

Instruments covered for Training

- + HPLC
- + FT-IR
- + Fluorescence Spectrophotometer
- + NMR
- + LC-MS
- + TGA-DTA-DSC
- + UV/VIS/NIR Spectrophotometer

HPLC

Make: Shimadzu

Model: HPLC -PDA- LC-20 AD

Applications: High Performance Liquid Chromatography is used to separate a mixture of compounds obtained while synthesizing novel organic & inorganic molecules. It is used in biochemistry and analytical chemistry to identify, quantify and purify the individual components of the mixture.





FT-IR

Make: Shimadzu

Model: IR affinity 1S

Applications: It is used for the identification of functional groups organic, inorganic, and polymeric materials and hence its characterization using the strength of vibrational spectroscopy

FLUORESCENCE spectrophotometer

Make: Horiba Instruments

Model: Fluoromax c+

Applications: A sensitive technique for qualitative and quantitative analysis of fluorophoric systems. The device performed both in steady state and time domain mode.



LC-MS

Make: Thermo fisher

Model: Exactive plus

Applications: Ultra-sensitive qualitative and quantitative analysis of novel synthetic molecules and of molecular traces present in an analyte.





NMR

Make: Bruker

Model: Ascend 400 MHz

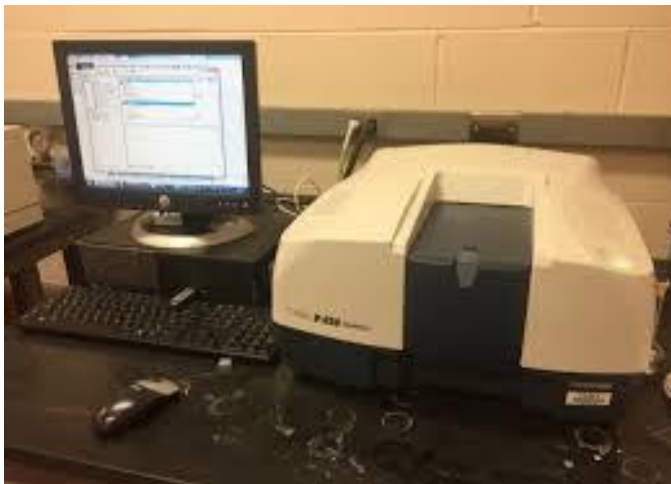
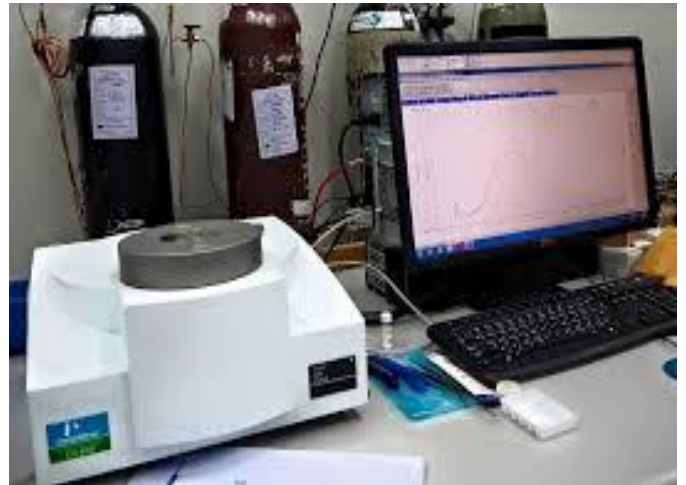
Applications: Identification of unknown materials, determination of chemical structures and quantification of components in a mixture and analysis of conformational and molecular dynamics by 1D and 2D NMR.

TGA-DTA-DSC

Make: PerkinElmer

Model: STA8000

Applications: STA8000 features simultaneous analysis of TGA, DTA & DSC. That is weight change, heat flow and heat differences a sample of interest with a reference sample over a temperature range can be simultaneously measured.



UV/VIS/NIR Spectrophotometer

Make: JASCO

Model: V-670

Applications: Analytical technique to determine the optical properties (transmittance, reflectance and absorbance) of liquids and solids. It is used to characterize semiconductor materials, coatings, glass and study molecular level interaction. UV/VIS/NIR operates in the optical range between 175 nm to 3300 nm