

Data Path : Z:\VOASRV\HPCHEM1\MSVOA X\DATA\VX071919\  
 Data File : VX010977.D  
 Acq On : 18 Jul 2019 22:45  
 Operator : JC/SP  
 Sample : VSTDICCC020  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 33 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 ClientSampleId :  
 VSTDICCC020

Manual Integrations  
 APPROVED

MMDadoda  
 7/19/2019 9:56:27 AM

Quant Time: Jul 19 03:25:45 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA X\METHOD\624X071919W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Fri Jul 19 03:13:22 2019  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.01  | 128  | 38775    | 30.00 | ug/l  | 0.00     |
| 28) 1,4-Difluorobenzene | 6.86  | 114  | 216317   | 30.00 | ug/l  | 0.00     |
| 57) Chlorobenzene-d5    | 10.11 | 117  | 193469   | 30.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |       |          |          |      |        |
|---------------------------|--------|-------|----------|----------|------|--------|
| 27) 1,2-Dichloroethane-d4 | 6.06   | 65    | 77508    | 25.04    | ug/l | 0.00   |
| Spiked Amount             | 30.000 | Range | 50 - 169 | Recovery | =    | 83.47% |
| 60) 4-Bromofluorobenzene  | 11.13  | 95    | 92059    | 28.44    | ug/l | 0.00   |
| Spiked Amount             | 30.000 | Range | 56 - 143 | Recovery | =    | 94.80% |
| 63) Toluene-d8            | 8.71   | 98    | 258666   | 28.66    | ug/l | 0.00   |
| Spiked Amount             | 30.000 | Range | 66 - 137 | Recovery | =    | 95.53% |

## Target Compounds

|                               |      |     |        |        | Ovalue     |
|-------------------------------|------|-----|--------|--------|------------|
| 2) Dichlorodifluoromethane    | 1.20 | 85  | 53578  | 24.495 | ug/l 100   |
| 3) Chloromethane              | 1.33 | 50  | 47112  | 17.473 | ug/l 100   |
| 4) Vinyl Chloride             | 1.41 | 62  | 48213  | 17.878 | ug/l 100   |
| 5) Bromomethane               | 1.64 | 94  | 29988  | 17.232 | ug/l 100   |
| 6) Chloroethane               | 1.73 | 64  | 28503  | 16.484 | ug/l 100   |
| 7) Trichlorofluoromethane     | 1.93 | 101 | 79053  | 22.362 | ug/l 100   |
| 8) Diethyl Ether              | 2.19 | 74  | 25974  | 16.933 | ug/l 100   |
| 9) 1,1,2-Trichlorotrifluoroet | 2.39 | 101 | 43400  | 20.388 | ug/l 100   |
| 10) 1,1-Dichloroethene        | 2.37 | 96  | 43832  | 20.484 | ug/l 100   |
| 11) Methyl Iodide             | 2.51 | 142 | 53250  | 22.048 | ug/l 100   |
| 12) Methyl Acetate            | 2.78 | 43  | 62181  | 16.149 | ug/l 100   |
| 13) Acrolein                  | 2.29 | 56  | 37531  | 71.784 | ug/l 100   |
| 14) Acrylonitrile             | 3.14 | 53  | 121171 | 73.986 | ug/l 100   |
| 15) Acetone                   | 2.44 | 58  | 34211  | 73.463 | ug/l 100   |
| 16) Carbon Disulfide          | 2.57 | 76  | 107809 | 18.941 | ug/l 100   |
| 17) Allyl chloride            | 2.73 | 41  | 60940  | 12.932 | ug/l 100   |
| 18) Methylene Chloride        | 2.85 | 84  | 48376  | 18.991 | ug/l 100   |
| 19) trans-1,2-Dichloroethene  | 3.17 | 96  | 46281  | 20.281 | ug/l 100   |
| 20) Diisopropyl ether         | 3.85 | 45  | 130910 | 13.972 | ug/l 100   |
| 21) 1,1-Dichloroethane        | 3.70 | 63  | 75212  | 16.127 | ug/l 100   |
| 22) cis-1,2-Dichloroethene    | 4.60 | 96  | 52143  | 19.224 | ug/l 100   |
| 23) tert-Butyl Alcohol        | 3.04 | 59  | 61105  | 85.175 | ug/l 100   |
| 24) Methyl tert-Butyl Ether   | 3.20 | 73  | 137463 | 17.020 | ug/l 100   |
| 25) Chloroform                | 5.21 | 83  | 81792  | 18.689 | ug/l 100   |
| 26) Cyclohexane               | 5.58 | 56  | 69596  | 16.103 | ug/l # 100 |
| 29) 1,1-Dichloropropene       | 5.80 | 75  | 60150  | 19.112 | ug/l 100   |
| 30) 2-Butanone                | 4.67 | 43  | 162969 | 70.249 | ug/l 100   |
| 31) 2,2-Dichloropropane       | 4.59 | 77  | 50476  | 15.212 | ug/l 100   |
| 32) 1,1,1-Trichloroethane     | 5.49 | 97  | 70084  | 20.129 | ug/l 100   |
| 33) Carbon Tetrachloride      | 5.78 | 117 | 59198  | 20.344 | ug/l 100   |
| 34) Benzene                   | 6.15 | 78  | 180808 | 18.745 | ug/l 100   |
| 35) Methacrylonitrile         | 5.04 | 41  | 32525  | 13.493 | ug/l 100   |
| 36) 1,2-Dichloroethane        | 6.20 | 62  | 62663  | 18.030 | ug/l 100   |
| 37) Trichloroethene           | 7.21 | 130 | 51792  | 21.427 | ug/l 100   |
| 38) Methylcyclohexane         | 7.46 | 83  | 75574  | 19.333 | ug/l 100   |
| 39) 1,2-Dichloropropane       | 7.51 | 63  | 44776  | 16.661 | ug/l 100   |
| 40) Dibromomethane            | 7.66 | 93  | 32708  | 20.479 | ug/l 100   |

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 Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc    | Units | Dev(Min) |
|--------------------------------|-------|------|----------|---------|-------|----------|
| 41) Bromodichloromethane       | 7.90  | 83   | 56533    | 17.822  | ug/l  | 100      |
| 42) Vinyl Acetate              | 3.81  | 43   | 522749   | 68.606  | ug/l  | 100      |
| 43) Ethyl Acetate              | 4.83  | 43   | 60852    | 14.522  | ug/l  | 100      |
| 44) Isopropyl Acetate          | 6.45  | 43   | 99053    | 14.424  | ug/l  | 100      |
| 45) 1,4-Dioxane                | 7.74  | 88   | 27440    | 385.160 | ug/l  | 100      |
| 46) Methyl methacrylate        | 7.77  | 41   | 47758    | 14.039  | ug/l  | 100      |
| 47) n-amyl Acetate             | 10.90 | 43   | 87298    | 14.131  | ug/l  | 100      |
| 48) t-1,3-Dichloropropene      | 9.04  | 75   | 58230    | 16.004  | ug/l  | 100      |
| 49) cis-1,3-Dichloropropene    | 8.43  | 75   | 66025    | 16.489  | ug/l  | 100      |
| 50) 1,1,2-Trichloroethane      | 9.21  | 97   | 47979    | 19.788  | ug/l  | 100      |
| 51) Ethyl methacrylate         | 9.18  | 69   | 71560    | 16.546  | ug/l  | 100      |
| 52) 1,3-Dichloropropane        | 9.37  | 76   | 77510    | 18.341  | ug/l  | 100      |
| 53) Dibromochloromethane       | 9.58  | 129  | 48731    | 19.966  | ug/l  | 100      |
| 54) 1,2-Dibromoethane          | 9.67  | 107  | 51362    | 20.439  | ug/l  | 100      |
| 55) 2-Chloroethyl vinyl ether  | 8.31  | 63   | 156825   | 70.946  | ug/l  | 100      |
| 56) Bromoform                  | 10.85 | 173  | 34744    | 18.698  | ug/l  | 100      |
| 58) 4-Methyl-2-Pentanone       | 8.64  | 43   | 326244   | 73.091  | ug/l  | 100      |
| 59) 2-Hexanone                 | 9.49  | 43   | 250658   | 71.897  | ug/l  | 100      |
| 61) Tetrachloroethene          | 9.34  | 164  | 52278    | 23.449  | ug/l  | 100      |
| 62) Toluene                    | 8.78  | 91   | 205973   | 19.960  | ug/l  | 100      |
| 64) Chlorobenzene              | 10.13 | 112  | 130318   | 20.689  | ug/l  | 100      |
| 65) 1,1,1,2-Tetrachloroethane  | 10.22 | 131  | 46434    | 20.200  | ug/l  | 100      |
| 66) Ethyl Benzene              | 10.25 | 91   | 229433   | 19.919  | ug/l  | 100      |
| 67) m/p-Xylenes                | 10.36 | 106  | 178748   | 41.924  | ug/l  | 100      |
| 68) o-Xylene                   | 10.69 | 106  | 86232    | 20.604  | ug/l  | 100      |
| 69) Styrene                    | 10.71 | 104  | 142954   | 19.687  | ug/l  | 100      |
| 70) Isopropylbenzene           | 11.02 | 105  | 227013   | 20.310  | ug/l  | 100      |
| 71) 1,1,2,2-Tetrachloroethane  | 11.27 | 83   | 73503    | 18.321  | ug/l  | 100      |
| 72) 1,2,3-Trichloropropane     | 11.29 | 75   | 60674m   | 17.769  | ug/l  | 100      |
| 73) Bromobenzene               | 11.26 | 156  | 61337    | 21.778  | ug/l  | 100      |
| 74) n-propylbenzene            | 11.36 | 91   | 254157   | 19.722  | ug/l  | 100      |
| 75) 2-Chlorotoluene            | 11.42 | 91   | 151014   | 19.589  | ug/l  | 100      |
| 76) 1,3,5-Trimethylbenzene     | 11.51 | 105  | 192901   | 20.327  | ug/l  | 100      |
| 77) t-1,4-Dichloro-2-butene    | 11.07 | 75   | 17423    | 13.091  | ug/l  | 100      |
| 78) 4-Chlorotoluene            | 11.51 | 91   | 171714   | 19.551  | ug/l  | 100      |
| 79) tert-butylbenzene          | 11.77 | 119  | 184387   | 20.141  | ug/l  | 100      |
| 80) 1,2,4-Trimethylbenzene     | 11.80 | 105  | 193650   | 20.338  | ug/l  | 100      |
| 81) sec-Butylbenzene           | 11.94 | 105  | 219752   | 20.179  | ug/l  | 100      |
| 82) p-Isopropyltoluene         | 12.06 | 119  | 203200   | 20.435  | ug/l  | 100      |
| 83) 1,3-Dichlorobenzene        | 12.02 | 146  | 107291   | 21.306  | ug/l  | 100      |
| 84) 1,4-Dichlorobenzene        | 12.10 | 146  | 107515   | 21.358  | ug/l  | 100      |
| 85) n-Butylbenzene             | 12.38 | 91   | 170305   | 18.932  | ug/l  | 100      |
| 86) Hexachloroethane           | 12.60 | 117  | 29271    | 17.850  | ug/l  | 100      |
| 87) 1,2-Dichlorobenzene        | 12.39 | 146  | 109471   | 21.595  | ug/l  | 100      |
| 88) 1,2-Dibromo-3-Chloropropan | 13.00 | 75   | 15558    | 16.942  | ug/l  | 100      |
| 89) 1,2,4-Trichlorobenzene     | 13.65 | 180  | 71836    | 20.076  | ug/l  | 100      |
| 90) Hexachlorobutadiene        | 13.78 | 225  | 35405    | 19.916  | ug/l  | 100      |
| 91) Naphthalene                | 13.83 | 128  | 227988   | 19.750  | ug/l  | 100      |
| 92) 1,2,3-Trichlorobenzene     | 14.02 | 180  | 73513    | 20.314  | ug/l  | 100      |

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

