

Data Path : Z:\VOASRV\HPCHEM1\MSVOA N\DATA\VN092518\  
 Data File : VN051485.D  
 Acq On : 25 Sep 2018 15:16  
 Operator : MD\SY  
 Sample : VN0925WBSD01  
 Misc : 5.00mL/MSVOA N/WATER  
 ALS Vial : 17 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleID :  
 VN0925WBSD01

Manual Integrations  
 APPROVED

MMDadoda  
 10/1/2018 11:21:33 AM

Quant Time: Sep 26 03:32:47 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA N\METHODS\624N092518W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Wed Sep 26 01:19:41 2018  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 7.20  | 128  | 125296   | 30.00 | ug/l  | 0.00     |
| 28) 1,4-Difluorobenzene | 8.59  | 114  | 670666   | 30.00 | ug/l  | 0.00     |
| 57) Chlorobenzene-d5    | 11.41 | 117  | 573894   | 30.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |       |          |          |      |         |
|---------------------------|--------|-------|----------|----------|------|---------|
| 27) 1,2-Dichloroethane-d4 | 8.03   | 65    | 256394   | 29.73    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 50 - 169 | Recovery | =    | 99.10%  |
| 60) 4-Bromofluorobenzene  | 12.40  | 95    | 260629   | 30.93    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 56 - 143 | Recovery | =    | 103.10% |
| 63) Toluene-d8            | 10.09  | 98    | 843452   | 30.65    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 66 - 137 | Recovery | =    | 102.17% |

## Target Compounds

|                               |      |     |        |         | Ovalue     |
|-------------------------------|------|-----|--------|---------|------------|
| 2) Dichlorodifluoromethane    | 1.85 | 85  | 97585  | 18.185  | ug/l 99    |
| 3) Chloromethane              | 2.06 | 50  | 177129 | 19.198  | ug/l 97    |
| 4) Vinyl Chloride             | 2.18 | 62  | 193426 | 19.647  | ug/l 97    |
| 5) Bromomethane               | 2.57 | 94  | 126008 | 19.583  | ug/l 85    |
| 6) Chloroethane               | 2.71 | 64  | 124825 | 20.570  | ug/l 97    |
| 7) Trichlorofluoromethane     | 3.02 | 101 | 264292 | 20.682  | ug/l 95    |
| 8) Diethyl Ether              | 3.41 | 74  | 79025  | 20.568  | ug/l 96    |
| 9) 1,1,2-Trichlorotrifluoroet | 3.76 | 101 | 137703 | 21.220  | ug/l # 43  |
| 10) 1,1-Dichloroethene        | 3.74 | 96  | 124710 | 21.098  | ug/l 96    |
| 11) Methyl Iodide             | 3.96 | 142 | 173326 | 19.885  | ug/l 96    |
| 12) Methyl Acetate            | 4.33 | 43  | 112978 | 21.746  | ug/l 91    |
| 13) Acrolein                  | 3.61 | 56  | 77136  | 111.345 | ug/l 91    |
| 14) Acrylonitrile             | 4.99 | 53  | 229190 | 108.600 | ug/l # 59  |
| 15) Acetone                   | 3.82 | 58  | 57270  | 110.184 | ug/l 97    |
| 16) Carbon Disulfide          | 4.05 | 76  | 367601 | 19.607  | ug/l 99    |
| 17) Allyl chloride            | 4.33 | 41  | 219425 | 21.029  | ug/l 97    |
| 18) Methylene Chloride        | 4.55 | 84  | 148389 | 21.021  | ug/l 93    |
| 19) trans-1,2-Dichloroethene  | 5.05 | 96  | 135939 | 21.245  | ug/l 97    |
| 20) Diisopropyl ether         | 5.96 | 45  | 473157 | 22.837  | ug/l # 84  |
| 21) 1,1-Dichloroethane        | 5.85 | 63  | 274754 | 22.015  | ug/l 96    |
| 22) cis-1,2-Dichloroethene    | 6.83 | 96  | 154336 | 21.555  | ug/l 96    |
| 23) tert-Butyl Alcohol        | 4.79 | 59  | 44327  | 111.537 | ug/l # 100 |
| 24) Methyl tert-Butyl Ether   | 5.05 | 73  | 350852 | 21.793  | ug/l # 61  |
| 25) Chloroform                | 7.37 | 83  | 269890 | 21.682  | ug/l 98    |
| 26) Cyclohexane               | 7.66 | 56  | 225818 | 21.253  | ug/l # 97  |
| 29) 1,1-Dichloropropene       | 7.79 | 75  | 199676 | 21.145  | ug/l 99    |
| 30) 2-Butanone                | 6.84 | 43  | 266934 | 109.434 | ug/l # 98  |
| 31) 2,2-Dichloropropane       | 6.83 | 77  | 221551 | 21.995  | ug/l # 80  |
| 32) 1,1,1-Trichloroethane     | 7.57 | 97  | 231234 | 21.449  | ug/l 98    |
| 33) Carbon Tetrachloride      | 7.78 | 117 | 210564 | 21.287  | ug/l 94    |
| 34) Benzene                   | 8.04 | 78  | 598189 | 21.337  | ug/l # 70  |
| 35) Methacrylonitrile         | 7.19 | 41  | 68420m | 19.465  | ug/l       |
| 36) 1,2-Dichloroethane        | 8.13 | 62  | 202230 | 22.153  | ug/l 99    |
| 37) Trichloroethene           | 8.84 | 130 | 155636 | 20.945  | ug/l 99    |
| 38) Methylcyclohexane         | 9.08 | 83  | 223357 | 20.404  | ug/l 95    |
| 39) 1,2-Dichloropropane       | 9.12 | 63  | 165184 | 21.659  | ug/l 94    |
| 40) Dibromomethane            | 9.21 | 93  | 93240  | 21.480  | ug/l 98    |

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 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Wed Sep 26 01:19:41 2018  
 Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc    | Units  | Dev(Min) |
|--------------------------------|-------|------|----------|---------|--------|----------|
| 41) Bromodichloromethane       | 9.40  | 83   | 201739   | 21.138  | ug/l   | 92       |
| 42) Vinyl Acetate              | 5.90  | 43   | 1470595  | 108.423 | ug/l   | 99       |
| 43) Ethyl Acetate              | 6.93  | 43   | 116106   | 22.877  | ug/l   | 97       |
| 44) Isopropyl Acetate          | 8.17  | 43   | 210804   | 21.596  | ug/l   | 99       |
| 45) 1,4-Dioxane                | 9.20  | 88   | 24936    | 419.908 | ug/l   | 93       |
| 46) Methyl methacrylate        | 9.20  | 41   | 100492   | 20.789  | ug/l   | 95       |
| 48) t-1,3-Dichloropropene      | 10.38 | 75   | 203180   | 21.440  | ug/l   | 95       |
| 49) cis-1,3-Dichloropropene    | 9.84  | 75   | 234592   | 21.385  | ug/l   | 96       |
| 50) 1,1,2-Trichloroethane      | 10.56 | 97   | 130839   | 21.081  | ug/l   | 95       |
| 51) Ethyl methacrylate         | 10.43 | 69   | 154942   | 21.093  | ug/l   | 100      |
| 52) 1,3-Dichloropropane        | 10.71 | 76   | 223544   | 21.349  | ug/l   | 97       |
| 53) Dibromochloromethane       | 10.90 | 129  | 150098   | 21.024  | ug/l   | 97       |
| 54) 1,2-Dibromoethane          | 11.01 | 107  | 123274   | 20.585  | ug/l   | 99       |
| 55) 2-Chloroethyl vinyl ether  | 9.70  | 63   | 394546   | 108.775 | ug/l   | 99       |
| 56) Bromoform                  | 12.13 | 173  | 97507    | 20.258  | ug/l   | 92       |
| 58) 4-Methyl-2-Pentanone       | 9.99  | 43   | 584247   | 115.841 | ug/l   | 96       |
| 59) 2-Hexanone                 | 10.75 | 43   | 375820   | 113.217 | ug/l   | 96       |
| 61) Tetrachloroethene          | 10.63 | 164  | 145384   | 21.775  | ug/l   | 96       |
| 62) Toluene                    | 10.16 | 91   | 637265   | 21.691  | ug/l   | 96       |
| 64) Chlorobenzene              | 11.43 | 112  | 390217   | 21.663  | ug/l   | 94       |
| 65) 1,1,1,2-Tetrachloroethane  | 11.51 | 131  | 151858   | 21.806  | ug/l   | 99       |
| 66) Ethyl Benzene              | 11.51 | 91   | 647652   | 21.368  | ug/l   | 98       |
| 67) m/p-Xylenes                | 11.62 | 106  | 513477   | 44.007  | ug/l   | 98       |
| 68) o-Xylene                   | 11.95 | 106  | 248256   | 22.339  | ug/l   | 92       |
| 69) Styrene                    | 11.96 | 104  | 390904   | 22.268  | ug/l   | 99       |
| 70) Isopropylbenzene           | 12.25 | 105  | 653673   | 21.978  | ug/l   | 100      |
| 71) 1,1,2,2-Tetrachloroethane  | 12.50 | 83   | 157177   | 22.450  | ug/l   | 97       |
| 72) 1,2,3-Trichloropropane     | 12.55 | 75   | 129617m  | 23.477  | ug/l   |          |
| 73) Bromobenzene               | 12.53 | 156  | 158811   | 21.187  | ug/l   | 98       |
| 74) n-propylbenzene            | 12.59 | 91   | 744706   | 21.538  | ug/l   | 99       |
| 75) 2-Chlorotoluene            | 12.67 | 91   | 447392   | 21.925  | ug/l   | 97       |
| 76) 1,3,5-Trimethylbenzene     | 12.73 | 105  | 547104   | 22.293  | ug/l   | 100      |
| 77) t-1,4-Dichloro-2-butene    | 12.30 | 75   | 39513    | 20.753  | ug/l   | 99       |
| 78) 4-Chlorotoluene            | 12.77 | 91   | 434193   | 21.454  | ug/l   | 97       |
| 79) tert-butylbenzene          | 12.99 | 119  | 467877   | 21.897  | ug/l   | 99       |
| 80) 1,2,4-Trimethylbenzene     | 13.04 | 105  | 556771   | 22.568  | ug/l   | 99       |
| 81) sec-Butylbenzene           | 13.17 | 105  | 645541   | 21.963  | ug/l   | 98       |
| 82) p-Isopropyltoluene         | 13.29 | 119  | 558941   | 22.029  | ug/l   | 97       |
| 83) 1,3-Dichlorobenzene        | 13.28 | 146  | 278272   | 21.166  | ug/l   | 95       |
| 84) 1,4-Dichlorobenzene        | 13.36 | 146  | 263594   | 21.347  | ug/l   | 97       |
| 85) n-Butylbenzene             | 13.62 | 91   | 427919   | 20.541  | ug/l   | 96       |
| 86) Hexachloroethane           | 13.88 | 117  | 108448   | 21.329  | ug/l   | 95       |
| 87) 1,2-Dichlorobenzene        | 13.65 | 146  | 276287   | 22.168  | ug/l   | 97       |
| 88) 1,2-Dibromo-3-Chloropropan | 14.27 | 75   | 22928    | 22.189  | ug/l # | 93       |
| 89) 1,2,4-Trichlorobenzene     | 14.91 | 180  | 123350   | 19.869  | ug/l   | 97       |
| 90) Hexachlorobutadiene        | 15.01 | 225  | 102818   | 21.370  | ug/l   | 95       |
| 91) Naphthalene                | 15.13 | 128  | 209642   | 17.896  | ug/l   | 98       |
| 92) 1,2,3-Trichlorobenzene     | 15.32 | 180  | 123198   | 19.658  | ug/l   | 92       |

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

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