

Data Path : W:\HPCHEM1\MSVOA N\DATA\VN091715\  
 Data File : VN027246.D  
 Acq On : 17 Sep 2015 11:03  
 Operator : MD\FY  
 Sample : VN0917WBS01  
 Misc : 5.00mL/MSVOA N/WATER  
 ALS Vial : 5 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 VN0917WBS01

Manual Integrations  
 APPROVED

MMDadoda  
 9/18/2015 12:22:32 PM

Quant Time: Sep 18 01:29:18 2015  
 Quant Method : W:\HPCHEM1\MSVOA\_N\METHODS\82N091515W.M  
 Quant Title : SW846 8260  
 QLast Update : Tue Sep 15 21:12:09 2015  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 7.75  | 168  | 545129   | 50.00 | ug/l  | 0.00     |
| 35) 1,4-Difluorobenzene    | 8.68  | 114  | 998789   | 50.00 | ug/l  | 0.00     |
| 64) Chlorobenzene-d5       | 11.52 | 117  | 852472   | 50.00 | ug/l  | 0.00     |
| 73) 1,4-Dichlorobenzene-d4 | 13.47 | 152  | 320527   | 50.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |     |          |       |        |      |
|---------------------------|--------|-----|----------|-------|--------|------|
| 34) 1,2-Dichloroethane-d4 | 8.12   | 65  | 467655   | 41.87 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 83.74% |      |
| 36) Dibromofluoromethane  | 7.68   | 113 | 297082   | 42.91 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 85.82% |      |
| 51) Toluene-d8            | 10.19  | 98  | 1157200  | 42.69 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 85.38% |      |
| 63) 4-Bromofluorobenzene  | 12.52  | 95  | 399765   | 41.55 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 83.10% |      |

## Target Compounds

|                                |      |     |         |        |        | Qvalue |
|--------------------------------|------|-----|---------|--------|--------|--------|
| 2) Dichlorodifluoromethane     | 1.80 | 85  | 116098  | 17.80  | ug/l   | 99     |
| 3) Chlorodifluoromethane       | 1.82 | 51  | 144782m | 19.18  | ug/l   |        |
| 4) Chloromethane               | 2.01 | 50  | 127883  | 18.23  | ug/l   | 98     |
| 5) Vinyl Chloride              | 2.14 | 62  | 137520  | 17.85  | ug/l   | 97     |
| 6) Bromomethane                | 2.54 | 94  | 57256   | 16.26  | ug/l   | 96     |
| 7) Chloroethane                | 2.69 | 64  | 89326   | 17.06  | ug/l   | 98     |
| 8) Trichlorofluoromethane      | 3.02 | 101 | 204671  | 17.59  | ug/l   | 98     |
| 9) Diethyl Ether               | 3.42 | 74  | 91938   | 17.17  | ug/l   | 85     |
| 10) 1,1,2-Trichlorotrifluoroet | 3.79 | 101 | 131610  | 18.01  | ug/l   | 96     |
| 11) Methyl Iodide              | 3.99 | 142 | 83088   | 11.70  | ug/l   | 91     |
| 12) Tert butyl alcohol         | 4.80 | 59  | 87790   | 80.38  | ug/l # | 74     |
| 13) 1,1-Dichloroethene         | 3.76 | 96  | 121253  | 17.32  | ug/l   | 92     |
| 14) Acrolein                   | 3.62 | 56  | 128863  | 100.43 | ug/l   | 99     |
| 15) Allyl chloride             | 4.37 | 41  | 232396  | 16.44  | ug/l # | 79     |
| 16) Acrylonitrile              | 5.03 | 53  | 299335  | 83.81  | ug/l   | 96     |
| 17) Acetone                    | 3.83 | 43  | 297595  | 98.82  | ug/l   | 96     |
| 18) Carbon Disulfide           | 4.11 | 76  | 374862  | 16.45  | ug/l   | 100    |
| 19) Methyl Acetate             | 4.36 | 43  | 366158  | 16.79  | ug/l   | 96     |
| 20) Methyl tert-butyl Ether    | 5.12 | 73  | 480058  | 17.08  | ug/l   | 97     |
| 21) Methylene Chloride         | 4.60 | 84  | 151501  | 18.06  | ug/l   | 95     |
| 22) trans-1,2-Dichloroethene   | 5.13 | 96  | 133836  | 17.68  | ug/l   | 96     |
| 23) Diisopropyl ether          | 6.04 | 45  | 513220  | 17.30  | ug/l # | 87     |
| 24) Vinyl Acetate              | 5.98 | 43  | 822883  | 83.82  | ug/l   | 98     |
| 25) 1,1-Dichloroethane         | 5.93 | 63  | 297743  | 17.28  | ug/l   | 99     |
| 26) 2-Butanone                 | 6.92 | 43  | 395781  | 87.28  | ug/l   | 94     |
| 27) 2,2-Dichloropropane        | 6.92 | 77  | 262340  | 17.55  | ug/l   | 95     |
| 28) cis-1,2-Dichloroethene     | 6.92 | 96  | 158905  | 18.30  | ug/l   | 97     |
| 29) Bromochloromethane         | 7.29 | 49  | 109708  | 16.40  | ug/l   | 97     |
| 30) Tetrahydrofuran            | 7.32 | 42  | 237678  | 76.05  | ug/l # | 87     |
| 31) Chloroform                 | 7.46 | 83  | 279732  | 17.97  | ug/l   | 99     |
| 32) Cyclohexane                | 7.77 | 56  | 287301  | 18.14  | ug/l # | 87     |
| 33) 1,1,1-Trichloroethane      | 7.67 | 97  | 244734  | 17.63  | ug/l   | 96     |
| 37) 1,1-Dichloropropene        | 7.89 | 75  | 208648  | 17.84  | ug/l   | 99     |
| 38) Ethyl Acetate              | 7.02 | 43  | 169099  | 16.29  | ug/l   | 99     |

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 Misc : 5.00mL/MSVOA N/WATER  
 ALS Vial : 5 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 VN0917WBS01

Manual Integrations  
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MMDadoda  
 9/18/2015 12:22:32 PM

Quant Time: Sep 18 01:29:18 2015  
 Quant Method : W:\HPCHEM1\MSVOA\_N\METHODS\82N091515W.M  
 Quant Title : SW846 8260  
 QLast Update : Tue Sep 15 21:12:09 2015  
 Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc   | Units  | Dev(Min) |
|--------------------------------|-------|------|----------|--------|--------|----------|
| 39) Carbon Tetrachloride       | 7.88  | 117  | 197329   | 17.95  | ug/l   | 98       |
| 40) Methylcyclohexane          | 9.19  | 83   | 263507   | 18.51  | ug/l   | 97       |
| 41) Benzene                    | 8.14  | 78   | 619779   | 18.17  | ug/l   | 100      |
| 42) Methacrylonitrile          | 7.24  | 41   | 91610    | 16.21  | ug/l # | 85       |
| 43) 1,2-Dichloroethane         | 8.22  | 62   | 243991   | 17.75  | ug/l   | 96       |
| 44) Isopropyl Acetate          | 8.25  | 43   | 319079   | 17.08  | ug/l   | 98       |
| 45) Trichloroethene            | 8.94  | 130  | 124667   | 18.19  | ug/l   | 91       |
| 46) 1,2-Dichloropropane        | 9.21  | 63   | 175399   | 17.87  | ug/l   | 100      |
| 47) Dibromomethane             | 9.31  | 93   | 101717   | 17.65  | ug/l   | 93       |
| 48) Bromodichloromethane       | 9.50  | 83   | 213768   | 17.60  | ug/l   | 100      |
| 49) Methyl methacrylate        | 9.29  | 41   | 155619   | 16.72  | ug/l # | 87       |
| 50) 1,4-Dioxane                | 9.30  | 88   | 38613    | 353.68 | ug/l   | 99       |
| 52) 4-Methyl-2-Pentanone       | 10.07 | 43   | 838258   | 84.86  | ug/l   | 99       |
| 53) Toluene                    | 10.26 | 92   | 361120   | 18.07  | ug/l   | 100      |
| 54) t-1,3-Dichloropropene      | 10.47 | 75   | 230149   | 16.88  | ug/l   | 99       |
| 55) cis-1,3-Dichloropropene    | 9.93  | 75   | 254383   | 17.15  | ug/l   | 93       |
| 56) 1,1,2-Trichloroethane      | 10.66 | 97   | 137185   | 18.27  | ug/l   | 99       |
| 57) Ethyl methacrylate         | 10.52 | 69   | 218687   | 17.28  | ug/l # | 90       |
| 58) 1,3-Dichloropropane        | 10.81 | 76   | 249152   | 17.87  | ug/l   | 97       |
| 59) 2-Chloroethyl Vinyl ether  | 9.78  | 63   | 565266   | 97.28  | ug/l   | 97       |
| 60) 2-Hexanone                 | 10.84 | 43   | 586662   | 87.23  | ug/l   | 99       |
| 61) Dibromochloromethane       | 11.00 | 129  | 132225   | 17.24  | ug/l   | 100      |
| 62) 1,2-Dibromoethane          | 11.11 | 107  | 127861   | 17.33  | ug/l   | 98       |
| 65) Tetrachloroethene          | 10.74 | 164  | 100089   | 18.36  | ug/l   | 97       |
| 66) Chlorobenzene              | 11.54 | 112  | 360895   | 17.93  | ug/l   | 100      |
| 67) 1,1,1,2-Tetrachloroethane  | 11.62 | 131  | 122470   | 17.84  | ug/l   | 99       |
| 68) Ethyl Benzene              | 11.62 | 91   | 683327   | 17.91  | ug/l   | 100      |
| 69) m/p-Xylenes                | 11.73 | 106  | 477582   | 36.27  | ug/l   | 91       |
| 70) o-Xylene                   | 12.06 | 106  | 237921   | 18.03  | ug/l   | 92       |
| 71) Styrene                    | 12.08 | 104  | 381085   | 17.88  | ug/l   | 95       |
| 72) Bromoform                  | 12.24 | 173  | 79684    | 16.69  | ug/l # | 100      |
| 74) Isopropylbenzene           | 12.36 | 105  | 645199   | 18.27  | ug/l   | 98       |
| 75) N-amyl acetate             | 12.17 | 43   | 260455   | 16.52  | ug/l   | 99       |
| 76) 1,1,2,2-Tetrachloroethane  | 12.61 | 83   | 178872   | 17.37  | ug/l   | 98       |
| 77) 1,2,3-Trichloropropane     | 12.66 | 75   | 159484m  | 16.46  | ug/l   |          |
| 78) Bromobenzene               | 12.64 | 156  | 125098   | 18.06  | ug/l   | 93       |
| 79) n-propylbenzene            | 12.71 | 91   | 753669   | 18.14  | ug/l   | 98       |
| 80) 2-Chlorotoluene            | 12.79 | 91   | 455008   | 18.23  | ug/l   | 95       |
| 81) 1,3,5-Trimethylbenzene     | 12.85 | 105  | 514705   | 18.14  | ug/l   | 95       |
| 82) trans-1,4-Dichloro-2-buten | 12.40 | 75   | 62842    | 15.93  | ug/l   | 92       |
| 83) 4-Chlorotoluene            | 12.89 | 91   | 442928   | 18.07  | ug/l   | 96       |
| 84) tert-Butylbenzene          | 13.11 | 119  | 414631   | 17.71  | ug/l   | 88       |
| 85) 1,2,4-Trimethylbenzene     | 13.16 | 105  | 512755   | 17.99  | ug/l   | 95       |
| 86) sec-Butylbenzene           | 13.29 | 105  | 625088   | 18.23  | ug/l   | 100      |
| 87) p-Isopropyltoluene         | 13.41 | 119  | 476813   | 18.05  | ug/l   | 94       |
| 88) 1,3-Dichlorobenzene        | 13.41 | 146  | 218771   | 18.46  | ug/l   | 97       |
| 89) 1,4-Dichlorobenzene        | 13.49 | 146  | 217044   | 18.08  | ug/l   | 94       |
| 90) n-Butylbenzene             | 13.74 | 91   | 463507   | 18.08  | ug/l   | 99       |
| 91) Hexachloroethane           | 14.01 | 117  | 97492    | 16.86  | ug/l   | 92       |
| 92) 1,2-Dichlorobenzene        | 13.78 | 146  | 216553   | 18.49  | ug/l   | 97       |

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Misc : 5.00mL/MSVOA N/WATER  
ALS Vial : 5 Sample Multiplier: 1

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9/18/2015 12:22:32 PM

Quant Time: Sep 18 01:29:18 2015  
Quant Method : W:\HPCHEM1\MSVOA\_N\METHODS\82N091515W.M  
Quant Title : SW846 8260  
QLast Update : Tue Sep 15 21:12:09 2015  
Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|--------------------------------|-------|------|----------|-------|-------|----------|
| 93) 1,2-Dibromo-3-Chloropropan | 14.40 | 75   | 34844    | 16.35 | ug/l  | 84       |
| 94) 1,2,4-Trichlorobenzene     | 15.06 | 180  | 112771   | 17.82 | ug/l  | 99       |
| 95) Hexachlorobutadiene        | 15.16 | 225  | 62312    | 18.70 | ug/l  | 97       |
| 96) Naphthalene                | 15.29 | 128  | 306504   | 16.52 | ug/l  | 100      |
| 97) 1,2,3-Trichlorobenzene     | 15.47 | 180  | 112057   | 17.82 | ug/l  | 99       |

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

