

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL022322\
 Data File : VL038419.D
 Acq On : 23 Feb 2022 22:29
 Operator : SY/AP
 Sample : N1605-02
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-3

Quant Time: Feb 24 07:31:11 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	792383	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.15	114	1945227	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.06	117	1652306	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.39	95	1283333	9.39	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	93.90%

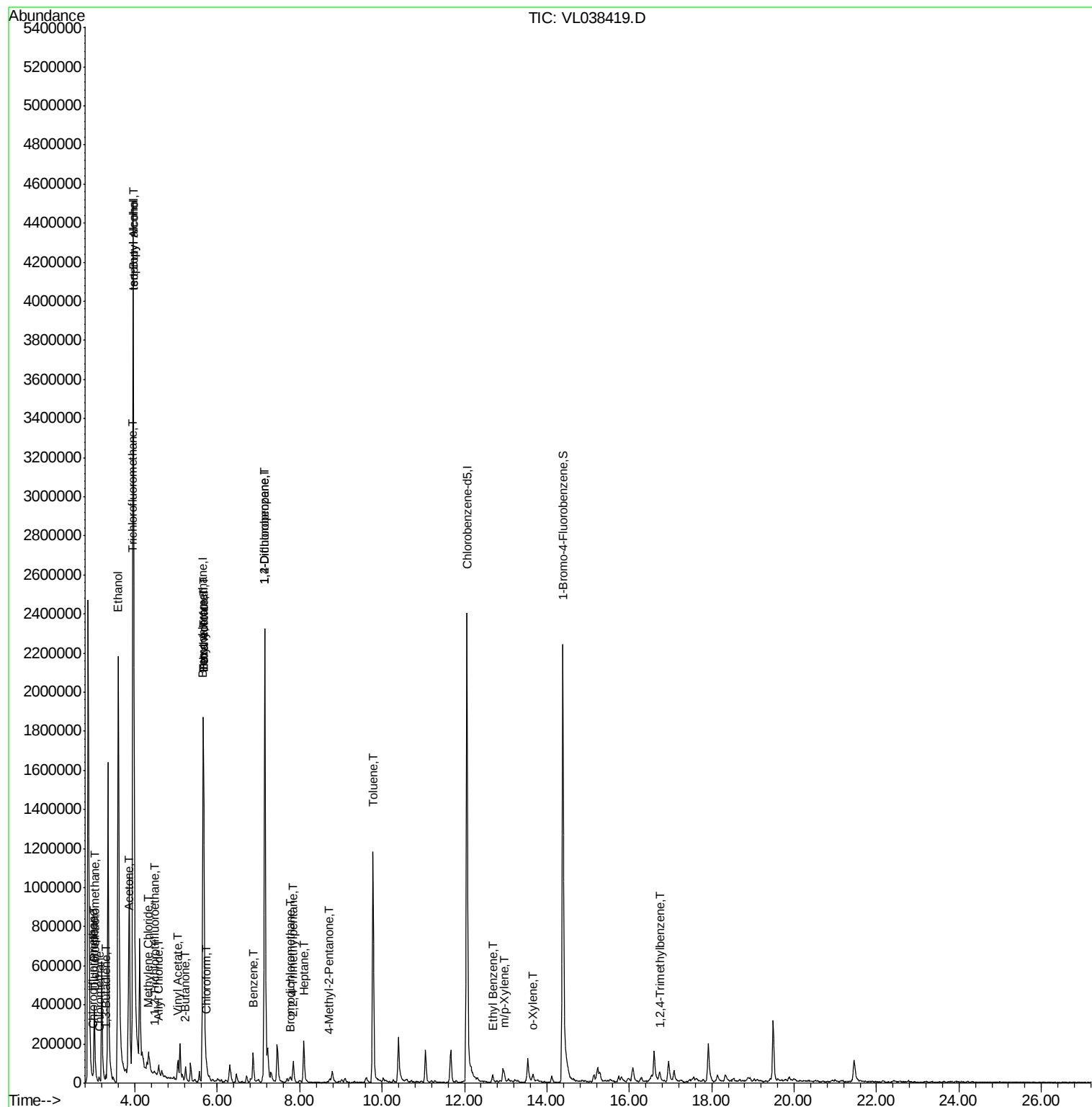
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.03	85	12703	0.10	ppbv	99
3) Chlorodifluoromethane	2.98	51	43080	0.31	ppbv #	87
4) Chloromethane	3.14	50	27555	0.57	ppbv	100
9) Propene	3.01	41	88617	1.92	ppbv #	70
10) Heptane	8.10	43	94725	0.84	ppbv	96
11) Trichlorofluoromethane	3.93	101	9549	0.08	ppbv	96
12) 1,1,2-Trichlorotrifluoroet	4.47	101	3987	0.05	ppbv #	42
13) Ethanol	3.59	45	3384007	733.98	ppbv	87
15) Acetone	3.84	43	292675	4.34	ppbv #	55
16) 1,3-Butadiene	3.30	39	11122	0.25	ppbv #	12
17) tert-Butyl alcohol	3.96	59	248667	3.70	ppbv	98
19) Isopropyl Alcohol	3.96	45	6938708	177.82	ppbv #	96
20) Methylene Chloride	4.33	84	32991	0.99	ppbv	95
21) Allyl Chloride	4.58	41	9282	0.16	ppbv #	20
23) Vinyl Acetate	5.04	43	72348	0.81	ppbv #	41
25) Ethyl Acetate	5.67	43	421622	2.33	ppbv #	81
26) Hexane	5.67	57	560025	6.83	ppbv #	45
29) Chloroform	5.74	83	14292	0.11	ppbv	99
34) 2-Butanone	5.23	43	93270	1.52	ppbv	98
36) Benzene	6.87	78	135258	0.79	ppbv	97
39) 1,2-Dichloropropane	7.15	63	507596	7.44	ppbv #	25
41) Tetrahydrofuran	5.67	42	212315	5.14	ppbv #	52
42) Bromodichloromethane	7.77	83	4383	0.03	ppbv #	68
44) 2,2,4-Trimethylpentane	7.85	57	87772	0.30	ppbv #	85
50) 4-Methyl-2-Pentanone	8.72	43	5048	0.05	ppbv #	50
53) Toluene	9.78	91	1003484	5.40	ppbv	99
58) Ethyl Benzene	12.68	91	34498	0.15	ppbv	92
59) m/p-Xylene	12.97	91	15604	0.08	ppbv #	33
60) o-Xylene	13.66	91	18340	0.10	ppbv #	58
74) 1,2,4-Trimethylbenzene	16.73	105	20898	0.11	ppbv #	65

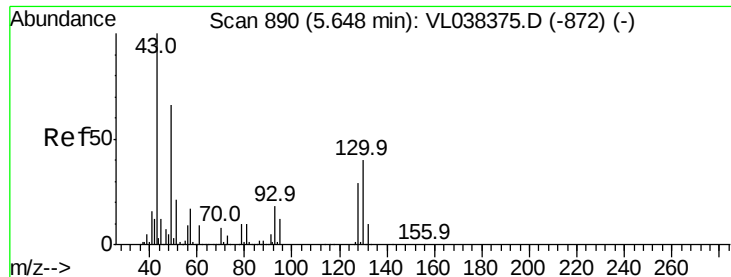
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA_L\METHODS\VL022222AIR.M
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Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.00 ppbv

RT: 5.65 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: IA-3

Acq: 23 Feb 2022 22:29

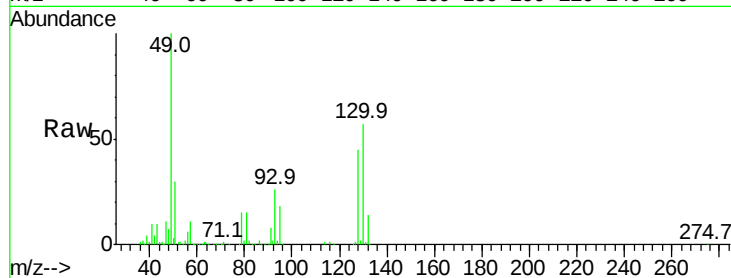
Tgt Ion: 49 Resp: 792383

Ion Ratio Lower Upper

49 100

128 46.6 24.3 72.9

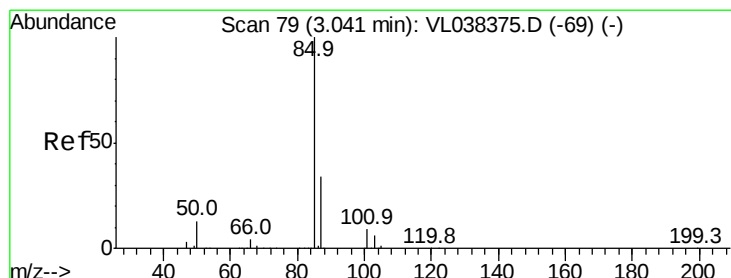
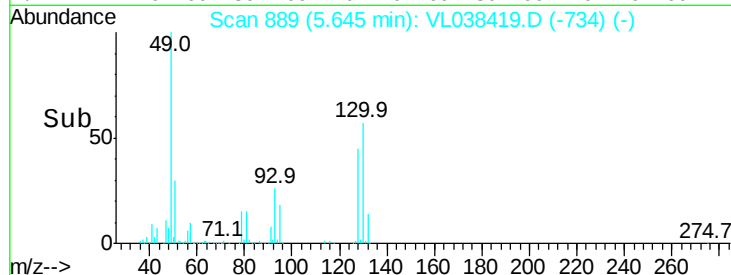
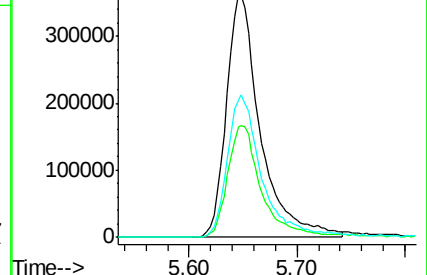
130 60.8 30.1 90.5



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



#2

Dichlorodifluoromethane

Concen: 0.10 ppbv

RT: 3.03 min Scan# 77

Delta R.T. -0.01 min

Lab File: VL038419.D

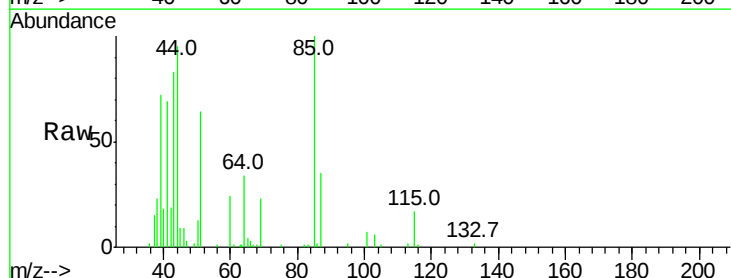
Acq: 23 Feb 2022 22:29

Tgt Ion: 85 Resp: 12703

Ion Ratio Lower Upper

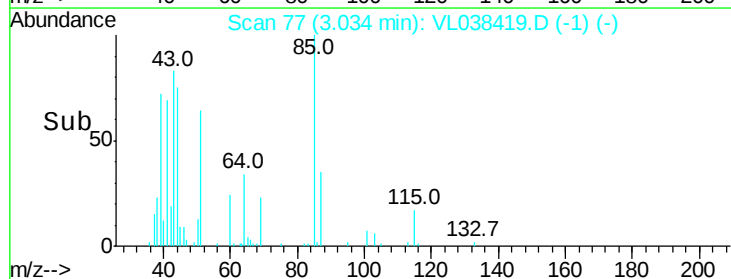
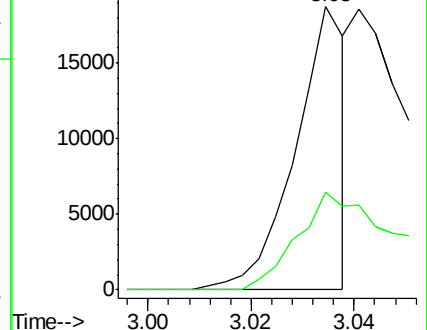
85 100

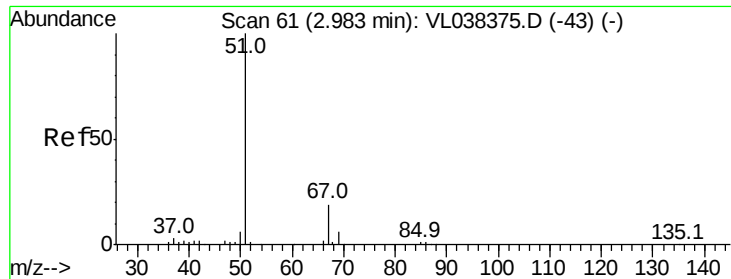
87 34.5 27.4 41.0



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.31 ppbv

RT: 2.98 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

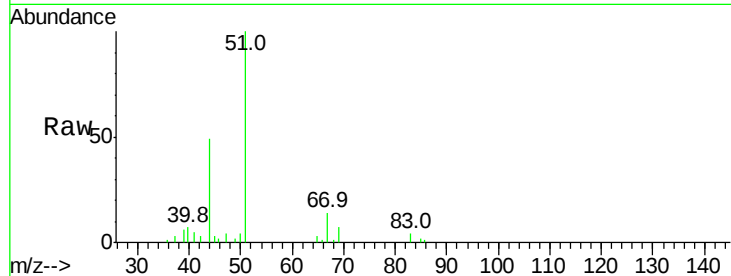
Acq: 23 Feb 2022 22:29

Tgt Ion: 51 Resp: 43080

Ion Ratio Lower Upper

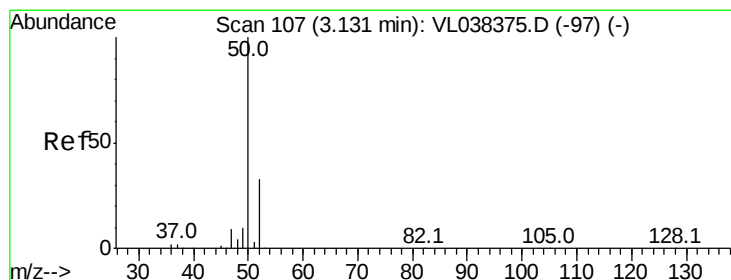
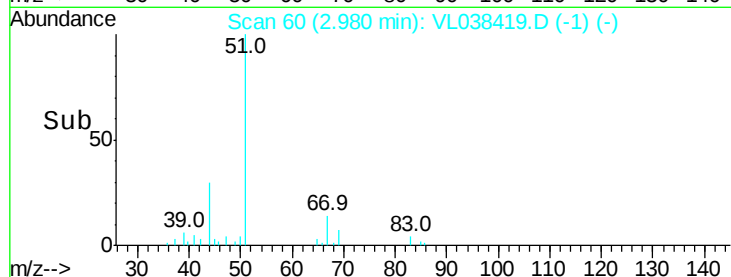
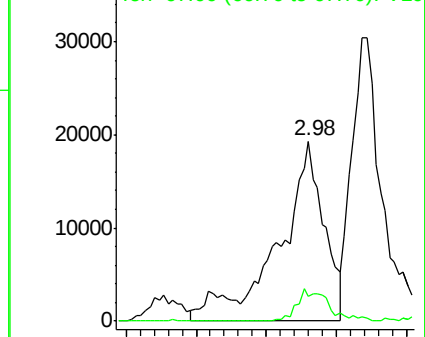
51 100

67 12.4 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: 0.57 ppbv

RT: 3.14 min Scan# 109

Delta R.T. 0.01 min

Lab File: VL038419.D

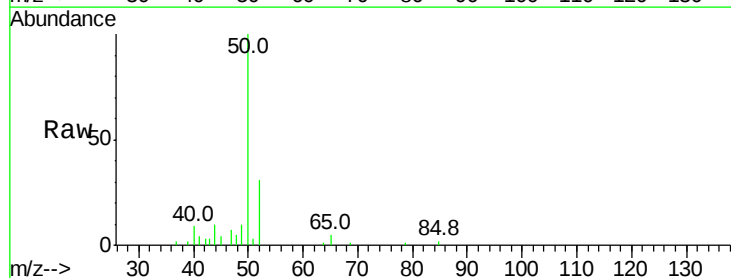
Acq: 23 Feb 2022 22:29

Tgt Ion: 50 Resp: 27555

Ion Ratio Lower Upper

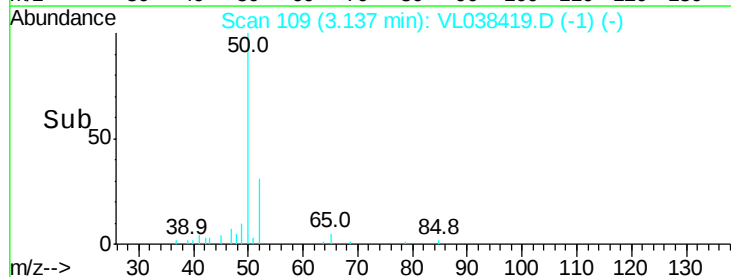
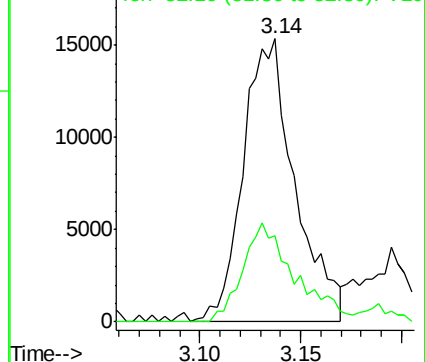
50 100

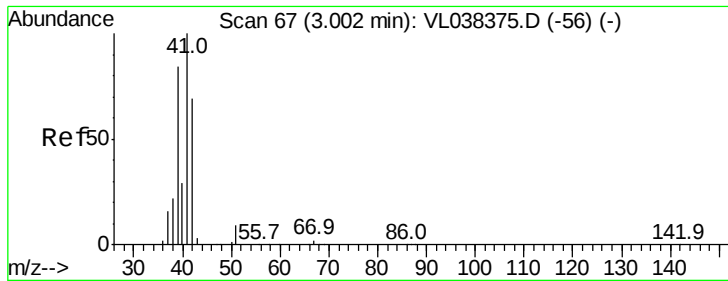
52 32.8 26.5 39.7



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 1.92 ppbv

RT: 3.01 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

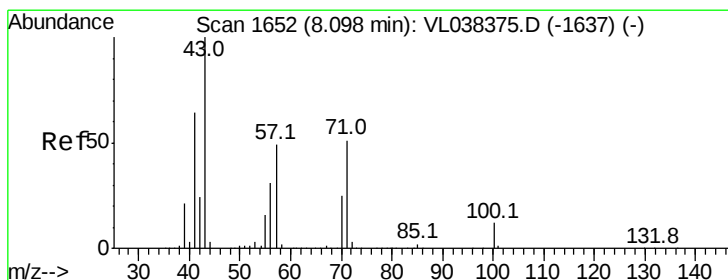
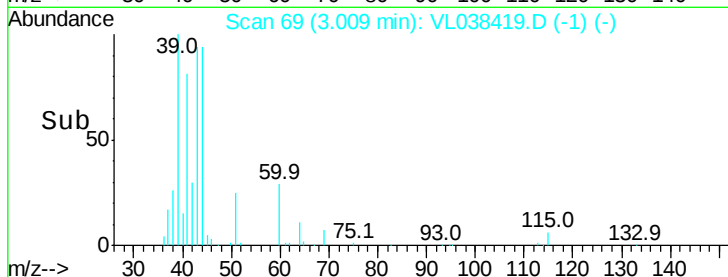
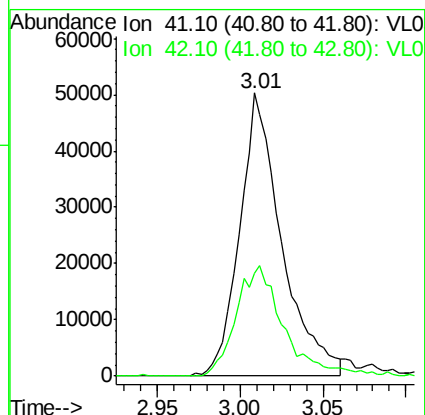
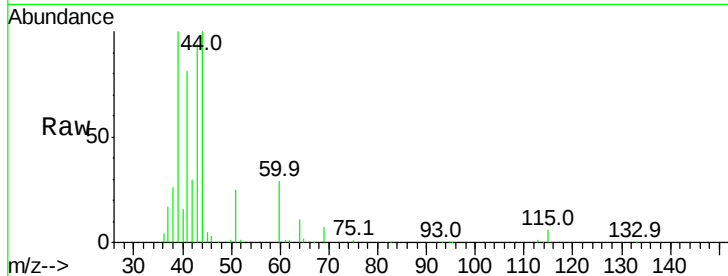
Acq: 23 Feb 2022 22:29

Tgt Ion: 41 Resp: 88617

Ion Ratio Lower Upper

41 100

42 44.4 54.6 82.0#



#10

Heptane

Concen: 0.84 ppbv

RT: 8.10 min Scan# 1651

Delta R.T. -0.00 min

Lab File: VL038419.D

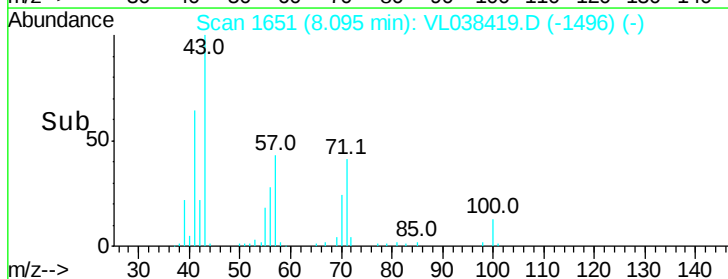
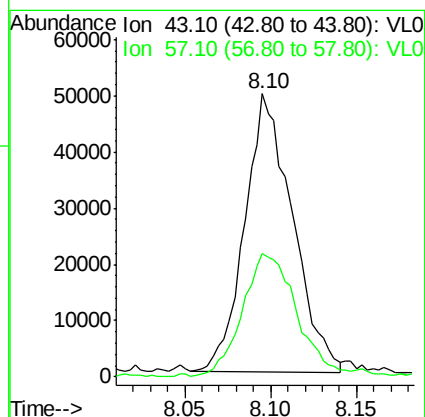
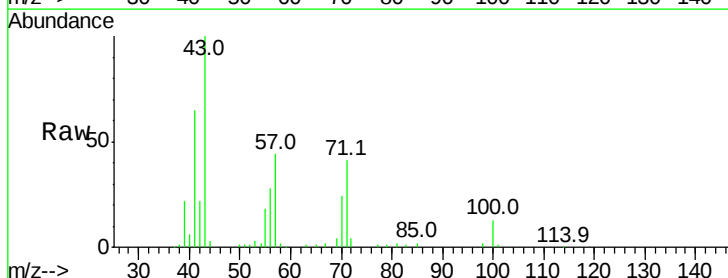
Acq: 23 Feb 2022 22:29

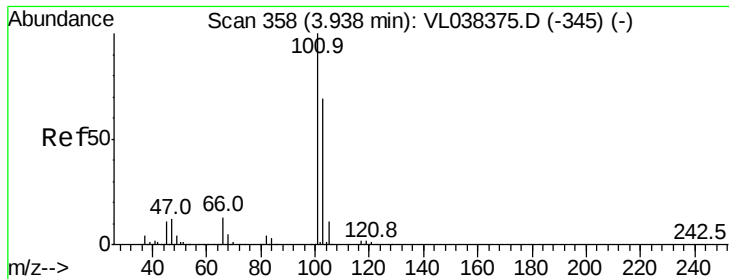
Tgt Ion: 43 Resp: 94725

Ion Ratio Lower Upper

43 100

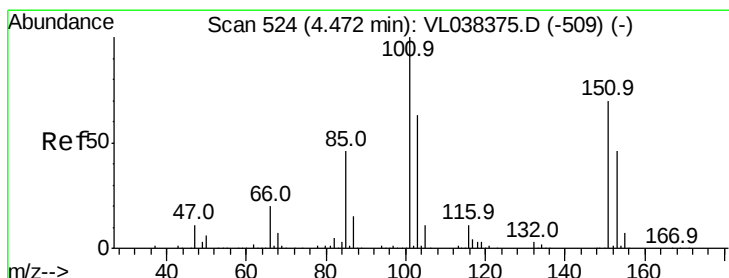
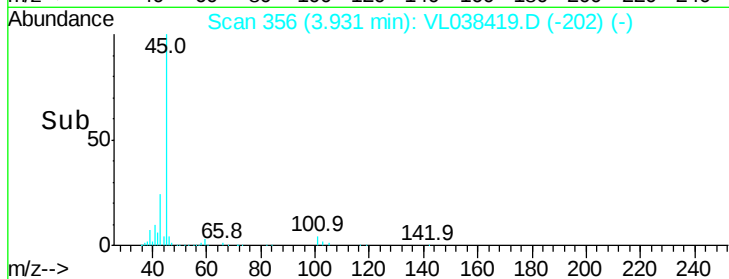
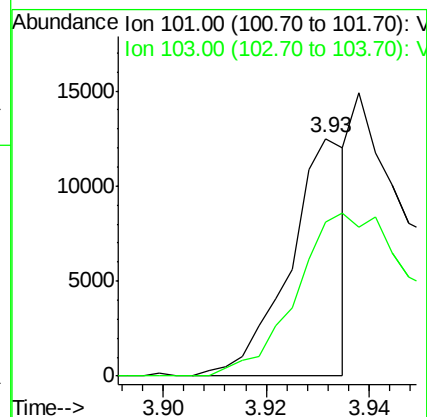
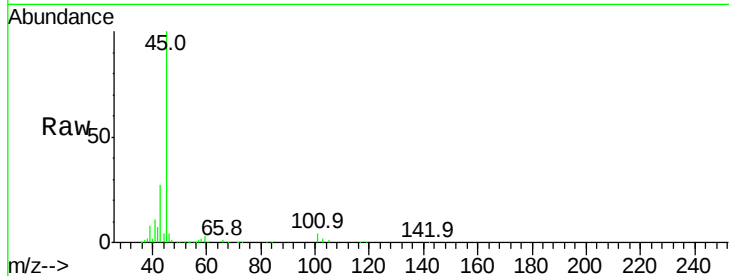
57 52.7 39.8 59.8





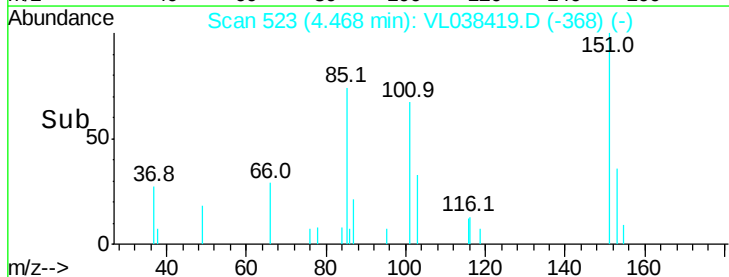
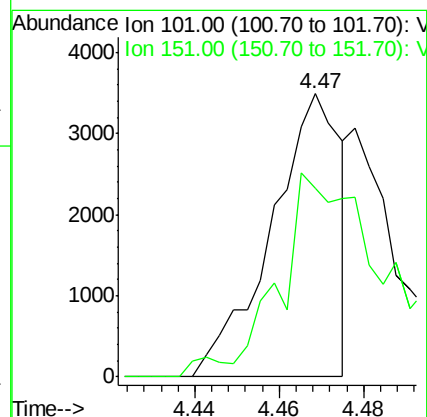
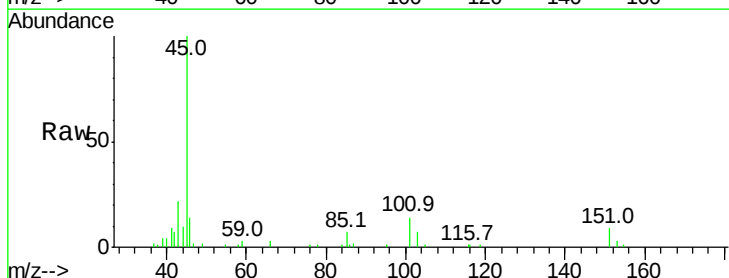
#11
 Trichlorofluoromethane
 Concen: 0.08 ppbv
 RT: 3.93
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 23 Feb 2022 22:29

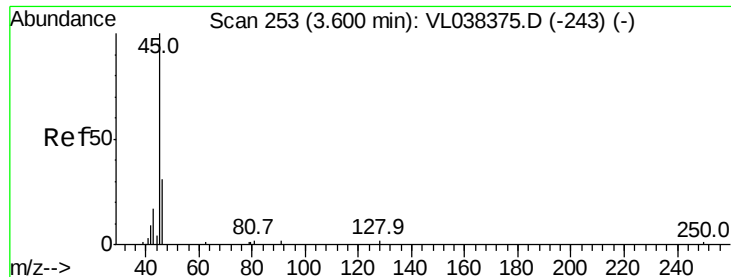
Tgt Ion:101 Resp: 9549
 Ion Ratio Lower Upper
 101 100
 103 65.0 55.0 82.4



#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.05 ppbv
 RT: 4.47 min Scan# 523
 Delta R.T. -0.00 min
 Lab File: VL038419.D
 Acq: 23 Feb 2022 22:29

Tgt Ion:101 Resp: 3987
 Ion Ratio Lower Upper
 101 100
 151 117.7 55.9 83.9#





#13

Ethanol

Concen: 733.98 ppbv

RT: 3.59 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

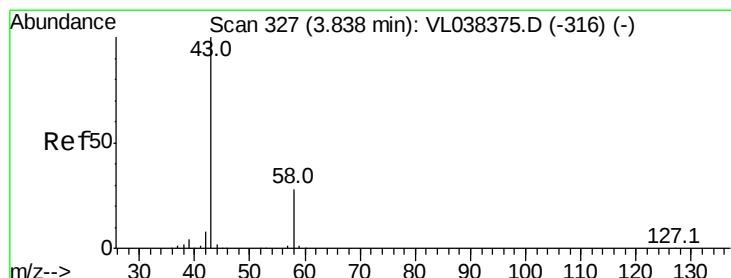
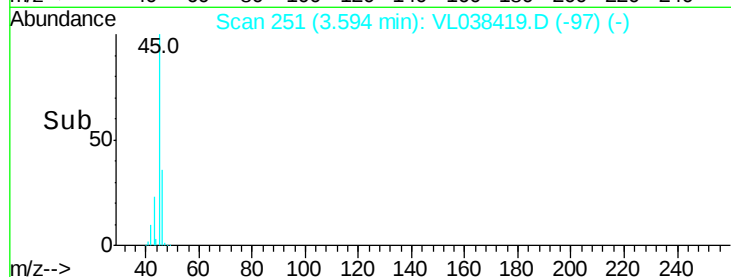
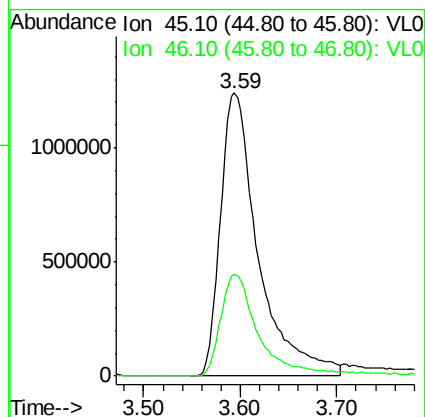
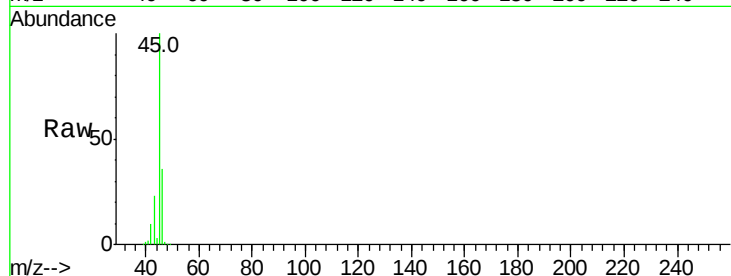
Acq: 23 Feb 2022 22:29

Tgt Ion: 45 Resp: 3384007

Ion Ratio Lower Upper

45 100

46 37.2 18.2 72.8



#15

Acetone

Concen: 4.34 ppbv

RT: 3.84 min Scan# 327

Delta R.T. 0.00 min

Lab File: VL038419.D

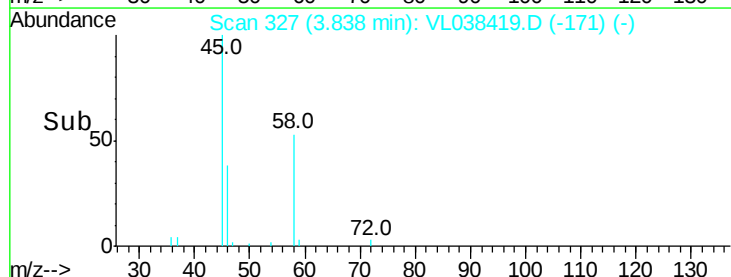
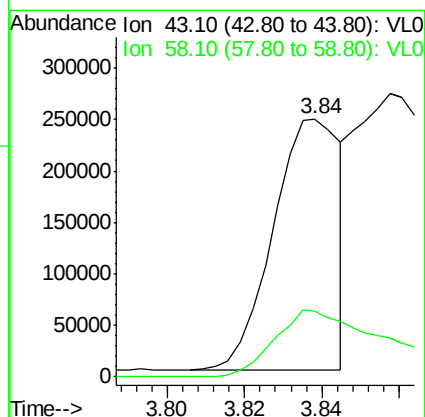
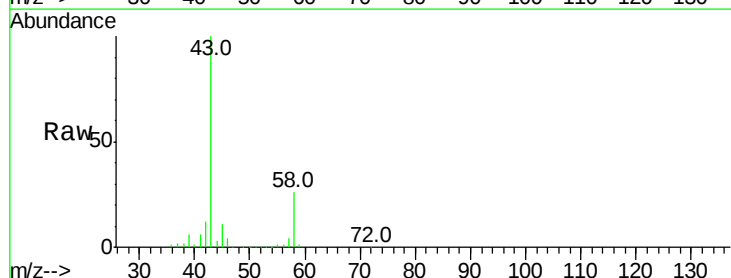
Acq: 23 Feb 2022 22:29

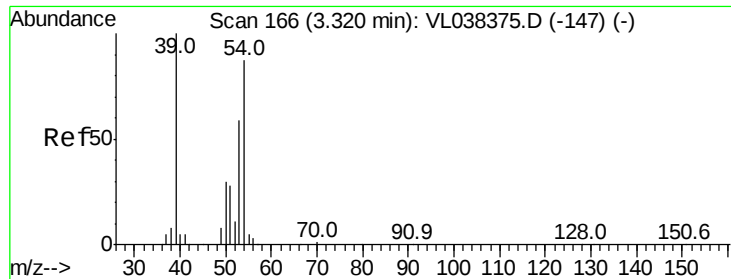
Tgt Ion: 43 Resp: 292675

Ion Ratio Lower Upper

43 100

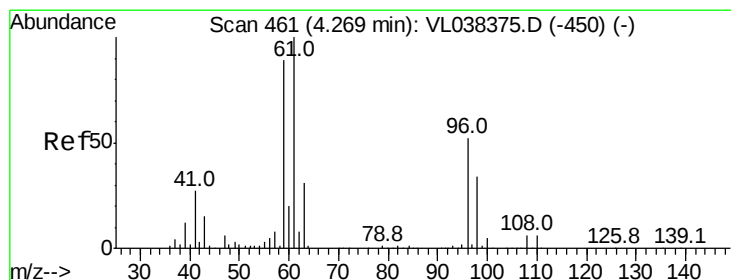
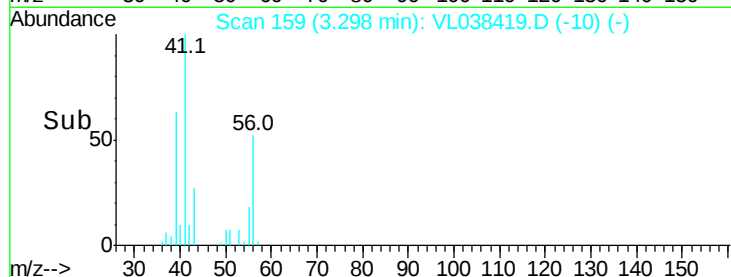
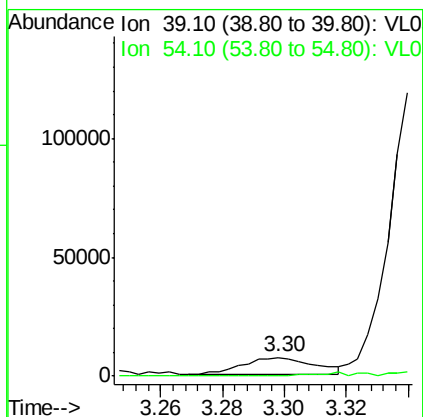
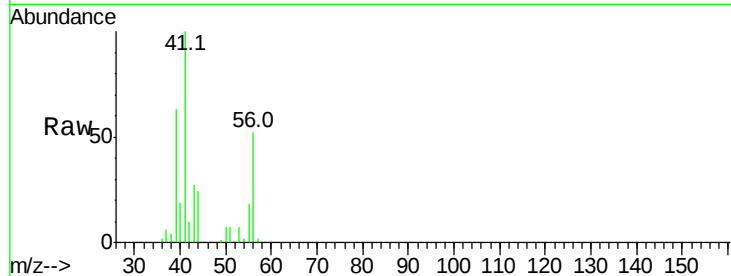
58 50.5 21.7 32.5#





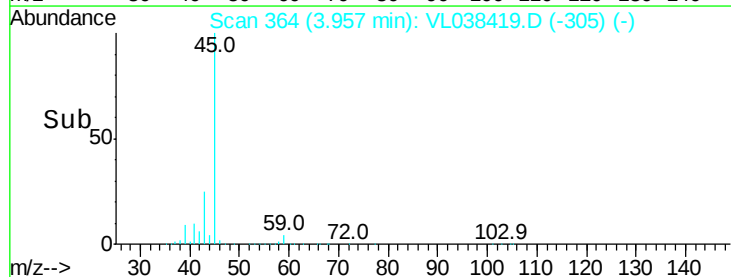
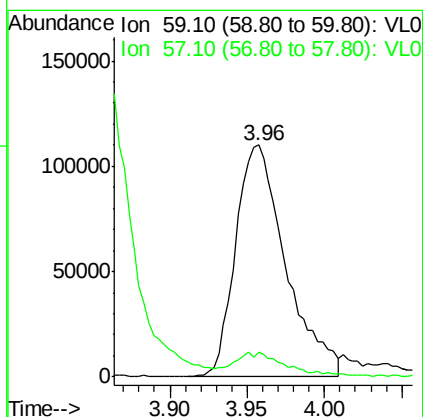
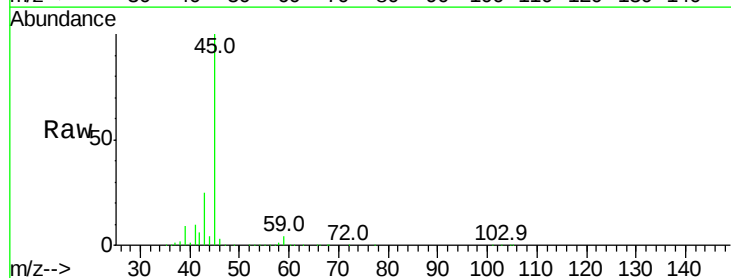
#16
 1,3-Butadiene
 Concen: 0.25 ppbv
 RT: 3.30
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 23 Feb 2022 22:29

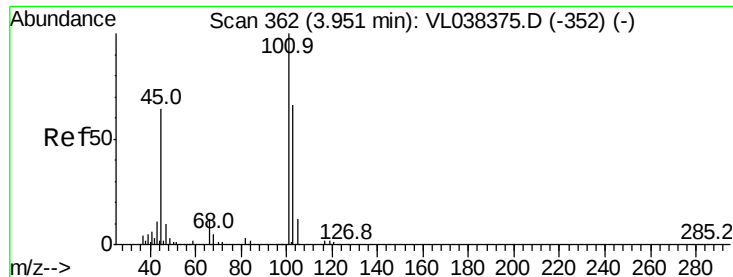
Tgt Ion: 39 Resp: 11122
 Ion Ratio Lower Upper
 39 100
 54 0.0 60.3 90.5#



#17
 tert-Butyl alcohol
 Concen: 3.70 ppbv
 RT: 3.96 min Scan# 364
 Delta R.T. -0.31 min
 Lab File: VL038419.D
 Acq: 23 Feb 2022 22:29

Tgt Ion: 59 Resp: 248667
 Ion Ratio Lower Upper
 59 100
 57 11.2 8.4 12.6





#19

Isopropyl Alcohol

Concen: 177.82 ppbv

RT: 3.96 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

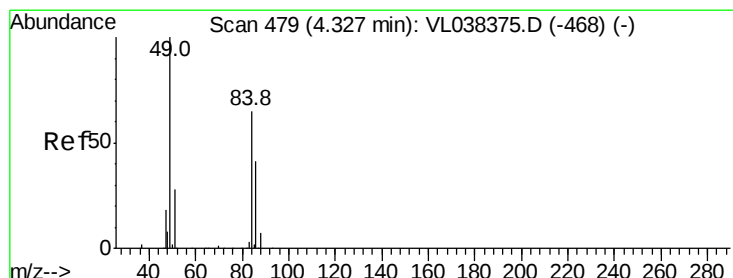
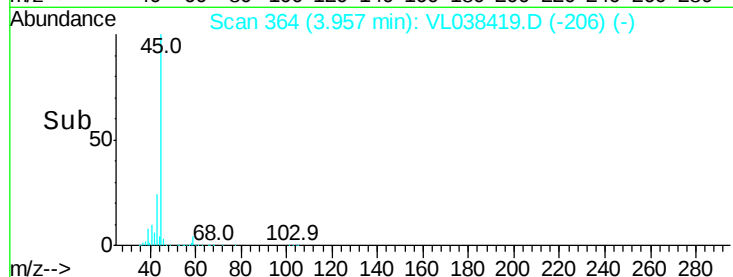
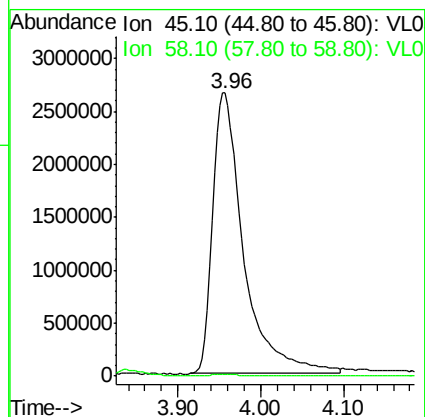
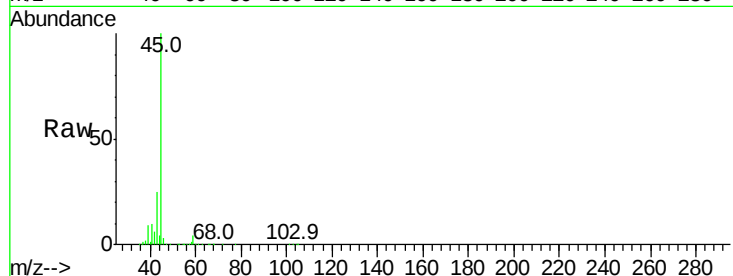
Acq: 23 Feb 2022 22:29

Tgt Ion: 45 Resp: 6938708

Ion Ratio Lower Upper

45 100

58 0.9 1.8 2.8#



#20

Methylene Chloride

Concen: 0.99 ppbv

RT: 4.33 min Scan# 480

Delta R.T. 0.00 min

Lab File: VL038419.D

Acq: 23 Feb 2022 22:29

Tgt Ion: 84 Resp: 32991

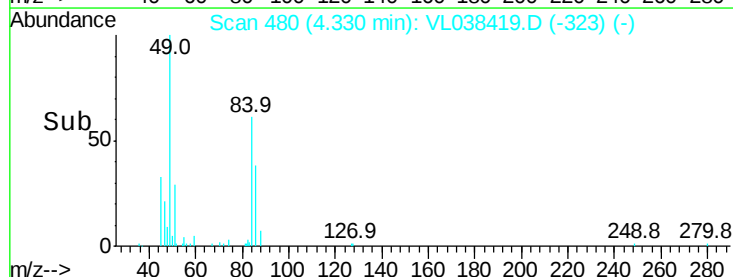
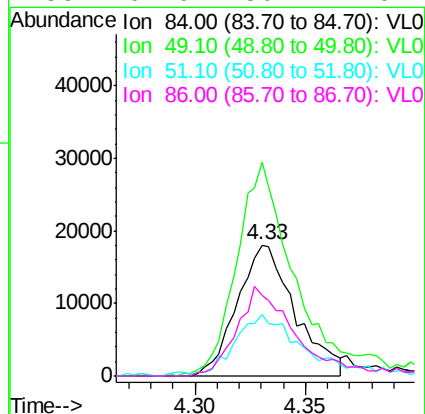
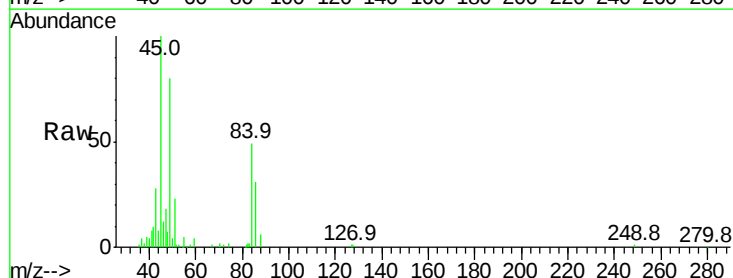
Ion Ratio Lower Upper

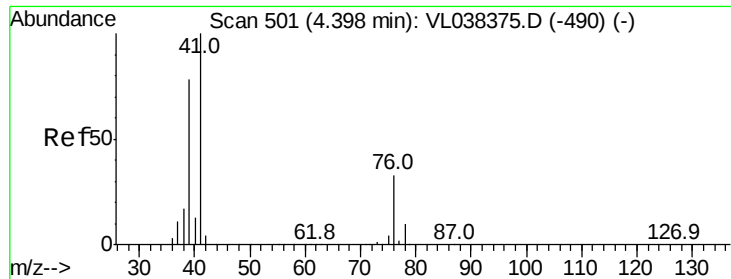
84 100

49 160.7 122.4 183.6

51 45.7 33.3 49.9

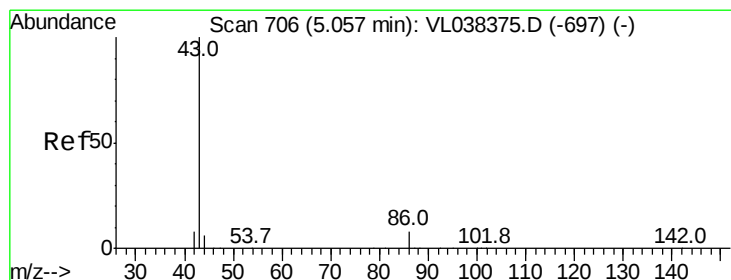
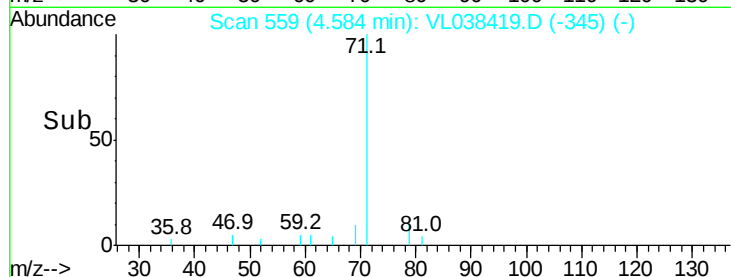
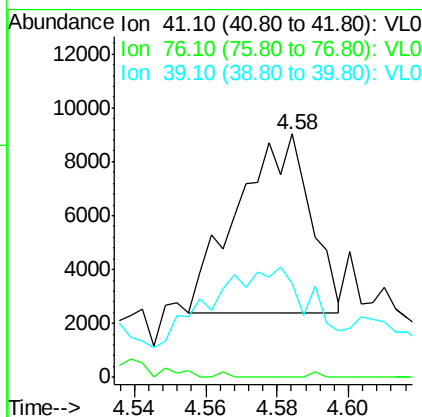
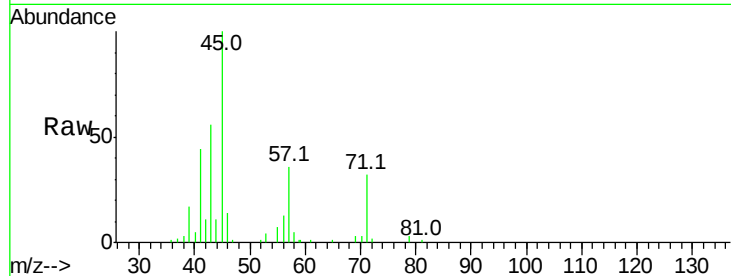
86 61.9 50.7 76.1





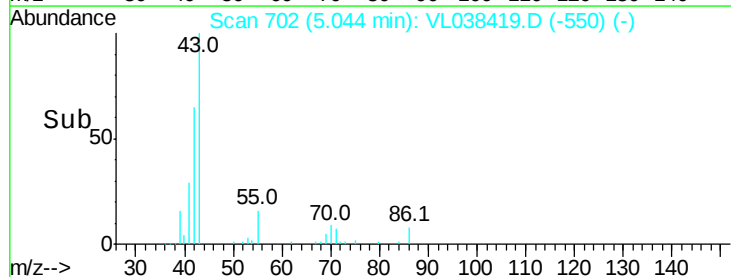
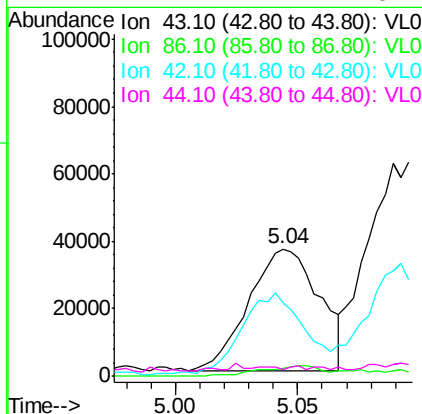
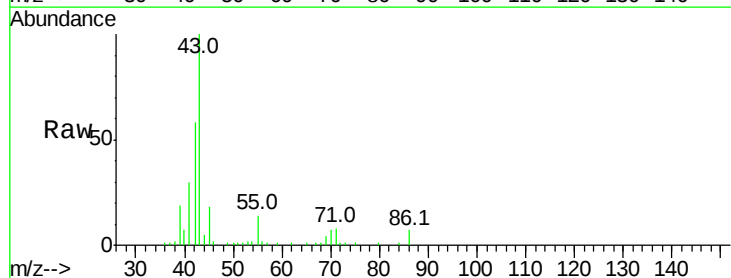
#21
 Allyl Chloride
 Concen: 0.16 ppbv
 RT: 4.58
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 23 Feb 2022 22:29

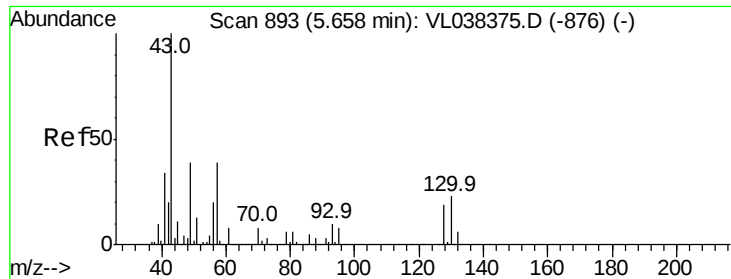
Tgt Ion: 41 Resp: 9282
 Ion Ratio Lower Upper
 41 100
 76 0.4 25.4 38.0#
 39 0.0 63.0 94.6#



#23
 Vinyl Acetate
 Concen: 0.81 ppbv
 RT: 5.04 min Scan# 702
 Delta R.T. -0.01 min
 Lab File: VL038419.D
 Acq: 23 Feb 2022 22:29

Tgt Ion: 43 Resp: 72348
 Ion Ratio Lower Upper
 43 100
 86 6.8 5.8 8.6
 42 57.0 7.4 11.0#
 44 1.2 4.2 6.2#





#25

Ethyl Acetate

Concen: 2.33 ppbv

RT: 5.67

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 23 Feb 2022 22:29

Tgt Ion: 43 Resp: 421622

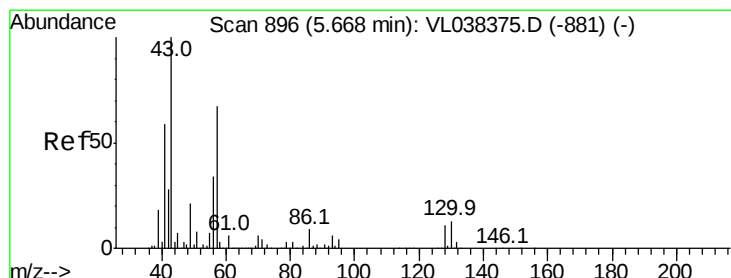
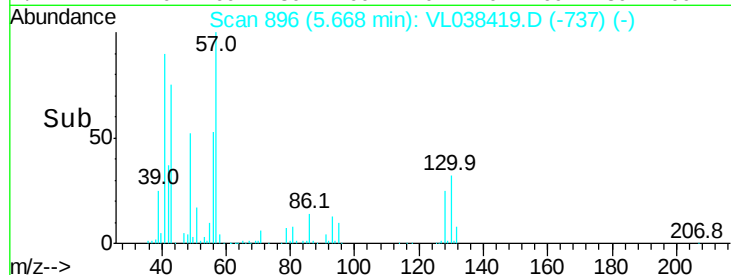
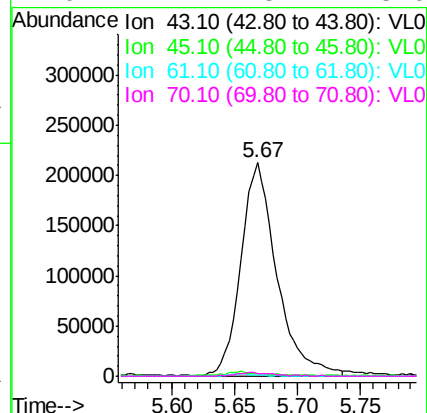
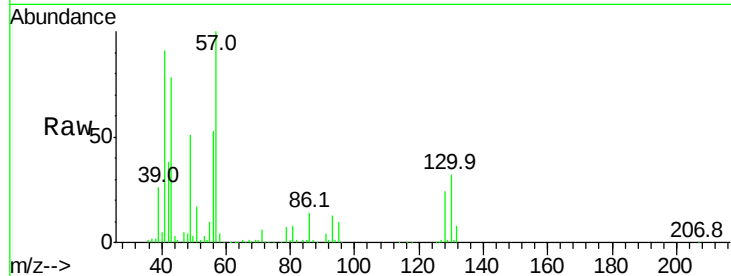
Ion Ratio Lower Upper

43 100

45 2.3 7.8 11.6#

61 1.1 7.5 11.3#

70 2.1 5.4 8.0#



#26

Hexane

Concen: 6.83 ppbv

RT: 5.67 min Scan# 896

Delta R.T. 0.00 min

Lab File: VL038419.D

Acq: 23 Feb 2022 22:29

Tgt Ion: 57 Resp: 560025

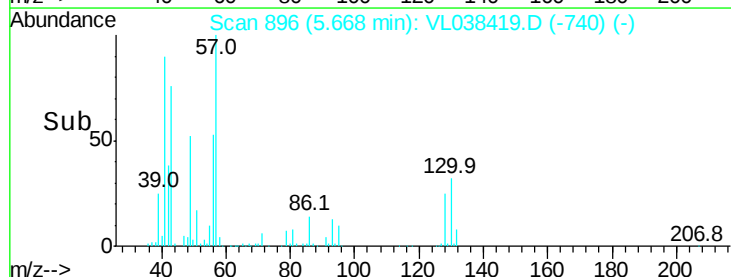
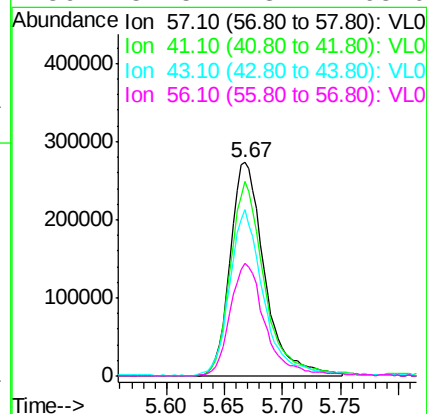
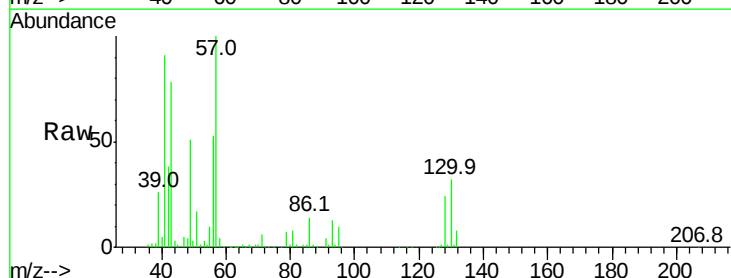
Ion Ratio Lower Upper

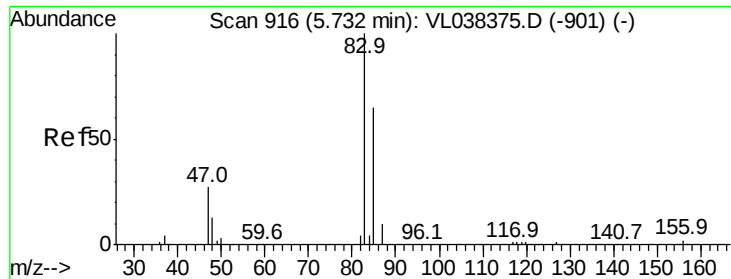
57 100

41 91.2 73.1 109.7

43 78.4 181.0 271.4#

56 54.5 43.4 65.0





#29

Chloroform

Concen: 0.11 ppbv

RT: 5.74 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: IA-3

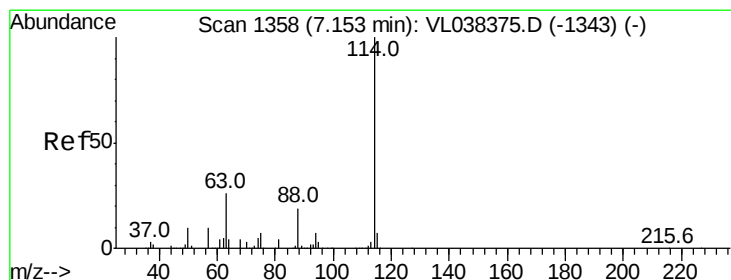
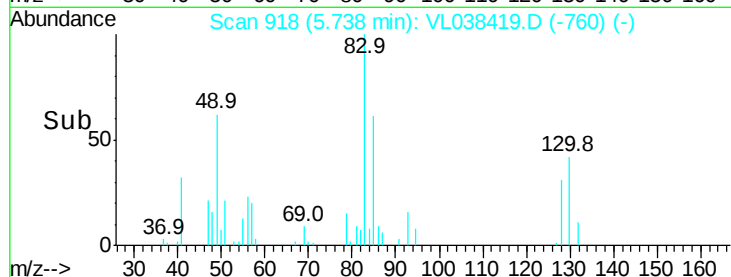
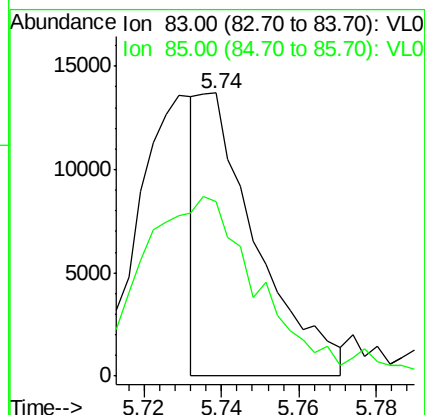
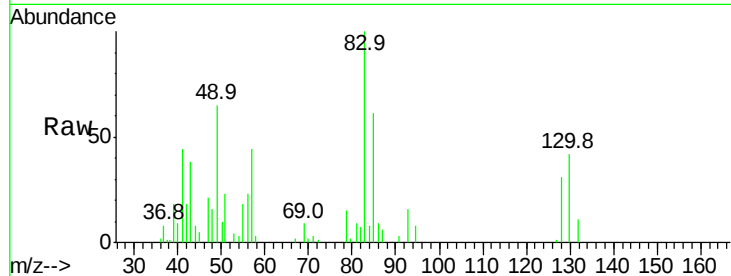
Acq: 23 Feb 2022 22:29

Tgt Ion: 83 Resp: 14292

Ion Ratio Lower Upper

83 100

85 63.9 51.6 77.4



#33

1,4-Difluorobenzene

Concen: 10.00 ppbv

RT: 7.15 min Scan# 1358

Delta R.T. 0.00 min

Lab File: VL038419.D

Acq: 23 Feb 2022 22:29

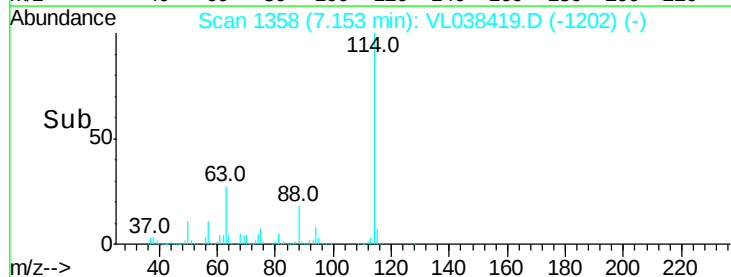
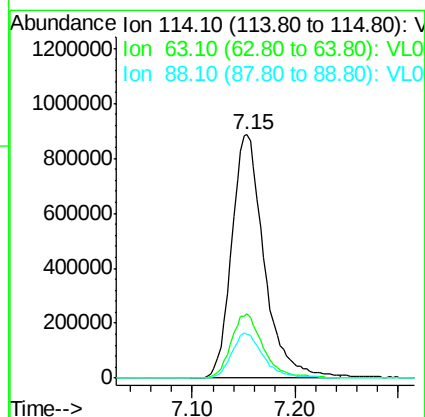
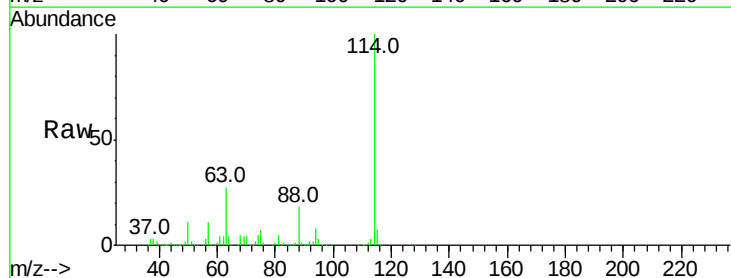
Tgt Ion: 114 Resp: 1945227

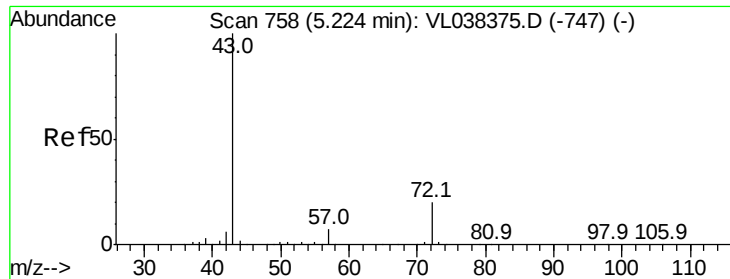
Ion Ratio Lower Upper

114 100

63 26.6 22.2 33.2

88 18.5 15.2 22.8





#34

2-Butanone

Concen: 1.52 ppbv

RT: 5.23 Instrument: MSVOA_1

Delta R.T. 0.00

Lab File: ClientSampleId: IA-3

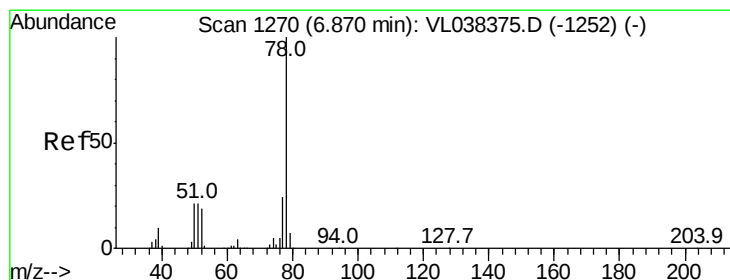
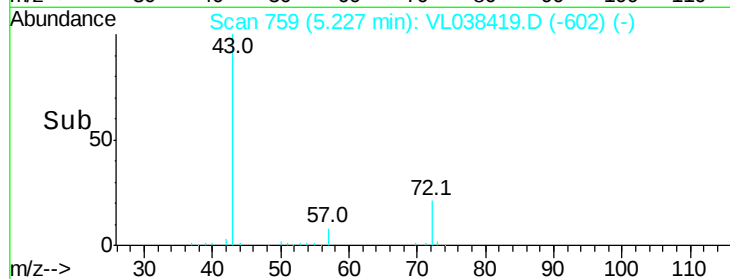
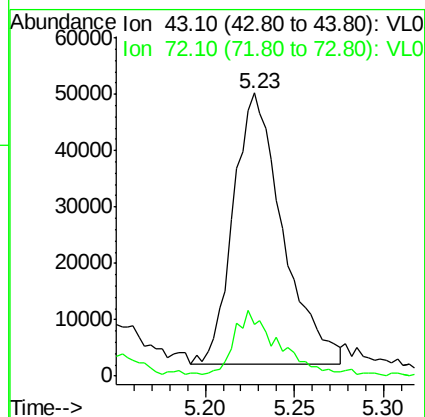
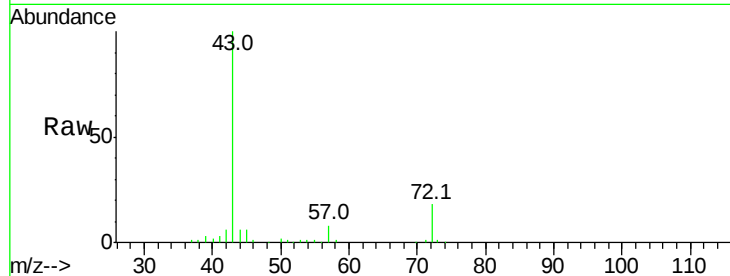
Acq: 23 Feb 2022 22:29

Tgt Ion: 43 Resp: 93270

Ion Ratio Lower Upper

43 100

72 22.8 17.4 26.2



#36

Benzene

Concen: 0.79 ppbv

RT: 6.87 min Scan# 1270

Delta R.T. 0.00 min

Lab File: VL038419.D

Acq: 23 Feb 2022 22:29

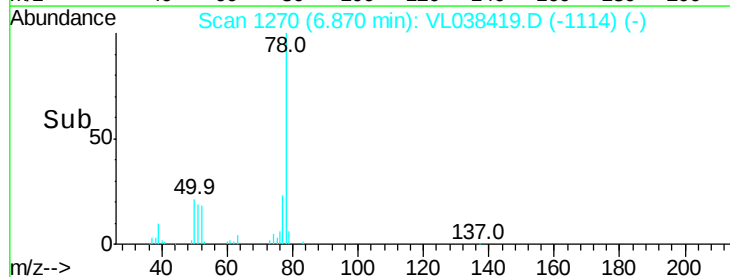
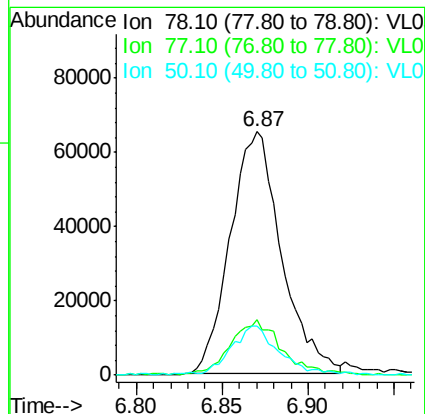
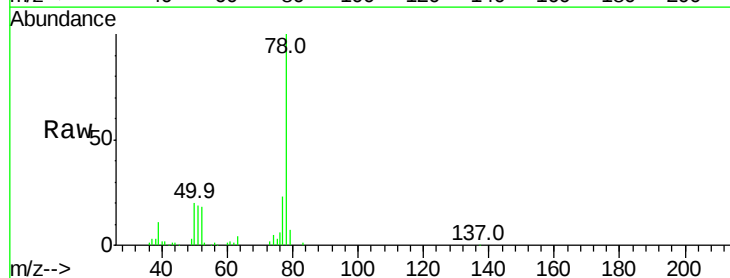
Tgt Ion: 78 Resp: 135258

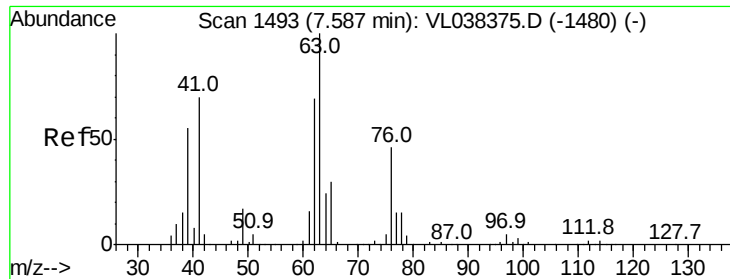
Ion Ratio Lower Upper

78 100

77 21.6 19.0 28.6

50 19.9 16.6 24.8





#39

1,2-Dichloropropane

Concen: 7.44 ppbv

RT: 7.15 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

Acq: 23 Feb 2022 22:29

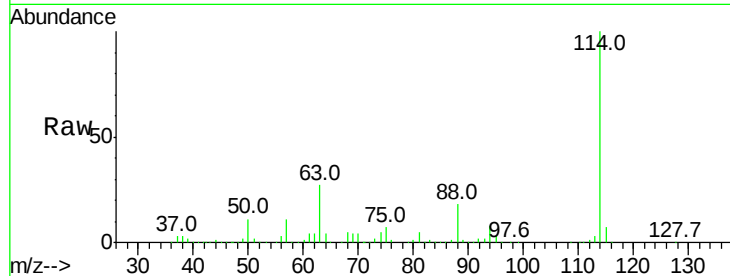
Tgt Ion: 63 Resp: 507596

Ion Ratio Lower Upper

63 100

41 0.0 56.1 84.1#

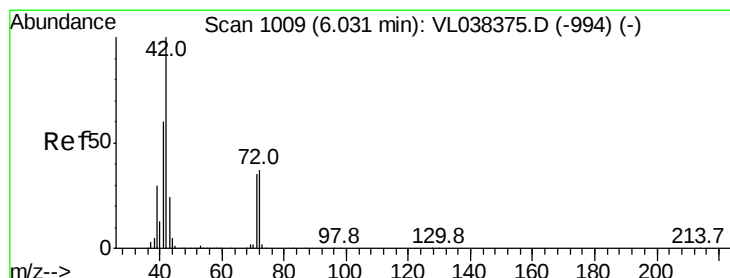
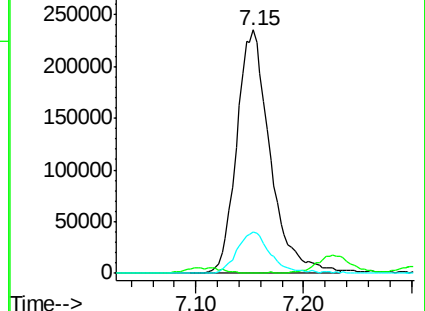
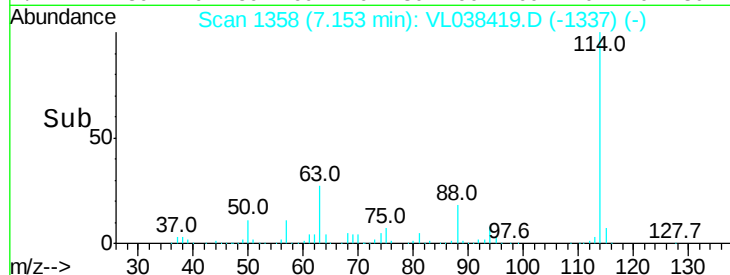
62 16.8 55.5 83.3#



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: 5.14 ppbv

RT: 5.67 min Scan# 896

Delta R.T. -0.36 min

Lab File: VL038419.D

Acq: 23 Feb 2022 22:29

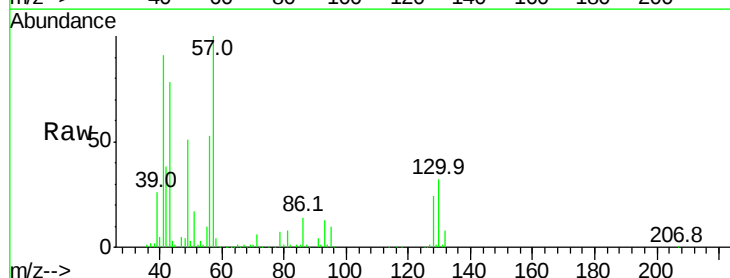
Tgt Ion: 42 Resp: 212315

Ion Ratio Lower Upper

42 100

72 0.8 29.9 44.9#

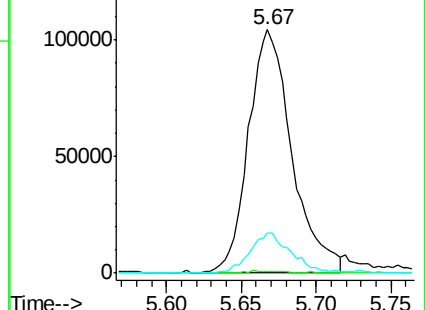
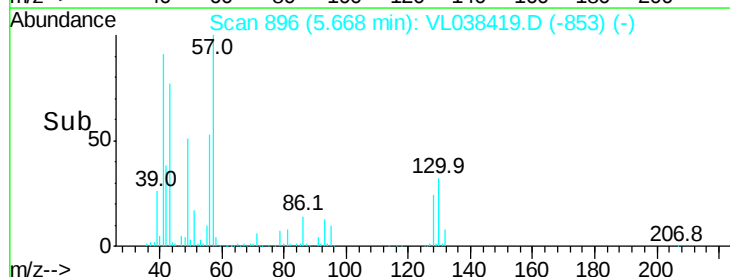
71 16.2 28.6 42.8#

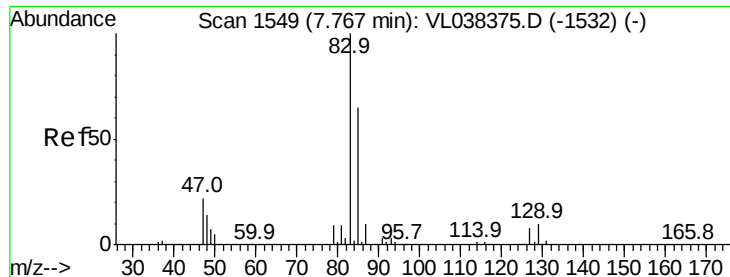


Abundance Ion 42.10 (41.80 to 42.80): VL0

Ion 72.10 (71.80 to 72.80): VL0

Ion 71.10 (70.80 to 71.80): VL0





#42

Bromodichloromethane

Concen: 0.03 ppbv

RT: 7.77 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

Acq: 23 Feb 2022 22:29

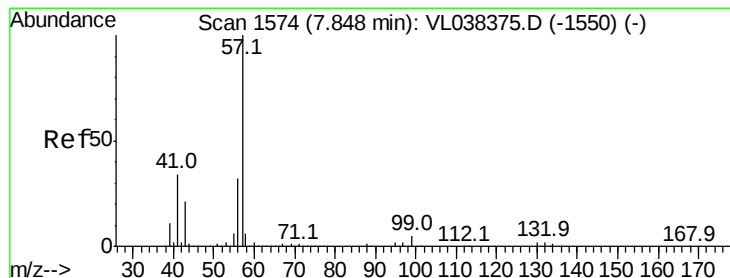
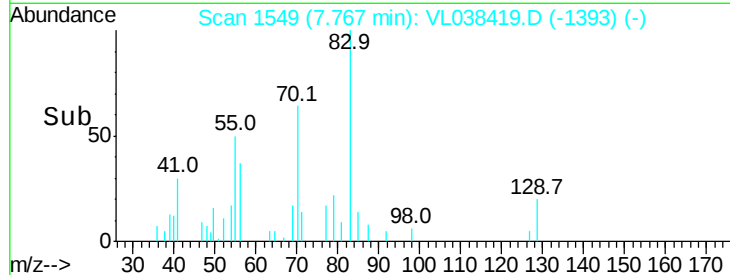
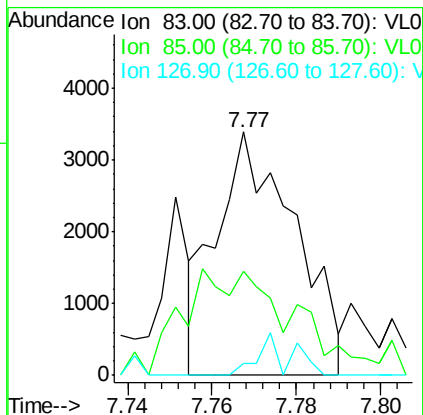
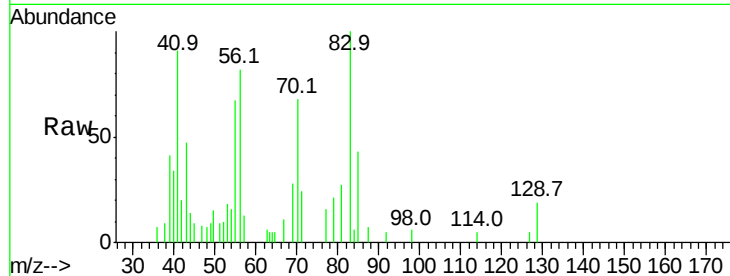
Tgt Ion: 83 Resp: 4383

Ion Ratio Lower Upper

83 100

85 37.2 52.2 78.4#

127 5.8 6.2 9.4#



#44

2,2,4-Trimethylpentane

Concen: 0.30 ppbv

RT: 7.85 min Scan# 1574

Delta R.T. 0.00 min

Lab File: VL038419.D

Acq: 23 Feb 2022 22:29

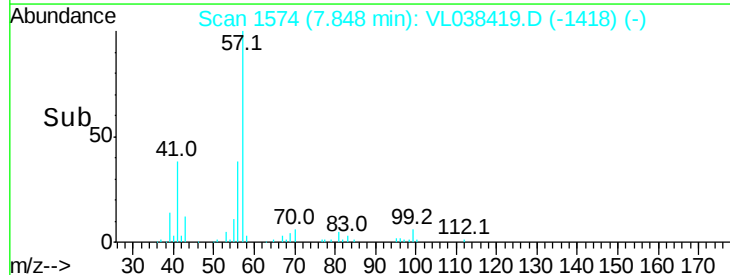
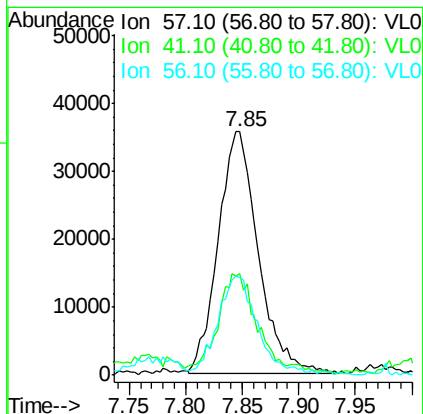
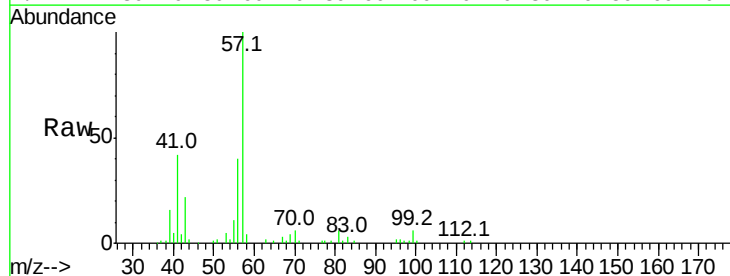
Tgt Ion: 57 Resp: 87772

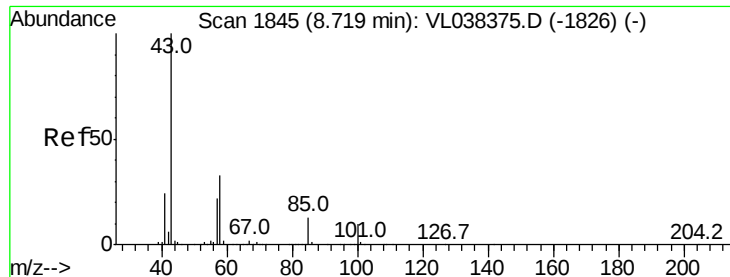
Ion Ratio Lower Upper

57 100

41 41.4 26.6 39.8#

56 40.4 25.0 37.6#





#50

4-Methyl-2-Pentanone

Concen: 0.05 ppbv

RT: 8.72 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampled:

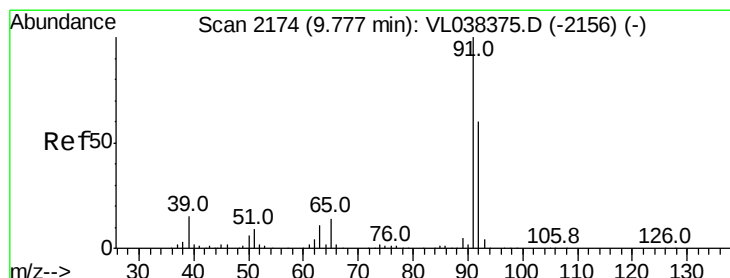
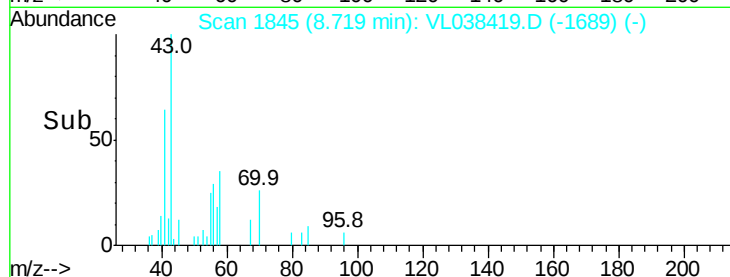
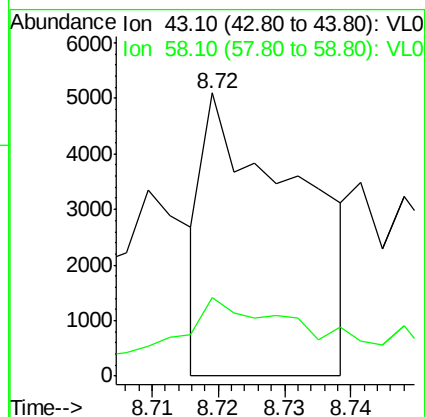
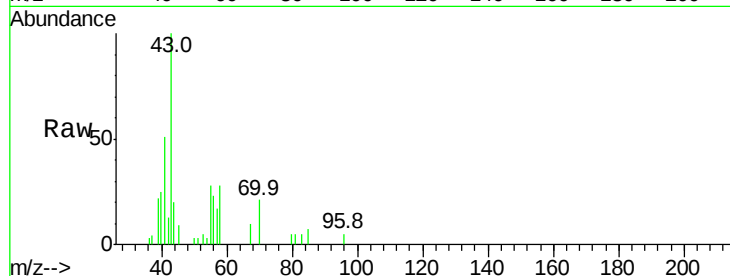
Acq: 23 Feb 2022 22:29

Tgt Ion: 43 Resp: 5048

Ion Ratio Lower Upper

43 100

58 63.3 27.7 41.5#



#53

Toluene

Concen: 5.40 ppbv

RT: 9.78 min Scan# 2175

Delta R.T. 0.00 min

Lab File: VL038419.D

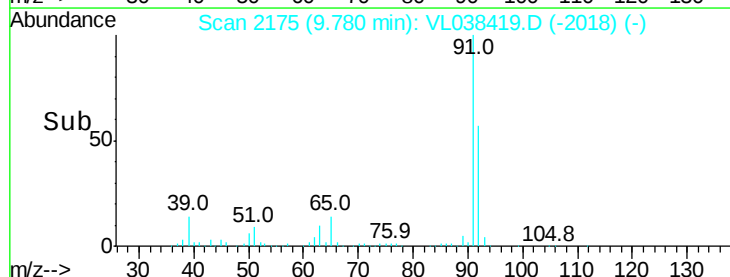
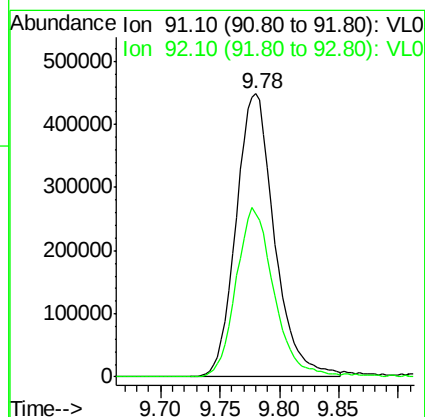
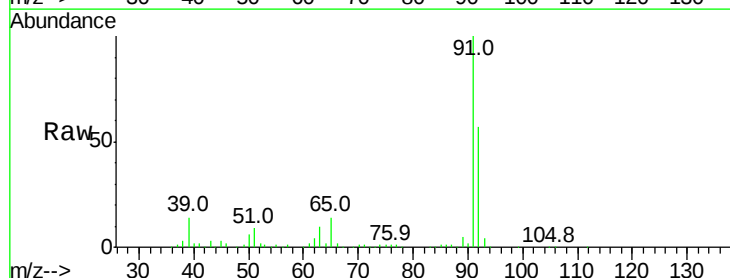
Acq: 23 Feb 2022 22:29

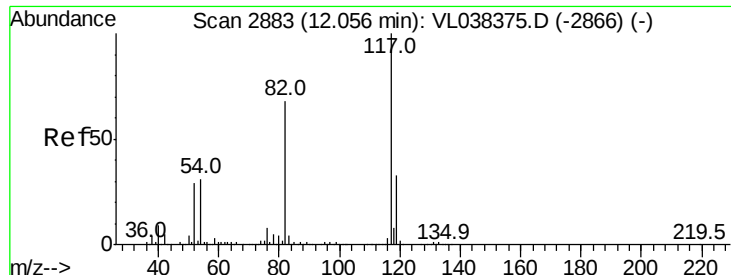
Tgt Ion: 91 Resp: 1003484

Ion Ratio Lower Upper

91 100

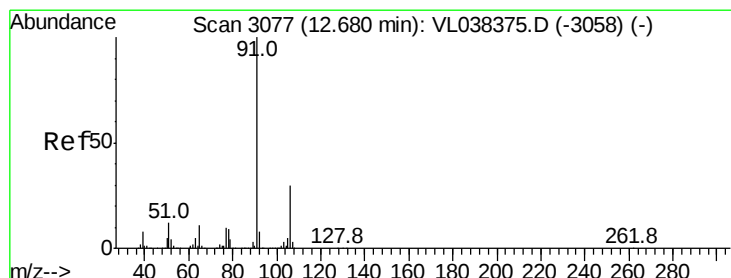
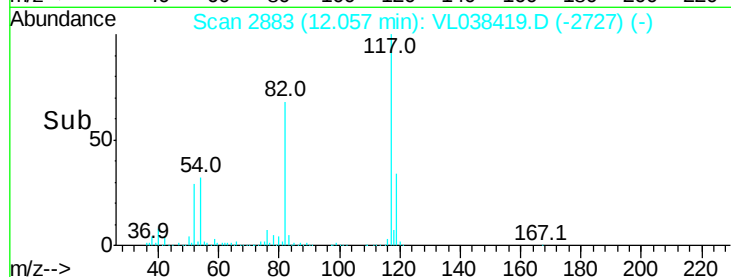
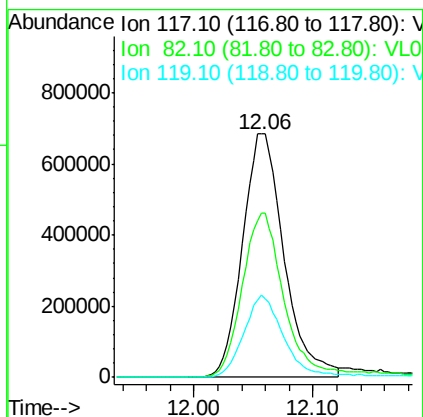
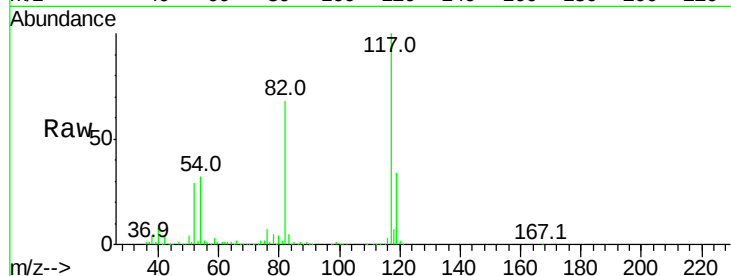
92 59.4 48.2 72.4





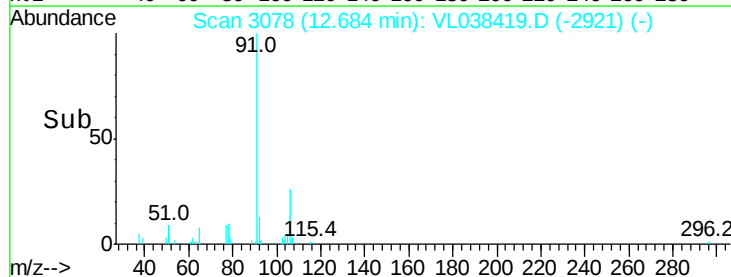
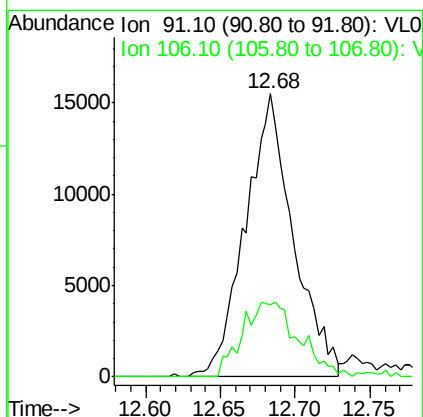
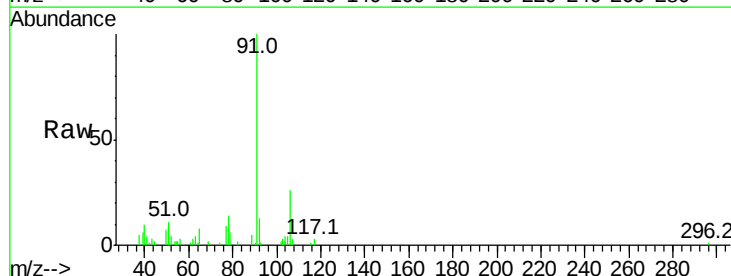
#55
 Chlorobenzene-d5
 Concen: 10.00 ppbv
 RT: 12.06
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId :
 Acq: 23 Feb 2022 22:29

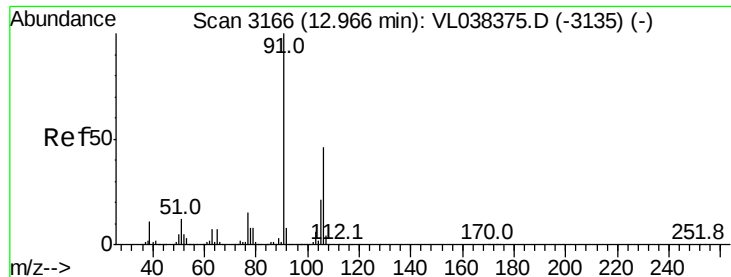
Tgt Ion: 117 Resp: 1652306
 Ion Ratio Lower Upper
 117 100
 82 72.0 54.9 82.3
 119 34.0 46.1 69.1#



#58
 Ethyl Benzene
 Concen: 0.15 ppbv
 RT: 12.68 min Scan# 3078
 Delta R.T. 0.00 min
 Lab File: VL038419.D
 Acq: 23 Feb 2022 22:29

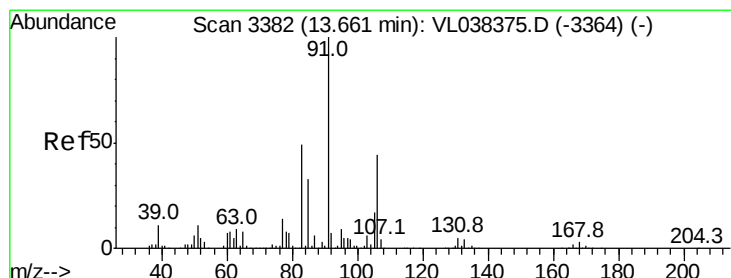
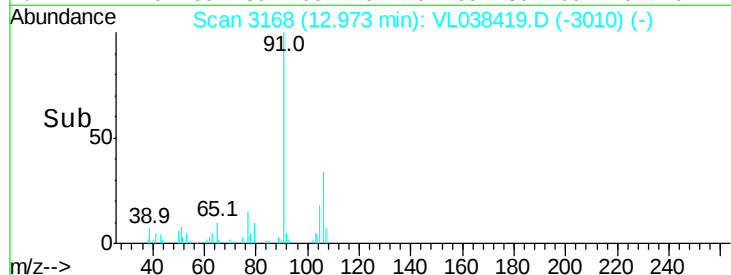
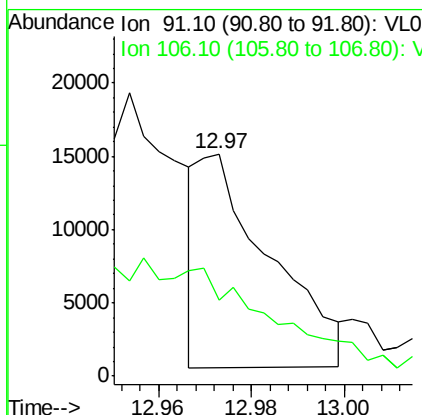
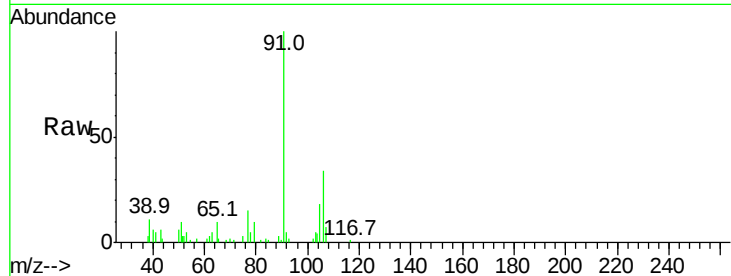
Tgt Ion: 91 Resp: 34498
 Ion Ratio Lower Upper
 91 100
 106 25.5 24.0 36.0





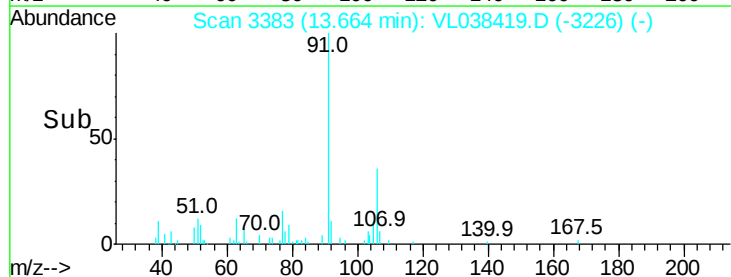
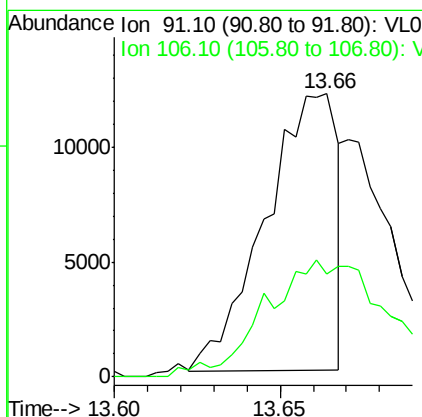
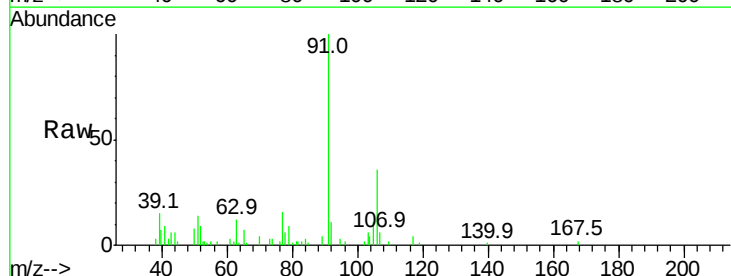
#59
m/p-Xylene
Concen: 0.08 ppbv
RT: 12.97 min
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId :
Acq: 23 Feb 2022 22:29

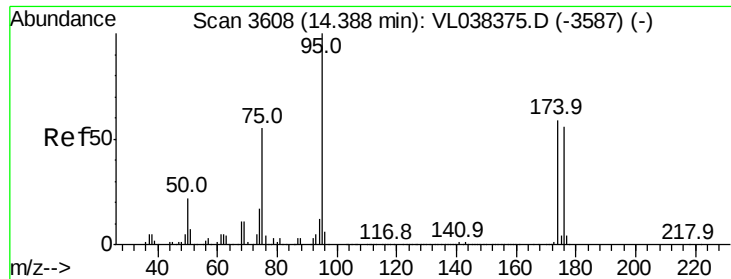
Tgt Ion: 91 Resp: 15604
Ion Ratio Lower Upper
91 100
106 0.0 34.4 51.6#



#60
o-Xylene
Concen: 0.10 ppbv
RT: 13.66 min Scan# 3383
Delta R.T.: 0.00 min
Lab File: VL038419.D
Acq: 23 Feb 2022 22:29

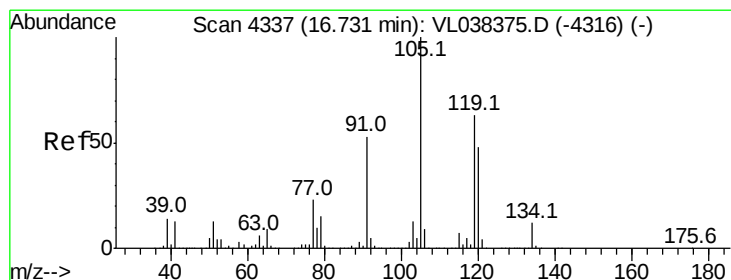
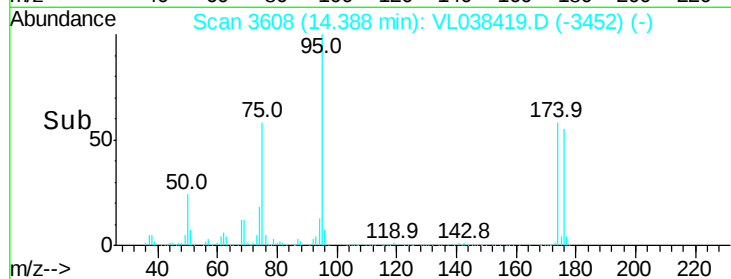
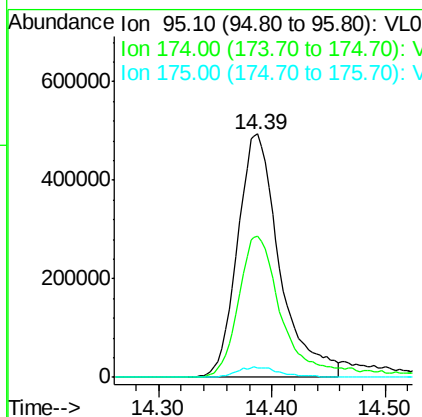
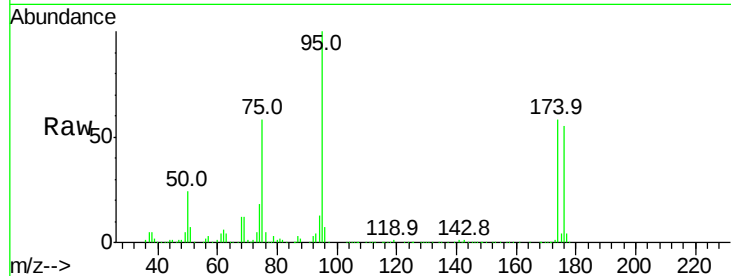
Tgt Ion: 91 Resp: 18340
Ion Ratio Lower Upper
91 100
106 70.6 21.9 65.5#





#68
 1-Bromo-4-Fluorobenzene
 Concen: 9.39 ppbv
 RT: 14.39 min
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 23 Feb 2022 22:29

Tgt Ion: 95 Resp: 1283333
 Ion Ratio Lower Upper
 95 100
 174 62.8 49.0 73.4
 175 4.3 3.6 5.4



#74
 1,2,4-Trimethylbenzene
 Concen: 0.11 ppbv
 RT: 16.73 min Scan# 4337
 Delta R.T. 0.00 min
 Lab File: VL038419.D
 Acq: 23 Feb 2022 22:29

Tgt Ion: 105 Resp: 20898
 Ion Ratio Lower Upper
 105 100
 120 29.6 38.2 57.4#
 91 13.6 42.7 64.1#
 77 20.8 18.5 27.7

