DMA Basic Training

DSC Training

Modulated DSC Training

Basic Rheology Training

Software Training

TGA Basic Training
Thank you for your interest in **TA Instruments’ Training Courses**. Enclosed please find the detailed program, practical information and a registration form.

**DMA Basic Training**

*This training provides an introduction to the DMA technique and its applications. It is designed for the new operator to get the most out of his DMA. It is mainly lecture based but includes also a practical part.*

09.15 – 09.30 Registration – coffee

09.30 – 12.00 Terminology, introduction to linear viscoelastic theory
   - Instrument design
   - Modes of operation and when to use them
   - When to use a particular clamping configuration
   - Experimental considerations

12.00 – 13.00 Lunch

13.00 – 16.30 Calibration: instrument and temperature
   - Applications with various types of clamps
   - Tips for optimum use of data analysis software

16.30 – …. Question session
Practical Information

Location: Application lab TA Instruments
Zellik (B) or Etten-Leur (NL)

Language / notes: The course language is English.
Notes are provided at the start of the day.

Registration fee: Registration fee is 500 Euro per day per person.
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).
Universities / schools receive 100 Euro discount on the registration fee.
An invoice for course registration (if applicable) will be send after the course.

Hotel: If desired we can make a hotel reservation for you or provide you with information of hotels. Hotel expenses are additional and to be paid directly at the hotel reception.

For all additional questions please contact Katia Van Praet at:

B: +32-2-7060080 or
NL: +31-76-5087270
Registration Form

Mail to  belgium@tainstruments.com or netherlands@tainstruments.com
or fax to  +32-2-7060081 or +31-76-5087280

Name :
Company :
Department :
Address :
ZIP Code : City :
Phone : Fax :
E-mail :

I want to register for Basic DMA Training on  May 28, 2008, in Zellik

Please make hotel reservation on  …………………….. (indicate date)

Registration fee for the course:

☐ Free of charge (user of new equipment)
☐ 500 Euro
☐ 400 Euro (University / school only)

As a confirmation of your registration you will receive at latest a week prior to the course a road description, and if applicable more details with respect to the hotel.
Thank you for your interest in **TA Instruments’ Training Courses**. Enclosed please find the detailed program, practical information and a registration form.

Two types of DSC training courses are available. 
The 1-day basic DSC training is mainly hands-on, and is designed for the operator of the instrument.
The 2-days advanced DSC training is mainly theoretical, with 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.

**DSC Basic Training (hands-on), 1 day**

09.15 – 09.30 Registration – coffee

09.30 – 12.00 Introduction instrumentation
Calibration
Design of an experimental method
Sample preparation and set-up of experiments

12.00 – 13.00 Lunch

13.00 – 16.30 Interpretation of the results
Use of data analysis software

16.30 – …. Question session

There is a fair chance for participants to measure their own samples during this hands-on training.
DSC Advanced Training (theory and some hands-on), 2 days

Part 1

09.15 – 09.30  Registration – coffee

09.30 – 12.00  Introduction technique and instrumentation
   Thermodynamic principles
   Design of an experimental method
   Calibration

12.00 – 13.00  Lunch

13.00 – 16.30  Optimisation of experimental conditions
   (purge gas, sample preparation, choice of pan type, heating & cooling rate, maintenance)

16.30 – ….  Question session

Part 2

09.15 – 09.30  Registration – coffee

09.30 – 12.00  Measuring conditions for typical material classes
   The glass transition temperature
   Melting and crystallisation

12.00 – 13.00  Lunch

13.00 – 16.30  How to measure heat capacity ?
   Hints for optimum use of data analysis software
   Introduction to Modulated DSC

16.30 – ….  Question Session
**Practical Information**

**Location:** Application lab TA Instruments
Zellik (B) or Etten-Leur (NL)

**Language / notes:** The course language is English unless indicated differently.
Notes are provided at the start of the first course day.

**Registration fee:** Registration fee per person is 900 Euro for the 2-days course and 500 Euro for the 1-day 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).
Universities / schools receive 100 Euro discount on the registration fee per day.
An invoice for course registration (if applicable) will be send after the course.

**Hotel:** If desired we can make a hotel reservation for you or provide you with information of hotels. Hotel expenses are additional and to be paid directly at the hotel reception.

For all additional questions please contact Katia Van Praet at:

B: +32-2-7060080 or
NL: +31-76-5087270
Registration Form

Mail to  
belgium@tainstruments.com or netherlands@tainstruments.com
or fax to  +32-2-7060081 or +31-76-5087280

Name :

Company :

Department :

Address :

ZIP Code :  City :

Phone :  Fax :

E-mail :

I want to register for Advanced DSC Training on

- February 19-20, 2008, in Zellik
- November 3-4, 2008, in Etten-Leur

I want to register for Basic DSC Training on

- April 15, 2008, in Etten-Leur (Dutch spoken)
- June 10, 2008, in Zellik (English spoken)
- September 30, 2008, in Zellik (French spoken)

Note that the indicated course location might be subject to changes.

Please make hotel reservation on  .......................  (indicate date)

Registration fee for the course:

- Free of charge (user of new equipment)
- 900 Euro (2-days course)
- 500 Euro (1-day course)

- University / school discount

As a confirmation of your registration you will receive at latest a week prior to the course a road description, and if applicable more details with respect to the hotel.
Thank you for your interest in **TA Instruments’ Training Courses**. Enclosed please find the detailed program, practical information and a registration form.

Two types of Modulated DSC training courses are available. The basic MDSC training is mainly hands-on, and is designed for the operator of the instrument. The advanced MDSC training is lecture based. It is designed to help the researcher / lab manager in choosing optimum measurement conditions and performing interpretation of the results. Examples of the use of MDSC for various applications and to study different types of transitions are covered.

**Modulated DSC Basic Training (hands-on)**

09.15 – 09.30  Registration – coffee

09.30 – 12.00  Introduction instrumentation
  MDSC calibration
  Design of an experimental method
  Sample preparation and set-up of experiments

12.00 – 13.00  Lunch

13.00 – 16.00  Interpretation of the results
  Use of data analysis software

16.00 – ….  Question session

There is a fair chance for participants to measure their own samples during this hands-on training.
Modulated DSC Advanced Training (theory)

09.15 – 09.30  Registration – coffee

09.30 – 12.00  Advantages of MDSC in comparison with conventional DSC
               Calibration of Modulated DSC
               Optimisation of experimental conditions for MDSC (purge gas, sample
               preparation, choice of pan type, modulation parameters and heating rate)

12.00 – 13.00  Lunch

13.00 – 16.00  MDSC data interpretation
               - glass transition region
               - influence of experimental conditions in the melting region

               Special measuring conditions and data analysis
               - thermal conductivity
               - stepwise quasi-isothermal
               - phase angle
               - Lissajous figures

16.00 – ….  Question session
**Practical Information**

**Location:** Application lab TA Instruments
Zellik (B) or Etten-Leur (NL)

**Language / notes:** The course language is English.
Notes are provided at the start of the day.

**Registration fee:** Registration fee is 500 Euro per day per person.
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).
Universities / schools receive 100 Euro discount on the registration fee.
An invoice for course registration (if applicable) will be send after the course.

**Hotel:** If desired we can make a hotel reservation for you or provide you with information of hotels located close to our office. Hotel expenses are additional and to be paid directly at the hotel reception.

For all additional questions please contact Katia Van Praet at:

B: +32-2-7060080 or
NL: +31-76-5087270
Registration Form

Mail to  belgium@tainstruments.com or netherlands@tainstruments.com
or fax to  +32-2-7060081 or +31-76-5087280

Name :

Company :

Department :

Address :

ZIP Code :  City :

Phone :  Fax :

E-mail :

I want to register for Advanced Modulated DSC Training on  March 12, 2008, in Zellik

I want to register for Basic Modulated DSC Training on  June 11, 2008, in Zellik

Note that the indicated course location might be subject to changes.

Please make hotel reservation on  .................  (indicate date)

Registration fee for the course:

☐ Free of charge (user of new equipment)

☐ 500 Euro

☐ 400 Euro (University / school only)

As a confirmation of your registration you will receive at latest a week prior to the course a road description to our application lab, and if applicable more details with respect to the hotel.
Thank you for your interest in **TA Instruments’ Training Courses**. Enclosed please find the detailed program, practical information and a registration form.

**Basic Rheology Training (theory and hands-on), 2 days**

*This training is designed for the user to get a maximum out of his rheometer. It is a mixture between theory and practice.*

**Day 1**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:30</td>
<td>Registration / Coffee</td>
</tr>
<tr>
<td>10:00</td>
<td>Introduction to rheology</td>
</tr>
<tr>
<td>10:30</td>
<td>Introduction to flow and viscometry</td>
</tr>
<tr>
<td>11:00</td>
<td><strong>Practical Session</strong></td>
</tr>
<tr>
<td></td>
<td>• Setting up an instrument</td>
</tr>
<tr>
<td></td>
<td>• Review of calibrations</td>
</tr>
<tr>
<td>11:30</td>
<td>Refreshments</td>
</tr>
<tr>
<td>11:45</td>
<td>Introduction to viscoelasticity and creep</td>
</tr>
<tr>
<td>12:15</td>
<td><strong>Practical Session – flow and creep</strong></td>
</tr>
<tr>
<td>13:00</td>
<td>Lunch</td>
</tr>
<tr>
<td>14:00</td>
<td>Introduction to dynamic techniques</td>
</tr>
<tr>
<td></td>
<td>• Linear Viscoelasticity</td>
</tr>
<tr>
<td></td>
<td>• Frequency sweeps</td>
</tr>
<tr>
<td>15:00</td>
<td>Remaining dynamic techniques</td>
</tr>
<tr>
<td></td>
<td>• Structure and structure recovery</td>
</tr>
<tr>
<td></td>
<td>• Cures (time and temperature ramps)</td>
</tr>
<tr>
<td>15:45</td>
<td><strong>Practical session – dynamic tests</strong></td>
</tr>
</tbody>
</table>
Day 2
This day is dedicated to delegates putting into practice what they have learnt.

09:00 – 10:00  **Practical session – dynamic tests continued**
10:00 – 10:30  Designing experiments and practical tips
   - Choosing the right geometry
   - Interrogating the process to simulate
   - Simulation or microstructure? What's of interest?
10:30 – 11:00  Informal Q&A session based on customer’s own type of samples
   - what are the tests they should use?
10:45 – 11:00  Refreshments & Preparation for practical – selection of products
10:45 – 13:00  **Practical session**
13:00 – 14:00  Lunch
14:00 – 15:30  **Practical session**
15:30           **CLOSE**
Practical Information

Location: Application lab TA Instruments
Zellik (B) or Etten-Leur (NL)

Language / notes: The course language is English.
Notes are provided at the start of the day.

Registration fee: Registration fee is 900 Euro per person for the 2 days.
Lunch is included.
Participation is free of charge for users who recently bought new equipment, with a maximum of 2 persons (excluding optional hotel costs).
Universities / schools receive 200 Euro discount on the registration fee.
An invoice for course registration (if applicable) will be send after the course.

Hotel: If desired we can make a hotel reservation for you or provide you with information of hotels located close to our office. Hotel expenses are additional and to be paid directly at the hotel reception.

For all additional questions please contact Katia Van Praet at:

B: +32-2-7060080 or
NL: +31-76-5087270
Registration Form

Mail to  belgium@tainstruments.com or  netherlands@tainstruments.com
or fax to  +32-2-7060081  or  +31-76-5087280

Name :

Company :

Department :

Address :

ZIP Code :  City :

Phone :  Fax :

E-mail :

I want to register for Basic Rheology Training on  ☐ May 21-22, 2008, in Etten-Leur

☐ September 17-18, 2008, in Zellik

Note that the indicated course location might be subject to changes.

Please make hotel reservation on  ..................  (indicate date)

Registration fee for the course:

☐ Free of charge (user of new equipment)

☐ 900 Euro

☐ 700 Euro (University / school only)

As a confirmation of your registration you will receive at latest a week prior to the course a road description to our application lab, and if applicable more details with respect to the hotel.
Thank you for your interest in TA Instruments’ Training Courses. Enclosed please find the detailed program, practical information and a registration form.

Software Training

This training is designed to help the operator in using the more advanced features of TA Instruments’ Universal Analysis software, including the use of Macro’s for autoanalysis of data files, creation of custom reports, and many other features. Universal Analysis software is used for analysis of DSC, MDSC, TGA, SDT, TMA and DMA data.

09.15 – 09.30 Registration – coffee

09.30 – 12.00 Instruction of UA software capabilities

12.00 – 13.00 Lunch

13.00 – 15.00 Hands-on of UA software capabilities
Practical Information

Location: Application lab TA Instruments
         Zellik (B) or Etten-Leur (NL)

Language: The course language is English.

Registration fee: Registration fee is 350 Euro per day per person.
                 Universities / schools receive 100 Euro discount on the registration
                 fee.
                 Lunch is included.
                 An invoice for course registration will be send after the course.

For all additional questions please contact Katia Van Praet at:

B: +32-2-7060080 or
NL: +31-76-5087270
**Registration Form**

Mail to [belgium@tainstruments.com](mailto:belgium@tainstruments.com) or [netherlands@tainstruments.com](mailto:netherlands@tainstruments.com)

or fax to +32-2-7060081 or +31-76-5087280

Name:

Company:

Department:

Address:

ZIP Code: City:

Phone: Fax:

E-mail:

I want to register for UA Software Training on [ ] September 9, 2008, in Zellik

Note that the indicated course location might be subject to changes.

Registration fee for the course:

[ ] 350 Euro

[ ] 250 Euro (University / school only)

As a confirmation of your registration you will receive at latest a week prior to the course a road description to our application lab.
Thank you for your interest in TA Instruments’ Training Courses. Enclosed please find the detailed program, practical information and a registration form.

TGA Basic Training

This training is designed for the operator to get the most out of his TGA. It includes a theoretical as well as a practical part.

09.15 – 09.30 Registration – coffee

09.30 – 12.00 Introduction technique and instrumentation
  Calibration
  Optimisation of experimental conditions
  (baseline, purge gas, choice of pan type, sample preparation, design of experimental method)
  Typical applications (thermal stability, compositional analysis)

12.00 – 13.00 Lunch

13.00 – 16.00 Hi-Res™ TGA:
  Introduction
  Different modes and their application domain
  Choice of parameter settings
  Applications
  Modulated™ TGA, Kinetics:
    Theory
    Choice of experimental conditions
    Applications
  TGA-EGA:
    Principle (coupling to MS, FTIR)
    Applications
    Tips for optimum use of data analysis software

16.00 – …. Question session
**Practical Information**

Location: Application lab TA Instruments  
Zellik (B) or Etten-Leur (NL)

Language / notes: The course language is English.  
Notes are provided at the start of the day.

Registration fee: Registration fee is 500 Euro per day per person.  
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).  
Universities / schools receive 100 Euro discount on the registration fee.  
An invoice for course registration (if applicable) will be send after the course.

Hotel: If desired we can make a hotel reservation for you or provide you with information of hotels located close to our office. Hotel expenses are additional and to be paid directly at the hotel reception.

For all additional questions please contact Katia Van Praet at:  
B: +32-2-7060080 or  
NL: +31-76-5087270
Registration Form

Mail to  Belgium@tainstruments.com or  Netherlands@tainstruments.com
or fax to  +32-2-7060081 or  +31-76-5087280

Name :

Company :

Department :

Address :

ZIP Code :  City :

Phone :  Fax :

E-mail :

I want to register for Basic TGA Training on  

☐ February 11, 2008, in Zellik

☐ May 27, 2008, in Zellik

Note that the indicated course location might be subject to changes.

Please make hotel reservation on  

............... (indicate date)

Registration fee for the course:

☐ Free of charge (user of new equipment)

☐ 500 Euro

☐ 400 Euro (University / school only)

As a confirmation of your registration you will receive at latest a week prior to the course a road description to our application lab, and if applicable more details with respect to the hotel.