

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL022322\
 Data File : VL038425.D
 Acq On : 24 Feb 2022 2:36
 Operator : SY/AP
 Sample : N1605-04
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-5

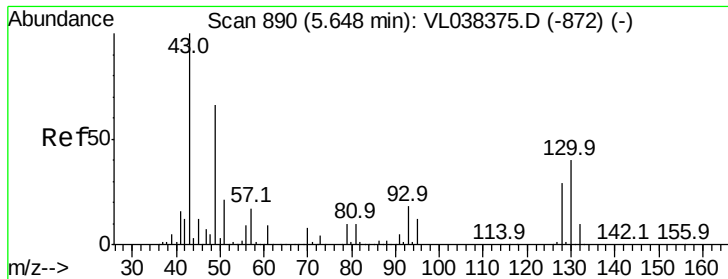
Quant Time: Feb 24 07:33:06 2022
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL022222AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Tue Feb 22 19:45:51 2022
 QLast Update : Tue Feb 22 19:45:51 2022
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.65	49	768112	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.15	114	1875566	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.05	117	1649593	10.00	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.38	95	1336772	9.79	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	97.90%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.04	85	31170	0.26	ppbv #	87
3) Chlorodifluoromethane	2.98	51	82779	0.61	ppbv #	81
4) Chloromethane	3.13	50	25912	0.55	ppbv	91
9) Propene	3.20	41	162795	3.64	ppbv	96
10) Heptane	8.10	43	41060	0.38	ppbv	91
11) Trichlorofluoromethane	3.93	101	13968	0.12	ppbv	83
12) 1,1,2-Trichlorotrifluoroet	4.47	101	4376	0.05	ppbv #	67
13) Ethanol	3.59	45	1938614	433.76	ppbv	85
15) Acetone	3.83	43	539988	8.27	ppbv #	80
16) 1,3-Butadiene	3.29	39	3050	0.07	ppbv #	12
17) tert-Butyl alcohol	3.95	59	157962	2.42	ppbv	98
19) Isopropyl Alcohol	3.95	45	4423145	116.94	ppbv #	97
20) Methylene Chloride	4.33	84	34247	1.06	ppbv	84
21) Allyl Chloride	4.58	41	4281	0.08	ppbv #	35
23) Vinyl Acetate	5.04	43	62580	0.72	ppbv #	23
25) Ethyl Acetate	5.66	43	451795	2.57	ppbv #	82
26) Hexane	5.67	57	559516	7.04	ppbv #	45
29) Chloroform	5.73	83	9948	0.08	ppbv	98
34) 2-Butanone	5.22	43	97742	1.66	ppbv	95
35) Carbon Tetrachloride	7.00	117	6452	0.05	ppbv	98
36) Benzene	6.86	78	129718	0.79	ppbv	98
39) 1,2-Dichloropropane	7.15	63	509407	7.75	ppbv #	24
41) Tetrahydrofuran	6.29	42	5429	0.14	ppbv #	38
44) 2,2,4-Trimethylpentane	7.84	57	99203	0.35	ppbv #	79
53) Toluene	9.78	91	1057317	5.90	ppbv	99
58) Ethyl Benzene	12.68	91	44003	0.20	ppbv	100
59) m/p-Xylene	12.96	91	34409	0.18	ppbv #	33
60) o-Xylene	13.66	91	48896	0.27	ppbv	98
72) 4-Ethyltoluene	15.81	105	8216	0.04	ppbv #	13
73) 1,3,5-Trimethylbenzene	15.96	105	15912	0.09	ppbv #	78
74) 1,2,4-Trimethylbenzene	16.73	105	43868	0.23	ppbv #	67

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



#1

Bromochloromethane

Concen: 10.00 ppbv

RT: 5.65 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 24 Feb 2022 2:30

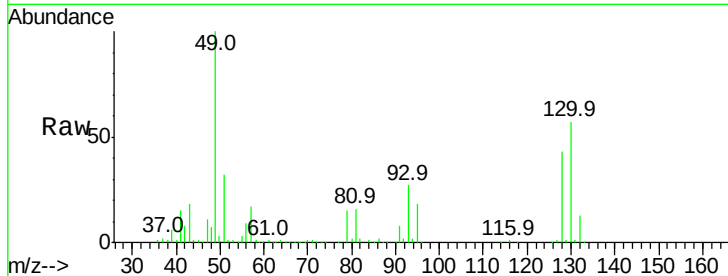
Tgt Ion: 49 Resp: 768112

Ion Ratio Lower Upper

49 100

128 47.8 24.3 72.9

130 61.2 30.1 90.5



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): VL0

Ion 130.00 (129.70 to 130.70): VL0

500000

400000

300000

200000

100000

0

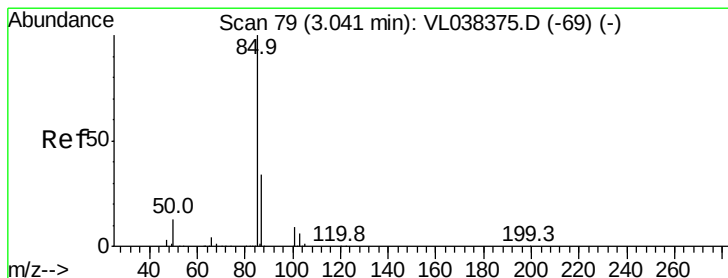
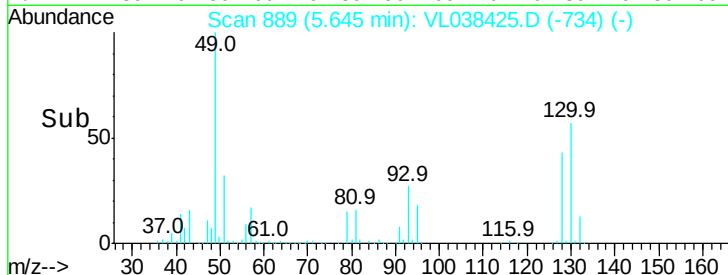
5.55

5.60

5.65

5.70

5.75



#2

Dichlorodifluoromethane

Concen: 0.26 ppbv

RT: 3.04 min Scan# 79

Delta R.T. 0.00 min

Lab File: VL038425.D

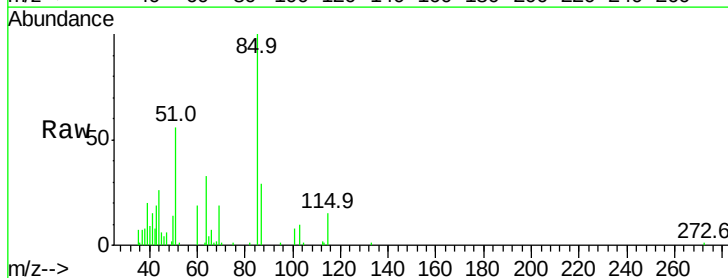
Acq: 24 Feb 2022 2:36

Tgt Ion: 85 Resp: 31170

Ion Ratio Lower Upper

85 100

87 26.8 27.4 41.0#



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

20000

15000

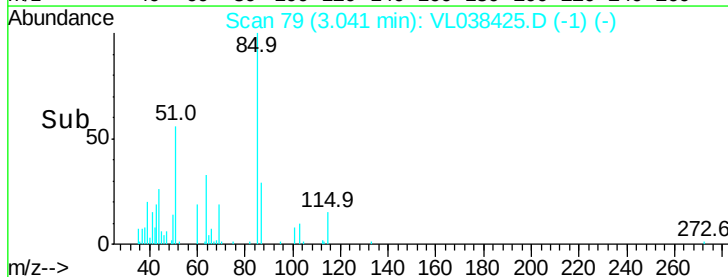
10000

5000

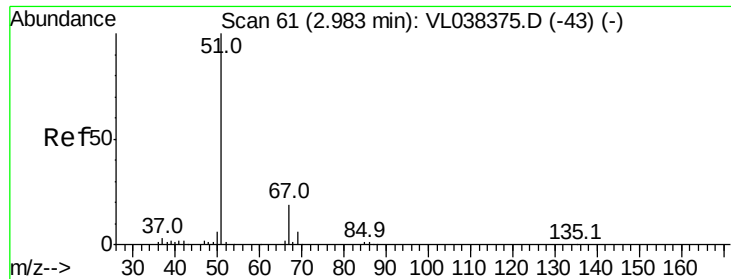
0

3.00

3.05



Time-->



#3

Chlorodifluoromethane

Concen: 0.61 ppbv

RT: 2.98 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: IA-5

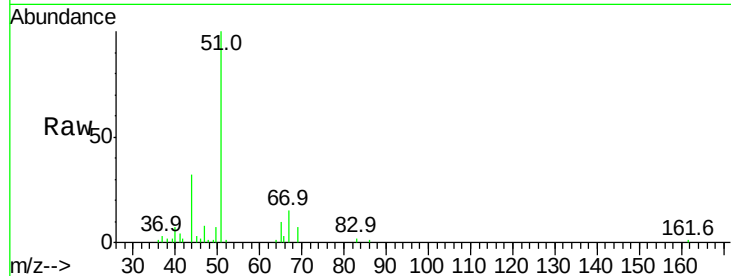
Acq: 24 Feb 2022 2:30

Tgt Ion: 51 Resp: 82779

Ion Ratio Lower Upper

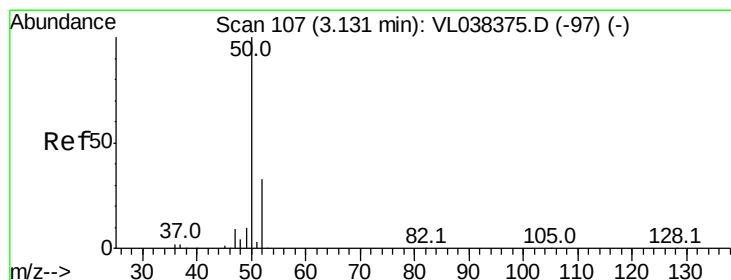
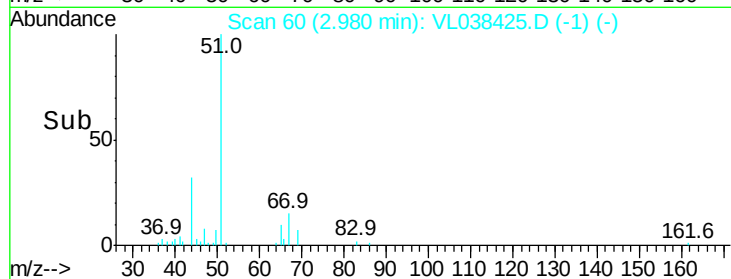
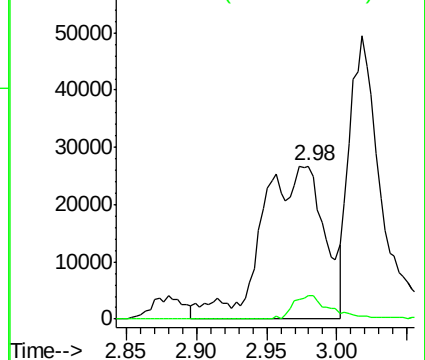
51 100

67 9.8 14.7 22.1#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.55 ppbv

RT: 3.13 min Scan# 106

Delta R.T. -0.00 min

Lab File: VL038425.D

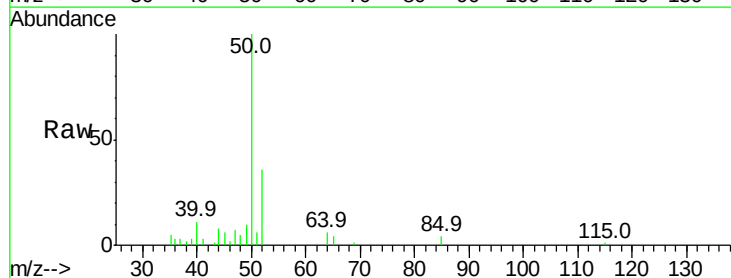
Acq: 24 Feb 2022 2:36

Tgt Ion: 50 Resp: 25912

Ion Ratio Lower Upper

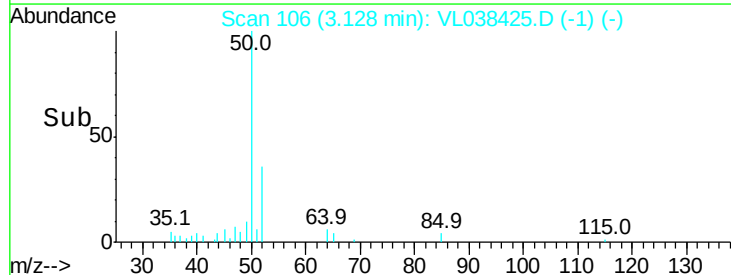
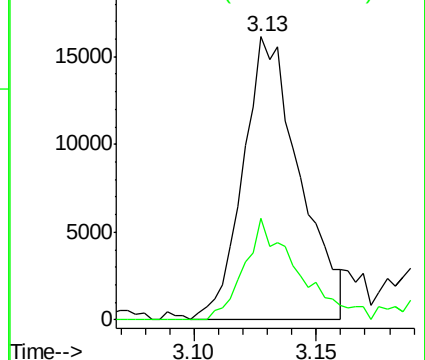
50 100

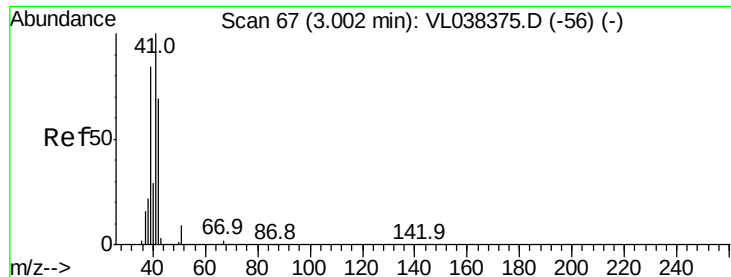
52 38.4 26.5 39.7



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 3.64 ppbv

RT: 3.20 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

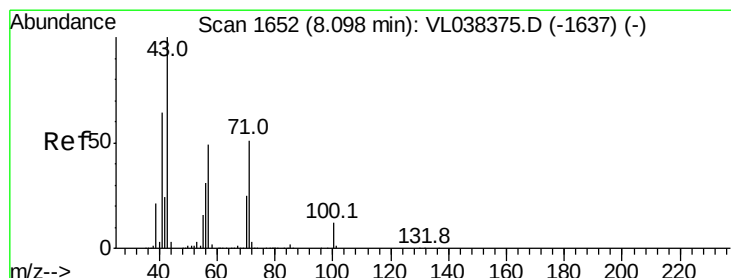
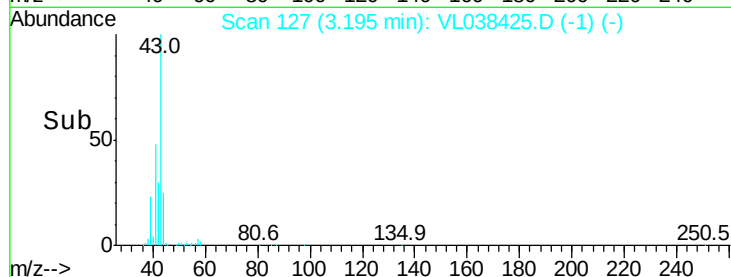
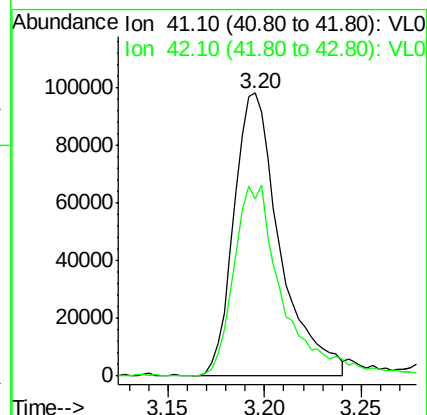
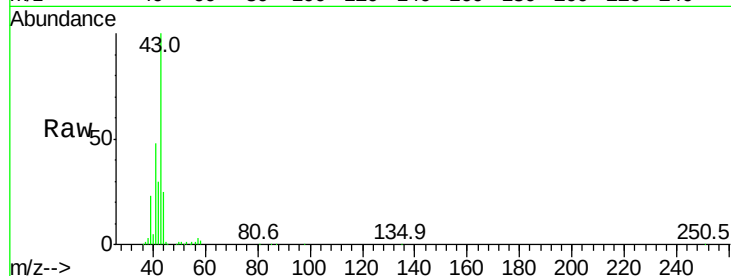
Acq: 24 Feb 2022 2:30

Tgt Ion: 41 Resp: 162795

Ion Ratio Lower Upper

41 100

42 71.6 54.6 82.0



#10

Heptane

Concen: 0.38 ppbv

RT: 8.10 min Scan# 1651

Delta R.T. -0.00 min

Lab File: VL038425.D

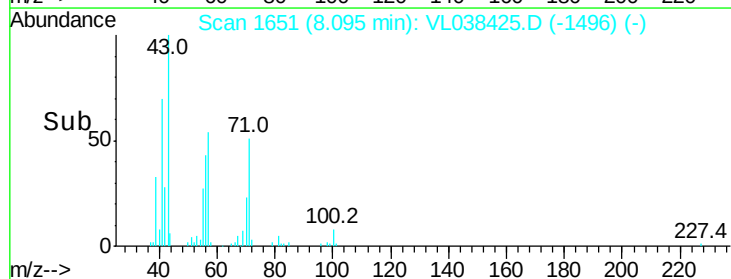
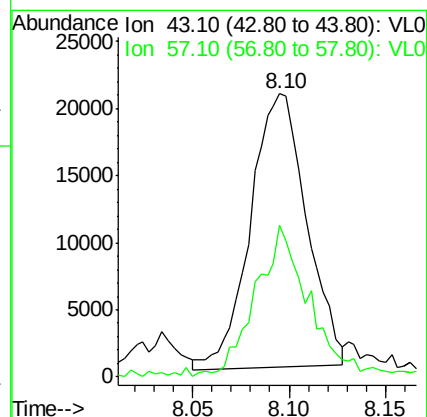
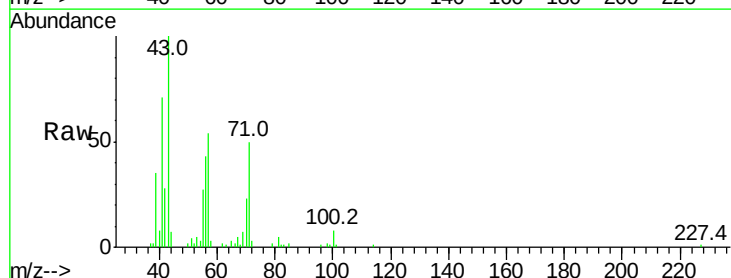
Acq: 24 Feb 2022 2:36

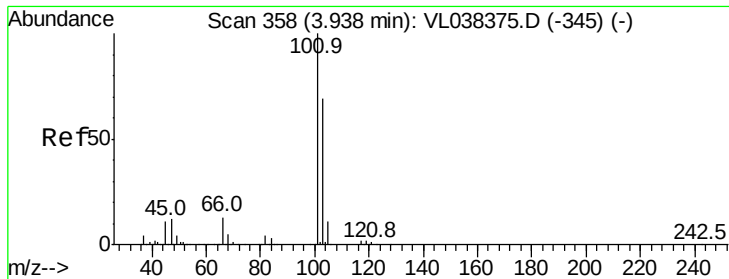
Tgt Ion: 43 Resp: 41060

Ion Ratio Lower Upper

43 100

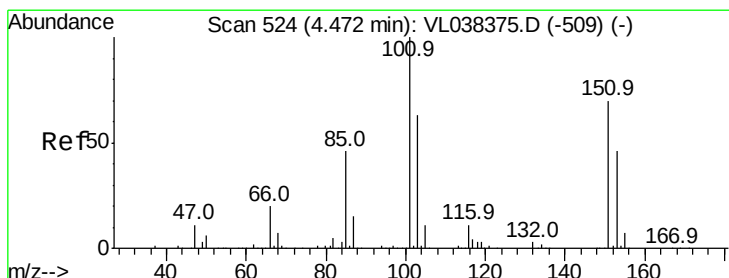
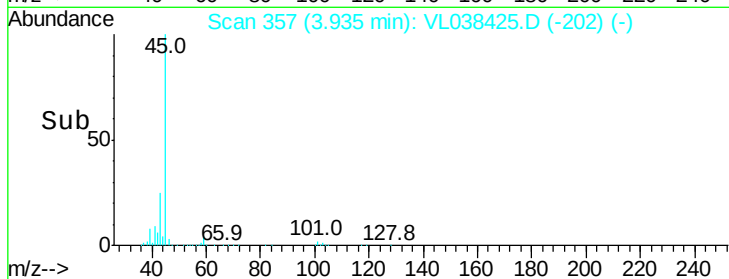
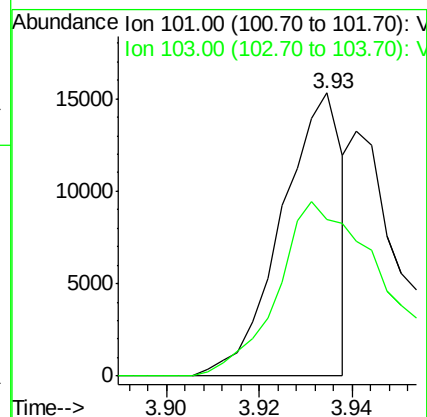
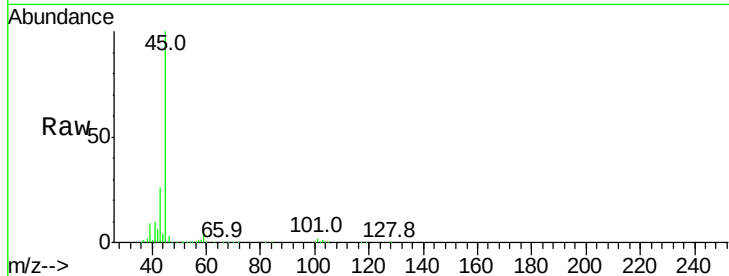
57 55.7 39.8 59.8





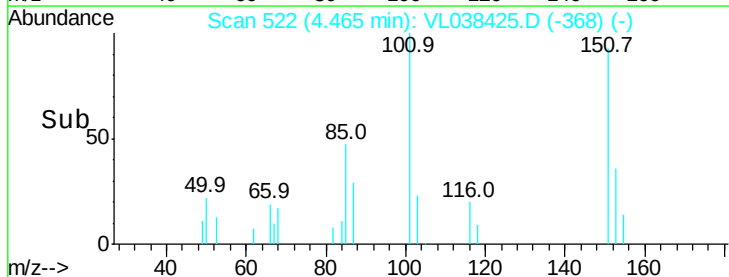
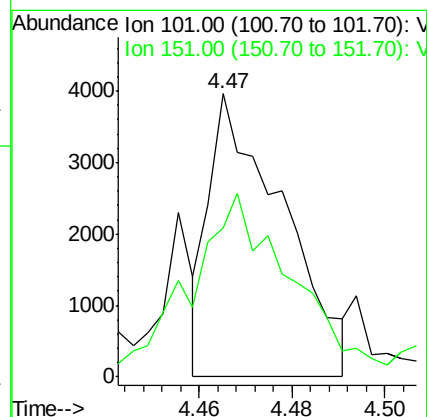
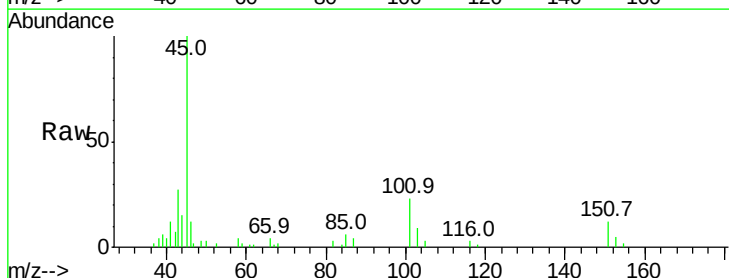
#11
 Trichlorofluoromethane
 Concen: 0.12 ppbv
 RT: 3.93
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 24 Feb 2022 2:30

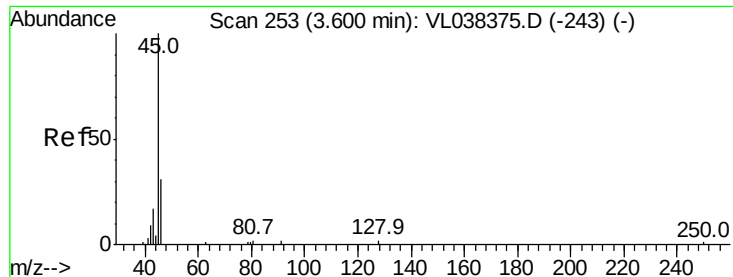
Tgt Ion:101 Resp: 13968
 Ion Ratio Lower Upper
 101 100
 103 55.2 55.0 82.4



#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.05 ppbv
 RT: 4.47 min Scan# 522
 Delta R.T. -0.01 min
 Lab File: VL038425.D
 Acq: 24 Feb 2022 2:36

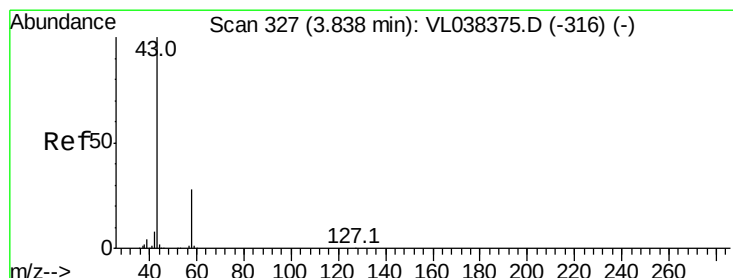
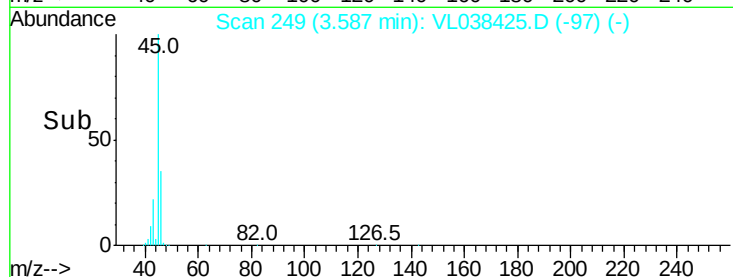
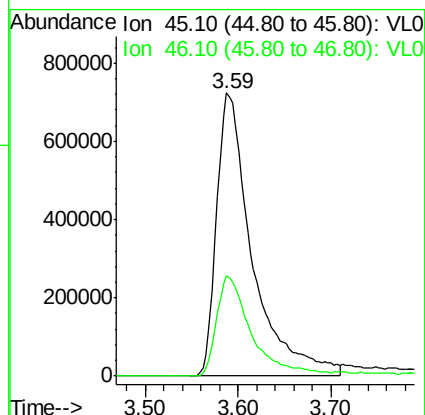
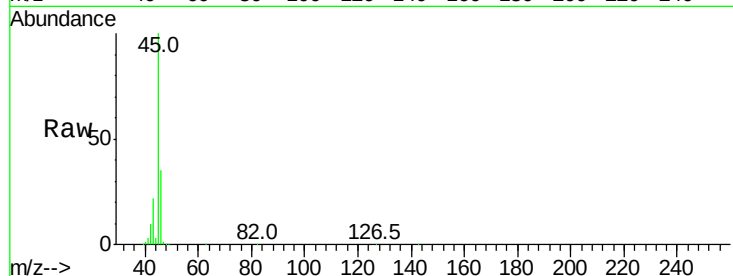
Tgt Ion:101 Resp: 4376
 Ion Ratio Lower Upper
 101 100
 151 97.0 55.9 83.9#





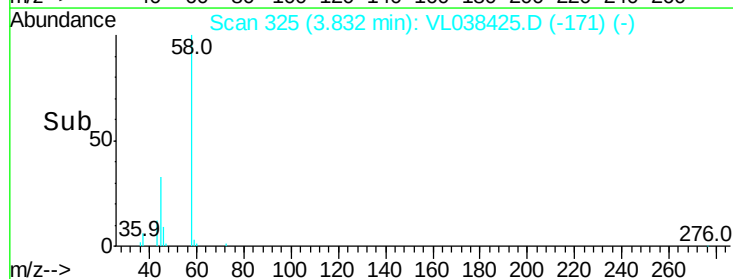
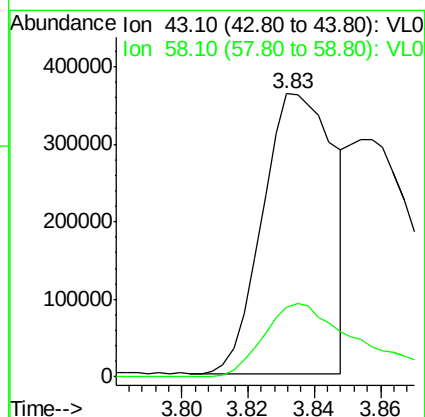
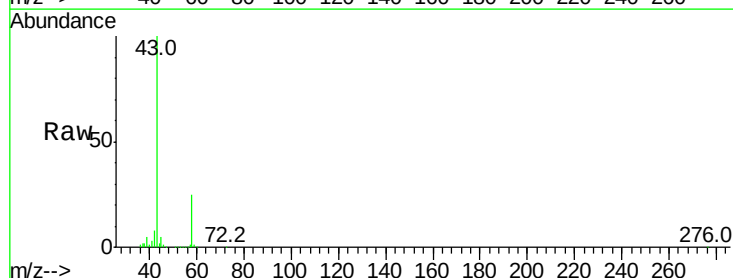
#13
Ethanol
Concen: 433.76 ppbv
RT: 3.59
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 24 Feb 2022 2:30

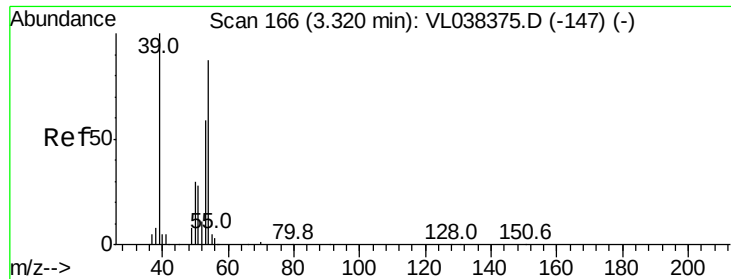
Tgt Ion: 45 Resp: 1938614
Ion Ratio Lower Upper
45 100
46 35.9 18.2 72.8



#15
Acetone
Concen: 8.27 ppbv
RT: 3.83 min Scan# 325
Delta R.T. -0.01 min
Lab File: VL038425.D
Acq: 24 Feb 2022 2:36

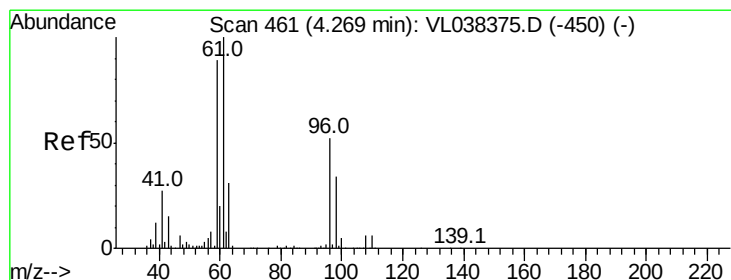
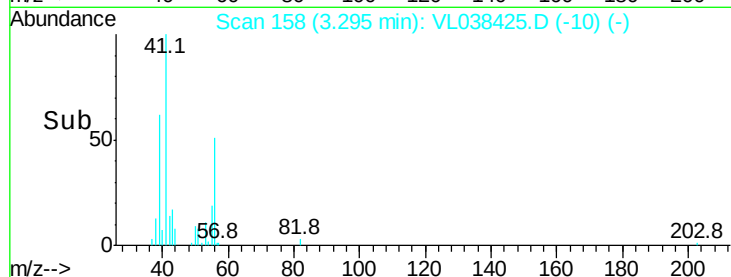
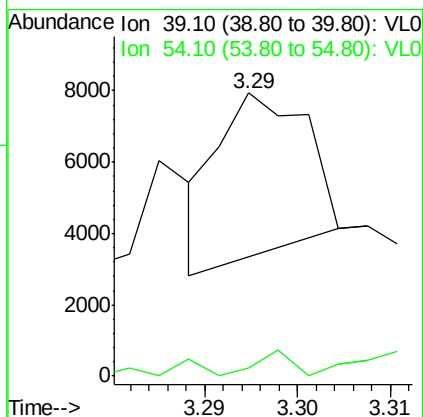
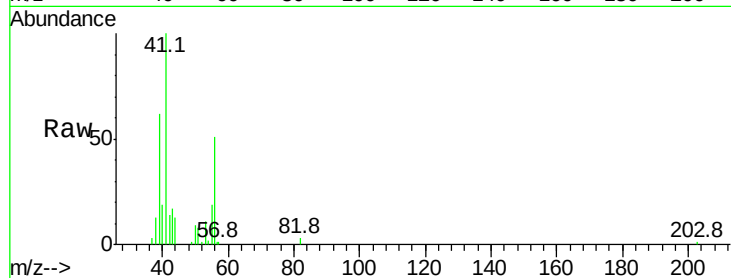
Tgt Ion: 43 Resp: 539988
Ion Ratio Lower Upper
43 100
58 37.5 21.7 32.5#





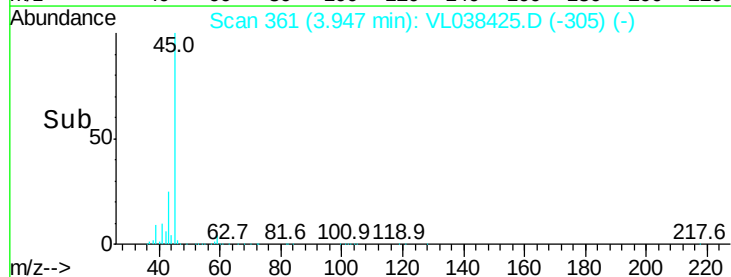
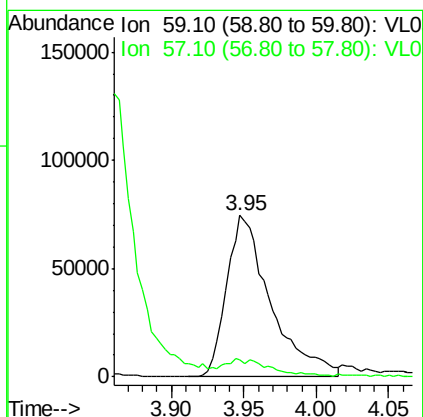
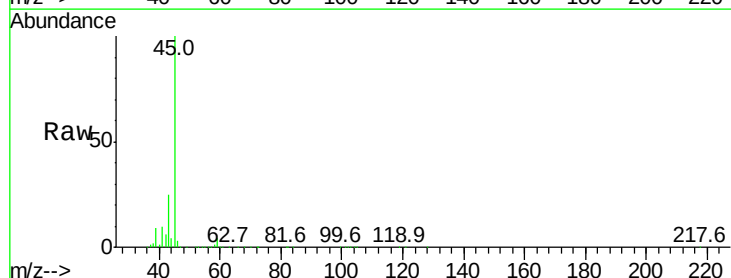
#16
 1,3-Butadiene
 Concen: 0.07 ppbv
 RT: 3.29
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 24 Feb 2022 2:30

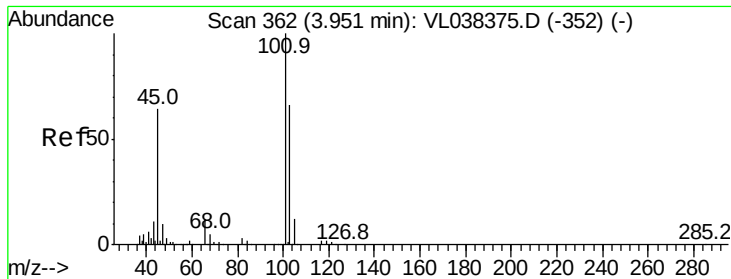
Tgt Ion: 39 Resp: 3050
 Ion Ratio Lower Upper
 39 100
 54 0.0 60.3 90.5#



#17
 tert-Butyl alcohol
 Concen: 2.42 ppbv
 RT: 3.95 min Scan# 361
 Delta R.T. -0.32 min
 Lab File: VL038425.D
 Acq: 24 Feb 2022 2:36

Tgt Ion: 59 Resp: 157962
 Ion Ratio Lower Upper
 59 100
 57 11.4 8.4 12.6





#19

Isopropyl Alcohol

Concen: 116.94 ppbv

RT: 3.95 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

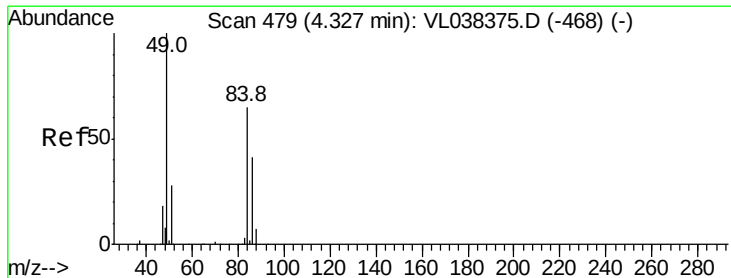
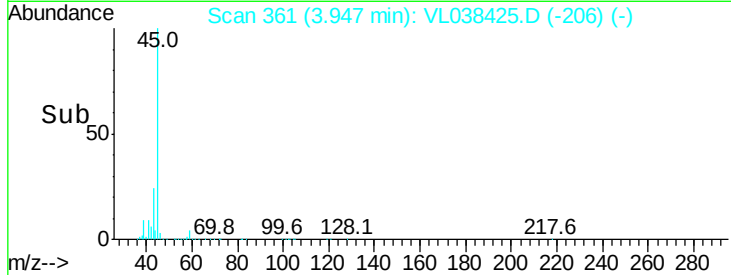
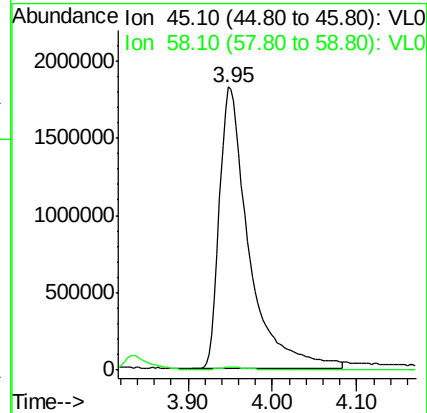
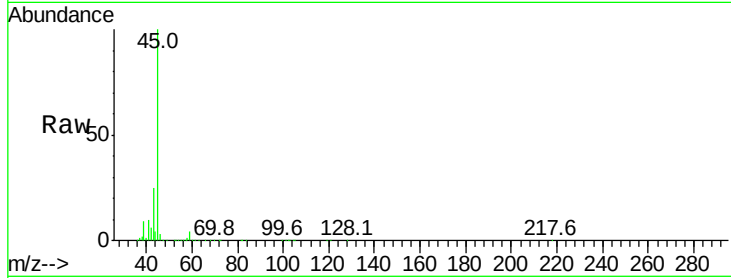
Acq: 24 Feb 2022 2:30

Tgt Ion: 45 Resp: 4423145

Ion Ratio Lower Upper

45 100

58 1.3 1.8 2.8#



#20

Methylene Chloride

Concen: 1.06 ppbv

RT: 4.33 min Scan# 480

Delta R.T. 0.00 min

Lab File: VL038425.D

Acq: 24 Feb 2022 2:36

Tgt Ion: 84 Resp: 34247

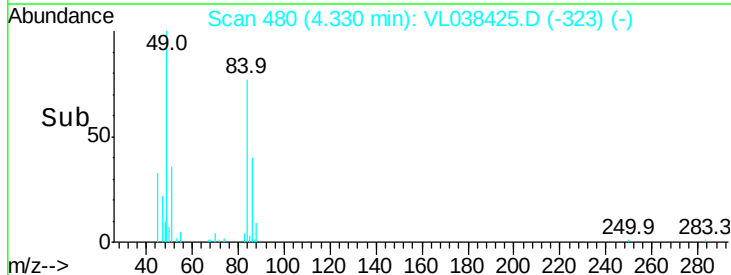
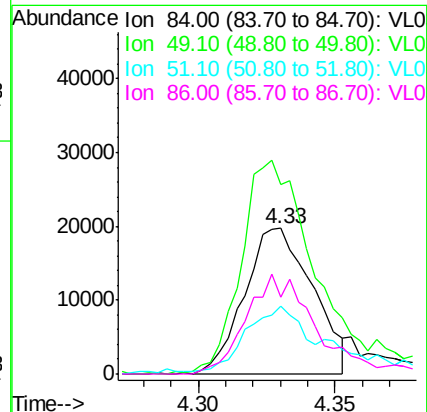
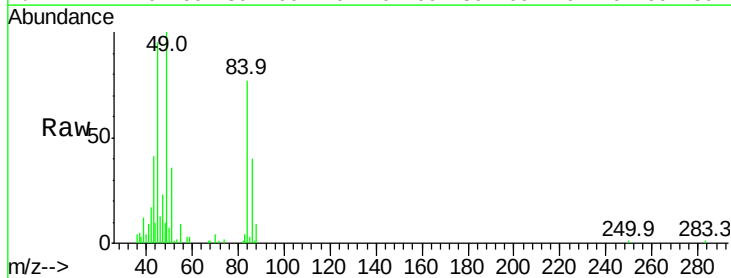
Ion Ratio Lower Upper

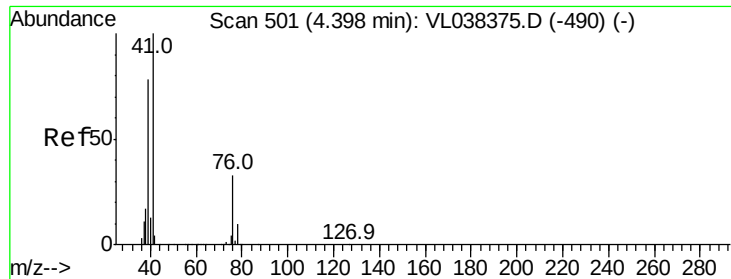
84 100

49 128.7 122.4 183.6

51 45.2 33.3 49.9

86 52.6 50.7 76.1





#21

Allyl Chloride

Concen: 0.08 ppbv

RT: 4.58 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

Acq: 24 Feb 2022 2:30

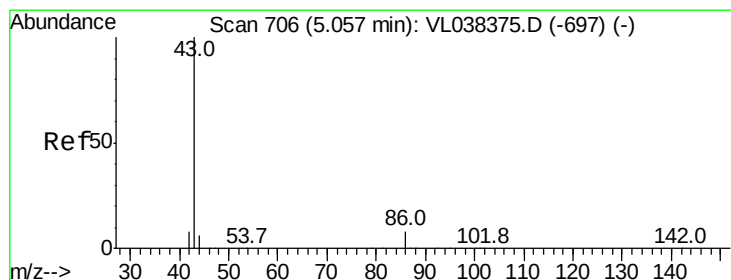
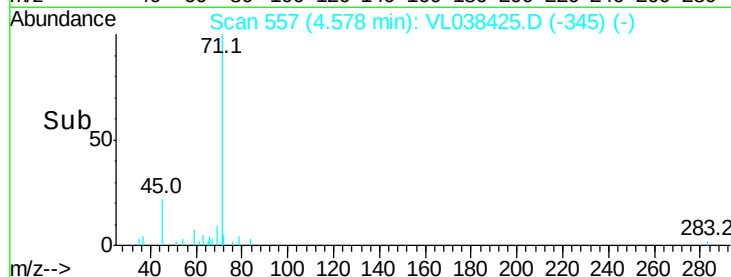
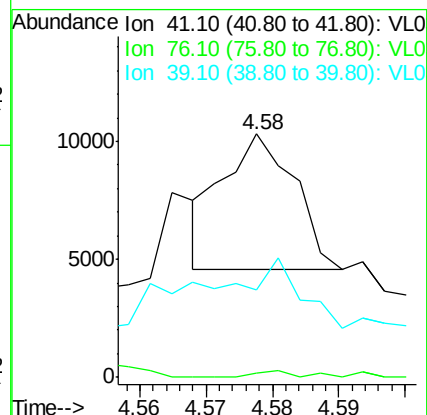
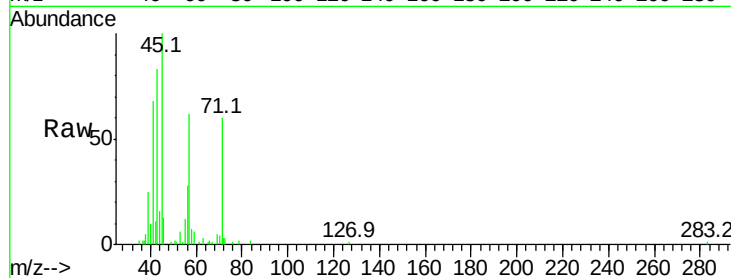
Tgt Ion: 41 Resp: 4281

Ion Ratio Lower Upper

41 100

76 32.8 25.4 38.0

39 0.0 63.0 94.6#



#23

Vinyl Acetate

Concen: 0.72 ppbv

RT: 5.04 min Scan# 701

Delta R.T. -0.02 min

Lab File: VL038425.D

Acq: 24 Feb 2022 2:36

Tgt Ion: 43 Resp: 62580

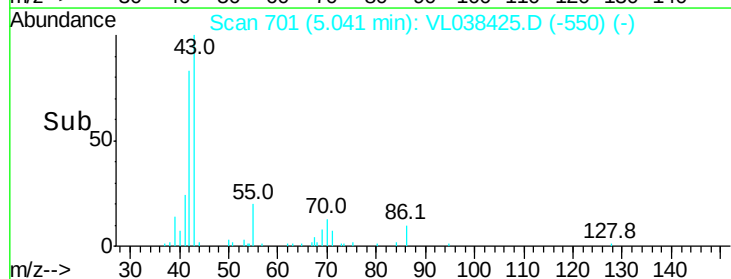
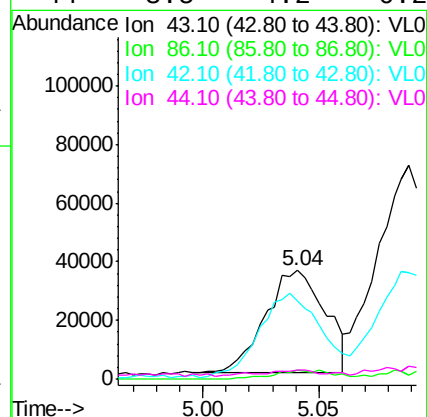
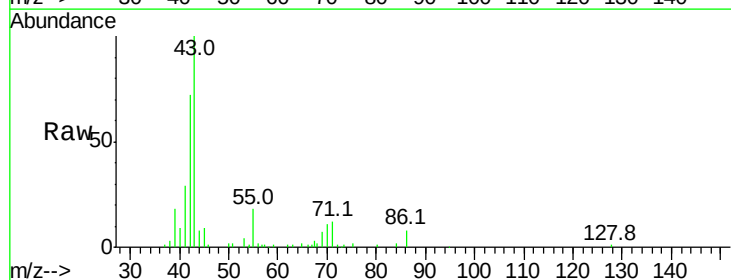
Ion Ratio Lower Upper

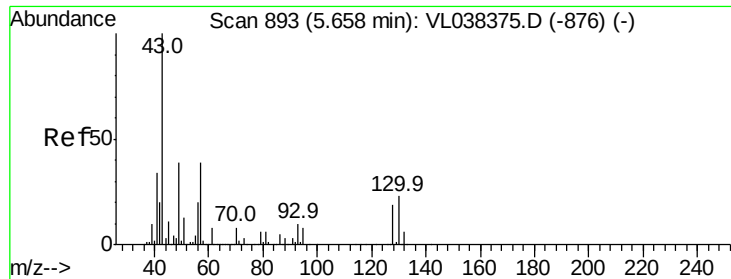
43 100

86 8.2 5.8 8.6

42 72.8 7.4 11.0#

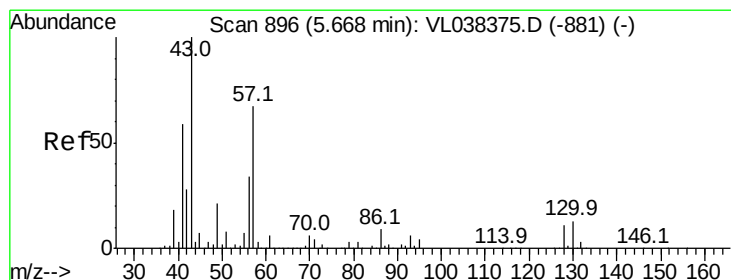
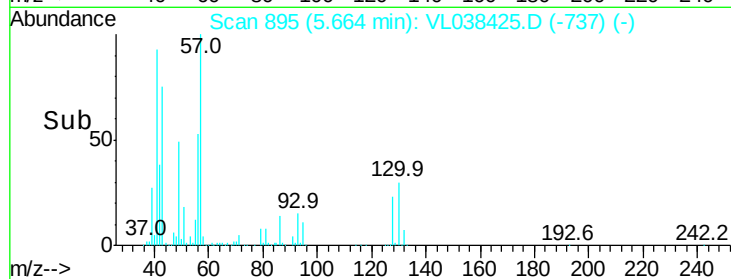
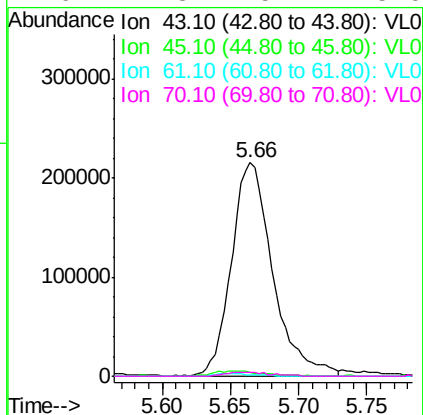
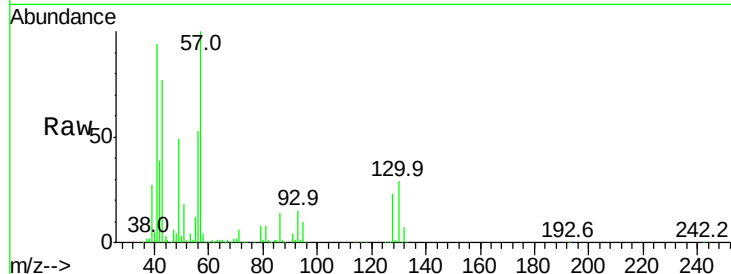
44 3.5 4.2 6.2#





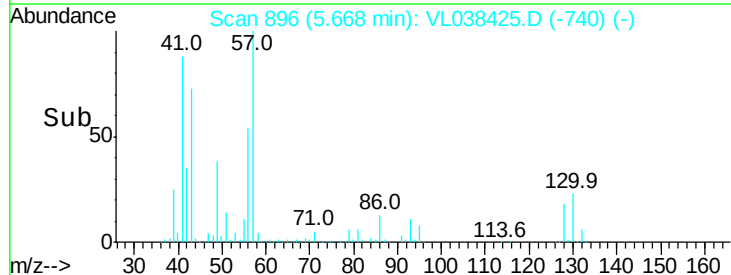
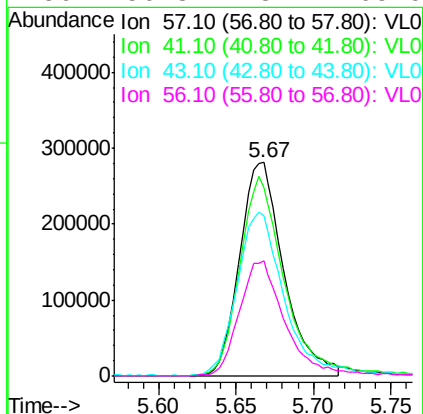
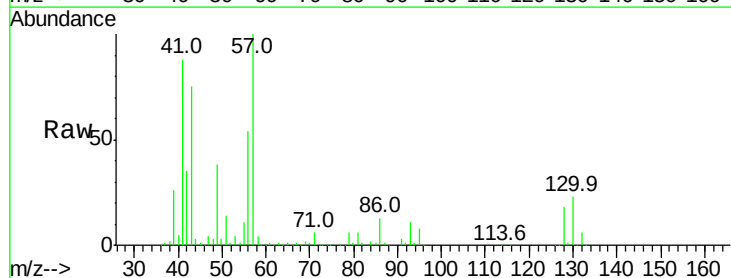
#25
Ethyl Acetate
Concen: 2.57 ppbv
RT: 5.66
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 24 Feb 2022 2:30

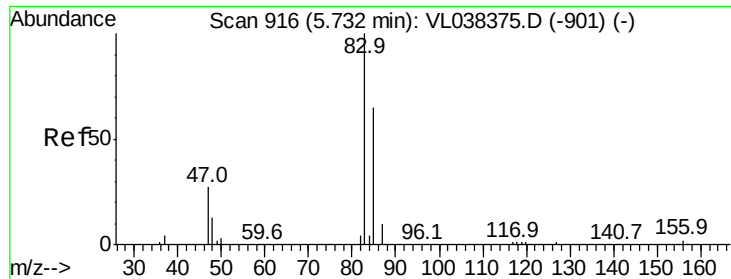
Tgt Ion	Ratio	Lower	Upper
43	100		
45	2.9	7.8	11.6#
61	1.4	7.5	11.3#
70	2.3	5.4	8.0#



#26
Hexane
Concen: 7.04 ppbv
RT: 5.67 min Scan# 896
Delta R.T. 0.00 min
Lab File: VL038425.D
Acq: 24 Feb 2022 2:36

Tgt Ion	Ratio	Lower	Upper
57	100		
41	95.7	73.1	109.7
43	83.8	181.0	271.4#
56	56.8	43.4	65.0





#29

Chloroform

Concen: 0.08 ppbv

RT: 5.73 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

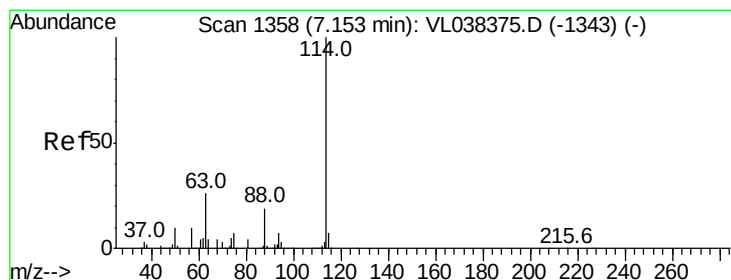
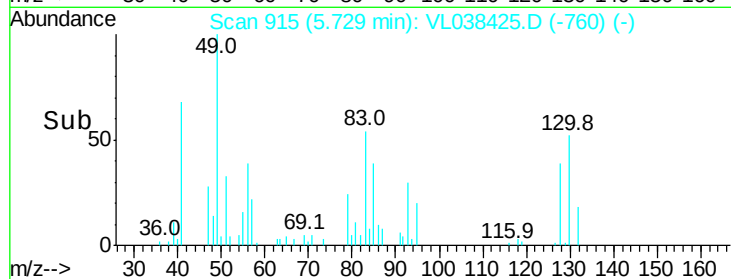
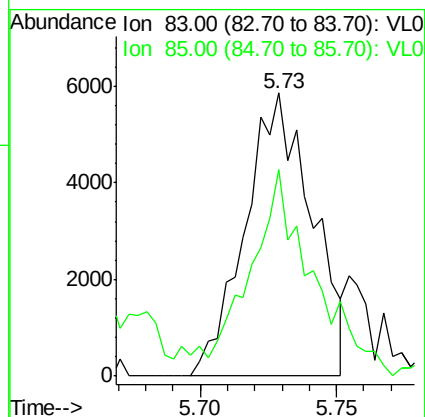
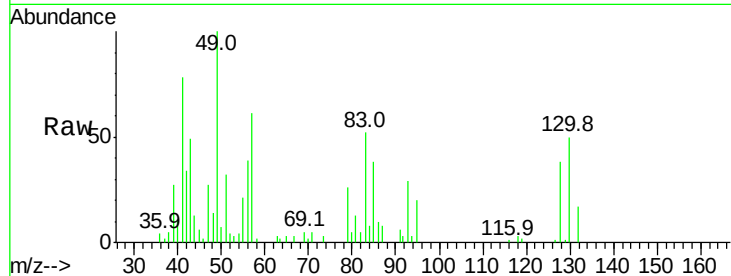
Acq: 24 Feb 2022 2:30

Tgt Ion: 83 Resp: 9948

Ion Ratio Lower Upper

83 100

85 65.8 51.6 77.4



#33

1,4-Difluorobenzene

Concen: 10.00 ppbv

RT: 7.15 min Scan# 1357

Delta R.T. -0.00 min

Lab File: VL038425.D

Acq: 24 Feb 2022 2:36

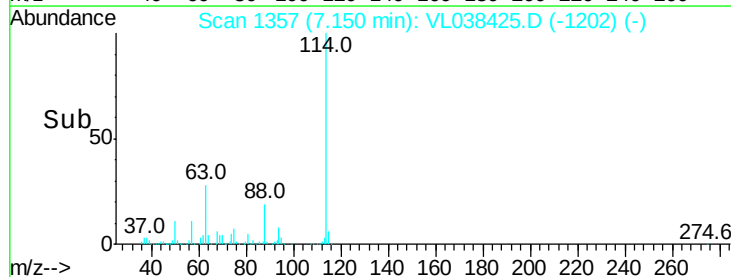
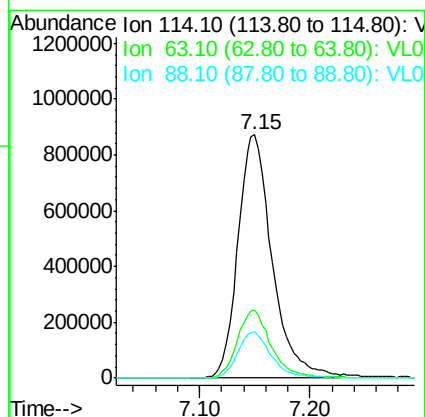
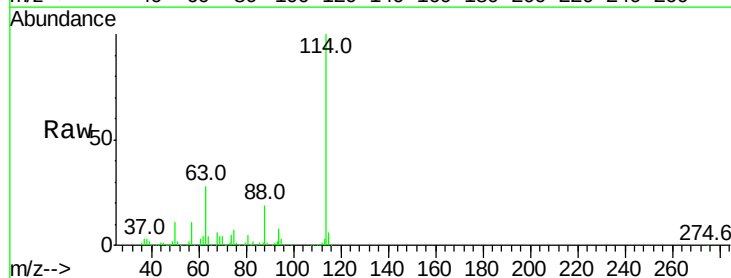
Tgt Ion: 114 Resp: 1875566

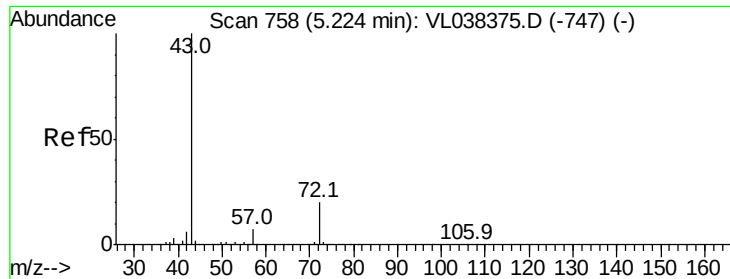
Ion Ratio Lower Upper

114 100

63 28.1 22.2 33.2

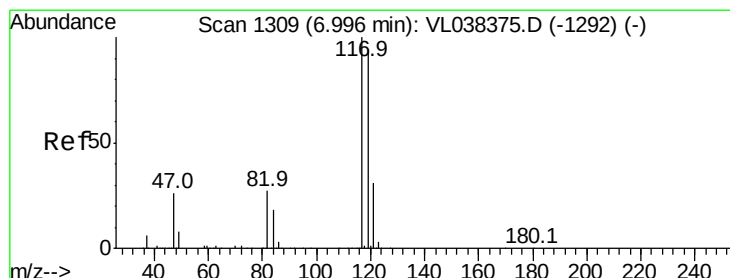
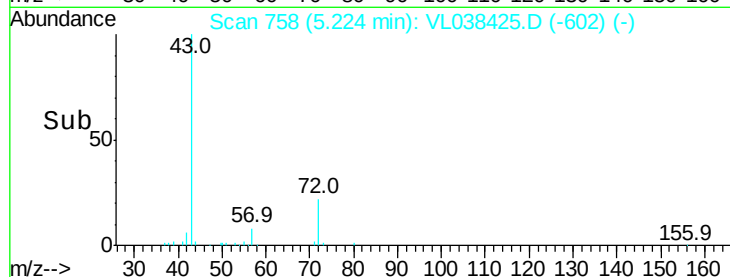
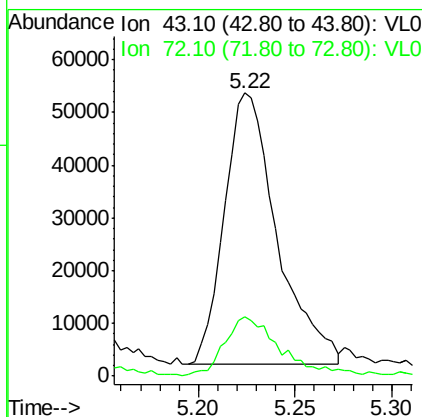
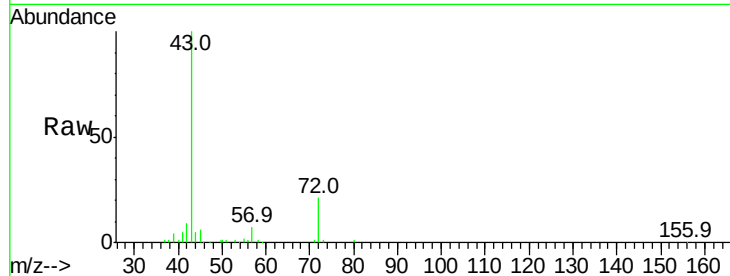
88 19.0 15.2 22.8





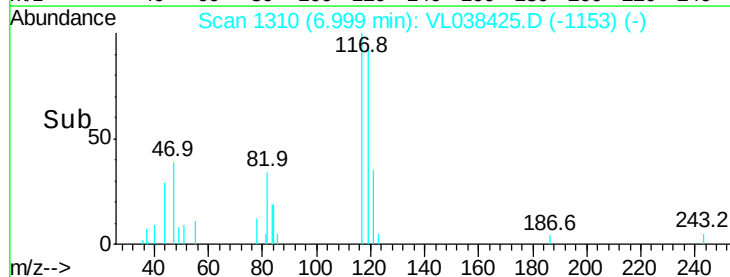
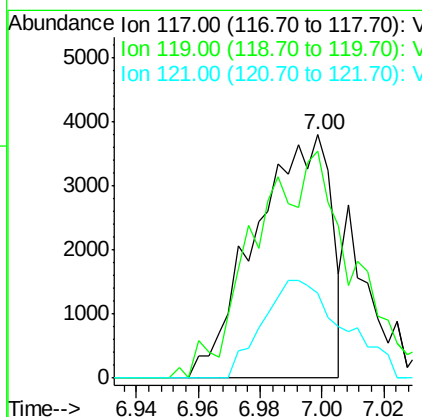
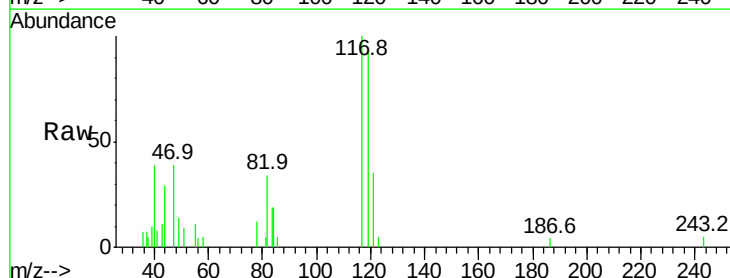
#34
 2-Butanone
 Concen: 1.66 ppbv
 RT: 5.22
 Delta R.T.:
 Lab File: MSVOA_1
 ClientSampleId:
 Acq: 24 Feb 2022 2:30

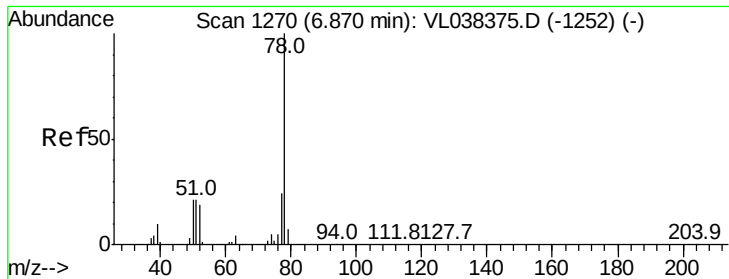
Tgt Ion: 43 Resp: 97742
 Ion Ratio Lower Upper
 43 100
 72 24.3 17.4 26.2



#35
 Carbon Tetrachloride
 Concen: 0.05 ppbv
 RT: 7.00 min Scan# 1310
 Delta R.T.: 0.00 min
 Lab File: VL038425.D
 Acq: 24 Feb 2022 2:36

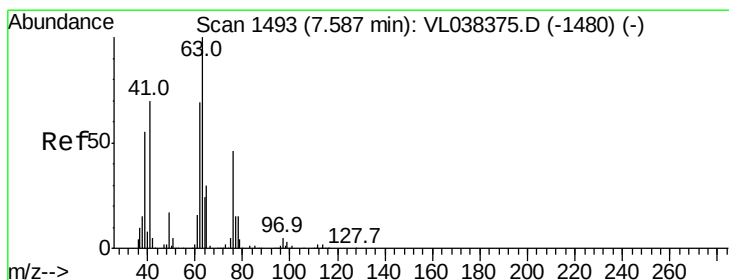
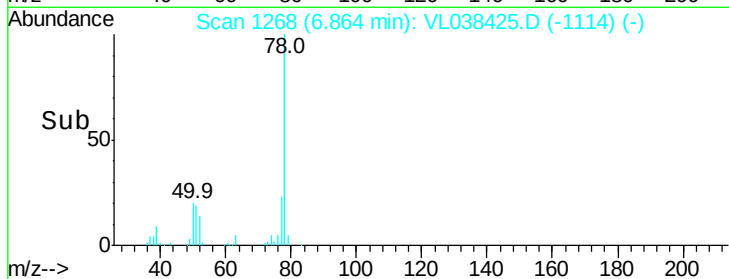
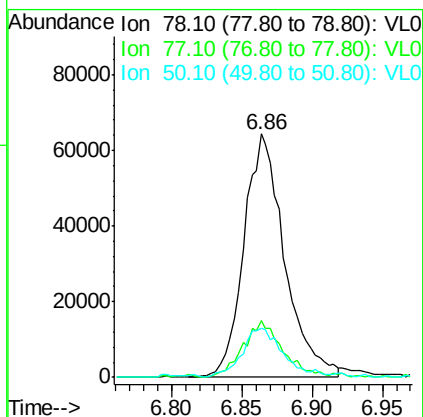
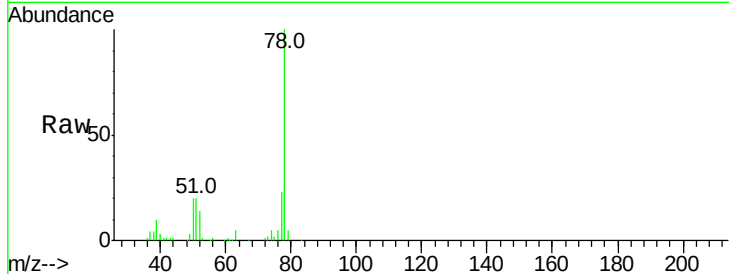
Tgt Ion: 117 Resp: 6452
 Ion Ratio Lower Upper
 117 100
 119 93.0 74.9 112.3
 121 34.8 24.8 37.2





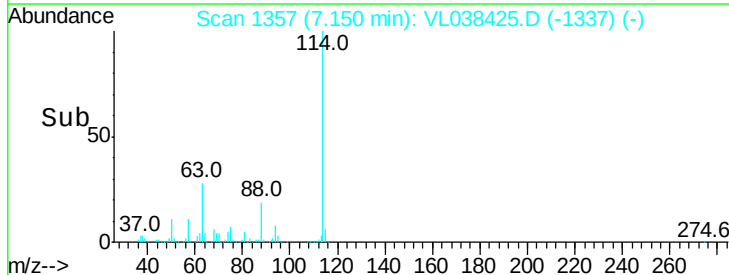
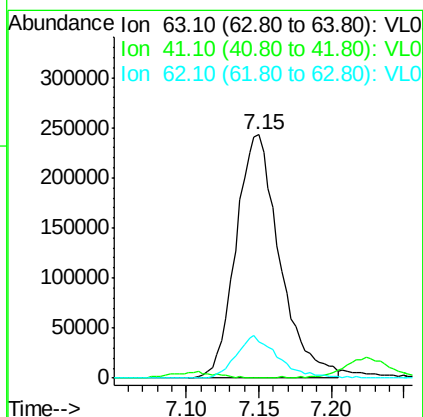
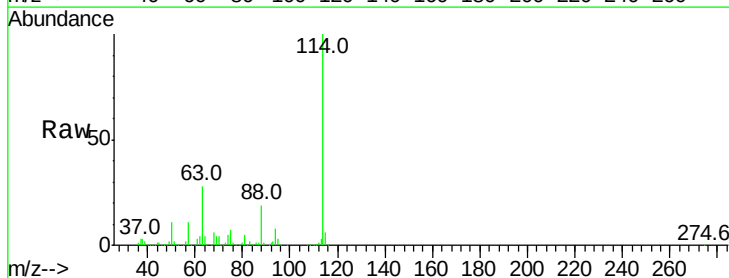
#36
Benzene
Concen: 0.79 ppbv
RT: 6.86
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 24 Feb 2022 2:30

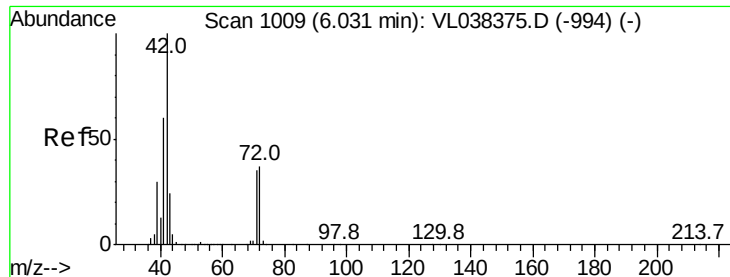
Tgt Ion: 78 Resp: 129718
Ion Ratio Lower Upper
78 100
77 22.6 19.0 28.6
50 19.6 16.6 24.8



#39
1,2-Dichloropropane
Concen: 7.75 ppbv
RT: 7.15 min Scan# 1357
Delta R.T. -0.44 min
Lab File: VL038425.D
Acq: 24 Feb 2022 2:36

Tgt Ion: 63 Resp: 509407
Ion Ratio Lower Upper
63 100
41 0.0 56.1 84.1#
62 14.9 55.5 83.3#





#41

Tetrahydrofuran

Concen: 0.14 ppbv

RT: 6.29 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

Acq: 24 Feb 2022 2:30

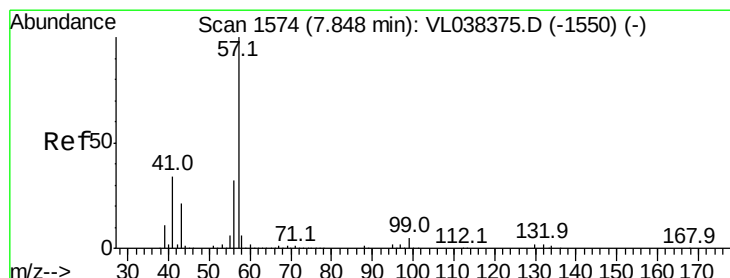
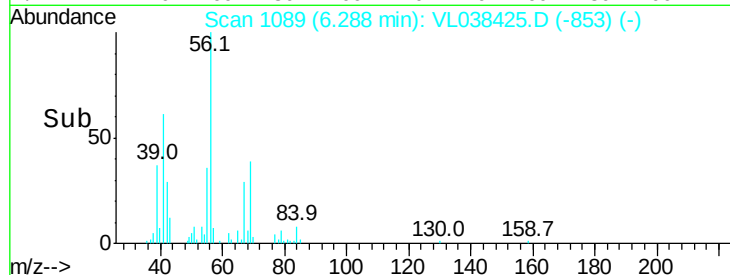
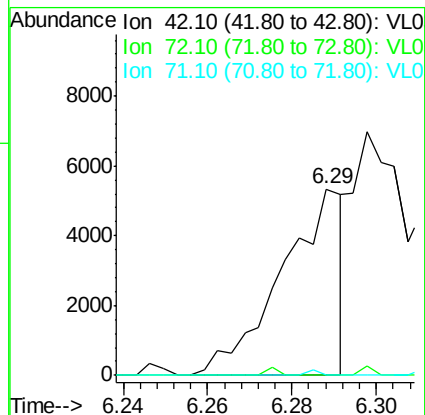
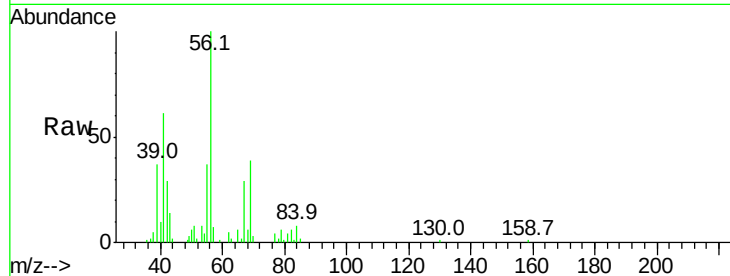
Tgt Ion: 42 Resp: 5429

Ion Ratio Lower Upper

42 100

72 0.0 29.9 44.9#

71 0.0 28.6 42.8#



#44

2,2,4-Trimethylpentane

Concen: 0.35 ppbv

RT: 7.84 min Scan# 1571

Delta R.T. -0.01 min

Lab File: VL038425.D

Acq: 24 Feb 2022 2:36

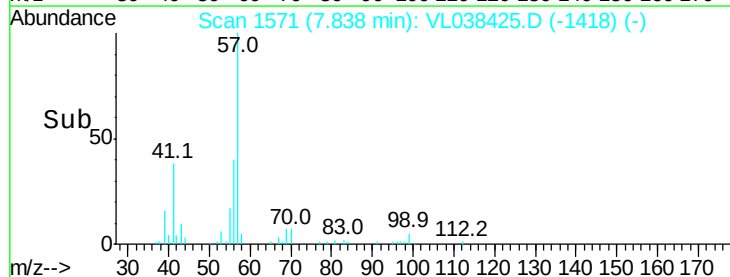
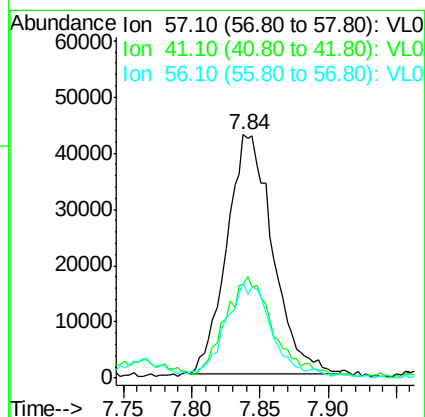
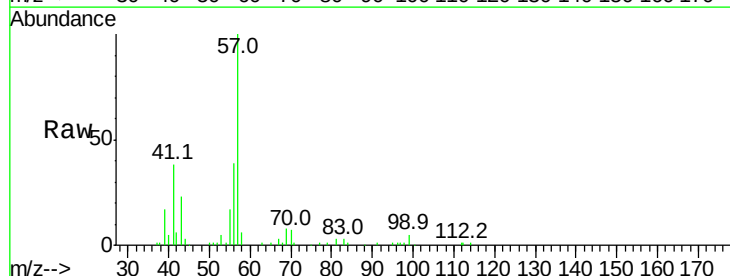
Tgt Ion: 57 Resp: 99203

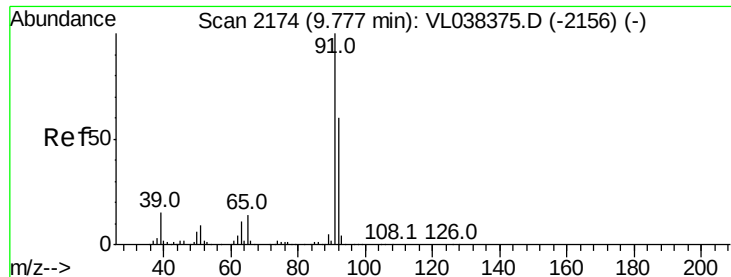
Ion Ratio Lower Upper

57 100

41 45.5 26.6 39.8#

56 42.0 25.0 37.6#





#53

Toluene

Concen: 5.90 ppbv

RT: 9.78 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

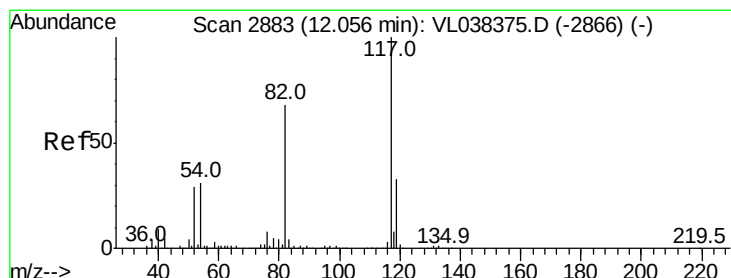
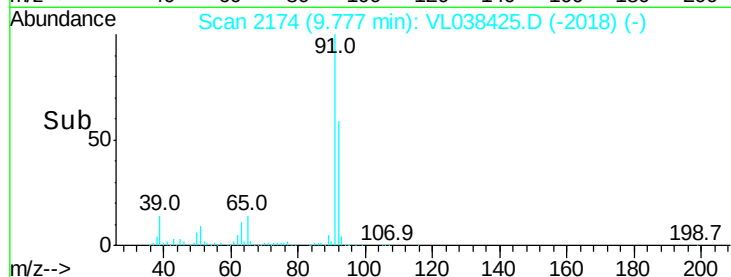
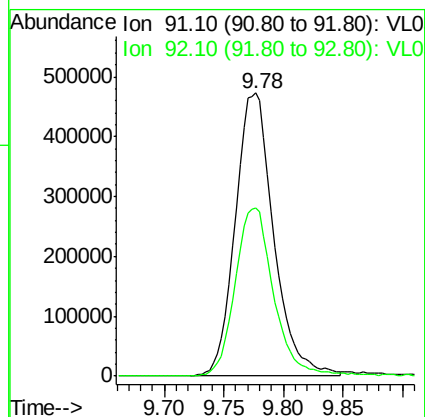
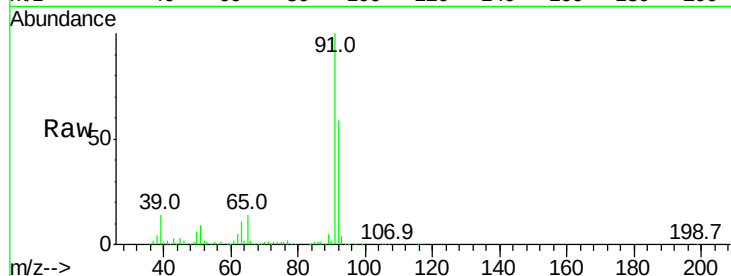
Acq: 24 Feb 2022 2:30

Tgt Ion: 91 Resp: 1057317

Ion Ratio Lower Upper

91 100

92 60.7 48.2 72.4



#55

Chlorobenzene-d5

Concen: 10.00 ppbv

RT: 12.05 min Scan# 2882

Delta R.T. -0.00 min

Lab File: VL038425.D

Acq: 24 Feb 2022 2:36

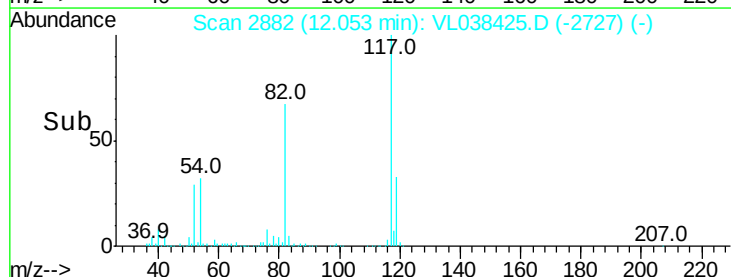
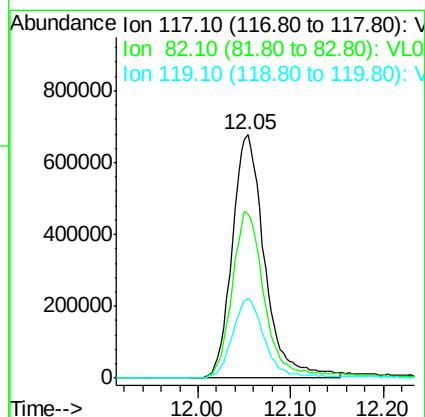
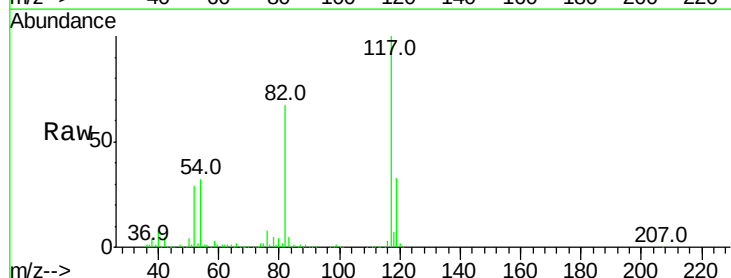
Tgt Ion: 117 Resp: 1649593

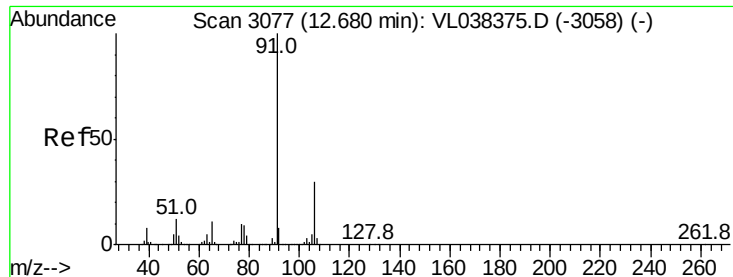
Ion Ratio Lower Upper

117 100

82 71.7 54.9 82.3

119 33.6 46.1 69.1#





#58

Ethyl Benzene

Concen: 0.20 ppbv

RT: 12.68

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

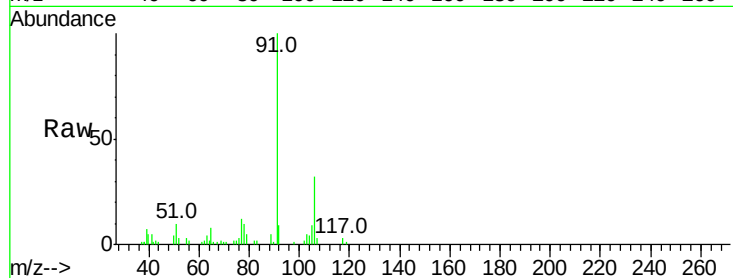
Acq: 24 Feb 2022 2:30

Tgt Ion: 91 Resp: 44003

Ion Ratio Lower Upper

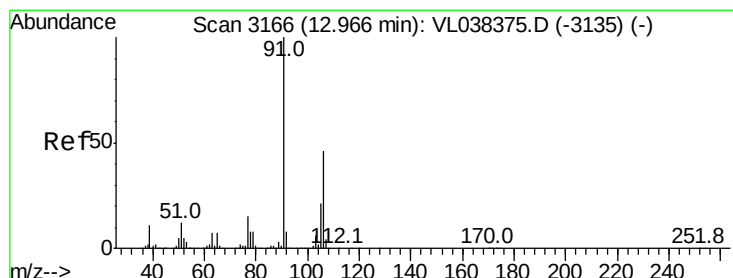
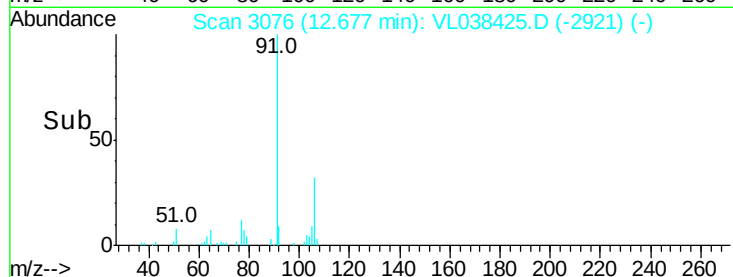
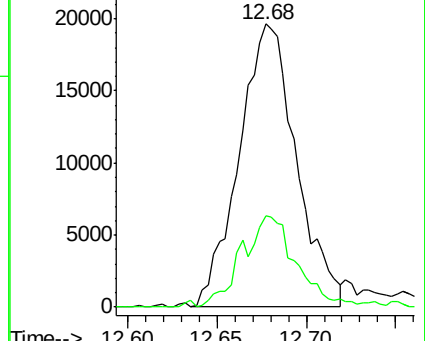
91 100

106 30.0 24.0 36.0



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V



#59

m/p-Xylene

Concen: 0.18 ppbv

RT: 12.96 min Scan# 3165

Delta R.T. -0.00 min

Lab File: VL038425.D

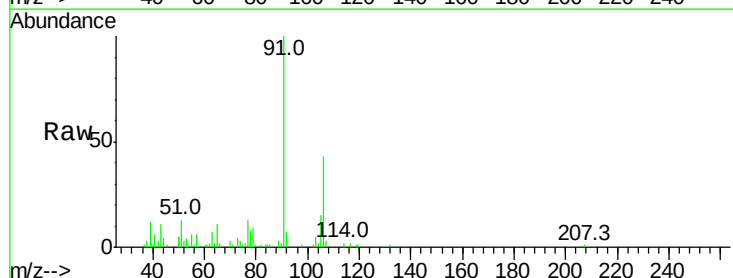
Acq: 24 Feb 2022 2:36

Tgt Ion: 91 Resp: 34409

Ion Ratio Lower Upper

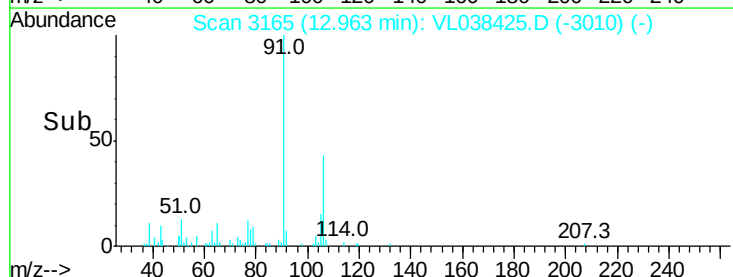
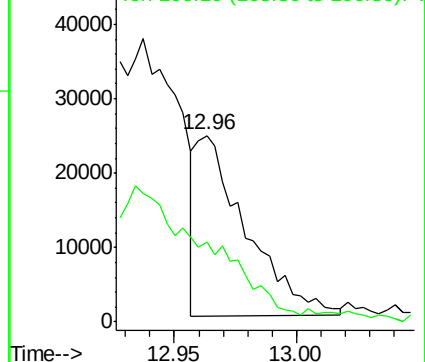
91 100

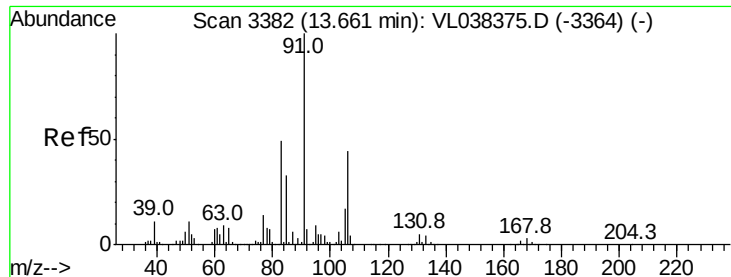
106 0.0 34.4 51.6#



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V





#60

o-Xylene

Concen: 0.27 ppbv

RT: 13.66

Delta R.T.

Lab File:

Acq: 24 Feb 2022 2:30

Instrument:

MSVOA_1

ClientSampleId:

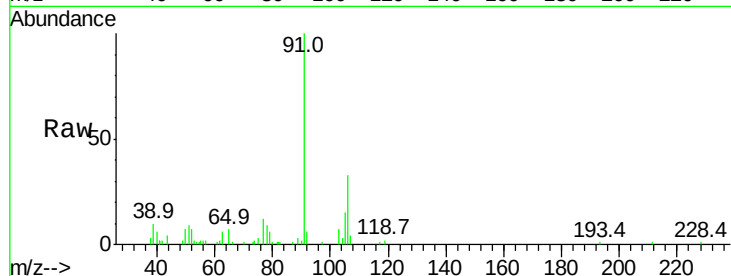
IA-5

Tgt Ion: 91 Resp: 48896

Ion Ratio Lower Upper

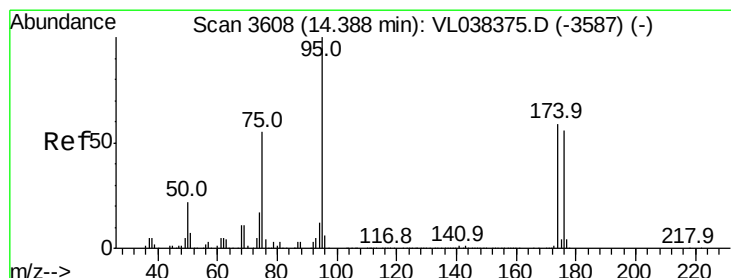
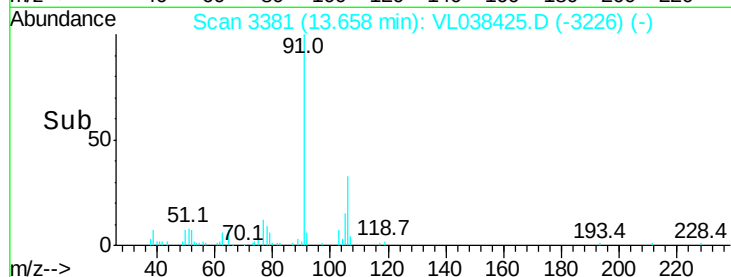
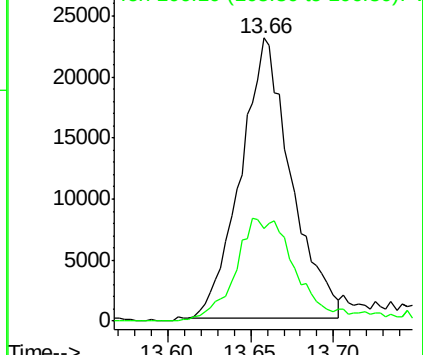
91 100

106 44.9 21.9 65.5



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V



#68

1-Bromo-4-Fluorobenzene

Concen: 9.79 ppbv

RT: 14.38 min Scan# 3607

Delta R.T. -0.00 min

Lab File: VL038425.D

Acq: 24 Feb 2022 2:36

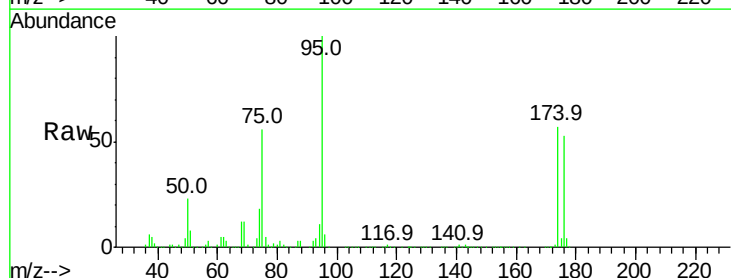
Tgt Ion: 95 Resp: 1336772

Ion Ratio Lower Upper

95 100

174 58.6 49.0 73.4

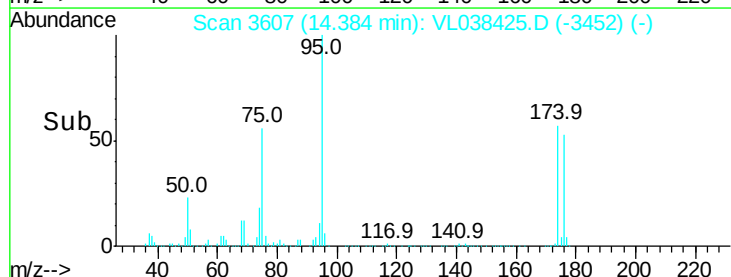
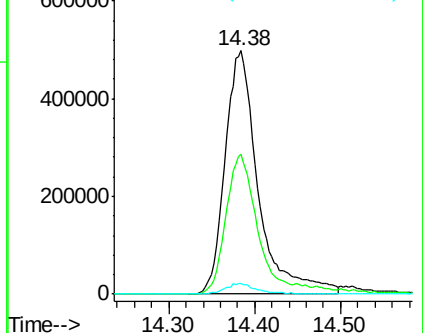
175 4.4 3.6 5.4

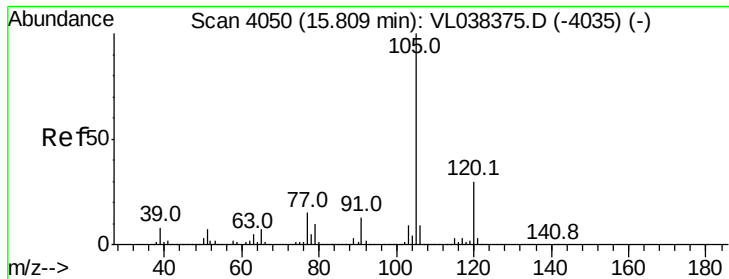


Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V





#72

4-Ethyltoluene

Concen: 0.04 ppbv

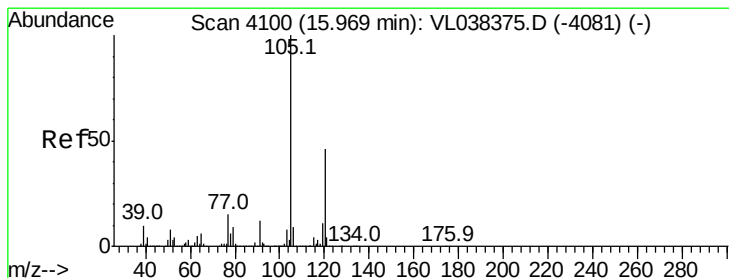
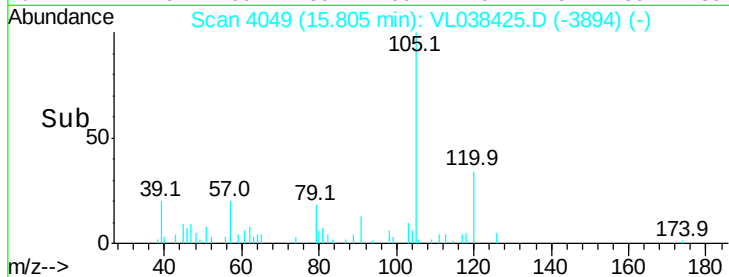
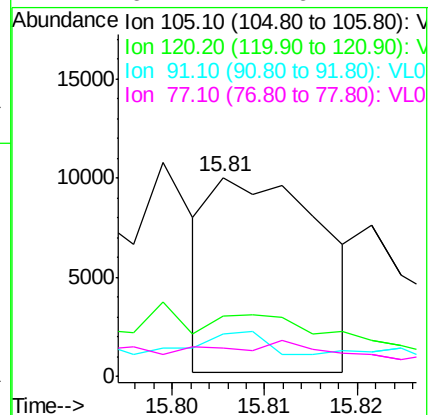
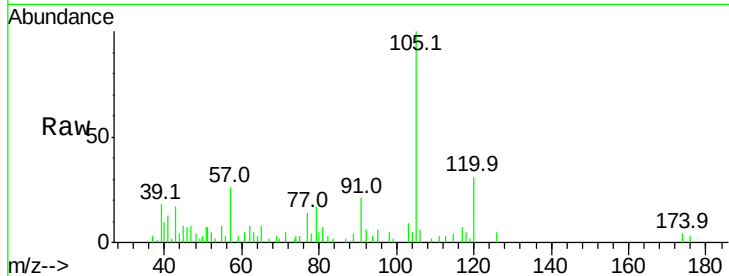
RT: 15.81

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 24 Feb 2022 2:30

Tgt Ion:	105	Resp:	8216
Ion Ratio	Lower	Upper	
105	100		
120	0.0	23.4	35.2#
91	62.3	10.4	15.6#
77	62.7	11.6	17.4#



#73

1,3,5-Trimethylbenzene

Concen: 0.09 ppbv

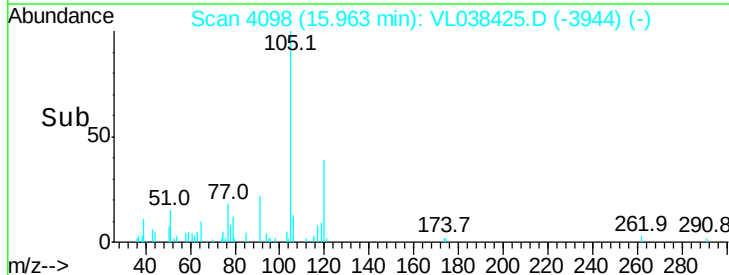
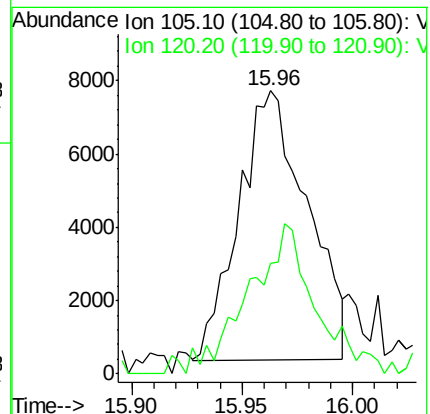
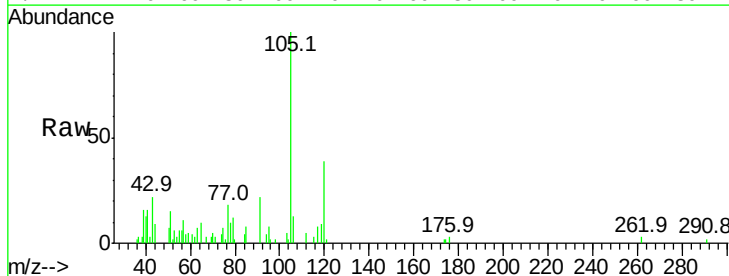
RT: 15.96 min Scan# 4098

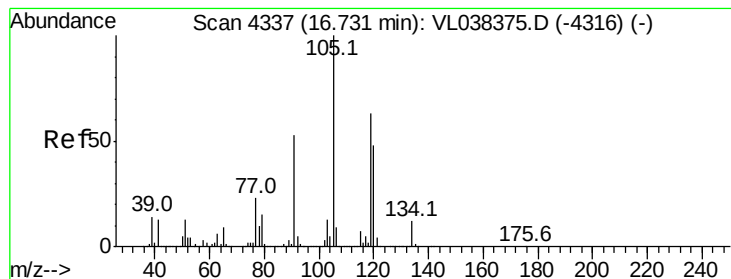
Delta R.T. -0.01 min

Lab File: VL038425.D

Acq: 24 Feb 2022 2:36

Tgt Ion:	105	Resp:	15912
Ion Ratio	Lower	Upper	
105	100		
120	31.5	36.6	55.0#





#74

1,2,4-Trimethylbenzene

Concen: 0.23 ppbv

RT: 16.73

Delta R.T: MSVOA_L

Lab File: ClientSampleId :

Acq: 24 Feb 2022 2:30

Tgt Ion:105 Resp: 43868

Ion Ratio Lower Upper

105 100

120 38.3 38.2 57.4

91 11.8 42.7 64.1#

77 16.1 18.5 27.7#

