

A Study of Quality Assurance on the Disinfection By-Products

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Quality assurance is a set of operating principles that, if strictly during sample collection and analysis, will produce data of known and defensible quality. That is, the accuracy of analytical results can be stated with a high level of confidence. Quality assurance included quality control and quality assessment. In Korea, it has not been yet known about disinfection by-products and quantitative method. So, we progressed the quality assessment and quality control program for establishment of the analytical methods and statement with high level confidence of analytical data for DBPs.

Interlaboratory QA/QC was conducted with Environmental Connection (WorldTrade Connection LLC, WTC) located in North Carolina of United States. Analyzing subjects are 14 compounds including haloacetic acids, haloacetonitriles, haloketones, halopicrine and chloral hydrate. The range of spiked concentration was 0.9~50 μ g/L. Haloacetic acids was analyzed by using modified US EPA 552.2 method. The Mean accuracy of haloacetic acids was 85.24%~109.43% in WTC and 100.32%~108.53% in Yonsei university respectively.

Haloacetonitrile, haloketone, halopicrine and chloral hydrate analyzed by using modified US EPA 551.1 method. The mean accuracy of haloacetonitrile, haloketone, halopicrine and chloral hydrate was 85%~122% in WTC and 100%~111% in Yonsei university respectively.

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