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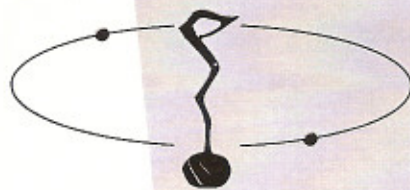
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**ABSTRACT BOOK**

**I-PO-35 FOOD SAFETY INVESTIGATION OF TRANSGENIC RICE.** Krisztina Takács, Éva Gelencsér, Barnabás Jenes, László Tamás, *Central Food Research Institute, Department of Biology, Herman Ottó street 15, 1022 Budapest, Hungary, k.takacs@cfri.hu*

**Keywords:** ELISA; immunoblot; transgenic rice

Our aim is to modify the functional quality of the rice flour by changing its protein content and structure of the protein matrix. Rice is transformed with a wheat gene coding for a high molecular weight gluten subunit (HMW-GS) protein. The transformation cassette contains the 1Dx5 HMW-GS gene driven by an improved endosperm specific promoter and the NOS terminator region. Activity of the tissue specific promoter was improved by a special part of the actin gene promoter derived from rice. Hygromycin B resistant marker gene (hpt) was used for selection. The gene construct was multiplied in *E.coli* and the purified plasmid DNA was transformed into the rice callus produced from immature embryo. The gene expression is proved and the level of the newly introduced gene product in the GM rice-lines was determined by antigen-specific ELISA and immunoblot. For this study, polyclonal rabbit IgG is developed in rabbit to HMW GS [1]. The potential allergen activity of the expressed gluten protein is also examined by gluten specific IgA/IgG human sera using ELISA method.

#### References

- [1] Harboe N. & Ingild A.: *J.Immunology*(1973), 2 (1) 161-164.

**I-PO-36 USING CHEMOMETRICS TO ESTABLISH THE AUTHENTICITY OF A REGIONAL SPIRIT.** Charis R. Theocharis, Rebecca Kokkinofa, *Department of Chemistry, University of Cyprus, charis@ucy.ac.cy*

**Keywords:** chemometrics; authenticity; classification

In 42 alcoholic beverages produced in Cyprus and other countries, 26 chemical and physical-chemical variables were determined by HPLC and GC, <sup>1</sup>H-NMR and ICP spectroscopy and other techniques. We also used Inductively Coupled Plasma Spectroscopy (ICP) to differentiate between zivania and other spirits similar in alcoholic content collected from different countries.

Data were processed using multivariate chemometric techniques, involving Principal Component Analysis, Cluster Analysis, Regularized Discriminant Analysis and Classification and Regression Trees.

Zivania can be differentiated from beverages from other countries. Using 2- and 3-methyl-butanol, 2-methyl-propanol, furfural, methanol, the alcoholic grade and the chemical shift of -CH<sub>3</sub> in <sup>1</sup>H-NMR spectra as features, a correct classification for zivania was achieved. The reasons for diversions were given.

We also used Inductively Coupled Plasma Spectroscopy (ICP) in order to differentiate between zivania and other spirits similar in alcoholic content collected from different countries. It was shown by statistical analysis that a near-perfect differentiation of zivania from other beverages is possible by a combination of the Cu, Mg and Zn contents of these.

**I-PO-37 SURVIVAL OF 35S PROMOTER AND NOS TERMINATOR IN DIFFERENT CHICKEN ORGANS.** Gabriella Ujhelyi, Anna Jánosi, Erzsébet Némédi, Éva Gelencsér, *g.ujhelyi@cfri.hu*

**Keywords:** 35S promoter; nos terminator; chicken feeding

The current study presents the results of a 6 weeks feeding study in chickens. The main goal of our investigations was to examine the degradation of the 35S promoter and the nos terminator in the different organs. The chickens were fed under big farm conditions. The feed contained Roundup Ready (GM) soy and samples of chickens were taken at 5 times during the 6 weeks. The purification of the DNA from the different organs and muscle tissue was performed with Wizard systems [1]. In case of some samples we had to concentrate the DNA with Amicon Ultra membrane. Quality of the isolated DNA solutions for the PCR was checked with vertebrate specific primer pair. The presence of 35S promoter and nos terminator were analysed with GMO specific primer pairs. The PCR products were run on 10% polyacrylamide gel and stained with SYBR Green. During the feeding the nos terminator and the 35S promoter could have been detected from some gizzards, craws and intestine fluids but the samples, which derived from the processed line were absolutely negative.

#### Reference

- [1] Zimmermann, A., Lüthy, J., and Pauli, U. (1998). *Z Lebensm Unters Forsch A*, 207, 81-90.

**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*

**Keywords:** flow analysis; enzymatic determination; ethanol

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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**I-PO-39 STUDIES OF THE DISTRIBUTION AND RESIDENCE TIME OF NITROFURANS AND CORRESPONDING METABOLITES IN TILAPIA FISH WITH LC/MS/MS.** Wei-Hsien Wang, Chung-Wei Tsai, I-Ming Chen, *National Sun Yat-sen University, Kaohsiung 804, Taiwan, b8952016@student.nsysu.edu.tw*

**Keywords:** nitrofurans; mass spectrometry; Tilapia Fish

The distribution and residence time of nitrofurans including furazolidone, nitrofurazone, furaldione and nitrofurantoin, and corresponding metabolites AOZ, SEM, AMOZ, and AHD in