

Data Path : Z:\VOASRV\HPCHEM1\MSVOA X\DATA\WX120519\  
 Data File : VX013784.D  
 Acq On : 05 Dec 2019 18:47  
 Operator : JC/SP  
 Sample : VSTDCCC020  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 21 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 ClientSampleID :  
 VSTDCCC020EC

Manual Integrations  
 APPROVED

apatel  
 12/6/2019 11:37:37 AM

Quant Time: Dec 06 03:36:17 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA X\METHOD\624X111119W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Tue Nov 12 01:16:13 2019  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.01  | 128  | 112459   | 30.00 | ug/l  | 0.00     |
| 28) 1,4-Difluorobenzene | 6.85  | 114  | 625165   | 30.00 | ug/l  | 0.00     |
| 57) Chlorobenzene-d5    | 10.11 | 117  | 560898   | 30.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |       |          |          |      |        |
|---------------------------|--------|-------|----------|----------|------|--------|
| 27) 1,2-Dichloroethane-d4 | 6.06   | 65    | 238061   | 28.67    | ug/l | 0.00   |
| Spiked Amount             | 30.000 | Range | 50 - 169 | Recovery | =    | 95.57% |
| 60) 4-Bromofluorobenzene  | 11.14  | 95    | 269310   | 29.87    | ug/l | 0.00   |
| Spiked Amount             | 30.000 | Range | 56 - 143 | Recovery | =    | 99.57% |
| 63) Toluene-d8            | 8.71   | 98    | 750232   | 29.58    | ug/l | 0.00   |
| Spiked Amount             | 30.000 | Range | 66 - 137 | Recovery | =    | 98.60% |

## Target Compounds

|                               |      |     |        |        | Ovalue     |
|-------------------------------|------|-----|--------|--------|------------|
| 2) Dichlorodifluoromethane    | 1.19 | 85  | 144823 | 17.188 | ug/l 98    |
| 3) Chloromethane              | 1.32 | 50  | 155245 | 16.905 | ug/l 100   |
| 4) Vinyl Chloride             | 1.40 | 62  | 180302 | 17.279 | ug/l 96    |
| 5) Bromomethane               | 1.63 | 94  | 92247  | 14.705 | ug/l 98    |
| 6) Chloroethane               | 1.72 | 64  | 135856 | 23.685 | ug/l 94    |
| 7) Trichlorofluoromethane     | 1.92 | 101 | 198218 | 17.645 | ug/l 97    |
| 8) Diethyl Ether              | 2.18 | 74  | 93867  | 18.300 | ug/l 93    |
| 9) 1,1,2-Trichlorotrifluoroet | 2.37 | 101 | 117609 | 17.401 | ug/l 98    |
| 10) 1,1-Dichloroethene        | 2.36 | 96  | 118727 | 17.094 | ug/l 98    |
| 11) Methyl Iodide             | 2.50 | 142 | 144708 | 16.874 | ug/l 98    |
| 12) Methyl Acetate            | 2.77 | 43  | 212529 | 17.463 | ug/l 99    |
| 13) Acrolein                  | 2.29 | 56  | 31871  | 24.653 | ug/l 100   |
| 14) Acrylonitrile             | 3.13 | 53  | 364337 | 81.409 | ug/l 98    |
| 15) Acetone                   | 2.43 | 58  | 124766 | 92.048 | ug/l 93    |
| 16) Carbon Disulfide          | 2.56 | 76  | 330721 | 17.072 | ug/l 99    |
| 17) Allyl chloride            | 2.72 | 41  | 214027 | 16.733 | ug/l 99    |
| 18) Methylene Chloride        | 2.85 | 84  | 141420 | 17.946 | ug/l 96    |
| 19) trans-1,2-Dichloroethene  | 3.16 | 96  | 129351 | 17.426 | ug/l 97    |
| 20) Diisopropyl ether         | 3.84 | 45  | 434193 | 17.645 | ug/l 91    |
| 21) 1,1-Dichloroethane        | 3.69 | 63  | 236788 | 17.667 | ug/l 100   |
| 22) cis-1,2-Dichloroethene    | 4.59 | 96  | 149295 | 17.641 | ug/l 99    |
| 23) tert-Butyl Alcohol        | 3.03 | 59  | 156664 | 72.740 | ug/l # 100 |
| 24) Methyl tert-Butyl Ether   | 3.18 | 73  | 414948 | 18.051 | ug/l 99    |
| 25) Chloroform                | 5.20 | 83  | 231298 | 17.631 | ug/l 98    |
| 26) Cyclohexane               | 5.58 | 56  | 206418 | 16.959 | ug/l # 99  |
| 29) 1,1-Dichloropropene       | 5.79 | 75  | 173759 | 18.197 | ug/l 98    |
| 30) 2-Butanone                | 4.65 | 43  | 555761 | 88.179 | ug/l 99    |
| 31) 2,2-Dichloropropane       | 4.57 | 77  | 185794 | 17.966 | ug/l 99    |
| 32) 1,1,1-Trichloroethane     | 5.48 | 97  | 195999 | 18.467 | ug/l 99    |
| 33) Carbon Tetrachloride      | 5.78 | 117 | 169537 | 18.391 | ug/l 99    |
| 34) Benzene                   | 6.14 | 78  | 541036 | 18.680 | ug/l 98    |
| 35) Methacrylonitrile         | 5.03 | 41  | 114042 | 18.119 | ug/l 98    |
| 36) 1,2-Dichloroethane        | 6.19 | 62  | 189621 | 18.704 | ug/l 100   |
| 37) Trichloroethene           | 7.21 | 130 | 143594 | 18.506 | ug/l 97    |
| 38) Methylcyclohexane         | 7.46 | 83  | 208100 | 17.774 | ug/l 98    |
| 39) 1,2-Dichloropropane       | 7.51 | 63  | 137922 | 18.417 | ug/l 99    |
| 40) Dibromomethane            | 7.65 | 93  | 90469  | 18.152 | ug/l 94    |

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|--------------------------------|-------|------|----------|---------|-------|----------|
| 41) Bromodichloromethane       | 7.89  | 83   | 181211   | 18.626  | ug/l  | 97       |
| 42) Vinyl Acetate              | 3.80  | 43   | 1786340  | 90.023  | ug/l  | 100      |
| 43) Ethyl Acetate              | 4.82  | 43   | 201493   | 17.528  | ug/l  | 99       |
| 44) Isopropyl Acetate          | 6.43  | 43   | 326194   | 17.653  | ug/l  | 98       |
| 45) 1,4-Dioxane                | 7.73  | 88   | 65886    | 322.962 | ug/l  | 97       |
| 46) Methyl methacrylate        | 7.76  | 41   | 163360   | 17.773  | ug/l  | 98       |
| 47) n-amyl Acetate             | 10.89 | 43   | 280818   | 17.326  | ug/l  | 99       |
| 48) t-1,3-Dichloropropene      | 9.04  | 75   | 192424   | 17.638  | ug/l  | 98       |
| 49) cis-1,3-Dichloropropene    | 8.43  | 75   | 220002   | 18.404  | ug/l  | 98       |
| 50) 1,1,2-Trichloroethane      | 9.21  | 97   | 140533   | 19.055  | ug/l  | 98       |
| 51) Ethyl methacrylate         | 9.17  | 69   | 217025   | 17.873  | ug/l  | 98       |
| 52) 1,3-Dichloropropane        | 9.37  | 76   | 236505   | 18.759  | ug/l  | 99       |
| 53) Dibromochloromethane       | 9.58  | 129  | 143344   | 18.339  | ug/l  | 100      |
| 54) 1,2-Dibromoethane          | 9.67  | 107  | 144975   | 18.384  | ug/l  | 97       |
| 55) 2-Chloroethyl vinyl ether  | 8.31  | 63   | 431460   | 83.159  | ug/l  | 99       |
| 56) Bromoform                  | 10.86 | 173  | 110296   | 17.731  | ug/l  | 99       |
| 58) 4-Methyl-2-Pentanone       | 8.64  | 43   | 1029539  | 87.865  | ug/l  | 99       |
| 59) 2-Hexanone                 | 9.48  | 43   | 803110   | 86.625  | ug/l  | 98       |
| 61) Tetrachloroethene          | 9.33  | 164  | 131218   | 18.972  | ug/l  | 92       |
| 62) Toluene                    | 8.78  | 91   | 577357   | 18.479  | ug/l  | 99       |
| 64) Chlorobenzene              | 10.14 | 112  | 362866   | 18.575  | ug/l  | 99       |
| 65) 1,1,1,2-Tetrachloroethane  | 10.21 | 131  | 136391   | 18.652  | ug/l  | 99       |
| 66) Ethyl Benzene              | 10.25 | 91   | 630998   | 18.384  | ug/l  | 98       |
| 67) m/p-Xylenes                | 10.36 | 106  | 485469   | 36.667  | ug/l  | 99       |
| 68) o-Xylene                   | 10.70 | 106  | 238074   | 18.632  | ug/l  | 97       |
| 69) Styrene                    | 10.71 | 104  | 402882   | 18.465  | ug/l  | 100      |
| 70) Isopropylbenzene           | 11.01 | 105  | 626428   | 18.605  | ug/l  | 100      |
| 71) 1,1,2,2-Tetrachloroethane  | 11.26 | 83   | 218246   | 18.103  | ug/l  | 99       |
| 72) 1,2,3-Trichloropropane     | 11.29 | 75   | 173966m  | 17.090  | ug/l  |          |
| 73) Bromobenzene               | 11.25 | 156  | 164336   | 18.508  | ug/l  | 98       |
| 74) n-propylbenzene            | 11.35 | 91   | 710082   | 18.558  | ug/l  | 100      |
| 75) 2-Chlorotoluene            | 11.42 | 91   | 419003   | 18.415  | ug/l  | 99       |
| 76) 1,3,5-Trimethylbenzene     | 11.50 | 105  | 520680   | 18.398  | ug/l  | 98       |
| 77) t-1,4-Dichloro-2-butene    | 11.07 | 75   | 67628    | 16.431  | ug/l  | 97       |
| 78) 4-Chlorotoluene            | 11.51 | 91   | 478057   | 18.338  | ug/l  | 99       |
| 79) tert-butylbenzene          | 11.76 | 119  | 524692   | 18.375  | ug/l  | 99       |
| 80) 1,2,4-Trimethylbenzene     | 11.80 | 105  | 522556   | 18.529  | ug/l  | 99       |
| 81) sec-Butylbenzene           | 11.94 | 105  | 600570   | 18.434  | ug/l  | 99       |
| 82) p-Isopropyltoluene         | 12.06 | 119  | 554541   | 18.474  | ug/l  | 99       |
| 83) 1,3-Dichlorobenzene        | 12.02 | 146  | 288765   | 18.498  | ug/l  | 99       |
| 84) 1,4-Dichlorobenzene        | 12.09 | 146  | 286190   | 18.469  | ug/l  | 99       |
| 85) n-Butylbenzene             | 12.39 | 91   | 462362   | 17.848  | ug/l  | 99       |
| 86) Hexachloroethane           | 12.59 | 117  | 97011    | 17.612  | ug/l  | 98       |
| 87) 1,2-Dichlorobenzene        | 12.39 | 146  | 286009   | 18.322  | ug/l  | 98       |
| 88) 1,2-Dibromo-3-Chloropropan | 12.99 | 75   | 47125    | 17.479  | ug/l  | 97       |
| 89) 1,2,4-Trichlorobenzene     | 13.64 | 180  | 197614   | 18.360  | ug/l  | 98       |
| 90) Hexachlorobutadiene        | 13.78 | 225  | 91788    | 17.797  | ug/l  | 98       |
| 91) Naphthalene                | 13.83 | 128  | 631151   | 18.521  | ug/l  | 99       |
| 92) 1,2,3-Trichlorobenzene     | 14.01 | 180  | 204658   | 18.816  | ug/l  | 100      |

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

