

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL060719\  
 Data File : VL033880.D  
 Acq On : 7 Jun 2019 5:54  
 Operator : SY/AP  
 Sample : VSTDIC015  
 Misc : 400ml/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDIC015

Manual Integrations  
 APPROVED

MMDadoda  
 6/11/2019 9:18:41 AM

Quant Time: Jun 07 06:37:30 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL060719AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Fri Jun 0  
 QLast Update : Fri Jun 07 05:42:58 2019  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.75  | 49   | 900785   | 10.00 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 7.29  | 114  | 2172918  | 10.00 | ppbv  | 0.00     |
| 55) Chlorobenzene-d5    | 12.23 | 117  | 2515890  | 10.00 | ppbv  | 0.00     |

System Monitoring Compounds

|                             |        |       |          |          |      |        |
|-----------------------------|--------|-------|----------|----------|------|--------|
| 68) 1-Bromo-4-Fluorobenzene | 14.57  | 95    | 1896197  | 9.32     | ppbv | 0.00   |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 93.20% |

| Target Compounds               | R.T. | QIon | Response | Conc   | Units  | Ovalue |
|--------------------------------|------|------|----------|--------|--------|--------|
| 2) Dichlorodifluoromethane     | 3.07 | 85   | 1660377  | 9.127  | ppbv   | 99     |
| 3) Chlorodifluoromethane       | 3.01 | 51   | 1430359  | 13.791 | ppbv   | 99     |
| 4) Chloromethane               | 3.17 | 50   | 813195   | 13.711 | ppbv   | 98     |
| 5) Vinyl Chloride              | 3.28 | 62   | 827605   | 13.695 | ppbv   | 100    |
| 6) Bromomethane                | 3.51 | 94   | 538051   | 14.580 | ppbv   | 94     |
| 7) Chloroethane                | 3.60 | 64   | 310195   | 14.374 | ppbv   | 95     |
| 8) Dichlorotetrafluoroethane   | 3.21 | 85   | 2135180  | 13.758 | ppbv   | 99     |
| 9) Propene                     | 3.03 | 41   | 592856   | 13.705 | ppbv   | 98     |
| 10) Heptane                    | 8.24 | 43   | 1763589  | 14.413 | ppbv   | 99     |
| 11) Trichlorofluoromethane     | 4.00 | 101  | 2664453  | 14.612 | ppbv   | 97     |
| 12) 1,1,2-Trichlorotrifluoroet | 4.54 | 101  | 1791542  | 14.110 | ppbv   | 99     |
| 13) Ethanol                    | 3.64 | 45   | 100897   | 7.247  | ppbv   | 99     |
| 14) Bromoethene                | 3.78 | 108  | 719997   | 15.171 | ppbv   | 99     |
| 15) Acetone                    | 3.89 | 43   | 1649425  | 13.220 | ppbv   | 100    |
| 16) 1,3-Butadiene              | 3.35 | 39   | 753457   | 14.955 | ppbv   | 100    |
| 17) tert-Butyl alcohol         | 4.35 | 59   | 1195310  | 11.518 | ppbv   | 100    |
| 18) 1,1-Dichloroethene         | 4.34 | 96   | 793689   | 14.802 | ppbv   | 99     |
| 19) Isopropyl Alcohol          | 4.01 | 45   | 873268   | 10.770 | ppbv   | 99     |
| 20) Methylene Chloride         | 4.40 | 84   | 673136   | 13.887 | ppbv   | 98     |
| 21) Allyl Chloride             | 4.47 | 41   | 1151191  | 14.846 | ppbv   | 100    |
| 22) trans-1,2-Dichloroethene   | 4.96 | 96   | 820654   | 14.674 | ppbv   | 98     |
| 23) Vinyl Acetate              | 5.15 | 43   | 2425639  | 14.798 | ppbv   | 99     |
| 24) 1,1-Dichloroethane         | 5.08 | 63   | 1725645  | 13.730 | ppbv   | 99     |
| 25) Ethyl Acetate              | 5.76 | 43   | 2996632  | 13.761 | ppbv   | 100    |
| 26) Hexane                     | 5.77 | 57   | 1308083  | 14.006 | ppbv   | 100    |
| 27) Carbon Disulfide           | 4.61 | 76   | 2033405  | 15.676 | ppbv   | 99     |
| 28) Methyl tert-Butyl Ether    | 5.10 | 73   | 2232454  | 14.425 | ppbv   | 99     |
| 29) Chloroform                 | 5.84 | 83   | 2291553  | 13.235 | ppbv   | 98     |
| 30) Cyclohexane                | 7.24 | 84   | 1146153  | 14.692 | ppbv   | 99     |
| 31) cis-1,2-Dichloroethene     | 5.63 | 61   | 1344371  | 14.362 | ppbv   | 98     |
| 32) 1,1,1-Trichloroethane      | 6.61 | 97   | 2479477  | 14.313 | ppbv   | 100    |
| 34) 2-Butanone                 | 5.32 | 43   | 1932249  | 14.384 | ppbv   | 100    |
| 35) Carbon Tetrachloride       | 7.13 | 117  | 2694175  | 15.451 | ppbv   | 96     |
| 36) Benzene                    | 7.00 | 78   | 2766715  | 14.251 | ppbv   | 98     |
| 37) 1,2-Dichloroethane         | 6.41 | 62   | 1868272  | 14.585 | ppbv   | 99     |
| 38) Trichloroethene            | 7.95 | 130  | 1204763  | 16.368 | ppbv   | 99     |
| 39) 1,2-Dichloropropane        | 7.73 | 63   | 1047900  | 14.401 | ppbv   | 94     |
| 40) 1,4-Dioxane                | 7.94 | 88   | 367116   | 11.960 | ppbv # | 50     |
| 41) Tetrahydrofuran            | 6.14 | 42   | 1076239  | 14.575 | ppbv   | 100    |
| 42) Bromodichloromethane       | 7.91 | 83   | 2655329  | 15.215 | ppbv   | 98     |
| 43) Methyl Methacrylate        | 8.13 | 69   | 1159866  | 16.097 | ppbv   | 98     |

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 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDIC015

Manual Integrations  
 APPROVED

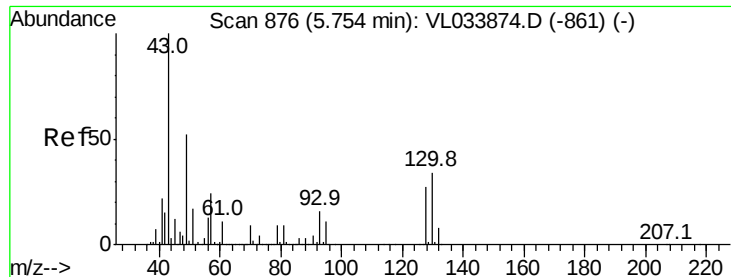
MMDadoda  
 6/11/2019 9:18:41 AM

Quant Time: Jun 07 06:37:30 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL060719AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Fri Jun 0  
 QLast Update : Fri Jun 07 05:42:58 2019  
 Response via : Initial Calibration

| Internal Standards            | R.T.  | QIon | Response | Conc   | Units  | Dev(Min) |
|-------------------------------|-------|------|----------|--------|--------|----------|
| -----                         |       |      |          |        |        |          |
| 44) 2,2,4-Trimethylpentane    | 7.98  | 57   | 4767126  | 14.417 | ppbv   | 99       |
| 45) t-1,3-Dichloropropene     | 9.41  | 75   | 1639924  | 17.973 | ppbv   | 100      |
| 46) cis-1,3-Dichloropropene   | 8.83  | 75   | 1812717  | 17.035 | ppbv   | 99       |
| 47) 1,1,2-Trichloroethane     | 9.61  | 97   | 1226359  | 14.713 | ppbv   | 97       |
| 48) Dibromochloromethane      | 10.44 | 129  | 2376797  | 16.382 | ppbv   | 99       |
| 49) Bromoform                 | 13.19 | 173  | 2210869  | 17.774 | ppbv   | 99       |
| 50) 4-Methyl-2-Pentanone      | 8.86  | 43   | 3140559  | 15.346 | ppbv   | 100      |
| 51) 2-Hexanone                | 10.26 | 43   | 2623939  | 16.422 | ppbv # | 99       |
| 52) Tetrachloroethene         | 11.36 | 164  | 1148397  | 16.610 | ppbv   | 97       |
| 53) Toluene                   | 9.94  | 91   | 3423445  | 16.216 | ppbv   | 99       |
| 54) 1,2-Dibromoethane         | 10.75 | 107  | 1974803  | 15.553 | ppbv   | 99       |
| 56) 1,1,1,2-Tetrachloroethane | 12.27 | 131  | 1573875  | 13.631 | ppbv # | 73       |
| 57) Chlorobenzene             | 12.29 | 112  | 2725360  | 13.299 | ppbv   | 97       |
| 58) Ethyl Benzene             | 12.86 | 91   | 4805869  | 14.681 | ppbv   | 95       |
| 59) m/p-Xylene                | 13.14 | 91   | 8152824m | 28.341 | ppbv   |          |
| 60) o-Xylene                  | 13.84 | 91   | 4167959  | 14.241 | ppbv   | 100      |
| 61) Styrene                   | 13.68 | 104  | 3132958  | 16.055 | ppbv   | 100      |
| 62) Isopropylbenzene          | 14.82 | 105  | 5549656  | 14.098 | ppbv   | 100      |
| 63) 1,1,2,2-Tetrachloroethane | 13.83 | 83   | 2965523  | 13.863 | ppbv   | 99       |
| 64) n-propylbenzene           | 15.71 | 120  | 1464990  | 14.416 | ppbv   | 96       |
| 65) tert-Butylbenzene         | 16.90 | 119  | 5275884  | 14.670 | ppbv   | 99       |
| 66) Benzyl Chloride           | 17.15 | 91   | 3104537  | 18.091 | ppbv   | 100      |
| 67) sec-Butylbenzene          | 17.45 | 105  | 7317921  | 14.519 | ppbv   | 100      |
| 69) p-Isopropyltoluene        | 17.81 | 119  | 6281166  | 15.066 | ppbv   | 100      |
| 70) n-Butylbenzene            | 18.70 | 91   | 6620386  | 14.774 | ppbv   | 99       |
| 71) 2-Chlorotoluene           | 15.61 | 91   | 4307469  | 14.764 | ppbv   | 100      |
| 72) 4-Ethyltoluene            | 15.99 | 105  | 5049399  | 15.107 | ppbv   | 99       |
| 73) 1,3,5-Trimethylbenzene    | 16.15 | 105  | 4818743  | 14.742 | ppbv   | 99       |
| 74) 1,2,4-Trimethylbenzene    | 16.92 | 105  | 5142118  | 14.419 | ppbv   | 97       |
| 75) 1,3-Dichlorobenzene       | 17.16 | 146  | 3068900  | 14.019 | ppbv   | 100      |
| 76) 1,4-Dichlorobenzene       | 17.30 | 146  | 3050687  | 14.692 | ppbv   | 100      |
| 77) 1,2-Dichlorobenzene       | 17.98 | 146  | 2988754  | 14.519 | ppbv   | 100      |
| 78) Hexachloro-1,3-Butadiene  | 23.53 | 225  | 1920530  | 12.450 | ppbv   | 99       |
| 79) Naphthalene               | 22.40 | 128  | 4689983  | 14.659 | ppbv   | 98       |
| 80) Naphthalene, 2-methyl-    | 25.10 | 142  | 2063389  | 17.916 | ppbv # | 94       |
| 81) 1,2,4-Trichlorobenzene    | 22.13 | 180  | 2733311  | 14.299 | ppbv   | 100      |
| -----                         |       |      |          |        |        |          |

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





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.75 min Scan# 876

Delta R.T. -0.00 min

Lab File: VL033880.D

Acq: 7 Jun 2019 5:54

Instrument :

MSVOA\_L

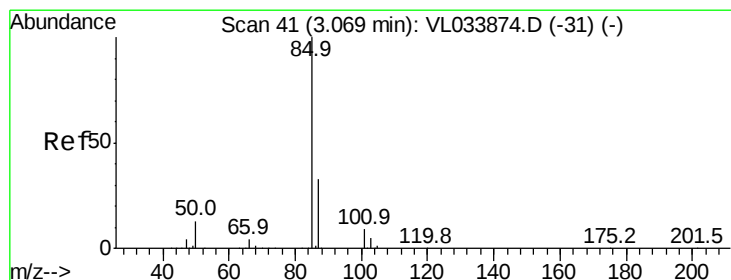
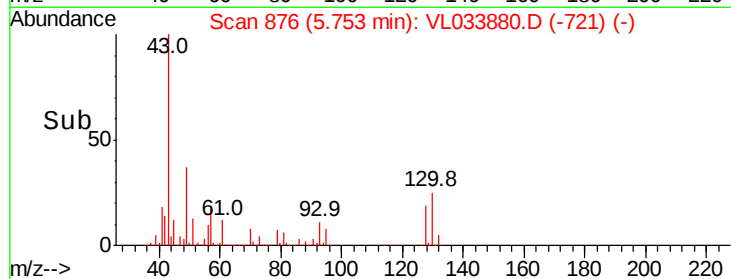
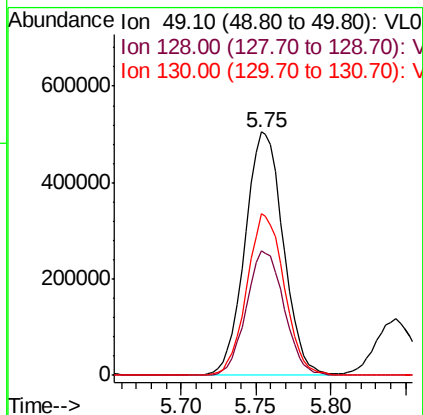
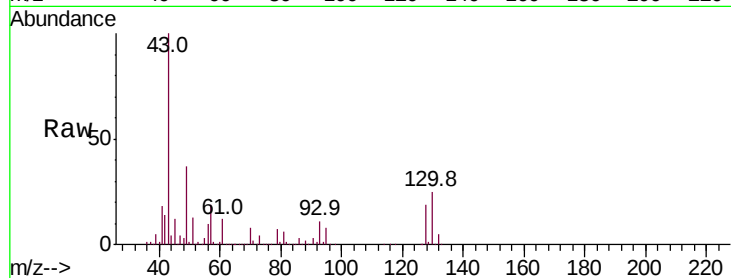
ClientSampleId :

VSTDIC015

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 49      | 100   |       |       |
| 128     | 50.4  | 25.5  | 76.5  |
| 130     | 65.1  | 32.5  | 97.4  |

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#2

Dichlorodifluoromethane

Concen: 9.127 ppbv

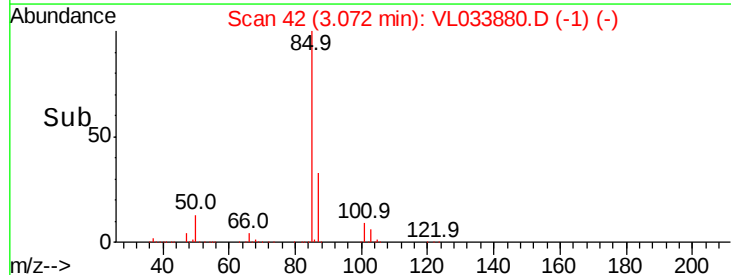
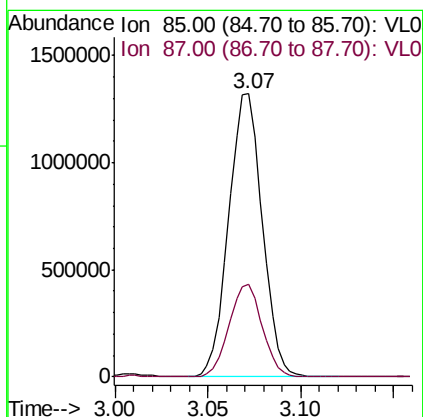
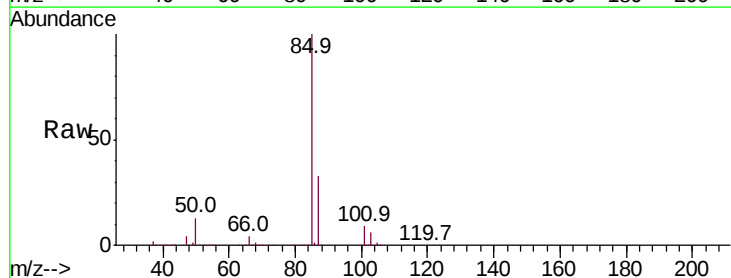
RT: 3.07 min Scan# 42

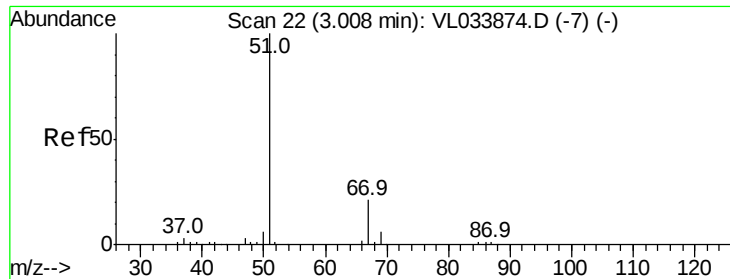
Delta R.T. 0.00 min

Lab File: VL033880.D

Acq: 7 Jun 2019 5:54

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 85      | 100   |       |       |
| 87      | 32.6  | 26.6  | 40.0  |





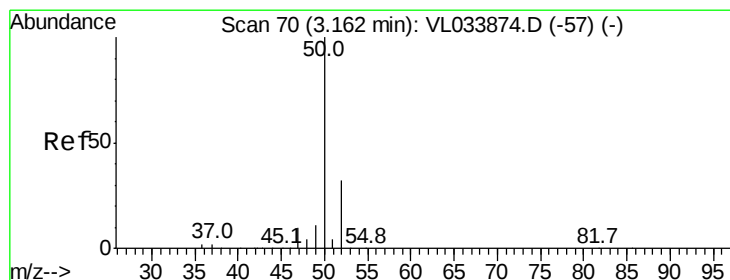
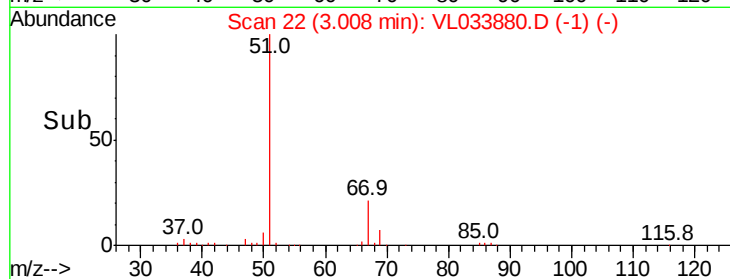
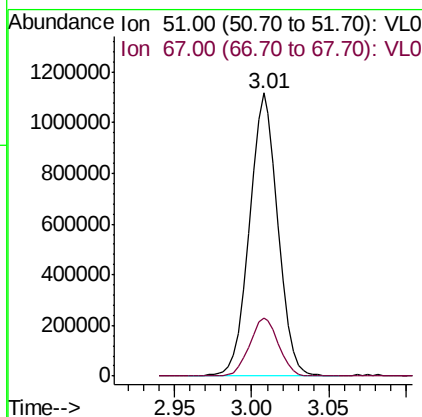
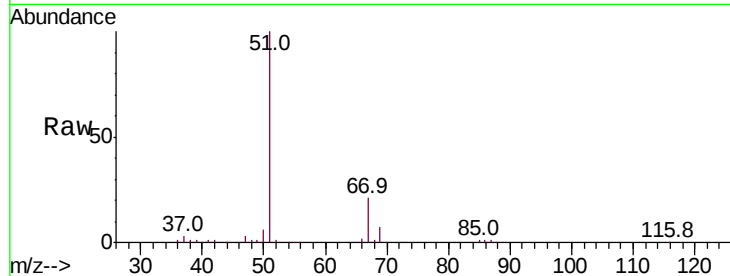
#3  
Chlorodifluoromethane  
Concen: 13.791 ppbv  
RT: 3.01 min Scan# 22  
Delta R.T. -0.00 min  
Lab File: VL033880.D  
Acq: 7 Jun 2019 5:54

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDIC015

Tot Ion: 51 Resp: 1430359  
Ion Ratio Lower Upper  
51 100  
67 21.0 16.4 24.6

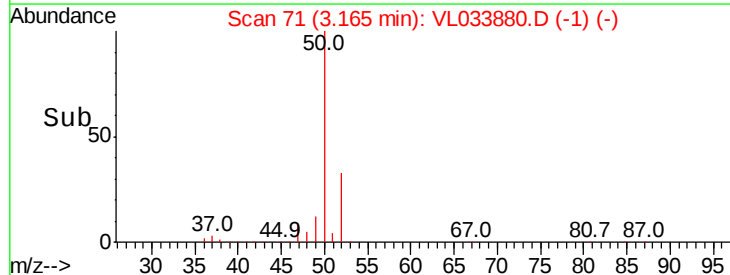
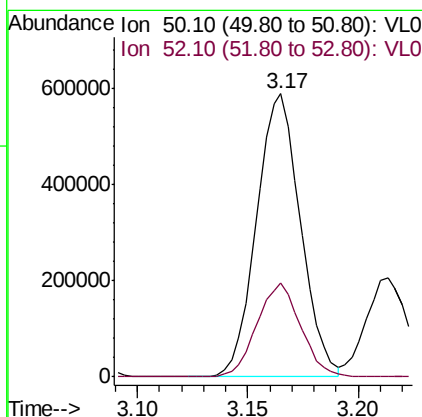
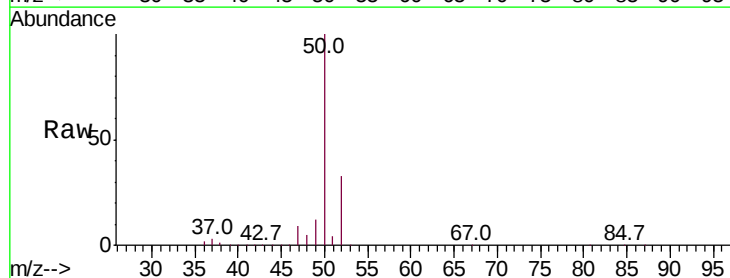
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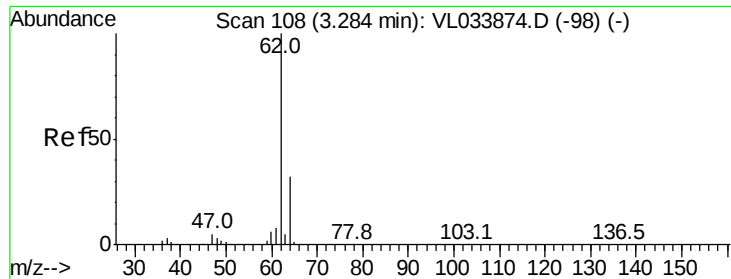
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6/11/2019 9:18:41 AM



#4  
Chloromethane  
Concen: 13.711 ppbv  
RT: 3.17 min Scan# 71  
Delta R.T. 0.00 min  
Lab File: VL033880.D  
Acq: 7 Jun 2019 5:54

Tgt Ion: 50 Resp: 813195  
Ion Ratio Lower Upper  
50 100  
52 33.1 25.4 38.0





#5

Vinyl Chloride

Concen: 13.695 ppbv

RT: 3.28 min Scan# 108

Delta R.T. -0.00 min

Lab File: VL033880.D

Acq: 7 Jun 2019 5:54

Instrument :

MSVOA\_L

ClientSampleId :

VSTDIC015

Tot Ion: 62 Resp: 827605

Ion Ratio Lower Upper

62 100

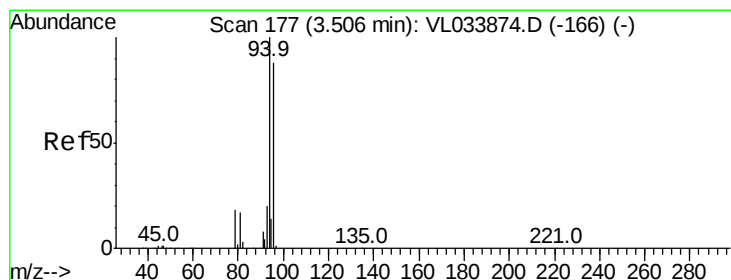
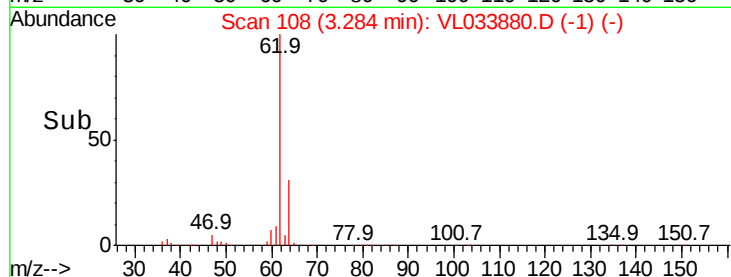
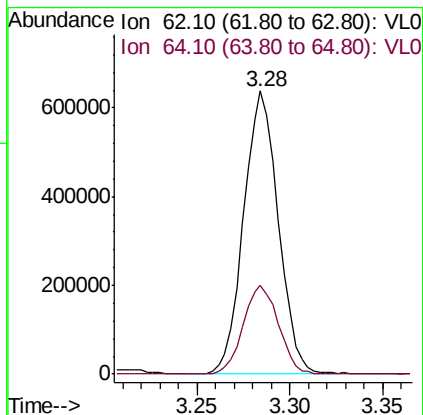
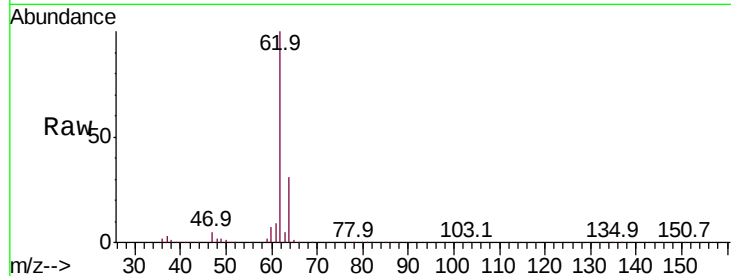
64 31.3 25.2 37.8

Manual Integrations

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#6

Bromomethane

Concen: 14.580 ppbv

RT: 3.51 min Scan# 177

Delta R.T. -0.00 min

Lab File: VL033880.D

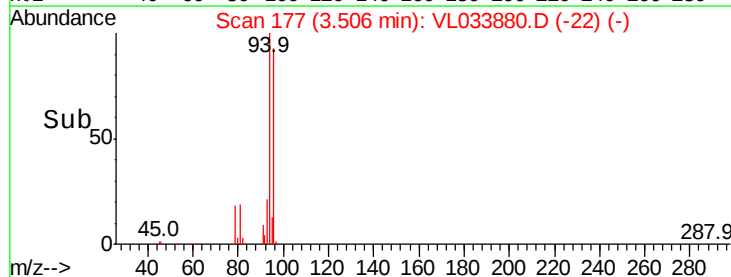
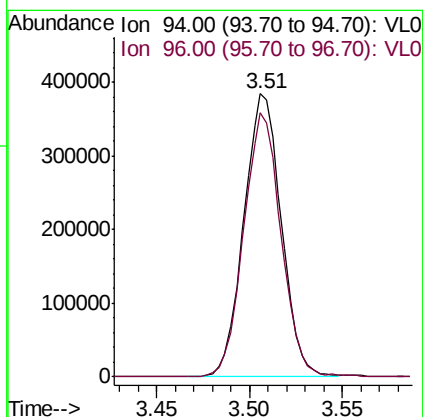
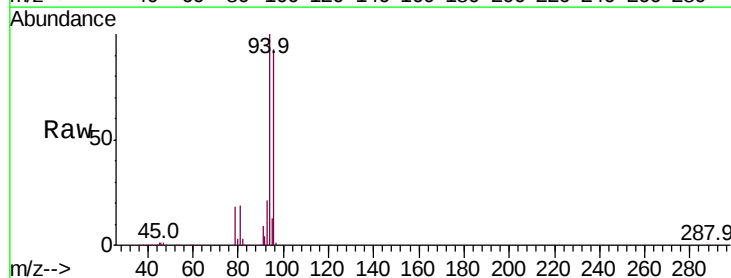
Acq: 7 Jun 2019 5:54

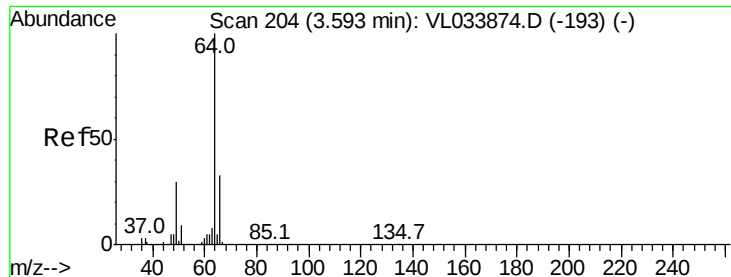
Tgt Ion: 94 Resp: 538051

Ion Ratio Lower Upper

94 100

96 93.5 70.2 105.2





#7

Chloroethane

Concen: 14.374 ppbv

RT: 3.60 min Scan# 205

Delta R.T. 0.00 min

Lab File: VL033880.D

Acq: 7 Jun 2019 5:54

Instrument :

MSVOA\_L

ClientSampleId :

VSTDIC015

Tot Ion: 64 Resp: 310195

Ion Ratio Lower Upper

64 100

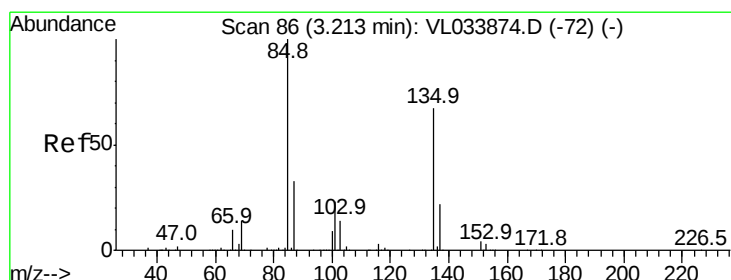
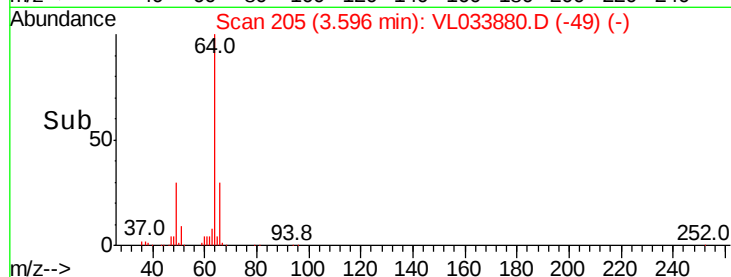
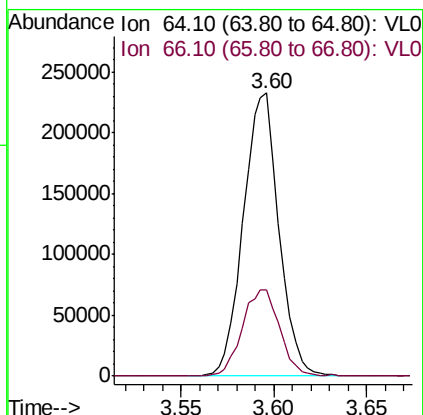
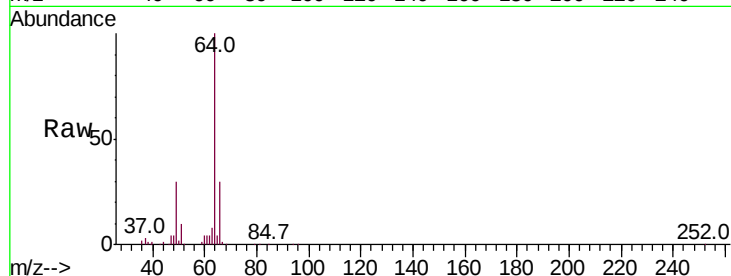
66 30.3 26.7 40.1

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#8

Dichlorotetrafluoroethane

Concen: 13.758 ppbv

RT: 3.21 min Scan# 86

Delta R.T. -0.00 min

Lab File: VL033880.D

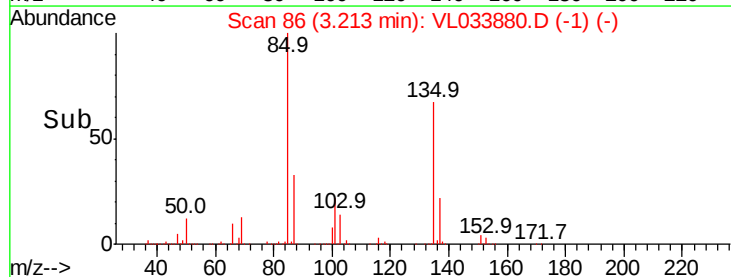
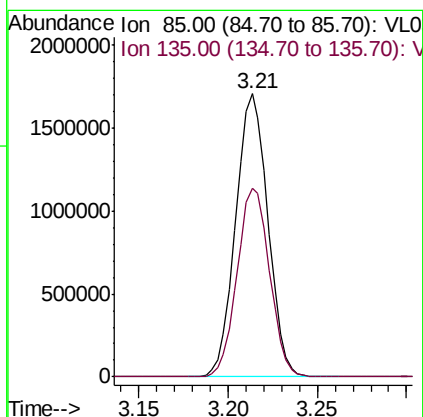
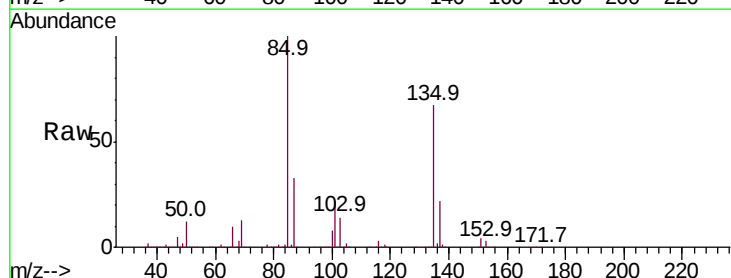
Acq: 7 Jun 2019 5:54

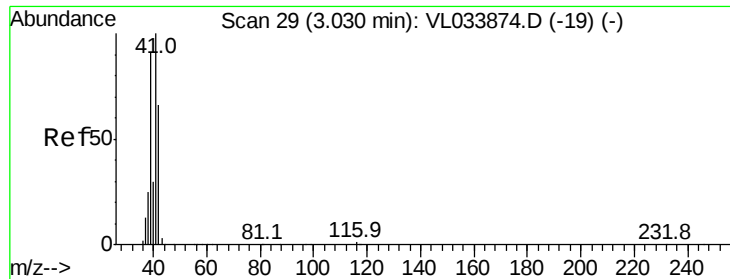
Tgt Ion: 85 Resp: 2135180

Ion Ratio Lower Upper

85 100

135 67.6 53.7 80.5





#9

Propene

Concen: 13.705 ppbv

RT: 3.03 min Scan# 29

Delta R.T. -0.00 min

Lab File: VL033880.D

Acq: 7 Jun 2019 5:54

Tot Ion: 41 Resp: 592856

Ion Ratio Lower Upper

41 100

42 68.5 56.3 84.5

Instrument :

MSVOA\_L

ClientSampleId :

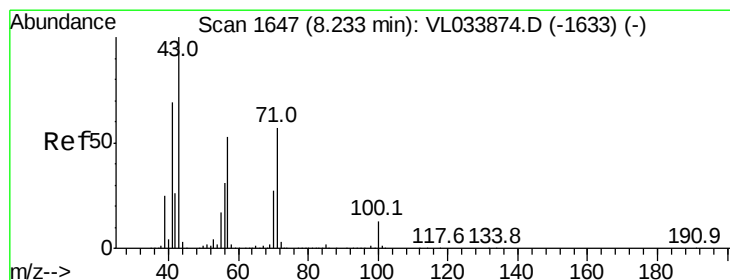
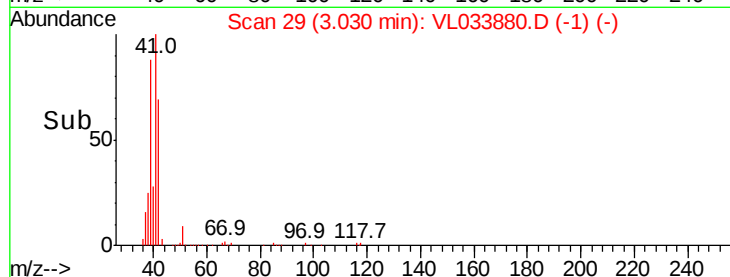
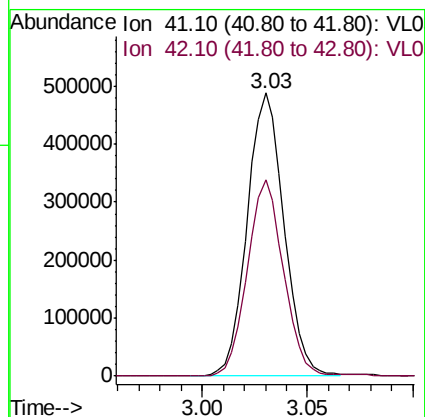
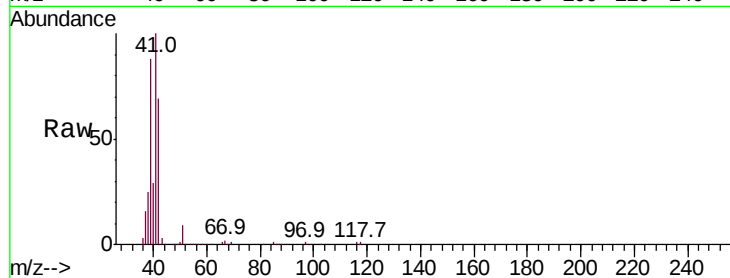
VSTDIC015

Manual Integrations

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#10

Heptane

Concen: 14.413 ppbv

RT: 8.24 min Scan# 1649

Delta R.T. 0.01 min

Lab File: VL033880.D

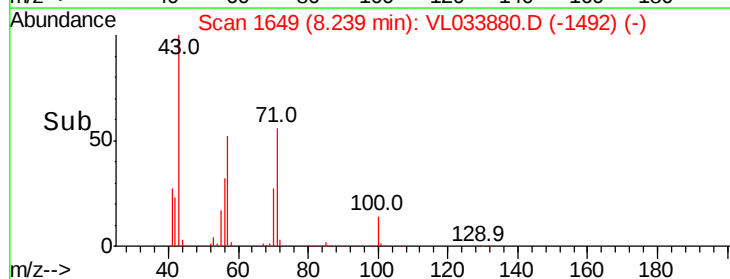
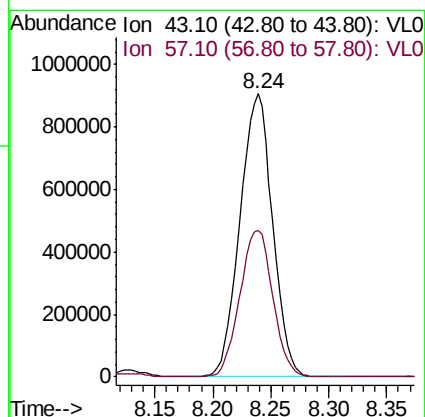
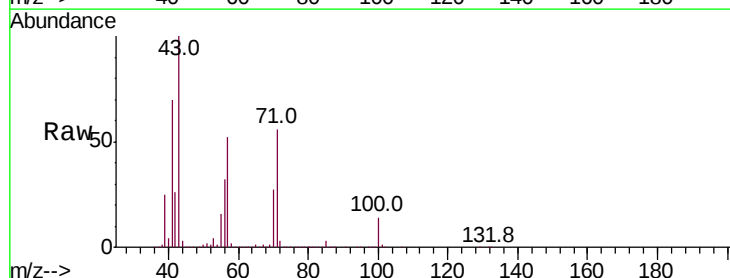
Acq: 7 Jun 2019 5:54

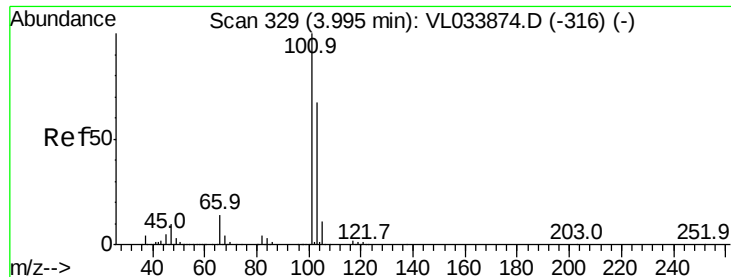
Tgt Ion: 43 Resp: 1763589

Ion Ratio Lower Upper

43 100

57 52.6 41.7 62.5





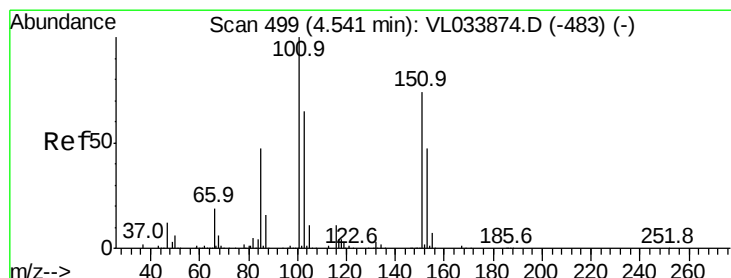
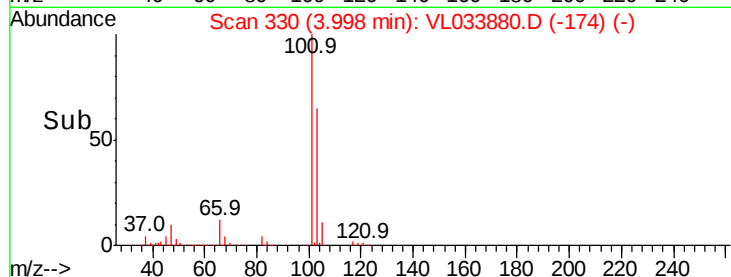
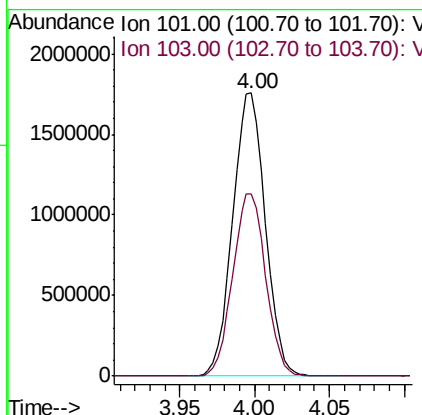
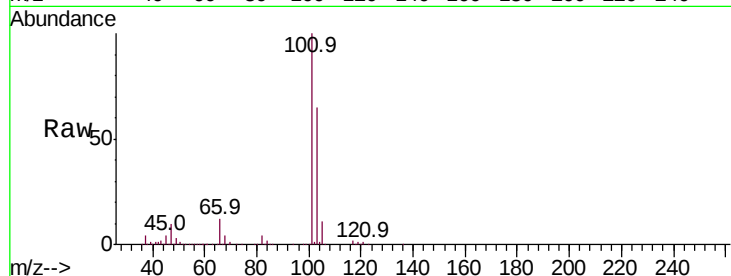
#11  
 Trichlorofluoromethane  
 Concen: 14.612 ppbv  
 RT: 4.00 min Scan# 330  
 Delta R.T. 0.00 min  
 Lab File: VL033880.D  
 Acq: 7 Jun 2019 5:54

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDIC015

Tot Ion:101 Resp: 2664453  
 Ion Ratio Lower Upper  
 101 100  
 103 64.5 53.6 80.4

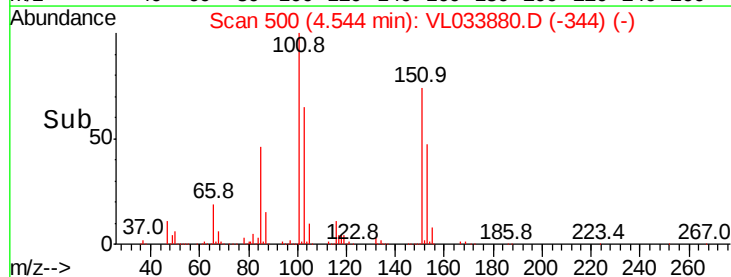
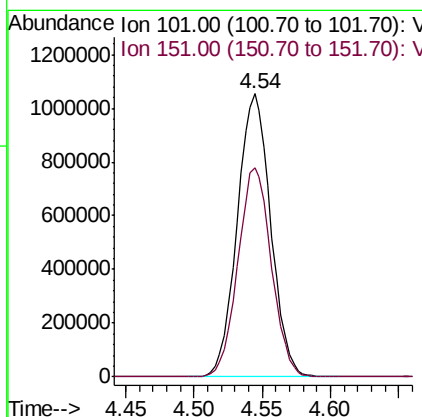
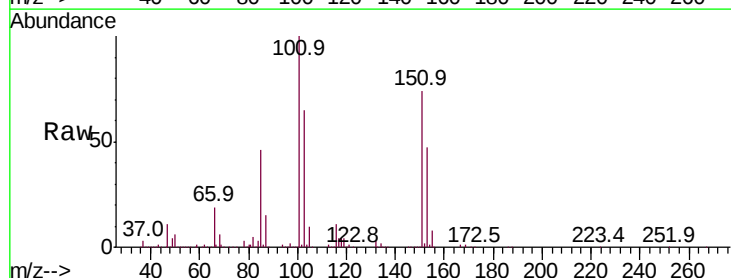
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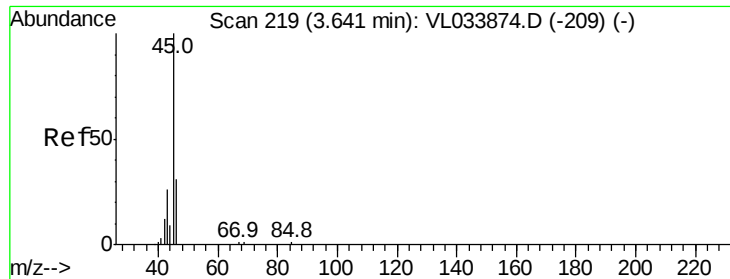
MMDadoda  
 6/11/2019 9:18:41 AM



#12  
 1,1,2-Trichlorotrifluoroethane  
 Concen: 14.110 ppbv  
 RT: 4.54 min Scan# 500  
 Delta R.T. 0.00 min  
 Lab File: VL033880.D  
 Acq: 7 Jun 2019 5:54

Tgt Ion:101 Resp: 1791542  
 Ion Ratio Lower Upper  
 101 100  
 151 73.9 58.6 87.8





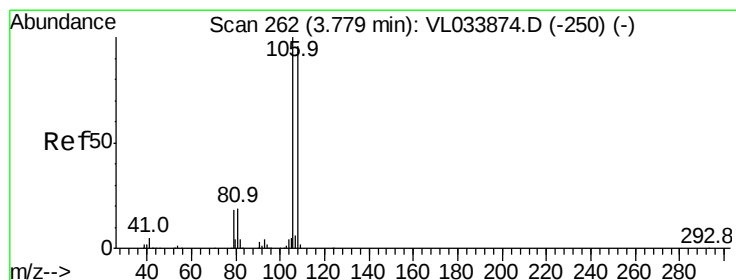
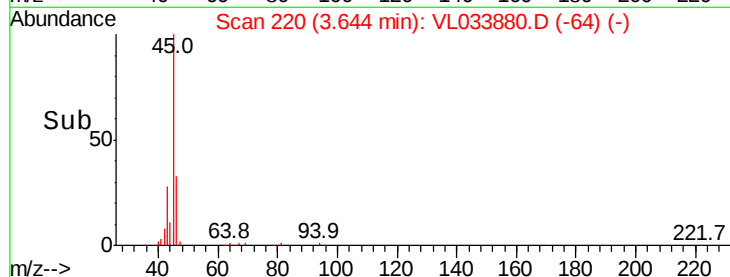
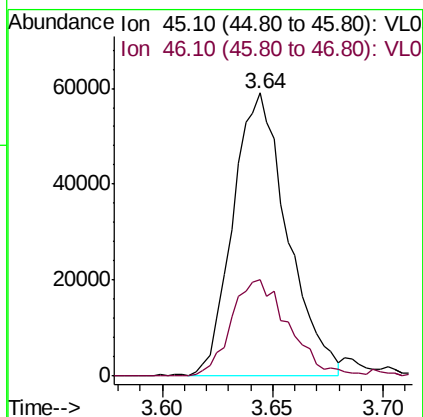
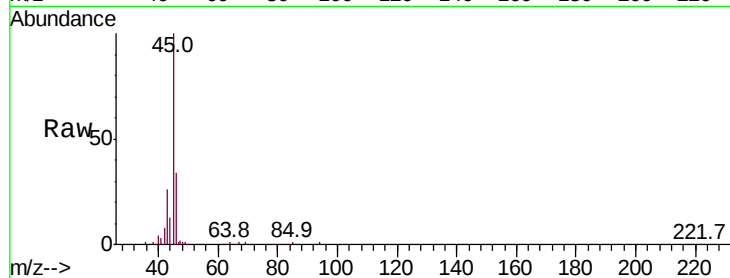
#13  
Ethanol  
Concen: 7.247 ppbv  
RT: 3.64 min Scan# 220  
Delta R.T. 0.00 min  
Lab File: VL033880.D  
Acq: 7 Jun 2019 5:54

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDIC015

Tot Ion: 45 Resp: 100897  
Ion Ratio Lower Upper  
45 100  
46 37.3 15.3 61.1

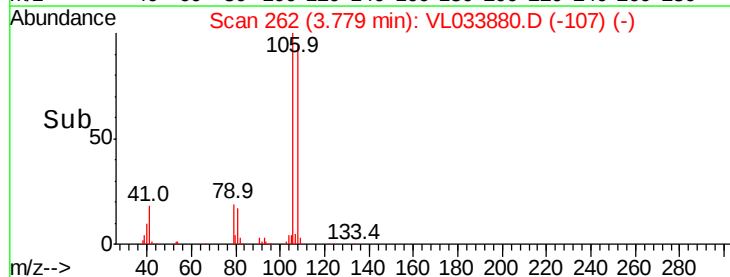
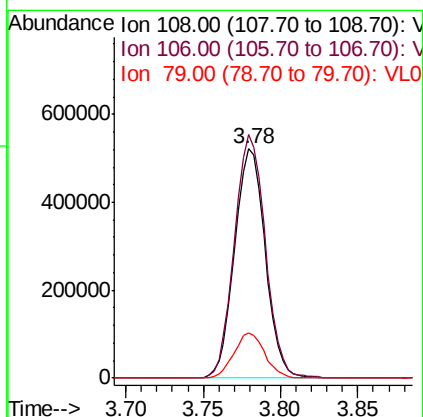
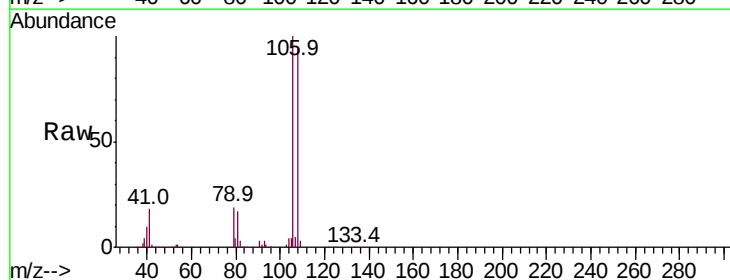
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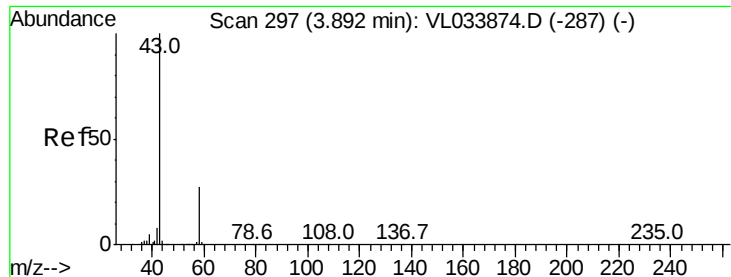
MMDadoda  
6/11/2019 9:18:41 AM



#14  
Bromoethene  
Concen: 15.171 ppbv  
RT: 3.78 min Scan# 262  
Delta R.T. -0.00 min  
Lab File: VL033880.D  
Acq: 7 Jun 2019 5:54

Tgt Ion: 108 Resp: 719997  
Ion Ratio Lower Upper  
108 100  
106 106.8 84.9 127.3  
79 19.9 15.4 23.0





#15

Acetone

Concen: 13.220 ppbv

RT: 3.89 min Scan# 297

Delta R.T. -0.00 min

Lab File: VL033880.D

Acq: 7 Jun 2019 5:54

Instrument :

MSVOA\_L

ClientSampleId :

VSTDIC015

Tot Ion: 43 Resp: 1649425

Ion Ratio Lower Upper

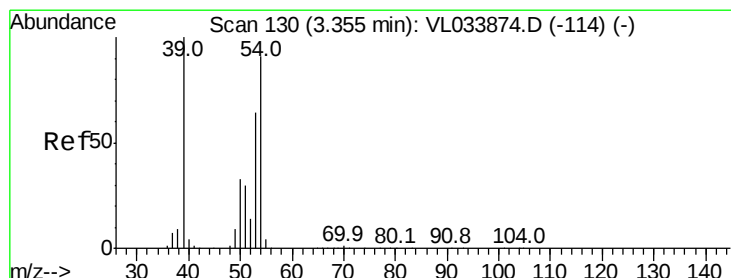
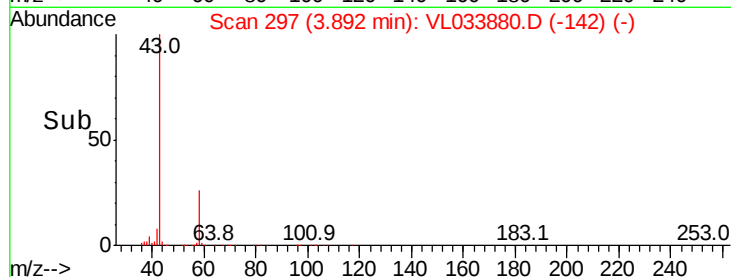
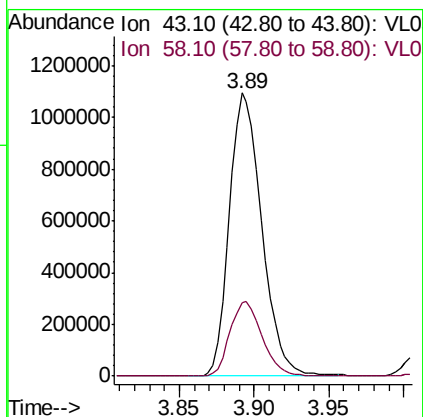
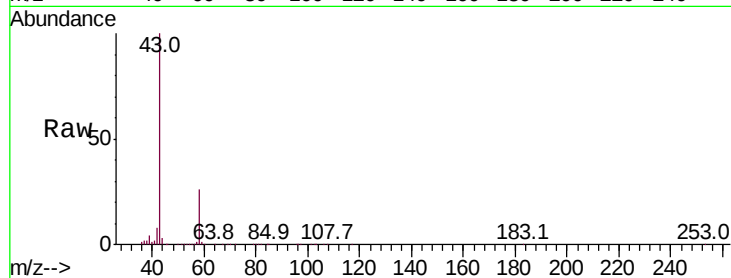
43 100

58 26.4 21.3 31.9

Manual Integrations  
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#16

1,3-Butadiene

Concen: 14.955 ppbv

RT: 3.35 min Scan# 130

Delta R.T. -0.00 min

Lab File: VL033880.D

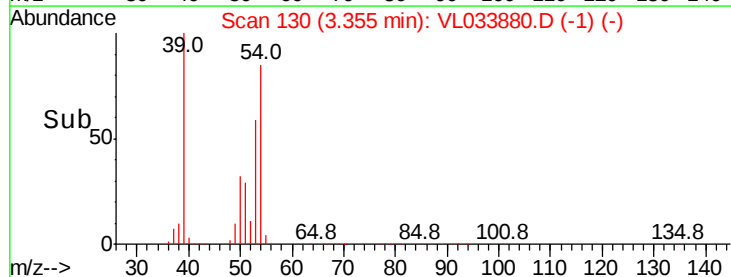
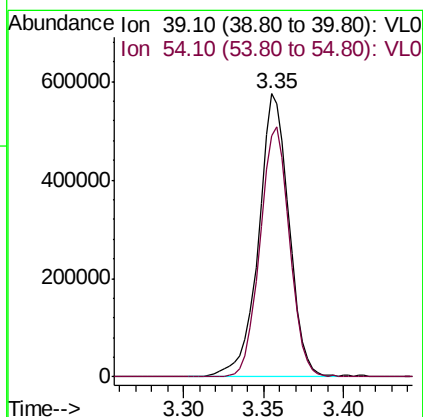
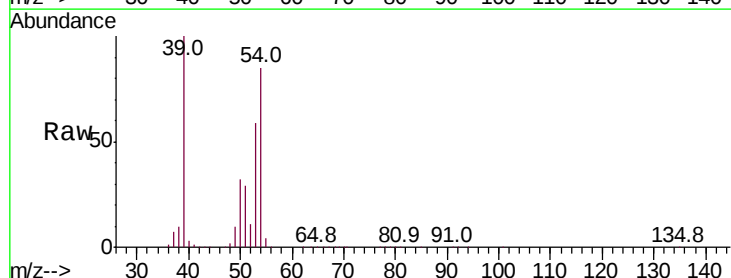
Acq: 7 Jun 2019 5:54

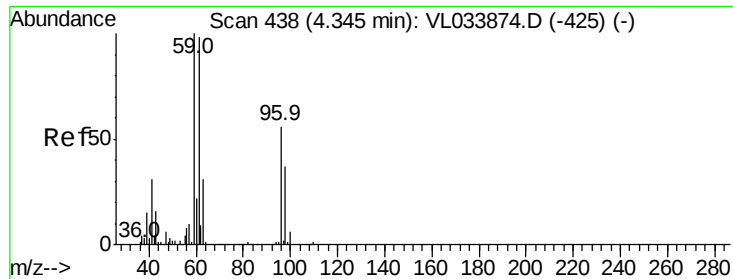
Tgt Ion: 39 Resp: 753457

Ion Ratio Lower Upper

39 100

54 86.1 68.6 103.0





#17

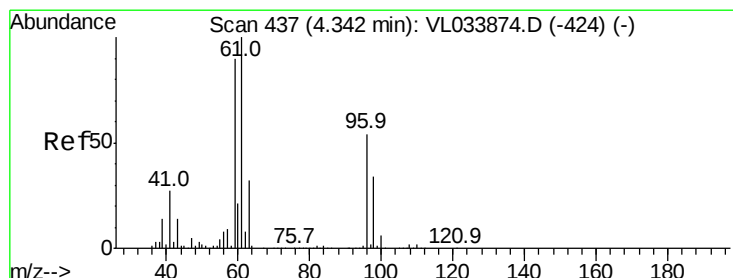
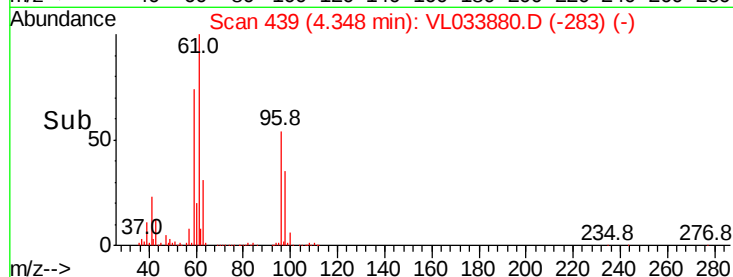
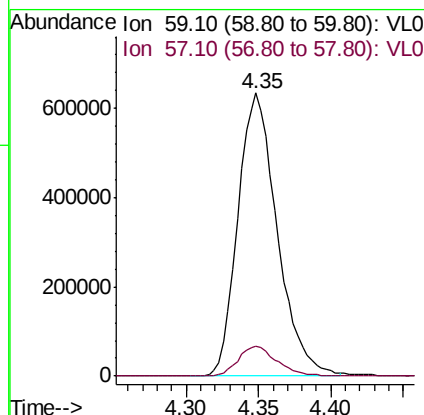
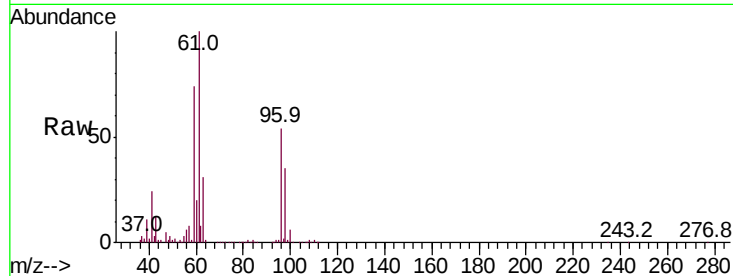
tert-Butyl alcohol  
 Concen: 11.518 ppbv  
 RT: 4.35 min Scan# 439  
 Delta R.T. 0.00 min  
 Lab File: VL033880.D  
 Acq: 7 Jun 2019 5:54

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDIC015

Tot Ion: 59 Resp: 1195310  
 Ion Ratio Lower Upper  
 59 100  
 57 10.6 8.4 12.6

Manual Integrations  
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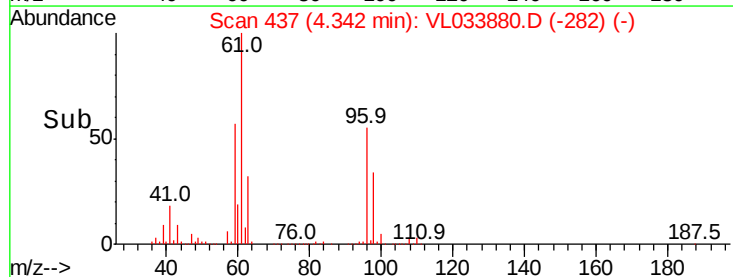
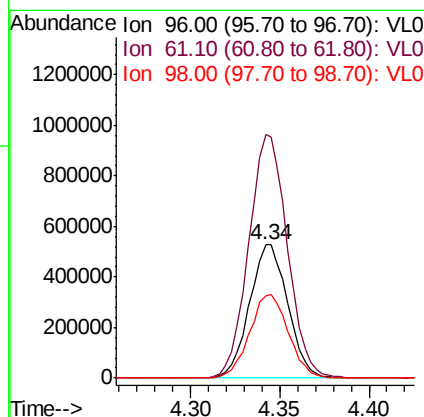
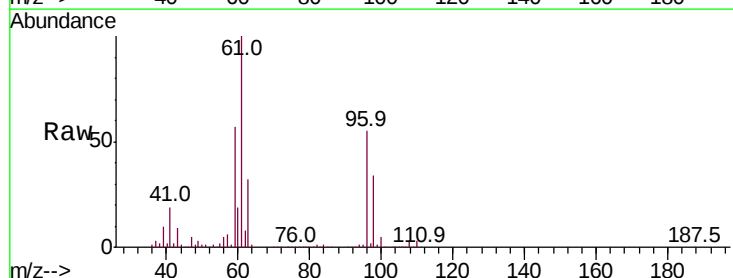
MMDadoda  
 6/11/2019 9:18:41 AM

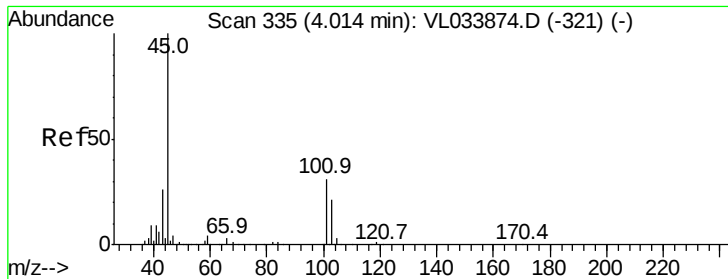


#18

1,1-Dichloroethene  
 Concen: 14.802 ppbv  
 RT: 4.34 min Scan# 437  
 Delta R.T. -0.00 min  
 Lab File: VL033880.D  
 Acq: 7 Jun 2019 5:54

Tgt Ion: 96 Resp: 793689  
 Ion Ratio Lower Upper  
 96 100  
 61 182.9 147.0 220.6  
 98 61.9 49.4 74.0





#19

Isopropyl Alcohol

Concen: 10.770 ppbv

RT: 4.01 min Scan# 335

Delta R.T. -0.00 min

Lab File: VL033880.D

Acq: 7 Jun 2019 5:54

Tot Ion: 45 Resp: 873268

Ion Ratio Lower Upper

45 100

58 2.4 1.8 2.6

Instrument :

MSVOA\_L

ClientSampleId :

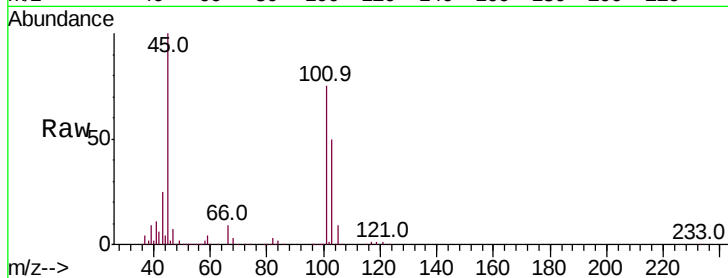
VSTDIC015

Manual Integrations

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6/11/2019 9:18:41 AM



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

4.01

500000

400000

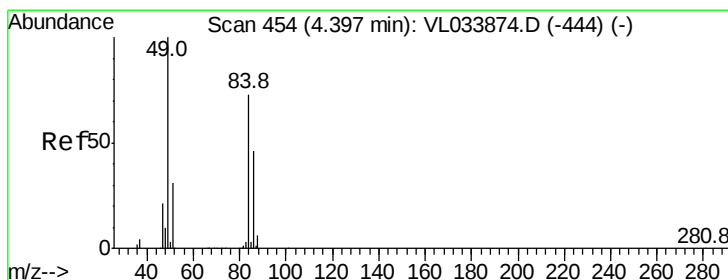
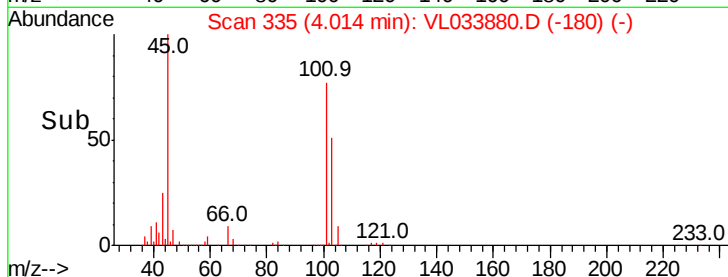
300000

200000

100000

0

Time-->



#20

Methylene Chloride

Concen: 13.887 ppbv

RT: 4.40 min Scan# 455

Delta R.T. 0.00 min

Lab File: VL033880.D

Acq: 7 Jun 2019 5:54

Tgt Ion: 84 Resp: 673136

Ion Ratio Lower Upper

84 100

49 139.9 110.0 165.0

51 41.7 34.6 51.8

86 65.8 50.6 75.8

Abundance Ion 84.00 (83.70 to 84.70): VL0

Ion 49.10 (48.80 to 49.80): VL0

Ion 51.10 (50.80 to 51.80): VL0

Ion 86.00 (85.70 to 86.70): VL0

800000

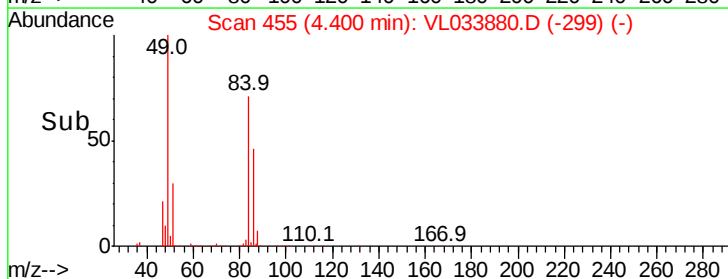
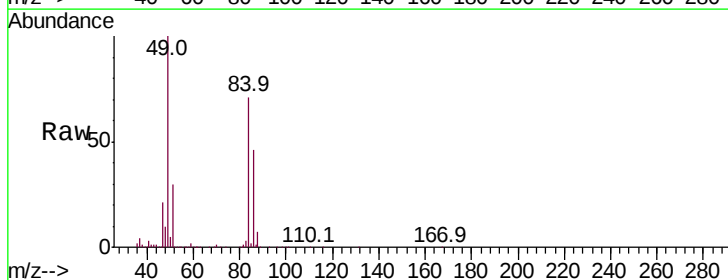
600000

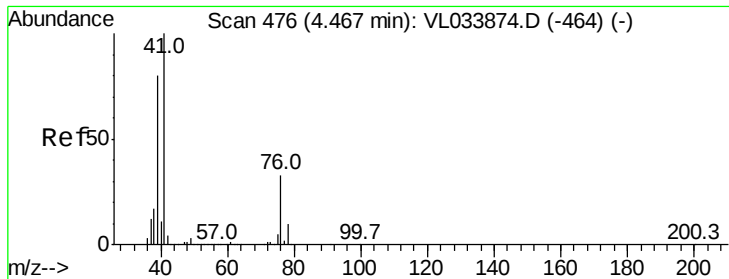
400000

200000

0

Time-->





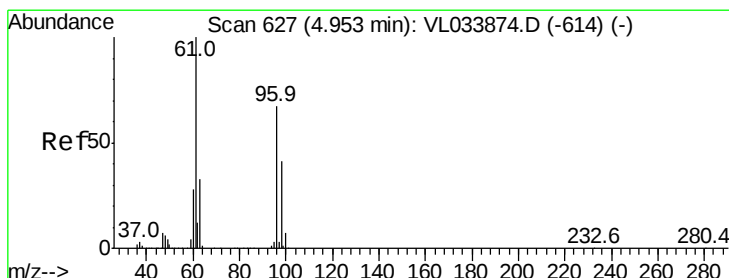
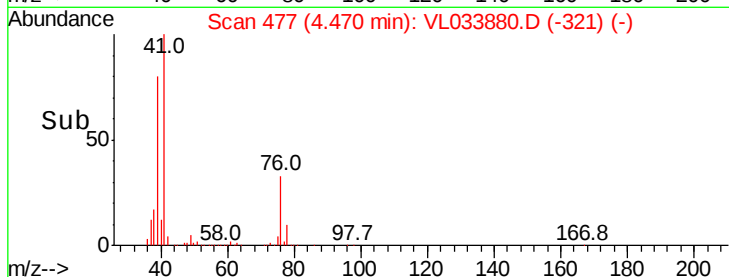
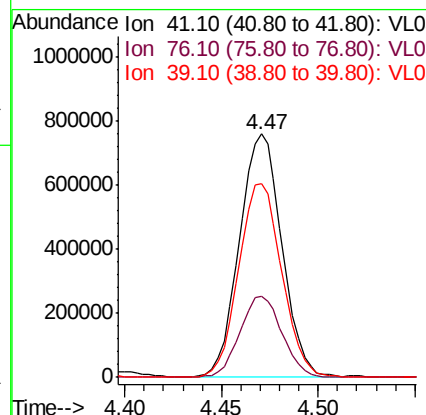
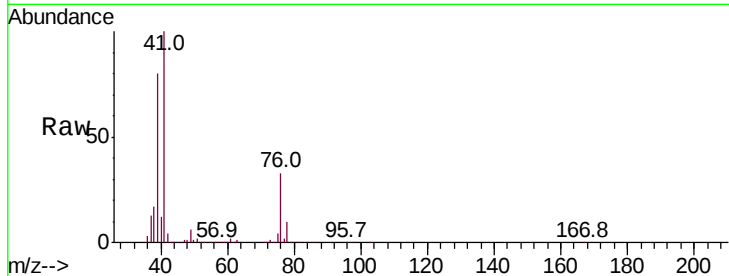
#21  
Allvl Chloride  
Concen: 14.846 ppbv  
RT: 4.47 min Scan# 477  
Delta R.T. 0.00 min  
Lab File: VL033880.D  
Acq: 7 Jun 2019 5:54

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDIC015

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 41      | 100   |       |       |
| 76      | 33.4  | 26.6  | 39.8  |
| 39      | 81.3  | 65.2  | 97.8  |

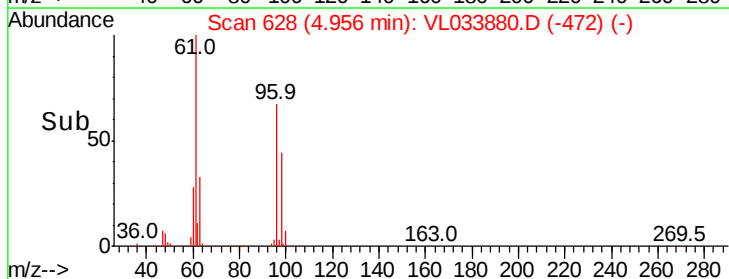
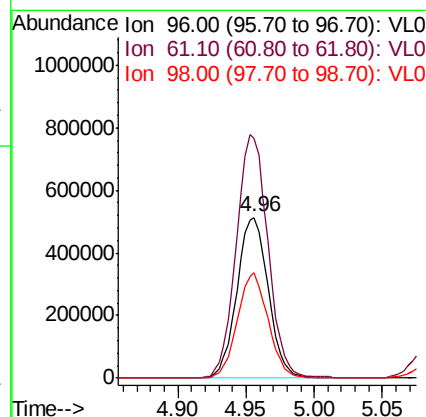
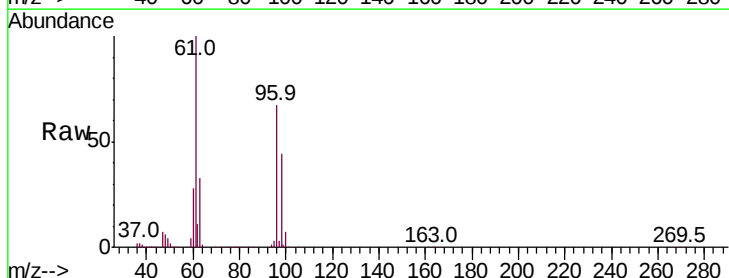
Manual Integrations  
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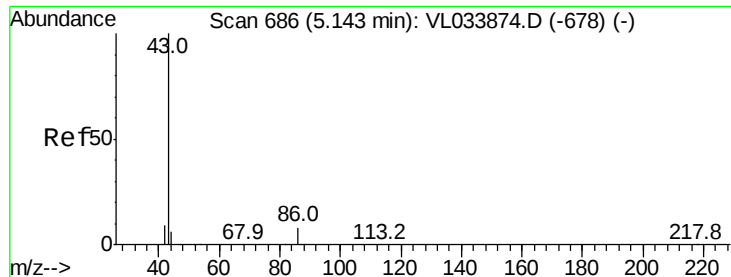
MMDadoda  
6/11/2019 9:18:41 AM



#22  
trans-1,2-Dichloroethene  
Concen: 14.674 ppbv  
RT: 4.96 min Scan# 628  
Delta R.T. 0.00 min  
Lab File: VL033880.D  
Acq: 7 Jun 2019 5:54

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 96      | 100   |       |       |
| 61      | 148.8 | 119.0 | 178.6 |
| 98      | 65.5  | 48.3  | 72.5  |





#23

Vinyl Acetate

Concen: 14.798 ppbv

RT: 5.15 min Scan# 688

Delta R.T. 0.01 min

Lab File: VL033880.D

Acq: 7 Jun 2019 5:54

Instrument :

MSVOA\_L

ClientSampleId :

VSTDIC015

Tot Ion: 43 Resp: 2425639

Ion Ratio Lower Upper

43 100

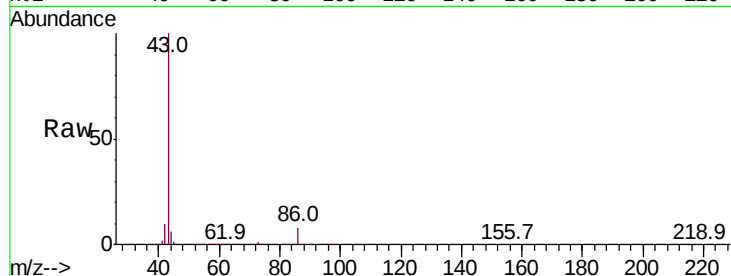
86 8.0 5.8 8.8

42 10.1 7.8 11.8

44 5.8 4.2 6.4

Manual Integrations  
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MMDadoda  
6/11/2019 9:18:41 AM

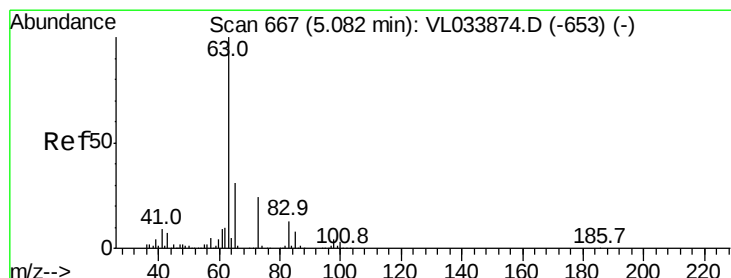
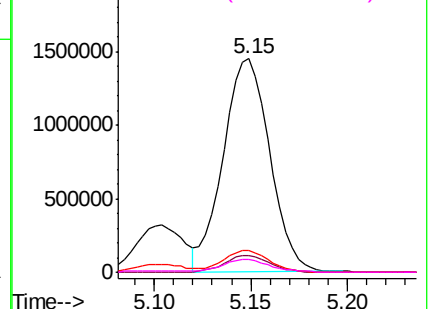
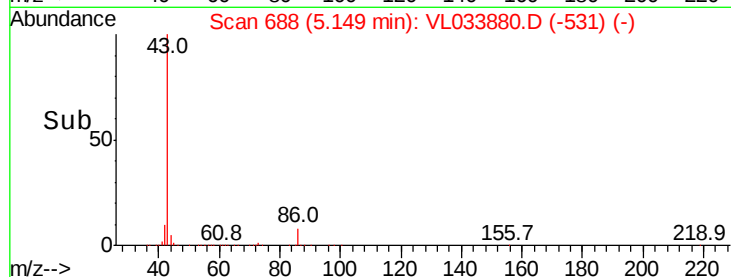


Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 13.730 ppbv

RT: 5.08 min Scan# 668

Delta R.T. 0.00 min

Lab File: VL033880.D

Acq: 7 Jun 2019 5:54

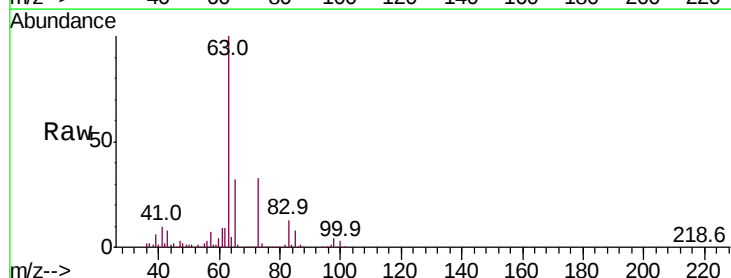
Tgt Ion: 63 Resp: 1725645

Ion Ratio Lower Upper

63 100

98 4.3 2.2 6.6

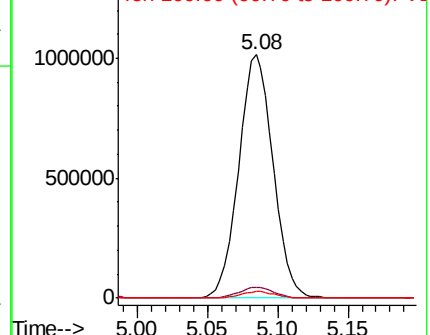
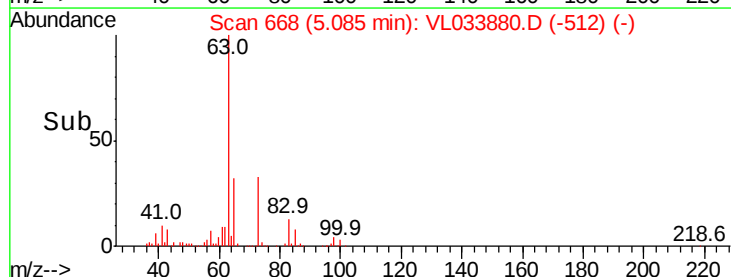
100 3.0 1.3 3.8

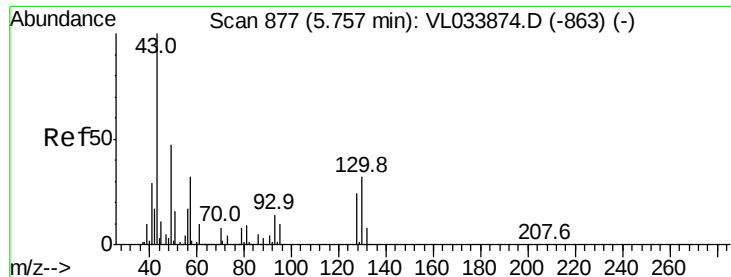


Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 98.00 (97.70 to 98.70): VL0

Ion 100.00 (99.70 to 100.70): VL0





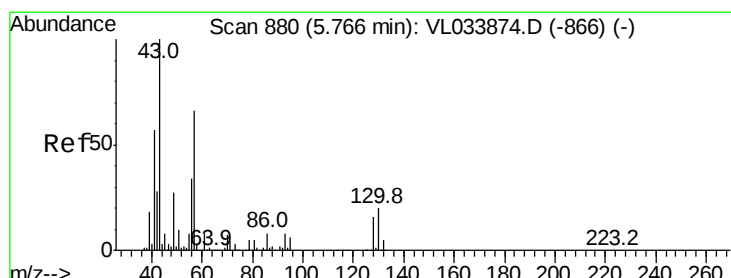
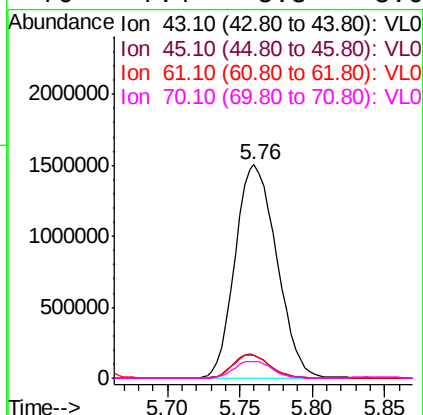
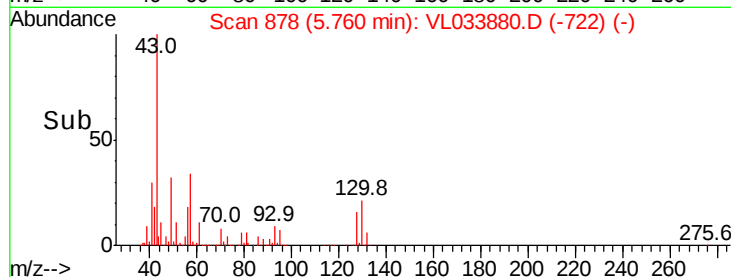
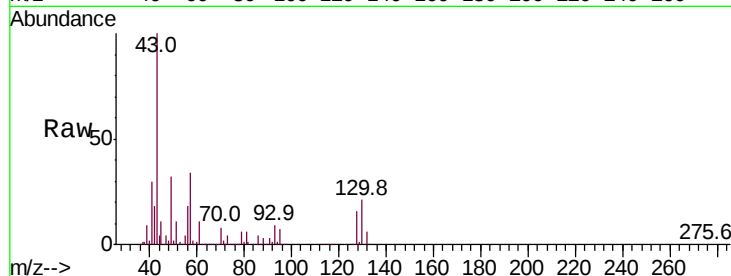
#25  
Ethyl Acetate  
Concen: 13.761 ppbv  
RT: 5.76 min Scan# 878  
Delta R.T. 0.00 min  
Lab File: VL033880.D  
Acq: 7 Jun 2019 5:54

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDIC015

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 43      | 100   |       |       |
| 45      | 9.9   | 7.9   | 11.9  |
| 61      | 9.9   | 7.8   | 11.6  |
| 70      | 7.4   | 5.8   | 8.6   |

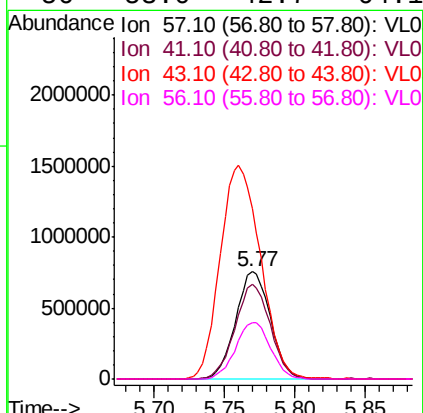
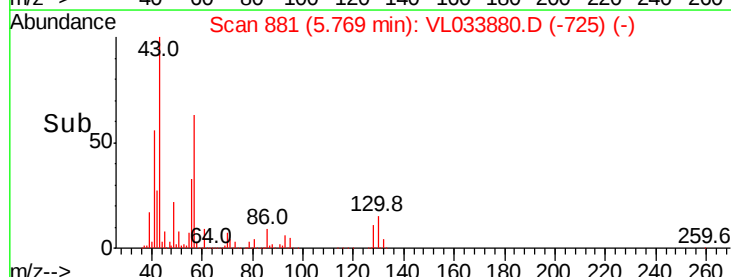
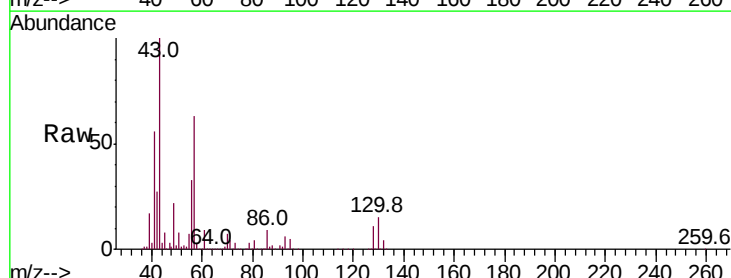
Manual Integrations  
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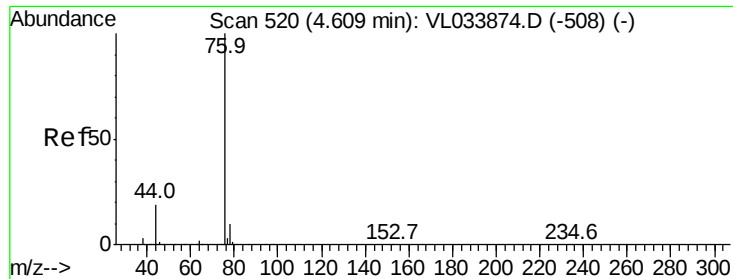
MMDadoda  
6/11/2019 9:18:41 AM



#26  
Hexane  
Concen: 14.006 ppbv  
RT: 5.77 min Scan# 881  
Delta R.T. 0.00 min  
Lab File: VL033880.D  
Acq: 7 Jun 2019 5:54

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 57      | 100   |       |       |
| 41      | 89.1  | 71.4  | 107.2 |
| 43      | 230.0 | 183.7 | 275.5 |
| 56      | 53.0  | 42.7  | 64.1  |





#27

Carbon Disulfide

Concen: 15.676 ppbv

RT: 4.61 min Scan# 521

Delta R.T. 0.00 min

Lab File: VL033880.D

Acq: 7 Jun 2019 5:54

Instrument :

MSVOA\_L

ClientSampleId :

VSTDIC015

Tot Ion: 76 Resp: 2033405

Ion Ratio Lower Upper

76 100

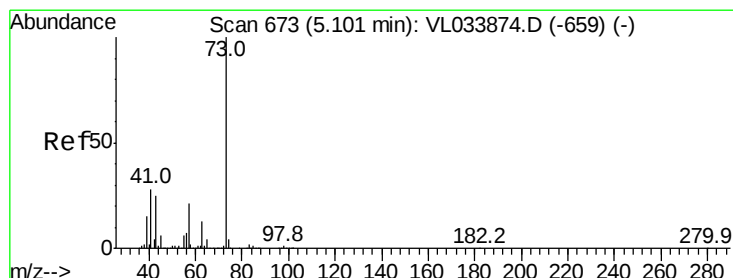
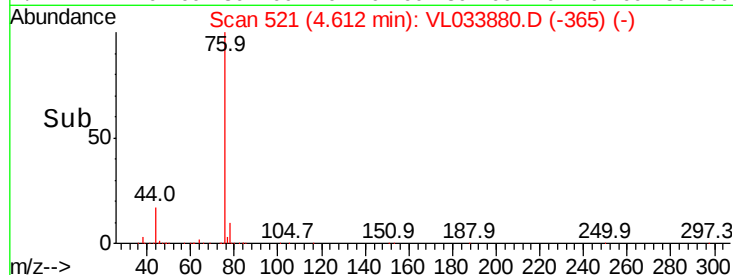
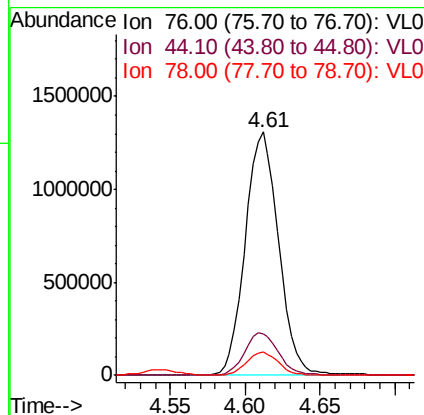
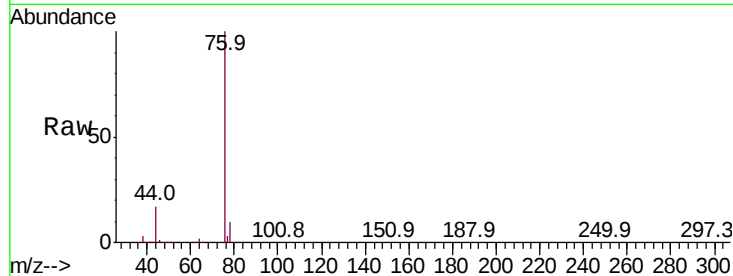
44 17.6 14.4 21.6

78 9.6 7.5 11.3

Manual Integrations  
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#28

Methyl tert-Butyl Ether

Concen: 14.425 ppbv

RT: 5.10 min Scan# 674

Delta R.T. 0.00 min

Lab File: VL033880.D

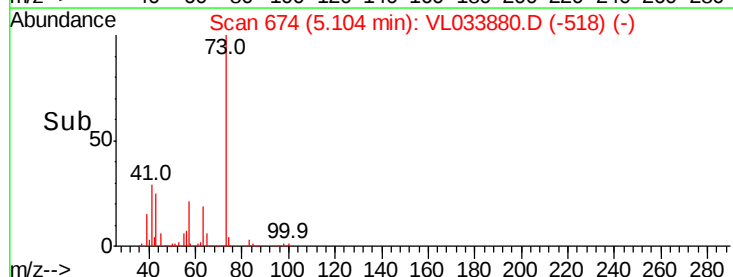
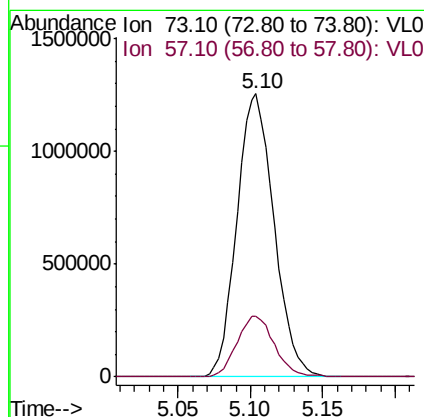
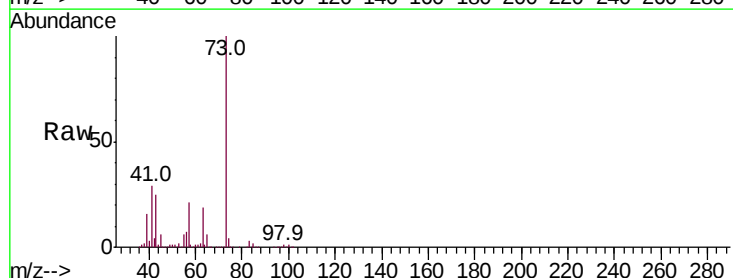
Acq: 7 Jun 2019 5:54

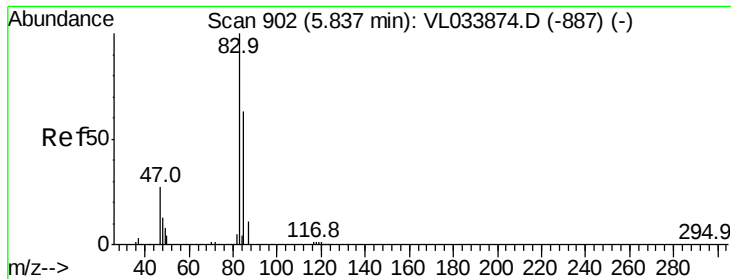
Tgt Ion: 73 Resp: 2232454

Ion Ratio Lower Upper

73 100

57 21.8 17.2 25.8





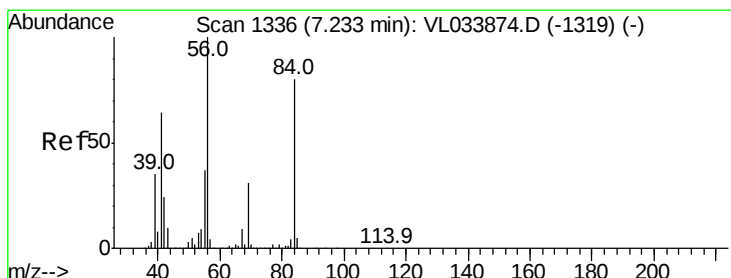
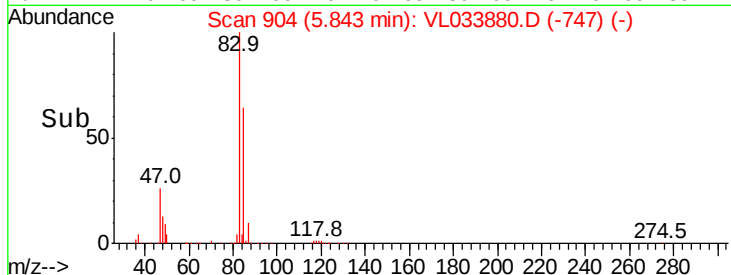
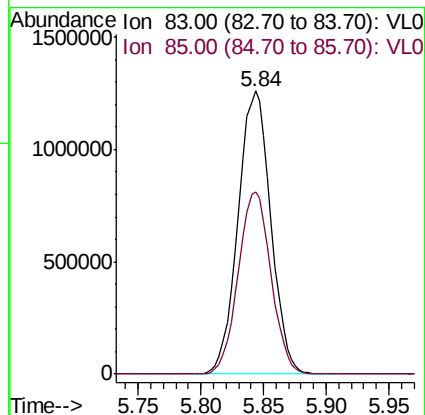
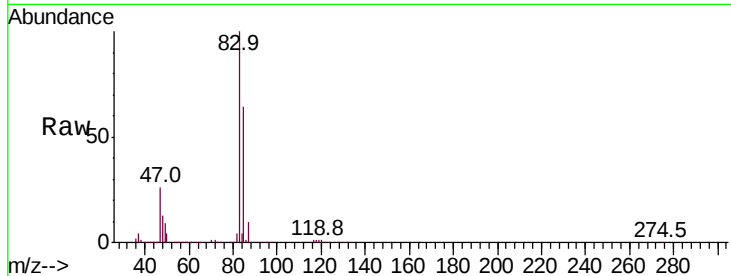
#29  
Chloroform  
Concen: 13.235 ppbv  
RT: 5.84 min Scan# 904  
Delta R.T. 0.01 min  
Lab File: VL033880.D  
Acq: 7 Jun 2019 5:54

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDIC015

Tot Ion: 83 Resp: 2291553  
Ion Ratio Lower Upper  
83 100  
85 64.3 50.5 75.7

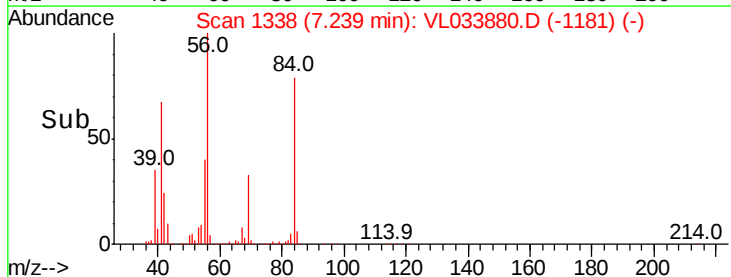
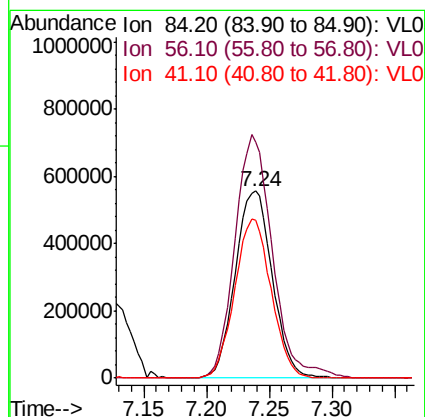
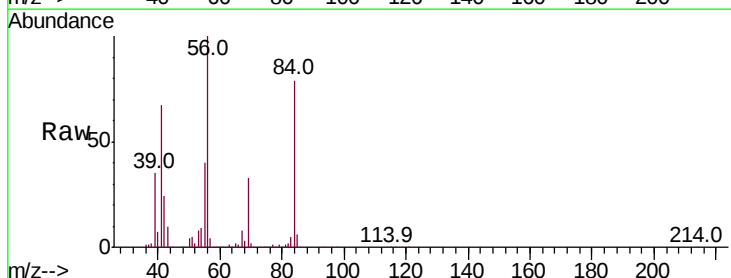
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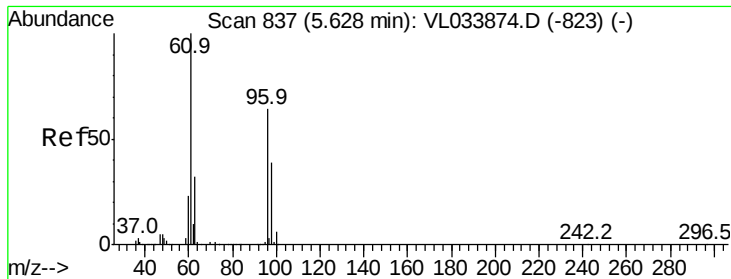
MMDadoda  
6/11/2019 9:18:41 AM



#30  
Cyclohexane  
Concen: 14.692 ppbv  
RT: 7.24 min Scan# 1338  
Delta R.T. 0.01 min  
Lab File: VL033880.D  
Acq: 7 Jun 2019 5:54

Tgt Ion: 84 Resp: 1146153  
Ion Ratio Lower Upper  
84 100  
56 131.8 105.8 158.8  
41 83.6 65.7 98.5





#31

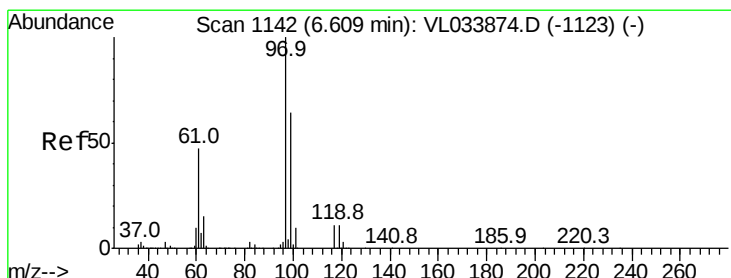
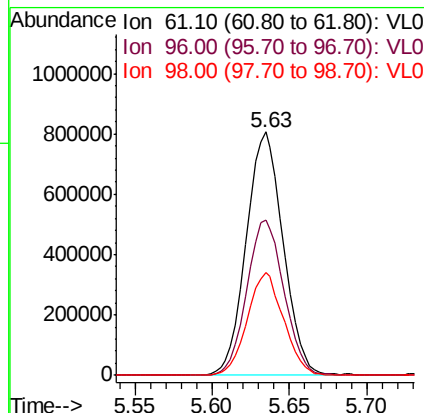
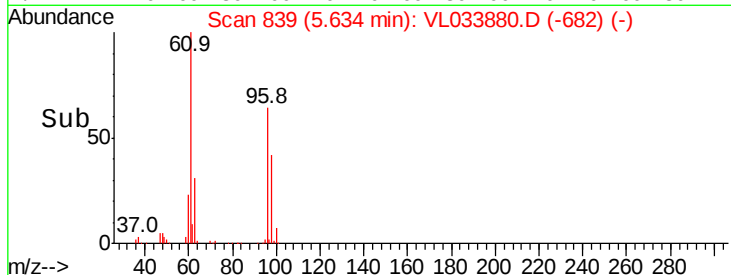
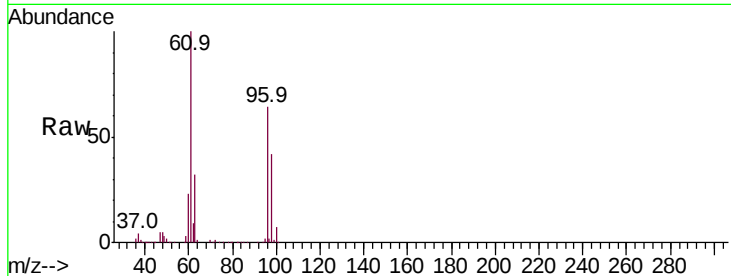
cis-1,2-Dichloroethene  
 Concen: 14.362 ppbv  
 RT: 5.63 min Scan# 839  
 Delta R.T. 0.01 min  
 Lab File: VL033880.D  
 Acq: 7 Jun 2019 5:54

Instrument :  
 MSVOA\_L  
 ClientSampled :  
 VSTDIC015

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 61      | 100   |       |       |
| 96      | 63.7  | 50.9  | 76.3  |
| 98      | 42.3  | 31.4  | 47.2  |

Manual Integrations  
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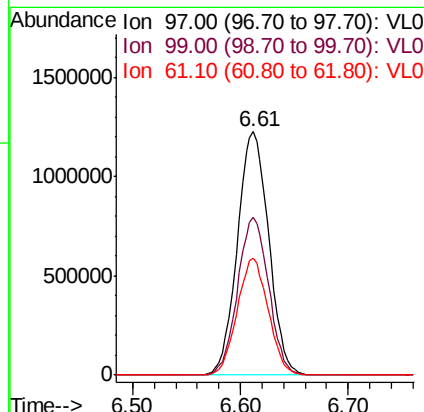
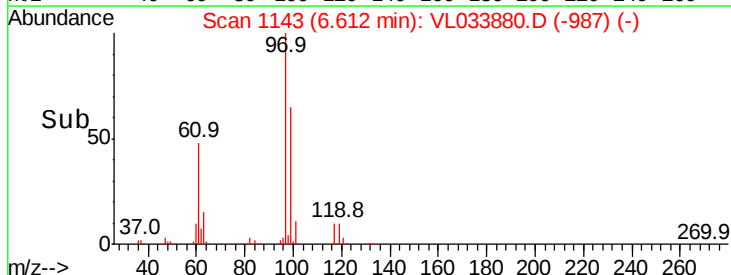
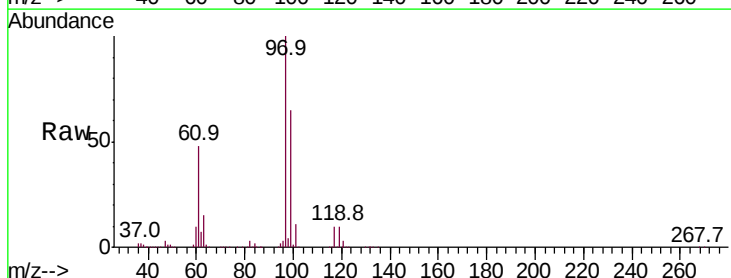
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 6/11/2019 9:18:41 AM

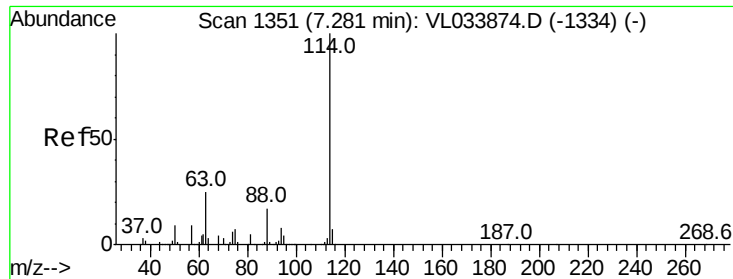


#32

1,1,1-Trichloroethane  
 Concen: 14.313 ppbv  
 RT: 6.61 min Scan# 1143  
 Delta R.T. 0.00 min  
 Lab File: VL033880.D  
 Acq: 7 Jun 2019 5:54

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 97      | 100   |       |       |
| 99      | 64.4  | 51.7  | 77.5  |
| 61      | 47.5  | 37.7  | 56.5  |





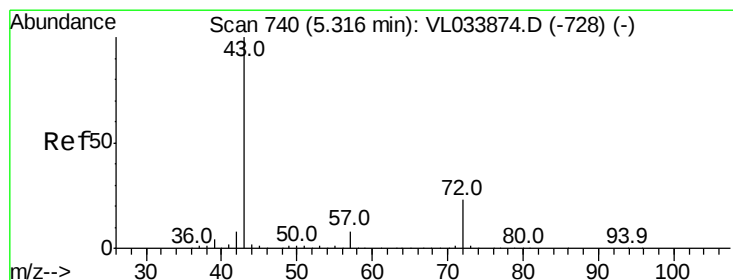
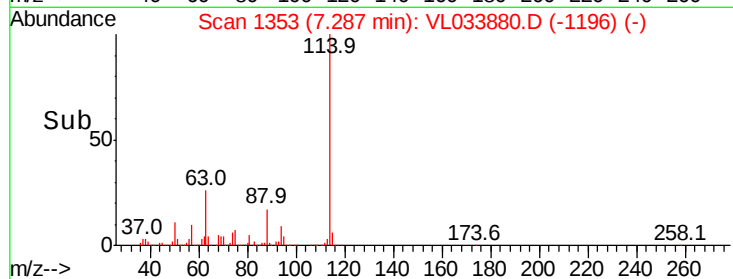
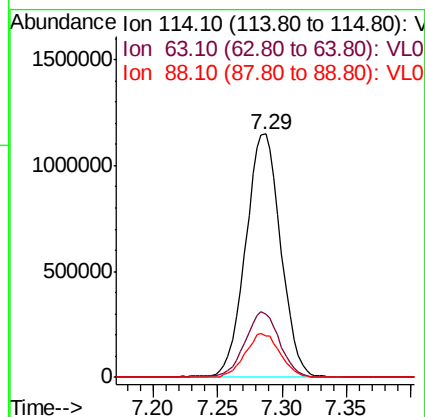
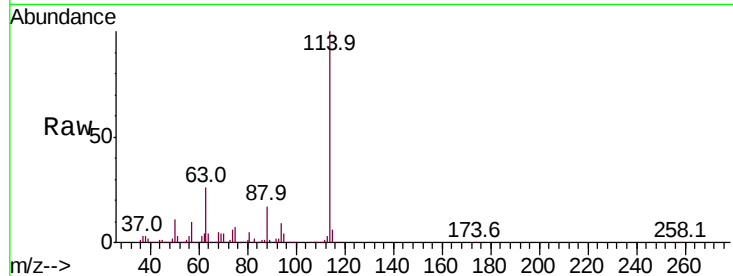
#33  
 1,4-Difluorobenzene  
 Concen: 10.000 ppbv  
 RT: 7.29 min Scan# 1353  
 Delta R.T. 0.01 min  
 Lab File: VL033880.D  
 Acq: 7 Jun 2019 5:54

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDIC015

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 114     | 100   |       |       |
| 63      | 27.2  | 21.1  | 31.7  |
| 88      | 17.9  | 14.2  | 21.4  |

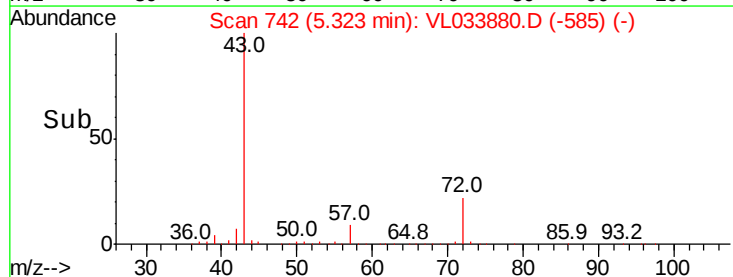
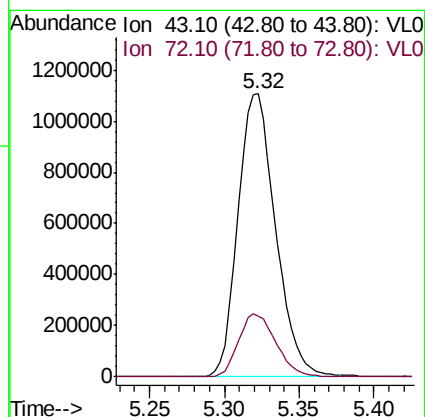
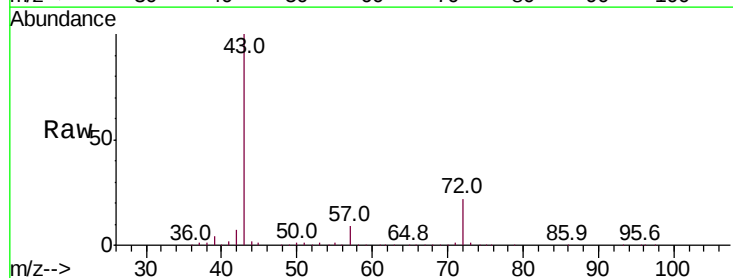
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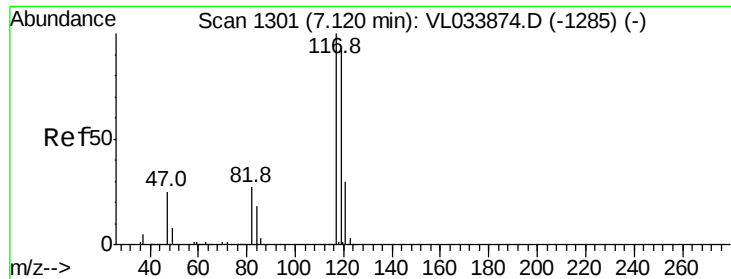
MMDadoda  
 6/11/2019 9:18:41 AM



#34  
 2-Butanone  
 Concen: 14.384 ppbv  
 RT: 5.32 min Scan# 742  
 Delta R.T. 0.01 min  
 Lab File: VL033880.D  
 Acq: 7 Jun 2019 5:54

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 43      | 100   |       |       |
| 72      | 22.2  | 17.9  | 26.9  |





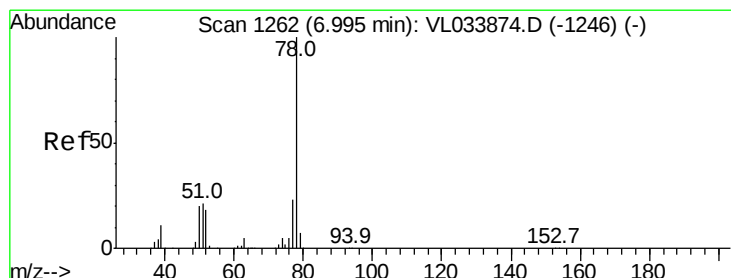
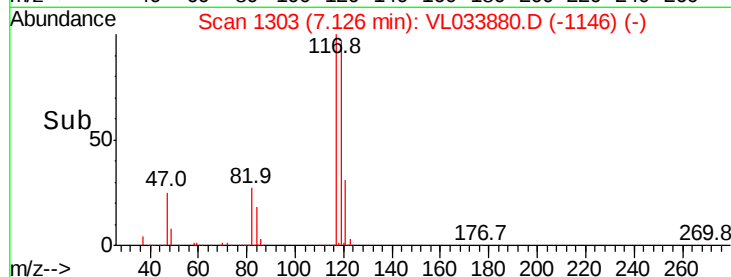
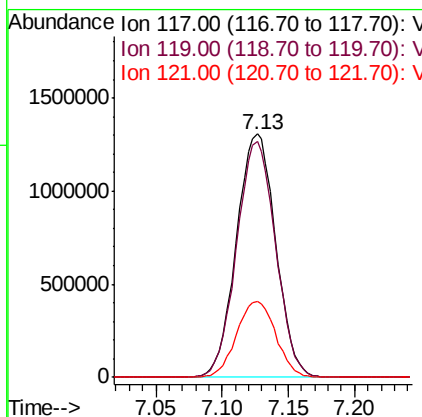
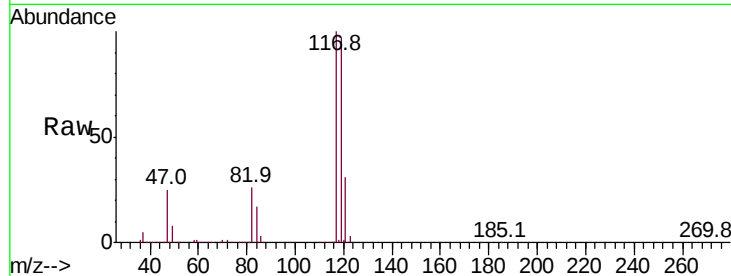
#35  
Carbon Tetrachloride  
Concen: 15.451 ppbv  
RT: 7.13 min Scan# 1303  
Delta R.T. 0.01 min  
Lab File: VL033880.D  
Acq: 7 Jun 2019 5:54

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDIC015

Tot Ion:117 Resp: 2694175  
Ion Ratio Lower Upper  
117 100  
119 97.0 74.6 111.8  
121 31.4 24.0 36.0

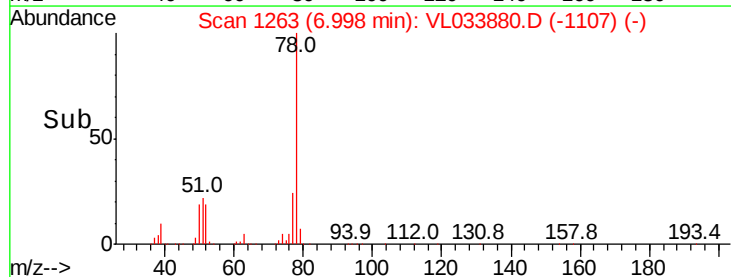
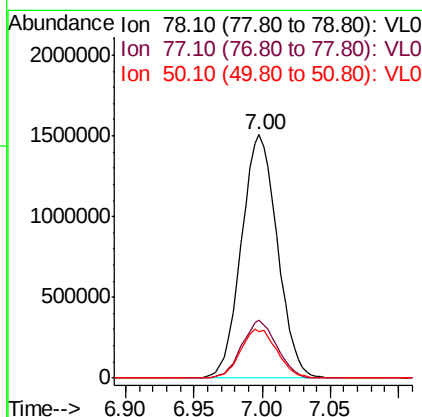
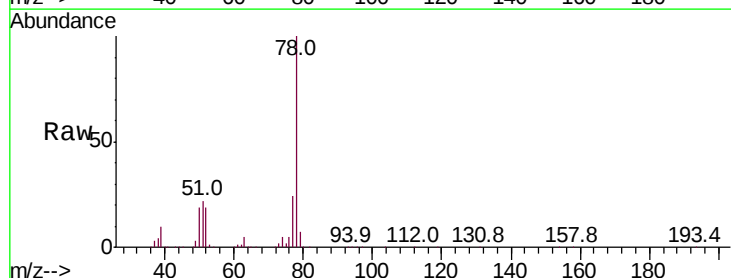
Manual Integrations  
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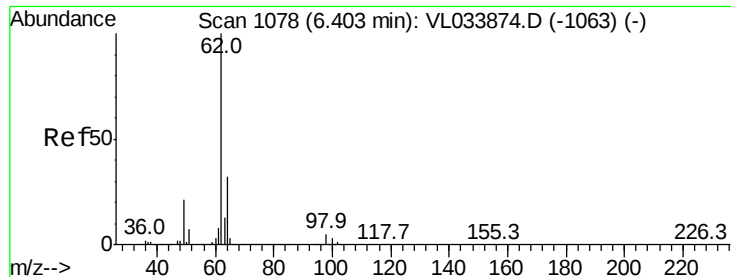
MMDadoda  
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#36  
Benzene  
Concen: 14.251 ppbv  
RT: 7.00 min Scan# 1263  
Delta R.T. 0.00 min  
Lab File: VL033880.D  
Acq: 7 Jun 2019 5:54

Tgt Ion: 78 Resp: 2766715  
Ion Ratio Lower Upper  
78 100  
77 23.6 18.2 27.2  
50 19.3 15.9 23.9





#37

1,2-Dichloroethane

Concen: 14.585 ppbv

RT: 6.41 min Scan# 1079

Delta R.T. 0.00 min

Lab File: VL033880.D

Acq: 7 Jun 2019 5:54

Tot Ion: 62 Resp: 1868272

Ion Ratio Lower Upper

62 100

98 5.3 4.0 6.0

Instrument :

MSVOA\_L

ClientSampleId :

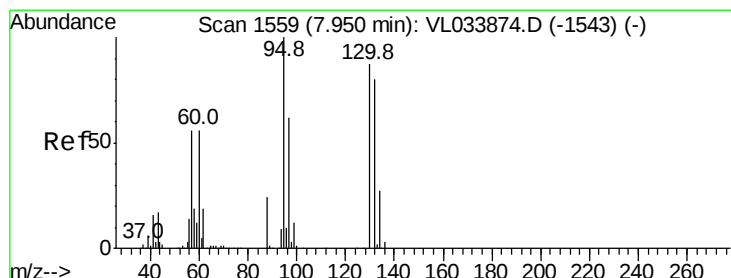
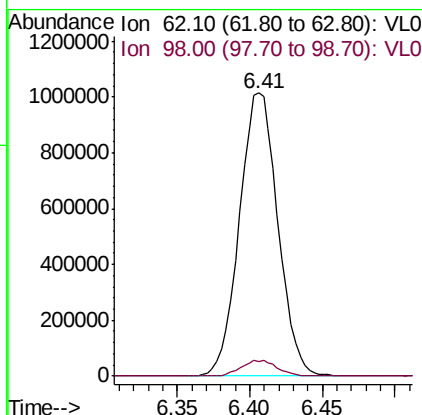
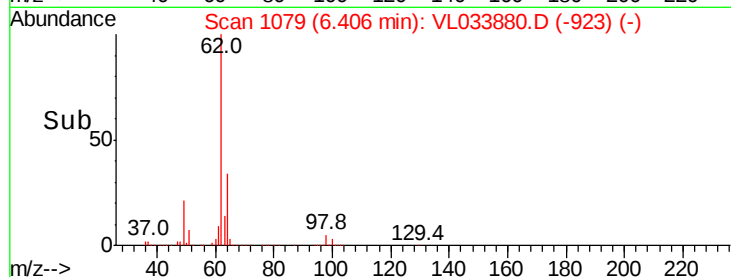
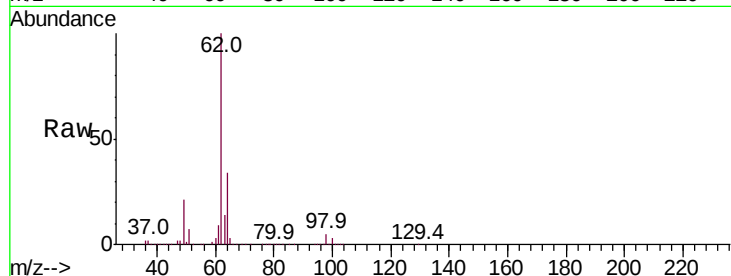
VSTDIC015

Manual Integrations

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#38

Trichloroethene

Concen: 16.368 ppbv

RT: 7.95 min Scan# 1560

Delta R.T. 0.00 min

Lab File: VL033880.D

Acq: 7 Jun 2019 5:54

Tgt Ion:130 Resp: 1204763

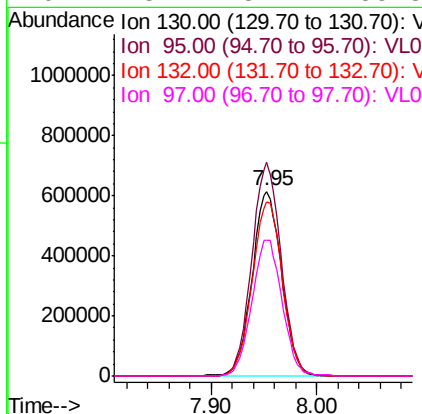
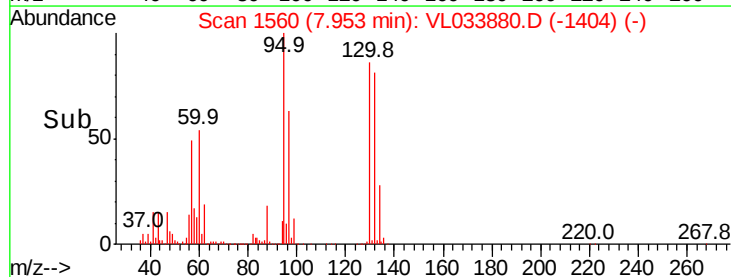
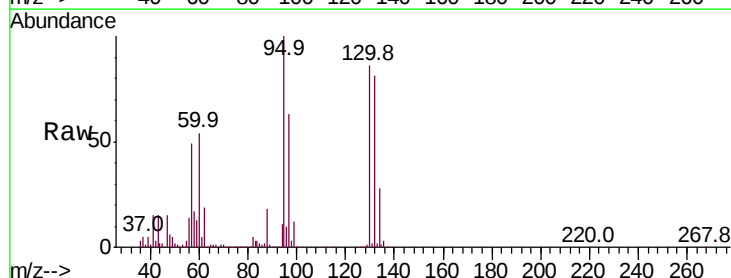
Ion Ratio Lower Upper

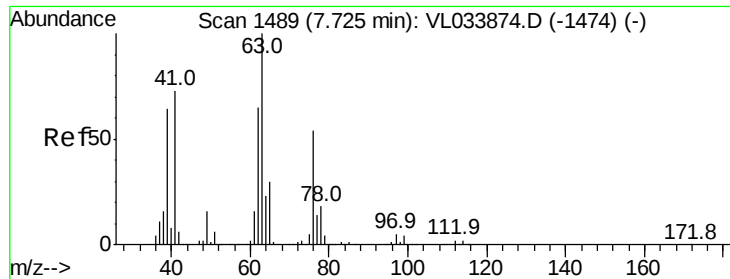
130 100

95 115.6 92.0 138.0

132 94.1 73.8 110.8

97 73.2 57.2 85.8





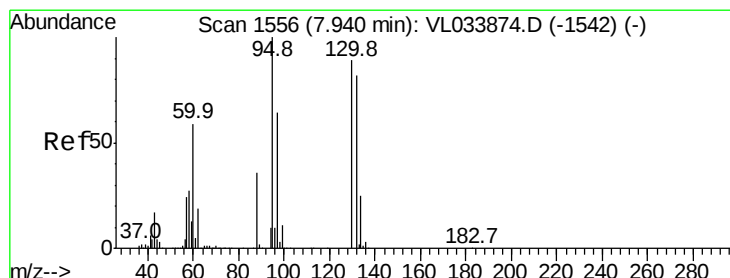
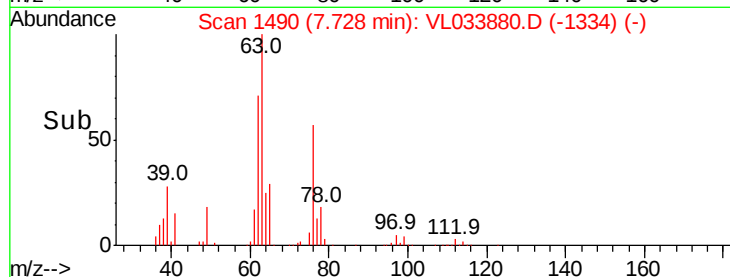
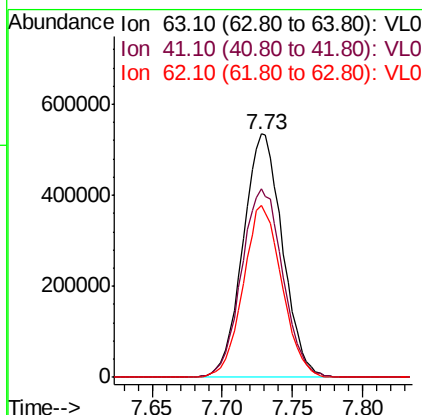
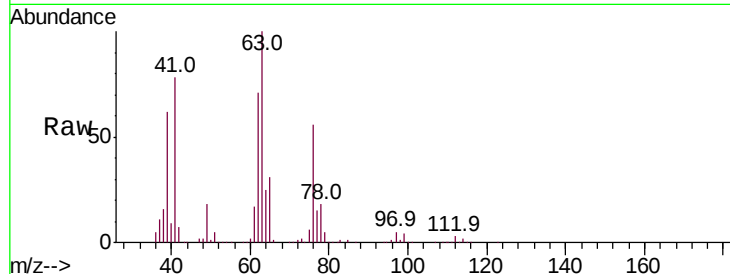
#39  
 1,2-Dichloropropane  
 Concen: 14.401 ppbv  
 RT: 7.73 min Scan# 1490  
 Delta R.T. 0.00 min  
 Lab File: VL033880.D  
 Acq: 7 Jun 2019 5:54

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDIC015

Tot Ion: 63 Resp: 1047900  
 Ion Ratio Lower Upper  
 63 100  
 41 77.6 58.7 88.1  
 62 70.6 51.9 77.9

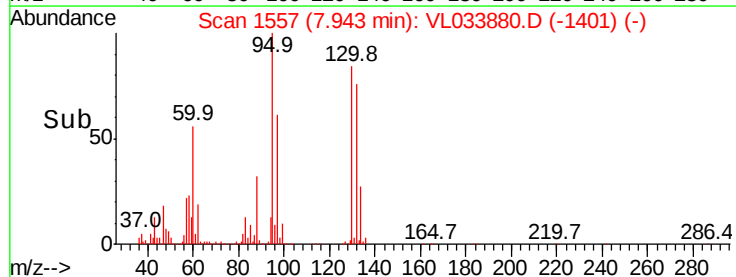
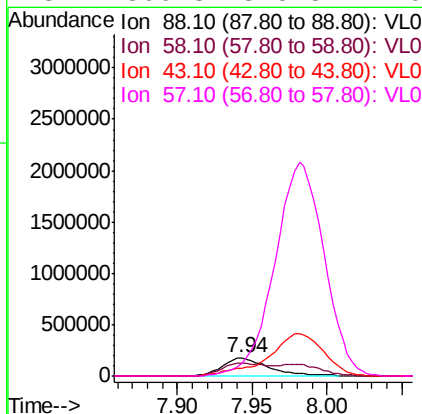
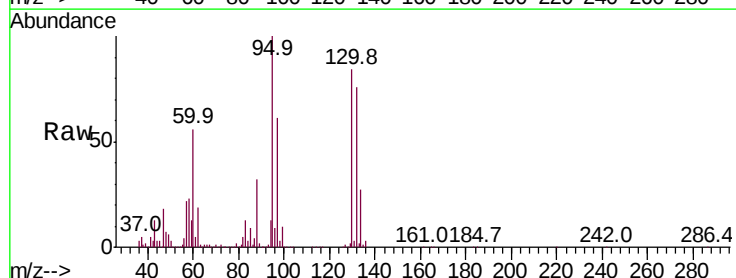
Manual Integrations  
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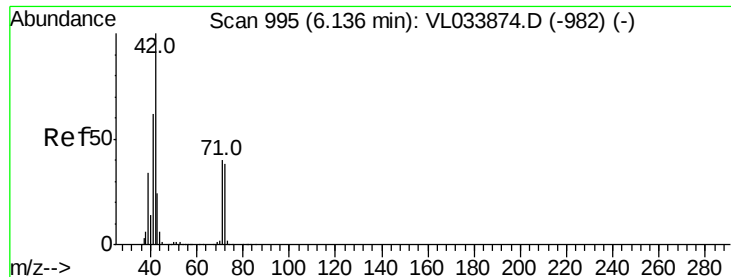
MMDadoda  
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#40  
 1,4-Dioxane  
 Concen: 11.960 ppbv  
 RT: 7.94 min Scan# 1557  
 Delta R.T. 0.00 min  
 Lab File: VL033880.D  
 Acq: 7 Jun 2019 5:54

Tgt Ion: 88 Resp: 367116  
 Ion Ratio Lower Upper  
 88 100  
 58 135.2 100.0 150.0  
 43 285.9 184.7 277.1#  
 57 1300.3 826.8 1240.2#





#41

Tetrahydrofuran

Concen: 14.575 ppbv

RT: 6.14 min Scan# 995

Delta R.T. -0.00 min

Lab File: VL033880.D

Acq: 7 Jun 2019 5:54

Instrument :

MSVOA\_L

ClientSampleId :

VSTDIC015

Tot Ion: 42 Resp: 1076239

Ion Ratio Lower Upper

42 100

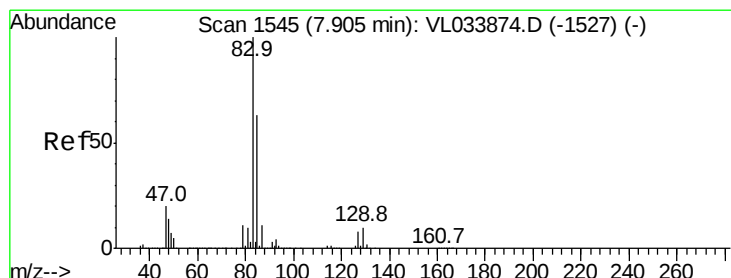
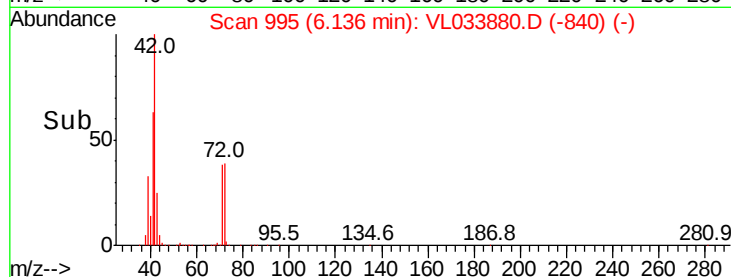
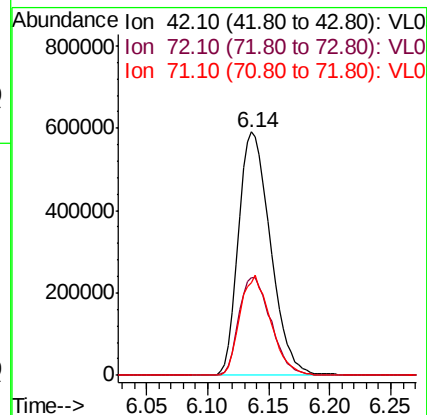
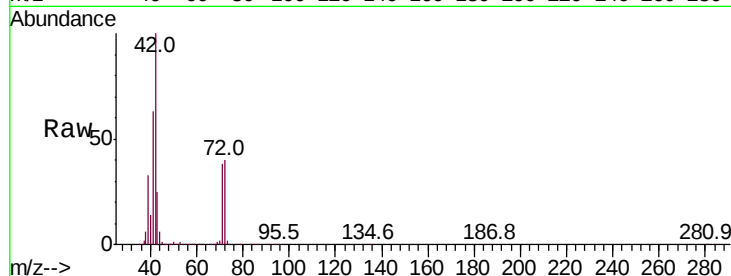
72 40.6 32.2 48.4

71 39.6 31.7 47.5

Manual Integrations  
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#42

Bromodichloromethane

Concen: 15.215 ppbv

RT: 7.91 min Scan# 1547

Delta R.T. 0.01 min

Lab File: VL033880.D

Acq: 7 Jun 2019 5:54

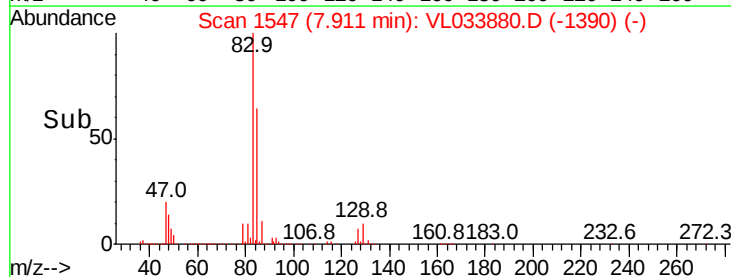
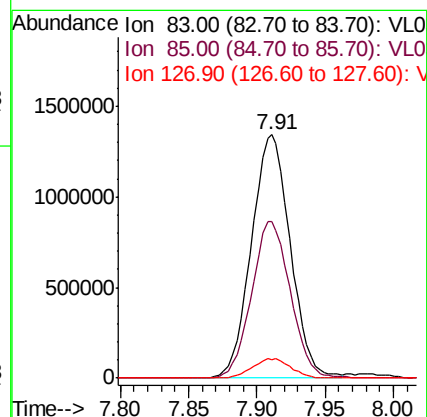
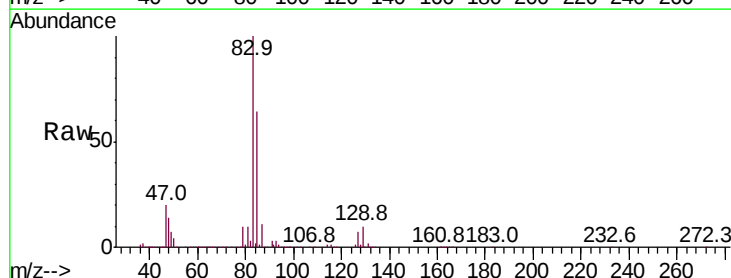
Tgt Ion: 83 Resp: 2655329

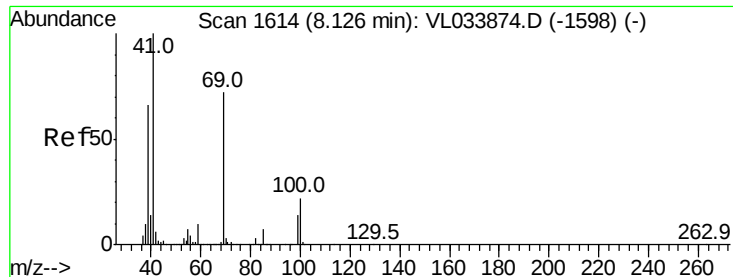
Ion Ratio Lower Upper

83 100

85 64.5 50.2 75.2

127 7.5 6.5 9.7





#43

Methyl Methacrylate

Concen: 16.097 ppbv

RT: 8.13 min Scan# 1615

Delta R.T. 0.00 min

Lab File: VL033880.D

Acq: 7 Jun 2019 5:54

Instrument :  
MSVOA\_L

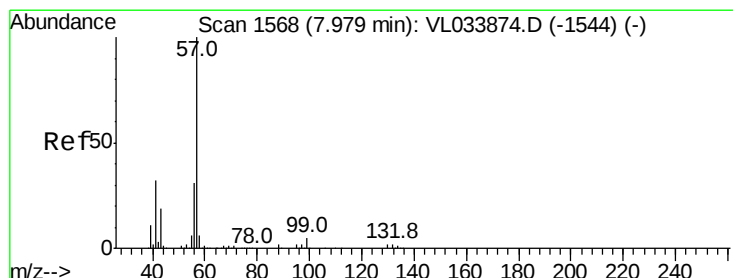
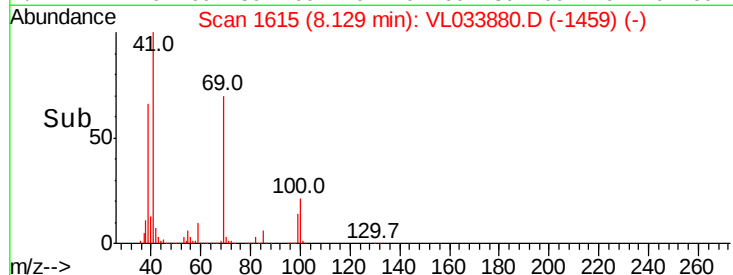
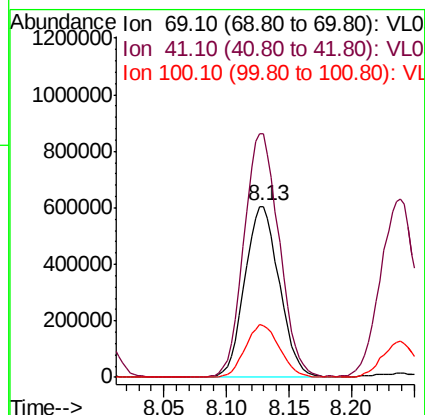
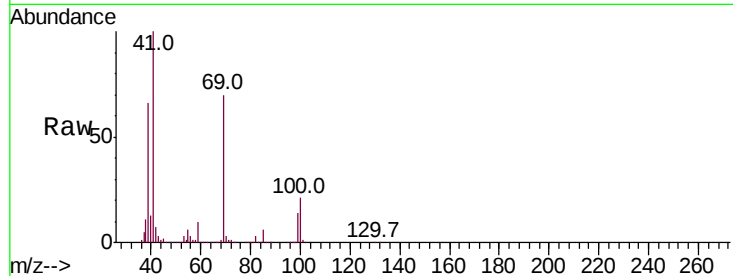
ClientSampleId :  
VSTDIC015

Tot Ion: 69 Resp: 1159866

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 69  | 100   |       |       |
| 41  | 145.3 | 114.3 | 171.5 |
| 100 | 30.7  | 24.8  | 37.2  |

Manual Integrations  
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#44

2,2,4-Trimethylpentane

Concen: 14.417 ppbv

RT: 7.98 min Scan# 1569

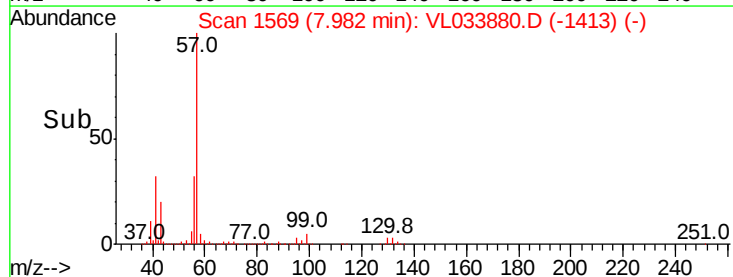
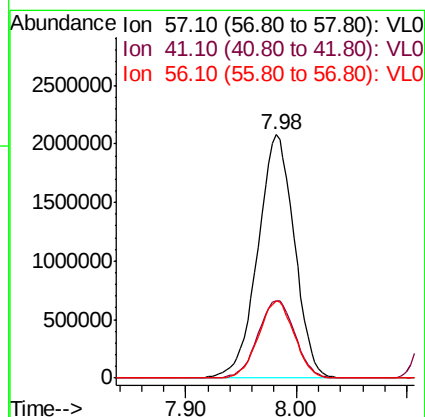
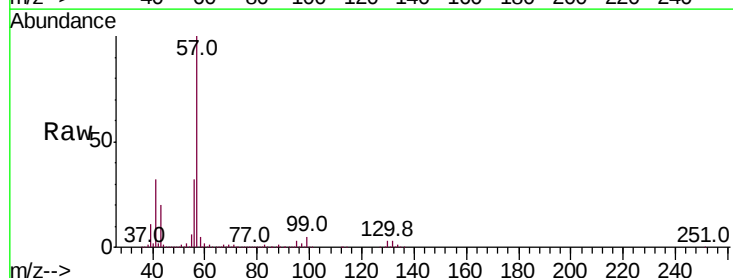
Delta R.T. 0.00 min

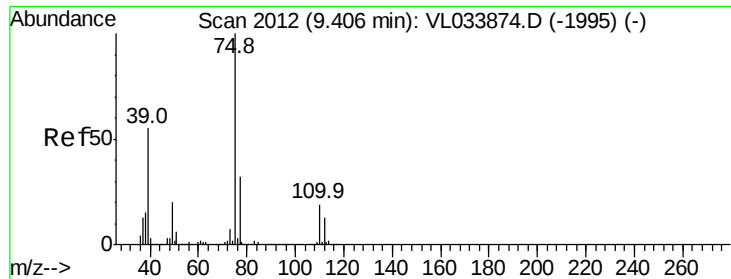
Lab File: VL033880.D

Acq: 7 Jun 2019 5:54

Tgt Ion: 57 Resp: 4767126

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 57  | 100   |       |       |
| 41  | 32.4  | 26.1  | 39.1  |
| 56  | 31.2  | 24.6  | 36.8  |





#45

t-1,3-Dichloropropene

Concen: 17.973 ppbv

RT: 9.41 min Scan# 2013

Delta R.T. 0.00 min

Lab File: VL033880.D

Acq: 7 Jun 2019 5:54

Tot Ion: 75 Resp: 1639924

Ion Ratio Lower Upper

75 100

77 31.9 25.4 38.2

Instrument :

MSVOA\_L

ClientSampleId :

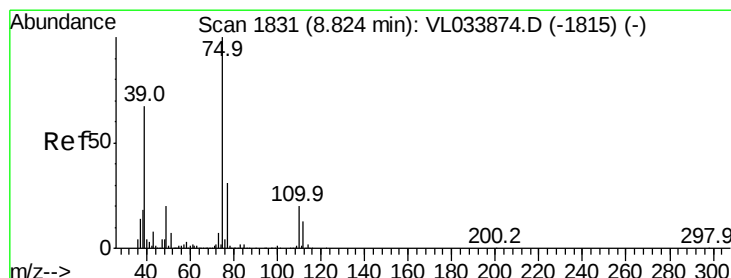
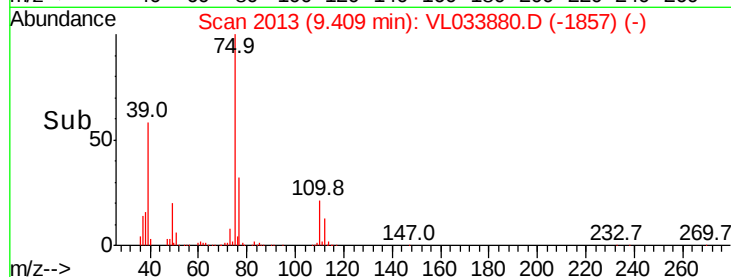
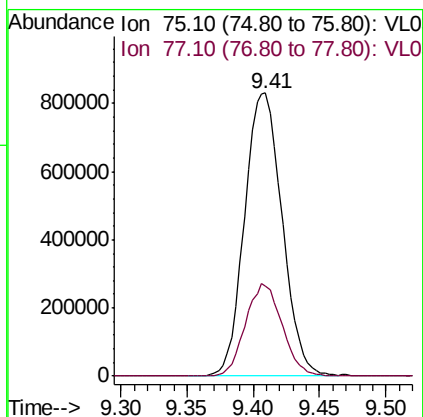
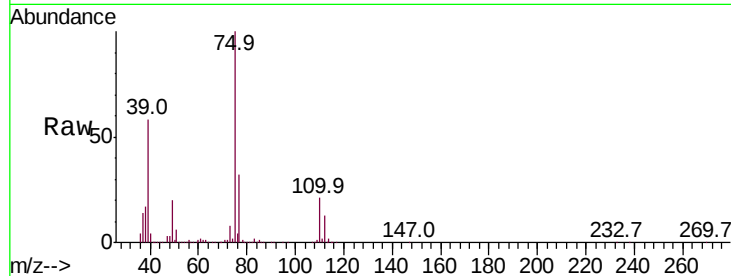
VSTDIC015

Manual Integrations

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#46

cis-1,3-Dichloropropene

Concen: 17.035 ppbv

RT: 8.83 min Scan# 1833

Delta R.T. 0.01 min

Lab File: VL033880.D

Acq: 7 Jun 2019 5:54

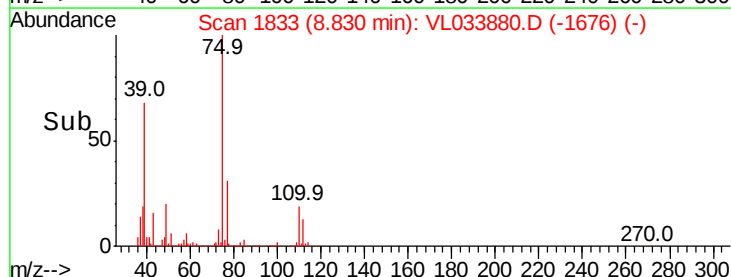
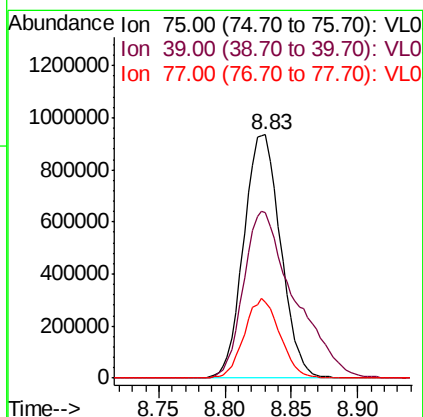
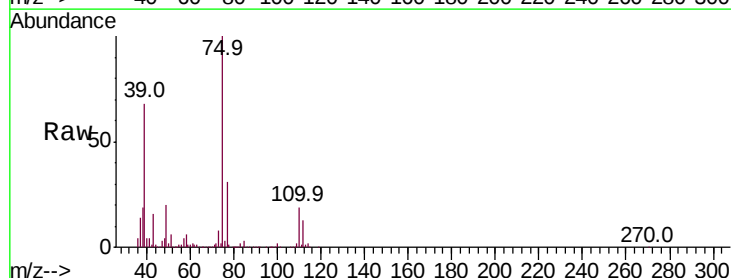
Tgt Ion: 75 Resp: 1812717

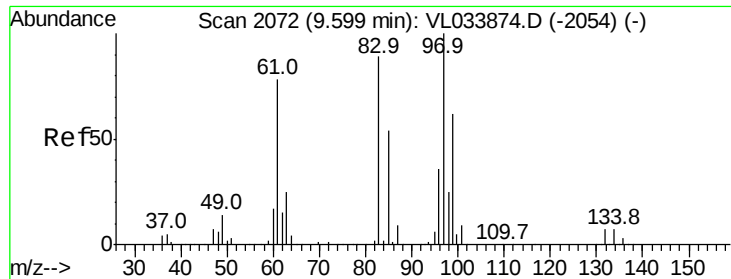
Ion Ratio Lower Upper

75 100

39 67.8 53.8 80.8

77 31.1 24.6 36.8





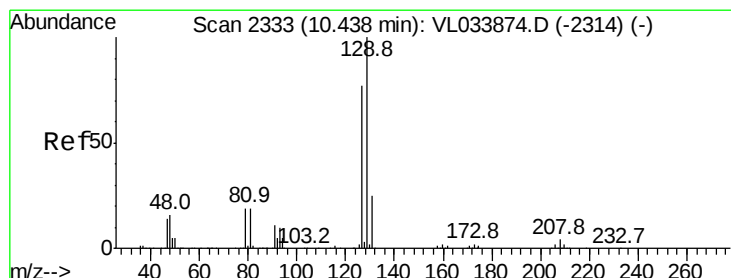
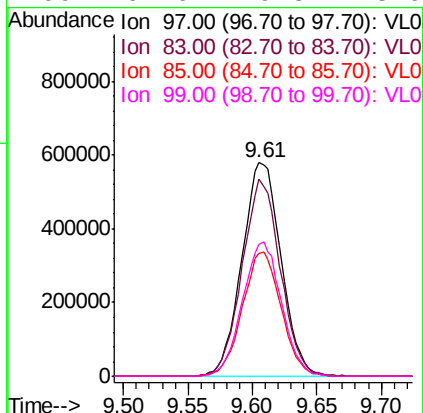
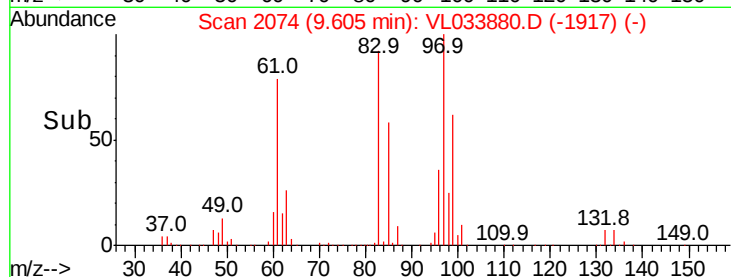
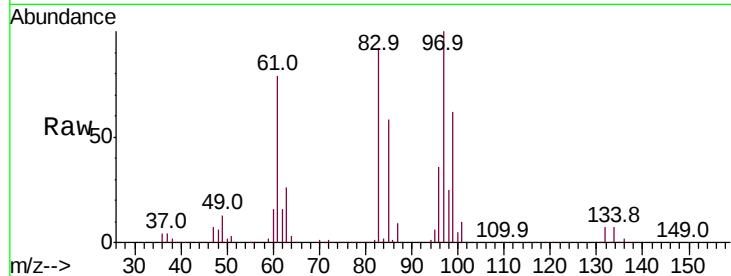
#47  
 1,1,2-Trichloroethane  
 Concen: 14.713 ppbv  
 RT: 9.61 min Scan# 2074  
 Delta R.T. 0.01 min  
 Lab File: VL033880.D  
 Acq: 7 Jun 2019 5:54

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDIC015

Tot Ion: 97 Resp: 1226359  
 Ion Ratio Lower Upper  
 97 100  
 83 92.0 70.9 106.3  
 85 57.6 43.0 64.6  
 99 61.6 49.3 73.9

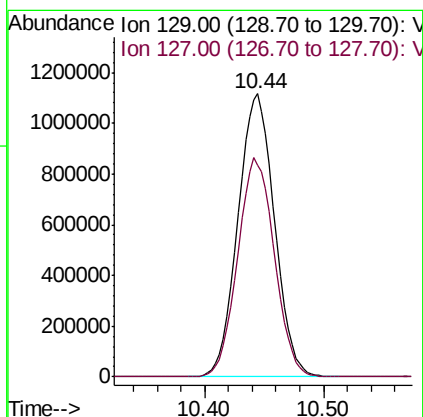
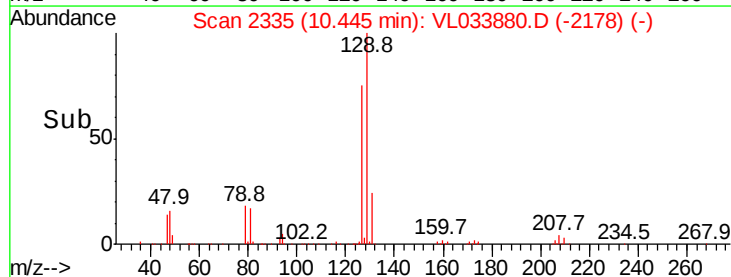
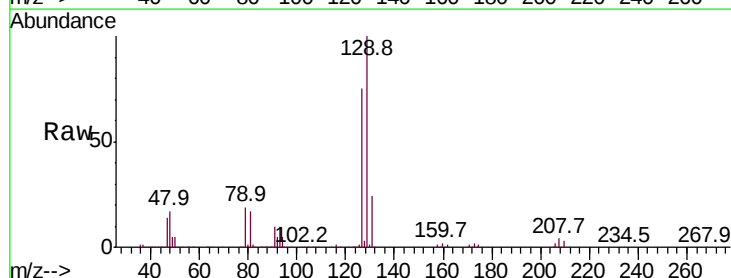
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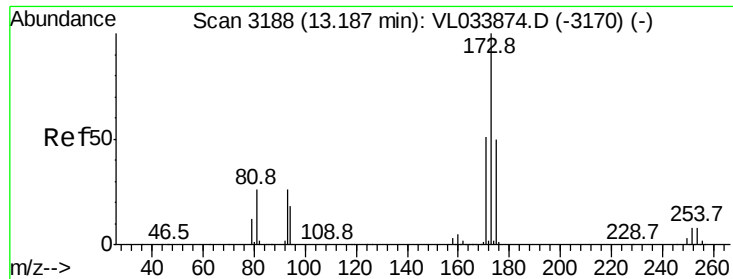
MMDadoda  
 6/11/2019 9:18:41 AM



#48  
 Dibromochloromethane  
 Concen: 16.382 ppbv  
 RT: 10.44 min Scan# 2335  
 Delta R.T. 0.01 min  
 Lab File: VL033880.D  
 Acq: 7 Jun 2019 5:54

Tgt Ion: 129 Resp: 2376797  
 Ion Ratio Lower Upper  
 129 100  
 127 77.7 38.6 115.7





#49

Bromoform

Concen: 17.774 ppbv

RT: 13.19 min Scan# 3189

Delta R.T. 0.00 min

Lab File: VL033880.D

Acq: 7 Jun 2019 5:54

Instrument :

MSVOA\_L

ClientSampleId :

VSTDIC015

Tot Ion:173 Resp: 2210869

Ion Ratio Lower Upper

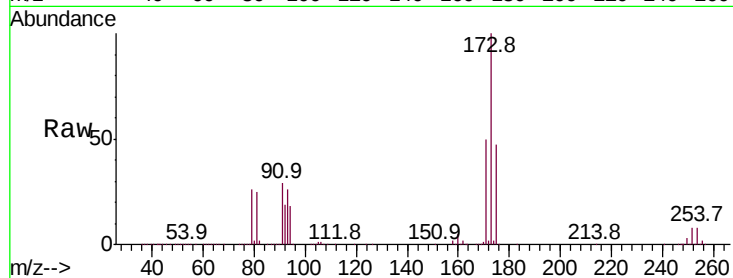
173 100

175 49.1 39.6 59.4

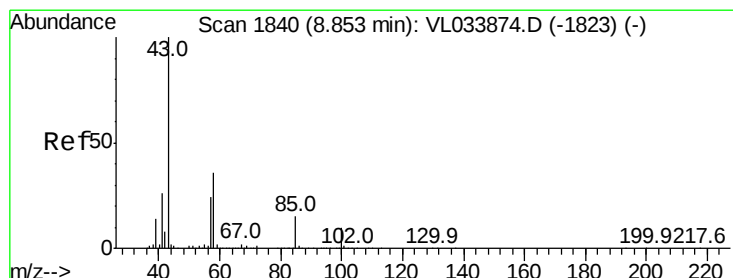
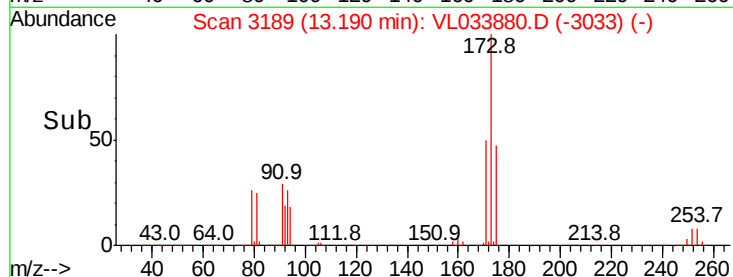
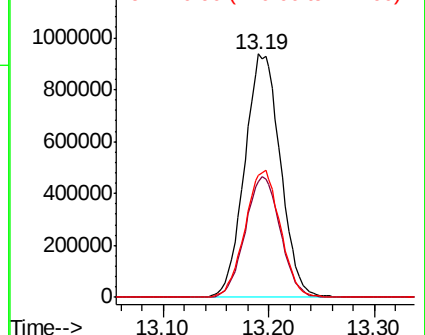
171 51.4 41.8 62.8

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Abundance Ion 172.90 (172.60 to 173.60): V  
Ion 174.90 (174.60 to 175.60): V  
Ion 170.90 (170.60 to 171.60): V



#50

4-Methyl-2-Pentanone

Concen: 15.346 ppbv

RT: 8.86 min Scan# 1842

Delta R.T. 0.01 min

Lab File: VL033880.D

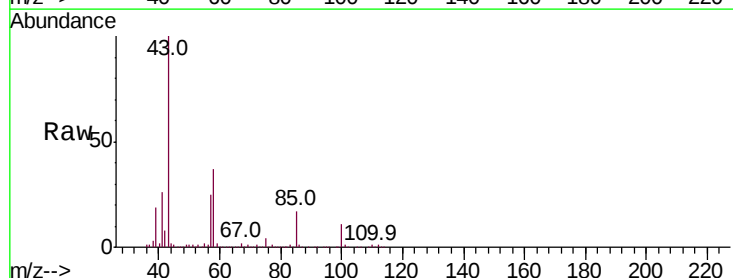
Acq: 7 Jun 2019 5:54

Tgt Ion: 43 Resp: 3140559

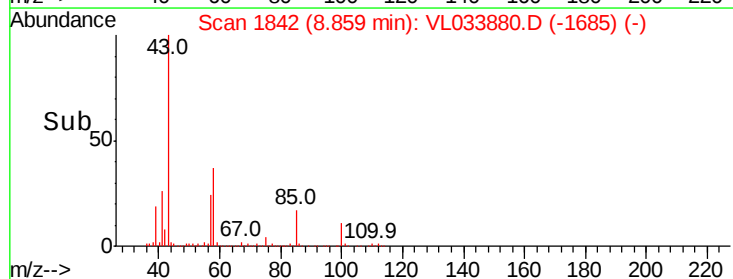
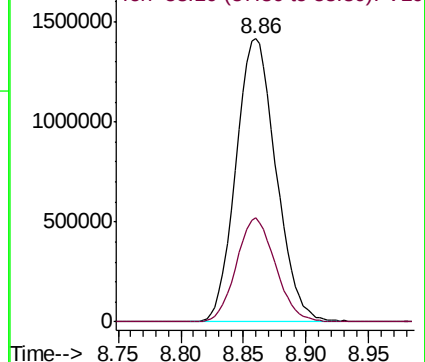
Ion Ratio Lower Upper

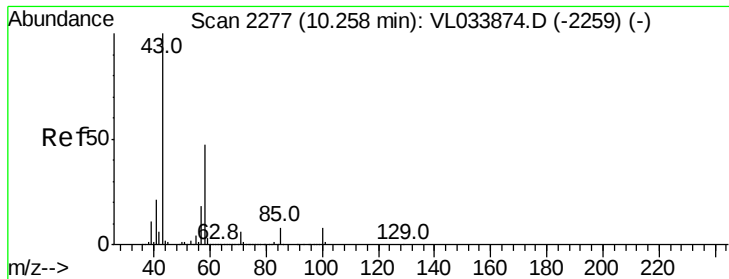
43 100

58 36.0 28.6 42.8



Abundance Ion 43.10 (42.80 to 43.80): VL0  
Ion 58.10 (57.80 to 58.80): VL0





#51

2-Hexanone

Concen: 16.422 ppbv

RT: 10.26 min Scan# 2278

Delta R.T. 0.00 min

Lab File: VL033880.D

Acq: 7 Jun 2019 5:54

Instrument :

MSVOA\_L

ClientSampleId :

VSTDIC015

Tot Ion: 43 Resp: 2623939

Ion Ratio Lower Upper

43 100

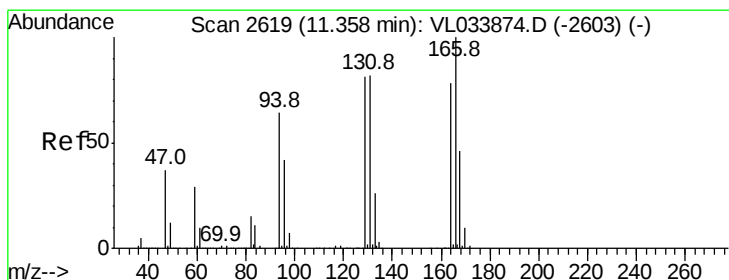
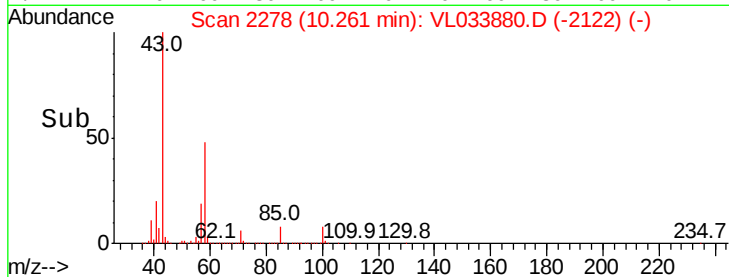
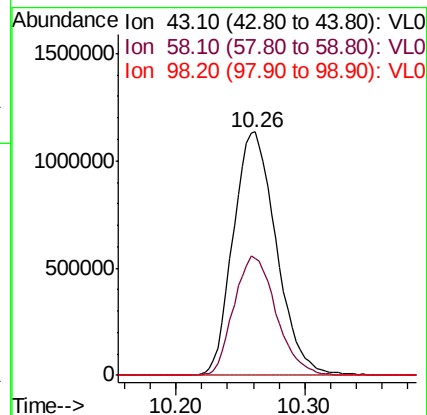
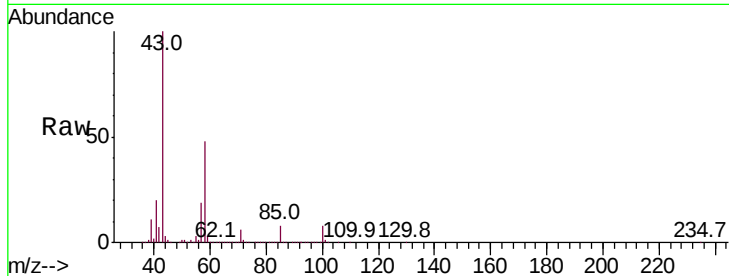
58 48.5 38.2 57.4

98 0.4 0.2 0.2#

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#52

Tetrachloroethene

Concen: 16.610 ppbv

RT: 11.36 min Scan# 2621

Delta R.T. 0.01 min

Lab File: VL033880.D

Acq: 7 Jun 2019 5:54

Tgt Ion: 164 Resp: 1148397

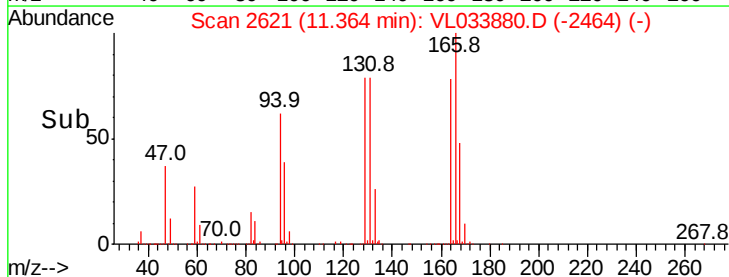
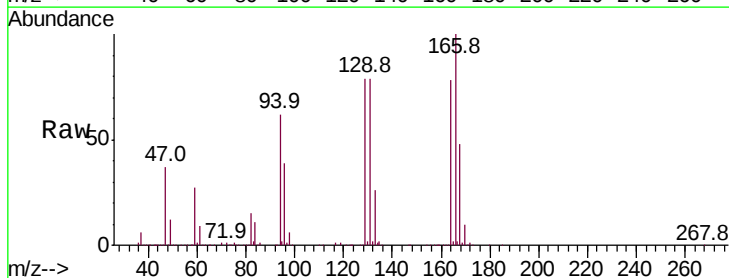
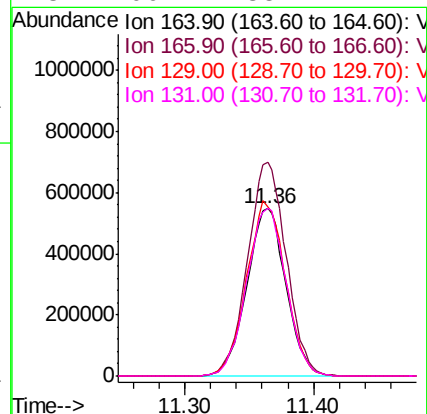
Ion Ratio Lower Upper

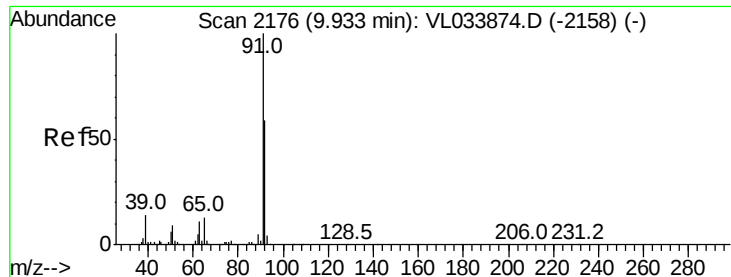
164 100

166 127.8 103.1 154.7

129 101.4 83.9 125.9

131 100.4 85.1 127.7





#53

Toluene

Concen: 16.216 ppbv

RT: 9.94 min Scan# 2177

Delta R.T. 0.00 min

Lab File: VL033880.D

Acq: 7 Jun 2019 5:54

Instrument :

MSVOA\_L

ClientSampleId :

VSTDIC015

Tot Ion: 91 Resp: 3423445

Ion Ratio Lower Upper

91 100

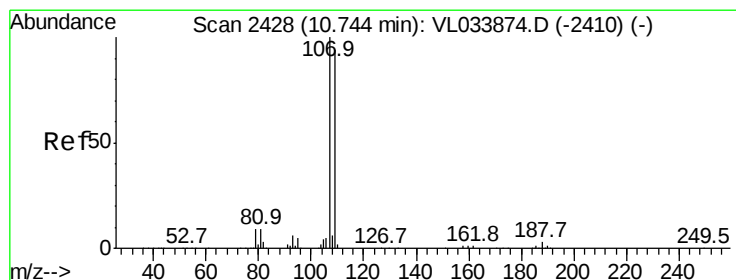
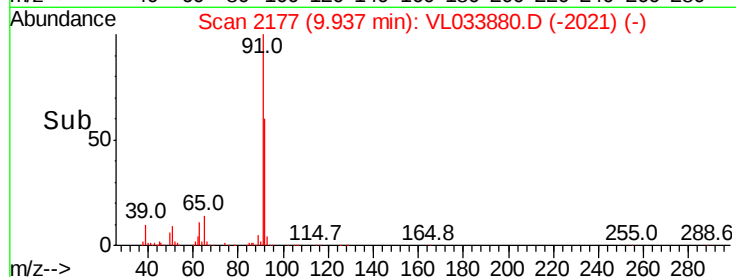
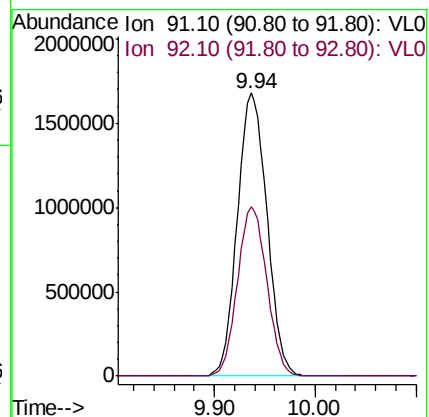
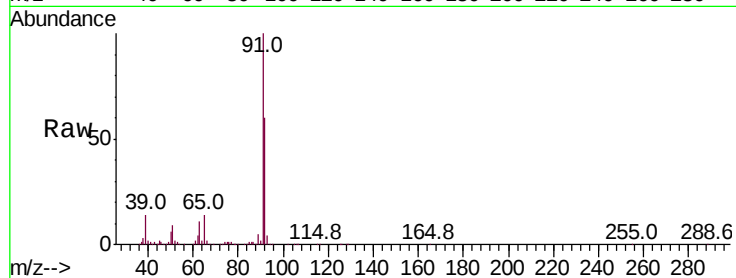
92 59.4 47.0 70.6

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#54

1,2-Dibromoethane

Concen: 15.553 ppbv

RT: 10.75 min Scan# 2430

Delta R.T. 0.01 min

Lab File: VL033880.D

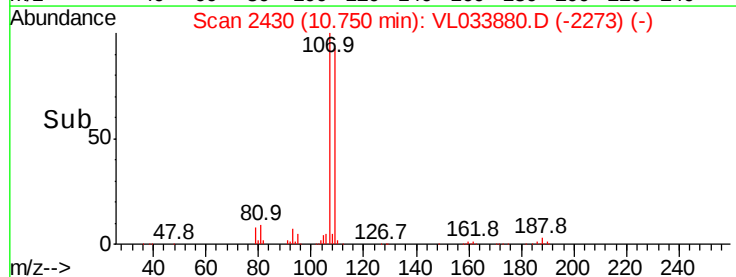
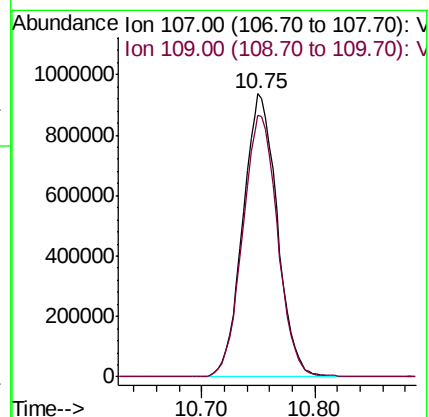
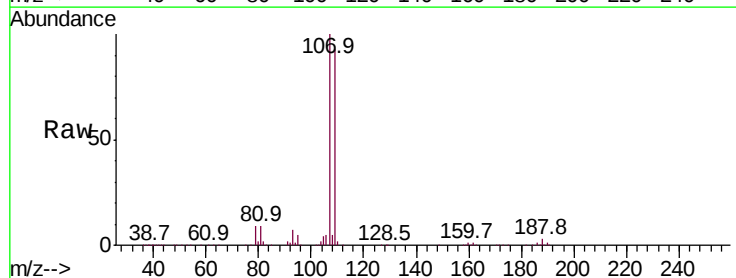
Acq: 7 Jun 2019 5:54

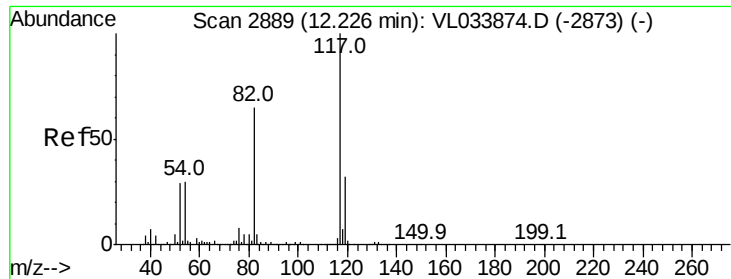
Tgt Ion: 107 Resp: 1974803

Ion Ratio Lower Upper

107 100

109 92.6 74.9 112.3





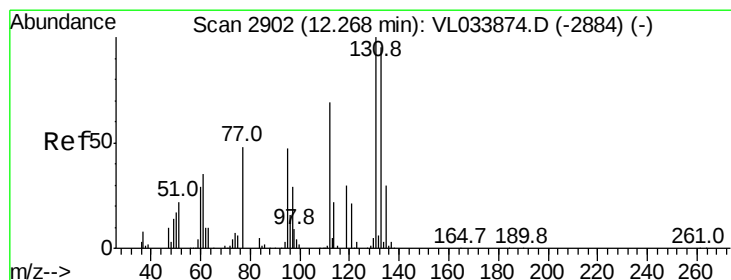
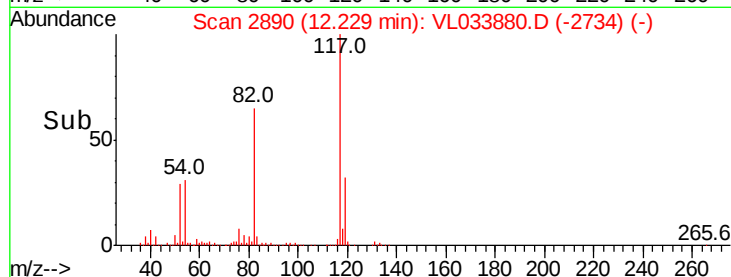
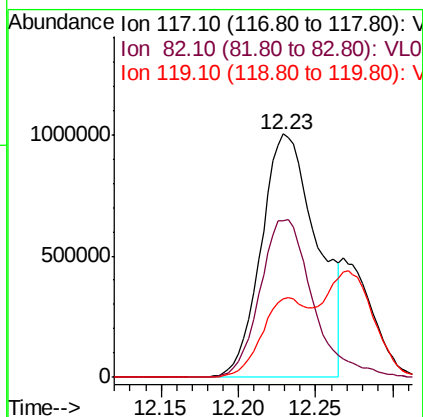
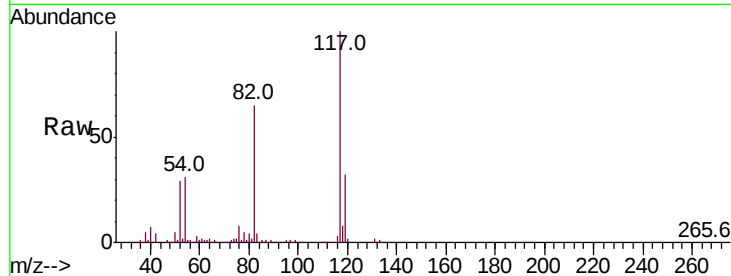
#55  
Chlorobenzene-d5  
Concen: 10.000 ppbv  
RT: 12.23 min Scan# 2890  
Delta R.T. 0.00 min  
Lab File: VL033880.D  
Acq: 7 Jun 2019 5:54

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDIC015

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 117     | 100   |       |       |
| 82      | 61.8  | 50.2  | 75.2  |
| 119     | 0.0   | 24.8  | 37.2# |

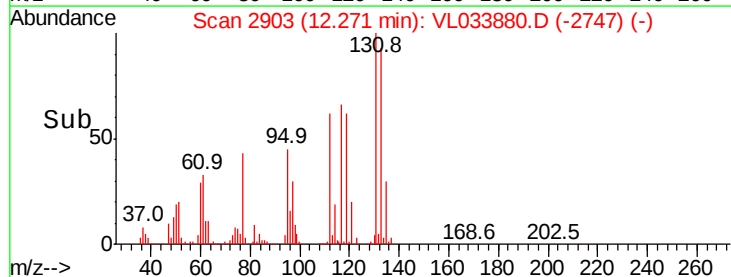
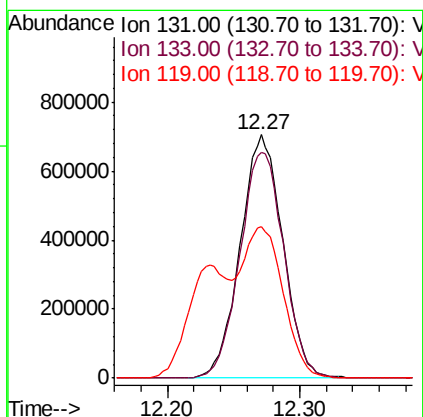
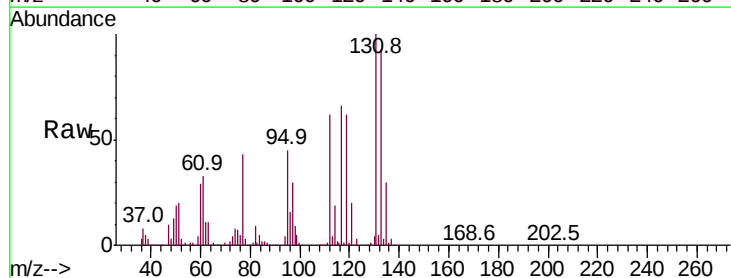
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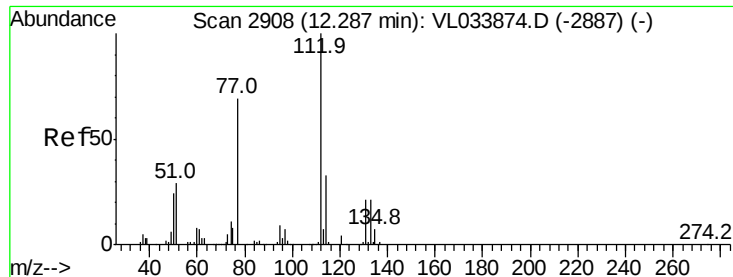
MMDadoda  
6/11/2019 9:18:41 AM



#56  
1,1,1,2-Tetrachloroethane  
Concen: 13.631 ppbv  
RT: 12.27 min Scan# 2903  
Delta R.T. 0.00 min  
Lab File: VL033880.D  
Acq: 7 Jun 2019 5:54

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 131     | 100   |       |       |
| 133     | 95.9  | 76.5  | 114.7 |
| 119     | 106.6 | 42.6  | 64.0# |





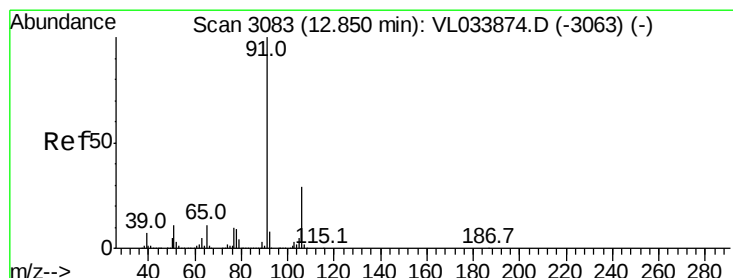
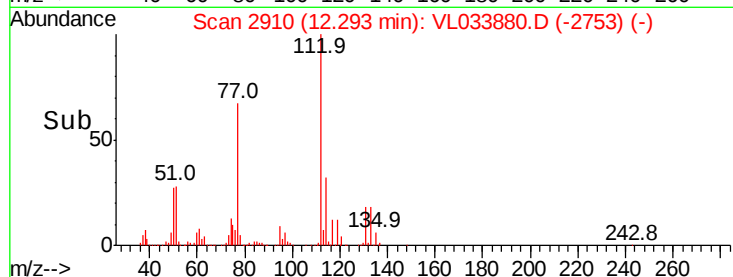
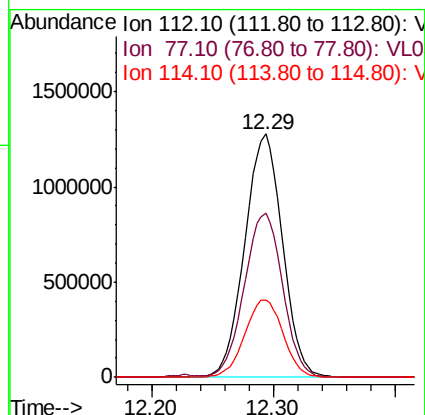
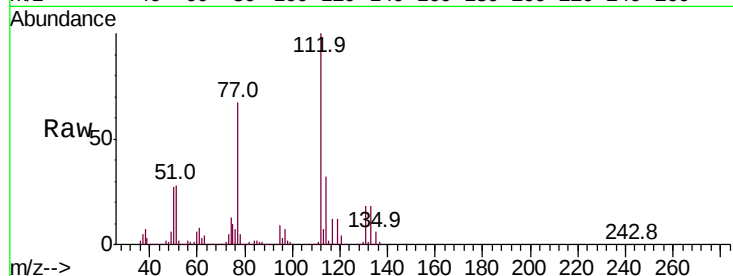
#57  
Chlorobenzene  
Concen: 13.299 ppbv  
RT: 12.29 min Scan# 2910  
Delta R.T. 0.01 min  
Lab File: VL033880.D  
Acq: 7 Jun 2019 5:54

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDIC015

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 112     | 100   |       |       |
| 77      | 67.1  | 55.8  | 83.6  |
| 114     | 31.9  | 29.8  | 36.4  |

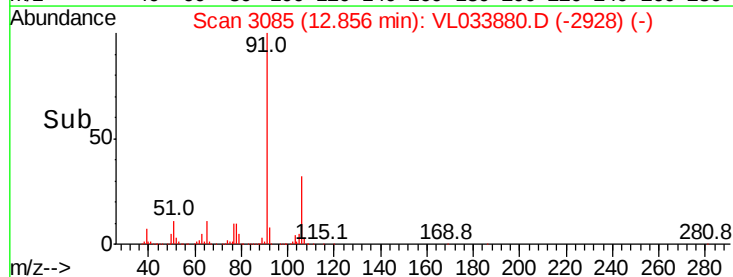
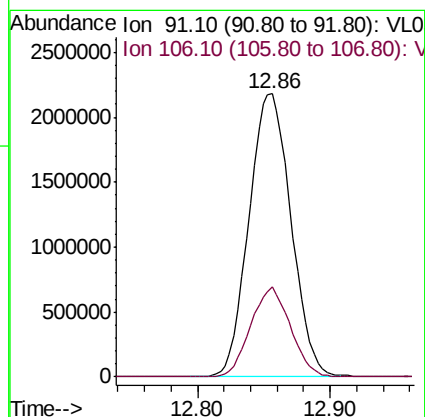
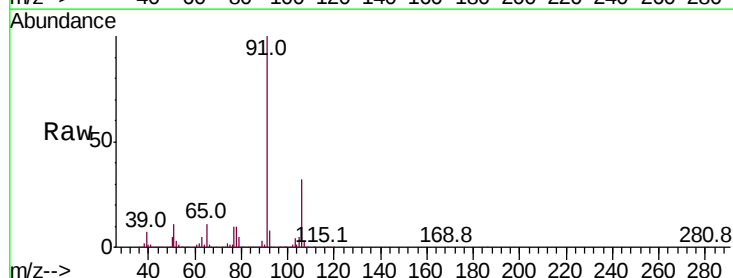
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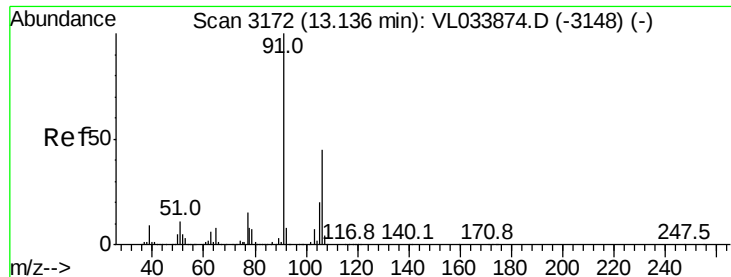
MMDadoda  
6/11/2019 9:18:41 AM



#58  
Ethyl Benzene  
Concen: 14.681 ppbv  
RT: 12.86 min Scan# 3085  
Delta R.T. 0.01 min  
Lab File: VL033880.D  
Acq: 7 Jun 2019 5:54

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 91      | 100   |       |       |
| 106     | 31.7  | 23.0  | 34.6  |





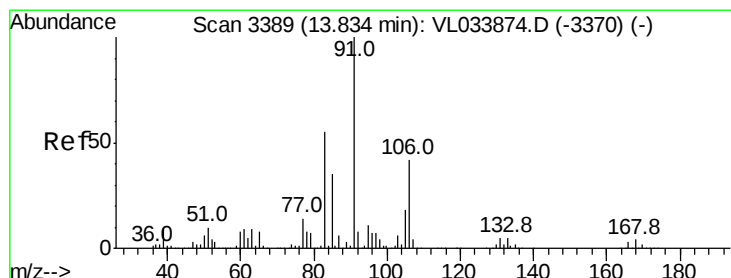
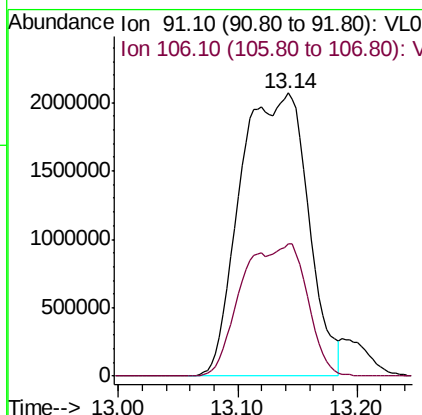
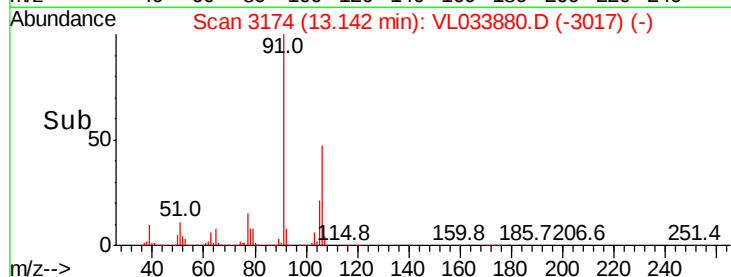
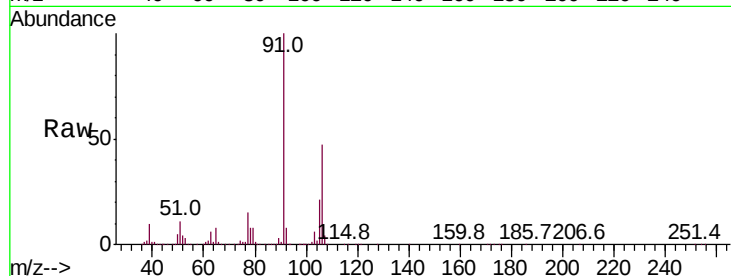
#59  
m/p-Xylene  
Concen: 28.341 ppbv m  
RT: 13.14 min Scan# 3174  
Delta R.T. 0.01 min  
Lab File: VL033880.D  
Acq: 7 Jun 2019 5:54

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDIC015

Tot Ion: 91 Resp: 8152824  
Ion Ratio Lower Upper  
91 100  
106 45.3 35.8 53.8

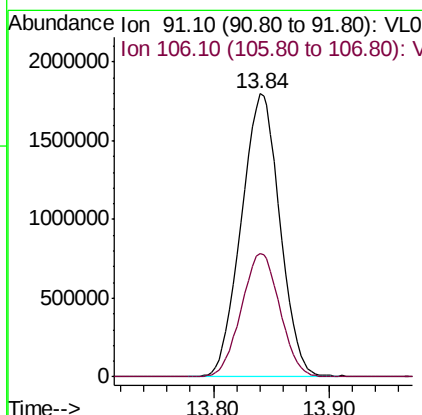
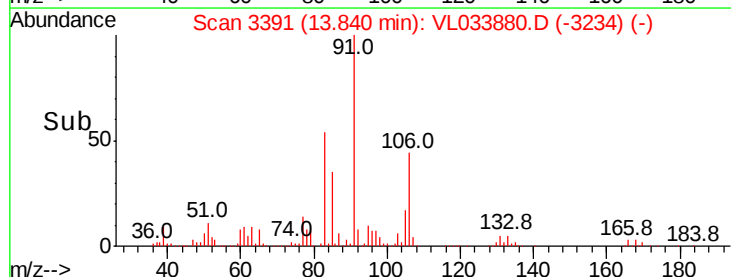
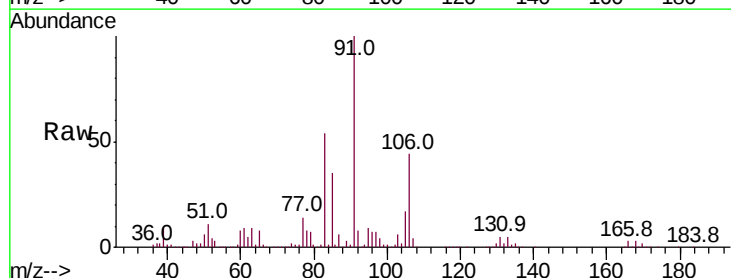
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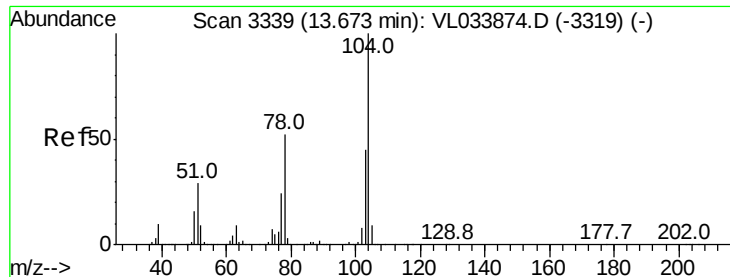
MMDadoda  
6/11/2019 9:18:41 AM



#60  
o-Xylene  
Concen: 14.241 ppbv  
RT: 13.84 min Scan# 3391  
Delta R.T. 0.01 min  
Lab File: VL033880.D  
Acq: 7 Jun 2019 5:54

Tgt Ion: 91 Resp: 4167959  
Ion Ratio Lower Upper  
91 100  
106 43.6 21.7 65.1





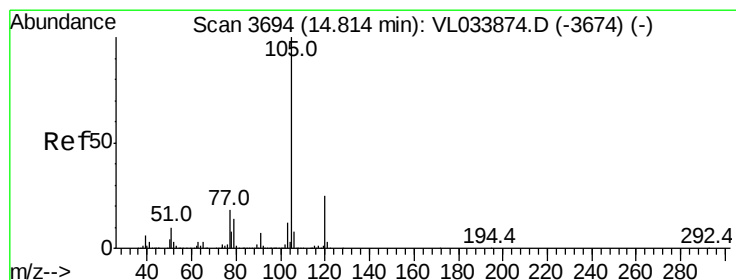
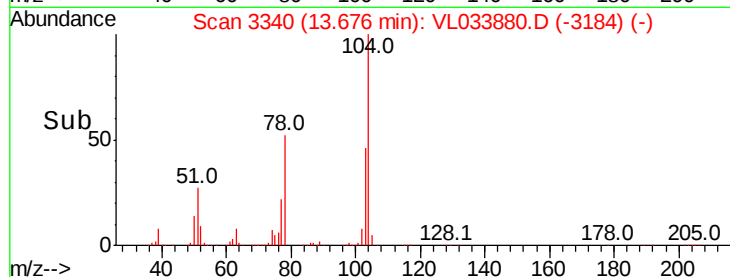
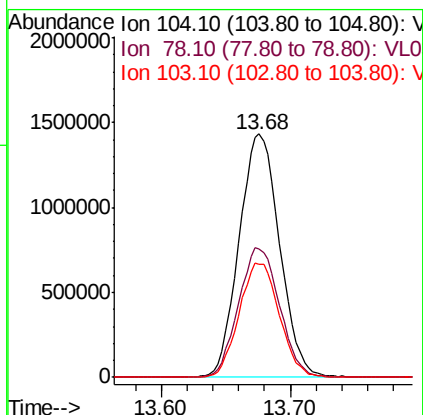
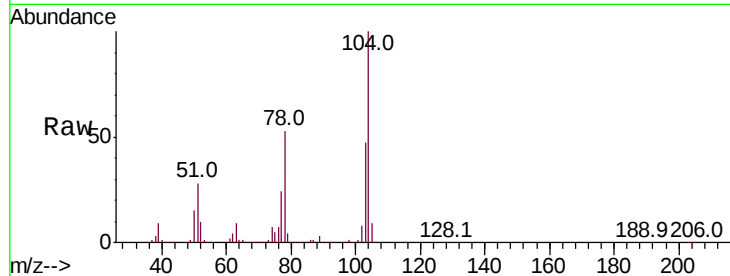
#61  
Stvrene  
Concen: 16.055 ppbv  
RT: 13.68 min Scan# 3340  
Delta R.T. 0.00 min  
Lab File: VL033880.D  
Acq: 7 Jun 2019 5:54

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDIC015

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 104     | 100   |       |       |
| 78      | 54.1  | 43.4  | 65.0  |
| 103     | 46.8  | 37.6  | 56.4  |

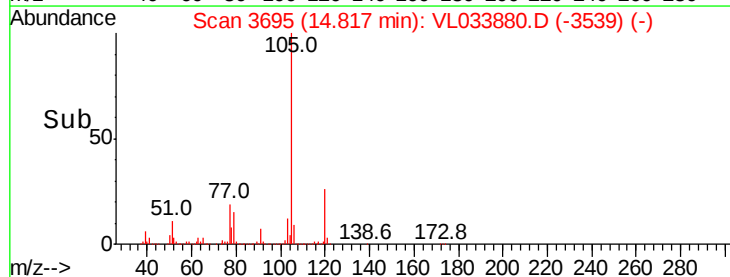
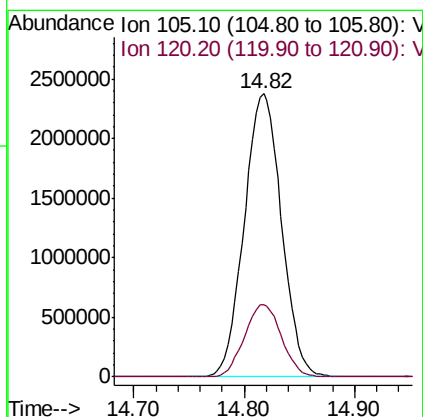
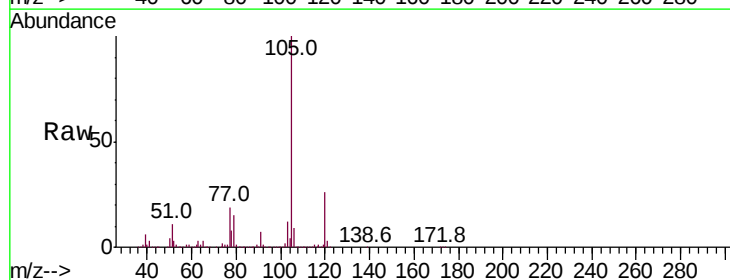
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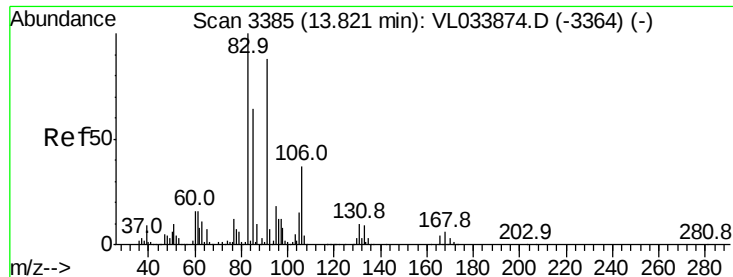
MMDadoda  
6/11/2019 9:18:41 AM



#62  
Isopropylbenzene  
Concen: 14.098 ppbv  
RT: 14.82 min Scan# 3695  
Delta R.T. 0.00 min  
Lab File: VL033880.D  
Acq: 7 Jun 2019 5:54

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 105     | 100   |       |       |
| 120     | 25.5  | 20.3  | 30.5  |





#63

1,1,2,2-Tetrachloroethane

Concen: 13.863 ppbv

RT: 13.83 min Scan# 3387

Delta R.T. 0.01 min

Lab File: VL033880.D

Acq: 7 Jun 2019 5:54

Instrument :

MSVOA\_L

ClientSampleId :

VSTDIC015

Tot Ion: 83 Resp: 2965523

Ion Ratio Lower Upper

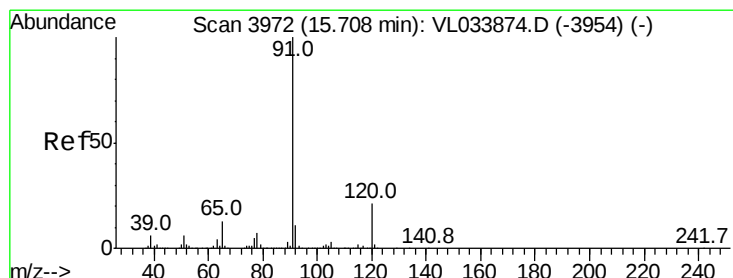
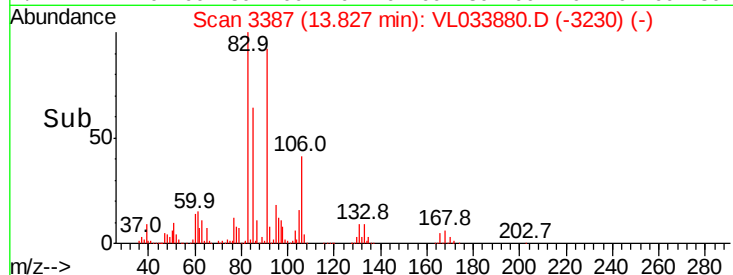
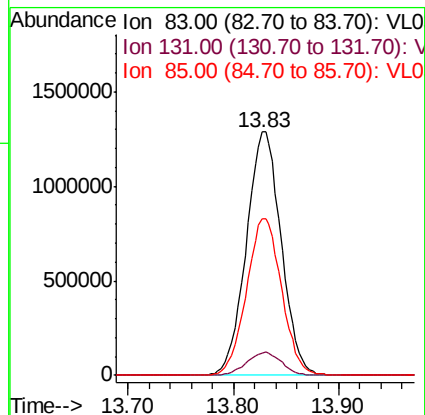
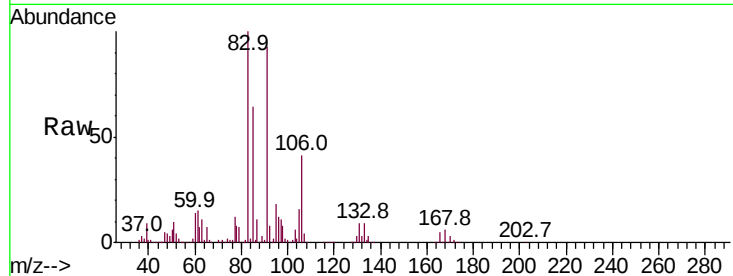
83 100

131 9.5 4.8 14.4

85 64.9 32.1 96.3

Manual Integrations  
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#64

n-propylbenzene

Concen: 14.416 ppbv

RT: 15.71 min Scan# 3974

Delta R.T. 0.01 min

Lab File: VL033880.D

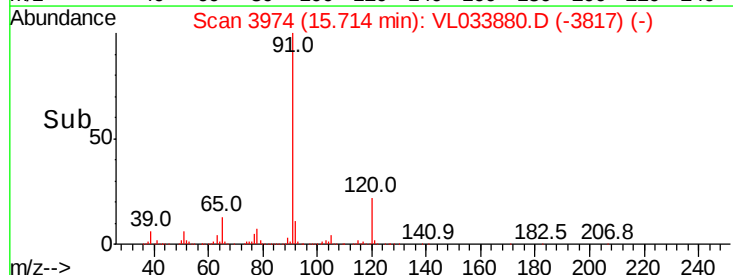
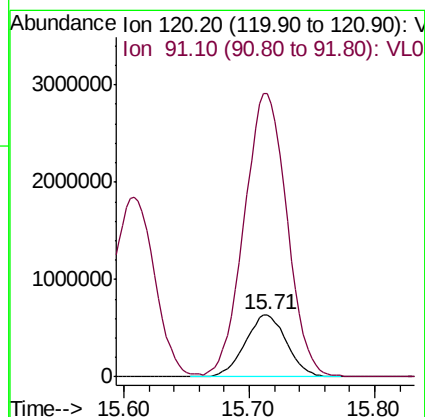
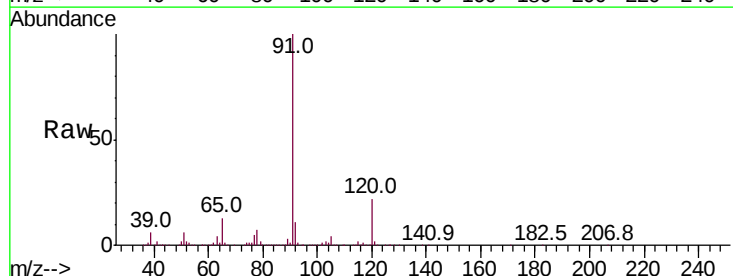
Acq: 7 Jun 2019 5:54

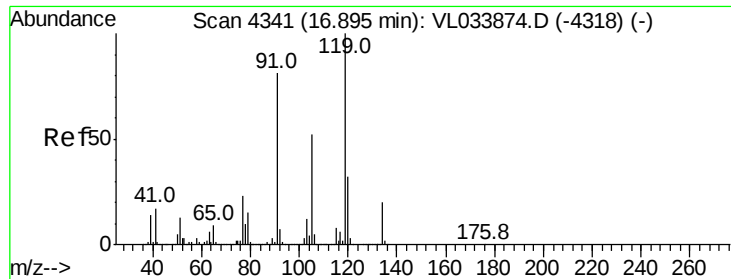
Tgt Ion:120 Resp: 1464990

Ion Ratio Lower Upper

120 100

91 473.0 387.0 580.6





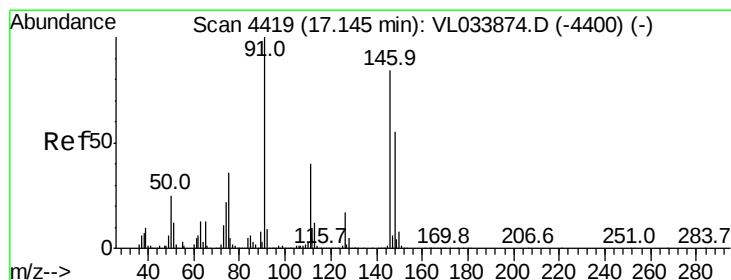
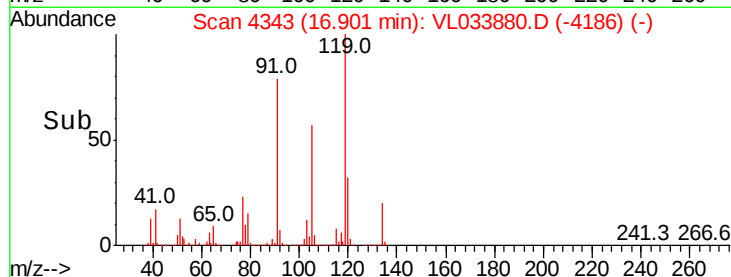
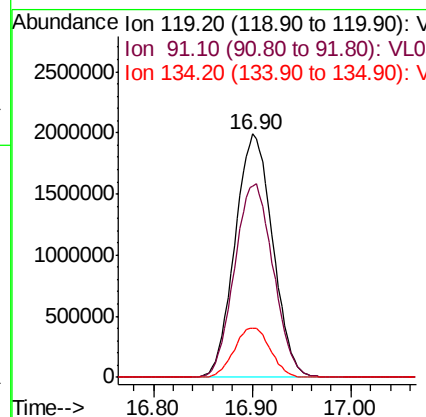
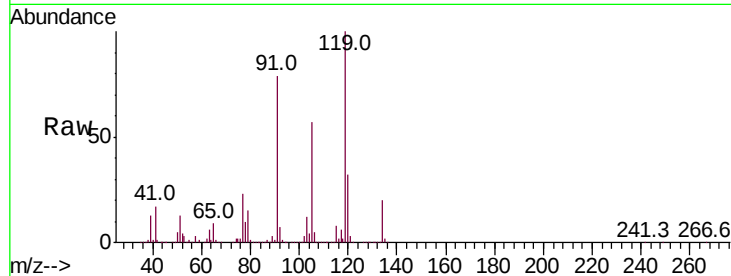
#65  
tert-Butylbenzene  
Concen: 14.670 ppbv  
RT: 16.90 min Scan# 4343  
Delta R.T. 0.01 min  
Lab File: VL033880.D  
Acq: 7 Jun 2019 5:54

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDIC015

Tot Ion:119 Resp: 5275884  
Ion Ratio Lower Upper  
119 100  
91 82.0 66.6 100.0  
134 19.6 15.5 23.3

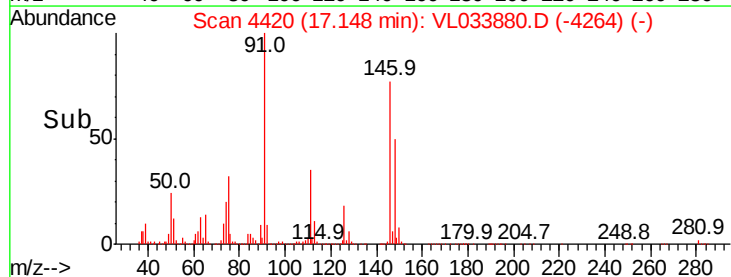
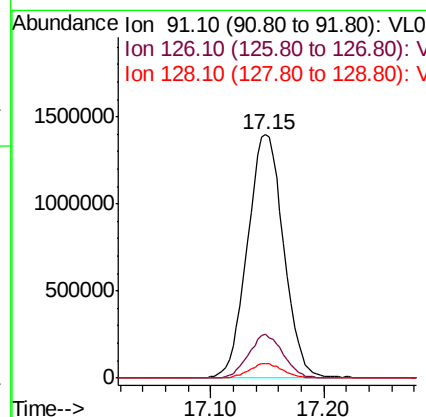
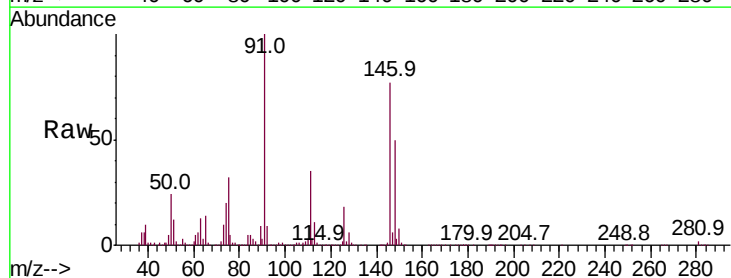
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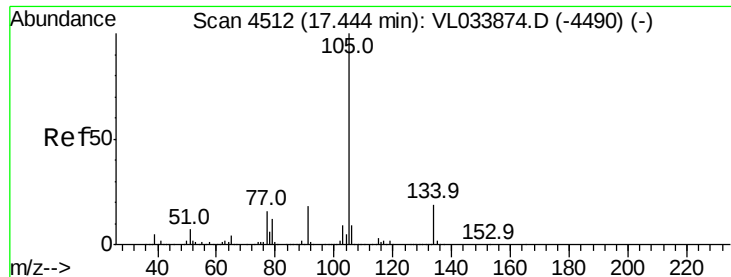
MMDadoda  
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#66  
Benzyl Chloride  
Concen: 18.091 ppbv  
RT: 17.15 min Scan# 4420  
Delta R.T. 0.00 min  
Lab File: VL033880.D  
Acq: 7 Jun 2019 5:54

Tgt Ion: 91 Resp: 3104537  
Ion Ratio Lower Upper  
91 100  
126 17.2 13.8 20.6  
128 5.7 4.4 6.6





#67

sec-Butylbenzene

Concen: 14.519 ppbv

RT: 17.45 min Scan# 4514

Delta R.T. 0.01 min

Lab File: VL033880.D

Acq: 7 Jun 2019 5:54

Instrument :

MSVOA\_L

ClientSampleId :

VSTDIC015

Tot Ion: 105 Resp: 7317921

Ion Ratio Lower Upper

105 100

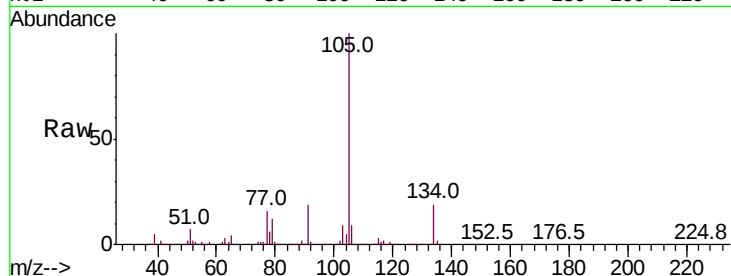
134 18.5 14.6 22.0

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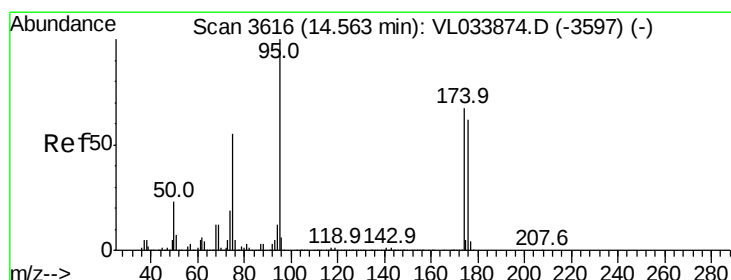
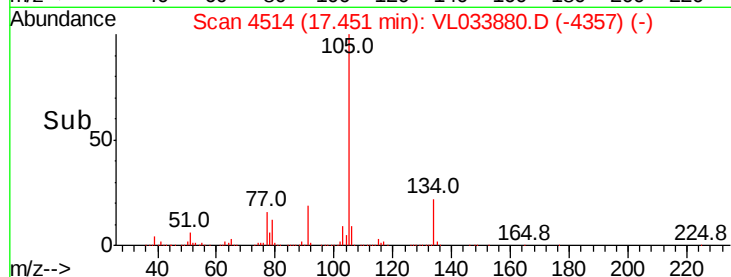
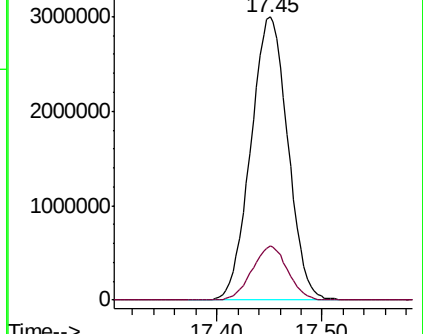
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Abundance Ion 105.10 (104.80 to 105.80): V

Ion 134.20 (133.90 to 134.90): V



#68

1-Bromo-4-Fluorobenzene

Concen: 9.316 ppbv

RT: 14.57 min Scan# 3618

Delta R.T. 0.01 min

Lab File: VL033880.D

Acq: 7 Jun 2019 5:54

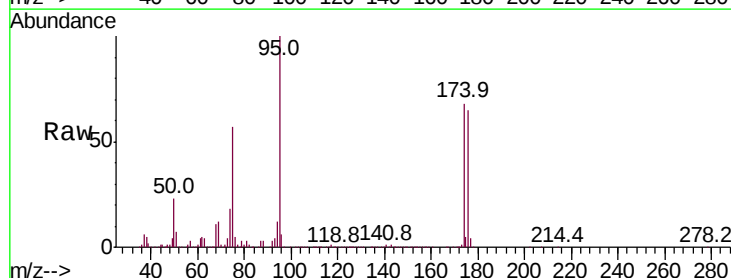
Tgt Ion: 95 Resp: 1896197

Ion Ratio Lower Upper

95 100

174 67.4 54.0 81.0

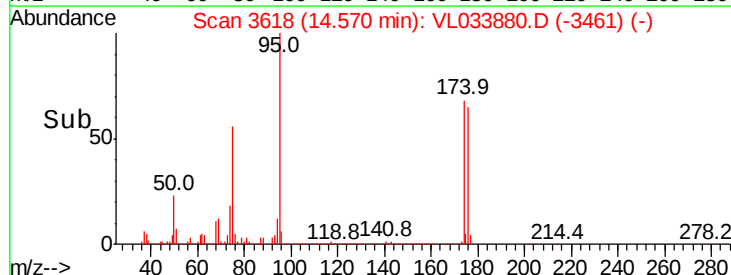
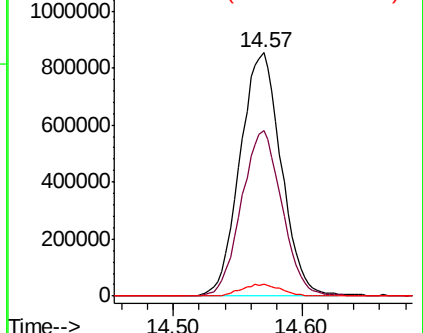
175 4.8 3.8 5.8

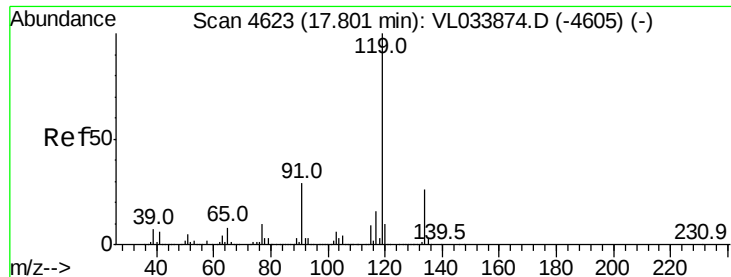


Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V





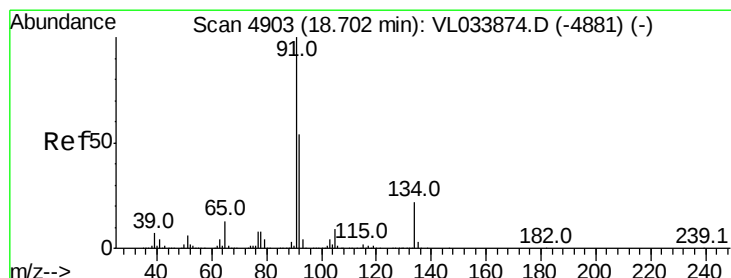
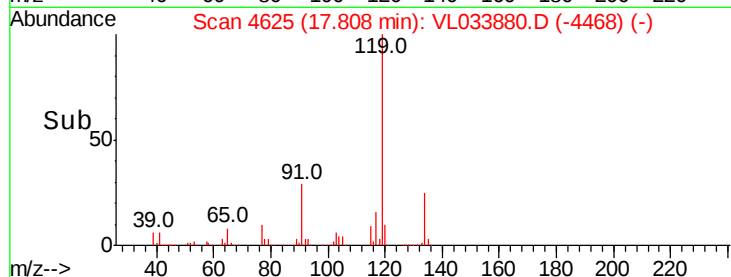
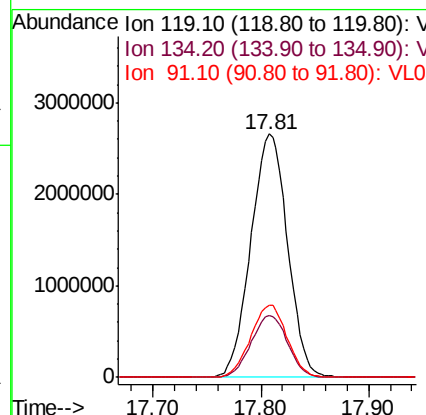
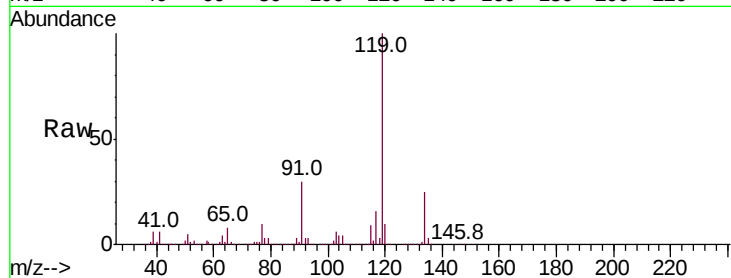
#69  
 p-Isopropyltoluene  
 Concen: 15.066 ppbv  
 RT: 17.81 min Scan# 4625  
 Delta R.T. 0.01 min  
 Lab File: VL033880.D  
 Acq: 7 Jun 2019 5:54

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDIC015

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 119     | 100   |       |       |
| 134     | 25.4  | 20.3  | 30.5  |
| 91      | 29.6  | 23.8  | 35.6  |

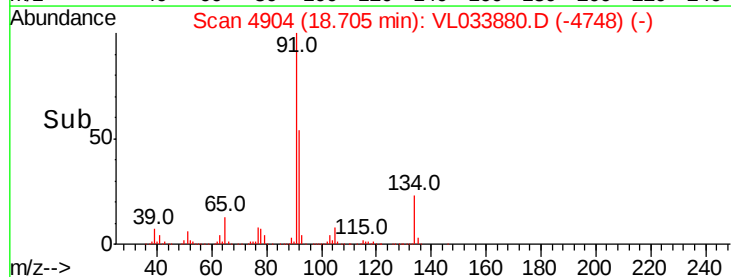
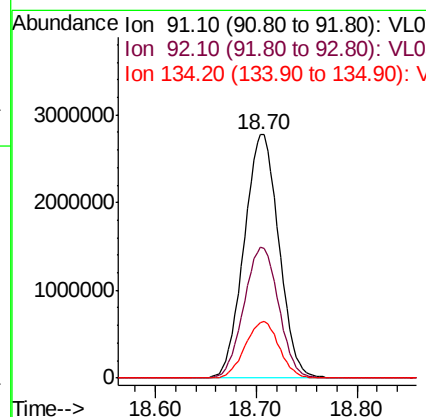
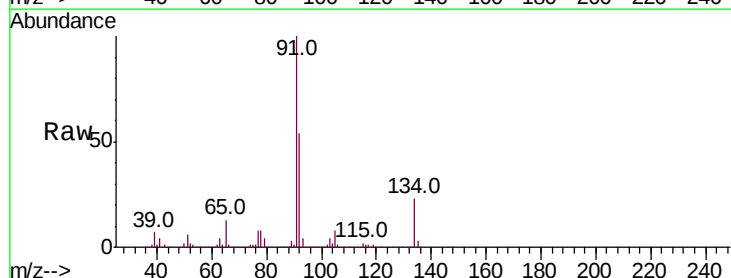
Manual Integrations  
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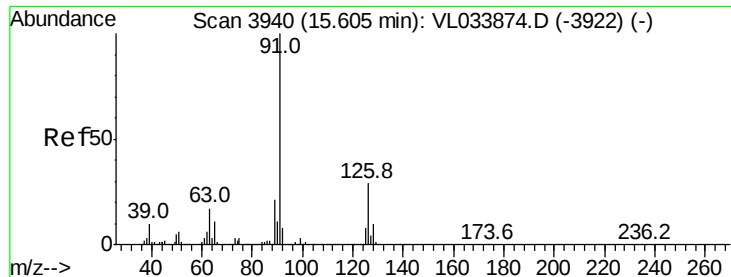
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 6/11/2019 9:18:41 AM



#70  
 n-Butylbenzene  
 Concen: 14.774 ppbv  
 RT: 18.70 min Scan# 4904  
 Delta R.T. 0.00 min  
 Lab File: VL033880.D  
 Acq: 7 Jun 2019 5:54

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 91      | 100   |       |       |
| 92      | 53.8  | 42.5  | 63.7  |
| 134     | 22.7  | 17.8  | 26.6  |





#71

2-Chlorotoluene

Concen: 14.764 ppbv

RT: 15.61 min Scan# 3941

Delta R.T. 0.00 min

Lab File: VL033880.D

Acq: 7 Jun 2019 5:54

Instrument :

MSVOA\_L

ClientSampleId :

VSTDIC015

Tot Ion: 91 Resp: 4307469

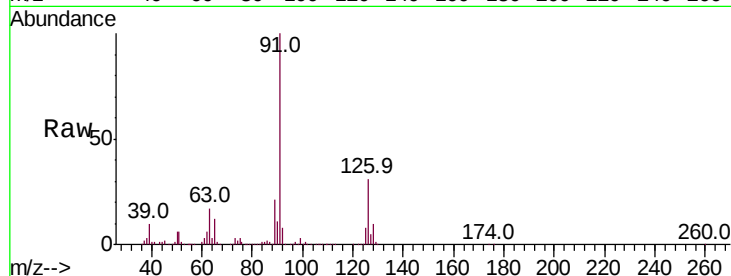
Ion Ratio Lower Upper

91 100

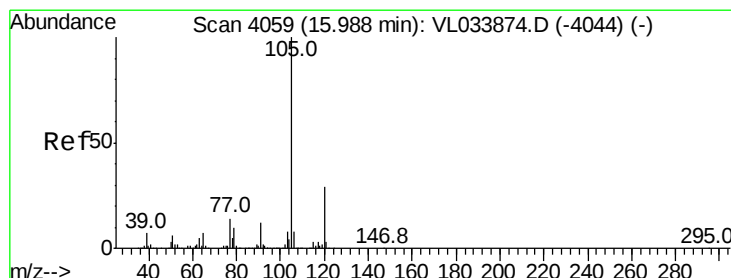
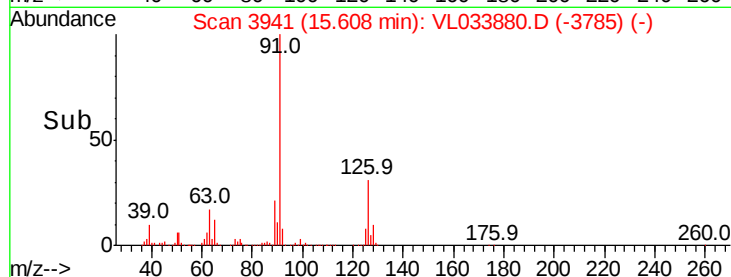
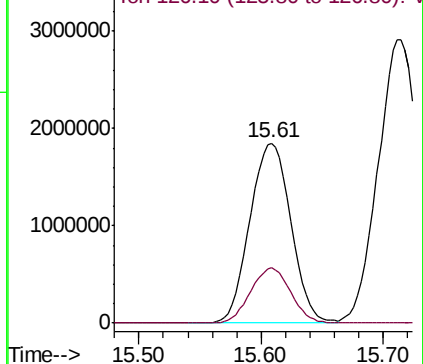
126 30.2 12.0 48.2

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6/11/2019 9:18:41 AM



Abundance Ion 91.10 (90.80 to 91.80): VL0  
Ion 126.10 (125.80 to 126.80): V



#72

4-Ethyltoluene

Concen: 15.107 ppbv

RT: 15.99 min Scan# 4060

Delta R.T. 0.00 min

Lab File: VL033880.D

Acq: 7 Jun 2019 5:54

Tgt Ion:105 Resp: 5049399

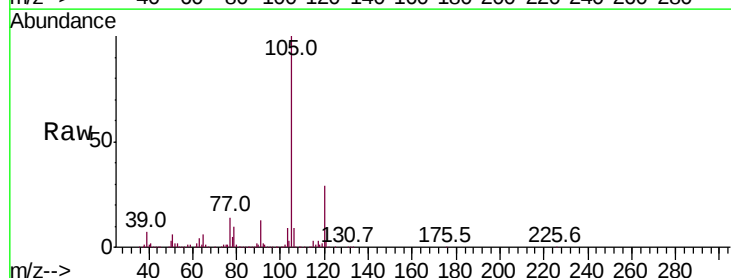
Ion Ratio Lower Upper

105 100

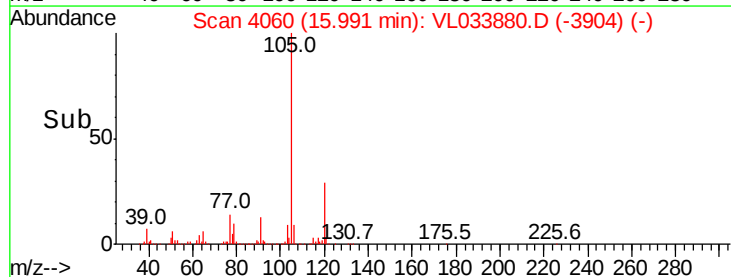
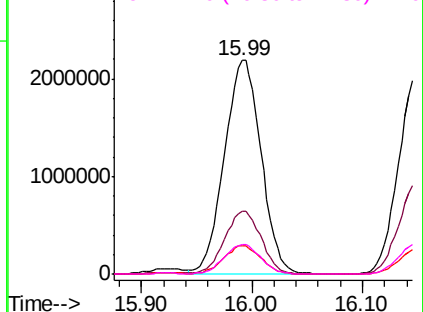
120 29.9 23.5 35.3

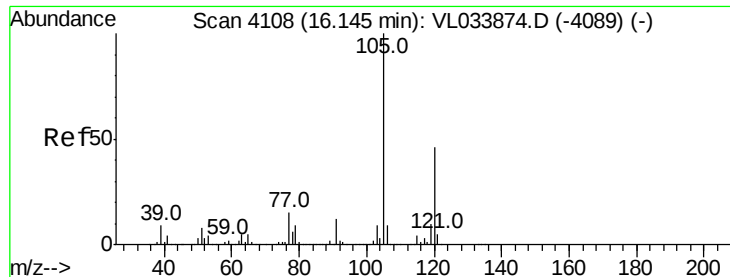
91 13.4 10.4 15.6

77 14.0 11.7 17.5



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





#73

1,3,5-Trimethylbenzene

Concen: 14.742 ppbv

RT: 16.15 min Scan# 4109

Delta R.T. 0.00 min

Lab File: VL033880.D

Acq: 7 Jun 2019 5:54

Instrument :

MSVOA\_L

ClientSampleId :

VSTDIC015

Tot Ion:105 Resp: 4818743

Ion Ratio Lower Upper

105 100

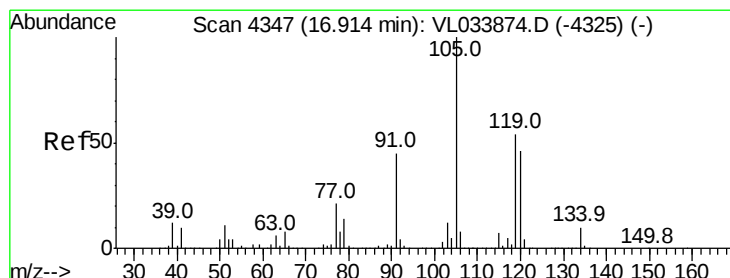
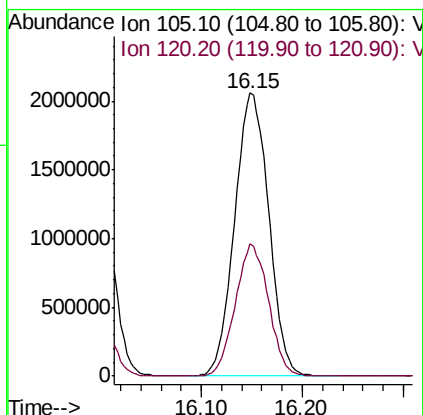
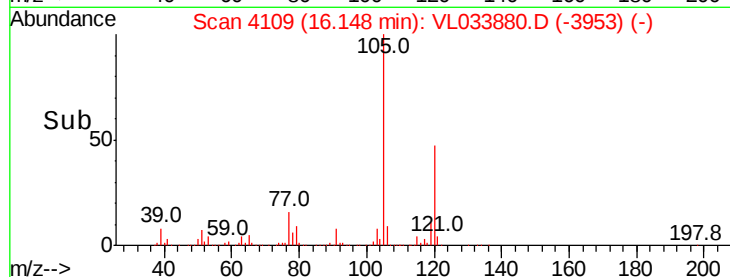
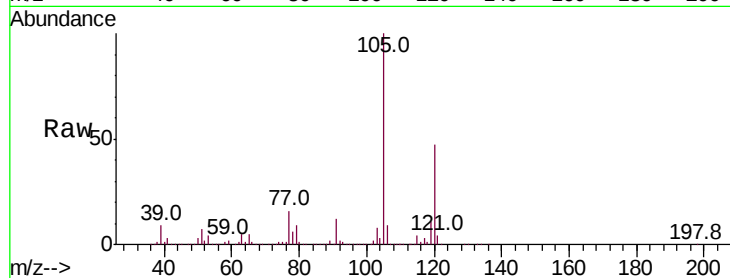
120 47.0 37.1 55.7

Manual Integrations

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#74

1,2,4-Trimethylbenzene

Concen: 14.419 ppbv

RT: 16.92 min Scan# 4349

Delta R.T. 0.01 min

Lab File: VL033880.D

Acq: 7 Jun 2019 5:54

Tgt Ion:105 Resp: 5142118

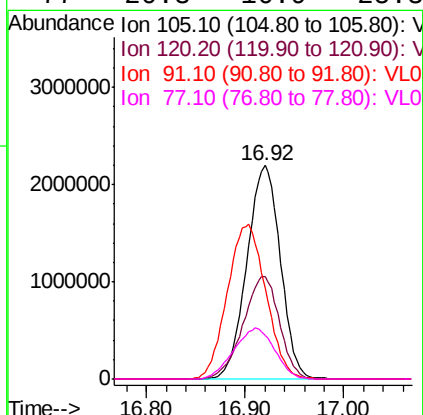
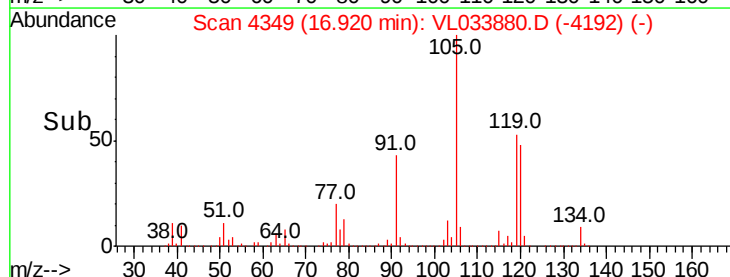
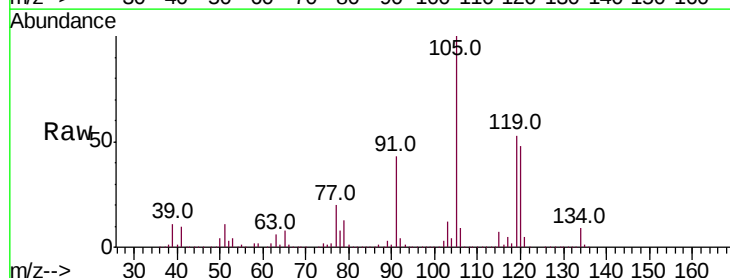
Ion Ratio Lower Upper

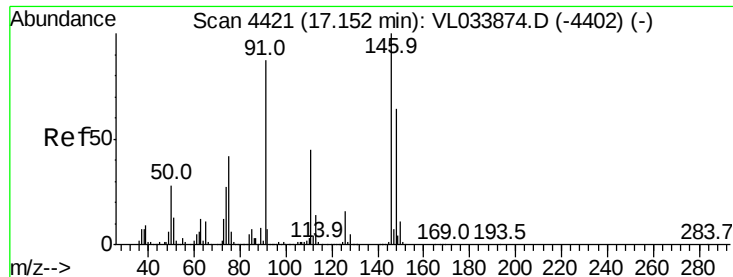
105 100

120 47.9 36.7 55.1

91 42.7 35.8 53.8

77 20.3 16.9 25.3





#75

1,3-Dichlorobenzene

Concen: 14.019 ppbv

RT: 17.16 min Scan# 4423

Delta R.T. 0.01 min

Lab File: VL033880.D

Acq: 7 Jun 2019 5:54

Instrument :

MSVOA\_L

ClientSampleId :

VSTDIC015

Tot Ion:146 Resp: 3068900

Ion Ratio Lower Upper

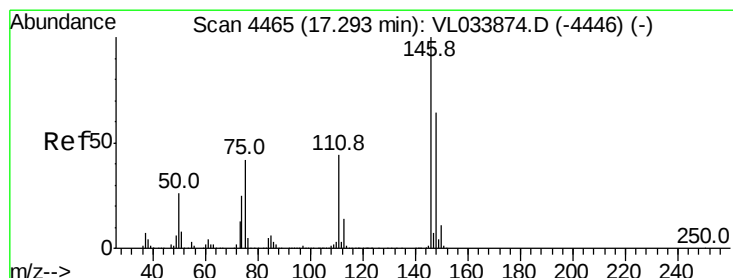
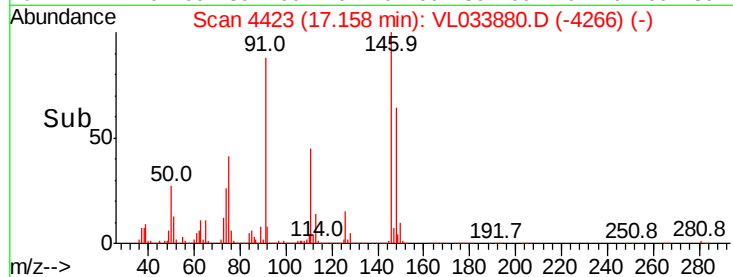
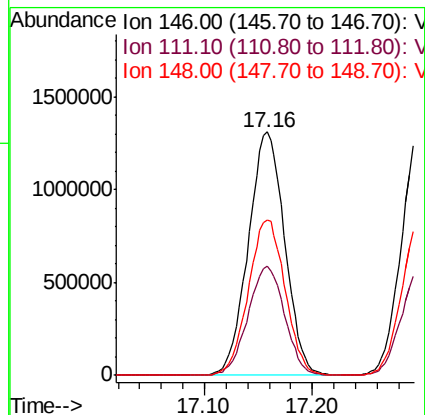
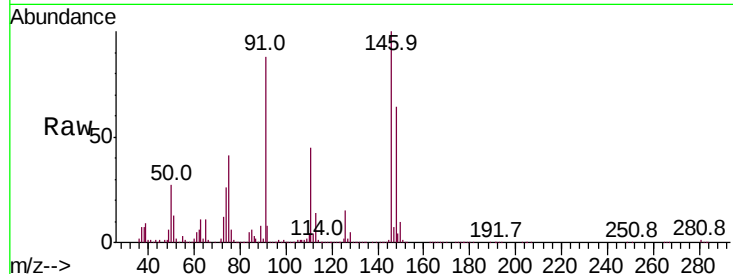
146 100

111 45.1 22.8 68.3

148 64.5 32.2 96.6

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#76

1,4-Dichlorobenzene

Concen: 14.692 ppbv

RT: 17.30 min Scan# 4467

Delta R.T. 0.01 min

Lab File: VL033880.D

Acq: 7 Jun 2019 5:54

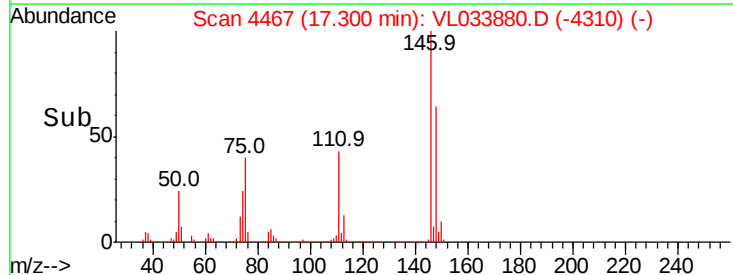
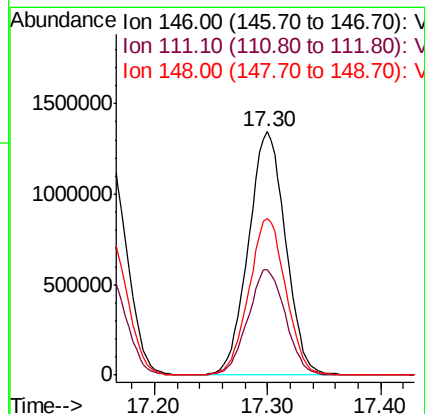
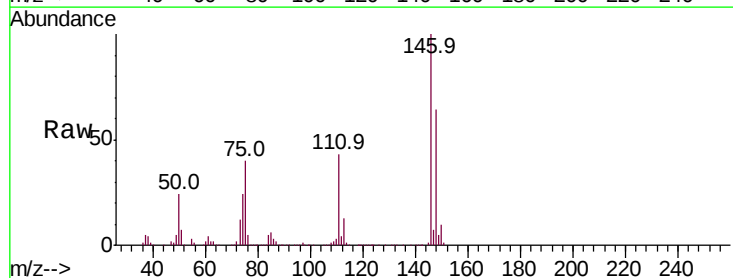
Tgt Ion:146 Resp: 3050687

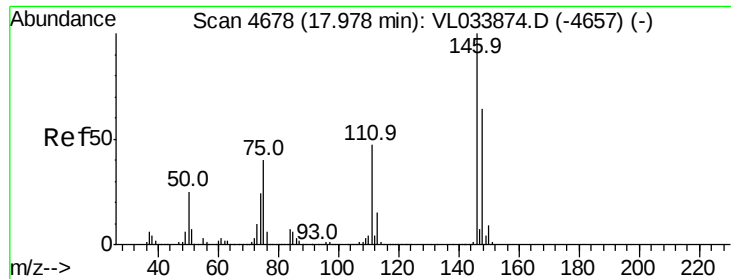
Ion Ratio Lower Upper

146 100

111 43.8 22.1 66.5

148 64.5 32.4 97.0





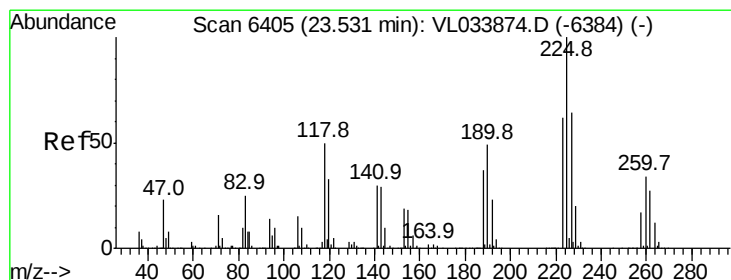
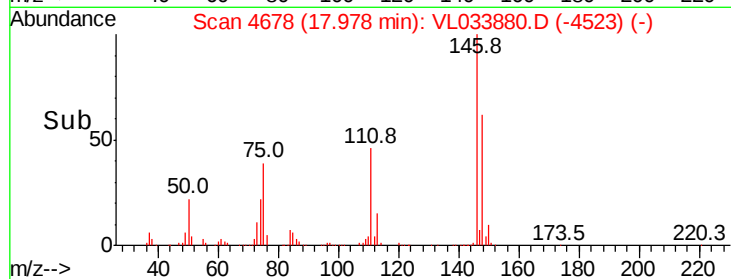
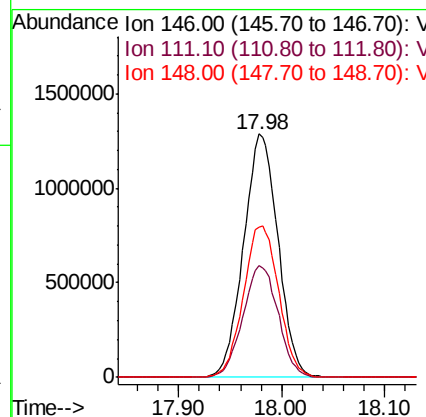
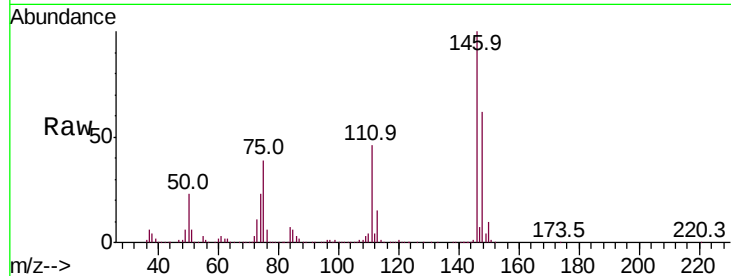
#77  
 1,2-Dichlorobenzene  
 Concen: 14.519 ppbv  
 RT: 17.98 min Scan# 4678  
 Delta R.T. -0.00 min  
 Lab File: VL033880.D  
 Acq: 7 Jun 2019 5:54

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDIC015

Tot Ion:146 Resp: 2988754  
 Ion Ratio Lower Upper  
 146 100  
 111 46.8 23.4 70.0  
 148 64.0 31.8 95.4

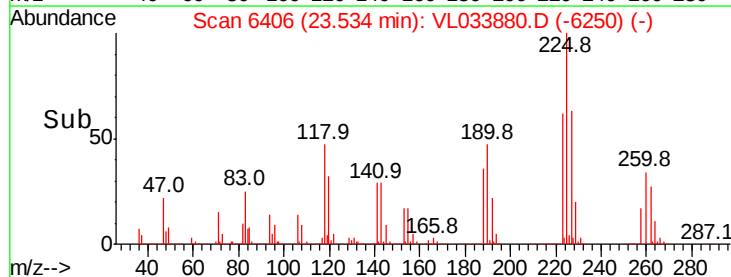
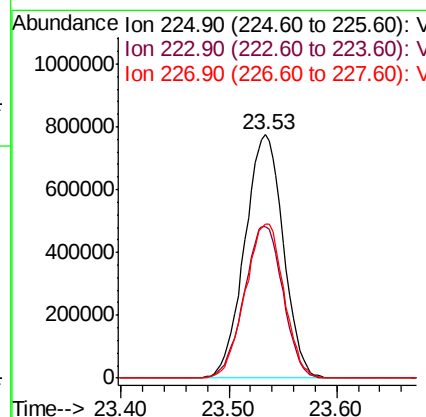
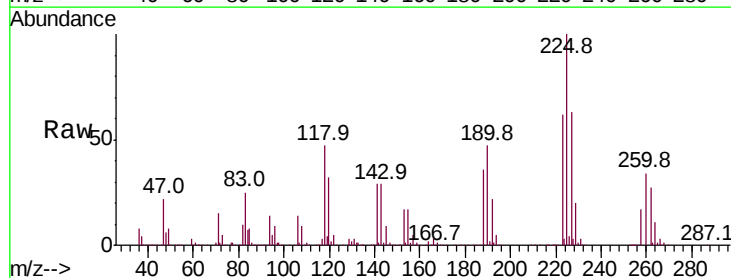
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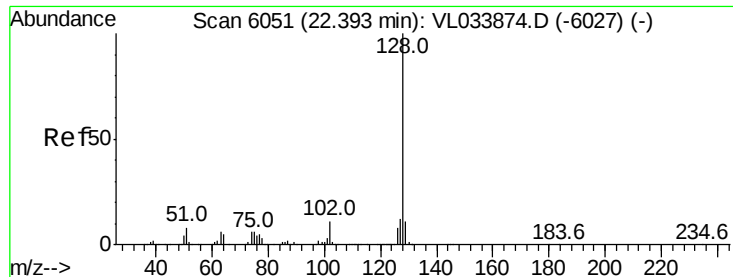
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#78  
 Hexachloro-1,3-Butadiene  
 Concen: 12.450 ppbv  
 RT: 23.53 min Scan# 6406  
 Delta R.T. 0.00 min  
 Lab File: VL033880.D  
 Acq: 7 Jun 2019 5:54

Tgt Ion:225 Resp: 1920530  
 Ion Ratio Lower Upper  
 225 100  
 223 63.0 50.8 76.2  
 227 63.8 51.8 77.6





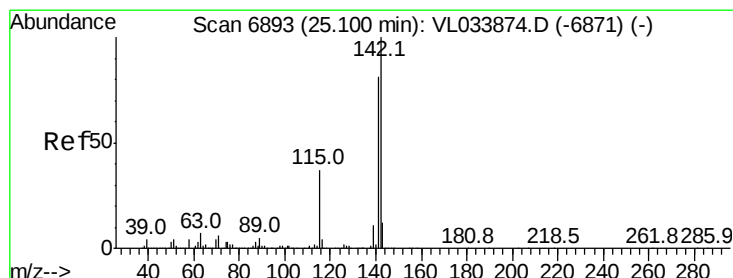
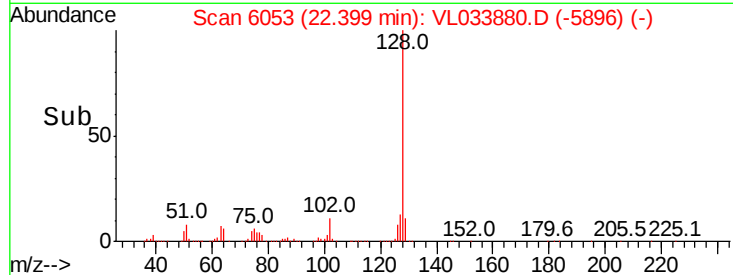
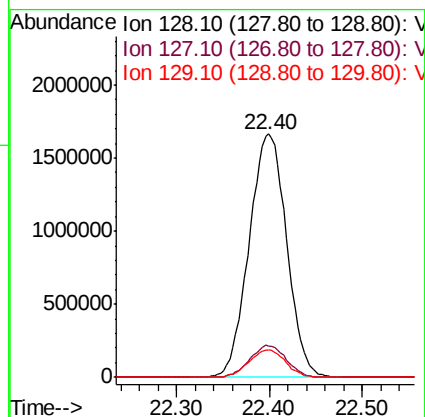
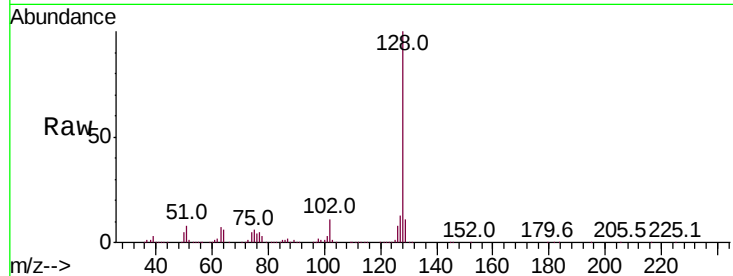
#79  
Naphthalene  
Concen: 14.659 ppbv  
RT: 22.40 min Scan# 6053  
Delta R.T. 0.01 min  
Lab File: VL033880.D  
Acq: 7 Jun 2019 5:54

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDIC015

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 128     | 100   |       |       |
| 127     | 12.9  | 9.7   | 14.5  |
| 129     | 11.4  | 8.6   | 12.8  |

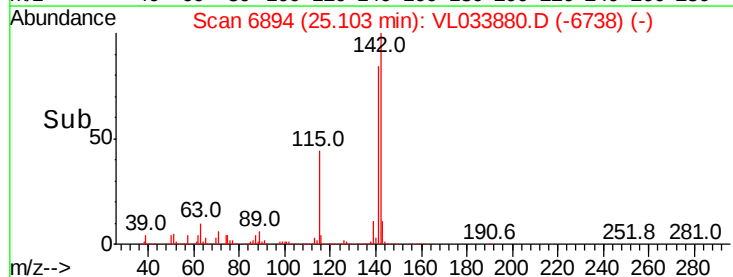
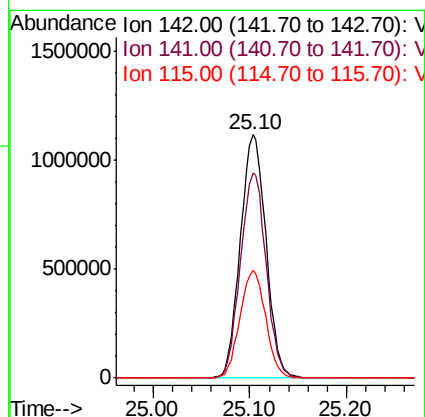
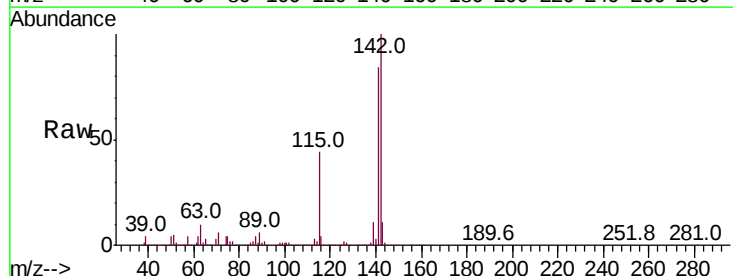
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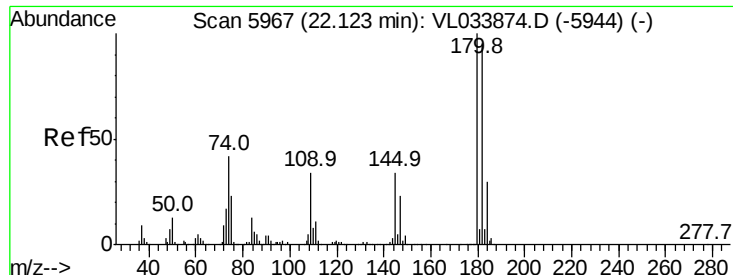
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#80  
Naphthalene, 2-methyl-  
Concen: 17.916 ppbv  
RT: 25.10 min Scan# 6894  
Delta R.T. 0.00 min  
Lab File: VL033880.D  
Acq: 7 Jun 2019 5:54

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 142     | 100   |       |       |
| 141     | 84.5  | 65.7  | 98.5  |
| 115     | 44.4  | 28.9  | 43.3# |





#81  
 1,2,4-Trichlorobenzene  
 Concen: 14.299 ppbv  
 RT: 22.13 min Scan# 5968  
 Delta R.T. 0.00 min  
 Lab File: VL033880.D  
 Acq: 7 Jun 2019 5:54

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDIC015

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 180     | 100   |       |       |
| 182     | 95.6  | 76.9  | 115.3 |
| 184     | 30.8  | 24.5  | 36.7  |

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