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**Miniaturisation and Incorporation of Ion Selective Electrodes in Sequential
Injection Analysis**

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In the last few years some efforts have been done to circumvent the pollutant aspects of the traditional analytical methods. In this interest less sample pre-treatment and volume decrease of the reagents generates a significant effluents decrease. The aim of this work is to propose a new approach to potentiometric determination (ISE) in sequential injection analysis (SIA) based on the use of microelectrodes and thus of smaller volumes of samples and reagents.

Periodate microelectrodes were constructed with the following dimensions: internal diameter: 0,16mm, external diameter: 0,62mm, height: 3,0mm. The ionic sensors to be dropped on the conductive material were prepared according Montenegro et al.¹. An acrylic set-up was developed to connect the periodate and reference microelectrode. This system was coupled to the rotative valve. The internal diameter of the set-up channel is 0,5mm. In batch evaluation the microelectrode presents the same behaviour as described by Montenegro for the conventional one.

References:

1. Montenegro M.C.B.S. M., Costa Lima J.L.F., Mattos I.L., Neto G.O., Neto J.A.G., Zagatto E.A.G., *Talanta*, 40 (10), 1563-1568 (1993).

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