

Data Path : Z:\VOASRV\HPCHEM1\MSVOA N\DATA\VN071219\  
 Data File : VN056668.D  
 Acq On : 11 Jul 2019 16:32  
 Operator : JC/SP  
 Sample : VN0712WBS01  
 Misc : 5.00mL/MSVOA N/WATER  
 ALS Vial : 4 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 VN0712WBS01

Manual Integrations  
 APPROVED

MMDadoda  
 7/12/2019 5:32:54 PM

Quant Time: Jul 12 05:36:27 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_N\METHODS\82N061919W.M  
 Quant Title : SW846 8260  
 QLast Update : Fri Jun 21 03:45:40 2019  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 7.67  | 168  | 307651   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 8.58  | 114  | 471173   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 11.41 | 117  | 418043   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 13.34 | 152  | 182471   | 50.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |     |          |       |         |      |
|---------------------------|--------|-----|----------|-------|---------|------|
| 33) 1,2-Dichloroethane-d4 | 8.03   | 65  | 171362   | 50.26 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 100.52% |      |
| 35) Dibromofluoromethane  | 7.59   | 113 | 151685   | 51.61 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 103.22% |      |
| 50) Toluene-d8            | 10.09  | 98  | 563641   | 49.28 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 98.56%  |      |
| 62) 4-Bromofluorobenzene  | 12.40  | 95  | 191467   | 50.22 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 100.44% |      |

## Target Compounds

|                               |      |     |        |         |      | Qvalue |
|-------------------------------|------|-----|--------|---------|------|--------|
| 2) Dichlorodifluoromethane    | 1.85 | 85  | 42059  | 16.145  | ug/l | 99     |
| 3) Chloromethane              | 2.06 | 50  | 56401  | 15.901  | ug/l | 99     |
| 4) Vinyl Chloride             | 2.18 | 62  | 58942  | 17.205  | ug/l | 99     |
| 5) Bromomethane               | 2.55 | 94  | 33802  | 16.830  | ug/l | 98     |
| 6) Chloroethane               | 2.69 | 64  | 35322  | 17.804  | ug/l | 95     |
| 7) Trichlorofluoromethane     | 3.01 | 101 | 81464  | 18.383  | ug/l | 97     |
| 8) Diethyl Ether              | 3.41 | 74  | 33560  | 17.894  | ug/l | 96     |
| 9) 1,1,2-Trichlorotrifluoroet | 3.75 | 101 | 52911  | 18.722  | ug/l | 99     |
| 10) Methyl Iodide             | 3.95 | 142 | 56709  | 14.847  | ug/l | 99     |
| 11) Tert butyl alcohol        | 4.79 | 59  | 54873  | 95.550  | ug/l | 97     |
| 12) 1,1-Dichloroethene        | 3.73 | 96  | 47086  | 17.325  | ug/l | 99     |
| 13) Acrolein                  | 3.61 | 56  | 15342  | 31.697  | ug/l | 99     |
| 14) Allyl chloride            | 4.32 | 41  | 86833  | 19.194  | ug/l | 98     |
| 15) Acrylonitrile             | 4.99 | 53  | 164323 | 103.429 | ug/l | 99     |
| 16) Acetone                   | 3.82 | 43  | 148199 | 86.751  | ug/l | 100    |
| 17) Carbon Disulfide          | 4.05 | 76  | 88017  | 14.239  | ug/l | 99     |
| 18) Methyl Acetate            | 4.33 | 43  | 73331  | 21.421  | ug/l | 98     |
| 19) Methyl tert-butyl Ether   | 5.04 | 73  | 176275 | 19.602  | ug/l | 95     |
| 20) Methylene Chloride        | 4.55 | 84  | 62815  | 18.952  | ug/l | 97     |
| 21) trans-1,2-Dichloroethene  | 5.04 | 96  | 50426  | 17.210  | ug/l | 98     |
| 22) Diisopropyl ether         | 5.95 | 45  | 195167 | 20.541  | ug/l | 97     |
| 23) Vinyl Acetate             | 5.90 | 43  | 766748 | 102.317 | ug/l | 100    |
| 24) 1,1-Dichloroethane        | 5.85 | 63  | 107279 | 19.670  | ug/l | 99     |
| 25) 2-Butanone                | 6.84 | 43  | 229099 | 101.328 | ug/l | 99     |
| 26) 2,2-Dichloropropane       | 6.82 | 77  | 75633  | 19.939  | ug/l | 97     |
| 27) cis-1,2-Dichloroethene    | 6.83 | 96  | 66403  | 19.370  | ug/l | 98     |
| 28) Bromochloromethane        | 7.19 | 49  | 49706  | 18.426  | ug/l | 99     |
| 29) Tetrahydrofuran           | 7.21 | 42  | 147771 | 106.950 | ug/l | 98     |
| 30) Chloroform                | 7.37 | 83  | 109345 | 20.318  | ug/l | 98     |
| 31) Cyclohexane               | 7.65 | 56  | 87900  | 16.694  | ug/l | 98     |
| 32) 1,1,1-Trichloroethane     | 7.57 | 97  | 83660  | 19.612  | ug/l | 97     |
| 36) 1,1-Dichloropropene       | 7.79 | 75  | 73783  | 17.791  | ug/l | 99     |
| 37) Ethyl Acetate             | 6.93 | 43  | 88646  | 21.750  | ug/l | 98     |
| 38) Carbon Tetrachloride      | 7.77 | 117 | 70677  | 19.488  | ug/l | 96     |

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Quant Time: Jul 12 05:36:27 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_N\METHODS\82N061919W.M  
 Quant Title : SW846 8260  
 QLast Update : Fri Jun 21 03:45:40 2019  
 Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc    | Units  | Dev(Min) |
|--------------------------------|-------|------|----------|---------|--------|----------|
| 39) Methylcyclohexane          | 9.08  | 83   | 84121    | 16.439  | ug/l   | 99       |
| 40) Benzene                    | 8.04  | 78   | 240895   | 18.884  | ug/l   | 97       |
| 41) Methacrylonitrile          | 7.17  | 41   | 31513    | 17.510  | ug/l   | 89       |
| 42) 1,2-Dichloroethane         | 8.12  | 62   | 81904    | 19.455  | ug/l   | 100      |
| 43) Isopropyl Acetate          | 8.17  | 43   | 132508   | 21.085  | ug/l   | 99       |
| 44) Trichloroethene            | 8.84  | 130  | 63718    | 18.542  | ug/l   | 98       |
| 45) 1,2-Dichloropropane        | 9.12  | 63   | 68717    | 20.142  | ug/l   | 97       |
| 46) Dibromomethane             | 9.21  | 93   | 42723    | 20.016  | ug/l   | 99       |
| 47) Bromodichloromethane       | 9.40  | 83   | 80420    | 21.244  | ug/l   | 98       |
| 48) Methyl methacrylate        | 9.20  | 41   | 65238    | 20.715  | ug/l   | 98       |
| 49) 1,4-Dioxane                | 9.20  | 88   | 27633    | 422.819 | ug/l   | 97       |
| 51) 4-Methyl-2-Pentanone       | 9.98  | 43   | 446735   | 110.136 | ug/l   | 100      |
| 52) Toluene                    | 10.16 | 92   | 146048   | 18.726  | ug/l   | 100      |
| 53) t-1,3-Dichloropropene      | 10.38 | 75   | 79301    | 19.837  | ug/l   | 98       |
| 54) cis-1,3-Dichloropropene    | 9.84  | 75   | 94188    | 20.661  | ug/l   | 99       |
| 55) 1,1,2-Trichloroethane      | 10.56 | 97   | 66162    | 21.105  | ug/l   | 98       |
| 56) Ethyl methacrylate         | 10.43 | 69   | 94811    | 20.694  | ug/l   | 99       |
| 57) 1,3-Dichloropropane        | 10.71 | 76   | 107549   | 20.421  | ug/l   | 100      |
| 58) 2-Chloroethyl Vinyl ether  | 9.69  | 63   | 223894   | 136.031 | ug/l   | 99       |
| 59) 2-Hexanone                 | 10.75 | 43   | 323155   | 108.398 | ug/l   | 98       |
| 60) Dibromochloromethane       | 10.90 | 129  | 62865    | 20.962  | ug/l   | 98       |
| 61) 1,2-Dibromoethane          | 11.00 | 107  | 64932    | 20.280  | ug/l   | 98       |
| 64) Tetrachloroethene          | 10.63 | 164  | 62434    | 18.859  | ug/l   | 98       |
| 65) Chlorobenzene              | 11.43 | 112  | 162973   | 19.402  | ug/l   | 99       |
| 66) 1,1,1,2-Tetrachloroethane  | 11.51 | 131  | 61154    | 21.541  | ug/l   | 98       |
| 67) Ethyl Benzene              | 11.51 | 91   | 279864   | 18.975  | ug/l   | 100      |
| 68) m/p-Xylenes                | 11.62 | 106  | 208007   | 38.482  | ug/l   | 98       |
| 69) o-Xylene                   | 11.95 | 106  | 104940   | 19.624  | ug/l   | 98       |
| 70) Styrene                    | 11.96 | 104  | 173030   | 20.243  | ug/l   | 100      |
| 71) Bromoform                  | 12.13 | 173  | 44650    | 21.413  | ug/l # | 99       |
| 73) Isopropylbenzene           | 12.25 | 105  | 274093   | 18.295  | ug/l   | 100      |
| 74) N-amyl acetate             | 12.07 | 43   | 105521   | 18.170  | ug/l   | 99       |
| 75) 1,1,2,2-Tetrachloroethane  | 12.50 | 83   | 97005    | 21.085  | ug/l   | 99       |
| 76) 1,2,3-Trichloropropane     | 12.55 | 75   | 85888m   | 22.700  | ug/l   |          |
| 77) Bromobenzene               | 12.53 | 156  | 72868    | 17.860  | ug/l   | 96       |
| 78) n-propylbenzene            | 12.59 | 91   | 300264   | 17.969  | ug/l   | 99       |
| 79) 2-Chlorotoluene            | 12.67 | 91   | 185347   | 18.642  | ug/l   | 100      |
| 80) 1,3,5-Trimethylbenzene     | 12.73 | 105  | 234208   | 18.994  | ug/l   | 99       |
| 81) trans-1,4-Dichloro-2-buten | 12.30 | 75   | 22697    | 21.321  | ug/l   | 98       |
| 82) 4-Chlorotoluene            | 12.77 | 91   | 179149   | 18.158  | ug/l   | 99       |
| 83) tert-Butylbenzene          | 12.99 | 119  | 201985   | 18.444  | ug/l   | 98       |
| 84) 1,2,4-Trimethylbenzene     | 13.04 | 105  | 232301   | 18.911  | ug/l   | 99       |
| 85) sec-Butylbenzene           | 13.17 | 105  | 261630   | 17.814  | ug/l   | 99       |
| 86) p-Isopropyltoluene         | 13.29 | 119  | 233428   | 18.519  | ug/l   | 99       |
| 87) 1,3-Dichlorobenzene        | 13.28 | 146  | 116804   | 18.891  | ug/l   | 99       |
| 88) 1,4-Dichlorobenzene        | 13.36 | 146  | 114515   | 19.123  | ug/l   | 100      |
| 89) n-Butylbenzene             | 13.61 | 91   | 183945   | 19.278  | ug/l   | 99       |
| 90) Hexachloroethane           | 13.87 | 117  | 36265    | 18.455  | ug/l   | 97       |
| 91) 1,2-Dichlorobenzene        | 13.65 | 146  | 123225   | 20.087  | ug/l   | 99       |
| 92) 1,2-Dibromo-3-Chloropropan | 14.27 | 75   | 15179    | 22.482  | ug/l   | 97       |

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| Internal Standards         | R.T.  | QIon | Response | Conc   | Units | Dev(Min) |
|----------------------------|-------|------|----------|--------|-------|----------|
| 93) 1,2,4-Trichlorobenzene | 14.91 | 180  | 55462    | 21.026 | ug/l  | 98       |
| 94) Hexachlorobutadiene    | 15.01 | 225  | 41799    | 18.939 | ug/l  | 99       |
| 95) Naphthalene            | 15.13 | 128  | 140231   | 20.279 | ug/l  | 99       |
| 96) 1,2,3-Trichlorobenzene | 15.31 | 180  | 59056    | 20.723 | ug/l  | 99       |

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

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