

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL032119\  
 Data File : VL033427.D  
 Acq On : 21 Mar 2019 22:28  
 Operator : SY/AP  
 Sample : K1975-03DL2 100X  
 Misc : 400ml/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :

Quant Time: Mar 22 08:47:00 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL031519AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Fri Mar 15 14:52:14 2019  
 QLast Update : Fri Mar 15 14:52:14 2019  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.76  | 49   | 814264   | 10.00 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 7.29  | 114  | 1783298  | 10.00 | ppbv  | 0.00     |
| 55) Chlorobenzene-d5    | 12.24 | 117  | 1727288  | 10.00 | ppbv  | 0.00     |

System Monitoring Compounds

|                             |        |       |          |          |      |         |
|-----------------------------|--------|-------|----------|----------|------|---------|
| 68) 1-Bromo-4-Fluorobenzene | 14.58  | 95    | 1335893  | 10.44    | ppbv | 0.00    |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 104.40% |

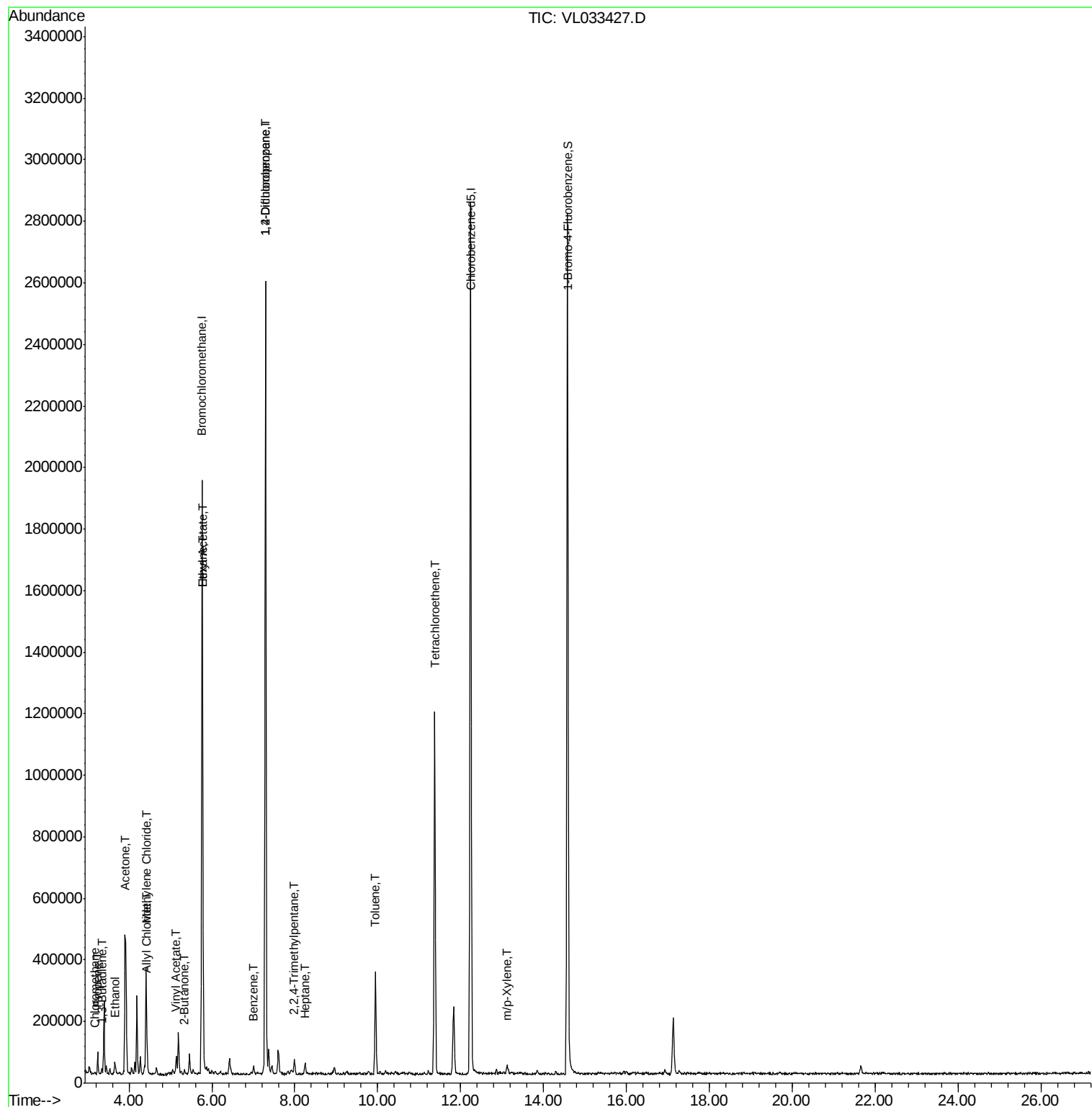
| Target Compounds           | R.T.  | QIon | Response | Conc  | Units  | Ovalue |
|----------------------------|-------|------|----------|-------|--------|--------|
| 4) Chloromethane           | 3.17  | 50   | 2335     | 0.046 | ppbv # | 63     |
| 9) Propene                 | 3.24  | 41   | 15991    | 0.383 | ppbv   | 90     |
| 10) Heptane                | 8.25  | 43   | 4657     | 0.045 | ppbv # | 1      |
| 13) Ethanol                | 3.67  | 45   | 40774    | 2.050 | ppbv   | 92     |
| 15) Acetone                | 3.90  | 43   | 520205   | 4.110 | ppbv   | 92     |
| 16) 1,3-Butadiene          | 3.34  | 39   | 5489     | 0.134 | ppbv # | 10     |
| 20) Methylene Chloride     | 4.41  | 84   | 116233   | 2.816 | ppbv   | 98     |
| 21) Allyl Chloride         | 4.44  | 41   | 5270     | 0.086 | ppbv # | 1      |
| 23) Vinyl Acetate          | 5.14  | 43   | 14451    | 0.099 | ppbv # | 1      |
| 25) Ethyl Acetate          | 5.78  | 43   | 106338   | 0.578 | ppbv # | 77     |
| 26) Hexane                 | 5.78  | 57   | 152382   | 1.852 | ppbv # | 40     |
| 34) 2-Butanone             | 5.34  | 43   | 9580     | 0.082 | ppbv # | 81     |
| 36) Benzene                | 7.00  | 78   | 10186    | 0.064 | ppbv # | 85     |
| 39) 1,2-Dichloropropane    | 7.29  | 63   | 473589   | 7.924 | ppbv # | 25     |
| 44) 2,2,4-Trimethylpentane | 7.98  | 57   | 10942    | 0.041 | ppbv # | 43     |
| 52) Tetrachloroethene      | 11.37 | 164  | 274720   | 4.132 | ppbv   | 98     |
| 53) Toluene                | 9.95  | 91   | 237384   | 1.309 | ppbv   | 97     |
| 59) m/p-Xylene             | 13.12 | 91   | 12344    | 0.059 | ppbv # | 100    |

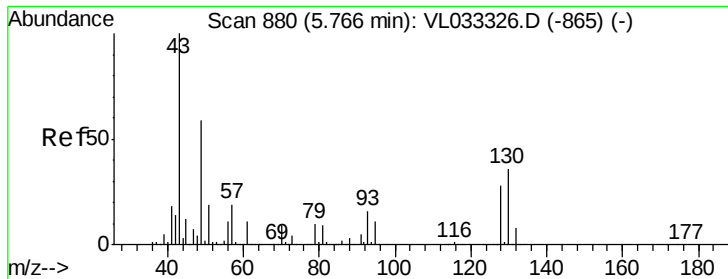
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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MSVOA\_L  
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Quant Time: Mar 22 08:47:00 2019  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA L\METHODS\VL031519AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Fri Mar 15 14:52:14 2019  
QLast Update : Fri Mar 15 14:52:14 2019  
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.76 min Scan# 879

Delta R.T. -0.00 min

Lab File: VL033427.D

Acq: 21 Mar 2019 22:28

Instrument :  
MSVOA\_L  
ClientSampleId :

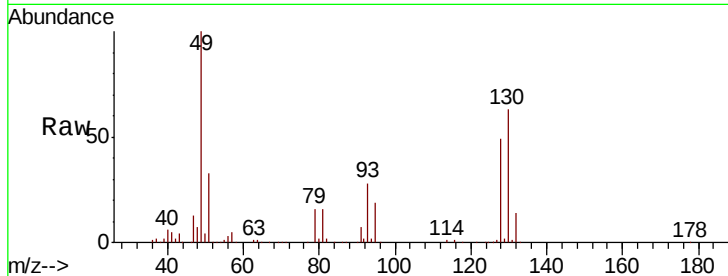
Tot Ion: 49 Resp: 814264

Ion Ratio Lower Upper

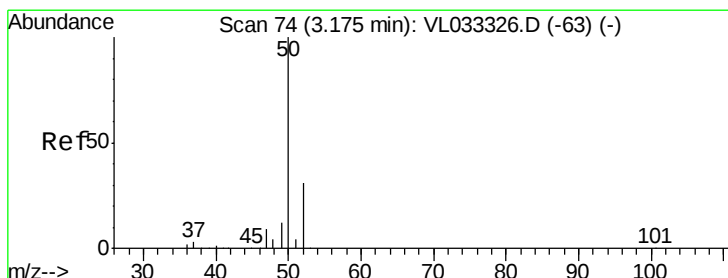
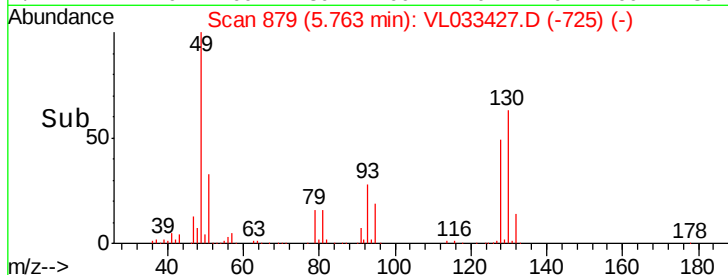
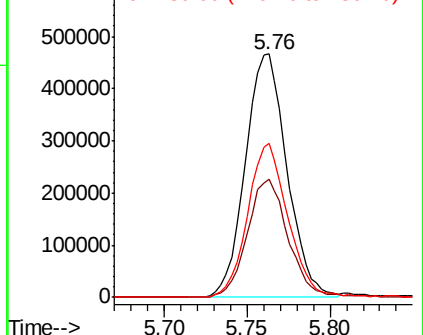
49 100

128 48.0 23.5 70.6

130 61.5 30.1 90.3



Abundance Ion 49.10 (48.80 to 49.80): VL0  
Ion 128.00 (127.70 to 128.70): V  
Ion 130.00 (129.70 to 130.70): V



#4

Chloromethane

Concen: 0.046 ppbv

RT: 3.17 min Scan# 74

Delta R.T. -0.00 min

Lab File: VL033427.D

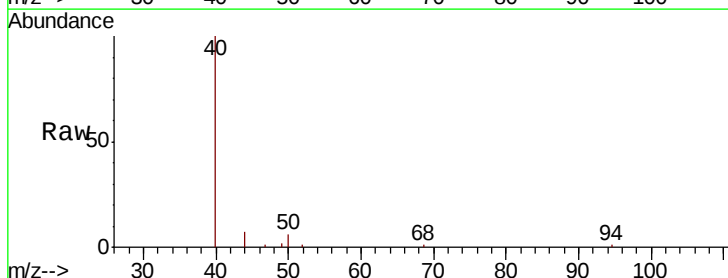
Acq: 21 Mar 2019 22:28

Tgt Ion: 50 Resp: 2335

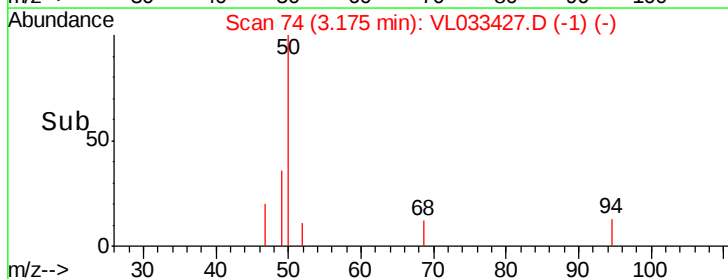
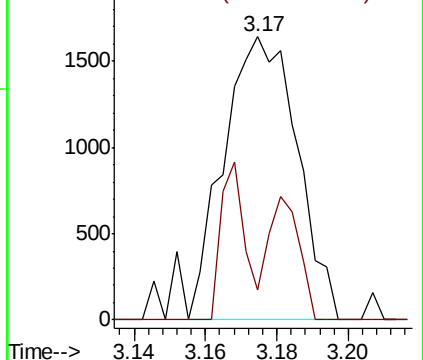
Ion Ratio Lower Upper

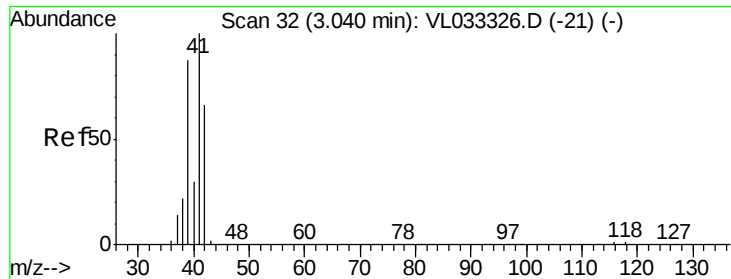
50 100

52 10.6 25.0 37.6#



Abundance Ion 50.10 (49.80 to 50.80): VL0  
Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 0.383 ppbv

RT: 3.24 min Scan# 95

Delta R.T. 0.20 min

Lab File: VL033427.D

Acq: 21 Mar 2019 22:28

Instrument :

MSVOA\_L

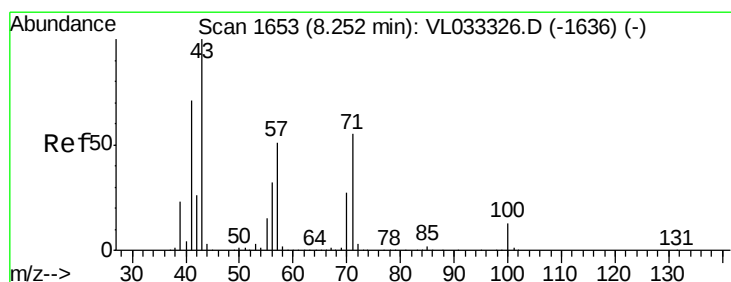
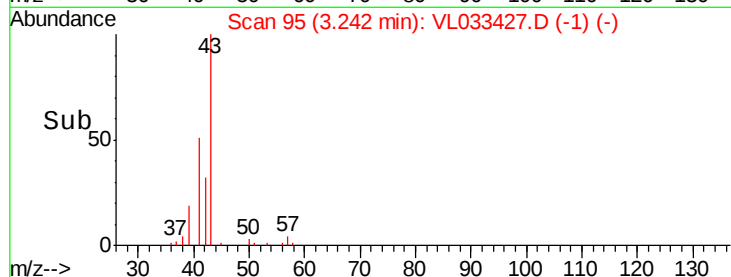
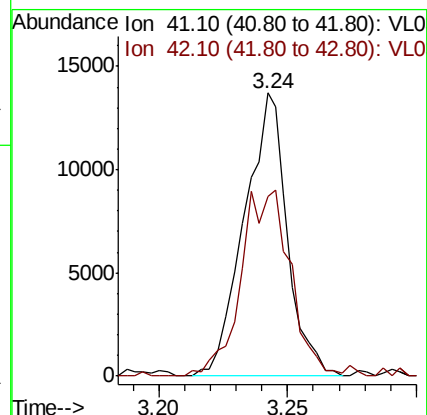
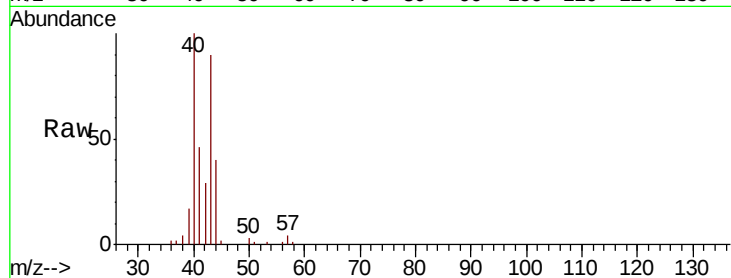
ClientSampleId :

Tot Ion: 41 Resp: 15991

Ion Ratio Lower Upper

41 100

42 77.4 55.2 82.8



#10

Heptane

Concen: 0.045 ppbv

RT: 8.25 min Scan# 1652

Delta R.T. -0.00 min

Lab File: VL033427.D

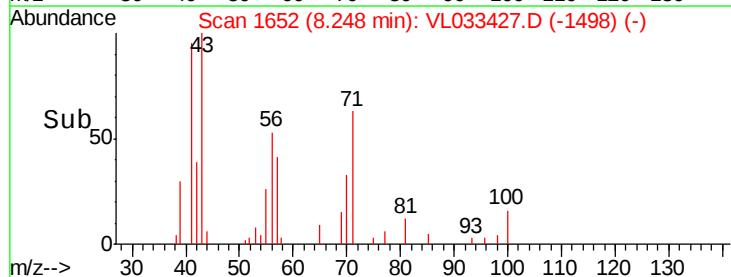
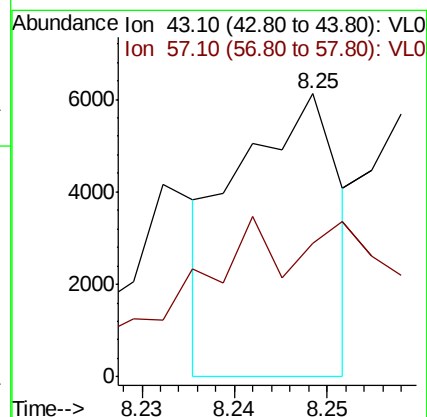
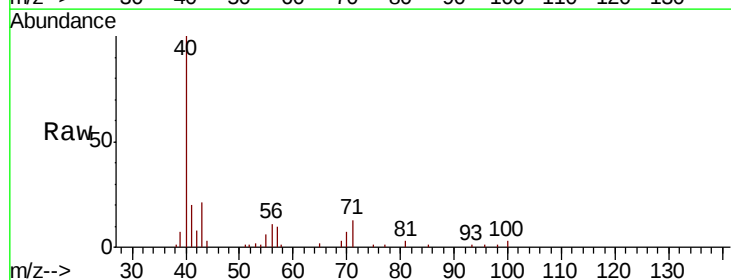
Acq: 21 Mar 2019 22:28

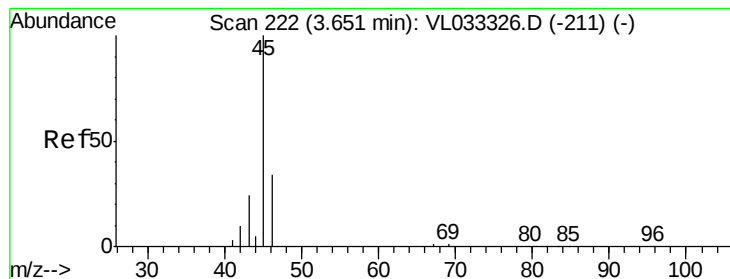
Tgt Ion: 43 Resp: 4657

Ion Ratio Lower Upper

43 100

57 127.9 40.4 60.6#





#13

Ethanol

Concen: 2.050 ppbv

RT: 3.67 min Scan# 227

Delta R.T. 0.02 min

Lab File: VL033427.D

Acq: 21 Mar 2019 22:28

Instrument :

MSVOA\_L

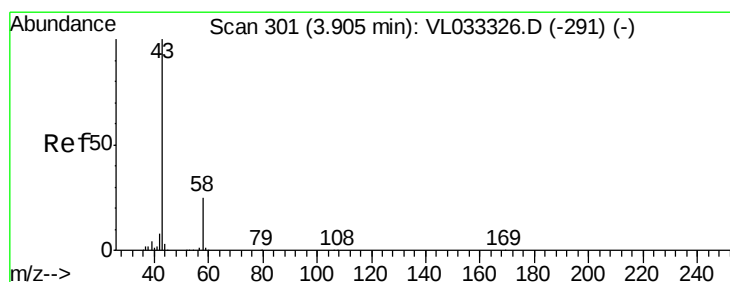
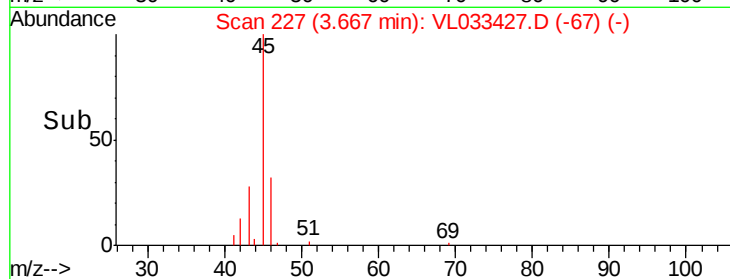
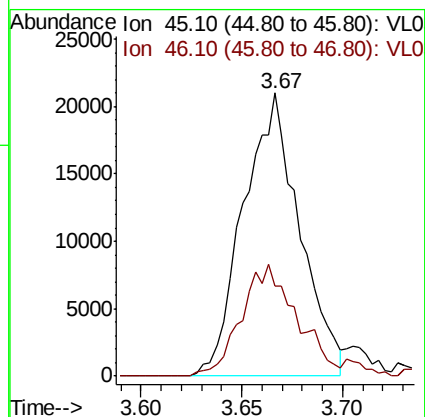
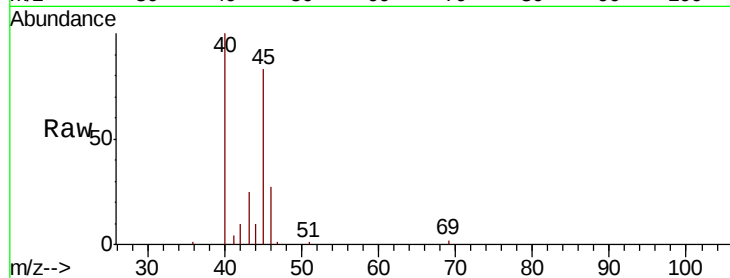
ClientSampleId :

Tot Ion: 45 Resp: 40774

Ion Ratio Lower Upper

45 100

46 42.1 14.9 59.7



#15

Acetone

Concen: 4.110 ppbv

RT: 3.90 min Scan# 301

Delta R.T. -0.00 min

Lab File: VL033427.D

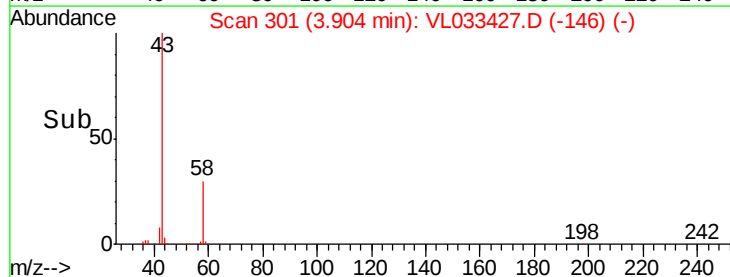
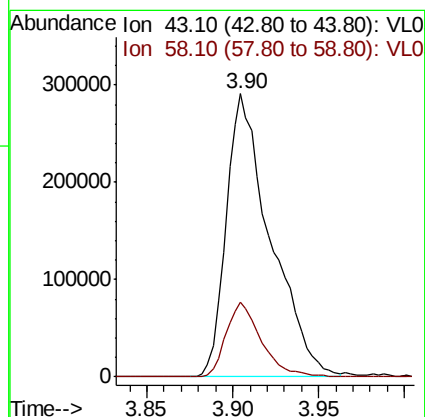
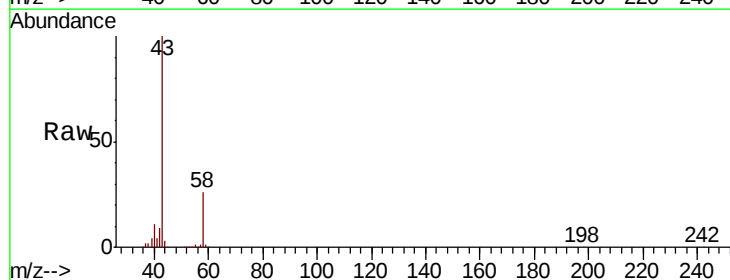
Acq: 21 Mar 2019 22:28

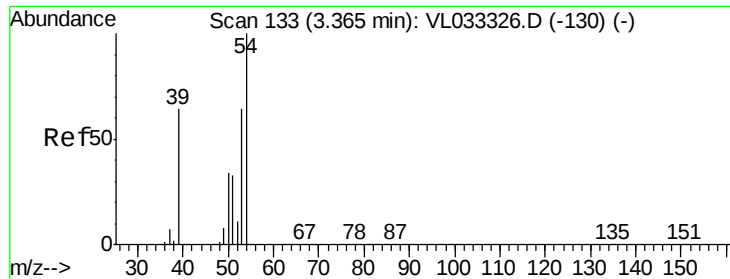
Tgt Ion: 43 Resp: 520205

Ion Ratio Lower Upper

43 100

58 21.5 20.4 30.6

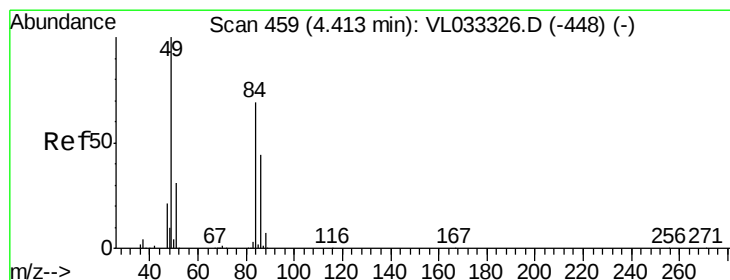
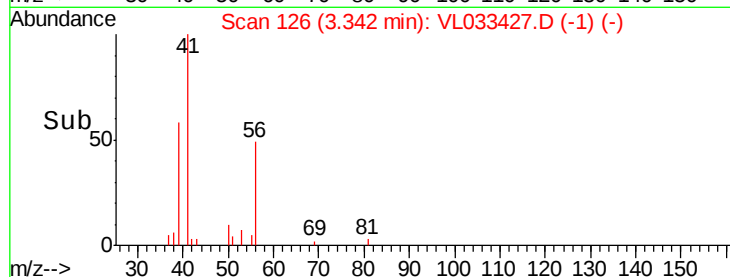
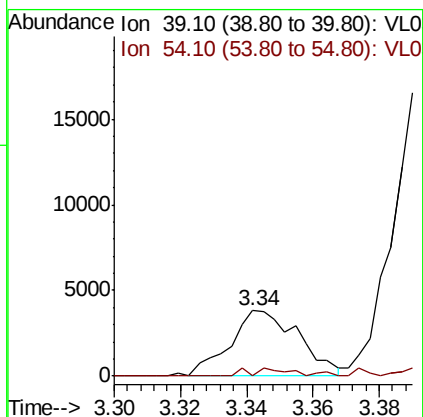
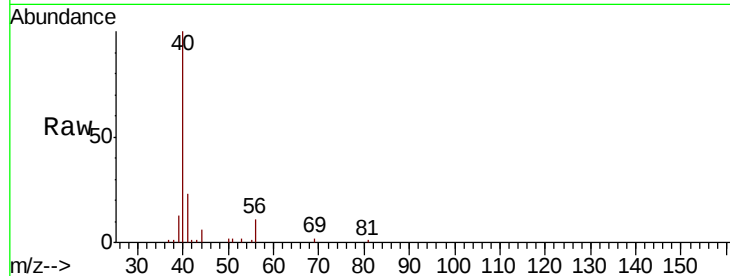




#16  
1,3-Butadiene  
Concen: 0.134 ppbv  
RT: 3.34 min Scan# 126  
Delta R.T. -0.02 min  
Lab File: VL033427.D  
Acq: 21 Mar 2019 22:28

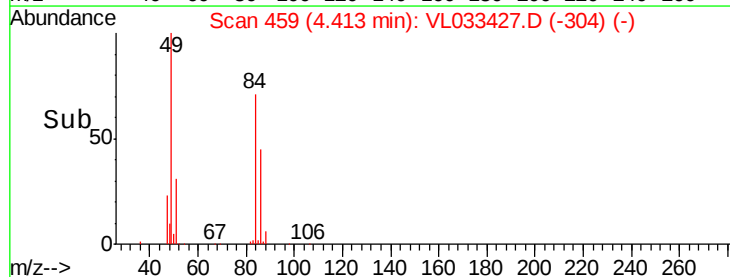
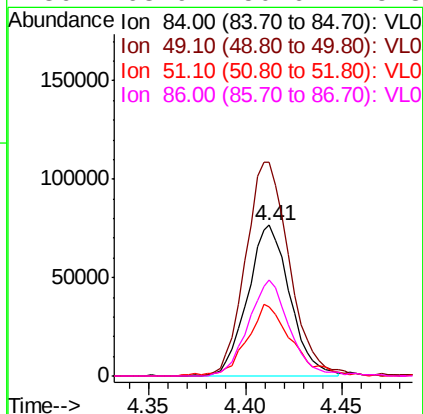
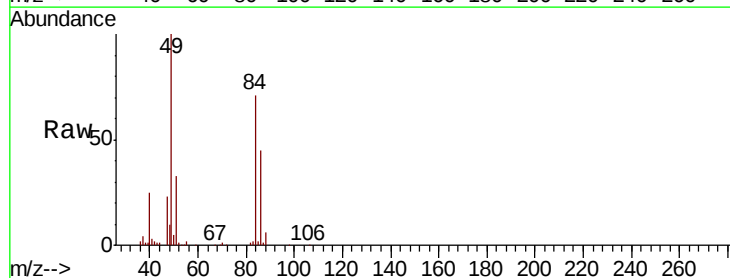
Instrument :  
MSVOA\_L  
ClientSampleId :

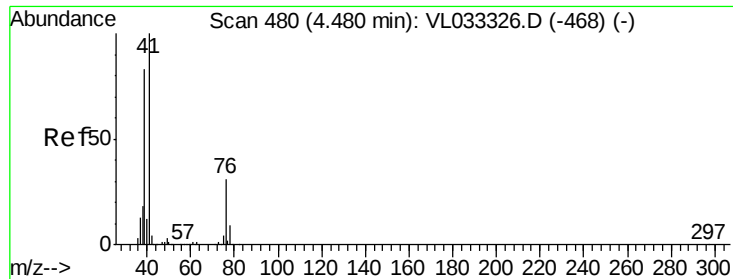
Tot Ion: 39 Resp: 5489  
Ion Ratio Lower Upper  
39 100  
54 8.0 76.8 115.2#



#20  
Methylene Chloride  
Concen: 2.816 ppbv  
RT: 4.41 min Scan# 459  
Delta R.T. -0.00 min  
Lab File: VL033427.D  
Acq: 21 Mar 2019 22:28

Tgt Ion: 84 Resp: 116233  
Ion Ratio Lower Upper  
84 100  
49 141.7 115.4 173.0  
51 45.4 35.8 53.6  
86 63.9 50.6 75.8

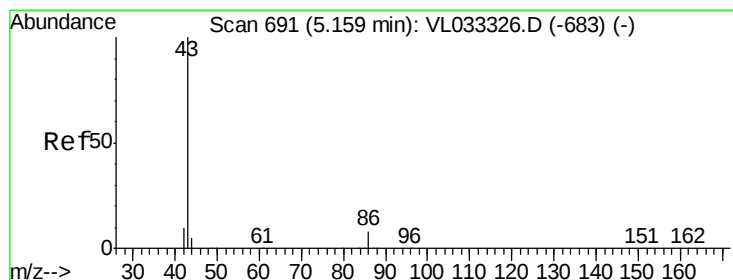
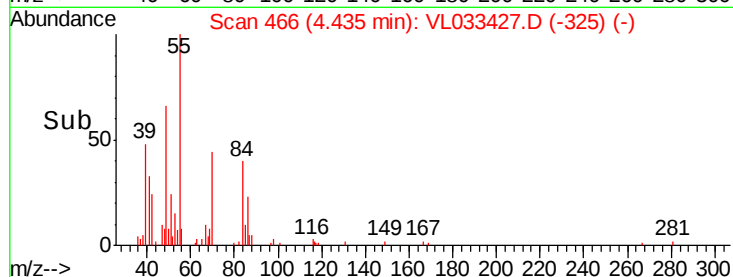
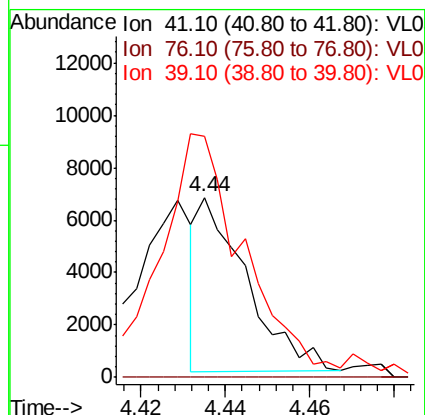
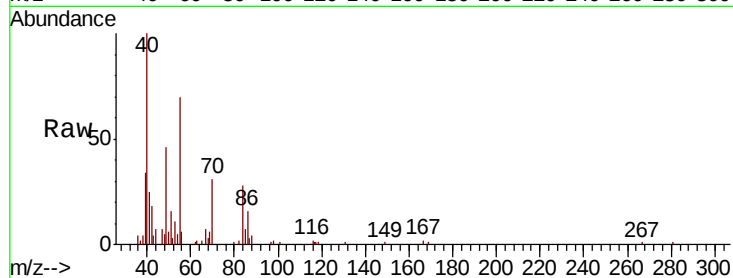




#21  
Allvl Chloride  
Concen: 0.086 ppbv  
RT: 4.44 min Scan# 466  
Delta R.T. -0.05 min  
Lab File: VL033427.D  
Acq: 21 Mar 2019 22:28

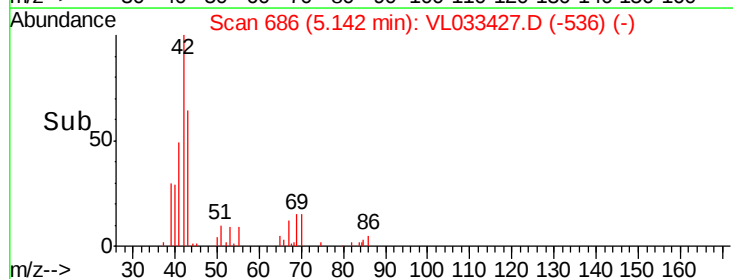
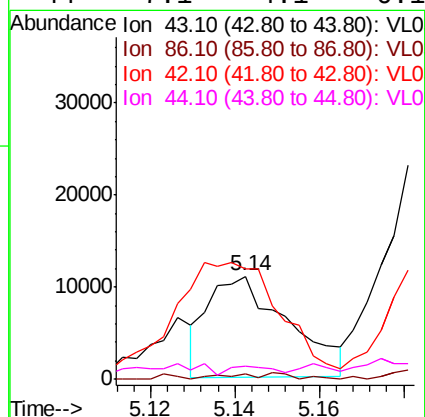
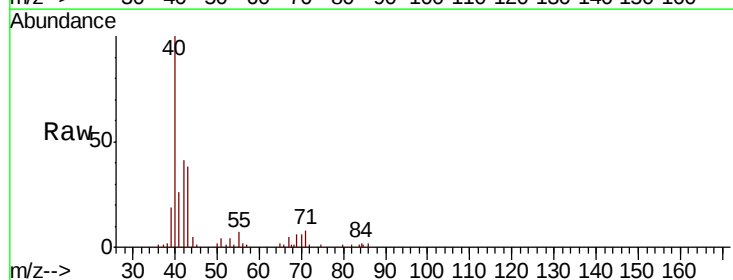
Instrument :  
MSVOA\_L  
ClientSampled :

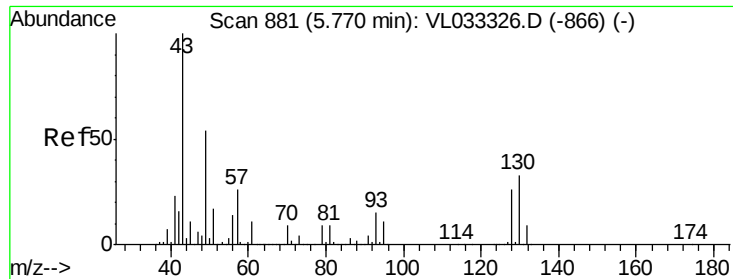
Tot Ion: 41 Resp: 5270  
Ion Ratio Lower Upper  
41 100  
76 1.5 25.0 37.4#  
39 273.0 65.9 98.9#



#23  
Vinyl Acetate  
Concen: 0.099 ppbv  
RT: 5.14 min Scan# 686  
Delta R.T. -0.02 min  
Lab File: VL033427.D  
Acq: 21 Mar 2019 22:28

Tgt Ion: 43 Resp: 14451  
Ion Ratio Lower Upper  
43 100  
86 6.9 6.2 9.2  
42 141.2 8.1 12.1#  
44 7.1 4.1 6.1#

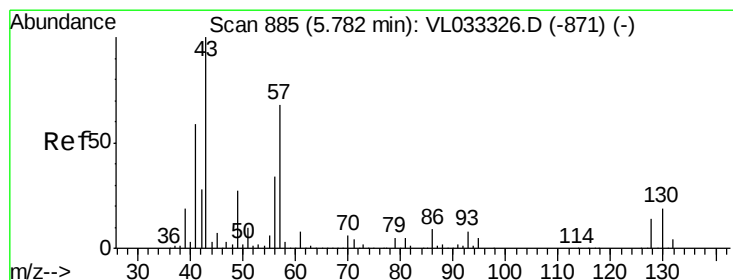
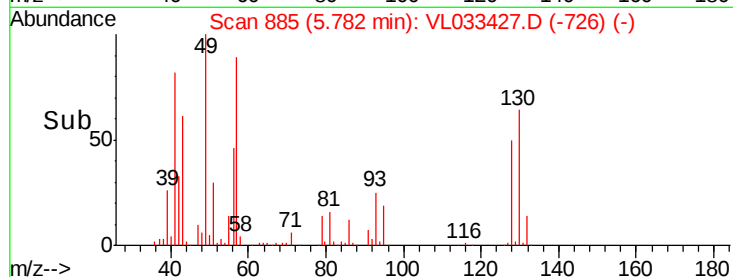
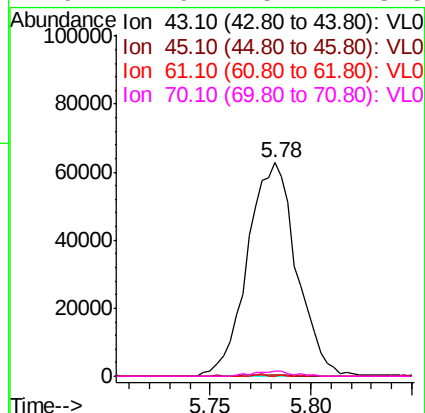
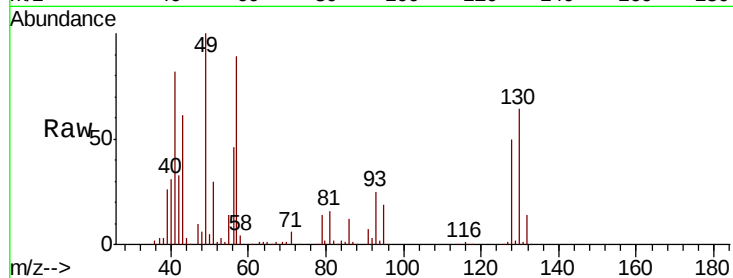




#25  
Ethyl Acetate  
Concen: 0.578 ppbv  
RT: 5.78 min Scan# 885  
Delta R.T. 0.01 min  
Lab File: VL033427.D  
Acq: 21 Mar 2019 22:28

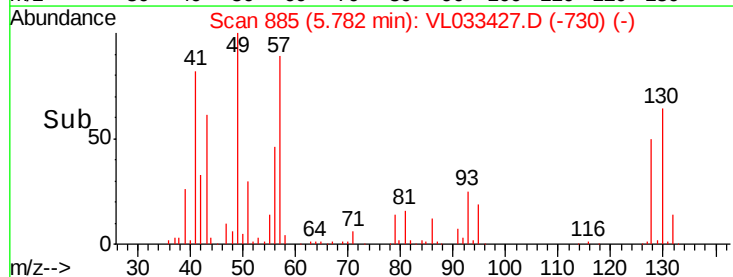
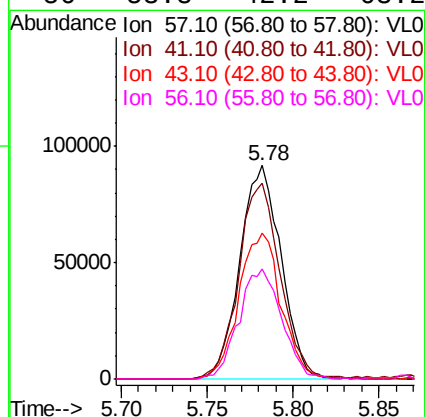
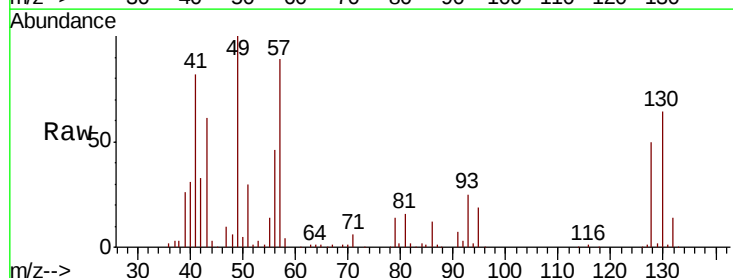
Instrument :  
MSVOA\_L  
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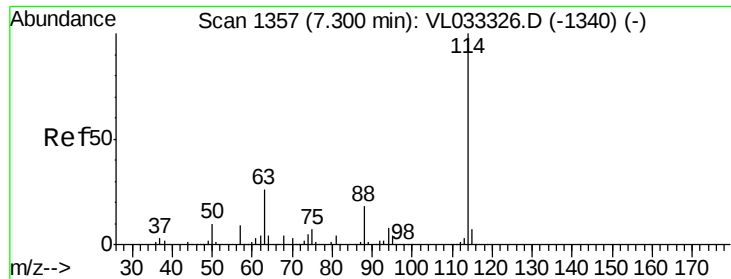
Tot Ion: 43 Resp: 106338  
Ion Ratio Lower Upper  
43 100  
45 0.5 7.9 11.9#  
61 0.0 7.4 11.2#  
70 1.9 5.7 8.5#



#26  
Hexane  
Concen: 1.852 ppbv  
RT: 5.78 min Scan# 885  
Delta R.T. -0.00 min  
Lab File: VL033427.D  
Acq: 21 Mar 2019 22:28

Tgt Ion: 57 Resp: 152382  
Ion Ratio Lower Upper  
57 100  
41 92.9 70.5 105.7  
43 70.6 181.8 272.8#  
56 53.8 42.2 63.2

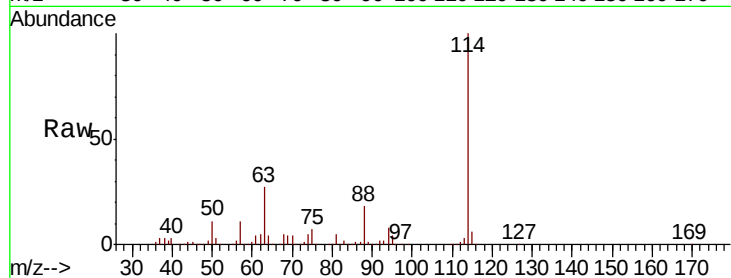




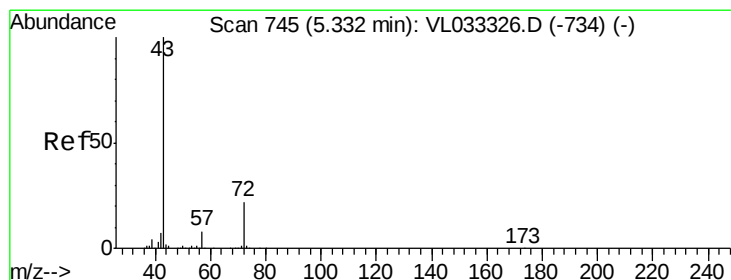
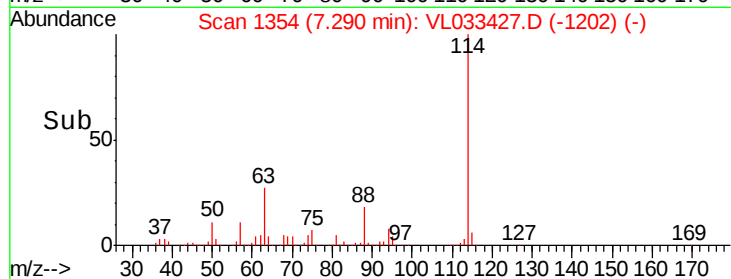
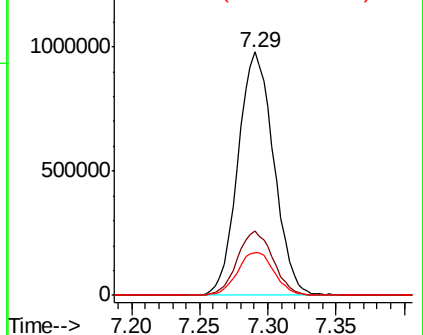
#33  
 1,4-Difluorobenzene  
 Concen: 10.000 ppbv  
 RT: 7.29 min Scan# 1354  
 Delta R.T. -0.01 min  
 Lab File: VL033427.D  
 Acq: 21 Mar 2019 22:28

Instrument :  
 MSVOA\_L  
 ClientSampleId :

Tot Ion:114 Resp: 1783298  
 Ion Ratio Lower Upper  
 114 100  
 63 26.7 21.4 32.2  
 88 18.1 14.5 21.7

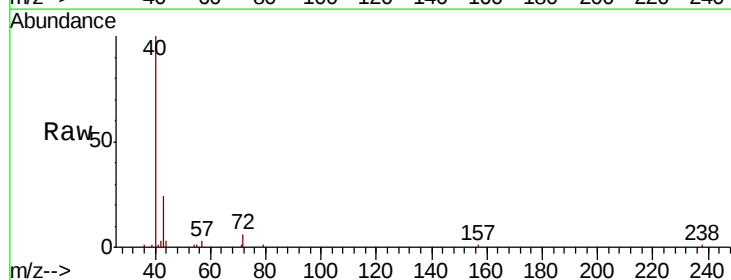


Abundance Ion 114.10 (113.80 to 114.80): VL0  
 Ion 63.10 (62.80 to 63.80): VL0  
 Ion 88.10 (87.80 to 88.80): VL0

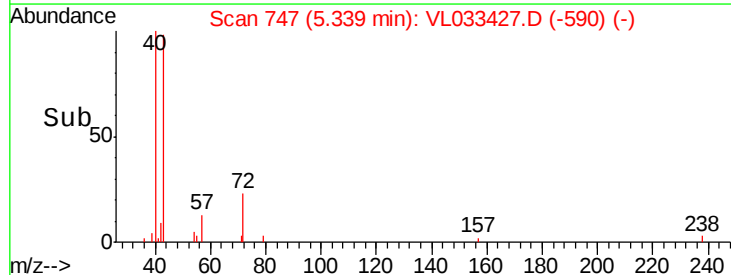
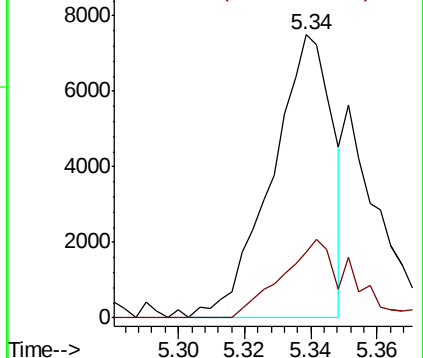


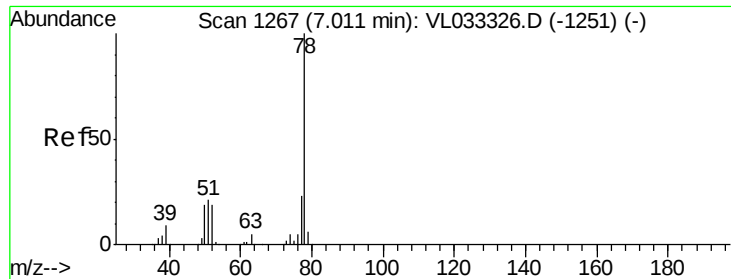
#34  
 2-Butanone  
 Concen: 0.082 ppbv  
 RT: 5.34 min Scan# 747  
 Delta R.T. 0.01 min  
 Lab File: VL033427.D  
 Acq: 21 Mar 2019 22:28

Tgt Ion: 43 Resp: 9580  
 Ion Ratio Lower Upper  
 43 100  
 72 31.2 17.7 26.5#



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

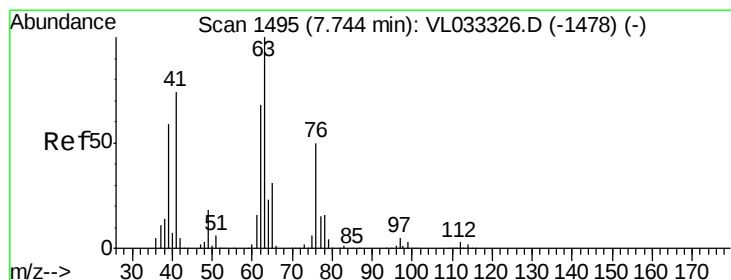
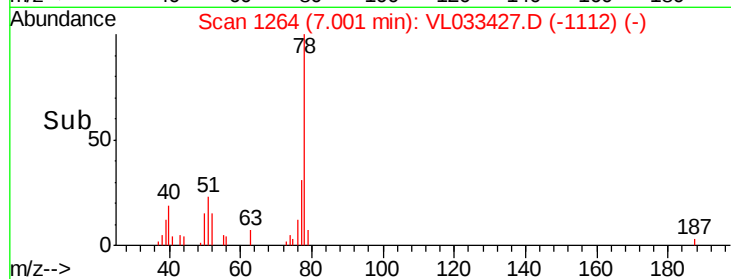
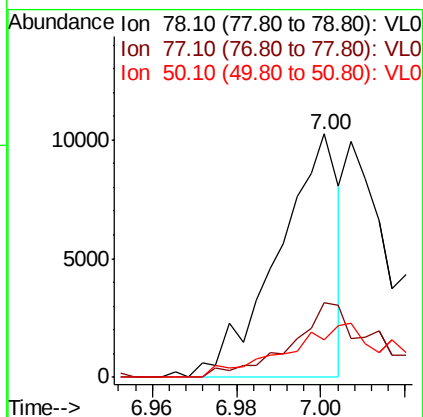
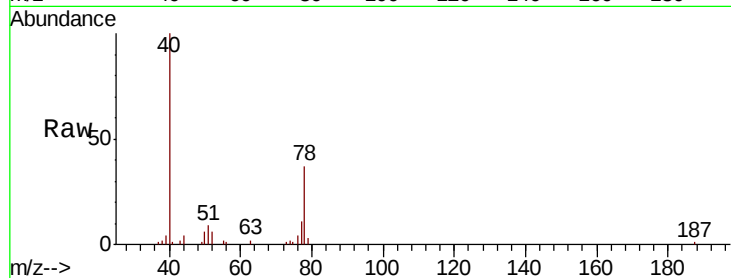




#36  
Benzene  
Concen: 0.064 ppbv  
RT: 7.00 min Scan# 1264  
Delta R.T. -0.01 min  
Lab File: VL033427.D  
Acq: 21 Mar 2019 22:28

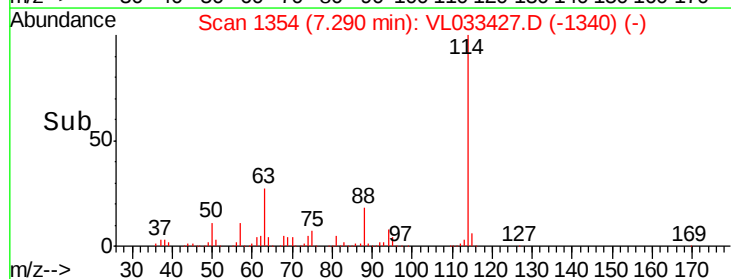
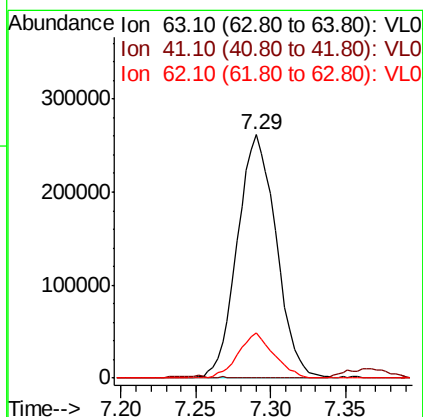
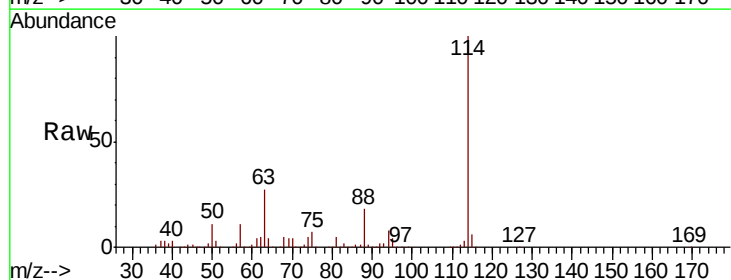
Instrument :  
MSVOA\_L  
ClientSampled :

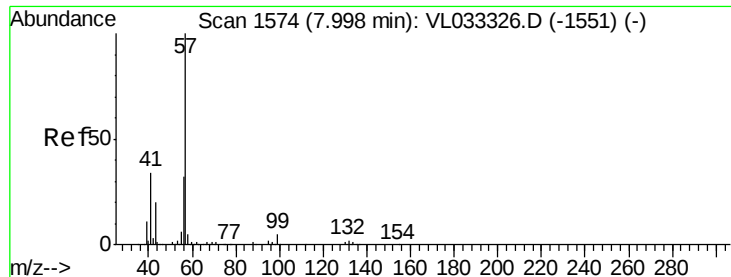
Tot Ion: 78 Resp: 10186  
Ion Ratio Lower Upper  
78 100  
77 30.8 18.1 27.1#  
50 13.2 15.2 22.8#



#39  
1,2-Dichloropropane  
Concen: 7.924 ppbv  
RT: 7.29 min Scan# 1354  
Delta R.T. -0.45 min  
Lab File: VL033427.D  
Acq: 21 Mar 2019 22:28

Tgt Ion: 63 Resp: 473589  
Ion Ratio Lower Upper  
63 100  
41 0.0 59.5 89.3#  
62 18.3 54.7 82.1#

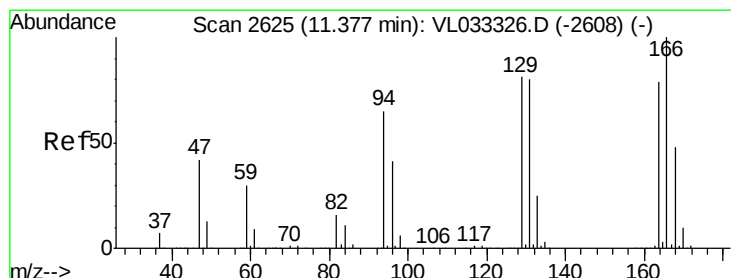
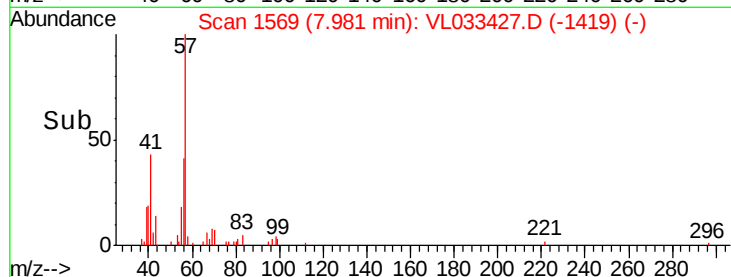
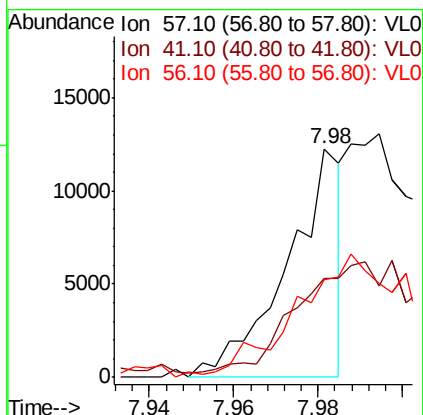
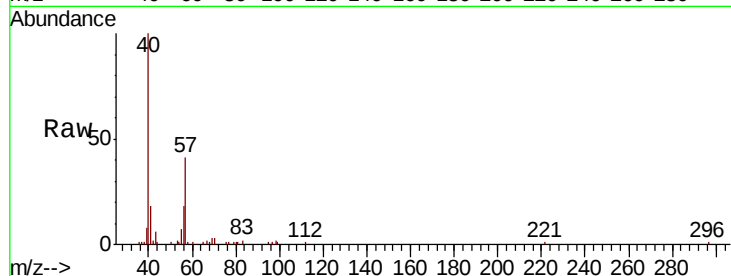




#44  
 2,2,4-Trimethylpentane  
 Concen: 0.041 ppbv  
 RT: 7.98 min Scan# 1569  
 Delta R.T. -0.02 min  
 Lab File: VL033427.D  
 Acq: 21 Mar 2019 22:28

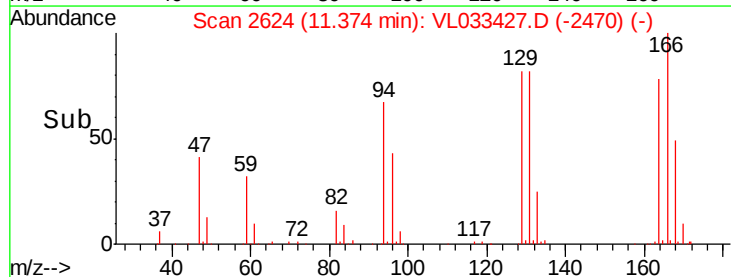
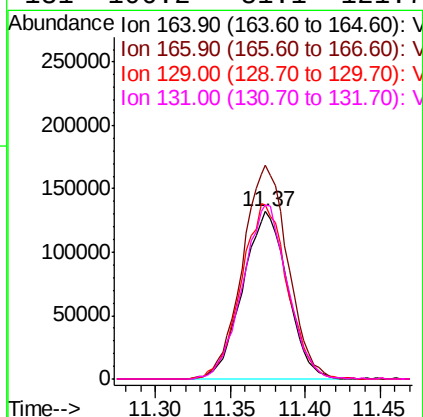
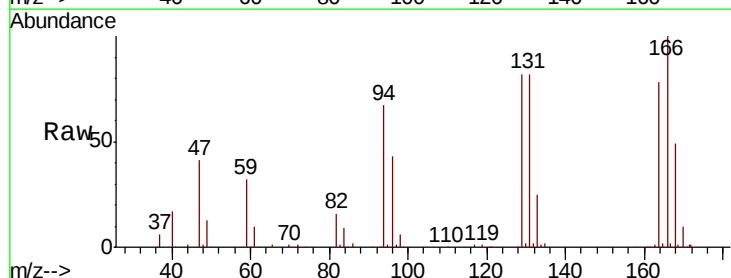
Instrument :  
 MSVOA\_L  
 ClientSampleId :

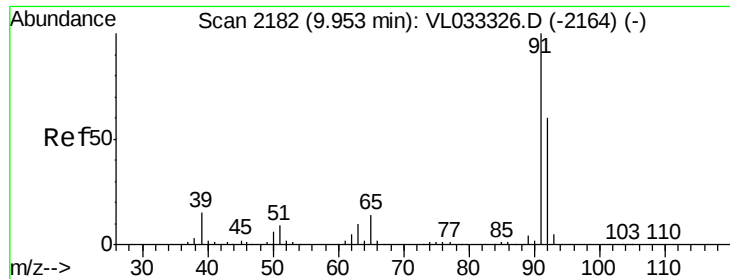
Tot Ion: 57 Resp: 10942  
 Ion Ratio Lower Upper  
 57 100  
 41 0.0 26.0 39.0#  
 56 0.0 24.6 36.8#



#52  
 Tetrachloroethene  
 Concen: 4.132 ppbv  
 RT: 11.37 min Scan# 2624  
 Delta R.T. -0.00 min  
 Lab File: VL033427.D  
 Acq: 21 Mar 2019 22:28

Tgt Ion:164 Resp: 274720  
 Ion Ratio Lower Upper  
 164 100  
 166 127.5 101.5 152.3  
 129 103.9 82.2 123.2  
 131 106.2 81.1 121.7





#53

Toluene

Concen: 1.309 ppbv

RT: 9.95 min Scan# 2180

Delta R.T. -0.01 min

Lab File: VL033427.D

Acq: 21 Mar 2019 22:28

Instrument :

MSVOA\_L

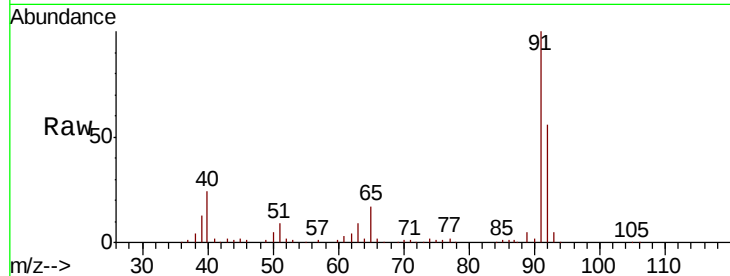
ClientSampled :

Tot Ion: 91 Resp: 237384

Ion Ratio Lower Upper

91 100

92 57.2 47.4 71.0



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

9.95

150000

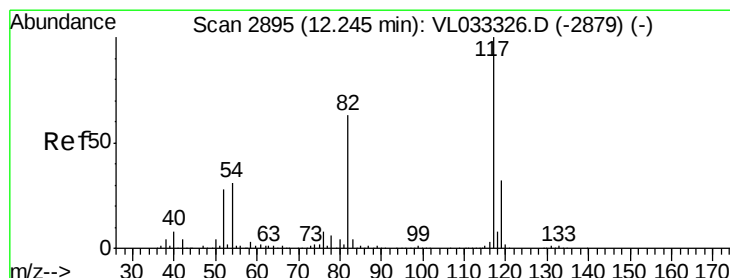
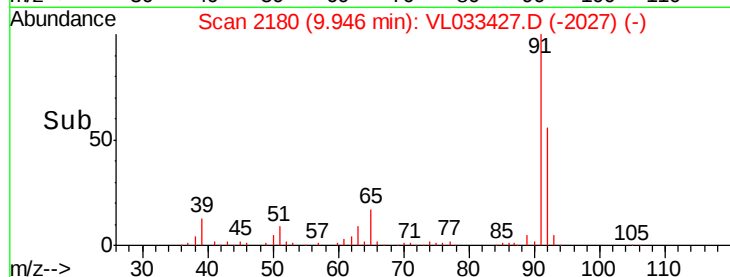
100000

50000

0

Time-->

9.85 9.90 9.95 10.00



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.24 min Scan# 2893

Delta R.T. -0.01 min

Lab File: VL033427.D

Acq: 21 Mar 2019 22:28

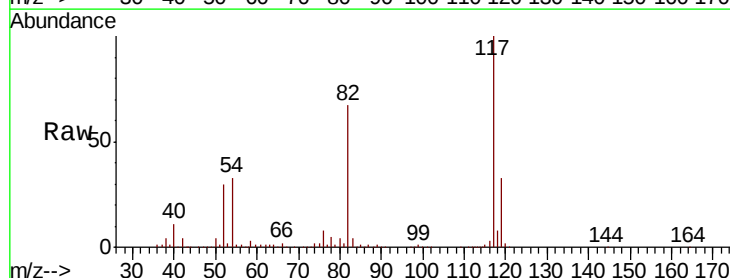
Tgt Ion: 117 Resp: 1727288

Ion Ratio Lower Upper

117 100

82 67.3 53.4 80.2

119 31.9 27.3 40.9



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

12.24

1000000

800000

600000

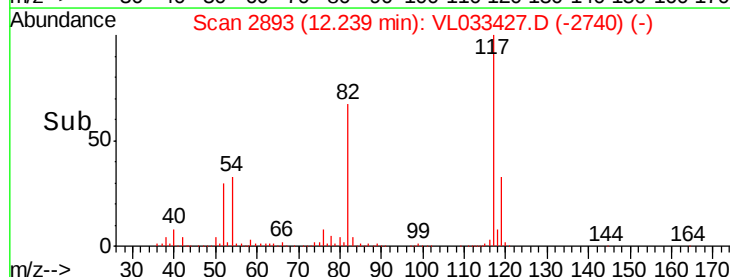
400000

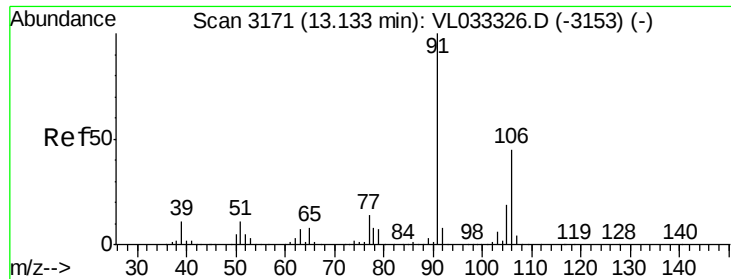
200000

0

Time-->

12.20 12.30





#59

m/p-Xylene

Concen: 0.059 ppbv

RT: 13.12 min Scan# 3167

Delta R.T. -0.01 min

Lab File: VL033427.D

Acq: 21 Mar 2019 22:28

Instrument :

MSVOA\_L

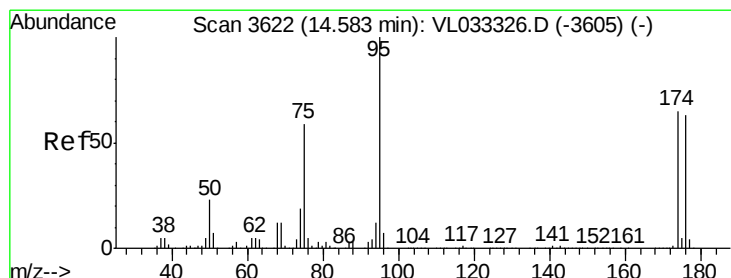
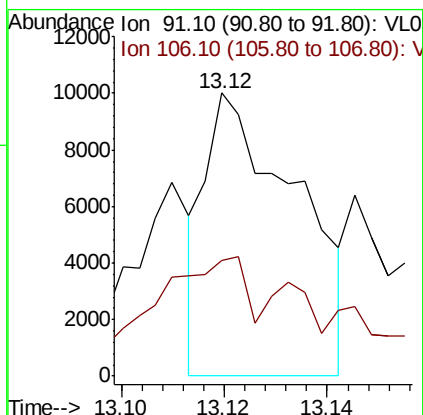
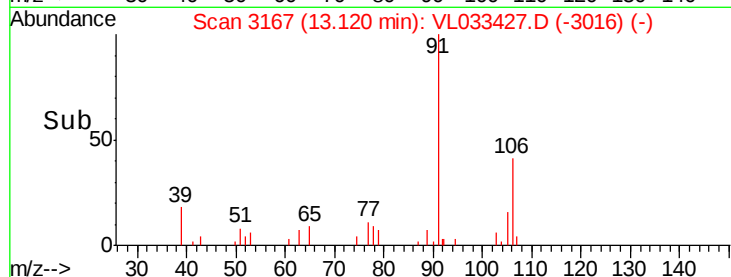
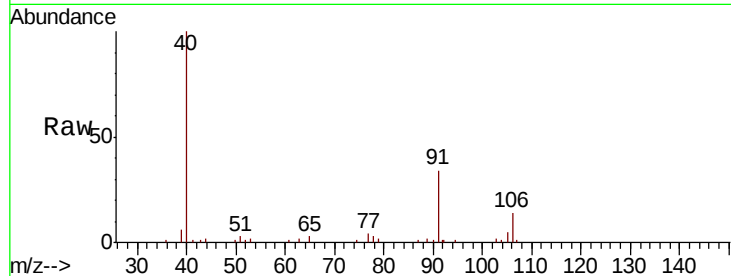
ClientSampled :

Tot Ion: 91 Resp: 12344

Ion Ratio Lower Upper

91 100

106 88.2 0.0 0.0#



#68

1-Bromo-4-Fluorobenzene

Concen: 10.437 ppbv

RT: 14.58 min Scan# 3620

Delta R.T. -0.01 min

Lab File: VL033427.D

Acq: 21 Mar 2019 22:28

Tgt Ion: 95 Resp: 1335893

Ion Ratio Lower Upper

95 100

174 64.4 51.5 77.3

175 4.6 3.8 5.6

