

# HPLC for Beginners

Skills and knowledge to work independently in GMP regulated laboratory environments.



Complete Laboratory Solutions

# IRISH MEDTECH SKILLNET

## HPLC for Beginners

The HPLC for Beginners programme is a two week intensive, competency based training course designed to equip participants with the practical skills, technical knowledge, and confidence required to work independently in GMP regulated laboratory environments.

Delivered at CLS Galway's HPRA and FDA GMP licensed laboratories, the course combines theoretical instruction with extensive hands on experience using live HPLC systems and Empower software, covering areas such as system operation, maintenance, troubleshooting, chromatography, data processing, and method execution.



### Course structure

#### Modules

- HPLC fundamentals
- Empower overview
- Operation and maintenance
- Method execution
- Chromatography and data processing
- Troubleshooting

#### Workshops

- Critical thinking and problem solving
- Time management and prioritisation
- Effective communication

### Daily schedule

- Day 1** Induction, GMP & Data Integrity, HPLC Fundamentals & Empower Introduction
- Day 2** HPLC Operation & Maintenance, System Set Up, Sample Set Creation & Sample Preparation
- Day 3** Method 1 Execution
- Day 4** Chromatography & Data Processing Overview, Method 1 Processing & Reporting
- Day 5** Processing Practice, Troubleshooting Overview & Case Study 1
- Day 6** Method 2 Execution, Processing & Troubleshooting Exercises, Time Management & Prioritisation
- Day 7** Workshop Method 2 Processing & Reporting, Processing & Troubleshooting Exercises, Critical Thinking
- Day 8** Workshop Independent Assessment – Method 3 Execution, Processing & Troubleshooting Exercises
- Day 9** Independent Assessment – Method 3 Processing & Reporting, Effective Communication Workshop
- Day 10** Overall Assessment & Course Close Out

### Assessments & certification

Rigorous competency-based assessment throughout the 10- day programme. Successful participants receive certification and professional digital badges.

- Interactive module quizzes
- Quantitative method execution assessment
- Troubleshooting and processing practice exercises
- Independent competency assessment

## HPLC for Beginners

### What your team will gain

#### HPLC operation and troubleshooting

Hands-on competency in HPLC system operation, routine maintenance, and troubleshooting to build confidence working independently in GMP laboratory environments.

#### Practice with GMP

GMP-compliant documentation practices and data integrity principles to support accurate record keeping, regulatory compliance, and reliable laboratory data management.

#### Training delivery method

##### Training format

Blended learning approach combining theoretical instruction with extensive hands-on practical application.

##### Practical application

Supervised hands-on laboratory sessions where participants apply theoretical knowledge using live HPLC systems and Empower software. Participants will execute three separate analytical methods throughout the course.

#### Participation support & logistics

##### Accommodation

CLS has negotiated preferential rates with nearby Galway hotels. Details provided in course confirmation pack.

##### Materials & equipment

All training materials, equipment, consumables, and PPE provided.

#### What makes CLS training different

##### Competency-based, not completion

Participants must demonstrate proficiency across all modules to certify. Rigorous assessment ensures your analysts are truly workplace ready.

##### Personalised learning experience

Pre-course assessment identifies individual learning styles, pace preferences, and support needs. Training delivery tailored accordingly.

##### Premium GMP-licensed facilities

All training is delivered in CLS Galway's HPRA and FDA GMP-licensed laboratories, providing an authentic regulatory-compliant learning environment.

#### Empower and chromatography skills

Empower software proficiency for data acquisition, processing, and chromatography fundamentals to ensure accurate analysis and confident interpretation of HPLC results.

#### Professional and workplace skills

Essential workplace skills to improve productivity, communication, problem-solving, and day-to-day performance.

#### Theory delivery

Instructor-led presentations covering foundational concepts and technical knowledge for each module.

#### Learning ratio

The course emphasises practical skill development with approximately 20% theory instruction and 80% hands-on practice, ensuring participants gain confidence and competence in real-world HPLC operations.

#### Social programme

Networking evening during Week 2. Optional but highly encouraged.

#### Ongoing support

Daily trainer availability for one-on-one coaching. Post-training resources include operational checklists, troubleshooting guides, Empower reference cards, and pathway recommendations.

#### Maximum 6 participants

Small cohorts ensure substantial individualised attention, one-on-one coaching, and extensive hands-on practice time for each participant.

#### Expert trainer team

Led by CLS's specialist training division with 20+ years experience in training and over 30 years of laboratory operations.



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