

Data Path : Z:\VOASRV\HPCHEM1\MSVOA N\DATA\VN061020\  
 Data File : VN061734.D  
 Acq On : 10 Jun 2020 13:38  
 Operator : JC/MD  
 Sample : VSTDICV020  
 Misc : 5.00mL/MSVOA N/WATER  
 ALS Vial : 8 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 ICVVN061020

Manual Integrations  
 APPROVED

MMDadoda  
 6/11/2020 12:44:37 PM

Quant Time: Jun 11 03:07:53 2020  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA N\METHODS\624N061020W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Wed Jun 10 12:28:45 2020  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 7.15  | 128  | 77948    | 30.00 | ug/l  | 0.00     |
| 28) 1,4-Difluorobenzene | 8.54  | 114  | 422205   | 30.00 | ug/l  | 0.00     |
| 57) Chlorobenzene-d5    | 11.38 | 117  | 385321   | 30.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |       |          |          |      |         |
|---------------------------|--------|-------|----------|----------|------|---------|
| 27) 1,2-Dichloroethane-d4 | 7.98   | 65    | 141674   | 29.14    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 50 - 169 | Recovery | =    | 97.13%  |
| 60) 4-Bromofluorobenzene  | 12.37  | 95    | 169466   | 29.85    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 56 - 143 | Recovery | =    | 99.50%  |
| 63) Toluene-d8            | 10.06  | 98    | 492803   | 30.11    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 66 - 137 | Recovery | =    | 100.37% |

## Target Compounds

|                               |      |     |        |         | Ovalue     |
|-------------------------------|------|-----|--------|---------|------------|
| 2) Dichlorodifluoromethane    | 1.83 | 85  | 63248  | 19.631  | ug/l 97    |
| 3) Chloromethane              | 2.03 | 50  | 79340  | 20.598  | ug/l 98    |
| 4) Vinyl Chloride             | 2.16 | 62  | 103847 | 19.319  | ug/l 100   |
| 5) Bromomethane               | 2.54 | 94  | 68410  | 19.420  | ug/l 99    |
| 6) Chloroethane               | 2.67 | 64  | 70450  | 18.748  | ug/l 98    |
| 7) Trichlorofluoromethane     | 2.98 | 101 | 148203 | 19.052  | ug/l 99    |
| 8) Diethyl Ether              | 3.37 | 74  | 46391  | 19.119  | ug/l 98    |
| 9) 1,1,2-Trichlorotrifluoroet | 3.71 | 101 | 76996  | 19.353  | ug/l 100   |
| 10) 1,1-Dichloroethene        | 3.69 | 96  | 74733  | 19.065  | ug/l 97    |
| 11) Methyl Iodide             | 3.91 | 142 | 106138 | 19.869  | ug/l 98    |
| 12) Methyl Acetate            | 4.28 | 43  | 58215  | 18.664  | ug/l 97    |
| 13) Acrolein                  | 3.56 | 56  | 41350  | 99.074  | ug/l 100   |
| 14) Acrylonitrile             | 4.92 | 53  | 144238 | 89.600  | ug/l # 91  |
| 15) Acetone                   | 3.77 | 58  | 49392  | 102.604 | ug/l 95    |
| 16) Carbon Disulfide          | 4.00 | 76  | 177699 | 21.888  | ug/l 99    |
| 17) Allyl chloride            | 4.27 | 41  | 83244  | 18.643  | ug/l 97    |
| 18) Methylene Chloride        | 4.50 | 84  | 82500  | 18.341  | ug/l 98    |
| 19) trans-1,2-Dichloroethene  | 4.98 | 96  | 83772  | 19.219  | ug/l 99    |
| 20) Diisopropyl ether         | 5.90 | 45  | 199530 | 18.705  | ug/l 98    |
| 21) 1,1-Dichloroethane        | 5.79 | 63  | 128877 | 18.171  | ug/l 99    |
| 22) cis-1,2-Dichloroethene    | 6.78 | 96  | 93936  | 18.374  | ug/l 99    |
| 23) tert-Butyl Alcohol        | 4.73 | 59  | 60444  | 97.096  | ug/l # 100 |
| 24) Methyl tert-Butyl Ether   | 4.99 | 73  | 227933 | 18.241  | ug/l # 91  |
| 25) Chloroform                | 7.32 | 83  | 147573 | 18.366  | ug/l 99    |
| 26) Cyclohexane               | 7.61 | 56  | 106231 | 19.615  | ug/l # 100 |
| 29) 1,1-Dichloropropene       | 7.75 | 75  | 107383 | 18.928  | ug/l 99    |
| 30) 2-Butanone                | 6.78 | 43  | 183333 | 93.287  | ug/l 100   |
| 31) 2,2-Dichloropropane       | 6.77 | 77  | 122321 | 18.416  | ug/l 100   |
| 32) 1,1,1-Trichloroethane     | 7.52 | 97  | 133663 | 18.451  | ug/l 98    |
| 33) Carbon Tetrachloride      | 7.73 | 117 | 107421 | 18.212  | ug/l 97    |
| 34) Benzene                   | 8.00 | 78  | 329253 | 18.617  | ug/l 98    |
| 35) Methacrylonitrile         | 7.12 | 41  | 30560  | 16.744  | ug/l # 77  |
| 36) 1,2-Dichloroethane        | 8.08 | 62  | 101202 | 17.706  | ug/l 99    |
| 37) Trichloroethene           | 8.80 | 130 | 100451 | 18.210  | ug/l 97    |
| 38) Methylcyclohexane         | 9.04 | 83  | 123682 | 19.477  | ug/l 100   |
| 39) 1,2-Dichloropropane       | 9.08 | 63  | 77409  | 18.274  | ug/l 96    |
| 40) Dibromomethane            | 9.17 | 93  | 58047  | 18.270  | ug/l 99    |

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| Internal Standards             | R.T.  | QIon | Response | Conc    | Units | Dev(Min) |
|--------------------------------|-------|------|----------|---------|-------|----------|
| 41) Bromodichloromethane       | 9.37  | 83   | 116989   | 18.151  | ug/l  | 99       |
| 42) Vinyl Acetate              | 5.84  | 43   | 760948   | 93.865  | ug/l  | 100      |
| 43) Ethyl Acetate              | 6.87  | 43   | 69211    | 17.343  | ug/l  | 97       |
| 44) Isopropyl Acetate          | 8.12  | 43   | 128484   | 17.794  | ug/l  | 98       |
| 45) 1,4-Dioxane                | 9.16  | 88   | 29345    | 397.655 | ug/l  | 98       |
| 46) Methyl methacrylate        | 9.16  | 41   | 54618    | 17.436  | ug/l  | 98       |
| 47) n-amyl Acetate             | 12.04 | 43   | 105338   | 17.216  | ug/l  | 99       |
| 48) t-1,3-Dichloropropene      | 10.35 | 75   | 121260   | 18.040  | ug/l  | 100      |
| 49) cis-1,3-Dichloropropene    | 9.81  | 75   | 132950   | 18.093  | ug/l  | 96       |
| 50) 1,1,2-Trichloroethane      | 10.53 | 97   | 83128    | 18.005  | ug/l  | 98       |
| 51) Ethyl methacrylate         | 10.40 | 69   | 107749   | 17.962  | ug/l  | 98       |
| 52) 1,3-Dichloropropane        | 10.68 | 76   | 134063   | 18.232  | ug/l  | 100      |
| 53) Dibromochloromethane       | 10.87 | 129  | 95554    | 17.564  | ug/l  | 99       |
| 54) 1,2-Dibromoethane          | 10.98 | 107  | 87895    | 18.172  | ug/l  | 99       |
| 55) 2-Chloroethyl vinyl ether  | 9.66  | 63   | 207063   | 90.816  | ug/l  | 100      |
| 56) Bromoform                  | 12.10 | 173  | 65534    | 17.252  | ug/l  | 100      |
| 58) 4-Methyl-2-Pentanone       | 9.95  | 43   | 371926   | 93.331  | ug/l  | 99       |
| 59) 2-Hexanone                 | 10.72 | 43   | 273215   | 94.546  | ug/l  | 99       |
| 61) Tetrachloroethene          | 10.60 | 164  | 108285   | 18.403  | ug/l  | 91       |
| 62) Toluene                    | 10.12 | 91   | 368338   | 19.040  | ug/l  | 98       |
| 64) Chlorobenzene              | 11.40 | 112  | 233331   | 18.744  | ug/l  | 97       |
| 65) 1,1,1,2-Tetrachloroethane  | 11.48 | 131  | 89160    | 18.790  | ug/l  | 99       |
| 66) Ethyl Benzene              | 11.48 | 91   | 401127   | 18.941  | ug/l  | 99       |
| 67) m/p-Xylenes                | 11.59 | 106  | 316014   | 37.513  | ug/l  | 100      |
| 68) o-Xylene                   | 11.92 | 106  | 150451   | 18.909  | ug/l  | 100      |
| 69) Styrene                    | 11.94 | 104  | 245454   | 18.211  | ug/l  | 100      |
| 70) Isopropylbenzene           | 12.22 | 105  | 399789   | 19.024  | ug/l  | 100      |
| 71) 1,1,2,2-Tetrachloroethane  | 12.48 | 83   | 102178   | 18.303  | ug/l  | 99       |
| 72) 1,2,3-Trichloropropane     | 12.53 | 75   | 93927m   | 17.848  | ug/l  |          |
| 73) Bromobenzene               | 12.50 | 156  | 107510   | 18.936  | ug/l  | 96       |
| 74) n-propylbenzene            | 12.56 | 91   | 448547   | 18.882  | ug/l  | 100      |
| 75) 2-Chlorotoluene            | 12.65 | 91   | 264420   | 18.886  | ug/l  | 100      |
| 76) 1,3,5-Trimethylbenzene     | 12.71 | 105  | 331634   | 18.929  | ug/l  | 99       |
| 77) t-1,4-Dichloro-2-butene    | 12.27 | 75   | 34728    | 18.293  | ug/l  | 98       |
| 78) 4-Chlorotoluene            | 12.75 | 91   | 270511   | 18.543  | ug/l  | 100      |
| 79) tert-butylbenzene          | 12.97 | 119  | 283976   | 18.743  | ug/l  | 98       |
| 80) 1,2,4-Trimethylbenzene     | 13.01 | 105  | 328938   | 18.665  | ug/l  | 100      |
| 81) sec-Butylbenzene           | 13.15 | 105  | 370016   | 18.899  | ug/l  | 100      |
| 82) p-Isopropyltoluene         | 13.27 | 119  | 337868   | 18.589  | ug/l  | 100      |
| 83) 1,3-Dichlorobenzene        | 13.26 | 146  | 183513   | 18.110  | ug/l  | 99       |
| 84) 1,4-Dichlorobenzene        | 13.34 | 146  | 180903   | 18.170  | ug/l  | 100      |
| 85) n-Butylbenzene             | 13.59 | 91   | 276907   | 18.445  | ug/l  | 99       |
| 86) Hexachloroethane           | 13.85 | 117  | 46894    | 18.950  | ug/l  | 100      |
| 87) 1,2-Dichlorobenzene        | 13.63 | 146  | 177744   | 18.465  | ug/l  | 100      |
| 88) 1,2-Dibromo-3-Chloropropan | 14.25 | 75   | 17949    | 17.308  | ug/l  | 98       |
| 89) 1,2,4-Trichlorobenzene     | 14.88 | 180  | 102519   | 18.162  | ug/l  | 99       |
| 90) Hexachlorobutadiene        | 14.98 | 225  | 46392    | 18.956  | ug/l  | 97       |
| 91) Naphthalene                | 15.10 | 128  | 278262   | 17.764  | ug/l  | 100      |
| 92) 1,2,3-Trichlorobenzene     | 15.28 | 180  | 99823    | 18.054  | ug/l  | 99       |

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

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