TOPIC: Rapid Methods for Food Quality and Safety Control

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BIOGRAPHY

- Education: Analytical Chemistry (Ph. D.), State University of Leiden (NL)
- Senior scientist at RIKILT – Institute of Food Safety, Wageningen (NL), since 1989
- Specialisation in methods of analysis for feeds (regulatory control, method development, harmonisation)
- Programme manager for Feed at RIKILT, since 2004
- Chairman of the CEN committee TC 327 “Animal feedingstuffs - methods of analysis and sampling”; since 2001
- Co-ordinator of the EU-project “Development and Validation of HPLC-methods for the official control of Coccidiostats and Antibiotics used as Feed Additives (CANFAS)” (FP4), 1998 – 2002
- Co-ordinator of the EU-project “Screening and identification methods for official control of banned antibiotics and growth promoters in feedingstuffs (SIMBAG-FEED)” (FP5), 2001 – 2005
- Co-ordinator of the EU-project “Chemical contaminants in food and feed: inexpensive detection for control of exposure” (CON*ff*IDENCE) (FP7), since 2008

ABSTRACT

Rapid Methods for Food Quality and Safety Control

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The presence of potentially hazardous chemicals in food remains a major concern among European consumers. Recent food contamination incidents, e.g. fraudulent addition of toxic chemicals to infant milk powders in China, certainly contribute to fears about the safety of food. Currently, a variety of analytical test methods are used to help ensure the safety of food and feed in Europe both for goods produced in the EU and imported from third countries. Many of these methods are tedious, time consuming, and require sophisticated and expensive instrumentation.

The CON*ff*IDENCE project aims to further improve food safety in Europe by the development of faster and more cost-efficient methods for the detection of a wide range of chemical contaminants in different food and feed commodities. These methods will not only save precious time in ever faster production cycles, but will also permit more food/ feed samples to be monitored due to the lower cost per test. In combination with the broadened spectrum of detectable residues and contaminants the CON*ff*IDENCE project will significantly increase food safety in Europe.

Within CON*ff*IDENCE, multi-methods will be developed for persistent organic pollutants, perfluorinated compounds, pesticides, veterinary pharmaceuticals (coccidiostats, antibiotics), heavy metals and biotoxins (alkaloids, marine toxins, mycotoxins) in products such as fish, cereal-based food and vegetables. A balanced mix of novel multiplex technologies will be utilized, including lateral flow devices, flow cytometry with functionalized beads, optical and electrochemical biosensors, cytosensors and metabolomics-like comprehensive profiling. After validation, the simplified methods will be applied in impact demonstrators that contribute to exposure assessment and validation of hazard models.

Results will be disseminated to scientists and relevant stakeholders, including the food industry, regulatory control bodies, DG-SANCO, EFSA, exporting countries, CRLs, CEN and consumers. The consortium consists of 17 partners from 10 European countries, representing 9 research institutes, 5 universities, 2 large food and feed industries and 1 SME.

The CON*ff*IDENCE project is a large collaborative project within the 7th work Programme of the European Community. It has started 1 May 2008 and it will have a duration of 4 years. CON*ff*IDENCE is coordinated by RIKILT – Institute of Food Safety, Wageningen, The Netherlands.

In the presentation, the outline of the CON*ff*IDENCE project will be given and some first results will be shown.

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Keywords: food, chemical contaminants, detection, rapid

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