

Abstract

The aim of this study was determination of lithium ion concentration in mineral waters “Vincentka” and “Bílinská kyselka” using capillary electrophoresis with contactless conductivity detection. A specialized laboratory-made apparatus designed for separations in short capillaries was first tested for separation of model solution of common inorganic cations and then for analysis of mineral water samples. Lithium ion concentration was determined using method of standard addition. The results obtained were compared with those obtained from atomic absorption and emission spectroscopy; standard addition method as well as the method of calibration graph were used in spectroscopic methods. A good agreement was obtained between experimentally determined concentrations of lithium and those declared in the labels on the mineral water bottles.

Keywords

Capillary electrophoresis, contactless conductivity detection, mineral waters, lithium, atomic absorption spectroscopy, atomic emission spectroscopy