

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL121421\
 Data File : VL038175.D
 Acq On : 14 Dec 2021 20:44
 Operator : SY/AP
 Sample : M5075-02
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Dec 15 04:57:38 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL111821AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu Nov 18 13:16:09 2021
 QLast Update : Thu Nov 18 13:16:09 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.63	49	881750	10.00	ppbv	-0.04
33) 1,4-Difluorobenzene	7.13	114	2310559	10.00	ppbv	-0.04
55) Chlorobenzene-d5	12.03	117	2058100	10.00	ppbv	-0.05

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.36	95	1649200	11.11	ppbv	-0.05
Spiked Amount	10.000	Range	65 - 135	Recovery	=	111.10%

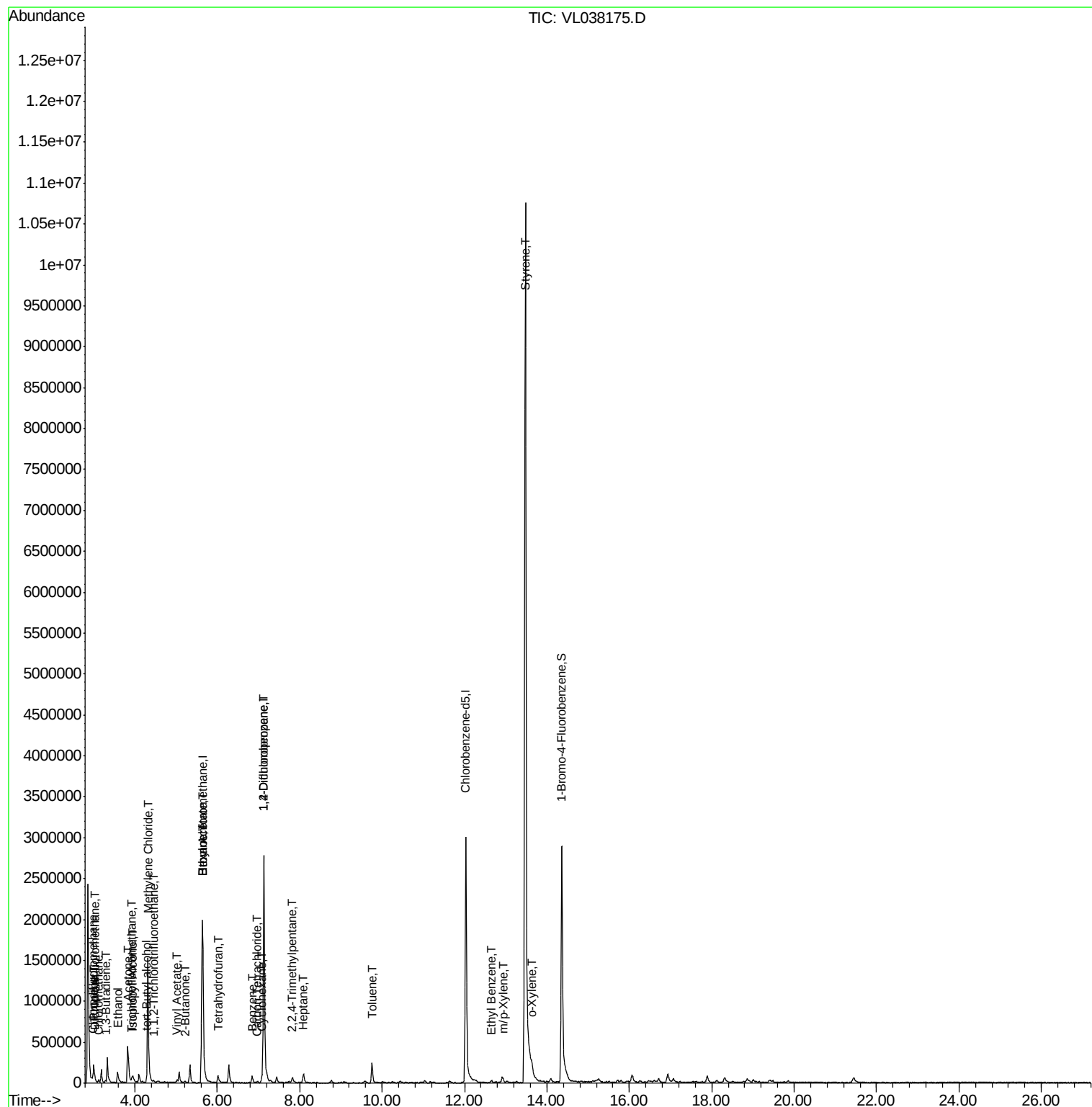
Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.03	85	34094	0.234	ppbv 92
3) Chlorodifluoromethane	2.97	51	76292	0.412	ppbv # 89
4) Chloromethane	3.12	50	29086	0.461	ppbv 93
9) Propene	3.00	41	64066	0.939	ppbv 88
10) Heptane	8.08	43	11403	0.068	ppbv # 35
11) Trichlorofluoromethane	3.92	101	28348	0.205	ppbv 97
12) 1,1,2-Trichlorotrifluoroet	4.46	101	5308	0.054	ppbv # 65
13) Ethanol	3.58	45	176180	26.733	ppbv 92
15) Acetone	3.82	43	602462	7.881	ppbv 94
16) 1,3-Butadiene	3.30	39	2291	0.038	ppbv # 1
17) tert-Butyl alcohol	4.28	59	3180	0.034	ppbv # 71
19) Isopropyl Alcohol	3.95	45	88961	1.611	ppbv # 1
20) Methylene Chloride	4.31	84	646817	15.105	ppbv 94
23) Vinyl Acetate	5.02	43	9237	0.083	ppbv # 35
25) Ethyl Acetate	5.65	43	416284	1.638	ppbv # 78
26) Hexane	5.65	57	548198	4.476	ppbv # 45
30) Cyclohexane	7.07	84	4056	0.036	ppbv # 1
34) 2-Butanone	5.21	43	23300	0.250	ppbv # 86
35) Carbon Tetrachloride	6.97	117	11222	0.069	ppbv # 90
36) Benzene	6.85	78	66316	0.288	ppbv # 92
39) 1,2-Dichloropropane	7.13	63	617569	6.985	ppbv # 27
41) Tetrahydrofuran	6.01	42	53592	0.927	ppbv 98
44) 2,2,4-Trimethylpentane	7.83	57	55554	0.144	ppbv # 61
53) Toluene	9.76	91	181056	0.683	ppbv 97
58) Ethyl Benzene	12.66	91	28127	0.083	ppbv 93
59) m/p-Xylene	12.94	91	19859	0.069	ppbv # 29
60) o-Xylene	13.64	91	16577	0.062	ppbv # 23
61) Styrene	13.48	104	7517686	52.787	ppbv 89

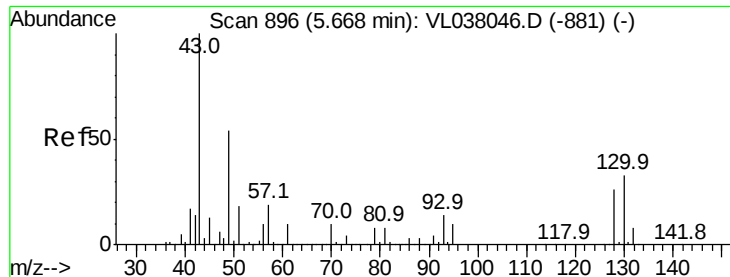
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.63 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 14 Dec 2021 20:44

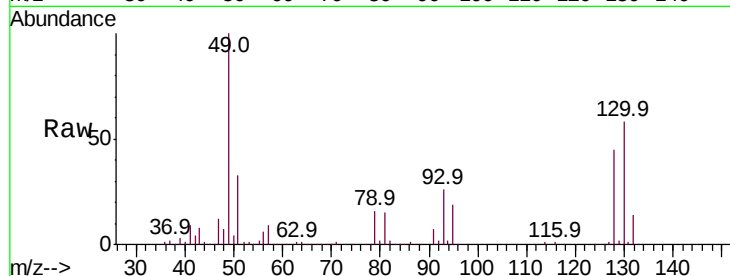
Tot Ion: 49 Resp: 881750

Ion Ratio Lower Upper

49 100

128 47.7 26.5 79.5

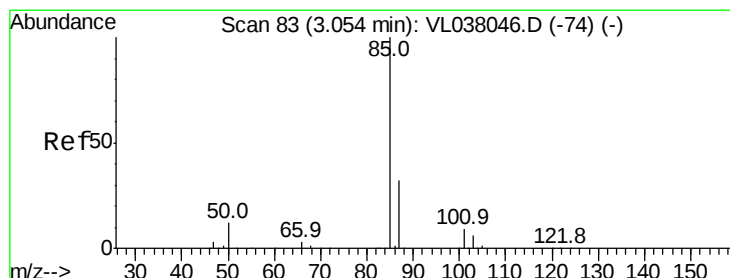
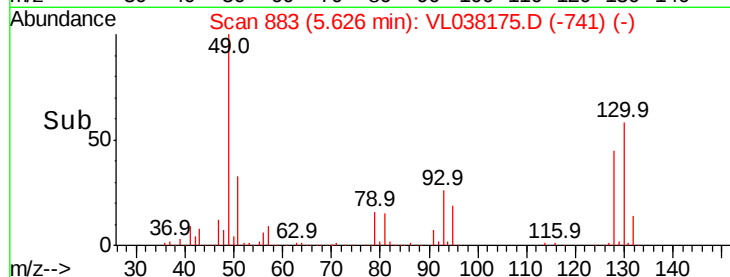
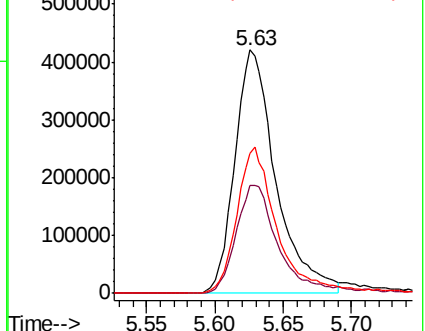
130 59.7 32.5 97.4



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): V

Ion 130.00 (129.70 to 130.70): V



#2

Dichlorodifluoromethane

Concen: 0.234 ppbv

RT: 3.03 min Scan# 75

Delta R.T. -0.03 min

Lab File: VL038175.D

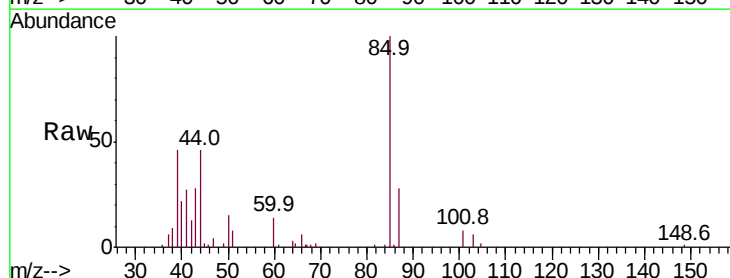
Acq: 14 Dec 2021 20:44

Tgt Ion: 85 Resp: 34094

Ion Ratio Lower Upper

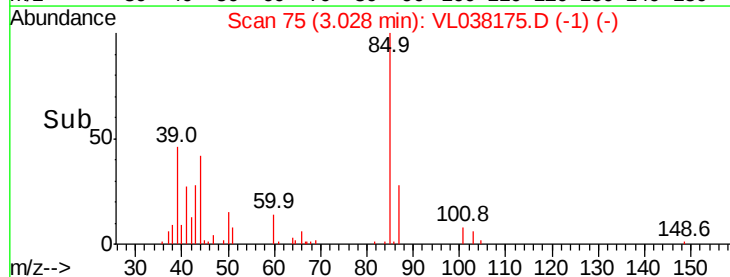
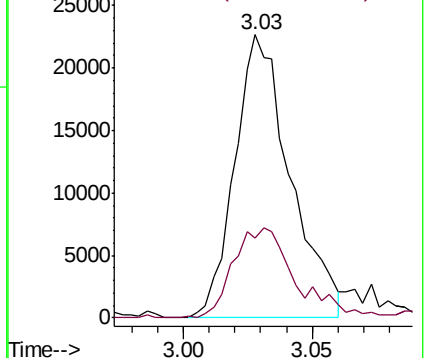
85 100

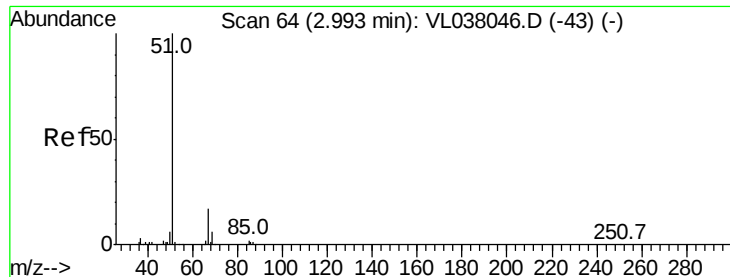
87 27.7 25.8 38.6



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.412 ppbv

RT: 2.97 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

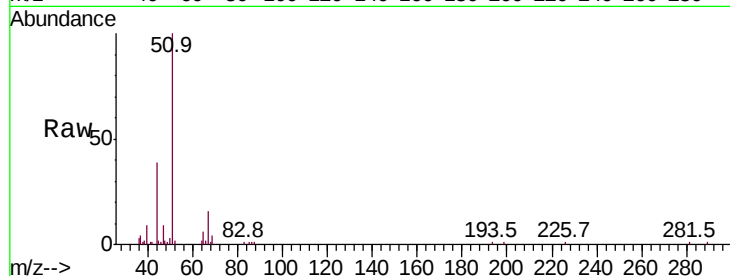
Acq: 14 Dec 2021 20:44

Tot Ion: 51 Resp: 76292

Ion Ratio Lower Upper

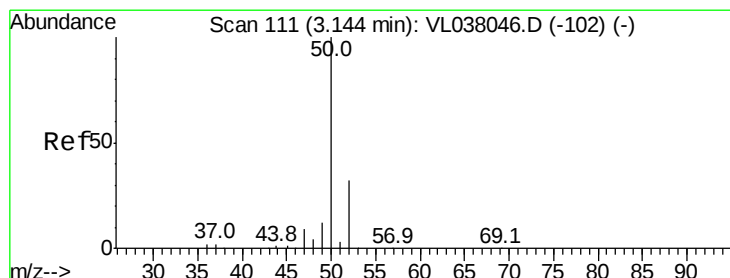
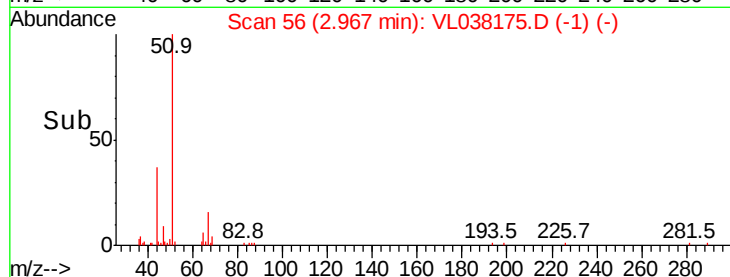
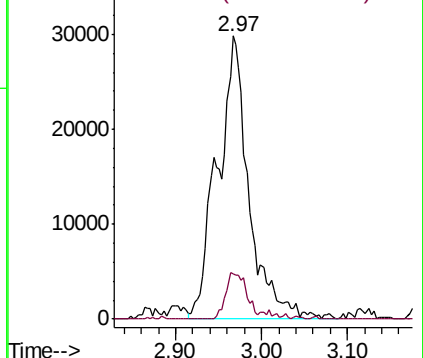
51 100

67 12.4 13.8 20.8#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.461 ppbv

RT: 3.12 min Scan# 104

Delta R.T. -0.02 min

Lab File: VL038175.D

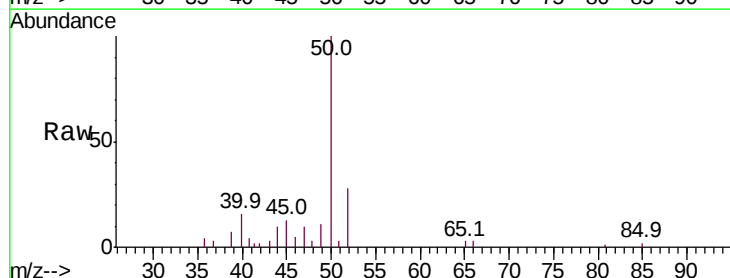
Acq: 14 Dec 2021 20:44

Tgt Ion: 50 Resp: 29086

Ion Ratio Lower Upper

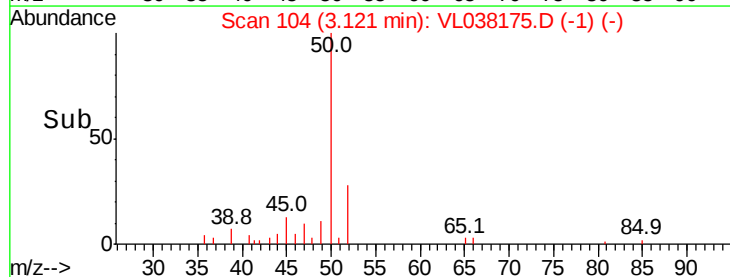
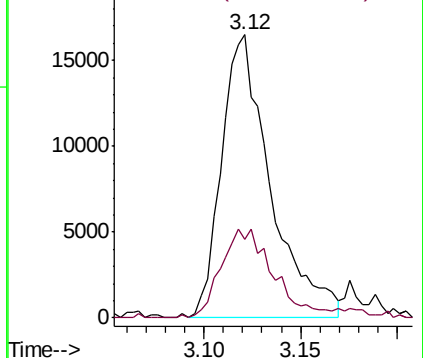
50 100

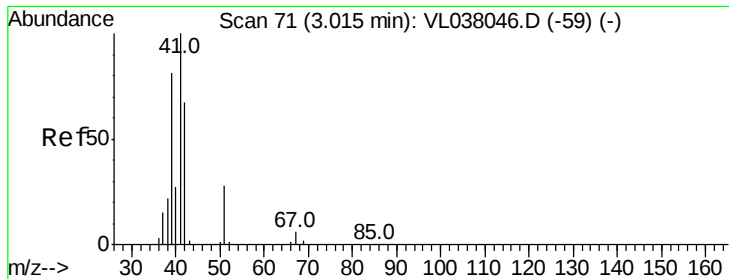
52 27.8 25.4 38.0



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 0.939 ppbv

RT: 3.00 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

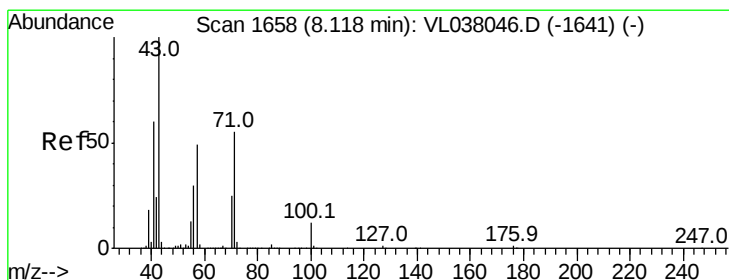
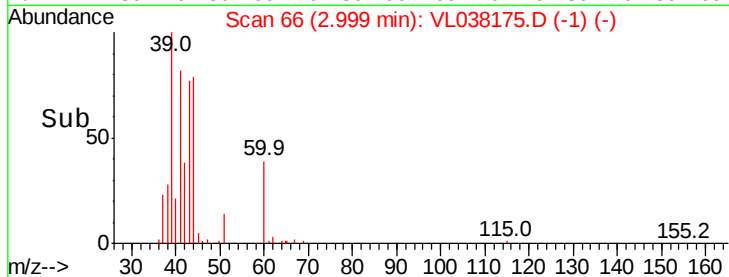
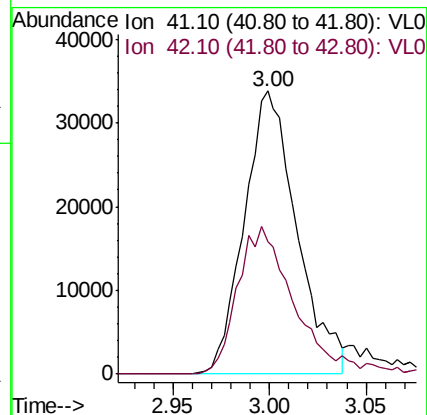
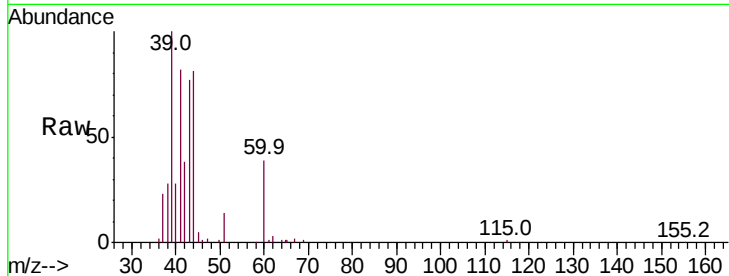
Acq: 14 Dec 2021 20:44

Tot Ion: 41 Resp: 64066

Ion Ratio Lower Upper

41 100

42 57.6 53.8 80.8



#10

Heptane

Concen: 0.068 ppbv

RT: 8.08 min Scan# 1646

Delta R.T. -0.04 min

Lab File: VL038175.D

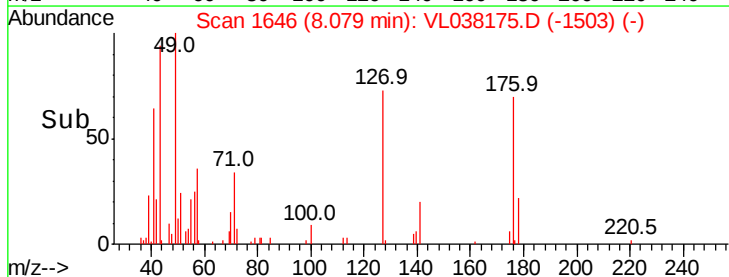
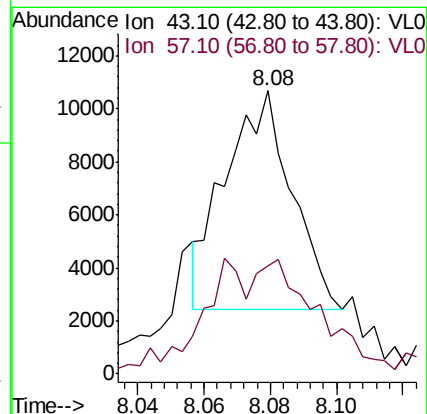
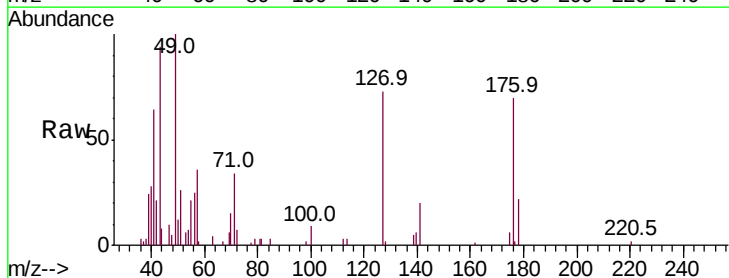
Acq: 14 Dec 2021 20:44

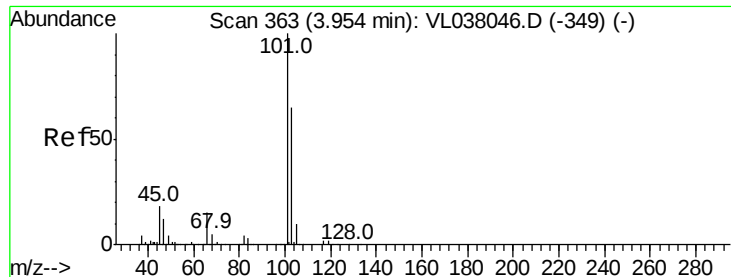
Tgt Ion: 43 Resp: 11403

Ion Ratio Lower Upper

43 100

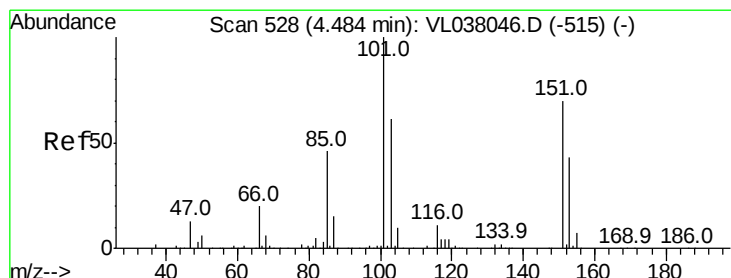
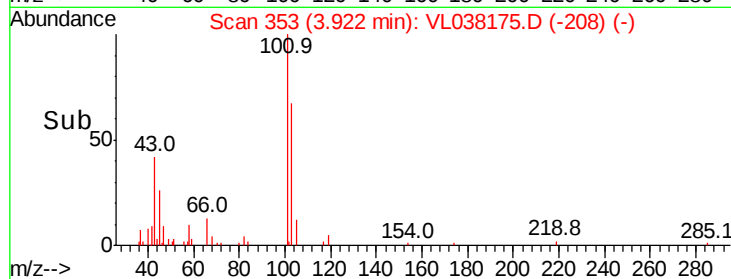
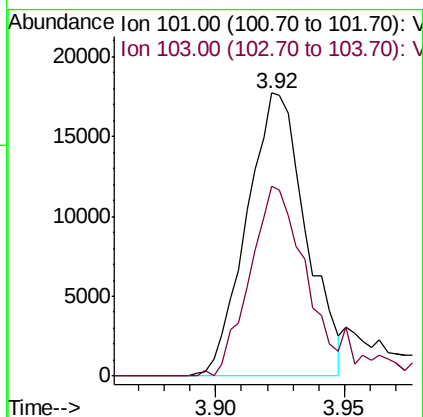
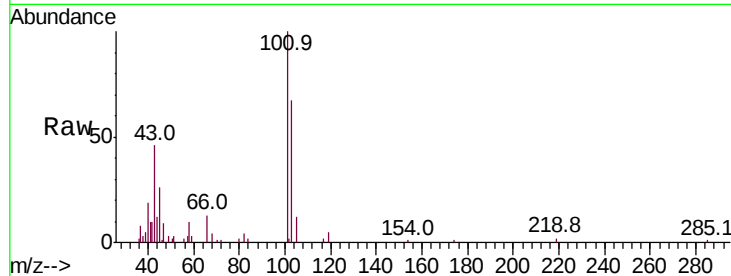
57 95.8 40.4 60.6#





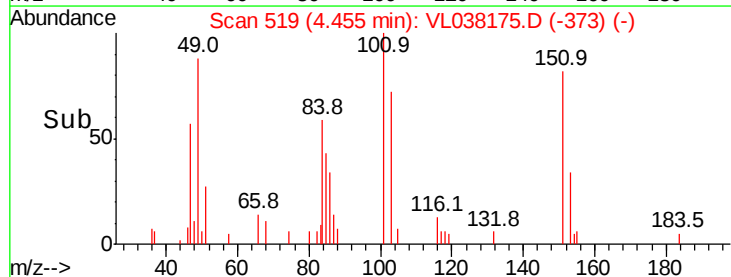
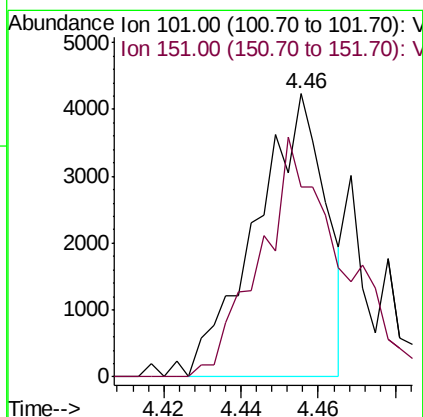
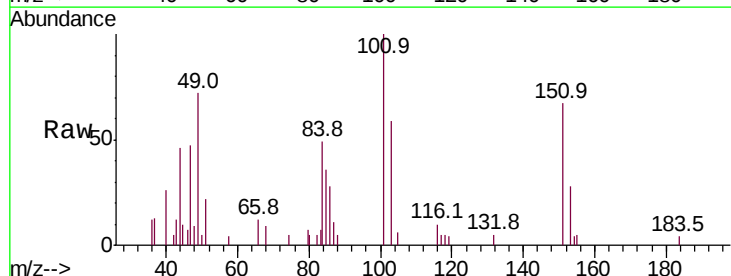
#11
 Trichlorofluoromethane
 Concen: 0.205 ppbv
 RT: 3.92
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 14 Dec 2021 20:44

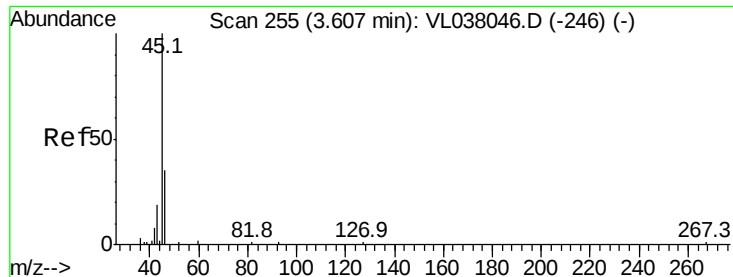
Tot Ion:101 Resp: 28348
 Ion Ratio Lower Upper
 101 100
 103 67.2 51.8 77.6



#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.054 ppbv
 RT: 4.46 min Scan# 519
 Delta R.T. -0.03 min
 Lab File: VL038175.D
 Acq: 14 Dec 2021 20:44

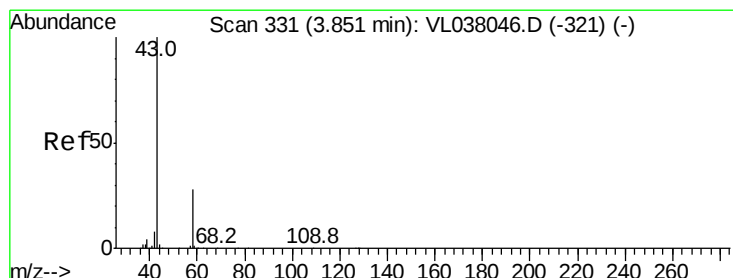
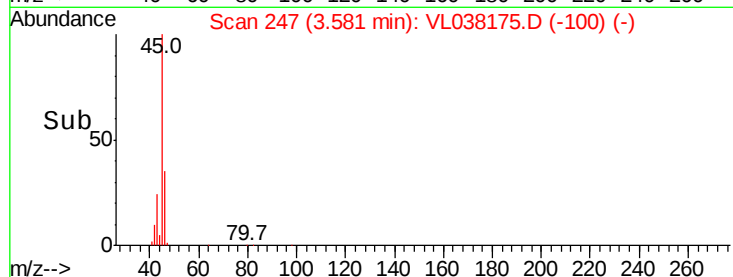
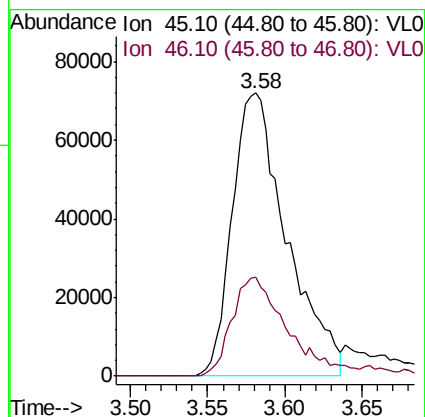
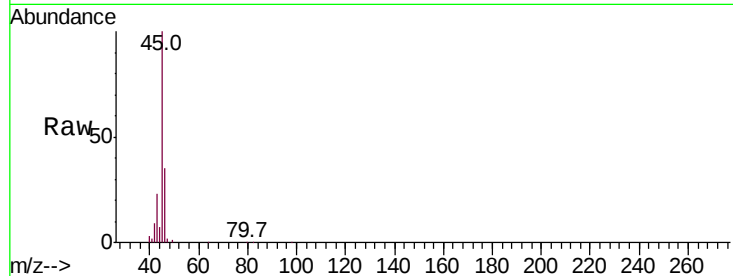
Tgt Ion:101 Resp: 5308
 Ion Ratio Lower Upper
 101 100
 151 103.1 59.0 88.4#





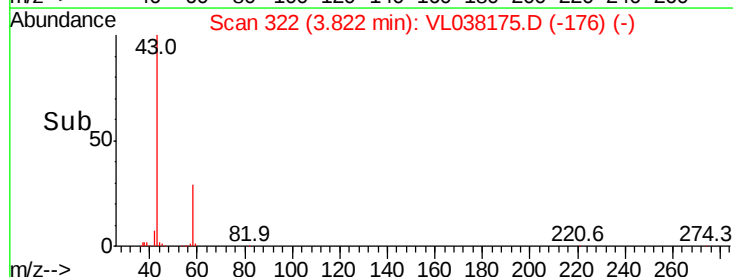
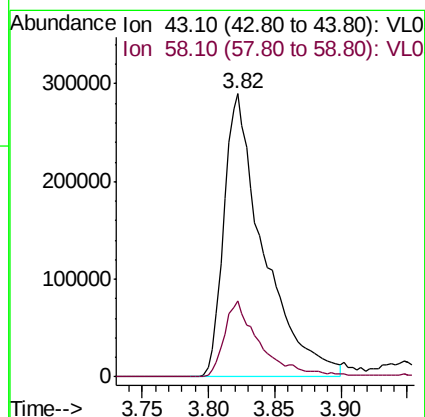
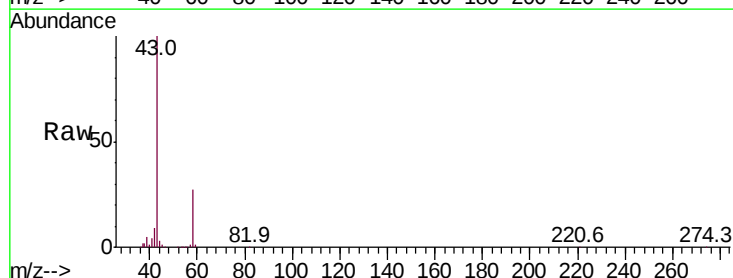
#13
Ethanol
Concen: 26.733 ppbv
RT: 3.58
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 14 Dec 2021 20:44

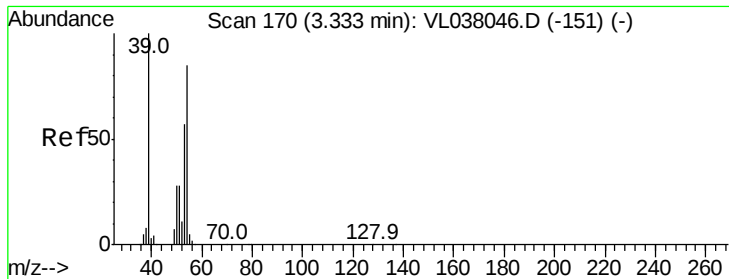
Tot Ion: 45 Resp: 176180
Ion Ratio Lower Upper
45 100
46 38.4 17.6 70.2



#15
Acetone
Concen: 7.881 ppbv
RT: 3.82 min Scan# 322
Delta R.T. -0.03 min
Lab File: VL038175.D
Acq: 14 Dec 2021 20:44

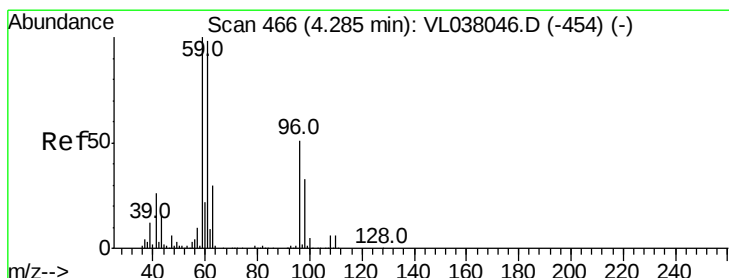
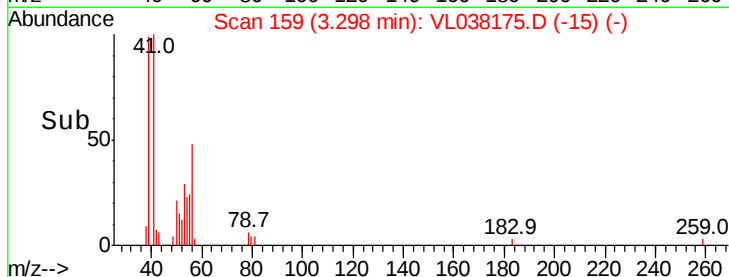
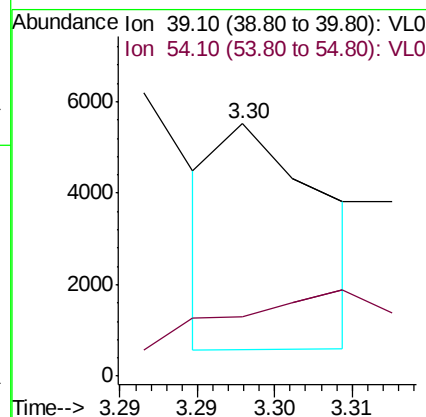
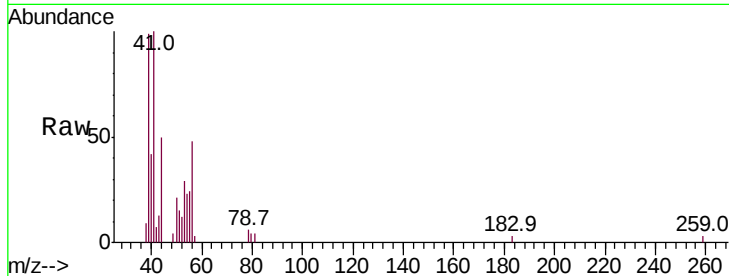
Tgt Ion: 43 Resp: 602462
Ion Ratio Lower Upper
43 100
58 24.8 22.4 33.6





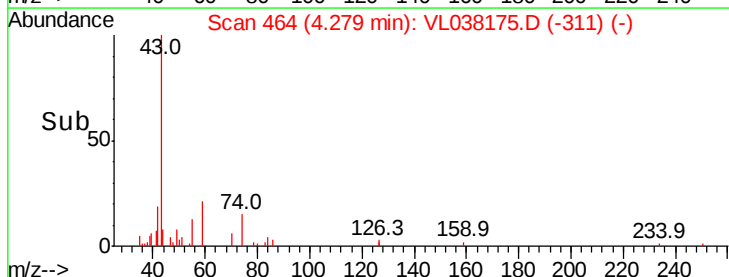
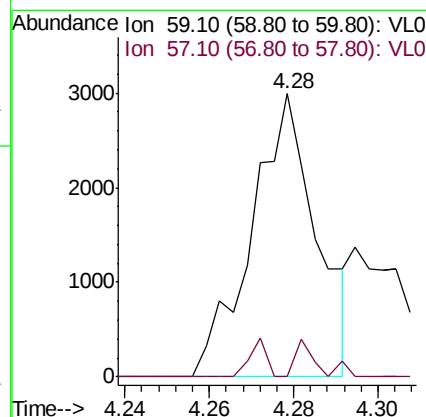
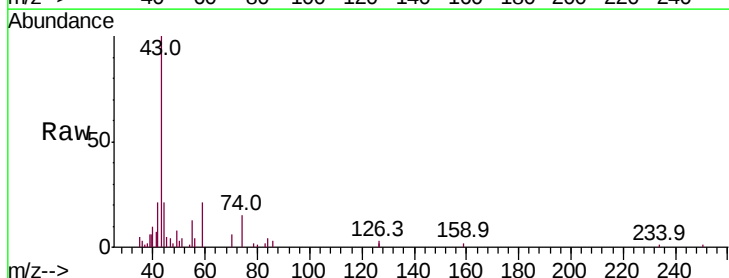
#16
 1,3-Butadiene
 Concen: 0.038 ppbv
 RT: 3.30
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId:
 Acq: 14 Dec 2021 20:44

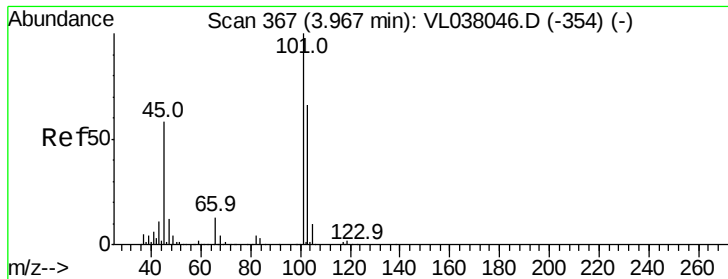
Tot Ion: 39 Resp: 2291
 Ion Ratio Lower Upper
 39 100
 54 217.5 64.4 96.6#



#17
 tert-Butyl alcohol
 Concen: 0.034 ppbv
 RT: 4.28 min Scan# 464
 Delta R.T. -0.01 min
 Lab File: VL038175.D
 Acq: 14 Dec 2021 20:44

Tgt Ion: 59 Resp: 3180
 Ion Ratio Lower Upper
 59 100
 57 0.0 8.6 13.0#





#19

Isopropyl Alcohol

Concen: 1.611 ppbv

RT: 3.95 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

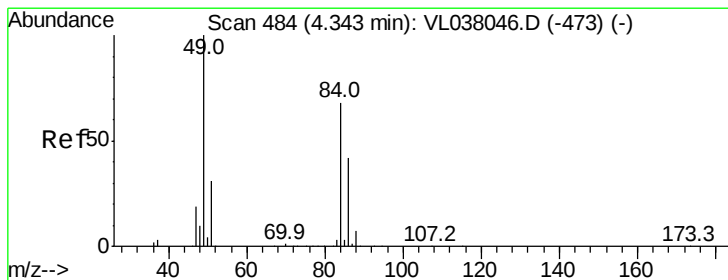
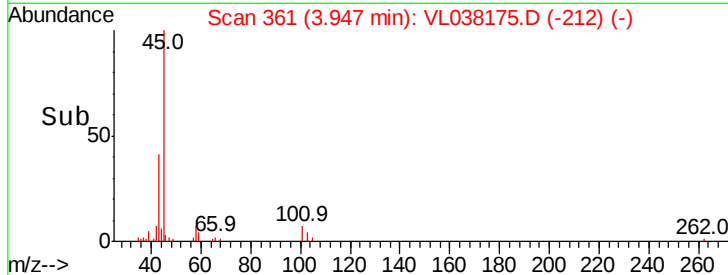
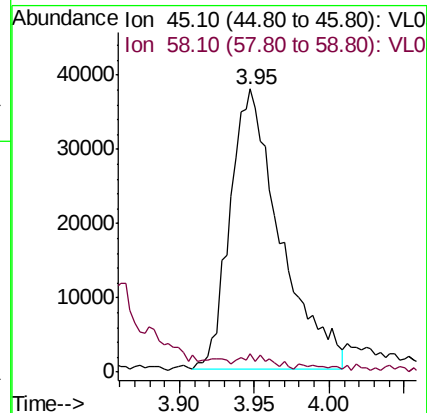
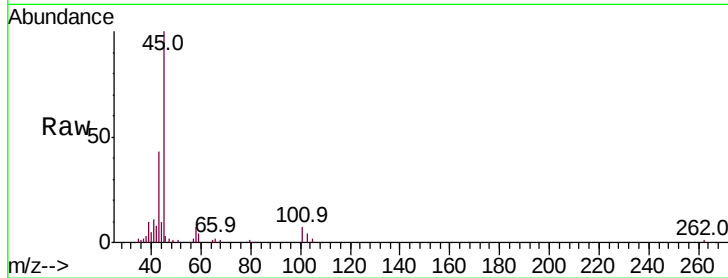
Acq: 14 Dec 2021 20:44

Tot Ion: 45 Resp: 88961

Ion Ratio Lower Upper

45 100

58 167.7 1.4 2.0#



#20

Methylene Chloride

Concen: 15.105 ppbv

RT: 4.31 min Scan# 475

Delta R.T. -0.03 min

Lab File: VL038175.D

Acq: 14 Dec 2021 20:44

Tgt Ion: 84 Resp: 646817

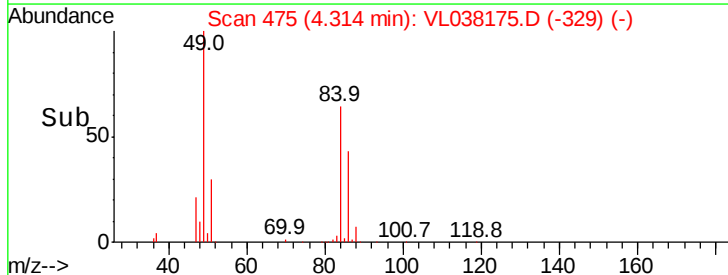
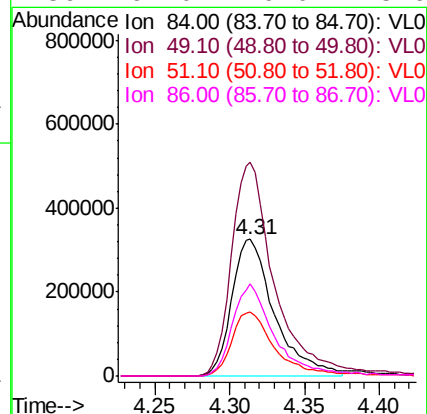
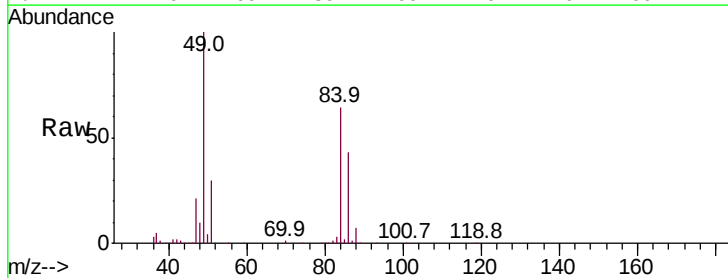
Ion Ratio Lower Upper

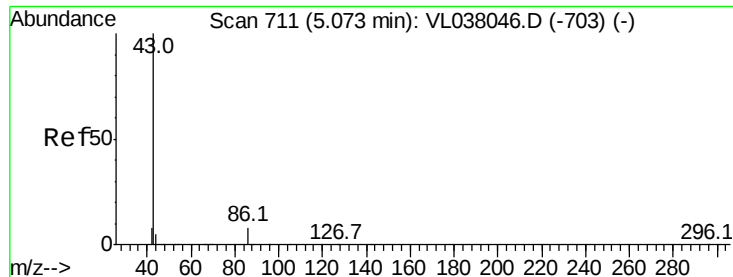
84 100

49 155.8 118.2 177.2

51 46.8 36.8 55.2

86 67.0 49.0 73.6





#23

Vinyl Acetate

Concen: 0.083 ppbv

RT: 5.02

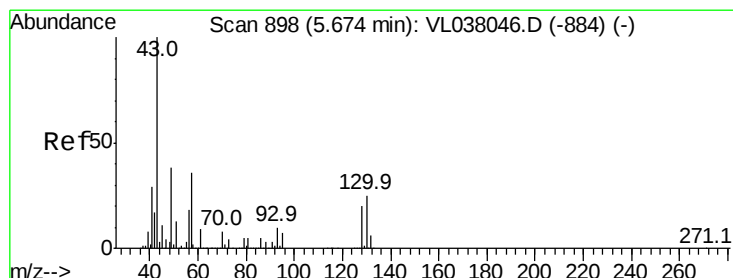
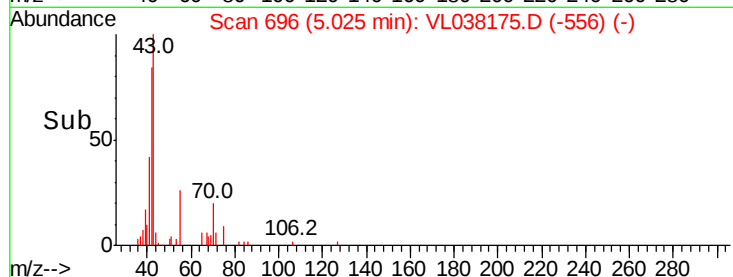
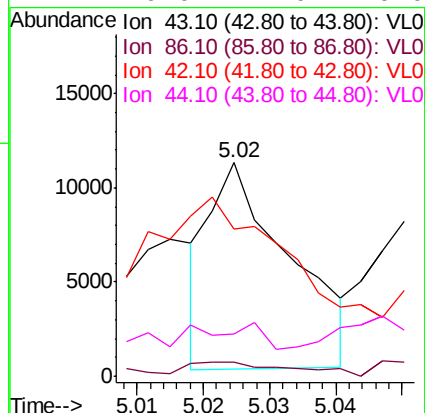
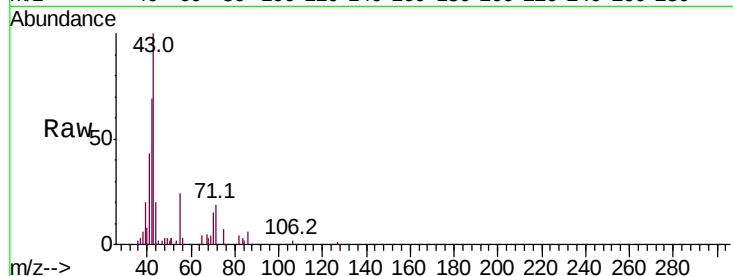
Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 14 Dec 2021 20:44

Tot Ion: 43 Resp: 9237

Ion	Ratio	Lower	Upper
43	100		
86	4.2	5.3	7.9#
42	58.1	7.0	10.6#
44	0.0	4.0	6.0#



#25

Ethyl Acetate

Concen: 1.638 ppbv

RT: 5.65 min Scan# 890

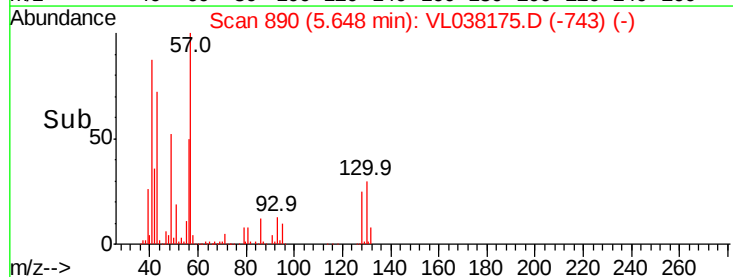
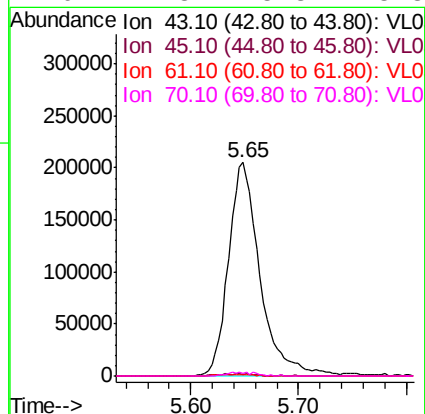
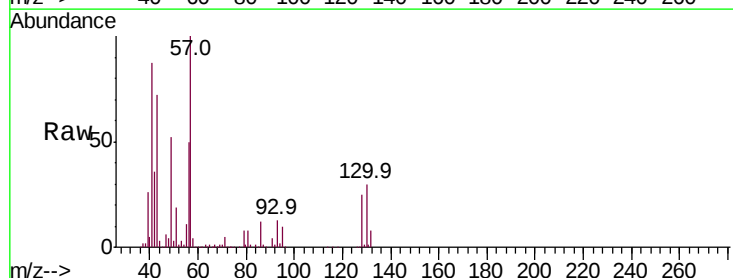
Delta R.T. -0.03 min

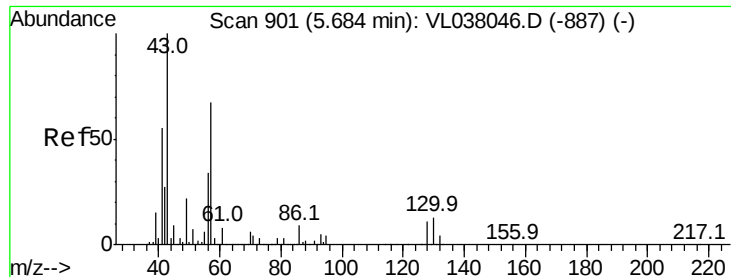
Lab File: VL038175.D

Acq: 14 Dec 2021 20:44

Tgt Ion: 43 Resp: 416284

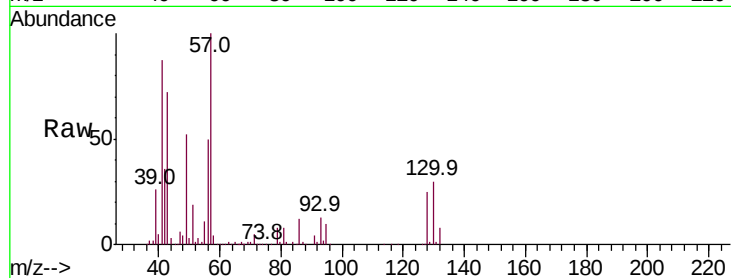
Ion	Ratio	Lower	Upper
43	100		
45	1.2	7.9	11.9#
61	0.8	7.8	11.6#
70	1.8	5.8	8.8#



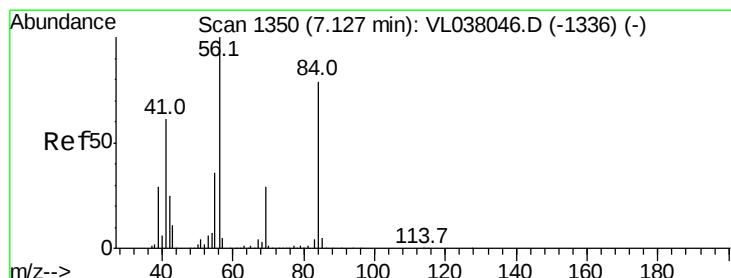
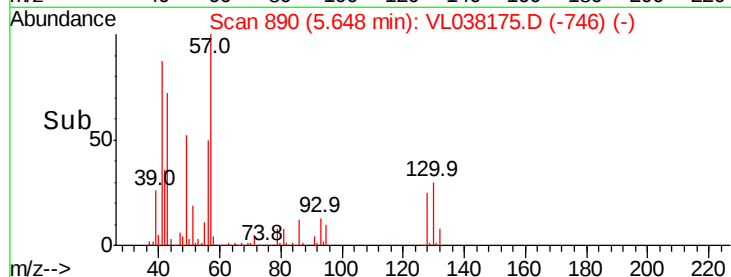
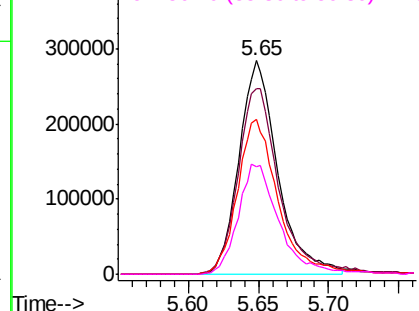


#26
Hexane
Concen: 4.476 ppbv
RT: 5.65
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 14 Dec 2021 20:44

Tot Ion: 57 Resp: 548198
Ion Ratio Lower Upper
57 100
41 93.6 71.4 107.2
43 77.1 174.6 261.8#
56 54.9 43.2 64.8

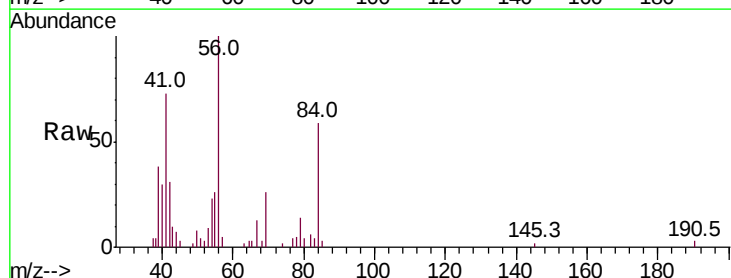


Abundance Ion 57.10 (56.80 to 57.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 43.10 (42.80 to 43.80): VL0
Ion 56.10 (55.80 to 56.80): VL0

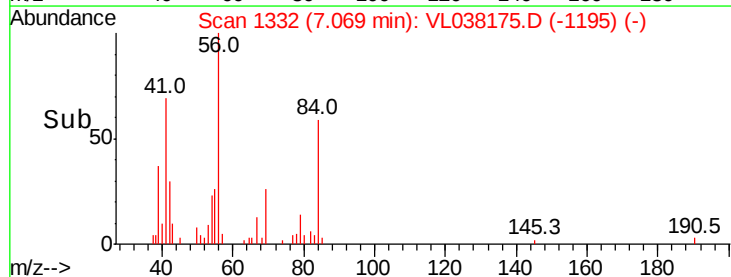
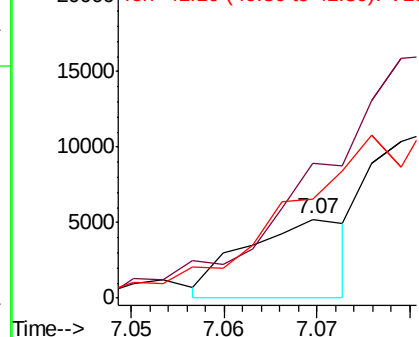


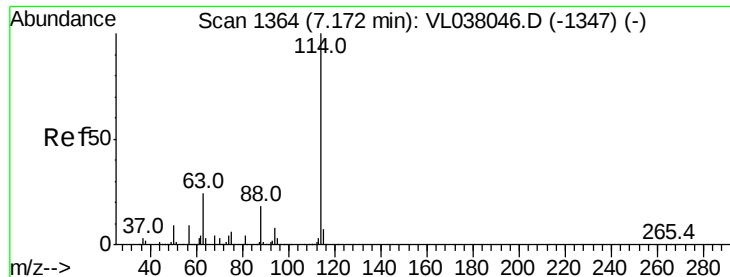
#30
Cyclohexane
Concen: 0.036 ppbv
RT: 7.07 min Scan# 1332
Delta R.T. -0.06 min
Lab File: VL038175.D
Acq: 14 Dec 2021 20:44

Tgt Ion: 84 Resp: 4056
Ion Ratio Lower Upper
84 100
56 0.0 108.1 162.1#
41 0.0 64.4 96.6#



Abundance Ion 84.20 (83.90 to 84.90): VL0
Ion 56.10 (55.80 to 56.80): VL0
Ion 41.10 (40.80 to 41.80): VL0





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.13 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 14 Dec 2021 20:44

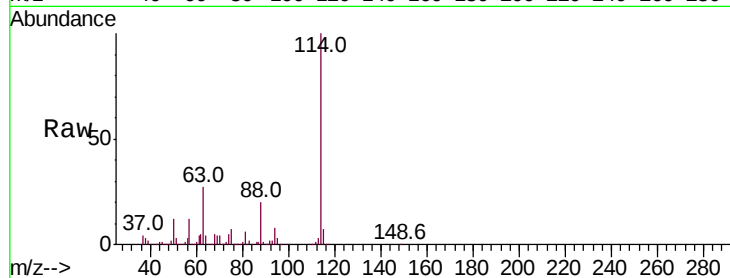
Tot Ion:114 Resp: 2310559

Ion Ratio Lower Upper

114 100

63 27.1 19.7 29.5

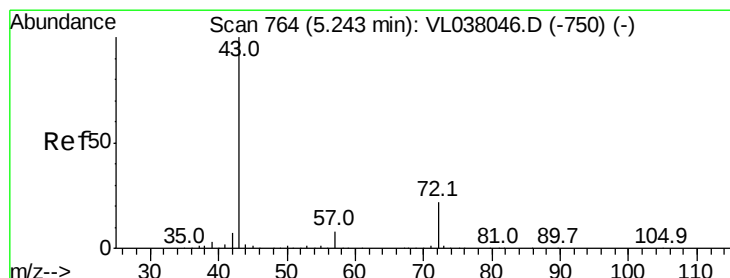
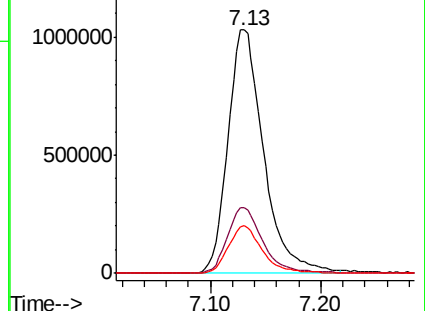
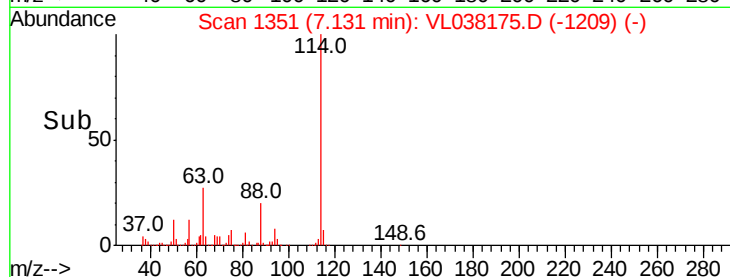
88 19.0 14.4 21.6



Abundance Ion 114.10 (113.80 to 114.80): VL0

Ion 63.10 (62.80 to 63.80): VL0

Ion 88.10 (87.80 to 88.80): VL0



#34

2-Butanone

Concen: 0.250 ppbv

RT: 5.21 min Scan# 755

Delta R.T. -0.03 min

Lab File: VL038175.D

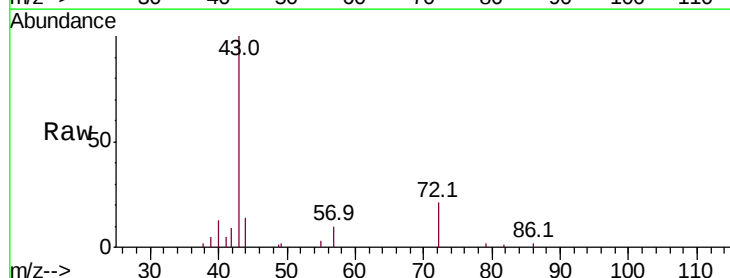
Acq: 14 Dec 2021 20:44

Tgt Ion: 43 Resp: 23300

Ion Ratio Lower Upper

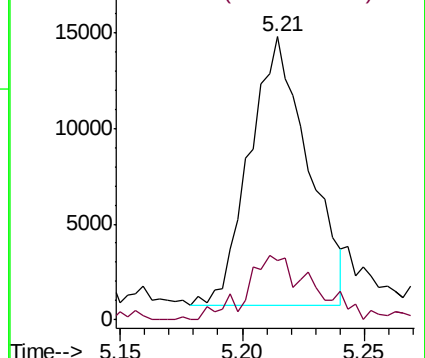
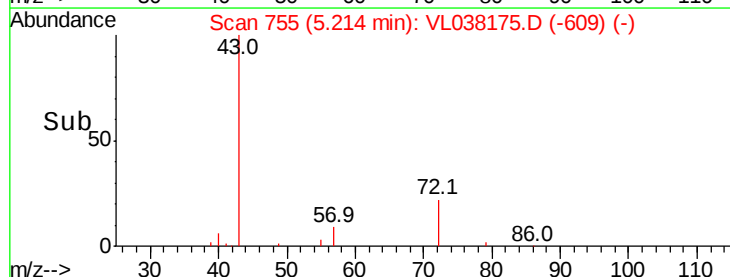
43 100

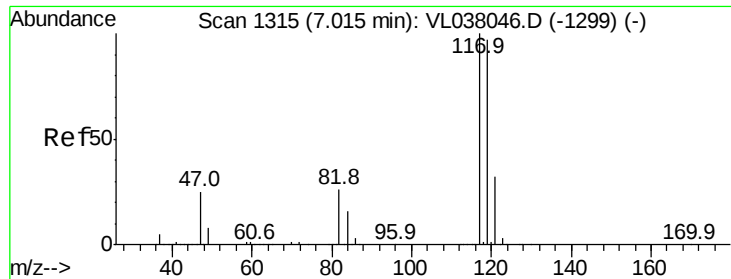
72 30.2 18.8 28.2#



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 72.10 (71.80 to 72.80): VL0





#35

Carbon Tetrachloride

Concen: 0.069 ppbv

RT: 6.97 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 14 Dec 2021 20:44

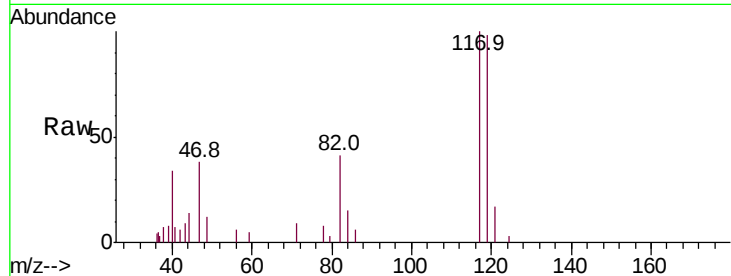
Tot Ion: 117 Resp: 11222

Ion Ratio Lower Upper

117 100

119 92.2 77.7 116.5

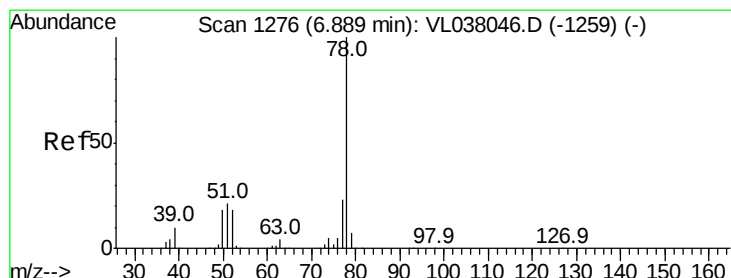
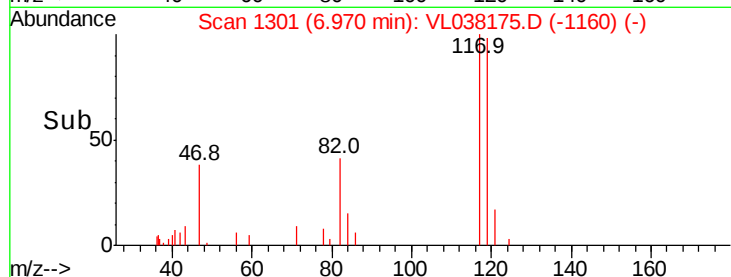
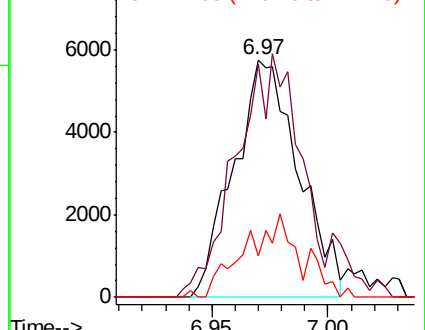
121 17.3 25.6 38.4#



Abundance Ion 117.00 (116.70 to 117.70): V

Ion 119.00 (118.70 to 119.70): V

Ion 121.00 (120.70 to 121.70): V



#36

Benzene

Concen: 0.288 ppbv

RT: 6.85 min Scan# 1263

Delta R.T. -0.04 min

Lab File: VL038175.D

Acq: 14 Dec 2021 20:44

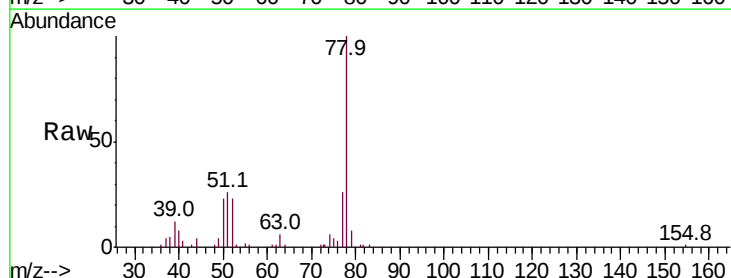
Tgt Ion: 78 Resp: 66316

Ion Ratio Lower Upper

78 100

77 26.2 18.2 27.4

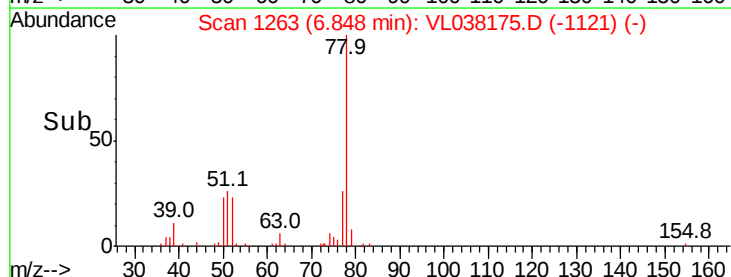
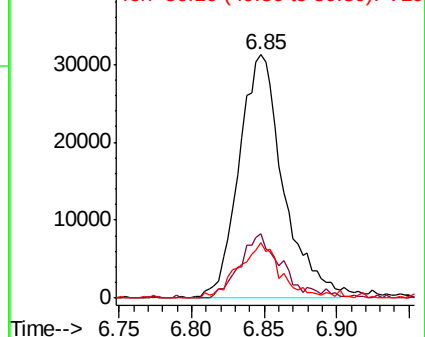
50 22.9 14.7 22.1#

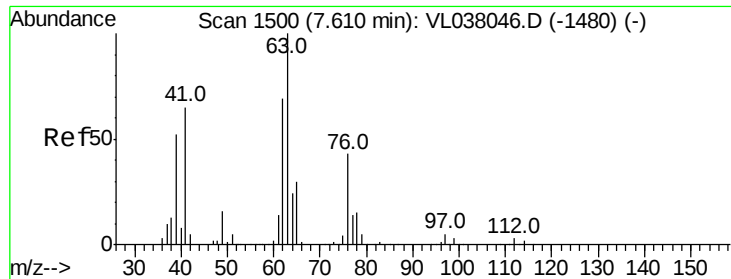


Abundance Ion 78.10 (77.80 to 78.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

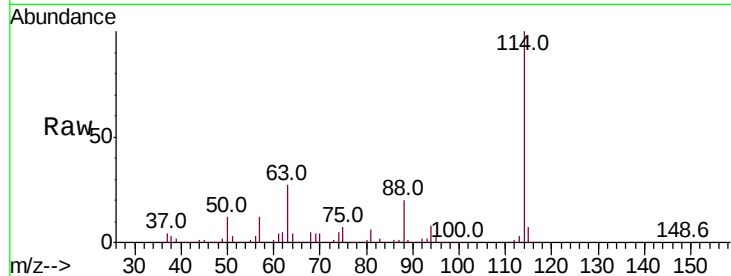
Ion 50.10 (49.80 to 50.80): VL0



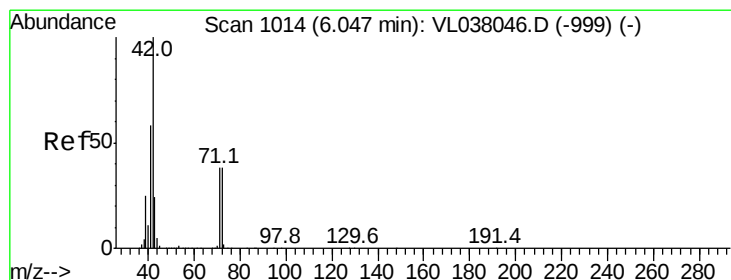
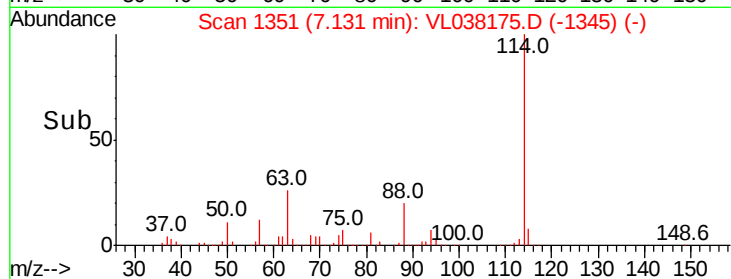
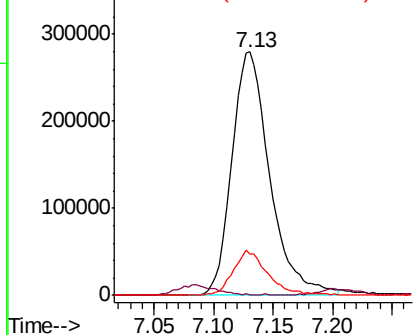


#39
 1,2-Dichloropropane
 Concen: 6.985 ppbv
 RT: 7.13
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 14 Dec 2021 20:44

Tot Ion	Ratio	Lower	Upper
63	100		
41	0.0	52.3	78.5#
62	17.2	55.1	82.7#

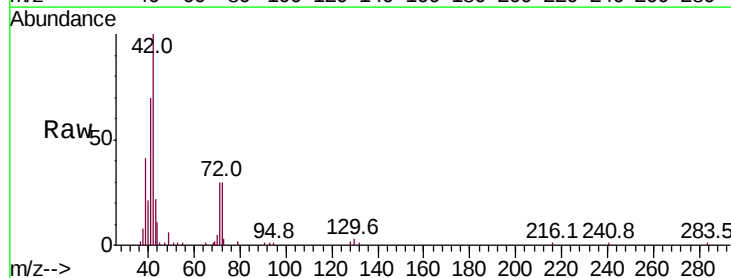


Abundance Ion 63.10 (62.80 to 63.80): VL0
 Ion 41.10 (40.80 to 41.80): VL0
 Ion 62.10 (61.80 to 62.80): VL0

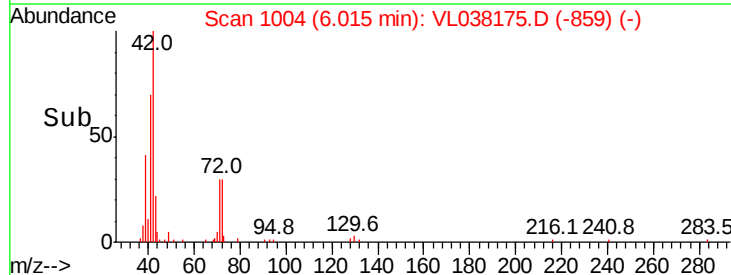
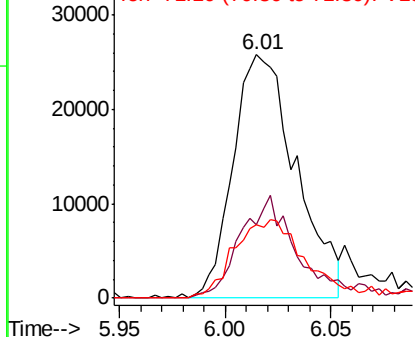


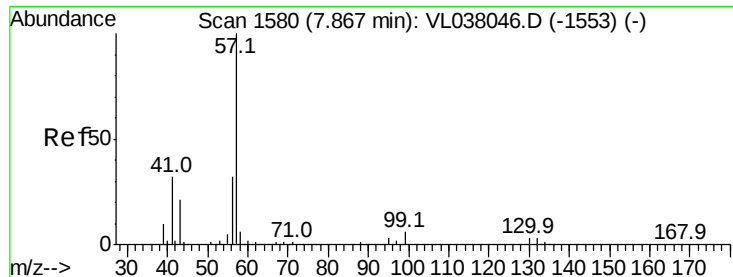
#41
 Tetrahydrofuran
 Concen: 0.927 ppbv
 RT: 6.01 min Scan# 1004
 Delta R.T. -0.03 min
 Lab File: VL038175.D
 Acq: 14 Dec 2021 20:44

Tgt Ion	Ratio	Lower	Upper
42	100		
72	40.8	31.7	47.5
71	36.6	30.6	46.0



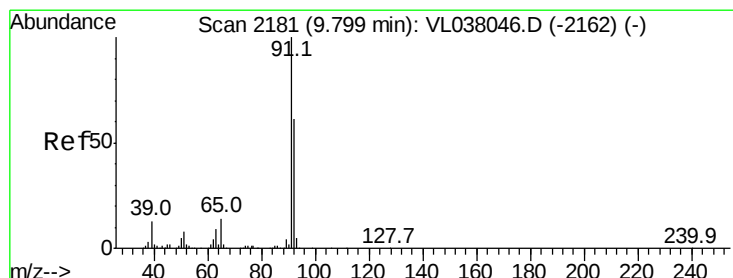
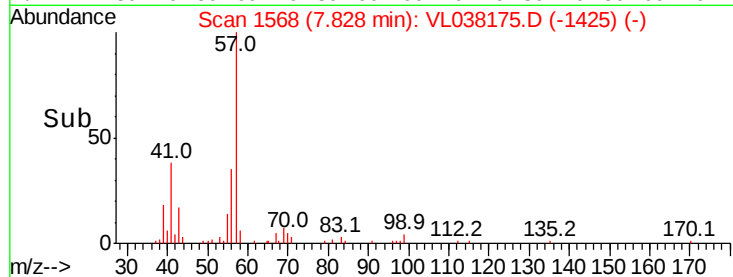
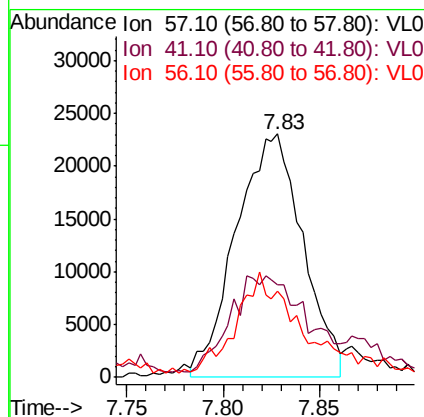
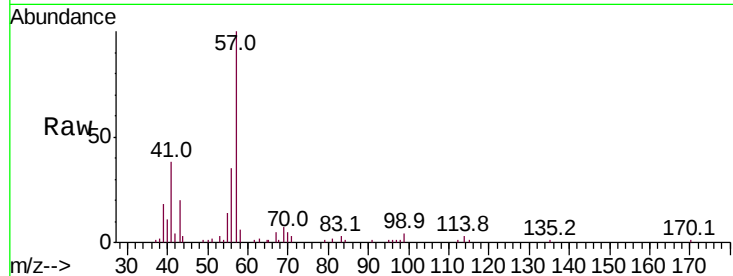
Abundance Ion 42.10 (41.80 to 42.80): VL0
 Ion 72.10 (71.80 to 72.80): VL0
 Ion 71.10 (70.80 to 71.80): VL0





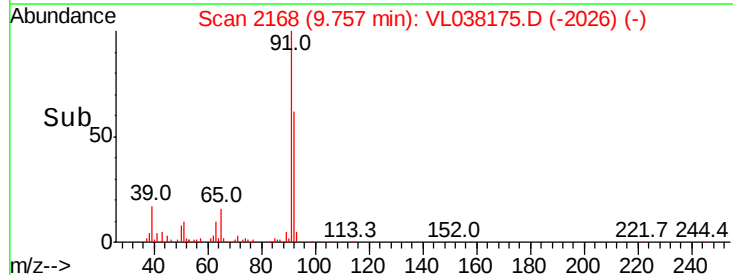
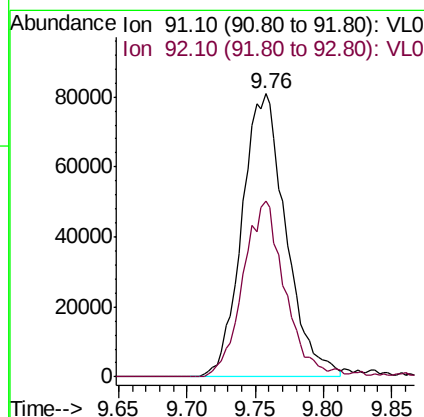
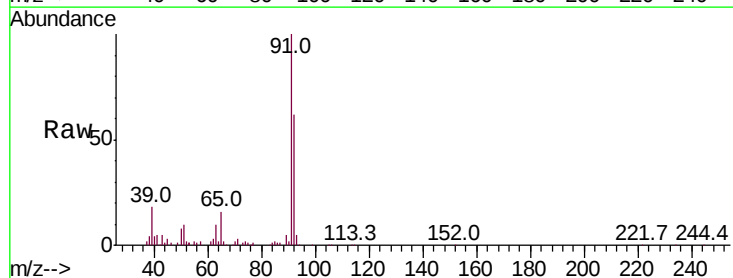
#44
 2,2,4-Trimethylpentane
 Concen: 0.144 ppbv
 RT: 7.83
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 14 Dec 2021 20:44

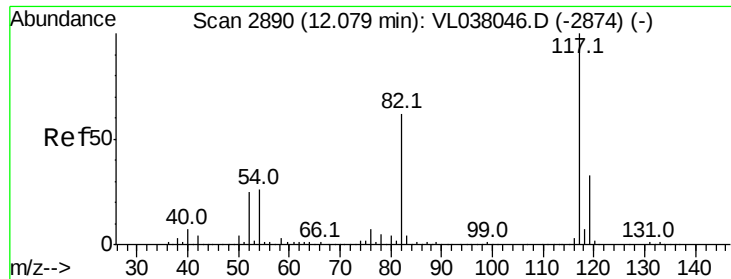
Tot Ion: 57 Resp: 55554
 Ion Ratio Lower Upper
 57 100
 41 60.5 25.8 38.6#
 56 46.7 25.6 38.4#



#53
 Toluene
 Concen: 0.683 ppbv
 RT: 9.76 min Scan# 2168
 Delta R.T. -0.04 min
 Lab File: VL038175.D
 Acq: 14 Dec 2021 20:44

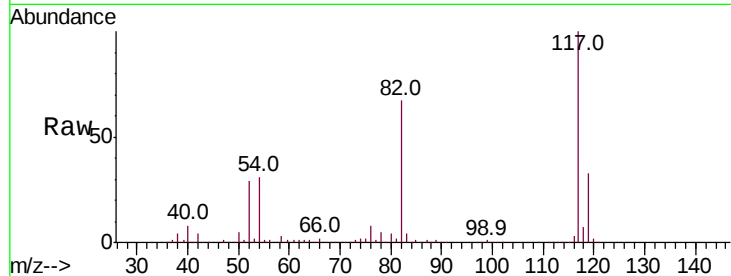
Tgt Ion: 91 Resp: 181056
 Ion Ratio Lower Upper
 91 100
 92 59.8 49.7 74.5



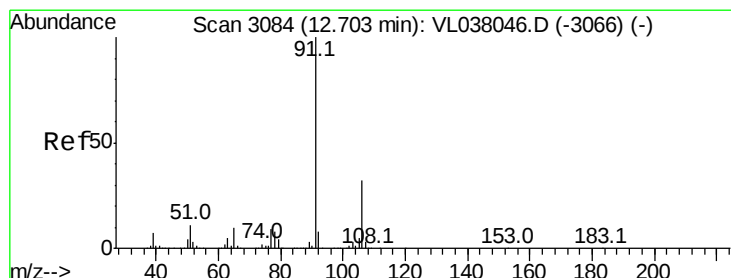
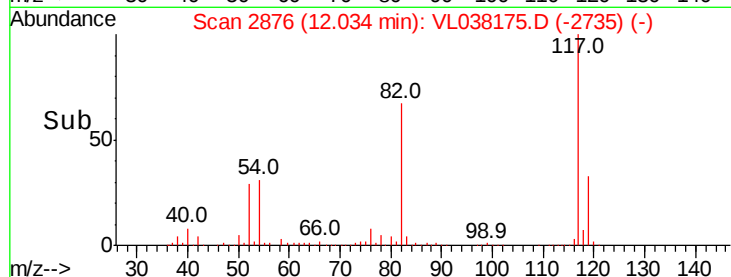
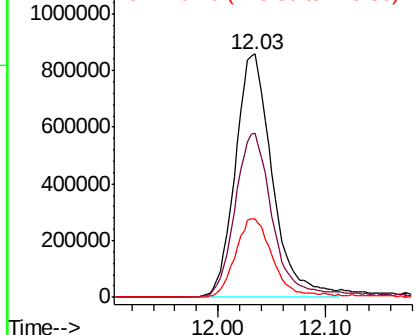


#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.03 min
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 14 Dec 2021 20:44

Tot Ion: 117 Resp: 2058100
Ion Ratio Lower Upper
117 100
82 71.3 52.8 79.2
119 33.6 26.8 40.2

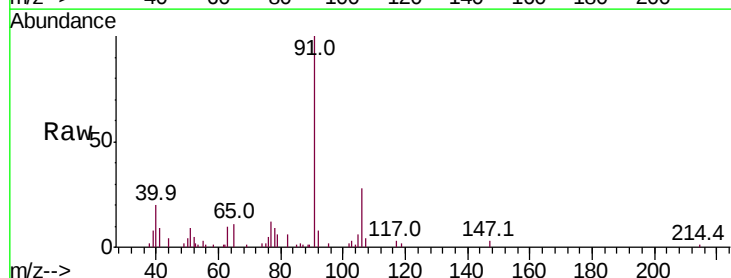


Abundance Ion 117.10 (116.80 to 117.80): V
Ion 82.10 (81.80 to 82.80): VL0
Ion 119.10 (118.80 to 119.80): V

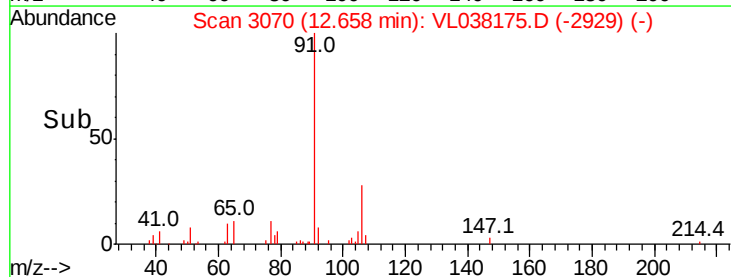
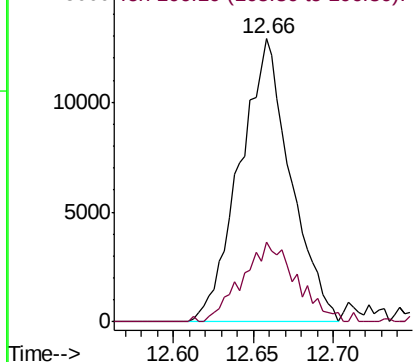


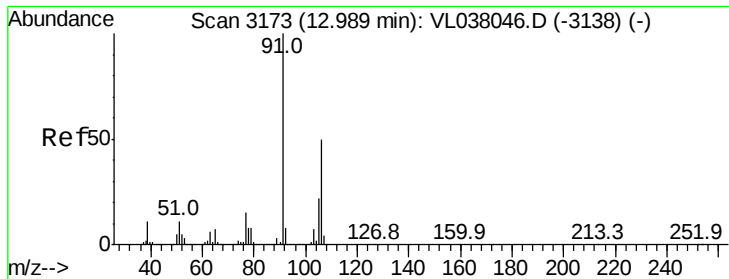
#58
Ethyl Benzene
Concen: 0.083 ppbv
RT: 12.66 min Scan# 3070
Delta R.T. -0.05 min
Lab File: VL038175.D
Acq: 14 Dec 2021 20:44

Tgt Ion: 91 Resp: 28127
Ion Ratio Lower Upper
91 100
106 28.0 25.8 38.6



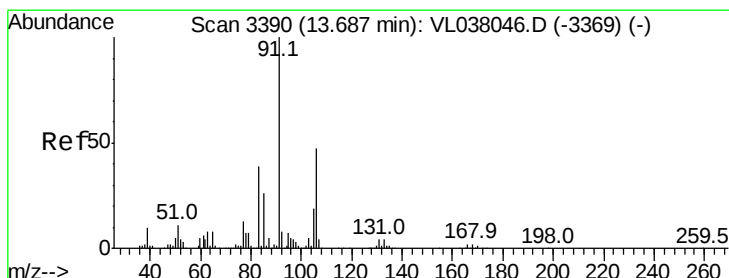
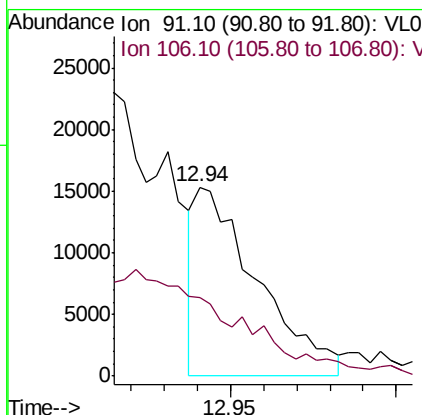
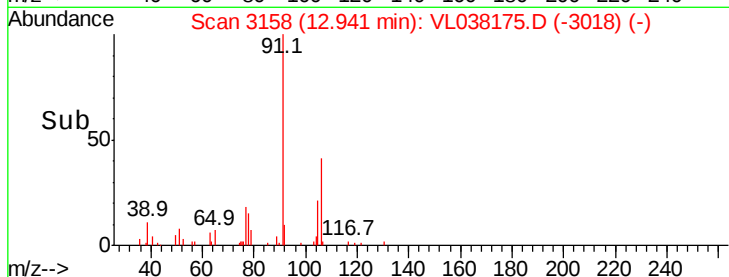
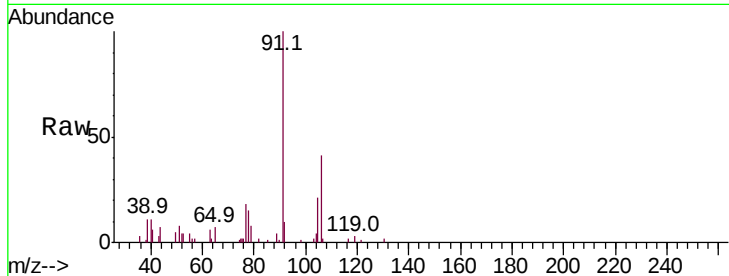
Abundance Ion 91.10 (90.80 to 91.80): VL0
Ion 106.10 (105.80 to 106.80): V





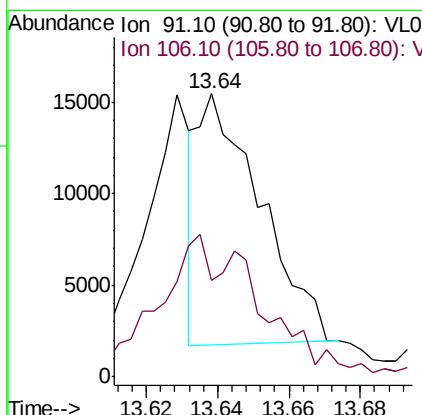
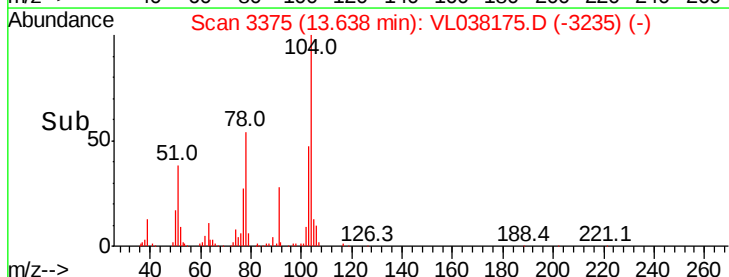
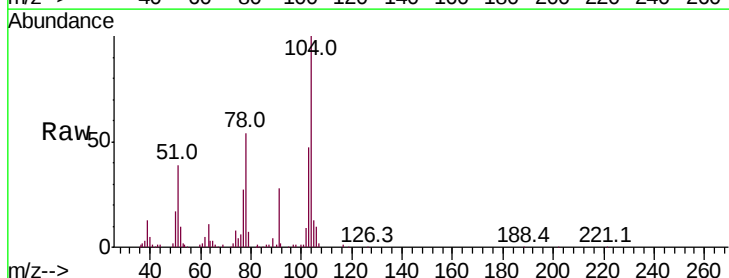
#59
m/p-Xylene
Concen: 0.069 ppbv
RT: 12.94 min
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 14 Dec 2021 20:44

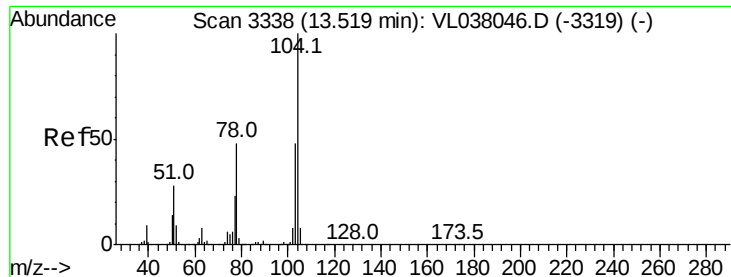
Tot Ion: 91 Resp: 19859
Ion Ratio Lower Upper
91 100
106 0.0 38.1 57.1#



#60
o-Xylene
Concen: 0.062 ppbv
RT: 13.64 min Scan# 3375
Delta R.T. -0.05 min
Lab File: VL038175.D
Acq: 14 Dec 2021 20:44

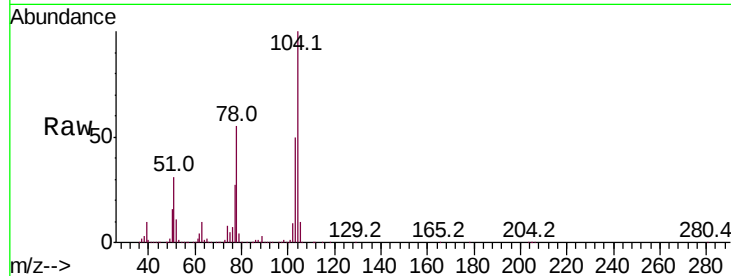
Tgt Ion: 91 Resp: 16577
Ion Ratio Lower Upper
91 100
106 100.4 24.2 72.6#



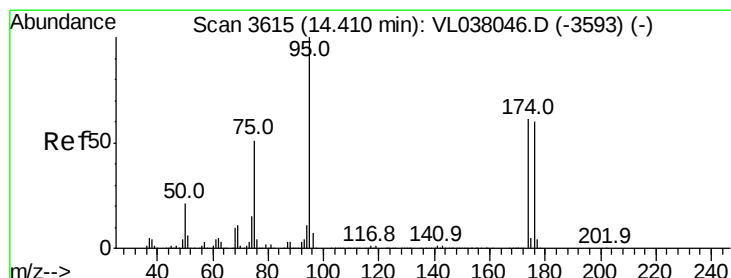
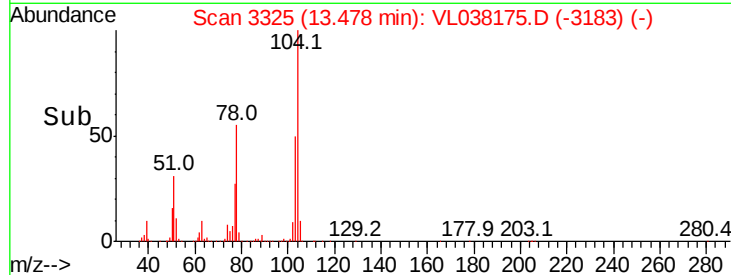
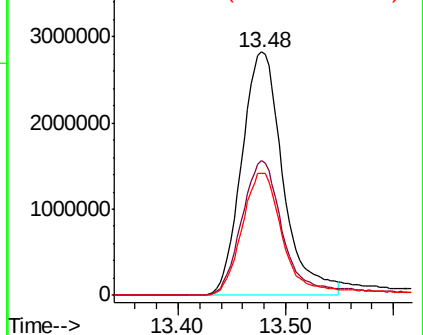


#61
Stvrene
Concen: 52.787 ppbv
RT: 13.48
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 14 Dec 2021 20:44

Tot Ion: 104 Resp: 7517686
Ion Ratio Lower Upper
104 100
78 59.4 39.8 59.6
103 53.1 38.2 57.2

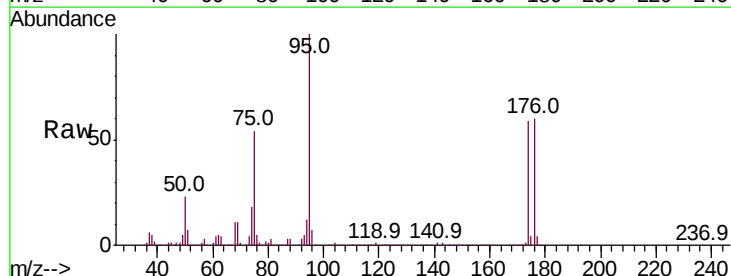


Abundance Ion 104.10 (103.80 to 104.80): V
Ion 78.10 (77.80 to 78.80): VL0
Ion 103.10 (102.80 to 103.80): V



#68
1-Bromo-4-Fluorobenzene
Concen: 11.109 ppbv
RT: 14.36 min Scan# 3600
Delta R.T. -0.05 min
Lab File: VL038175.D
Acq: 14 Dec 2021 20:44

Tgt Ion: 95 Resp: 1649200
Ion Ratio Lower Upper
95 100
174 65.0 53.1 79.7
175 4.6 4.0 6.0



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

