

Data Path : Z:\VOASRV\HPCHEM1\MSVOA N\DATA\VN090619\  
 Data File : VN057703.D  
 Acq On : 5 Sep 2019 18:10  
 Operator : JC/SP  
 Sample : VSTDIC005  
 Misc : 5.00mL/MSVOA N/WATER  
 ALS Vial : 4 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 VSTDIC005

Manual Integrations  
 APPROVED

MMDadoda  
 9/9/2019 1:10:23 PM

Quant Time: Sep 06 03:39:49 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_N\METHODS\82N090619W.M  
 Quant Title : SW846 8260  
 QLast Update : Fri Sep 06 02:20:36 2019  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 7.65  | 168  | 199189   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 8.58  | 114  | 338068   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 11.41 | 117  | 303094   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 13.35 | 152  | 157139   | 50.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |     |          |      |        |      |
|---------------------------|--------|-----|----------|------|--------|------|
| 33) 1,2-Dichloroethane-d4 | 8.01   | 65  | 25611    | 5.71 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =    | 11.42% |      |
| 35) Dibromofluoromethane  | 7.58   | 113 | 15856    | 5.18 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =    | 10.36% |      |
| 50) Toluene-d8            | 10.09  | 98  | 54653    | 4.80 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =    | 9.60%  |      |
| 62) 4-Bromofluorobenzene  | 12.40  | 95  | 24246    | 5.60 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =    | 11.20% |      |

## Target Compounds

|                               |      |     |        |        | Qvalue |    |
|-------------------------------|------|-----|--------|--------|--------|----|
| 2) Dichlorodifluoromethane    | 1.83 | 85  | 15612  | 4.981  | ug/l   | 98 |
| 3) Chloromethane              | 2.04 | 50  | 26949  | 8.321  | ug/l   | 97 |
| 4) Vinyl Chloride             | 2.17 | 62  | 14597  | 5.494  | ug/l   | 99 |
| 5) Bromomethane               | 2.53 | 94  | 6664m  | 4.464  | ug/l   |    |
| 6) Chloroethane               | 2.68 | 64  | 8018   | 4.494  | ug/l   | 99 |
| 7) Trichlorofluoromethane     | 3.00 | 101 | 21635  | 4.463  | ug/l   | 98 |
| 8) Diethyl Ether              | 3.39 | 74  | 8952   | 5.281  | ug/l # | 48 |
| 9) 1,1,2-Trichlorotrifluoroet | 3.74 | 101 | 14405  | 5.349  | ug/l   | 98 |
| 10) Methyl Iodide             | 3.93 | 142 | 10783  | 3.468  | ug/l   | 99 |
| 11) Tert butyl alcohol        | 4.76 | 59  | 14536  | 28.903 | ug/l # | 86 |
| 12) 1,1-Dichloroethene        | 3.72 | 96  | 13180  | 5.646  | ug/l   | 94 |
| 13) Acrolein                  | 3.59 | 56  | 7197   | 27.415 | ug/l   | 90 |
| 14) Allyl chloride            | 4.30 | 41  | 28139  | 5.293  | ug/l   | 98 |
| 15) Acrylonitrile             | 4.96 | 53  | 36218  | 28.057 | ug/l   | 95 |
| 16) Acetone                   | 3.80 | 43  | 36683  | 23.698 | ug/l   | 95 |
| 17) Carbon Disulfide          | 4.03 | 76  | 26476  | 4.847  | ug/l # | 95 |
| 18) Methyl Acetate            | 4.31 | 43  | 22028  | 5.451  | ug/l   | 97 |
| 19) Methyl tert-butyl Ether   | 5.02 | 73  | 54249  | 5.565  | ug/l   | 99 |
| 20) Methylene Chloride        | 4.53 | 84  | 16689  | 5.579  | ug/l   | 96 |
| 21) trans-1,2-Dichloroethene  | 5.01 | 96  | 13138  | 5.208  | ug/l   | 92 |
| 22) Diisopropyl ether         | 5.93 | 45  | 61509  | 5.413  | ug/l   | 95 |
| 23) Vinyl Acetate             | 5.87 | 43  | 239206 | 27.972 | ug/l   | 99 |
| 24) 1,1-Dichloroethane        | 5.82 | 63  | 30569  | 5.319  | ug/l   | 99 |
| 25) 2-Butanone                | 6.82 | 43  | 55666  | 27.211 | ug/l   | 99 |
| 26) 2,2-Dichloropropane       | 6.80 | 77  | 26356  | 5.203  | ug/l   | 99 |
| 27) cis-1,2-Dichloroethene    | 6.81 | 96  | 16829  | 5.545  | ug/l   | 99 |
| 28) Bromochloromethane        | 7.18 | 49  | 16840m | 5.588  | ug/l   |    |
| 29) Tetrahydrofuran           | 7.19 | 42  | 35644  | 28.582 | ug/l   | 99 |
| 30) Chloroform                | 7.36 | 83  | 32454  | 5.317  | ug/l   | 98 |
| 31) Cyclohexane               | 7.64 | 56  | 32303  | 6.387  | ug/l # | 84 |
| 32) 1,1,1-Trichloroethane     | 7.55 | 97  | 25459  | 5.027  | ug/l   | 99 |
| 36) 1,1-Dichloropropene       | 7.78 | 75  | 21728  | 5.123  | ug/l   | 98 |
| 37) Ethyl Acetate             | 6.91 | 43  | 23346  | 5.397  | ug/l # | 91 |
| 38) Carbon Tetrachloride      | 7.76 | 117 | 20105  | 4.647  | ug/l   | 98 |

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 Data File : VN057703.D  
 Acq On : 5 Sep 2019 18:10  
 Operator : JC/SP  
 Sample : VSTDIC005  
 Misc : 5.00mL/MSVOA N/WATER  
 ALS Vial : 4 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleID :  
 VSTDIC005

Manual Integrations  
 APPROVED

MMDadoda  
 9/9/2019 1:10:23 PM

Quant Time: Sep 06 03:39:49 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_N\METHODS\82N090619W.M  
 Quant Title : SW846 8260  
 QLast Update : Fri Sep 06 02:20:36 2019  
 Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc   | Units  | Dev(Min) |
|--------------------------------|-------|------|----------|--------|--------|----------|
| 39) Methylcyclohexane          | 9.07  | 83   | 23034    | 4.891  | ug/l   | 97       |
| 40) Benzene                    | 8.03  | 78   | 63257    | 5.127  | ug/l   | 99       |
| 41) Methacrylonitrile          | 7.16  | 41   | 10339m   | 5.729  | ug/l   |          |
| 42) 1,2-Dichloroethane         | 8.11  | 62   | 31492    | 5.548  | ug/l   | 98       |
| 43) Isopropyl Acetate          | 8.15  | 43   | 42182    | 5.308  | ug/l   | 99       |
| 44) Trichloroethene            | 8.83  | 130  | 13524    | 4.580  | ug/l   | 85       |
| 45) 1,2-Dichloropropane        | 9.11  | 63   | 18367    | 5.330  | ug/l   | 96       |
| 46) Dibromomethane             | 9.20  | 93   | 10893    | 4.853  | ug/l   | 98       |
| 47) Bromodichloromethane       | 9.40  | 83   | 21773    | 4.689  | ug/l   | 97       |
| 48) Methyl methacrylate        | 9.19  | 41   | 21040    | 5.484  | ug/l   | 99       |
| 49) 1,4-Dioxane                | 9.19  | 88   | 4996     | 91.970 | ug/l # | 78       |
| 51) 4-Methyl-2-Pentanone       | 9.98  | 43   | 119458   | 27.239 | ug/l   | 99       |
| 52) Toluene                    | 10.15 | 92   | 38378    | 5.022  | ug/l   | 99       |
| 53) t-1,3-Dichloropropene      | 10.38 | 75   | 21591    | 4.547  | ug/l   | 98       |
| 54) cis-1,3-Dichloropropene    | 9.84  | 75   | 24664    | 4.761  | ug/l   | 99       |
| 55) 1,1,2-Trichloroethane      | 10.56 | 97   | 16323    | 5.362  | ug/l   | 96       |
| 56) Ethyl methacrylate         | 10.43 | 69   | 24737    | 5.286  | ug/l   | 97       |
| 57) 1,3-Dichloropropane        | 10.70 | 76   | 28782    | 5.357  | ug/l   | 99       |
| 58) 2-Chloroethyl Vinyl ether  | 9.69  | 63   | 61972    | 37.268 | ug/l   | 97       |
| 59) 2-Hexanone                 | 10.75 | 43   | 83131    | 27.040 | ug/l   | 97       |
| 60) Dibromochloromethane       | 10.90 | 129  | 13020    | 4.358  | ug/l   | 100      |
| 61) 1,2-Dibromoethane          | 11.00 | 107  | 15066    | 5.054  | ug/l   | 96       |
| 64) Tetrachloroethene          | 10.63 | 164  | 11449    | 4.365  | ug/l   | 92       |
| 65) Chlorobenzene              | 11.43 | 112  | 39815    | 5.180  | ug/l   | 96       |
| 66) 1,1,1,2-Tetrachloroethane  | 11.51 | 131  | 12474    | 4.465  | ug/l   | 98       |
| 67) Ethyl Benzene              | 11.51 | 91   | 77219    | 5.262  | ug/l   | 99       |
| 68) m/p-Xylenes                | 11.62 | 106  | 50228    | 9.937  | ug/l   | 90       |
| 69) o-Xylene                   | 11.95 | 106  | 25456    | 5.054  | ug/l   | 93       |
| 70) Styrene                    | 11.96 | 104  | 43341    | 5.401  | ug/l   | 99       |
| 71) Bromoform                  | 12.13 | 173  | 7346     | 4.206  | ug/l # | 97       |
| 73) Isopropylbenzene           | 12.25 | 105  | 73311    | 3.890  | ug/l   | 100      |
| 74) N-amyl acetate             | 12.07 | 43   | 32358    | 4.132  | ug/l   | 97       |
| 75) 1,1,2,2-Tetrachloroethane  | 12.51 | 83   | 20877    | 4.086  | ug/l   | 95       |
| 76) 1,2,3-Trichloropropane     | 12.55 | 75   | 18446m   | 4.274  | ug/l   |          |
| 77) Bromobenzene               | 12.53 | 156  | 15535    | 3.863  | ug/l   | 97       |
| 78) n-propylbenzene            | 12.59 | 91   | 83238    | 4.048  | ug/l   | 99       |
| 79) 2-Chlorotoluene            | 12.68 | 91   | 52899    | 4.170  | ug/l   | 100      |
| 80) 1,3,5-Trimethylbenzene     | 12.74 | 105  | 60711    | 3.957  | ug/l   | 97       |
| 81) trans-1,4-Dichloro-2-buten | 12.30 | 75   | 4976     | 3.928  | ug/l   | 95       |
| 82) 4-Chlorotoluene            | 12.78 | 91   | 54817    | 4.562  | ug/l   | 99       |
| 83) tert-Butylbenzene          | 12.99 | 119  | 51199    | 3.792  | ug/l   | 100      |
| 84) 1,2,4-Trimethylbenzene     | 13.04 | 105  | 59512    | 4.236  | ug/l   | 99       |
| 85) sec-Butylbenzene           | 13.17 | 105  | 71087    | 4.182  | ug/l   | 98       |
| 86) p-Isopropyltoluene         | 13.29 | 119  | 59662    | 4.256  | ug/l   | 98       |
| 87) 1,3-Dichlorobenzene        | 13.28 | 146  | 28236    | 5.101  | ug/l   | 98       |
| 88) 1,4-Dichlorobenzene        | 13.37 | 146  | 28496    | 5.055  | ug/l   | 93       |
| 89) n-Butylbenzene             | 13.62 | 91   | 57406    | 4.688  | ug/l   | 95       |
| 90) Hexachloroethane           | 13.88 | 117  | 7811     | 3.131  | ug/l   | 90       |
| 91) 1,2-Dichlorobenzene        | 13.66 | 146  | 28181    | 5.355  | ug/l   | 99       |
| 92) 1,2-Dibromo-3-Chloropropan | 14.28 | 75   | 3996     | 5.306  | ug/l   | 94       |

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Acq On : 5 Sep 2019 18:10  
Operator : JC/SP  
Sample : VSTDICC005  
Misc : 5.00mL/MSVOA N/WATER  
ALS Vial : 4 Sample Multiplier: 1

Instrument :  
MSVOA\_N  
ClientSampleId :  
VSTDICC005

Manual Integrations  
APPROVED

MMDadoda  
9/9/2019 1:10:23 PM

Quant Time: Sep 06 03:39:49 2019  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_N\METHODS\82N090619W.M  
Quant Title : SW846 8260  
QLast Update : Fri Sep 06 02:20:36 2019  
Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 93) 1,2,4-Trichlorobenzene | 14.91 | 180  | 15931    | 8.271 | ug/l  | 94       |
| 94) Hexachlorobutadiene    | 15.01 | 225  | 8696     | 4.082 | ug/l  | 93       |
| 95) Naphthalene            | 15.13 | 128  | 46002    | 9.102 | ug/l  | 99       |
| 96) 1,2,3-Trichlorobenzene | 15.30 | 180  | 14917    | 8.293 | ug/l  | 94       |

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

