

Customer Trainings 2012

**Multicollector ICP-MS:
NEPTUNE and
NEPTUNE *Plus***

Training Courses 2012

Contents

1.	General Information	2
	Visa Information	3
2.	Multicollector ICP-MS: NEPTUNE and NEPTUNE <i>Plus</i>	4
	2.1 NEPTUNE and NEPTUNE <i>Plus</i> Basic Operator Training Course Outline	5
	2.2 NEPTUNE and NEPTUNE <i>Plus</i> Instrument Maintenance Training Course Outline	6
	2.3 Registration Form	7
3.	Training Schedule 2012	8

1. General Information

Thermo Fisher Scientific offers a number of training courses throughout the year for advanced mass spectrometry product systems, peripherals and software. The courses are designed to suit the requirements of beginners and advanced operators. In order to get the most from your system, we would like to encourage you to take advantage of getting in-depth knowledge of the instrument and technology from our highly experienced application specialists. Certificates are provided upon completion of the training.

Scheduled training courses take place at our Application Laboratory at

Thermo Fisher Scientific (Bremen) GmbH
Hanna-Kunath-Str. 11
28199 Bremen
Germany

Each course requires a **minimum of three participants**, but each group will not exceed a **maximum of six participants**. The training course language will be **English** unless specified otherwise.

For **training fees** please contact your local Thermo Fisher Scientific sales representative. The training fees include catering during training session (two coffee breaks and lunch). The training fees do not include individual travel costs, hotel accommodation or per diem expenses. However, we offer to arrange your hotel accommodation in Bremen. Preferably, we book our training guests into the Holiday Inn Express Bremen Airport, which is conveniently located next to our facilities, in walking distance of the airport (6 minutes) and 15 minutes by tram from the main railway station. Our preferred rate of 77 € includes breakfast and internet access.

Registration deadline is six weeks prior to scheduled dates. For registration please use our registration form. You can also register online at <http://training.thermo-bremen.com>

In case of **cancellation** we strongly recommend to nominate a substitute if possible. Cancellation prior to registration deadline is possible. Cancellations two weeks prior to scheduled courses are subject to a 50 % cancellation fee. Cancellations a week prior to scheduled courses are subject to a 90 % cancellation fee.

On-site training Thermo Fisher Scientific can also conduct the training courses at your facilities. The on-site training courses will be customized according to your instrument(s), software and application requirement(s). Your own instrument(s) will be used to train operation and maintenance procedures.

Training upon request: Training courses with a very special content will be held upon request only.

Scheduling of onsite training and the factory based instrument maintenance training cannot be at short notice but must be agreed upon in advance.

Training courses may be rescheduled or cancelled due to a lack of participants or other reasons. Already registered attendees will be informed as soon as possible.

2. Visa Formalities

In case you need a visa for Germany, please fill in the form below to enable Thermo Fisher Scientific (Bremen) GmbH to issue the visa invitation letter. Please mail the form to training.bremen@thermo.com or fax to No. +49 421 54 93 396.

Please allow 2-3 weeks for processing and mailing of the invitation letter.

Last name (surname)	
First name(s) (given name(s)):	
Title:	
Gender (male / female)	
Date of birth DD - month (in letters) - YYYY	
Number of passport:	
Dates of planned entry into and exit from Germany	
Correct and complete name and address of customer's company or institute, including telephone and fax numbers (no postbox):	
Expenses for travel, lodging, health insurance and per diem will be borne by:	
Correct and complete address of the embassy where to apply for visa, including telephone and fax numbers:	
Correct and complete address (no postbox) of where the originals of the invitation letters shall be sent by courier, including contact person, telephone and fax numbers:	

2. MC-ICPMS – NEPTUNE and NEPTUNE *Plus*

The **MC-ICPMS operator training courses** are designed for customers who have purchased the NEPTUNE and NEPTUNE *Plus*. The **general objective** of these training courses is to familiarize with the NEPTUNE and NEPTUNE *Plus* instrument features, basic instrument operations, check and maintenance, collector system, methods as well as software, and trouble shooting.

Participants' profile: General understanding of mass spectrometry (MS), English language.

The aims of the **MC-ICPMS lab manager training course** is to train lab-managers to a level of competence such that they are able to carry out trouble-free preventive maintenance work, and to communicate technical problems with service engineers precisely, do tests in advance and support problem solutions. It should be noted that this course focuses on a 'hands on' approach.

Participants' profile: Thorough understanding of mass spectrometry (MS) and **MC-ICPMS**, English language.

5-day Basic Operator Training Course	27. February – 03. March 2012
5-day Basic Operator Training Course	22. – 26. October 2012
2-day Maintenance Training Course at the factory only	29. - 30. October 2012

To check the currently available training dates, please visit <http://training.thermo-bremen.com>

Training Sessions:

Monday	10:00 – 16:30 h
Tuesday – Thursday	09:30 – 16:30 h
Friday	09:30 – 14:00 h

2.1 NEPTUNE / NEPTUNE *Plus* Basic Operator Training Course Outline

5-day training course

Basic Introduction:

- Introduction to Mass Spectrometry
- Principle of ICP-MS
- Design Basics of the NEPTUNE and NEPTUNE *Plus*
- Applications

General Explanations

- Features
- Geometry
- Pumping System
- Electronics

Hardware Details and Handling

- Ion Source
- Sample Preparation
- Collector System
- RPQ/Ion Counting
- High Mass Resolution
- Multiple Ion Counting

Computer System

- Operating System
- Application Software Structure
- Communication with MS

Application Software

- Functionality
- Set-up and Calibrations
- Manual Operation
- Fully Automatic Operation
- Editors
- Diagnostics

Sample Analyses

- Sample Preparation (different elements)
- Collector Adjustments
- Analysis Parameter Set-up
- Data Evaluation
- High Mass Resolution Measurements
- Multiple Ion Counting Application

Miscellaneous

- Specifications
- Maintenance, Baking
- Trouble Shooting
- User Applications

2.2 NEPTUNE / NEPTUNE *Plus* Instrument Maintenance Training Course Outline

2-day training course

NEPTUNE and NEPTUNE *Plus* (Preventive) Maintenance

- Skimmer Valve Maintenance
- Extraction Lens exchange
- Slit Exchange
- Water Flow Sensor Cleaning
- Ion Counter Exchange
- SEM Exchange
- NEPTUNE and NEPTUNE Plus Hardware Manual

NEPTUNE and NEPTUNE *Plus* Software

- Reinstallation and Setup of the Software
- Software Backup
- Software Patch

Explaining Electronics & Baking

- PCB Functions
- ICA electronics, motor controller
- Front-End, magnet field electronic
- HV-Units
- Baking the Instrument

Individual Questions

2.3 Registration Form

NEPTUNE and NEPTUNE *Plus* Training

Please mail this form to training.bremen@thermo.com
or fax it to our office at ++49 (421) 54 93 396. Thank you.

<p>Participant</p> <p>Last name: _____</p> <p>First name: _____</p> <p>Title: _____</p> <p>Company/Institute: _____</p> <p>Address (street): _____</p> <p>Postal code: _____</p> <p>City / State: _____</p> <p>Country: _____</p> <p>Phone: _____</p> <p>Fax: _____</p> <p>E-Mail: _____</p>	<p>Training Course:</p> <p>NEPTUNE and NEPTUNE <i>Plus</i></p> <p><input type="checkbox"/> Basic Operator Training</p> <p><input type="checkbox"/> Instrument Maintenance Training</p> <p>Date: _____</p> <p>Accommodation</p> <p>Hotel reservation Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>Smoking <input type="checkbox"/> Non-smoking <input type="checkbox"/></p> <p>At Holiday Inn Express Bremen Airport <input type="checkbox"/> (77 € including breakfast and internet access)</p> <p>Other <input type="checkbox"/> (please specify price range / location)</p> <p>Date of Arrival: _____</p> <p>Date of Departure: _____</p>
<p>Our Instrument is</p> <p>_____</p> <p>Service number (if known): _____</p> <p>S/N _____</p> <p>We use the following software</p> <p>_____</p> <p>Our main application is</p> <p>_____</p>	<p>Remarks:</p>

Date _____

Signature _____

3. Customer Operator Trainings

To check the currently available training dates, please visit

<http://training.thermo-bremen.com>

Instruments	Training Course
Multicollector ICP-MS NEPTUNE / NEPTUNE Plus	NEPTUNE and NEPTUNE <i>Plus</i> Basic Operator Training <i>5-day course</i> Instrument Maintenance Training <i>2-day course</i>
Thermal Ionization Mass Spectrometer TRITON / TRITON Plus	TRITON and TRITON <i>Plus</i> Basic Operator Training <i>5-day course</i> Instrument Maintenance Training <i>2-day course</i>
DFS	DFS Instrument Operator Training for Quantitative Applications <i>5-day course</i> DFS Instrument Operator Training for Qualitative Applications and Characterization <i>5-day course</i> DFS Dual Data Operator Training <i>3-day course</i>
ICP-MS / GD-MS XSERIES 2 ELEMENT ELEMENT 2 ELEMENT XR ELEMENT GD	XSERIES 2 Operator Training <i>3,5-day course</i> ELEMENT2 / ELEMENT XR Operator Training <i>5-day course</i> ELEMENT2 / ELEMENT XR German Language Operator Training <i>5-day course</i> ELEMENT GD Operator Training <i>5-day course</i>
Exactive Q Exactive Orbitrap Elite Orbitrap Velos Pro LTQ Orbitrap Velos LTQ Orbitrap XL LTQ Orbitrap Discovery LTQ FT	These trainings will be organized by the European Training Institute ETI. For more information please contact: euro.training.hemel@thermofisher.com or catherine.lemardele@thermofisher.com Individual training available upon request.

3. Customer Operator Trainings Overview - continued

To check the currently available training dates, please visit
<http://training.thermo-bremen.com>

Instruments	Training Course
Isotope Ratio Mass Spectrometers DELTA Series MAT 253 / MAT 252	GC-EA: GC IsoLink, ConFlo III/IV and Elemental Analyzer and TC/EA Peripherals <i>5-day course</i>
	GB-EA: GasBench II, ConFlo III/IV and Elemental Analyzer and TC/EA Peripherals <i>5-day course</i>
	EA: Elemental Analyzer and TC/EA Peripherals <i>3-day course</i>
	GC-GB: GC IsoLink, ConFlo III/IV and GasBench II <i>5-day course</i>
	GC-EA: Elemental Analyzer and TC/EA Peripherals and GC IsoLink, ConFlo III/IV <i>5-day course</i>
	LC: LC IsoLink and Peripherals <i>3-day course</i>
	Dual Inlet: Dual Inlet and Peripherals <i>3-day course</i>
	GB-GC: GasBench II and GC IsoLink, ConFlo III/IV <i>5-day course</i>
	GC-EA: GC IsoLink, ConFlo III/IV and Elemental Analyzer and TC/EA Peripherals <i>5-day course</i>
	Isodat Workshop Basic Software Training Advanced Software Training, Hardware programming