



Fast Trak training and education

DEV2



바이오의약품 정제과정 개발을 위한 심화 과정 (DEV2)

기간: 5일

코스 소개

Fast Trak DEV2 코스에서는 크로마토그래피 공정의 설계, 최적화 및 공정개발 중 발생하는 문제에 대한 해결방법의 학습과 논의가 진행되며, 또한 공정개발에 필수적인 주요공정변수의 최적화를 이해하고 어떻게 높은 생산성, 경제성을 확보해 스케일업 가능한 공정을 디자인하는지에 중점을 둡니다.

실습을 통해 *S. Cerevisiae*의 배양액으로부터 α -Glucosidase의 정제를 진행하며, 목표에 적합한 수율 및 순도 달성을 위해 3단계 크로마토그래피 공정을 디자인하고 최적화 합니다. 또한 공정의 위생관리와 컬럼의 유지 보수 방법에 대해서도 배우실 수 있습니다.

코스 일정

- 날짜: 2020년 2월 24일 - 28일 (한국어 과정) / 2020년 9월 14일-18일
- 장소: GE Healthcare APAC Fast Trak 센터
- 주소: 인천광역시 연수구 송도1동 송도 미래로 9 BRC 2동 2층 GE Healthcare APAC Fast Trak Center
- 식사: 점심식사 제공

강좌 목표

- 정제 공정 설계, 최적화 및 문제 해결 방법의 학습을 통한 공정개발 역량강화
- 크로마토그래피 공정 개발을 하고자 하는 고객을 위해 현업에 적용 가능한 보다 깊이 있는 이론과 실습 제공

수강 대상

- 정제 공정 개발에 대한 기본 지식을 갖추고자 하는 인력
- 크로마토그래피 공정의 설계, 최적화 및 문제 해결에 대한 지식을 심화하려는 연구원 및 엔지니어

등록 방법

APAC Fast Trak 웹사이트 (www.bit.ly/fasttrak-kr)를 통해 직접등록 또는 담당 GE 영업사원에게 문의 주시기 바랍니다.

코스 가격 (2020년 기준)

Fast Trak Center	List Price	Product Code
Korea, Songdo	2,900,000 (KRW)	29244578

강의 내용

- 전략적 사고를 통한 스케일업 가능한 최적의 크로마토그래피 공정 설계
- 크로마토그래피 공정 개발의 주요 공정변수 이해 및 스케일업 이슈 해결
- 크로마토그래피 공정 중 위생관리 및 컬럼 유지 보수 방법에 대한 전반적 이해



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Downstream bioprocess development (DEV2)

Duration: 5 days

Course description

This course covers bioreactor cultivation and upstream process development strategy using single-use equipment. You will learn how to optimize processes and monitor critical parameters for scale-up.

We also discuss validation and process design considerations for good manufacturing practice (GMP).

Practical sessions include bioreactor inoculation and evaluation of cell culture performance using analytical techniques. You will develop a medium and feed strategy based on cell metabolism and scale it up using key engineering principles.

- In-depth training on cell culture technology
- Optimization and development of medium
- Process development and evaluation, scale-up, and bioengineering in an animal cell culture

Who should attend?

This training course will be useful for research and development scientists, process engineers, and manufacturing technicians. A basic understanding of cell culture and corresponding techniques is required for this course.

After the course, you will be able to:

- Have a detailed theoretical background about process control strategies in bioreactors and culture scale up
- Be trained in controlling and evaluating fed-batch and perfusion cultures
- Know how to perform basic characterization of a bioreactor and interpret the results
- Have an overview of strategies used for process optimization

Topics covered

- Adsorption chromatography
- Design issues in downstream processing
- Method optimization
- Resin cleaning
- Scale-up with calculations
- Development of a scalable three-step purification process:
 - Optimization of selectivity/ binding, elution, capture, intermediate, and polishing steps
 - Optimization of load/dynamic breakthrough capacity
 - Scale-up and verification
 - Different elution strategies
 - Resin screening
 - Harvest culture

2020 pricing

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Korea, Songdo	2,900,000 (KRW)	29244578

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 Chinese 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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