



SOUTHERN AFRICAN BIOMANUFACTURING TRAINING HUB



**science, technology
& innovation**

Department:
Science, Technology and Innovation
REPUBLIC OF SOUTH AFRICA



CSIR

Touching lives through innovation



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BIOMANUFACTURING TRAINING HUB**



The CSIR-hosted **Southern African Biomanufacturing Training Hub** is pleased to announce the commencement of a course titled: **High-Performance Liquid Chromatography (HPLC) in Biomanufacturing: Fundamentals and Practical Applications (I-BTH05P/I-BTH05D)**, scheduled to start on **Monday, 2 November 2026** at the CSIR Pretoria campus and on **Monday, 23 November 2026** at the CSIR Durban campus, as part of its Strengthening Biomanufacturing Capabilities in Southern Africa programme supported by KfW Development Bank.

The programme aims to support training and development in the biomanufacturing sector, with a focus on developing a skilled and competent workforce in Africa.

HIGH-PERFORMANCE LIQUID CHROMATOGRAPHY (HPLC) IN BIOMANUFACTURING: FUNDAMENTALS AND PRACTICAL APPLICATIONS

The Biomanufacturing Training Hub's goal in providing this course is to help grow and develop the biomanufacturing sector in Africa through cutting-edge training in partnership with local and international stakeholders.

The course is offered to African manufacturers, scientists and other key players in the development and scaling-up of biomanufacturing processes and products. A key aspect of this programme is to provide theoretical and hands-on training, as well as skills development that will enable the local manufacturing of biologics, vaccines, recombinant proteins and therapeutics. This programme is aligned with several other initiatives focused on establishing vibrant biomanufacturing industries in Africa.

COURSE DESCRIPTION

The Fundamentals and Operation of HPLC within Biomanufacturing course aims to provide participants with a solid theoretical and practical understanding of the HPLC and its application in biomanufacturing. Participants will develop competency in HPLC instrumentation, chromatographic principles, method development, system suitability testing, data interpretation, routine maintenance and troubleshooting through a combination of online lectures and hands-on laboratory training. By the end of the course, participants will be equipped with the knowledge and practical skills required to operate HPLC systems effectively and generate reliable analytical results in research, quality control and biomanufacturing laboratories.

This course will be delivered using a hybrid model of applied and advanced knowledge transfer in the form of online lectures, in-person demonstrations and hands-on training.

KEY LEARNING AREAS INCLUDE:

- Introduction to chromatography and HPLC principles
- HPLC instrumentation and system components
- Mobile phase preparation and sample preparation
- Column selection and chromatographic separation
- Method development and optimisation
- System suitability testing (resolution, plate count, tailing factor, capacity factor, RSD and acceptance criteria)
- Data acquisition and chromatogram interpretation
- Quantitative analysis and reporting
- Routine maintenance and preventative care
- Troubleshooting common HPLC problems
- Practical hands-on operation of HPLC systems





COURSE DATE AND DURATION

THE COURSE WILL BE OFFERED AT TWO DIFFERENT SITES:

CSIR PRETORIA CAMPUS:

DATES: 2 – 3 November 2026 (online) and 4 – 6 November 2026 (on-site training)

DURATION: 5 days (online via Microsoft (MS) Teams and at the CSIR Pretoria, South Africa)

CSIR DURBAN CAMPUS:

DATES: 23 – 24 November 2026 (online) and 25 - 27 November 2026 (on-site training)

DURATION: 5 days (online via MS Teams and at the CSIR Durban campus, South Africa)

COURSE DELIVERY

The course is delivered using a blended format for the transfer of advanced knowledge, which includes:

- Hands-on training;
- Classroom-based lectures (online); and
- Demonstrations.

* Please note that a reliable internet connection is required to participate in the online sessions. It is recommended that a good download and upload speed be at least 5-10 Mbps.

COST AND FINANCING

Please note that a **maximum of 20 candidates will be selected for each location**. The course is offered free of charge and includes lunch for the on-site training.

Subsistence and travel allowance (S&T) will not be covered.



WHO SHOULD ATTEND?

Preference will be given to the following candidates:

- Current staff in the biomanufacturing sector requiring skills expansion/upgrading;
- New or developing staff in the biomanufacturing sector;
- Scientists, laboratory analysts, researchers, and technical personnel who require practical knowledge and hands-on experience in the operation and application of HPLC within biomanufacturing and related analytical laboratories.
- Individuals involved in analytical method development, validation, and routine laboratory testing who require a sound understanding of HPLC principles and best practices.
- Technical staff supporting research, product development, or manufacturing laboratories where HPLC is routinely used for analytical measurements.

Eligibility criteria are as follows:

- Participation is limited to South African applicants. Young, African women are encouraged to apply. Participation will only be available to candidates holding a Diploma, bachelor's degree or Honours in Chemistry, Biochemistry, Biotechnology, Microbiology, Chemical Engineering, Pharmaceutical Sciences, or a related field.
- Basic knowledge of analytical chemistry is recommended.

Certificate

- Participants who successfully complete the course and all practical assessments will receive a Certificate of Completion issued by the CSIR Southern African Biomanufacturing Training Hub.

For enquiries, please email BIDC@csir.co.za

IMPORTANT DATES

- **DEADLINE FOR SUBMISSION OF APPLICATIONS:**
12 October 2026 (Pretoria).
26 October 2026 (Durban).
- **SELECTED CANDIDATES WILL BE NOTIFIED BY:**
15 October 2026 (Pretoria).
02 November 2026 (Durban).

APPLICATIONS should be submitted by filling in the application form available [APPLICATION – Fill out form](#)(Pretoria), [APPLICATION – Fill out form](#)(Durban).

Pretoria course



Durban course

