



KONERU LAKSHMAIAH EDUCATION FOUNDATION

DEPARTMENT OF BIOTECHNOLOGY



INDUSTRIAL VISIT REPORT



Date of Industrial Visit: 17 February 2026

Faculty Mentors: Dr.G Siva Reddy-Assistant Professor

Dr.M Hemalatha-Assistant Professor

Dr. Uday Turaga - Assistant Professor



1. Introduction

An industrial visit was organized by the **Department of Biotechnology, Koneru Lakshmaiah Education Foundation** to **CSIR-Indian Institute of Chemical Technology**, located in **Hyderabad**, on **17 February 2026**. The visit aimed to provide practical exposure to **biotechnology research, chemical technology, pharmaceutical development, and industrial analytical techniques**.

Industrial visits are an important component of biotechnology education because they allow students to observe **real-world applications of laboratory research, industrial instrumentation, and process development** used in pharmaceutical and chemical industries.

2. Visit Details

- **Date of Visit:** 17/02/2026
- **Industry Visited:** CSIR-IICT, Hyderabad, Telangana
- **Number of Students:** 110 (Y24 & Y23 batch, B.Tech Biotechnology)
- **Faculty Coordinators:**
 - **Dr. G. Siva Reddy- Assistant Professor**
 - **Dr. M. Hemalatha- Assistant Professor**
 - **Dr. Uday Turaga - Assistant Professor**
 - **Mrs. Y. Naga Lakshmi- Lab Technician**

3. Objective of the Visit

The industrial visit helped students to:

- Understand real-time research activities in biotechnology and chemical sciences.
- Gain exposure to advanced analytical and biochemical instrumentation.
- Learn about bioprocess scale-up and industrial biotechnology applications.
- Understand drug discovery, catalysis, and environmental technologies.
- Explore career opportunities in research organizations and biotechnology industries.



4. About CSIR-IICT Hyderabad

The Indian Institute of Chemical Technology (IICT) is a premier research institute functioning under the Council of Scientific and Industrial Research (CSIR), Government of India. IICT is well known for its advanced research in chemical sciences, biotechnology, pharmaceutical development, catalysis, and environmental technology.

The institute has state-of-the-art laboratories equipped with advanced instrumentation such as:

- Gas Chromatography (GC)
- High Performance Liquid Chromatography (HPLC)
- Nuclear Magnetic Resonance (NMR)
- Mass Spectrometry (MS)
- Fermentation and bioprocess facilities

These facilities support research in drug discovery, green chemistry, bioprocess engineering, and industrial biotechnology.

5. Activities Conducted During the Visit

5.1 Orientation Session

The visit began with an introductory orientation session where scientists from IICT explained the institute's history, achievements, and ongoing research projects in pharmaceutical and chemical industries.

5.2 Laboratory Visits

Students were guided through several laboratories where they observed:

- Analytical instrumentation facilities
- Bioprocess and fermentation laboratories
- Chemical synthesis research units
- Environmental biotechnology laboratories

- Mol Bank
- Waste to wealth Laboratory
- Biogas production from waste-Airlift reactor

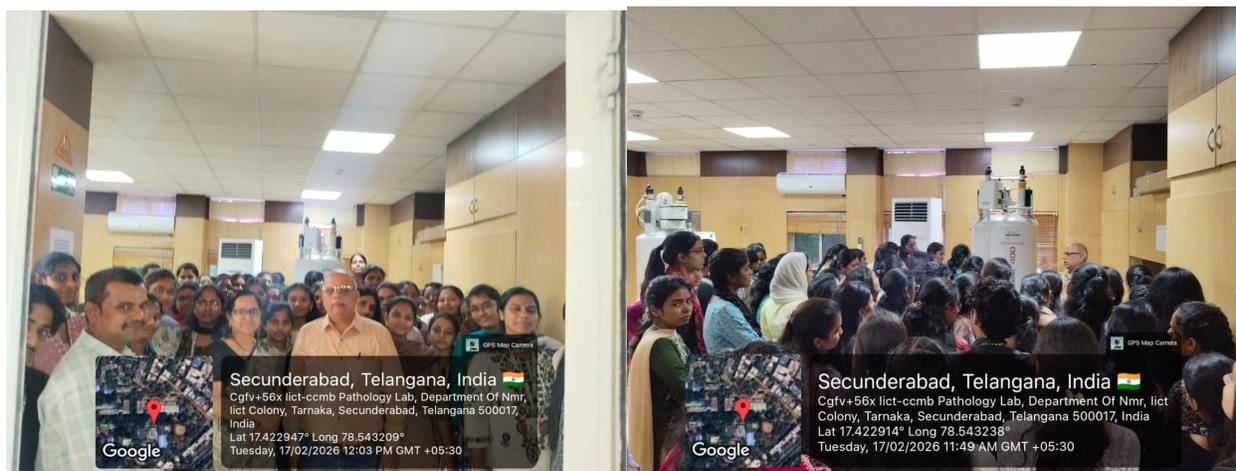
Scientists explained the applications of these technologies in pharmaceutical analysis, catalyst development, and industrial chemical production.

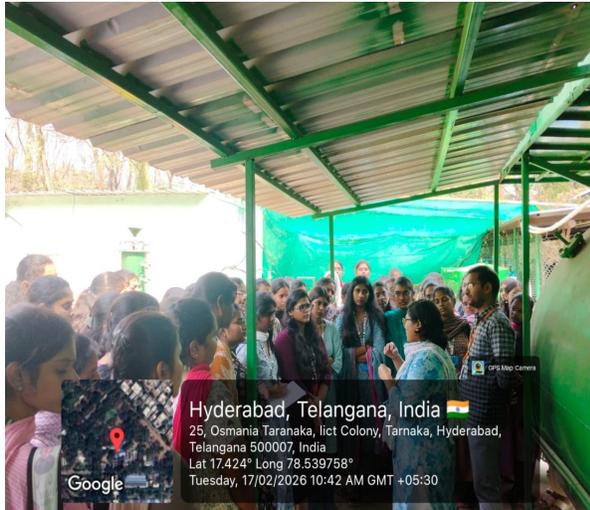
5.3 Instrument Demonstration

Students observed demonstrations of instruments such as:

- HPLC systems for compound analysis
- GC–MS for chemical profiling
- Spectroscopic tools for molecular characterization
- Airlift reactor

These instruments are widely used in biotechnology research, pharmaceutical industries, and environmental monitoring.





5.4 Interaction with Scientists

Students interacted with scientists and researchers who discussed:

- Career opportunities in biotechnology research institutes
- The importance of interdisciplinary research and innovation
- Opportunities for higher studies and research fellowships

6. Learning Outcomes

The industrial visit helped students to:

- Understand real-time research activities in biotechnology and chemical sciences.
- Gain exposure to advanced analytical and biochemical instrumentation.
- Learn about bioprocess scale-up and industrial biotechnology applications.
- Understand drug discovery, catalysis, and environmental technologies.
- Explore career opportunities in research organizations and biotechnology industries.

7. Contribution to Sustainable Development Goals (SDGs)

The activities and research at CSIR- Indian Institute of Chemical Technology align with several United Nations Sustainable Development Goals (SDGs).

SDG 3 – Good Health and Well-Being

Research in drug discovery and pharmaceutical development contributes to improving healthcare and developing new medicines.

SDG 6 – Clean Water and Sanitation

Environmental biotechnology research focuses on wastewater treatment and pollution control technologies.



SDG 9 – Industry, Innovation and Infrastructure

IICT promotes scientific innovation, industrial research collaboration, and technological development.

SDG 12 – Responsible Consumption and Production

Research in green chemistry and sustainable catalytic processes supports environmentally responsible industrial production.

7. Conclusion

The industrial visit to CSIR-Indian Institute of Chemical Technology, Hyderabad was highly informative and beneficial for Y23 and Y24 Biotechnology students. The visit provided valuable exposure to advanced research facilities, industrial analytical instruments, and biotechnology applications in pharmaceutical and chemical industries.

The Department of Biotechnology, K L University expresses sincere gratitude to the scientists and staff of IICT for their support and guidance during the visit. Such visits greatly enhance students' practical understanding, research interest, and professional development.