

The CRA-W

Established in 1872, the Walloon Agricultural Research Centre (CRA-W) is a leading scientific institution, under the Walloon Ministry of Agriculture. CRA-W employs some 450 people including 120 scientists. Its offices, laboratories, greenhouses, orchards and experimental plots occupy an area of about 300 ha. The expertise available at this multidisciplinary research institution covers the following areas: plant breeding, genetic engineering, plant genetic resources management, integrated plant protection, farming systems, agricultural engineering and agro-meteorology, optimisation of agricultural foods productions and analysis and quality control of agro-food products.

The Quality Department of Agricultural Products of the CRA has internationally renowned expertise in spectrometric analysis applied to the qualitative management of agro-food products. As far as research is concerned, we have gone to great lengths to develop analytical techniques that will enable us to measure or assess the quality of agricultural products from various angles. The expertise obtained from this activity gives us the opportunity to offer services to industry as well as to society (analyses conducted on behalf of inspection offices in the Ministry of Agriculture and the Ministry of Public Health). The development of analytical systems to check the authenticity of agricultural products is a priority focus of research within the department. We are trying to position ourselves at the international level in this area. The Quality Department has an expertise on the development and validation of analytical methods for the authentication of agro-food products. This expertise covers different techniques including microscopy, spectroscopy, DNA technology, chromatography or chemometrics among others.



This training is organized within the European Project TRACE (Project 006942 – Tracing Food Commodities in Europe)

<http://www.trace.eu.org/>



For more information:

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TRAINING
on

**Infrared spectroscopy
and Chemometrics**

16th - 20th February 2009



**Walloon Agricultural Research
Centre (CRA-W)**

**Quality of Agricultural Products
Department,
Gembloux – Belgium**

<http://cra.wallonie.be>

Context

- Overview of the theoretical/practical part of the spectroscopic methods most commonly used.
- Introduction to Chemometrics.
- Provide a whole practical session of the different methods developed in the previous points
- Answer all the questions one can find when working with spectroscopy and chemometrics.

Venue

The training will be hosted by the Quality Department of Agricultural Products of the Walloon Agricultural Research Centre (CRA-W) in Gembloux. This location is easily accessible by train or car (only 50 kilometres from Brussels).

Date of the training

February 16-20, 2009

Fee and registration

Participation to this training is 1700€ per participant. The registration fee includes attendance at the 5 days training, the training book with all courses, coffee breaks, lunches and a training diner. Registration is done by sending an email to: fernandez@cra.wallonie.be

Deadline for registration: 1st February 2009

Accommodation

At the moment of the inscription specify your needs and the reservation will be done by the organisers of the training. Payment can be done at the hotel directly.

The audience

The training is technical and practical and aimed at people with none or little knowledge of spectroscopy and chemometrics. Dedicated sessions could be organized for people with some knowledge on the methods.

Speakers

P. Dardenne, J.A. Fernandez Pierna, V. Baeten, G. Sinnaeve, B. Lecler, O. Abbas.

Contents

Each day the training from 9 am. to 5 pm. Mornings will be dedicated to theoretical aspects and afternoons to practical ones. All the practices will be performed at the Quality department of the CRA-W.

The following subjects will be studied during the training:

Infrared Spectroscopy

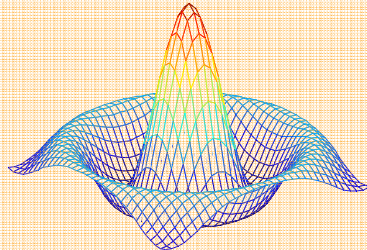
Theory and applications
Experimental / sample plan

NIR

NIR microscopy
NIR imaging
Embedded NIR
Networking

MIR

Raman



Chemometrics

Exploratory analysis

Data visualization / Principal Component Analysis (PCA) / Clustering / Outliers / Uncertainty estimation

Quantification and classification / multivariate calibration

Multiple Linear Regression (MLR)
Principal Component Regression (PCR)
Partial Least Squares (PLS)
Artificial Neural Networks (ANN)
Support Vector Machines (SVM)

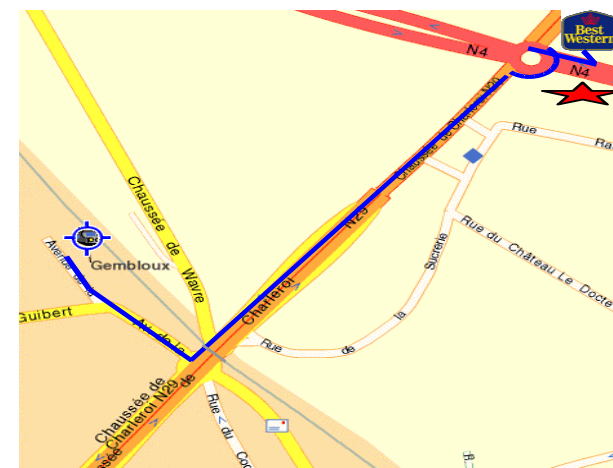
How to get to Gembloux

By train from Brussels

At any station in Brussels (Midi, Central, North, Schumann and Luxembourg) take a direct train (every half an hour) direction Namur-Luxembourg. Those trains stop in Ottignies and in Gembloux.

You can consult directly the timetable of the national railway company website: www.b-rail.be.

It takes 10 min walking from Gembloux Station, to the Quality department of the CRA-W.



By car

From Brussels or from Luxembourg (E411)

Take the exit 11 Thorembais. Follow the direction Charleroi-Gembloux. A bit before the round about with the big metal ring you can cross the road in front of the entrance of Hotel 3 clés.

From Liege (E42)

Take the exit 12 Namur Ouest. Turn to the right and follow the direction Brussels-Gembloux (N4 road). Follow this road until you reach Gembloux. Keep following the road until you see the Hotel 3 clés on your right side, we're located on the other side.