

UV-VIS-NIR SPECTROPHOTOMETER



Make	Model
Perkin Elmer,U.S.A	Lambda 19

Small Description:

UV-VIS-NIR Spectrometer Perkin Elmer Lambda 19 Range: 185-3200 nm: Diffuse reflectance attachment; Standards for wavelength and absorption calibration validation traceable to NIST All types of measurements/studies in the region including Absorbance, Transmission and Reflectance spectra; Quantitative analysis.

- ❖ Used for analysis of various compounds to find out the absorbance value & wavelength maxima in UV-VIS-NIR region
- ❖ Very useful instrument for qualitative analysis.
- ❖ The accessory "Integrating sphere" with spectrometer helps to analyze samples in reflectance mode
- ❖ The accessory helps to analyze samples like cloth, leather, films, various biological samples
- ❖ Helps in research & development of dyes products chemicals and other colored products
- ❖ The instrument is also useful to study kinetic behavior of chemical reaction with respect to time

Specifications:-

- ❖ Double Beam, Double Monochromator, Ratio Recording
- ❖ Lamp: Deuterium (UV), Tungsten-Halogen (VIS/NIR)
- ❖ Detectors: Photomultiplier tube for UV/Vis

Lead-Sulphide cell (PbS) for NIR

- ❖ Wavelength Range: 185-3200 nm for Absorbance/Transmission and 200-2500 for Reflectance
- ❖ Scan Speed: 0.3 to 1200 nm/min
- ❖ Wavelength Accuracy: ± 0.15 nm for UV/VIS & ± 0.6 nm for NIR
- ❖ Base line flatness: ± 0.001 A°, 4 nm slit
- ❖ Ordinate Mode: Scan, Time Drive, Wavelength Programming, Concentration

Photometric Accuracy: ± 0.003 A° or ± 0.08 %T

Application areas:

- Chemical – To find out unknown concentration. To find out wavelength maxima
- Physics – To find out band gap of the crystal and its optical properties.
- Clinical and Pharmaceutical – To find out optical density
- Environment Science – Effluent water analysis and its concentration
- Dyes – To find out colour concentration
- Material Science :- Find out materials optical properties and its concentration.