



CON IDENCE in Food and Feed: A new European Research Project

The facts

- Title: "Contaminants in Food and Feed: Inexpensive Detection for Control of Exposure"
- > FP7 Collaborative Project
- ➤ Start date: 1 May 2008
- > Duration: 48 months (2008 2012)
- ➤ Volume: 7.5 M €
- ➤ Participants: 17 partners from 10 countries, representing universities, research institutes, industry and SMEs
- > Co-ordinator: Dr. Jacob de Jong
 - RIKILT Institute of Food Safety

The goals

- ➤ Increased food safety through more effective chemical contaminant monitoring
- > Excellent screening tools for statutory control and industry
- ➤ Simple, fast, inexpensive multiplex assays (multi-analyte multi-class detection), fully validated
- > Replacement of expensive, tedious instrumental methods
- > Impact demonstration, e.g. European PFC database
- > Widespread dissemination of the new methods
- >Training workshops: governmental and industrial end-users
- > Education and training modules for students

The commodities

Based on their relevance for consumer safety and trade the following target commodities were selected for demonstrating the applicability of the new technologies:

- > Fish/shellfish, fish feed
- > Cereals, cereal-based feed
- > Potatoes/vegetables
- ➤ Honey, dairy products
- ➤ Eggs, meat

The technologies

A selection of the most recent and advanced technologies will be applied:

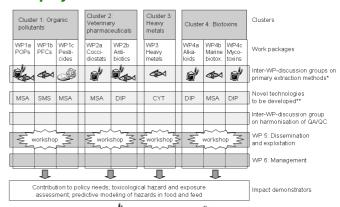
- Multiplex flow cytometry
- > Multiplex SPR biosensor
- > Magneto-immunosensor
- ➤ Multi-component dipstick assays
- Cytosensor
- > Simplified mass spectrometric (MS) methods
- > Automated contaminant profiling in MS data

The target contaminants

The targeted analytes represent a balance of emerging contaminants, high frequency residues as well as compounds which are not satisfactorily covered by current analytical tools.

- > Persistant Organic Pollutants (POPs):
 - dioxin-like PCBs (+ metabolites, e.g. PCB-OH)
- brominated flame retardants
- polycyclic aromatic hydrocarbons (PAHs)
- > Perfluorinated compounds (PFCs):
 - e.g. PFOS, PFOA
- > Pesticides:
- paraguat/diguat
- dithiocabamates
- > Veterinary drugs:
 - coccidiostats (lasalocid, monensin, salinomycin, narasin, nicarbazin)
- antibiotics (tetracyclines, sulfonamides, chloramphenicol, tylosin)
- malachite green
- ➤ Heavy metals:
- inorganic arsenic species
- methyl-mercury
- ➤ Biotoxins:
- alkaloids (pyrrolizidine, tropane, ergot)
- marine biotoxins (PSP/DSP)
- mycotoxins (DON, ZEA, T-2/HT-2, fumonisins FB1, FB2)

The project matrix



Acknowledgement

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