

> 25 years experience in GPC/SEC customer training

PSS has offered seminars for GPC/SEC and related techniques for more than 25 years. Our teaching format is to combine lectures, hands-on lab work, hands-on software training, and individual instruction based upon the background and application of the participants.

You will experience:

- a comprehensive and effective learning experience
- small practical workgroups with an experienced tutor
- a relaxing atmosphere to discuss application questions and seminar topics

PSS trainers are not only experts in GPC/SEC and related techniques, but also polymer chemists with a broad synthesis and properties knowledge.

PSS offers different types of training to meet your special needs

1. Face-to-face training in Europe (Mainz, Germany close to Frankfurt International Airport) (Page 1-4)
2. In-house training (Page 5)
3. Webinars (Page 5-8)

## 1) Face-to-face training in Europe

### 1.1 General training and Columns

**Location:** Mainz, Germany

**Dates:** 15. - 16.03.2012

or

20. - 21.09.2012

**Course fee:** € 1.290 +  
VAT@19%

#### Course 899-0022

#### GPC/SEC Training Course

This training course provides theory lectures and practical sessions for the modern analysis of macromolecules using gel permeation chromatography (GPC), also known as size exclusion chromatography (SEC).

It covers the theoretical background of the separation technique, gives practical advice for reproducible and accurate analysis, and shows the application advantages as well as the limitations of GPC/SEC and GPC/SEC hyphenation with light scattering, viscometry and other techniques.

In the practical sessions small workgroups (maximum 5 people) validate a GPC/SEC system, check the performance of the separation column, calibrate, and evaluate samples using different techniques. Each group has its own tutor, an experienced polymer chemist, to discuss also special applications and questions.

#### Who should attend?

- Analysts, managers and researchers who currently use or plan to use GPC/SEC in a laboratory.

This entry level course focuses on providing and improving their overall skills set and gives hands-on GPC/SEC experience.

> 25 years experience in GPC/SEC customer training

**Location:** Mainz, Germany  
**Date:** 27. - 28.06.2012

### Course 899-0025

#### Hands-on viscometry/light scattering training

This training course covers all aspects for working with advanced detection methods and instrumentation for the determination of molar masses, sizes, and structures of macromolecules and biopolymers in solution.

Lectures providing the theoretical background of (multi angle) light scattering and viscometry will be followed by hands-on training sessions on practical aspects and data processing.

Tutored discussions in small workgroups and a trouble shooting session ensure that all aspects of molar mass sensitive detection are completely covered. Each group has its own tutor, an experienced polymer chemist, to discuss also special applications and questions.

**Course fee:** € 1.400,-+  
VAT@19%

#### Who should attend?

- All scientists working with techniques to determine the molar mass and the size of polymers in solution.
- Scientists interested in adding molar mass sensitive detection to their equipment.
- Users of light scattering and viscometry detectors (triple detectors) independent on the brand.

**Location:** Mainz, Germany  
**Date:** 16.10.2012

### Users Meeting: GPC/SEC Columns

The PSS GPC/SEC Column Users Meeting brings together users and PSS specialists to discuss, listen, and learn about GPC/SEC columns, the heart of any GPC/SEC system.

**Course fee:** € 490,-+  
VAT@19%

It covers all factors that affect a successful selection of stationary phases for the separation of molecules according to size. Understanding of these basic considerations ensures method robustness, good resolution and accuracy.

Universities and  
Institutes:

€ 100,-+  
VAT@19%

Since the theory and practical part deal with general topics, it is not required that participants use PSS columns. Please use the chance to talk directly with the developers of the PSS columns and meet other GPC/SEC users!

#### Who should attend?

- All scientists working with GPC/SEC/GFC.
- Technicians who have to develop new methods for the characterization of polymers, biopolymers, polysaccharides and proteins.

> 25 years experience in GPC/SEC customer training

### 1.3 PSS WinGPC Software

**Location:** Mainz, Germany  
**Date:** 10.09.2012

#### **Course 899-0030**

##### **Reporting with the WinGPC Report Designer**

This software training course is designed for present users of the WinGPC ReportDesigner and for future clients planning to implement this versatile tool.

**Course fee:** € 490,-+  
VAT@19%

It offers lectures and a practical session given by an experienced polymer chemist with extensive knowledge about chromatography, WinGPC and the ReportDesigner.

After successful participation each attendee should be able to create layouts (1 or more pages)

- with the company's choice of content, layout and style
- with meaningful result tables, figures and on-line calculated quality criteria
- with the optimum output format to support the company's workflow requirements.

**Location:** Mainz, Germany  
**Date:** 11.09.2012

#### **Course 899-0029**

##### **Use and optimization of WinGPC UniChrom MCDS**

This software training course is designed to give users of the Macromolecular Chromatography Data System (MCDS) WinGPC a strong introduction to make a targeted and efficient use in the lab.

**Course fee:** € 490,-+  
VAT@19%

It offers lectures and a practical session given by an experienced polymer chemist with extensive knowledge about chromatography and WinGPC.

After successful participation each attendee should be able

- to use WinGPC UniChrom basic functions efficiently
- to identify and apply WinGPC features for advanced analysis
- to optimize the workflow in the lab
- to obtain and qualify results

**Location:** Mainz, Germany  
**Date:** 12.09.2012

#### **Course 899-0031**

##### **Reliable data evaluation with the WinGPC modules viscometry and light scattering**

This software training course is designed for present users of the WinGPC software modules viscometry, single angle light scattering, multi angle light scattering and for future clients planning to implement light scattering, viscometry or Triple detection.

**Course fee:** € 490,-+  
VAT@19%

It offers lectures and practical PC sessions given by an experienced polymer chemist with extensive knowledge about chromatography, WinGPC Unity and the methods described above. Participants should be familiar with the basic WinGPC features and functions.

Previous attendance of the WinGPC UniChrom software training course (P/N 899-0029) is recommended, but not required. For clients interested in a hands-on training including live measurements with the instruments, PSS offers an alternative 2-day viscometry/light scattering hands-on training (P/N 899-0025).

After successful participation each attendee should be able

> 25 years experience in GPC/SEC customer training

- to identify the best method for advanced molar mass determination of samples
- to determine important instrument and system constants
- to achieve reliable results from viscometers, light scattering detectors and Triple detectors
- to recognize and read molar mass results obtained with molar mass sensitive detectors correctly
- to evaluate data faster and with higher confidence

**Location:** Mainz, Germany  
**Date:** 13.09.2012

**Course 899-0032**

**Learn convenient ChromPilot instrument control**

This software training course is designed for present users of the WinGPC UniChrom ChromPilot and for future clients interested in implementing a convenient and cost effective infrastructure.

**Course fee:** € 490,-+  
VAT@19%

It offers lectures and practical PC sessions given by an experienced polymer chemist with extensive knowledge about chromatography and WinGPC. Participants should be familiar with the basic WinGPC features and functions. Previous attendance of the WinGPC UniChrom software training course (P/N 899-0029) is recommended, but not required.

After successful participation each attendee should be able

- to administrate the ChromPilot
- to program sample sequences efficiently
- to implement intelligent and cost saving measures

**Location:** Mainz, Germany  
**Date:** 14.09.2012

**Course 899-0033**

**Ensure WinGPC UniChrom traceability and compliance**

This software training course is designed for WinGPC Compliance Pack administrators, IT professionals responsible for CSV (computer system validation), and users responsible for validation.

**Course fee:** € 490,-+  
VAT@19%

It offers lectures and practical PC sessions given by an experienced polymer chemist with extensive knowledge about chromatography and WinGPC. Participants should be familiar with the basic WinGPC features and functions. Previous attendance of the WinGPC UniChrom software training course (P/N 899-0029) is recommended, but not required.

After successful participation each attendee should be able

- to administrate the WinGPC Compliance Pack
- to identify and apply settings reflecting the company policy
- to control audit trails
- to set user level rights
- to perform meaningful IQ/OQ for GPC/SEC systems

**Location:** Mainz, Germany  
**Date:** 17.10.2012

**WinGPC Users Meeting**  
**Who should attend?**

**Course fee:** free of charge

- All current and prospective users of PSS WinGPC
- All WinGPC users who want to exchange ideas and discuss with other users
- WinGPC users who want to upgrade their systems• Users who want to implement new data processing options like copolymer analysis, lightscattering and/or viscometry data processing

> 25 years experience in GPC/SEC customer training

**How you will benefit!**

- Understand what you can do with PSS WinGPC
- Discuss your tasks and ideas with PSS professionals and developers
- Learn how you can optimize your WinGPC processes
- Understand how you can work more productively
- See how you can implement new ideas effectively and seamlessly
- Get hands-on feedback in the workshops and the user forum

**2) In-house training**

**Location:** upon agreement  
**Dates:** upon agreement

**Course:** 899-0005  
**Course fee:** € 1510,-  
(1-4 persons)

**Course:** 899-0014  
**Course fee:** € 2.600,-  
(5-9 persons)

Company seminars and seminars covering several days upon agreement

**PSS GPC in-house training**

1-day on-site training with an experienced polymer chemist

**Potential subjects:**

- key concepts in polymer synthesis and liquid chromatography techniques (GPC/SEC/HPLC)
- fundamentals of GPC/SEC, separation mechanism, objectives
- experimental set-up parameters
- modern GPC/SEC column trends, column selection
- best practice in GPC/SEC method development
- instrument qualifications
- calibration methods
- how to be more successful and productive in GPC/SEC
- novel approaches in copolymer analysis, multi detection and coupling with hyphenated techniques
- tips&tricks for WinGPC (Unity) software
- tips&tricks for applications

All PSS in-house courses are completely customized and organized in close cooperation with the client.

**3) Webinars**

**Dates:** 09.-10.05.2012  
24.-25.10.2012

**Course:** 899-00web  
**Course fee:** US\$ 295,-

Company seminars upon agreement

**GPC/SEC Basic Training**

This lecture-style training course teaches skills for modern analysis of macromolecules molar mass and property distributions, using gel permeation chromatography (GPC), a.k.a. size exclusion chromatography (SEC).

The entry level course focuses on providing and improving the overall skills set. It is most useful for attendees having at least some hands-on GPC experience.

The 4-hour program offers the fundamental aspects of the GPC/SEC separation technique, with a balanced view of both, the advantages and limitations of GPC/SEC (stand-alone or hyphenated with light scattering, viscometry, and other techniques).

> 25 years experience in GPC/SEC customer training

**Key Topics**

- Key Concepts in Polymer Synthesis and Liquid Chromatography techniques (GPC/SEC/HPLC)
- Fundamentals of GPC/SEC, separation mechanism, objectives
- Experimental set-up parameters
- Modern GPC/SEC Column Trends, Column Selection
- Best Practice in GPC/SEC Method Development Instrument qualifications
- Calibration methods
- How to be more successful and productive in GPC/SEC
- Novel Approaches in Copolymer analysis, multi detection and coupling with hyphenated techniques

**Who should attend?**

- Analysts, managers and researchers who currently use GPC/SEC in a laboratory.

**Dates:** 15.-17.02.2012  
27.-29.06.2012  
10.-12.10.2012

**Course:** Refresher  
**Course fee:** free of charge

Company seminars upon agreement

**WinGPC Refresher**

This series of complimentary web seminars covers all aspects of WinGPC Unity MCDS and is designed for users of WinGPC, WinGPC Unity, WinGPC UniChrom and persons interested in achieving proficient and efficient analysis of molecular weight and structure of polymers.

Each series (run on three consecutive days) will consist of a 50min live WinGPC Unity demonstration followed by 10-min QA session.

**Day 1: WinGPC Basic**

- How to start and configure WinGPC
- Sample management and retrieval
- How to acquire data
- How to create a calibration curve
- Troubleshooting

**Day 2: WinGPC Advanced**

- Instrument control and sample queues
- Automated data evaluation
- Evaluation options for multiple peaks
- Reporting
- Troubleshooting

**Day 3: WinGPC Viscometry/Light Scattering/Triple Detection**

- Detector control
- How to setup a method
- How to determine system parameters
- How to determine on-line dn/dc and slice concentration
- Evaluation Tips&Tricks
- Troubleshooting

> 25 years experience in GPC/SEC customer training

## Educational Webinars 2012

**Course:** Educational  
**Course fee:** free of charge

PSS Educational Webinars are offered as complimentary 50 minute live demonstrations followed by a 10 minute QA session.

Company seminars upon agreement

Attendees require a high-speed connection to the Internet and an up-to-date version of the Web browser (Internet explorer preferred). For the audio portion of the live session a telephone conference call for attendees from the U.S. and Canada is used. A phone near the computer capable of making long distance phone calls to a 1-800 number is needed. A hands-free or speaker phone is highly recommended.

**Time:** Americas: 11AM EST  
Europe: 17:00 CET  
Asia: 14:00 CST

**Dates:** 25.01.2012

### WinGPC UniChrom and ChromPilot Update

What is new?

#### Who should attend?

- All current users of PSS WinGPC

Upon agreement

### Why WinGPC UniChrom?

How does WinGPC UniChrom work and how do the unique solutions look like.

#### Who should attend?

- All prospective users of PSS WinGPC software

07.03.2012

### 2D Polymer Analysis

Benefits, limitations and requirements for successful implementation of 2-dimensional chromatography.

#### Who should attend?

- All scientists working with techniques to determine the properties of polymers in solution.
- Lab managers interested in adding hyphenated techniques to gain better resolution.

24.05.2012

### It's Magic! - the PSS column concept

Benefits of different column material chemistry for balanced, interaction minimized GPC/SEC/GFC. The PSS magic triangle and the consequences for method development. Basic concepts for selecting columns with respect to analytical task, resolution and long-term reproducibility.

#### Who should attend?

- All scientists working with GPC/SEC/GFC.
- Technicians who have to develop new methods for the characterization of polymers, biopolymers, polysaccharides and proteins.

> 25 years experience in GPC/SEC customer training

---

Programs, registration forms and additional information: see [www.polymer.de](http://www.polymer.de) or

phone: +49 (0)6131-96239-0

E-mail: [info@polymer.de](mailto:info@polymer.de)

Fax: +49 (0)6131-96239-11

Please send more information:

- Course 899-0022 GPC/SEC Training Course
- Course 899-0025 Hands-on viscometry/light scattering training
- WinGPC Usermeeting
- GPC/SEC Usermeeting: Columns
- PSS GPC in-house training: please contact me!
- GPC/SEC Basic Webinar
- WinGPC Refresher
- Educational Webinars

Name \_\_\_\_\_

Company \_\_\_\_\_

Department: \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

Tel \_\_\_\_\_

Fax \_\_\_\_\_

Email \_\_\_\_\_