

Data Path : Z:\VOASRV\HPCHEM1\MSVOA X\DATA\VX031819\  
 Data File : VX008164.D  
 Acq On : 18 Mar 2019 14:01  
 Operator : JC/SP  
 Sample : VSTDIC005  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 8 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 ClientSampleId :  
 VSTDIC005

Manual Integrations  
 APPROVED

MMDadoda  
 3/19/2019 9:37:11 AM

Quant Time: Mar 18 14:35:04 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA X\METHOD\624X031819W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Mon Mar 18 11:50:52 2019  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.01  | 128  | 62165    | 30.00 | ug/l  | 0.00     |
| 28) 1,4-Difluorobenzene | 6.86  | 114  | 351475   | 30.00 | ug/l  | 0.00     |
| 57) Chlorobenzene-d5    | 10.11 | 117  | 313535   | 30.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |       |          |          |      |        |
|---------------------------|--------|-------|----------|----------|------|--------|
| 27) 1,2-Dichloroethane-d4 | 6.06   | 65    | 155793   | 29.30    | ug/l | 0.00   |
| Spiked Amount             | 30.000 | Range | 50 - 169 | Recovery | =    | 97.67% |
| 60) 4-Bromofluorobenzene  | 11.13  | 95    | 153398   | 29.10    | ug/l | 0.00   |
| Spiked Amount             | 30.000 | Range | 56 - 143 | Recovery | =    | 97.00% |
| 63) Toluene-d8            | 8.71   | 98    | 456439   | 29.67    | ug/l | 0.00   |
| Spiked Amount             | 30.000 | Range | 66 - 137 | Recovery | =    | 98.90% |

## Target Compounds

|                               |      |     |        |               | Ovalue |
|-------------------------------|------|-----|--------|---------------|--------|
| 2) Dichlorodifluoromethane    | 1.20 | 85  | 17036  | 6.277 ug/l    | 96     |
| 3) Chloromethane              | 1.32 | 50  | 24147  | 7.193 ug/l    | 99     |
| 4) Vinyl Chloride             | 1.41 | 62  | 24624  | 7.080 ug/l    | 96     |
| 5) Bromomethane               | 1.64 | 94  | 26448  | 11.503 ug/l   | 97     |
| 6) Chloroethane               | 1.72 | 64  | 15751  | 7.518 ug/l    | 94     |
| 7) Trichlorofluoromethane     | 1.93 | 101 | 32704  | 7.724 ug/l    | 98     |
| 8) Diethyl Ether              | 2.19 | 74  | 14681  | 6.010 ug/l    | 79     |
| 9) 1,1,2-Trichlorotrifluoroet | 2.39 | 101 | 18734  | 6.205 ug/l    | 93     |
| 10) 1,1-Dichloroethene        | 2.37 | 96  | 16826  | 5.883 ug/l    | 87     |
| 11) Methyl Iodide             | 2.51 | 142 | 19314  | 5.717 ug/l    | 98     |
| 12) Methyl Acetate            | 2.78 | 43  | 25989  | 5.460 ug/l    | 93     |
| 13) Acrolein                  | 2.29 | 56  | 26780  | 39.807 ug/l   | 98     |
| 14) Acrylonitrile             | 3.15 | 53  | 62067  | 29.722 ug/l   | 98     |
| 15) Acetone                   | 2.45 | 58  | 19945  | 27.077 ug/l   | 92     |
| 16) Carbon Disulfide          | 2.57 | 76  | 53165  | 5.900 ug/l    | 98     |
| 17) Allyl chloride            | 2.73 | 41  | 35735  | 5.900 ug/l    | 95     |
| 18) Methylene Chloride        | 2.85 | 84  | 20575  | 6.117 ug/l    | 88     |
| 19) trans-1,2-Dichloroethene  | 3.17 | 96  | 18116  | 5.895 ug/l    | 92     |
| 20) Diisopropyl ether         | 3.85 | 45  | 72355m | 5.939 ug/l    |        |
| 21) 1,1-Dichloroethane        | 3.70 | 63  | 36628  | 5.850 ug/l    | 97     |
| 22) cis-1,2-Dichloroethene    | 4.59 | 96  | 20566  | 5.863 ug/l #  | 80     |
| 23) tert-Butyl Alcohol        | 3.05 | 59  | 22081  | 28.646 ug/l # | 100    |
| 24) Methyl tert-Butyl Ether   | 3.20 | 73  | 60468  | 5.852 ug/l    | 97     |
| 25) Chloroform                | 5.21 | 83  | 34965  | 5.842 ug/l    | 92     |
| 26) Cyclohexane               | 5.57 | 56  | 34807  | 5.983 ug/l #  | 87     |
| 29) 1,1-Dichloropropene       | 5.80 | 75  | 26817  | 5.979 ug/l    | 93     |
| 30) 2-Butanone                | 4.68 | 43  | 93292  | 27.502 ug/l   | 93     |
| 31) 2,2-Dichloropropane       | 4.59 | 77  | 26018  | 5.807 ug/l    | 99     |
| 32) 1,1,1-Trichloroethane     | 5.50 | 97  | 27625  | 5.748 ug/l #  | 93     |
| 33) Carbon Tetrachloride      | 5.79 | 117 | 23083  | 5.881 ug/l    | 98     |
| 34) Benzene                   | 6.14 | 78  | 80759  | 5.912 ug/l    | 98     |
| 35) Methacrylonitrile         | 5.04 | 41  | 17760  | 5.742 ug/l    | 91     |
| 36) 1,2-Dichloroethane        | 6.19 | 62  | 29588  | 5.888 ug/l    | 100    |
| 37) Trichloroethene           | 7.21 | 130 | 19239m | 5.981 ug/l    |        |
| 38) Methylcyclohexane         | 7.46 | 83  | 32122  | 5.934 ug/l    | 90     |
| 39) 1,2-Dichloropropane       | 7.51 | 63  | 21588  | 5.812 ug/l    | 98     |
| 40) Dibromomethane            | 7.66 | 93  | 13677  | 6.024 ug/l    | 89     |

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 QLast Update : Mon Mar 18 11:50:52 2019  
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| Internal Standards             | R.T.  | QIon | Response | Conc    | Units  | Dev(Min) |
|--------------------------------|-------|------|----------|---------|--------|----------|
| -----                          |       |      |          |         |        |          |
| 41) Bromodichloromethane       | 7.90  | 83   | 24973    | 5.724   | ug/l   | 99       |
| 42) Vinyl Acetate              | 3.81  | 43   | 306646m  | 28.754  | ug/l   |          |
| 43) Ethyl Acetate              | 4.84  | 43   | 33099    | 5.700   | ug/l # | 82       |
| 44) Isopropyl Acetate          | 6.45  | 43   | 49471    | 5.734   | ug/l   | 96       |
| 45) 1,4-Dioxane                | 7.74  | 88   | 9827     | 119.635 | ug/l # | 85       |
| 46) Methyl methacrylate        | 7.77  | 41   | 26185    | 5.717   | ug/l   | 87       |
| 47) n-amyl Acetate             | 10.90 | 43   | 39391    | 5.269   | ug/l   | 98       |
| 48) t-1,3-Dichloropropene      | 9.04  | 75   | 24912    | 5.380   | ug/l   | 99       |
| 49) cis-1,3-Dichloropropene    | 8.43  | 75   | 29290    | 5.627   | ug/l # | 88       |
| 50) 1,1,2-Trichloroethane      | 9.21  | 97   | 19389    | 5.934   | ug/l   | 98       |
| 51) Ethyl methacrylate         | 9.18  | 69   | 29317    | 5.618   | ug/l   | 94       |
| 52) 1,3-Dichloropropane        | 9.37  | 76   | 34679    | 5.833   | ug/l   | 99       |
| 53) Dibromochloromethane       | 9.58  | 129  | 17122    | 5.488   | ug/l   | 99       |
| 54) 1,2-Dibromoethane          | 9.67  | 107  | 19610    | 5.604   | ug/l   | 98       |
| 55) 2-Chloroethyl vinyl ether  | 8.31  | 63   | 84642    | 21.736  | ug/l   | 94       |
| 56) Bromoform                  | 10.85 | 173  | 11786    | 5.328   | ug/l # | 96       |
| 58) 4-Methyl-2-Pentanone       | 8.64  | 43   | 166319   | 27.867  | ug/l   | 95       |
| 59) 2-Hexanone                 | 9.49  | 43   | 129846   | 26.699  | ug/l   | 95       |
| 61) Tetrachloroethene          | 9.34  | 164  | 18531    | 6.001   | ug/l   | 97       |
| 62) Toluene                    | 8.78  | 91   | 85898    | 5.964   | ug/l   | 98       |
| 64) Chlorobenzene              | 10.13 | 112  | 50804    | 5.896   | ug/l   | 97       |
| 65) 1,1,1,2-Tetrachloroethane  | 10.22 | 131  | 16788    | 5.674   | ug/l   | 97       |
| 66) Ethyl Benzene              | 10.25 | 91   | 89318    | 5.893   | ug/l   | 95       |
| 67) m/p-Xylenes                | 10.35 | 106  | 65121    | 11.622  | ug/l   | 90       |
| 68) o-Xylene                   | 10.69 | 106  | 31009    | 5.735   | ug/l   | 87       |
| 69) Styrene                    | 10.71 | 104  | 49516    | 5.640   | ug/l   | 95       |
| 70) Isopropylbenzene           | 11.02 | 105  | 85758    | 5.879   | ug/l   | 95       |
| 71) 1,1,2,2-Tetrachloroethane  | 11.27 | 83   | 29855    | 5.612   | ug/l   | 99       |
| 72) 1,2,3-Trichloropropane     | 11.29 | 75   | 25871m   | 5.555   | ug/l   |          |
| 73) Bromobenzene               | 11.26 | 156  | 21015    | 6.106   | ug/l   | 81       |
| 74) n-propylbenzene            | 11.36 | 91   | 100070   | 5.882   | ug/l   | 94       |
| 75) 2-Chlorotoluene            | 11.42 | 91   | 60352    | 5.904   | ug/l   | 90       |
| 76) 1,3,5-Trimethylbenzene     | 11.51 | 105  | 68695    | 5.702   | ug/l   | 96       |
| 77) t-1,4-Dichloro-2-butene    | 11.07 | 75   | 7485     | 4.920   | ug/l   | 87       |
| 78) 4-Chlorotoluene            | 11.51 | 91   | 67604    | 5.837   | ug/l   | 92       |
| 79) tert-butylbenzene          | 12.06 | 119  | 69508    | 5.765   | ug/l   | 96       |
| 80) 1,2,4-Trimethylbenzene     | 11.80 | 105  | 70014    | 5.777   | ug/l   | 95       |
| 81) sec-Butylbenzene           | 11.94 | 105  | 83508    | 5.845   | ug/l   | 96       |
| 82) p-Isopropyltoluene         | 12.06 | 119  | 69508    | 5.765   | ug/l   | 96       |
| 83) 1,3-Dichlorobenzene        | 12.02 | 146  | 36317    | 5.859   | ug/l   | 95       |
| 84) 1,4-Dichlorobenzene        | 12.10 | 146  | 36266    | 6.034   | ug/l   | 96       |
| 85) n-Butylbenzene             | 12.38 | 91   | 63260    | 5.787   | ug/l   | 96       |
| 86) Hexachloroethane           | 12.60 | 117  | 11428    | 5.607   | ug/l   | 93       |
| 87) 1,2-Dichlorobenzene        | 12.39 | 146  | 35912    | 5.826   | ug/l   | 97       |
| 88) 1,2-Dibromo-3-Chloropropan | 13.00 | 75   | 6220     | 5.595   | ug/l # | 74       |
| 89) 1,2,4-Trichlorobenzene     | 13.65 | 180  | 21982    | 5.703   | ug/l   | 97       |
| 90) Hexachlorobutadiene        | 13.78 | 225  | 12797    | 6.446   | ug/l   | 98       |
| 91) Naphthalene                | 13.83 | 128  | 68526    | 5.415   | ug/l   | 99       |
| 92) 1,2,3-Trichlorobenzene     | 14.02 | 180  | 22462    | 5.822   | ug/l   | 99       |
| -----                          |       |      |          |         |        |          |

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Sample : VSTDICC005  
Misc : 5.0mL/MSVOA X/WATER  
ALS Vial : 8 Sample Multiplier: 1

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VSTDICC005

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

