

Data Path : Z:\VOASRV\HPCHEM1\MSVOA X\DATA\VX031519\  
 Data File : VX008107.D  
 Acq On : 15 Mar 2019 14:56  
 Operator : JC/SP  
 Sample : VX0315WBSD01  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 7 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 ClientSampleId :  
 VX0315WBSD01

Manual Integrations  
 APPROVED

MMDadoda  
 3/16/2019 10:33:07 AM

Quant Time: Mar 16 01:03:33 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA X\METHOD\624X030819W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Fri Mar 08 12:01:36 2019  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.02  | 128  | 41856    | 30.00 | ug/l  | 0.00     |
| 28) 1,4-Difluorobenzene | 6.86  | 114  | 223681   | 30.00 | ug/l  | 0.00     |
| 57) Chlorobenzene-d5    | 10.11 | 117  | 196761   | 30.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |       |          |          |      |        |
|---------------------------|--------|-------|----------|----------|------|--------|
| 27) 1,2-Dichloroethane-d4 | 6.07   | 65    | 76693    | 27.88    | ug/l | 0.00   |
| Spiked Amount             | 30.000 | Range | 50 - 169 | Recovery | =    | 92.93% |
| 60) 4-Bromofluorobenzene  | 11.13  | 95    | 90357    | 28.77    | ug/l | 0.00   |
| Spiked Amount             | 30.000 | Range | 56 - 143 | Recovery | =    | 95.90% |
| 63) Toluene-d8            | 8.71   | 98    | 267291   | 29.68    | ug/l | 0.00   |
| Spiked Amount             | 30.000 | Range | 66 - 137 | Recovery | =    | 98.93% |

## Target Compounds

|                               |      |     |        |        | Ovalue    |
|-------------------------------|------|-----|--------|--------|-----------|
| 2) Dichlorodifluoromethane    | 1.20 | 85  | 38442  | 15.471 | ug/l 99   |
| 3) Chloromethane              | 1.33 | 50  | 36235  | 13.114 | ug/l 97   |
| 4) Vinyl Chloride             | 1.41 | 62  | 37785  | 13.805 | ug/l 97   |
| 5) Bromomethane               | 1.64 | 94  | 23136  | 16.955 | ug/l 100  |
| 6) Chloroethane               | 1.73 | 64  | 23494  | 14.698 | ug/l 95   |
| 7) Trichlorofluoromethane     | 1.93 | 101 | 52930  | 15.530 | ug/l 96   |
| 8) Diethyl Ether              | 2.19 | 74  | 27731  | 15.799 | ug/l 99   |
| 9) 1,1,2-Trichlorotrifluoroet | 2.39 | 101 | 42235  | 16.482 | ug/l 94   |
| 10) 1,1-Dichloroethene        | 2.38 | 96  | 40754  | 16.780 | ug/l 94   |
| 11) Methyl Iodide             | 2.51 | 142 | 64524  | 16.971 | ug/l 91   |
| 12) Methyl Acetate            | 2.78 | 43  | 53906  | 14.034 | ug/l 97   |
| 13) Acrolein                  | 2.30 | 56  | 35039  | 77.753 | ug/l 98   |
| 14) Acrylonitrile             | 3.15 | 53  | 123785 | 75.915 | ug/l 99   |
| 15) Acetone                   | 2.45 | 58  | 36244  | 61.566 | ug/l 96   |
| 16) Carbon Disulfide          | 2.57 | 76  | 114653 | 15.046 | ug/l 99   |
| 17) Allyl chloride            | 2.73 | 41  | 67016  | 13.459 | ug/l 93   |
| 18) Methylene Chloride        | 2.86 | 84  | 43980  | 15.895 | ug/l 91   |
| 19) trans-1,2-Dichloroethene  | 3.17 | 96  | 42643  | 16.594 | ug/l 96   |
| 20) Diisopropyl ether         | 3.87 | 45  | 139874 | 15.355 | ug/l 95   |
| 21) 1,1-Dichloroethane        | 3.70 | 63  | 79659  | 16.079 | ug/l 98   |
| 22) cis-1,2-Dichloroethene    | 4.59 | 96  | 50962  | 17.192 | ug/l 98   |
| 23) tert-Butyl Alcohol        | 3.07 | 59  | 53927  | 81.978 | ug/l 100  |
| 24) Methyl tert-Butyl Ether   | 3.21 | 73  | 134620 | 16.121 | ug/l 93   |
| 25) Chloroform                | 5.21 | 83  | 80346  | 17.182 | ug/l 97   |
| 26) Cyclohexane               | 5.57 | 56  | 69881  | 15.264 | ug/l # 97 |
| 29) 1,1-Dichloropropene       | 5.80 | 75  | 59086  | 16.660 | ug/l 98   |
| 30) 2-Butanone                | 4.70 | 43  | 180171 | 75.320 | ug/l 99   |
| 31) 2,2-Dichloropropane       | 4.58 | 77  | 55540  | 16.954 | ug/l 100  |
| 32) 1,1,1-Trichloroethane     | 5.49 | 97  | 66990  | 17.467 | ug/l 100  |
| 33) Carbon Tetrachloride      | 5.79 | 117 | 59557  | 17.508 | ug/l 96   |
| 34) Benzene                   | 6.15 | 78  | 183515 | 16.884 | ug/l 98   |
| 35) Methacrylonitrile         | 5.06 | 41  | 36041  | 15.462 | ug/l 97   |
| 36) 1,2-Dichloroethane        | 6.20 | 62  | 59818  | 16.916 | ug/l 99   |
| 37) Trichloroethene           | 7.21 | 130 | 53772  | 18.260 | ug/l 100  |
| 38) Methylcyclohexane         | 7.46 | 83  | 72153  | 16.001 | ug/l 98   |
| 39) 1,2-Dichloropropane       | 7.52 | 63  | 47177  | 16.644 | ug/l 100  |
| 40) Dibromomethane            | 7.66 | 93  | 31795  | 17.684 | ug/l 90   |

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|--------------------------------|-------|------|----------|---------|--------|----------|
| 41) Bromodichloromethane       | 7.90  | 83   | 56984    | 16.767  | ug/l   | 99       |
| 42) Vinyl Acetate              | 3.82  | 43   | 603000   | 77.874  | ug/l   | 99       |
| 43) Ethyl Acetate              | 4.85  | 43   | 65308    | 15.674  | ug/l # | 81       |
| 44) Isopropyl Acetate          | 6.46  | 43   | 99214    | 15.606  | ug/l   | 97       |
| 45) 1,4-Dioxane                | 7.75  | 88   | 24612    | 370.026 | ug/l   | 96       |
| 46) Methyl methacrylate        | 7.77  | 41   | 51720    | 15.468  | ug/l   | 94       |
| 47) n-amyl Acetate             | 10.90 | 43   | 81593    | 14.895  | ug/l   | 99       |
| 48) t-1,3-Dichloropropene      | 9.04  | 75   | 59078    | 16.051  | ug/l   | 99       |
| 49) cis-1,3-Dichloropropene    | 8.43  | 75   | 67896    | 16.291  | ug/l   | 95       |
| 50) 1,1,2-Trichloroethane      | 9.21  | 97   | 49017    | 17.885  | ug/l   | 96       |
| 51) Ethyl methacrylate         | 9.18  | 69   | 69301    | 16.674  | ug/l   | 93       |
| 52) 1,3-Dichloropropane        | 9.37  | 76   | 77802    | 17.181  | ug/l   | 98       |
| 53) Dibromochloromethane       | 9.58  | 129  | 48772    | 17.301  | ug/l   | 99       |
| 54) 1,2-Dibromoethane          | 9.67  | 107  | 50824    | 17.739  | ug/l   | 99       |
| 55) 2-Chloroethyl vinyl ether  | 8.31  | 63   | 179225   | 92.714  | ug/l   | 98       |
| 56) Bromoform                  | 10.85 | 173  | 39083    | 17.381  | ug/l # | 97       |
| 58) 4-Methyl-2-Pentanone       | 8.65  | 43   | 331412   | 81.810  | ug/l   | 97       |
| 59) 2-Hexanone                 | 9.49  | 43   | 252916   | 79.091  | ug/l   | 97       |
| 61) Tetrachloroethene          | 9.34  | 164  | 54920    | 19.134  | ug/l   | 94       |
| 62) Toluene                    | 8.79  | 91   | 197482   | 17.188  | ug/l   | 99       |
| 64) Chlorobenzene              | 10.14 | 112  | 129746   | 17.718  | ug/l   | 100      |
| 65) 1,1,1,2-Tetrachloroethane  | 10.22 | 131  | 47777    | 18.223  | ug/l   | 100      |
| 66) Ethyl Benzene              | 10.25 | 91   | 210181   | 17.031  | ug/l   | 97       |
| 67) m/p-Xylenes                | 10.36 | 106  | 165659   | 35.008  | ug/l   | 100      |
| 68) o-Xylene                   | 10.69 | 106  | 80018    | 17.414  | ug/l   | 99       |
| 69) Styrene                    | 10.71 | 104  | 131729   | 17.399  | ug/l   | 98       |
| 70) Isopropylbenzene           | 11.02 | 105  | 214876   | 17.500  | ug/l   | 97       |
| 71) 1,1,2,2-Tetrachloroethane  | 11.27 | 83   | 70772    | 17.452  | ug/l   | 99       |
| 72) 1,2,3-Trichloropropane     | 11.29 | 75   | 67640m   | 17.696  | ug/l   |          |
| 73) Bromobenzene               | 11.26 | 156  | 59571    | 18.250  | ug/l   | 98       |
| 74) n-propylbenzene            | 11.36 | 91   | 233467   | 16.857  | ug/l   | 100      |
| 75) 2-Chlorotoluene            | 11.42 | 91   | 141563   | 17.053  | ug/l   | 98       |
| 76) 1,3,5-Trimethylbenzene     | 11.51 | 105  | 178828   | 17.574  | ug/l   | 99       |
| 77) t-1,4-Dichloro-2-butene    | 11.07 | 75   | 19114    | 16.185  | ug/l   | 90       |
| 78) 4-Chlorotoluene            | 11.51 | 91   | 160330   | 17.082  | ug/l   | 97       |
| 79) tert-butylbenzene          | 12.06 | 119  | 190515   | 17.447  | ug/l   | 97       |
| 80) 1,2,4-Trimethylbenzene     | 11.80 | 105  | 179167   | 17.348  | ug/l   | 99       |
| 81) sec-Butylbenzene           | 11.94 | 105  | 207726   | 16.983  | ug/l   | 99       |
| 82) p-Isopropyltoluene         | 12.06 | 119  | 190515   | 17.447  | ug/l   | 97       |
| 83) 1,3-Dichlorobenzene        | 12.02 | 146  | 103910   | 17.879  | ug/l   | 98       |
| 84) 1,4-Dichlorobenzene        | 12.10 | 146  | 102504   | 17.628  | ug/l   | 98       |
| 85) n-Butylbenzene             | 12.39 | 91   | 147361   | 15.779  | ug/l   | 99       |
| 86) Hexachloroethane           | 12.60 | 117  | 29531    | 16.598  | ug/l   | 77       |
| 87) 1,2-Dichlorobenzene        | 12.39 | 146  | 104592   | 18.210  | ug/l   | 99       |
| 88) 1,2-Dibromo-3-Chloropropan | 13.00 | 75   | 14434    | 17.426  | ug/l   | 92       |
| 89) 1,2,4-Trichlorobenzene     | 13.65 | 180  | 71501    | 17.322  | ug/l   | 97       |
| 90) Hexachlorobutadiene        | 13.78 | 225  | 39504    | 17.352  | ug/l   | 99       |
| 91) Naphthalene                | 13.83 | 128  | 211128   | 17.843  | ug/l   | 100      |
| 92) 1,2,3-Trichlorobenzene     | 14.02 | 180  | 72337    | 17.631  | ug/l   | 99       |

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

