

Spectrum 100 Optica FT-IR System

FT-IR stands for Fourier Transform Infrared, the preferred method of infrared spectroscopy. In infrared spectroscopy, IR radiation is passed through a sample. Some of the infrared radiation is absorbed by the sample and some of it is passed through (transmitted). The resulting spectrum represents the molecular absorption and transmission, creating a molecular fingerprint of the sample. Like a fingerprint no two unique molecular structures produce the same infrared spectrum. This makes infrared spectroscopy useful for several types of analysis.

Specifications:

- **Make and Model:** Perkin Elmer, Spectrum BX II
- Single beam, purgeable, sample compartment.
- **Operating modes:** ratio, single beam, or interferogram
- An optical system that data collection over a total range of 7800 to 100 cm^{-1} .
- A mid infra red detector-either DTGS (deuterated triglycine sulphate) as standard and option of using MCT (Mercury cadmium telluride) or PAS (a photo acoustic detector).
- An electronic system based on Motorola-68340 integrated processor.
- **Sample sizes:**
 - Modified substrate: 1 cm^2
 - Liquid Non-aqueous sample: 1 mM
 - Powder Sample: 1 mg



General applications:

- Identification of unknown materials present in liquid or powder samples
- Identification of the chemical modification and Analyte immobilization on any silicon, glass or polymer substrate
- Determination of the quality, consistency of a sample and the quantification of components in a mixture.