

MicroCal™ Training Courses

Advanced Isothermal Titration Calorimetry

European Training Center Munich, Germany or Amersham, UK

Introduction

Isothermal titration calorimetry (ITC) is a universal technique that directly measures heat changes associated with binding between any two biomolecules. Using label-free, in-solution assays, ITC instruments provide a powerful analytical tool to measure binding affinity and thermodynamics. MicroCal ITC systems are widely used in areas such as pharmaceutical drug discovery, antibody characterization, biotherapeutic development, and throughout life science research.

Course description

The course is designed to allow users with some experience of ITC to fulfill the potential of this powerful technique. It consists of a series of seminars and practical sessions designed to give the participants a good understanding of experimental design, data analysis and to introduce a range of applications of thermodynamic data in the understanding of biomolecular interactions and macromolecular stability.

Participants will have the chance to work with the iTC₂₀₀™.

Data generated by its automated version, Auto- iTC₂₀₀™ will be presented and discussed.

The course will cover the following:

- Introduction to Isothermal Titration Calorimetry and thermodynamics
- Practical considerations and applications
- Experimental design and experimental set-up (VPViewer™ features)
- Data analysis using Origin™ for ITC software
- Frequently asked questions/troubleshooting
- Real time data with “real sample”: **the first 2 registrants** will have the chance to bring along their sample for analysis

All registrants may bring their ITC data for data analysis and discussions.

All courses will be performed in English.

Who should attend?

The structure of the course allows new users to get familiar with the technology very quickly. Users having at least one month of hands-on instrument will get more benefit from the course, as they may have many questions to be answered.

Learning Objectives

By the end of the course, participants will have a clear understanding of ITC technology and thermodynamics and will have gained a profound understanding of analysis of ITC data. After the course the ITC experimental set-up should become merely a routine and less of a challenge.

Course Content

| Day 1 (12:00 am – 5:00 pm) | Day 2 (9:00 am – 5:00 pm) | Day 3 (9:00 am – 1:00 pm) |
|---|--|--|
| <ul style="list-style-type: none"> • Introduction to Isothermal Titration Calorimetry and thermodynamics • Experimental design for binding experiment • VViewer™ features • Experiment start-up | <ul style="list-style-type: none"> • Practical considerations and applications • Experimental design for competitive binding • Introduction to Origin for ITC software • Data analysis using Origin for ITC software | <ul style="list-style-type: none"> • More Thermodynamics • FAQs / Troubleshooting • Questions and Answers session |

European Training Center Munich

Equipped with modern laboratories for protein separation, detection and analysis, we provide training courses for the best outcome and optimal use of your GE Healthcare Life Sciences equipment. Further course offerings in Munich include our Fast Trak™ program for Process chromatography/filtration, protein purification in lab scale with ÄKTA™ and UNICORN™, label free interaction analysis with Biacore™ systems and Ettan™ 2D-DIGE and DeCyder™ 2-D courses. We also offer customized courses and/or on-site training on request.

| Contact Details | Contact Details | Course Calendar 2010, 2. HY |
|--|---|---|
| <p>Munich, Germany GE Healthcare Europe GmbH European Training Center Oskar-Schlemmer-Strasse 11 80807 München, Germany</p> <p>T +49 89 96 281 631 F +49 89 96 281 640 E PSCourses.Europe@GE.com</p> | <p>Amersham, UK GE Healthcare UK Ltd St. Georges Industrial Estate Unit 9 White Lion Road HP7 9LL Amersham, United Kingdom</p> <p>T +44 792 027 3384 F +44 1494 542 018 E MicroCalScientificSupport@GE.com</p> | <p>July 21 – 23 (Amersham) September 08 – 10 (Munich) November 24 – 26 (Munich)</p> <p>Course Fee € 1.250,00 plus German VAT Order No. 94-0130-71 £ 1.230,00 plus British VAT Order No. 94-0130-80 Including course fee and lunch Excluding travel and accommodation costs</p> |

To register please use the registration form.

GE, imagination at work and GE monogram are trademarks of General Electric Company.
ÄKTA, Auto-iTC₂₀₀, Biacore, DeCyder, Ettan, Fast Trak, iTC₂₀₀, Microcal, Superloop, UNICORN, VP-Capillary DSC, VP-DSC and VP Viewer are trademarks of GE Healthcare companies.
2-D Fluorescence Difference Gel Electrophoresis (2-D DIGE) technology is covered by US patent numbers 6,043,025, 6,127,134 and 6,426,190 and equivalent patents and patent applications in other countries and exclusively licensed from Carnegie Mellon University. CyDye: this product or portions thereof is manufactured under an exclusive license from Carnegie Mellon University under US patent numbers 5,569,587, 5,627,027 and equivalent patents in other countries. The purchase of CyDye DIGE Fluors includes a limited license to use the CyDye DIGE Fluors for internal research and development, but not for any commercial purposes. A license to use the CyDye DIGE Fluors for commercial purposes is subject to a separate license agreement with GE Healthcare.
All third party trademarks are the property of their respective owners.
© 2010 General Electric Company—All rights reserved.
First published July 2010
All goods and services are sold subject to the terms and conditions of sale of the company within GE Healthcare which supplies them. A copy of these terms and conditions is available on request. Contact your local GE Healthcare representative for the most current information.
GE Healthcare Europe, GmbH - Munzinger Strasse 5 - D-79111 Freiburg - Germany
For local office contact information, visit: www.gelifesciences.com/contact
www.gelifesciences.com