

# Fast Trak training and education

DEV1



## 바이오횰약품 생산을 위한 정제 기본 과정

기간: 3일

### 코스 소개

Fast Trak DEV1 코스는 바이오 의약품 정제 공정 개발을 위한 기초 과정입니다. 다양한 크로마토그래피 기법에 대한 소개와 정제 공정 개발 전략에 대한 이론 강의가 제공되며, 수강생들이 ÄKTA Avant 시스템을 사용하는 실습에 직접 참여하여 다양한 크로마토그래피 기법으로 목적 단백질을 분리하는 실험을 진행하게 됩니다. Fast Trak DEV1 코스를 통해 다년간 축적된 Fast Trak의 노하우를 직접 경험해보세요.

### 코스 일정

- 날짜: 2022년 3월 23일 - 25일, 10월 19일 - 21일
- 장소: Cytiva APAC Fast Trak 센터
- 주소: 인천광역시 연수구 송도미래로 9 BRC 2동 2층
- 식사: 점심식사 제공

### 수강 대상

관련 학부/대학원생, R&D 연구원, 프로세스 엔지니어, 제조 기술자

### 등록 방법

APAC Fast Trak 웹사이트([bit.ly/fasttrak-kor](https://bit.ly/fasttrak-kor))를 통해 직접등록 또는 담당 Cytiva 영업사원에게 문의 주시기 바랍니다.

### 코스 금액 (2022년 기준)

Fast Trak Center	List Price	Product Code
Korea, Songdo	2,600,000 (KRW)	29244577

### 강의 내용

- 정제 공정 개발 및 최적화 전략소개
- 크로마토그래피 레진과 컬럼의 세척 및 유지보수
- ÄKTA™ avant 및 UNICORN™ 7 소프트웨어 사용 방법 학습
- 다양한 종류의 레진을 이용한 목적 단백질 정제
- 레진 별 주요 공정 변수 스크리닝을 통한 공정 최적화
- 컬럼 팩킹에 대한 이론 교육 및 실습

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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

## 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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