

Data Path : Z:\VOASRV\HPCHEM1\MSVOA N\DATA\VN060819\  
 Data File : VN056088.D  
 Acq On : 7 Jun 2019 10:10  
 Operator : JC/SP  
 Sample : VN0608WBS01  
 Misc : 5.00mL/MSVOA N/WATER  
 ALS Vial : 5 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 VN0608WBS01

Manual Integrations  
 APPROVED

MMDadoda  
 6/10/2019 3:31:17 PM

Quant Time: Jun 08 05:20:39 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA N\METHODS\624N060619W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Thu Jun 06 04:02:53 2019  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 7.19  | 128  | 51825    | 30.00 | ug/l  | 0.00     |
| 28) 1,4-Difluorobenzene | 8.58  | 114  | 277448   | 30.00 | ug/l  | 0.00     |
| 57) Chlorobenzene-d5    | 11.41 | 117  | 239972   | 30.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |       |          |          |      |         |
|---------------------------|--------|-------|----------|----------|------|---------|
| 27) 1,2-Dichloroethane-d4 | 8.03   | 65    | 97526    | 30.30    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 50 - 169 | Recovery | =    | 101.00% |
| 60) 4-Bromofluorobenzene  | 12.40  | 95    | 104002   | 29.24    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 56 - 143 | Recovery | =    | 97.47%  |
| 63) Toluene-d8            | 10.09  | 98    | 333753   | 30.66    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 66 - 137 | Recovery | =    | 102.20% |

## Target Compounds

|                               |      |     |        |         | Ovalue     |
|-------------------------------|------|-----|--------|---------|------------|
| 2) Dichlorodifluoromethane    | 1.85 | 85  | 62107  | 21.307  | ug/l 97    |
| 3) Chloromethane              | 2.06 | 50  | 71279  | 20.930  | ug/l 98    |
| 4) Vinyl Chloride             | 2.18 | 62  | 71086  | 20.472  | ug/l 97    |
| 5) Bromomethane               | 2.54 | 94  | 48863  | 22.391  | ug/l 99    |
| 6) Chloroethane               | 2.69 | 64  | 41305  | 21.031  | ug/l 97    |
| 7) Trichlorofluoromethane     | 3.01 | 101 | 86739  | 20.190  | ug/l 96    |
| 8) Diethyl Ether              | 3.40 | 74  | 36069  | 19.795  | ug/l 97    |
| 9) 1,1,2-Trichlorotrifluoroet | 3.74 | 101 | 54324  | 20.484  | ug/l 99    |
| 10) 1,1-Dichloroethene        | 3.72 | 96  | 54242  | 20.051  | ug/l 99    |
| 11) Methyl Iodide             | 3.94 | 142 | 72575  | 17.004  | ug/l 98    |
| 12) Methyl Acetate            | 4.33 | 43  | 63277  | 19.465  | ug/l 98    |
| 13) Acrolein                  | 3.60 | 56  | 18157  | 114.593 | ug/l 98    |
| 14) Acrylonitrile             | 4.99 | 53  | 144747 | 99.845  | ug/l 99    |
| 15) Acetone                   | 3.82 | 58  | 49325  | 103.913 | ug/l 99    |
| 16) Carbon Disulfide          | 4.04 | 76  | 115933 | 18.011  | ug/l 100   |
| 17) Allyl chloride            | 4.31 | 41  | 82171  | 19.604  | ug/l 98    |
| 18) Methylene Chloride        | 4.54 | 84  | 64155  | 20.485  | ug/l 98    |
| 19) trans-1,2-Dichloroethene  | 5.03 | 96  | 57612  | 19.951  | ug/l 98    |
| 20) Diisopropyl ether         | 5.96 | 45  | 176839 | 20.363  | ug/l 97    |
| 21) 1,1-Dichloroethane        | 5.84 | 63  | 102511 | 20.312  | ug/l 98    |
| 22) cis-1,2-Dichloroethene    | 6.82 | 96  | 68055  | 20.192  | ug/l 98    |
| 23) tert-Butyl Alcohol        | 4.81 | 59  | 48437  | 85.838  | ug/l # 100 |
| 24) Methyl tert-Butyl Ether   | 5.05 | 73  | 170562 | 19.783  | ug/l 100   |
| 25) Chloroform                | 7.37 | 83  | 104302 | 20.697  | ug/l 98    |
| 26) Cyclohexane               | 7.65 | 56  | 94502  | 20.183  | ug/l # 99  |
| 29) 1,1-Dichloropropene       | 7.79 | 75  | 77859  | 20.746  | ug/l 98    |
| 30) 2-Butanone                | 6.84 | 43  | 202223 | 102.353 | ug/l 99    |
| 31) 2,2-Dichloropropane       | 6.82 | 77  | 71153  | 20.380  | ug/l 97    |
| 32) 1,1,1-Trichloroethane     | 7.57 | 97  | 82115  | 19.804  | ug/l 99    |
| 33) Carbon Tetrachloride      | 7.77 | 117 | 67344  | 19.170  | ug/l 98    |
| 34) Benzene                   | 8.04 | 78  | 245721 | 20.549  | ug/l 100   |
| 35) Methacrylonitrile         | 7.17 | 41  | 34975  | 20.963  | ug/l 93    |
| 36) 1,2-Dichloroethane        | 8.12 | 62  | 77427  | 20.672  | ug/l 98    |
| 37) Trichloroethene           | 8.83 | 130 | 67928  | 20.301  | ug/l 100   |
| 38) Methylcyclohexane         | 9.08 | 83  | 95301  | 20.030  | ug/l 99    |
| 39) 1,2-Dichloropropane       | 9.12 | 63  | 62683  | 20.468  | ug/l 96    |
| 40) Dibromomethane            | 9.21 | 93  | 41632  | 20.502  | ug/l 97    |

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 6/10/2019 3:31:17 PM

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 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA N\METHODS\624N060619W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Thu Jun 06 04:02:53 2019  
 Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc    | Units | Dev(Min) |
|--------------------------------|-------|------|----------|---------|-------|----------|
| 41) Bromodichloromethane       | 9.40  | 83   | 69945    | 19.236  | ug/l  | 99       |
| 42) Vinyl Acetate              | 5.90  | 43   | 709144   | 100.676 | ug/l  | 99       |
| 43) Ethyl Acetate              | 6.93  | 43   | 80222    | 21.216  | ug/l  | 93       |
| 44) Isopropyl Acetate          | 8.17  | 43   | 113504   | 19.333  | ug/l  | 100      |
| 45) 1,4-Dioxane                | 9.20  | 88   | 24297    | 386.869 | ug/l  | 92       |
| 46) Methyl methacrylate        | 9.20  | 41   | 55807    | 19.134  | ug/l  | 97       |
| 47) n-amyl Acetate             | 12.07 | 43   | 89880    | 18.512  | ug/l  | 96       |
| 48) t-1,3-Dichloropropene      | 10.38 | 75   | 70436    | 18.407  | ug/l  | 98       |
| 49) cis-1,3-Dichloropropene    | 9.84  | 75   | 85029    | 18.976  | ug/l  | 100      |
| 50) 1,1,2-Trichloroethane      | 10.56 | 97   | 60437    | 20.038  | ug/l  | 97       |
| 51) Ethyl methacrylate         | 10.43 | 69   | 87186    | 19.107  | ug/l  | 98       |
| 52) 1,3-Dichloropropane        | 10.71 | 76   | 99811    | 20.413  | ug/l  | 99       |
| 53) Dibromochloromethane       | 10.90 | 129  | 53910    | 18.260  | ug/l  | 99       |
| 54) 1,2-Dibromoethane          | 11.00 | 107  | 62626    | 19.899  | ug/l  | 98       |
| 55) 2-Chloroethyl vinyl ether  | 9.69  | 63   | 146302   | 91.539  | ug/l  | 99       |
| 56) Bromoform                  | 12.13 | 173  | 36119    | 16.911  | ug/l  | 98       |
| 58) 4-Methyl-2-Pentanone       | 9.99  | 43   | 372055   | 102.388 | ug/l  | 99       |
| 59) 2-Hexanone                 | 10.75 | 43   | 261143   | 100.547 | ug/l  | 99       |
| 61) Tetrachloroethene          | 10.63 | 164  | 68454    | 20.468  | ug/l  | 97       |
| 62) Toluene                    | 10.16 | 91   | 266231   | 20.551  | ug/l  | 99       |
| 64) Chlorobenzene              | 11.43 | 112  | 162619   | 20.695  | ug/l  | 99       |
| 65) 1,1,1,2-Tetrachloroethane  | 11.51 | 131  | 55499    | 19.587  | ug/l  | 100      |
| 66) Ethyl Benzene              | 11.51 | 91   | 279419   | 20.251  | ug/l  | 99       |
| 67) m/p-Xylenes                | 11.62 | 106  | 211434   | 40.034  | ug/l  | 98       |
| 68) o-Xylene                   | 11.95 | 106  | 104413   | 20.194  | ug/l  | 98       |
| 69) Styrene                    | 11.96 | 104  | 165517   | 19.703  | ug/l  | 100      |
| 70) Isopropylbenzene           | 12.25 | 105  | 277695   | 20.556  | ug/l  | 99       |
| 71) 1,1,2,2-Tetrachloroethane  | 12.50 | 83   | 82573    | 20.274  | ug/l  | 99       |
| 72) 1,2,3-Trichloropropane     | 12.55 | 75   | 69625m   | 19.747  | ug/l  |          |
| 73) Bromobenzene               | 12.53 | 156  | 71130    | 19.837  | ug/l  | 98       |
| 74) n-propylbenzene            | 12.59 | 91   | 284740   | 19.973  | ug/l  | 99       |
| 75) 2-Chlorotoluene            | 12.67 | 91   | 178887   | 20.230  | ug/l  | 99       |
| 76) 1,3,5-Trimethylbenzene     | 12.73 | 105  | 226298   | 20.365  | ug/l  | 99       |
| 77) t-1,4-Dichloro-2-butene    | 12.30 | 75   | 15682    | 15.588  | ug/l  | 85       |
| 78) 4-Chlorotoluene            | 12.77 | 91   | 160391   | 19.422  | ug/l  | 99       |
| 79) tert-butylbenzene          | 12.99 | 119  | 196506   | 19.960  | ug/l  | 98       |
| 80) 1,2,4-Trimethylbenzene     | 13.04 | 105  | 215679   | 19.953  | ug/l  | 99       |
| 81) sec-Butylbenzene           | 13.17 | 105  | 251107   | 20.163  | ug/l  | 100      |
| 82) p-Isopropyltoluene         | 13.29 | 119  | 220311   | 19.566  | ug/l  | 100      |
| 83) 1,3-Dichlorobenzene        | 13.28 | 146  | 105868   | 18.946  | ug/l  | 99       |
| 84) 1,4-Dichlorobenzene        | 13.36 | 146  | 96729    | 18.173  | ug/l  | 100      |
| 85) n-Butylbenzene             | 13.61 | 91   | 149348   | 17.772  | ug/l  | 100      |
| 86) Hexachloroethane           | 13.87 | 117  | 31780    | 18.104  | ug/l  | 99       |
| 87) 1,2-Dichlorobenzene        | 13.65 | 146  | 107435   | 18.915  | ug/l  | 100      |
| 88) 1,2-Dibromo-3-Chloropropan | 14.27 | 75   | 10604    | 16.586  | ug/l  | 98       |
| 89) 1,2,4-Trichlorobenzene     | 14.91 | 180  | 40120    | 18.625  | ug/l  | 97       |
| 90) Hexachlorobutadiene        | 15.01 | 225  | 40302    | 19.436  | ug/l  | 99       |
| 91) Naphthalene                | 15.13 | 128  | 109833   | 14.560  | ug/l  | 99       |
| 92) 1,2,3-Trichlorobenzene     | 15.31 | 180  | 48279    | 16.238  | ug/l  | 99       |

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QLast Update : Thu Jun 06 04:02:53 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

