

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL022422\
 Data File : VL038437.D
 Acq On : 24 Feb 2022 16:51
 Operator : SY/AP
 Sample : N1605-07DUP
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-2DUP

Quant Time: Feb 25 00:44:21 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	5.64	49	771671	10.00	ppbv	-0.01
33) 1,4-Difluorobenzene	7.14	114	1859562	10.00	ppbv	-0.01
55) Chlorobenzene-d5	12.04	117	1588513	10.00	ppbv	-0.01

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.37	95	1235377	9.40	ppbv	-0.01
Spiked Amount	10.000	Range	65 - 135	Recovery	=	94.00%

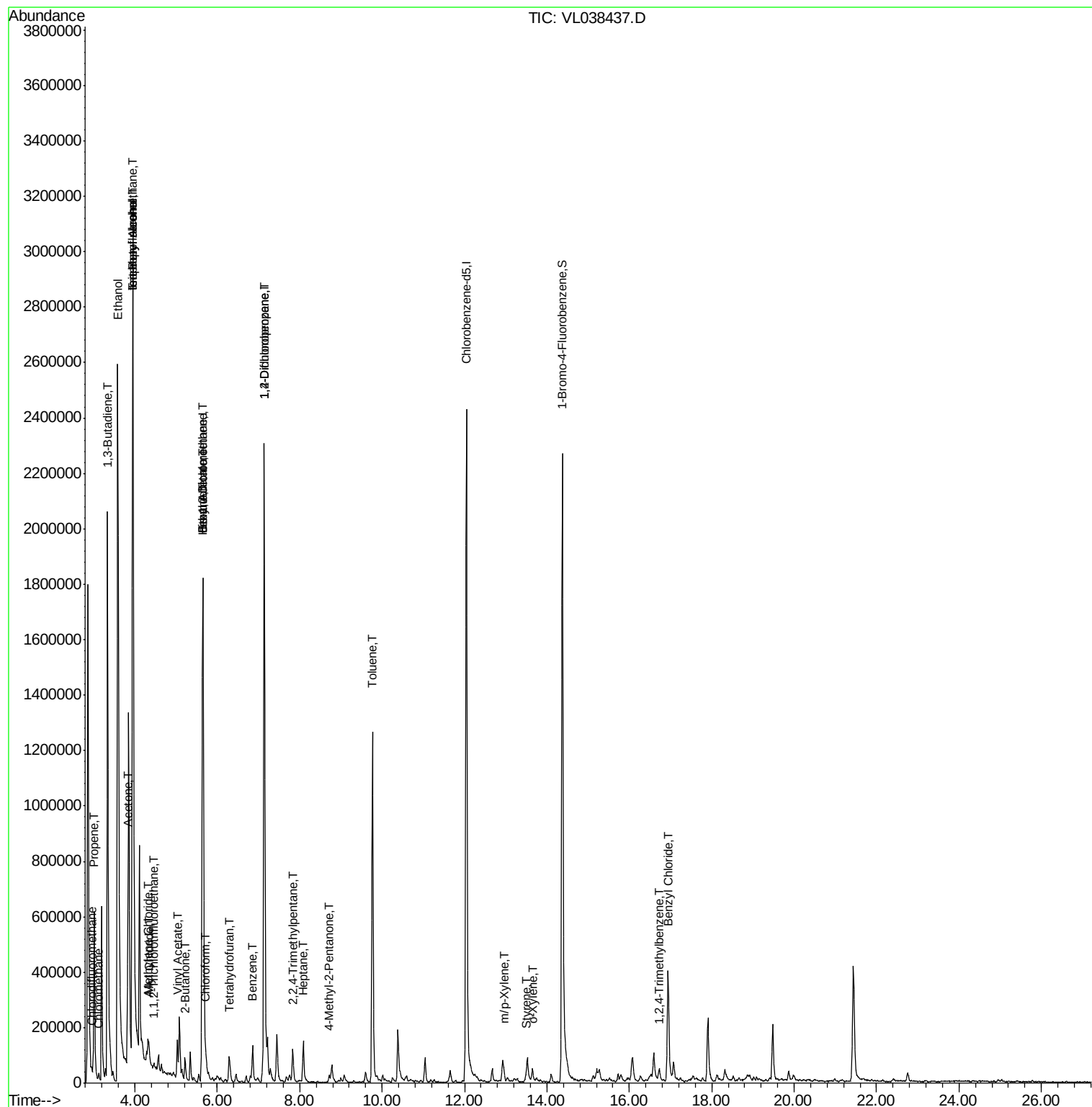
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
3) Chlorodifluoromethane	2.97	51	51474	0.38	ppbv #	79
4) Chloromethane	3.12	50	17718	0.37	ppbv	99
9) Propene	3.00	41	97174	2.16	ppbv #	72
10) Heptane	8.09	43	59130	0.54	ppbv	95
11) Trichlorofluoromethane	3.93	101	15060	0.13	ppbv	95
12) 1,1,2-Trichlorotrifluoroet	4.46	101	4851	0.06	ppbv	86
13) Ethanol	3.58	45	3945756	878.79	ppbv	90
15) Acetone	3.83	43	388340	5.92	ppbv #	70
16) 1,3-Butadiene	3.34	39	313847	7.16	ppbv #	15
17) tert-Butyl alcohol	3.95	59	163420	2.50	ppbv	95
19) Isopropyl Alcohol	3.94	45	4626885	121.76	ppbv #	97
20) Methylene Chloride	4.31	84	32820	1.01	ppbv	94
21) Allyl Chloride	4.34	41	3991	0.07	ppbv #	1
23) Vinyl Acetate	5.03	43	114145	1.31	ppbv #	64
25) Ethyl Acetate	5.65	43	422065	2.39	ppbv #	84
26) Hexane	5.66	57	500591	6.27	ppbv #	48
29) Chloroform	5.72	83	22472	0.17	ppbv	91
31) cis-1,2-Dichloroethene	5.65	61	5769	0.07	ppbv #	38
34) 2-Butanone	5.22	43	48323	0.83	ppbv #	38
36) Benzene	6.85	78	116305	0.71	ppbv	95
39) 1,2-Dichloropropane	7.14	63	489875	7.51	ppbv #	25
41) Tetrahydrofuran	6.28	42	6527	0.17	ppbv #	40
44) 2,2,4-Trimethylpentane	7.83	57	88795	0.32	ppbv #	78
50) 4-Methyl-2-Pentanone	8.71	43	4407	0.04	ppbv #	40
53) Toluene	9.76	91	1029458	5.79	ppbv	99
59) m/p-Xylene	12.96	91	16241	0.09	ppbv #	33
60) o-Xylene	13.65	91	22923	0.13	ppbv	70
61) Styrene	13.49	104	6756	0.08	ppbv #	22
66) Benzyl Chloride	16.95	91	366	0.03	ppbv #	69
74) 1,2,4-Trimethylbenzene	16.72	105	22603	0.12	ppbv #	72

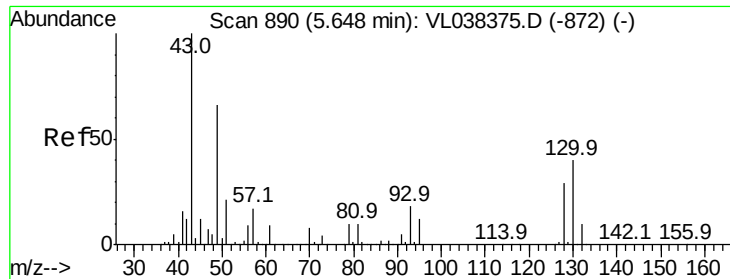
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\V0ASRV\HPCHEM1\MSVOA_L\DATA\VL022422\
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Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA_L\METHODS\VL022222AIR.M
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QLast Update : Tue Feb 22 19:45:51 2022
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.00 ppbv

RT: 5.64 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

IA-2DUP

Acq: 24 Feb 2022 16:51

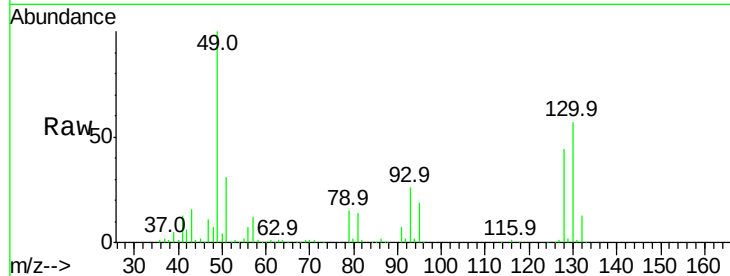
Tgt Ion: 49 Resp: 771671

Ion Ratio Lower Upper

49 100

128 46.6 24.3 72.9

130 60.1 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

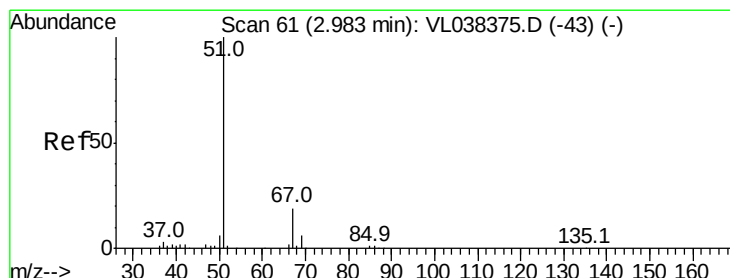
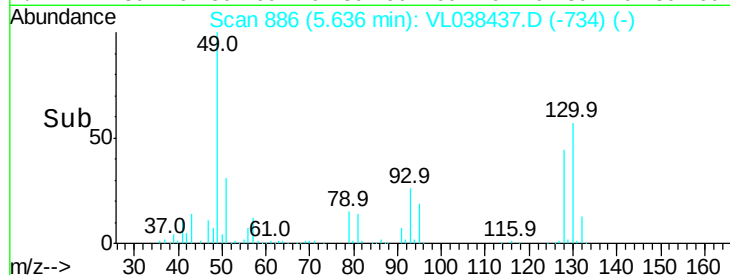
100000

0

5.55 5.60 5.65 5.70

5.64

Time-->



#3

Chlorodifluoromethane

Concen: 0.38 ppbv

RT: 2.97 min Scan# 56

Delta R.T. -0.02 min

Lab File: VL038437.D

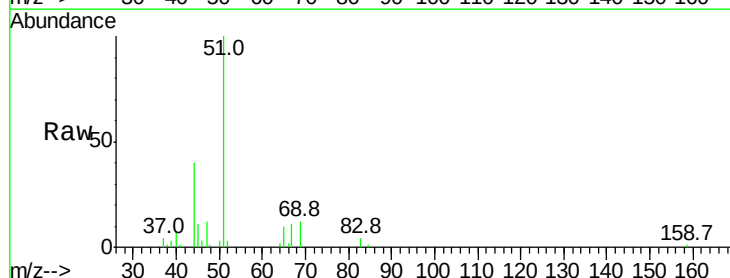
Acq: 24 Feb 2022 16:51

Tgt Ion: 51 Resp: 51474

Ion Ratio Lower Upper

51 100

67 8.9 14.7 22.1#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0

100000

80000

60000

40000

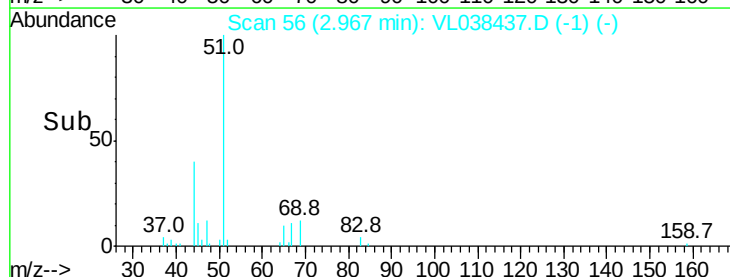
20000

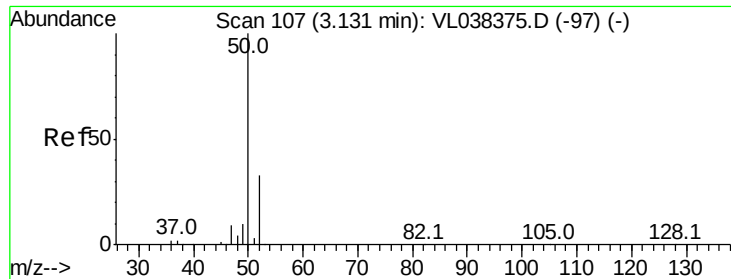
0

2.85 2.90 2.95 3.00

2.97

Time-->





#4

Chloromethane

Concen: 0.37 ppbv

RT: 3.12 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

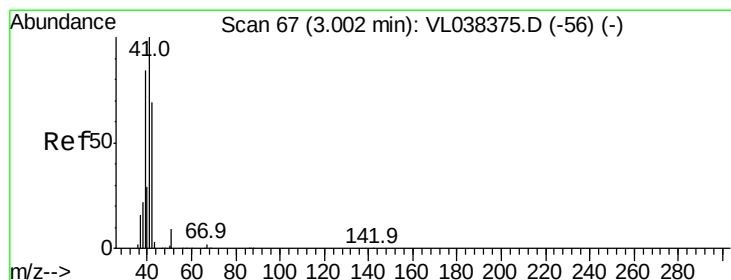
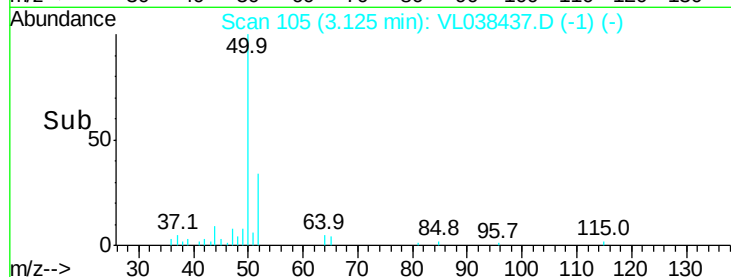
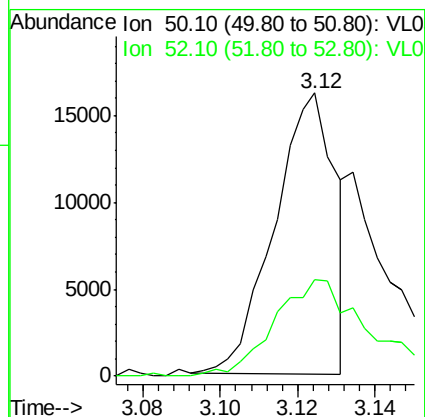
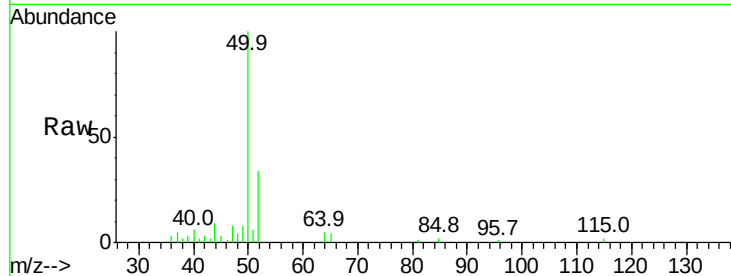
Acq: 24 Feb 2022 16:51

Tgt Ion: 50 Resp: 17718

Ion Ratio Lower Upper

50 100

52 32.3 26.5 39.7



#9

Propene

Concen: 2.16 ppbv

RT: 3.00 min Scan# 67

Delta R.T. 0.00 min

Lab File: VL038437.D

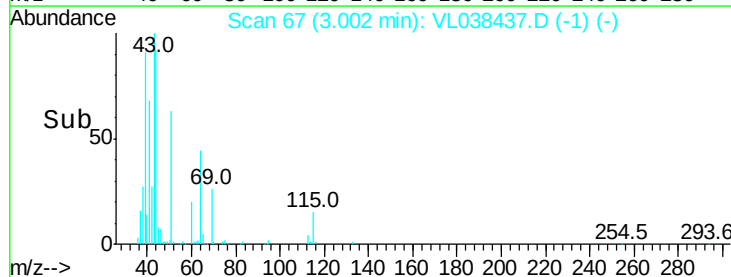
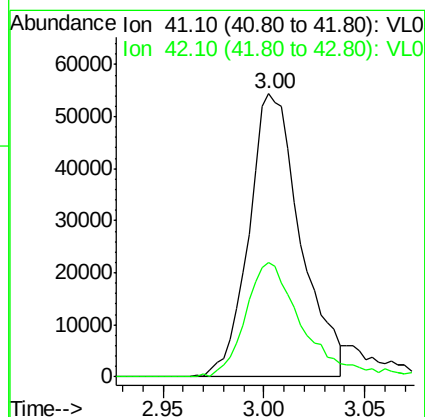
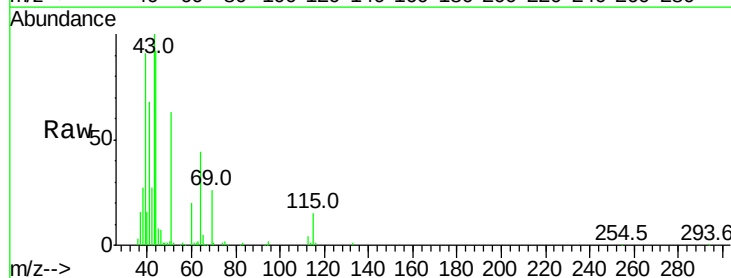
Acq: 24 Feb 2022 16:51

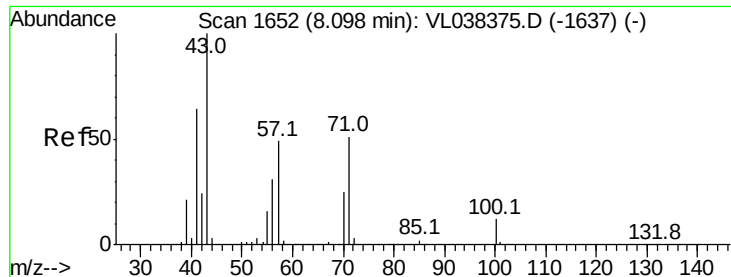
Tgt Ion: 41 Resp: 97174

Ion Ratio Lower Upper

41 100

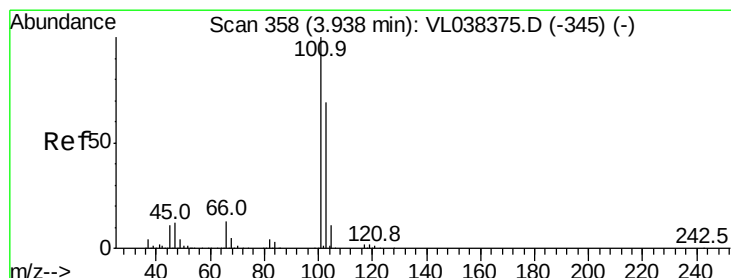
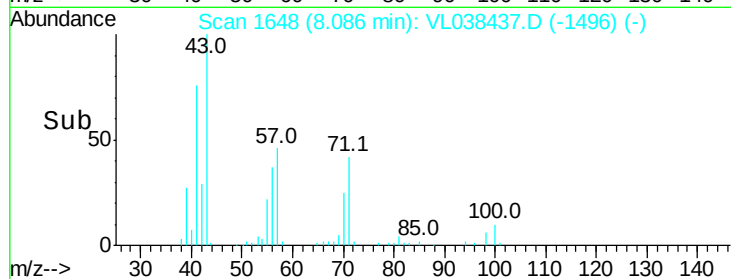
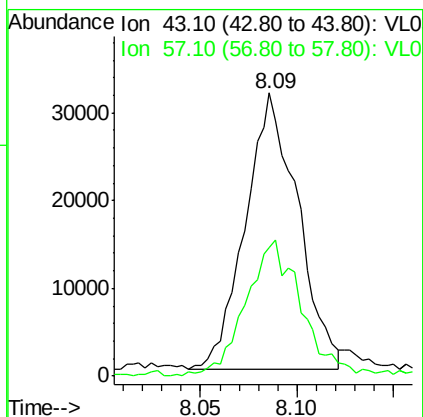
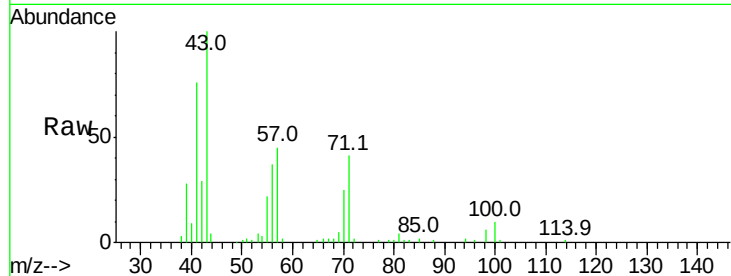
42 45.8 54.6 82.0#





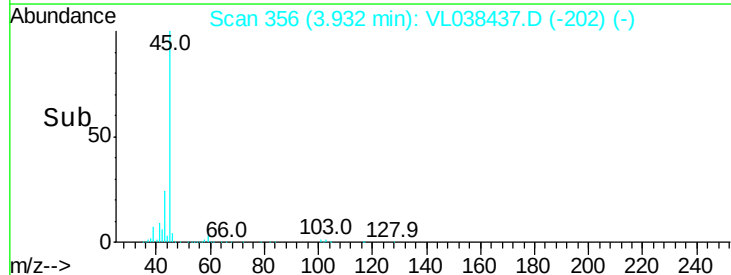
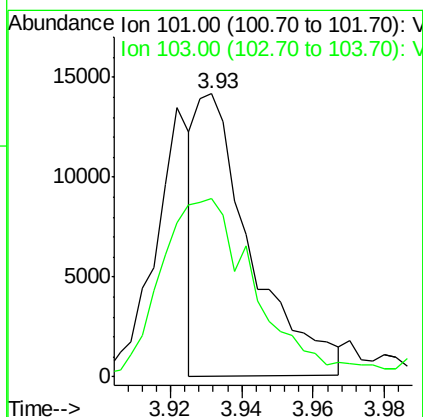
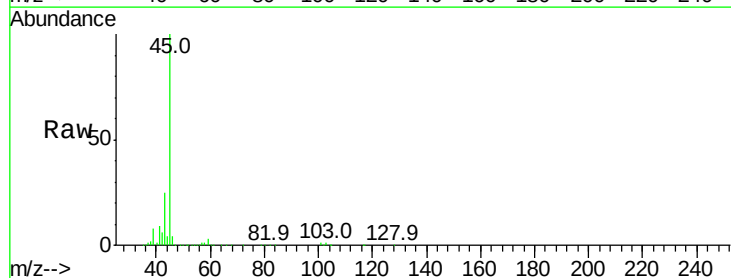
#10
 Heptane
 Concen: 0.54 ppbv
 RT: 8.09
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId:
 Acq: 24 Feb 2022 16:51

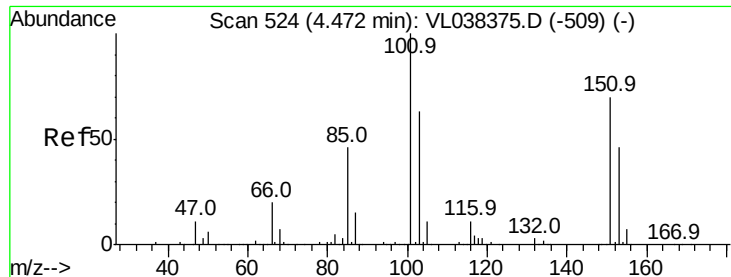
Tgt Ion: 43 Resp: 59130
 Ion Ratio Lower Upper
 43 100
 57 53.5 39.8 59.8



#11
 Trichlorofluoromethane
 Concen: 0.13 ppbv
 RT: 3.93 min Scan# 356
 Delta R.T. -0.01 min
 Lab File: VL038437.D
 Acq: 24 Feb 2022 16:51

Tgt Ion: 101 Resp: 15060
 Ion Ratio Lower Upper
 101 100
 103 64.8 55.0 82.4





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.06 ppbv

RT: 4.46 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

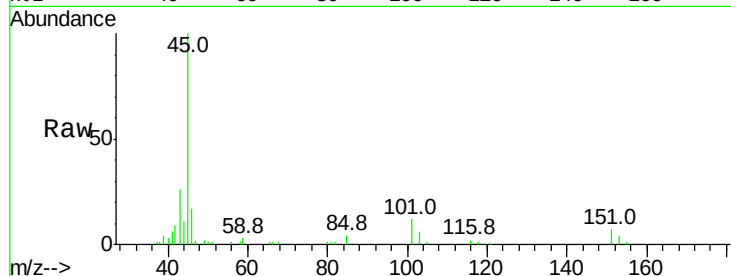
Acq: 24 Feb 2022 16:51

Tgt Ion: 101 Resp: 4851

Ion Ratio Lower Upper

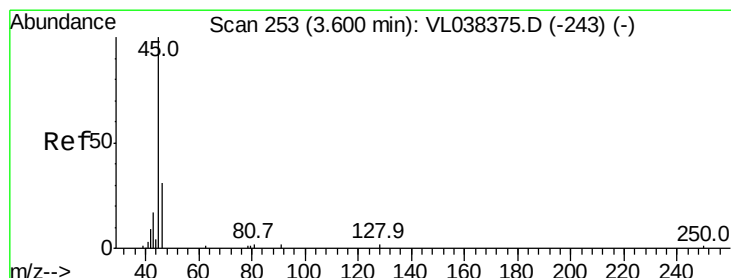
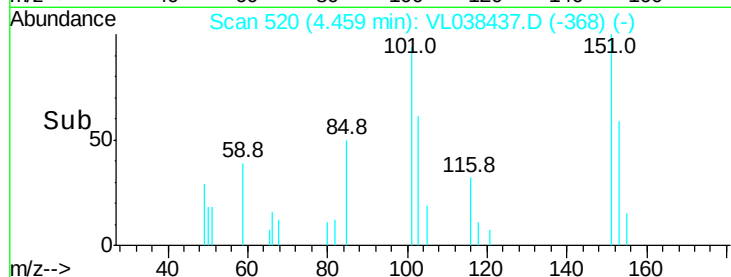
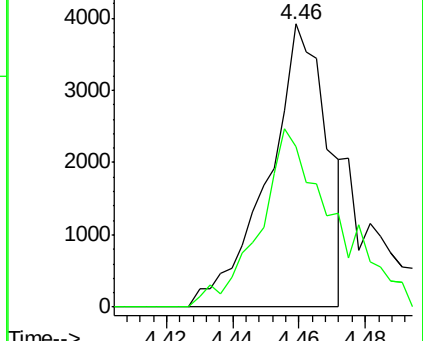
101 100

151 81.7 55.9 83.9



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V



#13

Ethanol

Concen: 878.79 ppbv

RT: 3.58 min Scan# 248

Delta R.T. -0.02 min

Lab File: VL038437.D

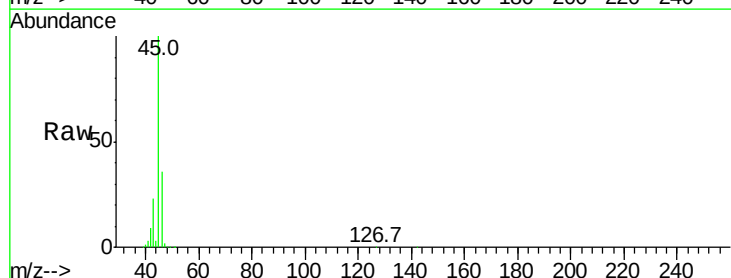
Acq: 24 Feb 2022 16:51

Tgt Ion: 45 Resp: 3945756

Ion Ratio Lower Upper

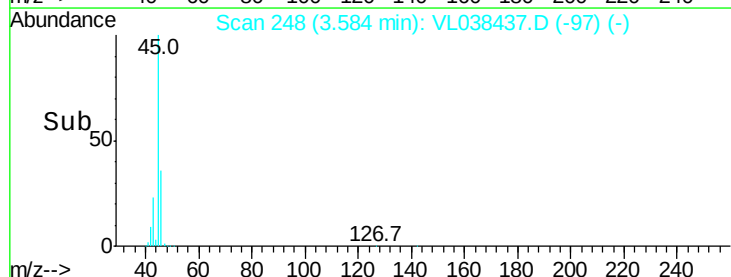
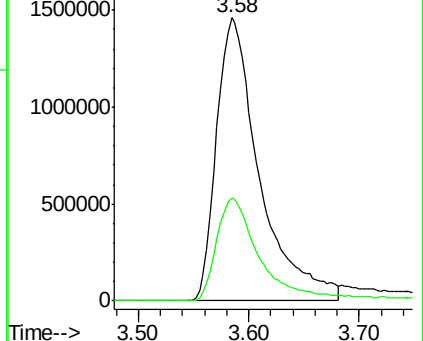
45 100

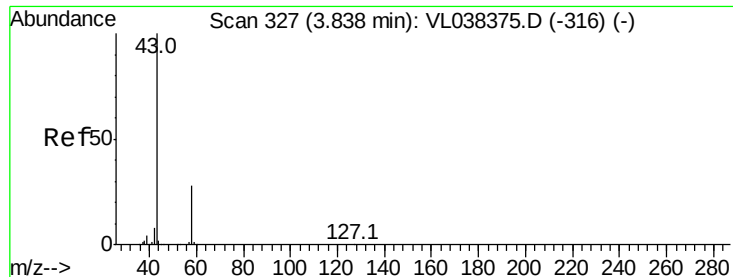
46 38.6 18.2 72.8



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0





#15

Acetone

Concen: 5.92 ppbv

RT: 3.83

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

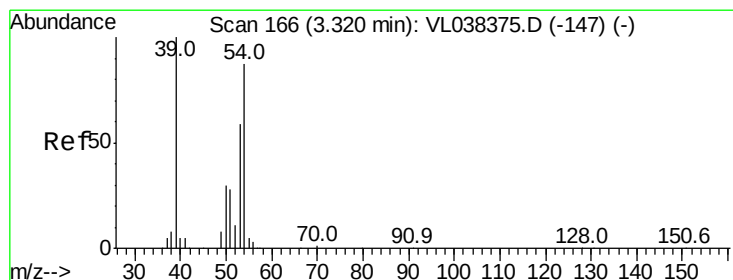
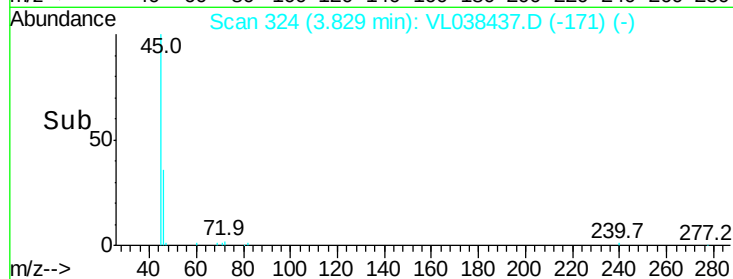
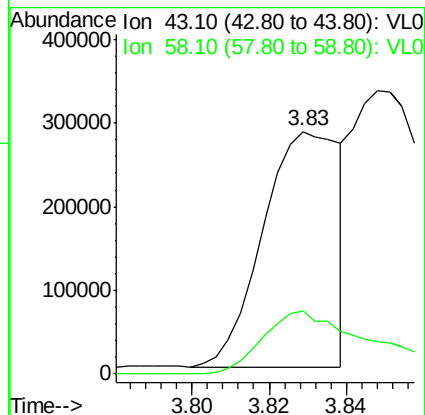
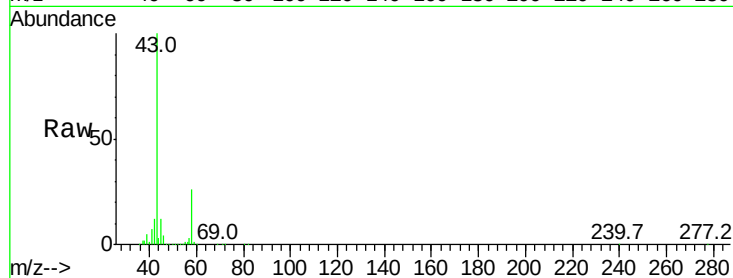
Acq: 24 Feb 2022 16:51

Tgt Ion: 43 Resp: 388340

Ion Ratio Lower Upper

43 100

58 42.4 21.7 32.5#



#16

1,3-Butadiene

Concen: 7.16 ppbv

RT: 3.34 min Scan# 171

Delta R.T. 0.02 min

Lab File: VL038437.D

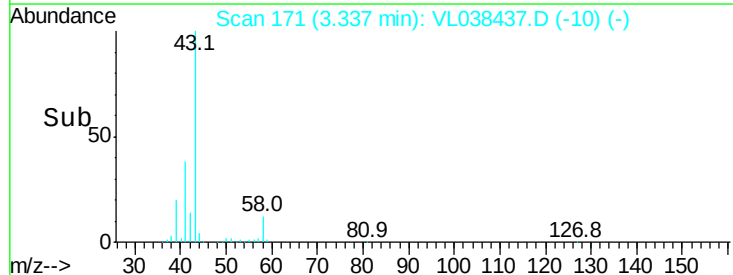
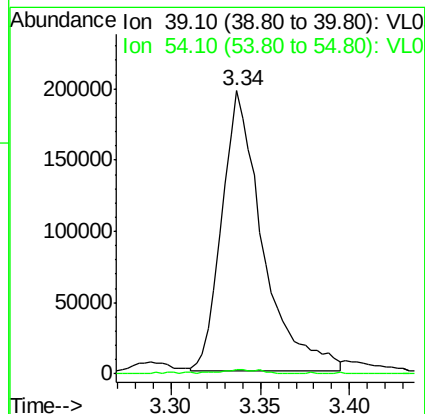
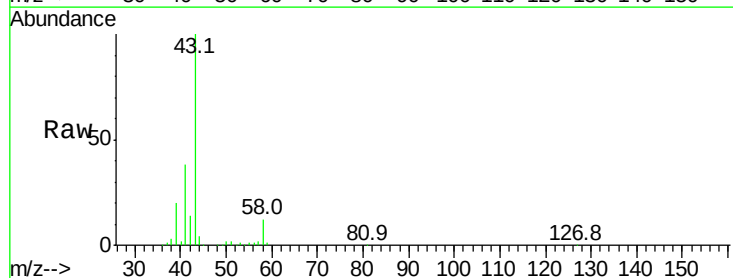
Acq: 24 Feb 2022 16:51

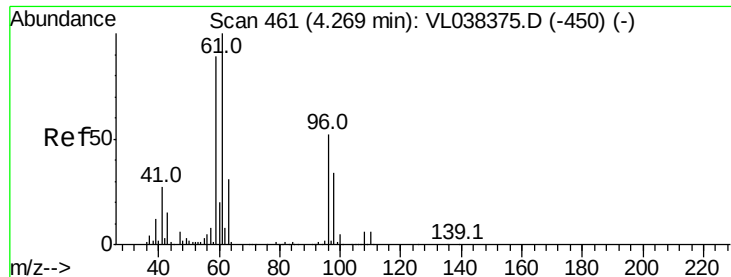
Tgt Ion: 39 Resp: 313847

Ion Ratio Lower Upper

39 100

54 2.8 60.3 90.5#





#17

tert-Butyl alcohol

Concen: 2.50 ppbv

RT: 3.95 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

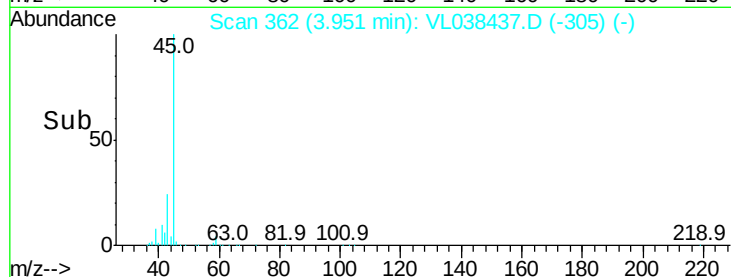
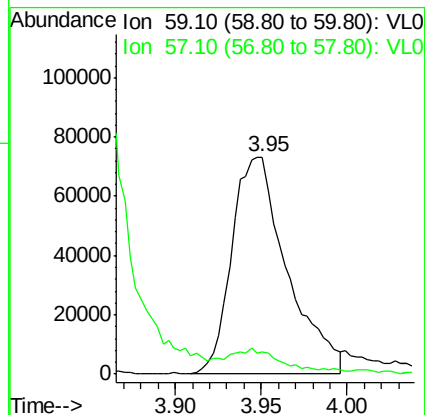
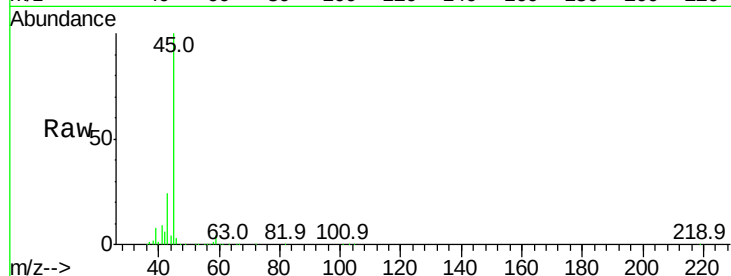
Acq: 24 Feb 2022 16:51

Tgt Ion: 59 Resp: 163420

Ion Ratio Lower Upper

59 100

57 12.4 8.4 12.6



#19

Isopropyl Alcohol

Concen: 121.76 ppbv

RT: 3.94 min Scan# 360

Delta R.T. -0.01 min

Lab File: VL038437.D

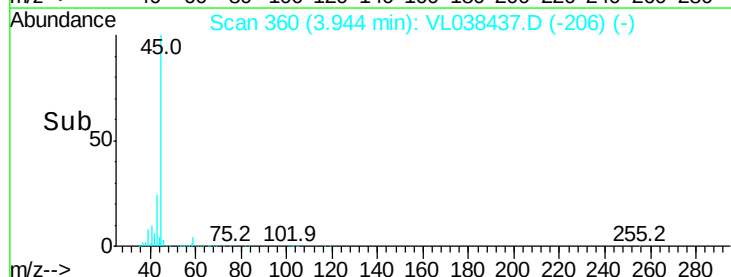
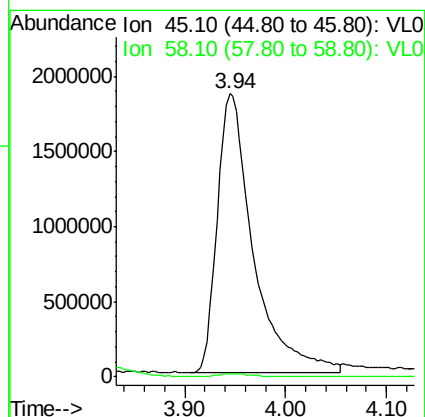
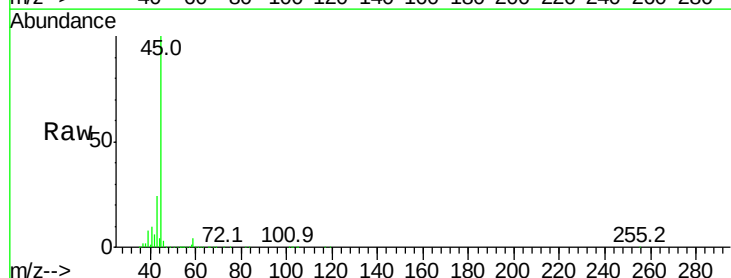
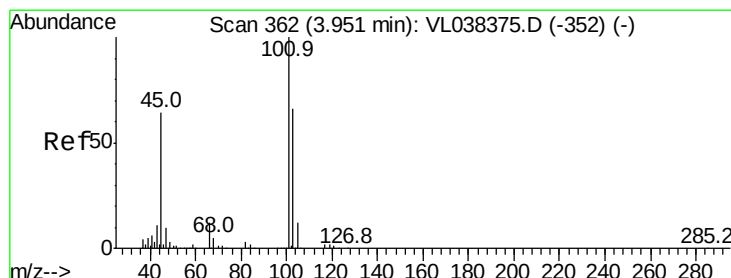
Acq: 24 Feb 2022 16:51

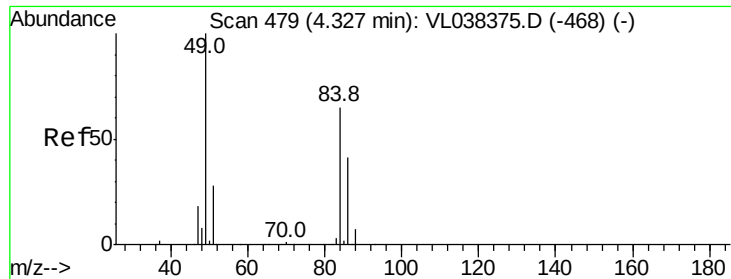
Tgt Ion: 45 Resp: 4626885

Ion Ratio Lower Upper

45 100

58 1.3 1.8 2.8#





#20

Methylene Chloride

Concen: 1.01 ppbv

RT: 4.31

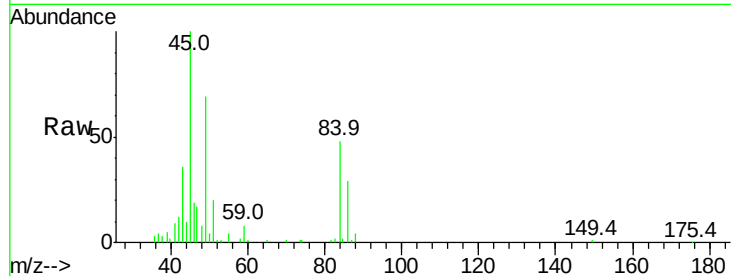
Delta R.T. MSVOA_L

Lab File: ClientSampleId : IA-2DUP

Acq: 24 Feb 2022 16:51

Tgt Ion: 84 Resp: 32820

Ion	Ratio	Lower	Upper
84	100		
49	143.3	122.4	183.6
51	40.3	33.3	49.9
86	60.6	50.7	76.1



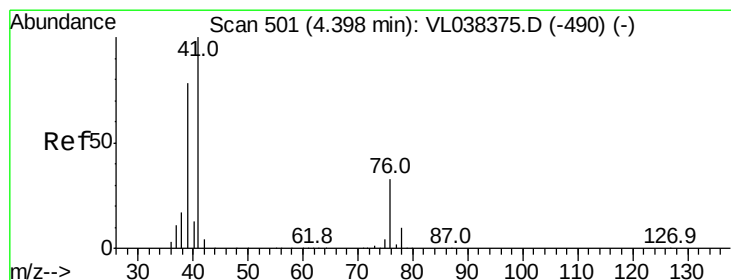
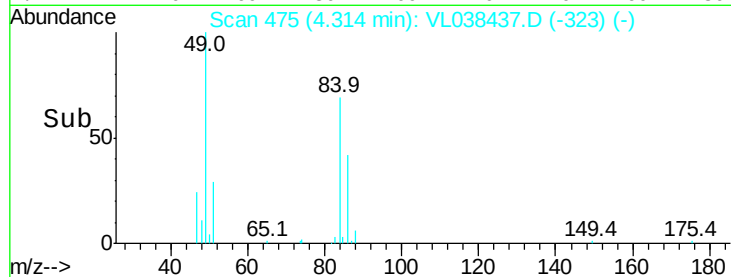
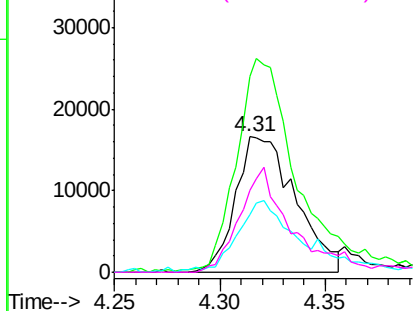
Abundance

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

Allyl Chloride

Concen: 0.07 ppbv

RT: 4.34 min Scan# 483

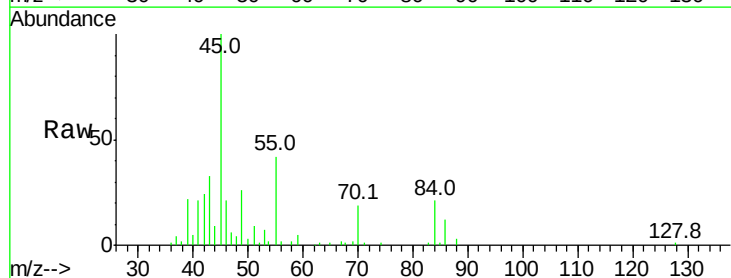
Delta R.T. -0.06 min

Lab File: VL038437.D

Acq: 24 Feb 2022 16:51

Tgt Ion: 41 Resp: 3991

Ion	Ratio	Lower	Upper
41	100		
76	6.4	25.4	38.0#
39	393.2	63.0	94.6#

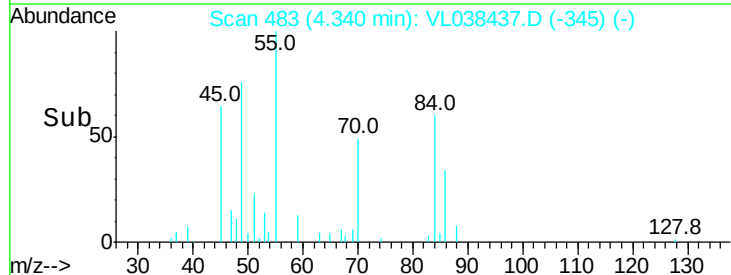
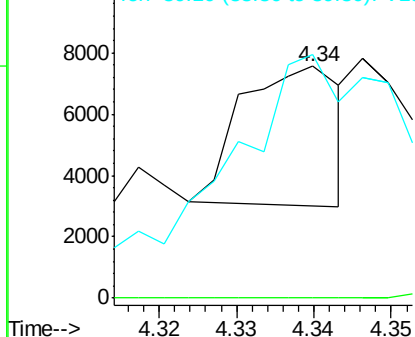


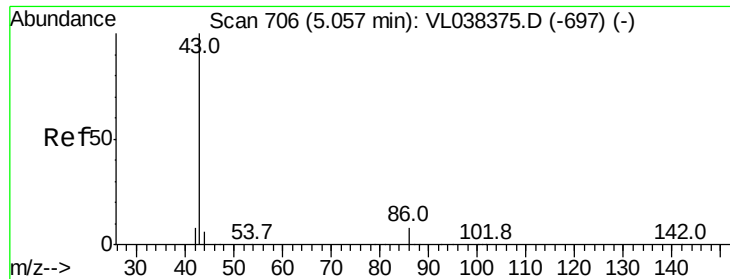
Abundance

Ion 41.10 (40.80 to 41.80): VL0

Ion 76.10 (75.80 to 76.80): VL0

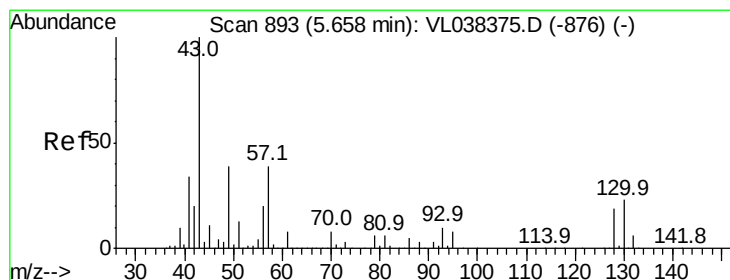
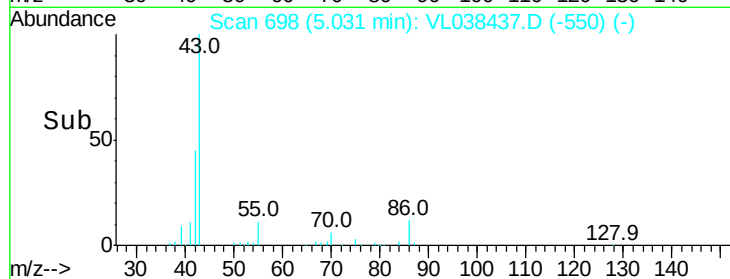
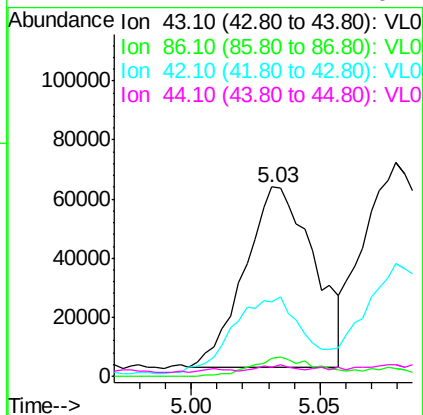
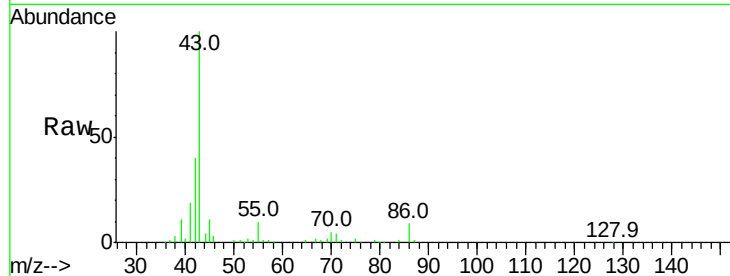
Ion 39.10 (38.80 to 39.80): VL0





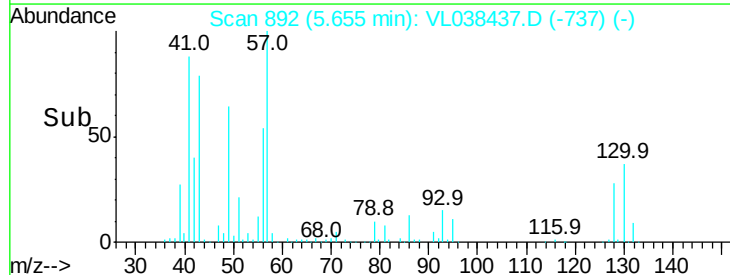
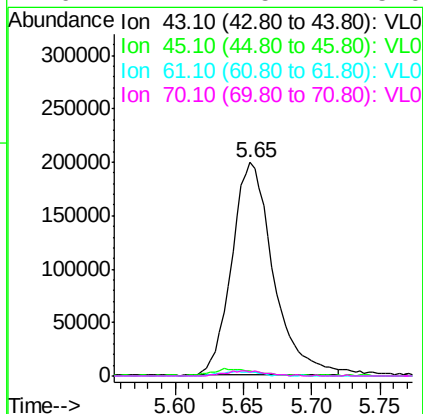
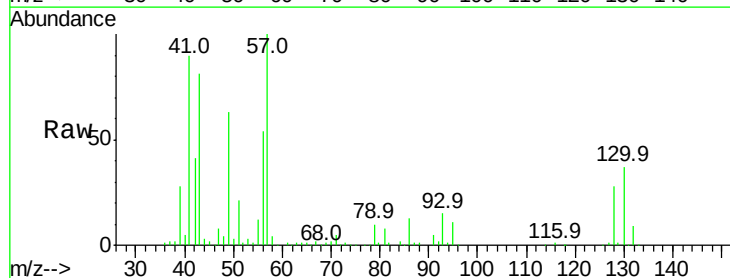
#23
 Vinyl Acetate
 Concen: 1.31 ppbv
 RT: 5.03
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 24 Feb 2022 16:51

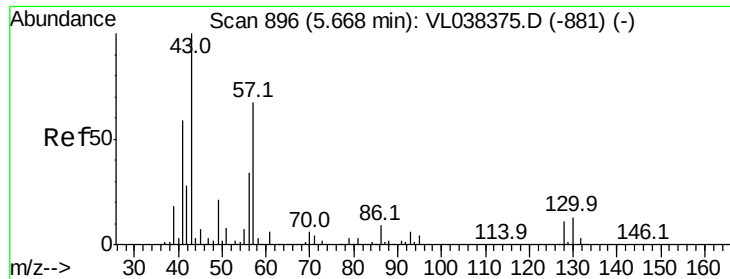
Tgt Ion:	43	Resp:	114145
Ion	Ratio	Lower	Upper
43	100		
86	9.8	5.8	8.6#
42	36.4	7.4	11.0#
44	2.4	4.2	6.2#



#25
 Ethyl Acetate
 Concen: 2.39 ppbv
 RT: 5.65 min Scan# 892
 Delta R.T. -0.00 min
 Lab File: VL038437.D
 Acq: 24 Feb 2022 16:51

Tgt Ion:	43	Resp:	422065
Ion	Ratio	Lower	Upper
43	100		
45	3.7	7.8	11.6#
61	2.3	7.5	11.3#
70	2.7	5.4	8.0#





#26

Hexane

Concen: 6.27 ppbv

RT: 5.66 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 24 Feb 2022 16:51

Tgt Ion: 57 Resp: 500591

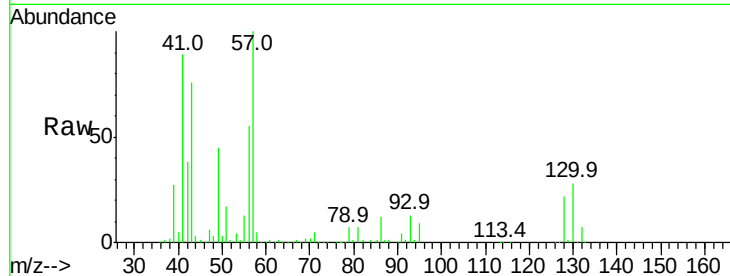
Ion Ratio Lower Upper

57 100

41 91.4 73.1 109.7

43 87.4 181.0 271.4#

56 55.6 43.4 65.0

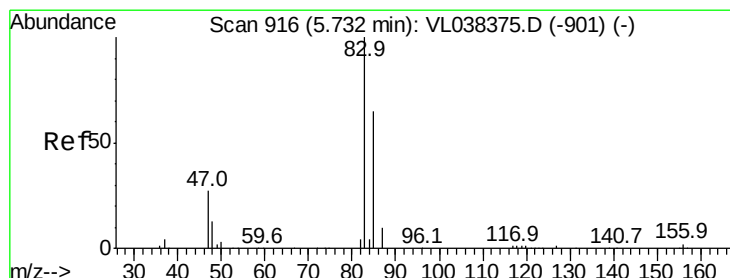
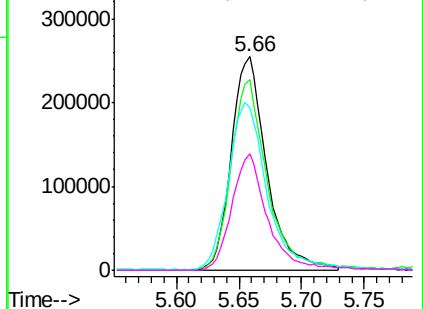
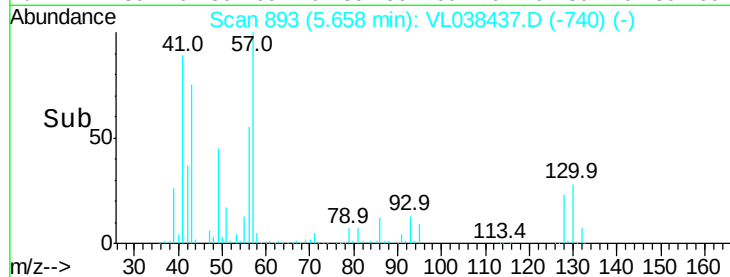


Abundance Ion 57.10 (56.80 to 57.80): VL0

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



#29

Chloroform

Concen: 0.17 ppbv

RT: 5.72 min Scan# 912

Delta R.T. -0.01 min

Lab File: VL038437.D

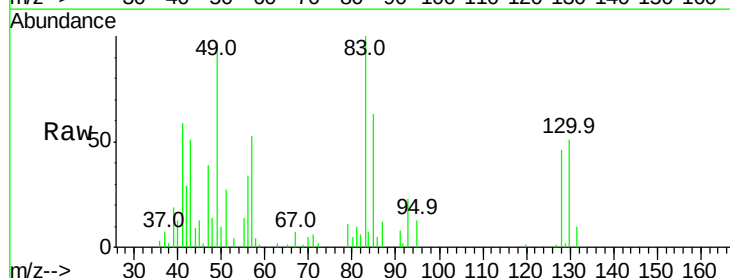
Acq: 24 Feb 2022 16:51

Tgt Ion: 83 Resp: 22472

Ion Ratio Lower Upper

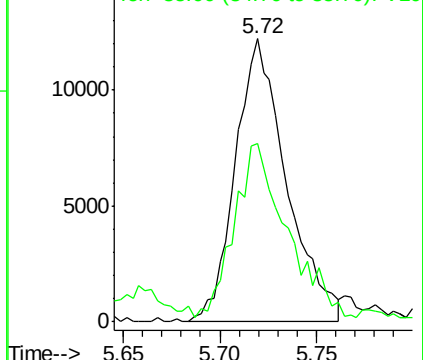
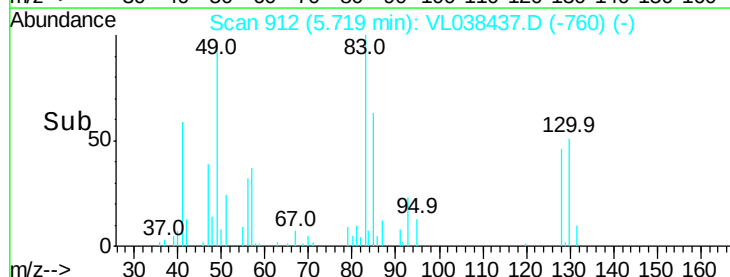
83 100

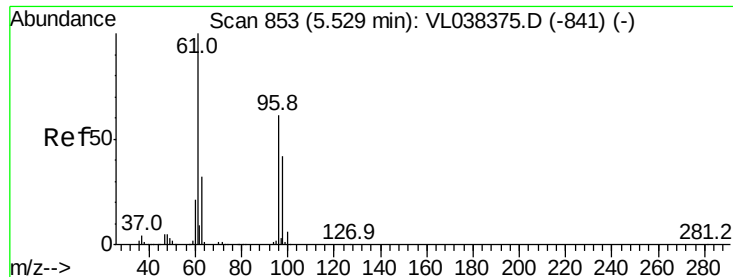
85 57.7 51.6 77.4



Abundance Ion 83.00 (82.70 to 83.70): VL0

Ion 85.00 (84.70 to 85.70): VL0





#31

cis-1,2-Dichloroethene

Concen: 0.07 ppbv

RT: 5.65 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 24 Feb 2022 16:51

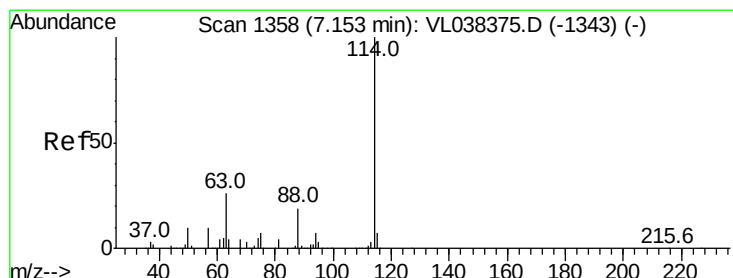
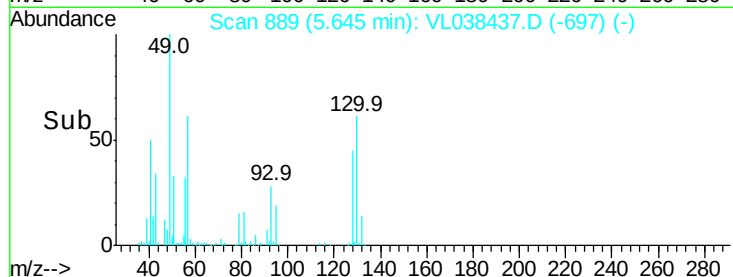
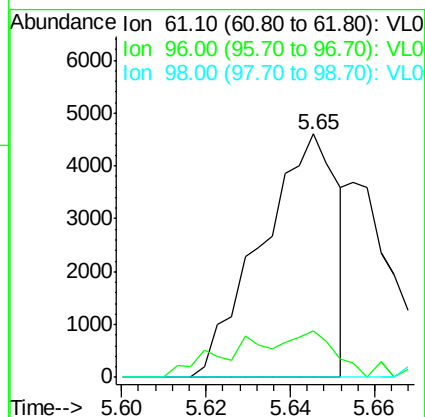
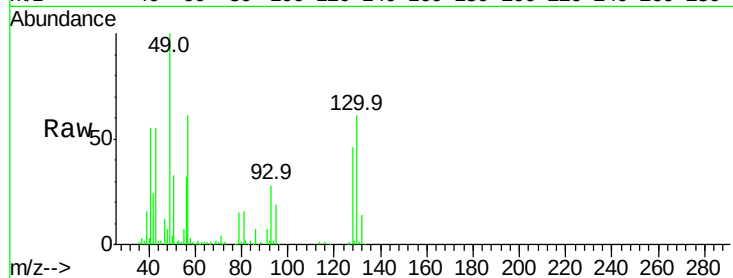
Tgt Ion: 61 Resp: 5769

Ion Ratio Lower Upper

61 100

96 15.5 48.6 73.0#

98 0.0 33.2 49.8#



#33

1,4-Difluorobenzene

Concen: 10.00 ppbv

RT: 7.14 min Scan# 1354

Delta R.T. -0.01 min

Lab File: VL038437.D

Acq: 24 Feb 2022 16:51

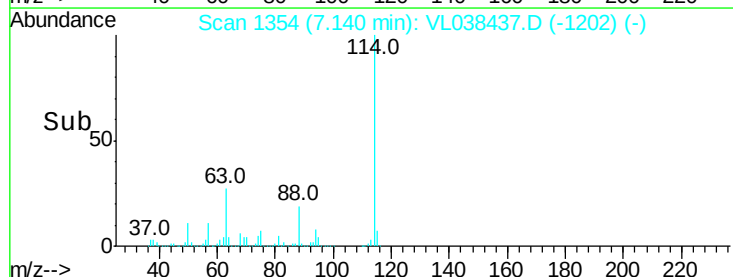
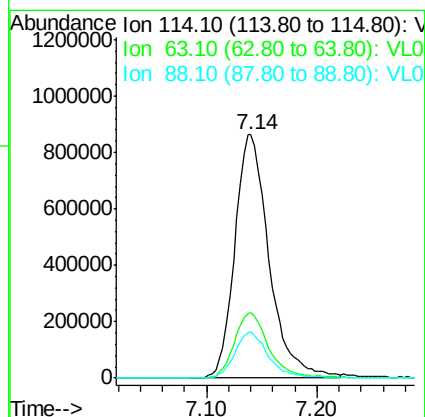
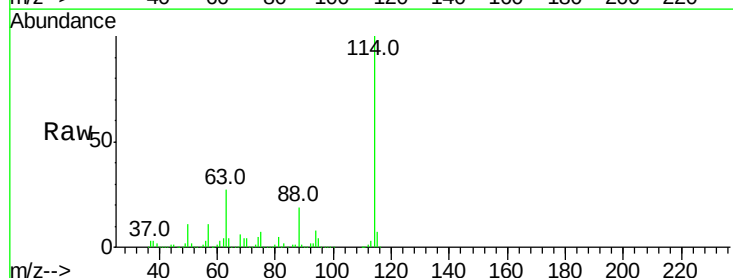
Tgt Ion: 114 Resp: 1859562

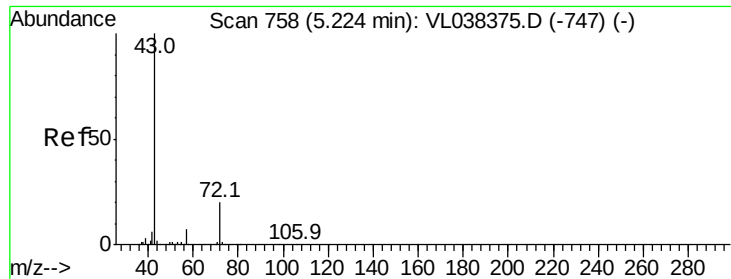
Ion Ratio Lower Upper

114 100

63 27.3 22.2 33.2

88 18.7 15.2 22.8





#34

2-Butanone

Concen: 0.83 ppbv

RT: 5.22 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: IA-2DUP

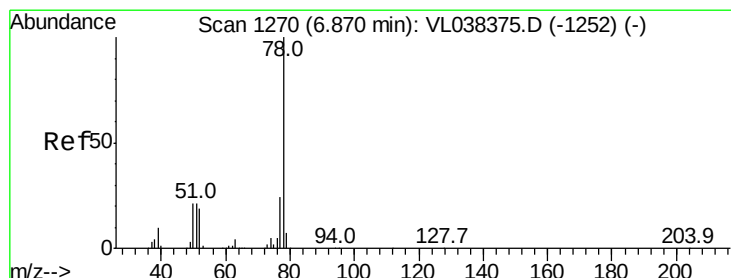
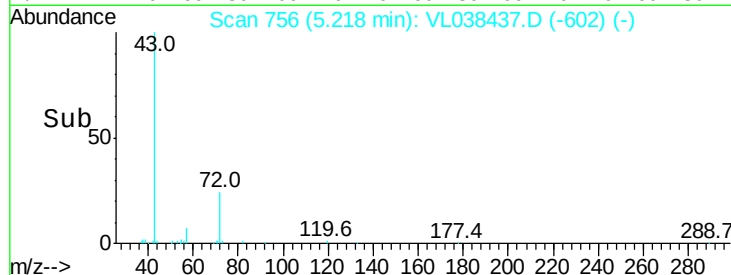
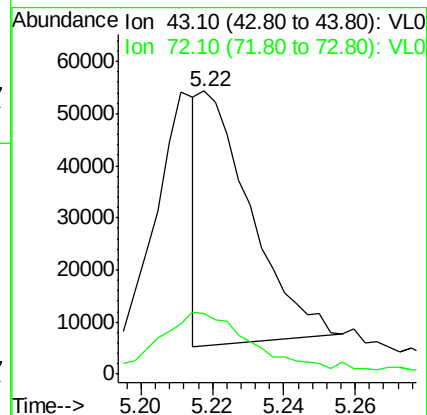
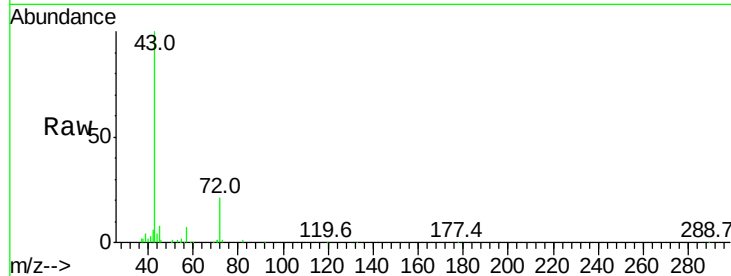
Acq: 24 Feb 2022 16:51

Tgt Ion: 43 Resp: 48323

Ion Ratio Lower Upper

43 100

72 51.5 17.4 26.2#



#36

Benzene

Concen: 0.71 ppbv

RT: 6.85 min Scan# 1265

Delta R.T. -0.02 min

Lab File: VL038437.D

Acq: 24 Feb 2022 16:51

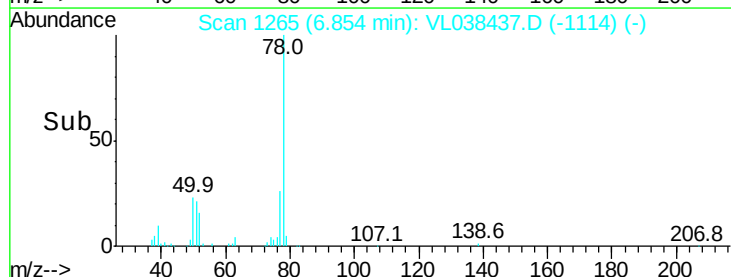
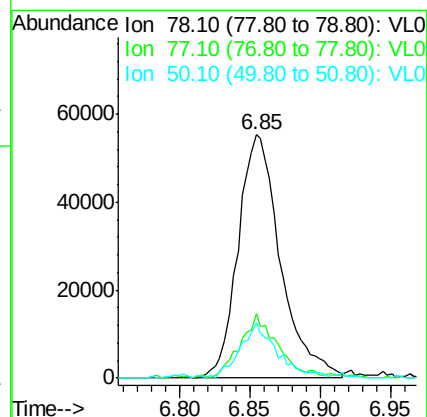
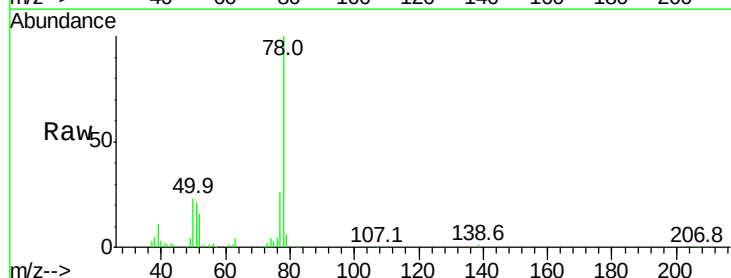
Tgt Ion: 78 Resp: 116305

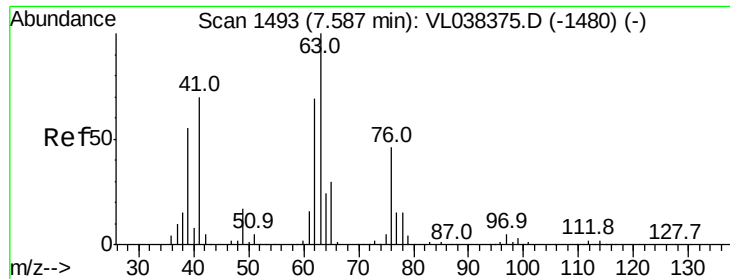
Ion Ratio Lower Upper

78 100

77 26.4 19.0 28.6

50 22.5 16.6 24.8





#39

1,2-Dichloropropane

Concen: 7.51 ppbv

RT: 7.14 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

Acq: 24 Feb 2022 16:51

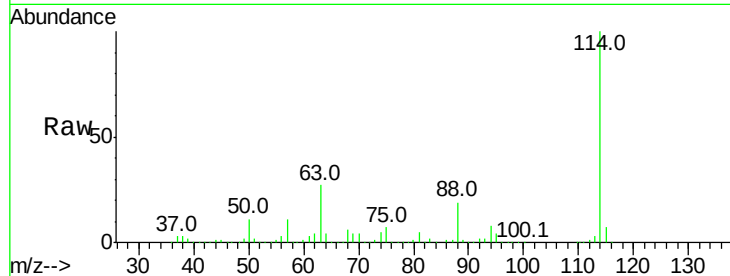
Tgt Ion: 63 Resp: 489875

Ion Ratio Lower Upper

63 100

41 0.0 56.1 84.1#

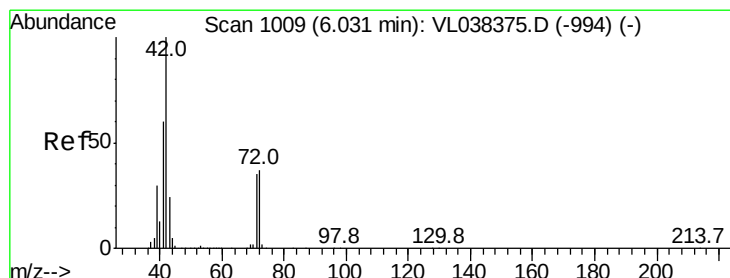
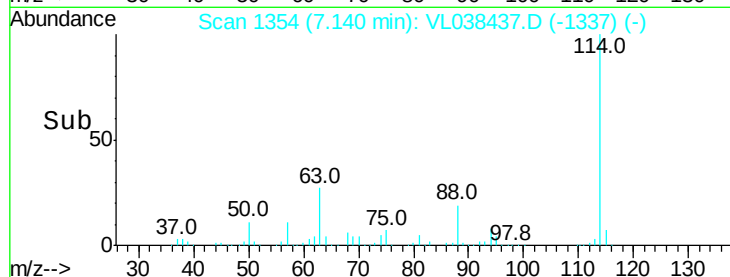
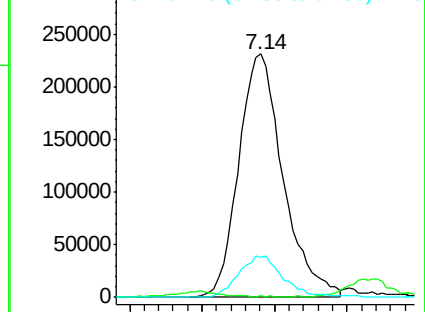
62 16.5 55.5 83.3#



Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 62.10 (61.80 to 62.80): VL0



#41

Tetrahydrofuran

Concen: 0.17 ppbv

RT: 6.28 min Scan# 1087

Delta R.T. 0.25 min

Lab File: VL038437.D

Acq: 24 Feb 2022 16:51

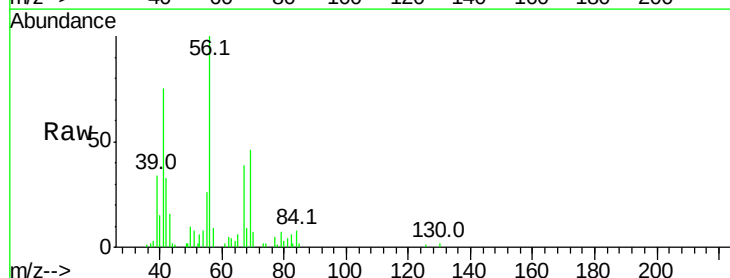
Tgt Ion: 42 Resp: 6527

Ion Ratio Lower Upper

42 100

72 1.4 29.9 44.9#

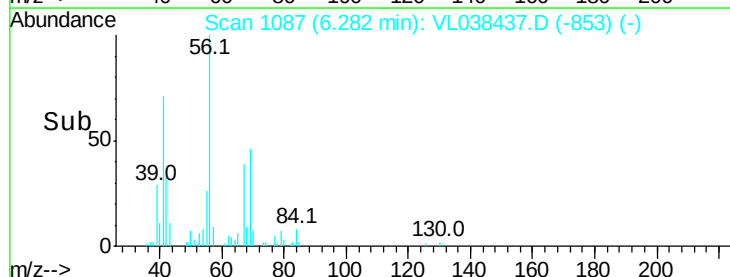
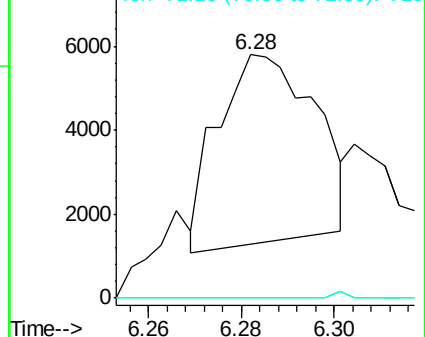
71 0.0 28.6 42.8#

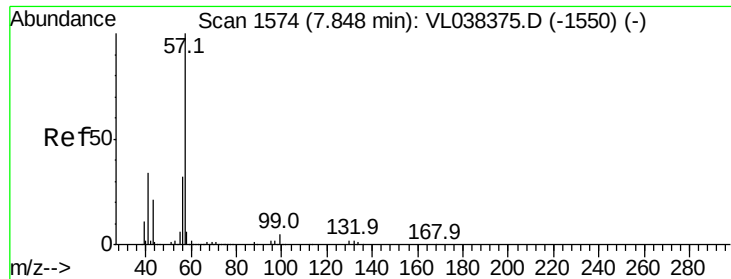


Abundance Ion 42.10 (41.80 to 42.80): VL0

Ion 72.10 (71.80 to 72.80): VL0

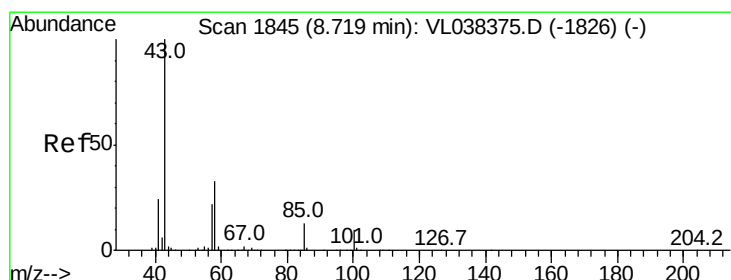
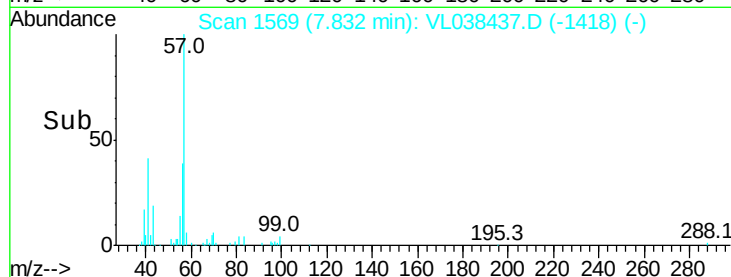
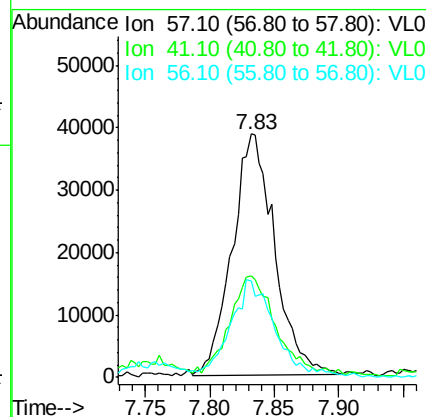
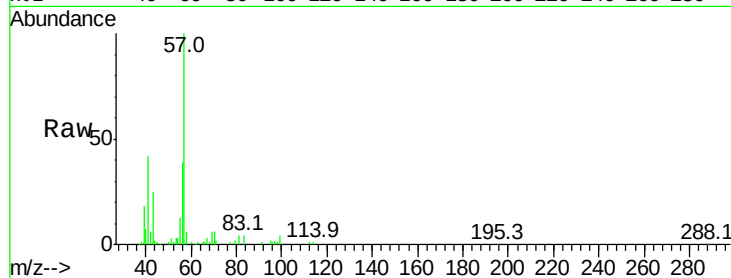
Ion 71.10 (70.80 to 71.80): VL0





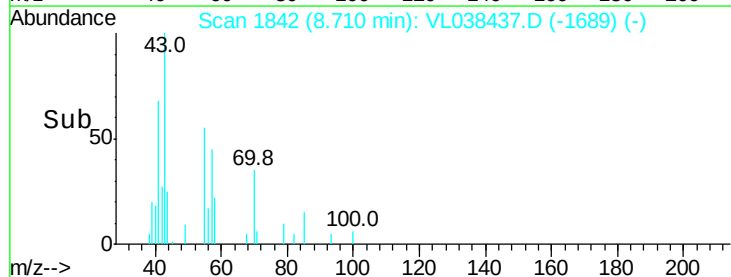
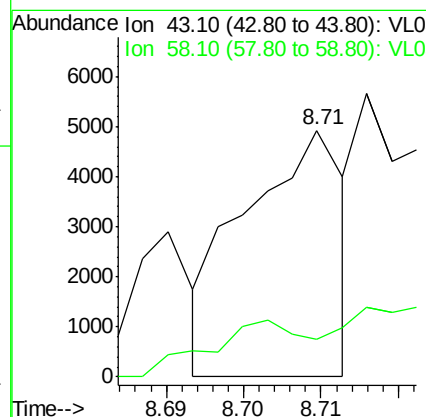
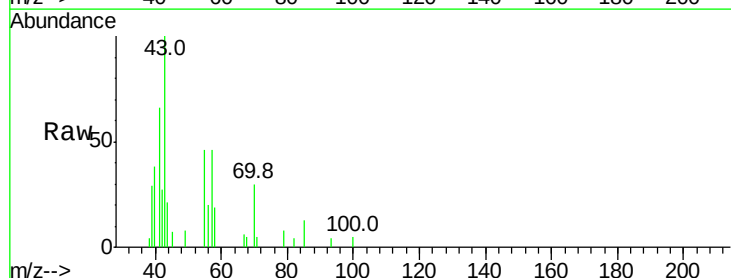
#44
 2,2,4-Trimethylpentane
 Concen: 0.32 ppbv
 RT: 7.83
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 24 Feb 2022 16:51

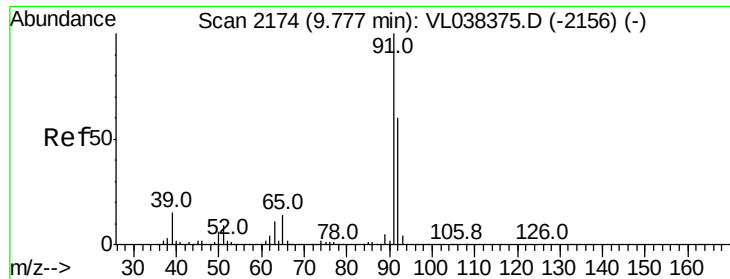
Tgt Ion: 57 Resp: 88795
 Ion Ratio Lower Upper
 57 100
 41 46.7 26.6 39.8#
 56 42.6 25.0 37.6#



#50
 4-Methyl-2-Pentanone
 Concen: 0.04 ppbv
 RT: 8.71 min Scan# 1842
 Delta R.T. -0.01 min
 Lab File: VL038437.D
 Acq: 24 Feb 2022 16:51

Tgt Ion: 43 Resp: 4407
 Ion Ratio Lower Upper
 43 100
 58 0.0 27.7 41.5#





#53

Toluene

Concen: 5.79 ppbv

RT: 9.76 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

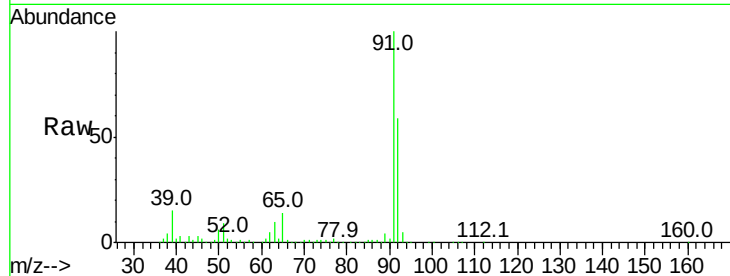
Acq: 24 Feb 2022 16:51

Tgt Ion: 91 Resp: 1029458

Ion Ratio Lower Upper

91 100

92 59.9 48.2 72.4



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

9.76

500000

400000

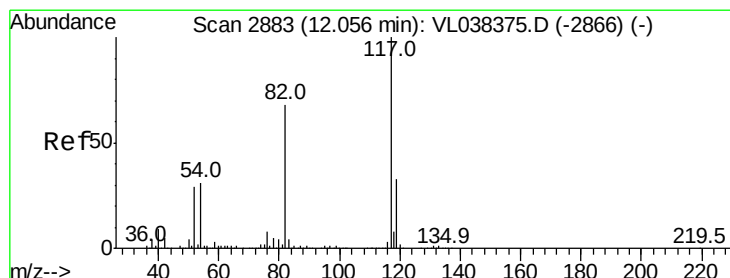
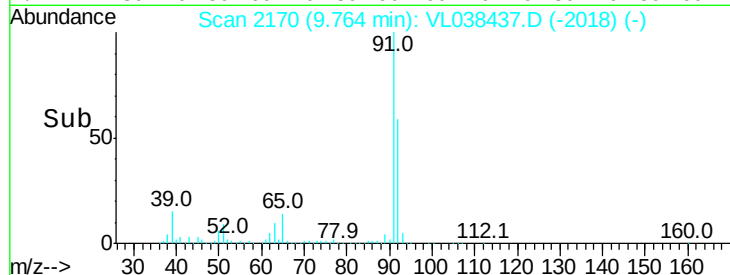
300000

200000

100000

0

Time--> 9.65 9.70 9.75 9.80 9.85



#55

Chlorobenzene-d5

Concen: 10.00 ppbv

RT: 12.04 min Scan# 2879

Delta R.T. -0.01 min

Lab File: VL038437.D

Acq: 24 Feb 2022 16:51

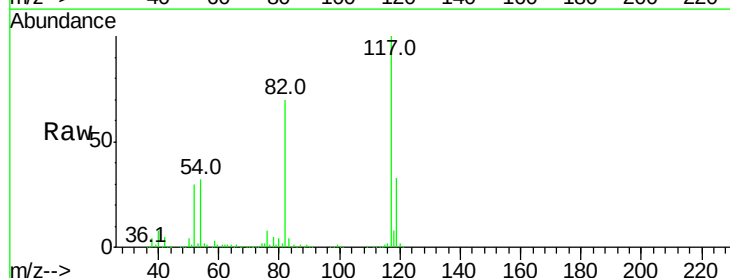
Tgt Ion: 117 Resp: 1588513

Ion Ratio Lower Upper

117 100

82 71.9 54.9 82.3

119 33.7 46.1 69.1#



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

12.04

800000

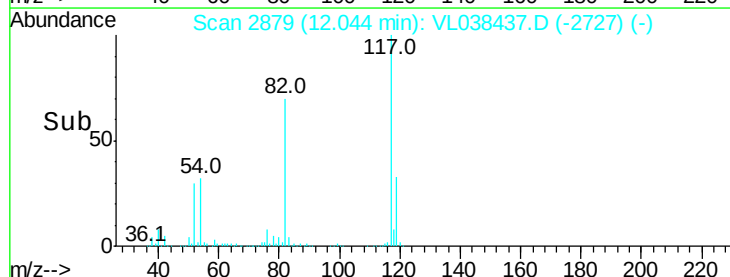
600000

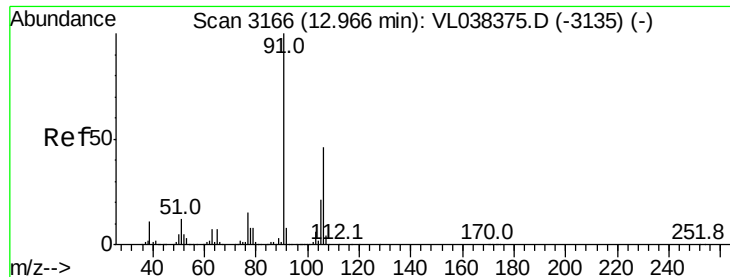
400000

200000

0

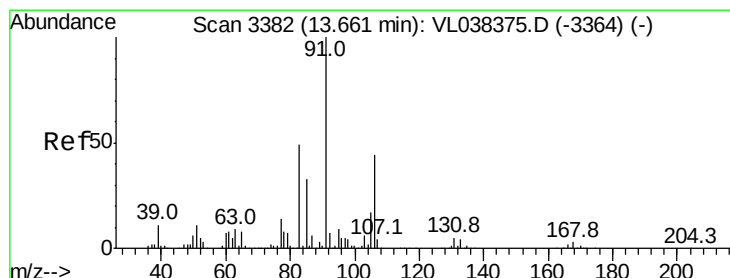
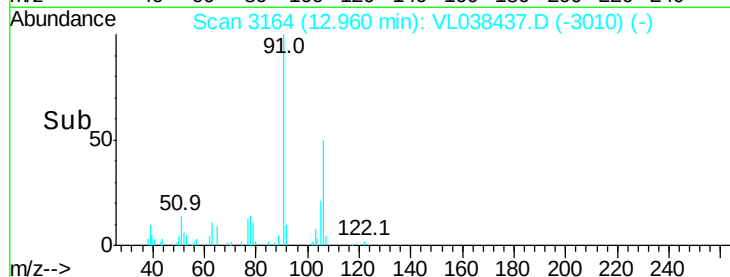
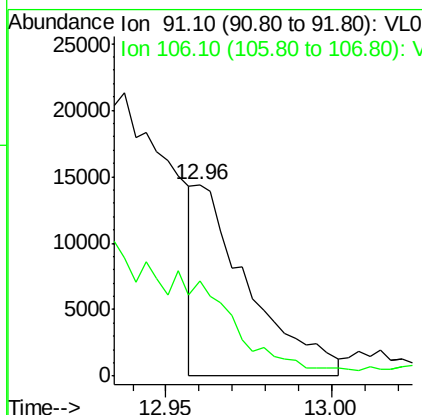
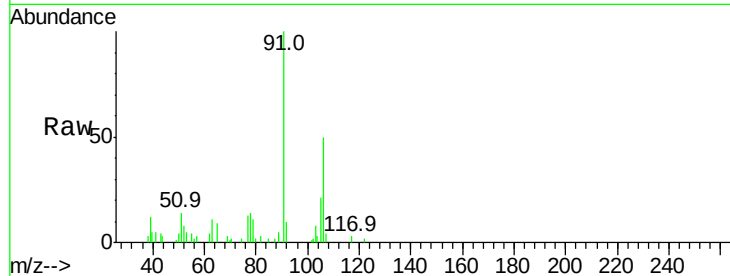
Time--> 12.00 12.10





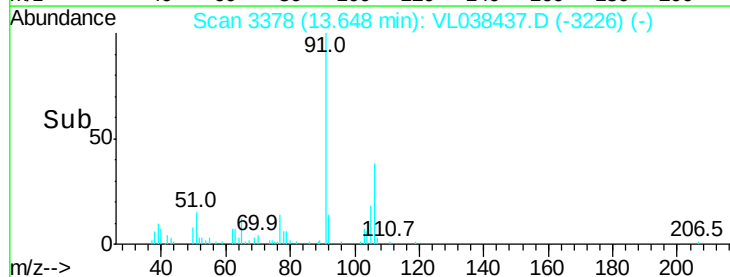
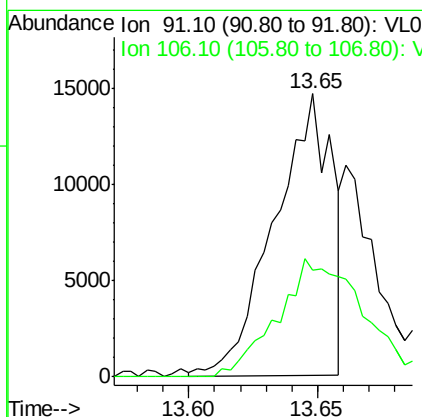
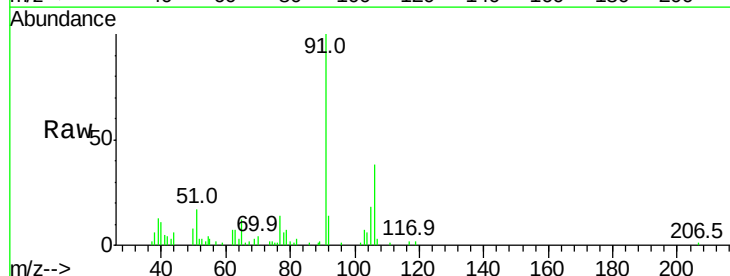
#59
m/p-Xylene
Concen: 0.09 ppbv
RT: 12.96 min
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 24 Feb 2022 16:51

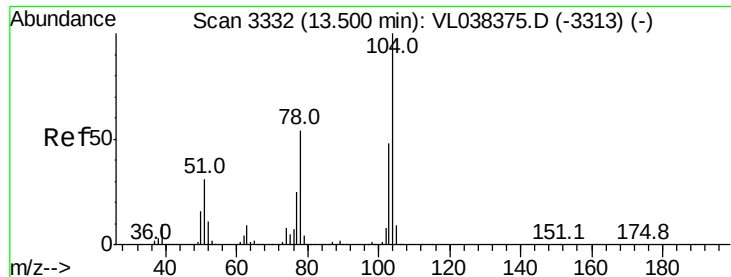
Tgt Ion: 91 Resp: 16241
Ion Ratio Lower Upper
91 100
106 0.0 34.4 51.6#



#60
o-Xylene
Concen: 0.13 ppbv
RT: 13.65 min Scan# 3378
Delta R.T. -0.01 min
Lab File: VL038437.D
Acq: 24 Feb 2022 16:51

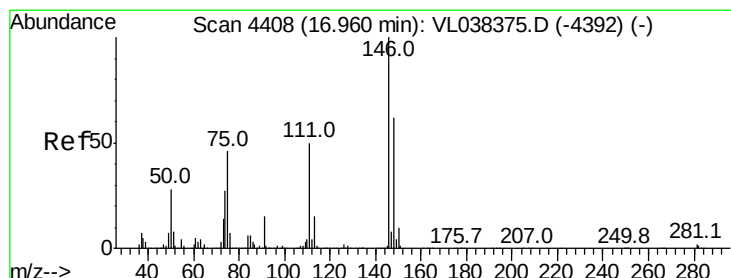
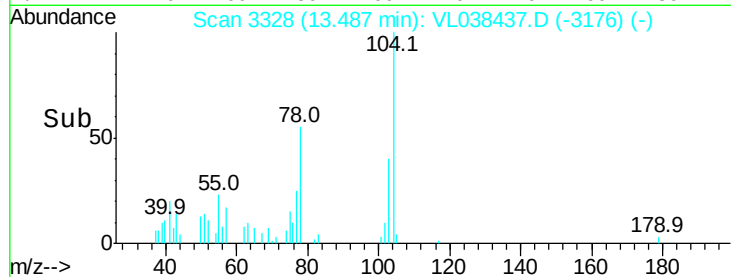
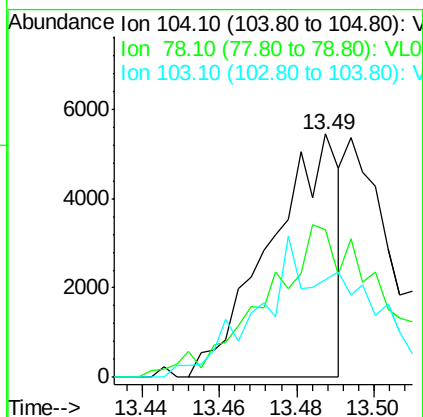
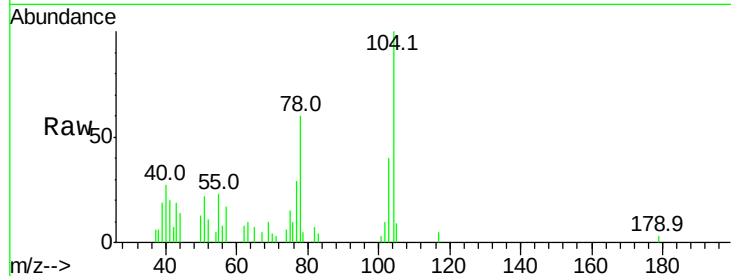
Tgt Ion: 91 Resp: 22923
Ion Ratio Lower Upper
91 100
106 63.2 21.9 65.5





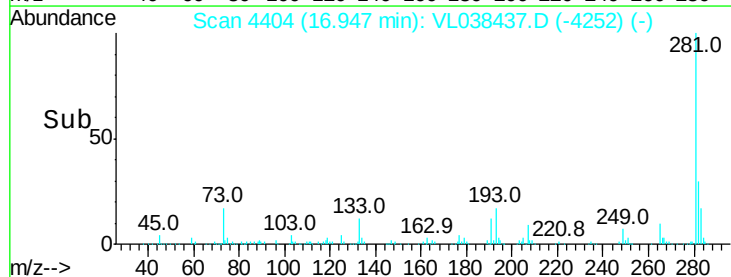
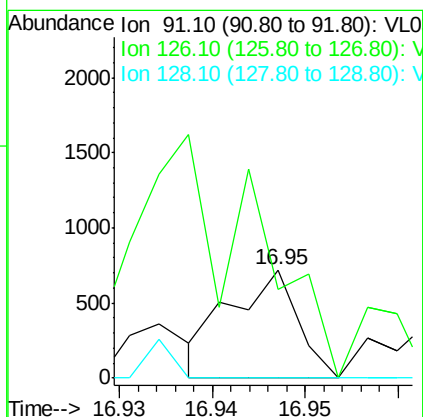
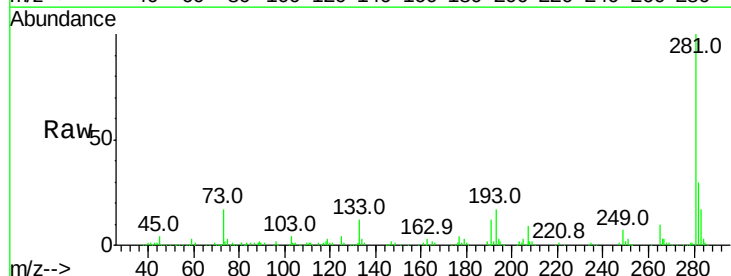
#61
 Styrene
 Concen: 0.08 ppbv
 RT: 13.49 min
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 24 Feb 2022 16:51

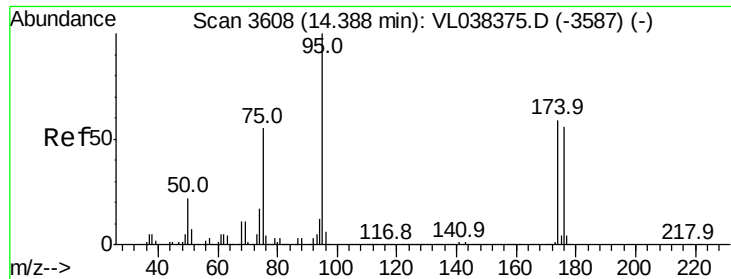
Tgt Ion: 104 Resp: 6756
 Ion Ratio Lower Upper
 104 100
 78 117.2 44.2 66.4#
 103 94.4 38.4 57.6#



#66
 Benzyl Chloride
 Concen: 0.03 ppbv
 RT: 16.95 min Scan# 4404
 Delta R.T. -0.01 min
 Lab File: VL038437.D
 Acq: 24 Feb 2022 16:51

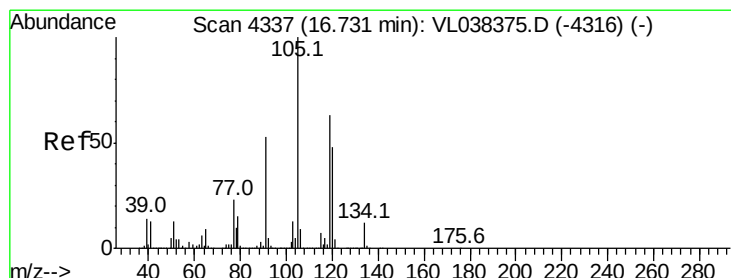
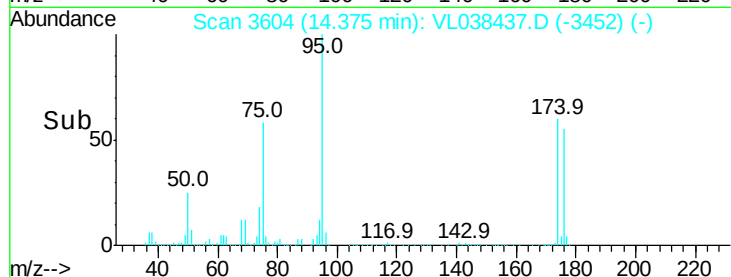
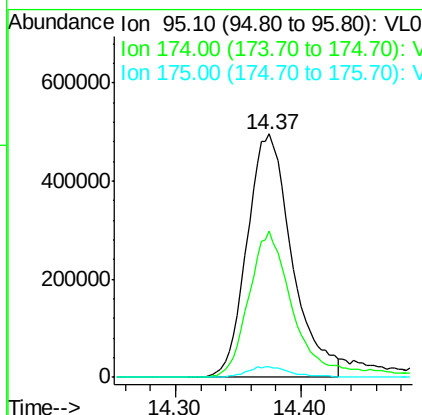
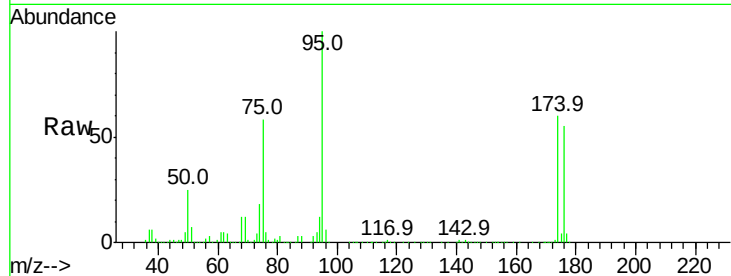
Tgt Ion: 91 Resp: 366
 Ion Ratio Lower Upper
 91 100
 126 0.0 12.3 18.5#
 128 0.0 4.2 6.4#





#68
 1-Bromo-4-Fluorobenzene
 Concen: 9.40 ppbv
 RT: 14.37 min
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 24 Feb 2022 16:51

Tgt Ion:	95	Resp:	1235377
Ion	Ratio	Lower	Upper
95	100		
174	62.9	49.0	73.4
175	4.5	3.6	5.4



#74
 1,2,4-Trimethylbenzene
 Concen: 0.12 ppbv
 RT: 16.72 min Scan# 4332
 Delta R.T. -0.02 min
 Lab File: VL038437.D
 Acq: 24 Feb 2022 16:51

Tgt Ion:	105	Resp:	22603
Ion	Ratio	Lower	Upper
105	100		
120	49.1	38.2	57.4
91	13.3	42.7	64.1#
77	15.0	18.5	27.7#

