

Data Path : Z:\VOASRV\HPCHEM1\MSVOA\_L\DATA\VL101718\  
 Data File : VL032651.D  
 Acq On : 17 Oct 2018 21:58  
 Operator : SY/AP  
 Sample : VSTDCCC010  
 Misc : 400ml/MSVOA\_L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleID :  
 VSTDCCC010EC

Manual Integrations  
 APPROVED

MMDadoda  
 10/19/2018 4:36:43 PM

Quant Time: Oct 18 11:13:30 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_L\METHODS\VL101718AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Wed Oct 17 2018  
 QLast Update : Wed Oct 17 08:55:11 2018  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.78  | 49   | 1238307  | 10.00 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 7.31  | 114  | 2699777  | 10.00 | ppbv  | 0.00     |
| 55) Chlorobenzene-d5    | 12.26 | 117  | 2934294m | 10.00 | ppbv  | 0.00     |

|                             |        |       |          |          |      |        |
|-----------------------------|--------|-------|----------|----------|------|--------|
| System Monitoring Compounds |        |       |          |          |      |        |
| 68) 1-Bromo-4-Fluorobenzene | 14.60  | 95    | 2110246  | 9.55     | ppbv | 0.00   |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 95.50% |

| Target Compounds               | R.T. | QIon | Response | Conc  | Units  | Qvalue |
|--------------------------------|------|------|----------|-------|--------|--------|
| 2) Dichlorodifluoromethane     | 3.09 | 85   | 1349814  | 14.99 | ppbv   | 100    |
| 3) Chlorodifluoromethane       | 3.03 | 51   | 970792   | 9.37  | ppbv   | 100    |
| 4) Chloromethane               | 3.18 | 50   | 533056   | 9.42  | ppbv   | 97     |
| 5) Vinyl Chloride              | 3.30 | 62   | 550291   | 9.66  | ppbv   | 100    |
| 6) Bromomethane                | 3.53 | 94   | 338779   | 9.41  | ppbv   | 94     |
| 7) Chloroethane                | 3.62 | 64   | 214757   | 9.63  | ppbv   | 98     |
| 8) Dichlorotetrafluoroethane   | 3.23 | 85   | 1257680  | 9.01  | ppbv   | 99     |
| 9) Propene                     | 3.05 | 41   | 401553   | 10.57 | ppbv   | 99     |
| 10) Heptane                    | 8.27 | 43   | 1589983  | 11.18 | ppbv   | 99     |
| 11) Trichlorofluoromethane     | 4.02 | 101  | 1496807  | 9.41  | ppbv   | 99     |
| 12) 1,1,2-Trichlorotrifluoroet | 4.57 | 101  | 1073618  | 9.22  | ppbv   | 99     |
| 13) Ethanol                    | 3.66 | 45   | 120641   | 10.26 | ppbv   | 97     |
| 14) Bromoethene                | 3.80 | 108  | 459843   | 10.79 | ppbv   | 98     |
| 15) Acetone                    | 3.92 | 43   | 1101032  | 9.99  | ppbv   | 100    |
| 16) 1,3-Butadiene              | 3.38 | 39   | 448808   | 11.00 | ppbv   | 85     |
| 17) tert-Butyl alcohol         | 4.37 | 59   | 115810   | 11.52 | ppbv # | 100    |
| 18) 1,1-Dichloroethene         | 4.37 | 96   | 599836   | 11.42 | ppbv   | 98     |
| 19) Isopropyl Alcohol          | 4.04 | 45   | 837522   | 10.76 | ppbv # | 97     |
| 20) Methylene Chloride         | 4.43 | 84   | 522215   | 10.58 | ppbv   | 92     |
| 21) Allyl Chloride             | 4.49 | 41   | 870620   | 10.53 | ppbv   | 99     |
| 22) trans-1,2-Dichloroethene   | 4.98 | 96   | 588982   | 9.71  | ppbv   | 94     |
| 23) Vinyl Acetate              | 5.17 | 43   | 2032510  | 11.59 | ppbv   | 99     |
| 24) 1,1-Dichloroethane         | 5.11 | 63   | 1617766  | 9.95  | ppbv   | 100    |
| 25) Ethyl Acetate              | 5.79 | 43   | 2730806  | 10.47 | ppbv   | 100    |
| 26) Hexane                     | 5.80 | 57   | 1269300  | 10.81 | ppbv   | 99     |
| 27) Carbon Disulfide           | 4.64 | 76   | 1425837  | 10.05 | ppbv   | 99     |
| 28) Methyl tert-Butyl Ether    | 5.13 | 73   | 1676153  | 11.36 | ppbv   | 100    |
| 29) Chloroform                 | 5.87 | 83   | 1994019  | 9.69  | ppbv   | 96     |
| 30) Cyclohexane                | 7.26 | 84   | 1034767  | 11.17 | ppbv   | 99     |
| 31) cis-1,2-Dichloroethene     | 5.66 | 61   | 1204357  | 10.67 | ppbv   | 94     |
| 32) 1,1,1-Trichloroethane      | 6.64 | 97   | 1962021  | 9.55  | ppbv   | 98     |
| 34) 2-Butanone                 | 5.35 | 43   | 1777794  | 11.86 | ppbv   | 100    |
| 35) Carbon Tetrachloride       | 7.16 | 117  | 2007513  | 9.59  | ppbv   | 98     |
| 36) Benzene                    | 7.03 | 78   | 2540222  | 11.61 | ppbv   | 99     |
| 37) 1,2-Dichloroethane         | 6.43 | 62   | 1593585  | 10.62 | ppbv   | 100    |
| 38) Trichloroethene            | 7.98 | 130  | 915539   | 11.13 | ppbv   | 97     |
| 39) 1,2-Dichloropropane        | 7.76 | 63   | 1018645  | 11.44 | ppbv   | 99     |
| 40) 1,4-Dioxane                | 7.98 | 88   | 380086   | 12.36 | ppbv # | 99     |
| 41) Tetrahydrofuran            | 6.17 | 42   | 999895   | 12.58 | ppbv   | 100    |
| 42) Bromodichloromethane       | 7.94 | 83   | 2170766  | 10.61 | ppbv   | 99     |
| 43) Methyl Methacrylate        | 8.16 | 69   | 1058396  | 12.47 | ppbv   | 99     |

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 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDCCC010EC

Manual Integrations  
 APPROVED

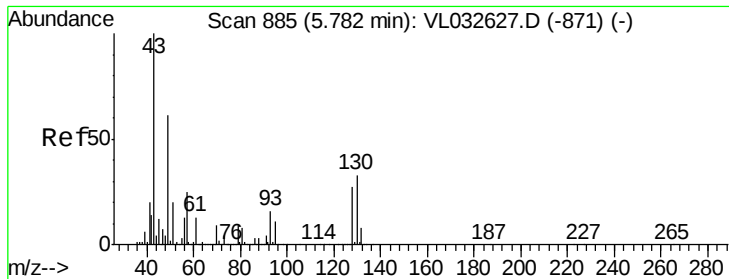
MMDadoda  
 10/19/2018 4:36:43 PM

Quant Time: Oct 18 11:13:30 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_L\METHODS\VL101718AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Wed Oct 18 11:13:30 2018  
 QLast Update : Wed Oct 17 08:55:11 2018  
 Response via : Initial Calibration

| Internal Standards            | R.T.  | QIon | Response | Conc  | Units  | Dev(Min) |
|-------------------------------|-------|------|----------|-------|--------|----------|
| 44) 2,2,4-Trimethylpentane    | 8.01  | 57   | 4447608  | 11.46 | ppbv   | 99       |
| 45) t-1,3-Dichloropropene     | 9.43  | 75   | 1493634  | 13.46 | ppbv   | 100      |
| 46) cis-1,3-Dichloropropene   | 8.86  | 75   | 1593284  | 12.61 | ppbv   | 99       |
| 47) 1,1,2-Trichloroethane     | 9.64  | 97   | 1121691  | 10.54 | ppbv   | 98       |
| 48) Dibromochloromethane      | 10.47 | 129  | 1918451  | 10.62 | ppbv   | 99       |
| 49) Bromoform                 | 13.23 | 173  | 1446599  | 10.60 | ppbv   | 100      |
| 50) 4-Methyl-2-Pentanone      | 8.89  | 43   | 2562693  | 11.62 | ppbv   | 100      |
| 51) 2-Hexanone                | 10.29 | 43   | 2245544  | 12.95 | ppbv   | 99       |
| 52) Tetrachloroethene         | 11.40 | 164  | 854692   | 11.86 | ppbv   | 98       |
| 53) Toluene                   | 9.97  | 91   | 3130707  | 12.55 | ppbv   | 99       |
| 54) 1,2-Dibromoethane         | 10.78 | 107  | 1693831  | 11.12 | ppbv   | 99       |
| 56) 1,1,1,2-Tetrachloroethane | 12.30 | 131  | 1257426  | 9.33  | ppbv   | 100      |
| 57) Chlorobenzene             | 12.32 | 112  | 2140959  | 9.59  | ppbv   | 99       |
| 58) Ethyl Benzene             | 12.89 | 91   | 3879367  | 11.77 | ppbv   | 99       |
| 59) m/p-Xylene                | 13.17 | 91   | 6349103m | 21.58 | ppbv   |          |
| 60) o-Xylene                  | 13.87 | 91   | 3147942  | 10.74 | ppbv   | 99       |
| 61) Styrene                   | 13.71 | 104  | 2250718  | 12.67 | ppbv   | 99       |
| 62) Isopropylbenzene          | 14.85 | 105  | 4421104  | 10.59 | ppbv   | 98       |
| 63) 1,1,2,2-Tetrachloroethane | 13.86 | 83   | 2359574  | 9.12  | ppbv   | 100      |
| 64) n-propylbenzene           | 15.74 | 120  | 1126913  | 10.65 | ppbv   | 98       |
| 65) tert-Butylbenzene         | 16.93 | 119  | 3739459  | 10.55 | ppbv   | 98       |
| 66) Benzyl Chloride           | 17.18 | 91   | 2199249  | 11.01 | ppbv   | 99       |
| 67) sec-Butylbenzene          | 17.48 | 105  | 5491345  | 10.30 | ppbv   | 99       |
| 69) p-Isopropyltoluene        | 17.84 | 119  | 4355382  | 10.79 | ppbv   | 99       |
| 70) n-Butylbenzene            | 18.74 | 91   | 4797949  | 10.79 | ppbv   | 100      |
| 71) 2-Chlorotoluene           | 15.64 | 91   | 3481629  | 11.28 | ppbv   | 99       |
| 72) 4-Ethyltoluene            | 16.02 | 105  | 3568391  | 11.26 | ppbv   | 99       |
| 73) 1,3,5-Trimethylbenzene    | 16.18 | 105  | 3386297  | 10.74 | ppbv   | 99       |
| 74) 1,2,4-Trimethylbenzene    | 16.95 | 105  | 3485355  | 10.04 | ppbv # | 91       |
| 75) 1,3-Dichlorobenzene       | 17.19 | 146  | 1889880  | 9.37  | ppbv   | 99       |
| 76) 1,4-Dichlorobenzene       | 17.33 | 146  | 1875738  | 10.21 | ppbv   | 99       |
| 77) 1,2-Dichlorobenzene       | 18.01 | 146  | 1869125  | 9.64  | ppbv   | 100      |
| 78) Hexachloro-1,3-Butadiene  | 23.56 | 225  | 704893   | 6.50  | ppbv   | 100      |
| 79) Naphthalene               | 22.44 | 128  | 2833703  | 12.01 | ppbv   | 99       |
| 80) Naphthalene,2-methyl-     | 25.13 | 142  | 761998   | 9.98  | ppbv   | 99       |
| 81) 1,2,4-Trichlorobenzene    | 22.16 | 180  | 1315275  | 11.23 | ppbv   | 99       |

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





#1

Bromochloromethane

Concen: 10.00 ppbv

RT: 5.78 min Scan# 884

Delta R.T. -0.00 min

Lab File: VL032651.D

Acq: 17 Oct 2018 21:58

Instrument :

MSVOA\_L

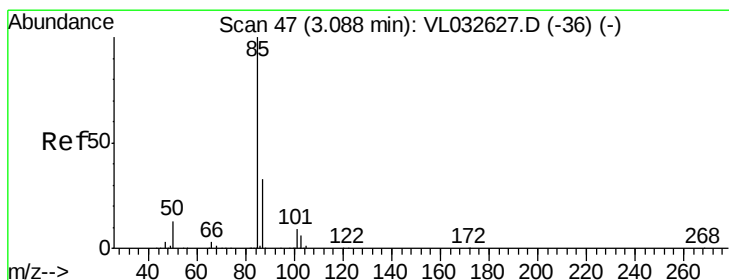
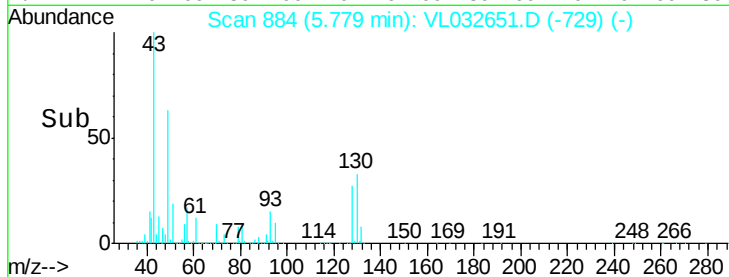
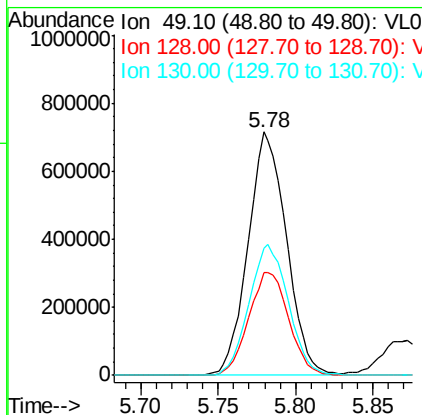
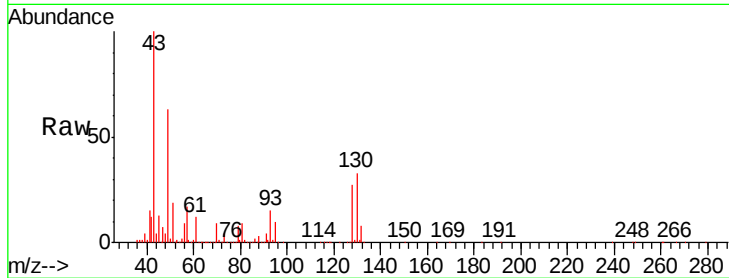
ClientSampleId :

VSTDCCC010EC

|          |       |       |         |
|----------|-------|-------|---------|
| Tgt Ion: | 49    | Resp: | 1238307 |
| Ion      | Ratio | Lower | Upper   |
| 49       | 100   |       |         |
| 128      | 44.1  | 22.3  | 66.8    |
| 130      | 55.5  | 28.4  | 85.3    |

Manual Integrations  
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#2

Dichlorodifluoromethane

Concen: 14.99 ppbv

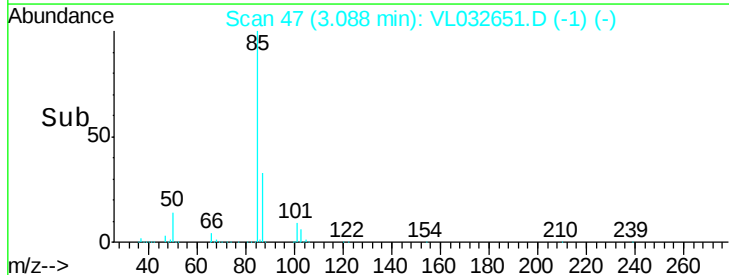
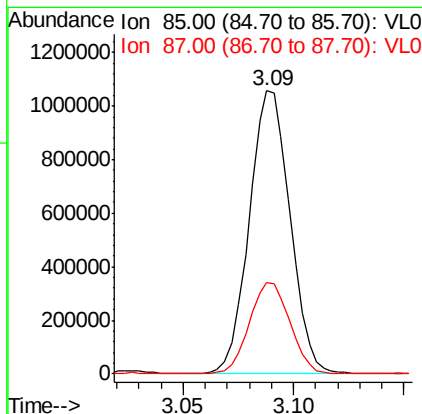
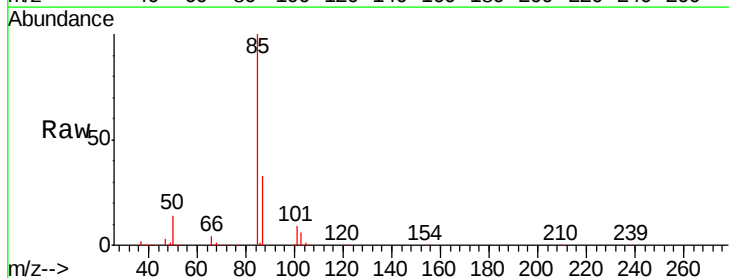
RT: 3.09 min Scan# 47

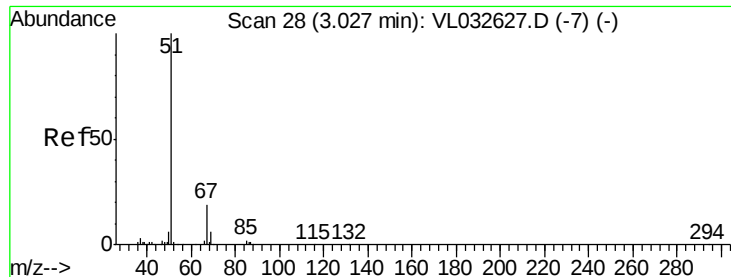
Delta R.T. 0.00 min

Lab File: VL032651.D

Acq: 17 Oct 2018 21:58

|          |       |       |         |
|----------|-------|-------|---------|
| Tgt Ion: | 85    | Resp: | 1349814 |
| Ion      | Ratio | Lower | Upper   |
| 85       | 100   |       |         |
| 87       | 32.5  | 26.2  | 39.2    |





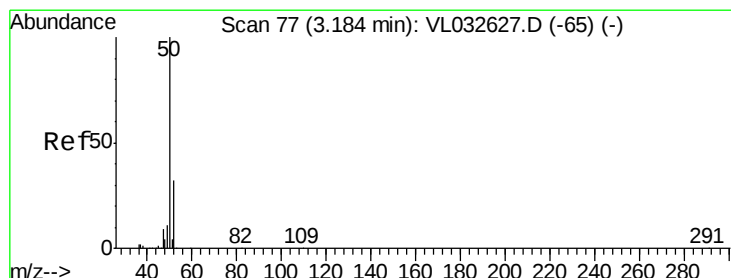
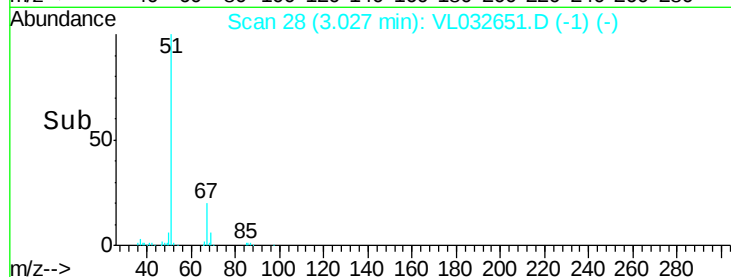
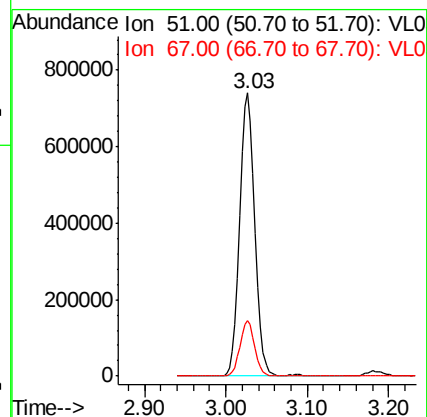
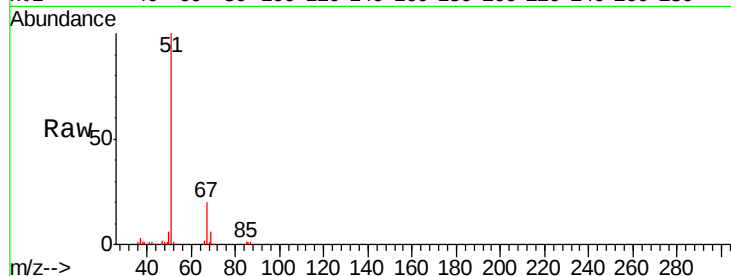
#3  
Chlorodifluoromethane  
Concen: 9.37 ppbv  
RT: 3.03 min Scan# 28  
Delta R.T. 0.00 min  
Lab File: VL032651.D  
Acq: 17 Oct 2018 21:58

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDCCC010EC

Tgt Ion: 51 Resp: 970792  
Ion Ratio Lower Upper  
51 100  
67 18.9 15.2 22.8

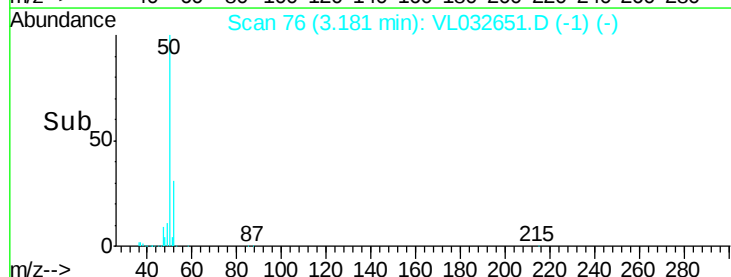
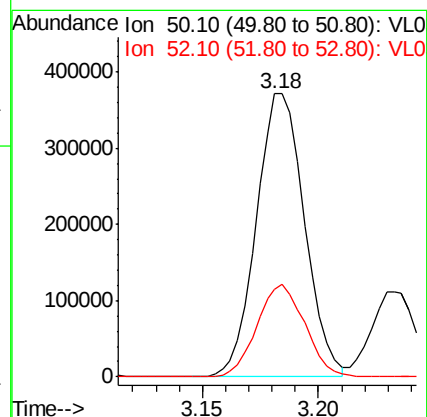
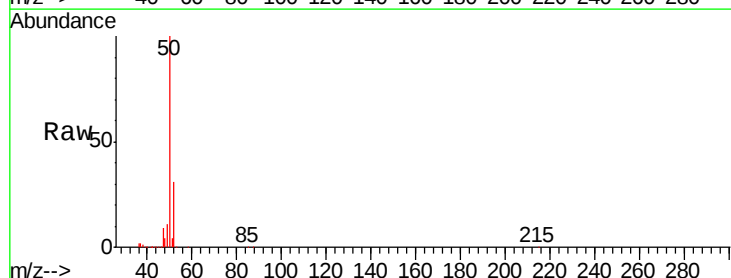
Manual Integrations  
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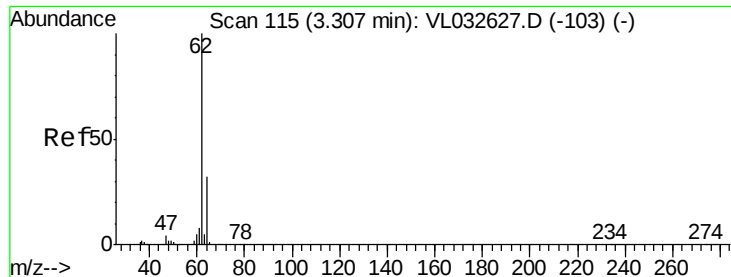
MMDadoda  
10/19/2018 4:36:43 PM



#4  
Chloromethane  
Concen: 9.42 ppbv  
RT: 3.18 min Scan# 76  
Delta R.T. -0.00 min  
Lab File: VL032651.D  
Acq: 17 Oct 2018 21:58

Tgt Ion: 50 Resp: 533056  
Ion Ratio Lower Upper  
50 100  
52 30.8 25.9 38.9





#5

Vinyl Chloride

Concen: 9.66 ppbv

RT: 3.30 min Scan# 114

Delta R.T. -0.00 min

Lab File: VL032651.D

Acq: 17 Oct 2018 21:58

Instrument :

MSVOA\_L

ClientSampleId :

VSTDCCC010EC

Tgt Ion: 62 Resp: 550291

Ion Ratio Lower Upper

62 100

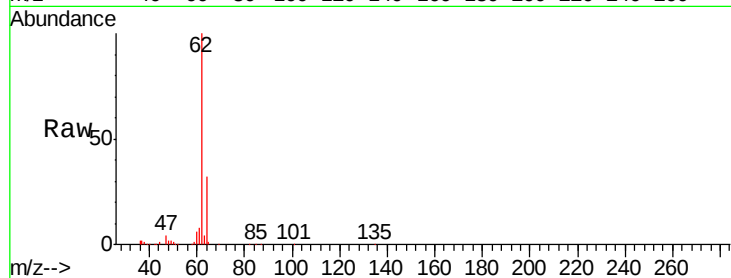
64 31.7 25.5 38.3

Manual Integrations

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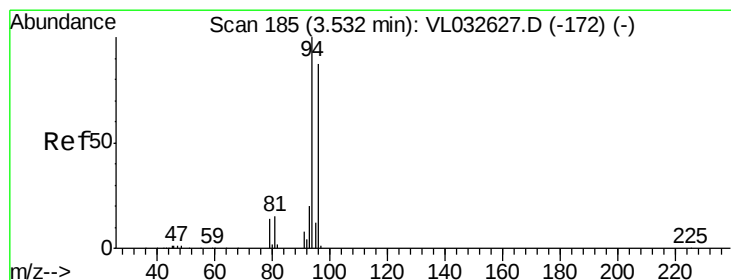
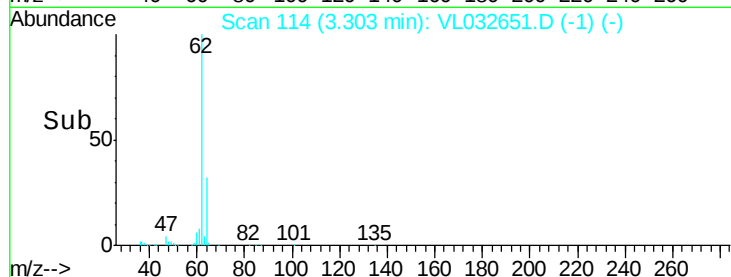
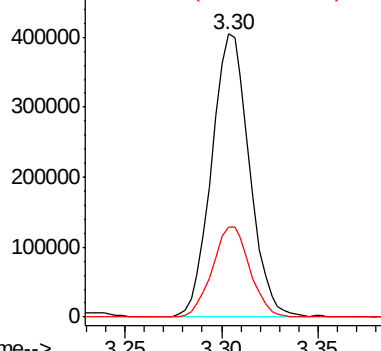
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Abundance Ion 62.10 (61.80 to 62.80): VL0

Ion 64.10 (63.80 to 64.80): VL0



#6

Bromomethane

Concen: 9.41 ppbv

RT: 3.53 min Scan# 184

Delta R.T. -0.00 min

Lab File: VL032651.D

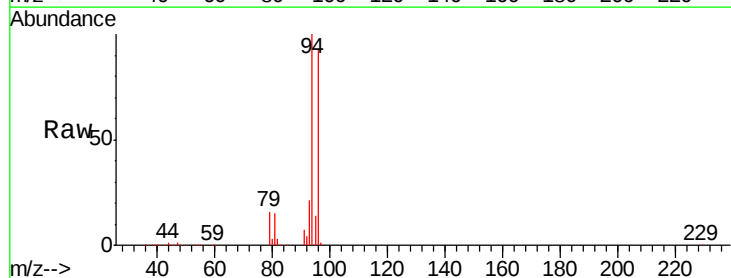
Acq: 17 Oct 2018 21:58

Tgt Ion: 94 Resp: 338779

Ion Ratio Lower Upper

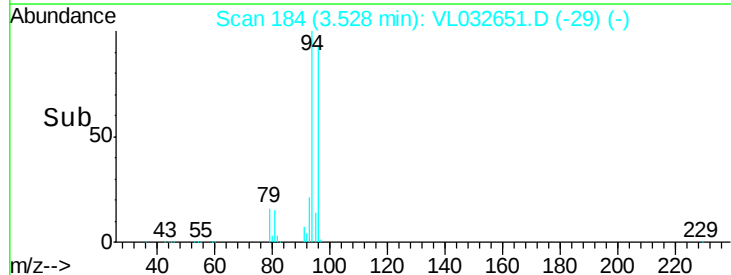
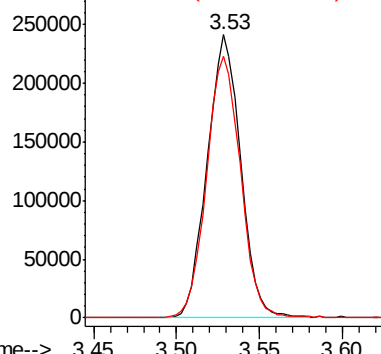
94 100

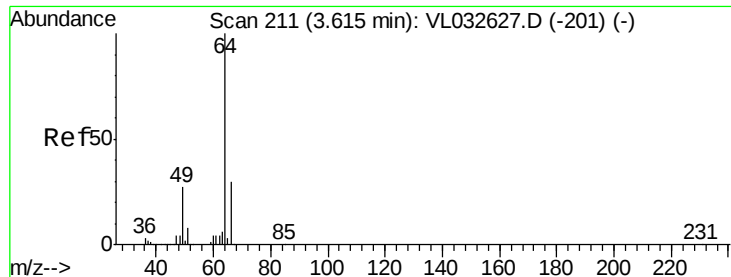
96 92.5 69.8 104.8



Abundance Ion 94.00 (93.70 to 94.70): VL0

Ion 96.00 (95.70 to 96.70): VL0





#7

Chloroethane

Concen: 9.63 ppbv

RT: 3.62 min Scan# 211

Delta R.T. 0.00 min

Lab File: VL032651.D

Acq: 17 Oct 2018 21:58

Instrument :

MSVOA\_L

ClientSampleId :

VSTDCCC010EC

Tgt Ion: 64 Resp: 214757

Ion Ratio Lower Upper

64 100

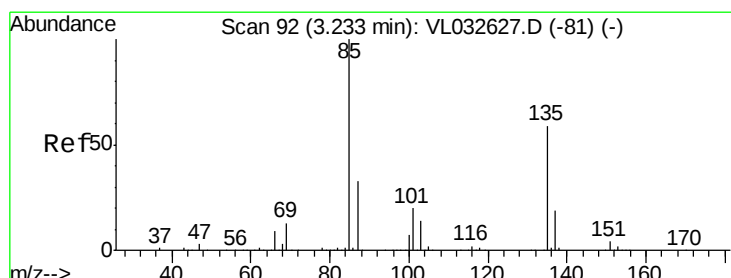
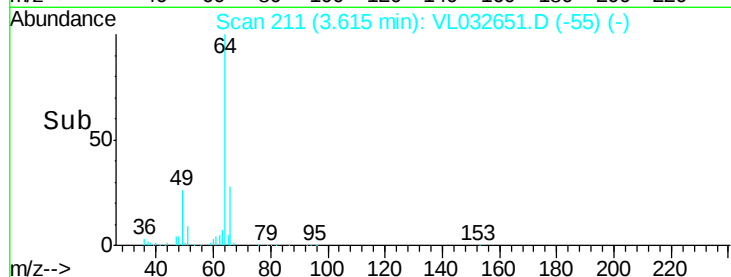
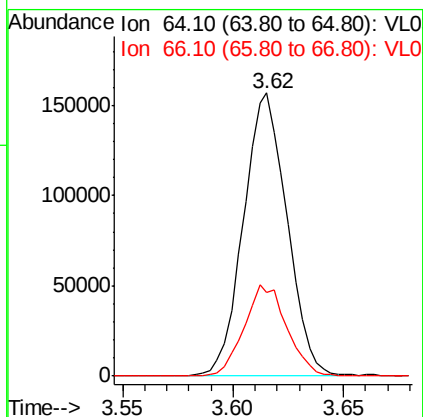
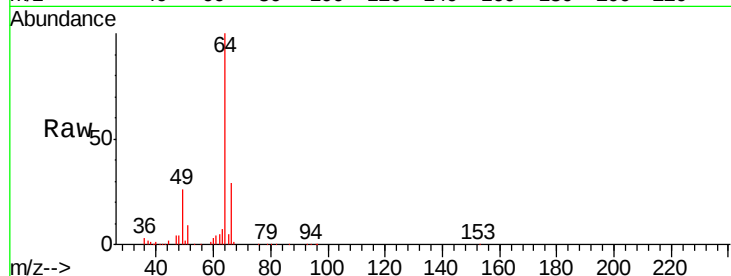
66 29.4 24.4 36.6

Manual Integrations

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#8

Dichlorotetrafluoroethane

Concen: 9.01 ppbv

RT: 3.23 min Scan# 92

Delta R.T. 0.00 min

Lab File: VL032651.D

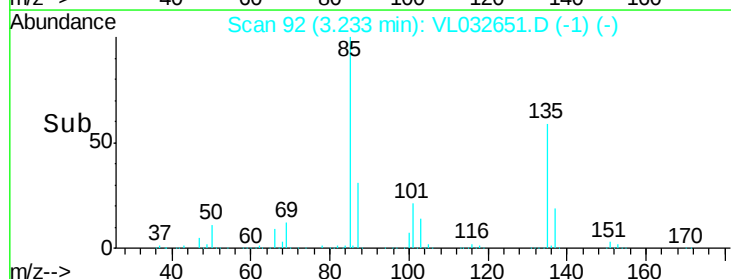
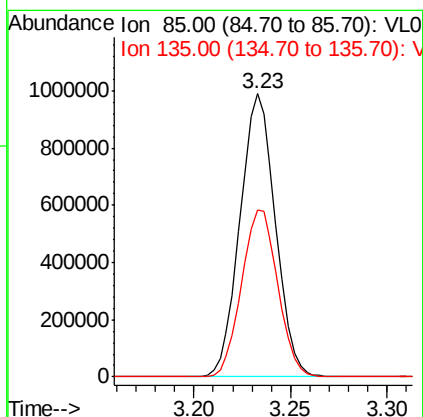
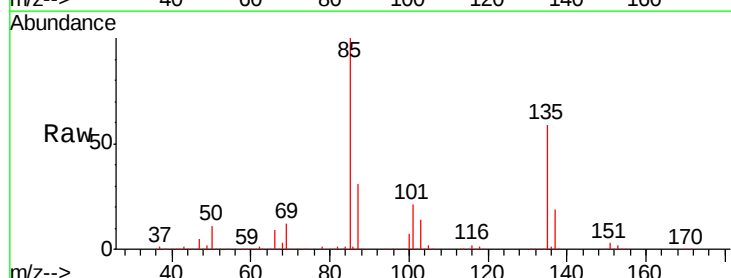
Acq: 17 Oct 2018 21:58

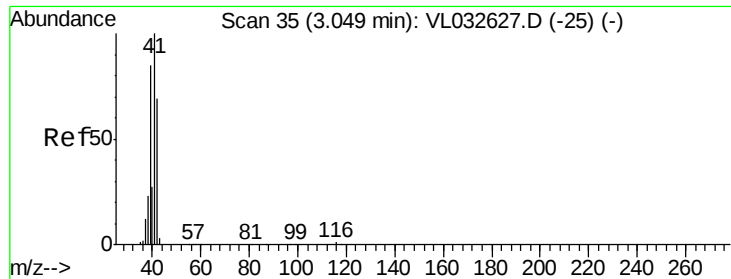
Tgt Ion: 85 Resp: 1257680

Ion Ratio Lower Upper

85 100

135 60.7 49.0 73.4





#9

Propene

Concen: 10.57 ppbv

RT: 3.05 min Scan# 35

Delta R.T. 0.00 min

Lab File: VL032651.D

Acq: 17 Oct 2018 21:58

Instrument :

MSVOA\_L

ClientSampleId :

VSTDCCC010EC

Tgt Ion: 41 Resp: 401553

Ion Ratio Lower Upper

41 100

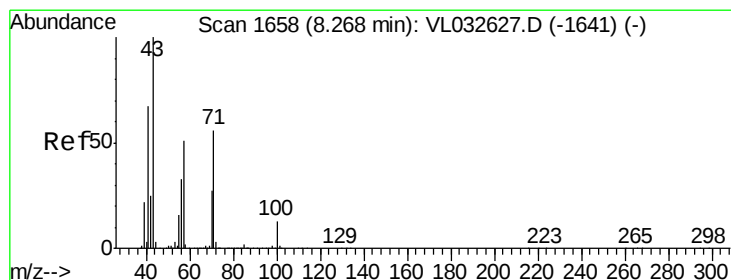
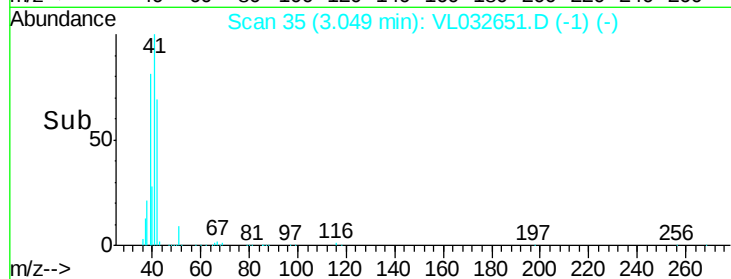
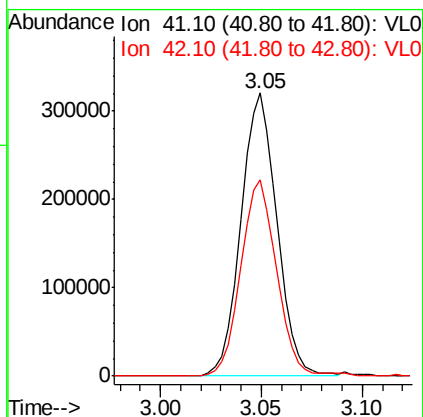
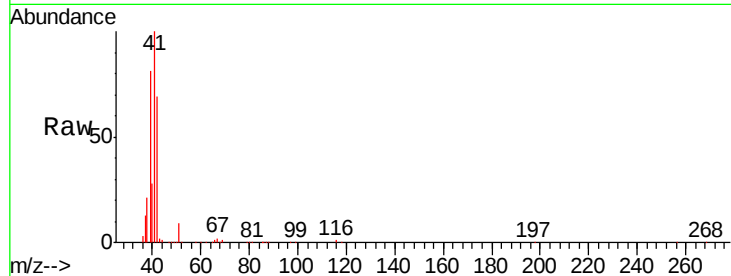
42 70.0 55.4 83.0

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#10

Heptane

Concen: 11.18 ppbv

RT: 8.27 min Scan# 1658

Delta R.T. 0.00 min

Lab File: VL032651.D

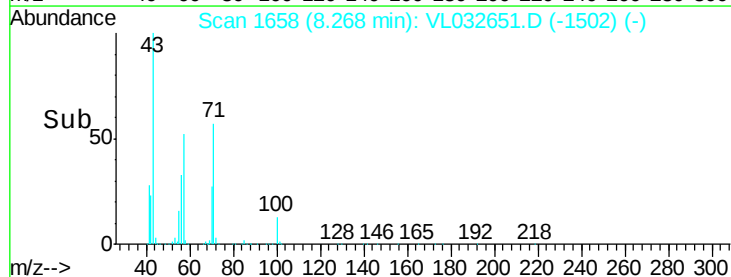
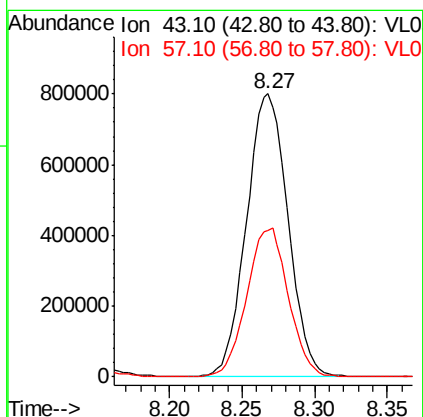
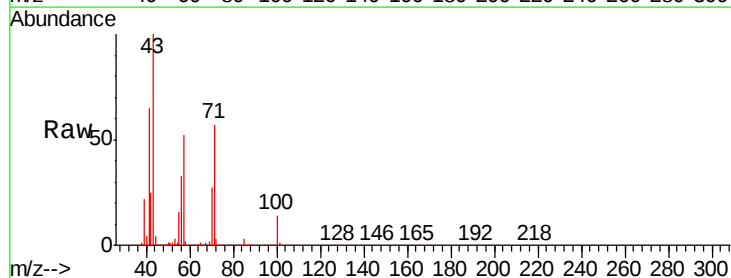
Acq: 17 Oct 2018 21:58

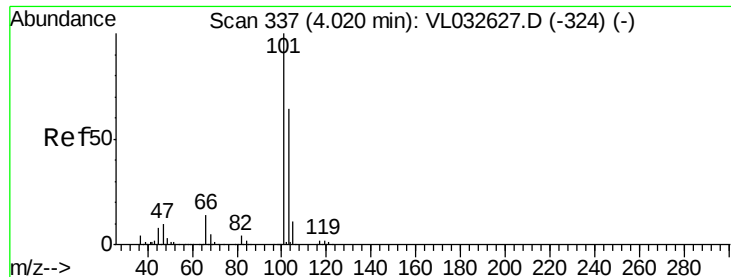
Tgt Ion: 43 Resp: 1589983

Ion Ratio Lower Upper

43 100

57 52.9 41.5 62.3





#11

Trichlorofluoromethane

Concen: 9.41 ppbv

RT: 4.02 min Scan# 337

Delta R.T. 0.00 min

Lab File: VL032651.D

Acq: 17 Oct 2018 21:58

Instrument :

MSVOA\_L

ClientSampleId :

VSTDCCC010EC

Tgt Ion:101 Resp: 1496807

Ion Ratio Lower Upper

101 100

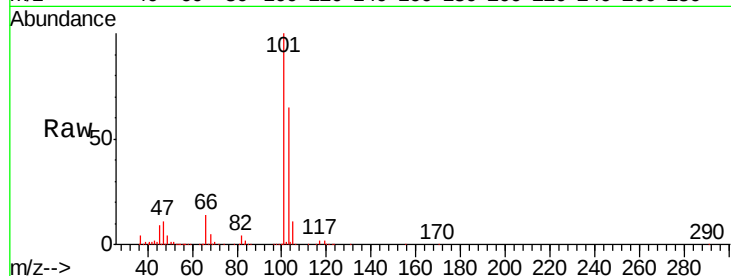
103 65.1 51.4 77.2

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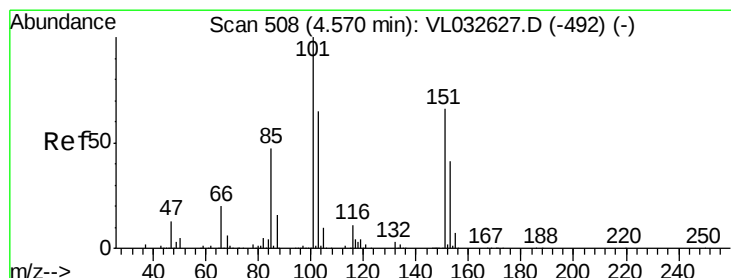
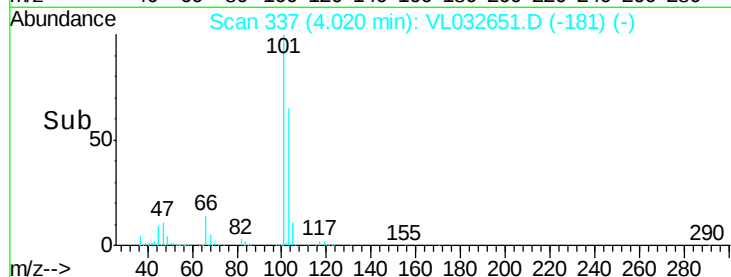
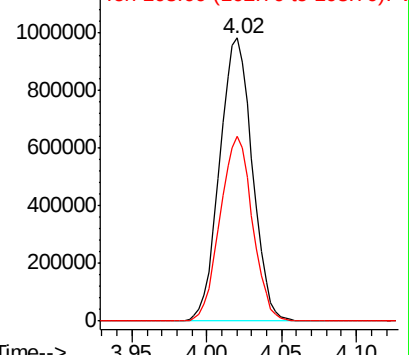
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Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V



#12

1,1,2-Trichlorotrifluoroethane

Concen: 9.22 ppbv

RT: 4.57 min Scan# 508

Delta R.T. 0.00 min

Lab File: VL032651.D

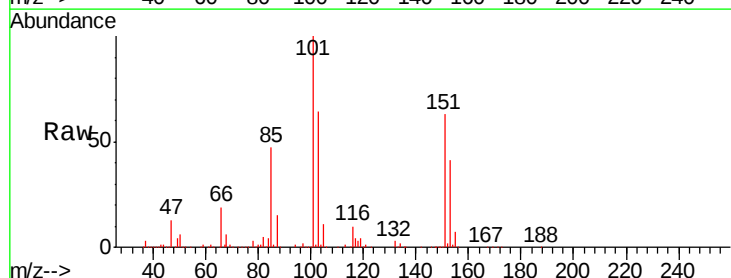
Acq: 17 Oct 2018 21:58

Tgt Ion:101 Resp: 1073618

Ion Ratio Lower Upper

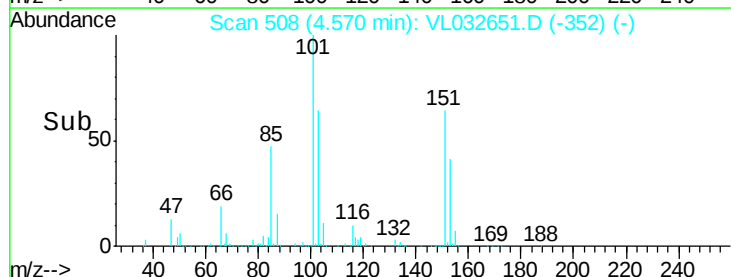
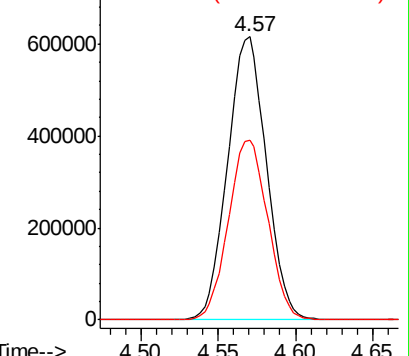
101 100

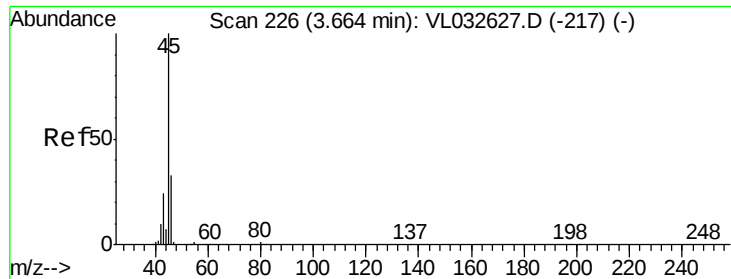
151 64.7 52.3 78.5



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V





#13

Ethanol

Concen: 10.26 ppbv

RT: 3.66 min Scan# 226

Delta R.T. 0.00 min

Lab File: VL032651.D

Acq: 17 Oct 2018 21:58

Instrument :

MSVOA\_L

ClientSampleId :

VSTDCCC010EC

Tgt Ion: 45 Resp: 120641

Ion Ratio Lower Upper

45 100

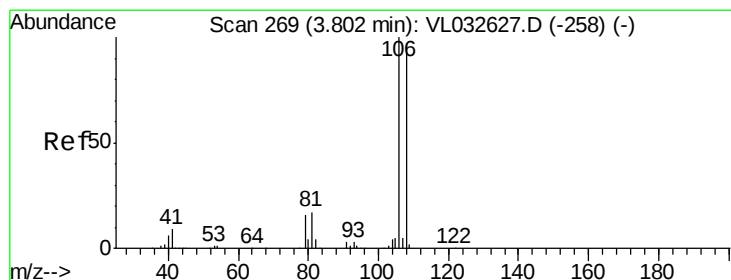
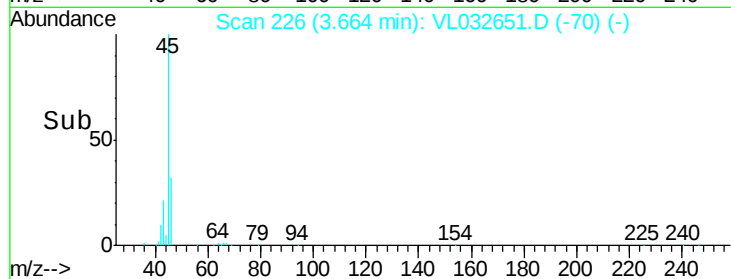
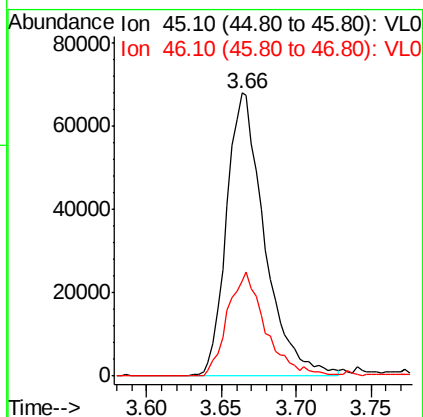
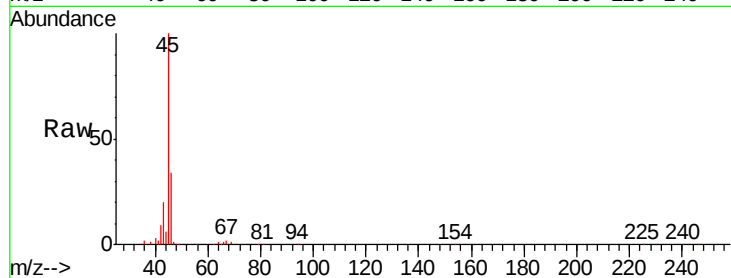
46 37.1 15.4 61.8

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#14

Bromoethene

Concen: 10.79 ppbv

RT: 3.80 min Scan# 269

Delta R.T. 0.00 min

Lab File: VL032651.D

Acq: 17 Oct 2018 21:58

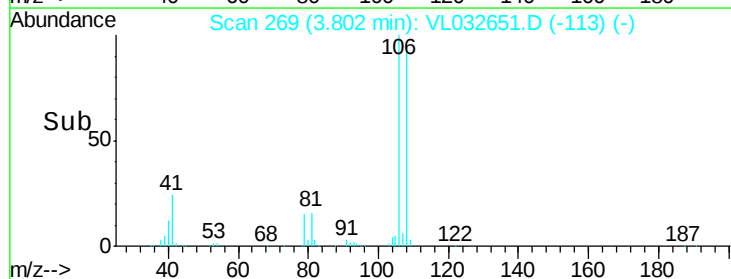
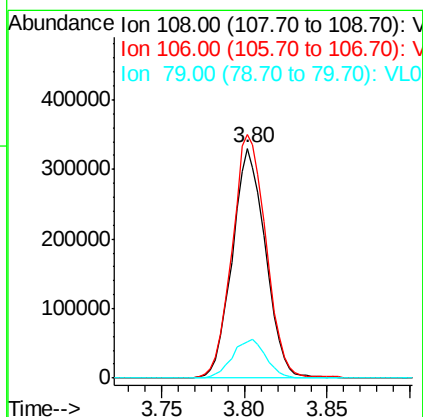
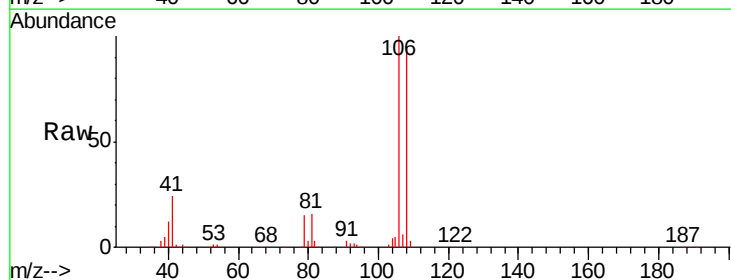
Tgt Ion: 108 Resp: 459843

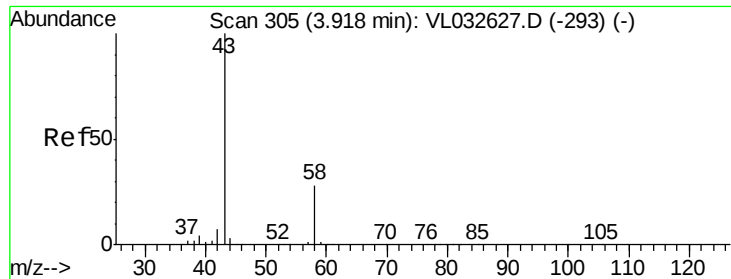
Ion Ratio Lower Upper

108 100

106 108.7 85.0 127.4

79 17.4 13.7 20.5





#15

Acetone

Concen: 9.99 ppbv

RT: 3.92 min Scan# 305

Delta R.T. 0.00 min

Lab File: VL032651.D

Acq: 17 Oct 2018 21:58

Instrument :

MSVOA\_L

ClientSampleId :

VSTDCCC010EC

Tgt Ion: 43 Resp: 1101032

Ion Ratio Lower Upper

43 100

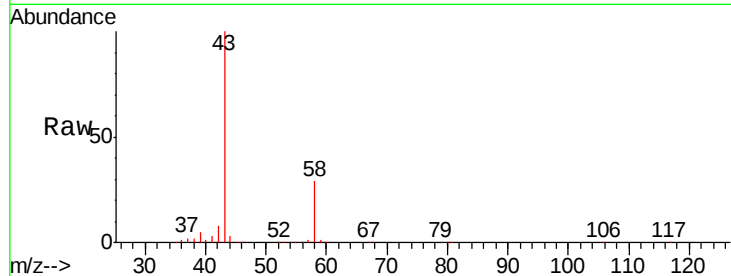
58 27.6 22.1 33.1

Manual Integrations

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Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

800000

600000

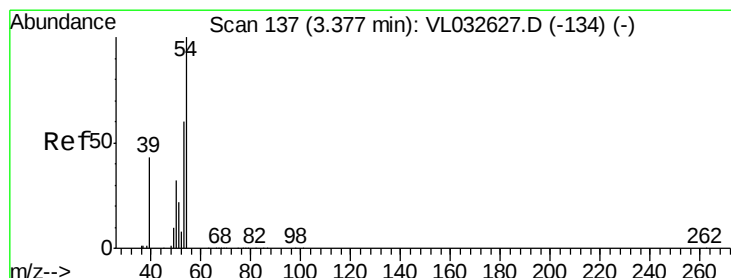
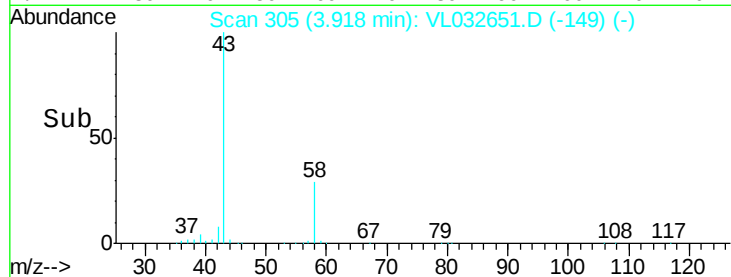
400000

200000

0

3.85 3.90 3.95 4.00

Time-->



#16

1,3-Butadiene

Concen: 11.00 ppbv

RT: 3.38 min Scan# 137

Delta R.T. 0.00 min

Lab File: VL032651.D

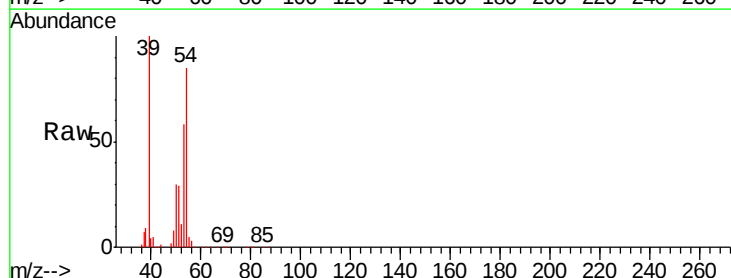
Acq: 17 Oct 2018 21:58

Tgt Ion: 39 Resp: 448808

Ion Ratio Lower Upper

39 100

54 96.7 90.4 135.6



Abundance Ion 39.10 (38.80 to 39.80): VL0

Ion 54.10 (53.80 to 54.80): VL0

400000

300000

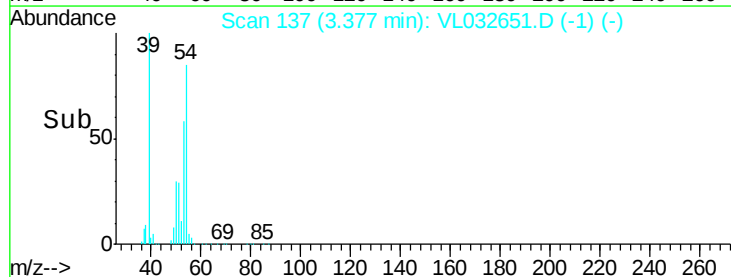
200000

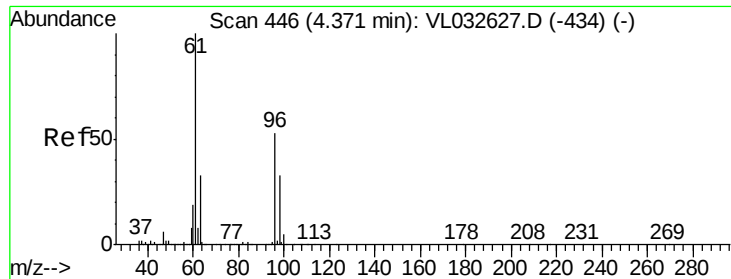
100000

0

3.35 3.40

Time-->





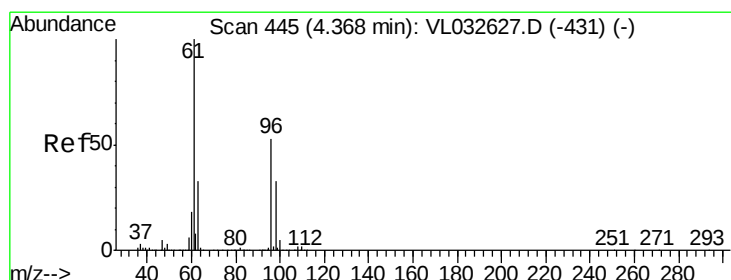
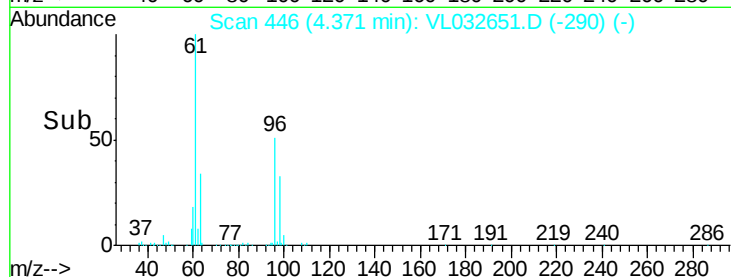
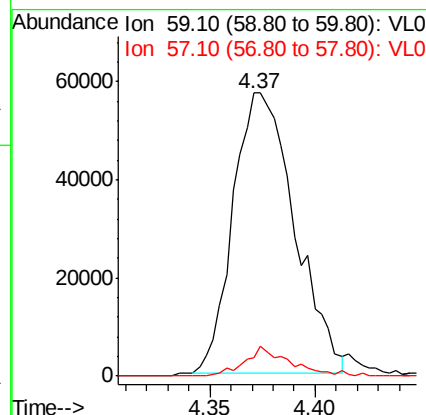
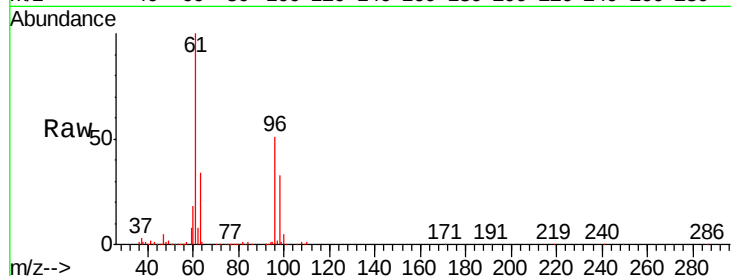
#17  
tert-Butyl alcohol  
Concen: 11.52 ppbv  
RT: 4.37 min Scan# 446  
Delta R.T. 0.00 min  
Lab File: VL032651.D  
Acq: 17 Oct 2018 21:58

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDCCC010EC

Tgt Ion: 59 Resp: 115810  
Ion Ratio Lower Upper  
59 100  
57 7.9 0.0 0.0#

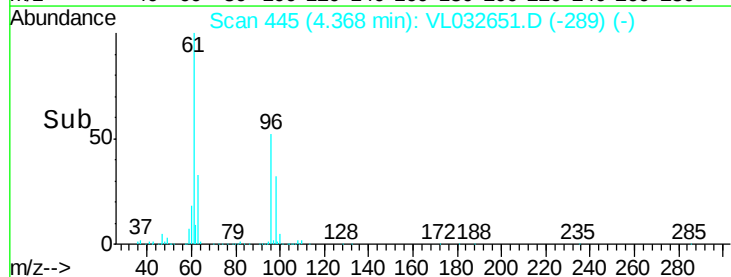
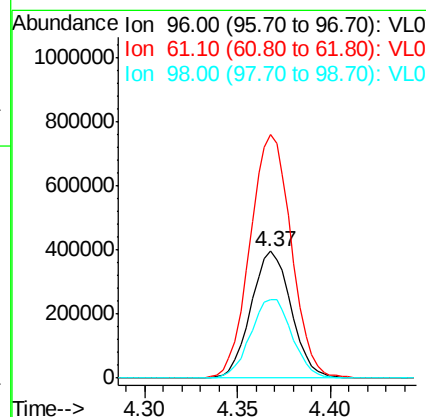
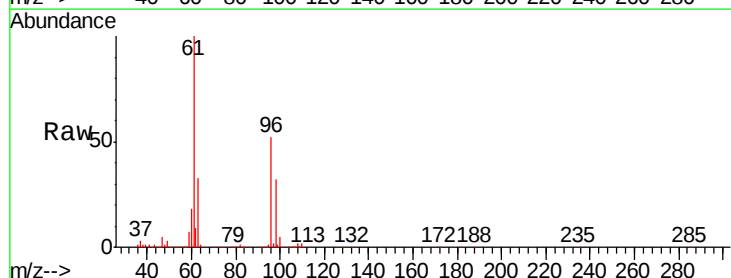
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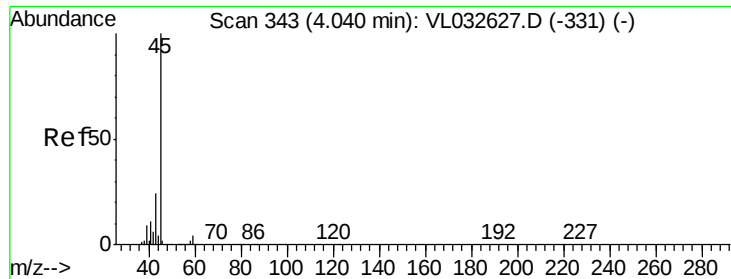
MMDadoda  
10/19/2018 4:36:43 PM



#18  
1,1-Dichloroethene  
Concen: 11.42 ppbv  
RT: 4.37 min Scan# 445  
Delta R.T. 0.00 min  
Lab File: VL032651.D  
Acq: 17 Oct 2018 21:58

Tgt Ion: 96 Resp: 599836  
Ion Ratio Lower Upper  
96 100  
61 191.8 151.6 227.4  
98 61.4 50.6 75.8





#19

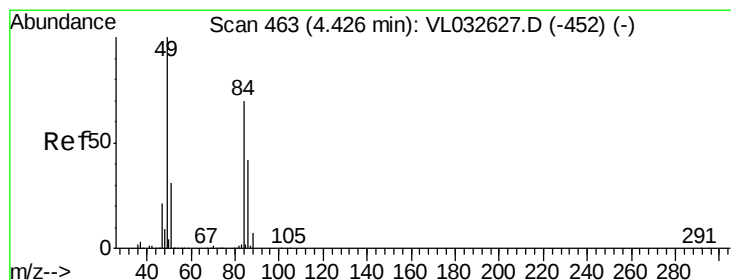
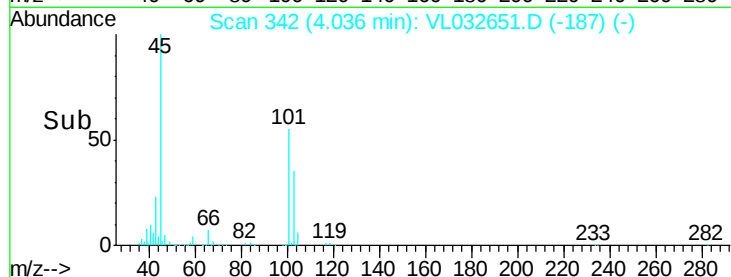
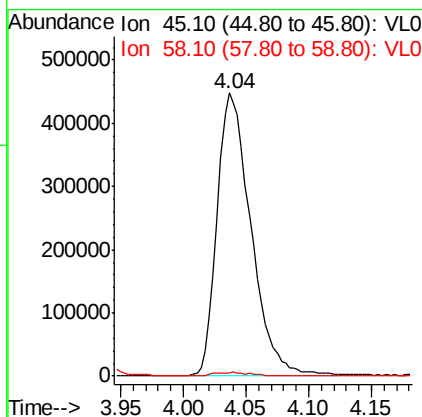
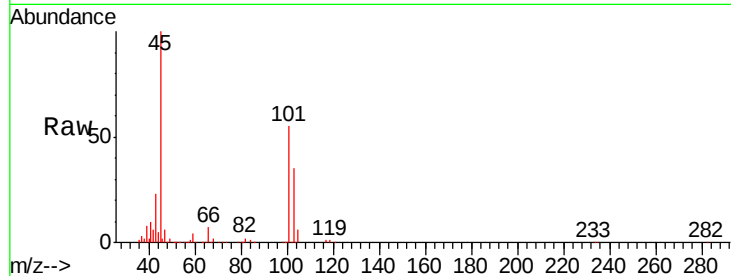
Isopropyl Alcohol  
 Concen: 10.76 ppbv  
 RT: 4.04 min Scan# 342  
 Delta R.T. -0.00 min  
 Lab File: VL032651.D  
 Acq: 17 Oct 2018 21:58

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDCCC010EC

Tgt Ion: 45 Resp: 837522  
 Ion Ratio Lower Upper  
 45 100  
 58 1.6 2.0 3.0#

Manual Integrations  
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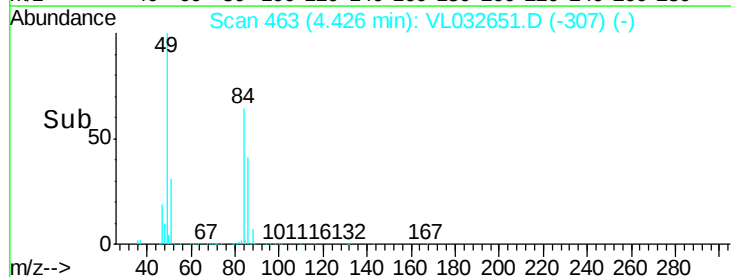
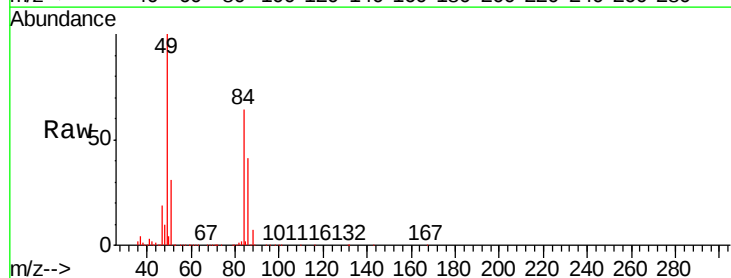
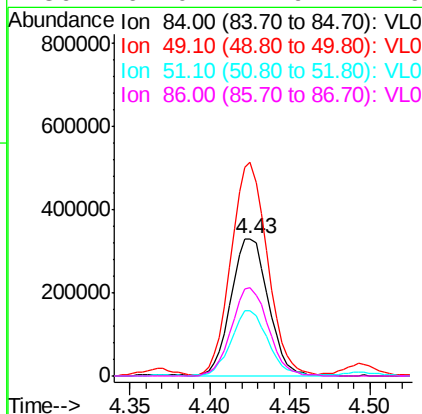
MMDadoda  
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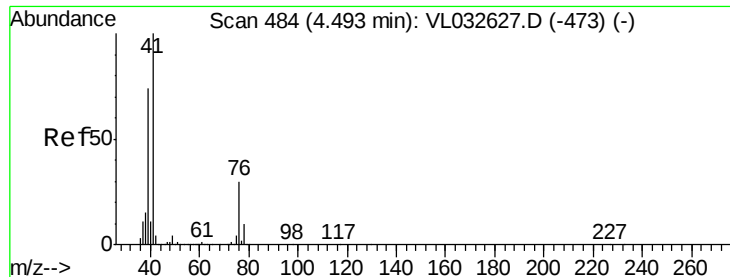


#20

Methylene Chloride  
 Concen: 10.58 ppbv  
 RT: 4.43 min Scan# 463  
 Delta R.T. 0.00 min  
 Lab File: VL032651.D  
 Acq: 17 Oct 2018 21:58

Tgt Ion: 84 Resp: 522215  
 Ion Ratio Lower Upper  
 84 100  
 49 154.3 113.5 170.3  
 51 47.0 34.8 52.2  
 86 64.0 47.9 71.9





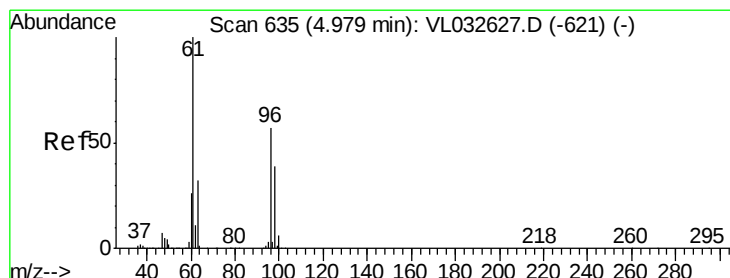
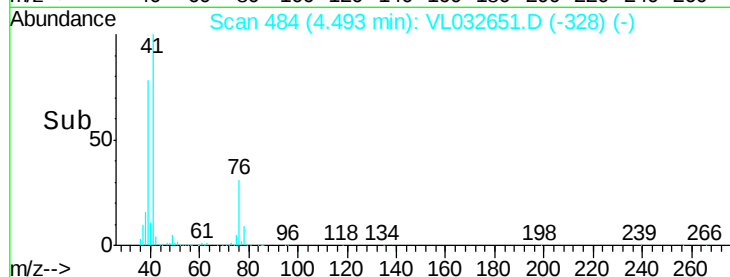
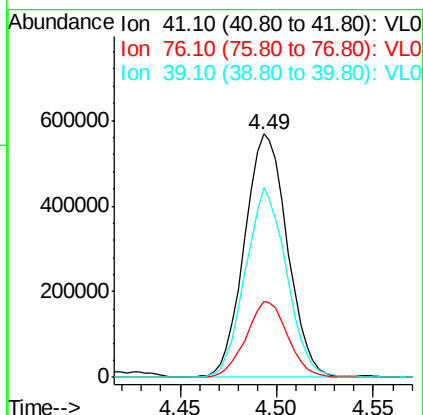
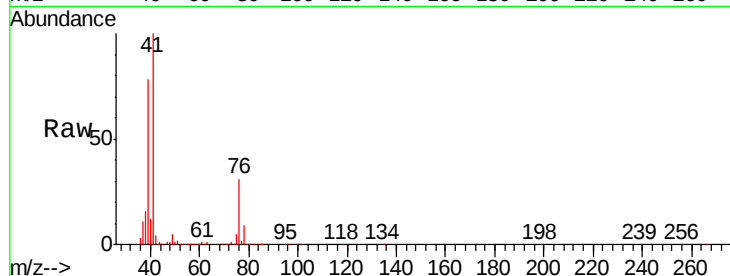
#21  
 Allyl Chloride  
 Concen: 10.53 ppbv  
 RT: 4.49 min Scan# 484  
 Delta R.T. 0.00 min  
 Lab File: VL032651.D  
 Acq: 17 Oct 2018 21:58

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDCCC010EC

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 41      | 100   |       |       |
| 76      | 30.6  | 24.3  | 36.5  |
| 39      | 76.0  | 60.3  | 90.5  |

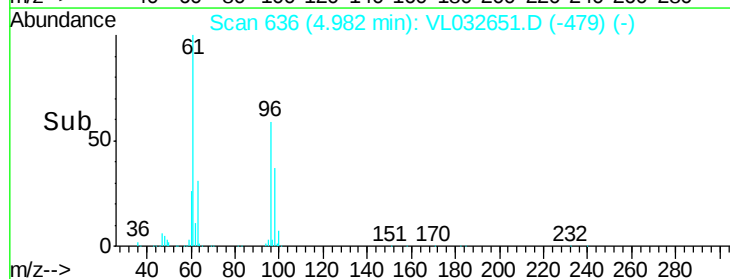
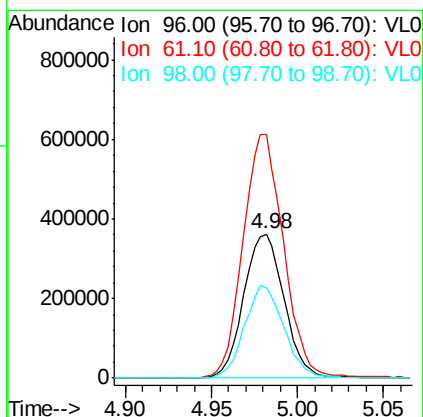
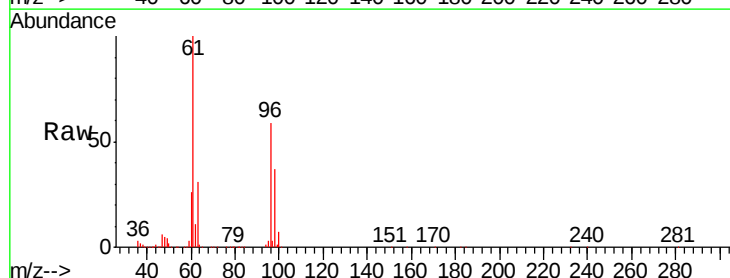
Manual Integrations  
 APPROVED

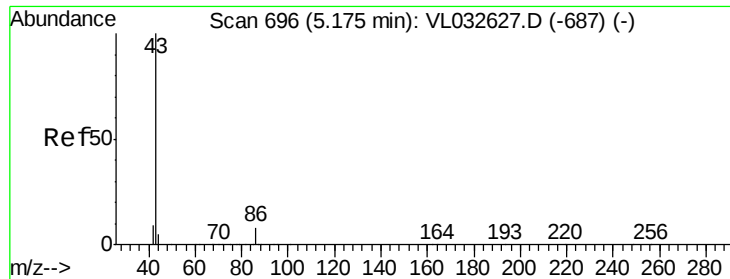
MMDadoda  
 10/19/2018 4:36:43 PM



#22  
 trans-1,2-Dichloroethene  
 Concen: 9.71 ppbv  
 RT: 4.98 min Scan# 636  
 Delta R.T. 0.00 min  
 Lab File: VL032651.D  
 Acq: 17 Oct 2018 21:58

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 96      | 100   |       |       |
| 61      | 168.5 | 140.4 | 210.6 |
| 98      | 62.3  | 55.0  | 82.6  |





#23

Vinyl Acetate

Concen: 11.59 ppbv

RT: 5.17 min Scan# 695

Delta R.T. -0.00 min

Lab File: VL032651.D

Acq: 17 Oct 2018 21:58

Instrument :

MSVOA\_L

ClientSampleId :

VSTDCCC010EC

Tgt Ion: 43 Resp: 2032510

Ion Ratio Lower Upper

43 100

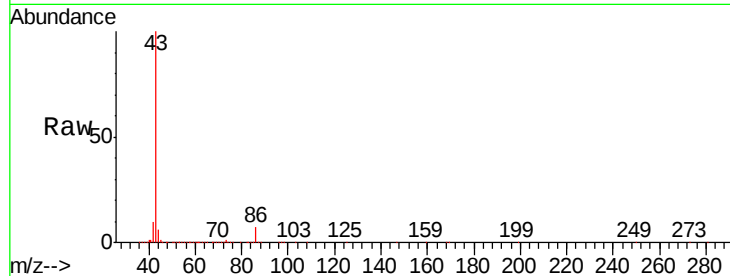
86 7.4 6.1 9.1

42 9.8 7.4 11.2

44 5.4 4.2 6.2

Manual Integrations  
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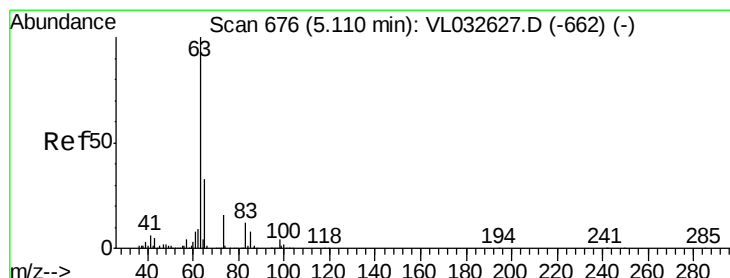
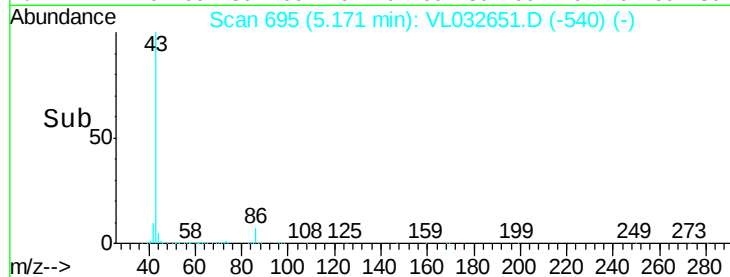
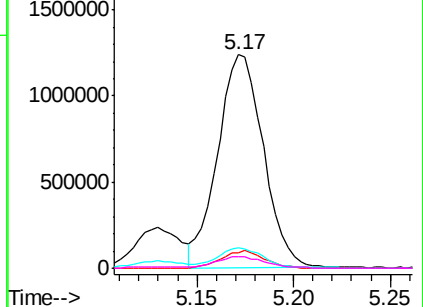


Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 86.10 (85.80 to 86.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

Ion 44.10 (43.80 to 44.80): VL0



#24

1,1-Dichloroethane

Concen: 9.95 ppbv

RT: 5.11 min Scan# 675

Delta R.T. -0.00 min

Lab File: VL032651.D

Acq: 17 Oct 2018 21:58

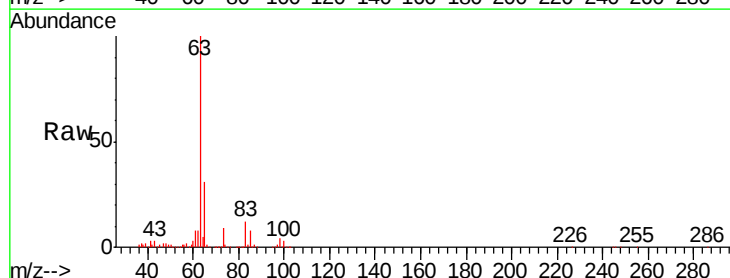
Tgt Ion: 63 Resp: 1617766

Ion Ratio Lower Upper

63 100

98 4.1 2.1 6.3

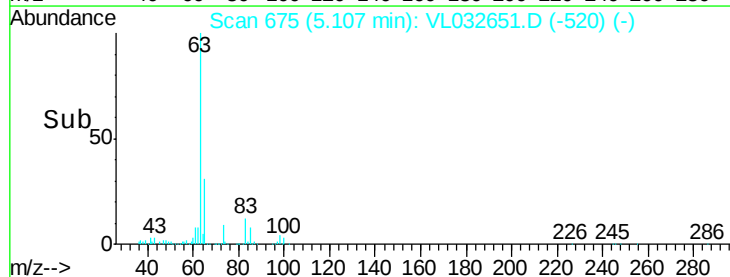
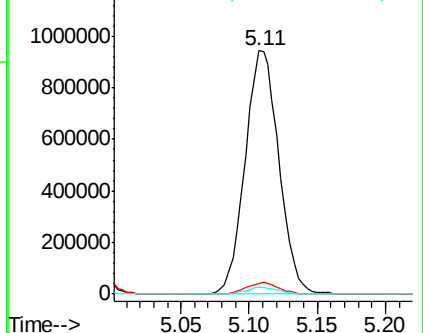
100 2.6 1.2 3.6

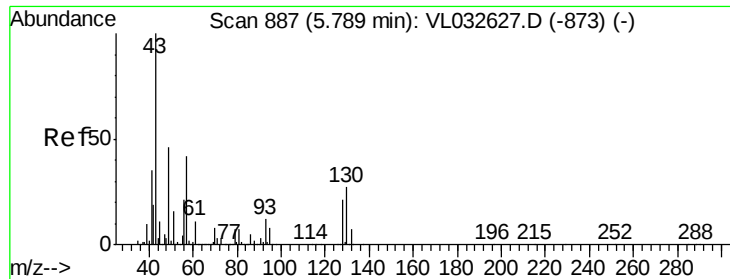


Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 98.00 (97.70 to 98.70): VL0

Ion 100.00 (99.70 to 100.70): VL0





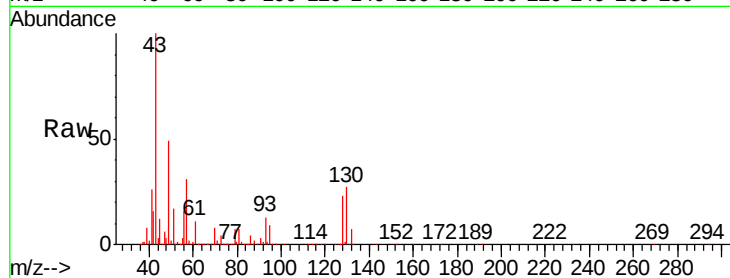
#25  
Ethyl Acetate  
Concen: 10.47 ppbv  
RT: 5.79 min Scan# 886  
Delta R.T. -0.00 min  
Lab File: VL032651.D  
Acq: 17 Oct 2018 21:58

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDCCC010EC

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 43      | 100   |       |       |
| 45      | 10.2  | 8.0   | 12.0  |
| 61      | 10.1  | 8.0   | 12.0  |
| 70      | 7.3   | 5.9   | 8.9   |

Manual Integrations  
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10/19/2018 4:36:43 PM



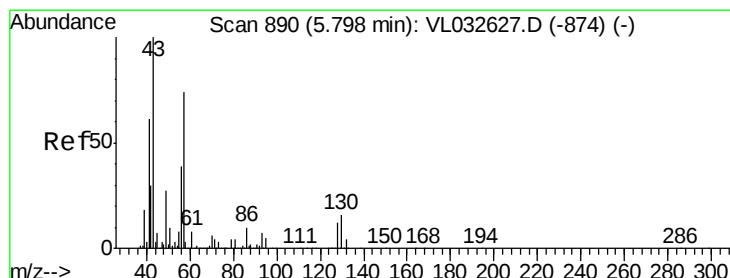
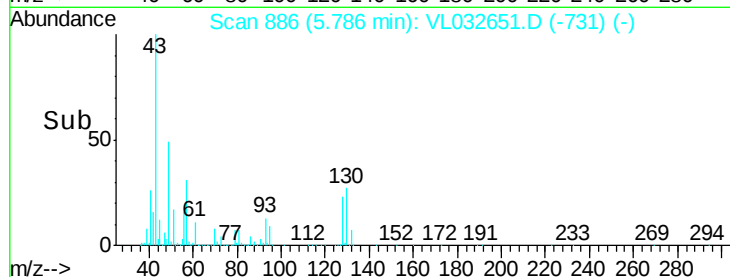
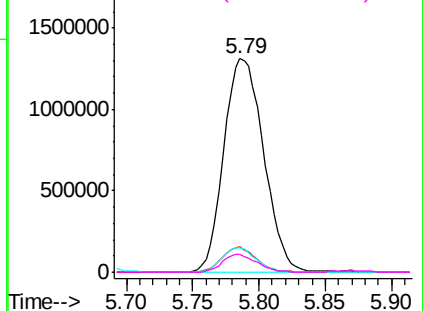
Abundance

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: 10.81 ppbv  
RT: 5.80 min Scan# 890  
Delta R.T. -0.00 min  
Lab File: VL032651.D  
Acq: 17 Oct 2018 21:58

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 57      | 100   |       |       |
| 41      | 84.4  | 67.4  | 101.0 |
| 43      | 216.9 | 171.9 | 257.9 |
| 56      | 53.5  | 42.6  | 63.8  |

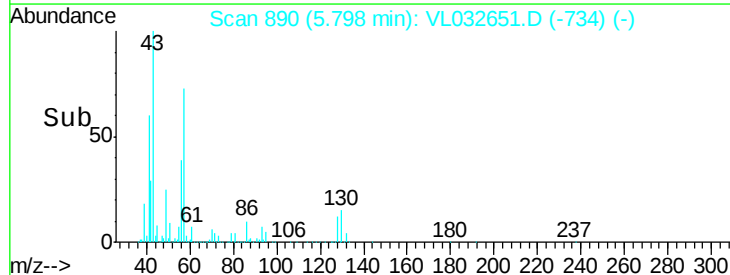
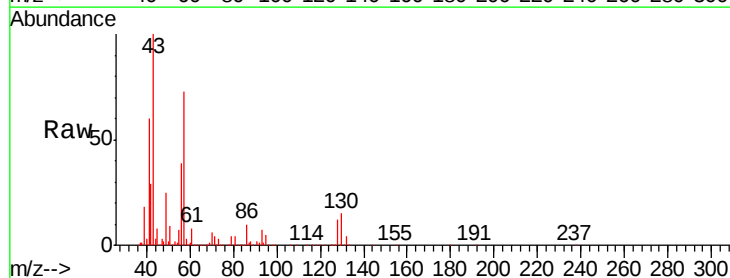
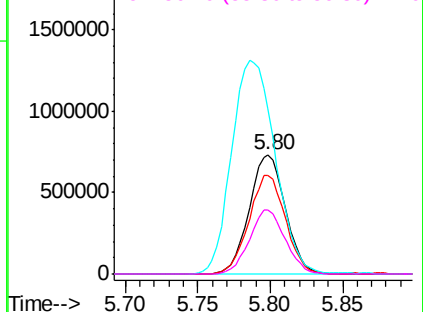
Abundance

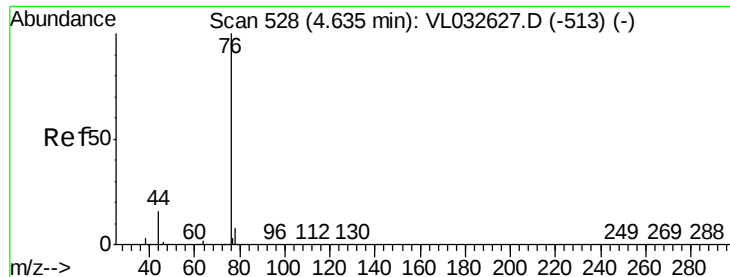
Ion 57.10 (56.80 to 57.80): VL0

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: 10.05 ppbv

RT: 4.64 min Scan# 529

Delta R.T. 0.00 min

Lab File: VL032651.D

Acq: 17 Oct 2018 21:58

Instrument :

MSVOA\_L

ClientSampleId :

VSTDCCC010EC

Tgt Ion: 76 Resp: 1425837

Ion Ratio Lower Upper

76 100

44 17.8 13.7 20.5

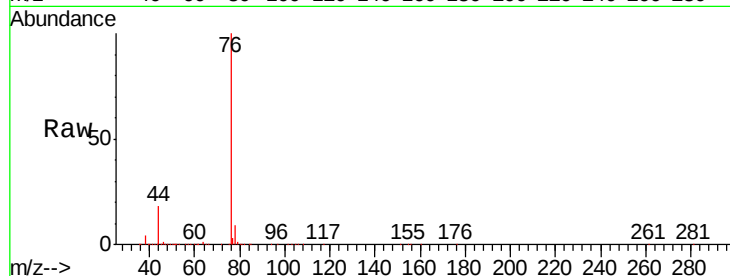
78 9.4 7.4 11.2

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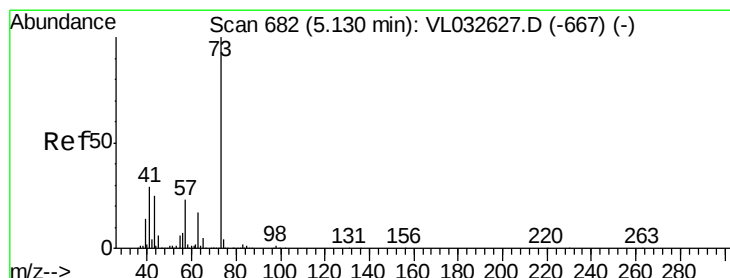
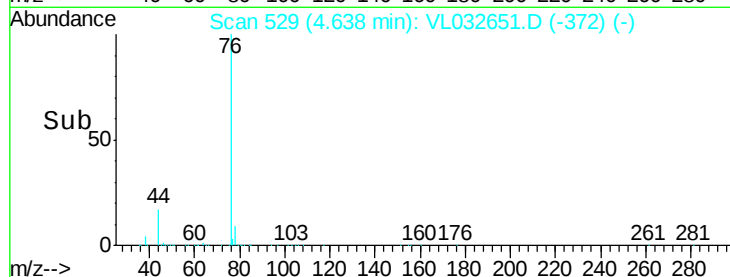
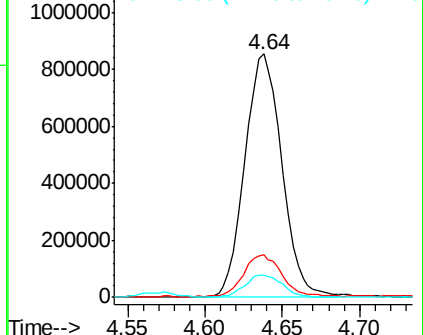
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Abundance Ion 76.00 (75.70 to 76.70): VL0

Ion 44.10 (43.80 to 44.80): VL0

Ion 78.00 (77.70 to 78.70): VL0



#28

Methyl tert-Butyl Ether

Concen: 11.36 ppbv

RT: 5.13 min Scan# 682

Delta R.T. -0.00 min

Lab File: VL032651.D

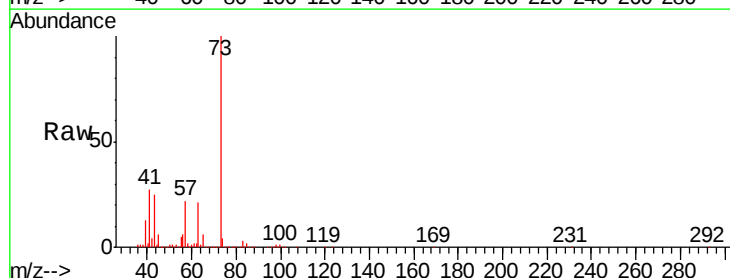
Acq: 17 Oct 2018 21:58

Tgt Ion: 73 Resp: 1676153

Ion Ratio Lower Upper

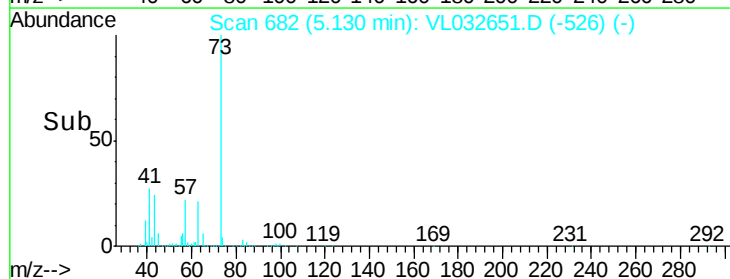
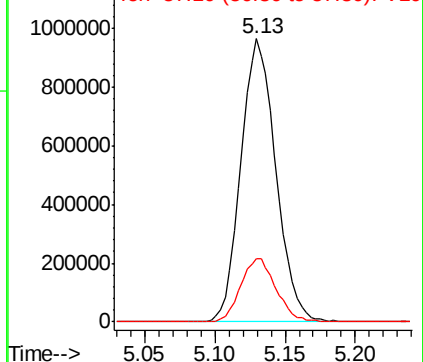
73 100

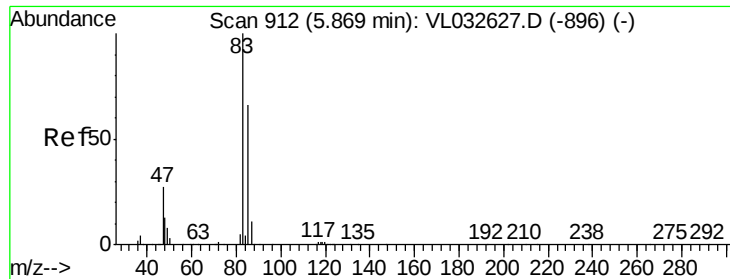
57 22.7 18.0 27.0



Abundance Ion 73.10 (72.80 to 73.80): VL0

Ion 57.10 (56.80 to 57.80): VL0





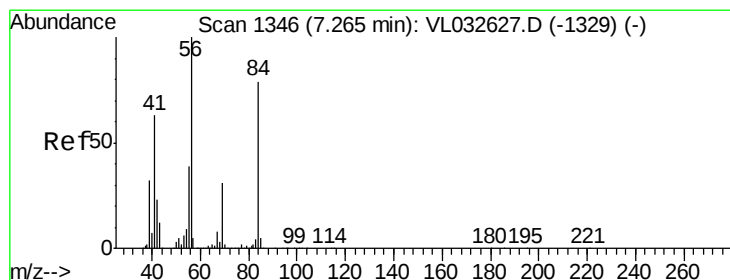
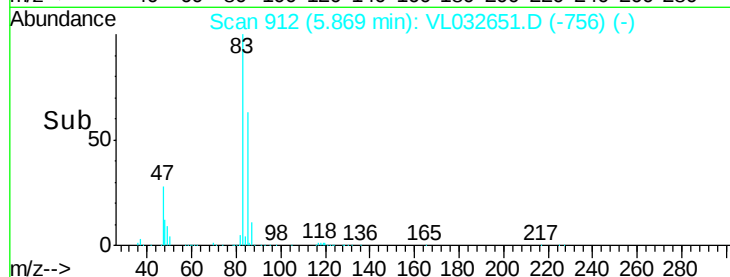
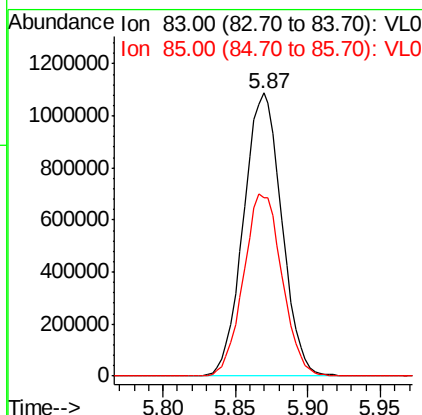
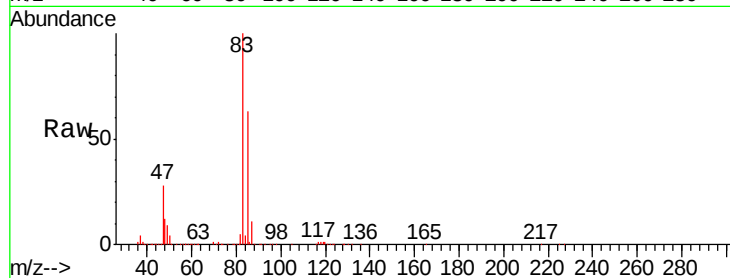
#29  
Chloroform  
Concen: 9.69 ppbv  
RT: 5.87 min Scan# 912  
Delta R.T. 0.00 min  
Lab File: VL032651.D  
Acq: 17 Oct 2018 21:58

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDCCC010EC

Tgt Ion: 83 Resp: 1994019  
Ion Ratio Lower Upper  
83 100  
85 62.9 53.0 79.6

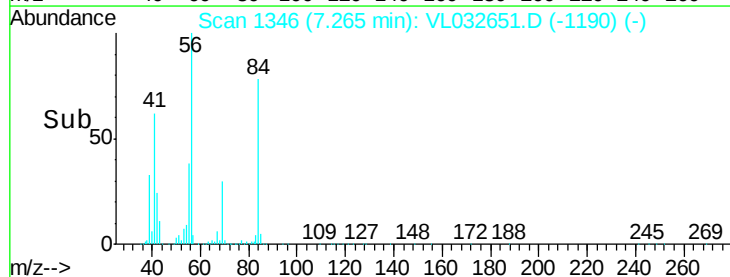
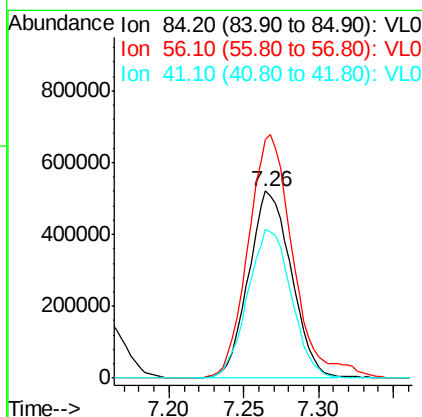
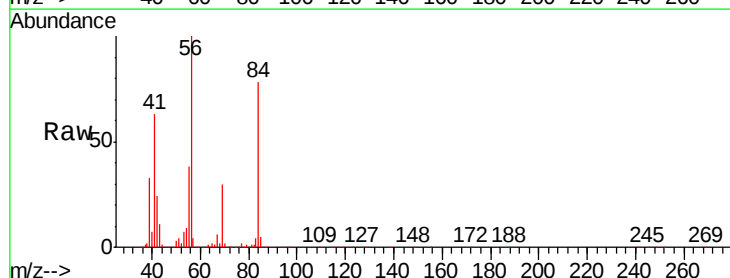
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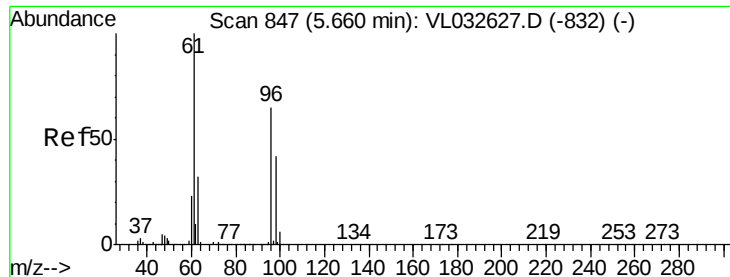
MMDadoda  
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#30  
Cyclohexane  
Concen: 11.17 ppbv  
RT: 7.26 min Scan# 1346  
Delta R.T. 0.00 min  
Lab File: VL032651.D  
Acq: 17 Oct 2018 21:58

Tgt Ion: 84 Resp: 1034767  
Ion Ratio Lower Upper  
84 100  
56 136.9 108.3 162.5  
41 81.3 64.8 97.2





#31

cis-1,2-Dichloroethene

Concen: 10.67 ppbv

RT: 5.66 min Scan# 847

Delta R.T. 0.00 min

Lab File: VL032651.D

Acq: 17 Oct 2018 21:58

Instrument :

MSVOA\_L

ClientSampleId :

VSTDCCC010EC

Tgt Ion: 61 Resp: 1204357  
Ion Ratio Lower Upper

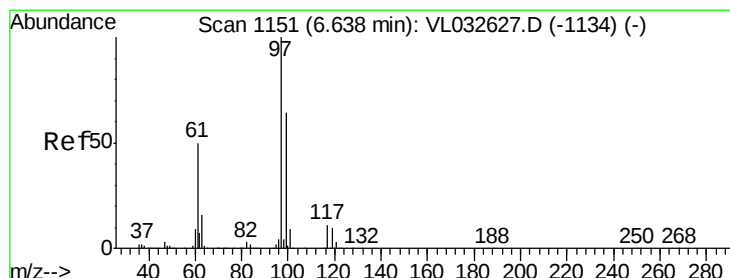
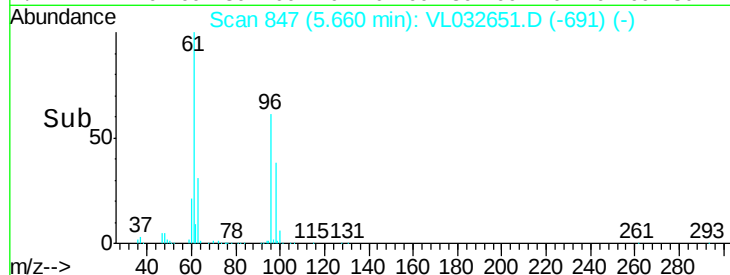
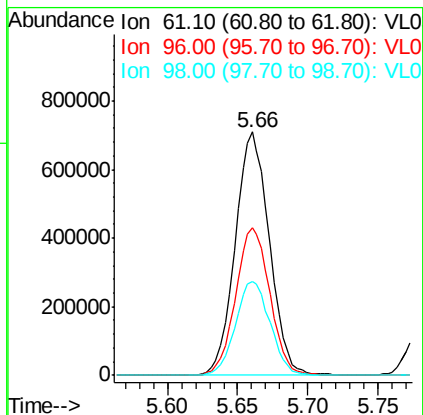
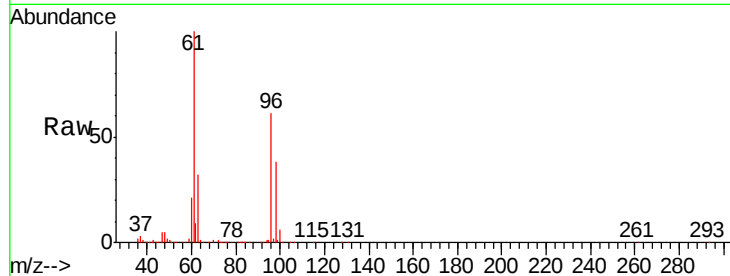
61 100

96 60.5 51.8 77.6

98 38.4 33.8 50.6

Manual Integrations  
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#32

1,1,1-Trichloroethane

Concen: 9.55 ppbv

RT: 6.64 min Scan# 1151

Delta R.T. 0.00 min

Lab File: VL032651.D

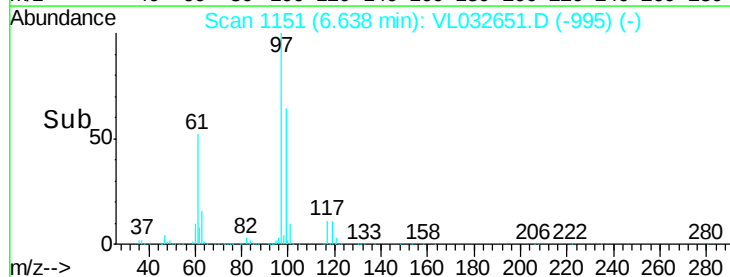
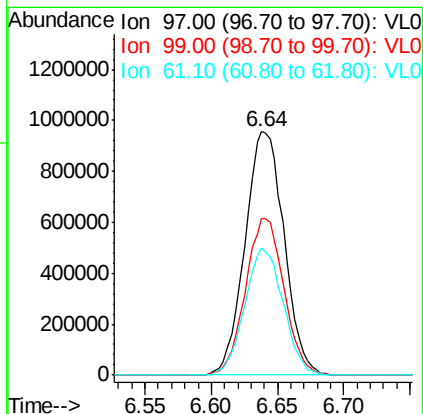
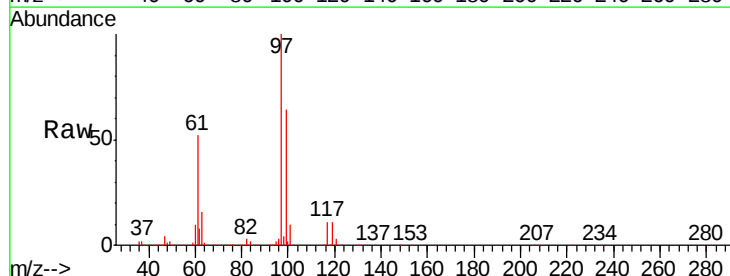
Acq: 17 Oct 2018 21:58

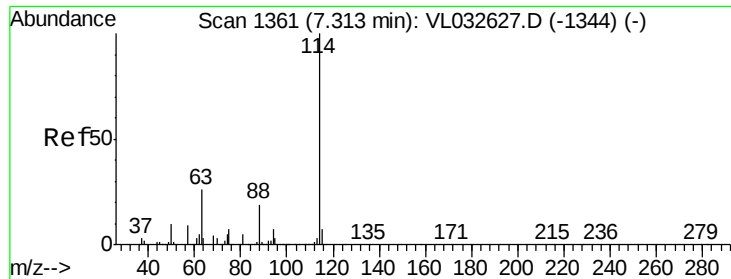
Tgt Ion: 97 Resp: 1962021  
Ion Ratio Lower Upper

97 100

99 63.5 52.0 78.0

61 51.6 40.7 61.1





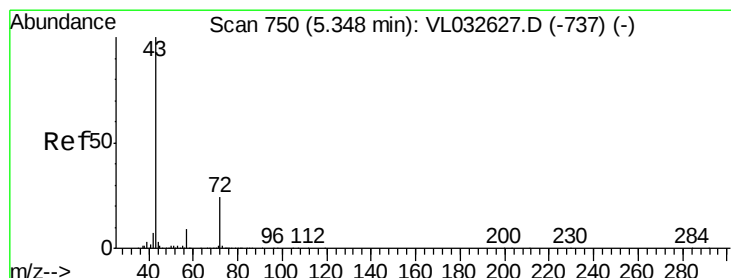
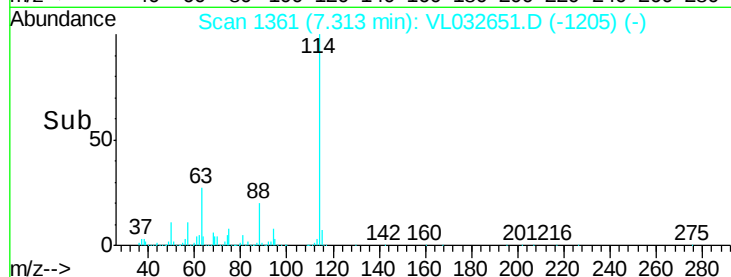
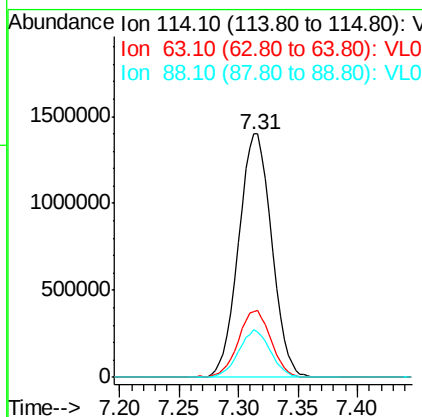
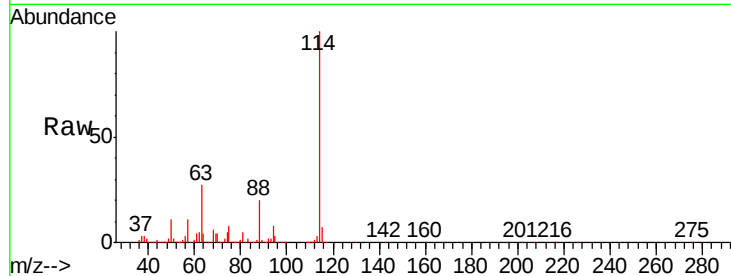
#33  
 1,4-Difluorobenzene  
 Concen: 10.00 ppbv  
 RT: 7.31 min Scan# 1361  
 Delta R.T. 0.00 min  
 Lab File: VL032651.D  
 Acq: 17 Oct 2018 21:58

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDCCC010EC

Tgt Ion: 114 Resp: 2699777  
 Ion Ratio Lower Upper  
 114 100  
 63 27.4 21.7 32.5  
 88 18.6 14.9 22.3

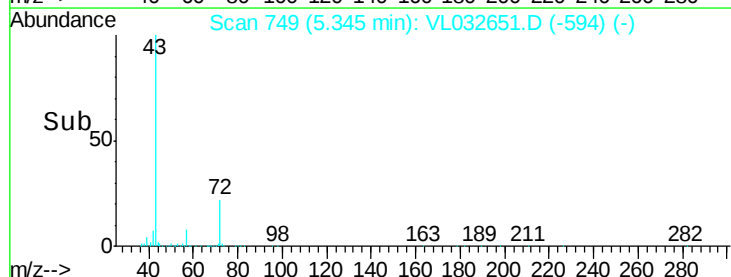
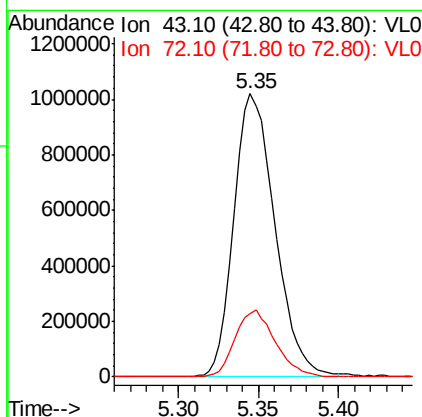
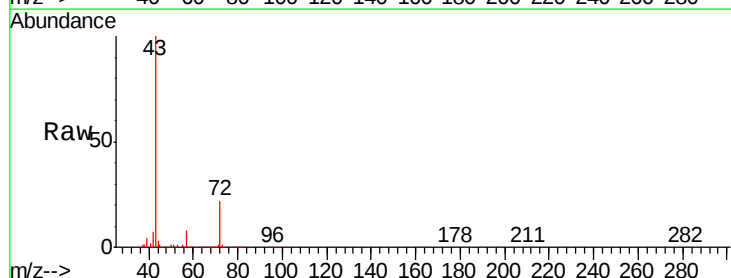
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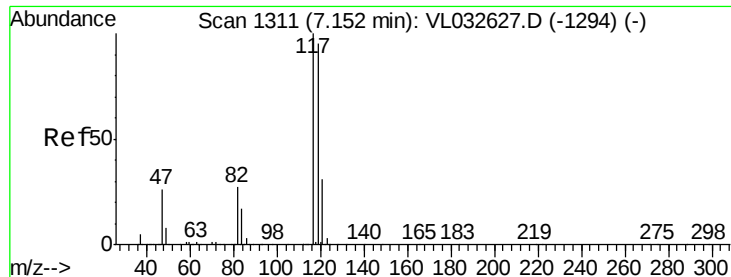
MMDadoda  
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#34  
 2-Butanone  
 Concen: 11.86 ppbv  
 RT: 5.35 min Scan# 749  
 Delta R.T. -0.00 min  
 Lab File: VL032651.D  
 Acq: 17 Oct 2018 21:58

Tgt Ion: 43 Resp: 1777794  
 Ion Ratio Lower Upper  
 43 100  
 72 23.2 18.6 27.8





#35

Carbon Tetrachloride

Concen: 9.59 ppbv

RT: 7.16 min Scan# 1312

Delta R.T. 0.00 min

Lab File: VL032651.D

Acq: 17 Oct 2018 21:58

Instrument :

MSVOA\_L

ClientSampleId :

VSTDCCC010EC

Tgt Ion: 117 Resp: 2007513

Ion Ratio Lower Upper

117 100

119 96.9 75.7 113.5

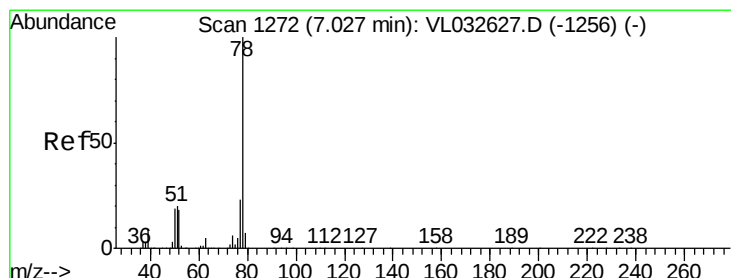
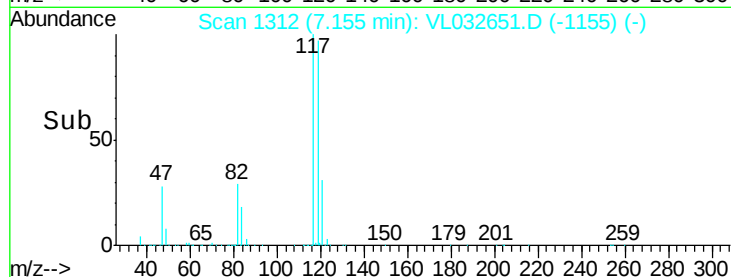
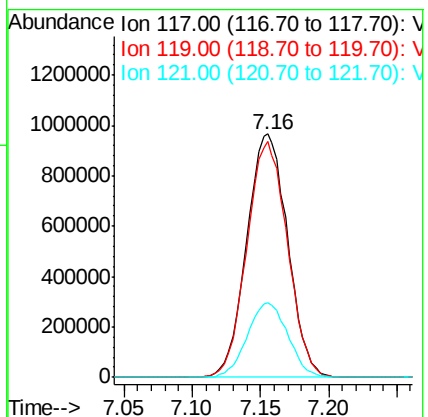
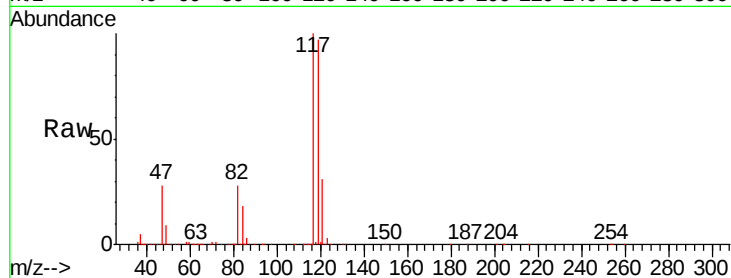
121 30.5 24.7 37.1

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#36

Benzene

Concen: 11.61 ppbv

RT: 7.03 min Scan# 1272

Delta R.T. 0.00 min

Lab File: VL032651.D

Acq: 17 Oct 2018 21:58

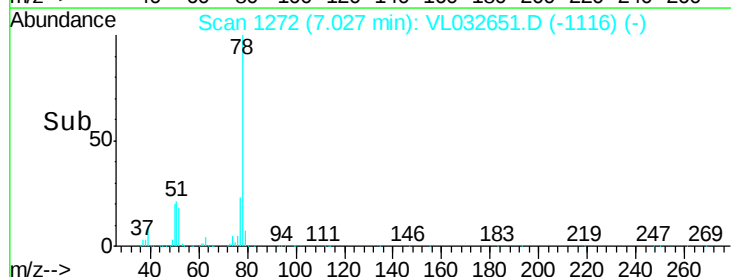
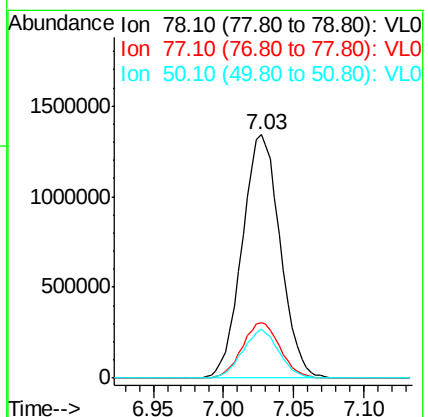
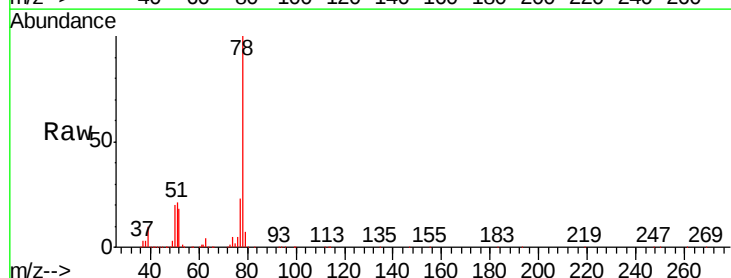
Tgt Ion: 78 Resp: 2540222

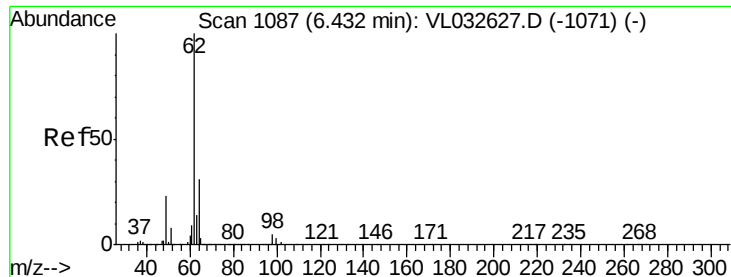
Ion Ratio Lower Upper

78 100

77 22.7 18.1 27.1

50 19.9 15.1 22.7





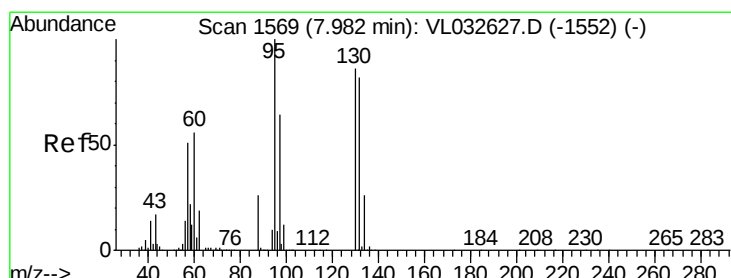
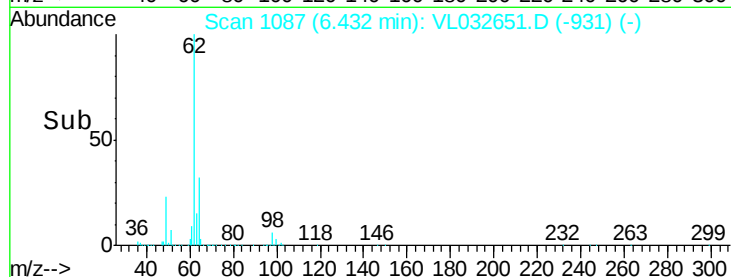
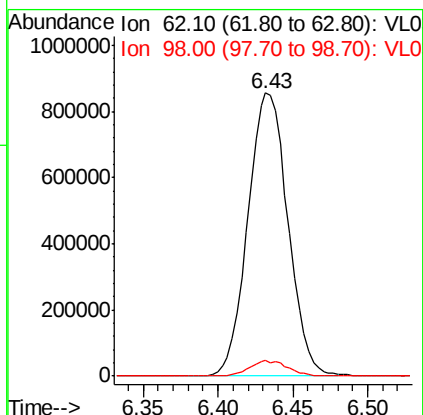
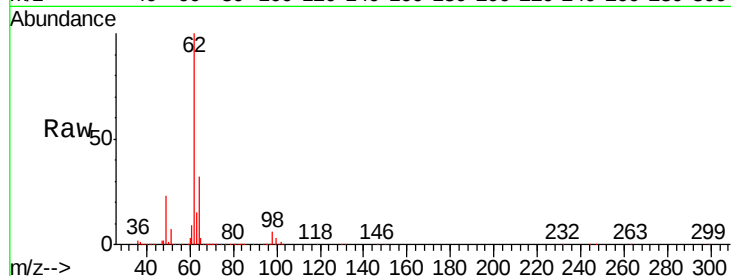
#37  
 1,2-Dichloroethane  
 Concen: 10.62 ppbv  
 RT: 6.43 min Scan# 1087  
 Delta R.T. 0.00 min  
 Lab File: VL032651.D  
 Acq: 17 Oct 2018 21:58

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDCCC010EC

Tgt Ion: 62 Resp: 1593585  
 Ion Ratio Lower Upper  
 62 100  
 98 5.4 4.4 6.6

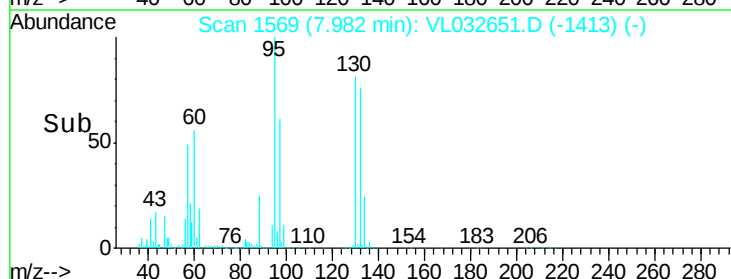
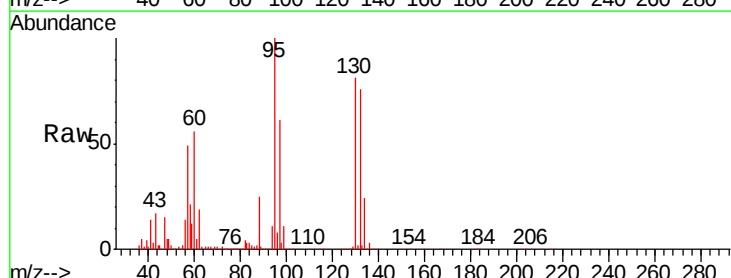
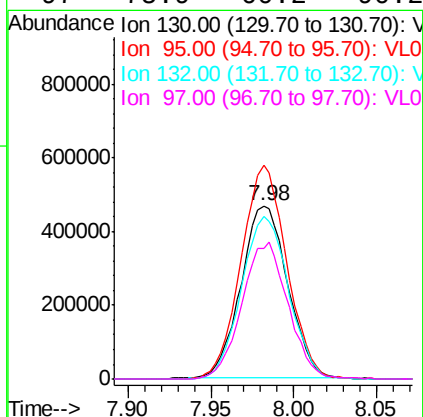
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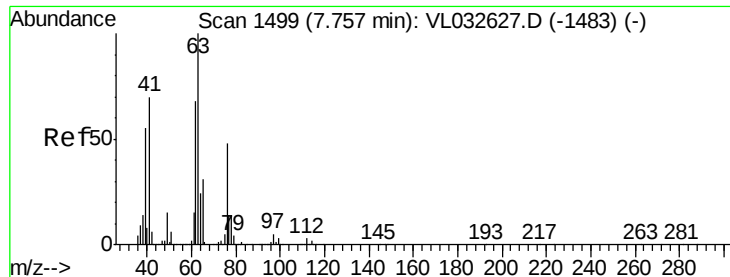
MMDadoda  
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#38  
 Trichloroethene  
 Concen: 11.13 ppbv  
 RT: 7.98 min Scan# 1569  
 Delta R.T. 0.00 min  
 Lab File: VL032651.D  
 Acq: 17 Oct 2018 21:58

Tgt Ion: 130 Resp: 915539  
 Ion Ratio Lower Upper  
 130 100  
 95 123.9 93.4 140.0  
 132 94.0 76.5 114.7  
 97 75.9 60.2 90.2





#39

1,2-Dichloropropane

Concen: 11.44 ppbv

RT: 7.76 min Scan# 1499

Delta R.T. 0.00 min

Lab File: VL032651.D

Acq: 17 Oct 2018 21:58

Instrument :

MSVOA\_L

ClientSampleId :

VSTDCCC010EC

Tgt Ion: 63 Resp: 1018645

Ion Ratio Lower Upper

63 100

41 72.0 56.2 84.4

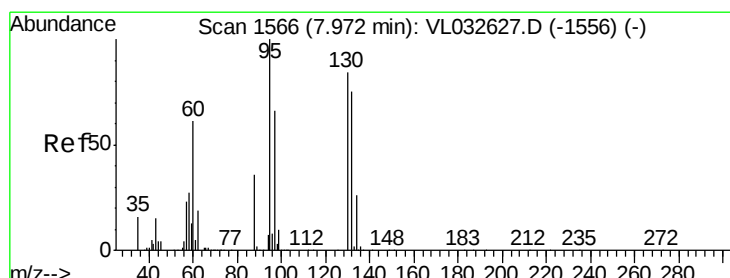
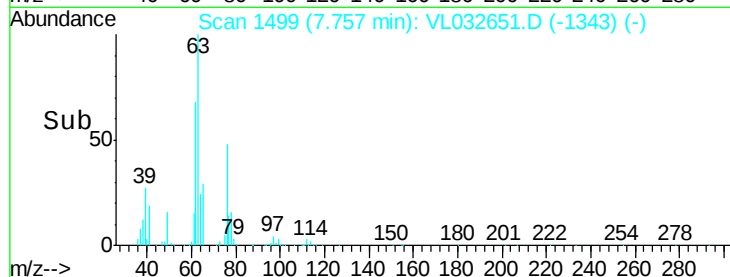
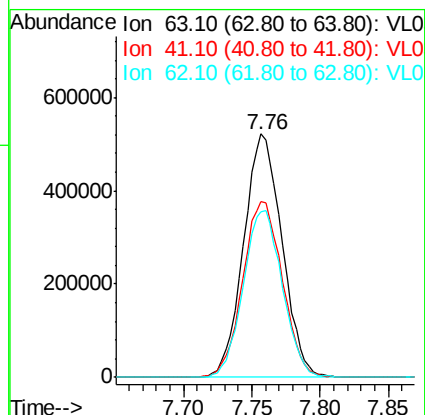
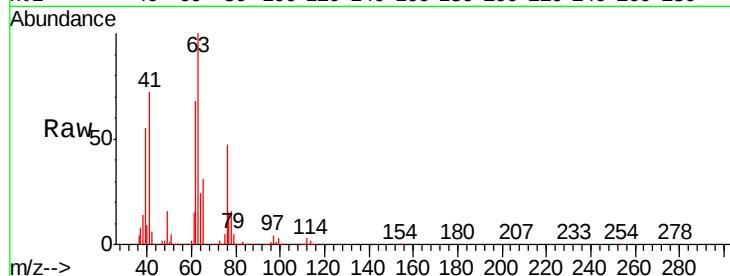
62 67.8 54.4 81.6

Manual Integrations

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#40

1,4-Dioxane

Concen: 12.36 ppbv

RT: 7.98 min Scan# 1567

Delta R.T. 0.00 min

Lab File: VL032651.D

Acq: 17 Oct 2018 21:58

Tgt Ion: 88 Resp: 380086

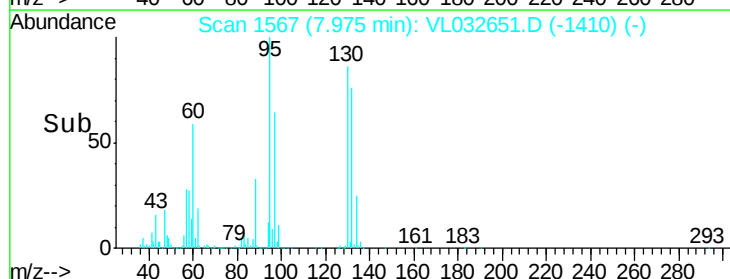
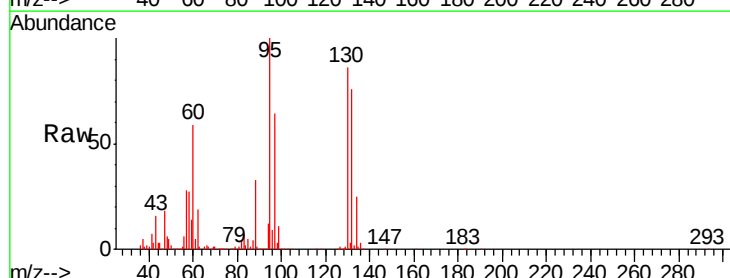
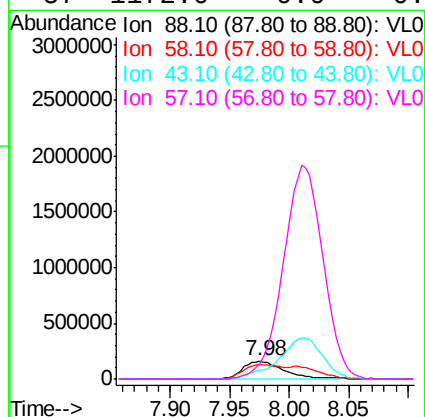
Ion Ratio Lower Upper

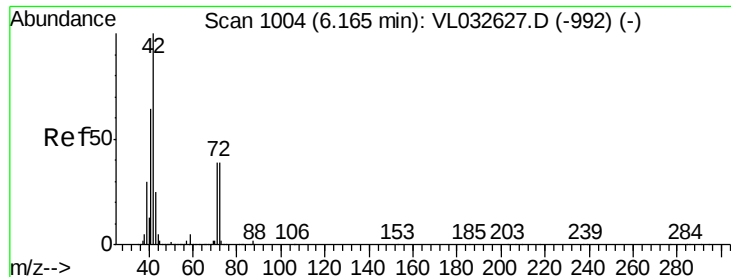
88 100

58 131.2 104.0 156.0

43 251.0 0.0 0.0#

57 1172.0 0.0 0.0#





#41

Tetrahydrofuran

Concen: 12.58 ppbv

RT: 6.17 min Scan# 1005

Delta R.T. 0.00 min

Lab File: VL032651.D

Acq: 17 Oct 2018 21:58

Instrument :

MSVOA\_L

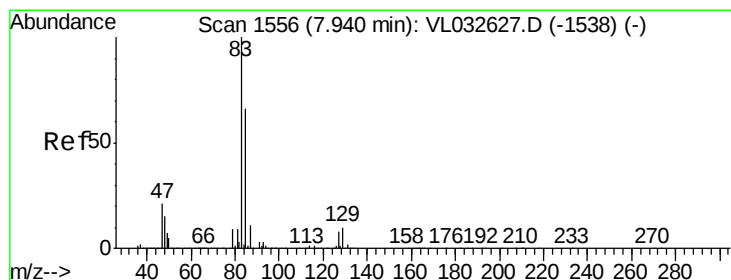
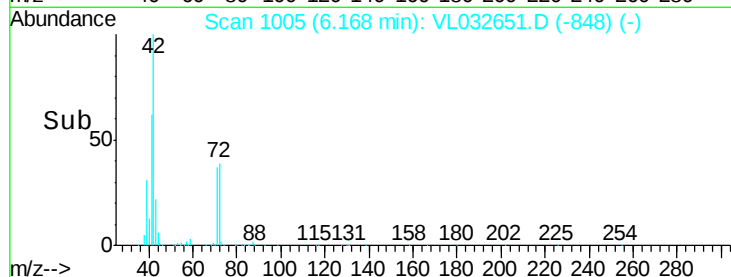
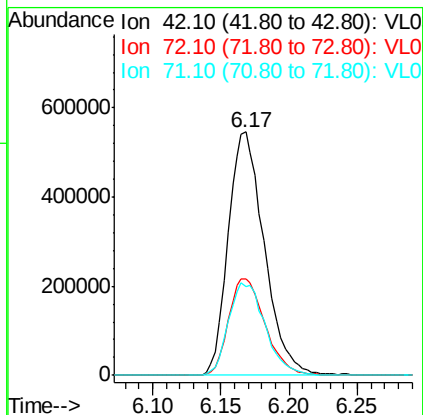
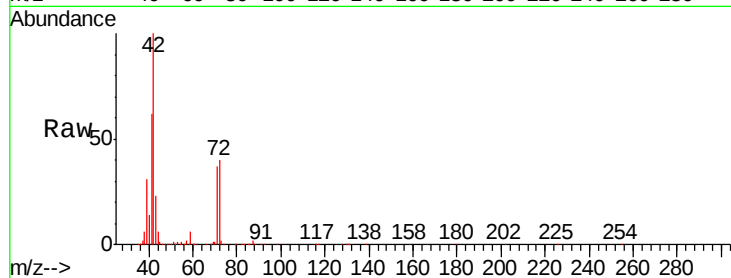
ClientSampleId :

VSTDCCC010EC

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 42      | 100   |       |       |
| 72      | 40.7  | 32.4  | 48.6  |
| 71      | 39.1  | 31.3  | 46.9  |

Manual Integrations  
APPROVED

MMDadoda  
10/19/2018 4:36:43 PM



#42

Bromodichloromethane

Concen: 10.61 ppbv

RT: 7.94 min Scan# 1556

Delta R.T. 0.00 min

Lab File: VL032651.D

Acq: 17 Oct 2018 21:58

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 83      | 100   |       |       |
| 85      | 66.7  | 52.4  | 78.6  |
| 127     | 8.0   | 6.1   | 9.1   |

