

Data Path : W:\HPCHEM1\MSVOA L\DATA\VL121317\  
 Data File : VL031221.D  
 Acq On : 14 Dec 2017 5:31  
 Operator : SY/AP  
 Sample : VL1213ABS01  
 Misc : 400ml/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleID :  
 VL1213ABS01

Manual Integrations  
 APPROVED

MMDadoda  
 12/15/2017 4:07:02 PM

Quant Time: Dec 14 12:08:19 2017  
 Quant Method : W:\HPCHEM1\MSVOA L\METHODS\VL121317AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Thu Dec 14 2017  
 QLast Update : Thu Dec 14 04:29:58 2017  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.91  | 49   | 1642243  | 10.00 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 7.45  | 114  | 4145947  | 10.00 | ppbv  | 0.00     |
| 55) Chlorobenzene-d5    | 12.42 | 117  | 4455737m | 10.00 | ppbv  | 0.00     |

System Monitoring Compounds

|                             |        |       |          |          |      |         |
|-----------------------------|--------|-------|----------|----------|------|---------|
| 68) 1-Bromo-4-Fluorobenzene | 14.75  | 95    | 3195229  | 10.08    | ppbv | 0.00    |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 100.80% |

| Target Compounds               | R.T. | QIon | Response | Conc | Units  | Ovalue |
|--------------------------------|------|------|----------|------|--------|--------|
| 2) Dichlorodifluoromethane     | 3.18 | 85   | 1371657  | 9.89 | ppbv   | 100    |
| 3) Chlorodifluoromethane       | 3.12 | 51   | 1509571  | 8.08 | ppbv   | 100    |
| 4) Chloromethane               | 3.28 | 50   | 953198   | 9.45 | ppbv   | 99     |
| 5) Vinyl Chloride              | 3.40 | 62   | 900677   | 8.63 | ppbv   | 99     |
| 6) Bromomethane                | 3.63 | 94   | 559089   | 9.04 | ppbv   | 97     |
| 7) Chloroethane                | 3.72 | 64   | 356759   | 9.23 | ppbv   | 100    |
| 8) Dichlorotetrafluoroethane   | 3.33 | 85   | 1919876  | 9.97 | ppbv   | 98     |
| 9) Propene                     | 3.14 | 41   | 834225   | 9.10 | ppbv   | 99     |
| 10) Heptane                    | 8.41 | 43   | 2381763  | 8.54 | ppbv   | 100    |
| 11) Trichlorofluoromethane     | 4.13 | 101  | 2107680  | 9.24 | ppbv   | 100    |
| 12) 1,1,2-Trichlorotrifluoroet | 4.69 | 101  | 1402487  | 8.78 | ppbv   | 98     |
| 13) Ethanol                    | 3.77 | 45   | 186861   | 7.07 | ppbv   | 98     |
| 14) Bromoethene                | 3.91 | 108  | 651171   | 9.48 | ppbv   | 99     |
| 15) Acetone                    | 4.02 | 43   | 1847235  | 8.52 | ppbv   | 98     |
| 16) 1,3-Butadiene              | 3.47 | 39   | 822754   | 8.82 | ppbv   | 97     |
| 17) tert-Butyl alcohol         | 4.49 | 59   | 875421   | 7.20 | ppbv   | 99     |
| 18) 1,1-Dichloroethene         | 4.48 | 96   | 681929   | 9.53 | ppbv   | 92     |
| 19) Isopropyl Alcohol          | 4.15 | 45   | 1146207  | 8.36 | ppbv # | 85     |
| 20) Methylene Chloride         | 4.54 | 84   | 630601   | 8.79 | ppbv   | 95     |
| 21) Allyl Chloride             | 4.61 | 41   | 1149226  | 9.01 | ppbv   | 99     |
| 22) trans-1,2-Dichloroethene   | 5.11 | 96   | 760083   | 8.64 | ppbv   | 97     |
| 23) Vinyl Acetate              | 5.30 | 43   | 2705503  | 7.75 | ppbv   | 99     |
| 24) 1,1-Dichloroethane         | 5.23 | 63   | 2144831  | 8.46 | ppbv   | 99     |
| 25) Ethyl Acetate              | 5.92 | 43   | 3572332  | 8.07 | ppbv   | 99     |
| 26) Hexane                     | 5.93 | 57   | 1705307  | 8.12 | ppbv   | 97     |
| 27) Carbon Disulfide           | 4.76 | 76   | 1811365  | 8.61 | ppbv   | 98     |
| 28) Methyl tert-Butyl Ether    | 5.25 | 73   | 2221932  | 8.09 | ppbv   | 99     |
| 29) Chloroform                 | 6.00 | 83   | 2453002  | 8.65 | ppbv   | 100    |
| 30) Cyclohexane                | 7.41 | 84   | 1463431  | 7.91 | ppbv   | 99     |
| 31) cis-1,2-Dichloroethene     | 5.79 | 61   | 1594740  | 8.37 | ppbv   | 100    |
| 32) 1,1,1-Trichloroethane      | 6.78 | 97   | 2437649  | 8.04 | ppbv   | 100    |
| 34) 2-Butanone                 | 5.47 | 43   | 2445624  | 8.35 | ppbv   | 100    |
| 35) Carbon Tetrachloride       | 7.30 | 117  | 2416931  | 8.14 | ppbv   | 99     |
| 36) Benzene                    | 7.17 | 78   | 3516492  | 8.00 | ppbv   | 99     |
| 37) 1,2-Dichloroethane         | 6.57 | 62   | 1964481  | 8.10 | ppbv   | 100    |
| 38) Trichloroethene            | 8.13 | 130  | 1351134  | 7.88 | ppbv   | 96     |
| 39) 1,2-Dichloropropane        | 7.90 | 63   | 1310563  | 8.44 | ppbv   | 95     |
| 40) 1,4-Dioxane                | 8.12 | 88   | 486386   | 8.67 | ppbv # | 100    |
| 41) Tetrahydrofuran            | 6.30 | 42   | 1409585  | 8.56 | ppbv   | 99     |
| 42) Bromodichloromethane       | 8.08 | 83   | 2581732  | 9.04 | ppbv   | 99     |
| 43) Methyl Methacrylate        | 8.30 | 69   | 1301339  | 8.84 | ppbv   | 100    |

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 Misc : 400ml/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VL1213ABS01

Manual Integrations  
 APPROVED

MMDadoda  
 12/15/2017 4:07:02 PM

Quant Time: Dec 14 12:08:19 2017  
 Quant Method : W:\HPCHEM1\MSVOA L\METHODS\VL121317AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Thu Dec 14 2017  
 QLast Update : Thu Dec 14 04:29:58 2017  
 Response via : Initial Calibration

| Internal Standards            | R.T.  | QIon | Response | Conc  | Units  | Dev(Min) |
|-------------------------------|-------|------|----------|-------|--------|----------|
| 44) 2,2,4-Trimethylpentane    | 8.16  | 57   | 5686583  | 8.57  | ppbv   | 100      |
| 45) t-1,3-Dichloropropene     | 9.58  | 75   | 1825412  | 9.07  | ppbv   | 98       |
| 46) cis-1,3-Dichloropropene   | 9.00  | 75   | 2208808  | 8.73  | ppbv   | 97       |
| 47) 1,1,2-Trichloroethane     | 9.79  | 97   | 1480669  | 9.19  | ppbv   | 98       |
| 48) Dibromochloromethane      | 10.63 | 129  | 2414336  | 9.59  | ppbv   | 100      |
| 49) Bromoform                 | 13.38 | 173  | 1728469  | 9.31  | ppbv   | 100      |
| 50) 4-Methyl-2-Pentanone      | 9.04  | 43   | 3093285  | 8.63  | ppbv   | 100      |
| 51) 2-Hexanone                | 10.44 | 43   | 2956539  | 8.65  | ppbv # | 99       |
| 52) Tetrachloroethene         | 11.55 | 164  | 1346531  | 8.31  | ppbv   | 98       |
| 53) Toluene                   | 10.12 | 91   | 4341035  | 9.11  | ppbv   | 100      |
| 54) 1,2-Dibromoethane         | 10.94 | 107  | 2283158  | 9.35  | ppbv   | 99       |
| 56) 1,1,1,2-Tetrachloroethane | 12.46 | 131  | 1647212  | 8.29  | ppbv   | 94       |
| 57) Chlorobenzene             | 12.48 | 112  | 3292214  | 7.93  | ppbv   | 98       |
| 58) Ethyl Benzene             | 13.04 | 91   | 5736629  | 7.80  | ppbv   | 99       |
| 59) m/p-Xylene                | 13.33 | 91   | 8945506m | 15.19 | ppbv   |          |
| 60) o-Xylene                  | 14.03 | 91   | 4570710  | 7.70  | ppbv   | 99       |
| 61) Styrene                   | 13.86 | 104  | 1338728  | 7.86  | ppbv   | 99       |
| 62) Isopropylbenzene          | 15.00 | 105  | 6121932  | 7.87  | ppbv   | 99       |
| 63) 1,1,2,2-Tetrachloroethane | 14.01 | 83   | 2977107  | 7.48  | ppbv   | 100      |
| 64) n-propylbenzene           | 15.90 | 120  | 1642028  | 7.95  | ppbv   | 100      |
| 65) tert-Butylbenzene         | 17.08 | 119  | 5231435  | 7.59  | ppbv   | 99       |
| 66) Benzyl Chloride           | 17.33 | 91   | 600587   | 8.08  | ppbv   | 99       |
| 67) sec-Butylbenzene          | 17.63 | 105  | 7384084  | 7.79  | ppbv   | 100      |
| 69) p-Isopropyltoluene        | 17.99 | 119  | 6112921  | 7.73  | ppbv   | 100      |
| 70) n-Butylbenzene            | 18.89 | 91   | 5998368  | 7.87  | ppbv   | 100      |
| 71) 2-Chlorotoluene           | 15.79 | 91   | 4574050  | 7.92  | ppbv   | 100      |
| 72) 4-Ethyltoluene            | 16.17 | 105  | 5126726  | 7.88  | ppbv   | 99       |
| 73) 1,3,5-Trimethylbenzene    | 16.33 | 105  | 4494126  | 7.77  | ppbv   | 99       |
| 74) 1,2,4-Trimethylbenzene    | 17.10 | 105  | 4554198  | 7.48  | ppbv   | 96       |
| 75) 1,3-Dichlorobenzene       | 17.34 | 146  | 2935213  | 7.60  | ppbv   | 99       |
| 76) 1,4-Dichlorobenzene       | 17.48 | 146  | 3000736  | 7.69  | ppbv   | 100      |
| 77) 1,2-Dichlorobenzene       | 18.17 | 146  | 2948900  | 7.82  | ppbv   | 100      |
| 78) Hexachloro-1,3-Butadiene  | 23.71 | 225  | 631945   | 7.29  | ppbv   | 99       |
| 79) Naphthalene               | 22.61 | 128  | 3791128  | 7.69  | ppbv   | 99       |
| 80) Naphthalene, 2-methyl-    | 25.25 | 142  | 1141965  | 6.22  | ppbv   | 100      |
| 81) 1,2,4-Trichlorobenzene    | 22.34 | 180  | 1690451  | 7.37  | ppbv   | 100      |

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

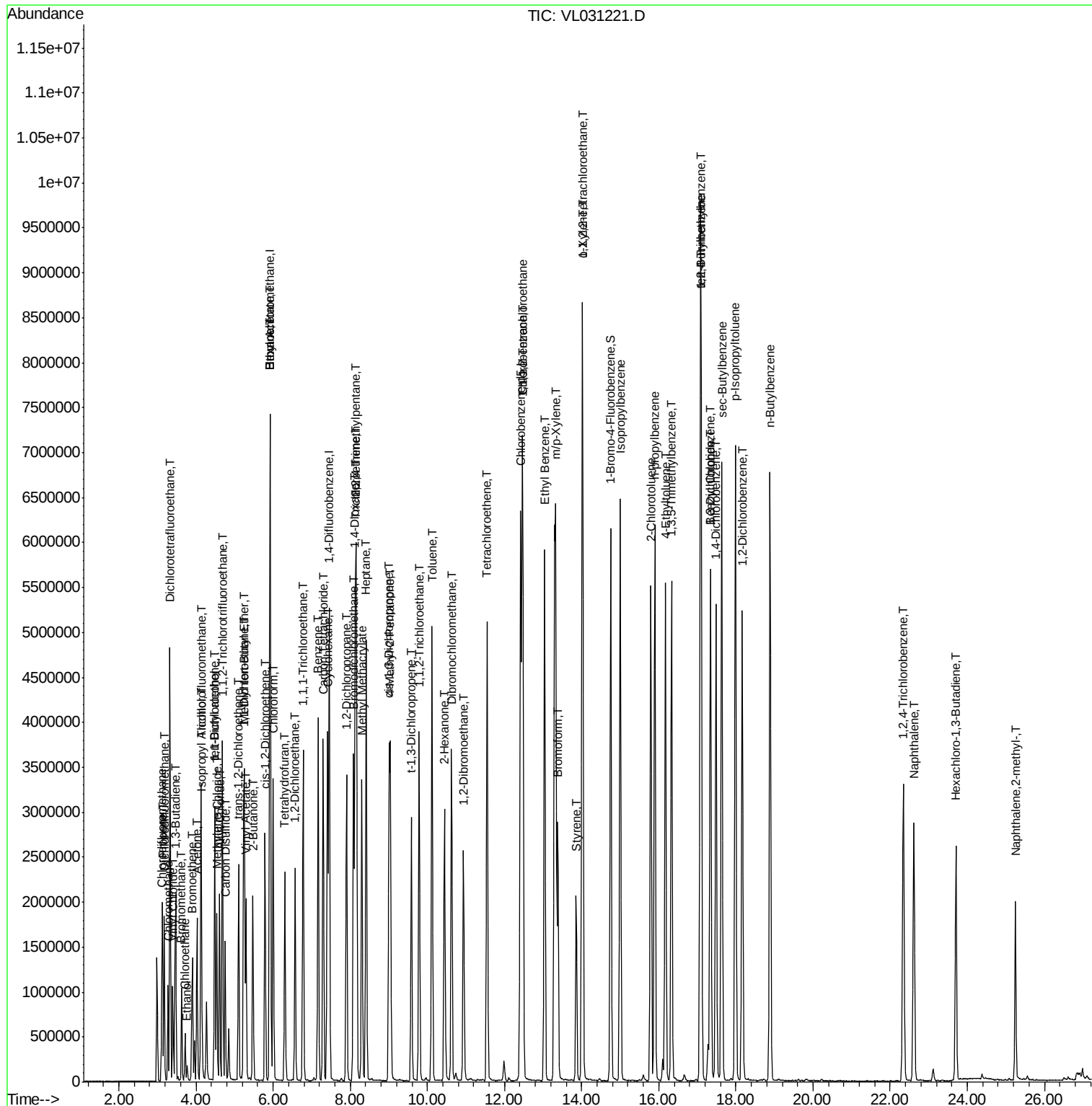
Data Path : W:\HPCHEM1\MSVOA L\DATA\VL121317\  
Data File : VL031221.D  
Acq On : 14 Dec 2017 5:31  
Operator : SY/AP  
Sample : VL1213ABS01  
Misc : 400ml/MSVOA L  
ALS Vial : 1 Sample Multiplier: 1

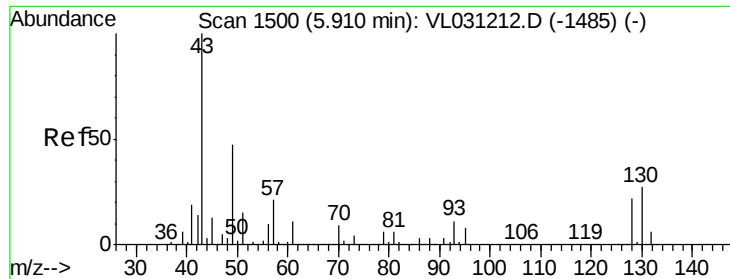
**Instrument :**  
MSVOA\_L  
**ClientSampleId :**  
VL1213ABS01

## Manual Integrations APPROVED

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Quant Time: Dec 14 12:08:19 2017  
Quant Method : W:\HPCHEM1\MSVOA L\METHODS\VL121317AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_LThu Dec  
QLast Update : Thu Dec 14 04:29:58 2017  
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.00 ppbv

RT: 5.91 min Scan# 1501

Delta R.T. 0.00 min

Lab File: VL031221.D

Acq: 14 Dec 2017 5:31

Instrument :

MSVOA\_L

ClientSampleId :

VL1213ABS01

Tot Ion: 49 Resp: 1642243

Ion Ratio Lower Upper

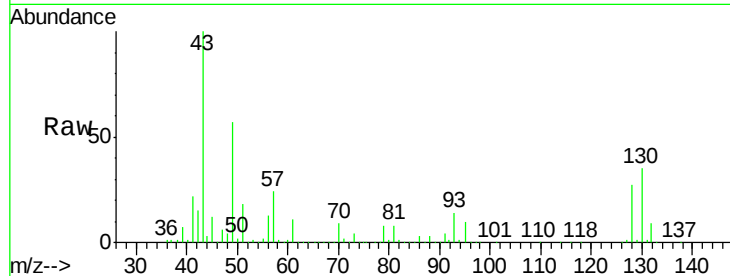
49 100

128 48.0 23.2 69.5

130 60.7 29.6 88.8

Manual Integrations  
APPROVED

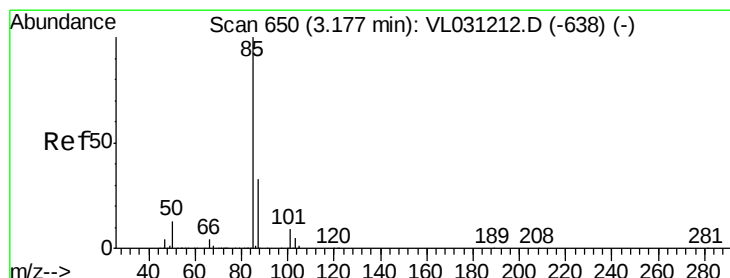
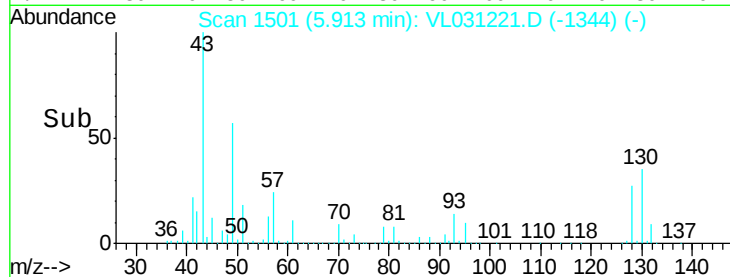
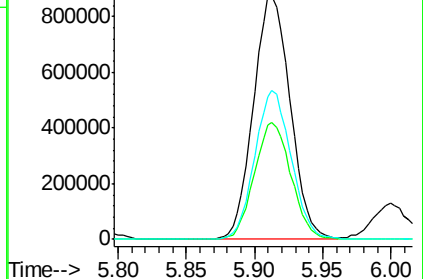
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12/15/2017 4:07:02 PM



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): VL0

Ion 130.00 (129.70 to 130.70): VL0



#2

Dichlorodifluoromethane

Concen: 9.89 ppbv

RT: 3.18 min Scan# 651

Delta R.T. 0.00 min

Lab File: VL031221.D

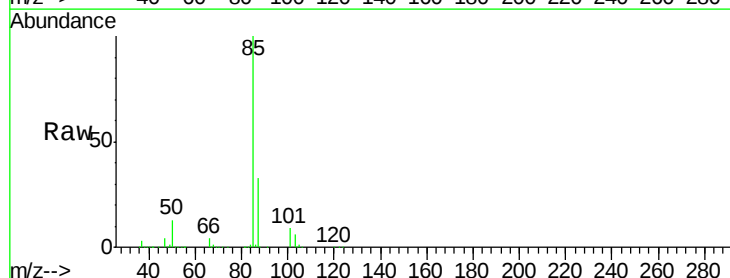
Acq: 14 Dec 2017 5:31

Tgt Ion: 85 Resp: 1371657

Ion Ratio Lower Upper

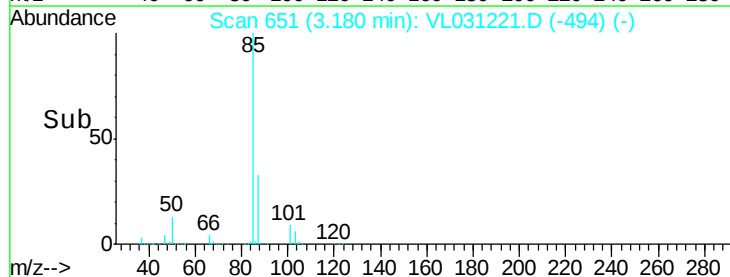
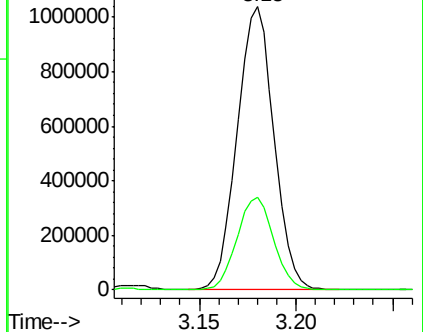
85 100

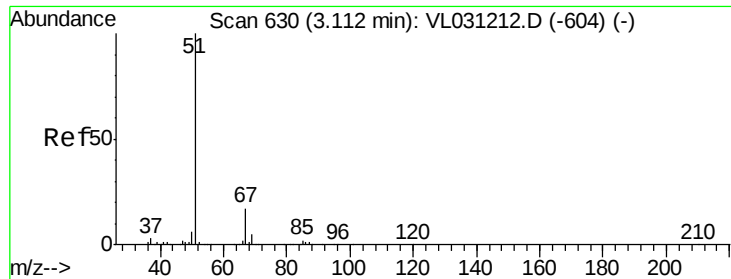
87 32.8 26.2 39.2



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 8.08 ppbv

RT: 3.12 min Scan# 631

Delta R.T. 0.00 min

Lab File: VL031221.D

Acq: 14 Dec 2017 5:31

Instrument :

MSVOA\_L

ClientSampleId :

VL1213ABS01

Tot Ion: 51 Resp: 1509571

Ion Ratio Lower Upper

51 100

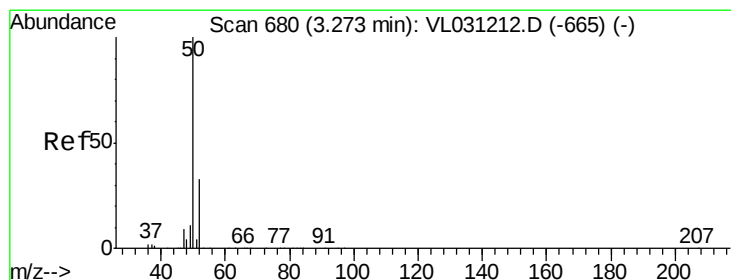
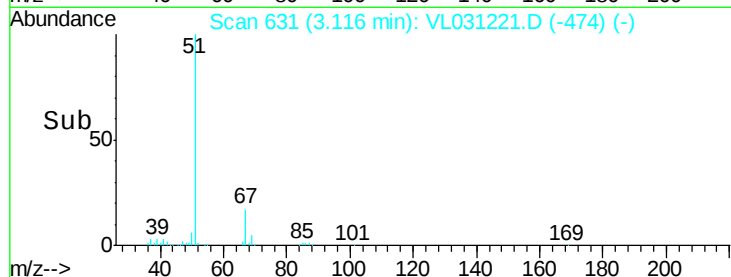
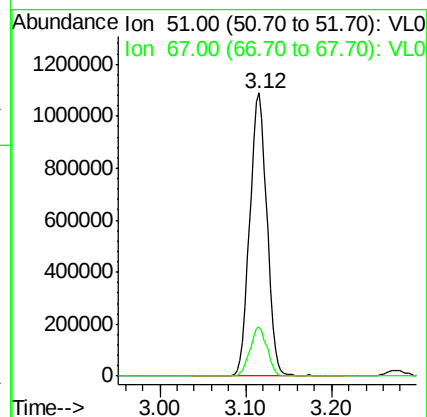
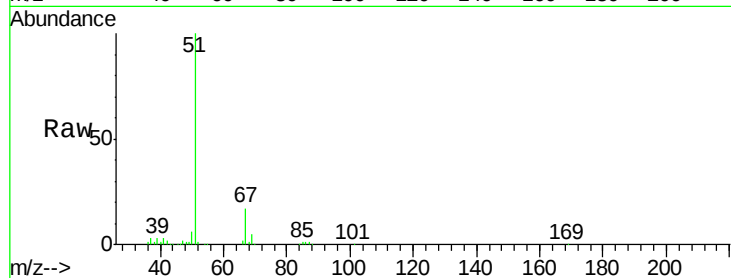
67 17.3 13.8 20.6

Manual Integrations

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#4

Chloromethane

Concen: 9.45 ppbv

RT: 3.28 min Scan# 681

Delta R.T. 0.00 min

Lab File: VL031221.D

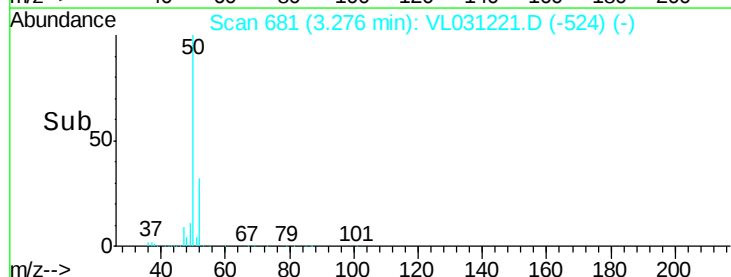
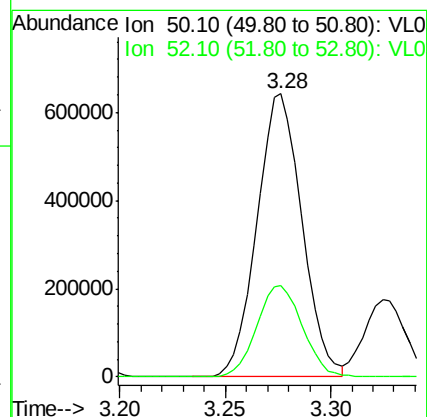
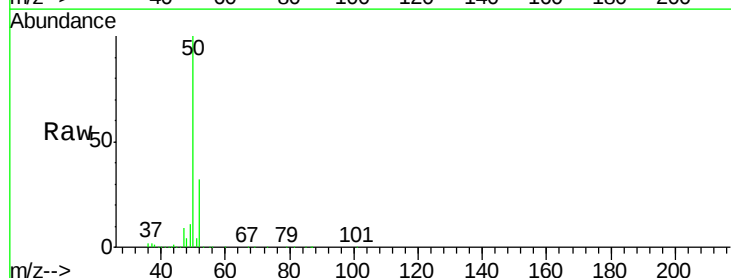
Acq: 14 Dec 2017 5:31

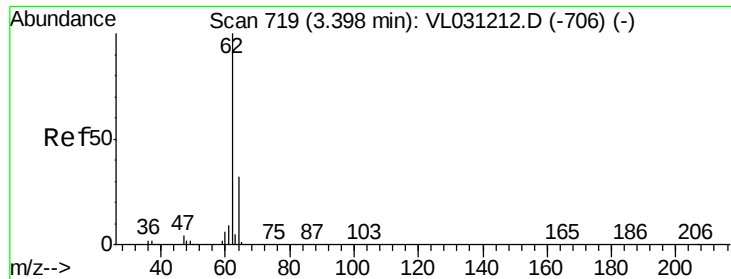
Tgt Ion: 50 Resp: 953198

Ion Ratio Lower Upper

50 100

52 32.5 26.5 39.7





#5

Vinyl Chloride

Concen: 8.63 ppbv

RT: 3.40 min Scan# 719

Delta R.T. 0.00 min

Lab File: VL031221.D

Acq: 14 Dec 2017 5:31

Instrument :

MSVOA\_L

ClientSampleId :

VL1213ABS01

Tot Ion: 62 Resp: 900677

Ion Ratio Lower Upper

62 100

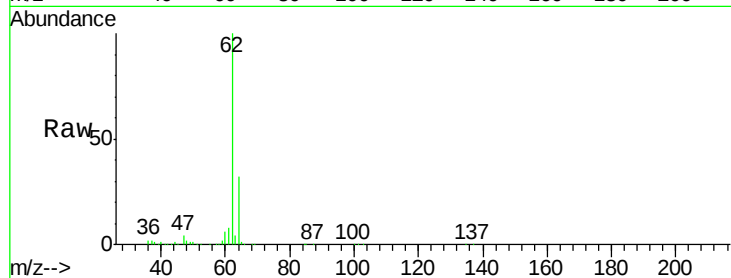
64 32.0 25.9 38.9

Manual Integrations

APPROVED

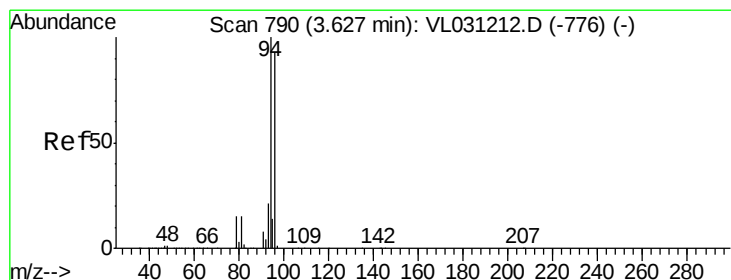
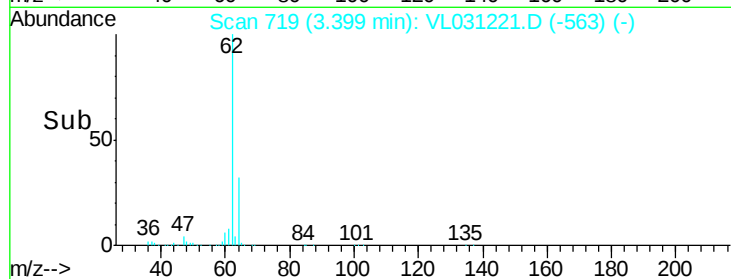
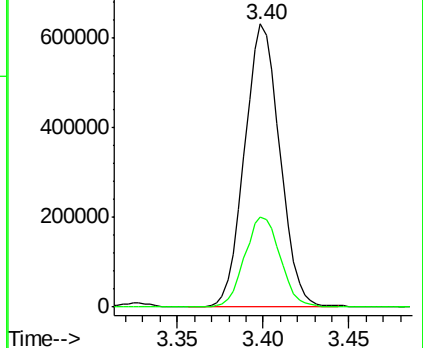
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Abundance Ion 62.10 (61.80 to 62.80): VL0

Ion 64.10 (63.80 to 64.80): VL0



#6

Bromomethane

Concen: 9.04 ppbv

RT: 3.63 min Scan# 790

Delta R.T. 0.00 min

Lab File: VL031221.D

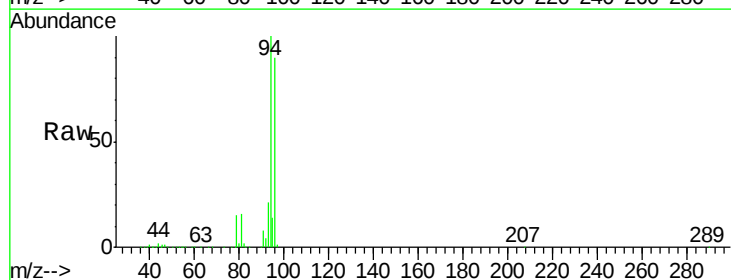
Acq: 14 Dec 2017 5:31

Tgt Ion: 94 Resp: 559089

Ion Ratio Lower Upper

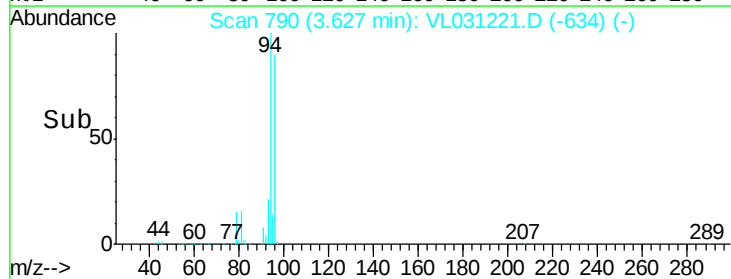
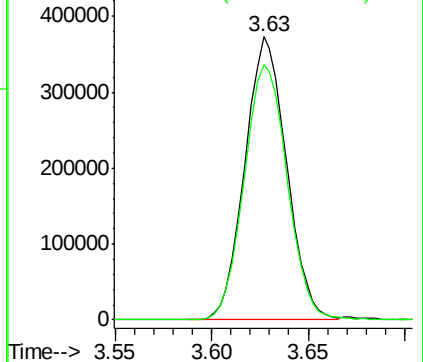
94 100

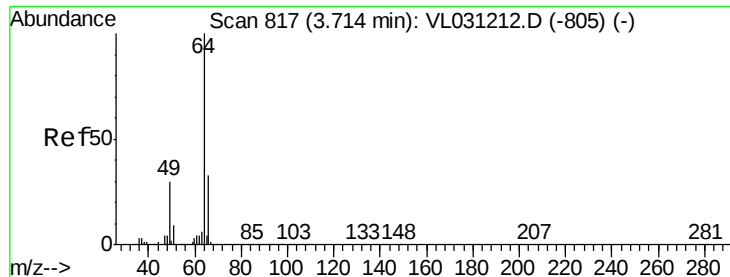
96 90.1 74.4 111.6



Abundance Ion 94.00 (93.70 to 94.70): VL0

Ion 96.00 (95.70 to 96.70): VL0





#7

Chloroethane

Concen: 9.23 ppbv

RT: 3.72 min Scan# 818

Delta R.T. 0.00 min

Lab File: VL031221.D

Acq: 14 Dec 2017 5:31

Instrument :

MSVOA\_L

ClientSampleId :

VL1213ABS01

Tot Ion: 64 Resp: 356759

Ion Ratio Lower Upper

64 100

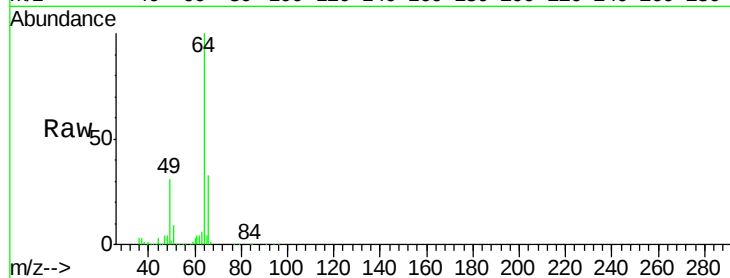
66 32.7 26.2 39.2

Manual Integrations

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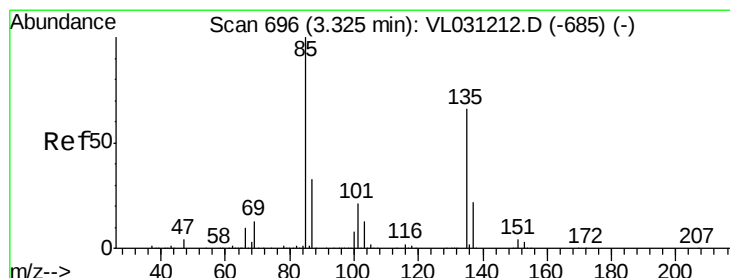
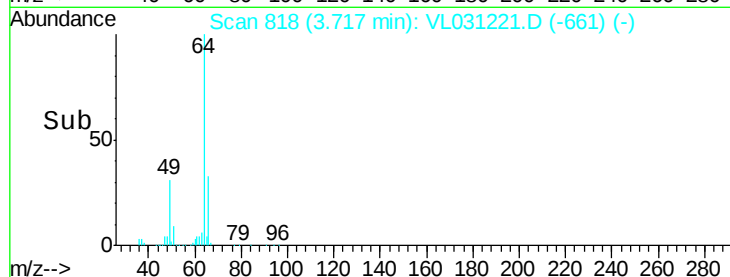
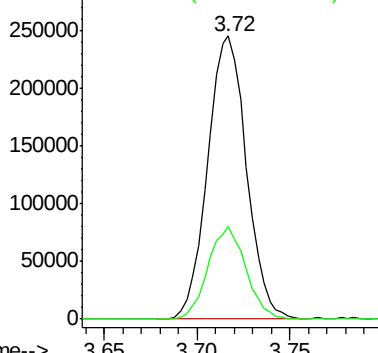
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Abundance Ion 64.10 (63.80 to 64.80): VL0

Ion 66.10 (65.80 to 66.80): VL0



#8

Dichlorotetrafluoroethane

Concen: 9.97 ppbv

RT: 3.33 min Scan# 697

Delta R.T. 0.00 min

Lab File: VL031221.D

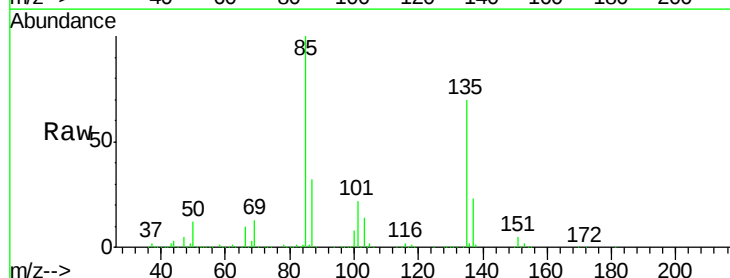
Acq: 14 Dec 2017 5:31

Tgt Ion: 85 Resp: 1919876

Ion Ratio Lower Upper

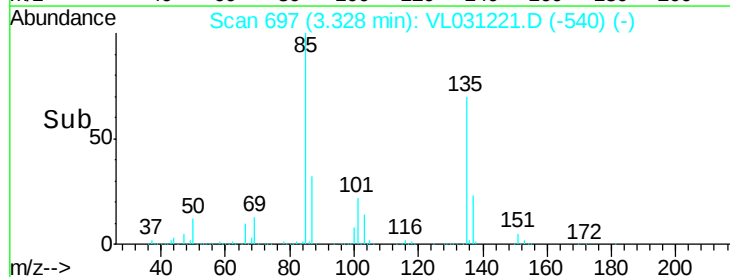
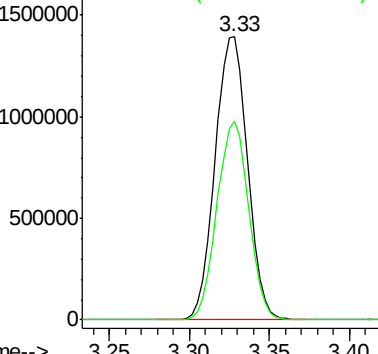
85 100

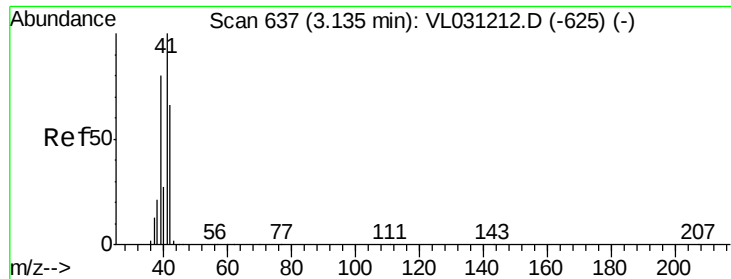
135 69.3 54.0 81.0



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 135.00 (134.70 to 135.70): V





#9

Propene

Concen: 9.10 ppbv

RT: 3.14 min Scan# 638

Delta R.T. 0.00 min

Lab File: VL031221.D

Acq: 14 Dec 2017 5:31

Instrument :

MSVOA\_L

ClientSampleId :

VL1213ABS01

Tot Ion: 41 Resp: 834225

Ion Ratio Lower Upper

41 100

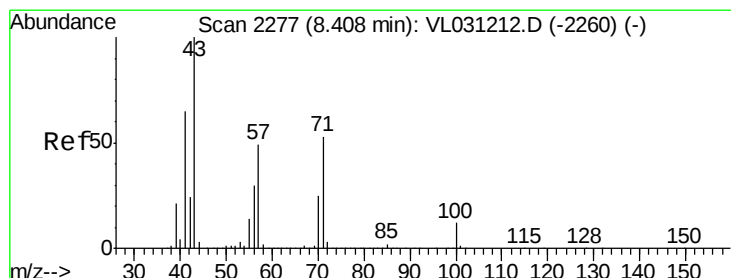
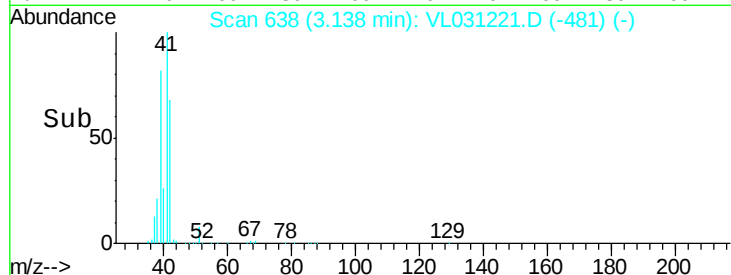
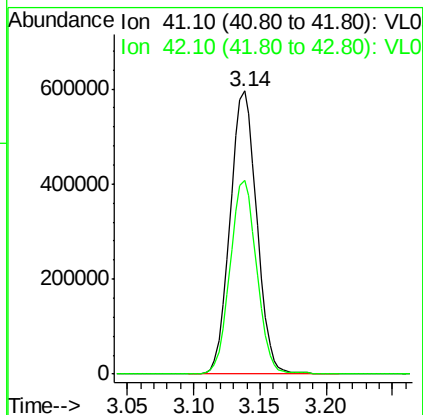
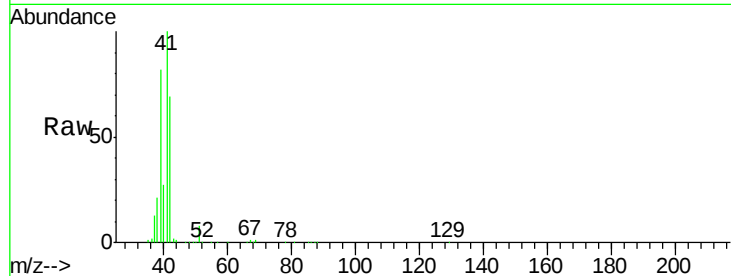
42 68.6 54.3 81.5

Manual Integrations

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#10

Heptane

Concen: 8.54 ppbv

RT: 8.41 min Scan# 2278

Delta R.T. 0.00 min

Lab File: VL031221.D

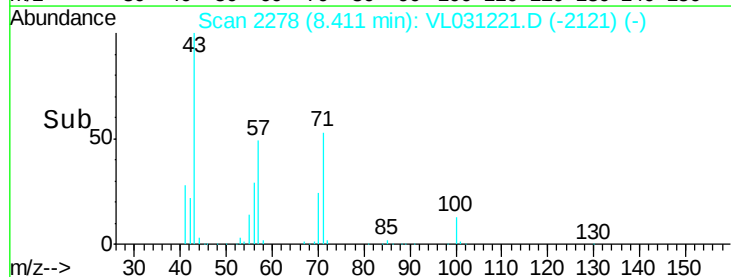
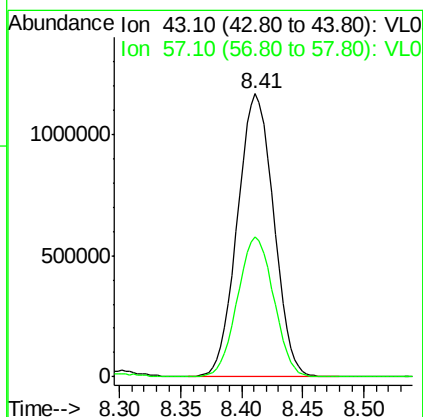
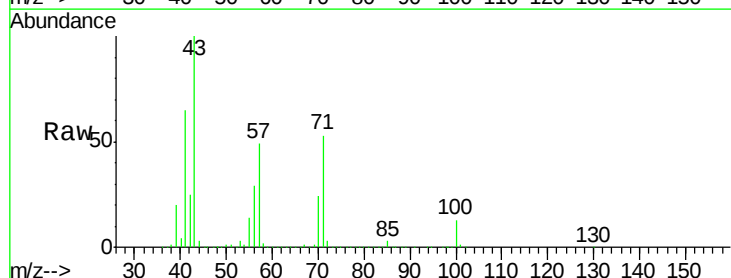
Acq: 14 Dec 2017 5:31

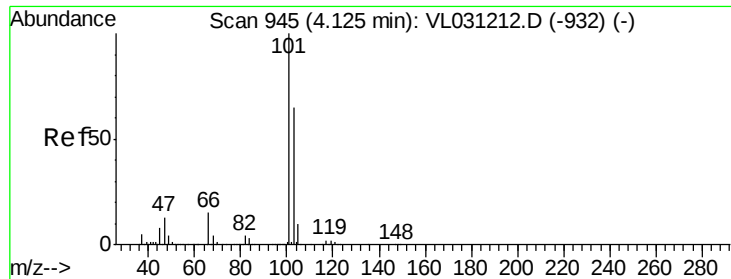
Tgt Ion: 43 Resp: 2381763

Ion Ratio Lower Upper

43 100

57 49.7 39.8 59.8





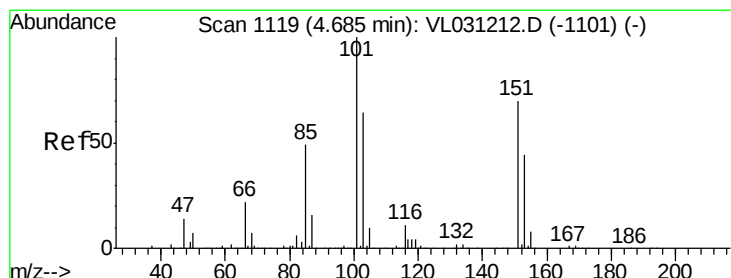
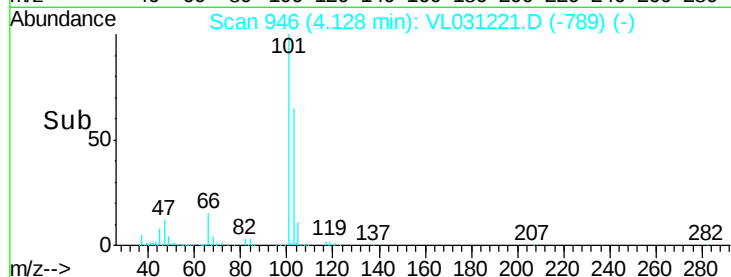
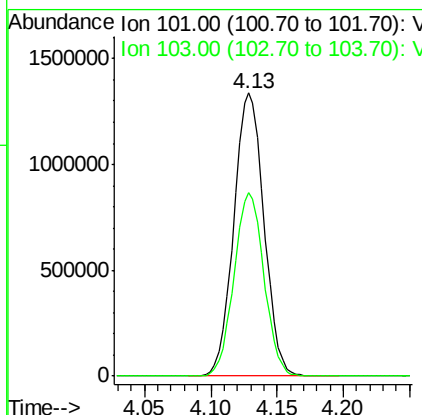
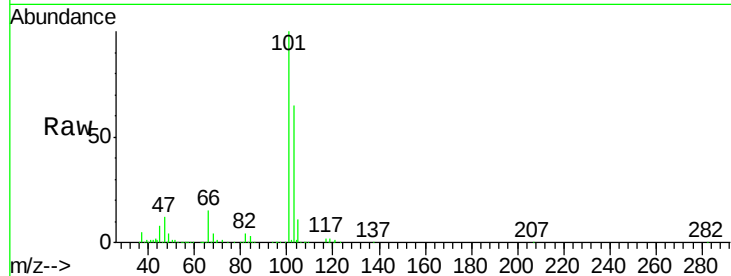
#11  
 Trichlorofluoromethane  
 Concen: 9.24 ppbv  
 RT: 4.13 min Scan# 946  
 Delta R.T. 0.00 min  
 Lab File: VL031221.D  
 Acq: 14 Dec 2017 5:31

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VL1213ABS01

Tot Ion:101 Resp: 2107680  
 Ion Ratio Lower Upper  
 101 100  
 103 65.0 51.8 77.8

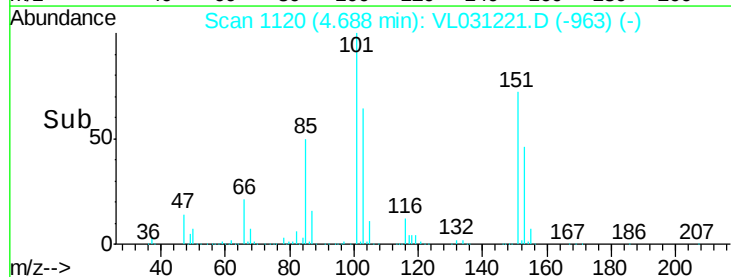
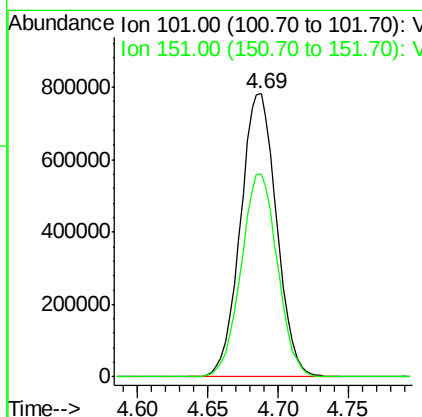
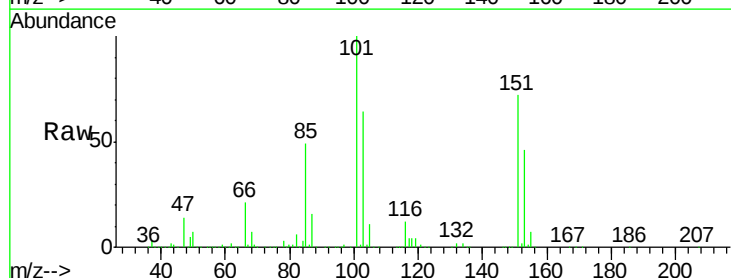
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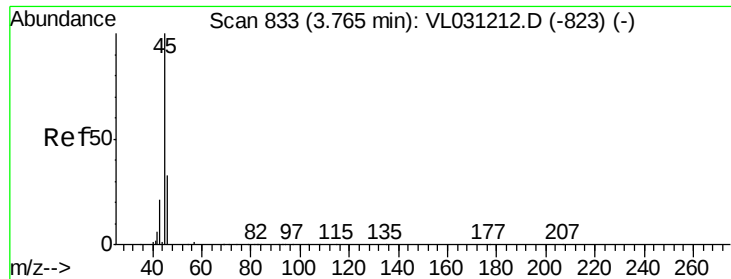
MM Dadoda  
 12/15/2017 4:07:02 PM



#12  
 1,1,2-Trichlorotrifluoroethane  
 Concen: 8.78 ppbv  
 RT: 4.69 min Scan# 1120  
 Delta R.T. 0.00 min  
 Lab File: VL031221.D  
 Acq: 14 Dec 2017 5:31

Tgt Ion:101 Resp: 1402487  
 Ion Ratio Lower Upper  
 101 100  
 151 72.2 56.5 84.7





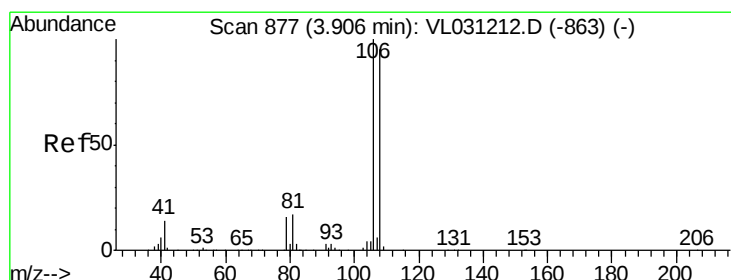
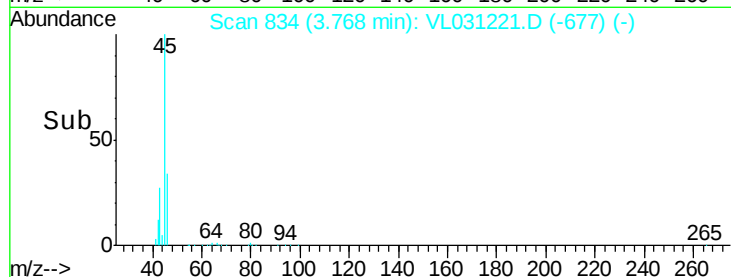
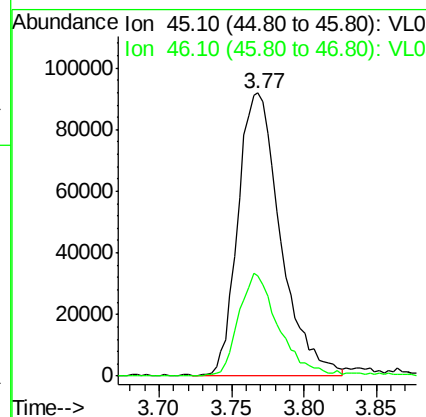
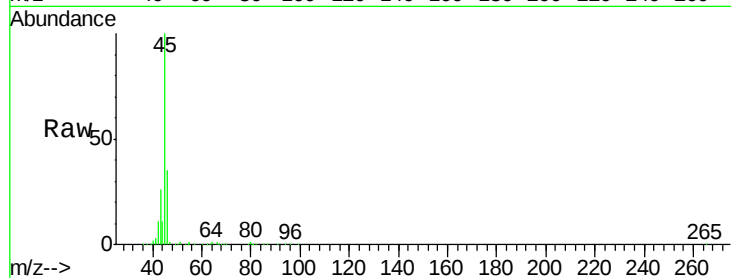
#13  
Ethanol  
Concen: 7.07 ppbv  
RT: 3.77 min Scan# 834  
Delta R.T. 0.00 min  
Lab File: VL031221.D  
Acq: 14 Dec 2017 5:31

Instrument :  
MSVOA\_L  
ClientSampleId :  
VL1213ABS01

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 45      | 100   |       |       |
| 46      | 35.4  | 14.6  | 58.4  |

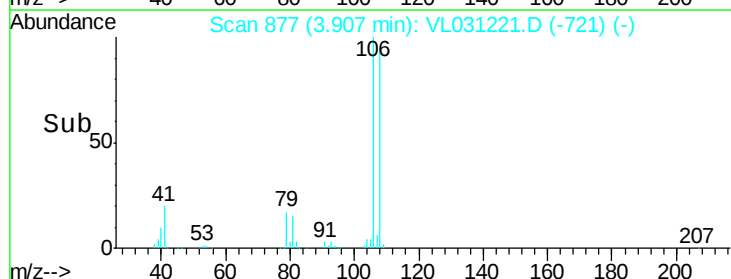
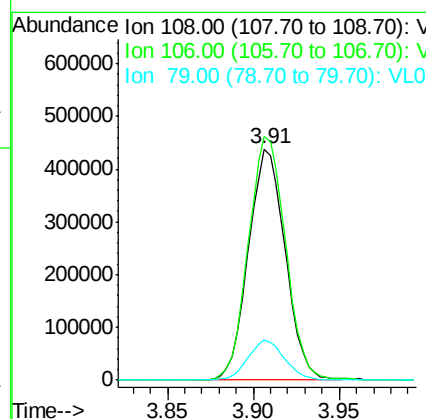
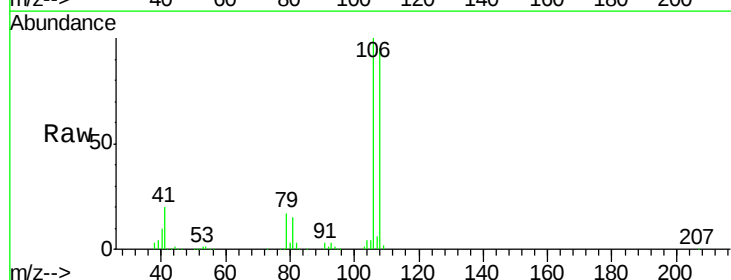
Manual Integrations  
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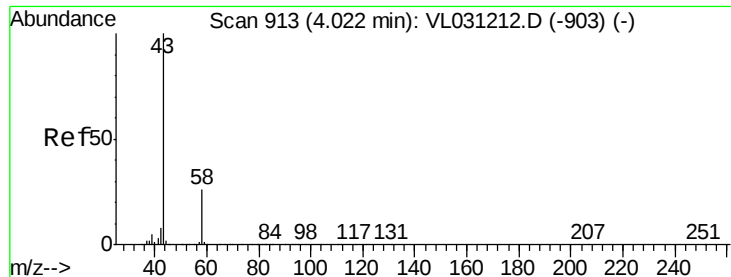
MMDadoda  
12/15/2017 4:07:02 PM



#14  
Bromoethene  
Concen: 9.48 ppbv  
RT: 3.91 min Scan# 877  
Delta R.T. 0.00 min  
Lab File: VL031221.D  
Acq: 14 Dec 2017 5:31

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 108     | 100   |       |       |
| 106     | 107.2 | 86.5  | 129.7 |
| 79      | 17.3  | 14.2  | 21.4  |





#15

Acetone

Concen: 8.52 ppbv

RT: 4.02 min Scan# 913

Delta R.T. 0.00 min

Lab File: VL031221.D

Acq: 14 Dec 2017 5:31

Instrument :

MSVOA\_L

ClientSampleId :

VL1213ABS01

Tot Ion: 43 Resp: 1847235

Ion Ratio Lower Upper

43 100

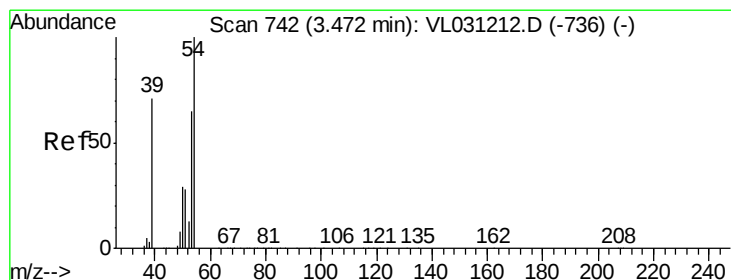
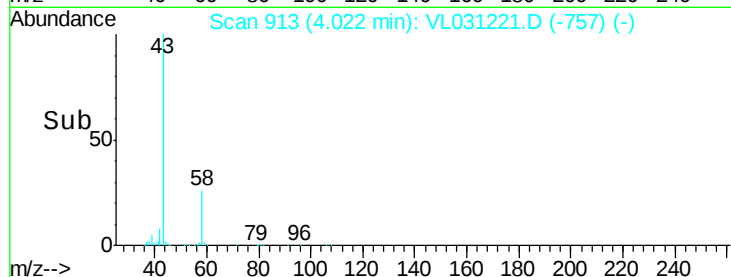
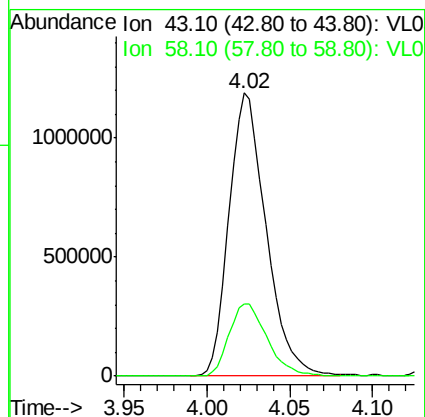
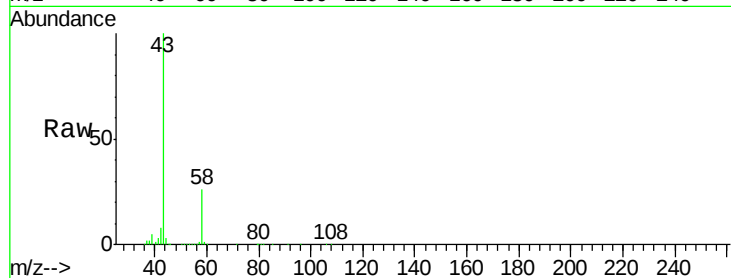
58 26.2 20.3 30.5

Manual Integrations

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#16

1,3-Butadiene

Concen: 8.82 ppbv

RT: 3.47 min Scan# 742

Delta R.T. 0.00 min

Lab File: VL031221.D

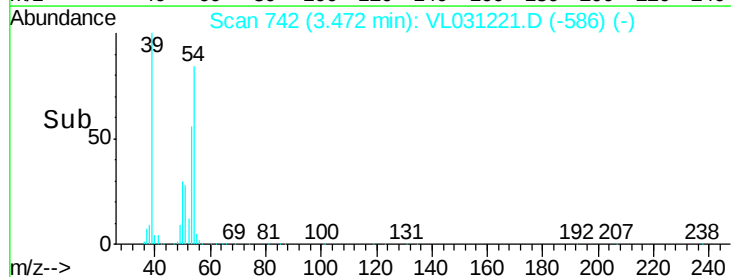
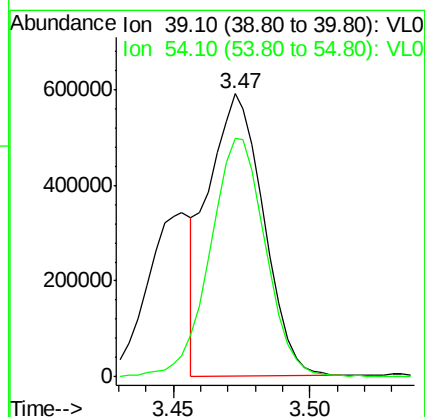
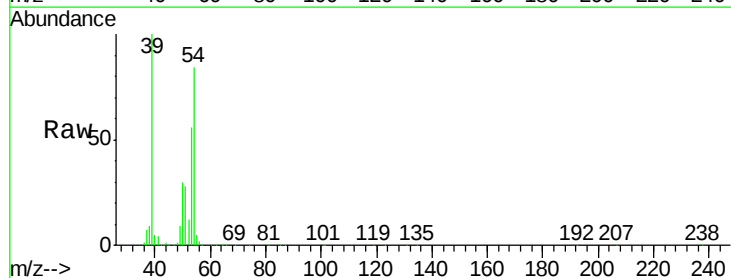
Acq: 14 Dec 2017 5:31

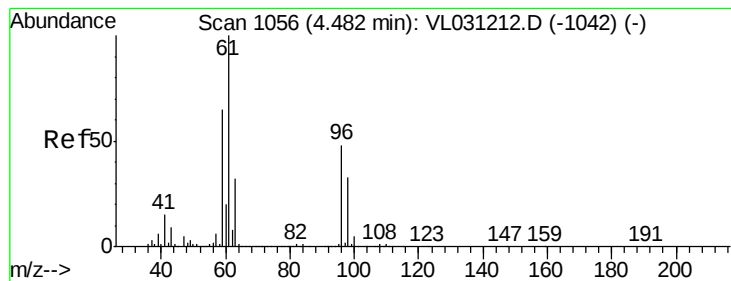
Tgt Ion: 39 Resp: 822754

Ion Ratio Lower Upper

39 100

54 85.9 66.4 99.6





#17

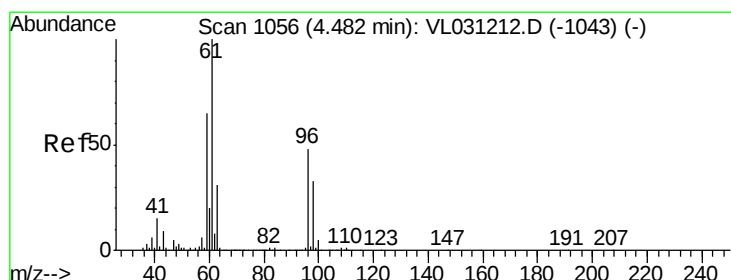
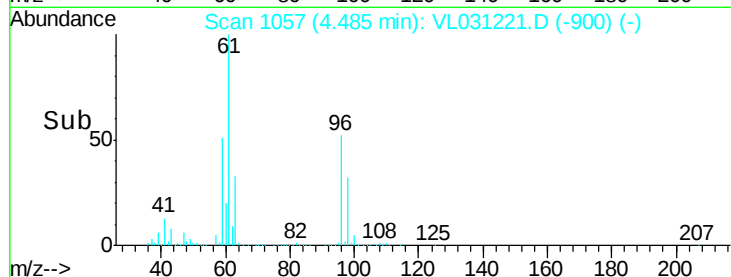
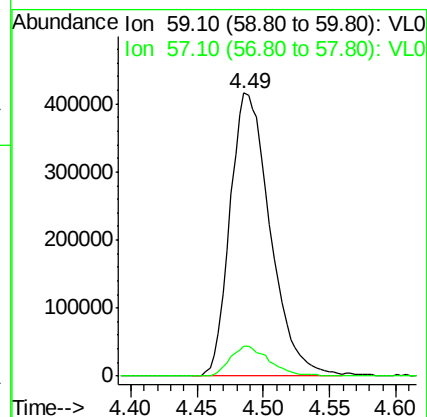
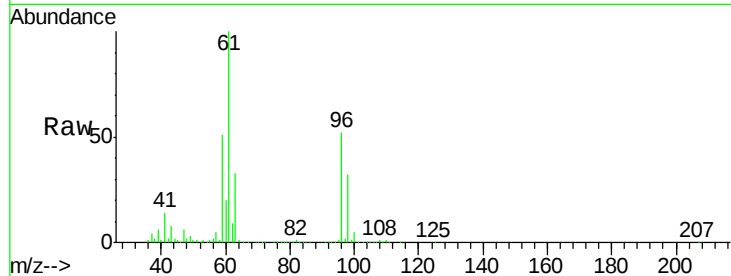
tert-Butyl alcohol  
Concen: 7.20 ppbv  
RT: 4.49 min Scan# 1057  
Delta R.T. 0.00 min  
Lab File: VL031221.D  
Acq: 14 Dec 2017 5:31

Instrument :  
MSVOA\_L  
ClientSampleId :  
VL1213ABS01

| Tot Ion | 59    | Resp  | 875421 |
|---------|-------|-------|--------|
| Ion     | Ratio | Lower | Upper  |
| 59      | 100   |       |        |
| 57      | 10.5  | 8.2   | 12.2   |

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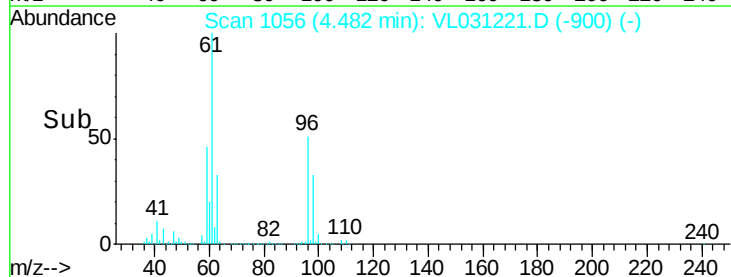
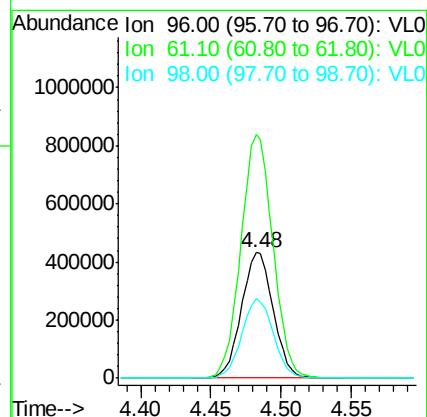
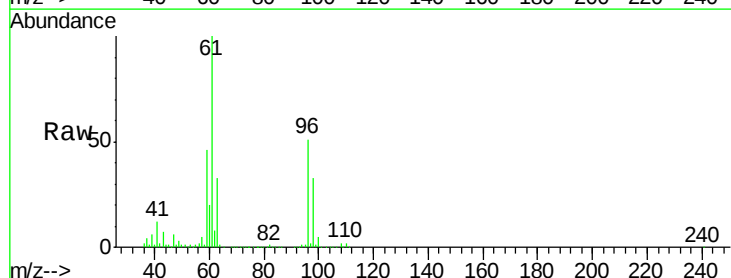
MMDadoda  
12/15/2017 4:07:02 PM

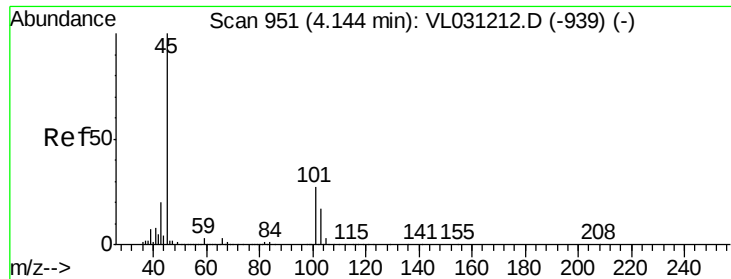


#18

1,1-Dichloroethene  
Concen: 9.53 ppbv  
RT: 4.48 min Scan# 1056  
Delta R.T. 0.00 min  
Lab File: VL031221.D  
Acq: 14 Dec 2017 5:31

| Tgt Ion | 96    | Resp  | 681929 |
|---------|-------|-------|--------|
| Ion     | Ratio | Lower | Upper  |
| 96      | 100   |       |        |
| 61      | 194.2 | 166.8 | 250.2  |
| 98      | 63.9  | 55.0  | 82.6   |





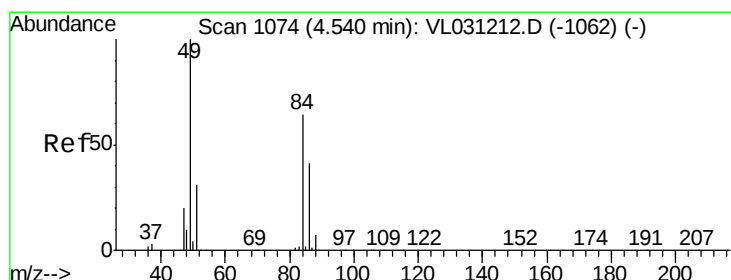
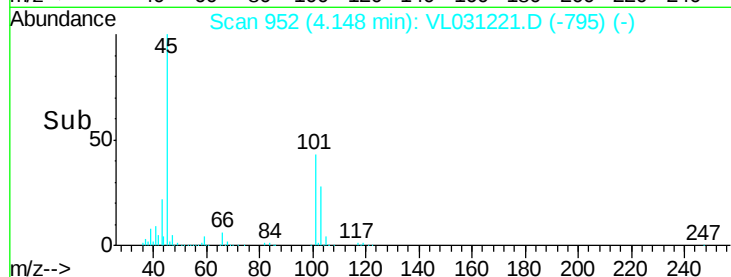
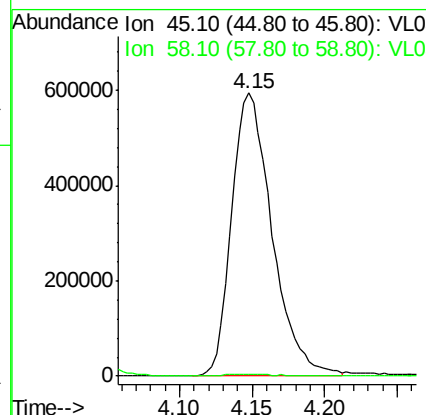
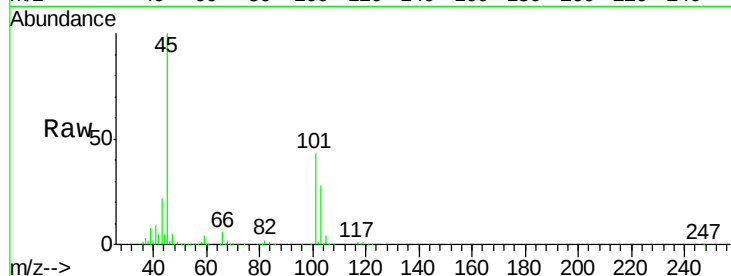
#19  
Isopropyl Alcohol  
Concen: 8.36 ppbv  
RT: 4.15 min Scan# 952  
Delta R.T. 0.00 min  
Lab File: VL031221.D  
Acq: 14 Dec 2017 5:31

Instrument :  
MSVOA\_L  
ClientSampleId :  
VL1213ABS01

Tot Ion: 45 Resp: 1146207  
Ion Ratio Lower Upper  
45 100  
58 42.4 27.2 40.8#

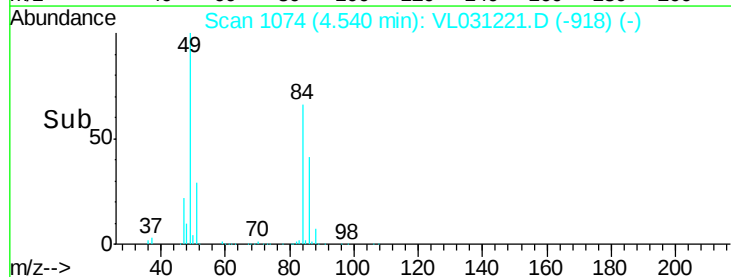
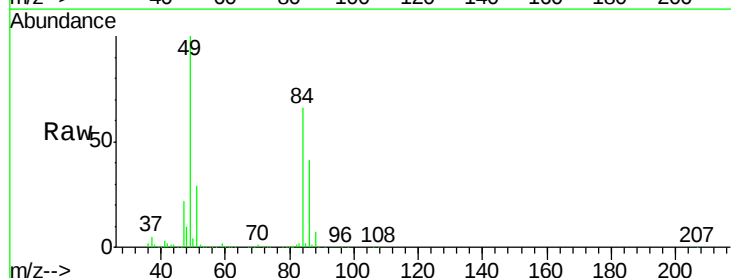
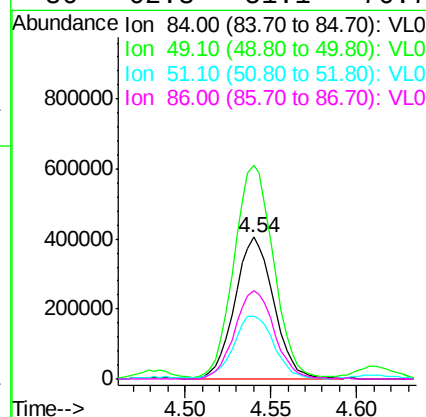
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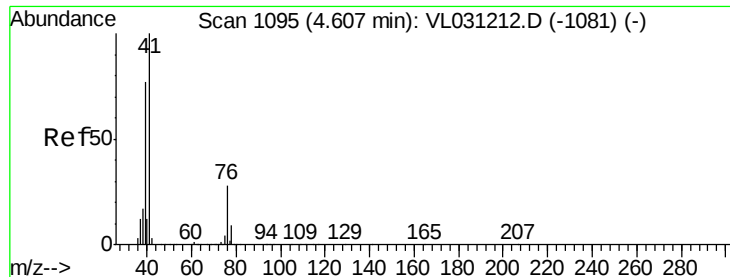
MMDadoda  
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#20  
Methylene Chloride  
Concen: 8.79 ppbv  
RT: 4.54 min Scan# 1074  
Delta R.T. 0.00 min  
Lab File: VL031221.D  
Acq: 14 Dec 2017 5:31

Tgt Ion: 84 Resp: 630601  
Ion Ratio Lower Upper  
84 100  
49 150.4 125.8 188.6  
51 43.9 39.3 58.9  
86 62.3 51.1 76.7





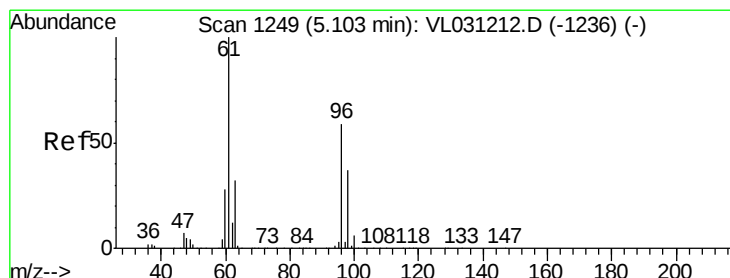
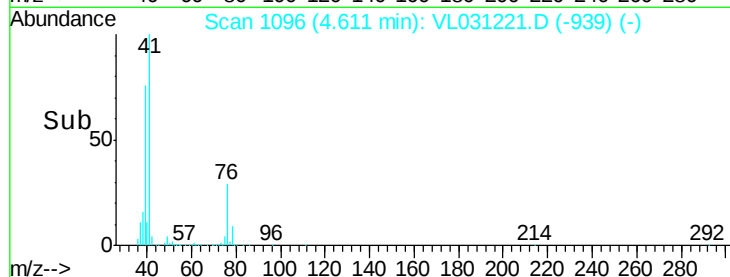
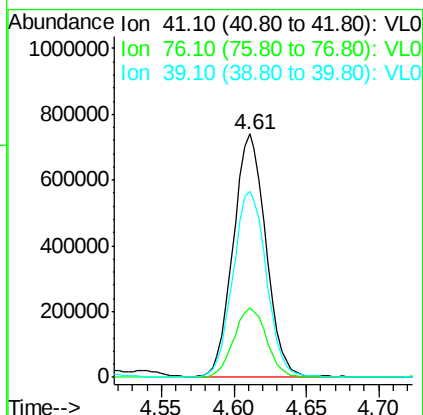
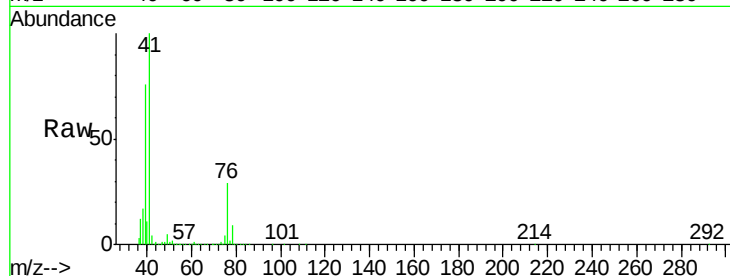
#21  
Allvl Chloride  
Concen: 9.01 ppbv  
RT: 4.61 min Scan# 1096  
Delta R.T. 0.00 min  
Lab File: VL031221.D  
Acq: 14 Dec 2017 5:31

Instrument :  
MSVOA\_L  
ClientSampleId :  
VL1213ABS01

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 41      | 100   |       |       |
| 76      | 29.1  | 22.9  | 34.3  |
| 39      | 78.8  | 62.6  | 93.8  |

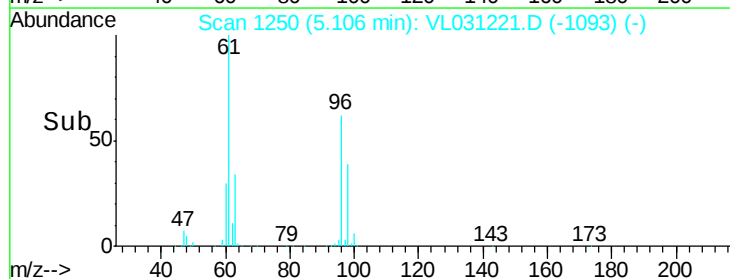
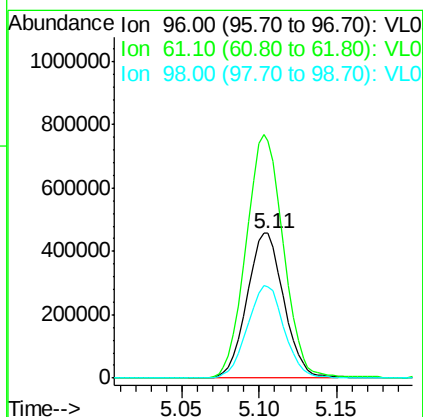
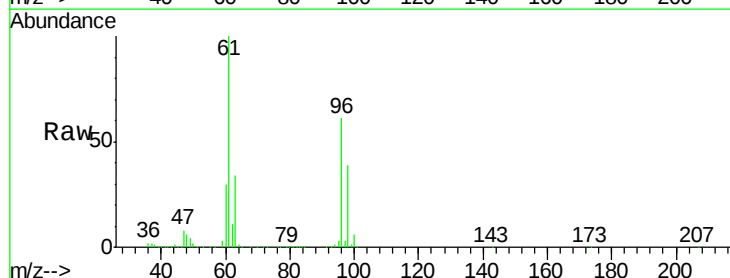
Manual Integrations  
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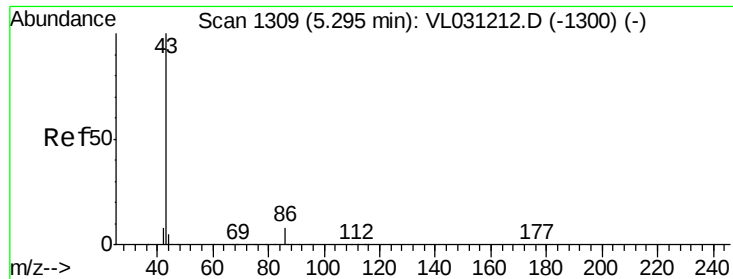
MMDadoda  
12/15/2017 4:07:02 PM



#22  
trans-1,2-Dichloroethene  
Concen: 8.64 ppbv  
RT: 5.11 min Scan# 1250  
Delta R.T. 0.00 min  
Lab File: VL031221.D  
Acq: 14 Dec 2017 5:31

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 96      | 100   |       |       |
| 61      | 163.6 | 135.0 | 202.4 |
| 98      | 63.1  | 50.5  | 75.7  |





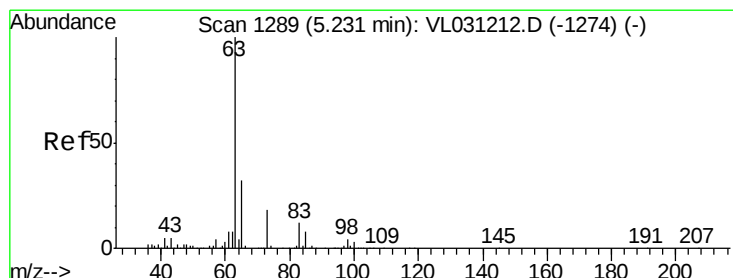
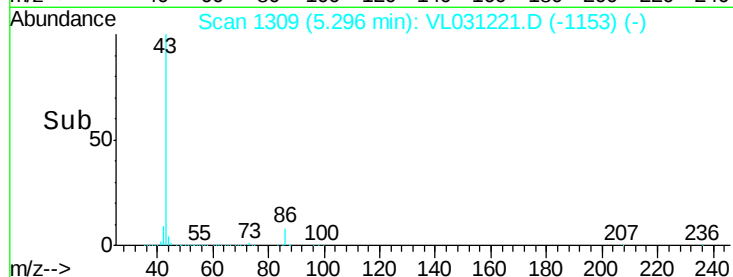
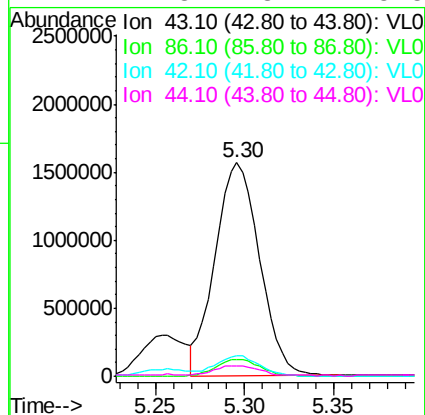
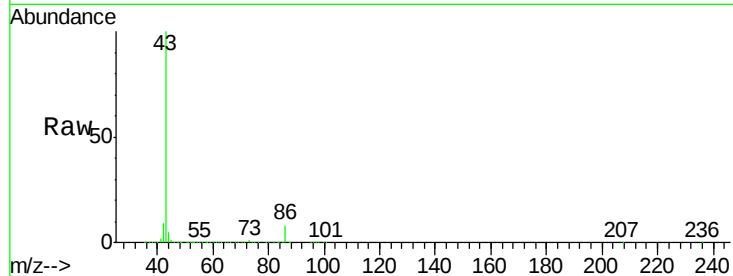
#23  
 Vinyl Acetate  
 Concen: 7.75 ppbv  
 RT: 5.30 min Scan# 1309  
 Delta R.T. 0.00 min  
 Lab File: VL031221.D  
 Acq: 14 Dec 2017 5:31

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VL1213ABS01

| Tot Ion | 43    | Resp  | 2705503 |
|---------|-------|-------|---------|
| Ion     | Ratio | Lower | Upper   |
| 43      | 100   |       |         |
| 86      | 7.8   | 5.9   | 8.9     |
| 42      | 9.4   | 7.3   | 10.9    |
| 44      | 4.8   | 3.7   | 5.5     |

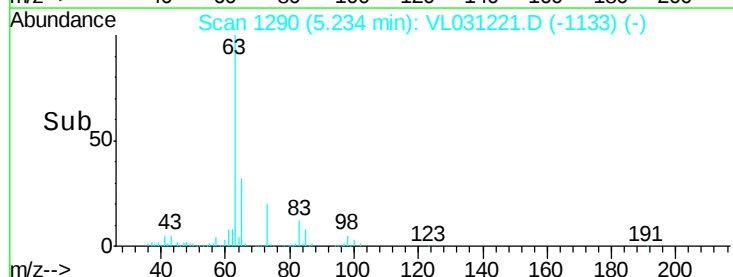
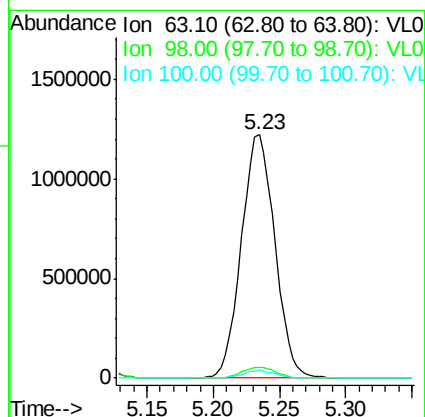
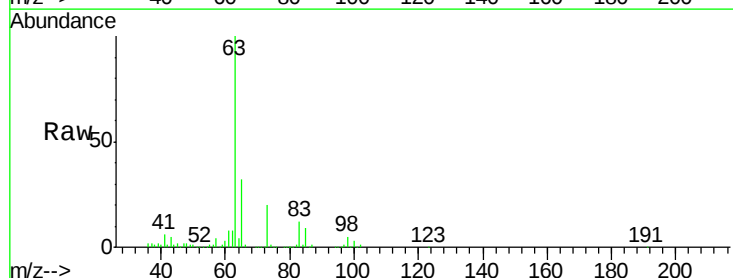
Manual Integrations  
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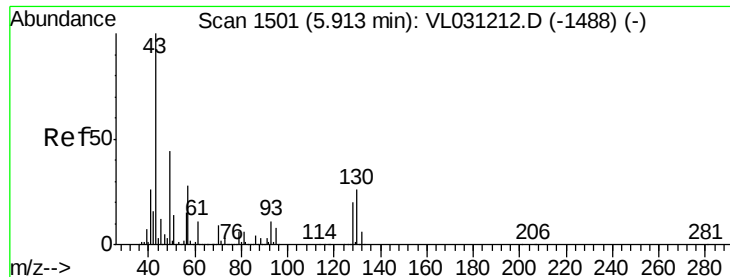
MMDadoda  
 12/15/2017 4:07:02 PM



#24  
 1,1-Dichloroethane  
 Concen: 8.46 ppbv  
 RT: 5.23 min Scan# 1290  
 Delta R.T. 0.00 min  
 Lab File: VL031221.D  
 Acq: 14 Dec 2017 5:31

| Tgt Ion | 63    | Resp  | 2144831 |
|---------|-------|-------|---------|
| Ion     | Ratio | Lower | Upper   |
| 63      | 100   |       |         |
| 98      | 4.6   | 2.3   | 6.8     |
| 100     | 3.1   | 1.4   | 4.2     |





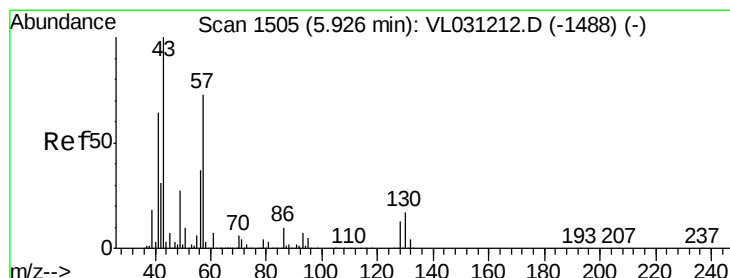
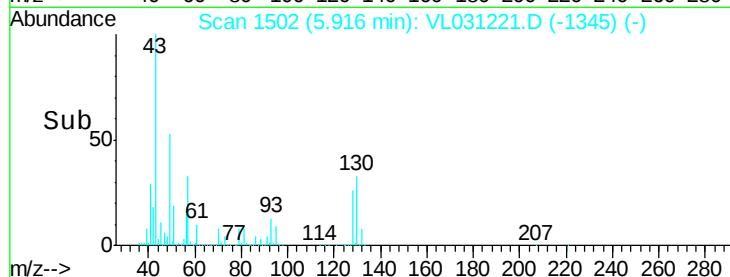
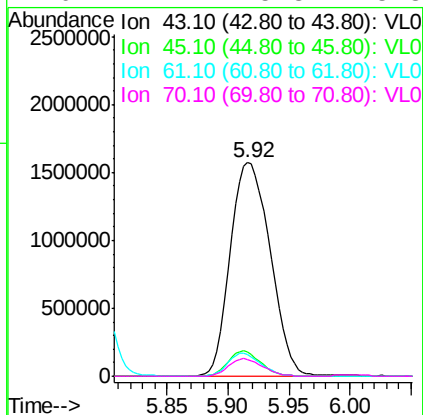
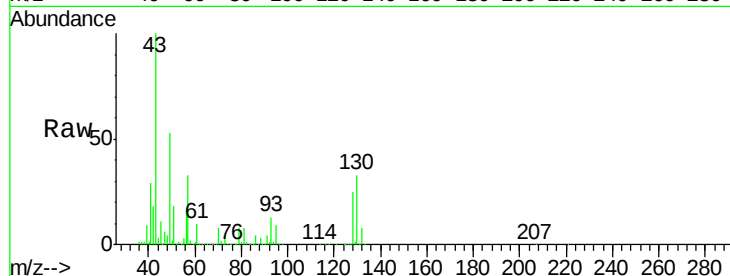
#25  
Ethyl Acetate  
Concen: 8.07 ppbv  
RT: 5.92 min Scan# 1502  
Delta R.T. 0.00 min  
Lab File: VL031221.D  
Acq: 14 Dec 2017 5:31

Instrument :  
MSVOA\_L  
ClientSampleId :  
VL1213ABS01

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 43      | 100   |       |       |
| 45      | 9.7   | 8.0   | 12.0  |
| 61      | 9.1   | 7.4   | 11.0  |
| 70      | 7.1   | 5.8   | 8.8   |

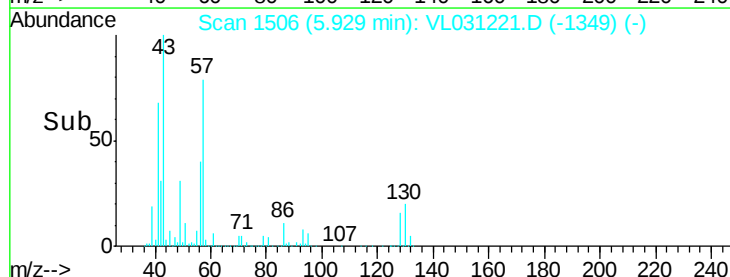
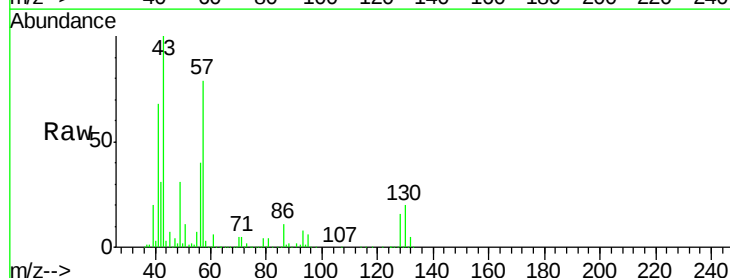
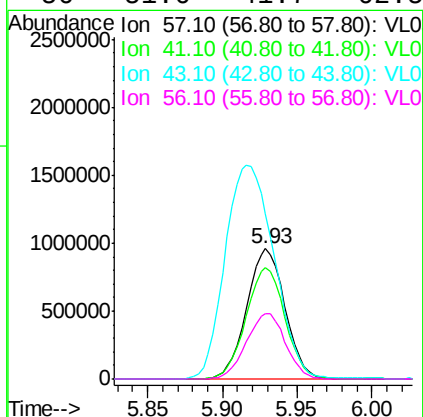
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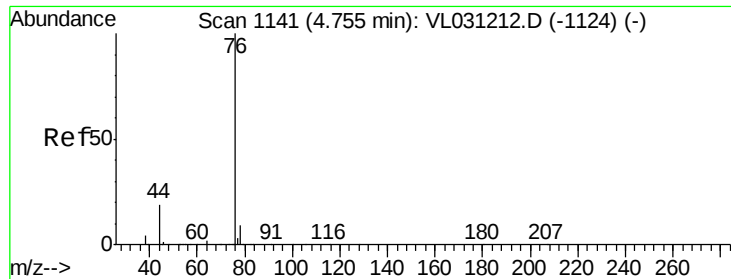
MMDadoda  
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#26  
Hexane  
Concen: 8.12 ppbv  
RT: 5.93 min Scan# 1506  
Delta R.T. 0.00 min  
Lab File: VL031221.D  
Acq: 14 Dec 2017 5:31

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 57      | 100   |       |       |
| 41      | 87.6  | 70.3  | 105.5 |
| 43      | 210.5 | 173.8 | 260.8 |
| 56      | 51.6  | 41.7  | 62.5  |





#27

Carbon Disulfide

Concen: 8.61 ppbv

RT: 4.76 min Scan# 1141

Delta R.T. 0.00 min

Lab File: VL031221.D

Acq: 14 Dec 2017 5:31

Instrument :

MSVOA\_L

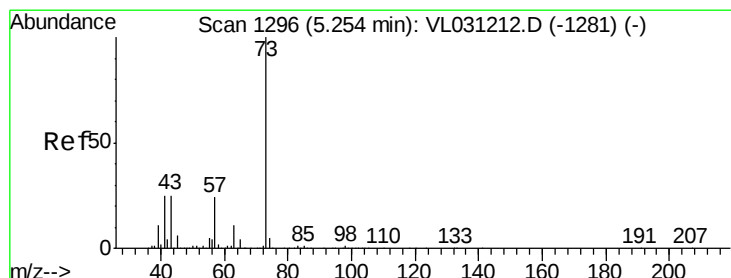
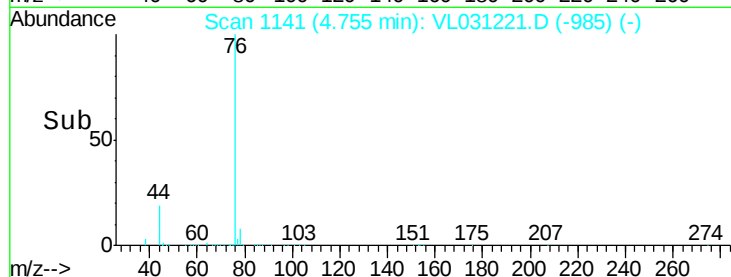
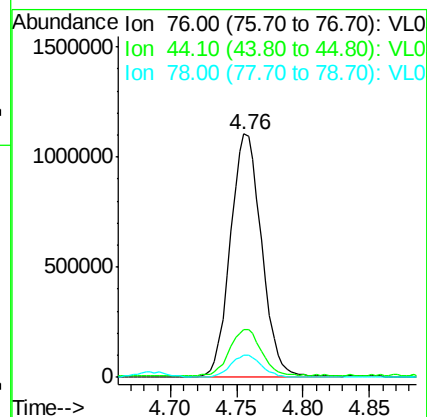
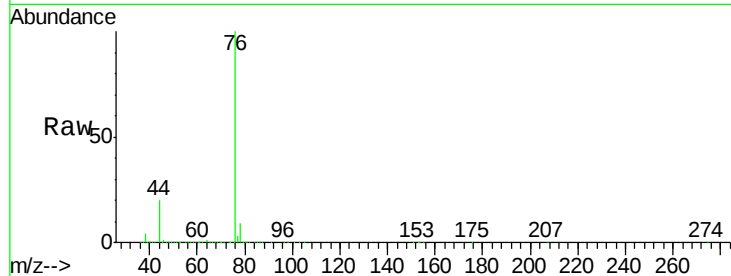
ClientSampleId :

VL1213ABS01

|          |       |       |         |
|----------|-------|-------|---------|
| Tot Ion: | 76    | Resp: | 1811365 |
| Ion      | Ratio | Lower | Upper   |
| 76       | 100   |       |         |
| 44       | 19.0  | 16.0  | 24.0    |
| 78       | 9.2   | 7.5   | 11.3    |

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#28

Methyl tert-Butyl Ether

Concen: 8.09 ppbv

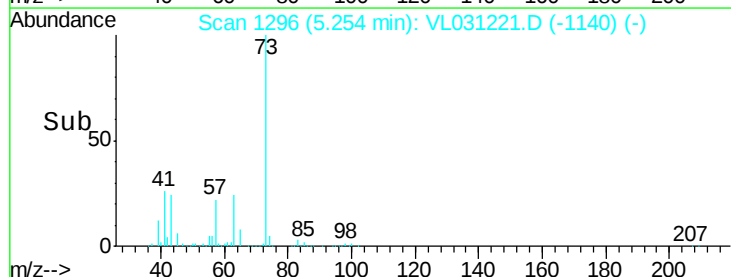
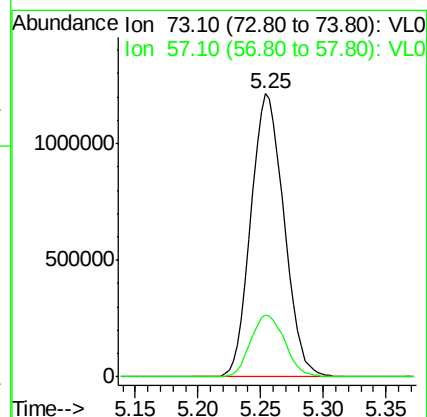
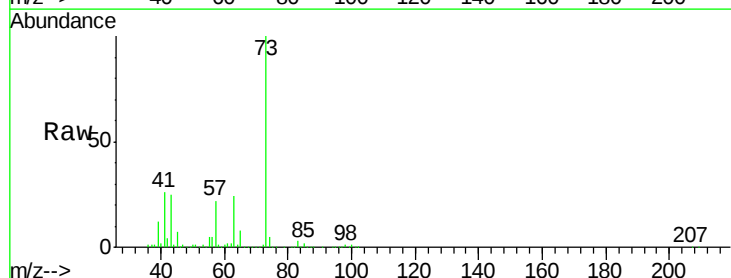
RT: 5.25 min Scan# 1296

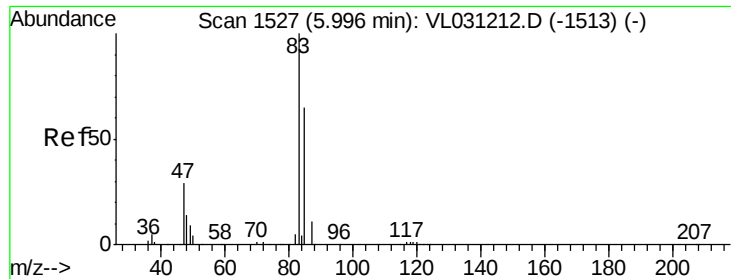
Delta R.T. 0.00 min

Lab File: VL031221.D

Acq: 14 Dec 2017 5:31

|          |       |       |         |
|----------|-------|-------|---------|
| Tgt Ion: | 73    | Resp: | 2221932 |
| Ion      | Ratio | Lower | Upper   |
| 73       | 100   |       |         |
| 57       | 22.7  | 18.5  | 27.7    |





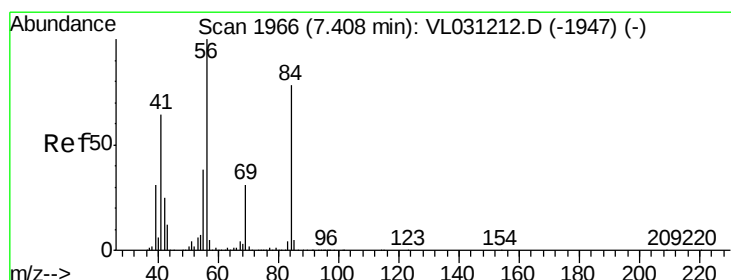
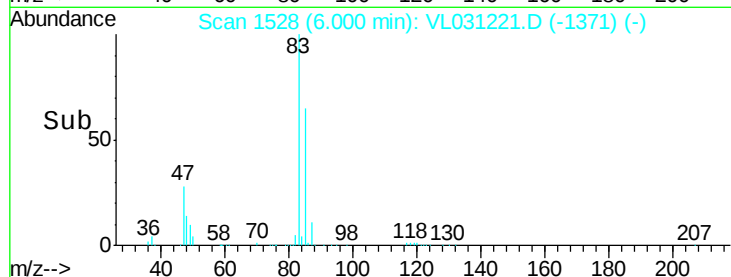
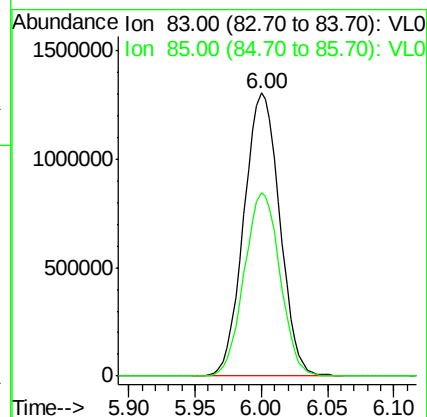
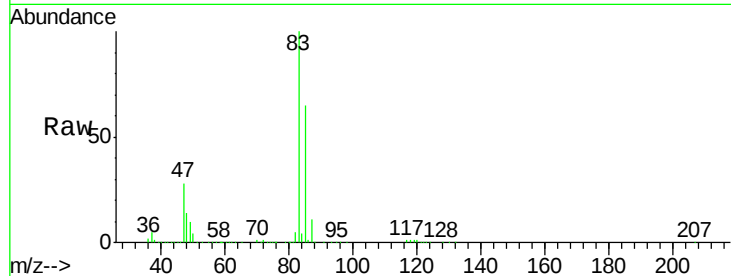
#29  
Chloroform  
Concen: 8.65 ppbv  
RT: 6.00 min Scan# 1528  
Delta R.T. 0.00 min  
Lab File: VL031221.D  
Acq: 14 Dec 2017 5:31

Instrument :  
MSVOA\_L  
ClientSampleId :  
VL1213ABS01

Tot Ion: 83 Resp: 2453002  
Ion Ratio Lower Upper  
83 100  
85 64.7 51.8 77.6

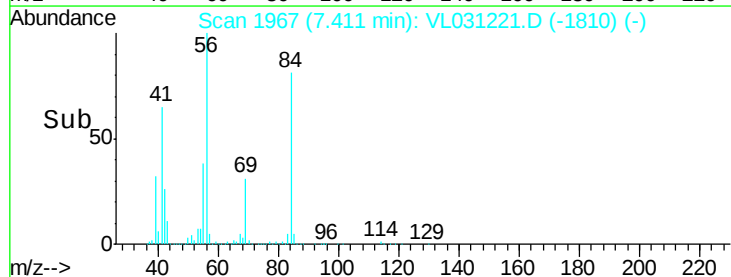
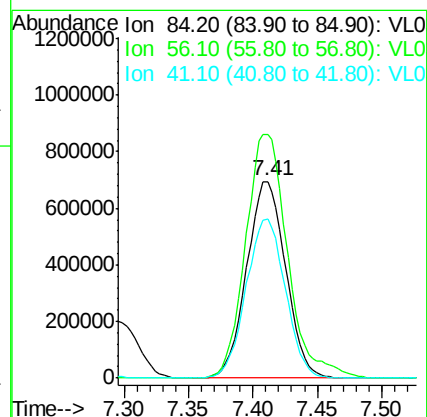
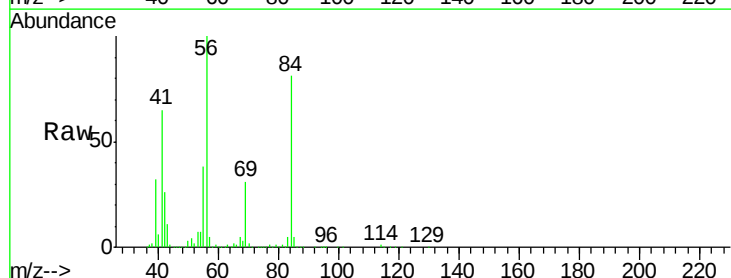
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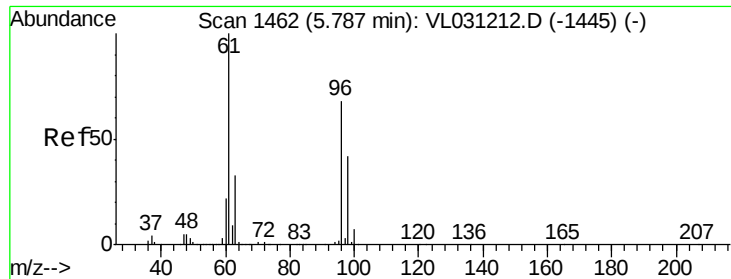
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#30  
Cyclohexane  
Concen: 7.91 ppbv  
RT: 7.41 min Scan# 1967  
Delta R.T. 0.00 min  
Lab File: VL031221.D  
Acq: 14 Dec 2017 5:31

Tgt Ion: 84 Resp: 1463431  
Ion Ratio Lower Upper  
84 100  
56 134.3 108.0 162.0  
41 81.8 66.2 99.4





#31

cis-1,2-Dichloroethene

Concen: 8.37 ppbv

RT: 5.79 min Scan# 1463

Delta R.T. 0.00 min

Lab File: VL031221.D

Acq: 14 Dec 2017 5:31

Instrument :

MSVOA\_L

ClientSampleId :

VL1213ABS01

Tot Ion: 61 Resp: 1594740

Ion Ratio Lower Upper

61 100

96 68.0 54.4 81.6

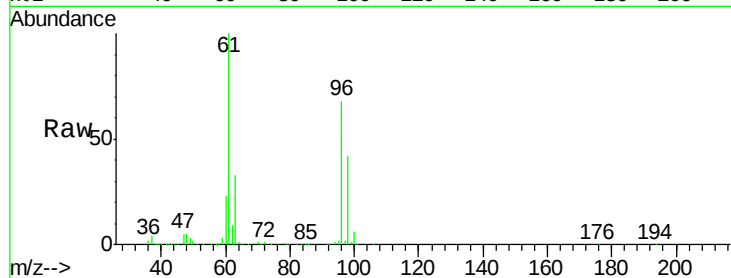
98 42.4 33.6 50.4

Manual Integrations

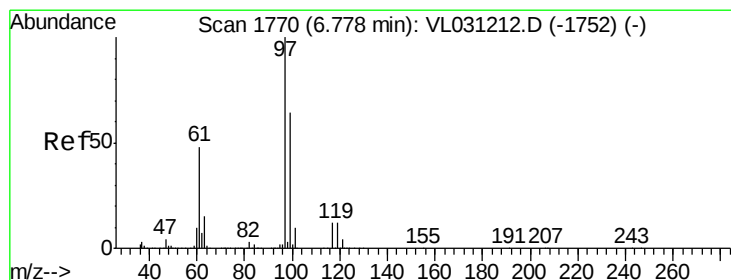
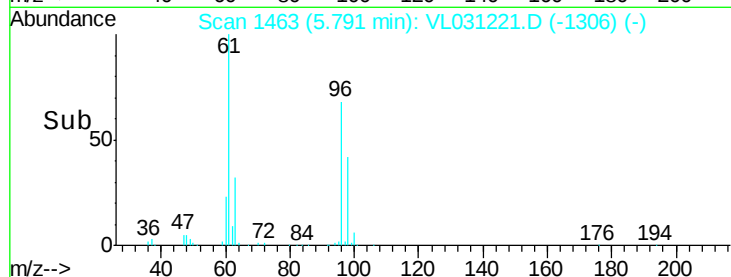
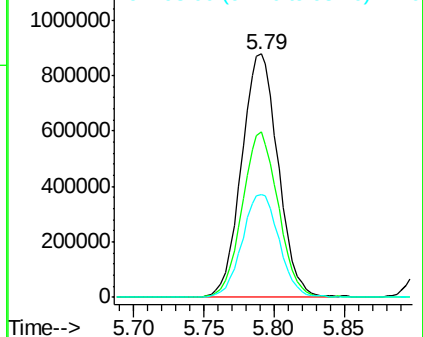
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Abundance Ion 61.10 (60.80 to 61.80): VL0  
Ion 96.00 (95.70 to 96.70): VL0  
Ion 98.00 (97.70 to 98.70): VL0



#32

1,1,1-Trichloroethane

Concen: 8.04 ppbv

RT: 6.78 min Scan# 1770

Delta R.T. 0.00 min

Lab File: VL031221.D

Acq: 14 Dec 2017 5:31

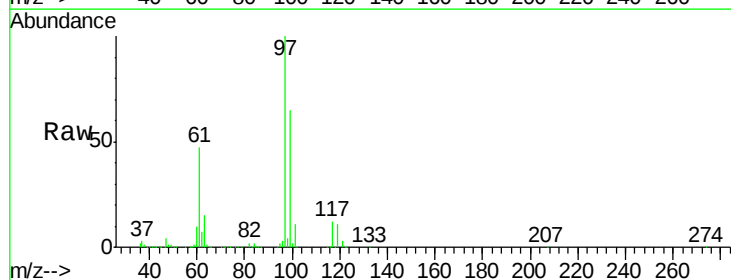
Tgt Ion: 97 Resp: 2437649

Ion Ratio Lower Upper

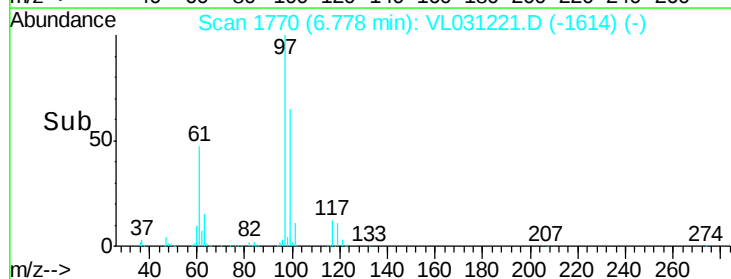
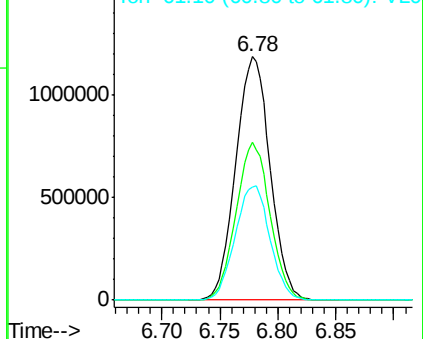
97 100

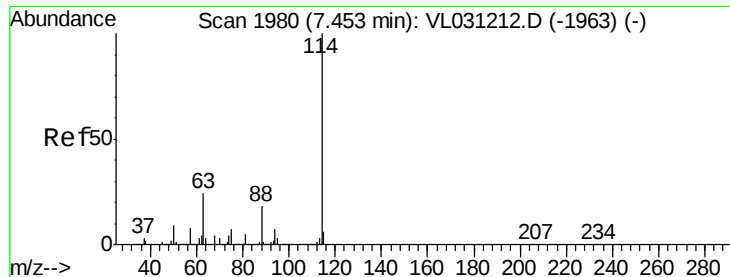
99 64.2 51.4 77.0

61 47.6 38.4 57.6



Abundance Ion 97.00 (96.70 to 97.70): VL0  
Ion 99.00 (98.70 to 99.70): VL0  
Ion 61.10 (60.80 to 61.80): VL0





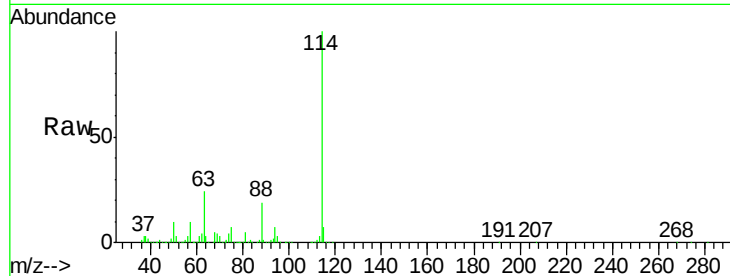
#33  
 1,4-Difluorobenzene  
 Concen: 10.00 ppbv  
 RT: 7.45 min Scan# 1980  
 Delta R.T. 0.00 min  
 Lab File: VL031221.D  
 Acq: 14 Dec 2017 5:31

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VL1213ABS01

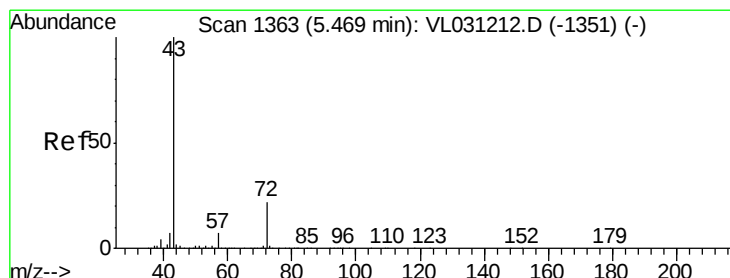
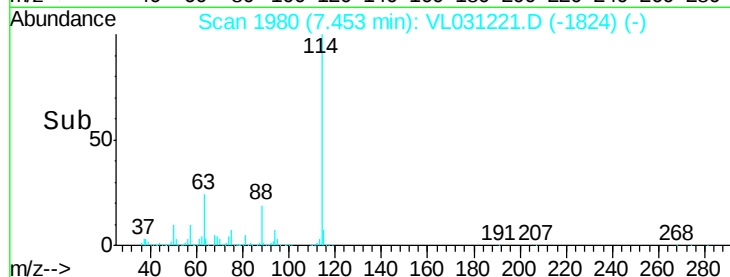
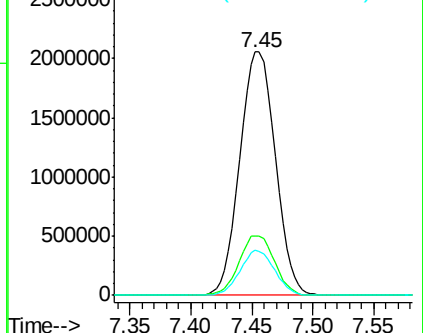
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 114     | 100   |       |       |
| 63      | 24.5  | 19.8  | 29.8  |
| 88      | 17.9  | 14.2  | 21.4  |

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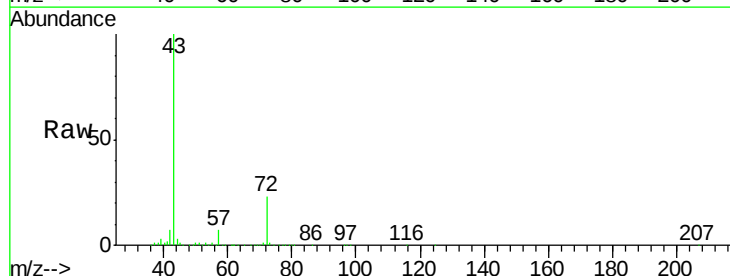


Abundance Ion 114.10 (113.80 to 114.80): VL0  
 Ion 63.10 (62.80 to 63.80): VL0  
 Ion 88.10 (87.80 to 88.80): VL0

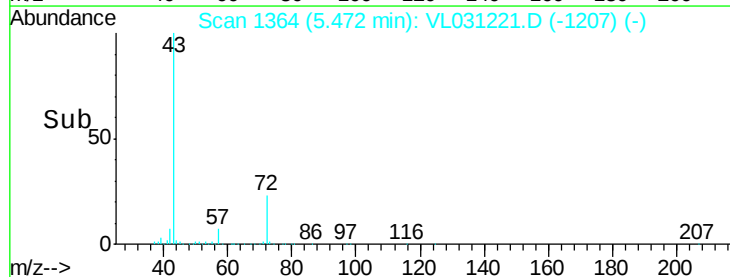
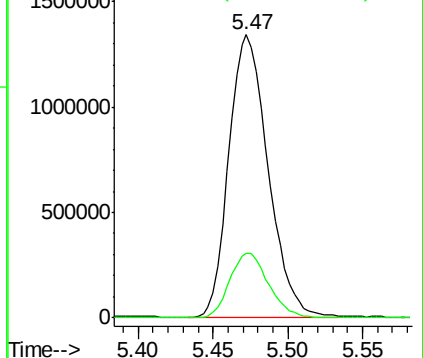


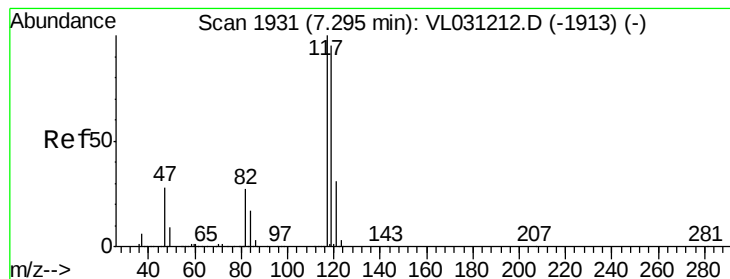
#34  
 2-Butanone  
 Concen: 8.35 ppbv  
 RT: 5.47 min Scan# 1364  
 Delta R.T. 0.00 min  
 Lab File: VL031221.D  
 Acq: 14 Dec 2017 5:31

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 43      | 100   |       |       |
| 72      | 22.8  | 18.1  | 27.1  |



Abundance Ion 43.10 (42.80 to 43.80): VL0  
 Ion 72.10 (71.80 to 72.80): VL0





#35

Carbon Tetrachloride

Concen: 8.14 ppbv

RT: 7.30 min Scan# 1932

Delta R.T. 0.00 min

Lab File: VL031221.D

Acq: 14 Dec 2017 5:31

Instrument :

MSVOA\_L

ClientSampleId :

VL1213ABS01

Tot Ion:117 Resp: 2416931

Ion Ratio Lower Upper

117 100

119 93.7 75.9 113.9

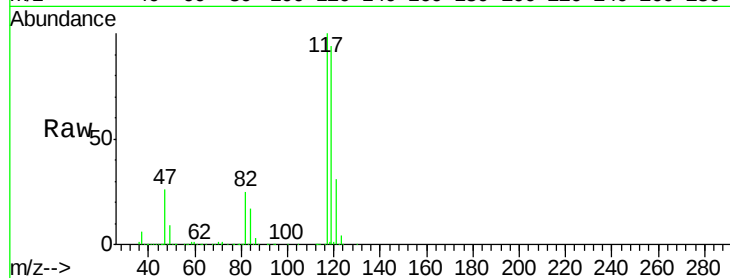
121 31.0 24.6 37.0

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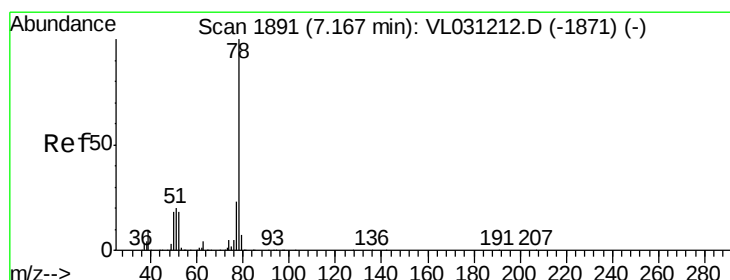
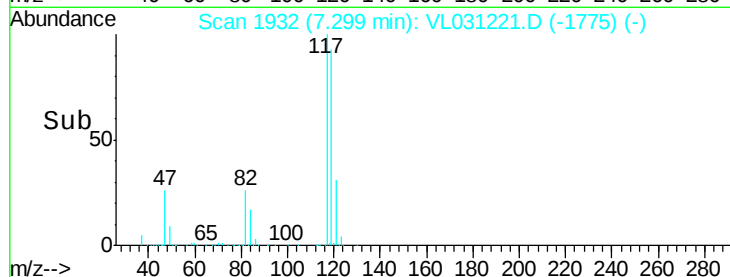
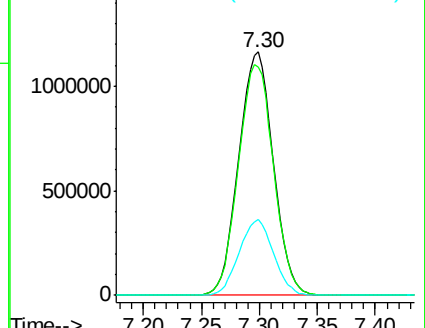
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Abundance Ion 117.00 (116.70 to 117.70): V

Ion 119.00 (118.70 to 119.70): V

Ion 121.00 (120.70 to 121.70): V



#36

Benzene

Concen: 8.00 ppbv

RT: 7.17 min Scan# 1891

Delta R.T. 0.00 min

Lab File: VL031221.D

Acq: 14 Dec 2017 5:31

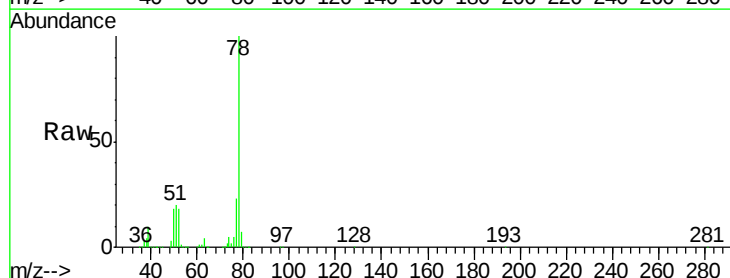
Tgt Ion: 78 Resp: 3516492

Ion Ratio Lower Upper

78 100

77 23.4 18.1 27.1

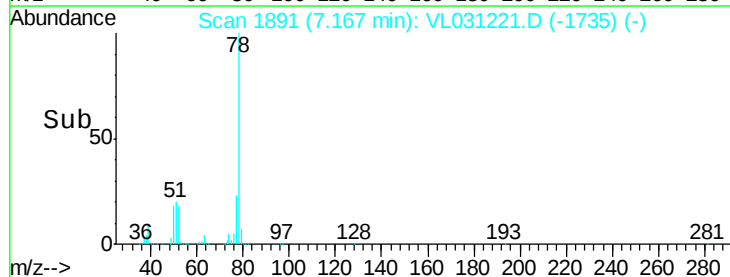
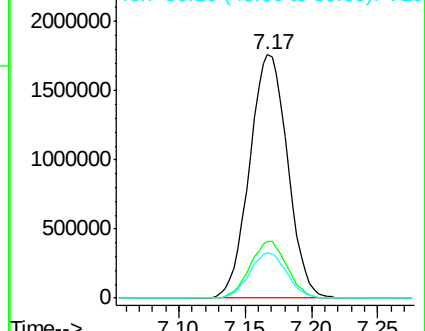
50 18.4 14.6 21.8

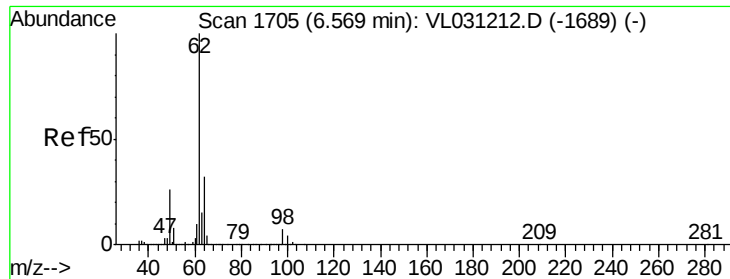


Abundance Ion 78.10 (77.80 to 78.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

Ion 50.10 (49.80 to 50.80): VL0





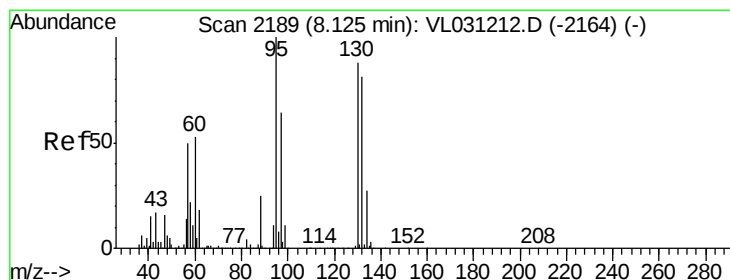
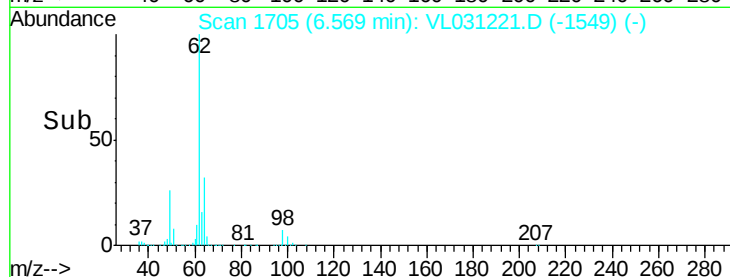
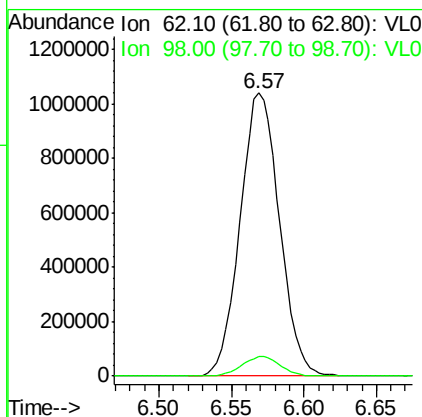
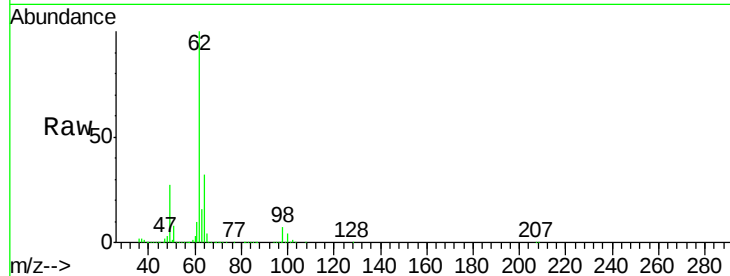
#37  
 1,2-Dichloroethane  
 Concen: 8.10 ppbv  
 RT: 6.57 min Scan# 1705  
 Delta R.T. 0.00 min  
 Lab File: VL031221.D  
 Acq: 14 Dec 2017 5:31

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VL1213ABS01

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 62      | 100   |       |       |
| 98      | 6.9   | 5.4   | 8.2   |

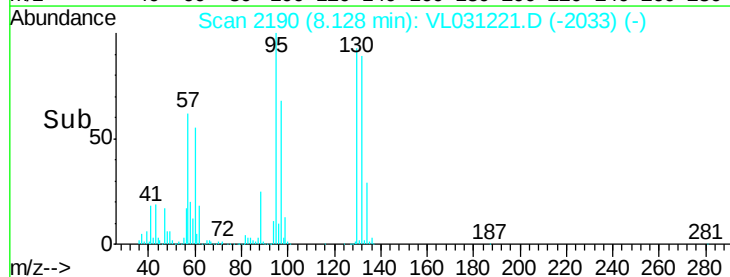
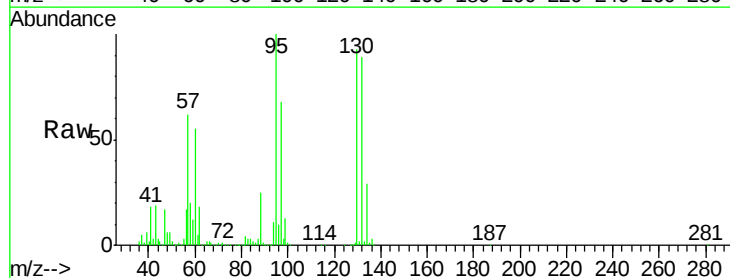
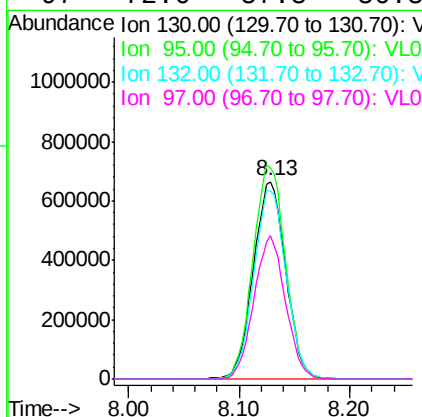
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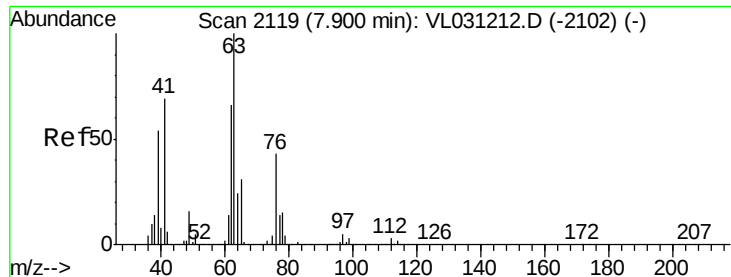
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#38  
 Trichloroethene  
 Concen: 7.88 ppbv  
 RT: 8.13 min Scan# 2190  
 Delta R.T. 0.00 min  
 Lab File: VL031221.D  
 Acq: 14 Dec 2017 5:31

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 130     | 100   |       |       |
| 95      | 107.2 | 90.6  | 135.8 |
| 132     | 95.6  | 73.5  | 110.3 |
| 97      | 72.6  | 57.8  | 86.8  |





#39

1,2-Dichloropropane

Concen: 8.44 ppbv

RT: 7.90 min Scan# 2120

Delta R.T. 0.00 min

Lab File: VL031221.D

Acq: 14 Dec 2017 5:31

Instrument :

MSVOA\_L

ClientSampleId :

VL1213ABS01

Tot Ion: 63 Resp: 1310563

Ion Ratio Lower Upper

63 100

41 71.2 55.2 82.8

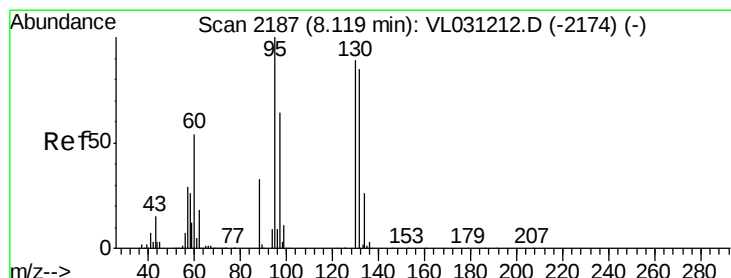
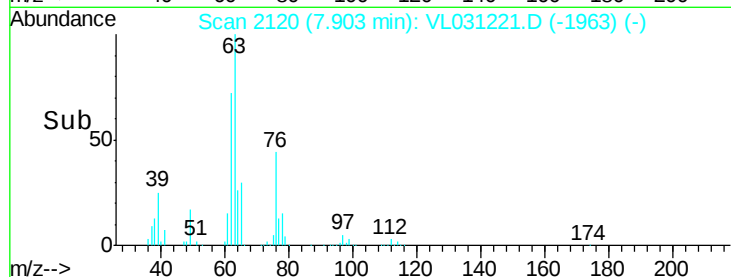
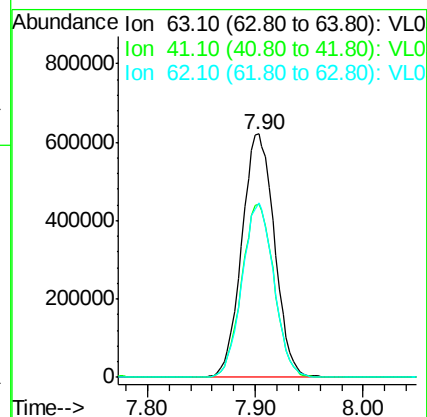
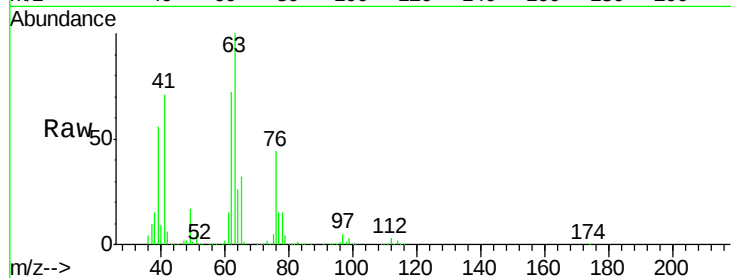
62 71.7 53.0 79.4

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#40

1,4-Dioxane

Concen: 8.67 ppbv

RT: 8.12 min Scan# 2187

Delta R.T. 0.00 min

Lab File: VL031221.D

Acq: 14 Dec 2017 5:31

Tgt Ion: 88 Resp: 486386

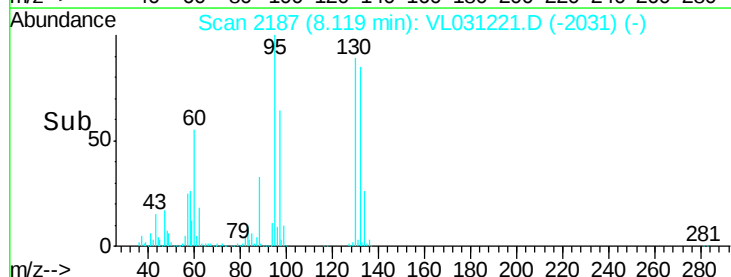
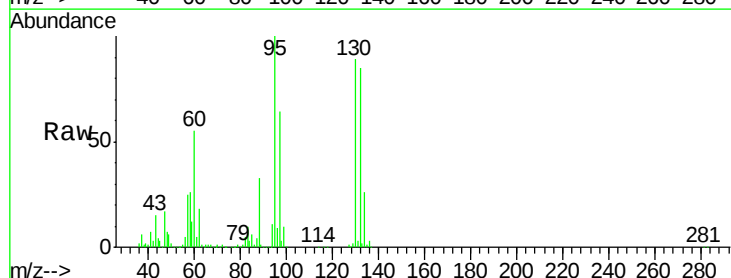
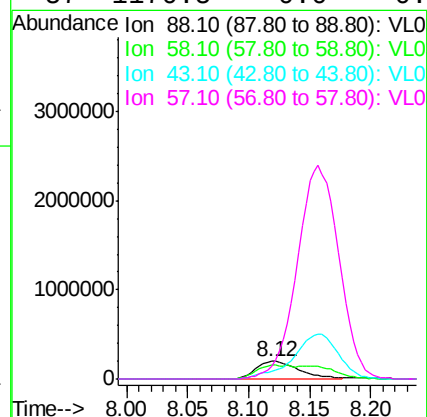
Ion Ratio Lower Upper

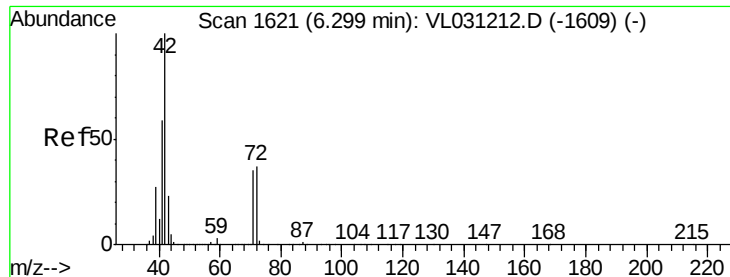
88 100

58 130.9 104.3 156.5

43 265.8 0.0 0.0#

57 1170.5 0.0 0.0#





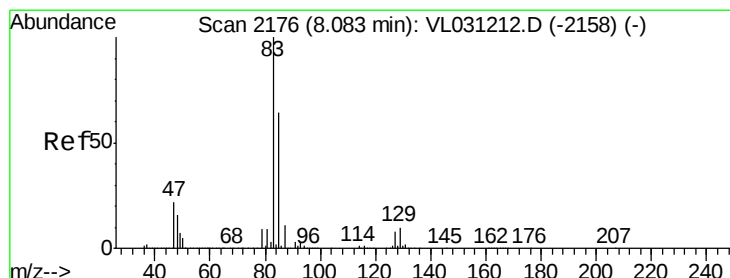
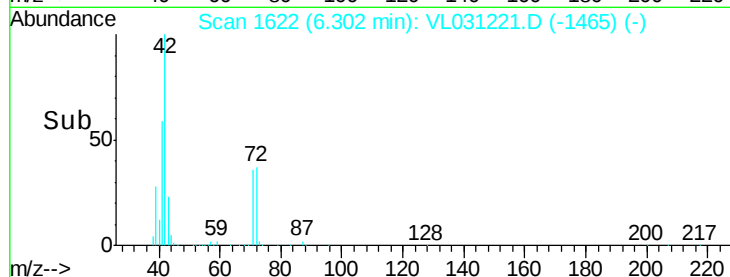
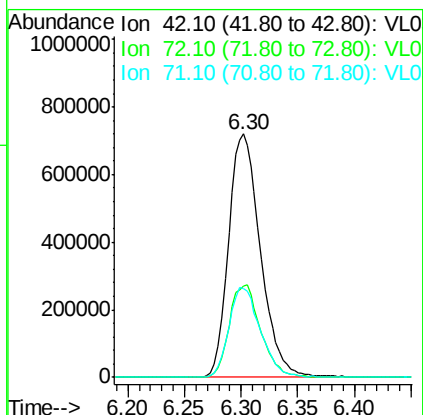
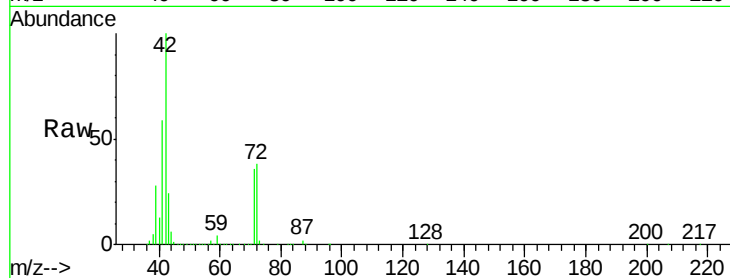
#41  
Tetrahydrofuran  
Concen: 8.56 ppbv  
RT: 6.30 min Scan# 1622  
Delta R.T. 0.00 min  
Lab File: VL031221.D  
Acq: 14 Dec 2017 5:31

Instrument :  
MSVOA\_L  
ClientSampleId :  
VL1213ABS01

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 42      | 100   |       |       |
| 72      | 37.9  | 30.2  | 45.4  |
| 71      | 36.9  | 29.0  | 43.6  |

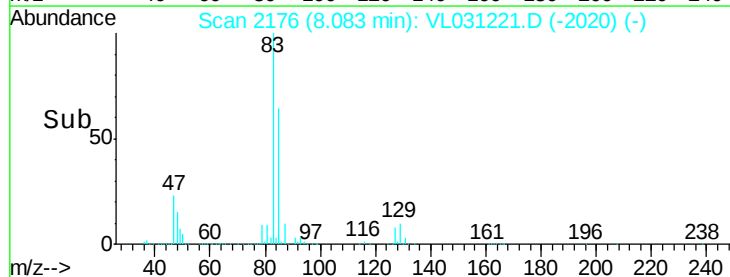
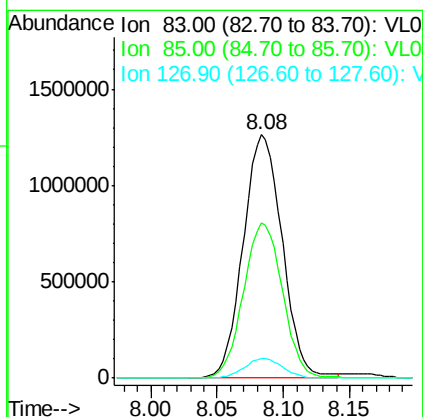
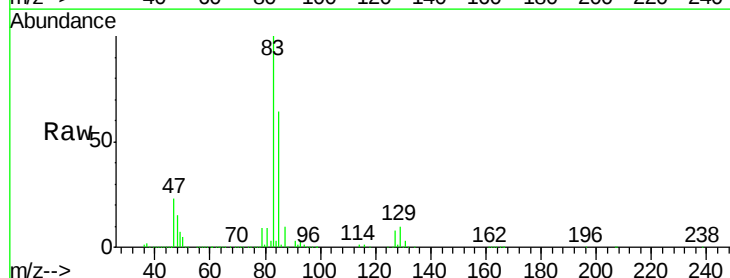
Manual Integrations  
APPROVED

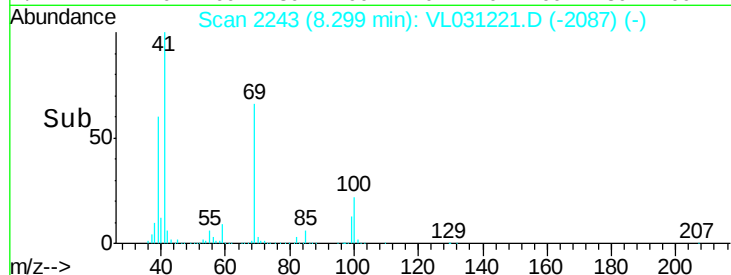
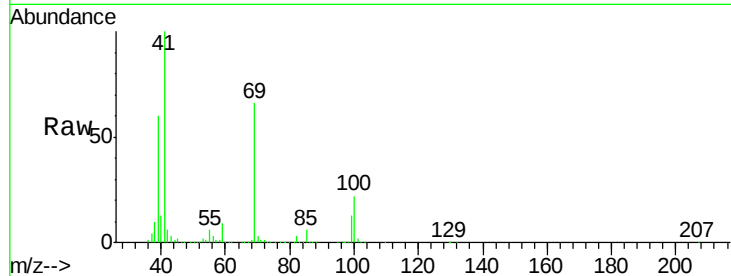
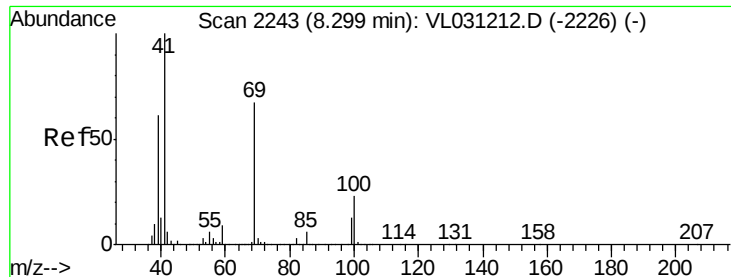
MMDadoda  
12/15/2017 4:07:02 PM



#42  
Bromodichloromethane  
Concen: 9.04 ppbv  
RT: 8.08 min Scan# 2176  
Delta R.T. 0.00 min  
Lab File: VL031221.D  
Acq: 14 Dec 2017 5:31

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 83      | 100   |       |       |
| 85      | 63.8  | 51.5  | 77.3  |
| 127     | 8.0   | 6.5   | 9.7   |





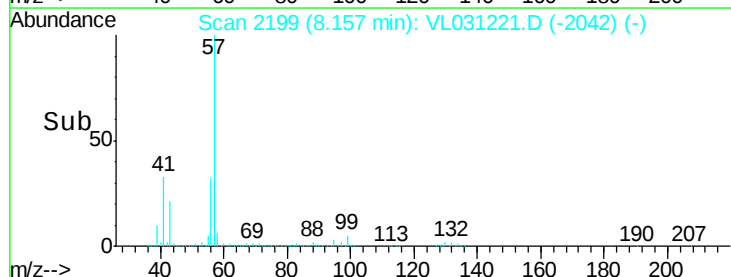
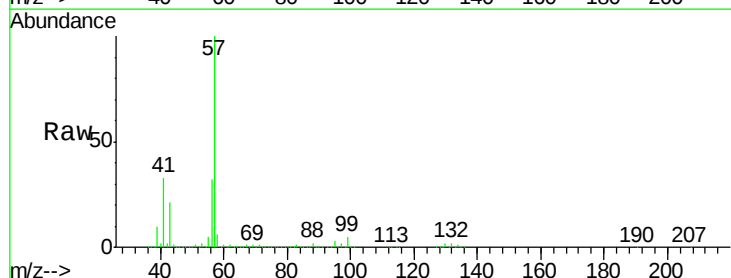
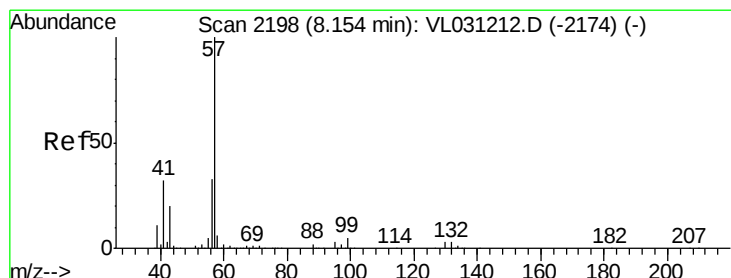
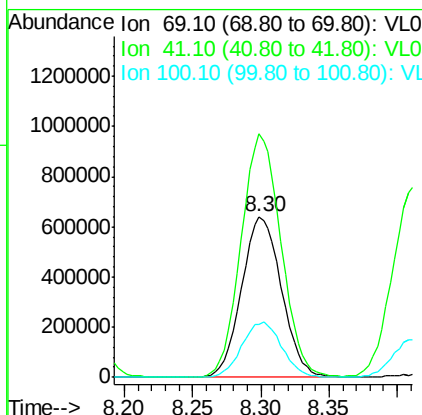
#43  
Methvl Methacrvlate  
Concen: 8.84 ppbv  
RT: 8.30 min Scan# 2243  
Delta R.T. 0.00 min  
Lab File: VL031221.D  
Acq: 14 Dec 2017 5:31

Tot Ion: 69 Resp: 1301339  
Ion Ratio Lower Upper  
69 100  
41 151.0 121.1 181.7  
100 34.5 27.4 41.2

Instrument :  
MSVOA\_L  
ClientSampleId :  
VL1213ABS01

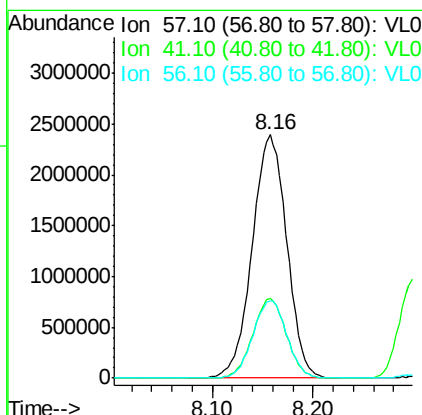
Manual Integrations  
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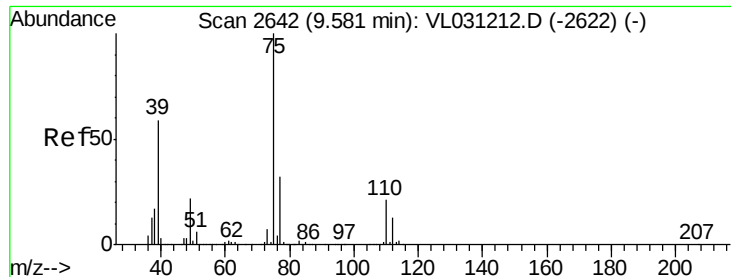
MMDadoda  
12/15/2017 4:07:02 PM



#44  
2,2,4-Trimethylpentane  
Concen: 8.57 ppbv  
RT: 8.16 min Scan# 2199  
Delta R.T. 0.00 min  
Lab File: VL031221.D  
Acq: 14 Dec 2017 5:31

Tgt Ion: 57 Resp: 5686583  
Ion Ratio Lower Upper  
57 100  
41 31.7 25.5 38.3  
56 31.3 25.0 37.6





#45

t-1,3-Dichloropropene

Concen: 9.07 ppbv

RT: 9.58 min Scan# 2643

Delta R.T. 0.00 min

Lab File: VL031221.D

Acq: 14 Dec 2017 5:31

Instrument :

MSVOA\_L

ClientSampleId :

VL1213ABS01

Tot Ion: 75 Resp: 1825412

Ion Ratio Lower Upper

75 100

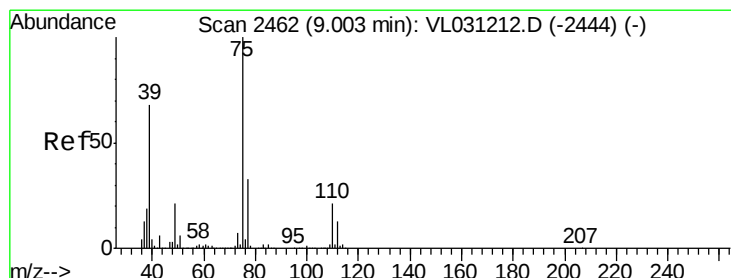
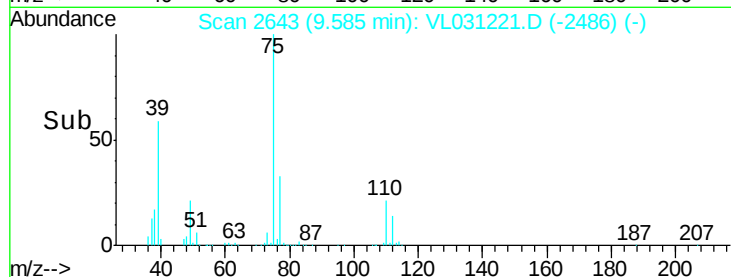
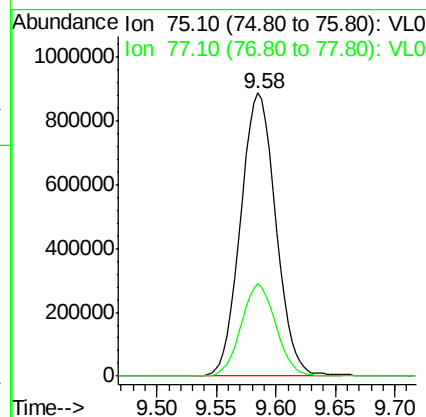
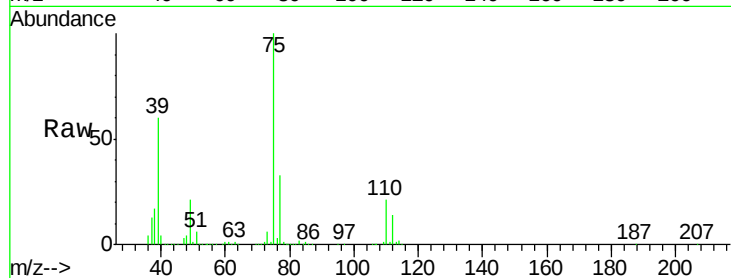
77 32.7 25.4 38.2

Manual Integrations

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#46

cis-1,3-Dichloropropene

Concen: 8.73 ppbv

RT: 9.00 min Scan# 2462

Delta R.T. 0.00 min

Lab File: VL031221.D

Acq: 14 Dec 2017 5:31

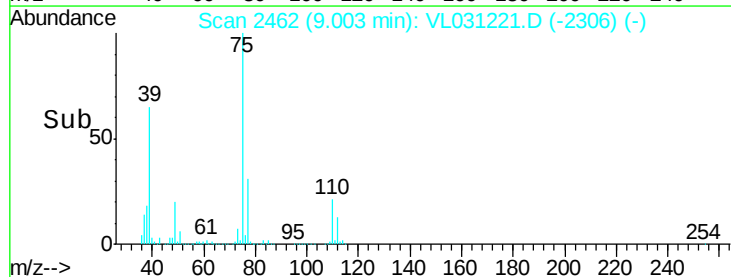
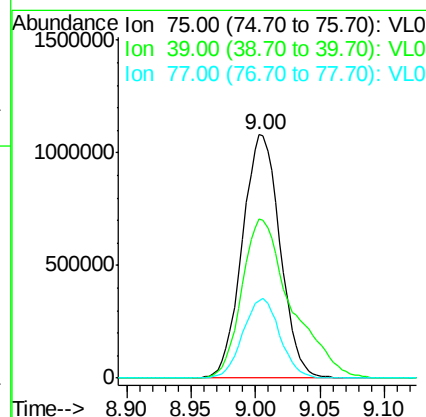
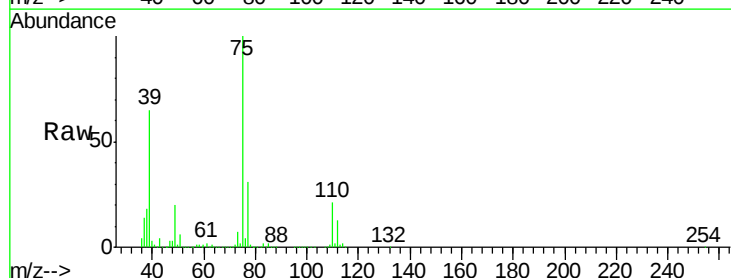
Tgt Ion: 75 Resp: 2208808

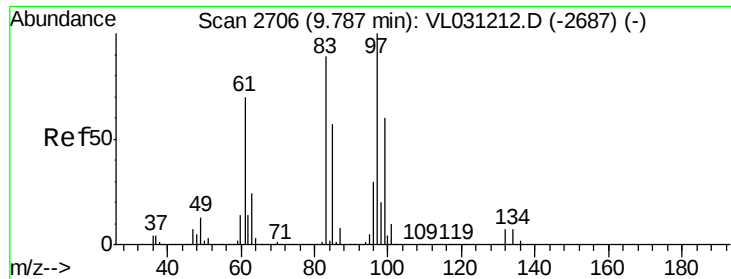
Ion Ratio Lower Upper

75 100

39 65.4 54.2 81.4

77 31.5 26.2 39.4





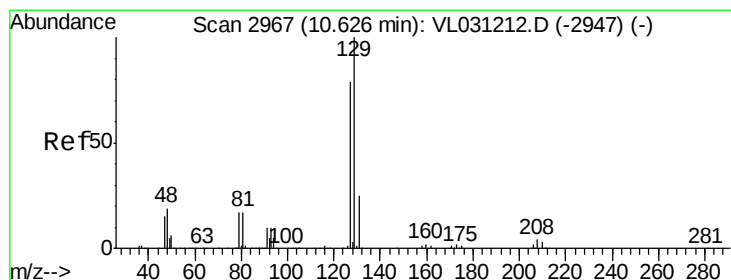
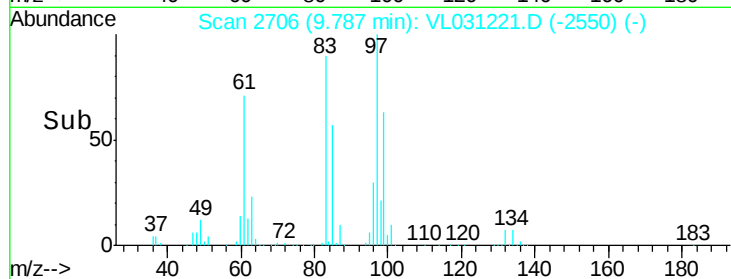
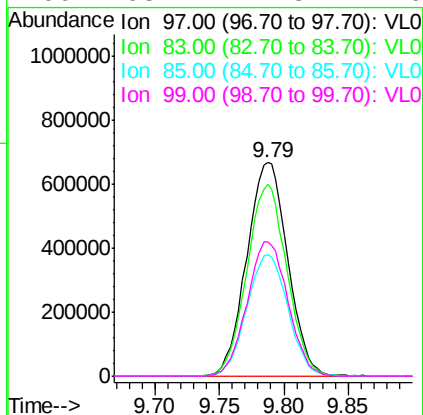
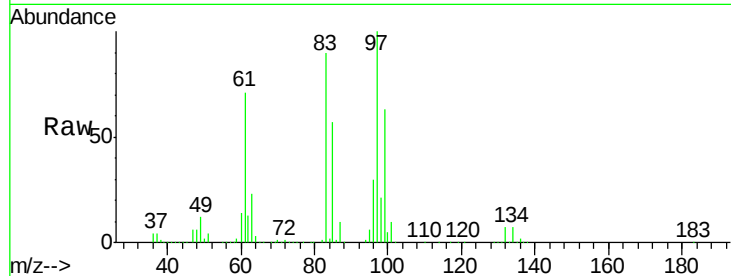
#47  
 1,1,2-Trichloroethane  
 Concen: 9.19 ppbv  
 RT: 9.79 min Scan# 2706  
 Delta R.T. 0.00 min  
 Lab File: VL031221.D  
 Acq: 14 Dec 2017 5:31

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VL1213ABS01

| Tot Ion | Ion  | Ratio | Lower | Upper |
|---------|------|-------|-------|-------|
| 97      | 100  |       |       |       |
| 83      | 90.0 | 71.0  | 106.4 |       |
| 85      | 56.7 | 45.3  | 67.9  |       |
| 99      | 63.1 | 47.8  | 71.6  |       |

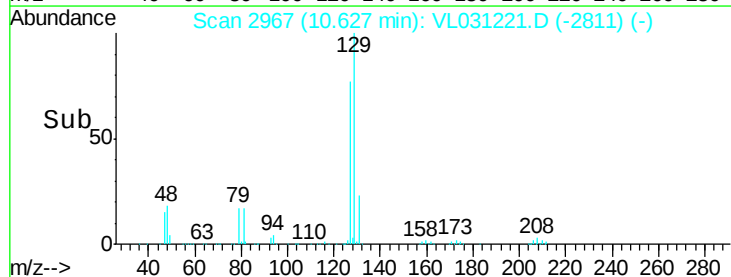
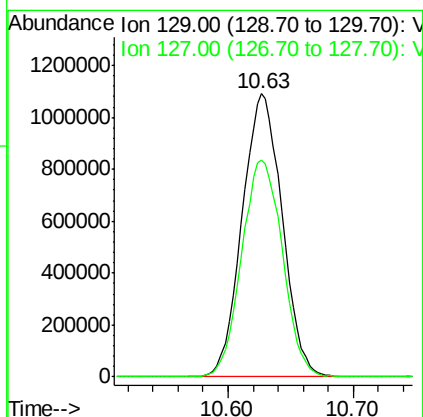
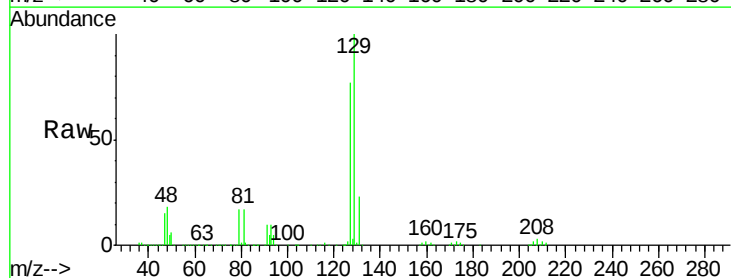
Manual Integrations  
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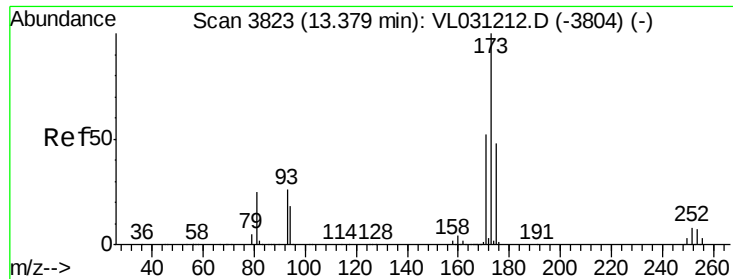
MMDadoda  
 12/15/2017 4:07:02 PM



#48  
 Dibromochloromethane  
 Concen: 9.59 ppbv  
 RT: 10.63 min Scan# 2967  
 Delta R.T. 0.00 min  
 Lab File: VL031221.D  
 Acq: 14 Dec 2017 5:31

| Tgt Ion | Ion  | Ratio | Lower | Upper |
|---------|------|-------|-------|-------|
| 129     | 100  |       |       |       |
| 127     | 78.5 | 39.1  | 117.5 |       |





#49

Bromoform

Concen: 9.31 ppbv

RT: 13.38 min Scan# 3823

Delta R.T. 0.00 min

Lab File: VL031221.D

Acq: 14 Dec 2017 5:31

Instrument :

MSVOA\_L

ClientSampleId :

VL1213ABS01

Tot Ion:173 Resp: 1728469

Ion Ratio Lower Upper

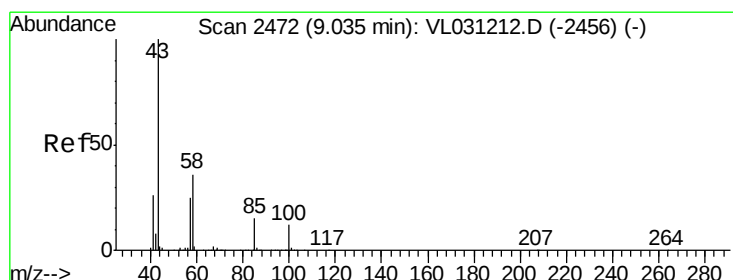
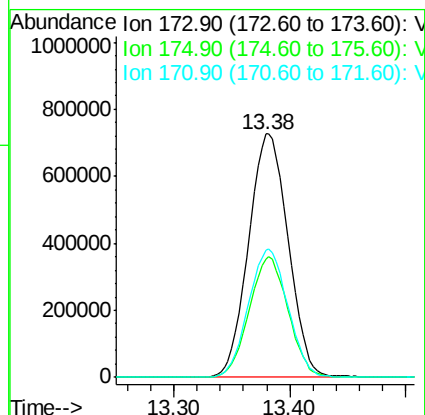
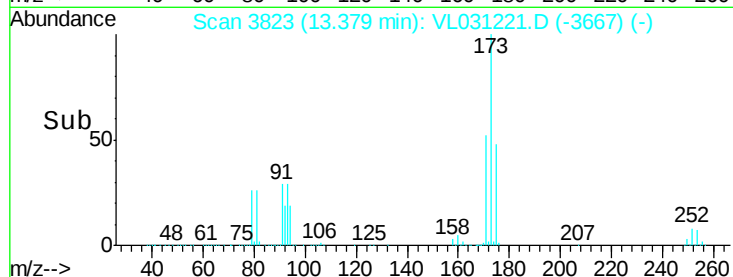
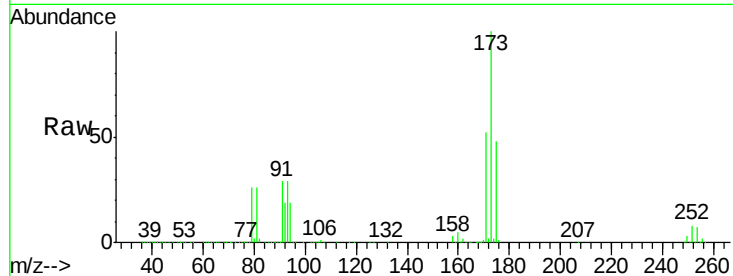
173 100

175 48.7 39.0 58.4

171 52.7 41.8 62.8

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#50

4-Methyl-2-Pentanone

Concen: 8.63 ppbv

RT: 9.04 min Scan# 2473

Delta R.T. 0.00 min

Lab File: VL031221.D

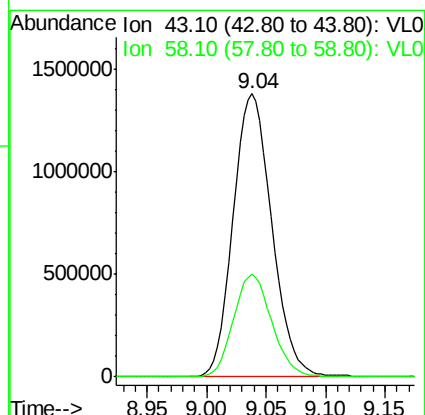
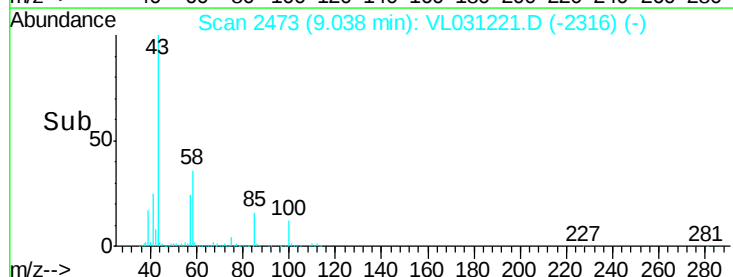
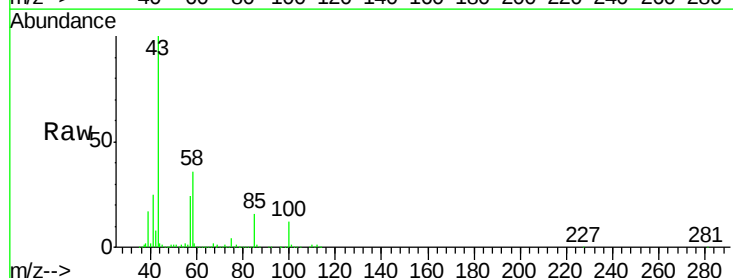
Acq: 14 Dec 2017 5:31

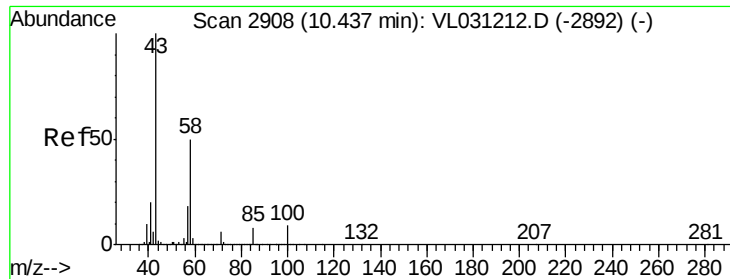
Tgt Ion: 43 Resp: 3093285

Ion Ratio Lower Upper

43 100

58 36.1 28.8 43.2





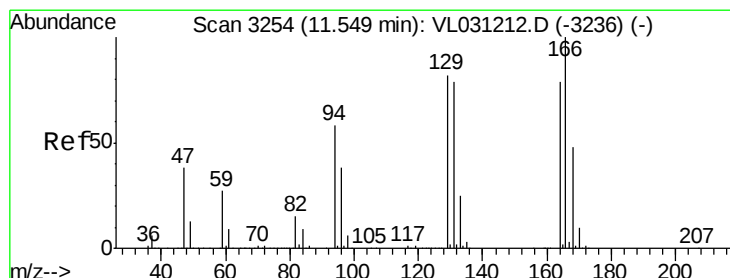
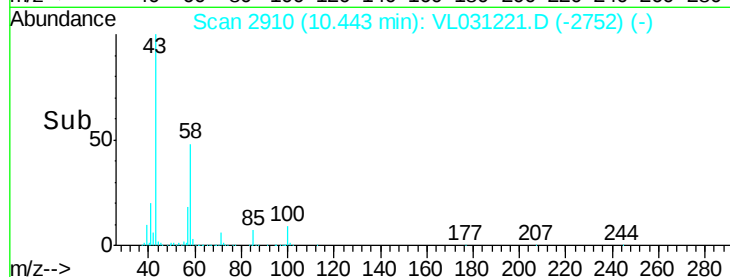
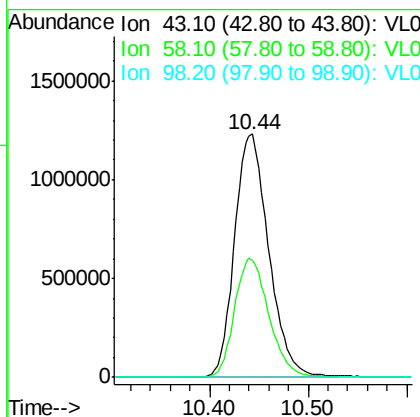
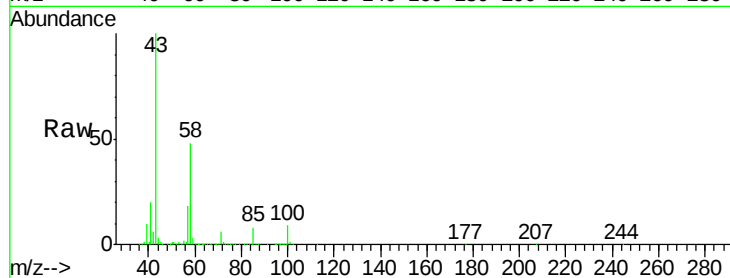
#51  
2-Hexanone  
Concen: 8.65 ppbv  
RT: 10.44 min Scan# 2910  
Delta R.T. 0.01 min  
Lab File: VL031221.D  
Acq: 14 Dec 2017 5:31

Instrument :  
MSVOA\_L  
ClientSampleId :  
VL1213ABS01

Tot Ion: 43 Resp: 2956539  
Ion Ratio Lower Upper  
43 100  
58 49.3 39.8 59.6  
98 0.1 0.0 0.0#

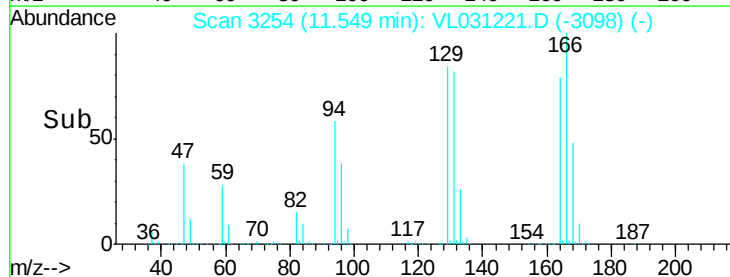
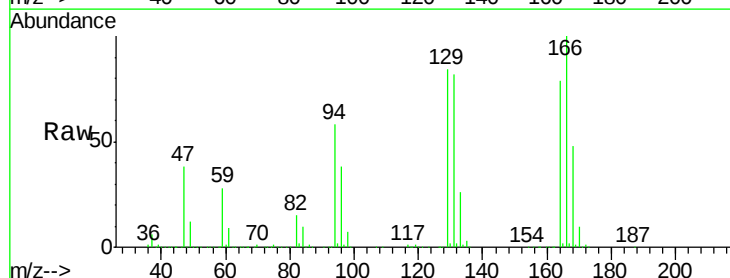
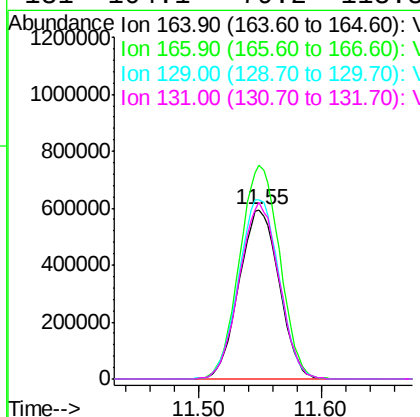
Manual Integrations  
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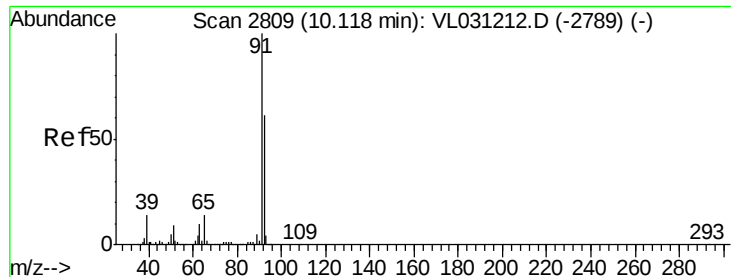
MMDadoda  
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#52  
Tetrachloroethene  
Concen: 8.31 ppbv  
RT: 11.55 min Scan# 3254  
Delta R.T. 0.00 min  
Lab File: VL031221.D  
Acq: 14 Dec 2017 5:31

Tgt Ion:164 Resp: 1346531  
Ion Ratio Lower Upper  
164 100  
166 126.2 100.6 151.0  
129 105.5 82.9 124.3  
131 104.1 79.2 118.8





#53

Toluene

Concen: 9.11 ppbv

RT: 10.12 min Scan# 2809

Delta R.T. 0.00 min

Lab File: VL031221.D

Acq: 14 Dec 2017 5:31

Instrument :

MSVOA\_L

ClientSampleId :

VL1213ABS01

Tot Ion: 91 Resp: 4341035

Ion Ratio Lower Upper

91 100

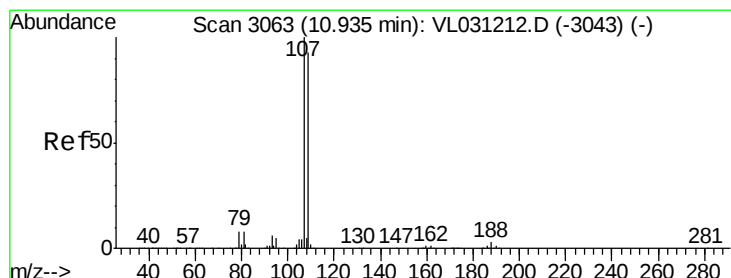
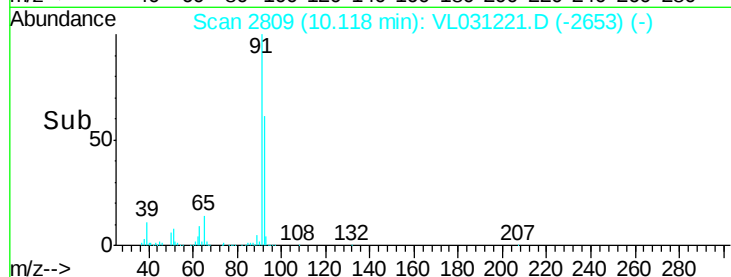
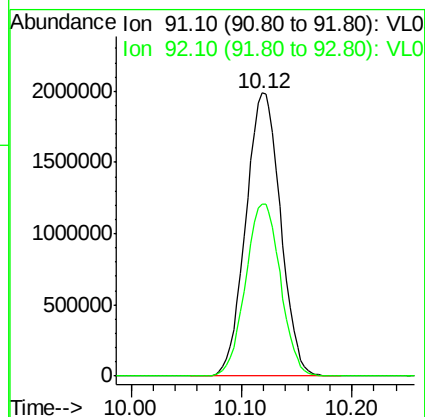
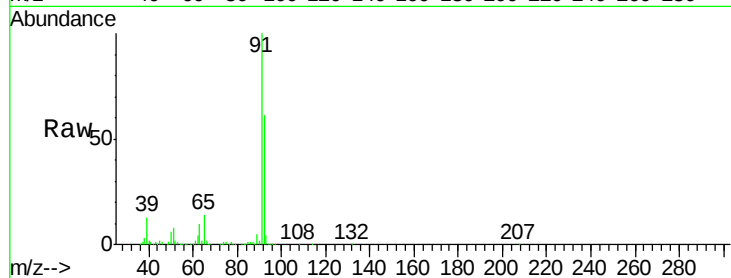
92 61.1 49.1 73.7

Manual Integrations

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#54

1,2-Dibromoethane

Concen: 9.35 ppbv

RT: 10.94 min Scan# 3063

Delta R.T. 0.00 min

Lab File: VL031221.D

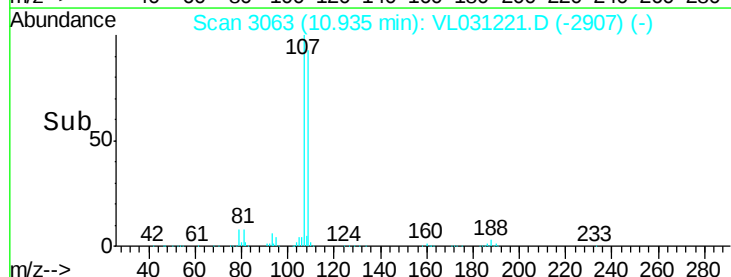
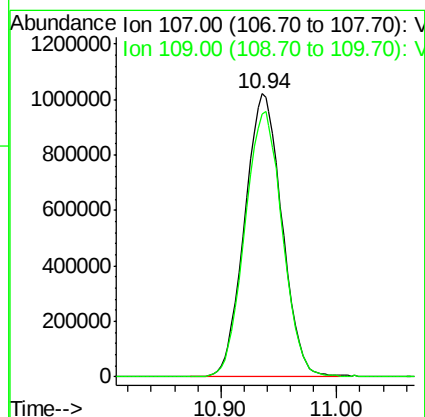
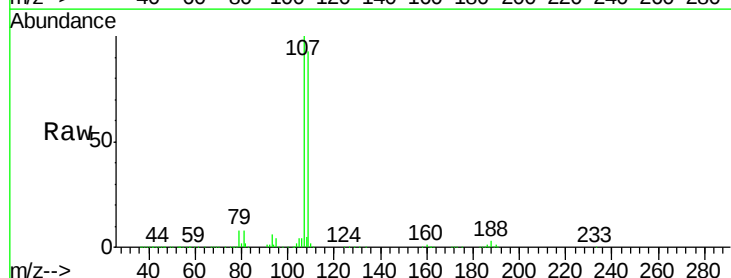
Acq: 14 Dec 2017 5:31

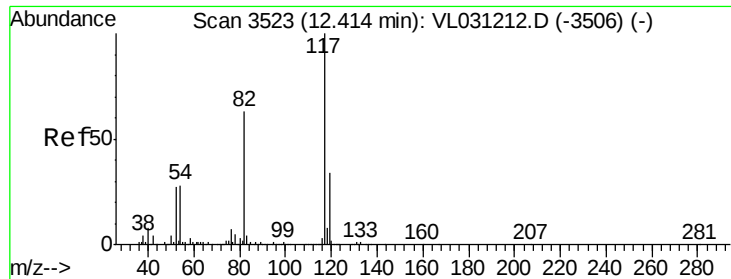
Tgt Ion: 107 Resp: 2283158

Ion Ratio Lower Upper

107 100

109 92.8 74.7 112.1





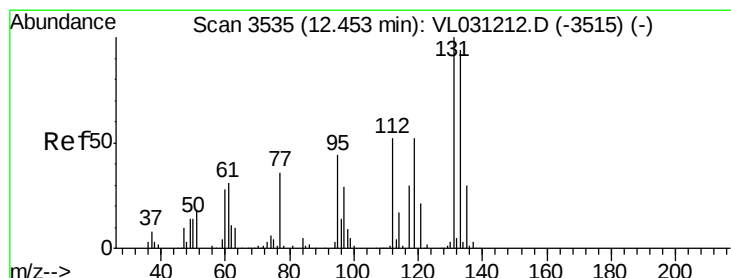
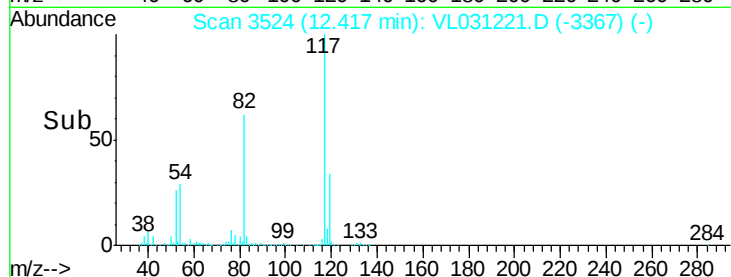
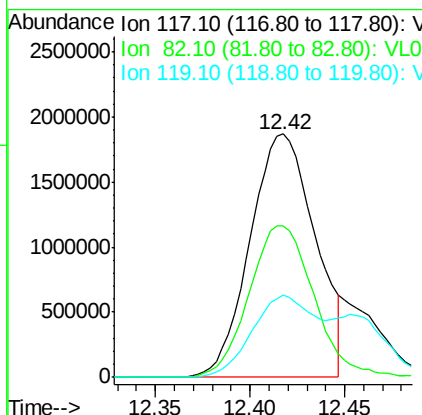
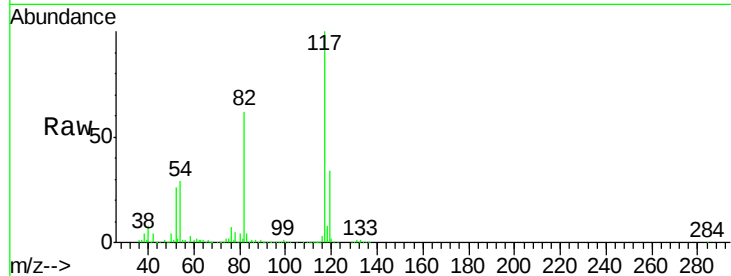
#55  
Chlorobenzene-d5  
Concen: 10.00 ppbv m  
RT: 12.42 min Scan# 3524  
Delta R.T. 0.00 min  
Lab File: VL031221.D  
Acq: 14 Dec 2017 5:31

Instrument :  
MSVOA\_L  
ClientSampleId :  
VL1213ABS01

Tot Ion:117 Resp: 4455737  
Ion Ratio Lower Upper  
117 100  
82 62.4 48.1 72.1  
119 54.5 23.1 34.7#

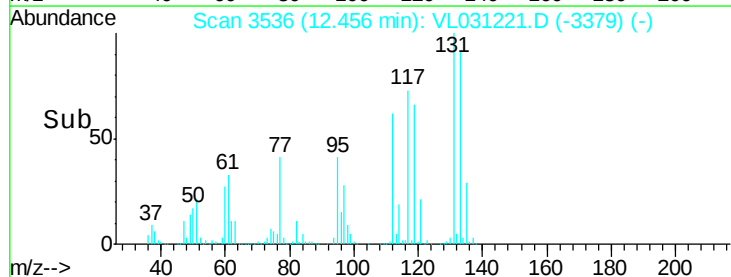
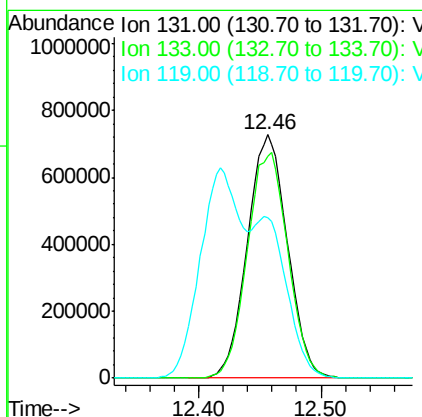
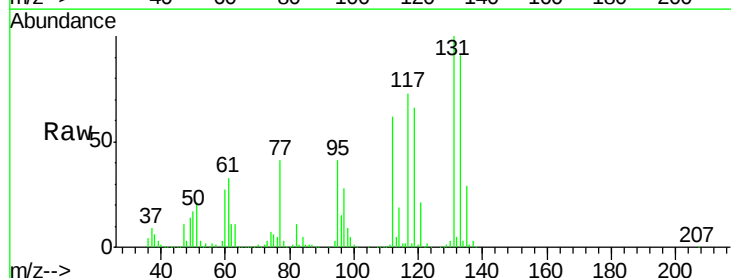
Manual Integrations  
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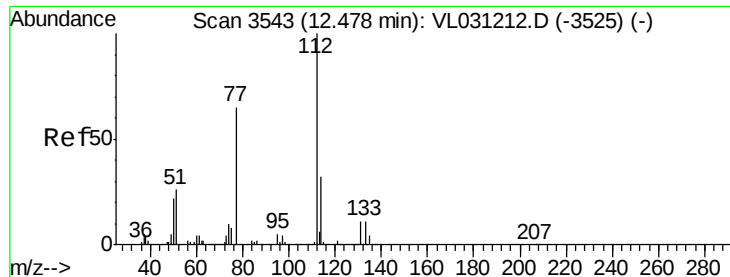
MMDadoda  
12/15/2017 4:07:02 PM



#56  
1,1,1,2-Tetrachloroethane  
Concen: 8.29 ppbv  
RT: 12.46 min Scan# 3536  
Delta R.T. 0.00 min  
Lab File: VL031221.D  
Acq: 14 Dec 2017 5:31

Tgt Ion:131 Resp: 1647212  
Ion Ratio Lower Upper  
131 100  
133 94.3 76.1 114.1  
119 147.3 108.5 162.7





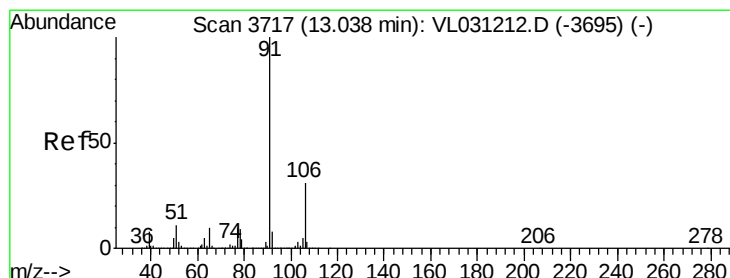
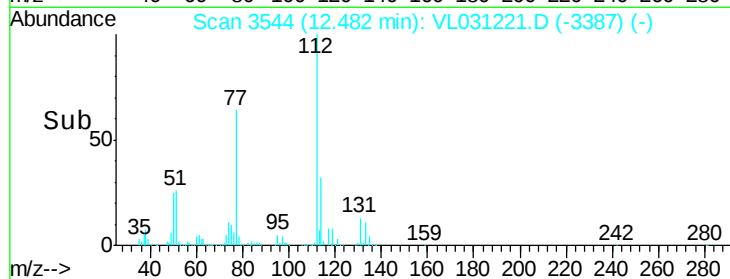
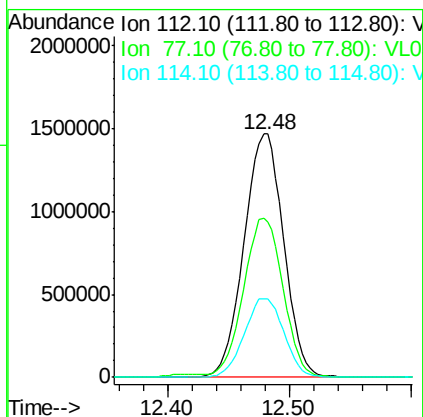
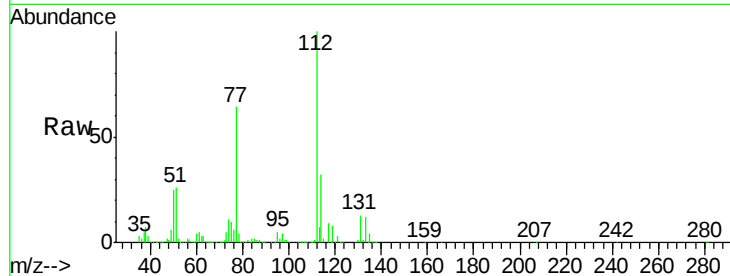
#57  
Chlorobenzene  
Concen: 7.93 ppbv  
RT: 12.48 min Scan# 3544  
Delta R.T. 0.00 min  
Lab File: VL031221.D  
Acq: 14 Dec 2017 5:31

Instrument :  
MSVOA\_L  
ClientSampleId :  
VL1213ABS01

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 112     | 100   |       |       |
| 77      | 63.9  | 52.9  | 79.3  |
| 114     | 32.0  | 29.1  | 35.5  |

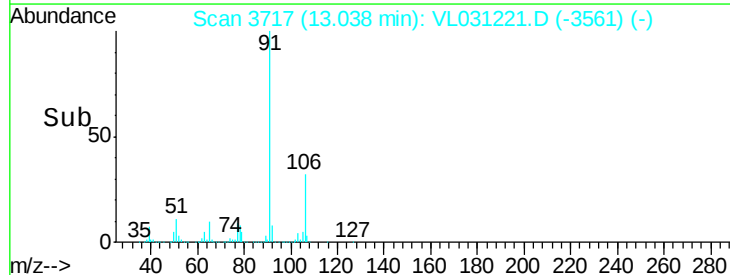
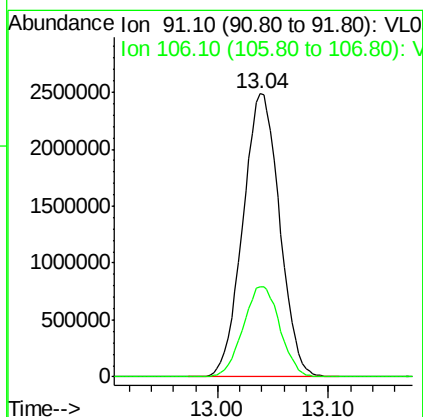
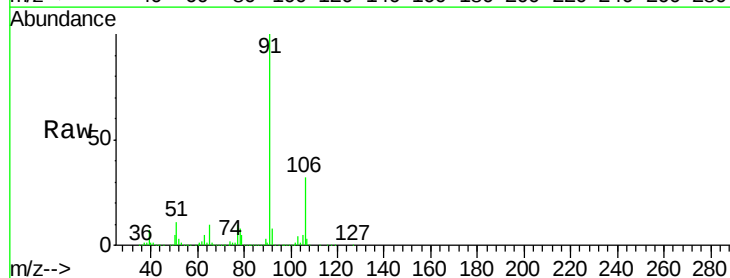
Manual Integrations  
APPROVED

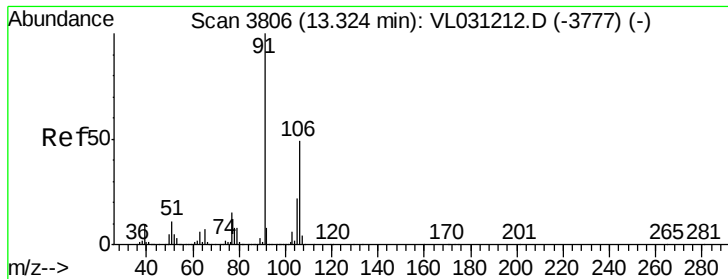
MMDadoda  
12/15/2017 4:07:02 PM



#58  
Ethyl Benzene  
Concen: 7.80 ppbv  
RT: 13.04 min Scan# 3717  
Delta R.T. 0.00 min  
Lab File: VL031221.D  
Acq: 14 Dec 2017 5:31

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 91      | 100   |       |       |
| 106     | 31.8  | 25.1  | 37.7  |





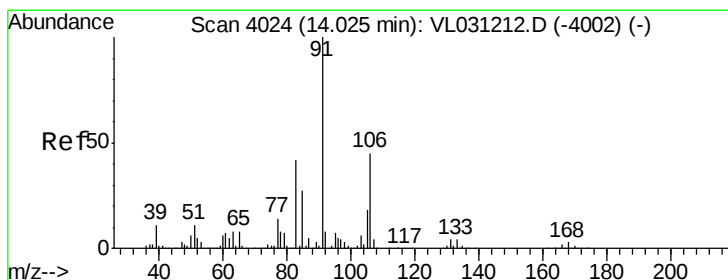
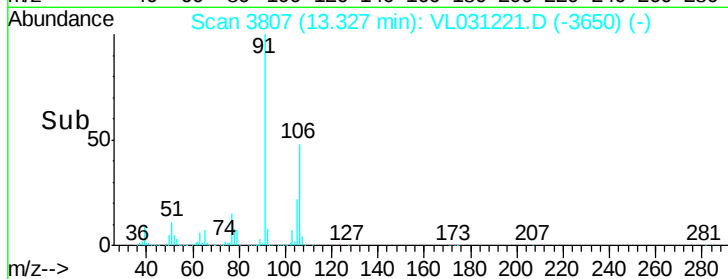
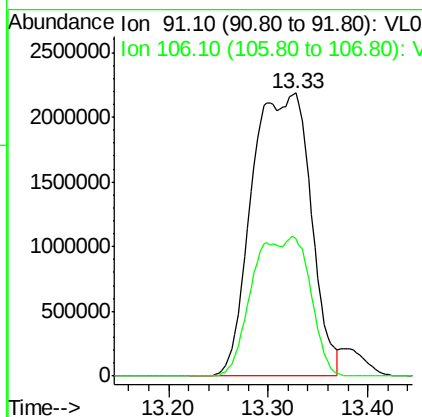
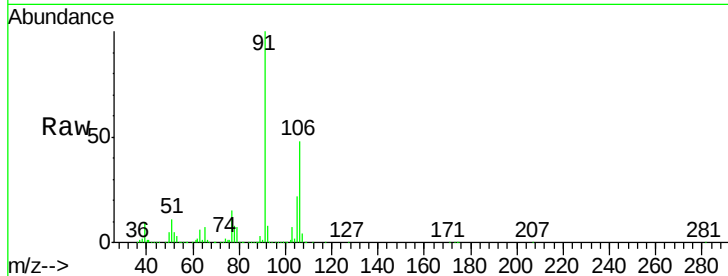
#59  
m/p-Xylene  
Concen: 15.19 ppbv m  
RT: 13.33 min Scan# 3807  
Delta R.T. 0.00 min  
Lab File: VL031221.D  
Acq: 14 Dec 2017 5:31

Instrument :  
MSVOA\_L  
ClientSampleId :  
VL1213ABS01

Tot Ion: 91 Resp: 8945506  
Ion Ratio Lower Upper  
91 100  
106 48.3 38.5 57.7

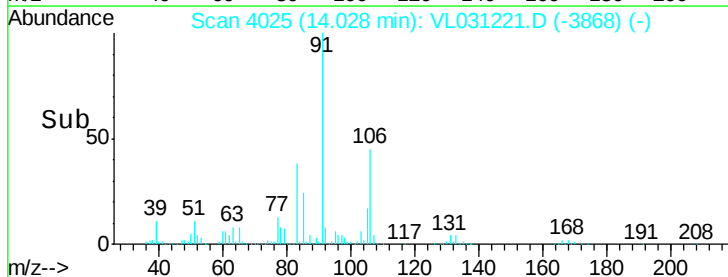
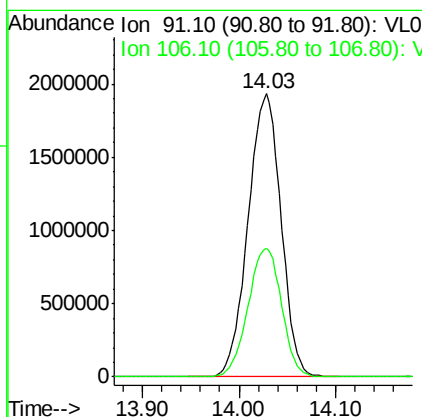
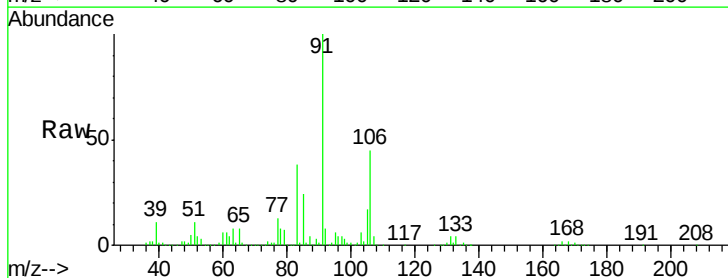
Manual Integrations  
APPROVED

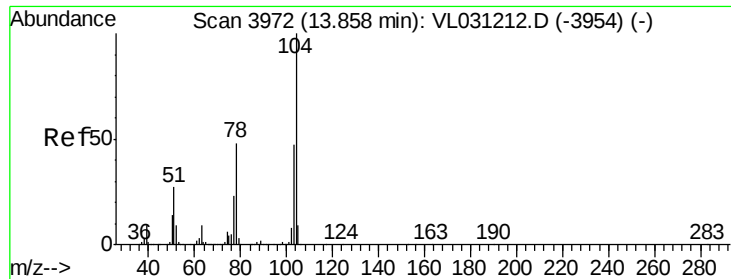
MMDadoda  
12/15/2017 4:07:02 PM



#60  
o-Xylene  
Concen: 7.70 ppbv  
RT: 14.03 min Scan# 4025  
Delta R.T. 0.00 min  
Lab File: VL031221.D  
Acq: 14 Dec 2017 5:31

Tgt Ion: 91 Resp: 4570710  
Ion Ratio Lower Upper  
91 100  
106 46.2 22.7 68.1





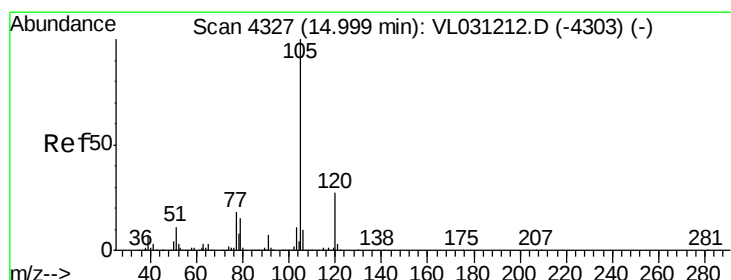
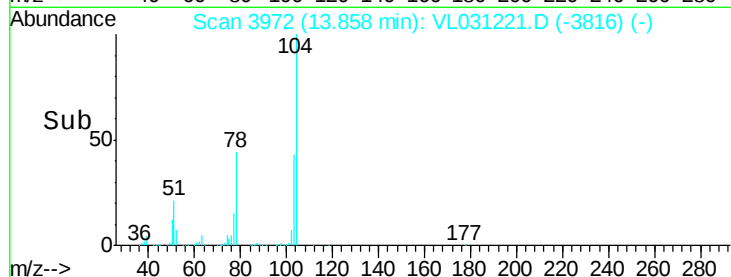
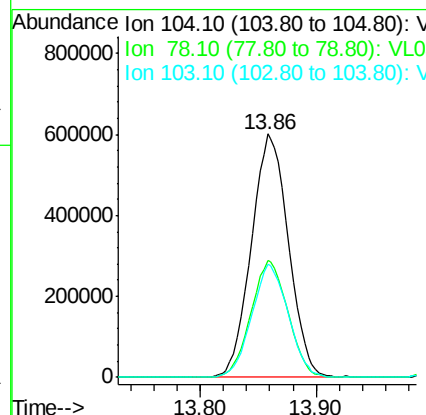
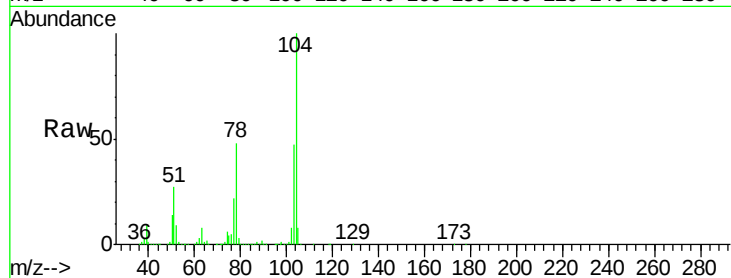
#61  
Stvrene  
Concen: 7.86 ppbv  
RT: 13.86 min Scan# 3972  
Delta R.T. 0.00 min  
Lab File: VL031221.D  
Acq: 14 Dec 2017 5:31

Instrument :  
MSVOA\_L  
ClientSampleId :  
VL1213ABS01

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 104     | 100   |       |       |
| 78      | 48.0  | 39.1  | 58.7  |
| 103     | 45.7  | 37.3  | 55.9  |

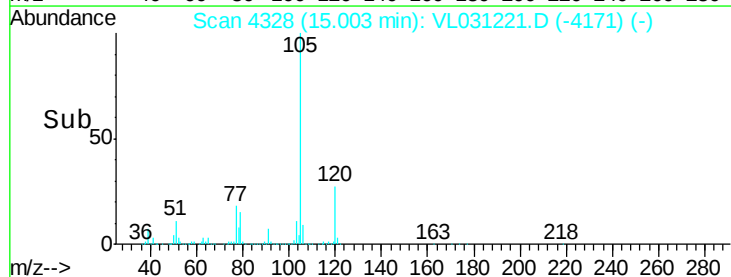
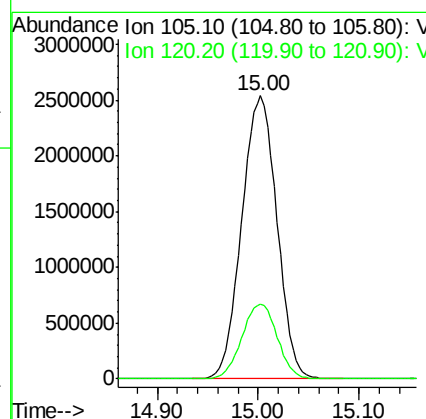
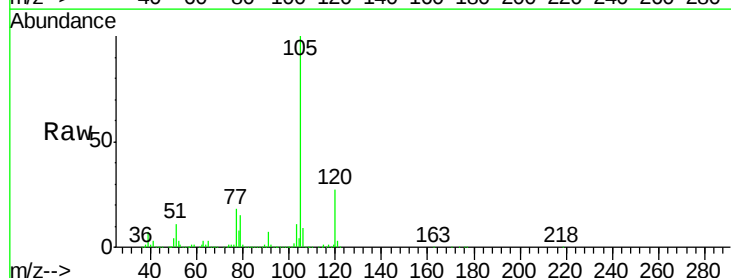
Manual Integrations  
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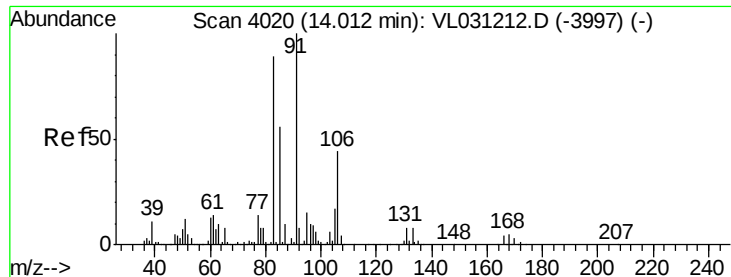
MMDadoda  
12/15/2017 4:07:02 PM



#62  
Isopropylbenzene  
Concen: 7.87 ppbv  
RT: 15.00 min Scan# 4328  
Delta R.T. 0.00 min  
Lab File: VL031221.D  
Acq: 14 Dec 2017 5:31

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 105     | 100   |       |       |
| 120     | 26.6  | 21.0  | 31.6  |





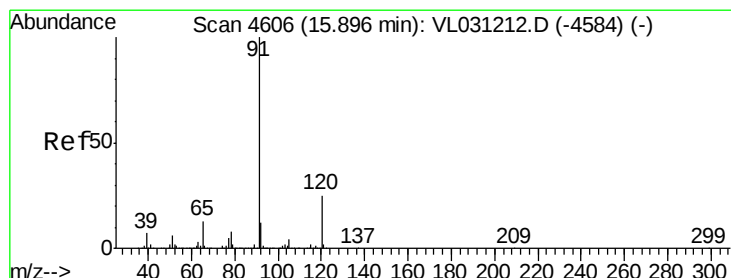
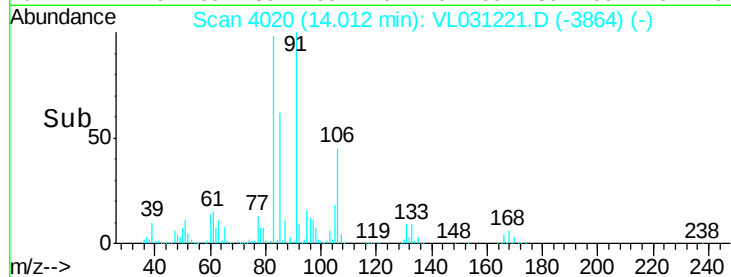
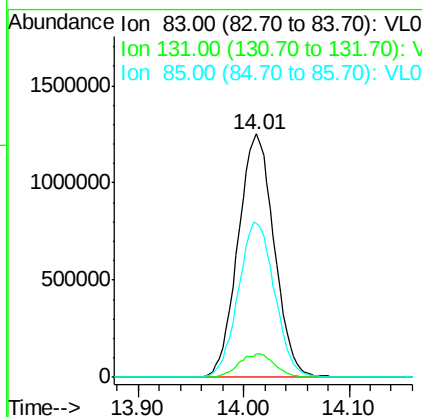
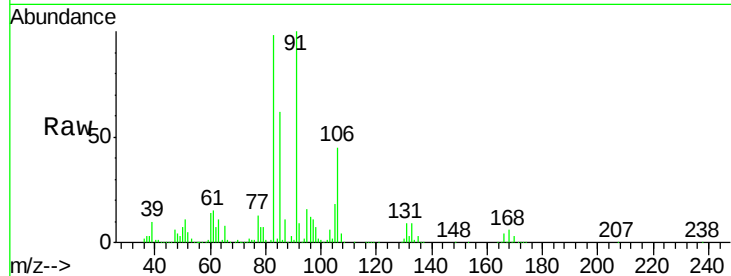
#63  
 1,1,2,2-Tetrachloroethane  
 Concen: 7.48 ppbv  
 RT: 14.01 min Scan# 4020  
 Delta R.T. 0.00 min  
 Lab File: VL031221.D  
 Acq: 14 Dec 2017 5:31

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VL1213ABS01

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 83      | 100   |       |       |
| 131     | 9.7   | 4.8   | 14.3  |
| 85      | 64.6  | 32.1  | 96.5  |

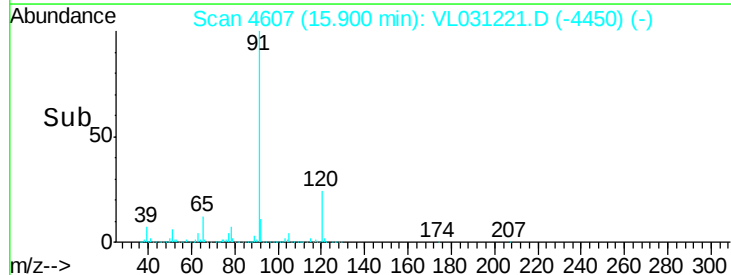
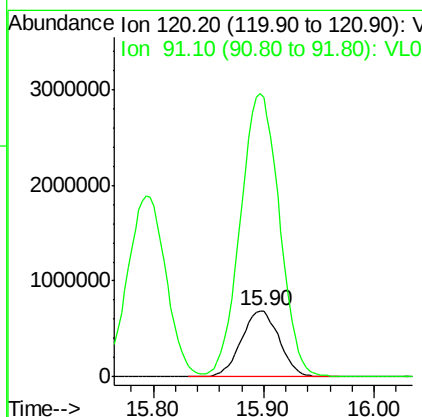
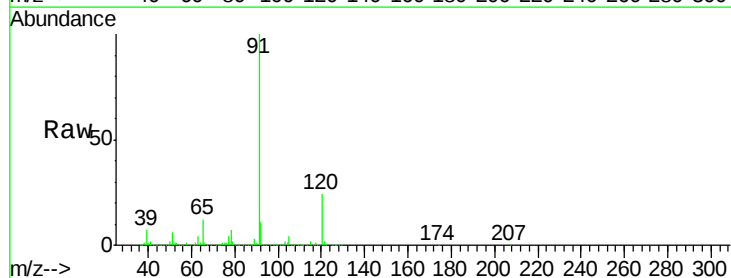
Manual Integrations  
 APPROVED

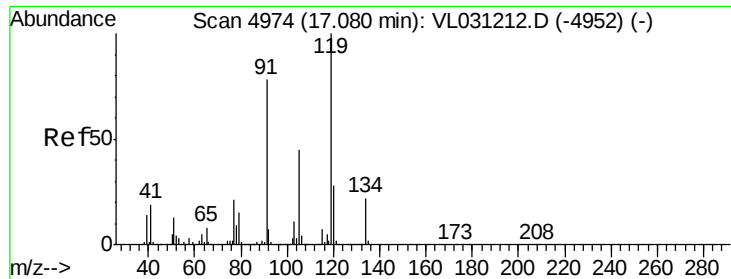
MMDadoda  
 12/15/2017 4:07:02 PM



#64  
 n-propylbenzene  
 Concen: 7.95 ppbv  
 RT: 15.90 min Scan# 4607  
 Delta R.T. 0.00 min  
 Lab File: VL031221.D  
 Acq: 14 Dec 2017 5:31

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 120     | 100   |       |       |
| 91      | 441.3 | 352.1 | 528.1 |





#65

tert-Butylbenzene

Concen: 7.59 ppbv

RT: 17.08 min Scan# 4974

Delta R.T. 0.00 min

Lab File: VL031221.D

Acq: 14 Dec 2017 5:31

Instrument :

MSVOA\_L

ClientSampleId :

VL1213ABS01

Tot Ion:119 Resp: 5231435

Ion Ratio Lower Upper

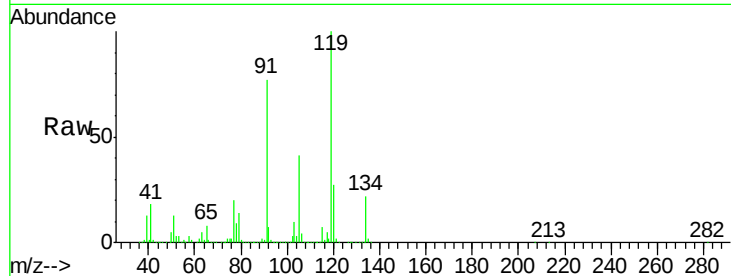
119 100

91 77.8 63.3 94.9

134 20.1 16.1 24.1

Manual Integrations  
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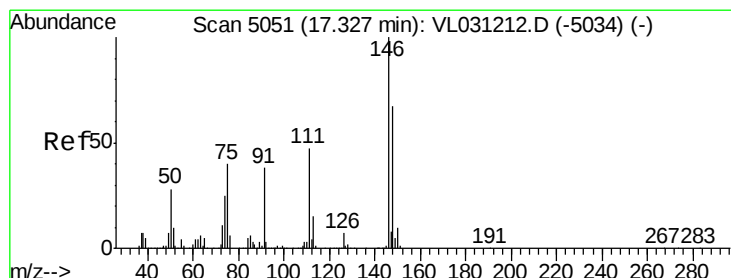
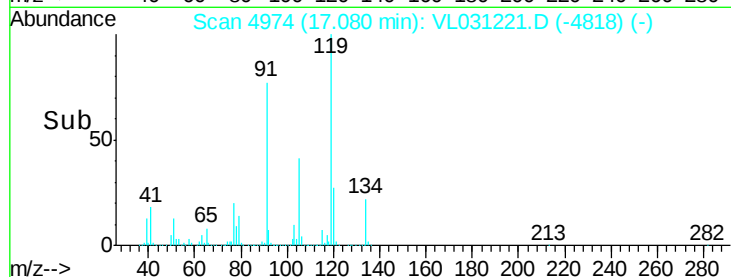
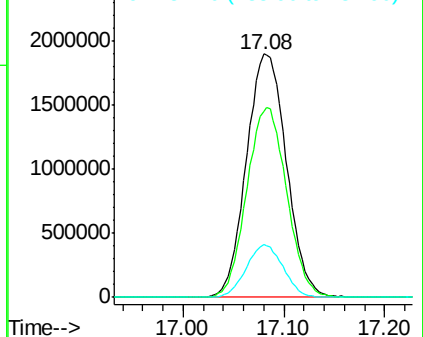
MMDadoda  
12/15/2017 4:07:02 PM



Abundance Ion 119.20 (118.90 to 119.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 134.20 (133.90 to 134.90): V



#66

Benzyl Chloride

Concen: 8.08 ppbv

RT: 17.33 min Scan# 5052

Delta R.T. 0.00 min

Lab File: VL031221.D

Acq: 14 Dec 2017 5:31

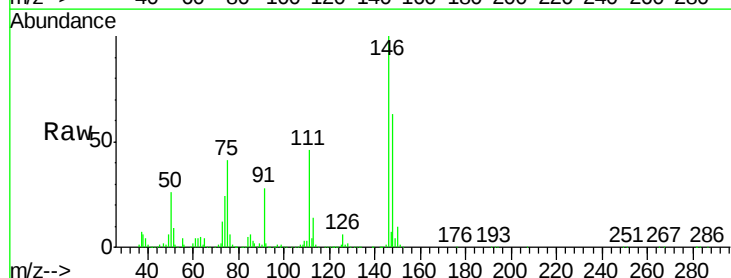
Tgt Ion: 91 Resp: 600587

Ion Ratio Lower Upper

91 100

126 18.7 15.2 22.8

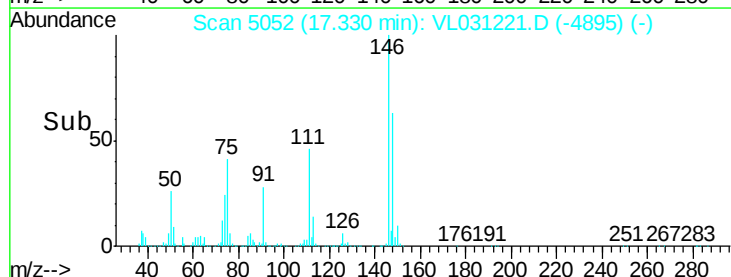
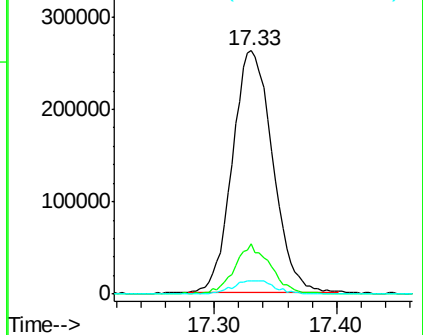
128 5.9 4.9 7.3

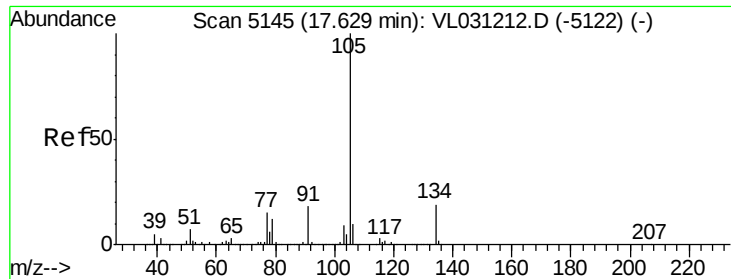


Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 126.10 (125.80 to 126.80): V

Ion 128.10 (127.80 to 128.80): V





#67

sec-Butylbenzene

Concen: 7.79 ppbv

RT: 17.63 min Scan# 5146

Delta R.T. 0.00 min

Lab File: VL031221.D

Acq: 14 Dec 2017 5:31

Instrument :

MSVOA\_L

ClientSampleId :

VL1213ABS01

Tot Ion: 105 Resp: 7384084

Ion Ratio Lower Upper

105 100

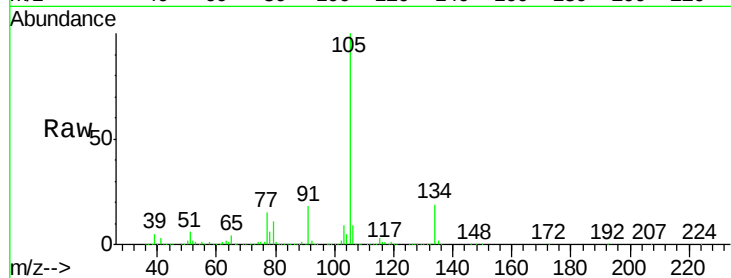
134 18.9 15.3 22.9

Manual Integrations

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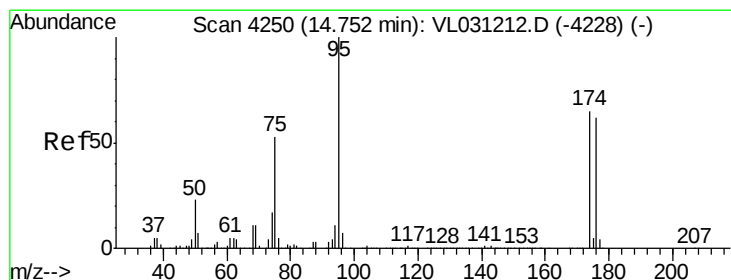
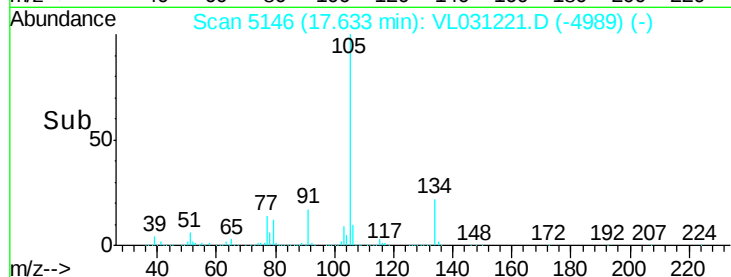
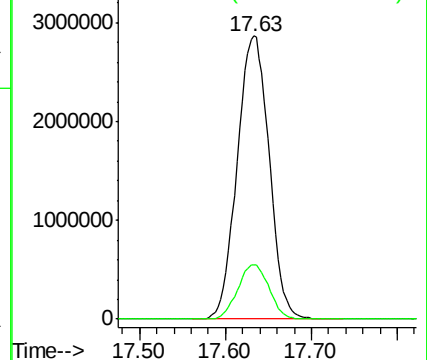
MMDadoda

12/15/2017 4:07:02 PM



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 134.20 (133.90 to 134.90): V



#68

1-Bromo-4-Fluorobenzene

Concen: 10.08 ppbv

RT: 14.75 min Scan# 4250

Delta R.T. 0.00 min

Lab File: VL031221.D

Acq: 14 Dec 2017 5:31

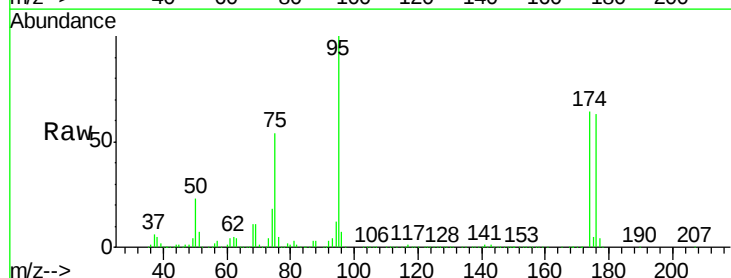
Tgt Ion: 95 Resp: 3195229

Ion Ratio Lower Upper

95 100

174 65.2 52.5 78.7

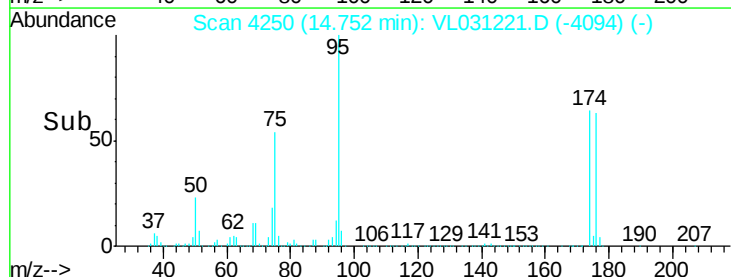
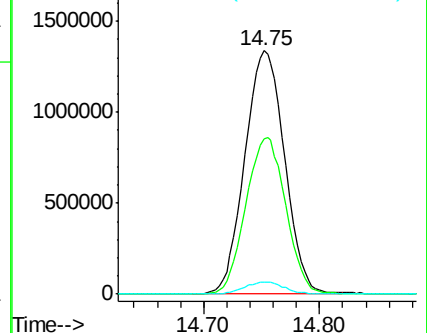
175 5.0 4.1 6.1

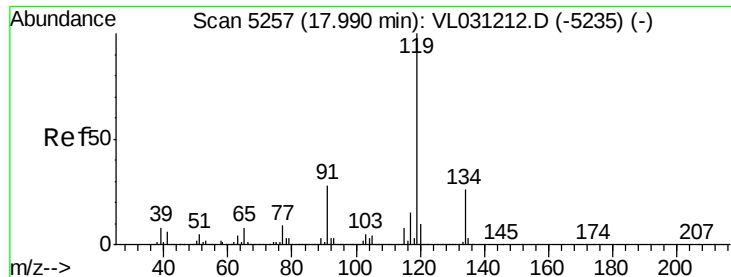


Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V





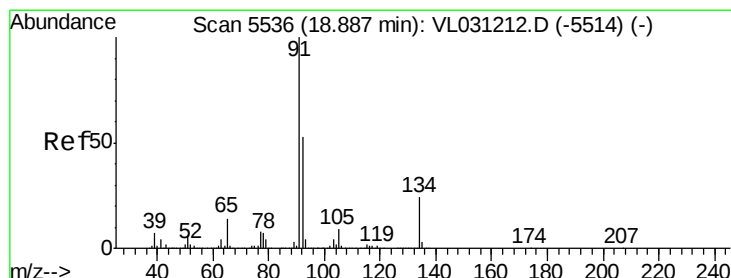
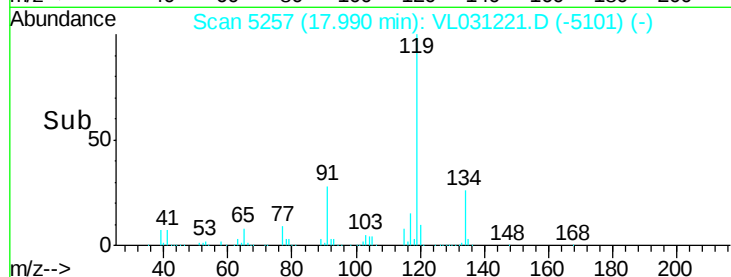
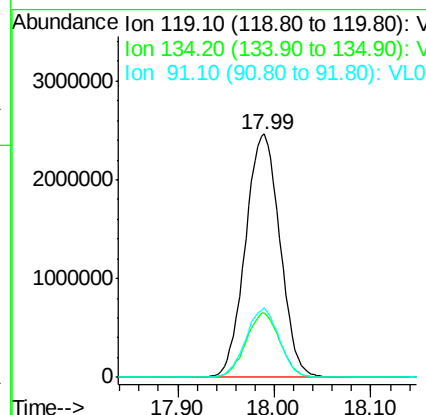
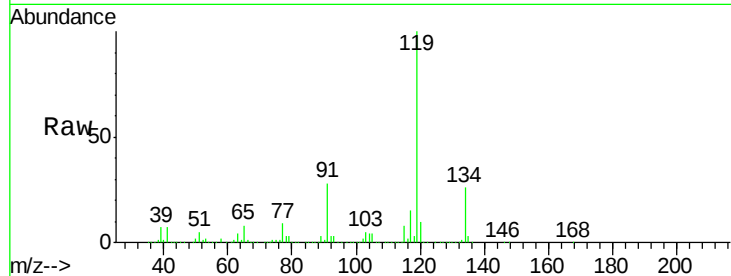
#69  
p-Isopropyltoluene  
Concen: 7.73 ppbv  
RT: 17.99 min Scan# 5257  
Delta R.T. 0.00 min  
Lab File: VL031221.D  
Acq: 14 Dec 2017 5:31

Instrument :  
MSVOA\_L  
ClientSampleId :  
VL1213ABS01

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 119     | 100   |       |       |
| 134     | 25.9  | 20.7  | 31.1  |
| 91      | 27.7  | 22.3  | 33.5  |

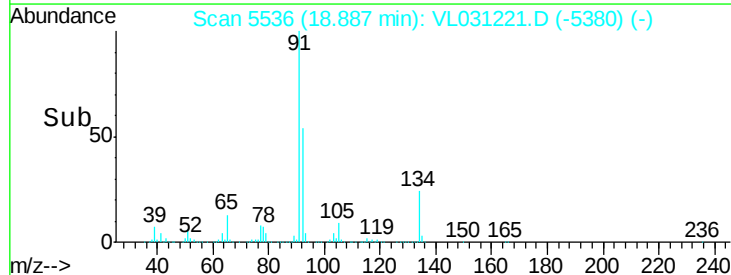
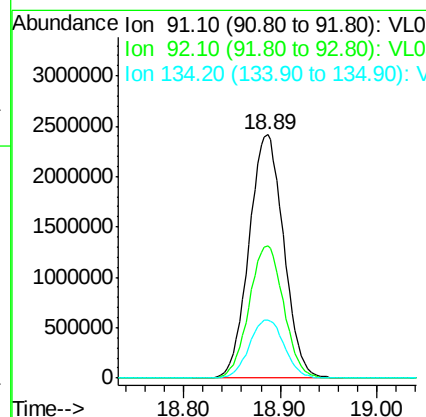
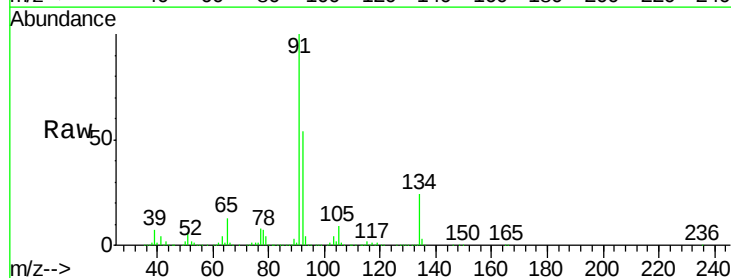
Manual Integrations  
APPROVED

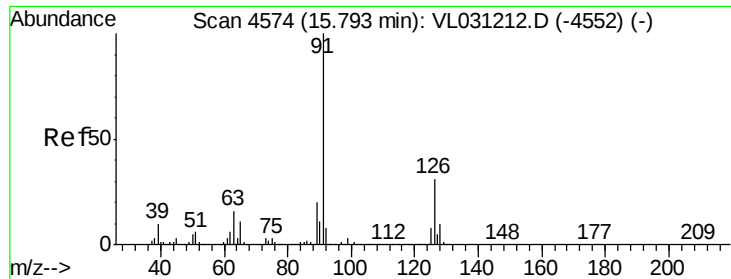
MMDadoda  
12/15/2017 4:07:02 PM



#70  
n-Butylbenzene  
Concen: 7.87 ppbv  
RT: 18.89 min Scan# 5536  
Delta R.T. 0.00 min  
Lab File: VL031221.D  
Acq: 14 Dec 2017 5:31

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 91      | 100   |       |       |
| 92      | 54.2  | 43.4  | 65.2  |
| 134     | 24.2  | 19.3  | 28.9  |





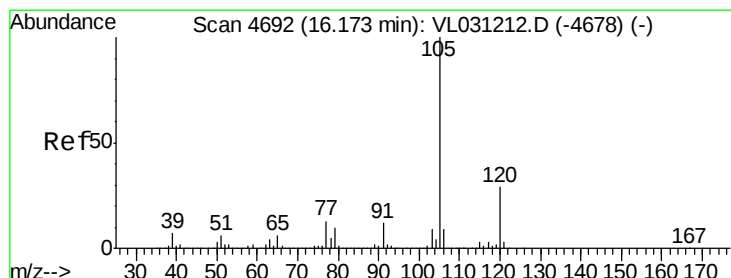
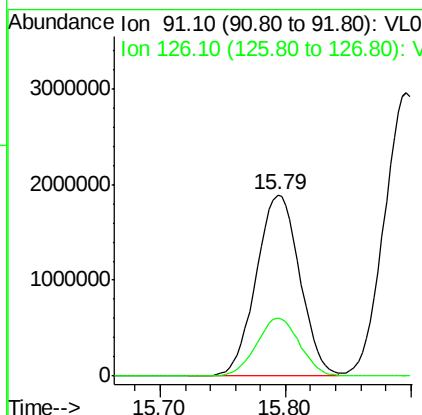
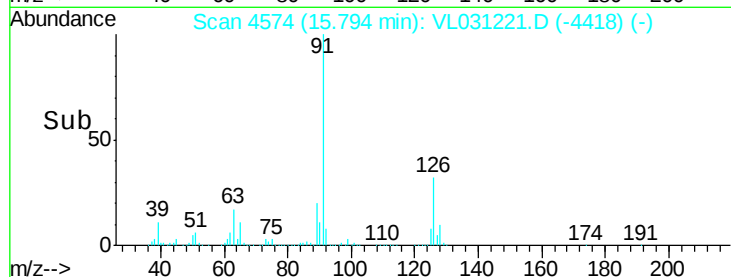
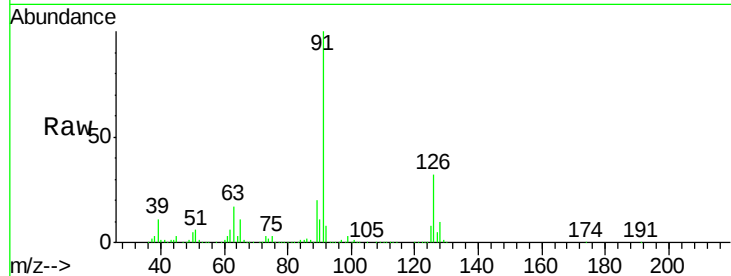
#71  
 2-Chlorotoluene  
 Concen: 7.92 ppbv  
 RT: 15.79 min Scan# 4574  
 Delta R.T. 0.00 min  
 Lab File: VL031221.D  
 Acq: 14 Dec 2017 5:31

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VL1213ABS01

Tot Ion: 91 Resp: 4574050  
 Ion Ratio Lower Upper  
 91 100  
 126 31.9 12.6 50.6

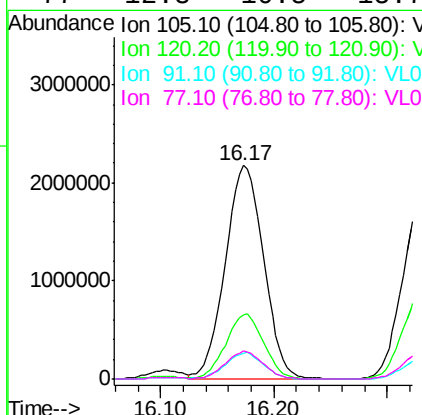
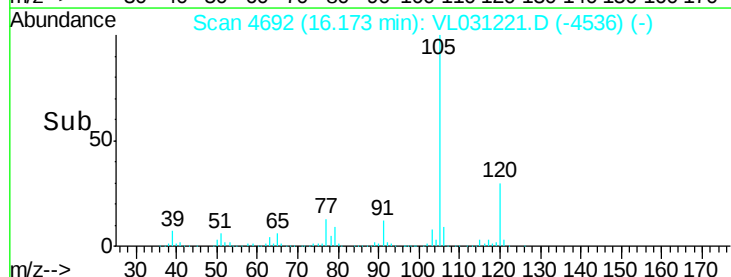
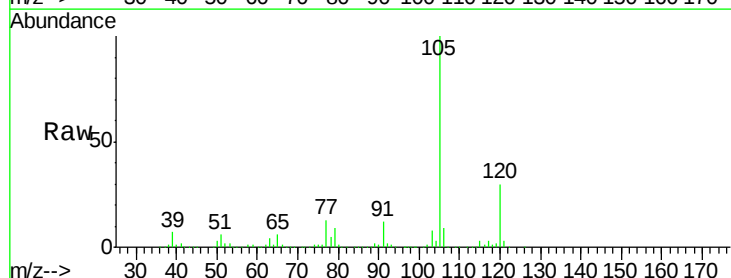
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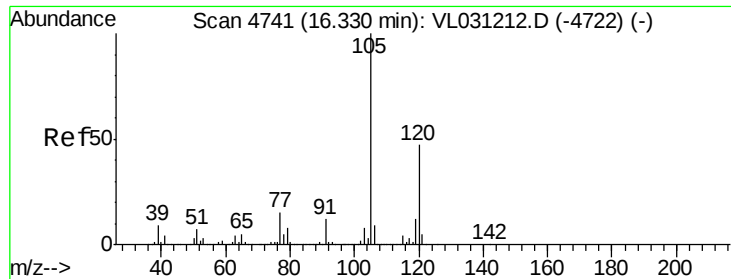
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#72  
 4-Ethyltoluene  
 Concen: 7.88 ppbv  
 RT: 16.17 min Scan# 4692  
 Delta R.T. 0.00 min  
 Lab File: VL031221.D  
 Acq: 14 Dec 2017 5:31

Tgt Ion:105 Resp: 5126726  
 Ion Ratio Lower Upper  
 105 100  
 120 30.3 24.2 36.2  
 91 12.0 9.8 14.8  
 77 12.8 10.5 15.7





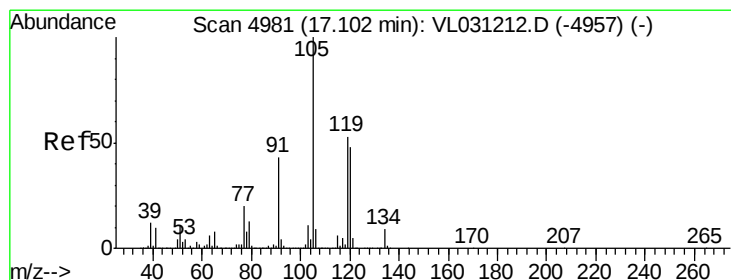
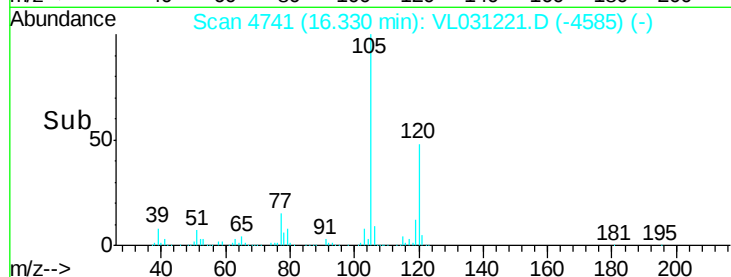
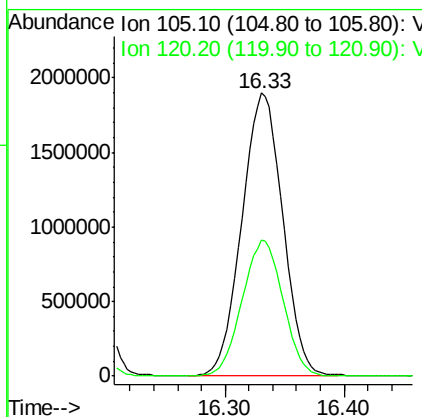
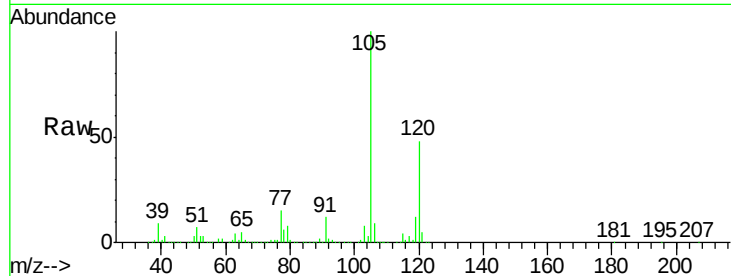
#73  
 1,3,5-Trimethylbenzene  
 Concen: 7.77 ppbv  
 RT: 16.33 min Scan# 4741  
 Delta R.T. 0.00 min  
 Lab File: VL031221.D  
 Acq: 14 Dec 2017 5:31

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VL1213ABS01

Tot Ion:105 Resp: 4494126  
 Ion Ratio Lower Upper  
 105 100  
 120 48.1 37.8 56.6

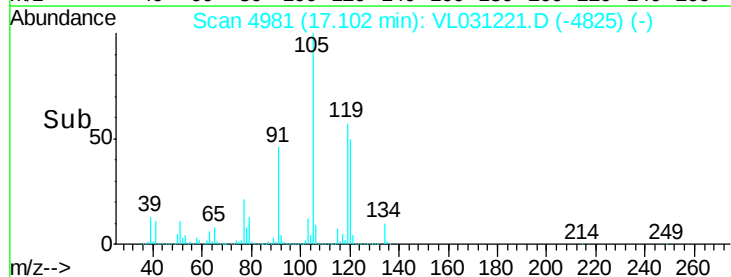
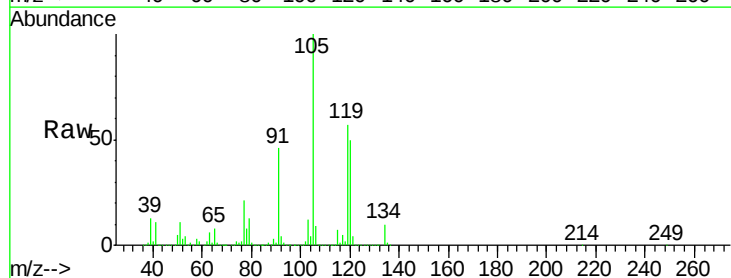
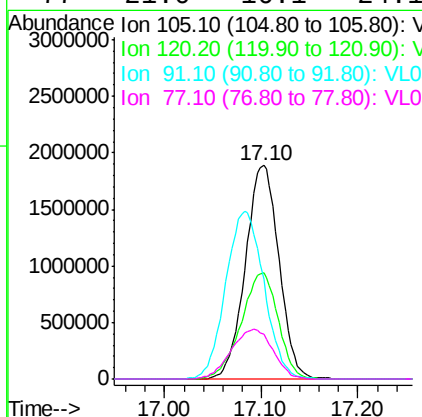
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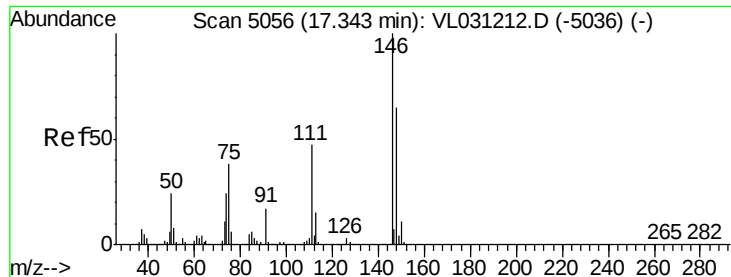
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#74  
 1,2,4-Trimethylbenzene  
 Concen: 7.48 ppbv  
 RT: 17.10 min Scan# 4981  
 Delta R.T. 0.00 min  
 Lab File: VL031221.D  
 Acq: 14 Dec 2017 5:31

Tgt Ion:105 Resp: 4554198  
 Ion Ratio Lower Upper  
 105 100  
 120 50.0 38.6 58.0  
 91 46.4 34.2 51.4  
 77 21.0 16.1 24.1





#75

1,3-Dichlorobenzene

Concen: 7.60 ppbv

RT: 17.34 min Scan# 5055

Delta R.T. -0.00 min

Lab File: VL031221.D

Acq: 14 Dec 2017 5:31

Instrument :

MSVOA\_L

ClientSampleId :

VL1213ABS01

Tot Ion:146 Resp: 2935213

Ion Ratio Lower Upper

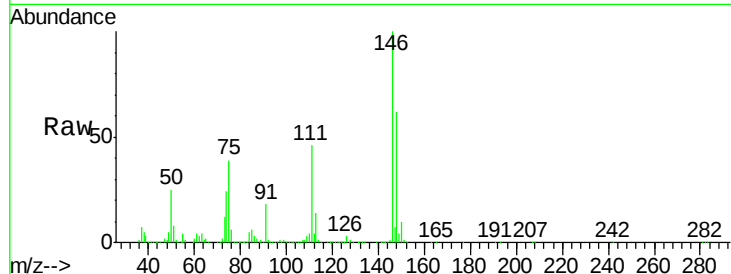
146 100

111 46.0 22.7 68.1

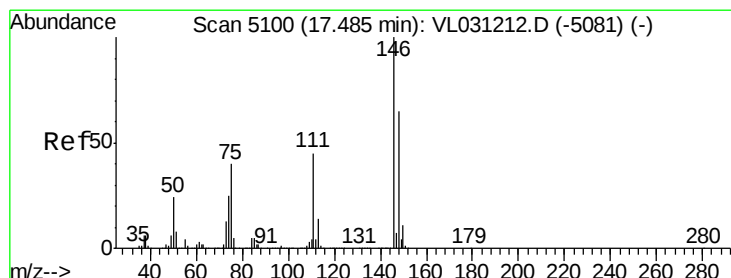
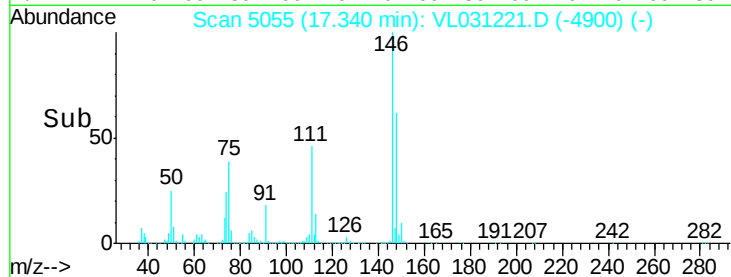
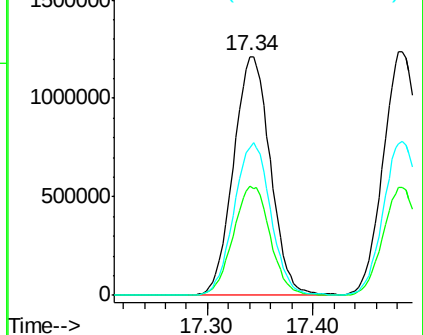
148 63.9 32.0 96.2

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Abundance Ion 146.00 (145.70 to 146.70): V  
Ion 111.10 (110.80 to 111.80): V  
Ion 148.00 (147.70 to 148.70): V



#76

1,4-Dichlorobenzene

Concen: 7.69 ppbv

RT: 17.48 min Scan# 5099

Delta R.T. -0.00 min

Lab File: VL031221.D

Acq: 14 Dec 2017 5:31

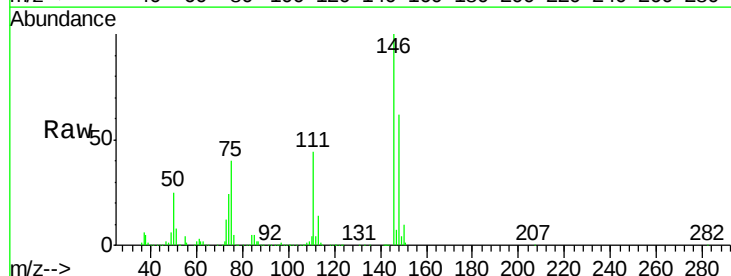
Tgt Ion:146 Resp: 3000736

Ion Ratio Lower Upper

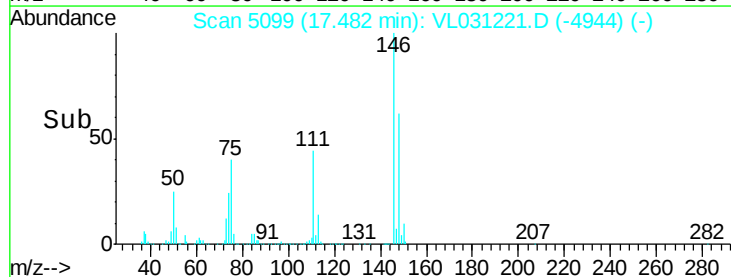
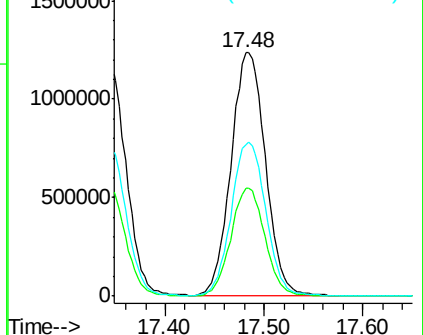
146 100

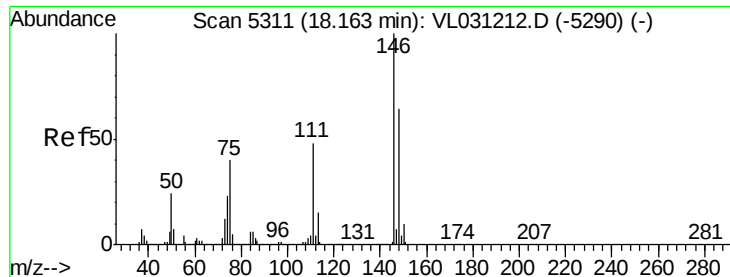
111 44.0 22.1 66.1

148 63.7 32.0 96.0



Abundance Ion 146.00 (145.70 to 146.70): V  
Ion 111.10 (110.80 to 111.80): V  
Ion 148.00 (147.70 to 148.70): V





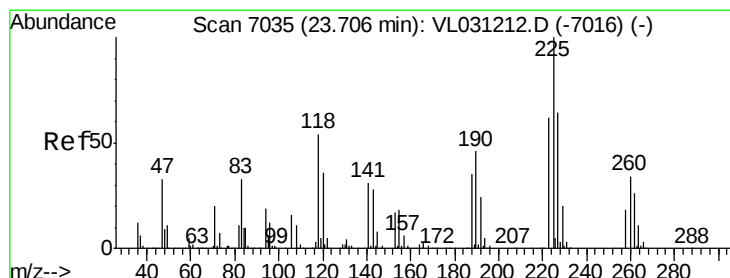
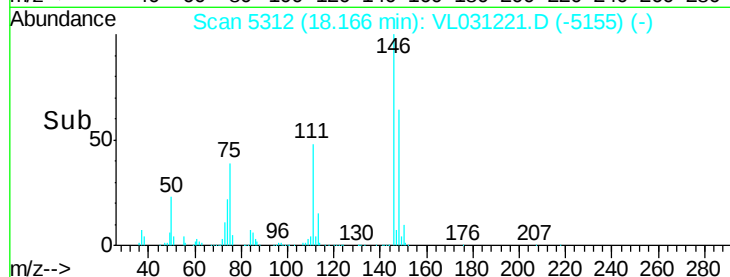
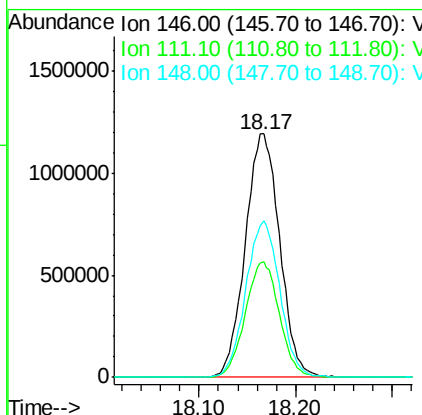
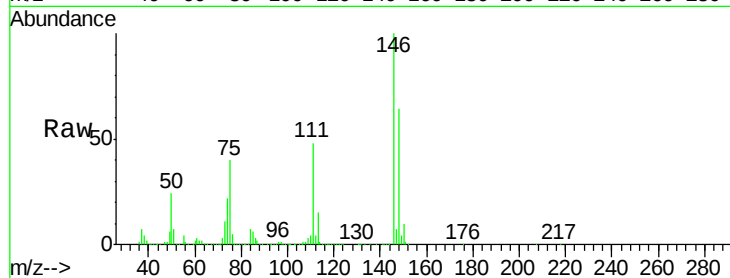
#77  
 1,2-Dichlorobenzene  
 Concen: 7.82 ppbv  
 RT: 18.17 min Scan# 5312  
 Delta R.T. 0.00 min  
 Lab File: VL031221.D  
 Acq: 14 Dec 2017 5:31

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VL1213ABS01

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 146     | 100   |       |       |
| 111     | 46.9  | 23.3  | 69.8  |
| 148     | 63.6  | 31.9  | 95.7  |

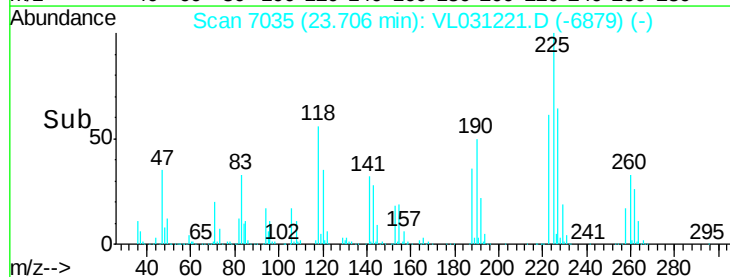
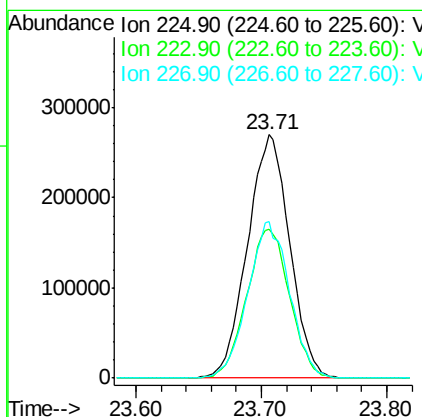
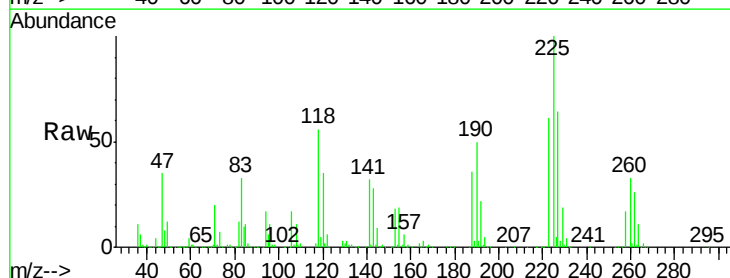
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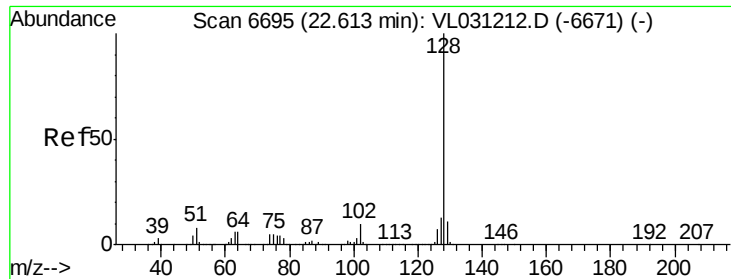
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#78  
 Hexachloro-1,3-Butadiene  
 Concen: 7.29 ppbv  
 RT: 23.71 min Scan# 7035  
 Delta R.T. 0.00 min  
 Lab File: VL031221.D  
 Acq: 14 Dec 2017 5:31

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 225     | 100   |       |       |
| 223     | 62.2  | 50.4  | 75.6  |
| 227     | 63.5  | 51.3  | 76.9  |





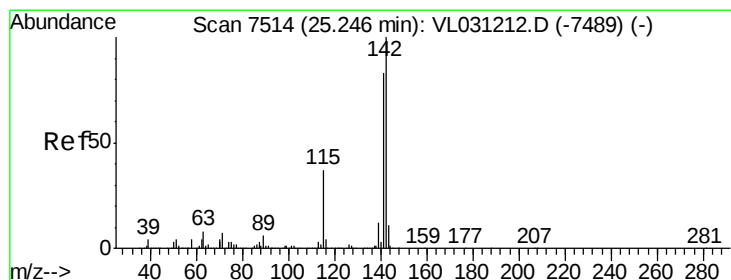
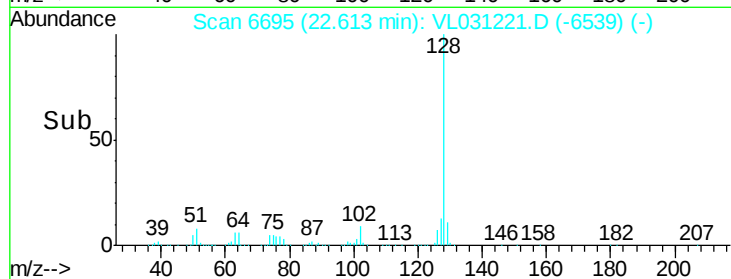
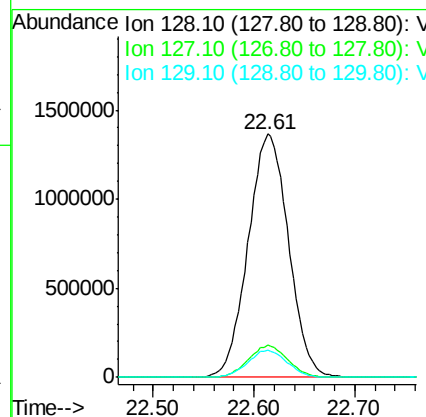
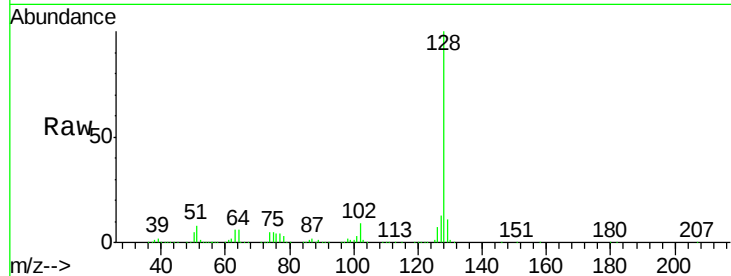
#79  
Naphthalene  
Concen: 7.69 ppbv  
RT: 22.61 min Scan# 6695  
Delta R.T. 0.00 min  
Lab File: VL031221.D  
Acq: 14 Dec 2017 5:31

Instrument :  
MSVOA\_L  
ClientSampleId :  
VL1213ABS01

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 128     | 100   |       |       |
| 127     | 13.1  | 10.2  | 15.2  |
| 129     | 11.1  | 8.9   | 13.3  |

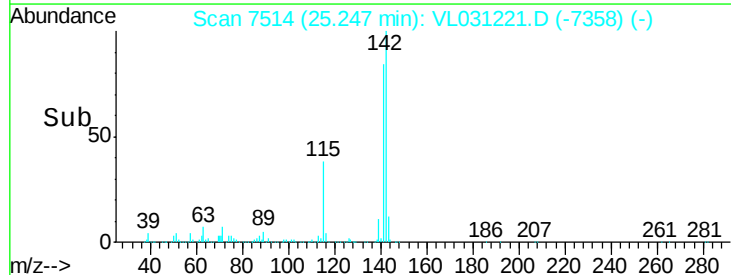
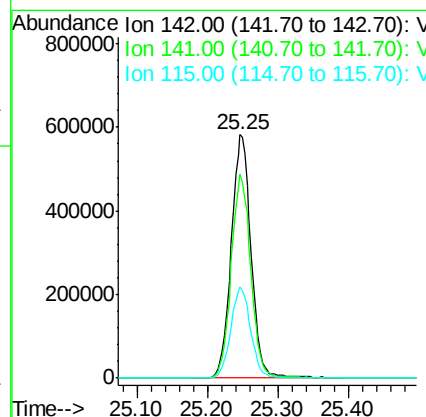
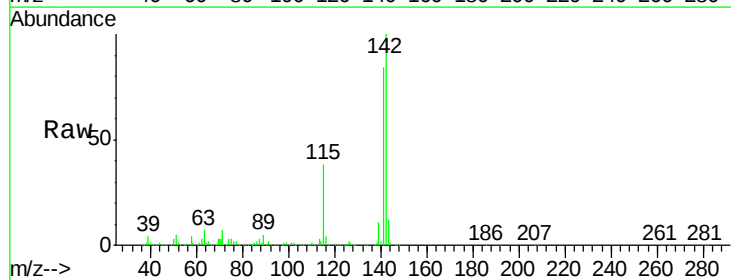
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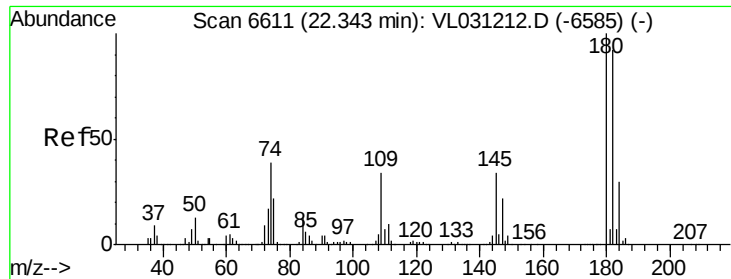
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#80  
Naphthalene, 2-methyl-  
Concen: 6.22 ppbv  
RT: 25.25 min Scan# 7514  
Delta R.T. 0.00 min  
Lab File: VL031221.D  
Acq: 14 Dec 2017 5:31

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 142     | 100   |       |       |
| 141     | 83.3  | 66.8  | 100.2 |
| 115     | 37.6  | 29.7  | 44.5  |





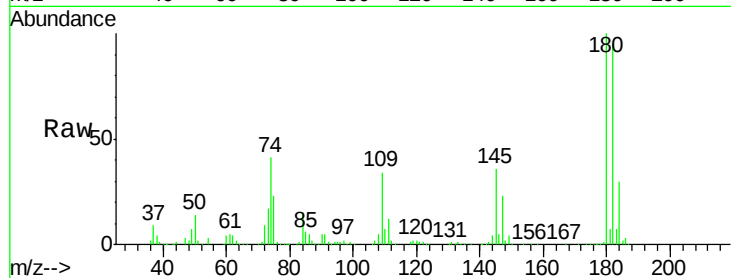
#81  
 1,2,4-Trichlorobenzene  
 Concen: 7.37 ppbv  
 RT: 22.34 min Scan# 6611  
 Delta R.T. 0.00 min  
 Lab File: VL031221.D  
 Acq: 14 Dec 2017 5:31

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VL1213ABS01

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 180     | 100   |       |       |
| 182     | 95.0  | 75.9  | 113.9 |
| 184     | 30.2  | 24.2  | 36.2  |

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Abundance Ion 180.00 (179.70 to 180.70): V  
 Ion 182.00 (181.70 to 182.70): V  
 Ion 184.00 (183.70 to 184.70): V

