



3rd Training school on thermal analysis

When: 21- 25 September, 2009

Where: Crop Research Institute, Prague

WHAT is a COST Training School?

“Training Schools” within the frame of the Action topic are aimed to provide dissemination from the Action activities and intensive training in a new emerging subject in one of the laboratories of the Action with unique equipment or know how. Those attending are basically but not exclusively young researchers from across Europe but training Schools may also cover appropriate re-training as part of “life-long learning”. For more detailed information see:

http://w3.cost.esf.org/fileadmin/cost_documents/guidelines/Financial_Instruments/FinancialInstruments.pdf

The major aim of this Thermal Analysis Training School will be to acquire the ability to employ the methods of thermal analysis and calorimetry. The participant will become acquainted with thermal analysis (TA) methods and instruments used for measurement of basic thermal characteristics. The lectures will be delivered by renowned theoretical physicist, theoretical thermodynamic physicist and physical chemist. Each participant will measure plant samples through TA. They will determine thermal characteristics of samples prepared for cryopreservation through dehydration as well as vitrification methods. A very important aspect of the TA school is the analysis and the interpretation of data obtained. The knowledge gained in the training school will help the participants to develop cryopreservation protocols for plants on a more efficient (less purely empirical) way.

Preliminary Program:

21 Sept., Mon. - Lectures on:

- Basic principles of thermal analysis
- Differential Scanning Calorimetry
- Thermal analysis methods

- Preparation of Samples – explant pretreatment, dehydration

22- 24 Sept. - Differential Scanning Calorimeter calibration – baseline, cell constant, temperature, cross-talk, heat capacity

- Instrument programming and operation

- Measurement of samples with different water content, E-D, PVS

- Software for result evaluation of thermal analysis
- Advanced Differential Scanning Calorimetry methods
 - Modulated - Differential Scanning Calorimetry
 - Quasithermal Modulated Differential Scanning Calorimetry
- Other thermal methods
 - measurement of freezing or warming rate by thermocouples
 - infrared thermometer

- 25 Sept. Fri*
- Evaluation and interpretation of TA results
 - General discussion
 - Conclusions
 - Excursion to TA lab with another Differential Scanning Calorimeter

Grant

A fixed grant of € 800 will be allocated to selected participants, originating from COST participating countries. This grant should cover for travel and subsistence expenses (€500 is foreseen for accommodation, lunches and dinners for the period of stay (5 days), while € 300 is foreseen for “economical” travel, i.e. by train).

Who can participate?

The number of participants is limited to 6. The “ideal profile” of a participant of this training school is a senior Ph.D. student or a young Post-Doc coming from labs which already have a Differential Scanning Calorimeter (or at least have access to one) or which are going to buy one.

REGISTRATION AND DEADLINES

E-mail a letter of interest (which should include, a clear statement of how attendance at the Training School will benefit the attendant in terms of their current/future research activities and enhance research in their home laboratory) together with any documents which the Applicant may regard as helpful in supporting the application at the evaluation process (including a CV, list of publications, and a letter of support from the Applicant’s PhD supervisor if applicable) before the 10th of June, 2009 to:

- the host of the training school (Dr. Milos Faltus: TAschool@vurv.cz)
- the Chair of the Management Committee of the Action (B. Panis : Bart.Panis@biw.kuleuven.be)

Applicants will be informed by the end of June 2009 by email.