

## UV-VIS-NIR spectrophotometer

It is a double beam, double monochromator; ratio recording UV/Vis spectrophotometer with microcomputer electronics, controlled by a personal computer. All reflecting optical system (SiO<sub>2</sub> coated) with holographic grating monochromator with 1440 Lines/mm UV/Vis blazed at 240 nm, Littrow mounting, sample thickness compensated detector optics. The optical source and detector are a pre-aligned tungsten-halogen and deuterium and R955 Photomultiplier, giving high energy throughout the whole UV/Vis range respectively.

### **System capabilities:**

- **Wavelength Range:** 190 nm - 3300 nm
- **Wavelength Resolution:** UV/Vis Resolution  $\leq 0.17$  nm, NIR Resolution  $\leq 0.20$  nm
- **Source:** Pre-aligned tungsten-halogen and deuterium
- **Detector:** Photomultiplier R955 for high energy in the whole UV/V is wavelength range. Peltier cooled PbS detector for NIR.
- **Wavelength Reproducibility:** UV/Vis (Deuterium Lamp Lines)  $\leq 0.06$  nm, NIR (Deuterium Lamp Lines)  $\leq 0.1$  nm
- **Photometric Range:** 6 A (using reference-beam attenuation)
- **Photometric Display:** Unlimited



**Sample Information:** Absorbance/Transmittance of liquids, suspensions and transparent films on transparent substrates

### **Data collection modes:**

- Wavelength Scan
- Quant and Scanning Quant
- Time-drive
- Wavelength program

Ideal for full or partial range spectral characterization

Ideal for quantitative analysis on discrete peaks or full spectra

Ideal for kinetics, including general and enzyme kinetics

Ideal for rapid measurement at single or multiple discrete wavelengths

**Data collection modes used till date:** Wavelength Scan (full range)

**Sample history:** Nanoparticle solutions and suspensions, biological suspensions, transparent films on glass substrates