



St. Francis
College for Women
Begumpet, Hyderabad-500016
(Autonomous & Affiliated to Osmania University)



जैवप्रौद्योगिकी विभाग
DEPARTMENT OF
BIOTECHNOLOGY

HPLC WORKSHOP REPORT

1. Brochure:-

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जैवप्रौद्योगिकी विभाग
DEPARTMENT OF
BIOTECHNOLOGY

DBT STAR COLLEGE
(Under Strengthening Component)

Department of Microbiology

Organizes an
Hands-on Training on
HPLC

NIPER, Balanagar, Hyderabad

For B.Sc. IIC BT/MB/C Students

Coordinated by

Dr. Arsheen Tabassum
Assistant Professor

Dr. P. Roselin
Associate Professor, HOD - Microbiology

31st January, 2026

9:00 am to 5:30 pm

2. Resource person's details:-

- Dr. Sai kishore
- Dr. Gananadhamu Samnthula
- Mr. Sai Vivek
- Ms. Mahananda Gurav

3. Organised by:-

- Dr. P Roselin - HoD, Microbiology
- Dr. Gayathri - DBT Coordinator
- Dr. Arsheen Tabassum – Asst. Professor
- Department of Microbiology

4. Participant Details:-

- Date:- 31st January 2026
- Venue:- NIPER, Balanagar
- Total Participants:- 15 Students (UG Final year Microbiology students)
- Faculty accompanied:- 1

5. Brief Report:-

The one-day HPLC workshop held at NIPER on 31 January was highly informative and successful. The session provided a clear understanding of HPLC instrumentation, working principles, and method workflow. We gained practical insights into system components, sample preparation, column selection, and data interpretation. The hands-on exposure and expert guidance made the concepts easier to understand and apply. Overall, it was a valuable learning experience that strengthened our analytical skills.

6. Detailed Report:-

Objectives-

- To understand the basic principles and working of HPLC instrumentation.
- To learn about major system components such as pumps, columns, detectors, and injectors.
- To gain knowledge of sample preparation and method setup in HPLC analysis.
- To develop familiarity with chromatogram interpretation and troubleshooting basics.

Outcomes-

- Participants understood the operational workflow of an HPLC system.
- Gained practical insight into instrument handling and parameter selection.
- Improved ability to read and interpret chromatographic data.
- Enhanced foundational skills in analytical and separation techniques.

Program Schedule-

- **Inauguration & Welcome Address:** Dr. Sai Kishore and Dr. Srinivas Nanduri
- **About Avishkaran:** Mr. Sai Vivek
- **Workshop Overview:** Ms. Mahananda Gurav
- **Theoretical Session on HPLC:** Dr. Gananadhamu Samanthula
- **HPLC Instrument Demonstration:** Ms. Mahananda Gurav
- **Method Creation Session:** Ms. Mahananda Gurav
- **Real-time Batch Creation:** Ms. Mahananda Gurav
- **Q&A Session with Tea:** Interactive session with participants
- **Report Format Creation:** Ms. Mahananda Gurav
- **Sample Running & Data Integration:** Ms. Mahananda Gurav
- **Closing Remarks, Feedback & Certificate Distribution:** Dr. Srinivas Nanduri

Session Details:-

The one-day HPLC workshop conducted at NIPER by Avishkaran was an insightful and well-structured program that combined theoretical foundations with practical exposure. The workshop began with introductory sessions covering HPLC fundamentals, instrumentation, and system components, including pumps, columns, detectors, and injectors. Participants were guided through the principles of separation, different types of HPLC methods, and key parameters affecting analysis. The theory sessions also included detailed explanations of sampling procedures, method creation, and essential considerations for accurate and reproducible results.

This was followed by hands-on demonstrations where the complete workflow was practically explained, from sample preparation and injection to method setup and real-time batch creation. We learned how to run samples, generate chromatograms, and interpret graphs and peak data effectively. Troubleshooting basics and report generation were also discussed. In addition to the technical sessions, we were briefly introduced to the various startup companies and innovation facilities housed within the NIPER incubation ecosystem, giving us exposure to real-world applications and entrepreneurial opportunities in pharmaceutical and analytical sciences.

Conclusion:-

The HPLC workshop was a highly enriching experience that strengthened our understanding of both theoretical and practical aspects of chromatographic analysis. The balanced approach of concept explanation followed by hands-on demonstration enhanced clarity and confidence in using HPLC systems. Exposure to data interpretation, method development, and the innovation ecosystem at NIPER added significant value, making the workshop a meaningful step toward developing strong analytical and industry-relevant skills.

7. Photographs:-



