



## 2020 TRAINING COURSES

### DIFFERENTIAL SCANNING CALORIMETRY (DSC)

#### PROGRAM

Two types of DSC training courses are available:

The DSC maintenance training is mainly hands-on, and is designed for the operator of the instrument. Focus is on basic maintenance of the equipment and proper use of the software. It is highly recommended to have already some practical experience before attending this course.

The theoretical DSC training is mainly lecture based, with only a brief hands-on session. It is designed to help the researcher/lab manager in choosing optimum measurement conditions and performing interpretation of the results. Moreover, a general overview of the use of DSC in multiple fields is presented.

#### MAINTENANCE DSC TRAINING

1 day

This training is mainly hands-on and designed for the operator to get experience in doing basic maintenance of his DSC. **Equipment covered: DSC2500, DSC250, DSC25, Discovery DSC.**

08.45 – 09.00	Registration/coffee
09.00 – 12.30	<ul style="list-style-type: none"> <li>• Maintenance of the DSC:               <ul style="list-style-type: none"> <li>• Cleaning a dirty furnace, lid, gripper fingers</li> <li>• Aligning the autolid</li> <li>• Autosampler calibration</li> <li>• Gases and flow rates</li> <li>• Optimum use and maintenance of the cooling accessory</li> <li>• Troubleshooting</li> </ul> </li> </ul>
12.30 – 13.30	Lunch
13.30 – 17.00	<ul style="list-style-type: none"> <li>• Calibration &amp; verification (Tzero, baseline, heat flow, temperature)</li> <li>• Optimisation of experimental conditions</li> <li>• Tips for optimum use of the data analysis software</li> </ul> <p><i>If possible please bring your laptop with Trios installed on it.</i></p>

#### THEORETICAL DSC TRAINING

2 days

This training is mainly lecture based and designed to provide a general review on the importance of experimental parameters and different applications of the DSC. **This training is to a big extent brand independent.**

##### DAY 1

09.15 – 09.30	Registration/coffee
09.30 – 12.00	<ul style="list-style-type: none"> <li>• Introduction technique and instrumentation</li> <li>• Thermodynamic principles</li> <li>• Design of experimental method</li> <li>• Calibration: theory</li> </ul>
12.00 – 13.00	Lunch
13.00 – 16.30	Optimisation of experimental conditions (purge gas, sample preparation, choice of pan type, heating & cooling rate)
16.30 – ...	Question session

##### DAY 2

09.15 – 09.30	Registration/coffee
09.30 – 12.00	<ul style="list-style-type: none"> <li>• Measuring conditions for typical material classes</li> <li>• The glass transition temperature</li> <li>• Melting and crystallization</li> </ul>
12.00 – 13.00	Lunch
13.00 – 16.30	<ul style="list-style-type: none"> <li>• How to measure heat capacity?</li> <li>• Miscellaneous applications</li> <li>• Introduction to Modulated DSC</li> </ul>
16.30 – ...	Question session



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#### PRACTICAL INFORMATION

- LOCATION:** Application Lab TA Instruments  
Brusselsesteenweg 500, 1731 Zellik (B)
- LANGUAGE:** The course language is English.
- NOTES:** Notes are provided at the start of the day.
- REGISTRATION FEE:** Registration fee per person is 1800 Euro for the two days course and 1200 Euro for the one day maintenance course.
- Lunch is included.
  - Participation is free of charge for users who recently bought new equipment, with a maximum of 2 persons (excluding optional hotel fare). Participation is also free of charge for customers with an Academic, Premium or Lifetime Support Plan.
  - Universities/schools receive 100 Euro discount on the registration fee per day.
  - An invoice for course registration (if applicable) will be sent after the course.
- HOTEL:** Hotels located close to our office are:
- Salons Waerboom (Groot-Bijgaarden), [www.waerboom.com](http://www.waerboom.com)  
(A room in the main hotel is the most convenient, not in the aparthotel.)
  - Gosset Hotel (Groot-Bijgaarden), [www.gosset.be](http://www.gosset.be)
- INFO:** For all additional questions, please contact Line Vanden Eede  
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