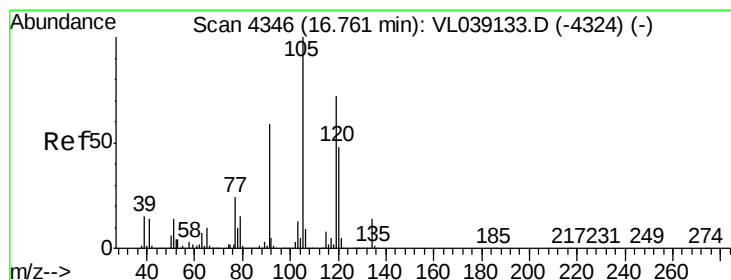
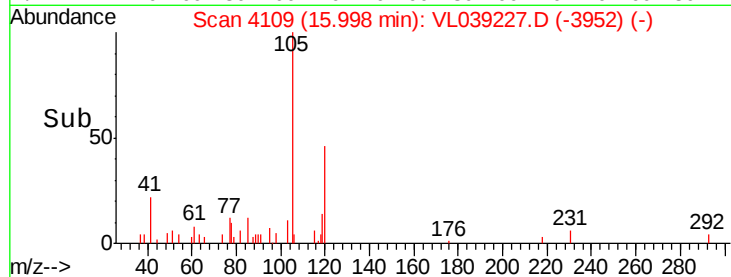
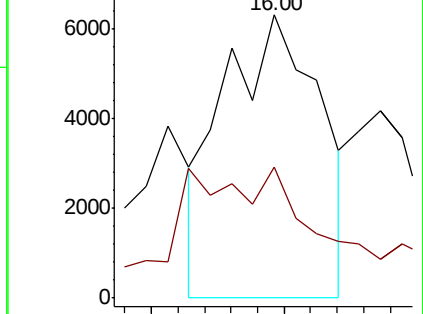
105 100

120 36.6 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: 0.293 ppbv

RT: 16.76 min Scan# 4347

Delta R.T. 0.00 min

Lab File: VL039227.D

Acq: 8 Jun 2022 2:52

Tgt Ion:105 Resp: 49224

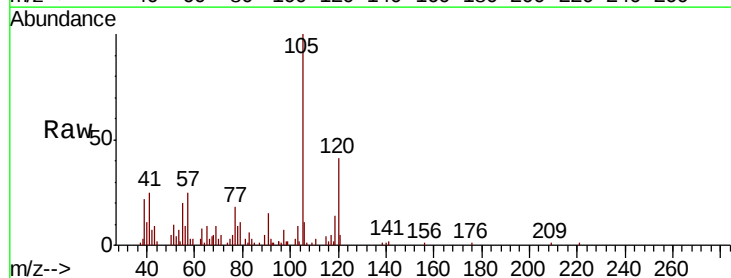
Ion Ratio Lower Upper

105 100

120 43.7 38.1 57.1

91 18.0 47.4 71.0#

77 16.3 19.5 29.3#

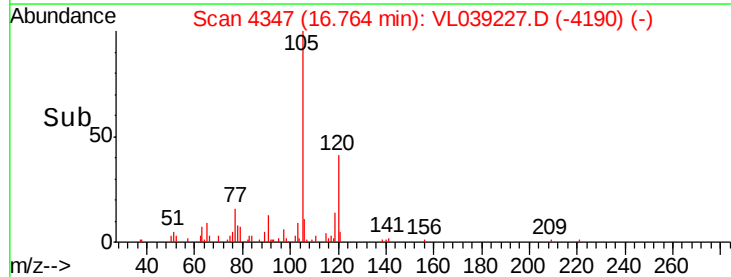
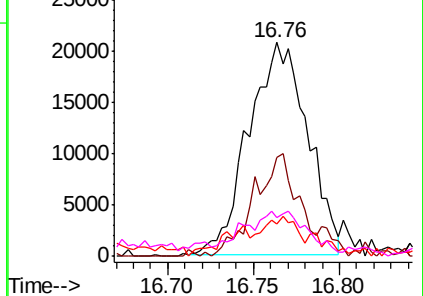


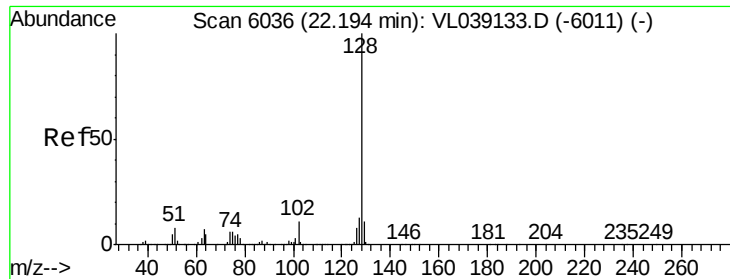
Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

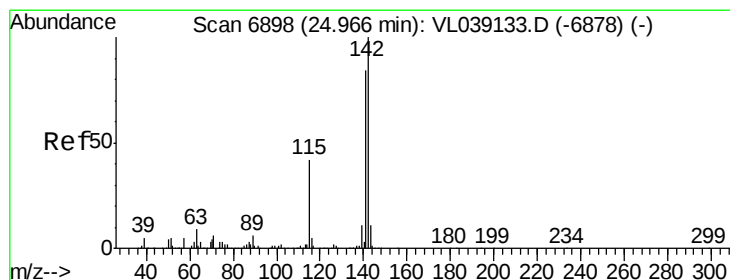
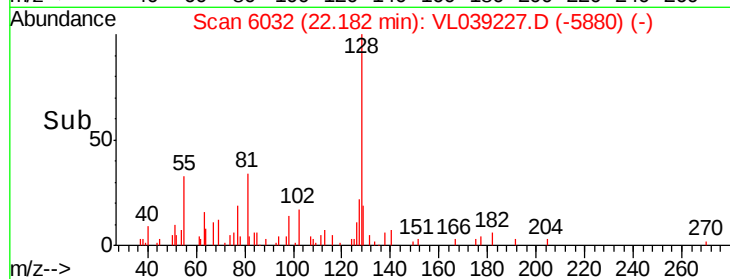
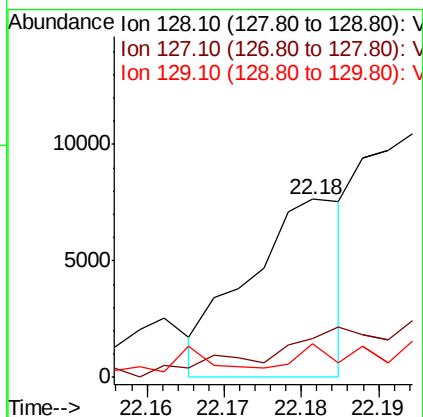
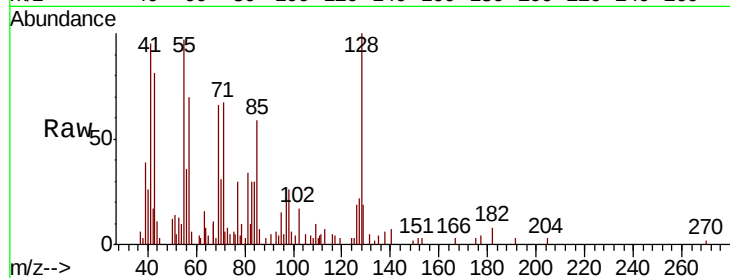
Ion 77.10 (76.80 to 77.80): VL0





#79
Naphthalene
Concen: 0.051 ppbv
RT: 22.18 min Scan# 6032
Delta R.T. -0.01 min
Lab File: VL039227.D
Acq: 8 Jun 2022 2:52

Tot Ion:128 Resp: 6599
Ion Ratio Lower Upper
128 100
127 21.2 10.4 15.6#
129 13.6 9.0 13.6#



#80
Naphthalene, 2-methyl-
Concen: 0.174 ppbv
RT: 24.98 min Scan# 6901
Delta R.T. 0.01 min
Lab File: VL039227.D
Acq: 8 Jun 2022 2:52

Tgt Ion:142 Resp: 8364
Ion Ratio Lower Upper
142 100
141 68.0 64.6 96.8
115 34.7 32.7 49.1

