

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL052322\
 Data File : VL039094.D
 Acq On : 23 May 2022 21:44
 Operator : SY/AP
 Sample : N2956-03
 Misc : 400mL/MSVOA L
 ALS Vial : 8 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 AP-2

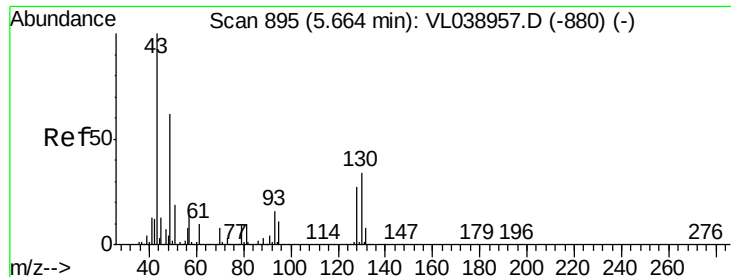
Quant Time: May 24 06:01:57 2022
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL050522AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu May 05 10:12:15 2022
 QLast Update : Thu May 05 10:12:15 2022
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.65	49	1022185	10.00	ppbv	-0.01
33) 1,4-Difluorobenzene	7.16	114	2257367	10.00	ppbv	-0.02
55) Chlorobenzene-d5	12.06	117	1906570	10.00	ppbv	-0.02

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.39	95	1604760	10.63	ppbv	-0.01
Spiked Amount	10.000	Range	65 - 135	Recovery	=	106.30%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.04	85	41776	0.261	ppbv	91
3) Chlorodifluoromethane	2.99	51	84767	0.668	ppbv	93
4) Chloromethane	3.13	50	35647	0.561	ppbv	95
9) Propene	3.02	41	45029	0.813	ppbv #	79
10) Heptane	8.10	43	18511	0.136	ppbv #	60
11) Trichlorofluoromethane	3.94	101	34002	0.247	ppbv	96
12) 1,1,2-Trichlorotrifluoroet	4.47	101	5501	0.058	ppbv #	70
13) Ethanol	3.59	45	7311968	1865.314	ppbv	89
15) Acetone	3.84	43	785490	8.146	ppbv	92
16) 1,3-Butadiene	3.29	39	8951	0.162	ppbv #	31
17) tert-Butyl alcohol	4.29	59	13234	0.179	ppbv #	77
19) Isopropyl Alcohol	3.96	45	336638	7.343	ppbv #	97
20) Methylene Chloride	4.33	84	1003961	27.626	ppbv	97
21) Allyl Chloride	4.34	41	14329	0.218	ppbv #	29
23) Vinyl Acetate	5.05	43	143034	1.875	ppbv #	80
25) Ethyl Acetate	5.67	43	586669	2.542	ppbv #	81
26) Hexane	5.67	57	747692	7.292	ppbv #	42
29) Chloroform	5.74	83	374039	2.255	ppbv	92
34) 2-Butanone	5.23	43	79591	0.691	ppbv	92
35) Carbon Tetrachloride	7.00	117	4740	0.032	ppbv #	68
36) Benzene	6.87	78	9723	0.050	ppbv	98
39) 1,2-Dichloropropane	7.16	63	643037	8.555	ppbv #	27
41) Tetrahydrofuran	5.71	42	8760	0.113	ppbv #	61
44) 2,2,4-Trimethylpentane	7.85	57	14154	0.042	ppbv #	22
53) Toluene	9.78	91	43262	0.200	ppbv #	56
58) Ethyl Benzene	12.68	91	27652	0.101	ppbv	94
59) m/p-Xylene	12.98	91	8121	0.035	ppbv #	33
60) o-Xylene	13.66	91	17362	0.079	ppbv #	54
74) 1,2,4-Trimethylbenzene	16.73	105	15155	0.061	ppbv #	58

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: AP-2

Acq: 23 May 2022 21:44

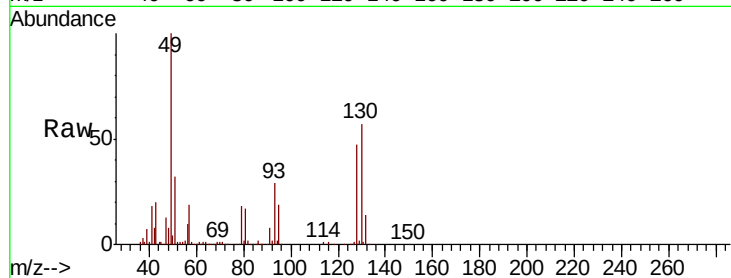
Tot Ion: 49 Resp: 1022185

Ion Ratio Lower Upper

49 100

128 47.1 23.3 69.8

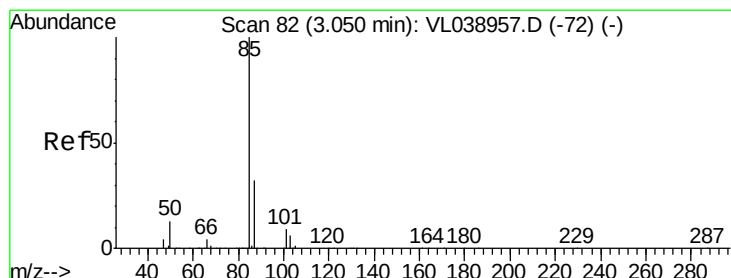
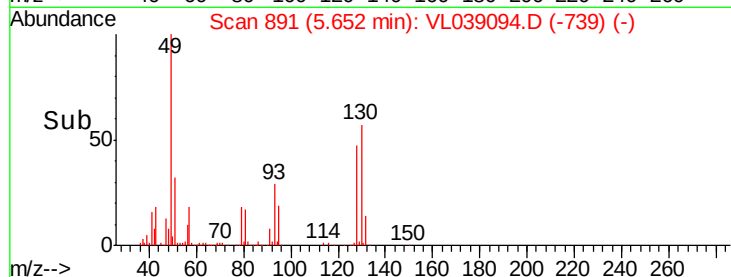
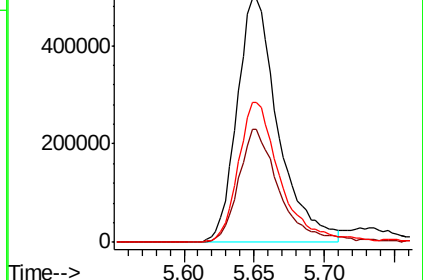
130 59.4 29.8 89.3



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: 0.261 ppbv

RT: 3.04 min Scan# 80

Delta R.T. -0.01 min

Lab File: VL039094.D

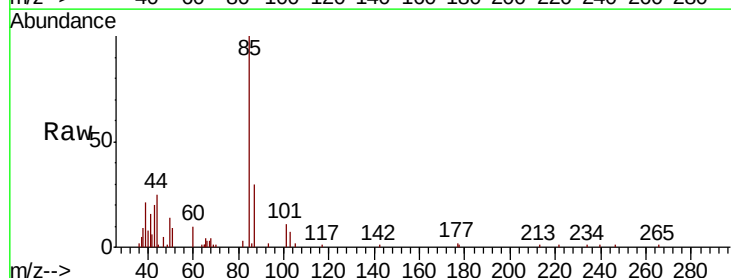
Acq: 23 May 2022 21:44

Tgt Ion: 85 Resp: 41776

Ion Ratio Lower Upper

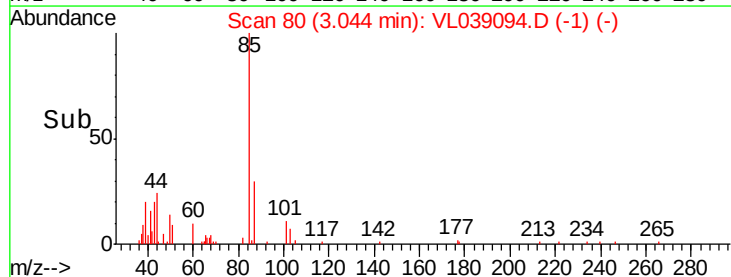
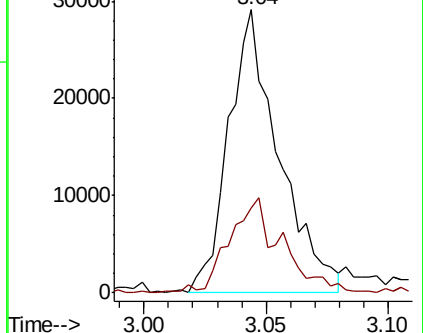
85 100

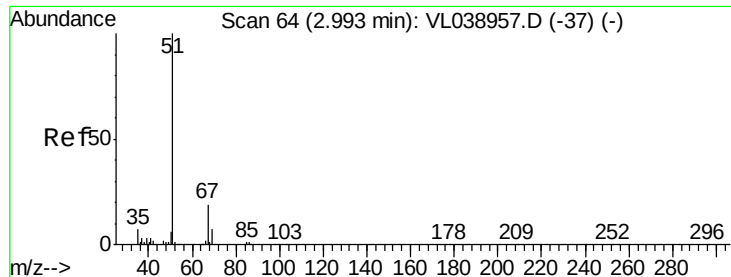
87 27.1 25.7 38.5



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.668 ppbv

RT: 2.99 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: AP-2

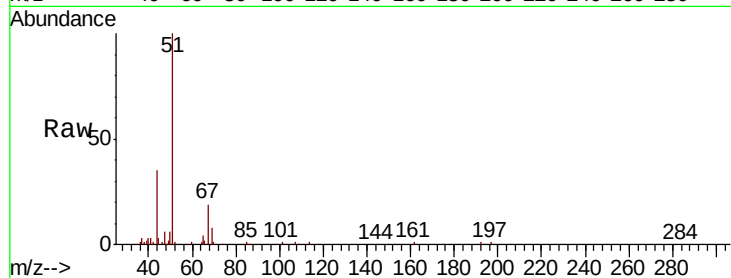
Acq: 23 May 2022 21:44

Tot Ion: 51 Resp: 84767

Ion Ratio Lower Upper

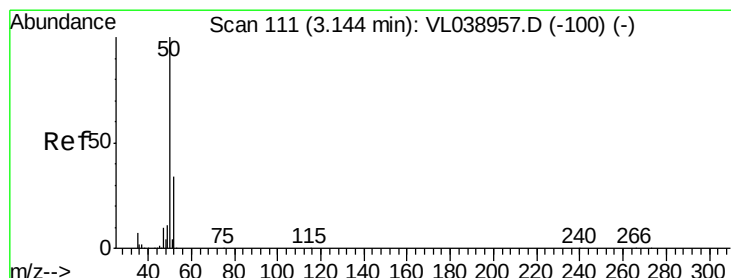
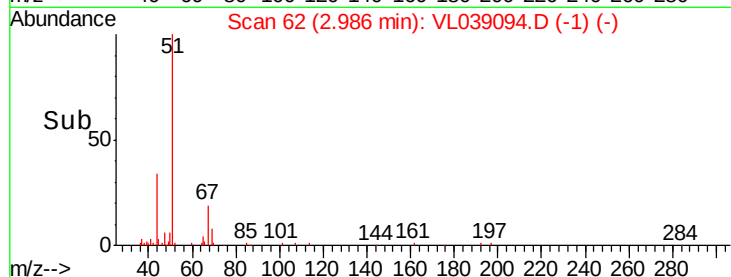
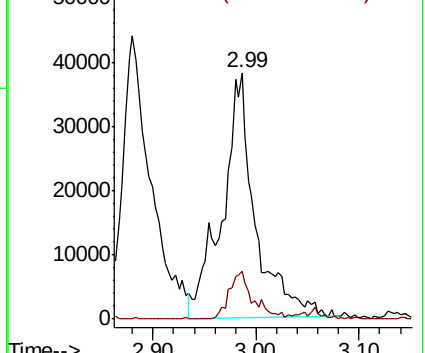
51 100

67 16.6 15.8 23.8



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.561 ppbv

RT: 3.13 min Scan# 108

Delta R.T. -0.01 min

Lab File: VL039094.D

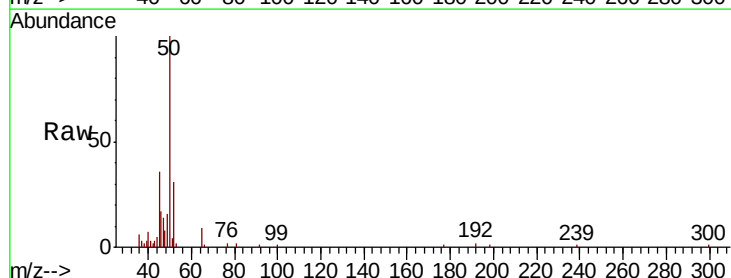
Acq: 23 May 2022 21:44

Tgt Ion: 50 Resp: 35647

Ion Ratio Lower Upper

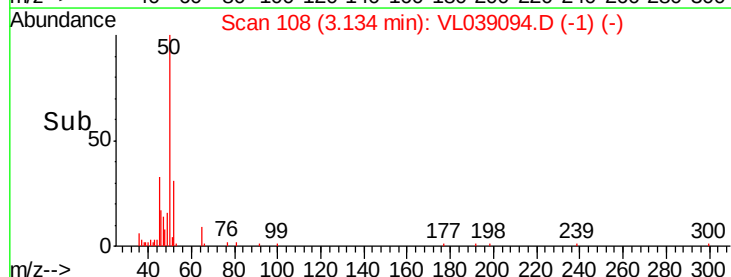
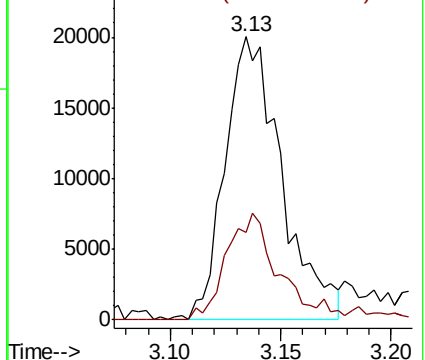
50 100

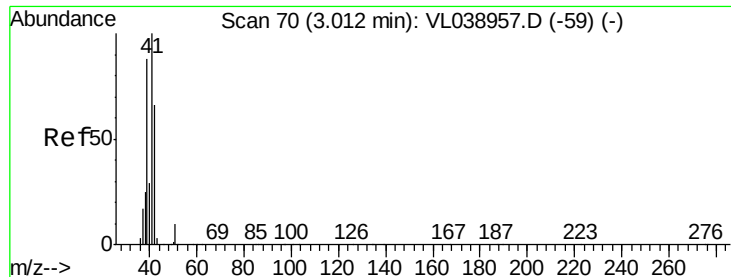
52 31.0 27.3 40.9



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 0.813 ppbv

RT: 3.02 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

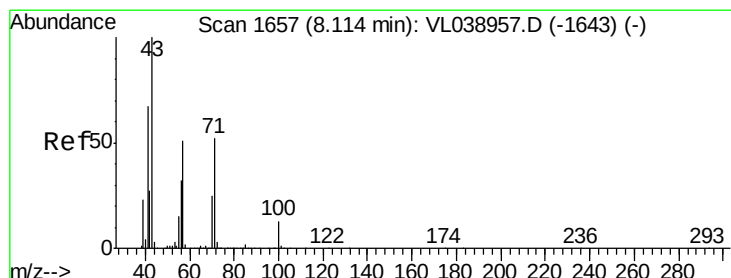
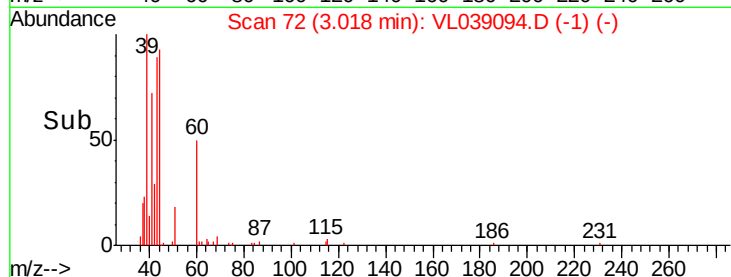
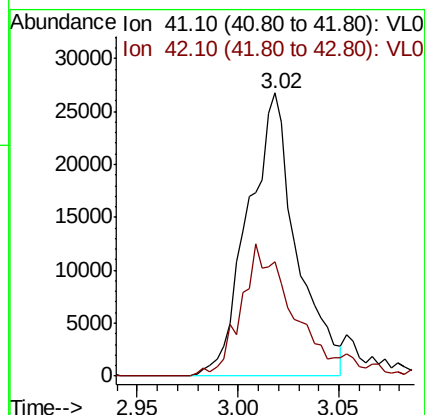
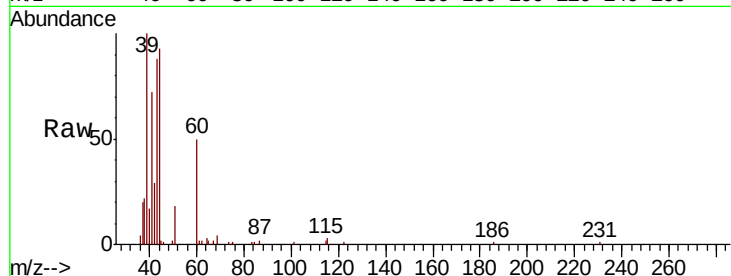
Acq: 23 May 2022 21:44

Tot Ion: 41 Resp: 45029

Ion Ratio Lower Upper

41 100

42 55.0 58.3 87.5#



#10

Heptane

Concen: 0.136 ppbv

RT: 8.10 min Scan# 1653

Delta R.T. -0.01 min

Lab File: VL039094.D

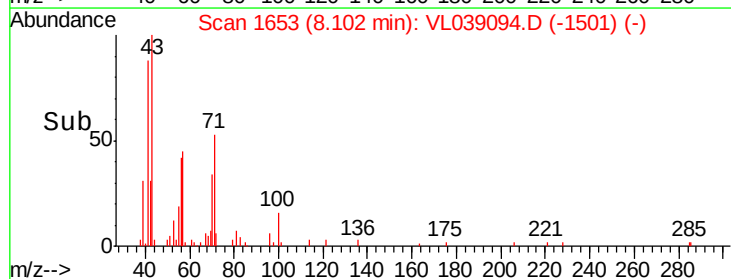
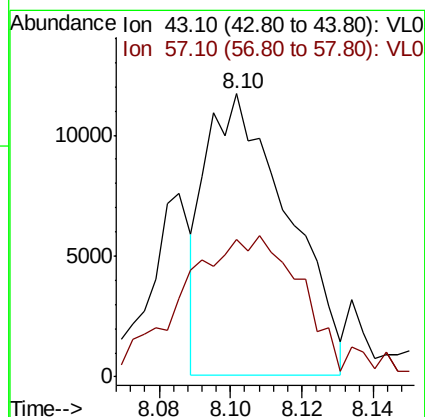
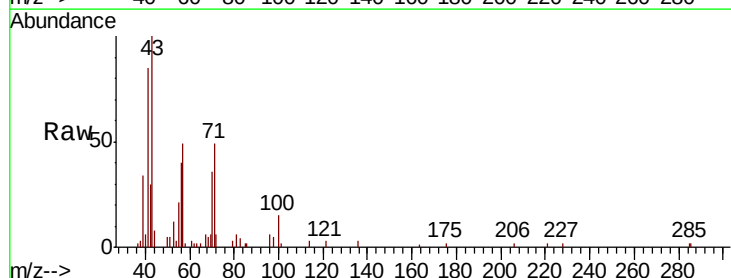
Acq: 23 May 2022 21:44

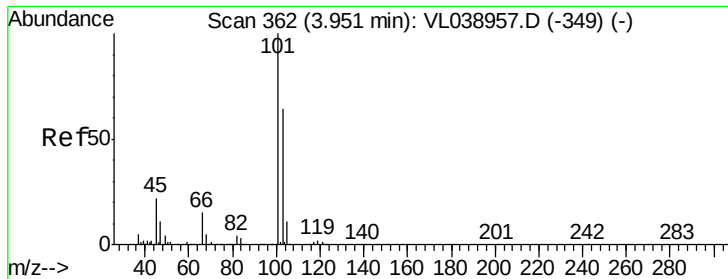
Tgt Ion: 43 Resp: 18511

Ion Ratio Lower Upper

43 100

57 78.2 40.5 60.7#





#11

Trichlorofluoromethane

Concen: 0.247 ppbv

RT: 3.94 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

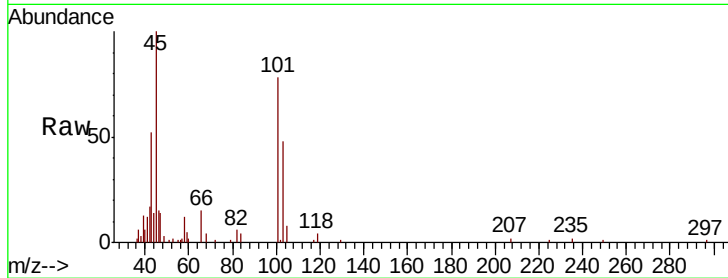
Acq: 23 May 2022 21:44

Tot Ion:101 Resp: 34002

Ion Ratio Lower Upper

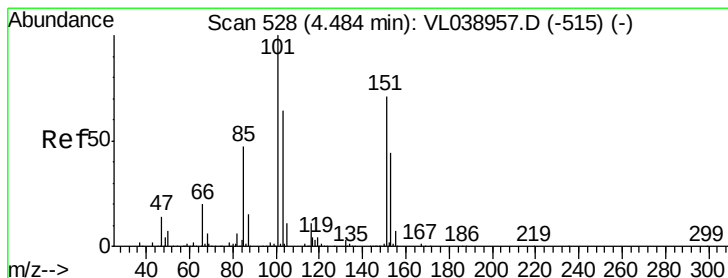
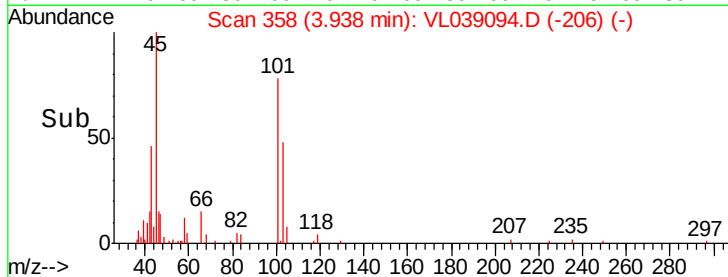
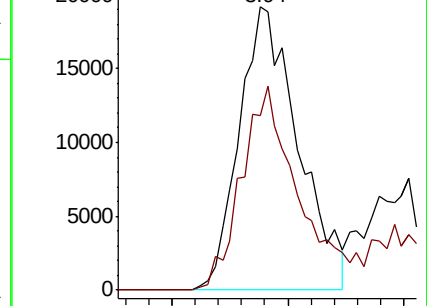
101 100

103 61.6 51.5 77.3



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: 0.058 ppbv

RT: 4.47 min Scan# 523

Delta R.T. -0.02 min

Lab File: VL039094.D

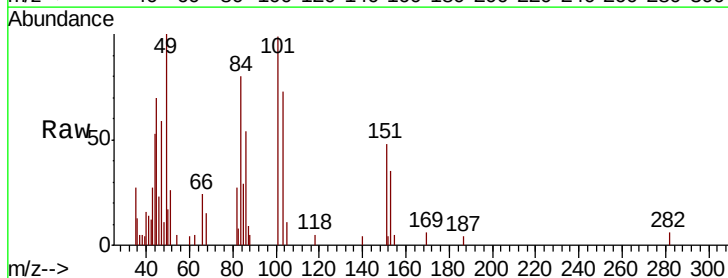
Acq: 23 May 2022 21:44

Tgt Ion:101 Resp: 5501

Ion Ratio Lower Upper

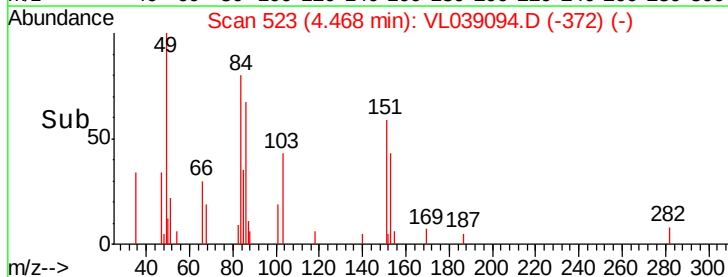
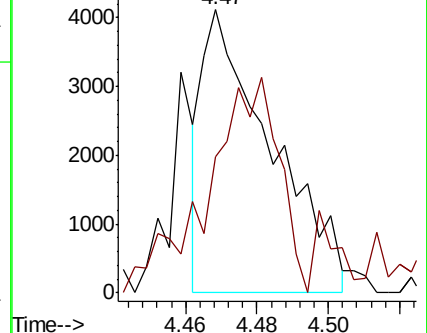
101 100

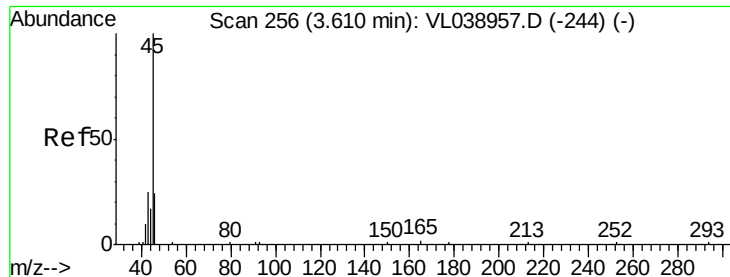
151 93.6 55.4 83.0#



Abundance Ion 101.00 (100.70 to 101.70): V

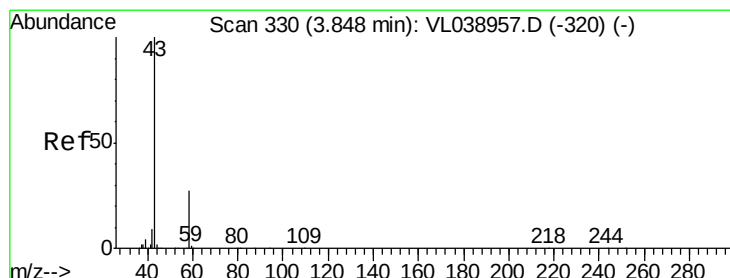
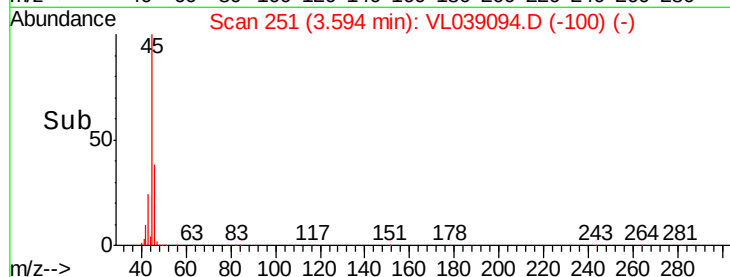
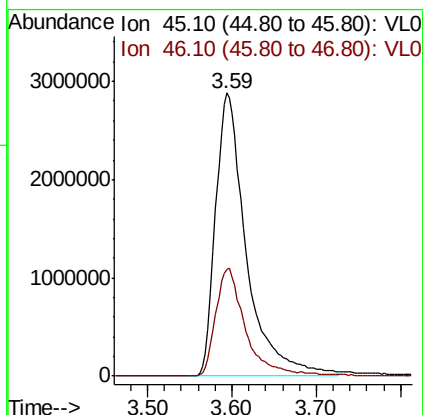
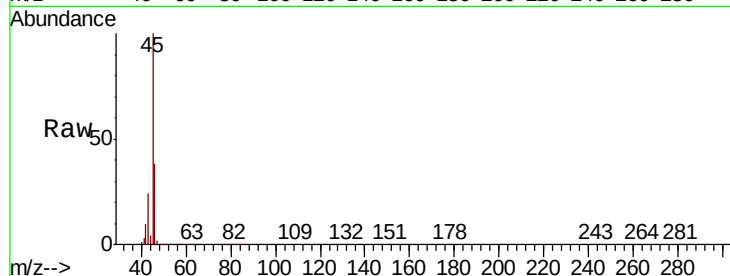
Ion 151.00 (150.70 to 151.70): V





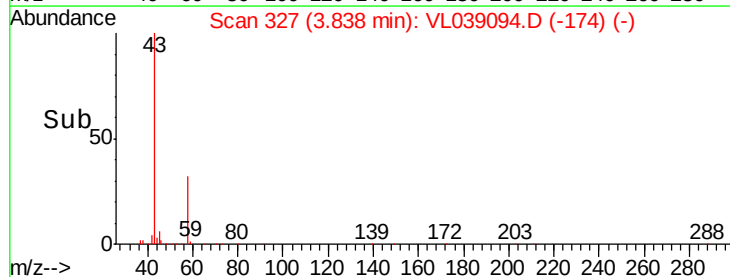
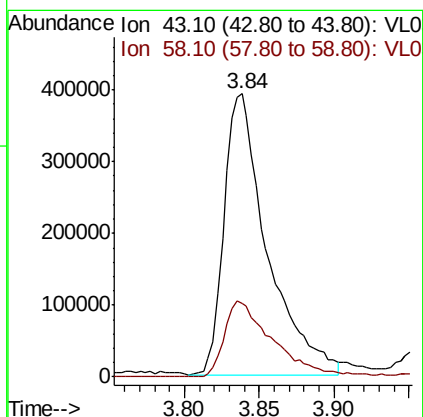
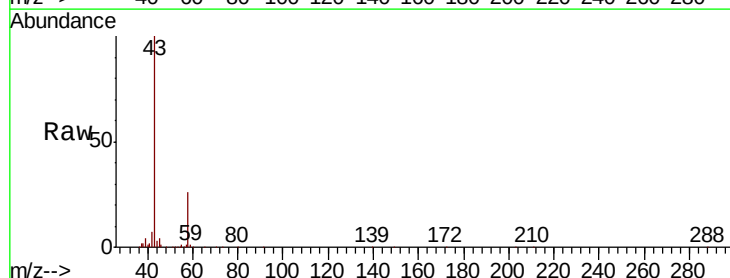
#13
Ethanol
Concen: 1865.314 ppbv
RT: 3.59
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
AP-2
Acq: 23 May 2022 21:44

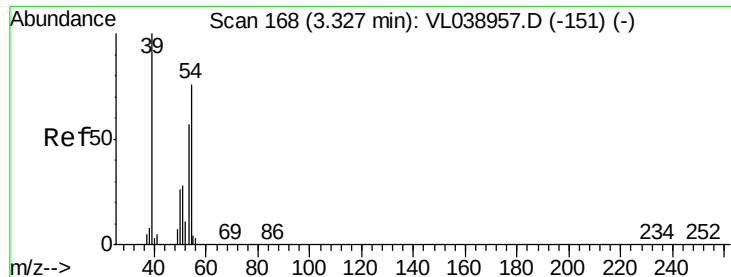
Tot Ion: 45 Resp: 7311968
Ion Ratio Lower Upper
45 100
46 37.7 18.0 72.2



#15
Acetone
Concen: 8.146 ppbv
RT: 3.84 min Scan# 327
Delta R.T. -0.01 min
Lab File: VL039094.D
Acq: 23 May 2022 21:44

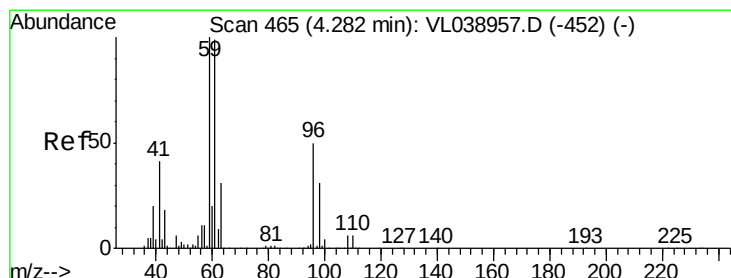
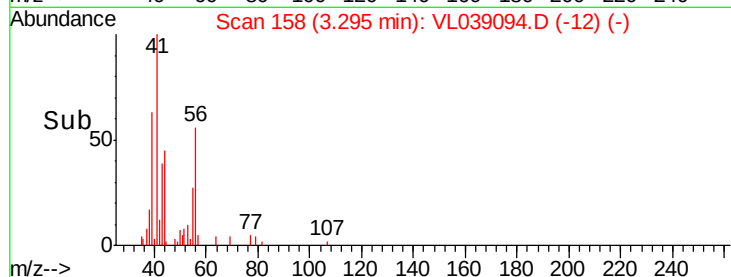
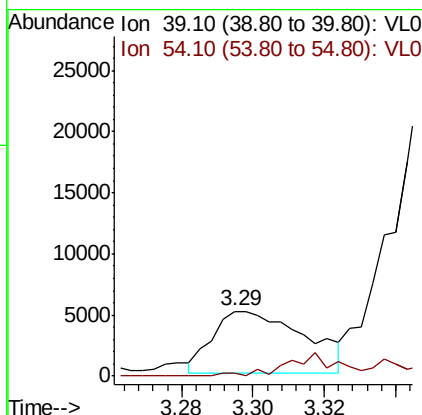
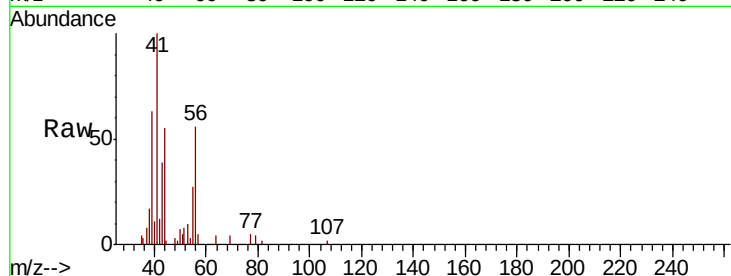
Tgt Ion: 43 Resp: 785490
Ion Ratio Lower Upper
43 100
58 30.6 21.3 31.9





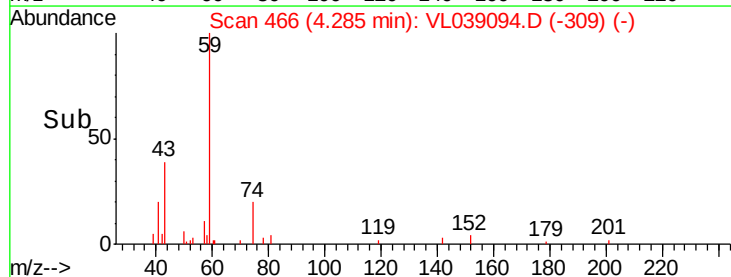
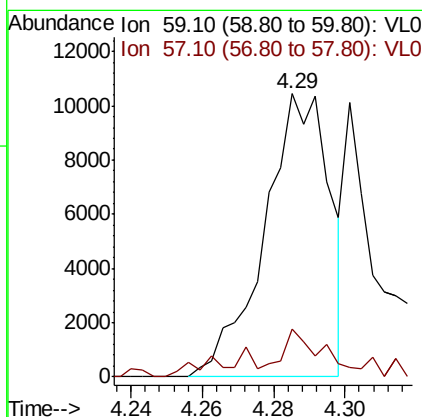
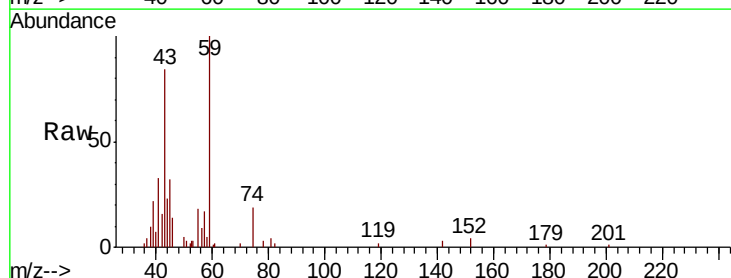
#16
 1,3-Butadiene
 Concen: 0.162 ppbv
 RT: 3.29
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 AP-2
 Acq: 23 May 2022 21:44

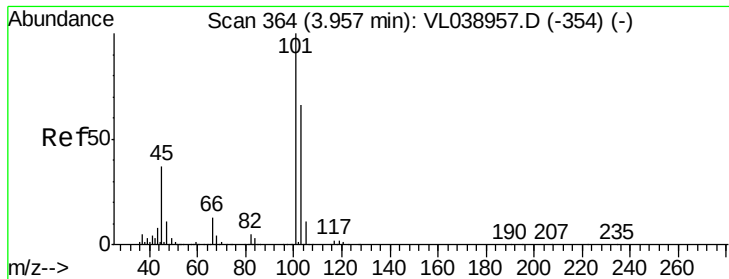
Tot Ion: 39 Resp: 8951
 Ion Ratio Lower Upper
 39 100
 54 20.2 65.2 97.8#



#17
 tert-Butyl alcohol
 Concen: 0.179 ppbv
 RT: 4.29 min Scan# 466
 Delta R.T. 0.00 min
 Lab File: VL039094.D
 Acq: 23 May 2022 21:44

Tgt Ion: 59 Resp: 13234
 Ion Ratio Lower Upper
 59 100
 57 20.3 9.2 13.8#





#19

Isopropyl Alcohol

Concen: 7.343 ppbv

RT: 3.96 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

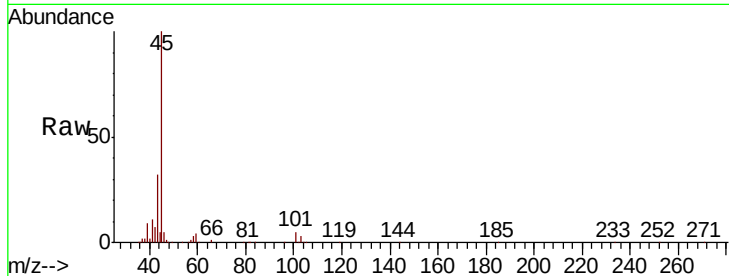
Acq: 23 May 2022 21:44

Tot Ion: 45 Resp: 336638

Ion Ratio Lower Upper

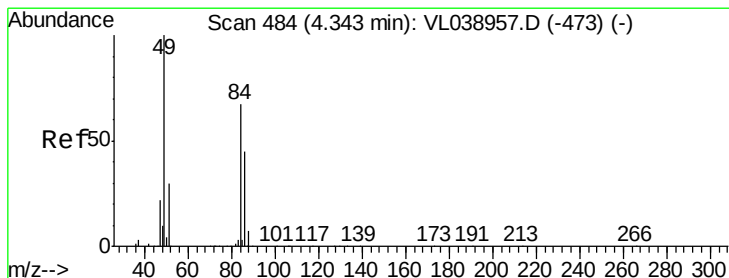
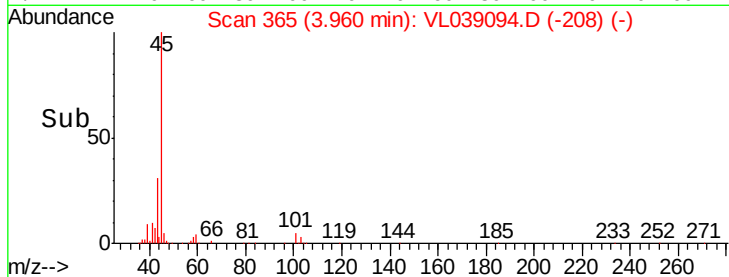
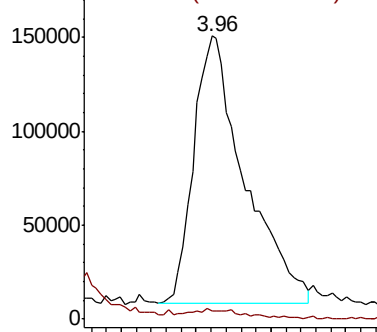
45 100

58 3.0 1.4 2.2#



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#20

Methylene Chloride

Concen: 27.626 ppbv

RT: 4.33 min Scan# 481

Delta R.T. -0.01 min

Lab File: VL039094.D

Acq: 23 May 2022 21:44

Tgt Ion: 84 Resp: 1003961

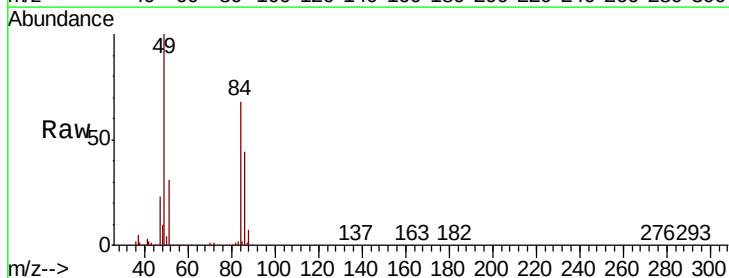
Ion Ratio Lower Upper

84 100

49 146.2 119.9 179.9

51 44.9 35.7 53.5

86 64.5 53.8 80.6

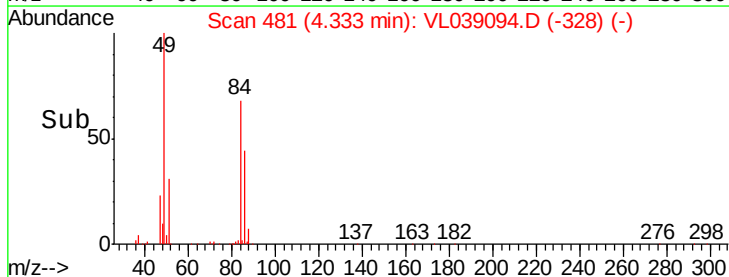
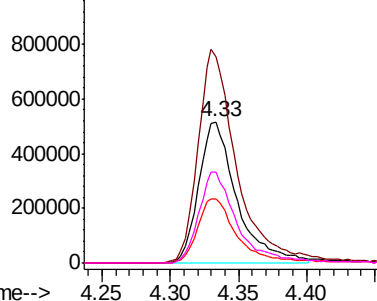


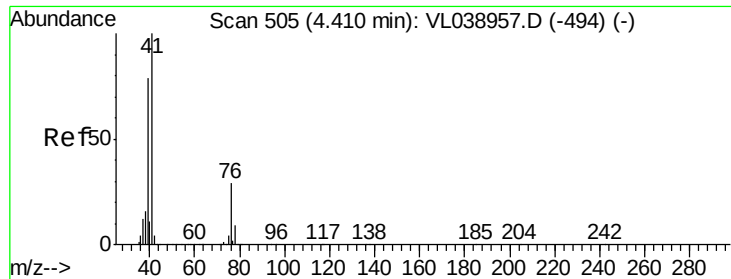
Abundance Ion 84.00 (83.70 to 84.70): VL0

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





#21

Allvl Chloride

Concen: 0.218 ppbv

RT: 4.34 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

Acq: 23 May 2022 21:44

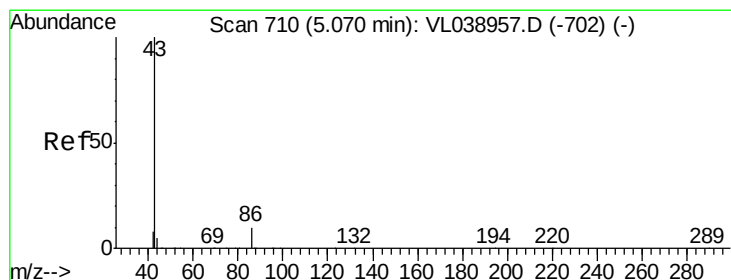
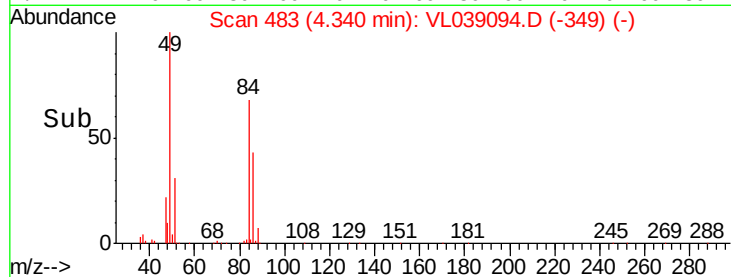
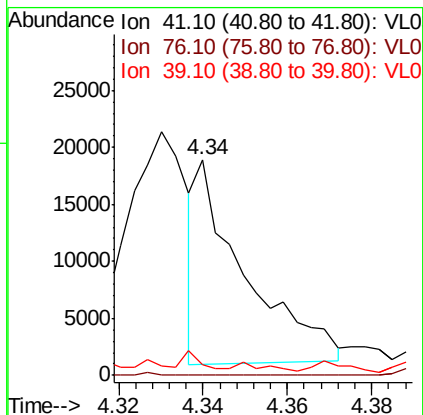
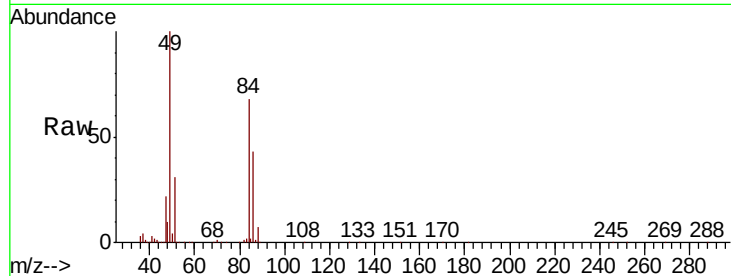
Tot Ion: 41 Resp: 14329

Ion Ratio Lower Upper

41 100

76 1.0 24.2 36.4#

39 12.0 63.8 95.8#



#23

Vinyl Acetate

Concen: 1.875 ppbv

RT: 5.05 min Scan# 704

Delta R.T. -0.02 min

Lab File: VL039094.D

Acq: 23 May 2022 21:44

Tgt Ion: 43 Resp: 143034

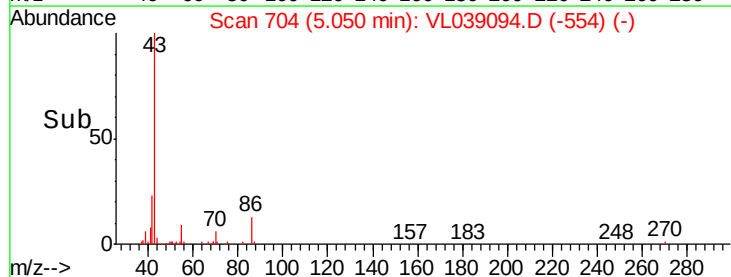
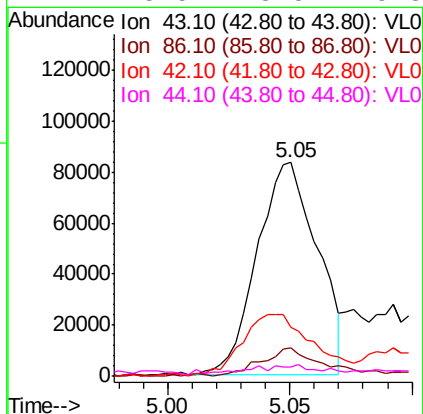
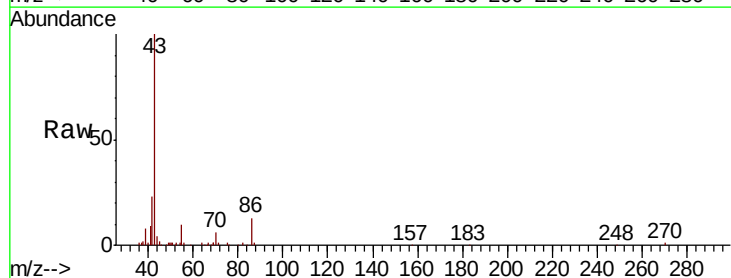
Ion Ratio Lower Upper

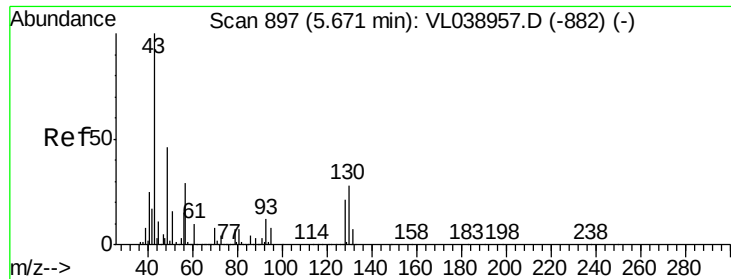
43 100

86 13.0 6.6 9.8#

42 22.7 8.1 12.1#

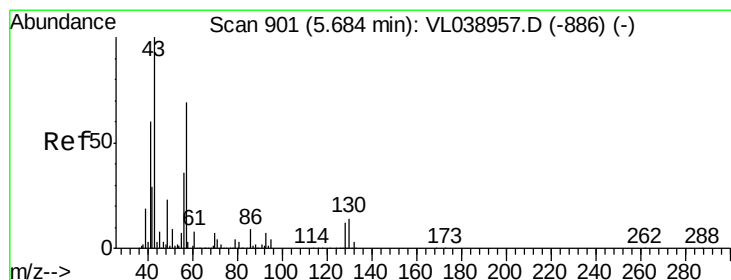
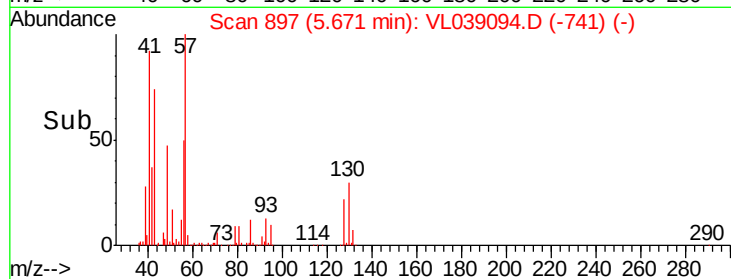
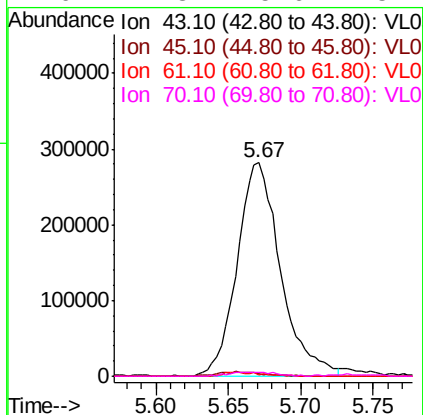
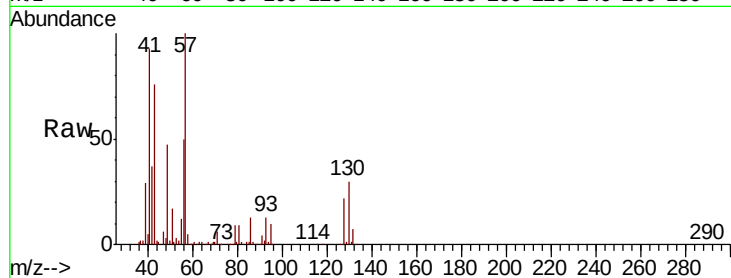
44 3.5 3.5 5.3#





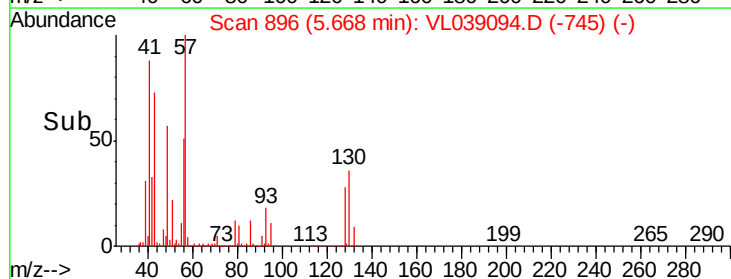
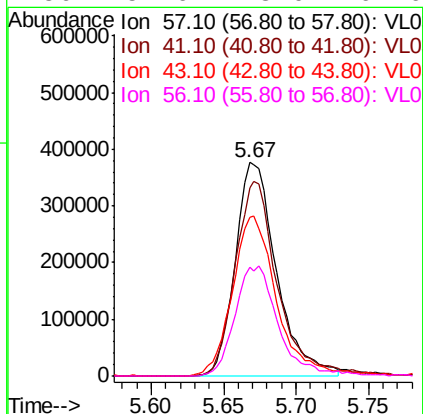
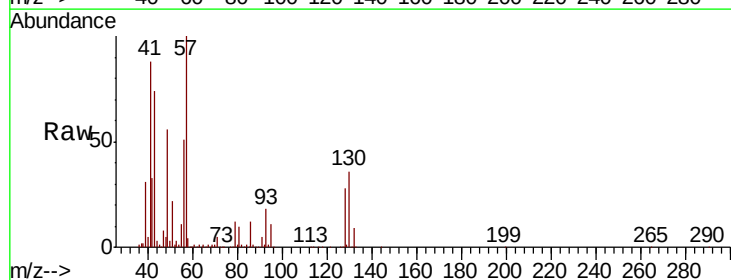
#25
Ethyl Acetate
Concen: 2.542 ppbv
RT: 5.67 min
Delta R.T.: MSVOA_L
Lab File: ClientSampleId :
Acq: 23 May 2022 21:44

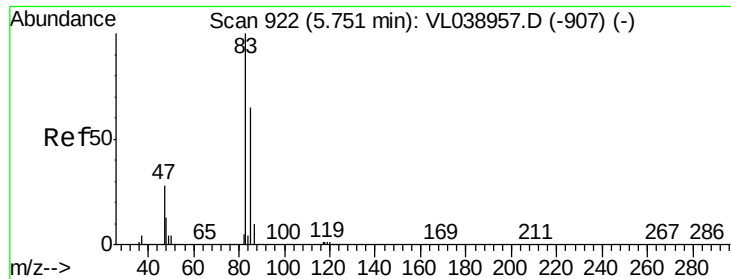
Tot Ion:	43	Resp:	586669
Ion	Ratio	Lower	Upper
43	100		
45	2.3	8.1	12.1#
61	1.7	7.8	11.6#
70	2.3	5.6	8.4#



#26
Hexane
Concen: 7.292 ppbv
RT: 5.67 min Scan# 896
Delta R.T.: -0.02 min
Lab File: VL039094.D
Acq: 23 May 2022 21:44

Tgt Ion:	57	Resp:	747692
Ion	Ratio	Lower	Upper
57	100		
41	94.9	75.2	112.8
43	80.5	190.8	286.2#
56	54.6	43.0	64.6





#29

Chloroform

Concen: 2.255 ppbv

RT: 5.74 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

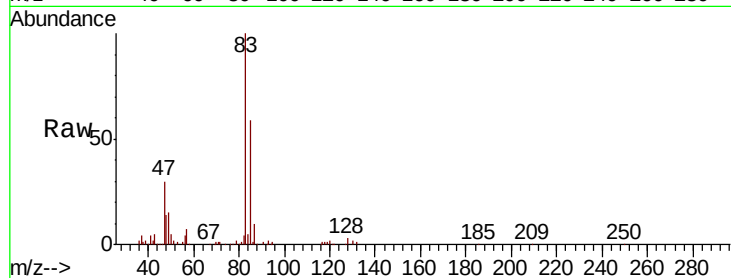
Acq: 23 May 2022 21:44

Tot Ion: 83 Resp: 374039

Ion Ratio Lower Upper

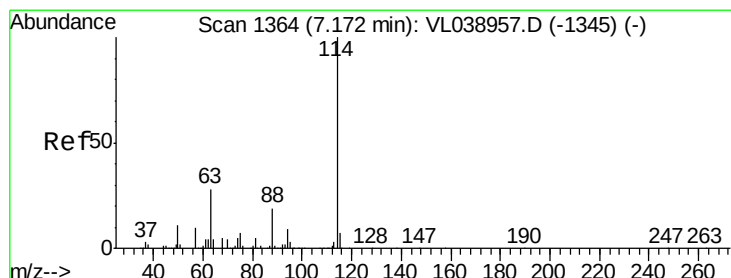
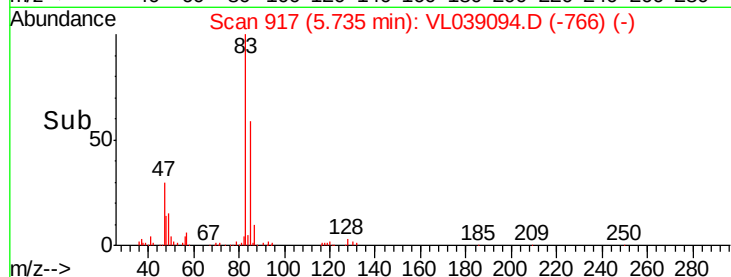
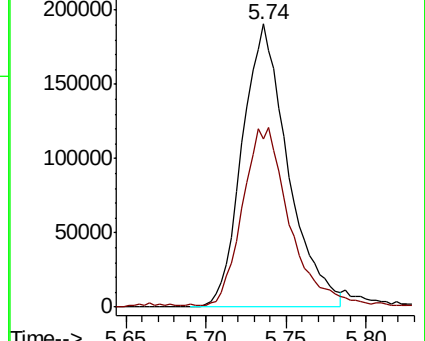
83 100

85 58.4 51.8 77.6



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: 7.16 min Scan# 1359

Delta R.T. -0.02 min

Lab File: VL039094.D

Acq: 23 May 2022 21:44

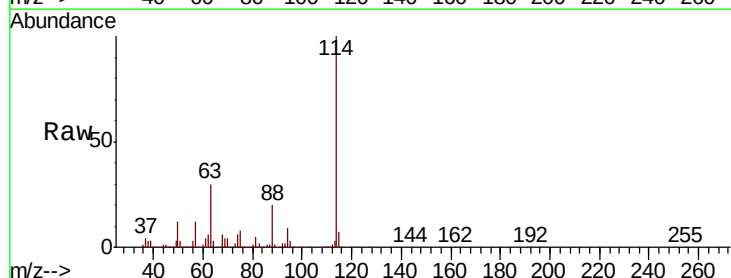
Tgt Ion: 114 Resp: 2257367

Ion Ratio Lower Upper

114 100

63 29.1 22.6 33.8

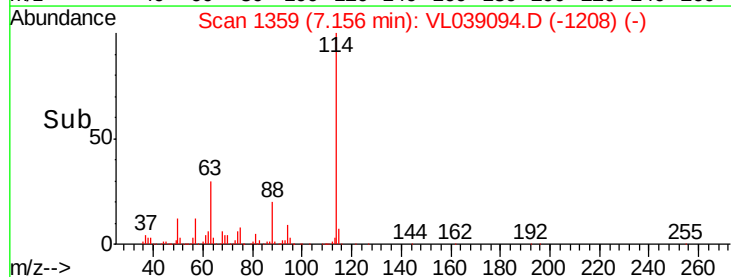
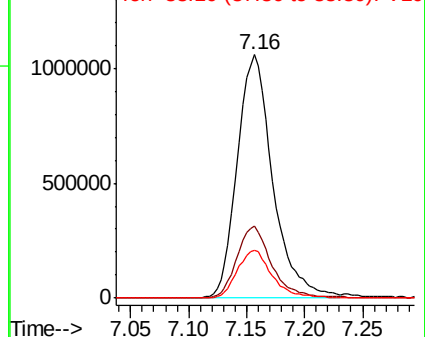
88 19.3 15.4 23.0

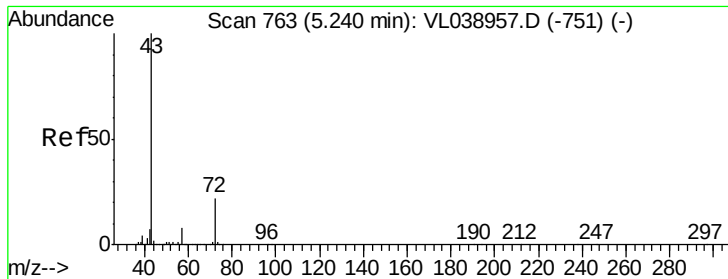


Abundance Ion 114.10 (113.80 to 114.80): V

Ion 63.10 (62.80 to 63.80): VL0

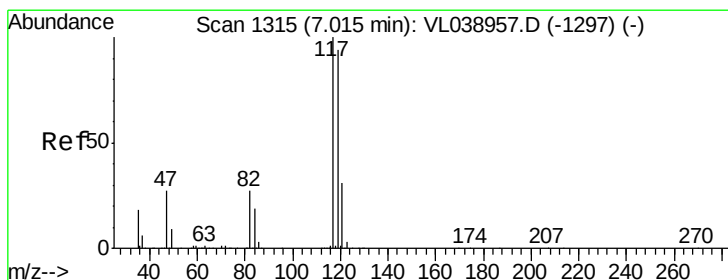
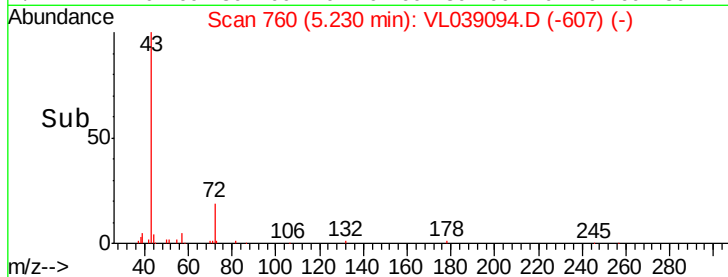
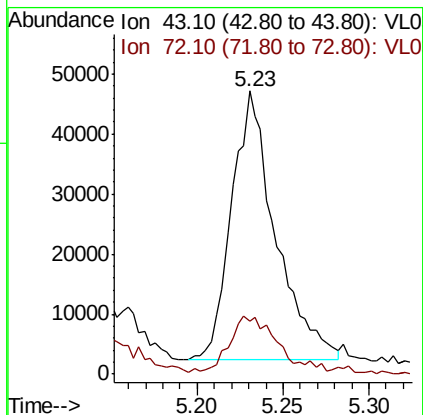
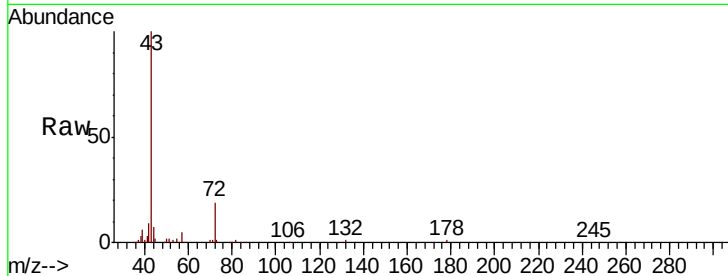
Ion 88.10 (87.80 to 88.80): VL0





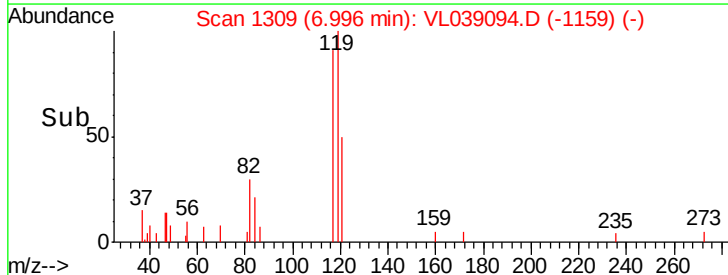
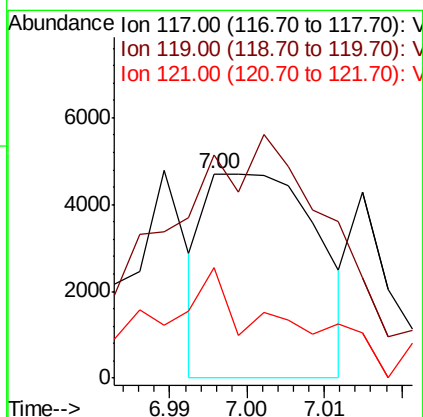
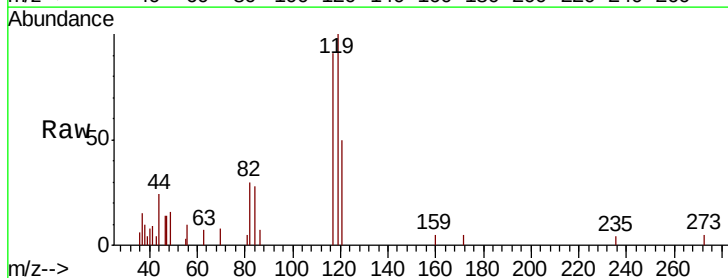
#34
 2-Butanone
 Concen: 0.691 ppbv
 RT: 5.23
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 AP-2
 Acq: 23 May 2022 21:44

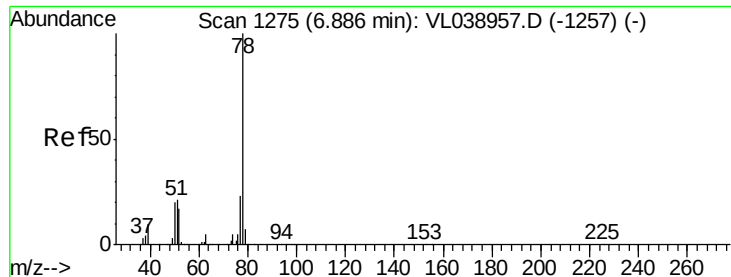
Tot Ion: 43 Resp: 79591
 Ion Ratio Lower Upper
 43 100
 72 25.8 17.8 26.6



#35
 Carbon Tetrachloride
 Concen: 0.032 ppbv
 RT: 7.00 min Scan# 1309
 Delta R.T. -0.02 min
 Lab File: VL039094.D
 Acq: 23 May 2022 21:44

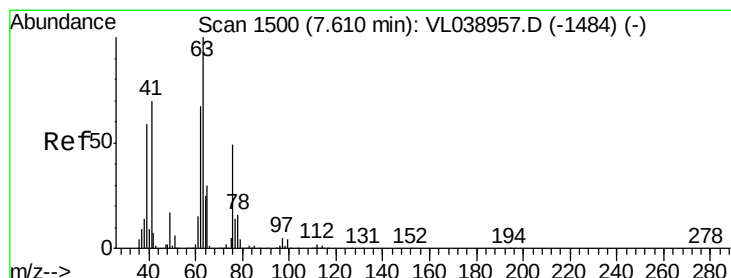
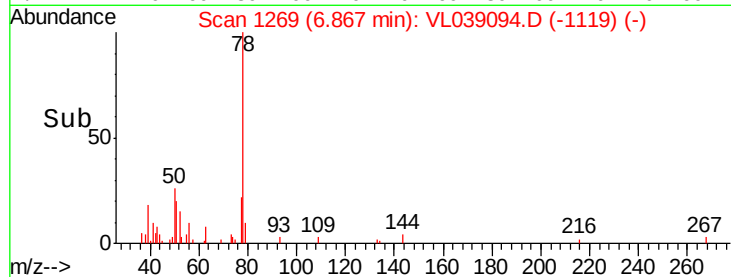
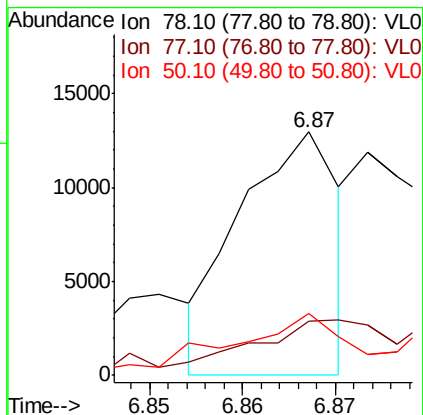
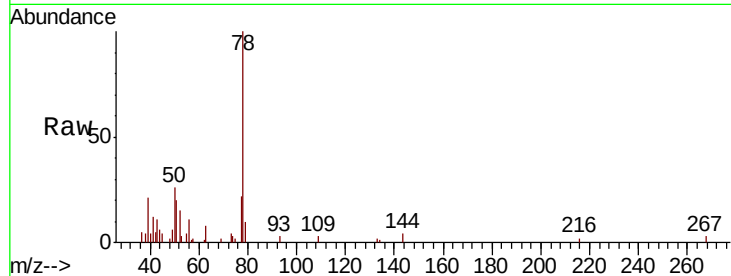
Tgt Ion: 117 Resp: 4740
 Ion Ratio Lower Upper
 117 100
 119 69.4 75.2 112.8#
 121 58.3 24.6 37.0#





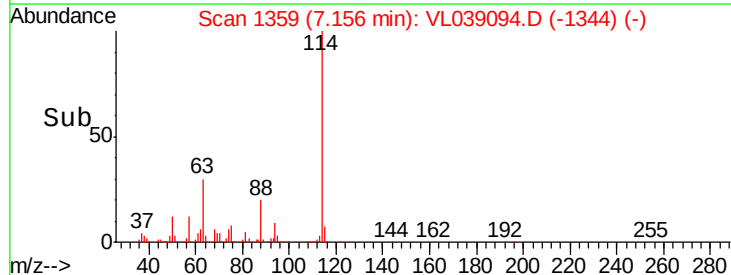
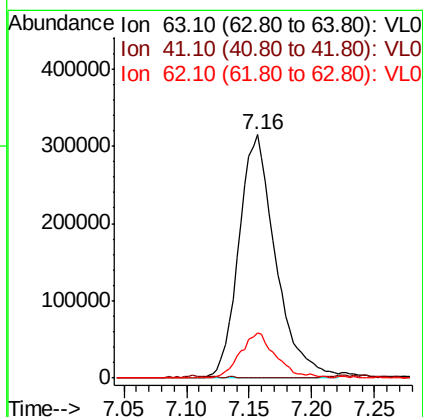
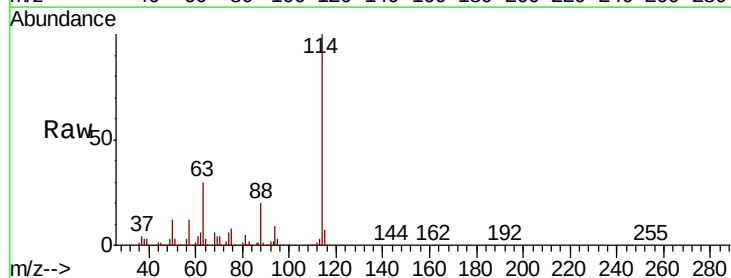
#36
Benzene
Concen: 0.050 ppbv
RT: 6.87
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 23 May 2022 21:44

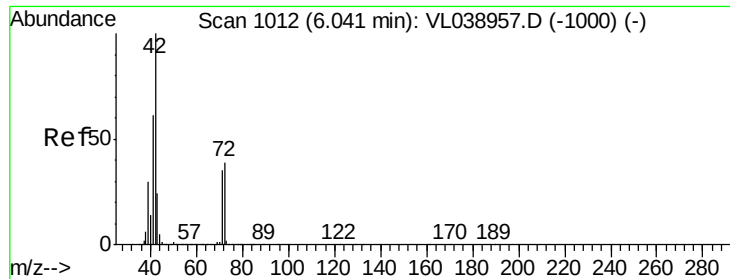
Tot Ion: 78 Resp: 9723
Ion Ratio Lower Upper
78 100
77 23.7 18.6 28.0
50 17.5 15.6 23.4



#39
1,2-Dichloropropane
Concen: 8.555 ppbv
RT: 7.16 min Scan# 1359
Delta R.T. -0.45 min
Lab File: VL039094.D
Acq: 23 May 2022 21:44

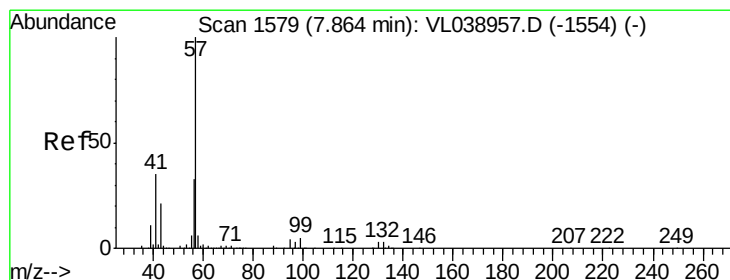
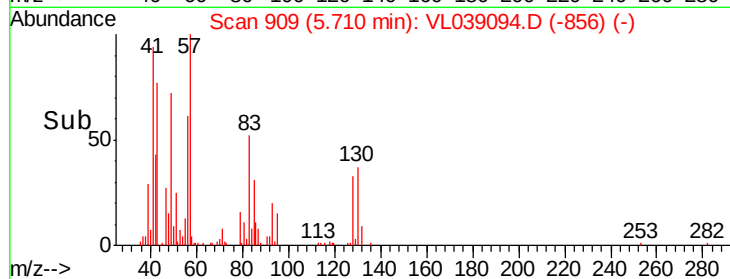
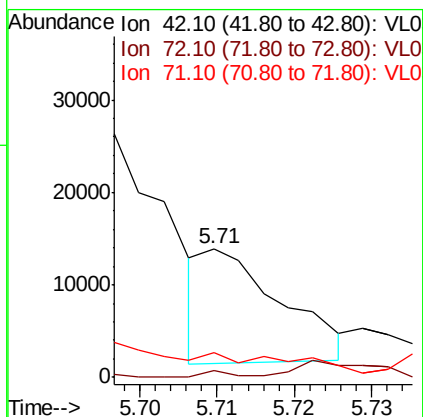
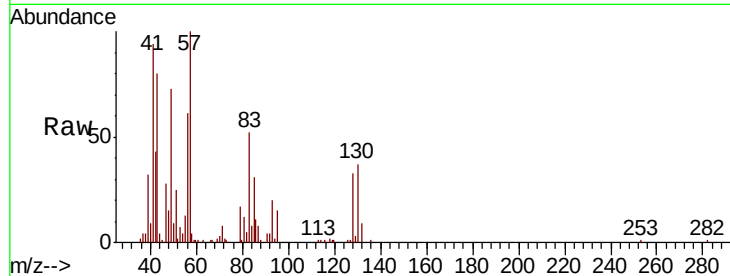
Tgt Ion: 63 Resp: 643037
Ion Ratio Lower Upper
63 100
41 0.0 55.9 83.9#
62 18.6 53.8 80.6#





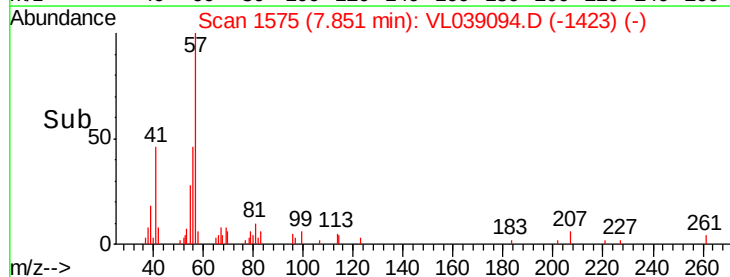
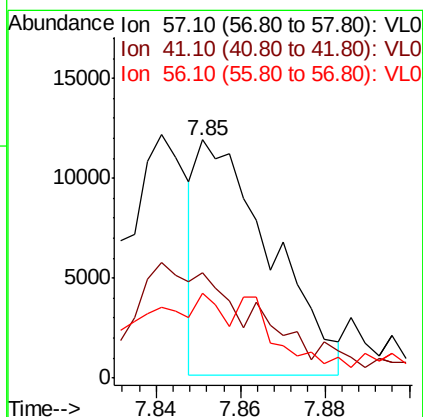
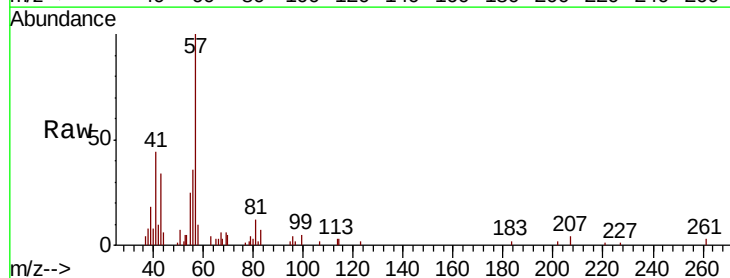
#41
Tetrahydrofuran
Concen: 0.113 ppbv
RT: 5.71 min
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId :
Acq: 23 May 2022 21:44

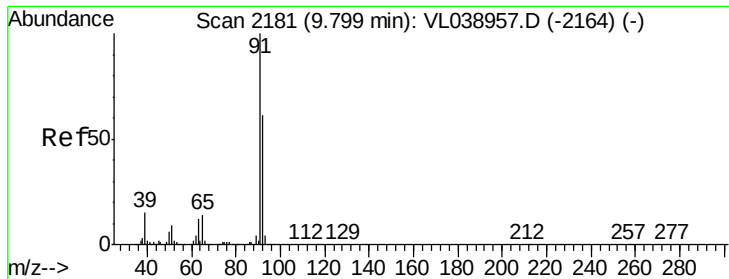
Tot Ion	Ratio	Lower	Upper
42	100		
72	29.9	31.8	47.6#
71	0.0	30.6	45.8#



#44
2,2,4-Trimethylpentane
Concen: 0.042 ppbv
RT: 7.85 min Scan# 1575
Delta R.T.: -0.01 min
Lab File: VL039094.D
Acq: 23 May 2022 21:44

Tgt Ion	Ratio	Lower	Upper
57	100		
41	0.0	26.3	39.5#
56	84.6	24.6	37.0#





#53

Toluene

Concen: 0.200 ppbv

RT: 9.78 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

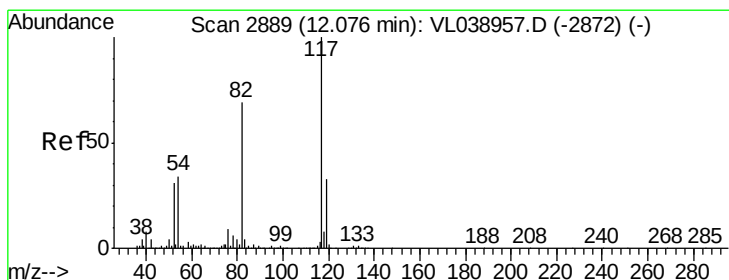
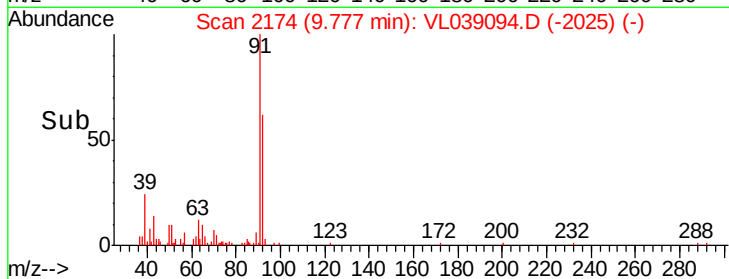
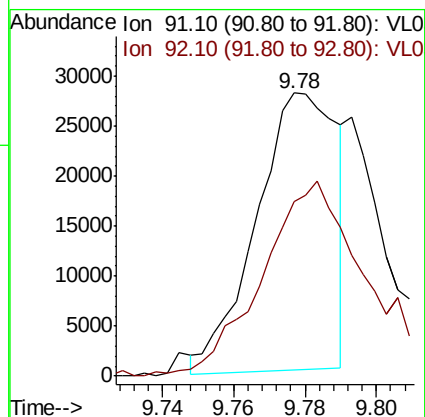
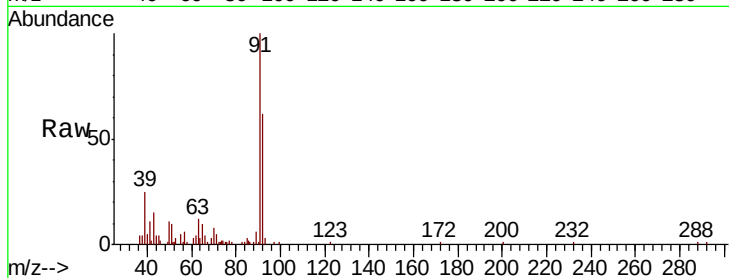
Acq: 23 May 2022 21:44

Tot Ion: 91 Resp: 43262

Ion Ratio Lower Upper

91 100

92 93.6 48.2 72.2#



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.06 min Scan# 2884

Delta R.T. -0.02 min

Lab File: VL039094.D

Acq: 23 May 2022 21:44

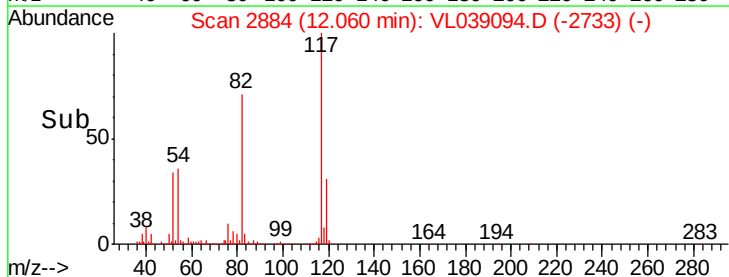
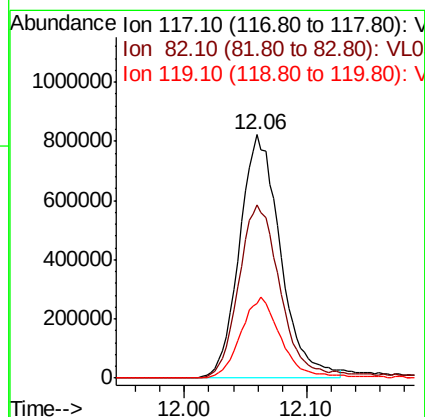
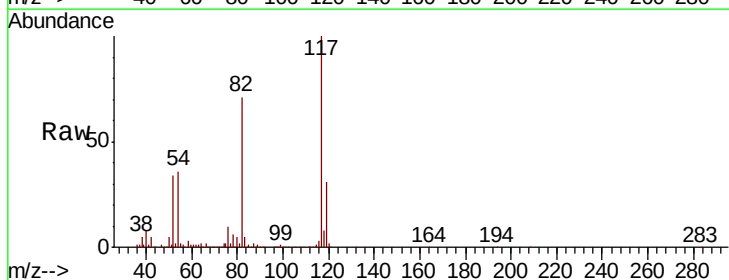
Tgt Ion: 117 Resp: 1906570

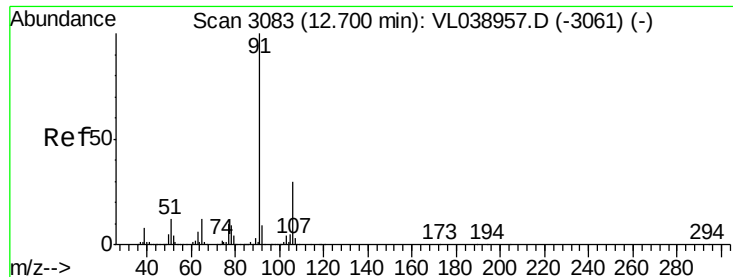
Ion Ratio Lower Upper

117 100

82 75.3 57.0 85.6

119 33.2 27.2 40.8





#58

Ethyl Benzene

Concen: 0.101 ppbv

RT: 12.68

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

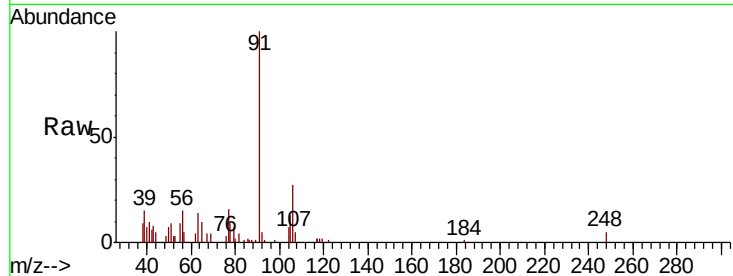
Acq: 23 May 2022 21:44

Tot Ion: 91 Resp: 27652

Ion Ratio Lower Upper

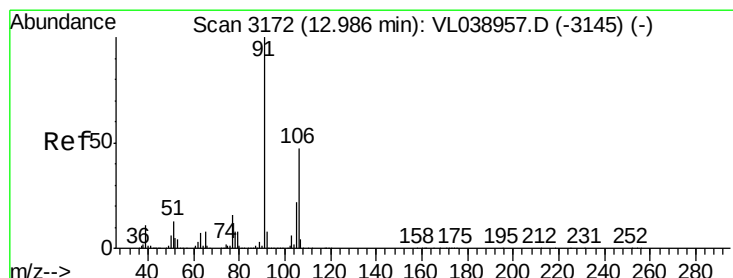
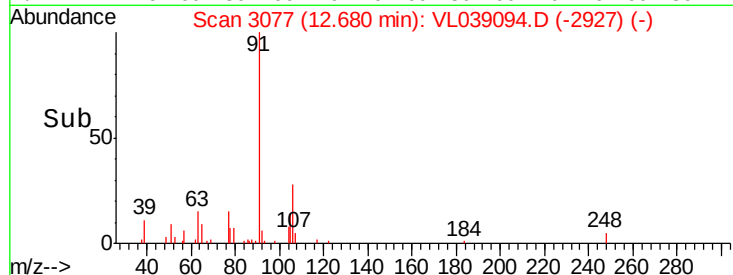
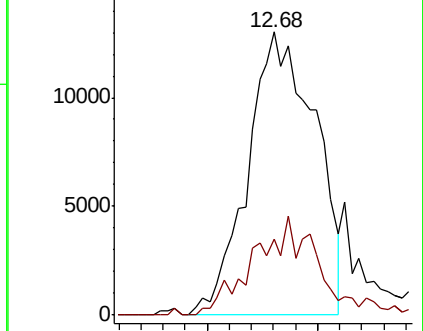
91 100

106 26.8 24.2 36.4



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V



#59

m/p-Xylene

Concen: 0.035 ppbv

RT: 12.98 min Scan# 3170

Delta R.T. -0.01 min

Lab File: VL039094.D

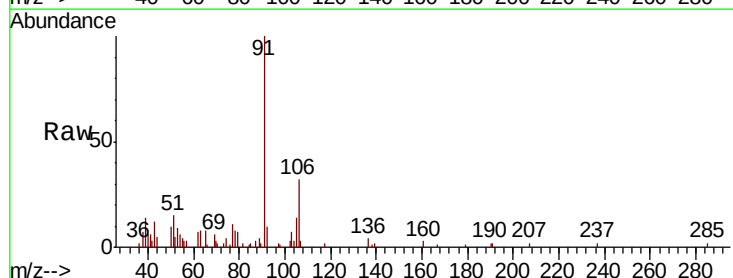
Acq: 23 May 2022 21:44

Tgt Ion: 91 Resp: 8121

Ion Ratio Lower Upper

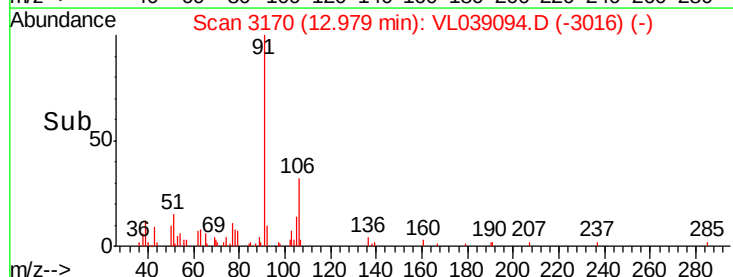
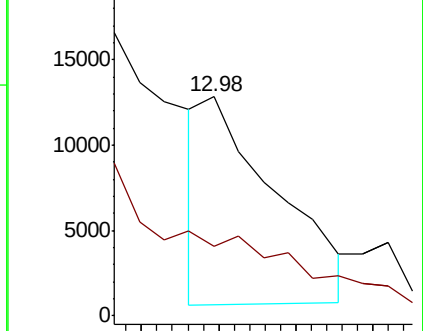
91 100

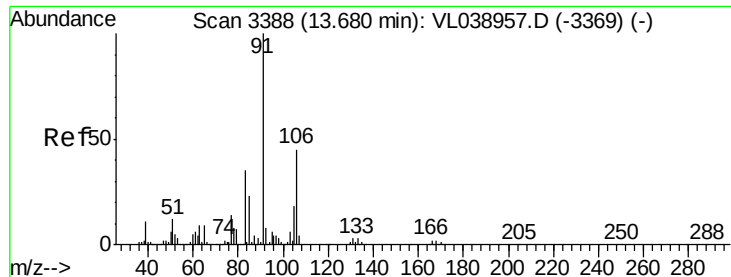
106 0.0 34.6 52.0#



Abundance Ion 91.10 (90.80 to 91.80): VL0

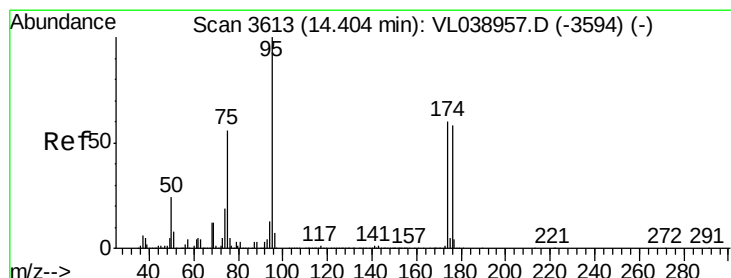
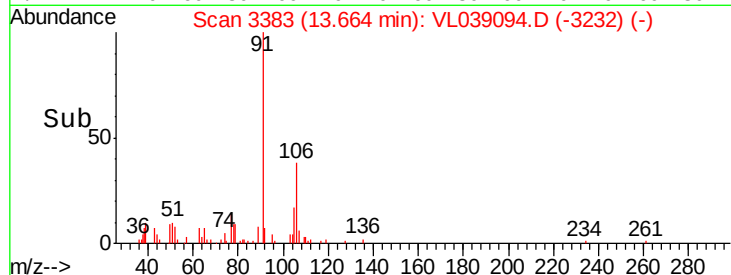
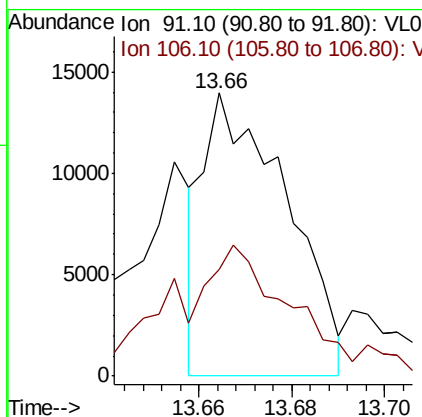
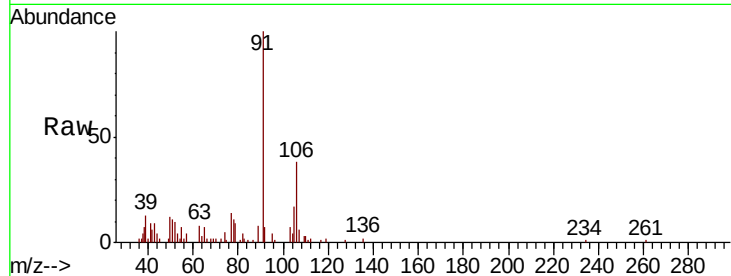
Ion 106.10 (105.80 to 106.80): V





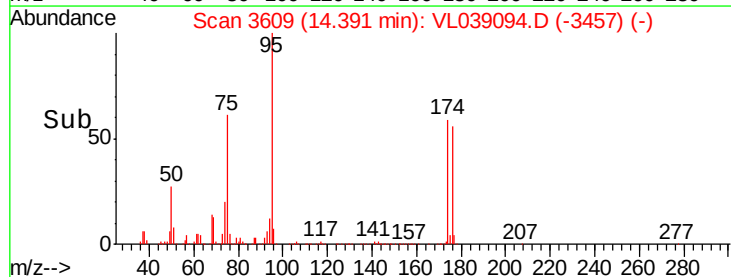
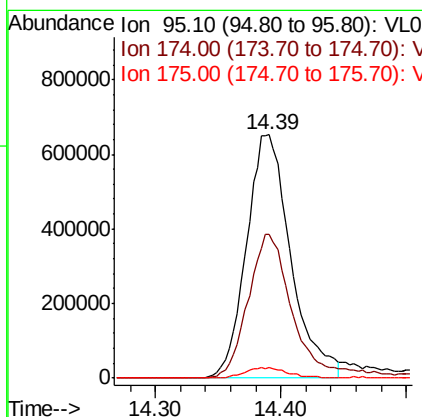
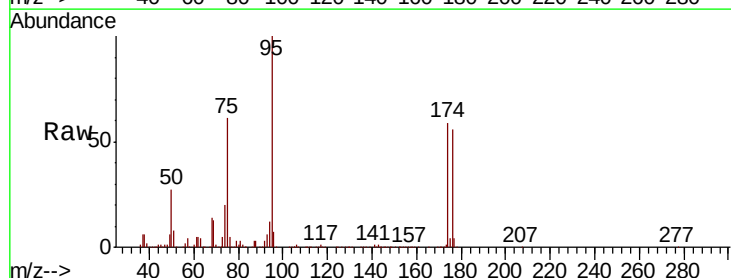
#60
o-Xylene
Concen: 0.079 ppbv
RT: 13.66
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 23 May 2022 21:44

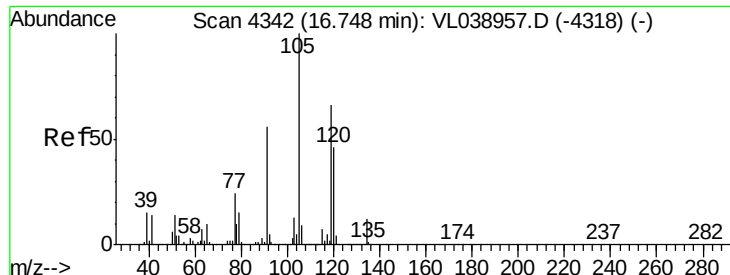
Tot Ion: 91 Resp: 17362
Ion Ratio Lower Upper
91 100
106 74.1 22.2 66.6#



#68
1-Bromo-4-Fluorobenzene
Concen: 10.628 ppbv
RT: 14.39 min Scan# 3609
Delta R.T. -0.01 min
Lab File: VL039094.D
Acq: 23 May 2022 21:44

Tgt Ion: 95 Resp: 1604760
Ion Ratio Lower Upper
95 100
174 62.7 50.8 76.2
175 4.4 3.8 5.6





#74

1,2,4-Trimethylbenzene

Concen: 0.061 ppbv

RT: 16.73 Instrument:

Delta R.T MSVOA_L

Lab File: ClientSampleId:

Acq: 23 May 2022 21:44

Tot Ion:105 Resp: 15155

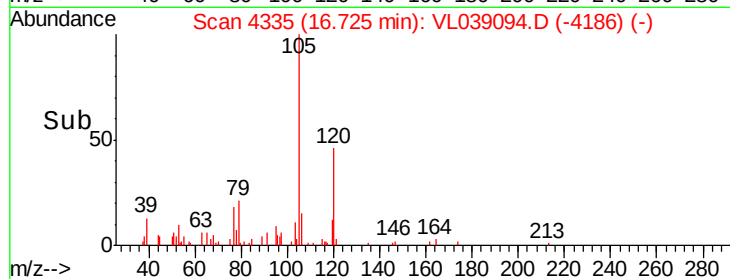
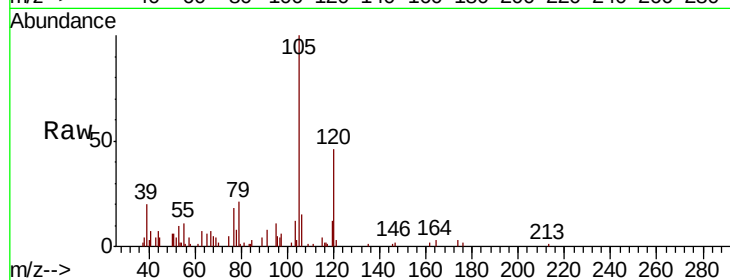
Ion Ratio Lower Upper

105 100

120 39.6 36.9 55.3

91 0.0 45.0 67.4#

77 12.7 19.2 28.8#



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

