## QUOTATION NOTICE DEPARTMENT OF CHEMISTRY, UNIVERSITY OF KERALA DC/ST/EQ/ (SB/S1/OC-43/2013)/15-16'

Competitive quotations **are** invited for the purchase of a UV-Vis Spectrophotometer with the specifications detailed below. Sealed quotations are to reach the office of the Department of Chemistry, Kariavattom Campus on or before 26.10.2015. Quotations are to be addressed to Dr Ani Deepthi, PI-SERB Project, Department of Chemistry, University of Kerala, Kariavattom Campus, Thiruvananthapuram – 695581.

## SPECIFICATION FOR UV-VIS SPECTROPHOTOMETER

PC controlled scanning UV/VIS Spectrometer (Imported) of Variable bandwidth with the following specification.

Optics	<b>Double beam</b> spectrometer with concave holographic grating single monochromator with 1050 lines / mm or more. Beam splitter must be half-silvered mirror.
Sources	Pre-aligned deuterium and tungsten and tungsten halogen lamps with automatic source change.
Detector	Solid state detector/ PMT
Wavelength range	190 - 1100 nm
Stray radiation	must be minimum 0.02 % T at 220, 340, 370 nm
Wavelength accuracy	+/- 0.1nm
Wavelength repeatability	: must be minimum +/- 0.1 nm at $D_2$ peak 656.1 nm
Bandpass ( Variable)	: 0.5, 1, 2, 5, 20 nm ( Variable bandwidth only)
Baseline flatness with Slit of	0.5 nm must be <b>±0.00005 A</b>
Photometric repeatability	+/-0.001 A at 1 A
Photometric accuracy	±0.004 Abs
Photometric stability	±0.00015 Abs/ hr
Photometric noise less than =	±0.00005
Baseline flatness	±0.001 A
Resolution	should be minimum 0.5 nm
Stability	must be minimum <b>0.00015 A/h</b> (At 500 nm, 2 s response) or better

Noise level: at 500nm RMS and slit of 1nm must be minimum **0.00003A** or better Software Windows based operating Software. Should provide Recording, manipulation and storage of Spectral data. It should have complete controlling of instruments and accessories of spectrometers. Operating modes scan, fixed wavelength measurement, wavelength program calibration concentration measurements 25 standards, 5 ordinate types, 6 curve models, etc.

Accessories:

- Quartz cuvette 10mm path length- 1 pair. <u>Cuvette must be supplied along</u> with UV shipment itself by the manufacturer. The cuvette may not quote or supply separately in Indian rupees or any other form.
- Must quote Thin film sample holder for the analysis of thin films.
- <u>Integrating Sphere attachment for the analysis of powder samples & thin</u> <u>films have to be quoted</u>

Warranty: 5 years warranty for the complete instrument

The PC, laser Printer & 1 KVA UPS have to be quoted and must be supplied alongwith the instrument.

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