Instrument Solutions
Technology for Your Success!

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Program day 1 (Basic-course HPLC and GPC)

28 November 2023

8:30h Welcome and introduction

8:45h Theoretical basics of chromatography (HPLC and SEC/GPC).
Column dimensions, selectivity, resolution, particle size, pore size, particle technology,
Suitability of detectors for solving specific problems, isocratic and gradient methods

10:30h Coffee break including a small snack

10:45h HPLC – Small Molecules:

- Hydrophobic and Intermediate Hydrophobic Molecules: Strengths, Target Molecules, Fields of Work silica-based "normal" C18, "polar" C18 and polymer-based RP-HPLC
- Highly water-soluble molecules: starches, target molecules, fields of work HILIC-HPLC
- Strongly hydrophobic molecules: strengths, target molecules, fields of work NP-HPLC
- Saccharides I: starches, target molecules, fields of work silica- and polymer-based amino phase HPLC.

12:15h Lunch

12:45h HPLC – small and larger molecules II:

- Ligand exchange HPLC - partly with SEC component, ion exclusion HPLC Saccharides II, saccharides, acids, alcohols: starches, target molecules, fields of work polymer-based polystyrene sulfonate-based aqueous HPLC phases.
- HIC-HPLC Separations
- Water-soluble biopolymers: starches, target molecules, working fields of aqueous HIC HPLC phases.

14:45h Coffee break

15:00h Detectors in the HPLC (UV VIS, RI, ELSD and others).

15:15h Maximum separation efficiency with recycling HPLC/GPC (up to 500,000 theoretical plates even with preparative product production)

15:30h Sample preparation HPLC

16:30h Discussion
Specific questions from the seminar participants will be dealt with if requested

17:00h End of day