

Fast Trak training and education

DEV1



Introduction to downstream techniques and bioprocessing

Duration: 3 days

Course description

Learn downstream processing techniques suitable for large-scale protein purification and considerations for process development. The course provides understanding of the techniques and parameters governing separation.

You will operate lab-scale ÄKTA™ avant systems using a variety of chromatography resins to separate and purify a crude feed.

- Basics in industrial processing and chromatographic techniques suitable for large-scale purification
- Different chromatographic techniques
- Purification strategies and optimization
- Process hygiene and column packing
- Laboratory practicals: purification of protein from clarified *E. coli* lysate or milk whey

Who should attend?

- Scientists new to industrial chromatography
- R&D scientists and process engineers — to review the basics of protein purification

After the course, you will be able to:

- Screen and optimize bioprocesses in your process development work
- Apply effective chromatographic techniques in your downstream purification process
- Understand the issues associated with optimizing chromatographic unit operations in biopharmaceutical production processes

Topics covered

- Purification techniques and strategies
- Size exclusion chromatography (gel filtration)
- Ion exchange chromatography
- Hydrophobic interaction and reversed phase chromatography
- Affinity chromatography
- Column packing and testing
- Optimization
- Scale-up and fine tuning
- Process hygiene
- Regulatory requirements

2021 pricing

Fast Trak Center	List Price	Product Code
USA, Marlborough	3700 (USD)	29031036
Sweden, Uppsala	2850 (EUR)	29030918
Germany, Munich	2850 (EUR)	29237708
India, Bangalore	100000 (INR)	29099332
Korea, Songdo	2400000 (KRW)	29244577
China, Shanghai	16370.20 (CNY)	29012012
Singapore	2460 (SGD)	29012138
Japan, Tokyo*	99200 (JPY)	28904066

* Abbreviated course, combined with DEV2

General course information

Fast Trak™ Education is one means by which Cytiva 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.

Cytiva 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. Cytiva 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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