

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL032919\  
 Data File : VL033520.D  
 Acq On : 30 Mar 2019 2:55  
 Operator : SY/AP  
 Sample : K2042-06DL 10X  
 Misc : 400ml/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :

Quant Time: Mar 30 03:32:04 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL032519AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Tue Mar 26 16:00:50 2019  
 QLast Update : Tue Mar 26 16:00:50 2019  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.76  | 49   | 826270   | 10.00 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 7.29  | 114  | 1881451  | 10.00 | ppbv  | 0.00     |
| 55) Chlorobenzene-d5    | 12.24 | 117  | 1785353  | 10.00 | ppbv  | 0.00     |

|                             |        |       |          |          |      |        |
|-----------------------------|--------|-------|----------|----------|------|--------|
| System Monitoring Compounds |        |       |          |          |      |        |
| 68) 1-Bromo-4-Fluorobenzene | 14.58  | 95    | 1352276  | 9.66     | ppbv | 0.00   |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 96.60% |

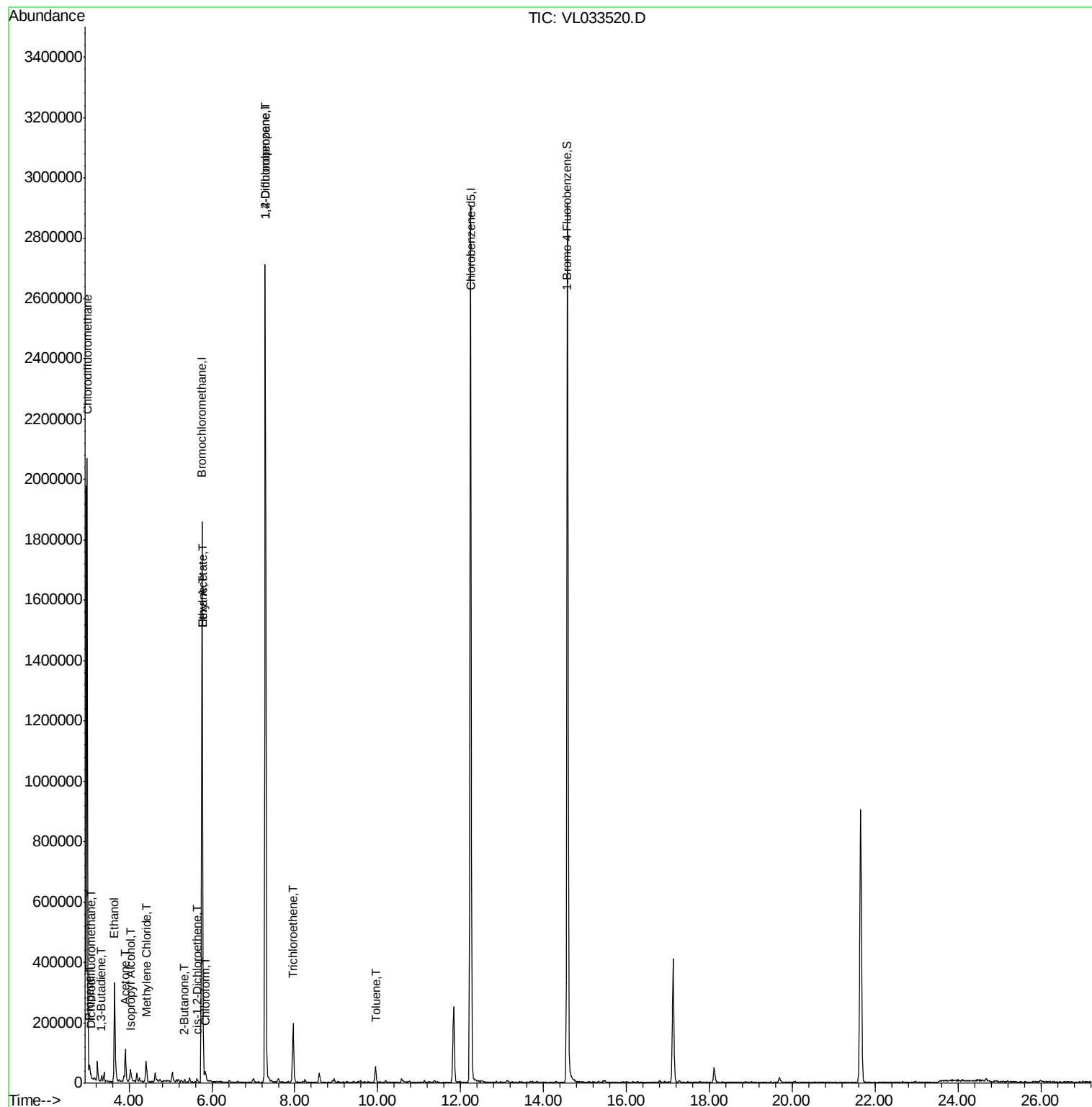
| Target Compounds           |      |     |         |       |        | Ovalue |
|----------------------------|------|-----|---------|-------|--------|--------|
| 2) Dichlorodifluoromethane | 3.08 | 85  | 10714   | 0.09  | ppbv   | 90     |
| 3) Chlorodifluoromethane   | 2.99 | 51  | 1197058 | 12.58 | ppbv # | 57     |
| 9) Propene                 | 3.05 | 41  | 6979    | 0.17  | ppbv   | 86     |
| 13) Ethanol                | 3.65 | 45  | 345351  | 33.41 | ppbv   | 63     |
| 15) Acetone                | 3.90 | 43  | 105726  | 1.06  | ppbv   | 98     |
| 16) 1,3-Butadiene          | 3.35 | 39  | 4170    | 0.11  | ppbv # | 16     |
| 19) Isopropyl Alcohol      | 4.06 | 45  | 3513    | 0.06  | ppbv # | 1      |
| 20) Methylene Chloride     | 4.41 | 84  | 21929   | 0.52  | ppbv   | 95     |
| 25) Ethyl Acetate          | 5.78 | 43  | 22504   | 0.12  | ppbv # | 87     |
| 26) Hexane                 | 5.78 | 57  | 26960   | 0.33  | ppbv # | 43     |
| 29) Chloroform             | 5.84 | 83  | 14630   | 0.10  | ppbv   | 99     |
| 31) cis-1,2-Dichloroethene | 5.64 | 61  | 6178    | 0.08  | ppbv # | 73     |
| 34) 2-Butanone             | 5.34 | 43  | 8918    | 0.08  | ppbv   | 95     |
| 38) Trichloroethene        | 7.96 | 130 | 36545   | 0.62  | ppbv # | 86     |
| 39) 1,2-Dichloropropane    | 7.29 | 63  | 494874  | 8.00  | ppbv # | 24     |
| 53) Toluene                | 9.95 | 91  | 26325   | 0.14  | ppbv # | 62     |

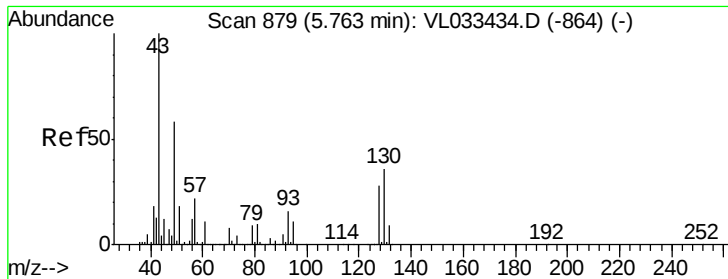
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Tue Mar 26 16:00:50 2019  
QLast Update : Tue Mar 26 16:00:50 2019  
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.00 ppbv

RT: 5.76 min Scan# 878

Delta R.T. -0.00 min

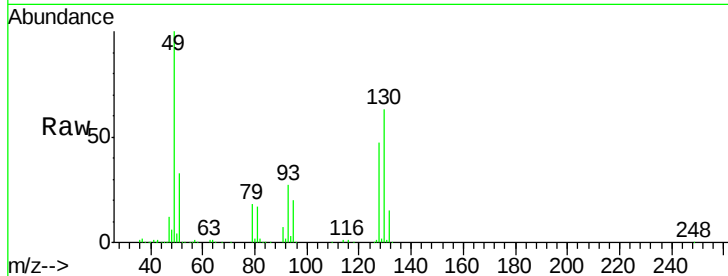
Lab File: VL033520.D

Acq: 30 Mar 2019 2:55

Instrument :  
MSVOA\_L  
ClientSampleId :

Tot Ion: 49 Resp: 826270

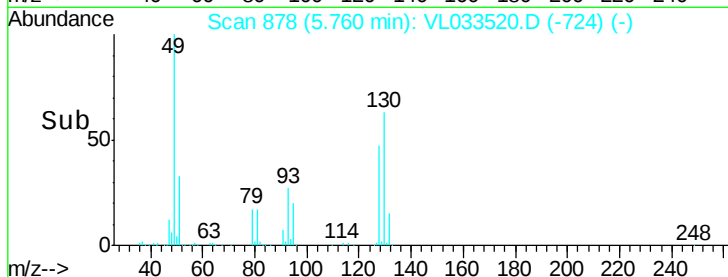
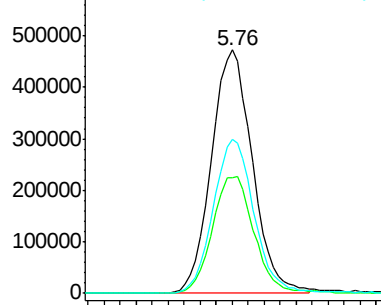
| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 49  | 100   |       |       |
| 128 | 49.2  | 24.0  | 72.0  |
| 130 | 63.9  | 31.2  | 93.6  |



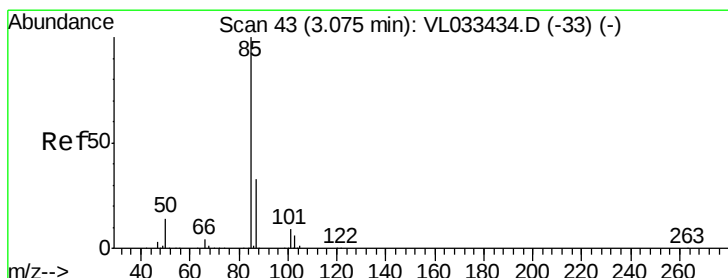
Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): VL0

Ion 130.00 (129.70 to 130.70): VL0



Time-->



#2

Dichlorodifluoromethane

Concen: 0.09 ppbv

RT: 3.08 min Scan# 44

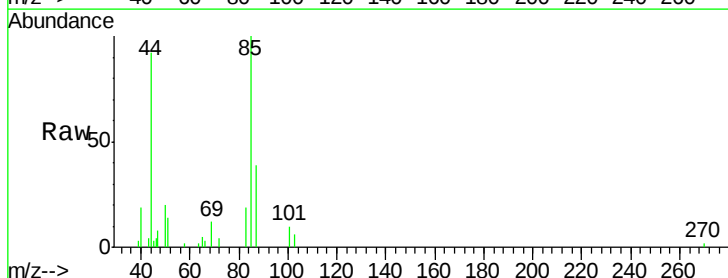
Delta R.T. 0.00 min

Lab File: VL033520.D

Acq: 30 Mar 2019 2:55

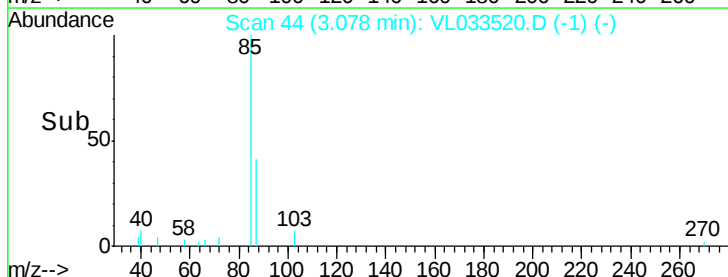
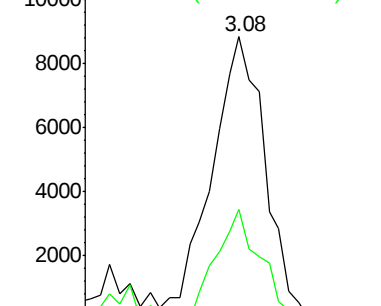
Tgt Ion: 85 Resp: 10714

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 85  | 100   |       |       |
| 87  | 38.9  | 26.7  | 40.1  |



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0



Time-->



#3

Chlorodifluoromethane

Concen: 12.58 ppbv

RT: 2.99 min Scan# 17

Delta R.T. -0.02 min

Lab File: VL033520.D

Acq: 30 Mar 2019 2:55

Instrument :

MSVOA\_L

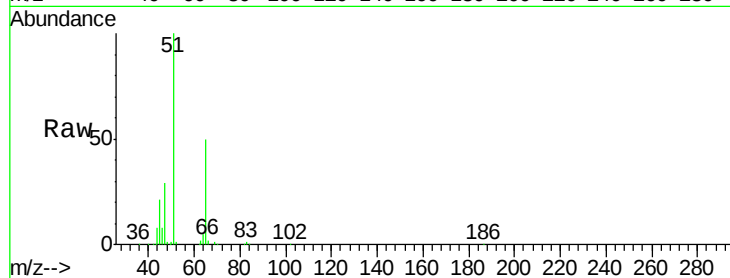
ClientSampleId :

Tot Ion: 51 Resp: 1197058

Ion Ratio Lower Upper

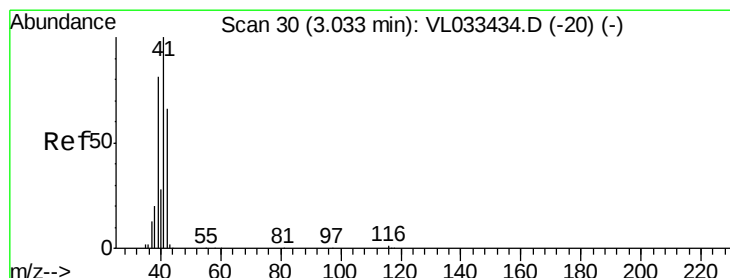
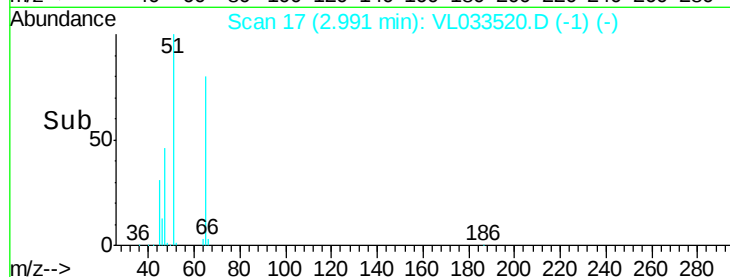
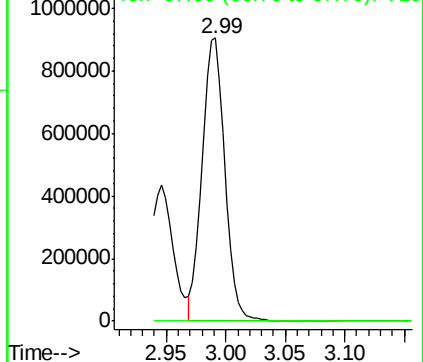
51 100

67 0.2 15.7 23.5#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#9

Propene

Concen: 0.17 ppbv

RT: 3.05 min Scan# 35

Delta R.T. 0.02 min

Lab File: VL033520.D

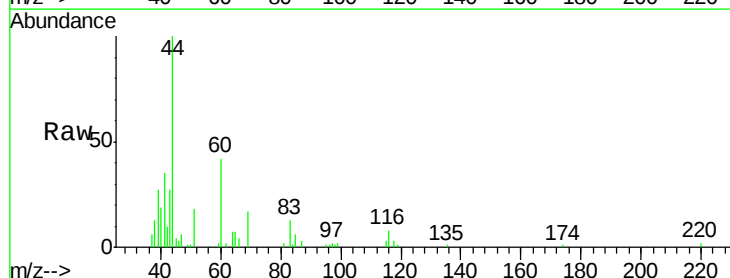
Acq: 30 Mar 2019 2:55

Tgt Ion: 41 Resp: 6979

Ion Ratio Lower Upper

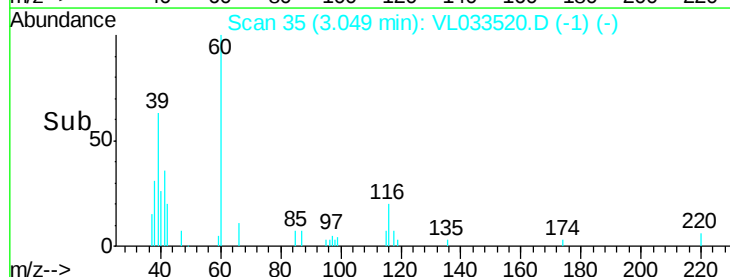
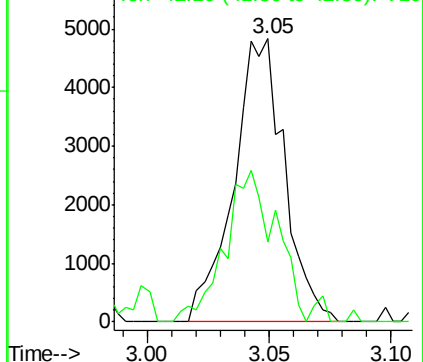
41 100

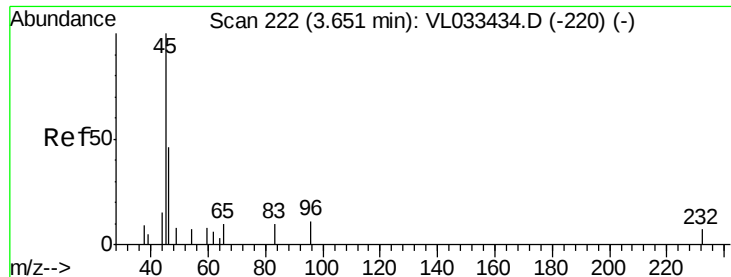
42 56.0 53.9 80.9



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0





#13

Ethanol

Concen: 33.41 ppbv

RT: 3.65 min Scan# 221

Delta R.T. -0.00 min

Lab File: VL033520.D

Acq: 30 Mar 2019 2:55

Instrument :

MSVOA\_L

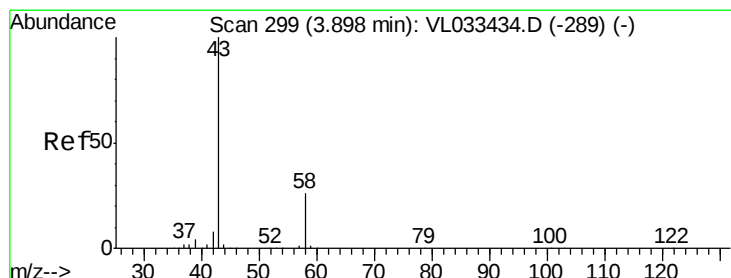
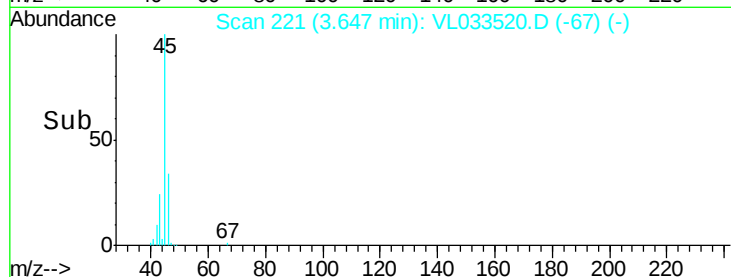
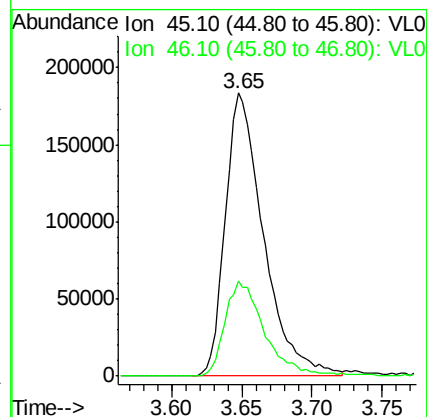
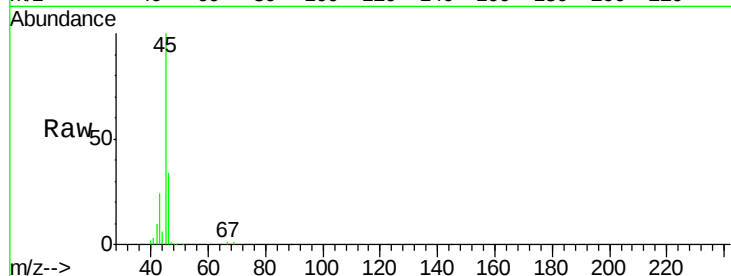
ClientSampleId :

Tot Ion: 45 Resp: 345351

Ion Ratio Lower Upper

45 100

46 35.1 25.4 101.8



#15

Acetone

Concen: 1.06 ppbv

RT: 3.90 min Scan# 301

Delta R.T. 0.01 min

Lab File: VL033520.D

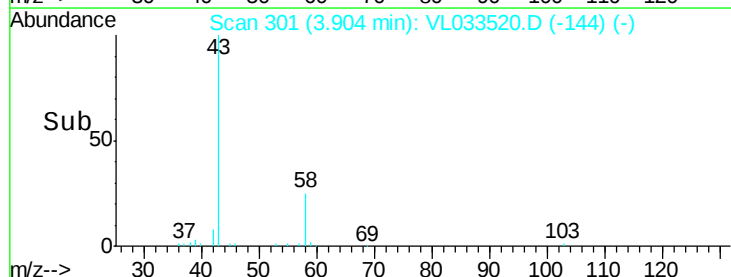
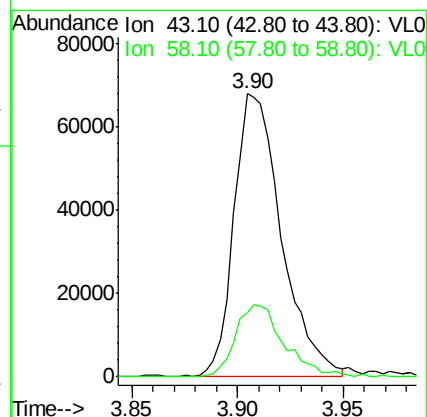
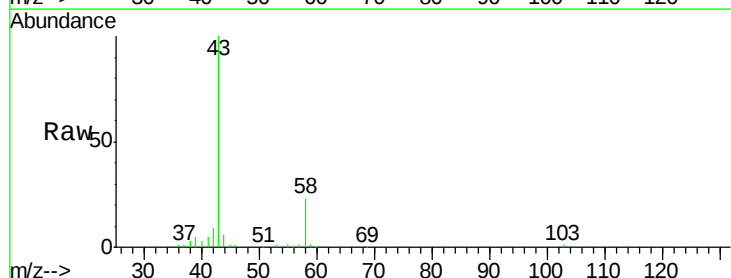
Acq: 30 Mar 2019 2:55

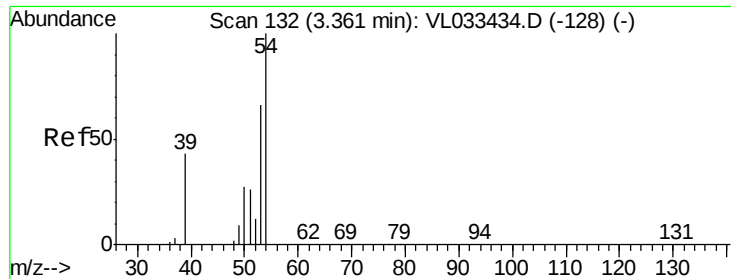
Tgt Ion: 43 Resp: 105726

Ion Ratio Lower Upper

43 100

58 26.5 20.5 30.7





#16

1,3-Butadiene

Concen: 0.11 ppbv

RT: 3.35 min Scan# 127

Delta R.T. -0.02 min

Lab File: VL033520.D

Acq: 30 Mar 2019 2:55

Instrument :

MSVOA\_L

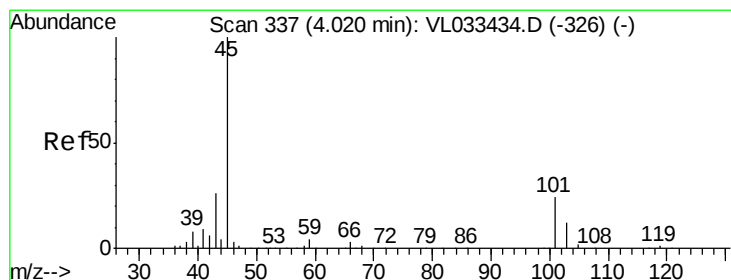
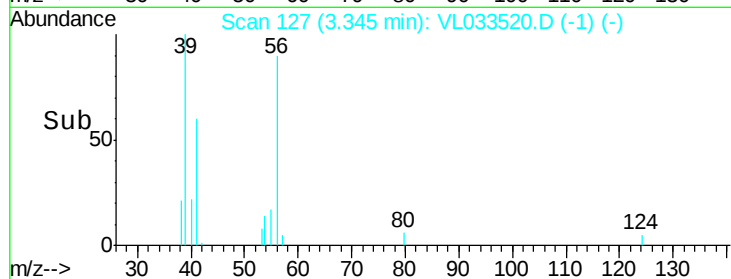
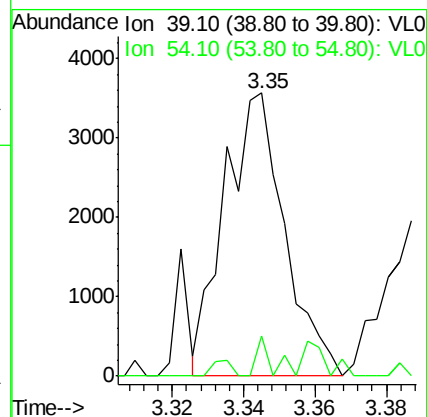
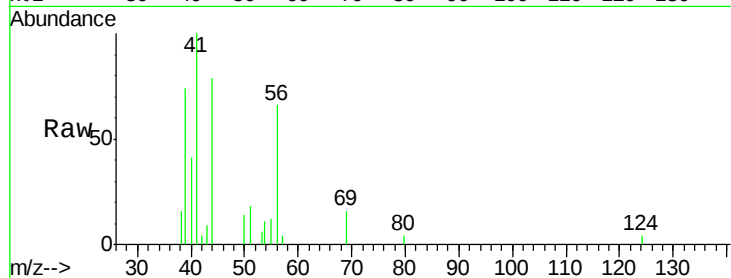
ClientSampleId :

Tot Ion: 39 Resp: 4170

Ion Ratio Lower Upper

39 100

54 9.0 69.4 104.2#



#19

Isopropyl Alcohol

Concen: 0.06 ppbv

RT: 4.06 min Scan# 350

Delta R.T. 0.04 min

Lab File: VL033520.D

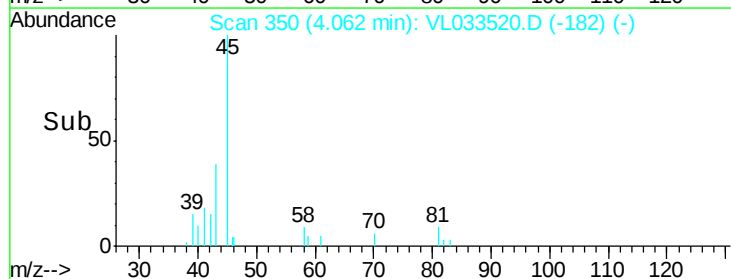
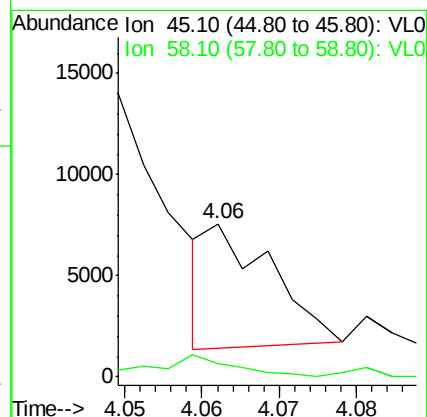
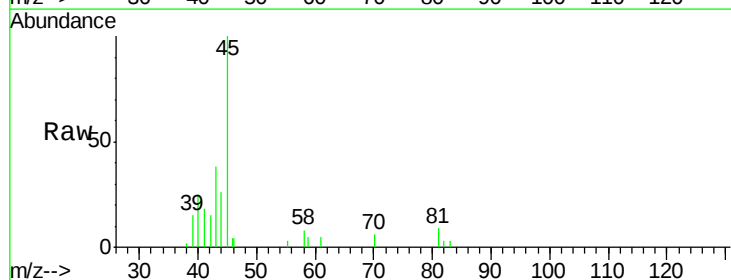
Acq: 30 Mar 2019 2:55

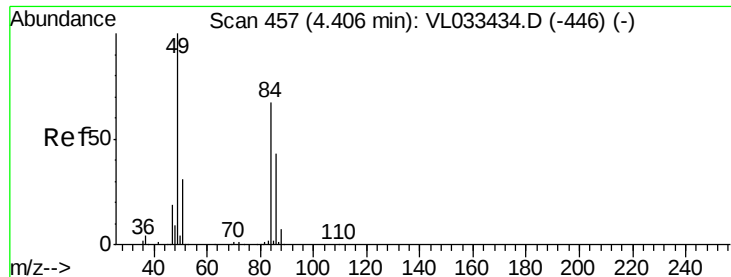
Tgt Ion: 45 Resp: 3513

Ion Ratio Lower Upper

45 100

58 61.5 1.4 2.2#





#20

Methylene Chloride

Concen: 0.52 ppbv

RT: 4.41 min Scan# 457

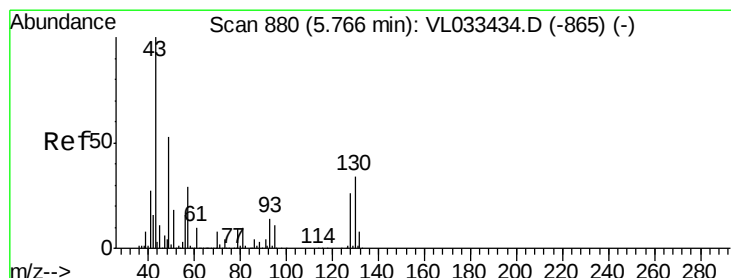
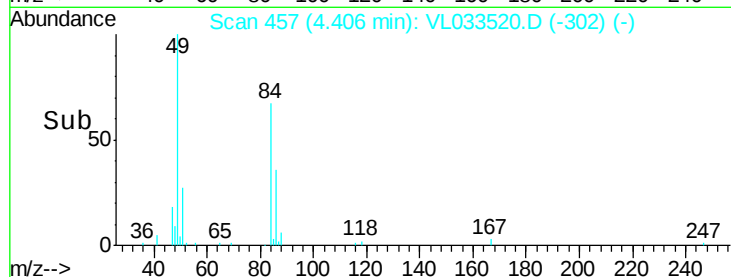
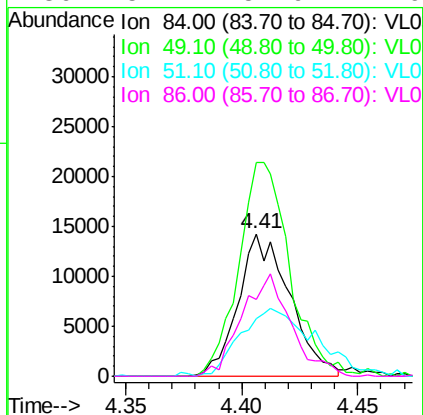
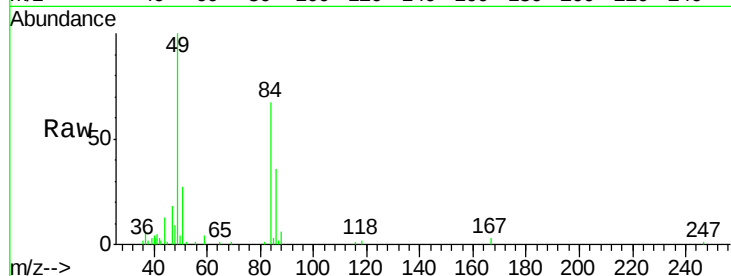
Delta R.T. -0.00 min

Lab File: VL033520.D

Acq: 30 Mar 2019 2:55

Instrument :  
MSVOA\_L  
ClientSampled :

|          |       |       |       |
|----------|-------|-------|-------|
| Tot Ion: | 84    | Resp: | 21929 |
| Ion      | Ratio | Lower | Upper |
| 84       | 100   |       |       |
| 49       | 149.7 | 120.0 | 180.0 |
| 51       | 39.4  | 36.7  | 55.1  |
| 86       | 54.2  | 51.9  | 77.9  |



#25

Ethyl Acetate

Concen: 0.12 ppbv

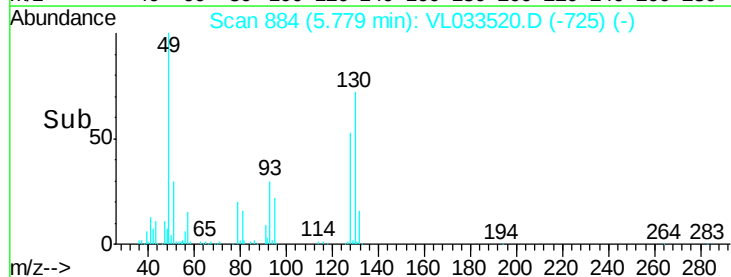
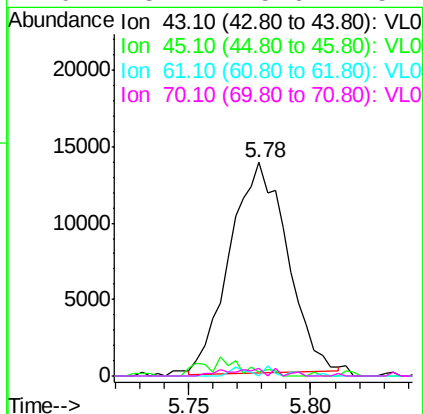
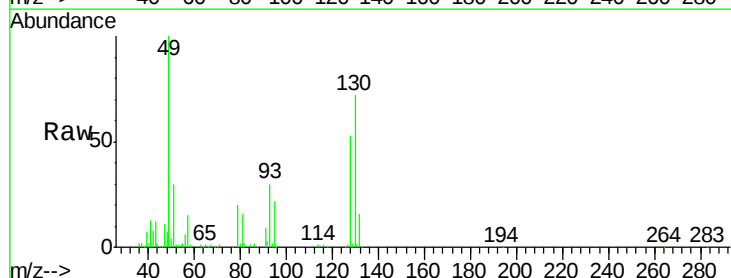
RT: 5.78 min Scan# 884

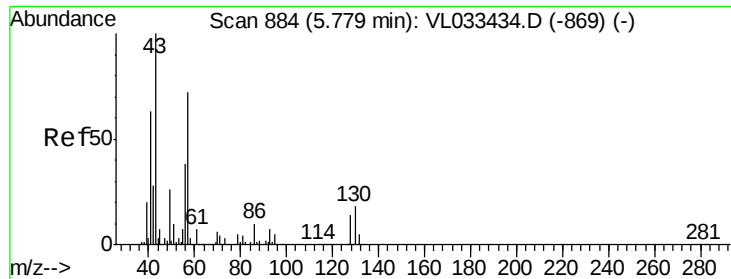
Delta R.T. 0.01 min

Lab File: VL033520.D

Acq: 30 Mar 2019 2:55

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 43    | Resp: | 22504 |
| Ion      | Ratio | Lower | Upper |
| 43       | 100   |       |       |
| 45       | 6.3   | 7.8   | 11.6# |
| 61       | 2.6   | 7.3   | 10.9# |
| 70       | 3.2   | 5.6   | 8.4#  |

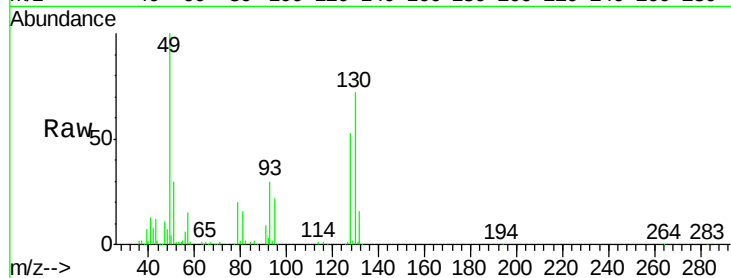




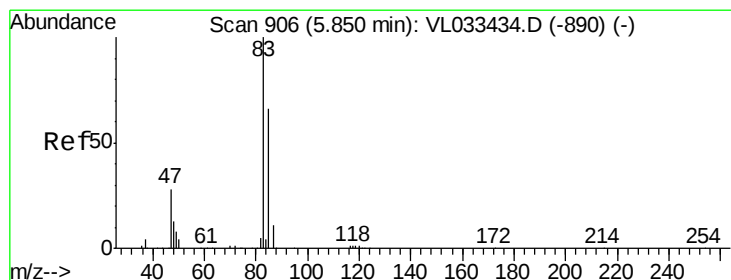
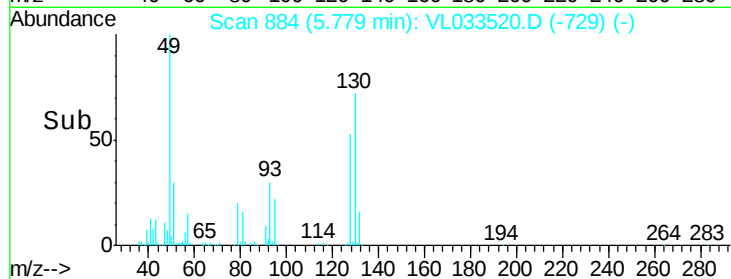
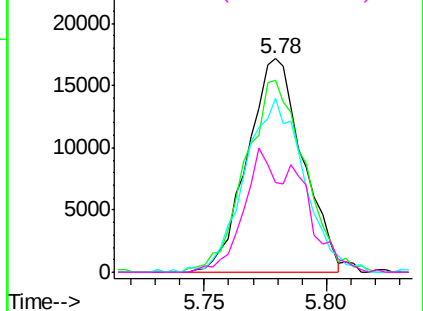
#26  
Hexane  
Concen: 0.33 ppbv  
RT: 5.78 min Scan# 884  
Delta R.T. -0.00 min  
Lab File: VL033520.D  
Acq: 30 Mar 2019 2:55

Instrument :  
MSVOA\_L  
ClientSampleId :

Tot Ion: 57 Resp: 26960  
Ion Ratio Lower Upper  
57 100  
41 97.1 70.7 106.1  
43 87.8 182.6 274.0#  
56 61.1 42.0 63.0

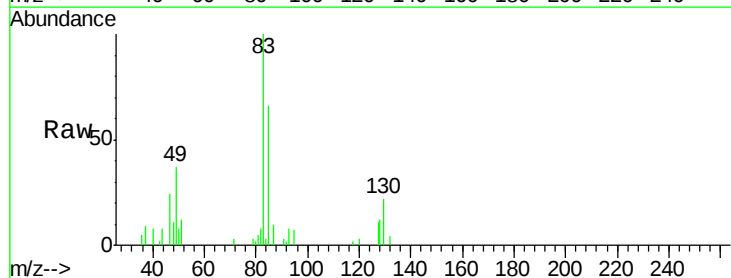


Abundance Ion 57.10 (56.80 to 57.80): VL0  
Ion 41.10 (40.80 to 41.80): VL0  
Ion 43.10 (42.80 to 43.80): VL0  
Ion 56.10 (55.80 to 56.80): VL0

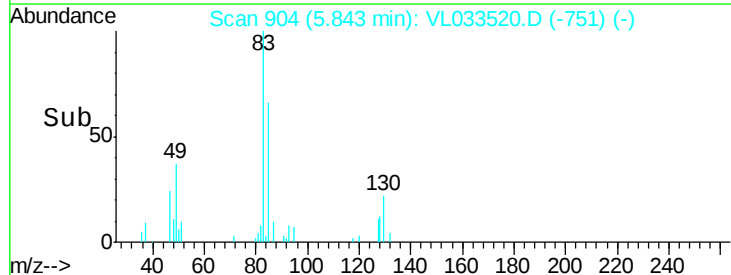
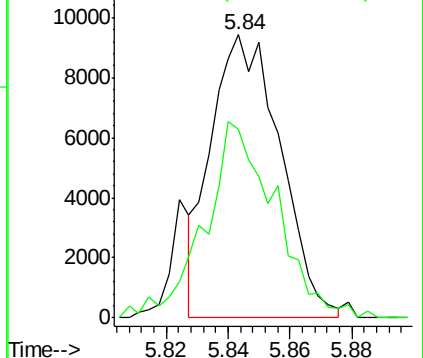


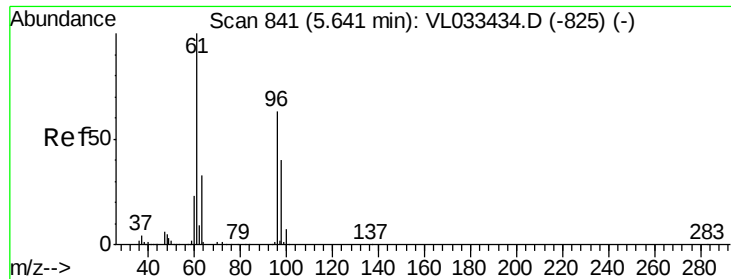
#29  
Chloroform  
Concen: 0.10 ppbv  
RT: 5.84 min Scan# 904  
Delta R.T. -0.01 min  
Lab File: VL033520.D  
Acq: 30 Mar 2019 2:55

Tgt Ion: 83 Resp: 14630  
Ion Ratio Lower Upper  
83 100  
85 65.1 52.6 79.0



Abundance Ion 83.00 (82.70 to 83.70): VL0  
Ion 85.00 (84.70 to 85.70): VL0



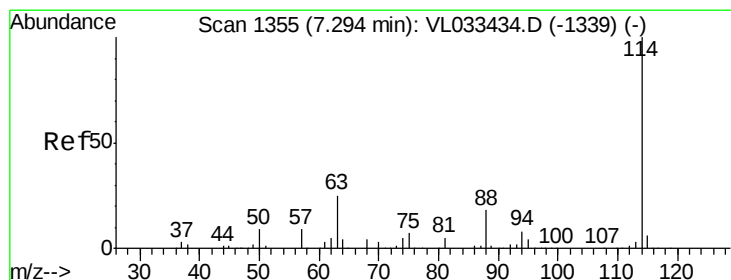
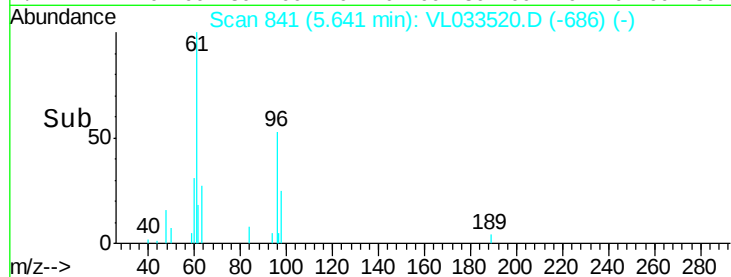
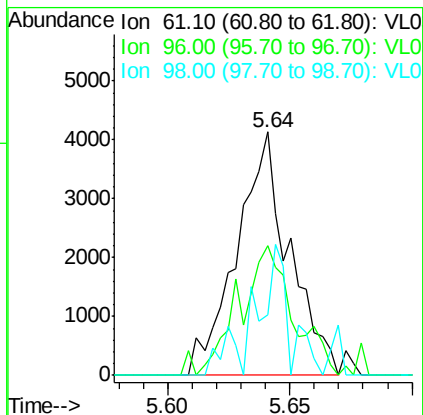
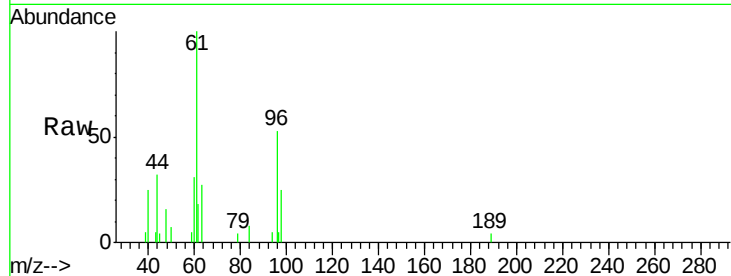


#31

cis-1,2-Dichloroethene  
 Concen: 0.08 ppbv  
 RT: 5.64 min Scan# 841  
 Delta R.T. -0.00 min  
 Lab File: VL033520.D  
 Acq: 30 Mar 2019 2:55

Instrument :  
 MSVOA\_L  
 ClientSampled :

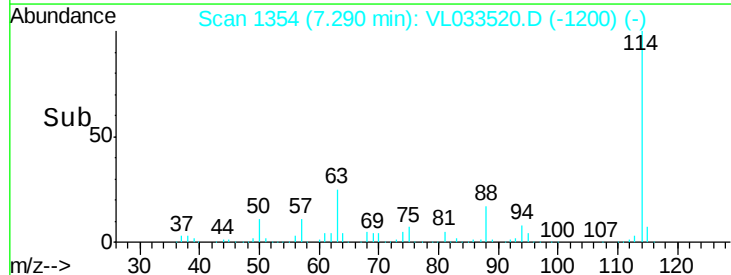
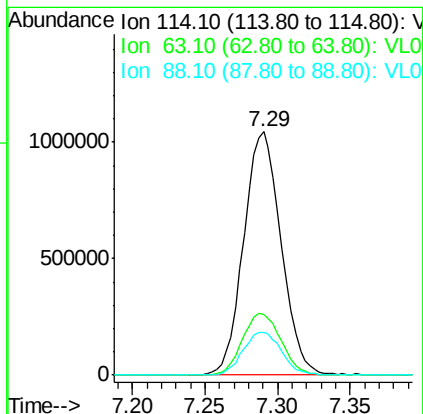
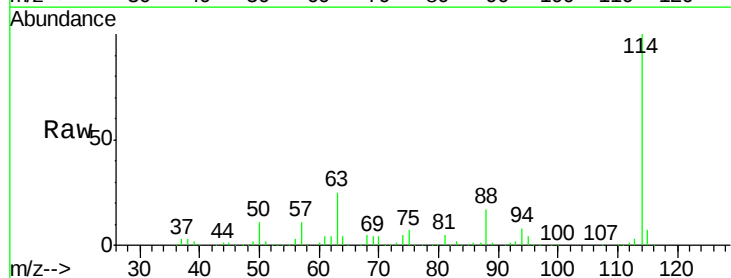
Tot Ion: 61 Resp: 6178  
 Ion Ratio Lower Upper  
 61 100  
 96 44.8 50.6 76.0#  
 98 20.9 32.2 48.2#

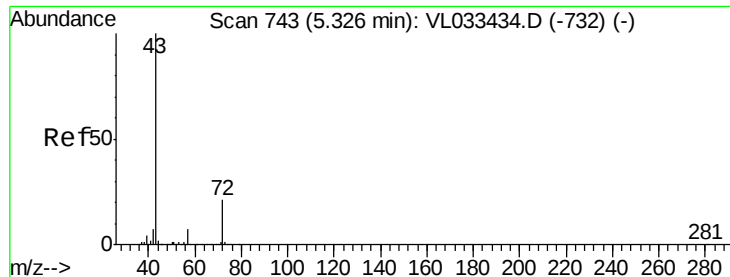


#33

1,4-Difluorobenzene  
 Concen: 10.00 ppbv  
 RT: 7.29 min Scan# 1354  
 Delta R.T. -0.00 min  
 Lab File: VL033520.D  
 Acq: 30 Mar 2019 2:55

Tgt Ion: 114 Resp: 1881451  
 Ion Ratio Lower Upper  
 114 100  
 63 26.4 21.5 32.3  
 88 18.2 14.5 21.7

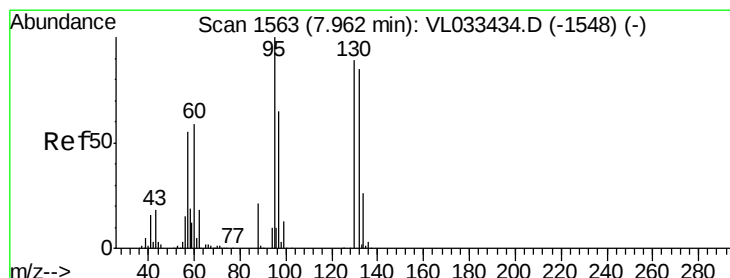
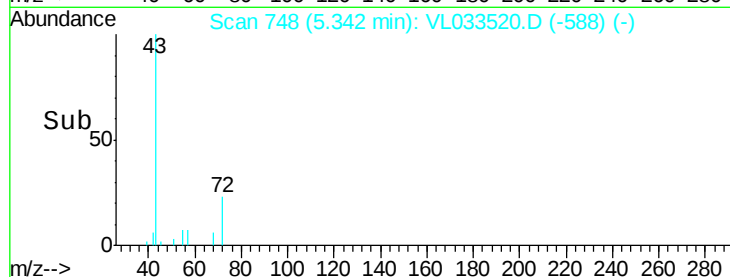
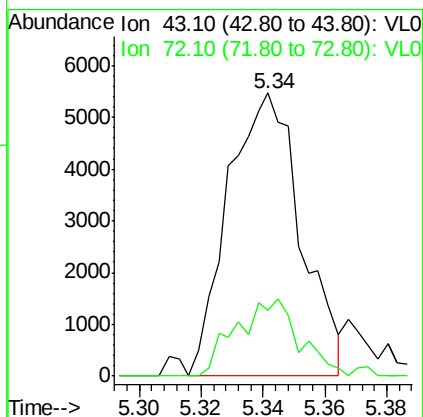
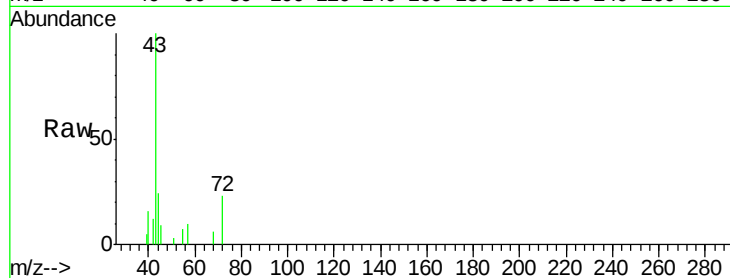




#34  
2-Butanone  
Concen: 0.08 ppbv  
RT: 5.34 min Scan# 748  
Delta R.T. 0.02 min  
Lab File: VL033520.D  
Acq: 30 Mar 2019 2:55

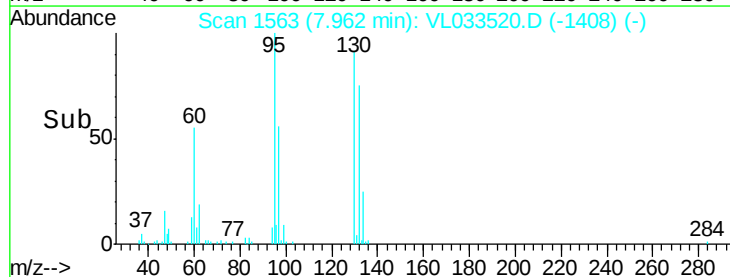
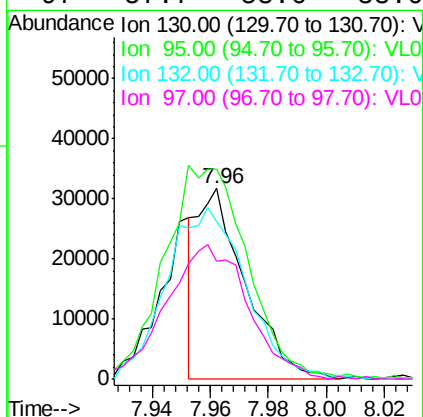
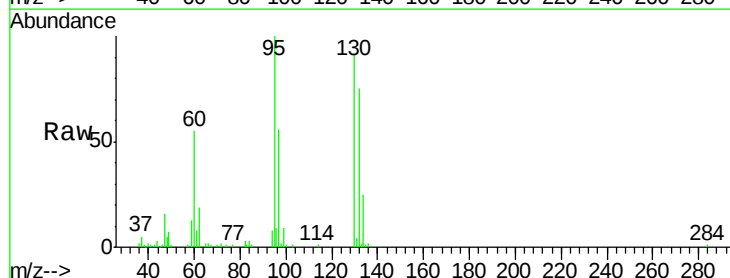
Instrument :  
MSVOA\_L  
ClientSampleId :

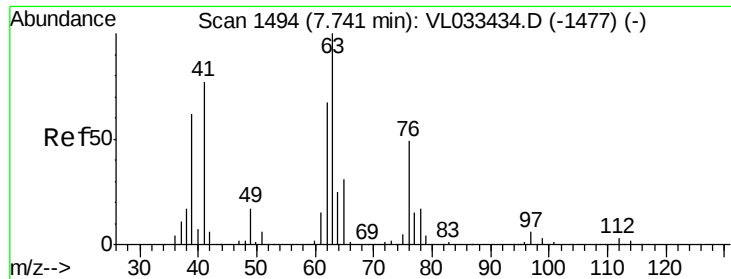
Tot Ion: 43 Resp: 8918  
Ion Ratio Lower Upper  
43 100  
72 24.4 17.4 26.2



#38  
Trichloroethene  
Concen: 0.62 ppbv  
RT: 7.96 min Scan# 1563  
Delta R.T. -0.00 min  
Lab File: VL033520.D  
Acq: 30 Mar 2019 2:55

Tgt Ion: 130 Resp: 36545  
Ion Ratio Lower Upper  
130 100  
95 104.0 89.8 134.8  
132 77.0 76.6 115.0  
97 57.7 58.6 88.0#

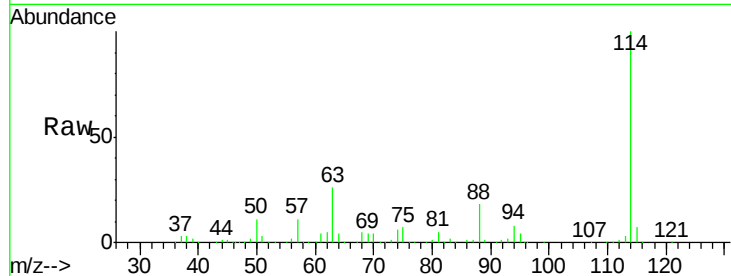




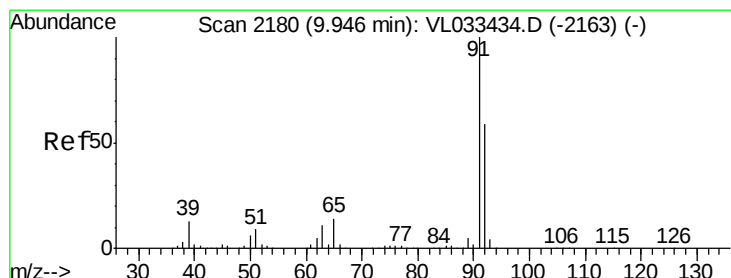
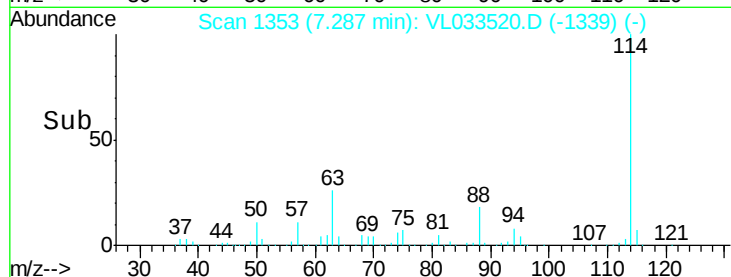
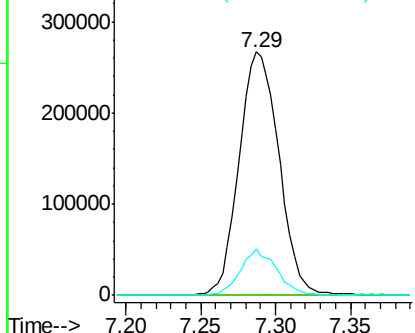
#39  
 1,2-Dichloropropane  
 Concen: 8.00 ppbv  
 RT: 7.29 min Scan# 1353  
 Delta R.T. -0.45 min  
 Lab File: VL033520.D  
 Acq: 30 Mar 2019 2:55

Instrument :  
 MSVOA\_L  
 ClientSampleId :

Tot Ion: 63 Resp: 494874  
 Ion Ratio Lower Upper  
 63 100  
 41 0.0 61.2 91.8#  
 62 18.8 54.0 81.0#

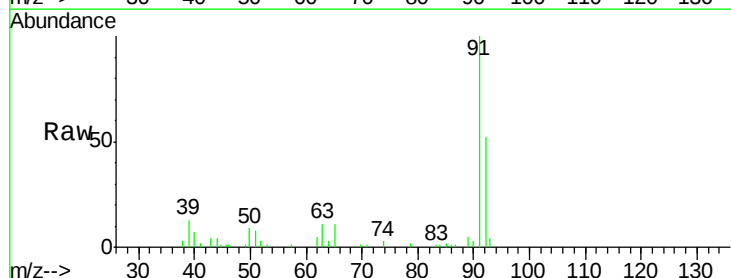


Abundance Ion 63.10 (62.80 to 63.80): VL0  
 Ion 41.10 (40.80 to 41.80): VL0  
 Ion 62.10 (61.80 to 62.80): VL0

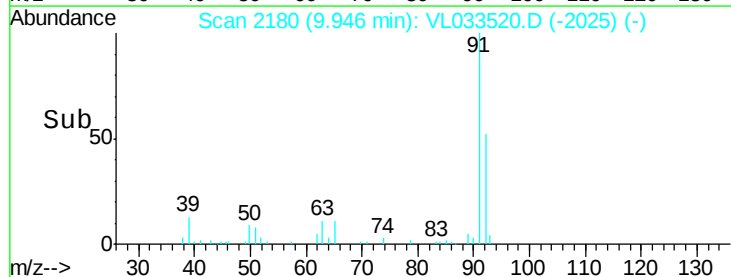
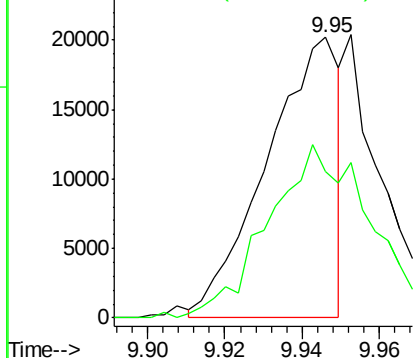


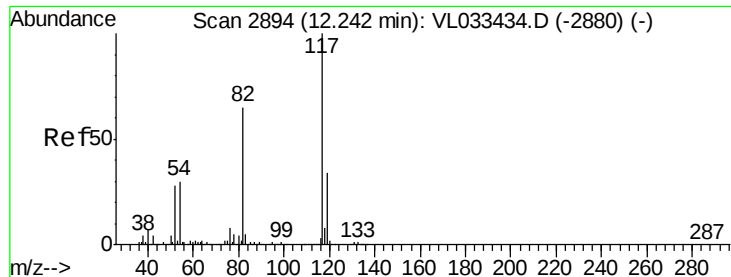
#53  
 Toluene  
 Concen: 0.14 ppbv  
 RT: 9.95 min Scan# 2180  
 Delta R.T. -0.00 min  
 Lab File: VL033520.D  
 Acq: 30 Mar 2019 2:55

Tgt Ion: 91 Resp: 26325  
 Ion Ratio Lower Upper  
 91 100  
 92 87.6 47.4 71.0#



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: 12.24 min Scan# 2892

Delta R.T. -0.01 min

Lab File: VL033520.D

Acq: 30 Mar 2019 2:55

Instrument :

MSVOA\_L

ClientSampleId :

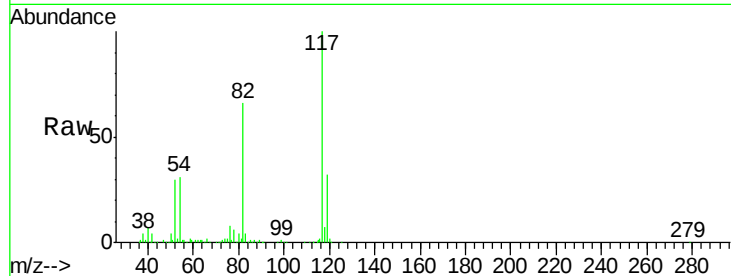
Tot Ion:117 Resp: 1785353

Ion Ratio Lower Upper

117 100

82 66.6 51.5 77.3

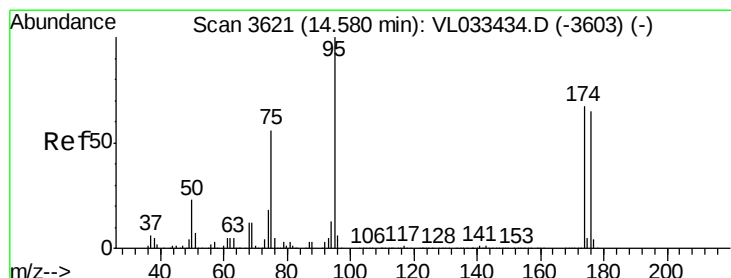
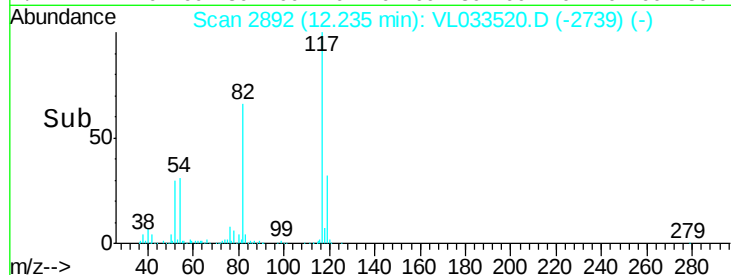
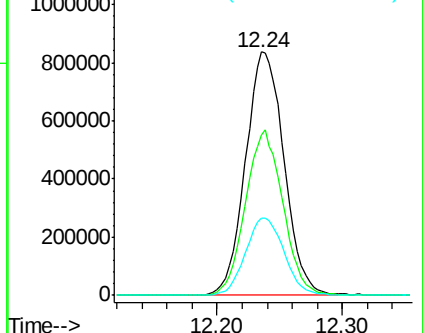
119 32.0 25.5 38.3



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



#68

1-Bromo-4-Fluorobenzene

Concen: 9.66 ppbv

RT: 14.58 min Scan# 3620

Delta R.T. -0.00 min

Lab File: VL033520.D

Acq: 30 Mar 2019 2:55

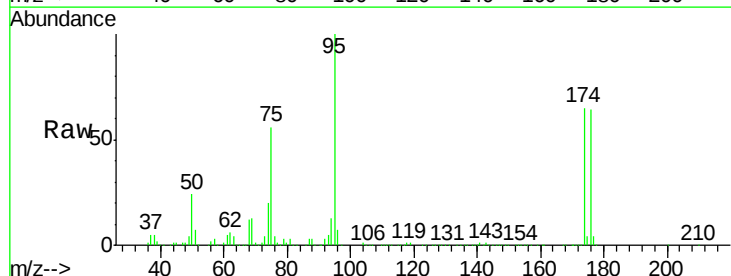
Tgt Ion: 95 Resp: 1352276

Ion Ratio Lower Upper

95 100

174 67.4 52.9 79.3

175 4.7 3.8 5.6



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

