

**TECHNICAL SPECIFICATION FOR UV-VISIBLE DOUBLE BEAM SPECTROPHOTOMETER**  
**(PC BASED)**

- Optical System** : Czerny-Turner spectrometer design,  
double beam optical system
- Light Source** : Deuterium arc Lamp: 190 to 350nm  
Tungsten Halogen Lamp: 330 to 900nm
- Light source**  
**Exchange Wavelength:** user selectable within a range of  
330 to 350nm
- Detector** : Photomultiplier tube (PMT)
- Wavelength Range** : Should cover the range from 190 - 900nm
- W.L.Accuracy** : +/-0.2 nm or Better
- W.L.Repeatability** : Should have at least <0.05nm or better
- Scanning Speed** : 10 to 4000nm/min or better
- Slew Speed** : 12000nm/min or better
- Spectral Bandwidth** : 0.1 to 10 nm  
L2, L5, L10nm (low stray light mode)  
M1, M2nm (micro cell mode)
- Photometric Range** : -4 to 4Abs or better
- Photometric Accuracy:** +/-0.0015 Abs (0 to 0.5Abs) or better
- Stray Light** : 1% (198nm KCL 12 g/L aqueous solution)  
0.005% (220nm NaI 10 g/L aqueous solution)
- Baseline Stability** : <0.0003 Abs/hour
- Baseline Flatness** : +/-0.0002 Abs
- Bandpass** : 0.05 nm to 5.00 nm or better
- RMS Noise** : 0.00003 Abs
- Power Supply** : Switchable 120 – 230V AC, 50 – 60 Hz

**SOFTWARE SPECIFICATIONS:**

**Measurement Modes:** Quantitative Analysis  
Wavelength scan, Time scan: (Abs, %T, %R, sample reference)

Fixed Wavelength : (up to 8 wavelength)  
Abs/%T monitor, validation program

Should have basic and advance modes for parameter setting for routine measurement and advance measurement.

**Data Processing:** spectral Manipulation , overlay peak picking, peak height , peak area, peak width , Derivatives, smoothing, Data Truncation, Arithmetic , Base line connection, subtraction, Deconvolution, vertical axis conversion , Horizontal axis conversion.

**Computer Station:**

Latest i5 desktop computer with compactable operating system along with a laser printer/hp desktop printer

**Other standard functions should include:** Enzyme activity calculation. Film Thickness measurement, color analysis software

Should supply the following items along with the instrument:

1. **Diffuse Reflectance Accessory:** Integrating sphere Dia should be 60mm
2. Thin film Holder
3. Micro Cell Holder
4. Quartz Cuvettes, Glass Cuvettes 2 X 10mm - 2 Pair
5. Micro rectangular quartz cuvette 2 X 5 mm - 2 Pair

**Warranty:** 1 year + 2 years AMC free or three years Manufacturer's Warranty Certificate

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