

Data Path : Z:\VOASRV\HPCHEM1\MSVOA X\DATA\VX031819\  
 Data File : VX008165.D  
 Acq On : 18 Mar 2019 14:28  
 Operator : JC/SP  
 Sample : VSTDICV020  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 9 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 ClientSampleId :  
 ICVVX031819

Manual Integrations  
 APPROVED

MMDadoda  
 3/19/2019 9:37:17 AM

Quant Time: Mar 19 03:09:45 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA X\METHOD\624X031819W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Mon Mar 18 14:34:46 2019  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.02  | 128  | 53008    | 30.00 | ug/l  | 0.00     |
| 28) 1,4-Difluorobenzene | 6.86  | 114  | 294831   | 30.00 | ug/l  | 0.00     |
| 57) Chlorobenzene-d5    | 10.11 | 117  | 259309   | 30.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |       |          |          |      |         |
|---------------------------|--------|-------|----------|----------|------|---------|
| 27) 1,2-Dichloroethane-d4 | 6.06   | 65    | 133488   | 30.27    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 50 - 169 | Recovery | =    | 100.90% |
| 60) 4-Bromofluorobenzene  | 11.13  | 95    | 132466   | 30.61    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 56 - 143 | Recovery | =    | 102.03% |
| 63) Toluene-d8            | 8.71   | 98    | 377522   | 29.96    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 66 - 137 | Recovery | =    | 99.87%  |

## Target Compounds

|                               |      |     |        |        | Ovalue     |
|-------------------------------|------|-----|--------|--------|------------|
| 2) Dichlorodifluoromethane    | 1.20 | 85  | 46421  | 19.544 | ug/l 100   |
| 3) Chloromethane              | 1.33 | 50  | 56393  | 18.836 | ug/l 98    |
| 4) Vinyl Chloride             | 1.41 | 62  | 57426  | 18.600 | ug/l 99    |
| 5) Bromomethane               | 1.64 | 94  | 38491  | 15.654 | ug/l 98    |
| 6) Chloroethane               | 1.73 | 64  | 35661  | 18.477 | ug/l 93    |
| 7) Trichlorofluoromethane     | 1.93 | 101 | 72277  | 18.593 | ug/l 100   |
| 8) Diethyl Ether              | 2.19 | 74  | 40398  | 19.247 | ug/l 82    |
| 9) 1,1,2-Trichlorotrifluoroet | 2.39 | 101 | 52643  | 19.965 | ug/l 92    |
| 10) 1,1-Dichloroethene        | 2.38 | 96  | 48759  | 19.576 | ug/l 90    |
| 11) Methyl Iodide             | 2.51 | 142 | 60314  | 19.025 | ug/l 98    |
| 12) Methyl Acetate            | 2.78 | 43  | 78843  | 19.340 | ug/l 97    |
| 13) Acrolein                  | 2.29 | 56  | 58349  | 93.071 | ug/l 97    |
| 14) Acrylonitrile             | 3.14 | 53  | 173013 | 95.641 | ug/l 100   |
| 15) Acetone                   | 2.45 | 58  | 51752  | 89.038 | ug/l 89    |
| 16) Carbon Disulfide          | 2.57 | 76  | 152229 | 19.171 | ug/l 100   |
| 17) Allyl chloride            | 2.73 | 41  | 103429 | 18.998 | ug/l 98    |
| 18) Methylene Chloride        | 2.86 | 84  | 55999  | 19.294 | ug/l 89    |
| 19) trans-1,2-Dichloroethene  | 3.17 | 96  | 52295  | 19.543 | ug/l 87    |
| 20) Diisopropyl ether         | 3.85 | 45  | 206298 | 19.349 | ug/l # 82  |
| 21) 1,1-Dichloroethane        | 3.70 | 63  | 105894 | 19.462 | ug/l 95    |
| 22) cis-1,2-Dichloroethene    | 4.60 | 96  | 58647  | 19.225 | ug/l # 81  |
| 23) tert-Butyl Alcohol        | 3.04 | 59  | 63375  | 95.091 | ug/l # 100 |
| 24) Methyl tert-Butyl Ether   | 3.20 | 73  | 173626 | 19.215 | ug/l 96    |
| 25) Chloroform                | 5.21 | 83  | 99990  | 19.480 | ug/l 98    |
| 26) Cyclohexane               | 5.58 | 56  | 101689 | 19.603 | ug/l # 84  |
| 29) 1,1-Dichloropropene       | 5.80 | 75  | 76032  | 19.377 | ug/l 92    |
| 30) 2-Butanone                | 4.67 | 43  | 258491 | 93.975 | ug/l 94    |
| 31) 2,2-Dichloropropane       | 4.59 | 77  | 76661  | 19.371 | ug/l 93    |
| 32) 1,1,1-Trichloroethane     | 5.50 | 97  | 81003  | 19.489 | ug/l # 95  |
| 33) Carbon Tetrachloride      | 5.79 | 117 | 67310  | 19.297 | ug/l 95    |
| 34) Benzene                   | 6.15 | 78  | 229439 | 19.554 | ug/l # 97  |
| 35) Methacrylonitrile         | 5.04 | 41  | 51482  | 19.237 | ug/l 93    |
| 36) 1,2-Dichloroethane        | 6.20 | 62  | 82080  | 19.273 | ug/l 98    |
| 37) Trichloroethene           | 7.21 | 130 | 54299  | 19.420 | ug/l 88    |
| 38) Methylcyclohexane         | 7.46 | 83  | 95134  | 19.960 | ug/l 89    |
| 39) 1,2-Dichloropropane       | 7.51 | 63  | 62890  | 19.680 | ug/l 99    |
| 40) Dibromomethane            | 7.66 | 93  | 37965  | 19.405 | ug/l 90    |

Data Path : Z:\VOASRV\HPCHEM1\MSVOA X\DATA\VX031819\  
 Data File : VX008165.D  
 Acq On : 18 Mar 2019 14:28  
 Operator : JC/SP  
 Sample : VSTDICV020  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 9 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 ClientSampleId :  
 ICVVX031819

Manual Integrations  
 APPROVED

MMDadoda  
 3/19/2019 9:37:17 AM

Quant Time: Mar 19 03:09:45 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA X\METHOD\624X031819W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Mon Mar 18 14:34:46 2019  
 Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc    | Units  | Dev(Min) |
|--------------------------------|-------|------|----------|---------|--------|----------|
| -----                          |       |      |          |         |        |          |
| 41) Bromodichloromethane       | 7.90  | 83   | 72157    | 19.073  | ug/l   | 99       |
| 42) Vinyl Acetate              | 3.82  | 43   | 898421   | 97.119  | ug/l # | 94       |
| 43) Ethyl Acetate              | 4.83  | 43   | 96847m   | 19.859  | ug/l   |          |
| 44) Isopropyl Acetate          | 6.45  | 43   | 145550   | 19.243  | ug/l   | 97       |
| 45) 1,4-Dioxane                | 7.74  | 88   | 27193    | 384.851 | ug/l # | 82       |
| 46) Methyl methacrylate        | 7.77  | 41   | 76336    | 19.127  | ug/l   | 90       |
| 47) n-amyl Acetate             | 10.90 | 43   | 124410   | 19.248  | ug/l   | 96       |
| 48) t-1,3-Dichloropropene      | 9.04  | 75   | 77824    | 18.611  | ug/l   | 96       |
| 49) cis-1,3-Dichloropropene    | 8.43  | 75   | 86803    | 18.659  | ug/l   | 93       |
| 50) 1,1,2-Trichloroethane      | 9.21  | 97   | 56694    | 20.183  | ug/l   | 95       |
| 51) Ethyl methacrylate         | 9.18  | 69   | 86713    | 19.042  | ug/l   | 92       |
| 52) 1,3-Dichloropropane        | 9.37  | 76   | 99679    | 19.818  | ug/l   | 98       |
| 53) Dibromochloromethane       | 9.58  | 129  | 50997    | 18.776  | ug/l   | 99       |
| 54) 1,2-Dibromoethane          | 9.67  | 107  | 57528    | 19.623  | ug/l   | 98       |
| 55) 2-Chloroethyl vinyl ether  | 8.31  | 63   | 331407   | 102.222 | ug/l   | 95       |
| 56) Bromoform                  | 10.85 | 173  | 36546    | 18.702  | ug/l # | 98       |
| 58) 4-Methyl-2-Pentanone       | 8.64  | 43   | 494507   | 99.713  | ug/l   | 96       |
| 59) 2-Hexanone                 | 9.49  | 43   | 379058   | 96.876  | ug/l   | 96       |
| 61) Tetrachloroethene          | 9.34  | 164  | 51915    | 19.879  | ug/l   | 97       |
| 62) Toluene                    | 8.78  | 91   | 240283   | 19.593  | ug/l   | 99       |
| 64) Chlorobenzene              | 10.13 | 112  | 144287   | 19.769  | ug/l   | 97       |
| 65) 1,1,1,2-Tetrachloroethane  | 10.22 | 131  | 49432    | 19.315  | ug/l   | 98       |
| 66) Ethyl Benzene              | 10.25 | 91   | 255539   | 19.509  | ug/l   | 96       |
| 67) m/p-Xylenes                | 10.36 | 106  | 186995   | 38.644  | ug/l   | 89       |
| 68) o-Xylene                   | 10.69 | 106  | 91309    | 19.637  | ug/l   | 91       |
| 69) Styrene                    | 10.71 | 104  | 147333   | 19.452  | ug/l   | 96       |
| 70) Isopropylbenzene           | 11.02 | 105  | 247670   | 19.754  | ug/l   | 95       |
| 71) 1,1,2,2-Tetrachloroethane  | 11.27 | 83   | 88587    | 20.171  | ug/l   | 97       |
| 72) 1,2,3-Trichloropropane     | 11.29 | 75   | 77396m   | 20.436  | ug/l   |          |
| 73) Bromobenzene               | 11.26 | 156  | 57668    | 19.430  | ug/l   | 80       |
| 74) n-propylbenzene            | 11.36 | 91   | 290876   | 19.595  | ug/l   | 95       |
| 75) 2-Chlorotoluene            | 11.42 | 91   | 172400   | 19.770  | ug/l   | 91       |
| 76) 1,3,5-Trimethylbenzene     | 11.51 | 105  | 205639   | 19.834  | ug/l   | 96       |
| 77) t-1,4-Dichloro-2-butene    | 11.07 | 75   | 24942    | 18.328  | ug/l   | 96       |
| 78) 4-Chlorotoluene            | 11.51 | 91   | 196526   | 19.564  | ug/l   | 91       |
| 79) tert-butylbenzene          | 12.06 | 119  | 210056   | 19.895  | ug/l   | 96       |
| 80) 1,2,4-Trimethylbenzene     | 11.80 | 105  | 207810   | 19.857  | ug/l   | 94       |
| 81) sec-Butylbenzene           | 11.94 | 105  | 246391   | 19.899  | ug/l   | 96       |
| 82) p-Isopropyltoluene         | 12.06 | 119  | 210056   | 19.895  | ug/l   | 96       |
| 83) 1,3-Dichlorobenzene        | 12.02 | 146  | 104182   | 19.587  | ug/l   | 95       |
| 84) 1,4-Dichlorobenzene        | 12.10 | 146  | 105017   | 19.894  | ug/l   | 97       |
| 85) n-Butylbenzene             | 12.38 | 91   | 192168   | 19.303  | ug/l   | 97       |
| 86) Hexachloroethane           | 12.60 | 117  | 34698    | 19.172  | ug/l   | 97       |
| 87) 1,2-Dichlorobenzene        | 12.39 | 146  | 104540   | 19.725  | ug/l   | 97       |
| 88) 1,2-Dibromo-3-Chloropropan | 13.00 | 75   | 18362    | 18.880  | ug/l # | 73       |
| 89) 1,2,4-Trichlorobenzene     | 13.65 | 180  | 67052    | 19.422  | ug/l   | 99       |
| 90) Hexachlorobutadiene        | 13.78 | 225  | 35800    | 19.982  | ug/l   | 98       |
| 91) Naphthalene                | 13.83 | 128  | 215623   | 19.283  | ug/l   | 100      |
| 92) 1,2,3-Trichlorobenzene     | 14.02 | 180  | 67950    | 19.706  | ug/l   | 99       |
| -----                          |       |      |          |         |        |          |

Data Path : Z:\VOASRV\HPCHEM1\MSVOA X\DATA\VX031819\  
Data File : VX008165.D  
Acq On : 18 Mar 2019 14:28  
Operator : JC/SP  
Sample : VSTDICV020  
Misc : 5.0mL/MSVOA X/WATER  
ALS Vial : 9 Sample Multiplier: 1

Instrument :  
MSVOA\_X  
ClientSampleId :  
ICVVX031819

Manual Integrations  
APPROVED

MMDadoda  
3/19/2019 9:37:17 AM

Quant Time: Mar 19 03:09:45 2019  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA X\METHOD\624X031819W.M  
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
QLast Update : Mon Mar 18 14:34:46 2019  
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|--------------------|------|------|----------|------|-------|----------|
|--------------------|------|------|----------|------|-------|----------|

-----

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

Data Path : Z:\VOASRV\HPCHEM1\MSVOA X\DATA\VX031819\  
Data File : VX008165.D  
Acq On : 18 Mar 2019 14:28  
Operator : JC/SP  
Sample : VSTDICV020  
Misc : 5.0mL/MSVOA X/WATER  
ALS Vial : 9 Sample Multiplier: 1

Instrument :  
MSVOA\_X  
ClientSampleId :  
ICVVX031819

Manual Integrations  
APPROVED

MMDadoda  
3/19/2019 9:37:17 AM

Quant Time: Mar 19 03:09:45 2019  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA X\METHOD\624X031819W.M  
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
QLast Update : Mon Mar 18 14:34:46 2019  
Response via : Initial Calibration

