

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL121621\
 Data File : VL038187.D
 Acq On : 16 Dec 2021 13:24
 Operator : SY/AP
 Sample : M5117-01
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Dec 17 05:08:07 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	5.67	49	1023887	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.18	114	2695574	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.08	117	2238545	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.41	95	1745074	10.81	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	108.10%

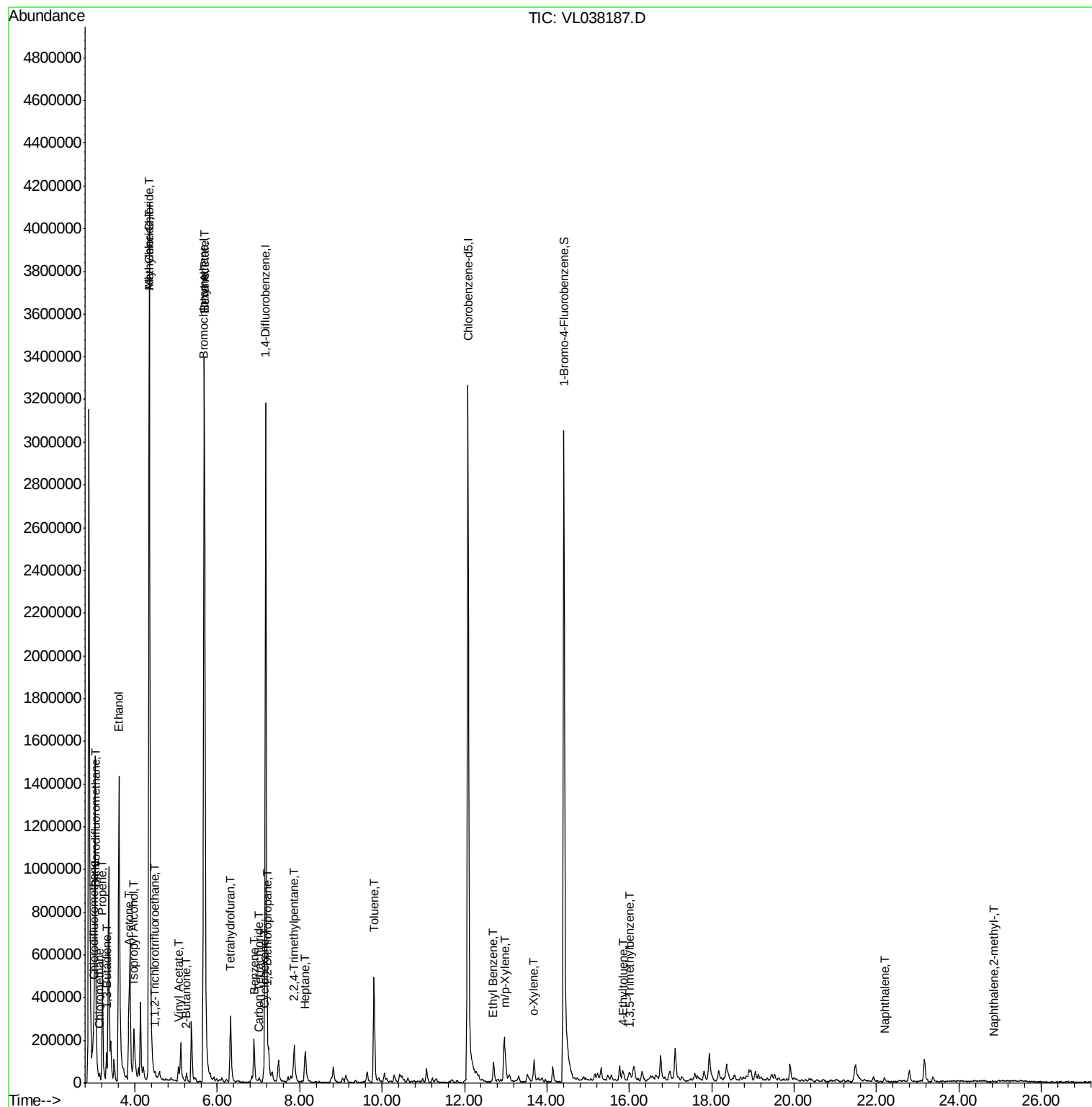
Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.05	85	43252	0.256	ppbv 98
3) Chlorodifluoromethane	3.00	51	325428	1.513	ppbv # 91
4) Chloromethane	3.15	50	18454	0.252	ppbv 92
9) Propene	3.21	41	187071	2.362	ppbv 98
10) Heptane	8.12	43	34766	0.178	ppbv # 77
12) 1,1,2-Trichlorotrifluoroet	4.48	101	3766	0.033	ppbv # 13
13) Ethanol	3.61	45	1921389	251.077	ppbv 92
15) Acetone	3.85	43	390031	4.394	ppbv # 85
16) 1,3-Butadiene	3.31	39	38264	0.552	ppbv # 48
19) Isopropyl Alcohol	3.98	45	295810	4.612	ppbv # 98
20) Methylene Chloride	4.35	84	1844385	37.093	ppbv 98
21) Allyl Chloride	4.35	41	74568	0.907	ppbv # 41
23) Vinyl Acetate	5.06	43	17717	0.138	ppbv # 20
25) Ethyl Acetate	5.69	43	944348	3.201	ppbv # 78
26) Hexane	5.69	57	1277872	8.986	ppbv # 46
30) Cyclohexane	7.13	84	23395	0.181	ppbv # 20
34) 2-Butanone	5.25	43	49111	0.452	ppbv 97
35) Carbon Tetrachloride	7.02	117	10552	0.056	ppbv # 80
36) Benzene	6.89	78	178931	0.665	ppbv 98
39) 1,2-Dichloropropane	7.23	63	8333	0.081	ppbv # 28
41) Tetrahydrofuran	6.32	42	47056	0.697	ppbv # 36
44) 2,2,4-Trimethylpentane	7.87	57	149898	0.333	ppbv # 78
53) Toluene	9.80	91	214208	0.692	ppbv # 40
58) Ethyl Benzene	12.70	91	41889	0.113	ppbv 92
59) m/p-Xylene	13.00	91	43896	0.141	ppbv # 29
60) o-Xylene	13.69	91	80392	0.278	ppbv 95
72) 4-Ethyltoluene	15.84	105	28600	0.085	ppbv # 88
73) 1,3,5-Trimethylbenzene	16.00	105	17414	0.057	ppbv # 63
79) Naphthalene	22.19	128	6960	0.042	ppbv # 86
80) Naphthalene,2-methyl-	24.85	142	1545	0.043	ppbv 93

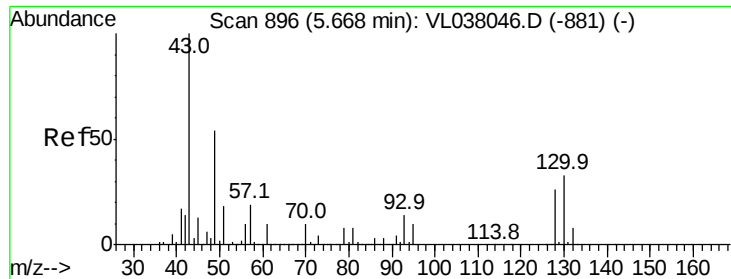
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.67 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 16 Dec 2021 13:24

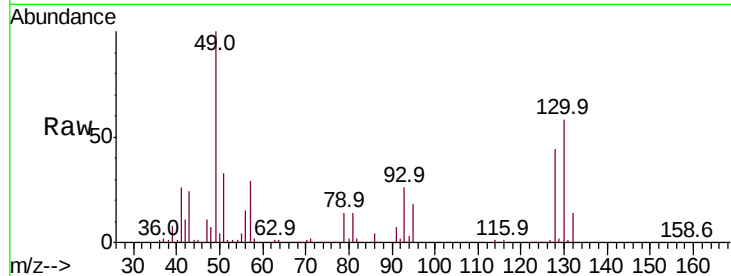
Tot Ion: 49 Resp: 1023887

Ion Ratio Lower Upper

49 100

128 47.0 26.5 79.5

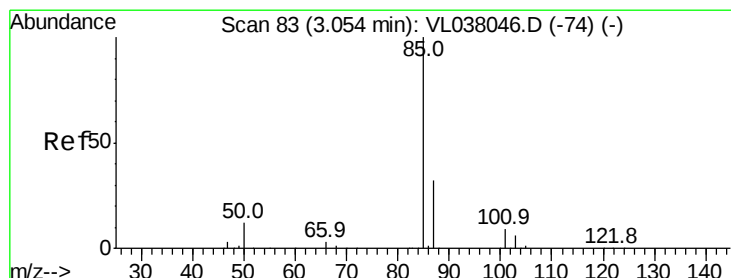
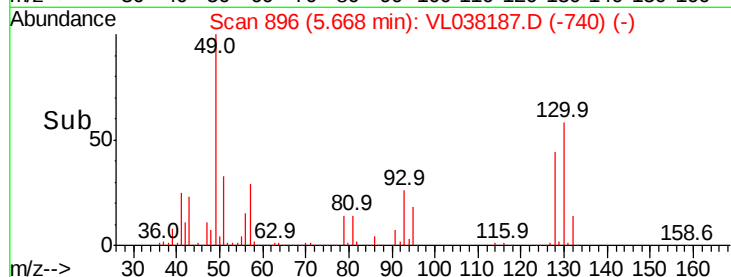
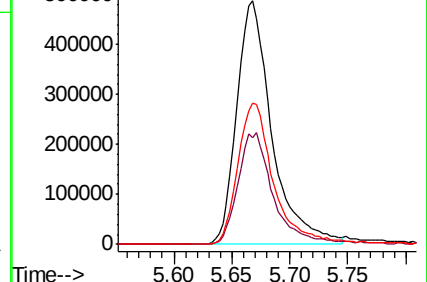
130 60.3 32.5 97.4



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: 0.256 ppbv

RT: 3.05 min Scan# 83

Delta R.T. 0.00 min

Lab File: VL038187.D

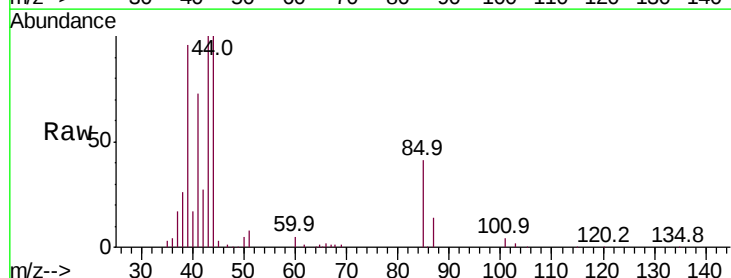
Acq: 16 Dec 2021 13:24

Tgt Ion: 85 Resp: 43252

Ion Ratio Lower Upper

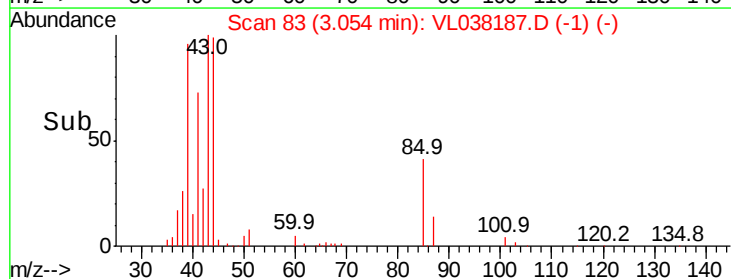
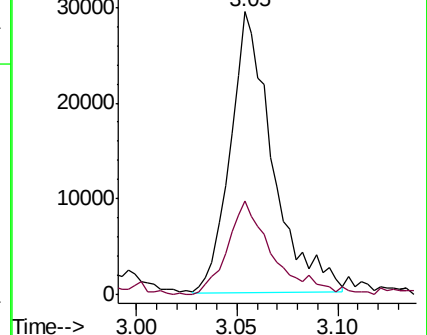
85 100

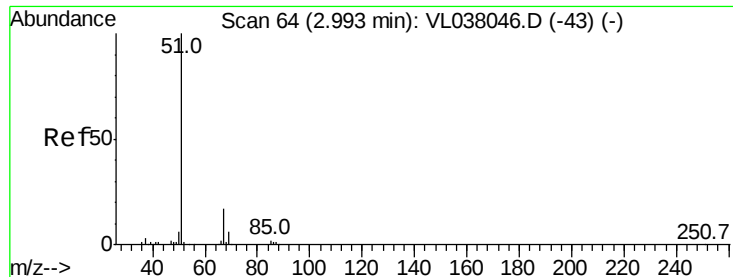
87 33.6 25.8 38.6



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 1.513 ppbv

RT: 3.00 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

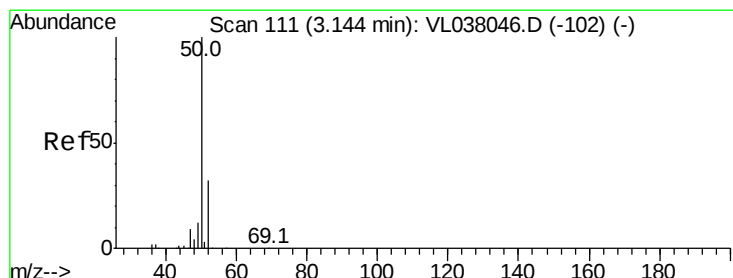
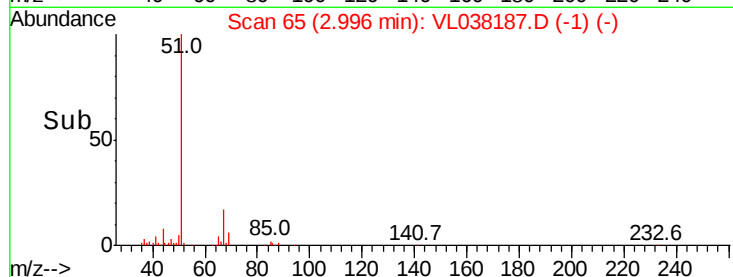
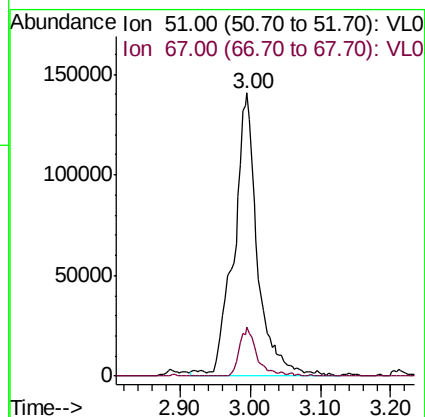
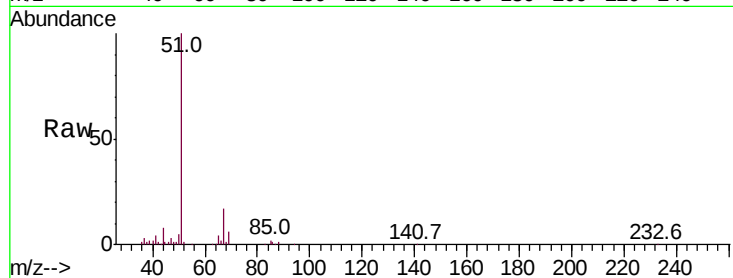
Acq: 16 Dec 2021 13:24

Tot Ion: 51 Resp: 325428

Ion Ratio Lower Upper

51 100

67 13.3 13.8 20.8#



#4

Chloromethane

Concen: 0.252 ppbv

RT: 3.15 min Scan# 112

Delta R.T. 0.00 min

Lab File: VL038187.D

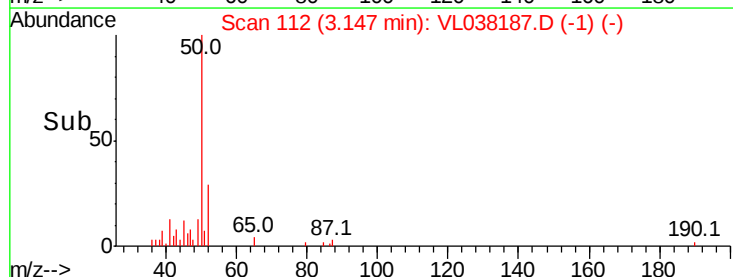
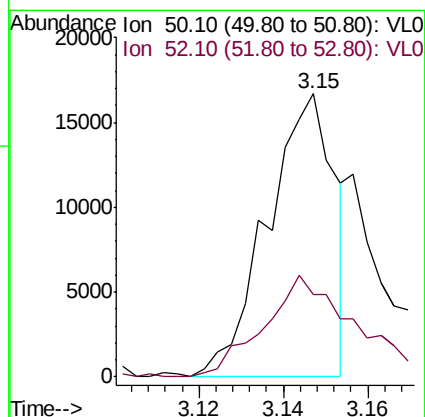
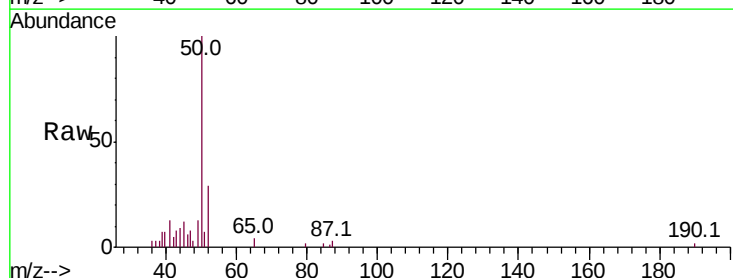
Acq: 16 Dec 2021 13:24

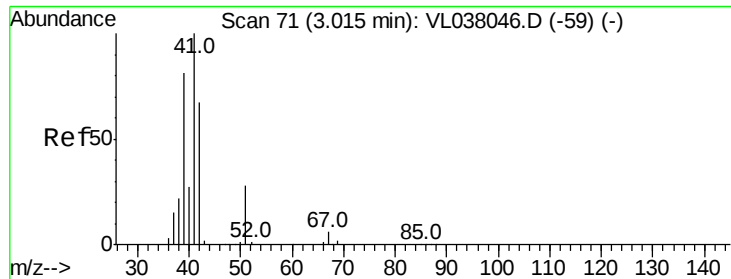
Tgt Ion: 50 Resp: 18454

Ion Ratio Lower Upper

50 100

52 27.4 25.4 38.0





#9

Propene

Concen: 2.362 ppbv

RT: 3.21 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

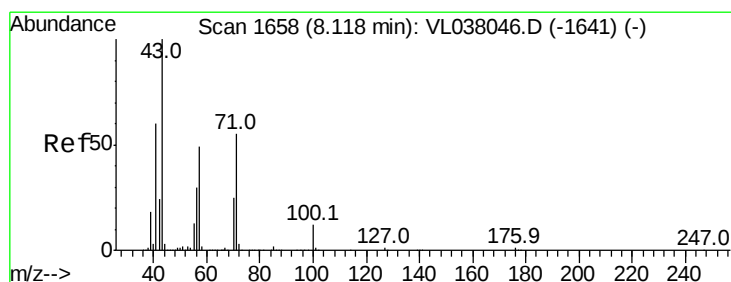
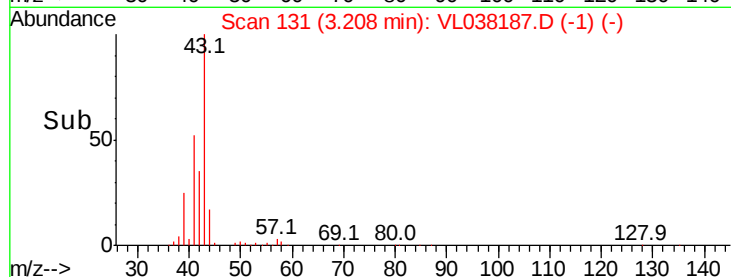
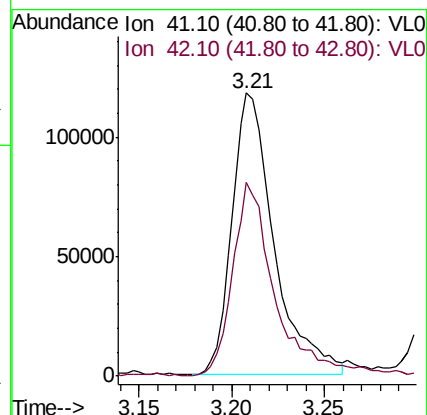
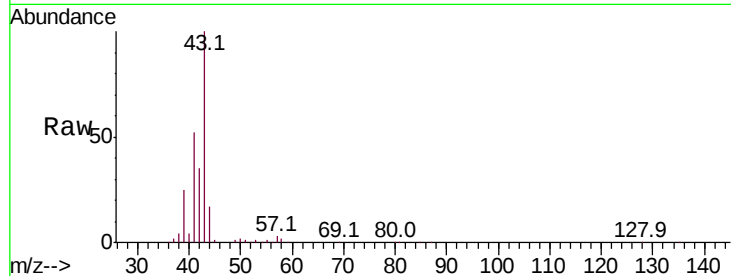
Acq: 16 Dec 2021 13:24

Tot Ion: 41 Resp: 187071

Ion Ratio Lower Upper

41 100

42 68.7 53.8 80.8



#10

Heptane

Concen: 0.178 ppbv

RT: 8.12 min Scan# 1658

Delta R.T. 0.00 min

Lab File: VL038187.D

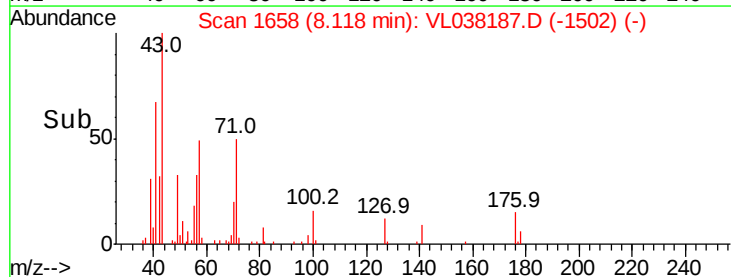
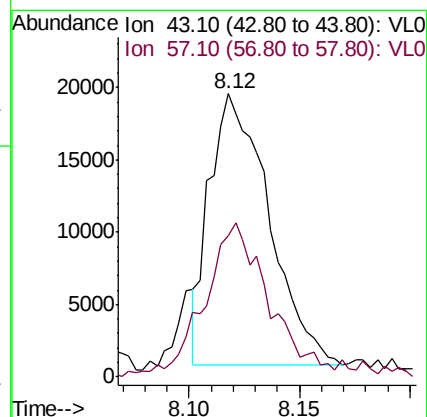
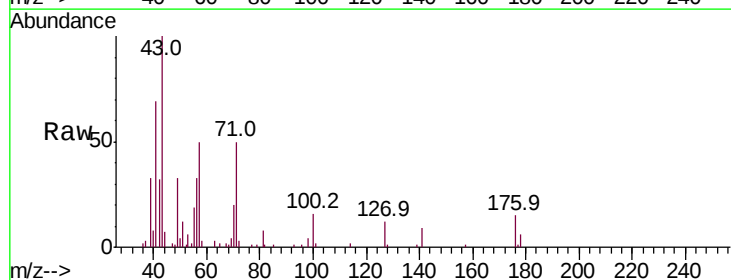
Acq: 16 Dec 2021 13:24

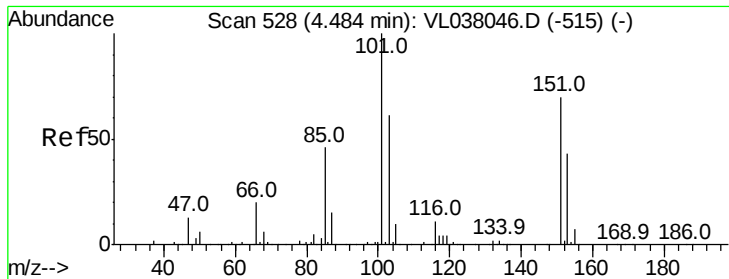
Tgt Ion: 43 Resp: 34766

Ion Ratio Lower Upper

43 100

57 66.6 40.4 60.6#





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.033 ppbv

RT: 4.48 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

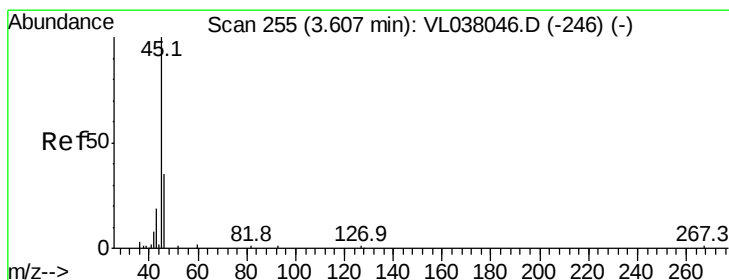
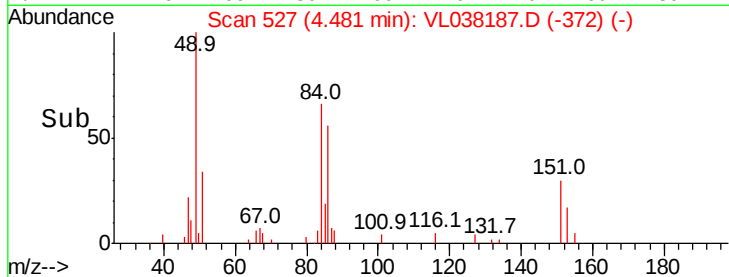
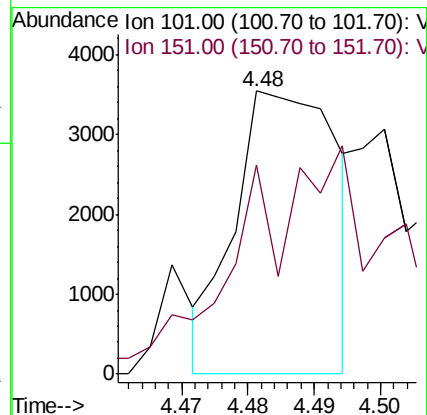
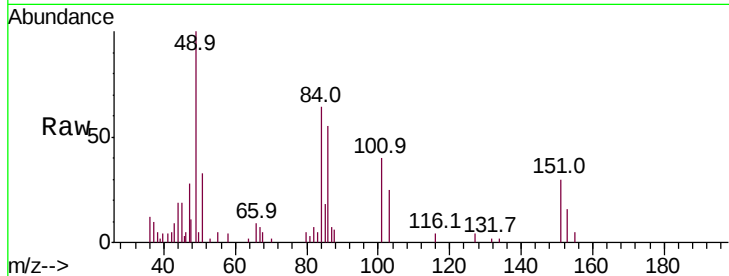
Acq: 16 Dec 2021 13:24

Tot Ion:101 Resp: 3766

Ion Ratio Lower Upper

101 100

151 0.0 59.0 88.4#



#13

Ethanol

Concen: 251.077 ppbv

RT: 3.61 min Scan# 256

Delta R.T. 0.00 min

Lab File: VL038187.D

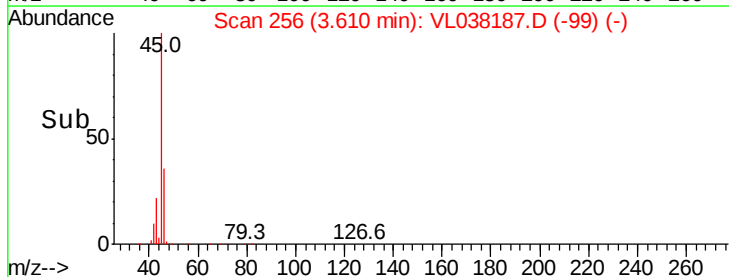
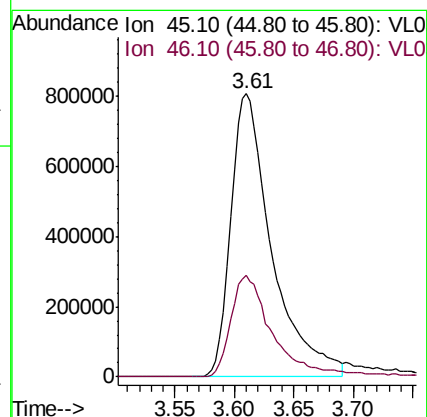
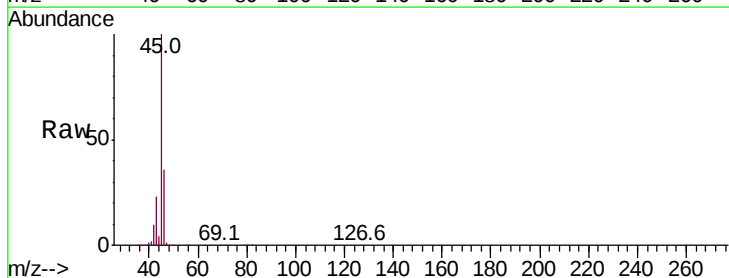
Acq: 16 Dec 2021 13:24

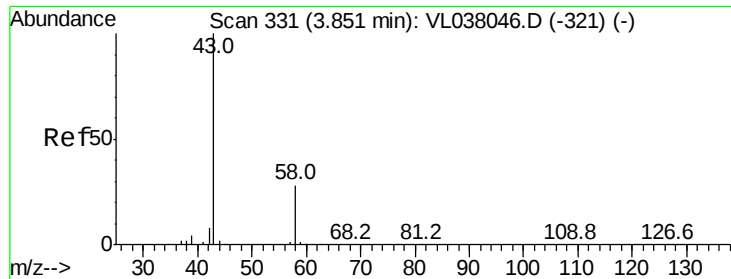
Tgt Ion: 45 Resp: 1921389

Ion Ratio Lower Upper

45 100

46 38.5 17.6 70.2





#15

Acetone

Concen: 4.394 ppbv

RT: 3.85 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

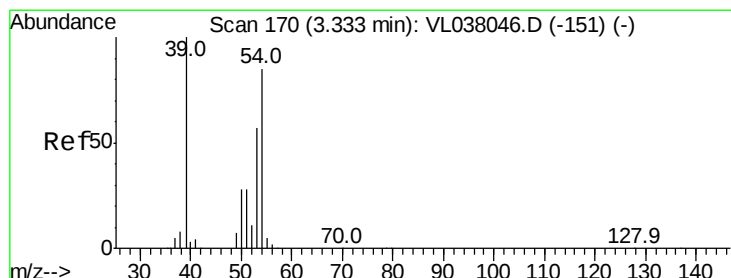
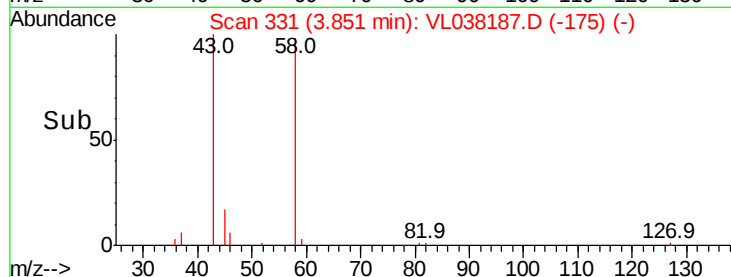
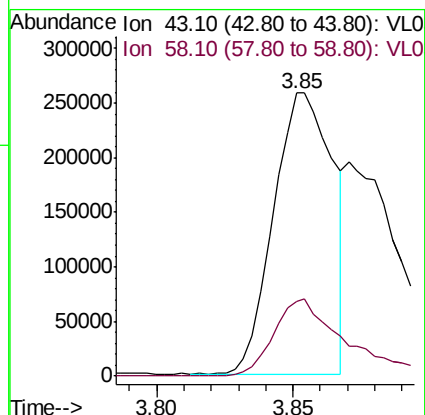
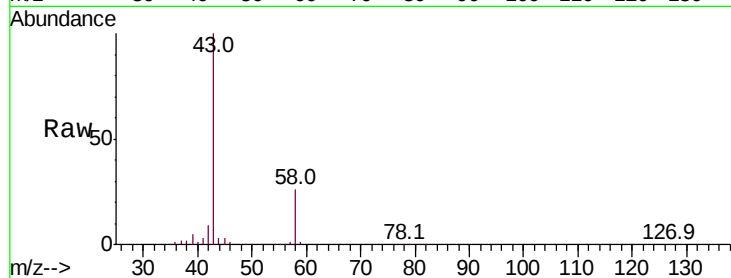
Acq: 16 Dec 2021 13:24

Tot Ion: 43 Resp: 390031

Ion Ratio Lower Upper

43 100

58 35.7 22.4 33.6#



#16

1,3-Butadiene

Concen: 0.552 ppbv

RT: 3.31 min Scan# 164

Delta R.T. -0.02 min

Lab File: VL038187.D

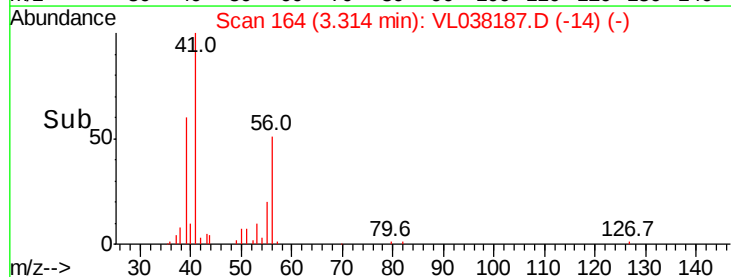
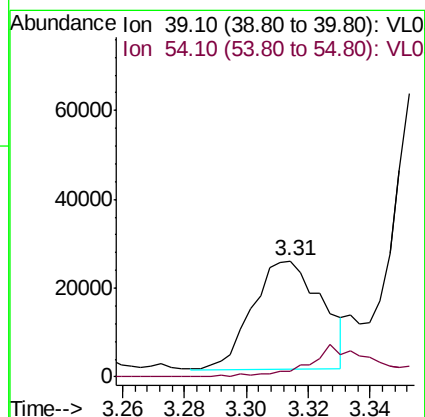
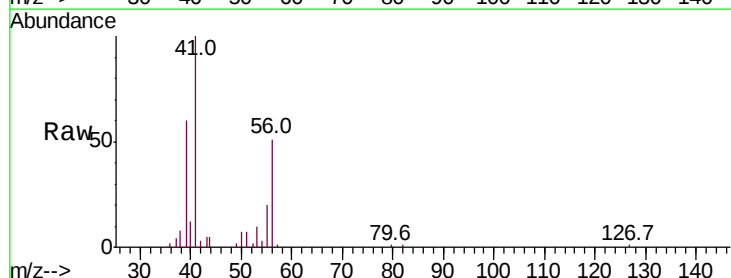
Acq: 16 Dec 2021 13:24

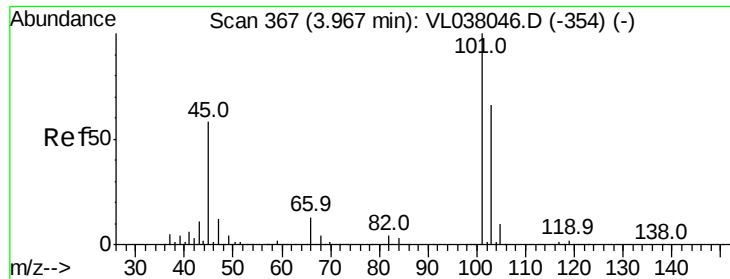
Tgt Ion: 39 Resp: 38264

Ion Ratio Lower Upper

39 100

54 34.4 64.4 96.6#





#19

Isopropyl Alcohol

Concen: 4.612 ppbv

RT: 3.98 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

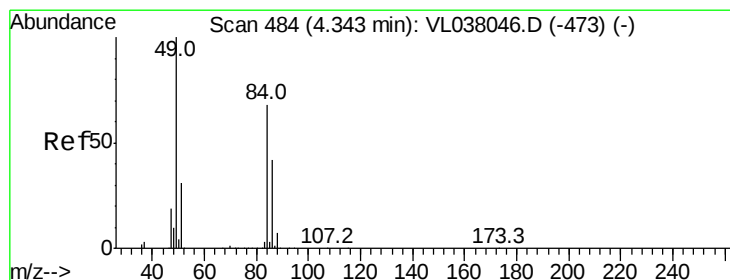
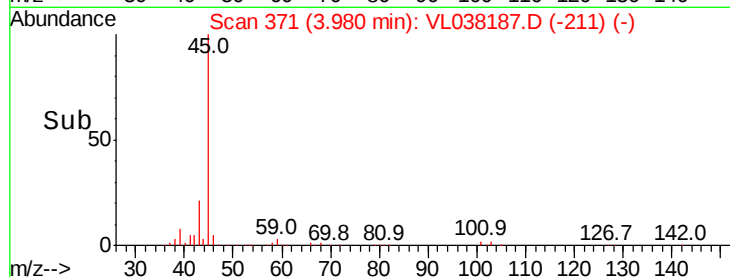
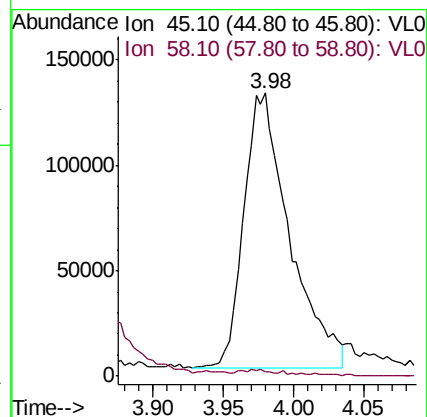
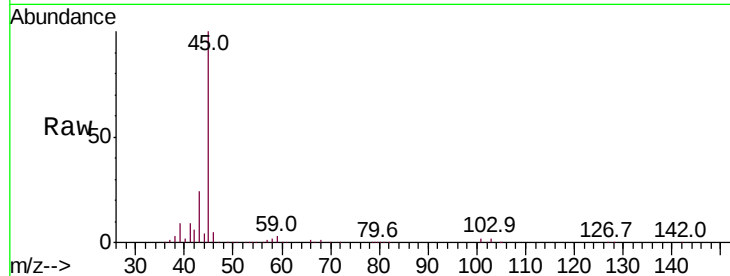
Acq: 16 Dec 2021 13:24

Tot Ion: 45 Resp: 295810

Ion Ratio Lower Upper

45 100

58 2.3 1.4 2.0#



#20

Methylene Chloride

Concen: 37.093 ppbv

RT: 4.35 min Scan# 485

Delta R.T. 0.00 min

Lab File: VL038187.D

Acq: 16 Dec 2021 13:24

Tgt Ion: 84 Resp: 1844385

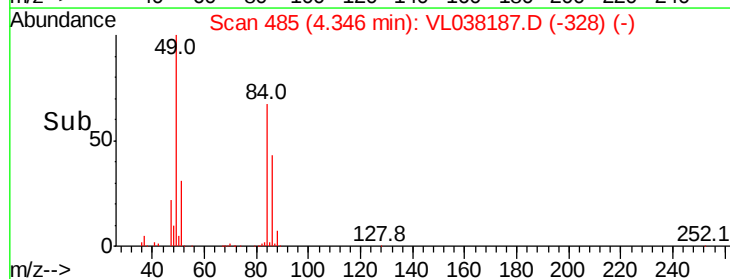
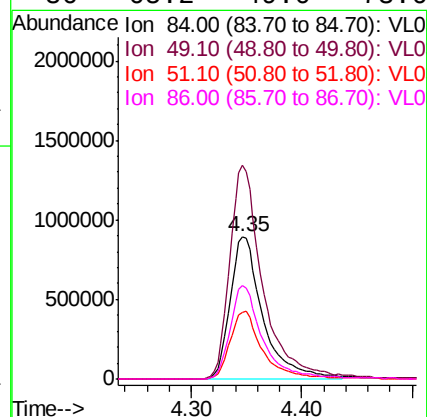
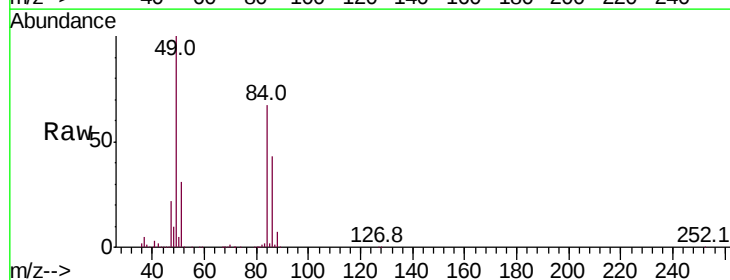
Ion Ratio Lower Upper

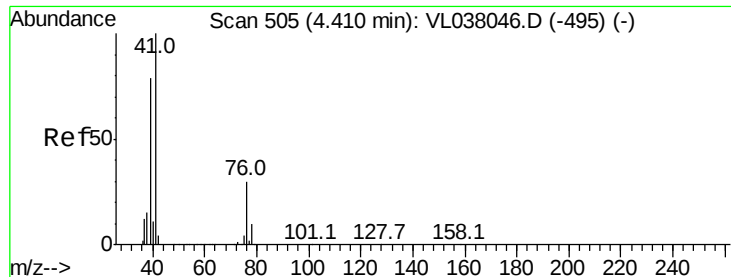
84 100

49 150.0 118.2 177.2

51 46.6 36.8 55.2

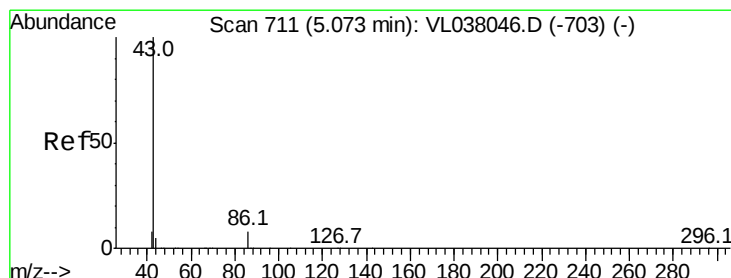
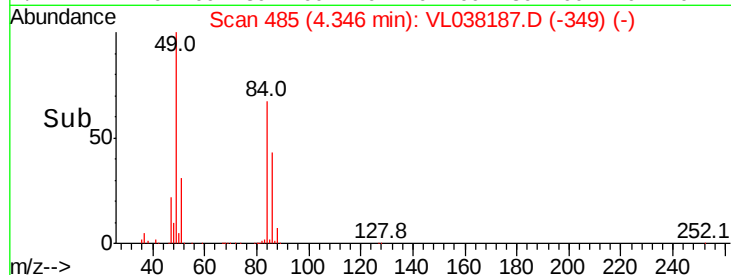
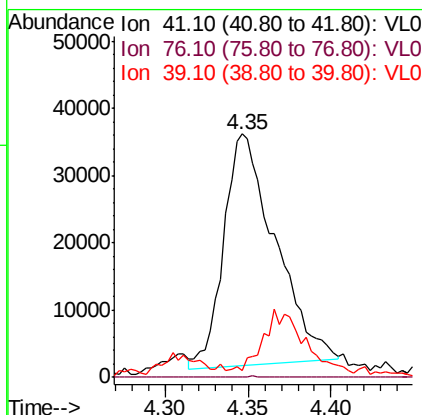
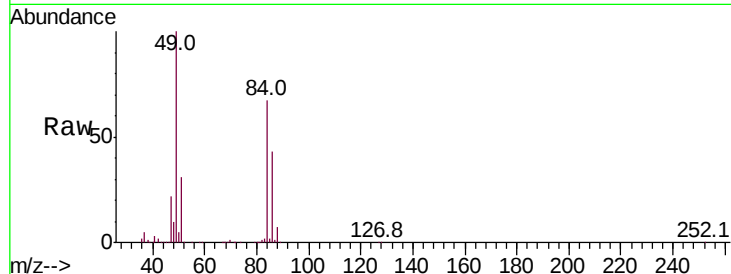
86 65.2 49.0 73.6





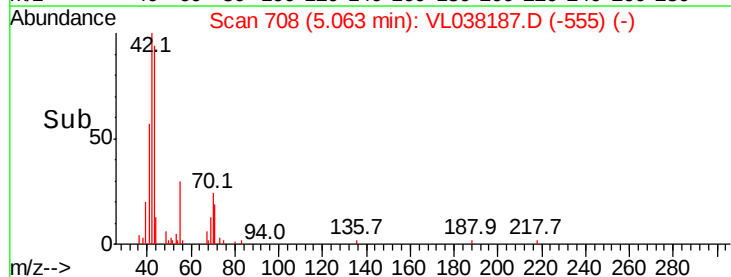
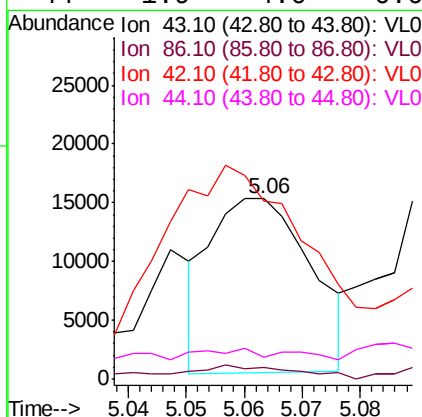
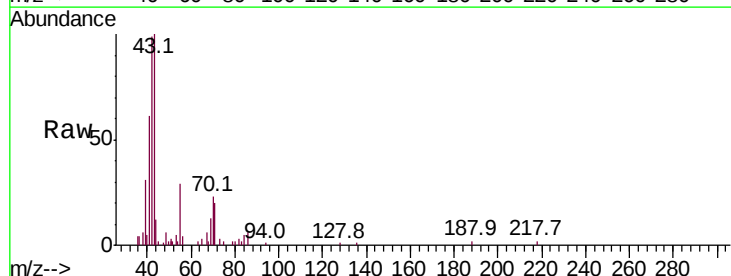
#21
 Allvl Chloride
 Concen: 0.907 ppbv
 RT: 4.35
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 16 Dec 2021 13:24

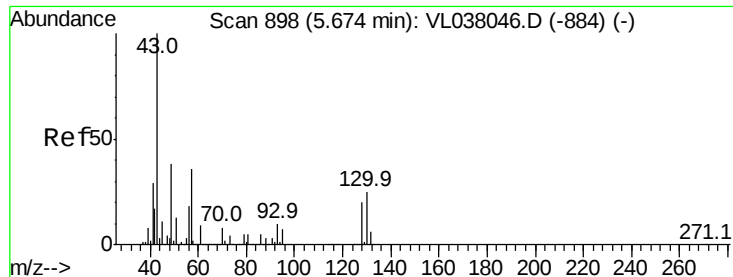
Tot Ion: 41 Resp: 74568
 Ion Ratio Lower Upper
 41 100
 76 0.1 24.6 36.8#
 39 26.1 63.4 95.0#



#23
 Vinyl Acetate
 Concen: 0.138 ppbv
 RT: 5.06 min Scan# 708
 Delta R.T. -0.01 min
 Lab File: VL038187.D
 Acq: 16 Dec 2021 13:24

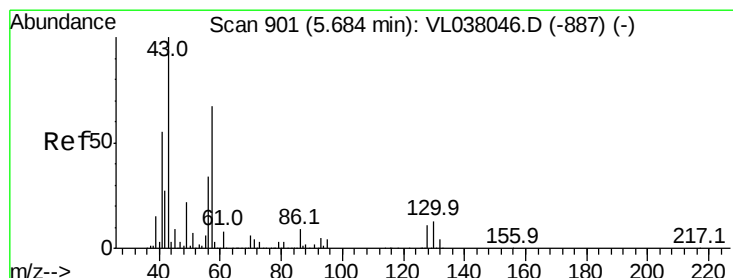
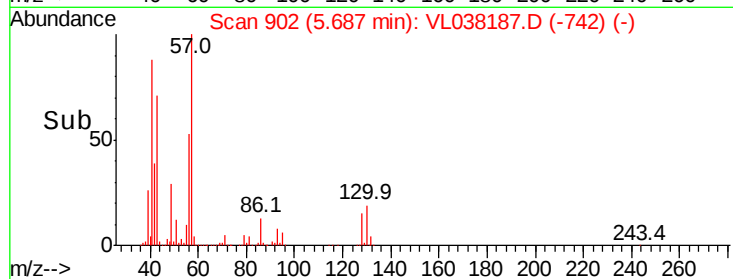
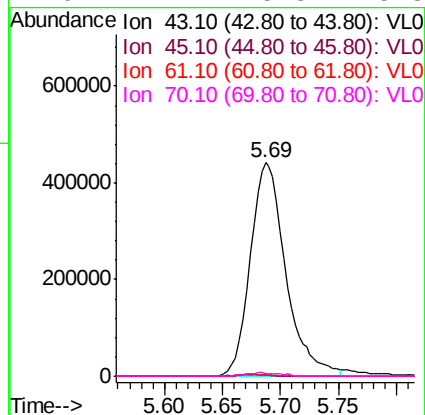
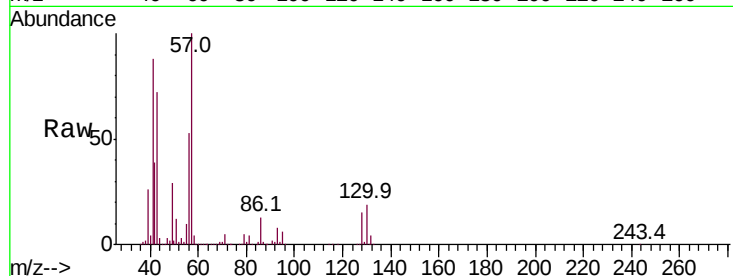
Tgt Ion: 43 Resp: 17717
 Ion Ratio Lower Upper
 43 100
 86 4.2 5.3 7.9#
 42 71.8 7.0 10.6#
 44 1.9 4.0 6.0#





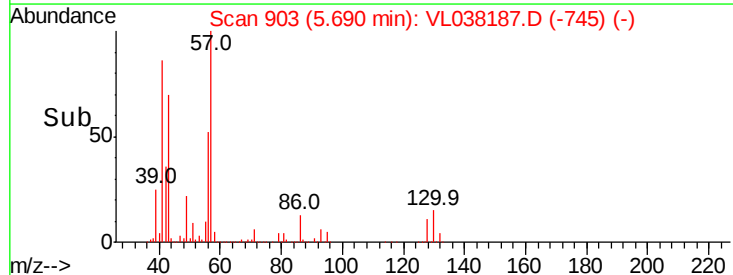
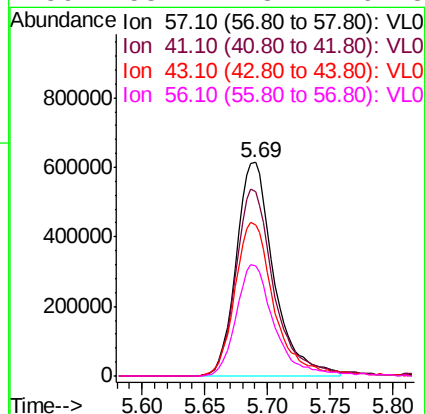
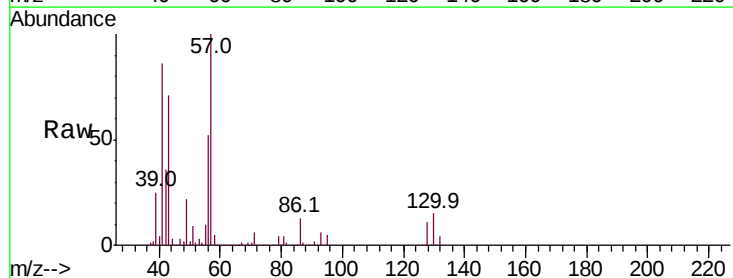
#25
Ethyl Acetate
Concen: 3.201 ppbv
RT: 5.69 min
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 16 Dec 2021 13:24

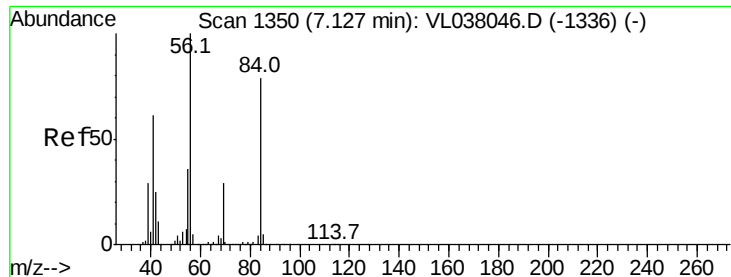
Tot Ion:	43	Resp:	944348
Ion	Ratio	Lower	Upper
43	100		
45	1.0	7.9	11.9#
61	0.8	7.8	11.6#
70	1.7	5.8	8.8#



#26
Hexane
Concen: 8.986 ppbv
RT: 5.69 min Scan# 903
Delta R.T. 0.01 min
Lab File: VL038187.D
Acq: 16 Dec 2021 13:24

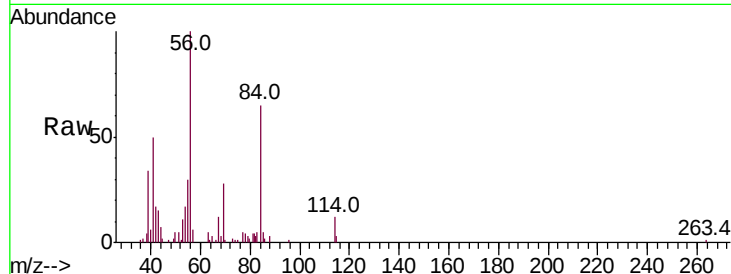
Tgt Ion:	57	Resp:	1277872
Ion	Ratio	Lower	Upper
57	100		
41	89.9	71.4	107.2
43	75.8	174.6	261.8#
56	53.7	43.2	64.8



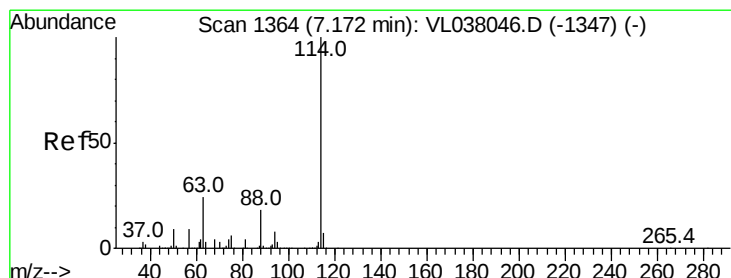
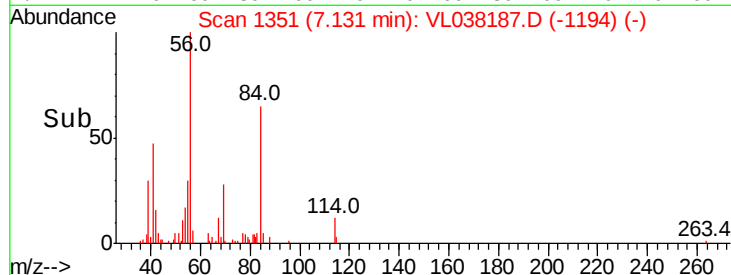
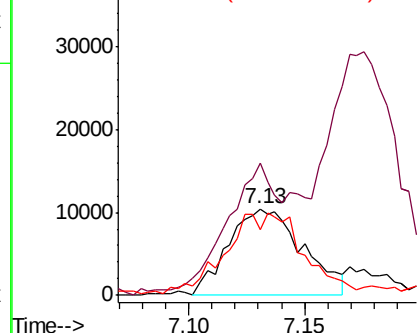


#30
Cvclohexane
Concen: 0.181 ppbv
RT: 7.13
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 16 Dec 2021 13:24

Tot Ion	Ratio	Lower	Upper
84	100		
56	0.0	108.1	162.1#
41	102.0	64.4	96.6#

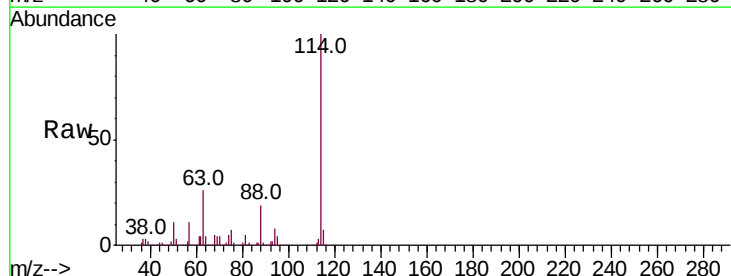


Abundance Ion 84.20 (83.90 to 84.90): VL0
Ion 56.10 (55.80 to 56.80): VL0
Ion 41.10 (40.80 to 41.80): VL0

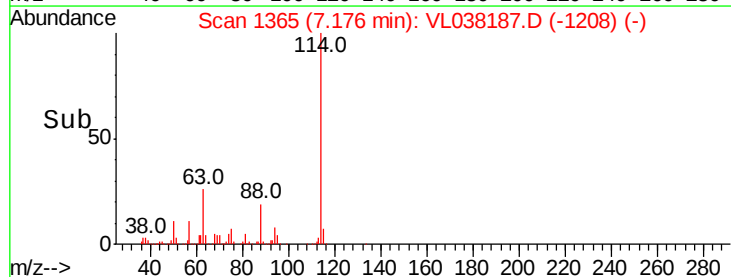
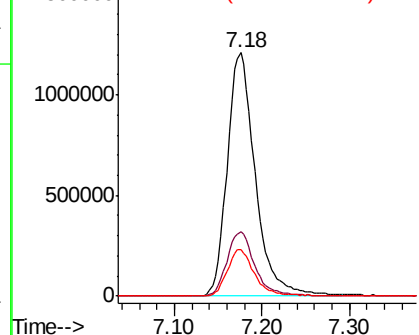


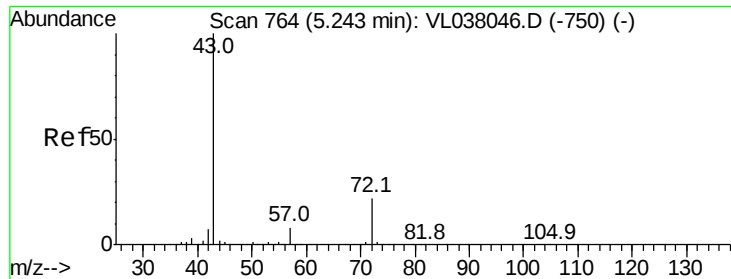
#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.18 min Scan# 1365
Delta R.T. 0.00 min
Lab File: VL038187.D
Acq: 16 Dec 2021 13:24

Tgt Ion	Ratio	Lower	Upper
114	100		
63	26.4	19.7	29.5
88	18.8	14.4	21.6



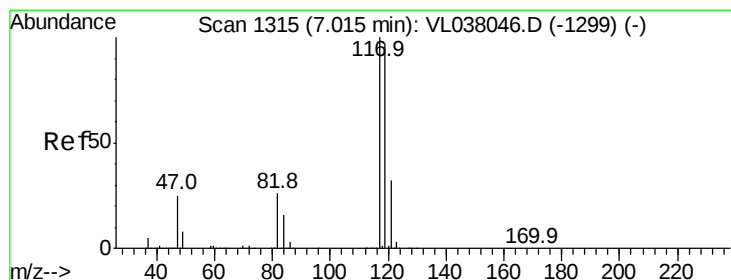
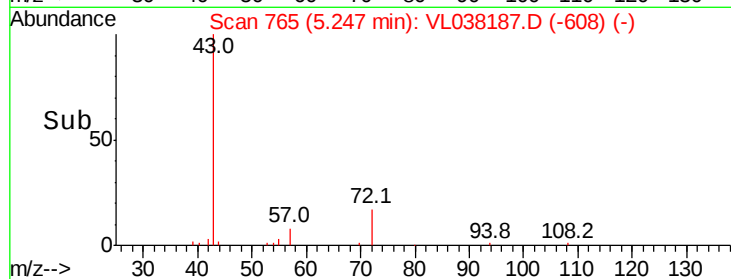
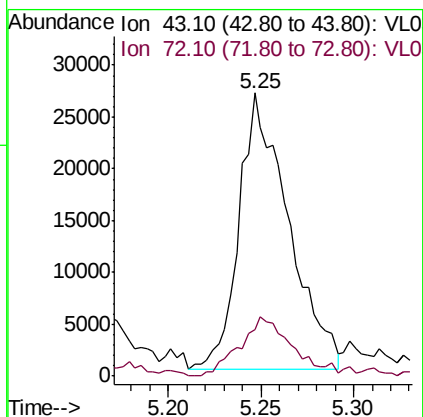
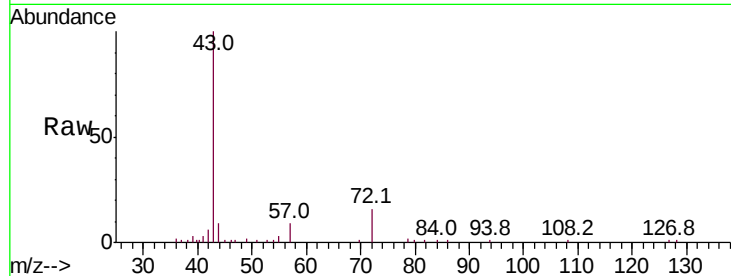
Abundance Ion 114.10 (113.80 to 114.80): V
Ion 63.10 (62.80 to 63.80): VL0
Ion 88.10 (87.80 to 88.80): VL0





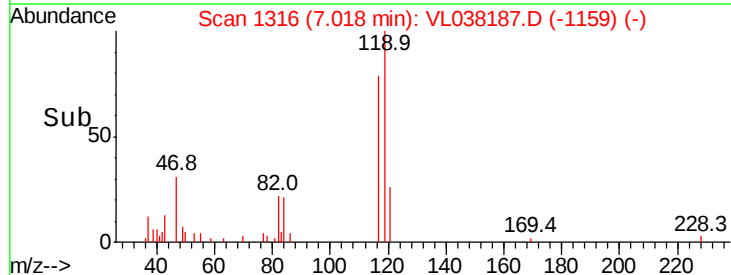
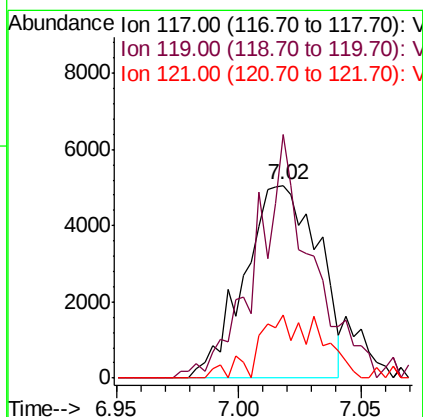
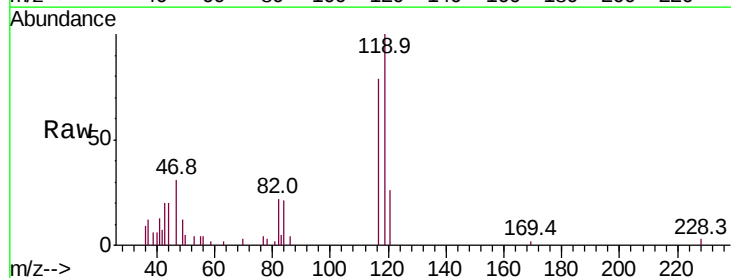
#34
2-Butanone
Concen: 0.452 ppbv
RT: 5.25
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 16 Dec 2021 13:24

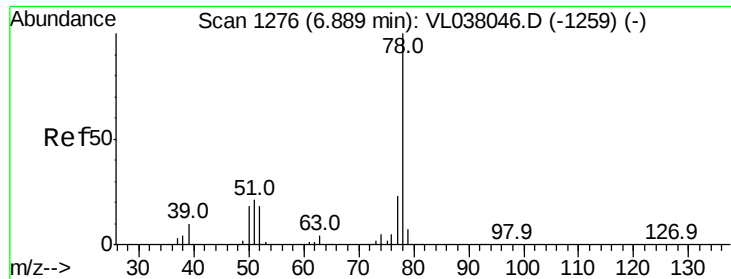
Tot Ion: 43 Resp: 49111
Ion Ratio Lower Upper
43 100
72 25.2 18.8 28.2



#35
Carbon Tetrachloride
Concen: 0.056 ppbv
RT: 7.02 min Scan# 1316
Delta R.T. 0.00 min
Lab File: VL038187.D
Acq: 16 Dec 2021 13:24

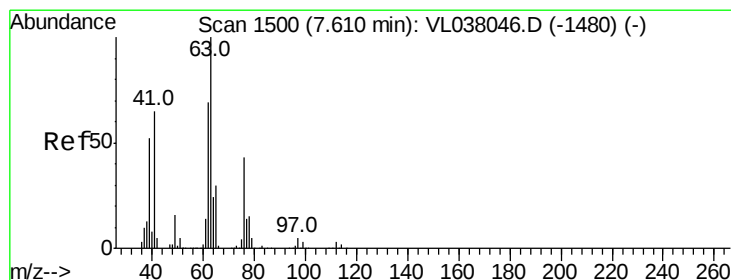
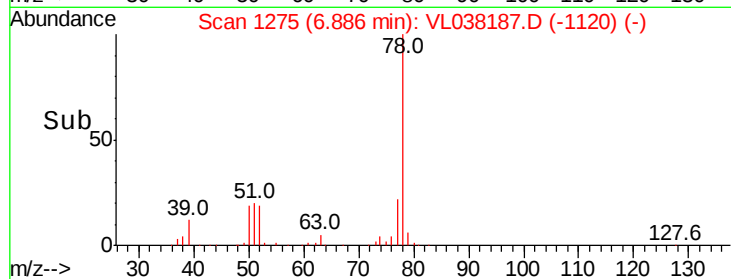
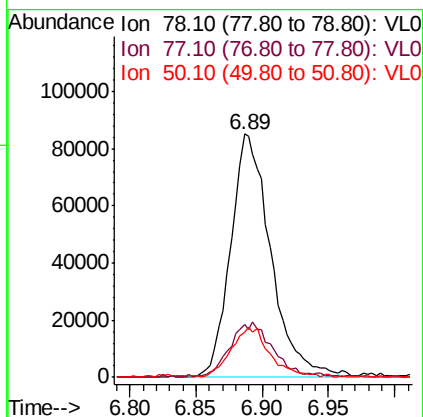
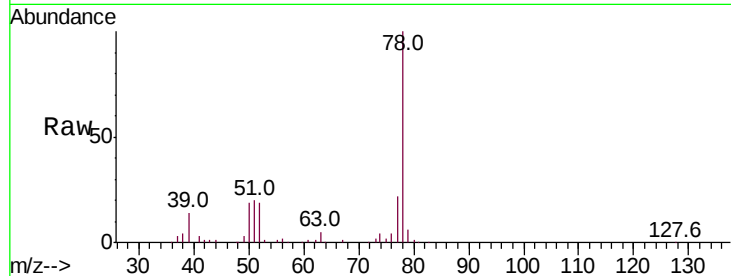
Tgt Ion: 117 Resp: 10552
Ion Ratio Lower Upper
117 100
119 123.0 77.7 116.5#
121 32.5 25.6 38.4





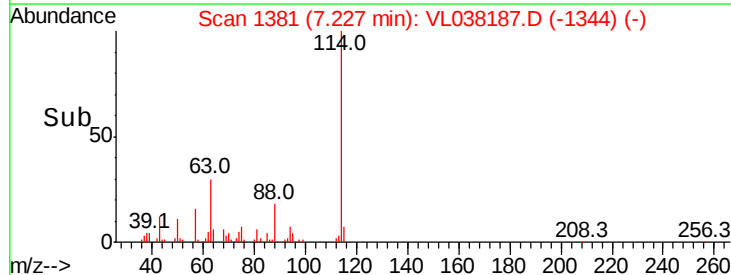
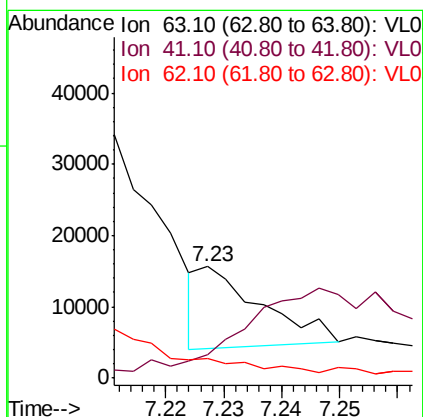
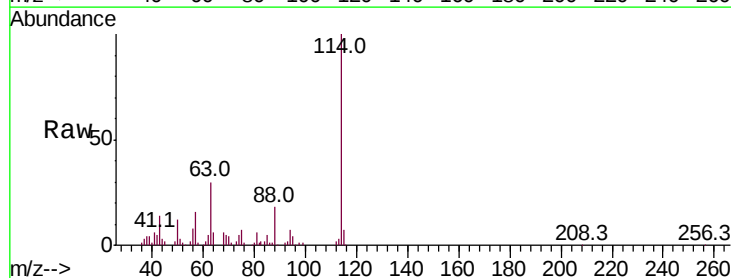
#36
Benzene
Concen: 0.665 ppbv
RT: 6.89
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 16 Dec 2021 13:24

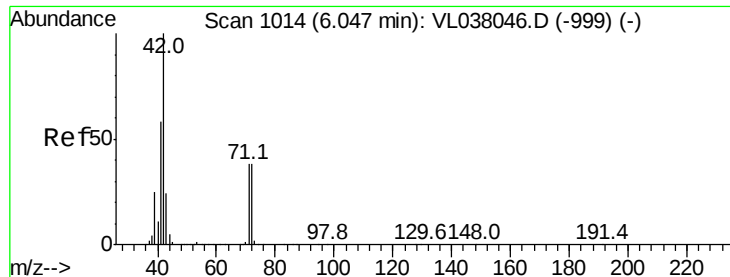
Tot Ion: 78 Resp: 178931
Ion Ratio Lower Upper
78 100
77 20.9 18.2 27.4
50 18.7 14.7 22.1



#39
1,2-Dichloropropane
Concen: 0.081 ppbv
RT: 7.23 min Scan# 1381
Delta R.T. -0.38 min
Lab File: VL038187.D
Acq: 16 Dec 2021 13:24

Tgt Ion: 63 Resp: 8333
Ion Ratio Lower Upper
63 100
41 7.6 52.3 78.5#
62 11.4 55.1 82.7#





#41

Tetrahydrofuran

Concen: 0.697 ppbv

RT: 6.32 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 16 Dec 2021 13:24

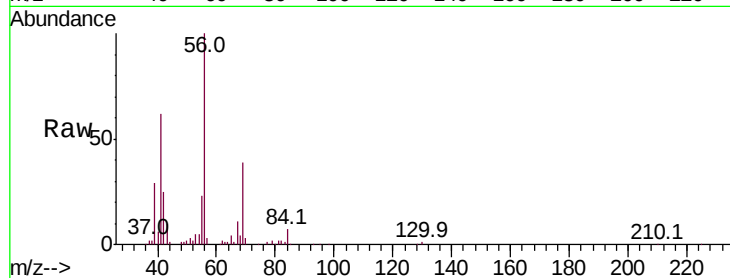
Tot Ion: 42 Resp: 47056

Ion Ratio Lower Upper

42 100

72 0.0 31.7 47.5#

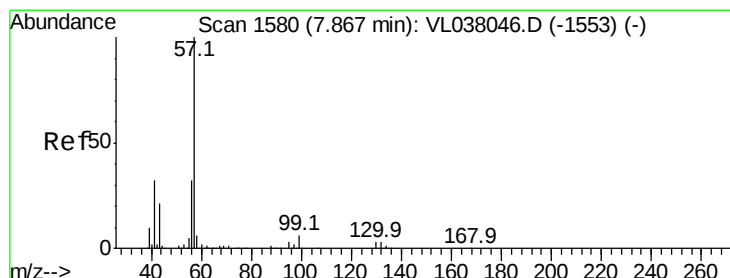
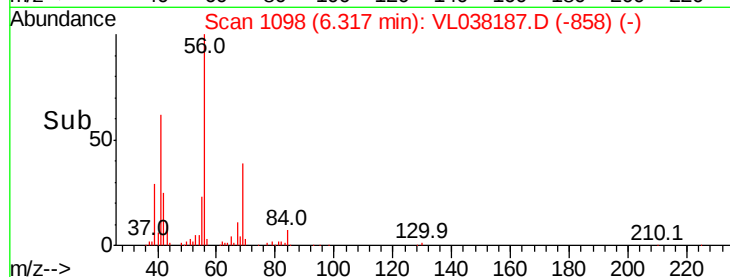
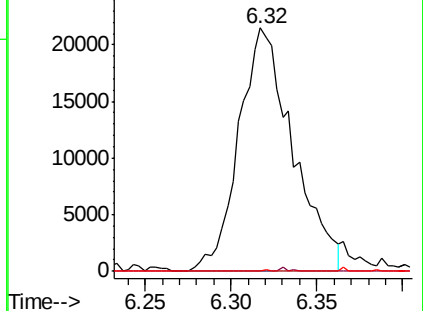
71 0.0 30.6 46.0#



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: 0.333 ppbv

RT: 7.87 min Scan# 1582

Delta R.T. 0.01 min

Lab File: VL038187.D

Acq: 16 Dec 2021 13:24

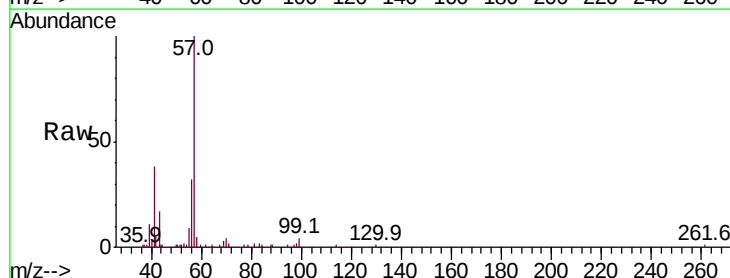
Tgt Ion: 57 Resp: 149898

Ion Ratio Lower Upper

57 100

41 47.3 25.8 38.6#

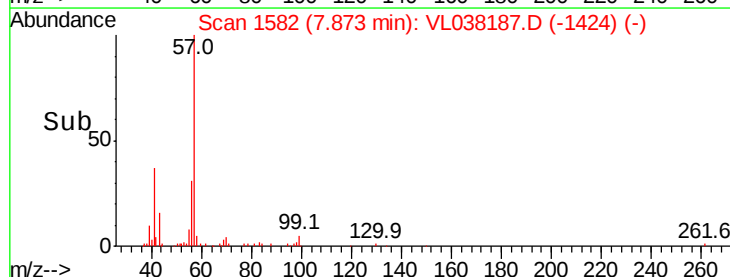
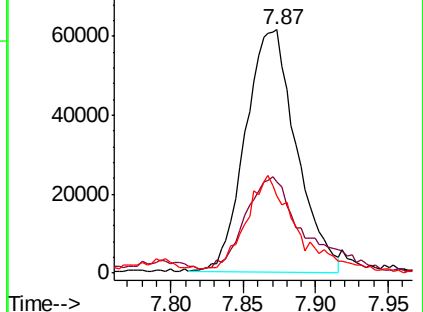
56 41.1 25.6 38.4#

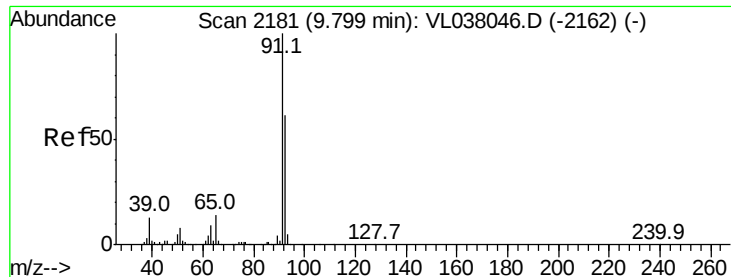


Abundance Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 56.10 (55.80 to 56.80): VL0





#53

Toluene

Concen: 0.692 ppbv

RT: 9.80 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

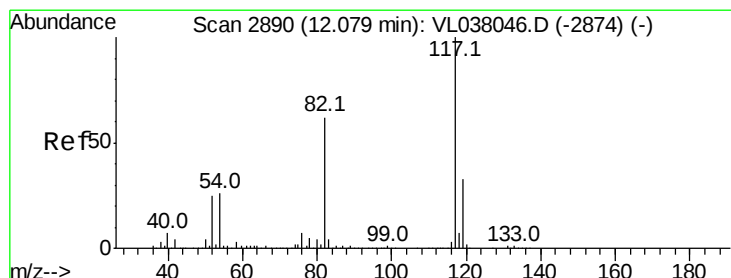
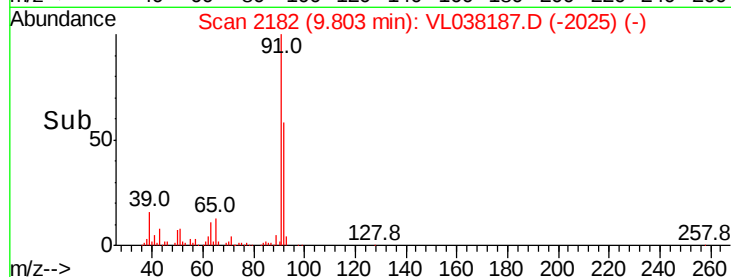
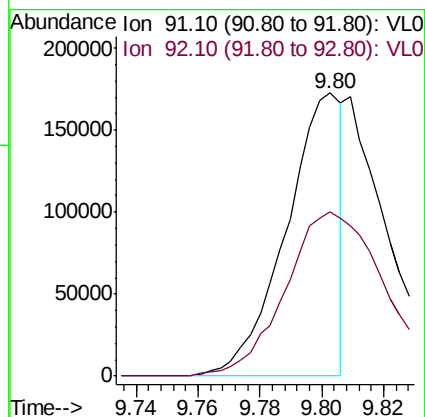
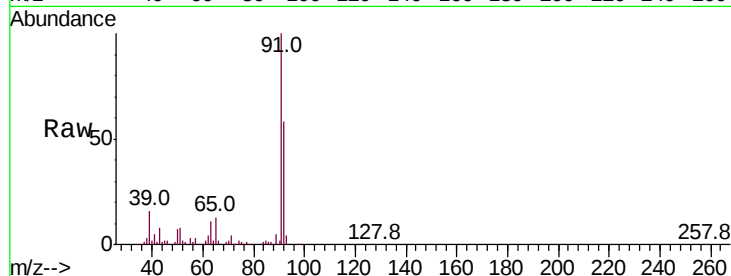
Acq: 16 Dec 2021 13:24

Tot Ion: 91 Resp: 214208

Ion Ratio Lower Upper

91 100

92 108.6 49.7 74.5#



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.08 min Scan# 2891

Delta R.T. 0.00 min

Lab File: VL038187.D

Acq: 16 Dec 2021 13:24

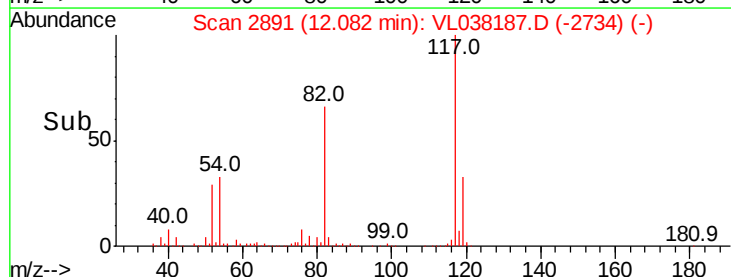
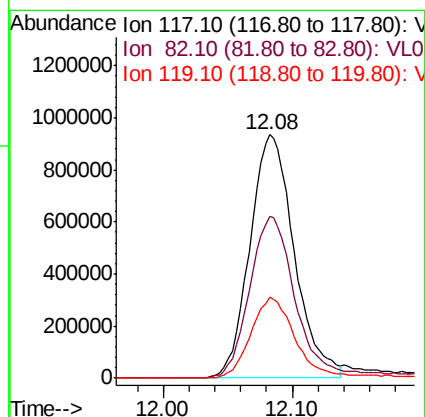
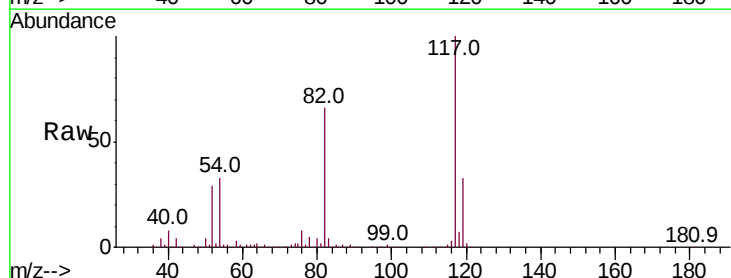
Tgt Ion: 117 Resp: 2238545

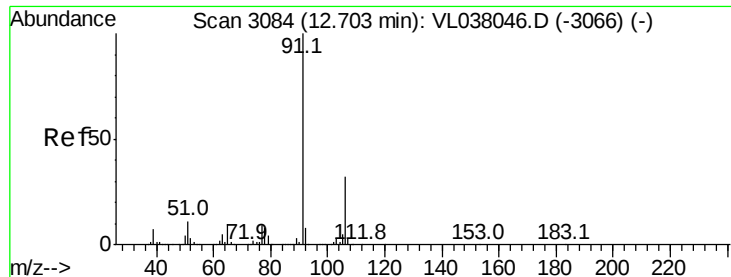
Ion Ratio Lower Upper

117 100

82 72.3 52.8 79.2

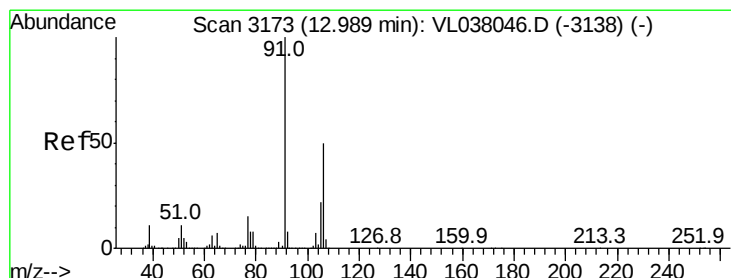
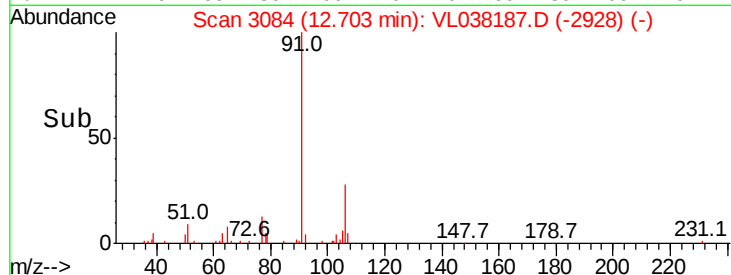
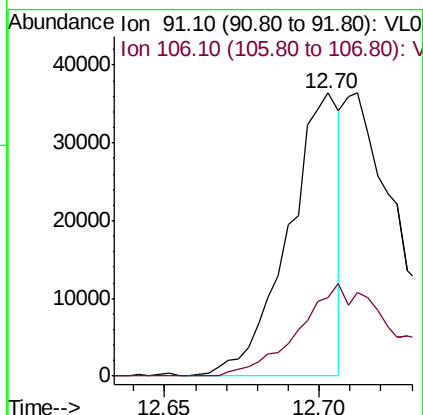
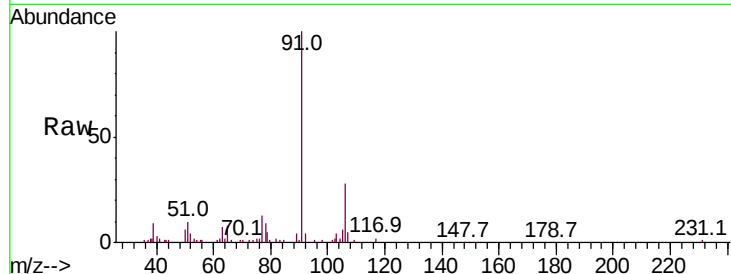
119 35.1 26.8 40.2





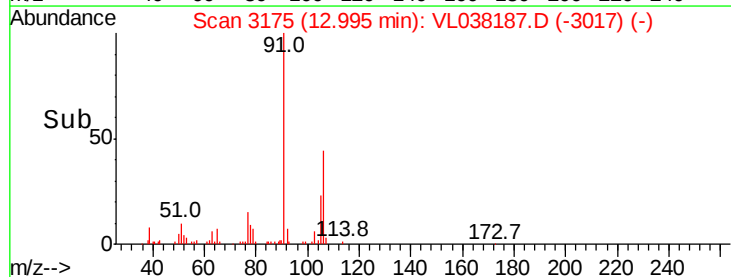
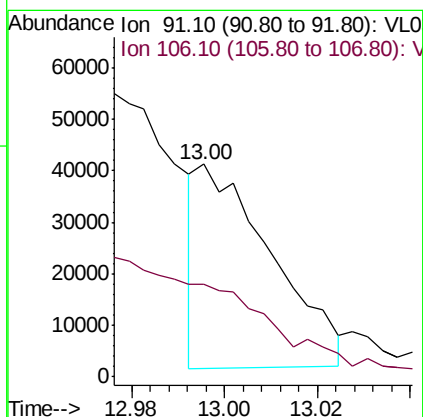
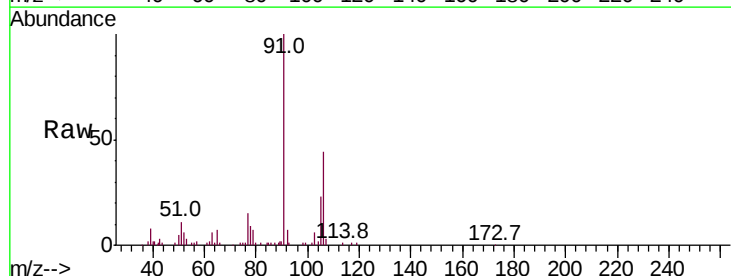
#58
Ethyl Benzene
Concen: 0.113 ppbv
RT: 12.70 min
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 16 Dec 2021 13:24

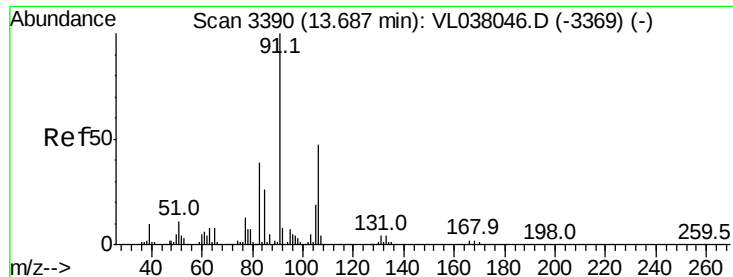
Tot Ion: 91 Resp: 41889
Ion Ratio Lower Upper
91 100
106 27.8 25.8 38.6



#59
m/p-Xylene
Concen: 0.141 ppbv
RT: 13.00 min Scan# 3175
Delta R.T. 0.01 min
Lab File: VL038187.D
Acq: 16 Dec 2021 13:24

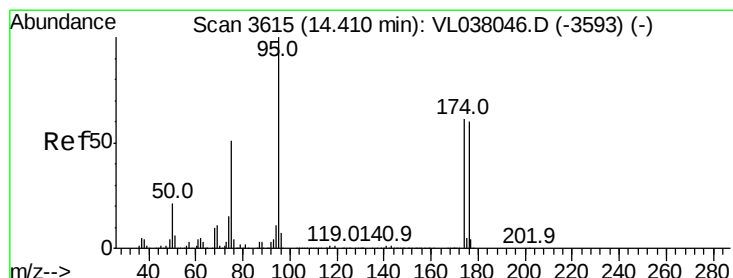
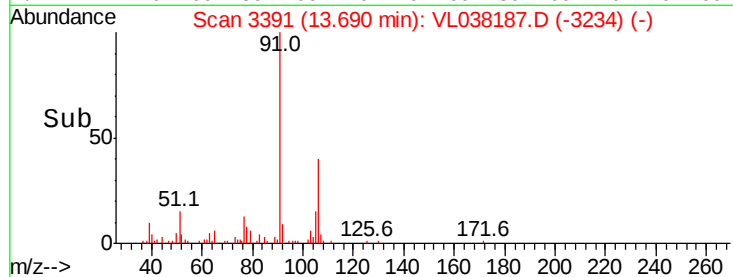
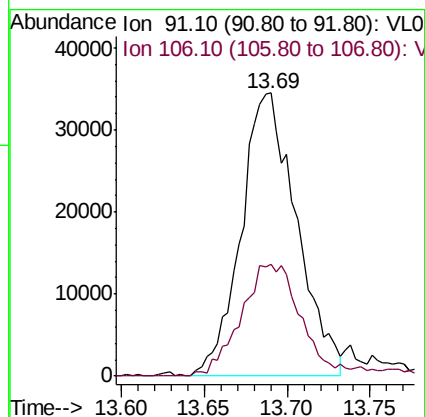
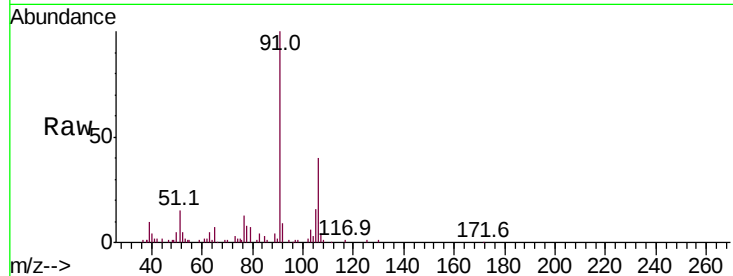
Tgt Ion: 91 Resp: 43896
Ion Ratio Lower Upper
91 100
106 0.0 38.1 57.1#





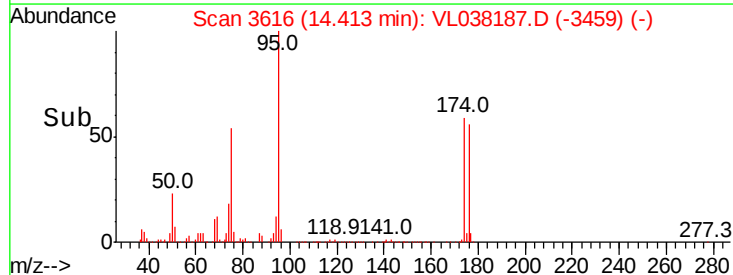
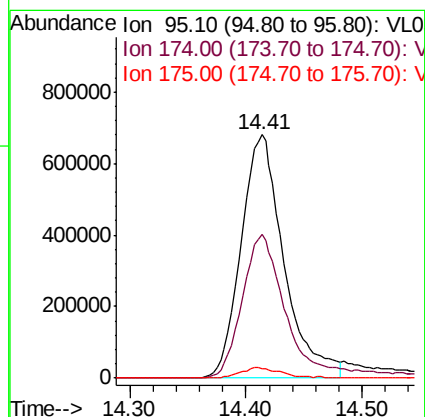
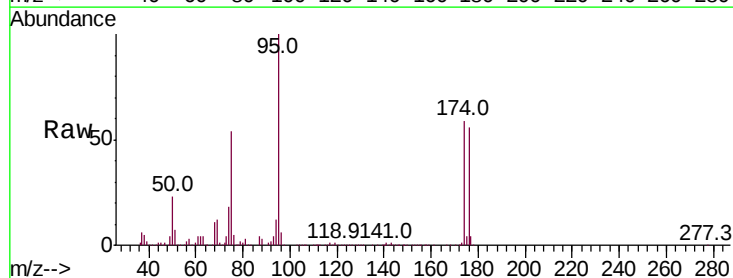
#60
o-Xylene
Concen: 0.278 ppbv
RT: 13.69
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 16 Dec 2021 13:24

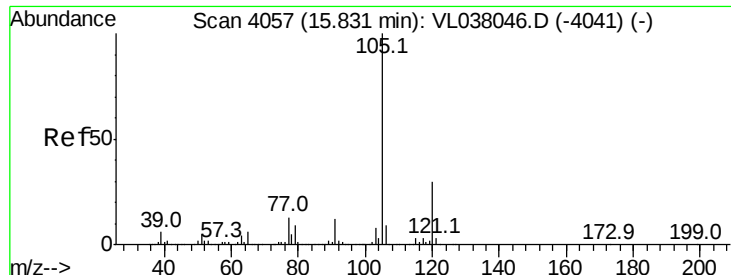
Tot Ion: 91 Resp: 80392
Ion Ratio Lower Upper
91 100
106 44.9 24.2 72.6



#68
1-Bromo-4-Fluorobenzene
Concen: 10.807 ppbv
RT: 14.41 min Scan# 3616
Delta R.T. 0.00 min
Lab File: VL038187.D
Acq: 16 Dec 2021 13:24

Tgt Ion: 95 Resp: 1745074
Ion Ratio Lower Upper
95 100
174 64.2 53.1 79.7
175 4.7 4.0 6.0





#72

4-Ethyltoluene

Concen: 0.085 ppbv

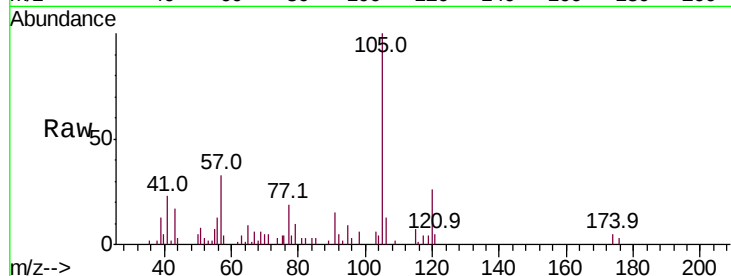
RT: 15.84

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 16 Dec 2021 13:24

Tot Ion:	105	Resp:	28600
Ion	Ratio	Lower	Upper
105	100		
120	29.0	25.1	37.7
91	22.2	9.7	14.5#
77	21.1	10.6	16.0#



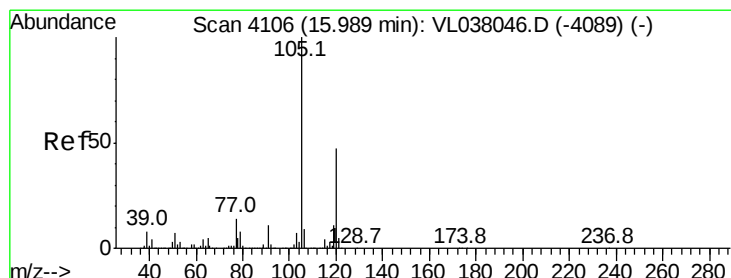
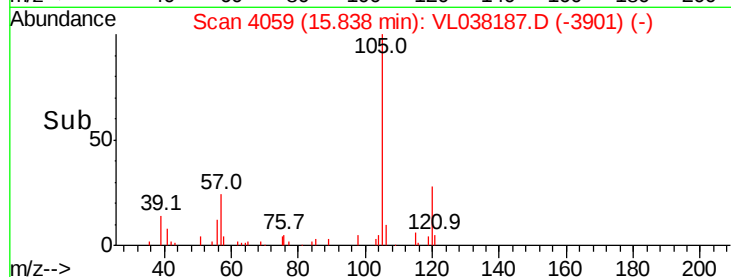
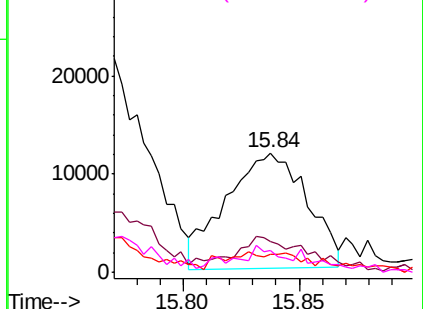
Abundance

Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 77.10 (76.80 to 77.80): VL0



#73

1,3,5-Trimethylbenzene

Concen: 0.057 ppbv

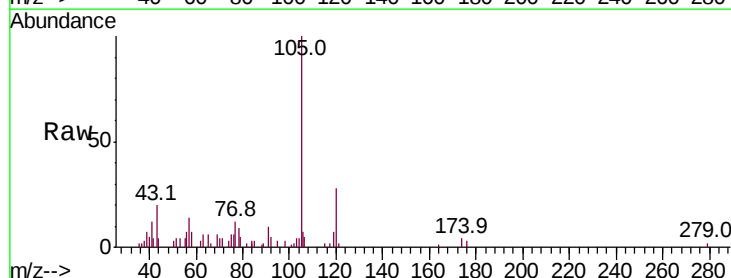
RT: 16.00 min Scan# 4108

Delta R.T. 0.01 min

Lab File: VL038187.D

Acq: 16 Dec 2021 13:24

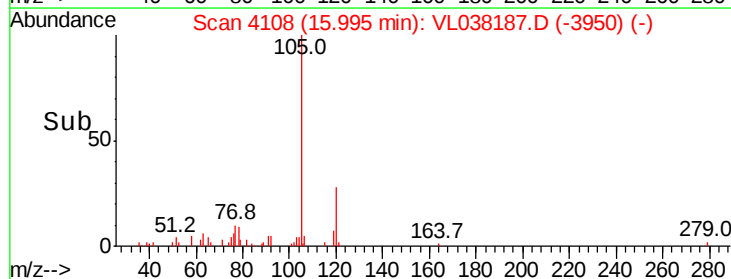
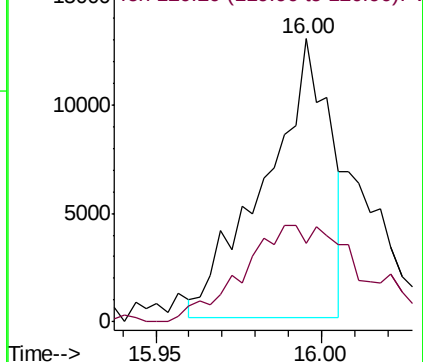
Tgt Ion:	105	Resp:	17414
Ion	Ratio	Lower	Upper
105	100		
120	22.3	37.8	56.6#

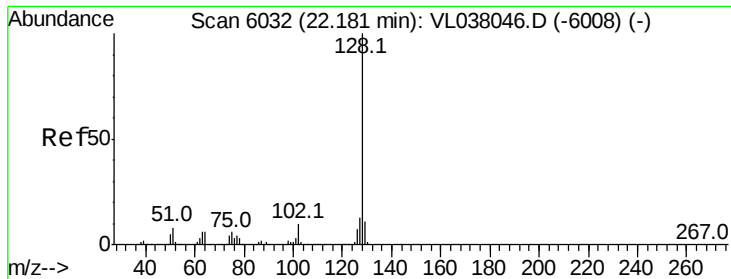


Abundance

Ion 105.10 (104.80 to 105.80): V

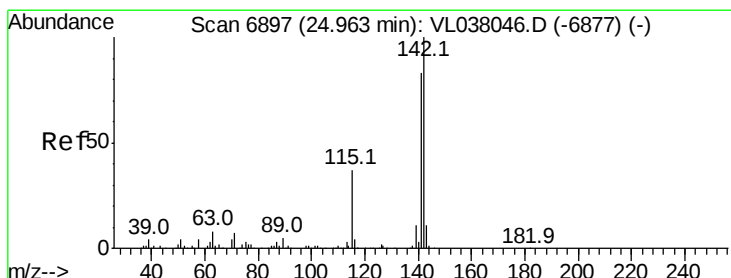
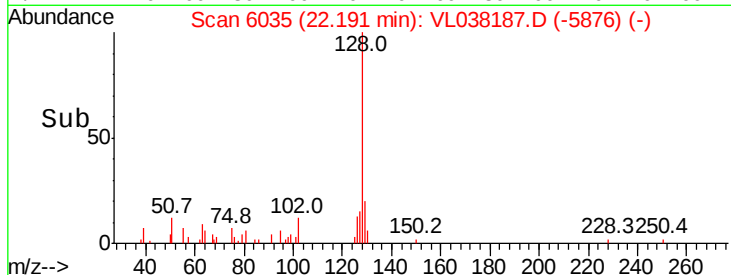
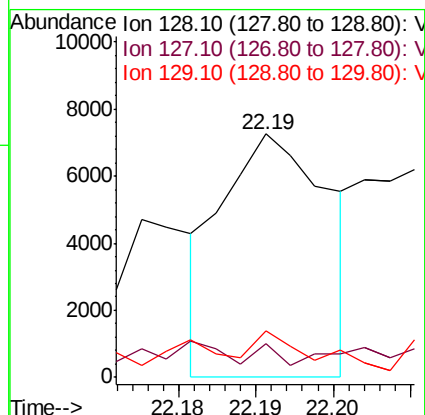
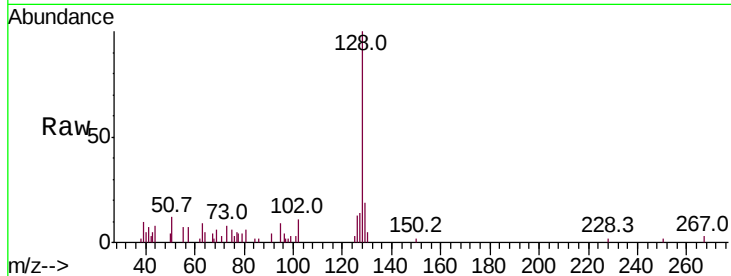
Ion 120.20 (119.90 to 120.90): V





#79
Naphthalene
Concen: 0.042 ppbv
RT: 22.19 min
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 16 Dec 2021 13:24

Tot Ion:128	Resp:	6960
Ion Ratio	Lower	Upper
128	100	
127	10.2	10.4 15.6#
129	19.6	8.9 13.3#



#80
Naphthalene, 2-methyl-
Concen: 0.043 ppbv
RT: 24.85 min Scan# 6863
Delta R.T.: -0.11 min
Lab File: VL038187.D
Acq: 16 Dec 2021 13:24

Tgt Ion:142	Resp:	1545
Ion Ratio	Lower	Upper
142	100	
141	77.2	67.3 100.9
115	32.2	28.9 43.3

