

Data File : VL031217.D

Acq On : 14 Dec 2017 1:33

Operator : SY/AP

Sample : VSTDIC0.03

Misc : 400ml/MSVOA_L

ALS Vial : 1 Sample Multiplier: 1

Instrument :

MSVOA_L

ClientSampleId :

VSTDIC0.03

Quant Time: Dec 14 03:44:41 2017

Quant Method : W:\HPCHEM1\MSVOA_L\METHODS\VL121317AIR.M

Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu Dec 14 03:40:57 2017

QLast Update : Thu Dec 14 03:40:57 2017

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.91	49	1653735	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.45	114	3978650	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.41	117	3979768	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.75	95	2955145	9.61	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	96.10%

Target Compounds

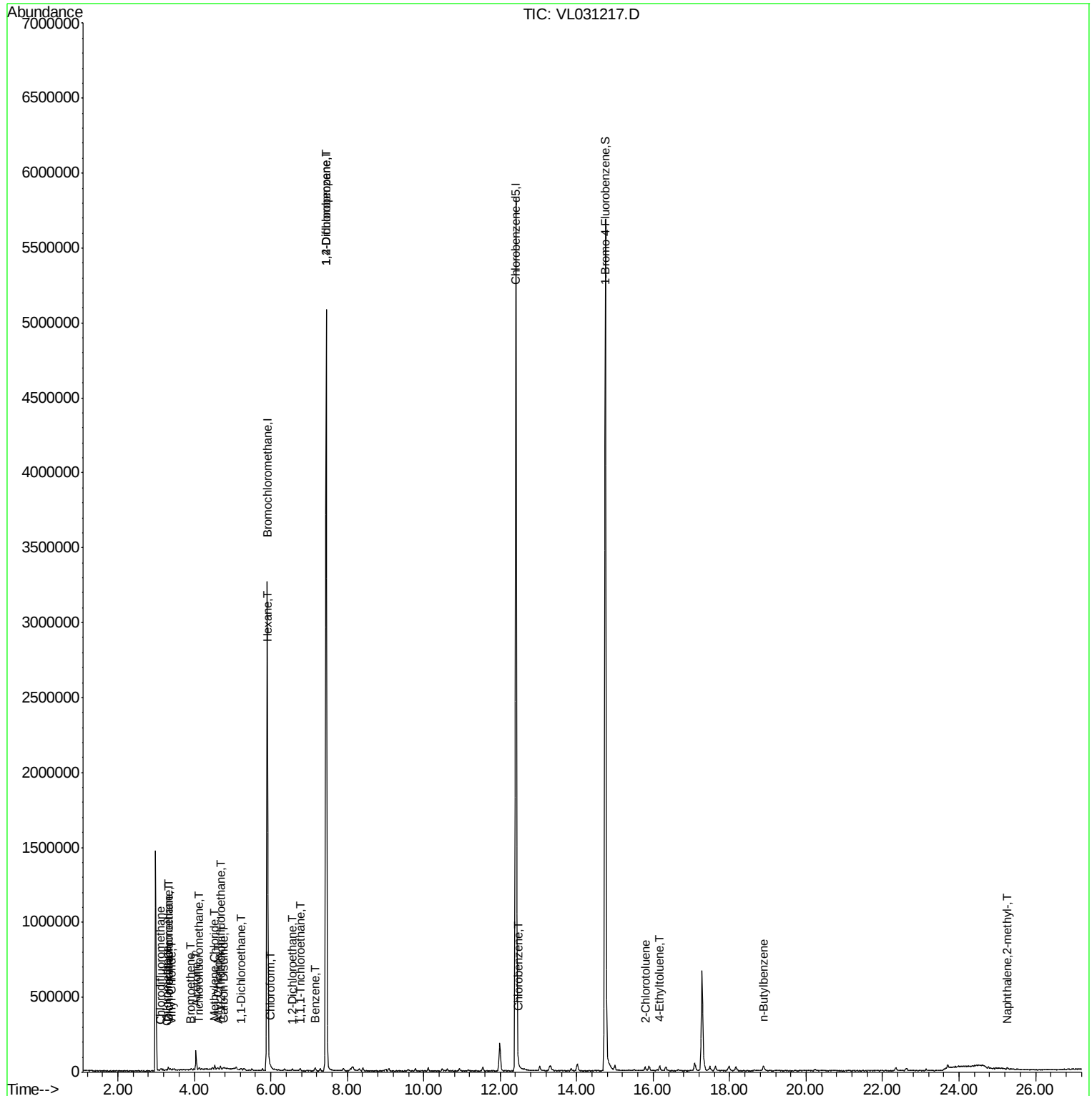
						Qvalue
2) Dichlorodifluoromethane	3.32	85	8680	0.05	ppbv	100
3) Chlorodifluoromethane	3.12	51	8452	0.04	ppbv	94
4) Chloromethane	3.27	50	2899	0.03	ppbv #	81
5) Vinyl Chloride	3.40	62	4155	0.04	ppbv #	87
8) Dichlorotetrafluoroethane	3.32	85	8680	0.04	ppbv	93
11) Trichlorofluoromethane	4.13	101	8653	0.04	ppbv	95
12) 1,1,2-Trichlorotrifluoroet	4.68	101	4222	0.04	ppbv #	51
14) Bromoethene	3.91	108	1891	0.03	ppbv #	63
15) Acetone	4.05	43	54238	0.33	ppbv #	70
20) Methylene Chloride	4.54	84	5353	0.09	ppbv #	82
21) Allyl Chloride	4.61	41	3613	0.04	ppbv #	2
24) 1,1-Dichloroethane	5.23	63	8582	0.03	ppbv #	94
26) Hexane	5.93	57	7209	0.04	ppbv #	1
27) Carbon Disulfide	4.76	76	4379	0.03	ppbv #	1
29) Chloroform	5.99	83	9750	0.03	ppbv	98
32) 1,1,1-Trichloroethane	6.77	97	8407	0.04	ppbv	89
36) Benzene	7.16	78	16229	0.04	ppbv #	81
37) 1,2-Dichloroethane	6.57	62	8451	0.03	ppbv #	90
39) 1,2-Dichloropropane	7.45	63	959315	5.50	ppbv #	26
57) Chlorobenzene	12.47	112	15246	0.04	ppbv #	92
70) n-Butylbenzene	18.89	91	25908	0.03	ppbv #	94
71) 2-Chlorotoluene	15.79	91	20242	0.04	ppbv	99
72) 4-Ethyltoluene	16.17	105	25959	0.04	ppbv #	95
80) Naphthalene,2-methyl-	25.25	142	5656	0.05	ppbv	95

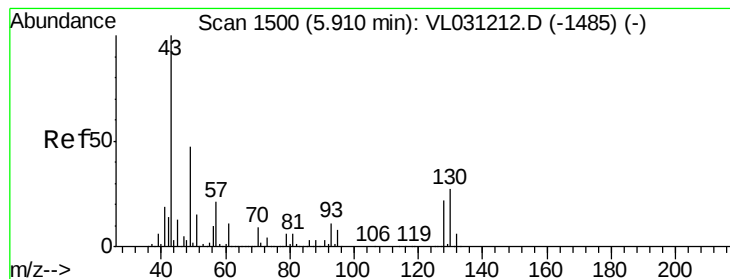
(#)=qualifier out of range (m)=manual integration (+)=signals summed

ALS Vial : 1 Sample Multiplier: 1

VSTDICC0.03

Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.00 ppbv

RT: 5.91 min Scan# 1499

Delta R.T. -0.00 min

Lab File: VL031217.D

Acq: 14 Dec 2017 1:33

Instrument :

MSVOA_L

ClientSampleId :

VSTDIC0.03

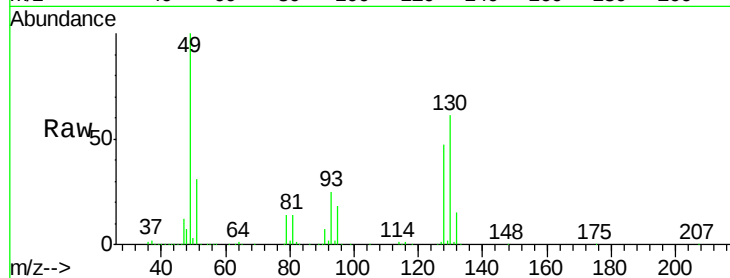
Tgt Ion: 49 Resp: 1653735

Ion Ratio Lower Upper

49 100

128 49.0 23.2 69.5

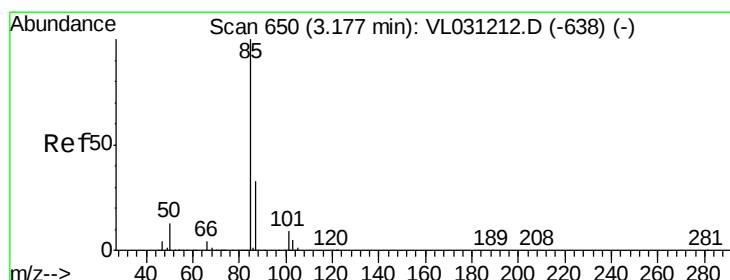
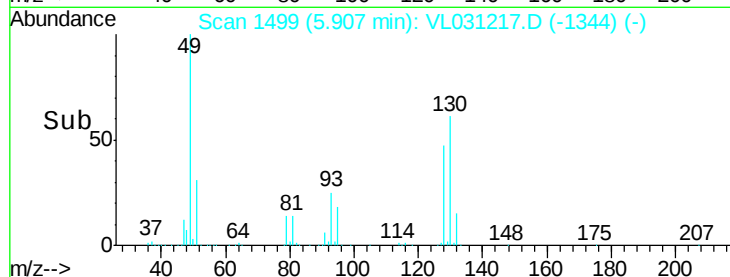
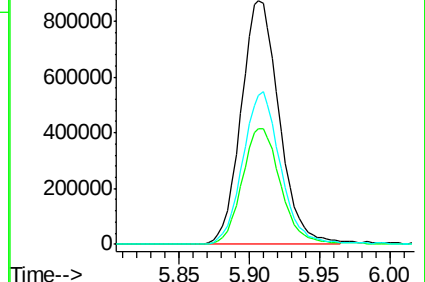
130 62.8 29.6 88.8



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: 0.05 ppbv

RT: 3.32 min Scan# 696

Delta R.T. 0.15 min

Lab File: VL031217.D

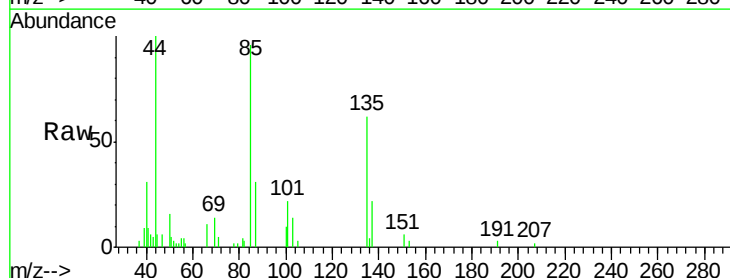
Acq: 14 Dec 2017 1:33

Tgt Ion: 85 Resp: 8680

Ion Ratio Lower Upper

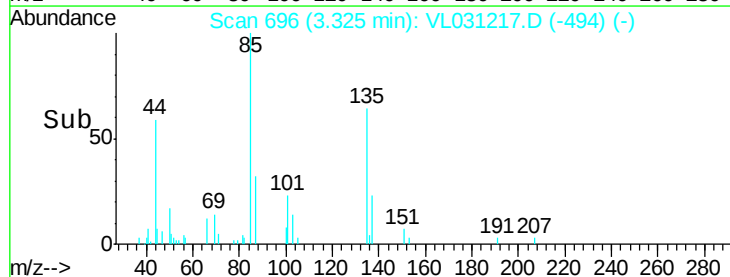
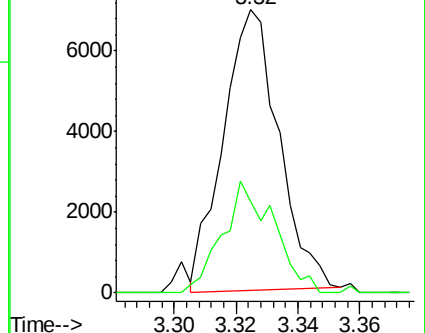
85 100

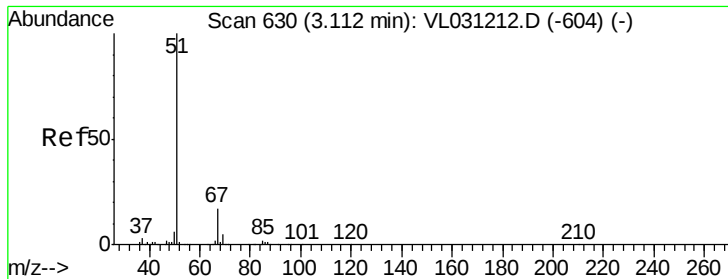
87 32.8 26.2 39.2



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.04 ppbv

RT: 3.12 min Scan# 631

Delta R.T. 0.00 min

Lab File: VL031217.D

Acq: 14 Dec 2017 1:33

Instrument :

MSVOA_L

ClientSampleId :

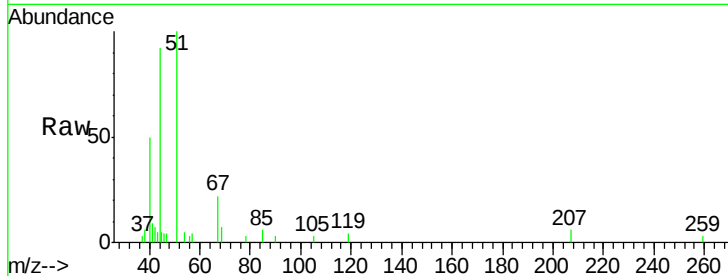
VSTDIC0.03

Tgt Ion: 51 Resp: 8452

Ion Ratio Lower Upper

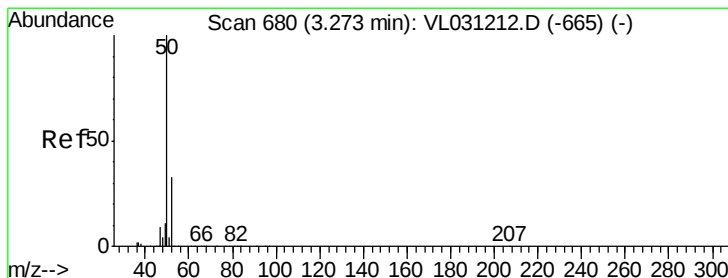
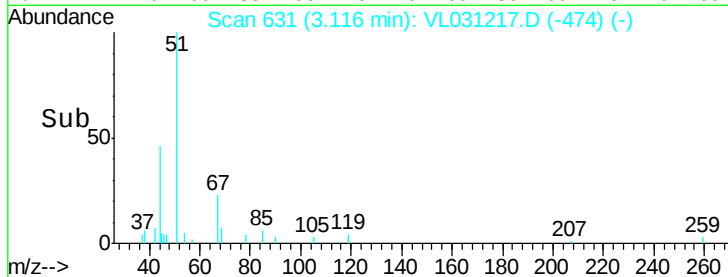
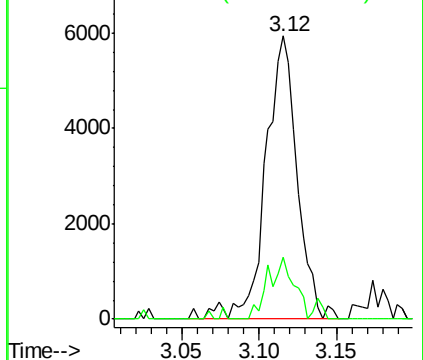
51 100

67 19.9 13.8 20.6



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.03 ppbv

RT: 3.27 min Scan# 680

Delta R.T. 0.00 min

Lab File: VL031217.D

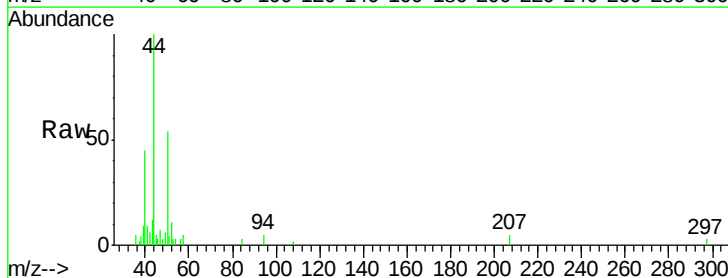
Acq: 14 Dec 2017 1:33

Tgt Ion: 50 Resp: 2899

Ion Ratio Lower Upper

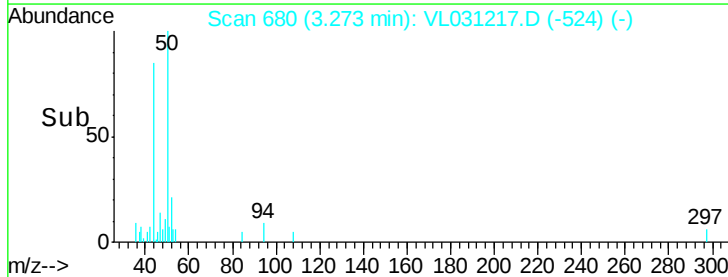
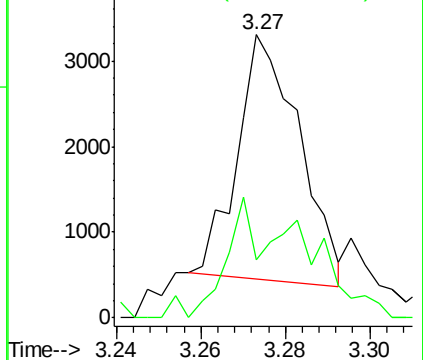
50 100

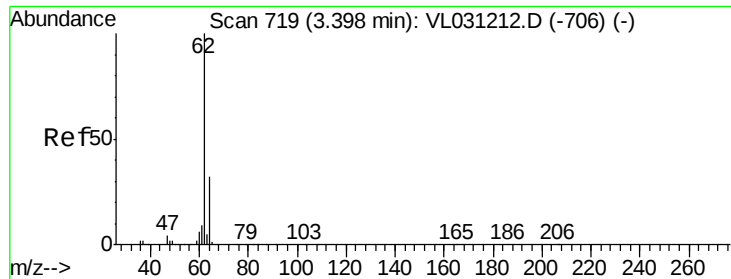
52 22.6 26.5 39.7#



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#5

Vinyl Chloride

Concen: 0.04 ppbv

RT: 3.40 min Scan# 720

Delta R.T. 0.00 min

Lab File: VL031217.D

Acq: 14 Dec 2017 1:33

Instrument :

MSVOA_L

ClientSampleId :

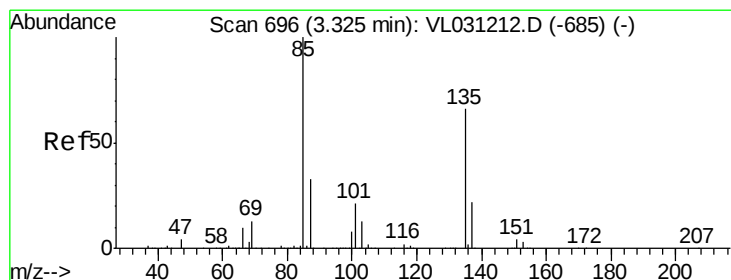
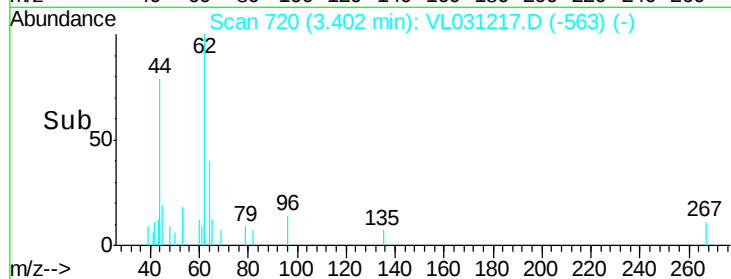
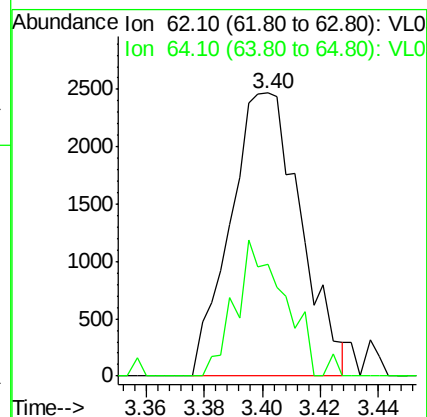
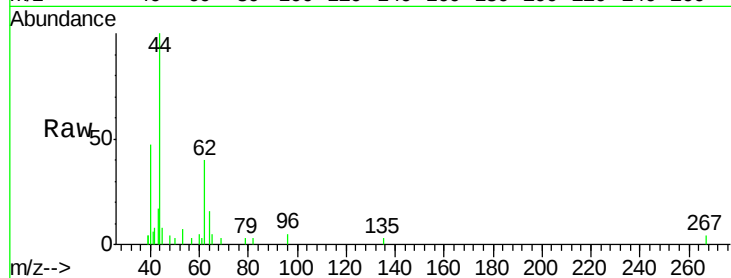
VSTDIC0.03

Tgt Ion: 62 Resp: 4155

Ion Ratio Lower Upper

62 100

64 39.5 25.9 38.9#



#8

Dichlorotetrafluoroethane

Concen: 0.04 ppbv

RT: 3.32 min Scan# 696

Delta R.T. 0.00 min

Lab File: VL031217.D

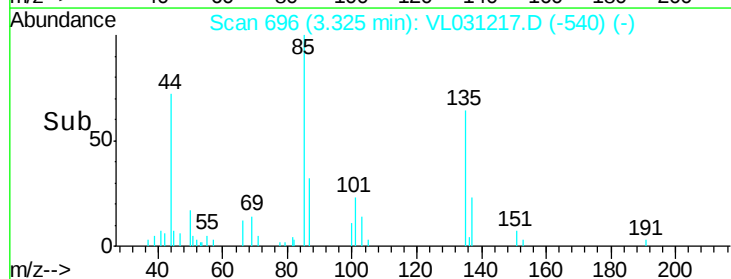
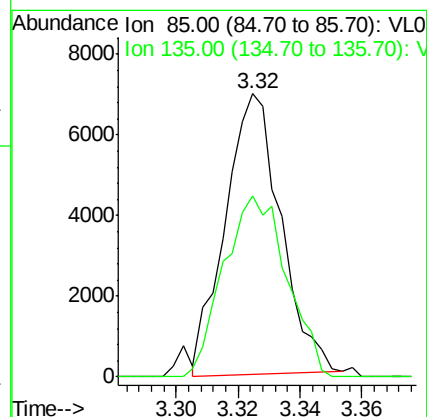
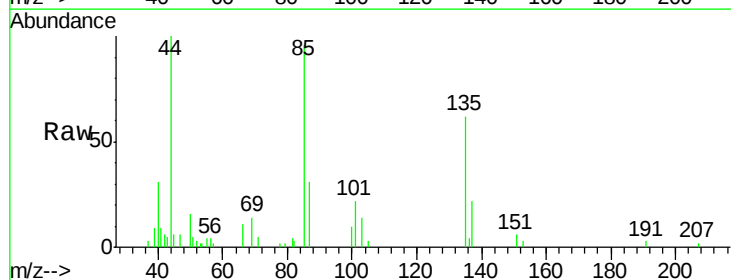
Acq: 14 Dec 2017 1:33

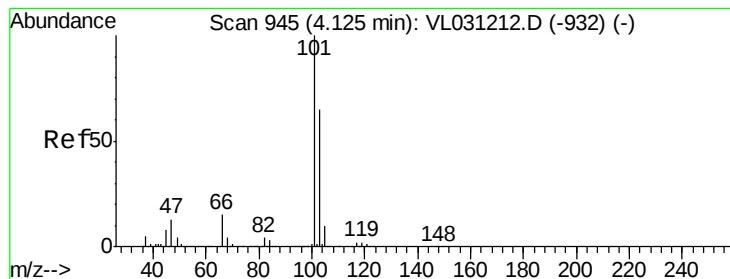
Tgt Ion: 85 Resp: 8680

Ion Ratio Lower Upper

85 100

135 73.5 54.0 81.0





#11

Trichlorofluoromethane

Concen: 0.04 ppbv

RT: 4.13 min Scan# 945

Delta R.T. 0.00 min

Lab File: VL031217.D

Acq: 14 Dec 2017 1:33

Instrument :

MSVOA_L

ClientSampleId :

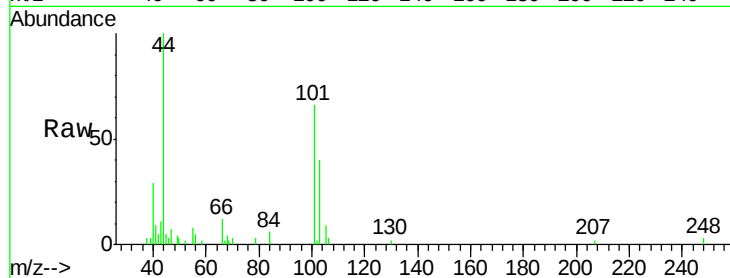
VSTDIC0.03

Tgt Ion:101 Resp: 8653

Ion Ratio Lower Upper

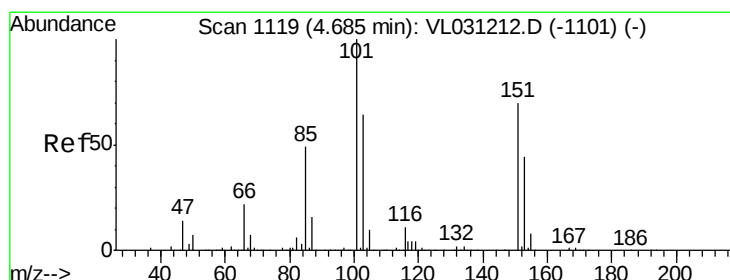
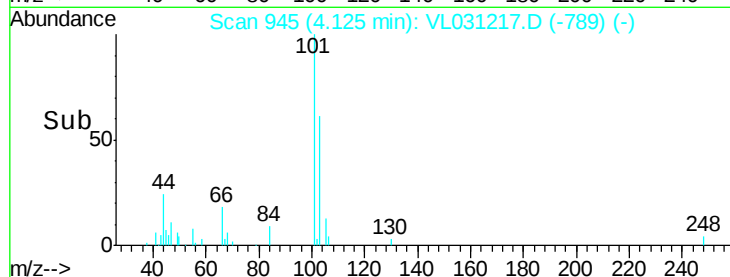
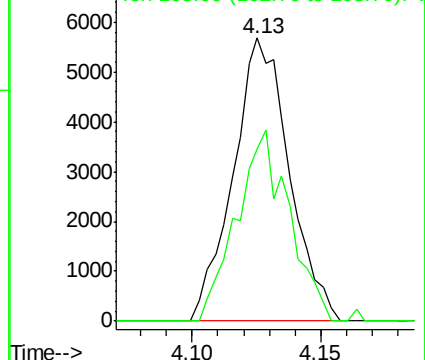
101 100

103 60.9 51.8 77.8



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: 0.04 ppbv

RT: 4.68 min Scan# 1119

Delta R.T. 0.00 min

Lab File: VL031217.D

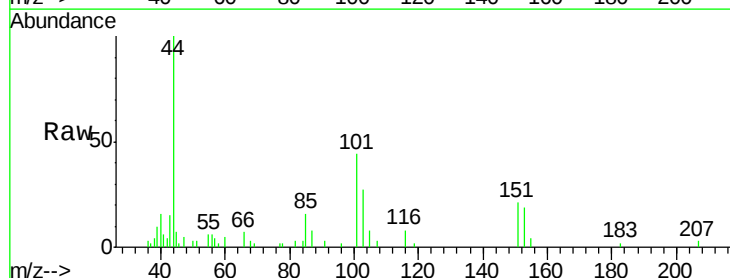
Acq: 14 Dec 2017 1:33

Tgt Ion:101 Resp: 4222

Ion Ratio Lower Upper

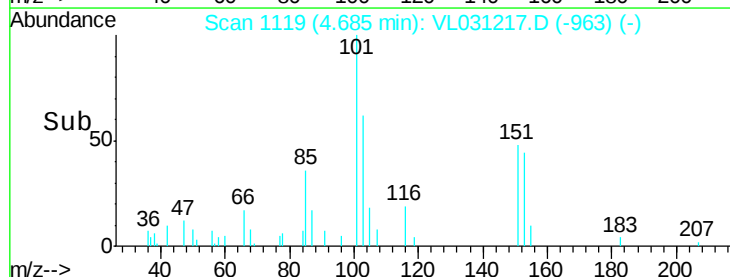
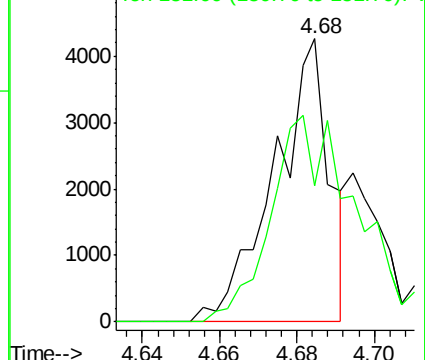
101 100

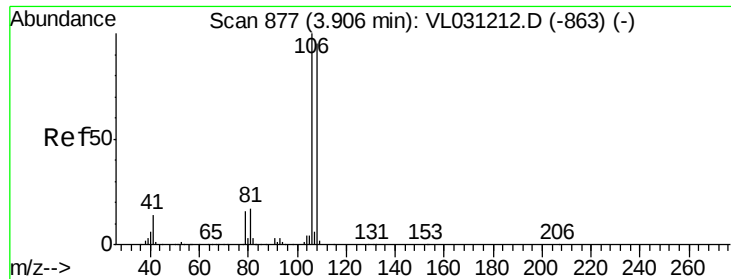
151 110.7 56.5 84.7#



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V





#14

Bromoethene

Concen: 0.03 ppbv

RT: 3.91 min Scan# 877

Delta R.T. 0.00 min

Lab File: VL031217.D

Acq: 14 Dec 2017 1:33

Instrument :

MSVOA_L

ClientSampleId :

VSTDIC0.03

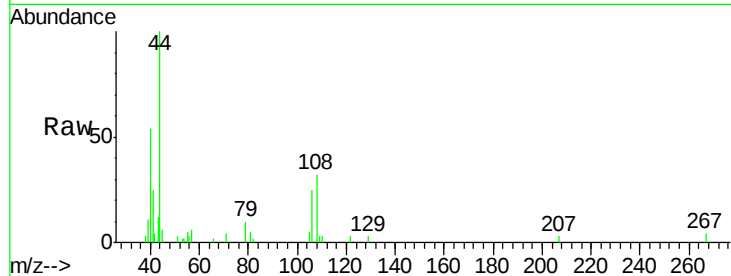
Tgt Ion:108 Resp: 1891

Ion Ratio Lower Upper

108 100

106 140.6 86.5 129.7#

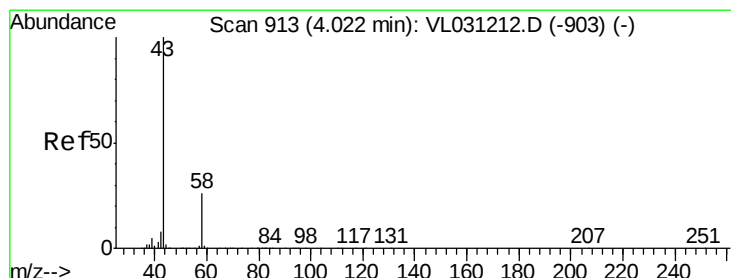
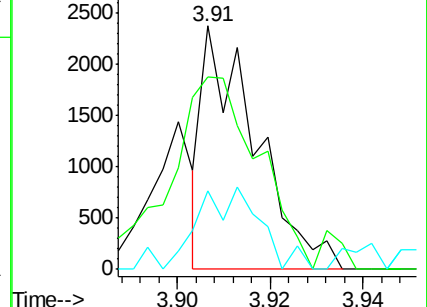
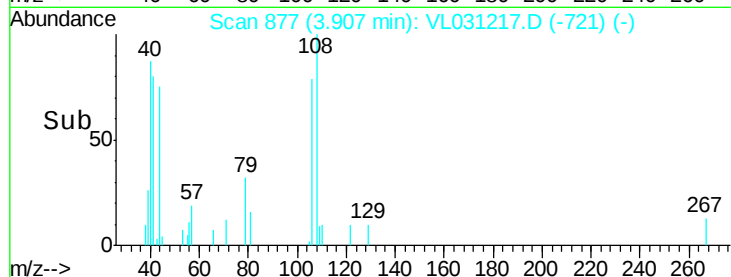
79 49.1 14.2 21.4#



Abundance Ion 108.00 (107.70 to 108.70): V

Ion 106.00 (105.70 to 106.70): V

Ion 79.00 (78.70 to 79.70): VL0



#15

Acetone

Concen: 0.33 ppbv

RT: 4.05 min Scan# 921

Delta R.T. 0.03 min

Lab File: VL031217.D

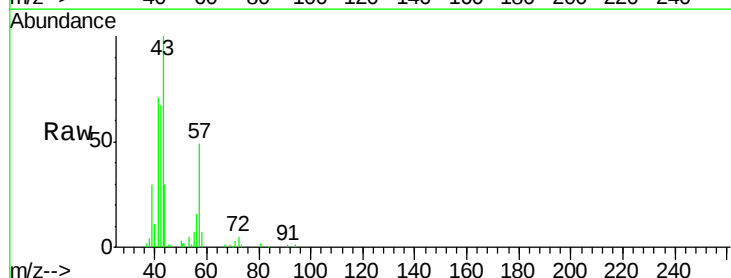
Acq: 14 Dec 2017 1:33

Tgt Ion: 43 Resp: 54238

Ion Ratio Lower Upper

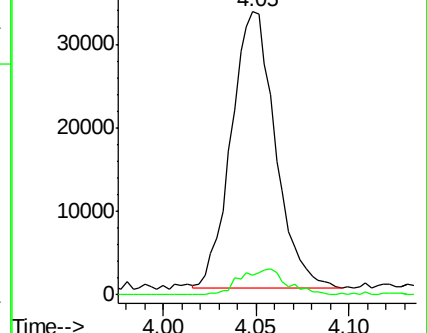
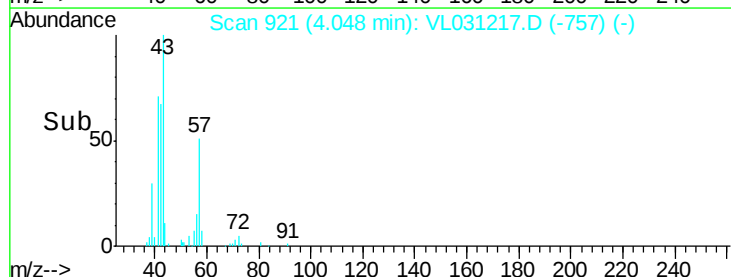
43 100

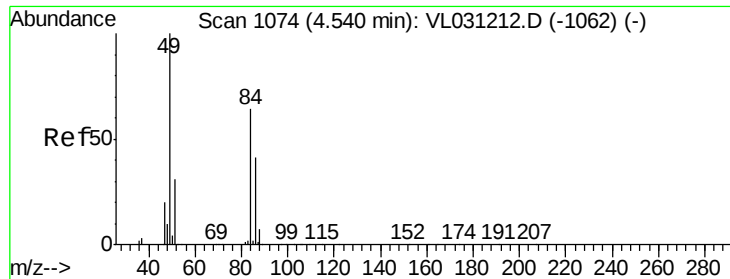
58 10.1 20.3 30.5#



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

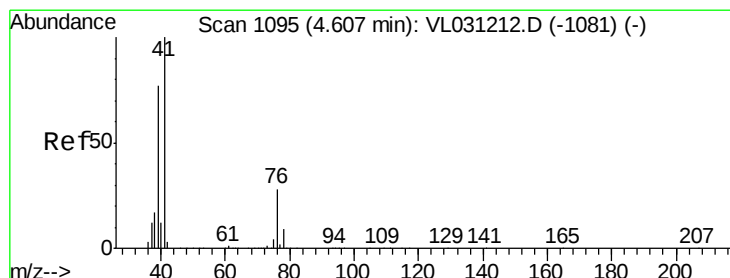
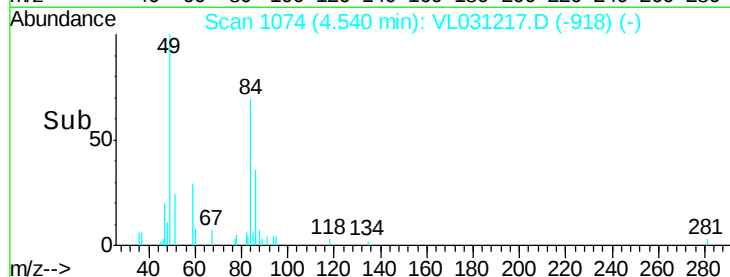
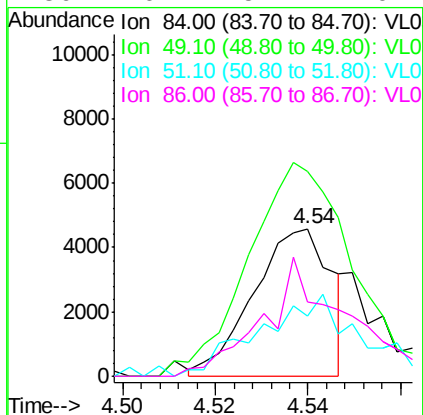
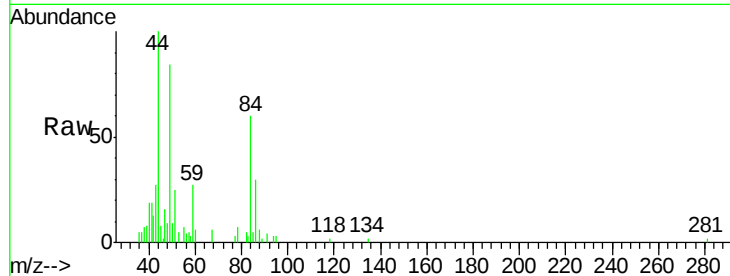




#20
Methylene Chloride
Concen: 0.09 ppbv
RT: 4.54 min Scan# 1074
Delta R.T. 0.00 min
Lab File: VL031217.D
Acq: 14 Dec 2017 1:33

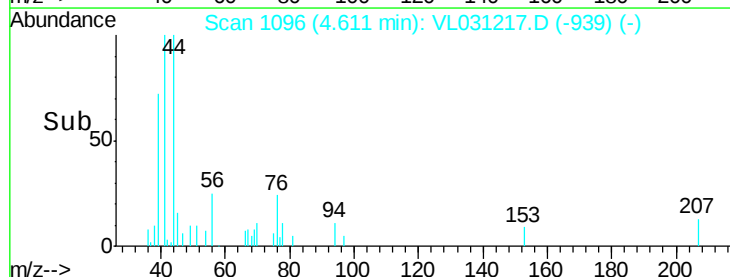
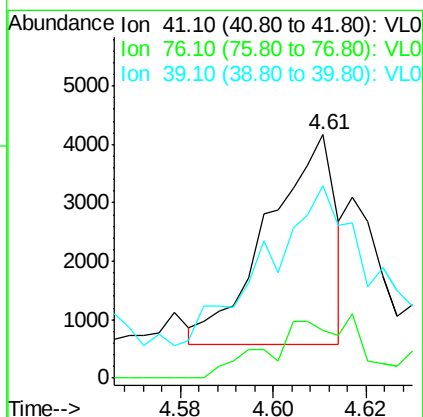
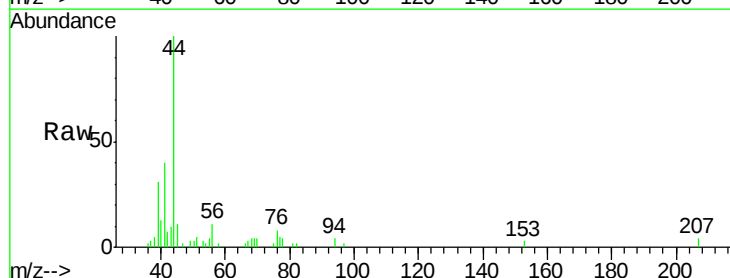
Instrument :
MSVOA_L
ClientSampleId :
VSTDIC0.03

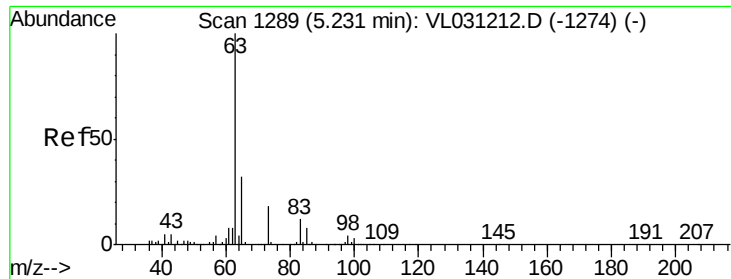
Tgt Ion: 84 Resp: 5353
Ion Ratio Lower Upper
84 100
49 134.5 125.8 188.6
51 38.1 39.3 58.9#
86 46.4 51.1 76.7#



#21
Allyl Chloride
Concen: 0.04 ppbv
RT: 4.61 min Scan# 1096
Delta R.T. 0.00 min
Lab File: VL031217.D
Acq: 14 Dec 2017 1:33

Tgt Ion: 41 Resp: 3613
Ion Ratio Lower Upper
41 100
76 0.0 22.9 34.3#
39 177.5 62.6 93.8#





#24

1,1-Dichloroethane

Concen: 0.03 ppbv

RT: 5.23 min Scan# 1288

Delta R.T. -0.00 min

Lab File: VL031217.D

Acq: 14 Dec 2017 1:33

Instrument :

MSVOA_L

ClientSampleId :

VSTDIC0.03

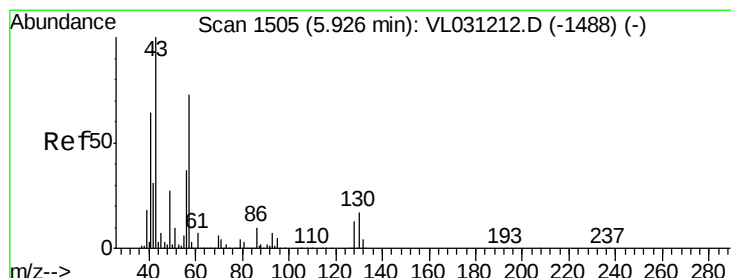
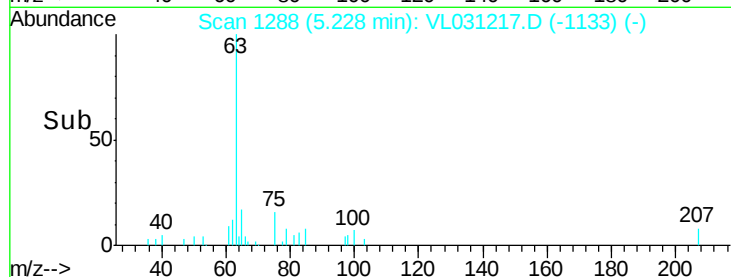
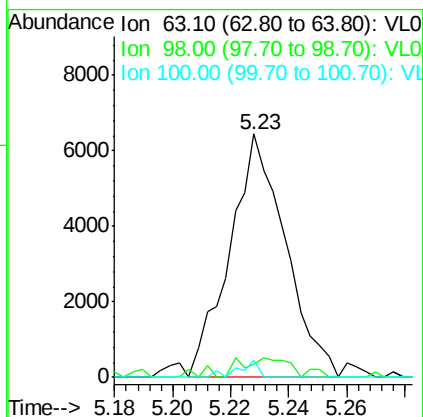
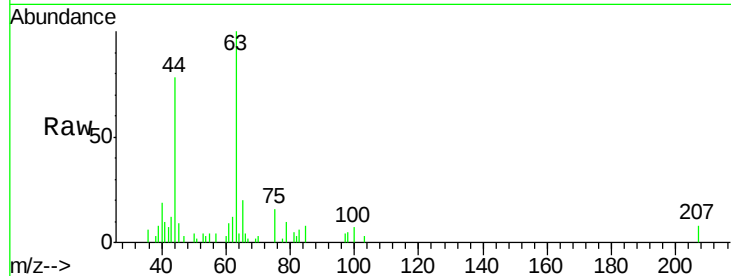
Tgt Ion: 63 Resp: 8582

Ion Ratio Lower Upper

63 100

98 5.2 2.3 6.8

100 6.9 1.4 4.2#



#26

Hexane

Concen: 0.04 ppbv

RT: 5.93 min Scan# 1505

Delta R.T. 0.00 min

Lab File: VL031217.D

Acq: 14 Dec 2017 1:33

Tgt Ion: 57 Resp: 7209

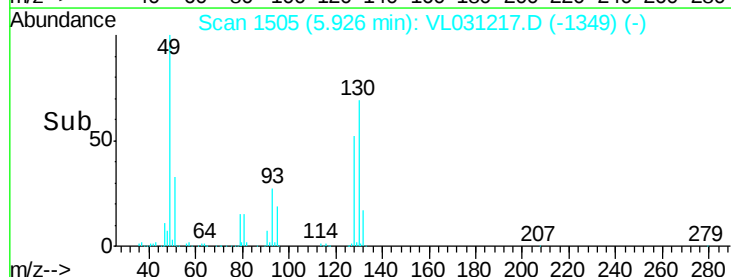
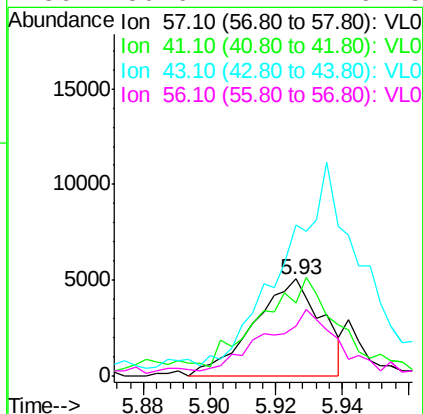
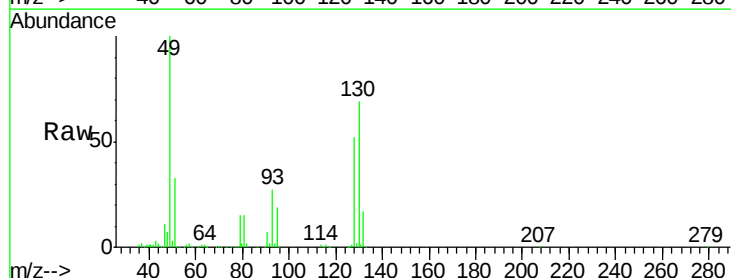
Ion Ratio Lower Upper

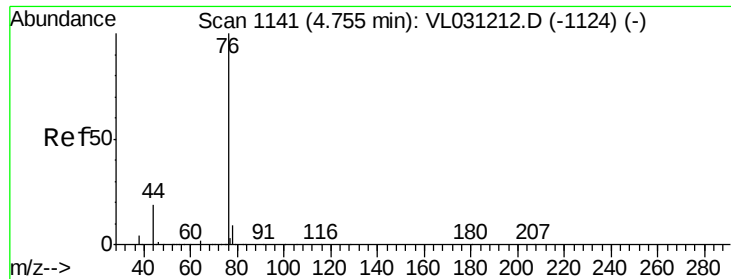
57 100

41 132.7 70.3 105.5#

43 0.0 173.8 260.8#

56 80.6 41.7 62.5#

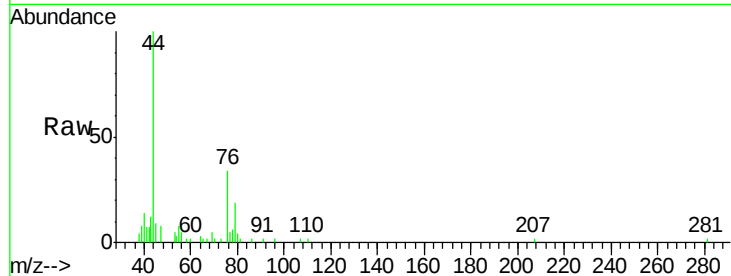




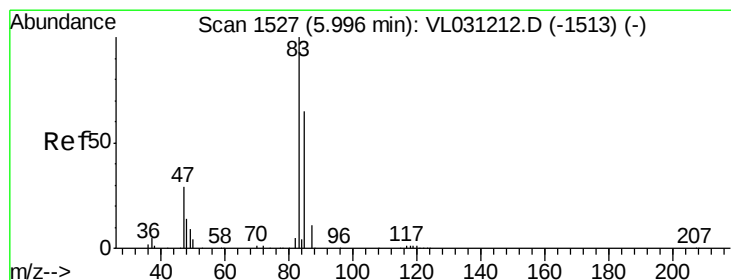
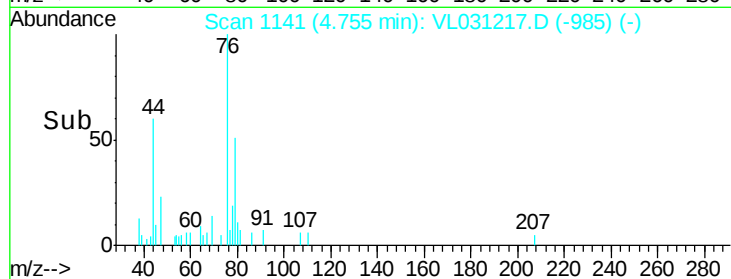
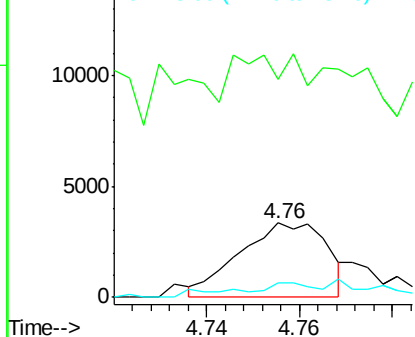
#27
Carbon Disulfide
Concen: 0.03 ppbv
RT: 4.76 min Scan# 1141
Delta R.T. 0.00 min
Lab File: VL031217.D
Acq: 14 Dec 2017 1:33

Instrument :
MSVOA_L
ClientSampleId :
VSTDIC0.03

Tgt Ion: 76 Resp: 4379
Ion Ratio Lower Upper
76 100
44 298.8 16.0 24.0#
78 0.0 7.5 11.3#

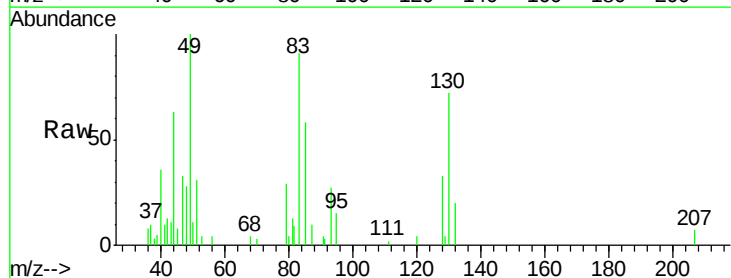


Abundance Ion 76.00 (75.70 to 76.70): VL0
Ion 44.10 (43.80 to 44.80): VL0
Ion 78.00 (77.70 to 78.70): VL0

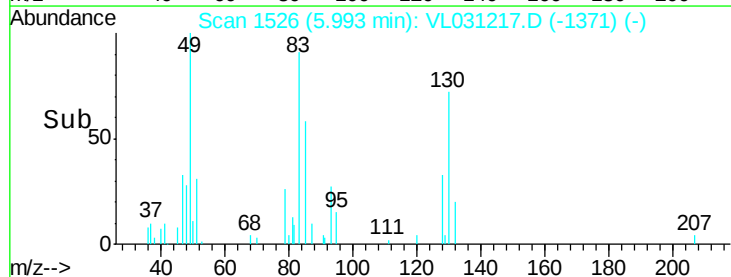
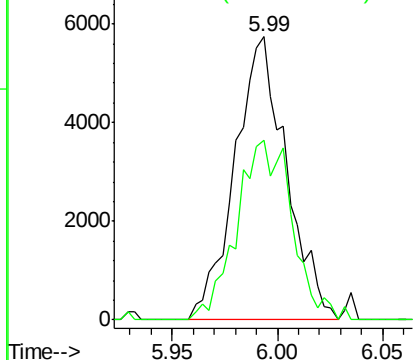


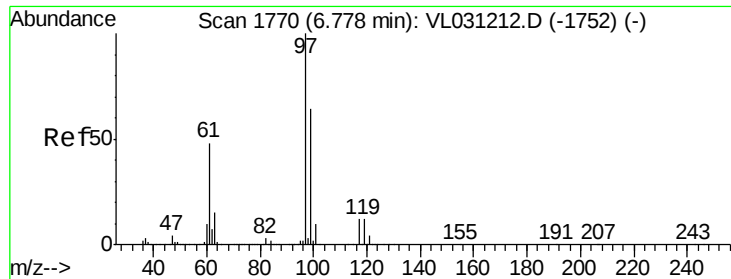
#29
Chloroform
Concen: 0.03 ppbv
RT: 5.99 min Scan# 1526
Delta R.T. -0.00 min
Lab File: VL031217.D
Acq: 14 Dec 2017 1:33

Tgt Ion: 83 Resp: 9750
Ion Ratio Lower Upper
83 100
85 63.3 51.8 77.6



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





#32

1,1,1-Trichloroethane

Concen: 0.04 ppbv

RT: 6.77 min Scan# 1769

Delta R.T. -0.00 min

Lab File: VL031217.D

Acq: 14 Dec 2017 1:33

Instrument :

MSVOA_L

ClientSampleId :

VSTDIC0.03

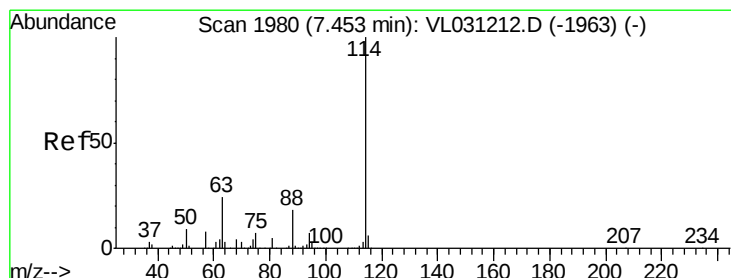
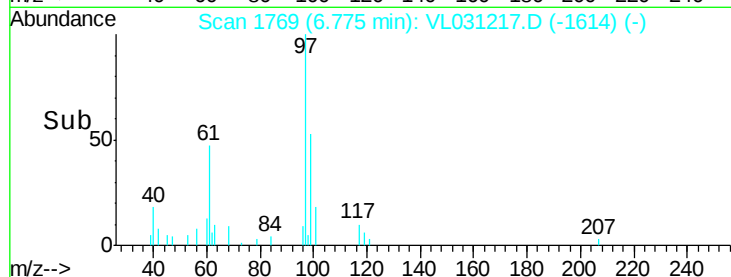
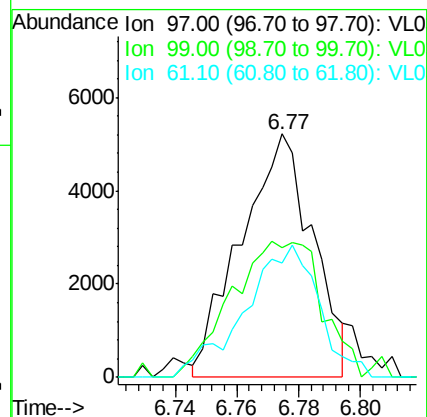
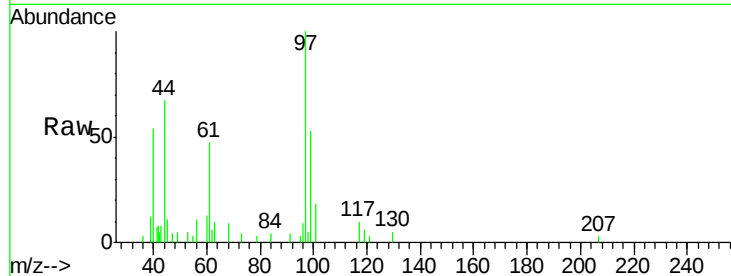
Tgt Ion: 97 Resp: 8407

Ion Ratio Lower Upper

97 100

99 72.9 51.4 77.0

61 56.1 38.4 57.6



#33

1,4-Difluorobenzene

Concen: 10.00 ppbv

RT: 7.45 min Scan# 1979

Delta R.T. -0.00 min

Lab File: VL031217.D

Acq: 14 Dec 2017 1:33

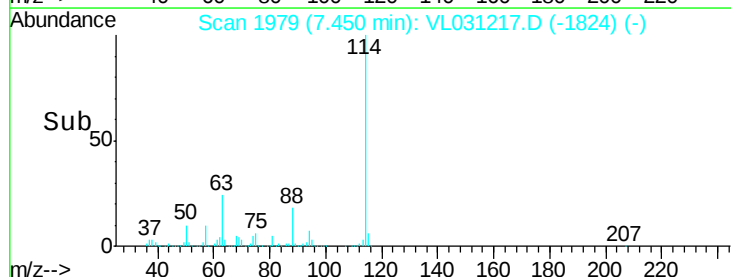
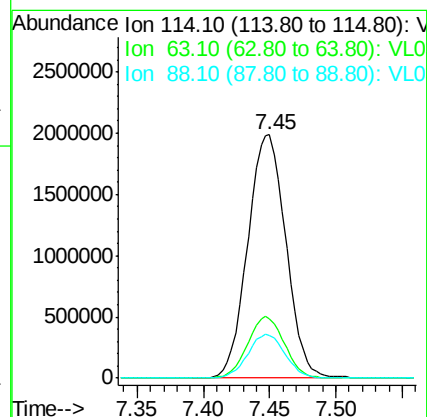
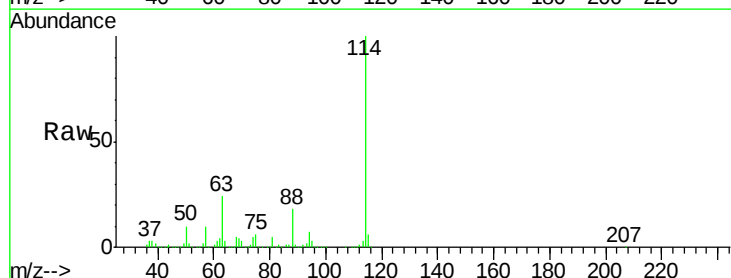
Tgt Ion: 114 Resp: 3978650

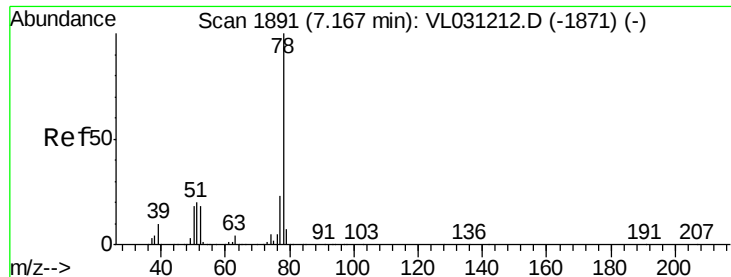
Ion Ratio Lower Upper

114 100

63 24.5 19.8 29.8

88 17.8 14.2 21.4





#36

Benzene

Concen: 0.04 ppbv

RT: 7.16 min Scan# 1889

Delta R.T. -0.01 min

Lab File: VL031217.D

Acq: 14 Dec 2017 1:33

Instrument :

MSVOA_L

ClientSampleId :

VSTDIC0.03

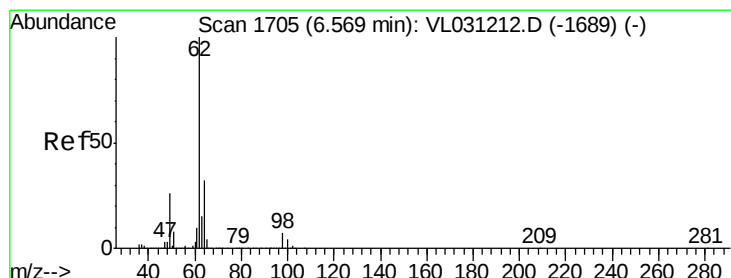
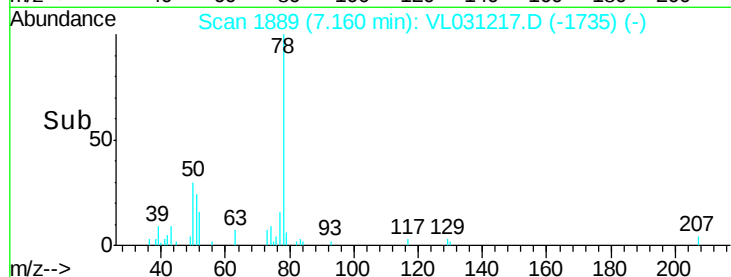
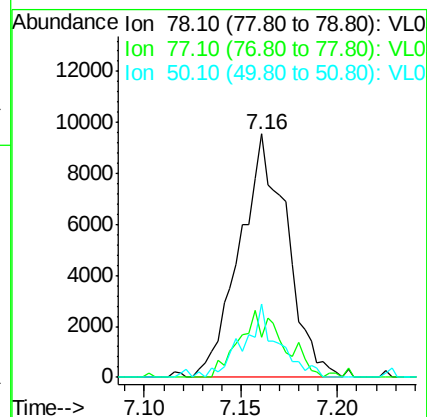
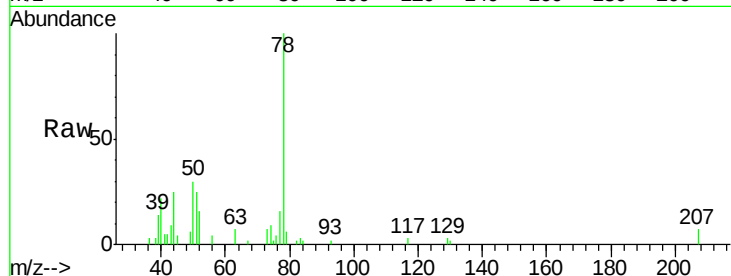
Tgt Ion: 78 Resp: 16229

Ion Ratio Lower Upper

78 100

77 16.4 18.1 27.1#

50 29.9 14.6 21.8#



#37

1,2-Dichloroethane

Concen: 0.03 ppbv

RT: 6.57 min Scan# 1704

Delta R.T. -0.00 min

Lab File: VL031217.D

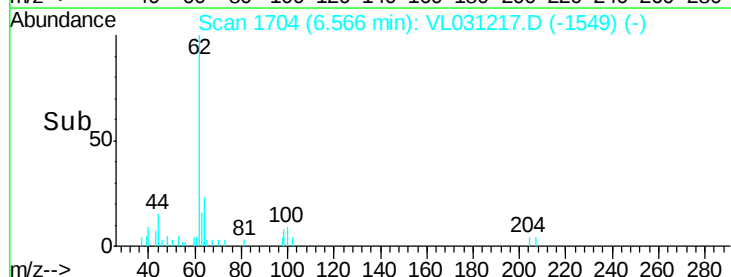
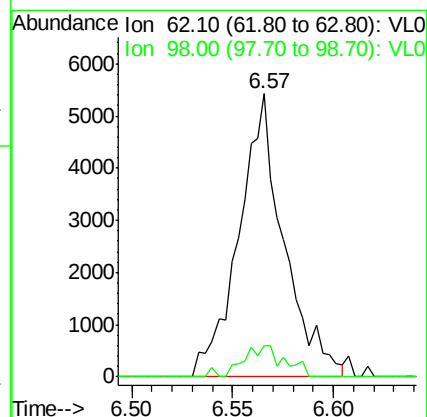
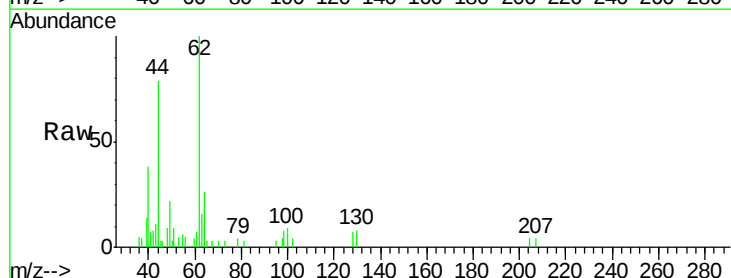
Acq: 14 Dec 2017 1:33

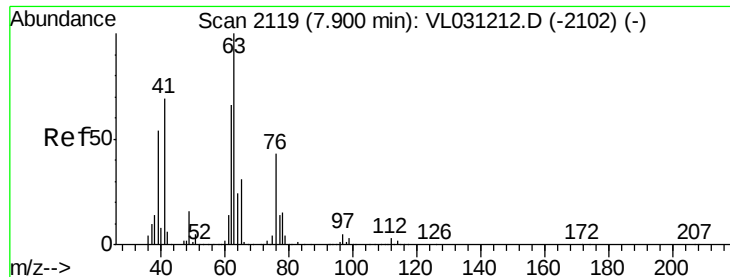
Tgt Ion: 62 Resp: 8451

Ion Ratio Lower Upper

62 100

98 10.2 5.4 8.2#

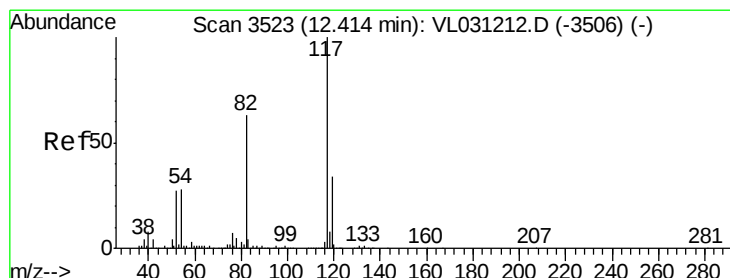
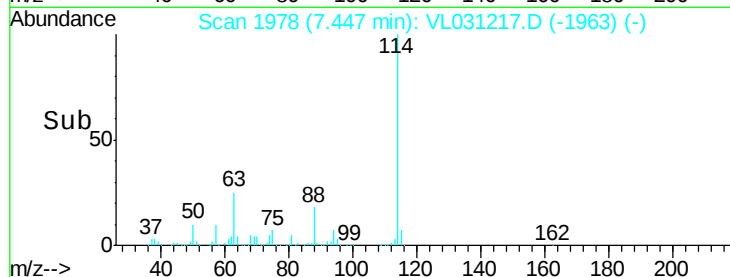
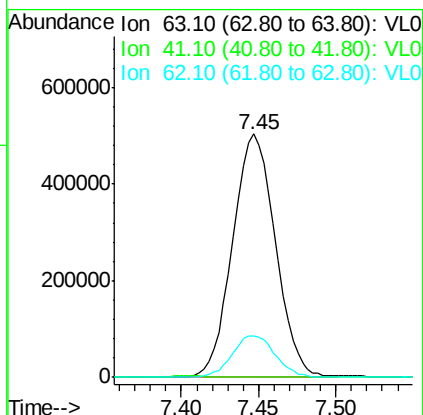
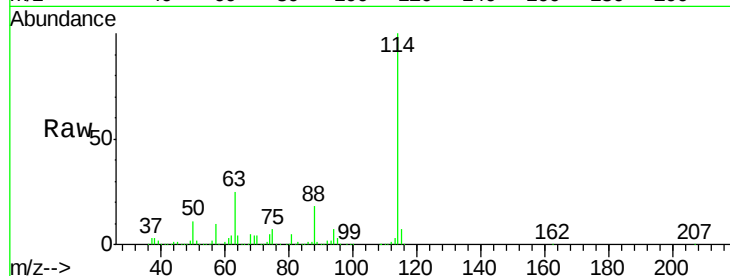




#39
 1,2-Dichloropropane
 Concen: 5.50 ppbv
 RT: 7.45 min Scan# 1978
 Delta R.T. -0.45 min
 Lab File: VL031217.D
 Acq: 14 Dec 2017 1:33

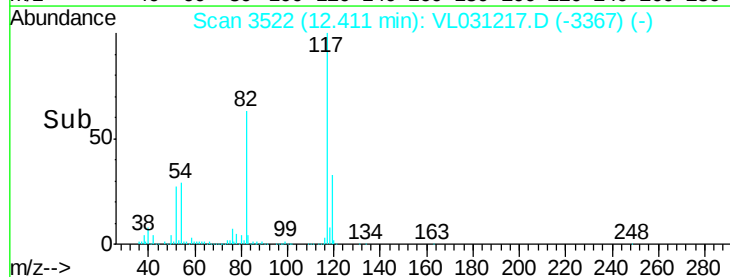
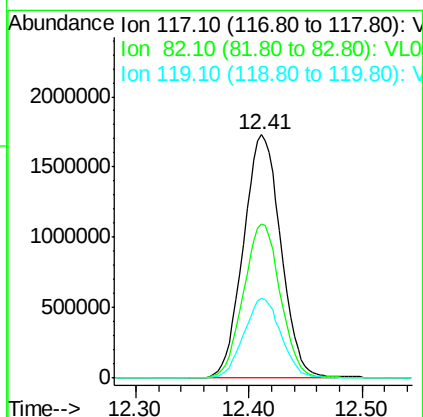
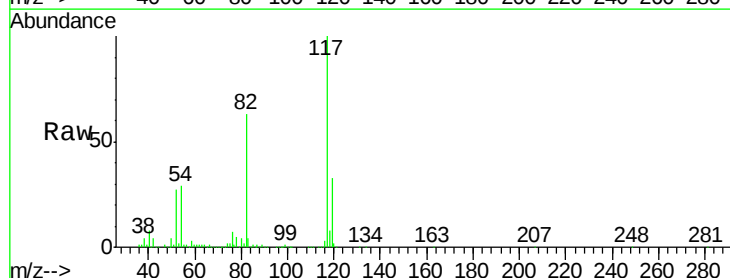
Instrument :
 MSVOA_L
 ClientSampleId :
 VSTDIC0.03

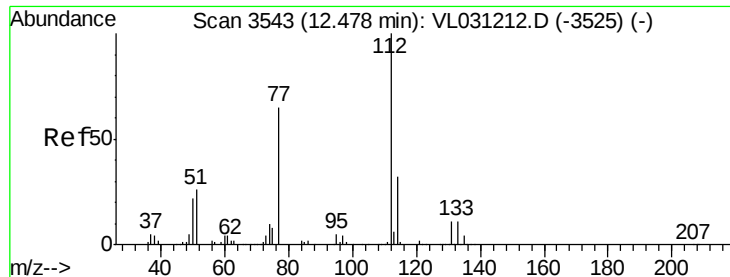
Tgt Ion: 63 Resp: 959315
 Ion Ratio Lower Upper
 63 100
 41 0.0 55.2 82.8#
 62 16.9 53.0 79.4#



#55
 Chlorobenzene-d5
 Concen: 10.00 ppbv
 RT: 12.41 min Scan# 3522
 Delta R.T. -0.00 min
 Lab File: VL031217.D
 Acq: 14 Dec 2017 1:33

Tgt Ion: 117 Resp: 3979768
 Ion Ratio Lower Upper
 117 100
 82 63.1 48.1 72.1
 119 32.7 23.1 34.7

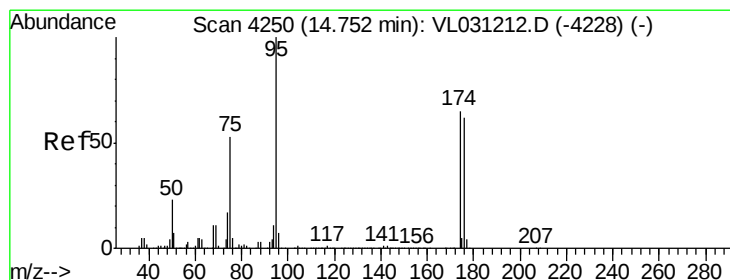
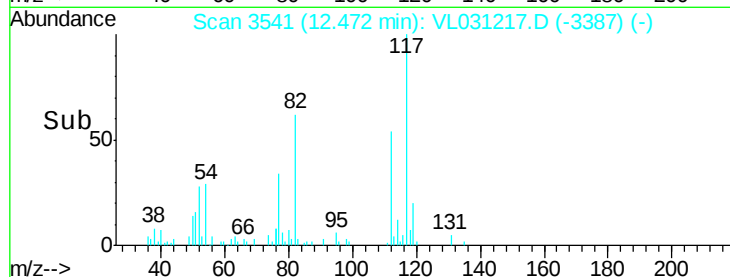
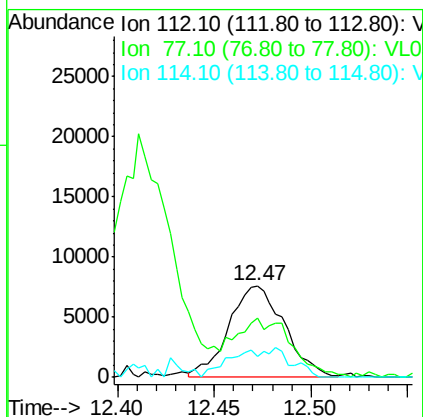
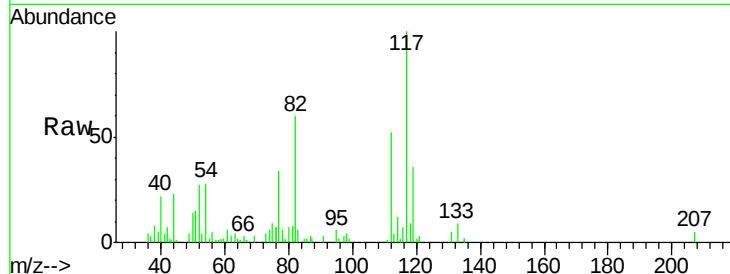




#57
Chlorobenzene
Concen: 0.04 ppbv
RT: 12.47 min Scan# 3541
Delta R.T. -0.01 min
Lab File: VL031217.D
Acq: 14 Dec 2017 1:33

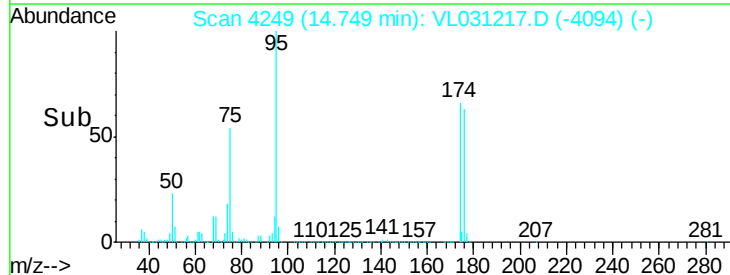
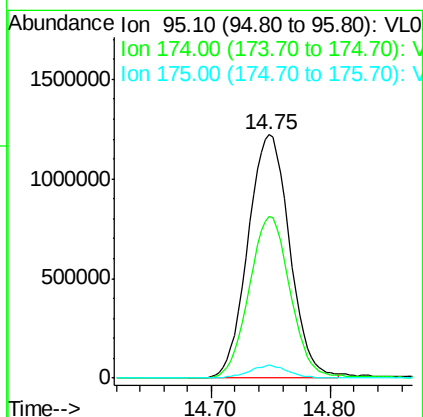
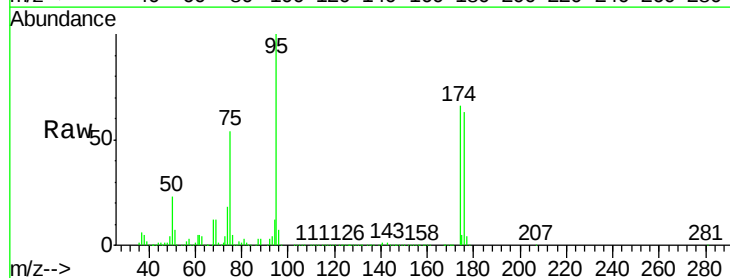
Instrument :
MSVOA_L
ClientSampleId :
VSTDIC0.03

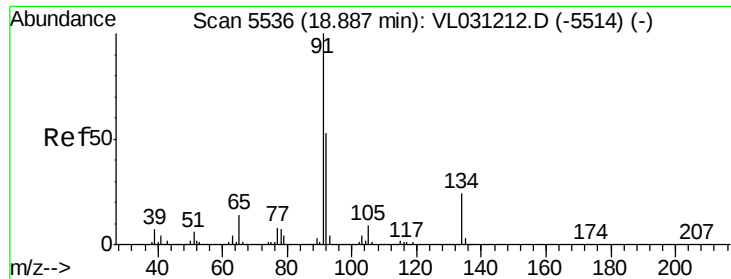
Tgt Ion: 112 Resp: 15246
Ion Ratio Lower Upper
112 100
77 62.8 52.9 79.3
114 23.7 29.1 35.5#



#68
1-Bromo-4-Fluorobenzene
Concen: 9.61 ppbv
RT: 14.75 min Scan# 4249
Delta R.T. -0.00 min
Lab File: VL031217.D
Acq: 14 Dec 2017 1:33

Tgt Ion: 95 Resp: 2955145
Ion Ratio Lower Upper
95 100
174 66.7 52.5 78.7
175 5.0 4.1 6.1





#70

n-Butylbenzene

Concen: 0.03 ppbv

RT: 18.89 min Scan# 5536

Delta R.T. 0.00 min

Lab File: VL031217.D

Acq: 14 Dec 2017 1:33

Instrument :

MSVOA_L

ClientSampleId :

VSTDIC0.03

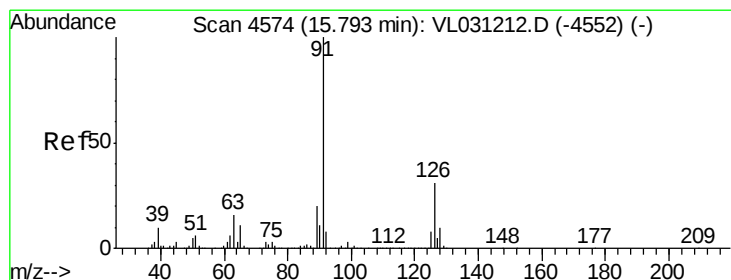
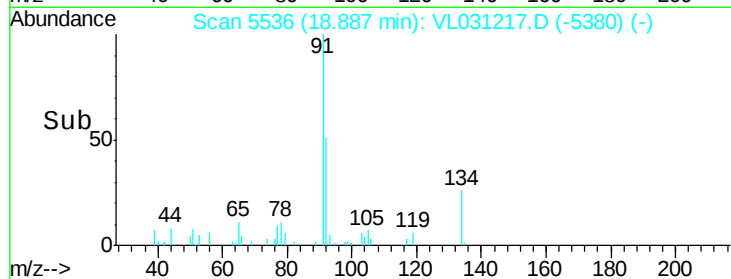
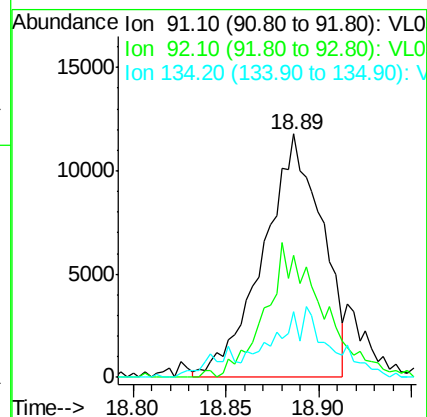
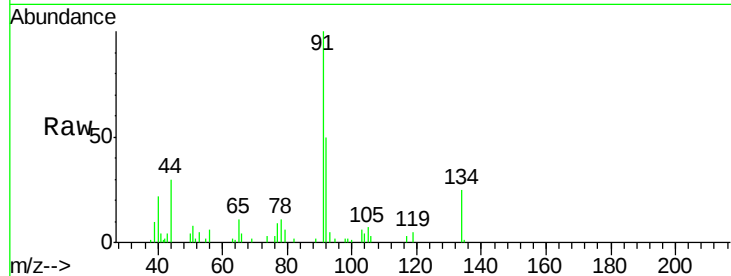
Tgt Ion: 91 Resp: 25908

Ion Ratio Lower Upper

91 100

92 54.9 43.4 65.2

134 32.9 19.3 28.9#



#71

2-Chlorotoluene

Concen: 0.04 ppbv

RT: 15.79 min Scan# 4572

Delta R.T. -0.01 min

Lab File: VL031217.D

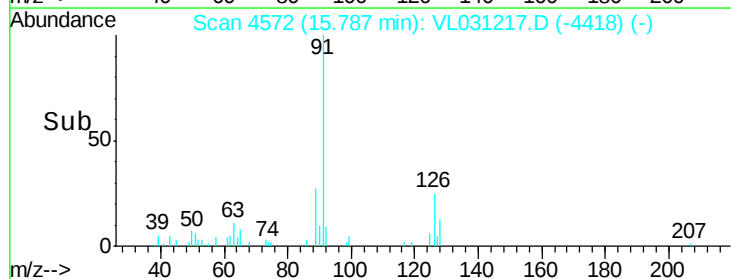
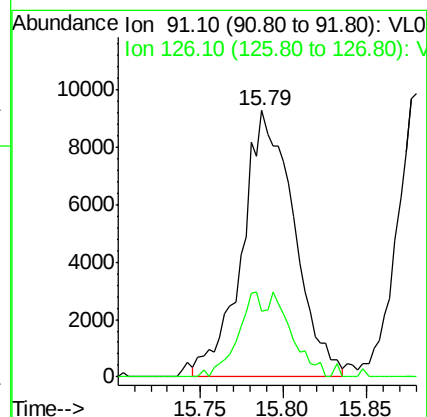
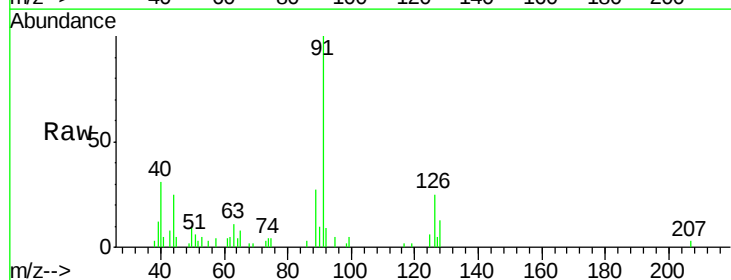
Acq: 14 Dec 2017 1:33

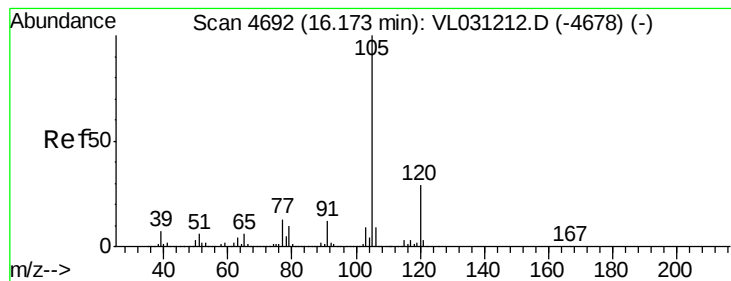
Tgt Ion: 91 Resp: 20242

Ion Ratio Lower Upper

91 100

126 31.0 12.6 50.6





#72

4-Ethyltoluene

Concen: 0.04 ppbv

RT: 16.17 min Scan# 4691

Delta R.T. -0.00 min

Lab File: VL031217.D

Acq: 14 Dec 2017 1:33

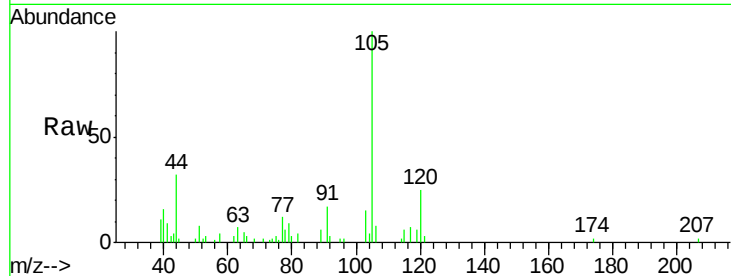
Instrument :

MSVOA_L

ClientSampleId :

VSTDIC0.03

Tgt Ion:	105	Resp:	25959
Ion Ratio	Lower	Upper	
105	100		
120	32.1	24.2	36.2
91	15.2	9.8	14.8#
77	15.0	10.5	15.7

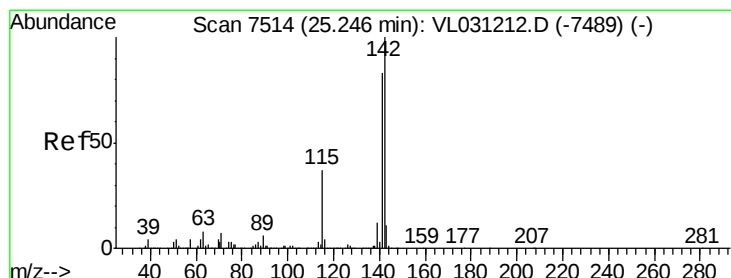
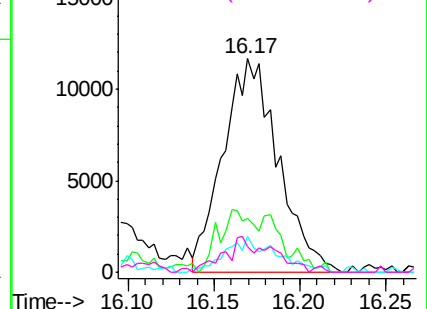
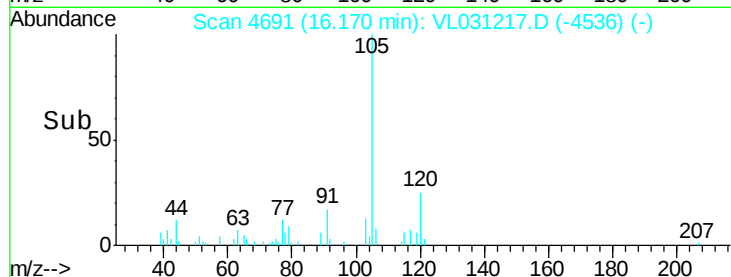


Abundance Ion 105.10 (104.80 to 105.80): V

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



#80

Naphthalene, 2-methyl-

Concen: 0.05 ppbv

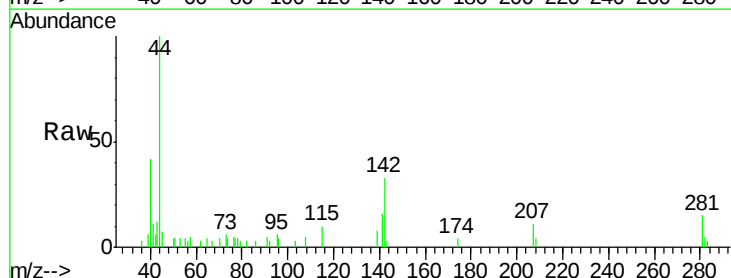
RT: 25.25 min Scan# 7515

Delta R.T. 0.00 min

Lab File: VL031217.D

Acq: 14 Dec 2017 1:33

Tgt Ion:	142	Resp:	5656
Ion Ratio	Lower	Upper	
142	100		
141	78.8	66.8	100.2
115	38.9	29.7	44.5



Abundance Ion 142.00 (141.70 to 142.70): V

Ion 141.00 (140.70 to 141.70): V

Ion 115.00 (114.70 to 115.70): V

