

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL091019\  
 Data File : VL034158.D  
 Acq On : 11 Sep 2019 00:58  
 Operator : SY/AP  
 Sample : VSTDCCC010  
 Misc : 400ml/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleID :  
 VSTDCCC010EC

Manual Integrations  
 APPROVED

MMDadoda  
 9/12/2019 5:17:33 AM

Quant Time: Sep 11 04:44:20 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL090519AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Thu Sep 0  
 QLast Update : Thu Sep 05 10:21:45 2019  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.71  | 49   | 641658   | 10.00 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 7.23  | 114  | 1207807  | 10.00 | ppbv  | 0.00     |
| 55) Chlorobenzene-d5    | 12.17 | 117  | 1340404m | 10.00 | ppbv  | 0.00     |

|                             |        |       |          |          |      |        |
|-----------------------------|--------|-------|----------|----------|------|--------|
| System Monitoring Compounds |        |       |          |          |      |        |
| 68) 1-Bromo-4-Fluorobenzene | 14.51  | 95    | 1038749  | 9.48     | ppbv | 0.00   |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 94.80% |

| Target Compounds               |      |     |         |        | Ovalue    |
|--------------------------------|------|-----|---------|--------|-----------|
| 2) Dichlorodifluoromethane     | 3.03 | 85  | 1077456 | 10.180 | ppbv 96   |
| 3) Chlorodifluoromethane       | 2.97 | 51  | 709259  | 9.916  | ppbv 100  |
| 4) Chloromethane               | 3.13 | 50  | 437358  | 9.781  | ppbv 96   |
| 5) Vinyl Chloride              | 3.25 | 62  | 389537  | 9.564  | ppbv 99   |
| 6) Bromomethane                | 3.47 | 94  | 192458  | 9.574  | ppbv 95   |
| 7) Chloroethane                | 3.56 | 64  | 137970  | 9.942  | ppbv 100  |
| 8) Dichlorotetrafluoroethane   | 3.18 | 85  | 817988  | 9.602  | ppbv 99   |
| 9) Propene                     | 3.00 | 41  | 374991  | 9.370  | ppbv 98   |
| 10) Heptane                    | 8.19 | 43  | 976390  | 9.401  | ppbv 100  |
| 11) Trichlorofluoromethane     | 3.95 | 101 | 837766  | 9.706  | ppbv 99   |
| 12) 1,1,2-Trichlorotrifluoroet | 4.50 | 101 | 561482  | 9.724  | ppbv 100  |
| 13) Ethanol                    | 3.60 | 45  | 51260   | 6.539  | ppbv 98   |
| 14) Bromoethene                | 3.74 | 108 | 243666  | 9.747  | ppbv 100  |
| 15) Acetone                    | 3.85 | 43  | 705378  | 9.121  | ppbv 99   |
| 16) 1,3-Butadiene              | 3.32 | 39  | 387421  | 9.892  | ppbv 97   |
| 17) tert-Butyl alcohol         | 4.30 | 59  | 442711  | 7.886  | ppbv 99   |
| 18) 1,1-Dichloroethene         | 4.30 | 96  | 259754  | 9.846  | ppbv 92   |
| 19) Isopropyl Alcohol          | 3.98 | 45  | 401044  | 7.683  | ppbv # 99 |
| 20) Methylene Chloride         | 4.36 | 84  | 231774  | 9.065  | ppbv 96   |
| 21) Allyl Chloride             | 4.43 | 41  | 509792  | 9.999  | ppbv 99   |
| 22) trans-1,2-Dichloroethene   | 4.91 | 96  | 267609  | 10.134 | ppbv 97   |
| 23) Vinyl Acetate              | 5.10 | 43  | 1302281 | 9.926  | ppbv 99   |
| 24) 1,1-Dichloroethane         | 5.04 | 63  | 830723  | 9.540  | ppbv 100  |
| 25) Ethyl Acetate              | 5.71 | 43  | 1561061 | 9.196  | ppbv 100  |
| 26) Hexane                     | 5.72 | 57  | 659995  | 8.745  | ppbv 99   |
| 27) Carbon Disulfide           | 4.57 | 76  | 698598  | 10.256 | ppbv 99   |
| 28) Methyl tert-Butyl Ether    | 5.06 | 73  | 1056910 | 9.558  | ppbv 99   |
| 29) Chloroform                 | 5.79 | 83  | 965036  | 9.480  | ppbv 97   |
| 30) Cyclohexane                | 7.18 | 84  | 522922  | 9.584  | ppbv 98   |
| 31) cis-1,2-Dichloroethene     | 5.58 | 61  | 703631  | 9.735  | ppbv 96   |
| 32) 1,1,1-Trichloroethane      | 6.56 | 97  | 892287  | 9.278  | ppbv 98   |
| 34) 2-Butanone                 | 5.28 | 43  | 1095529 | 9.435  | ppbv 99   |
| 35) Carbon Tetrachloride       | 7.07 | 117 | 871979  | 9.260  | ppbv 97   |
| 36) Benzene                    | 6.94 | 78  | 1284962 | 9.307  | ppbv 97   |
| 37) 1,2-Dichloroethane         | 6.36 | 62  | 810275  | 9.568  | ppbv 99   |
| 38) Trichloroethene            | 7.90 | 130 | 402632  | 7.816  | ppbv 95   |
| 39) 1,2-Dichloropropane        | 7.67 | 63  | 551063  | 9.327  | ppbv 96   |
| 40) 1,4-Dioxane                | 7.89 | 88  | 159231  | 7.334  | ppbv # 96 |
| 41) Tetrahydrofuran            | 6.09 | 42  | 666282  | 9.571  | ppbv 98   |
| 42) Bromodichloromethane       | 7.85 | 83  | 1049439 | 9.508  | ppbv 98   |
| 43) Methyl Methacrylate        | 8.07 | 69  | 542681  | 9.542  | ppbv 95   |

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Manual Integrations  
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 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Thu Sep 0  
 QLast Update : Thu Sep 05 10:21:45 2019  
 Response via : Initial Calibration

| Internal Standards            | R.T.  | QIon | Response | Conc   | Units  | Dev(Min) |
|-------------------------------|-------|------|----------|--------|--------|----------|
| 44) 2,2,4-Trimethylpentane    | 7.93  | 57   | 2311646  | 9.082  | ppbv   | 98       |
| 45) t-1,3-Dichloropropene     | 9.35  | 75   | 682862   | 10.215 | ppbv   | 98       |
| 46) cis-1,3-Dichloropropene   | 8.77  | 75   | 797327   | 9.804  | ppbv   | 99       |
| 47) 1,1,2-Trichloroethane     | 9.55  | 97   | 489654   | 9.097  | ppbv   | 95       |
| 48) Dibromochloromethane      | 10.39 | 129  | 785994   | 9.786  | ppbv   | 96       |
| 49) Bromoform                 | 13.14 | 173  | 628353   | 8.924  | ppbv   | 99       |
| 50) 4-Methyl-2-Pentanone      | 8.81  | 43   | 1609695  | 9.085  | ppbv   | 97       |
| 51) 2-Hexanone                | 10.20 | 43   | 1382392  | 9.031  | ppbv   | 98       |
| 52) Tetrachloroethene         | 11.30 | 164  | 392800   | 8.069  | ppbv   | 96       |
| 53) Toluene                   | 9.88  | 91   | 1415557  | 9.271  | ppbv   | 97       |
| 54) 1,2-Dibromoethane         | 10.69 | 107  | 726617   | 9.061  | ppbv   | 96       |
| 56) 1,1,1,2-Tetrachloroethane | 12.21 | 131  | 501798   | 8.728  | ppbv # | 59       |
| 57) Chlorobenzene             | 12.23 | 112  | 961565   | 8.339  | ppbv   | 99       |
| 58) Ethyl Benzene             | 12.80 | 91   | 1901970  | 8.653  | ppbv   | 97       |
| 59) m/p-Xylene                | 13.08 | 91   | 3045606m | 16.986 | ppbv   |          |
| 60) o-Xylene                  | 13.78 | 91   | 1485481  | 8.318  | ppbv   | 97       |
| 61) Styrene                   | 13.62 | 104  | 1144794  | 8.570  | ppbv   | 99       |
| 62) Isopropylbenzene          | 14.75 | 105  | 1924827  | 8.284  | ppbv   | 98       |
| 63) 1,1,2,2-Tetrachloroethane | 13.77 | 83   | 1028680  | 7.068  | ppbv   | 100      |
| 64) n-propylbenzene           | 15.65 | 120  | 484805   | 8.329  | ppbv   | 85       |
| 65) tert-Butylbenzene         | 16.84 | 119  | 1589375  | 7.926  | ppbv   | 99       |
| 66) Benzyl Chloride           | 17.09 | 91   | 663504   | 8.974  | ppbv   | 97       |
| 67) sec-Butylbenzene          | 17.39 | 105  | 2377703m | 8.245  | ppbv   |          |
| 69) p-Isopropyltoluene        | 17.74 | 119  | 1920861  | 8.325  | ppbv   | 98       |
| 70) n-Butylbenzene            | 18.64 | 91   | 2238899  | 8.528  | ppbv   | 97       |
| 71) 2-Chlorotoluene           | 15.55 | 91   | 1572008  | 8.282  | ppbv   | 99       |
| 72) 4-Ethyltoluene            | 15.93 | 105  | 1713735  | 8.505  | ppbv   | 98       |
| 73) 1,3,5-Trimethylbenzene    | 16.09 | 105  | 1626216  | 8.304  | ppbv   | 97       |
| 74) 1,2,4-Trimethylbenzene    | 16.86 | 105  | 1620473  | 8.036  | ppbv   | 97       |
| 75) 1,3-Dichlorobenzene       | 17.10 | 146  | 874420   | 8.184  | ppbv   | 100      |
| 76) 1,4-Dichlorobenzene       | 17.24 | 146  | 922793   | 8.241  | ppbv   | 99       |
| 77) 1,2-Dichlorobenzene       | 17.92 | 146  | 898118   | 8.211  | ppbv   | 98       |
| 78) Hexachloro-1,3-Butadiene  | 23.47 | 225  | 824463   | 11.048 | ppbv   | 99       |
| 79) Naphthalene               | 22.33 | 128  | 1956926  | 10.735 | ppbv   | 98       |
| 80) Naphthalene, 2-methyl-    | 25.06 | 142  | 874993   | 13.828 | ppbv   | 99       |
| 81) 1,2,4-Trichlorobenzene    | 22.05 | 180  | 994622   | 10.027 | ppbv   | 99       |

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

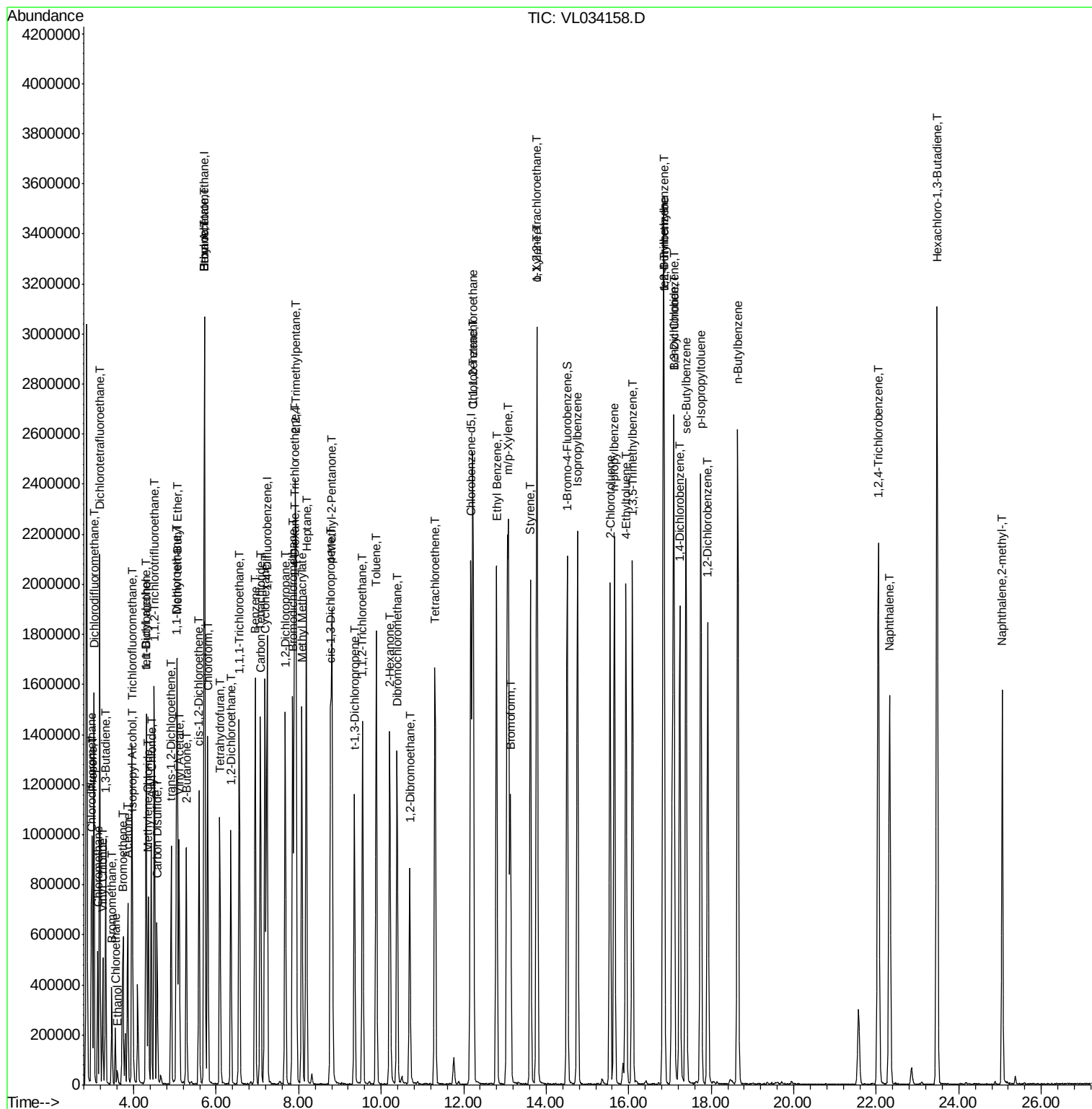
Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL091019\  
Data File : VL034158.D  
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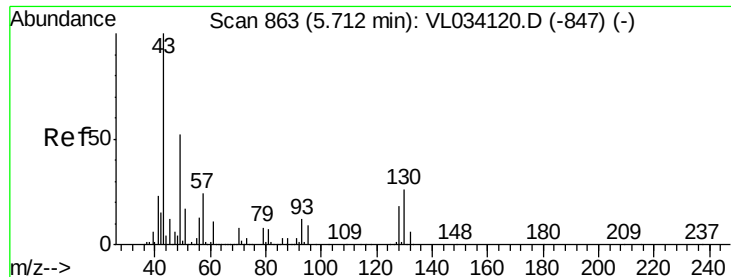
Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDCCC010EC

Manual Integrations  
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Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Thu Sep  
QLast Update : Thu Sep 05 10:21:45 2019  
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.71 min Scan# 908

Delta R.T. -0.01 min

Lab File: VL034158.D

Acq: 11 Sep 2019 00:58

Instrument :

MSVOA\_L

ClientSampleId :

VSTDCCC010EC

Tot Ion: 49 Resp: 641658

Ion Ratio Lower Upper

49 100

128 35.8 18.4 55.0

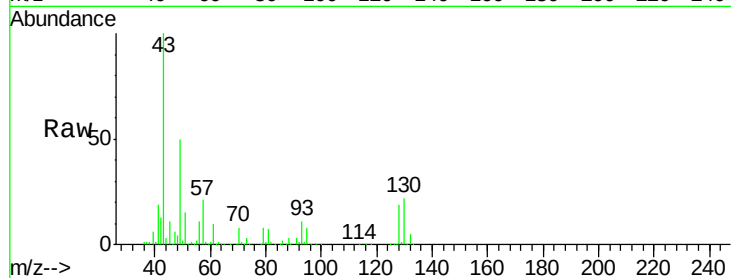
130 45.1 23.5 70.6

Manual Integrations

APPROVED

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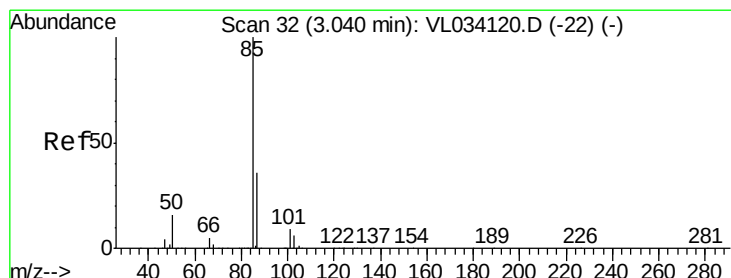
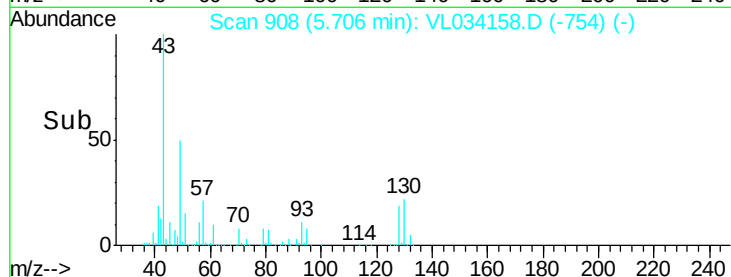
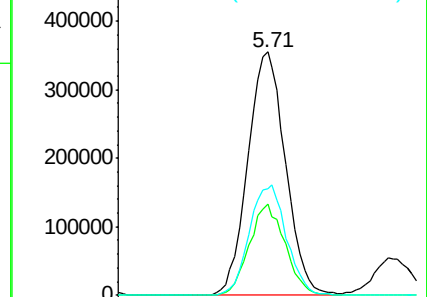
9/12/2019 5:17:33 AM



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: 10.180 ppbv

RT: 3.03 min Scan# 77

Delta R.T. -0.01 min

Lab File: VL034158.D

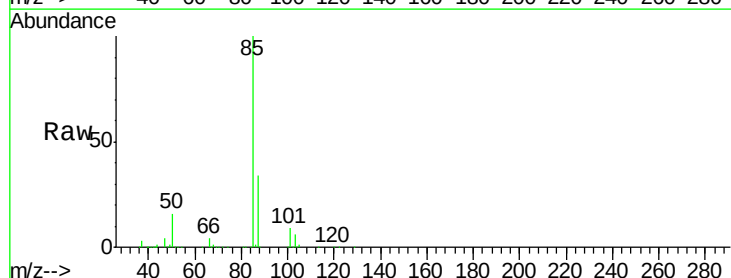
Acq: 11 Sep 2019 00:58

Tgt Ion: 85 Resp: 1077456

Ion Ratio Lower Upper

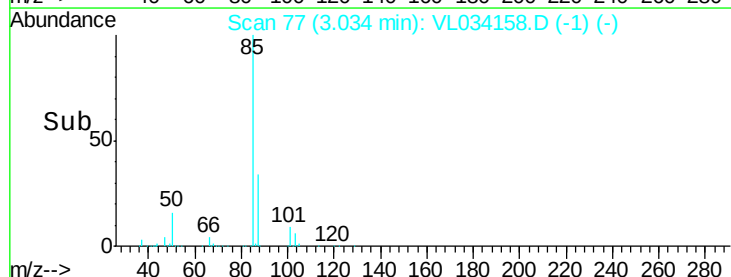
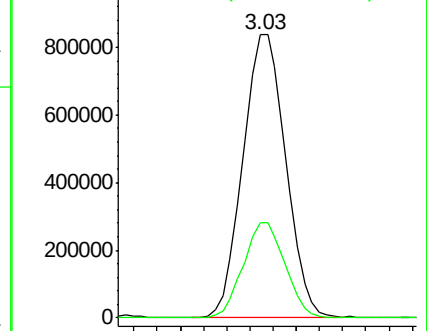
85 100

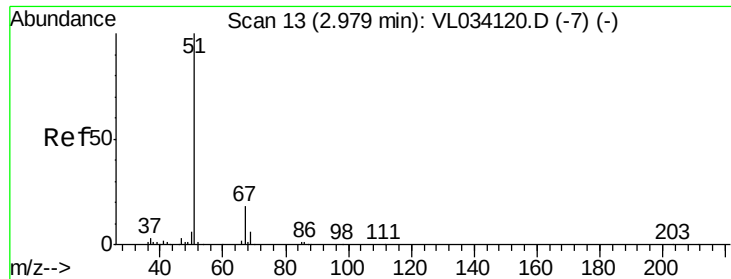
87 33.7 28.6 43.0



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





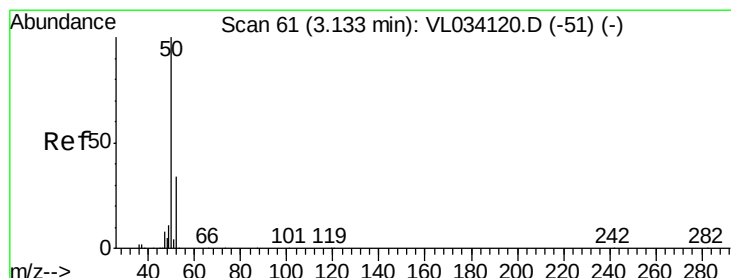
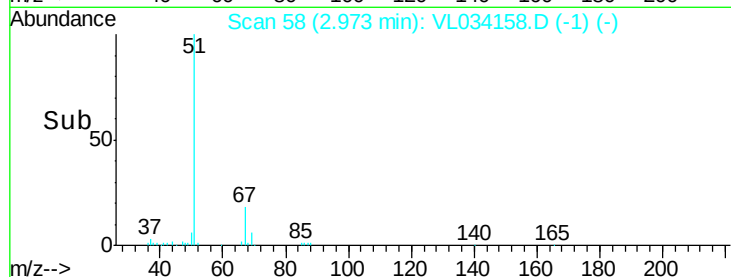
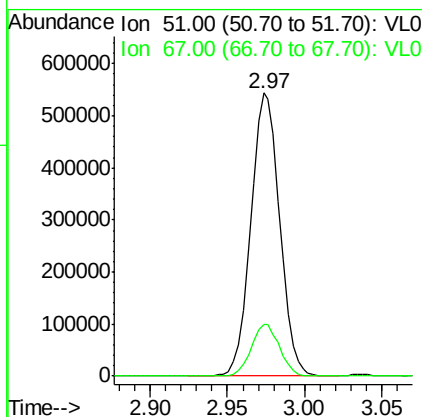
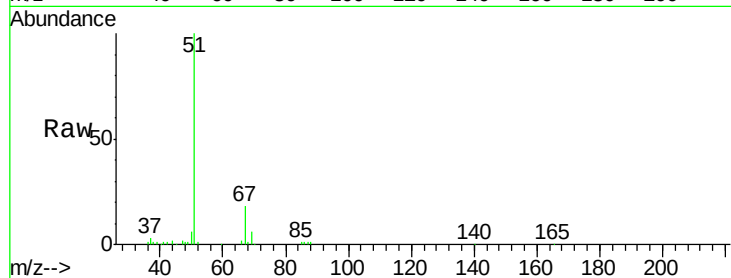
#3  
Chlorodifluoromethane  
Concen: 9.916 ppbv  
RT: 2.97 min Scan# 58  
Delta R.T. -0.01 min  
Lab File: VL034158.D  
Acq: 11 Sep 2019 00:58

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDCCC010EC

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 51      | 100   |       |       |
| 67      | 17.9  | 14.2  | 21.4  |

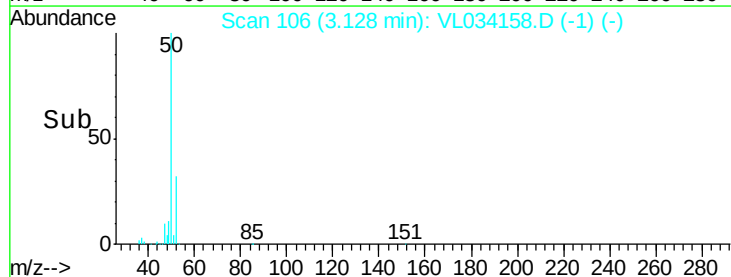
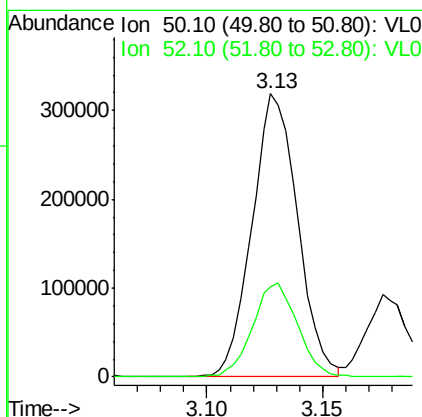
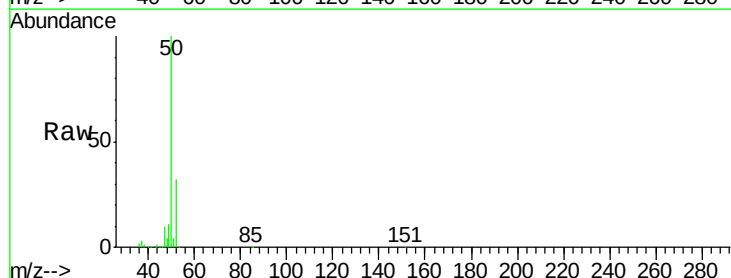
Manual Integrations  
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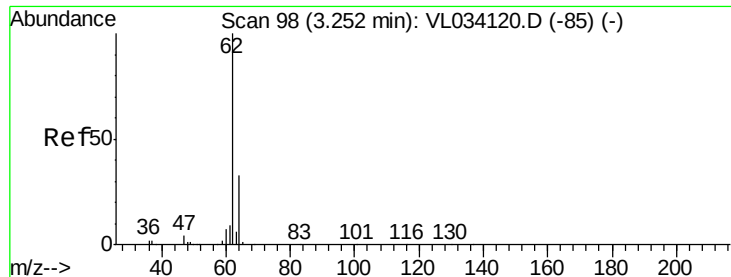
MMDadoda  
9/12/2019 5:17:33 AM



#4  
Chloromethane  
Concen: 9.781 ppbv  
RT: 3.13 min Scan# 106  
Delta R.T. -0.01 min  
Lab File: VL034158.D  
Acq: 11 Sep 2019 00:58

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 50      | 100   |       |       |
| 52      | 31.7  | 27.4  | 41.2  |





#5

Vinyl Chloride

Concen: 9.564 ppbv

RT: 3.25 min Scan# 144

Delta R.T. -0.00 min

Lab File: VL034158.D

Acq: 11 Sep 2019 00:58

Instrument :

MSVOA\_L

ClientSampleId :

VSTDCCC010EC

Tot Ion: 62 Resp: 389537

Ion Ratio Lower Upper

62 100

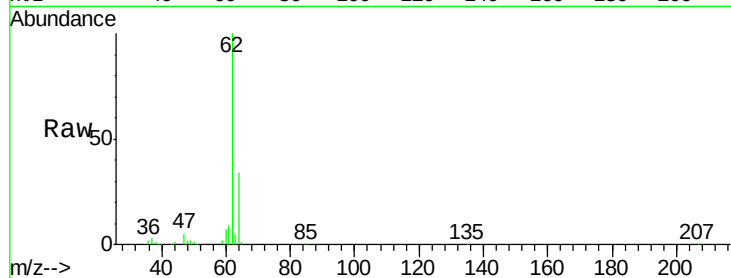
64 33.7 26.6 39.8

Manual Integrations

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9/12/2019 5:17:33 AM



Abundance Ion 62.10 (61.80 to 62.80): VL0

Ion 64.10 (63.80 to 64.80): VL0

3.25

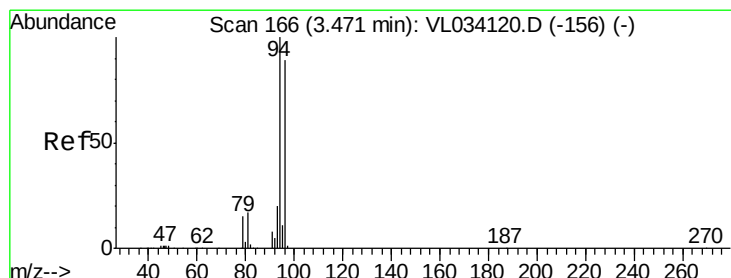
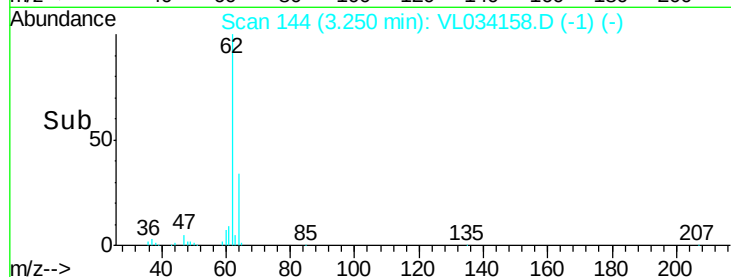
300000

200000

100000

0

Time-->



#6

Bromomethane

Concen: 9.574 ppbv

RT: 3.47 min Scan# 212

Delta R.T. -0.00 min

Lab File: VL034158.D

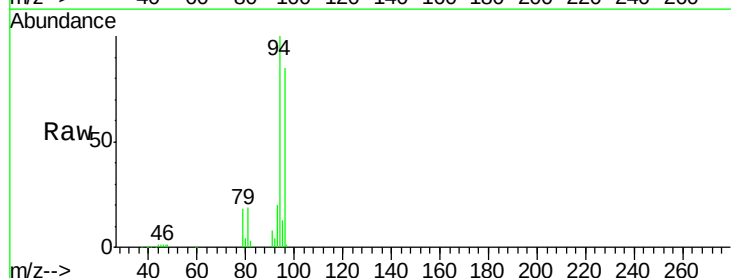
Acq: 11 Sep 2019 00:58

Tgt Ion: 94 Resp: 192458

Ion Ratio Lower Upper

94 100

96 84.8 71.4 107.0



Abundance Ion 94.00 (93.70 to 94.70): VL0

Ion 96.00 (95.70 to 96.70): VL0

3.47

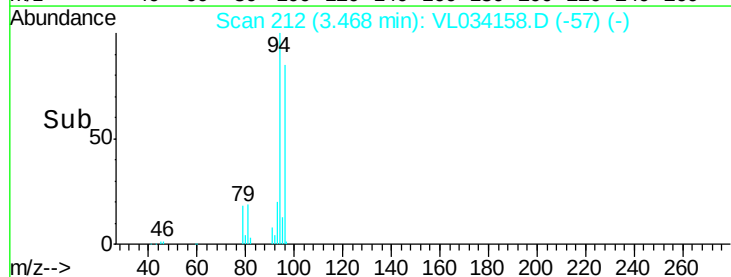
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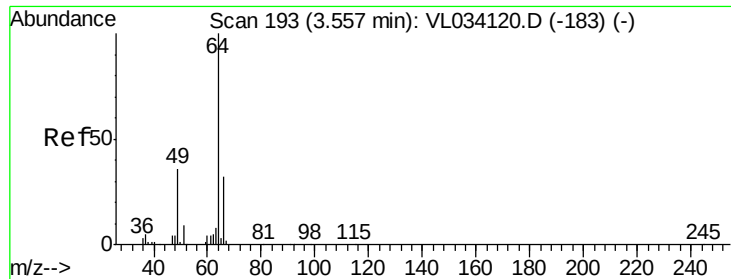
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50000

0

Time-->





#7

Chloroethane

Concen: 9.942 ppbv

RT: 3.56 min Scan# 239

Delta R.T. -0.00 min

Lab File: VL034158.D

Acq: 11 Sep 2019 00:58

Instrument :

MSVOA\_L

ClientSampleId :

VSTDCCC010EC

Tot Ion: 64 Resp: 137970

Ion Ratio Lower Upper

64 100

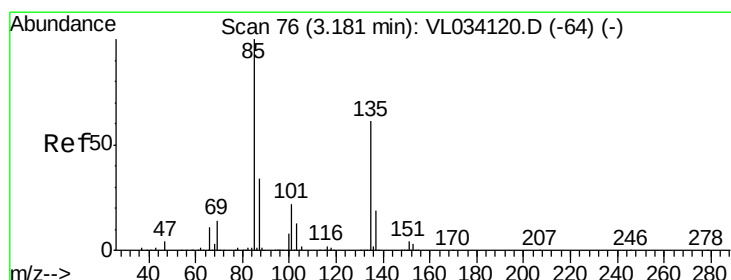
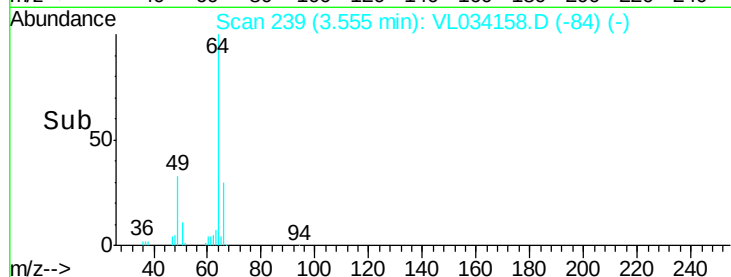
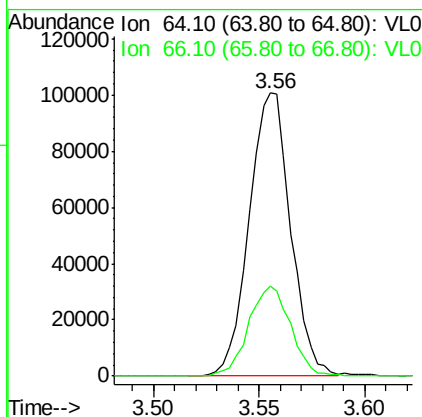
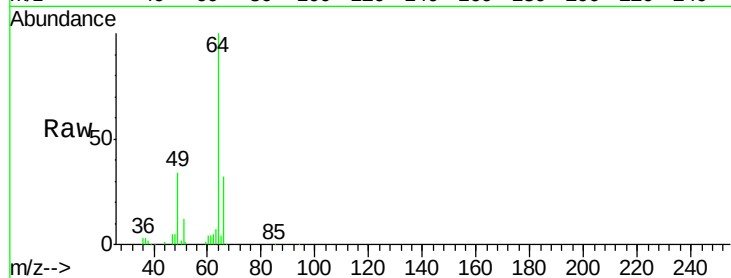
66 31.8 25.4 38.2

Manual Integrations

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9/12/2019 5:17:33 AM



#8

Dichlorotetrafluoroethane

Concen: 9.602 ppbv

RT: 3.18 min Scan# 122

Delta R.T. -0.00 min

Lab File: VL034158.D

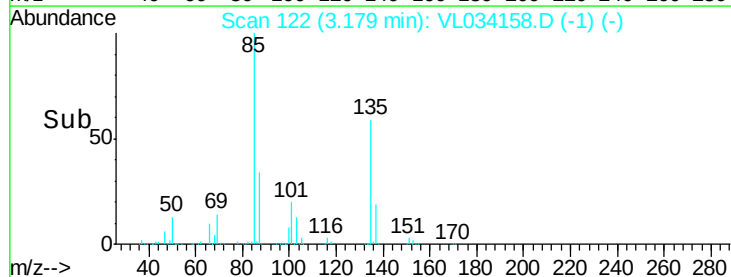
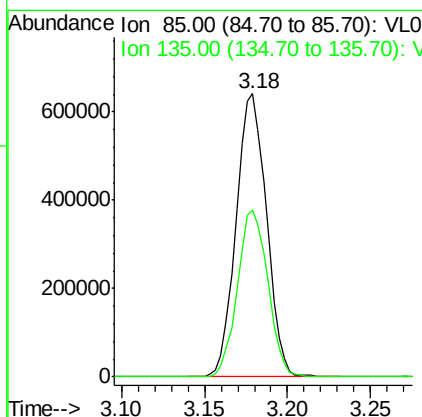
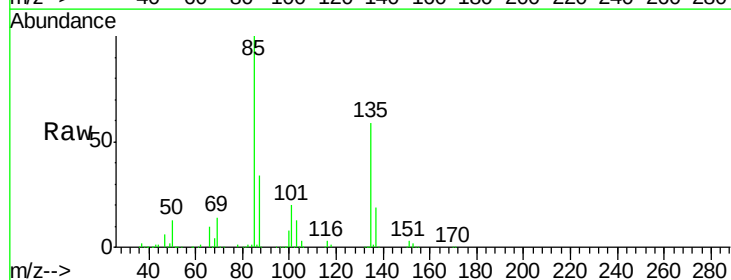
Acq: 11 Sep 2019 00:58

Tgt Ion: 85 Resp: 817988

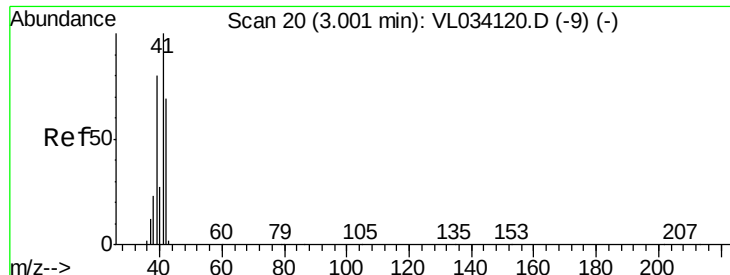
Ion Ratio Lower Upper

85 100

135 59.1 48.0 72.0







#9

Propene

Concen: 9.370 ppbv

RT: 3.00 min Scan# 65

Delta R.T. -0.01 min

Lab File: VL034158.D

Acq: 11 Sep 2019 00:58

Instrument :

MSVOA\_L

ClientSampleId :

VSTDCCC010EC

Tot Ion: 41 Resp: 374991

Ion Ratio Lower Upper

41 100

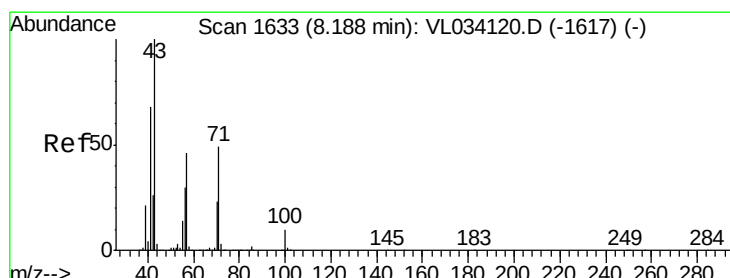
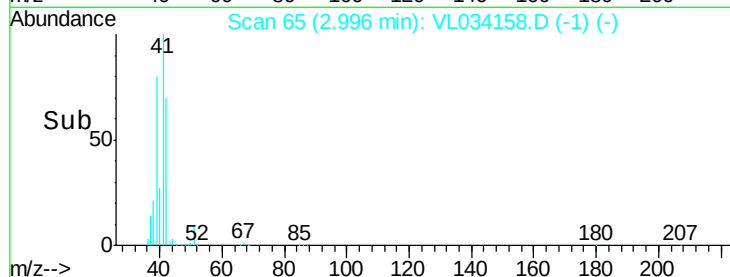
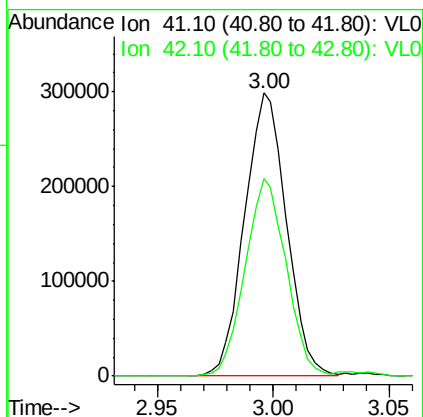
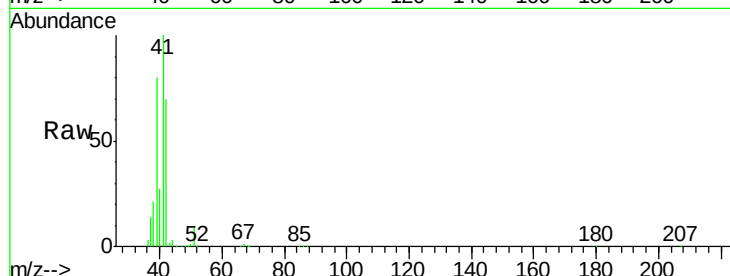
42 69.9 54.6 81.8

Manual Integrations

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#10

Heptane

Concen: 9.401 ppbv

RT: 8.19 min Scan# 1679

Delta R.T. -0.00 min

Lab File: VL034158.D

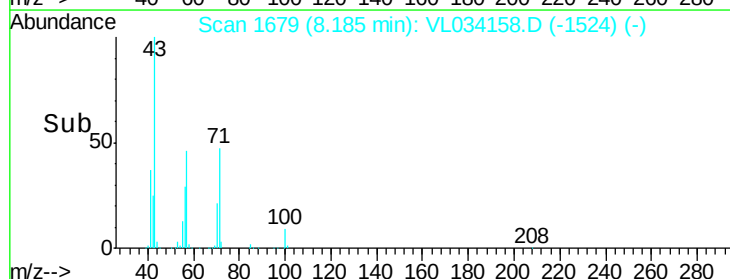
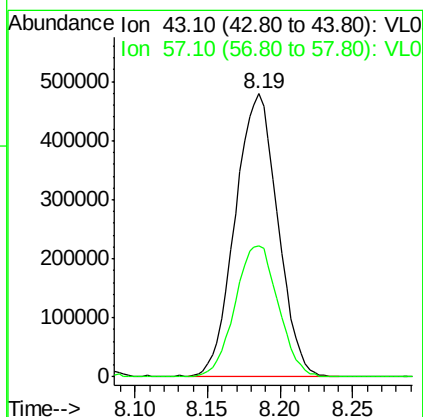
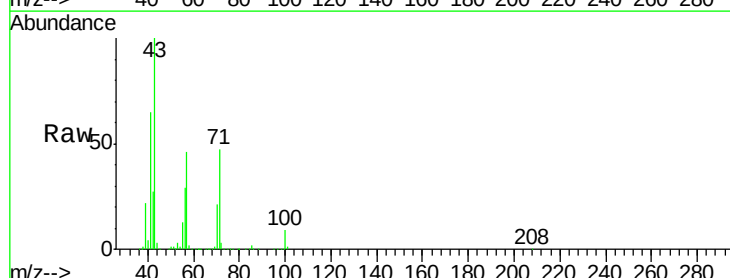
Acq: 11 Sep 2019 00:58

Tgt Ion: 43 Resp: 976390

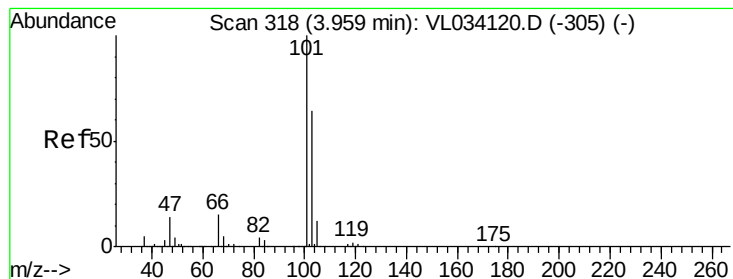
Ion Ratio Lower Upper

43 100

57 47.3 38.1 57.1







#11

Trichlorofluoromethane

Concen: 9.706 ppbv

RT: 3.95 min Scan# 363

Delta R.T. -0.01 min

Lab File: VL034158.D

Acq: 11 Sep 2019 00:58

Instrument :

MSVOA\_L

ClientSampleId :

VSTDCCC010EC

Tot Ion:101 Resp: 837766

Ion Ratio Lower Upper

101 100

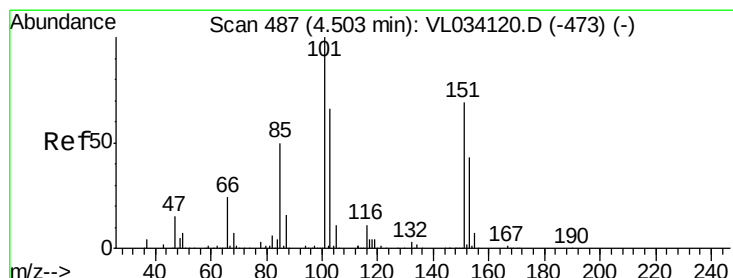
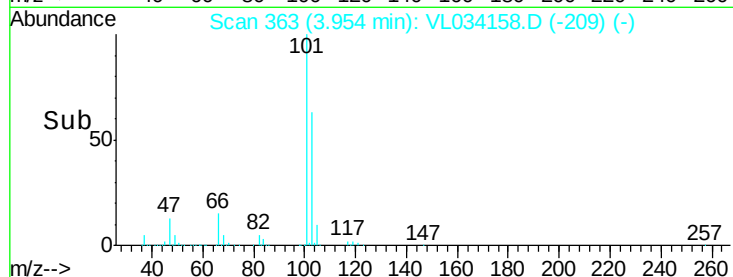
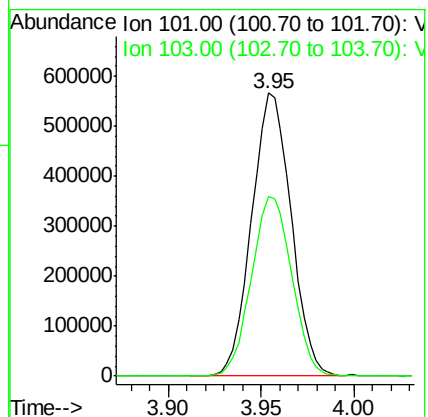
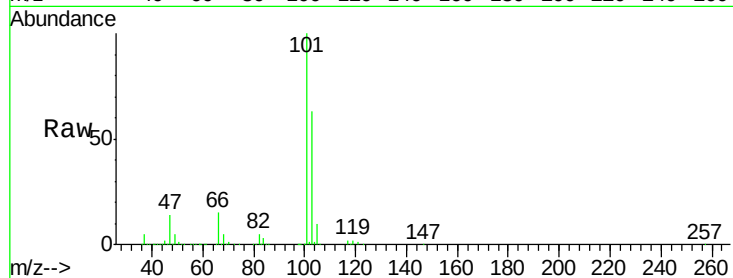
103 63.3 51.4 77.2

Manual Integrations

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#12

1,1,2-Trichlorotrifluoroethane

Concen: 9.724 ppbv

RT: 4.50 min Scan# 534

Delta R.T. 0.00 min

Lab File: VL034158.D

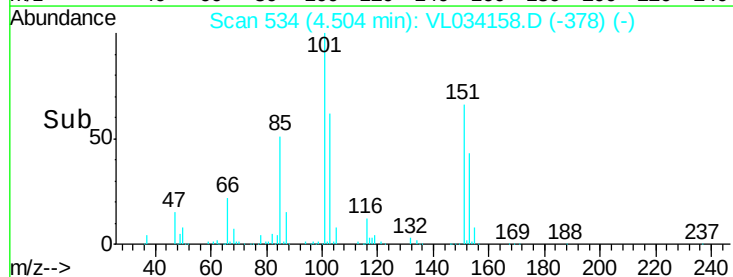
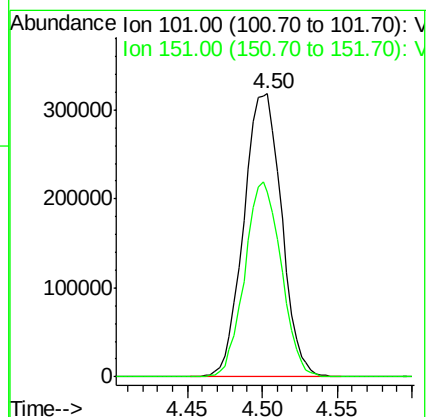
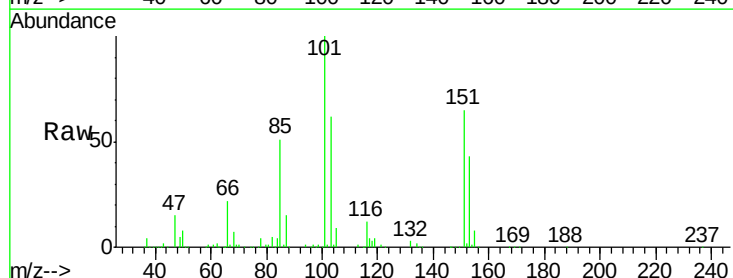
Acq: 11 Sep 2019 00:58

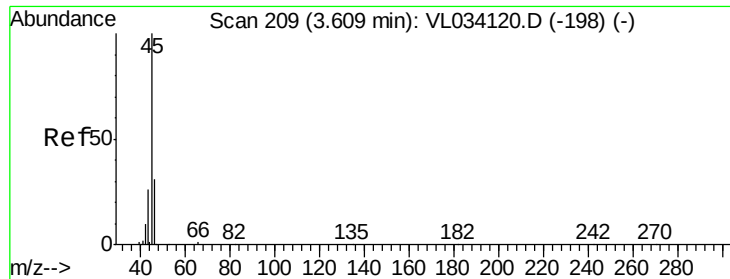
Tgt Ion:101 Resp: 561482

Ion Ratio Lower Upper

101 100

151 66.2 53.0 79.6





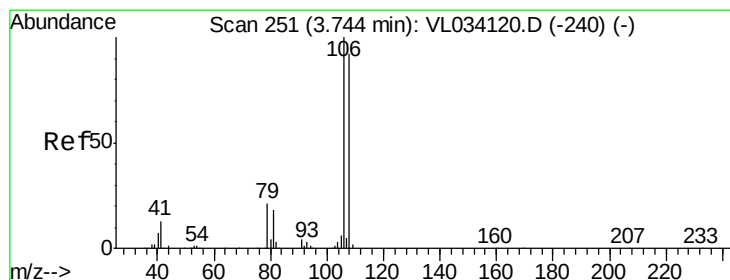
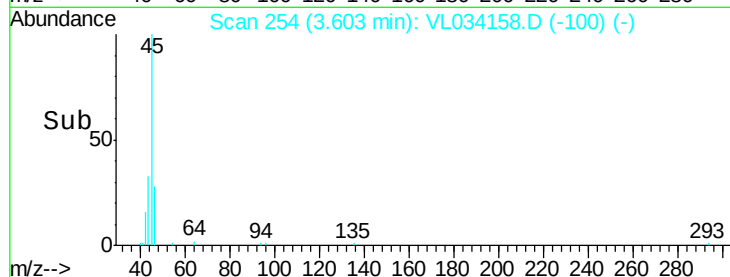
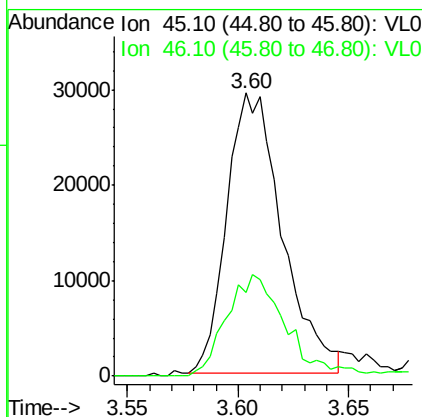
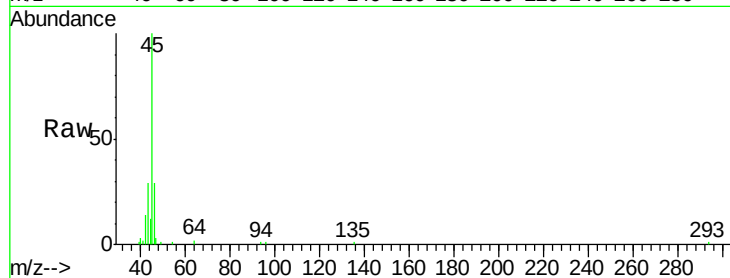
#13  
Ethanol  
Concen: 6.539 ppbv  
RT: 3.60 min Scan# 254  
Delta R.T. -0.01 min  
Lab File: VL034158.D  
Acq: 11 Sep 2019 00:58

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDCCC010EC

| Tot Ion   | 45.10 | Resp  | 51260 |
|-----------|-------|-------|-------|
| Ion Ratio | Lower | Upper |       |
| 45        | 100   |       |       |
| 46        | 38.9  | 15.0  | 60.0  |

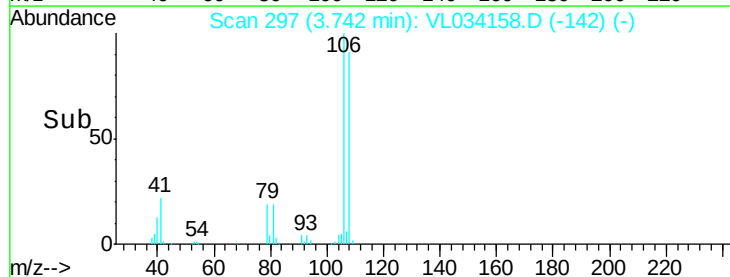
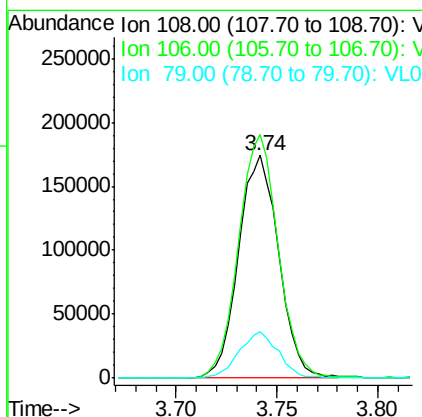
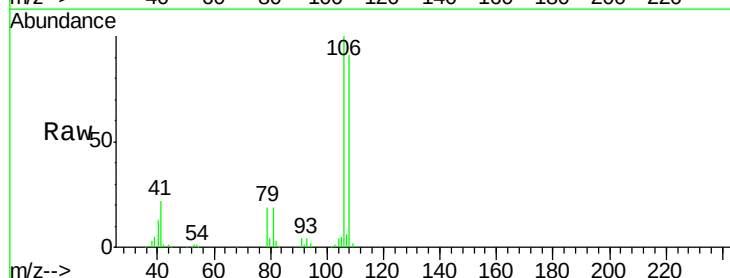
Manual Integrations  
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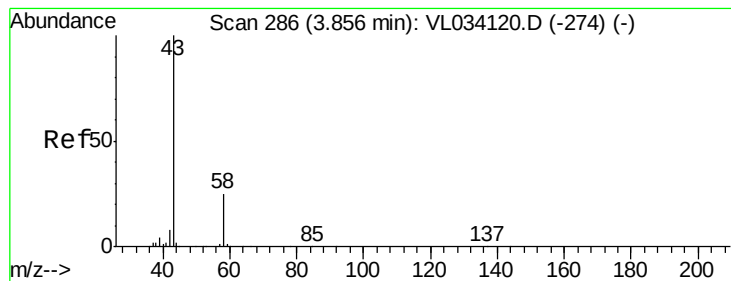
MMDadoda  
9/12/2019 5:17:33 AM



#14  
Bromoethene  
Concen: 9.747 ppbv  
RT: 3.74 min Scan# 297  
Delta R.T. -0.00 min  
Lab File: VL034158.D  
Acq: 11 Sep 2019 00:58

| Tgt Ion   | 108   | Resp  | 243666 |
|-----------|-------|-------|--------|
| Ion Ratio | Lower | Upper |        |
| 108       | 100   |       |        |
| 106       | 108.7 | 87.2  | 130.8  |
| 79        | 20.6  | 16.5  | 24.7   |





#15

Acetone

Concen: 9.121 ppbv

RT: 3.85 min Scan# 332

Delta R.T. -0.00 min

Lab File: VL034158.D

Acq: 11 Sep 2019 00:58

Instrument :

MSVOA\_L

ClientSampleId :

VSTDCCC010EC

Tot Ion: 43 Resp: 705378

Ion Ratio Lower Upper

43 100

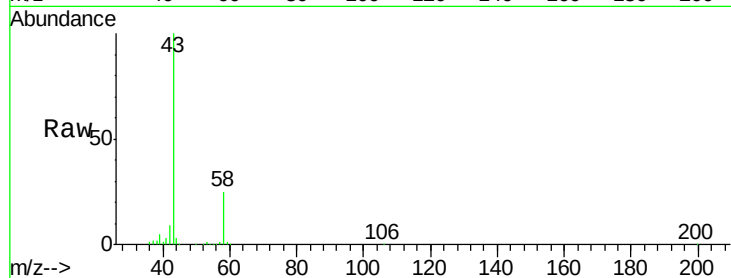
58 25.1 20.6 30.8

Manual Integrations

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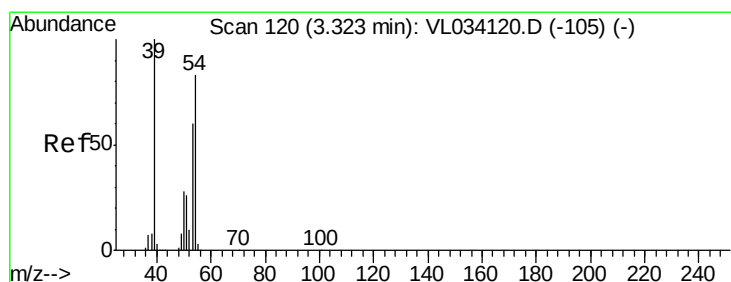
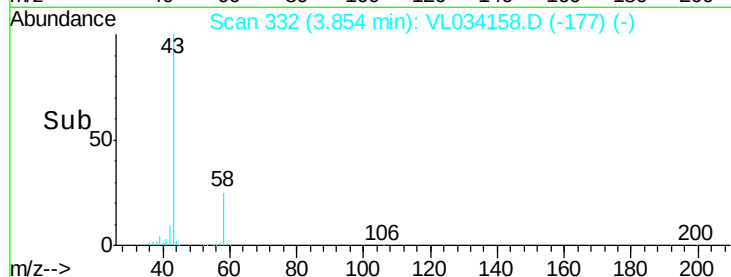
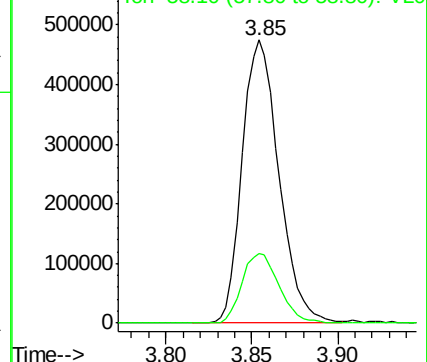
MMDadoda

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Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#16

1,3-Butadiene

Concen: 9.892 ppbv

RT: 3.32 min Scan# 166

Delta R.T. -0.00 min

Lab File: VL034158.D

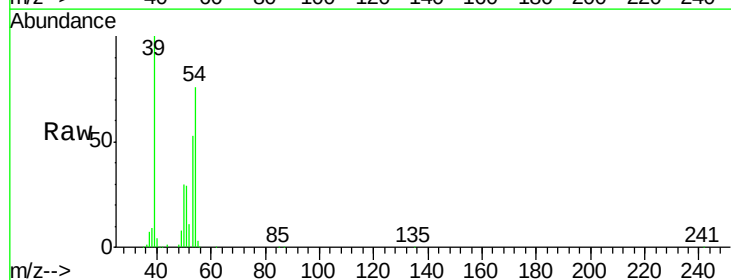
Acq: 11 Sep 2019 00:58

Tgt Ion: 39 Resp: 387421

Ion Ratio Lower Upper

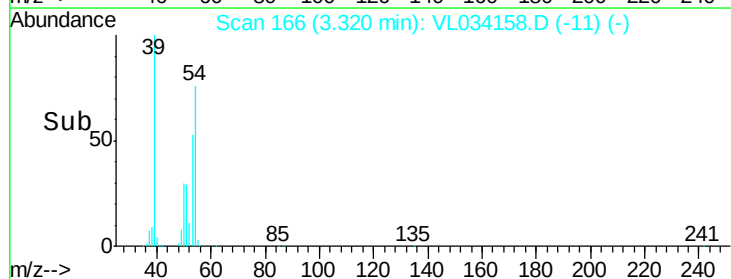
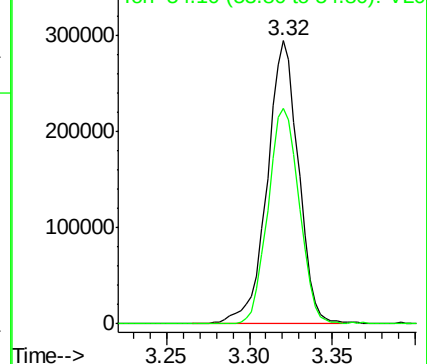
39 100

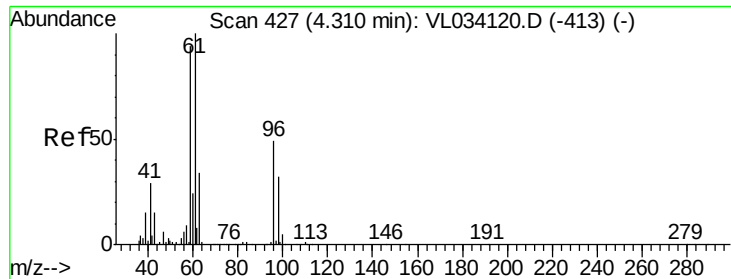
54 76.4 63.5 95.3



Abundance Ion 39.10 (38.80 to 39.80): VL0

Ion 54.10 (53.80 to 54.80): VL0





#17

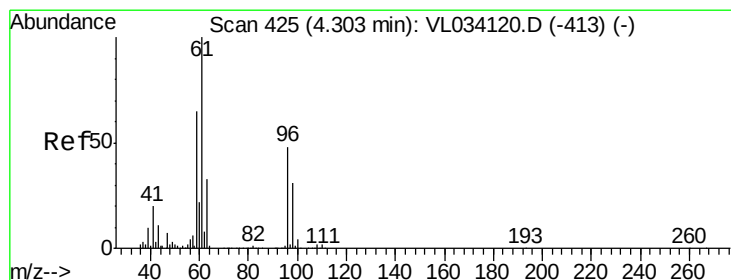
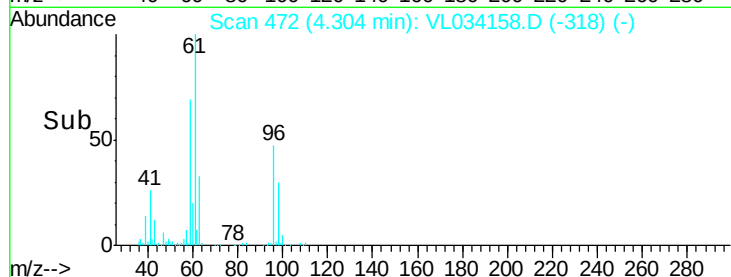
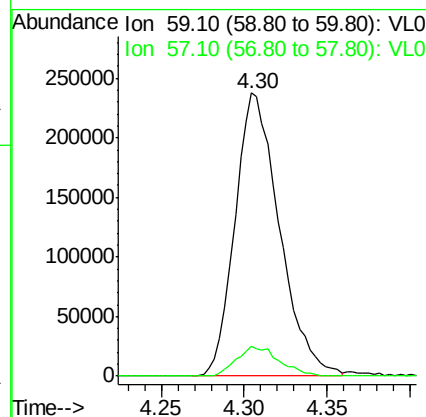
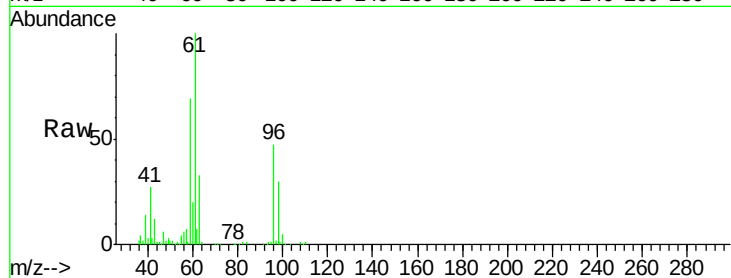
tert-Butyl alcohol  
Concen: 7.886 ppbv  
RT: 4.30 min Scan# 472  
Delta R.T. -0.01 min  
Lab File: VL034158.D  
Acq: 11 Sep 2019 00:58

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDCCC010EC

| Tot Ion   | 59    | Resp  | 442711 |
|-----------|-------|-------|--------|
| Ion Ratio | Lower | Upper |        |
| 59        | 100   |       |        |
| 57        | 10.2  | 8.6   | 12.8   |

Manual Integrations  
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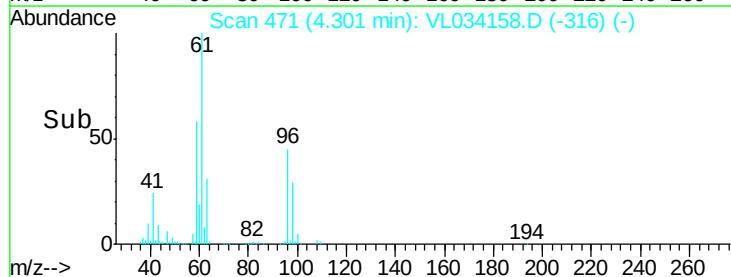
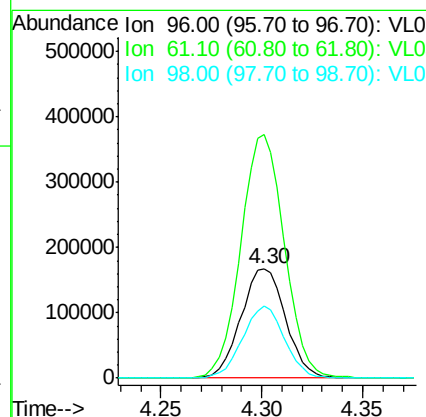
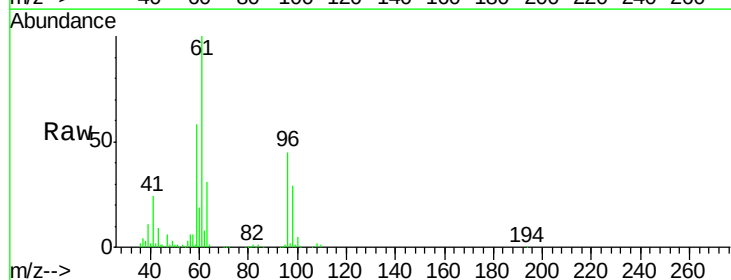
MMDadoda  
9/12/2019 5:17:33 AM

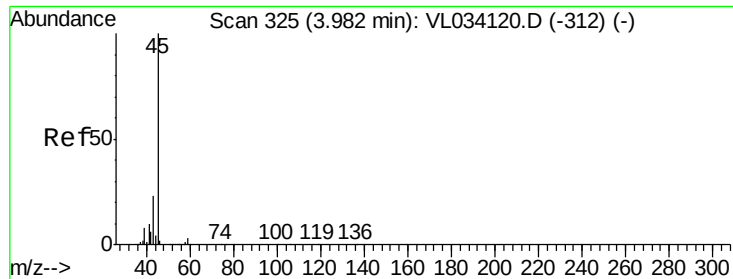


#18

1,1-Dichloroethene  
Concen: 9.846 ppbv  
RT: 4.30 min Scan# 471  
Delta R.T. -0.00 min  
Lab File: VL034158.D  
Acq: 11 Sep 2019 00:58

| Tgt Ion   | 96    | Resp  | 259754 |
|-----------|-------|-------|--------|
| Ion Ratio | Lower | Upper |        |
| 96        | 100   |       |        |
| 61        | 222.7 | 165.8 | 248.8  |
| 98        | 65.5  | 50.8  | 76.2   |





#19

Isopropyl Alcohol

Concen: 7.683 ppbv

RT: 3.98 min Scan# 370

Delta R.T. -0.01 min

Lab File: VL034158.D

Acq: 11 Sep 2019 00:58

Instrument :

MSVOA\_L

ClientSampleId :

VSTDCCC010EC

Tot Ion: 45 Resp: 401044

Ion Ratio Lower Upper

45 100

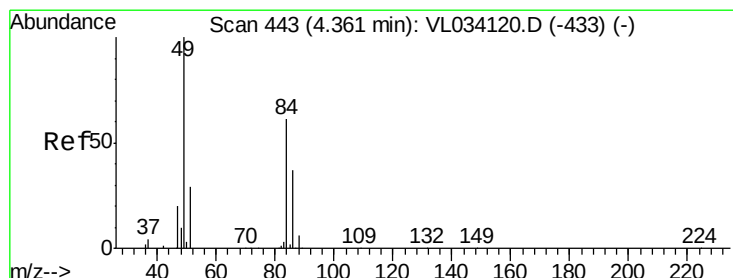
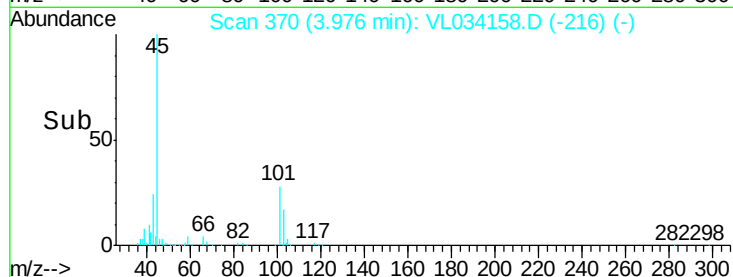
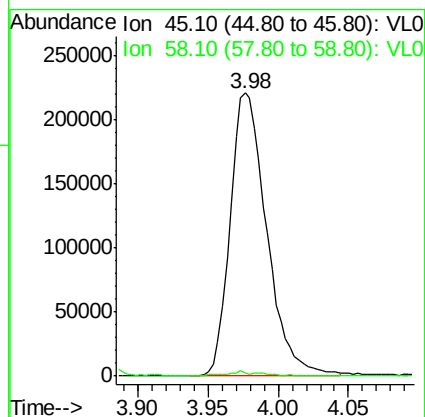
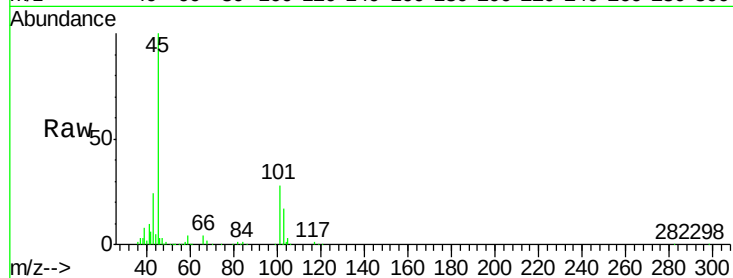
58 1.8 1.0 1.6#

Manual Integrations

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9/12/2019 5:17:33 AM



#20

Methylene Chloride

Concen: 9.065 ppbv

RT: 4.36 min Scan# 488

Delta R.T. -0.01 min

Lab File: VL034158.D

Acq: 11 Sep 2019 00:58

Tgt Ion: 84 Resp: 231774

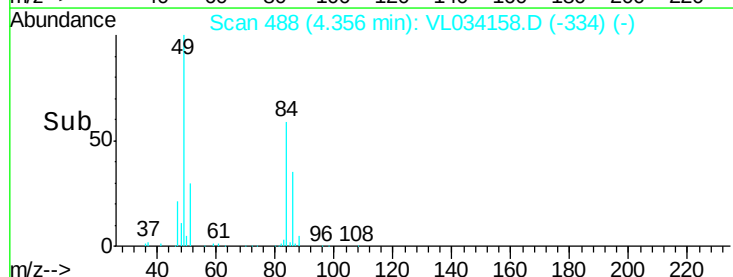
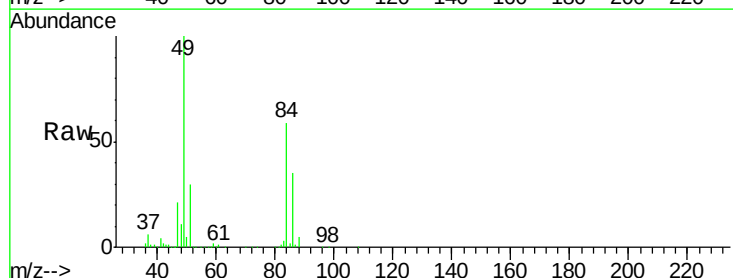
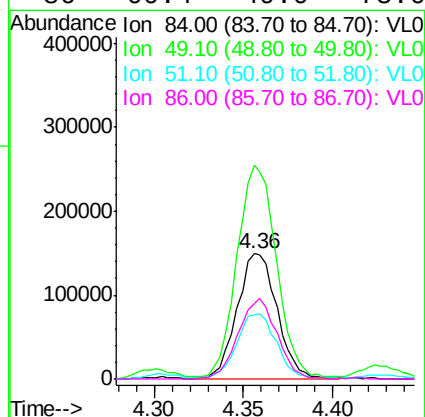
Ion Ratio Lower Upper

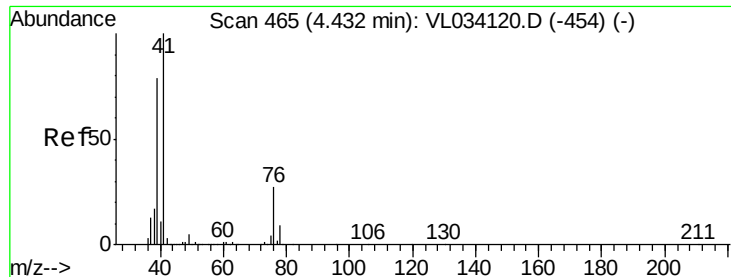
84 100

49 169.5 131.0 196.6

51 51.0 38.1 57.1

86 60.4 49.0 73.6





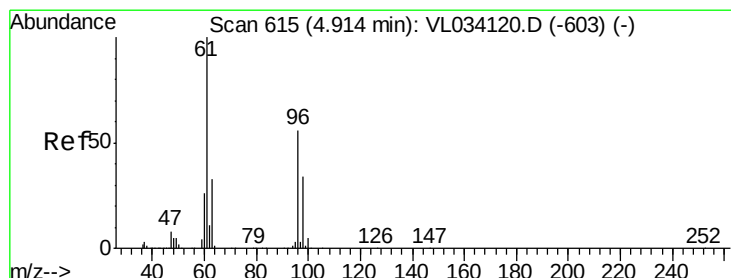
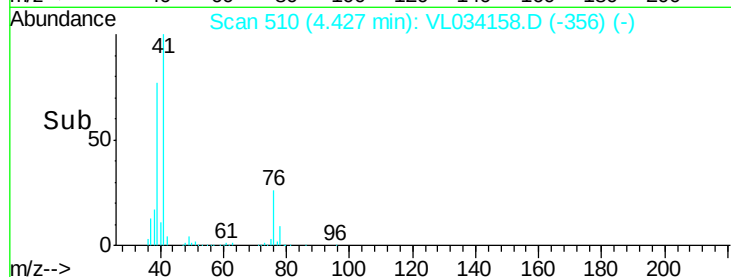
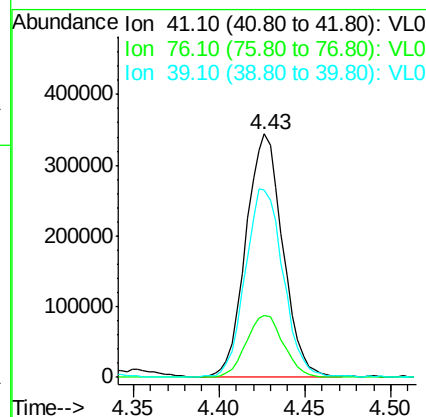
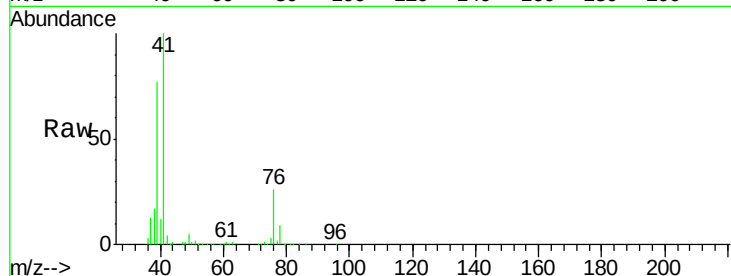
#21  
Allvl Chloride  
Concen: 9.999 ppbv  
RT: 4.43 min Scan# 510  
Delta R.T. -0.01 min  
Lab File: VL034158.D  
Acq: 11 Sep 2019 00:58

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDCCC010EC

| Tot Ion | Ratio | Resp   | Lower | Upper |
|---------|-------|--------|-------|-------|
| 41      | 100   | 509792 |       |       |
| 76      | 26.0  |        | 21.6  | 32.4  |
| 39      | 80.3  |        | 65.0  | 97.4  |

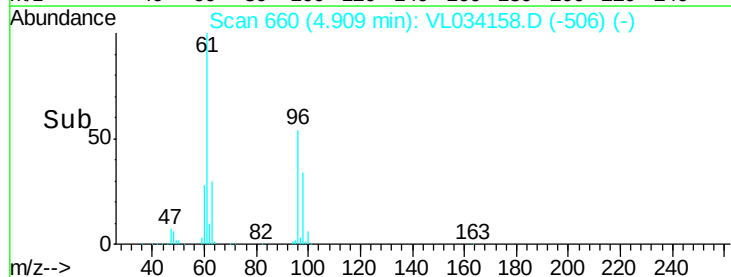
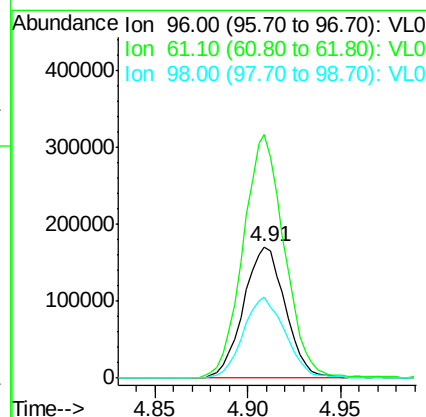
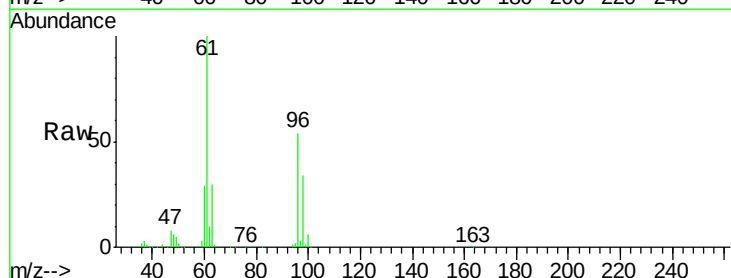
Manual Integrations  
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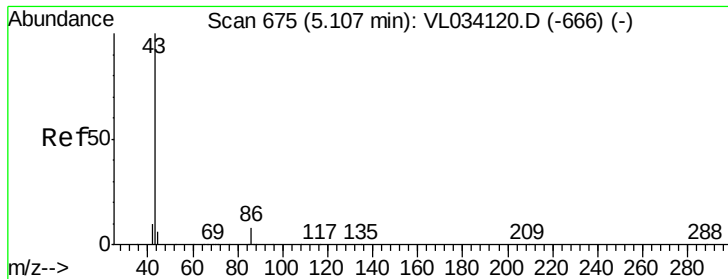
MMDadoda  
9/12/2019 5:17:33 AM



#22  
trans-1,2-Dichloroethene  
Concen: 10.134 ppbv  
RT: 4.91 min Scan# 660  
Delta R.T. -0.01 min  
Lab File: VL034158.D  
Acq: 11 Sep 2019 00:58

| Tgt Ion | Ratio | Resp   | Lower | Upper |
|---------|-------|--------|-------|-------|
| 96      | 100   | 267609 |       |       |
| 61      | 184.9 |        | 143.1 | 214.7 |
| 98      | 62.2  |        | 49.0  | 73.4  |





#23

Vinyl Acetate

Concen: 9.926 ppbv

RT: 5.10 min Scan# 720

Delta R.T. -0.01 min

Lab File: VL034158.D

Acq: 11 Sep 2019 00:58

Instrument :

MSVOA\_L

ClientSampleId :

VSTDCCC010EC

Tot Ion: 43 Resp: 1302281

Ion Ratio Lower Upper

43 100

86 7.2 5.5 8.3

42 10.0 8.2 12.4

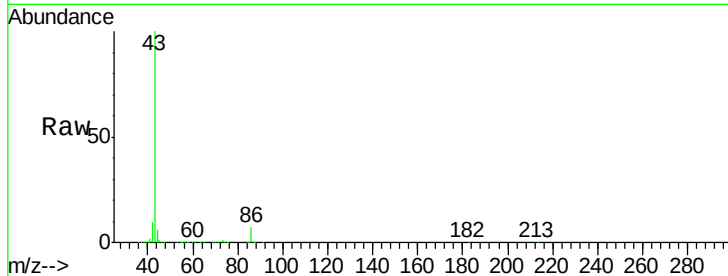
44 5.4 4.3 6.5

Manual Integrations

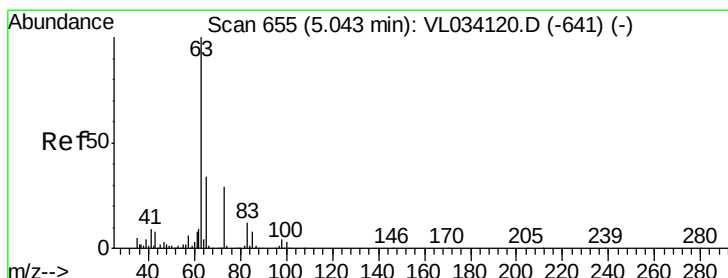
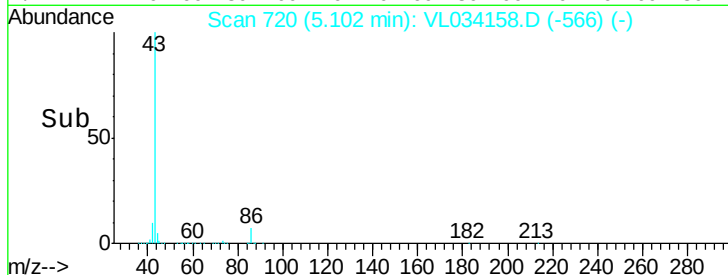
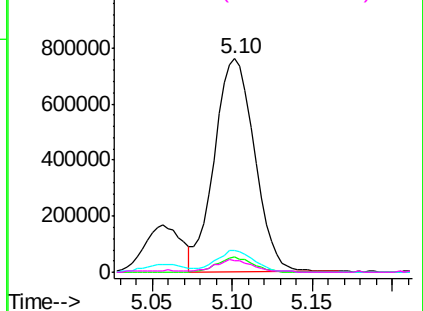
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9/12/2019 5:17:33 AM



Abundance Ion 43.10 (42.80 to 43.80): VL0  
Ion 86.10 (85.80 to 86.80): VL0  
Ion 42.10 (41.80 to 42.80): VL0  
Ion 44.10 (43.80 to 44.80): VL0



#24

1,1-Dichloroethane

Concen: 9.540 ppbv

RT: 5.04 min Scan# 700

Delta R.T. -0.01 min

Lab File: VL034158.D

Acq: 11 Sep 2019 00:58

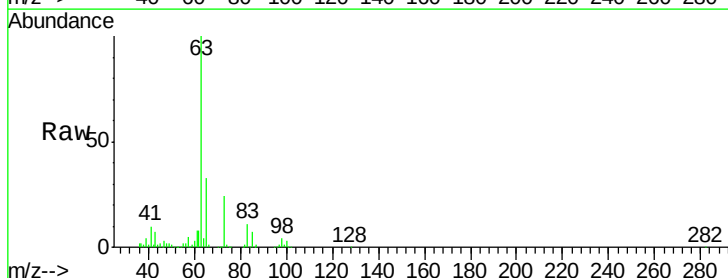
Tgt Ion: 63 Resp: 830723

Ion Ratio Lower Upper

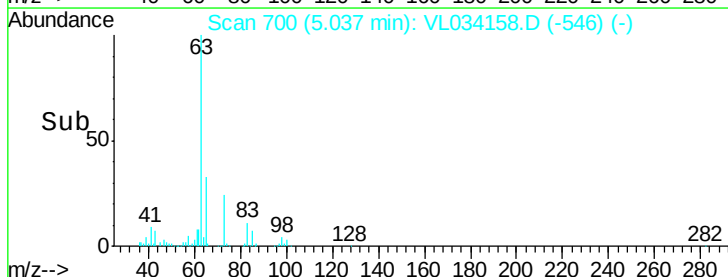
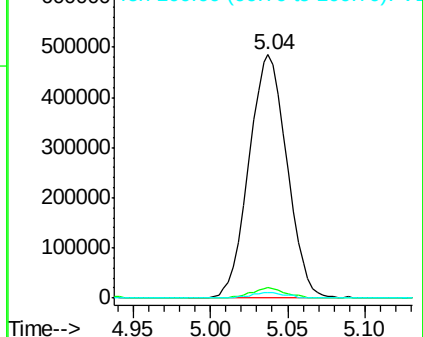
63 100

98 4.1 2.1 6.2

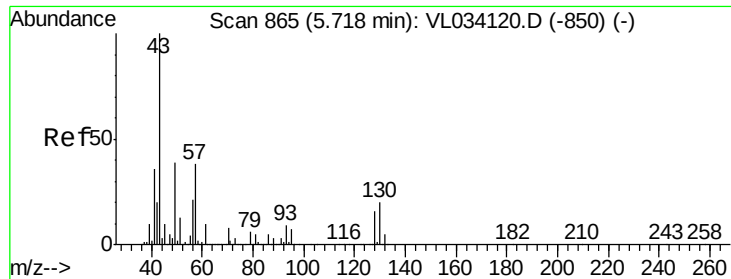
100 2.5 1.4 4.0



Abundance Ion 63.10 (62.80 to 63.80): VL0  
Ion 98.00 (97.70 to 98.70): VL0  
Ion 100.00 (99.70 to 100.70): VL0







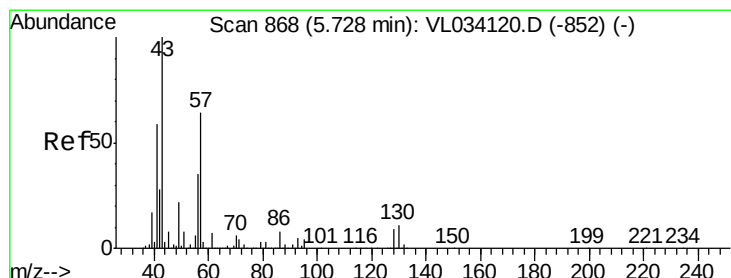
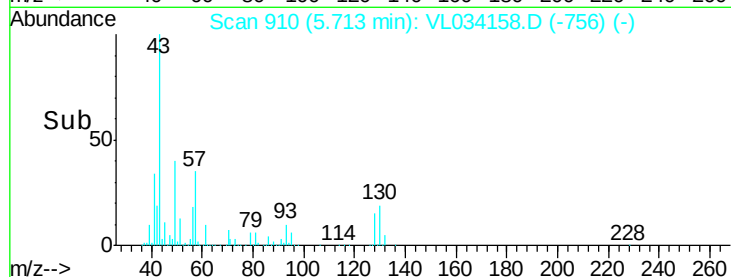
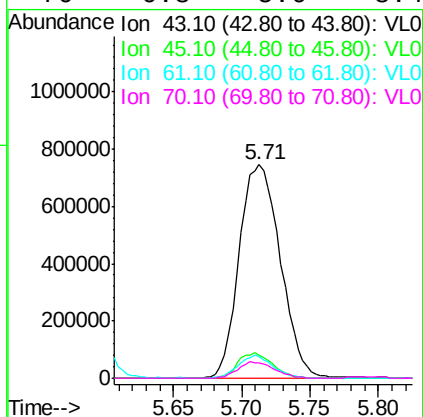
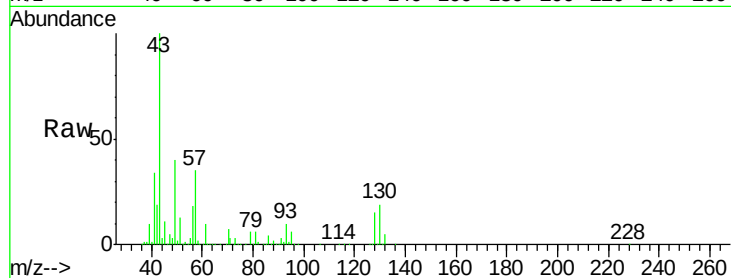
#25  
Ethyl Acetate  
Concen: 9.196 ppbv  
RT: 5.71 min Scan# 910  
Delta R.T. -0.01 min  
Lab File: VL034158.D  
Acq: 11 Sep 2019 00:58

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDCCC010EC

| Tot Ion | 43    | Resp  | 1561061 |
|---------|-------|-------|---------|
| Ion     | Ratio | Lower | Upper   |
| 43      | 100   |       |         |
| 45      | 10.2  | 8.2   | 12.4    |
| 61      | 9.2   | 7.4   | 11.2    |
| 70      | 6.8   | 5.6   | 8.4     |

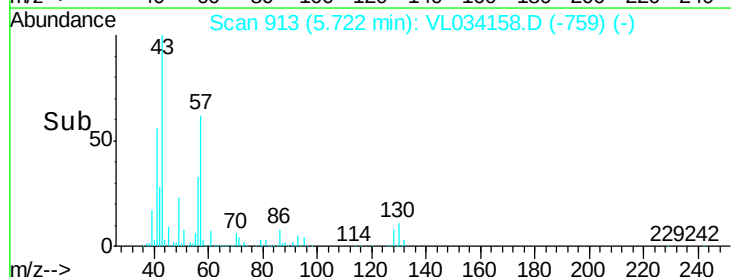
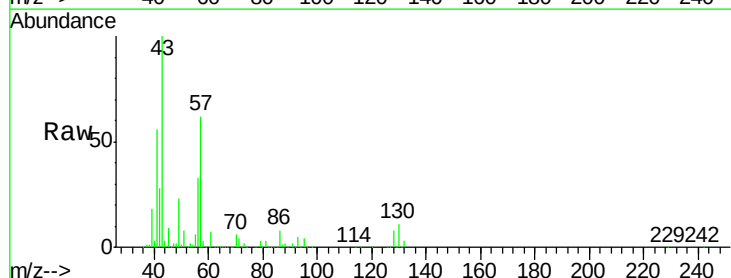
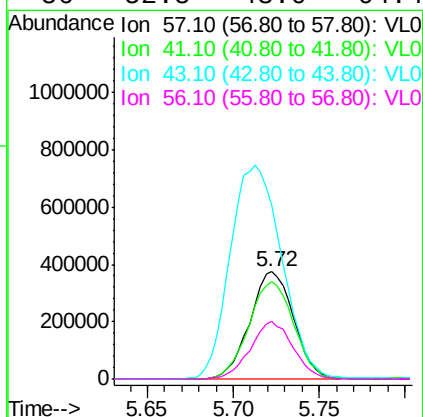
Manual Integrations  
APPROVED

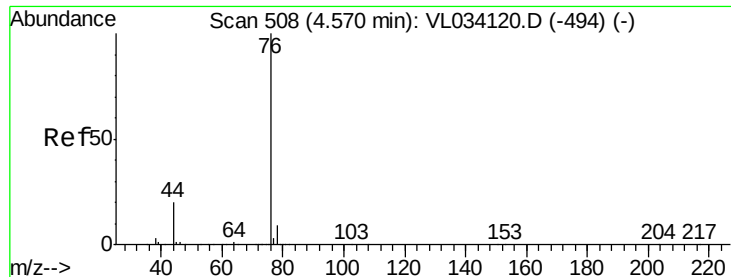
MMDadoda  
9/12/2019 5:17:33 AM



#26  
Hexane  
Concen: 8.745 ppbv  
RT: 5.72 min Scan# 913  
Delta R.T. -0.01 min  
Lab File: VL034158.D  
Acq: 11 Sep 2019 00:58

| Tgt Ion | 57    | Resp  | 659995 |
|---------|-------|-------|--------|
| Ion     | Ratio | Lower | Upper  |
| 57      | 100   |       |        |
| 41      | 93.6  | 76.6  | 115.0  |
| 43      | 238.2 | 189.2 | 283.8  |
| 56      | 52.5  | 43.0  | 64.4   |





#27

Carbon Disulfide

Concen: 10.256 ppbv

RT: 4.57 min Scan# 554

Delta R.T. -0.00 min

Lab File: VL034158.D

Acq: 11 Sep 2019 00:58

Instrument :

MSVOA\_L

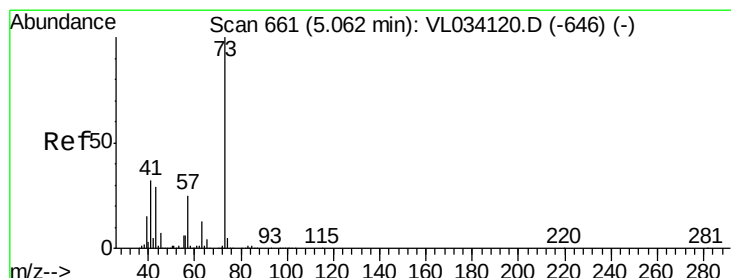
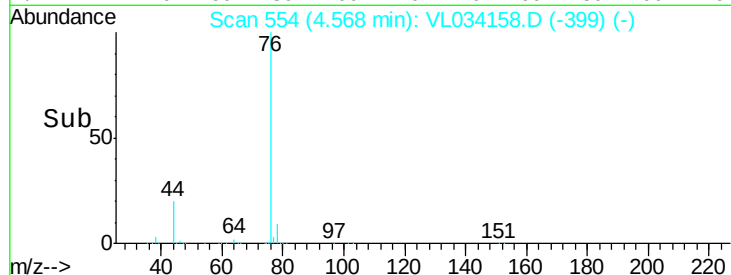
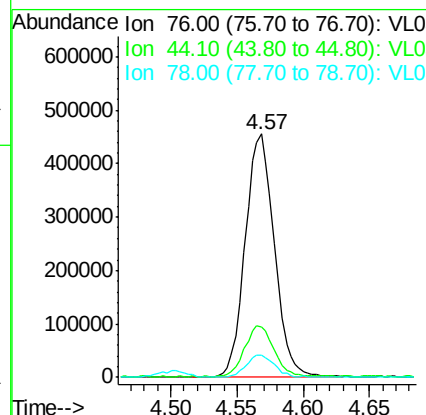
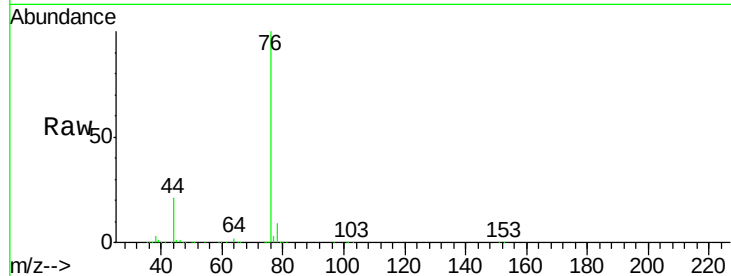
ClientSampleId :

VSTDCCC010EC

|          |       |       |        |
|----------|-------|-------|--------|
| Tot Ion: | 76    | Resp: | 698598 |
| Ion      | Ratio | Lower | Upper  |
| 76       | 100   |       |        |
| 44       | 21.4  | 17.6  | 26.4   |
| 78       | 9.2   | 7.3   | 10.9   |

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MMDadoda  
9/12/2019 5:17:33 AM



#28

Methyl tert-Butyl Ether

Concen: 9.558 ppbv

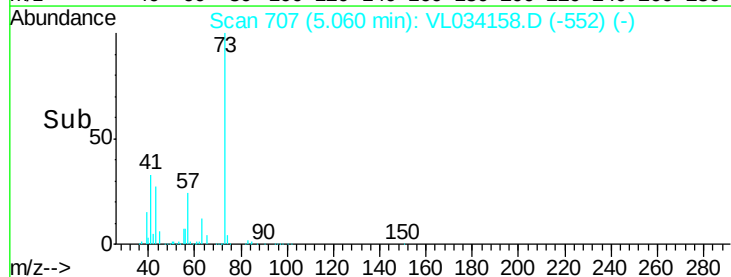
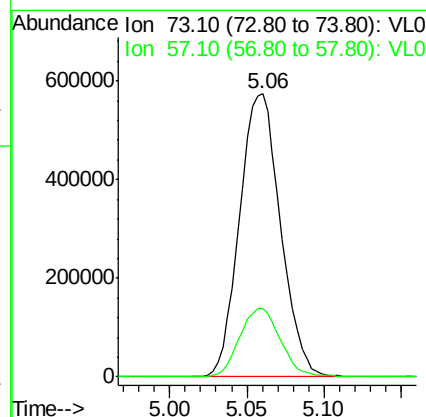
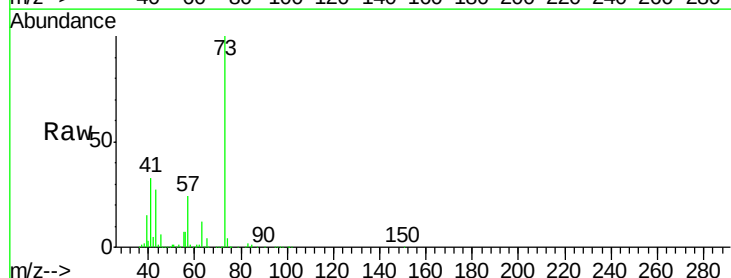
RT: 5.06 min Scan# 707

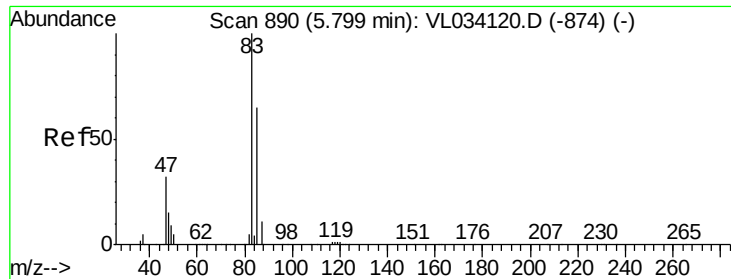
Delta R.T. -0.00 min

Lab File: VL034158.D

Acq: 11 Sep 2019 00:58

|          |       |       |         |
|----------|-------|-------|---------|
| Tgt Ion: | 73    | Resp: | 1056910 |
| Ion      | Ratio | Lower | Upper   |
| 73       | 100   |       |         |
| 57       | 24.1  | 19.8  | 29.8    |





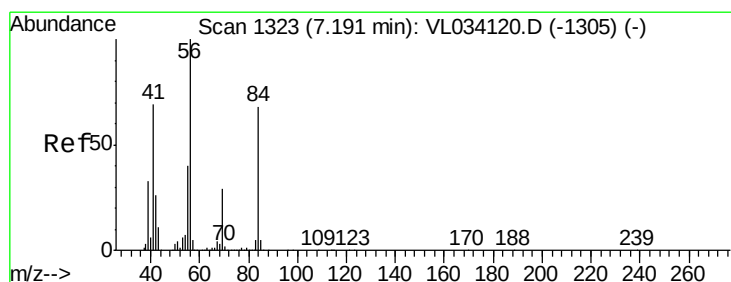
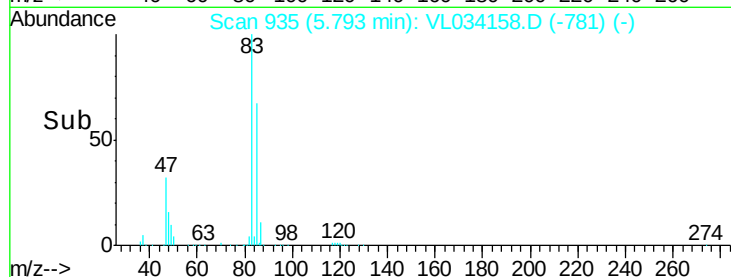
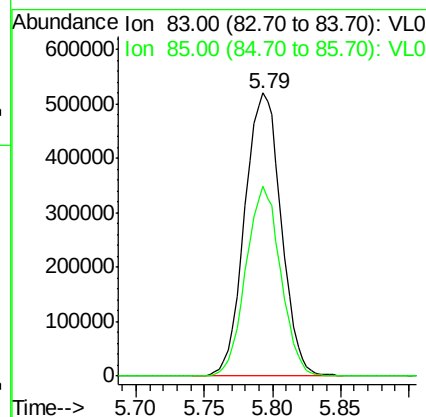
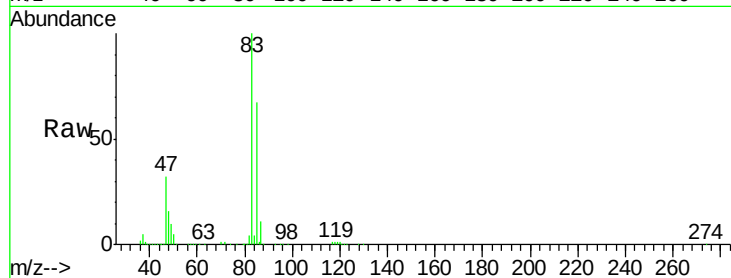
#29  
Chloroform  
Concen: 9.480 ppbv  
RT: 5.79 min Scan# 935  
Delta R.T. -0.01 min  
Lab File: VL034158.D  
Acq: 11 Sep 2019 00:58

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDCCC010EC

| Tot Ion   | 83    | Resp  | 965036 |
|-----------|-------|-------|--------|
| Ion Ratio | Lower | Upper |        |
| 83        | 100   |       |        |
| 85        | 67.2  | 51.8  | 77.6   |

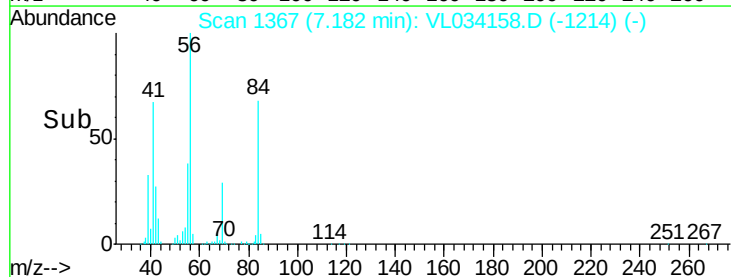
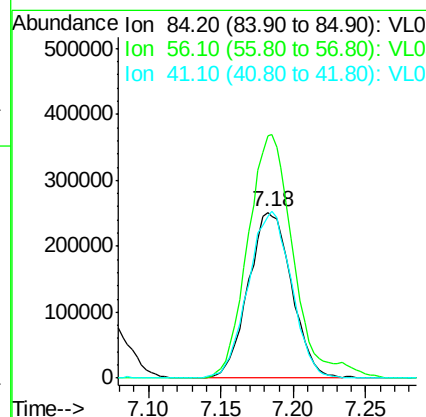
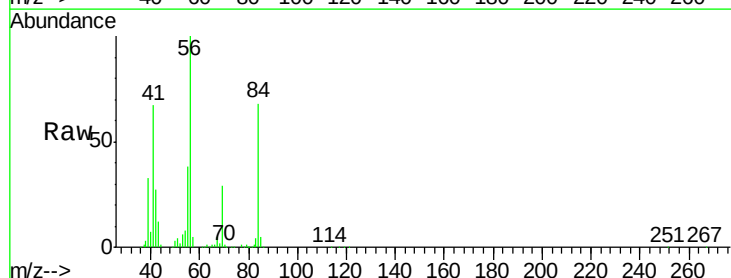
Manual Integrations  
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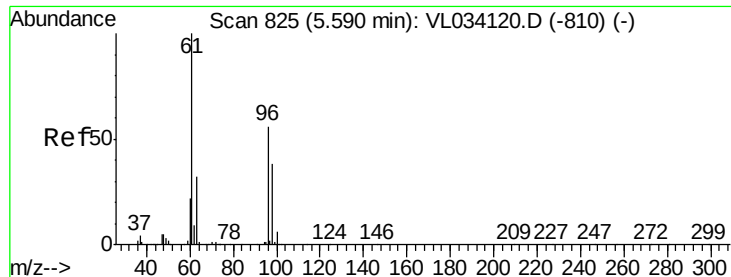
MMDadoda  
9/12/2019 5:17:33 AM



#30  
Cyclohexane  
Concen: 9.584 ppbv  
RT: 7.18 min Scan# 1367  
Delta R.T. -0.01 min  
Lab File: VL034158.D  
Acq: 11 Sep 2019 00:58

| Tgt Ion   | 84    | Resp  | 522922 |
|-----------|-------|-------|--------|
| Ion Ratio | Lower | Upper |        |
| 84        | 100   |       |        |
| 56        | 155.0 | 122.6 | 183.8  |
| 41        | 100.9 | 79.1  | 118.7  |





#31

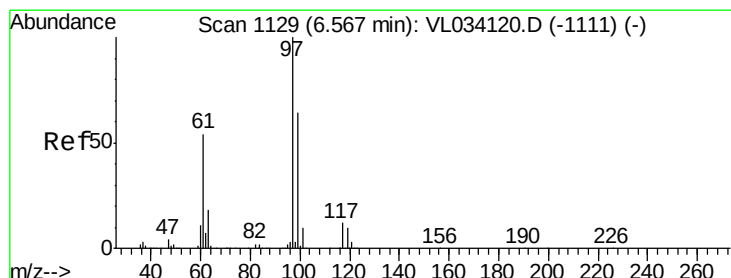
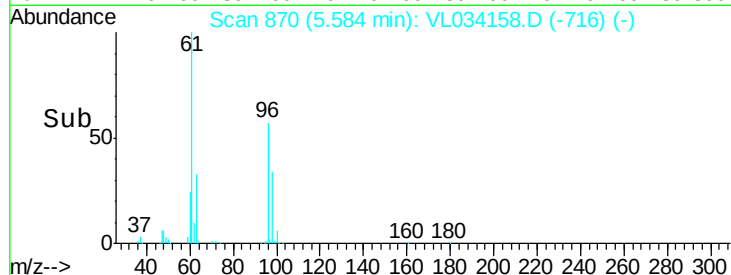
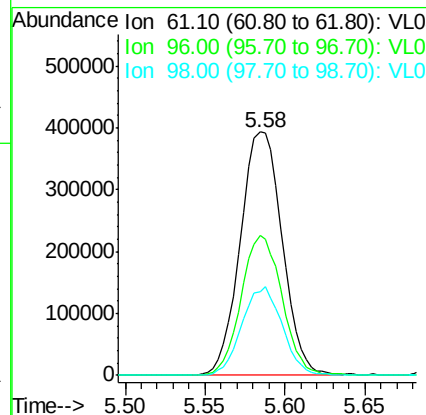
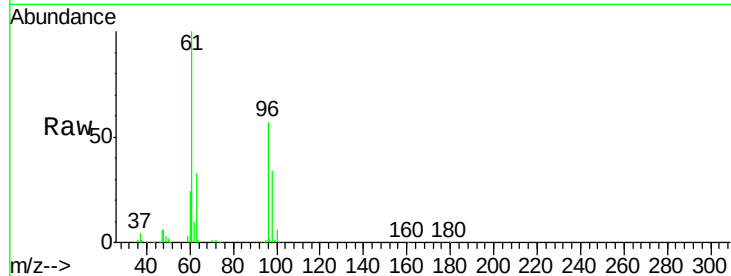
cis-1,2-Dichloroethene  
Concen: 9.735 ppbv  
RT: 5.58 min Scan# 870  
Delta R.T. -0.01 min  
Lab File: VL034158.D  
Acq: 11 Sep 2019 00:58

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDCCC010EC

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 61      | 100   |       |       |
| 96      | 57.2  | 44.4  | 66.6  |
| 98      | 34.3  | 30.0  | 45.0  |

Manual Integrations  
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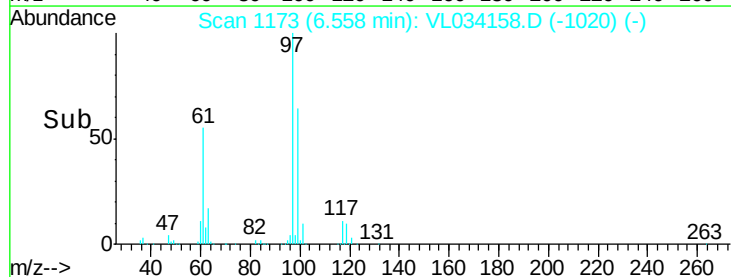
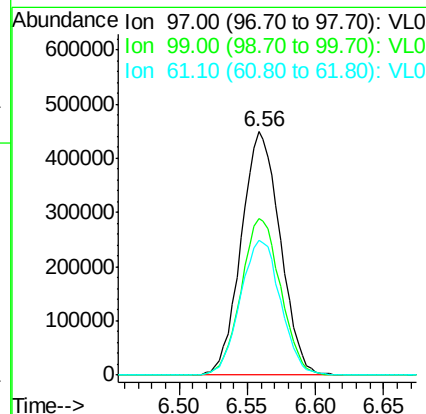
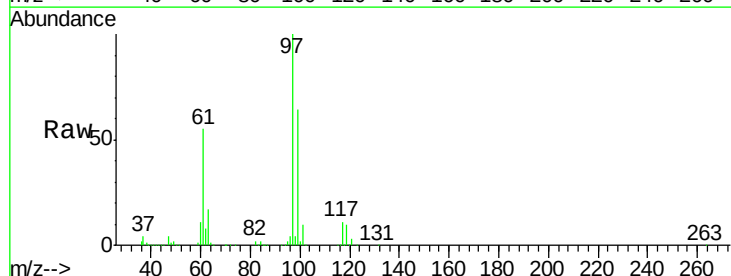
MMDadoda  
9/12/2019 5:17:33 AM

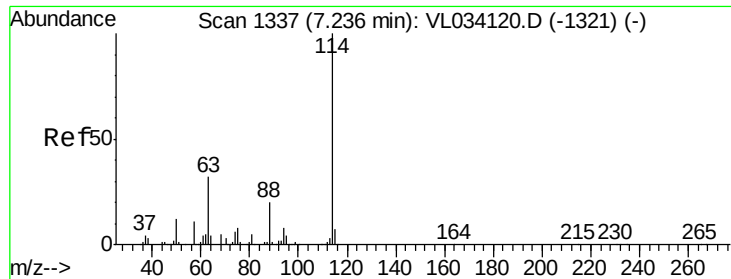


#32

1,1,1-Trichloroethane  
Concen: 9.278 ppbv  
RT: 6.56 min Scan# 1173  
Delta R.T. -0.01 min  
Lab File: VL034158.D  
Acq: 11 Sep 2019 00:58

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 97      | 100   |       |       |
| 99      | 65.1  | 51.7  | 77.5  |
| 61      | 57.3  | 44.0  | 66.0  |





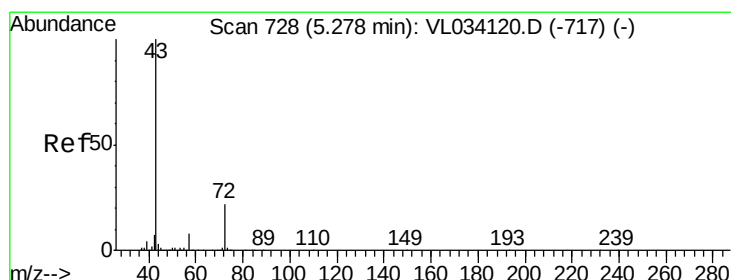
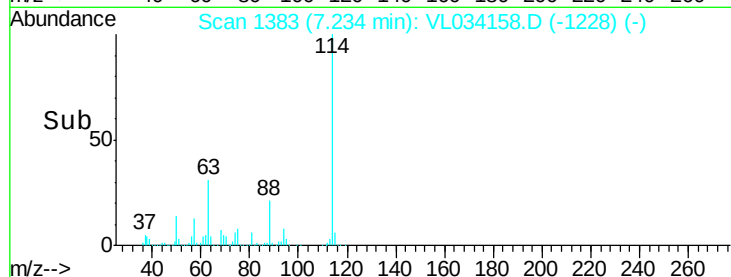
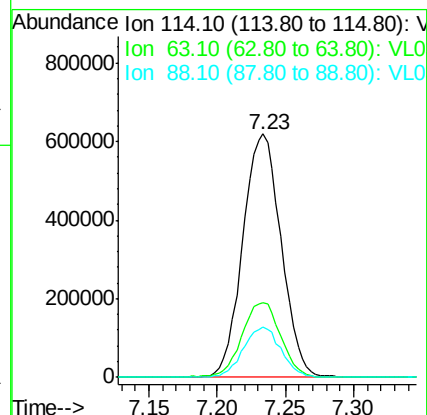
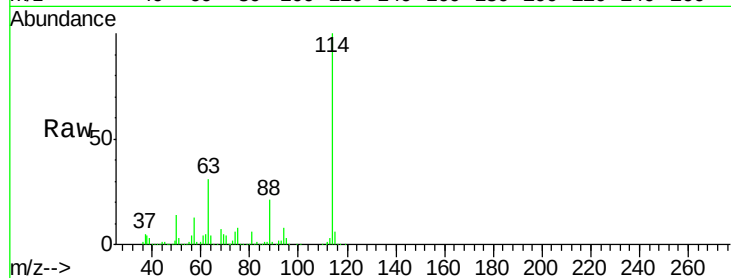
#33  
 1,4-Difluorobenzene  
 Concen: 10.000 ppbv  
 RT: 7.23 min Scan# 1383  
 Delta R.T. -0.00 min  
 Lab File: VL034158.D  
 Acq: 11 Sep 2019 00:58

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDCCC010EC

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 114     | 100   |       |       |
| 63      | 31.5  | 25.5  | 38.3  |
| 88      | 20.3  | 16.8  | 25.2  |

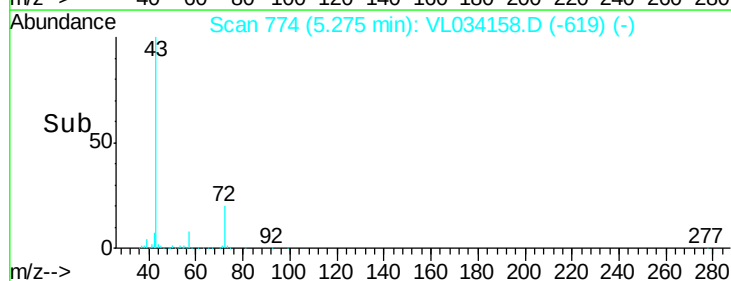
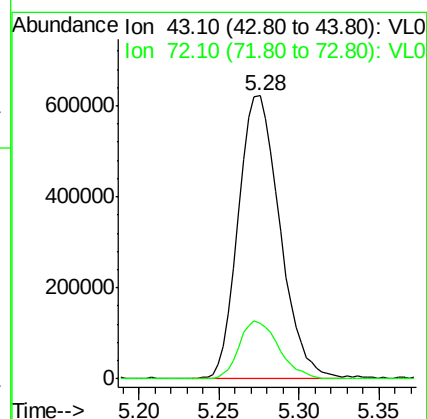
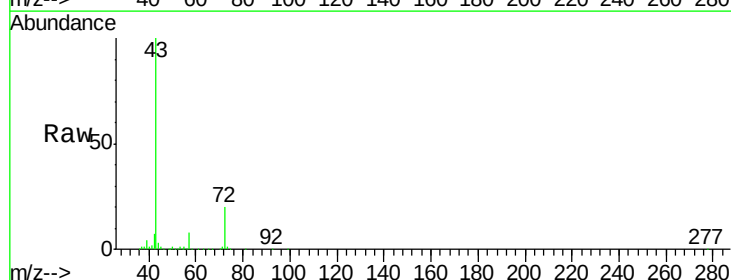
Manual Integrations  
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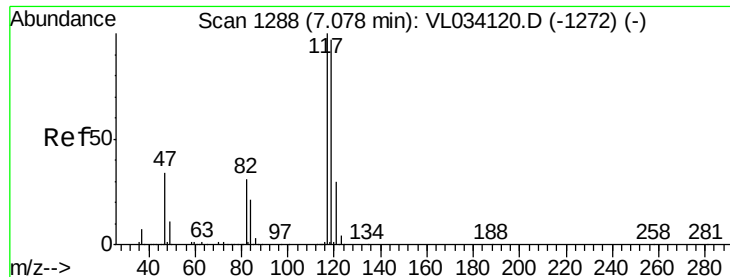
MMDadoda  
 9/12/2019 5:17:33 AM



#34  
 2-Butanone  
 Concen: 9.435 ppbv  
 RT: 5.28 min Scan# 774  
 Delta R.T. -0.00 min  
 Lab File: VL034158.D  
 Acq: 11 Sep 2019 00:58

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 43      | 100   |       |       |
| 72      | 20.0  | 16.5  | 24.7  |





#35

Carbon Tetrachloride

Concen: 9.260 ppbv

RT: 7.07 min Scan# 1333

Delta R.T. -0.01 min

Lab File: VL034158.D

Acq: 11 Sep 2019 00:58

Instrument :

MSVOA\_L

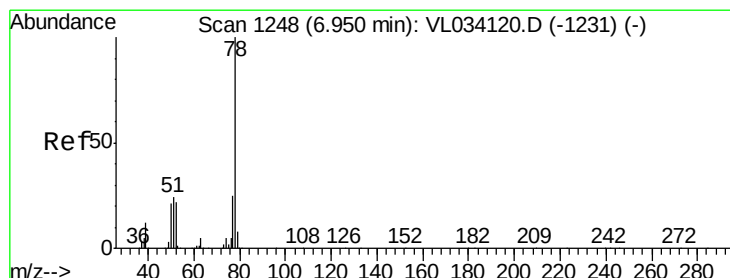
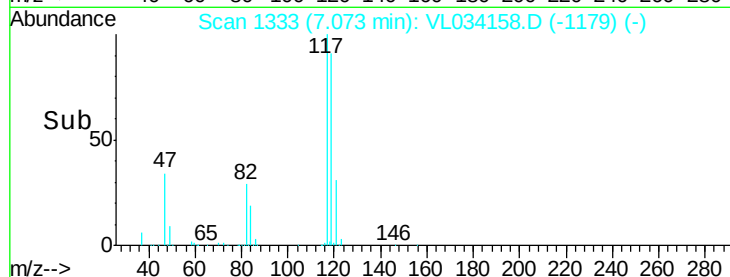
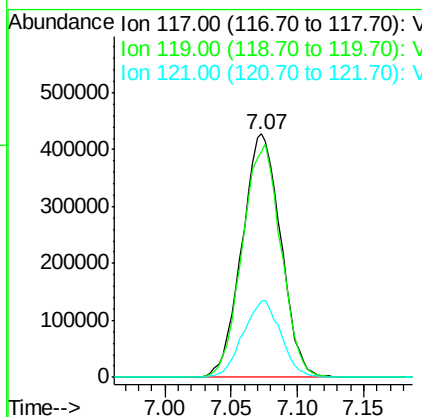
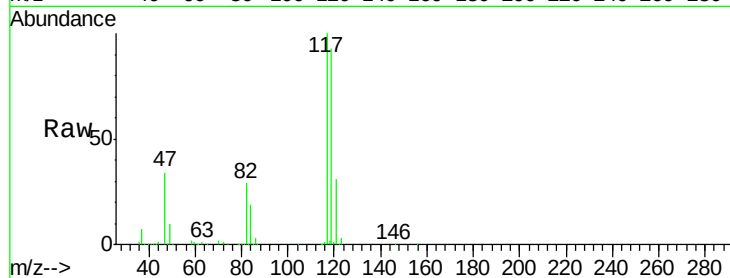
ClientSampleId :

VSTDCCC010EC

|          |       |       |        |
|----------|-------|-------|--------|
| Tot Ion: | 117   | Resp: | 871979 |
| Ion      | Ratio | Lower | Upper  |
| 117      | 100   |       |        |
| 119      | 92.7  | 77.2  | 115.8  |
| 121      | 31.0  | 24.2  | 36.4   |

Manual Integrations  
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MMDadoda  
9/12/2019 5:17:33 AM



#36

Benzene

Concen: 9.307 ppbv

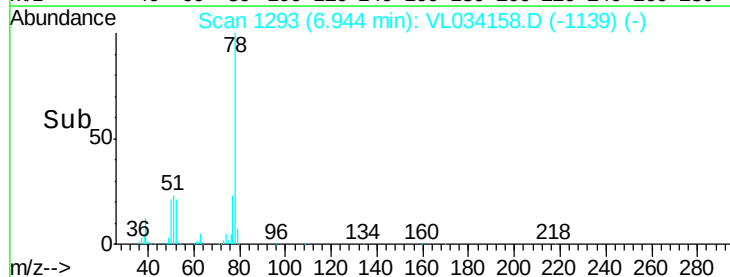
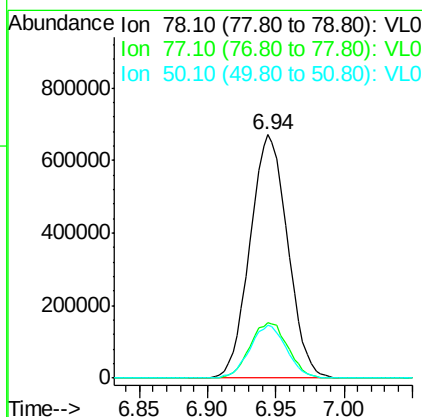
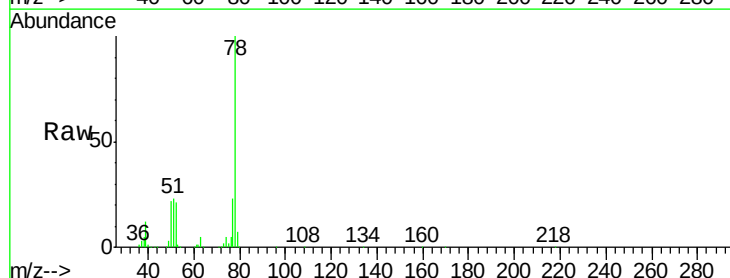
RT: 6.94 min Scan# 1293

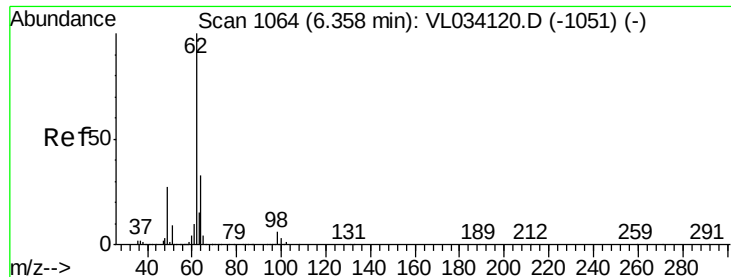
Delta R.T. -0.01 min

Lab File: VL034158.D

Acq: 11 Sep 2019 00:58

|          |       |       |         |
|----------|-------|-------|---------|
| Tgt Ion: | 78    | Resp: | 1284962 |
| Ion      | Ratio | Lower | Upper   |
| 78       | 100   |       |         |
| 77       | 22.9  | 20.3  | 30.5    |
| 50       | 21.5  | 16.9  | 25.3    |





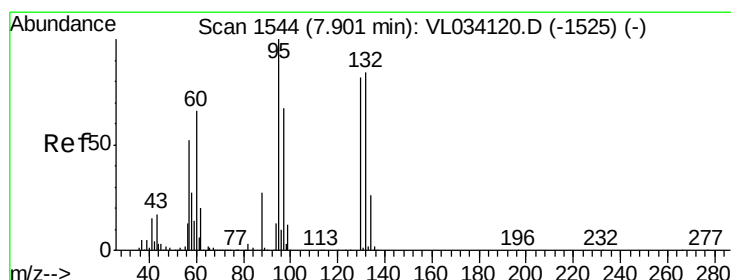
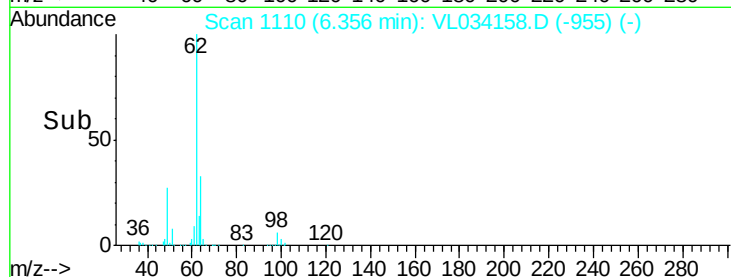
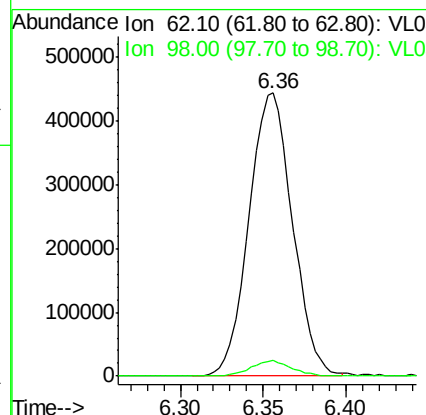
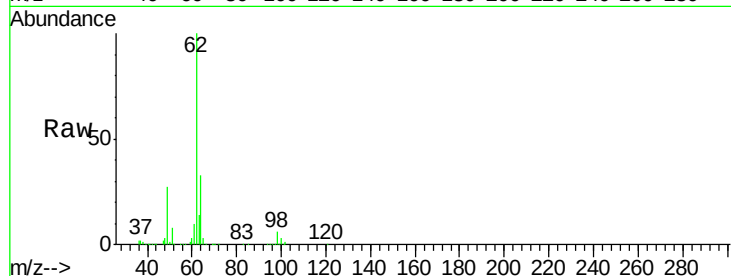
#37  
 1,2-Dichloroethane  
 Concen: 9.568 ppbv  
 RT: 6.36 min Scan# 1110  
 Delta R.T. -0.00 min  
 Lab File: VL034158.D  
 Acq: 11 Sep 2019 00:58

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDCCC010EC

| Tot Ion | Ratio | Resp   | Lower | Upper |
|---------|-------|--------|-------|-------|
| 62      | 100   | 810275 |       |       |
| 98      | 5.2   |        | 4.4   | 6.6   |

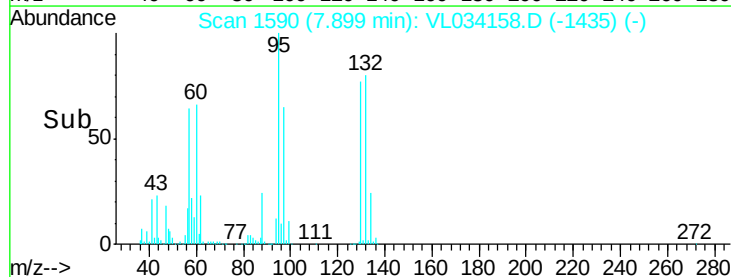
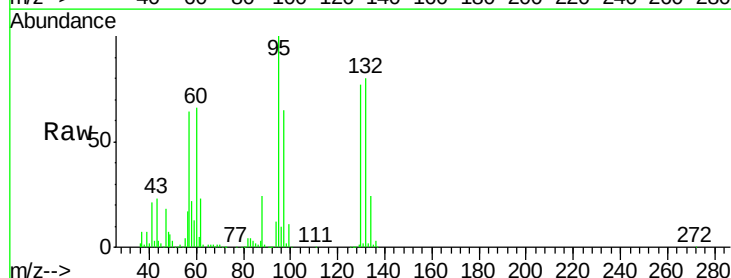
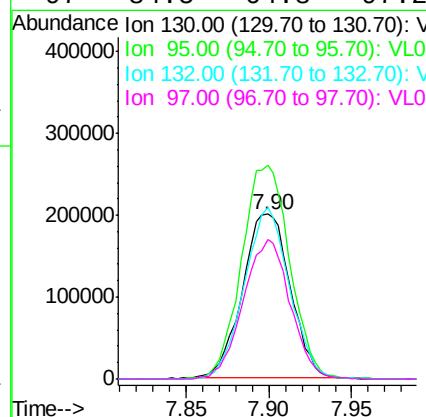
Manual Integrations  
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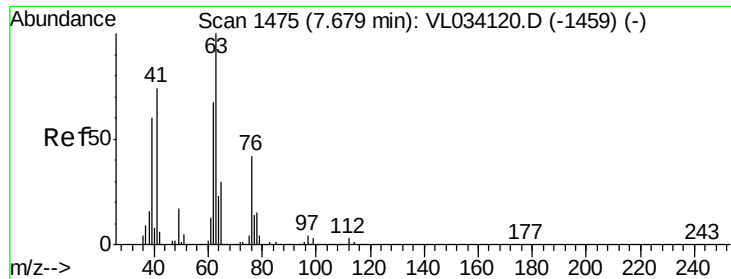
MMDadoda  
 9/12/2019 5:17:33 AM



#38  
 Trichloroethene  
 Concen: 7.816 ppbv  
 RT: 7.90 min Scan# 1590  
 Delta R.T. -0.00 min  
 Lab File: VL034158.D  
 Acq: 11 Sep 2019 00:58

| Tgt Ion | Ratio | Resp   | Lower | Upper |
|---------|-------|--------|-------|-------|
| 130     | 100   | 402632 |       |       |
| 95      | 129.6 |        | 97.2  | 145.8 |
| 132     | 104.2 |        | 81.4  | 122.2 |
| 97      | 84.5  |        | 64.8  | 97.2  |





#39

1,2-Dichloropropane

Concen: 9.327 ppbv

RT: 7.67 min Scan# 1519

Delta R.T. -0.01 min

Lab File: VL034158.D

Acq: 11 Sep 2019 00:58

Instrument :

MSVOA\_L

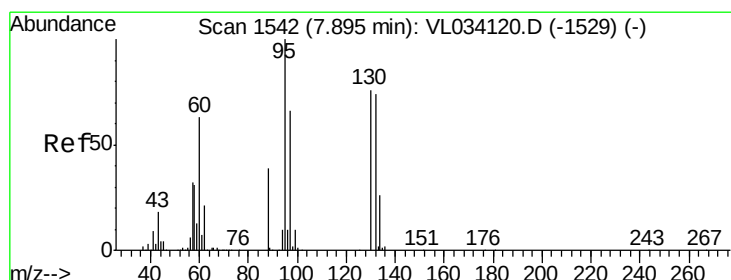
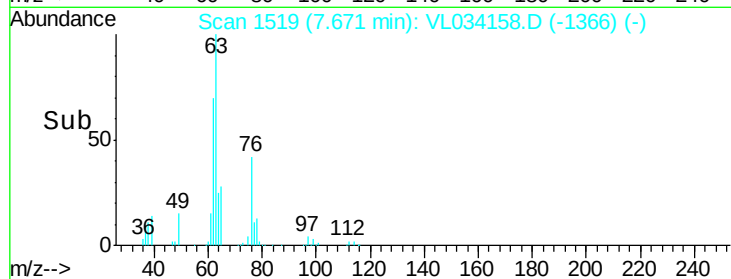
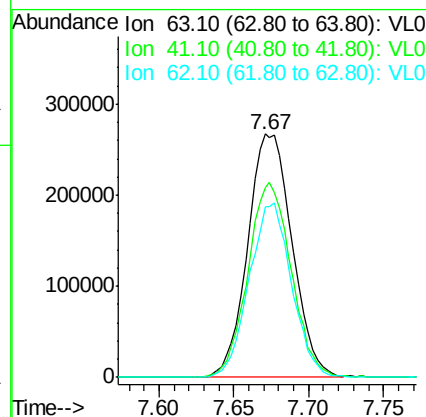
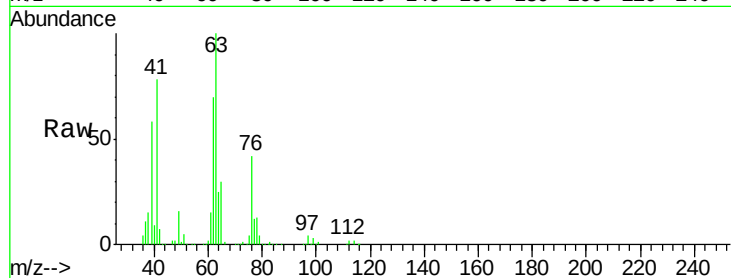
ClientSampleId :

VSTDCCC010EC

|           |       |       |        |
|-----------|-------|-------|--------|
| Tot Ion:  | 63    | Resp: | 551063 |
| Ion Ratio | Lower | Upper |        |
| 63        | 100   |       |        |
| 41        | 77.8  | 59.3  | 88.9   |
| 62        | 69.9  | 53.8  | 80.6   |

Manual Integrations  
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9/12/2019 5:17:33 AM



#40

1,4-Dioxane

Concen: 7.334 ppbv

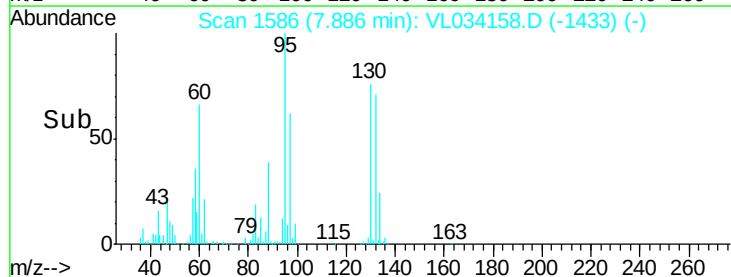
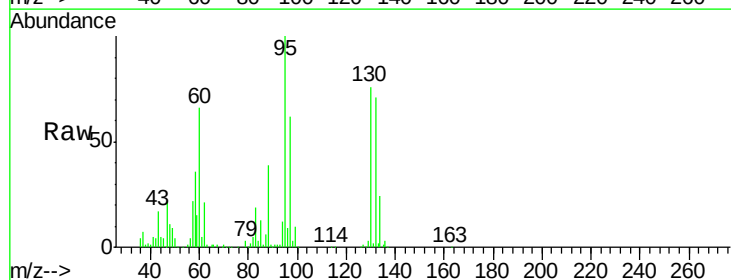
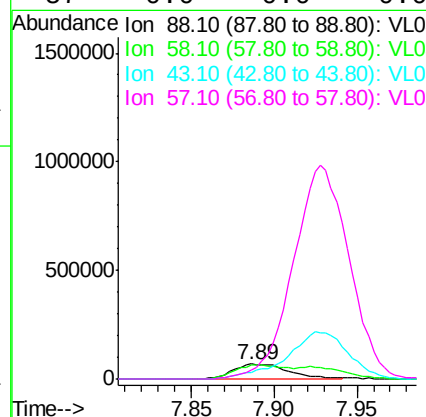
RT: 7.89 min Scan# 1586

Delta R.T. -0.01 min

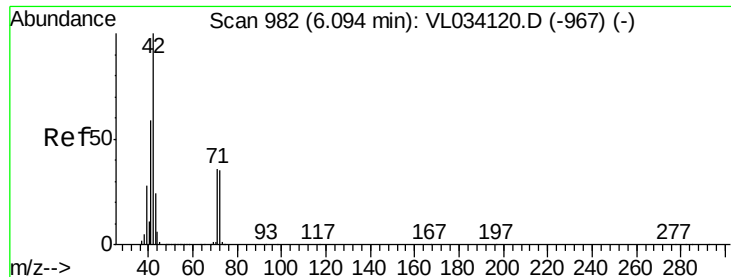
Lab File: VL034158.D

Acq: 11 Sep 2019 00:58

|           |       |       |        |
|-----------|-------|-------|--------|
| Tgt Ion:  | 88    | Resp: | 159231 |
| Ion Ratio | Lower | Upper |        |
| 88        | 100   |       |        |
| 58        | 156.7 | 121.7 | 182.5  |
| 43        | 0.0   | 0.0   | 0.0    |
| 57        | 0.0   | 0.0   | 0.0    |







#41

Tetrahydrofuran

Concen: 9.571 ppbv

RT: 6.09 min Scan# 1027

Delta R.T. -0.01 min

Lab File: VL034158.D

Acq: 11 Sep 2019 00:58

Instrument :

MSVOA\_L

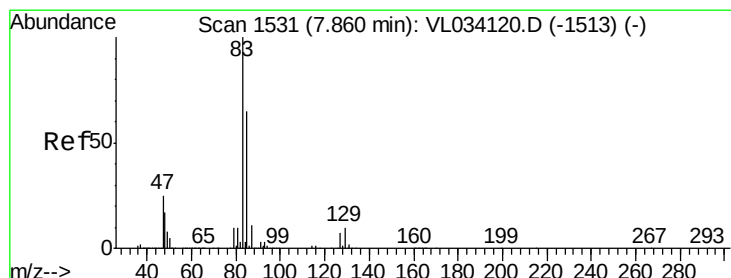
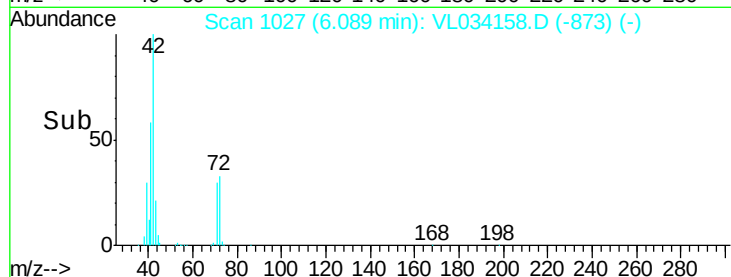
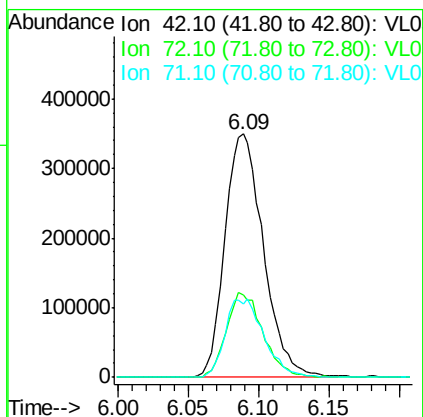
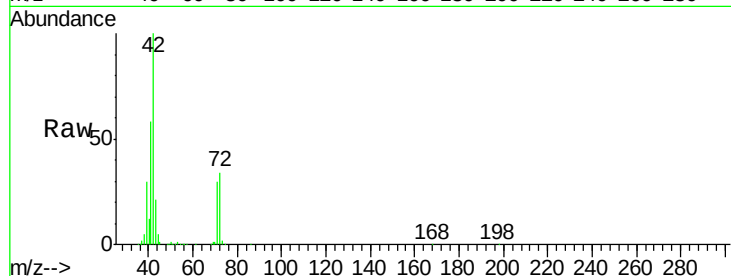
ClientSampleId :

VSTDCCC010EC

|           |      |       |        |
|-----------|------|-------|--------|
| Tot Ion:  | 42   | Resp: | 666282 |
| Ion Ratio |      | Lower | Upper  |
| 42        | 100  |       |        |
| 72        | 33.4 | 27.7  | 41.5   |
| 71        | 32.7 | 26.7  | 40.1   |

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MMDadoda  
9/12/2019 5:17:33 AM



#42

Bromodichloromethane

Concen: 9.508 ppbv

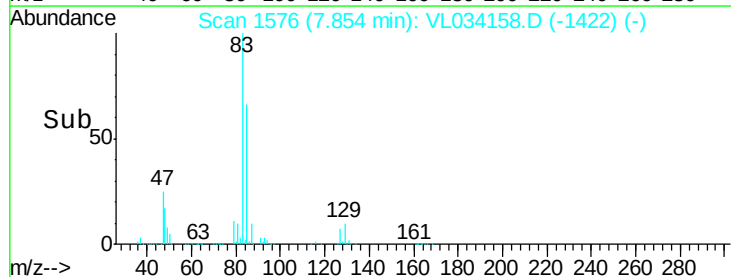
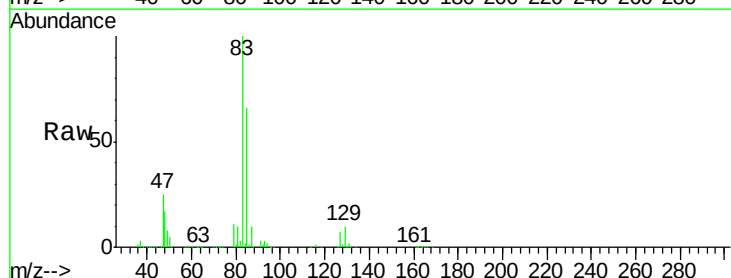
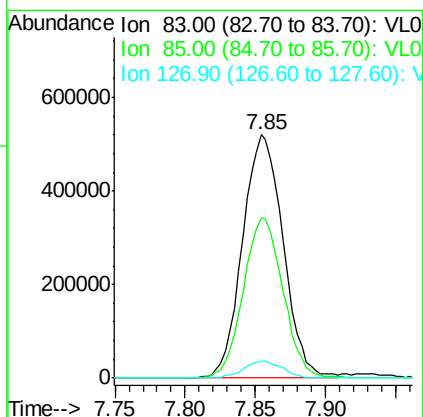
RT: 7.85 min Scan# 1576

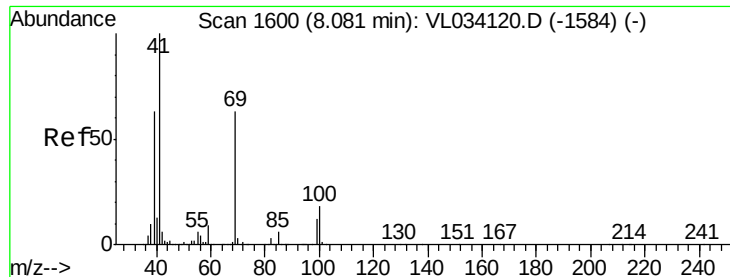
Delta R.T. -0.01 min

Lab File: VL034158.D

Acq: 11 Sep 2019 00:58

|           |      |       |         |
|-----------|------|-------|---------|
| Tgt Ion:  | 83   | Resp: | 1049439 |
| Ion Ratio |      | Lower | Upper   |
| 83        | 100  |       |         |
| 85        | 66.1 | 51.6  | 77.4    |
| 127       | 6.9  | 5.4   | 8.0     |





#43

Methyl Methacrylate

Concen: 9.542 ppbv

RT: 8.07 min Scan# 1644

Delta R.T. -0.01 min

Lab File: VL034158.D

Acq: 11 Sep 2019 00:58

Instrument :

MSVOA\_L

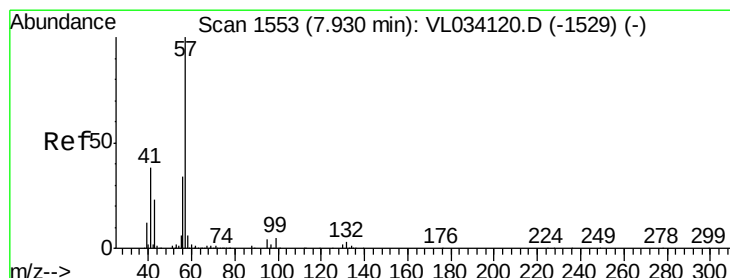
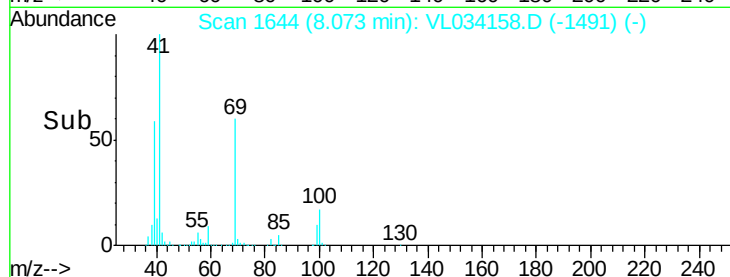
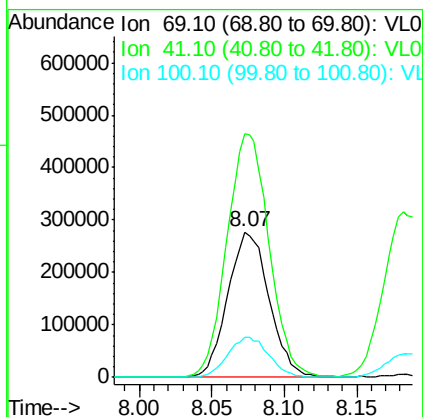
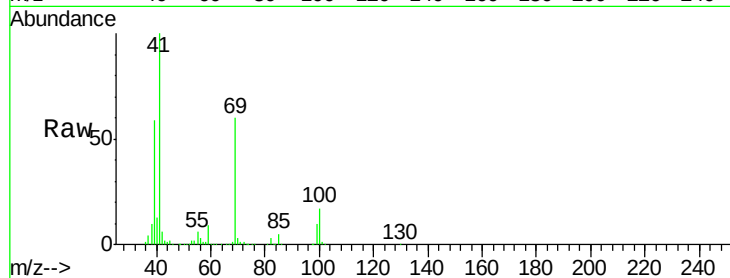
ClientSampleId :

VSTDCCC010EC

|           |       |       |        |
|-----------|-------|-------|--------|
| Tot Ion:  | 69    | Resp: | 542681 |
| Ion Ratio | Lower | Upper |        |
| 69        | 100   |       |        |
| 41        | 172.3 | 131.0 | 196.6  |
| 100       | 28.0  | 22.6  | 33.8   |

Manual Integrations  
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MMDadoda  
9/12/2019 5:17:33 AM



#44

2,2,4-Trimethylpentane

Concen: 9.082 ppbv

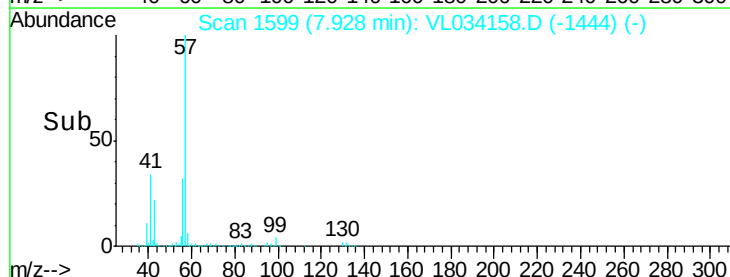
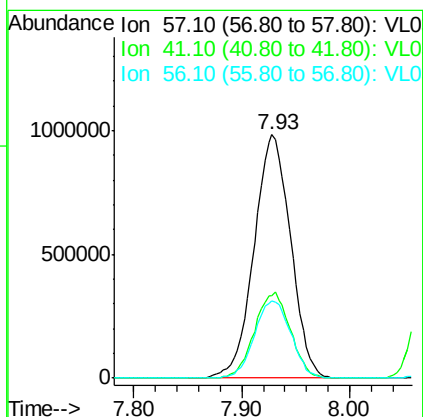
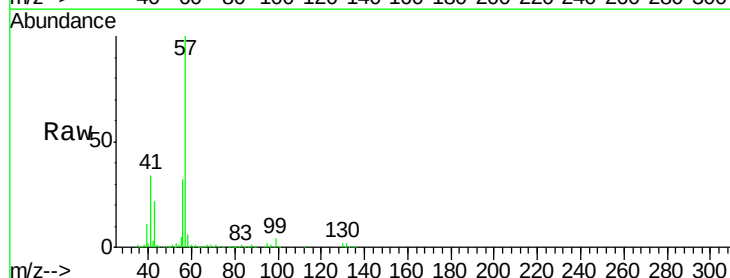
RT: 7.93 min Scan# 1599

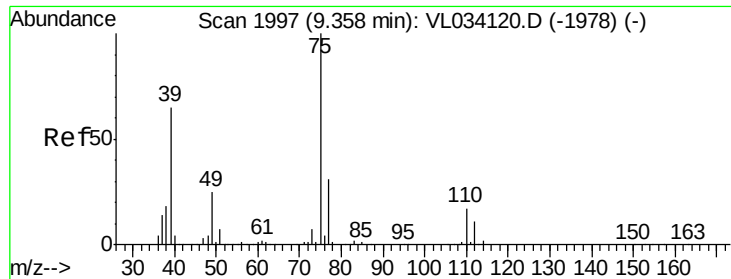
Delta R.T. -0.00 min

Lab File: VL034158.D

Acq: 11 Sep 2019 00:58

|           |       |       |         |
|-----------|-------|-------|---------|
| Tgt Ion:  | 57    | Resp: | 2311646 |
| Ion Ratio | Lower | Upper |         |
| 57        | 100   |       |         |
| 41        | 34.5  | 28.4  | 42.6    |
| 56        | 31.6  | 26.3  | 39.5    |





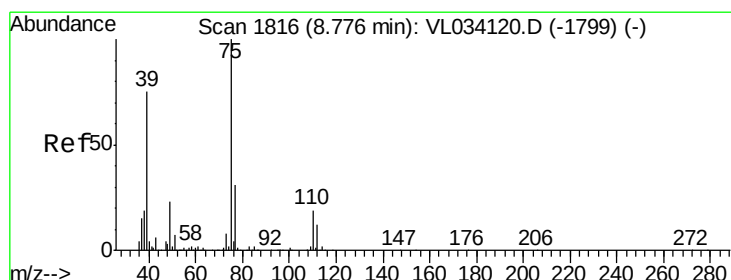
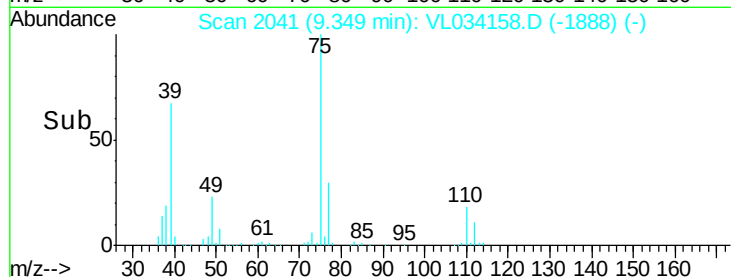
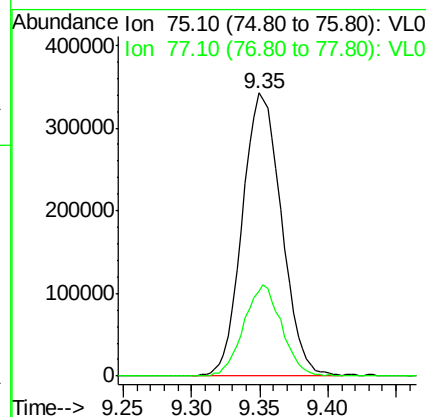
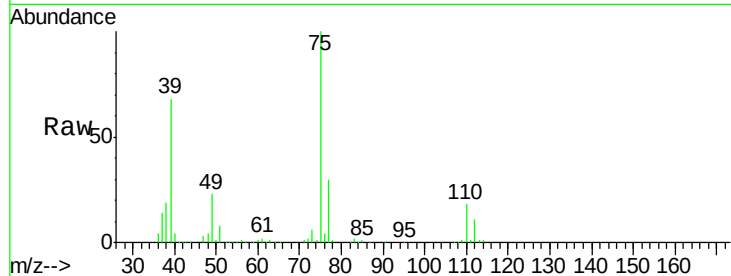
#45  
t-1,3-Dichloropropene  
Concen: 10.215 ppbv  
RT: 9.35 min Scan# 2041  
Delta R.T. -0.01 min  
Lab File: VL034158.D  
Acq: 11 Sep 2019 00:58

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDCCC010EC

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 75      | 100   |       |       |
| 77      | 29.8  | 24.6  | 36.8  |

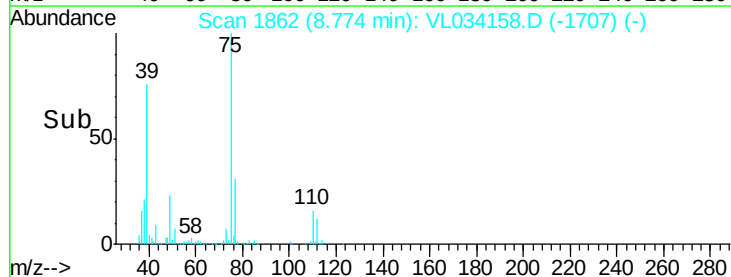
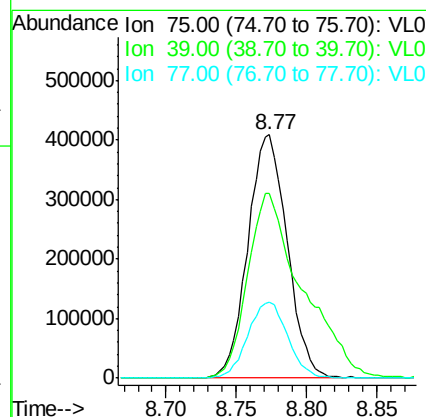
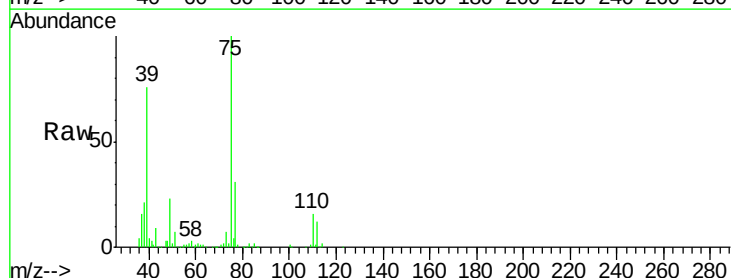
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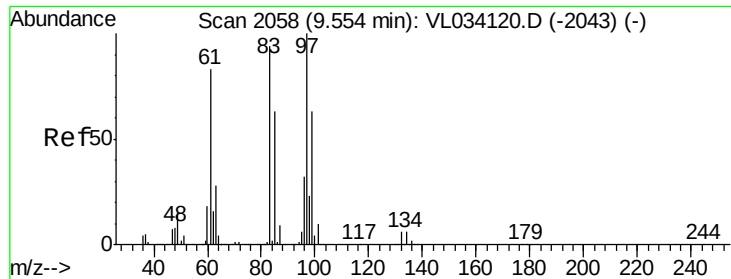
MMDadoda  
9/12/2019 5:17:33 AM



#46  
cis-1,3-Dichloropropene  
Concen: 9.804 ppbv  
RT: 8.77 min Scan# 1862  
Delta R.T. -0.00 min  
Lab File: VL034158.D  
Acq: 11 Sep 2019 00:58

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 75      | 100   |       |       |
| 39      | 75.8  | 60.0  | 90.0  |
| 77      | 31.0  | 24.8  | 37.2  |





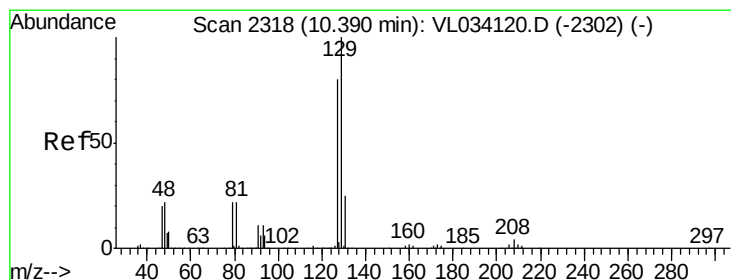
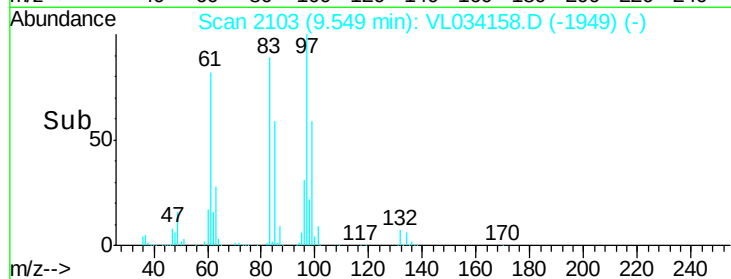
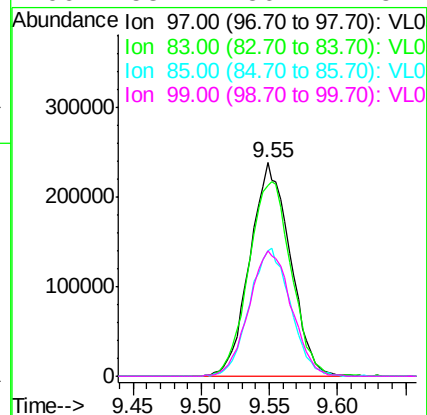
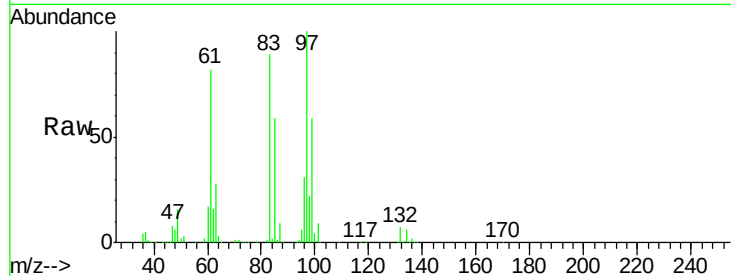
#47  
 1,1,2-Trichloroethane  
 Concen: 9.097 ppbv  
 RT: 9.55 min Scan# 2103  
 Delta R.T. -0.01 min  
 Lab File: VL034158.D  
 Acq: 11 Sep 2019 00:58

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDCCC010EC

| Tot Ion | Ion  | Ratio | Resp   | Lower | Upper |
|---------|------|-------|--------|-------|-------|
| 97      | 100  |       | 489654 |       |       |
| 83      | 89.1 |       | 74.9   | 112.3 |       |
| 85      | 58.9 |       | 50.6   | 75.8  |       |
| 99      | 58.7 |       | 50.2   | 75.2  |       |

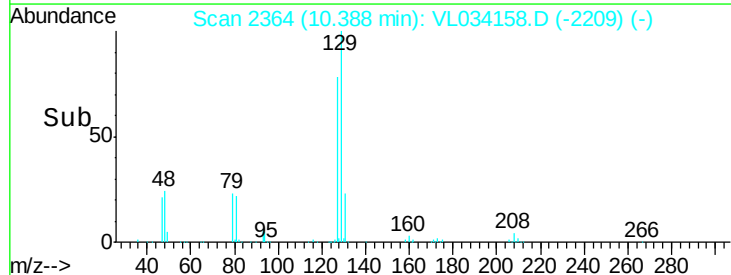
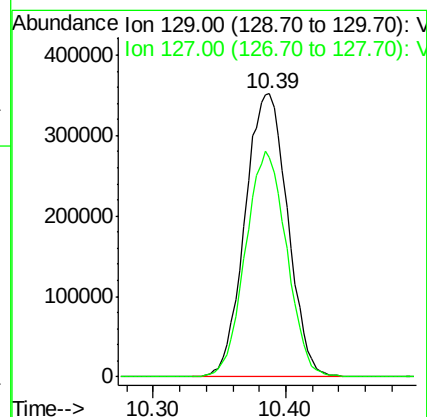
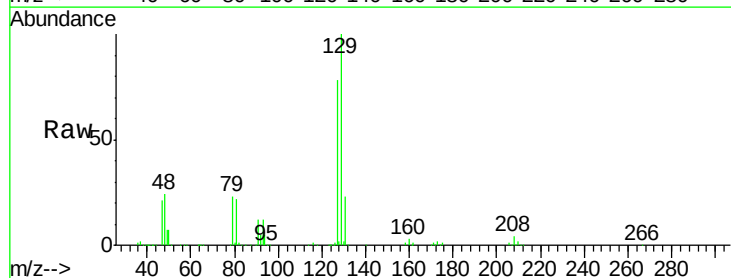
Manual Integrations  
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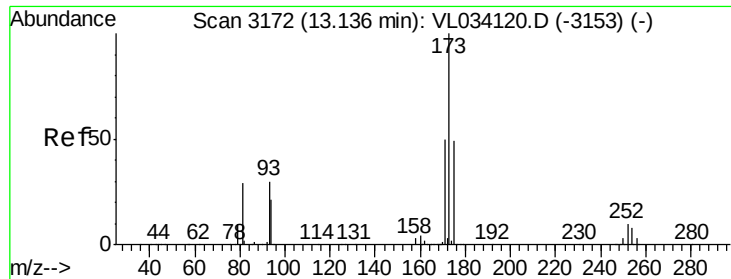
MMDadoda  
 9/12/2019 5:17:33 AM



#48  
 Dibromochloromethane  
 Concen: 9.786 ppbv  
 RT: 10.39 min Scan# 2364  
 Delta R.T. -0.00 min  
 Lab File: VL034158.D  
 Acq: 11 Sep 2019 00:58

| Tgt Ion | Ion  | Ratio | Resp   | Lower | Upper |
|---------|------|-------|--------|-------|-------|
| 129     | 100  |       | 785994 |       |       |
| 127     | 77.0 |       | 40.2   | 120.6 |       |





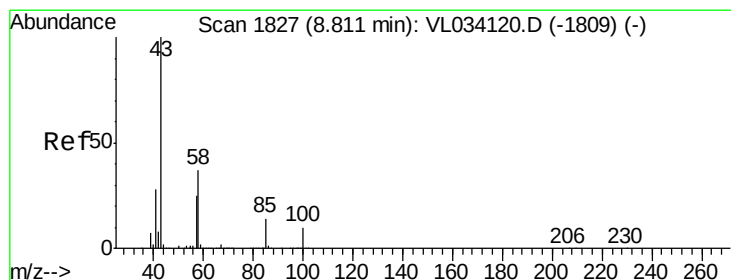
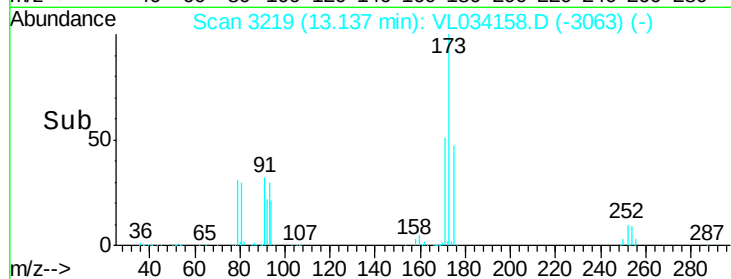
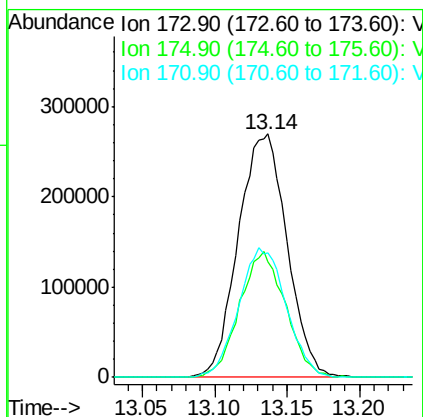
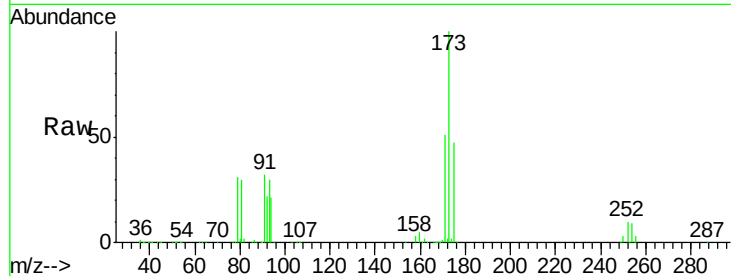
#49  
Bromoform  
Concen: 8.924 ppbv  
RT: 13.14 min Scan# 3219  
Delta R.T. 0.00 min  
Lab File: VL034158.D  
Acq: 11 Sep 2019 00:58

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDCCC010EC

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 173     | 100   |       |       |
| 175     | 49.1  | 40.0  | 60.0  |
| 171     | 52.1  | 42.2  | 63.2  |

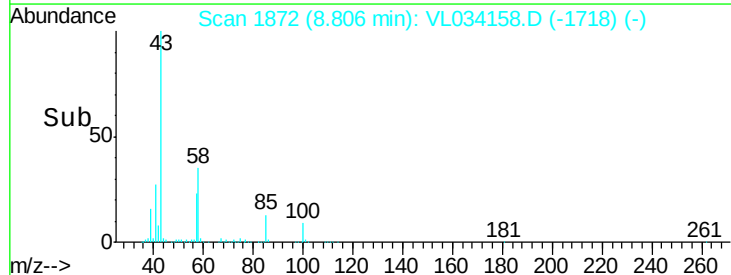
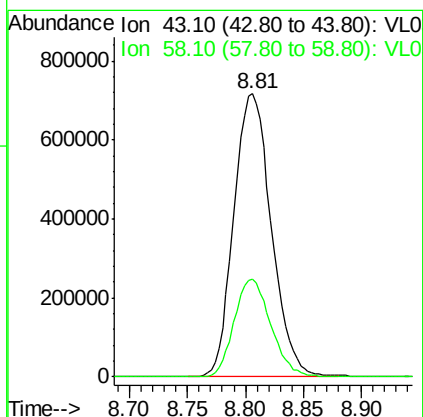
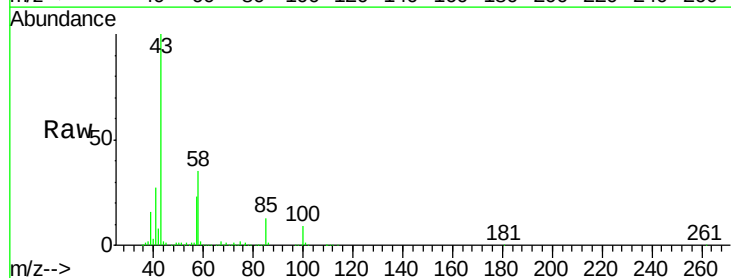
Manual Integrations  
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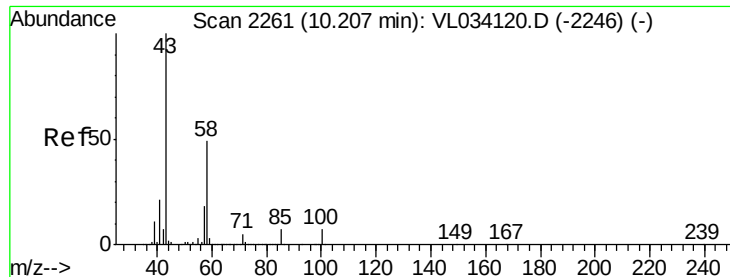
MMDadoda  
9/12/2019 5:17:33 AM



#50  
4-Methyl-2-Pentanone  
Concen: 9.085 ppbv  
RT: 8.81 min Scan# 1872  
Delta R.T. -0.01 min  
Lab File: VL034158.D  
Acq: 11 Sep 2019 00:58

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 43      | 100   |       |       |
| 58      | 33.9  | 28.5  | 42.7  |





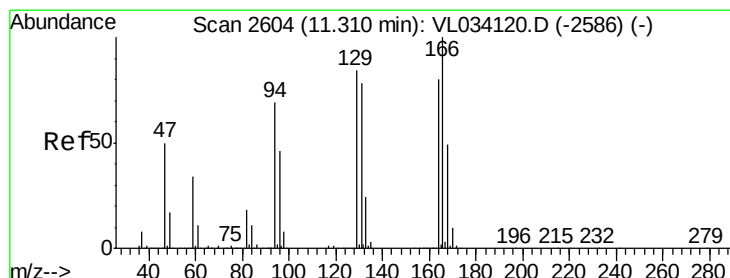
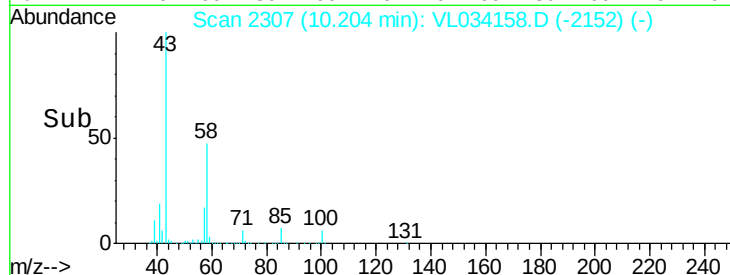
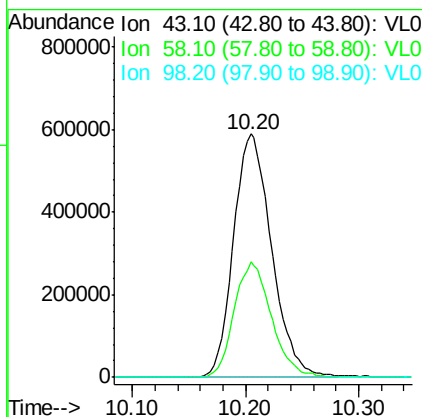
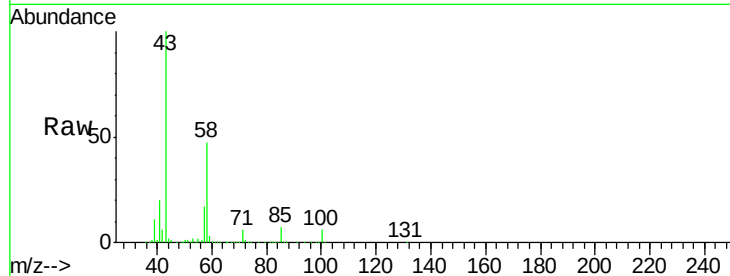
#51  
2-Hexanone  
Concen: 9.031 ppbv  
RT: 10.20 min Scan# 2307  
Delta R.T. -0.00 min  
Lab File: VL034158.D  
Acq: 11 Sep 2019 00:58

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDCCC010EC

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 43      | 100   |       |       |
| 58      | 46.5  | 38.2  | 57.2  |
| 98      | 0.1   | 0.1   | 0.1   |

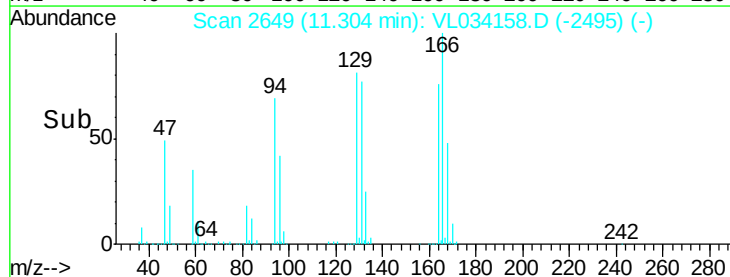
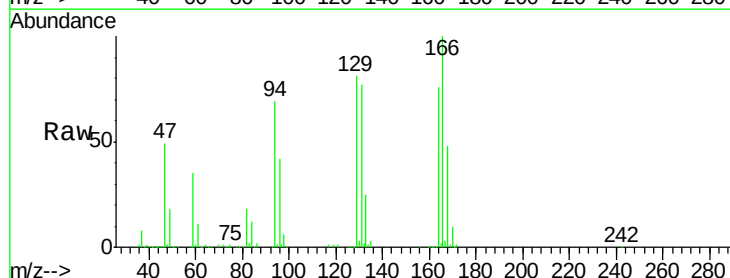
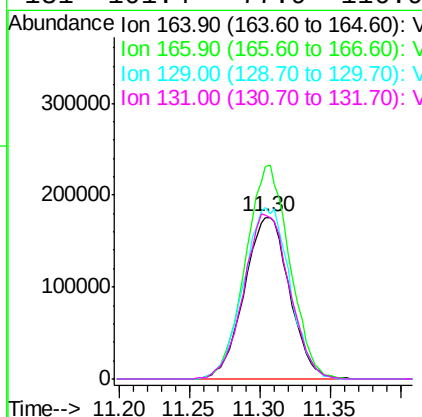
Manual Integrations  
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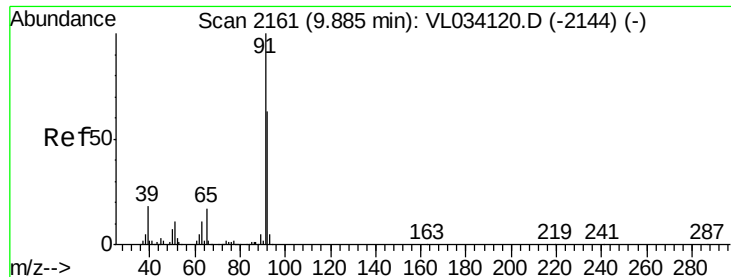
MMDadoda  
9/12/2019 5:17:33 AM



#52  
Tetrachloroethene  
Concen: 8.069 ppbv  
RT: 11.30 min Scan# 2649  
Delta R.T. -0.01 min  
Lab File: VL034158.D  
Acq: 11 Sep 2019 00:58

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 164     | 100   |       |       |
| 166     | 131.2 | 99.5  | 149.3 |
| 129     | 106.2 | 83.6  | 125.4 |
| 131     | 101.4 | 77.9  | 116.9 |





#53

Toluene

Concen: 9.271 ppbv

RT: 9.88 min Scan# 2206

Delta R.T. -0.01 min

Lab File: VL034158.D

Acq: 11 Sep 2019 00:58

Instrument :

MSVOA\_L

ClientSampleId :

VSTDCCC010EC

Tot Ion: 91 Resp: 1415557

Ion Ratio Lower Upper

91 100

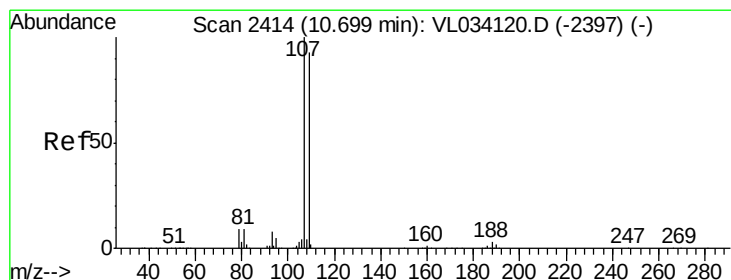
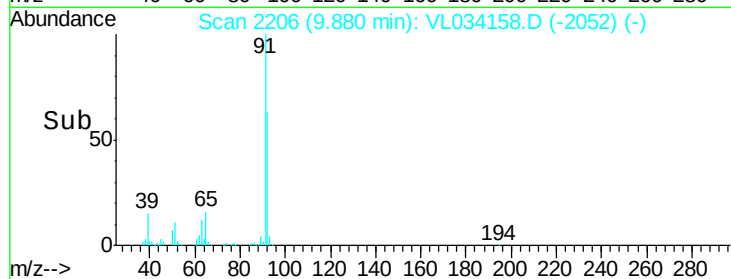
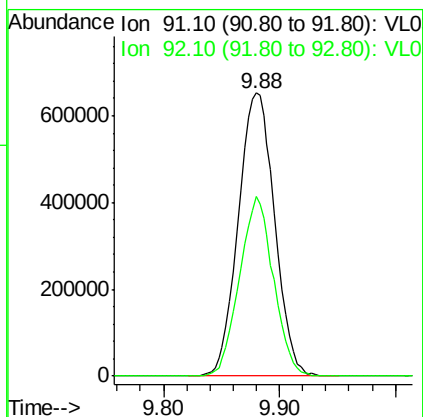
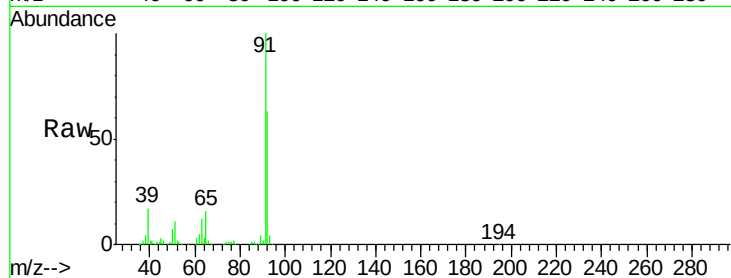
92 59.5 49.3 73.9

Manual Integrations

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MMDadoda

9/12/2019 5:17:33 AM



#54

1,2-Dibromoethane

Concen: 9.061 ppbv

RT: 10.69 min Scan# 2459

Delta R.T. -0.01 min

Lab File: VL034158.D

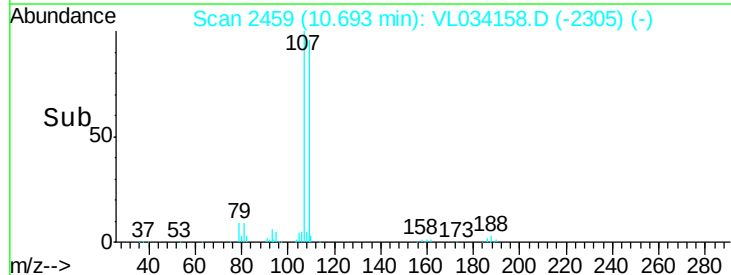
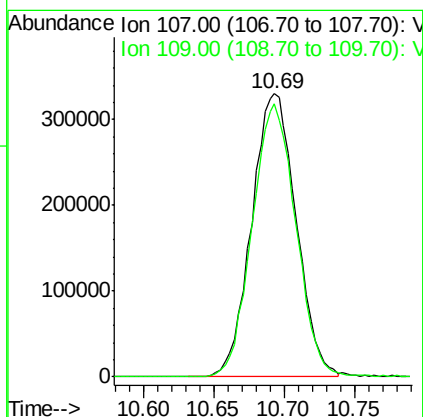
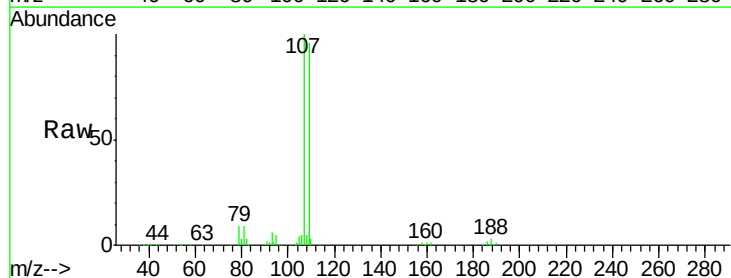
Acq: 11 Sep 2019 00:58

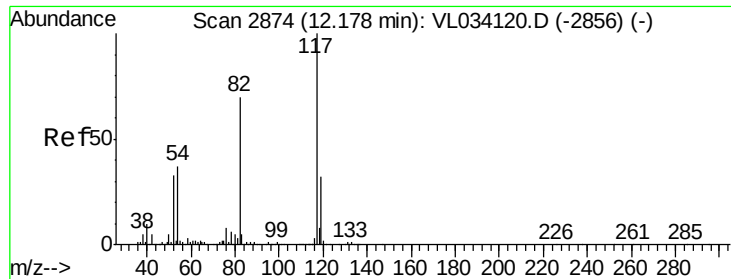
Tgt Ion: 107 Resp: 726617

Ion Ratio Lower Upper

107 100

109 96.5 74.5 111.7





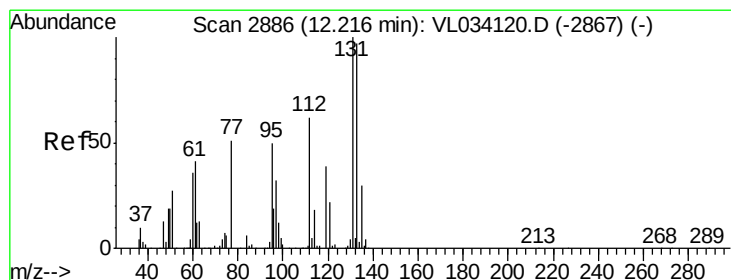
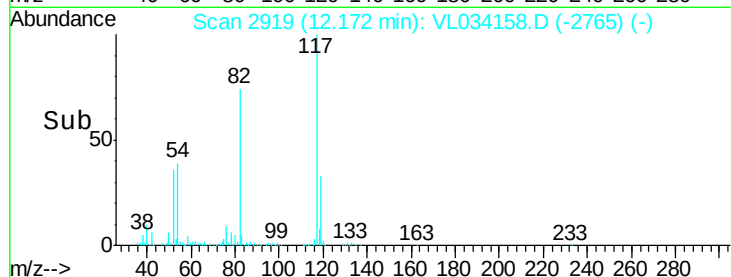
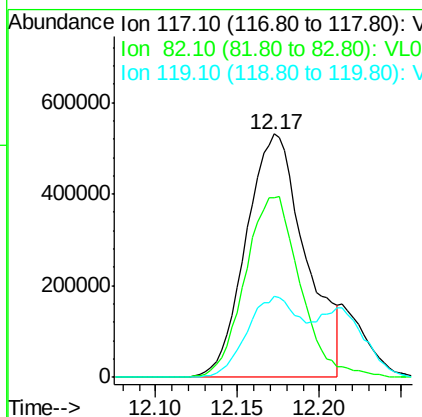
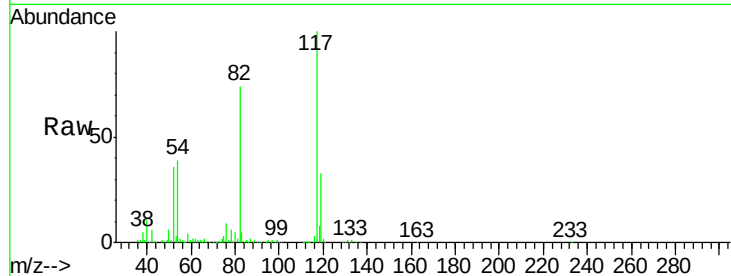
#55  
Chlorobenzene-d5  
Concen: 10.000 ppbv m  
RT: 12.17 min Scan# 2919  
Delta R.T. -0.01 min  
Lab File: VL034158.D  
Acq: 11 Sep 2019 00:58

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDCCC010EC

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 117     | 100   |       |       |
| 82      | 69.2  | 55.8  | 83.6  |
| 119     | 30.6  | 43.1  | 64.7# |

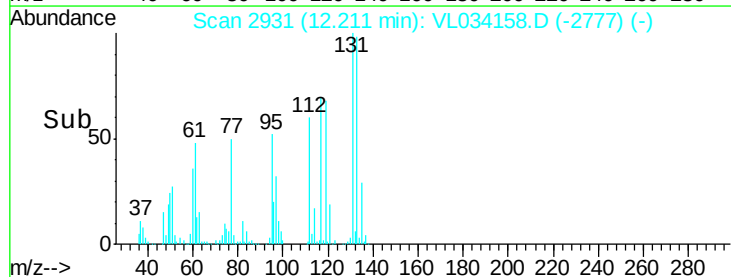
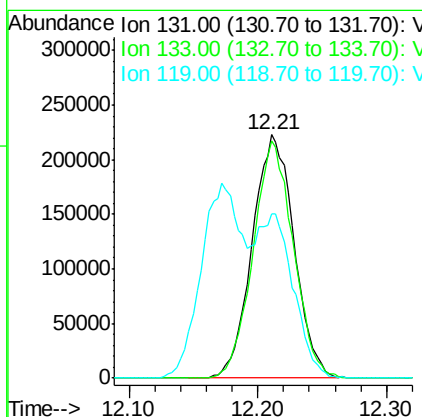
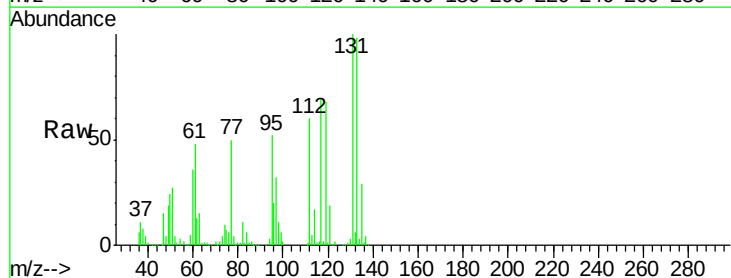
Manual Integrations  
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9/12/2019 5:17:33 AM

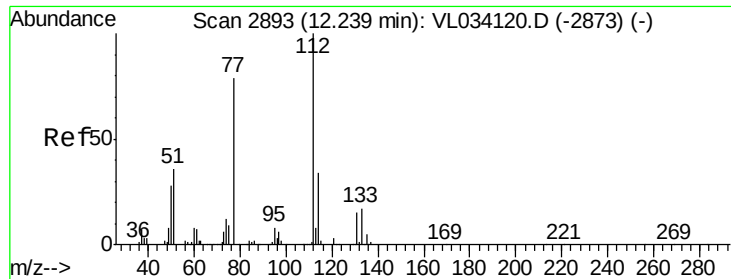


#56  
1,1,1,2-Tetrachloroethane  
Concen: 8.728 ppbv  
RT: 12.21 min Scan# 2931  
Delta R.T. -0.01 min  
Lab File: VL034158.D  
Acq: 11 Sep 2019 00:58

| Tgt Ion | Ratio | Lower | Upper  |
|---------|-------|-------|--------|
| 131     | 100   |       |        |
| 133     | 94.4  | 75.8  | 113.6  |
| 119     | 59.2  | 114.7 | 172.1# |







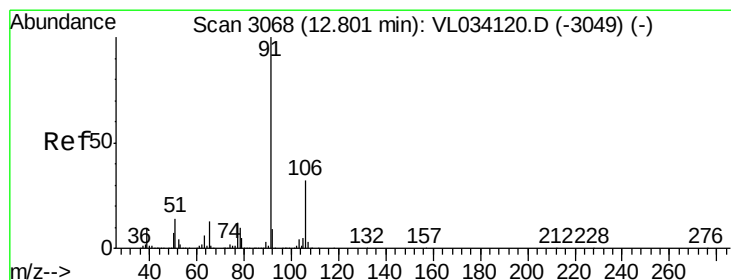
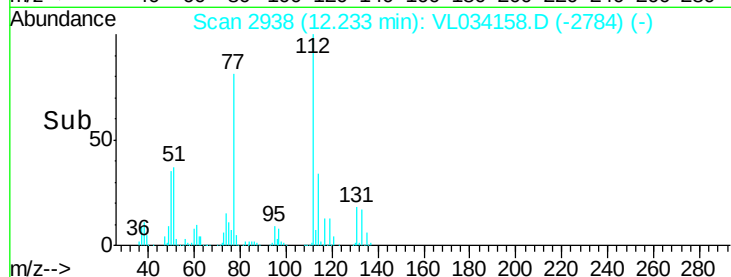
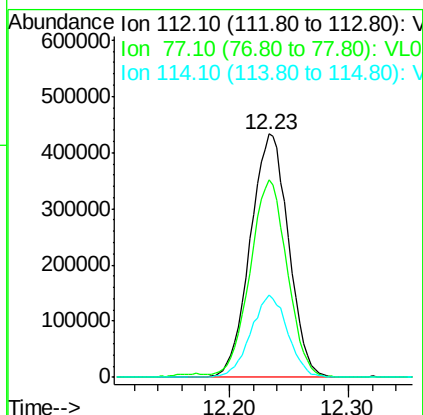
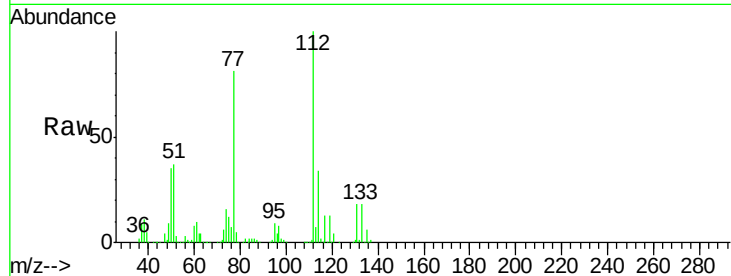
#57  
Chlorobenzene  
Concen: 8.339 ppbv  
RT: 12.23 min Scan# 2938  
Delta R.T. -0.01 min  
Lab File: VL034158.D  
Acq: 11 Sep 2019 00:58

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDCCC010EC

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 112     | 100   |       |       |
| 77      | 81.0  | 64.4  | 96.6  |
| 114     | 33.8  | 30.3  | 37.1  |

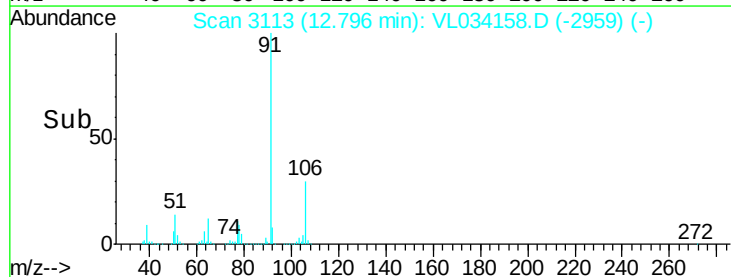
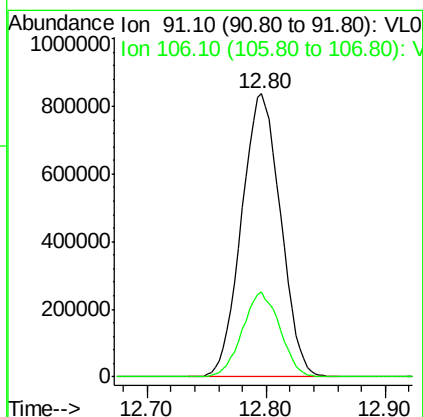
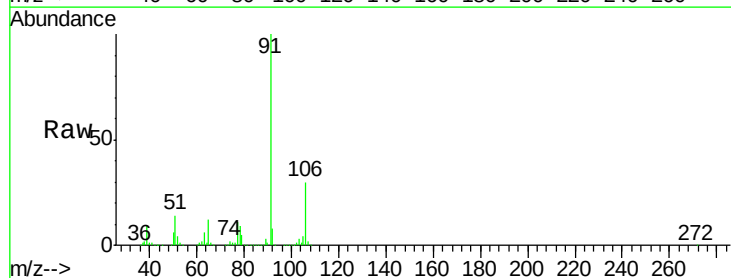
Manual Integrations  
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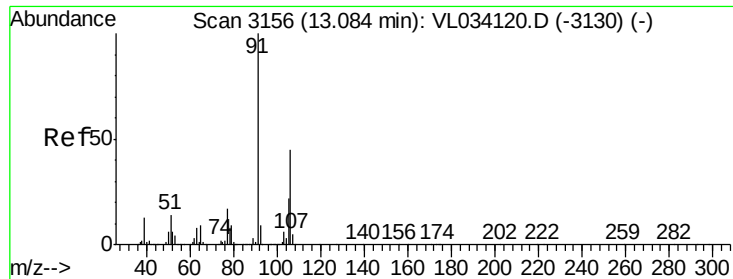
MMDadoda  
9/12/2019 5:17:33 AM



#58  
Ethyl Benzene  
Concen: 8.653 ppbv  
RT: 12.80 min Scan# 3113  
Delta R.T. -0.01 min  
Lab File: VL034158.D  
Acq: 11 Sep 2019 00:58

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 91      | 100   |       |       |
| 106     | 30.0  | 25.3  | 37.9  |





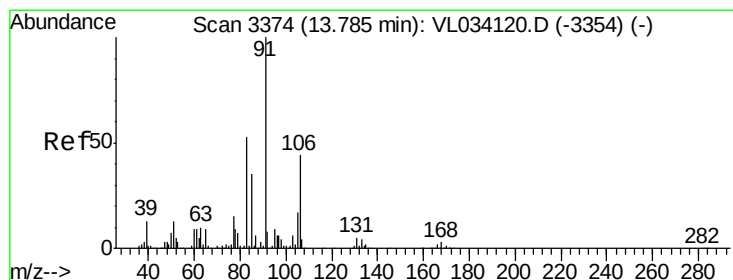
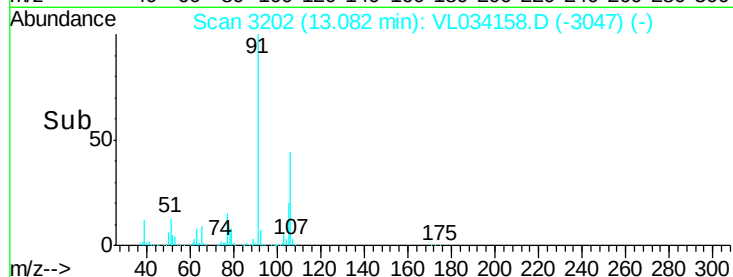
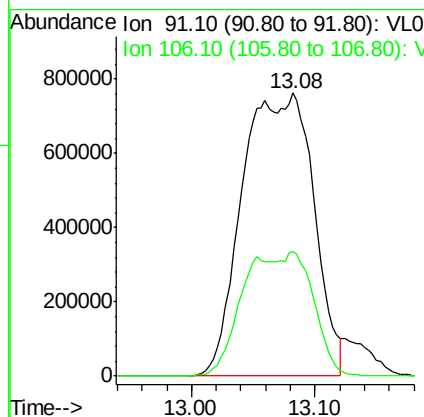
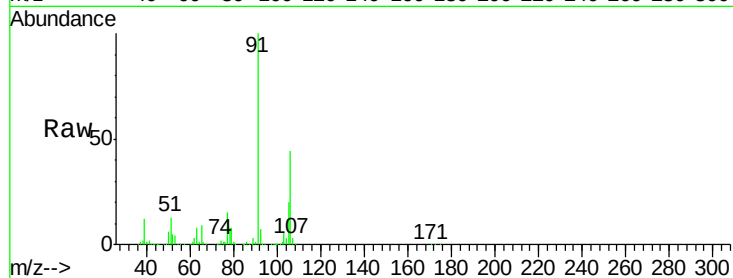
#59  
m/p-Xylene  
Concen: 16.986 ppbv m  
RT: 13.08 min Scan# 3202  
Delta R.T. -0.00 min  
Lab File: VL034158.D  
Acq: 11 Sep 2019 00:58

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDCCC010EC

Tot Ion: 91 Resp: 3045606  
Ion Ratio Lower Upper  
91 100  
106 43.2 35.4 53.2

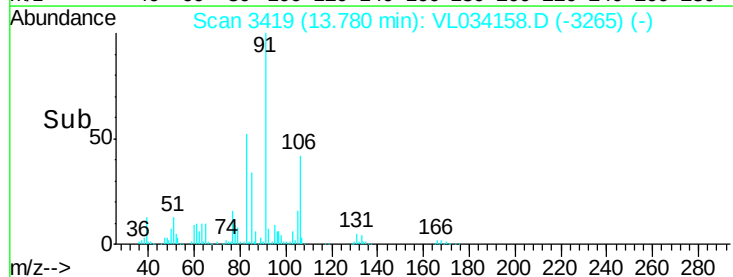
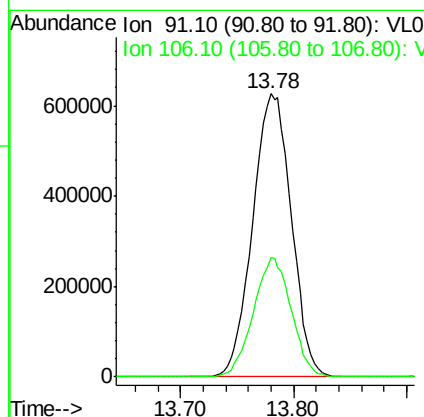
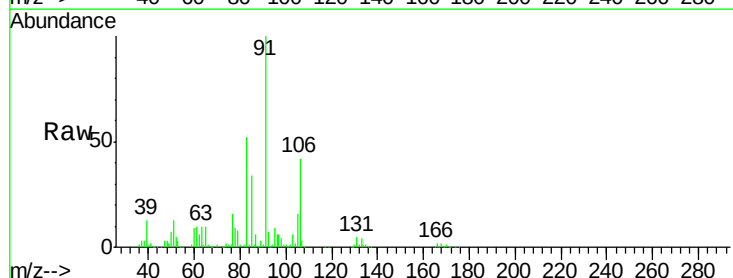
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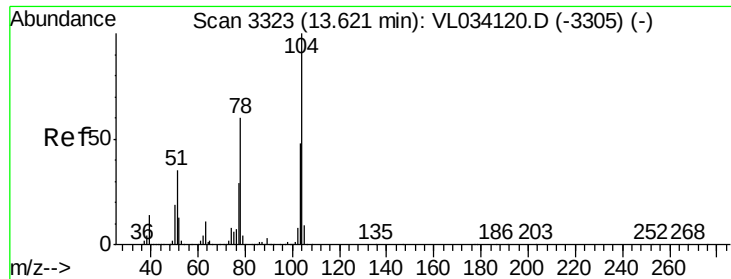
MMDadoda  
9/12/2019 5:17:33 AM



#60  
o-Xylene  
Concen: 8.318 ppbv  
RT: 13.78 min Scan# 3419  
Delta R.T. -0.01 min  
Lab File: VL034158.D  
Acq: 11 Sep 2019 00:58

Tgt Ion: 91 Resp: 1485481  
Ion Ratio Lower Upper  
91 100  
106 41.2 21.4 64.3





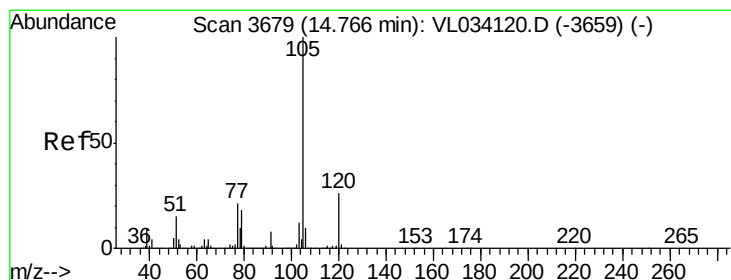
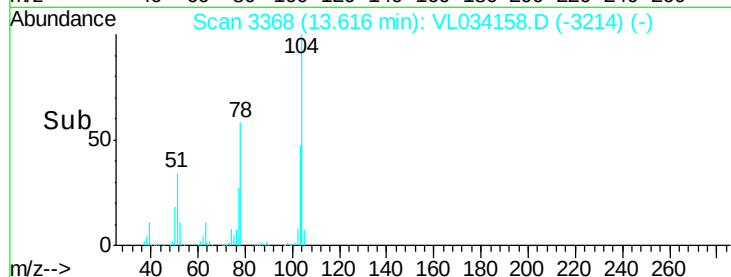
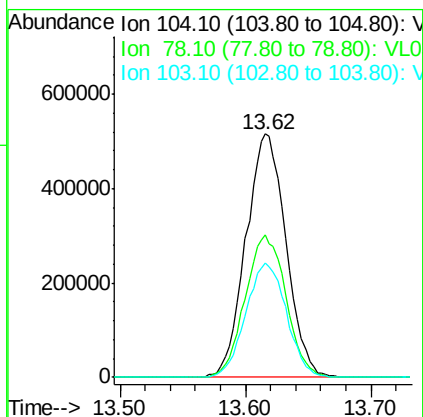
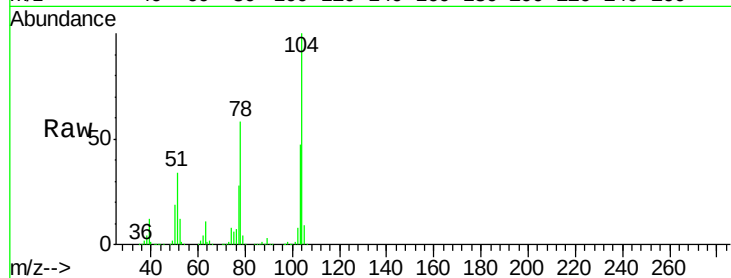
#61  
Stvrene  
Concen: 8.570 ppbv  
RT: 13.62 min Scan# 3368  
Delta R.T. -0.01 min  
Lab File: VL034158.D  
Acq: 11 Sep 2019 00:58

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDCCC010EC

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 104     | 100   |       |       |
| 78      | 59.6  | 47.8  | 71.6  |
| 103     | 47.6  | 38.7  | 58.1  |

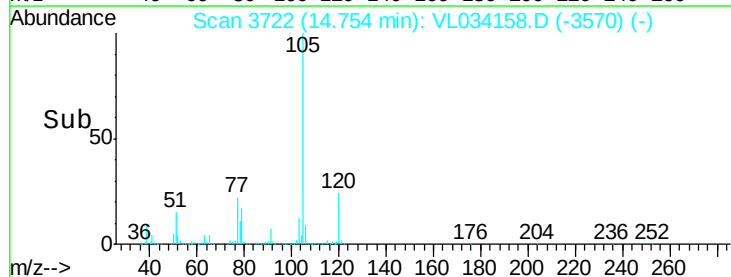
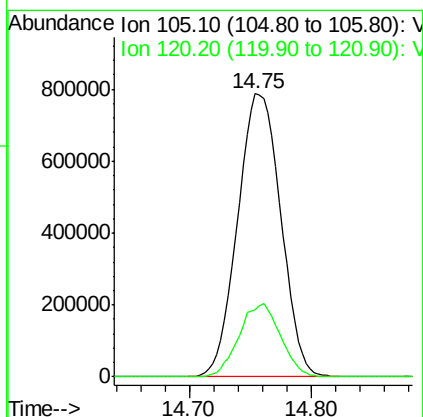
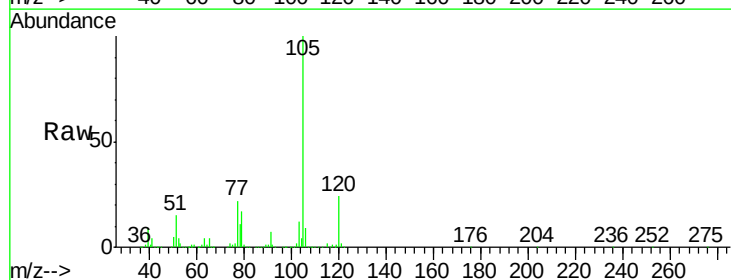
Manual Integrations  
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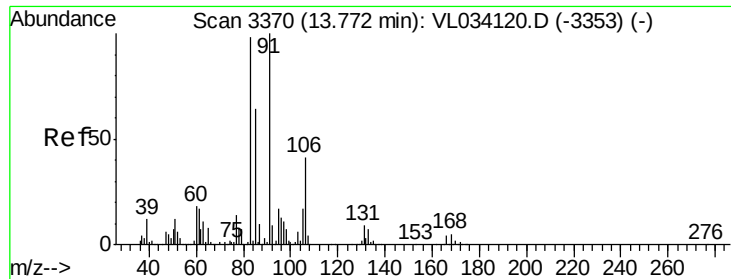
MMDadoda  
9/12/2019 5:17:33 AM



#62  
Isopropylbenzene  
Concen: 8.284 ppbv  
RT: 14.75 min Scan# 3722  
Delta R.T. -0.01 min  
Lab File: VL034158.D  
Acq: 11 Sep 2019 00:58

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 105     | 100   |       |       |
| 120     | 24.8  | 20.6  | 31.0  |





#63

1,1,2,2-Tetrachloroethane

Concen: 7.068 ppbv

RT: 13.77 min Scan# 3415

Delta R.T. -0.01 min

Lab File: VL034158.D

Acq: 11 Sep 2019 00:58

Instrument :

MSVOA\_L

ClientSampleId :

VSTDCCC010EC

Tot Ion: 83 Resp: 1028680

Ion Ratio Lower Upper

83 100

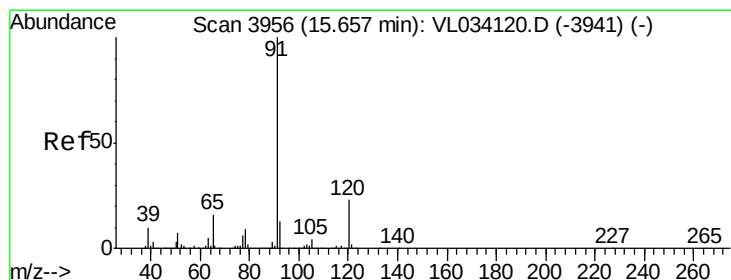
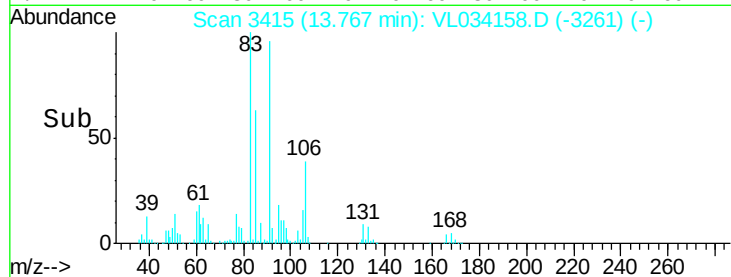
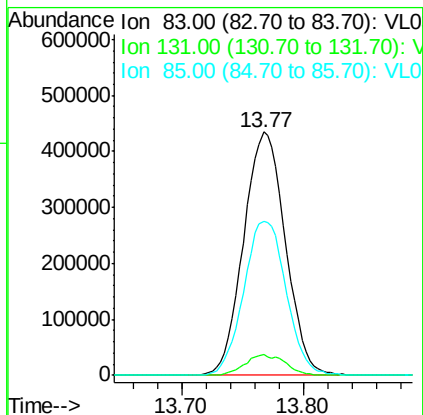
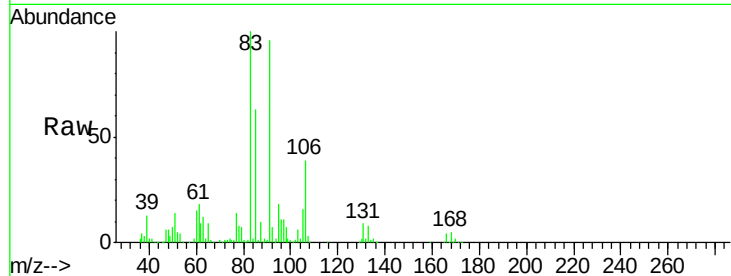
131 8.4 4.3 12.8

85 64.6 32.5 97.5

Manual Integrations  
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#64

n-propylbenzene

Concen: 8.329 ppbv

RT: 15.65 min Scan# 4000

Delta R.T. -0.01 min

Lab File: VL034158.D

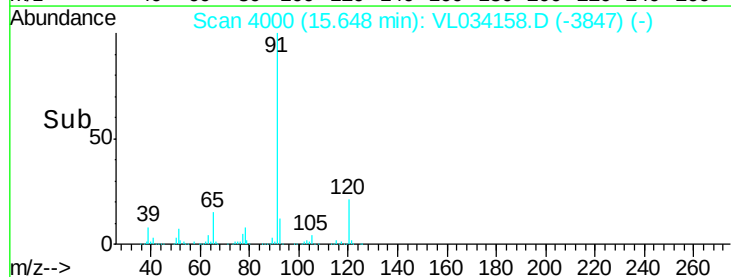
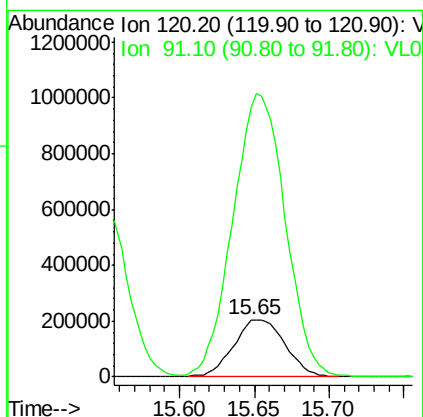
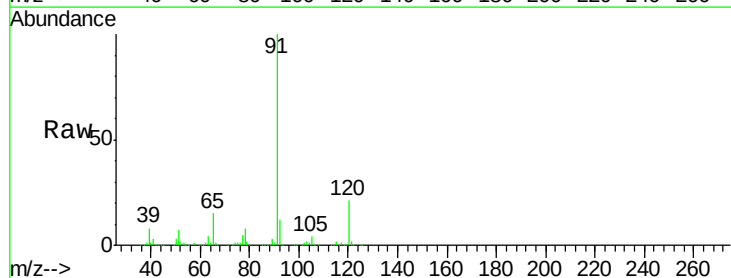
Acq: 11 Sep 2019 00:58

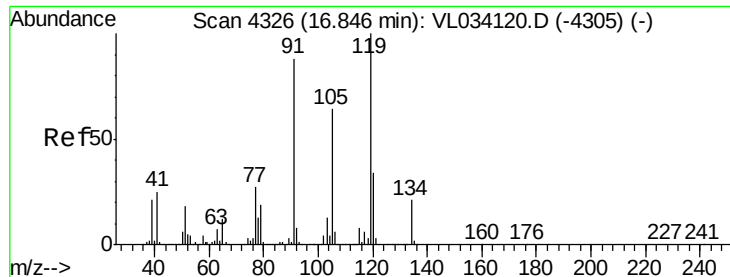
Tgt Ion: 120 Resp: 484805

Ion Ratio Lower Upper

120 100

91 511.1 376.8 565.2





#65

tert-Butylbenzene

Concen: 7.926 ppbv

RT: 16.84 min Scan# 4371

Delta R.T. -0.01 min

Lab File: VL034158.D

Acq: 11 Sep 2019 00:58

Instrument :

MSVOA\_L

ClientSampleId :

VSTDCCC010EC

Tot Ion: 119 Resp: 1589375

Ion Ratio Lower Upper

119 100

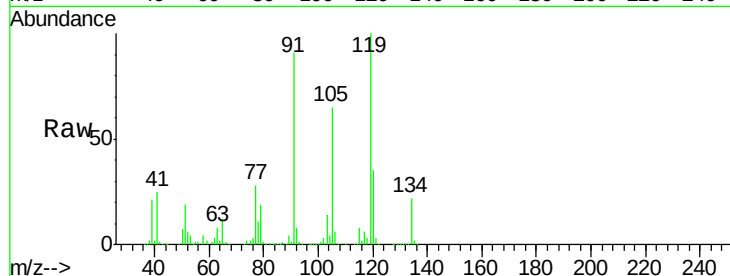
91 91.6 72.8 109.2

134 19.2 15.8 23.8

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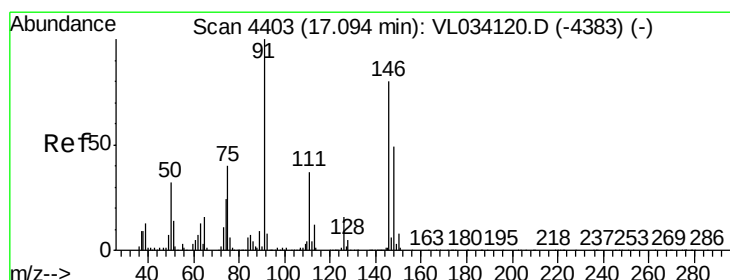
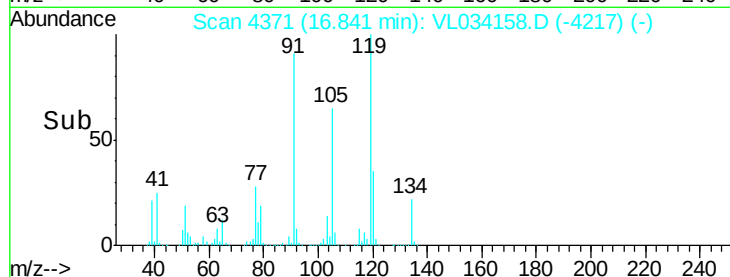
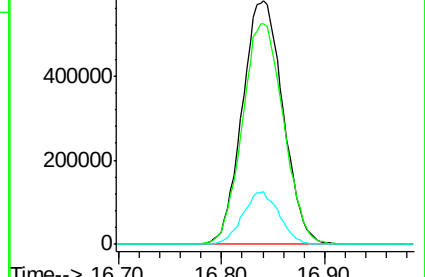
9/12/2019 5:17:33 AM



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: 8.974 ppbv

RT: 17.09 min Scan# 4447

Delta R.T. -0.01 min

Lab File: VL034158.D

Acq: 11 Sep 2019 00:58

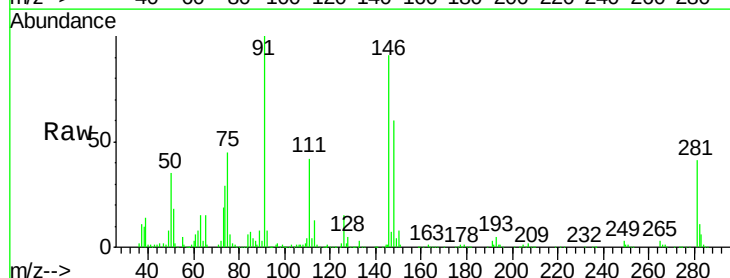
Tgt Ion: 91 Resp: 663504

Ion Ratio Lower Upper

91 100

126 15.3 13.7 20.5

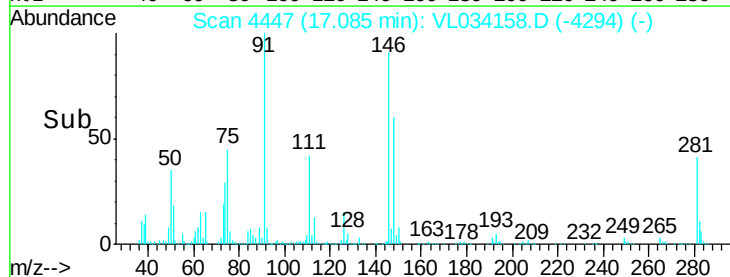
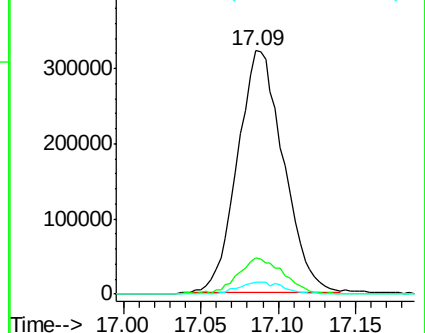
128 5.0 4.2 6.4

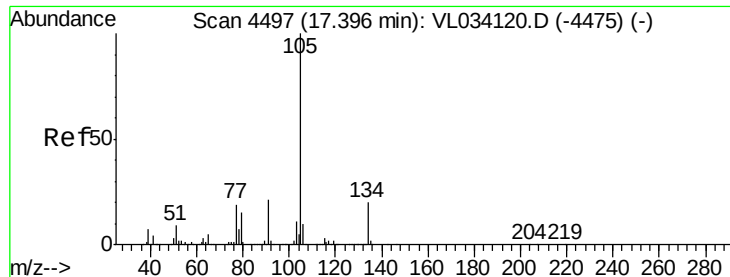


Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 126.10 (125.80 to 126.80): V

Ion 128.10 (127.80 to 128.80): V





#67

sec-Butylbenzene

Concen: 8.245 ppbv m

RT: 17.39 min Scan# 4541

Delta R.T. -0.01 min

Lab File: VL034158.D

Acq: 11 Sep 2019 00:58

Instrument :

MSVOA\_L

ClientSampleId :

VSTDCCC010EC

Tot Ion:105 Resp: 2377703

Ion Ratio Lower Upper

105 100

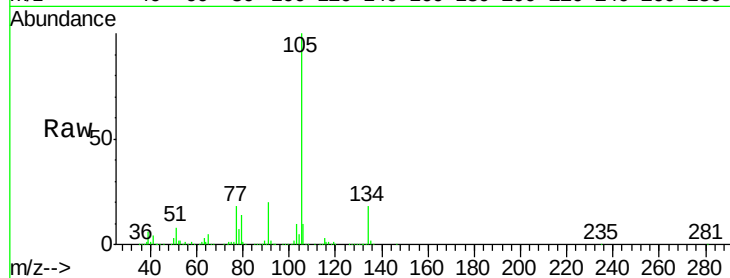
134 17.7 15.0 22.4

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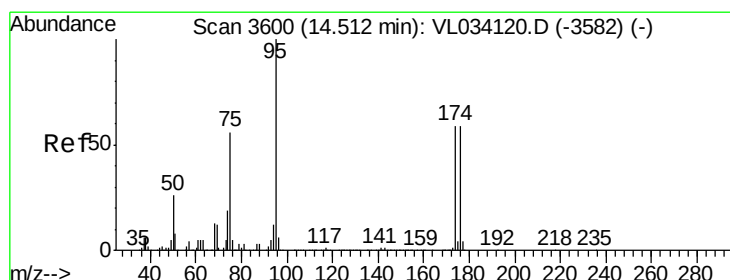
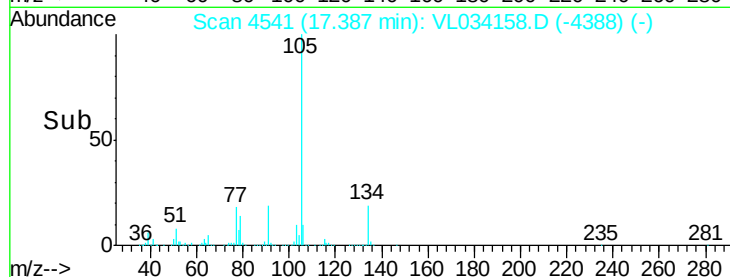
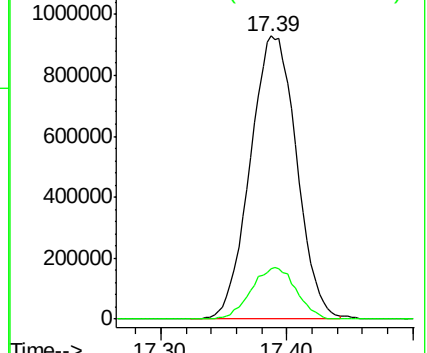
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Abundance Ion 105.10 (104.80 to 105.80): V

Ion 134.20 (133.90 to 134.90): V



#68

1-Bromo-4-Fluorobenzene

Concen: 9.479 ppbv

RT: 14.51 min Scan# 3645

Delta R.T. -0.01 min

Lab File: VL034158.D

Acq: 11 Sep 2019 00:58

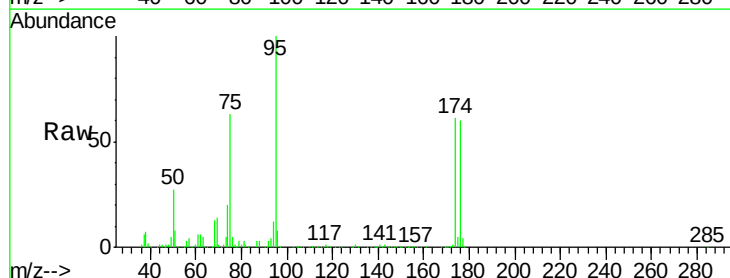
Tgt Ion: 95 Resp: 1038749

Ion Ratio Lower Upper

95 100

174 59.4 48.1 72.1

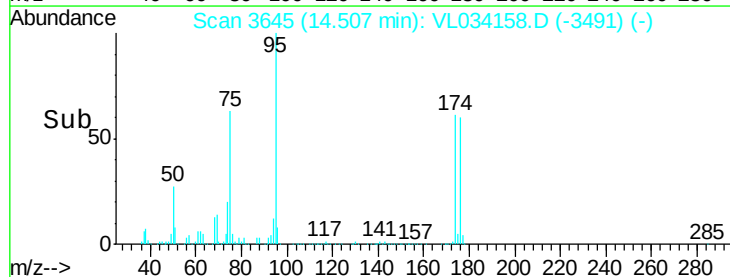
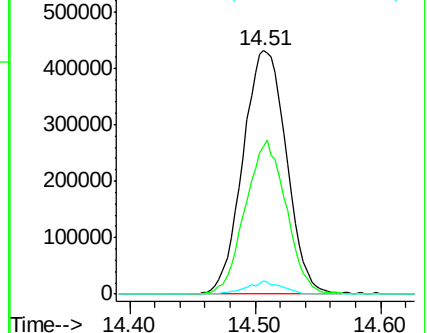
175 4.4 3.5 5.3

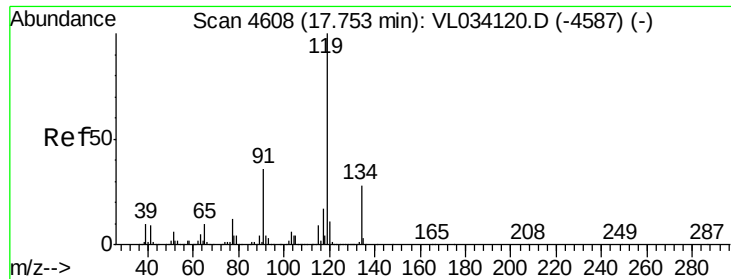


Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V





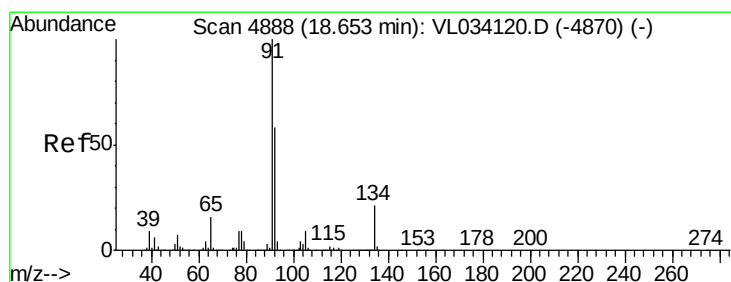
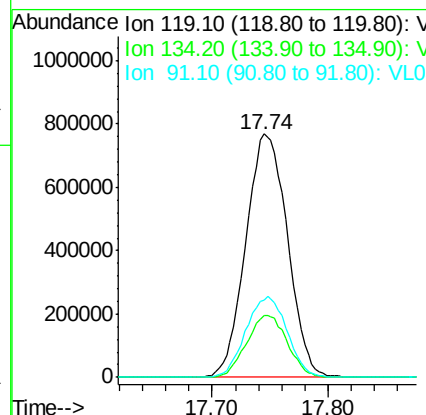
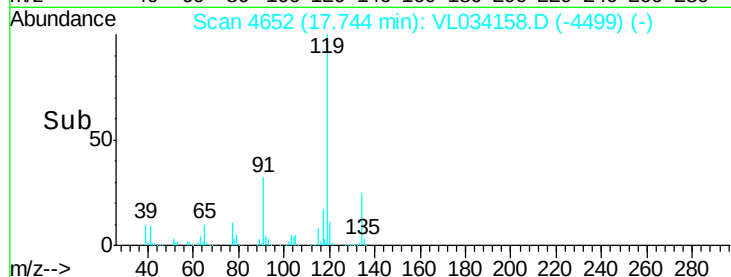
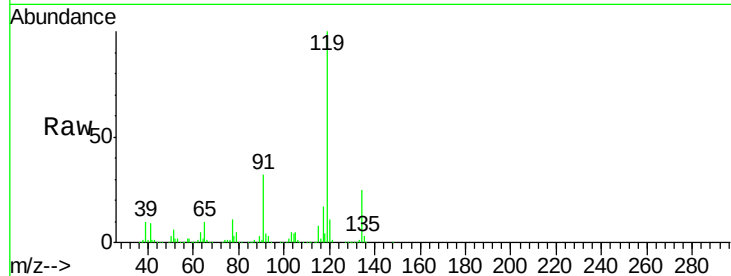
#69  
 p-Isopropyltoluene  
 Concen: 8.325 ppbv  
 RT: 17.74 min Scan# 4652  
 Delta R.T. -0.01 min  
 Lab File: VL034158.D  
 Acq: 11 Sep 2019 00:58

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDCCC010EC

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 119     | 100   |       |       |
| 134     | 24.9  | 20.8  | 31.2  |
| 91      | 33.0  | 27.2  | 40.8  |

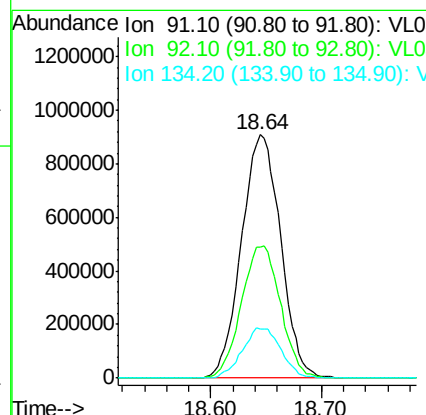
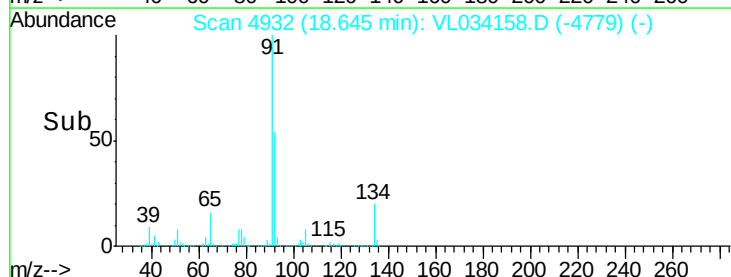
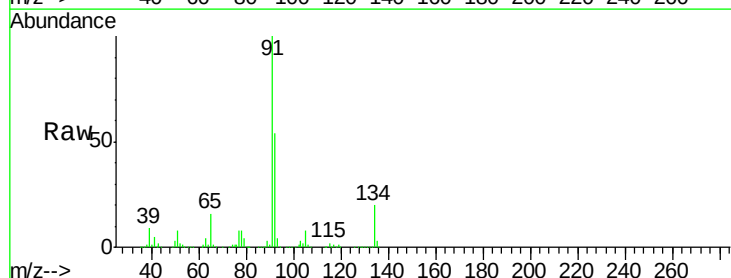
Manual Integrations  
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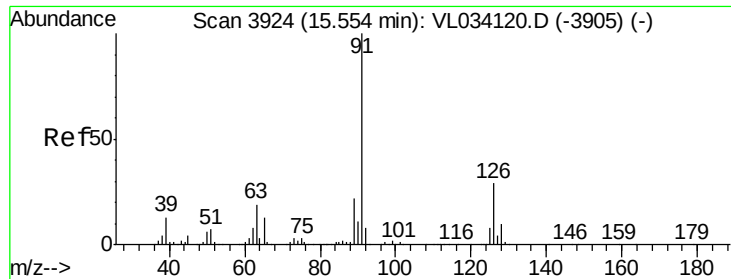
MMDadoda  
 9/12/2019 5:17:33 AM



#70  
 n-Butylbenzene  
 Concen: 8.528 ppbv  
 RT: 18.64 min Scan# 4932  
 Delta R.T. -0.01 min  
 Lab File: VL034158.D  
 Acq: 11 Sep 2019 00:58

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 91      | 100   |       |       |
| 92      | 54.4  | 45.3  | 67.9  |
| 134     | 20.5  | 17.4  | 26.0  |





#71

2-Chlorotoluene

Concen: 8.282 ppbv

RT: 15.55 min Scan# 3969

Delta R.T. -0.01 min

Lab File: VL034158.D

Acq: 11 Sep 2019 00:58

Instrument :

MSVOA\_L

ClientSampleId :

VSTDCCC010EC

Tot Ion: 91 Resp: 1572008

Ion Ratio Lower Upper

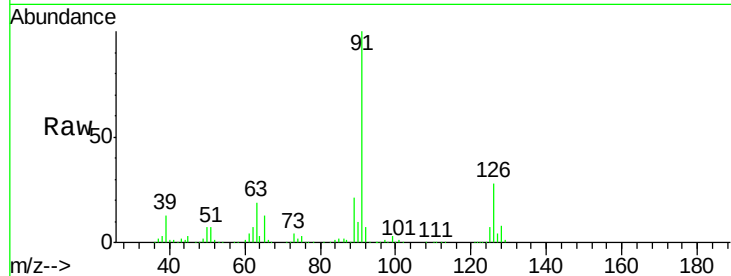
91 100

126 27.9 11.4 45.4

Manual Integrations  
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Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 126.10 (125.80 to 126.80): V

1200000

1000000

800000

600000

400000

200000

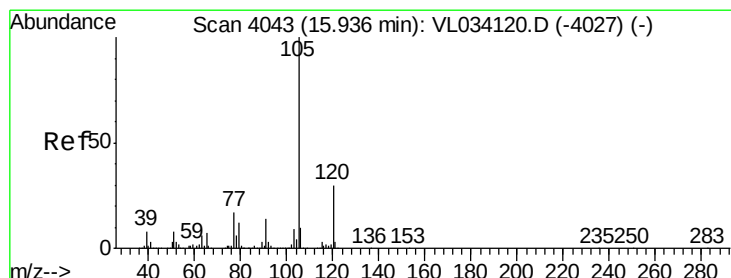
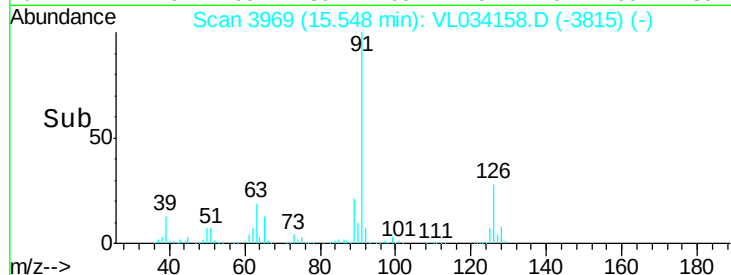
0

15.50

15.55

15.60

Time-->



#72

4-Ethyltoluene

Concen: 8.505 ppbv

RT: 15.93 min Scan# 4088

Delta R.T. -0.01 min

Lab File: VL034158.D

Acq: 11 Sep 2019 00:58

Tgt Ion: 105 Resp: 1713735

Ion Ratio Lower Upper

105 100

120 28.1 23.8 35.6

91 13.9 11.4 17.0

77 15.6 12.6 18.8

Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

1000000

800000

600000

400000

200000

0

15.85

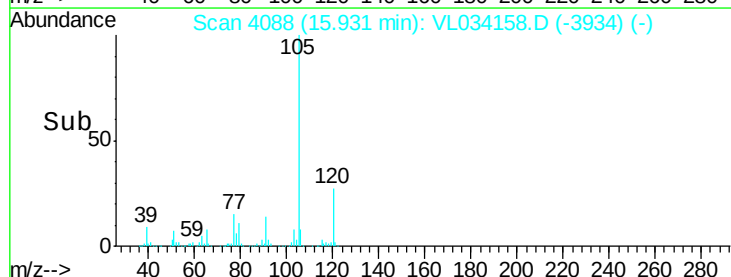
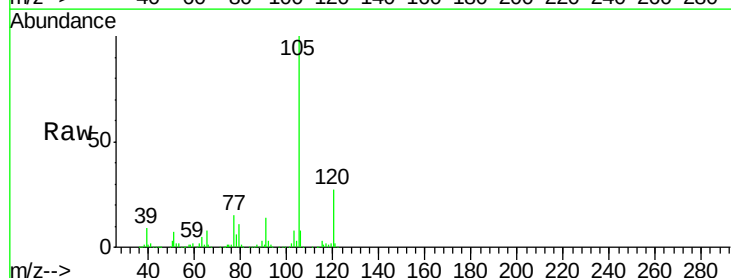
15.90

15.93

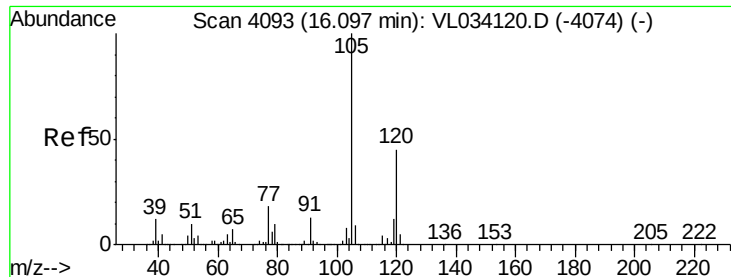
15.95

16.00

Time-->







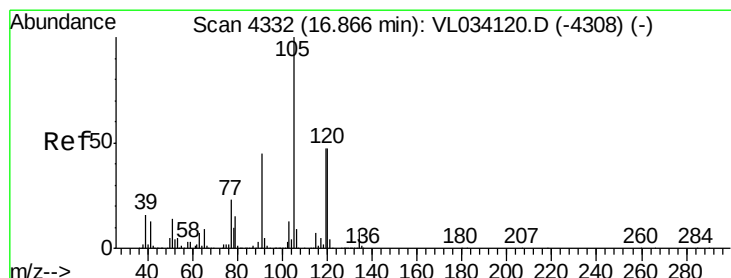
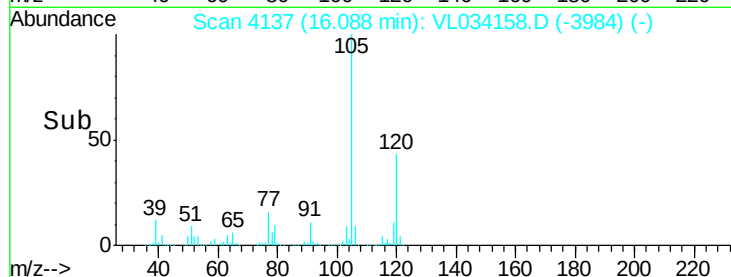
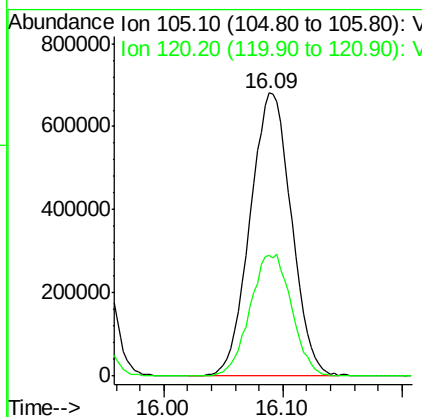
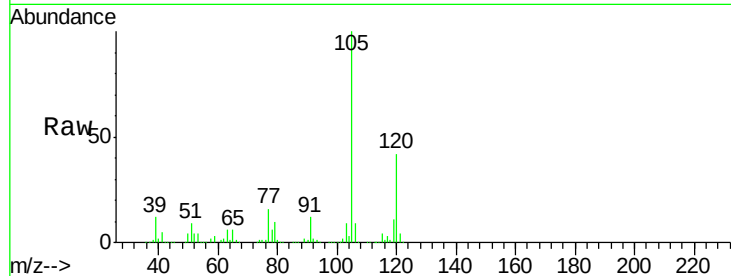
#73  
 1,3,5-Trimethylbenzene  
 Concen: 8.304 ppbv  
 RT: 16.09 min Scan# 4137  
 Delta R.T. -0.01 min  
 Lab File: VL034158.D  
 Acq: 11 Sep 2019 00:58

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDCCC010EC

Tot Ion:105 Resp: 1626216  
 Ion Ratio Lower Upper  
 105 100  
 120 42.6 35.8 53.8

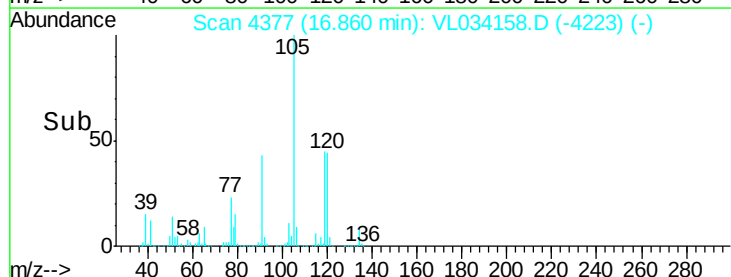
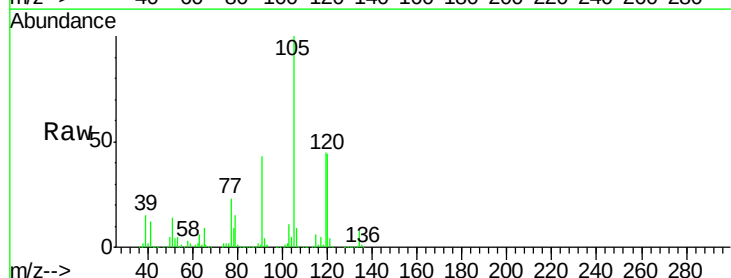
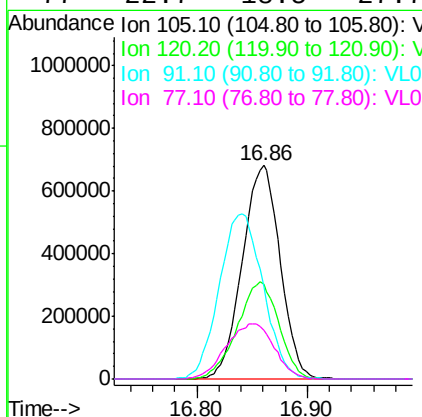
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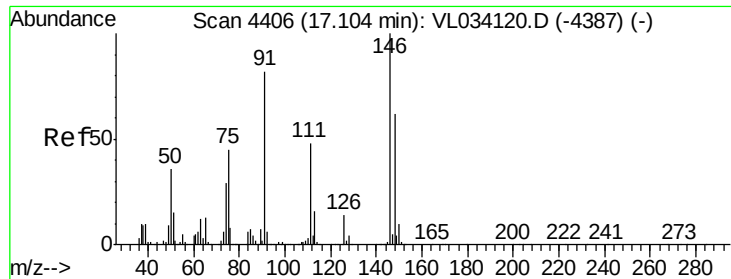
MMDadoda  
 9/12/2019 5:17:33 AM



#74  
 1,2,4-Trimethylbenzene  
 Concen: 8.036 ppbv  
 RT: 16.86 min Scan# 4377  
 Delta R.T. -0.01 min  
 Lab File: VL034158.D  
 Acq: 11 Sep 2019 00:58

Tgt Ion:105 Resp: 1620473  
 Ion Ratio Lower Upper  
 105 100  
 120 44.1 37.7 56.5  
 91 43.0 36.2 54.2  
 77 22.7 18.5 27.7





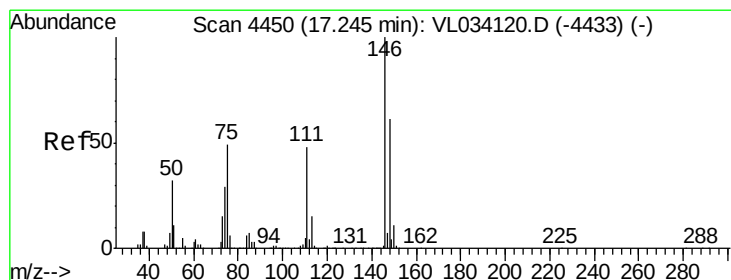
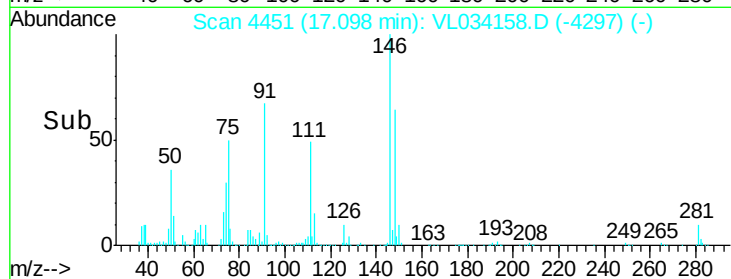
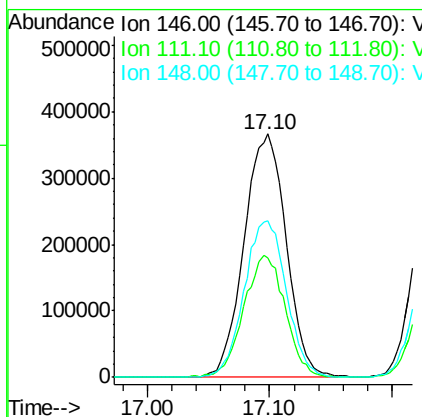
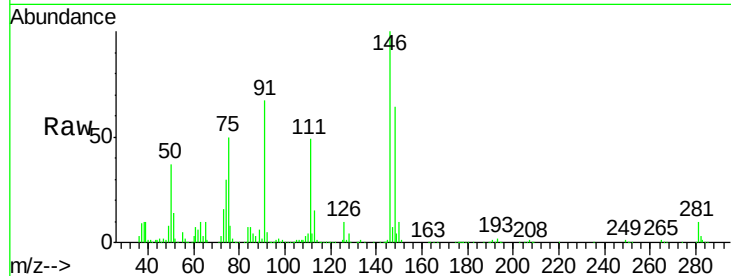
#75  
 1,3-Dichlorobenzene  
 Concen: 8.184 ppbv  
 RT: 17.10 min Scan# 4451  
 Delta R.T. -0.01 min  
 Lab File: VL034158.D  
 Acq: 11 Sep 2019 00:58

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDCCC010EC

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 146     | 100   |       |       |
| 111     | 49.6  | 24.9  | 74.7  |
| 148     | 64.6  | 32.5  | 97.5  |

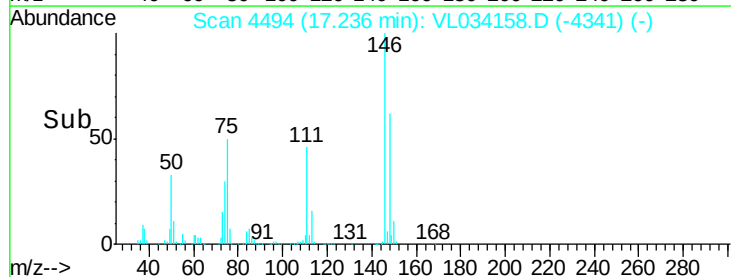
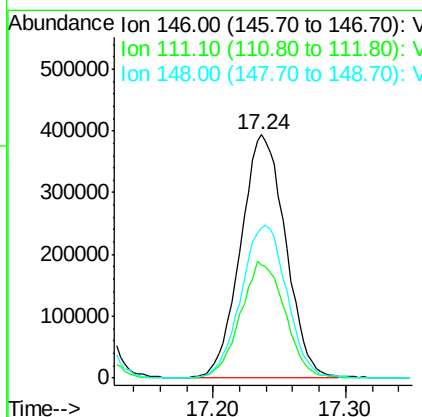
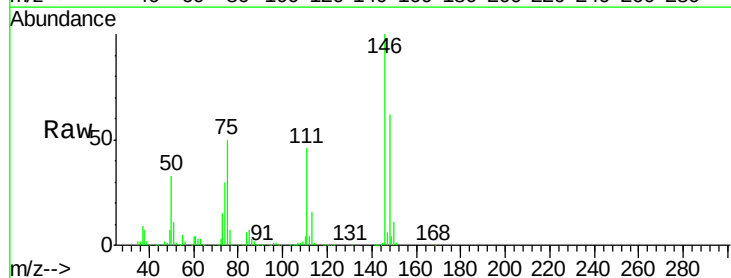
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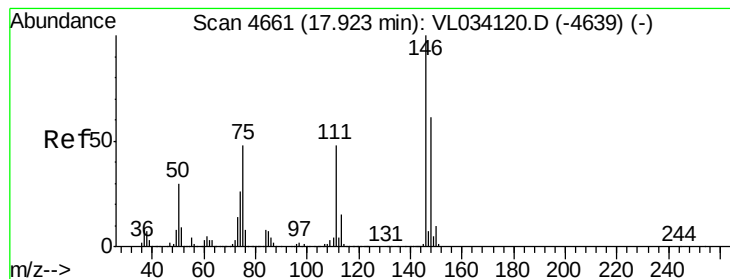
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#76  
 1,4-Dichlorobenzene  
 Concen: 8.241 ppbv  
 RT: 17.24 min Scan# 4494  
 Delta R.T. -0.01 min  
 Lab File: VL034158.D  
 Acq: 11 Sep 2019 00:58

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 146     | 100   |       |       |
| 111     | 47.7  | 24.3  | 72.8  |
| 148     | 64.6  | 32.6  | 98.0  |





#77

1,2-Dichlorobenzene

Concen: 8.211 ppbv

RT: 17.92 min Scan# 4707

Delta R.T. -0.00 min

Lab File: VL034158.D

Acq: 11 Sep 2019 00:58

Instrument :

MSVOA\_L

ClientSampleId :

VSTDCCC010EC

Tot Ion:146 Resp: 898118

Ion Ratio Lower Upper

146 100

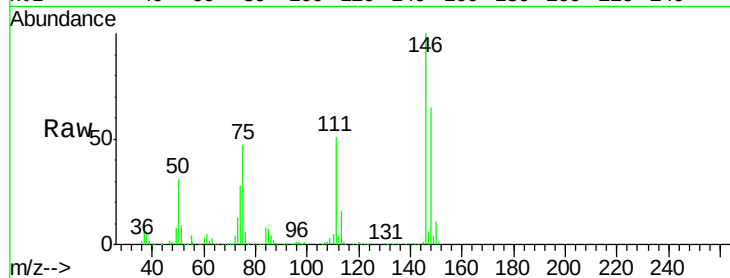
111 51.7 25.1 75.4

148 65.0 32.0 96.2

Manual Integrations  
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MMDadoda

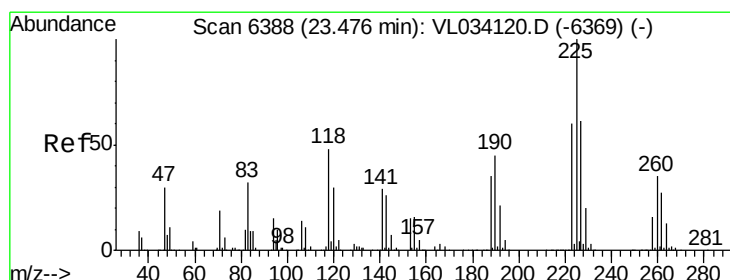
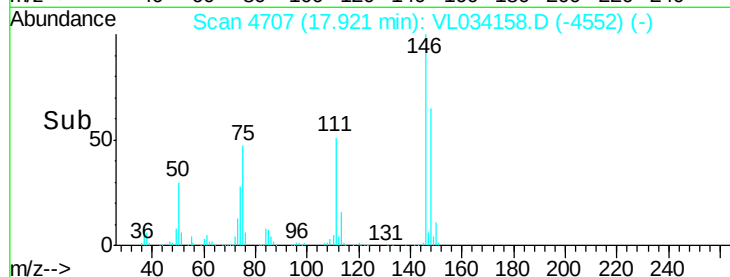
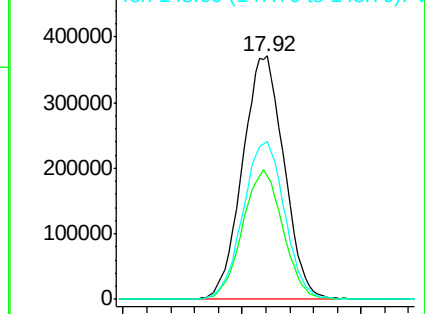
9/12/2019 5:17:33 AM



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



#78

Hexachloro-1,3-Butadiene

Concen: 11.048 ppbv

RT: 23.47 min Scan# 6434

Delta R.T. -0.00 min

Lab File: VL034158.D

Acq: 11 Sep 2019 00:58

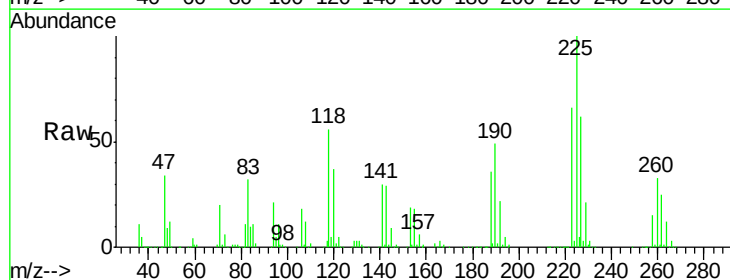
Tgt Ion:225 Resp: 824463

Ion Ratio Lower Upper

225 100

223 63.8 50.3 75.5

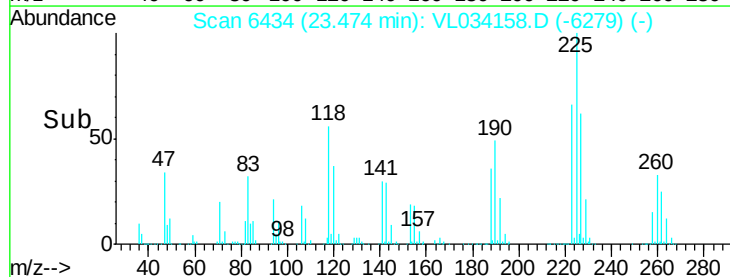
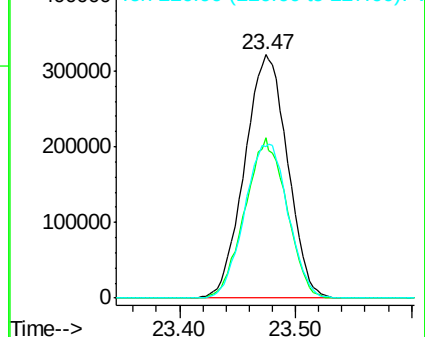
227 64.4 50.9 76.3

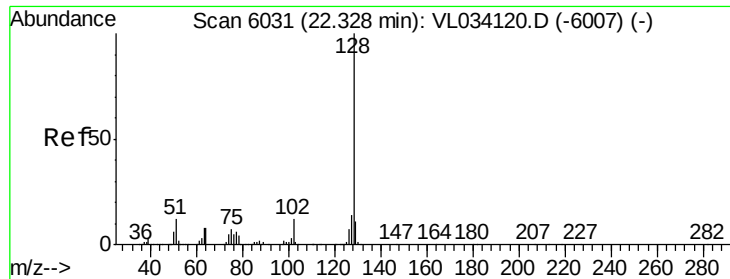


Abundance Ion 224.90 (224.60 to 225.60): V

Ion 222.90 (222.60 to 223.60): V

Ion 226.90 (226.60 to 227.60): V





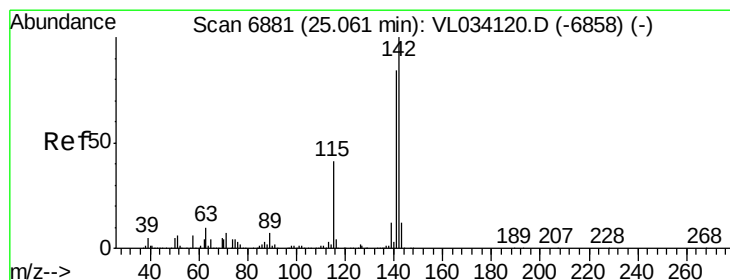
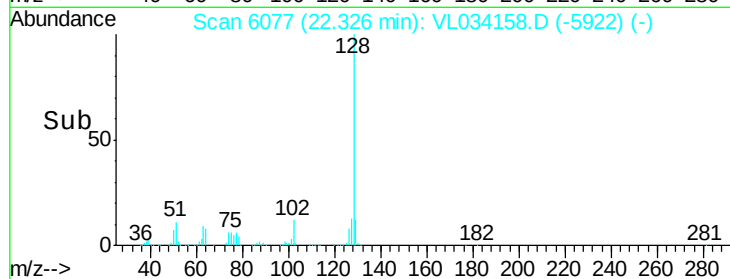
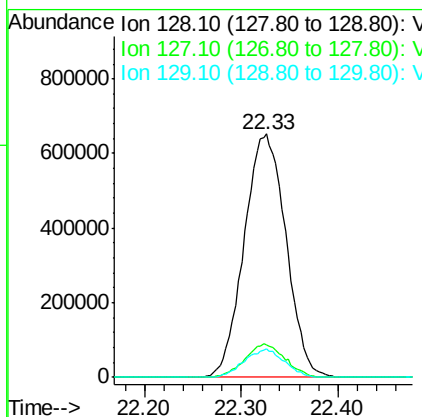
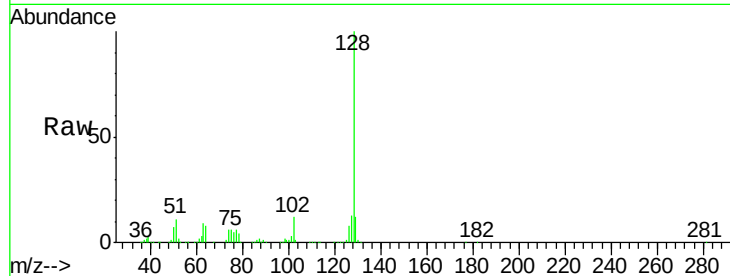
#79  
Naphthalene  
Concen: 10.735 ppbv  
RT: 22.33 min Scan# 6077  
Delta R.T. -0.00 min  
Lab File: VL034158.D  
Acq: 11 Sep 2019 00:58

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDCCC010EC

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 128     | 100   |       |       |
| 127     | 13.1  | 10.9  | 16.3  |
| 129     | 11.5  | 8.5   | 12.7  |

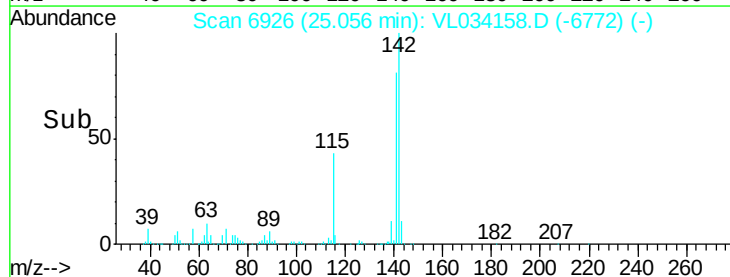
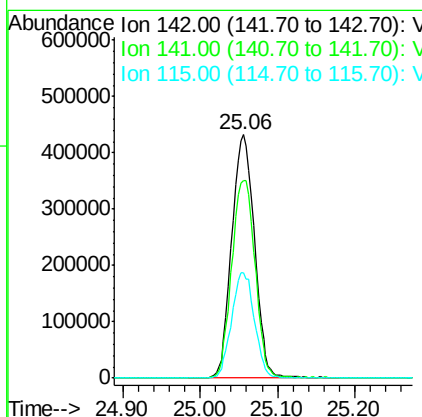
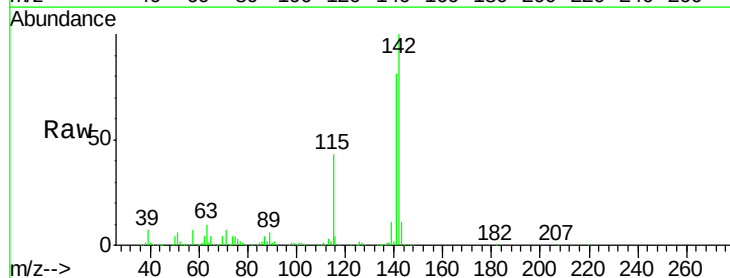
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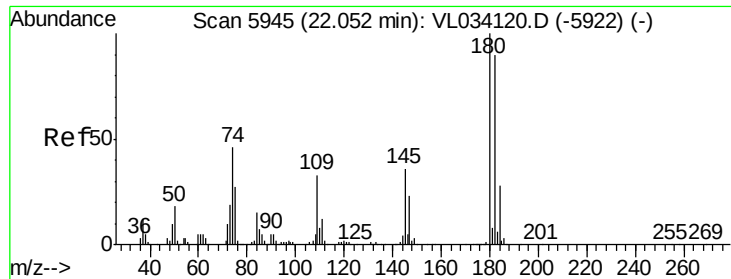
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#80  
Naphthalene, 2-methyl-  
Concen: 13.828 ppbv  
RT: 25.06 min Scan# 6926  
Delta R.T. -0.01 min  
Lab File: VL034158.D  
Acq: 11 Sep 2019 00:58

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 142     | 100   |       |       |
| 141     | 83.2  | 67.6  | 101.4 |
| 115     | 43.4  | 34.6  | 52.0  |





#81  
 1,2,4-Trichlorobenzene  
 Concen: 10.027 ppbv  
 RT: 22.05 min Scan# 5992  
 Delta R.T. 0.00 min  
 Lab File: VL034158.D  
 Acq: 11 Sep 2019 00:58

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDCCC010EC

| Tot Ion | Ratio | Resp   | Lower | Upper |
|---------|-------|--------|-------|-------|
| 180     | 100   | 994622 |       |       |
| 182     | 94.8  |        | 77.0  | 115.4 |
| 184     | 31.1  |        | 25.5  | 38.3  |

Manual Integrations  
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 9/12/2019 5:17:33 AM

