

Data Path : Z:\VOASRV\HPCHEM1\MSVOA D\DATA\VD110819\  
 Data File : VD064160.D  
 Acq On : 08 Nov 2019 16:53  
 Operator : VA/SY  
 Sample : VSTDICV050  
 Misc : 5.00G/5.00ml/MSVOA D/SOIL  
 ALS Vial : 10 Sample Multiplier: 1

Instrument :  
 MSVOA\_D  
 ClientSampleId :  
 ICVVD110819

Manual Integrations  
 APPROVED

MMDadoda  
 11/13/2019 11:14:56 AM

Quant Time: Nov 11 08:27:22 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_D\METHOD\82D110819S.M  
 Quant Title : SW846 8260  
 QLast Update : Fri Nov 08 16:20:44 2019  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 7.98  | 168  | 954362   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 8.87  | 114  | 1358405  | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 11.65 | 117  | 1163513  | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 13.58 | 152  | 576008   | 50.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |     |          |       |        |      |
|---------------------------|--------|-----|----------|-------|--------|------|
| 33) 1,2-Dichloroethane-d4 | 8.34   | 65  | 383280   | 48.83 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 97.66% |      |
| 35) Dibromofluoromethane  | 7.92   | 113 | 377601   | 48.43 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 96.86% |      |
| 50) Toluene-d8            | 10.34  | 98  | 1435308  | 48.79 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 97.58% |      |
| 62) 4-Bromofluorobenzene  | 12.63  | 95  | 485020   | 47.61 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 95.22% |      |

## Target Compounds

|                               |      |     |         |         |      | Qvalue |
|-------------------------------|------|-----|---------|---------|------|--------|
| 2) Dichlorodifluoromethane    | 1.99 | 85  | 392034  | 49.529  | ug/l | 98     |
| 3) Chloromethane              | 2.21 | 50  | 416402  | 49.046  | ug/l | 100    |
| 4) Vinyl Chloride             | 2.36 | 62  | 455685  | 50.191  | ug/l | 98     |
| 5) Bromomethane               | 2.77 | 94  | 290400  | 50.654  | ug/l | 98     |
| 6) Chloroethane               | 2.93 | 64  | 284427  | 49.028  | ug/l | 98     |
| 7) Trichlorofluoromethane     | 3.27 | 101 | 734267  | 49.883  | ug/l | 97     |
| 8) Diethyl Ether              | 3.70 | 74  | 194337  | 48.016  | ug/l | 99     |
| 9) 1,1,2-Trichlorotrifluoroet | 4.09 | 101 | 413589  | 49.159  | ug/l | 99     |
| 10) Methyl Iodide             | 4.30 | 142 | 455076  | 47.491  | ug/l | 99     |
| 11) Tert butyl alcohol        | 5.26 | 59  | 137294  | 250.435 | ug/l | 96     |
| 12) 1,1-Dichloroethene        | 4.06 | 96  | 395780  | 49.354  | ug/l | 93     |
| 13) Acrolein                  | 3.93 | 56  | 128711  | 277.524 | ug/l | 97     |
| 14) Allyl chloride            | 4.71 | 41  | 696685  | 49.136  | ug/l | 99     |
| 15) Acrylonitrile             | 5.44 | 53  | 417748  | 242.111 | ug/l | 99     |
| 16) Acetone                   | 4.17 | 43  | 477644  | 256.874 | ug/l | 98     |
| 17) Carbon Disulfide          | 4.40 | 76  | 1242930 | 49.770  | ug/l | 100    |
| 18) Methyl Acetate            | 4.73 | 43  | 234753  | 45.201  | ug/l | 100    |
| 19) Methyl tert-butyl Ether   | 5.48 | 73  | 936508  | 48.919  | ug/l | 98     |
| 20) Methylene Chloride        | 4.97 | 84  | 431945  | 45.987  | ug/l | 98     |
| 21) trans-1,2-Dichloroethene  | 5.47 | 96  | 438645  | 48.279  | ug/l | 98     |
| 22) Diisopropyl ether         | 6.37 | 45  | 1292931 | 49.146  | ug/l | 99     |
| 23) Vinyl Acetate             | 6.31 | 43  | 3711998 | 253.127 | ug/l | 99     |
| 24) 1,1-Dichloroethane        | 6.27 | 63  | 754778  | 49.413  | ug/l | 99     |
| 25) 2-Butanone                | 7.22 | 43  | 592117  | 246.479 | ug/l | 100    |
| 26) 2,2-Dichloropropane       | 7.21 | 77  | 730085  | 48.737  | ug/l | 99     |
| 27) cis-1,2-Dichloroethene    | 7.21 | 96  | 485360  | 49.815  | ug/l | 97     |
| 28) Bromochloromethane        | 7.55 | 49  | 293075  | 55.110  | ug/l | 100    |
| 29) Tetrahydrofuran           | 7.57 | 42  | 352662  | 244.335 | ug/l | 99     |
| 30) Chloroform                | 7.71 | 83  | 766979  | 49.087  | ug/l | 99     |
| 31) Cyclohexane               | 7.98 | 56  | 729330  | 47.343  | ug/l | 98     |
| 32) 1,1,1-Trichloroethane     | 7.91 | 97  | 731824  | 48.915  | ug/l | 99     |
| 36) 1,1-Dichloropropene       | 8.11 | 75  | 615350  | 49.083  | ug/l | 99     |
| 37) Ethyl Acetate             | 7.30 | 43  | 253923  | 48.044  | ug/l | 98     |
| 38) Carbon Tetrachloride      | 8.10 | 117 | 667370  | 49.749  | ug/l | 99     |

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 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_D\METHOD\82D110819S.M  
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 QLast Update : Fri Nov 08 16:20:44 2019  
 Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc    | Units  | Dev(Min) |
|--------------------------------|-------|------|----------|---------|--------|----------|
| 39) Methylcyclohexane          | 9.36  | 83   | 783461   | 49.387  | ug/l   | 98       |
| 40) Benzene                    | 8.36  | 78   | 1667631  | 48.671  | ug/l   | 99       |
| 41) Methacrylonitrile          | 7.53  | 41   | 168766   | 50.804  | ug/l   | 95       |
| 42) 1,2-Dichloroethane         | 8.43  | 62   | 497781   | 48.372  | ug/l   | 100      |
| 43) Isopropyl Acetate          | 8.46  | 43   | 534336   | 49.068  | ug/l   | 99       |
| 44) Trichloroethene            | 9.11  | 130  | 502584   | 48.872  | ug/l   | 97       |
| 45) 1,2-Dichloropropane        | 9.39  | 63   | 407541   | 48.868  | ug/l   | 97       |
| 46) Dibromomethane             | 9.48  | 93   | 214622   | 48.071  | ug/l   | 99       |
| 47) Bromodichloromethane       | 9.67  | 83   | 586095   | 48.735  | ug/l   | 98       |
| 48) Methyl methacrylate        | 9.46  | 41   | 241962   | 45.440  | ug/l   | 97       |
| 49) 1,4-Dioxane                | 9.47  | 88   | 50069    | 933.759 | ug/l   | 98       |
| 51) 4-Methyl-2-Pentanone       | 10.23 | 43   | 1256049  | 240.524 | ug/l   | 100      |
| 52) Toluene                    | 10.40 | 92   | 1091982  | 48.467  | ug/l   | 99       |
| 53) t-1,3-Dichloropropene      | 10.62 | 75   | 590584   | 49.018  | ug/l   | 99       |
| 54) cis-1,3-Dichloropropene    | 10.09 | 75   | 690323   | 49.100  | ug/l   | 100      |
| 55) 1,1,2-Trichloroethane      | 10.80 | 97   | 299774   | 49.495  | ug/l   | 98       |
| 56) Ethyl methacrylate         | 10.66 | 69   | 411847   | 48.610  | ug/l   | 99       |
| 57) 1,3-Dichloropropane        | 10.95 | 76   | 518918   | 49.126  | ug/l   | 100      |
| 58) 2-Chloroethyl Vinyl ether  | 9.94  | 63   | 823597   | 239.976 | ug/l   | 100      |
| 59) 2-Hexanone                 | 10.99 | 43   | 914940   | 246.266 | ug/l   | 99       |
| 60) Dibromochloromethane       | 11.14 | 129  | 405653   | 47.999  | ug/l   | 98       |
| 61) 1,2-Dibromoethane          | 11.25 | 107  | 296312   | 48.845  | ug/l   | 98       |
| 64) Tetrachloroethene          | 10.88 | 164  | 434740   | 48.583  | ug/l   | 99       |
| 65) Chlorobenzene              | 11.67 | 112  | 1153868  | 48.768  | ug/l   | 97       |
| 66) 1,1,1,2-Tetrachloroethane  | 11.74 | 131  | 441070   | 49.026  | ug/l   | 99       |
| 67) Ethyl Benzene              | 11.75 | 91   | 2105099  | 49.188  | ug/l   | 99       |
| 68) m/p-Xylenes                | 11.86 | 106  | 1612437  | 98.294  | ug/l   | 99       |
| 69) o-Xylene                   | 12.18 | 106  | 744909   | 48.962  | ug/l   | 99       |
| 70) Styrene                    | 12.20 | 104  | 1291472  | 48.630  | ug/l   | 100      |
| 71) Bromoform                  | 12.37 | 173  | 252490   | 49.315  | ug/l # | 98       |
| 73) Isopropylbenzene           | 12.48 | 105  | 2024717  | 47.890  | ug/l   | 100      |
| 74) N-amyl acetate             | 12.29 | 43   | 474816   | 47.558  | ug/l   | 99       |
| 75) 1,1,2,2-Tetrachloroethane  | 12.74 | 83   | 308001   | 48.347  | ug/l   | 98       |
| 76) 1,2,3-Trichloropropane     | 12.78 | 75   | 224665m  | 48.424  | ug/l   |          |
| 77) Bromobenzene               | 12.77 | 156  | 489229   | 47.630  | ug/l   | 98       |
| 78) n-propylbenzene            | 12.83 | 91   | 2325428  | 48.141  | ug/l   | 99       |
| 79) 2-Chlorotoluene            | 12.91 | 91   | 1308499  | 47.980  | ug/l   | 100      |
| 80) 1,3,5-Trimethylbenzene     | 12.96 | 105  | 1652953  | 47.580  | ug/l   | 99       |
| 81) trans-1,4-Dichloro-2-buten | 12.53 | 75   | 113702   | 48.681  | ug/l   | 99       |
| 82) 4-Chlorotoluene            | 13.01 | 91   | 1383224  | 48.628  | ug/l   | 99       |
| 83) tert-Butylbenzene          | 13.23 | 119  | 1449060  | 47.303  | ug/l   | 98       |
| 84) 1,2,4-Trimethylbenzene     | 13.27 | 105  | 1660179  | 48.405  | ug/l   | 100      |
| 85) sec-Butylbenzene           | 13.40 | 105  | 1982615  | 48.188  | ug/l   | 100      |
| 86) p-Isopropyltoluene         | 13.52 | 119  | 1889794  | 48.314  | ug/l   | 100      |
| 87) 1,3-Dichlorobenzene        | 13.52 | 146  | 928113   | 48.677  | ug/l   | 100      |
| 88) 1,4-Dichlorobenzene        | 13.60 | 146  | 908053   | 48.797  | ug/l   | 100      |
| 89) n-Butylbenzene             | 13.84 | 91   | 1714586  | 48.519  | ug/l   | 100      |
| 90) Hexachloroethane           | 14.11 | 117  | 347559   | 48.079  | ug/l   | 100      |
| 91) 1,2-Dichlorobenzene        | 13.89 | 146  | 789264   | 48.907  | ug/l   | 100      |
| 92) 1,2-Dibromo-3-Chloropropan | 14.51 | 75   | 51524    | 45.235  | ug/l   | 97       |

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| Internal Standards         | R.T.  | QIon | Response | Conc   | Units | Dev(Min) |
|----------------------------|-------|------|----------|--------|-------|----------|
| 93) 1,2,4-Trichlorobenzene | 15.17 | 180  | 610576   | 49.046 | ug/l  | 100      |
| 94) Hexachlorobutadiene    | 15.27 | 225  | 390077   | 48.512 | ug/l  | 99       |
| 95) Naphthalene            | 15.40 | 128  | 993087   | 48.664 | ug/l  | 100      |
| 96) 1,2,3-Trichlorobenzene | 15.60 | 180  | 520412   | 49.178 | ug/l  | 100      |

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

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