

CONffIDENCE: Contaminants in food and feed: Inexpensive detection for control of exposure



November 2009 - Issue 3

In the spotlight

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Dear stakeholder,

News from the CONffIDENCE project The CONffIDENCE project team is proud to present the 3rd edition of the CONffIDENCE e-newsletter. In this newsletter you will find recent developments in the CONffIDENCE project and related information in the area of contaminants in food and feed.

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Best regards,

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CONffIDENCE coordinator

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# In the spotlight

# 1<sup>st</sup> CONffIDENCE Open Day



Since the start of this project on May 1, 2008, much effort has been put into the development of rapid methods for food and feed safety. The project team would like to share its results so far with all interested stakeholders. For this, an open day will be organized on Wednesday January 27, 2010, from 13:30 -16:00, directly following the Rapid Methods Europe 2010 Conference.

Read more about this open day

### Third Feed safety Conference at Wageningen

This third Feed safety Conference, hosted by RIKILT, was held on the 6<sup>th</sup> and 7<sup>th</sup> of October 2009 in Wageningen. It was



attended by more than 140 researchers from 25 countries through the world. In his presentation, Jacob de Jong (RIKILT, CONffIDENCE project coordinator) gave the outline of the CONffIDENCE project by stressing on the feed topics and showed some first results. This newsletter reports more in detail some contributions of the CONffIDENCE partners.

#### Read more about this conference

Read more about the presentation of the CONfflDENCE project

# **News from the CONffIDENCE project**

# **Developing detection methods for organic pollutants; PFCs**

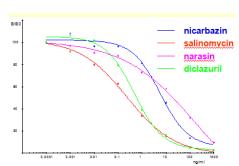
Regarding the PFCs, a <u>simplified and harmonized analytical procedure</u> for the detection and quantification of Perfluorooctanesulfonate (PFOS), perfluoro octane sulfonamide (FOSA), and perfluorooctanoic acid (PFOA) in food has been developed. WP1b is working in the internal evaluation of an analytical method based on LC/MS to detect and quantify perfluorinated compounds (PFCs) in food and fish feed.

Read more on organic pollutants

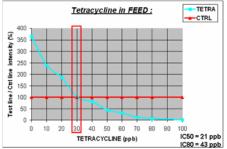
# Developing detection methods for Veterinary Pharmaceuticals: Coccidiostats, Antibiotics

At the Feed safety conference, Ursula Vincent (EC-JRC-IRMM, WP2a leader on coccidiostats) gave an overview of recent developments of analytical methods for simultaneous determination of authorised coccidiostats. developments of quantitative and confirmatory methods include chromatographic based methods as well as a flow cytometry based multiplex immunoassay developed in the frame of the Project CONffIDENCE project. In the multiplex assay, the target analytes narasin, nicarbazin, diclazuril and salinomycin have been studied. Sensitivities of nicarbazin, diclazuril and salinomycin assays are promising. Narasin assay needs further optimization. Performance has to be tested in eggs and in non-targeted feeds in the frame of a potential cross-contamination from feed produced with the highest authorised dose of the coccidiostats (e.g. broiler feed) into the afterwards produced non-targeted feed (e.g laying hens feed), taking into account hypothetical carry over rates of 2%, 5% and 10 %.

Read more on coccidiostats



Calibration curves of nicarbazin, diclazuril, salinomycin and narasin in buffer



Tetracycline Tetrasensor assay for feed

Regarding the antibiotics, Jacob de Jong (RIKILT, project coordinator) presented a lecture at the Feed safety conference on the principle of the dipstick assay developed for tetracycline detection in feed, stressing on the sample preparation simplicity and the quickness of the test assessed to 10 minutes.

Read more on antibiotics

## **Developing detection methods for Heavy Metals**

At the Feed safety conference, Rikke Vingborg Hedegaard (DTU Food, WP3 co-leader on heavy metals) gave an overview of the current knowledge on arsenic and mercury speciation in feed and analytical methodologies for arsenic and mercury speciation analysis. She also summarised the current status in legislation for heavy metals in feed and presented initiatives for the establishment of standardised methods for determination of inorganic arsenic and methylmercury. In the CONffIDENCE project, the task is to develop a method for inexpensive detection for control of exposure for inorganic arsenic and methyl mercury. The first results obtained by the solid phase extraction approach followed by atomic absorption spectrometry (SPE-AAS) were presented.

Read more on heavy metals

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Extraction of inorganic arsenic by SPE

Discrimination ergot/wheat based on 2 wavelengths (1220nm/1440nm)

# **Developing detection methods for Biotoxins: Alkaloids, Marine Biotoxins, Mycotoxins**

At the Feed safety conference, Hans van Egmond (RIVM, WP4a co-leader on alkaloids) gave an overview of the alkaloids we can find in feed and updated the legislation regarding this topic. He gave results of recent investigations about the wheat contaminated with charmac (local weed) in Afghanistan and about animal hay contaminated with ragwort in the Netherlands. He underlined the main guidelines of the work package on alkaloids inside the CONffIDENCE project where attention is given to pyrrolizidine, tropane and ergot alkaloids. One poster was dedicated to preliminary results regarding the detection of ergot using near infrared hyperspectral imaging. The study showed the potential of the technique to discriminate the ergot bodies from wheat kernels using 2 wavelengths 1220 nm and 1440 nm selected based on the Fisher coefficient. Similar poster was presented in the framework of the International workshop on multivariate analysis in Valencia.

Read more on alkaloids
Read more on ergot bodies detection



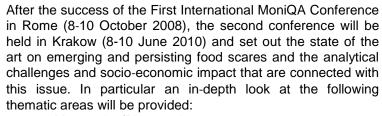
Regarding mycotoxins, at the 3rd Italian National Congress on Mycotoxins held in Rome on 28-30th September 2009, A. Visconti (CNR-ISPA, WP4c leader on mycotoxins) presented an overview of EU outputs on mycotoxin diagnostic, including general information on the CONffDENCE project with particular reference to WP4c activities.

Read more on EU outputs on mycotoxins
Read more on mycotoxins

# **News from other projects**

# 2<sup>nd</sup> MONIQA international conference

08 - 10 June 2010



- Mycotoxins/Phycotoxins
- Food Allergens
- Chemical Contaminants
- Microbiological Contaminants
- Food Additives and Processing Toxicants
- Emerging Issues

The conference will also feature results from related projects, such as BioCop (www.biocop.org) and CONffIDENCE (www.conffidence.eu) in order to reinforce the collaboration between those projects.

Read more about the conference...

# **News highlights**

## **EFSA OPINION ON ARSENIC IN FOOD**

04 Nov 2009

EFSA's panel on contaminants in the food chain (CONTAM Panel) has published an opinion on possible health risks related to the presence of arsenic as a contaminant in food. Arsenic is a widely-occurring contaminant which occurs both naturally and as a result of human activity. It appears in many different forms, which can be either organic (i.e. containing carbon) or inorganic. Food is the main source of exposure to arsenic for the general population in Europe. The EFSA opinion mainly focuses on inorganic arsenic, as long-term





intake of inorganic arsenic has been associated with a range of health problems, including skin lesions, cardiovascular diseases and some forms of cancer. EFSA recommended that exposure to inorganic arsenic, the more toxic form, should be reduced. EFSA also highlighted considerable uncertainties in relation to its risk assessment. It stressed the need for more data on levels of organic and inorganic arsenic in different foodstuffs, as well as on the relationship between arsenic intake levels and possible health effects. WP3 in CONffIDENCE aims at the development of novel methods for inorganic arsenic and will also produce valuable data to be used in future risk assessment of arsenic.

Read more about the EFSA opinion...



#### SAFER FOOD WITH CONFIDENCE

11 Sept 2009

An overview of the new EU Framework Programme 7 project, "CONfflDENCE" has been published in the September 2009 issue of Food Science & Technology – the quarterly journal of the UK's Institute of Food Science & Technology (<a href="www.ifst.org">www.ifst.org</a>) and is reproduced here with the permission of IFST.

Read more about the publication...

# **Upcoming Events**

# VI LATINAMERICAN CONGRESS OF MYCOTOXINS

30 Nov - 04 Dec 2009



We have the pleasure to invite you to the VI Latinamerican Congress of Mycotoxins, organized by the Latinamerican Society of Mycotoxicology, together with the II International Symposium on Fungal and Algal Toxins in Industry, organized by the National Autonomous University of Mexico with an International Committee of several countries worldwide. These two international events will be done simultaneously in Merida, Yucatan, the Maya land of Mexico, from November 30th. to December 4th, 2009. The world best known mycotoxicologists and phycotoxicologists will present you their last discoveries. Moreover a technological exhibition of industries related to mycotoxins and phycotoxins, will be done.

#### **RAPID METHODS EUROPE 2010**

25 - 27 Jan 2010



Rapid Methods Europe is a series of events dedicated to the latest developments in analytical methods and instrumentation for food and feed safety and quality. During the years it has strengthened its position as an important meeting point for science and industry. Rapid Methods Europe presents new and cutting-edge technologies, the two main topics being microbiology and contaminants detection. The three-day programme of Rapid Methods Europe 2010 consists of lectures in plenary meetings and parallel sessions, workshops and demonstrations, an instrument and manufacturers exhibition, and a matchmaking event providing the opportunity to meet companies and research institutes throughout Europe to identify possibilities for international R&D co-operation. We proudly announce that Rapid Methods Europe 2010 will host CONffIDENCE Open Day. Participants CONffIDENCE project are granted a special registration fee for Rapid Methods Europe 2010.

Read more about the conference...



#### OPEN DAY CONFIDENCE

27 Jan 2010

The CONffIDENCE project (funded by the European Commission under Grant Agreement number 211326) aims to further improve food safety in Europe by the development of fast and cost-efficient methods for the detection of a wide range of chemical contaminants in different food and feed commodities (see the project's website: <a href="https://www.conffidence.eu">www.conffidence.eu</a>). Since the start of this project on May 1, 2008, much effort has been put into the development of rapid methods for food and feed safety. The project team would like to share its results so far with all interested stakeholders. For this, an open day will be organized on Wednesday January 27, 2010, from 13:30 – 16:00, directly following the Rapid Methods Europe 2010 Conference

Read more about this open day

## CONffIDENCE FP7 project : www.conffidence.eu

## For further information contact: <a href="mailto:coordination@conffidence.eu">coordination@conffidence.eu</a>

This work is funded by the European Commission, under the FP7 Food Quality and Safety Priority, within the framework of the Collaborative Project CONfflDENCE – 211326 – entitled "Contaminants in Food and Feed: Inexpensive DEtection for Control of Exposure". This project is carried out by a consortium coordinated by RIKILT – Institute of Food Safety (NL) and includes 17 partners. The information reflects the authors views, the European Commission is not liable for any use of the information contained therein.

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