

Data Path : Z:\VOASRV\HPCHEM1\MSVOA\_L\DATA\VL120718\  
 Data File : VL032923.D  
 Acq On : 7 Dec 2018 5:34  
 Operator : SY/AP  
 Sample : VSTDIC0.5  
 Misc : 400ml/MSVOA\_L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDIC0.5

Manual Integrations  
 APPROVED

MMDadoda  
 12/11/2018 10:08:16 AM

Quant Time: Dec 07 09:37:03 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_L\METHODS\VL120718AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Fri Dec 07  
 QLast Update : Fri Dec 07 05:41:55 2018  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.77  | 49   | 1293461  | 10.00 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 7.30  | 114  | 3128968  | 10.00 | ppbv  | 0.00     |
| 55) Chlorobenzene-d5    | 12.25 | 117  | 2911653  | 10.00 | ppbv  | 0.00     |

## System Monitoring Compounds

|                             |        |       |          |          |      |         |
|-----------------------------|--------|-------|----------|----------|------|---------|
| 68) 1-Bromo-4-Fluorobenzene | 14.58  | 95    | 2185805  | 10.28    | ppbv | 0.00    |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 102.80% |

## Target Compounds

|                                |      |     |         |              | Qvalue |
|--------------------------------|------|-----|---------|--------------|--------|
| 2) Dichlorodifluoromethane     | 3.08 | 85  | 92705   | 0.523 ppbv   | 99     |
| 3) Chlorodifluoromethane       | 3.02 | 51  | 49729   | 0.493 ppbv   | 98     |
| 4) Chloromethane               | 3.17 | 50  | 32833   | 0.552 ppbv # | 83     |
| 5) Vinyl Chloride              | 3.30 | 62  | 26560   | 0.456 ppbv   | 94     |
| 6) Bromomethane                | 3.52 | 94  | 18341   | 0.486 ppbv   | 100    |
| 7) Chloroethane                | 3.61 | 64  | 11007   | 0.488 ppbv # | 85     |
| 8) Dichlorotetrafluoroethane   | 3.22 | 85  | 75519   | 0.523 ppbv   | 97     |
| 9) Propene                     | 3.04 | 41  | 18537   | 0.459 ppbv   | 97     |
| 10) Heptane                    | 8.25 | 43  | 59017m  | 0.384 ppbv   |        |
| 11) Trichlorofluoromethane     | 4.01 | 101 | 87499   | 0.498 ppbv   | 93     |
| 12) 1,1,2-Trichlorotrifluoroet | 4.56 | 101 | 71888m  | 0.538 ppbv   |        |
| 13) Ethanol                    | 3.66 | 45  | 8418m   | 0.616 ppbv   |        |
| 14) Bromoethene                | 3.80 | 108 | 22898   | 0.469 ppbv   | 96     |
| 15) Acetone                    | 3.92 | 43  | 60754   | 0.526 ppbv   | 93     |
| 16) 1,3-Butadiene              | 3.37 | 39  | 21614m  | 0.469 ppbv   |        |
| 17) tert-Butyl alcohol         | 4.39 | 59  | 15589m  | 0.486 ppbv   |        |
| 18) 1,1-Dichloroethene         | 4.36 | 96  | 31038   | 0.535 ppbv   | 92     |
| 19) Isopropyl Alcohol          | 4.05 | 45  | 36665   | 0.439 ppbv # | 94     |
| 20) Methylene Chloride         | 4.42 | 84  | 34561   | 0.533 ppbv   | 93     |
| 21) Allyl Chloride             | 4.49 | 41  | 44172m  | 0.519 ppbv   |        |
| 22) trans-1,2-Dichloroethene   | 4.97 | 96  | 33832m  | 0.483 ppbv   |        |
| 23) Vinyl Acetate              | 5.16 | 43  | 78687m  | 0.362 ppbv   |        |
| 24) 1,1-Dichloroethane         | 5.10 | 63  | 85975   | 0.513 ppbv   | 96     |
| 25) Ethyl Acetate              | 5.78 | 43  | 130711  | 0.480 ppbv   | 99     |
| 26) Hexane                     | 5.78 | 57  | 59948   | 0.469 ppbv   | 94     |
| 27) Carbon Disulfide           | 4.63 | 76  | 74253   | 0.459 ppbv # | 85     |
| 28) Methyl tert-Butyl Ether    | 5.13 | 73  | 78386   | 0.383 ppbv   | 97     |
| 29) Chloroform                 | 5.85 | 83  | 112608  | 0.530 ppbv   | 96     |
| 30) Cyclohexane                | 7.26 | 84  | 43205m  | 0.414 ppbv   |        |
| 31) cis-1,2-Dichloroethene     | 5.65 | 61  | 47291   | 0.406 ppbv   | 93     |
| 32) 1,1,1-Trichloroethane      | 6.62 | 97  | 103811  | 0.437 ppbv   | 98     |
| 34) 2-Butanone                 | 5.35 | 43  | 64546   | 0.417 ppbv   | 98     |
| 35) Carbon Tetrachloride       | 7.14 | 117 | 113009  | 0.486 ppbv   | 94     |
| 36) Benzene                    | 7.01 | 78  | 107727m | 0.439 ppbv   |        |
| 37) 1,2-Dichloroethane         | 6.42 | 62  | 78857   | 0.500 ppbv   | 97     |
| 38) Trichloroethene            | 7.96 | 130 | 43277   | 0.443 ppbv # | 87     |
| 39) 1,2-Dichloropropane        | 7.74 | 63  | 42665m  | 0.475 ppbv   |        |
| 40) 1,4-Dioxane                | 8.01 | 88  | 15768m  | 0.465 ppbv   |        |
| 41) Tetrahydrofuran            | 6.19 | 42  | 35187m  | 0.399 ppbv   |        |
| 42) Bromodichloromethane       | 7.92 | 83  | 106783  | 0.487 ppbv # | 98     |
| 43) Methyl Methacrylate        | 8.15 | 69  | 33931   | 0.375 ppbv   | 96     |

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 Sample : VSTDIC0.5  
 Misc : 400ml/MSVOA\_L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDIC0.5

Manual Integrations  
 APPROVED

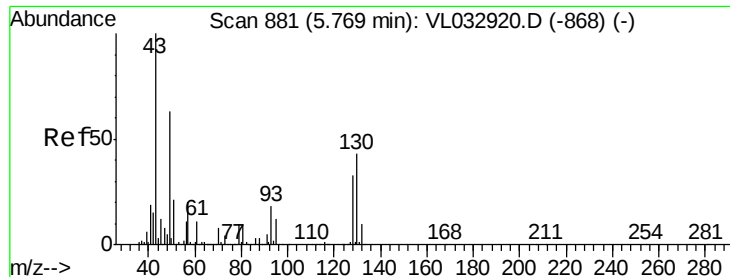
MMDadoda  
 12/11/2018 10:08:16 AM

Quant Time: Dec 07 09:37:03 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_L\METHODS\VL120718AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Fri Dec 07 09:37:03 2018  
 QLast Update : Fri Dec 07 05:41:55 2018  
 Response via : Initial Calibration

| Internal Standards            | R.T.  | QIon | Response | Conc  | Units  | Dev(Min) |
|-------------------------------|-------|------|----------|-------|--------|----------|
| 44) 2,2,4-Trimethylpentane    | 8.00  | 57   | 172906   | 0.432 | ppbv   | 96       |
| 45) t-1,3-Dichloropropene     | 9.42  | 75   | 35580m   | 0.299 | ppbv   |          |
| 46) cis-1,3-Dichloropropene   | 8.84  | 75   | 42811    | 0.317 | ppbv   | 95       |
| 47) 1,1,2-Trichloroethane     | 9.61  | 97   | 47315    | 0.446 | ppbv   | 91       |
| 48) Dibromochloromethane      | 10.45 | 129  | 84056m   | 0.428 | ppbv   |          |
| 49) Bromoform                 | 13.20 | 173  | 66071m   | 0.401 | ppbv   |          |
| 50) 4-Methyl-2-Pentanone      | 8.90  | 43   | 88931    | 0.393 | ppbv   | 97       |
| 51) 2-Hexanone                | 10.31 | 43   | 49978    | 0.298 | ppbv # | 94       |
| 52) Tetrachloroethene         | 11.38 | 164  | 39103m   | 0.426 | ppbv   |          |
| 53) Toluene                   | 9.95  | 91   | 89633    | 0.323 | ppbv   | 100      |
| 54) 1,2-Dibromoethane         | 10.76 | 107  | 64805m   | 0.409 | ppbv   |          |
| 56) 1,1,1,2-Tetrachloroethane | 12.28 | 131  | 70975    | 0.540 | ppbv # | 1        |
| 57) Chlorobenzene             | 12.30 | 112  | 114275   | 0.526 | ppbv # | 90       |
| 58) Ethyl Benzene             | 12.88 | 91   | 117284   | 0.353 | ppbv   | 97       |
| 59) m/p-Xylene                | 13.16 | 91   | 242839m  | 0.811 | ppbv   |          |
| 60) o-Xylene                  | 13.86 | 91   | 121283   | 0.414 | ppbv   | 99       |
| 61) Styrene                   | 13.70 | 104  | 61658m   | 0.315 | ppbv   |          |
| 62) Isopropylbenzene          | 14.83 | 105  | 176655   | 0.425 | ppbv   | 97       |
| 63) 1,1,2,2-Tetrachloroethane | 13.85 | 83   | 103744m  | 0.470 | ppbv   |          |
| 64) n-propylbenzene           | 15.74 | 120  | 44399m   | 0.424 | ppbv   |          |
| 65) tert-Butylbenzene         | 16.92 | 119  | 156687   | 0.440 | ppbv   | 91       |
| 66) Benzyl Chloride           | 17.16 | 91   | 78857m   | 0.418 | ppbv   |          |
| 67) sec-Butylbenzene          | 17.47 | 105  | 237818   | 0.471 | ppbv   | 99       |
| 69) p-Isopropyltoluene        | 17.83 | 119  | 173547   | 0.432 | ppbv   | 96       |
| 70) n-Butylbenzene            | 18.72 | 91   | 165012   | 0.418 | ppbv   | 97       |
| 71) 2-Chlorotoluene           | 15.62 | 91   | 116719   | 0.389 | ppbv   | 100      |
| 72) 4-Ethyltoluene            | 16.01 | 105  | 111889   | 0.362 | ppbv # | 93       |
| 73) 1,3,5-Trimethylbenzene    | 16.17 | 105  | 124568   | 0.419 | ppbv   | 95       |
| 74) 1,2,4-Trimethylbenzene    | 16.93 | 105  | 164747   | 0.509 | ppbv   | 93       |
| 75) 1,3-Dichlorobenzene       | 17.17 | 146  | 97941    | 0.517 | ppbv   | 93       |
| 76) 1,4-Dichlorobenzene       | 17.32 | 146  | 85909    | 0.484 | ppbv   | 97       |
| 77) 1,2-Dichlorobenzene       | 18.00 | 146  | 88223    | 0.494 | ppbv   | 97       |
| 78) Hexachloro-1,3-Butadiene  | 23.55 | 225  | 57654    | 0.511 | ppbv   | 96       |
| 79) Naphthalene               | 22.42 | 128  | 70454m   | 0.368 | ppbv   |          |
| 80) Naphthalene,2-methyl-     | 25.12 | 142  | 10990    | 0.257 | ppbv   | 95       |
| 81) 1,2,4-Trichlorobenzene    | 22.15 | 180  | 46877m   | 0.465 | ppbv   |          |

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





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.77 min Scan# 880

Delta R.T. -0.00 min

Lab File: VL032923.D

Acq: 7 Dec 2018 5:34

Instrument :

MSVOA\_L

ClientSampleId :

VSTDIC0.5

Tgt Ion: 49 Resp: 1293461

Ion Ratio Lower Upper

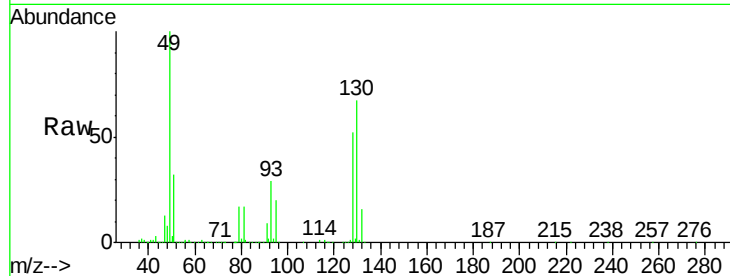
49 100

128 51.7 26.3 78.8

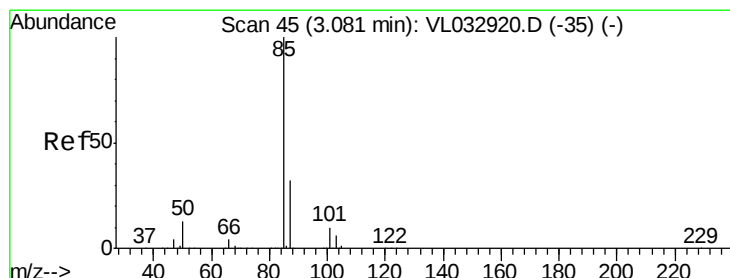
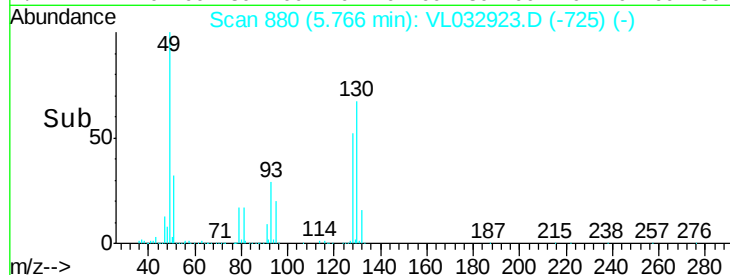
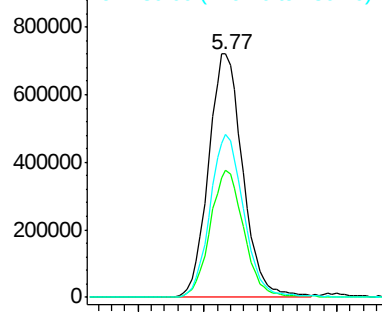
130 66.6 33.9 101.7

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Abundance Ion 49.10 (48.80 to 49.80): VL0  
Ion 128.00 (127.70 to 128.70): VL0  
Ion 130.00 (129.70 to 130.70): VL0



#2

Dichlorodifluoromethane

Concen: 0.523 ppbv

RT: 3.08 min Scan# 45

Delta R.T. 0.00 min

Lab File: VL032923.D

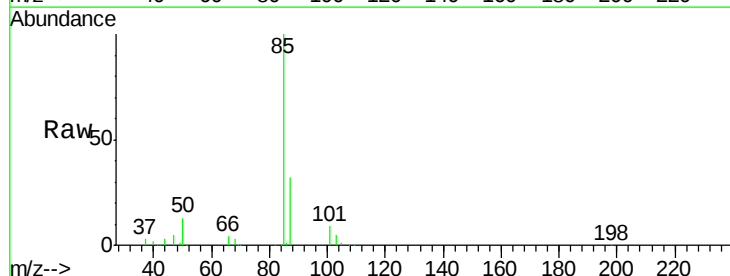
Acq: 7 Dec 2018 5:34

Tgt Ion: 85 Resp: 92705

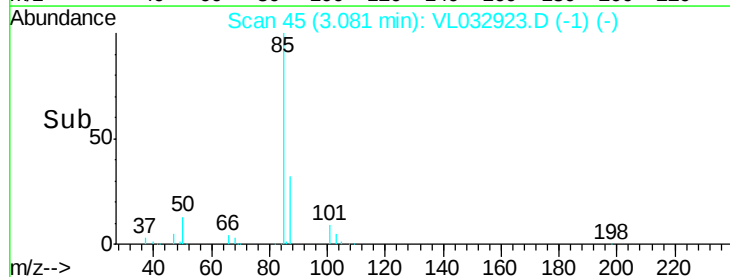
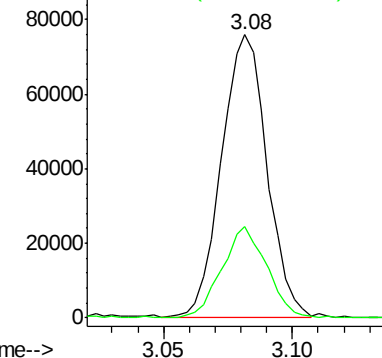
Ion Ratio Lower Upper

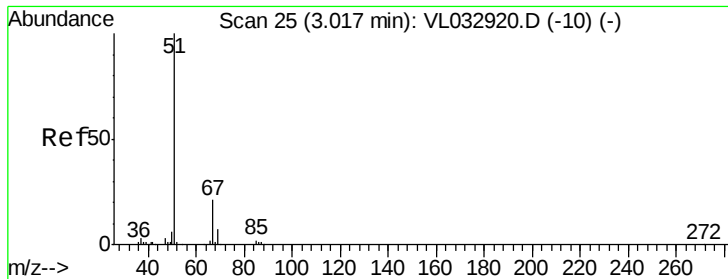
85 100

87 32.4 25.7 38.5



Abundance Ion 85.00 (84.70 to 85.70): VL0  
Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.493 ppbv

RT: 3.02 min Scan# 26

Delta R.T. 0.00 min

Lab File: VL032923.D

Acq: 7 Dec 2018 5:34

Instrument :

MSVOA\_L

ClientSampleId :

VSTDIC0.5

Tgt Ion: 51 Resp: 49729

Ion Ratio Lower Upper

51 100

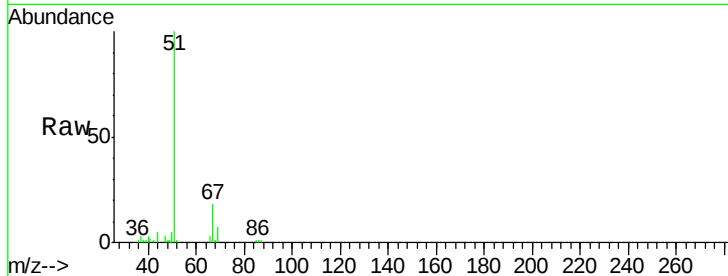
67 20.2 16.8 25.2

Manual Integrations

APPROVED

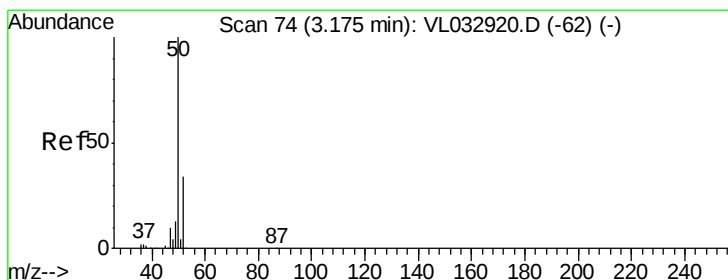
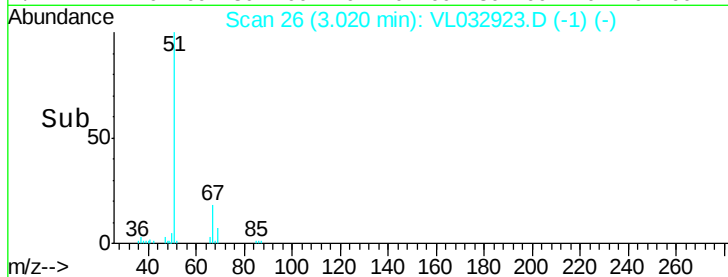
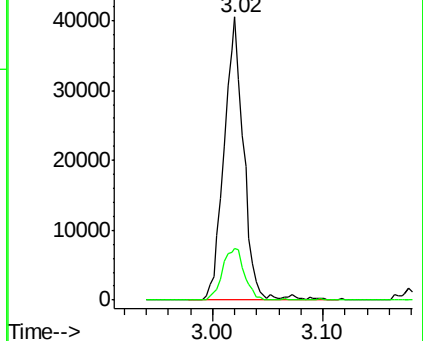
MMDadoda

12/11/2018 10:08:16 AM



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.552 ppbv

RT: 3.17 min Scan# 74

Delta R.T. 0.00 min

Lab File: VL032923.D

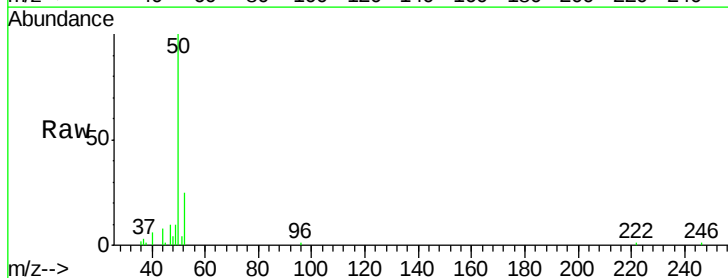
Acq: 7 Dec 2018 5:34

Tgt Ion: 50 Resp: 32833

Ion Ratio Lower Upper

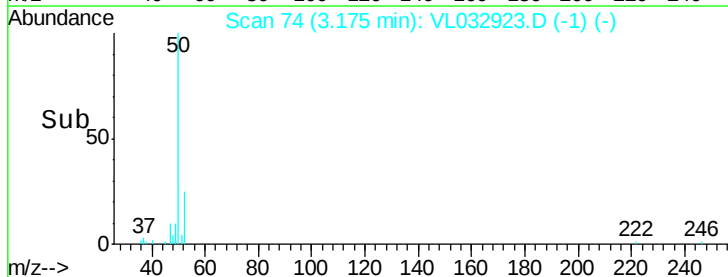
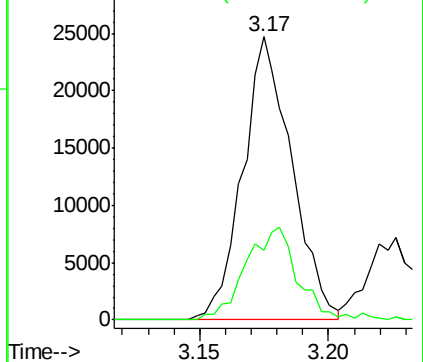
50 100

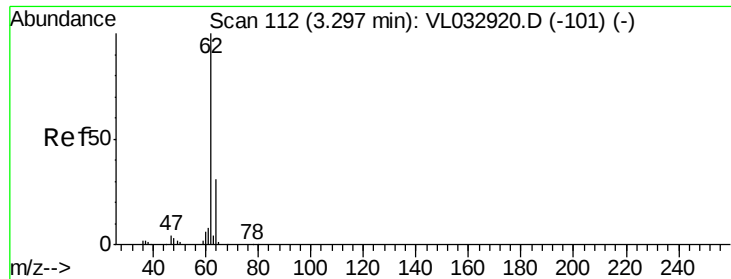
52 24.5 27.3 40.9#



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#5

Vinyl Chloride

Concen: 0.456 ppbv

RT: 3.30 min Scan# 113

Delta R.T. 0.00 min

Lab File: VL032923.D

Acq: 7 Dec 2018 5:34

Instrument :

MSVOA\_L

ClientSampleId :

VSTDIC0.5

Tgt Ion: 62 Resp: 26560

Ion Ratio Lower Upper

62 100

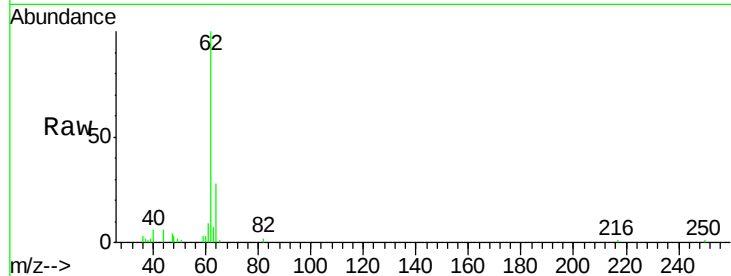
64 28.0 24.8 37.2

Manual Integrations

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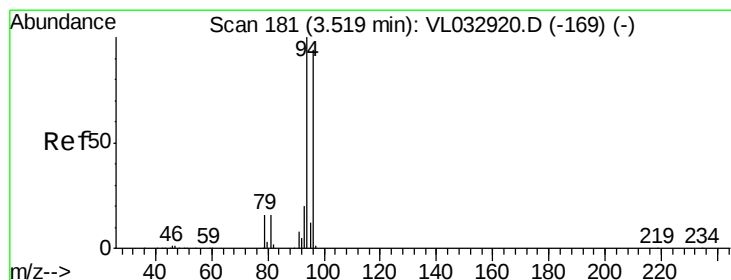
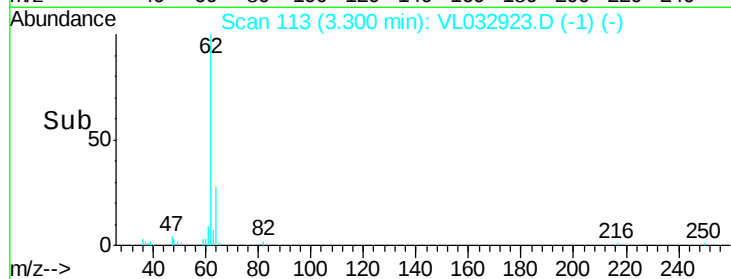
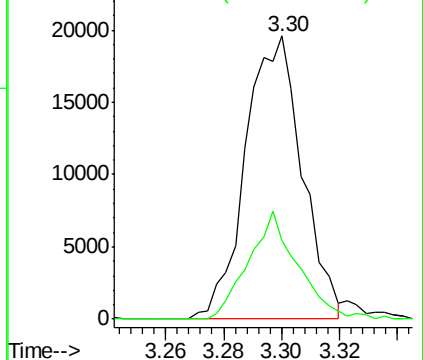
MMDadoda

12/11/2018 10:08:16 AM



Abundance Ion 62.10 (61.80 to 62.80): VL0

Ion 64.10 (63.80 to 64.80): VL0



#6

Bromomethane

Concen: 0.486 ppbv

RT: 3.52 min Scan# 181

Delta R.T. 0.00 min

Lab File: VL032923.D

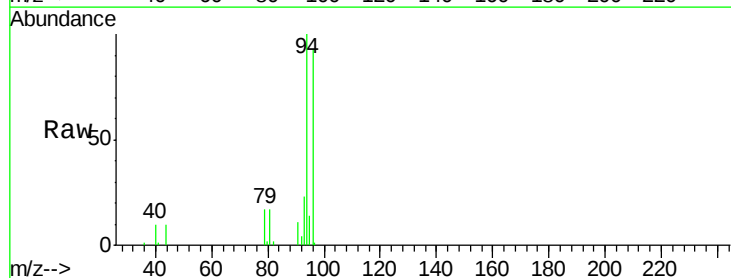
Acq: 7 Dec 2018 5:34

Tgt Ion: 94 Resp: 18341

Ion Ratio Lower Upper

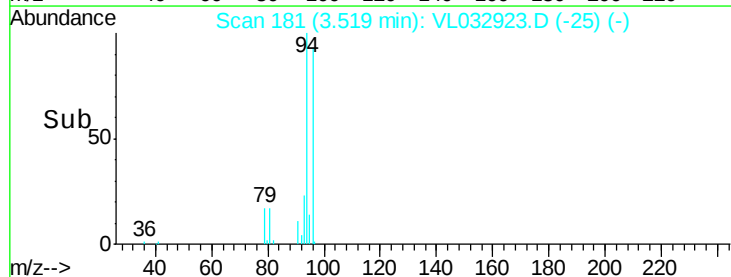
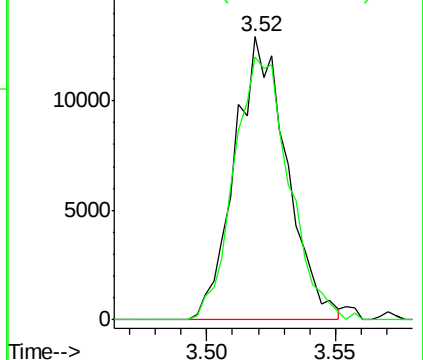
94 100

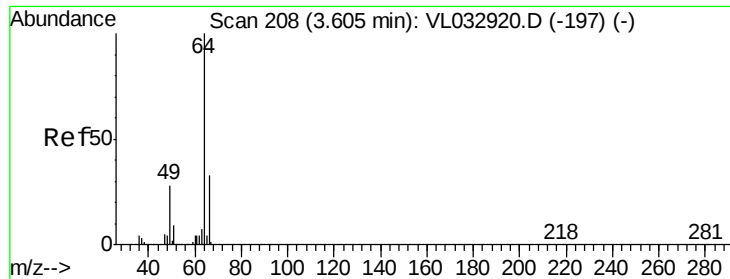
96 94.3 75.5 113.3



Abundance Ion 94.00 (93.70 to 94.70): VL0

Ion 96.00 (95.70 to 96.70): VL0





#7

Chloroethane

Concen: 0.488 ppbv

RT: 3.61 min Scan# 208

Delta R.T. 0.00 min

Lab File: VL032923.D

Acq: 7 Dec 2018 5:34

Instrument :

MSVOA\_L

ClientSampleId :

VSTDIC0.5

Tgt Ion: 64 Resp: 11007

Ion Ratio Lower Upper

64 100

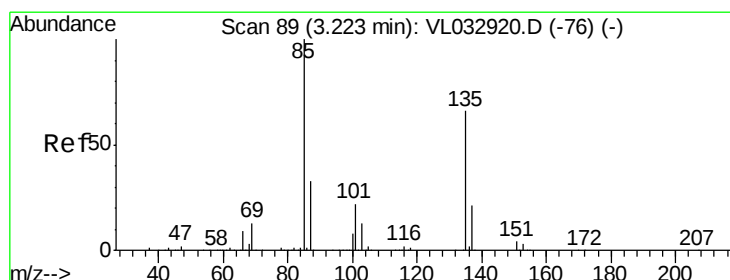
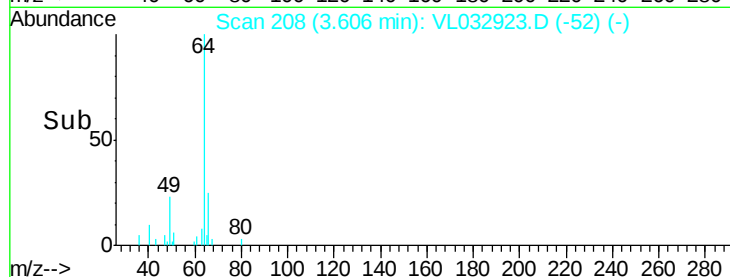
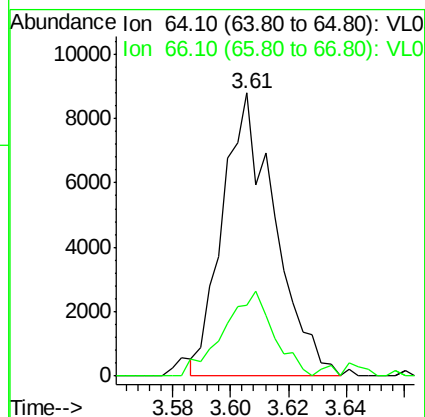
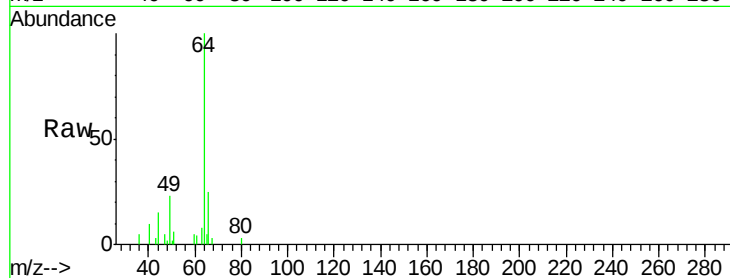
66 25.1 26.6 40.0#

Manual Integrations

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12/11/2018 10:08:16 AM



#8

Dichlorotetrafluoroethane

Concen: 0.523 ppbv

RT: 3.22 min Scan# 89

Delta R.T. 0.00 min

Lab File: VL032923.D

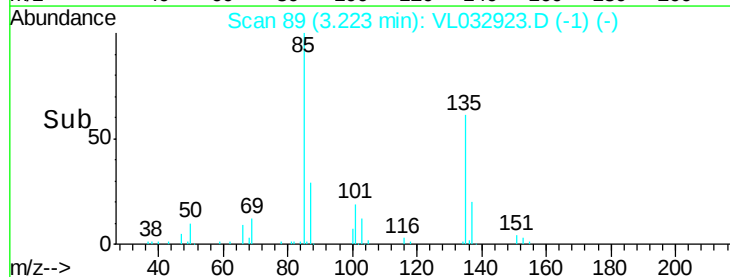
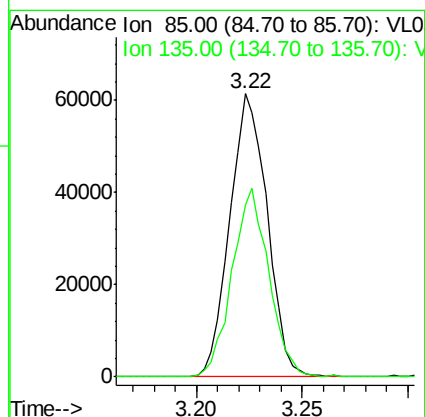
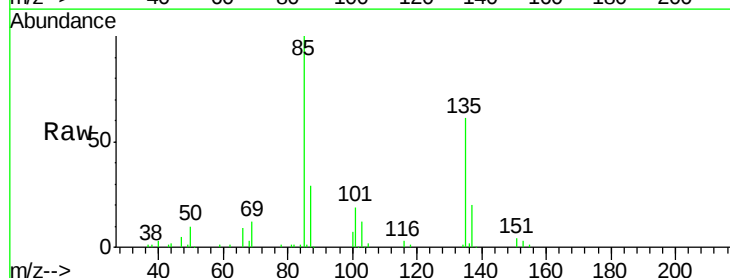
Acq: 7 Dec 2018 5:34

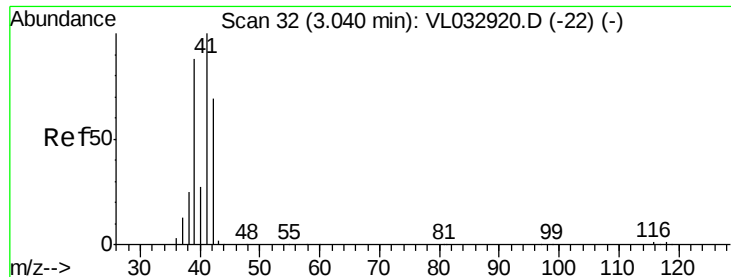
Tgt Ion: 85 Resp: 75519

Ion Ratio Lower Upper

85 100

135 65.5 54.5 81.7





#9

Propene

Concen: 0.459 ppbv

RT: 3.04 min Scan# 32

Delta R.T. 0.00 min

Lab File: VL032923.D

Acq: 7 Dec 2018 5:34

Instrument :

MSVOA\_L

ClientSampleId :

VSTDIC0.5

Tgt Ion: 41 Resp: 18537

Ion Ratio Lower Upper

41 100

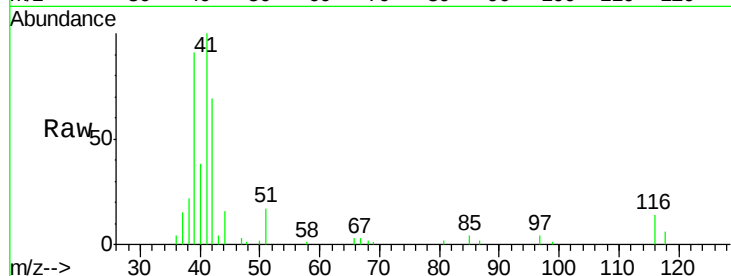
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Manual Integrations

APPROVED

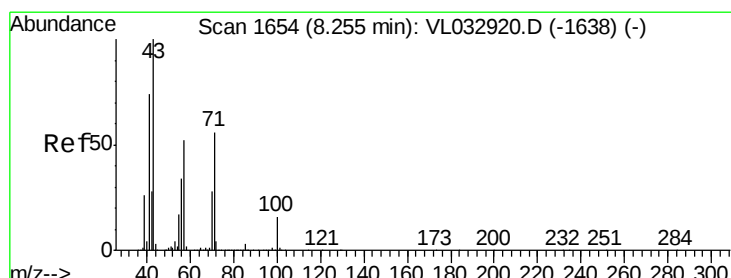
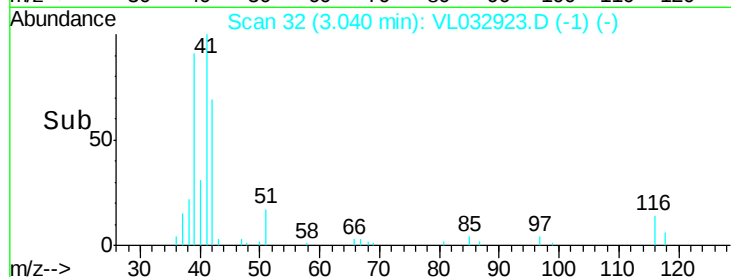
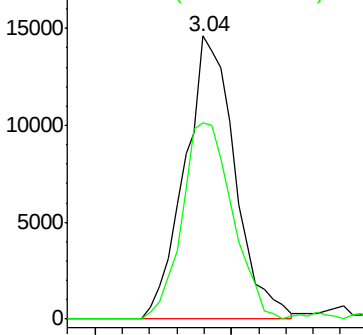
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Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0



#10

Heptane

Concen: 0.384 ppbv m

RT: 8.25 min Scan# 1652

Delta R.T. -0.01 min

Lab File: VL032923.D

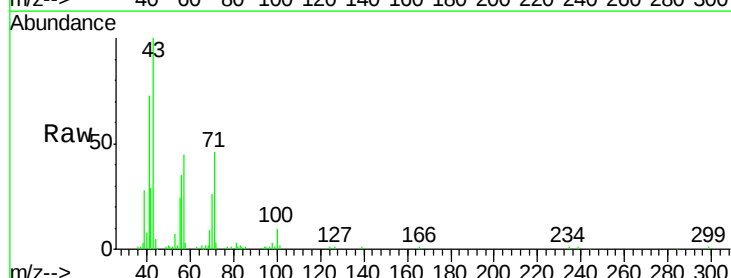
Acq: 7 Dec 2018 5:34

Tgt Ion: 43 Resp: 59017

Ion Ratio Lower Upper

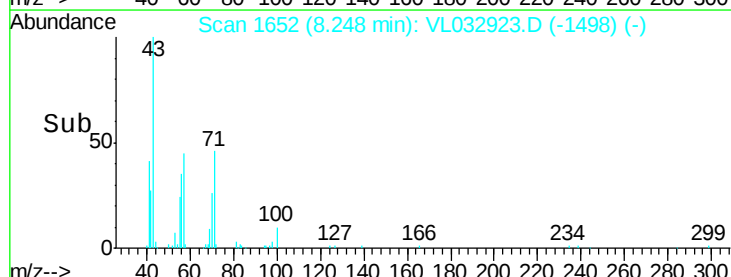
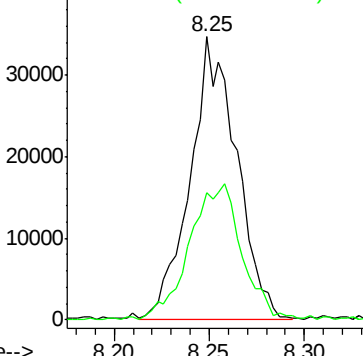
43 100

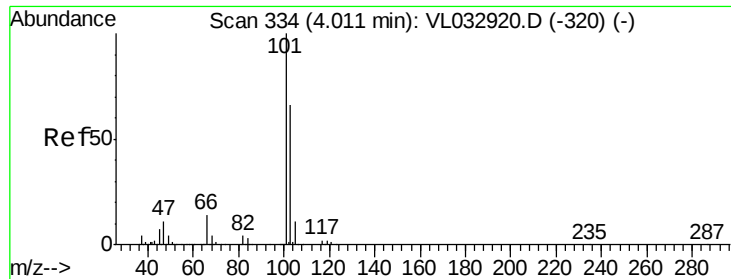
57 0.0 41.8 62.6#



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 57.10 (56.80 to 57.80): VL0





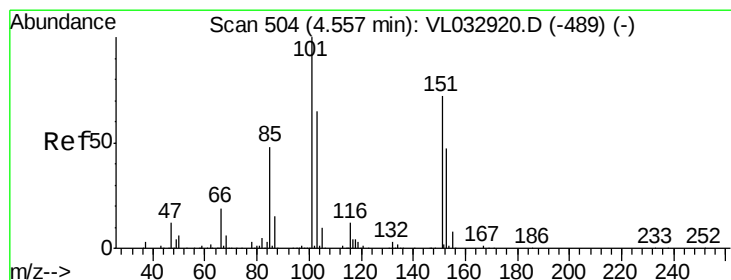
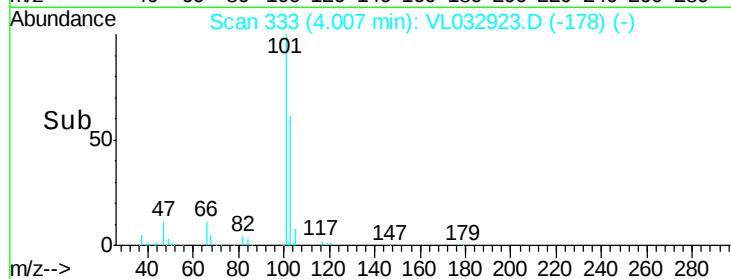
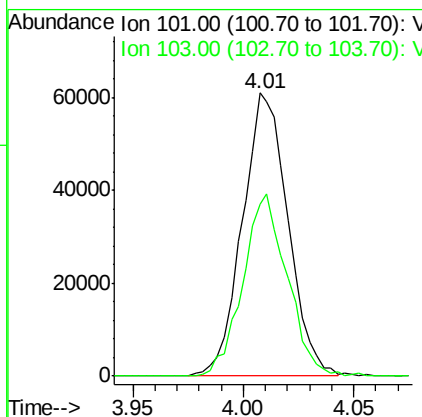
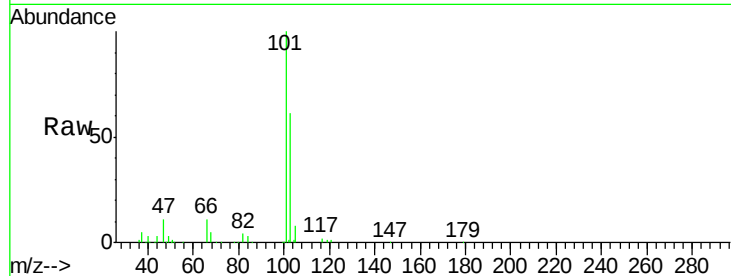
#11  
 Trichlorofluoromethane  
 Concen: 0.498 ppbv  
 RT: 4.01 min Scan# 333  
 Delta R.T. -0.00 min  
 Lab File: VL032923.D  
 Acq: 7 Dec 2018 5:34

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDIC0.5

Tgt Ion:101 Resp: 87499  
 Ion Ratio Lower Upper  
 101 100  
 103 60.6 52.7 79.1

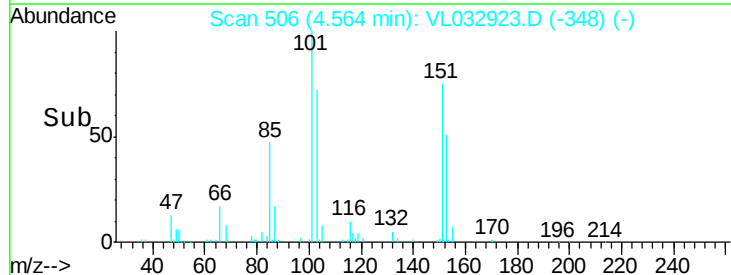
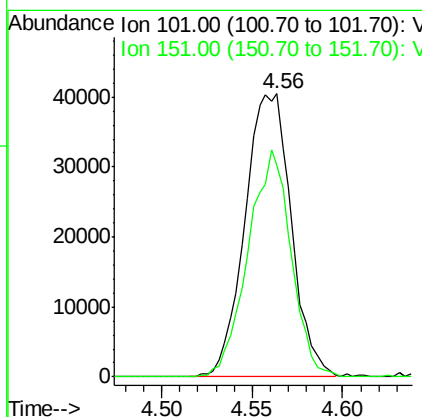
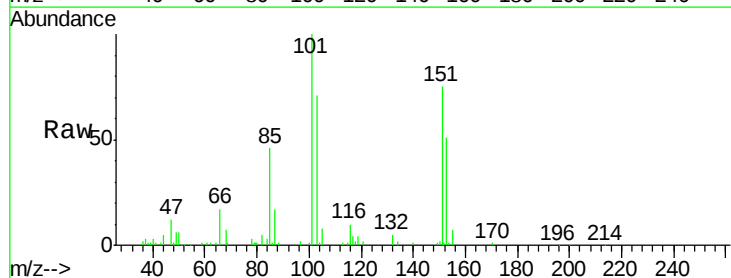
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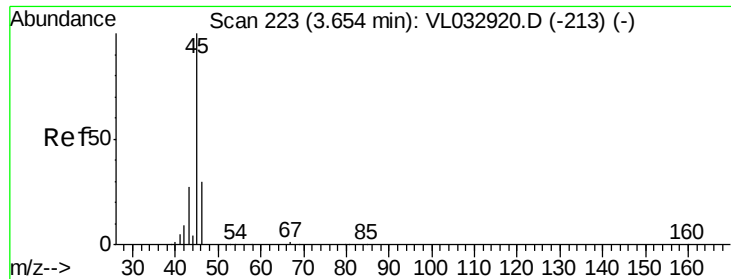
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#12  
 1,1,2-Trichlorotrifluoroethane  
 Concen: 0.538 ppbv m  
 RT: 4.56 min Scan# 506  
 Delta R.T. 0.01 min  
 Lab File: VL032923.D  
 Acq: 7 Dec 2018 5:34

Tgt Ion:101 Resp: 71888  
 Ion Ratio Lower Upper  
 101 100  
 151 0.0 59.3 88.9#





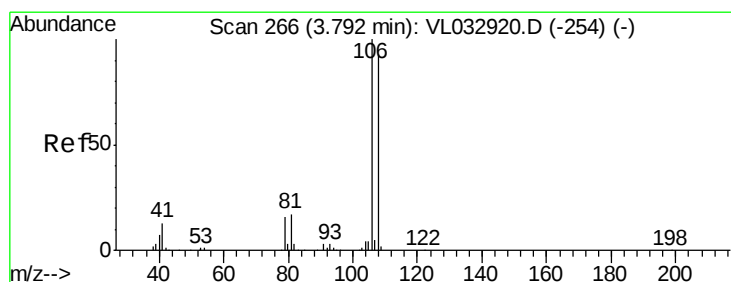
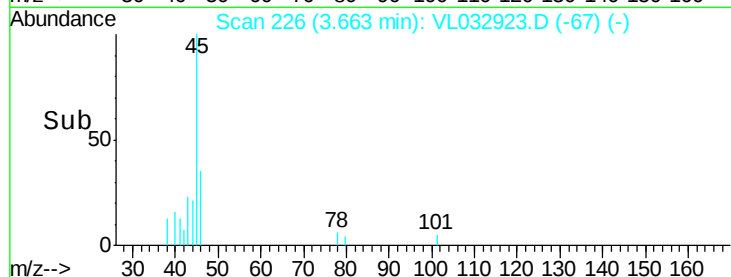
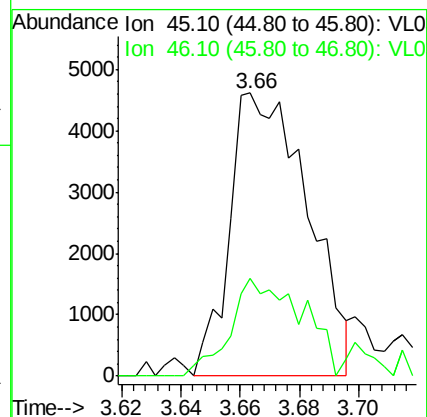
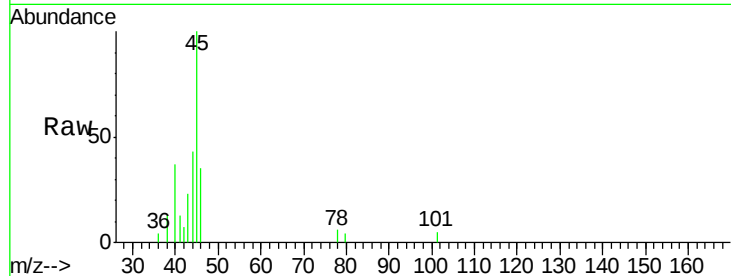
#13  
Ethanol  
Concen: 0.616 ppbv m  
RT: 3.66 min Scan# 226  
Delta R.T. 0.01 min  
Lab File: VL032923.D  
Acq: 7 Dec 2018 5:34

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDIC0.5

Tgt Ion: 45 Resp: 8418  
Ion Ratio Lower Upper  
45 100  
46 36.6 13.8 55.4

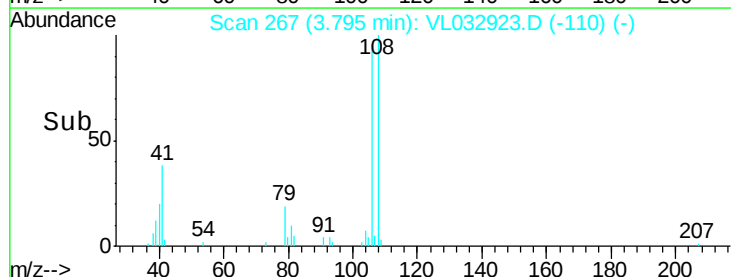
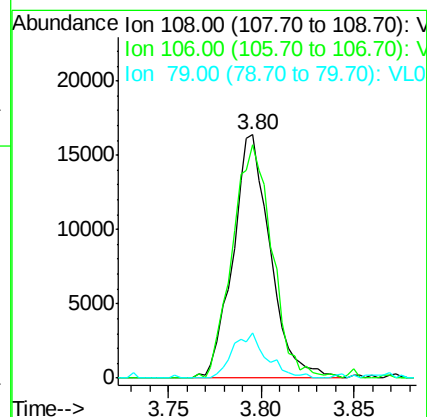
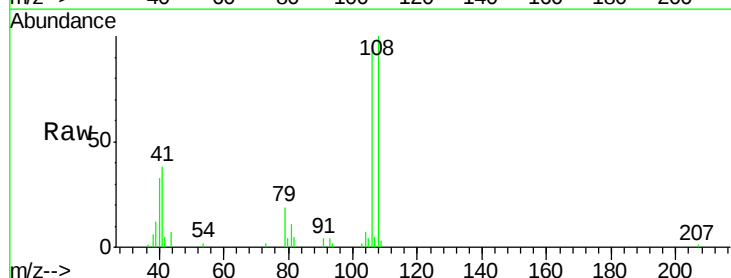
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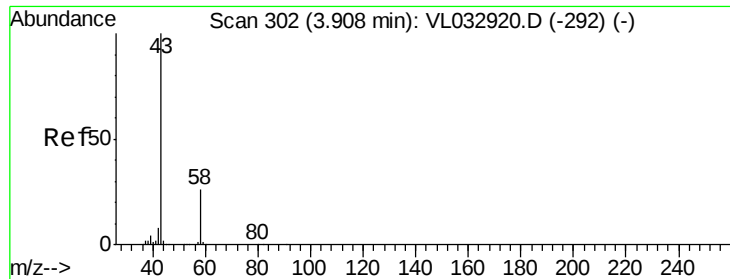
MMDadoda  
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#14  
Bromoethene  
Concen: 0.469 ppbv  
RT: 3.80 min Scan# 267  
Delta R.T. 0.00 min  
Lab File: VL032923.D  
Acq: 7 Dec 2018 5:34

Tgt Ion: 108 Resp: 22898  
Ion Ratio Lower Upper  
108 100  
106 102.2 85.4 128.2  
79 17.1 14.6 21.8





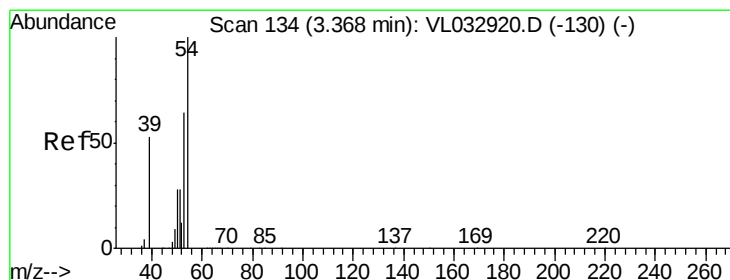
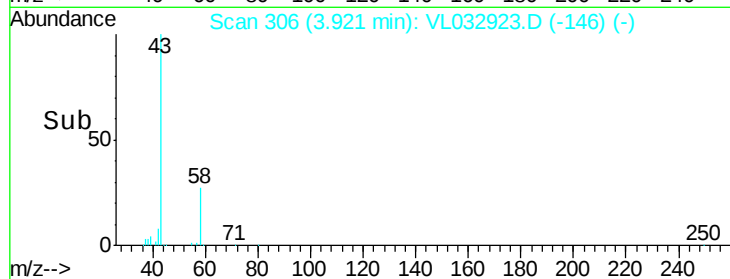
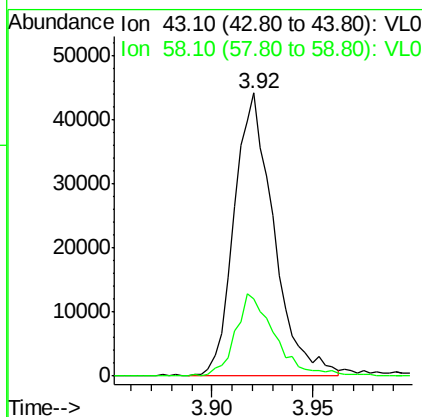
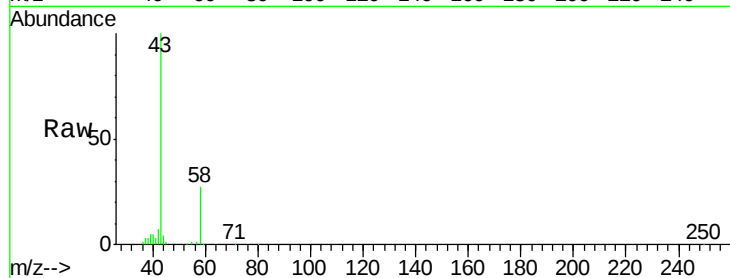
#15  
Acetone  
Concen: 0.526 ppbv  
RT: 3.92 min Scan# 306  
Delta R.T. 0.01 min  
Lab File: VL032923.D  
Acq: 7 Dec 2018 5:34

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDIC0.5

Tgt Ion: 43 Resp: 60754  
Ion Ratio Lower Upper  
43 100  
58 29.1 20.6 30.8

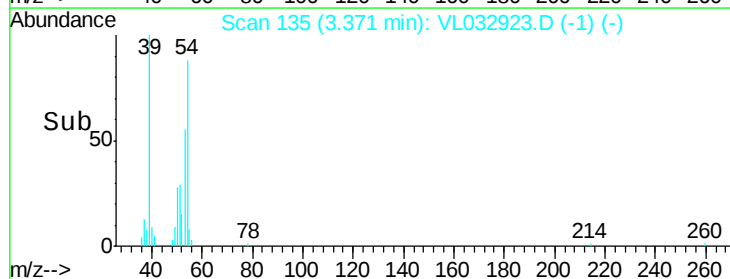
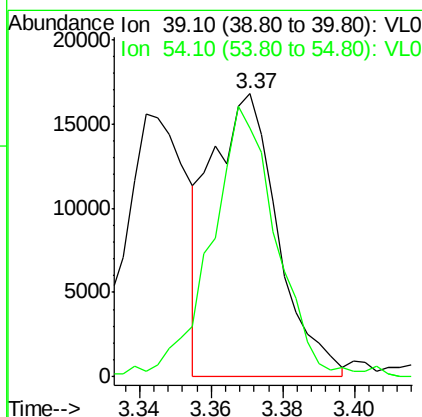
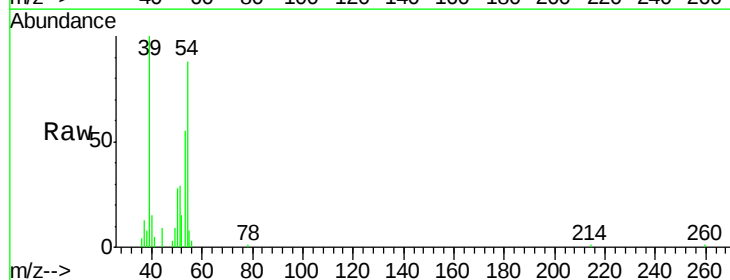
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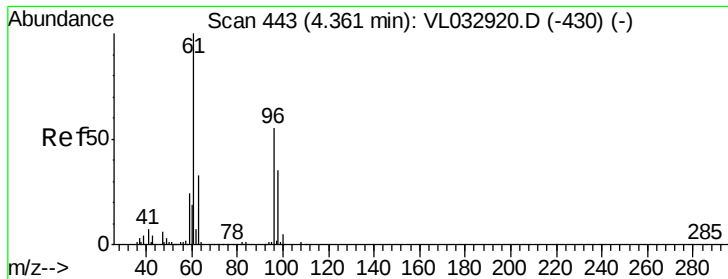
MMDadoda  
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#16  
1,3-Butadiene  
Concen: 0.469 ppbv m  
RT: 3.37 min Scan# 135  
Delta R.T. 0.00 min  
Lab File: VL032923.D  
Acq: 7 Dec 2018 5:34

Tgt Ion: 39 Resp: 21614  
Ion Ratio Lower Upper  
39 100  
54 94.8 72.7 109.1





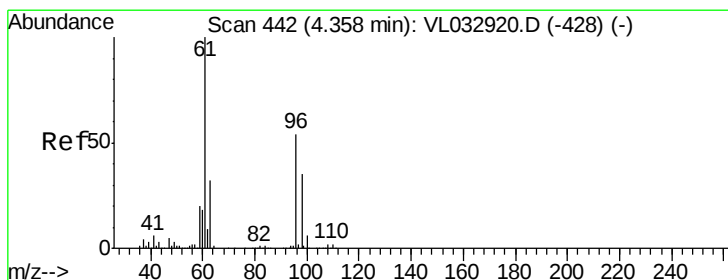
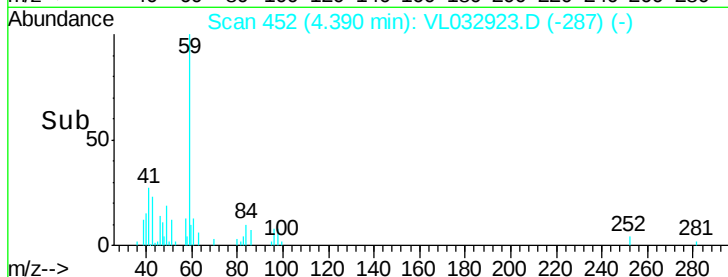
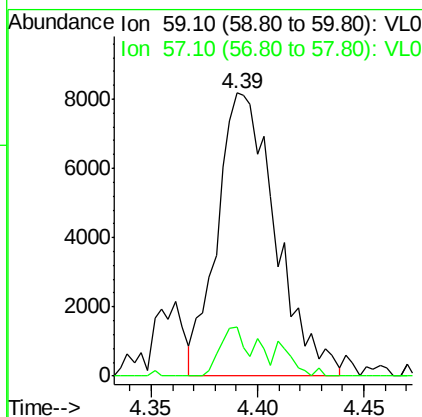
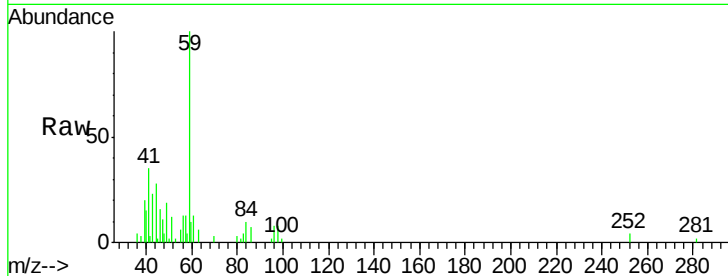
#17  
tert-Butyl alcohol  
Concen: 0.486 ppbv  
RT: 4.39 min Scan# 452  
Delta R.T. 0.03 min  
Lab File: VL032923.D  
Acq: 7 Dec 2018 5:34

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDIC0.5

Tgt Ion: 59 Resp: 15589  
Ion Ratio Lower Upper  
59 100  
57 0.0 0.6 1.0#

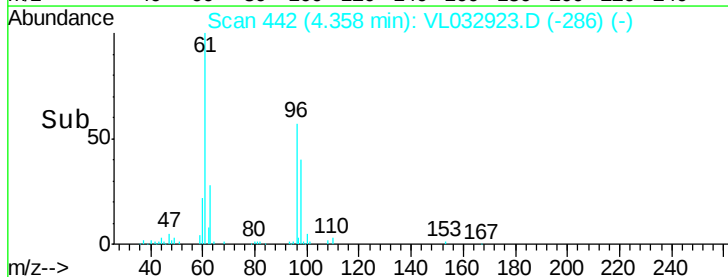
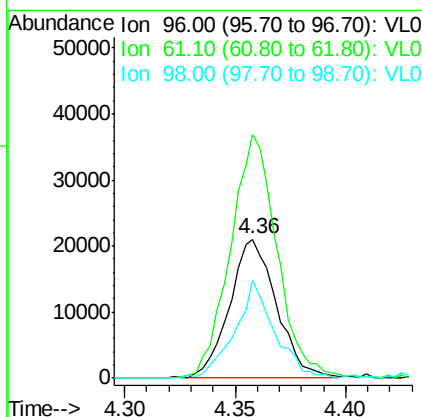
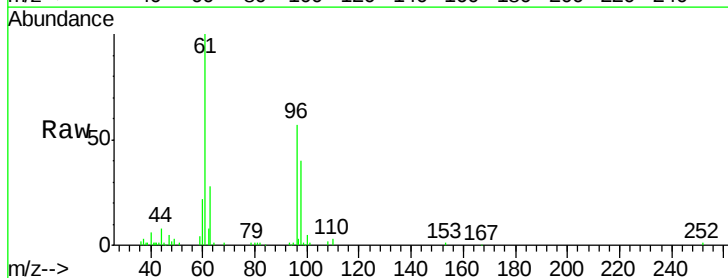
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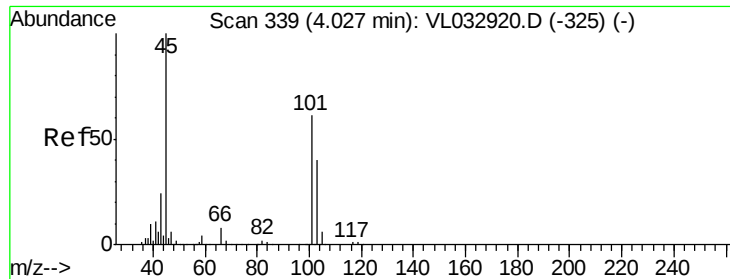
MMDadoda  
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#18  
1,1-Dichloroethene  
Concen: 0.535 ppbv  
RT: 4.36 min Scan# 442  
Delta R.T. 0.00 min  
Lab File: VL032923.D  
Acq: 7 Dec 2018 5:34

Tgt Ion: 96 Resp: 31038  
Ion Ratio Lower Upper  
96 100  
61 173.3 147.0 220.4  
98 70.0 50.7 76.1





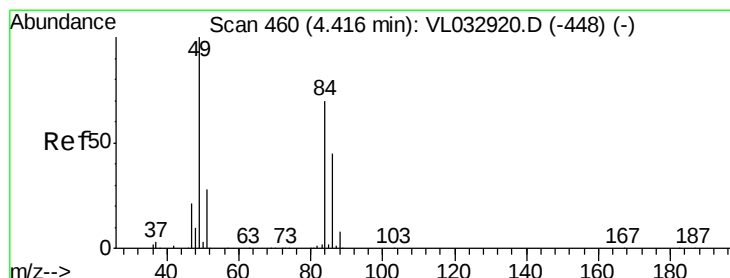
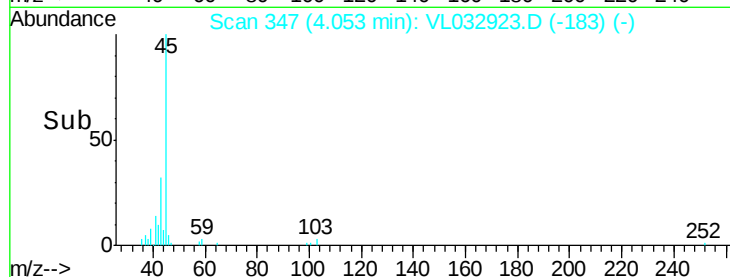
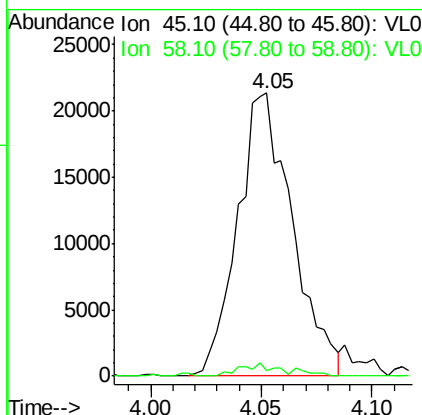
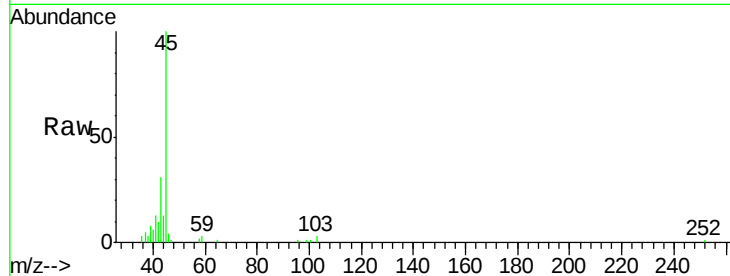
#19  
Isopropyl Alcohol  
Concen: 0.439 ppbv  
RT: 4.05 min Scan# 347  
Delta R.T. 0.03 min  
Lab File: VL032923.D  
Acq: 7 Dec 2018 5:34

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDIC0.5

Tgt Ion: 45 Resp: 36665  
Ion Ratio Lower Upper  
45 100  
58 3.9 1.4 2.2#

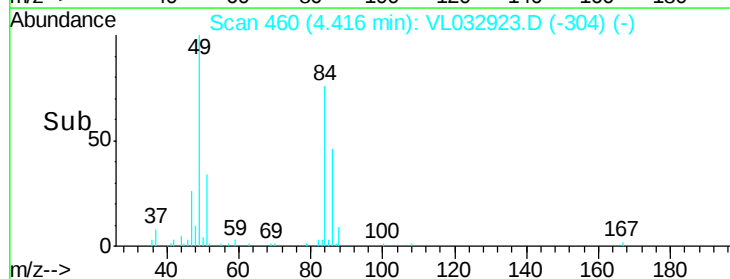
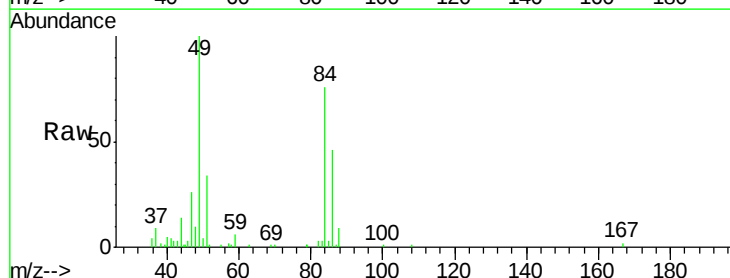
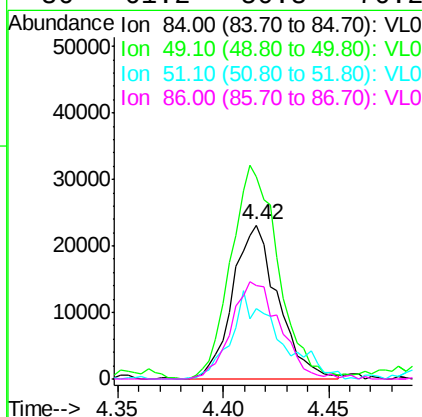
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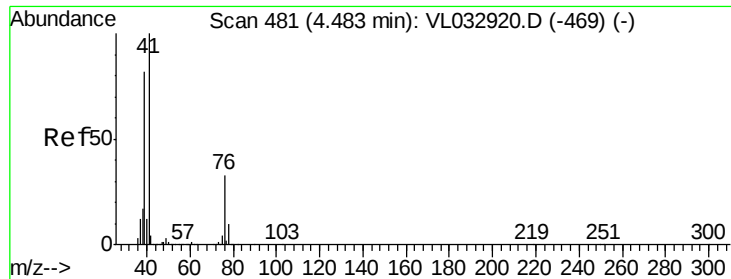
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#20  
Methylene Chloride  
Concen: 0.533 ppbv  
RT: 4.42 min Scan# 460  
Delta R.T. 0.00 min  
Lab File: VL032923.D  
Acq: 7 Dec 2018 5:34

Tgt Ion: 84 Resp: 34561  
Ion Ratio Lower Upper  
84 100  
49 131.9 113.8 170.8  
51 44.2 31.8 47.8  
86 61.2 50.8 76.2





#21

Allyl Chloride

Concen: 0.519 ppbv m

RT: 4.49 min Scan# 482

Delta R.T. 0.00 min

Lab File: VL032923.D

Acq: 7 Dec 2018 5:34

Instrument :

MSVOA\_L

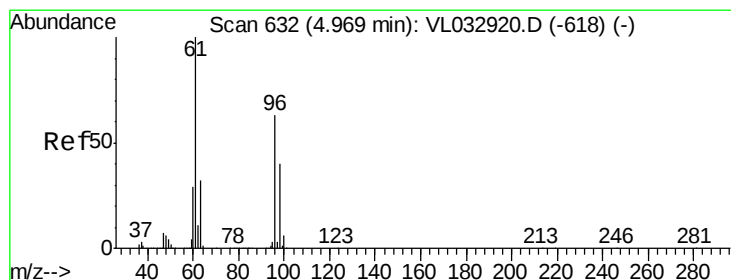
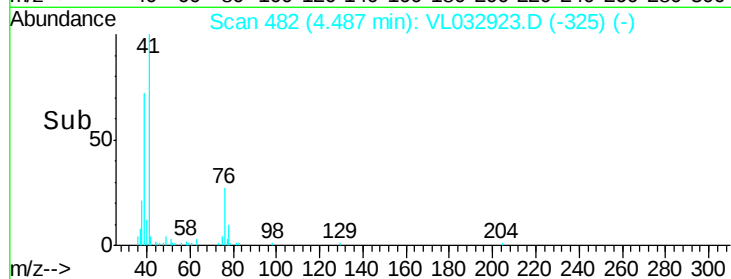
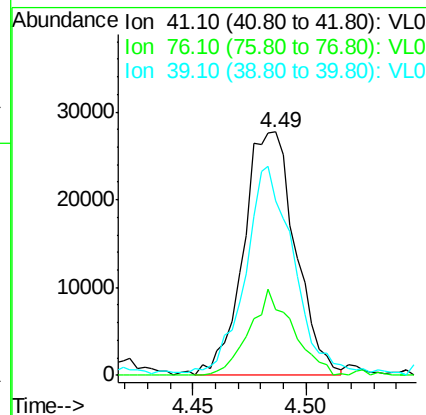
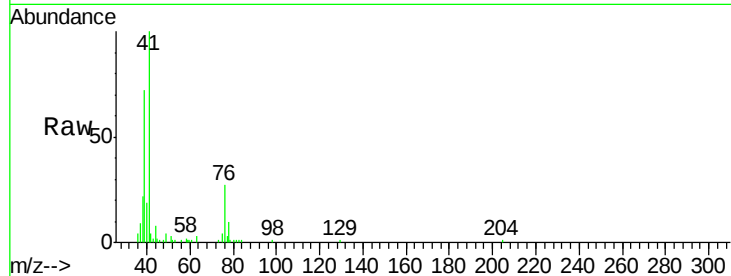
ClientSampleId :

VSTDIC0.5

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 41    | Resp: | 44172 |
| Ion      | Ratio | Lower | Upper |
| 41       | 100   |       |       |
| 76       | 30.2  | 25.2  | 37.8  |
| 39       | 83.0  | 65.2  | 97.8  |

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#22

trans-1,2-Dichloroethene

Concen: 0.483 ppbv m

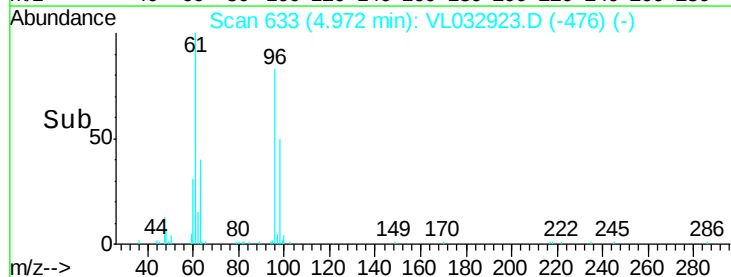
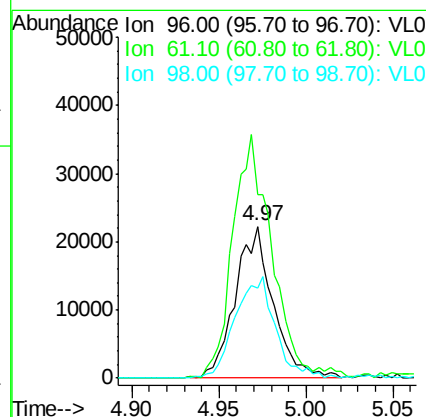
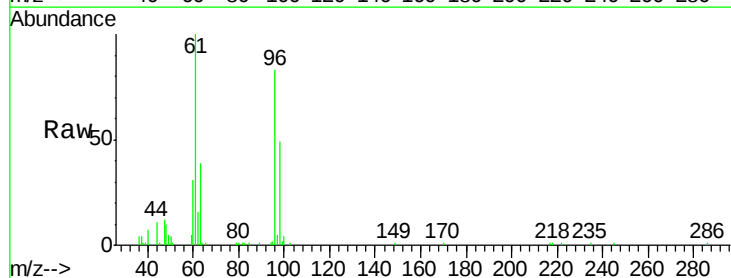
RT: 4.97 min Scan# 633

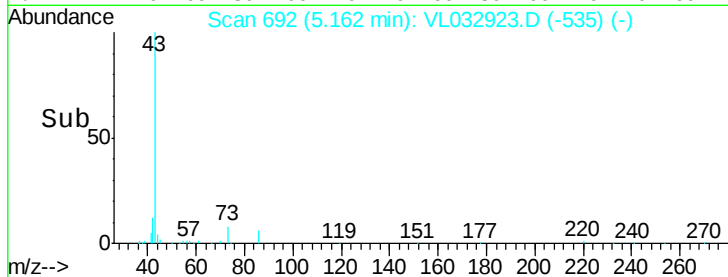
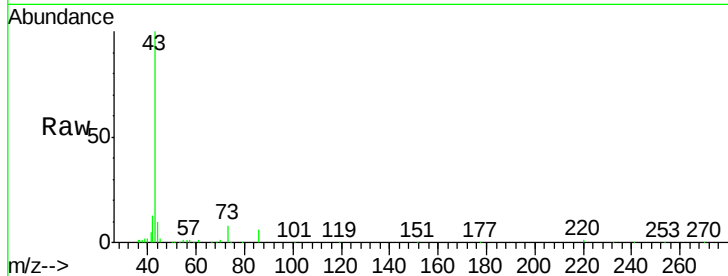
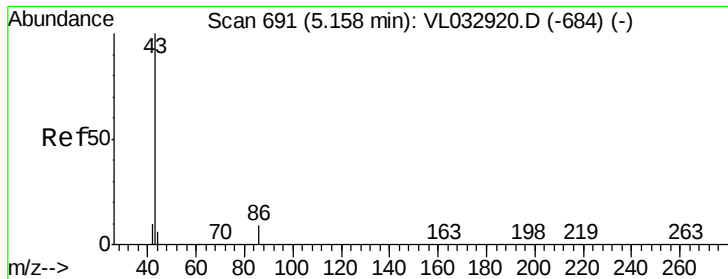
Delta R.T. 0.00 min

Lab File: VL032923.D

Acq: 7 Dec 2018 5:34

|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 96    | Resp: | 33832  |
| Ion      | Ratio | Lower | Upper  |
| 96       | 100   |       |        |
| 61       | 121.1 | 127.1 | 190.7# |
| 98       | 59.4  | 51.3  | 76.9   |





#23

Vinyl Acetate

Concen: 0.362 ppbv m

RT: 5.16 min Scan# 692

Delta R.T. 0.00 min

Lab File: VL032923.D

Acq: 7 Dec 2018 5:34

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 43      | 100   |       |       |
| 86      | 6.4   | 6.6   | 9.8#  |
| 42      | 13.0  | 8.3   | 12.5# |
| 44      | 10.2  | 4.2   | 6.4#  |

Instrument :

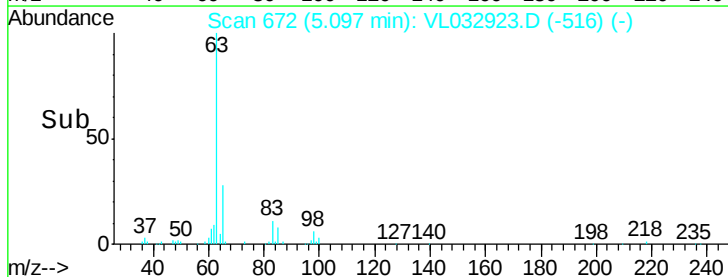
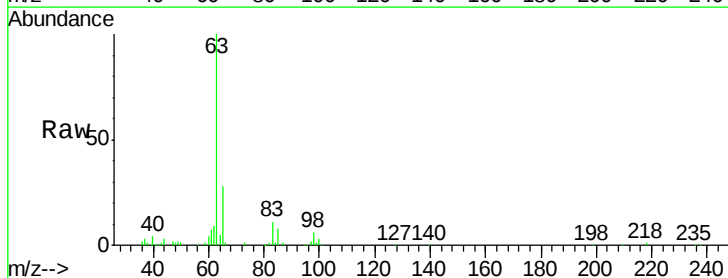
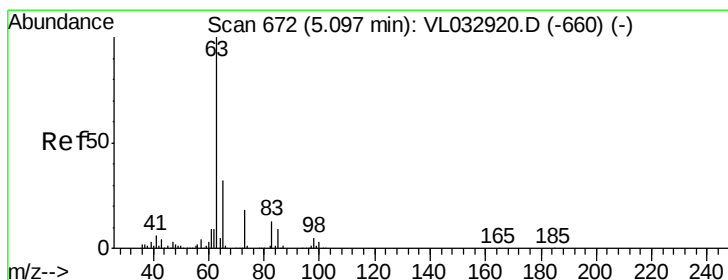
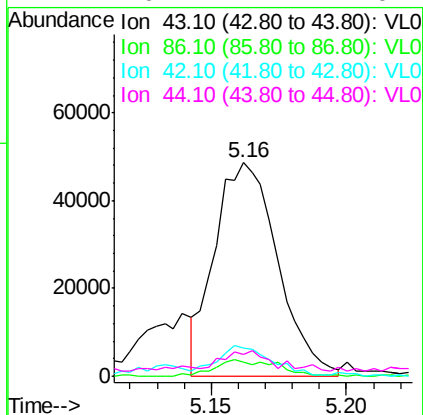
MSVOA\_L

ClientSampleId :

VSTDIC0.5

Manual Integrations  
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#24

1,1-Dichloroethane

Concen: 0.513 ppbv

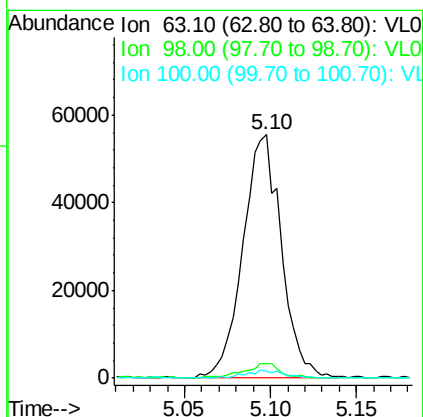
RT: 5.10 min Scan# 672

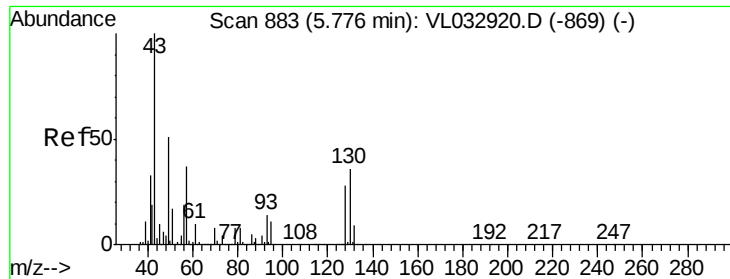
Delta R.T. 0.00 min

Lab File: VL032923.D

Acq: 7 Dec 2018 5:34

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 63      | 100   |       |       |
| 98      | 6.9   | 2.5   | 7.5   |
| 100     | 2.7   | 1.4   | 4.2   |





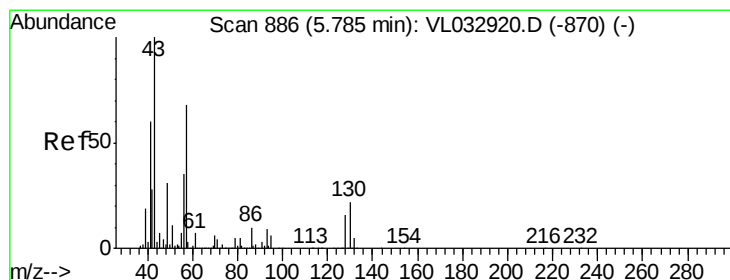
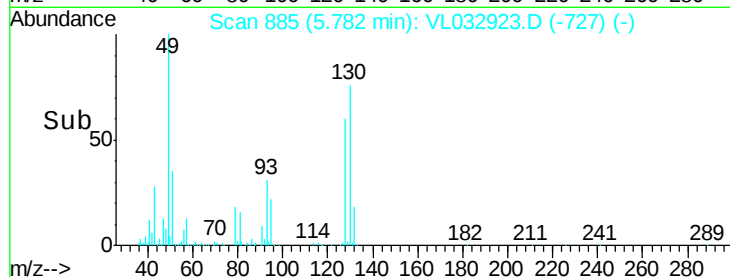
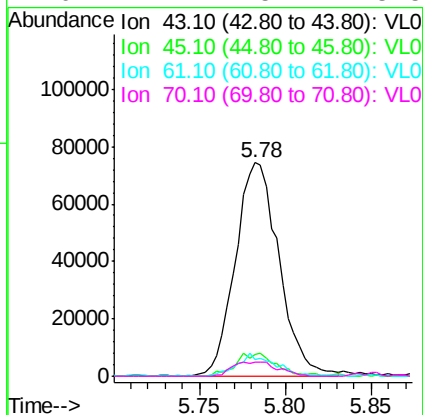
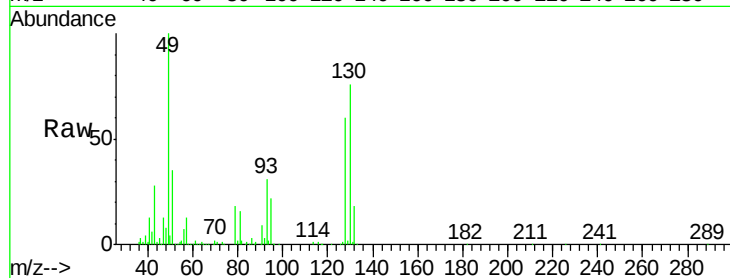
#25  
Ethyl Acetate  
Concen: 0.480 ppbv  
RT: 5.78 min Scan# 885  
Delta R.T. 0.01 min  
Lab File: VL032923.D  
Acq: 7 Dec 2018 5:34

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDIC0.5

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 43      | 100   |       |       |
| 45      | 10.5  | 7.8   | 11.6  |
| 61      | 9.4   | 7.4   | 11.2  |
| 70      | 7.1   | 5.7   | 8.5   |

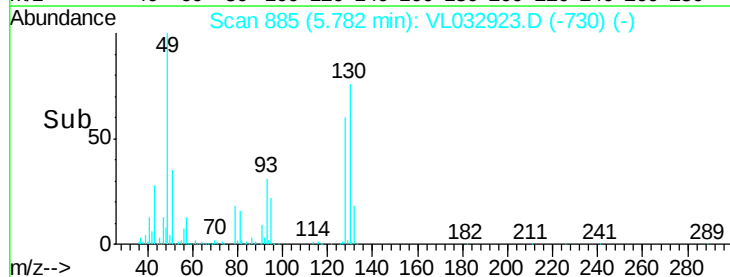
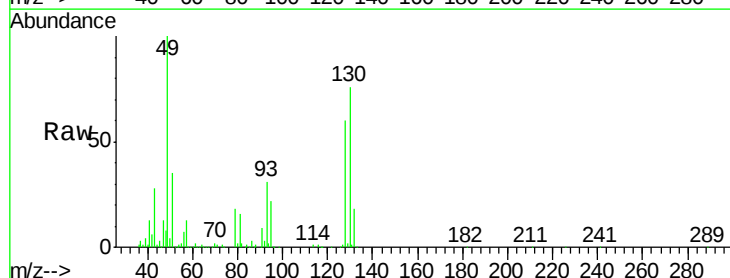
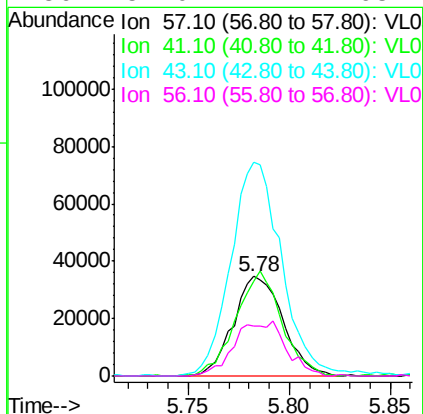
Manual Integrations  
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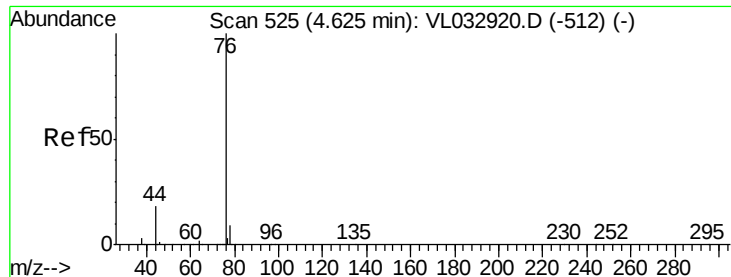
MMDadoda  
12/11/2018 10:08:16 AM



#26  
Hexane  
Concen: 0.469 ppbv  
RT: 5.78 min Scan# 885  
Delta R.T. -0.00 min  
Lab File: VL032923.D  
Acq: 7 Dec 2018 5:34

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 57      | 100   |       |       |
| 41      | 97.6  | 72.2  | 108.2 |
| 43      | 221.8 | 171.9 | 257.9 |
| 56      | 57.0  | 42.2  | 63.2  |





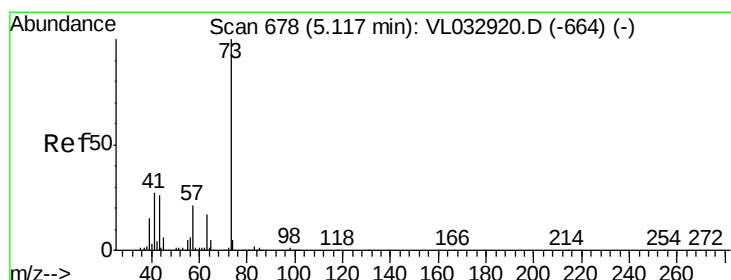
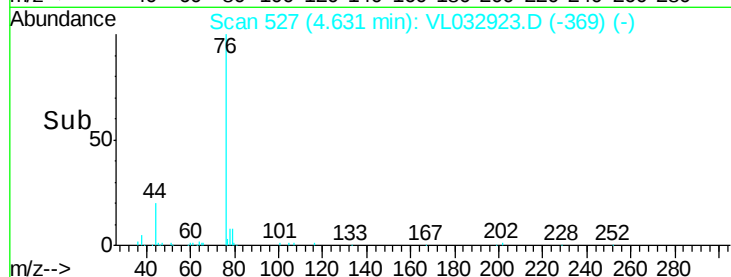
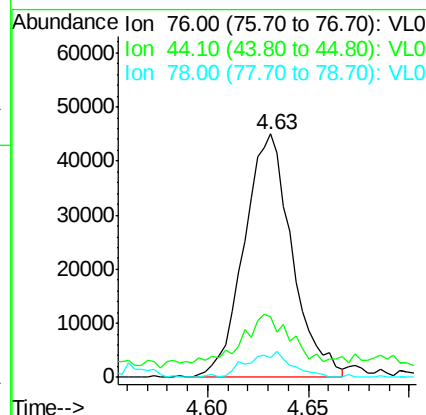
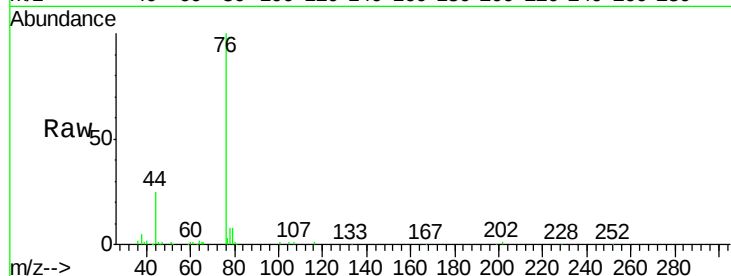
#27  
Carbon Disulfide  
Concen: 0.459 ppbv  
RT: 4.63 min Scan# 527  
Delta R.T. 0.01 min  
Lab File: VL032923.D  
Acq: 7 Dec 2018 5:34

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDIC0.5

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 76      | 100   |       |       |
| 44      | 27.7  | 14.7  | 22.1# |
| 78      | 10.1  | 7.4   | 11.2  |

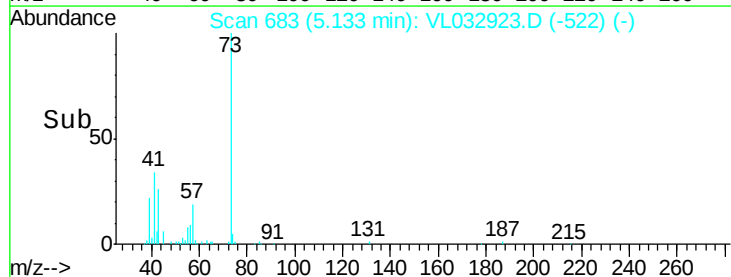
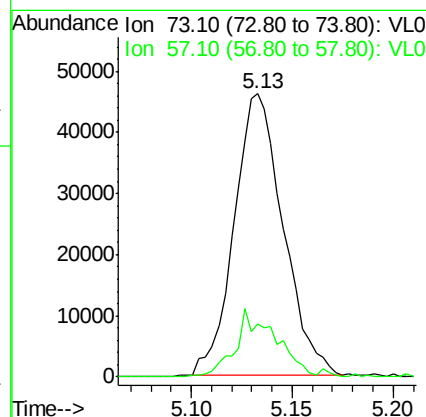
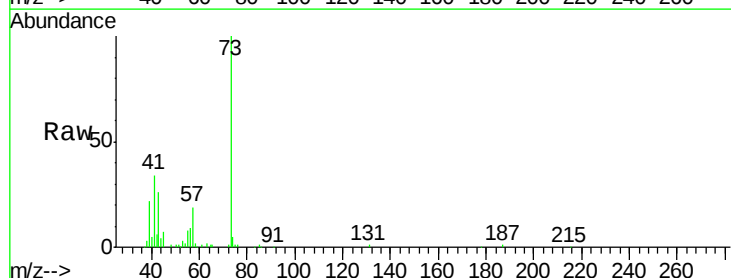
Manual Integrations  
APPROVED

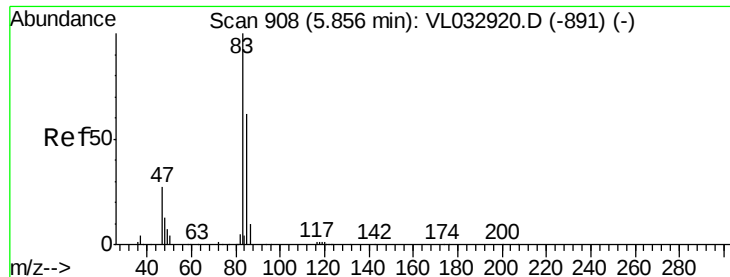
MMDadoda  
12/11/2018 10:08:16 AM



#28  
Methyl tert-Butyl Ether  
Concen: 0.383 ppbv  
RT: 5.13 min Scan# 683  
Delta R.T. 0.02 min  
Lab File: VL032923.D  
Acq: 7 Dec 2018 5:34

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 73      | 100   |       |       |
| 57      | 20.5  | 17.4  | 26.0  |





#29

Chloroform

Concen: 0.530 ppbv

RT: 5.85 min Scan# 907

Delta R.T. -0.00 min

Lab File: VL032923.D

Acq: 7 Dec 2018 5:34

Instrument :

MSVOA\_L

ClientSampleId :

VSTDIC0.5

Tgt Ion: 83 Resp: 112608

Ion Ratio Lower Upper

83 100

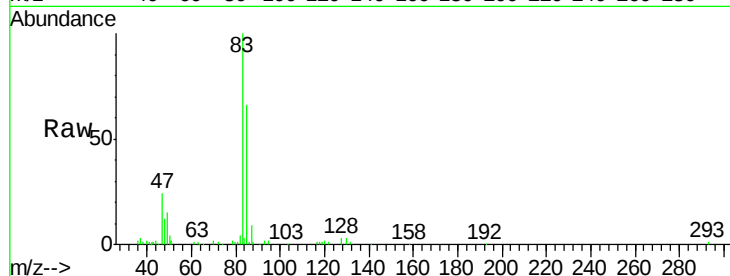
85 65.6 49.8 74.8

Manual Integrations

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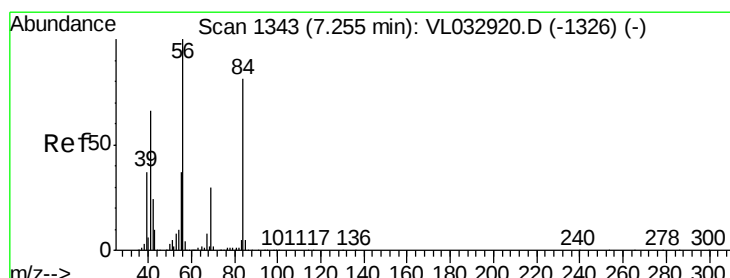
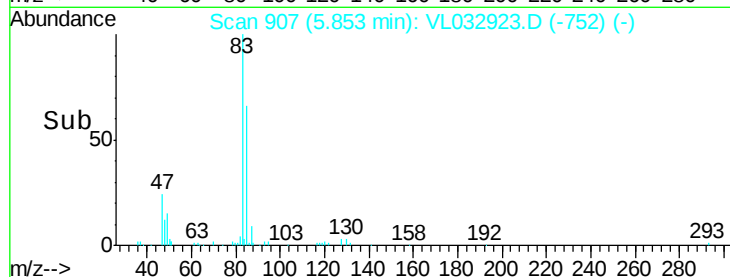
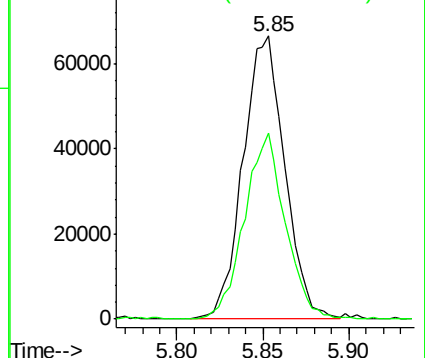
MMDadoda

12/11/2018 10:08:16 AM



Abundance Ion 83.00 (82.70 to 83.70): VL0

Ion 85.00 (84.70 to 85.70): VL0



#30

Cyclohexane

Concen: 0.414 ppbv m

RT: 7.26 min Scan# 1345

Delta R.T. 0.01 min

Lab File: VL032923.D

Acq: 7 Dec 2018 5:34

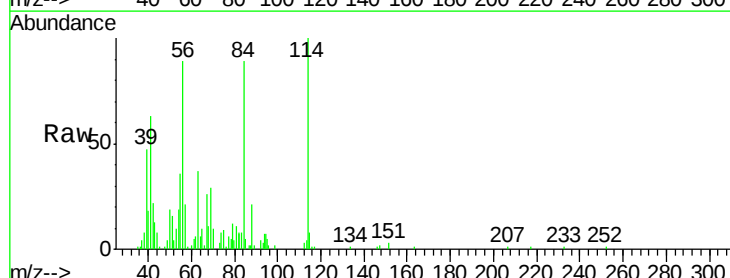
Tgt Ion: 84 Resp: 43205

Ion Ratio Lower Upper

84 100

56 99.6 102.5 153.7#

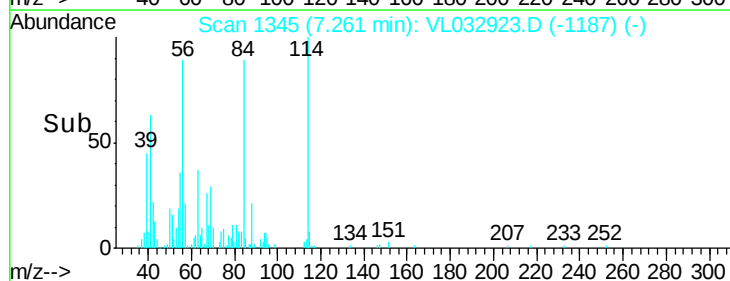
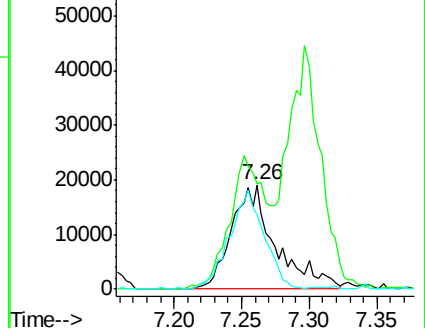
41 75.6 64.1 96.1

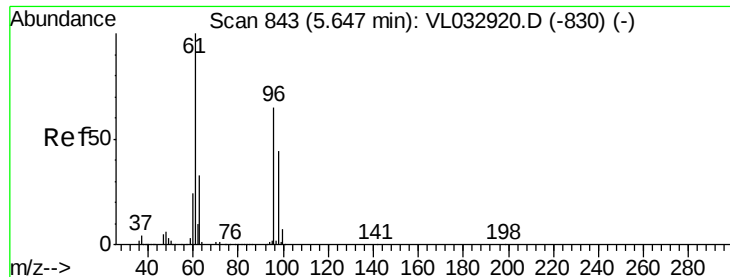


Abundance Ion 84.20 (83.90 to 84.90): VL0

Ion 56.10 (55.80 to 56.80): VL0

Ion 41.10 (40.80 to 41.80): VL0





#31

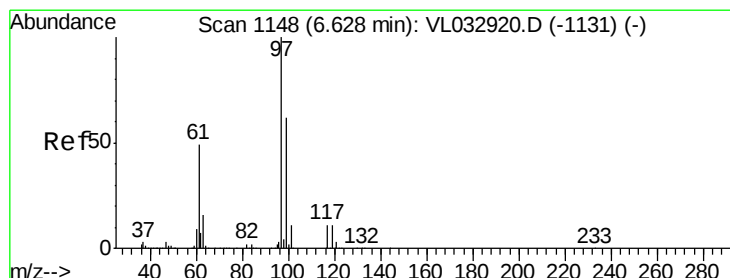
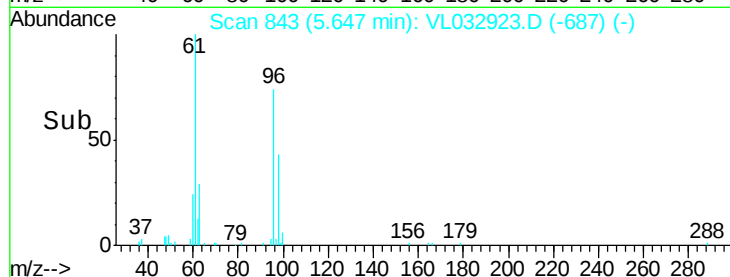
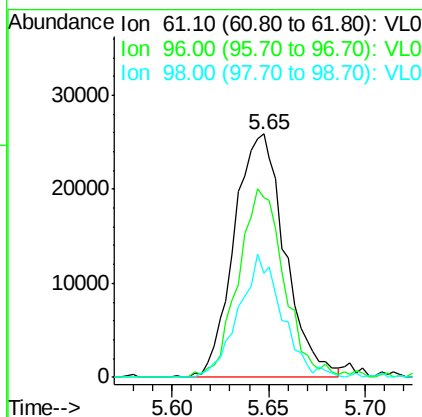
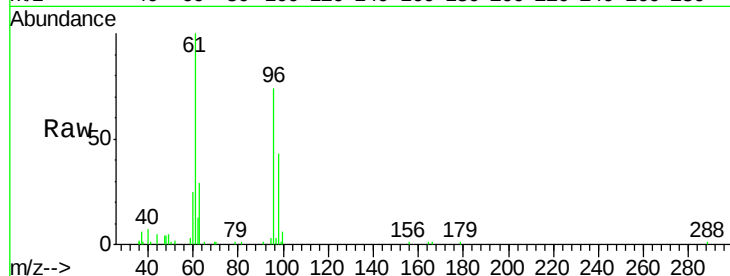
cis-1,2-Dichloroethene  
 Concen: 0.406 ppbv  
 RT: 5.65 min Scan# 843  
 Delta R.T. 0.00 min  
 Lab File: VL032923.D  
 Acq: 7 Dec 2018 5:34

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDIC0.5

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 61      | 100   |       |       |
| 96      | 73.8  | 51.9  | 77.9  |
| 98      | 42.8  | 35.0  | 52.4  |

Manual Integrations  
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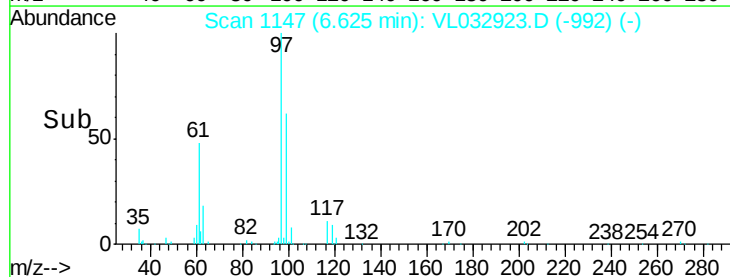
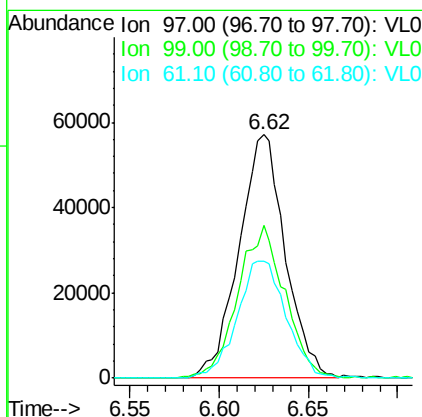
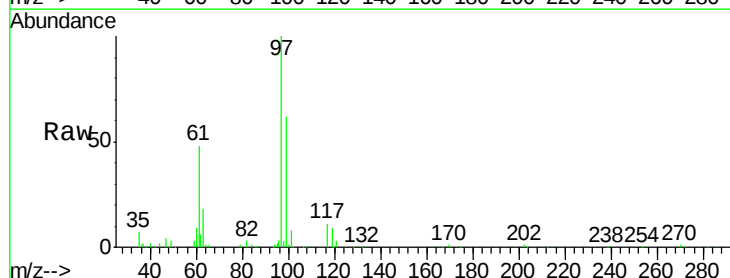
MMDadoda  
 12/11/2018 10:08:16 AM

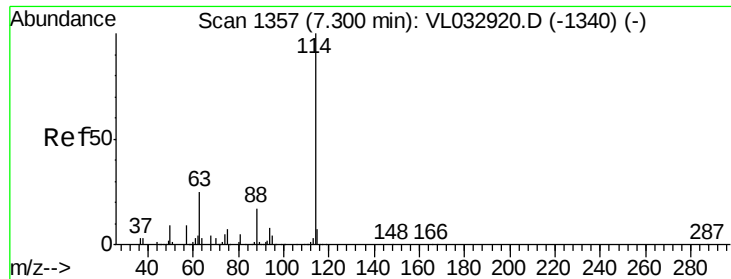


#32

1,1,1-Trichloroethane  
 Concen: 0.437 ppbv  
 RT: 6.62 min Scan# 1147  
 Delta R.T. -0.00 min  
 Lab File: VL032923.D  
 Acq: 7 Dec 2018 5:34

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 97      | 100   |       |       |
| 99      | 63.5  | 51.1  | 76.7  |
| 61      | 51.1  | 39.3  | 58.9  |





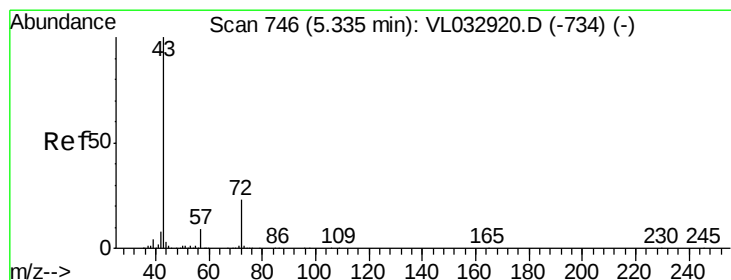
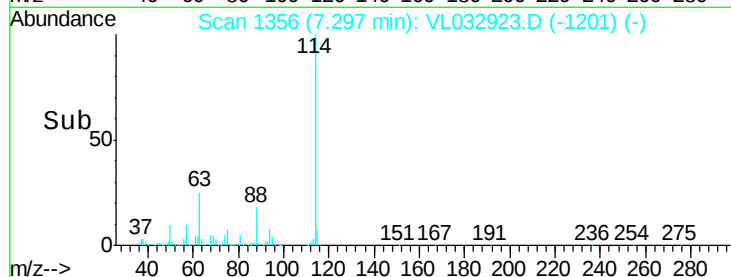
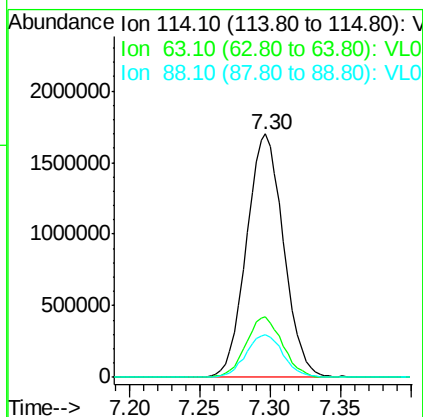
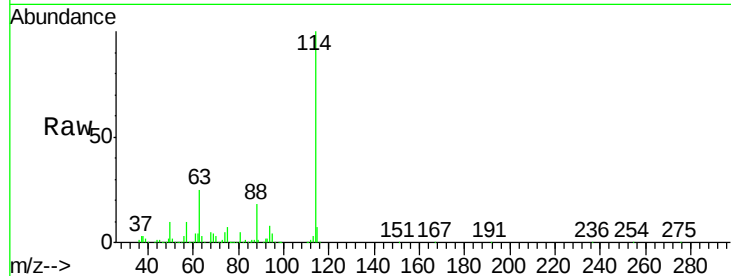
#33  
 1,4-Difluorobenzene  
 Concen: 10.000 ppbv  
 RT: 7.30 min Scan# 1356  
 Delta R.T. -0.00 min  
 Lab File: VL032923.D  
 Acq: 7 Dec 2018 5:34

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDIC0.5

Tgt Ion: 114 Resp: 3128968  
 Ion Ratio Lower Upper  
 114 100  
 63 24.6 20.1 30.1  
 88 17.6 14.2 21.4

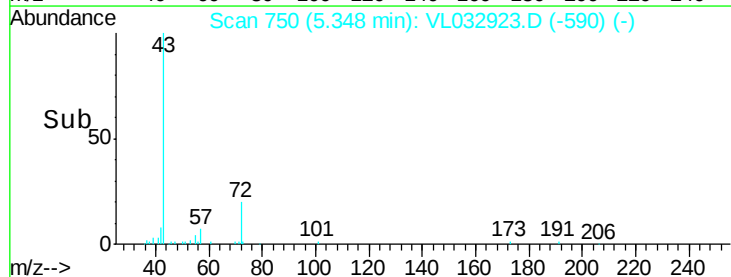
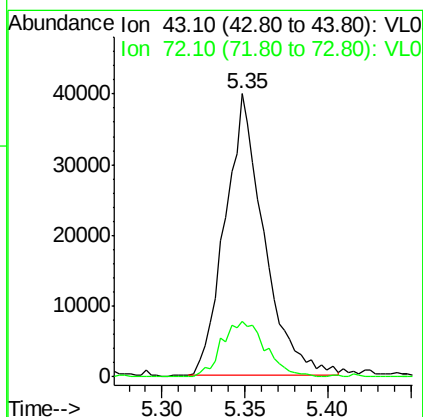
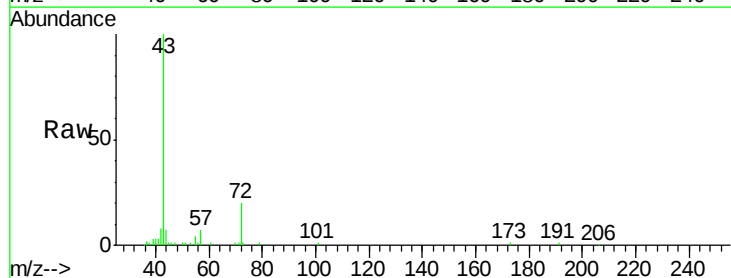
Manual Integrations  
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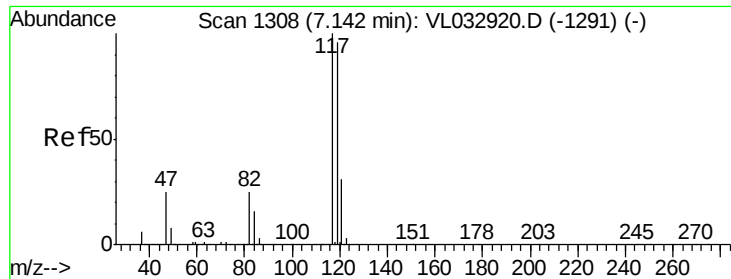
MMDadoda  
 12/11/2018 10:08:16 AM



#34  
 2-Butanone  
 Concen: 0.417 ppbv  
 RT: 5.35 min Scan# 750  
 Delta R.T. 0.01 min  
 Lab File: VL032923.D  
 Acq: 7 Dec 2018 5:34

Tgt Ion: 43 Resp: 64546  
 Ion Ratio Lower Upper  
 43 100  
 72 22.5 18.8 28.2





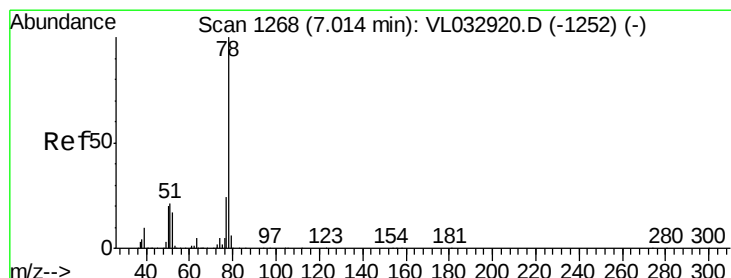
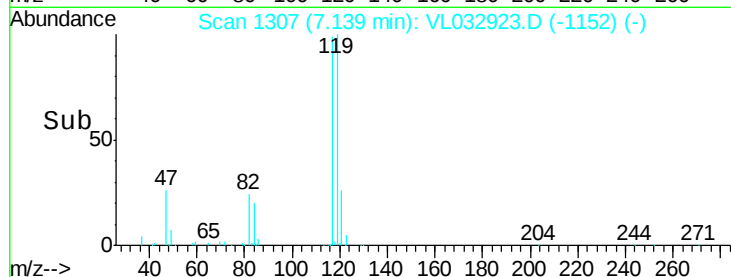
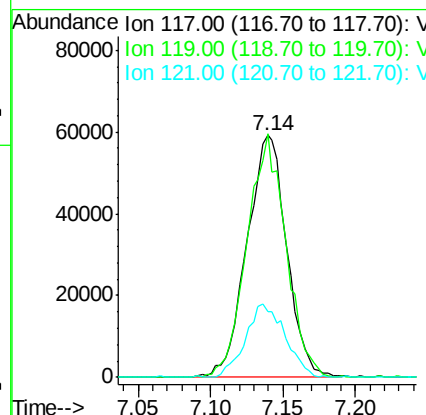
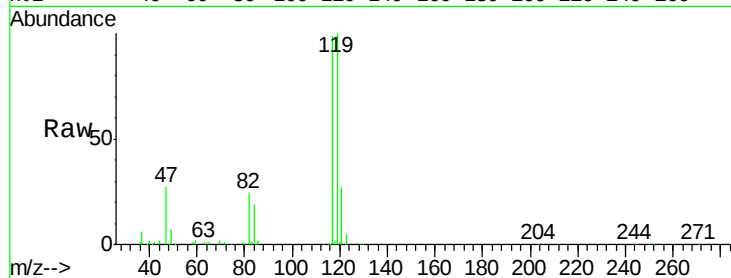
#35  
Carbon Tetrachloride  
Concen: 0.486 ppbv  
RT: 7.14 min Scan# 1307  
Delta R.T. -0.00 min  
Lab File: VL032923.D  
Acq: 7 Dec 2018 5:34

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDIC0.5

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 117     | 100   |       |       |
| 119     | 100.7 | 76.5  | 114.7 |
| 121     | 26.9  | 24.5  | 36.7  |

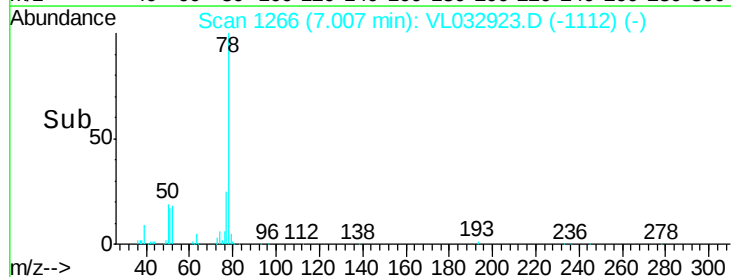
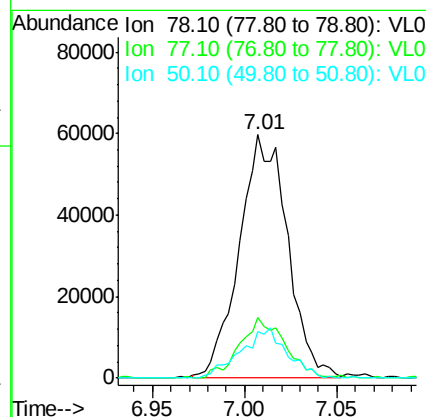
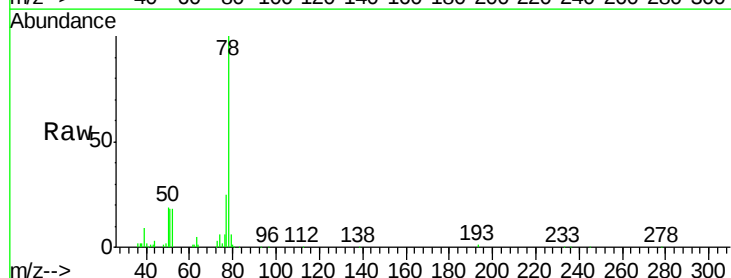
Manual Integrations  
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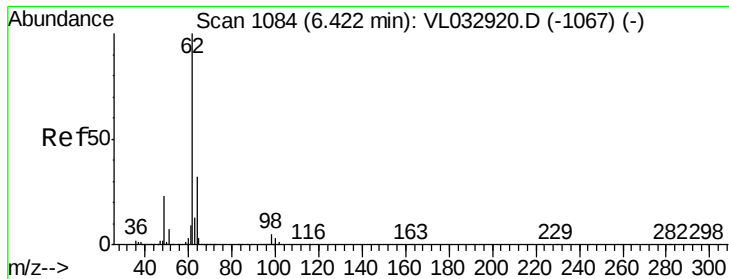
MMDadoda  
12/11/2018 10:08:16 AM



#36  
Benzene  
Concen: 0.439 ppbv m  
RT: 7.01 min Scan# 1266  
Delta R.T. -0.01 min  
Lab File: VL032923.D  
Acq: 7 Dec 2018 5:34

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 78      | 100   |       |       |
| 77      | 24.7  | 18.9  | 28.3  |
| 50      | 19.3  | 16.1  | 24.1  |





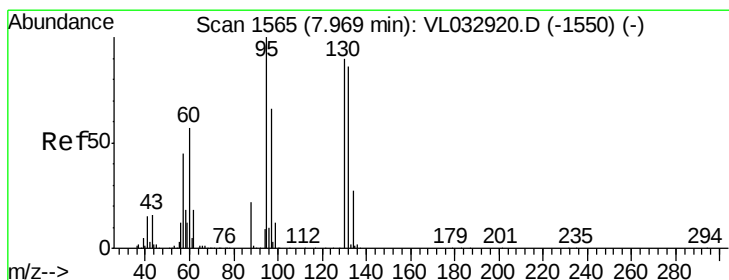
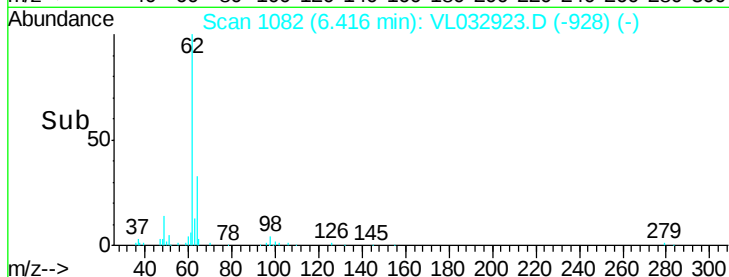
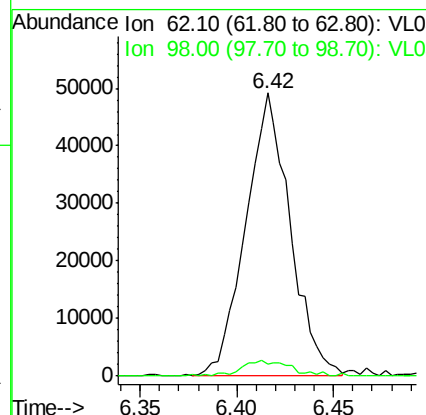
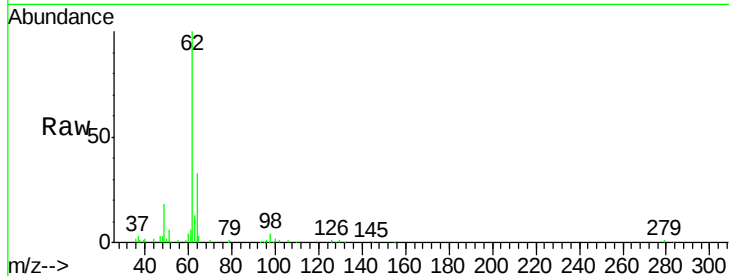
#37  
 1,2-Dichloroethane  
 Concen: 0.500 ppbv  
 RT: 6.42 min Scan# 1082  
 Delta R.T. -0.01 min  
 Lab File: VL032923.D  
 Acq: 7 Dec 2018 5:34

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDIC0.5

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 62      | 100   |       |       |
| 98      | 6.4   | 4.3   | 6.5   |

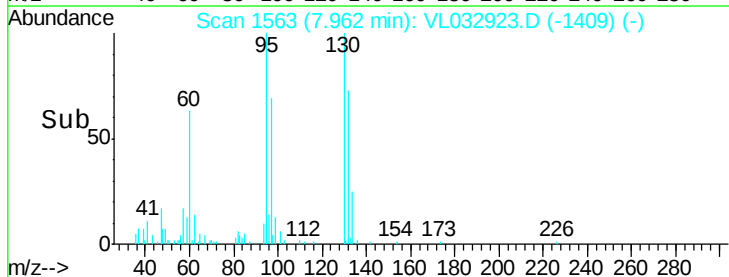
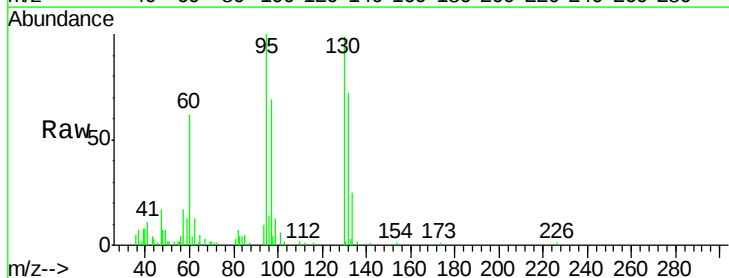
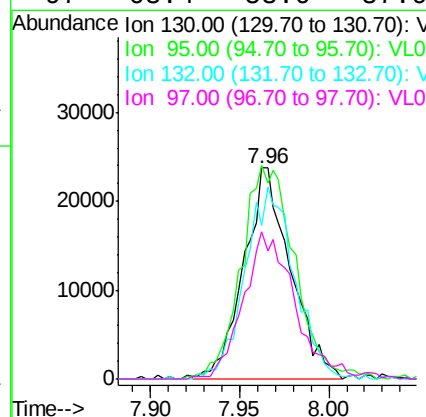
Manual Integrations  
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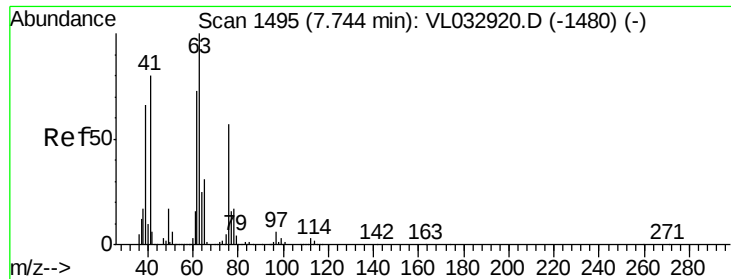
MMDadoda  
 12/11/2018 10:08:16 AM



#38  
 Trichloroethene  
 Concen: 0.443 ppbv  
 RT: 7.96 min Scan# 1563  
 Delta R.T. -0.01 min  
 Lab File: VL032923.D  
 Acq: 7 Dec 2018 5:34

| Tgt Ion | Ratio | Lower | Upper  |
|---------|-------|-------|--------|
| 130     | 100   |       |        |
| 95      | 99.8  | 88.6  | 132.8  |
| 132     | 73.0  | 76.1  | 114.1# |
| 97      | 68.4  | 58.0  | 87.0   |





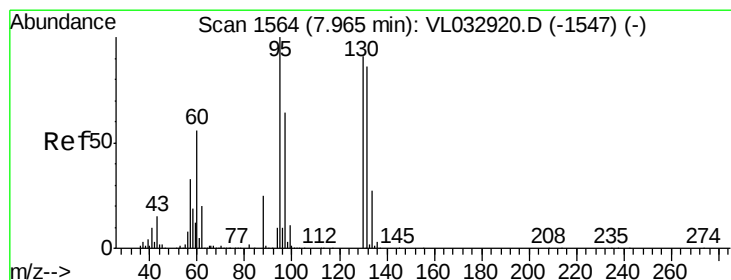
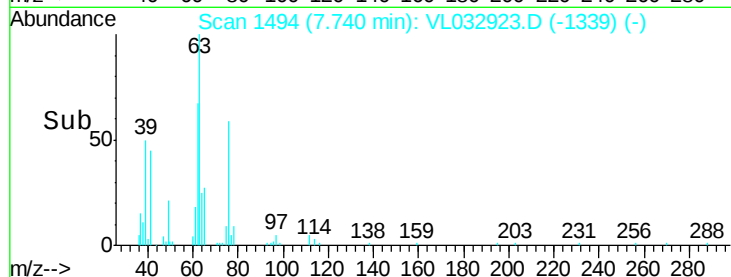
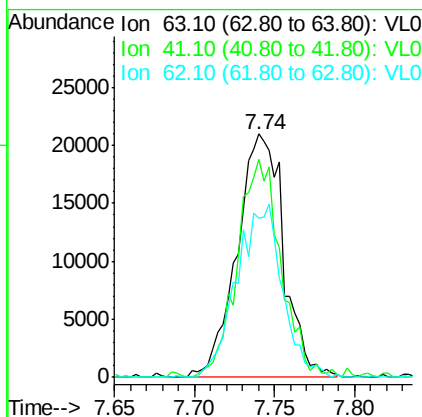
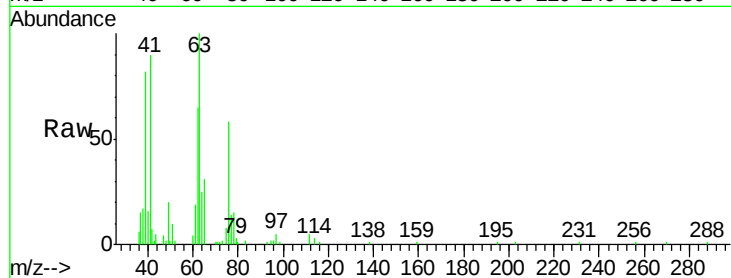
#39  
 1,2-Dichloropropane  
 Concen: 0.475 ppbv m  
 RT: 7.74 min Scan# 1494  
 Delta R.T. -0.00 min  
 Lab File: VL032923.D  
 Acq: 7 Dec 2018 5:34

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDIC0.5

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 63      | 100   |       |       |
| 41      | 89.7  | 63.9  | 95.9  |
| 62      | 65.2  | 58.8  | 88.2  |

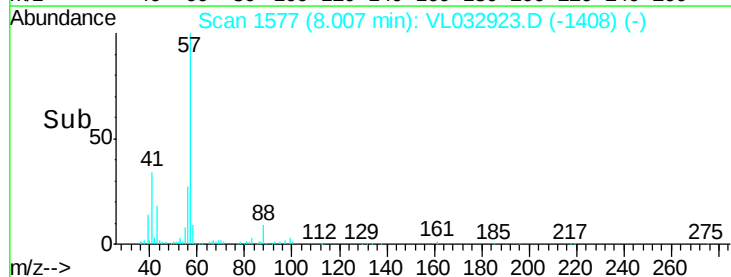
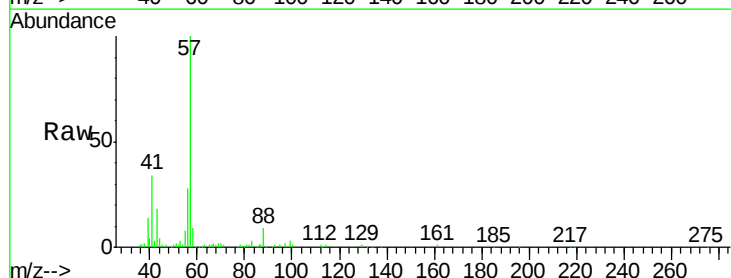
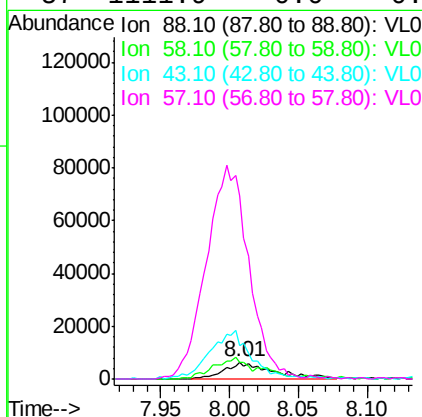
Manual Integrations  
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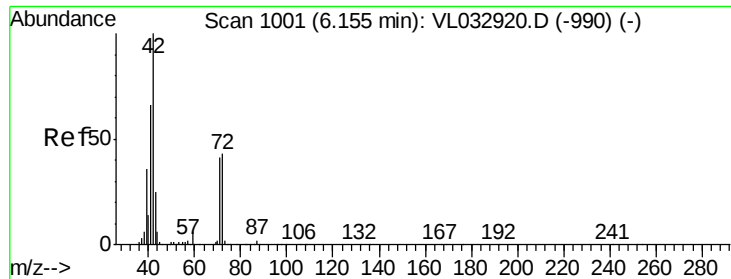
MMDadoda  
 12/11/2018 10:08:16 AM



#40  
 1,4-Dioxane  
 Concen: 0.465 ppbv m  
 RT: 8.01 min Scan# 1577  
 Delta R.T. 0.04 min  
 Lab File: VL032923.D  
 Acq: 7 Dec 2018 5:34

| Tgt Ion | Ratio  | Lower | Upper  |
|---------|--------|-------|--------|
| 88      | 100    |       |        |
| 58      | 0.0    | 107.4 | 161.2# |
| 43      | 0.0    | 0.0   | 0.0    |
| 57      | 1111.9 | 0.0   | 0.0#   |





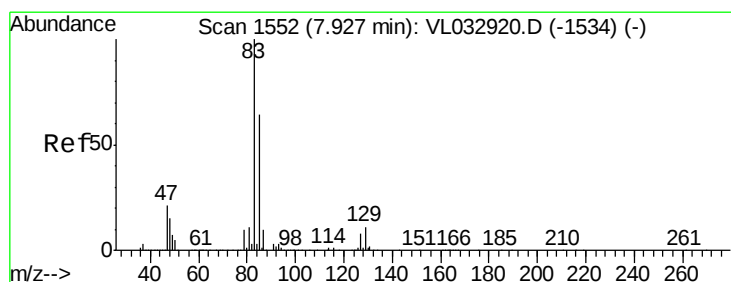
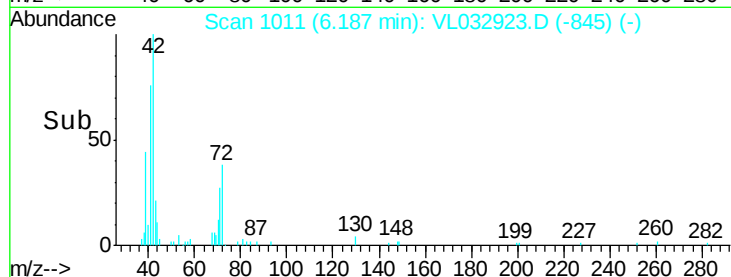
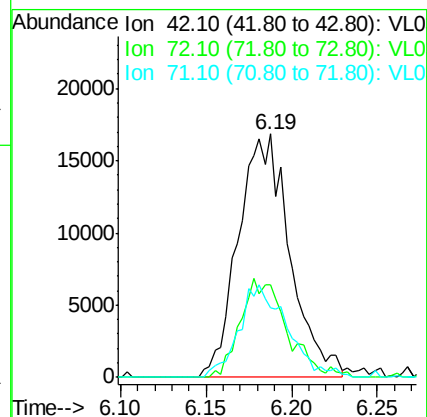
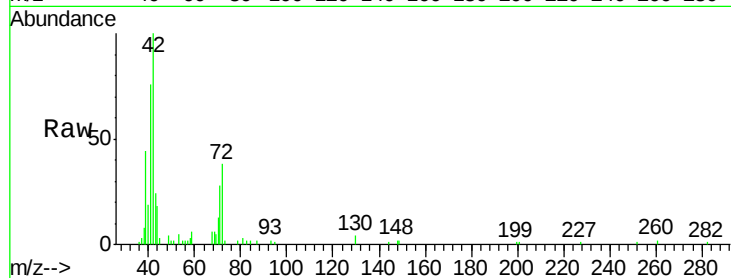
#41  
Tetrahydrofuran  
Concen: 0.399 ppbv m  
RT: 6.19 min Scan# 1011  
Delta R.T. 0.03 min  
Lab File: VL032923.D  
Acq: 7 Dec 2018 5:34

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDIC0.5

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 42      | 100   |       |       |
| 72      | 36.6  | 32.9  | 49.3  |
| 71      | 35.8  | 32.0  | 48.0  |

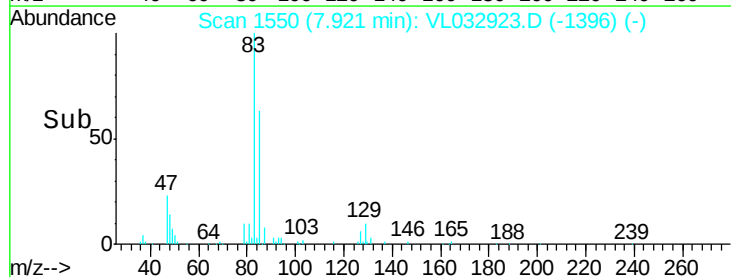
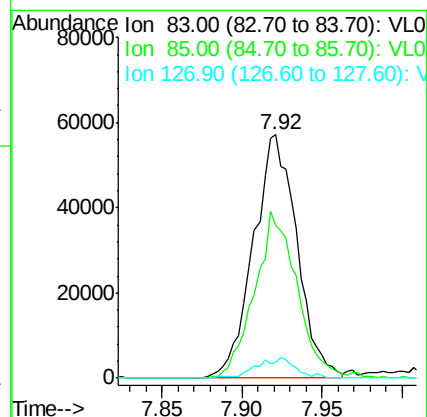
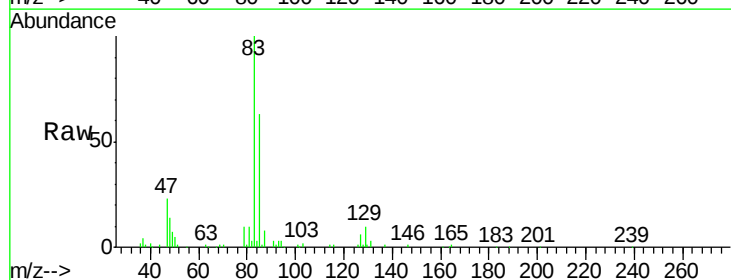
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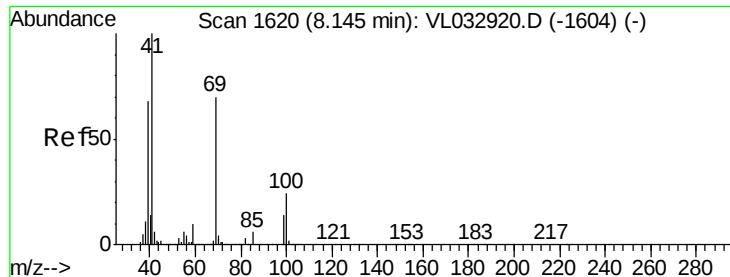
MMDadoda  
12/11/2018 10:08:16 AM



#42  
Bromodichloromethane  
Concen: 0.487 ppbv  
RT: 7.92 min Scan# 1550  
Delta R.T. -0.01 min  
Lab File: VL032923.D  
Acq: 7 Dec 2018 5:34

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 83      | 100   |       |       |
| 85      | 62.8  | 50.9  | 76.3  |
| 127     | 6.5   | 6.7   | 10.1# |





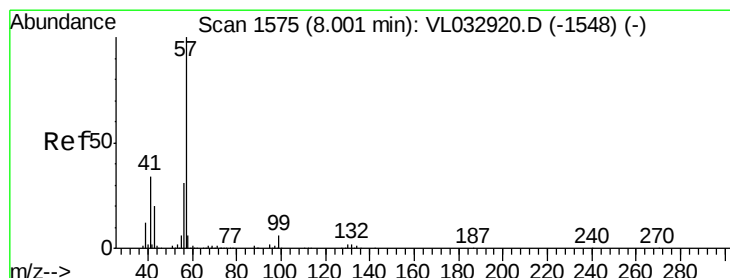
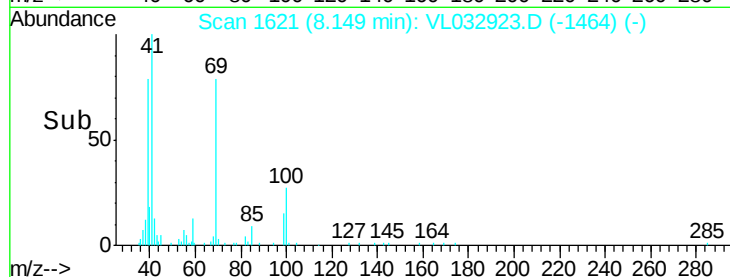
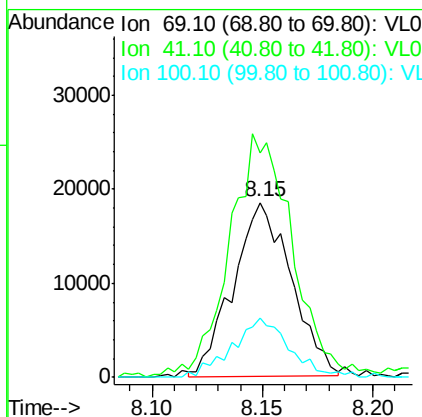
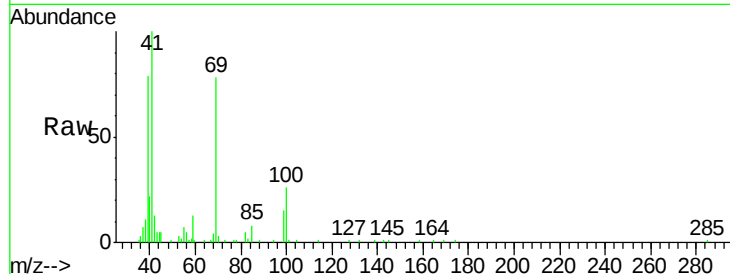
#43  
Methyl Methacrylate  
Concen: 0.375 ppbv  
RT: 8.15 min Scan# 1621  
Delta R.T. 0.00 min  
Lab File: VL032923.D  
Acq: 7 Dec 2018 5:34

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDIC0.5

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 69      | 100   |       |       |
| 41      | 152.3 | 116.6 | 175.0 |
| 100     | 33.7  | 26.5  | 39.7  |

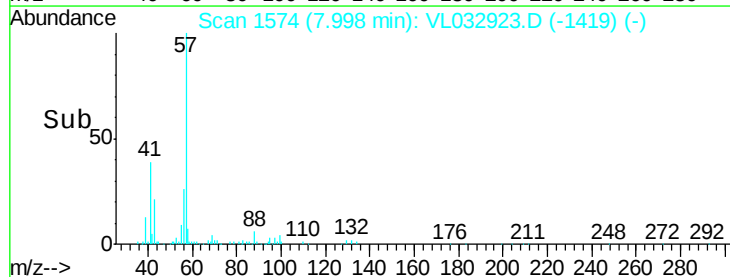
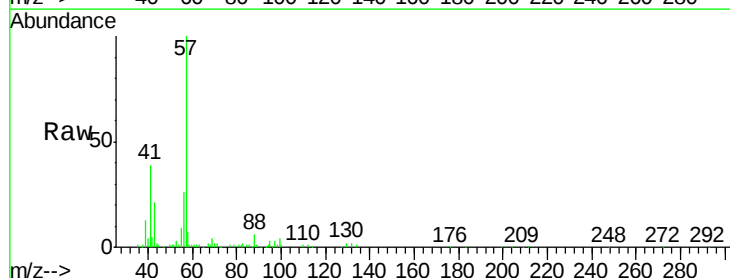
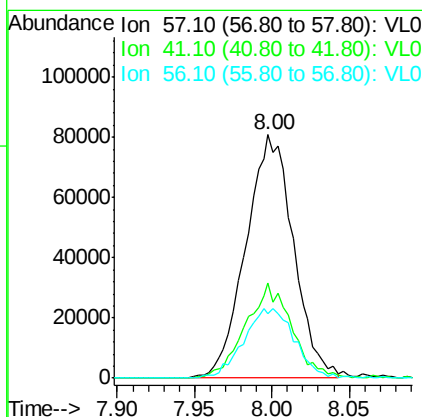
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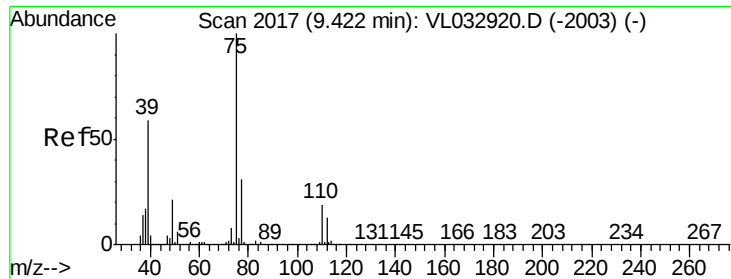
MMDadoda  
12/11/2018 10:08:16 AM



#44  
2,2,4-Trimethylpentane  
Concen: 0.432 ppbv  
RT: 8.00 min Scan# 1574  
Delta R.T. -0.00 min  
Lab File: VL032923.D  
Acq: 7 Dec 2018 5:34

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 57      | 100   |       |       |
| 41      | 38.3  | 27.0  | 40.4  |
| 56      | 30.8  | 24.6  | 37.0  |





#45

t-1,3-Dichloropropene

Concen: 0.299 ppbv m

RT: 9.42 min Scan# 2015

Delta R.T. -0.01 min

Lab File: VL032923.D

Acq: 7 Dec 2018 5:34

Instrument :

MSVOA\_L

ClientSampleId :

VSTDIC0.5

Tgt Ion: 75 Resp: 35580

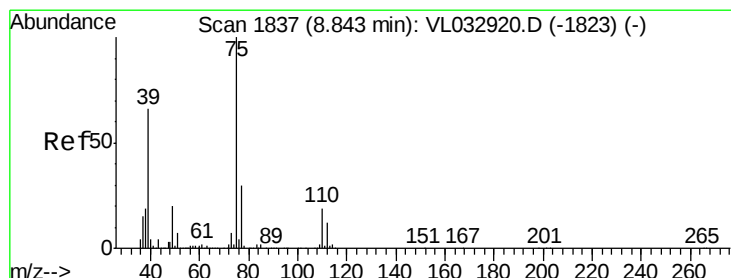
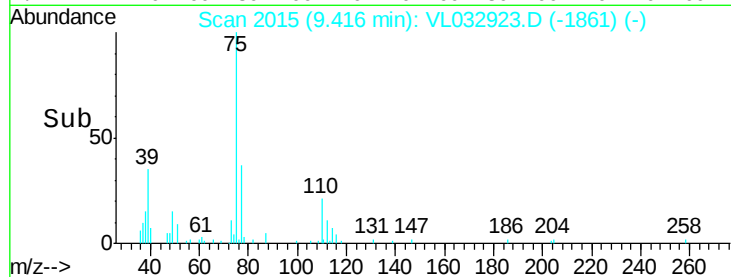
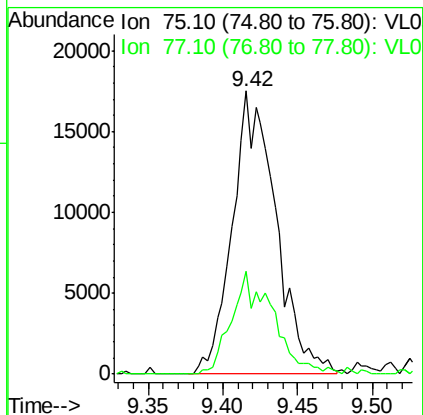
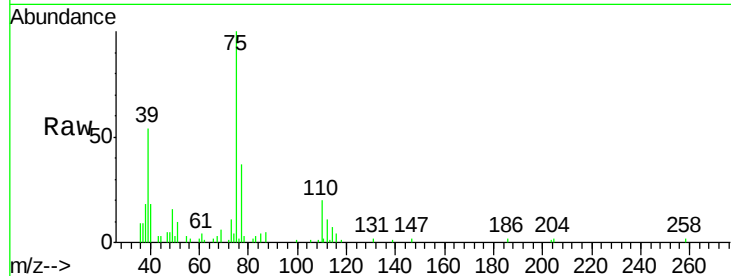
Ion Ratio Lower Upper

75 100

77 36.5 24.8 37.2

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#46

cis-1,3-Dichloropropene

Concen: 0.317 ppbv

RT: 8.84 min Scan# 1836

Delta R.T. -0.00 min

Lab File: VL032923.D

Acq: 7 Dec 2018 5:34

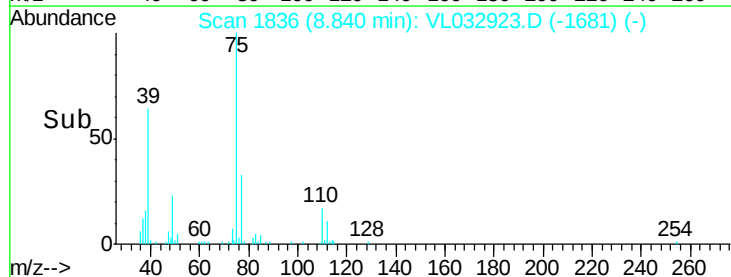
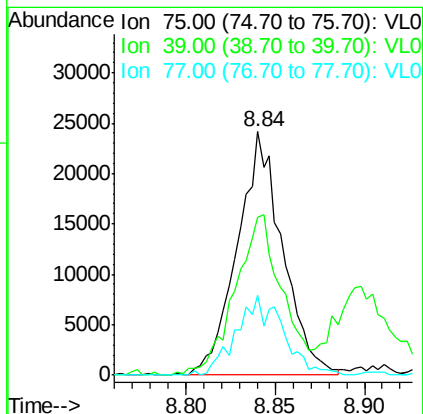
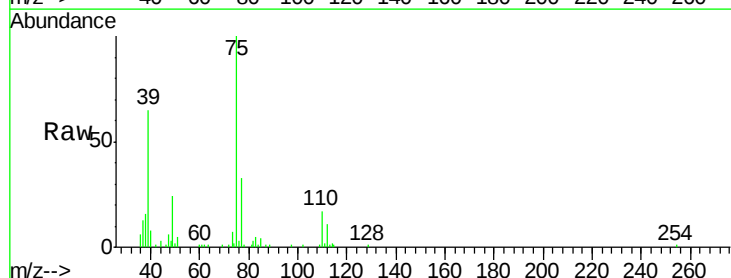
Tgt Ion: 75 Resp: 42811

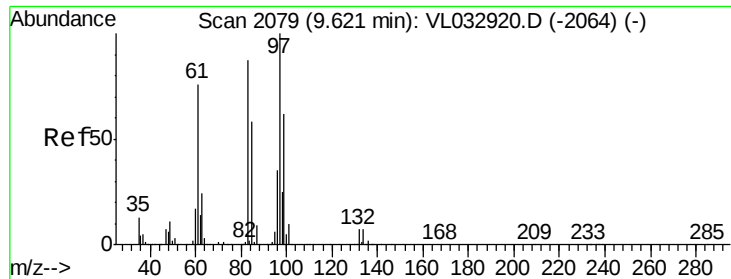
Ion Ratio Lower Upper

75 100

39 62.3 52.8 79.2

77 32.9 24.3 36.5





#47

1,1,2-Trichloroethane

Concen: 0.446 ppbv

RT: 9.61 min Scan# 2077

Delta R.T. -0.01 min

Lab File: VL032923.D

Acq: 7 Dec 2018 5:34

Instrument :

MSVOA\_L

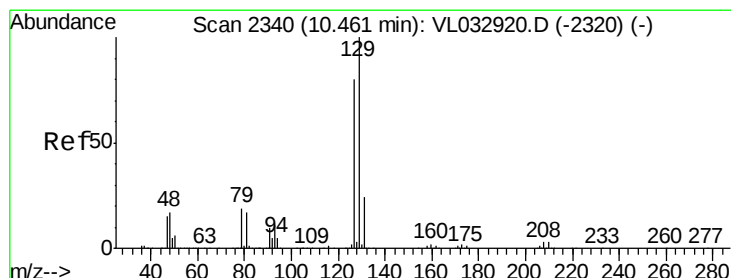
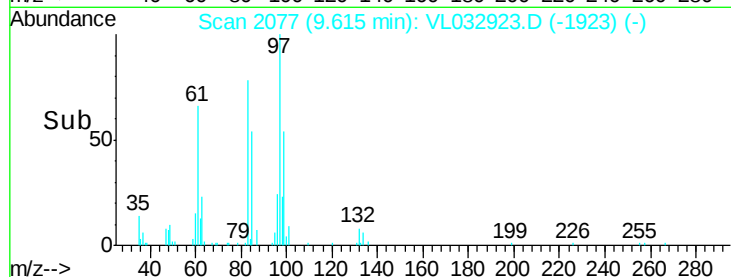
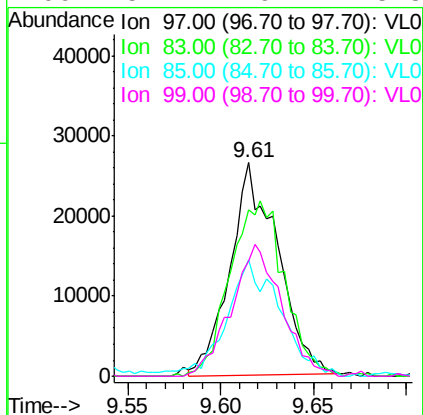
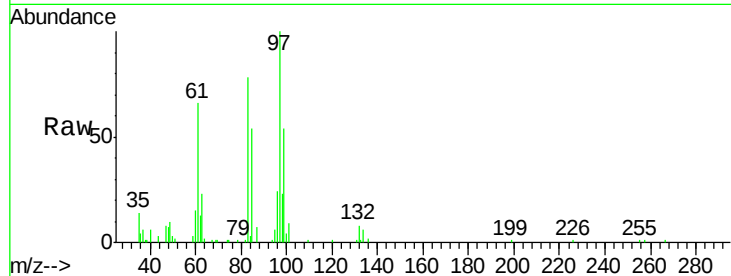
ClientSampleId :

VSTDIC0.5

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 97    | Resp: | 47315 |
| Ion      | Ratio | Lower | Upper |
| 97       | 100   |       |       |
| 83       | 77.3  | 69.8  | 104.8 |
| 85       | 53.8  | 46.7  | 70.1  |
| 99       | 54.7  | 49.2  | 73.8  |

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#48

Dibromochloromethane

Concen: 0.428 ppbv m

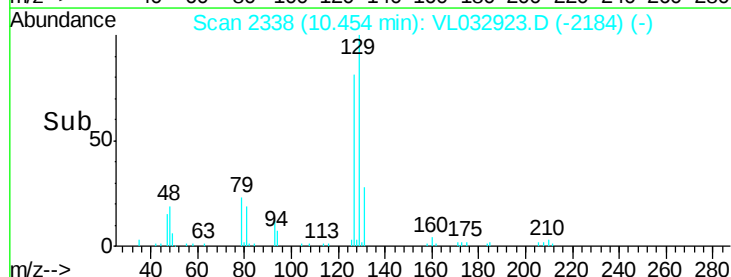
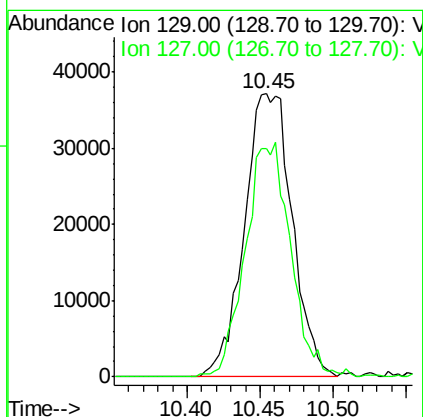
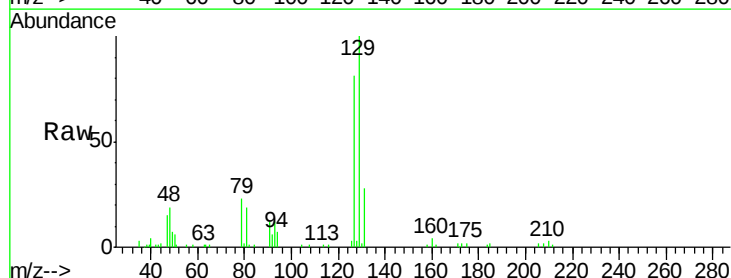
RT: 10.45 min Scan# 2338

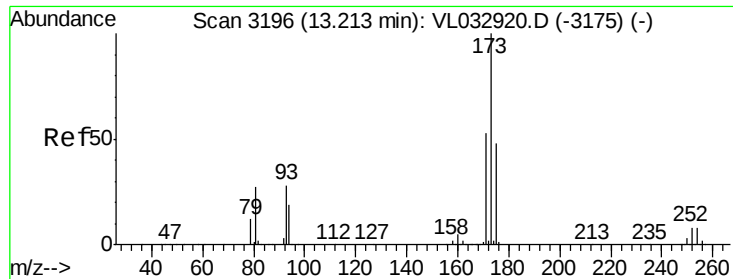
Delta R.T. -0.01 min

Lab File: VL032923.D

Acq: 7 Dec 2018 5:34

|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 129   | Resp: | 84056  |
| Ion      | Ratio | Lower | Upper  |
| 129      | 100   |       |        |
| 127      | 0.0   | 39.3  | 117.8# |





#49

Bromoform

Concen: 0.401 ppbv m

RT: 13.20 min Scan# 3193

Delta R.T. -0.01 min

Lab File: VL032923.D

Acq: 7 Dec 2018 5:34

Instrument :

MSVOA\_L

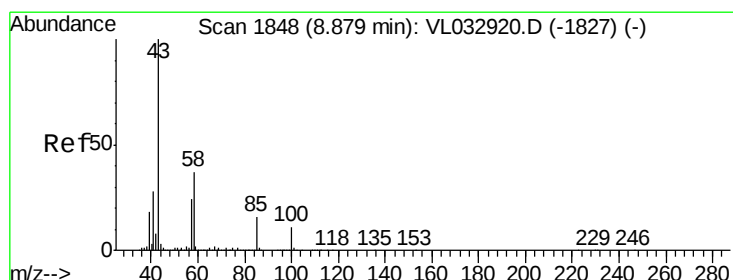
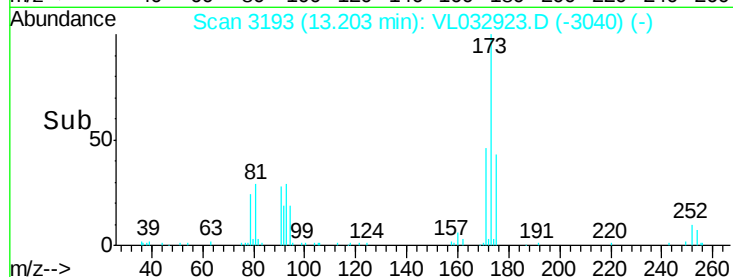
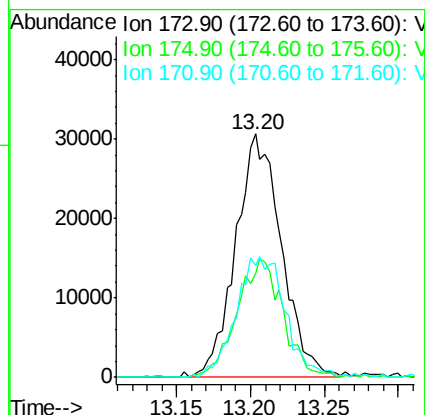
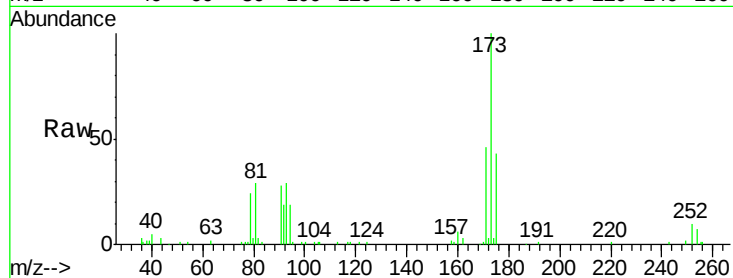
ClientSampleId :

VSTDIC0.5

|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 173   | Resp: | 66071 |
| Ion Ratio | Lower | Upper |       |
| 173       | 100   |       |       |
| 175       | 48.8  | 39.0  | 58.4  |
| 171       | 53.5  | 41.5  | 62.3  |

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#50

4-Methyl-2-Pentanone

Concen: 0.393 ppbv

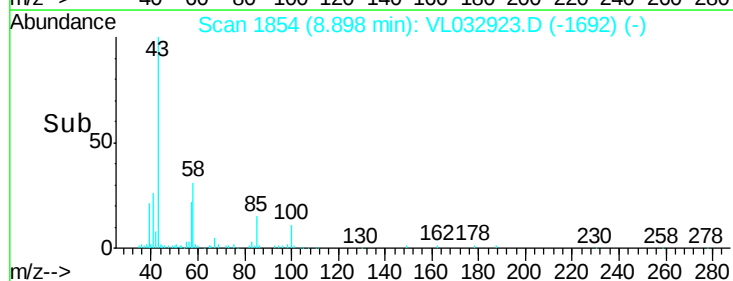
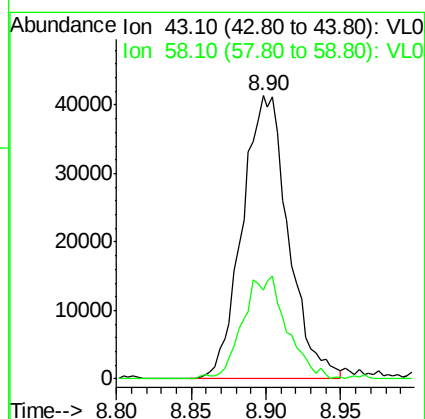
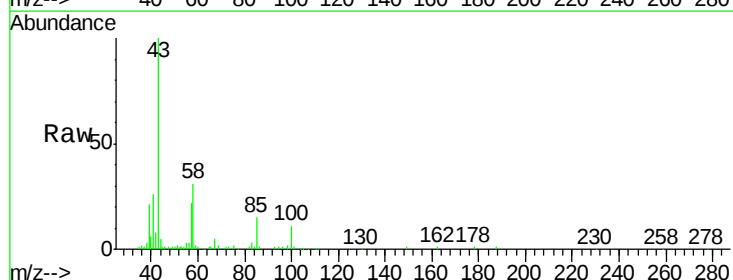
RT: 8.90 min Scan# 1854

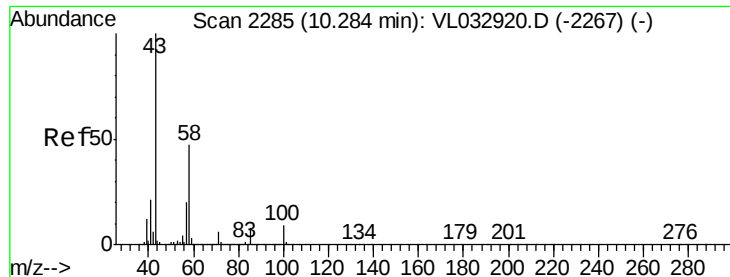
Delta R.T. 0.02 min

Lab File: VL032923.D

Acq: 7 Dec 2018 5:34

|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 43    | Resp: | 88931 |
| Ion Ratio | Lower | Upper |       |
| 43        | 100   |       |       |
| 58        | 34.6  | 29.0  | 43.4  |





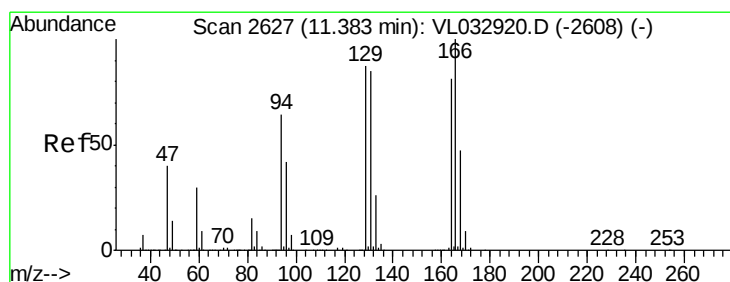
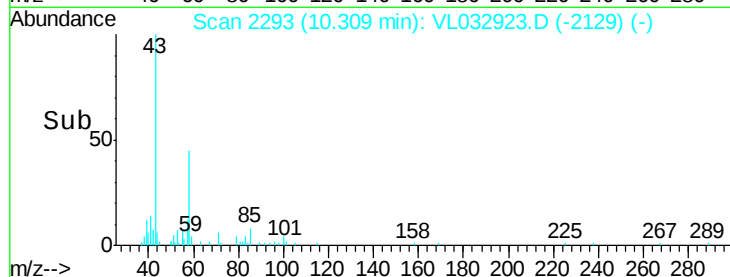
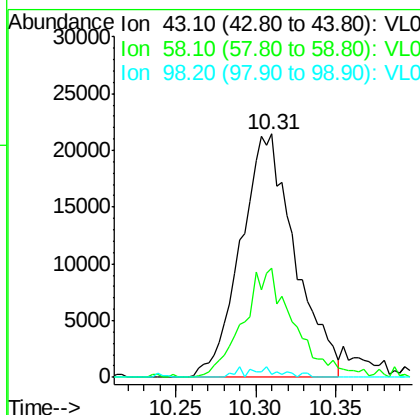
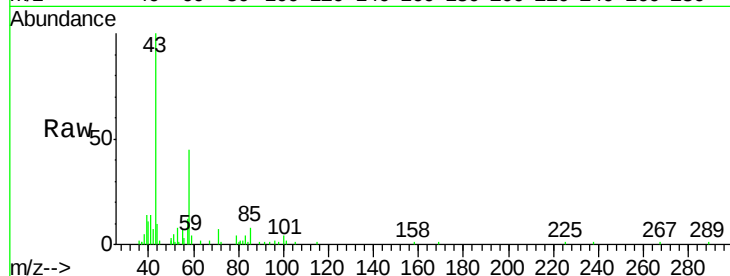
#51  
2-Hexanone  
Concen: 0.298 ppbv  
RT: 10.31 min Scan# 2293  
Delta R.T. 0.03 min  
Lab File: VL032923.D  
Acq: 7 Dec 2018 5:34

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDIC0.5

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 43      | 100   |       |       |
| 58      | 43.6  | 38.1  | 57.1  |
| 98      | 2.6   | 0.4   | 0.6   |

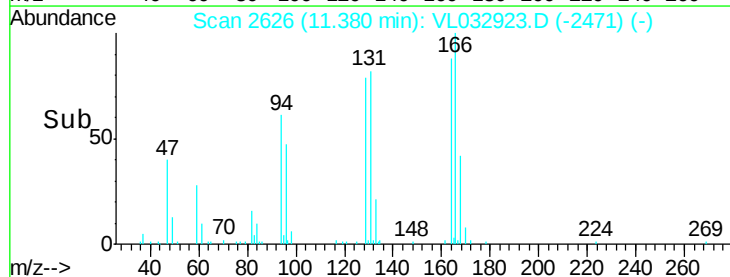
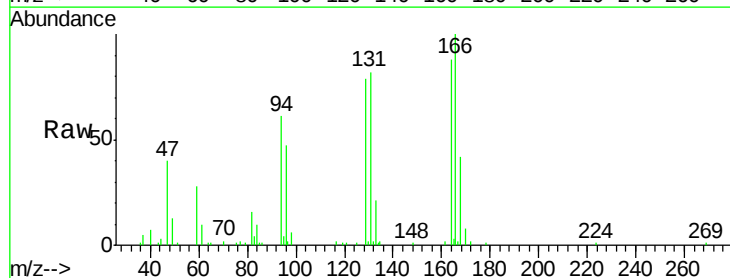
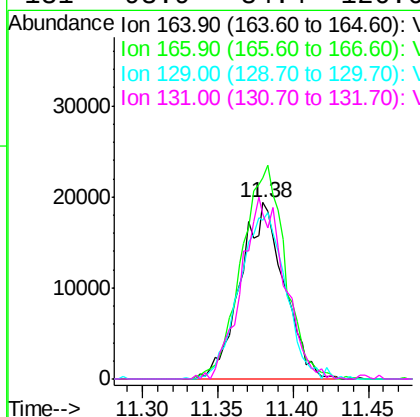
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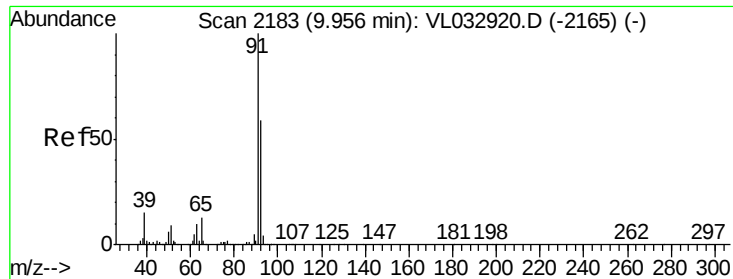
MMDadoda  
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#52  
Tetrachloroethene  
Concen: 0.426 ppbv m  
RT: 11.38 min Scan# 2626  
Delta R.T. -0.00 min  
Lab File: VL032923.D  
Acq: 7 Dec 2018 5:34

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 164     | 100   |       |       |
| 166     | 114.1 | 98.8  | 148.2 |
| 129     | 90.3  | 85.5  | 128.3 |
| 131     | 93.9  | 84.4  | 126.6 |





#53

Toluene

Concen: 0.323 ppbv

RT: 9.95 min Scan# 2182

Delta R.T. -0.00 min

Lab File: VL032923.D

Acq: 7 Dec 2018 5:34

Instrument :

MSVOA\_L

ClientSampleId :

VSTDIC0.5

Tgt Ion: 91 Resp: 89633

Ion Ratio Lower Upper

91 100

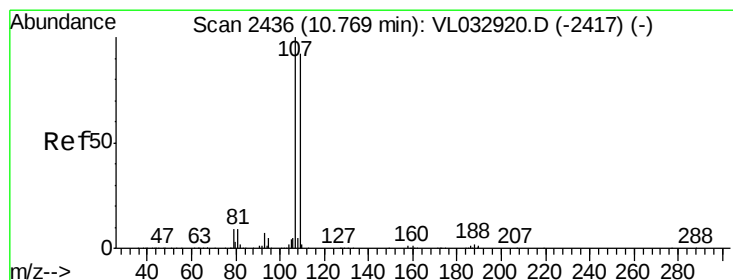
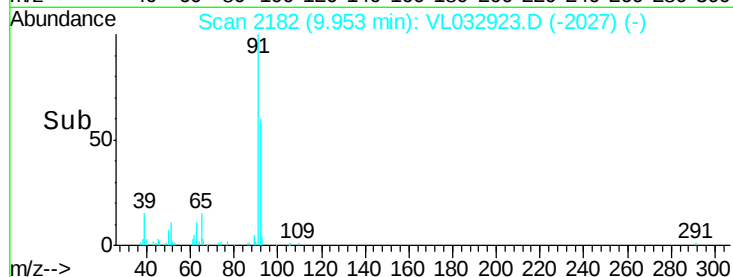
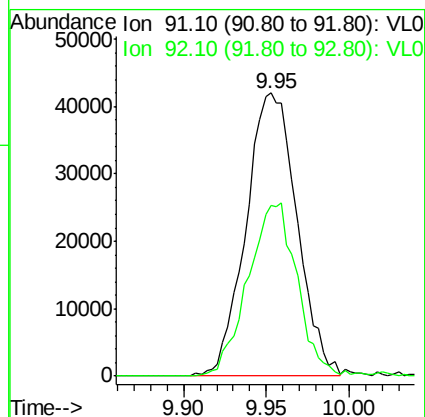
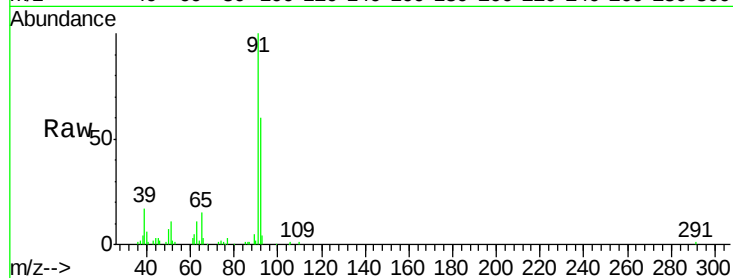
92 59.4 47.4 71.0

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#54

1,2-Dibromoethane

Concen: 0.409 ppbv m

RT: 10.76 min Scan# 2434

Delta R.T. -0.01 min

Lab File: VL032923.D

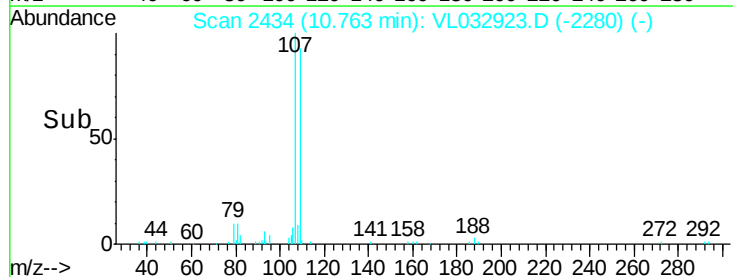
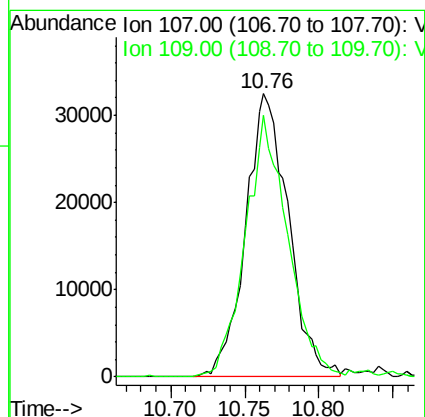
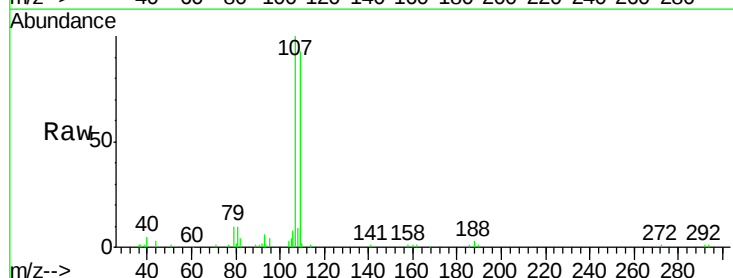
Acq: 7 Dec 2018 5:34

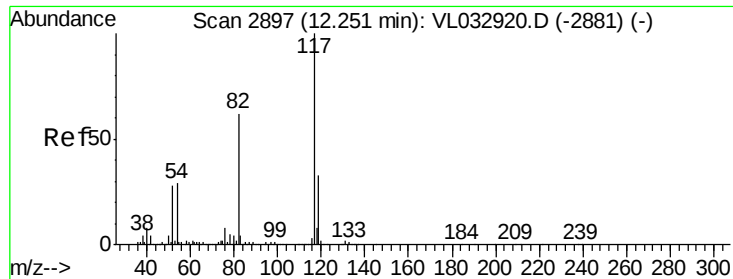
Tgt Ion: 107 Resp: 64805

Ion Ratio Lower Upper

107 100

109 92.6 73.4 110.2





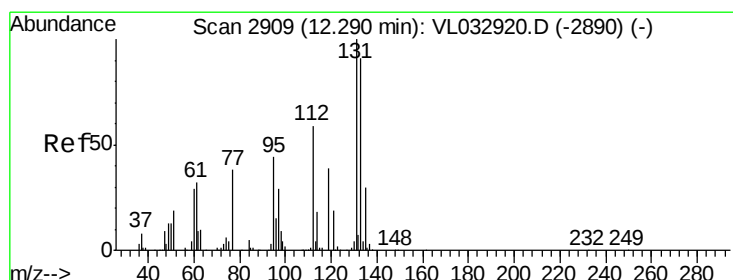
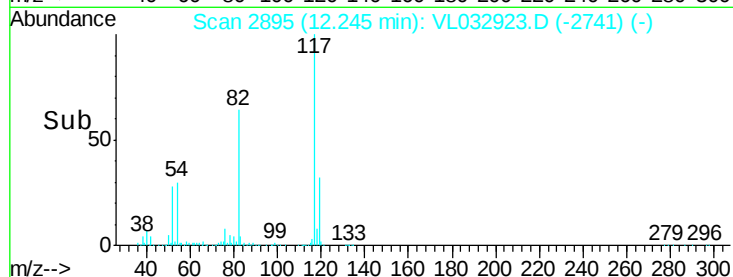
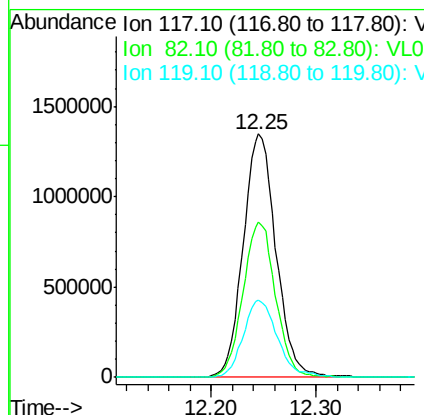
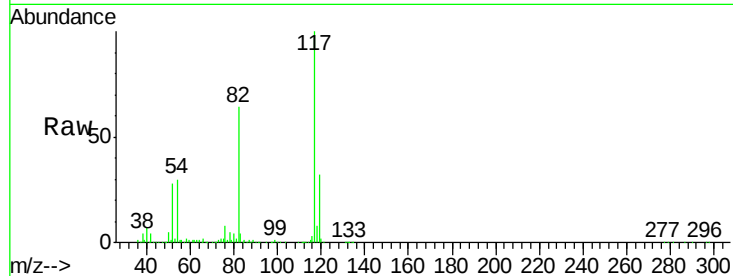
#55  
Chlorobenzene-d5  
Concen: 10.000 ppbv  
RT: 12.25 min Scan# 2895  
Delta R.T. -0.01 min  
Lab File: VL032923.D  
Acq: 7 Dec 2018 5:34

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDIC0.5

Tgt Ion:117 Resp: 2911653  
Ion Ratio Lower Upper  
117 100  
82 63.5 47.8 71.8  
119 33.4 43.1 64.7#

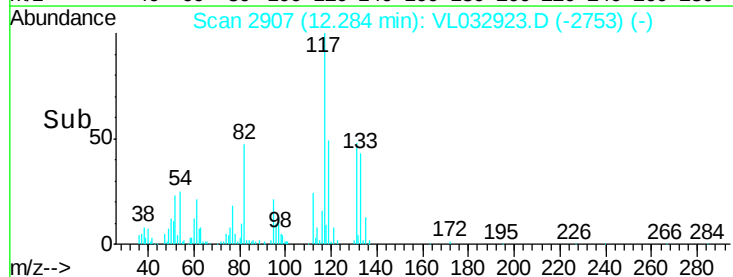
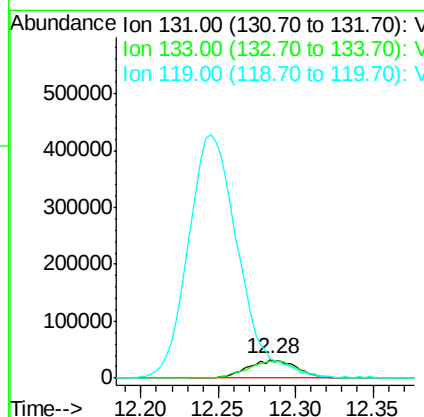
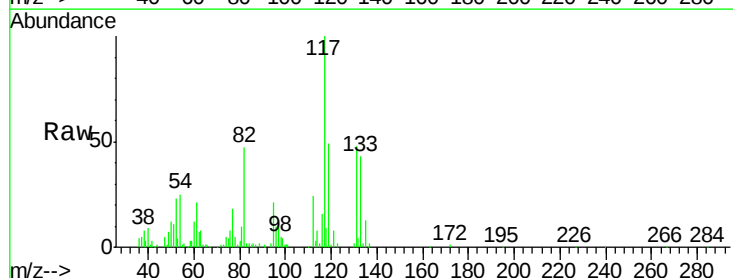
Manual Integrations  
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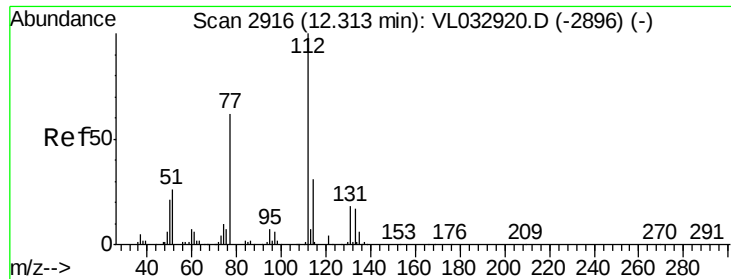
MMDadoda  
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#56  
1,1,1,2-Tetrachloroethane  
Concen: 0.540 ppbv  
RT: 12.28 min Scan# 2907  
Delta R.T. -0.01 min  
Lab File: VL032923.D  
Acq: 7 Dec 2018 5:34

Tgt Ion:131 Resp: 70975  
Ion Ratio Lower Upper  
131 100  
133 95.9 75.1 112.7  
119 1366.9 47.5 71.3#





#57

Chlorobenzene

Concen: 0.526 ppbv

RT: 12.30 min Scan# 2912

Delta R.T. -0.01 min

Lab File: VL032923.D

Acq: 7 Dec 2018 5:34

Instrument :

MSVOA\_L

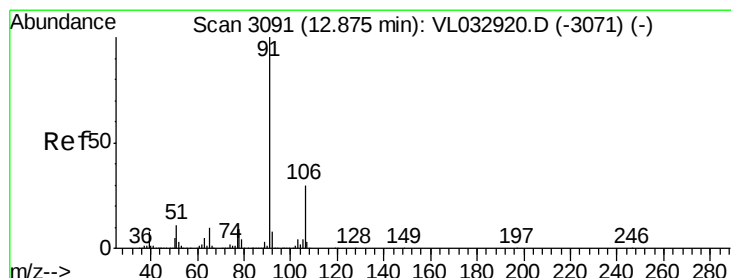
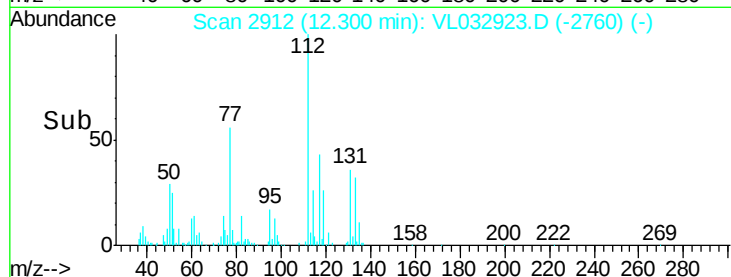
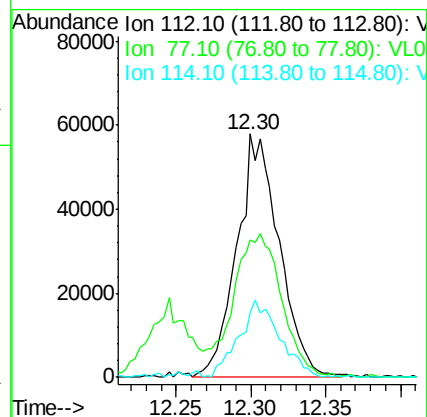
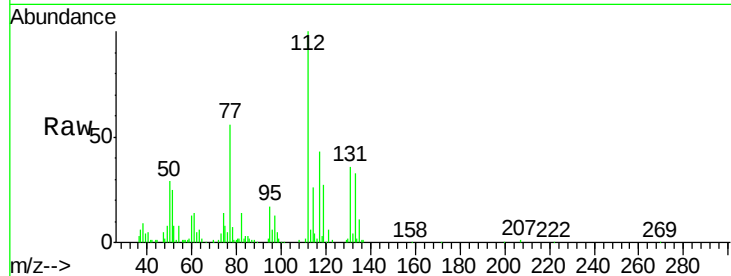
ClientSampleId :

VSTDIC0.5

|           |       |       |        |
|-----------|-------|-------|--------|
| Tgt Ion:  | 112   | Resp: | 114275 |
| Ion Ratio | Lower | Upper |        |
| 112       | 100   |       |        |
| 77        | 55.8  | 51.1  | 76.7   |
| 114       | 26.3  | 28.4  | 34.7#  |

Manual Integrations  
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MMDadoda  
12/11/2018 10:08:16 AM



#58

Ethyl Benzene

Concen: 0.353 ppbv

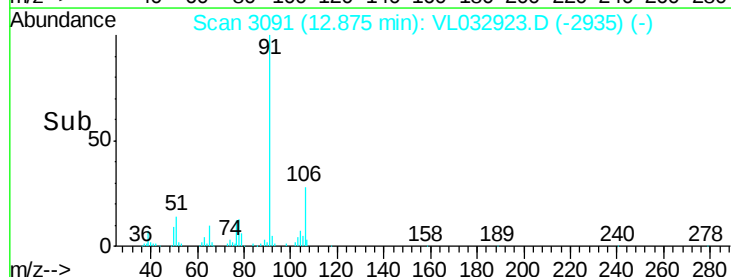
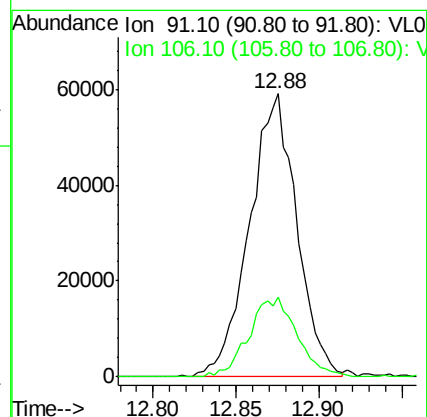
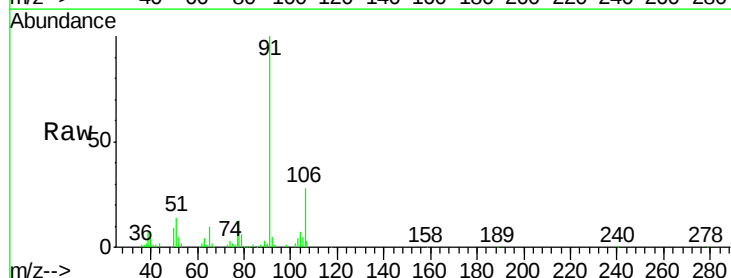
RT: 12.88 min Scan# 3091

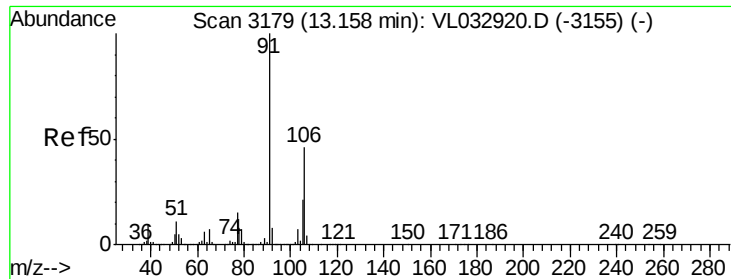
Delta R.T. 0.00 min

Lab File: VL032923.D

Acq: 7 Dec 2018 5:34

|           |       |       |        |
|-----------|-------|-------|--------|
| Tgt Ion:  | 91    | Resp: | 117284 |
| Ion Ratio | Lower | Upper |        |
| 91        | 100   |       |        |
| 106       | 28.2  | 23.9  | 35.9   |





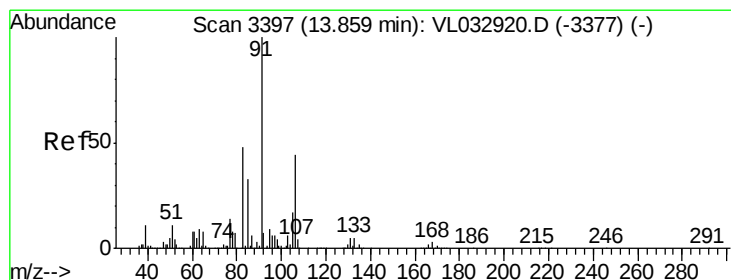
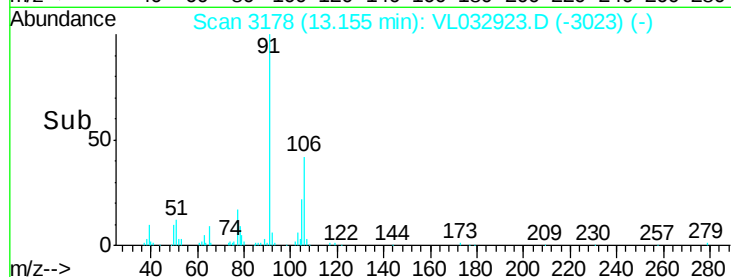
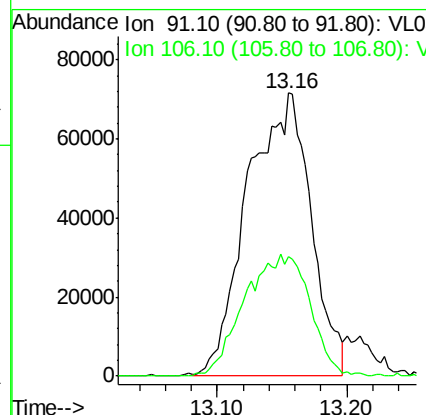
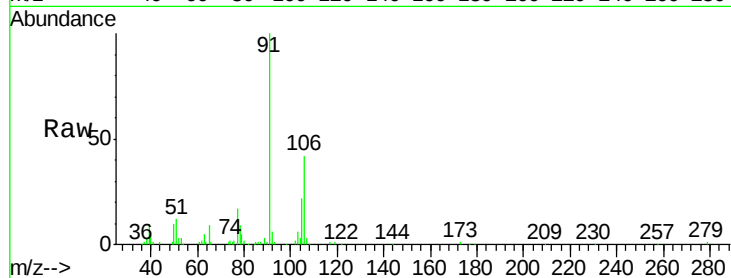
#59  
m/p-Xylene  
Concen: 0.811 ppbv m  
RT: 13.16 min Scan# 3178  
Delta R.T. -0.00 min  
Lab File: VL032923.D  
Acq: 7 Dec 2018 5:34

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDIC0.5

Tgt Ion: 91 Resp: 242839  
Ion Ratio Lower Upper  
91 100  
106 44.5 0.0 0.0#

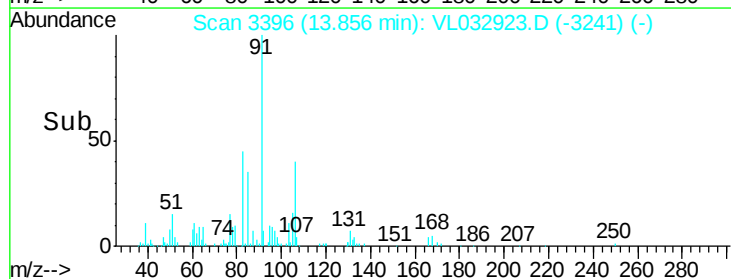
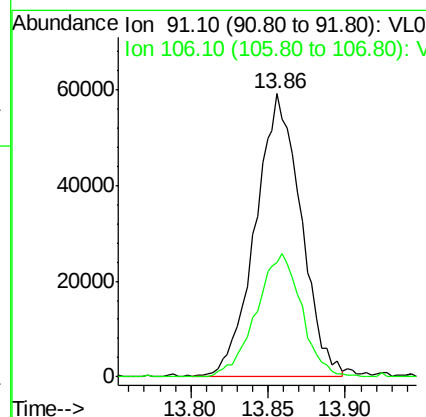
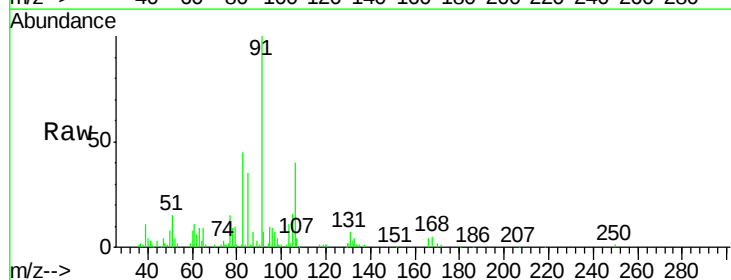
Manual Integrations  
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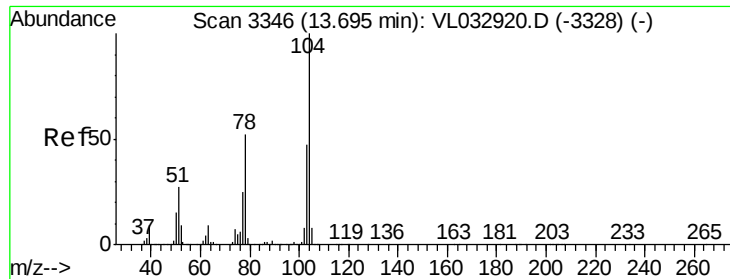
MMDadoda  
12/11/2018 10:08:16 AM



#60  
o-Xylene  
Concen: 0.414 ppbv  
RT: 13.86 min Scan# 3396  
Delta R.T. -0.00 min  
Lab File: VL032923.D  
Acq: 7 Dec 2018 5:34

Tgt Ion: 91 Resp: 121283  
Ion Ratio Lower Upper  
91 100  
106 43.2 21.9 65.8





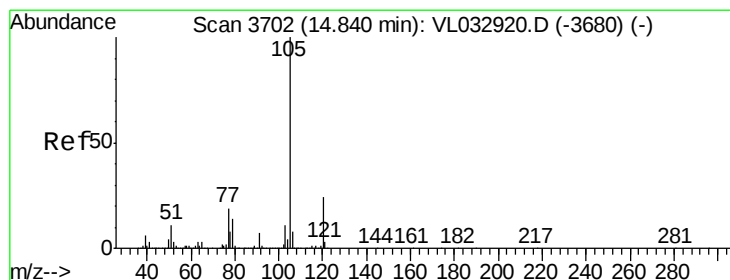
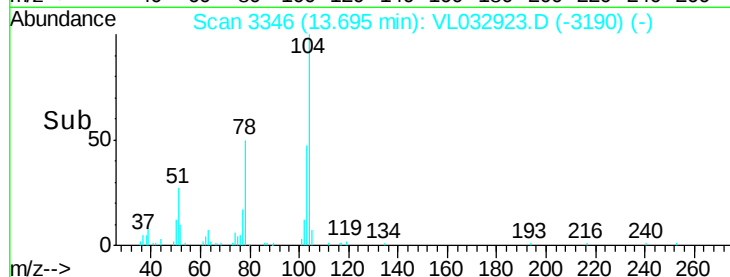
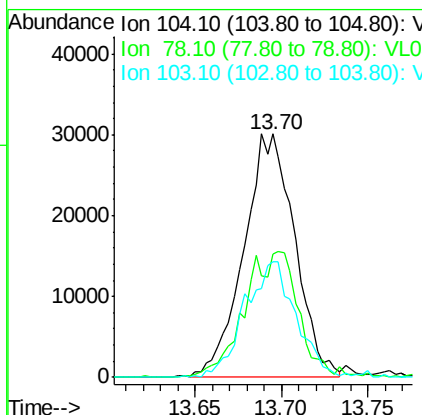
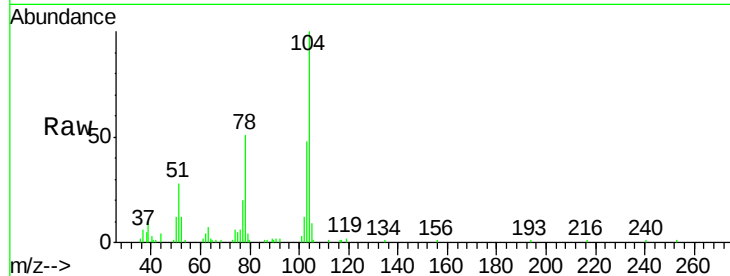
#61  
Styrene  
Concen: 0.315 ppbv m  
RT: 13.70 min Scan# 3346  
Delta R.T. 0.00 min  
Lab File: VL032923.D  
Acq: 7 Dec 2018 5:34

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDIC0.5

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 104     | 100   |       |       |
| 78      | 0.0   | 42.0  | 63.0# |
| 103     | 0.0   | 38.3  | 57.5# |

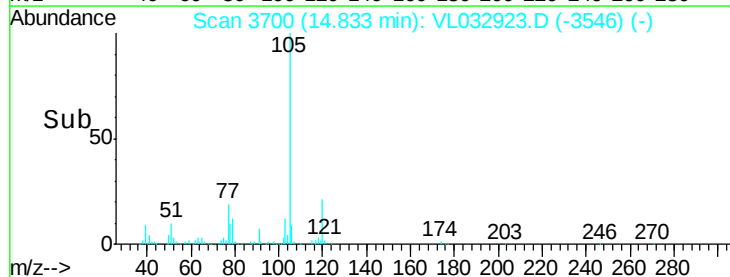
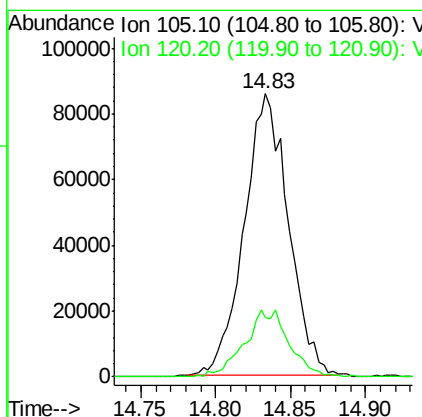
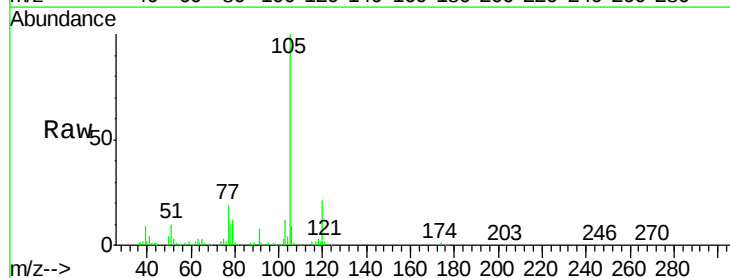
Manual Integrations  
APPROVED

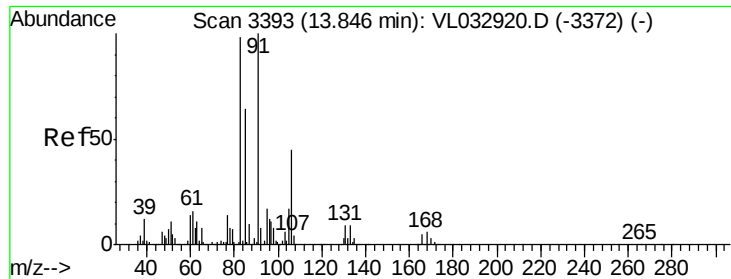
MMDadoda  
12/11/2018 10:08:16 AM



#62  
Isopropylbenzene  
Concen: 0.425 ppbv  
RT: 14.83 min Scan# 3700  
Delta R.T. -0.01 min  
Lab File: VL032923.D  
Acq: 7 Dec 2018 5:34

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 105     | 100   |       |       |
| 120     | 23.9  | 20.3  | 30.5  |





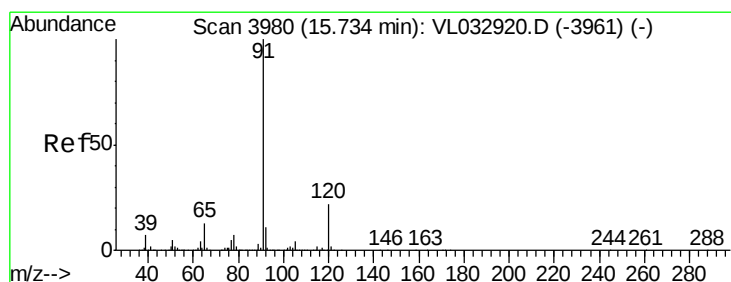
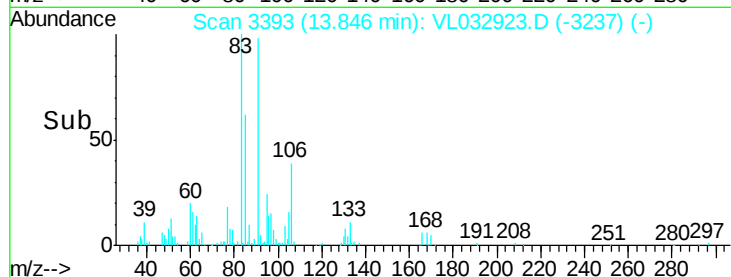
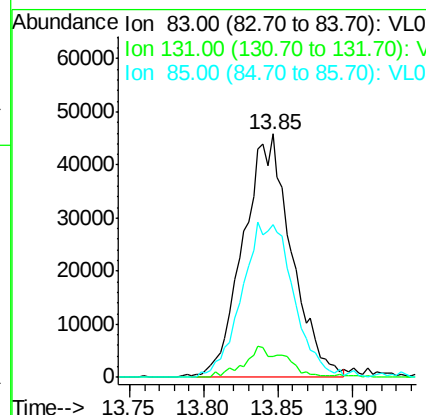
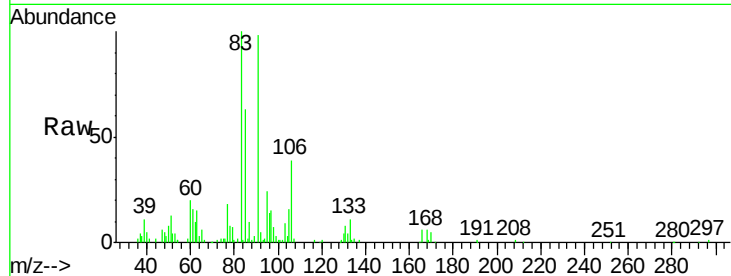
#63  
 1,1,2,2-Tetrachloroethane  
 Concen: 0.470 ppbv m  
 RT: 13.85 min Scan# 3393  
 Delta R.T. 0.00 min  
 Lab File: VL032923.D  
 Acq: 7 Dec 2018 5:34

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDIC0.5

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 83      | 100   |       |       |
| 131     | 11.2  | 4.9   | 14.6  |
| 85      | 68.4  | 32.9  | 98.6  |

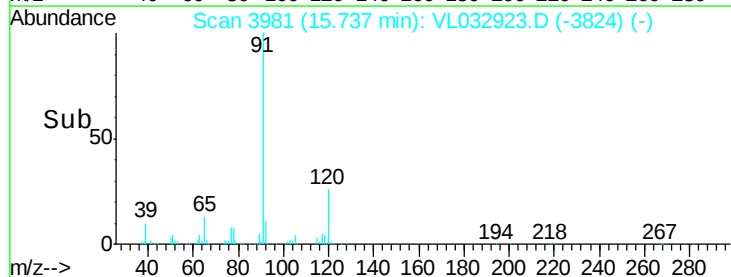
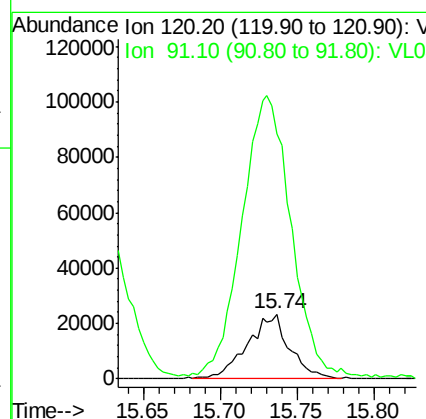
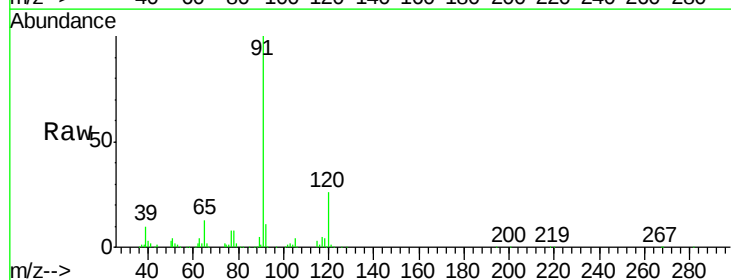
Manual Integrations  
 APPROVED

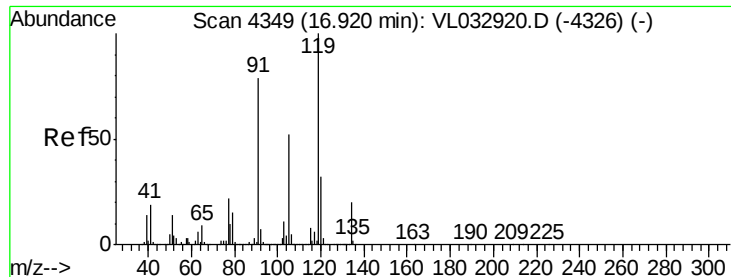
MMDadoda  
 12/11/2018 10:08:16 AM



#64  
 n-propylbenzene  
 Concen: 0.424 ppbv m  
 RT: 15.74 min Scan# 3981  
 Delta R.T. 0.00 min  
 Lab File: VL032923.D  
 Acq: 7 Dec 2018 5:34

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 120     | 100   |       |       |
| 91      | 512.5 | 380.4 | 570.6 |





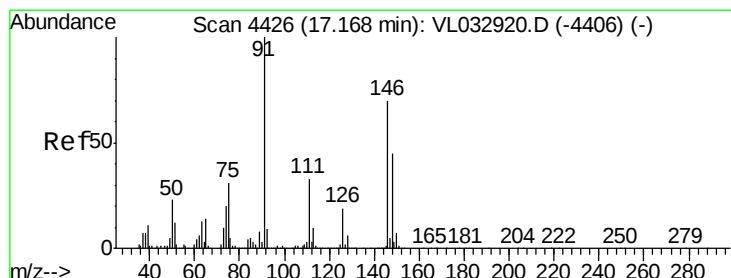
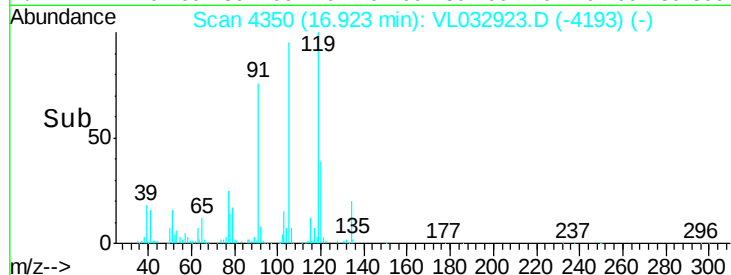
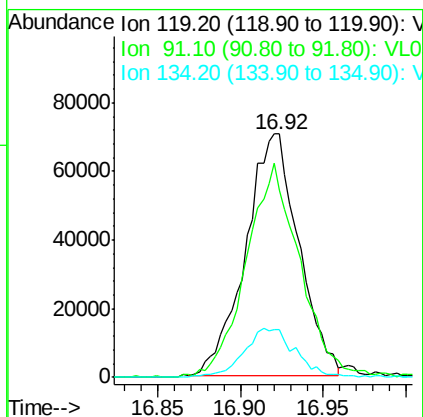
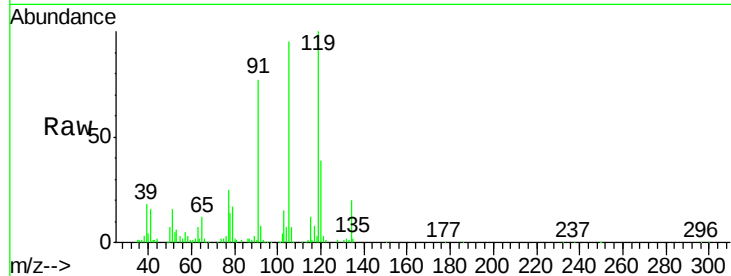
#65  
tert-Butylbenzene  
Concen: 0.440 ppbv  
RT: 16.92 min Scan# 4350  
Delta R.T. 0.00 min  
Lab File: VL032923.D  
Acq: 7 Dec 2018 5:34

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDIC0.5

| Tgt Ion | Ratio | Resp   | Lower | Upper |
|---------|-------|--------|-------|-------|
| 119     | 100   | 156687 |       |       |
| 91      | 90.3  | 64.5   | 96.7  |       |
| 134     | 19.9  | 15.7   | 23.5  |       |

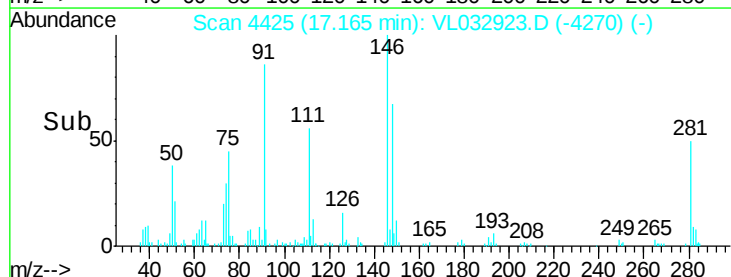
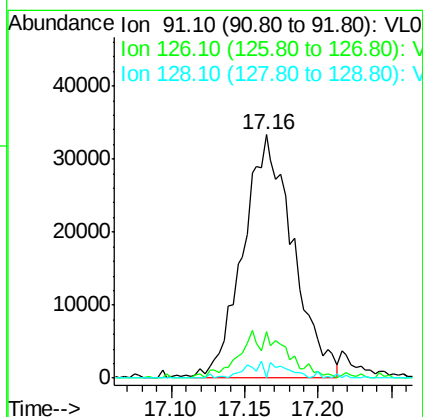
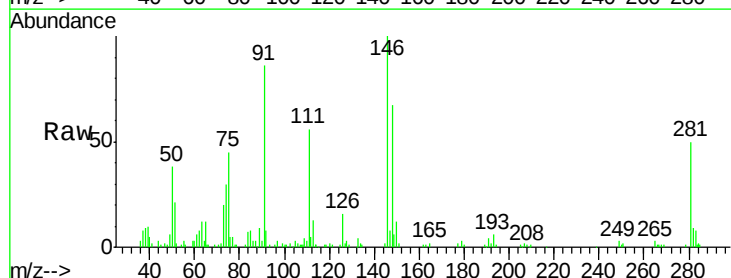
Manual Integrations  
APPROVED

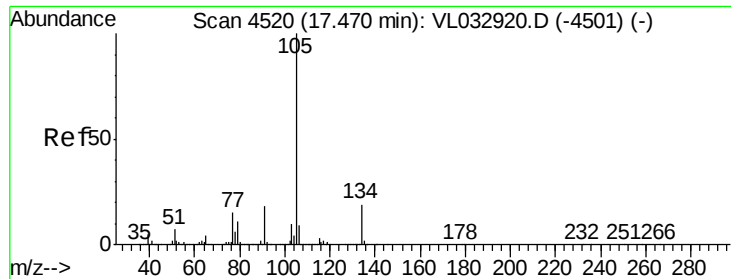
MMDadoda  
12/11/2018 10:08:16 AM



#66  
Benzyl Chloride  
Concen: 0.418 ppbv m  
RT: 17.16 min Scan# 4425  
Delta R.T. -0.00 min  
Lab File: VL032923.D  
Acq: 7 Dec 2018 5:34

| Tgt Ion | Ratio | Resp  | Lower | Upper |
|---------|-------|-------|-------|-------|
| 91      | 100   | 78857 |       |       |
| 126     | 0.0   | 14.1  | 21.1# |       |
| 128     | 5.3   | 4.5   | 6.7   |       |





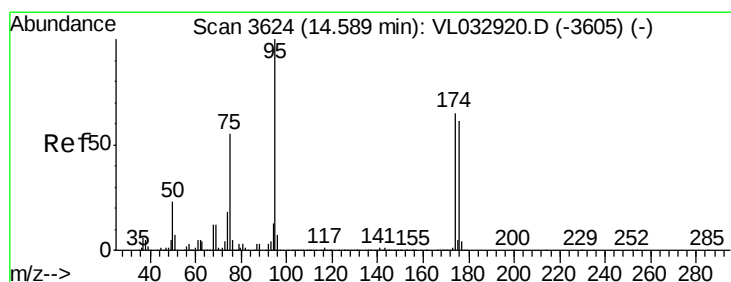
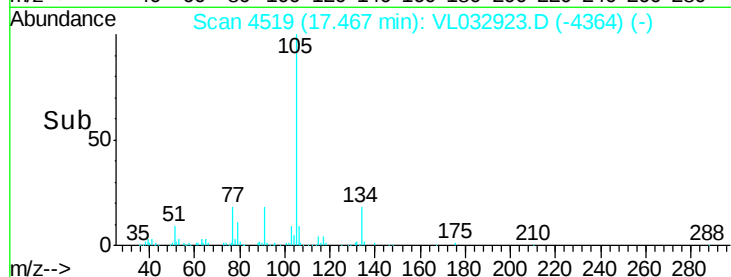
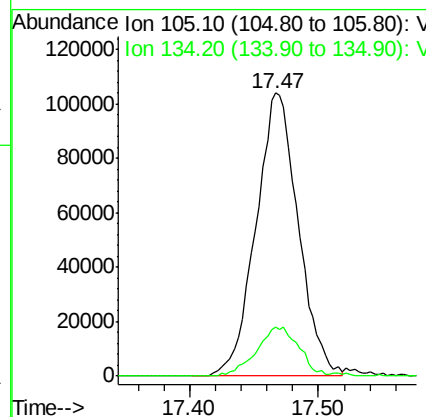
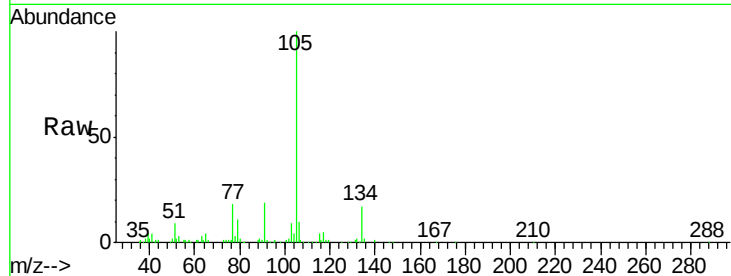
#67  
 sec-Butylbenzene  
 Concen: 0.471 ppbv  
 RT: 17.47 min Scan# 4519  
 Delta R.T. -0.00 min  
 Lab File: VL032923.D  
 Acq: 7 Dec 2018 5:34

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDIC0.5

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 105     | 100   |       |       |
| 134     | 17.9  | 14.6  | 21.8  |

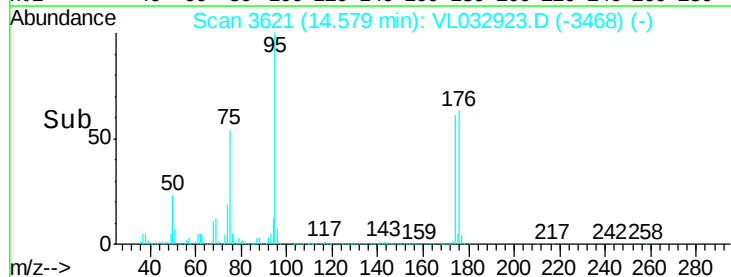
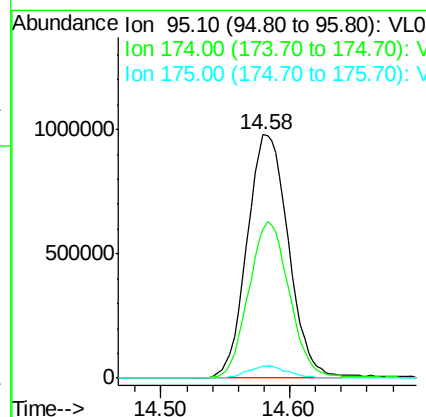
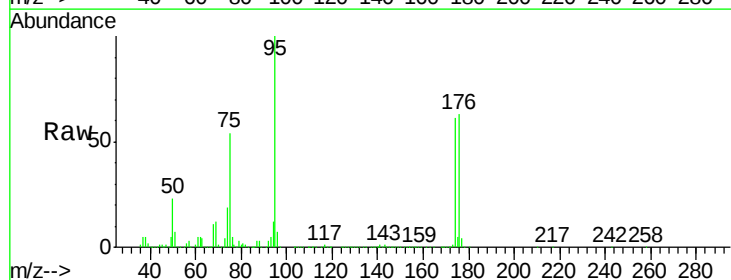
Manual Integrations  
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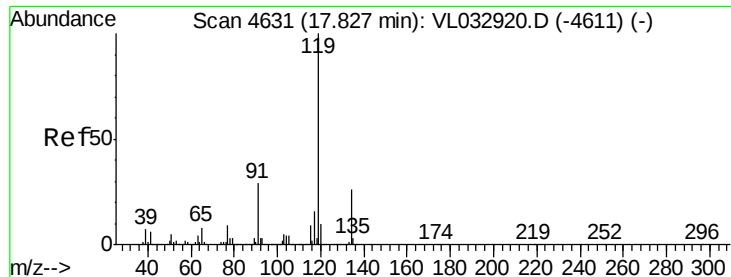
MMDadoda  
 12/11/2018 10:08:16 AM



#68  
 1-Bromo-4-Fluorobenzene  
 Concen: 10.279 ppbv  
 RT: 14.58 min Scan# 3621  
 Delta R.T. -0.01 min  
 Lab File: VL032923.D  
 Acq: 7 Dec 2018 5:34

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 95      | 100   |       |       |
| 174     | 64.3  | 51.4  | 77.0  |
| 175     | 4.9   | 3.8   | 5.6   |





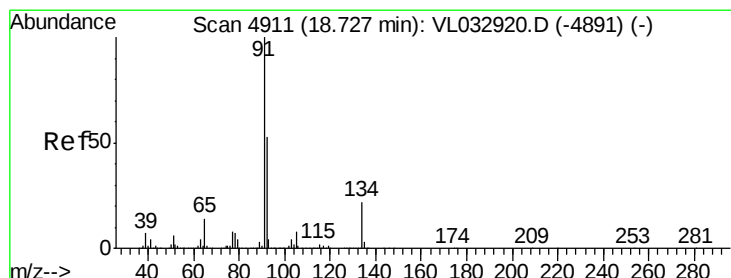
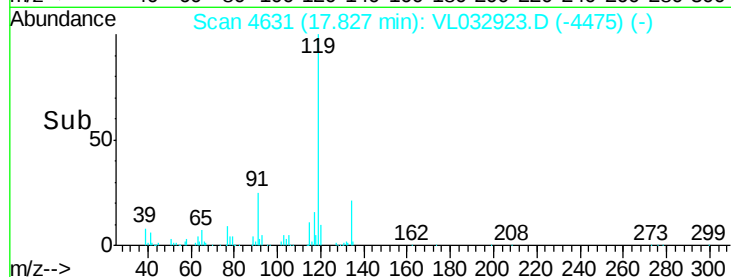
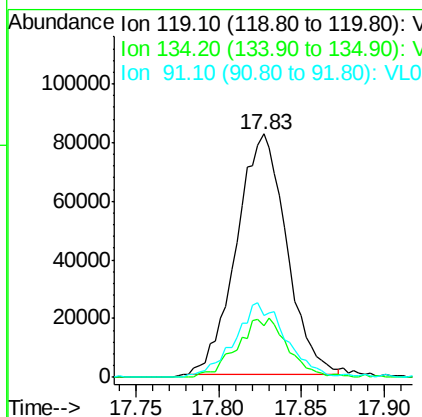
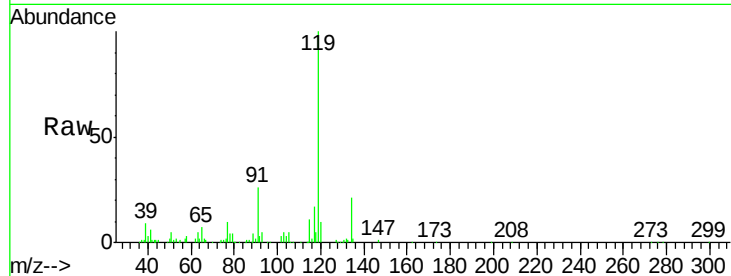
#69  
 p-Isopropyltoluene  
 Concen: 0.432 ppbv  
 RT: 17.83 min Scan# 4631  
 Delta R.T. 0.00 min  
 Lab File: VL032923.D  
 Acq: 7 Dec 2018 5:34

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDIC0.5

| Tgt Ion | Ratio | Resp   | Lower | Upper |
|---------|-------|--------|-------|-------|
| 119     | 100   | 173547 |       |       |
| 134     | 24.9  | 20.2   | 30.2  |       |
| 91      | 32.3  | 22.9   | 34.3  |       |

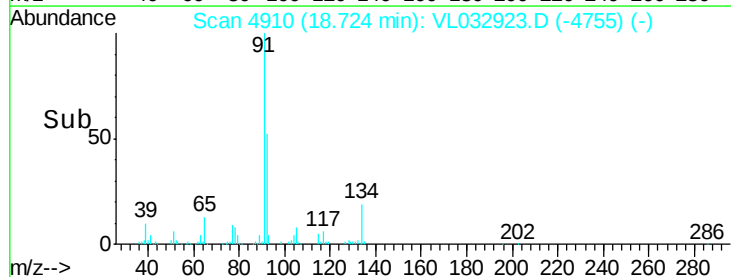
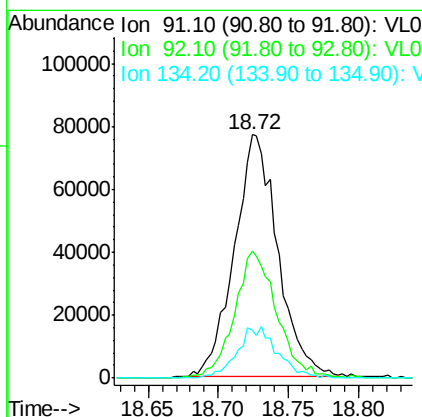
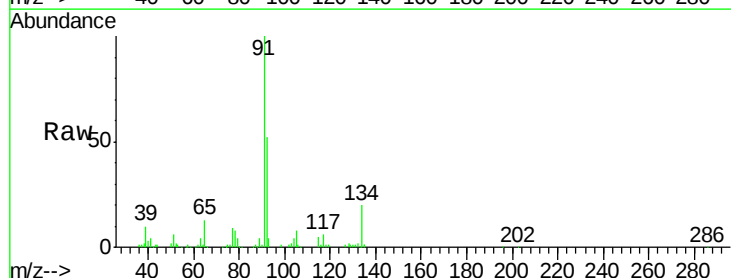
Manual Integrations  
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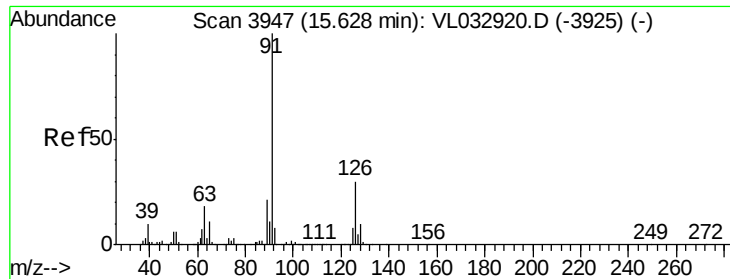
MMDadoda  
 12/11/2018 10:08:16 AM



#70  
 n-Butylbenzene  
 Concen: 0.418 ppbv  
 RT: 18.72 min Scan# 4910  
 Delta R.T. -0.00 min  
 Lab File: VL032923.D  
 Acq: 7 Dec 2018 5:34

| Tgt Ion | Ratio | Resp   | Lower | Upper |
|---------|-------|--------|-------|-------|
| 91      | 100   | 165012 |       |       |
| 92      | 51.8  | 42.7   | 64.1  |       |
| 134     | 20.0  | 18.0   | 27.0  |       |





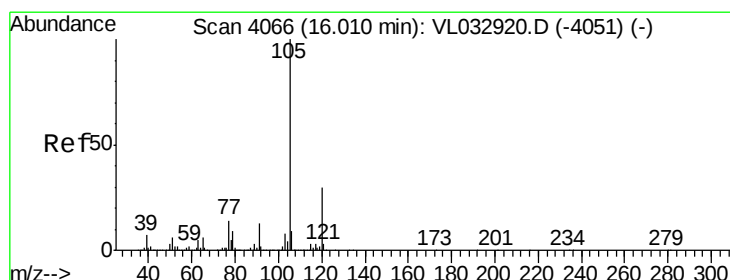
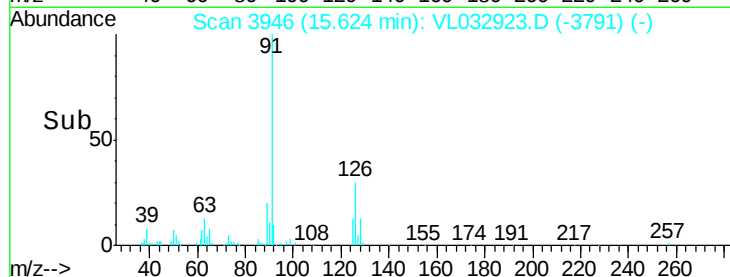
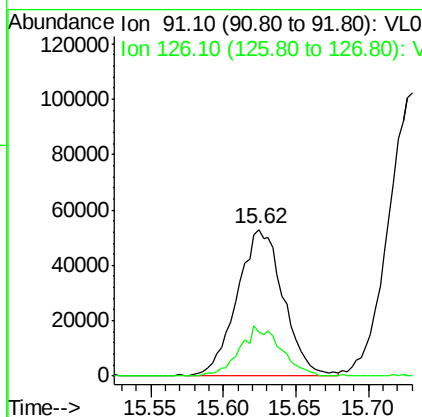
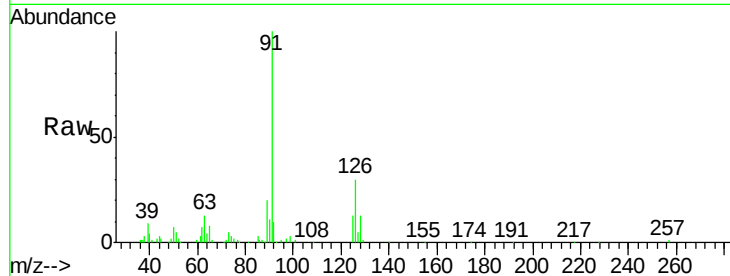
#71  
 2-Chlorotoluene  
 Concen: 0.389 ppbv  
 RT: 15.62 min Scan# 3946  
 Delta R.T. -0.00 min  
 Lab File: VL032923.D  
 Acq: 7 Dec 2018 5:34

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDIC0.5

Tgt Ion: 91 Resp: 116719  
 Ion Ratio Lower Upper  
 91 100  
 126 30.5 12.3 49.3

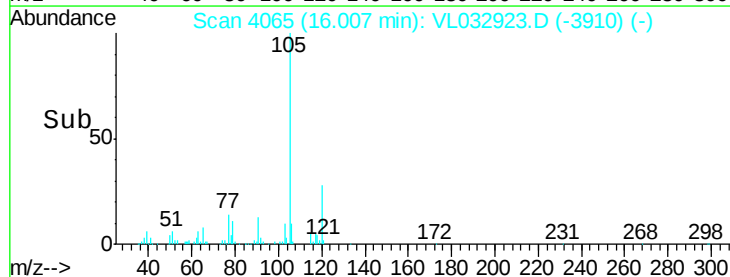
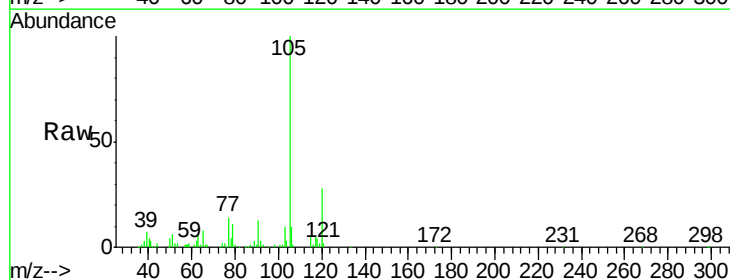
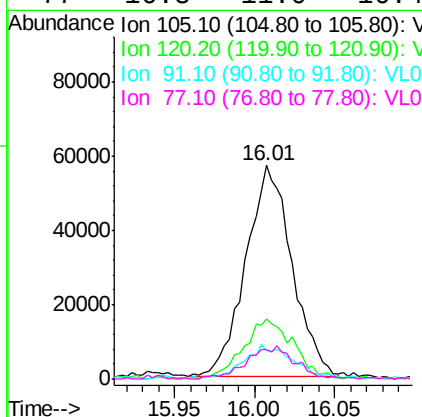
Manual Integrations  
 APPROVED

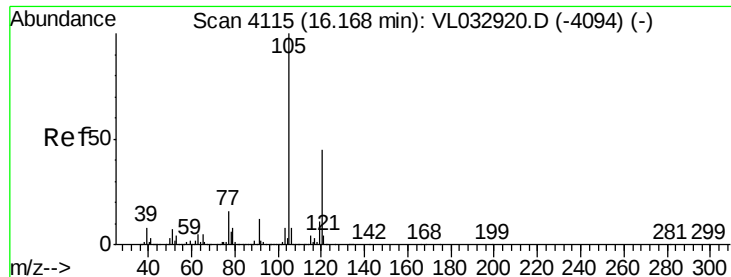
MMDadoda  
 12/11/2018 10:08:16 AM



#72  
 4-Ethyltoluene  
 Concen: 0.362 ppbv  
 RT: 16.01 min Scan# 4065  
 Delta R.T. -0.00 min  
 Lab File: VL032923.D  
 Acq: 7 Dec 2018 5:34

Tgt Ion: 105 Resp: 111889  
 Ion Ratio Lower Upper  
 105 100  
 120 31.5 23.0 34.4  
 91 16.9 10.4 15.6#  
 77 16.8 11.0 16.4#





#73

1,3,5-Trimethylbenzene

Concen: 0.419 ppbv

RT: 16.17 min Scan# 4115

Delta R.T. 0.00 min

Lab File: VL032923.D

Acq: 7 Dec 2018 5:34

Instrument :

MSVOA\_L

ClientSampleId :

VSTDIC0.5

Tgt Ion:105 Resp: 124568

Ion Ratio Lower Upper

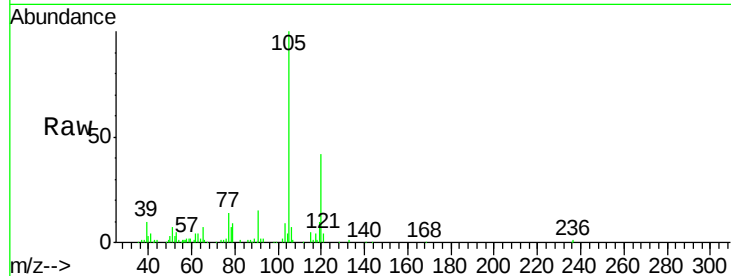
105 100

120 41.5 36.0 54.0

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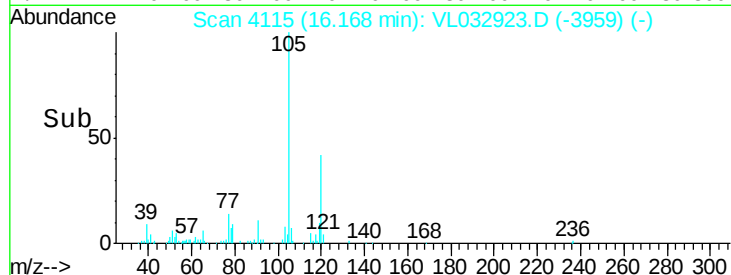
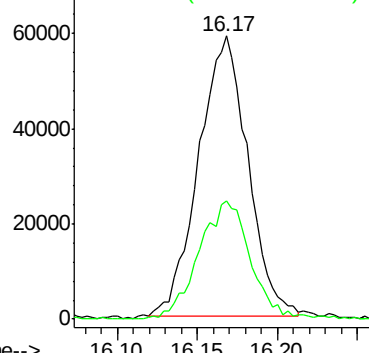
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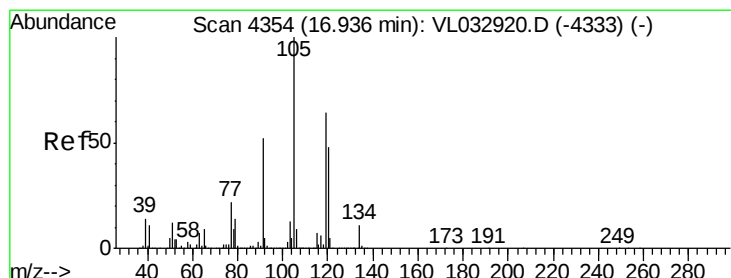


Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V



Time-->



#74

1,2,4-Trimethylbenzene

Concen: 0.509 ppbv

RT: 16.93 min Scan# 4352

Delta R.T. -0.01 min

Lab File: VL032923.D

Acq: 7 Dec 2018 5:34

Tgt Ion:105 Resp: 164747

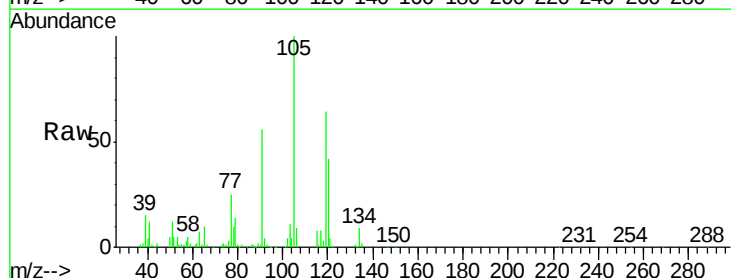
Ion Ratio Lower Upper

105 100

120 40.4 38.6 58.0

91 54.7 41.7 62.5

77 24.6 17.4 26.2

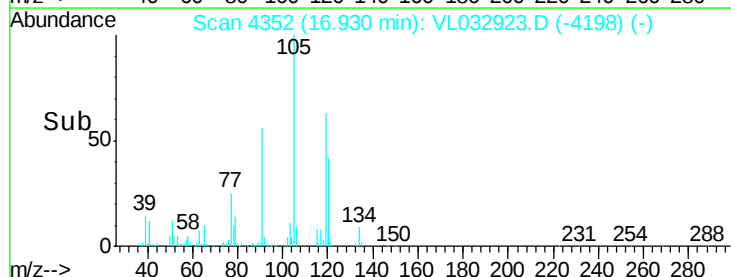
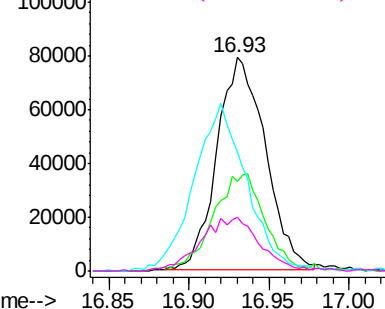


Abundance Ion 105.10 (104.80 to 105.80): V

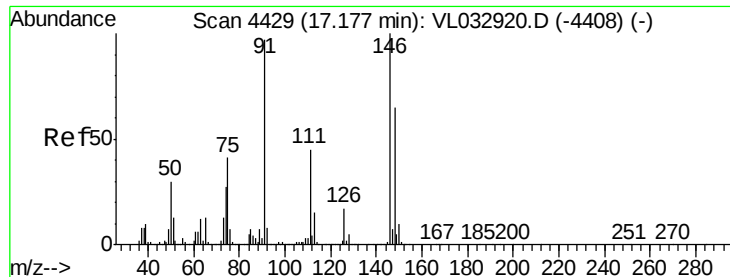
Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 77.10 (76.80 to 77.80): VL0



Time-->



#75

1,3-Dichlorobenzene

Concen: 0.517 ppbv

RT: 17.17 min Scan# 4428

Delta R.T. -0.00 min

Lab File: VL032923.D

Acq: 7 Dec 2018 5:34

Instrument :

MSVOA\_L

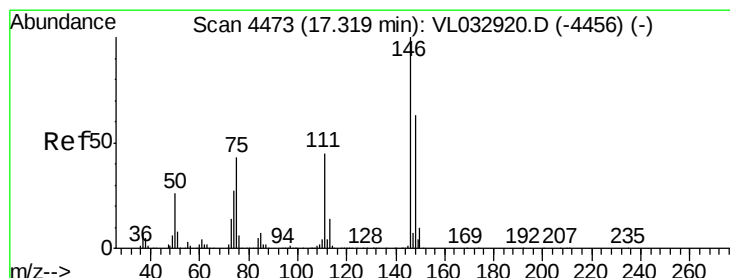
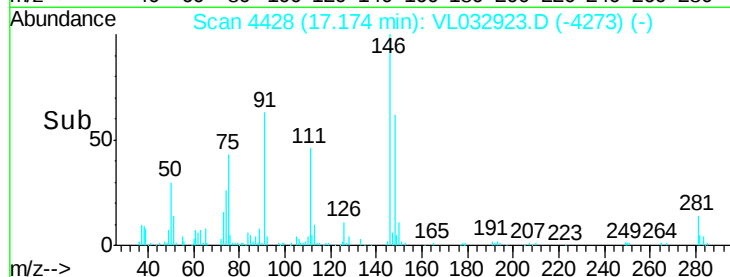
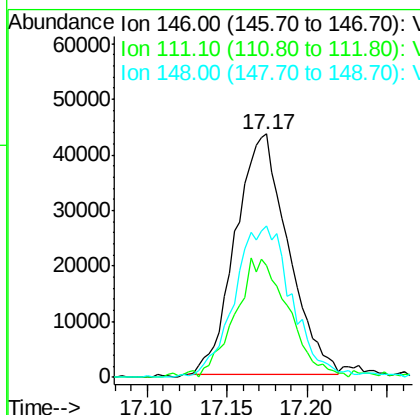
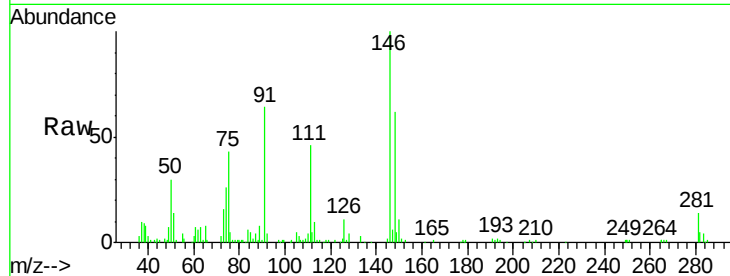
ClientSampleId :

VSTDIC0.5

|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 146   | Resp: | 97941 |
| Ion Ratio | Lower | Upper |       |
| 146       | 100   |       |       |
| 111       | 52.2  | 23.6  | 70.8  |
| 148       | 69.3  | 32.1  | 96.3  |

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#76

1,4-Dichlorobenzene

Concen: 0.484 ppbv

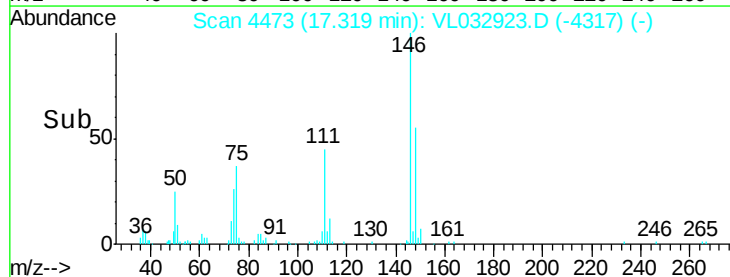
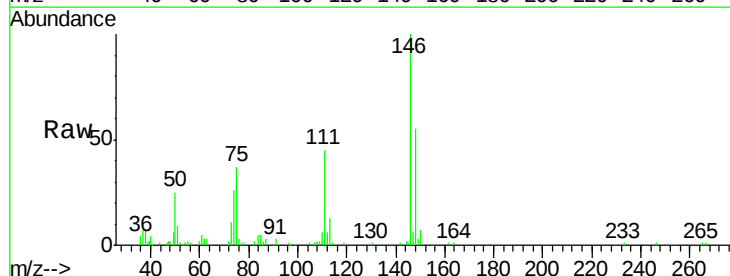
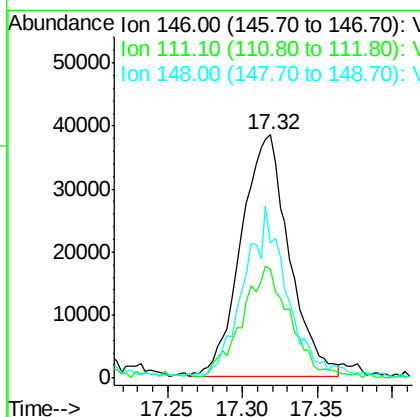
RT: 17.32 min Scan# 4473

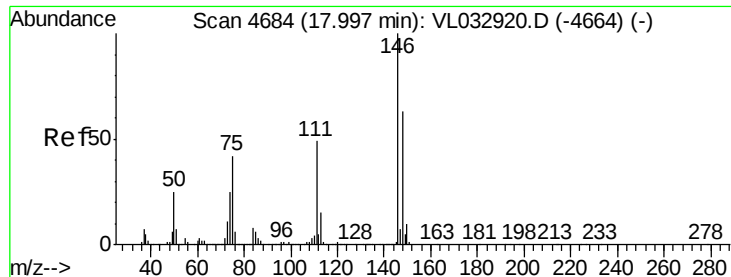
Delta R.T. 0.00 min

Lab File: VL032923.D

Acq: 7 Dec 2018 5:34

|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 146   | Resp: | 85909 |
| Ion Ratio | Lower | Upper |       |
| 146       | 100   |       |       |
| 111       | 47.8  | 22.8  | 68.4  |
| 148       | 66.2  | 32.0  | 96.2  |





#77

1,2-Dichlorobenzene

Concen: 0.494 ppbv

RT: 18.00 min Scan# 4684

Delta R.T. 0.00 min

Lab File: VL032923.D

Acq: 7 Dec 2018 5:34

Instrument :

MSVOA\_L

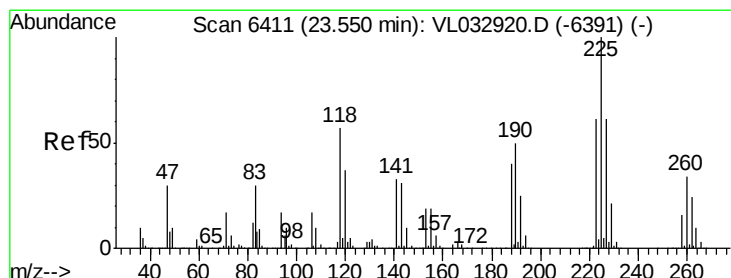
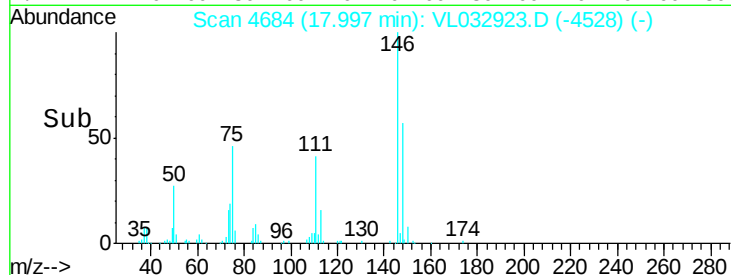
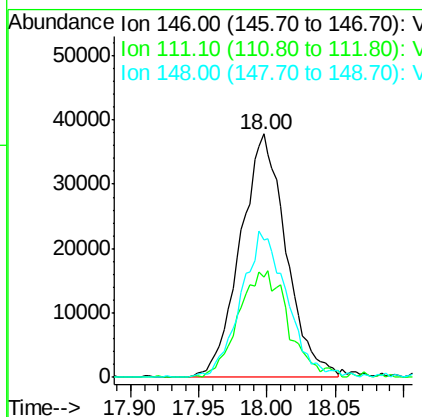
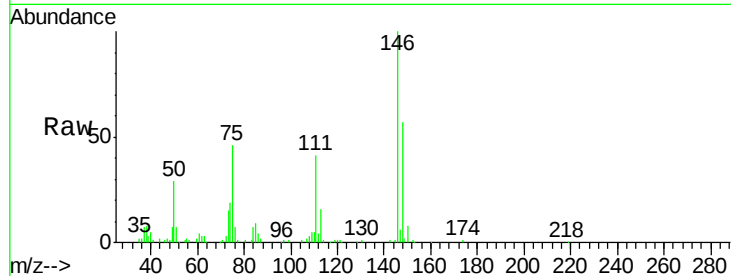
ClientSampleId :

VSTDIC0.5

|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 146   | Resp: | 88223 |
| Ion Ratio | Lower | Upper |       |
| 146       | 100   |       |       |
| 111       | 48.3  | 24.3  | 72.9  |
| 148       | 60.6  | 32.0  | 96.2  |

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#78

Hexachloro-1,3-Butadiene

Concen: 0.511 ppbv

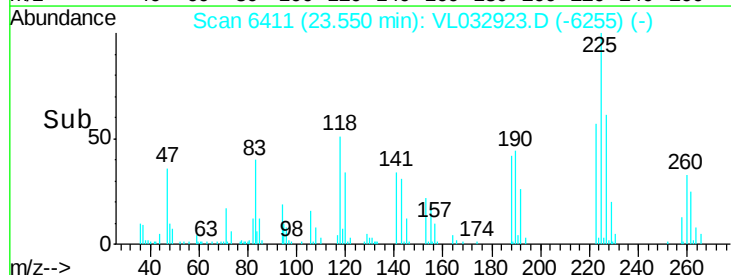
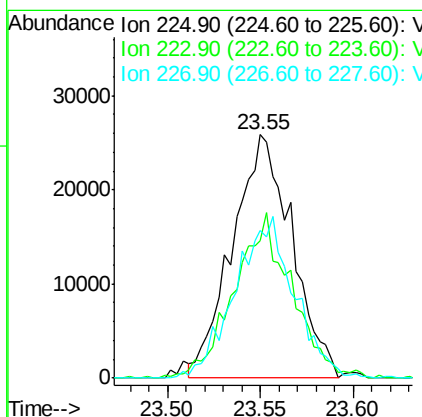
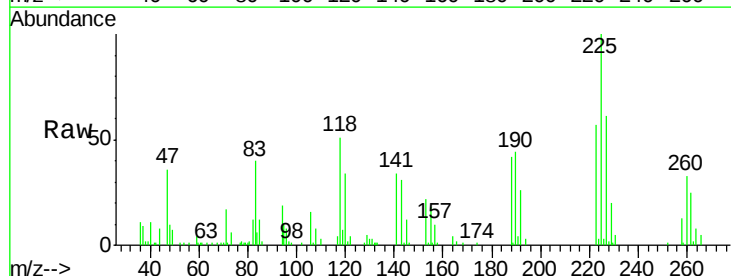
RT: 23.55 min Scan# 6411

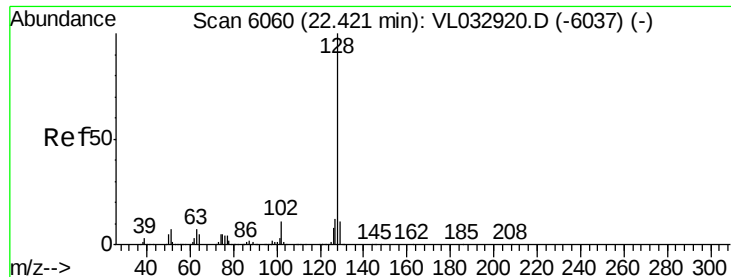
Delta R.T. 0.00 min

Lab File: VL032923.D

Acq: 7 Dec 2018 5:34

|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 225   | Resp: | 57654 |
| Ion Ratio | Lower | Upper |       |
| 225       | 100   |       |       |
| 223       | 65.7  | 50.6  | 75.8  |
| 227       | 65.9  | 50.4  | 75.6  |





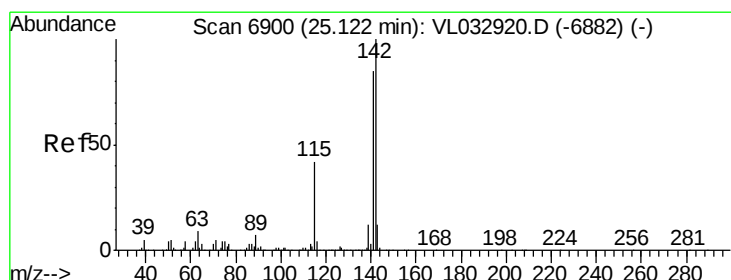
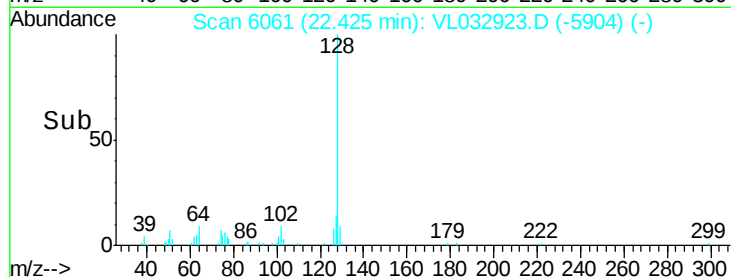
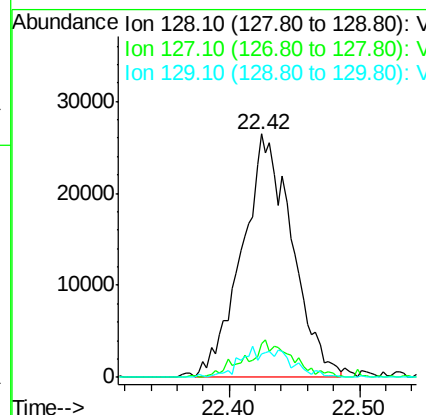
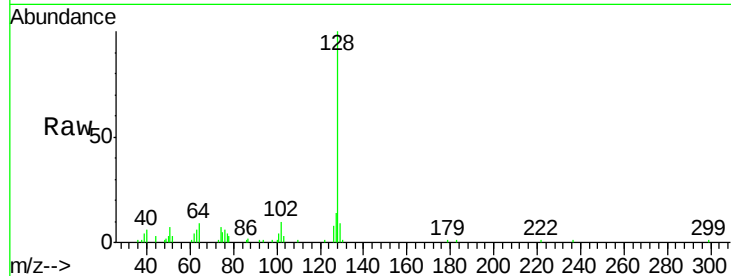
#79  
Naphthalene  
Concen: 0.368 ppbv m  
RT: 22.42 min Scan# 6061  
Delta R.T. 0.00 min  
Lab File: VL032923.D  
Acq: 7 Dec 2018 5:34

Instrument :  
MSVOA\_L  
ClientSampleId :  
VSTDIC0.5

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 128     | 100   |       |       |
| 127     | 13.7  | 9.9   | 14.9  |
| 129     | 9.4   | 8.6   | 13.0  |

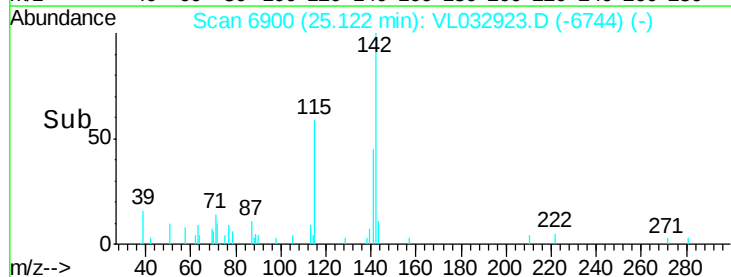
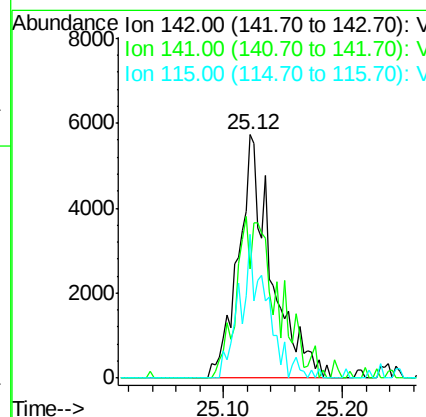
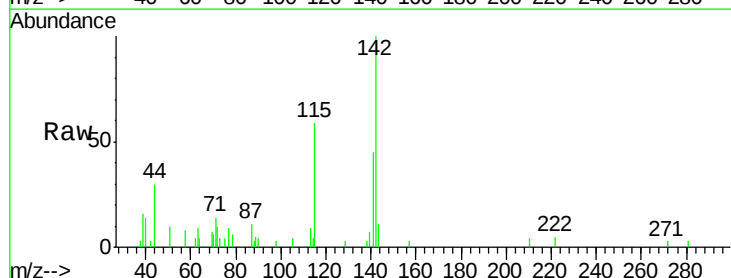
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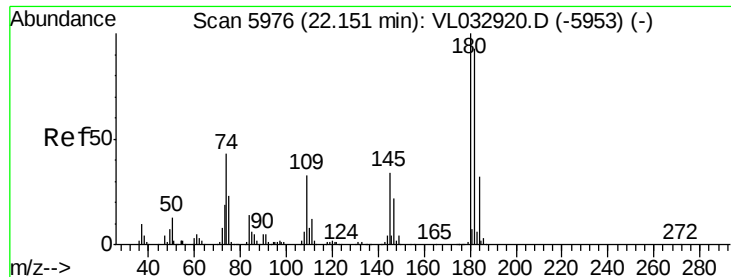
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#80  
Naphthalene, 2-methyl-  
Concen: 0.257 ppbv  
RT: 25.12 min Scan# 6900  
Delta R.T. 0.00 min  
Lab File: VL032923.D  
Acq: 7 Dec 2018 5:34

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 142     | 100   |       |       |
| 141     | 81.3  | 68.2  | 102.2 |
| 115     | 47.5  | 35.1  | 52.7  |





#81  
 1,2,4-Trichlorobenzene  
 Concen: 0.465 ppbv m  
 RT: 22.15 min Scan# 5975  
 Delta R.T. -0.00 min  
 Lab File: VL032923.D  
 Acq: 7 Dec 2018 5:34

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDIC0.5

| Tgt Ion | Ratio | Resp  | Lower  | Upper |
|---------|-------|-------|--------|-------|
| 180     | 100   | 46877 |        |       |
| 182     | 0.0   | 77.0  | 115.6# |       |
| 184     | 0.0   | 24.3  | 36.5#  |       |

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