

Data Path : W:\HPCHEM1\MSVOA L\DATA\VL070715\  
 Data File : VL025622.D  
 Acq On : 8 Jul 2015 00:38  
 Operator : SY/MD  
 Sample : G2872-02 10X  
 Misc : 400mL/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 DIN46-MIDSTREAM-070115

Quant Time: Jul 08 08:41:21 2015  
 Quant Method : W:\HPCHEM1\MSVOA L\METHODS\VL070715AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_LWed Jul 08 02:22:55 2015  
 QLast Update : Wed Jul 08 02:22:55 2015  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 6.65  | 49   | 764888   | 10.00 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 8.34  | 114  | 2077907  | 10.00 | ppbv  | 0.01     |
| 55) Chlorobenzene-d5    | 13.76 | 117  | 2470299  | 10.00 | ppbv  | 0.00     |

| System Monitoring Compounds |        | R.T.  | QIon     | Response | Conc | Units  | Dev(Min) |
|-----------------------------|--------|-------|----------|----------|------|--------|----------|
| 68) 1-Bromo-4-Fluorobenzene | 16.29  | 95    | 2027488  | 9.73     | ppbv | 0.00   |          |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 97.30% |          |

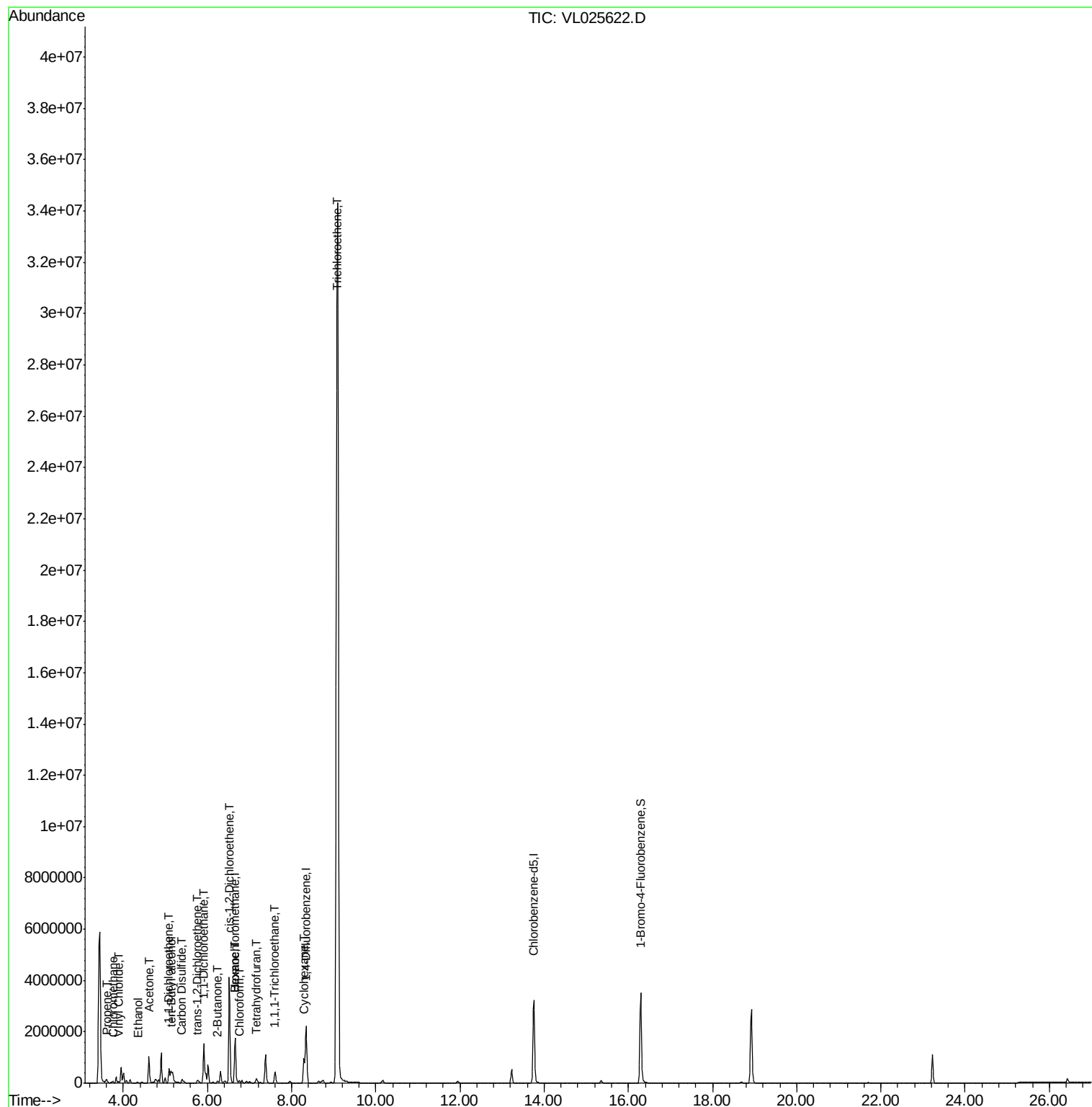
| Target Compounds             | R.T. | QIon | Response | Conc   | Units  | Ovalue |
|------------------------------|------|------|----------|--------|--------|--------|
| 4) Chloromethane             | 3.75 | 50   | 7458     | 0.15   | ppbv   | 96     |
| 5) Vinyl Chloride            | 3.89 | 62   | 52328    | 0.99   | ppbv   | 96     |
| 9) Propene                   | 3.60 | 41   | 64351    | 1.80   | ppbv   | 92     |
| 13) Ethanol                  | 4.35 | 45   | 24845    | 4.46   | ppbv   | 100    |
| 15) Acetone                  | 4.61 | 43   | 766546   | 5.67   | ppbv # | 90     |
| 17) tert-Butyl alcohol       | 5.14 | 59   | 798430   | 7.04   | ppbv   | 97     |
| 18) 1,1-Dichloroethene       | 5.09 | 96   | 176303   | 3.12   | ppbv   | 99     |
| 22) trans-1,2-Dichloroethene | 5.77 | 96   | 21261    | 0.37   | ppbv   | 91     |
| 24) 1,1-Dichloroethane       | 5.92 | 63   | 1521263  | 11.08  | ppbv   | 100    |
| 26) Hexane                   | 6.67 | 57   | 163440   | 1.70   | ppbv # | 44     |
| 27) Carbon Disulfide         | 5.39 | 76   | 197947   | 1.27   | ppbv   | 97     |
| 29) Chloroform               | 6.75 | 83   | 39425    | 0.21   | ppbv   | 96     |
| 30) Cyclohexane              | 8.29 | 84   | 419376   | 4.56   | ppbv   | 95     |
| 31) cis-1,2-Dichloroethene   | 6.52 | 61   | 2910364  | 30.42  | ppbv   | 99     |
| 32) 1,1,1-Trichloroethane    | 7.60 | 97   | 333321   | 1.61   | ppbv   | 98     |
| 34) 2-Butanone               | 6.23 | 43   | 104395   | 0.89   | ppbv   | 96     |
| 38) Trichloroethene          | 9.09 | 130  | 18028370 | 194.84 | ppbv   | 89     |
| 41) Tetrahydrofuran          | 7.17 | 42   | 109860   | 1.87   | ppbv   | 95     |

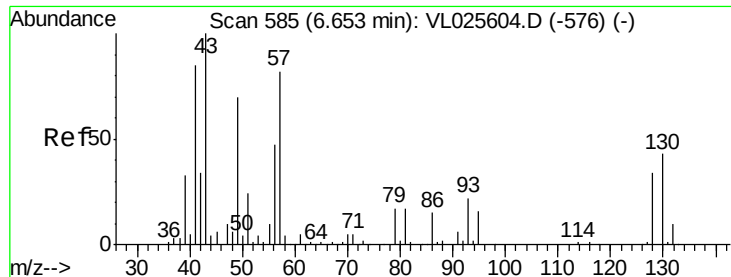
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Method : W:\HPCHEM1\MSVOA L\METHODS\VL070715AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Wed Jul 08 02:22:55 2015  
QLast Update : Wed Jul 08 02:22:55 2015  
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.00 ppbv

RT: 6.65 min Scan# 585

Delta R.T. -0.00 min

Lab File: VL025622.D

Acq: 8 Jul 2015 00:38

Instrument :

MSVOA\_L

ClientSampleId :

DIN46-MIDSTREAM-070115

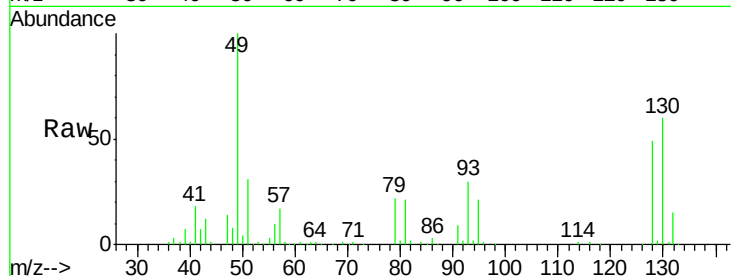
Tot Ion: 49 Resp: 764888

Ion Ratio Lower Upper

49 100

128 51.1 25.4 76.0

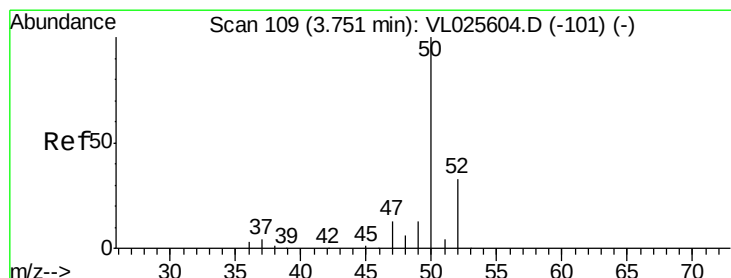
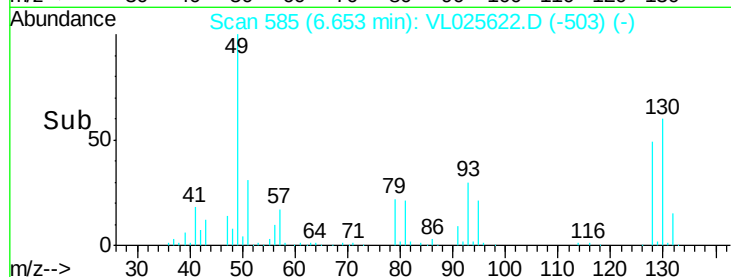
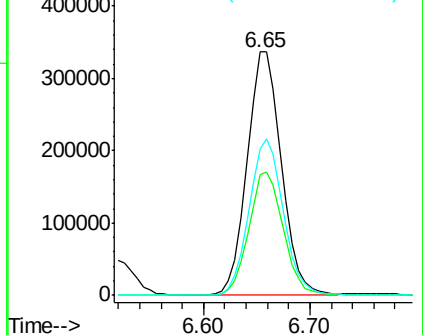
130 64.7 31.9 95.9



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



#4

Chloromethane

Concen: 0.15 ppbv

RT: 3.75 min Scan# 109

Delta R.T. -0.00 min

Lab File: VL025622.D

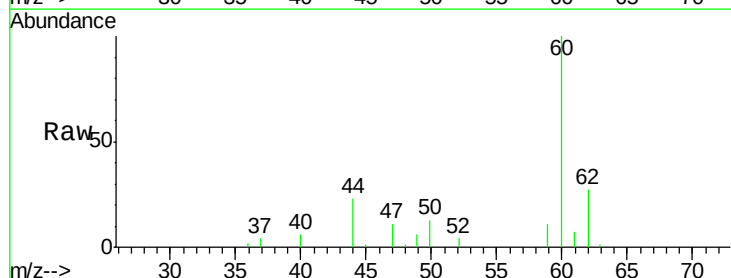
Acq: 8 Jul 2015 00:38

Tgt Ion: 50 Resp: 7458

Ion Ratio Lower Upper

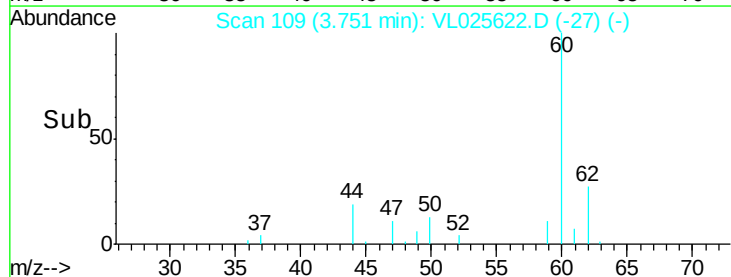
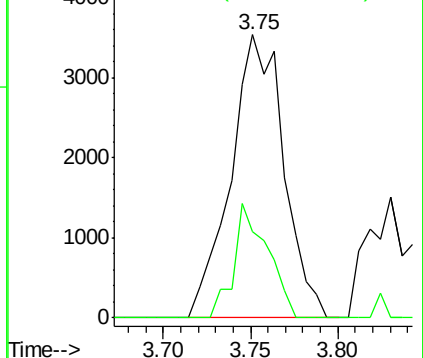
50 100

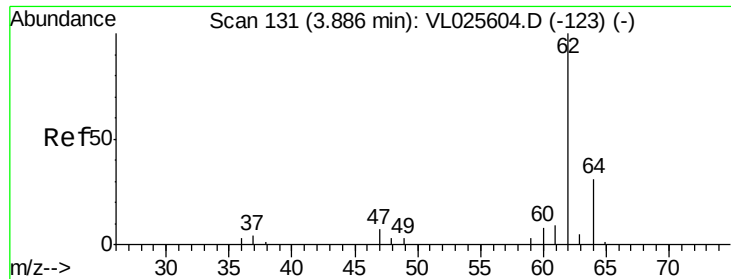
52 30.6 26.2 39.2



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#5

Vinyl Chloride

Concen: 0.99 ppbv

RT: 3.89 min Scan# 132

Delta R.T. 0.01 min

Lab File: VL025622.D

Acq: 8 Jul 2015 00:38

Instrument :

MSVOA\_L

ClientSampleId :

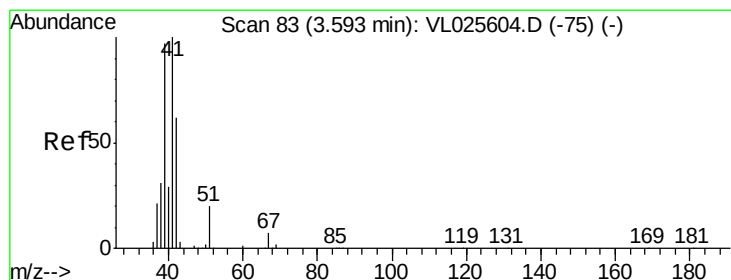
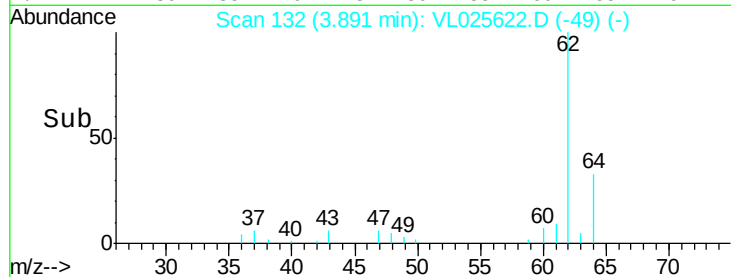
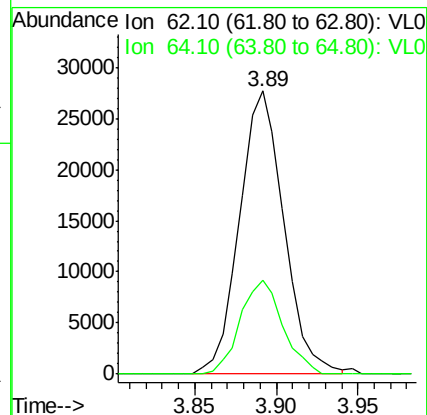
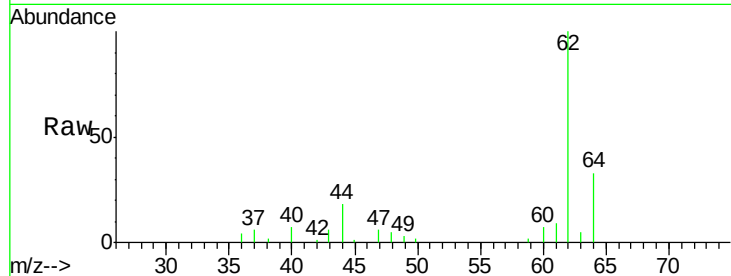
DIN46-MIDSTREAM-070115

Tot Ion: 62 Resp: 52328

Ion Ratio Lower Upper

62 100

64 33.2 25.0 37.6



#9

Propene

Concen: 1.80 ppbv

RT: 3.60 min Scan# 85

Delta R.T. 0.01 min

Lab File: VL025622.D

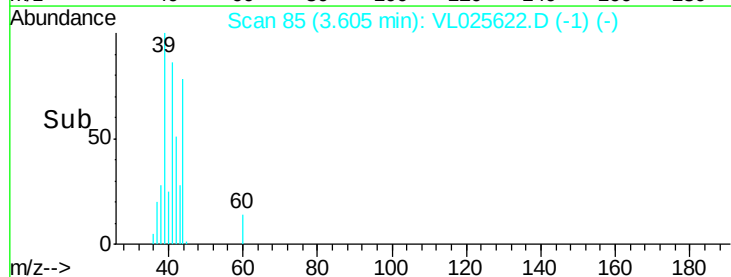
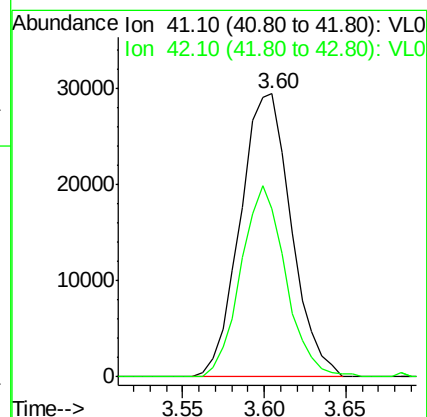
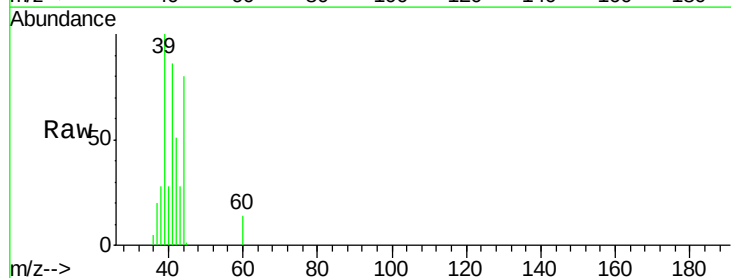
Acq: 8 Jul 2015 00:38

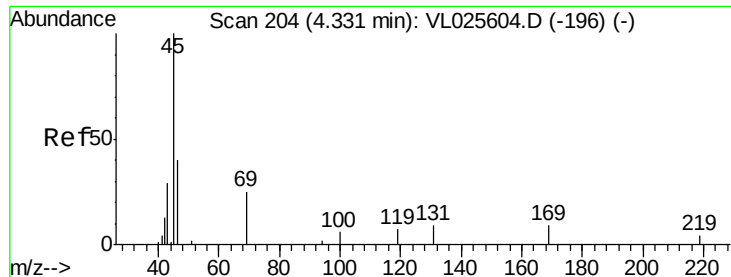
Tgt Ion: 41 Resp: 64351

Ion Ratio Lower Upper

41 100

42 59.4 52.4 78.6

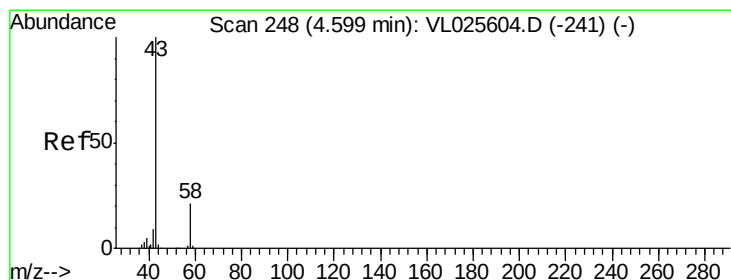
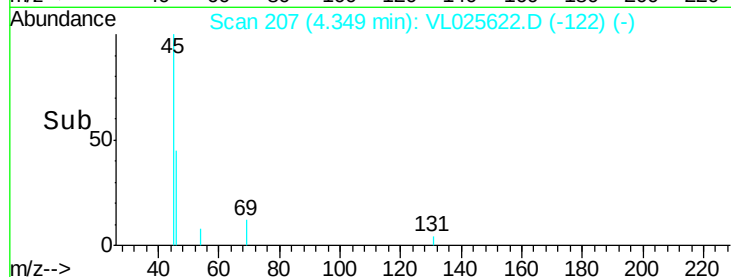
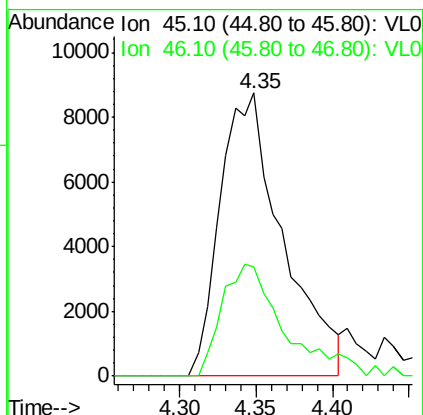
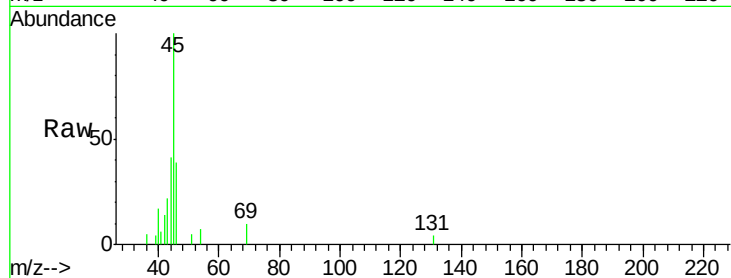




#13  
Ethanol  
Concen: 4.46 ppbv  
RT: 4.35 min Scan# 207  
Delta R.T. 0.02 min  
Lab File: VL025622.D  
Acq: 8 Jul 2015 00:38

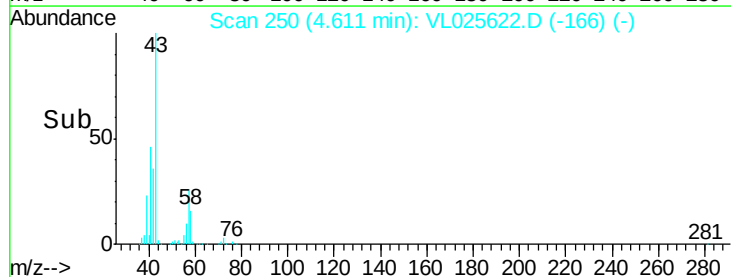
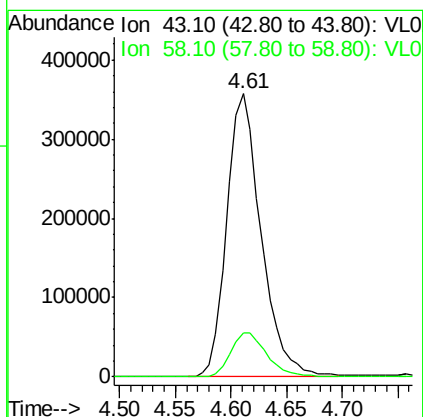
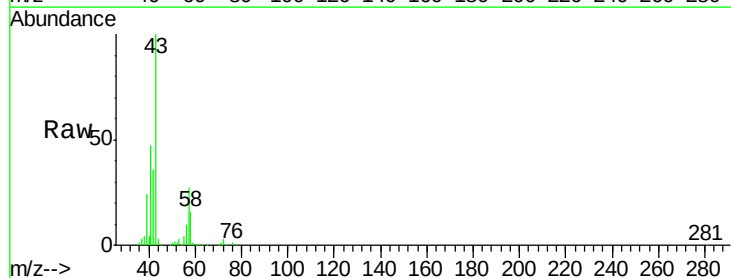
Instrument :  
MSVOA\_L  
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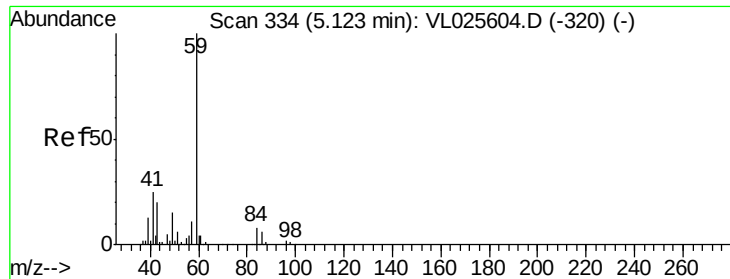
Tot Ion: 45 Resp: 24845  
Ion Ratio Lower Upper  
45 100  
46 40.0 16.0 64.0



#15  
Acetone  
Concen: 5.67 ppbv  
RT: 4.61 min Scan# 250  
Delta R.T. 0.01 min  
Lab File: VL025622.D  
Acq: 8 Jul 2015 00:38

Tgt Ion: 43 Resp: 766546  
Ion Ratio Lower Upper  
43 100  
58 16.8 17.2 25.8#



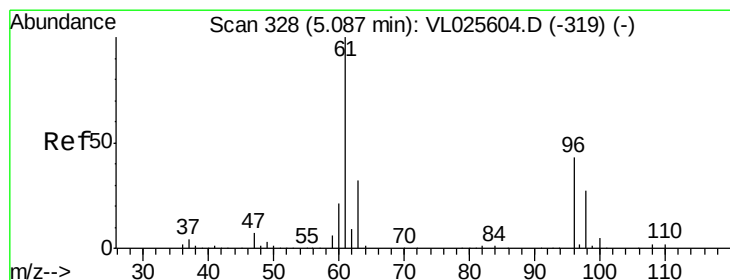
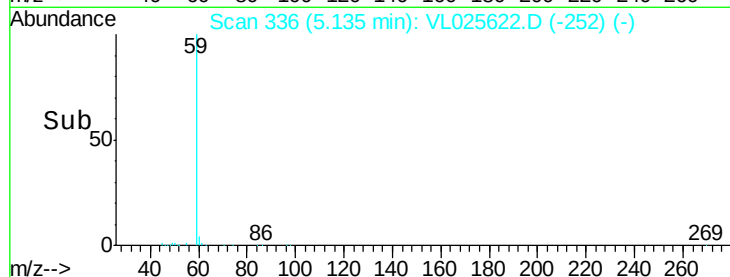
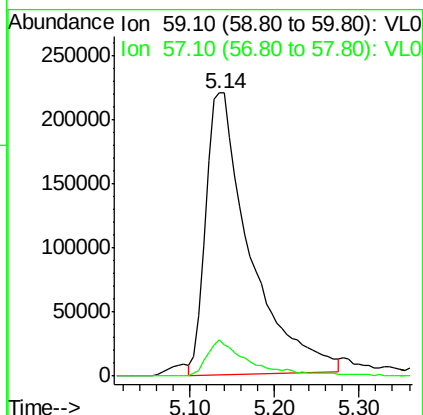
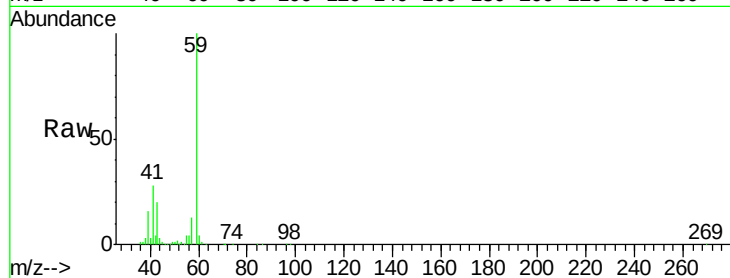


#17

tert-Butyl alcohol  
 Concen: 7.04 ppbv  
 RT: 5.14 min Scan# 336  
 Delta R.T. 0.01 min  
 Lab File: VL025622.D  
 Acq: 8 Jul 2015 00:38

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 DIN46-MIDSTREAM-070115

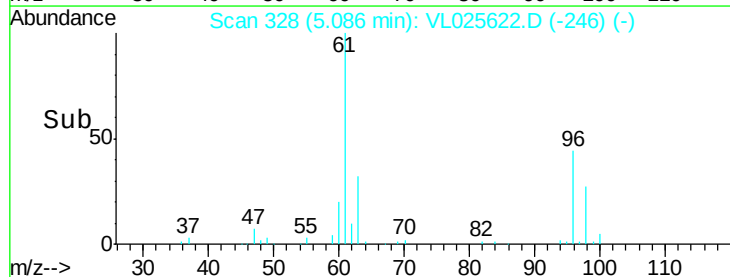
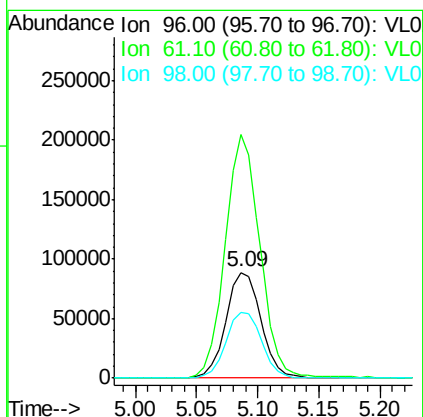
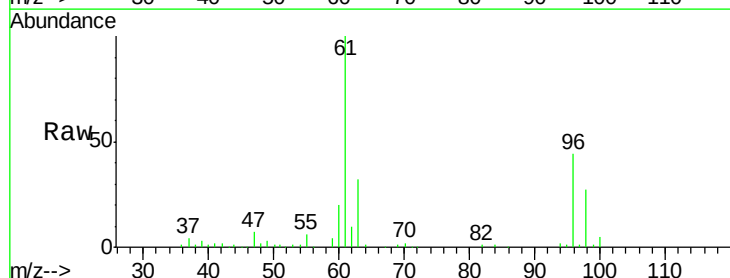
Tot Ion: 59 Resp: 798430  
 Ion Ratio Lower Upper  
 59 100  
 57 12.8 9.4 14.2

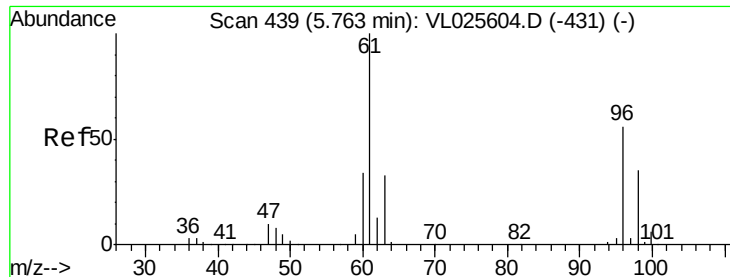


#18

1,1-Dichloroethene  
 Concen: 3.12 ppbv  
 RT: 5.09 min Scan# 328  
 Delta R.T. -0.00 min  
 Lab File: VL025622.D  
 Acq: 8 Jul 2015 00:38

Tgt Ion: 96 Resp: 176303  
 Ion Ratio Lower Upper  
 96 100  
 61 229.1 184.1 276.1  
 98 62.1 50.0 75.0





#22

trans-1,2-Dichloroethene

Concen: 0.37 ppbv

RT: 5.77 min Scan# 440

Delta R.T. 0.01 min

Lab File: VL025622.D

Acq: 8 Jul 2015 00:38

Instrument :

MSVOA\_L

ClientSampleId :

DIN46-MIDSTREAM-070115

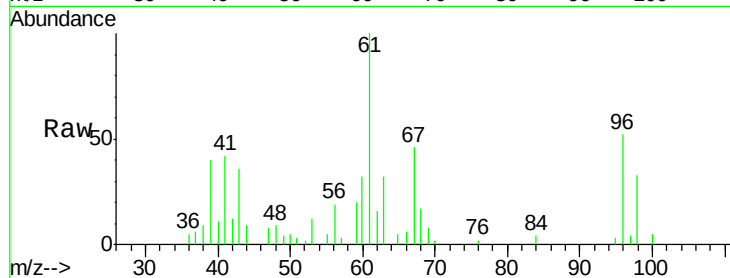
Tot Ion: 96 Resp: 21261

Ion Ratio Lower Upper

96 100

61 193.4 141.8 212.6

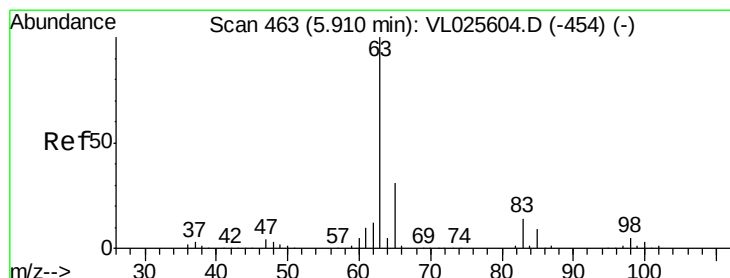
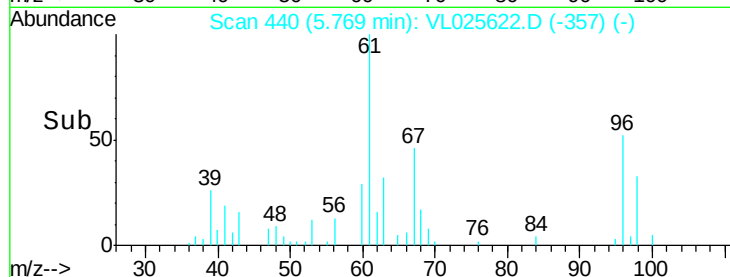
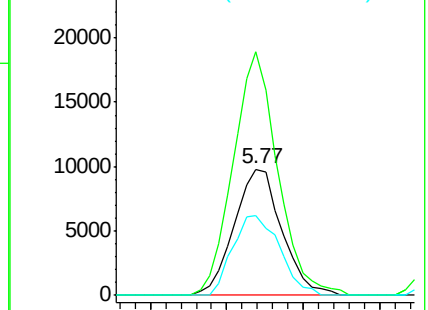
98 63.9 49.0 73.6



Abundance Ion 96.00 (95.70 to 96.70): VL0

Ion 61.10 (60.80 to 61.80): VL0

Ion 98.00 (97.70 to 98.70): VL0



#24

1,1-Dichloroethane

Concen: 11.08 ppbv

RT: 5.92 min Scan# 464

Delta R.T. 0.01 min

Lab File: VL025622.D

Acq: 8 Jul 2015 00:38

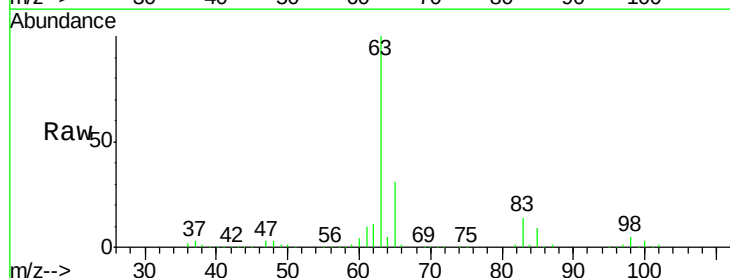
Tgt Ion: 63 Resp: 1521263

Ion Ratio Lower Upper

63 100

98 5.1 2.6 8.0

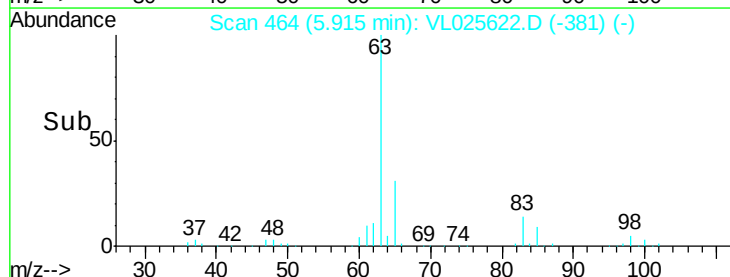
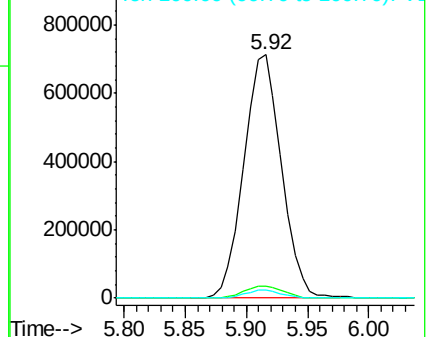
100 3.2 1.6 4.7

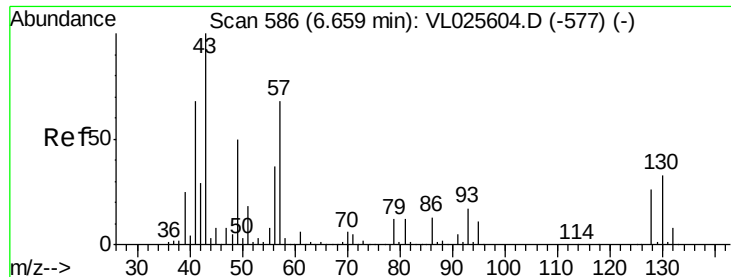


Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 98.00 (97.70 to 98.70): VL0

Ion 100.00 (99.70 to 100.70): VL0

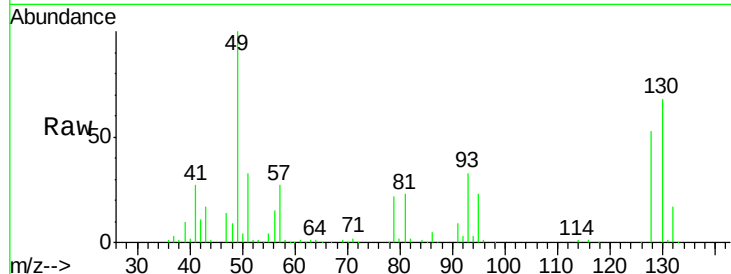




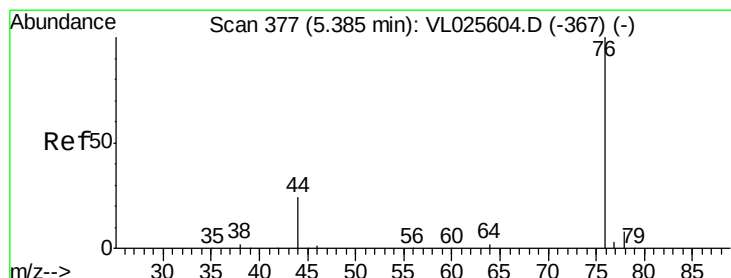
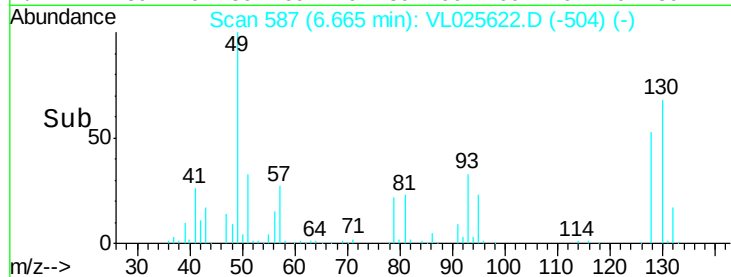
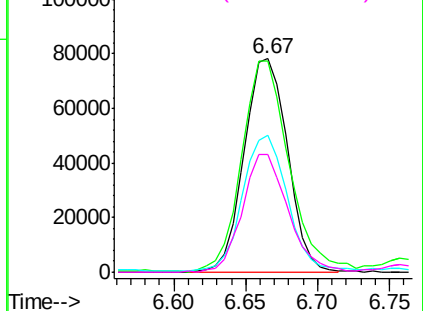
#26  
Hexane  
Concen: 1.70 ppbv  
RT: 6.67 min Scan# 587  
Delta R.T. 0.01 min  
Lab File: VL025622.D  
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Tot Ion: 57 Resp: 163440  
Ion Ratio Lower Upper  
57 100  
41 106.2 81.4 122.2  
43 65.3 171.4 257.2#  
56 58.3 44.5 66.7

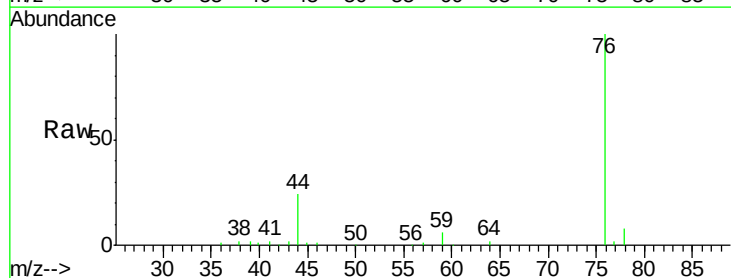


Abundance Ion 57.10 (56.80 to 57.80): VL0  
Ion 41.10 (40.80 to 41.80): VL0  
Ion 43.10 (42.80 to 43.80): VL0  
Ion 56.10 (55.80 to 56.80): VL0

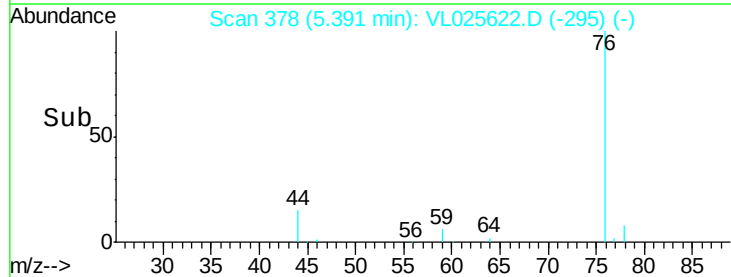
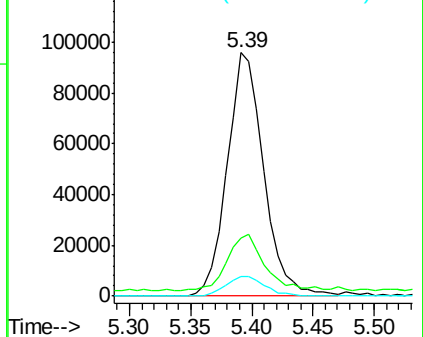


#27  
Carbon Disulfide  
Concen: 1.27 ppbv  
RT: 5.39 min Scan# 378  
Delta R.T. 0.01 min  
Lab File: VL025622.D  
Acq: 8 Jul 2015 00:38

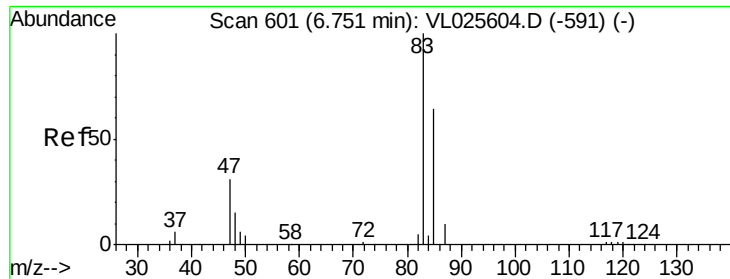
Tgt Ion: 76 Resp: 197947  
Ion Ratio Lower Upper  
76 100  
44 27.0 20.2 30.4  
78 8.6 7.4 11.2



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



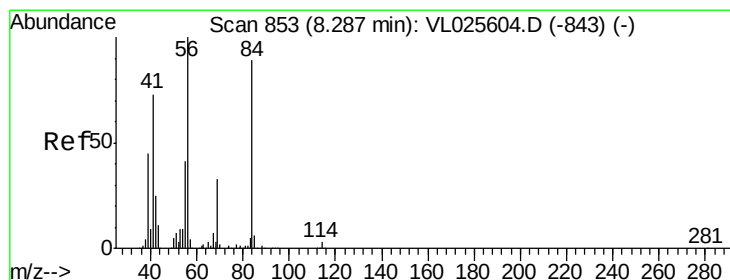
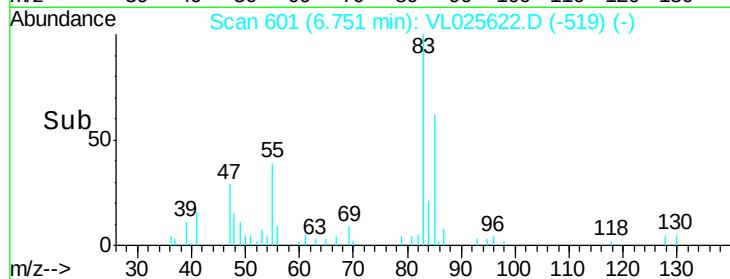
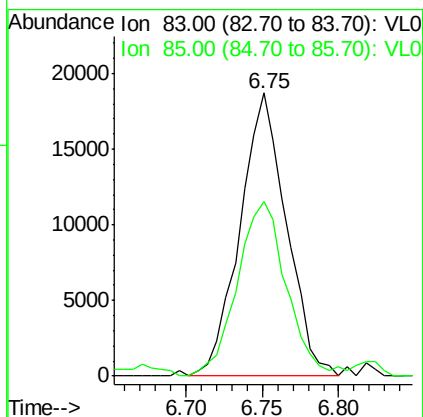
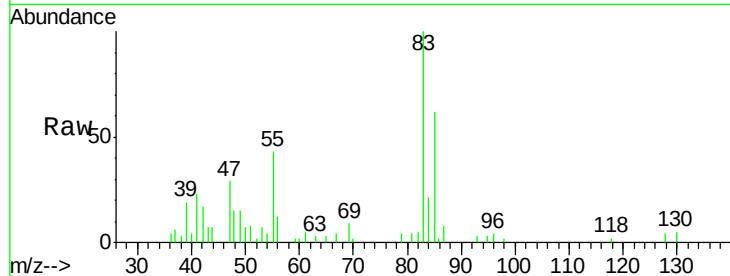




#29  
Chloroform  
Concen: 0.21 ppbv  
RT: 6.75 min Scan# 601  
Delta R.T. -0.00 min  
Lab File: VL025622.D  
Acq: 8 Jul 2015 00:38

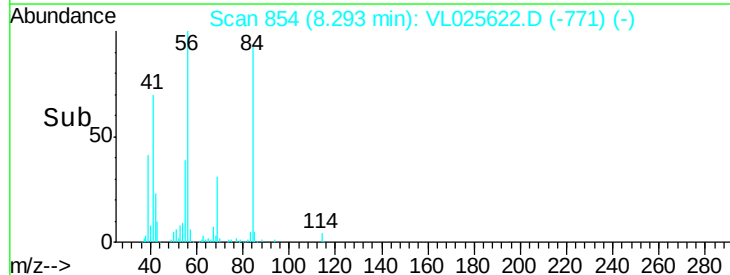
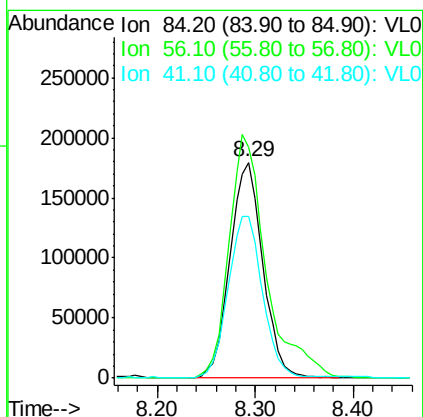
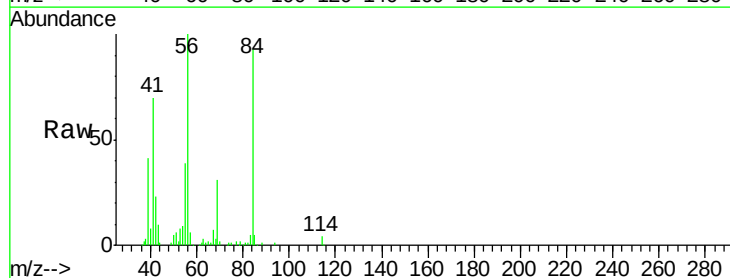
Instrument :  
MSVOA\_L  
ClientSampleId :  
DIN46-MIDSTREAM-070115

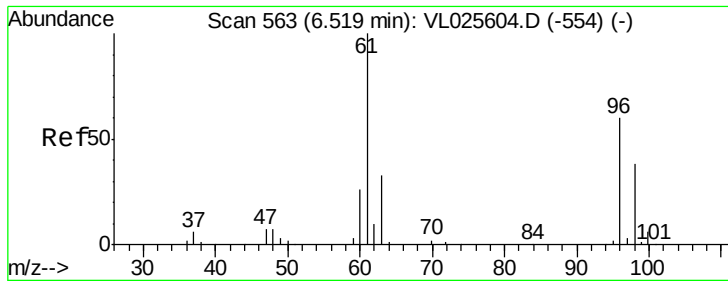
Tot Ion: 83 Resp: 39425  
Ion Ratio Lower Upper  
83 100  
85 61.5 51.6 77.4



#30  
Cyclohexane  
Concen: 4.56 ppbv  
RT: 8.29 min Scan# 854  
Delta R.T. 0.01 min  
Lab File: VL025622.D  
Acq: 8 Jul 2015 00:38

Tgt Ion: 84 Resp: 419376  
Ion Ratio Lower Upper  
84 100  
56 128.4 97.5 146.3  
41 79.4 65.4 98.2





#31

cis-1,2-Dichloroethene

Concen: 30.42 ppbv

RT: 6.52 min Scan# 563

Delta R.T. -0.00 min

Lab File: VL025622.D

Acq: 8 Jul 2015 00:38

Instrument :

MSVOA\_L

ClientSampleId :

DIN46-MIDSTREAM-070115

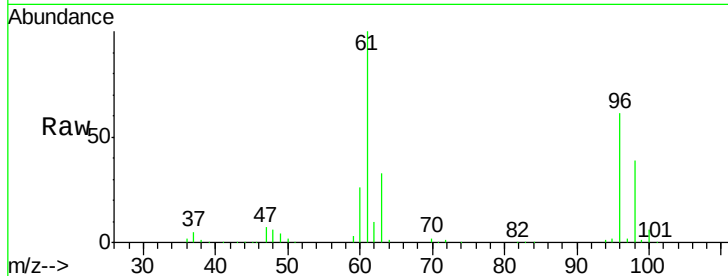
Tot Ion: 61 Resp: 2910364

Ion Ratio Lower Upper

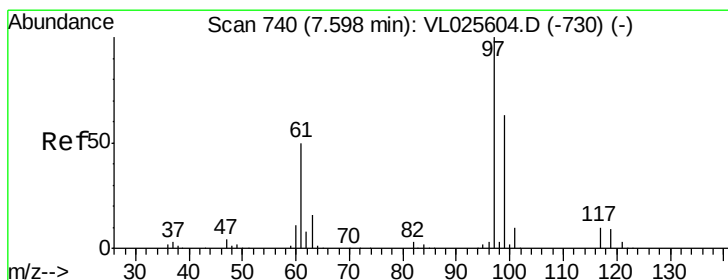
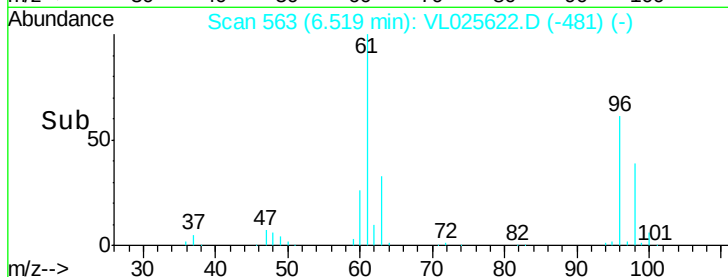
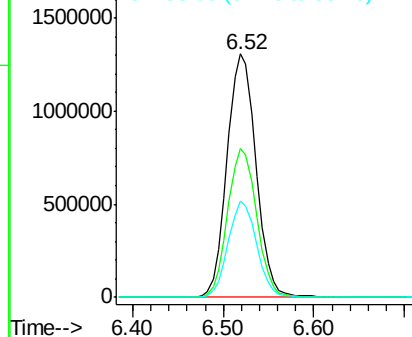
61 100

96 61.0 48.1 72.1

98 39.4 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: 1.61 ppbv

RT: 7.60 min Scan# 741

Delta R.T. 0.01 min

Lab File: VL025622.D

Acq: 8 Jul 2015 00:38

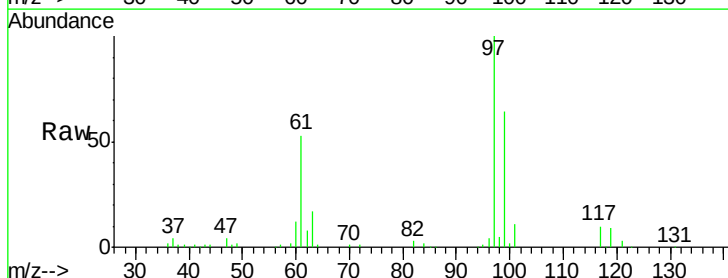
Tgt Ion: 97 Resp: 333321

Ion Ratio Lower Upper

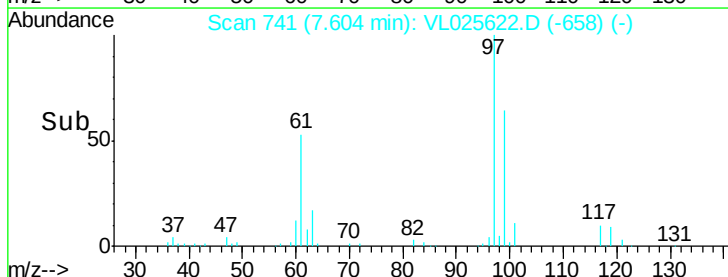
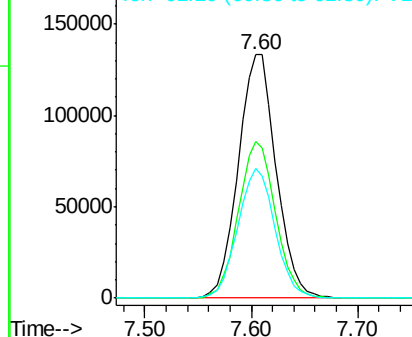
97 100

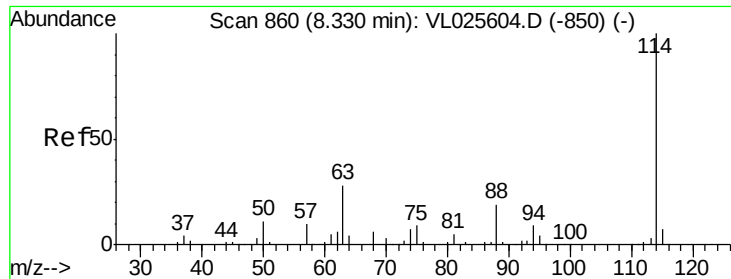
99 63.2 51.2 76.8

61 52.7 40.4 60.6



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

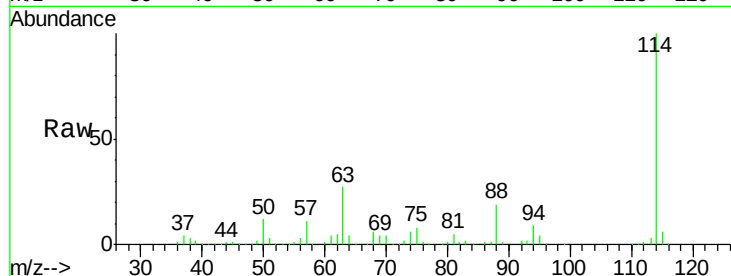




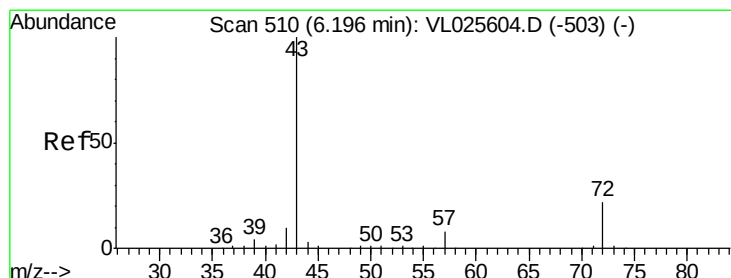
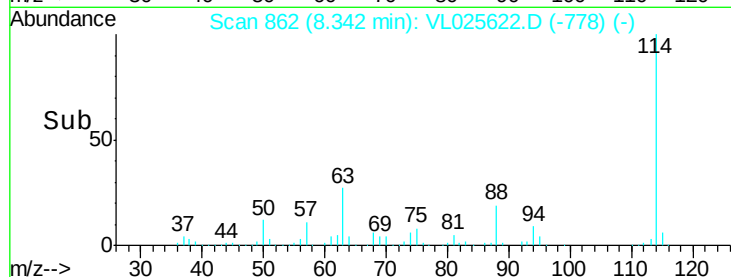
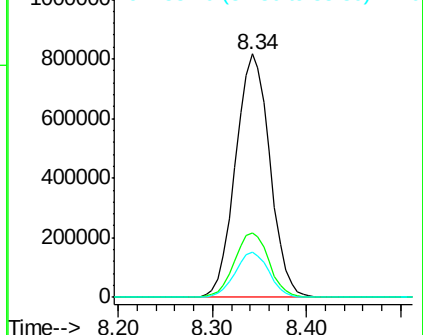
#33  
 1,4-Difluorobenzene  
 Concen: 10.00 ppbv  
 RT: 8.34 min Scan# 862  
 Delta R.T. 0.01 min  
 Lab File: VL025622.D  
 Acq: 8 Jul 2015 00:38

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 DIN46-MIDSTREAM-070115

Tot Ion:114 Resp: 2077907  
 Ion Ratio Lower Upper  
 114 100  
 63 26.9 22.4 33.6  
 88 18.4 15.0 22.4

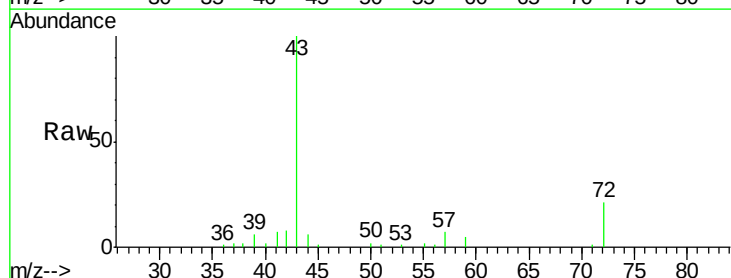


Abundance Ion 114.10 (113.80 to 114.80): VL0  
 Ion 63.10 (62.80 to 63.80): VL0  
 Ion 88.10 (87.80 to 88.80): VL0

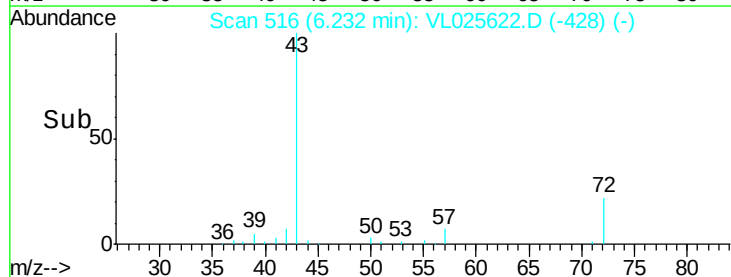
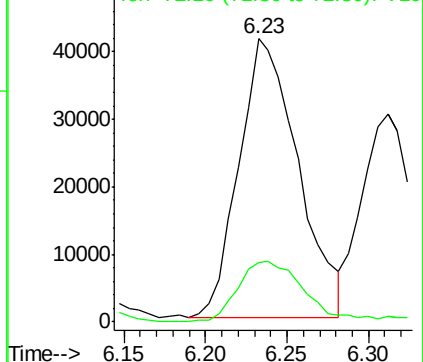


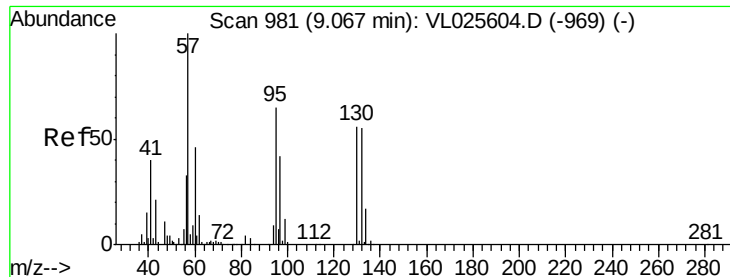
#34  
 2-Butanone  
 Concen: 0.89 ppbv  
 RT: 6.23 min Scan# 516  
 Delta R.T. 0.04 min  
 Lab File: VL025622.D  
 Acq: 8 Jul 2015 00:38

Tgt Ion: 43 Resp: 104395  
 Ion Ratio Lower Upper  
 43 100  
 72 25.3 18.6 28.0



Abundance Ion 43.10 (42.80 to 43.80): VL0  
 Ion 72.10 (71.80 to 72.80): VL0





#38

Trichloroethene

Concen: 194.84 ppbv

RT: 9.09 min Scan# 985

Delta R.T. 0.02 min

Lab File: VL025622.D

Acq: 8 Jul 2015 00:38

Instrument :

MSVOA\_L

ClientSampleId :

DIN46-MIDSTREAM-070115

Tot Ion:130 Resp:18028370

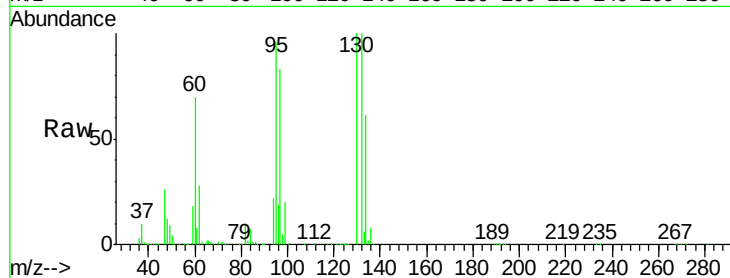
Ion Ratio Lower Upper

130 100

95 95.6 94.2 141.4

132 99.7 78.6 118.0

97 83.3 60.6 90.8

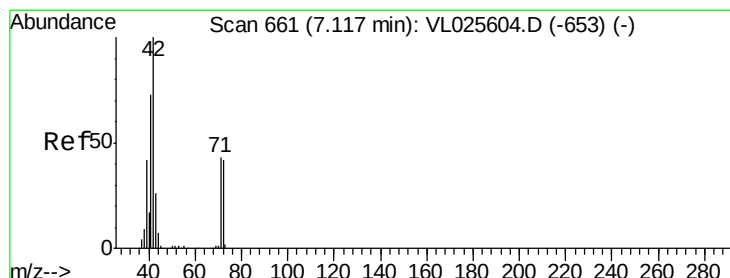
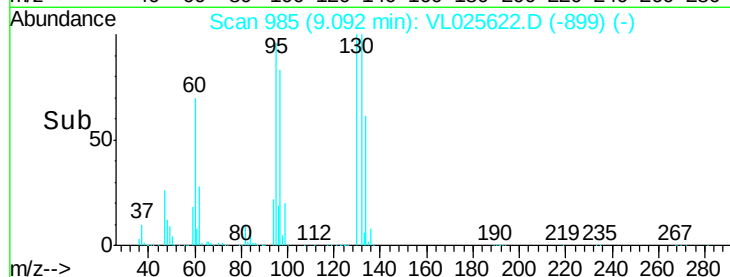
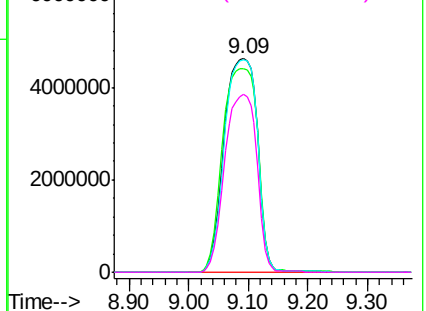


Abundance Ion 130.00 (129.70 to 130.70): V

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



#41

Tetrahydrofuran

Concen: 1.87 ppbv

RT: 7.17 min Scan# 669

Delta R.T. 0.05 min

Lab File: VL025622.D

Acq: 8 Jul 2015 00:38

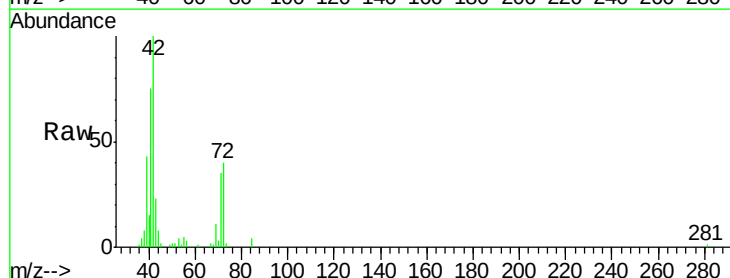
Tgt Ion: 42 Resp: 109860

Ion Ratio Lower Upper

42 100

72 39.5 34.0 51.0

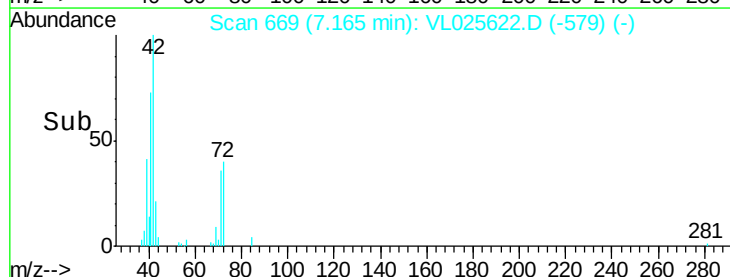
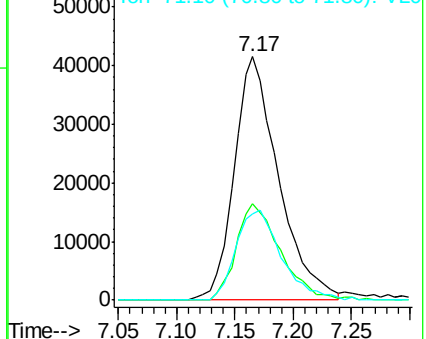
71 38.0 33.0 49.6

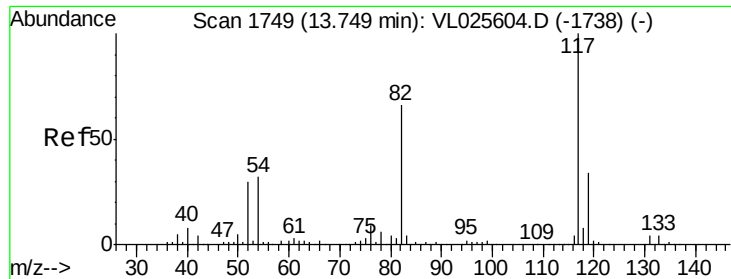


Abundance Ion 42.10 (41.80 to 42.80): VL0

Ion 72.10 (71.80 to 72.80): VL0

Ion 71.10 (70.80 to 71.80): VL0

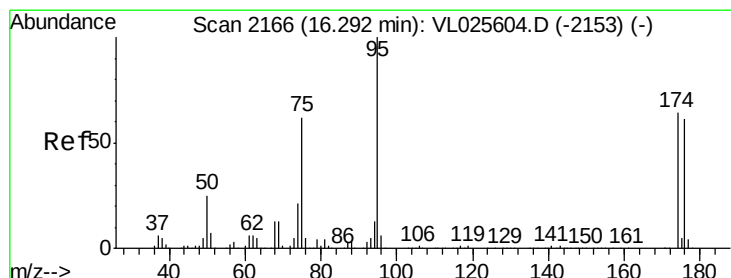
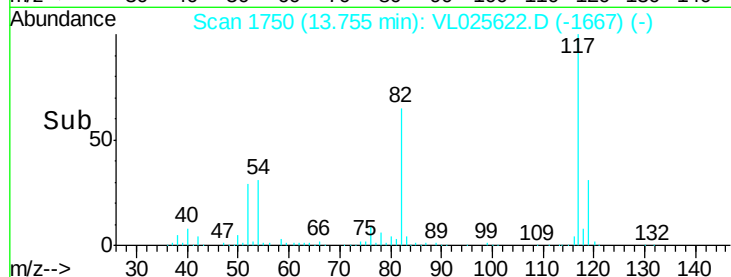
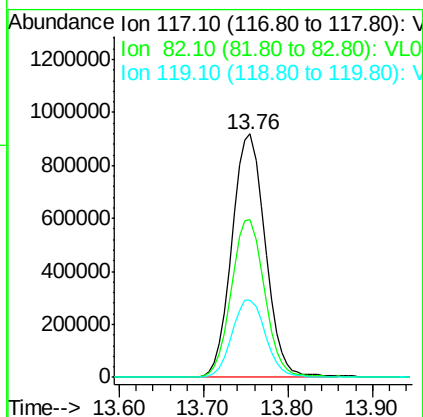
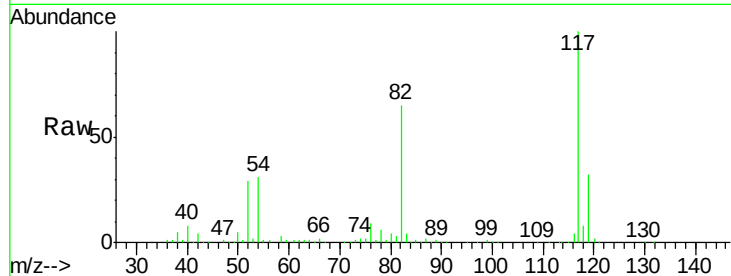




#55  
Chlorobenzene-d5  
Concen: 10.00 ppbv  
RT: 13.76 min Scan# 1750  
Delta R.T. 0.01 min  
Lab File: VL025622.D  
Acq: 8 Jul 2015 00:38

Instrument :  
MSVOA\_L  
ClientSampleId :  
DIN46-MIDSTREAM-070115

Tot Ion:117 Resp: 2470299  
Ion Ratio Lower Upper  
117 100  
82 0.0 50.5 75.7#  
119 32.3 45.1 67.7#



#68  
1-Bromo-4-Fluorobenzene  
Concen: 9.73 ppbv  
RT: 16.29 min Scan# 2166  
Delta R.T. -0.00 min  
Lab File: VL025622.D  
Acq: 8 Jul 2015 00:38

Tgt Ion: 95 Resp: 2027488  
Ion Ratio Lower Upper  
95 100  
174 65.3 52.0 78.0  
175 4.9 3.9 5.9

