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INVITATION TO THE LECTURE

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Tuesday, October 5th 2004 at 1 p.m.
in Lecture Hall at the National Institute of Chemistry
Hajdrihova 19, Ljubljana

Development of Capillary Ion Chromatography with Suppressed Conductivity Detection

There has been significant growth in the applications of high performance liquid chromatography (HPLC) using capillary columns. As an analytical tool, capillary HPLC offers several important advantages including (1) providing higher mass sensitivity than conventional HPLC, (2) ideal for applications where samples are limited, (3) improved separation efficiency and/or speed, (4) facilitating the direct interface to mass spectrometry, and (5) significant reduction in the solvent consumption and the associated waste disposal. In this presentation, we will report our efforts in the development of capillary ion chromatography (IC) with suppressed conductivity detection for determination of target ionic analytes. We will discuss the platforms for generating and delivering the chromatographic eluents, the preparation of various capillary ion exchange columns, and the design and optimization of the capillary-scale suppressed conductivity detection. We will demonstrate the advantages of using isocratic and gradient capillary IC systems in the determination of target inorganic and organic analytes.