

BIOTECHNOLOGY FAB LAB



Atal Incubation Centre :

AIC Nitte, jointly promoted by Nitte Education Trust and NITI Aayog under the Atal Innovation Mission (AIM), GOI. AIC Nitte aims to foster and accelerate the nation's entrepreneurial vision by nurturing a start-up ecosystem that transforms ideas into successful businesses led by capable and ambitious leaders. Atal Incubation Centre Nitte achieves this by offering start-ups valuable expertise, technological support, investor access, market entry, networking, industry connections. Start-ups also receive direction through a robust chain of mentors who impart their sector and domain-specific expertise as real-time practical guidance.

Biotechnology Fab Lab :

FabLab, a one-of-a-kind, state of the art infrastructure. FabLab is a multipurpose platform for all kinds of engineering to take shape, to fuel innovation and entrepreneurship and engineer ideas into reality. Biotechnology Fab Lab aims to provide infrastructural facilities to Startups and incubations to facilitate development and commercialization of bioprocesses and products. The Biotechnology Fab Lab in AIC Nitte fosters interdisciplinary innovation in the life sciences, from genetic and biological research to production and processing technologies.

Biotechnology Fab Lab



Laminar air flow



Incubator shaker



Autoclave

- **Laminar air flow** - To work with microorganisms in an aseptic environment
- **Incubator shaker** - To culture microorganisms both in liquid and solid state
- **Autoclave** - To sterilize culture media and other materials

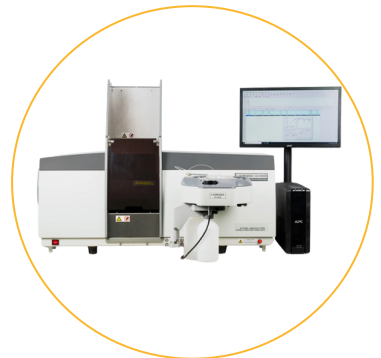


Fourier Transform Infrared Spectroscopy (FTIR)

FTIR spectra reveal the composition of solids and liquids. The most common use is in the identification of unknown materials and confirmation of production materials (incoming or outgoing). FTIR Analysis or FTIR Spectroscopy, is an analytical technique used to identify organic, polymeric, and, in some cases, inorganic materials.

Atomic Absorption Spectroscopy (AAS)

AAS is a highly versatile analytical technique used to determine the concentration of specific elements in a wide range of samples, including, Soil, Water, Pharmaceutical, Mining, Archaeology, Forensics, Food products etc.,



Biotechnology Fab Lab



UV Spectrophotometer with microplate reader

It can be used for Biomolecules analysis, pharmaceutical analysis, Bacterial culture, Beverage analysis, other applications. Microvolume quantification is fast and easy by measuring multiple samples at the same time, without diluting and without the need for specialized equipment.

Refrigerated Centrifuge

A refrigerated centrifuge is a laboratory equipment used for the separation of microliter temperature-sensitive heterogeneous mixtures or samples. This device works by spinning the samples loaded in a rotor at high speed.



Bioreactor (Fermenter)

Broadly speaking, bioreactors and fermentors are culture systems to produce cells or organisms. They are used in various applications, including basic research and development, and the manufacturing of biopharmaceuticals, food and food additives, chemicals, and other products.

Technical infrastructure services

1. Biotechnology product development
2. Bioprocess optimization
3. Chemical analysis
4. Microbial analysis
5. Trace element analysis

Who can access?

1. Startups
2. Researchers
3. Farmers
4. Incubates
5. Student projects

Sample Analysis Fee

SI No	Instrument facility	Charges per experiment (Rs)		Remarks
		Students/ Faculty of NDU	Others	
1	FTIR	236	354	Sample should be ready to analyse.
2	AAS	118	236	i) Charges per element ii) sample should be processed & ready to analyse
3	UV-VIS Spectrophotometer with Plate reader	118	177	sample should be processed & ready to analyse
4	Fermenter /Bioreactor With working volume 1.5 lit (for both aerobic and anaerobic)	2360	3540	i)Charges per batch of fermentation (3 days) additional day Rs.1000/day ii) Required parameters should be provided iii) Inoculum should be in pure form
5	Microbial analysis	236	354	i)charges per experiment

Note

- Charges mentioned are including GST
- Sample processing charges will be additional if any
- Sample report includes only result not interpretation.
- Interpretation charges are additional with case basis.

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Sample Submission



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