

Fast Trak™ training and education

MEM1



Bioprocessing using membrane separations

Duration: 3 days

Course description

Learn about membrane separation techniques used in bioprocessing with emphasis on tangential flow filtration (TFF) techniques using open and/or screen channel devices. The course provides a general understanding of optimization, cleaning, validation, and scale-up.

In the practical sessions, you will learn basic methods, including membrane preparation, air diffusion, and integrity testing. You will also conduct experiments on optimizing clarification and concentration/diafiltration steps.

- Membrane separation techniques for the purification of biomolecules
- Comparison on alternative filtration techniques
- Presentation and discussion of tangential flow techniques
- Focus on process optimization, cleaning validation, and scale-up of membrane separation procedures
- Hands-on work with filtration system testing and maintenance exercises

Who should attend?

- R&D, process development and manufacturing personnel designing, executing, or advising on membrane unit operations in the biopharmaceutical industry
- Scientists and engineers working in primary recovery and clarification stages through to final purification steps
- Anyone interested in primary clarification of mammalian, bacterial, yeast, or baculovirus/insect cells

After the course, you will be able to:

- Choose the optimum membrane format or technique based on target molecule and process objective
- Define process conditions critical to the success of membrane applications
- Evaluate experimental results for optimization and scale-up calculations

2020 pricing

| Fast Trak Center | List Price | Product Code |
|------------------|----------------|--------------|
| USA, Marlborough | 3500 (USD) | 29031049 |
| Sweden, Uppsala | 2476 (EUR) | 29005243 |
| China, Shanghai | 18341.40 (CNY) | 29012019 |

Topics covered

- Tangential flow filtration theory and practice for upstream and downstream processing
- Hollow fiber and cassette materials and configuration
- Process design strategies: process development, optimization, and scale-up
- System design: hardware configuration and automation
- Current topics in validation
- Hands-on training with manual and automated systems for both hollow fiber and cassettes



General course information

Fast Trak Education is one means by which GE Healthcare provides application training in the various aspects of bioprocessing.

The courses are designed to provide a learning experience for process development and manufacturing staff.

There are hands-on training courses on column packing, basic chromatography, optimization and scale-up for both pilot and production scales. Courses on validation issues and chromatography theory are also given. The courses are run at our regional Fast Trak centers or customized at your premises.

Cancellation policy

In case you need to cancel your registration, the following charges will apply:

- 30 to 21 days prior to course: 50% of course fee
- 20 to 8 days prior to course: 80% of course fee
- 7 days or less prior to course: 100% of course fee

If you are unable to attend after registered, you may send a colleague in your place or attend another course.

GE Healthcare reserves the right to modify course location, course material, substitute speakers, or to cancel the course. If the course is cancelled, registrants will be notified as soon as possible and will receive a full refund of paid fees. GE Healthcare will not be responsible for airfare penalties or other costs incurred due to a course cancellation.

Course certificate

Upon completion of the course, each participant receives a course certificate in which course name and course date is stated.

Course evaluation

At the end of each course, you will be asked to fill in a course evaluation form. We value your opinion of the course, the speakers, the material, and presentations and use this feedback to continuously improve the courses and their contents.

Travel and hotel costs

Travel and hotel costs are not included in the course price.

Language

Standard courses are held in English at Fast Trak Centers in USA, Sweden, Turkey, India, Singapore and Korea, unless otherwise specified. In China, most courses are in Mandarin with occasional courses in English. The courses in Germany are held in German and courses in Japan are held in Japanese. Customized courses can be presented in other languages. Please contact the Fast Trak center for more information.

Lunches

All lunches during course days are included in the course prices.

Material in binders

Each course participant will receive the lectures and other relevant material in a binder.

Requirements for safety level S1 (L1) laboratories

Every course participant who enters our laboratories for the practical sessions must comply with certain safety requirements. Please notice that open-toe shoes are not allowed in the lab. Obligatory protective clothing and safety devices will be provided.

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