

Determination of Inorganic Antimony Species by Hyphenated Technique High Performance Liquid Chromatography with Hydride Generation Atomic Absorption Spectrometry Detection – Lidia Kozak, Przemysław Niedzielski

Summary

The article presents the hyphenated technique of high performance liquid chromatography and hydride generation atomic absorption spectrometry (HPLC-HG-AAS) in determination of antimony inorganic species: Sb(III) and Sb(V) in ground water samples. While carrying separation of these forms on an anion-exchange column in a chromatographic system and detection by means of hydride generation atomic absorption spectrometry method, the analytical signals of the determined forms were separated at the detection limits of 6.8 ng/cm³ (peak high) or 2.7 ng/cm³ (peak area) in the case of Sb(III) and 4.8 ng/cm³ (peak high) or 3,2 ng/cm³ (peak area) in the case of Sb(V) with RSD below 20% at the concentration of 25 ng/cm³. The hyphenated technique was applied for antimony determinations in polluted ground water.