

Data Path : Z:\VOASRV\HPCHEM1\MSVOA X\DATA\VX121219\  
 Data File : VX013991.D  
 Acq On : 12 Dec 2019 22:11  
 Operator : JC/SP  
 Sample : VSTDIC005  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 28 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 ClientSampleId :  
 VSTDIC005

Manual Integrations  
 APPROVED

apatel  
 12/13/2019 11:25:36 AM

Quant Time: Dec 13 01:25:09 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA X\METHOD\624X121219W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Fri Dec 13 01:15:47 2019  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.01  | 128  | 92238    | 30.00 | ug/l  | 0.00     |
| 28) 1,4-Difluorobenzene | 6.85  | 114  | 512220   | 30.00 | ug/l  | 0.00     |
| 57) Chlorobenzene-d5    | 10.11 | 117  | 457218   | 30.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |       |          |          |      |         |
|---------------------------|--------|-------|----------|----------|------|---------|
| 27) 1,2-Dichloroethane-d4 | 6.05   | 65    | 197095   | 28.88    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 50 - 169 | Recovery | =    | 96.27%  |
| 60) 4-Bromofluorobenzene  | 11.14  | 95    | 211234   | 28.65    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 56 - 143 | Recovery | =    | 95.50%  |
| 63) Toluene-d8            | 8.71   | 98    | 625280   | 30.21    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 66 - 137 | Recovery | =    | 100.70% |

## Target Compounds

|                               |      |     |        |             | Ovalue |
|-------------------------------|------|-----|--------|-------------|--------|
| 2) Dichlorodifluoromethane    | 1.19 | 85  | 25064  | 3.866 ug/l  | 94     |
| 3) Chloromethane              | 1.32 | 50  | 33525  | 4.523 ug/l  | 99     |
| 4) Vinyl Chloride             | 1.40 | 62  | 33996  | 4.127 ug/l  | 96     |
| 5) Bromomethane               | 1.63 | 94  | 28785  | 5.523 ug/l  | 97     |
| 6) Chloroethane               | 1.70 | 64  | 21200  | 4.582 ug/l  | 97     |
| 7) Trichlorofluoromethane     | 1.92 | 101 | 41326  | 4.516 ug/l  | 99     |
| 8) Diethyl Ether              | 2.18 | 74  | 17982  | 4.297 ug/l  | 95     |
| 9) 1,1,2-Trichlorotrifluoroet | 2.37 | 101 | 25607  | 4.679 ug/l  | 94     |
| 10) 1,1-Dichloroethene        | 2.36 | 96  | 25405  | 4.502 ug/l  | 88     |
| 11) Methyl Iodide             | 2.50 | 142 | 23693  | 3.372 ug/l  | 96     |
| 12) Methyl Acetate            | 2.76 | 43  | 39248  | 4.044 ug/l  | 98     |
| 13) Acrolein                  | 2.28 | 56  | 17037  | 15.947 ug/l | 95     |
| 14) Acrylonitrile             | 3.13 | 53  | 74638  | 20.745 ug/l | 100    |
| 15) Acetone                   | 2.44 | 58  | 23080  | 21.924 ug/l | 82     |
| 16) Carbon Disulfide          | 2.56 | 76  | 62840  | 4.019 ug/l  | 96     |
| 17) Allyl chloride            | 2.72 | 41  | 42190  | 4.074 ug/l  | 97     |
| 18) Methylene Chloride        | 2.85 | 84  | 35302  | 5.409 ug/l  | 90     |
| 19) trans-1,2-Dichloroethene  | 3.15 | 96  | 28029  | 4.622 ug/l  | 97     |
| 20) Diisopropyl ether         | 3.84 | 45  | 91080  | 4.502 ug/l  | 90     |
| 21) 1,1-Dichloroethane        | 3.69 | 63  | 51010  | 4.643 ug/l  | 97     |
| 22) cis-1,2-Dichloroethene    | 4.59 | 96  | 32478  | 4.676 ug/l  | 97     |
| 23) tert-Butyl Alcohol        | 3.05 | 59  | 28336  | 16.689 ug/l | # 100  |
| 24) Methyl tert-Butyl Ether   | 3.19 | 73  | 83047  | 4.421 ug/l  | 98     |
| 25) Chloroform                | 5.20 | 83  | 46636  | 4.350 ug/l  | 92     |
| 26) Cyclohexane               | 5.57 | 56  | 42942  | 4.301 ug/l  | # 97   |
| 29) 1,1-Dichloropropene       | 5.79 | 75  | 35025  | 4.490 ug/l  | 77     |
| 30) 2-Butanone                | 4.67 | 43  | 104753 | 21.060 ug/l | 97     |
| 31) 2,2-Dichloropropane       | 4.58 | 77  | 31676  | 3.873 ug/l  | 91     |
| 32) 1,1,1-Trichloroethane     | 5.48 | 97  | 39444  | 4.581 ug/l  | 97     |
| 33) Carbon Tetrachloride      | 5.78 | 117 | 31700  | 4.260 ug/l  | # 94   |
| 34) Benzene                   | 6.14 | 78  | 112056 | 4.725 ug/l  | 97     |
| 35) Methacrylonitrile         | 5.03 | 41  | 21460  | 4.214 ug/l  | 95     |
| 36) 1,2-Dichloroethane        | 6.18 | 62  | 42373m | 5.139 ug/l  |        |
| 37) Trichloroethene           | 7.20 | 130 | 31595  | 4.954 ug/l  | 91     |
| 38) Methylcyclohexane         | 7.45 | 83  | 39756  | 4.191 ug/l  | 99     |
| 39) 1,2-Dichloropropane       | 7.51 | 63  | 29369  | 4.780 ug/l  | 98     |
| 40) Dibromomethane            | 7.66 | 93  | 18470  | 4.556 ug/l  | 98     |

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 Sample : VSTDIC005  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 28 Sample Multiplier: 1

Instrument :  
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 ClientSampleID :  
 VSTDIC005

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 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA X\METHOD\624X121219W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Fri Dec 13 01:15:47 2019  
 Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc   | Units  | Dev(Min) |
|--------------------------------|-------|------|----------|--------|--------|----------|
| -----                          |       |      |          |        |        |          |
| 41) Bromodichloromethane       | 7.89  | 83   | 32981    | 4.200  | ug/l   | 90       |
| 42) Vinyl Acetate              | 3.80  | 43   | 358214   | 22.103 | ug/l   | 100      |
| 43) Ethyl Acetate              | 4.83  | 43   | 38462    | 4.174  | ug/l   | 97       |
| 44) Isopropyl Acetate          | 6.43  | 43   | 67901    | 4.544  | ug/l   | 98       |
| 45) 1,4-Dioxane                | 7.74  | 88   | 11738    | 72.136 | ug/l   | 96       |
| 46) Methyl methacrylate        | 7.77  | 41   | 29731    | 3.995  | ug/l   | 99       |
| 47) n-amyl Acetate             | 10.89 | 43   | 49964    | 3.787  | ug/l   | 100      |
| 48) t-1,3-Dichloropropene      | 9.04  | 75   | 33314    | 3.792  | ug/l   | 97       |
| 49) cis-1,3-Dichloropropene    | 8.43  | 75   | 39120    | 4.049  | ug/l   | 98       |
| 50) 1,1,2-Trichloroethane      | 9.21  | 97   | 29204    | 4.841  | ug/l   | 98       |
| 51) Ethyl methacrylate         | 9.17  | 69   | 40313    | 4.070  | ug/l   | 98       |
| 52) 1,3-Dichloropropane        | 9.37  | 76   | 48817    | 4.730  | ug/l   | 99       |
| 53) Dibromochloromethane       | 9.57  | 129  | 23628    | 3.738  | ug/l   | 94       |
| 54) 1,2-Dibromoethane          | 9.67  | 107  | 28457    | 4.454  | ug/l   | 98       |
| 55) 2-Chloroethyl vinyl ether  | 8.31  | 63   | 95876    | 22.621 | ug/l   | 99       |
| 56) Bromoform                  | 10.85 | 173  | 17387    | 3.469  | ug/l # | 97       |
| 58) 4-Methyl-2-Pentanone       | 8.64  | 43   | 203165   | 21.625 | ug/l   | 99       |
| 59) 2-Hexanone                 | 9.49  | 43   | 148236   | 20.160 | ug/l   | 99       |
| 61) Tetrachloroethene          | 9.33  | 164  | 29423    | 5.139  | ug/l   | 97       |
| 62) Toluene                    | 8.78  | 91   | 121351   | 4.788  | ug/l   | 99       |
| 64) Chlorobenzene              | 10.14 | 112  | 73568    | 4.618  | ug/l   | 96       |
| 65) 1,1,1,2-Tetrachloroethane  | 10.22 | 131  | 27174    | 4.590  | ug/l   | 96       |
| 66) Ethyl Benzene              | 10.24 | 91   | 124441   | 4.464  | ug/l   | 99       |
| 67) m/p-Xylenes                | 10.35 | 106  | 92772    | 8.619  | ug/l   | 97       |
| 68) o-Xylene                   | 10.70 | 106  | 47437    | 4.543  | ug/l   | 99       |
| 69) Styrene                    | 10.71 | 104  | 77171    | 4.355  | ug/l   | 99       |
| 70) Isopropylbenzene           | 11.01 | 105  | 120878   | 4.425  | ug/l   | 99       |
| 71) 1,1,2,2-Tetrachloroethane  | 11.26 | 83   | 44896    | 4.594  | ug/l   | 97       |
| 72) 1,2,3-Trichloropropane     | 11.29 | 75   | 37661m   | 4.452  | ug/l   |          |
| 73) Bromobenzene               | 11.25 | 156  | 32471    | 4.491  | ug/l   | 97       |
| 74) n-propylbenzene            | 11.35 | 91   | 132026   | 4.253  | ug/l   | 99       |
| 75) 2-Chlorotoluene            | 11.42 | 91   | 83367    | 4.496  | ug/l   | 97       |
| 76) 1,3,5-Trimethylbenzene     | 11.50 | 105  | 100154   | 4.352  | ug/l   | 99       |
| 77) t-1,4-Dichloro-2-butene    | 11.07 | 75   | 9321     | 2.886  | ug/l   | 92       |
| 78) 4-Chlorotoluene            | 11.51 | 91   | 91388    | 4.299  | ug/l   | 99       |
| 79) tert-butylbenzene          | 11.76 | 119  | 94429    | 4.101  | ug/l   | 97       |
| 80) 1,2,4-Trimethylbenzene     | 11.81 | 105  | 99006    | 4.309  | ug/l   | 99       |
| 81) sec-Butylbenzene           | 11.94 | 105  | 113728   | 4.296  | ug/l   | 99       |
| 82) p-Isopropyltoluene         | 12.06 | 119  | 98463    | 4.058  | ug/l   | 100      |
| 83) 1,3-Dichlorobenzene        | 12.02 | 146  | 54740    | 4.312  | ug/l   | 98       |
| 84) 1,4-Dichlorobenzene        | 12.09 | 146  | 53952    | 4.276  | ug/l   | 98       |
| 85) n-Butylbenzene             | 12.38 | 91   | 75223    | 3.616  | ug/l   | 98       |
| 86) Hexachloroethane           | 12.59 | 117  | 17020    | 3.843  | ug/l   | 89       |
| 87) 1,2-Dichlorobenzene        | 12.39 | 146  | 56625    | 4.464  | ug/l   | 99       |
| 88) 1,2-Dibromo-3-Chloropropan | 12.99 | 75   | 7342     | 3.404  | ug/l   | 97       |
| 89) 1,2,4-Trichlorobenzene     | 13.64 | 180  | 30943    | 3.594  | ug/l   | 97       |
| 90) Hexachlorobutadiene        | 13.77 | 225  | 16388    | 3.954  | ug/l   | 97       |
| 91) Naphthalene                | 13.83 | 128  | 88745    | 3.289  | ug/l   | 98       |
| 92) 1,2,3-Trichlorobenzene     | 14.01 | 180  | 32834    | 3.781  | ug/l   | 96       |
| -----                          |       |      |          |        |        |          |

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Acq On : 12 Dec 2019 22:11  
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Sample : VSTDICC005  
Misc : 5.0mL/MSVOA X/WATER  
ALS Vial : 28 Sample Multiplier: 1

Instrument :  
MSVOA\_X  
ClientSampleId :  
VSTDICC005

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QLast Update : Fri Dec 13 01:15:47 2019  
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|--------------------|------|------|----------|------|-------|----------|
|--------------------|------|------|----------|------|-------|----------|

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

