

Data Path : Z:\VOASRV\HPCHEM1\MSVOA N\DATA\VN092818\  
 Data File : VN051611.D  
 Acq On : 28 Sep 2018 9:53  
 Operator : MD\SY  
 Sample : VSTDICC150  
 Misc : 5.00mL/MSVOA N/WATER  
 ALS Vial : 6 Sample Multiplier: 28

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 VSTDICC150

Manual Integrations  
 APPROVED

MMDadoda  
 10/3/2018 5:27:37 PM

Quant Time: Sep 29 00:59:04 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA N\METHODS\624N092818W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Sat Sep 29 00:34:08 2018  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 7.20  | 128  | 111956   | 30.00 | ug/l  | 0.00     |
| 28) 1,4-Difluorobenzene | 8.59  | 114  | 618614   | 30.00 | ug/l  | 0.00     |
| 57) Chlorobenzene-d5    | 11.41 | 117  | 560653   | 30.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |       |          |          |      |         |
|---------------------------|--------|-------|----------|----------|------|---------|
| 27) 1,2-Dichloroethane-d4 | 8.03   | 65    | 230579   | 29.58    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 50 - 169 | Recovery | =    | 98.60%  |
| 60) 4-Bromofluorobenzene  | 12.40  | 95    | 276681   | 32.09    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 56 - 143 | Recovery | =    | 106.97% |
| 63) Toluene-d8            | 10.09  | 98    | 767802   | 29.02    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 66 - 137 | Recovery | =    | 96.73%  |

## Target Compounds

|                               |      |     |         |         | Ovalue     |
|-------------------------------|------|-----|---------|---------|------------|
| 2) Dichlorodifluoromethane    | 1.85 | 85  | 1532543 | 155.981 | ug/l 99    |
| 3) Chloromethane              | 2.06 | 50  | 1677990 | 152.616 | ug/l 100   |
| 4) Vinyl Chloride             | 2.18 | 62  | 1627410 | 150.882 | ug/l 98    |
| 5) Bromomethane               | 2.55 | 94  | 880994  | 157.248 | ug/l 99    |
| 6) Chloroethane               | 2.70 | 64  | 793671  | 146.680 | ug/l 98    |
| 7) Trichlorofluoromethane     | 3.01 | 101 | 1999415 | 151.721 | ug/l 99    |
| 8) Diethyl Ether              | 3.41 | 74  | 646936  | 156.294 | ug/l 97    |
| 9) 1,1,2-Trichlorotrifluoroet | 3.76 | 101 | 1102324 | 147.981 | ug/l 97    |
| 10) 1,1-Dichloroethene        | 3.73 | 96  | 1031675 | 152.612 | ug/l 98    |
| 11) Methyl Iodide             | 3.95 | 142 | 1563153 | 179.635 | ug/l 99    |
| 12) Methyl Acetate            | 4.33 | 43  | 860810  | 144.284 | ug/l 95    |
| 13) Acrolein                  | 3.61 | 56  | 536991  | 814.685 | ug/l 98    |
| 14) Acrylonitrile             | 4.99 | 53  | 1904759 | 797.199 | ug/l 99    |
| 15) Acetone                   | 3.82 | 58  | 449423  | 717.397 | ug/l 94    |
| 16) Carbon Disulfide          | 4.05 | 76  | 3285258 | 150.809 | ug/l 99    |
| 17) Allyl chloride            | 4.32 | 41  | 1931057 | 159.686 | ug/l 99    |
| 18) Methylene Chloride        | 4.55 | 84  | 1135931 | 146.159 | ug/l 98    |
| 19) trans-1,2-Dichloroethene  | 5.04 | 96  | 1088085 | 151.628 | ug/l 98    |
| 20) Diisopropyl ether         | 5.95 | 45  | 3729339 | 155.456 | ug/l 97    |
| 21) 1,1-Dichloroethane        | 5.85 | 63  | 2110274 | 148.421 | ug/l 100   |
| 22) cis-1,2-Dichloroethene    | 6.83 | 96  | 1221393 | 155.848 | ug/l 99    |
| 23) tert-Butyl Alcohol        | 4.79 | 59  | 360733  | 792.254 | ug/l # 100 |
| 24) Methyl tert-Butyl Ether   | 5.05 | 73  | 2872593 | 161.685 | ug/l 99    |
| 25) Chloroform                | 7.37 | 83  | 2024640 | 148.930 | ug/l 100   |
| 26) Cyclohexane               | 7.65 | 56  | 2042526 | 166.006 | ug/l # 99  |
| 29) 1,1-Dichloropropene       | 7.79 | 75  | 1651253 | 156.538 | ug/l 99    |
| 30) 2-Butanone                | 6.84 | 43  | 2189735 | 762.719 | ug/l 100   |
| 31) 2,2-Dichloropropane       | 6.83 | 77  | 1704218 | 149.692 | ug/l 99    |
| 32) 1,1,1-Trichloroethane     | 7.57 | 97  | 1766988 | 149.085 | ug/l 99    |
| 33) Carbon Tetrachloride      | 7.78 | 117 | 1618337 | 151.921 | ug/l 99    |
| 34) Benzene                   | 8.04 | 78  | 4715192 | 150.665 | ug/l # 91  |
| 35) Methacrylonitrile         | 7.18 | 41  | 578216  | 173.751 | ug/l 97    |
| 36) 1,2-Dichloroethane        | 8.13 | 62  | 1478697 | 148.232 | ug/l 99    |
| 37) Trichloroethene           | 8.84 | 130 | 1214838 | 151.193 | ug/l 99    |
| 38) Methylcyclohexane         | 9.08 | 83  | 2034239 | 167.122 | ug/l 96    |
| 39) 1,2-Dichloropropane       | 9.12 | 63  | 1287911 | 150.186 | ug/l 99    |
| 40) Dibromomethane            | 9.21 | 93  | 715248  | 150.147 | ug/l 98    |

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| Internal Standards             | R.T.  | QIon | Response | Conc     | Units | Dev(Min) |
|--------------------------------|-------|------|----------|----------|-------|----------|
| 41) Bromodichloromethane       | 9.40  | 83   | 1575075  | 151.475  | ug/l  | 100      |
| 42) Vinyl Acetate              | 5.90  | 43   | 12995453 | 813.077  | ug/l  | 99       |
| 43) Ethyl Acetate              | 6.93  | 43   | 970925   | 159.773  | ug/l  | 100      |
| 44) Isopropyl Acetate          | 8.17  | 43   | 1823073  | 153.216  | ug/l  | 98       |
| 45) 1,4-Dioxane                | 9.20  | 88   | 212696   | 3308.894 | ug/l  | 98       |
| 46) Methyl methacrylate        | 9.20  | 41   | 924864   | 167.089  | ug/l  | 96       |
| 47) n-amyl Acetate             | 12.07 | 43   | 1695006  | 190.390  | ug/l  | 96       |
| 48) t-1,3-Dichloropropene      | 10.38 | 75   | 1707750  | 164.551  | ug/l  | 98       |
| 49) cis-1,3-Dichloropropene    | 9.84  | 75   | 1948789  | 160.611  | ug/l  | 100      |
| 50) 1,1,2-Trichloroethane      | 10.56 | 97   | 995313   | 147.849  | ug/l  | 99       |
| 51) Ethyl methacrylate         | 10.43 | 69   | 1420329  | 173.893  | ug/l  | 98       |
| 52) 1,3-Dichloropropane        | 10.71 | 76   | 1767052  | 153.090  | ug/l  | 99       |
| 53) Dibromochloromethane       | 10.90 | 129  | 1191608  | 155.415  | ug/l  | 100      |
| 54) 1,2-Dibromoethane          | 11.01 | 107  | 1020754  | 158.022  | ug/l  | 98       |
| 55) 2-Chloroethyl vinyl ether  | 9.70  | 63   | 3460310  | 857.109  | ug/l  | 100      |
| 56) Bromoform                  | 12.13 | 173  | 825654   | 162.288  | ug/l  | 99       |
| 58) 4-Methyl-2-Pentanone       | 9.99  | 43   | 4903262  | 770.293  | ug/l  | 100      |
| 59) 2-Hexanone                 | 10.75 | 43   | 3348911  | 799.713  | ug/l  | 97       |
| 61) Tetrachloroethene          | 10.63 | 164  | 1123869  | 141.586  | ug/l  | 99       |
| 62) Toluene                    | 10.16 | 91   | 5087703  | 147.995  | ug/l  | 99       |
| 64) Chlorobenzene              | 11.43 | 112  | 3170493  | 152.534  | ug/l  | 99       |
| 65) 1,1,1,2-Tetrachloroethane  | 11.51 | 131  | 1186067  | 149.437  | ug/l  | 98       |
| 66) Ethyl Benzene              | 11.51 | 91   | 5670569  | 161.169  | ug/l  | 100      |
| 67) m/p-Xylenes                | 11.62 | 106  | 4336528  | 319.802  | ug/l  | 100      |
| 68) o-Xylene                   | 11.95 | 106  | 2089036  | 161.387  | ug/l  | 96       |
| 69) Styrene                    | 11.96 | 104  | 3400897  | 167.389  | ug/l  | 99       |
| 70) Isopropylbenzene           | 12.25 | 105  | 5584261  | 161.728  | ug/l  | 100      |
| 71) 1,1,2,2-Tetrachloroethane  | 12.50 | 83   | 1247905  | 149.381  | ug/l  | 100      |
| 72) 1,2,3-Trichloropropane     | 12.55 | 75   | 972879m  | 141.347  | ug/l  |          |
| 73) Bromobenzene               | 12.53 | 156  | 1374175  | 159.923  | ug/l  | 98       |
| 74) n-propylbenzene            | 12.59 | 91   | 6620401  | 164.702  | ug/l  | 100      |
| 75) 2-Chlorotoluene            | 12.67 | 91   | 3800750  | 158.345  | ug/l  | 100      |
| 76) 1,3,5-Trimethylbenzene     | 12.73 | 105  | 4651890  | 161.234  | ug/l  | 99       |
| 77) t-1,4-Dichloro-2-butene    | 12.30 | 75   | 409754   | 181.143  | ug/l  | 94       |
| 78) 4-Chlorotoluene            | 12.77 | 91   | 3914942  | 165.118  | ug/l  | 99       |
| 79) tert-butylbenzene          | 12.99 | 119  | 4099448  | 164.003  | ug/l  | 98       |
| 80) 1,2,4-Trimethylbenzene     | 13.04 | 105  | 4743538  | 164.606  | ug/l  | 100      |
| 81) sec-Butylbenzene           | 13.17 | 105  | 5672678  | 164.290  | ug/l  | 100      |
| 82) p-Isopropyltoluene         | 13.29 | 119  | 5009544  | 169.752  | ug/l  | 100      |
| 83) 1,3-Dichlorobenzene        | 13.28 | 146  | 2491472  | 166.399  | ug/l  | 99       |
| 84) 1,4-Dichlorobenzene        | 13.36 | 146  | 2406030  | 170.949  | ug/l  | 100      |
| 85) n-Butylbenzene             | 13.62 | 91   | 4438364  | 183.230  | ug/l  | 98       |
| 86) Hexachloroethane           | 13.88 | 117  | 925522   | 156.801  | ug/l  | 97       |
| 87) 1,2-Dichlorobenzene        | 13.65 | 146  | 2346175  | 160.180  | ug/l  | 100      |
| 88) 1,2-Dibromo-3-Chloropropan | 14.27 | 75   | 198770   | 163.252  | ug/l  | 94       |
| 89) 1,2,4-Trichlorobenzene     | 14.91 | 180  | 1469409  | 214.339  | ug/l  | 98       |
| 90) Hexachlorobutadiene        | 15.01 | 225  | 837595   | 149.865  | ug/l  | 98       |
| 91) Naphthalene                | 15.13 | 128  | 2965274  | 230.321  | ug/l  | 98       |
| 92) 1,2,3-Trichlorobenzene     | 15.31 | 180  | 1374529  | 199.356  | ug/l  | 99       |

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

