

## MAHARAJA RANJIT SINGH PUNJAB TECHNICAL UNIVERSITY BATHINDA-151001, PUNJAB (INDIA)

(Established by Punjab Govt, vide Punjab Act No. 5 of 2015 & Under Section 2(f) of the UGC Act at S. No. 428)

Ref. No. MRSPTU/Purchase/16-17/....

Dated .....

## **Tender Specifications of UV Visible Spectrophotometer**

Optical System	: Double Beam with sample and reference cell holder
Wavelength Range Working Mode Spectral Band Width Scanning Speed Monochromator Wavelength Accuracy	<ul> <li>190nm to 900nm or better</li> <li>PC controlled</li> <li>Fixed or Variable (0.5, 1, 2, 4 or 5nm)</li> <li>3000 nm/min or more</li> <li>Czerny Turner mounting with 1200 lines/mm</li> <li>± 0.1nm @656.1nm D2</li> <li>± 0.3nm entire range (190 to 900nm or better)</li> </ul>
Wavelength Repeatability Stray light	: 0.1nm : <0.02% T @340nm for NaNO <sub>2</sub> <0.9% T @198nm for KCI
Photometric Range (approx.) Photometric Accuracy	: -4 to 4 Abs, Transmittance 0-100% : <u>+</u> 0.002 Abs (0.0.5) : <u>+</u> 0.004 Abs (0.5~1A) : + 0.006% T (2A)
Photometric Reproducibility	: 0.001 Abs (0.2A) 0.001 Abs (0.5~1A) 0.15% T (0~100%T)
Baseline Stability	: +<0.0003 Abs/h or better (700nm, 1.0Abs, 2nm Spectral Bandwidth, 2 hr warm-up)
Baseline Flatness	: <u>+</u> 0.0015 Abs (190-900nm or better)
Noise Level	: 0.00005 Abs RMS @700nm
Cuvettes 3.5ml) Detector	: One additional set of glass and Quartz cuvette (10mm, : Silicon photo diode detector or PMT
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- PC and printer: OEM factory supplied OR compatible i3 or better PC with 4GB, 500 GB HDD, Flat screen monitor, optical mouse, pre loaded Windows and laser jet printer should be quoted along with system
- Communication should be through USB
- Suitable online UPS with atleast 30 min backup
- System should support up gradation to Pelletier assembly and integrating sphere for analysis of solid samples
- Warranty: 2 Years with additional AMC of two years

- Built in hardware and software validation and reporting wavelength, wavelength repeatability, resolution, stray light, noise level etc. software should be GLP/GMP Compliance. IQ, OQ, PQ documentation.
- Free onsite installation and training for support