

Abstract

Development of Sampling and Analytical Method for Tetramethylammonium hydroxide

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Objective : The objective of this study was to develop a method of sampling and analysis for tetramethylammonium hydroxide.

Methods : We used guidelines of National Institute of Occupational Safety and Health and Occupational Safety and Health Agency for air sampling and analytical method development and evaluation.

Results : We selected quartz filter as sampling media, deionization water as desorption solution with 60 min sonication, and ion chromatograph(IC) as analysis instrument. The Limit of quantitation($1.7 \mu\text{g}/\text{sample}$) was sufficient for assessment of proposed 8 hour time weighted average limit($1 \text{ mg}/\text{m}^3$). Stability and recovery of analyte on the medium, storage stability, and precision were fulfilled the guidelines.

Conclusions : We suggest quartz filter sampling and analysis with IC as the sampling and analytical method for tetramethylammonium hydroxide.