

POS44. IN-HOUSE METHOD FOR THE ANALYSIS OF HALOACETIC ACIDS FROM TREATED WATER USING GC-ITMS

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Abstract

A novel in house method for the evaluation of haloacetic acids (HAA) containing bromine and/or chlorine haloacetic acids in treated and drinkable waters was developed, based on liquid-liquid extraction, derivatization by methylation with methanol-sulphuric acid mixture and GC-ITMS (ion trap mass spectrometry). A (5%-Phenyl)-methylpolysiloxane capillary column (60 m) was used with good results for HAA separation and ITMS operating in single ion monitoring mode was used for qualitative and quantitative determination of HAA methyl esters. RSD varied between 2.5 to 4.8%, with detection limits from 0.005 to 0.07 µg/L. Correlation coefficient, R² varied between 0.984 and 0.999. The developed method was applied to the analysis of HAAs in water treated using experimental potabilization processes.

Keywords: *haloacetic acids, GC-ITMS, water quality*