

Data Path : W:\HPCHEM1\MSVOA L\DATA\VL122017\  
 Data File : VL031290.D  
 Acq On : 21 Dec 2017 4:33  
 Operator : SY/AP  
 Sample : I7005-09DL 10X  
 Misc : 400ml/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 EP1-SV-8DL

Manual Integrations  
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MMDadoda  
 12/22/2017 4:55:09 PM

Quant Time: Dec 22 06:56:10 2017  
 Quant Method : W:\HPCHEM1\MSVOA L\METHODS\VL121317AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Thu Dec 14 2017  
 QLast Update : Thu Dec 14 04:29:58 2017  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.91  | 49   | 1402568  | 10.00 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 7.45  | 114  | 3435056  | 10.00 | ppbv  | 0.00     |
| 55) Chlorobenzene-d5    | 12.41 | 117  | 3246656  | 10.00 | ppbv  | 0.00     |

System Monitoring Compounds

|                             |        |       |          |          |      |         |
|-----------------------------|--------|-------|----------|----------|------|---------|
| 68) 1-Bromo-4-Fluorobenzene | 14.75  | 95    | 2578405  | 11.17    | ppbv | 0.00    |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 111.70% |

| Target Compounds           | R.T.  | QIon | Response | Conc | Units  | Ovalue |
|----------------------------|-------|------|----------|------|--------|--------|
| 9) Propene                 | 3.14  | 41   | 163416   | 2.09 | ppbv   | 97     |
| 10) Heptane                | 8.41  | 43   | 25130    | 0.11 | ppbv   | 96     |
| 11) Trichlorofluoromethane | 4.13  | 101  | 42326    | 0.22 | ppbv   | 99     |
| 13) Ethanol                | 3.78  | 45   | 26937m   | 1.19 | ppbv   |        |
| 15) Acetone                | 4.03  | 43   | 487050   | 2.63 | ppbv # | 64     |
| 17) tert-Butyl alcohol     | 4.52  | 59   | 35732    | 0.34 | ppbv # | 90     |
| 26) Hexane                 | 5.93  | 57   | 51731    | 0.29 | ppbv # | 10     |
| 27) Carbon Disulfide       | 4.76  | 76   | 25234    | 0.14 | ppbv # | 80     |
| 34) 2-Butanone             | 5.47  | 43   | 1625789  | 6.70 | ppbv   | 99     |
| 36) Benzene                | 7.16  | 78   | 318407   | 0.87 | ppbv   | 97     |
| 44) 2,2,4-Trimethylpentane | 8.15  | 57   | 56873    | 0.10 | ppbv # | 77     |
| 51) 2-Hexanone             | 10.47 | 43   | 121315   | 0.43 | ppbv # | 99     |
| 52) Tetrachloroethene      | 11.55 | 164  | 196986   | 1.47 | ppbv   | 91     |
| 53) Toluene                | 10.11 | 91   | 57327m   | 0.15 | ppbv   |        |
| 59) m/p-Xylene             | 13.29 | 91   | 42996    | 0.10 | ppbv   | 100    |

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

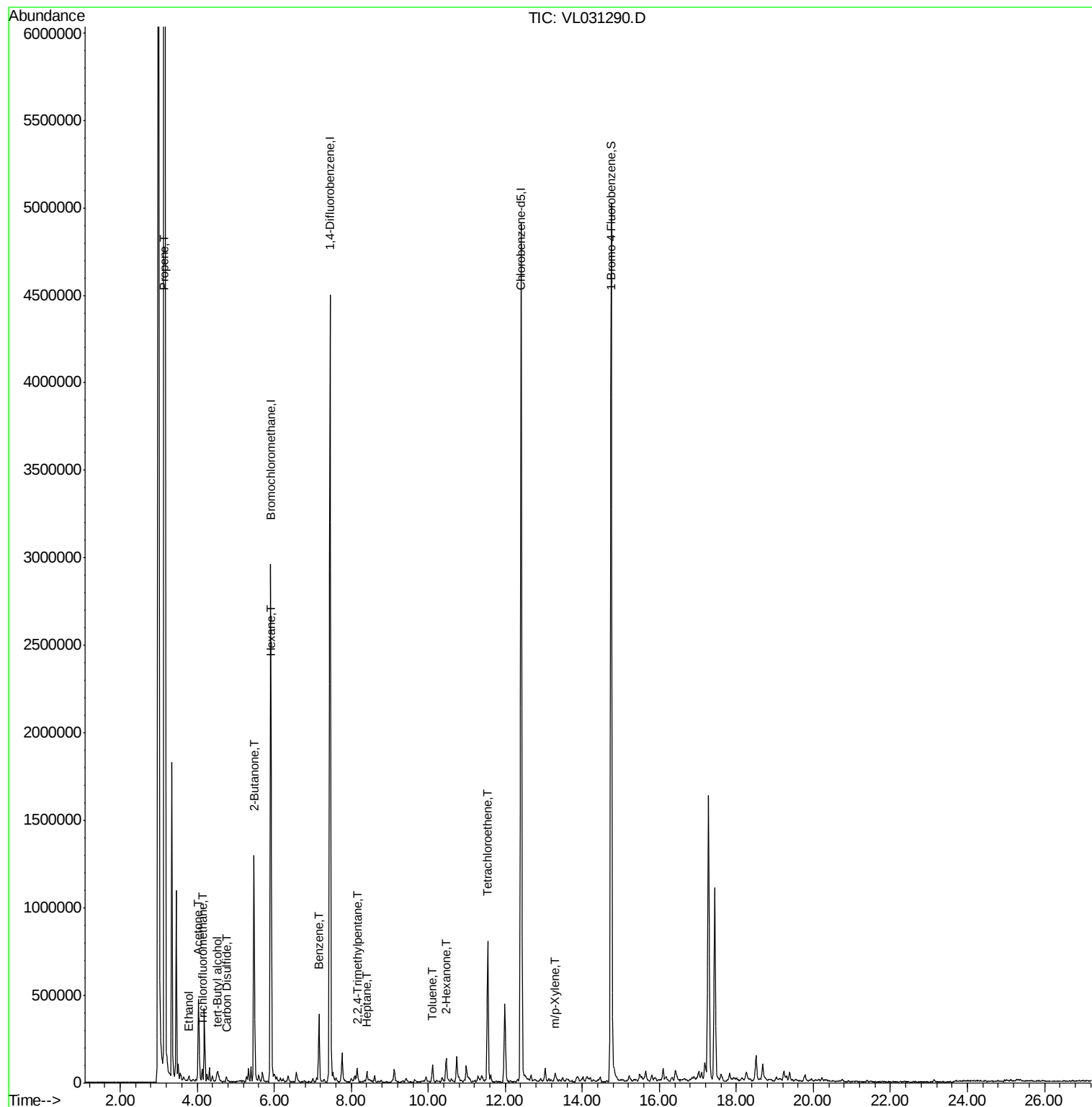
Data Path : W:\HPCHEM1\MSVOA L\DATA\VL122017\  
Data File : VL031290.D  
Acq On : 21 Dec 2017 4:33  
Operator : SY/AP  
Sample : I7005-09DL 10X  
Misc : 400ml/MSVOA L  
ALS Vial : 1 Sample Multiplier: 1

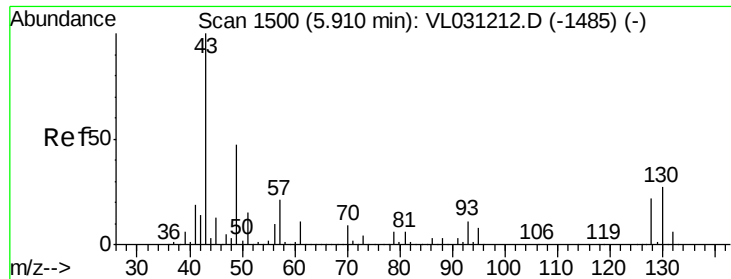
Instrument :  
MSVOA\_L  
ClientSampleId :  
EP1-SV-8DL

Manual Integrations  
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Quant Time: Dec 22 06:56:10 2017  
Quant Method : W:\HPCHEM1\MSVOA L\METHODS\VL121317AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Thu Dec  
QLast Update : Thu Dec 14 04:29:58 2017  
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.00 ppbv

RT: 5.91 min Scan# 1500

Delta R.T. 0.00 min

Lab File: VL031290.D

Acq: 21 Dec 2017 4:33

Instrument :

MSVOA\_L

ClientSampled :

EP1-SV-8DL

Tot Ion: 49 Resp: 1402568

Ion Ratio Lower Upper

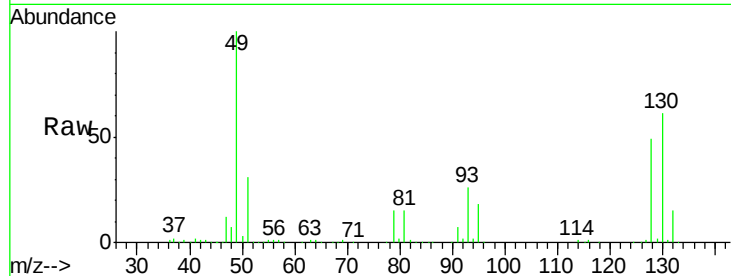
49 100

128 48.8 23.2 69.5

130 62.5 29.6 88.8

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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

5.91

800000

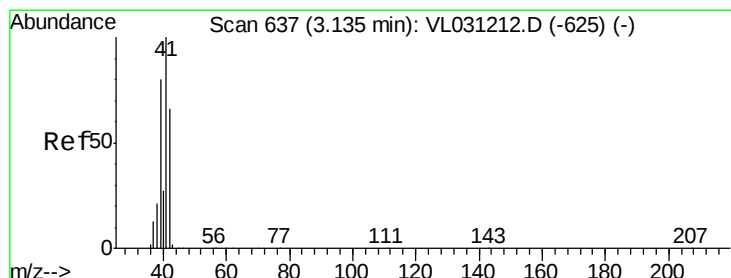
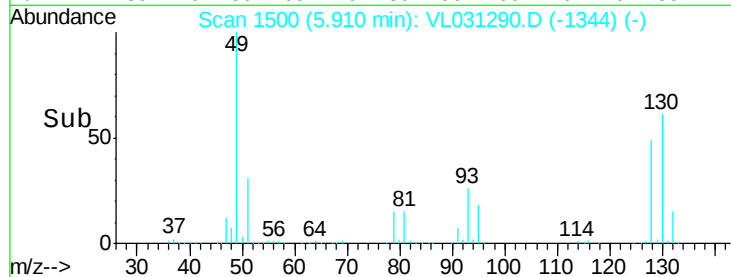
600000

400000

200000

0

Time-->



#9

Propene

Concen: 2.09 ppbv

RT: 3.14 min Scan# 638

Delta R.T. 0.00 min

Lab File: VL031290.D

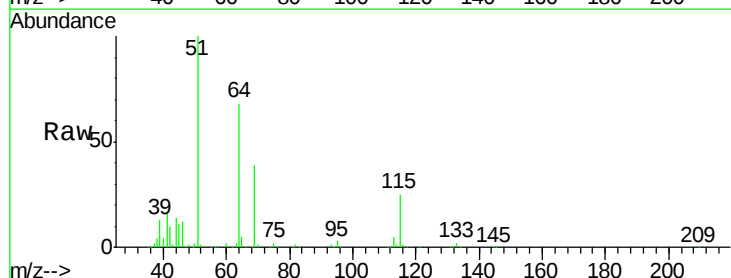
Acq: 21 Dec 2017 4:33

Tgt Ion: 41 Resp: 163416

Ion Ratio Lower Upper

41 100

42 65.8 54.3 81.5



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

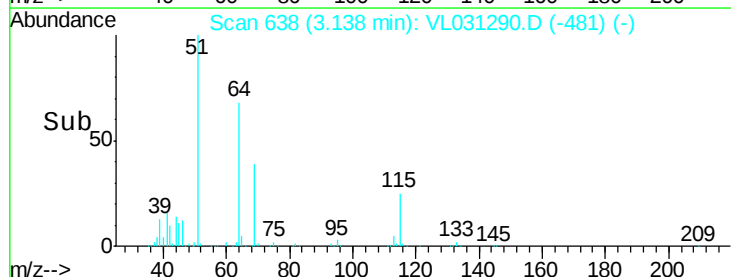
3.14

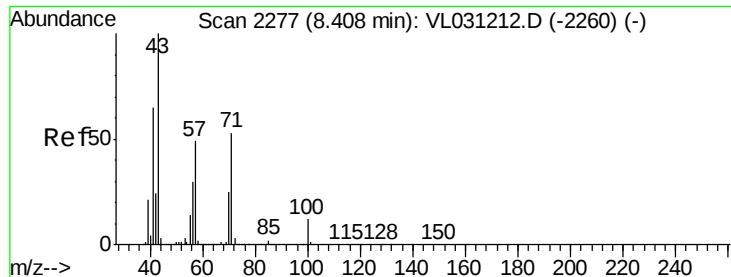
100000

50000

0

Time-->





#10

Heptane

Concen: 0.11 ppbv

RT: 8.41 min Scan# 2278

Delta R.T. 0.00 min

Lab File: VL031290.D

Acq: 21 Dec 2017 4:33

Instrument :

MSVOA\_L

ClientSampleId :

EP1-SV-8DL

Tot Ion: 43 Resp: 25130

Ion Ratio Lower Upper

43 100

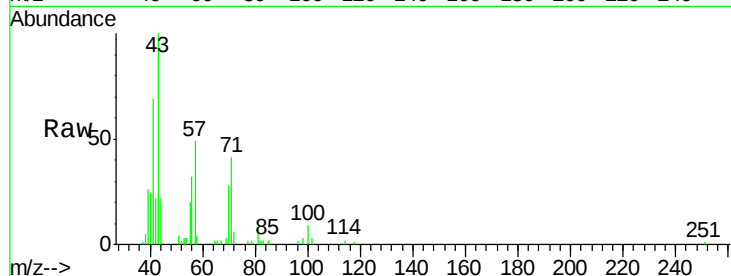
57 52.4 39.8 59.8

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Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 57.10 (56.80 to 57.80): VL0

8.41

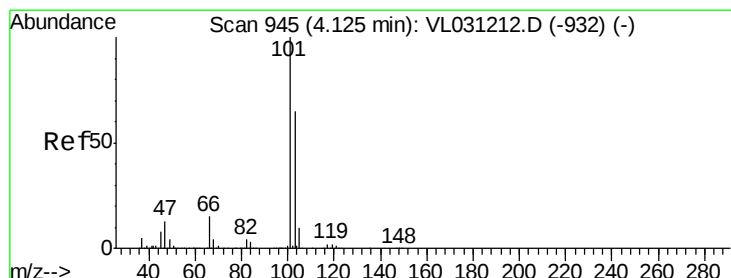
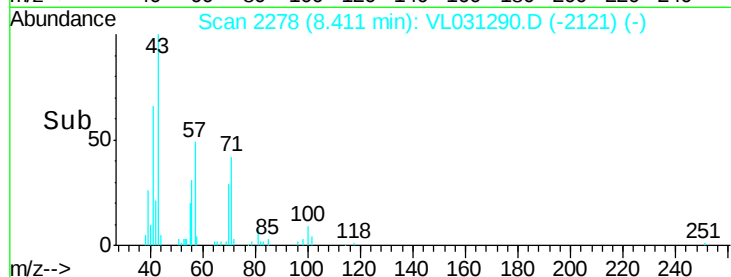
10000

5000

0

8.35 8.40 8.45

Time-->



#11

Trichlorofluoromethane

Concen: 0.22 ppbv

RT: 4.13 min Scan# 946

Delta R.T. 0.00 min

Lab File: VL031290.D

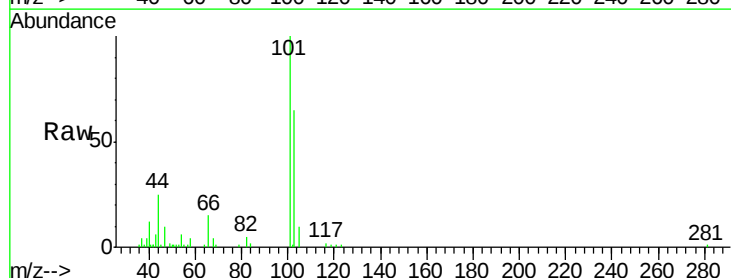
Acq: 21 Dec 2017 4:33

Tgt Ion: 101 Resp: 42326

Ion Ratio Lower Upper

101 100

103 63.9 51.8 77.8



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V

4.13

30000

25000

20000

15000

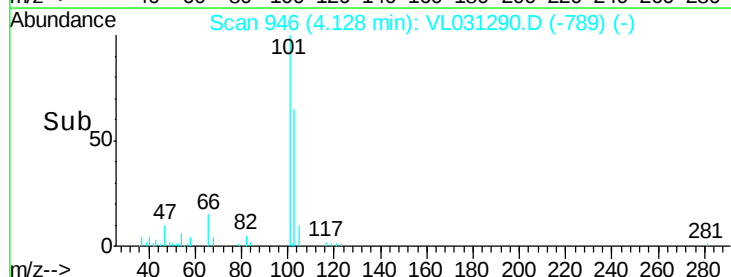
10000

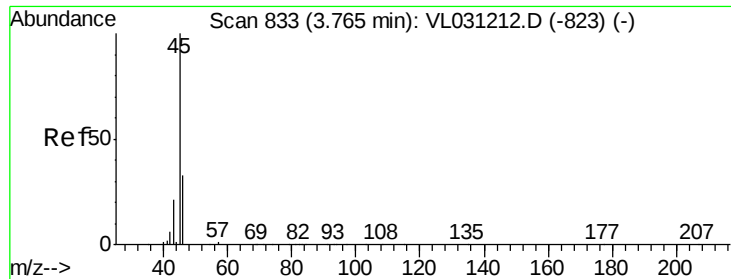
5000

0

4.10 4.15

Time-->





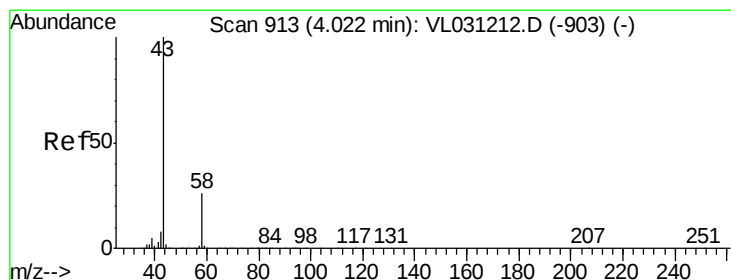
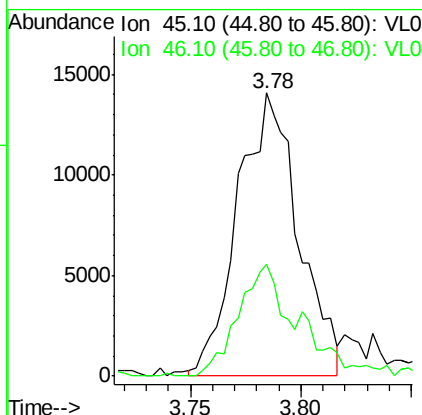
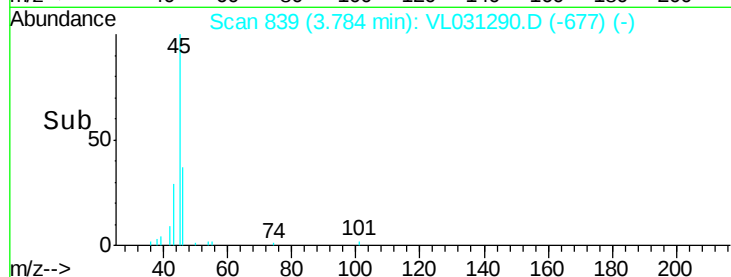
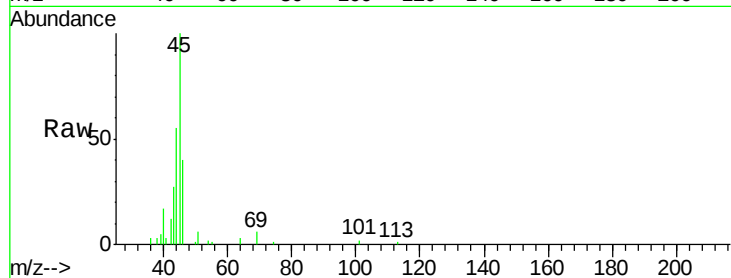
#13  
Ethanol  
Concen: 1.19 ppbv m  
RT: 3.78 min Scan# 839  
Delta R.T. 0.02 min  
Lab File: VL031290.D  
Acq: 21 Dec 2017 4:33

Instrument :  
MSVOA\_L  
ClientSampleId :  
EP1-SV-8DL

Tot Ion: 45 Resp: 26937  
Ion Ratio Lower Upper  
45 100  
46 40.3 14.6 58.4

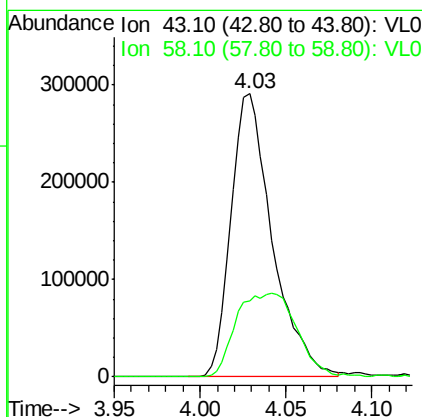
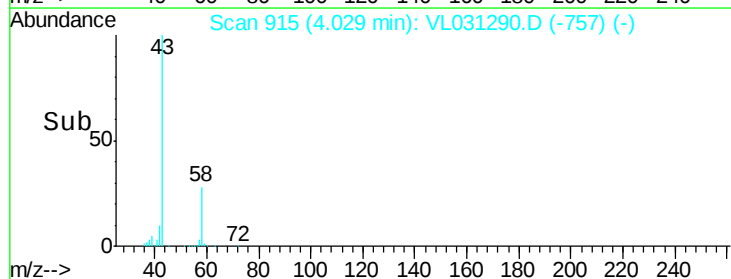
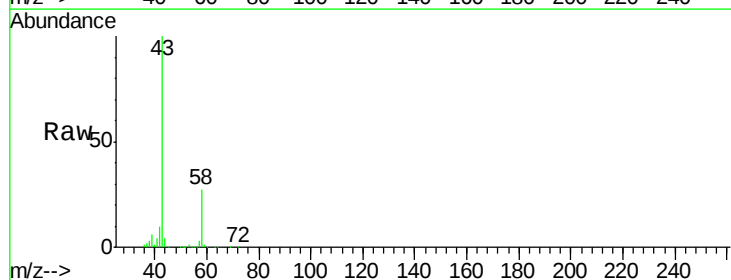
Manual Integrations  
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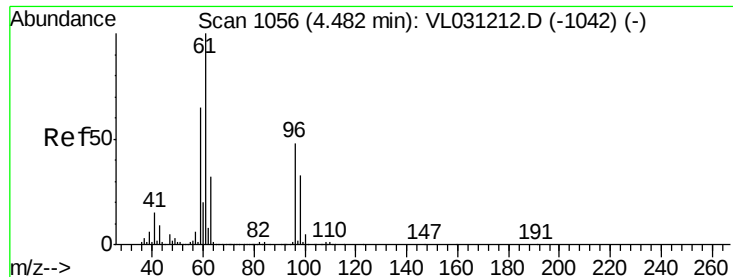
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#15  
Acetone  
Concen: 2.63 ppbv  
RT: 4.03 min Scan# 915  
Delta R.T. 0.01 min  
Lab File: VL031290.D  
Acq: 21 Dec 2017 4:33

Tgt Ion: 43 Resp: 487050  
Ion Ratio Lower Upper  
43 100  
58 43.4 20.3 30.5#





#17

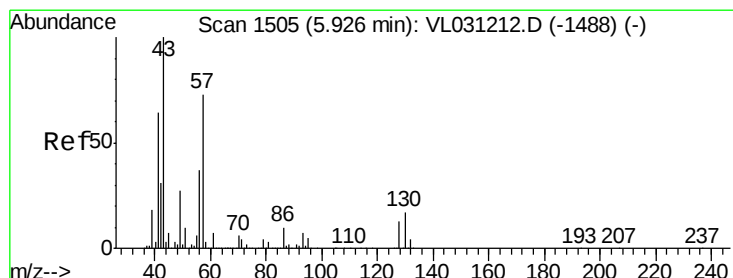
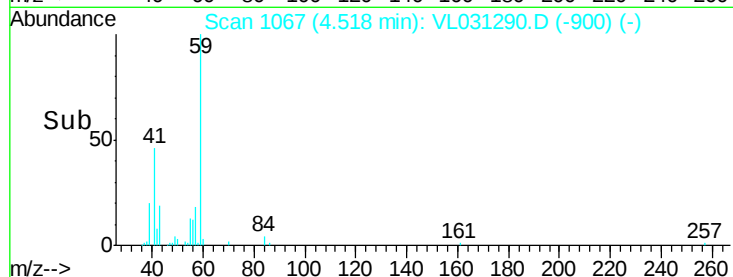
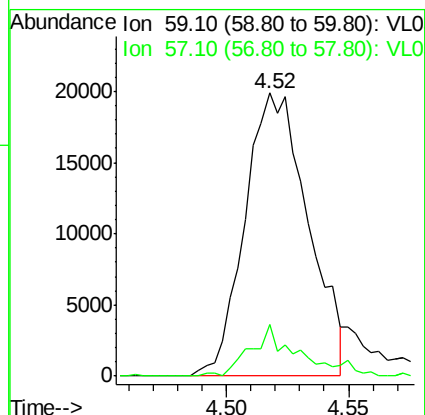
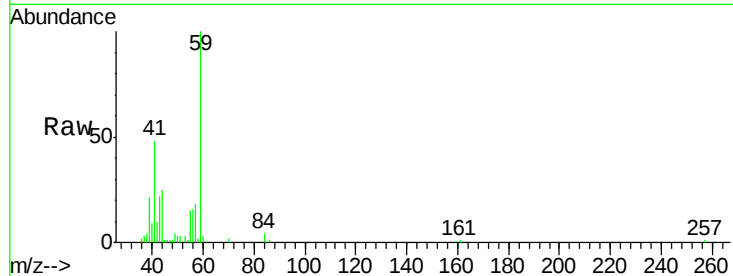
tert-Butyl alcohol  
 Concen: 0.34 ppbv  
 RT: 4.52 min Scan# 1067  
 Delta R.T. 0.04 min  
 Lab File: VL031290.D  
 Acq: 21 Dec 2017 4:33

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 EP1-SV-8DL

Tot Ion: 59 Resp: 35732  
 Ion Ratio Lower Upper  
 59 100  
 57 13.8 8.2 12.2#

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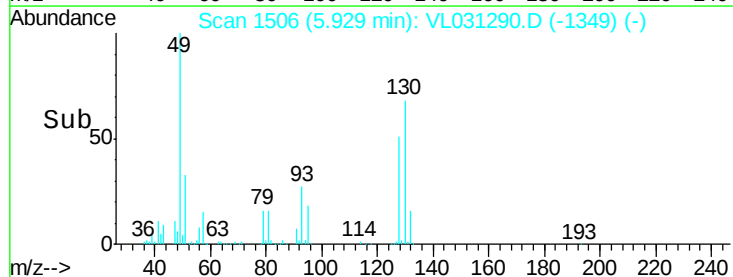
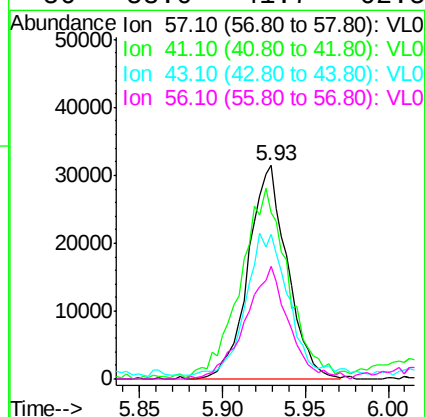
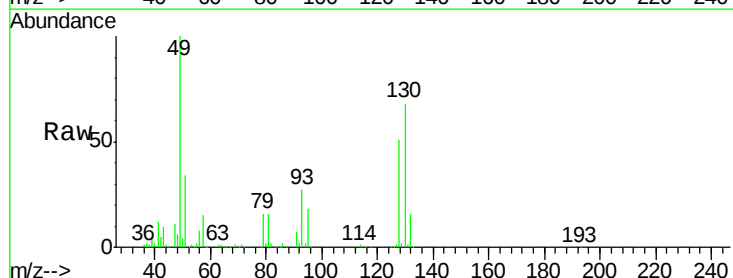
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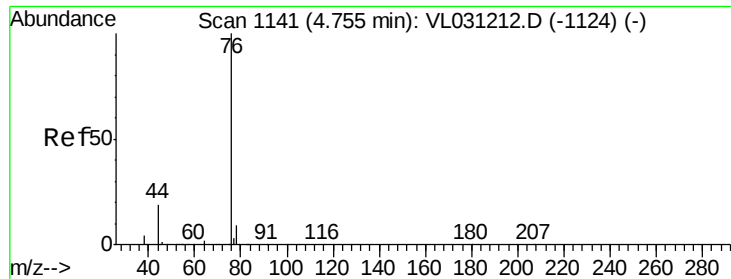


#26

Hexane  
 Concen: 0.29 ppbv  
 RT: 5.93 min Scan# 1506  
 Delta R.T. 0.00 min  
 Lab File: VL031290.D  
 Acq: 21 Dec 2017 4:33

Tgt Ion: 57 Resp: 51731  
 Ion Ratio Lower Upper  
 57 100  
 41 111.0 70.3 105.5#  
 43 0.0 173.8 260.8#  
 56 58.0 41.7 62.5





#27

Carbon Disulfide

Concen: 0.14 ppbv

RT: 4.76 min Scan# 1142

Delta R.T. 0.00 min

Lab File: VL031290.D

Acq: 21 Dec 2017 4:33

Instrument :

MSVOA\_L

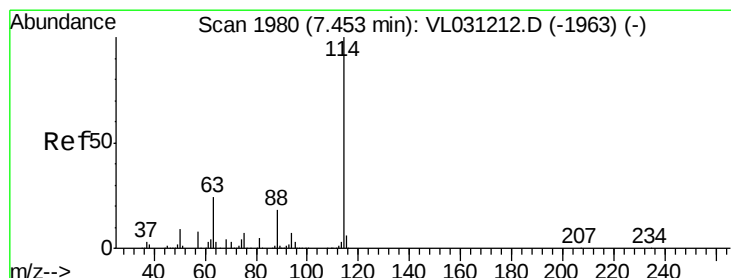
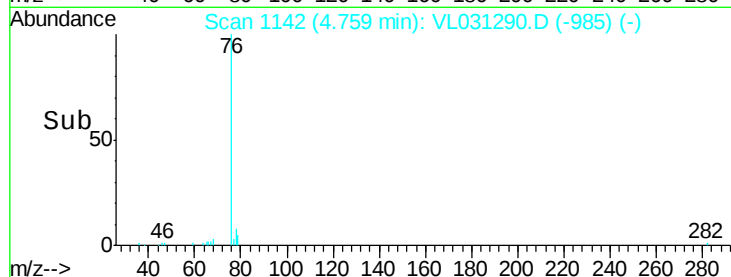
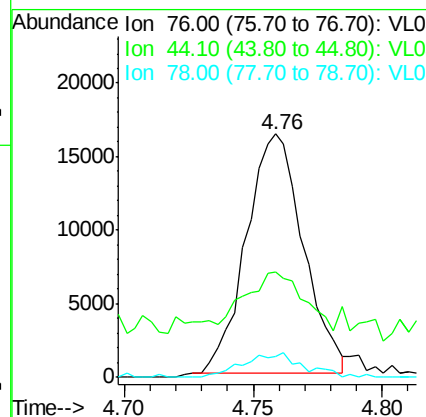
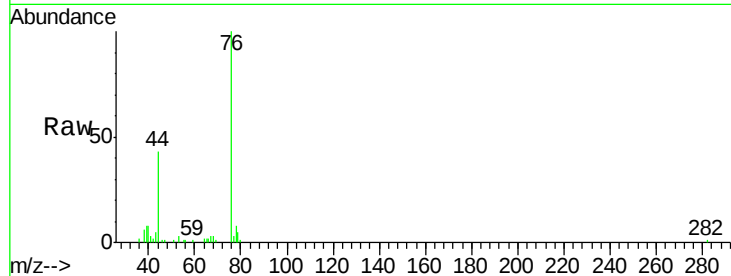
ClientSampleId :

EP1-SV-8DL

|           |       |       |       |
|-----------|-------|-------|-------|
| Tot Ion:  | 76    | Resp: | 25234 |
| Ion Ratio | Lower | Upper |       |
| 76        | 100   |       |       |
| 44        | 33.0  | 16.0  | 24.0# |
| 78        | 10.7  | 7.5   | 11.3  |

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#33

1,4-Difluorobenzene

Concen: 10.00 ppbv

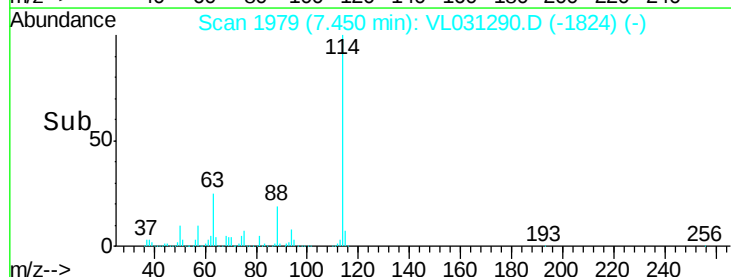
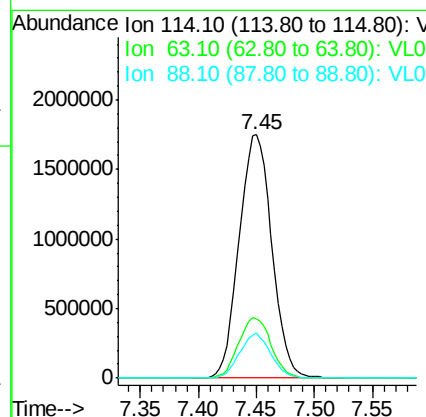
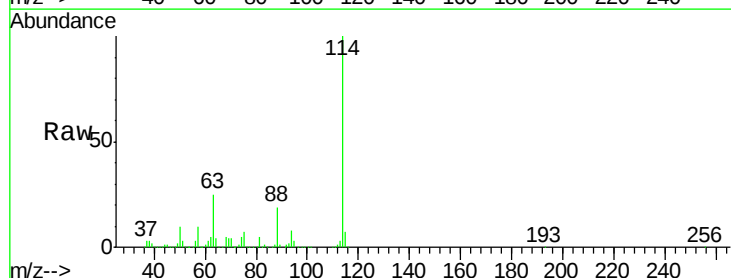
RT: 7.45 min Scan# 1979

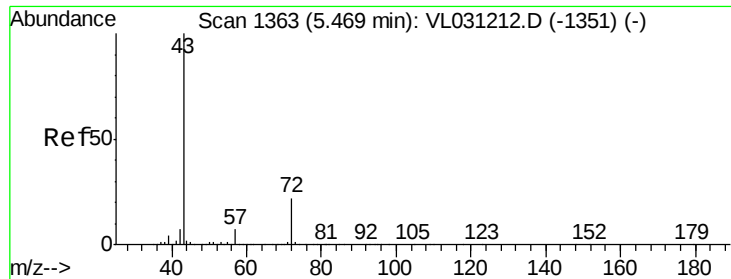
Delta R.T. -0.00 min

Lab File: VL031290.D

Acq: 21 Dec 2017 4:33

|           |       |       |         |
|-----------|-------|-------|---------|
| Tgt Ion:  | 114   | Resp: | 3435056 |
| Ion Ratio | Lower | Upper |         |
| 114       | 100   |       |         |
| 63        | 24.7  | 19.8  | 29.8    |
| 88        | 17.6  | 14.2  | 21.4    |





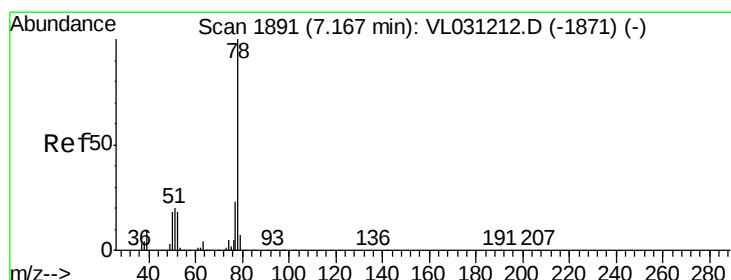
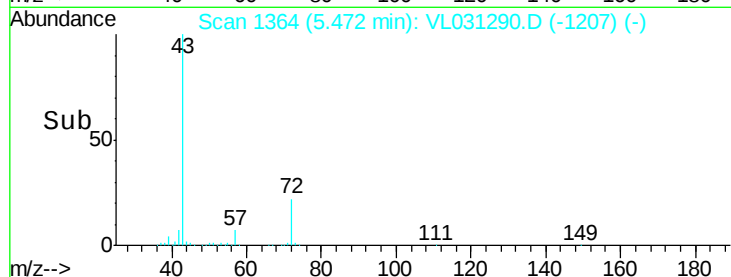
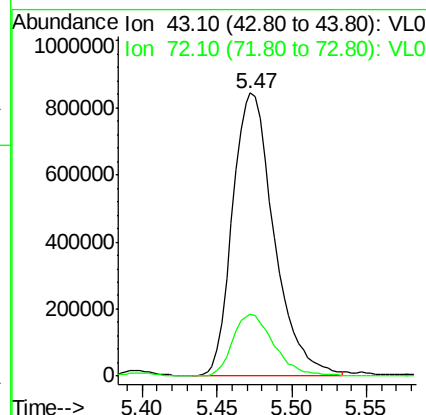
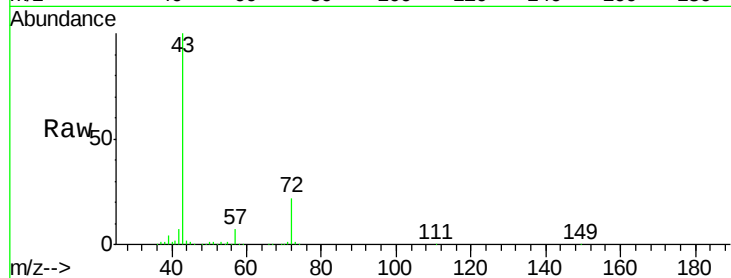
#34  
2-Butanone  
Concen: 6.70 ppbv  
RT: 5.47 min Scan# 1364  
Delta R.T. 0.00 min  
Lab File: VL031290.D  
Acq: 21 Dec 2017 4:33

Instrument :  
MSVOA\_L  
ClientSampleId :  
EP1-SV-8DL

Tot Ion: 43 Resp: 1625789  
Ion Ratio Lower Upper  
43 100  
72 21.9 18.1 27.1

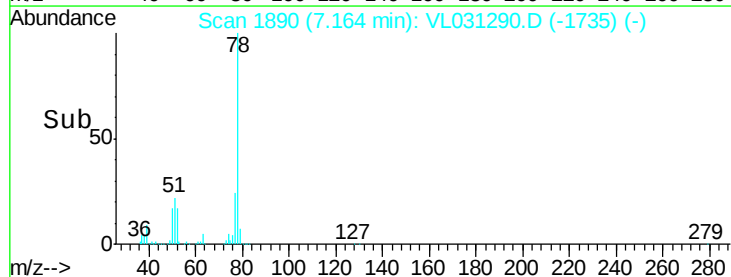
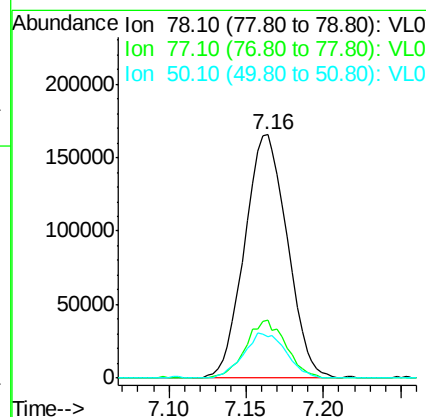
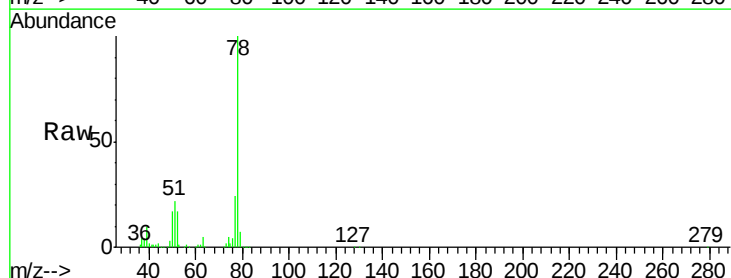
Manual Integrations  
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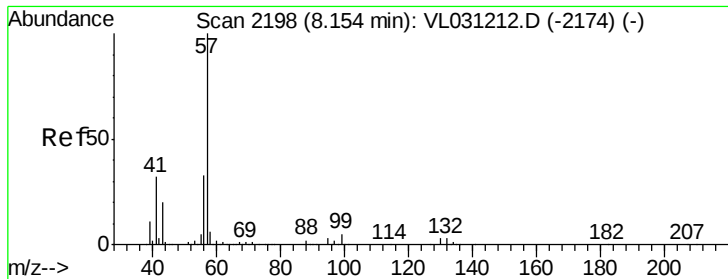
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12/22/2017 4:55:09 PM



#36  
Benzene  
Concen: 0.87 ppbv  
RT: 7.16 min Scan# 1890  
Delta R.T. -0.00 min  
Lab File: VL031290.D  
Acq: 21 Dec 2017 4:33

Tgt Ion: 78 Resp: 318407  
Ion Ratio Lower Upper  
78 100  
77 23.8 18.1 27.1  
50 16.7 14.6 21.8





#44

2,2,4-Trimethylpentane

Concen: 0.10 ppbv

RT: 8.15 min Scan# 2198

Delta R.T. 0.00 min

Lab File: VL031290.D

Acq: 21 Dec 2017 4:33

Instrument :

MSVOA\_L

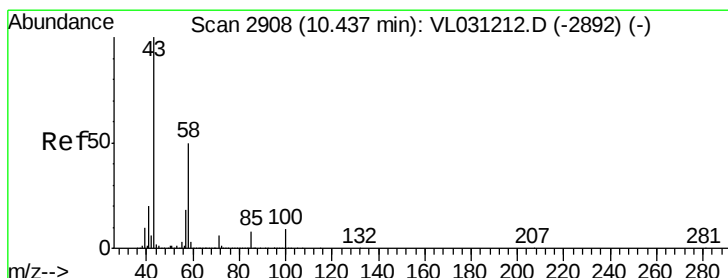
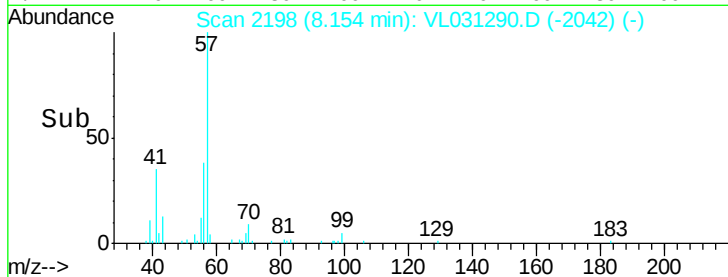
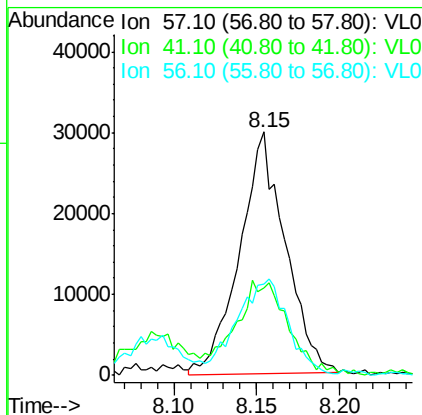
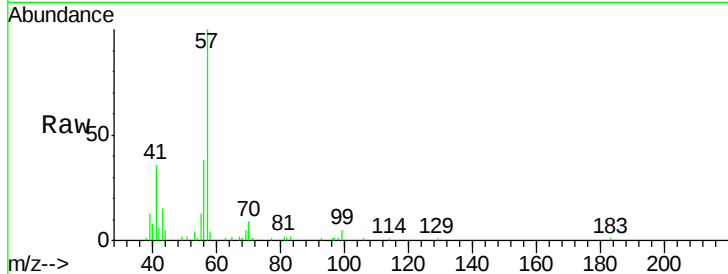
ClientSampleId :

EP1-SV-8DL

|           |       |       |       |
|-----------|-------|-------|-------|
| Tot Ion:  | 57    | Resp: | 56873 |
| Ion Ratio | Lower | Upper |       |
| 57        | 100   |       |       |
| 41        | 41.9  | 25.5  | 38.3# |
| 56        | 47.1  | 25.0  | 37.6# |

Manual Integrations  
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#51

2-Hexanone

Concen: 0.43 ppbv

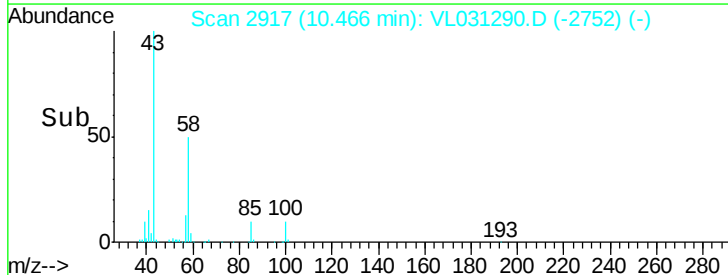
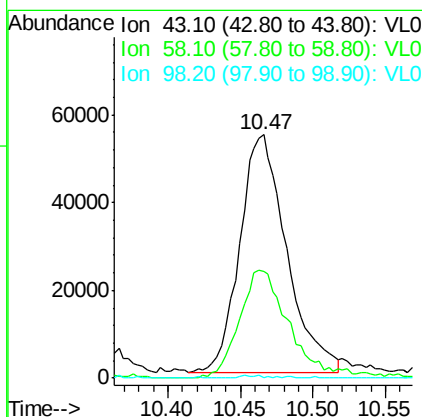
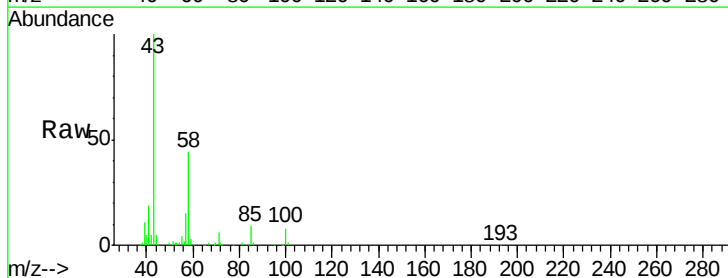
RT: 10.47 min Scan# 2917

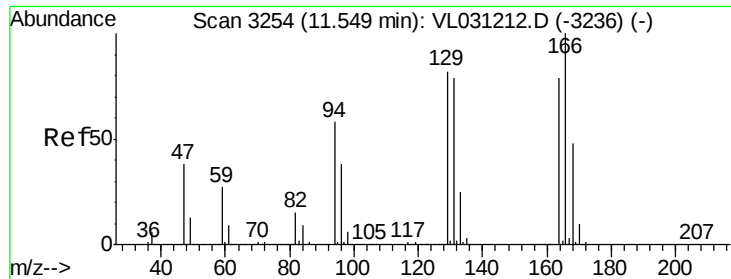
Delta R.T. 0.03 min

Lab File: VL031290.D

Acq: 21 Dec 2017 4:33

|           |       |       |        |
|-----------|-------|-------|--------|
| Tgt Ion:  | 43    | Resp: | 121315 |
| Ion Ratio | Lower | Upper |        |
| 43        | 100   |       |        |
| 58        | 50.5  | 39.8  | 59.6   |
| 98        | 0.7   | 0.0   | 0.0#   |





#52

Tetrachloroethene

Concen: 1.47 ppbv

RT: 11.55 min Scan# 3253

Delta R.T. -0.00 min

Lab File: VL031290.D

Acq: 21 Dec 2017 4:33

Instrument :

MSVOA\_L

ClientSampleId :

EP1-SV-8DL

Tot Ion:164 Resp: 196986

Ion Ratio Lower Upper

164 100

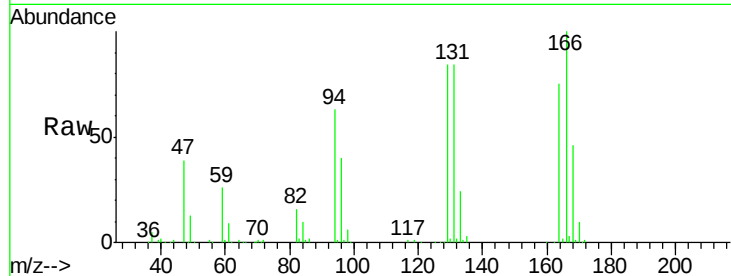
166 133.6 100.6 151.0

129 111.5 82.9 124.3

131 111.6 79.2 118.8

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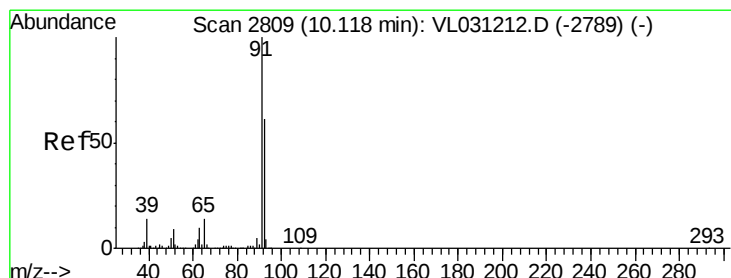
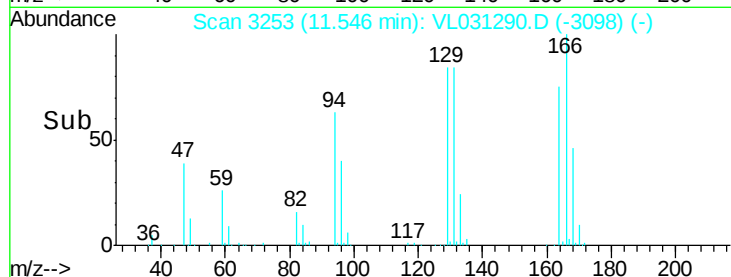
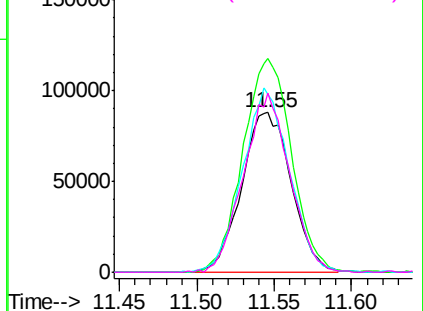


Abundance Ion 163.90 (163.60 to 164.60): V

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: 0.15 ppbv m

RT: 10.11 min Scan# 2807

Delta R.T. -0.01 min

Lab File: VL031290.D

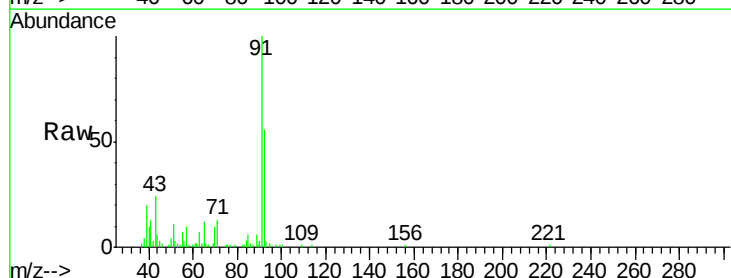
Acq: 21 Dec 2017 4:33

Tgt Ion: 91 Resp: 57327

Ion Ratio Lower Upper

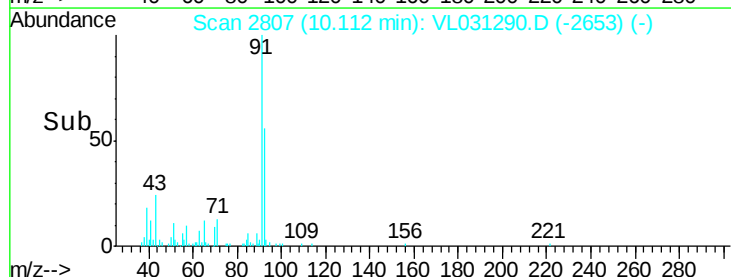
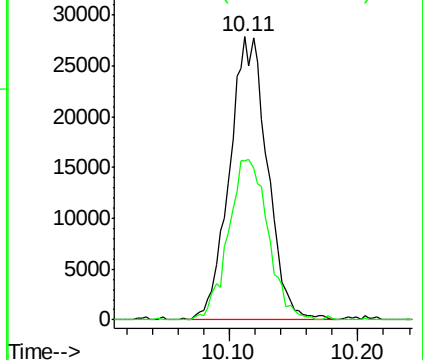
91 100

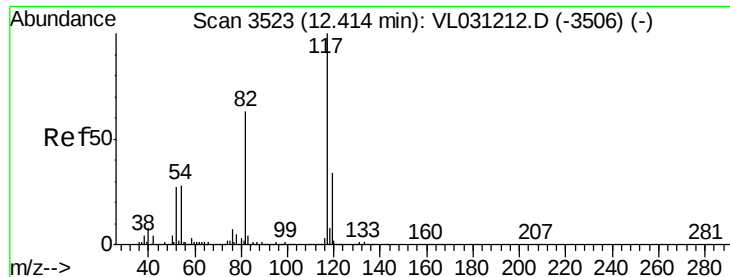
92 59.1 49.1 73.7



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: 12.41 min Scan# 3522

Delta R.T. -0.00 min

Lab File: VL031290.D

Acq: 21 Dec 2017 4:33

Instrument :

MSVOA\_L

ClientSampleId :

EP1-SV-8DL

Tot Ion:117 Resp: 3246656

Ion Ratio Lower Upper

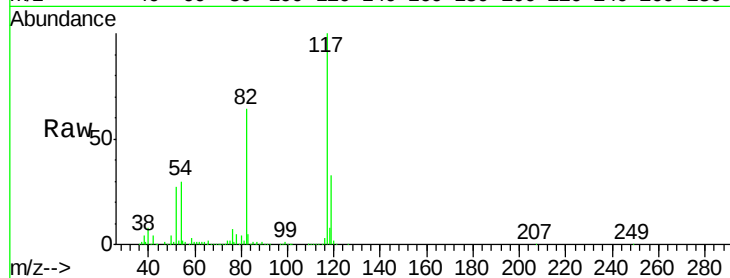
117 100

82 64.3 48.1 72.1

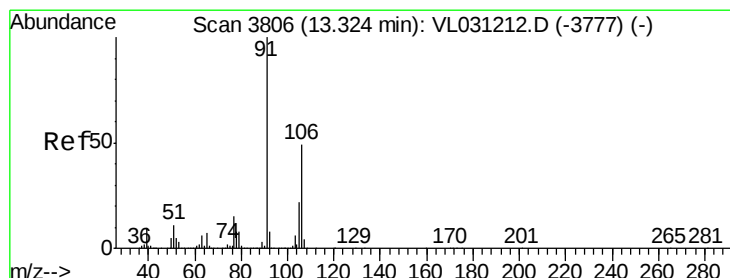
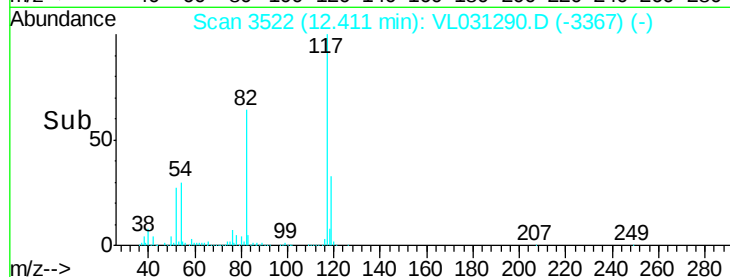
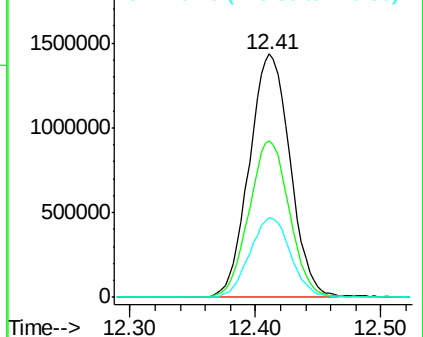
119 32.8 23.1 34.7

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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



#59

m/p-Xylene

Concen: 0.10 ppbv

RT: 13.29 min Scan# 3795

Delta R.T. -0.04 min

Lab File: VL031290.D

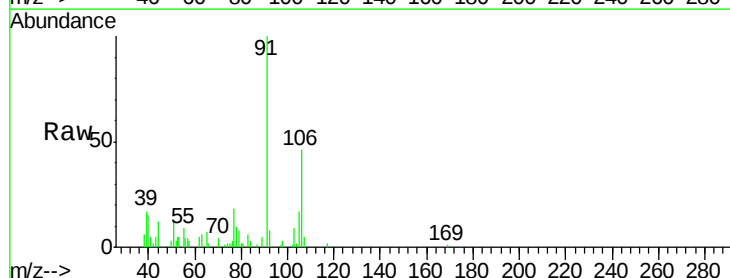
Acq: 21 Dec 2017 4:33

Tgt Ion: 91 Resp: 42996

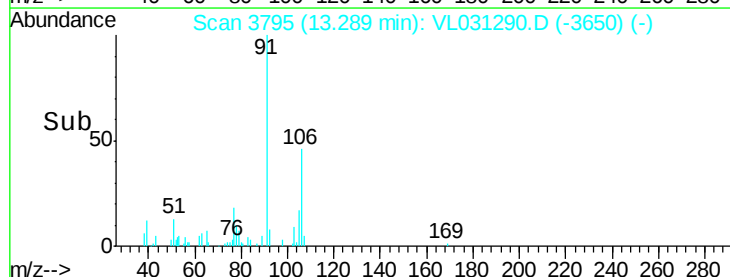
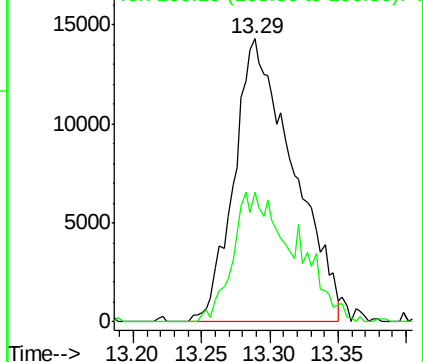
Ion Ratio Lower Upper

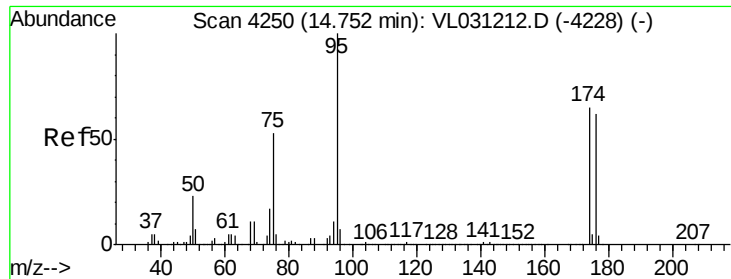
91 100

106 48.4 38.5 57.7



Abundance Ion 91.10 (90.80 to 91.80): VL0  
Ion 106.10 (105.80 to 106.80): V





#68  
 1-Bromo-4-Fluorobenzene  
 Concen: 11.17 ppbv  
 RT: 14.75 min Scan# 4249  
 Delta R.T. -0.00 min  
 Lab File: VL031290.D  
 Acq: 21 Dec 2017 4:33

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 EP1-SV-8DL

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 95      | 100   |       |       |
| 174     | 62.8  | 52.5  | 78.7  |
| 175     | 4.6   | 4.1   | 6.1   |

Manual Integrations  
 APPROVED

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 12/22/2017 4:55:09 PM

