Measurement of: ABSORPTION MEASUREMENTS

Equipment: UV-Vis spectrometer model no. UV-2401PC(Shimadzu)

Property Measured: Absorption spectrum

Photograph (small size)

Basic Principle:

The ultraviolet-visible light absorbance of the materials were examined by using UV-Vis absorption spectroscopy. A typical absorption spectrophotometer measures the amount of optical absorption in a material, as a function of wavelength. In such double beam spectrophotometers, a beam of light from a broadband light source gets separated into its component wavelengths by a prism or diffraction grating. Each monochromatic beam in turn is split into two equal intensity beams. One beam, the sample beam passes through the sample. The other beam, the reference beam passes through an identical reference. The intensities of these light beams are then measured by detectors and then compared. The ratio of these intensities can then be used to measure absorbance or transmittance of light through the sample.

Capabilities:

The instrument can study optical properties of materials (Both in liquid and thin films) in transmission and absorption mode in the wavelength range of 200-800nm.

Sample Requirement: Liquid suspensions/Thin film