

Data Path : W:\HPCHEM1\MSVOA L\DATA\VL011216\  
 Data File : VL026676.D  
 Acq On : 12 Jan 2016 15:58  
 Operator : SY/AP  
 Sample : H1064-02DL 10X  
 Misc : 400mL/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :

Quant Time: Jan 13 03:01:58 2016  
 Quant Method : W:\HPCHEM1\MSVOA L\METHODS\VL010816AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Mon Jan 11 17:14:02 2016  
 QLast Update : Mon Jan 11 17:14:02 2016  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 6.68  | 49   | 750007   | 10.00 | ppbv  | 0.04     |
| 33) 1,4-Difluorobenzene | 8.35  | 114  | 2284655  | 10.00 | ppbv  | 0.04     |
| 55) Chlorobenzene-d5    | 13.77 | 117  | 3050849  | 10.00 | ppbv  | 0.05     |

|                             |        |       |          |          |      |         |
|-----------------------------|--------|-------|----------|----------|------|---------|
| System Monitoring Compounds |        |       |          |          |      |         |
| 68) 1-Bromo-4-Fluorobenzene | 16.32  | 95    | 2555117  | 10.51    | ppbv | 0.05    |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 105.10% |

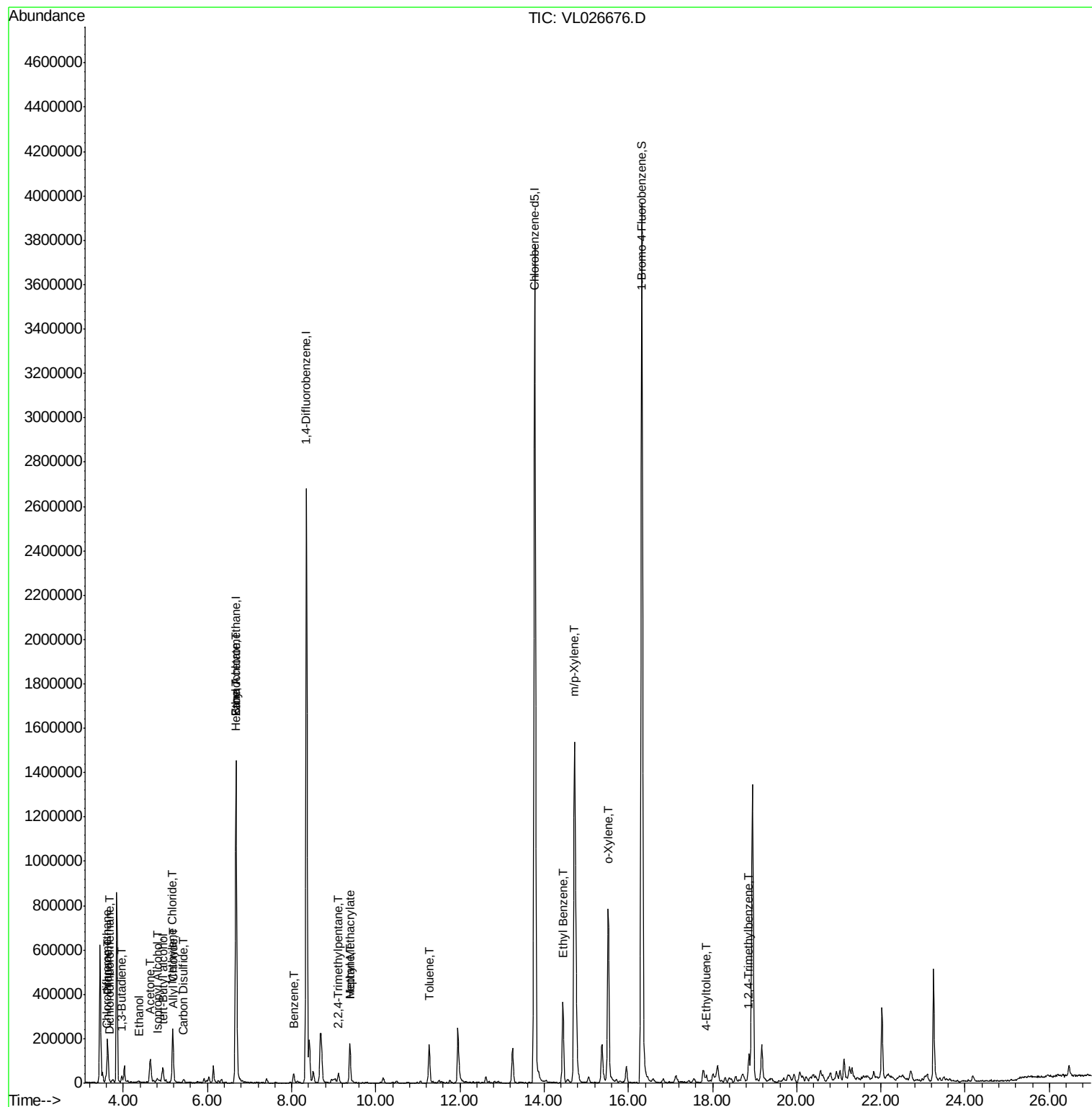
| Target Compounds           | R.T.  | QIon | Response | Conc | Units  | Ovalue |
|----------------------------|-------|------|----------|------|--------|--------|
| 2) Dichlorodifluoromethane | 3.67  | 85   | 12586    | 0.06 | ppbv   | 90     |
| 3) Chlorodifluoromethane   | 3.59  | 51   | 27449    | 0.27 | ppbv   | 93     |
| 9) Propene                 | 3.63  | 41   | 55531    | 1.55 | ppbv # | 71     |
| 10) Heptane                | 9.38  | 43   | 66268    | 0.50 | ppbv   | 100    |
| 13) Ethanol                | 4.37  | 45   | 3775     | 0.55 | ppbv # | 34     |
| 15) Acetone                | 4.65  | 43   | 141948   | 1.15 | ppbv   | 91     |
| 16) 1,3-Butadiene          | 3.96  | 39   | 8383     | 0.17 | ppbv # | 34     |
| 17) tert-Butyl alcohol     | 4.95  | 59   | 33286    | 0.36 | ppbv   | 98     |
| 19) Isopropyl Alcohol      | 4.81  | 45   | 22070    | 0.43 | ppbv # | 96     |
| 20) Methylene Chloride     | 5.17  | 84   | 114942   | 2.27 | ppbv   | 97     |
| 21) Allyl Chloride         | 5.20  | 41   | 4440     | 0.06 | ppbv # | 67     |
| 25) Ethyl Acetate          | 6.68  | 43   | 10684    | 0.06 | ppbv # | 75     |
| 26) Hexane                 | 6.69  | 57   | 16599    | 0.17 | ppbv # | 46     |
| 27) Carbon Disulfide       | 5.43  | 76   | 7596     | 0.05 | ppbv # | 19     |
| 36) Benzene                | 8.06  | 78   | 41652    | 0.18 | ppbv   | 95     |
| 43) Methyl Methacrylate    | 9.38  | 69   | 5358     | 0.06 | ppbv # | 1      |
| 44) 2,2,4-Trimethylpentane | 9.11  | 57   | 23025    | 0.06 | ppbv # | 60     |
| 53) Toluene                | 11.27 | 91   | 156998   | 0.47 | ppbv   | 100    |
| 58) Ethyl Benzene          | 14.44 | 91   | 379482   | 0.70 | ppbv   | 99     |
| 59) m/p-Xylene             | 14.72 | 91   | 1898427  | 4.23 | ppbv   | 98     |
| 60) o-Xylene               | 15.52 | 91   | 755651   | 1.56 | ppbv   | 97     |
| 72) 4-Ethyltoluene         | 17.86 | 105  | 28280    | 0.05 | ppbv # | 97     |
| 74) 1,2,4-Trimethylbenzene | 18.86 | 105  | 100869   | 0.18 | ppbv # | 75     |

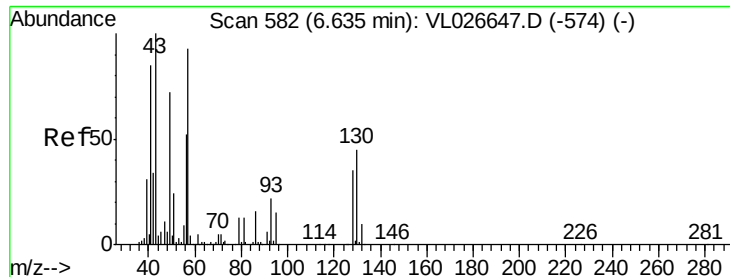
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : W:\HPCHEM1\MSVOA L\DATA\VL011216\  
Data File : VL026676.D  
Acq On : 12 Jan 2016 15:58  
Operator : SY/AP  
Sample : H1064-02DL 10X  
Misc : 400mL/MSVOA L  
ALS Vial : 1 Sample Multiplier: 1

Instrument :  
MSVOA\_L  
ClientSampleId :

Quant Time: Jan 13 03:01:58 2016  
Quant Method : W:\HPCHEM1\MSVOA L\METHODS\VL010816AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Mon Jan 11 17:14:02 2016  
QLast Update : Mon Jan 11 17:14:02 2016  
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.00 ppbv

RT: 6.68 min Scan# 589

Delta R.T. 0.04 min

Lab File: VL026676.D

Acq: 12 Jan 2016 15:58

Instrument :

MSVOA\_L

ClientSampleId :

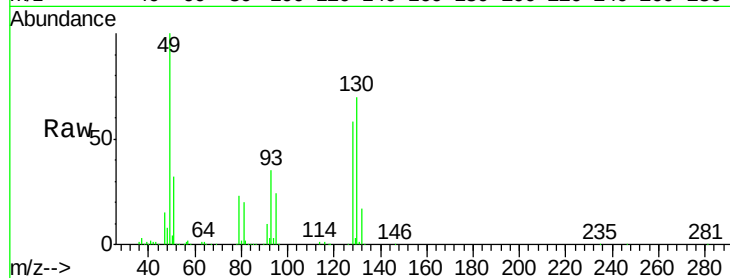
Tot Ion: 49 Resp: 750007

Ion Ratio Lower Upper

49 100

128 56.8 25.9 77.7

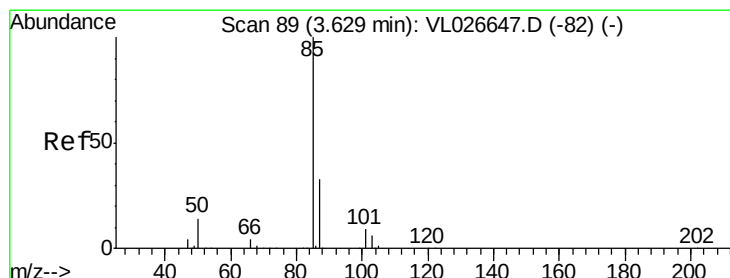
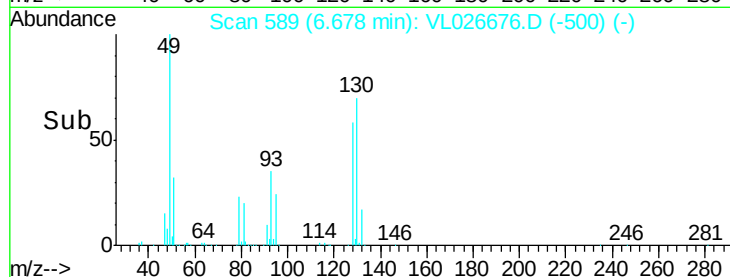
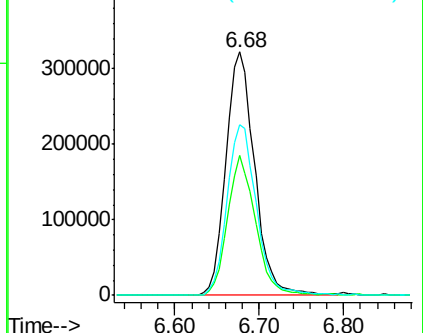
130 72.3 33.6 100.8



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: 0.06 ppbv

RT: 3.67 min Scan# 96

Delta R.T. 0.04 min

Lab File: VL026676.D

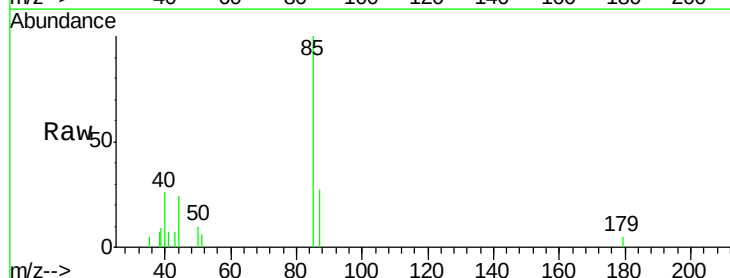
Acq: 12 Jan 2016 15:58

Tgt Ion: 85 Resp: 12586

Ion Ratio Lower Upper

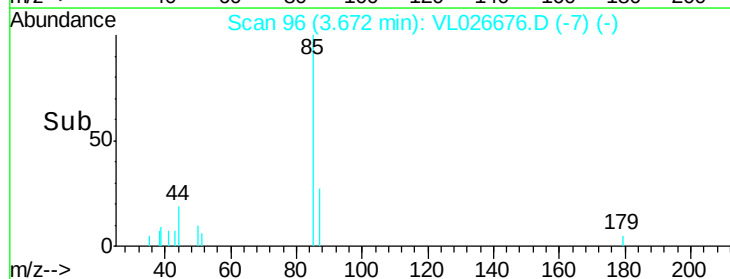
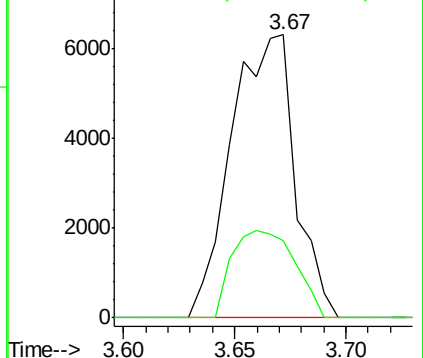
85 100

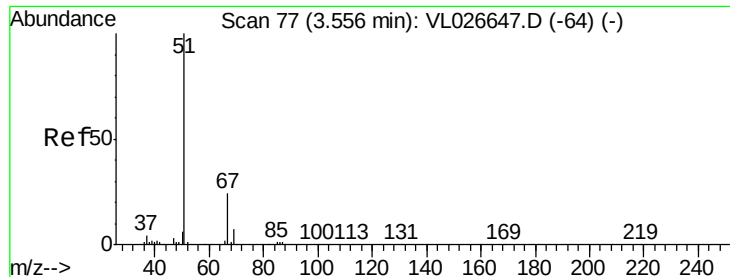
87 27.5 26.4 39.6



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.27 ppbv

RT: 3.59 min Scan# 83

Delta R.T. 0.04 min

Lab File: VL026676.D

Acq: 12 Jan 2016 15:58

Instrument :

MSVOA\_L

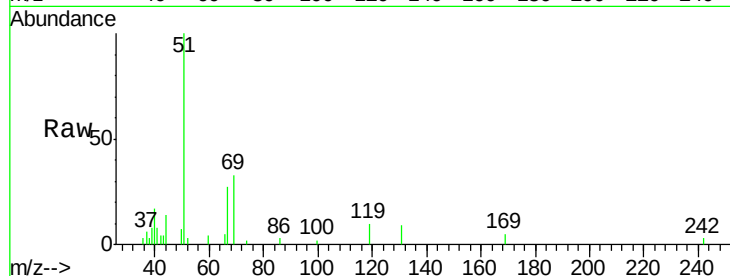
ClientSampled :

Tot Ion: 51 Resp: 27449

Ion Ratio Lower Upper

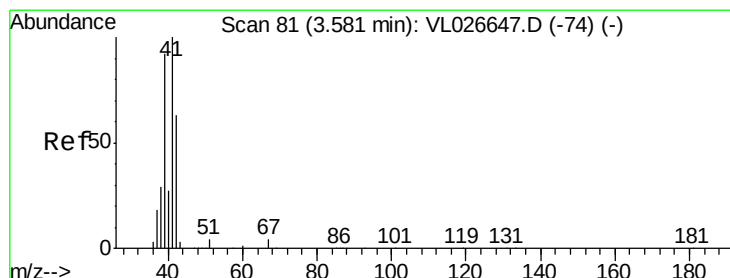
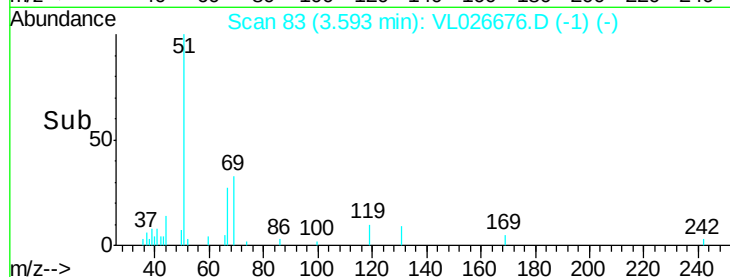
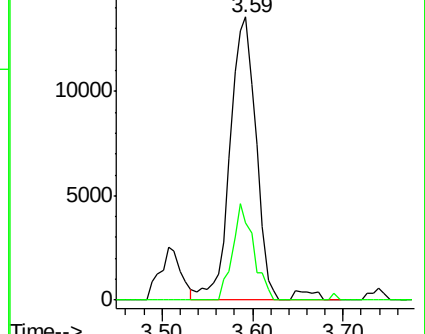
51 100

67 26.9 18.6 28.0



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#9

Propene

Concen: 1.55 ppbv

RT: 3.63 min Scan# 89

Delta R.T. 0.05 min

Lab File: VL026676.D

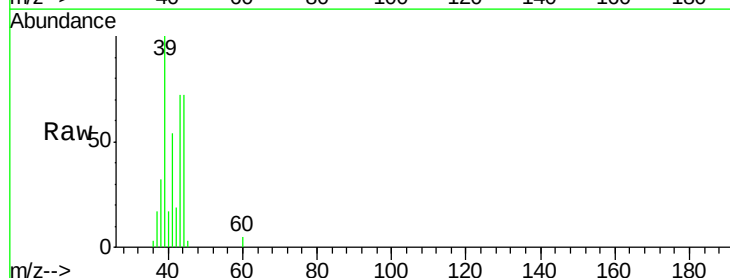
Acq: 12 Jan 2016 15:58

Tgt Ion: 41 Resp: 55531

Ion Ratio Lower Upper

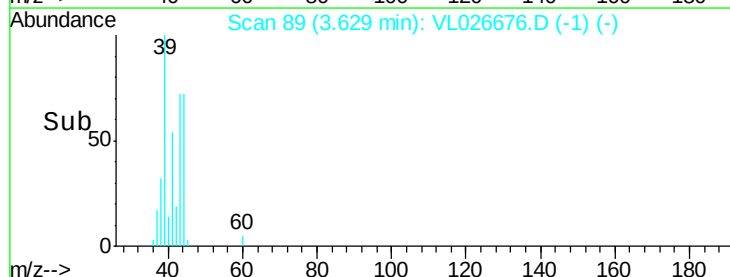
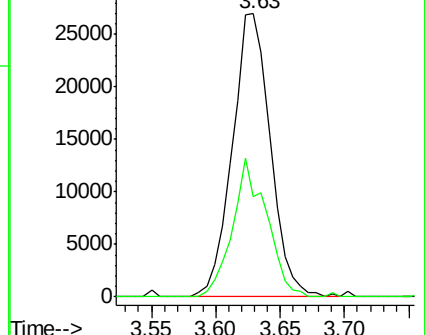
41 100

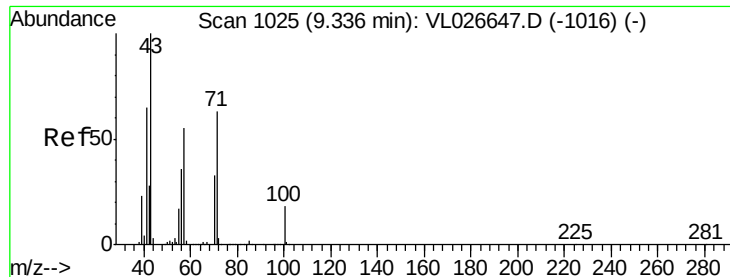
42 43.8 53.6 80.4#



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

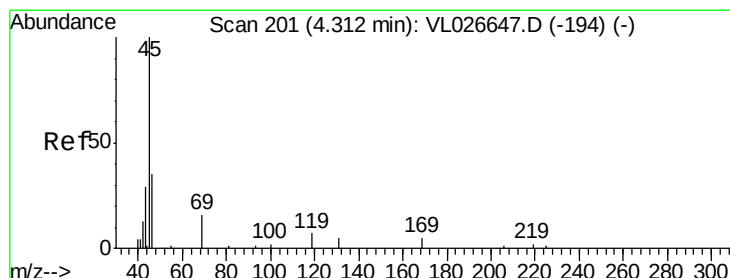
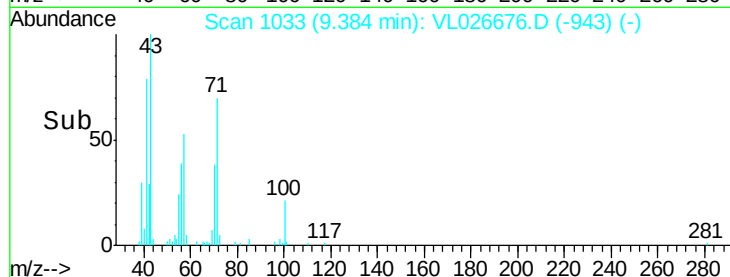
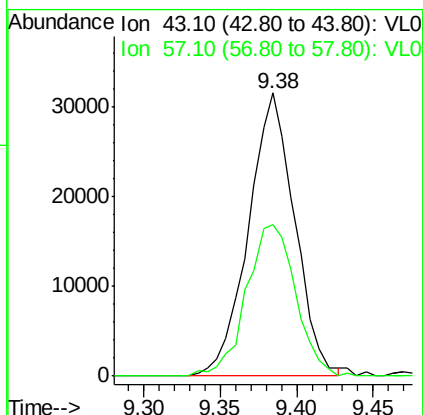
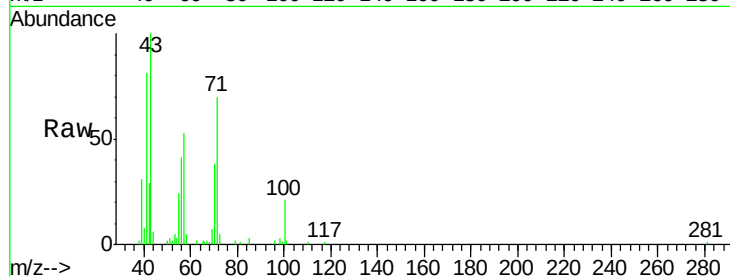




#10  
Heptane  
Concen: 0.50 ppbv  
RT: 9.38 min Scan# 1033  
Delta R.T. 0.05 min  
Lab File: VL026676.D  
Acq: 12 Jan 2016 15:58

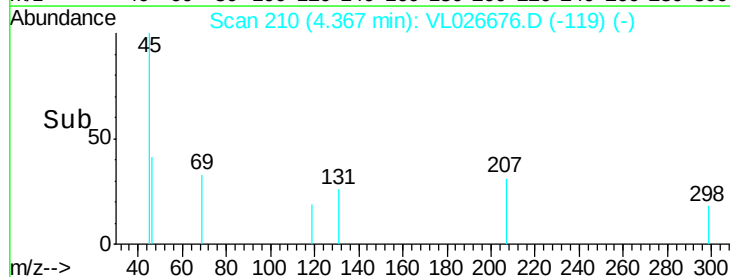
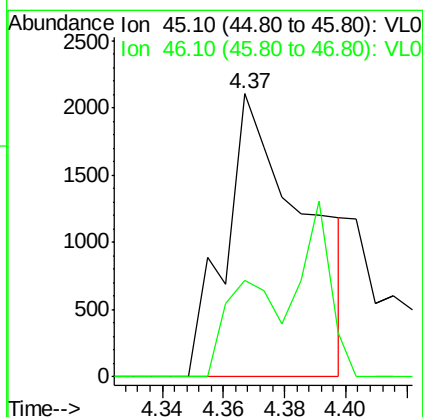
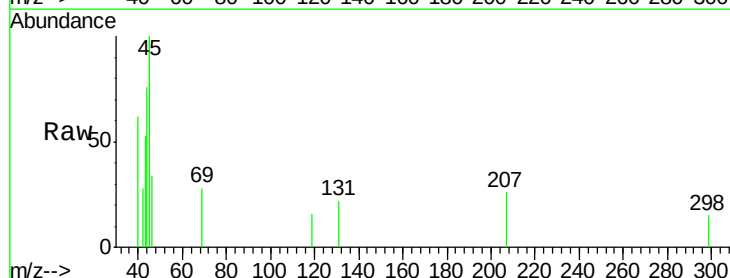
Instrument :  
MSVOA\_L  
ClientSampled :

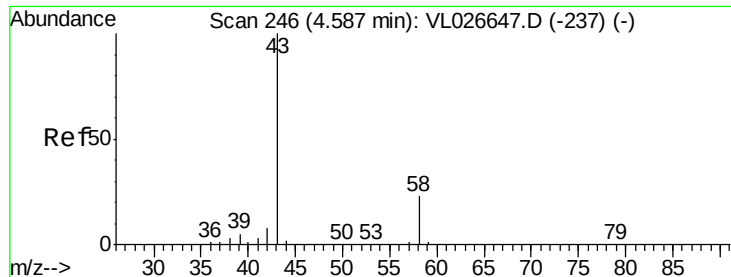
Tot Ion: 43 Resp: 66268  
Ion Ratio Lower Upper  
43 100  
57 57.0 45.8 68.6



#13  
Ethanol  
Concen: 0.55 ppbv  
RT: 4.37 min Scan# 210  
Delta R.T. 0.05 min  
Lab File: VL026676.D  
Acq: 12 Jan 2016 15:58

Tgt Ion: 45 Resp: 3775  
Ion Ratio Lower Upper  
45 100  
46 0.0 16.7 66.7#





#15

Acetone

Concen: 1.15 ppbv

RT: 4.65 min Scan# 256

Delta R.T. 0.06 min

Lab File: VL026676.D

Acq: 12 Jan 2016 15:58

Instrument :

MSVOA\_L

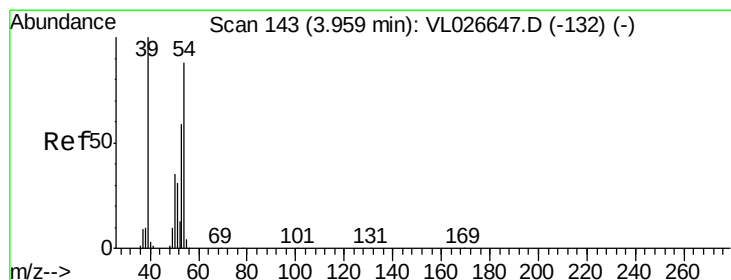
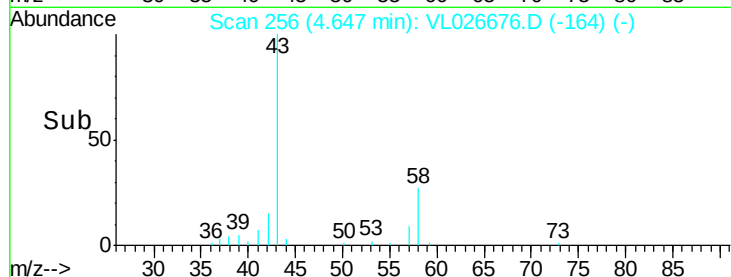
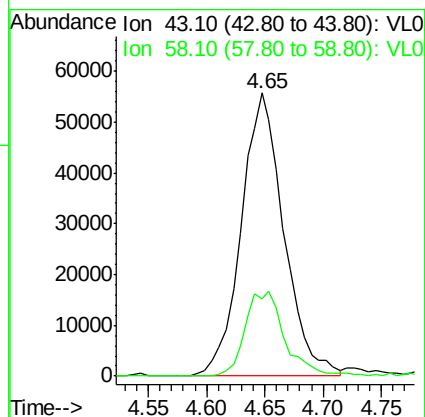
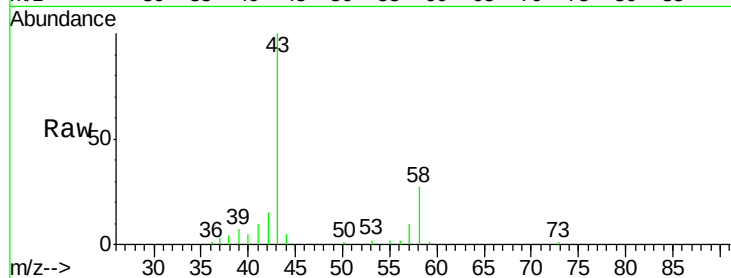
ClientSampleId :

Tot Ion: 43 Resp: 141948

Ion Ratio Lower Upper

43 100

58 28.2 19.2 28.8



#16

1,3-Butadiene

Concen: 0.17 ppbv

RT: 3.96 min Scan# 144

Delta R.T. 0.01 min

Lab File: VL026676.D

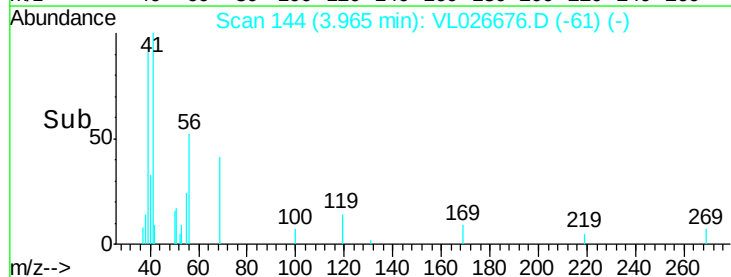
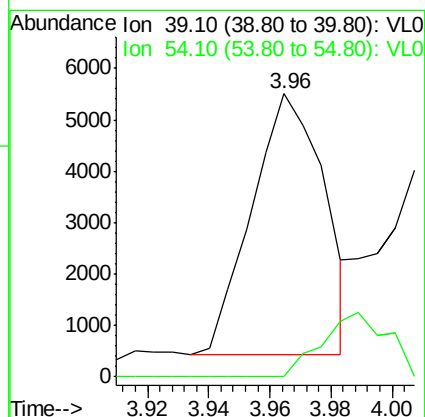
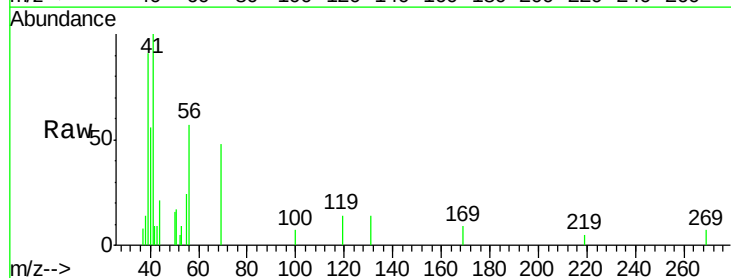
Acq: 12 Jan 2016 15:58

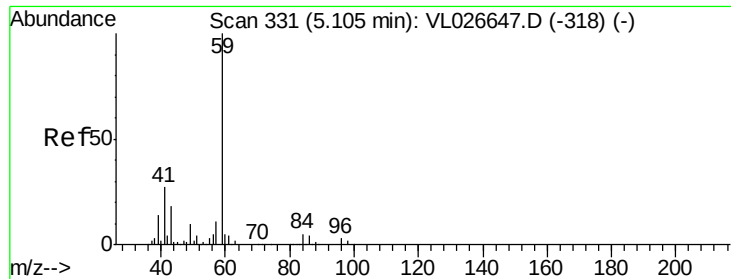
Tgt Ion: 39 Resp: 8383

Ion Ratio Lower Upper

39 100

54 23.6 66.6 100.0#





#17

tert-Butyl alcohol

Concen: 0.36 ppbv

RT: 4.95 min Scan# 306

Delta R.T. -0.15 min

Lab File: VL026676.D

Acq: 12 Jan 2016 15:58

Instrument :

MSVOA\_L

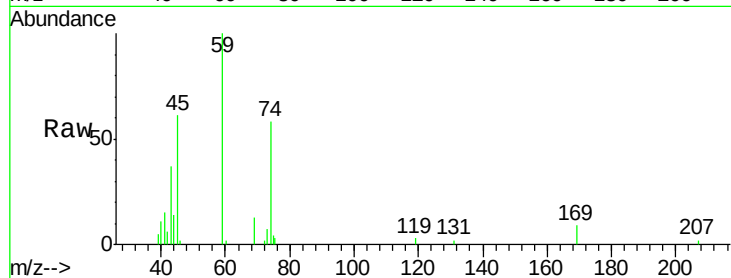
ClientSampleId :

Tot Ion: 59 Resp: 33286

Ion Ratio Lower Upper

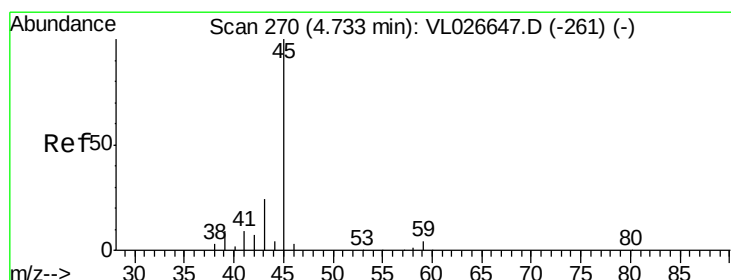
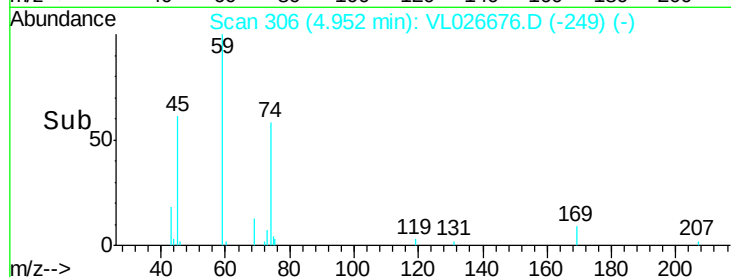
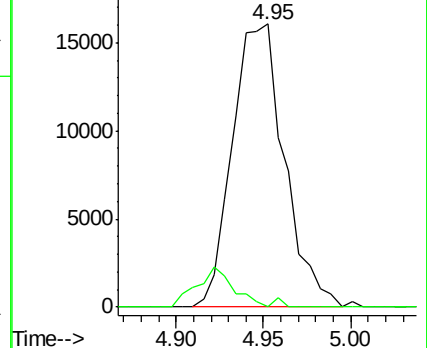
59 100

57 10.5 9.0 13.6



Abundance Ion 59.10 (58.80 to 59.80): VL0

Ion 57.10 (56.80 to 57.80): VL0



#19

Isopropyl Alcohol

Concen: 0.43 ppbv

RT: 4.81 min Scan# 283

Delta R.T. 0.08 min

Lab File: VL026676.D

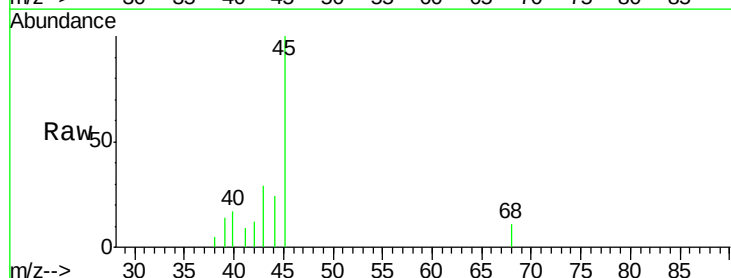
Acq: 12 Jan 2016 15:58

Tgt Ion: 45 Resp: 22070

Ion Ratio Lower Upper

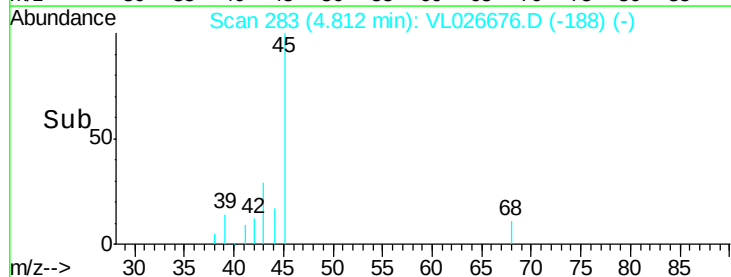
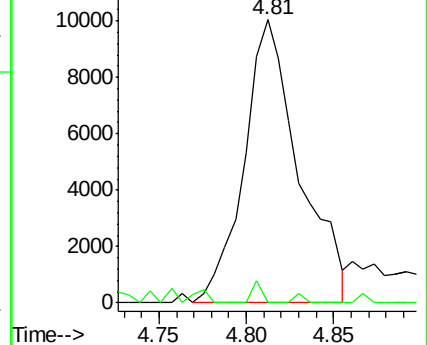
45 100

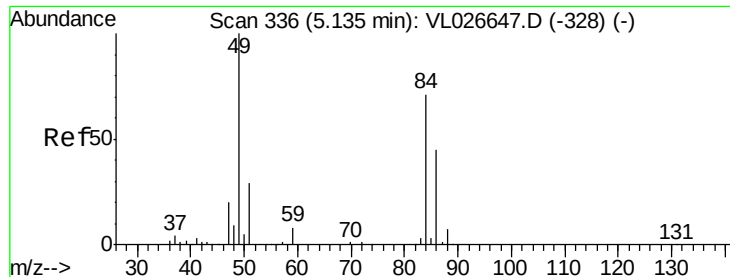
58 0.0 1.3 1.9#



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



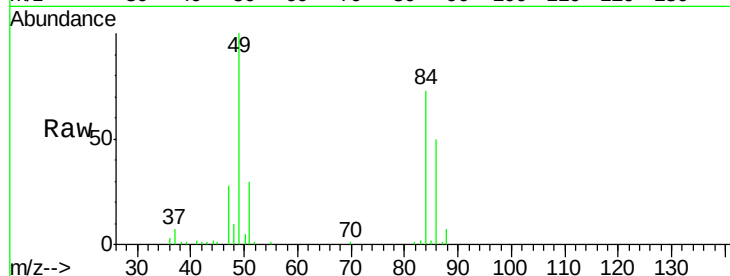


#20  
Methvlene Chloride  
Concen: 2.27 ppbv  
RT: 5.17 min Scan# 342  
Delta R.T. 0.04 min  
Lab File: VL026676.D  
Acq: 12 Jan 2016 15:58

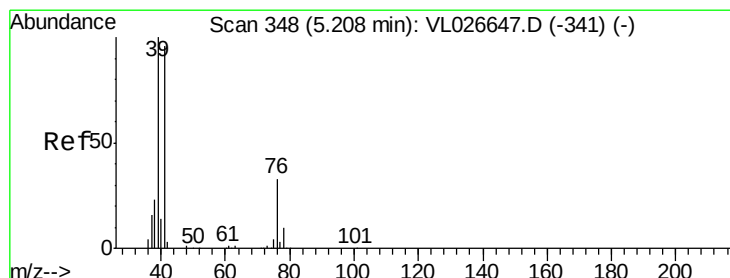
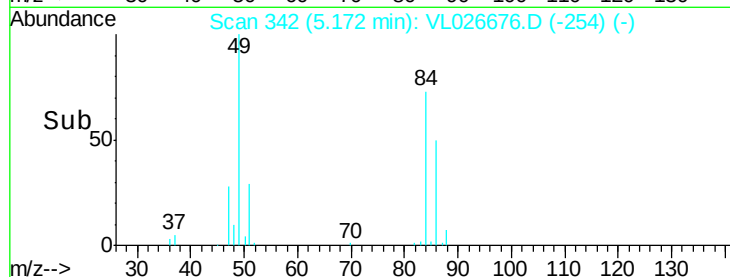
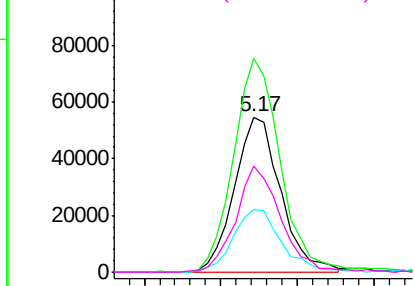
Instrument :  
MSVOA\_L  
ClientSampleId :

Tot Ion: 84 Resp: 114942

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 84  | 100   |       |       |
| 49  | 137.5 | 112.3 | 168.5 |
| 51  | 40.8  | 32.5  | 48.7  |
| 86  | 67.5  | 50.3  | 75.5  |



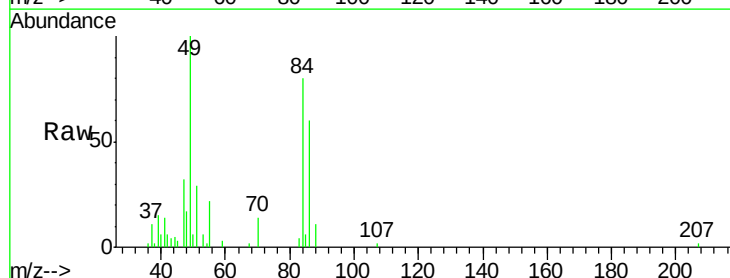
Abundance Ion 84.00 (83.70 to 84.70): VL0  
Ion 49.10 (48.80 to 49.80): VL0  
Ion 51.10 (50.80 to 51.80): VL0  
Ion 86.00 (85.70 to 86.70): VL0



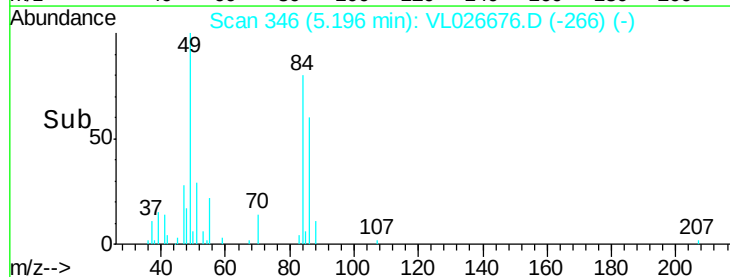
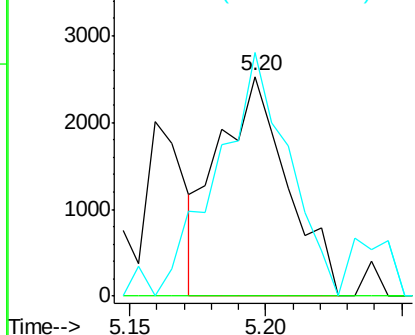
#21  
Allyl Chloride  
Concen: 0.06 ppbv  
RT: 5.20 min Scan# 346  
Delta R.T. -0.01 min  
Lab File: VL026676.D  
Acq: 12 Jan 2016 15:58

Tgt Ion: 41 Resp: 4440

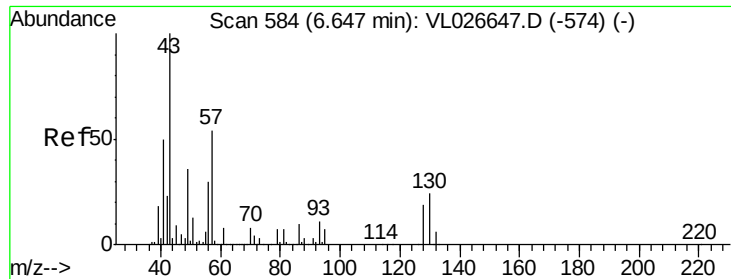
| Ion | Ratio | Lower | Upper  |
|-----|-------|-------|--------|
| 41  | 100   |       |        |
| 76  | 0.0   | 27.5  | 41.3#  |
| 39  | 129.0 | 83.0  | 124.6# |



Abundance Ion 41.10 (40.80 to 41.80): VL0  
Ion 76.10 (75.80 to 76.80): VL0  
Ion 39.10 (38.80 to 39.80): VL0



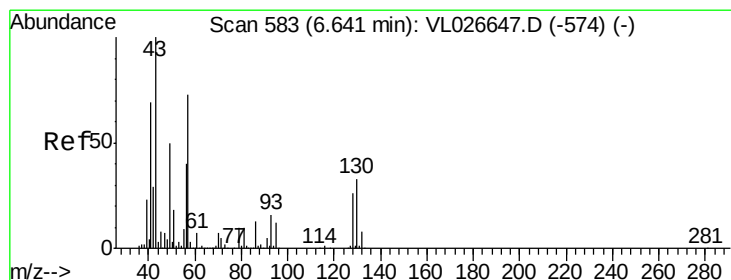
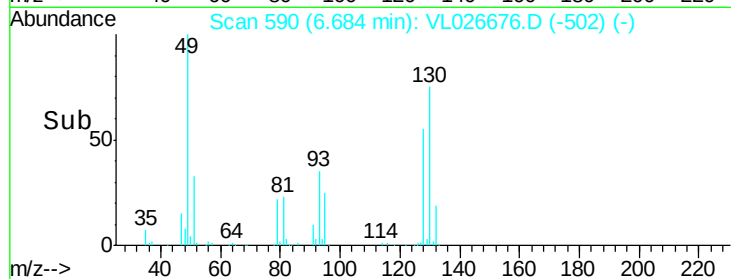
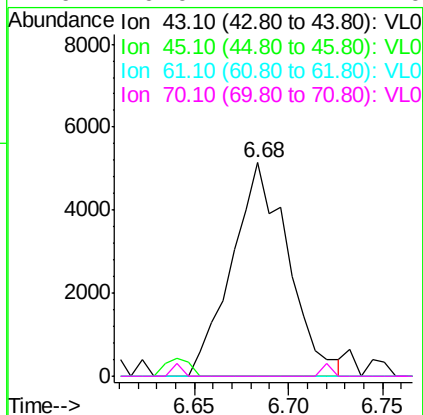
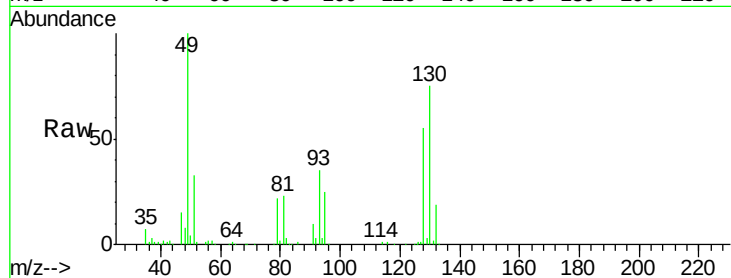




#25  
Ethyl Acetate  
Concen: 0.06 ppbv  
RT: 6.68 min Scan# 590  
Delta R.T. 0.04 min  
Lab File: VL026676.D  
Acq: 12 Jan 2016 15:58

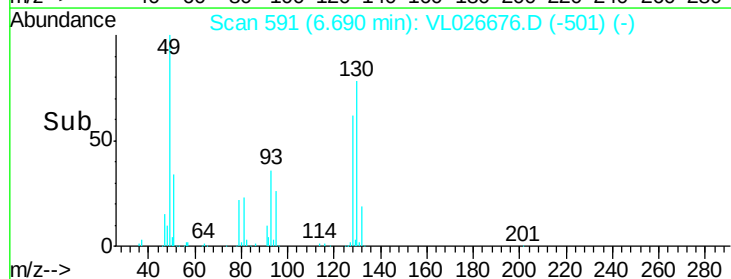
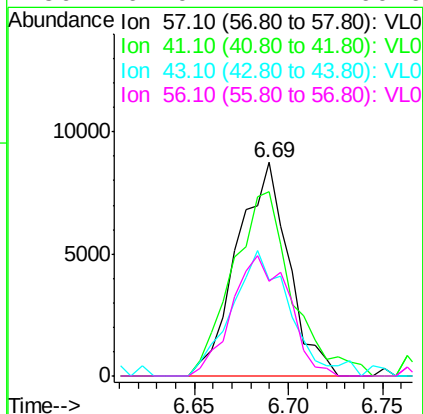
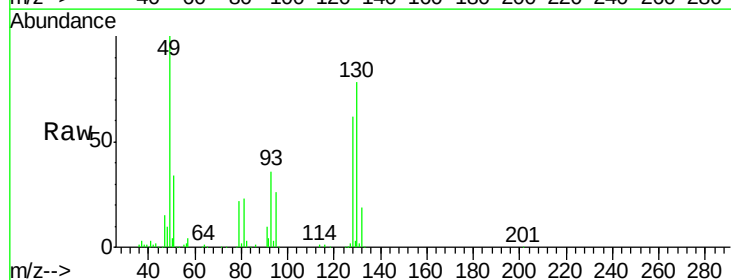
Instrument :  
MSVOA\_L  
ClientSampleId :

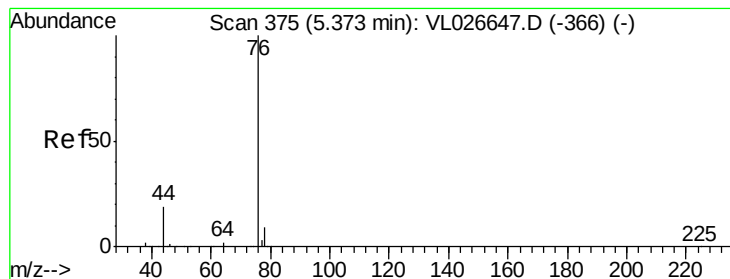
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 43      | 100   |       |       |
| 45      | 0.0   | 7.5   | 11.3# |
| 61      | 0.0   | 7.3   | 10.9# |
| 70      | 0.0   | 7.4   | 11.0# |



#26  
Hexane  
Concen: 0.17 ppbv  
RT: 6.69 min Scan# 591  
Delta R.T. 0.05 min  
Lab File: VL026676.D  
Acq: 12 Jan 2016 15:58

| Tgt Ion | Ratio | Lower | Upper  |
|---------|-------|-------|--------|
| 57      | 100   |       |        |
| 41      | 99.7  | 74.8  | 112.2  |
| 43      | 67.4  | 161.5 | 242.3# |
| 56      | 62.0  | 44.4  | 66.6   |





#27

Carbon Disulfide

Concen: 0.05 ppbv

RT: 5.43 min Scan# 384

Delta R.T. 0.05 min

Lab File: VL026676.D

Acq: 12 Jan 2016 15:58

Instrument :

MSVOA\_L

ClientSampleId :

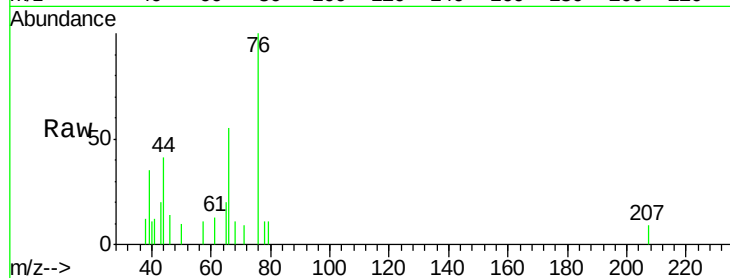
Tot Ion: 76 Resp: 7596

Ion Ratio Lower Upper

76 100

44 68.9 15.9 23.9#

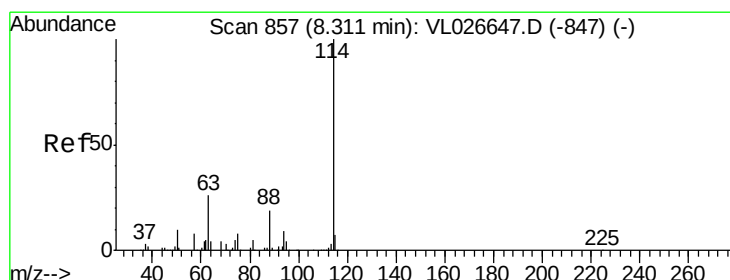
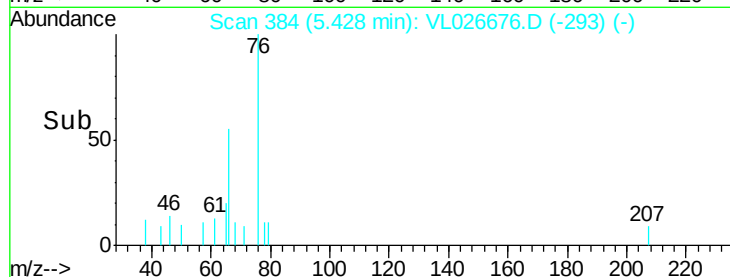
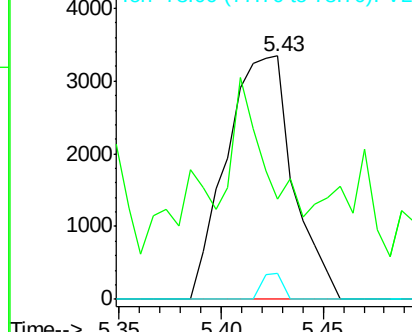
78 0.0 7.6 11.4#



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



#33

1,4-Difluorobenzene

Concen: 10.00 ppbv

RT: 8.35 min Scan# 864

Delta R.T. 0.04 min

Lab File: VL026676.D

Acq: 12 Jan 2016 15:58

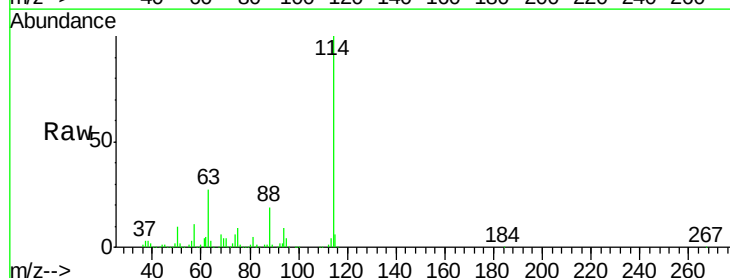
Tgt Ion: 114 Resp: 2284655

Ion Ratio Lower Upper

114 100

63 26.7 21.7 32.5

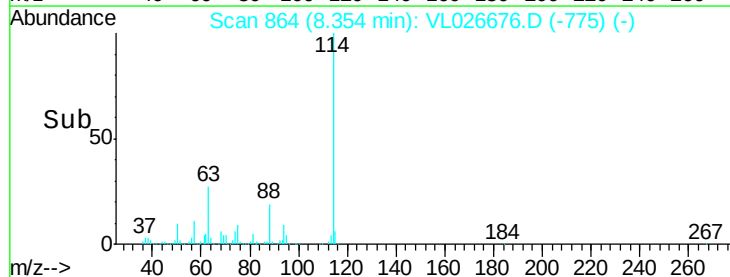
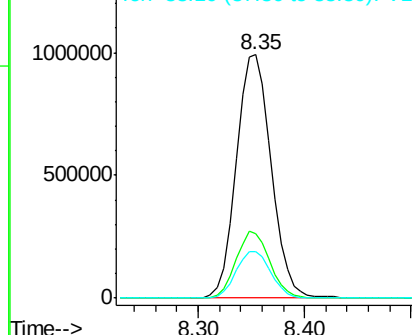
88 19.3 15.2 22.8

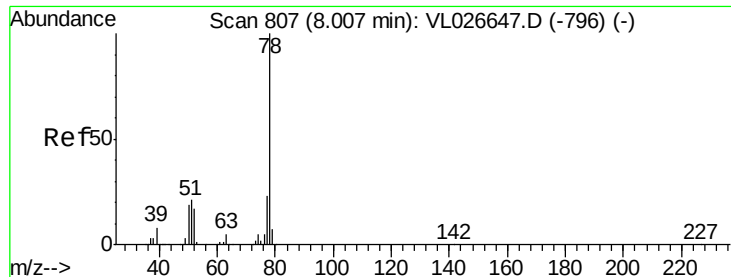


Abundance Ion 114.10 (113.80 to 114.80): V

Ion 63.10 (62.80 to 63.80): VL0

Ion 88.10 (87.80 to 88.80): VL0

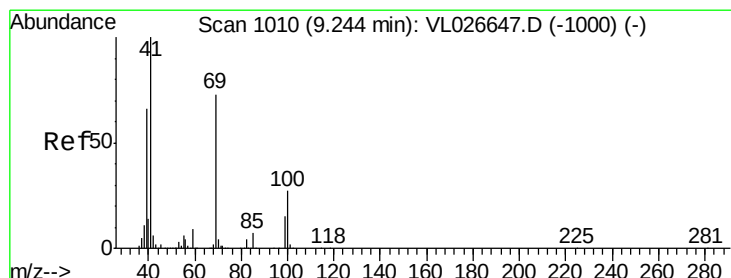
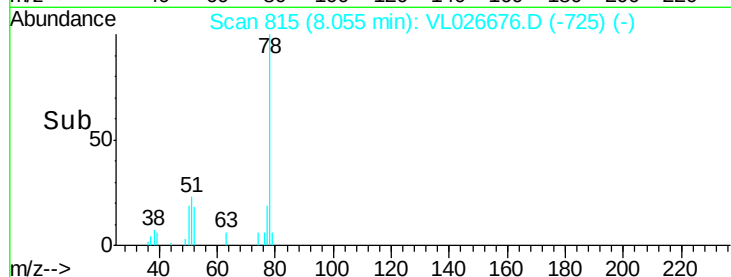
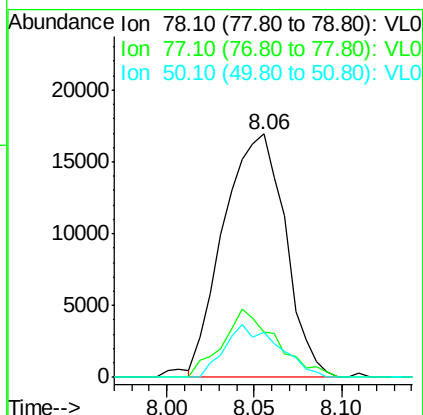
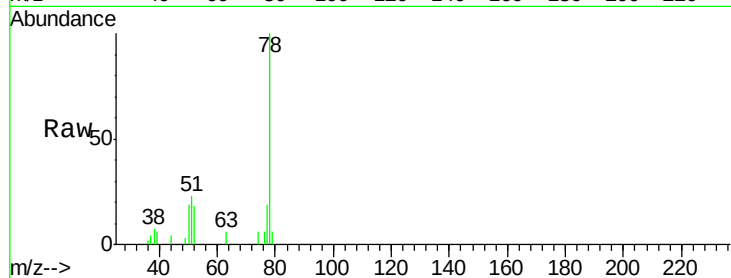




#36  
Benzene  
Concen: 0.18 ppbv  
RT: 8.06 min Scan# 815  
Delta R.T. 0.05 min  
Lab File: VL026676.D  
Acq: 12 Jan 2016 15:58

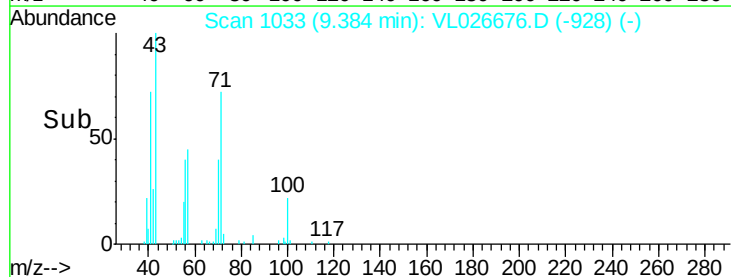
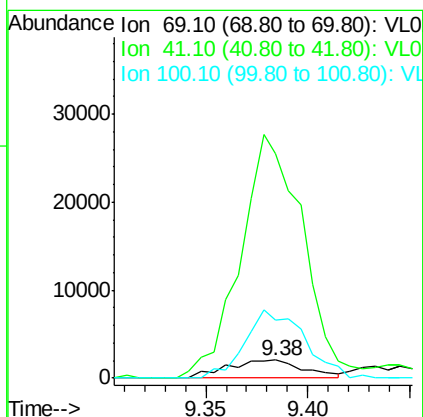
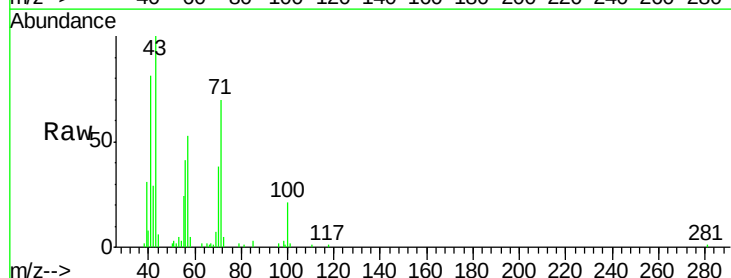
Instrument :  
MSVOA\_L  
ClientSampleId :

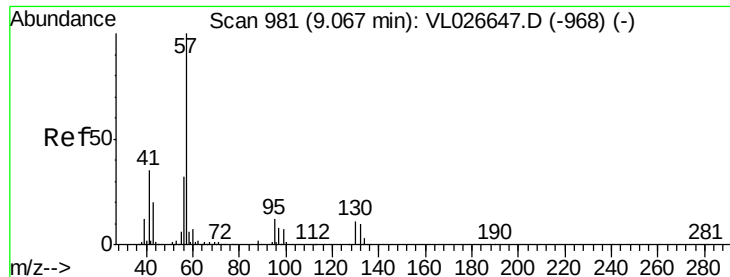
Tot Ion: 78 Resp: 41652  
Ion Ratio Lower Upper  
78 100  
77 18.7 18.5 27.7  
50 18.7 15.4 23.2



#43  
Methyl Methacrylate  
Concen: 0.06 ppbv  
RT: 9.38 min Scan# 1033  
Delta R.T. 0.14 min  
Lab File: VL026676.D  
Acq: 12 Jan 2016 15:58

Tgt Ion: 69 Resp: 5358  
Ion Ratio Lower Upper  
69 100  
41 1210.2 106.1 159.1#  
100 294.3 29.0 43.4#

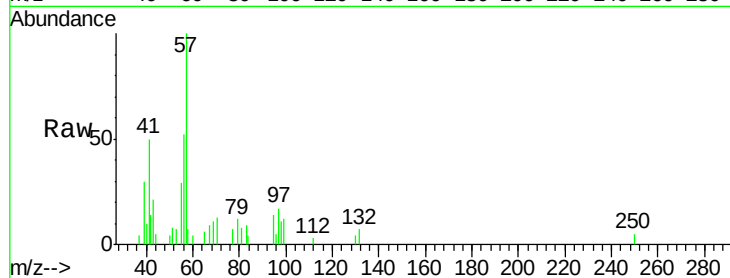




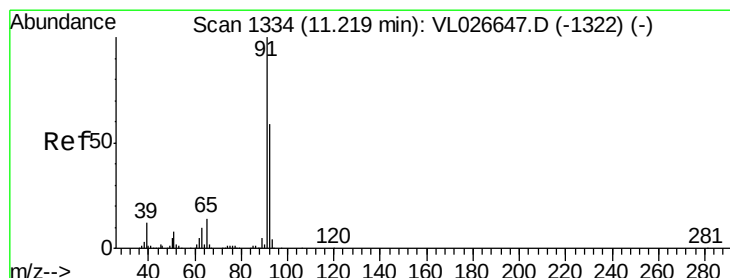
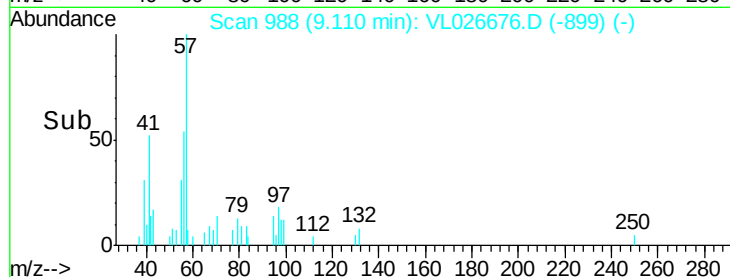
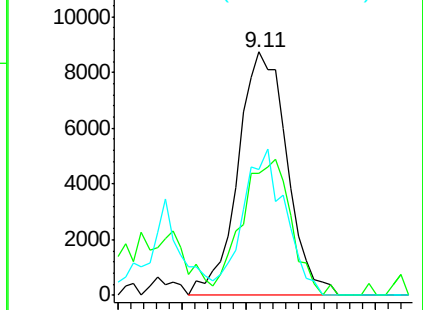
#44  
 2,2,4-Trimethylpentane  
 Concen: 0.06 ppbv  
 RT: 9.11 min Scan# 988  
 Delta R.T. 0.04 min  
 Lab File: VL026676.D  
 Acq: 12 Jan 2016 15:58

Instrument :  
 MSVOA\_L  
 ClientSampleId :

Tot Ion: 57 Resp: 23025  
 Ion Ratio Lower Upper  
 57 100  
 41 57.0 26.9 40.3#  
 56 52.9 25.4 38.0#

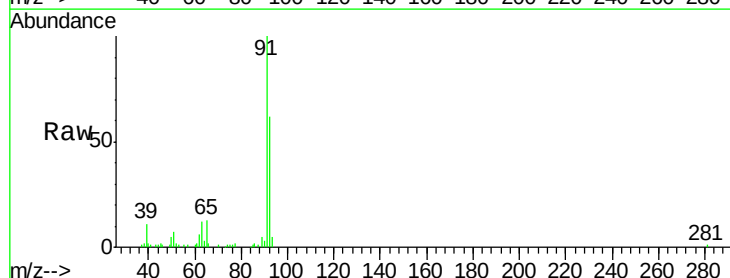


Abundance Ion 57.10 (56.80 to 57.80): VL0  
 Ion 41.10 (40.80 to 41.80): VL0  
 Ion 56.10 (55.80 to 56.80): VL0

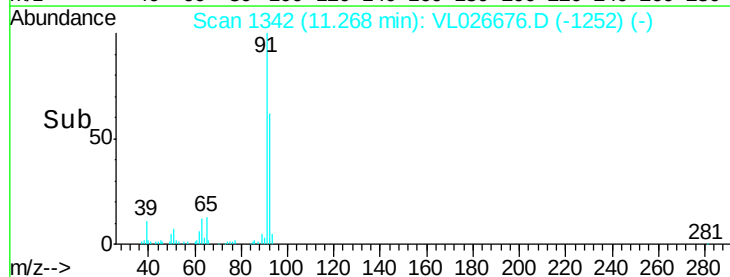
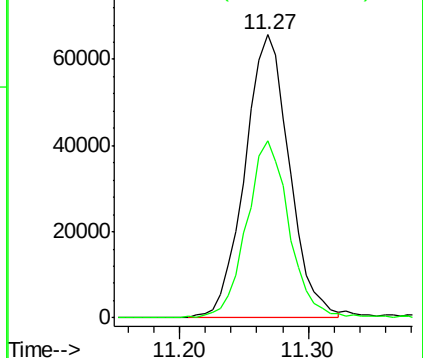


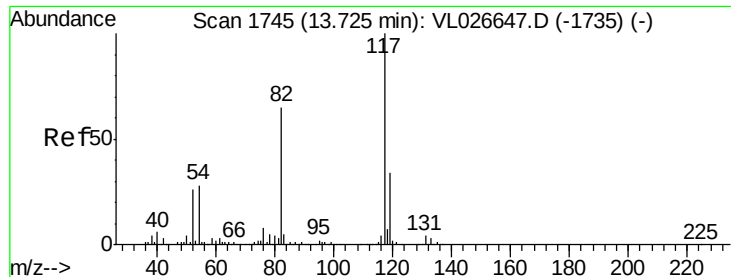
#53  
 Toluene  
 Concen: 0.47 ppbv  
 RT: 11.27 min Scan# 1342  
 Delta R.T. 0.05 min  
 Lab File: VL026676.D  
 Acq: 12 Jan 2016 15:58

Tgt Ion: 91 Resp: 156998  
 Ion Ratio Lower Upper  
 91 100  
 92 60.1 48.2 72.4



Abundance Ion 91.10 (90.80 to 91.80): VL0  
 Ion 92.10 (91.80 to 92.80): VL0

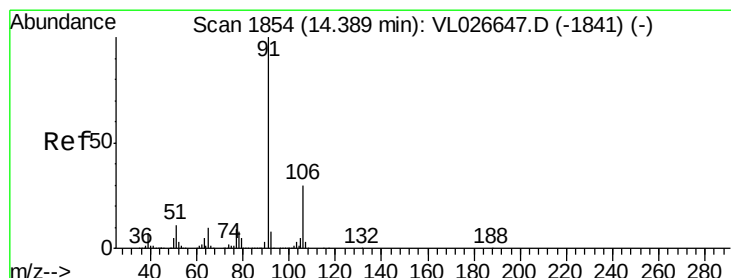
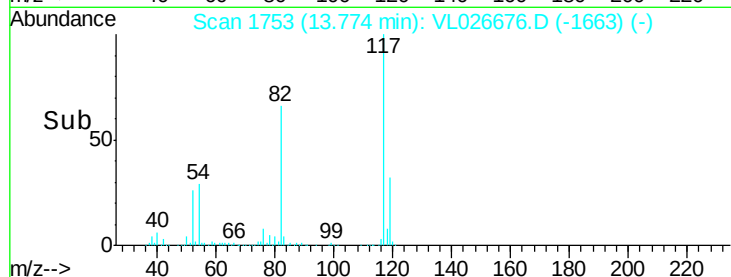
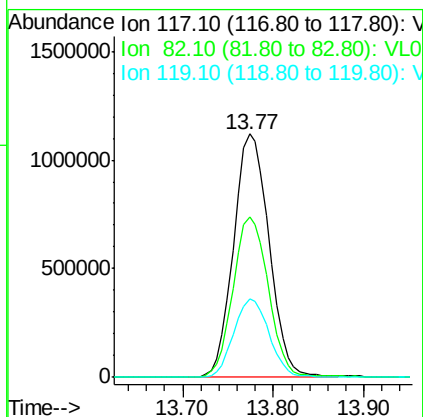
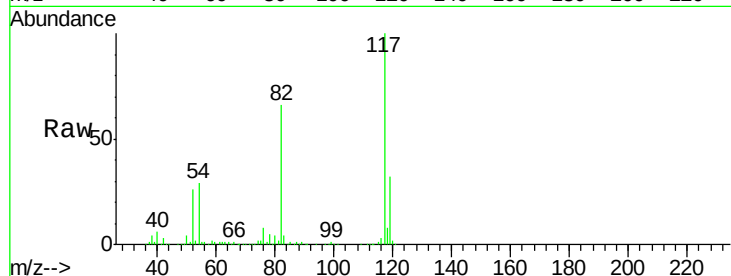




#55  
Chlorobenzene-d5  
Concen: 10.00 ppbv  
RT: 13.77 min Scan# 1753  
Delta R.T. 0.05 min  
Lab File: VL026676.D  
Acq: 12 Jan 2016 15:58

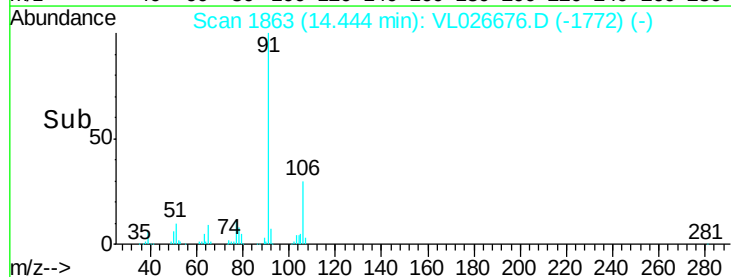
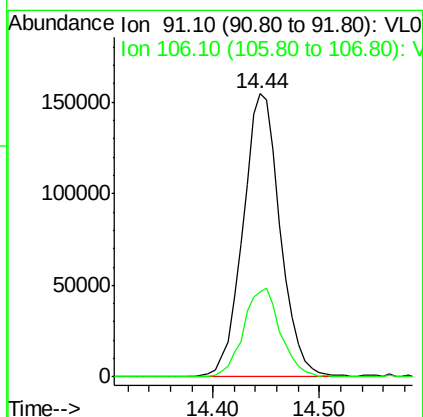
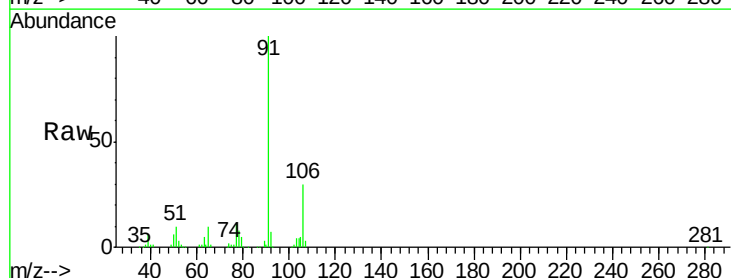
Instrument :  
MSVOA\_L  
ClientSampled :

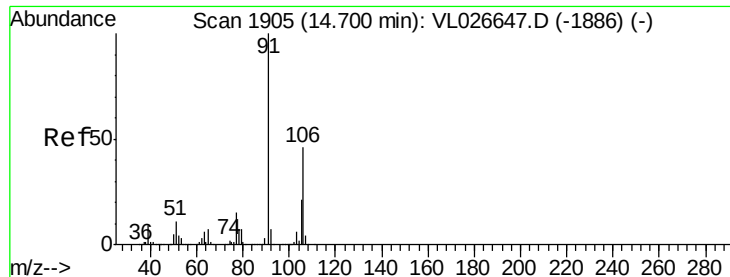
Tot Ion:117 Resp: 3050849  
Ion Ratio Lower Upper  
117 100  
82 66.6 49.7 74.5  
119 32.3 43.8 65.8#



#58  
Ethyl Benzene  
Concen: 0.70 ppbv  
RT: 14.44 min Scan# 1863  
Delta R.T. 0.05 min  
Lab File: VL026676.D  
Acq: 12 Jan 2016 15:58

Tgt Ion: 91 Resp: 379482  
Ion Ratio Lower Upper  
91 100  
106 30.2 23.8 35.6

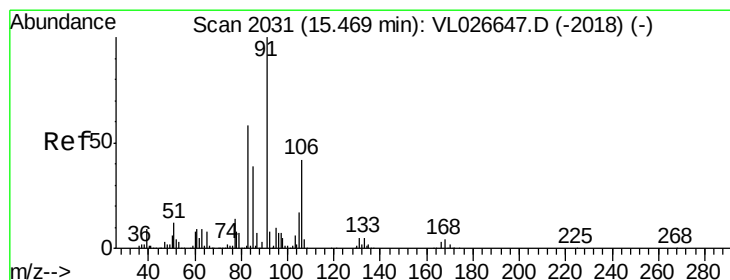
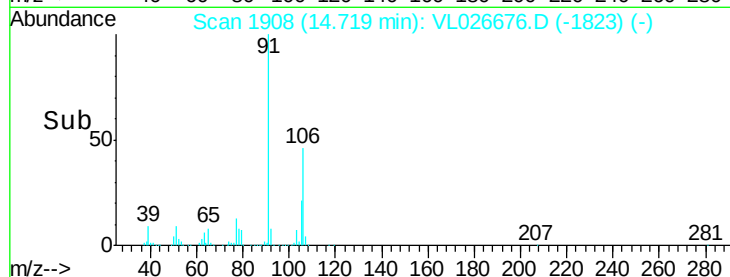
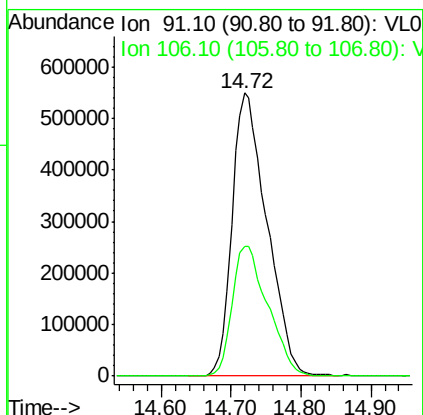
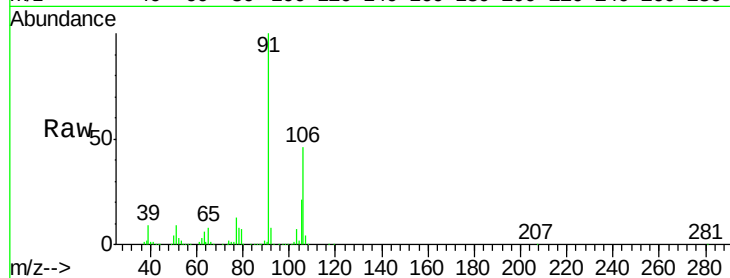




#59  
m/p-Xylene  
Concen: 4.23 ppbv  
RT: 14.72 min Scan# 1908  
Delta R.T. 0.02 min  
Lab File: VL026676.D  
Acq: 12 Jan 2016 15:58

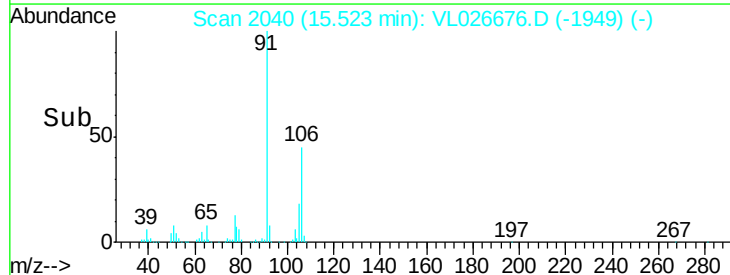
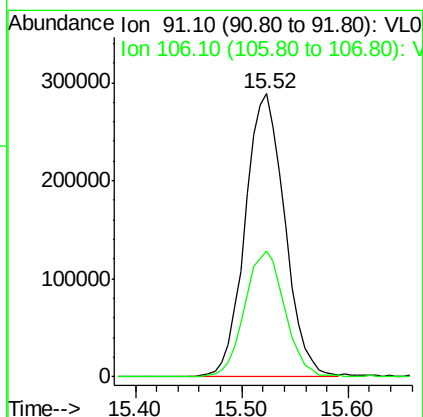
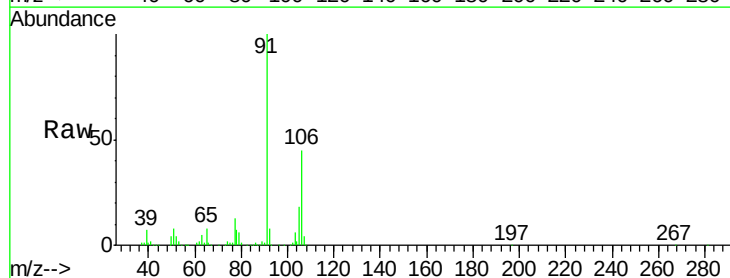
Instrument :  
MSVOA\_L  
ClientSampleId :

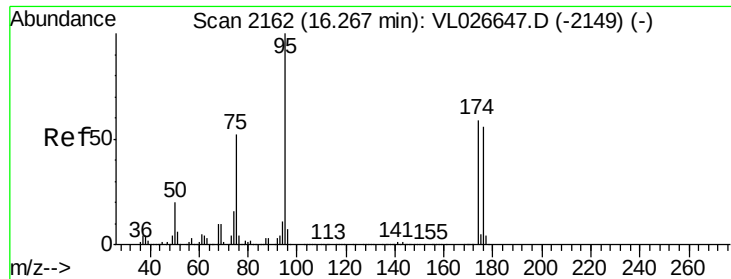
Tot Ion: 91 Resp: 1898427  
Ion Ratio Lower Upper  
91 100  
106 47.1 36.6 55.0



#60  
o-Xylene  
Concen: 1.56 ppbv  
RT: 15.52 min Scan# 2040  
Delta R.T. 0.05 min  
Lab File: VL026676.D  
Acq: 12 Jan 2016 15:58

Tgt Ion: 91 Resp: 755651  
Ion Ratio Lower Upper  
91 100  
106 45.1 21.5 64.5

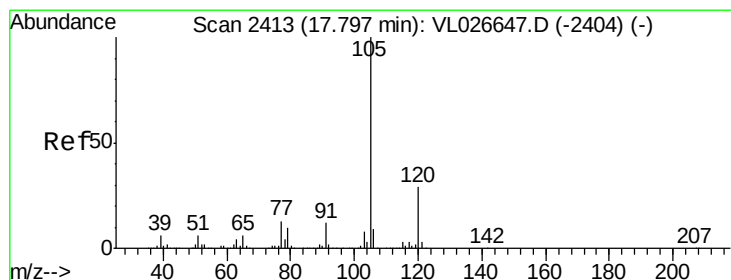
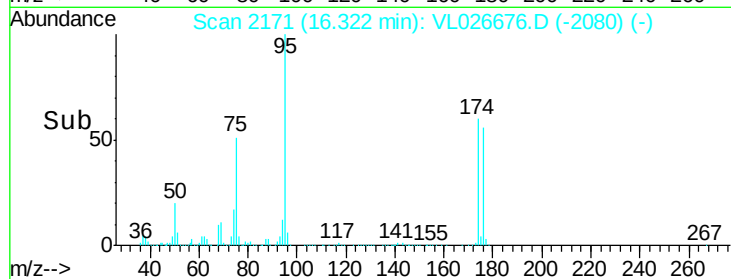
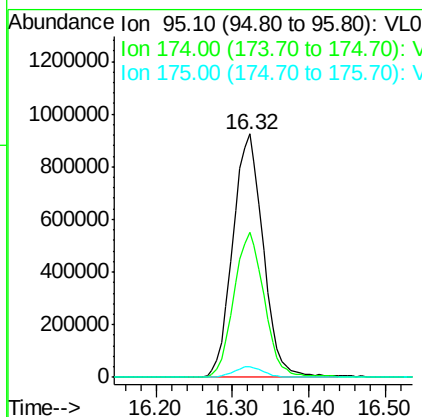
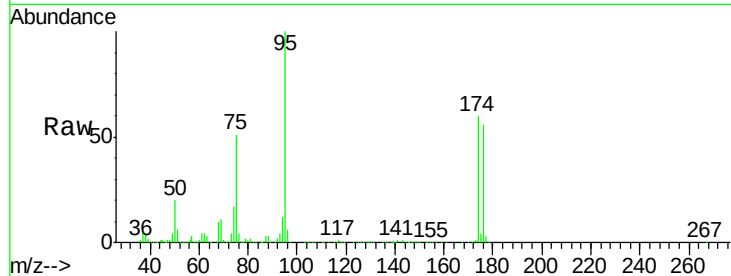




#68  
 1-Bromo-4-Fluorobenzene  
 Concen: 10.51 ppbv  
 RT: 16.32 min Scan# 2171  
 Delta R.T. 0.05 min  
 Lab File: VL026676.D  
 Acq: 12 Jan 2016 15:58

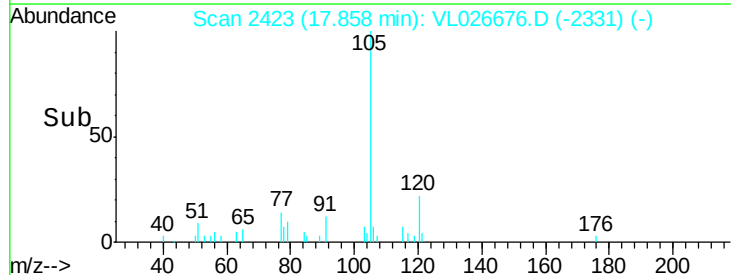
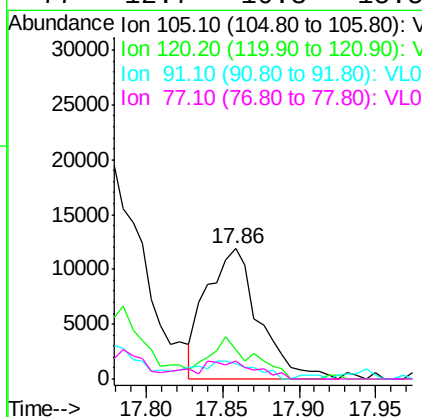
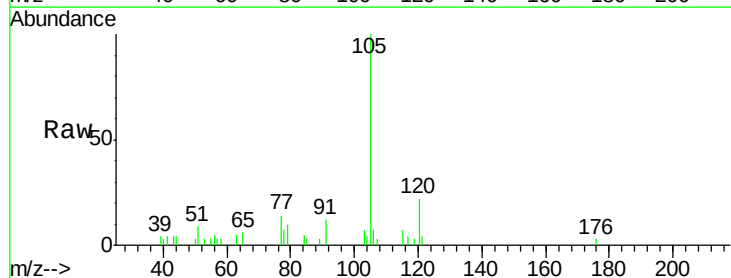
Instrument :  
 MSVOA\_L  
 ClientSampleId :

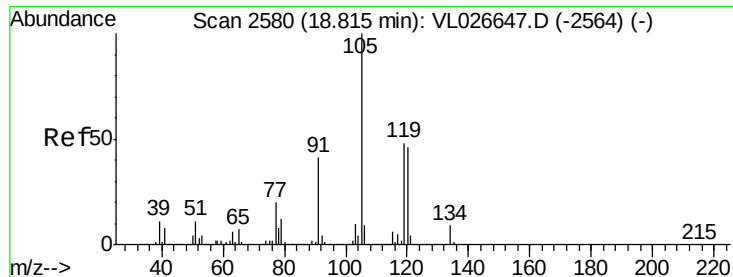
Tot Ion: 95 Resp: 2555117  
 Ion Ratio Lower Upper  
 95 100  
 174 60.1 47.8 71.8  
 175 4.3 3.6 5.4



#72  
 4-Ethyltoluene  
 Concen: 0.05 ppbv  
 RT: 17.86 min Scan# 2423  
 Delta R.T. 0.06 min  
 Lab File: VL026676.D  
 Acq: 12 Jan 2016 15:58

Tgt Ion: 105 Resp: 28280  
 Ion Ratio Lower Upper  
 105 100  
 120 30.2 23.7 35.5  
 91 15.8 9.7 14.5#  
 77 12.7 10.3 15.5





#74

1,2,4-Trimethylbenzene

Concen: 0.18 ppbv

RT: 18.86 min Scan# 2588

Delta R.T. 0.05 min

Lab File: VL026676.D

Acq: 12 Jan 2016 15:58

Instrument :

MSVOA\_L

ClientSampleId :

|           |       |       |        |
|-----------|-------|-------|--------|
| Tot Ion:  | 105   | Resp: | 100869 |
| Ion Ratio | Lower | Upper |        |
| 105       | 100   |       |        |
| 120       | 41.5  | 36.6  | 55.0   |
| 91        | 9.1   | 32.5  | 48.7#  |
| 77        | 13.7  | 15.7  | 23.5#  |

