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2014

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WATERS EDUCATIONAL SERVICES

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Waters

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Waters Core Chromatography Training (2 Days)

Course Description

The learning objective of this two day course is to teach the user core chromatography, system and software fundamentals in an outcomes based approach. The course focuses on practical exercises conducted on the instrument to reinforce topics covered from running samples through to reporting on Empower 2 or 3 Software.

Course Topics

- Daily system startup and maintenance
- Software Overview
- Applying methods to run samples
- Acquiring data
- Reviewing Results
- Processing Results
- Reporting

Who Should Attend

- This course is designed for laboratory personnel who are responsible for operating HPLC systems and require an enhancement/refreshment of their current HPLC skills.

Pre-requisites

- None

Course notes

- Each attendee will receive course manuals to keep for future reference and a Certificate of Attendance.

Duration

2 Days

Cost per Delegate

R 5,800-00 Excl. VAT per person

Part Number

3WE101

Please refer to page 11-12 for General Information and Core Training Registration Form

Data Acquisition, Processing and Reviewing in Empower (1 Day)

Course Description

This Course focuses on advanced Empower 2 or 3 Software acquisition and processing features, using the Pro interface to create methods, optimize integration, and process data

Topics Covered

- Creating Acquisition Methods
- Using the review window
- Developing a processing method
- Apex Track detection and integration
- System suitability overview
- Altering sample information and batch/background processing
- Reviewing results and calibration curves
- Saving calibration curves, using an earlier calibration curve, recalculating results

Who Should Attend

Experienced Empower 2 or 3 software users who want to customize the software to meet individual lab application needs.

Cost

R 3,050-00 Excl. VAT per person

Minimum 2 people

Part Number

3WE201 (On-site Request Only)

Please refer to page 10 for On-Site Request Requirements



Empower - Custom Fields and Reports (1 Day)

Course Description

This course focuses on advanced Empower 2 or 3 Software report publishing features, using the Pro interface to create custom fields, formulas and calculations

Topics Covered

- Understanding Custom Fields
- Adding Sample identifiers using the keyboard or a selection from a list
- Adding component specific numerical information
- Calculations within and between peaks
- Boolean calculations with peaks
- Using text strings as the output for peak calculations
- Reporting fields only within specified limits
- Inter-sample and inter-sample summary calculations
- Customizing headers and footers with logos and special information
- Lining up information on the report page
- Finding information for the report
- Using Empower 2 or 3 Software to generate reports for methods
- Using data filters
- Creating composite groups
- Summarizing statistical information
- Using overlay chromatograms and ordering tables
- Summarizing component information for all results in a result set
- Using composite groups to associate and order chromatograms and tables
- Summarizing component information for all results in a result set

Cost

R 3,050-00 Excl. VAT per person

Minimum 2 people

Who Should Attend

Experienced Empower 2 or 3 Software users who want to customize the software to meet individual lab application needs

Part Number

3WE202 (On-site Request Only)

Please refer to page 10 for On-Site Request Requirements

Empower - Admin Tools for Productivity (1 Day)

Course Description

This course provides attendees with the basic knowledge to administer Empower 2 or 3 in an Enterprise or Workgroup environment.

Topics Covered

- Networking fundamentals
- Enterprise Architecture
- Administration Tools
- User management
- Project management
- Configuring Empower nodes
- Empower communication pathways
- Database backup

Cost

R 3,050-00 Excl. VAT per person

Minimum 2 people

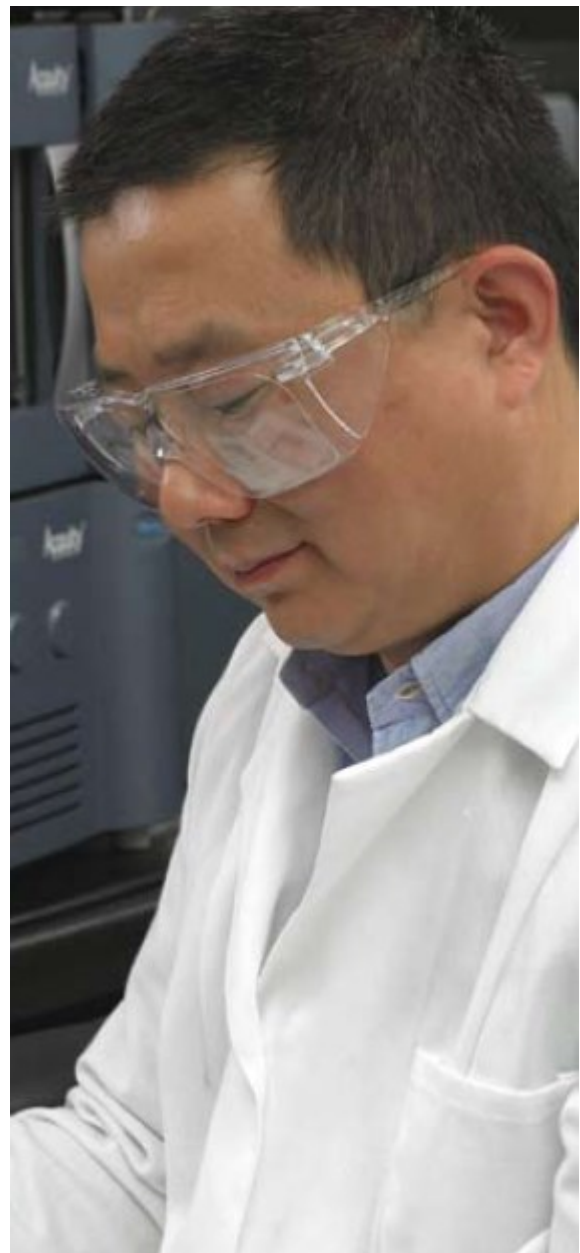
Who Should Attend

System administrators in an Empower 2 or 3 Enterprise or Workgroup

Part Number

3WE203 (On-site Request Only)

Please refer to page 10 for On-Site Request Requirements



Using the PDA Detector with Empower™ Software (1 Day)

Course Description

Practical Use of the Waters PDA Detector and Empower Software provides the fundamental information that you need to acquire and utilize PDA data with confidence using Empower chromatography software. You will use Empower software with PDA data sets throughout the entire course. The instructor led segments and the practice exercises reinforce the skills needed for utilizing PDA detection for problem-solving.

Topics Covered

- PDA Overview
- Guidelines for collecting 3-dimensional data with the PDA detector
- Reviewing PDA data
- Building a Processing Method
- Peak Purity
- Creating a UV Library and Library Matching
- Reporting PDA Data

Who Should Attend

- Empower software users who want to rapidly learn to utilize the capabilities of the Waters PDA detector for 3D analysis.

Pre-requisites

- The class attendee must be familiar with either the Empower QuickStart or Pro Interface. Knowing how to create a processing method with 2-dimensional chromatography data is helpful.

Course Notes

- Each attendee receives a course manual for reference during and following the course and will receive a Certificate of Attendance.

Duration

1 Day

Cost

R 3,050-00 Excl VAT per person

Minimum 2 people

Part Number

3WE204 (On-site Request Only)

Please refer to page 10 for On-Site Request

High Performance Liquid Chromatography Theory (1 Day)

Course Description

This classroom theory course guides the attendee through the fundamental principles of High Performance Liquid Chromatography

Topics Covered

- What is liquid Chromatography?
 - History and definition
 - Techniques

- How does HPLC work?
 - System components
 - Operation
 - Detectors
 - What is a Chromatogram
 - Identifying and Quantitating Compounds
 - Isocratic and Gradient Chromatography
 - HPLC on different scales (Analytical, preparative, process)

- HPLC column Hardware
 - Design
 - Resolution
 - Efficiency
 - Selectivity

- HPLC Separation modes
 - Polarity based separations (normal phase, reverse phase, HILIC)
 - Ion chromatography
 - Size Exclusion chromatography

Who Should Attend

This Course is for anyone who is new to HPLC or wants to build a strong foundation on the theory of HPLC

Duration

1 Day

Cost

R 850-00 Excl VAT per person

Minimum 2 people

Part Number

3WE102

Mass Spectrometry Theory (1 Day)

Course Description

This classroom theory course guides the attendee through the fundamental principles of mass spectrometry.

Topics Covered

- What is Mass Spectrometry? Where do I use it?
- Isotope and elemental Mass Spectrometry
- Components of a mass Spectrometer
- Common Ionization techniques
 - Electrospray Ionization (ESI)
 - Atmospheric Pressure Chemical Ionization (APCI)
 - Alternative ionization techniques (API, MALDI, Desorption)
- Different Types of Mass Spectrometers
- The analyzer
 - Principles of Quadrupole Mass Spectrometers
 - Fragmentation
 - Principles of Time of Flight and hybrid Mass Spectrometers
- Types of Mass spectrometry methods available (e.g. SIR, SCAN, MRM)
- Principles of Accuracy and Resolution
- Interpretation of Mass Spectrometer output
 - Isotope Characteristics
 - Even and odd electrons
 - Characterizing Spectra
- Quantitation and Calibration
- Solvents and Caveats for LCMS
- Ion suppression
- Matrix Effects

Who Should Attend

This Course is for anyone who is new to Mass Spectrometry or wants to build a strong foundation on the theory of Mass Spectrometry.

Duration

1 Day

Cost

R 850-00 Excl VAT per person

Minimum 2 people

Part Number

3WM102

Masslynx™ 4.1 Software Training (1 Day)

Course Description

This instructor-led, hands on, computer course guides the attendee from login to data acquisition through reporting. The course format includes exercises to reinforce the topics covered.

Topics Covered

- Masslynx™ Software overview
- Creating Projects:
 - Inlet Methods
 - MS Methods
 - Sample Lists
- Processing Data
 - Integration
 - Smoothing
 - Subtraction
 - Annotation
- Creating a processing method for Quantitation
- Reviewing batch results and calibration curves
- Generating reports using Quanlynx™/ Targetlynx™ Software

Who Should Attend

This Course is for anyone who wants to build a strong foundation to use Masslynx Software. If your answer is "no" to the following questions, this course is a good choice for you:

- Can you confidently process data to perform qualitative spectral analysis?
- Can you generate calibration curves and quantify unknowns?
- Do you know how to create printed reports that document instrument settings and processing parameters?

Duration

1 Day

Cost

R 3,050-00 Excl VAT per person

Minimum 2 people

Part Number

3WM101 (On-site Request Only)

Please refer to page 10 for On-Site Request Requirements

Onsite Training

Course Description

To maximize effect and individual attention to attendees, a maximum of 4 delegates (Maximum 2 delegates per instrument) are allocated for On-Site Requests.



Topics Covered

- Waters Core Chromatography Training (2 Days)
- Data Acquisition, Processing and Reviewing in Empower (1 Day)
- Empower - Custom Fields and Reports (1 Day)
- Empower - Admin Tools for Productivity (1 Day)
- Using the PDA Detector with Empower™ Software (1 Day)
- Masslynx™ 4.1 Software Training (1 Day)

Other Onsite training requests

We will work with you to develop a curriculum that meets your educational goals and scheduling requirements

The Fee Structure for customized onsite training is determined by the number of delegates, days of instruction and course content.

Please contact your local sales consultant to discuss your needs.

General Information: Terms and Conditions

Course Inclusions

- All lunches and refreshments are included in the course fee.
- On arrival all attendees are provided with a course pack, which includes course notes and writing materials.
- A Certificate of Attendance is given to each candidate on completion of the course.
- Waters Core Chromatography Courses are run with a small number of attendees for maximum effect

Venue

Microsep (Pty) Ltd
2 Saturn Crescent
Linbro Business Park
Frankenwald Ext 30
Sandton

Hotel Accommodation

- Hotel accommodation and payment is for your company's responsibility.
- Recommended local hotels: City Lodge Morningside or Town Lodge Grayston Drive.

Travel

- Travel arrangements should be made upon receipt of confirmation only.
- Microsep (Pty) Ltd is not responsible for reimbursement of non-refundable tickets as a result of class cancellation.
- Acceptance of the registration for this course indicates that Microsep (Pty) Ltd will not be held responsible for any inconvenience or losses incurred during the training or while travelling for this course.



Cancellation

Cancellations will incur the following charges:

- | | |
|------------------|-----------------------|
| • 10 Days Prior | 20% of training cost |
| • 5 Days Prior | 50% of training cost |
| • No show on day | 100% of training cost |

Microsep (Pty) Ltd reserves the right to cancel any course 10 business days prior to the course's start date, when minimum enrolment is not met.

Dates:

Waters Core Chromatography Training 3W101	HPLC Theory Course 3WE102	Mass Spectrometry Theory 3WM102
12-13 March	18 March	19 March
9-10 April	20 May	21 May
14-15 May	19 August	20 August
11-12 June	14 October	15 October
23-24 July		
13-14 August		
10-11 September		
22-23 October		

Fax the completed registration form to:

Company: Microsep (Pty) Ltd

Attention: Waters Sales Secretary

Fax no: 011 553 2400



Please select the course that you would like to attend:

Waters Core Chromatography Training 3W101	HPLC Theory Course 3WE102	Mass Spectrometry Theory 3WM102
12-13 March <input type="checkbox"/>	18 March <input type="checkbox"/>	19 March <input type="checkbox"/>
9-10 April <input type="checkbox"/>	20 May <input type="checkbox"/>	21 May <input type="checkbox"/>
14-15 May <input type="checkbox"/>	19 August <input type="checkbox"/>	20 August <input type="checkbox"/>
11-12 June <input type="checkbox"/>	14 October <input type="checkbox"/>	15 October <input type="checkbox"/>
23-24 July <input type="checkbox"/>		
13-14 August <input type="checkbox"/>		
10-11 September <input type="checkbox"/>		
22-23 October <input type="checkbox"/>		

Company Details

Company Name _____

Postal Address _____

Postal Code _____

Tel _____

Fax _____

Results addressed to _____

Delegate Details

First Name _____

Surname _____

E-mail _____

Note

Please print clearly

Use a separate registration form for each delegate

Dietary Requirements

Vegetarian

Halaal

Order No.