

Data Path : W:\HPCHEM1\MSVOA X\DATA\VX030118\  
 Data File : VX000182.D  
 Acq On : 01 Mar 2018 13:53  
 Operator : JC/MD  
 Sample : VX0301WBSD02  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 ClientSampleId :  
 VX0301WBSD02

Manual Integrations  
 APPROVED

apatel  
 3/2/2018 3:13:26 PM

Quant Time: Mar 02 03:57:25 2018  
 Quant Method : W:\HPCHEM1\MSVOA X\METHOD\624X022018W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Wed Feb 21 06:17:26 2018  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.04  | 128  | 22848    | 30.00 | ug/l  | 0.00     |
| 28) 1,4-Difluorobenzene | 6.87  | 114  | 133477   | 30.00 | ug/l  | 0.00     |
| 57) Chlorobenzene-d5    | 10.12 | 117  | 129514   | 30.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |       |          |          |      |         |
|---------------------------|--------|-------|----------|----------|------|---------|
| 27) 1,2-Dichloroethane-d4 | 6.08   | 65    | 55232    | 31.23    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 50 - 169 | Recovery | =    | 104.10% |
| 60) 4-Bromofluorobenzene  | 11.15  | 95    | 64681    | 30.53    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 56 - 143 | Recovery | =    | 101.77% |
| 63) Toluene-d8            | 8.73   | 98    | 167566   | 30.21    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 66 - 137 | Recovery | =    | 100.70% |

## Target Compounds

|                               |      |     |        |       |        | Ovalue |
|-------------------------------|------|-----|--------|-------|--------|--------|
| 2) Dichlorodifluoromethane    | 1.20 | 85  | 18578  | 13.10 | ug/l   | 99     |
| 3) Chloromethane              | 1.32 | 50  | 18870  | 13.28 | ug/l   | 94     |
| 4) Vinyl Chloride             | 1.40 | 62  | 24003  | 14.19 | ug/l   | 95     |
| 5) Bromomethane               | 1.65 | 94  | 21421  | 13.75 | ug/l   | 96     |
| 6) Chloroethane               | 1.73 | 64  | 16300  | 15.06 | ug/l   | 98     |
| 7) Trichlorofluoromethane     | 1.93 | 101 | 44673  | 15.25 | ug/l   | 100    |
| 8) Diethyl Ether              | 2.19 | 74  | 16330  | 15.96 | ug/l   | 93     |
| 9) 1,1,2-Trichlorotrifluoroet | 2.39 | 101 | 25001  | 15.64 | ug/l   | 94     |
| 10) 1,1-Dichloroethene        | 2.38 | 96  | 21546  | 14.11 | ug/l   | 89     |
| 11) Methyl Iodide             | 2.52 | 142 | 16117  | 10.86 | ug/l   | 100    |
| 12) Methyl Acetate            | 2.79 | 43  | 55205  | 20.24 | ug/l   | 97     |
| 13) Acrolein                  | 2.30 | 56  | 8447   | 25.73 | ug/l   | 98     |
| 14) Acrylonitrile             | 3.16 | 53  | 105052 | 88.87 | ug/l   | 99     |
| 15) Acetone                   | 2.45 | 58  | 37146  | 96.38 | ug/l   | 94     |
| 16) Carbon Disulfide          | 2.57 | 76  | 45062  | 10.32 | ug/l   | 99     |
| 17) Allyl chloride            | 2.73 | 41  | 42341  | 16.27 | ug/l   | 97     |
| 18) Methylene Chloride        | 2.86 | 84  | 25439  | 15.29 | ug/l   | 97     |
| 19) trans-1,2-Dichloroethene  | 3.17 | 96  | 23096  | 13.90 | ug/l   | 92     |
| 20) Diisopropyl ether         | 3.88 | 45  | 65689  | 15.98 | ug/l   | 93     |
| 21) 1,1-Dichloroethane        | 3.71 | 63  | 46913  | 17.32 | ug/l   | 97     |
| 22) cis-1,2-Dichloroethene    | 4.60 | 96  | 24487  | 15.87 | ug/l   | 99     |
| 23) tert-Butyl Alcohol        | 3.07 | 59  | 62069  | 91.86 | ug/l # | 100    |
| 24) Methyl tert-Butyl Ether   | 3.21 | 73  | 90291  | 17.16 | ug/l   | 97     |
| 25) Chloroform                | 5.23 | 83  | 43064  | 16.03 | ug/l   | 92     |
| 26) Cyclohexane               | 5.59 | 56  | 30351  | 14.29 | ug/l # | 53     |
| 29) 1,1-Dichloropropene       | 5.81 | 75  | 29657  | 15.26 | ug/l   | 99     |
| 30) 2-Butanone                | 4.72 | 43  | 142014 | 94.91 | ug/l   | 98     |
| 31) 2,2-Dichloropropane       | 4.59 | 77  | 33591  | 16.07 | ug/l # | 75     |
| 32) 1,1,1-Trichloroethane     | 5.51 | 97  | 38011  | 16.16 | ug/l   | 97     |
| 33) Carbon Tetrachloride      | 5.79 | 117 | 30874  | 14.78 | ug/l   | 97     |
| 34) Benzene                   | 6.15 | 78  | 88265  | 15.78 | ug/l # | 94     |
| 35) Methacrylonitrile         | 5.08 | 41  | 24201  | 17.57 | ug/l   | 92     |
| 36) 1,2-Dichloroethane        | 6.21 | 62  | 36640  | 17.27 | ug/l   | 99     |
| 37) Trichloroethene           | 7.22 | 130 | 25669  | 15.53 | ug/l   | 100    |
| 38) Methylcyclohexane         | 7.47 | 83  | 32366  | 13.89 | ug/l   | 98     |
| 39) 1,2-Dichloropropane       | 7.53 | 63  | 23549  | 16.86 | ug/l   | 99     |
| 40) Dibromomethane            | 7.67 | 93  | 18732  | 17.41 | ug/l   | 93     |

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| Internal Standards             | R.T.  | QIon | Response | Conc   | Units | Dev(Min) |
|--------------------------------|-------|------|----------|--------|-------|----------|
| 41) Bromodichloromethane       | 7.91  | 83   | 33045    | 16.16  | ug/l  | 96       |
| 42) Vinyl Acetate              | 3.84  | 43   | 342062   | 89.69  | ug/l  | 99       |
| 43) Ethyl Acetate              | 4.87  | 43   | 46164    | 17.57  | ug/l  | 99       |
| 44) Isopropyl Acetate          | 6.48  | 43   | 67823    | 17.59  | ug/l  | 97       |
| 45) 1,4-Dioxane                | 7.77  | 88   | 16944    | 349.38 | ug/l  | 95       |
| 46) Methyl methacrylate        | 7.79  | 41   | 32870    | 17.53  | ug/l  | 92       |
| 47) n-amyl Acetate             | 10.91 | 43   | 59247    | 17.60  | ug/l  | 98       |
| 48) t-1,3-Dichloropropene      | 8.45  | 75   | 38007    | 15.96  | ug/l  | 99       |
| 49) cis-1,3-Dichloropropene    | 9.05  | 75   | 37455    | 16.17  | ug/l  | 96       |
| 50) 1,1,2-Trichloroethane      | 9.23  | 97   | 26220    | 16.60  | ug/l  | 99       |
| 51) Ethyl methacrylate         | 9.19  | 69   | 39878    | 16.48  | ug/l  | 93       |
| 52) 1,3-Dichloropropane        | 9.38  | 76   | 45540    | 17.97  | ug/l  | 97       |
| 53) Dibromochloromethane       | 9.59  | 129  | 26873    | 15.29  | ug/l  | 97       |
| 54) 1,2-Dibromoethane          | 9.68  | 107  | 28020    | 15.91  | ug/l  | 96       |
| 55) 2-Chloroethyl vinyl ether  | 8.32  | 63   | 99334    | 93.99  | ug/l  | 99       |
| 56) Bromoform                  | 10.87 | 173  | 20303    | 14.26  | ug/l  | 100      |
| 58) 4-Methyl-2-Pentanone       | 8.66  | 43   | 267211   | 94.19  | ug/l  | 98       |
| 59) 2-Hexanone                 | 9.51  | 43   | 224480   | 93.45  | ug/l  | 98       |
| 61) Tetrachloroethene          | 9.34  | 164  | 22167    | 14.10  | ug/l  | 96       |
| 62) Toluene                    | 8.79  | 91   | 106481   | 15.80  | ug/l  | 98       |
| 64) Chlorobenzene              | 10.15 | 112  | 73833    | 16.21  | ug/l  | 98       |
| 65) 1,1,1,2-Tetrachloroethane  | 10.23 | 131  | 25474    | 15.79  | ug/l  | 99       |
| 66) Ethyl Benzene              | 10.26 | 91   | 125431   | 16.31  | ug/l  | 98       |
| 67) m/p-Xylenes                | 10.37 | 106  | 93786    | 31.10  | ug/l  | 97       |
| 68) o-Xylene                   | 10.71 | 106  | 46761    | 15.97  | ug/l  | 98       |
| 69) Styrene                    | 10.72 | 104  | 78061    | 16.09  | ug/l  | 99       |
| 70) Isopropylbenzene           | 11.02 | 105  | 127944   | 16.16  | ug/l  | 100      |
| 71) 1,1,2,2-Tetrachloroethane  | 11.27 | 83   | 48379    | 17.76  | ug/l  | 100      |
| 72) 1,2,3-Trichloropropane     | 11.30 | 75   | 44386m   | 18.16  | ug/l  |          |
| 73) Bromobenzene               | 11.26 | 156  | 32565    | 15.69  | ug/l  | 94       |
| 74) n-propylbenzene            | 11.37 | 91   | 153402   | 16.53  | ug/l  | 98       |
| 75) 2-Chlorotoluene            | 11.43 | 91   | 88777    | 16.64  | ug/l  | 98       |
| 76) 1,3,5-Trimethylbenzene     | 11.51 | 105  | 108199   | 16.13  | ug/l  | 71       |
| 77) t-1,4-Dichloro-2-butene    | 11.09 | 75   | 13075    | 15.13  | ug/l  | 86       |
| 78) 4-Chlorotoluene            | 11.52 | 91   | 105846   | 16.56  | ug/l  | 97       |
| 79) tert-butylbenzene          | 11.78 | 119  | 110003m  | 16.47  | ug/l  |          |
| 80) 1,2,4-Trimethylbenzene     | 11.82 | 105  | 110248   | 16.11  | ug/l  | 98       |
| 81) sec-Butylbenzene           | 11.96 | 105  | 137101   | 16.61  | ug/l  | 97       |
| 82) p-Isopropyltoluene         | 12.07 | 119  | 117571   | 15.96  | ug/l  | 99       |
| 83) 1,3-Dichlorobenzene        | 12.04 | 146  | 63907    | 16.17  | ug/l  | 98       |
| 84) 1,4-Dichlorobenzene        | 12.11 | 146  | 63880    | 15.51  | ug/l  | 97       |
| 85) n-Butylbenzene             | 12.40 | 91   | 111907   | 16.20  | ug/l  | 99       |
| 86) Hexachloroethane           | 12.60 | 117  | 19077    | 15.51  | ug/l  | 94       |
| 87) 1,2-Dichlorobenzene        | 12.40 | 146  | 61801    | 15.78  | ug/l  | 97       |
| 88) 1,2-Dibromo-3-Chloropropan | 13.01 | 75   | 13846    | 18.18  | ug/l  | 85       |
| 89) 1,2,4-Trichlorobenzene     | 13.65 | 180  | 45601    | 15.86  | ug/l  | 99       |
| 90) Hexachlorobutadiene        | 13.79 | 225  | 18055    | 14.57  | ug/l  | 97       |
| 91) Naphthalene                | 13.84 | 128  | 162339   | 16.15  | ug/l  | 99       |
| 92) 1,2,3-Trichlorobenzene     | 14.03 | 180  | 45054    | 15.58  | ug/l  | 98       |

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

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