
ARTICLES

Determination of Elemental Sulfur in Bottom Sediments Using High-Performance Liquid Chromatography

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Abstract—A procedure for determining elemental sulfur in bottom sediments by microcolumn reversed-phase high-performance liquid chromatography was developed. The analytical range was 4–1200 $\mu\text{g/g}$ (in terms of the dry weight of a sediment). The procedure is based on the direct injection of acetone extracts of sediments into a chromatographic column. The detection limit was 5 ng/peak (signal-to-noise ratio of 3 : 1); the relative standard deviation was 5.6%. Errors introduced at particular stages of analysis and the total errors were evaluated for different sampling techniques. The results of determining elemental sulfur in the core samples of bottom sediments from Lake Baikal are presented.