

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL062419\  
 Data File : VL033942.D  
 Acq On : 24 Jun 2019 18:38  
 Operator : SY/AP  
 Sample : K3481-09  
 Misc : 400ml/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 TZC-SSDS-OUTDOOR-AIR-2

Manual Integrations  
 APPROVED

MMDadoda  
 6/26/2019 8:15:40 AM

Quant Time: Jun 25 04:22:10 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL060719AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Fri Jun 0  
 QLast Update : Fri Jun 07 08:53:27 2019  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.74  | 49   | 860994   | 10.00 | ppbv  | -0.01    |
| 33) 1,4-Difluorobenzene | 7.27  | 114  | 2044298  | 10.00 | ppbv  | -0.01    |
| 55) Chlorobenzene-d5    | 12.21 | 117  | 2031856  | 10.00 | ppbv  | -0.02    |

System Monitoring Compounds

|                             |        |       |          |          |      |         |
|-----------------------------|--------|-------|----------|----------|------|---------|
| 68) 1-Bromo-4-Fluorobenzene | 14.54  | 95    | 1670912  | 10.01    | ppbv | -0.02   |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 100.10% |

| Target Compounds               | R.T.  | QIon | Response | Conc   | Units  | Ovalue |
|--------------------------------|-------|------|----------|--------|--------|--------|
| 2) Dichlorodifluoromethane     | 3.07  | 85   | 45173m   | 0.323  | ppbv   |        |
| 3) Chlorodifluoromethane       | 3.00  | 51   | 42317m   | 0.417  | ppbv   |        |
| 4) Chloromethane               | 3.17  | 50   | 28892    | 0.500  | ppbv   | 100    |
| 9) Propene                     | 3.04  | 41   | 20862    | 0.550  | ppbv   | 84     |
| 11) Trichlorofluoromethane     | 3.99  | 101  | 42108    | 0.234  | ppbv   | 92     |
| 12) 1,1,2-Trichlorotrifluoroet | 4.54  | 101  | 9403     | 0.077  | ppbv   | 86     |
| 13) Ethanol                    | 3.64  | 45   | 78158    | 6.334  | ppbv   | 100    |
| 15) Acetone                    | 3.89  | 43   | 445638   | 3.549  | ppbv   | 99     |
| 19) Isopropyl Alcohol          | 4.02  | 45   | 40840m   | 0.569  | ppbv   |        |
| 20) Methylene Chloride         | 4.39  | 84   | 57560    | 1.175  | ppbv   | 93     |
| 26) Hexane                     | 5.76  | 57   | 201468   | 2.314  | ppbv # | 40     |
| 27) Carbon Disulfide           | 4.61  | 76   | 23738    | 0.196  | ppbv # | 38     |
| 34) 2-Butanone                 | 5.32  | 43   | 44201    | 0.383  | ppbv   | 98     |
| 35) Carbon Tetrachloride       | 7.11  | 117  | 11266m   | 0.071  | ppbv   |        |
| 36) Benzene                    | 6.98  | 78   | 27947m   | 0.179  | ppbv   |        |
| 38) Trichloroethene            | 7.93  | 130  | 30882    | 0.508  | ppbv # | 85     |
| 44) 2,2,4-Trimethylpentane     | 7.97  | 57   | 27689m   | 0.100  | ppbv   |        |
| 52) Tetrachloroethene          | 11.34 | 164  | 5493m    | 0.100  | ppbv   |        |
| 53) Toluene                    | 9.92  | 91   | 2890229  | 16.725 | ppbv   | 99     |
| 59) m/p-Xylene                 | 13.09 | 91   | 32049m   | 0.154  | ppbv   |        |
| 60) o-Xylene                   | 13.82 | 91   | 14376m   | 0.067  | ppbv   |        |
| 74) 1,2,4-Trimethylbenzene     | 16.89 | 105  | 35569    | 0.128  | ppbv # | 68     |

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

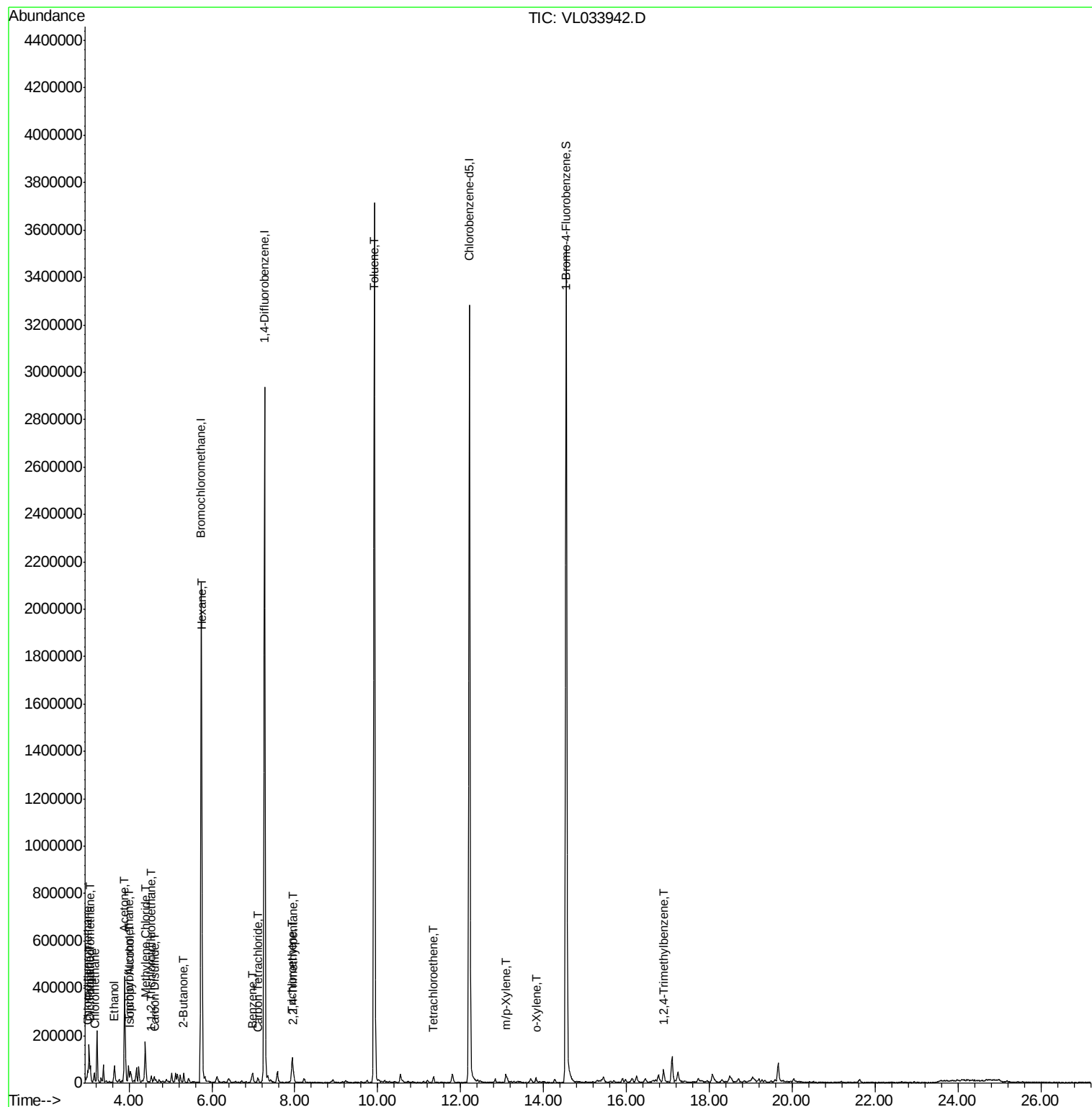
Data Path : Z:\V0ASRV\HPCHEM1\MSVOA L\DATA\VL062419\  
Data File : VL033942.D  
Acq On : 24 Jun 2019 18:38  
Operator : SY/AP  
Sample : K3481-09  
Misc : 400ml/MSVOA L  
ALS Vial : 1 Sample Multiplier: 1

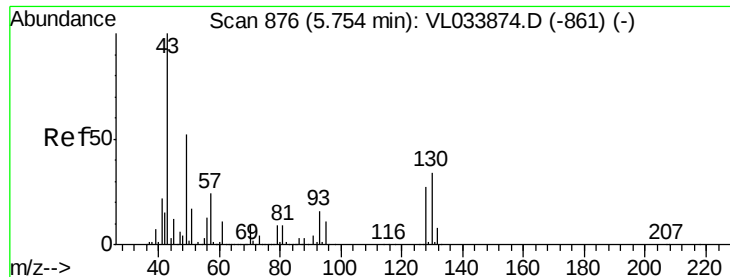
Instrument :  
MSVOA\_L  
ClientSampleId :  
TZC-SSDS-OUTDOOR-AIR-2

Manual Integrations  
APPROVED

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6/26/2019 8:15:40 AM

Quant Time: Jun 25 04:22:10 2019  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA L\METHODS\VL060719AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Fri Jun  
QLast Update : Fri Jun 07 08:53:27 2019  
Response via : Initial Calibration





#1

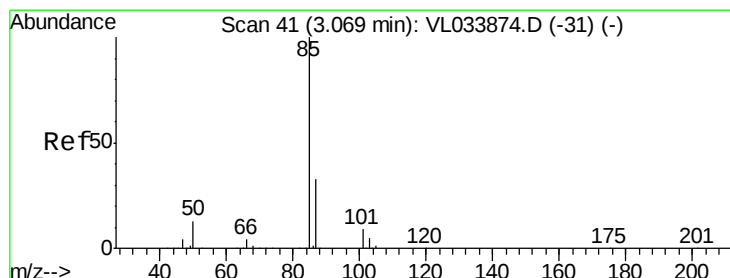
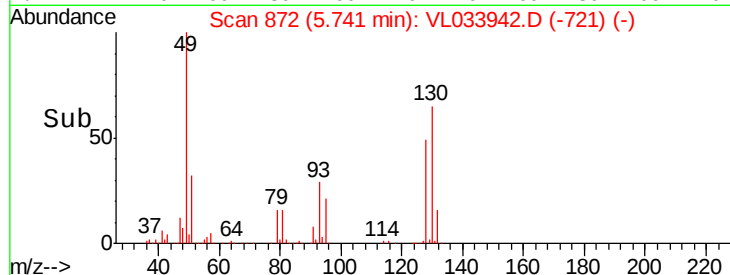
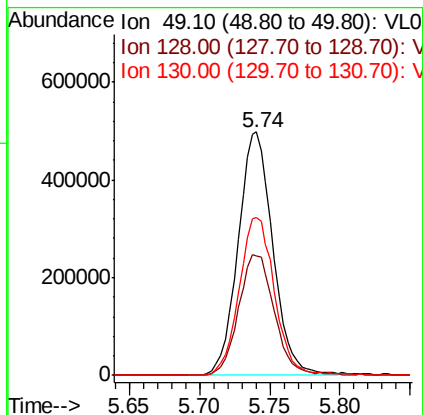
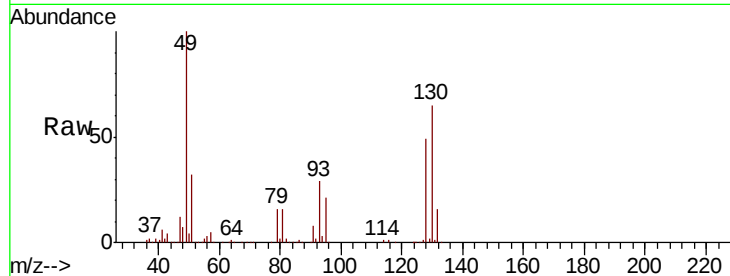
Bromochloromethane  
Concen: 10.000 ppbv  
RT: 5.74 min Scan# 872  
Delta R.T. -0.01 min  
Lab File: VL033942.D  
Acq: 24 Jun 2019 18:38

Instrument :  
MSVOA\_L  
ClientSampleId :  
TZC-SSDS-OUTDOOR-AIR-2

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 49      | 100   |       |       |
| 128     | 51.6  | 25.5  | 76.5  |
| 130     | 66.3  | 32.5  | 97.4  |

Manual Integrations  
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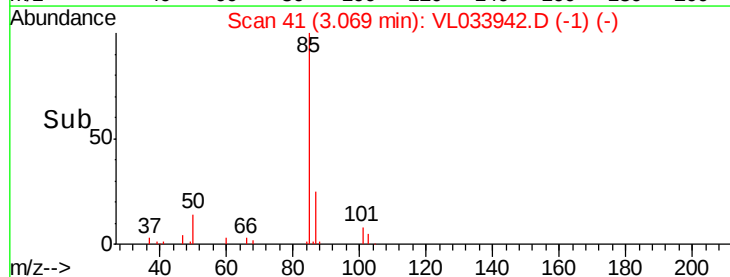
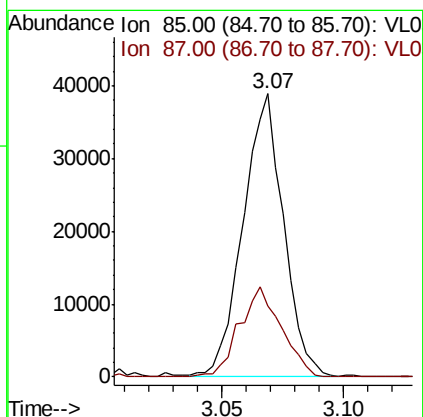
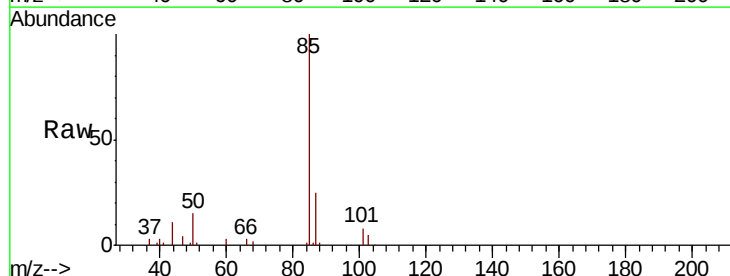
MMDadoda  
6/26/2019 8:15:40 AM

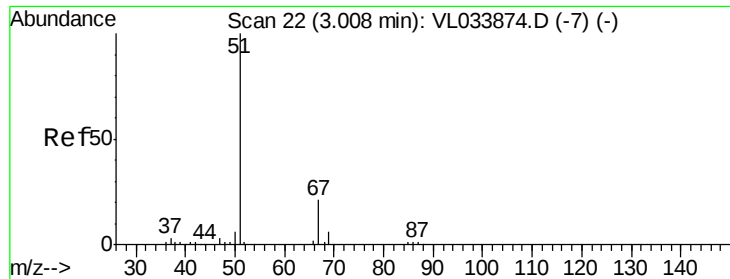


#2

Dichlorodifluoromethane  
Concen: 0.323 ppbv m  
RT: 3.07 min Scan# 41  
Delta R.T. -0.00 min  
Lab File: VL033942.D  
Acq: 24 Jun 2019 18:38

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 85      | 100   |       |       |
| 87      | 25.1  | 26.6  | 40.0# |





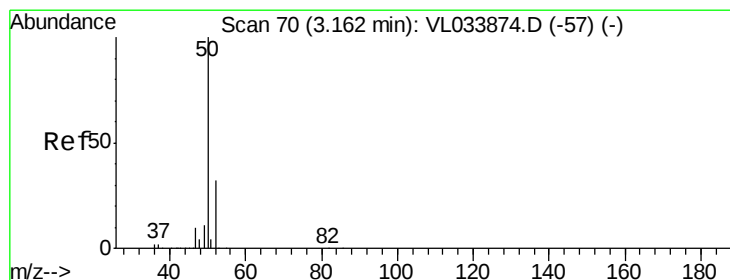
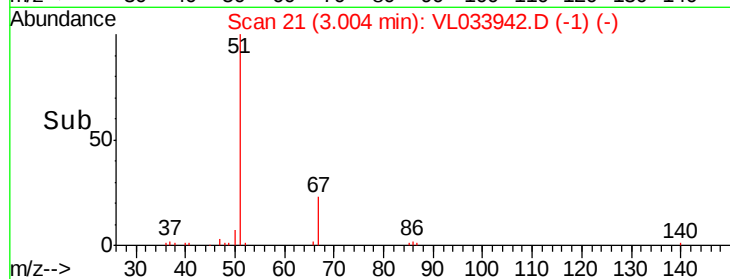
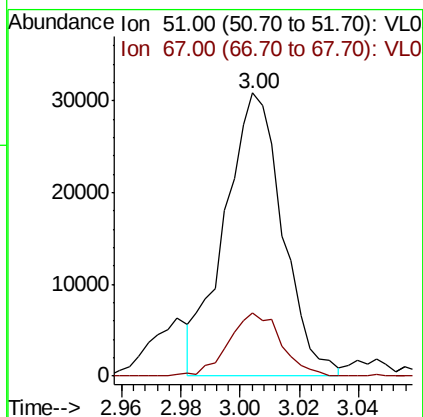
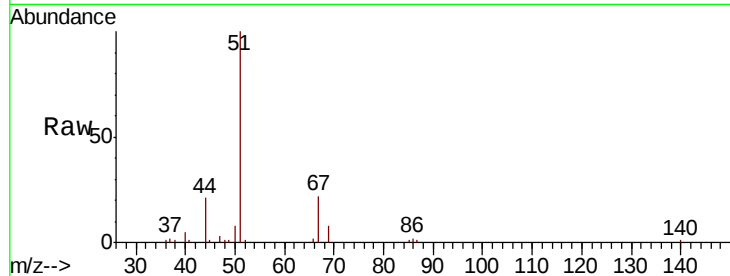
#3  
Chlorodifluoromethane  
Concen: 0.417 ppbv  
RT: 3.00 min Scan# 21  
Delta R.T. -0.00 min  
Lab File: VL033942.D  
Acq: 24 Jun 2019 18:38

Instrument :  
MSVOA\_L  
ClientSampleId :  
TZC-SSDS-OUTDOOR-AIR-2

Tot Ion: 51 Resp: 42317  
Ion Ratio Lower Upper  
51 100  
67 20.3 16.4 24.6

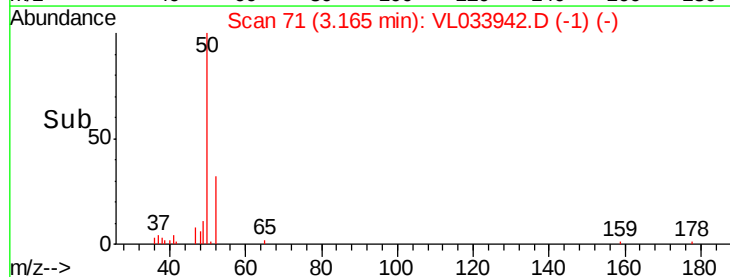
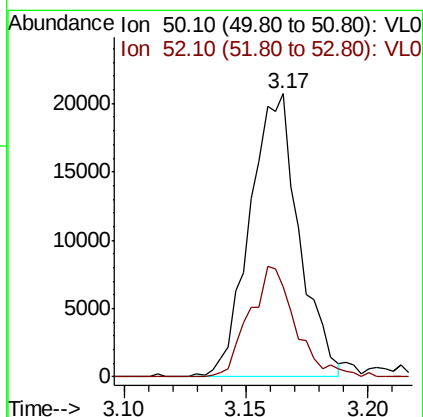
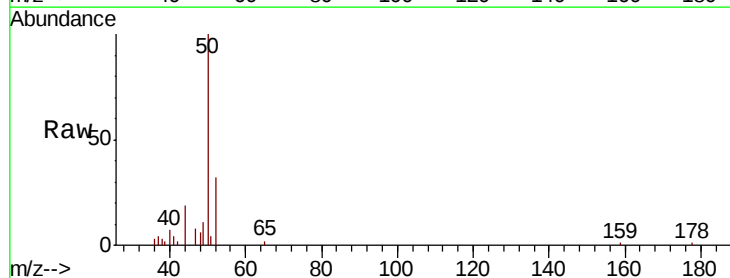
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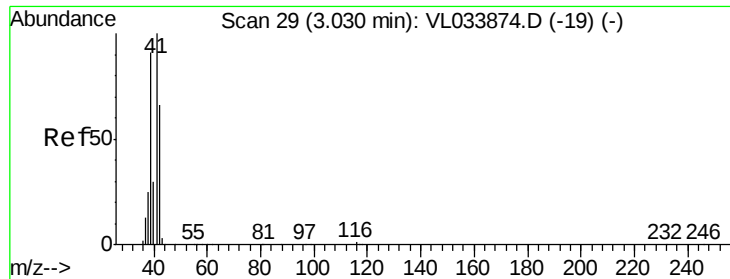
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#4  
Chloromethane  
Concen: 0.500 ppbv  
RT: 3.17 min Scan# 71  
Delta R.T. 0.00 min  
Lab File: VL033942.D  
Acq: 24 Jun 2019 18:38

Tgt Ion: 50 Resp: 28892  
Ion Ratio Lower Upper  
50 100  
52 31.6 25.4 38.0





#9

Propene

Concen: 0.550 ppbv

RT: 3.04 min Scan# 32

Delta R.T. 0.01 min

Lab File: VL033942.D

Acq: 24 Jun 2019 18:38

Instrument :

MSVOA\_L

ClientSampleId :

TZC-SSDS-OUTDOOR-AIR-2

Tot Ion: 41 Resp: 20862

Ion Ratio Lower Upper

41 100

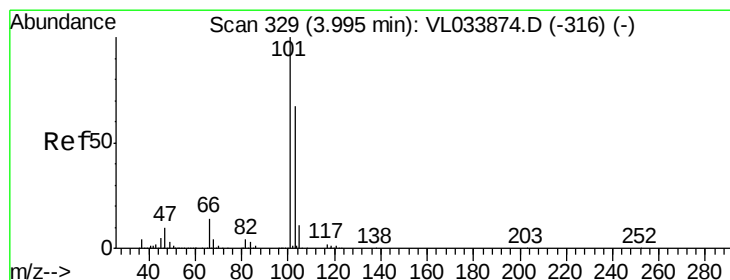
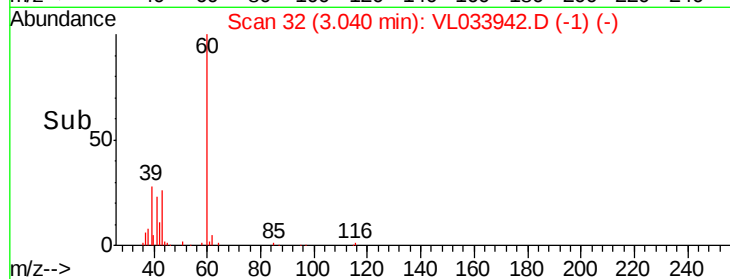
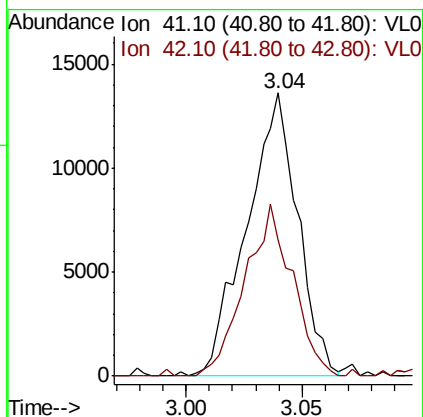
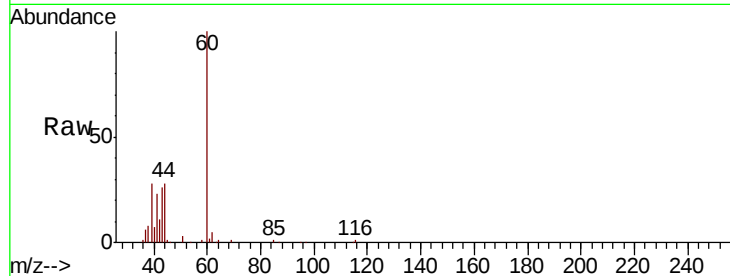
42 57.0 56.3 84.5

Manual Integrations

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#11

Trichlorofluoromethane

Concen: 0.234 ppbv

RT: 3.99 min Scan# 328

Delta R.T. -0.00 min

Lab File: VL033942.D

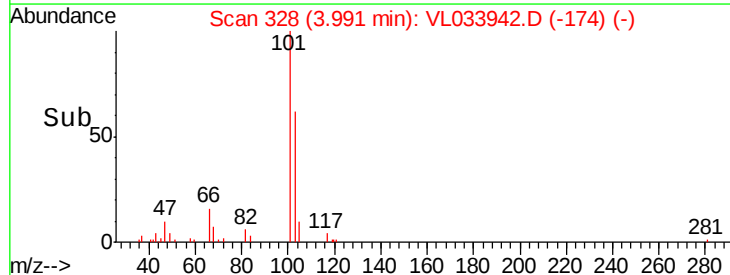
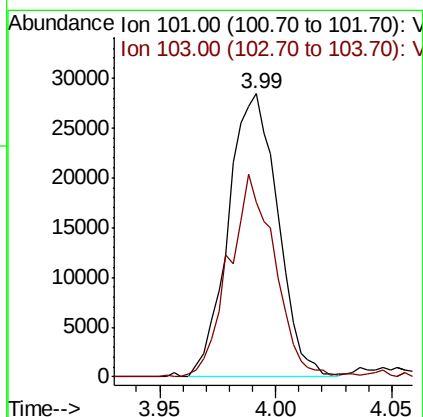
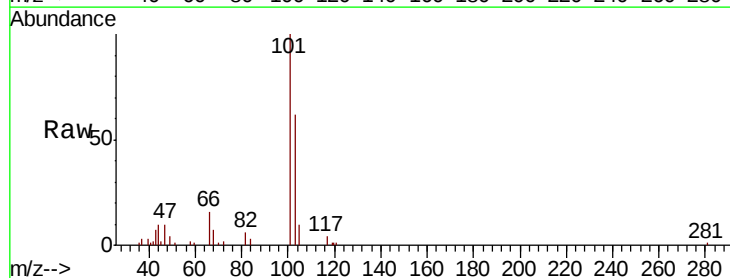
Acq: 24 Jun 2019 18:38

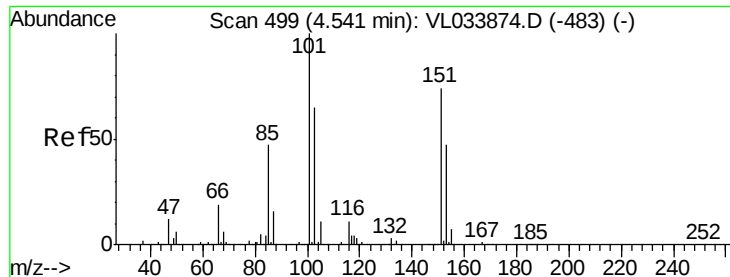
Tgt Ion: 101 Resp: 42108

Ion Ratio Lower Upper

101 100

103 60.7 53.6 80.4





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.077 ppbv

RT: 4.54 min Scan# 498

Delta R.T. -0.00 min

Lab File: VL033942.D

Acq: 24 Jun 2019 18:38

Instrument :

MSVOA\_L

ClientSampleId :

TZC-SSDS-OUTDOOR-AIR-2

Tot Ion:101 Resp: 9403

Ion Ratio Lower Upper

101 100

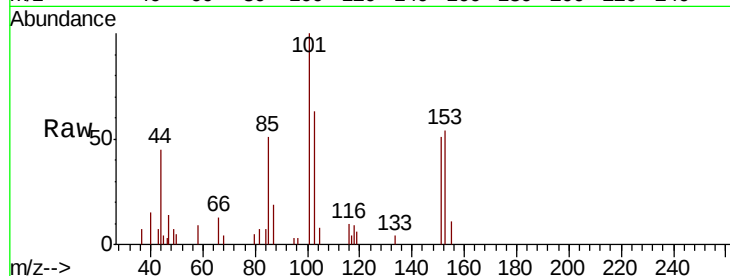
151 61.6 58.6 87.8

Manual Integrations

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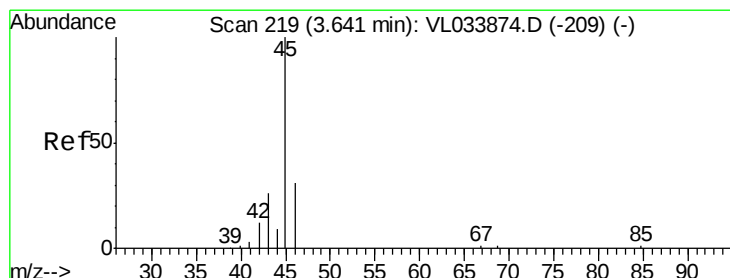
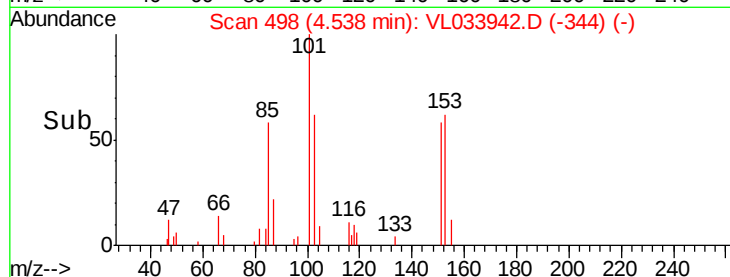
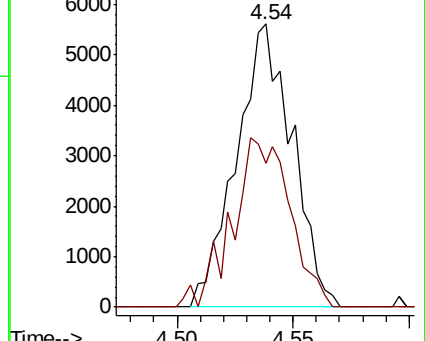
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Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V



#13

Ethanol

Concen: 6.334 ppbv

RT: 3.64 min Scan# 219

Delta R.T. -0.00 min

Lab File: VL033942.D

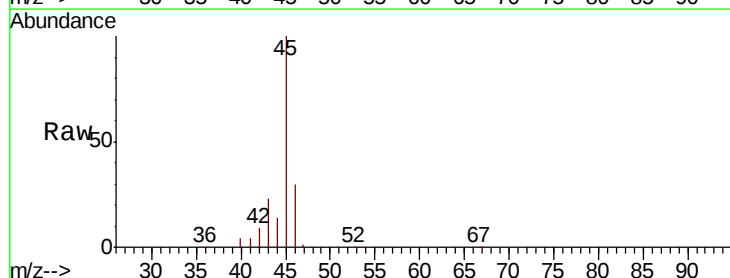
Acq: 24 Jun 2019 18:38

Tgt Ion: 45 Resp: 78158

Ion Ratio Lower Upper

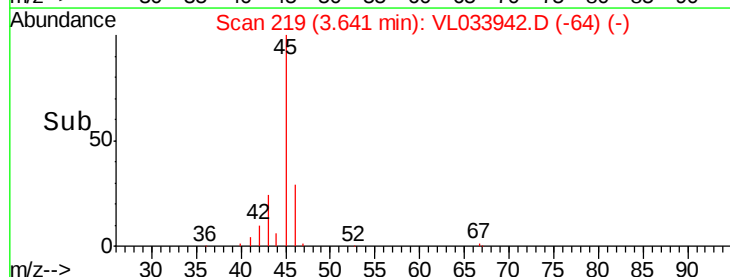
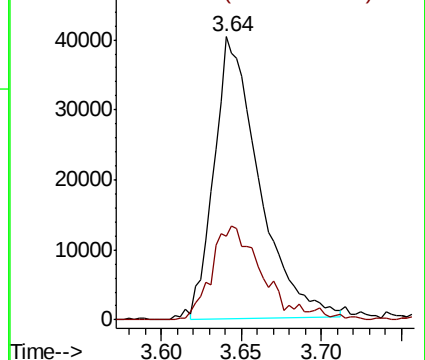
45 100

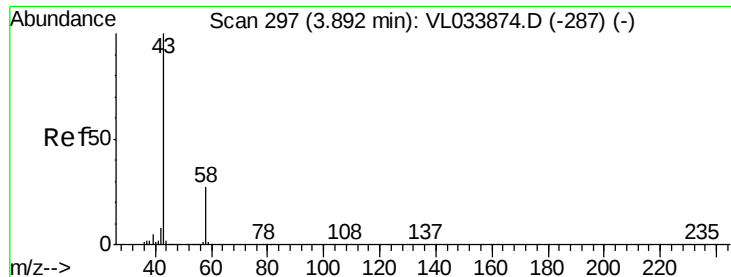
46 38.5 15.3 61.1



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0





#15

Acetone

Concen: 3.549 ppbv

RT: 3.89 min Scan# 296

Delta R.T. -0.00 min

Lab File: VL033942.D

Acq: 24 Jun 2019 18:38

Instrument :

MSVOA\_L

ClientSampleId :

TZC-SSDS-OUTDOOR-AIR-2

Tot Ion: 43 Resp: 445638

Ion Ratio Lower Upper

43 100

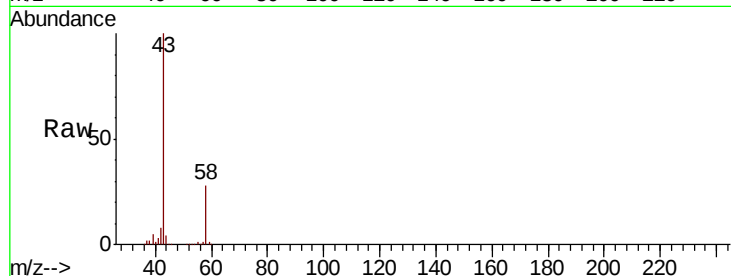
58 26.2 21.3 31.9

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Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

3.89

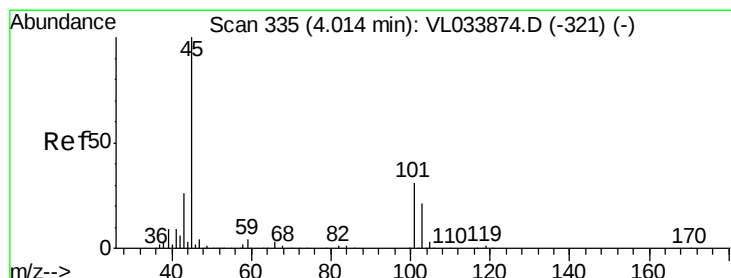
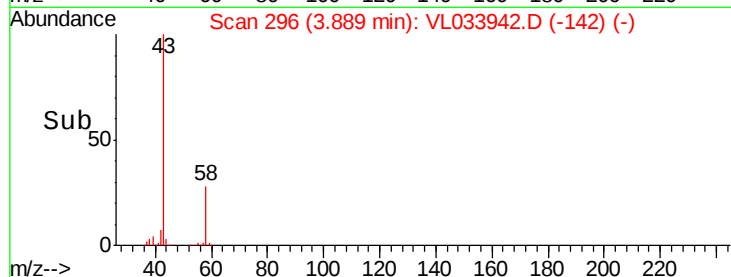
300000

200000

100000

0

Time-->



#19

Isopropyl Alcohol

Concen: 0.569 ppbv m

RT: 4.02 min Scan# 338

Delta R.T. 0.01 min

Lab File: VL033942.D

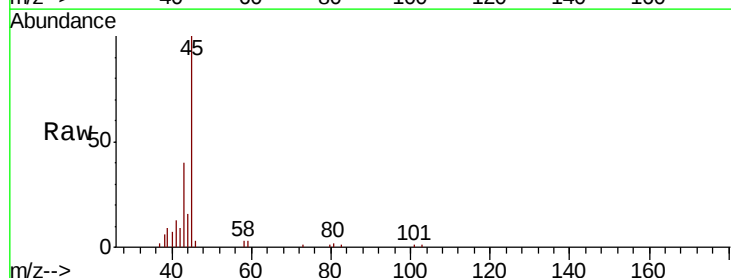
Acq: 24 Jun 2019 18:38

Tgt Ion: 45 Resp: 40840

Ion Ratio Lower Upper

45 100

58 9.7 1.8 2.6#



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

4.02

25000

20000

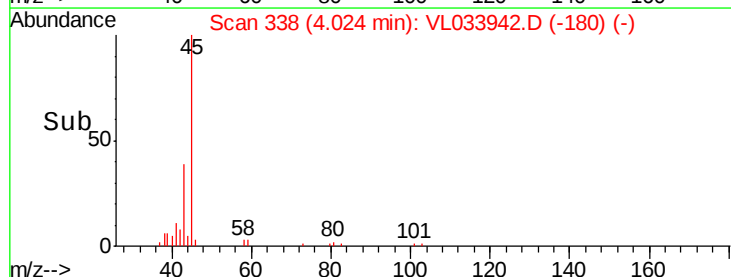
15000

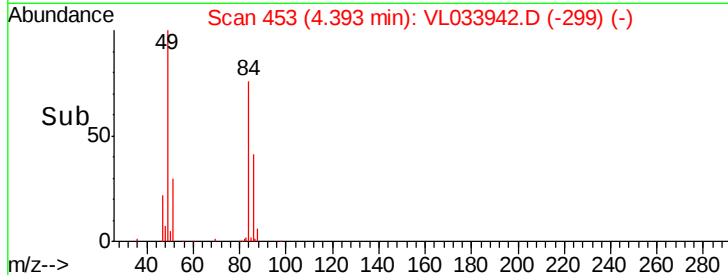
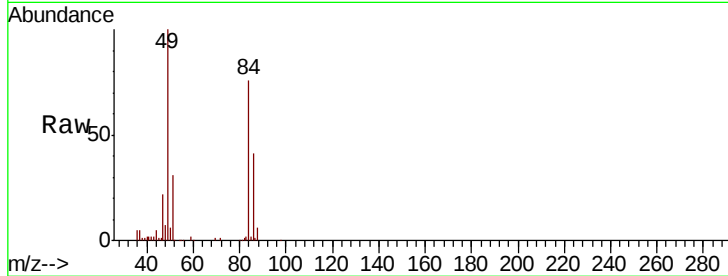
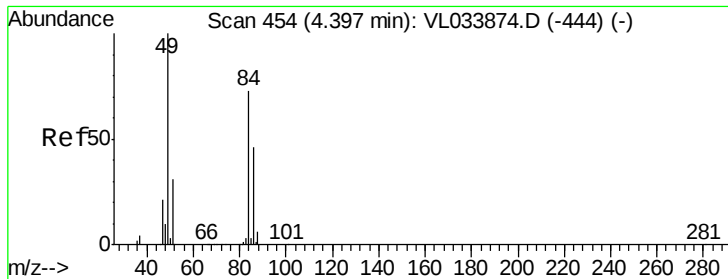
10000

5000

0

Time-->





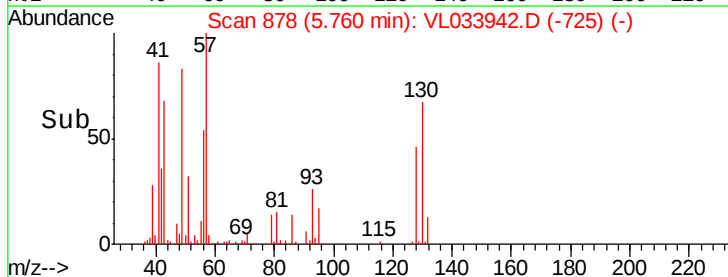
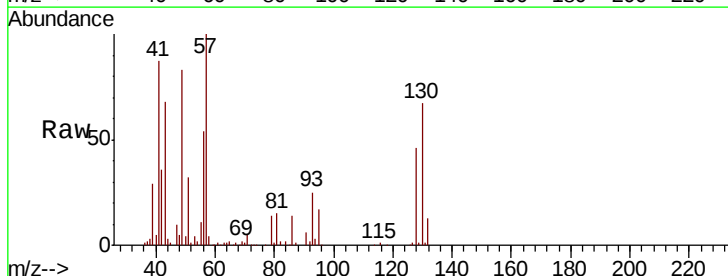
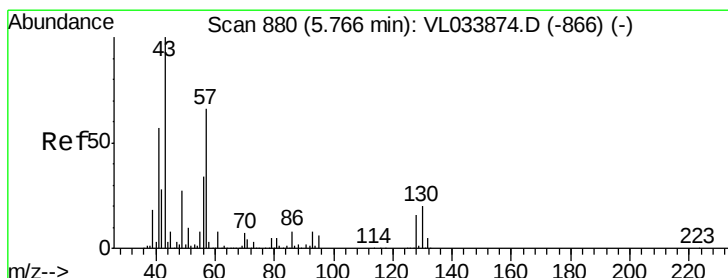
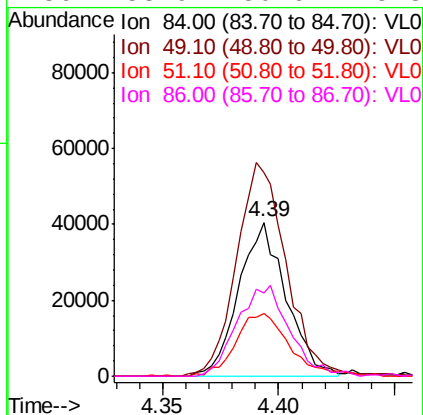
#20  
Methvlene Chloride  
Concen: 1.175 ppbv  
RT: 4.39 min Scan# 453  
Delta R.T. -0.00 min  
Lab File: VL033942.D  
Acq: 24 Jun 2019 18:38

| Tot Ion | Ion   | Ratio | Lower | Upper |
|---------|-------|-------|-------|-------|
| 84      | 100   |       |       |       |
| 49      | 130.7 | 110.0 | 165.0 |       |
| 51      | 41.5  | 34.6  | 51.8  |       |
| 86      | 53.9  | 50.6  | 75.8  |       |

Instrument :  
MSVOA\_L  
ClientSampleId :  
TZC-SSDS-OUTDOOR-AIR-2

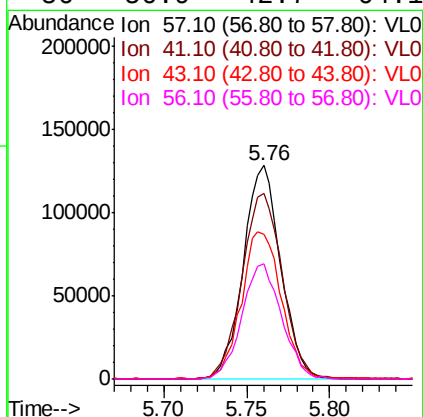
Manual Integrations  
APPROVED

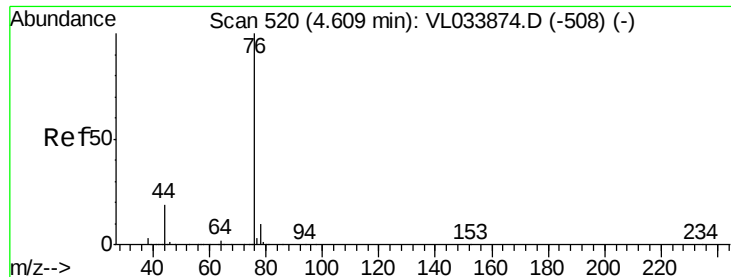
MMDadoda  
6/26/2019 8:15:40 AM



#26  
Hexane  
Concen: 2.314 ppbv  
RT: 5.76 min Scan# 878  
Delta R.T. -0.01 min  
Lab File: VL033942.D  
Acq: 24 Jun 2019 18:38

| Tgt Ion | Ion  | Ratio | Lower | Upper |
|---------|------|-------|-------|-------|
| 57      | 100  |       |       |       |
| 41      | 94.2 | 71.4  | 107.2 |       |
| 43      | 74.2 | 183.7 | 275.5 |       |
| 56      | 56.9 | 42.7  | 64.1  |       |





#27

Carbon Disulfide

Concen: 0.196 ppbv

RT: 4.61 min Scan# 520

Delta R.T. -0.00 min

Lab File: VL033942.D

Acq: 24 Jun 2019 18:38

Instrument :

MSVOA\_L

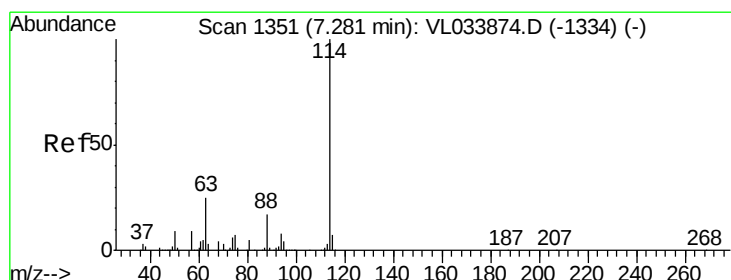
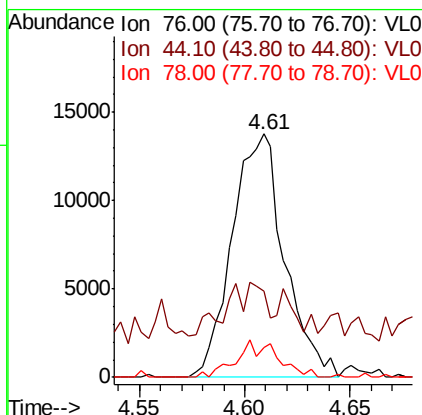
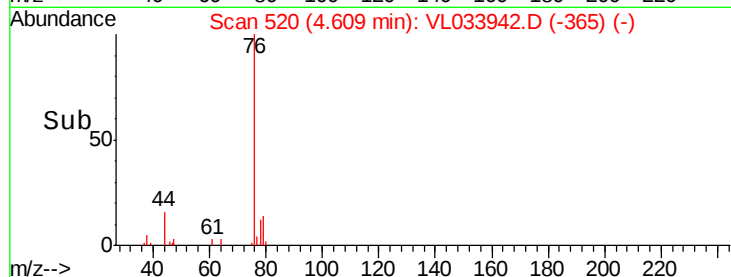
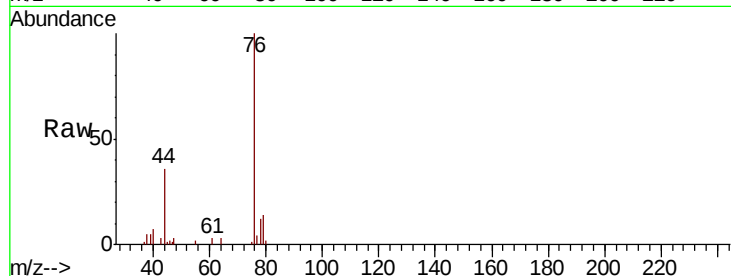
ClientSampleId :

TZC-SSDS-OUTDOOR-AIR-2

|          |       |       |       |
|----------|-------|-------|-------|
| Tot Ion: | 76    | Resp: | 23738 |
| Ion      | Ratio | Lower | Upper |
| 76       | 100   |       |       |
| 44       | 57.8  | 14.4  | 21.6# |
| 78       | 12.1  | 7.5   | 11.3# |

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#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

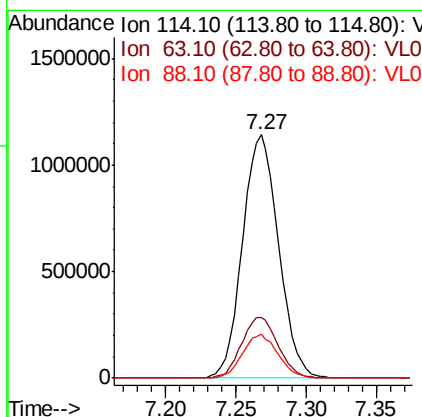
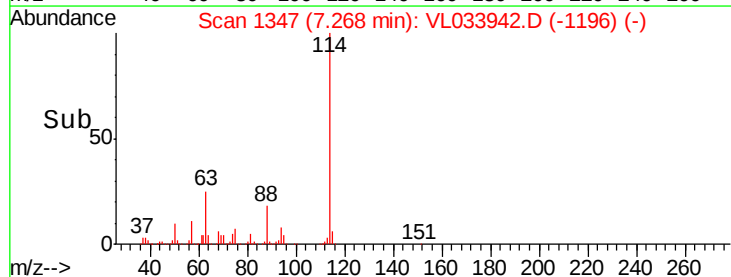
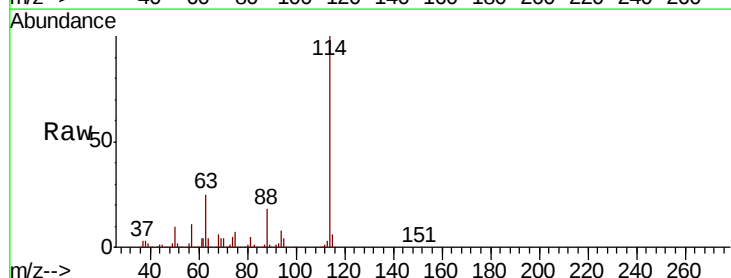
RT: 7.27 min Scan# 1347

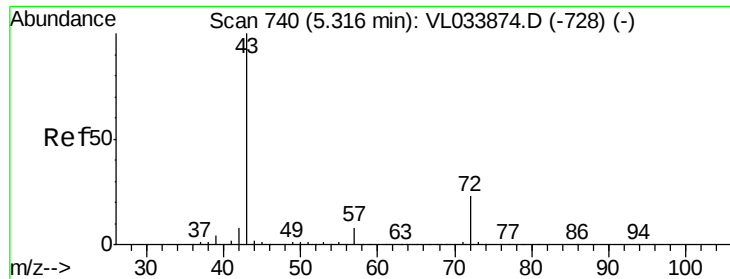
Delta R.T. -0.01 min

Lab File: VL033942.D

Acq: 24 Jun 2019 18:38

|          |       |       |         |
|----------|-------|-------|---------|
| Tgt Ion: | 114   | Resp: | 2044298 |
| Ion      | Ratio | Lower | Upper   |
| 114      | 100   |       |         |
| 63       | 25.3  | 21.1  | 31.7    |
| 88       | 17.7  | 14.2  | 21.4    |





#34

2-Butanone

Concen: 0.383 ppbv

RT: 5.32 min Scan# 741

Delta R.T. 0.00 min

Lab File: VL033942.D

Acq: 24 Jun 2019 18:38

Instrument :

MSVOA\_L

ClientSampleId :

TZC-SSDS-OUTDOOR-AIR-2

Tot Ion: 43 Resp: 44201

Ion Ratio Lower Upper

43 100

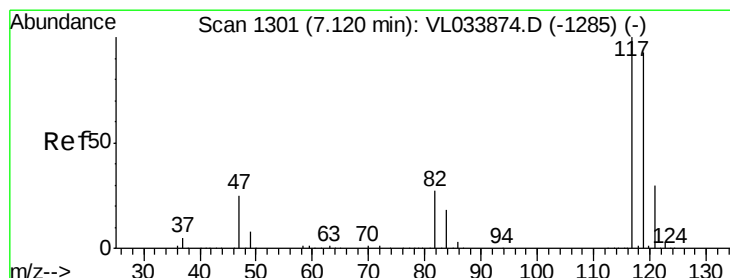
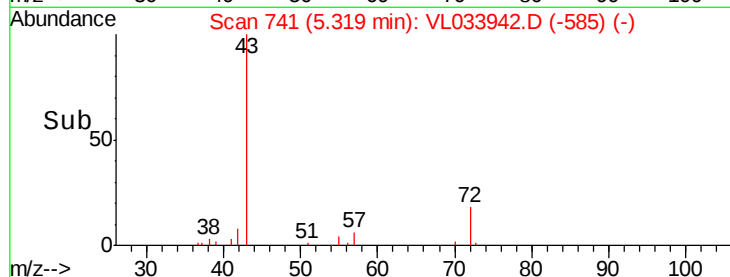
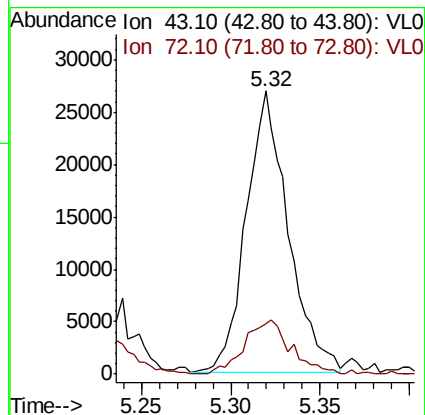
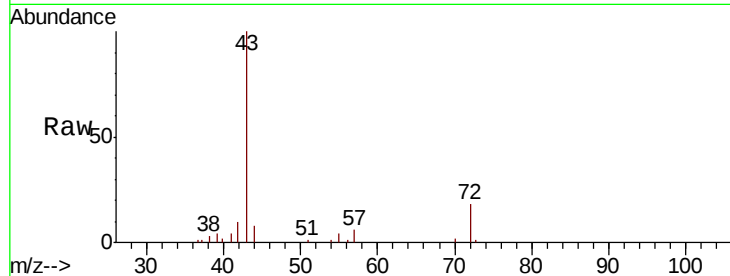
72 21.5 17.9 26.9

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#35

Carbon Tetrachloride

Concen: 0.071 ppbv m

RT: 7.11 min Scan# 1298

Delta R.T. -0.01 min

Lab File: VL033942.D

Acq: 24 Jun 2019 18:38

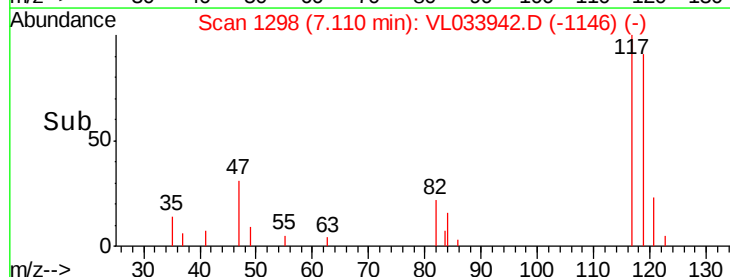
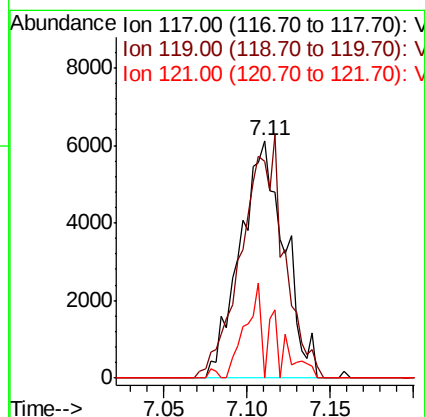
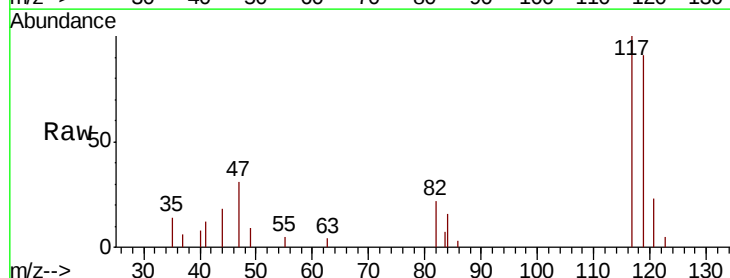
Tgt Ion: 117 Resp: 11266

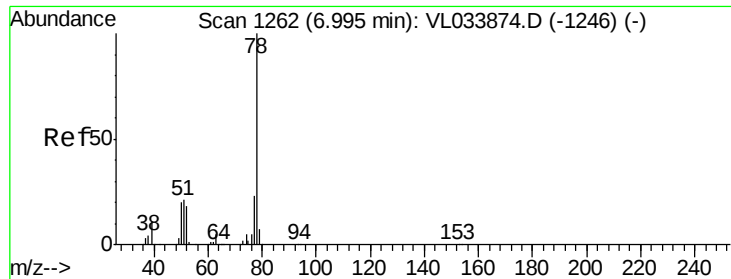
Ion Ratio Lower Upper

117 100

119 91.3 74.6 111.8

121 0.0 24.0 36.0#





#36

Benzene

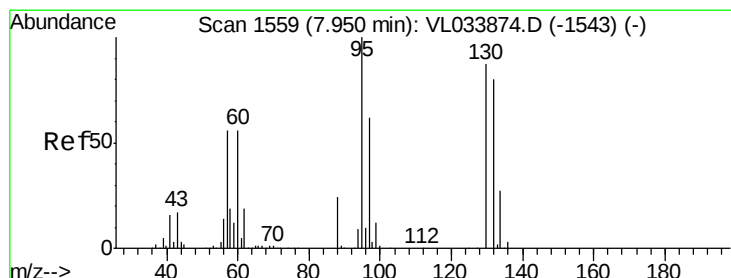
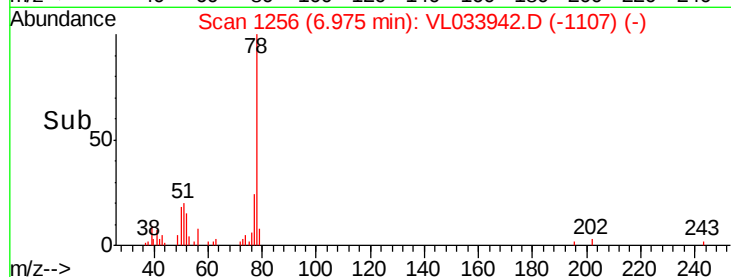
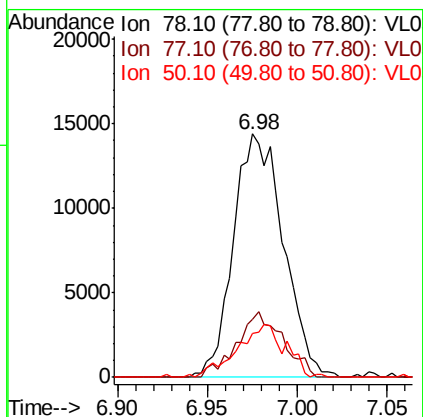
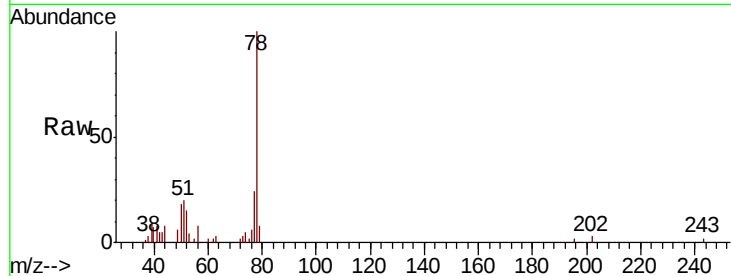
Concen: 0.179 ppbv m  
RT: 6.98 min Scan# 1256  
Delta R.T. -0.02 min  
Lab File: VL033942.D  
Acq: 24 Jun 2019 18:38

Instrument :  
MSVOA\_L  
ClientSampleId :  
TZC-SSDS-OUTDOOR-AIR-2

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 78      | 100   |       |       |
| 77      | 24.0  | 18.2  | 27.2  |
| 50      | 17.8  | 15.9  | 23.9  |

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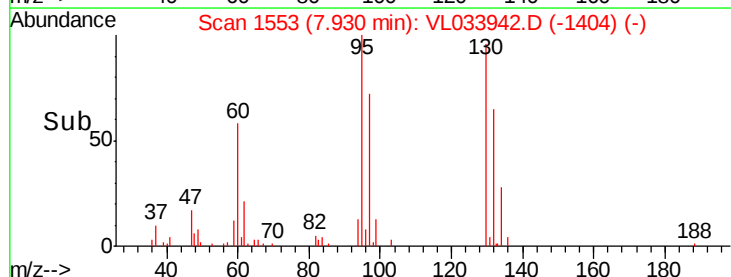
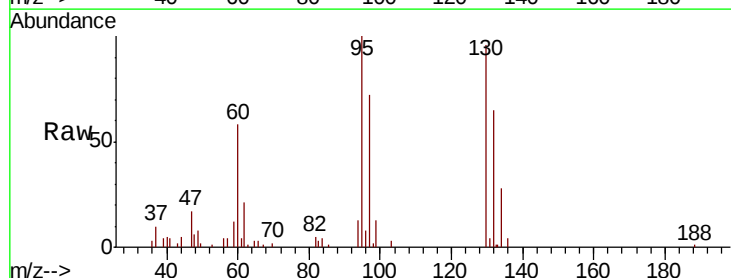
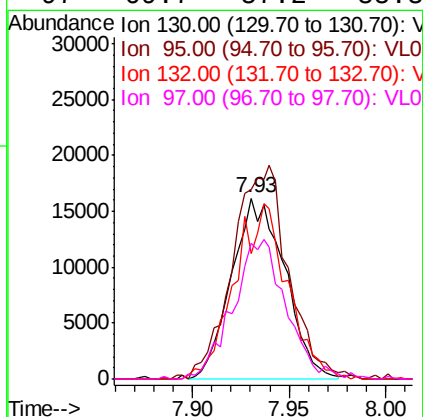


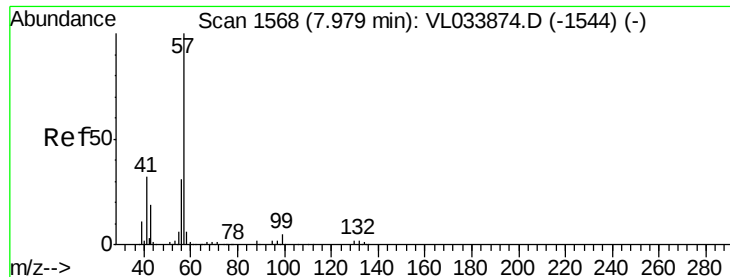
#38

Trichloroethene

Concen: 0.508 ppbv  
RT: 7.93 min Scan# 1553  
Delta R.T. -0.02 min  
Lab File: VL033942.D  
Acq: 24 Jun 2019 18:38

| Tgt Ion | Ratio | Lower | Upper  |
|---------|-------|-------|--------|
| 130     | 100   |       |        |
| 95      | 100.8 | 92.0  | 138.0  |
| 132     | 66.0  | 73.8  | 110.8# |
| 97      | 69.7  | 57.2  | 85.8   |





#44

2,2,4-Trimethylpentane

Concen: 0.100 ppbv m

RT: 7.97 min Scan# 1565

Delta R.T. -0.01 min

Lab File: VL033942.D

Acq: 24 Jun 2019 18:38

Instrument :

MSVOA\_L

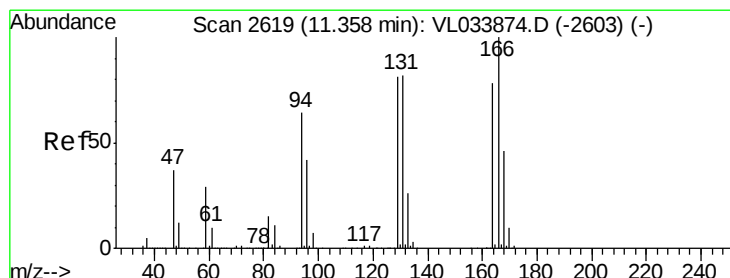
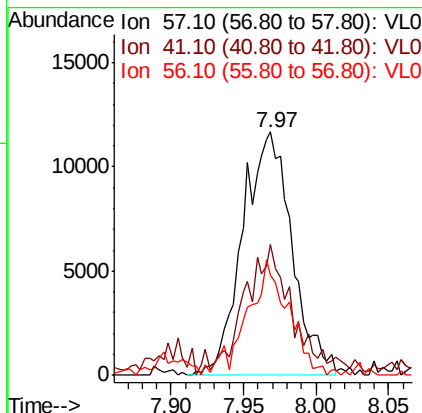
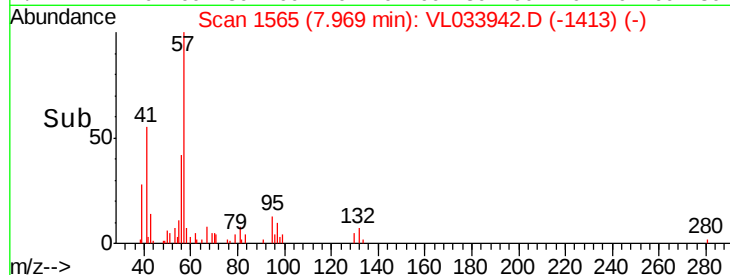
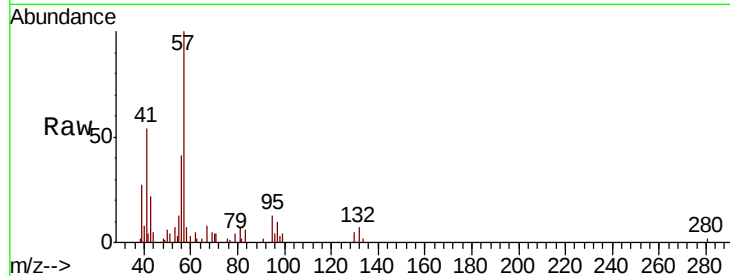
ClientSampleId :

TZC-SSDS-OUTDOOR-AIR-2

|          |       |       |       |
|----------|-------|-------|-------|
| Tot Ion: | 57    | Resp: | 27689 |
| Ion      | Ratio | Lower | Upper |
| 57       | 100   |       |       |
| 41       | 54.6  | 26.1  | 39.1# |
| 56       | 40.4  | 24.6  | 36.8# |

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#52

Tetrachloroethene

Concen: 0.100 ppbv m

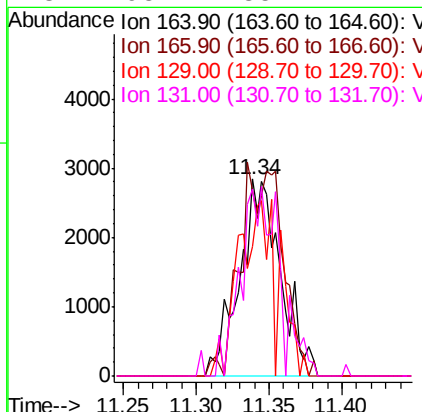
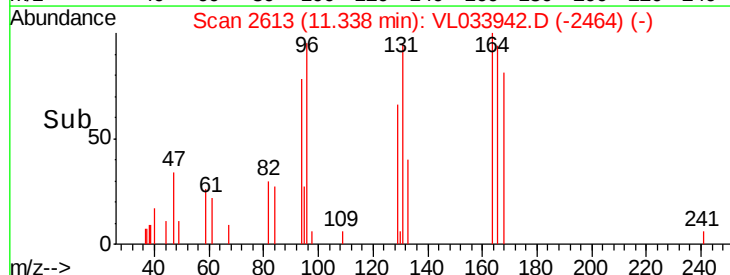
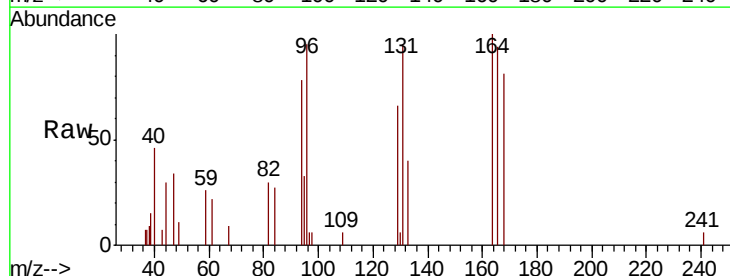
RT: 11.34 min Scan# 2613

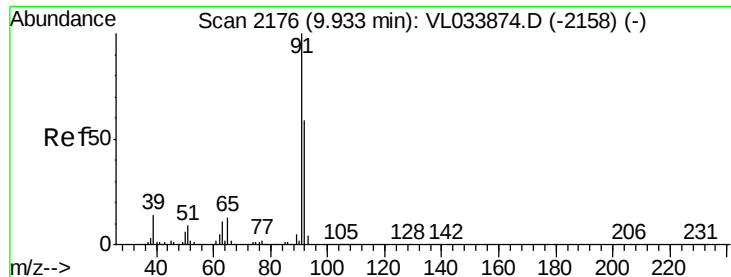
Delta R.T. -0.02 min

Lab File: VL033942.D

Acq: 24 Jun 2019 18:38

|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 164   | Resp: | 5493   |
| Ion      | Ratio | Lower | Upper  |
| 164      | 100   |       |        |
| 166      | 94.3  | 103.1 | 154.7# |
| 129      | 65.8  | 83.9  | 125.9# |
| 131      | 95.4  | 85.1  | 127.7  |





#53

Toluene

Concen: 16.725 ppbv

RT: 9.92 min Scan# 2171

Delta R.T. -0.02 min

Lab File: VL033942.D

Acq: 24 Jun 2019 18:38

Instrument :

MSVOA\_L

ClientSampleId :

TZC-SSDS-OUTDOOR-AIR-2

Tot Ion: 91 Resp: 2890229

Ion Ratio Lower Upper

91 100

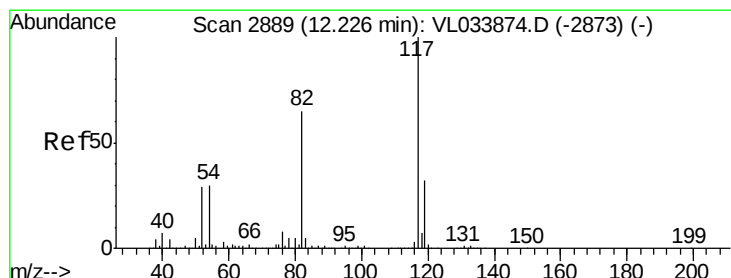
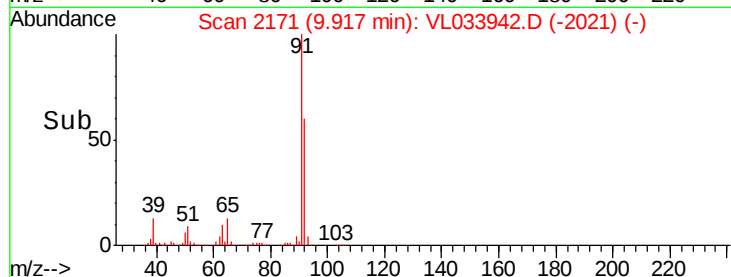
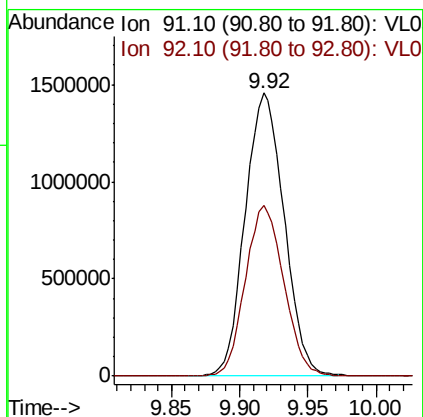
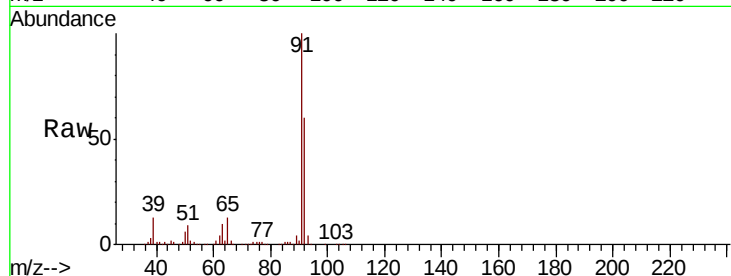
92 59.7 47.0 70.6

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#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.21 min Scan# 2884

Delta R.T. -0.02 min

Lab File: VL033942.D

Acq: 24 Jun 2019 18:38

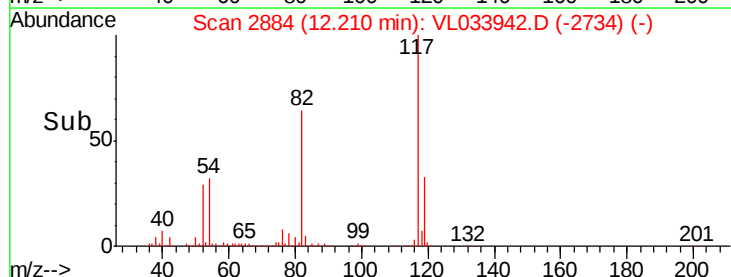
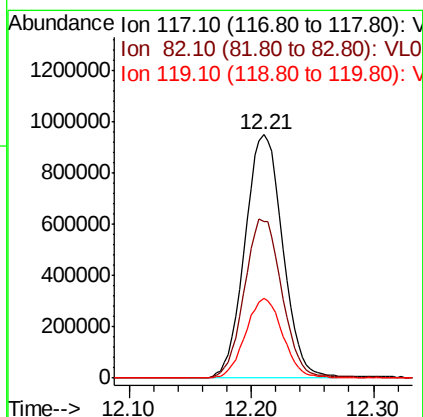
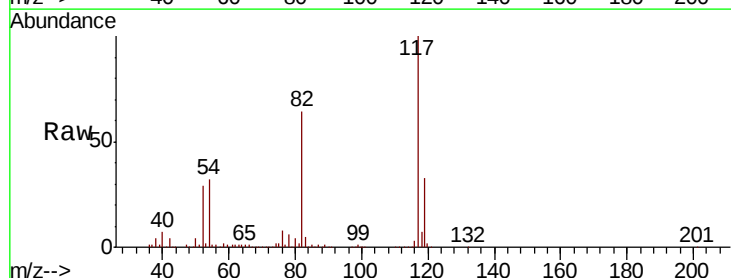
Tgt Ion: 117 Resp: 2031856

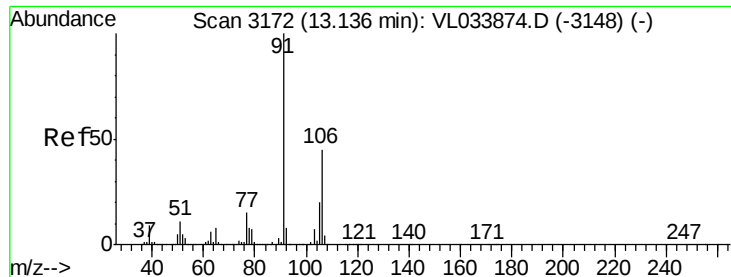
Ion Ratio Lower Upper

117 100

82 65.7 50.2 75.2

119 32.6 24.8 37.2





#59

m/p-Xylene

Concen: 0.154 ppbv m

RT: 13.09 min Scan# 3158

Delta R.T. -0.05 min

Lab File: VL033942.D

Acq: 24 Jun 2019 18:38

Instrument :

MSVOA\_L

ClientSampleId :

TZC-SSDS-OUTDOOR-AIR-2

Tot Ion: 91 Resp: 32049

Ion Ratio Lower Upper

91 100

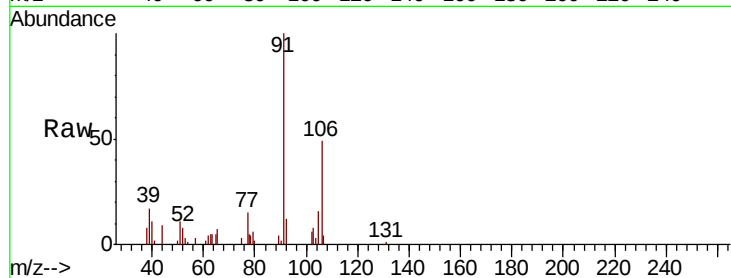
106 0.0 35.8 53.8#

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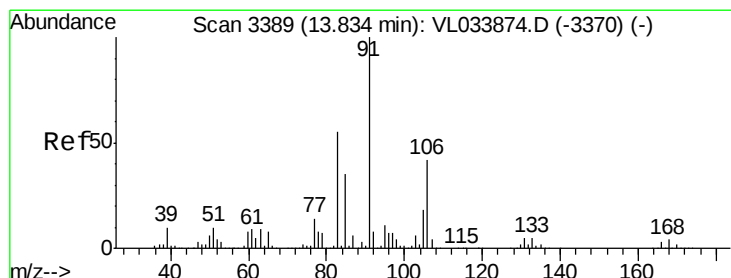
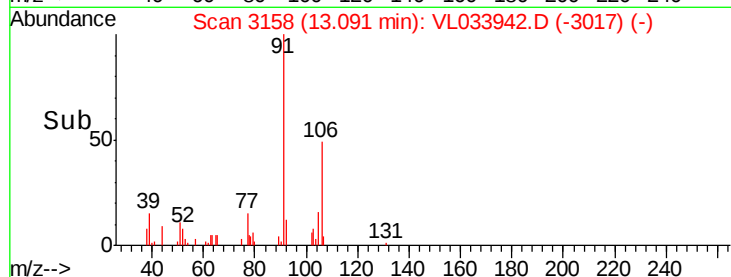
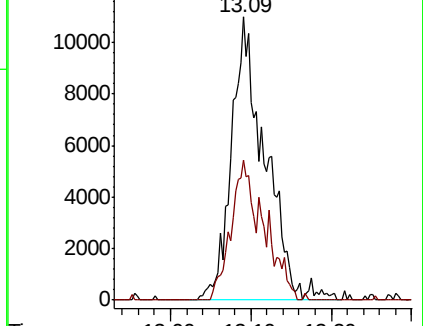
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Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V



#60

o-Xylene

Concen: 0.067 ppbv m

RT: 13.82 min Scan# 3386

Delta R.T. -0.01 min

Lab File: VL033942.D

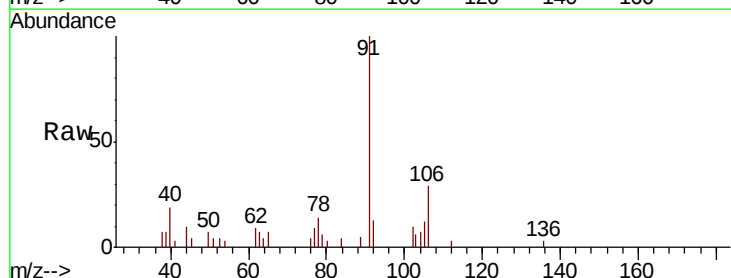
Acq: 24 Jun 2019 18:38

Tgt Ion: 91 Resp: 14376

Ion Ratio Lower Upper

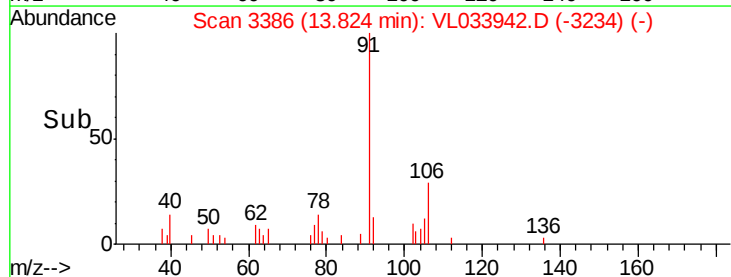
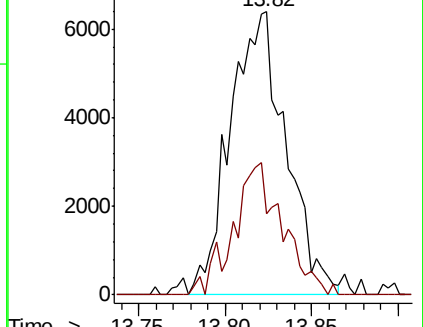
91 100

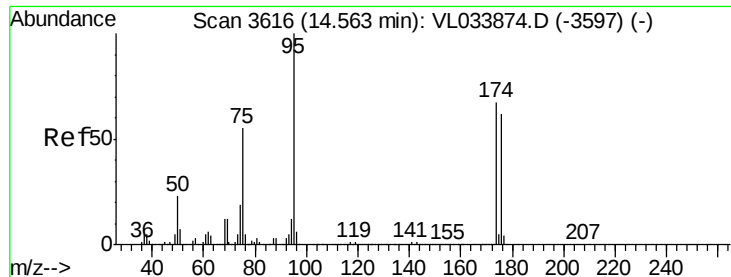
106 40.3 21.7 65.1



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V





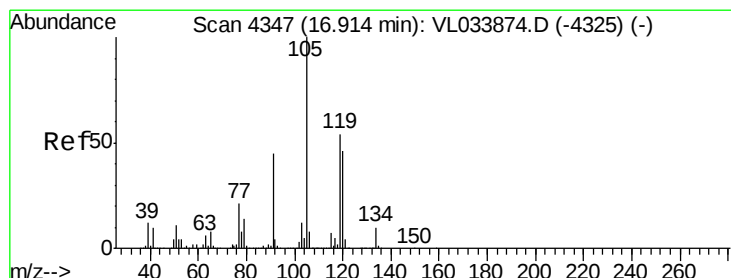
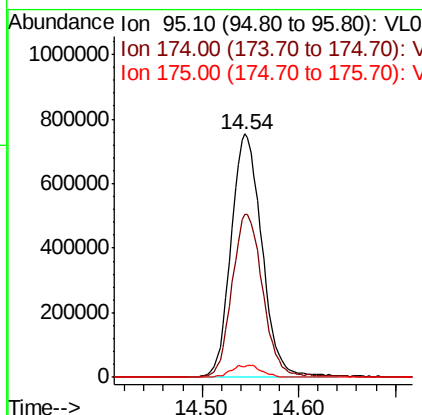
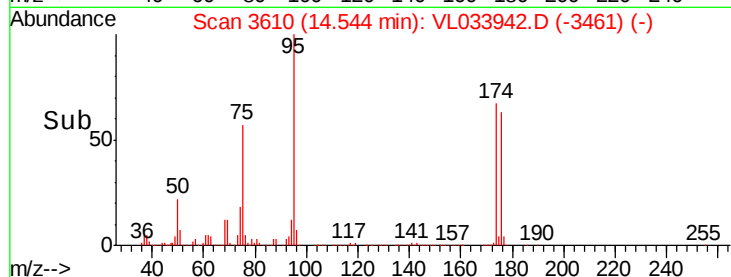
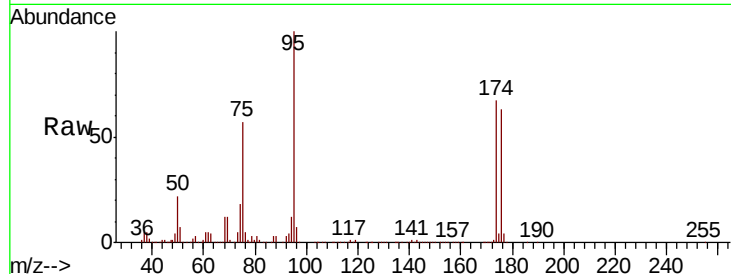
#68  
 1-Bromo-4-Fluorobenzene  
 Concen: 10.012 ppbv  
 RT: 14.54 min Scan# 3610  
 Delta R.T. -0.02 min  
 Lab File: VL033942.D  
 Acq: 24 Jun 2019 18:38

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 TZC-SSDS-OUTDOOR-AIR-2

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 95      | 100   |       |       |
| 174     | 67.5  | 54.0  | 81.0  |
| 175     | 5.0   | 3.8   | 5.8   |

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#74  
 1,2,4-Trimethylbenzene  
 Concen: 0.128 ppbv  
 RT: 16.89 min Scan# 4341  
 Delta R.T. -0.02 min  
 Lab File: VL033942.D  
 Acq: 24 Jun 2019 18:38

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 105     | 100   |       |       |
| 120     | 33.9  | 36.7  | 55.1# |
| 91      | 11.2  | 35.8  | 53.8# |
| 77      | 11.8  | 16.9  | 25.3# |

