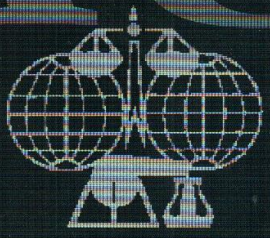
ABSTRACTS OF
LECTURES AND POSTERS

wmf MEETS IUPAC 2012

THE World Mycotoxin Forum®



5-9 NOVEMBER 2012

7th conference of The World Mycotoxin Forum®
and XIIIth IUPAC International Symposium
on Mycotoxins and Phycotoxins

Rotterdam, the Netherlands

www.WMFmeetsIUPAC.org

FINAL PROGRAMME
&
ABSTRACTS OF LECTURES AND POSTERS

wmf MEETS IUPAC 2012

7th conference of The World Mycotoxin Forum®
and XIIIth IUPAC International Symposium
on Mycotoxins and Phycotoxins

5-9 November 2012
Rotterdam, the Netherlands

Agency for the Safety of the Food Chain (FAVV-AFSCA) has appointed the Veterinary and Agrochemical Research Centre (CODA-CERVA) as National Reference Laboratory for mycotoxins to evaluate the fast mycotoxin test kits that are currently available on the Belgian market. In 2008-2009 kits for deoxynivalenol in cereals were assessed, in 2009-2010 the evaluation was repeated for ochratoxin A in cereals and in 2010-2011 immunoassays for aflatoxins in rice and corn were evaluated. The main points verified were recovery, accuracy, detection capability (CCβ), repeatability and cross-reactivity in corn and rice. The cross-reactivity, recovery, accuracy and detection capability experiments clearly show that these tests possess the selectivity and sensitivity to adequately screen samples and differentiate reliably positive from negative samples. The repeatability on the other hand is somewhat troublesome exceeding the recommendations set by Commission Regulation (EC) No 401/2006. Immunoassays are very powerful screening tools to assess a large number of samples in a very short timescale with a minimum of effort, costly labour hours or expensive lab equipment. It remains advisable however to analyse samples flagged by immunoassays as positive by reference methods or other confirmatory methods.

P120

Acoustic screening of *Fusarium* contaminated seeds in combination with a biological treatment to reduce its occurrence

Graziena Juodeikiene[1] and W. J. de Koe[2]

[1]Kaunas University of Kaunas and [2]Food safety expert, the Netherlands. Corresponding author: graziena.juodeikiene@ktu.lt

The health and safety of crops, and the eventual grain yield and quality, are highly dependent on the implementation of preventative measures, such as guaranteed pathogen-free seeds and clean handling by agricultural workers. Microbes and *Fusarium* spp. could have a greater negative impact on its sprouting capacity when seeds are stored for a longer time. Seed distributors should analyze each lot for the presence of microbial pathogens using internationally accepted analytical methods and keep up-to-date agricultural records by eliminating contaminated seeds. Unfortunately these methods are costly. One promising and economical strategy is to screen contaminated seeds by using an acoustic technique. An EUREKA project within the ITEA2 cluster with acronym ACOUSTICS has been approved by the EU and new equipment based on this project will be developed. Linked to this approach the treatment of seeds with anti-fungal bio-products could be performed to decontaminate a wide range of crops. Such an environmental beneficial plant-protection strategy developed through molecular analysis of sprouting cereal grains could easily be integrated into a sustainable agricultural practice to increase e.g. yield, quality and safety without environmental harm. The latter approach forms the basis for an on-going Lithuanian industrial biotechnology project with acronym BIOEKOTECH.

P121

Validation of a rapid method for the quantification of lipophilic marine biotoxins including cyclic imines in shellfish

Mirjam D. Klijnstra and A. Gerssen

RIKILT- Institute of Food Safety, Wageningen UR, the Netherlands. Corresponding author: mirjam.klijnstra@wur.nl

Since July 2011 the official method for the control of shellfish on the presence of lipophilic marine biotoxins is a liquid chromatography tandem mass spectrometric method (LC-MS/MS). With this method a single analysis takes approximately 20 min. An improved method based on the chromatographic separation of various lipophilic marine biotoxins under alkaline conditions using a BEH C18, 100x2.1 mm, 1.7 µm ultra-performance LC (UPLC)-column with a total analysis time of 5 min has been developed. In order to evaluate the method performance characteristics of the developed quantitative UPLC-MS/MS method a single lab / single day validation was performed. Extracts were analysed using alternating positive and negative electrospray ionisation (ESI). Identification and quantification of the toxins was based on the ion transitions monitored by multiple reaction monitoring (MRM). Method performance characteristics were evaluated for various shellfish matrices such as mussel, oyster, cockle and ensis. The validation of the method was carried out according to EU commission decision 657/2002, which establishes criteria and procedures for the