

Data Path : Z:\VOASRV\HPCHEM1\MSVOA\_V\DATA\VV121918\  
 Data File : VV009052.D  
 Acq On : 19 Dec 2018 15:53  
 Operator : SY/MD  
 Sample : J6441-02  
 Misc : 5.61G/10ML/MSVOA\_V/SOIL  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_V  
 ClientSampleId :  
 BE7Z9

Manual Integrations  
 APPROVED

MMDadoda  
 12/20/2018 1:25:20 PM

Quant Time: Dec 20 03:04:14 2018

Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_V\METHOD\SOM2VLM120618S.M

Quant Title : VOC Analysis

QLast Update : Thu Dec 20 01:58:47 2018

Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) 1,4-Difluorobenzene     | 5.66  | 114  | 221695   | 25.00 | ug/L  | 0.00     |
| 28) Chlorobenzene-d5       | 8.90  | 117  | 174577   | 25.00 | ug/L  | 0.00     |
| 60) 1,4-Dichlorobenzene-d4 | 11.30 | 152  | 58403    | 25.00 | ug/L  | 0.00     |

#### System Monitoring Compounds

|                                |        |       |          |          |      |          |
|--------------------------------|--------|-------|----------|----------|------|----------|
| 4) Vinyl Chloride-d3           | 1.31   | 65    | 52047    | 22.69    | ug/L | 0.00     |
| Spiked Amount                  | 25.000 | Range | 30 - 150 | Recovery | =    | 90.76%   |
| 7) Chloroethane-d5             | 1.58   | 69    | 61978    | 36.57    | ug/L | 0.00     |
| Spiked Amount                  | 25.000 | Range | 30 - 150 | Recovery | =    | 146.28%  |
| 10) 1,1-Dichloroethene-d2      | 2.13   | 63    | 140433   | 24.48    | ug/L | 0.00     |
| Spiked Amount                  | 25.000 | Range | 45 - 110 | Recovery | =    | 97.92%   |
| 20) 2-Butanone-d5              | 3.93   | 46    | 35138    | 42.07    | ug/L | 0.00     |
| Spiked Amount                  | 50.000 | Range | 20 - 135 | Recovery | =    | 84.14%   |
| 24) Chloroform-d               | 4.40   | 84    | 34559    | 6.48     | ug/L | 0.00     |
| Spiked Amount                  | 25.000 | Range | 40 - 150 | Recovery | =    | 25.92%#  |
| 26) 1,2-Dichloroethane-d4      | 5.08   | 65    | 85118    | 29.27    | ug/L | 0.00     |
| Spiked Amount                  | 25.000 | Range | 70 - 130 | Recovery | =    | 117.08%  |
| 29) Benzene-d6                 | 5.10   | 84    | 286529   | 29.39    | ug/L | 0.00     |
| Spiked Amount                  | 25.000 | Range | 20 - 135 | Recovery | =    | 117.56%  |
| 33) 1,2-Dichloropropane-d6     | 6.12   | 67    | 88798    | 32.53    | ug/L | 0.00     |
| Spiked Amount                  | 25.000 | Range | 70 - 120 | Recovery | =    | 130.12%# |
| 37) Toluene-d8                 | 7.36   | 98    | 239307   | 26.52    | ug/L | 0.00     |
| Spiked Amount                  | 25.000 | Range | 30 - 130 | Recovery | =    | 106.08%  |
| 38) trans-1,3-Dichloropropene- | 7.66   | 79    | 21327    | 17.78    | ug/L | 0.00     |
| Spiked Amount                  | 25.000 | Range | 30 - 135 | Recovery | =    | 71.12%   |
| 39) 2-Hexanone-d5              | 8.14   | 63    | 21050    | 42.09    | ug/L | 0.00     |
| Spiked Amount                  | 50.000 | Range | 20 - 135 | Recovery | =    | 84.18%   |
| 48) 1,1,2,2-Tetrachloroethane- | 10.29  | 84    | 11755m   | 5.13     | ug/L | 0.03     |
| Spiked Amount                  | 25.000 | Range | 45 - 120 | Recovery | =    | 20.52%#  |
| 61) 1,2-Dichlorobenzene-d4     | 11.67  | 152   | 57031    | 26.02    | ug/L | 0.00     |
| Spiked Amount                  | 25.000 | Range | 75 - 120 | Recovery | =    | 104.08%  |

#### Target Compounds

|                         |       |     |         |         | Qvalue    |
|-------------------------|-------|-----|---------|---------|-----------|
| 13) Acetone             | 2.19  | 43  | 40508   | 32.917  | ug/L 97   |
| 14) Carbon disulfide    | 2.32  | 76  | 49276   | 5.370   | ug/L 98   |
| 16) Methylene chloride  | 2.53  | 84  | 19421   | 5.202   | ug/L 98   |
| 21) 2-Butanone          | 4.03  | 43  | 3837    | 3.327   | ug/L 82   |
| 25) Chloroform          | 4.43  | 83  | 113531  | 21.132  | ug/L 99   |
| 30) Cyclohexane         | 4.72  | 56  | 27708   | 6.303   | ug/L 99   |
| 34) Benzene             | 5.15  | 78  | 1094472 | 104.640 | ug/L 100  |
| 35) Trichloroethene     | 5.96  | 95  | 5296    | 1.680   | ug/L # 82 |
| 36) Methylcyclohexane   | 6.18  | 83  | 2776    | 0.552   | ug/L 94   |
| 44) Toluene             | 7.43  | 91  | 16486   | 1.503   | ug/L 98   |
| 47) Tetrachloroethene   | 8.02  | 164 | 1249    | 0.487   | ug/L 88   |
| 52) Chlorobenzene       | 8.93  | 112 | 15327   | 2.146   | ug/L 96   |
| 53) Ethylbenzene        | 9.06  | 91  | 97160   | 8.165   | ug/L 99   |
| 54) m,p-Xylene          | 9.18  | 106 | 19752   | 4.384   | ug/L 99   |
| 55) o-xylene            | 9.59  | 106 | 50857   | 12.148  | ug/L 97   |
| 57) Isopropylbenzene    | 9.98  | 105 | 113955  | 10.015  | ug/L 99   |
| 64) 1,4-Dichlorobenzene | 11.32 | 146 | 3831    | 0.989   | ug/L # 64 |

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Misc : 5.61G/10ML/MSVOA\_V/SOIL  
ALS Vial : 1 Sample Multiplier: 1

Instrument :  
MSVOA\_V  
ClientSampleId :  
BE7Z9

Manual Integrations  
APPROVED

MMDadoda  
12/20/2018 1:25:20 PM

Quant Time: Dec 20 03:04:14 2018  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_V\METHOD\SOM2VLM120618S.M  
Quant Title : VOC Analysis  
QLast Update : Thu Dec 20 01:58:47 2018  
Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units  | Dev(Min) |
|-------------------------|-------|------|----------|-------|--------|----------|
| 65) 1,2-Dichlorobenzene | 11.69 | 146  | 7086     | 2.042 | ug/L # | 83       |

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

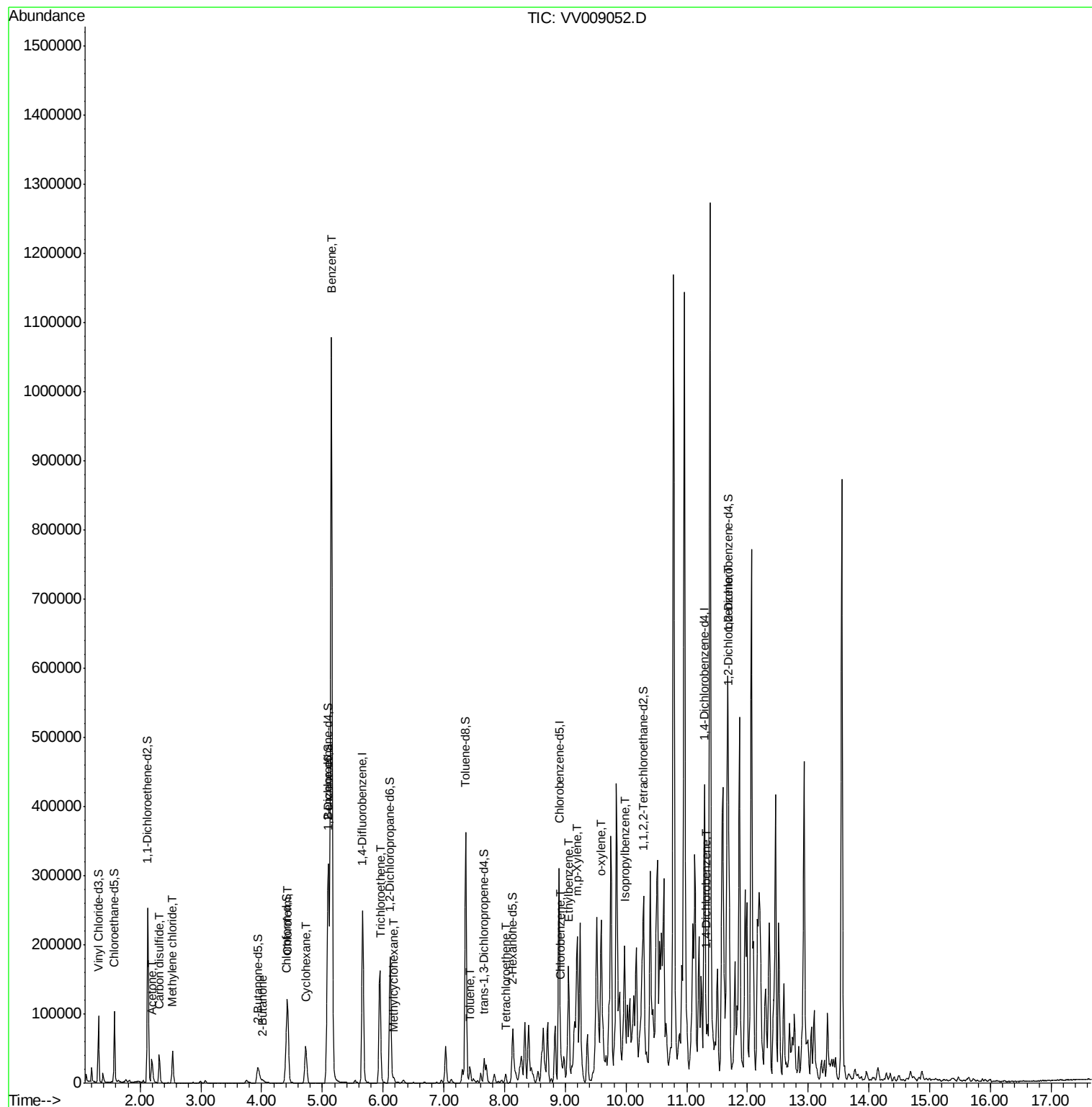
Data Path : Z:\V0ASRV\HPCHEM1\MSVOA\_V\DATA\VV121918\  
Data File : VV009052.D  
Acq On : 19 Dec 2018 15:53  
Operator : SY/MD  
Sample : J6441-02  
Misc : 5.61G/10ML/MSVOA\_V/SOIL  
ALS Vial : 1 Sample Multiplier: 1

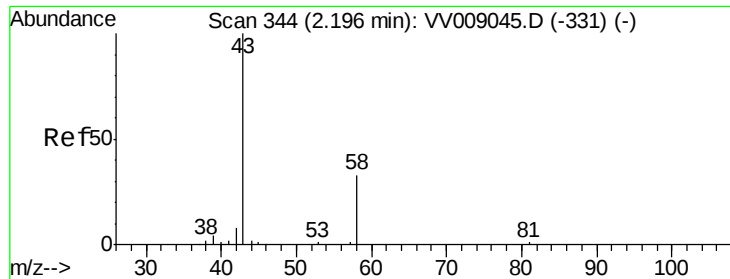
Instrument :  
MSVOA\_V  
ClientSampleId :  
BE7Z9

Manual Integrations  
APPROVED

MMDadoda  
12/20/2018 1:25:20 PM

Quant Time: Dec 20 03:04:14 2018  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA\_V\METHOD\SOM2VLM120618S.M  
Quant Title : VOC Analysis  
QLast Update : Thu Dec 20 01:58:47 2018  
Response via : Initial Calibration





#13

Acetone

Concen: 32.917 ug/L

RT: 2.19 min Scan# 343

Delta R.T. -0.00 min

Lab File: VV009052.D

Acq: 19 Dec 2018 15:53

Instrument :

MSVOA\_V

ClientSampleId :

BE7Z9

Tgt Ion: 43 Resp: 40508

Ion Ratio Lower Upper

43 100

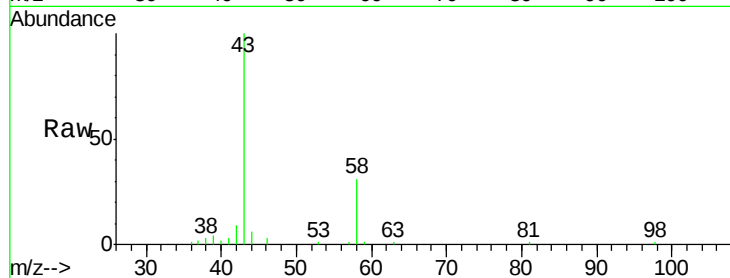
58 30.9 0.0 65.4

Manual Integrations

APPROVED

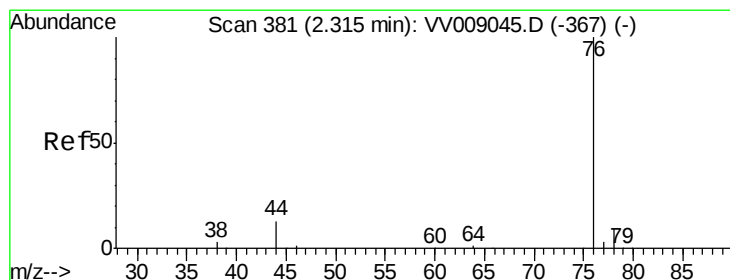
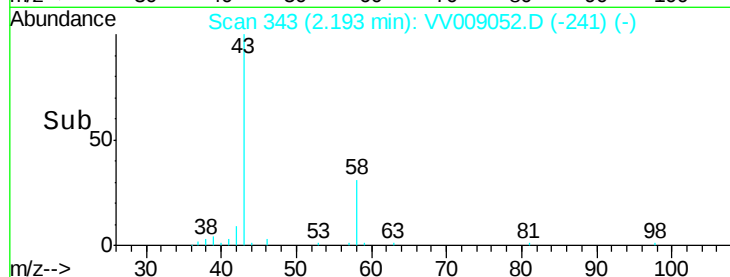
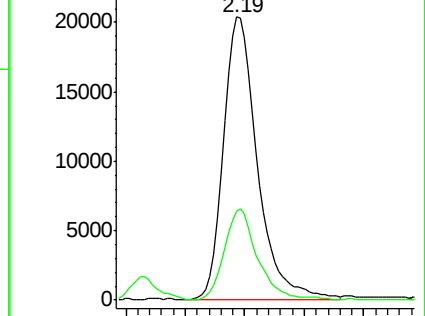
MMDadoda

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Abundance Ion 43.00 (42.70 to 43.70): VV0

Ion 58.00 (57.70 to 58.70): VV0



#14

Carbon disulfide

Concen: 5.370 ug/L

RT: 2.32 min Scan# 381

Delta R.T. -0.00 min

Lab File: VV009052.D

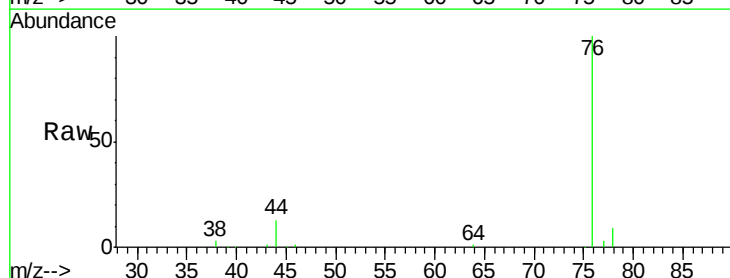
Acq: 19 Dec 2018 15:53

Tgt Ion: 76 Resp: 49276

Ion Ratio Lower Upper

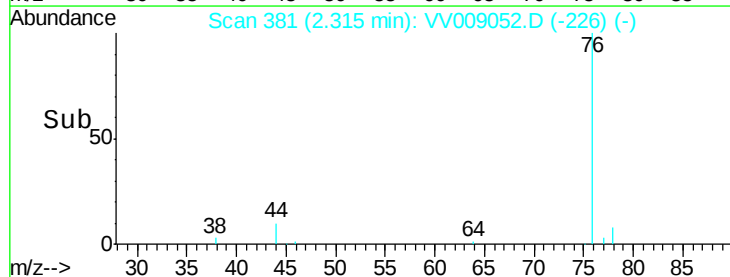
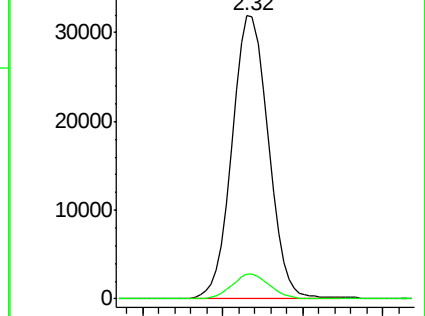
76 100

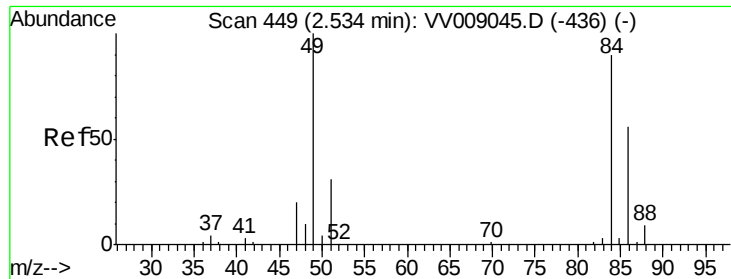
78 8.6 7.4 11.0



Abundance Ion 76.00 (75.70 to 76.70): VV0

Ion 78.00 (77.70 to 78.70): VV0





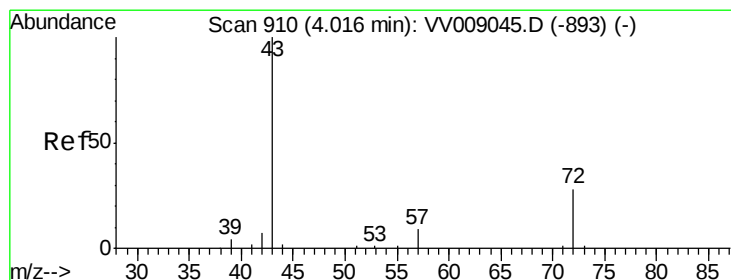
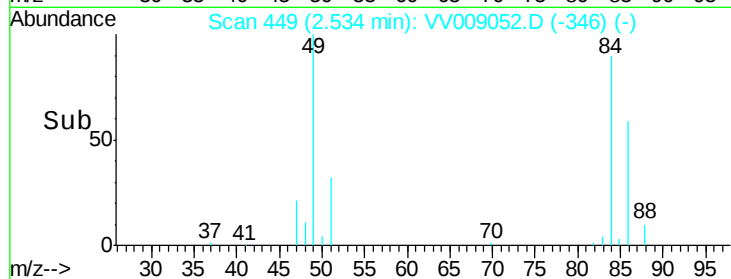
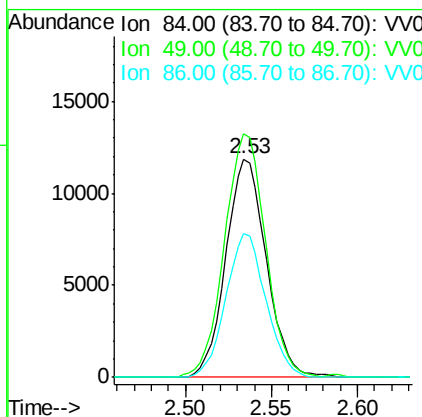
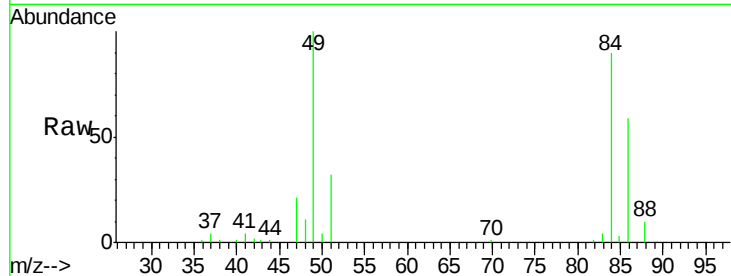
#16  
Methylene chloride  
Concen: 5.202 ug/L  
RT: 2.53 min Scan# 449  
Delta R.T. -0.00 min  
Lab File: VV009052.D  
Acq: 19 Dec 2018 15:53

Instrument :  
MSVOA\_V  
ClientSampleId :  
BE7Z9

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 84      | 100   |       |       |
| 49      | 111.6 | 80.5  | 149.5 |
| 86      | 66.0  | 45.5  | 84.5  |

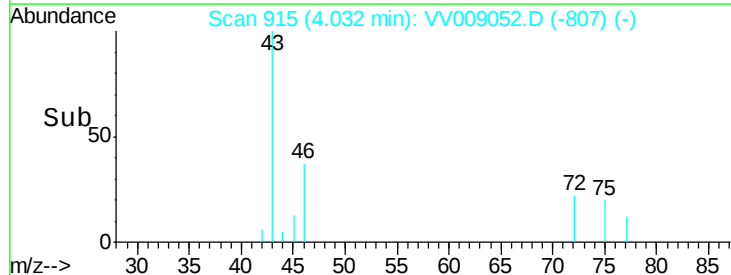
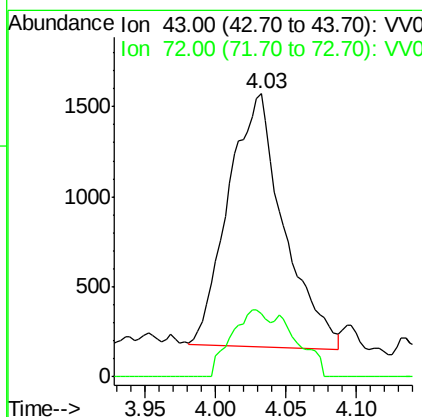
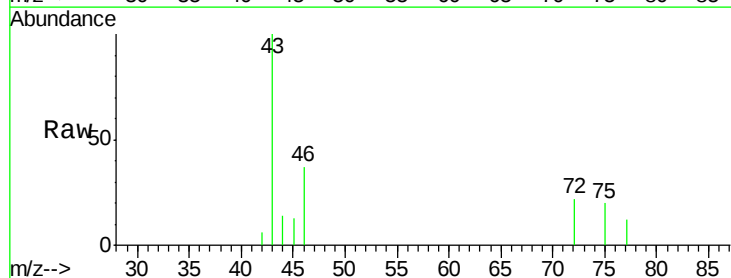
Manual Integrations  
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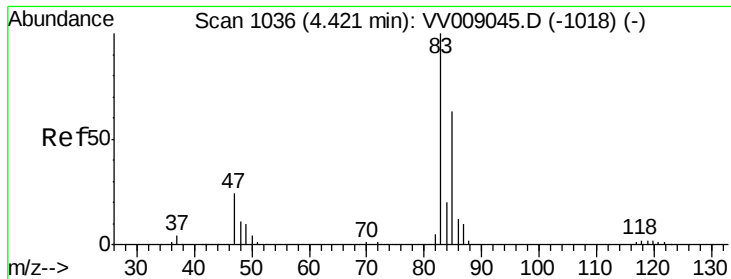
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#21  
2-Butanone  
Concen: 3.327 ug/L  
RT: 4.03 min Scan# 915  
Delta R.T. 0.02 min  
Lab File: VV009052.D  
Acq: 19 Dec 2018 15:53

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 43      | 100   |       |       |
| 72      | 17.9  | 13.7  | 41.1  |





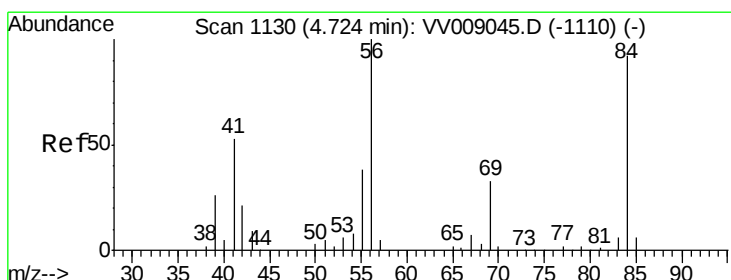
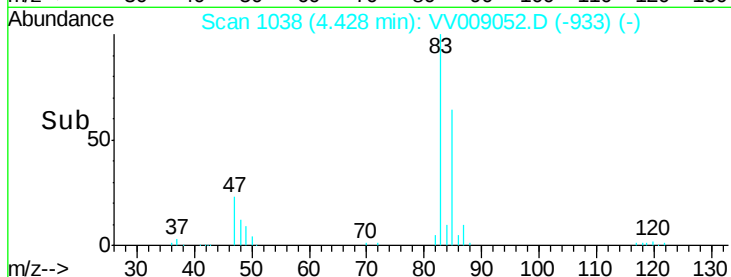
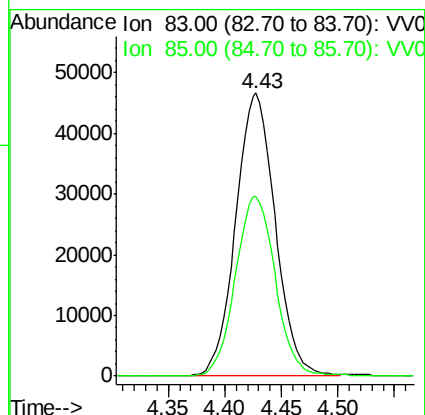
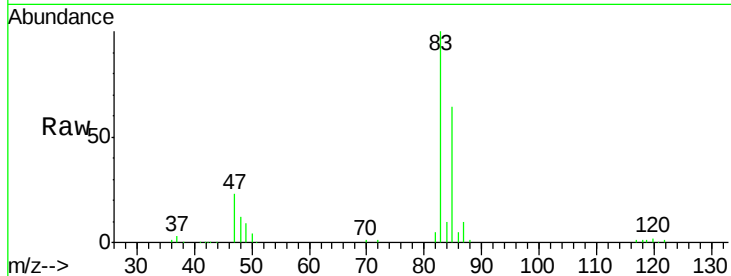
#25  
Chloroform  
Concen: 21.132 ug/L  
RT: 4.43 min Scan# 1038  
Delta R.T. 0.01 min  
Lab File: VV009052.D  
Acq: 19 Dec 2018 15:53

Instrument :  
MSVOA\_V  
ClientSampleId :  
BE7Z9

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 83      | 100   |       |       |
| 85      | 64.2  | 45.6  | 84.8  |

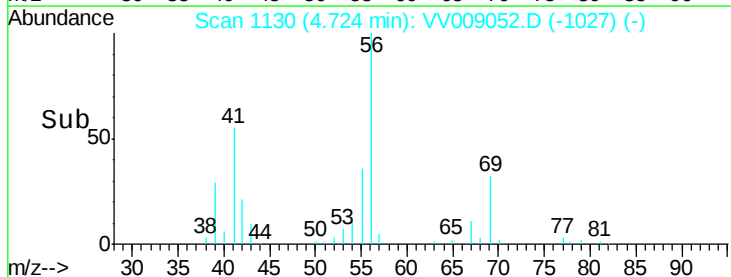
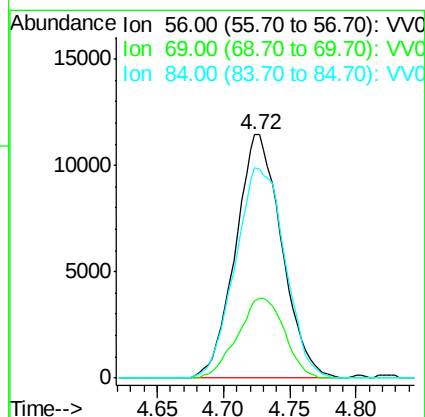
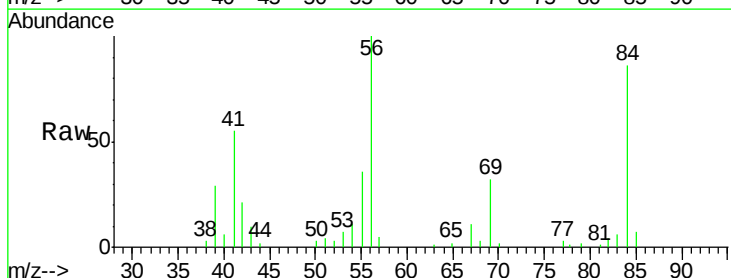
Manual Integrations  
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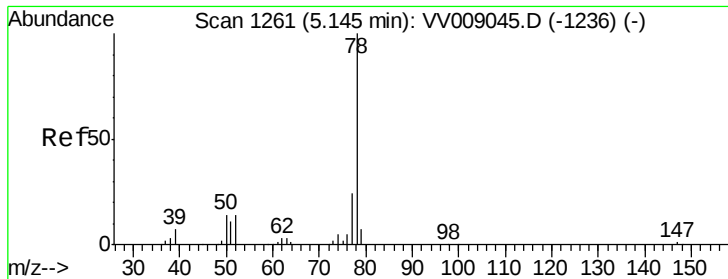
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12/20/2018 1:25:20 PM



#30  
Cyclohexane  
Concen: 6.303 ug/L  
RT: 4.72 min Scan# 1130  
Delta R.T. -0.00 min  
Lab File: VV009052.D  
Acq: 19 Dec 2018 15:53

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 56      | 100   |       |       |
| 69      | 33.1  | 25.8  | 38.8  |
| 84      | 92.6  | 73.0  | 109.6 |





#34

Benzene

Concen: 104.640 ug/L

RT: 5.15 min Scan# 1262

Delta R.T. 0.00 min

Lab File: VV009052.D

Acq: 19 Dec 2018 15:53

Instrument :

MSVOA\_V

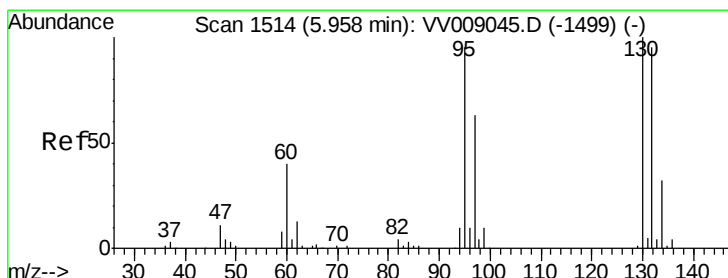
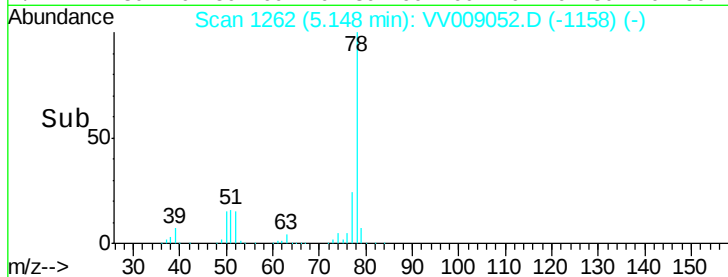
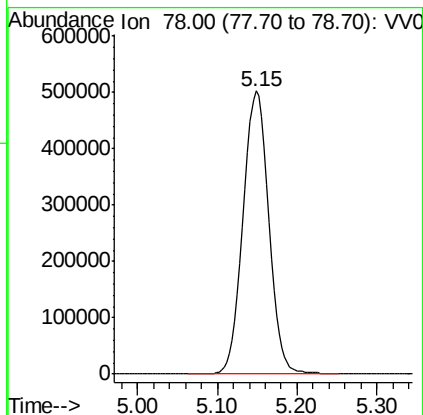
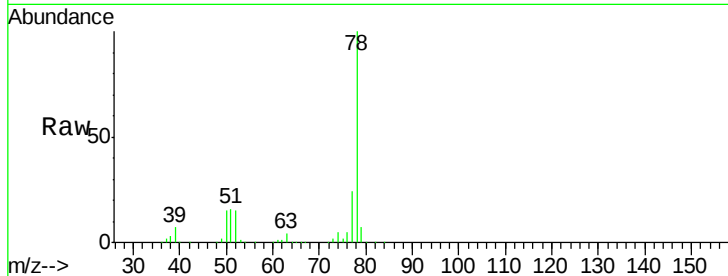
ClientSampleId :

BE7Z9

Tgt Ion: 78 Resp: 1094472

Manual Integrations  
APPROVED

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12/20/2018 1:25:20 PM



#35

Trichloroethene

Concen: 1.680 ug/L

RT: 5.96 min Scan# 1515

Delta R.T. 0.00 min

Lab File: VV009052.D

Acq: 19 Dec 2018 15:53

Tgt Ion: 95 Resp: 5296

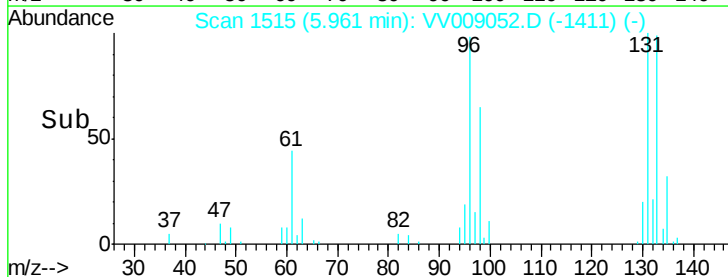
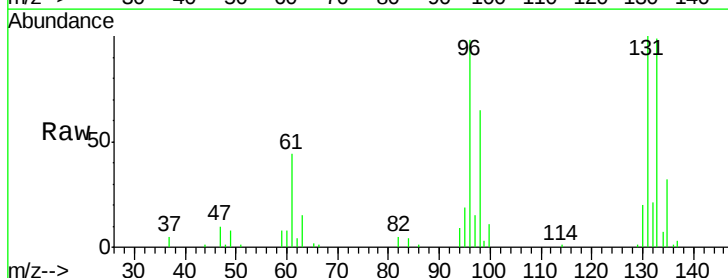
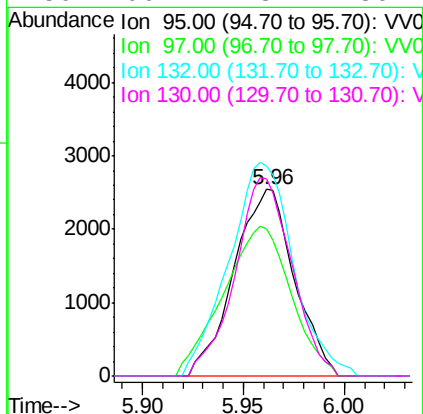
Ion Ratio Lower Upper

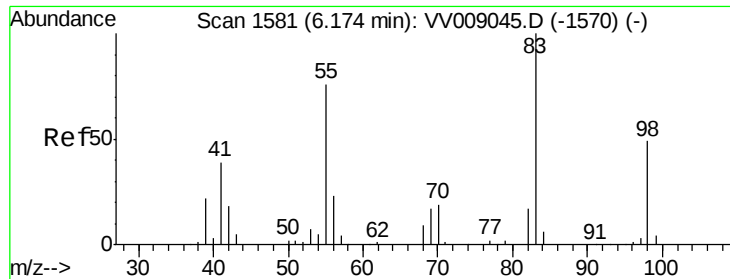
95 100

97 89.9 45.3 84.1#

132 122.7 70.0 130.0

130 100.1 73.4 136.4





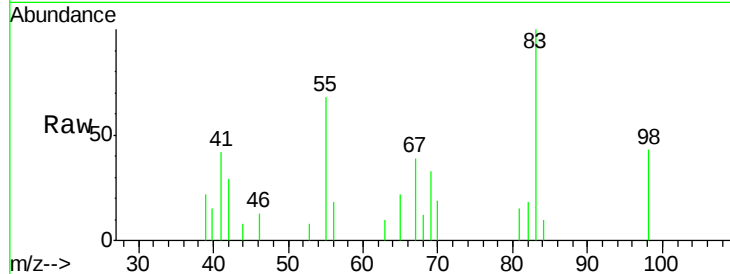
#36  
Methylcyclohexane  
Concen: 0.552 ug/L  
RT: 6.18 min Scan# 1583  
Delta R.T. 0.01 min  
Lab File: VV009052.D  
Acq: 19 Dec 2018 15:53

Instrument :  
MSVOA\_V  
ClientSampleID :  
BE7Z9

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 83      | 100   |       |       |
| 55      | 77.5  | 58.2  | 87.2  |
| 98      | 42.7  | 37.8  | 56.8  |

Manual Integrations  
APPROVED

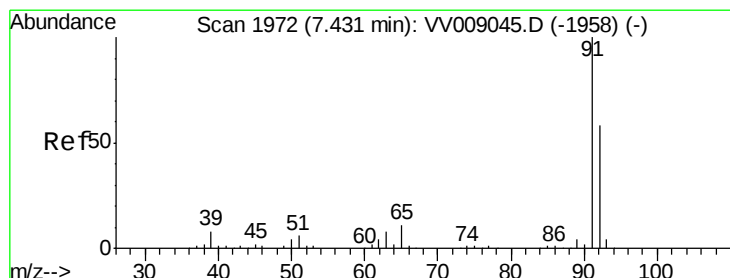
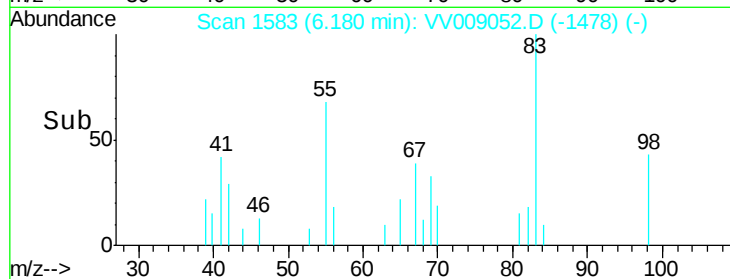
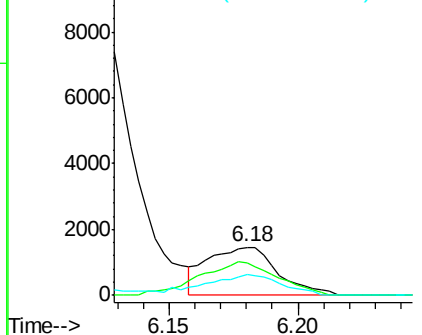
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12/20/2018 1:25:20 PM



Abundance Ion 83.00 (82.70 to 83.70): VV009045.D (-1570) (-)

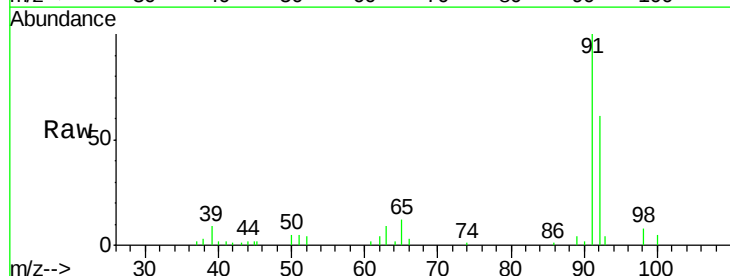
Ion 55.00 (54.70 to 55.70): VV009045.D (-1570) (-)

Ion 98.00 (97.70 to 98.70): VV009045.D (-1570) (-)



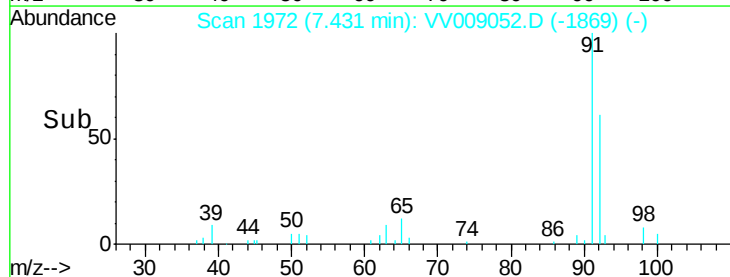
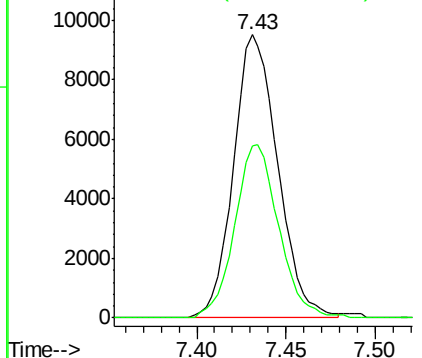
#44  
Toluene  
Concen: 1.503 ug/L  
RT: 7.43 min Scan# 1972  
Delta R.T. -0.00 min  
Lab File: VV009052.D  
Acq: 19 Dec 2018 15:53

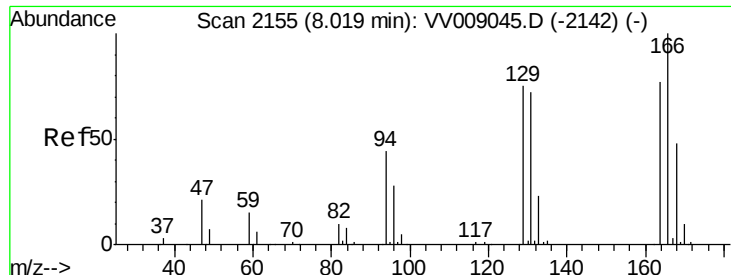
| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 91      | 100   |       |       |
| 92      | 61.0  | 41.7  | 77.5  |



Abundance Ion 91.00 (90.70 to 91.70): VV009045.D (-1958) (-)

Ion 92.00 (91.70 to 92.70): VV009045.D (-1958) (-)





#47

Tetrachloroethene

Concen: 0.487 ug/L

RT: 8.02 min Scan# 2155

Delta R.T. -0.00 min

Lab File: VV009052.D

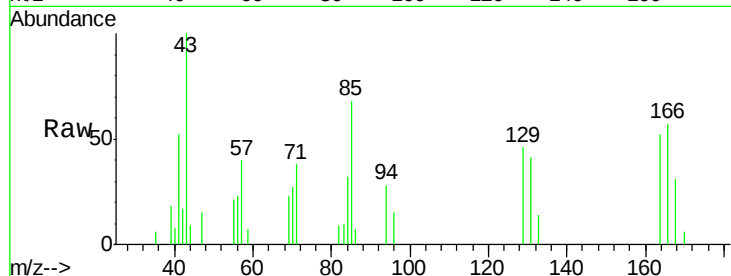
Acq: 19 Dec 2018 15:53

Instrument :

MSVOA\_V

ClientSampled :

BE7Z9



Tgt Ion:164 Resp: 1249

Ion Ratio Lower Upper

164 100

129 87.4 64.6 120.0

131 77.3 64.5 119.7

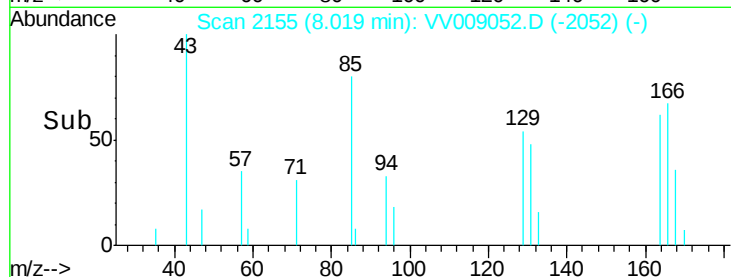
166 108.9 88.7 164.7

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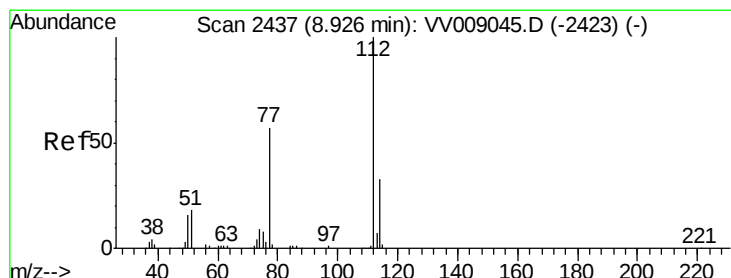
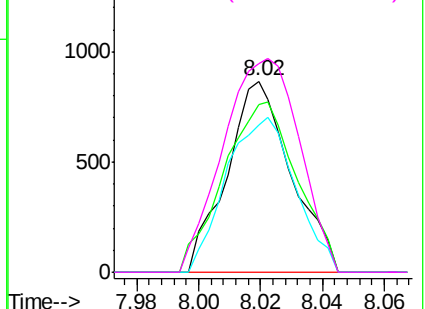


Abundance Ion 164.00 (163.70 to 164.70): V

Ion 129.00 (128.70 to 129.70): V

Ion 131.00 (130.70 to 131.70): V

Ion 166.00 (165.70 to 166.70): V



#52

Chlorobenzene

Concen: 2.146 ug/L

RT: 8.93 min Scan# 2437

Delta R.T. -0.00 min

Lab File: VV009052.D

Acq: 19 Dec 2018 15:53

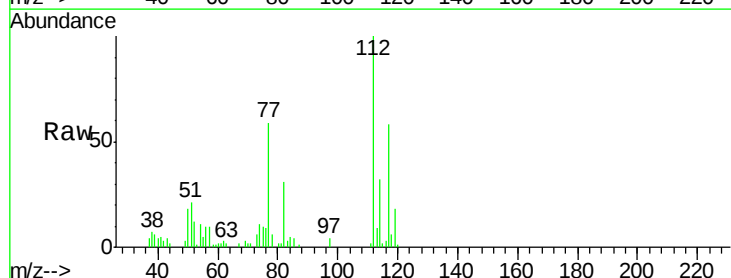
Tgt Ion:112 Resp: 15327

Ion Ratio Lower Upper

112 100

77 59.4 44.6 66.8

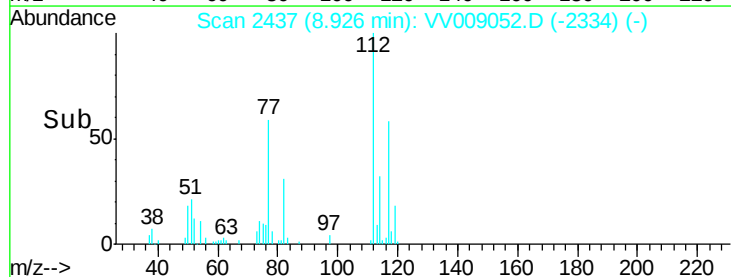
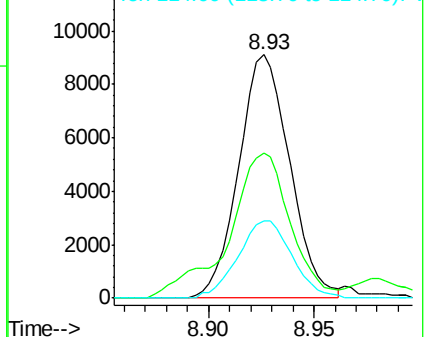
114 31.9 22.6 42.0

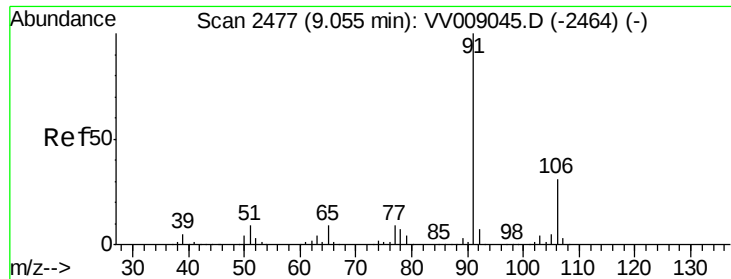


Abundance Ion 112.00 (111.70 to 112.70): V

Ion 77.00 (76.70 to 77.70): VV0

Ion 114.00 (113.70 to 114.70): V





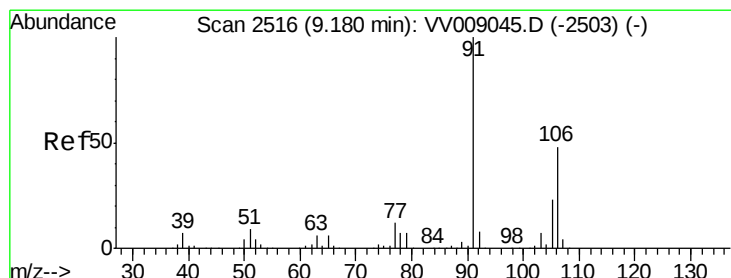
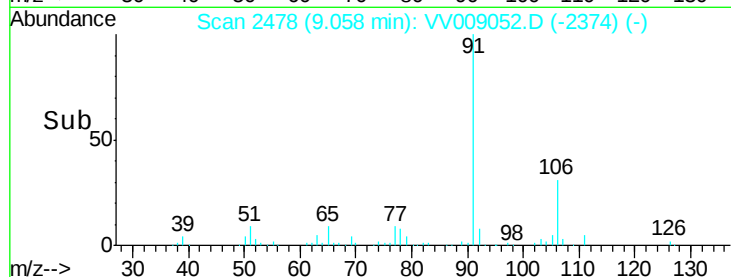
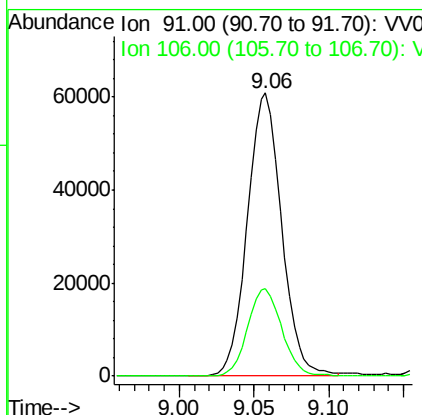
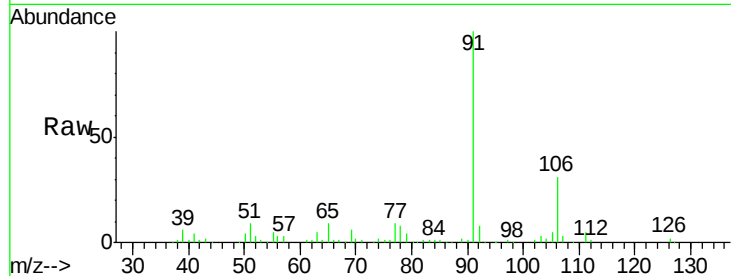
#53  
Ethylbenzene  
Concen: 8.165 ug/L  
RT: 9.06 min Scan# 2478  
Delta R.T. 0.00 min  
Lab File: VV009052.D  
Acq: 19 Dec 2018 15:53

Instrument :  
MSVOA\_V  
ClientSampleId :  
BE7Z9

Tgt Ion: 91 Resp: 97160  
Ion Ratio Lower Upper  
91 100  
106 30.9 21.3 39.5

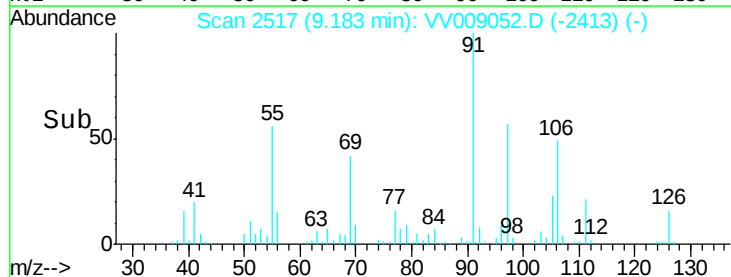
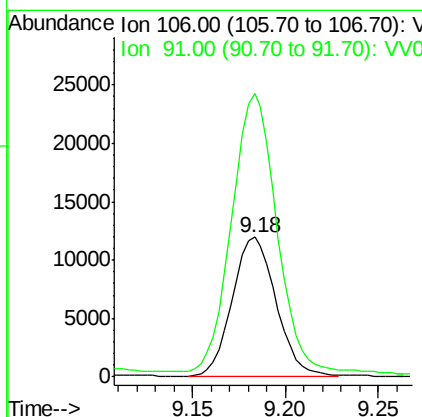
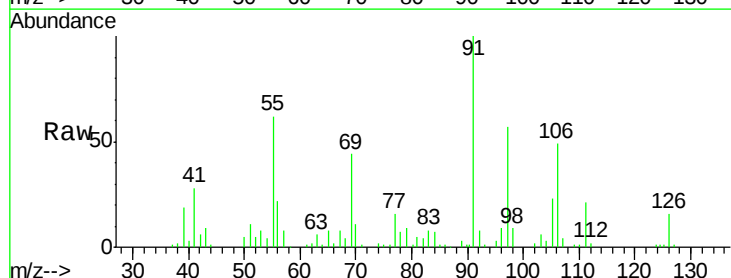
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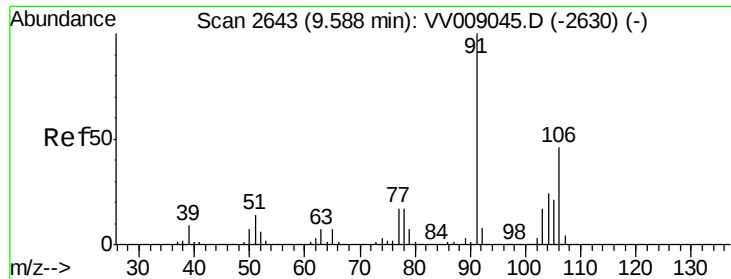
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#54  
m,p-Xylene  
Concen: 4.384 ug/L  
RT: 9.18 min Scan# 2517  
Delta R.T. 0.00 min  
Lab File: VV009052.D  
Acq: 19 Dec 2018 15:53

Tgt Ion: 106 Resp: 19752  
Ion Ratio Lower Upper  
106 100  
91 203.1 141.3 262.3





#55

o-xylene

Concen: 12.148 ug/L

RT: 9.59 min Scan# 2643

Delta R.T. -0.00 min

Lab File: VV009052.D

Acq: 19 Dec 2018 15:53

Instrument :

MSVOA\_V

ClientSampled :

BE7Z9

Tgt Ion:106 Resp: 50857

Ion Ratio Lower Upper

106 100

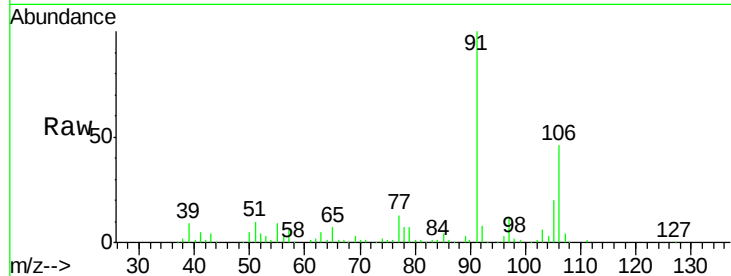
91 217.3 148.3 275.5

Manual Integrations

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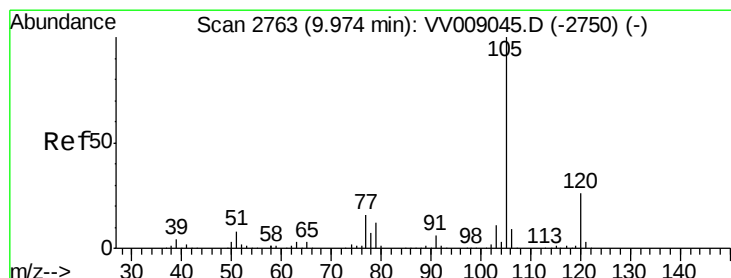
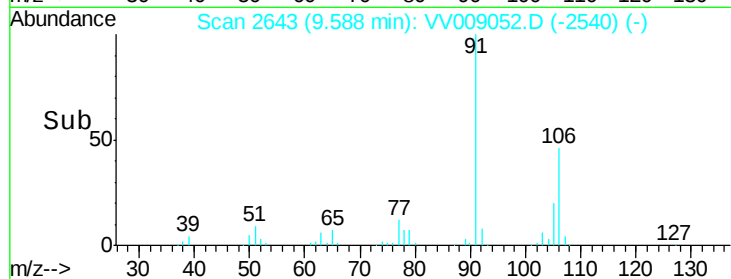
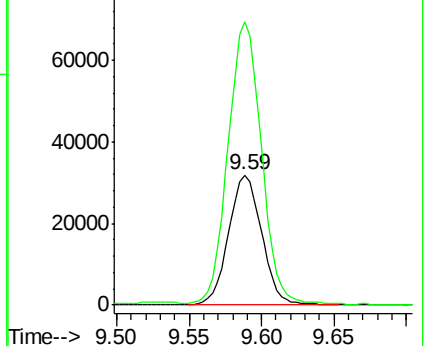
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Abundance Ion 106.00 (105.70 to 106.70): V

Ion 91.00 (90.70 to 91.70): VV0



#57

Isopropylbenzene

Concen: 10.015 ug/L

RT: 9.98 min Scan# 2764

Delta R.T. 0.00 min

Lab File: VV009052.D

Acq: 19 Dec 2018 15:53

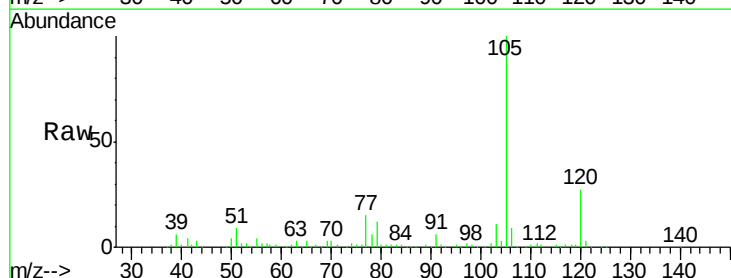
Tgt Ion:105 Resp: 113955

Ion Ratio Lower Upper

105 100

120 26.1 21.7 32.5

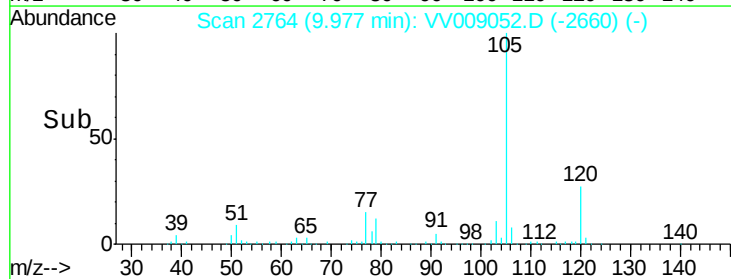
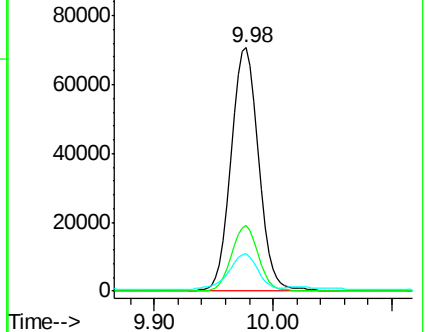
77 15.7 12.4 18.6

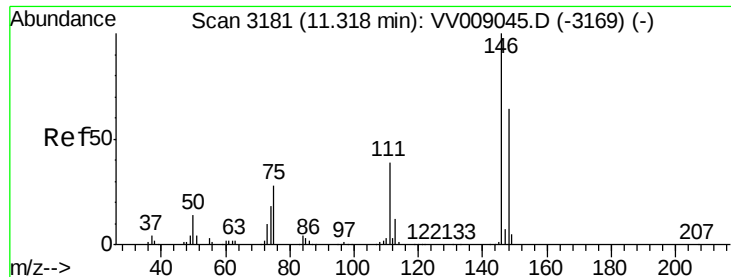


Abundance Ion 105.00 (104.70 to 105.70): V

Ion 120.00 (119.70 to 120.70): V

Ion 77.00 (76.70 to 77.70): VV0





#64

1,4-Dichlorobenzene

Concen: 0.989 ug/L

RT: 11.32 min Scan# 3182

Delta R.T. 0.00 min

Lab File: VV009052.D

Acq: 19 Dec 2018 15:53

Instrument :

MSVOA\_V

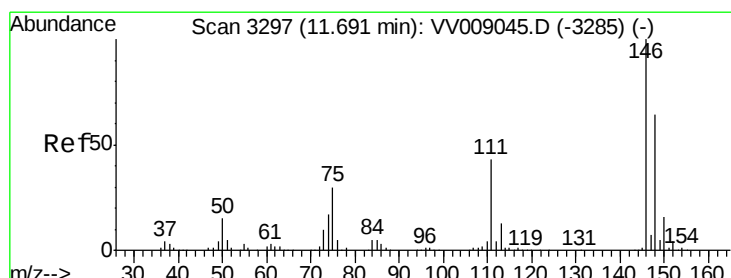
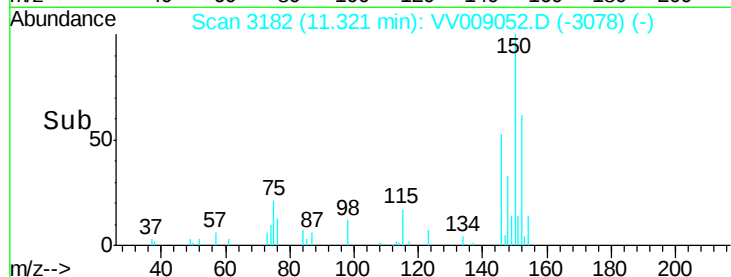
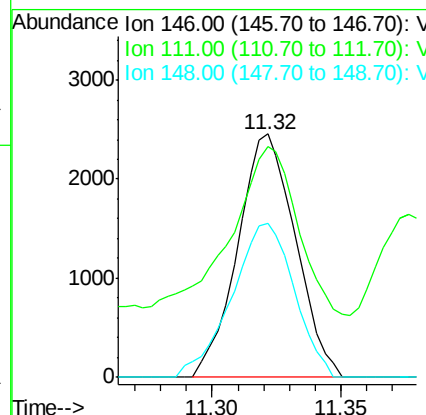
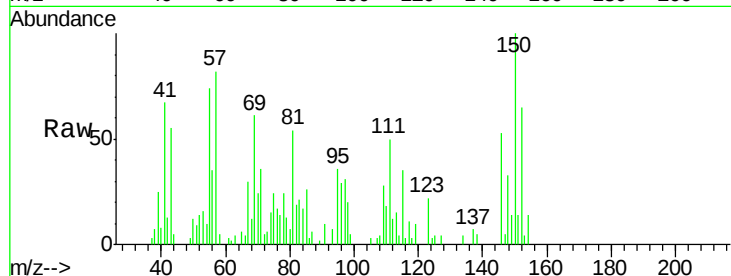
ClientSampled :

BE7Z9

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 146     | 100   |       |       |
| 111     | 95.0  | 26.8  | 49.8# |
| 148     | 63.1  | 45.8  | 85.0  |

Manual Integrations  
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#65

1,2-Dichlorobenzene

Concen: 2.042 ug/L

RT: 11.69 min Scan# 3297

Delta R.T. -0.00 min

Lab File: VV009052.D

Acq: 19 Dec 2018 15:53

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 146     | 100   |       |       |
| 111     | 60.7  | 34.2  | 51.4# |
| 148     | 71.5  | 51.0  | 76.6  |

