

Determination of QC Range Limits for Method 8270 Matrix Spike Recoveries

Laboratory: New Mexico Dept. of Health, State Laboratory Division

Instrument: Varian CP-3800 GC / Varian Saturn 2000 MS

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Saturn Data from 2/18/2009 through 11/26/2009

| Base/Neutral Compounds | Average | Standard Deviation | Mean Minus 2SDs | Mean Plus 2SDs | Average Recovery | Low Recovery Limit | High Recovery Limit | RSD |
|----------------------------|---------|--------------------|-----------------|----------------|------------------|--------------------|---------------------|-------|
| 1,4-Dichlorobenzene | 12.0 | 2.62 | 6.71 | 17.20 | 47.8% | 26.8% | 68.8% | 21.9% |
| N-Nitroso-di-n-propylamine | 16.6 | 3.25 | 10.07 | 23.08 | 66.3% | 40.3% | 92.3% | 19.6% |
| 1,2,4-Trichlorobenzene | 12.2 | 2.51 | 7.17 | 17.23 | 48.8% | 28.7% | 68.9% | 20.6% |
| Acenaphthene | 16.6 | 3.54 | 9.56 | 23.71 | 66.6% | 38.3% | 94.8% | 21.3% |
| 2,4-Dinitrotoluene | 18.7 | 3.56 | 11.62 | 25.87 | 75.0% | 46.5% | 103.5% | 19.0% |
| Pyrene | 19.0 | 3.90 | 11.16 | 26.75 | 75.8% | 44.6% | 107.0% | 20.6% |
| Acid Compounds | Average | Standard Deviation | Mean Minus 2SDs | Mean Plus 2SDs | Average Recovery | Low Recovery Limit | High Recovery Limit | RSD |
| Phenol | 16.1 | 3.95 | 8.23 | 24.05 | 32.3% | 16.5% | 48.1% | 24.5% |
| 2-Chlorophenol | 30.8 | 7.47 | 15.88 | 45.78 | 61.7% | 31.8% | 91.6% | 24.2% |
| 4-Chloro-3-methylphenol | 36.6 | 6.56 | 23.45 | 49.68 | 73.1% | 46.9% | 99.4% | 17.9% |
| 4-Nitrophenol | 16.5 | 5.75 | 5.04 | 28.04 | 33.1% | 10.1% | 56.1% | 34.8% |
| Pentachlorophenol | 32.5 | 11.66 | 9.14 | 55.77 | 64.9% | 18.3% | 111.5% | 35.9% |
| Organochlorine Pesticides | Average | Standard Deviation | Mean Minus 2SDs | Mean Plus 2SDs | Average Recovery | Low Recovery Limit | High Recovery Limit | RSD |
| Endrin | 13.0 | 2.21 | 8.56 | 17.42 | 86.6% | 57.1% | 116.1% | 17.0% |
| 4,4'-DDT | 13.0 | 2.15 | 8.70 | 17.30 | 86.7% | 58.0% | 115.3% | 16.5% |