

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL021419\
 Data File : VL033217.D
 Acq On : 15 Feb 2019 3:31
 Operator : SY/AP
 Sample : K1483-10
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 ZONE-B

Quant Time: Feb 15 15:49:02 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL020519AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed Feb 06 09:13:11 2019
 QLast Update : Wed Feb 06 09:13:11 2019
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.77	49	915064	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.31	114	2041921	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.25	117	2034225	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.58	95	1617049	10.32	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	103.20%

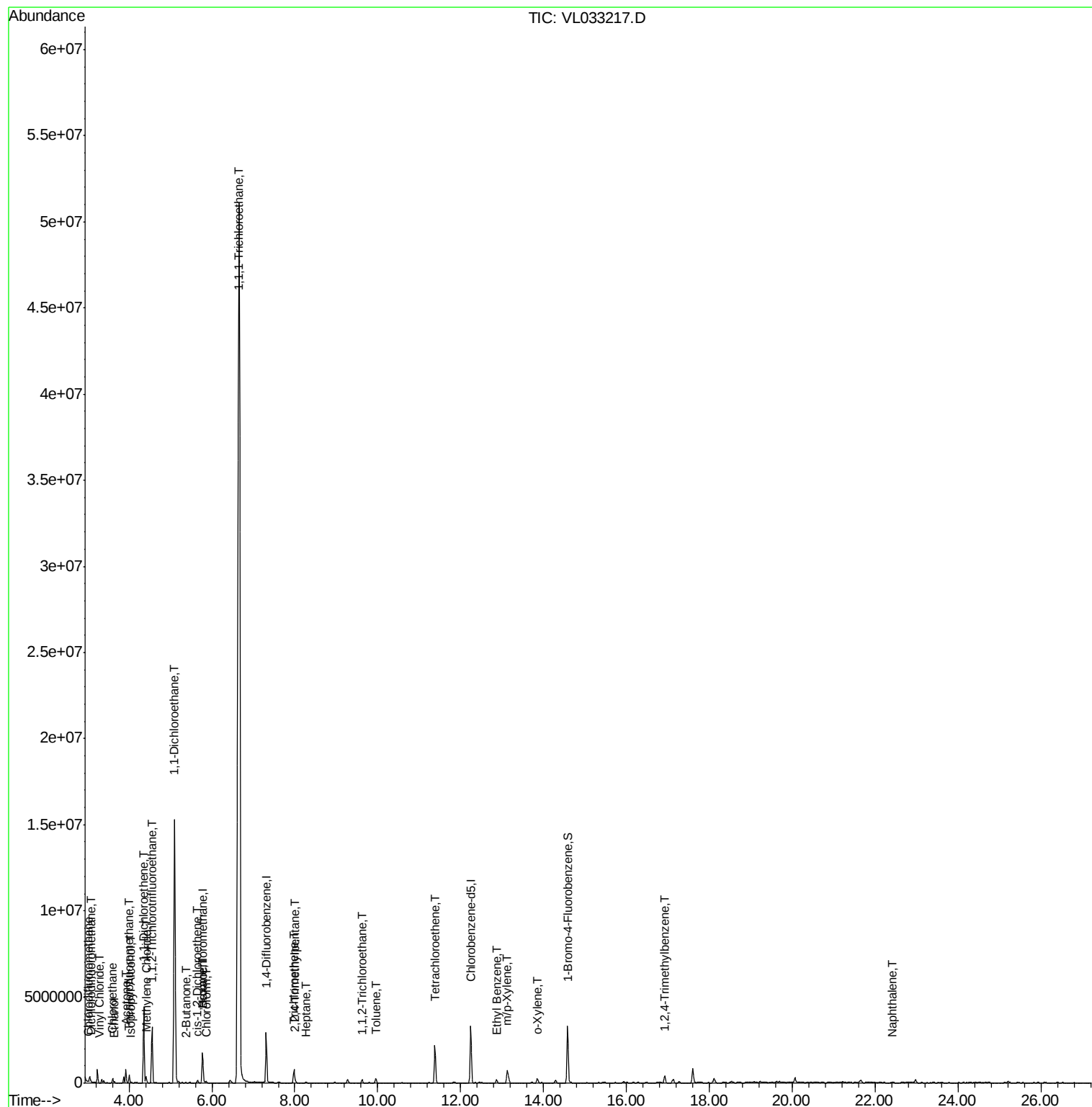
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.08	85	95227	0.544	ppbv	96
3) Chlorodifluoromethane	3.02	51	38140m	0.346	ppbv	
5) Vinyl Chloride	3.29	62	3372m	0.055	ppbv	
7) Chloroethane	3.60	64	148873	7.496	ppbv	99
10) Heptane	8.26	43	23654m	0.147	ppbv	
11) Trichlorofluoromethane	4.00	101	291518	2.058	ppbv	100
12) 1,1,2-Trichlorotrifluoroet	4.55	101	1176378	11.984	ppbv	100
13) Ethanol	3.66	45	33652	1.896	ppbv	95
15) Acetone	3.92	43	314007	3.046	ppbv #	84
18) 1,1-Dichloroethene	4.35	96	1323679	30.125	ppbv	97
19) Isopropyl Alcohol	4.04	45	56024m	0.801	ppbv	
20) Methylene Chloride	4.41	84	113349	2.764	ppbv	98
24) 1,1-Dichloroethane	5.10	63	15160814	119.961	ppbv #	94
26) Hexane	5.78	57	66682	0.613	ppbv #	41
29) Chloroform	5.86	83	73179	0.439	ppbv	90
31) cis-1,2-Dichloroethene	5.65	61	88666	0.814	ppbv	96
32) 1,1,1-Trichloroethane	6.64	97	39785274m	216.673	ppbv	
34) 2-Butanone	5.37	43	28960	0.224	ppbv	98
38) Trichloroethene	7.98	130	235598	2.658	ppbv	95
44) 2,2,4-Trimethylpentane	8.01	57	95126	0.271	ppbv #	87
47) 1,1,2-Trichloroethane	9.63	97	67620	0.797	ppbv	96
52) Tetrachloroethene	11.38	164	531852	6.689	ppbv	97
53) Toluene	9.96	91	164384	0.671	ppbv	99
58) Ethyl Benzene	12.87	91	170384	0.518	ppbv	99
59) m/p-Xylene	13.12	91	797109	2.901	ppbv #	100
60) o-Xylene	13.85	91	205038	0.767	ppbv	97
74) 1,2,4-Trimethylbenzene	16.93	105	112448	0.368	ppbv #	76
79) Naphthalene	22.41	128	37565m	0.114	ppbv	

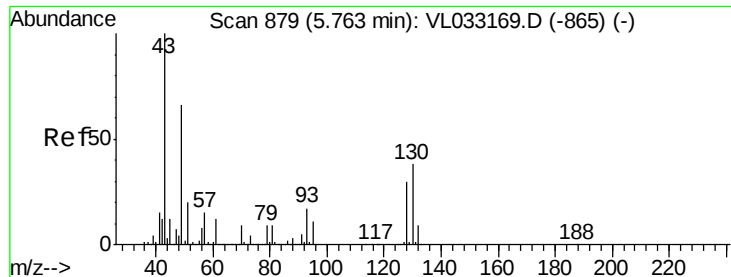
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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QLast Update : Wed Feb 06 09:13:11 2019
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.77 min Scan# 882

Delta R.T. 0.01 min

Lab File: VL033217.D

Acq: 15 Feb 2019 3:31

Instrument :

MSVOA_L

ClientSampleId :

ZONE-B

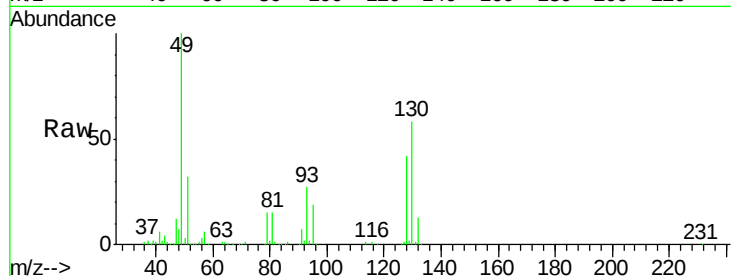
Tot Ion: 49 Resp: 915064

Ion Ratio Lower Upper

49 100

128 44.5 23.6 71.0

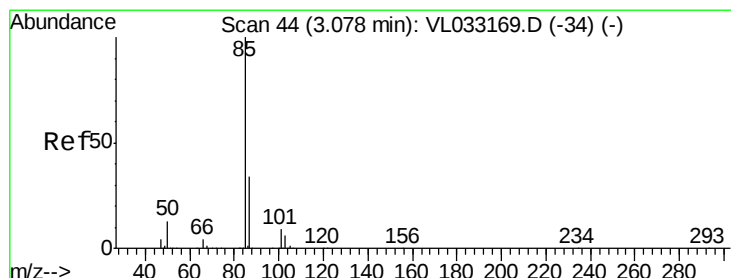
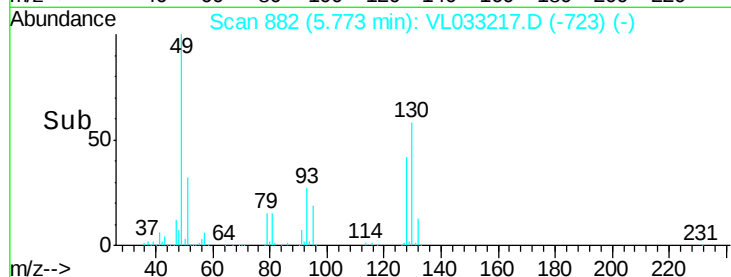
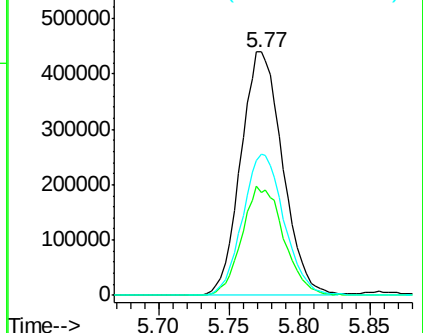
130 57.7 30.3 91.0



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: 0.544 ppbv

RT: 3.08 min Scan# 44

Delta R.T. 0.00 min

Lab File: VL033217.D

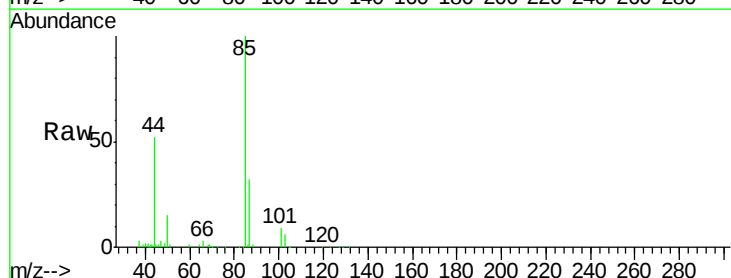
Acq: 15 Feb 2019 3:31

Tgt Ion: 85 Resp: 95227

Ion Ratio Lower Upper

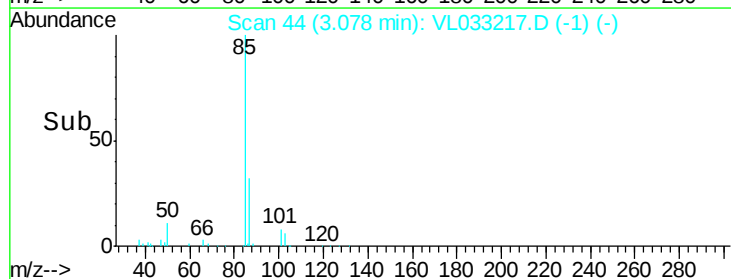
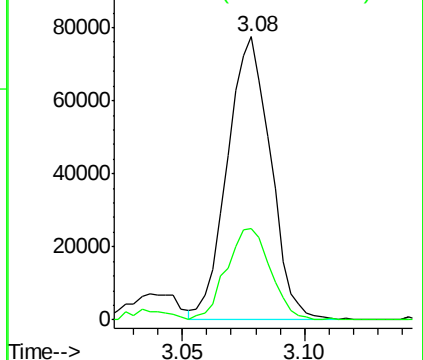
85 100

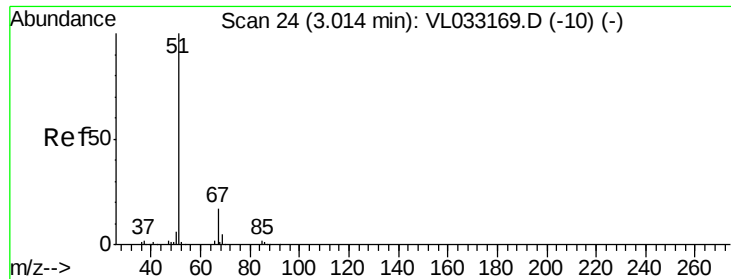
87 32.2 27.4 41.2



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.346 ppbv m

RT: 3.02 min Scan# 25

Delta R.T. 0.00 min

Lab File: VL033217.D

Acq: 15 Feb 2019 3:31

Instrument :

MSVOA_L

ClientSampleId :

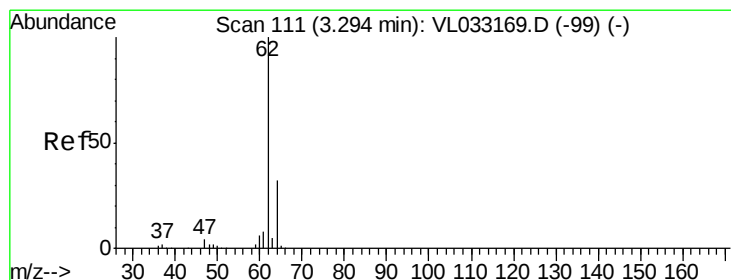
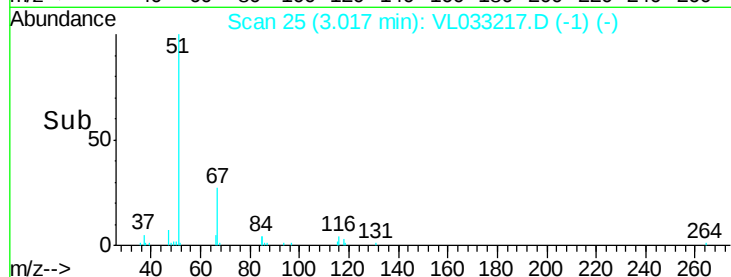
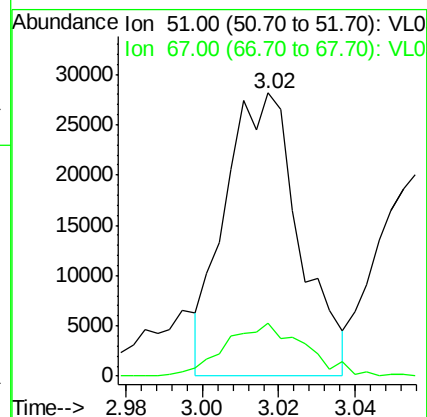
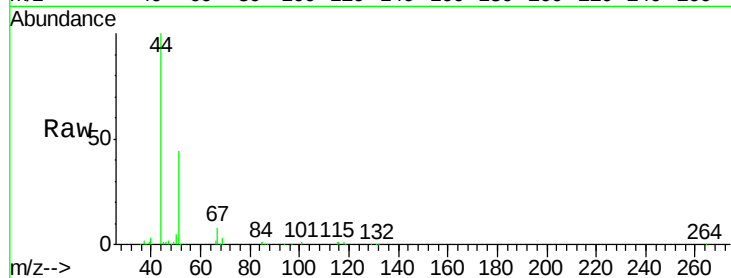
ZONE-B

Tot Ion: 51 Resp: 38140

Ion Ratio Lower Upper

51 100

67 19.9 14.0 21.0



#5

Vinyl Chloride

Concen: 0.055 ppbv m

RT: 3.29 min Scan# 111

Delta R.T. 0.00 min

Lab File: VL033217.D

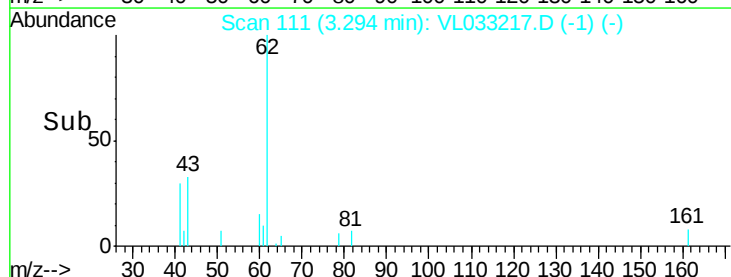
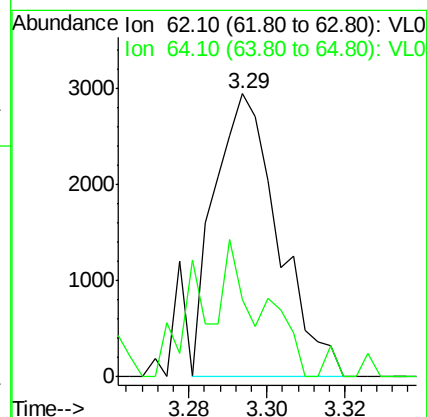
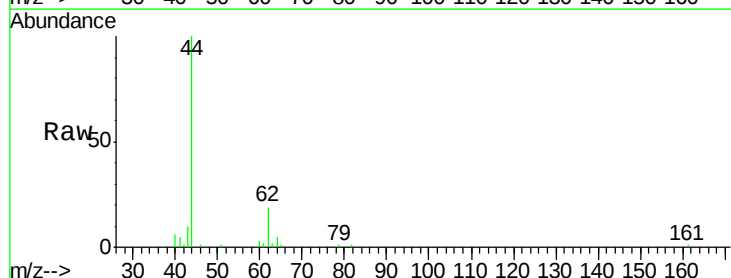
Acq: 15 Feb 2019 3:31

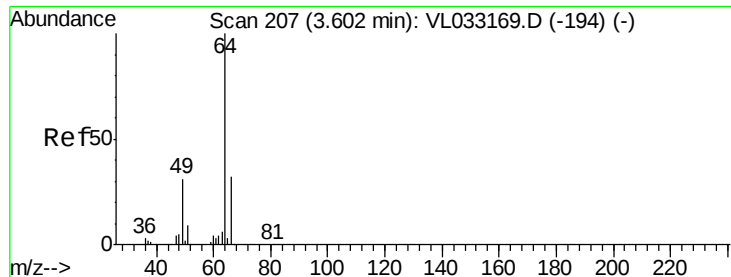
Tgt Ion: 62 Resp: 3372

Ion Ratio Lower Upper

62 100

64 27.3 25.6 38.4





#7

Chloroethane

Concen: 7.496 ppbv

RT: 3.60 min Scan# 207

Delta R.T. 0.00 min

Lab File: VL033217.D

Acq: 15 Feb 2019 3:31

Instrument :

MSVOA_L

ClientSampleId :

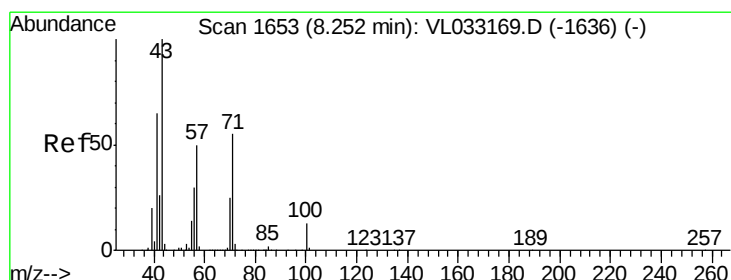
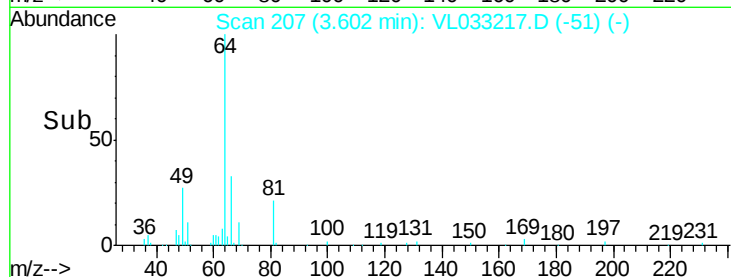
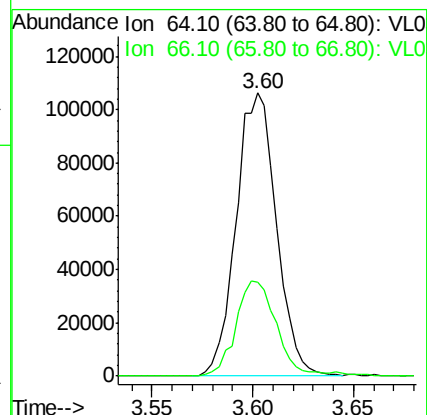
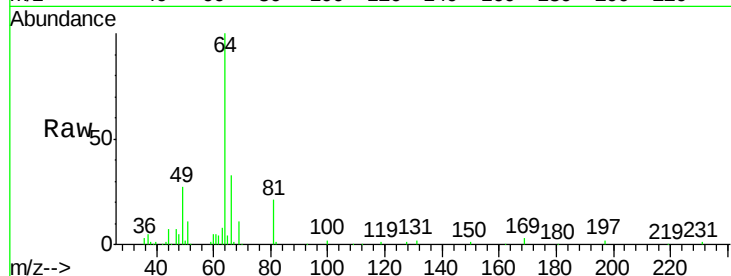
ZONE-B

Tot Ion: 64 Resp: 148873

Ion Ratio Lower Upper

64 100

66 33.1 26.0 39.0



#10

Heptane

Concen: 0.147 ppbv m

RT: 8.26 min Scan# 1657

Delta R.T. 0.01 min

Lab File: VL033217.D

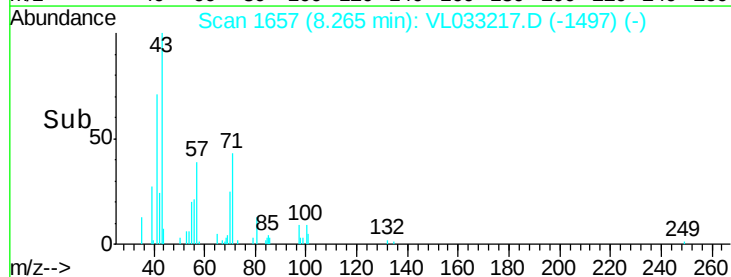
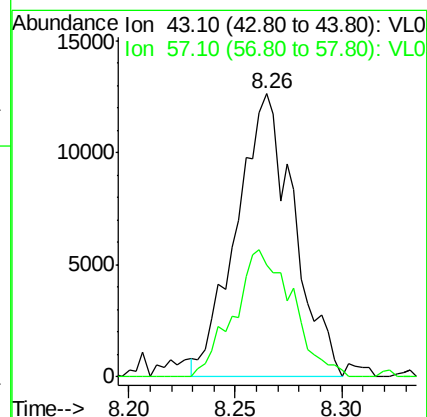
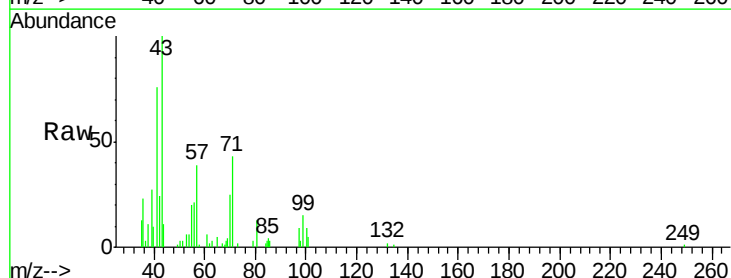
Acq: 15 Feb 2019 3:31

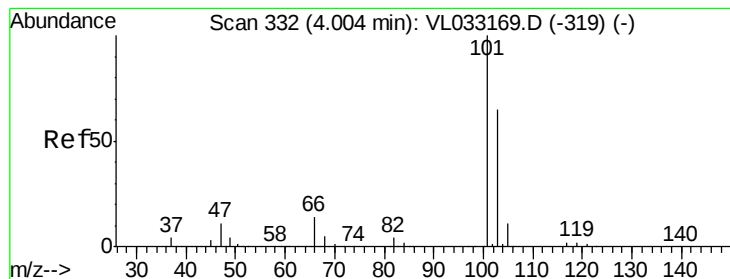
Tgt Ion: 43 Resp: 23654

Ion Ratio Lower Upper

43 100

57 45.5 39.5 59.3





#11

Trichlorofluoromethane

Concen: 2.058 ppbv

RT: 4.00 min Scan# 332

Delta R.T. 0.00 min

Lab File: VL033217.D

Acq: 15 Feb 2019 3:31

Instrument :

MSVOA_L

ClientSampleId :

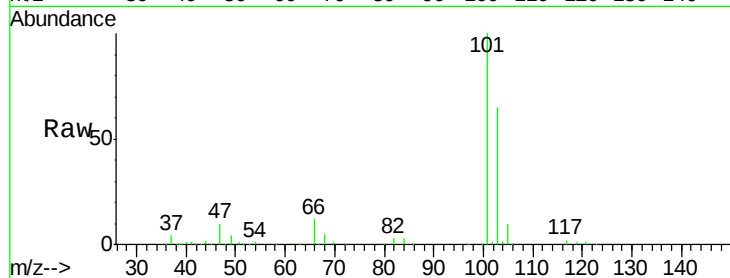
ZONE-B

Tot Ion:101 Resp: 291518

Ion Ratio Lower Upper

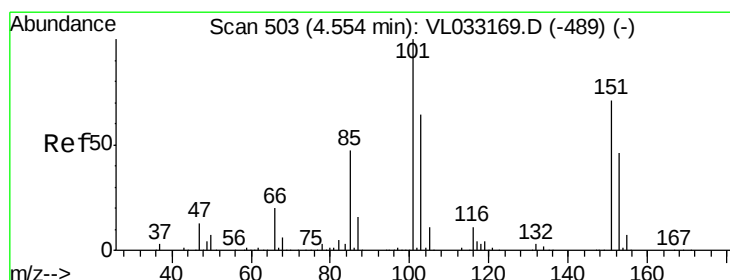
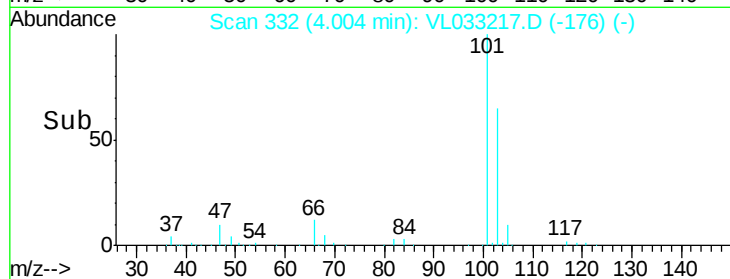
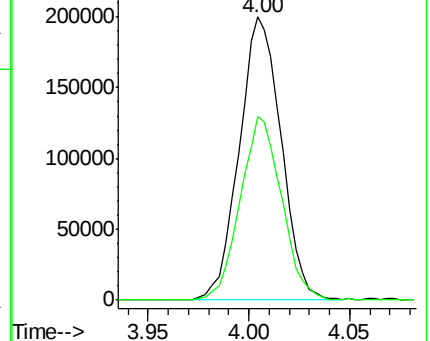
101 100

103 64.8 51.7 77.5



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V



#12

1,1,2-Trichlorotrifluoroethane

Concen: 11.984 ppbv

RT: 4.55 min Scan# 503

Delta R.T. 0.00 min

Lab File: VL033217.D

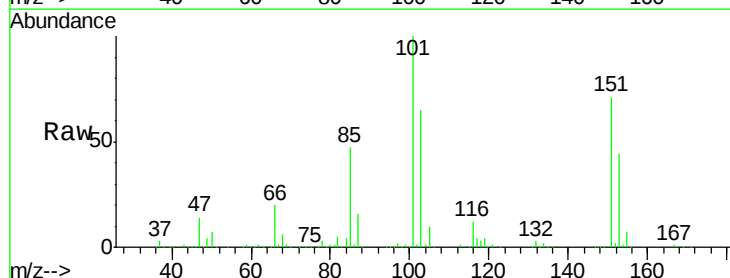
Acq: 15 Feb 2019 3:31

Tgt Ion:101 Resp: 1176378

Ion Ratio Lower Upper

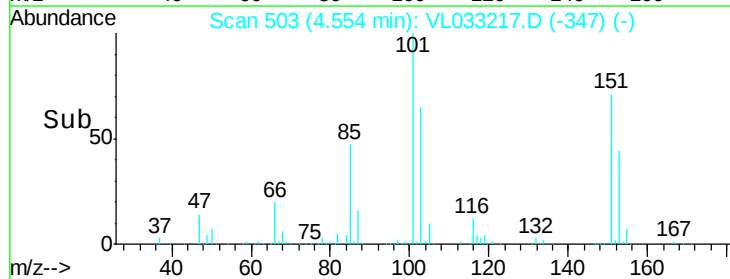
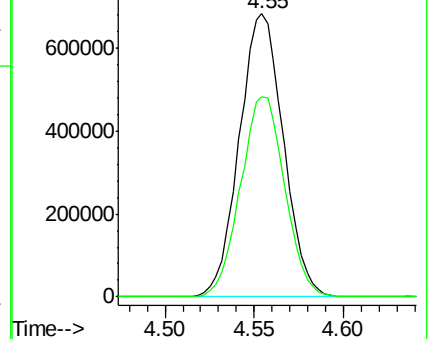
101 100

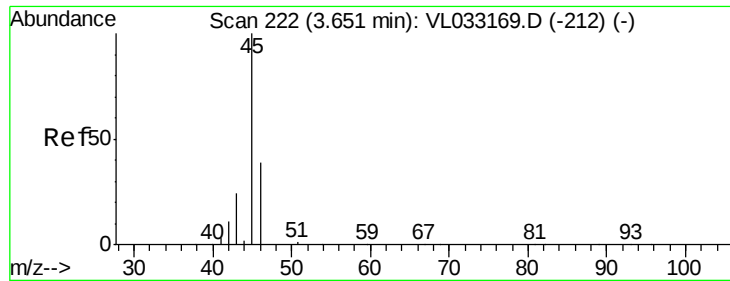
151 71.3 57.4 86.0



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V





#13

Ethanol

Concen: 1.896 ppbv

RT: 3.66 min Scan# 225

Delta R.T. 0.01 min

Lab File: VL033217.D

Acq: 15 Feb 2019 3:31

Instrument :

MSVOA_L

ClientSampleId :

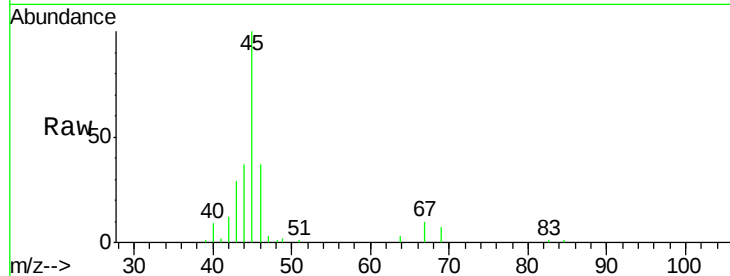
ZONE-B

Tot Ion: 45 Resp: 33652

Ion Ratio Lower Upper

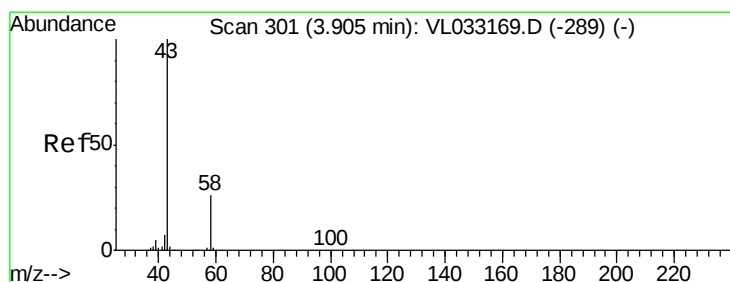
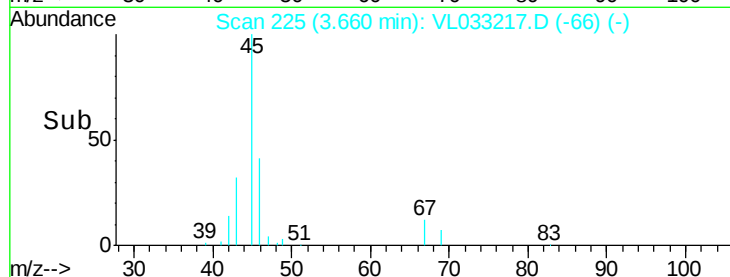
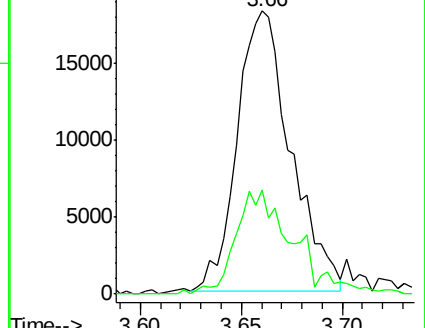
45 100

46 40.5 15.0 60.2



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0



#15

Acetone

Concen: 3.046 ppbv

RT: 3.92 min Scan# 306

Delta R.T. 0.02 min

Lab File: VL033217.D

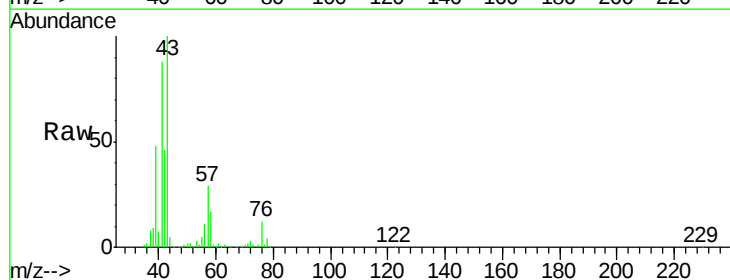
Acq: 15 Feb 2019 3:31

Tgt Ion: 43 Resp: 314007

Ion Ratio Lower Upper

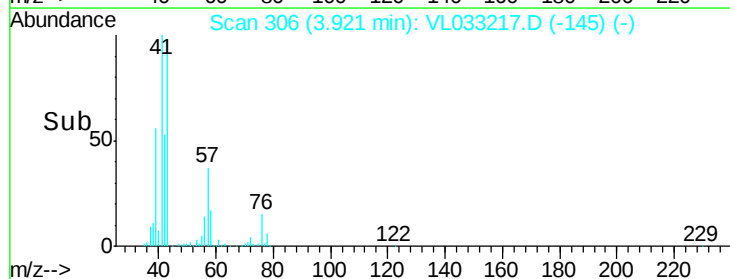
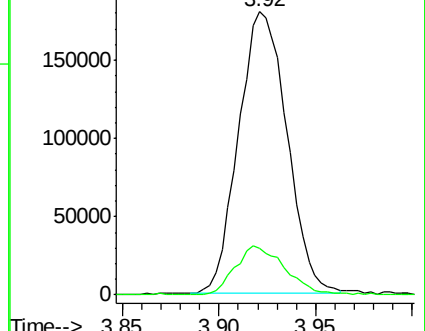
43 100

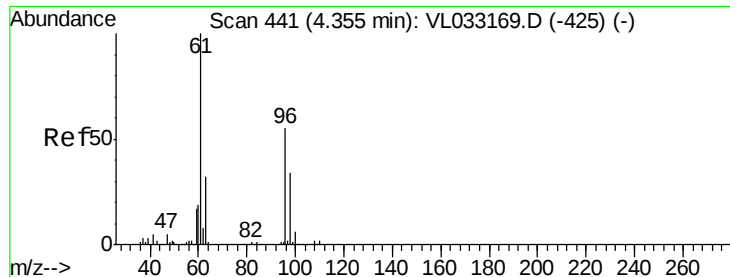
58 18.2 21.1 31.7#



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0





#18

1,1-Dichloroethene

Concen: 30.125 ppbv

RT: 4.35 min Scan# 441

Delta R.T. 0.00 min

Lab File: VL033217.D

Acq: 15 Feb 2019 3:31

Instrument :

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ZONE-B

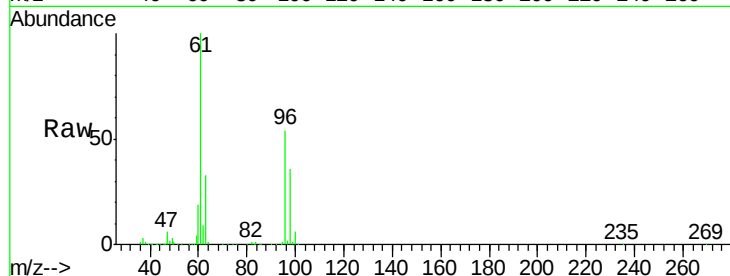
Tot Ion: 96 Resp: 1323679

Ion Ratio Lower Upper

96 100

61 185.1 145.0 217.6

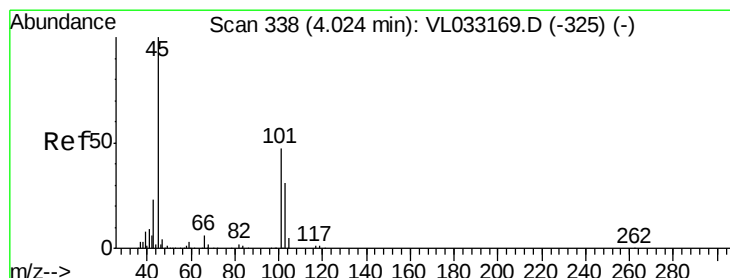
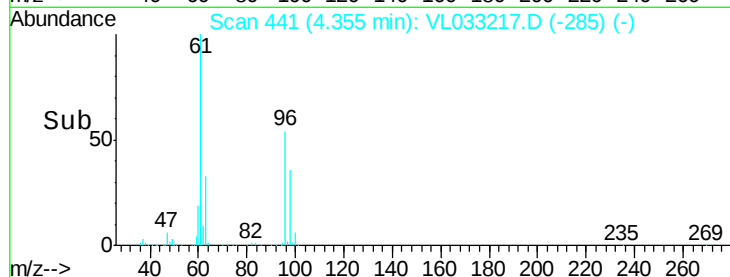
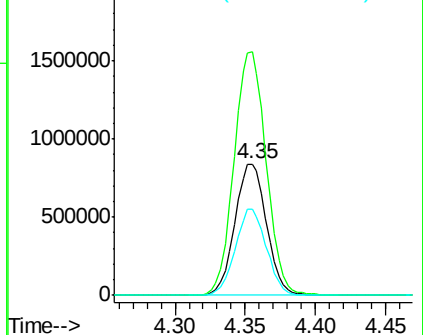
98 65.8 50.0 75.0



Abundance Ion 96.00 (95.70 to 96.70): VL0

Ion 61.10 (60.80 to 61.80): VL0

Ion 98.00 (97.70 to 98.70): VL0



#19

Isopropyl Alcohol

Concen: 0.801 ppbv m

RT: 4.04 min Scan# 343

Delta R.T. 0.02 min

Lab File: VL033217.D

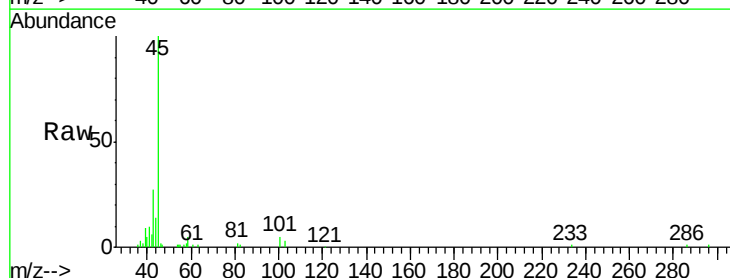
Acq: 15 Feb 2019 3:31

Tgt Ion: 45 Resp: 56024

Ion Ratio Lower Upper

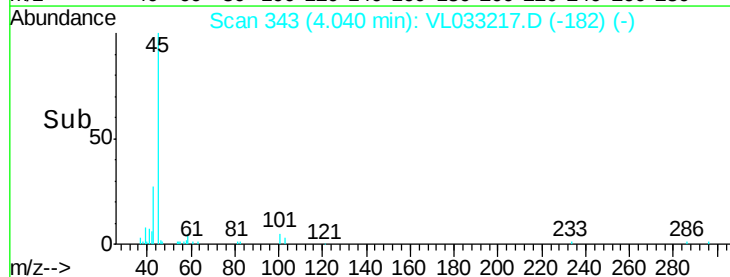
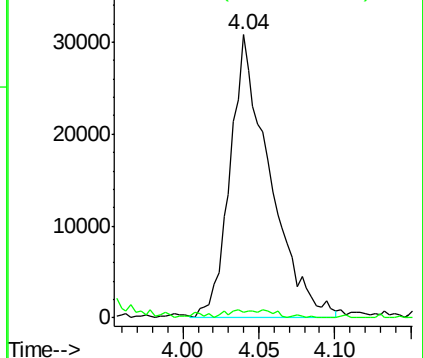
45 100

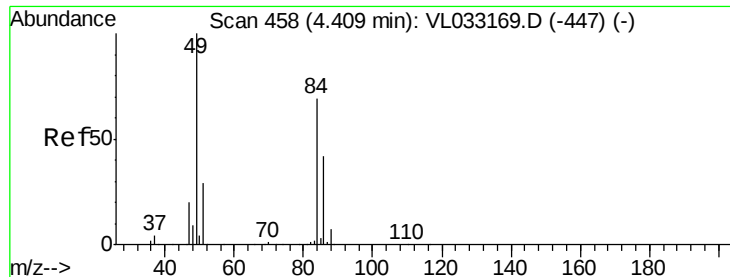
58 0.0 1.5 2.3#



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

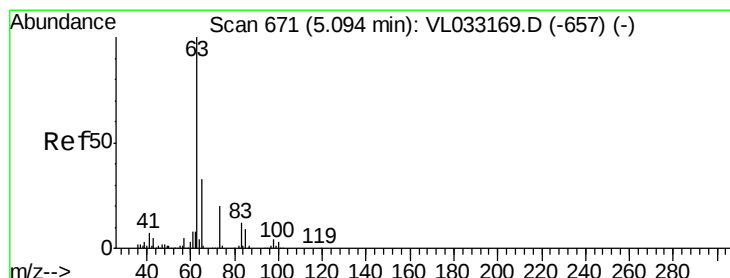
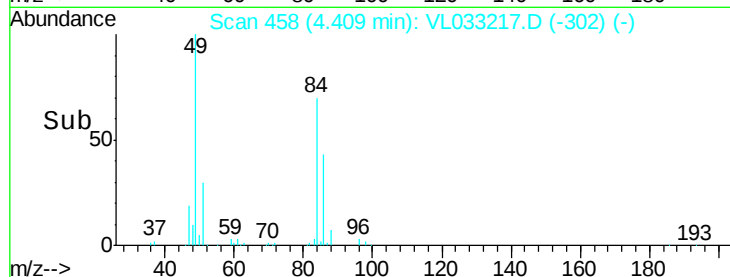
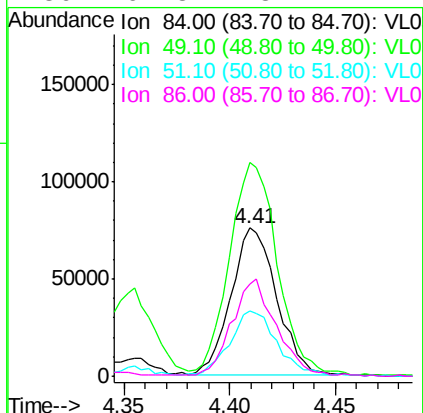
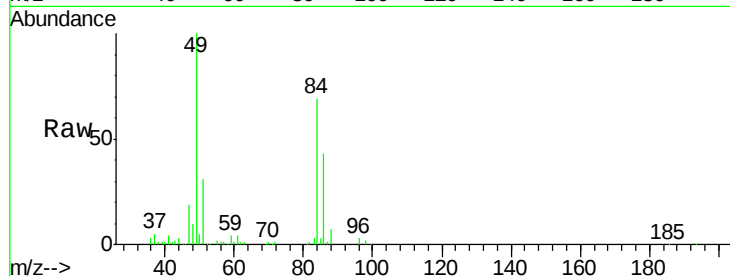




#20
Methylene Chloride
Concen: 2.764 ppbv
RT: 4.41 min Scan# 458
Delta R.T. 0.00 min
Lab File: VL033217.D
Acq: 15 Feb 2019 3:31

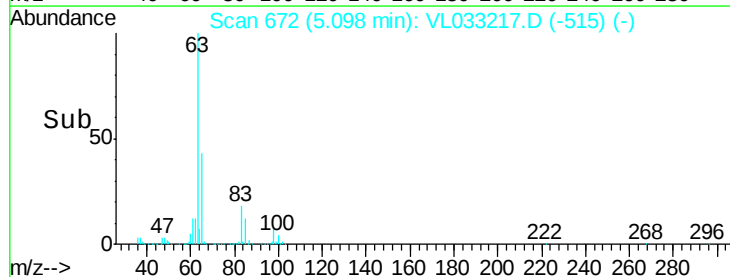
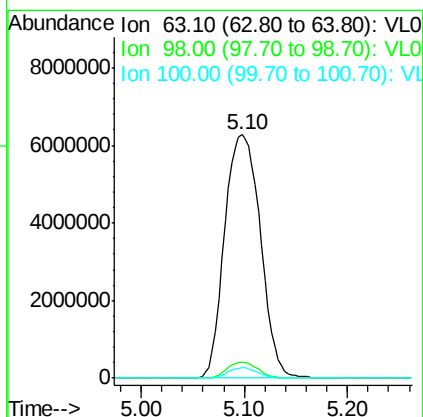
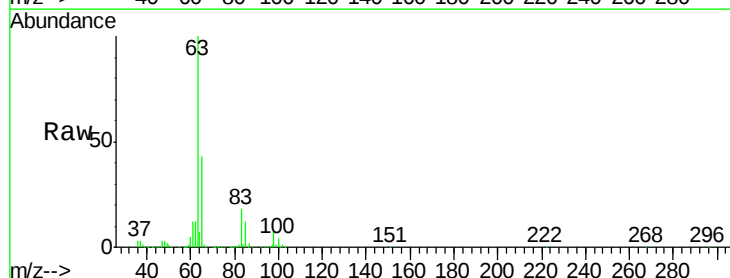
Instrument :
MSVOA_L
ClientSampleId :
ZONE-B

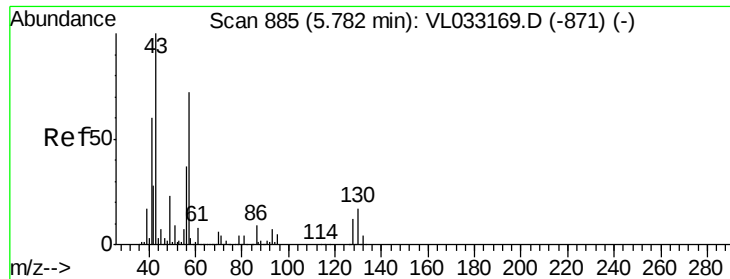
Tot Ion: 84 Resp: 113349
Ion Ratio Lower Upper
84 100
49 142.8 115.8 173.8
51 43.6 33.0 49.6
86 61.8 48.2 72.2



#24
1,1-Dichloroethane
Concen: 119.961 ppbv
RT: 5.10 min Scan# 672
Delta R.T. 0.00 min
Lab File: VL033217.D
Acq: 15 Feb 2019 3:31

Tgt Ion: 63 Resp: 15160814
Ion Ratio Lower Upper
63 100
98 6.5 2.1 6.5#
100 4.1 1.4 4.2

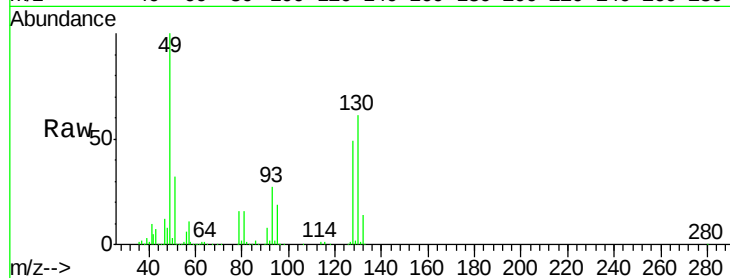




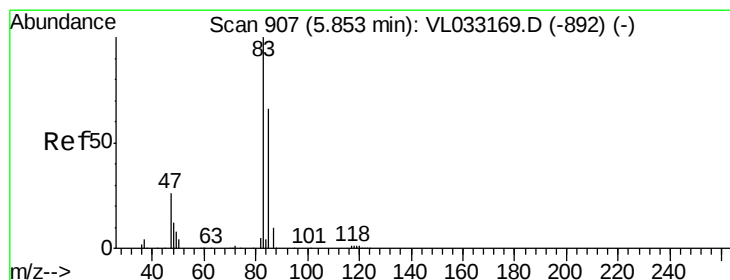
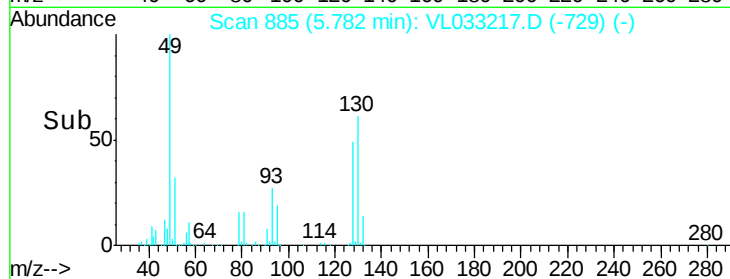
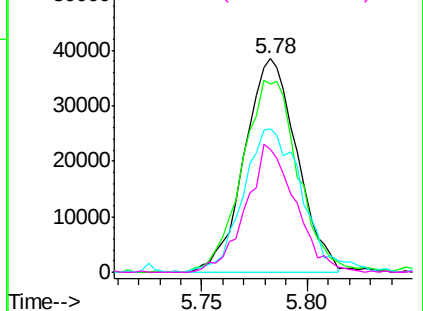
#26
Hexane
Concen: 0.613 ppbv
RT: 5.78 min Scan# 885
Delta R.T. 0.00 min
Lab File: VL033217.D
Acq: 15 Feb 2019 3:31

Instrument :
MSVOA_L
ClientSampleId :
ZONE-B

Tot Ion: 57 Resp: 66682
Ion Ratio Lower Upper
57 100
41 96.5 69.4 104.2
43 75.8 176.7 265.1#
56 56.3 41.4 62.0

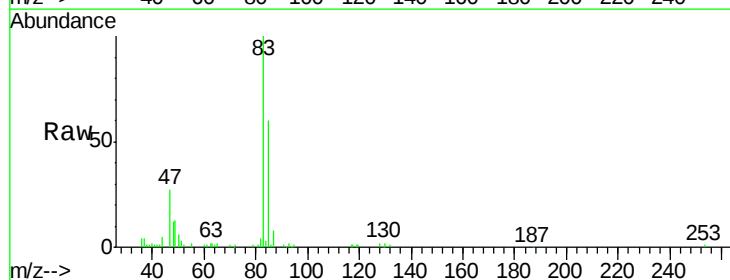


Abundance Ion 57.10 (56.80 to 57.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 43.10 (42.80 to 43.80): VL0
Ion 56.10 (55.80 to 56.80): VL0

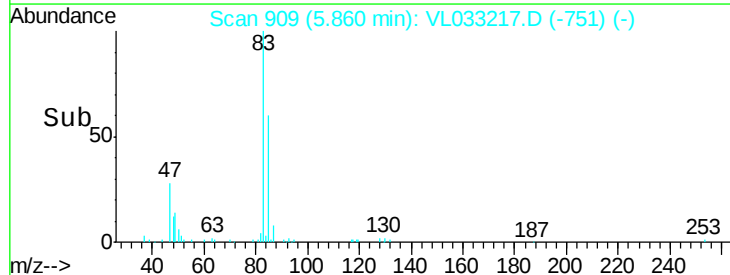
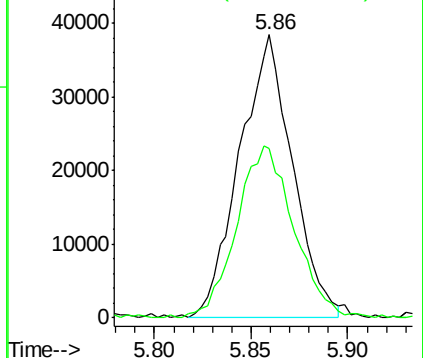


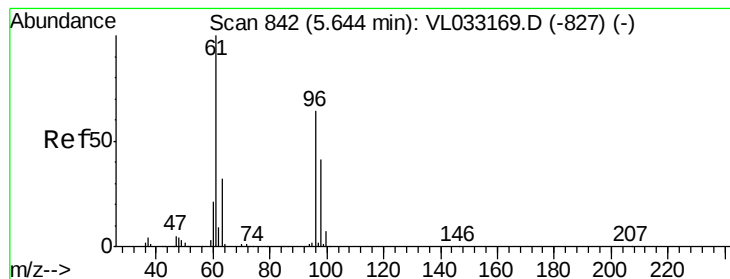
#29
Chloroform
Concen: 0.439 ppbv
RT: 5.86 min Scan# 909
Delta R.T. 0.01 min
Lab File: VL033217.D
Acq: 15 Feb 2019 3:31

Tgt Ion: 83 Resp: 73179
Ion Ratio Lower Upper
83 100
85 58.1 52.6 78.8



Abundance Ion 83.00 (82.70 to 83.70): VL0
Ion 85.00 (84.70 to 85.70): VL0





#31

cis-1,2-Dichloroethene

Concen: 0.814 ppbv

RT: 5.65 min Scan# 844

Delta R.T. 0.01 min

Lab File: VL033217.D

Acq: 15 Feb 2019 3:31

Instrument :

MSVOA_L

ClientSampleId :

ZONE-B

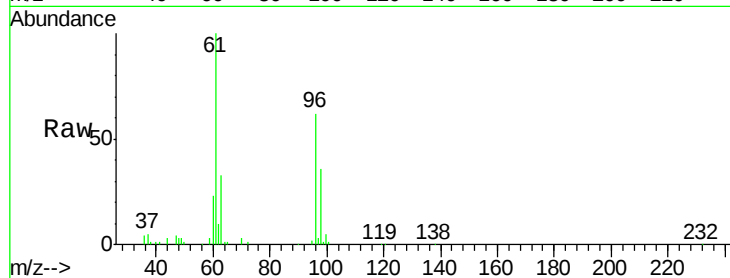
Tot Ion: 61 Resp: 88666

Ion Ratio Lower Upper

61 100

96 62.5 51.2 76.8

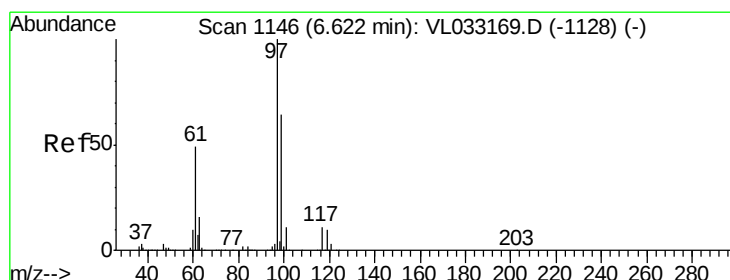
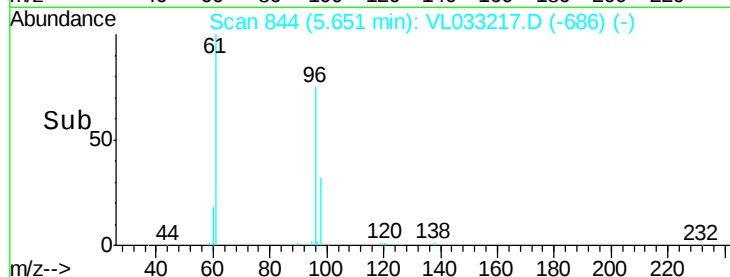
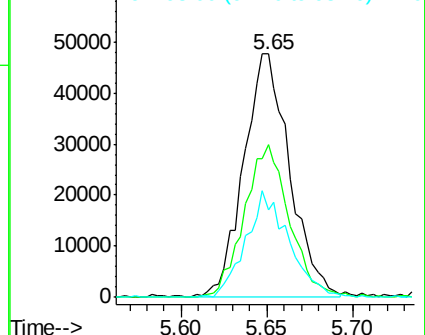
98 35.7 32.8 49.2



Abundance Ion 61.10 (60.80 to 61.80): VL0

Ion 96.00 (95.70 to 96.70): VL0

Ion 98.00 (97.70 to 98.70): VL0



#32

1,1,1-Trichloroethane

Concen: 216.673 ppbv m

RT: 6.64 min Scan# 1153

Delta R.T. 0.02 min

Lab File: VL033217.D

Acq: 15 Feb 2019 3:31

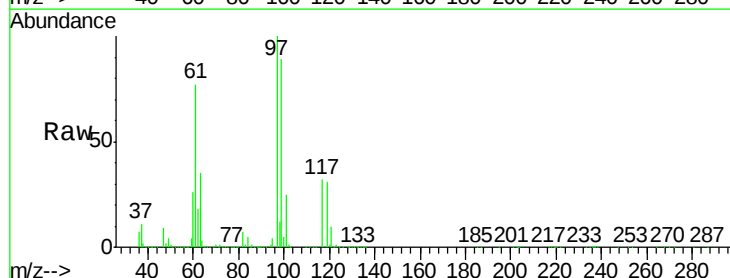
Tgt Ion: 97 Resp: 39785274

Ion Ratio Lower Upper

97 100

99 0.0 51.4 77.2#

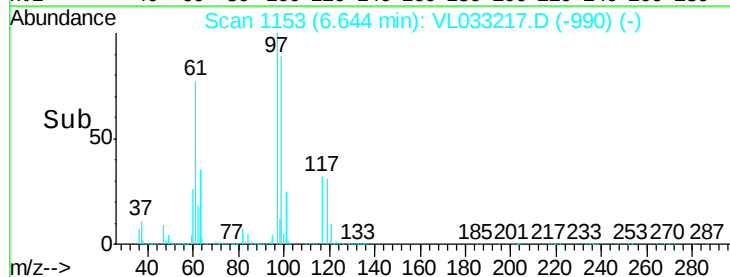
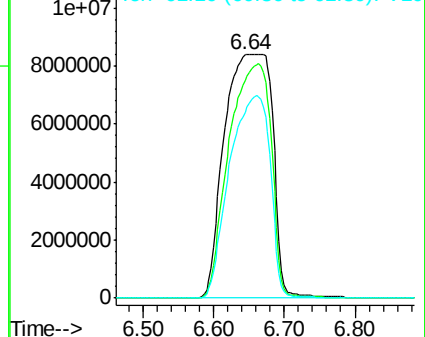
61 0.0 38.9 58.3#

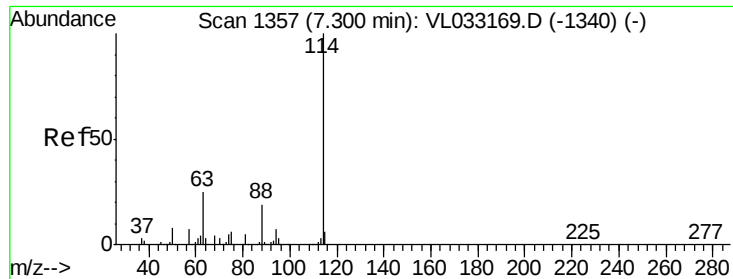


Abundance Ion 97.00 (96.70 to 97.70): VL0

Ion 99.00 (98.70 to 99.70): VL0

Ion 61.10 (60.80 to 61.80): VL0

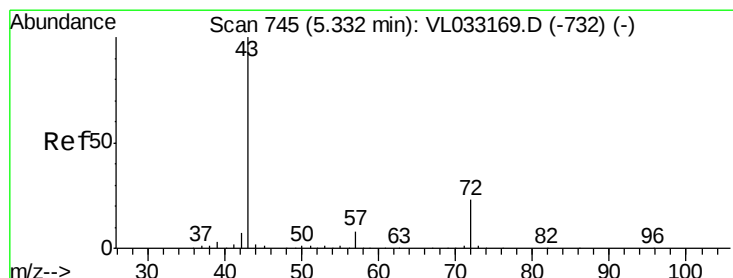
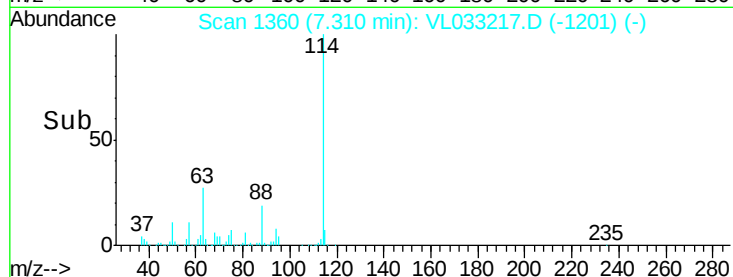
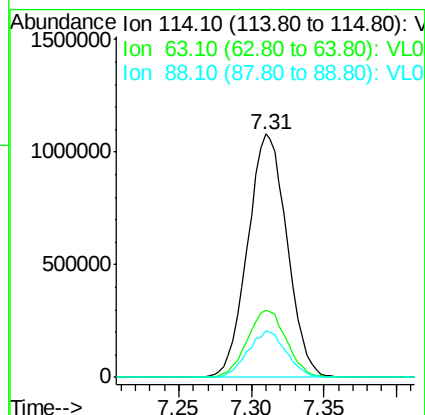
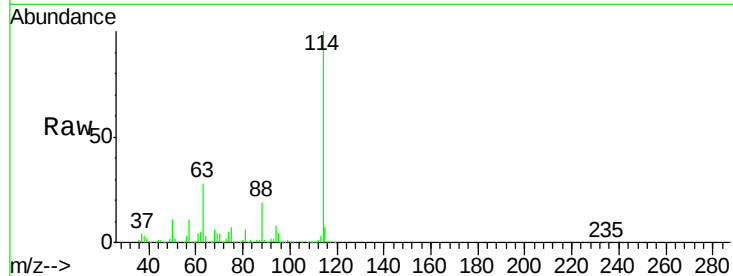




#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.31 min Scan# 1360
 Delta R.T. 0.01 min
 Lab File: VL033217.D
 Acq: 15 Feb 2019 3:31

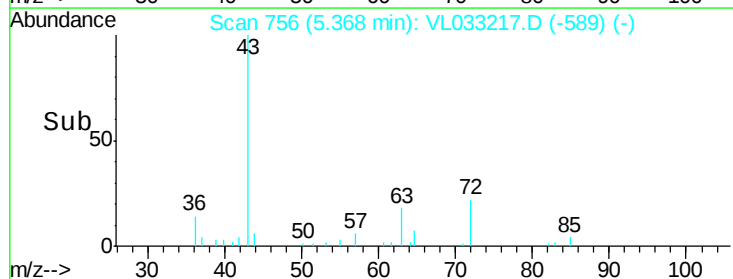
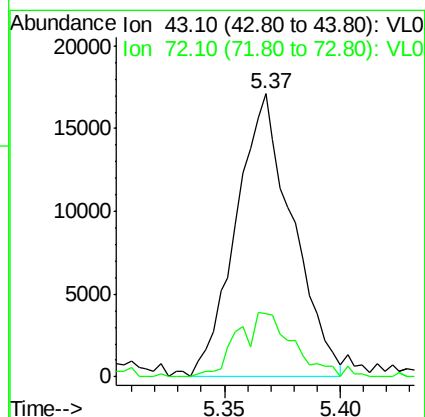
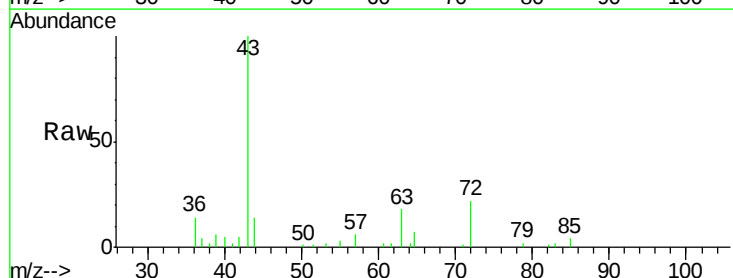
Instrument :
 MSVOA_L
 ClientSampleId :
 ZONE-B

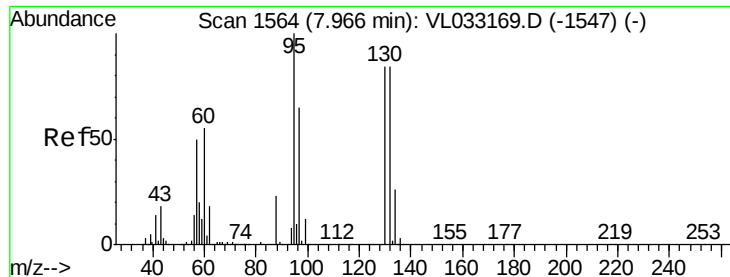
Tot Ion:114 Resp: 2041921
 Ion Ratio Lower Upper
 114 100
 63 27.7 20.8 31.2
 88 18.6 14.6 22.0



#34
 2-Butanone
 Concen: 0.224 ppbv
 RT: 5.37 min Scan# 756
 Delta R.T. 0.04 min
 Lab File: VL033217.D
 Acq: 15 Feb 2019 3:31

Tgt Ion: 43 Resp: 28960
 Ion Ratio Lower Upper
 43 100
 72 22.9 17.8 26.6





#38

Trichloroethene

Concen: 2.658 ppbv

RT: 7.98 min Scan# 1568

Delta R.T. 0.01 min

Lab File: VL033217.D

Acq: 15 Feb 2019 3:31

Instrument :

MSVOA_L

ClientSampleId :

ZONE-B

Tot Ion:130 Resp: 235598

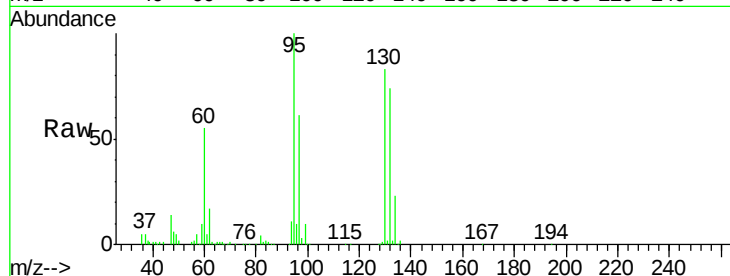
Ion Ratio Lower Upper

130 100

95 120.0 95.5 143.3

132 89.5 80.0 120.0

97 72.1 62.2 93.2

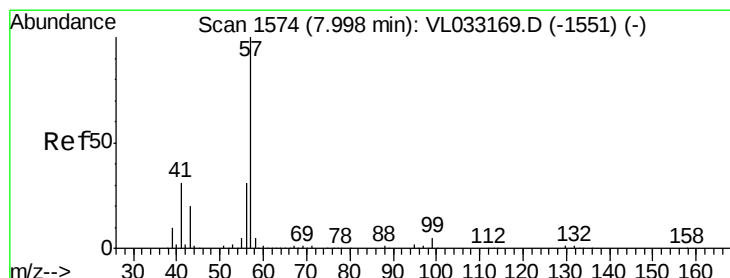
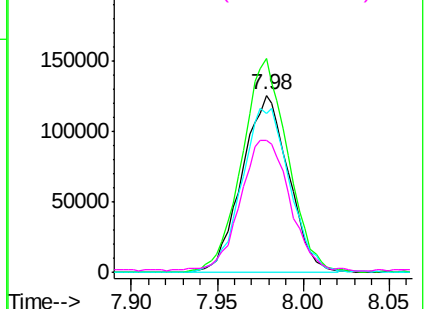
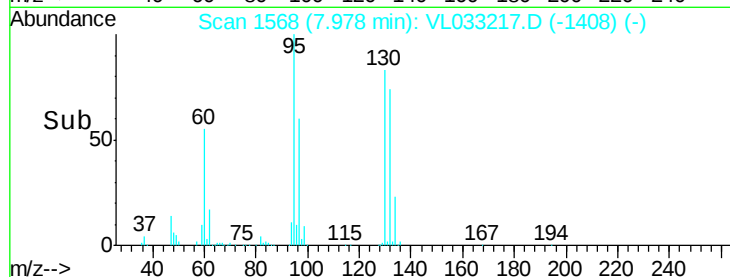


Abundance Ion 130.00 (129.70 to 130.70): V

Ion 95.00 (94.70 to 95.70): VL0

Ion 132.00 (131.70 to 132.70): V

Ion 97.00 (96.70 to 97.70): VL0



#44

2,2,4-Trimethylpentane

Concen: 0.271 ppbv

RT: 8.01 min Scan# 1577

Delta R.T. 0.01 min

Lab File: VL033217.D

Acq: 15 Feb 2019 3:31

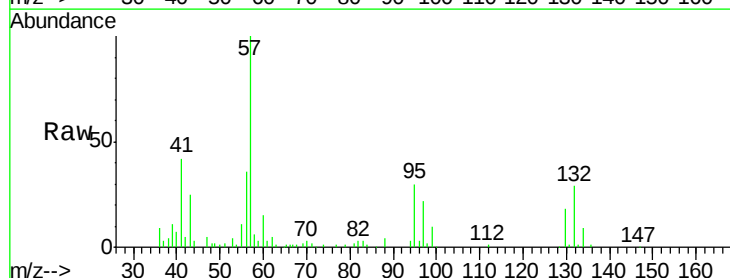
Tgt Ion: 57 Resp: 95126

Ion Ratio Lower Upper

57 100

41 39.7 25.1 37.7#

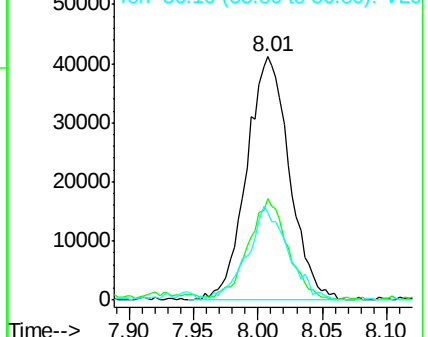
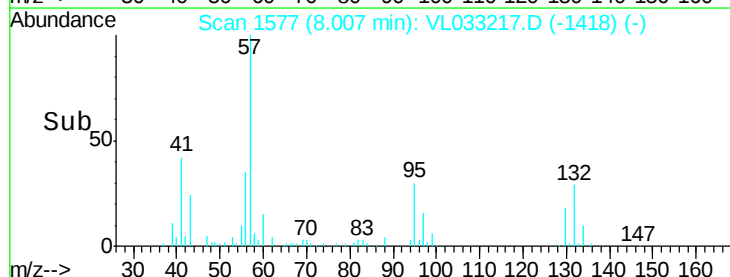
56 36.4 24.5 36.7

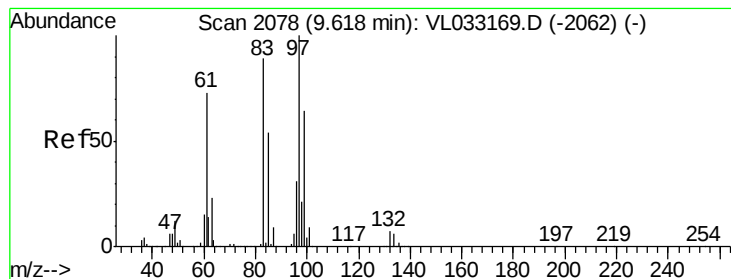


Abundance Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 56.10 (55.80 to 56.80): VL0





#47

1,1,2-Trichloroethane

Concen: 0.797 ppbv

RT: 9.63 min Scan# 2081

Delta R.T. 0.01 min

Lab File: VL033217.D

Acq: 15 Feb 2019 3:31

Instrument :

MSVOA_L

ClientSampled :

ZONE-B

Tot Ion: 97 Resp: 67620

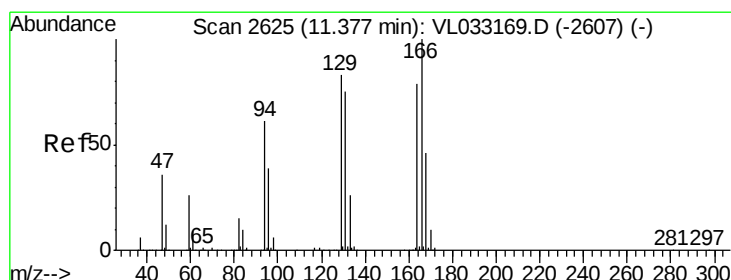
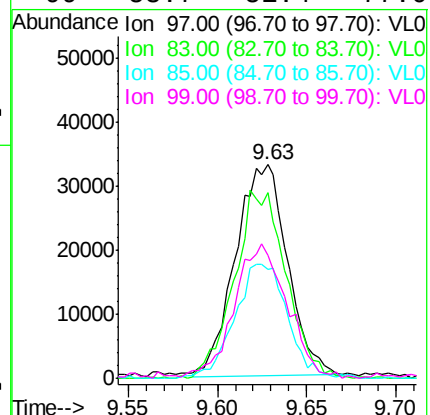
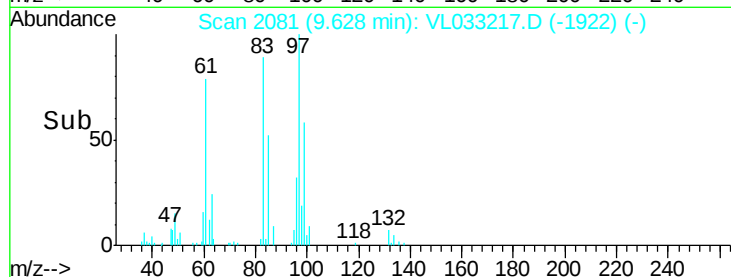
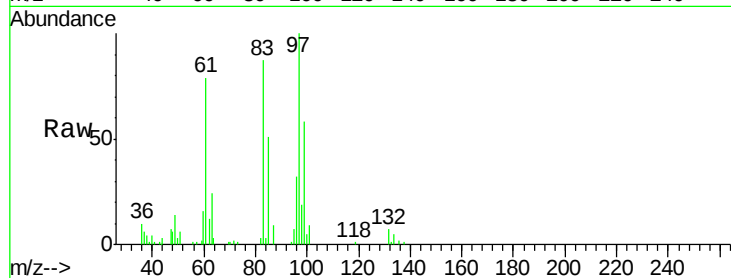
Ion Ratio Lower Upper

97 100

83 87.6 71.4 107.2

85 50.4 43.5 65.3

99 58.7 51.4 77.0



#52

Tetrachloroethene

Concen: 6.689 ppbv

RT: 11.38 min Scan# 2627

Delta R.T. 0.01 min

Lab File: VL033217.D

Acq: 15 Feb 2019 3:31

Tgt Ion: 164 Resp: 531852

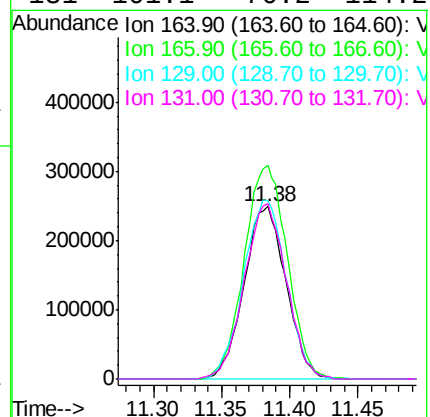
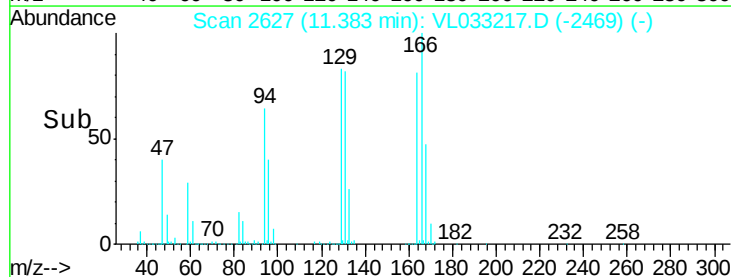
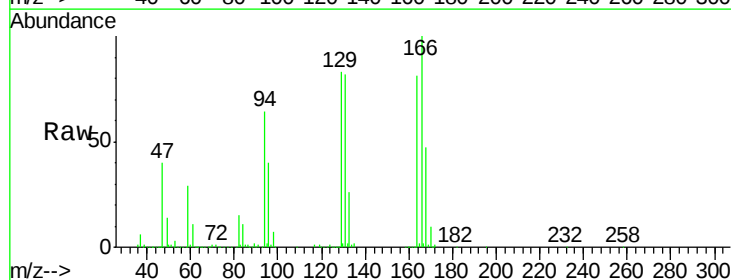
Ion Ratio Lower Upper

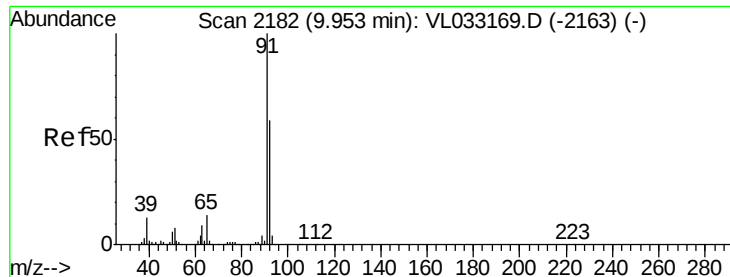
164 100

166 123.3 100.9 151.3

129 102.9 83.9 125.9

131 101.1 76.2 114.2





#53

Toluene

Concen: 0.671 ppbv

RT: 9.96 min Scan# 2183

Delta R.T. 0.00 min

Lab File: VL033217.D

Acq: 15 Feb 2019 3:31

Instrument :

MSVOA_L

ClientSampleId :

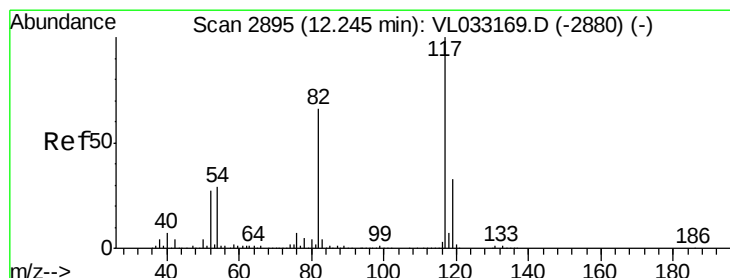
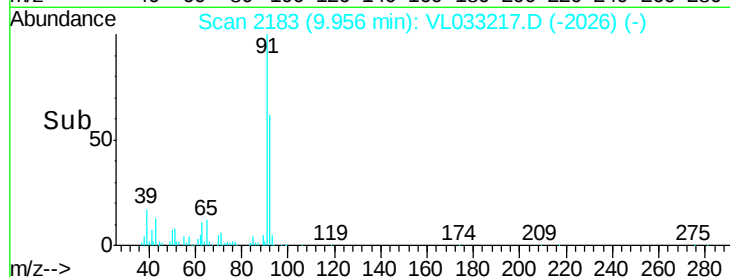
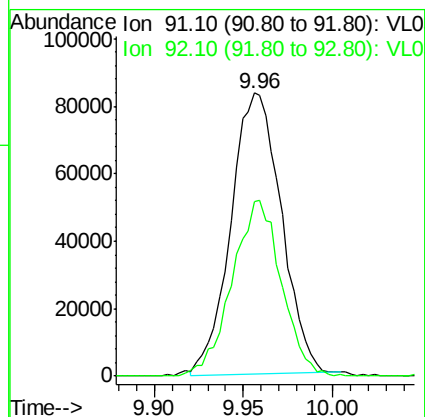
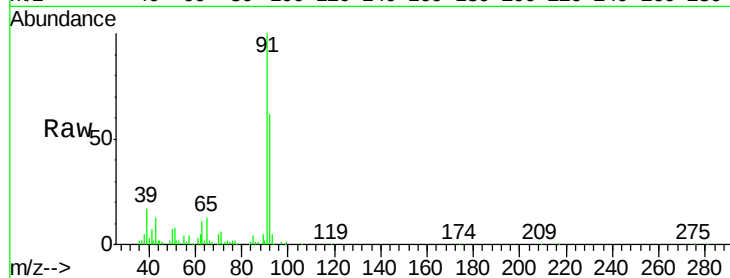
ZONE-B

Tot Ion: 91 Resp: 164384

Ion Ratio Lower Upper

91 100

92 61.1 48.0 72.0



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.25 min Scan# 2895

Delta R.T. 0.00 min

Lab File: VL033217.D

Acq: 15 Feb 2019 3:31

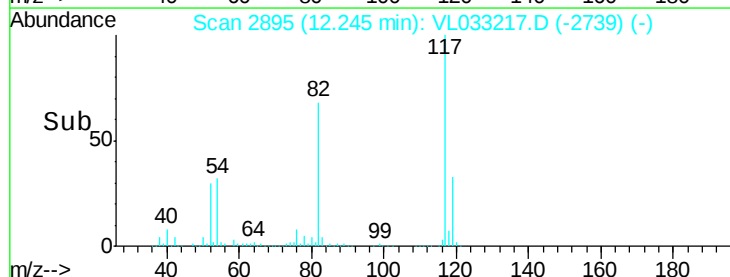
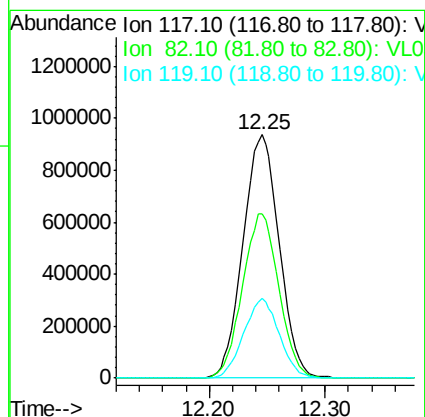
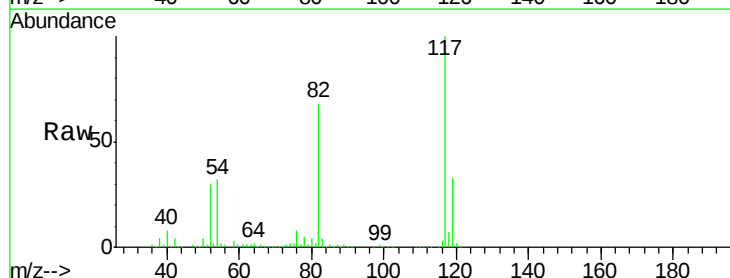
Tgt Ion: 117 Resp: 2034225

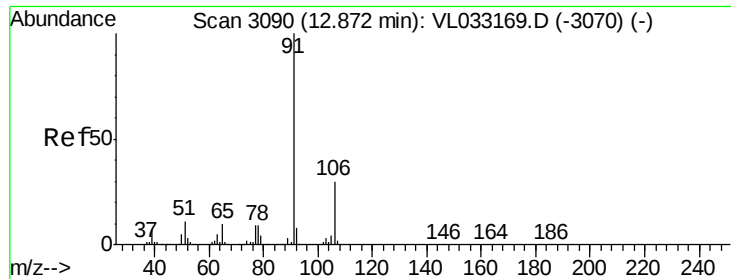
Ion Ratio Lower Upper

117 100

82 67.8 49.5 74.3

119 32.1 24.4 36.6





#58

Ethyl Benzene

Concen: 0.518 ppbv

RT: 12.87 min Scan# 3089

Delta R.T. -0.00 min

Lab File: VL033217.D

Acq: 15 Feb 2019 3:31

Instrument :

MSVOA_L

ClientSampleId :

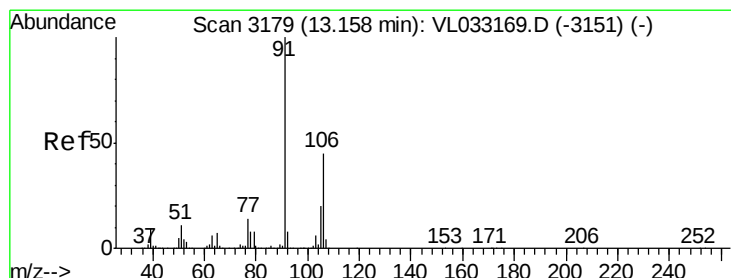
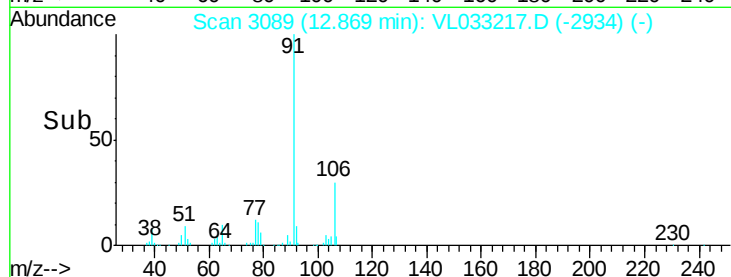
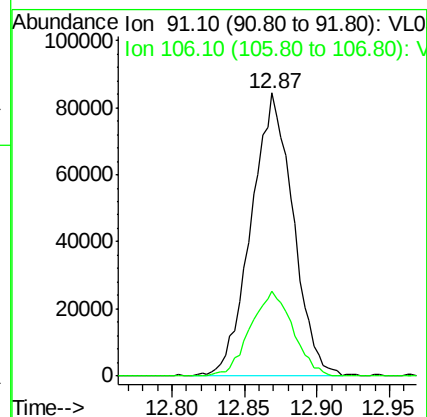
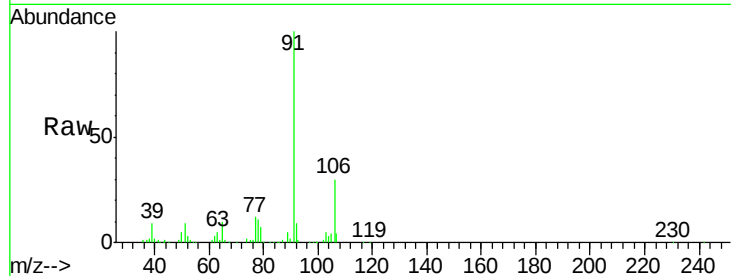
ZONE-B

Tot Ion: 91 Resp: 170384

Ion Ratio Lower Upper

91 100

106 30.2 23.8 35.8



#59

m/p-Xylene

Concen: 2.901 ppbv

RT: 13.12 min Scan# 3168

Delta R.T. -0.04 min

Lab File: VL033217.D

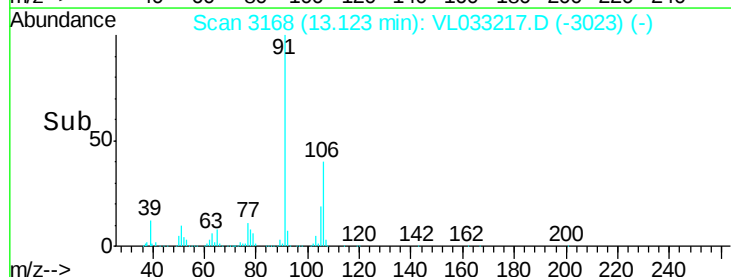
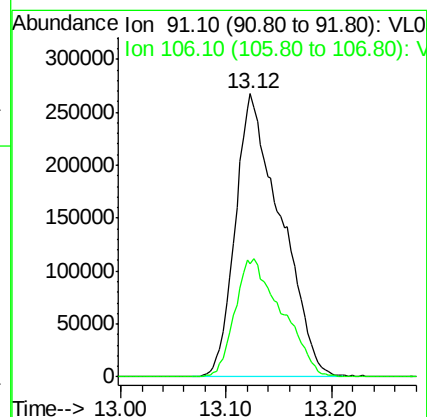
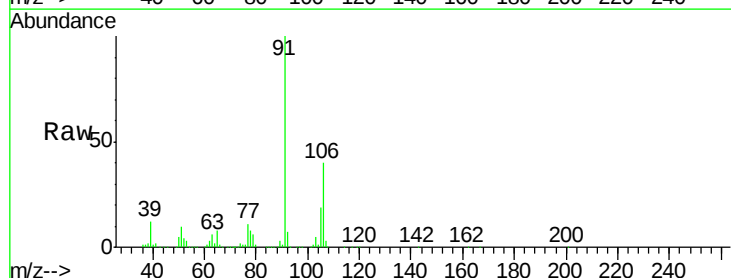
Acq: 15 Feb 2019 3:31

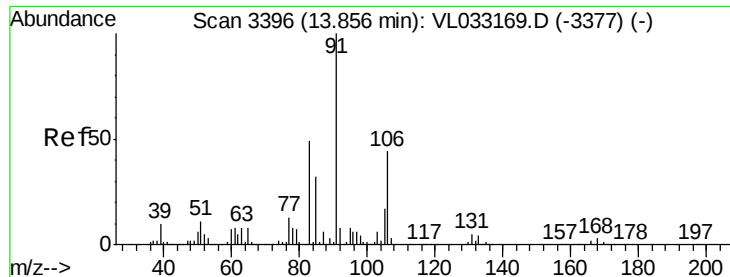
Tgt Ion: 91 Resp: 797109

Ion Ratio Lower Upper

91 100

106 43.3 0.0 0.0#

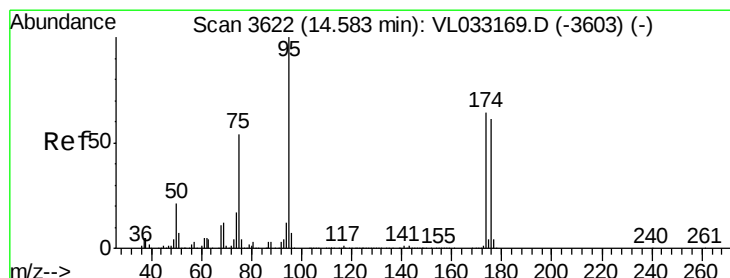
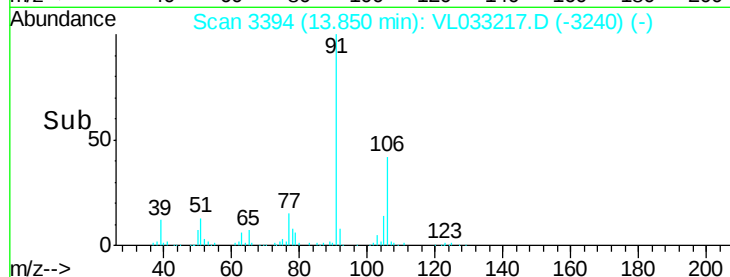
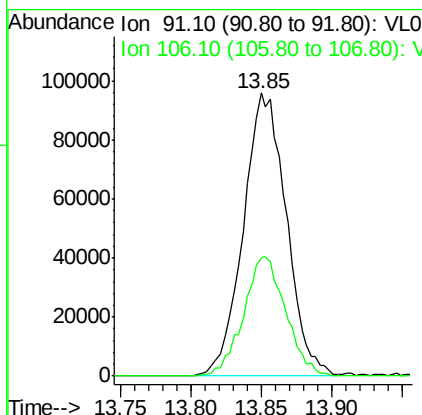
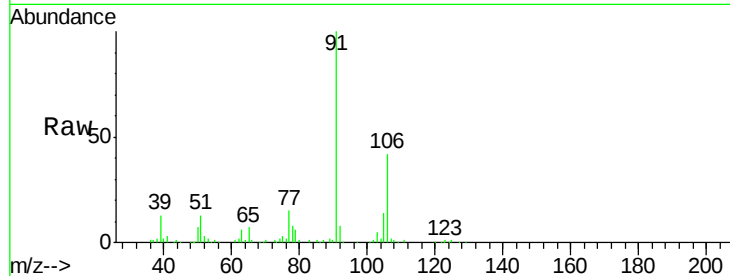




#60
o-Xylene
Concen: 0.767 ppbv
RT: 13.85 min Scan# 3394
Delta R.T. -0.01 min
Lab File: VL033217.D
Acq: 15 Feb 2019 3:31

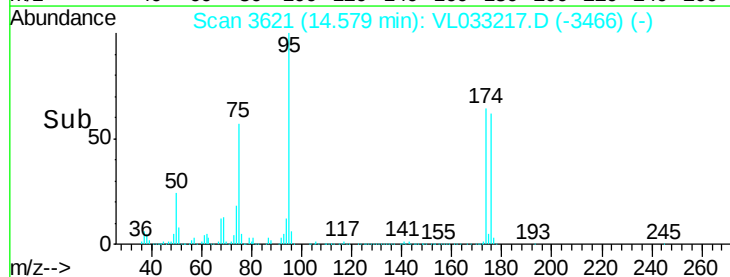
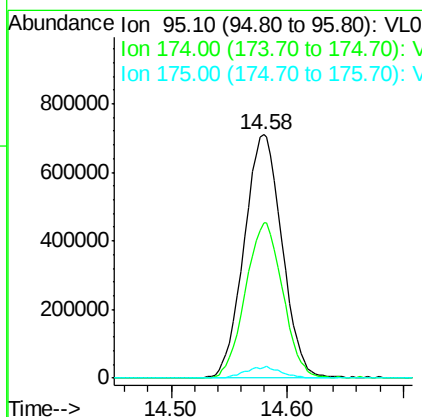
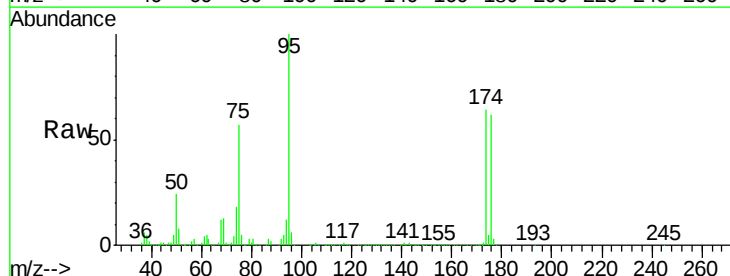
Instrument :
MSVOA_L
ClientSampled :
ZONE-B

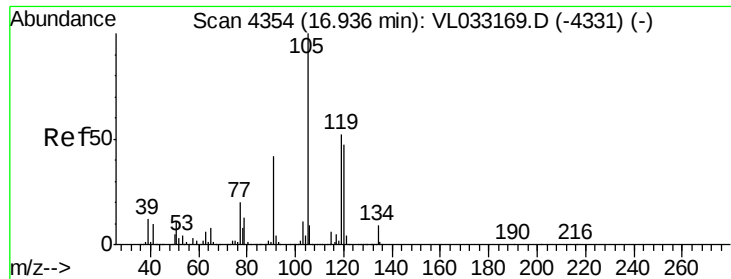
Tot Ion: 91 Resp: 205038
Ion Ratio Lower Upper
91 100
106 41.5 21.8 65.3



#68
1-Bromo-4-Fluorobenzene
Concen: 10.322 ppbv
RT: 14.58 min Scan# 3621
Delta R.T. -0.00 min
Lab File: VL033217.D
Acq: 15 Feb 2019 3:31

Tgt Ion: 95 Resp: 1617049
Ion Ratio Lower Upper
95 100
174 62.9 51.2 76.8
175 4.5 3.8 5.6





#74

1,2,4-Trimethylbenzene

Concen: 0.368 ppbv

RT: 16.93 min Scan# 4352

Delta R.T. -0.01 min

Lab File: VL033217.D

Acq: 15 Feb 2019 3:31

Instrument :

MSVOA_L

ClientSampleId :

ZONE-B

Tot Ion:105 Resp: 112448

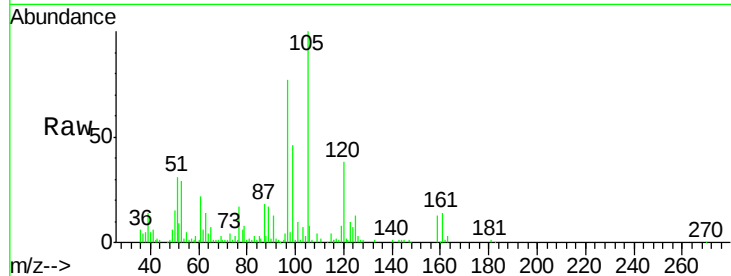
Ion Ratio Lower Upper

105 100

120 38.0 37.9 56.9

91 14.5 34.0 51.0#

77 17.0 15.7 23.5

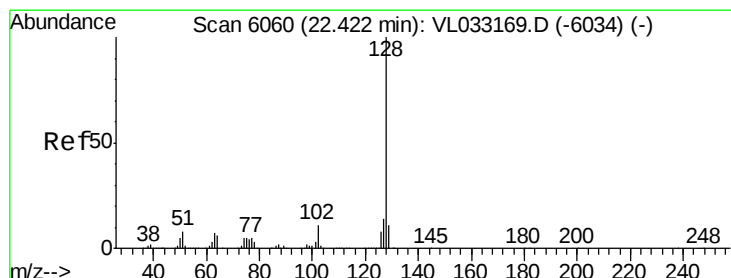
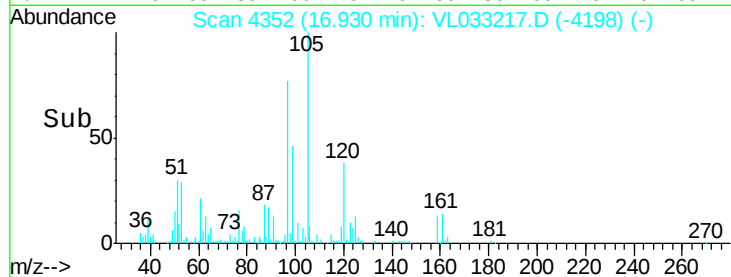
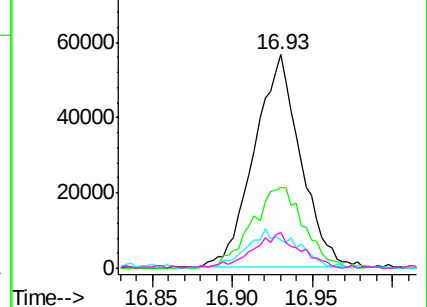


Abundance Ion 105.10 (104.80 to 105.80): V

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



#79

Naphthalene

Concen: 0.114 ppbv m

RT: 22.41 min Scan# 6057

Delta R.T. -0.01 min

Lab File: VL033217.D

Acq: 15 Feb 2019 3:31

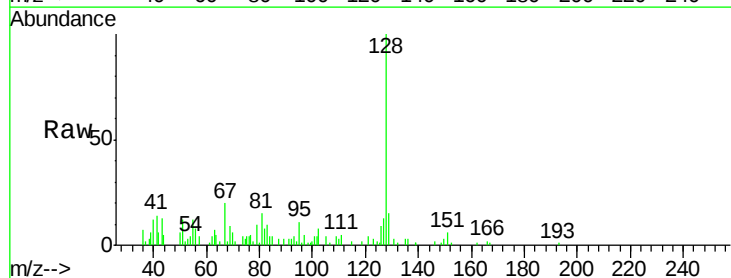
Tgt Ion:128 Resp: 37565

Ion Ratio Lower Upper

128 100

127 13.2 11.0 16.4

129 15.4 8.6 12.8#



Abundance Ion 128.10 (127.80 to 128.80): V

Ion 127.10 (126.80 to 127.80): V

Ion 129.10 (128.80 to 129.80): V

