

Data Path : Z:\VOASRV\HPCHEM1\MSVOA W\DATA\VW092118\  
 Data File : VW005543.D  
 Acq On : 20 Sep 2018 21:28  
 Operator : SY/AP  
 Sample : VSTDIC020  
 Misc : 5.00G/5ML/MSVOA W/SOIL  
 ALS Vial : 7 Sample Multiplier: 1

Instrument :  
 MSVOA\_W  
 ClientSampleId :  
 VSTDIC020

Manual Integrations  
 APPROVED

apatel  
 9/21/2018 4:21:50 PM

Quant Time: Sep 21 05:50:05 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_W\METHOD\82W092118S.M  
 Quant Title : SW846 8260  
 QLast Update : Fri Sep 21 04:37:21 2018  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 7.95  | 168  | 228507   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 8.85  | 114  | 340377   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 11.64 | 117  | 314111   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 13.57 | 152  | 177511   | 50.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |     |          |       |        |      |
|---------------------------|--------|-----|----------|-------|--------|------|
| 33) 1,2-Dichloroethane-d4 | 8.31   | 65  | 52531    | 21.41 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 42.82% |      |
| 35) Dibromofluoromethane  | 7.89   | 113 | 41235    | 20.93 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 41.86% |      |
| 50) Toluene-d8            | 10.33  | 98  | 173813   | 19.78 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 39.56% |      |
| 62) 4-Bromofluorobenzene  | 12.62  | 95  | 64449    | 20.04 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 40.08% |      |

## Target Compounds

|                               |      |     |        |         |        | Qvalue |
|-------------------------------|------|-----|--------|---------|--------|--------|
| 2) Dichlorodifluoromethane    | 2.01 | 85  | 29969  | 14.245  | ug/l   | 95     |
| 3) Chloromethane              | 2.21 | 50  | 36713  | 14.341  | ug/l   | 97     |
| 4) Vinyl Chloride             | 2.37 | 62  | 45003  | 18.135  | ug/l   | 99     |
| 5) Bromomethane               | 2.78 | 94  | 30057  | 16.494  | ug/l   | 99     |
| 6) Chloroethane               | 2.93 | 64  | 28466  | 19.250  | ug/l   | 95     |
| 7) Trichlorofluoromethane     | 3.26 | 101 | 35068  | 11.278  | ug/l   | 94     |
| 8) Diethyl Ether              | 3.68 | 74  | 21715  | 21.280  | ug/l   | 99     |
| 9) 1,1,2-Trichlorotrifluoroet | 4.07 | 101 | 45111  | 22.573  | ug/l   | 100    |
| 10) Methyl Iodide             | 4.26 | 142 | 66662  | 30.193  | ug/l   | 98     |
| 11) Tert butyl alcohol        | 5.17 | 59  | 14646  | 86.958  | ug/l   | 99     |
| 12) 1,1-Dichloroethene        | 4.03 | 96  | 41567  | 22.748  | ug/l   | 94     |
| 13) Acrolein                  | 3.90 | 56  | 12298  | 111.157 | ug/l   | 99     |
| 14) Allyl chloride            | 4.67 | 41  | 70405  | 20.896  | ug/l   | 98     |
| 15) Acrylonitrile             | 5.37 | 53  | 49408  | 106.783 | ug/l   | 99     |
| 16) Acetone                   | 4.12 | 43  | 47117  | 118.147 | ug/l   | 99     |
| 17) Carbon Disulfide          | 4.38 | 76  | 130974 | 20.787  | ug/l   | 99     |
| 18) Methyl Acetate            | 4.67 | 43  | 23771  | 20.467  | ug/l   | 97     |
| 19) Methyl tert-butyl Ether   | 5.43 | 73  | 61715  | 13.538  | ug/l   | 96     |
| 20) Methylene Chloride        | 4.92 | 84  | 50798  | 17.832  | ug/l   | 99     |
| 21) trans-1,2-Dichloroethene  | 5.42 | 96  | 45236  | 20.889  | ug/l   | 93     |
| 22) Diisopropyl ether         | 6.32 | 45  | 139465 | 21.170  | ug/l   | 98     |
| 23) Vinyl Acetate             | 6.26 | 43  | 393758 | 104.625 | ug/l   | 100    |
| 24) 1,1-Dichloroethane        | 6.22 | 63  | 84774  | 21.046  | ug/l   | 99     |
| 25) 2-Butanone                | 7.18 | 43  | 64724  | 111.335 | ug/l   | 96     |
| 26) 2,2-Dichloropropane       | 7.17 | 77  | 59578  | 17.266  | ug/l   | 100    |
| 27) cis-1,2-Dichloroethene    | 7.17 | 96  | 48990  | 20.789  | ug/l   | 97     |
| 28) Bromochloromethane        | 7.52 | 49  | 33152  | 21.143  | ug/l # | 97     |
| 29) Tetrahydrofuran           | 7.53 | 42  | 40731  | 109.617 | ug/l   | 99     |
| 30) Chloroform                | 7.68 | 83  | 88603  | 21.191  | ug/l   | 93     |
| 31) Cyclohexane               | 7.96 | 56  | 81459  | 21.180  | ug/l # | 88     |
| 32) 1,1,1-Trichloroethane     | 7.88 | 97  | 77893  | 20.396  | ug/l   | 100    |
| 36) 1,1-Dichloropropene       | 8.09 | 75  | 69685  | 21.282  | ug/l   | 99     |
| 37) Ethyl Acetate             | 7.26 | 43  | 28883  | 21.522  | ug/l   | 99     |
| 38) Carbon Tetrachloride      | 8.07 | 117 | 73916  | 21.523  | ug/l   | 98     |

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 Misc : 5.00G/5ML/MSVOA W/SOIL  
 ALS Vial : 7 Sample Multiplier: 1

Instrument :  
 MSVOA\_W  
 ClientSampleID :  
 VSTDIC020

Manual Integrations  
 APPROVED

apatel  
 9/21/2018 4:21:50 PM

Quant Time: Sep 21 05:50:05 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_W\METHOD\82W092118S.M  
 Quant Title : SW846 8260  
 QLast Update : Fri Sep 21 04:37:21 2018  
 Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc    | Units  | Dev(Min) |
|--------------------------------|-------|------|----------|---------|--------|----------|
| -----                          |       |      |          |         |        |          |
| 39) Methylcyclohexane          | 9.34  | 83   | 81689    | 21.517  | ug/l   | 100      |
| 40) Benzene                    | 8.33  | 78   | 196500   | 20.832  | ug/l   | 100      |
| 41) Methacrylonitrile          | 7.49  | 41   | 16553    | 20.591  | ug/l   | 98       |
| 42) 1,2-Dichloroethane         | 8.40  | 62   | 62963    | 21.126  | ug/l   | 98       |
| 43) Isopropyl Acetate          | 8.43  | 43   | 55812    | 21.438  | ug/l   | 99       |
| 44) Trichloroethene            | 9.10  | 130  | 50415    | 20.760  | ug/l   | 93       |
| 45) 1,2-Dichloropropane        | 9.37  | 63   | 47974    | 21.125  | ug/l   | 95       |
| 46) Dibromomethane             | 9.46  | 93   | 24151    | 21.520  | ug/l   | 99       |
| 47) Bromodichloromethane       | 9.65  | 83   | 63982    | 21.104  | ug/l   | 98       |
| 48) Methyl methacrylate        | 9.45  | 41   | 26585    | 20.645  | ug/l   | 98       |
| 49) 1,4-Dioxane                | 9.45  | 88   | 7954     | 435.972 | ug/l # | 95       |
| 51) 4-Methyl-2-Pentanone       | 10.21 | 43   | 142256   | 106.835 | ug/l   | 99       |
| 52) Toluene                    | 10.39 | 92   | 123921   | 19.689  | ug/l   | 97       |
| 53) t-1,3-Dichloropropene      | 10.61 | 75   | 63090    | 20.783  | ug/l   | 96       |
| 54) cis-1,3-Dichloropropene    | 10.07 | 75   | 72541    | 21.115  | ug/l   | 98       |
| 55) 1,1,2-Trichloroethane      | 10.79 | 97   | 34180    | 20.623  | ug/l   | 98       |
| 56) Ethyl methacrylate         | 10.65 | 69   | 41061    | 19.791  | ug/l   | 99       |
| 57) 1,3-Dichloropropane        | 10.94 | 76   | 59838    | 20.958  | ug/l   | 100      |
| 58) 2-Chloroethyl Vinyl ether  | 9.93  | 63   | 91866    | 97.359  | ug/l   | 97       |
| 59) 2-Hexanone                 | 10.98 | 43   | 98744    | 109.278 | ug/l   | 99       |
| 60) Dibromochloromethane       | 11.13 | 129  | 41542    | 20.863  | ug/l   | 97       |
| 61) 1,2-Dibromoethane          | 11.24 | 107  | 31912    | 21.396  | ug/l   | 100      |
| 64) Tetrachloroethene          | 10.87 | 164  | 45124    | 19.550  | ug/l   | 96       |
| 65) Chlorobenzene              | 11.66 | 112  | 131552   | 19.636  | ug/l   | 91       |
| 66) 1,1,1,2-Tetrachloroethane  | 11.74 | 131  | 47336    | 21.619  | ug/l   | 98       |
| 67) Ethyl Benzene              | 11.74 | 91   | 238082   | 20.202  | ug/l   | 96       |
| 68) m/p-Xylenes                | 11.85 | 106  | 181127   | 40.025  | ug/l   | 98       |
| 69) o-Xylene                   | 12.17 | 106  | 84337    | 20.019  | ug/l   | 98       |
| 70) Styrene                    | 12.19 | 104  | 143209   | 20.516  | ug/l   | 99       |
| 71) Bromoform                  | 12.35 | 173  | 25405    | 21.963  | ug/l # | 97       |
| 73) Isopropylbenzene           | 12.47 | 105  | 240392   | 19.222  | ug/l   | 100      |
| 74) N-amyl acetate             | 12.28 | 43   | 53115    | 20.030  | ug/l   | 98       |
| 75) 1,1,2,2-Tetrachloroethane  | 12.72 | 83   | 39864    | 21.408  | ug/l   | 98       |
| 76) 1,2,3-Trichloropropane     | 12.77 | 75   | 30007m   | 20.283  | ug/l   |          |
| 77) Bromobenzene               | 12.76 | 156  | 55297    | 18.762  | ug/l   | 99       |
| 78) n-propylbenzene            | 12.81 | 91   | 296113   | 19.627  | ug/l   | 100      |
| 79) 2-Chlorotoluene            | 12.90 | 91   | 170688   | 19.247  | ug/l   | 99       |
| 80) 1,3,5-Trimethylbenzene     | 12.95 | 105  | 215489   | 19.807  | ug/l   | 100      |
| 81) trans-1,4-Dichloro-2-buten | 12.52 | 75   | 13067    | 22.519  | ug/l   | 99       |
| 82) 4-Chlorotoluene            | 12.99 | 91   | 181427   | 19.364  | ug/l   | 100      |
| 83) tert-Butylbenzene          | 13.21 | 119  | 177075   | 19.568  | ug/l   | 99       |
| 84) 1,2,4-Trimethylbenzene     | 13.26 | 105  | 216825   | 19.612  | ug/l   | 98       |
| 85) sec-Butylbenzene           | 13.39 | 105  | 258996   | 19.806  | ug/l   | 100      |
| 86) p-Isopropyltoluene         | 13.51 | 119  | 236049   | 20.174  | ug/l   | 100      |
| 87) 1,3-Dichlorobenzene        | 13.51 | 146  | 117157   | 19.574  | ug/l   | 99       |
| 88) 1,4-Dichlorobenzene        | 13.58 | 146  | 115405   | 19.607  | ug/l   | 99       |
| 89) n-Butylbenzene             | 13.83 | 91   | 221333   | 20.336  | ug/l   | 98       |
| 90) Hexachloroethane           | 14.10 | 117  | 41294    | 20.432  | ug/l   | 99       |
| 91) 1,2-Dichlorobenzene        | 13.88 | 146  | 104033   | 19.924  | ug/l   | 99       |
| 92) 1,2-Dibromo-3-Chloropropan | 14.49 | 75   | 7524     | 21.306  | ug/l   | 95       |

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Acq On : 20 Sep 2018 21:28  
Operator : SY/AP  
Sample : VSTDICC020  
Misc : 5.00G/5ML/MSVOA W/SOIL  
ALS Vial : 7 Sample Multiplier: 1

Instrument :  
MSVOA\_W  
ClientSampleId :  
VSTDICC020

Manual Integrations  
APPROVED

apatel  
9/21/2018 4:21:50 PM

Quant Time: Sep 21 05:50:05 2018  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA\_W\METHOD\82W092118S.M  
Quant Title : SW846 8260  
QLast Update : Fri Sep 21 04:37:21 2018  
Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc   | Units | Dev(Min) |
|----------------------------|-------|------|----------|--------|-------|----------|
| 93) 1,2,4-Trichlorobenzene | 15.15 | 180  | 73026    | 20.799 | ug/l  | 98       |
| 94) Hexachlorobutadiene    | 15.25 | 225  | 48983    | 21.472 | ug/l  | 99       |
| 95) Naphthalene            | 15.38 | 128  | 120371   | 20.464 | ug/l  | 99       |
| 96) 1,2,3-Trichlorobenzene | 15.57 | 180  | 65679    | 21.352 | ug/l  | 100      |

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

