



Fermentation Technology Division

Fermentation Technology Division focuses on microbial biodiversity research and IPR leading to the production of novel bioactive products, biocatalysts, biotransformed products for health and agriculture crop yields increase through biofertilizer, biocides and metal gluconates. This division is well equipped with latest lab scale to pilot scale 4KL fermentors and downstream processing facilities.

MISSIONS & GOALS

- Industrial microbial strains isolation, identification and characterization for different novel bioactive products, biocatalysts for health and agriculture
- Production of novel bioactives, biocatalysts for health and agriculture from endophytes and extremophiles
- Industrial scale production of microbial enzymes and high value microbial products from wild type and genetically modified strains
- Biotransformations using free and immobilized enzymes for production of industrially important bioactive molecules
- Pathway engineering of microorganisms for production of novel metabolites and bioactive molecules
- Helping Indian industries to scale up processes and building confidence in Indian industry through transferring technologies and training on microbial fermentation processes

COMPETENCIES

- Microorganisms isolation, characterization and identification for specific enzyme activities, enantioselectivity/regio-specificity, biotransformation and secondary metabolites production.
- Repository of psychrotrophic, mesophilic and thermo-tolerant microorganisms including bacteria, actinomycetes, fungi and endophytes
- Chemo-profiling of biocatalysts, biotransformations, bioprocesses development by fermentation, up scaling and downstream processing
- Multi-functional fermentation scale up facility from lab to pilot scale ranging from 5 to 4KL capacity.

FACILITIES

- The department has excellent Micro-processor controlled fermentation facility from lab scale to pilot scale (5-4KL capacity) and matching downstream processing facilities for bacterial, fungal and yeast based products.
- State-of-art equipments required for Microbiology, Enzymology and Bio-process development
- Centrifuges laboratory to industrial scale
- High Performance Liquid Chromatography
- Gas Chromatography