6th International Symposium on
RECENT ADVANCES IN FOOD ANALYSIS
November 5 - 8, 2013 • Prague, Czech Republic
RAFA 2013

WORKSHOP on

Infrared spectroscopy, Raman spectroscopy and chemometrics for monitoring of food and feed products, lab-to-the-sample

Chairs:

Vincent Baeten & Juan-Antonio Fernández Pierna
(Walloon Agricultural Research Centre (CRA-W), Gembloux, Belgium)

Tuesday, 5 November 2013, 9:00 – 13:00 (Leo hall)

8:30–9:00	**Registration for the workshop**
9:00–10:00	**BASICS OF INFRARED AND RAMAN SPECTROSCOPY** ***Vincent Baeten**, Walloon Agricultural Research Centre (CRA–W), Gembloux, Belgium*
10:00–11:00	**BASICS OF CHEMOMETRICS** ***Juan-Antonio Fernández Pierna**, Walloon Agricultural Research Centre (CRA–W), Gembloux, Belgium*
11:00–11:30	**Coffee break**
11:30–11:50	**CHALLENGES OF VALIDATION OF SPECTROSCOPIC METHODS: THE EXAMPLE OF MEAT AND BONE MEAL (MBM) DETECTION** ***Christoph von Holst**, EC–JRC–Institute for Reference Materials and Measurements (IRMM), Geel, Belgium*
11:50–12:10	**NEW TOOLS FOR THE DAIRY SECTOR BASED ON MIR AND NIR SPECTROSCOPY** ***Clément Grelet**, Walloon Agricultural Research Centre (CRA–W), Gembloux, Belgium*
12:10–12:30	**APPLICATION OF FT-IR SPECTROSCOPY FOR AUTHENTICATION OF DISTILLERS DRIED GRAINS AND SOLUBLES (DDGS)** ***Thorben Nietner**, Federal Institute for Risk Assessment, Berlin, Germany*
12:30–12:50	**TRANSFER OF METHODOLOGY FROM LAB TO INDUSTRY FOR THE DETECTION OF ERGOT** ***Philippe Vermeulen**, Walloon Agricultural Research Centre (CRA–W), Gembloux, Belgium*
12:50–13:00	**Discussion & Conclusion of the workshop** ***Vincent Baeten**, Walloon Agricultural Research Centre (CRA–W), Gembloux, Belgium*

Vibrational spectroscopy, as Near infrared (NIR) or Raman, is the most widely used non-destructive technology in the food and feed industries for the daily determination and quantification of qualitative parameters of the materials. The high throughput of the method, the capacity to determine in one single analysis a panoply of parameters, the possibility to build a network of spectrometers together with its potential use both on-line and at-line in a production plant made this technique even more attractive. These techniques provide real-time analyses with an increased sample throughput. Moreover, more recent areas as hyperspectral imaging allow collection of spectroscopic images at different levels from single kernel or particle levels to satellite. This is of great interest for laboratories that control feed compound or cereals. Other decisive advantages of spectroscopic methods are the ability to determine simultaneously different parameters and criteria, no use of reagents and reduced sample preparation.

The combination of these techniques with appropriate data treatment or chemometric tools should help to solve the deep and rapid changes that the agro-food sector is facing with increasing consumer concerns about food and feed safety and quality issues. These concerns arise in part from previous safety crises (e.g. dioxin, BSE, melamine) and in part from the health impact of food and feed. The main outcome of these consumer demands is an increased need for appropriate techniques and methods to help producers, retailers and processors to control and to track their products. Infrared and Raman spectroscopy combined with chemometric should allow to build strategies that can be applied to check (on-line, at-line and at the laboratory level) the quality of food and feed materials, to detect non conformity and subsequently to identify targeted or untargeted adulterants and contaminants among others.

For more information: j.fernandez@cra.wallonie.be

We are looking forward to welcoming you at our workshop!