

Instruments covered under training:

LC-MS

Confocal/Fluorescence Microscope

FTIR

NMR

AAS

MPAES

SEM

HPLC

Nuclear magnetic resonance spectrometer (NMR)

Make: Jeol

Model: 400mhz

Analysis/Application: Nuclear Magnetic Resonance is used to elucidate the structure of chemical and biochemical molecules of biological interest. NMR is widely used in drug discovery, target-drug interactions, solving the 3D structure of important protein, nucleic acid, DNA-protein interaction etc.



Scanning Electron Microscope (SEM)

Make: ZEISS

Model: EVO LS 10

Analysis/Application: Scanning Electron microscope is helpful in physical, chemical, and life science to explore the surface properties of metallic or biological macromolecules. The composition and proportion of different elements in metallic or biological particles can also be elucidated using advanced SEM equipment like "Field Emission Scanning Electron Microscopy".

Confocal Microscope/ fluorescence Microscope

Make: Nikon Corporation

Model: Ti 2-E

Analysis/Application: Both are used to resolve the detailed structure of specific objects within the cell like imaging of cancer cells, plant cells, animal tissues, spore structure, live cell imaging of cancer and plant cells, etc.



Fourier transform infrared spectroscopy (FTIR)

Make: Shimadzu (Asia Pacific) Pte. Ltd.

Model: IR Tracer-100 AIM-9000

Analysis/Application: The composition of gases, solids, and liquids can be analyzed with FTIR spectra. FTIR is highly useful in screening applications in different fields of research and quality control.



Liquid Chromatography-Mass Spectroscopy (LC-MS)

Make: Bruker Daltonik

Model: microOTOF-QII

Analysis/Application: Determine the information about the molecular weight of chemical polypeptides or organic molecules and their quantification.

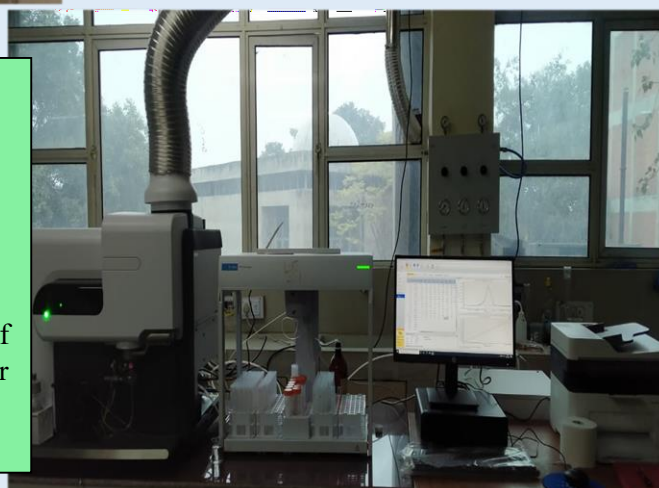


Microwave Plasma Atomic Emission Spectrometer (MPAES)

Make: Agilent Technologies Singapore (Sale) Pvt. Ltd.

Model: Agilent MP-AES System

Analysis/Application: Determine the information about the molecular structure and molecular weight of chemical polypeptides or organic molecules and their quantification.



High-Pressure Liquid Chromatography (HPLC)

Make: Shimadzu Pte. Ltd.

Model: Shimadzu-Prep HPLC system

Analysis/Application: High-performance liquid chromatography is widely used to quickly analyze a mixture of chemicals, and or biological molecules. It is used in laboratories, clinical diagnosis, pharmaceutical industry, chemistry, and biological sciences.

