Fourier-Transform Infrared Spectrometer (FTIR)

- FTIR is a technique used to obtain an infrared spectrum of absorption or emission of a solid, liquid, or gas.
- The principle of FTIR is based on the bonds and the group of bonds vibrates at some characteristic frequencies.
- FTIR is a sensitive technique particularly for identifying organic chemicals although it can also characterize some inorganic.
- The equipment is used to determine functional groups in organic samples using infrared radiation within the 400-4000 cm^{-1} range.
- The FT/IR-6000 Series is controlled by Spectra Manager™ cross-platform software. Spectra Manager™ includes various capabilities including Spectra measurement, Quick-Start, spectral comparison and quantitative analysis as standard functions.
- The sample measurement screen can be customized according to user requirements and the customized screen and parameters.

Specific Features:

- Spectra Manager™ Suite software with KnowItAll Informatics.
- FT/IR-6600 and the FT/IR-6700 – aluminium optics.
- FT/IR-6800 – gold optics.
- All instruments include a high-output ceramic source, KBr beam splitter, and DLaTGS detector.
- A full range of sampling accessories with IQ accessory recognition.
- Vibration-proof optical bench.
- Large sample compartment.
- Retro-reflector (corner-cube) mirrors with auto-alignment to optimize energy throughput.
- Purgeable and vacuum sample compartment and optical bench.
- Detectors from DLaTGS, InGaAs, InSb, MCT and He-cooled Bolometers.
- Range of beam splitter materials with either manual or automatic exchange.
- Optional FTIR microscopy and IR Imaging for both micro and macro measurement.

- Rapid scan and step-scan (microsecond or nanosecond).
- Wavenumber extension option (25,000 to 10 cm^{-1}).
- Vibrational Circular Dichroism (VCD) option.

Sample requirement for FTIR

Solid or Powder (organic/inorganic) and liquid organic samples

1g or 1 mL sample.

Details of FTIR

Brand	JASCO-6600
Model	6600
Sponsored Agency	DST- PURSE program (Phase -2)