

Data Path : Z:\VOASRV\HPCHEM1\MSVOA X\DATA\WX020819\  
 Data File : VX007434.D  
 Acq On : 08 Feb 2019 11:09  
 Operator : JC/SP  
 Sample : VSTDCCC020  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 3 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 ClientSampleId :  
 VSTDCCC020

Manual Integrations  
 APPROVED

MMDadoda  
 2/11/2019 9:37:16 AM

Quant Time: Feb 08 14:49:41 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA X\METHOD\624X012519W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Mon Jan 28 10:35:22 2019  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.02  | 128  | 103099   | 30.00 | ug/l  | 0.00     |
| 28) 1,4-Difluorobenzene | 6.86  | 114  | 557756   | 30.00 | ug/l  | 0.00     |
| 57) Chlorobenzene-d5    | 10.11 | 117  | 504281   | 30.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |       |          |          |      |         |
|---------------------------|--------|-------|----------|----------|------|---------|
| 27) 1,2-Dichloroethane-d4 | 6.07   | 65    | 198279   | 29.30    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 50 - 169 | Recovery | =    | 97.67%  |
| 60) 4-Bromofluorobenzene  | 11.13  | 95    | 239290   | 30.74    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 56 - 143 | Recovery | =    | 102.47% |
| 63) Toluene-d8            | 8.71   | 98    | 674831   | 29.69    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 66 - 137 | Recovery | =    | 98.97%  |

## Target Compounds

|                               |      |     |        |         | Ovalue    |
|-------------------------------|------|-----|--------|---------|-----------|
| 2) Dichlorodifluoromethane    | 1.20 | 85  | 91259  | 19.720  | ug/l 96   |
| 3) Chloromethane              | 1.33 | 50  | 103445 | 19.994  | ug/l 99   |
| 4) Vinyl Chloride             | 1.41 | 62  | 118013 | 20.100  | ug/l 99   |
| 5) Bromomethane               | 1.64 | 94  | 129716 | 21.197  | ug/l 98   |
| 6) Chloroethane               | 1.72 | 64  | 79944  | 20.204  | ug/l 98   |
| 7) Trichlorofluoromethane     | 1.93 | 101 | 204436 | 20.624  | ug/l 96   |
| 8) Diethyl Ether              | 2.19 | 74  | 79251  | 21.151  | ug/l 100  |
| 9) 1,1,2-Trichlorotrifluoroet | 2.39 | 101 | 124360 | 21.242  | ug/l 99   |
| 10) 1,1-Dichloroethene        | 2.37 | 96  | 110429 | 20.753  | ug/l 98   |
| 11) Methyl Iodide             | 2.51 | 142 | 169567 | 19.642  | ug/l 95   |
| 12) Methyl Acetate            | 2.78 | 43  | 190677 | 21.041  | ug/l 99   |
| 13) Acrolein                  | 2.29 | 56  | 45397  | 69.196  | ug/l 96   |
| 14) Acrylonitrile             | 3.15 | 53  | 358282 | 105.601 | ug/l 98   |
| 15) Acetone                   | 2.45 | 58  | 99404  | 103.078 | ug/l 93   |
| 16) Carbon Disulfide          | 2.57 | 76  | 246510 | 19.212  | ug/l 100  |
| 17) Allyl chloride            | 2.73 | 41  | 191620 | 20.711  | ug/l 96   |
| 18) Methylene Chloride        | 2.86 | 84  | 125889 | 20.527  | ug/l 95   |
| 19) trans-1,2-Dichloroethene  | 3.17 | 96  | 115802 | 20.098  | ug/l 98   |
| 20) Diisopropyl ether         | 3.87 | 45  | 362557 | 21.049  | ug/l 96   |
| 21) 1,1-Dichloroethane        | 3.70 | 63  | 210654 | 21.413  | ug/l 98   |
| 22) cis-1,2-Dichloroethene    | 4.60 | 96  | 135729 | 21.420  | ug/l 96   |
| 23) tert-Butyl Alcohol        | 3.07 | 59  | 144264 | 101.181 | ug/l 100  |
| 24) Methyl tert-Butyl Ether   | 3.20 | 73  | 390924 | 20.974  | ug/l 100  |
| 25) Chloroform                | 5.21 | 83  | 215317 | 21.177  | ug/l 97   |
| 26) Cyclohexane               | 5.57 | 56  | 174909 | 21.111  | ug/l # 98 |
| 29) 1,1-Dichloropropene       | 5.80 | 75  | 153299 | 21.084  | ug/l 99   |
| 30) 2-Butanone                | 4.70 | 43  | 454983 | 104.726 | ug/l # 98 |
| 31) 2,2-Dichloropropane       | 4.58 | 77  | 161412 | 21.974  | ug/l 98   |
| 32) 1,1,1-Trichloroethane     | 5.49 | 97  | 181344 | 21.104  | ug/l 99   |
| 33) Carbon Tetrachloride      | 5.78 | 117 | 159908 | 21.170  | ug/l 95   |
| 34) Benzene                   | 6.14 | 78  | 475953 | 21.222  | ug/l 99   |
| 35) Methacrylonitrile         | 5.06 | 41  | 95141  | 21.454  | ug/l 98   |
| 36) 1,2-Dichloroethane        | 6.20 | 62  | 160846 | 20.784  | ug/l 100  |
| 37) Trichloroethene           | 7.21 | 130 | 142692 | 21.578  | ug/l 99   |
| 38) Methylcyclohexane         | 7.46 | 83  | 193776 | 21.029  | ug/l 98   |
| 39) 1,2-Dichloropropane       | 7.52 | 63  | 119884 | 21.315  | ug/l 100  |
| 40) Dibromomethane            | 7.66 | 93  | 85794  | 21.176  | ug/l 99   |

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|--------------------------------|-------|------|----------|---------|-------|----------|
| 41) Bromodichloromethane       | 7.90  | 83   | 150186   | 21.122  | ug/l  | 98       |
| 42) Vinyl Acetate              | 3.82  | 43   | 1516175  | 102.930 | ug/l  | 99       |
| 43) Ethyl Acetate              | 4.85  | 43   | 167444   | 20.655  | ug/l  | 98       |
| 44) Isopropyl Acetate          | 6.46  | 43   | 266534   | 21.051  | ug/l  | 98       |
| 45) 1,4-Dioxane                | 7.75  | 88   | 61473    | 400.664 | ug/l  | 99       |
| 46) Methyl methacrylate        | 7.77  | 41   | 133184   | 20.573  | ug/l  | 96       |
| 47) n-amyl Acetate             | 10.90 | 43   | 230782   | 20.730  | ug/l  | 99       |
| 48) t-1,3-Dichloropropene      | 9.04  | 75   | 165078   | 21.286  | ug/l  | 98       |
| 49) cis-1,3-Dichloropropene    | 8.43  | 75   | 181912   | 21.115  | ug/l  | 99       |
| 50) 1,1,2-Trichloroethane      | 9.21  | 97   | 129546   | 21.304  | ug/l  | 97       |
| 51) Ethyl methacrylate         | 9.18  | 69   | 181382   | 20.876  | ug/l  | 97       |
| 52) 1,3-Dichloropropane        | 9.37  | 76   | 206027   | 21.160  | ug/l  | 98       |
| 53) Dibromochloromethane       | 9.58  | 129  | 130076   | 21.164  | ug/l  | 98       |
| 54) 1,2-Dibromoethane          | 9.67  | 107  | 137842   | 21.057  | ug/l  | 100      |
| 55) 2-Chloroethyl vinyl ether  | 8.31  | 63   | 623068   | 130.354 | ug/l  | 100      |
| 56) Bromoform                  | 10.85 | 173  | 95496    | 20.463  | ug/l  | 98       |
| 58) 4-Methyl-2-Pentanone       | 8.65  | 43   | 897651   | 106.452 | ug/l  | 100      |
| 59) 2-Hexanone                 | 9.49  | 43   | 686926   | 105.269 | ug/l  | 99       |
| 61) Tetrachloroethene          | 9.34  | 164  | 150115   | 21.357  | ug/l  | 97       |
| 62) Toluene                    | 8.78  | 91   | 539626   | 21.259  | ug/l  | 99       |
| 64) Chlorobenzene              | 10.13 | 112  | 360285   | 21.516  | ug/l  | 99       |
| 65) 1,1,1,2-Tetrachloroethane  | 10.22 | 131  | 128826   | 21.720  | ug/l  | 96       |
| 66) Ethyl Benzene              | 10.25 | 91   | 594795   | 21.628  | ug/l  | 97       |
| 67) m/p-Xylenes                | 10.36 | 106  | 466472   | 42.951  | ug/l  | 99       |
| 68) o-Xylene                   | 10.69 | 106  | 224121   | 21.066  | ug/l  | 99       |
| 69) Styrene                    | 10.71 | 104  | 368425   | 21.465  | ug/l  | 98       |
| 70) Isopropylbenzene           | 11.02 | 105  | 619303   | 21.987  | ug/l  | 97       |
| 71) 1,1,2,2-Tetrachloroethane  | 11.27 | 83   | 188830   | 20.939  | ug/l  | 98       |
| 72) 1,2,3-Trichloropropane     | 11.29 | 75   | 182644m  | 21.542  | ug/l  |          |
| 73) Bromobenzene               | 11.26 | 156  | 166633   | 21.375  | ug/l  | 99       |
| 74) n-propylbenzene            | 11.36 | 91   | 697617   | 22.008  | ug/l  | 100      |
| 75) 2-Chlorotoluene            | 11.42 | 91   | 397428   | 21.142  | ug/l  | 98       |
| 76) 1,3,5-Trimethylbenzene     | 11.51 | 105  | 502436   | 21.373  | ug/l  | 99       |
| 77) t-1,4-Dichloro-2-butene    | 11.07 | 75   | 50359    | 20.443  | ug/l  | 95       |
| 78) 4-Chlorotoluene            | 11.51 | 91   | 462519   | 21.132  | ug/l  | 99       |
| 79) tert-butylbenzene          | 12.06 | 119  | 549738   | 21.614  | ug/l  | 99       |
| 80) 1,2,4-Trimethylbenzene     | 11.80 | 105  | 511540   | 21.491  | ug/l  | 99       |
| 81) sec-Butylbenzene           | 11.94 | 105  | 617400   | 21.781  | ug/l  | 100      |
| 82) p-Isopropyltoluene         | 12.06 | 119  | 549738   | 21.614  | ug/l  | 99       |
| 83) 1,3-Dichlorobenzene        | 12.02 | 146  | 301003   | 21.720  | ug/l  | 99       |
| 84) 1,4-Dichlorobenzene        | 12.10 | 146  | 294741   | 21.258  | ug/l  | 99       |
| 85) n-Butylbenzene             | 12.38 | 91   | 461798   | 21.156  | ug/l  | 99       |
| 86) Hexachloroethane           | 12.60 | 117  | 86538    | 22.006  | ug/l  | 97       |
| 87) 1,2-Dichlorobenzene        | 12.39 | 146  | 294827   | 21.366  | ug/l  | 99       |
| 88) 1,2-Dibromo-3-Chloropropan | 13.00 | 75   | 37757    | 20.542  | ug/l  | 98       |
| 89) 1,2,4-Trichlorobenzene     | 13.65 | 180  | 205393   | 21.682  | ug/l  | 98       |
| 90) Hexachlorobutadiene        | 13.78 | 225  | 98216    | 21.739  | ug/l  | 98       |
| 91) Naphthalene                | 13.83 | 128  | 625491   | 21.813  | ug/l  | 98       |
| 92) 1,2,3-Trichlorobenzene     | 14.02 | 180  | 203313   | 21.645  | ug/l  | 98       |

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

