

Data Path : W:\HPCHEM1\MSVOA X\DATA\VX043018\  
 Data File : VX001255.D  
 Acq On : 30 Apr 2018 10:36  
 Operator : JC/MD  
 Sample : VSTDIC005  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 2 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 ClientSampleId :  
 VSTDIC005

Manual Integrations  
 APPROVED

MMDadoda  
 5/2/2018 11:08:01 AM

Quant Time: Apr 30 13:08:18 2018  
 Quant Method : W:\HPCHEM1\MSVOA X\METHOD\624X043018W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Mon Apr 30 12:56:30 2018  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.03  | 128  | 38767    | 30.00 | ug/l  | 0.00     |
| 28) 1,4-Difluorobenzene | 6.87  | 114  | 211620   | 30.00 | ug/l  | 0.00     |
| 57) Chlorobenzene-d5    | 10.12 | 117  | 198120   | 30.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |       |          |          |      |         |
|---------------------------|--------|-------|----------|----------|------|---------|
| 27) 1,2-Dichloroethane-d4 | 6.07   | 65    | 83509    | 27.83    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 50 - 169 | Recovery | =    | 92.77%  |
| 60) 4-Bromofluorobenzene  | 11.14  | 95    | 92838    | 28.64    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 56 - 143 | Recovery | =    | 95.47%  |
| 63) Toluene-d8            | 8.72   | 98    | 257270   | 30.32    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 66 - 137 | Recovery | =    | 101.07% |

## Target Compounds

|                               |      |     |       |       |        | Ovalue |
|-------------------------------|------|-----|-------|-------|--------|--------|
| 2) Dichlorodifluoromethane    | 1.20 | 85  | 10506 | 4.37  | ug/l   | 93     |
| 3) Chloromethane              | 1.32 | 50  | 11753 | 4.87  | ug/l   | 97     |
| 4) Vinyl Chloride             | 1.41 | 62  | 12310 | 4.29  | ug/l   | 92     |
| 5) Bromomethane               | 1.65 | 94  | 10544 | 3.99  | ug/l   | 94     |
| 6) Chloroethane               | 1.73 | 64  | 7708  | 4.20  | ug/l   | 93     |
| 7) Trichlorofluoromethane     | 1.93 | 101 | 20808 | 4.19  | ug/l   | 97     |
| 8) Diethyl Ether              | 2.19 | 74  | 7689  | 4.43  | ug/l   | 86     |
| 9) 1,1,2-Trichlorotrifluoroet | 2.39 | 101 | 12841 | 4.74  | ug/l   | 95     |
| 10) 1,1-Dichloroethene        | 2.38 | 96  | 11181 | 4.32  | ug/l   | 91     |
| 11) Methyl Iodide             | 2.51 | 142 | 9687  | 3.85  | ug/l   | 90     |
| 12) Methyl Acetate            | 2.78 | 43  | 13654 | 2.95  | ug/l   | 98     |
| 13) Acrolein                  | 2.29 | 56  | 7622  | 13.68 | ug/l   | 97     |
| 14) Acrylonitrile             | 3.15 | 53  | 26398 | 13.16 | ug/l   | 99     |
| 15) Acetone                   | 2.45 | 58  | 9181  | 14.04 | ug/l   | 98     |
| 16) Carbon Disulfide          | 2.57 | 76  | 27529 | 3.72  | ug/l   | 96     |
| 17) Allyl chloride            | 2.73 | 41  | 18125 | 4.10  | ug/l   | 97     |
| 18) Methylene Chloride        | 2.86 | 84  | 12754 | 4.52  | ug/l   | 93     |
| 19) trans-1,2-Dichloroethene  | 3.17 | 96  | 11993 | 4.26  | ug/l   | 92     |
| 20) Diisopropyl ether         | 3.87 | 45  | 37340 | 5.35  | ug/l # | 93     |
| 21) 1,1-Dichloroethane        | 3.70 | 63  | 21565 | 4.69  | ug/l   | 96     |
| 22) cis-1,2-Dichloroethene    | 4.60 | 96  | 13647 | 5.21  | ug/l   | 99     |
| 23) tert-Butyl Alcohol        | 3.05 | 59  | 9940  | 8.67  | ug/l # | 99     |
| 24) Methyl tert-Butyl Ether   | 3.20 | 73  | 37246 | 4.17  | ug/l   | 97     |
| 25) Chloroform                | 5.21 | 83  | 23015 | 5.05  | ug/l   | 100    |
| 26) Cyclohexane               | 5.58 | 56  | 18871 | 5.24  | ug/l # | 91     |
| 29) 1,1-Dichloropropene       | 5.80 | 75  | 15783 | 5.12  | ug/l   | 99     |
| 30) 2-Butanone                | 4.70 | 43  | 38846 | 16.38 | ug/l   | 98     |
| 31) 2,2-Dichloropropane       | 4.59 | 77  | 17656 | 5.33  | ug/l   | 96     |
| 32) 1,1,1-Trichloroethane     | 5.50 | 97  | 18562 | 4.98  | ug/l   | 95     |
| 33) Carbon Tetrachloride      | 5.79 | 117 | 16786 | 5.07  | ug/l   | 96     |
| 34) Benzene                   | 6.15 | 78  | 48232 | 5.44  | ug/l # | 94     |
| 35) Methacrylonitrile         | 5.06 | 41  | 8571  | 3.92  | ug/l   | 93     |
| 36) 1,2-Dichloroethane        | 6.20 | 62  | 18752 | 5.58  | ug/l   | 98     |
| 37) Trichloroethene           | 7.22 | 130 | 15340 | 5.85  | ug/l   | 93     |
| 38) Methylcyclohexane         | 7.46 | 83  | 18966 | 5.13  | ug/l   | 95     |
| 39) 1,2-Dichloropropane       | 7.52 | 63  | 12424 | 5.61  | ug/l   | 93     |
| 40) Dibromomethane            | 7.67 | 93  | 8539  | 5.01  | ug/l   | 88     |

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 Data File : VX001255.D  
 Acq On : 30 Apr 2018 10:36  
 Operator : JC/MD  
 Sample : VSTDIC005  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 2 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 ClientSampleId :  
 VSTDIC005

Manual Integrations  
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 5/2/2018 11:08:01 AM

Quant Time: Apr 30 13:08:18 2018  
 Quant Method : W:\HPCHEM1\MSVOA X\METHOD\624X043018W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Mon Apr 30 12:56:30 2018  
 Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc  | Units  | Dev(Min) |
|--------------------------------|-------|------|----------|-------|--------|----------|
| -----                          |       |      |          |       |        |          |
| 41) Bromodichloromethane       | 7.90  | 83   | 14885    | 4.59  | ug/l   | 97       |
| 42) Vinyl Acetate              | 3.82  | 43   | 154404   | 25.54 | ug/l   | 99       |
| 43) Ethyl Acetate              | 4.85  | 43   | 15024    | 3.61  | ug/l   | 94       |
| 44) Isopropyl Acetate          | 6.46  | 43   | 24656    | 4.03  | ug/l   | 97       |
| 45) 1,4-Dioxane                | 7.76  | 88   | 4401     | 57.24 | ug/l # | 87       |
| 46) Methyl methacrylate        | 7.78  | 41   | 12238    | 4.12  | ug/l   | 89       |
| 47) n-amyl Acetate             | 10.90 | 43   | 20495    | 3.84  | ug/l   | 93       |
| 48) t-1,3-Dichloropropene      | 8.44  | 75   | 16719    | 4.43  | ug/l   | 97       |
| 49) cis-1,3-Dichloropropene    | 9.04  | 75   | 15338    | 4.18  | ug/l   | 95       |
| 50) 1,1,2-Trichloroethane      | 9.22  | 97   | 12328    | 4.92  | ug/l   | 96       |
| 51) Ethyl methacrylate         | 9.18  | 69   | 15447    | 4.03  | ug/l   | 96       |
| 52) 1,3-Dichloropropane        | 9.37  | 76   | 20032    | 4.99  | ug/l   | 99       |
| 53) Dibromochloromethane       | 9.59  | 129  | 11973    | 4.30  | ug/l   | 97       |
| 54) 1,2-Dibromoethane          | 9.67  | 107  | 13022    | 4.66  | ug/l   | 99       |
| 55) 2-Chloroethyl vinyl ether  | 8.32  | 63   | 41236    | 24.61 | ug/l   | 100      |
| 56) Bromoform                  | 10.86 | 173  | 8495     | 3.76  | ug/l # | 96       |
| 58) 4-Methyl-2-Pentanone       | 8.65  | 43   | 72141    | 16.62 | ug/l   | 99       |
| 59) 2-Hexanone                 | 9.50  | 43   | 56009    | 15.24 | ug/l   | 95       |
| 61) Tetrachloroethene          | 9.34  | 164  | 17197    | 7.15  | ug/l   | 91       |
| 62) Toluene                    | 8.79  | 91   | 55512    | 5.39  | ug/l   | 99       |
| 64) Chlorobenzene              | 10.14 | 112  | 37688    | 5.41  | ug/l   | 100      |
| 65) 1,1,1,2-Tetrachloroethane  | 10.23 | 131  | 12412    | 5.03  | ug/l   | 96       |
| 66) Ethyl Benzene              | 10.26 | 91   | 59813    | 5.08  | ug/l   | 99       |
| 67) m/p-Xylenes                | 10.36 | 106  | 47101    | 10.21 | ug/l   | 98       |
| 68) o-Xylene                   | 10.70 | 106  | 22402    | 5.00  | ug/l   | 99       |
| 69) Styrene                    | 10.71 | 104  | 35368    | 4.77  | ug/l   | 99       |
| 70) Isopropylbenzene           | 11.02 | 105  | 61567    | 5.08  | ug/l   | 100      |
| 71) 1,1,2,2-Tetrachloroethane  | 11.27 | 83   | 16651    | 4.00  | ug/l   | 100      |
| 72) 1,2,3-Trichloropropane     | 11.30 | 75   | 13972m   | 3.74  | ug/l   |          |
| 73) Bromobenzene               | 11.26 | 156  | 18273    | 5.76  | ug/l   | 94       |
| 74) n-propylbenzene            | 11.37 | 91   | 68252    | 4.81  | ug/l   | 100      |
| 75) 2-Chlorotoluene            | 11.43 | 91   | 42253    | 5.18  | ug/l   | 100      |
| 76) 1,3,5-Trimethylbenzene     | 11.51 | 105  | 51028    | 4.97  | ug/l   | 70       |
| 77) t-1,4-Dichloro-2-butene    | 11.08 | 75   | 3354     | 2.54  | ug/l   | 87       |
| 78) 4-Chlorotoluene            | 11.51 | 91   | 48664    | 4.98  | ug/l   | 99       |
| 79) tert-butylbenzene          | 12.07 | 119  | 53073    | 5.20  | ug/l   | 96       |
| 80) 1,2,4-Trimethylbenzene     | 11.81 | 105  | 51282    | 4.90  | ug/l   | 100      |
| 81) sec-Butylbenzene           | 11.95 | 105  | 59666    | 4.72  | ug/l   | 98       |
| 82) p-Isopropyltoluene         | 12.07 | 119  | 53073    | 4.71  | ug/l   | 99       |
| 83) 1,3-Dichlorobenzene        | 12.03 | 146  | 32965    | 5.45  | ug/l   | 97       |
| 84) 1,4-Dichlorobenzene        | 12.10 | 146  | 33315    | 5.29  | ug/l   | 99       |
| 85) n-Butylbenzene             | 12.39 | 91   | 45074    | 4.27  | ug/l   | 99       |
| 86) Hexachloroethane           | 12.60 | 117  | 7020     | 3.73  | ug/l   | 71       |
| 87) 1,2-Dichlorobenzene        | 12.40 | 146  | 32087    | 5.36  | ug/l   | 98       |
| 88) 1,2-Dibromo-3-Chloropropan | 13.01 | 75   | 3032     | 2.60  | ug/l   | 94       |
| 89) 1,2,4-Trichlorobenzene     | 13.65 | 180  | 23442    | 5.33  | ug/l   | 98       |
| 90) Hexachlorobutadiene        | 13.79 | 225  | 11333    | 5.98  | ug/l   | 97       |
| 91) Naphthalene                | 13.84 | 128  | 55950    | 3.64  | ug/l   | 100      |
| 92) 1,2,3-Trichlorobenzene     | 14.02 | 180  | 23774    | 5.37  | ug/l   | 98       |
| -----                          |       |      |          |       |        |          |

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Data File : VX001255.D  
Acq On : 30 Apr 2018 10:36  
Operator : JC/MD  
Sample : VSTDICC005  
Misc : 5.0mL/MSVOA X/WATER  
ALS Vial : 2 Sample Multiplier: 1

Instrument :  
MSVOA\_X  
ClientSampleId :  
VSTDICC005

Manual Integrations  
APPROVED

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5/2/2018 11:08:01 AM

Quant Time: Apr 30 13:08:18 2018  
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Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
QLast Update : Mon Apr 30 12:56:30 2018  
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

