

Data Path : Z:\VOASRV\HPCHEM1\MSVOA X\DATA\VX102819\  
 Data File : VX013244.D  
 Acq On : 28 Oct 2019 13:43  
 Operator : JC/SP  
 Sample : VX1028WBS02  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 7 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 ClientSampleId :  
 VX1028WBS02

Manual Integrations  
 APPROVED

MMDadoda  
 10/30/2019 12:07:42 PM

Quant Time: Oct 29 14:23:50 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA X\METHOD\624X102119W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Tue Oct 22 01:53:07 2019  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.01  | 128  | 23140    | 30.00 | ug/l  | 0.00     |
| 28) 1,4-Difluorobenzene | 6.85  | 114  | 127347   | 30.00 | ug/l  | 0.00     |
| 57) Chlorobenzene-d5    | 10.11 | 117  | 115337   | 30.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |       |          |          |      |         |
|---------------------------|--------|-------|----------|----------|------|---------|
| 27) 1,2-Dichloroethane-d4 | 6.06   | 65    | 54515    | 29.93    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 50 - 169 | Recovery | =    | 99.77%  |
| 60) 4-Bromofluorobenzene  | 11.13  | 95    | 60287    | 30.02    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 56 - 143 | Recovery | =    | 100.07% |
| 63) Toluene-d8            | 8.71   | 98    | 154554   | 30.13    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 66 - 137 | Recovery | =    | 100.43% |

## Target Compounds

|                               |      |     |        |        | Ovalue     |
|-------------------------------|------|-----|--------|--------|------------|
| 2) Dichlorodifluoromethane    | 1.19 | 85  | 30338  | 18.261 | ug/l 97    |
| 3) Chloromethane              | 1.32 | 50  | 23578  | 16.279 | ug/l 94    |
| 4) Vinyl Chloride             | 1.40 | 62  | 24755  | 16.531 | ug/l 100   |
| 5) Bromomethane               | 1.63 | 94  | 16061  | 19.876 | ug/l 93    |
| 6) Chloroethane               | 1.72 | 64  | 16007  | 16.750 | ug/l 93    |
| 7) Trichlorofluoromethane     | 1.92 | 101 | 44546  | 18.511 | ug/l 99    |
| 8) Diethyl Ether              | 2.18 | 74  | 13971  | 17.009 | ug/l 96    |
| 9) 1,1,2-Trichlorotrifluoroet | 2.37 | 101 | 25150  | 17.110 | ug/l 99    |
| 10) 1,1-Dichloroethene        | 2.36 | 96  | 24435  | 17.213 | ug/l 95    |
| 11) Methyl Iodide             | 2.50 | 142 | 26603  | 14.551 | ug/l 96    |
| 12) Methyl Acetate            | 2.76 | 43  | 31211  | 17.026 | ug/l 95    |
| 13) Acrolein                  | 2.28 | 56  | 26525  | 97.205 | ug/l 96    |
| 14) Acrylonitrile             | 3.13 | 53  | 64462  | 84.086 | ug/l 99    |
| 15) Acetone                   | 2.44 | 58  | 21385  | 84.668 | ug/l 93    |
| 16) Carbon Disulfide          | 2.56 | 76  | 61390  | 16.194 | ug/l 100   |
| 17) Allyl chloride            | 2.72 | 41  | 36373  | 16.108 | ug/l 89    |
| 18) Methylene Chloride        | 2.85 | 84  | 27430  | 16.688 | ug/l 93    |
| 19) trans-1,2-Dichloroethene  | 3.16 | 96  | 26009  | 17.266 | ug/l 97    |
| 20) Diisopropyl ether         | 3.84 | 45  | 74084  | 16.963 | ug/l 96    |
| 21) 1,1-Dichloroethane        | 3.69 | 63  | 46369  | 17.487 | ug/l 97    |
| 22) cis-1,2-Dichloroethene    | 4.59 | 96  | 29372  | 17.099 | ug/l 95    |
| 23) tert-Butyl Alcohol        | 3.03 | 59  | 35780  | 88.587 | ug/l # 100 |
| 24) Methyl tert-Butyl Ether   | 3.19 | 73  | 88384  | 18.053 | ug/l 98    |
| 25) Chloroform                | 5.20 | 83  | 51162  | 18.361 | ug/l 96    |
| 26) Cyclohexane               | 5.57 | 56  | 37979  | 16.323 | ug/l # 97  |
| 29) 1,1-Dichloropropene       | 5.79 | 75  | 35414  | 17.901 | ug/l # 86  |
| 30) 2-Butanone                | 4.65 | 43  | 94273  | 90.845 | ug/l 98    |
| 31) 2,2-Dichloropropane       | 4.58 | 77  | 44686  | 19.537 | ug/l 95    |
| 32) 1,1,1-Trichloroethane     | 5.48 | 97  | 47040  | 19.650 | ug/l 99    |
| 33) Carbon Tetrachloride      | 5.78 | 117 | 40076  | 19.478 | ug/l 97    |
| 34) Benzene                   | 6.14 | 78  | 103716 | 18.210 | ug/l 97    |
| 35) Methacrylonitrile         | 5.03 | 41  | 18897  | 17.757 | ug/l 93    |
| 36) 1,2-Dichloroethane        | 6.19 | 62  | 42929  | 19.940 | ug/l 98    |
| 37) Trichloroethene           | 7.21 | 130 | 29776  | 18.849 | ug/l 97    |
| 38) Methylcyclohexane         | 7.46 | 83  | 42698  | 17.697 | ug/l 99    |
| 39) 1,2-Dichloropropane       | 7.50 | 63  | 24744  | 17.701 | ug/l 97    |
| 40) Dibromomethane            | 7.65 | 93  | 18595  | 18.623 | ug/l 98    |

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| Internal Standards             | R.T.  | QIon | Response | Conc    | Units | Dev(Min) |
|--------------------------------|-------|------|----------|---------|-------|----------|
| 41) Bromodichloromethane       | 7.89  | 83   | 37705    | 18.727  | ug/l  | 99       |
| 42) Vinyl Acetate              | 3.80  | 43   | 319871   | 88.888  | ug/l  | 99       |
| 43) Ethyl Acetate              | 4.82  | 43   | 32536    | 17.190  | ug/l  | 99       |
| 44) Isopropyl Acetate          | 6.43  | 43   | 57633    | 18.118  | ug/l  | 99       |
| 45) 1,4-Dioxane                | 7.73  | 88   | 14205    | 353.102 | ug/l  | 96       |
| 46) Methyl methacrylate        | 7.76  | 41   | 27851    | 17.793  | ug/l  | 93       |
| 47) n-amyl Acetate             | 10.89 | 43   | 46447    | 17.322  | ug/l  | 98       |
| 48) t-1,3-Dichloropropene      | 9.04  | 75   | 40135    | 18.173  | ug/l  | 97       |
| 49) cis-1,3-Dichloropropene    | 8.43  | 75   | 44744    | 18.620  | ug/l  | 96       |
| 50) 1,1,2-Trichloroethane      | 9.21  | 97   | 27270    | 18.493  | ug/l  | 95       |
| 51) Ethyl methacrylate         | 9.17  | 69   | 42574    | 18.413  | ug/l  | 96       |
| 52) 1,3-Dichloropropane        | 9.37  | 76   | 46264    | 18.630  | ug/l  | 100      |
| 53) Dibromochloromethane       | 9.57  | 129  | 30505    | 19.178  | ug/l  | 96       |
| 54) 1,2-Dibromoethane          | 9.67  | 107  | 30083    | 19.080  | ug/l  | 100      |
| 55) 2-Chloroethyl vinyl ether  | 8.31  | 63   | 93833    | 99.905  | ug/l  | 99       |
| 56) Bromoform                  | 10.85 | 173  | 20715    | 18.357  | ug/l  | 100      |
| 58) 4-Methyl-2-Pentanone       | 8.64  | 43   | 175087   | 90.090  | ug/l  | 100      |
| 59) 2-Hexanone                 | 9.48  | 43   | 133758   | 87.818  | ug/l  | 99       |
| 61) Tetrachloroethene          | 9.33  | 164  | 29309    | 19.168  | ug/l  | 97       |
| 62) Toluene                    | 8.78  | 91   | 114078   | 18.322  | ug/l  | 100      |
| 64) Chlorobenzene              | 10.14 | 112  | 72754    | 18.224  | ug/l  | 99       |
| 65) 1,1,1,2-Tetrachloroethane  | 10.21 | 131  | 28550    | 19.091  | ug/l  | 98       |
| 66) Ethyl Benzene              | 10.25 | 91   | 131768   | 18.388  | ug/l  | 100      |
| 67) m/p-Xylenes                | 10.36 | 106  | 98713    | 36.245  | ug/l  | 98       |
| 68) o-Xylene                   | 10.70 | 106  | 46433    | 17.859  | ug/l  | 99       |
| 69) Styrene                    | 10.71 | 104  | 80521    | 17.997  | ug/l  | 98       |
| 70) Isopropylbenzene           | 11.01 | 105  | 130577   | 18.303  | ug/l  | 99       |
| 71) 1,1,2,2-Tetrachloroethane  | 11.26 | 83   | 39507    | 18.072  | ug/l  | 96       |
| 72) 1,2,3-Trichloropropane     | 11.29 | 75   | 39239m   | 20.666  | ug/l  |          |
| 73) Bromobenzene               | 11.25 | 156  | 30807    | 17.994  | ug/l  | 99       |
| 74) n-propylbenzene            | 11.35 | 91   | 137353   | 17.541  | ug/l  | 99       |
| 75) 2-Chlorotoluene            | 11.42 | 91   | 87593    | 17.877  | ug/l  | 100      |
| 76) 1,3,5-Trimethylbenzene     | 11.50 | 105  | 114109   | 19.054  | ug/l  | 96       |
| 77) t-1,4-Dichloro-2-butene    | 11.07 | 75   | 12533    | 17.001  | ug/l  | 96       |
| 78) 4-Chlorotoluene            | 11.51 | 91   | 97866    | 17.480  | ug/l  | 98       |
| 79) tert-butylbenzene          | 11.76 | 119  | 102508   | 17.776  | ug/l  | 99       |
| 80) 1,2,4-Trimethylbenzene     | 11.80 | 105  | 110324   | 18.441  | ug/l  | 96       |
| 81) sec-Butylbenzene           | 11.94 | 105  | 121447   | 17.679  | ug/l  | 99       |
| 82) p-Isopropyltoluene         | 12.06 | 119  | 113243   | 18.029  | ug/l  | 99       |
| 83) 1,3-Dichlorobenzene        | 12.02 | 146  | 54906    | 17.561  | ug/l  | 95       |
| 84) 1,4-Dichlorobenzene        | 12.09 | 146  | 54807    | 17.724  | ug/l  | 99       |
| 85) n-Butylbenzene             | 12.39 | 91   | 89406    | 16.757  | ug/l  | 99       |
| 86) Hexachloroethane           | 12.59 | 117  | 19609    | 17.886  | ug/l  | 96       |
| 87) 1,2-Dichlorobenzene        | 12.39 | 146  | 56568    | 18.651  | ug/l  | 98       |
| 88) 1,2-Dibromo-3-Chloropropan | 12.99 | 75   | 9894     | 18.368  | ug/l  | 97       |
| 89) 1,2,4-Trichlorobenzene     | 13.64 | 180  | 33246    | 17.625  | ug/l  | 99       |
| 90) Hexachlorobutadiene        | 13.78 | 225  | 16680    | 17.416  | ug/l  | 97       |
| 91) Naphthalene                | 13.83 | 128  | 105460   | 17.187  | ug/l  | 99       |
| 92) 1,2,3-Trichlorobenzene     | 14.01 | 180  | 33439    | 17.303  | ug/l  | 99       |

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

