

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL070518\  
 Data File : VL032223.D  
 Acq On : 6 Jul 2018 3:45  
 Operator : SY/AP  
 Sample : J3762-15 0.4 PPB LOD  
 Misc : 400ml/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 MDL-AIR-03-QT3-2018

Manual Integrations  
 APPROVED

MMDadoda  
 7/9/2018 10:47:58 AM

Quant Time: Jul 06 07:26:44 2018

Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL062918AIR.M

Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Fri Jun 2

QLast Update : Fri Jun 29 22:27:58 2018

Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.84  | 49   | 1615908  | 10.00 | ppbv  | -0.02    |
| 33) 1,4-Difluorobenzene | 7.38  | 114  | 4046727  | 10.00 | ppbv  | -0.02    |
| 55) Chlorobenzene-d5    | 12.33 | 117  | 3953362  | 10.00 | ppbv  | -0.03    |

#### System Monitoring Compounds

|                             |        |       |          |          |      |         |
|-----------------------------|--------|-------|----------|----------|------|---------|
| 68) 1-Bromo-4-Fluorobenzene | 14.67  | 95    | 3054212  | 10.11    | ppbv | -0.03   |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 101.10% |

#### Target Compounds

|                                |      |     |        |      |        | Ovalue |
|--------------------------------|------|-----|--------|------|--------|--------|
| 2) Dichlorodifluoromethane     | 3.13 | 85  | 131005 | 0.62 | ppbv   | 100    |
| 3) Chlorodifluoromethane       | 3.07 | 51  | 101631 | 0.51 | ppbv   | 98     |
| 4) Chloromethane               | 3.23 | 50  | 50602m | 0.48 | ppbv   |        |
| 5) Vinyl Chloride              | 3.35 | 62  | 48089  | 0.45 | ppbv   | 98     |
| 6) Bromomethane                | 3.58 | 94  | 28227  | 0.47 | ppbv   | 97     |
| 7) Chloroethane                | 3.66 | 64  | 17621m | 0.47 | ppbv   |        |
| 8) Dichlorotetrafluoroethane   | 3.28 | 85  | 122069 | 0.51 | ppbv   | 87     |
| 9) Propene                     | 3.09 | 41  | 32391m | 0.35 | ppbv   |        |
| 10) Heptane                    | 8.33 | 43  | 99967  | 0.37 | ppbv   | 95     |
| 11) Trichlorofluoromethane     | 4.07 | 101 | 140905 | 0.61 | ppbv   | 89     |
| 12) 1,1,2-Trichlorotrifluoroet | 4.63 | 101 | 70550m | 0.46 | ppbv   |        |
| 13) Ethanol                    | 3.73 | 45  | 13039m | 0.47 | ppbv   |        |
| 14) Bromoethene                | 3.86 | 108 | 35461  | 0.49 | ppbv # | 98     |
| 15) Acetone                    | 3.98 | 43  | 126275 | 0.67 | ppbv   | 99     |
| 16) 1,3-Butadiene              | 3.42 | 39  | 37804  | 0.42 | ppbv   | 91     |
| 17) tert-Butyl alcohol         | 4.45 | 59  | 42223m | 0.35 | ppbv   |        |
| 18) 1,1-Dichloroethene         | 4.42 | 96  | 37023  | 0.50 | ppbv   | 96     |
| 19) Isopropyl Alcohol          | 4.11 | 45  | 76512m | 0.49 | ppbv   |        |
| 20) Methylene Chloride         | 4.48 | 84  | 34739m | 0.50 | ppbv   |        |
| 21) Allyl Chloride             | 4.55 | 41  | 40382  | 0.31 | ppbv   | 89     |
| 22) trans-1,2-Dichloroethene   | 5.04 | 96  | 30980  | 0.40 | ppbv   | 82     |
| 23) Vinyl Acetate              | 5.23 | 43  | 104102 | 0.30 | ppbv # | 93     |
| 24) 1,1-Dichloroethane         | 5.17 | 63  | 103794 | 0.47 | ppbv   | 97     |
| 25) Ethyl Acetate              | 5.86 | 43  | 163420 | 0.42 | ppbv   | 98     |
| 26) Hexane                     | 5.86 | 57  | 73345  | 0.41 | ppbv   | 89     |
| 27) Carbon Disulfide           | 4.69 | 76  | 52034  | 0.29 | ppbv # | 67     |
| 28) Methyl tert-Butyl Ether    | 5.20 | 73  | 102374 | 0.32 | ppbv   | 99     |
| 29) Chloroform                 | 5.93 | 83  | 124862 | 0.48 | ppbv   | 92     |
| 30) Cyclohexane                | 7.33 | 84  | 64824m | 0.38 | ppbv   |        |
| 31) cis-1,2-Dichloroethene     | 5.72 | 61  | 68418  | 0.38 | ppbv # | 86     |
| 32) 1,1,1-Trichloroethane      | 6.71 | 97  | 118643 | 0.43 | ppbv   | 94     |
| 34) 2-Butanone                 | 5.42 | 43  | 99768  | 0.39 | ppbv   | 100    |
| 35) Carbon Tetrachloride       | 7.22 | 117 | 127289 | 0.46 | ppbv   | 93     |
| 36) Benzene                    | 7.10 | 78  | 160330 | 0.41 | ppbv   | 96     |
| 37) 1,2-Dichloroethane         | 6.49 | 62  | 106911 | 0.55 | ppbv   | 96     |
| 38) Trichloroethene            | 8.05 | 130 | 61594  | 0.40 | ppbv   | 97     |
| 39) 1,2-Dichloropropane        | 7.82 | 63  | 73177m | 0.47 | ppbv   |        |
| 40) 1,4-Dioxane                | 8.11 | 88  | 26243m | 0.43 | ppbv   |        |
| 41) Tetrahydrofuran            | 6.26 | 42  | 50537  | 0.33 | ppbv   | 95     |
| 42) Bromodichloromethane       | 8.01 | 83  | 148841 | 0.49 | ppbv   | 88     |
| 43) Methyl Methacrylate        | 8.23 | 69  | 56045  | 0.35 | ppbv   | 90     |

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL070518\  
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 Operator : SY/AP  
 Sample : J3762-15 0.4 PPB LOD  
 Misc : 400ml/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 MDL-AIR-03-QT3-2018

Manual Integrations  
 APPROVED

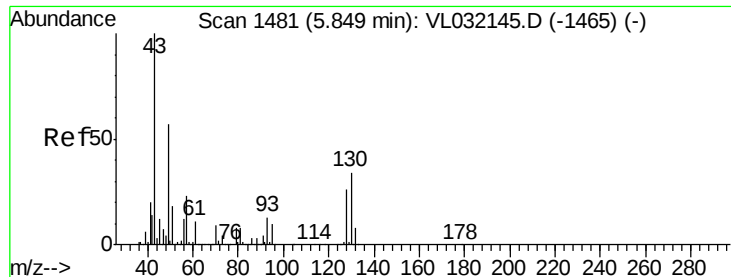
MMDadoda  
 7/9/2018 10:47:58 AM

Quant Time: Jul 06 07:26:44 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL062918AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Fri Jun 2  
 QLast Update : Fri Jun 29 22:27:58 2018  
 Response via : Initial Calibration

| Internal Standards            | R.T.  | QIon | Response | Conc | Units  | Dev(Min) |
|-------------------------------|-------|------|----------|------|--------|----------|
| 44) 2,2,4-Trimethylpentane    | 8.08  | 57   | 297848   | 0.43 | ppbv   | 93       |
| 45) t-1,3-Dichloropropene     | 9.51  | 75   | 53599m   | 0.27 | ppbv   |          |
| 46) cis-1,3-Dichloropropene   | 8.93  | 75   | 73833m   | 0.31 | ppbv   |          |
| 47) 1,1,2-Trichloroethane     | 9.70  | 97   | 78044m   | 0.49 | ppbv   |          |
| 48) Dibromochloromethane      | 10.55 | 129  | 95383    | 0.38 | ppbv   | 95       |
| 49) Bromoform                 | 13.30 | 173  | 69677m   | 0.33 | ppbv   |          |
| 50) 4-Methyl-2-Pentanone      | 8.99  | 43   | 168811   | 0.40 | ppbv   | 96       |
| 51) 2-Hexanone                | 10.39 | 43   | 124701   | 0.36 | ppbv # | 93       |
| 52) Tetrachloroethene         | 11.47 | 164  | 60160m   | 0.42 | ppbv   |          |
| 53) Toluene                   | 10.04 | 91   | 157915   | 0.33 | ppbv   | 99       |
| 54) 1,2-Dibromoethane         | 10.85 | 107  | 98287    | 0.41 | ppbv   | 87       |
| 56) 1,1,1,2-Tetrachloroethane | 12.38 | 131  | 83231    | 0.47 | ppbv # | 1        |
| 57) Chlorobenzene             | 12.40 | 112  | 177304   | 0.52 | ppbv # | 96       |
| 58) Ethyl Benzene             | 12.96 | 91   | 238250   | 0.37 | ppbv   | 99       |
| 59) m/p-Xylene                | 13.24 | 91   | 431556m  | 0.85 | ppbv   |          |
| 60) o-Xylene                  | 13.94 | 91   | 215772   | 0.42 | ppbv   | 92       |
| 61) Styrene                   | 13.79 | 104  | 133260m  | 0.32 | ppbv   |          |
| 62) Isopropylbenzene          | 14.92 | 105  | 302658   | 0.39 | ppbv   | 99       |
| 63) 1,1,2,2-Tetrachloroethane | 13.94 | 83   | 205564m  | 0.52 | ppbv   |          |
| 64) n-propylbenzene           | 15.82 | 120  | 73163m   | 0.36 | ppbv   |          |
| 65) tert-Butylbenzene         | 17.01 | 119  | 245547   | 0.36 | ppbv   | 88       |
| 66) Benzyl Chloride           | 17.25 | 91   | 70596    | 0.17 | ppbv # | 95       |
| 67) sec-Butylbenzene          | 17.55 | 105  | 382746   | 0.38 | ppbv   | 95       |
| 69) p-Isopropyltoluene        | 17.91 | 119  | 268280   | 0.33 | ppbv   | 94       |
| 70) n-Butylbenzene            | 18.81 | 91   | 306867   | 0.36 | ppbv   | 94       |
| 71) 2-Chlorotoluene           | 15.72 | 91   | 230443m  | 0.38 | ppbv   |          |
| 72) 4-Ethyltoluene            | 16.10 | 105  | 226943m  | 0.34 | ppbv   |          |
| 73) 1,3,5-Trimethylbenzene    | 16.25 | 105  | 213052   | 0.34 | ppbv # | 85       |
| 74) 1,2,4-Trimethylbenzene    | 17.02 | 105  | 229051   | 0.37 | ppbv # | 89       |
| 75) 1,3-Dichlorobenzene       | 17.26 | 146  | 160591   | 0.45 | ppbv   | 95       |
| 76) 1,4-Dichlorobenzene       | 17.40 | 146  | 132133   | 0.37 | ppbv   | 92       |
| 77) 1,2-Dichlorobenzene       | 18.09 | 146  | 137958   | 0.39 | ppbv   | 92       |
| 78) Hexachloro-1,3-Butadiene  | 23.64 | 225  | 49225m   | 0.40 | ppbv   |          |
| 79) Naphthalene               | 22.53 | 128  | 98787m   | 0.17 | ppbv   |          |
| 80) Naphthalene, 2-methyl-    | 25.20 | 142  | 6454     | 0.03 | ppbv # | 93       |
| 81) 1,2,4-Trichlorobenzene    | 22.25 | 180  | 59103m   | 0.23 | ppbv   |          |

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





#1

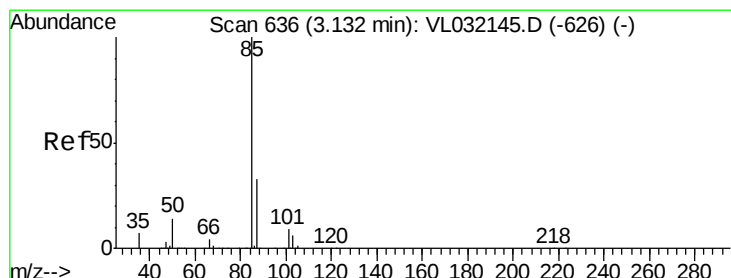
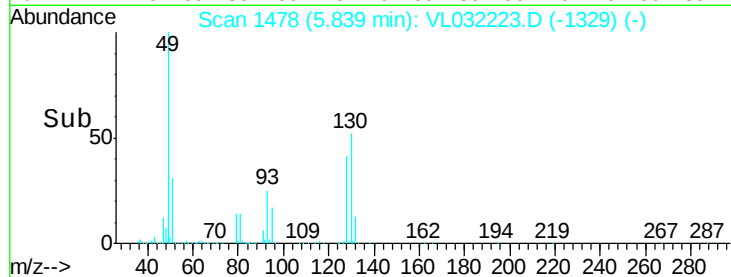
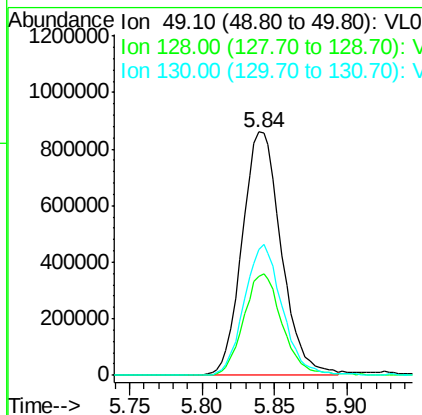
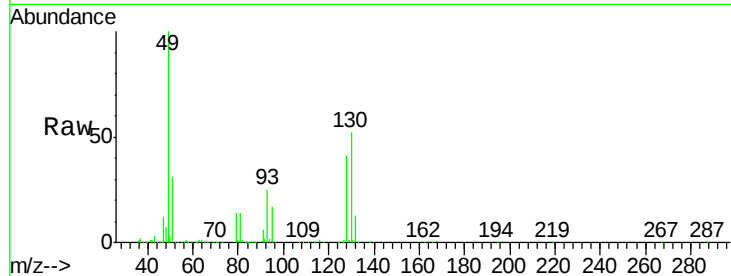
Bromochloromethane  
 Concen: 10.00 ppbv  
 RT: 5.84 min Scan# 1478  
 Delta R.T. -0.02 min  
 Lab File: VL032223.D  
 Acq: 6 Jul 2018 3:45

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 MDL-AIR-03-QT3-2018

Tot Ion: 49 Resp: 1615908  
 Ion Ratio Lower Upper  
 49 100  
 128 41.6 23.4 70.0  
 130 52.5 30.3 90.9

Manual Integrations  
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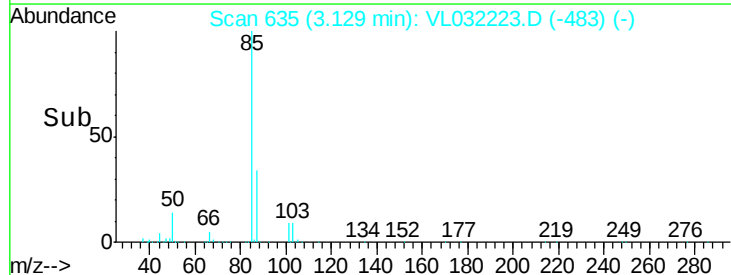
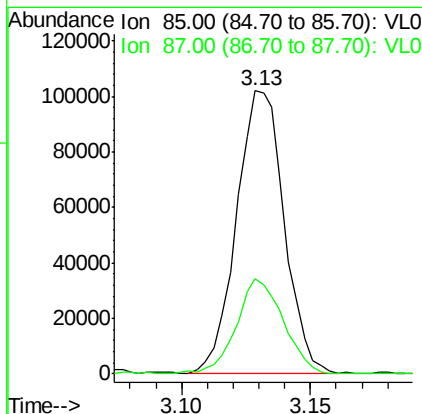
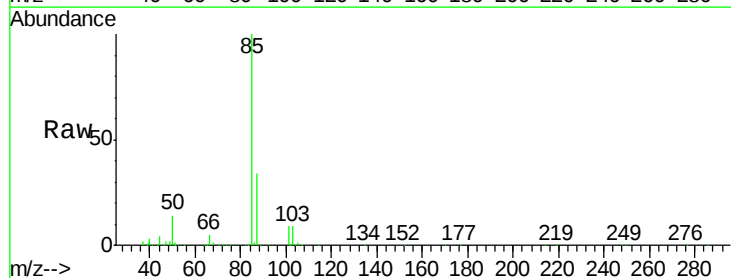
MMDadoda  
 7/9/2018 10:47:58 AM

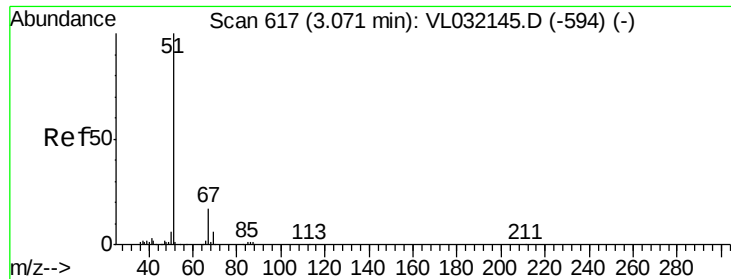


#2

Dichlorodifluoromethane  
 Concen: 0.62 ppbv  
 RT: 3.13 min Scan# 635  
 Delta R.T. -0.01 min  
 Lab File: VL032223.D  
 Acq: 6 Jul 2018 3:45

Tgt Ion: 85 Resp: 131005  
 Ion Ratio Lower Upper  
 85 100  
 87 33.5 26.7 40.1





#3

Chlorodifluoromethane

Concen: 0.51 ppbv

RT: 3.07 min Scan# 616

Delta R.T. -0.01 min

Lab File: VL032223.D

Acq: 6 Jul 2018 3:45

Instrument :

MSVOA\_L

ClientSampleId :

MDL-AIR-03-QT3-2018

Tot Ion: 51 Resp: 101631

Ion Ratio Lower Upper

51 100

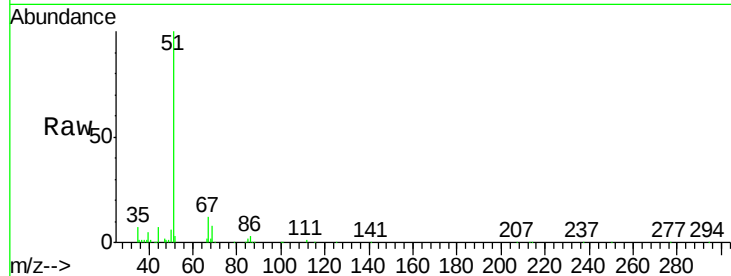
67 17.3 13.2 19.8

Manual Integrations

APPROVED

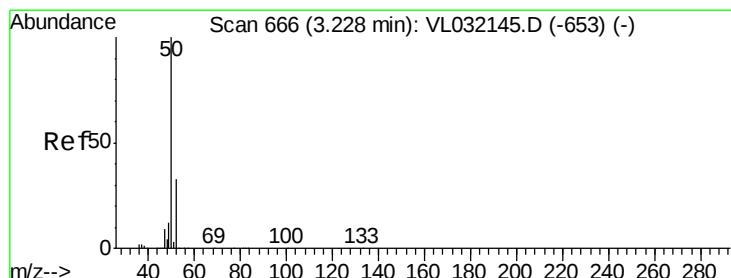
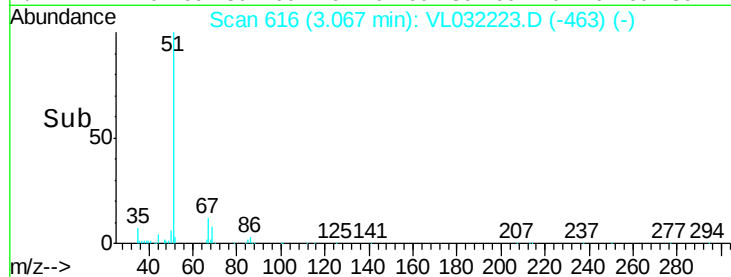
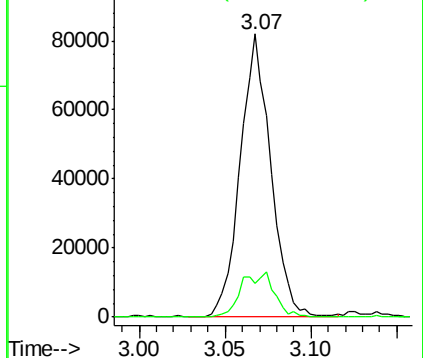
MMDadoda

7/9/2018 10:47:58 AM



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.48 ppbv m

RT: 3.23 min Scan# 667

Delta R.T. -0.01 min

Lab File: VL032223.D

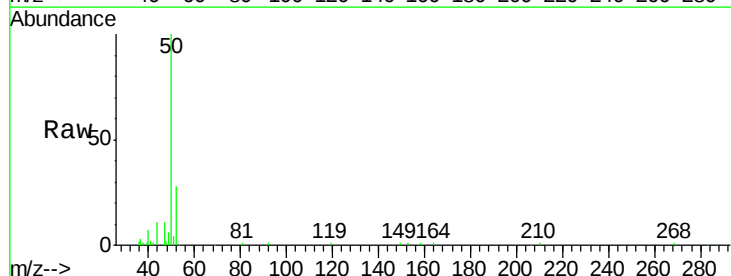
Acq: 6 Jul 2018 3:45

Tgt Ion: 50 Resp: 50602

Ion Ratio Lower Upper

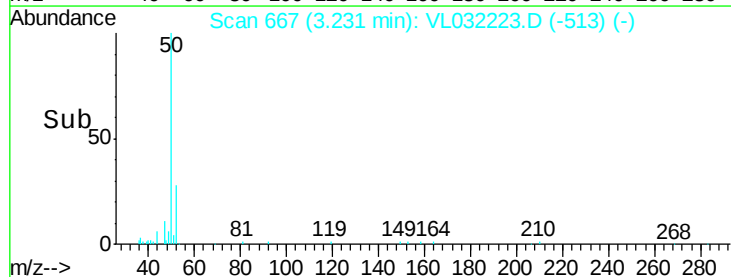
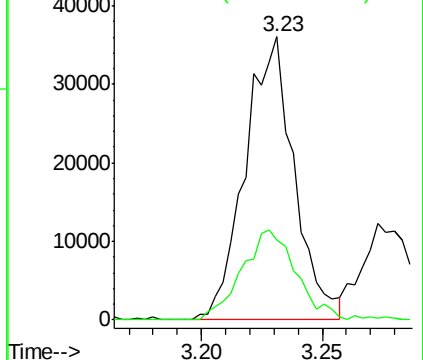
50 100

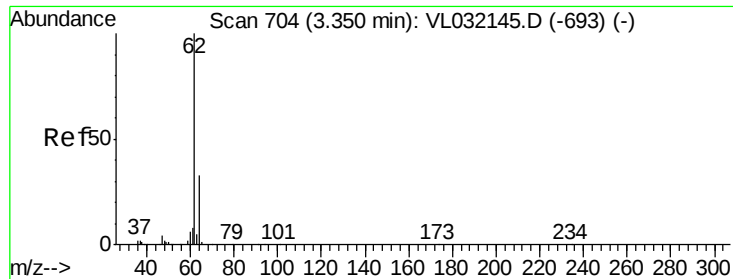
52 28.4 26.0 39.0



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#5

Vinyl Chloride

Concen: 0.45 ppbv

RT: 3.35 min Scan# 703

Delta R.T. -0.01 min

Lab File: VL032223.D

Acq: 6 Jul 2018 3:45

Instrument :

MSVOA\_L

ClientSampleId :

MDL-AIR-03-QT3-2018

Tot Ion: 62 Resp: 48089

Ion Ratio Lower Upper

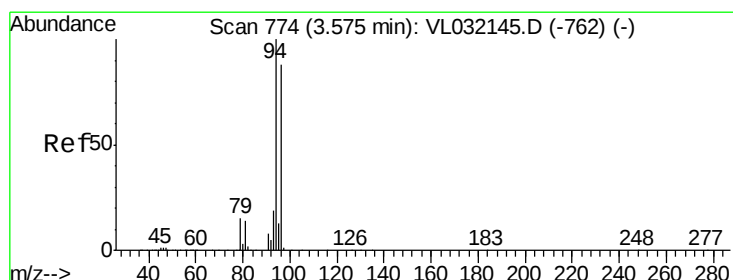
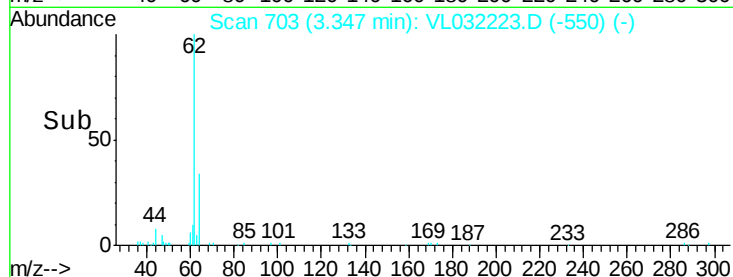
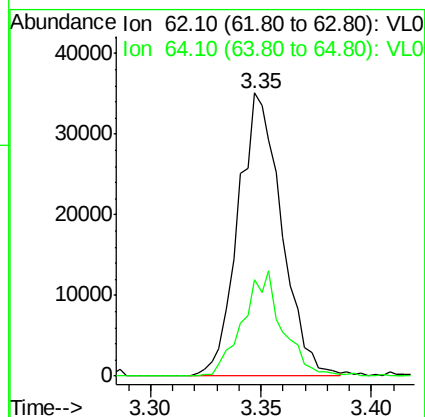
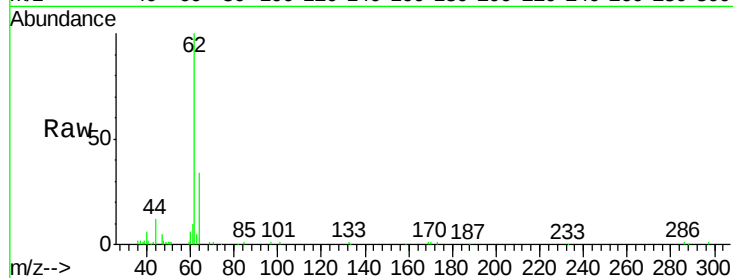
62 100

64 34.0 26.1 39.1

Manual Integrations  
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7/9/2018 10:47:58 AM



#6

Bromomethane

Concen: 0.47 ppbv

RT: 3.58 min Scan# 774

Delta R.T. -0.01 min

Lab File: VL032223.D

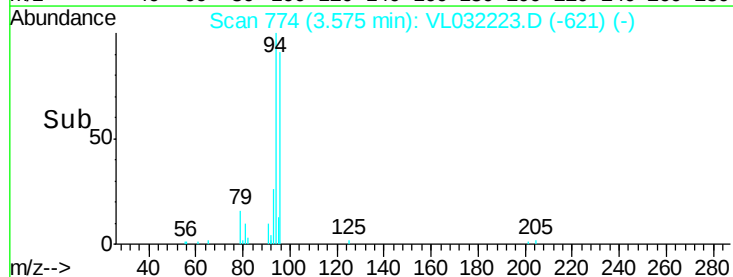
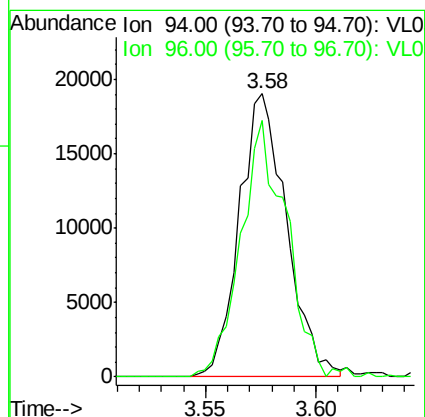
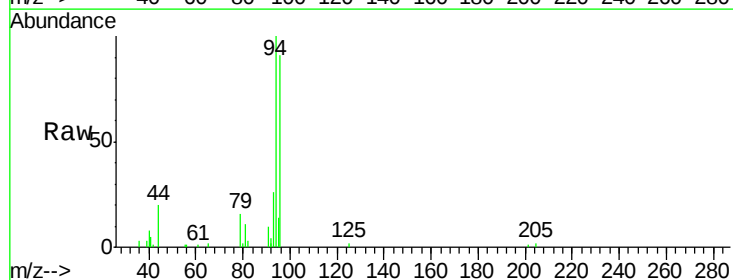
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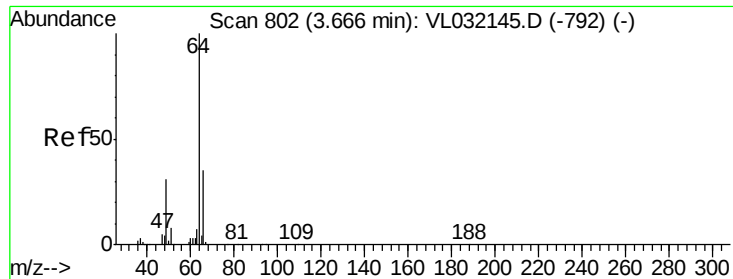
Tgt Ion: 94 Resp: 28227

Ion Ratio Lower Upper

94 100

96 90.6 74.7 112.1





#7

Chloroethane

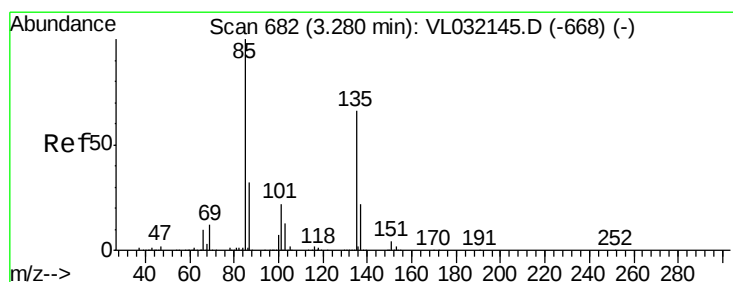
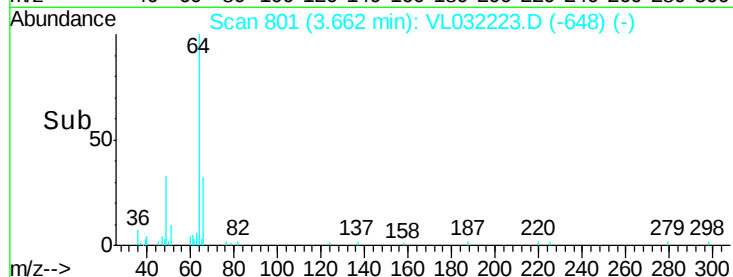
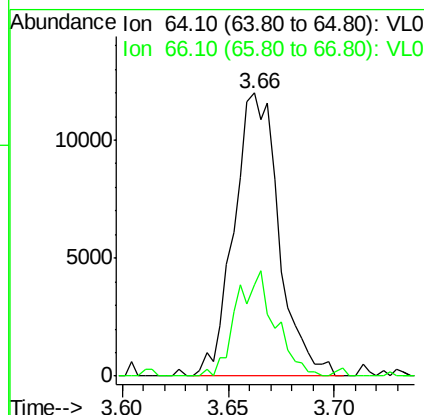
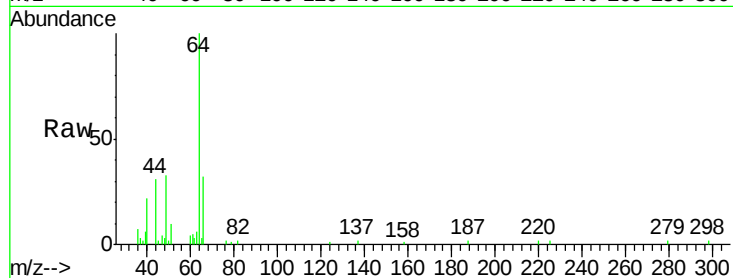
Concen: 0.47 ppbv m  
 RT: 3.66 min Scan# 801  
 Delta R.T. -0.01 min  
 Lab File: VL032223.D  
 Acq: 6 Jul 2018 3:45

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 MDL-AIR-03-QT3-2018

| Tot Ion   | 64   | Resp  | 17621 |
|-----------|------|-------|-------|
| Ion Ratio | 100  | Lower | Upper |
| 66        | 32.3 | 26.9  | 40.3  |

Manual Integrations  
 APPROVED

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 7/9/2018 10:47:58 AM

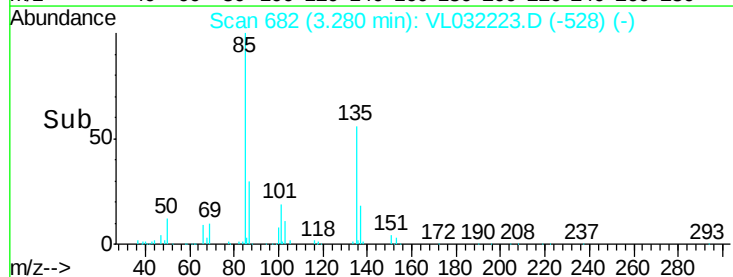
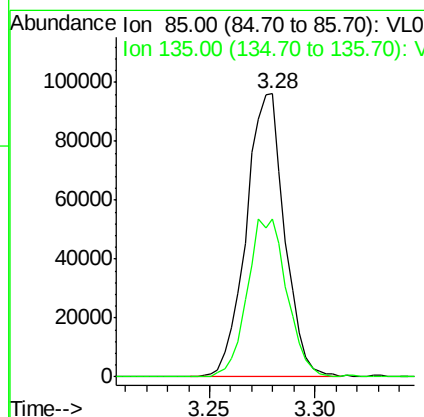
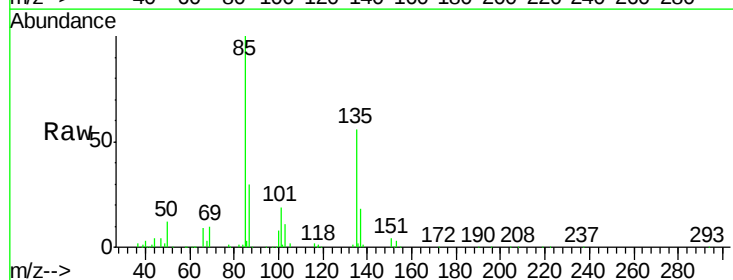


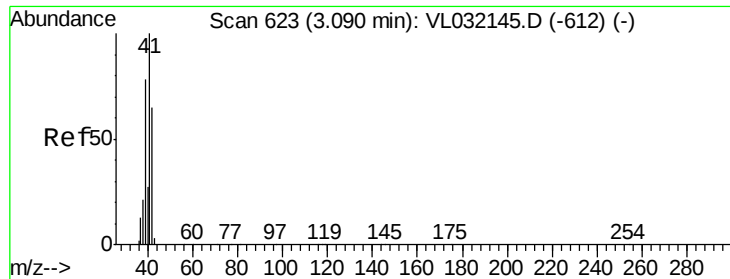
#8

Dichlorotetrafluoroethane

Concen: 0.51 ppbv  
 RT: 3.28 min Scan# 682  
 Delta R.T. -0.01 min  
 Lab File: VL032223.D  
 Acq: 6 Jul 2018 3:45

| Tgt Ion   | 85   | Resp  | 122069 |
|-----------|------|-------|--------|
| Ion Ratio | 100  | Lower | Upper  |
| 135       | 57.7 | 54.6  | 82.0   |





#9

Propene

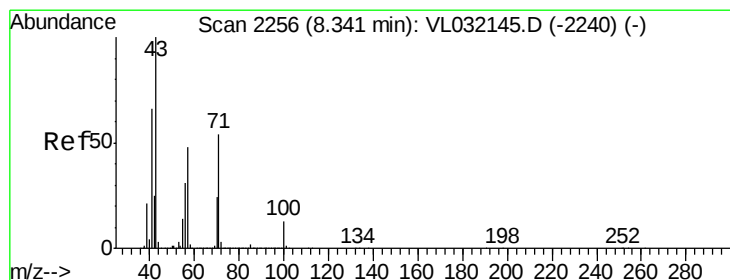
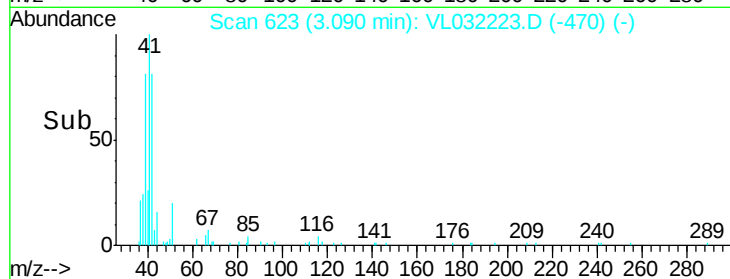
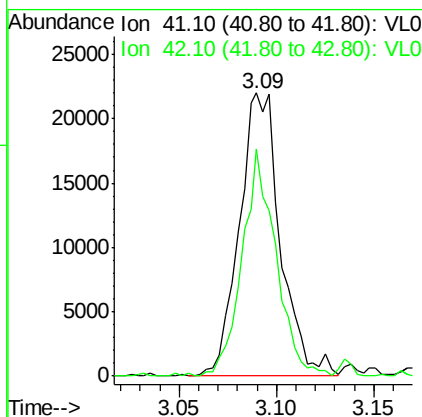
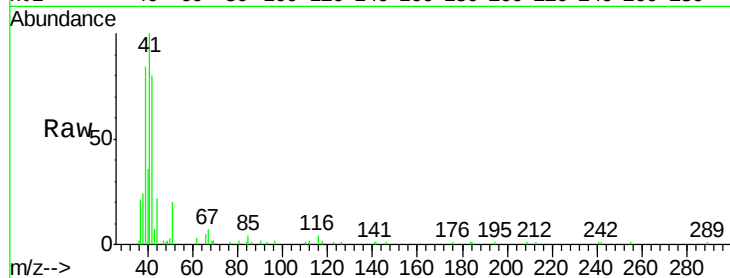
Concen: 0.35 ppbv m  
RT: 3.09 min Scan# 623  
Delta R.T. -0.01 min  
Lab File: VL032223.D  
Acq: 6 Jul 2018 3:45

Instrument :  
MSVOA\_L  
ClientSampleId :  
MDL-AIR-03-QT3-2018

| Tot Ion | 41    | Resp  | 32391 |
|---------|-------|-------|-------|
| Ion     | Ratio | Lower | Upper |
| 41      | 100   |       |       |
| 42      | 65.9  | 56.2  | 84.4  |

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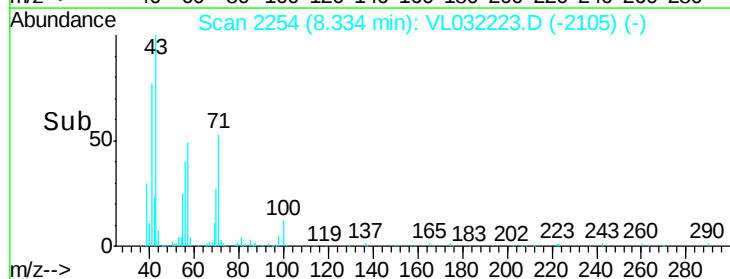
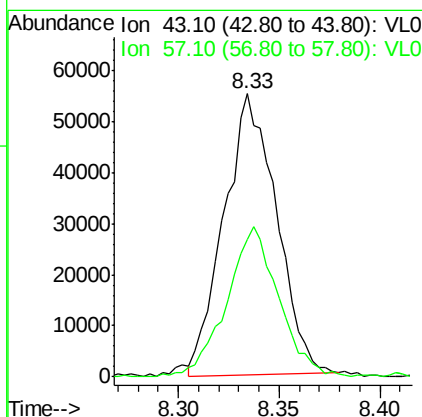
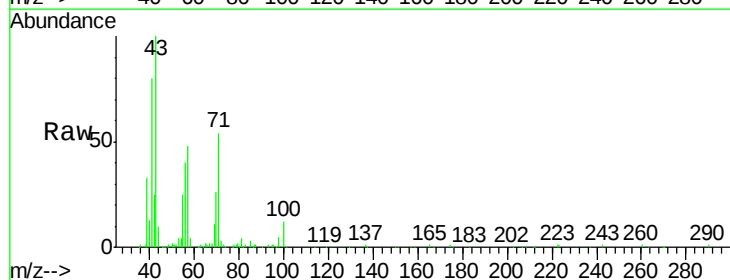


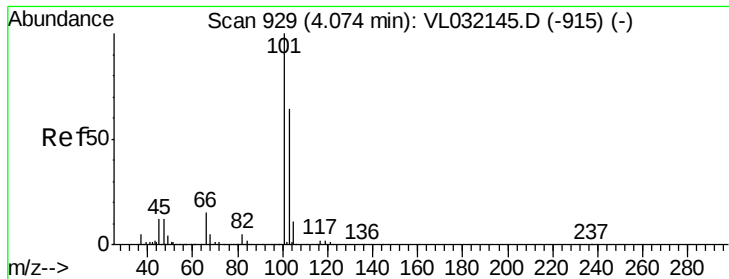
#10

Heptane

Concen: 0.37 ppbv  
RT: 8.33 min Scan# 2254  
Delta R.T. -0.02 min  
Lab File: VL032223.D  
Acq: 6 Jul 2018 3:45

| Tgt Ion | 43    | Resp  | 99967 |
|---------|-------|-------|-------|
| Ion     | Ratio | Lower | Upper |
| 43      | 100   |       |       |
| 57      | 53.6  | 39.8  | 59.8  |





#11

Trichlorofluoromethane

Concen: 0.61 ppbv

RT: 4.07 min Scan# 928

Delta R.T. -0.01 min

Lab File: VL032223.D

Acq: 6 Jul 2018 3:45

Tot Ion:101 Resp: 140905

Ion Ratio Lower Upper

101 100

103 55.5 51.4 77.0

Instrument :

MSVOA\_L

ClientSampleId :

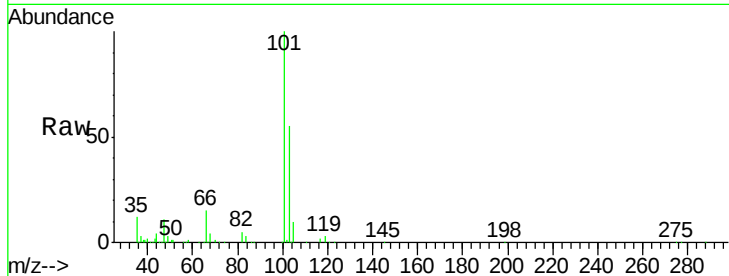
MDL-AIR-03-QT3-2018

Manual Integrations

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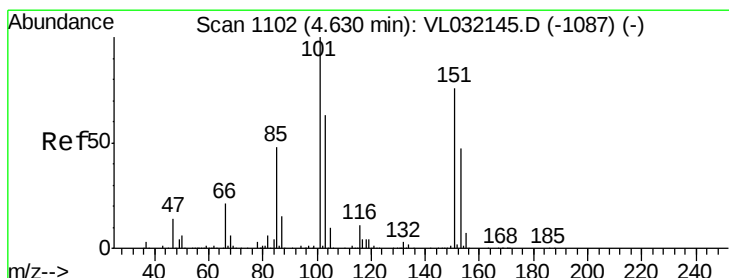
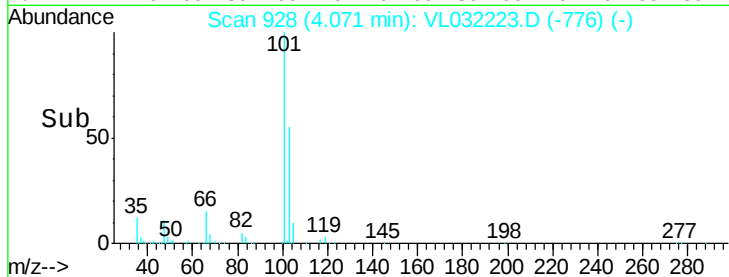
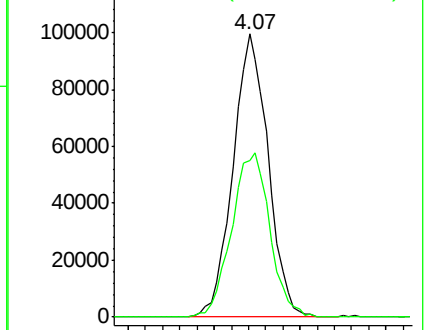
MMDadoda

7/9/2018 10:47:58 AM



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V



#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.46 ppbv m

RT: 4.63 min Scan# 1101

Delta R.T. -0.01 min

Lab File: VL032223.D

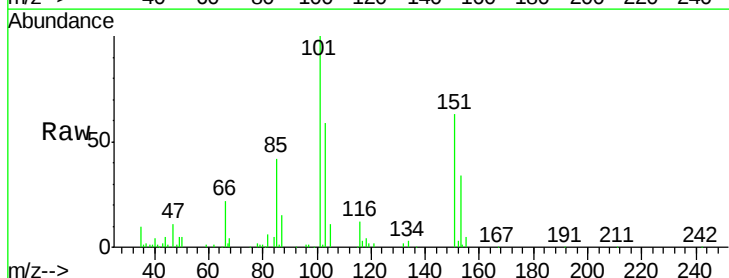
Acq: 6 Jul 2018 3:45

Tgt Ion:101 Resp: 70550

Ion Ratio Lower Upper

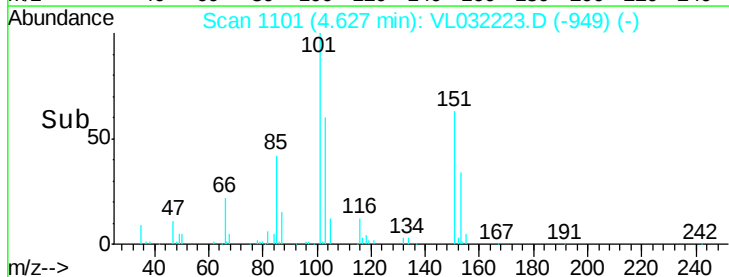
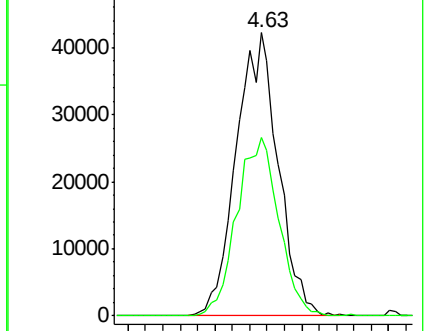
101 100

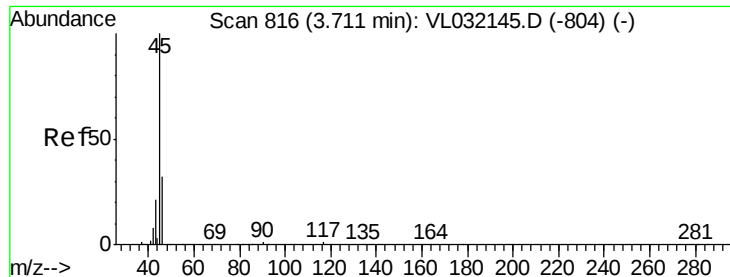
151 0.0 58.8 88.2#



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V





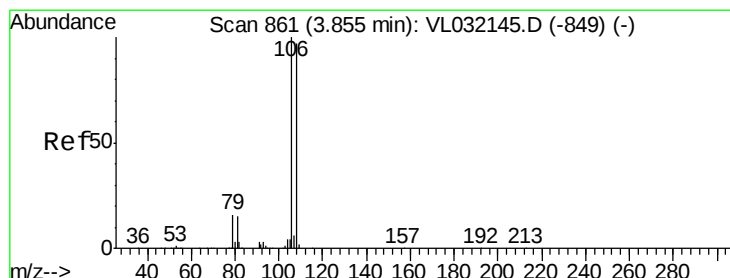
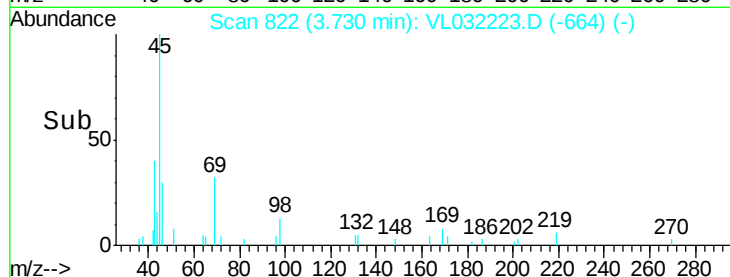
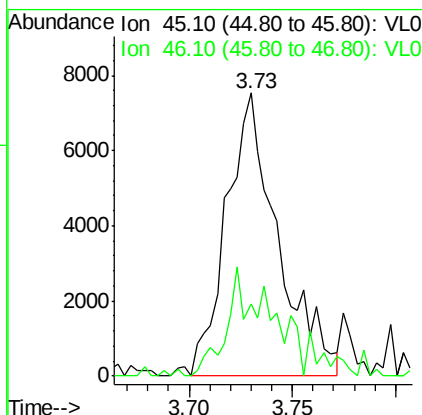
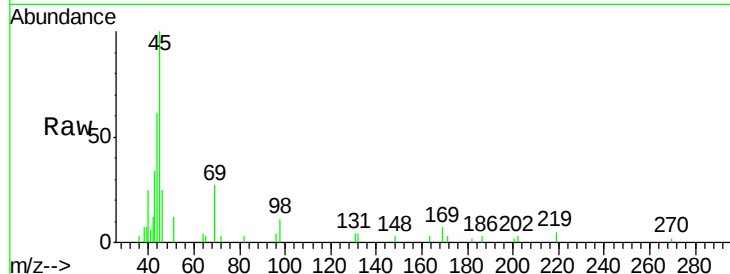
#13  
Ethanol  
Concen: 0.47 ppbv m  
RT: 3.73 min Scan# 822  
Delta R.T. 0.01 min  
Lab File: VL032223.D  
Acq: 6 Jul 2018 3:45

Instrument :  
MSVOA\_L  
ClientSampleId :  
MDL-AIR-03-QT3-2018

Tot Ion: 45 Resp: 13039  
Ion Ratio Lower Upper  
45 100  
46 39.6 14.6 58.4

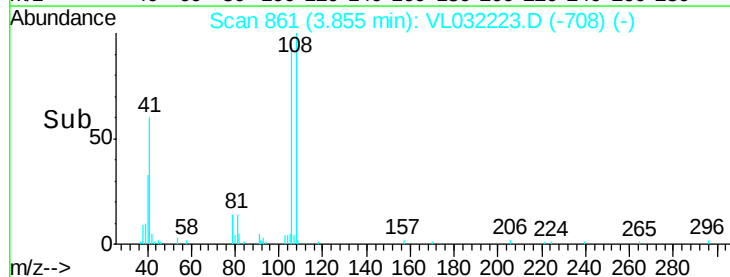
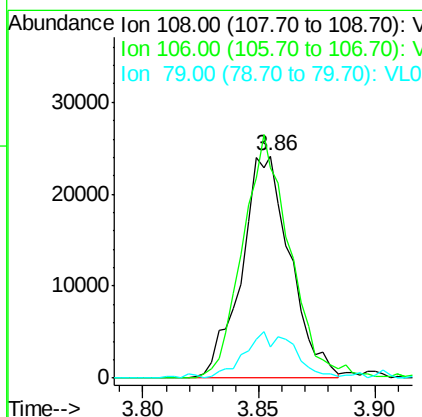
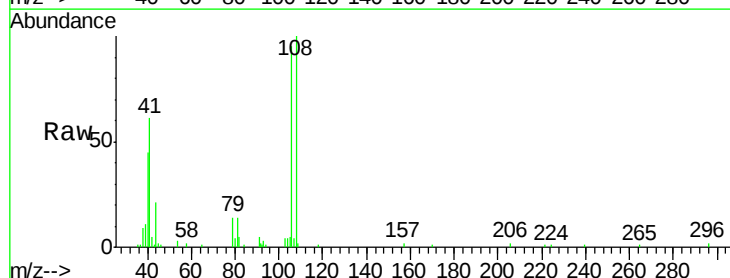
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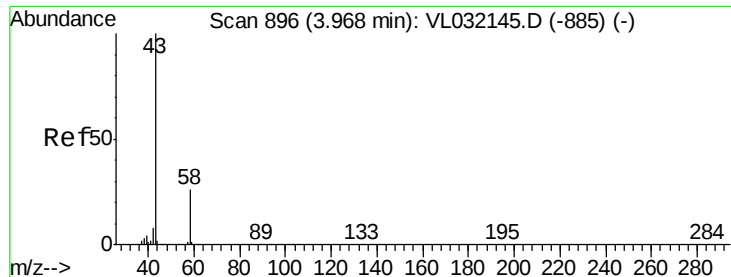
MMDadoda  
7/9/2018 10:47:58 AM



#14  
Bromoethene  
Concen: 0.49 ppbv  
RT: 3.86 min Scan# 861  
Delta R.T. -0.01 min  
Lab File: VL032223.D  
Acq: 6 Jul 2018 3:45

Tgt Ion: 108 Resp: 35461  
Ion Ratio Lower Upper  
108 100  
106 107.6 86.3 129.5  
79 23.0 12.7 19.1#





#15

Acetone

Concen: 0.67 ppbv

RT: 3.98 min Scan# 901

Delta R.T. 0.01 min

Lab File: VL032223.D

Acq: 6 Jul 2018 3:45

Instrument :

MSVOA\_L

ClientSampleId :

MDL-AIR-03-QT3-2018

Tot Ion: 43 Resp: 126275

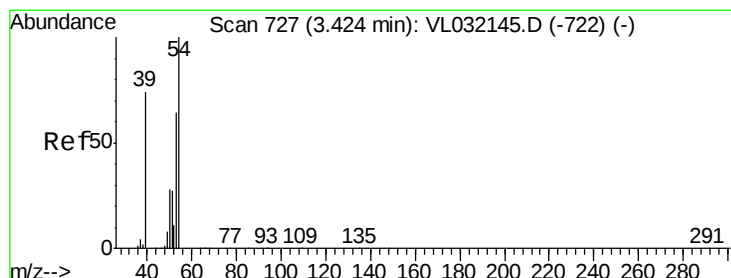
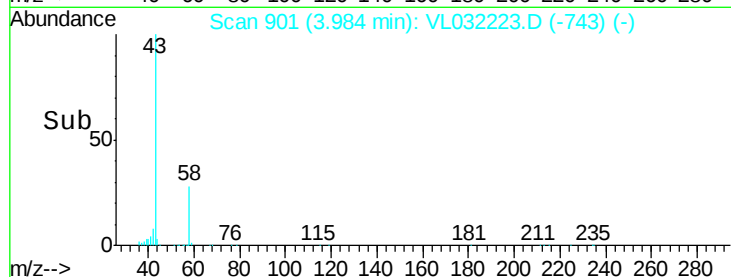
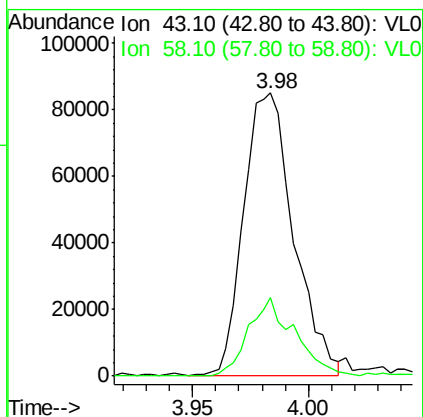
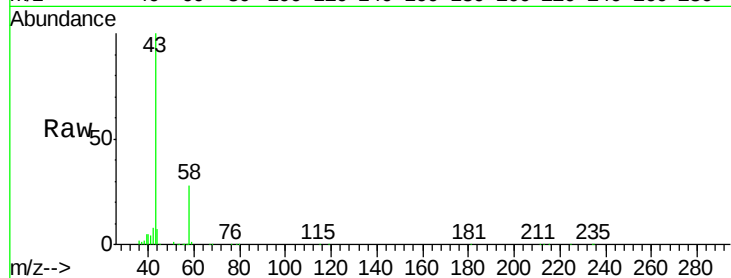
Ion Ratio Lower Upper

43 100

58 27.5 21.4 32.0

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#16

1,3-Butadiene

Concen: 0.42 ppbv

RT: 3.42 min Scan# 727

Delta R.T. -0.01 min

Lab File: VL032223.D

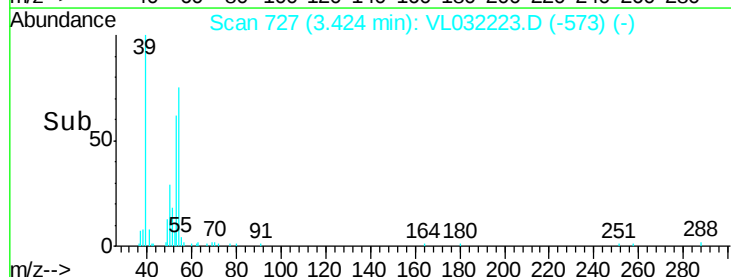
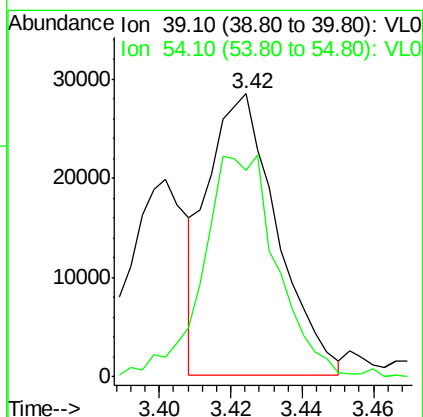
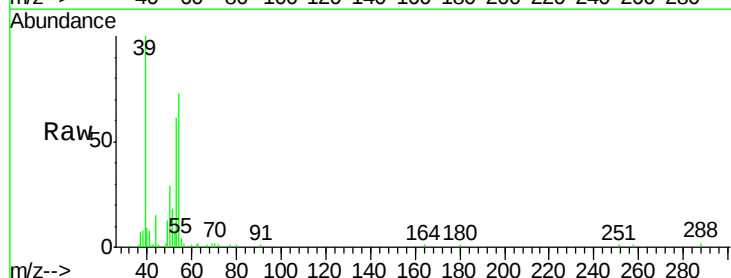
Acq: 6 Jul 2018 3:45

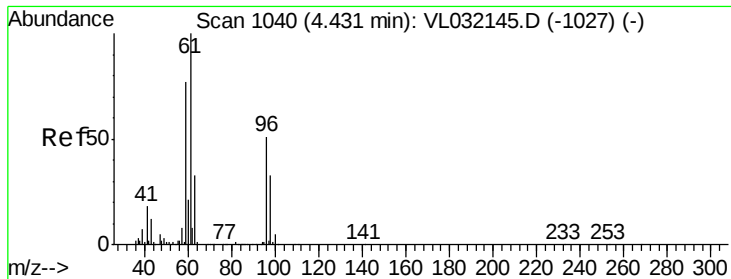
Tgt Ion: 39 Resp: 37804

Ion Ratio Lower Upper

39 100

54 85.9 75.8 113.6





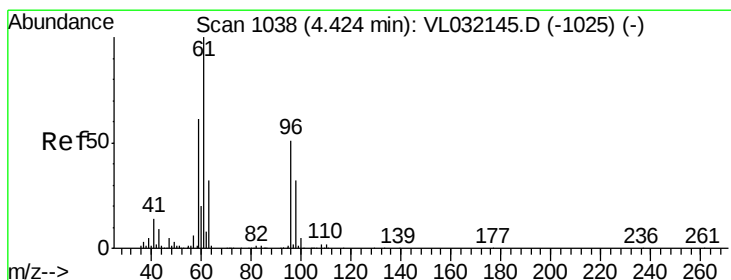
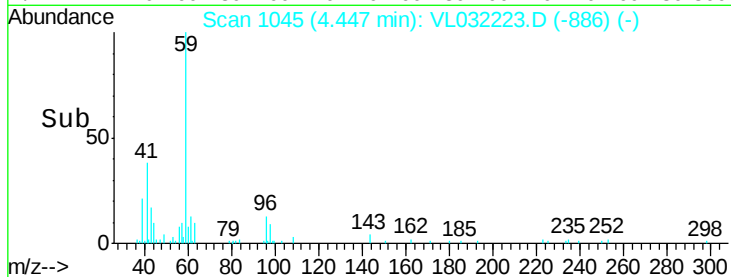
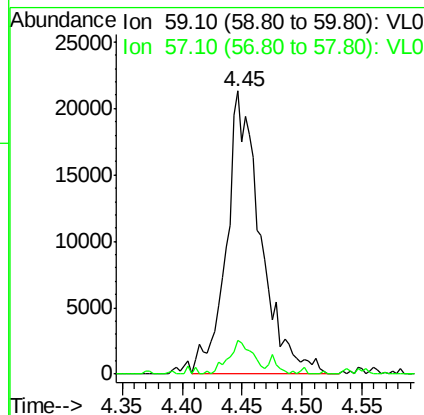
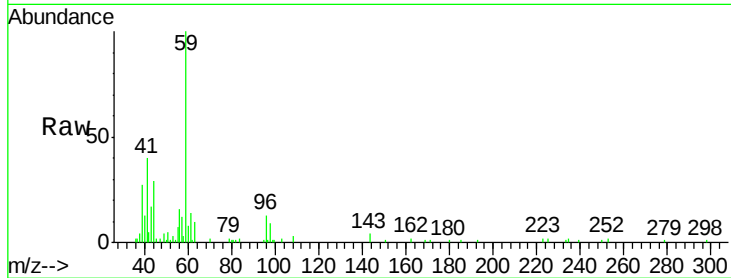
#17  
tert-Butyl alcohol  
Concen: 0.35 ppbv m  
RT: 4.45 min Scan# 1045  
Delta R.T. 0.01 min  
Lab File: VL032223.D  
Acq: 6 Jul 2018 3:45

Instrument :  
MSVOA\_L  
ClientSampleId :  
MDL-AIR-03-QT3-2018

Tot Ion: 59 Resp: 42223  
Ion Ratio Lower Upper  
59 100  
57 0.0 8.2 12.2#

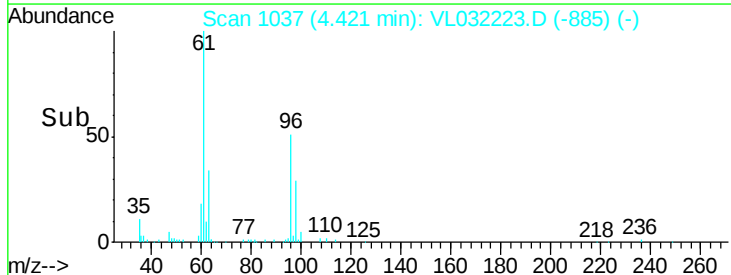
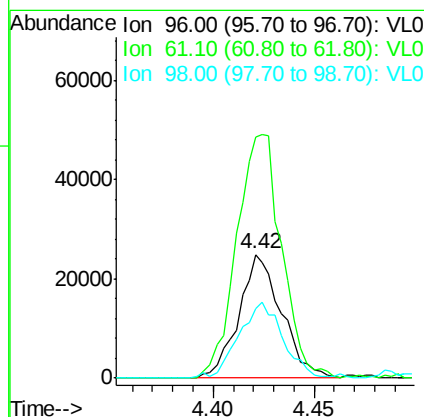
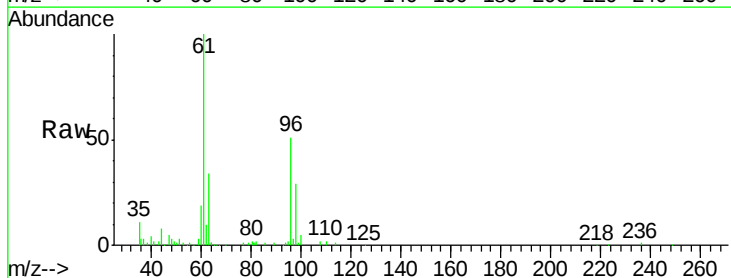
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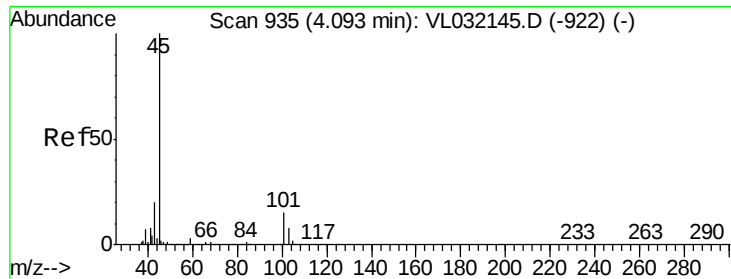
MMDadoda  
7/9/2018 10:47:58 AM



#18  
1,1-Dichloroethene  
Concen: 0.50 ppbv  
RT: 4.42 min Scan# 1037  
Delta R.T. -0.01 min  
Lab File: VL032223.D  
Acq: 6 Jul 2018 3:45

Tgt Ion: 96 Resp: 37023  
Ion Ratio Lower Upper  
96 100  
61 195.1 154.1 231.1  
98 55.8 50.3 75.5





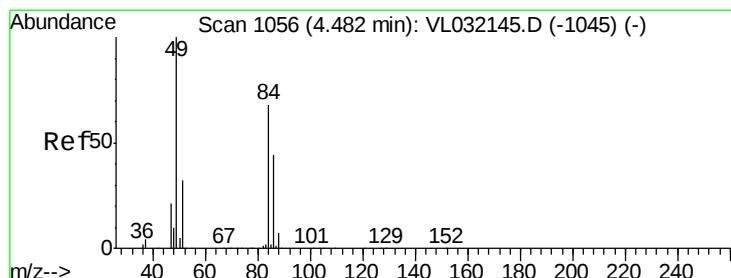
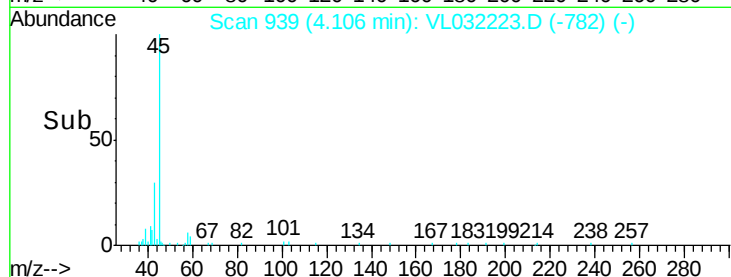
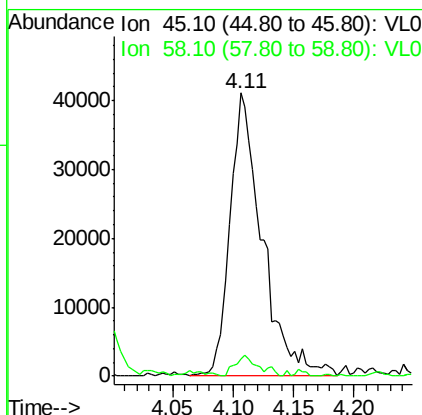
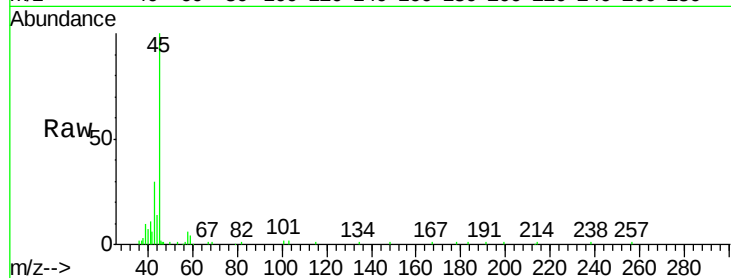
#19  
Isopropyl Alcohol  
Concen: 0.49 ppbv m  
RT: 4.11 min Scan# 939  
Delta R.T. 0.00 min  
Lab File: VL032223.D  
Acq: 6 Jul 2018 3:45

Instrument :  
MSVOA\_L  
ClientSampleId :  
MDL-AIR-03-QT3-2018

Tot Ion: 45 Resp: 76512  
Ion Ratio Lower Upper  
45 100  
58 5.0 29.4 44.0#

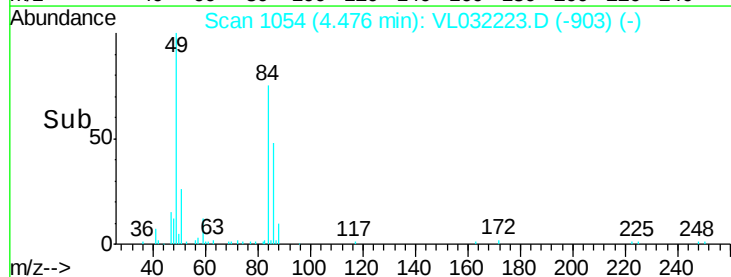
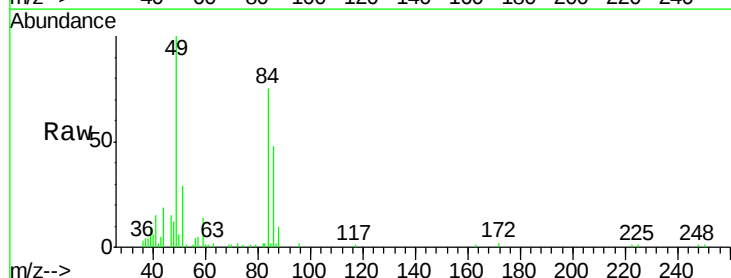
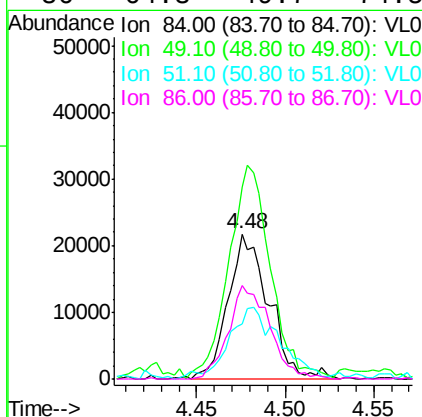
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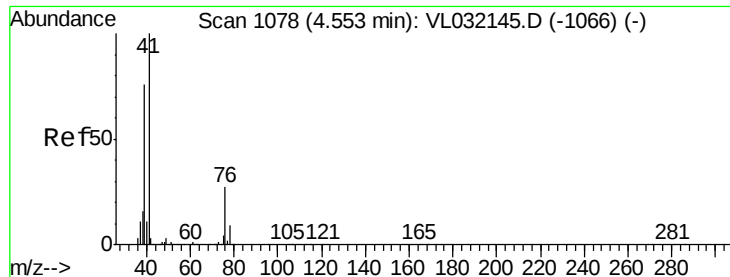
MMDadoda  
7/9/2018 10:47:58 AM



#20  
Methylene Chloride  
Concen: 0.50 ppbv m  
RT: 4.48 min Scan# 1054  
Delta R.T. -0.02 min  
Lab File: VL032223.D  
Acq: 6 Jul 2018 3:45

Tgt Ion: 84 Resp: 34739  
Ion Ratio Lower Upper  
84 100  
49 132.8 119.6 179.4  
51 38.0 36.3 54.5  
86 64.3 49.7 74.5





#21

Allvl Chloride

Concen: 0.31 ppbv

RT: 4.55 min Scan# 1076

Delta R.T. -0.02 min

Lab File: VL032223.D

Acq: 6 Jul 2018 3:45

Instrument :

MSVOA\_L

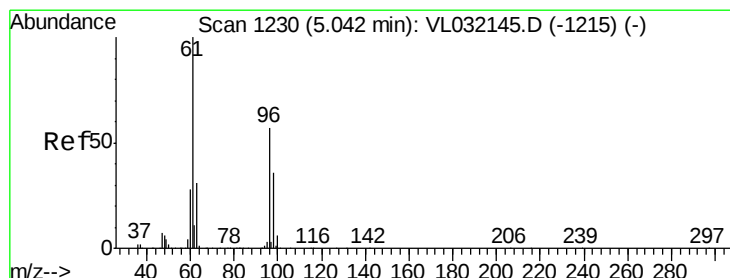
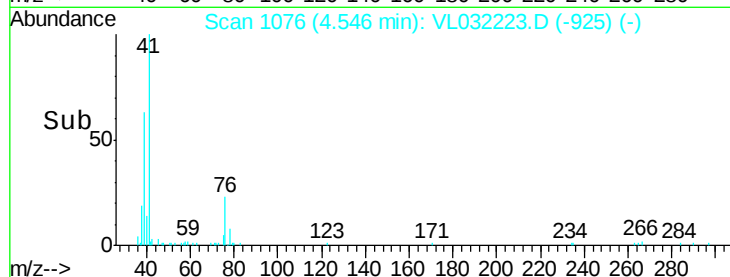
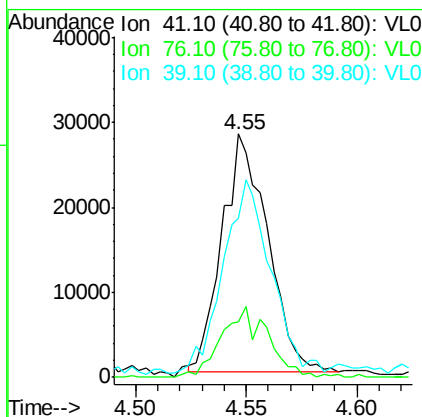
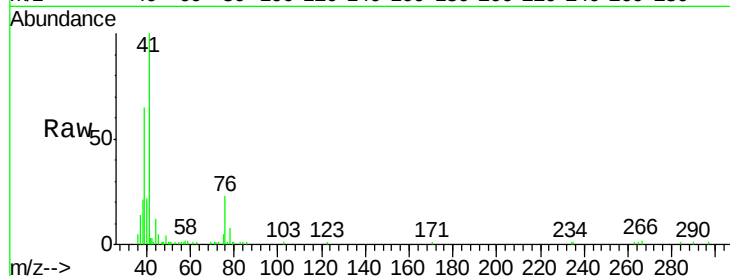
ClientSampleId :

MDL-AIR-03-QT3-2018

|           |      |       |       |
|-----------|------|-------|-------|
| Tot Ion:  | 41   | Resp: | 40382 |
| Ion Ratio |      | Lower | Upper |
| 41        | 100  |       |       |
| 76        | 30.3 | 22.5  | 33.7  |
| 39        | 86.9 | 60.5  | 90.7  |

Manual Integrations  
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MMDadoda  
7/9/2018 10:47:58 AM



#22

trans-1,2-Dichloroethene

Concen: 0.40 ppbv

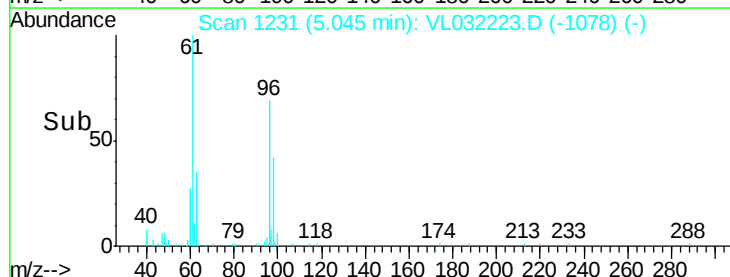
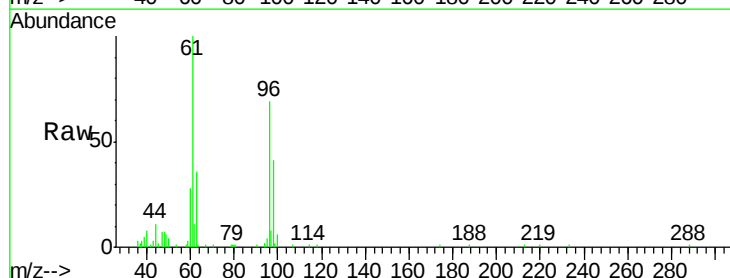
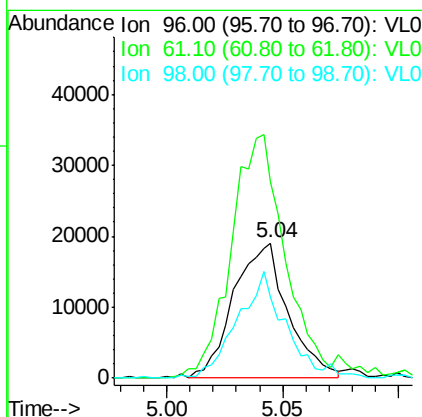
RT: 5.04 min Scan# 1231

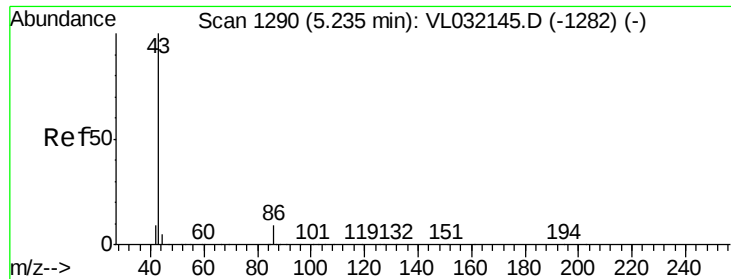
Delta R.T. -0.01 min

Lab File: VL032223.D

Acq: 6 Jul 2018 3:45

|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 96    | Resp: | 30980 |
| Ion Ratio |       | Lower | Upper |
| 96        | 100   |       |       |
| 61        | 138.3 | 135.2 | 202.8 |
| 98        | 58.4  | 49.7  | 74.5  |





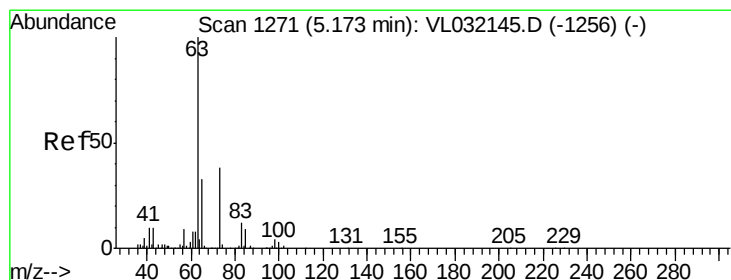
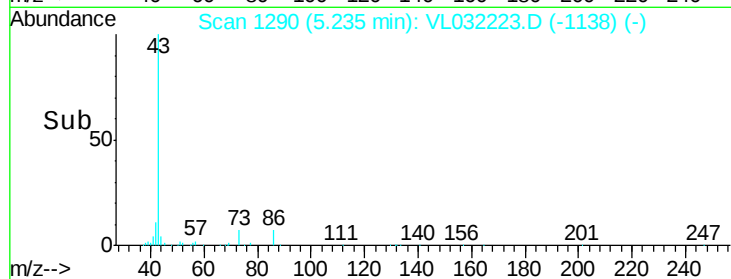
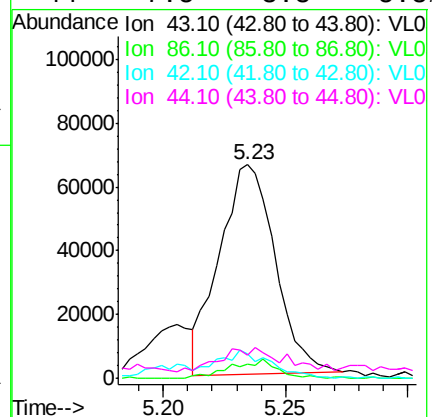
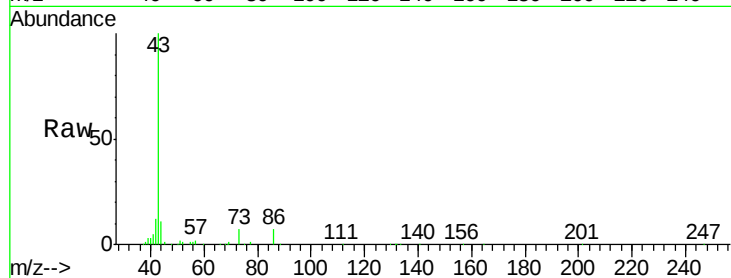
#23  
 Vinyl Acetate  
 Concen: 0.30 ppbv  
 RT: 5.23 min Scan# 1290  
 Delta R.T. -0.01 min  
 Lab File: VL032223.D  
 Acq: 6 Jul 2018 3:45

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 MDL-AIR-03-QT3-2018

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 43      | 100   |       |       |
| 86      | 6.3   | 6.2   | 9.4   |
| 42      | 11.5  | 6.9   | 10.3# |
| 44      | 7.5   | 3.8   | 5.8#  |

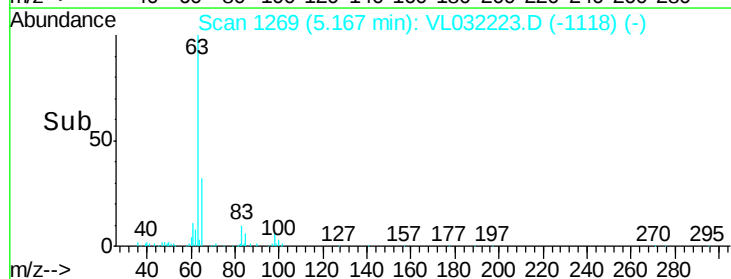
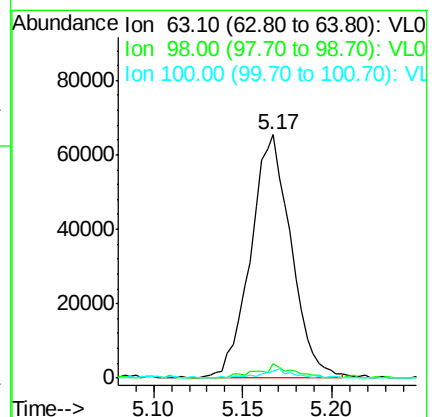
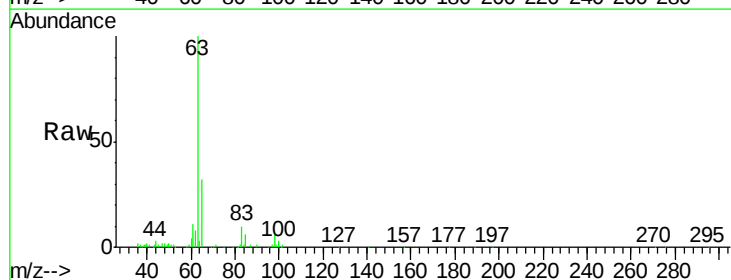
Manual Integrations  
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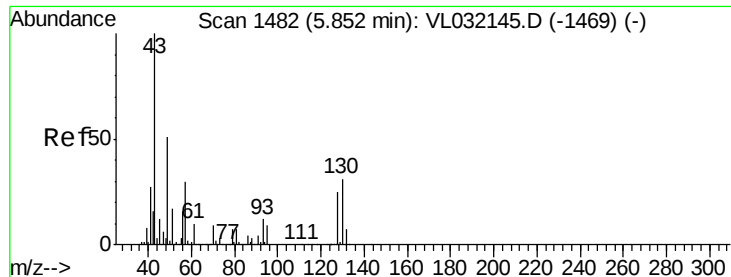
MMDadoda  
 7/9/2018 10:47:58 AM



#24  
 1,1-Dichloroethane  
 Concen: 0.47 ppbv  
 RT: 5.17 min Scan# 1269  
 Delta R.T. -0.02 min  
 Lab File: VL032223.D  
 Acq: 6 Jul 2018 3:45

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 63      | 100   |       |       |
| 98      | 5.9   | 2.4   | 7.2   |
| 100     | 2.8   | 1.7   | 5.0   |





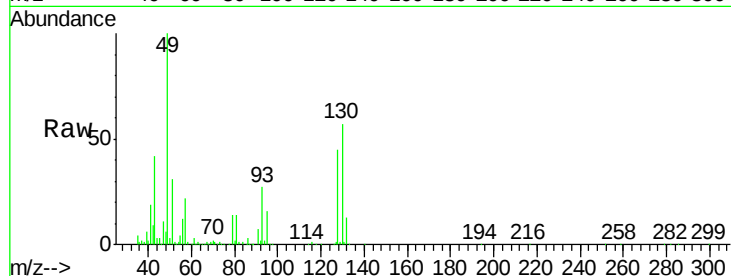
#25  
Ethyl Acetate  
Concen: 0.42 ppbv  
RT: 5.86 min Scan# 1485  
Delta R.T. -0.00 min  
Lab File: VL032223.D  
Acq: 6 Jul 2018 3:45

Instrument :  
MSVOA\_L  
ClientSampleId :  
MDL-AIR-03-QT3-2018

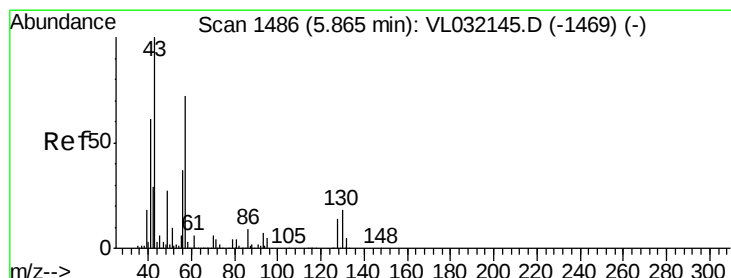
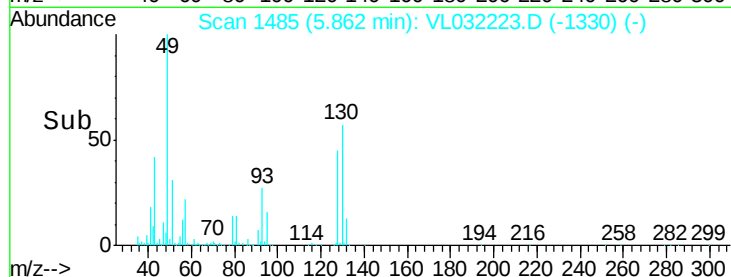
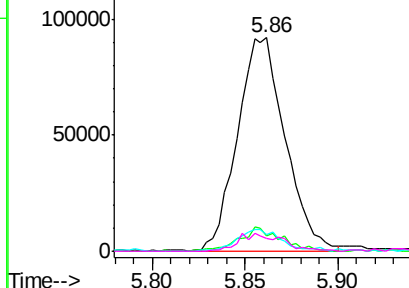
| Tot Ion   | 43    | Resp  | 163420 |
|-----------|-------|-------|--------|
| Ion Ratio | Lower | Upper |        |
| 43        | 100   |       |        |
| 45        | 10.5  | 7.8   | 11.8   |
| 61        | 10.1  | 7.4   | 11.0   |
| 70        | 7.8   | 6.1   | 9.1    |

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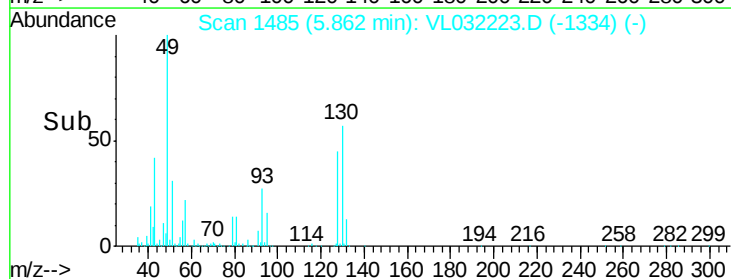
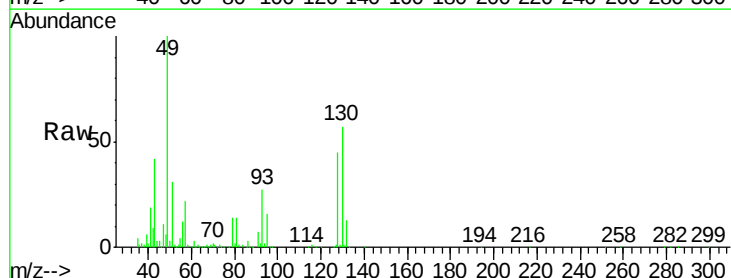
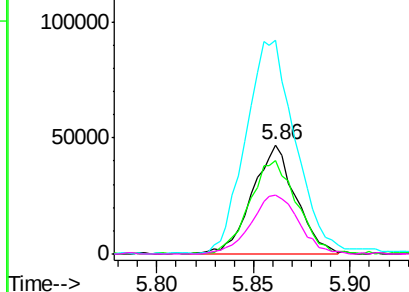
Abundance Ion 43.10 (42.80 to 43.80): VL0  
Ion 45.10 (44.80 to 45.80): VL0  
Ion 61.10 (60.80 to 61.80): VL0  
Ion 70.10 (69.80 to 70.80): VL0

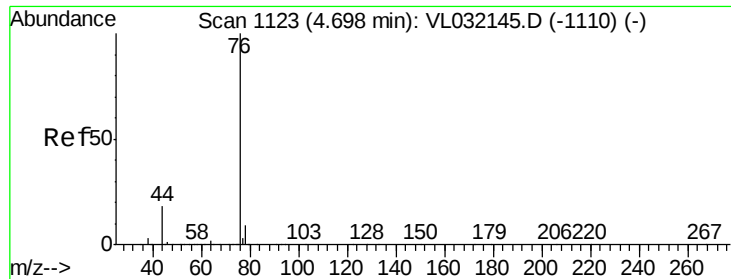


#26  
Hexane  
Concen: 0.41 ppbv  
RT: 5.86 min Scan# 1485  
Delta R.T. -0.02 min  
Lab File: VL032223.D  
Acq: 6 Jul 2018 3:45

| Tgt Ion   | 57    | Resp  | 73345 |
|-----------|-------|-------|-------|
| Ion Ratio | Lower | Upper |       |
| 57        | 100   |       |       |
| 41        | 94.5  | 68.6  | 103.0 |
| 43        | 229.1 | 168.6 | 252.8 |
| 56        | 59.4  | 41.0  | 61.6  |

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





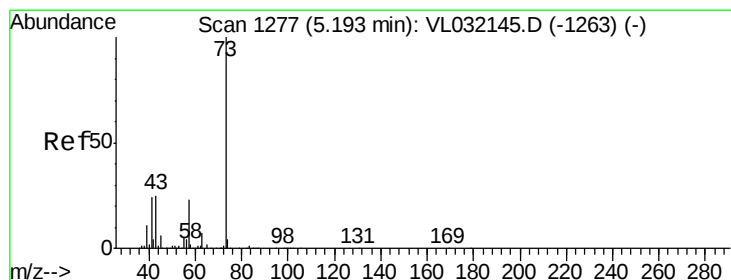
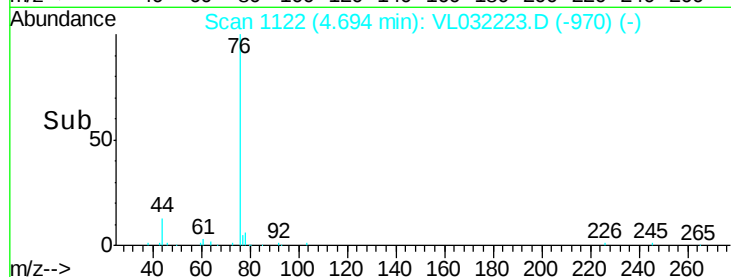
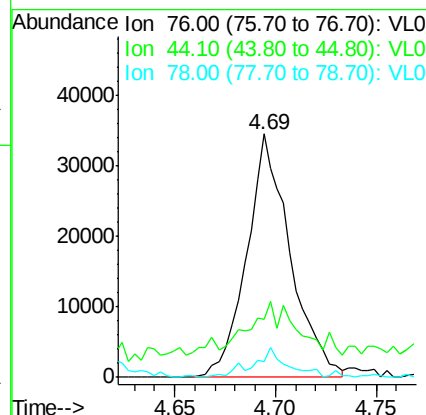
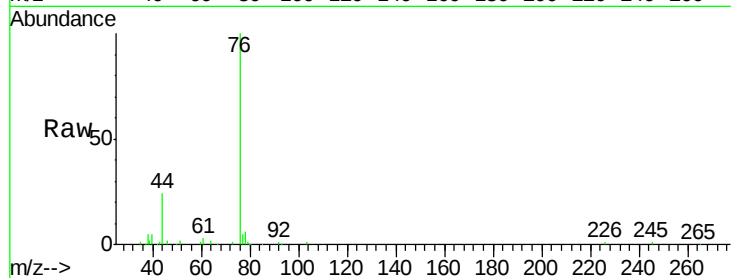
#27  
Carbon Disulfide  
Concen: 0.29 ppbv  
RT: 4.69 min Scan# 1122  
Delta R.T. -0.01 min  
Lab File: VL032223.D  
Acq: 6 Jul 2018 3:45

Instrument :  
MSVOA\_L  
ClientSampleId :  
MDL-AIR-03-QT3-2018

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 76      | 100   |       |       |
| 44      | 39.6  | 15.1  | 22.7# |
| 78      | 10.5  | 7.2   | 10.8  |

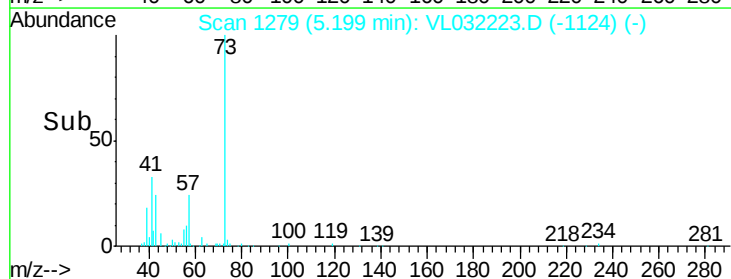
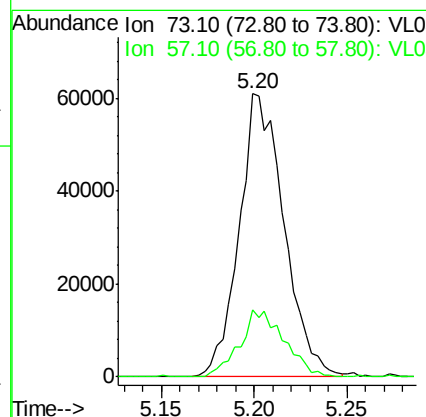
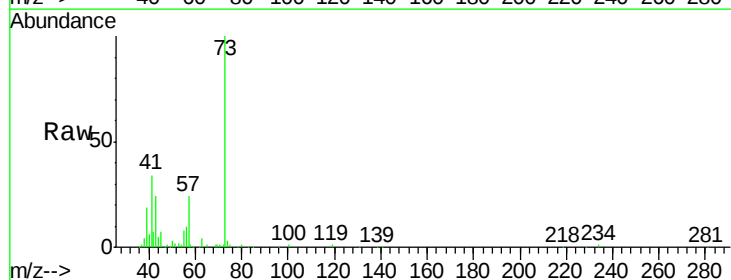
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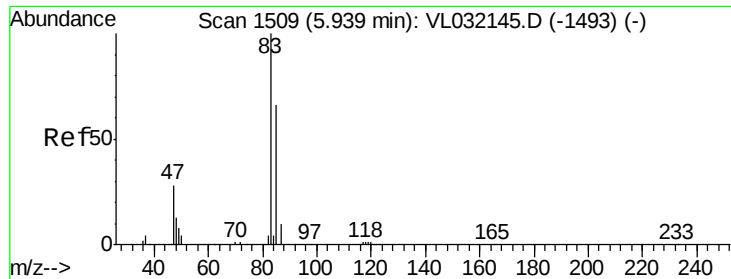
MMDadoda  
7/9/2018 10:47:58 AM



#28  
Methyl tert-Butyl Ether  
Concen: 0.32 ppbv  
RT: 5.20 min Scan# 1279  
Delta R.T. -0.00 min  
Lab File: VL032223.D  
Acq: 6 Jul 2018 3:45

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 73      | 100   |       |       |
| 57      | 23.6  | 18.6  | 27.8  |





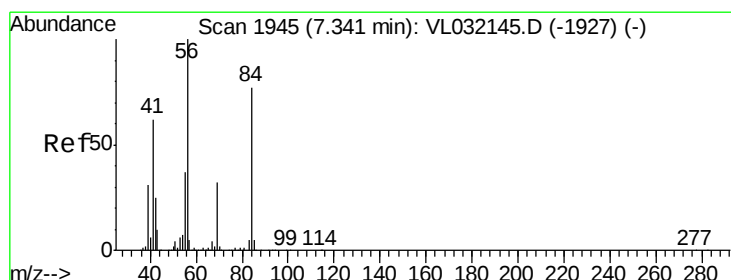
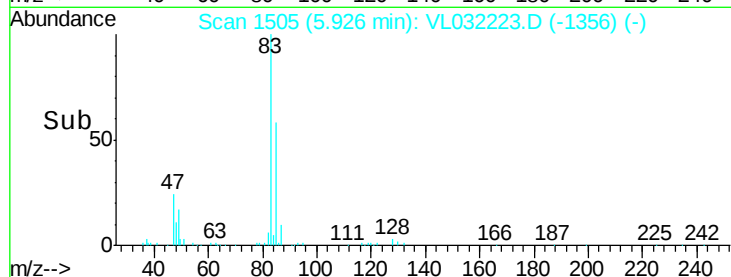
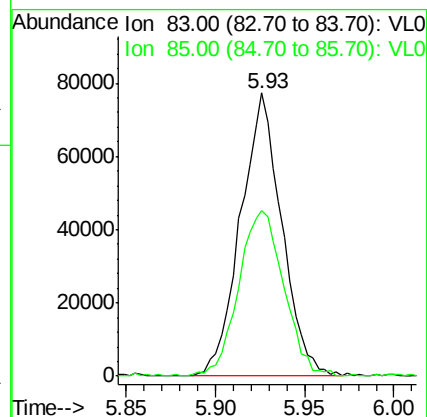
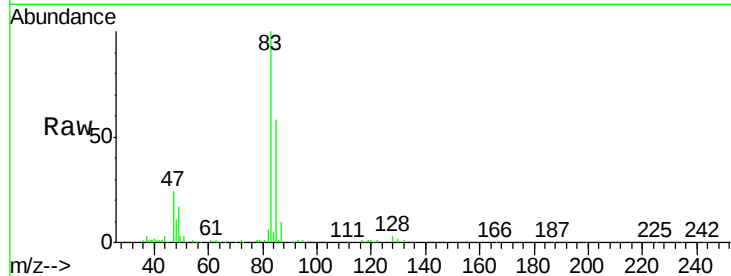
#29  
Chloroform  
Concen: 0.48 ppbv  
RT: 5.93 min Scan# 1505  
Delta R.T. -0.02 min  
Lab File: VL032223.D  
Acq: 6 Jul 2018 3:45

Instrument :  
MSVOA\_L  
ClientSampleId :  
MDL-AIR-03-QT3-2018

Tot Ion: 83 Resp: 124862  
Ion Ratio Lower Upper  
83 100  
85 58.0 51.6 77.4

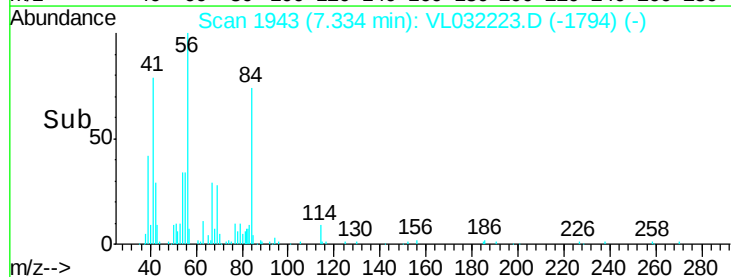
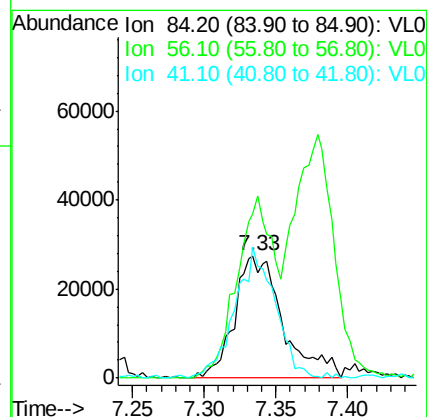
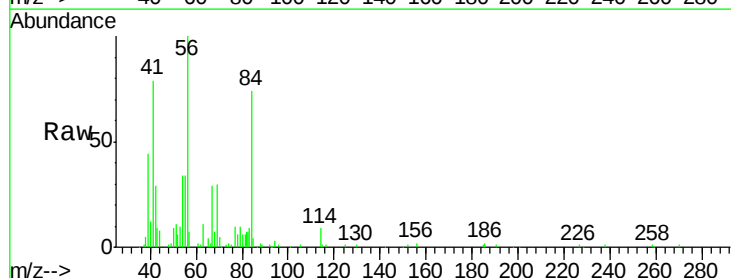
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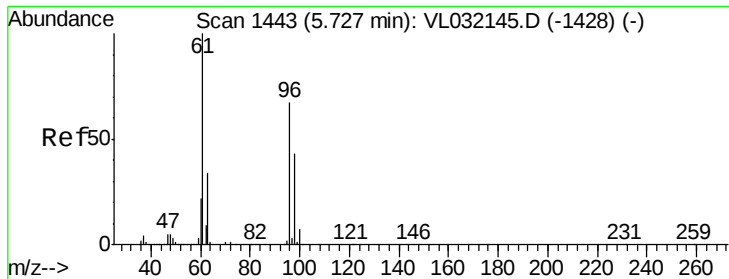
MMDadoda  
7/9/2018 10:47:58 AM



#30  
Cyclohexane  
Concen: 0.38 ppbv m  
RT: 7.33 min Scan# 1943  
Delta R.T. -0.02 min  
Lab File: VL032223.D  
Acq: 6 Jul 2018 3:45

Tgt Ion: 84 Resp: 64824  
Ion Ratio Lower Upper  
84 100  
56 107.5 109.1 163.7#  
41 88.7 64.6 96.8





#31

cis-1,2-Dichloroethene

Concen: 0.38 ppbv

RT: 5.72 min Scan# 1440

Delta R.T. -0.02 min

Lab File: VL032223.D

Acq: 6 Jul 2018 3:45

Instrument :

MSVOA\_L

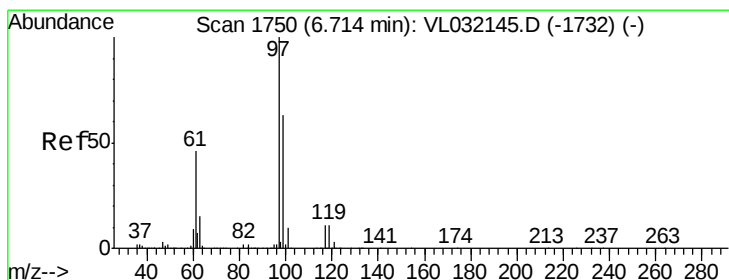
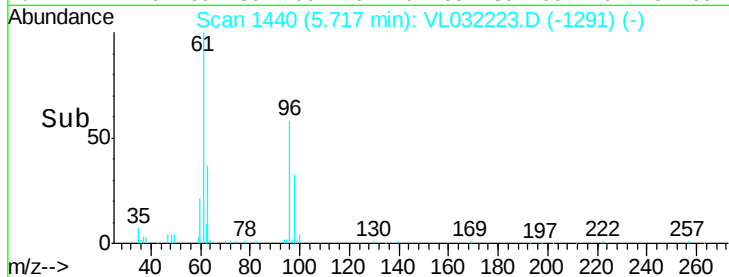
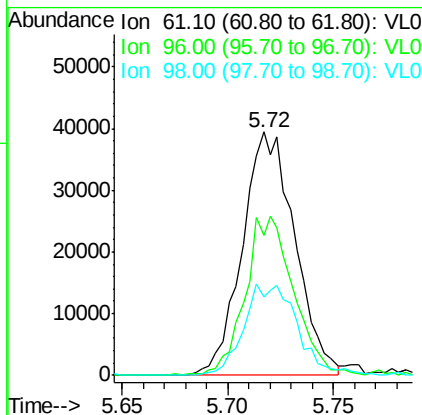
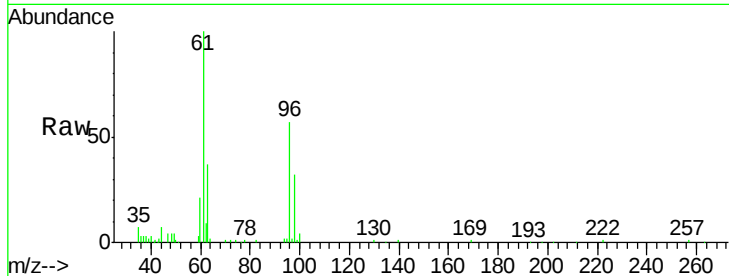
ClientSampleId :

MDL-AIR-03-QT3-2018

|           |       |       |       |
|-----------|-------|-------|-------|
| Tot Ion:  | 61    | Resp: | 68418 |
| Ion Ratio | Lower | Upper |       |
| 61        | 100   |       |       |
| 96        | 56.9  | 54.2  | 81.4  |
| 98        | 33.1  | 34.6  | 52.0# |

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7/9/2018 10:47:58 AM



#32

1,1,1-Trichloroethane

Concen: 0.43 ppbv

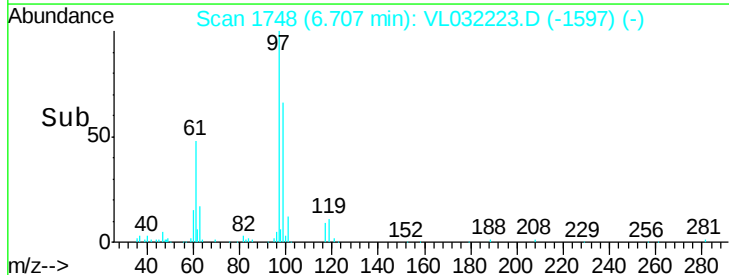
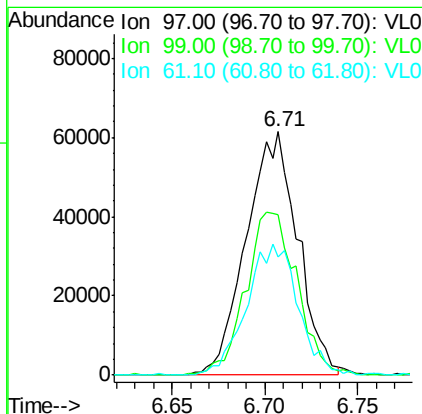
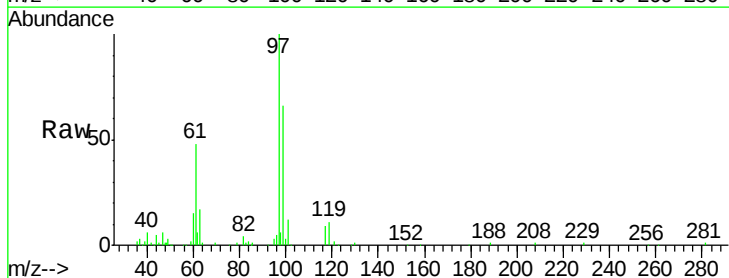
RT: 6.71 min Scan# 1748

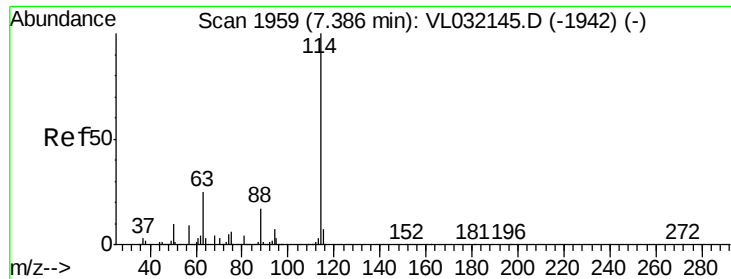
Delta R.T. -0.02 min

Lab File: VL032223.D

Acq: 6 Jul 2018 3:45

|           |       |       |        |
|-----------|-------|-------|--------|
| Tgt Ion:  | 97    | Resp: | 118643 |
| Ion Ratio | Lower | Upper |        |
| 97        | 100   |       |        |
| 99        | 66.8  | 51.3  | 76.9   |
| 61        | 54.4  | 38.4  | 57.6   |





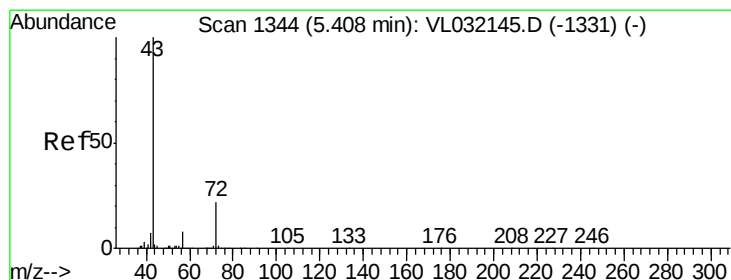
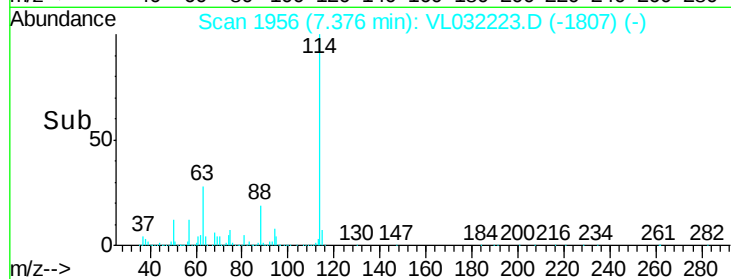
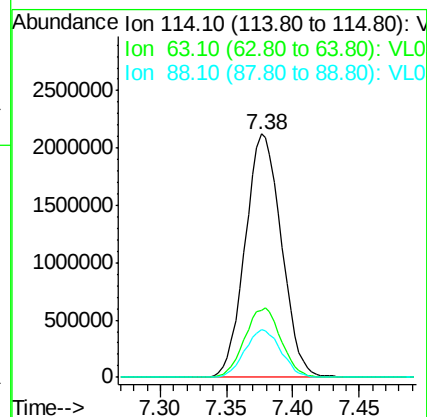
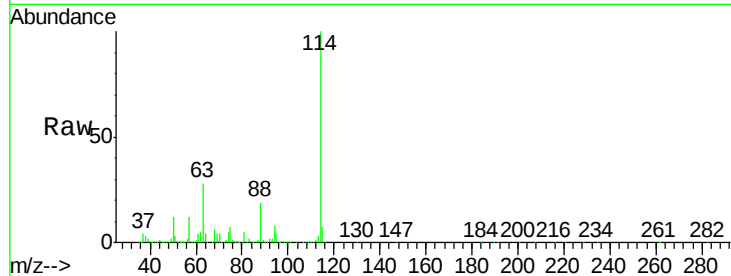
#33  
 1,4-Difluorobenzene  
 Concen: 10.00 ppbv  
 RT: 7.38 min Scan# 1956  
 Delta R.T. -0.02 min  
 Lab File: VL032223.D  
 Acq: 6 Jul 2018 3:45

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 MDL-AIR-03-QT3-2018

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 114     | 100   |       |       |
| 63      | 28.6  | 19.1  | 28.7  |
| 88      | 19.5  | 13.9  | 20.9  |

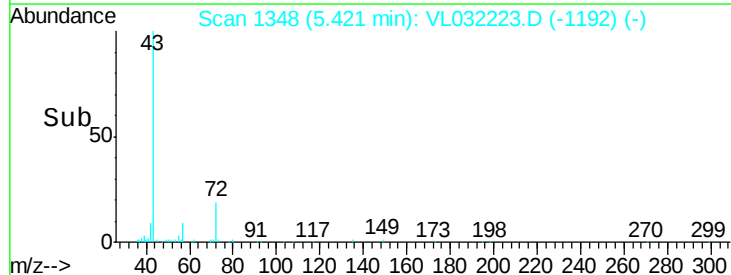
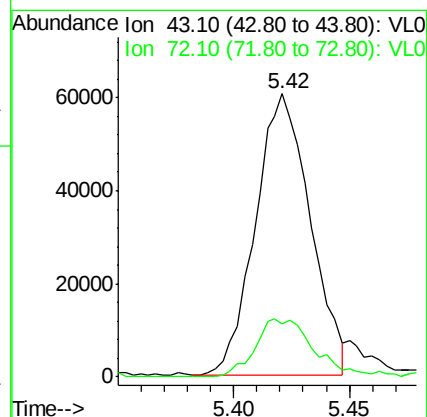
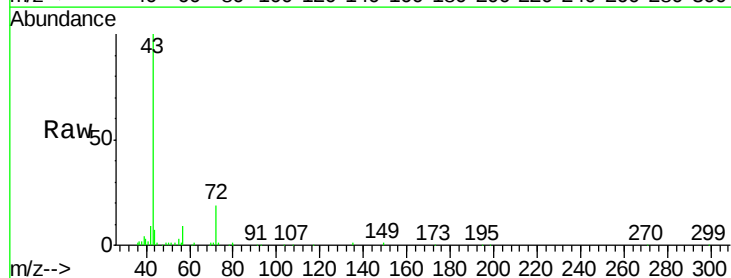
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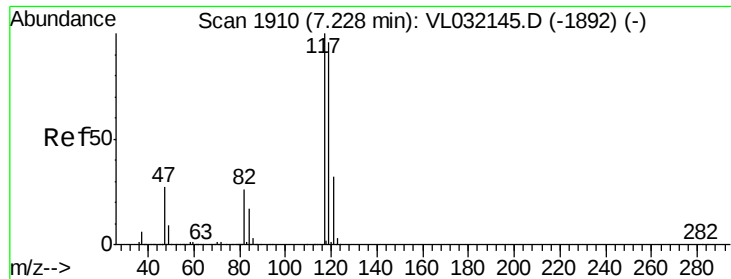
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#34  
 2-Butanone  
 Concen: 0.39 ppbv  
 RT: 5.42 min Scan# 1348  
 Delta R.T. 0.00 min  
 Lab File: VL032223.D  
 Acq: 6 Jul 2018 3:45

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 43      | 100   |       |       |
| 72      | 23.0  | 18.4  | 27.6  |





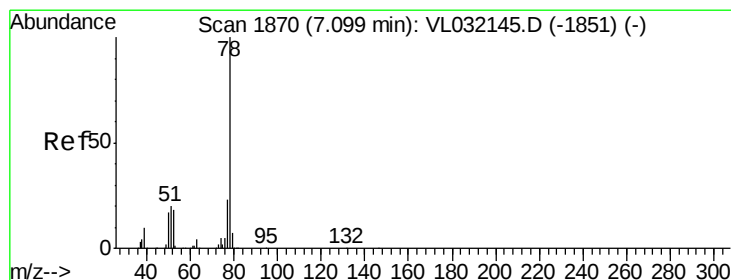
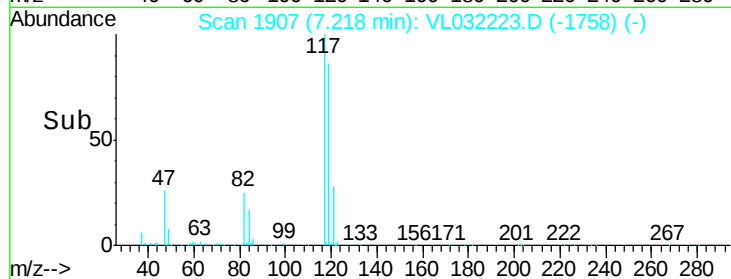
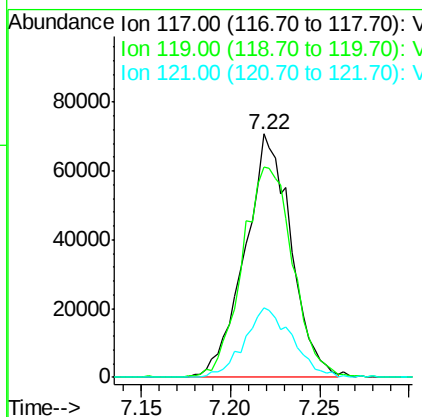
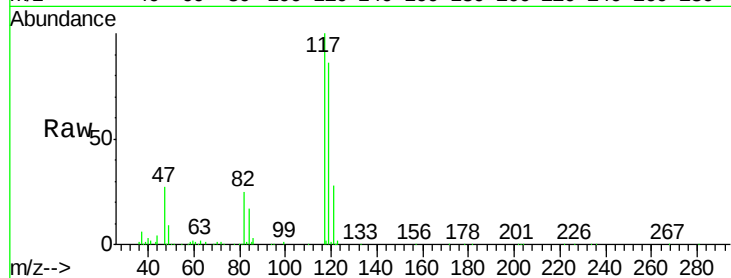
#35  
Carbon Tetrachloride  
Concen: 0.46 ppbv  
RT: 7.22 min Scan# 1907  
Delta R.T. -0.02 min  
Lab File: VL032223.D  
Acq: 6 Jul 2018 3:45

Instrument :  
MSVOA\_L  
ClientSampleId :  
MDL-AIR-03-QT3-2018

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 117     | 100   |       |       |
| 119     | 85.7  | 74.8  | 112.2 |
| 121     | 28.6  | 24.0  | 36.0  |

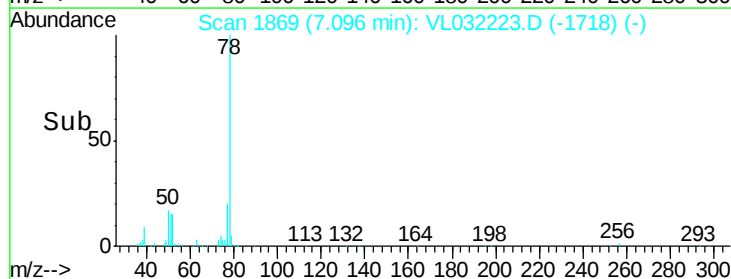
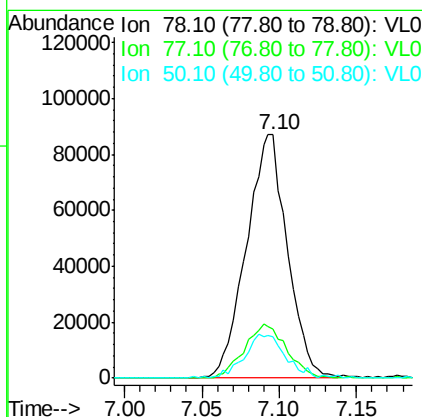
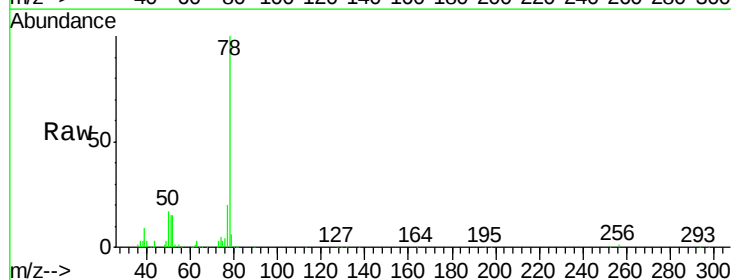
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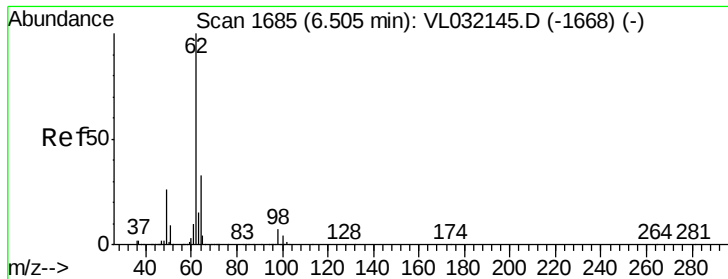
MMDadoda  
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#36  
Benzene  
Concen: 0.41 ppbv  
RT: 7.10 min Scan# 1869  
Delta R.T. -0.02 min  
Lab File: VL032223.D  
Acq: 6 Jul 2018 3:45

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 78      | 100   |       |       |
| 77      | 19.7  | 17.7  | 26.5  |
| 50      | 16.8  | 14.0  | 21.0  |





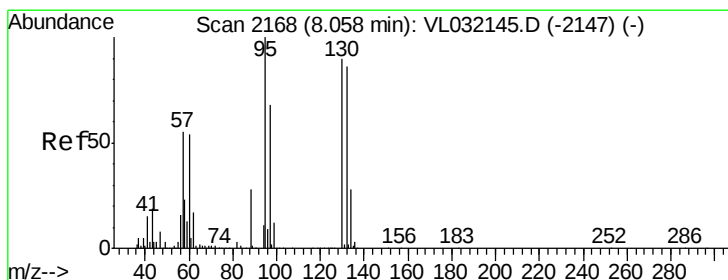
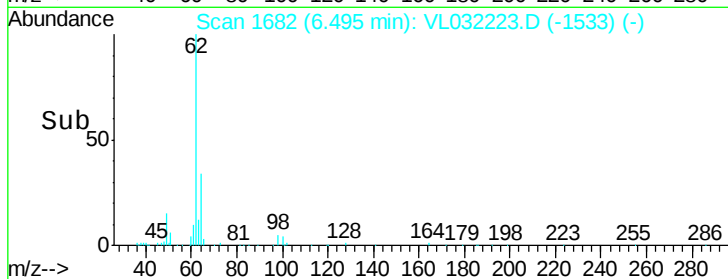
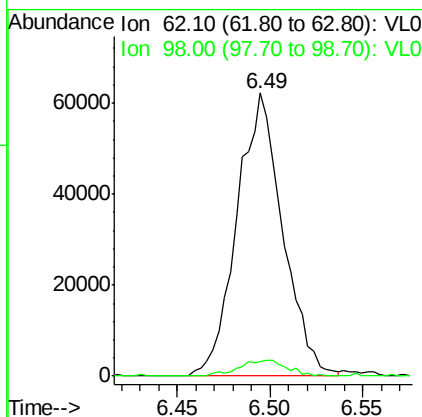
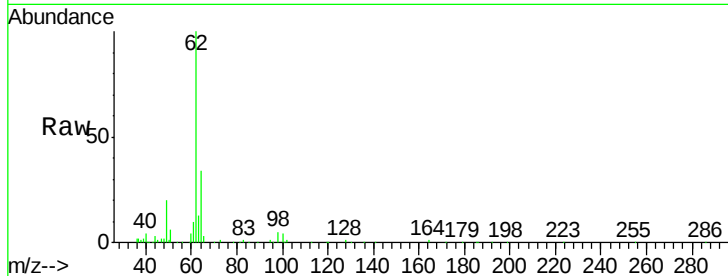
#37  
1,2-Dichloroethane  
Concen: 0.55 ppbv  
RT: 6.49 min Scan# 1682  
Delta R.T. -0.02 min  
Lab File: VL032223.D  
Acq: 6 Jul 2018 3:45

Instrument :  
MSVOA\_L  
ClientSampleId :  
MDL-AIR-03-QT3-2018

| Tot Ion | Ratio | Resp   | Lower | Upper |
|---------|-------|--------|-------|-------|
| 62      | 100   | 106911 |       |       |
| 98      | 6.0   | 5.8    | 8.6   |       |

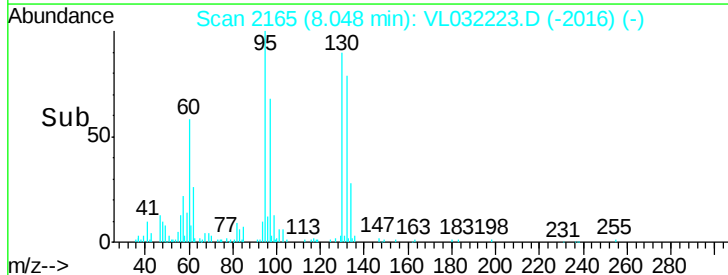
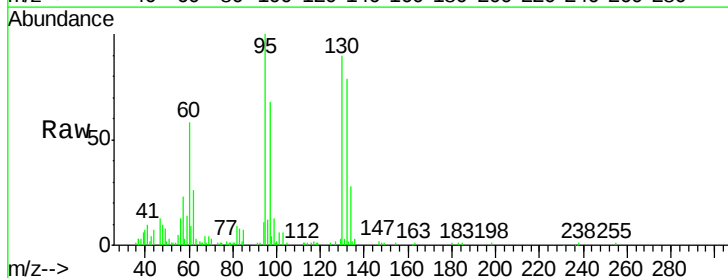
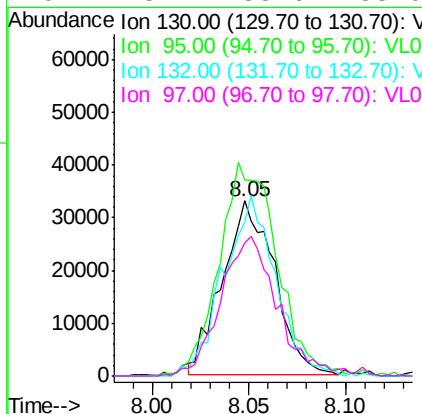
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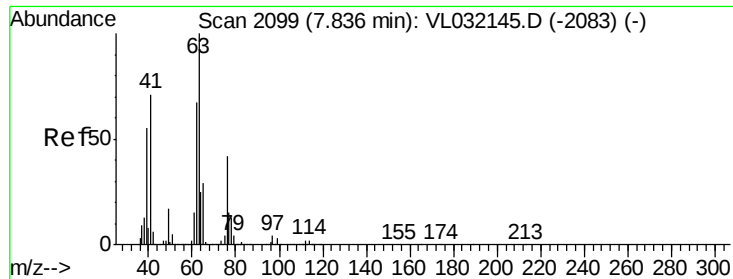
MMDadoda  
7/9/2018 10:47:58 AM



#38  
Trichloroethene  
Concen: 0.40 ppbv  
RT: 8.05 min Scan# 2165  
Delta R.T. -0.02 min  
Lab File: VL032223.D  
Acq: 6 Jul 2018 3:45

| Tgt Ion | Ratio | Resp  | Lower | Upper |
|---------|-------|-------|-------|-------|
| 130     | 100   | 61594 |       |       |
| 95      | 108.4 | 88.1  | 132.1 |       |
| 132     | 86.8  | 74.6  | 112.0 |       |
| 97      | 73.1  | 58.6  | 88.0  |       |





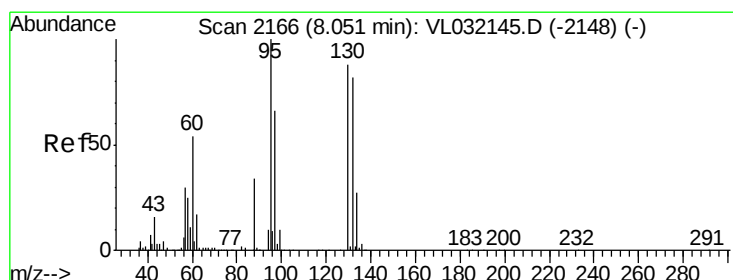
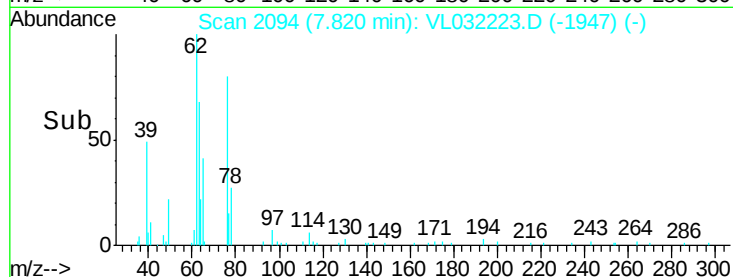
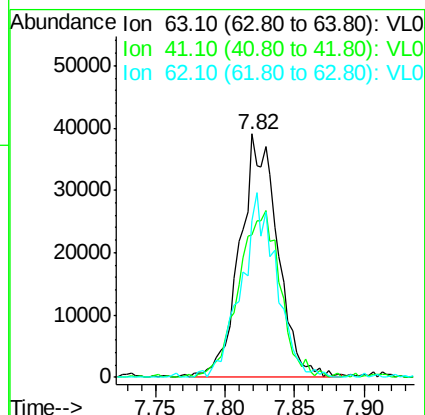
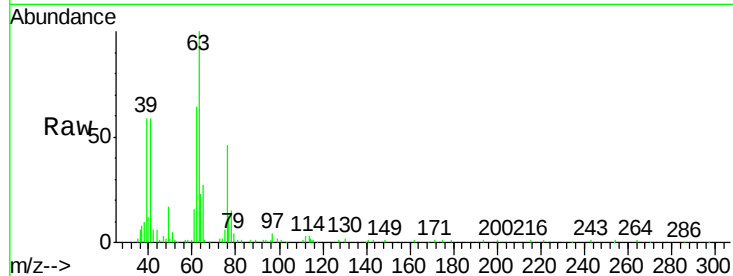
#39  
 1,2-Dichloropropane  
 Concen: 0.47 ppbv m  
 RT: 7.82 min Scan# 2094  
 Delta R.T. -0.03 min  
 Lab File: VL032223.D  
 Acq: 6 Jul 2018 3:45

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 MDL-AIR-03-QT3-2018

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 63      | 100   |       |       |
| 41      | 58.7  | 53.3  | 79.9  |
| 62      | 64.2  | 54.8  | 82.2  |

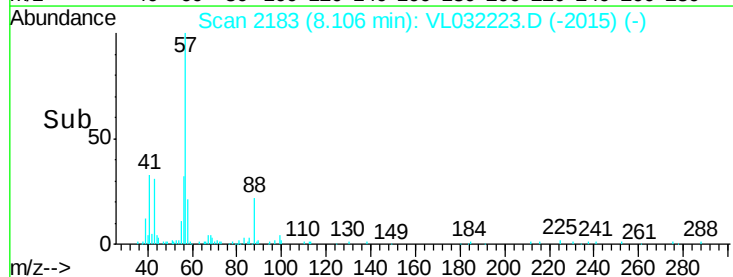
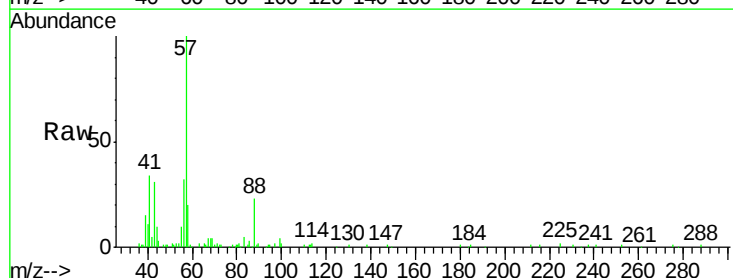
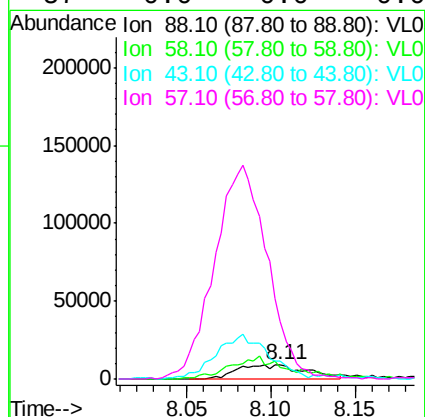
Manual Integrations  
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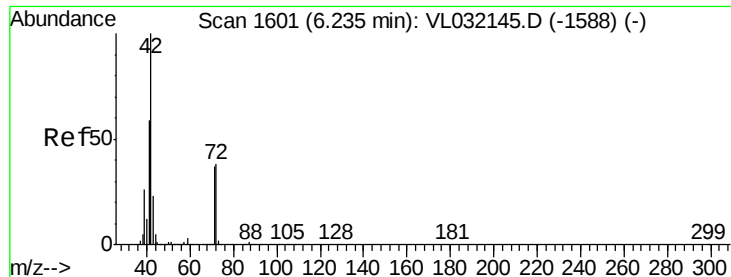
MMDadoda  
 7/9/2018 10:47:58 AM



#40  
 1,4-Dioxane  
 Concen: 0.43 ppbv m  
 RT: 8.11 min Scan# 2183  
 Delta R.T. 0.04 min  
 Lab File: VL032223.D  
 Acq: 6 Jul 2018 3:45

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 88      | 100   |       |       |
| 58      | 0.0   | 47.4  | 71.0# |
| 43      | 0.0   | 0.0   | 0.0   |
| 57      | 0.0   | 0.0   | 0.0   |





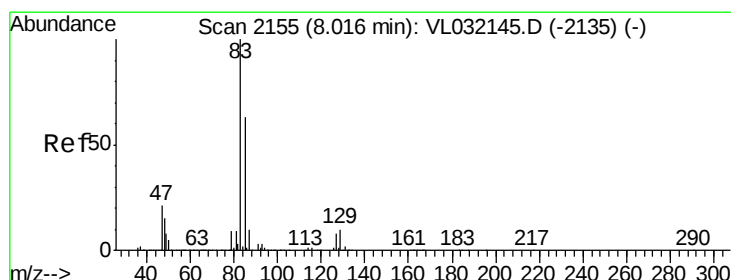
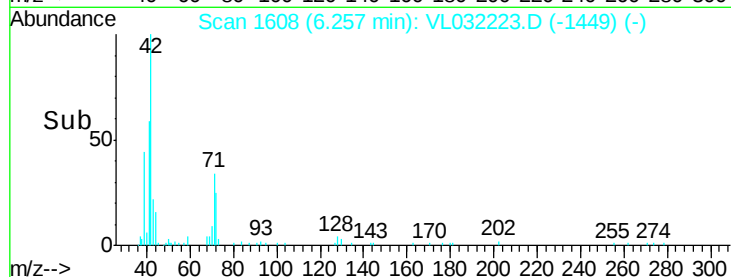
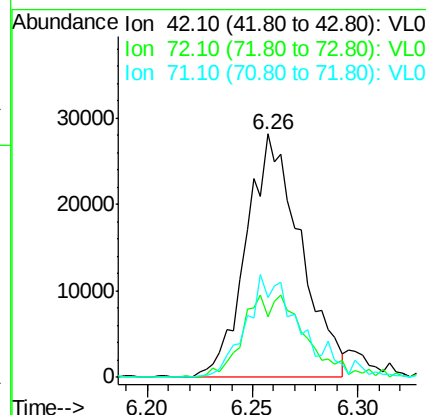
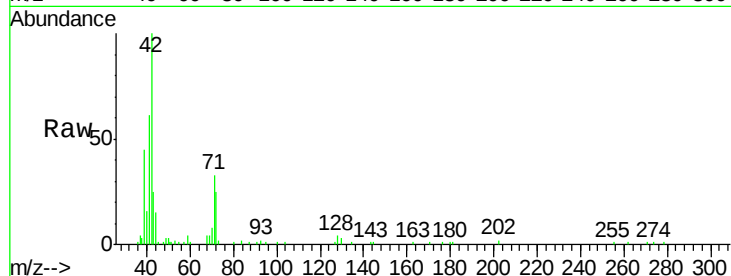
#41  
Tetrahydrofuran  
Concen: 0.33 ppbv  
RT: 6.26 min Scan# 1608  
Delta R.T. 0.01 min  
Lab File: VL032223.D  
Acq: 6 Jul 2018 3:45

Instrument :  
MSVOA\_L  
ClientSampleId :  
MDL-AIR-03-QT3-2018

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 42      | 100   |       |       |
| 72      | 39.2  | 31.1  | 46.7  |
| 71      | 42.9  | 29.5  | 44.3  |

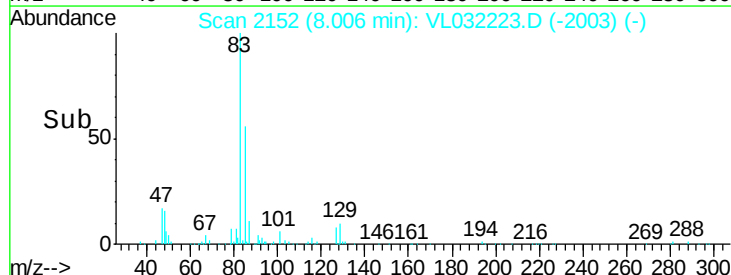
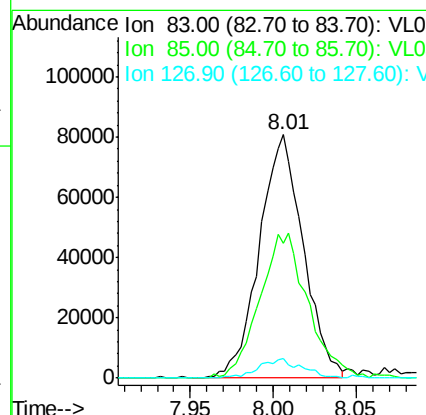
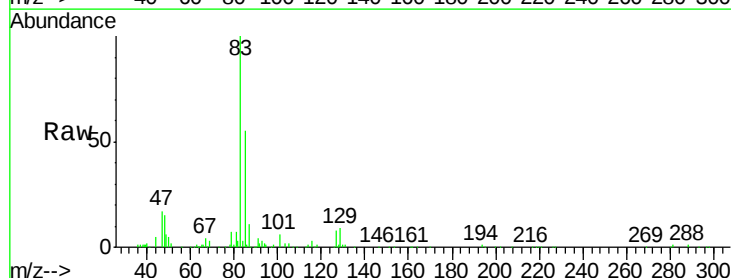
Manual Integrations  
APPROVED

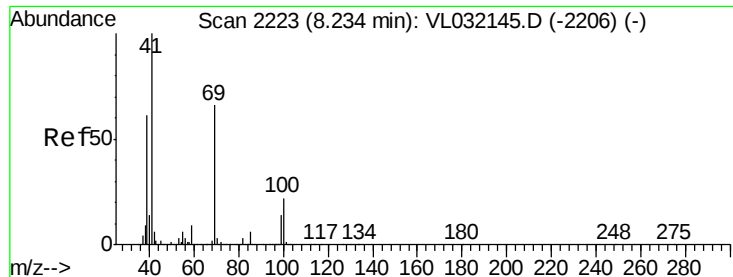
MMDadoda  
7/9/2018 10:47:58 AM



#42  
Bromodichloromethane  
Concen: 0.49 ppbv  
RT: 8.01 min Scan# 2152  
Delta R.T. -0.02 min  
Lab File: VL032223.D  
Acq: 6 Jul 2018 3:45

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 83      | 100   |       |       |
| 85      | 55.1  | 52.6  | 79.0  |
| 127     | 8.1   | 6.5   | 9.7   |





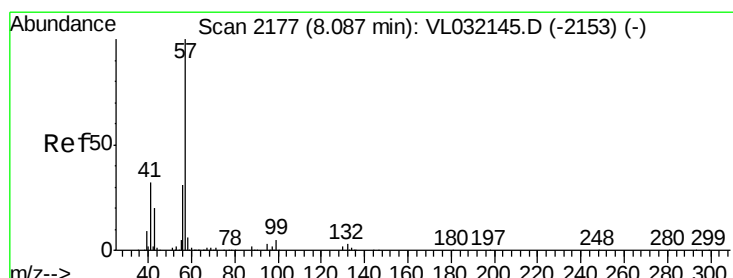
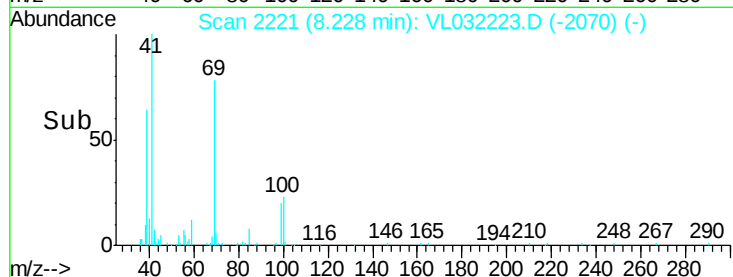
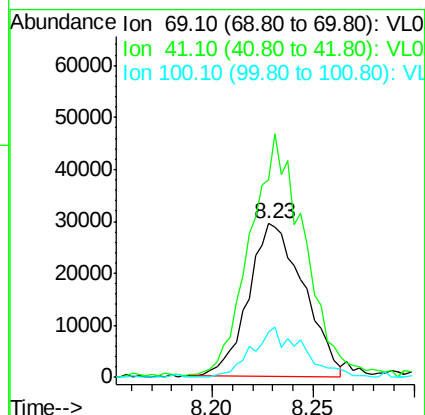
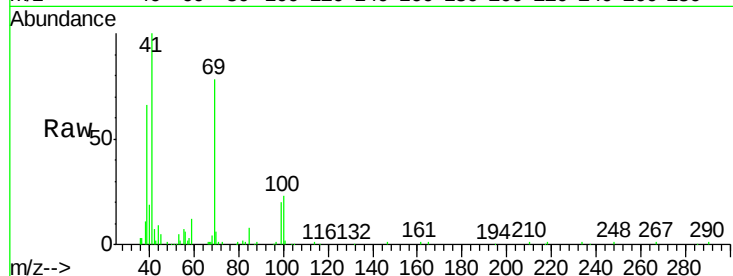
#43  
Methvl Methacrilate  
Concen: 0.35 ppbv  
RT: 8.23 min Scan# 2221  
Delta R.T. -0.02 min  
Lab File: VL032223.D  
Acq: 6 Jul 2018 3:45

Instrument :  
MSVOA\_L  
ClientSampleId :  
MDL-AIR-03-QT3-2018

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 69      | 100   |       |       |
| 41      | 161.0 | 118.2 | 177.4 |
| 100     | 30.6  | 27.4  | 41.2  |

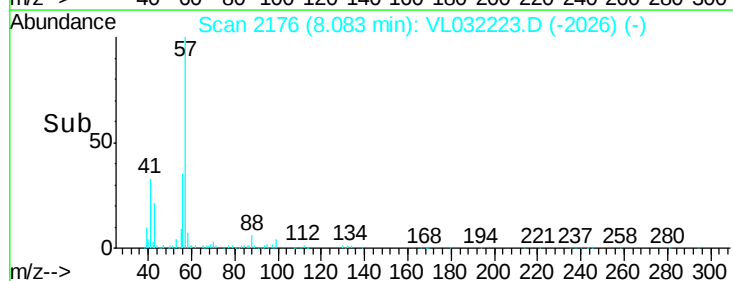
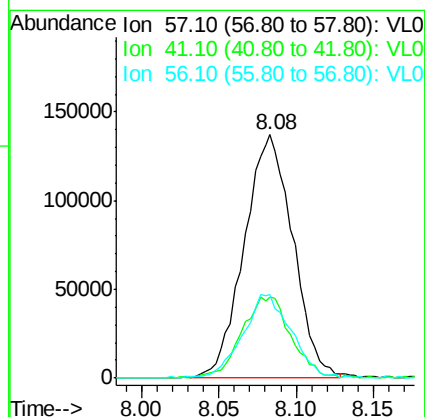
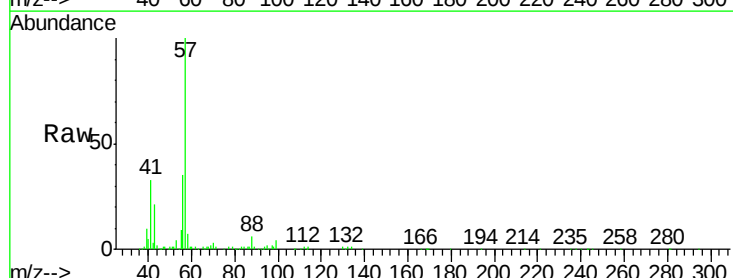
Manual Integrations  
APPROVED

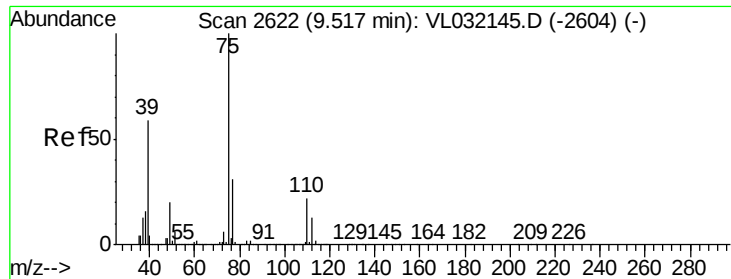
MMDadoda  
7/9/2018 10:47:58 AM



#44  
2,2,4-Trimethylpentane  
Concen: 0.43 ppbv  
RT: 8.08 min Scan# 2176  
Delta R.T. -0.02 min  
Lab File: VL032223.D  
Acq: 6 Jul 2018 3:45

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 57      | 100   |       |       |
| 41      | 34.5  | 24.3  | 36.5  |
| 56      | 34.9  | 25.1  | 37.7  |





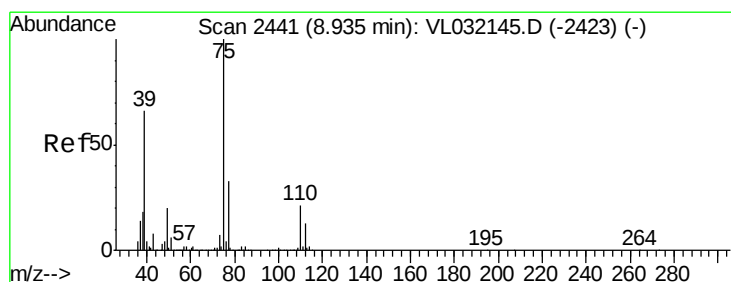
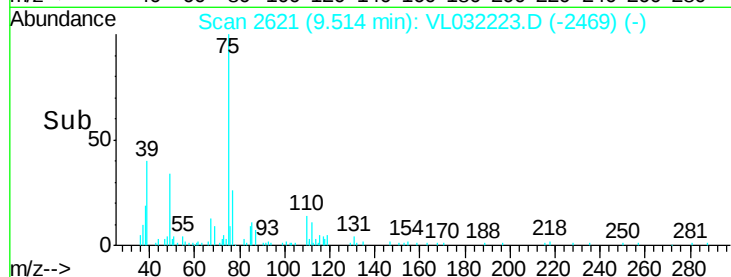
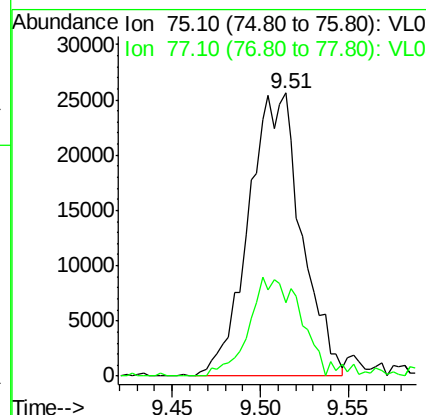
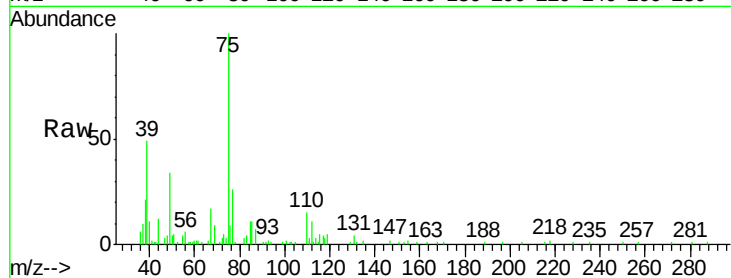
#45  
 t-1,3-Dichloropropene  
 Concen: 0.27 ppbv m  
 RT: 9.51 min Scan# 2621  
 Delta R.T. -0.01 min  
 Lab File: VL032223.D  
 Acq: 6 Jul 2018 3:45

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 MDL-AIR-03-QT3-2018

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 75      | 100   |       |       |
| 77      | 25.8  | 25.6  | 38.4  |

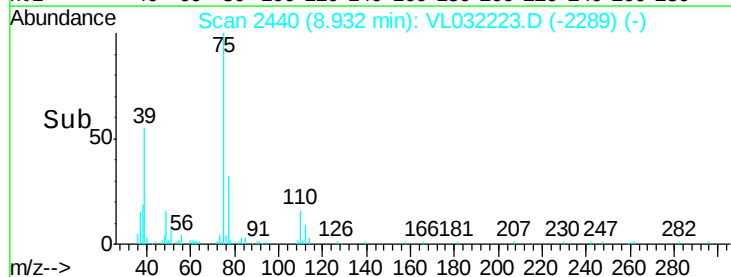
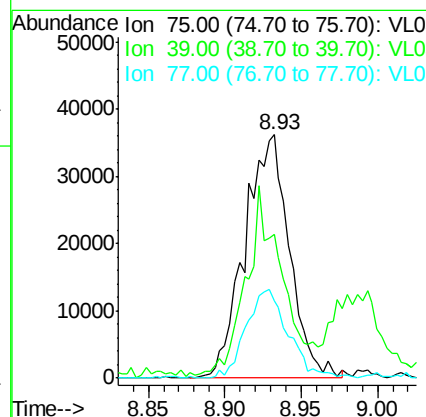
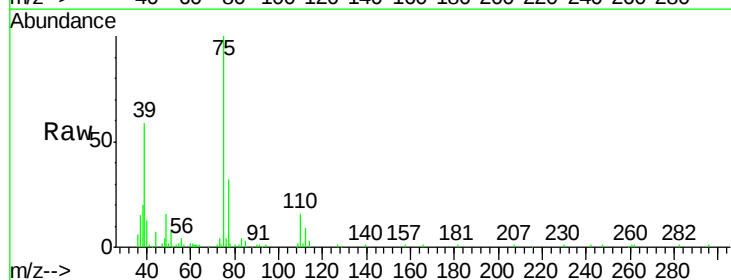
Manual Integrations  
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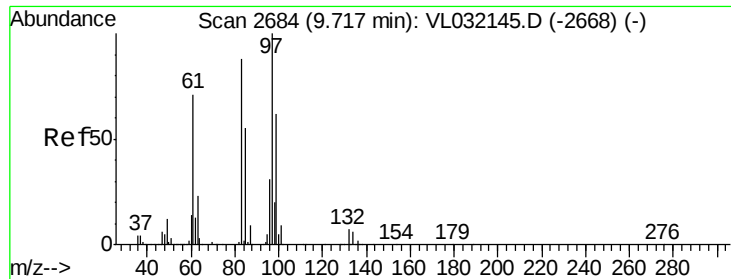
MMDadoda  
 7/9/2018 10:47:58 AM



#46  
 cis-1,3-Dichloropropene  
 Concen: 0.31 ppbv m  
 RT: 8.93 min Scan# 2440  
 Delta R.T. -0.02 min  
 Lab File: VL032223.D  
 Acq: 6 Jul 2018 3:45

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 75      | 100   |       |       |
| 39      | 59.0  | 51.9  | 77.9  |
| 77      | 31.7  | 24.3  | 36.5  |





#47

1,1,2-Trichloroethane

Concen: 0.49 ppbv m

RT: 9.70 min Scan# 2680

Delta R.T. -0.03 min

Lab File: VL032223.D

Acq: 6 Jul 2018 3:45

Instrument :

MSVOA\_L

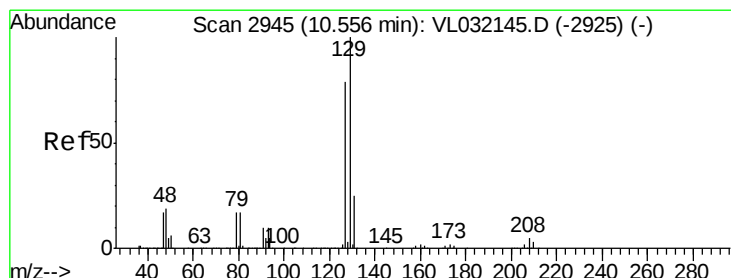
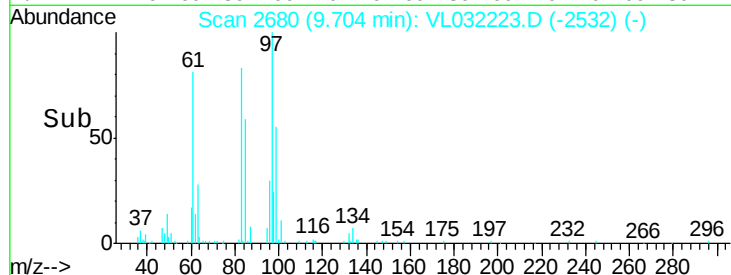
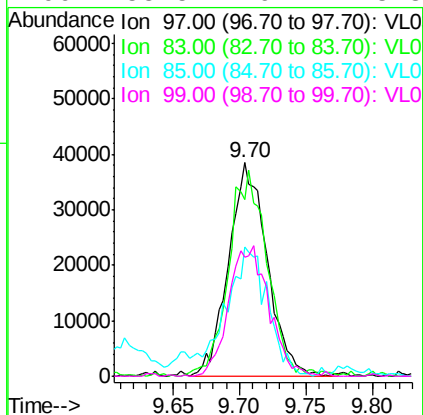
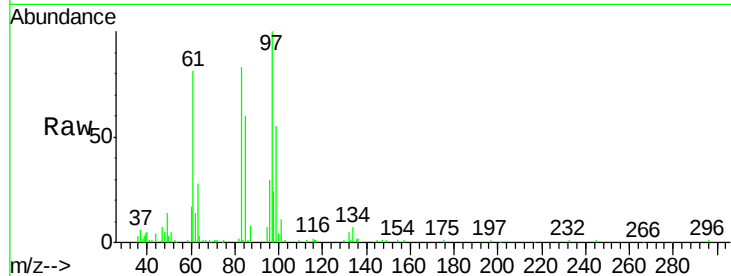
ClientSampleId :

MDL-AIR-03-QT3-2018

|          |       |       |       |
|----------|-------|-------|-------|
| Tot Ion: | 97    | Resp: | 78044 |
| Ion      | Ratio | Lower | Upper |
| 97       | 100   |       |       |
| 83       | 82.7  | 71.0  | 106.4 |
| 85       | 60.3  | 44.2  | 66.4  |
| 99       | 55.5  | 49.2  | 73.8  |

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7/9/2018 10:47:58 AM



#48

Dibromochloromethane

Concen: 0.38 ppbv

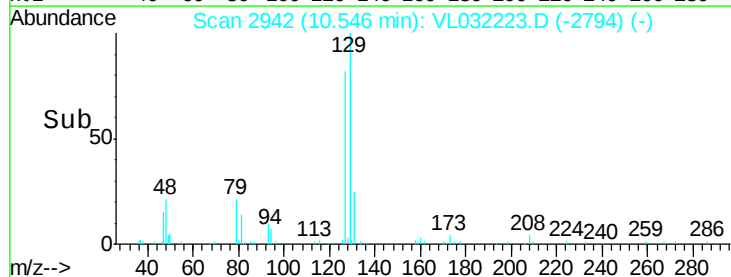
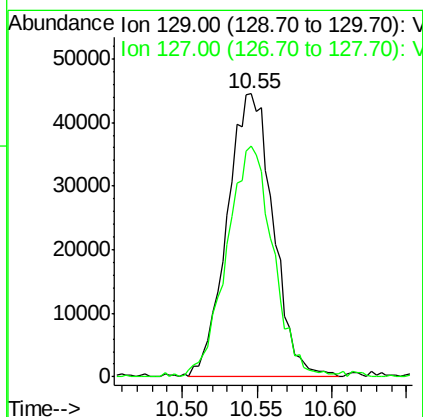
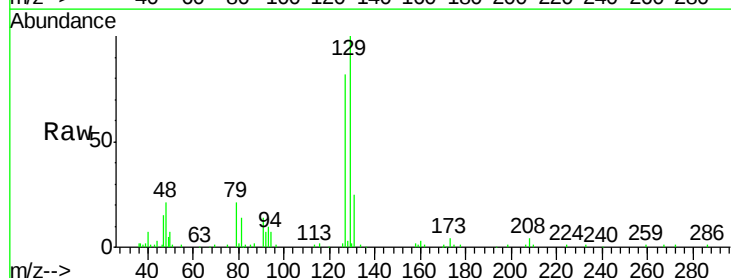
RT: 10.55 min Scan# 2942

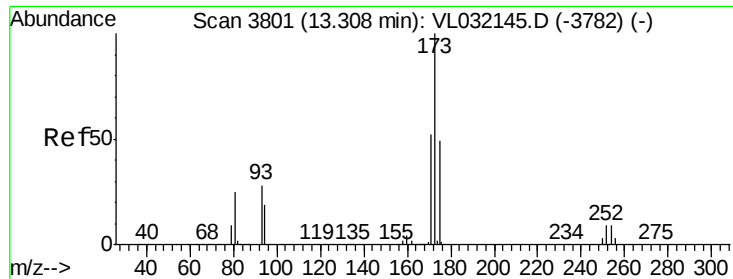
Delta R.T. -0.03 min

Lab File: VL032223.D

Acq: 6 Jul 2018 3:45

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 129   | Resp: | 95383 |
| Ion      | Ratio | Lower | Upper |
| 129      | 100   |       |       |
| 127      | 82.4  | 39.1  | 117.5 |





#49

Bromoform

Concen: 0.33 ppbv m

RT: 13.30 min Scan# 3799

Delta R.T. -0.02 min

Lab File: VL032223.D

Acq: 6 Jul 2018 3:45

Instrument :

MSVOA\_L

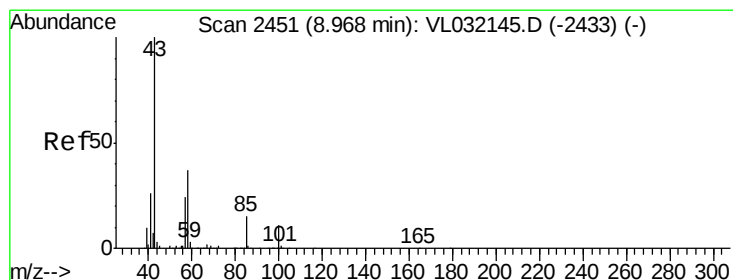
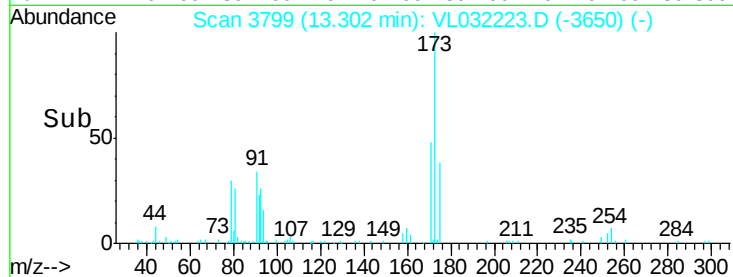
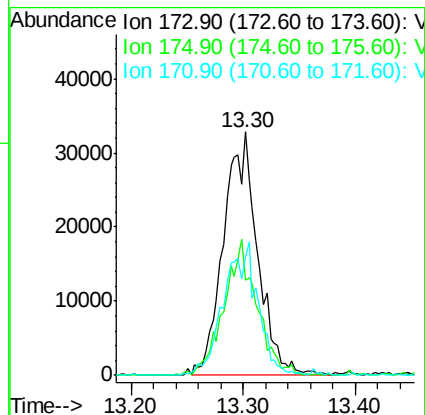
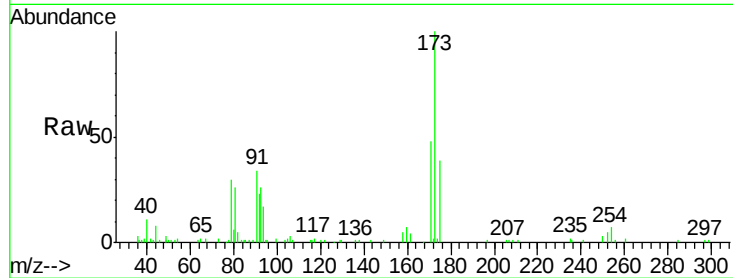
ClientSampleId :

MDL-AIR-03-QT3-2018

|           |       |       |       |
|-----------|-------|-------|-------|
| Tot Ion:  | 173   | Resp: | 69677 |
| Ion Ratio | Lower | Upper |       |
| 173       | 100   |       |       |
| 175       | 0.0   | 39.4  | 59.0# |
| 171       | 0.0   | 41.8  | 62.8# |

Manual Integrations  
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MMDadoda  
7/9/2018 10:47:58 AM



#50

4-Methyl-2-Pentanone

Concen: 0.40 ppbv

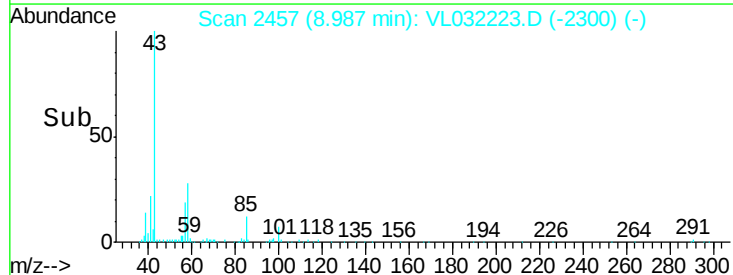
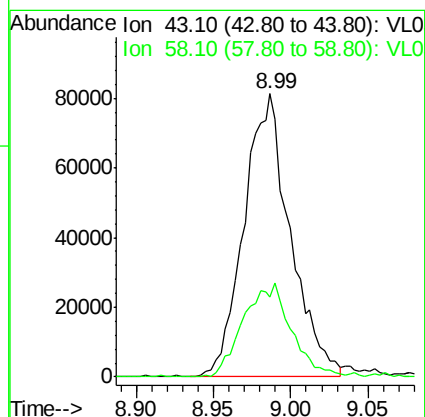
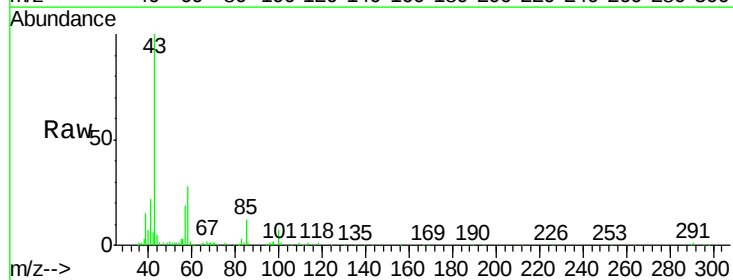
RT: 8.99 min Scan# 2457

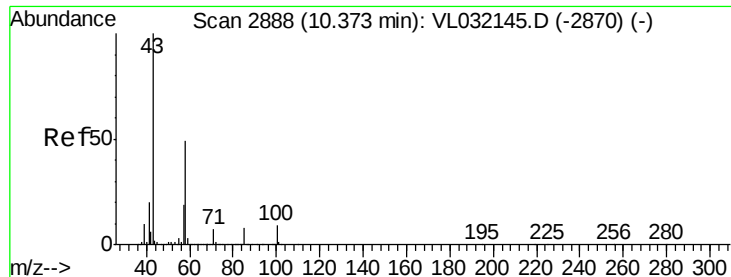
Delta R.T. 0.00 min

Lab File: VL032223.D

Acq: 6 Jul 2018 3:45

|           |       |       |        |
|-----------|-------|-------|--------|
| Tgt Ion:  | 43    | Resp: | 168811 |
| Ion Ratio | Lower | Upper |        |
| 43        | 100   |       |        |
| 58        | 34.8  | 29.8  | 44.6   |





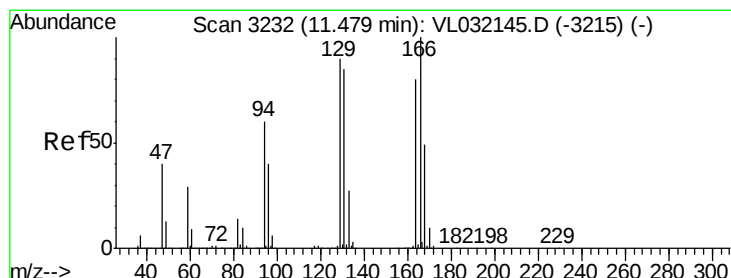
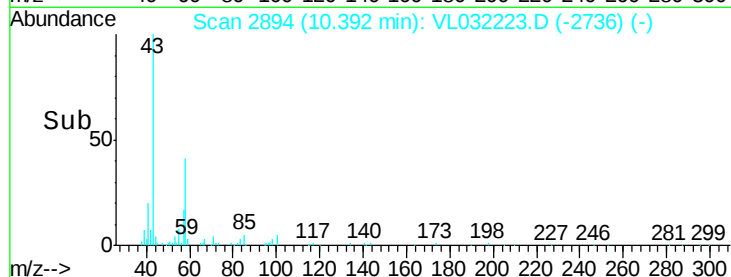
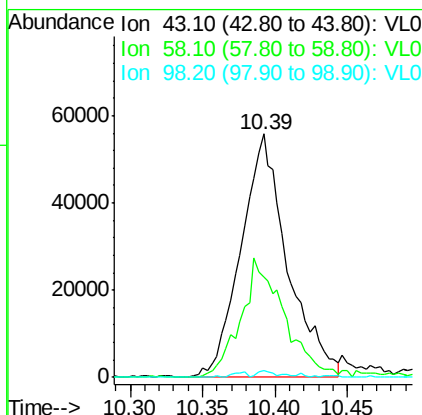
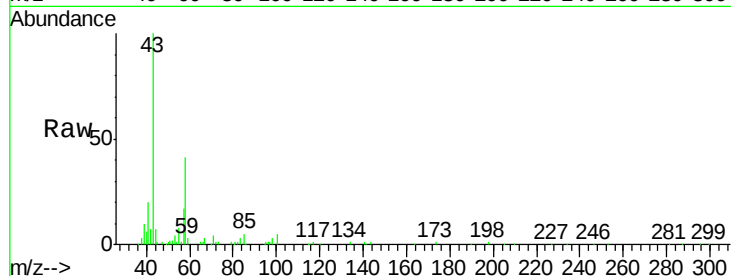
#51  
2-Hexanone  
Concen: 0.36 ppbv  
RT: 10.39 min Scan# 2894  
Delta R.T. 0.01 min  
Lab File: VL032223.D  
Acq: 6 Jul 2018 3:45

Instrument :  
MSVOA\_L  
ClientSampleId :  
MDL-AIR-03-QT3-2018

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 43      | 100   |       |       |
| 58      | 45.9  | 40.6  | 60.8  |
| 98      | 2.1   | 0.1   | 0.1#  |

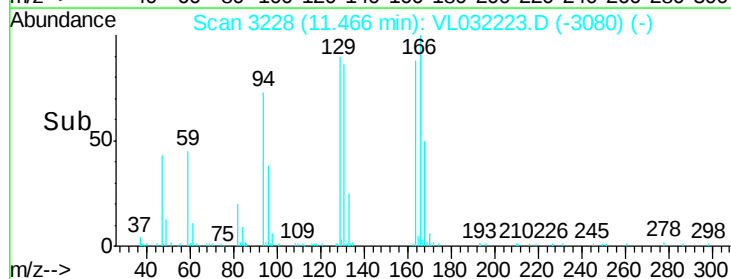
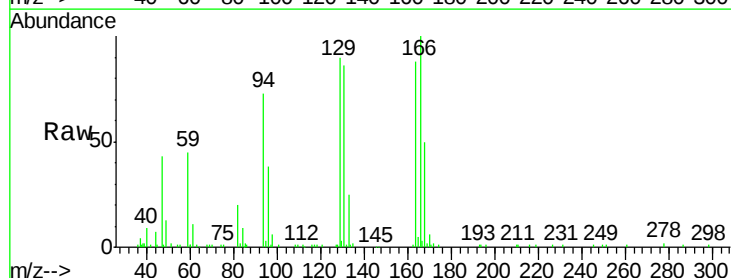
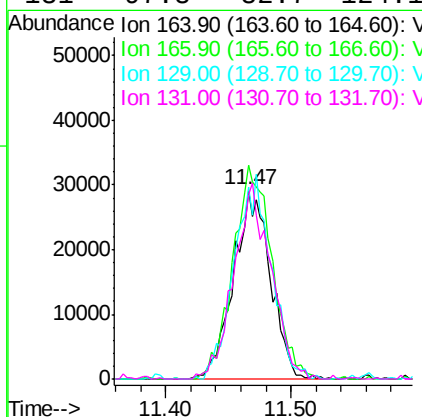
Manual Integrations  
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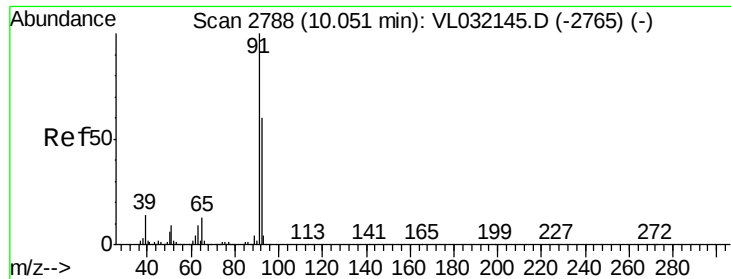
MMDadoda  
7/9/2018 10:47:58 AM



#52  
Tetrachloroethene  
Concen: 0.42 ppbv m  
RT: 11.47 min Scan# 3228  
Delta R.T. -0.03 min  
Lab File: VL032223.D  
Acq: 6 Jul 2018 3:45

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 164     | 100   |       |       |
| 166     | 113.2 | 100.6 | 151.0 |
| 129     | 101.9 | 84.0  | 126.0 |
| 131     | 97.8  | 82.7  | 124.1 |





#53

Toluene

Concen: 0.33 ppbv

RT: 10.04 min Scan# 2785

Delta R.T. -0.02 min

Lab File: VL032223.D

Acq: 6 Jul 2018 3:45

Instrument :

MSVOA\_L

ClientSampleId :

MDL-AIR-03-QT3-2018

Tot Ion: 91 Resp: 157915

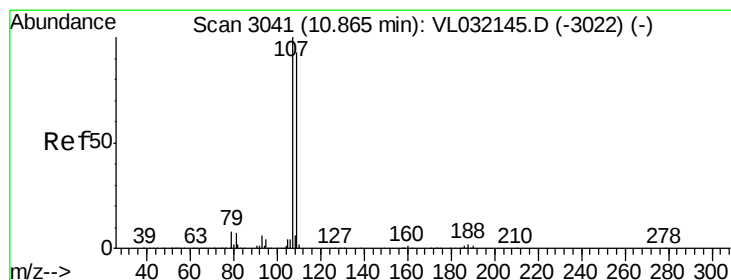
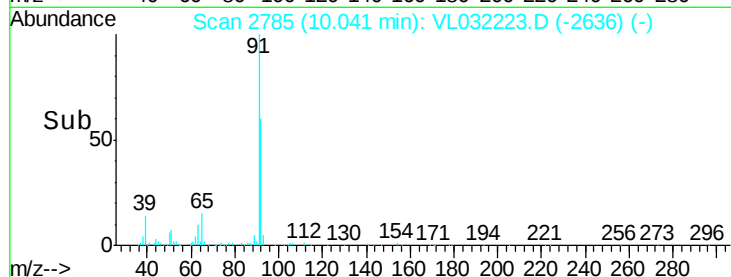
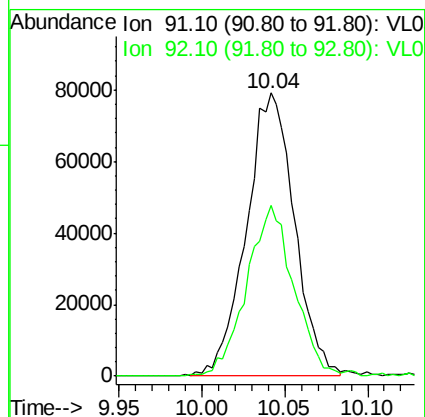
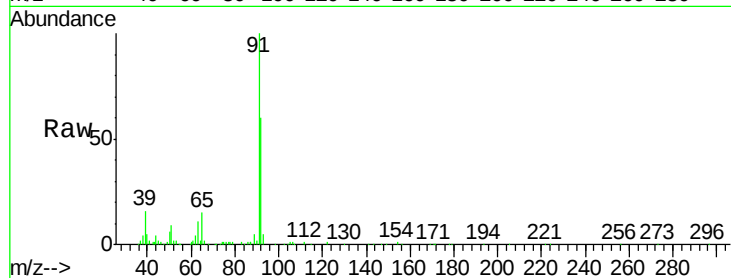
Ion Ratio Lower Upper

91 100

92 60.6 49.2 73.8

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7/9/2018 10:47:58 AM



#54

1,2-Dibromoethane

Concen: 0.41 ppbv

RT: 10.85 min Scan# 3038

Delta R.T. -0.02 min

Lab File: VL032223.D

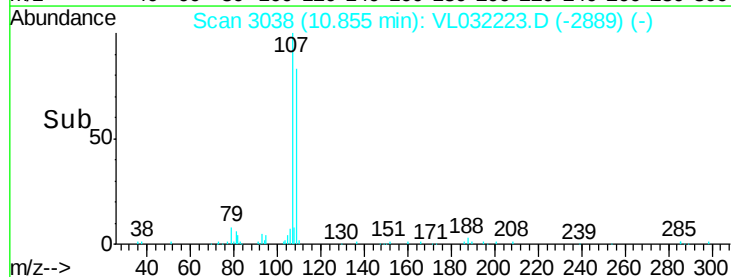
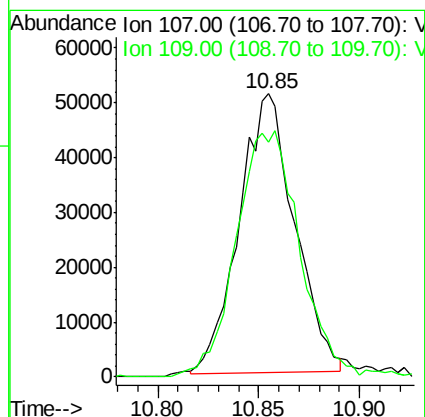
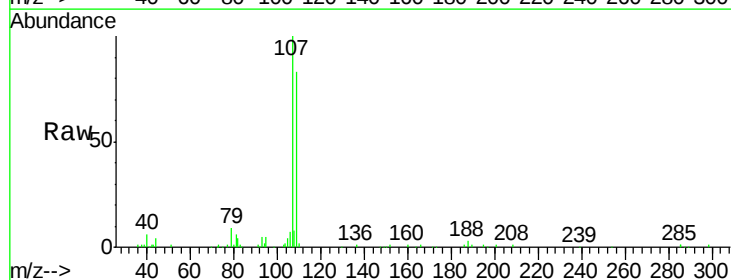
Acq: 6 Jul 2018 3:45

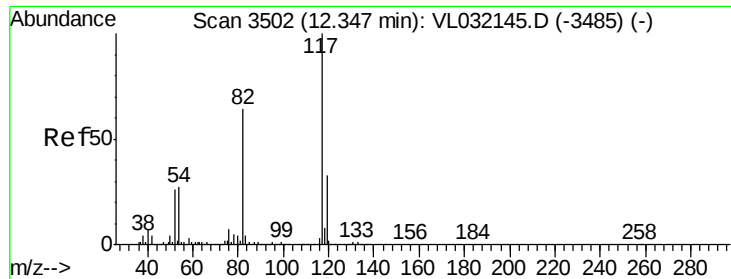
Tgt Ion: 107 Resp: 98287

Ion Ratio Lower Upper

107 100

109 81.6 75.0 112.4





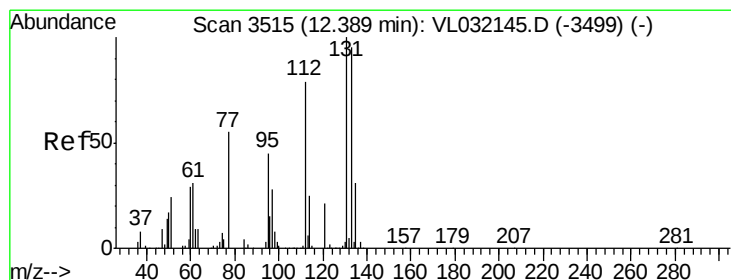
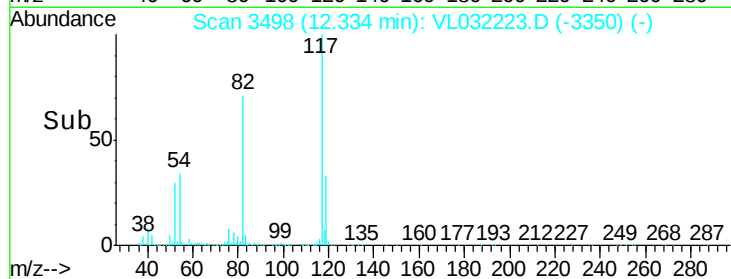
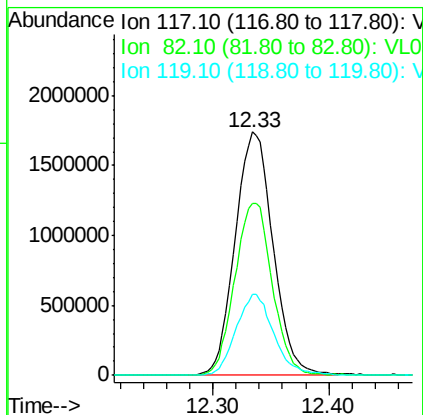
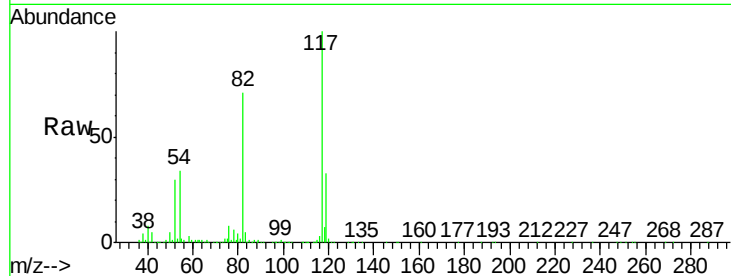
#55  
Chlorobenzene-d5  
Concen: 10.00 ppbv  
RT: 12.33 min Scan# 3498  
Delta R.T. -0.03 min  
Lab File: VL032223.D  
Acq: 6 Jul 2018 3:45

Instrument :  
MSVOA\_L  
ClientSampleId :  
MDL-AIR-03-QT3-2018

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 117     | 100   |       |       |
| 82      | 70.2  | 47.8  | 71.8  |
| 119     | 33.4  | 43.3  | 64.9# |

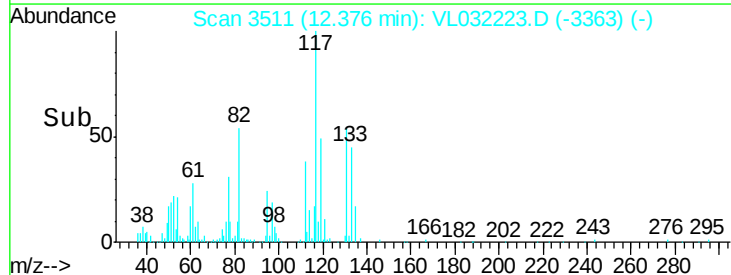
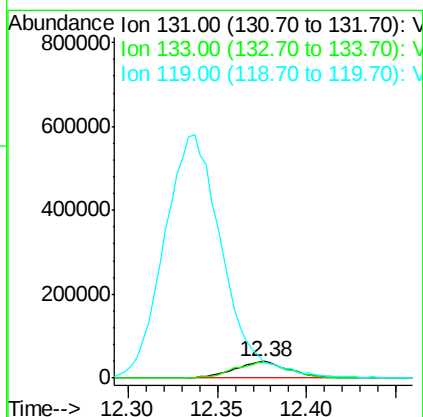
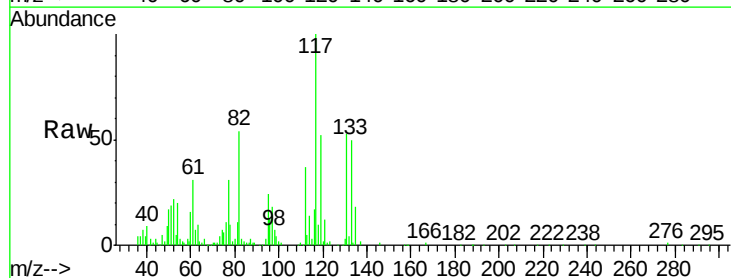
Manual Integrations  
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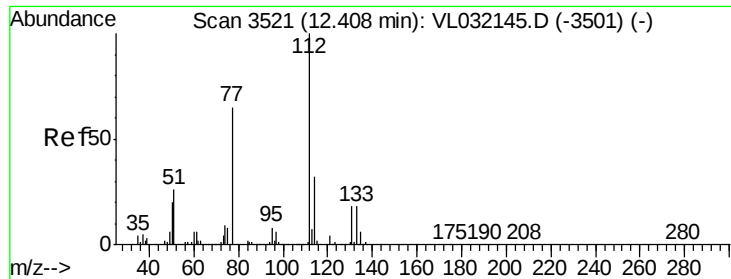
MMDadoda  
7/9/2018 10:47:58 AM



#56  
1,1,1,2-Tetrachloroethane  
Concen: 0.47 ppbv  
RT: 12.38 min Scan# 3511  
Delta R.T. -0.03 min  
Lab File: VL032223.D  
Acq: 6 Jul 2018 3:45

| Tgt Ion | Ratio  | Lower | Upper  |
|---------|--------|-------|--------|
| 131     | 100    |       |        |
| 133     | 97.7   | 75.5  | 113.3  |
| 119     | 1589.5 | 118.4 | 177.6# |





#57

Chlorobenzene

Concen: 0.52 ppbv

RT: 12.40 min Scan# 3518

Delta R.T. -0.02 min

Lab File: VL032223.D

Acq: 6 Jul 2018 3:45

Instrument :

MSVOA\_L

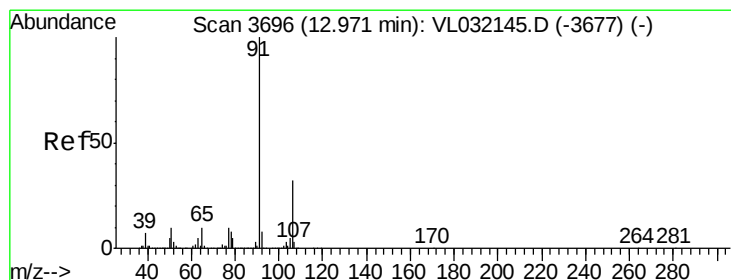
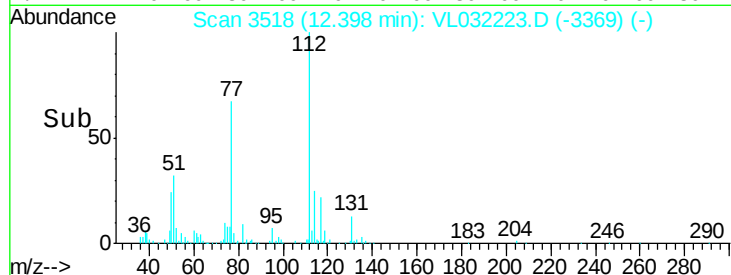
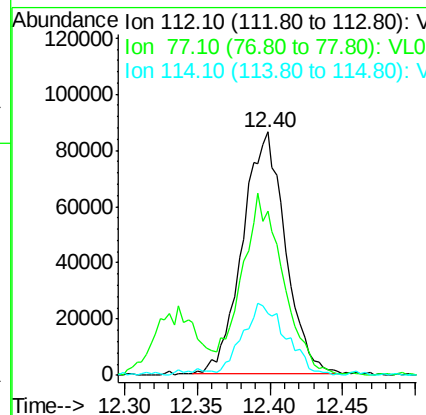
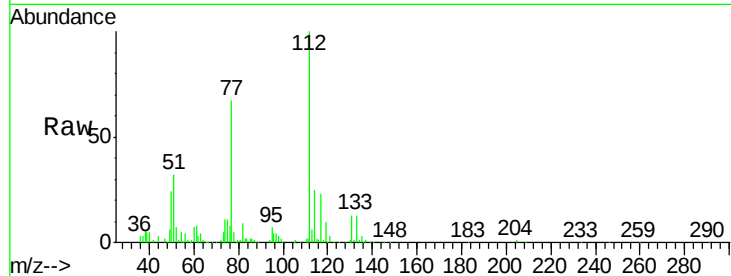
ClientSampleId :

MDL-AIR-03-QT3-2018

|           |       |       |        |
|-----------|-------|-------|--------|
| Tot Ion:  | 112   | Resp: | 177304 |
| Ion Ratio | Lower | Upper |        |
| 112       | 100   |       |        |
| 77        | 66.1  | 52.6  | 78.8   |
| 114       | 25.1  | 27.9  | 34.1#  |

Manual Integrations  
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7/9/2018 10:47:58 AM



#58

Ethyl Benzene

Concen: 0.37 ppbv

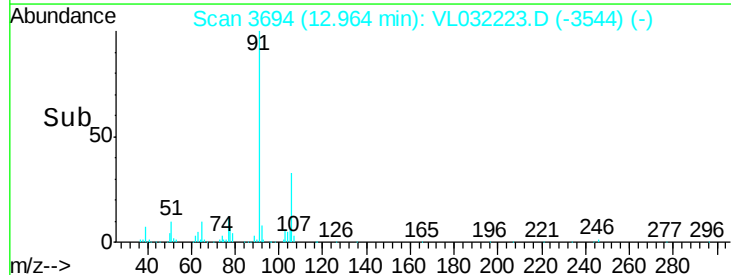
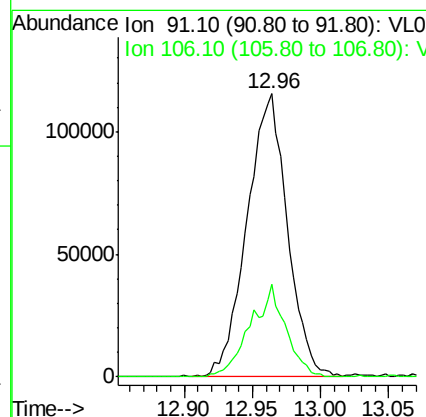
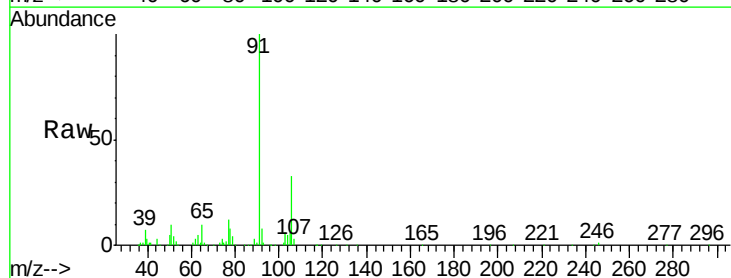
RT: 12.96 min Scan# 3694

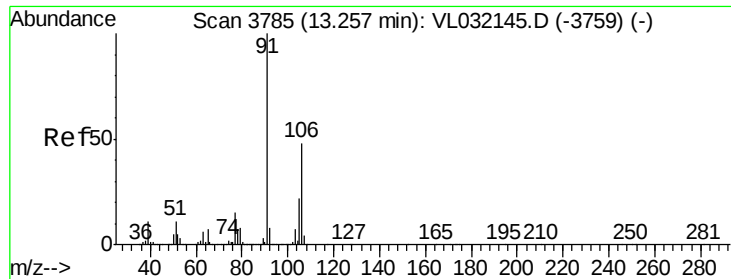
Delta R.T. -0.02 min

Lab File: VL032223.D

Acq: 6 Jul 2018 3:45

|           |       |       |        |
|-----------|-------|-------|--------|
| Tgt Ion:  | 91    | Resp: | 238250 |
| Ion Ratio | Lower | Upper |        |
| 91        | 100   |       |        |
| 106       | 32.6  | 26.5  | 39.7   |





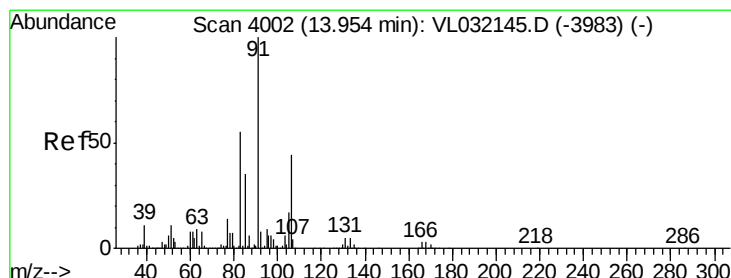
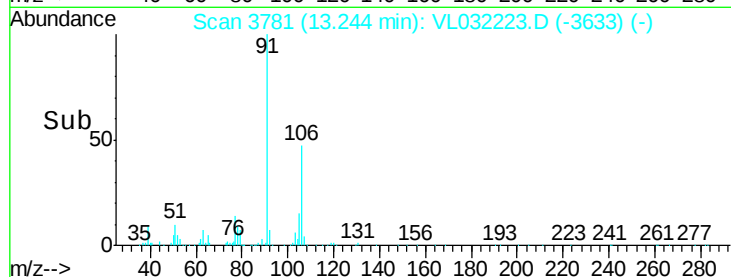
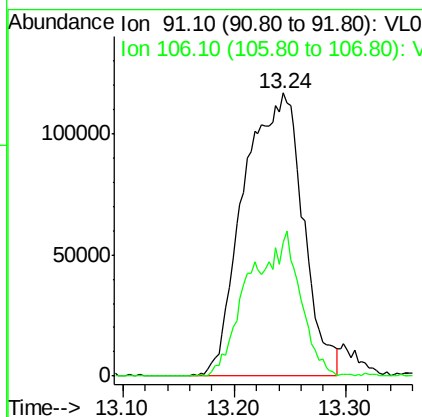
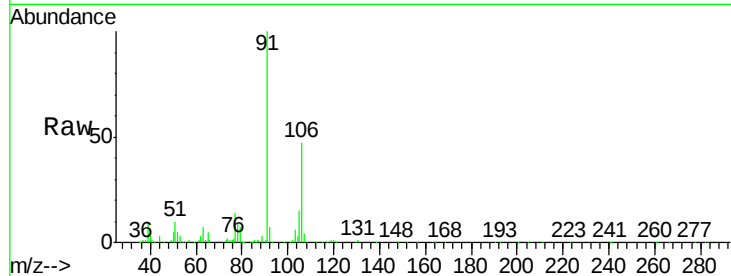
#59  
m/p-Xylene  
Concen: 0.85 ppbv m  
RT: 13.24 min Scan# 3781  
Delta R.T. -0.03 min  
Lab File: VL032223.D  
Acq: 6 Jul 2018 3:45

Instrument :  
MSVOA\_L  
ClientSampleId :  
MDL-AIR-03-QT3-2018

Tot Ion: 91 Resp: 431556  
Ion Ratio Lower Upper  
91 100  
106 43.9 38.6 58.0

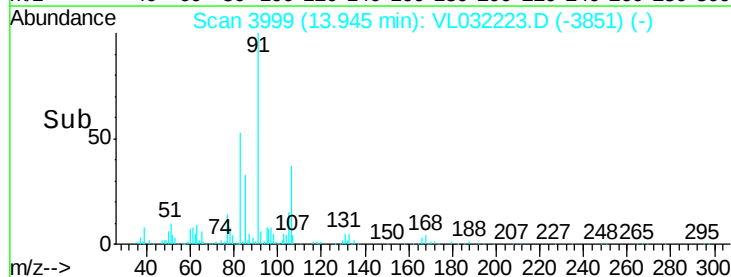
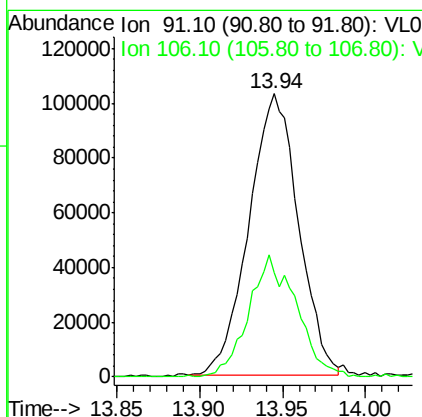
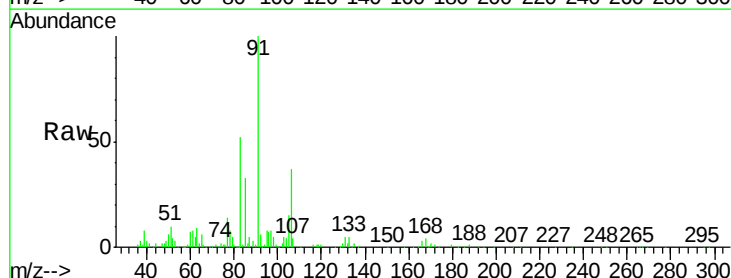
Manual Integrations  
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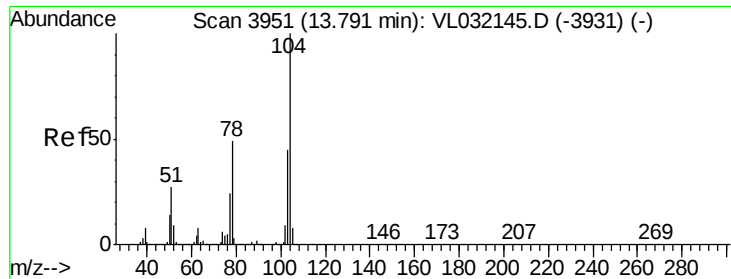
MMDadoda  
7/9/2018 10:47:58 AM



#60  
o-Xylene  
Concen: 0.42 ppbv  
RT: 13.94 min Scan# 3999  
Delta R.T. -0.03 min  
Lab File: VL032223.D  
Acq: 6 Jul 2018 3:45

Tgt Ion: 91 Resp: 215772  
Ion Ratio Lower Upper  
91 100  
106 41.5 23.3 69.8





#61

Stvrene

Concen: 0.32 ppbv m

RT: 13.79 min Scan# 3950

Delta R.T. -0.02 min

Lab File: VL032223.D

Acq: 6 Jul 2018 3:45

Instrument :

MSVOA\_L

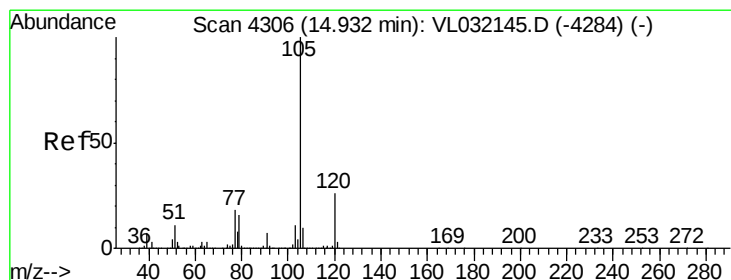
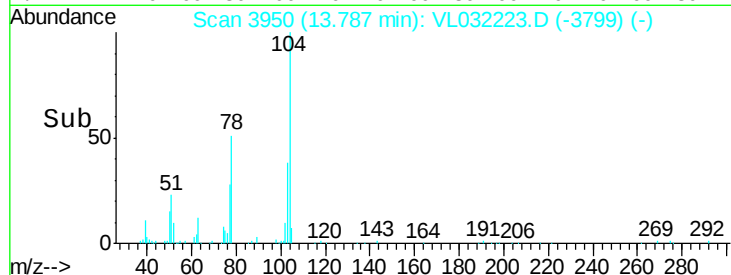
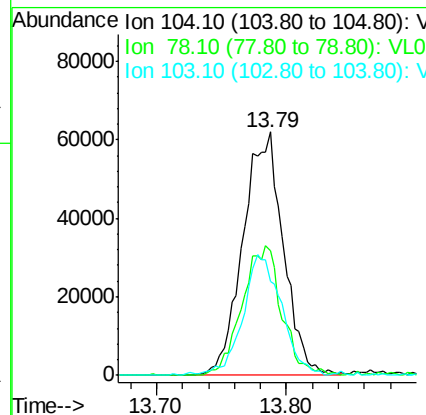
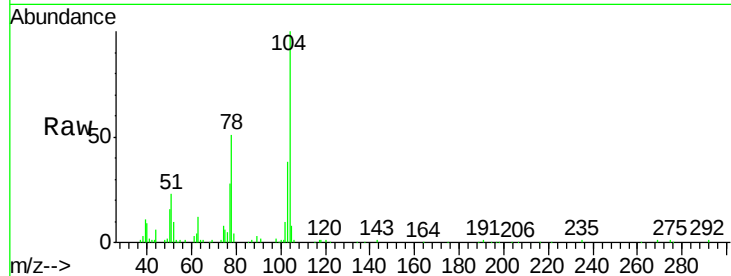
ClientSampleId :

MDL-AIR-03-QT3-2018

|           |       |       |        |
|-----------|-------|-------|--------|
| Tot Ion:  | 104   | Resp: | 133260 |
| Ion Ratio | Lower | Upper |        |
| 104       | 100   |       |        |
| 78        | 0.0   | 37.9  | 56.9#  |
| 103       | 48.0  | 36.6  | 55.0   |

Manual Integrations  
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MMDadoda  
7/9/2018 10:47:58 AM



#62

Isopropylbenzene

Concen: 0.39 ppbv

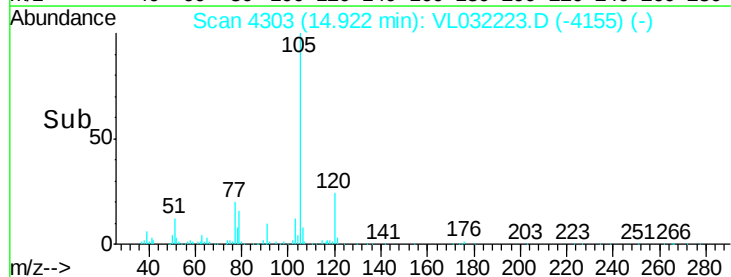
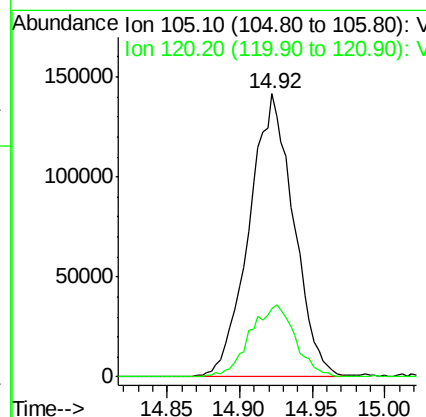
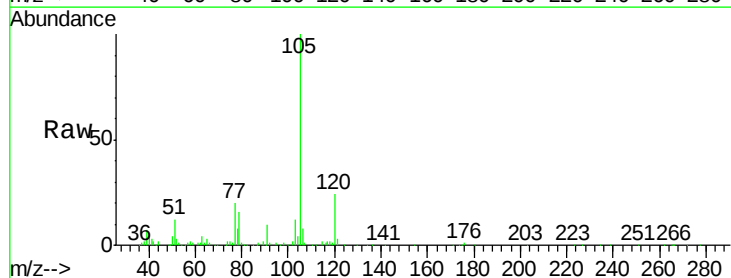
RT: 14.92 min Scan# 4303

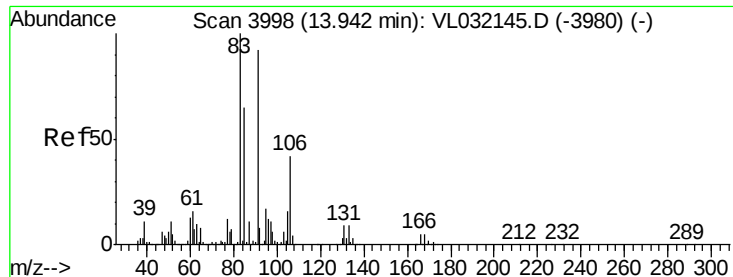
Delta R.T. -0.03 min

Lab File: VL032223.D

Acq: 6 Jul 2018 3:45

|           |       |       |        |
|-----------|-------|-------|--------|
| Tgt Ion:  | 105   | Resp: | 302658 |
| Ion Ratio | Lower | Upper |        |
| 105       | 100   |       |        |
| 120       | 25.8  | 21.0  | 31.4   |





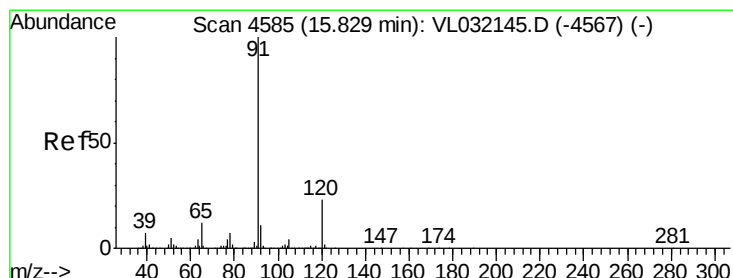
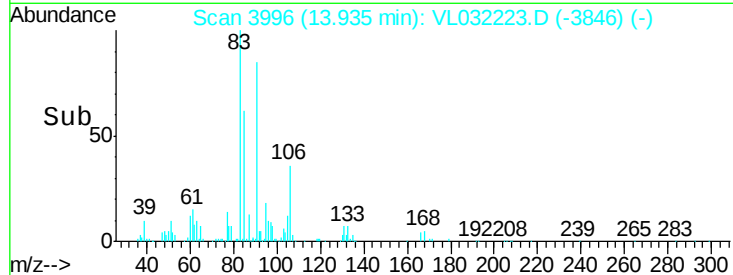
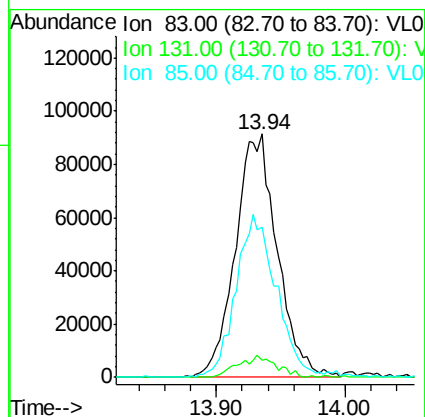
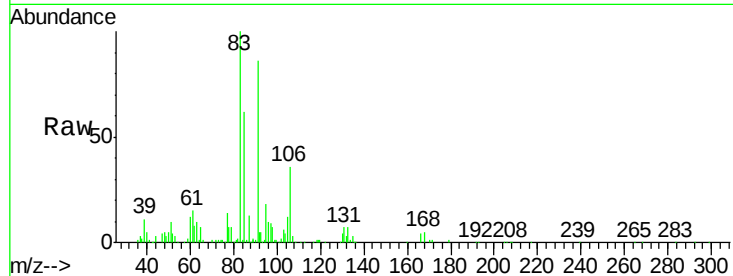
#63  
 1,1,2,2-Tetrachloroethane  
 Concen: 0.52 ppbv m  
 RT: 13.94 min Scan# 3996  
 Delta R.T. -0.02 min  
 Lab File: VL032223.D  
 Acq: 6 Jul 2018 3:45

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 MDL-AIR-03-QT3-2018

| Tot Ion | Ratio | Resp   | Lower | Upper |
|---------|-------|--------|-------|-------|
| 83      | 100   | 205564 |       |       |
| 131     | 0.0   | 4.6    | 13.8# |       |
| 85      | 0.0   | 32.4   | 97.2# |       |

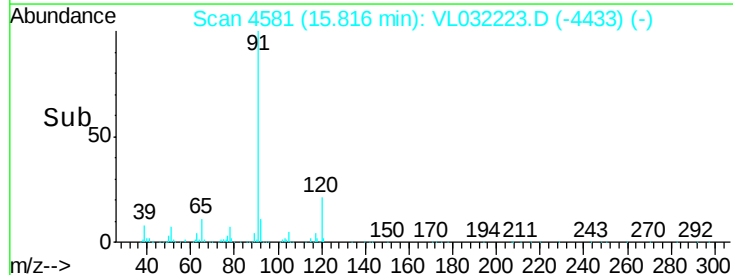
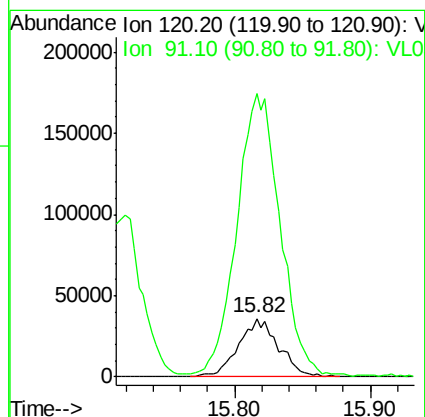
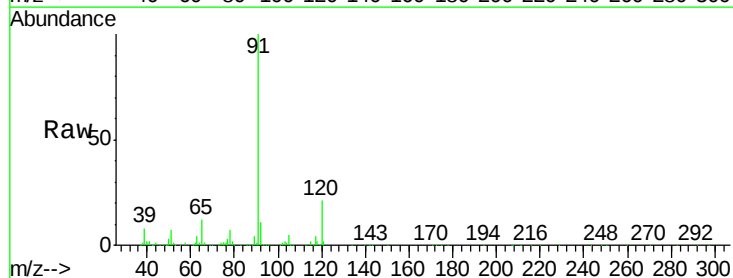
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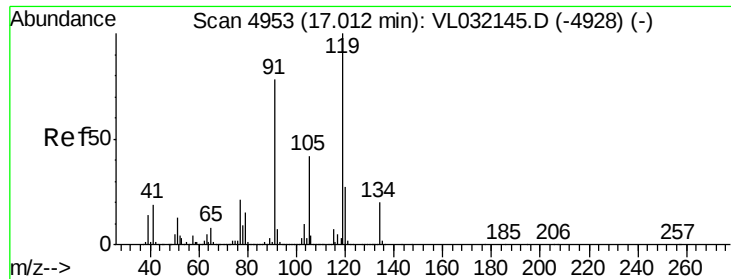
MMDadoda  
 7/9/2018 10:47:58 AM



#64  
 n-propylbenzene  
 Concen: 0.36 ppbv m  
 RT: 15.82 min Scan# 4581  
 Delta R.T. -0.03 min  
 Lab File: VL032223.D  
 Acq: 6 Jul 2018 3:45

| Tgt Ion | Ratio | Resp  | Lower | Upper |
|---------|-------|-------|-------|-------|
| 120     | 100   | 73163 |       |       |
| 91      | 526.0 | 357.4 | 536.0 |       |





#65

tert-Butylbenzene

Concen: 0.36 ppbv

RT: 17.01 min Scan# 4951

Delta R.T. -0.02 min

Lab File: VL032223.D

Acq: 6 Jul 2018 3:45

Instrument :

MSVOA\_L

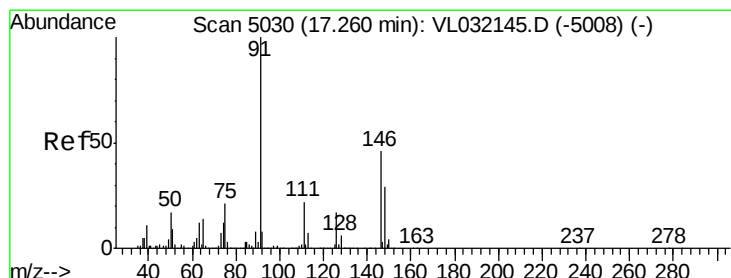
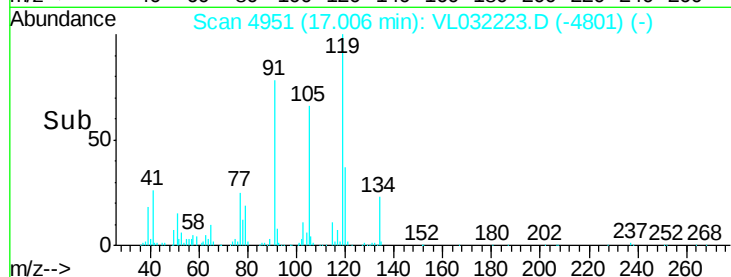
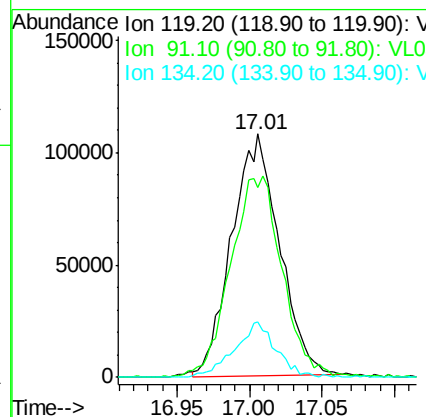
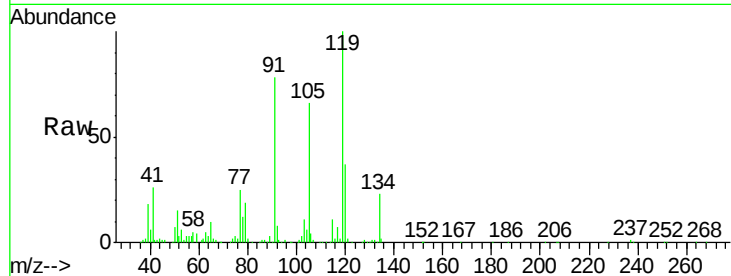
ClientSampleId :

MDL-AIR-03-QT3-2018

|           |       |       |        |
|-----------|-------|-------|--------|
| Tot Ion:  | 119   | Resp: | 245547 |
| Ion Ratio | Lower | Upper |        |
| 119       | 100   |       |        |
| 91        | 90.7  | 62.2  | 93.2   |
| 134       | 20.3  | 16.2  | 24.2   |

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7/9/2018 10:47:58 AM



#66

Benzyl Chloride

Concen: 0.17 ppbv

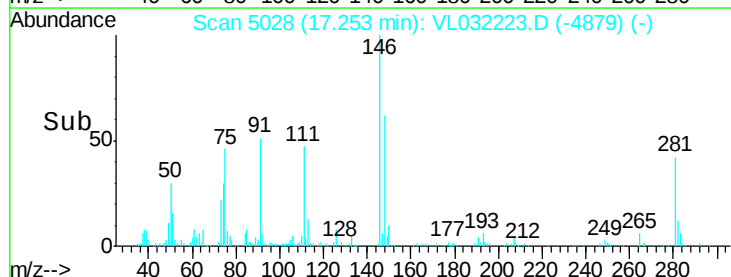
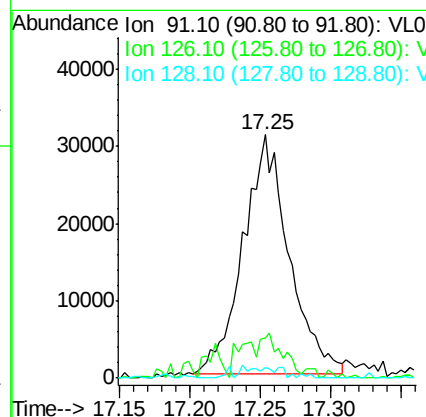
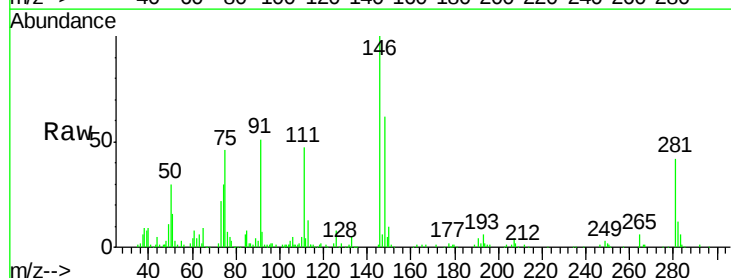
RT: 17.25 min Scan# 5028

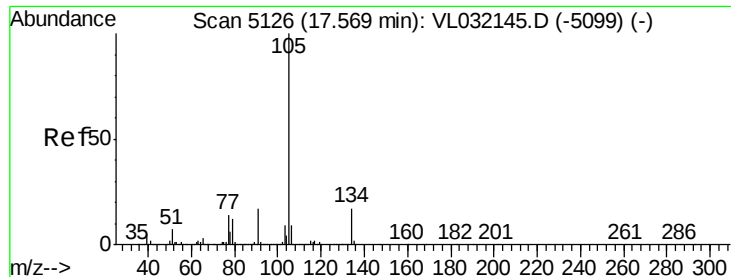
Delta R.T. -0.02 min

Lab File: VL032223.D

Acq: 6 Jul 2018 3:45

|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 91    | Resp: | 70596 |
| Ion Ratio | Lower | Upper |       |
| 91        | 100   |       |       |
| 126       | 21.9  | 15.7  | 23.5  |
| 128       | 4.5   | 5.2   | 7.8#  |





#67

sec-Butylbenzene

Concen: 0.38 ppbv

RT: 17.55 min Scan# 5121

Delta R.T. -0.03 min

Lab File: VL032223.D

Acq: 6 Jul 2018 3:45

Instrument :

MSVOA\_L

ClientSampleId :

MDL-AIR-03-QT3-2018

Tot Ion: 105 Resp: 382746

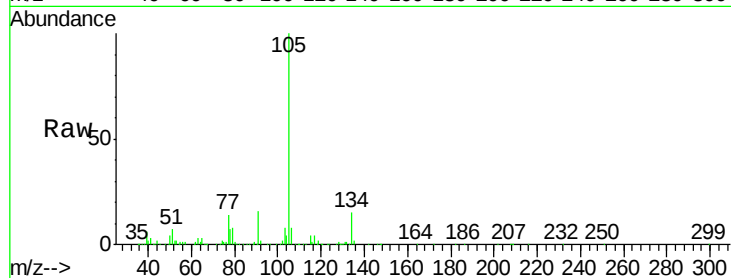
Ion Ratio Lower Upper

105 100

134 16.4 14.7 22.1

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7/9/2018 10:47:58 AM



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 134.20 (133.90 to 134.90): V

17.55

200000

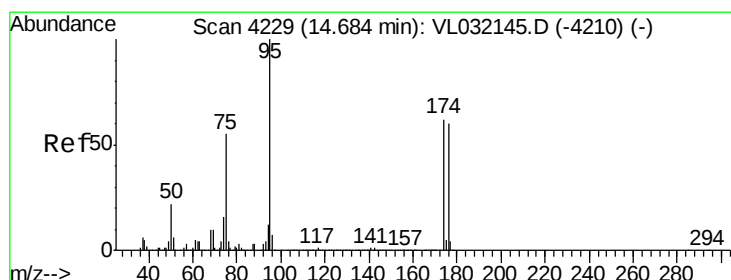
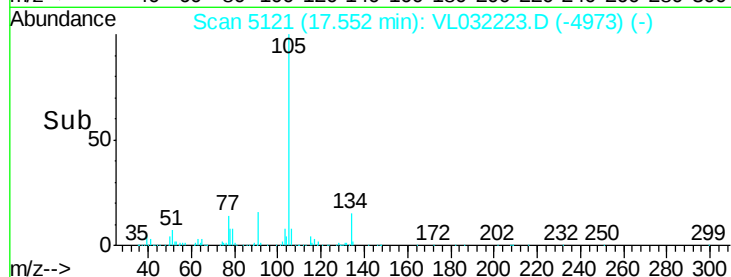
150000

100000

50000

0

Time-->



#68

1-Bromo-4-Fluorobenzene

Concen: 10.11 ppbv

RT: 14.67 min Scan# 4225

Delta R.T. -0.03 min

Lab File: VL032223.D

Acq: 6 Jul 2018 3:45

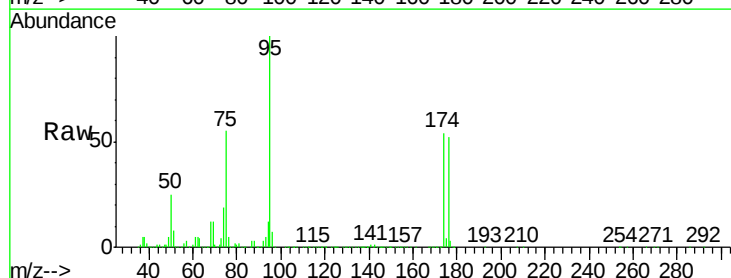
Tgt Ion: 95 Resp: 3054212

Ion Ratio Lower Upper

95 100

174 54.3 52.1 78.1

175 3.9 4.0 6.0#



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

14.67

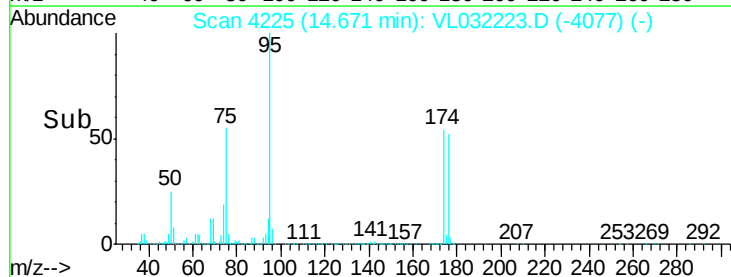
1500000

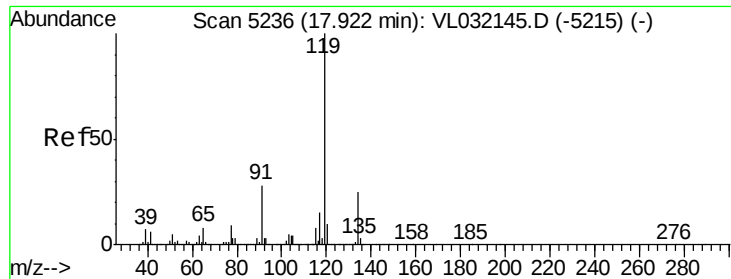
1000000

500000

0

Time-->





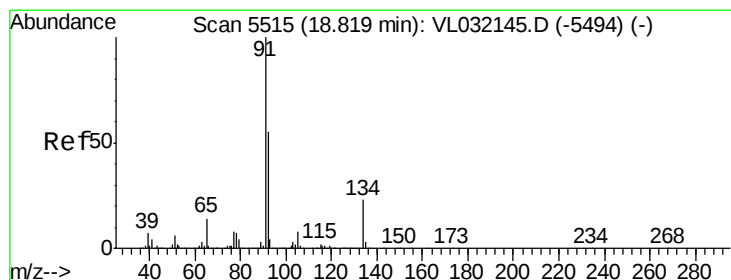
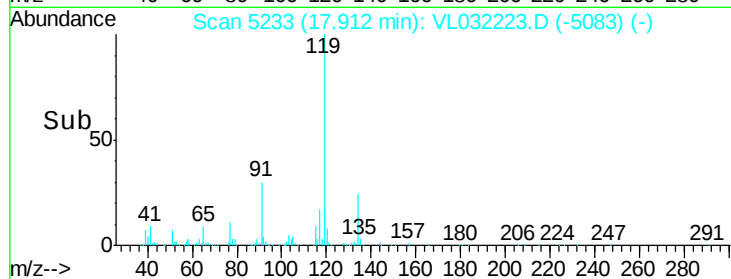
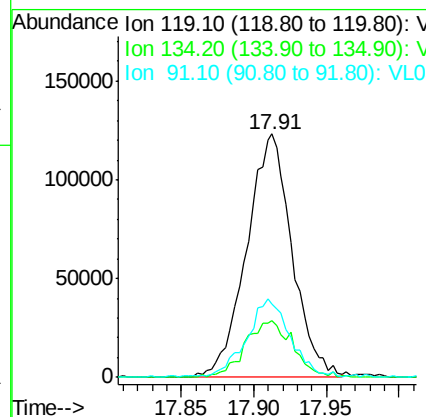
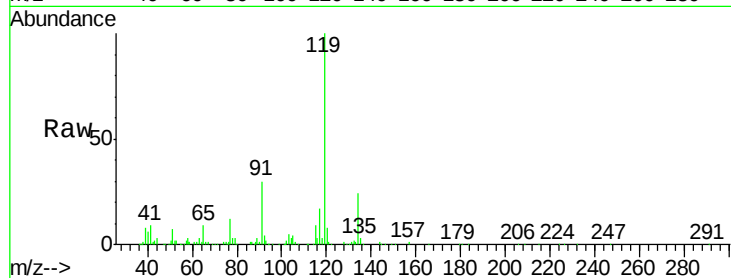
#69  
 p-Isopropyltoluene  
 Concen: 0.33 ppbv  
 RT: 17.91 min Scan# 5233  
 Delta R.T. -0.02 min  
 Lab File: VL032223.D  
 Acq: 6 Jul 2018 3:45

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 MDL-AIR-03-QT3-2018

| Tot Ion | Ratio | Resp   | Lower | Upper |
|---------|-------|--------|-------|-------|
| 119     | 100   | 268280 |       |       |
| 134     | 24.5  |        | 20.7  | 31.1  |
| 91      | 31.7  |        | 21.8  | 32.8  |

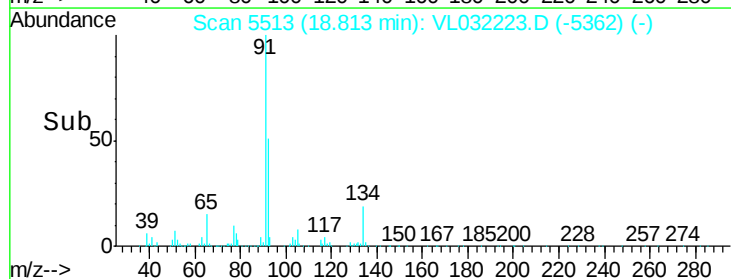
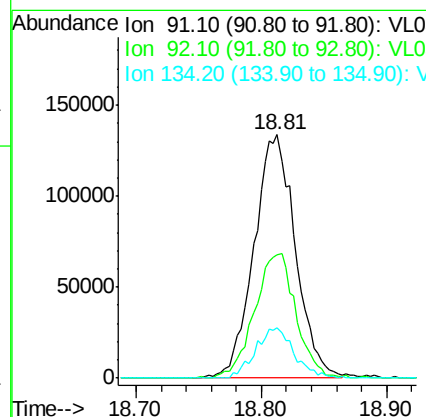
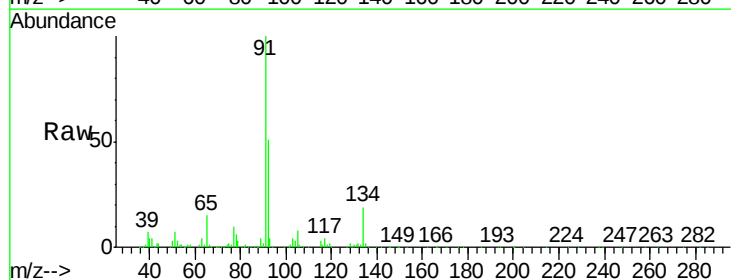
Manual Integrations  
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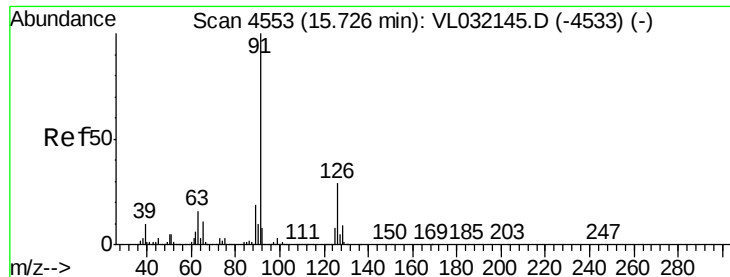
MMDadoda  
 7/9/2018 10:47:58 AM



#70  
 n-Butylbenzene  
 Concen: 0.36 ppbv  
 RT: 18.81 min Scan# 5513  
 Delta R.T. -0.02 min  
 Lab File: VL032223.D  
 Acq: 6 Jul 2018 3:45

| Tgt Ion | Ratio | Resp   | Lower | Upper |
|---------|-------|--------|-------|-------|
| 91      | 100   | 306867 |       |       |
| 92      | 51.3  |        | 43.7  | 65.5  |
| 134     | 19.4  |        | 18.9  | 28.3  |





#71

2-Chlorotoluene

Concen: 0.38 ppbv m

RT: 15.72 min Scan# 4551

Delta R.T. -0.02 min

Lab File: VL032223.D

Acq: 6 Jul 2018 3:45

Instrument :

MSVOA\_L

ClientSampleId :

MDL-AIR-03-QT3-2018

Tot Ion: 91 Resp: 230443

Ion Ratio Lower Upper

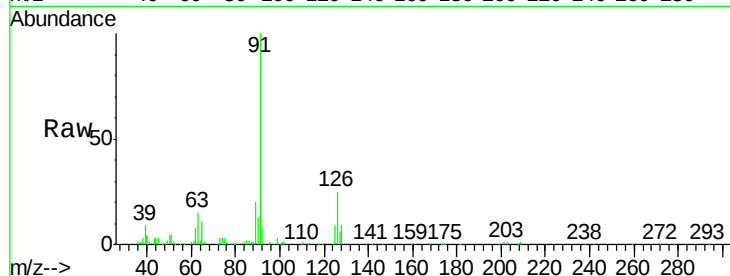
91 100

126 28.5 12.8 51.0

Manual Integrations  
APPROVED

MMDadoda

7/9/2018 10:47:58 AM



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 126.10 (125.80 to 126.80): V

200000

150000

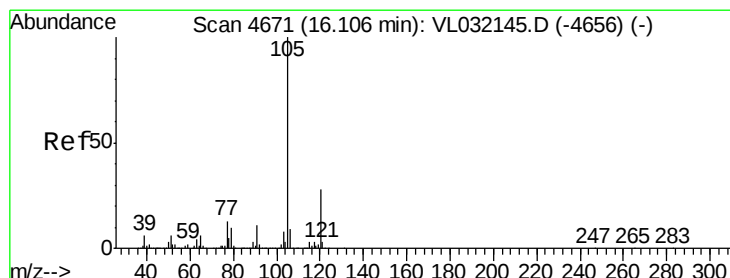
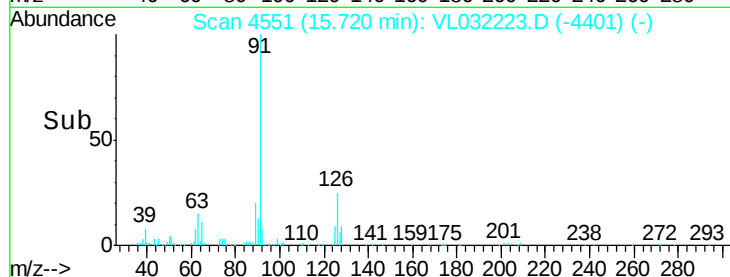
100000

50000

0

15.60 15.65 15.70 15.75

Time-->



#72

4-Ethyltoluene

Concen: 0.34 ppbv m

RT: 16.10 min Scan# 4669

Delta R.T. -0.02 min

Lab File: VL032223.D

Acq: 6 Jul 2018 3:45

Tgt Ion: 105 Resp: 226943

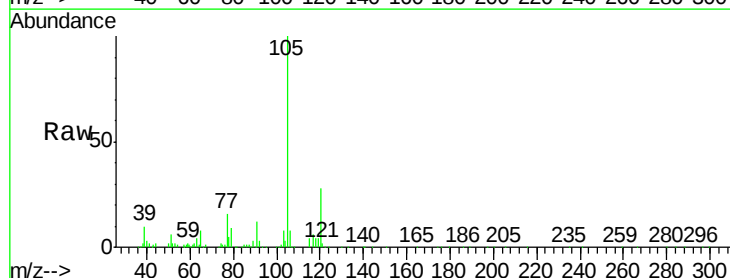
Ion Ratio Lower Upper

105 100

120 0.0 24.3 36.5#

91 0.0 9.4 14.0#

77 0.0 10.2 15.2#



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

150000

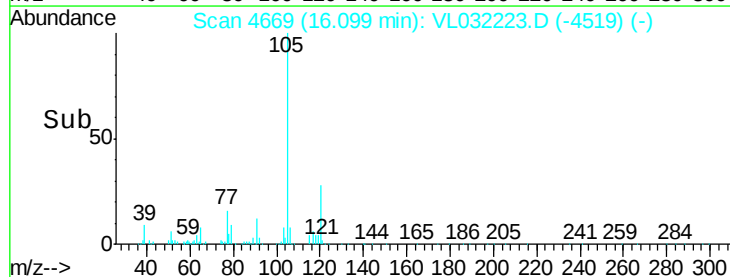
100000

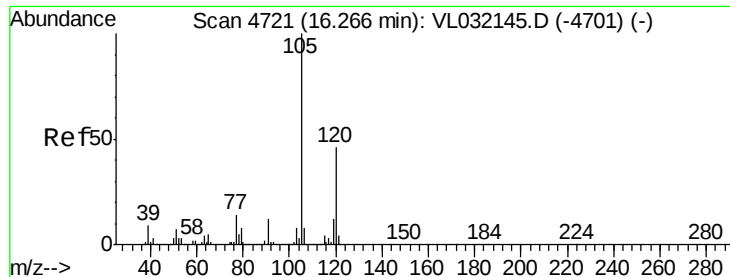
50000

0

16.00 16.05 16.10

Time-->





#73

1,3,5-Trimethylbenzene

Concen: 0.34 ppbv

RT: 16.25 min Scan# 4716

Delta R.T. -0.03 min

Lab File: VL032223.D

Acq: 6 Jul 2018 3:45

Instrument :

MSVOA\_L

ClientSampleId :

MDL-AIR-03-QT3-2018

Tot Ion:105 Resp: 213052

Ion Ratio Lower Upper

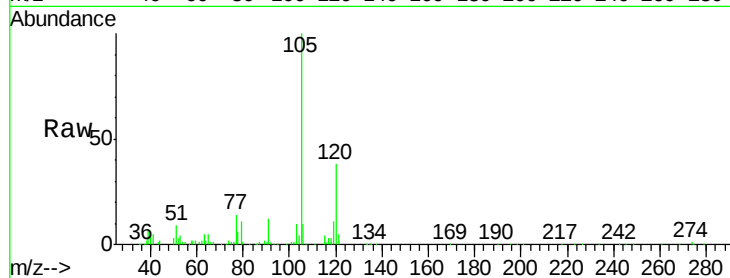
105 100

120 38.1 38.6 57.8#

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Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

16.25

100000

80000

60000

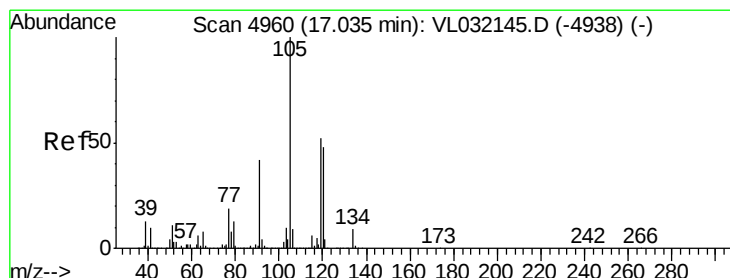
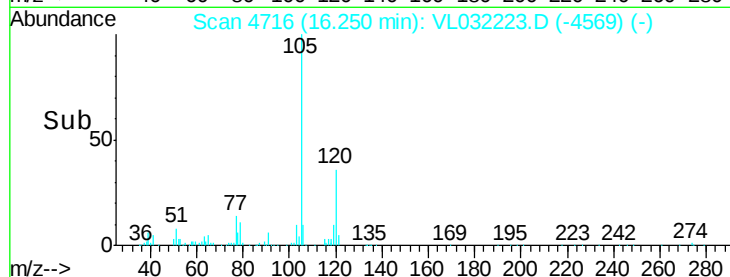
40000

20000

0

Time-->

16.15 16.20 16.25 16.30



#74

1,2,4-Trimethylbenzene

Concen: 0.37 ppbv

RT: 17.02 min Scan# 4955

Delta R.T. -0.03 min

Lab File: VL032223.D

Acq: 6 Jul 2018 3:45

Tgt Ion:105 Resp: 229051

Ion Ratio Lower Upper

105 100

120 41.6 38.8 58.2

91 50.9 33.6 50.4#

77 23.9 16.0 24.0

Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

17.02

150000

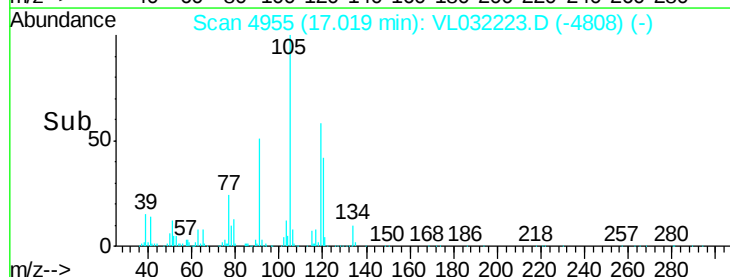
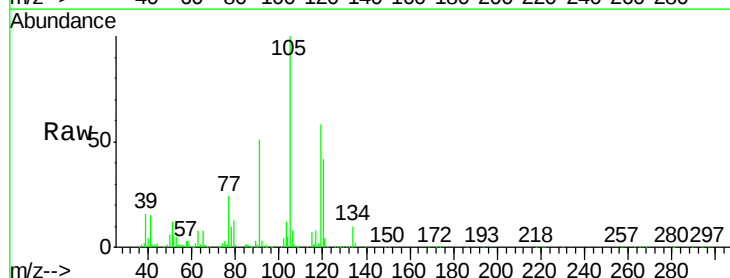
100000

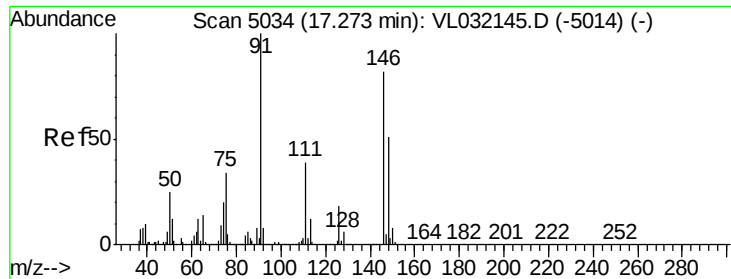
50000

0

Time-->

16.95 17.00 17.05 17.10





#75

1,3-Dichlorobenzene

Concen: 0.45 ppbv

RT: 17.26 min Scan# 5029

Delta R.T. -0.03 min

Lab File: VL032223.D

Acq: 6 Jul 2018 3:45

Instrument :

MSVOA\_L

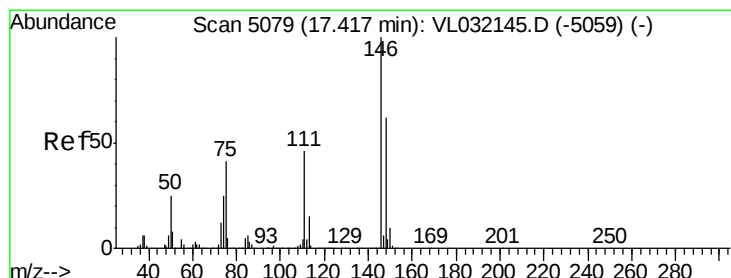
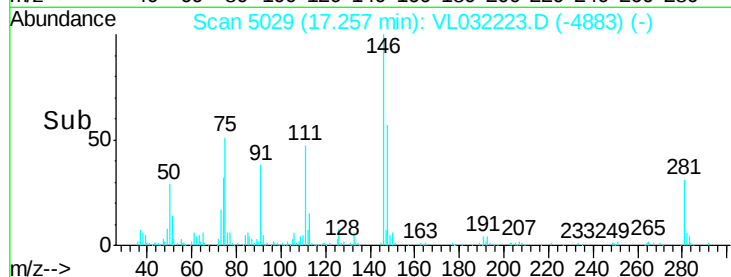
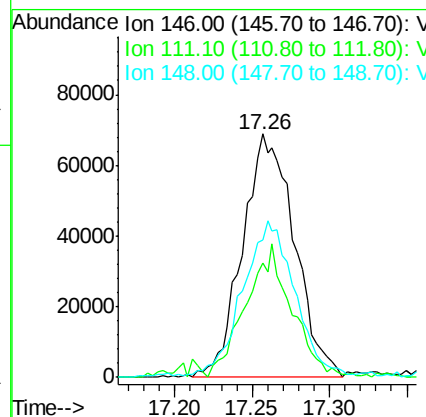
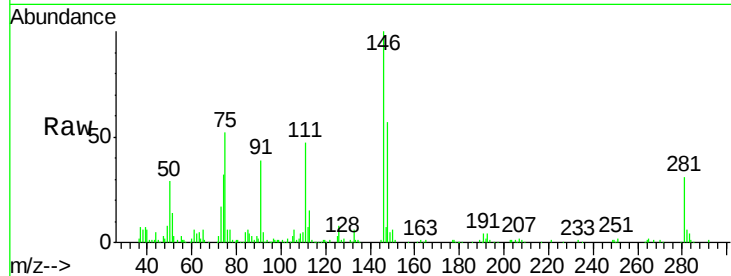
ClientSampleId :

MDL-AIR-03-QT3-2018

|           |       |       |        |
|-----------|-------|-------|--------|
| Tot Ion:  | 146   | Resp: | 160591 |
| Ion Ratio | Lower | Upper |        |
| 146       | 100   |       |        |
| 111       | 50.6  | 22.9  | 68.8   |
| 148       | 66.5  | 31.7  | 95.1   |

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#76

1,4-Dichlorobenzene

Concen: 0.37 ppbv

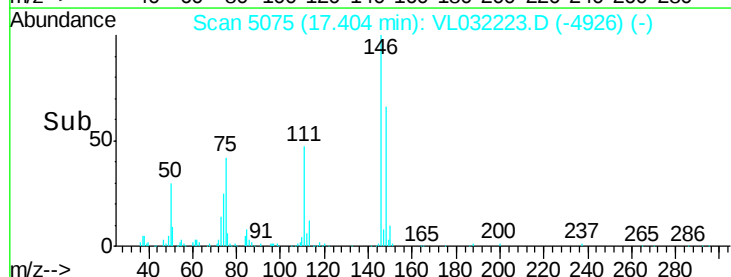
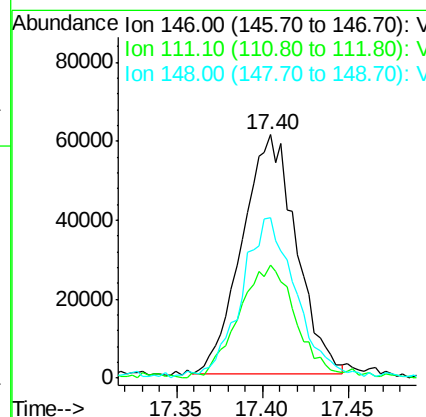
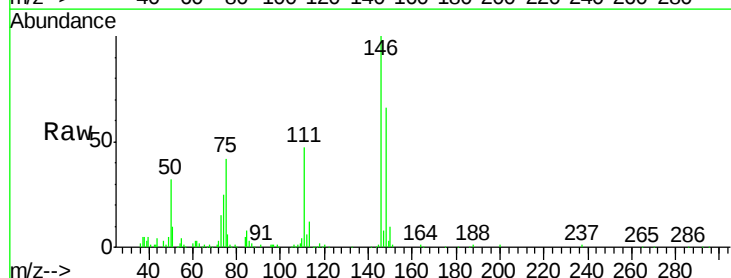
RT: 17.40 min Scan# 5075

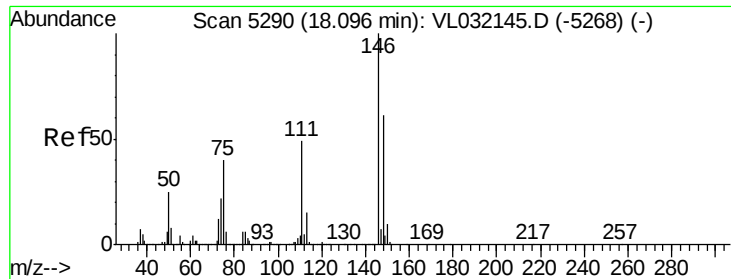
Delta R.T. -0.02 min

Lab File: VL032223.D

Acq: 6 Jul 2018 3:45

|           |       |       |        |
|-----------|-------|-------|--------|
| Tgt Ion:  | 146   | Resp: | 132133 |
| Ion Ratio | Lower | Upper |        |
| 146       | 100   |       |        |
| 111       | 51.7  | 21.9  | 65.8   |
| 148       | 68.1  | 32.1  | 96.5   |





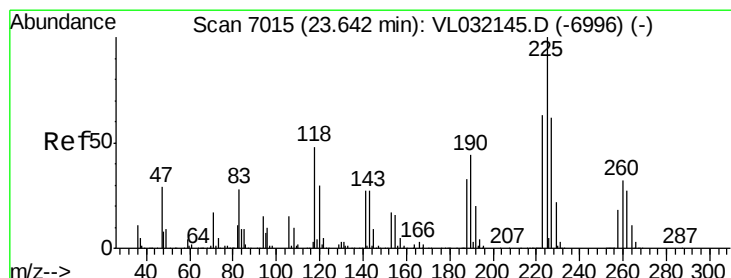
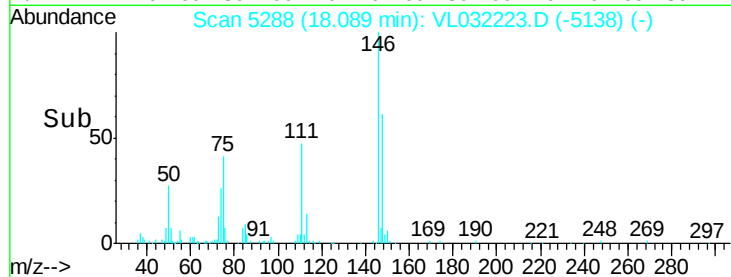
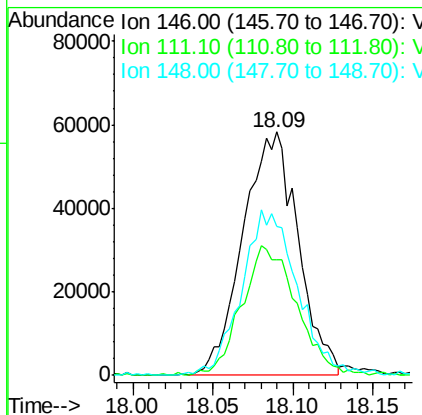
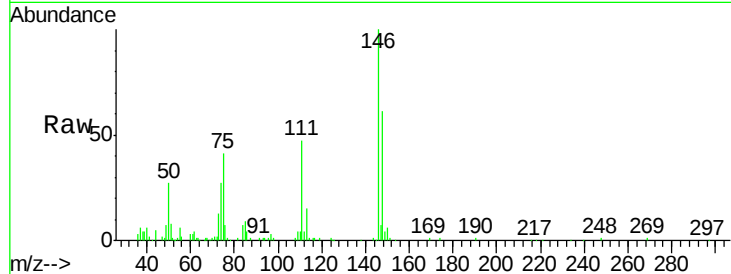
#77  
 1,2-Dichlorobenzene  
 Concen: 0.39 ppbv  
 RT: 18.09 min Scan# 5288  
 Delta R.T. -0.02 min  
 Lab File: VL032223.D  
 Acq: 6 Jul 2018 3:45

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 MDL-AIR-03-QT3-2018

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 146     | 100   |       |       |
| 111     | 53.5  | 23.4  | 70.3  |
| 148     | 69.1  | 32.0  | 96.0  |

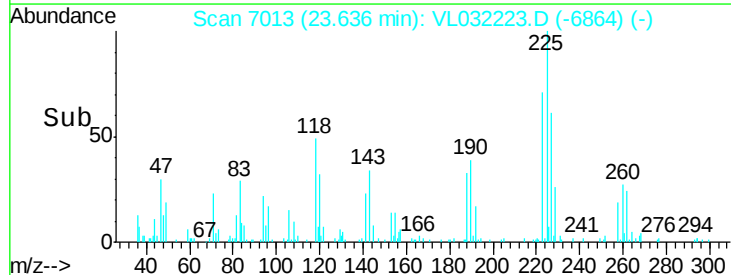
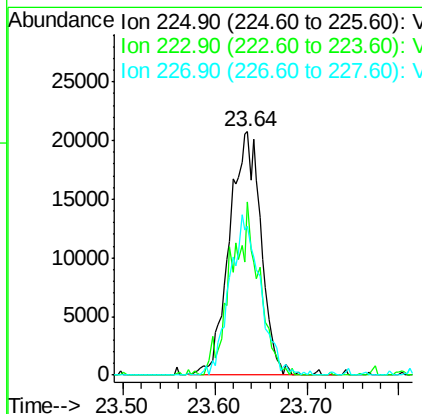
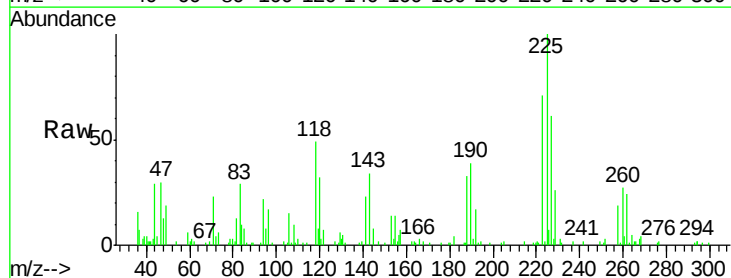
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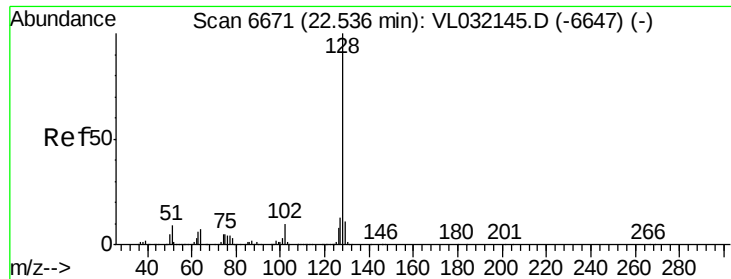
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#78  
 Hexachloro-1,3-Butadiene  
 Concen: 0.40 ppbv m  
 RT: 23.64 min Scan# 7013  
 Delta R.T. -0.02 min  
 Lab File: VL032223.D  
 Acq: 6 Jul 2018 3:45

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 225     | 100   |       |       |
| 223     | 0.0   | 51.0  | 76.4# |
| 227     | 0.0   | 51.4  | 77.0# |





#79

Naphthalene

Concen: 0.17 ppbv m

RT: 22.53 min Scan# 6668

Delta R.T. -0.03 min

Lab File: VL032223.D

Acq: 6 Jul 2018 3:45

Instrument :

MSVOA\_L

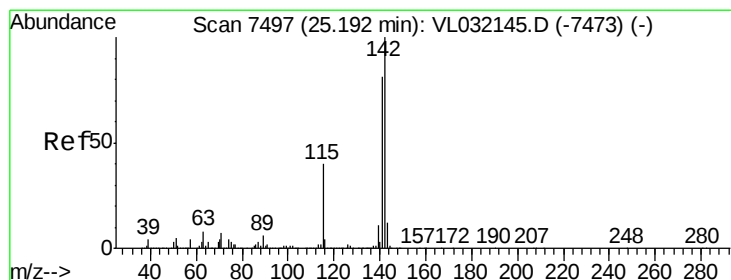
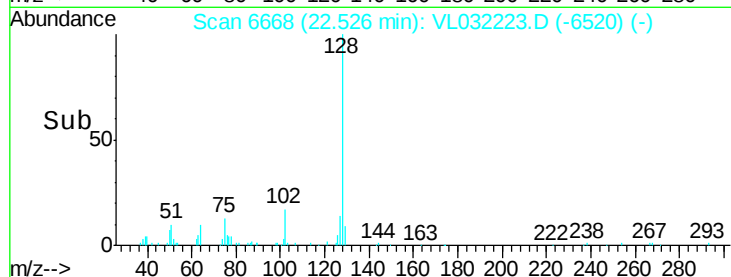
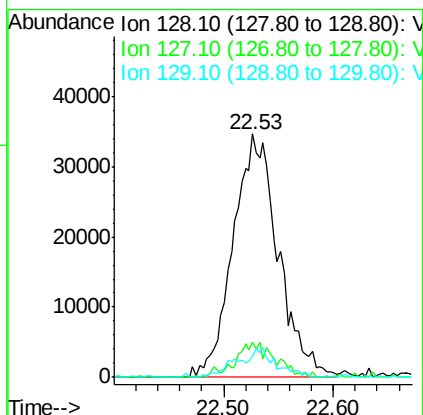
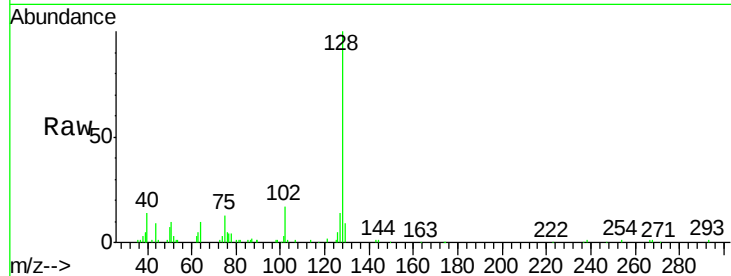
ClientSampleId :

MDL-AIR-03-QT3-2018

|           |       |       |       |
|-----------|-------|-------|-------|
| Tot Ion:  | 128   | Resp: | 98787 |
| Ion Ratio | Lower | Upper |       |
| 128       | 100   |       |       |
| 127       | 14.2  | 10.5  | 15.7  |
| 129       | 8.5   | 9.0   | 13.6# |

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#80

Naphthalene, 2-methyl-

Concen: 0.03 ppbv

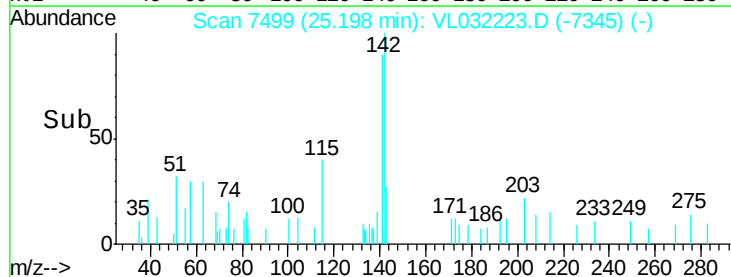
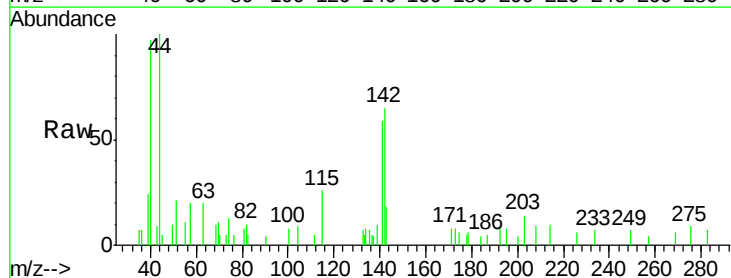
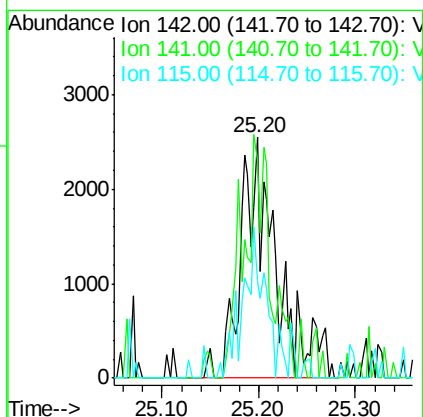
RT: 25.20 min Scan# 7499

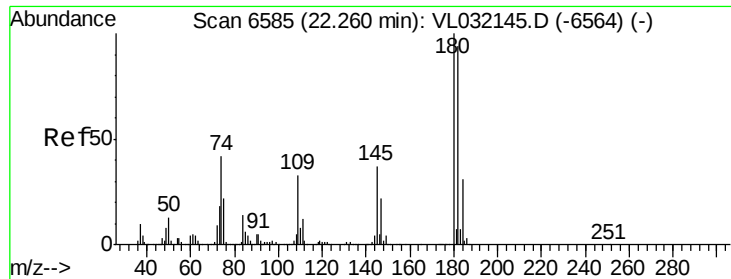
Delta R.T. -0.01 min

Lab File: VL032223.D

Acq: 6 Jul 2018 3:45

|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 142   | Resp: | 6454  |
| Ion Ratio | Lower | Upper |       |
| 142       | 100   |       |       |
| 141       | 85.7  | 65.8  | 98.6  |
| 115       | 45.5  | 29.4  | 44.0# |





#81  
 1,2,4-Trichlorobenzene  
 Concen: 0.23 ppbv m  
 RT: 22.25 min Scan# 6583  
 Delta R.T. -0.02 min  
 Lab File: VL032223.D  
 Acq: 6 Jul 2018 3:45

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 MDL-AIR-03-QT3-2018

| Tot Ion | Ratio | Resp Lower | Upper  |
|---------|-------|------------|--------|
| 180     | 100   |            |        |
| 182     | 0.0   | 76.2       | 114.4# |
| 184     | 0.0   | 24.4       | 36.6#  |

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