

Data Path : W:\HPCHEM1\MSVOA X\DATA\VX052518\  
 Data File : VX001959.D  
 Acq On : 24 May 2018 23:52  
 Operator : JC/MD  
 Sample : VSTDIC100  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 27 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 ClientSampleId :  
 VSTDIC100

Manual Integrations  
 APPROVED

MMDadoda  
 5/29/2018 4:39:13 PM

Quant Time: May 25 02:11:02 2018  
 Quant Method : W:\HPCHEM1\MSVOA X\METHOD\624X052518W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Fri May 25 01:52:03 2018  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.03  | 128  | 66509    | 30.00 | ug/l  | 0.00     |
| 28) 1,4-Difluorobenzene | 6.87  | 114  | 381639   | 30.00 | ug/l  | 0.00     |
| 57) Chlorobenzene-d5    | 10.12 | 117  | 353772   | 30.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |       |          |          |      |         |
|---------------------------|--------|-------|----------|----------|------|---------|
| 27) 1,2-Dichloroethane-d4 | 6.08   | 65    | 158473   | 32.41    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 50 - 169 | Recovery | =    | 108.03% |
| 60) 4-Bromofluorobenzene  | 11.14  | 95    | 185859   | 32.82    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 56 - 143 | Recovery | =    | 109.40% |
| 63) Toluene-d8            | 8.72   | 98    | 465760   | 29.58    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 66 - 137 | Recovery | =    | 98.60%  |

## Target Compounds

|                               |      |     |         |         | Ovalue     |
|-------------------------------|------|-----|---------|---------|------------|
| 2) Dichlorodifluoromethane    | 1.20 | 85  | 351567  | 111.489 | ug/l 100   |
| 3) Chloromethane              | 1.32 | 50  | 414445  | 115.563 | ug/l 99    |
| 4) Vinyl Chloride             | 1.40 | 62  | 416713  | 112.387 | ug/l 99    |
| 5) Bromomethane               | 1.64 | 94  | 214767  | 117.714 | ug/l 99    |
| 6) Chloroethane               | 1.71 | 64  | 243047  | 100.535 | ug/l 98    |
| 7) Trichlorofluoromethane     | 1.92 | 101 | 629554  | 116.109 | ug/l 100   |
| 8) Diethyl Ether              | 2.19 | 74  | 233924  | 102.281 | ug/l 100   |
| 9) 1,1,2-Trichlorotrifluoroet | 2.38 | 101 | 340801  | 114.485 | ug/l 98    |
| 10) 1,1-Dichloroethene        | 2.37 | 96  | 327970  | 107.540 | ug/l 97    |
| 11) Methyl Iodide             | 2.51 | 142 | 569573  | 126.290 | ug/l 97    |
| 12) Methyl Acetate            | 2.79 | 43  | 524464  | 102.392 | ug/l 97    |
| 13) Acrolein                  | 2.30 | 56  | 214343  | 383.366 | ug/l 99    |
| 14) Acrylonitrile             | 3.16 | 53  | 1078869 | 522.465 | ug/l 99    |
| 15) Acetone                   | 2.46 | 58  | 283254  | 510.912 | ug/l 99    |
| 16) Carbon Disulfide          | 2.57 | 76  | 933829  | 119.337 | ug/l 100   |
| 17) Allyl chloride            | 2.73 | 41  | 673797  | 113.394 | ug/l 100   |
| 18) Methylene Chloride        | 2.86 | 84  | 365713  | 102.545 | ug/l 98    |
| 19) trans-1,2-Dichloroethene  | 3.17 | 96  | 345652  | 104.984 | ug/l 98    |
| 20) Diisopropyl ether         | 3.89 | 45  | 1278691 | 114.538 | ug/l 98    |
| 21) 1,1-Dichloroethane        | 3.70 | 63  | 679794  | 108.127 | ug/l 99    |
| 22) cis-1,2-Dichloroethene    | 4.60 | 96  | 413483  | 110.121 | ug/l 80    |
| 23) tert-Butyl Alcohol        | 3.10 | 59  | 544548  | 569.937 | ug/l # 100 |
| 24) Methyl tert-Butyl Ether   | 3.21 | 73  | 1264372 | 112.223 | ug/l 99    |
| 25) Chloroform                | 5.23 | 83  | 727385  | 111.841 | ug/l 100   |
| 26) Cyclohexane               | 5.57 | 56  | 640091  | 132.432 | ug/l # 98  |
| 29) 1,1-Dichloropropene       | 5.81 | 75  | 529982  | 110.692 | ug/l 100   |
| 30) 2-Butanone                | 4.73 | 43  | 1782777 | 554.847 | ug/l 99    |
| 31) 2,2-Dichloropropane       | 4.59 | 77  | 445796  | 106.715 | ug/l 99    |
| 32) 1,1,1-Trichloroethane     | 5.50 | 97  | 678746  | 110.911 | ug/l 99    |
| 33) Carbon Tetrachloride      | 5.79 | 117 | 622673  | 114.162 | ug/l 97    |
| 34) Benzene                   | 6.15 | 78  | 1578660 | 104.064 | ug/l 98    |
| 35) Methacrylonitrile         | 5.08 | 41  | 397296  | 113.792 | ug/l 99    |
| 36) 1,2-Dichloroethane        | 6.21 | 62  | 620250  | 103.797 | ug/l 100   |
| 37) Trichloroethene           | 7.22 | 130 | 454497  | 102.489 | ug/l 94    |
| 38) Methylcyclohexane         | 7.46 | 83  | 625075  | 119.790 | ug/l 99    |
| 39) 1,2-Dichloropropane       | 7.52 | 63  | 421738  | 108.893 | ug/l 97    |
| 40) Dibromomethane            | 7.67 | 93  | 284998  | 104.342 | ug/l 98    |

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 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Fri May 25 01:52:03 2018  
 Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc     | Units  | Dev(Min) |
|--------------------------------|-------|------|----------|----------|--------|----------|
| 41) Bromodichloromethane       | 7.91  | 83   | 594580   | 112.882  | ug/l   | 98       |
| 42) Vinyl Acetate              | 3.84  | 43   | 5658130  | 535.242  | ug/l   | 99       |
| 43) Ethyl Acetate              | 4.88  | 43   | 701681   | 113.575  | ug/l   | 97       |
| 44) Isopropyl Acetate          | 6.48  | 43   | 1187615  | 122.567  | ug/l   | 99       |
| 45) 1,4-Dioxane                | 7.77  | 88   | 223476   | 2071.443 | ug/l # | 91       |
| 46) Methyl methacrylate        | 7.79  | 41   | 600250   | 116.918  | ug/l   | 99       |
| 47) n-amyl Acetate             | 10.90 | 43   | 1118566  | 131.717  | ug/l # | 91       |
| 48) t-1,3-Dichloropropene      | 8.45  | 75   | 677630   | 115.871  | ug/l   | 99       |
| 49) cis-1,3-Dichloropropene    | 9.05  | 75   | 658219   | 124.658  | ug/l   | 98       |
| 50) 1,1,2-Trichloroethane      | 9.22  | 97   | 416002   | 104.419  | ug/l   | 98       |
| 51) Ethyl methacrylate         | 9.19  | 69   | 720406   | 118.637  | ug/l   | 97       |
| 52) 1,3-Dichloropropane        | 9.38  | 76   | 693935   | 104.577  | ug/l   | 99       |
| 53) Dibromochloromethane       | 9.59  | 129  | 517973   | 119.763  | ug/l   | 99       |
| 54) 1,2-Dibromoethane          | 9.68  | 107  | 449184   | 106.206  | ug/l   | 100      |
| 55) 2-Chloroethyl vinyl ether  | 8.32  | 63   | 1648812  | 523.088  | ug/l   | 99       |
| 56) Bromoform                  | 10.87 | 173  | 466775   | 129.472  | ug/l   | 100      |
| 58) 4-Methyl-2-Pentanone       | 8.66  | 43   | 3636490  | 556.072  | ug/l   | 98       |
| 59) 2-Hexanone                 | 9.51  | 43   | 2838117  | 575.940  | ug/l   | 99       |
| 61) Tetrachloroethene          | 9.34  | 164  | 516782   | 101.518  | ug/l   | 99       |
| 62) Toluene                    | 8.79  | 91   | 1766539  | 104.679  | ug/l   | 99       |
| 64) Chlorobenzene              | 10.15 | 112  | 1146297  | 104.120  | ug/l   | 100      |
| 65) 1,1,1,2-Tetrachloroethane  | 10.23 | 131  | 462741   | 108.876  | ug/l   | 100      |
| 66) Ethyl Benzene              | 10.26 | 91   | 1992402  | 111.999  | ug/l   | 99       |
| 67) m/p-Xylenes                | 10.37 | 106  | 1534587  | 219.268  | ug/l   | 100      |
| 68) o-Xylene                   | 10.71 | 106  | 762163   | 109.294  | ug/l   | 99       |
| 69) Styrene                    | 10.72 | 104  | 1300600  | 113.097  | ug/l   | 99       |
| 70) Isopropylbenzene           | 11.02 | 105  | 2047339  | 113.623  | ug/l   | 100      |
| 71) 1,1,2,2-Tetrachloroethane  | 11.27 | 83   | 643237   | 107.709  | ug/l   | 100      |
| 72) 1,2,3-Trichloropropane     | 11.30 | 75   | 553148m  | 93.855   | ug/l   |          |
| 73) Bromobenzene               | 11.26 | 156  | 563940   | 105.729  | ug/l   | 97       |
| 74) n-propylbenzene            | 11.37 | 91   | 2345304  | 118.064  | ug/l   | 99       |
| 75) 2-Chlorotoluene            | 11.43 | 91   | 1417140  | 114.134  | ug/l   | 100      |
| 76) 1,3,5-Trimethylbenzene     | 11.51 | 105  | 1755262  | 115.535  | ug/l   | 99       |
| 77) t-1,4-Dichloro-2-butene    | 11.08 | 75   | 220110   | 134.843  | ug/l   | 99       |
| 78) 4-Chlorotoluene            | 11.52 | 91   | 1647209  | 116.922  | ug/l   | 99       |
| 79) tert-butylbenzene          | 12.07 | 119  | 1893442  | 118.453  | ug/l   | 99       |
| 80) 1,2,4-Trimethylbenzene     | 11.81 | 105  | 1787313  | 115.604  | ug/l   | 99       |
| 81) sec-Butylbenzene           | 11.95 | 105  | 2086313  | 118.212  | ug/l   | 99       |
| 82) p-Isopropyltoluene         | 12.07 | 119  | 1893442  | 118.453  | ug/l   | 99       |
| 83) 1,3-Dichlorobenzene        | 12.03 | 146  | 1016077  | 109.390  | ug/l   | 100      |
| 84) 1,4-Dichlorobenzene        | 12.10 | 146  | 1025735  | 110.112  | ug/l   | 100      |
| 85) n-Butylbenzene             | 12.40 | 91   | 1638282  | 127.041  | ug/l   | 99       |
| 86) Hexachloroethane           | 12.60 | 117  | 371382   | 137.268  | ug/l   | 97       |
| 87) 1,2-Dichlorobenzene        | 12.40 | 146  | 1039443  | 108.111  | ug/l   | 99       |
| 88) 1,2-Dibromo-3-Chloropropan | 13.01 | 75   | 187416   | 127.517  | ug/l   | 99       |
| 89) 1,2,4-Trichlorobenzene     | 13.65 | 180  | 766844   | 112.011  | ug/l   | 100      |
| 90) Hexachlorobutadiene        | 13.79 | 225  | 401454   | 114.381  | ug/l   | 99       |
| 91) Naphthalene                | 13.84 | 128  | 2325543  | 111.485  | ug/l   | 100      |
| 92) 1,2,3-Trichlorobenzene     | 14.02 | 180  | 780012   | 107.827  | ug/l   | 99       |

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Misc : 5.0mL/MSVOA X/WATER  
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| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

