

Data Path : W:\HPCHEM1\MSVOA L\DATA\VL100915\  
 Data File : VL026196.D  
 Acq On : 10 Oct 2015 4:15  
 Operator : SY/MD  
 Sample : G3925-01DL 40X  
 Misc : 400mL/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :

Quant Time: Oct 12 02:08:45 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   | 6.65  | 49   | 342390   | 10.00 | ppbv  | -0.01    |
| 33) 1,4-Difluorobenzene | 8.32  | 114  | 1169203  | 10.00 | ppbv  | -0.02    |
| 55) Chlorobenzene-d5    | 13.74 | 117  | 1305771  | 10.00 | ppbv  | -0.02    |

System Monitoring Compounds

|                             |        |       |          |          |      |         |
|-----------------------------|--------|-------|----------|----------|------|---------|
| 68) 1-Bromo-4-Fluorobenzene | 16.28  | 95    | 1054039  | 10.52    | ppbv | -0.02   |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 105.20% |

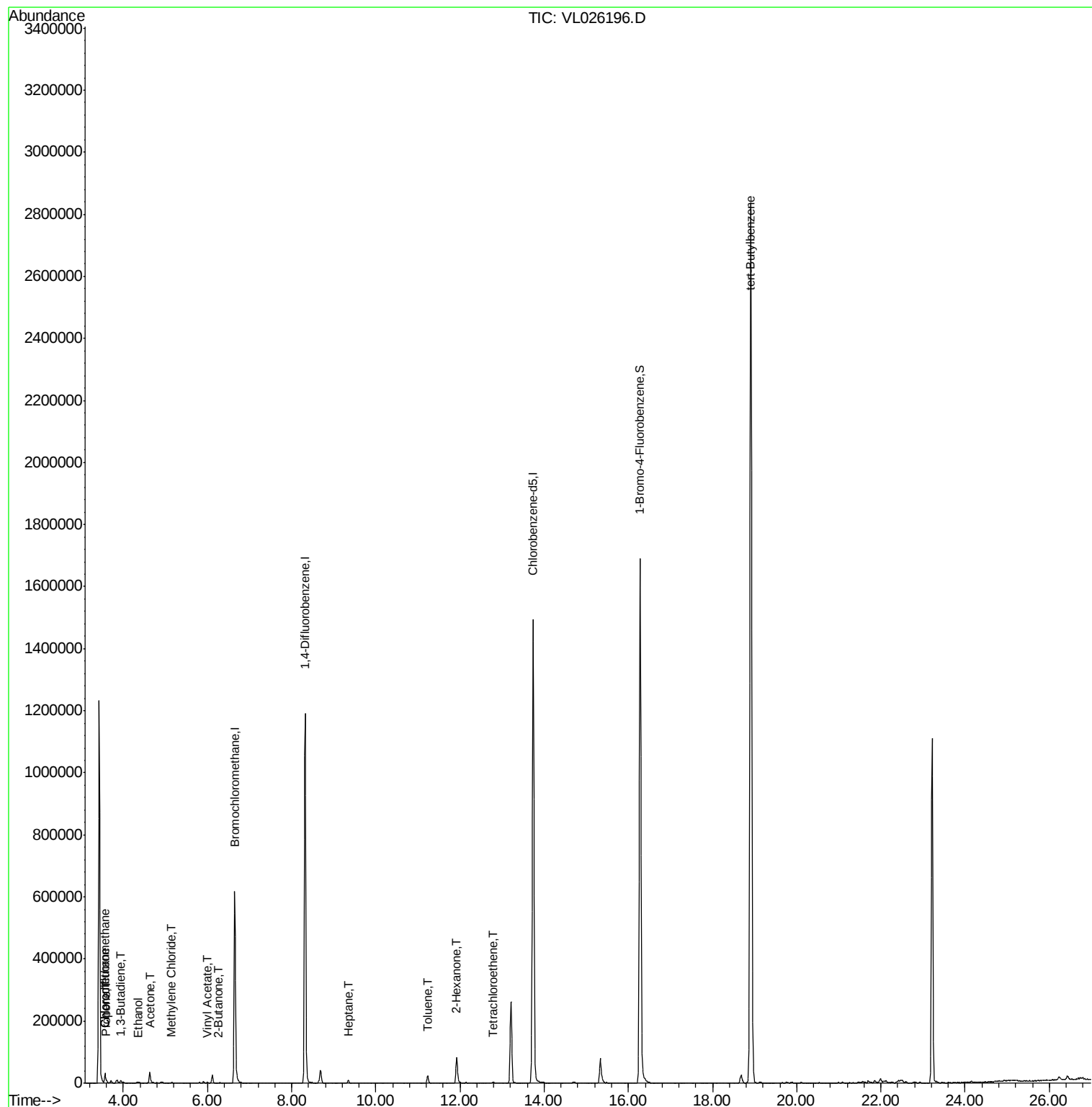
| Target Compounds         | R.T.  | QIon | Response | Conc | Units  | Ovalue |
|--------------------------|-------|------|----------|------|--------|--------|
| 3) Chlorodifluoromethane | 3.57  | 51   | 33457    | 0.84 | ppbv   | 96     |
| 4) Chloromethane         | 3.57  | 50   | 2166     | 0.10 | ppbv # | 42     |
| 9) Propene               | 3.60  | 41   | 1317     | 0.07 | ppbv # | 27     |
| 10) Heptane              | 9.34  | 43   | 4653     | 0.07 | ppbv   | 100    |
| 13) Ethanol              | 4.37  | 45   | 1001     | 0.37 | ppbv # | 31     |
| 15) Acetone              | 4.63  | 43   | 48157    | 1.09 | ppbv # | 85     |
| 16) 1,3-Butadiene        | 3.94  | 39   | 1422     | 0.07 | ppbv # | 7      |
| 20) Methylene Chloride   | 5.15  | 84   | 2053     | 0.11 | ppbv # | 75     |
| 23) Vinyl Acetate        | 6.01  | 43   | 4367     | 0.06 | ppbv # | 59     |
| 34) 2-Butanone           | 6.24  | 43   | 2902     | 0.04 | ppbv # | 51     |
| 51) 2-Hexanone           | 11.92 | 43   | 26379    | 0.34 | ppbv # | 45     |
| 52) Tetrachloroethene    | 12.79 | 164  | 1664     | 0.03 | ppbv # | 70     |
| 53) Toluene              | 11.23 | 91   | 24124    | 0.17 | ppbv   | 99     |
| 65) tert-Butylbenzene    | 18.91 | 119  | 49132    | 0.26 | ppbv # | 25     |

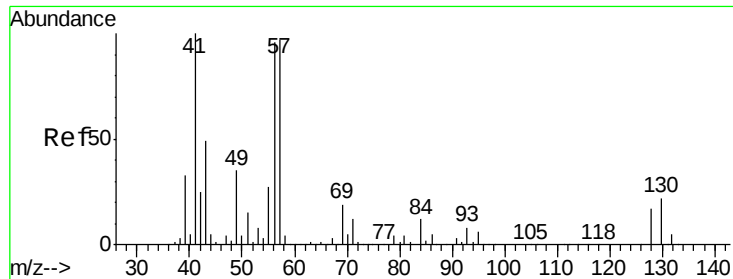
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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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





#1

Bromochloromethane

Concen: 10.00 ppbv

RT: 6.65 min Scan# 584

Delta R.T. -0.01 min

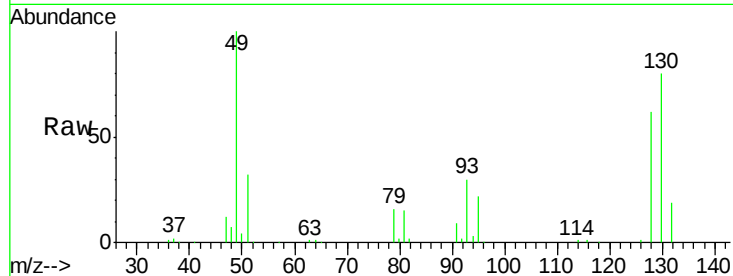
Lab File: VL026196.D

Acq: 10 Oct 2015 4:15

Instrument :  
MSVOA\_L  
ClientSampleId :

Tot Ion: 49 Resp: 342390

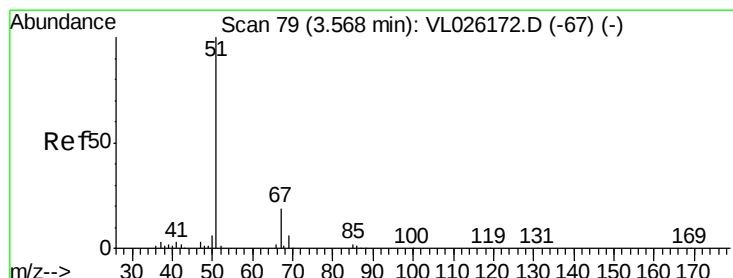
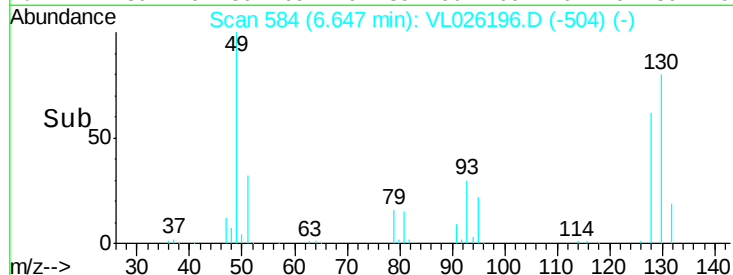
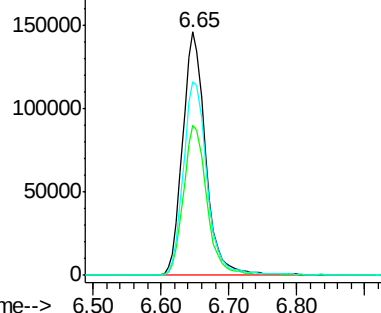
| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 49  | 100   |       |       |
| 128 | 63.3  | 26.3  | 78.8  |
| 130 | 83.1  | 34.2  | 102.5 |



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



#3

Chlorodifluoromethane

Concen: 0.84 ppbv

RT: 3.57 min Scan# 79

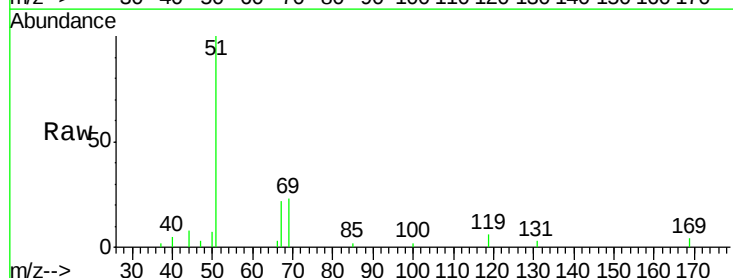
Delta R.T. 0.00 min

Lab File: VL026196.D

Acq: 10 Oct 2015 4:15

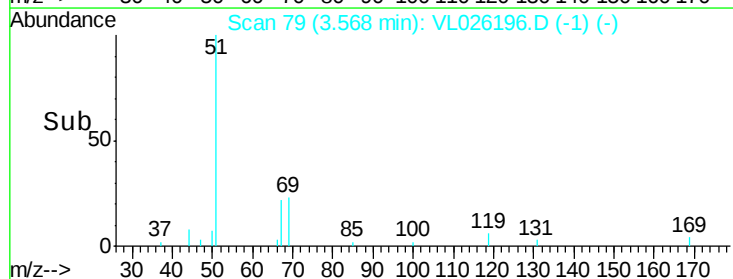
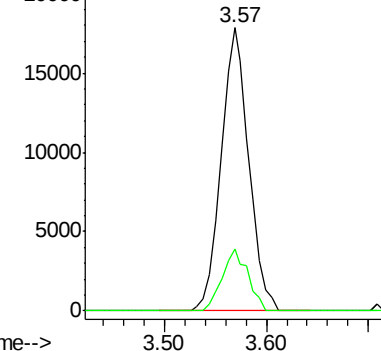
Tgt Ion: 51 Resp: 33457

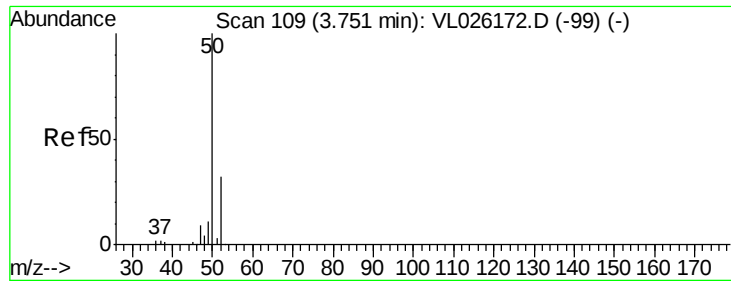
| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 51  | 100   |       |       |
| 67  | 20.4  | 14.9  | 22.3  |



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0





#4

Chloromethane

Concen: 0.10 ppbv

RT: 3.57 min Scan# 79

Delta R.T. -0.18 min

Lab File: VL026196.D

Acq: 10 Oct 2015 4:15

Instrument :

MSVOA\_L

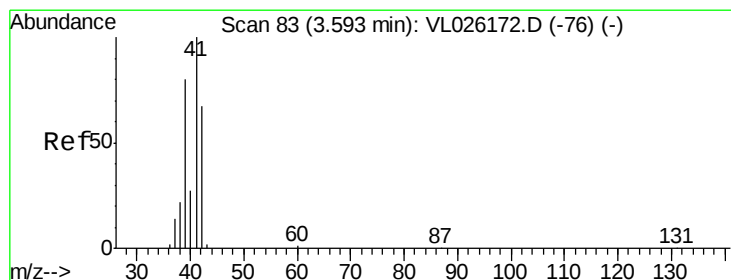
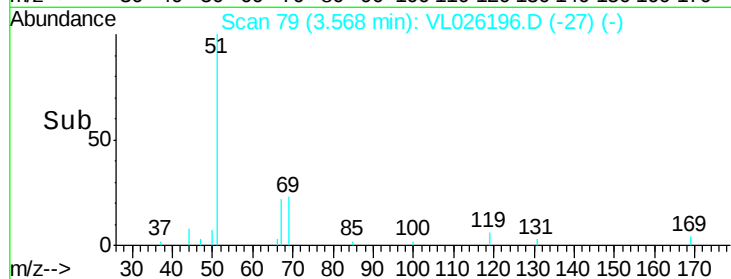
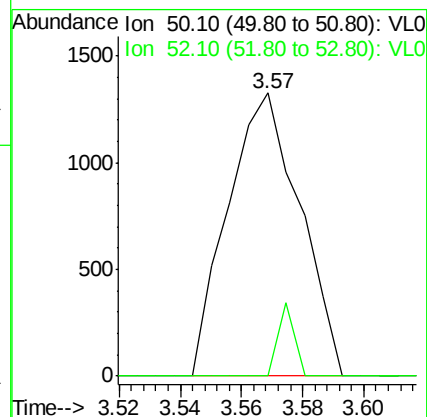
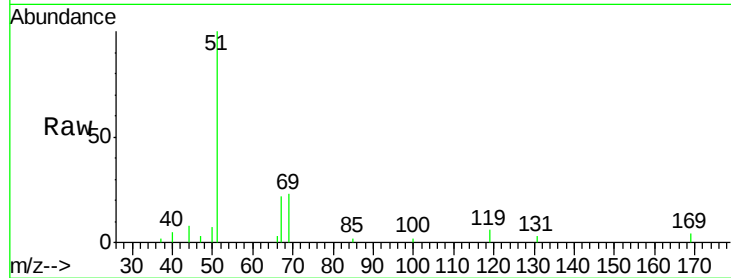
ClientSampleId :

Tot Ion: 50 Resp: 2166

Ion Ratio Lower Upper

50 100

52 0.0 25.9 38.9#



#9

Propene

Concen: 0.07 ppbv

RT: 3.60 min Scan# 84

Delta R.T. 0.01 min

Lab File: VL026196.D

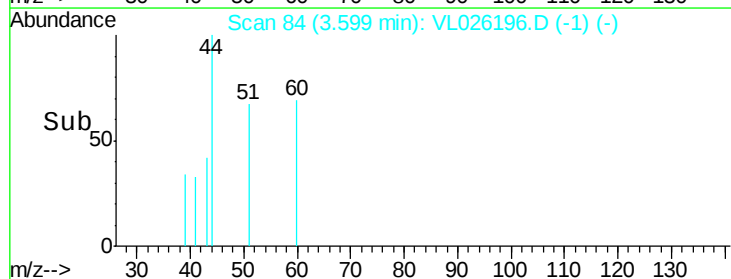
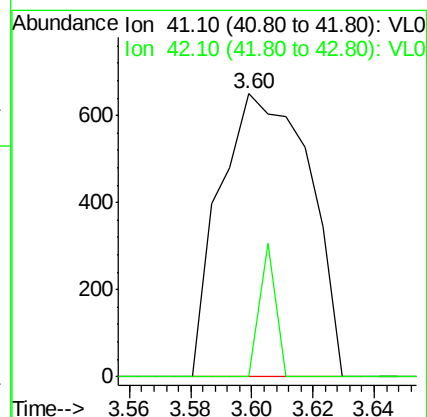
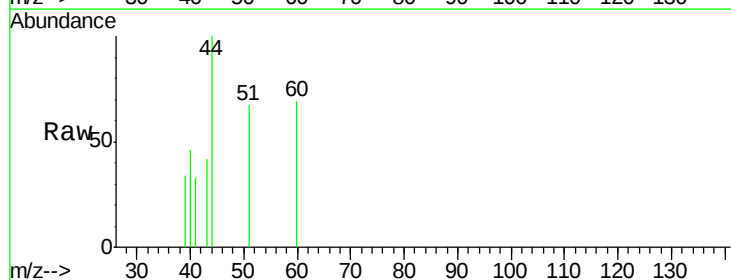
Acq: 10 Oct 2015 4:15

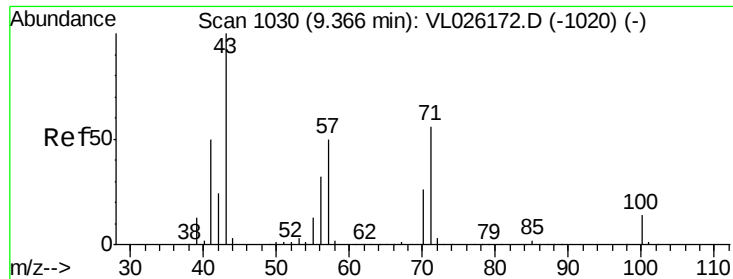
Tgt Ion: 41 Resp: 1317

Ion Ratio Lower Upper

41 100

42 8.6 53.6 80.4#

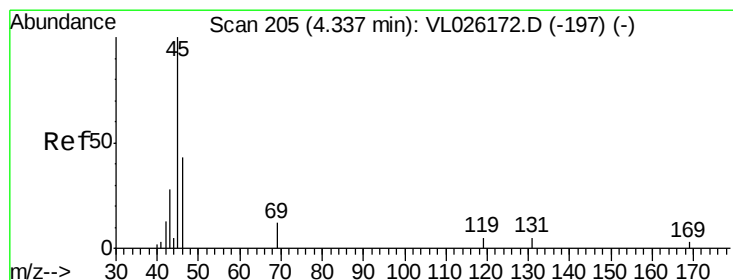
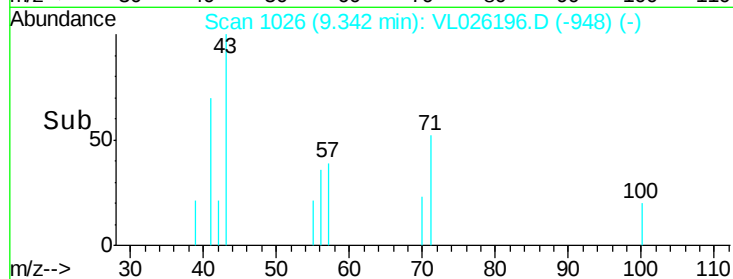
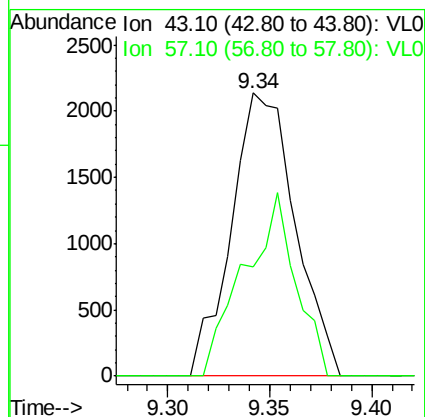
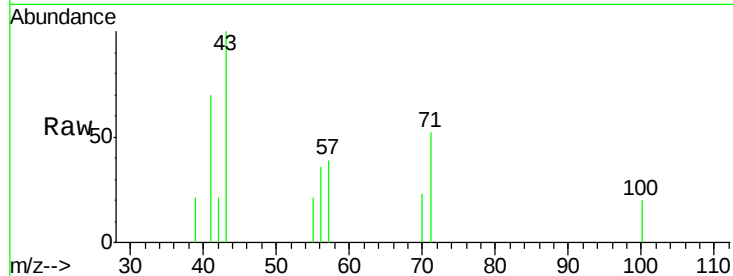




#10  
Heptane  
Concen: 0.07 ppbv  
RT: 9.34 min Scan# 1026  
Delta R.T. -0.02 min  
Lab File: VL026196.D  
Acq: 10 Oct 2015 4:15

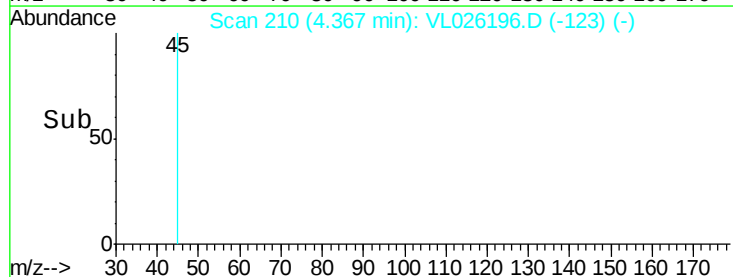
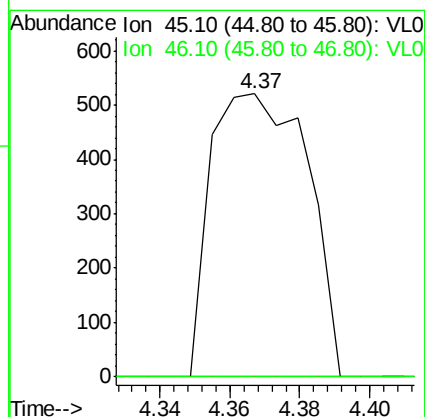
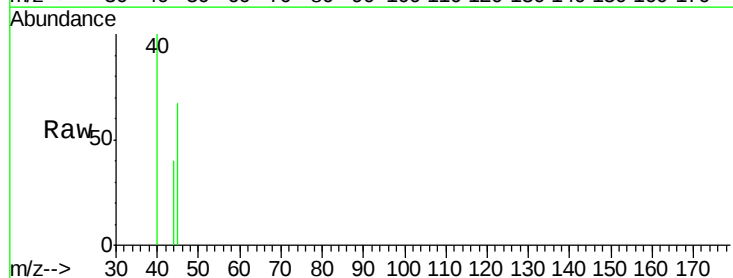
Instrument :  
MSVOA\_L  
ClientSampled :

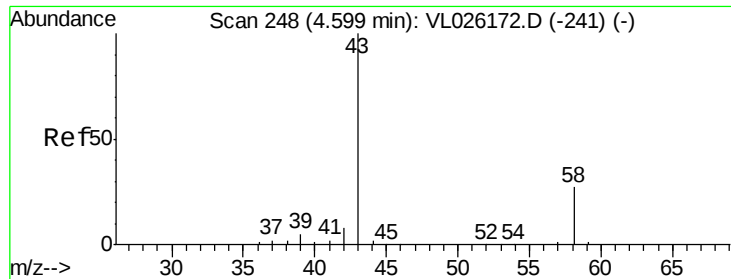
Tot Ion: 43 Resp: 4653  
Ion Ratio Lower Upper  
43 100  
57 52.4 41.8 62.8



#13  
Ethanol  
Concen: 0.37 ppbv  
RT: 4.37 min Scan# 210  
Delta R.T. 0.03 min  
Lab File: VL026196.D  
Acq: 10 Oct 2015 4:15

Tgt Ion: 45 Resp: 1001  
Ion Ratio Lower Upper  
45 100  
46 0.0 18.1 72.5#





#15

Acetone

Concen: 1.09 ppbv

RT: 4.63 min Scan# 253

Delta R.T. 0.03 min

Lab File: VL026196.D

Acq: 10 Oct 2015 4:15

Instrument :

MSVOA\_L

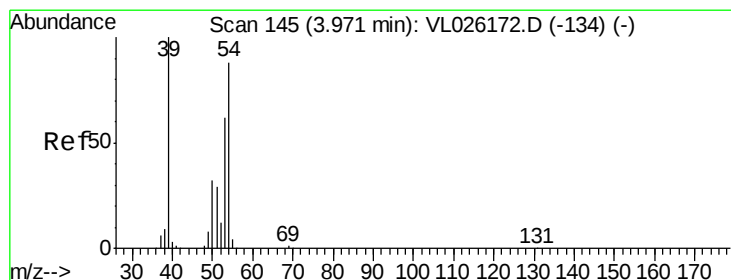
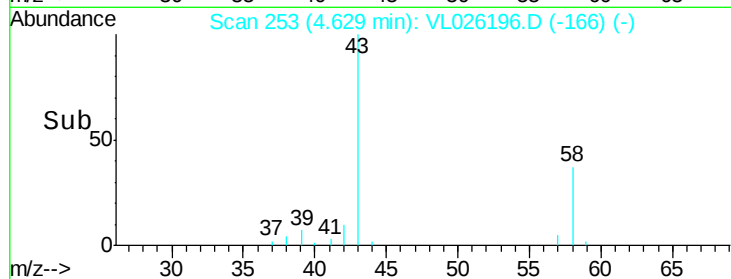
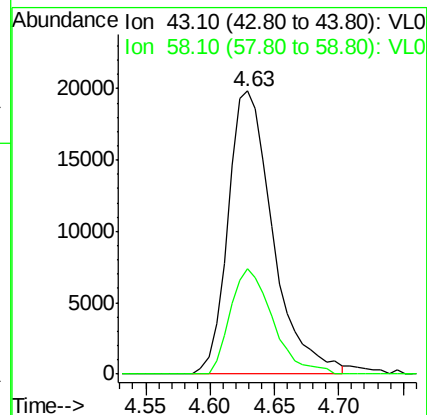
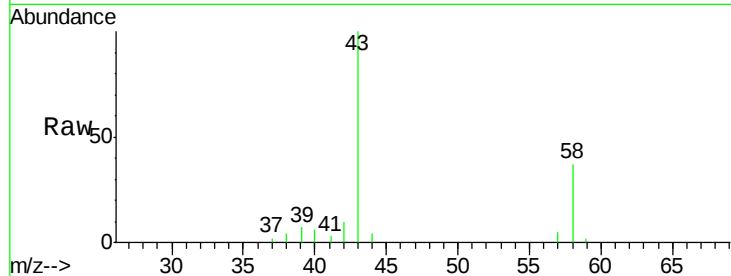
ClientSampleId :

Tot Ion: 43 Resp: 48157

Ion Ratio Lower Upper

43 100

58 35.1 22.0 33.0#



#16

1,3-Butadiene

Concen: 0.07 ppbv

RT: 3.94 min Scan# 140

Delta R.T. -0.03 min

Lab File: VL026196.D

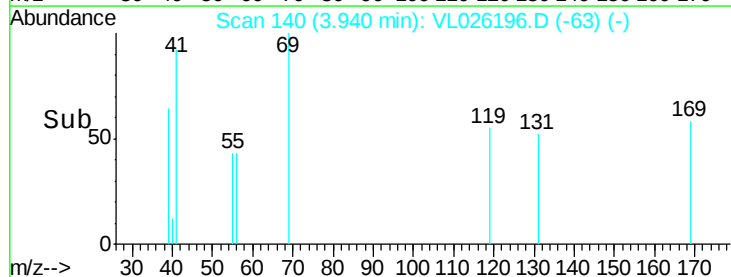
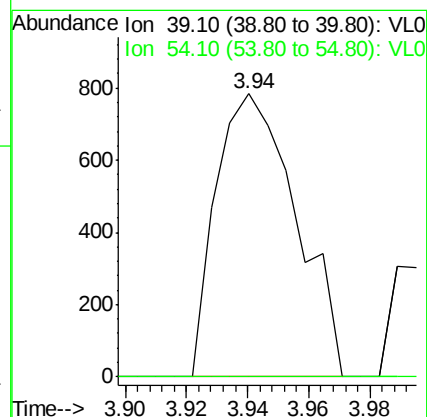
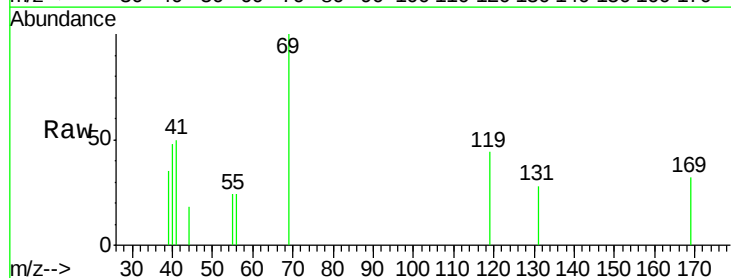
Acq: 10 Oct 2015 4:15

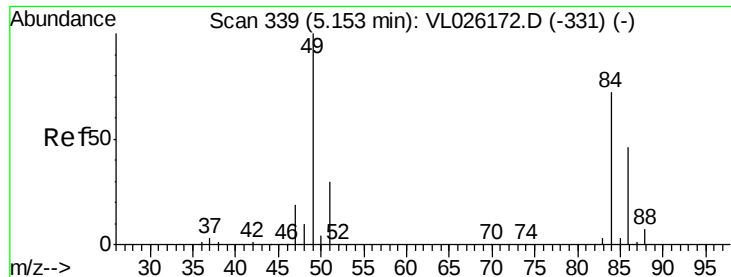
Tgt Ion: 39 Resp: 1422

Ion Ratio Lower Upper

39 100

54 0.0 67.9 101.9#

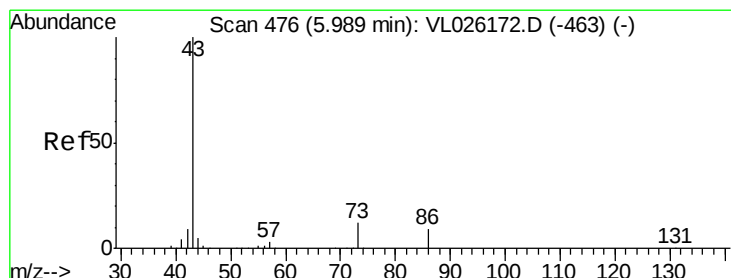
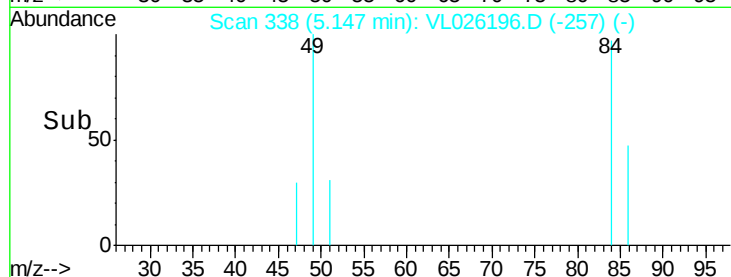
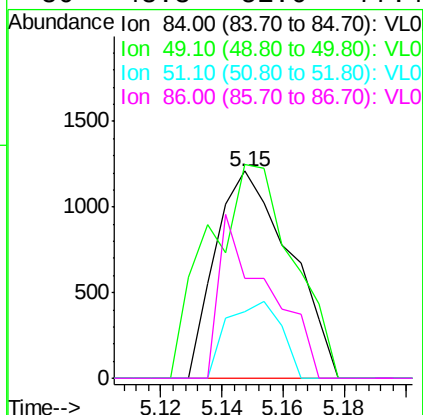
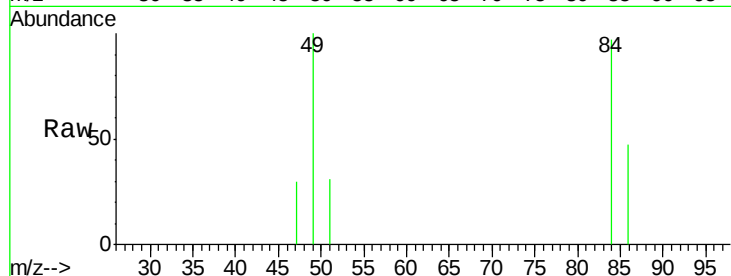




#20  
Methvlene Chloride  
Concen: 0.11 ppbv  
RT: 5.15 min Scan# 338  
Delta R.T. -0.01 min  
Lab File: VL026196.D  
Acq: 10 Oct 2015 4:15

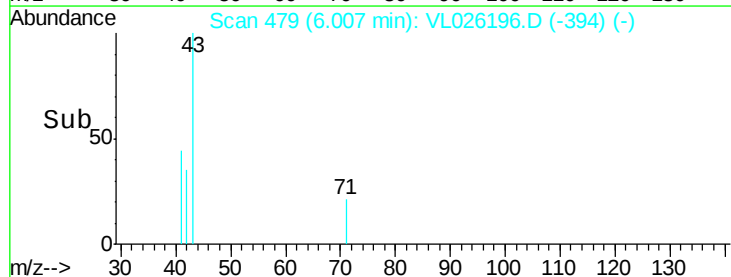
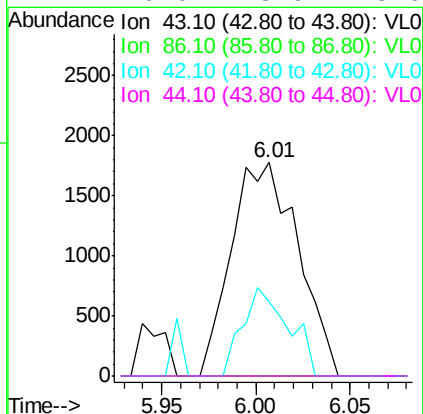
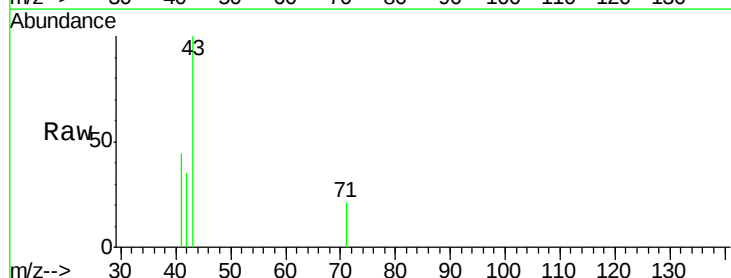
Instrument :  
MSVOA\_L  
ClientSampleId :

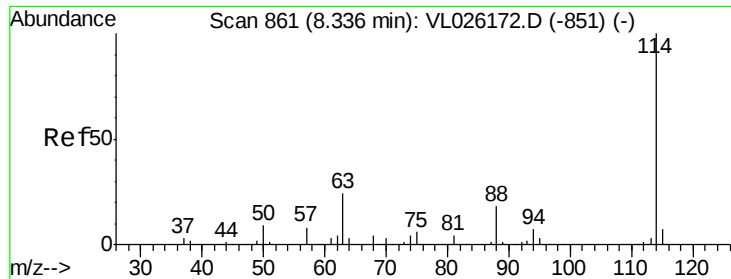
Tot Ion: 84 Resp: 2053  
Ion Ratio Lower Upper  
84 100  
49 103.1 111.3 166.9#  
51 32.4 33.0 49.6#  
86 48.3 51.6 77.4#



#23  
Vinyl Acetate  
Concen: 0.06 ppbv  
RT: 6.01 min Scan# 479  
Delta R.T. 0.02 min  
Lab File: VL026196.D  
Acq: 10 Oct 2015 4:15

Tgt Ion: 43 Resp: 4367  
Ion Ratio Lower Upper  
43 100  
86 0.0 7.2 10.8#  
42 34.9 7.4 11.2#  
44 0.0 3.9 5.9#

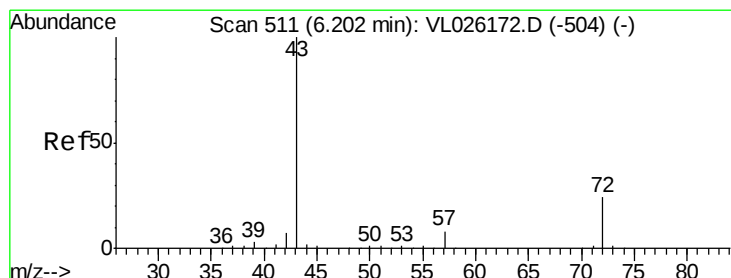
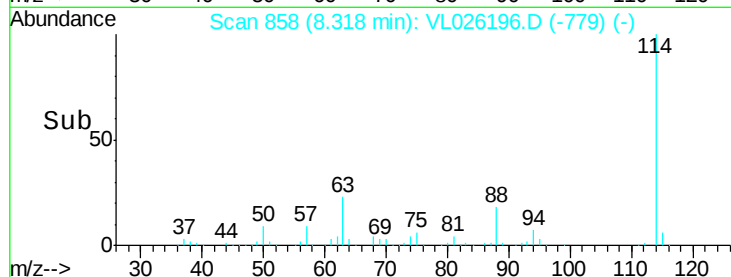
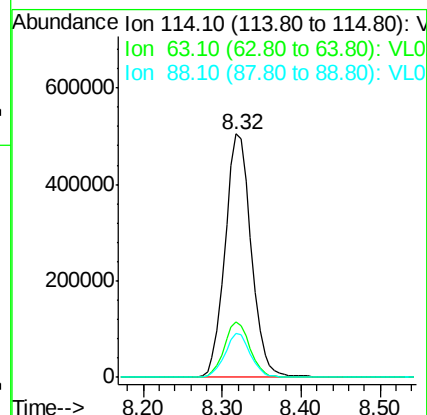
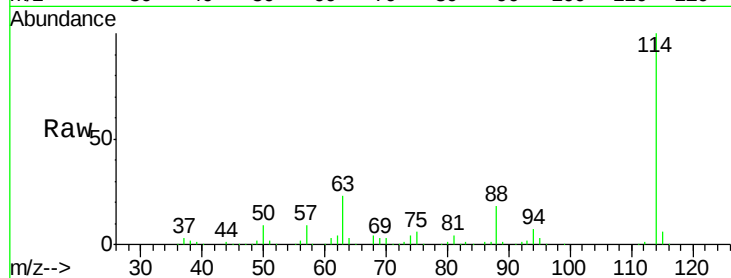




#33  
 1,4-Difluorobenzene  
 Concen: 10.00 ppbv  
 RT: 8.32 min Scan# 858  
 Delta R.T. -0.02 min  
 Lab File: VL026196.D  
 Acq: 10 Oct 2015 4:15

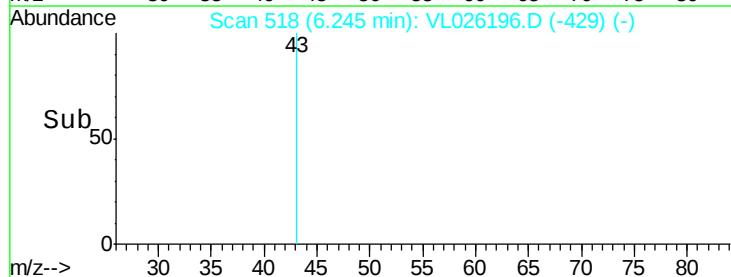
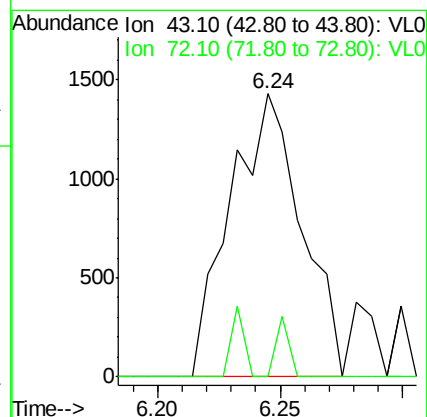
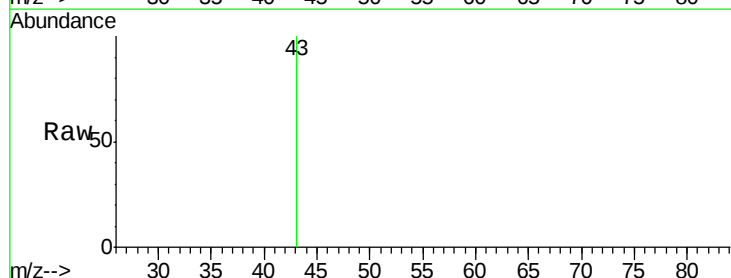
Instrument :  
 MSVOA\_L  
 ClientSampleId :

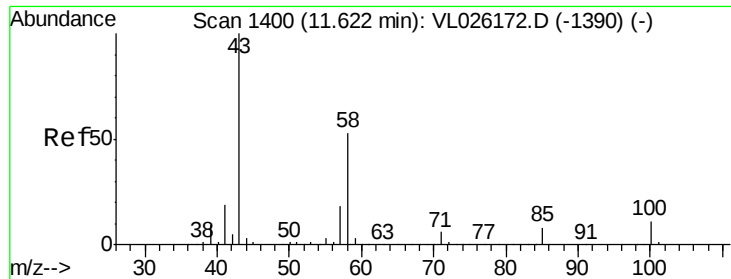
Tot Ion:114 Resp: 1169203  
 Ion Ratio Lower Upper  
 114 100  
 63 22.4 19.0 28.6  
 88 17.5 13.8 20.8



#34  
 2-Butanone  
 Concen: 0.04 ppbv  
 RT: 6.24 min Scan# 518  
 Delta R.T. 0.04 min  
 Lab File: VL026196.D  
 Acq: 10 Oct 2015 4:15

Tgt Ion: 43 Resp: 2902  
 Ion Ratio Lower Upper  
 43 100  
 72 0.0 19.6 29.4#





#51

2-Hexanone

Concen: 0.34 ppbv

RT: 11.92 min Scan# 1449

Delta R.T. 0.30 min

Lab File: VL026196.D

Acq: 10 Oct 2015 4:15

Instrument :

MSVOA\_L

ClientSampleId :

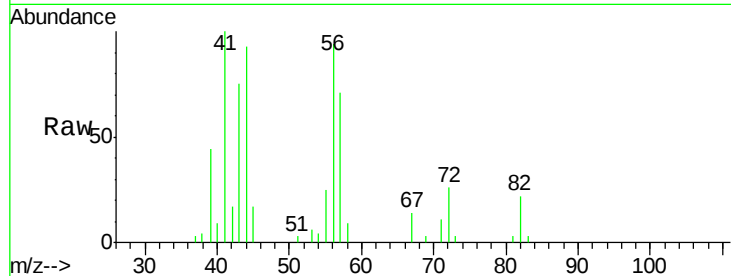
Tot Ion: 43 Resp: 26379

Ion Ratio Lower Upper

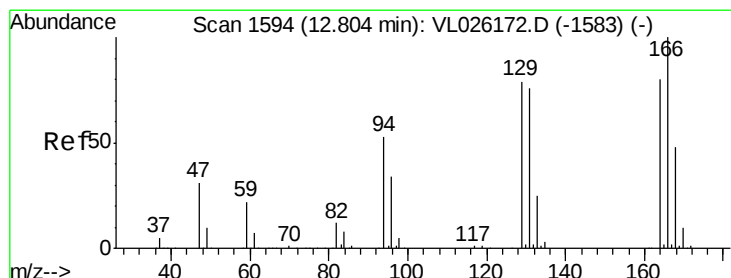
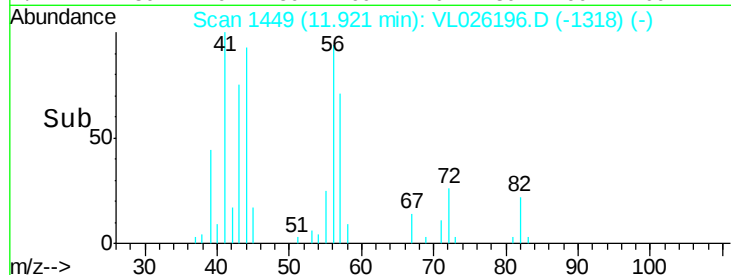
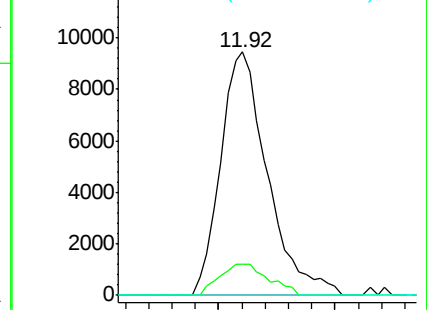
43 100

58 13.4 42.2 63.4#

98 0.0 0.2 0.2#



Abundance Ion 43.10 (42.80 to 43.80): VL0  
Ion 58.10 (57.80 to 58.80): VL0  
Ion 98.20 (97.90 to 98.90): VL0



#52

Tetrachloroethene

Concen: 0.03 ppbv

RT: 12.79 min Scan# 1592

Delta R.T. -0.01 min

Lab File: VL026196.D

Acq: 10 Oct 2015 4:15

Tgt Ion: 164 Resp: 1664

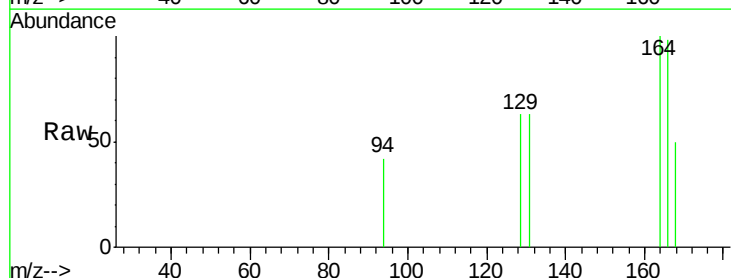
Ion Ratio Lower Upper

164 100

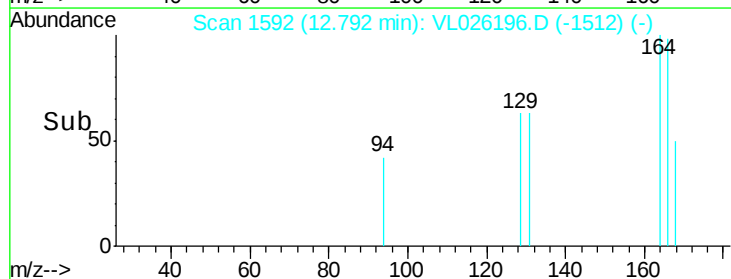
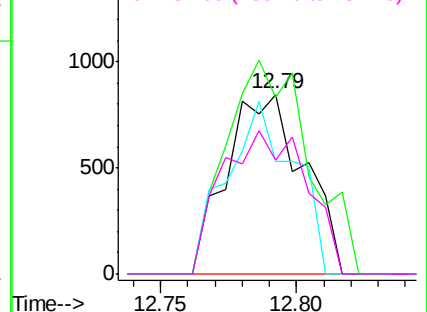
166 98.3 99.9 149.9#

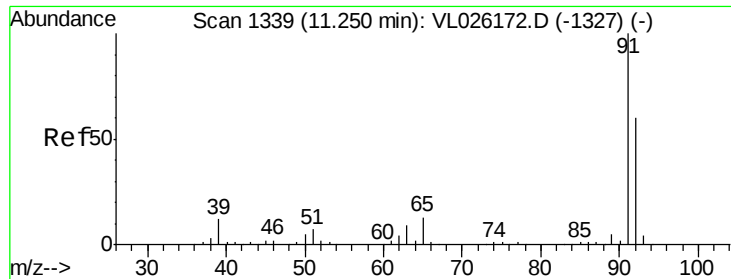
129 63.0 79.1 118.7#

131 63.3 76.3 114.5#



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: 0.17 ppbv

RT: 11.23 min Scan# 1336

Delta R.T. -0.02 min

Lab File: VL026196.D

Acq: 10 Oct 2015 4:15

Instrument :

MSVOA\_L

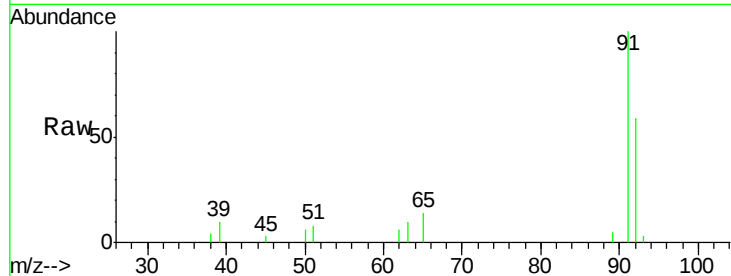
ClientSampleId :

Tot Ion: 91 Resp: 24124

Ion Ratio Lower Upper

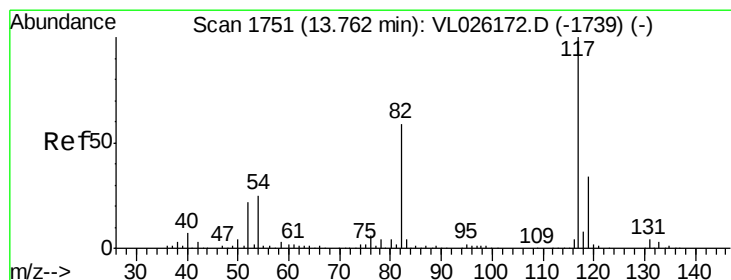
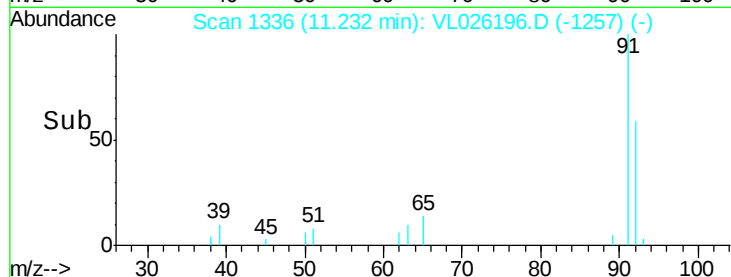
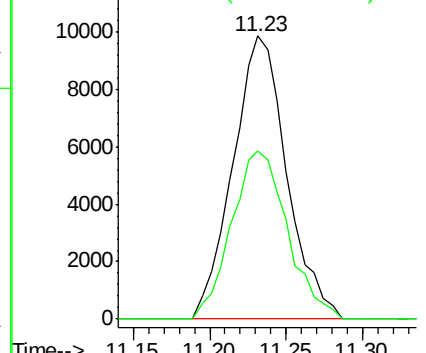
91 100

92 61.5 48.5 72.7



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: 13.74 min Scan# 1747

Delta R.T. -0.02 min

Lab File: VL026196.D

Acq: 10 Oct 2015 4:15

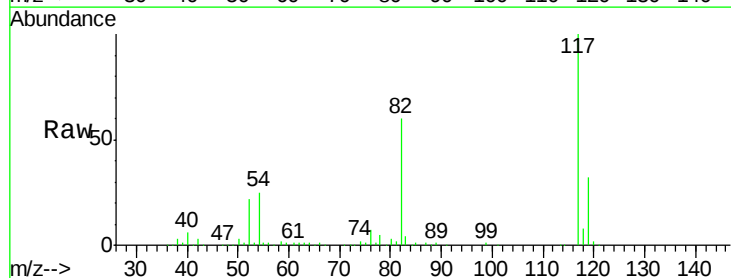
Tgt Ion: 117 Resp: 1305771

Ion Ratio Lower Upper

117 100

82 60.1 47.7 71.5

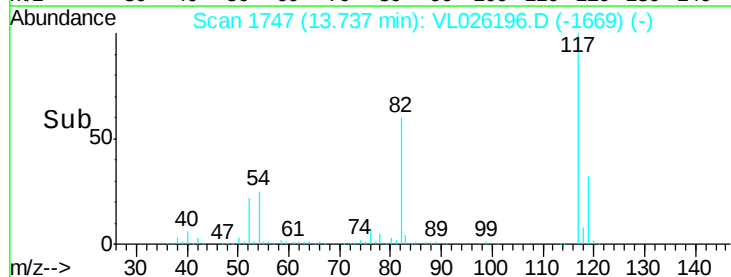
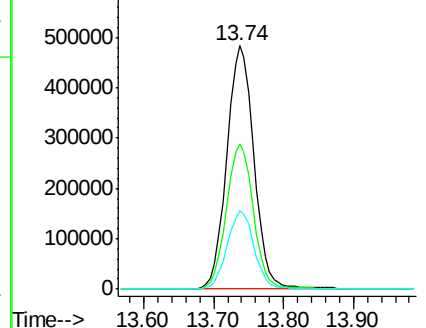
119 32.4 43.7 65.5#

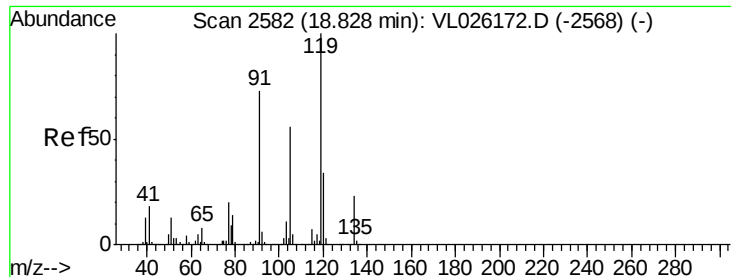


Abundance Ion 117.10 (116.80 to 117.80): V

Ion 82.10 (81.80 to 82.80): VL0

Ion 119.10 (118.80 to 119.80): V





#65

tert-Butylbenzene

Concen: 0.26 ppbv

RT: 18.91 min Scan# 2595

Delta R.T. 0.08 min

Lab File: VL026196.D

Acq: 10 Oct 2015 4:15

Instrument :

MSVOA\_L

ClientSampleId :

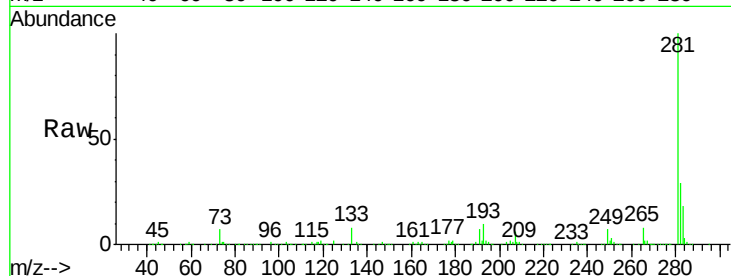
Tot Ion:119 Resp: 49132

Ion Ratio Lower Upper

119 100

91 2.4 58.5 87.7#

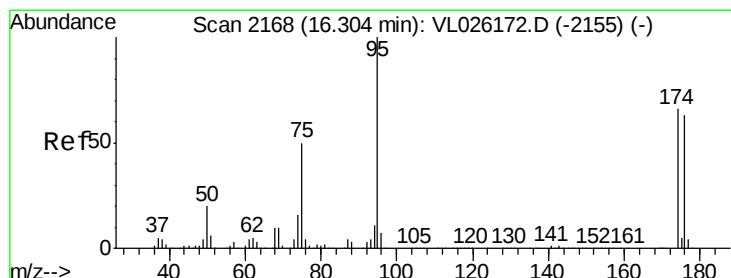
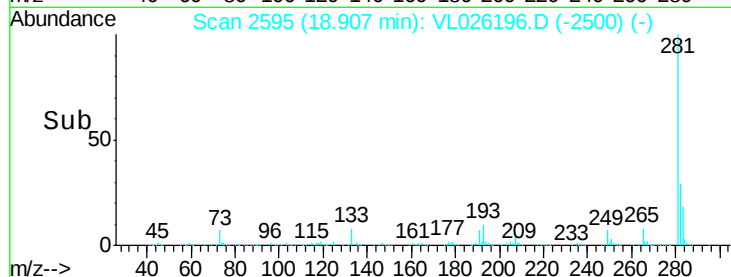
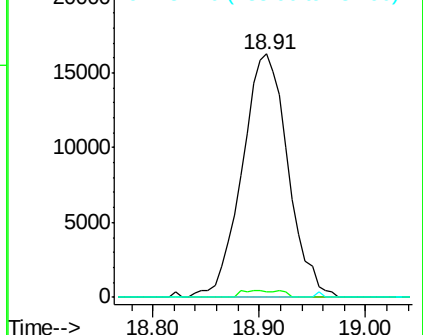
134 0.3 18.0 27.0#



Abundance Ion 119.20 (118.90 to 119.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 134.20 (133.90 to 134.90): V



#68

1-Bromo-4-Fluorobenzene

Concen: 10.52 ppbv

RT: 16.28 min Scan# 2164

Delta R.T. -0.02 min

Lab File: VL026196.D

Acq: 10 Oct 2015 4:15

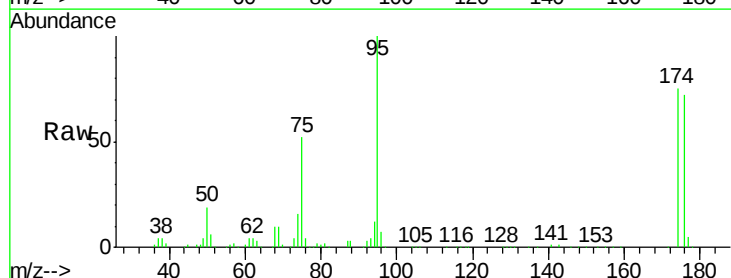
Tgt Ion: 95 Resp: 1054039

Ion Ratio Lower Upper

95 100

174 75.7 52.2 78.4

175 0.2 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

