

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL092418\
 Data File : VL032531.D
 Acq On : 25 Sep 2018 5:37
 Operator : SY/AP
 Sample : J5034-01DL 10X
 Misc : 400ml/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 GAC-EFF-DUP-092018DL

Quant Time: Sep 25 07:13:26 2018
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL092418AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Tue Sep 25 05:17:15 2018
 QLast Update : Tue Sep 25 05:17:15 2018
 Response via : Initial Calibration

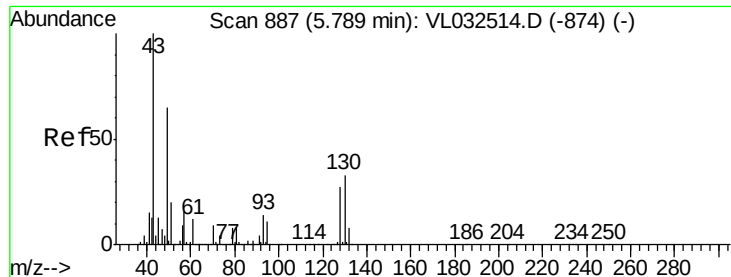
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.79	49	1493320	10.00	ppbv	-0.02
33) 1,4-Difluorobenzene	7.32	114	3338856	10.00	ppbv	-0.03
55) Chlorobenzene-d5	12.27	117	3217144	10.00	ppbv	-0.03

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.61	95	2439485	10.06	ppbv	-0.03
Spiked Amount	10.000	Range	65 - 135	Recovery	=	100.60%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.09	85	10001	0.072	ppbv	99
4) Chloromethane	3.18	50	2327	0.032	ppbv	97
7) Chloroethane	3.62	64	1052	0.040	ppbv #	42
9) Propene	3.26	41	135014	2.506	ppbv	91
11) Trichlorofluoromethane	4.02	101	16091	0.098	ppbv #	82
12) 1,1,2-Trichlorotrifluoroet	4.57	101	9135	0.068	ppbv #	50
13) Ethanol	3.68	45	135327	8.356	ppbv	94
15) Acetone	3.94	43	88803	0.677	ppbv	93
16) 1,3-Butadiene	3.41	39	61632	1.159	ppbv #	3
17) tert-Butyl alcohol	4.40	59	4402	0.267	ppbv #	100
19) Isopropyl Alcohol	4.06	45	24132	0.264	ppbv #	93
20) Methylene Chloride	4.44	84	24176	0.381	ppbv	85
24) 1,1-Dichloroethane	5.11	63	160798	0.834	ppbv	96
25) Ethyl Acetate	5.80	43	12898	0.041	ppbv #	65
26) Hexane	5.81	57	13543	0.094	ppbv #	68
29) Chloroform	5.87	83	49233	0.223	ppbv	90
30) Cyclohexane	7.27	84	17149	0.147	ppbv #	1
31) cis-1,2-Dichloroethene	5.66	61	105256	0.769	ppbv	94
32) 1,1,1-Trichloroethane	6.64	97	506699	2.157	ppbv	100
38) Trichloroethene	7.99	130	644548	6.241	ppbv	99
39) 1,2-Dichloropropane	7.32	63	899072	7.394	ppbv #	25
80) Naphthalene,2-methyl-	25.15	142	2320	0.036	ppbv #	65

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.79 min Scan# 886

Delta R.T. -0.02 min

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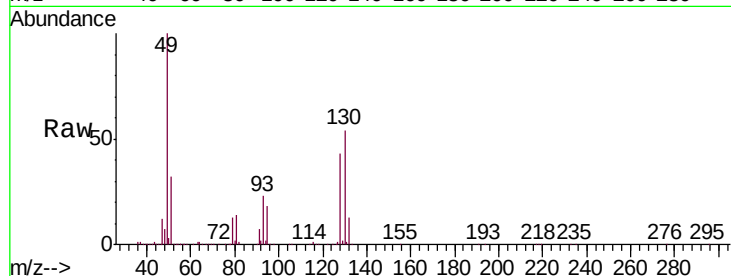
Tgt Ion: 49 Resp: 1493320

Ion Ratio Lower Upper

49 100

128 43.8 20.7 62.1

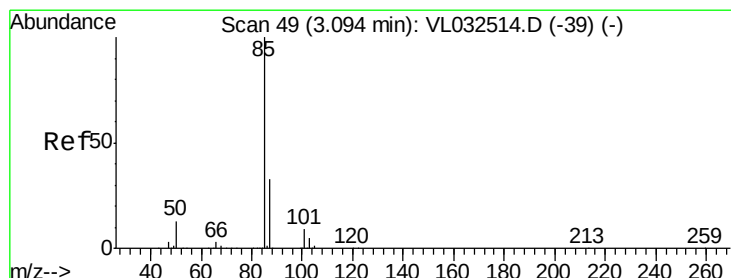
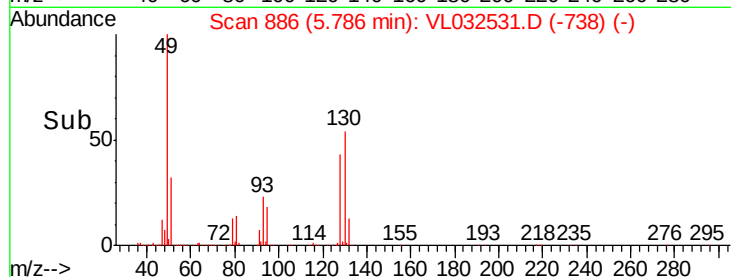
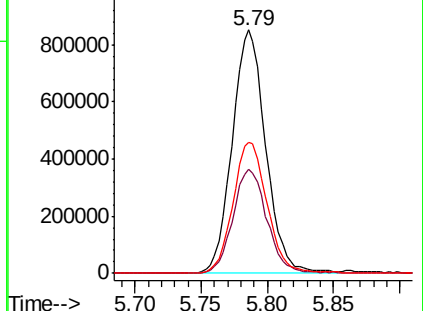
130 55.2 26.6 79.7



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: 0.072 ppbv

RT: 3.09 min Scan# 48

Delta R.T. -0.02 min

Lab File: VL032531.D

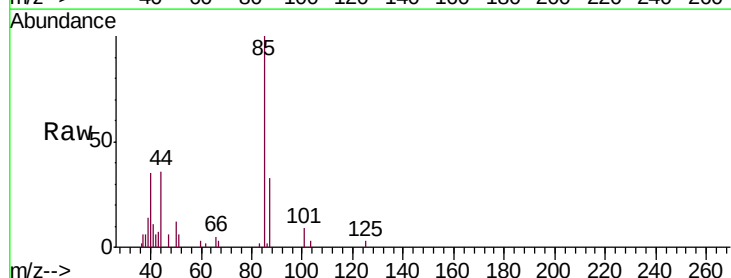
Acq: 25 Sep 2018 5:37

Tgt Ion: 85 Resp: 10001

Ion Ratio Lower Upper

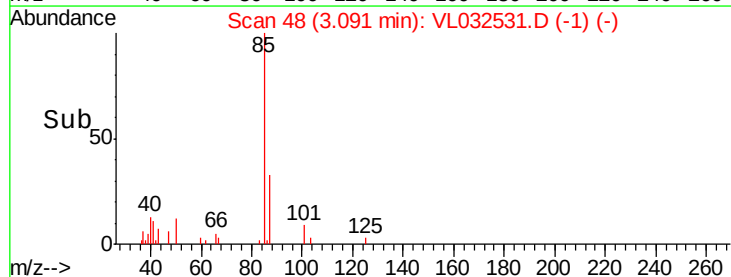
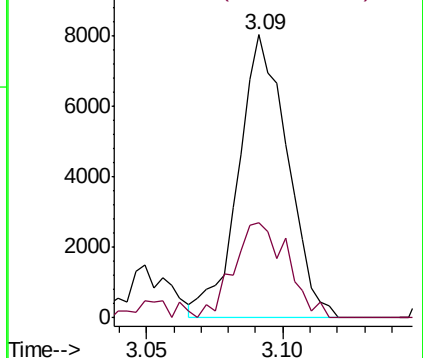
85 100

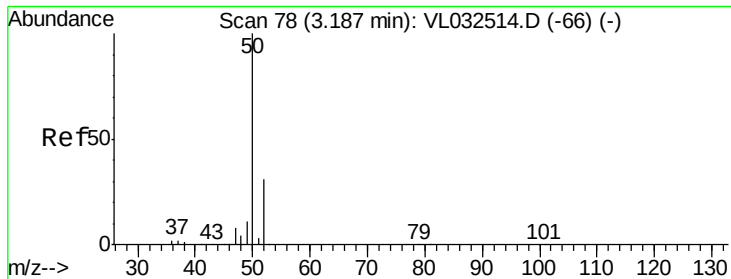
87 33.4 26.2 39.4



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#4

Chloromethane

Concen: 0.032 ppbv

RT: 3.18 min Scan# 77

Delta R.T. -0.02 min

Lab File: VL032531.D

Acq: 25 Sep 2018 5:37

Instrument :

MSVOA_L

ClientSampleId :

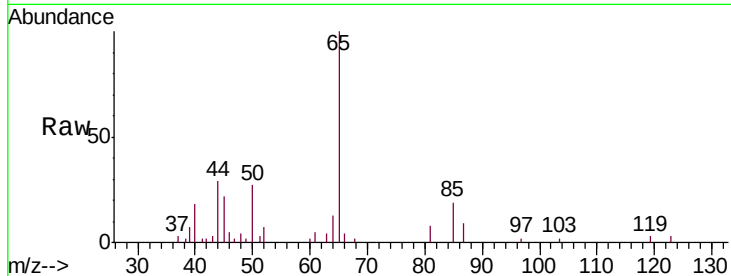
GAC-EFF-DUP-092018DL

Tgt Ion: 50 Resp: 2327

Ion Ratio Lower Upper

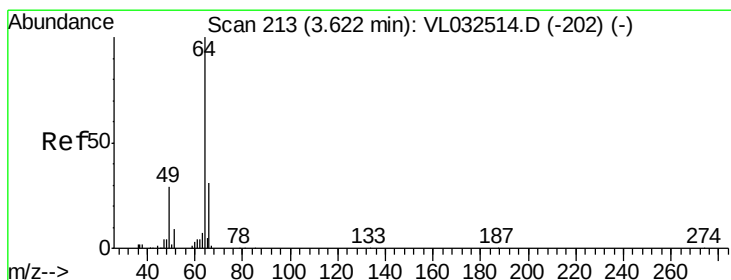
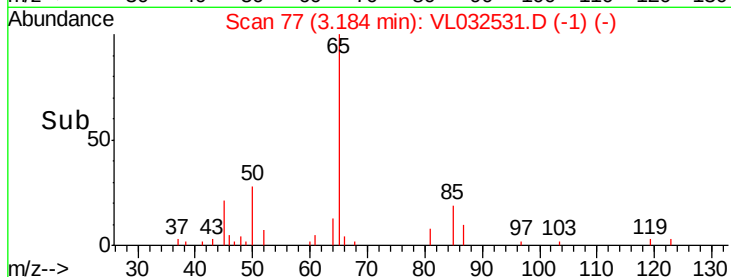
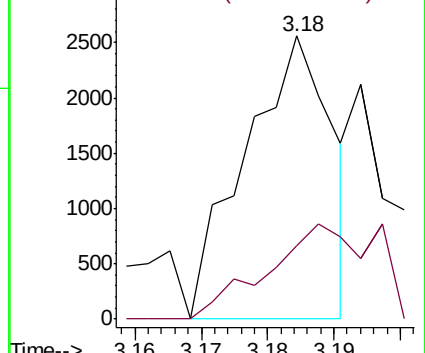
50 100

52 30.3 25.6 38.4



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0



#7

Chloroethane

Concen: 0.040 ppbv

RT: 3.62 min Scan# 212

Delta R.T. -0.02 min

Lab File: VL032531.D

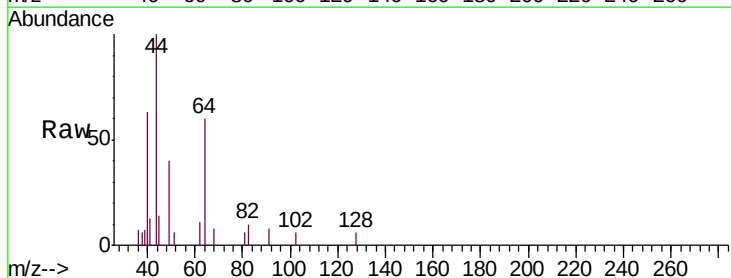
Acq: 25 Sep 2018 5:37

Tgt Ion: 64 Resp: 1052

Ion Ratio Lower Upper

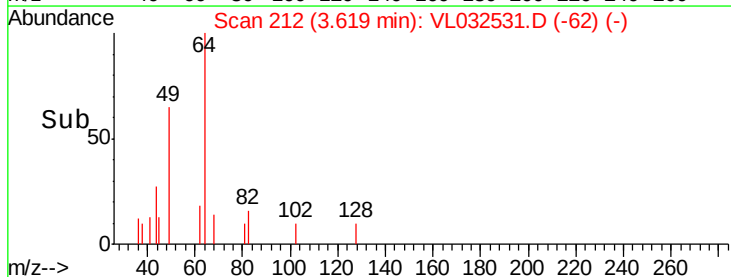
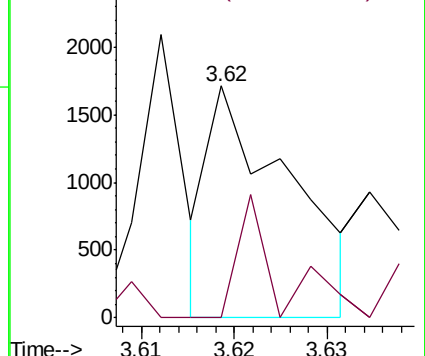
64 100

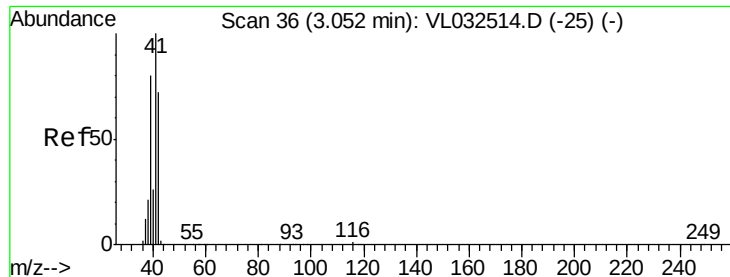
66 0.0 25.8 38.6#



Abundance Ion 64.10 (63.80 to 64.80): VL0

Ion 66.10 (65.80 to 66.80): VL0





#9

Propene

Concen: 2.506 ppbv

RT: 3.26 min Scan# 99

Delta R.T. 0.19 min

Lab File: VL032531.D

Acq: 25 Sep 2018 5:37

Instrument :

MSVOA_L

ClientSampleId :

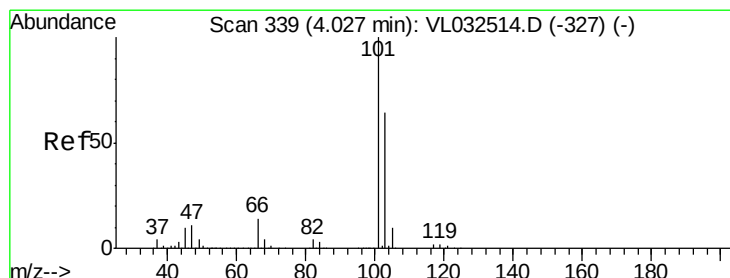
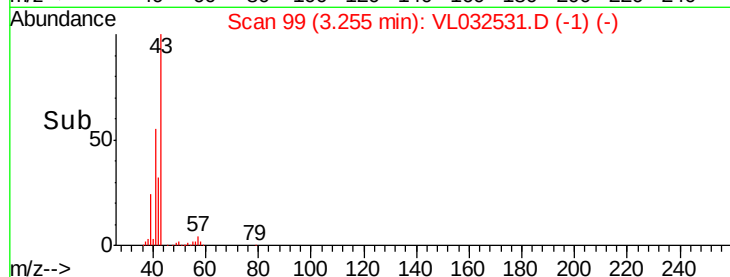
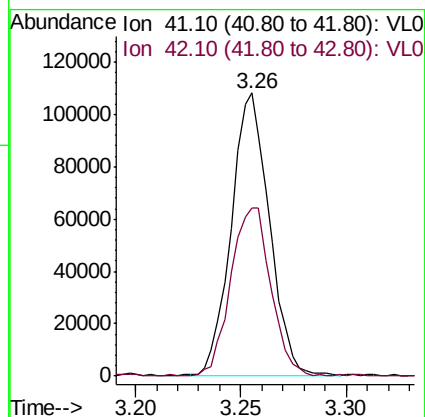
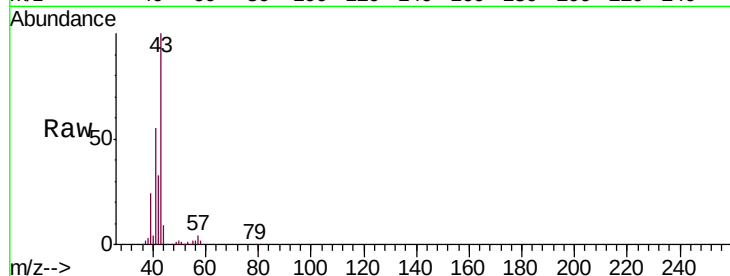
GAC-EFF-DUP-092018DL

Tgt Ion: 41 Resp: 135014

Ion Ratio Lower Upper

41 100

42 63.3 56.6 84.8



#11

Trichlorofluoromethane

Concen: 0.098 ppbv

RT: 4.02 min Scan# 338

Delta R.T. -0.02 min

Lab File: VL032531.D

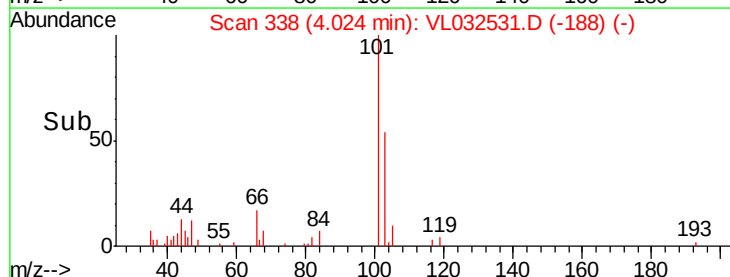
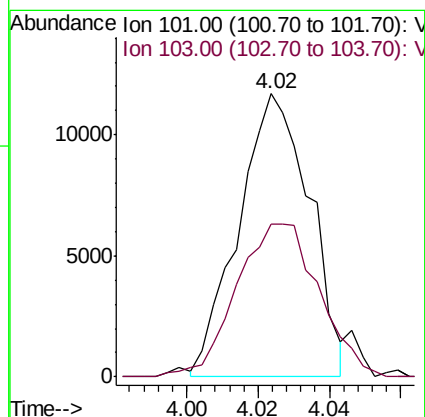
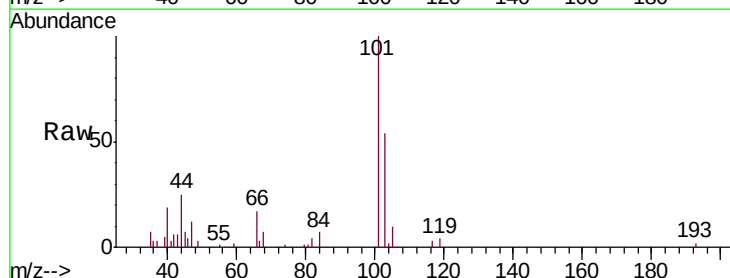
Acq: 25 Sep 2018 5:37

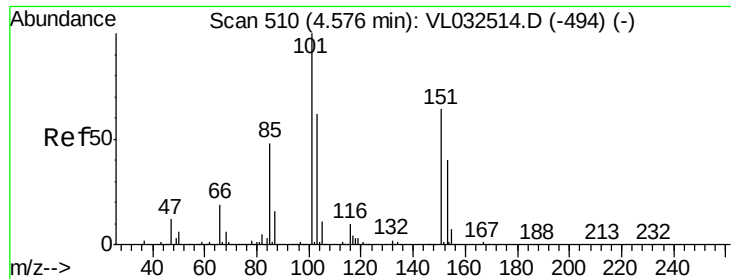
Tgt Ion: 101 Resp: 16091

Ion Ratio Lower Upper

101 100

103 51.9 52.8 79.2#





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.068 ppbv

RT: 4.57 min Scan# 509

Delta R.T. -0.02 min

Lab File: VL032531.D

Acq: 25 Sep 2018 5:37

Instrument :

MSVOA_L

ClientSampleId :

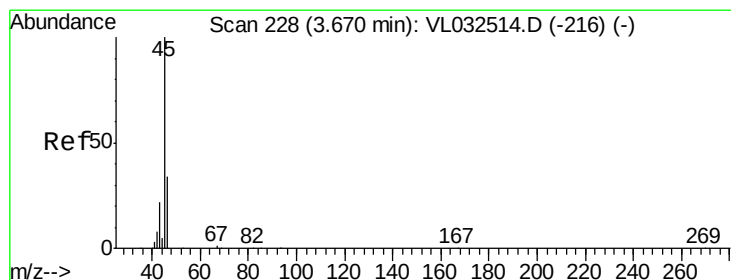
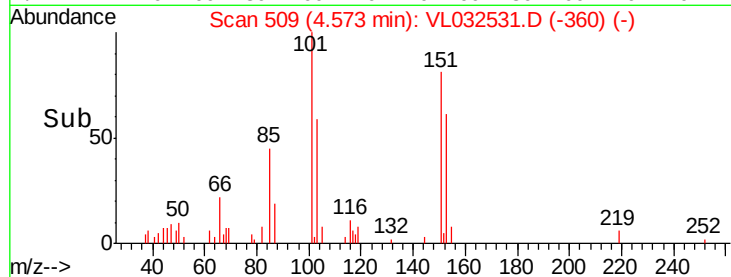
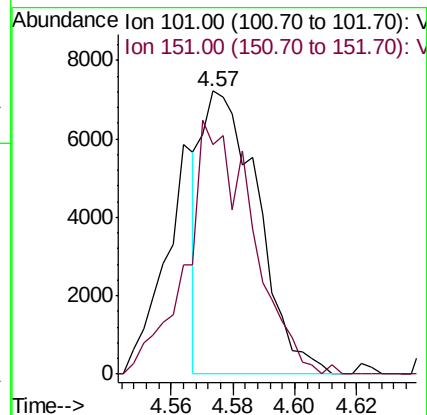
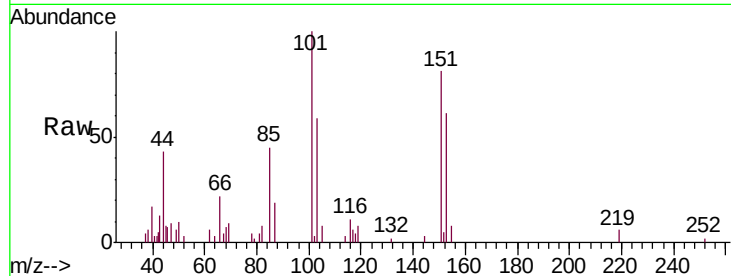
GAC-EFF-DUP-092018DL

Tgt Ion:101 Resp: 9135

Ion Ratio Lower Upper

101 100

151 105.1 52.6 78.8#



#13

Ethanol

Concen: 8.356 ppbv

RT: 3.68 min Scan# 230

Delta R.T. -0.01 min

Lab File: VL032531.D

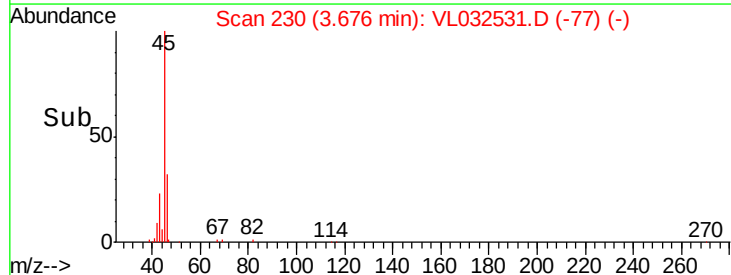
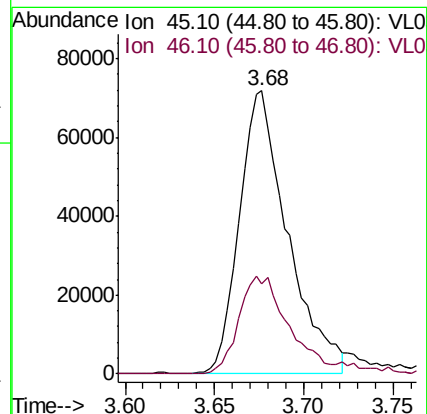
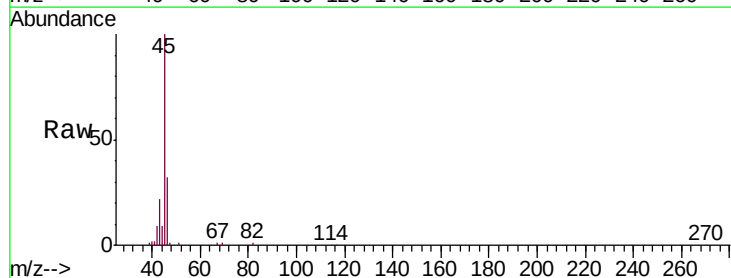
Acq: 25 Sep 2018 5:37

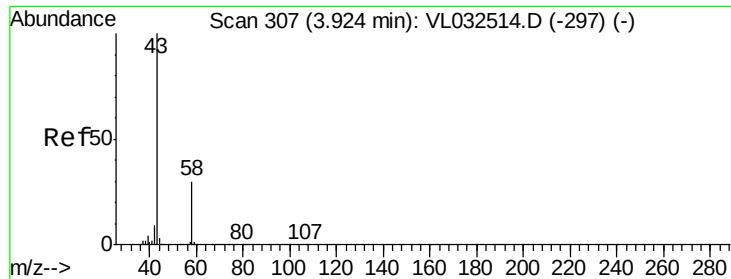
Tgt Ion: 45 Resp: 135327

Ion Ratio Lower Upper

45 100

46 38.7 14.2 56.8





#15

Acetone

Concen: 0.677 ppbv

RT: 3.94 min Scan# 311

Delta R.T. -0.00 min

Lab File: VL032531.D

Acq: 25 Sep 2018 5:37

Instrument :

MSVOA_L

ClientSampleId :

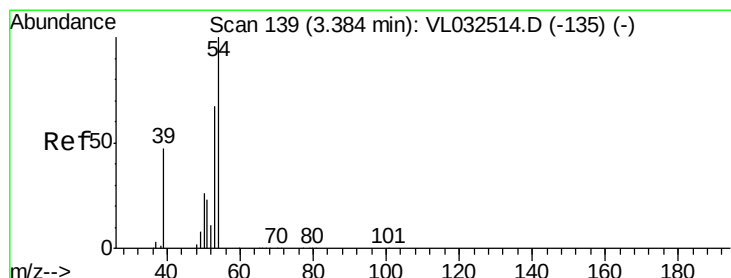
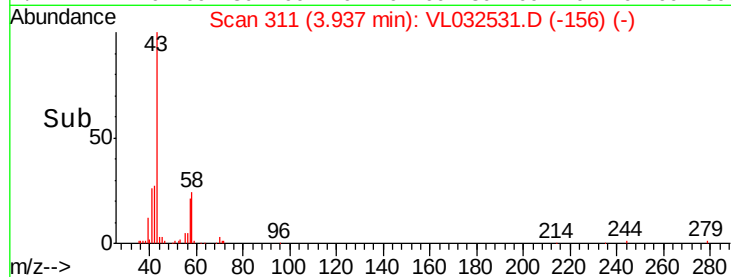
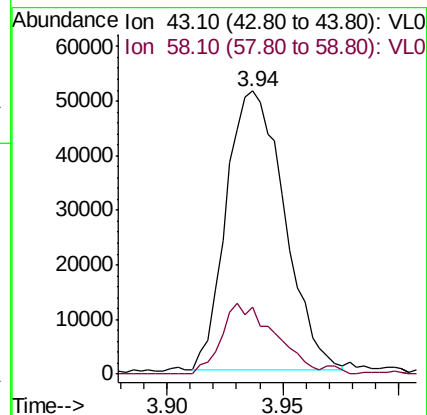
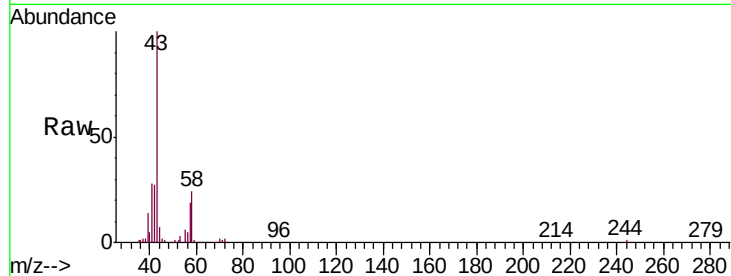
GAC-EFF-DUP-092018DL

Tgt Ion: 43 Resp: 88803

Ion Ratio Lower Upper

43 100

58 24.6 22.6 33.8



#16

1,3-Butadiene

Concen: 1.159 ppbv

RT: 3.41 min Scan# 147

Delta R.T. 0.01 min

Lab File: VL032531.D

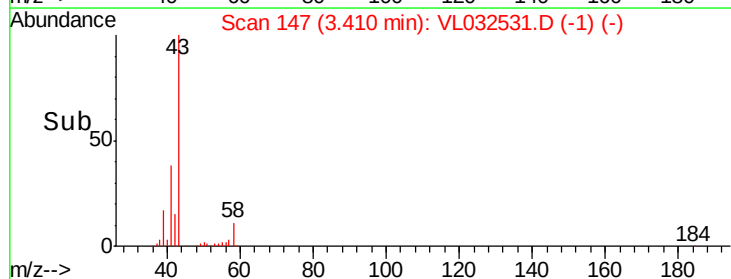
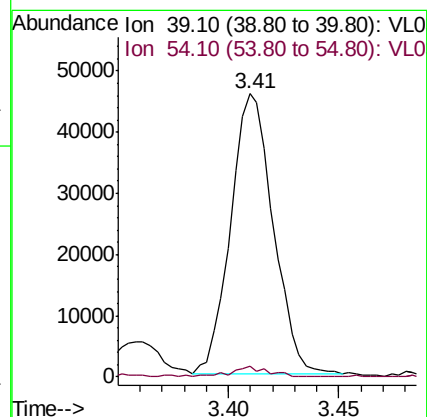
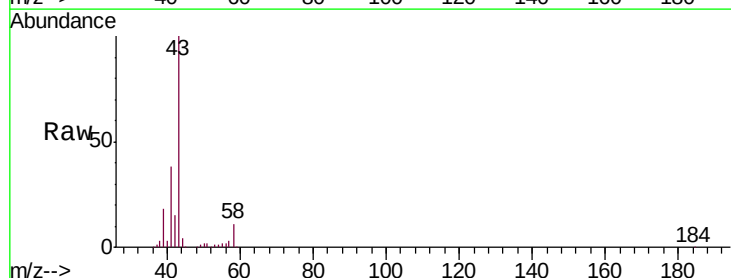
Acq: 25 Sep 2018 5:37

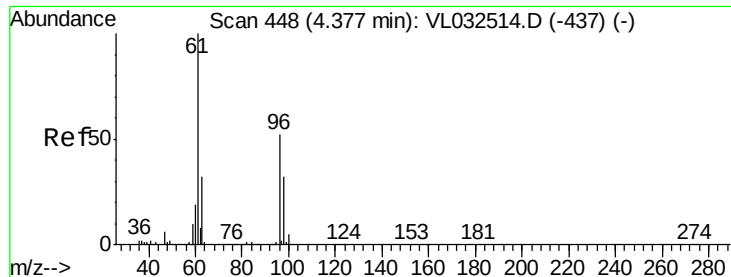
Tgt Ion: 39 Resp: 61632

Ion Ratio Lower Upper

39 100

54 3.5 80.8 121.2#



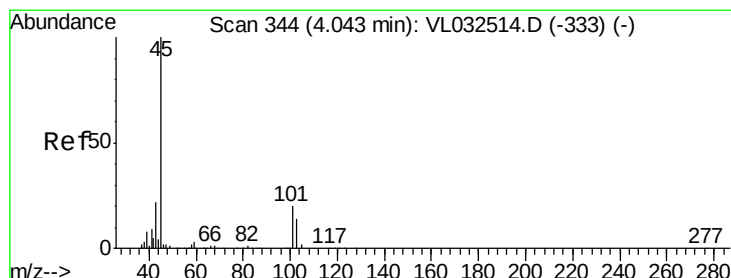
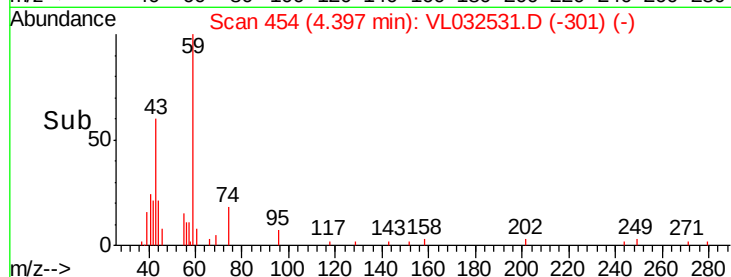
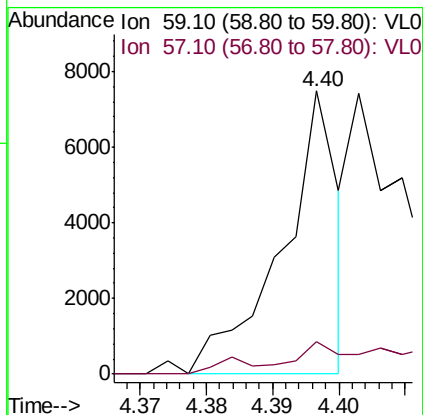
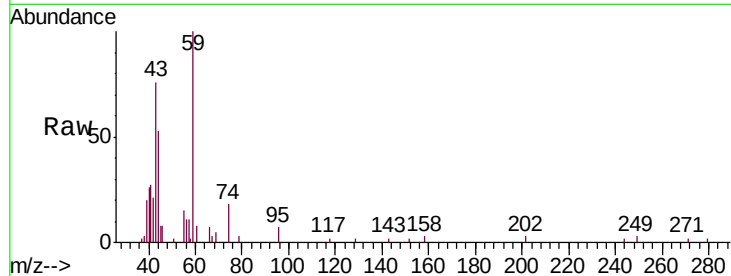


#17

tert-Butyl alcohol
Concen: 0.267 ppbv
RT: 4.40 min Scan# 454
Delta R.T. -0.01 min
Lab File: VL032531.D
Acq: 25 Sep 2018 5:37

Instrument :
MSVOA_L
ClientSampleId :
GAC-EFF-DUP-092018DL

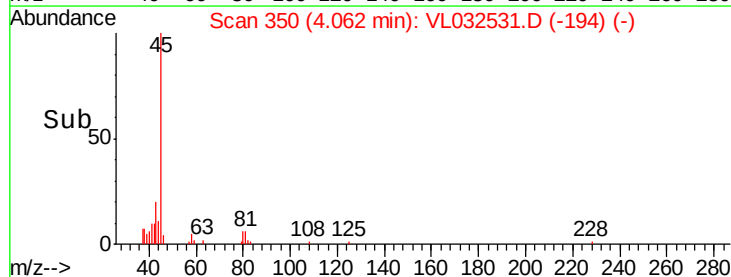
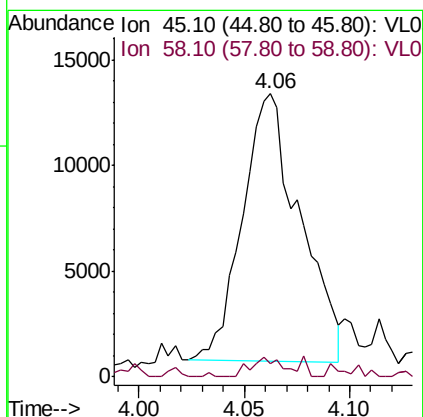
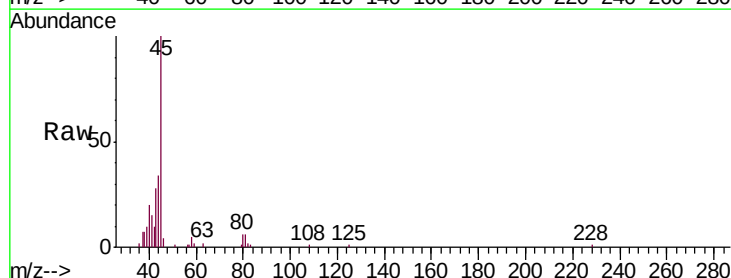
Tgt Ion: 59 Resp: 4402
Ion Ratio Lower Upper
59 100
57 24.8 0.0 0.0#

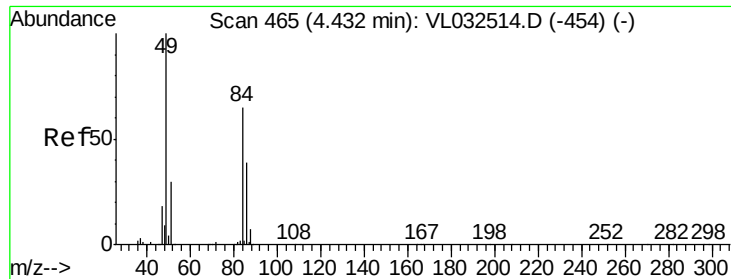


#19

Isopropyl Alcohol
Concen: 0.264 ppbv
RT: 4.06 min Scan# 350
Delta R.T. 0.00 min
Lab File: VL032531.D
Acq: 25 Sep 2018 5:37

Tgt Ion: 45 Resp: 24132
Ion Ratio Lower Upper
45 100
58 4.8 2.0 3.0#

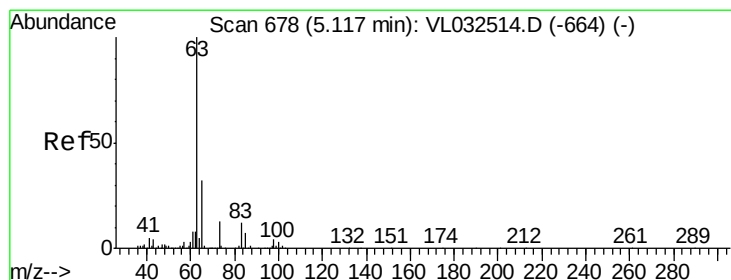
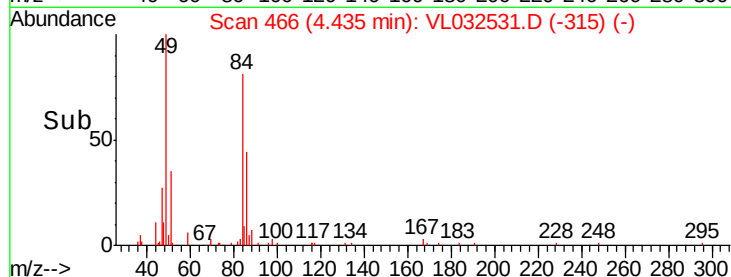
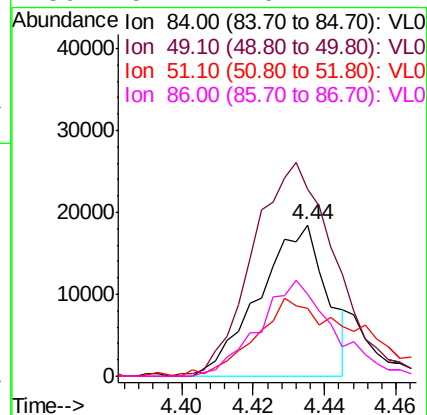
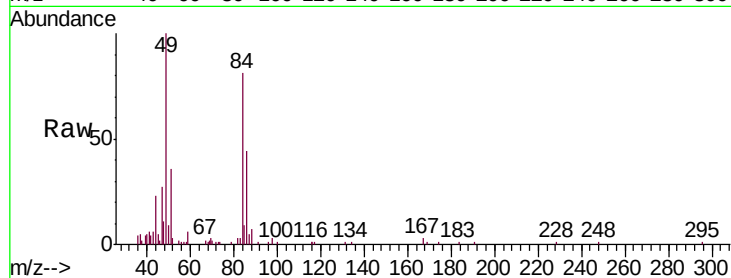




#20
Methylene Chloride
Concen: 0.381 ppbv
RT: 4.44 min Scan# 466
Delta R.T. -0.01 min
Lab File: VL032531.D
Acq: 25 Sep 2018 5:37

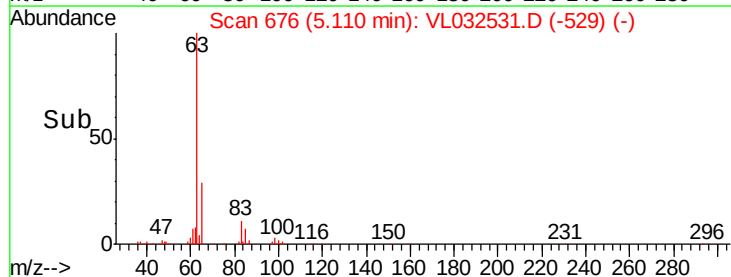
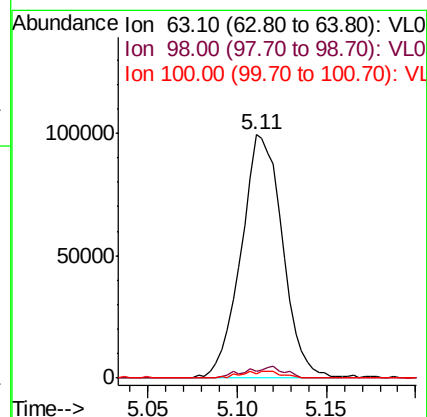
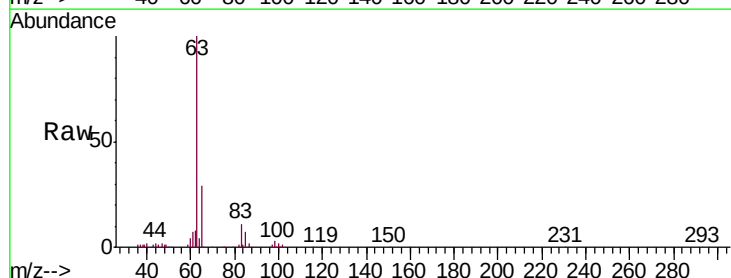
Instrument :
MSVOA_L
ClientSampleId :
GAC-EFF-DUP-092018DL

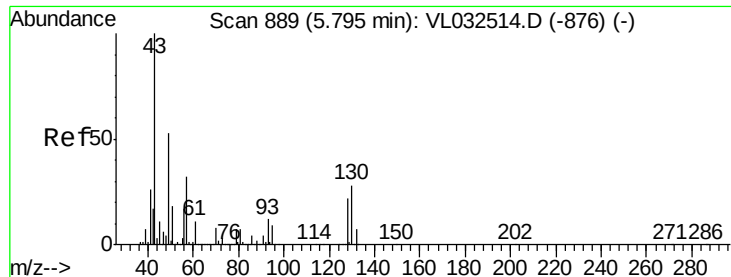
Tgt Ion: 84 Resp: 24176
Ion Ratio Lower Upper
84 100
49 122.1 119.1 178.7
51 41.4 35.2 52.8
86 54.1 49.4 74.2



#24
1,1-Dichloroethane
Concen: 0.834 ppbv
RT: 5.11 min Scan# 676
Delta R.T. -0.03 min
Lab File: VL032531.D
Acq: 25 Sep 2018 5:37

Tgt Ion: 63 Resp: 160798
Ion Ratio Lower Upper
63 100
98 3.0 2.1 6.5
100 1.6 1.5 4.4





#25

Ethyl Acetate

Concen: 0.041 ppbv

RT: 5.80 min Scan# 890

Delta R.T. -0.02 min

Lab File: VL032531.D

Acq: 25 Sep 2018 5:37

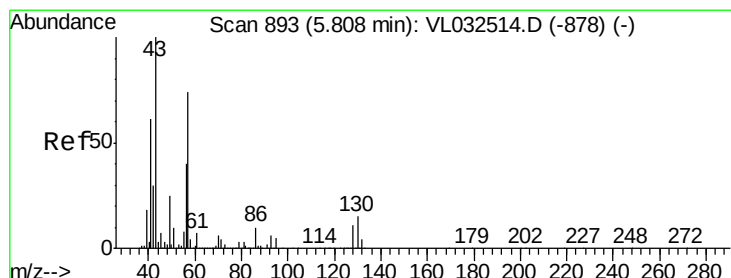
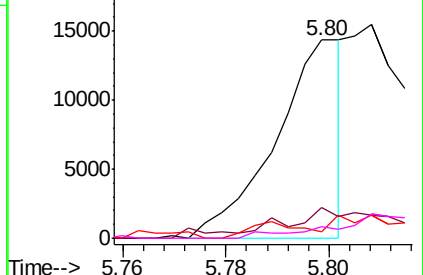
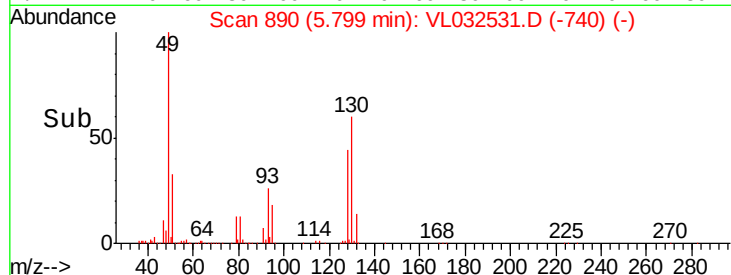
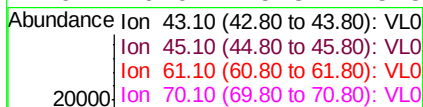
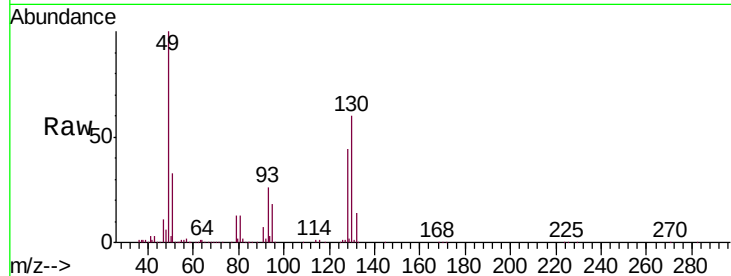
Instrument :

MSVOA_L

ClientSampleId :

GAC-EFF-DUP-092018DL

Tgt Ion:	43	Resp:	12898
Ion	Ratio	Lower	Upper
43	100		
45	29.9	8.0	12.0#
61	0.0	7.6	11.4#
70	0.0	5.8	8.8#



#26

Hexane

Concen: 0.094 ppbv

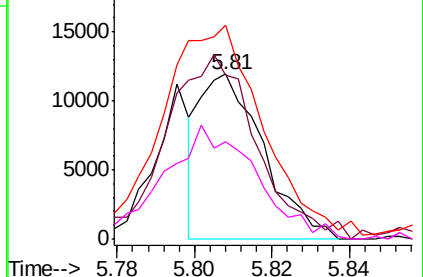
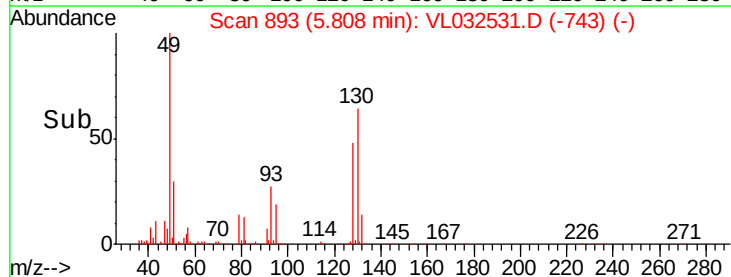
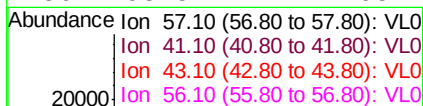
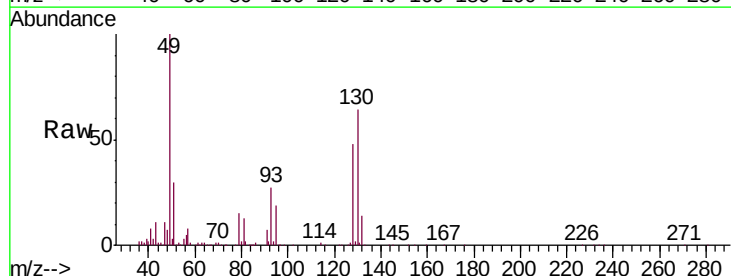
RT: 5.81 min Scan# 893

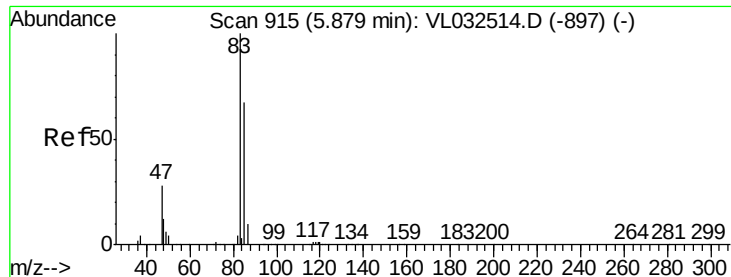
Delta R.T. -0.02 min

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Tgt Ion:	57	Resp:	13543
Ion	Ratio	Lower	Upper
57	100		
41	164.5	69.0	103.4#
43	215.7	172.1	258.1
56	103.5	42.2	63.2#

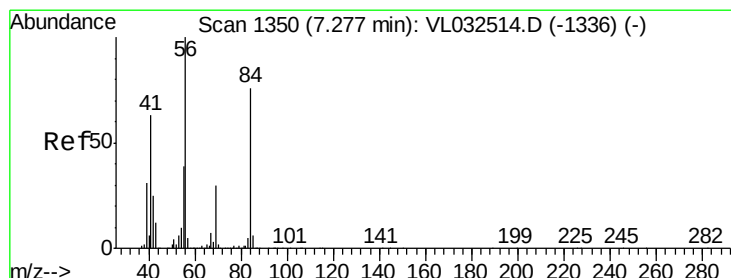
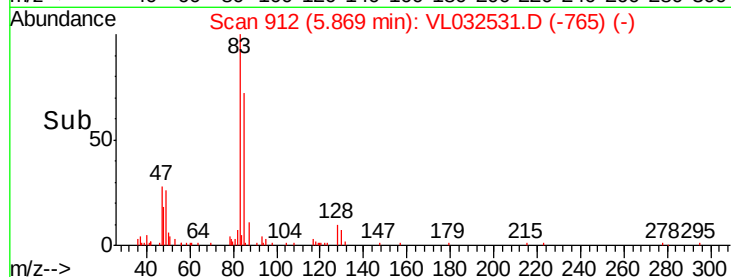
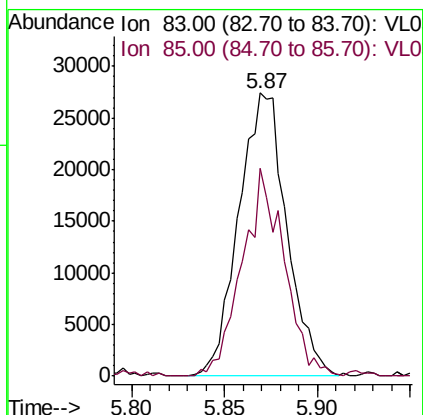
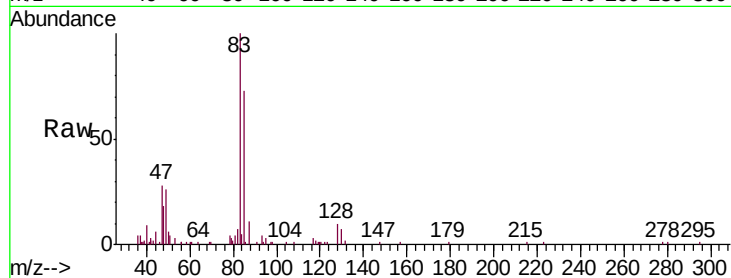




#29
Chloroform
Concen: 0.223 ppbv
RT: 5.87 min Scan# 912
Delta R.T. -0.03 min
Lab File: VL032531.D
Acq: 25 Sep 2018 5:37

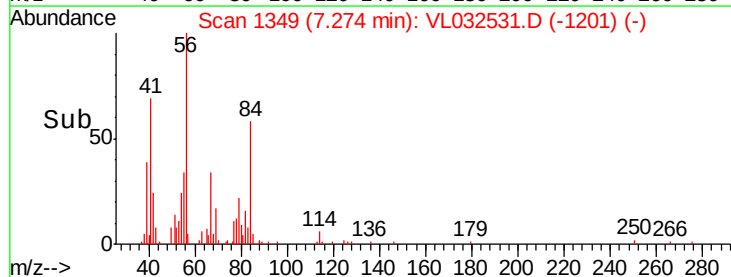
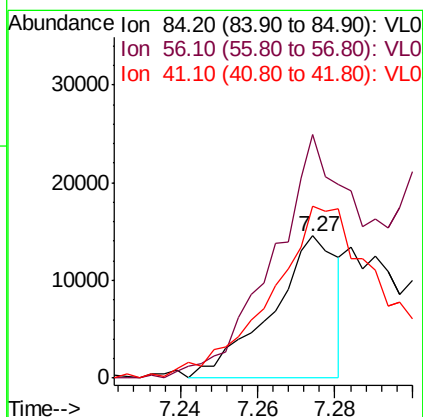
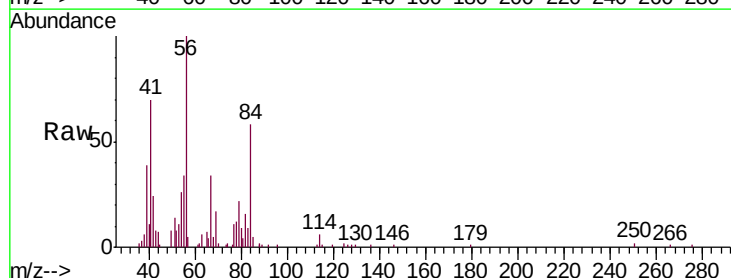
Instrument :
MSVOA_L
ClientSampleId :
GAC-EFF-DUP-092018DL

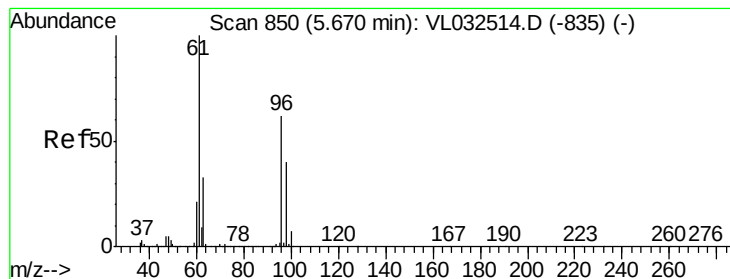
Tgt Ion: 83 Resp: 49233
Ion Ratio Lower Upper
83 100
85 73.3 52.5 78.7



#30
Cyclohexane
Concen: 0.147 ppbv
RT: 7.27 min Scan# 1349
Delta R.T. -0.02 min
Lab File: VL032531.D
Acq: 25 Sep 2018 5:37

Tgt Ion: 84 Resp: 17149
Ion Ratio Lower Upper
84 100
56 0.0 113.5 170.3#
41 205.5 68.1 102.1#





#31

cis-1,2-Dichloroethene

Concen: 0.769 ppbv

RT: 5.66 min Scan# 848

Delta R.T. -0.03 min

Lab File: VL032531.D

Acq: 25 Sep 2018 5:37

Instrument :

MSVOA_L

ClientSampleId :

GAC-EFF-DUP-092018DL

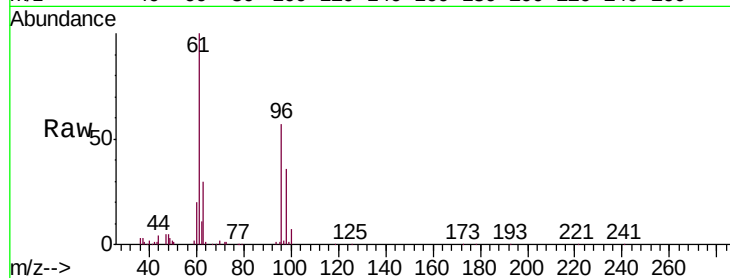
Tgt Ion: 61 Resp: 105256

Ion Ratio Lower Upper

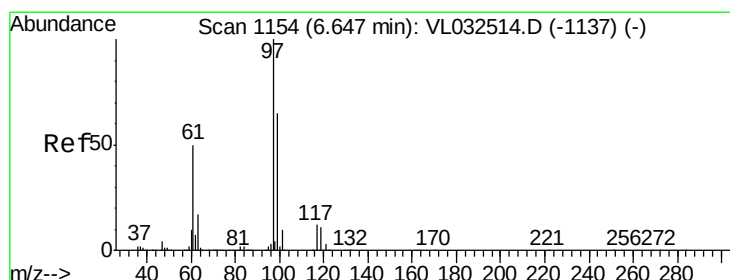
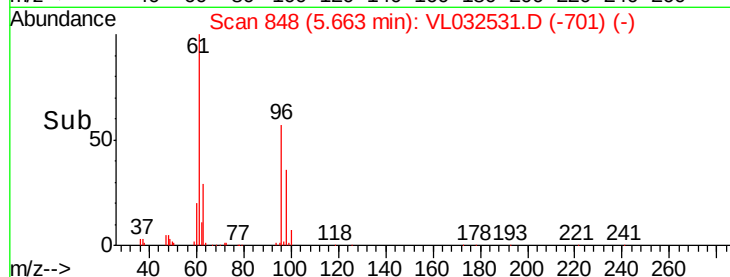
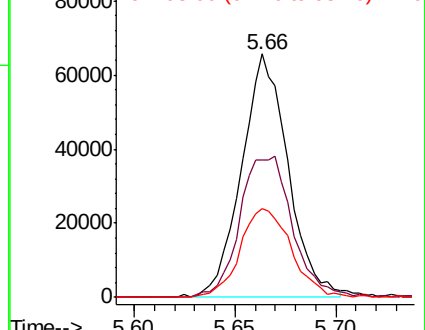
61 100

96 56.4 49.2 73.8

98 36.1 30.7 46.1



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: 2.157 ppbv

RT: 6.64 min Scan# 1153

Delta R.T. -0.03 min

Lab File: VL032531.D

Acq: 25 Sep 2018 5:37

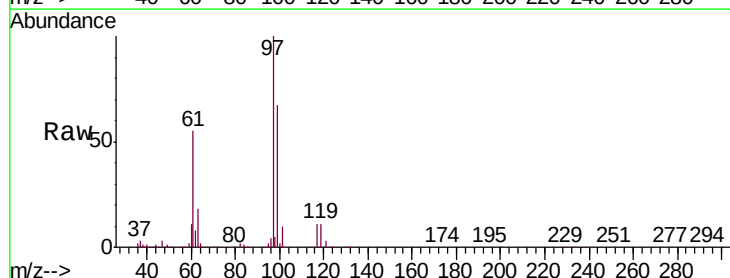
Tgt Ion: 97 Resp: 506699

Ion Ratio Lower Upper

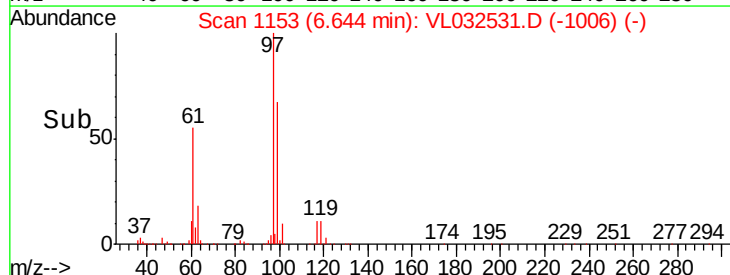
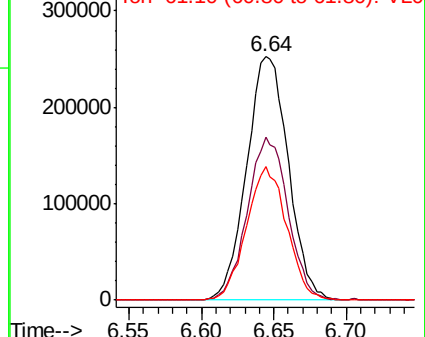
97 100

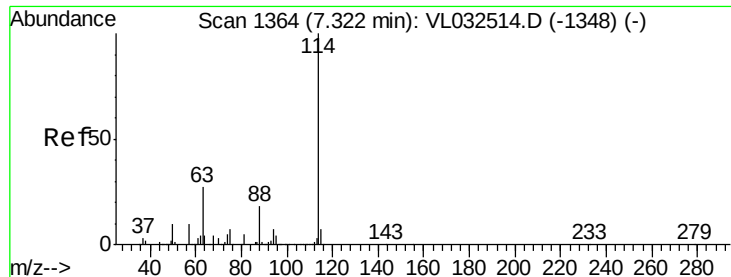
99 65.3 52.1 78.1

61 52.8 42.5 63.7



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

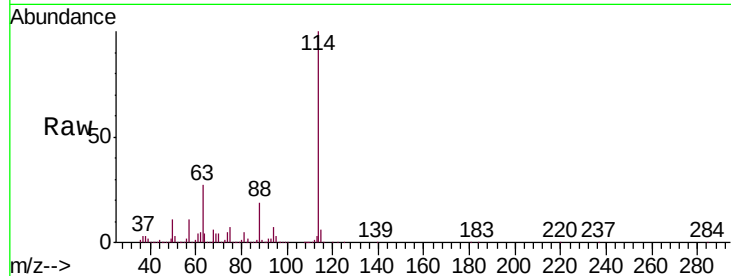




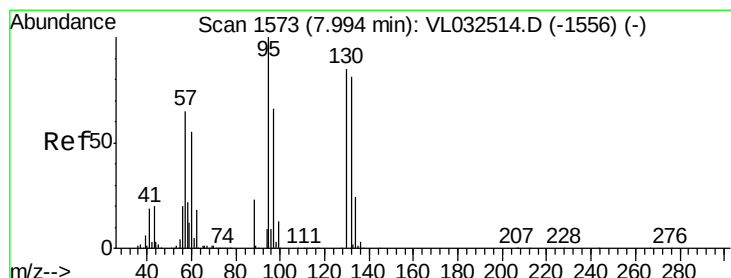
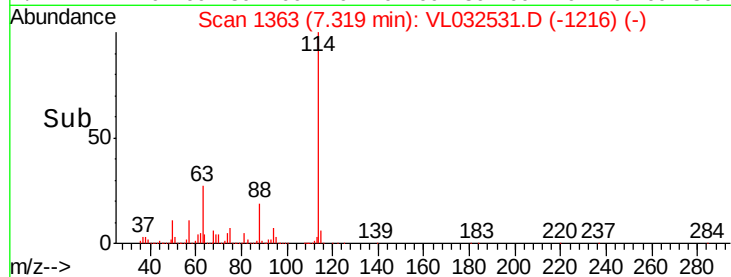
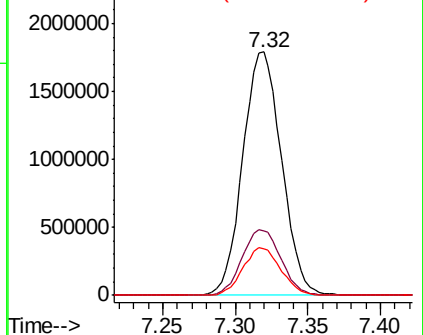
#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.32 min Scan# 1363
Delta R.T. -0.03 min
Lab File: VL032531.D
Acq: 25 Sep 2018 5:37

Instrument :
MSVOA_L
ClientSampleId :
GAC-EFF-DUP-092018DL

Tgt Ion:114 Resp: 3338856
Ion Ratio Lower Upper
114 100
63 27.2 22.2 33.4
88 19.1 15.0 22.4

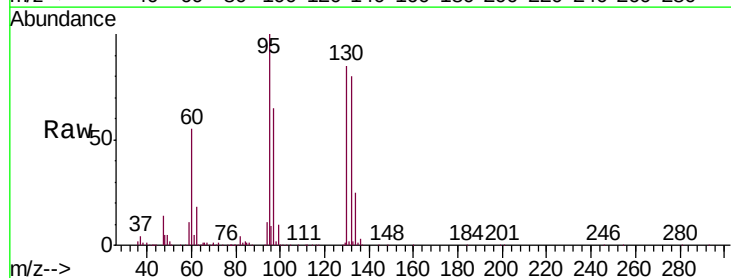


Abundance Ion 114.10 (113.80 to 114.80): V
Ion 63.10 (62.80 to 63.80): VL0
Ion 88.10 (87.80 to 88.80): VL0

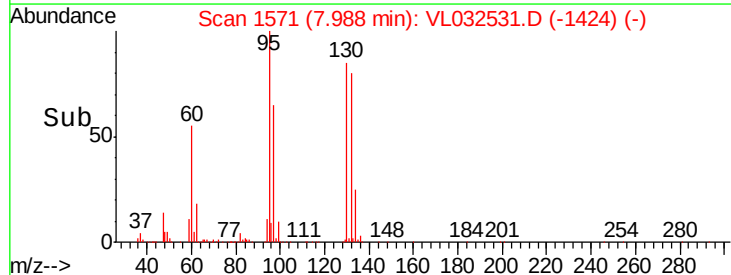
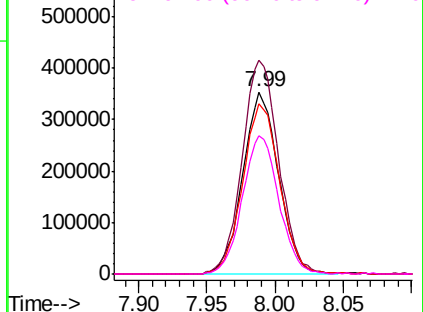


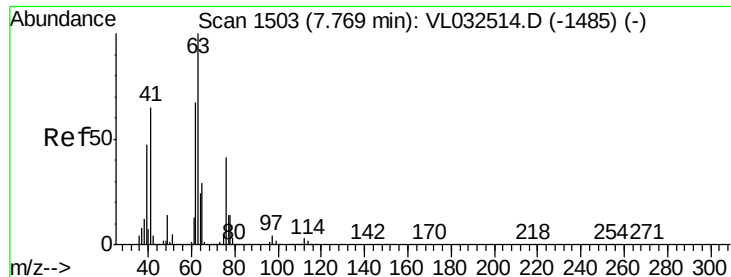
#38
Trichloroethene
Concen: 6.241 ppbv
RT: 7.99 min Scan# 1571
Delta R.T. -0.03 min
Lab File: VL032531.D
Acq: 25 Sep 2018 5:37

Tgt Ion:130 Resp: 644548
Ion Ratio Lower Upper
130 100
95 117.5 94.2 141.4
132 93.5 76.2 114.4
97 76.3 60.8 91.2



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





#39

1,2-Dichloropropane

Concen: 7.394 ppbv

RT: 7.32 min Scan# 1362

Delta R.T. -0.47 min

Lab File: VL032531.D

Acq: 25 Sep 2018 5:37

Instrument :

MSVOA_L

ClientSampleId :

GAC-EFF-DUP-092018DL

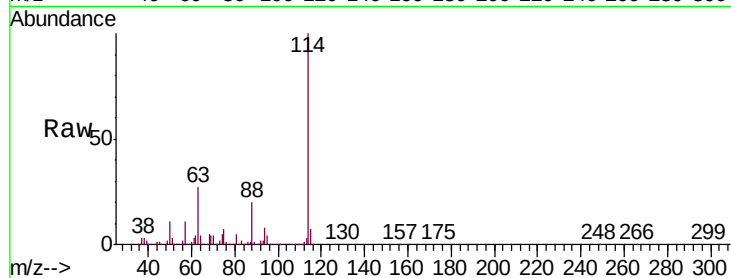
Tgt Ion: 63 Resp: 899072

Ion Ratio Lower Upper

63 100

41 0.1 55.4 83.0#

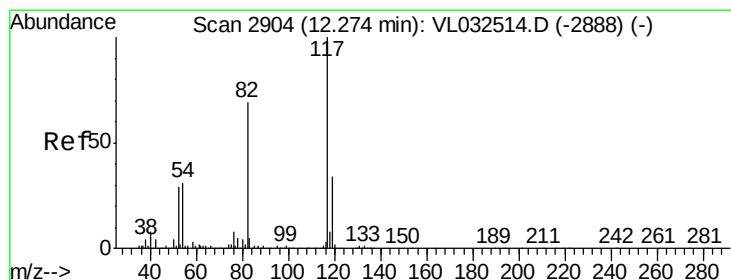
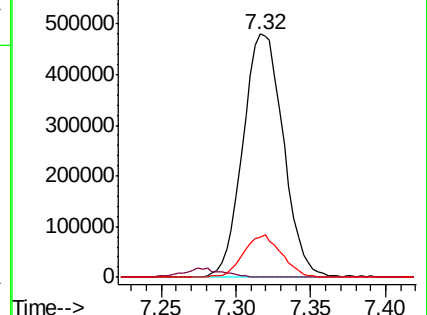
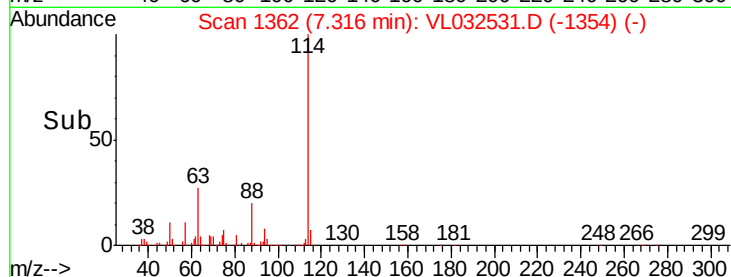
62 16.4 55.4 83.0#



Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 62.10 (61.80 to 62.80): VL0



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.27 min Scan# 2903

Delta R.T. -0.03 min

Lab File: VL032531.D

Acq: 25 Sep 2018 5:37

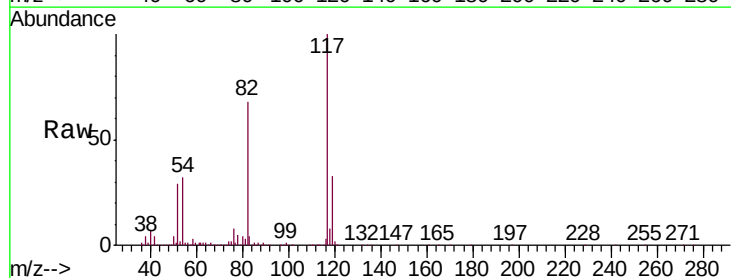
Tgt Ion: 117 Resp: 3217144

Ion Ratio Lower Upper

117 100

82 68.1 53.0 79.6

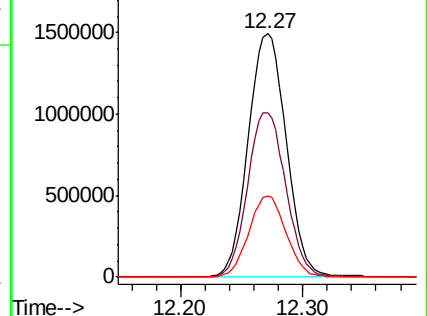
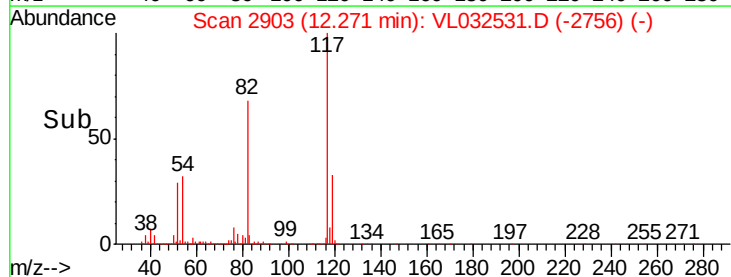
119 32.6 45.9 68.9#

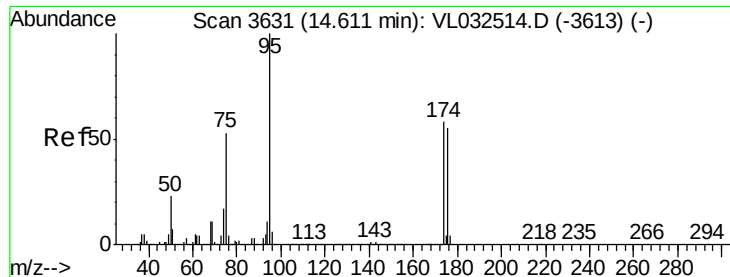


Abundance Ion 117.10 (116.80 to 117.80): V

Ion 82.10 (81.80 to 82.80): VL0

Ion 119.10 (118.80 to 119.80): V





#68

1-Bromo-4-Fluorobenzene

Concen: 10.055 ppbv

RT: 14.61 min Scan# 3630

Delta R.T. -0.03 min

Lab File: VL032531.D

Acq: 25 Sep 2018 5:37

Instrument :

MSVOA_L

ClientSampleId :

GAC-EFF-DUP-092018DL

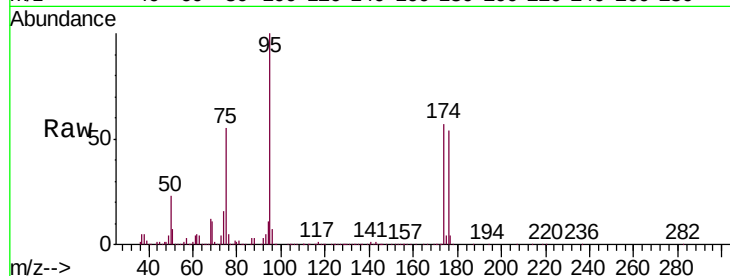
Tgt Ion: 95 Resp: 2439485

Ion Ratio Lower Upper

95 100

174 58.2 46.3 69.5

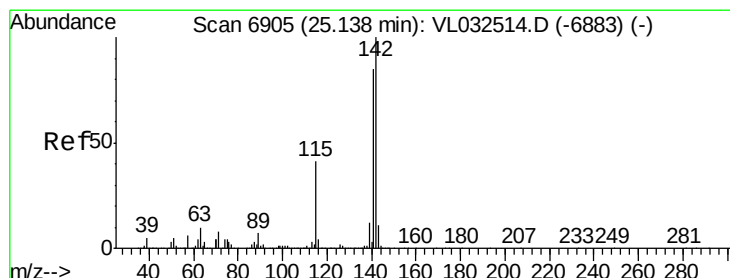
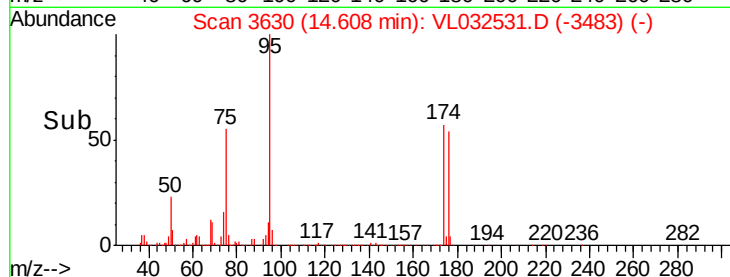
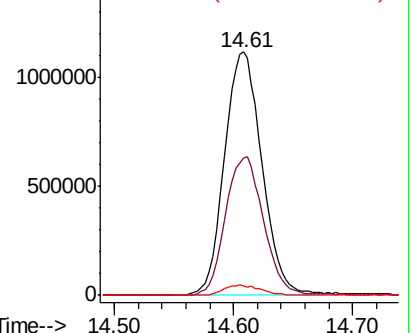
175 4.2 3.4 5.0



Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V



#80

Naphthalene, 2-methyl-

Concen: 0.036 ppbv

RT: 25.15 min Scan# 6907

Delta R.T. -0.01 min

Lab File: VL032531.D

Acq: 25 Sep 2018 5:37

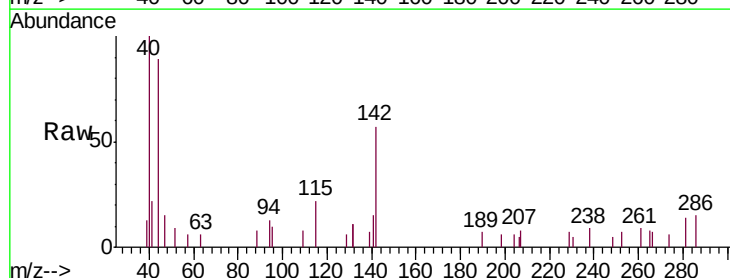
Tgt Ion: 142 Resp: 2320

Ion Ratio Lower Upper

142 100

141 63.0 67.0 100.6#

115 75.4 31.3 46.9#



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

