

Data Path : Z:\VOASRV\HPCHEM1\MSVOA X\DATA\VX072720\  
 Data File : VX017621.D  
 Acq On : 27 Jul 2020 16:22  
 Operator : JC/SP  
 Sample : VSTDCCC020  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 17 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 ClientSampleID :  
 VSTDCCC020EC

Manual Integrations  
 APPROVED

MMDadoda  
 7/28/2020 10:31:04 AM

Quant Time: Jul 28 01:29:46 2020  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA X\METHOD\624X072720W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Mon Jul 27 11:38:31 2020  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 4.99  | 128  | 100066   | 30.00 | ug/l  | 0.00     |
| 28) 1,4-Difluorobenzene | 6.84  | 114  | 532535   | 30.00 | ug/l  | 0.00     |
| 57) Chlorobenzene-d5    | 10.10 | 117  | 504293   | 30.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |       |          |          |      |         |
|---------------------------|--------|-------|----------|----------|------|---------|
| 27) 1,2-Dichloroethane-d4 | 6.04   | 65    | 235818   | 30.67    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 50 - 169 | Recovery | =    | 102.23% |
| 60) 4-Bromofluorobenzene  | 11.12  | 95    | 255771   | 29.95    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 56 - 143 | Recovery | =    | 99.83%  |
| 63) Toluene-d8            | 8.70   | 98    | 629966   | 28.23    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 66 - 137 | Recovery | =    | 94.10%  |

## Target Compounds

|                               |      |     |        |         | Ovalue   |
|-------------------------------|------|-----|--------|---------|----------|
| 2) Dichlorodifluoromethane    | 1.18 | 85  | 178745 | 23.256  | ug/l 97  |
| 3) Chloromethane              | 1.32 | 50  | 153823 | 20.690  | ug/l 99  |
| 4) Vinyl Chloride             | 1.39 | 62  | 152369 | 20.591  | ug/l 100 |
| 5) Bromomethane               | 1.64 | 94  | 97782  | 21.398  | ug/l 96  |
| 6) Chloroethane               | 1.71 | 64  | 82205  | 19.714  | ug/l 96  |
| 7) Trichlorofluoromethane     | 1.92 | 101 | 222354 | 19.407  | ug/l 97  |
| 8) Diethyl Ether              | 2.17 | 74  | 64692  | 19.585  | ug/l 97  |
| 9) 1,1,2-Trichlorotrifluoroet | 2.37 | 101 | 99991  | 19.277  | ug/l 97  |
| 10) 1,1-Dichloroethene        | 2.36 | 96  | 90363  | 18.772  | ug/l 97  |
| 11) Methyl Iodide             | 2.50 | 142 | 106084 | 17.507  | ug/l 96  |
| 12) Methyl Acetate            | 2.75 | 43  | 139679 | 19.080  | ug/l 98  |
| 13) Acrolein                  | 2.28 | 56  | 98414  | 90.727  | ug/l 100 |
| 14) Acrylonitrile             | 3.12 | 53  | 302512 | 98.838  | ug/l 99  |
| 15) Acetone                   | 2.42 | 58  | 84163  | 100.667 | ug/l 95  |
| 16) Carbon Disulfide          | 2.55 | 76  | 248036 | 19.436  | ug/l 99  |
| 17) Allyl chloride            | 2.71 | 41  | 166413 | 18.185  | ug/l 97  |
| 18) Methylene Chloride        | 2.84 | 84  | 116437 | 20.615  | ug/l 98  |
| 19) trans-1,2-Dichloroethene  | 3.14 | 96  | 98726  | 19.194  | ug/l 99  |
| 20) Diisopropyl ether         | 3.83 | 45  | 359060 | 19.594  | ug/l 93  |
| 21) 1,1-Dichloroethane        | 3.67 | 63  | 198830 | 20.273  | ug/l 99  |
| 22) cis-1,2-Dichloroethene    | 4.56 | 96  | 119754 | 19.704  | ug/l 99  |
| 23) tert-Butyl Alcohol        | 3.01 | 59  | 131819 | 91.881  | ug/l 100 |
| 24) Methyl tert-Butyl Ether   | 3.17 | 73  | 365134 | 19.061  | ug/l 99  |
| 25) Chloroform                | 5.18 | 83  | 209036 | 19.188  | ug/l 93  |
| 26) Cyclohexane               | 5.56 | 56  | 171557 | 19.666  | ug/l # 6 |
| 29) 1,1-Dichloropropene       | 5.77 | 75  | 137637 | 18.179  | ug/l 98  |
| 30) 2-Butanone                | 4.64 | 43  | 441692 | 103.049 | ug/l 100 |
| 31) 2,2-Dichloropropane       | 4.56 | 77  | 173419 | 17.764  | ug/l 99  |
| 32) 1,1,1-Trichloroethane     | 5.46 | 97  | 192834 | 18.840  | ug/l 99  |
| 33) Carbon Tetrachloride      | 5.76 | 117 | 173909 | 18.383  | ug/l 98  |
| 34) Benzene                   | 6.12 | 78  | 401190 | 18.741  | ug/l 96  |
| 35) Methacrylonitrile         | 5.00 | 41  | 89848  | 18.839  | ug/l 96  |
| 36) 1,2-Dichloroethane        | 6.17 | 62  | 172126 | 18.921  | ug/l 99  |
| 37) Trichloroethene           | 7.19 | 130 | 124477 | 18.943  | ug/l 97  |
| 38) Methylcyclohexane         | 7.44 | 83  | 149689 | 15.623  | ug/l 99  |
| 39) 1,2-Dichloropropane       | 7.49 | 63  | 115833 | 19.379  | ug/l 94  |
| 40) Dibromomethane            | 7.64 | 93  | 80960  | 19.080  | ug/l 99  |

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 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA X\METHOD\624X072720W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Mon Jul 27 11:38:31 2020  
 Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc    | Units  | Dev(Min) |
|--------------------------------|-------|------|----------|---------|--------|----------|
| -----                          |       |      |          |         |        |          |
| 41) Bromodichloromethane       | 7.88  | 83   | 172094   | 18.314  | ug/l # | 96       |
| 42) Vinyl Acetate              | 3.79  | 43   | 1338599  | 94.556  | ug/l   | 100      |
| 43) Ethyl Acetate              | 4.80  | 43   | 144255   | 18.269  | ug/l # | 83       |
| 44) Isopropyl Acetate          | 6.42  | 43   | 251886   | 18.369  | ug/l   | 99       |
| 45) 1,4-Dioxane                | 7.71  | 88   | 50782    | 356.951 | ug/l # | 92       |
| 46) Methyl methacrylate        | 7.75  | 41   | 129033   | 18.525  | ug/l   | 94       |
| 47) n-amyl Acetate             | 10.88 | 43   | 233125   | 19.519  | ug/l   | 98       |
| 48) t-1,3-Dichloropropene      | 9.02  | 75   | 186533   | 18.223  | ug/l   | 99       |
| 49) cis-1,3-Dichloropropene    | 8.41  | 75   | 193376   | 17.658  | ug/l   | 97       |
| 50) 1,1,2-Trichloroethane      | 9.20  | 97   | 120356   | 19.798  | ug/l   | 97       |
| 51) Ethyl methacrylate         | 9.16  | 69   | 174575   | 19.045  | ug/l   | 97       |
| 52) 1,3-Dichloropropane        | 9.35  | 76   | 191614   | 19.334  | ug/l   | 100      |
| 53) Dibromochloromethane       | 9.57  | 129  | 145098   | 18.794  | ug/l   | 99       |
| 54) 1,2-Dibromoethane          | 9.65  | 107  | 124698   | 18.860  | ug/l   | 98       |
| 55) 2-Chloroethyl vinyl ether  | 8.29  | 63   | 441458   | 90.144  | ug/l   | 99       |
| 56) Bromoform                  | 10.84 | 173  | 115506   | 19.601  | ug/l   | 98       |
| 58) 4-Methyl-2-Pentanone       | 8.62  | 43   | 840853   | 93.422  | ug/l   | 100      |
| 59) 2-Hexanone                 | 9.48  | 43   | 632251   | 99.813  | ug/l   | 99       |
| 61) Tetrachloroethene          | 9.32  | 164  | 129050   | 18.781  | ug/l   | 96       |
| 62) Toluene                    | 8.77  | 91   | 459801   | 18.347  | ug/l   | 99       |
| 64) Chlorobenzene              | 10.12 | 112  | 316450   | 19.320  | ug/l   | 96       |
| 65) 1,1,1,2-Tetrachloroethane  | 10.21 | 131  | 128153   | 18.707  | ug/l   | 96       |
| 66) Ethyl Benzene              | 10.24 | 91   | 524113   | 18.944  | ug/l   | 96       |
| 67) m/p-Xylenes                | 10.34 | 106  | 398714   | 38.467  | ug/l   | 98       |
| 68) o-Xylene                   | 10.68 | 106  | 199599   | 19.384  | ug/l   | 98       |
| 69) Styrene                    | 10.69 | 104  | 347680   | 19.367  | ug/l   | 99       |
| 70) Isopropylbenzene           | 11.00 | 105  | 527197   | 17.529  | ug/l   | 99       |
| 71) 1,1,2,2-Tetrachloroethane  | 11.25 | 83   | 167177   | 19.943  | ug/l   | 98       |
| 72) 1,2,3-Trichloropropane     | 11.28 | 75   | 166345m  | 19.793  | ug/l   |          |
| 73) Bromobenzene               | 11.24 | 156  | 152797   | 19.235  | ug/l   | 97       |
| 74) n-propylbenzene            | 11.34 | 91   | 590601   | 17.423  | ug/l   | 100      |
| 75) 2-Chlorotoluene            | 11.40 | 91   | 371946   | 18.235  | ug/l   | 98       |
| 76) 1,3,5-Trimethylbenzene     | 11.49 | 105  | 439387   | 17.646  | ug/l   | 98       |
| 77) t-1,4-Dichloro-2-butene    | 11.06 | 75   | 65589    | 19.179  | ug/l   | 93       |
| 78) 4-Chlorotoluene            | 11.49 | 91   | 437351   | 18.395  | ug/l   | 99       |
| 79) tert-butylbenzene          | 11.76 | 119  | 409993   | 16.803  | ug/l   | 99       |
| 80) 1,2,4-Trimethylbenzene     | 11.79 | 105  | 463496   | 18.036  | ug/l   | 99       |
| 81) sec-Butylbenzene           | 11.93 | 105  | 452012   | 15.527  | ug/l   | 99       |
| 82) p-Isopropyltoluene         | 12.05 | 119  | 432077   | 15.991  | ug/l   | 99       |
| 83) 1,3-Dichlorobenzene        | 12.01 | 146  | 264449   | 18.568  | ug/l   | 99       |
| 84) 1,4-Dichlorobenzene        | 12.08 | 146  | 266497   | 18.806  | ug/l   | 99       |
| 85) n-Butylbenzene             | 12.37 | 91   | 361680   | 14.021  | ug/l   | 100      |
| 86) Hexachloroethane           | 12.58 | 117  | 81512    | 14.491  | ug/l   | 98       |
| 87) 1,2-Dichlorobenzene        | 12.38 | 146  | 254253   | 17.806  | ug/l   | 99       |
| 88) 1,2-Dibromo-3-Chloropropan | 12.98 | 75   | 43635    | 18.431  | ug/l   | 98       |
| 89) 1,2,4-Trichlorobenzene     | 13.63 | 180  | 155394   | 14.832  | ug/l   | 95       |
| 90) Hexachlorobutadiene        | 13.76 | 225  | 50917    | 10.727  | ug/l   | 97       |
| 91) Naphthalene                | 13.82 | 128  | 533957   | 17.272  | ug/l   | 99       |
| 92) 1,2,3-Trichlorobenzene     | 14.00 | 180  | 152069   | 15.211  | ug/l   | 98       |
| -----                          |       |      |          |         |        |          |

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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

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