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ABSTRACT BOOK

I-PO-38 **STRATEGIES FOR THE ENZYMATIC DETERMINATION OF ETHANOL IN BEVERAGES USING FLOW BASED APPROACHES.** Susana S. M. P. Vidigal, Teresa F. M. Pais, Ricardo N. M. J Páscoa, Ildikó V. Tóth, António O. S. S. Rangel, *Escola Superior de Biotecnologia, Universidade Católica Portuguesa, Rua Dr. António Bernardino de Almeida, 4200-072 Porto, Portugal, ivtoth@mail.esb.ucp.pt*

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The tendency for miniaturization apparent from the recent scientific literature is highly justified by the elevated costs of the reagents involved in enzymatic and immuno-assays, and by the often limited amount of the samples available.

The determination of ethanol is not only a key parameter in terms of quality and stability for alcoholic beverages, but also an important factor for fermentation monitoring. The official methods for the determination of ethanol in wines are laborious and require in most cases the separation of the analyte from the sample matrix by distillation. Automated flow procedures have been applied to the determination of this analyte and most of them based on the use of immobilized enzymes with the aim of reducing enzyme consumption.

The objective of this work was to compare different strategies of flow analysis developed for the enzymatic determination of ethanol in wine samples, using alcohol dehydrogenase. The different approaches are compared in terms of application range, repeatability, reagent (enzyme and cofactor) consumption, waste production and cost of analysis.

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