

Data Path : W:\HPCHEM1\MSVOA L\DATA\VL102015\
 Data File : VL026228.D
 Acq On : 21 Oct 2015 5:37
 Operator : SY/MD
 Sample : G4112-03 10X
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 INDOOR-239DL

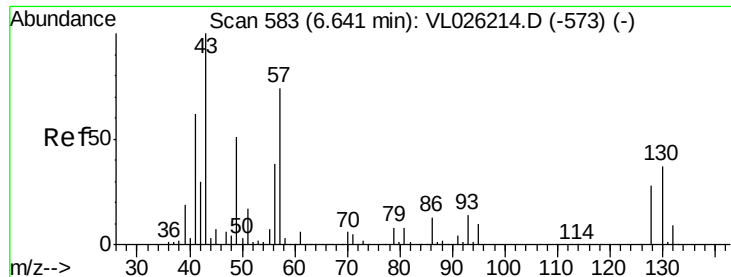
Quant Time: Oct 21 05:34:13 2015
 Quant Method : W:\HPCHEM1\MSVOA L\METHODS\VL102015AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed Oct 21 01:20:55 2015
 QLast Update : Wed Oct 21 01:20:55 2015
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	6.63	49	511525	10.00	ppbv	-0.01
33) 1,4-Difluorobenzene	8.29	114	1497102	10.00	ppbv	-0.02
55) Chlorobenzene-d5	13.71	117	1770875	10.00	ppbv	-0.02

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	16.25	95	1405786	10.29	ppbv	-0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	102.90%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.62	85	8692	0.08	ppbv	93
3) Chlorodifluoromethane	3.56	51	49196	0.76	ppbv	96
4) Chloromethane	3.74	50	2020	0.06	ppbv	99
8) Dichlorotetrafluoroethane	3.62	85	8692	0.10	ppbv #	13
9) Propene	3.60	41	5784	0.19	ppbv #	77
10) Heptane	9.32	43	2413	0.02	ppbv	86
11) Trichlorofluoromethane	4.68	101	6113	0.06	ppbv #	79
13) Ethanol	4.34	45	17820	3.92	ppbv	95
15) Acetone	4.60	43	63506	0.84	ppbv #	79
16) 1,3-Butadiene	3.92	39	3368	0.10	ppbv #	7
19) Isopropyl Alcohol	4.79	45	6447	0.22	ppbv #	27
20) Methylene Chloride	5.14	84	12736	0.42	ppbv	94
25) Ethyl Acetate	6.63	43	2929	0.02	ppbv #	75
26) Hexane	6.63	57	3437	0.05	ppbv	91
36) Benzene	7.99	78	5527	0.04	ppbv #	95
38) Trichloroethene	9.04	130	7648	0.10	ppbv	96
50) 4-Methyl-2-Pentanone	10.12	43	2910	0.03	ppbv #	58
52) Tetrachloroethene	12.76	164	925756	10.59	ppbv	98
53) Toluene	11.21	91	31025	0.15	ppbv	99
59) m/p-Xylene	14.65	91	11342	0.05	ppbv	97
60) o-Xylene	15.45	91	5772	0.02	ppbv	87
74) 1,2,4-Trimethylbenzene	18.78	105	13369	0.05	ppbv #	68

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



#1

Bromochloromethane

Concen: 10.00 ppbv

RT: 6.63 min Scan# 581

Delta R.T. -0.01 min

Lab File: VL026228.D

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ClientSampleId :

INDOOR-239DL

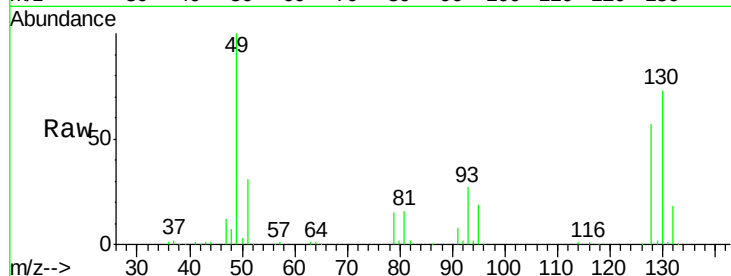
Tot Ion: 49 Resp: 511525

Ion Ratio Lower Upper

49 100

128 56.8 28.2 84.7

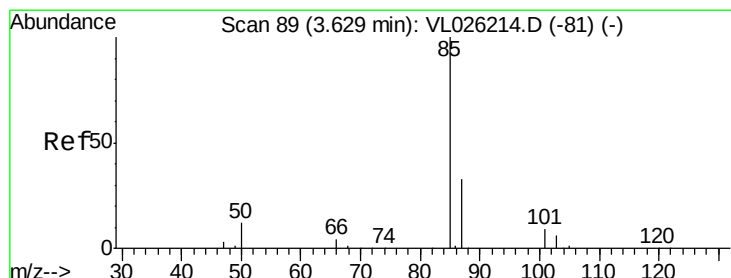
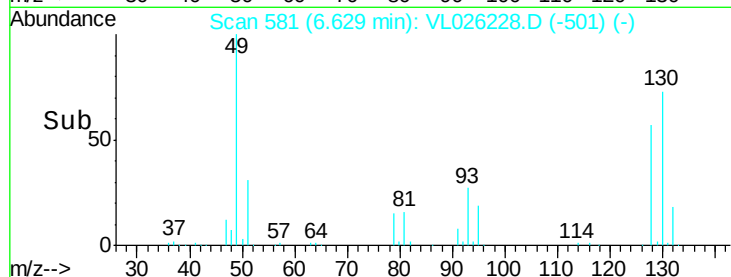
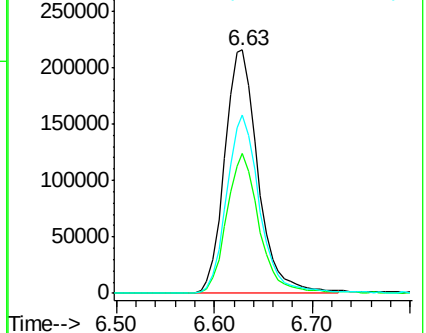
130 73.8 36.0 108.1



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: 0.08 ppbv

RT: 3.62 min Scan# 88

Delta R.T. -0.01 min

Lab File: VL026228.D

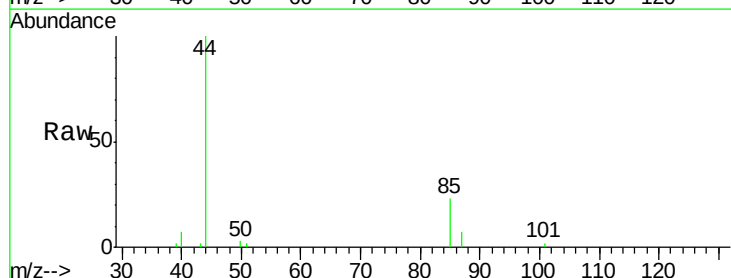
Acq: 21 Oct 2015 5:37

Tgt Ion: 85 Resp: 8692

Ion Ratio Lower Upper

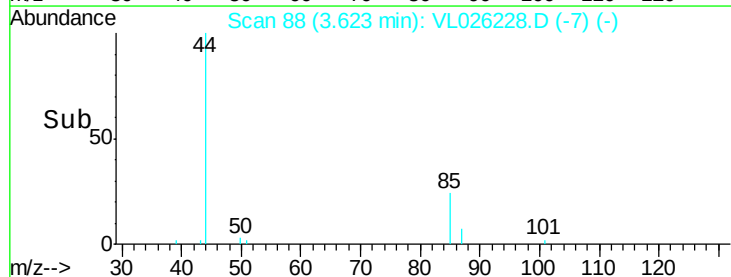
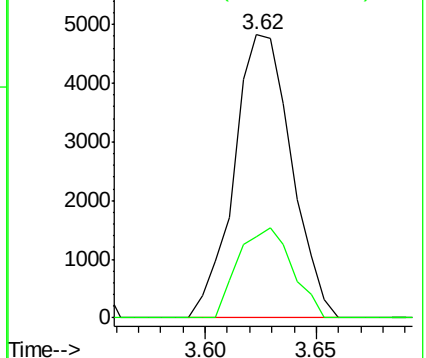
85 100

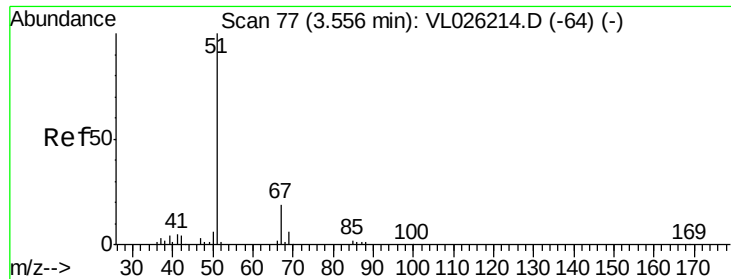
87 28.5 26.1 39.1



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

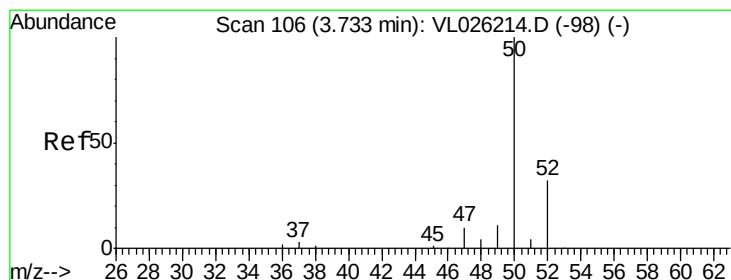
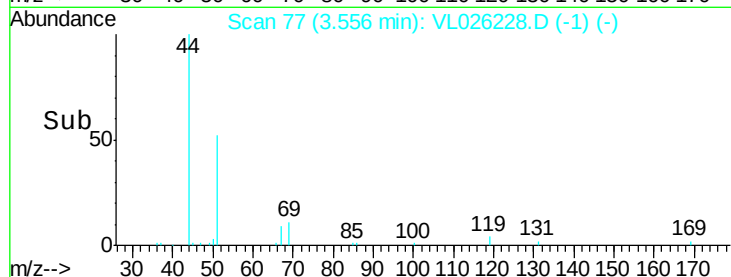
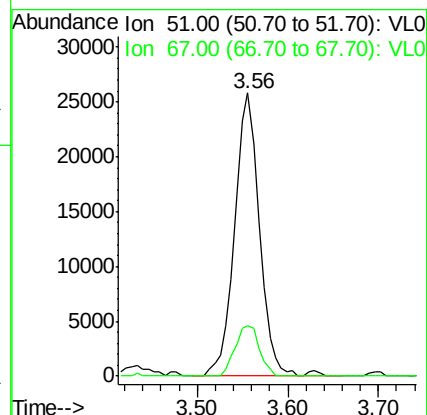
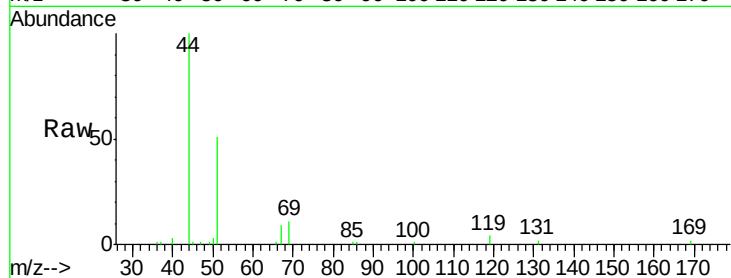




#3
Chlorodifluoromethane
Concen: 0.76 ppbv
RT: 3.56 min Scan# 77
Delta R.T. -0.00 min
Lab File: VL026228.D
Acq: 21 Oct 2015 5:37

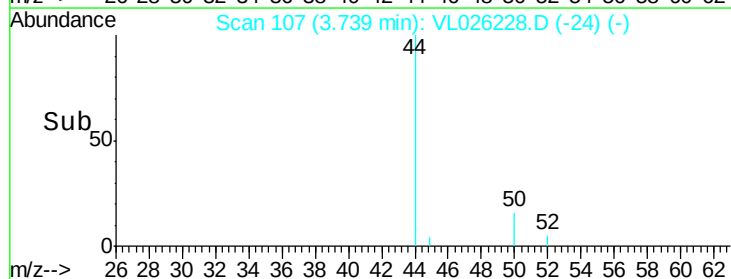
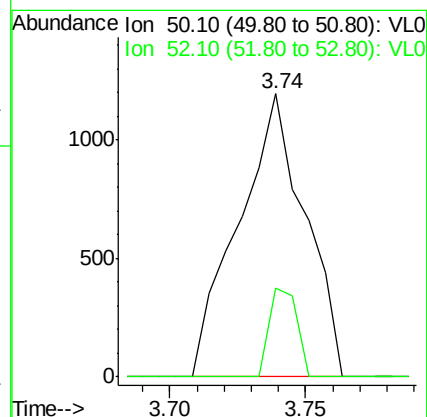
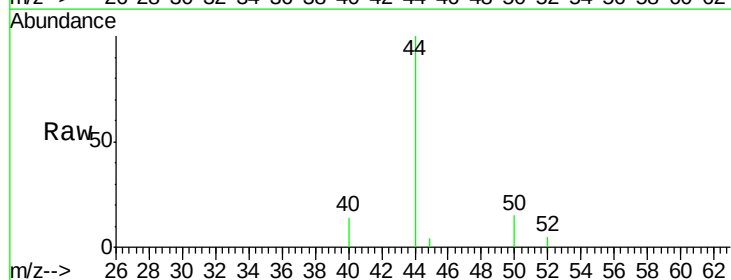
Instrument :
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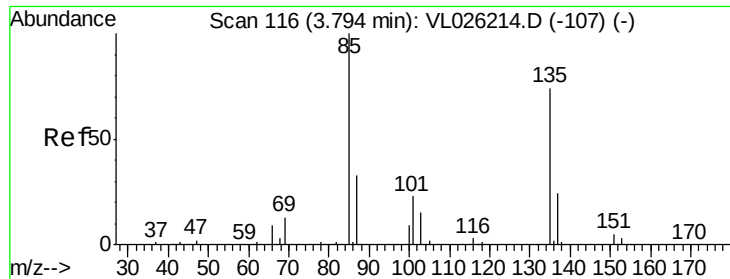
Tot Ion: 51 Resp: 49196
Ion Ratio Lower Upper
51 100
67 17.2 15.3 22.9



#4
Chloromethane
Concen: 0.06 ppbv
RT: 3.74 min Scan# 107
Delta R.T. 0.01 min
Lab File: VL026228.D
Acq: 21 Oct 2015 5:37

Tgt Ion: 50 Resp: 2020
Ion Ratio Lower Upper
50 100
52 31.5 25.8 38.6





#8

Dichlorotetrafluoroethane

Concen: 0.10 ppbv

RT: 3.62 min Scan# 88

Delta R.T. -0.17 min

Lab File: VL026228.D

Acq: 21 Oct 2015 5:37

Instrument :

MSVOA_L

ClientSampleId :

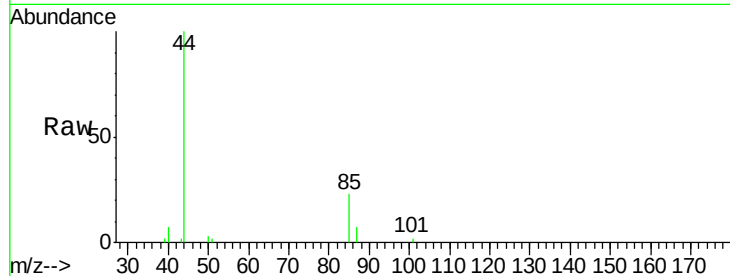
INDOOR-239DL

Tot Ion: 85 Resp: 8692

Ion Ratio Lower Upper

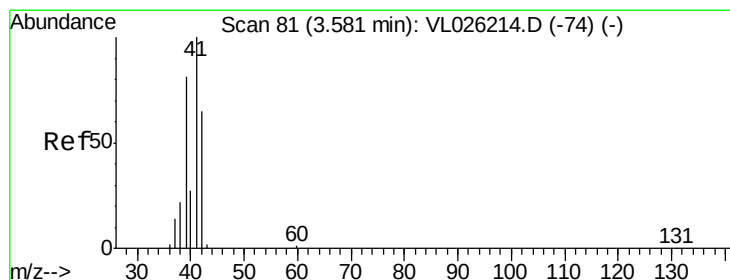
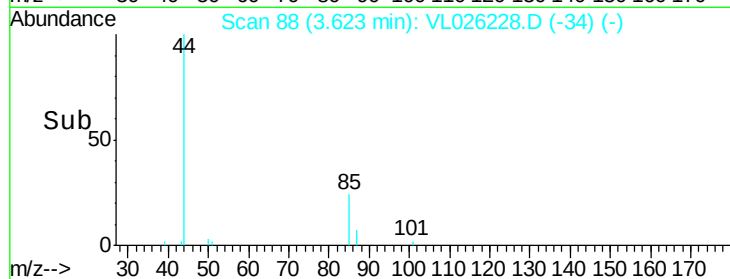
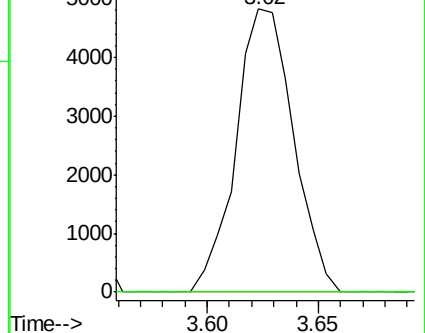
85 100

135 0.0 57.8 86.8#



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 135.00 (134.70 to 135.70): V



#9

Propene

Concen: 0.19 ppbv

RT: 3.60 min Scan# 84

Delta R.T. 0.02 min

Lab File: VL026228.D

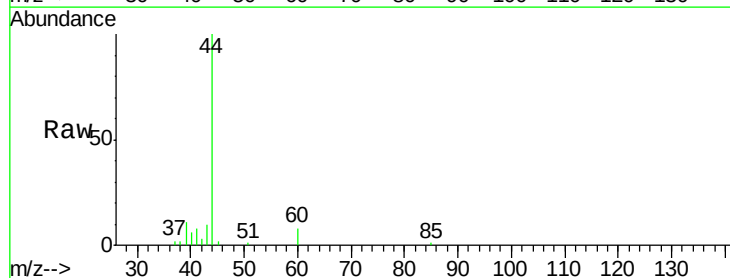
Acq: 21 Oct 2015 5:37

Tgt Ion: 41 Resp: 5784

Ion Ratio Lower Upper

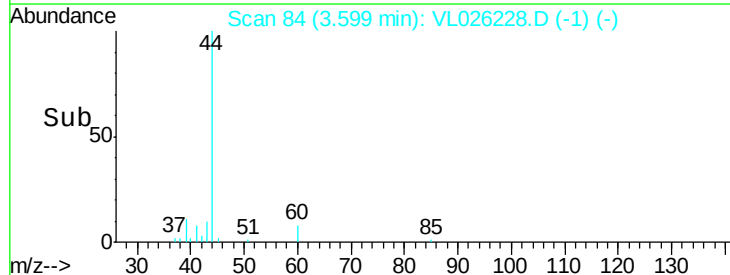
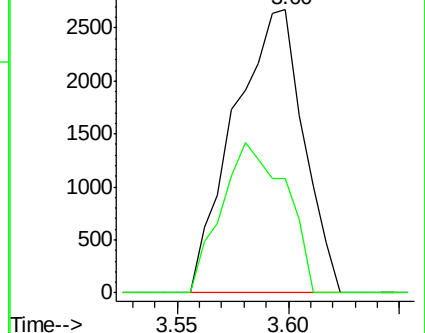
41 100

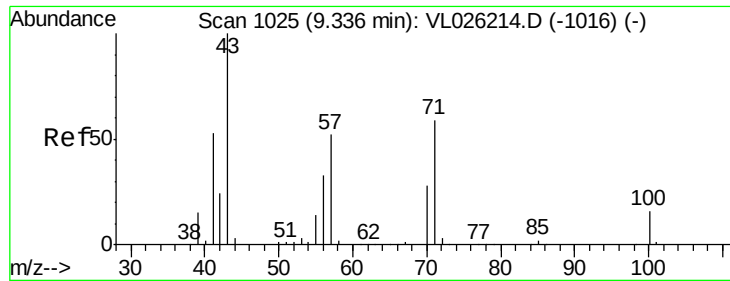
42 49.2 53.8 80.8#



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0





#10

Heptane

Concen: 0.02 ppbv

RT: 9.32 min Scan# 1023

Delta R.T. -0.01 min

Lab File: VL026228.D

Acq: 21 Oct 2015 5:37

Instrument :

MSVOA_L

ClientSampleId :

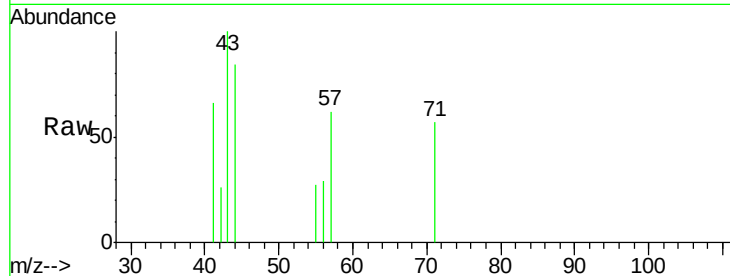
INDOOR-239DL

Tot Ion: 43 Resp: 2413

Ion Ratio Lower Upper

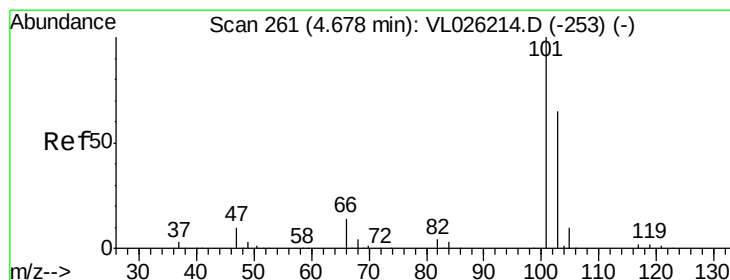
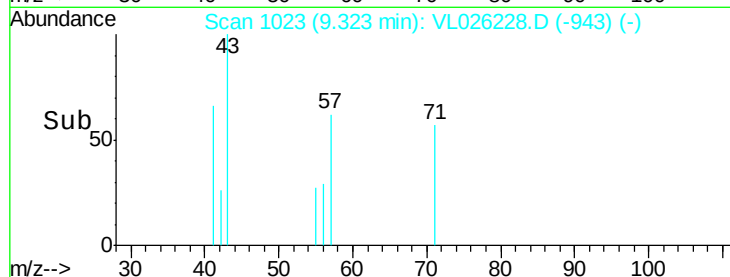
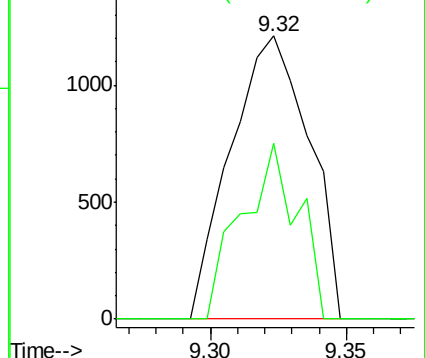
43 100

57 44.8 43.7 65.5



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 57.10 (56.80 to 57.80): VL0



#11

Trichlorofluoromethane

Concen: 0.06 ppbv

RT: 4.68 min Scan# 262

Delta R.T. 0.01 min

Lab File: VL026228.D

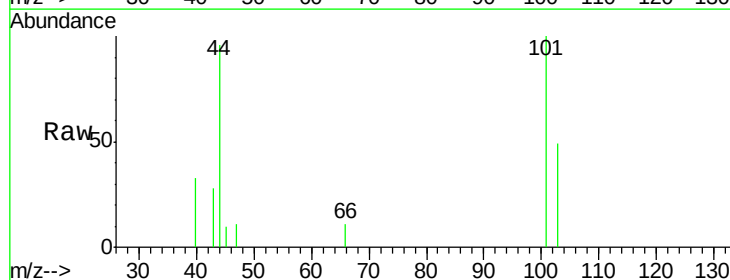
Acq: 21 Oct 2015 5:37

Tgt Ion: 101 Resp: 6113

Ion Ratio Lower Upper

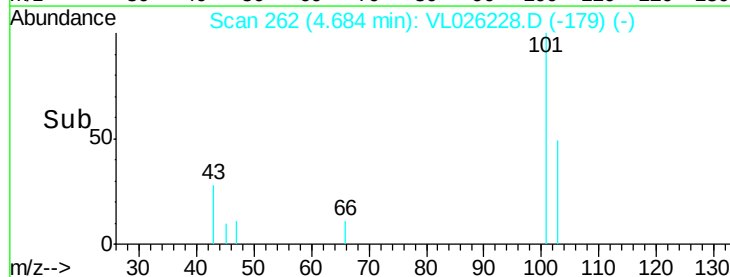
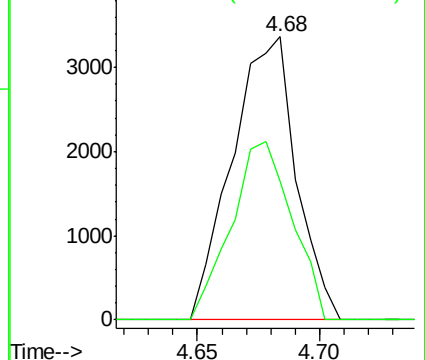
101 100

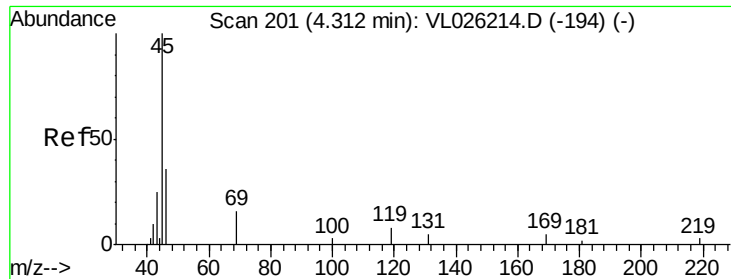
103 49.0 52.2 78.2#



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V

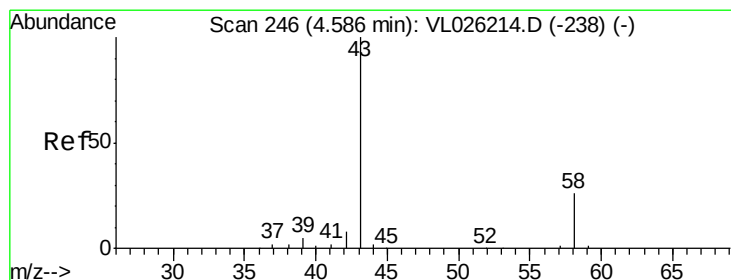
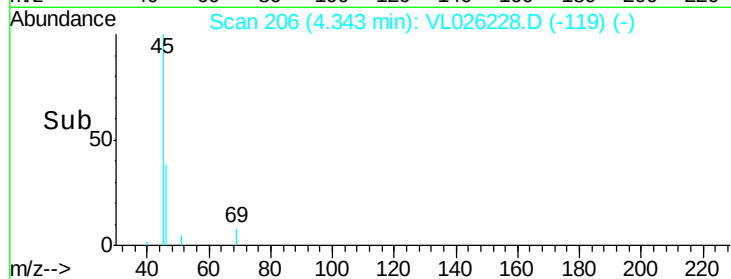
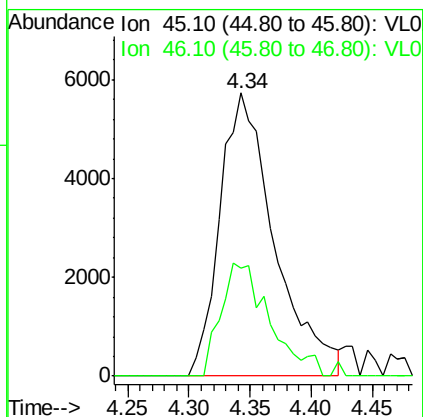
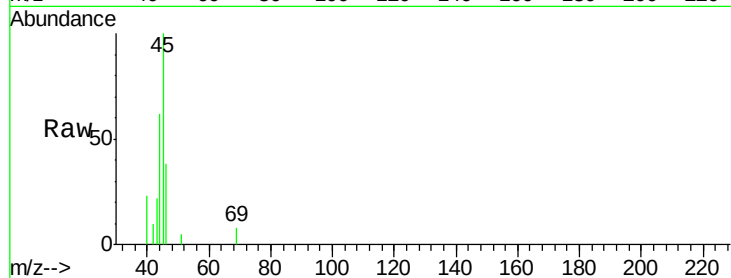




#13
Ethanol
Concen: 3.92 ppbv
RT: 4.34 min Scan# 206
Delta R.T. 0.03 min
Lab File: VL026228.D
Acq: 21 Oct 2015 5:37

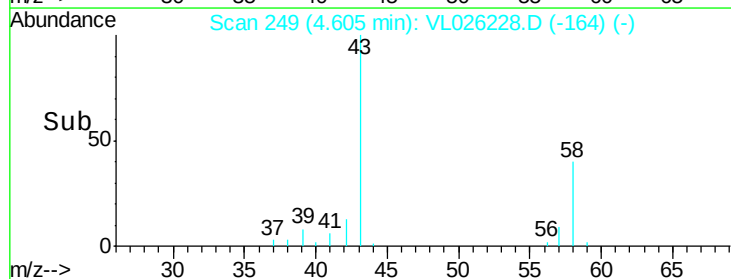
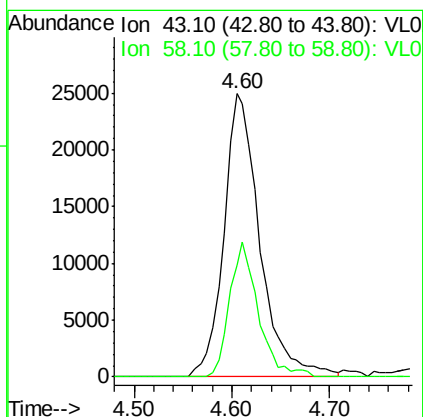
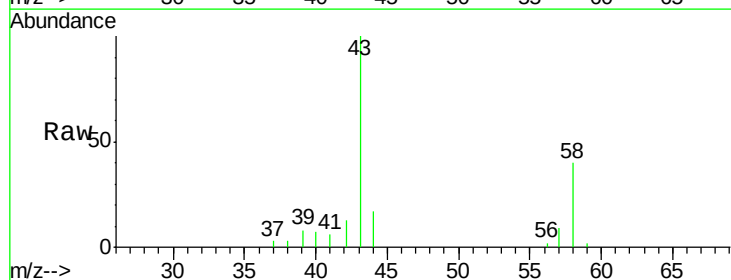
Instrument :
MSVOA_L
ClientSampleId :
INDOOR-239DL

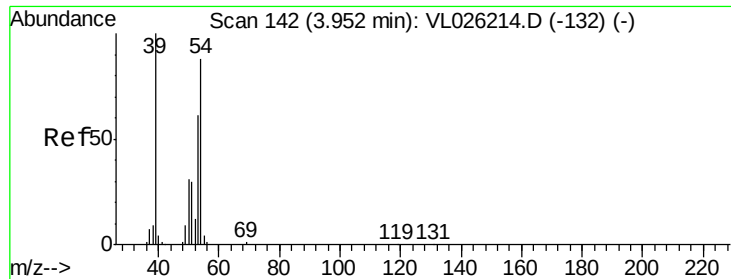
Tot Ion: 45 Resp: 17820
Ion Ratio Lower Upper
45 100
46 36.3 15.8 63.0



#15
Acetone
Concen: 0.84 ppbv
RT: 4.60 min Scan# 249
Delta R.T. 0.02 min
Lab File: VL026228.D
Acq: 21 Oct 2015 5:37

Tgt Ion: 43 Resp: 63506
Ion Ratio Lower Upper
43 100
58 38.1 21.8 32.6#

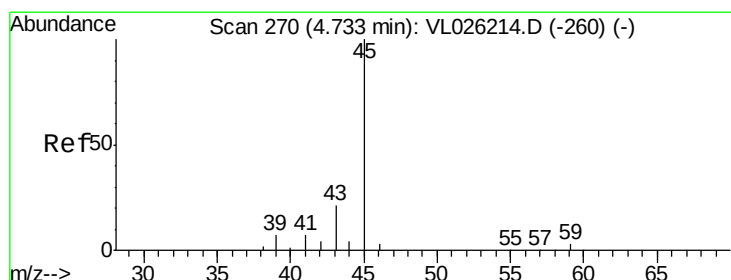
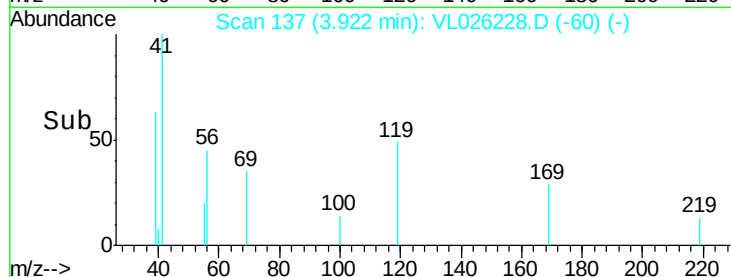
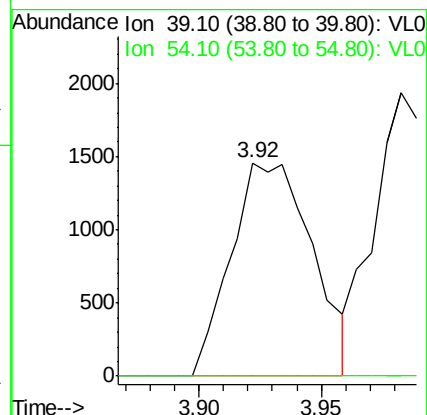
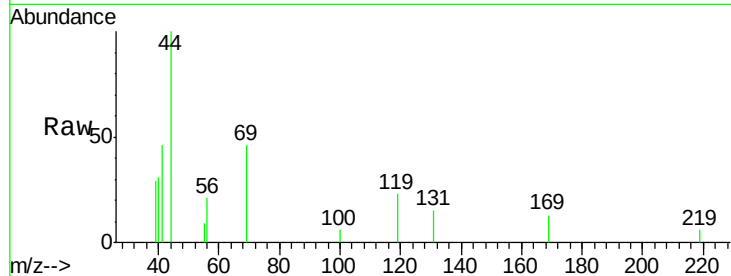




#16
 1,3-Butadiene
 Concen: 0.10 ppbv
 RT: 3.92 min Scan# 137
 Delta R.T. -0.03 min
 Lab File: VL026228.D
 Acq: 21 Oct 2015 5:37

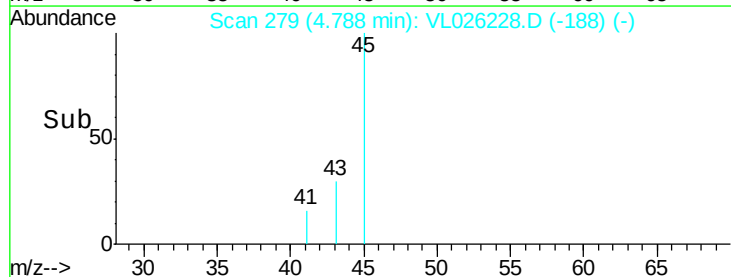
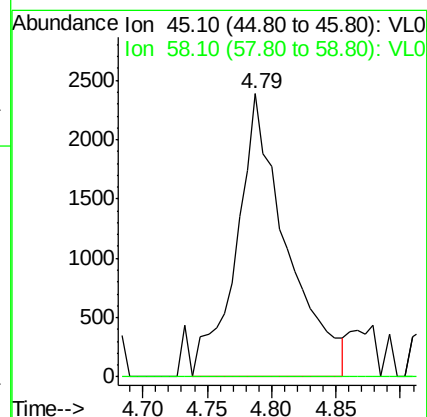
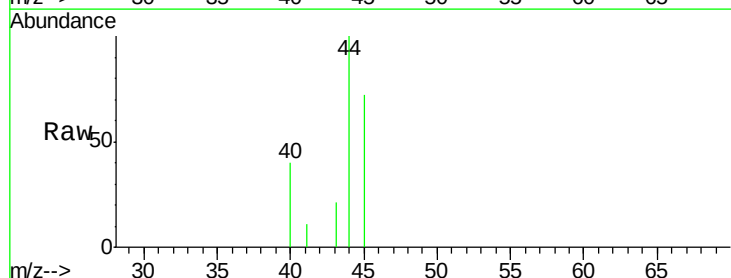
Instrument :
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 ClientSampleId :
 INDOOR-239DL

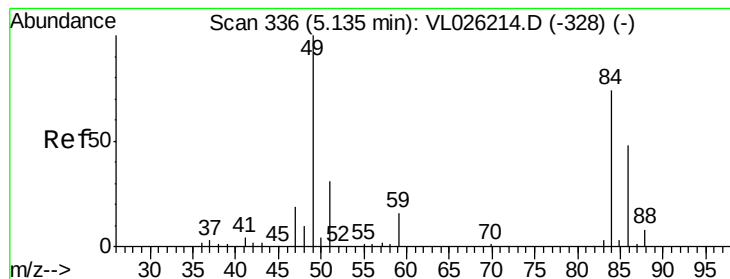
Tot Ion: 39 Resp: 3368
 Ion Ratio Lower Upper
 39 100
 54 0.0 67.3 100.9#



#19
 Isopropyl Alcohol
 Concen: 0.22 ppbv
 RT: 4.79 min Scan# 279
 Delta R.T. 0.05 min
 Lab File: VL026228.D
 Acq: 21 Oct 2015 5:37

Tgt Ion: 45 Resp: 6447
 Ion Ratio Lower Upper
 45 100
 58 0.0 40.3 60.5#





#20

Methylene Chloride

Concen: 0.42 ppbv

RT: 5.14 min Scan# 336

Delta R.T. -0.00 min

Lab File: VL026228.D

Acq: 21 Oct 2015 5:37

Instrument :

MSVOA_L

ClientSampleId :

INDOOR-239DL

Tot Ion: 84 Resp: 12736

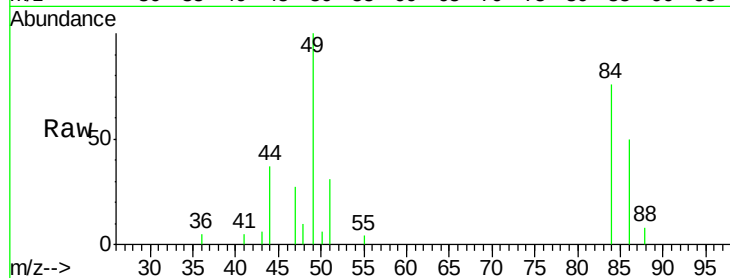
Ion Ratio Lower Upper

84 100

49 124.4 108.7 163.1

51 40.6 33.7 50.5

86 65.9 52.2 78.2

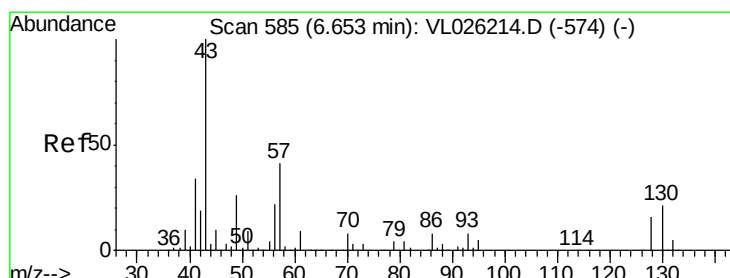
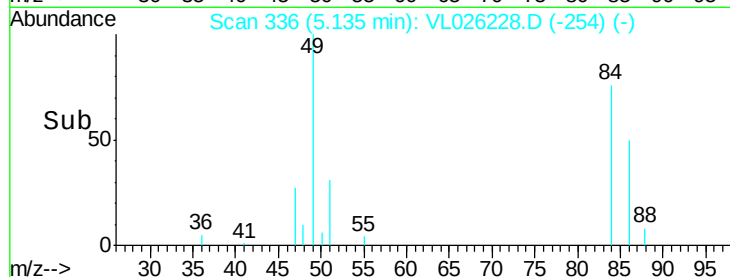
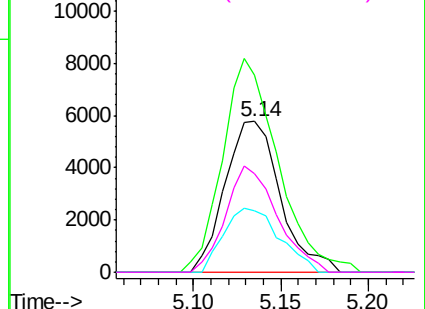


Abundance Ion 84.00 (83.70 to 84.70): VL0

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



#25

Ethyl Acetate

Concen: 0.02 ppbv

RT: 6.63 min Scan# 582

Delta R.T. -0.02 min

Lab File: VL026228.D

Acq: 21 Oct 2015 5:37

Tgt Ion: 43 Resp: 2929

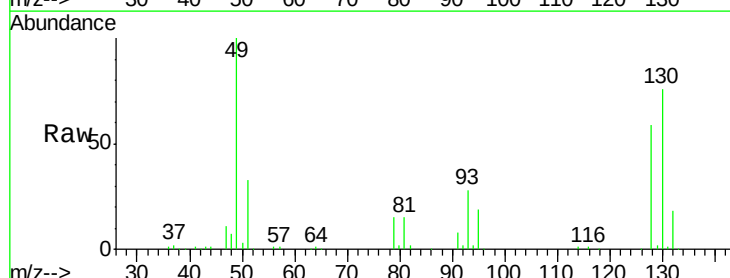
Ion Ratio Lower Upper

43 100

45 0.0 7.7 11.5#

61 0.0 7.5 11.3#

70 0.0 6.9 10.3#

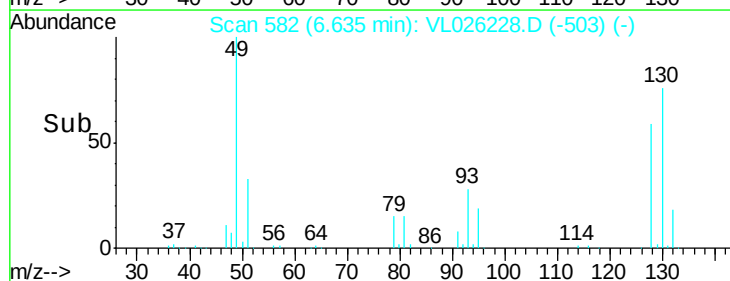
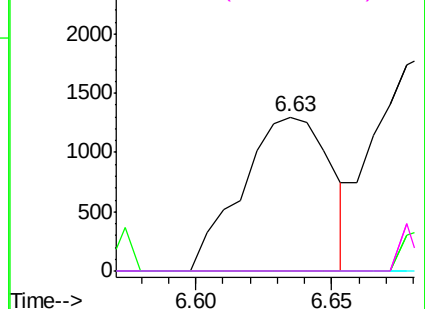


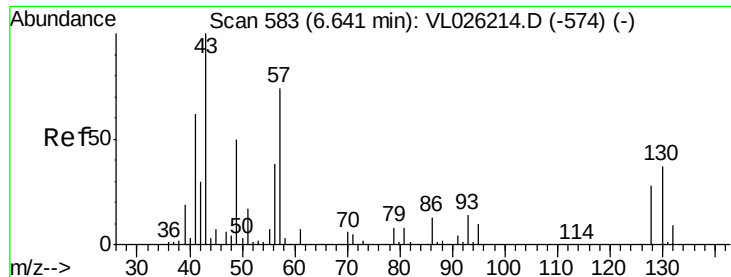
Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 45.10 (44.80 to 45.80): VL0

Ion 61.10 (60.80 to 61.80): VL0

Ion 70.10 (69.80 to 70.80): VL0

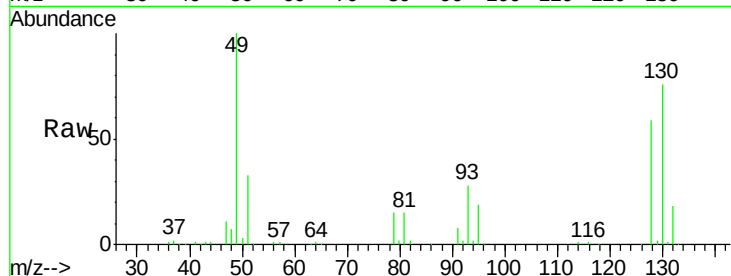




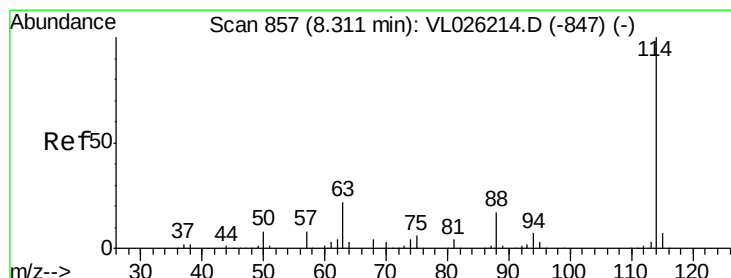
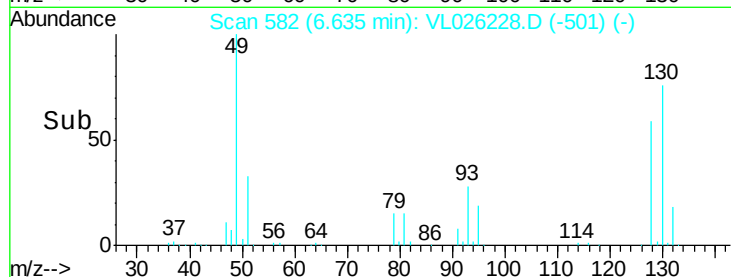
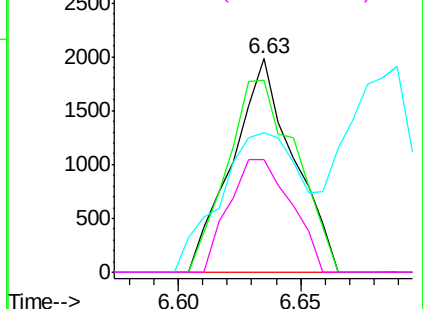
#26
Hexane
Concen: 0.05 ppbv
RT: 6.63 min Scan# 582
Delta R.T. -0.01 min
Lab File: VL026228.D
Acq: 21 Oct 2015 5:37

Instrument :
MSVOA_L
ClientSampleId :
INDOOR-239DL

Tot Ion: 57 Resp: 3437
Ion Ratio Lower Upper
57 100
41 101.8 68.1 102.1
43 214.1 163.4 245.2
56 53.9 42.2 63.4

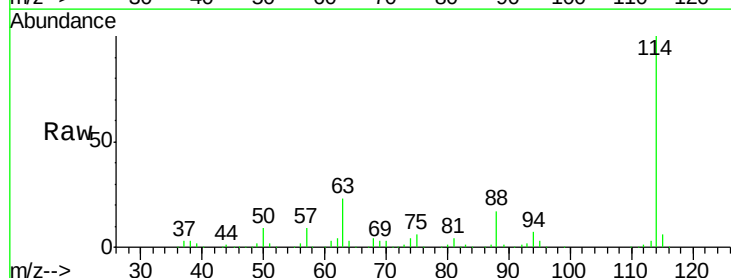


Abundance Ion 57.10 (56.80 to 57.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 43.10 (42.80 to 43.80): VL0
Ion 56.10 (55.80 to 56.80): VL0

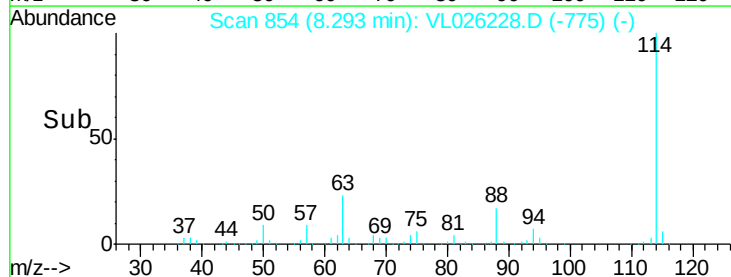
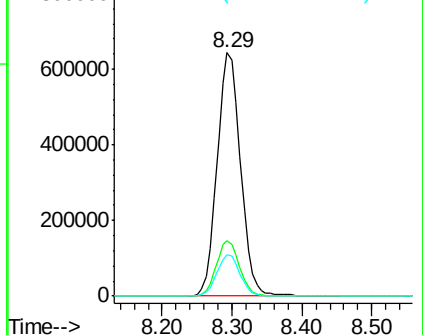


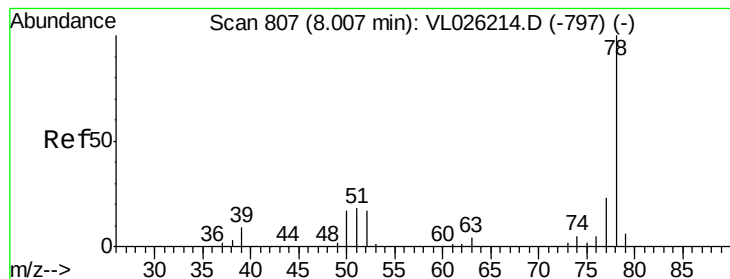
#33
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 8.29 min Scan# 854
Delta R.T. -0.02 min
Lab File: VL026228.D
Acq: 21 Oct 2015 5:37

Tgt Ion: 114 Resp: 1497102
Ion Ratio Lower Upper
114 100
63 22.5 18.2 27.4
88 16.9 13.5 20.3



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





#36

Benzene

Concen: 0.04 ppbv

RT: 7.99 min Scan# 805

Delta R.T. -0.01 min

Lab File: VL026228.D

Acq: 21 Oct 2015 5:37

Instrument :

MSVOA_L

ClientSampleId :

INDOOR-239DL

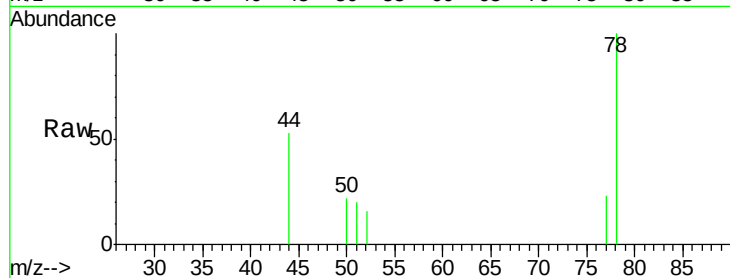
Tot Ion: 78 Resp: 5527

Ion Ratio Lower Upper

78 100

77 22.7 18.1 27.1

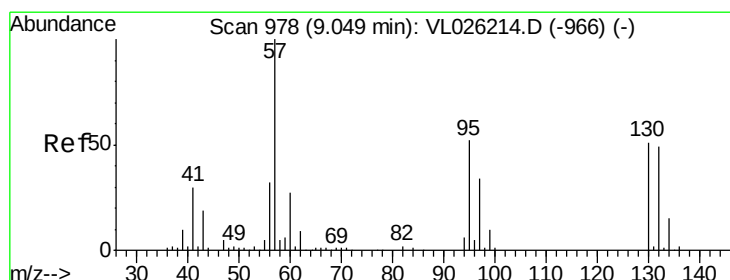
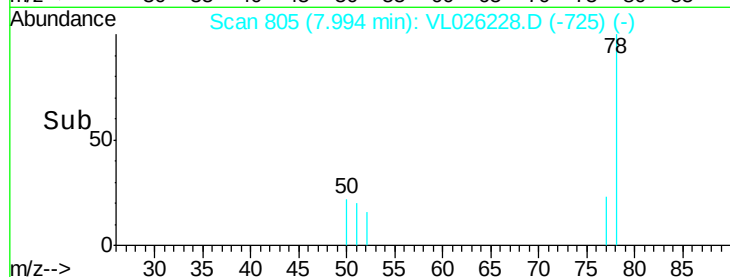
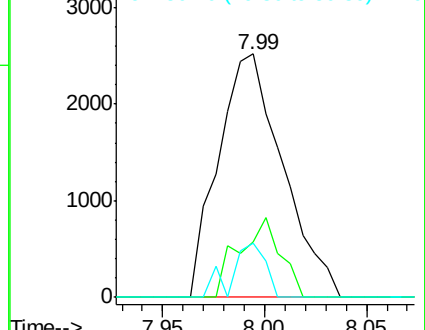
50 22.3 13.8 20.8#



Abundance Ion 78.10 (77.80 to 78.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

Ion 50.10 (49.80 to 50.80): VL0



#38

Trichloroethene

Concen: 0.10 ppbv

RT: 9.04 min Scan# 976

Delta R.T. -0.01 min

Lab File: VL026228.D

Acq: 21 Oct 2015 5:37

Tgt Ion: 130 Resp: 7648

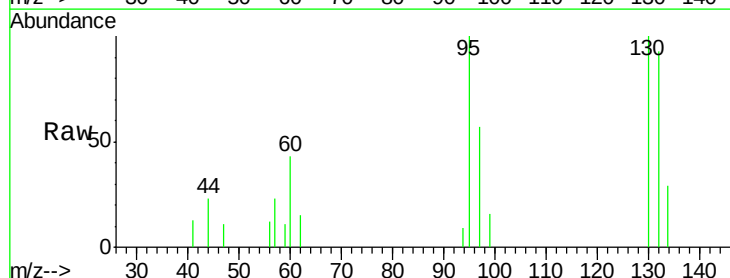
Ion Ratio Lower Upper

130 100

95 100.3 81.0 121.4

132 93.2 76.5 114.7

97 57.2 52.5 78.7

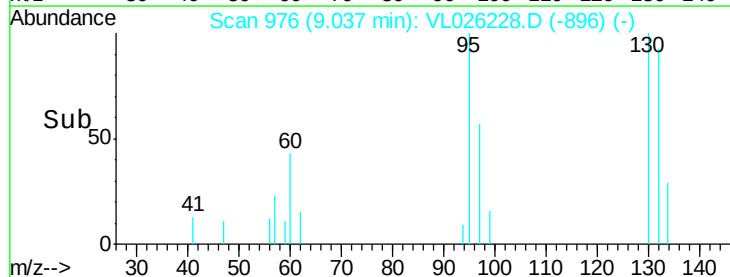
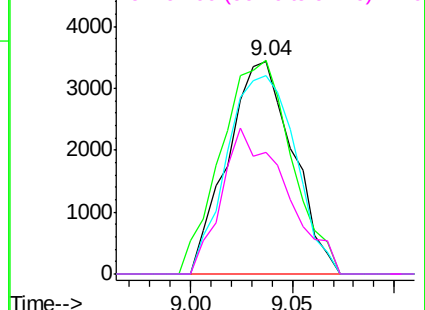


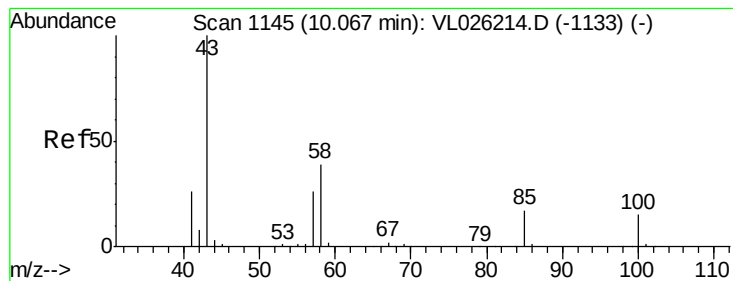
Abundance Ion 130.00 (129.70 to 130.70): V

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





#50

4-Methyl-2-Pentanone

Concen: 0.03 ppbv

RT: 10.12 min Scan# 1153

Delta R.T. 0.05 min

Lab File: VL026228.D

Acq: 21 Oct 2015 5:37

Instrument :

MSVOA_L

ClientSampleId :

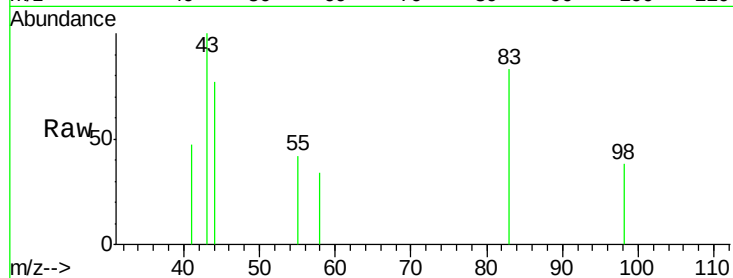
INDOOR-239DL

Tot Ion: 43 Resp: 2910

Ion Ratio Lower Upper

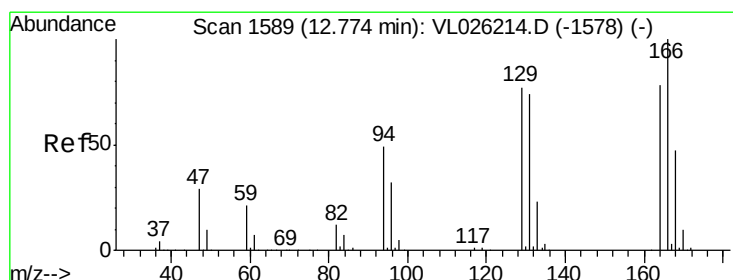
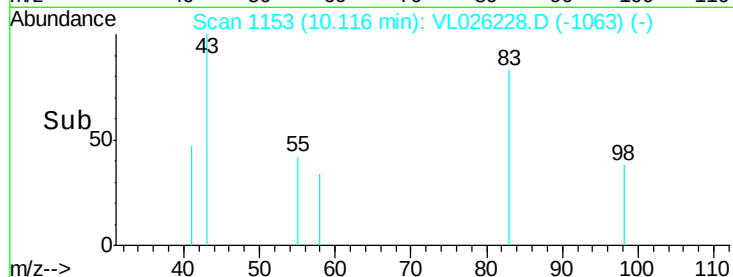
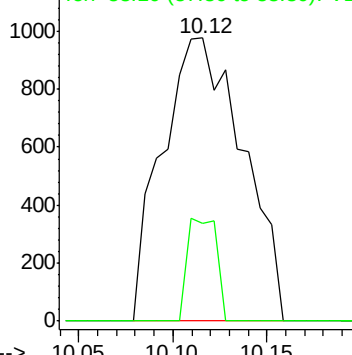
43 100

58 13.0 31.1 46.7#



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#52

Tetrachloroethene

Concen: 10.59 ppbv

RT: 12.76 min Scan# 1586

Delta R.T. -0.02 min

Lab File: VL026228.D

Acq: 21 Oct 2015 5:37

Tgt Ion: 164 Resp: 925756

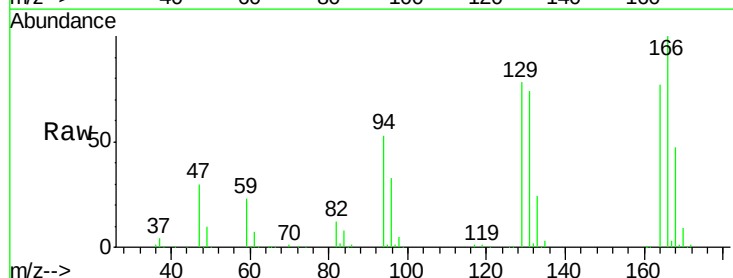
Ion Ratio Lower Upper

164 100

166 129.3 102.3 153.5

129 101.0 78.2 117.4

131 95.9 75.7 113.5

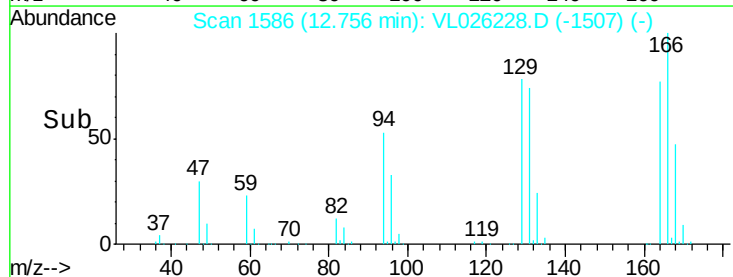
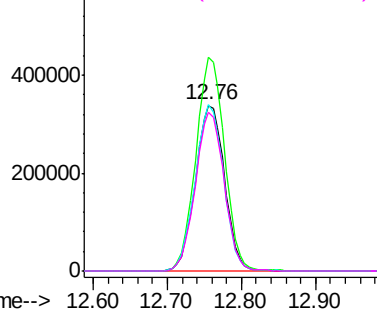


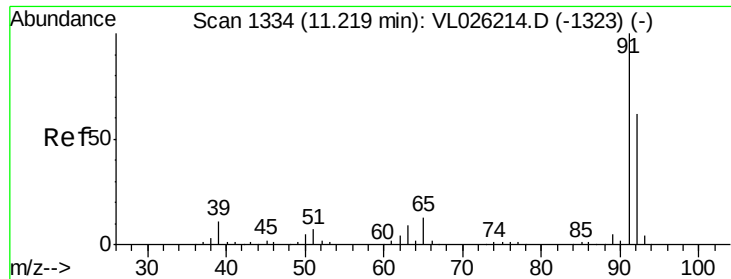
Abundance Ion 163.90 (163.60 to 164.60): V

Ion 165.90 (165.60 to 166.60): V

Ion 129.00 (128.70 to 129.70): V

Ion 131.00 (130.70 to 131.70): V





#53

Toluene

Concen: 0.15 ppbv

RT: 11.21 min Scan# 1332

Delta R.T. -0.01 min

Lab File: VL026228.D

Acq: 21 Oct 2015 5:37

Instrument :

MSVOA_L

ClientSampleId :

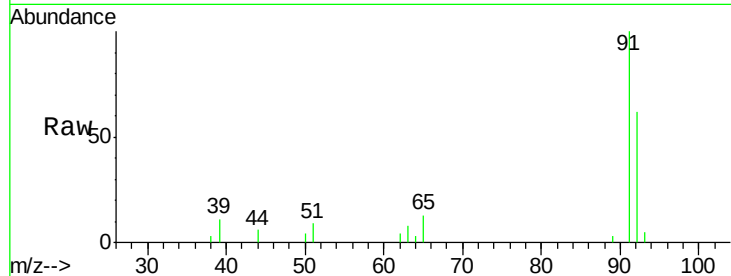
INDOOR-239DL

Tot Ion: 91 Resp: 31025

Ion Ratio Lower Upper

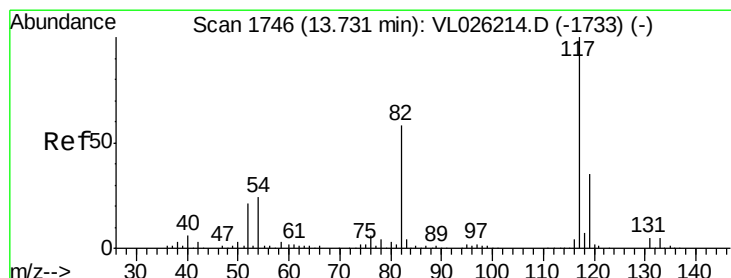
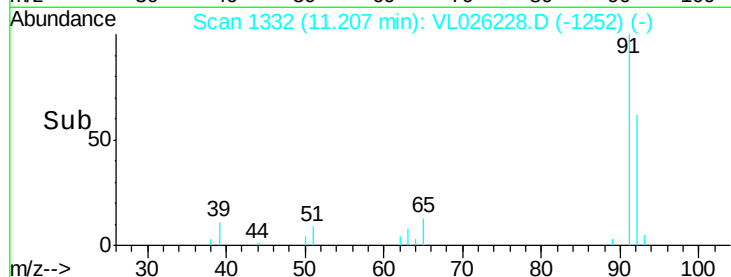
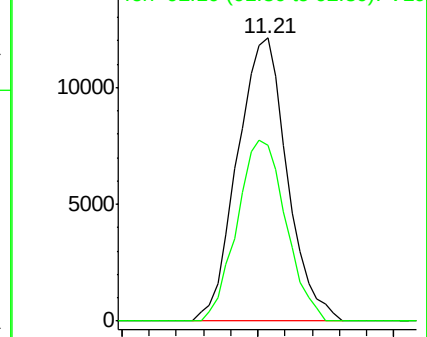
91 100

92 62.5 49.2 73.8



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0



#55

Chlorobenzene-d5

Concen: 10.00 ppbv

RT: 13.71 min Scan# 1742

Delta R.T. -0.02 min

Lab File: VL026228.D

Acq: 21 Oct 2015 5:37

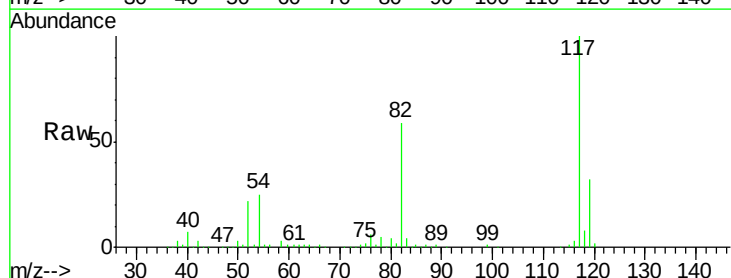
Tgt Ion: 117 Resp: 1770875

Ion Ratio Lower Upper

117 100

82 60.2 45.8 68.8

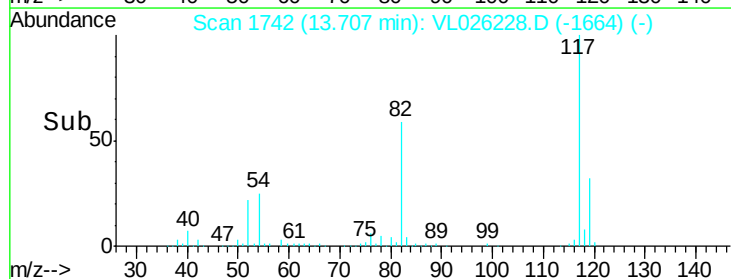
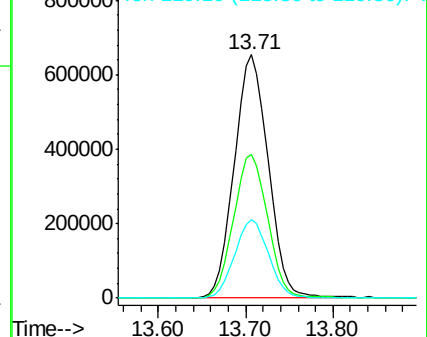
119 32.6 45.0 67.4#

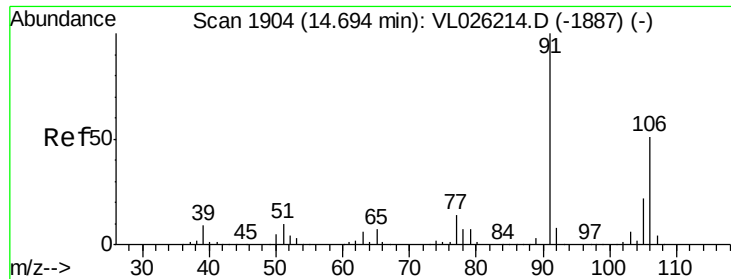


Abundance Ion 117.10 (116.80 to 117.80): V

Ion 82.10 (81.80 to 82.80): VL0

Ion 119.10 (118.80 to 119.80): V





#59

m/p-Xylene

Concen: 0.05 ppbv

RT: 14.65 min Scan# 1897

Delta R.T. -0.04 min

Lab File: VL026228.D

Acq: 21 Oct 2015 5:37

Instrument :

MSVOA_L

ClientSampleId :

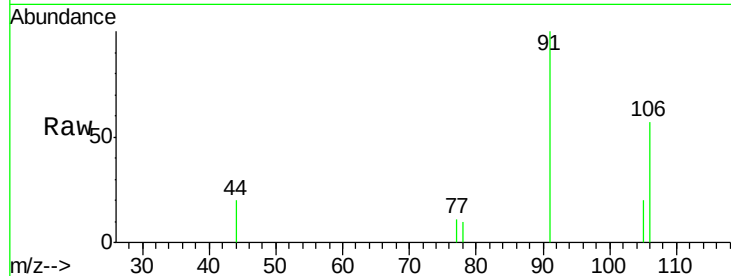
INDOOR-239DL

Tot Ion: 91 Resp: 11342

Ion Ratio Lower Upper

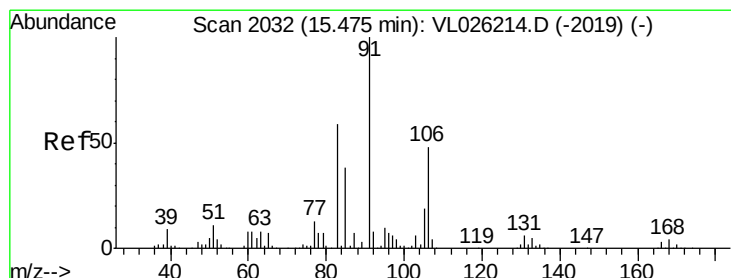
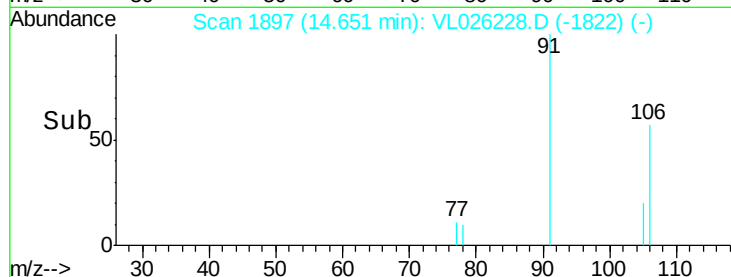
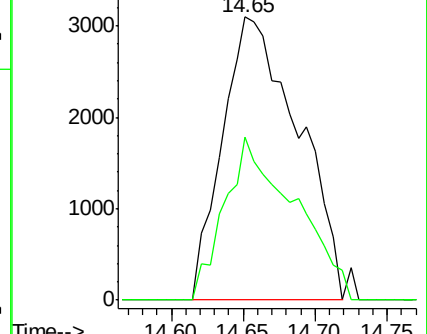
91 100

106 53.1 40.6 61.0



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V



#60

o-Xylene

Concen: 0.02 ppbv

RT: 15.45 min Scan# 2028

Delta R.T. -0.02 min

Lab File: VL026228.D

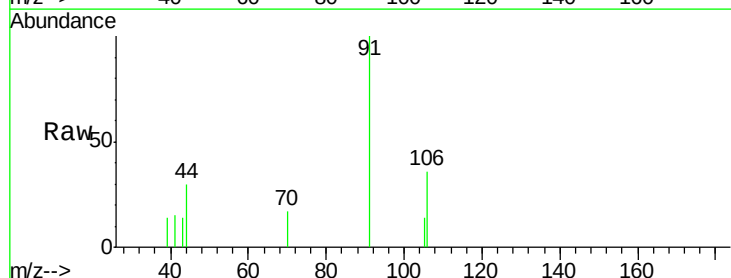
Acq: 21 Oct 2015 5:37

Tgt Ion: 91 Resp: 5772

Ion Ratio Lower Upper

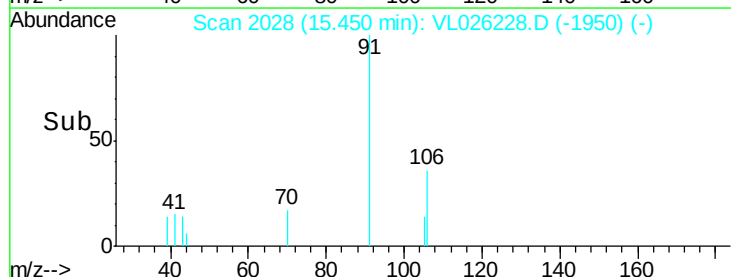
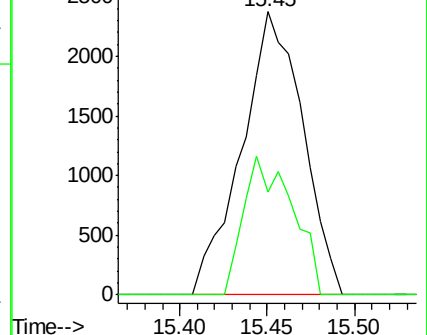
91 100

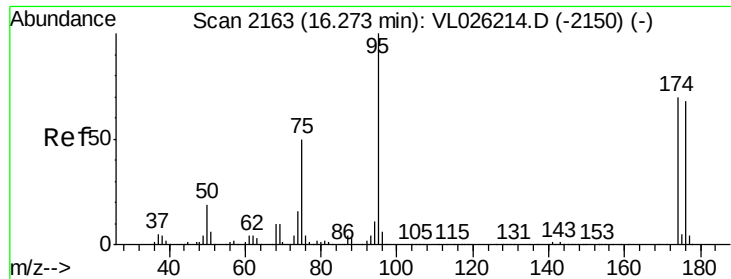
106 39.1 23.8 71.5



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V





#68

1-Bromo-4-Fluorobenzene

Concen: 10.29 ppbv

RT: 16.25 min Scan# 2159

Delta R.T. -0.02 min

Lab File: VL026228.D

Acq: 21 Oct 2015 5:37

Instrument :

MSVOA_L

ClientSampleId :

INDOOR-239DL

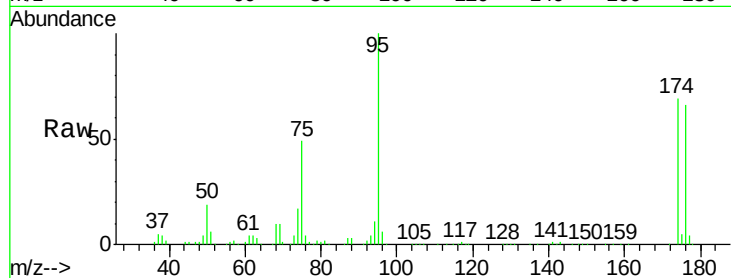
Tot Ion: 95 Resp: 1405786

Ion Ratio Lower Upper

95 100

174 69.8 55.8 83.8

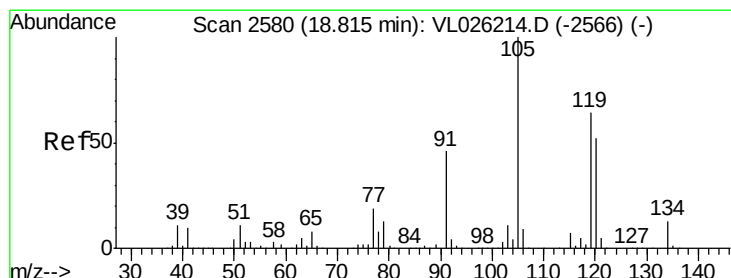
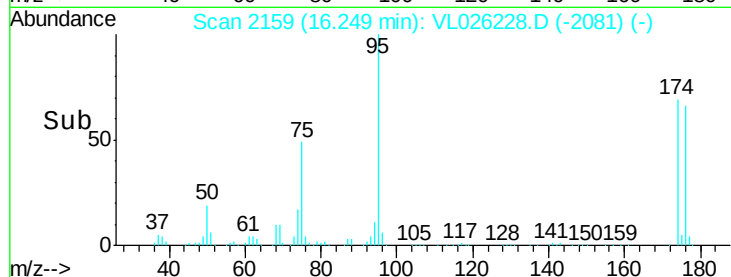
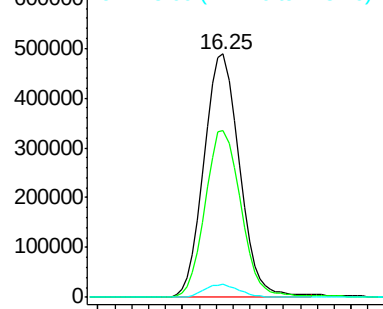
175 5.3 4.3 6.5



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



#74

1,2,4-Trimethylbenzene

Concen: 0.05 ppbv

RT: 18.78 min Scan# 2575

Delta R.T. -0.03 min

Lab File: VL026228.D

Acq: 21 Oct 2015 5:37

Tgt Ion: 105 Resp: 13369

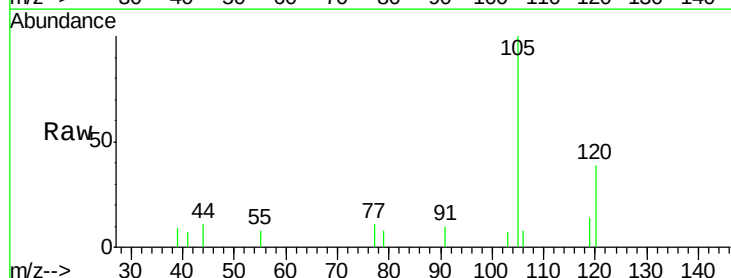
Ion Ratio Lower Upper

105 100

120 39.0 41.2 61.8#

91 10.2 37.2 55.8#

77 11.1 15.6 23.4#



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

