

Data Path : Z:\VOASRV\HPCHEM1\MSVOA N\DATA\VN030619\  
 Data File : VN054112.D  
 Acq On : 6 Mar 2019 11:02  
 Operator : JC/SP  
 Sample : VSTDIC020  
 Misc : 5.00mL/MSVOA N/WATER  
 ALS Vial : 4 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 VSTDIC020

Manual Integrations  
 APPROVED

MMDadoda  
 3/7/2019 11:38:02 AM

Quant Time: Mar 07 06:12:24 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_N\METHODS\82N030619W.M  
 Quant Title : SW846 8260  
 QLast Update : Thu Mar 07 05:44:36 2019  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 7.66  | 168  | 606961   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 8.58  | 114  | 977232   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 11.41 | 117  | 828851   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 13.34 | 152  | 357127   | 50.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |     |          |       |        |      |
|---------------------------|--------|-----|----------|-------|--------|------|
| 33) 1,2-Dichloroethane-d4 | 8.02   | 65  | 152671   | 20.94 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 41.88% |      |
| 35) Dibromofluoromethane  | 7.59   | 113 | 134516   | 21.19 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 42.38% |      |
| 50) Toluene-d8            | 10.09  | 98  | 493352   | 20.47 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 40.94% |      |
| 62) 4-Bromofluorobenzene  | 12.40  | 95  | 153948   | 19.62 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 39.24% |      |

## Target Compounds

|                               |      |     |         |        |      | Qvalue |
|-------------------------------|------|-----|---------|--------|------|--------|
| 2) Dichlorodifluoromethane    | 1.85 | 85  | 110784  | 18.991 | ug/l | 97     |
| 3) Chloromethane              | 2.06 | 50  | 153186  | 18.326 | ug/l | 99     |
| 4) Vinyl Chloride             | 2.18 | 62  | 152391  | 19.282 | ug/l | 99     |
| 5) Bromomethane               | 2.57 | 94  | 88152   | 17.202 | ug/l | 97     |
| 6) Chloroethane               | 2.71 | 64  | 91312   | 19.061 | ug/l | 99     |
| 7) Trichlorofluoromethane     | 3.02 | 101 | 189648  | 19.641 | ug/l | 98     |
| 8) Diethyl Ether              | 3.41 | 74  | 70600   | 18.349 | ug/l | 97     |
| 9) 1,1,2-Trichlorotrifluoroet | 3.76 | 101 | 120468  | 19.177 | ug/l | 100    |
| 10) Methyl Iodide             | 3.95 | 142 | 125381  | 18.808 | ug/l | 99     |
| 11) Tert butyl alcohol        | 4.78 | 59  | 39519   | 89.113 | ug/l | 99     |
| 12) 1,1-Dichloroethene        | 3.74 | 96  | 113206  | 19.318 | ug/l | 98     |
| 13) Acrolein                  | 3.61 | 56  | 37542   | 96.259 | ug/l | 100    |
| 14) Allyl chloride            | 4.32 | 41  | 204250  | 19.344 | ug/l | 99     |
| 15) Acrylonitrile             | 4.99 | 53  | 229736  | 91.779 | ug/l | 97     |
| 16) Acetone                   | 3.81 | 43  | 212269  | 94.121 | ug/l | 99     |
| 17) Carbon Disulfide          | 4.05 | 76  | 343918  | 17.993 | ug/l | 99     |
| 18) Methyl Acetate            | 4.32 | 43  | 100622  | 17.500 | ug/l | 99     |
| 19) Methyl tert-butyl Ether   | 5.04 | 73  | 308853  | 18.780 | ug/l | 100    |
| 20) Methylene Chloride        | 4.55 | 84  | 135509  | 18.909 | ug/l | 98     |
| 21) trans-1,2-Dichloroethene  | 5.04 | 96  | 122055  | 18.973 | ug/l | 98     |
| 22) Diisopropyl ether         | 5.95 | 45  | 401267  | 19.504 | ug/l | 93     |
| 23) Vinyl Acetate             | 5.90 | 43  | 1357254 | 92.874 | ug/l | 99     |
| 24) 1,1-Dichloroethane        | 5.85 | 63  | 239633  | 19.468 | ug/l | 99     |
| 25) 2-Butanone                | 6.83 | 43  | 277746  | 92.982 | ug/l | 98     |
| 26) 2,2-Dichloropropane       | 6.82 | 77  | 171813  | 19.366 | ug/l | 99     |
| 27) cis-1,2-Dichloroethene    | 6.83 | 96  | 139686  | 19.472 | ug/l | 99     |
| 28) Bromochloromethane        | 7.19 | 49  | 129082  | 21.011 | ug/l | 99     |
| 29) Tetrahydrofuran           | 7.21 | 42  | 175058  | 89.412 | ug/l | 99     |
| 30) Chloroform                | 7.37 | 83  | 234636  | 19.894 | ug/l | 97     |
| 31) Cyclohexane               | 7.65 | 56  | 222245  | 16.630 | ug/l | 97     |
| 32) 1,1,1-Trichloroethane     | 7.57 | 97  | 190094  | 19.440 | ug/l | 100    |
| 36) 1,1-Dichloropropene       | 7.79 | 75  | 170168  | 18.552 | ug/l | 100    |
| 37) Ethyl Acetate             | 6.93 | 43  | 117744  | 17.905 | ug/l | 100    |
| 38) Carbon Tetrachloride      | 7.77 | 117 | 167267  | 19.102 | ug/l | 97     |

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 ALS Vial : 4 Sample Multiplier: 1

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 VSTDIC020

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 3/7/2019 11:38:02 AM

Quant Time: Mar 07 06:12:24 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_N\METHODS\82N030619W.M  
 Quant Title : SW846 8260  
 QLast Update : Thu Mar 07 05:44:36 2019  
 Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc    | Units  | Dev(Min) |
|--------------------------------|-------|------|----------|---------|--------|----------|
| 39) Methylcyclohexane          | 9.08  | 83   | 199755   | 18.870  | ug/l   | 98       |
| 40) Benzene                    | 8.04  | 78   | 529551   | 19.514  | ug/l   | 99       |
| 41) Methacrylonitrile          | 7.17  | 41   | 61373    | 15.352  | ug/l # | 100      |
| 42) 1,2-Dichloroethane         | 8.12  | 62   | 166017   | 19.313  | ug/l   | 99       |
| 43) Isopropyl Acetate          | 8.16  | 43   | 195033   | 19.082  | ug/l   | 99       |
| 44) Trichloroethene            | 8.83  | 130  | 142136   | 19.533  | ug/l   | 96       |
| 45) 1,2-Dichloropropane        | 9.12  | 63   | 145232   | 19.403  | ug/l   | 99       |
| 46) Dibromomethane             | 9.21  | 93   | 82706    | 19.356  | ug/l   | 98       |
| 47) Bromodichloromethane       | 9.40  | 83   | 174882   | 19.552  | ug/l   | 96       |
| 48) Methyl methacrylate        | 9.20  | 41   | 92326    | 18.293  | ug/l   | 99       |
| 49) 1,4-Dioxane                | 9.20  | 88   | 26470    | 396.884 | ug/l   | 98       |
| 51) 4-Methyl-2-Pentanone       | 9.98  | 43   | 525256   | 89.698  | ug/l   | 100      |
| 52) Toluene                    | 10.16 | 92   | 314466   | 19.559  | ug/l   | 99       |
| 53) t-1,3-Dichloropropene      | 10.38 | 75   | 163602   | 18.544  | ug/l   | 98       |
| 54) cis-1,3-Dichloropropene    | 9.84  | 75   | 200294   | 19.209  | ug/l   | 99       |
| 55) 1,1,2-Trichloroethane      | 10.56 | 97   | 116690   | 19.274  | ug/l   | 99       |
| 56) Ethyl methacrylate         | 10.43 | 69   | 126172   | 17.753  | ug/l   | 99       |
| 57) 1,3-Dichloropropane        | 10.71 | 76   | 200936   | 19.452  | ug/l   | 100      |
| 58) 2-Chloroethyl Vinyl ether  | 9.70  | 63   | 295386   | 90.803  | ug/l   | 100      |
| 59) 2-Hexanone                 | 10.75 | 43   | 340503   | 88.142  | ug/l   | 100      |
| 60) Dibromochloromethane       | 10.90 | 129  | 126314   | 19.513  | ug/l   | 100      |
| 61) 1,2-Dibromoethane          | 11.01 | 107  | 110410   | 19.166  | ug/l   | 98       |
| 64) Tetrachloroethene          | 10.63 | 164  | 141219   | 20.761  | ug/l   | 99       |
| 65) Chlorobenzene              | 11.43 | 112  | 331026   | 19.191  | ug/l   | 98       |
| 66) 1,1,1,2-Tetrachloroethane  | 11.51 | 131  | 123179   | 19.950  | ug/l   | 99       |
| 67) Ethyl Benzene              | 11.51 | 91   | 560469   | 19.418  | ug/l   | 99       |
| 68) m/p-Xylenes                | 11.62 | 106  | 432762   | 39.731  | ug/l   | 100      |
| 69) o-Xylene                   | 11.95 | 106  | 210087   | 20.044  | ug/l   | 100      |
| 70) Styrene                    | 11.96 | 104  | 326125   | 19.601  | ug/l   | 99       |
| 71) Bromoform                  | 12.13 | 173  | 82689    | 19.459  | ug/l # | 99       |
| 73) Isopropylbenzene           | 12.25 | 105  | 555363   | 19.544  | ug/l   | 99       |
| 74) N-amyl acetate             | 12.07 | 43   | 135438   | 17.996  | ug/l   | 99       |
| 75) 1,1,2,2-Tetrachloroethane  | 12.50 | 83   | 133542   | 18.056  | ug/l   | 100      |
| 76) 1,2,3-Trichloropropane     | 12.55 | 75   | 120795m  | 21.633  | ug/l   |          |
| 77) Bromobenzene               | 12.53 | 156  | 133741   | 18.268  | ug/l   | 100      |
| 78) n-propylbenzene            | 12.59 | 91   | 621836   | 19.447  | ug/l   | 99       |
| 79) 2-Chlorotoluene            | 12.67 | 91   | 381110   | 19.624  | ug/l   | 99       |
| 80) 1,3,5-Trimethylbenzene     | 12.73 | 105  | 462455   | 20.020  | ug/l   | 99       |
| 81) trans-1,4-Dichloro-2-buten | 12.30 | 75   | 31481    | 17.763  | ug/l   | 96       |
| 82) 4-Chlorotoluene            | 12.77 | 91   | 371519   | 19.191  | ug/l   | 100      |
| 83) tert-Butylbenzene          | 12.99 | 119  | 405120   | 19.804  | ug/l   | 99       |
| 84) 1,2,4-Trimethylbenzene     | 13.04 | 105  | 463437   | 20.214  | ug/l   | 100      |
| 85) sec-Butylbenzene           | 13.17 | 105  | 544907   | 19.629  | ug/l   | 100      |
| 86) p-Isopropyltoluene         | 13.29 | 119  | 458388   | 19.641  | ug/l   | 100      |
| 87) 1,3-Dichlorobenzene        | 13.28 | 146  | 233778   | 18.799  | ug/l   | 99       |
| 88) 1,4-Dichlorobenzene        | 13.36 | 146  | 229292   | 18.579  | ug/l   | 99       |
| 89) n-Butylbenzene             | 13.61 | 91   | 370634   | 18.809  | ug/l   | 98       |
| 90) Hexachloroethane           | 13.87 | 117  | 85510    | 19.103  | ug/l   | 99       |
| 91) 1,2-Dichlorobenzene        | 13.65 | 146  | 231180   | 18.674  | ug/l   | 100      |
| 92) 1,2-Dibromo-3-Chloropropan | 14.27 | 75   | 19104    | 18.426  | ug/l   | 98       |

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Sample : VSTDICC020  
Misc : 5.00mL/MSVOA N/WATER  
ALS Vial : 4 Sample Multiplier: 1

Instrument :  
MSVOA\_N  
ClientSampleId :  
VSTDICC020

Manual Integrations  
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3/7/2019 11:38:02 AM

Quant Time: Mar 07 06:12:24 2019  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_N\METHODS\82N030619W.M  
Quant Title : SW846 8260  
QLast Update : Thu Mar 07 05:44:36 2019  
Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc   | Units | Dev(Min) |
|----------------------------|-------|------|----------|--------|-------|----------|
| 93) 1,2,4-Trichlorobenzene | 14.91 | 180  | 101721   | 17.213 | ug/l  | 99       |
| 94) Hexachlorobutadiene    | 15.01 | 225  | 81897    | 18.483 | ug/l  | 100      |
| 95) Naphthalene            | 15.13 | 128  | 190942   | 15.666 | ug/l  | 99       |
| 96) 1,2,3-Trichlorobenzene | 15.31 | 180  | 103057   | 17.327 | ug/l  | 99       |

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

