



Indian Institute  
of Technology  
Gandhinagar



## FTIR FOURIER TRANSFORM INFRARED SPECTROSCOPY

FTIR Spectrophotometer with ATR and accessories.

**Make:** Bruker, Model: Invenio-S FTIR with Confocheck and Accessories.

### TECHNICAL SPECIFICATIONS

- ✓ Spectral Range: 8,000- 340cm<sup>-1</sup> (standard KBr optics)
- ✓ Detector: DLATGS, Photovoltaic MCT
- ✓ BaF<sub>2</sub> window, AquaSpec flow-through transmission cell with CaF<sub>2</sub> window
- ✓ OPUS/QUANT Quantitative analysis software

### APPLICATIONS

- ✓ Polymer and material analysis
- ✓ Pharmaceutical and biomedical research
- ✓ Environmental and forensic investigations

## GPC GEL PERMEATION CHROMATOGRAPHY

**Make:** Waters, Model: 1500 series HPLC Pumps

### TECHNICAL SPECIFICATIONS

- ✓ Mobile Phase – Solvent that carries the sample.
- ✓ Pump – Ensures consistent flow rate.
- ✓ Injector – Introduces the sample into the system.
- ✓ Column – Packed with porous gel particles for separation.
- ✓ Solvents: Dimethylformamide (DMF) and Toluene
- ✓ Standards: Polyethylene Glycol (PEG)(100-22,000) and Polystyrene (PS) (500-3,00,000)
- ✓ Detectors – Refractive Index Detector, Evaporation Light Scattering Detector, UV Detector

### APPLICATIONS

- ✓ Polymer characterization
- ✓ Protein and biopolymer analysis
- ✓ Drug formulation studies
- ✓ Quality control in industries



Department of Chemical Engineering