

Data Path : W:\HPCHEM1\MSVOA L\DATA\VL100915\
 Data File : VL026202.D
 Acq On : 10 Oct 2015 8:14
 Operator : SY/MD
 Sample : G3925-03DL 10X
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Oct 12 02:10:21 2015
 Quant Method : W:\HPCHEM1\MSVOA L\METHODS\VL100915AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Oct 09 16:23:14 2015
 QLast Update : Fri Oct 09 16:23:14 2015
 Response via : Initial Calibration

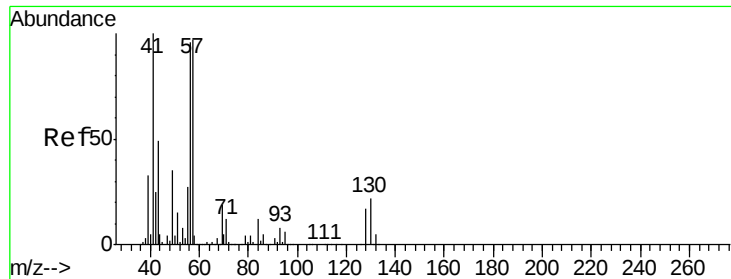
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	6.63	49	547293	10.00	ppbv	-0.02
33) 1,4-Difluorobenzene	8.31	114	1696975	10.00	ppbv	-0.03
55) Chlorobenzene-d5	13.72	117	1973098	10.00	ppbv	-0.04

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	16.27	95	1552631	10.25	ppbv	-0.04
Spiked Amount	10.000	Range	65 - 135	Recovery	=	102.50%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.63	85	5468	0.05	ppbv	99
3) Chlorodifluoromethane	3.53	51	3482638	54.48	ppbv #	61
4) Chloromethane	3.74	50	1738	0.05	ppbv	96
5) Vinyl Chloride	3.53	62	3687	0.10	ppbv #	1
8) Dichlorotetrafluoroethane	3.63	85	5468	0.06	ppbv #	15
9) Propene	3.59	41	4106	0.14	ppbv #	75
10) Heptane	9.34	43	3984	0.04	ppbv #	79
11) Trichlorofluoromethane	4.68	101	5262	0.05	ppbv #	80
13) Ethanol	4.33	45	63154	14.63	ppbv	93
15) Acetone	4.60	43	129811	1.84	ppbv #	86
16) 1,3-Butadiene	3.94	39	3721	0.11	ppbv #	7
17) tert-Butyl alcohol	5.16	59	1757	0.04	ppbv #	71
19) Isopropyl Alcohol	4.78	45	11540	0.42	ppbv #	1
20) Methylene Chloride	5.14	84	2927	0.10	ppbv #	65
26) Hexane	6.63	57	3155	0.05	ppbv #	93
29) Chloroform	6.73	83	9683	0.10	ppbv	95
34) 2-Butanone	6.21	43	9797	0.10	ppbv	94
52) Tetrachloroethene	12.77	164	2957	0.04	ppbv	94
53) Toluene	11.22	91	39921	0.19	ppbv	99
59) m/p-Xylene	14.67	91	17487	0.08	ppbv	97
60) o-Xylene	15.47	91	7295	0.03	ppbv	96
73) 1,3,5-Trimethylbenzene	17.96	105	8527	0.04	ppbv	91
74) 1,2,4-Trimethylbenzene	18.81	105	29320	0.12	ppbv #	69
79) Naphthalene	23.92	128	42611	0.27	ppbv	97

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



#1

Bromochloromethane

Concen: 10.00 ppbv

RT: 6.63 min Scan# 582

Delta R.T. -0.02 min

Lab File: VL026202.D

Acq: 10 Oct 2015 8:14

Instrument :

MSVOA_L

ClientSampled :

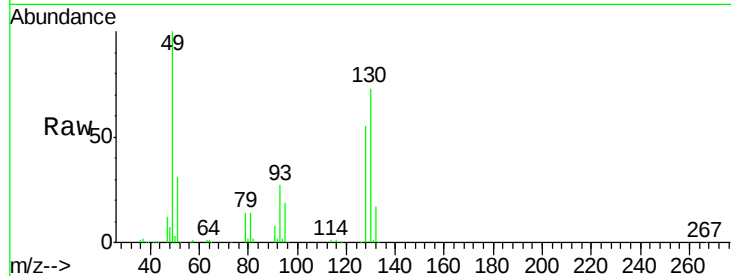
Tot Ion: 49 Resp: 547293

Ion Ratio Lower Upper

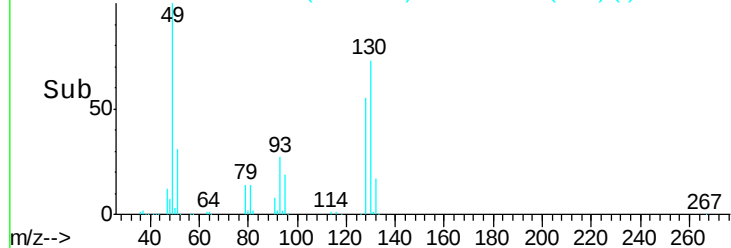
49 100

128 57.8 26.3 78.8

130 73.2 34.2 102.5



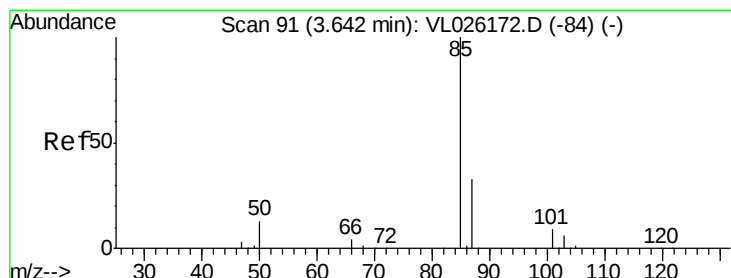
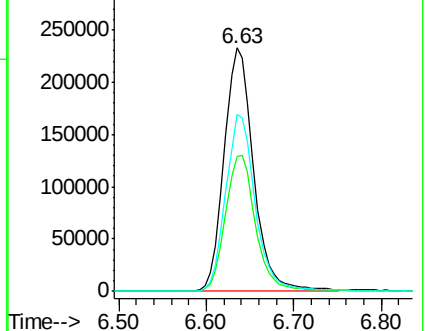
Scan 582 (6.635 min): VL026202.D (-504) (-)



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: 3.63 min Scan# 89

Delta R.T. -0.01 min

Lab File: VL026202.D

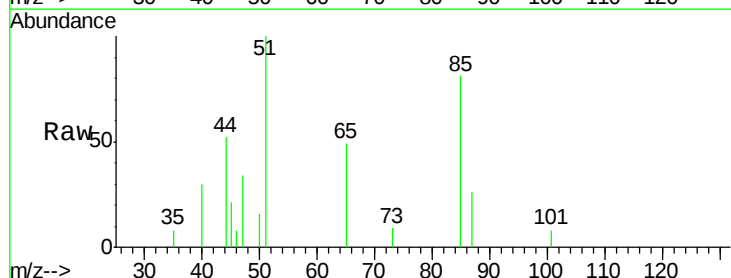
Acq: 10 Oct 2015 8:14

Tgt Ion: 85 Resp: 5468

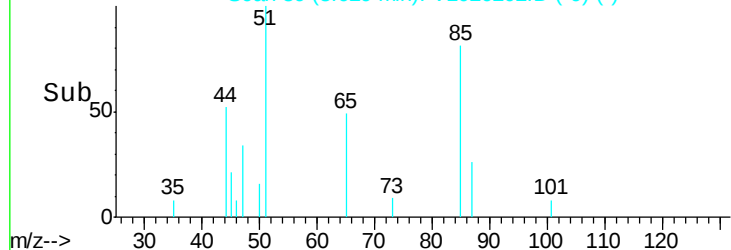
Ion Ratio Lower Upper

85 100

87 32.1 26.2 39.4

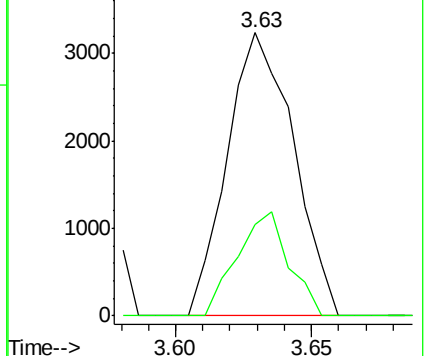


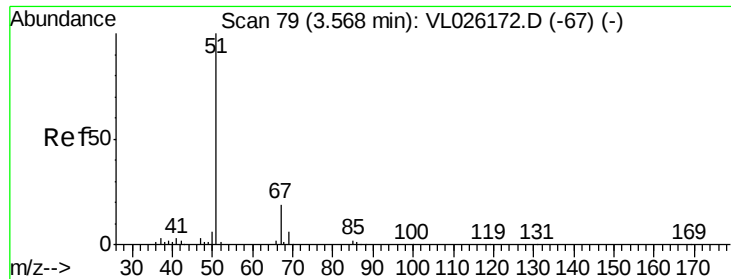
Scan 89 (3.629 min): VL026202.D (-9) (-)



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 54.48 ppbv

RT: 3.53 min Scan# 73

Delta R.T. -0.04 min

Lab File: VL026202.D

Acq: 10 Oct 2015 8:14

Instrument :

MSVOA_L

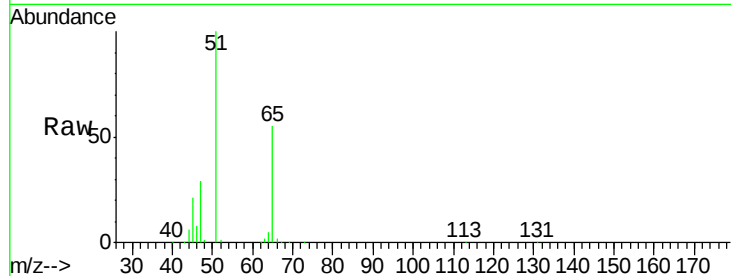
ClientSampled :

Tot Ion: 51 Resp: 3482638

Ion Ratio Lower Upper

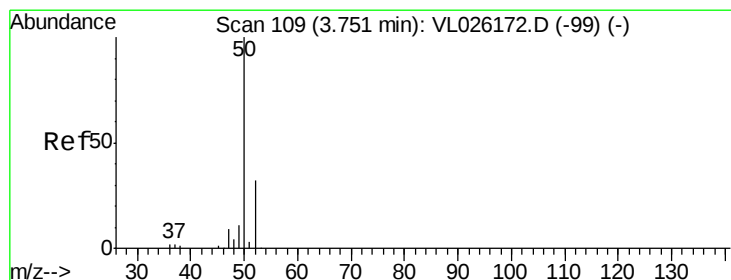
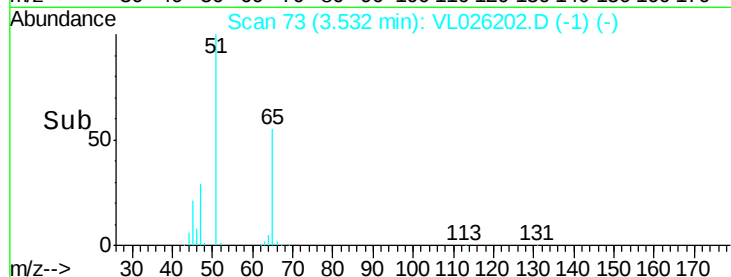
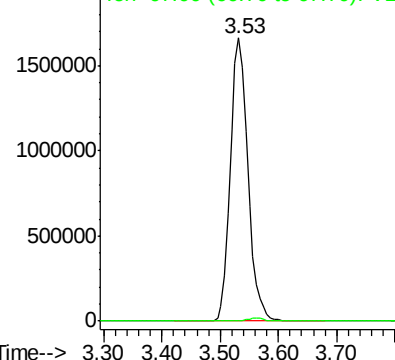
51 100

67 1.1 14.9 22.3#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.05 ppbv

RT: 3.74 min Scan# 107

Delta R.T. -0.01 min

Lab File: VL026202.D

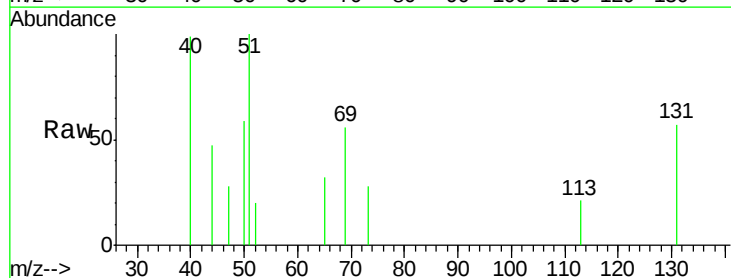
Acq: 10 Oct 2015 8:14

Tgt Ion: 50 Resp: 1738

Ion Ratio Lower Upper

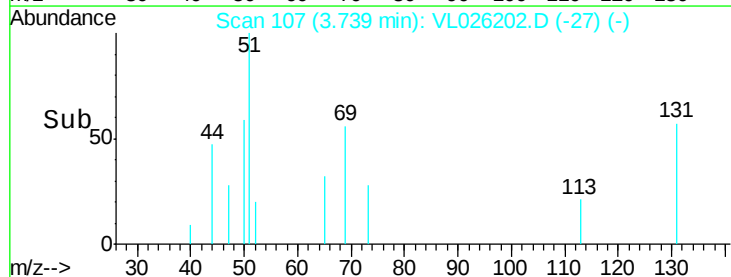
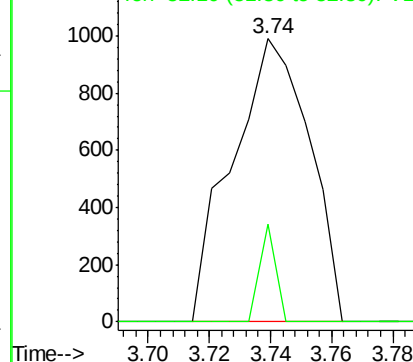
50 100

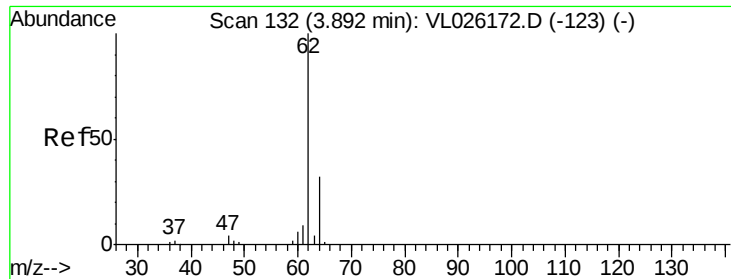
52 34.7 25.9 38.9



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#5

Vinyl Chloride

Concen: 0.10 ppbv

RT: 3.53 min Scan# 73

Delta R.T. -0.36 min

Lab File: VL026202.D

Acq: 10 Oct 2015 8:14

Instrument :

MSVOA_L

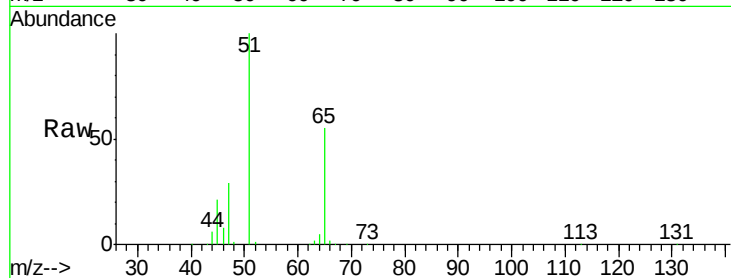
ClientSampled :

Tot Ion: 62 Resp: 3687

Ion Ratio Lower Upper

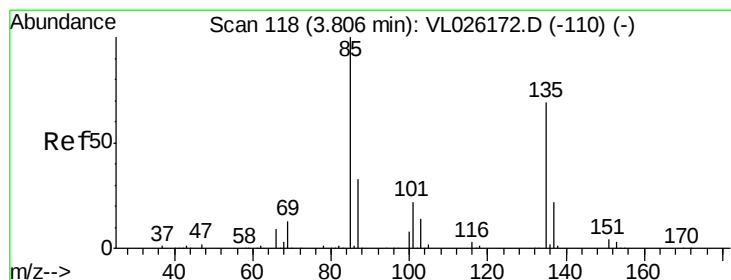
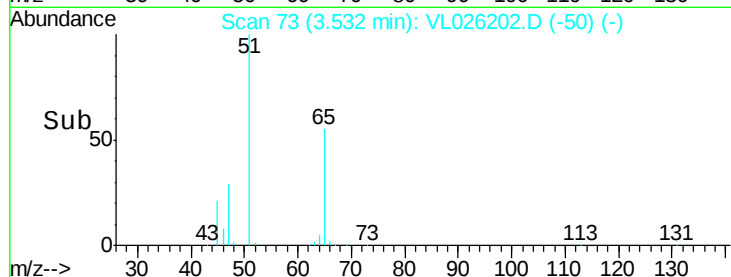
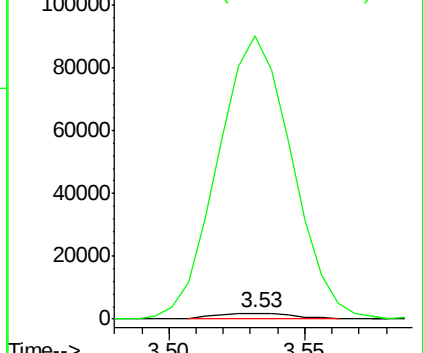
62 100

64 4447.0 25.6 38.4#



Abundance Ion 62.10 (61.80 to 62.80): VL0

Ion 64.10 (63.80 to 64.80): VL0



#8

Dichlorotetrafluoroethane

Concen: 0.06 ppbv

RT: 3.63 min Scan# 89

Delta R.T. -0.18 min

Lab File: VL026202.D

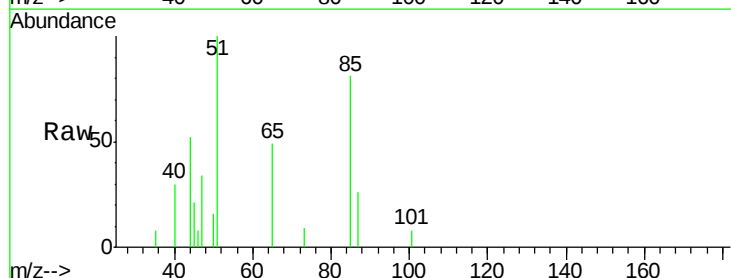
Acq: 10 Oct 2015 8:14

Tgt Ion: 85 Resp: 5468

Ion Ratio Lower Upper

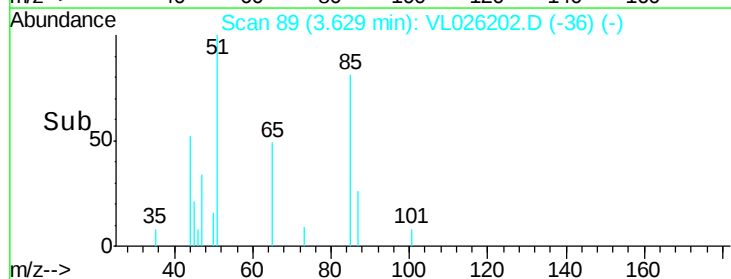
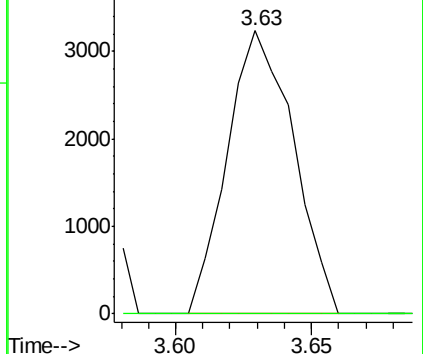
85 100

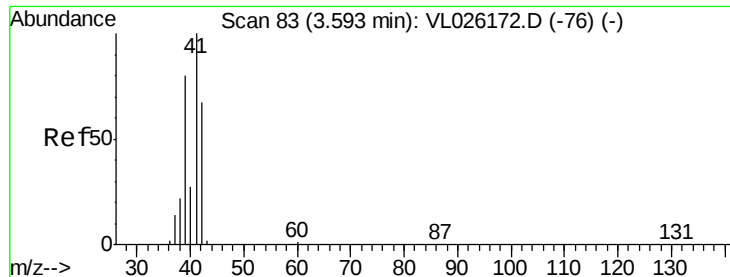
135 0.0 55.3 82.9#



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 135.00 (134.70 to 135.70): VL0





#9

Propene

Concen: 0.14 ppbv

RT: 3.59 min Scan# 83

Delta R.T. -0.00 min

Lab File: VL026202.D

Acq: 10 Oct 2015 8:14

Instrument :

MSVOA_L

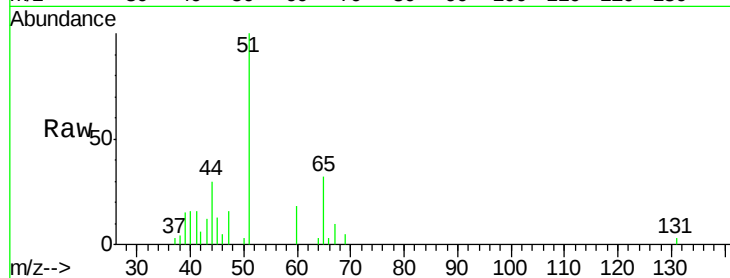
ClientSampled :

Tot Ion: 41 Resp: 4106

Ion Ratio Lower Upper

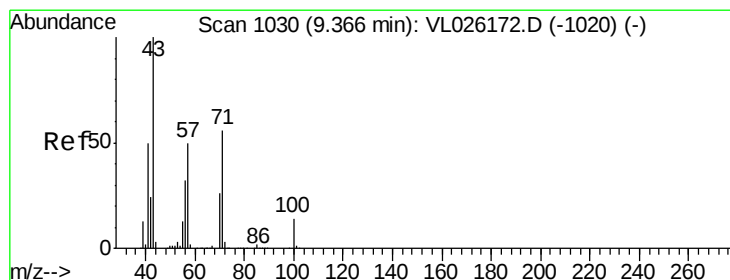
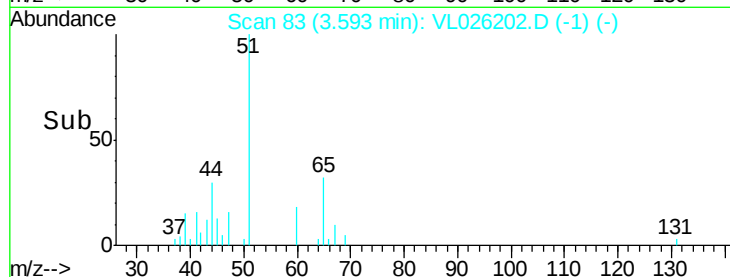
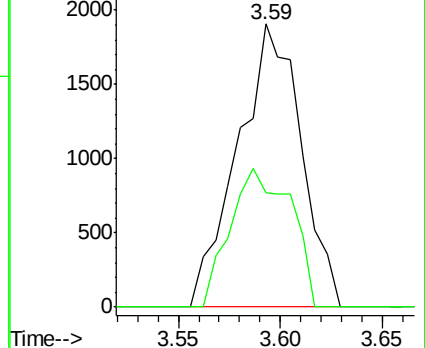
41 100

42 47.2 53.6 80.4#



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0



#10

Heptane

Concen: 0.04 ppbv

RT: 9.34 min Scan# 1026

Delta R.T. -0.02 min

Lab File: VL026202.D

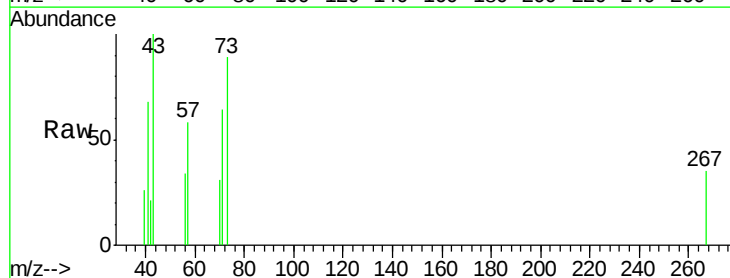
Acq: 10 Oct 2015 8:14

Tgt Ion: 43 Resp: 3984

Ion Ratio Lower Upper

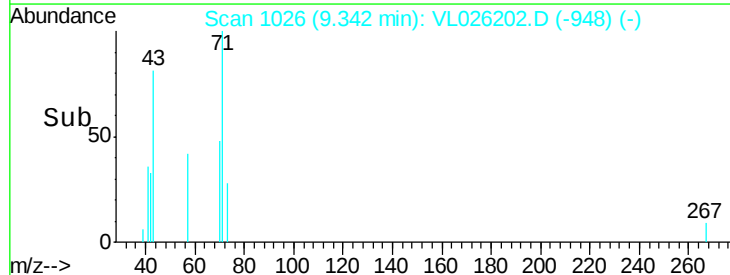
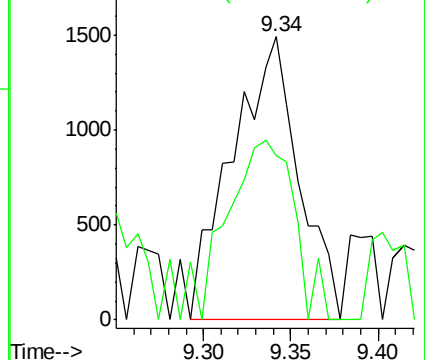
43 100

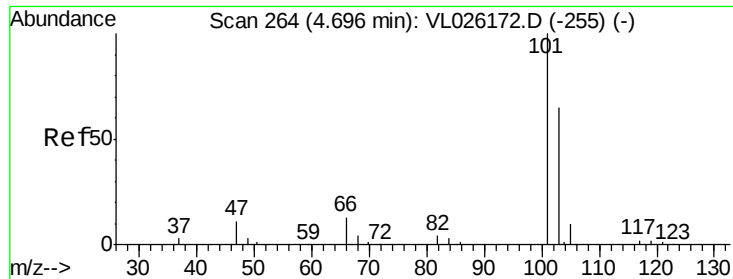
57 67.4 41.8 62.8#



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 57.10 (56.80 to 57.80): VL0

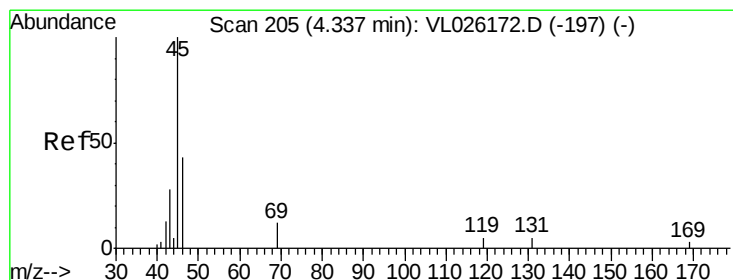
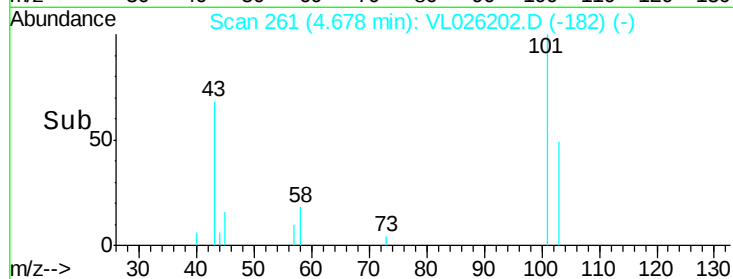
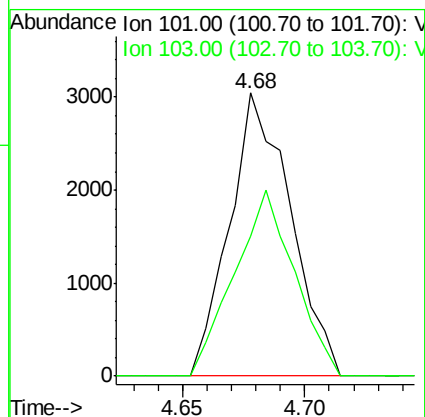
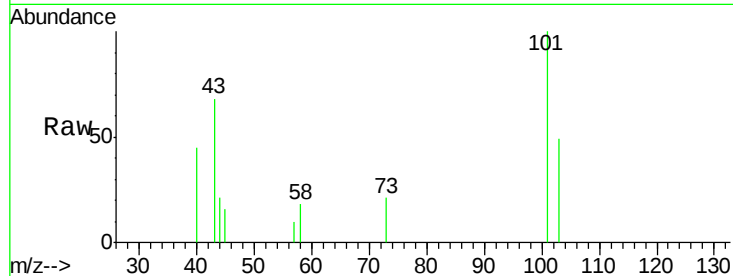




#11
 Trichlorofluoromethane
 Concen: 0.05 ppbv
 RT: 4.68 min Scan# 261
 Delta R.T. -0.02 min
 Lab File: VL026202.D
 Acq: 10 Oct 2015 8:14

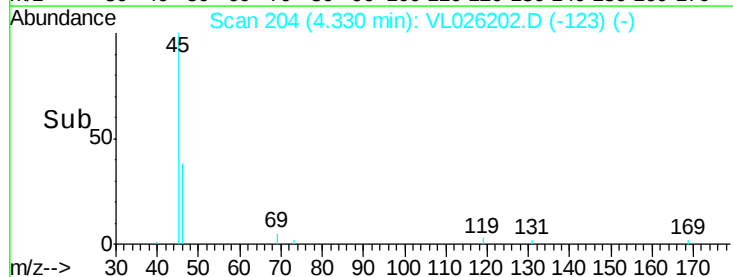
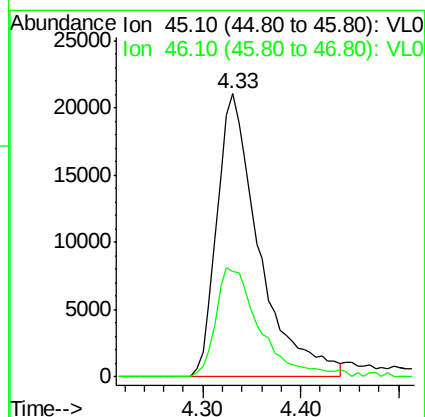
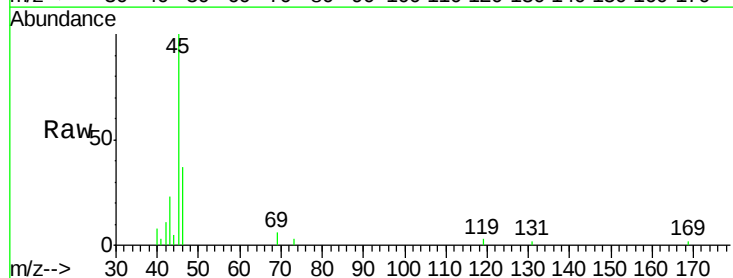
Instrument :
 MSVOA_L
 ClientSampleId :

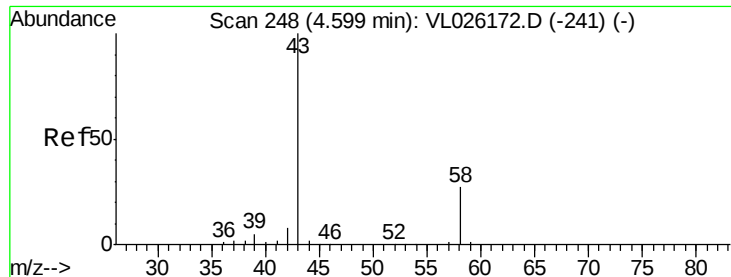
Tot Ion:101 Resp: 5262
 Ion Ratio Lower Upper
 101 100
 103 49.4 51.9 77.9#



#13
 Ethanol
 Concen: 14.63 ppbv
 RT: 4.33 min Scan# 204
 Delta R.T. -0.01 min
 Lab File: VL026202.D
 Acq: 10 Oct 2015 8:14

Tgt Ion: 45 Resp: 63154
 Ion Ratio Lower Upper
 45 100
 46 40.7 18.1 72.5





#15

Acetone

Concen: 1.84 ppbv

RT: 4.60 min Scan# 249

Delta R.T. 0.01 min

Lab File: VL026202.D

Acq: 10 Oct 2015 8:14

Instrument :

MSVOA_L

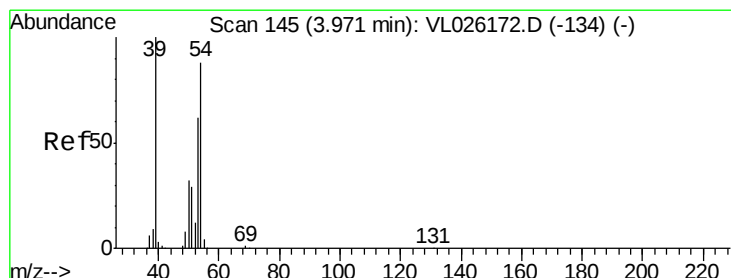
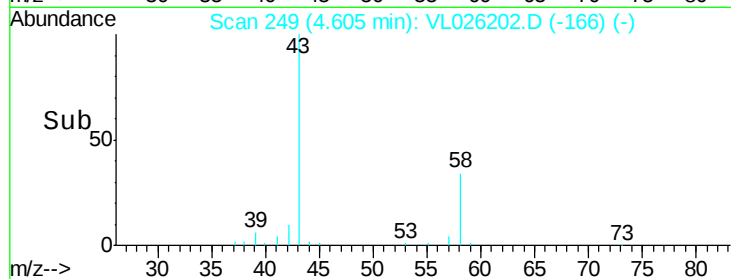
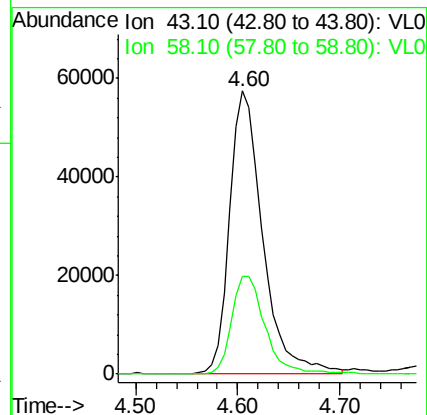
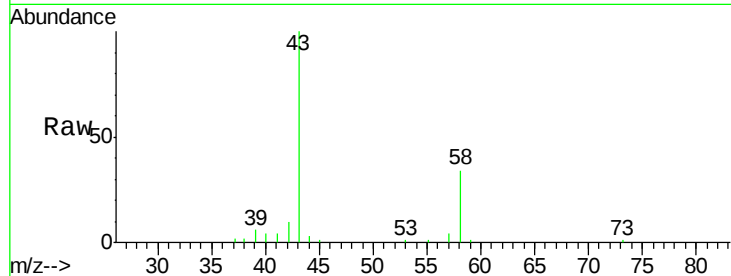
ClientSampleId :

Tot Ion: 43 Resp: 129811

Ion Ratio Lower Upper

43 100

58 34.9 22.0 33.0#



#16

1,3-Butadiene

Concen: 0.11 ppbv

RT: 3.94 min Scan# 140

Delta R.T. -0.03 min

Lab File: VL026202.D

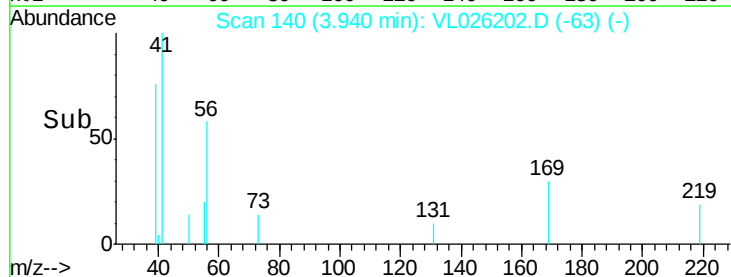
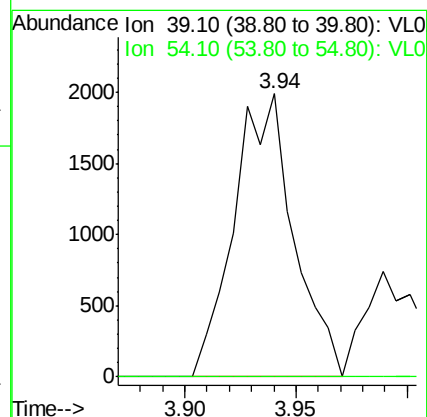
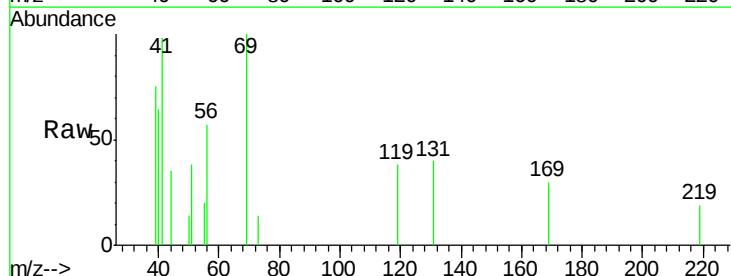
Acq: 10 Oct 2015 8:14

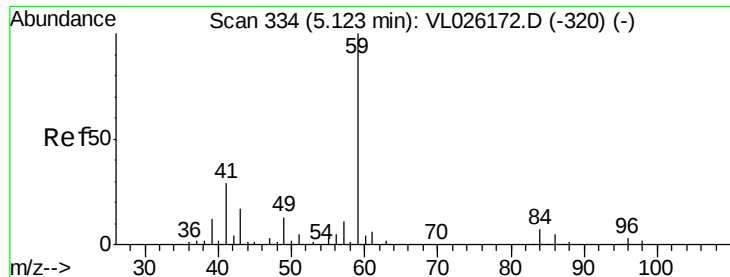
Tgt Ion: 39 Resp: 3721

Ion Ratio Lower Upper

39 100

54 0.0 67.9 101.9#



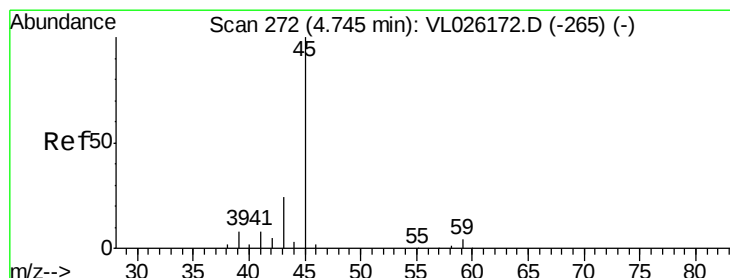
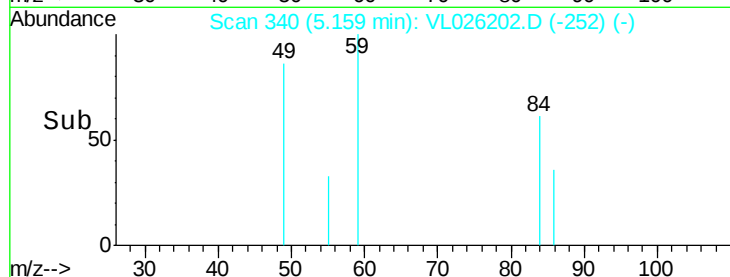
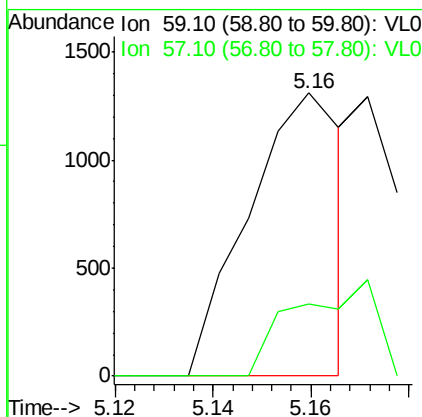
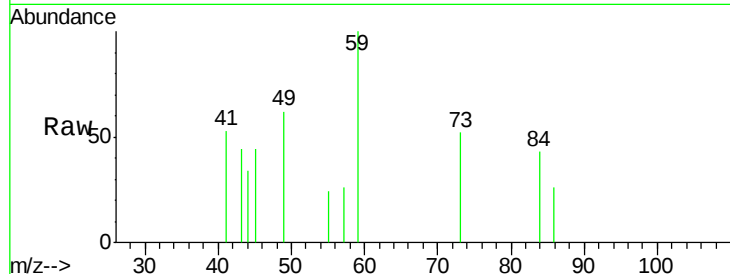


#17

tert-Butyl alcohol
Concen: 0.04 ppbv
RT: 5.16 min Scan# 340
Delta R.T. 0.04 min
Lab File: VL026202.D
Acq: 10 Oct 2015 8:14

Instrument :
MSVOA_L
ClientSampled :

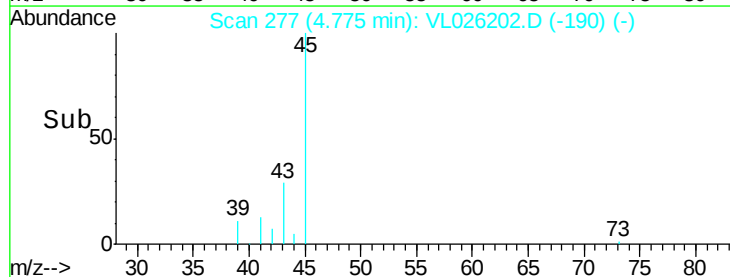
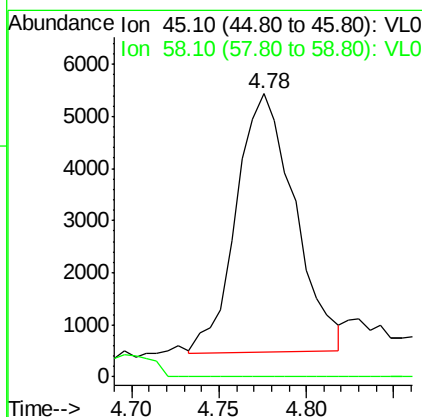
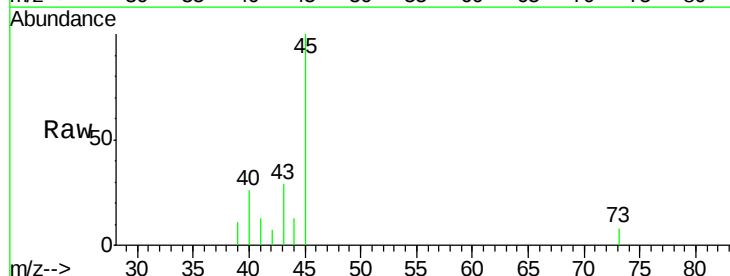
Tot Ion: 59 Resp: 1757
Ion Ratio Lower Upper
59 100
57 0.0 8.8 13.2#

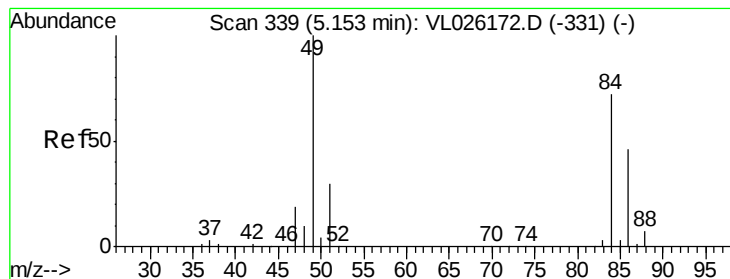


#19

Isopropyl Alcohol
Concen: 0.42 ppbv
RT: 4.78 min Scan# 277
Delta R.T. 0.03 min
Lab File: VL026202.D
Acq: 10 Oct 2015 8:14

Tgt Ion: 45 Resp: 11540
Ion Ratio Lower Upper
45 100
58 392.5 1.7 2.5#





#20

Methvlene Chloride

Concen: 0.10 ppbv

RT: 5.14 min Scan# 337

Delta R.T. -0.01 min

Lab File: VL026202.D

Acq: 10 Oct 2015 8:14

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion: 84 Resp: 2927

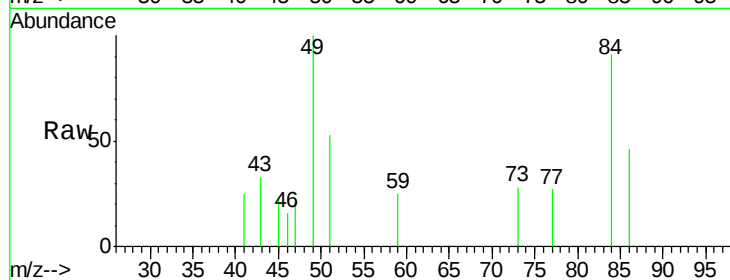
Ion Ratio Lower Upper

84 100

49 84.0 111.3 166.9#

51 57.9 33.0 49.6#

86 50.6 51.6 77.4#

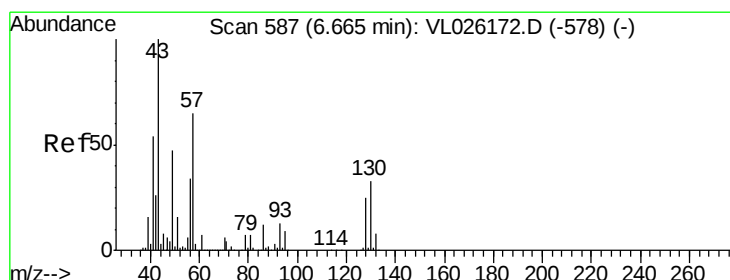
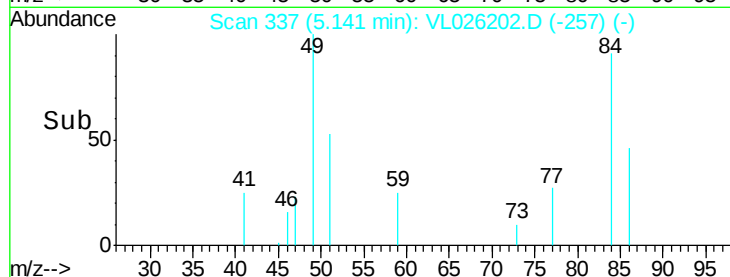
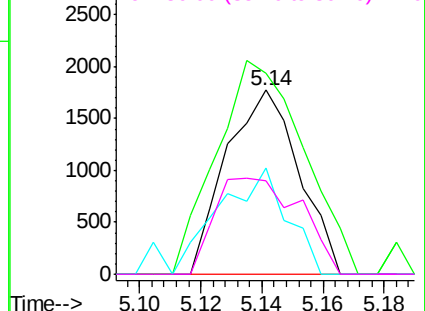


Abundance Ion 84.00 (83.70 to 84.70): VL0

Ion 49.10 (48.80 to 49.80): VL0

Ion 51.10 (50.80 to 51.80): VL0

Ion 86.00 (85.70 to 86.70): VL0



#26

Hexane

Concen: 0.05 ppbv

RT: 6.63 min Scan# 582

Delta R.T. -0.03 min

Lab File: VL026202.D

Acq: 10 Oct 2015 8:14

Tgt Ion: 57 Resp: 3155

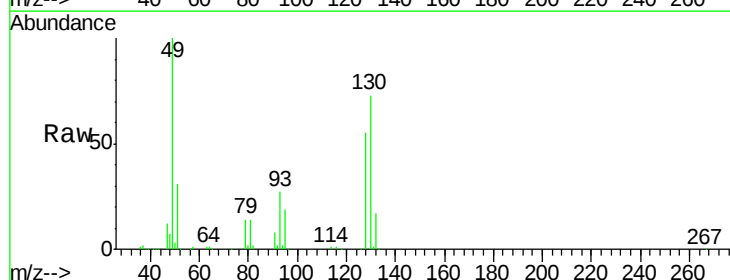
Ion Ratio Lower Upper

57 100

41 79.8 68.0 102.0

43 214.0 164.4 246.6

56 41.2 42.7 64.1#

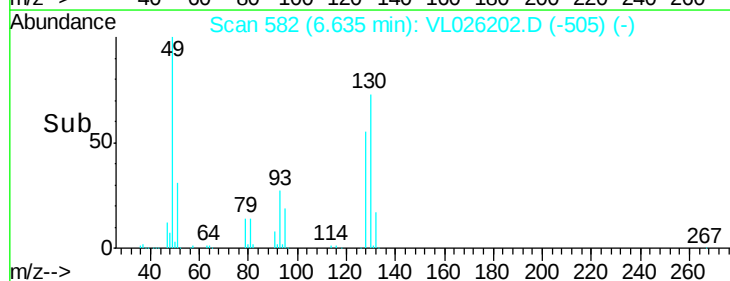
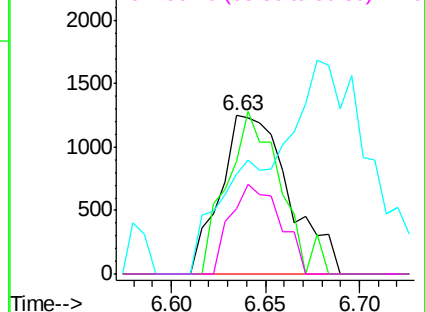


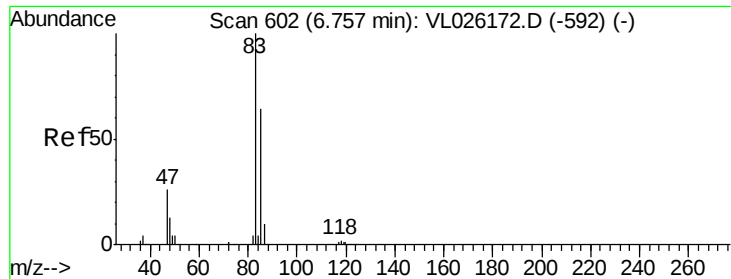
Abundance Ion 57.10 (56.80 to 57.80): VL0

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

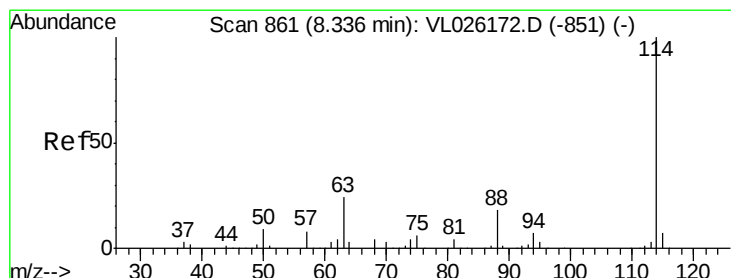
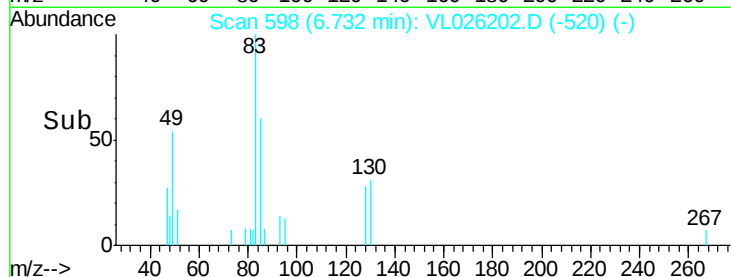
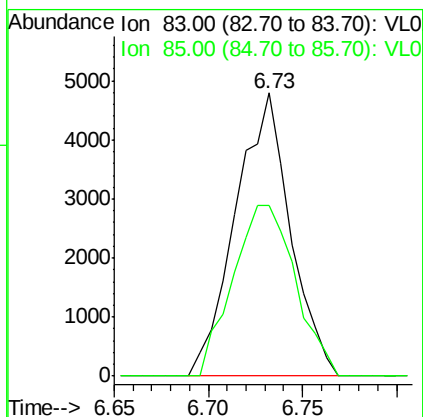
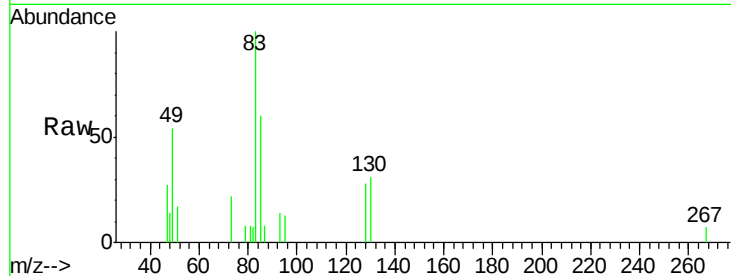




#29
Chloroform
Concen: 0.10 ppbv
RT: 6.73 min Scan# 598
Delta R.T. -0.02 min
Lab File: VL026202.D
Acq: 10 Oct 2015 8:14

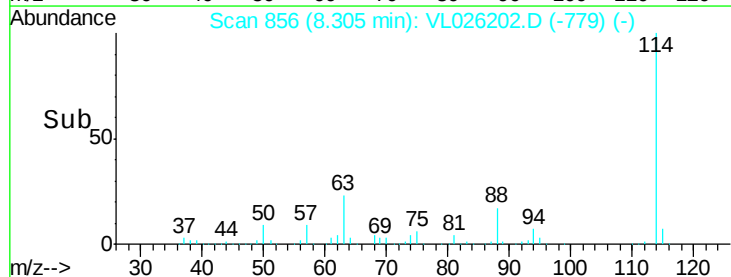
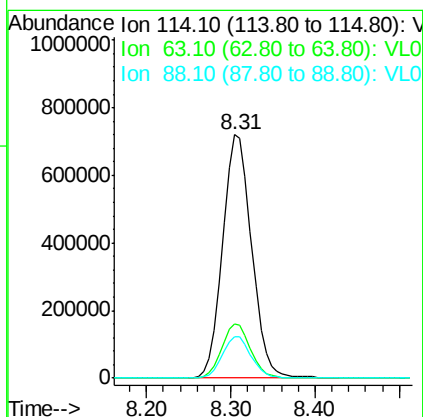
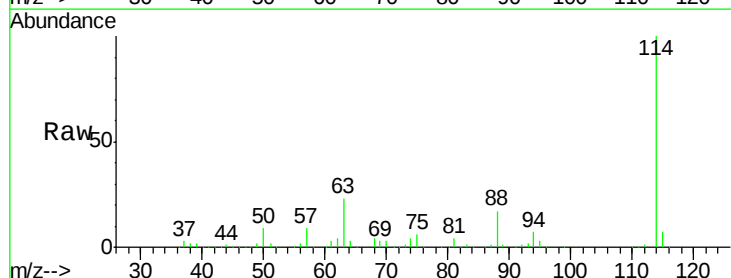
Instrument :
MSVOA_L
ClientSampleId :

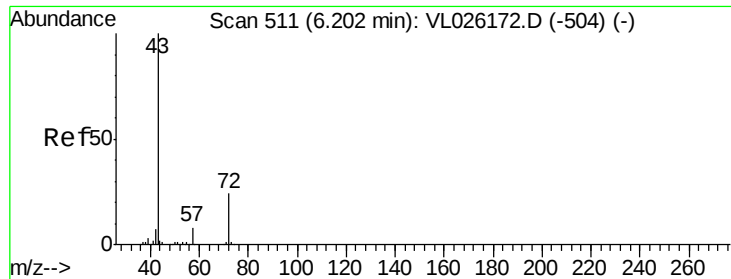
Tot Ion: 83 Resp: 9683
Ion Ratio Lower Upper
83 100
85 60.2 51.5 77.3



#33
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 8.31 min Scan# 856
Delta R.T. -0.03 min
Lab File: VL026202.D
Acq: 10 Oct 2015 8:14

Tgt Ion: 114 Resp: 1696975
Ion Ratio Lower Upper
114 100
63 22.1 19.0 28.6
88 17.0 13.8 20.8





#34

2-Butanone

Concen: 0.10 ppbv

RT: 6.21 min Scan# 513

Delta R.T. 0.01 min

Lab File: VL026202.D

Acq: 10 Oct 2015 8:14

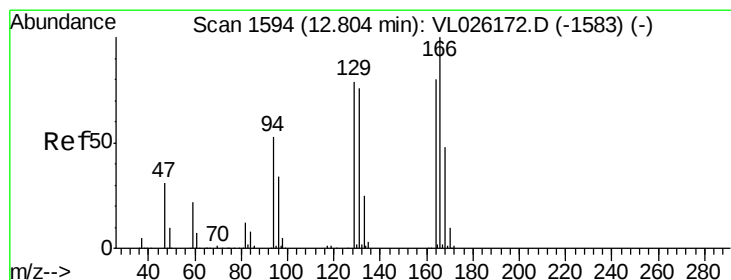
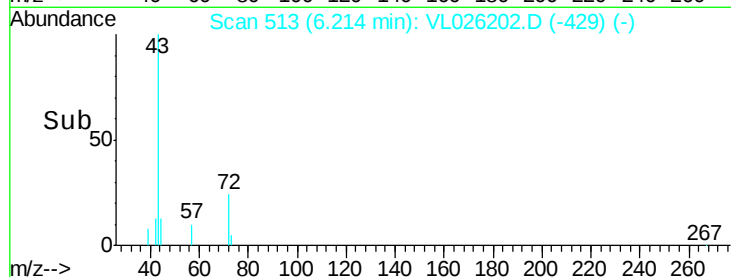
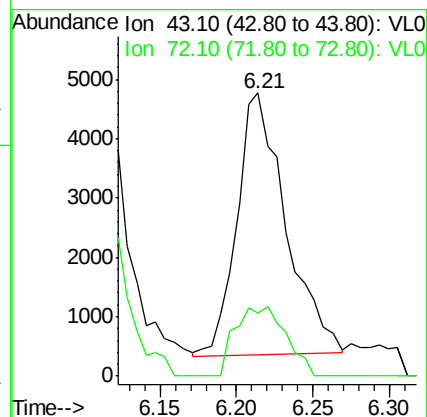
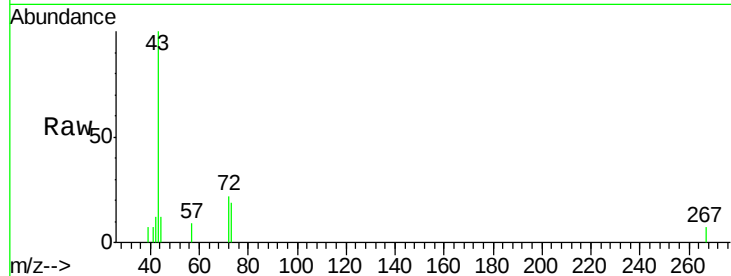
Instrument :
MSVOA_L
ClientSampleId :

Tot Ion: 43 Resp: 9797

Ion Ratio Lower Upper

43 100

72 27.5 19.6 29.4



#52

Tetrachloroethene

Concen: 0.04 ppbv

RT: 12.77 min Scan# 1589

Delta R.T. -0.03 min

Lab File: VL026202.D

Acq: 10 Oct 2015 8:14

Tgt Ion: 164 Resp: 2957

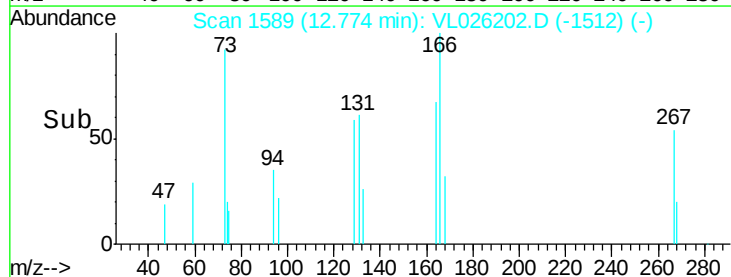
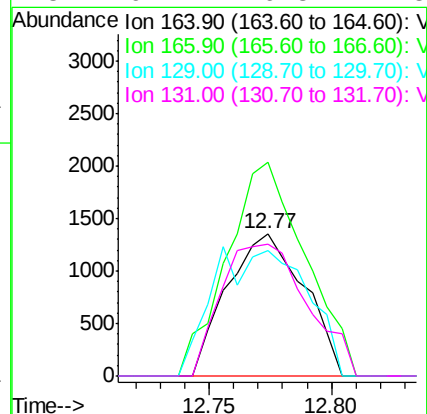
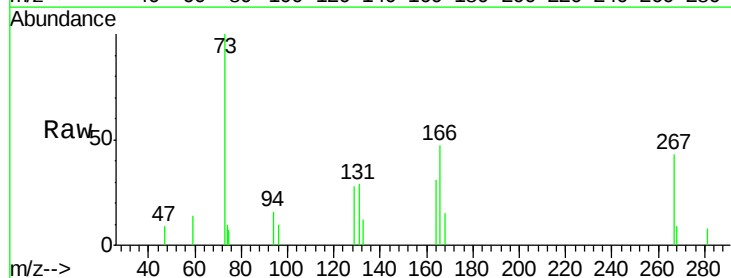
Ion Ratio Lower Upper

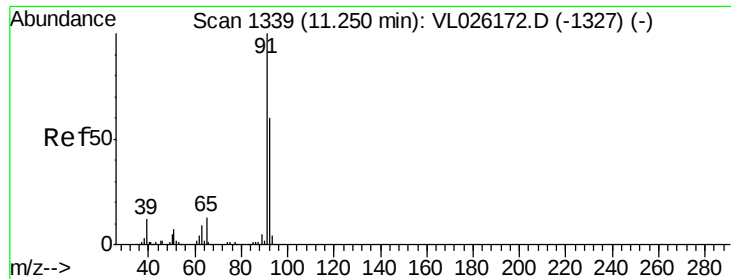
164 100

166 119.9 99.9 149.9

129 88.3 79.1 118.7

131 92.2 76.3 114.5





#53

Toluene

Concen: 0.19 ppbv

RT: 11.22 min Scan# 1334

Delta R.T. -0.03 min

Lab File: VL026202.D

Acq: 10 Oct 2015 8:14

Instrument :

MSVOA_L

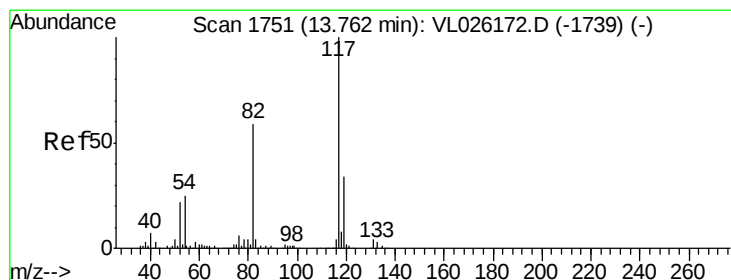
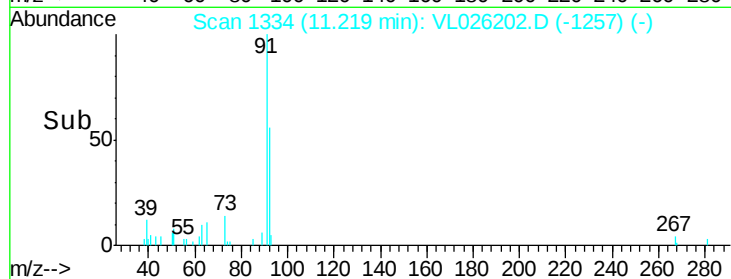
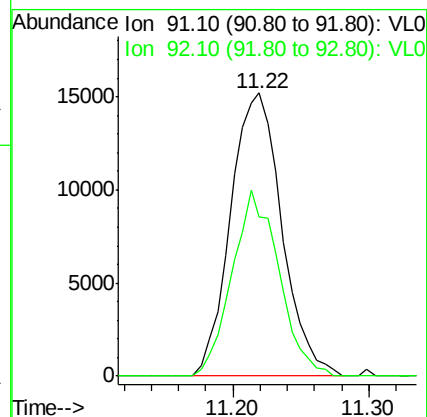
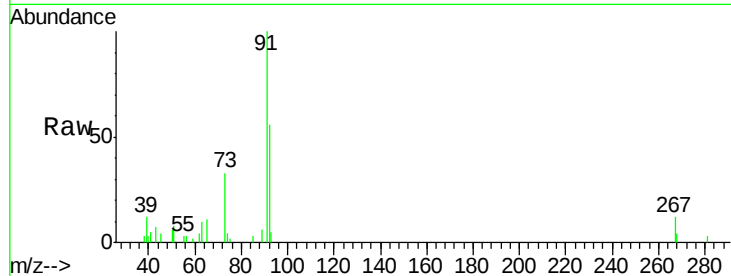
ClientSampleId :

Tot Ion: 91 Resp: 39921

Ion Ratio Lower Upper

91 100

92 60.1 48.5 72.7



#55

Chlorobenzene-d5

Concen: 10.00 ppbv

RT: 13.72 min Scan# 1745

Delta R.T. -0.04 min

Lab File: VL026202.D

Acq: 10 Oct 2015 8:14

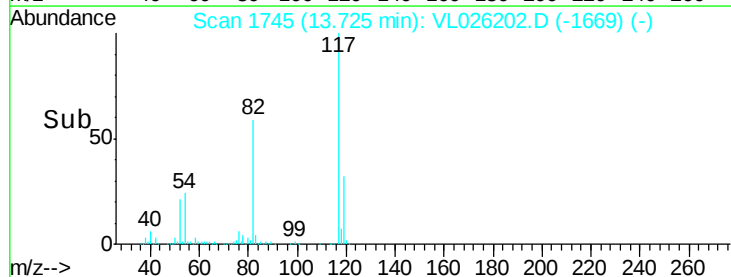
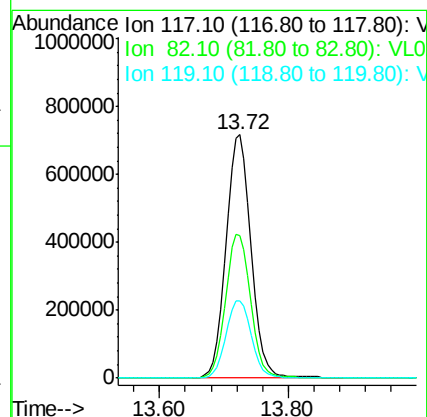
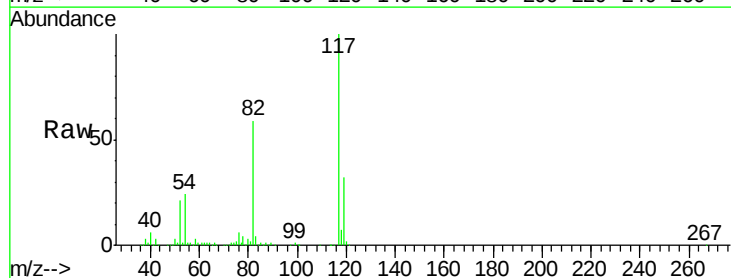
Tgt Ion: 117 Resp: 1973098

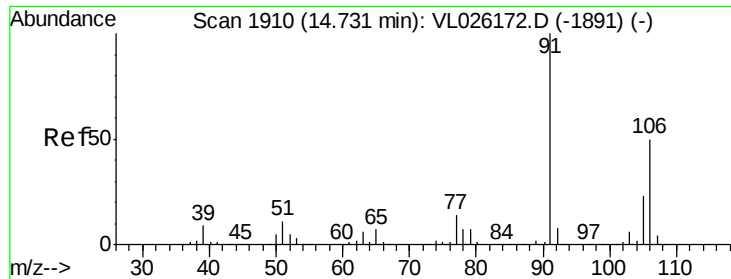
Ion Ratio Lower Upper

117 100

82 59.7 47.7 71.5

119 32.8 43.7 65.5#

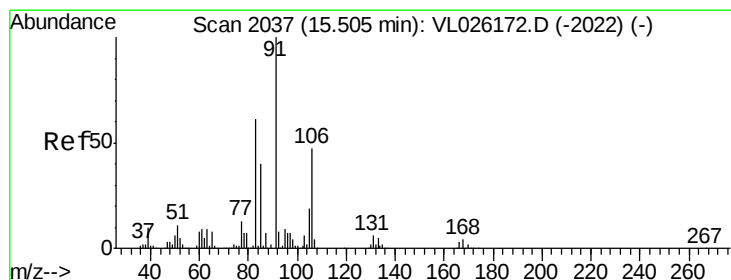
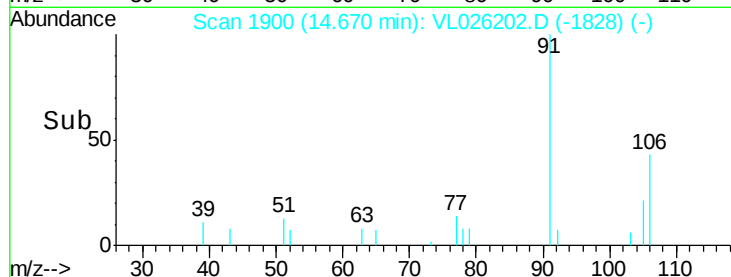
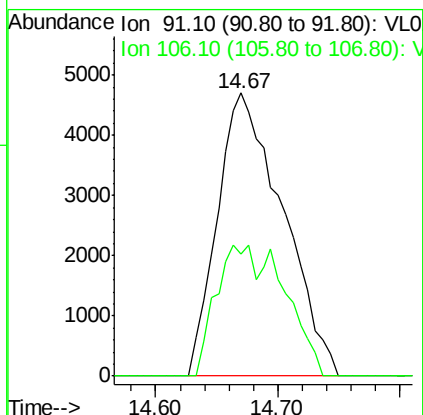
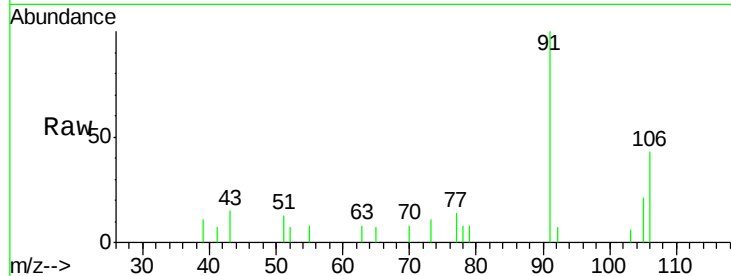




#59
m/p-Xylene
Concen: 0.08 ppbv
RT: 14.67 min Scan# 1900
Delta R.T. -0.06 min
Lab File: VL026202.D
Acq: 10 Oct 2015 8:14

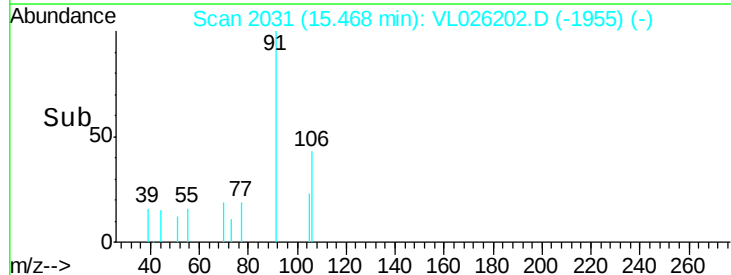
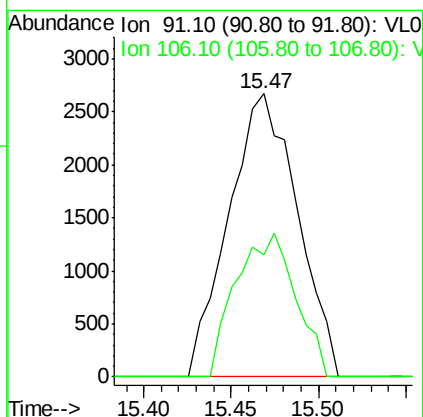
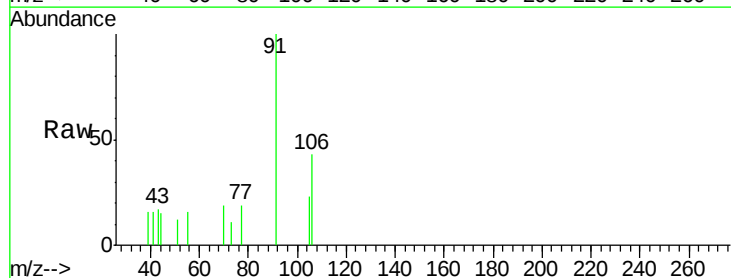
Instrument :
MSVOA_L
ClientSampleId :

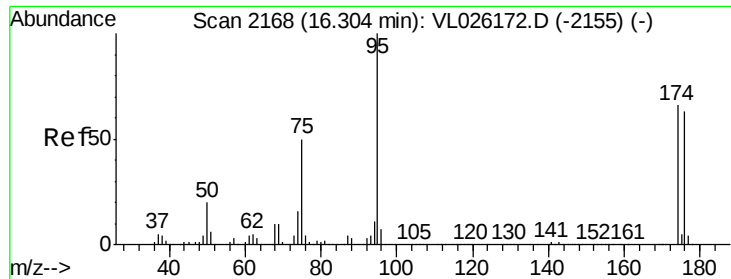
Tot Ion: 91 Resp: 17487
Ion Ratio Lower Upper
91 100
106 48.4 40.2 60.4



#60
o-Xylene
Concen: 0.03 ppbv
RT: 15.47 min Scan# 2031
Delta R.T. -0.04 min
Lab File: VL026202.D
Acq: 10 Oct 2015 8:14

Tgt Ion: 91 Resp: 7295
Ion Ratio Lower Upper
91 100
106 44.0 23.4 70.3





#68

1-Bromo-4-Fluorobenzene

Concen: 10.25 ppbv

RT: 16.27 min Scan# 2162

Delta R.T. -0.04 min

Lab File: VL026202.D

Acq: 10 Oct 2015 8:14

Instrument :

MSVOA_L

ClientSampleId :

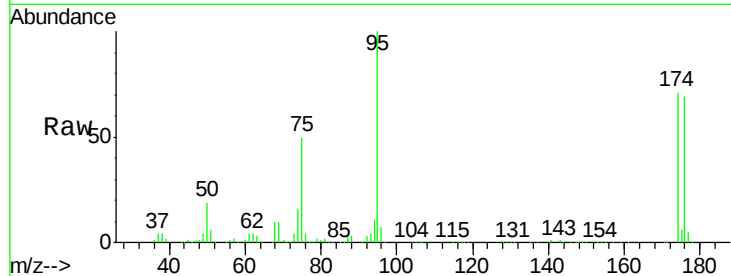
Tot Ion: 95 Resp: 1552631

Ion Ratio Lower Upper

95 100

174 70.8 52.2 78.4

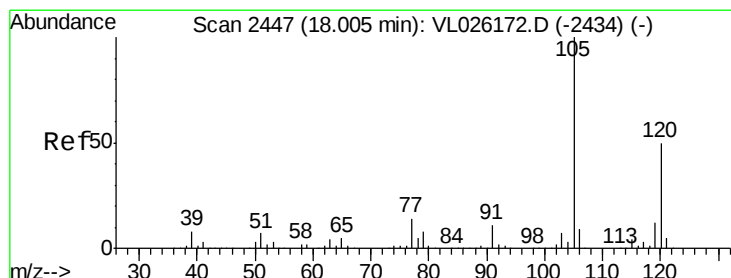
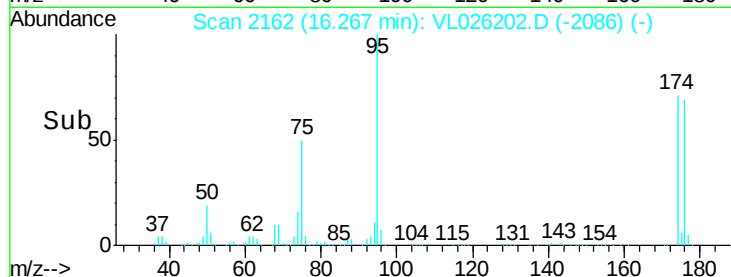
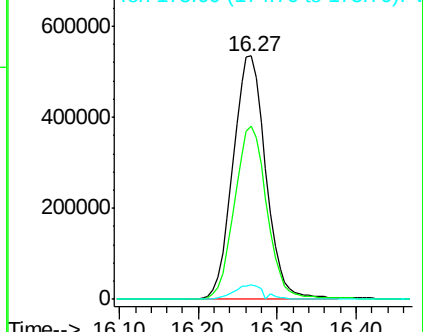
175 5.4 3.9 5.9



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



#73

1,3,5-Trimethylbenzene

Concen: 0.04 ppbv

RT: 17.96 min Scan# 2440

Delta R.T. -0.04 min

Lab File: VL026202.D

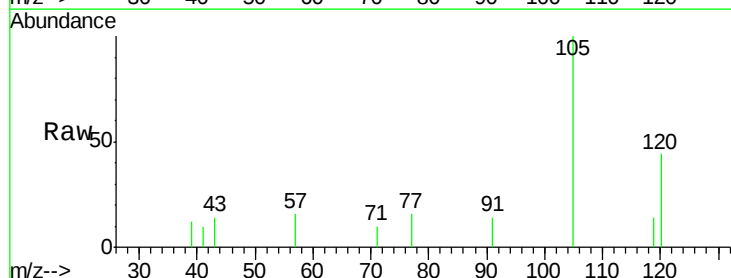
Acq: 10 Oct 2015 8:14

Tgt Ion: 105 Resp: 8527

Ion Ratio Lower Upper

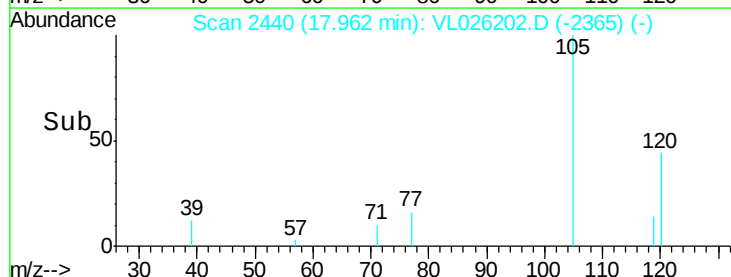
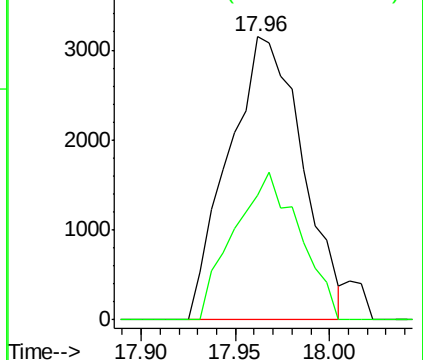
105 100

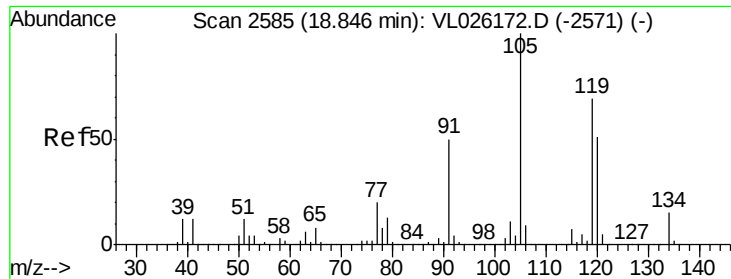
120 43.8 40.1 60.1



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

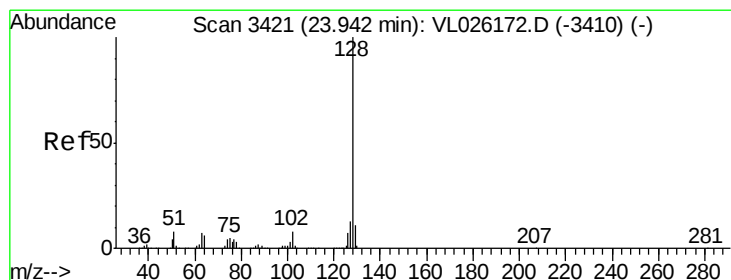
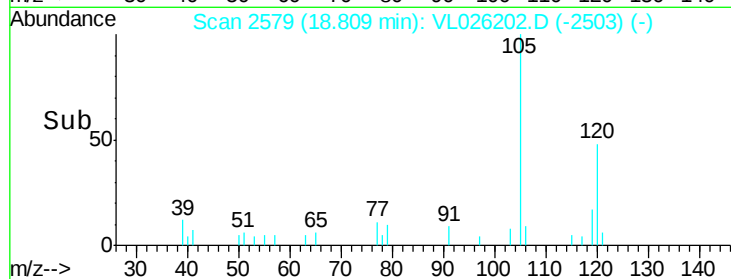
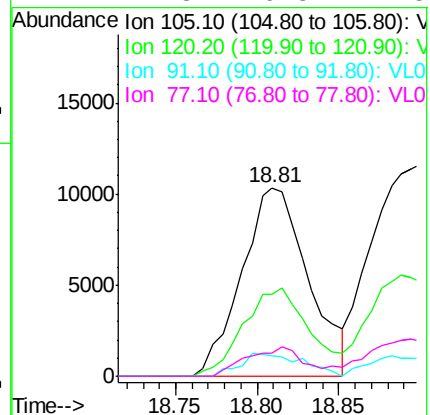
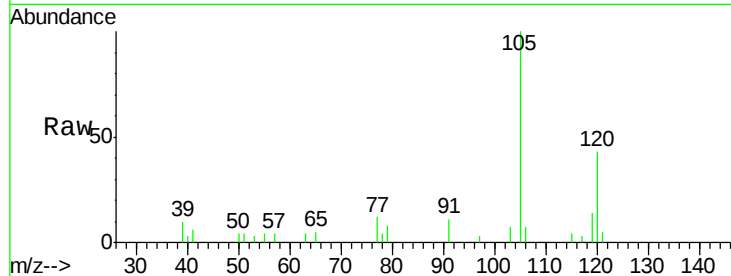




#74
 1,2,4-Trimethylbenzene
 Concen: 0.12 ppbv
 RT: 18.81 min Scan# 2579
 Delta R.T. -0.04 min
 Lab File: VL026202.D
 Acq: 10 Oct 2015 8:14

Instrument :
 MSVOA_L
 ClientSampleId :

Tot Ion	Ratio	Lower	Upper
105	100		
120	43.3	41.1	61.7
91	10.8	39.8	59.6
77	12.3	16.3	24.5



#79
 Naphthalene
 Concen: 0.27 ppbv
 RT: 23.92 min Scan# 3418
 Delta R.T. -0.02 min
 Lab File: VL026202.D
 Acq: 10 Oct 2015 8:14

Tgt Ion	Ratio	Lower	Upper
128	100		
127	11.0	10.2	15.2
129	11.6	8.7	13.1

