

**Department of Physics, University of Kerala, Kariavattom,
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PHY/SARD/ET/01/17

30.06.2017

E-Tender Notice

Department of Physics, University of Kerala, Kariavattom, invites tenders for the purchase of UV-Visible spectrophotometer and DRS accessory with following specifications.

Last date and time for submission of tender online	: 20-07-2017 5:00 PM
Last date and time for submission of tender offline	: 20-07-2017 5:00 PM
Date and time of opening of tender	: 24/07/2017 11:00 AM
Hard copies of the sealed tenders to be submitted to the office of	Co-coordinator, KSCSTE SARD, Department of Physics, University of Kerala, Karivattom e-mail: gsubodh@gmail.com
For technical details contact	Dr. V. Biju Assistant Professor, Department of Physics, University of Kerala, Thiruvananthapuram, Ph. No. 9961228468 E-Mail: bijunano@gmail.com

For further details logon to www.etenders.kerala.gov.in

TECHNICAL SPECIFICATIONS

UV- Visible Spectrophotometer with DRS

UV visible spectrometer must be capable of measuring transmittance, absorbance of liquids and films and diffuse reflectance spectroscopy of powders and films.

Optical system:	Czerny-Turner mount single monochromator fully symmetrical double beam type
Light source:	Halogen lamp, Deuterium lamp
Wavelength range:	190 to 900 nm or wider range
Wavelength accuracy :	+/-0.2 nm (at 656.1 nm) or better
Spectral bandwidth (SBW):	0.1, 0.2, 0.5, 1, 2, 5, 10 nm L2, L5, L10 nm (low stray light mode) M1, M2 nm (micro cell mode) or better
Stray light:	1 % (198 nm KCL 12 g/L aqueous solution) 0.005 % (220 nm NaI 10 g/L aqueous solution) 0.005 % (340 nm NaNO ₂ 50 g/L aqueous solution) 0.005 % (370 nm NaNO ₂ 50 g/L aqueous solution) SBW: L2 nm Or better standards
Photometric range:	-4~4 Abs
Photometric accuracy:	+/-0.0015 Abs (0 to 0.5 Abs) +/-0.0025 Abs (0.5 to 1 Abs) +/-0.3 %T Tested with NIST SRM 930D or better
Photometric repeatability:	+/-0.0005 Abs (0 to 0.5 Abs) +/-0.0005 Abs (0.5 to 1 Abs) Tested with NIST SRM 930D
Scanning speed:	10~4000 nm/min or better
Slew speed:	12,000 nm/min
RMS noise:	0.00003 Abs (0 Abs, wavelength: 500 nm, measurement time: 60 s, SBW: 2 nm)

Baseline stability: At least 0.0003 Abs/hour

Baseline flatness: +/-0.0002 Abs (200 -850 nm)

Detector: Photomultiplier tube

Standard facilities: IQ accessories, Start button, Analog output

Standard program: Abs/%T Meter, Quantitative Analysis, Spectrum Measurement, Time Course Measurement, Fixed-Wavelength Measurement, Validation, Daily Maintenance, Macro command (only for iRM), Dual Wavelength Time Course Measurement (only for PC)

Sample holder: Sample holders for powder, thin film and liquid sample measurements

Diffuse Reflectance Accessory for Powder and Film:

(i) Integrating Sphere (60 mm dia) (ii) Powder holder for integrating sphere accessory
Sample holder for powder, thin film and liquid measurements

Desktop computer with monitor with following specifications (for Analysis) & Inkjet colour printer

Desktop computer with monitor having following specifications

(i) Processor: intel core i3 (ii) Operating system: Windows 10 Home

(iii) Memory: 4 GB DDR3 RAM (iv) Hard disk: 1TB HDD.

UPS: A suitable UPS (for UV and Computer) with 1 hr back up time also should be quoted.

Any Other Item: Also quote any other items, which are required for the installation and continuous operation of UV- Visible Spectrometer.

Warranty: Comprehensive warranty for not less than three years.

General Conditions:

1. The tender shall be submitted in the two bid viz. Technical Bid and Financial Bid. Only those qualified in technical bid will be eligible for participating in financial bid. A presentation

regarding the technical specification and item to be supplied shall be done before the technical evaluation committee if requested.

2. The bidder should be a manufacturer or their dealer specifically authorized by the manufacturer to quote on their behalf for this tender as per Manufacturer Authorization Form and Indian agents of foreign principals, if any, who must have designed, manufactured, tested and supplied the equipment(s) similar to the type specified in the “Technical Specification”. Such equipment must be of the most recent series/models incorporating the latest improvements in design. The models should be in successful operation for at least one year as on date of Bid Opening.
3. **Compliance Statement:** Along with the technical details provide a tabular column indicating whether the equipment quoted by you meets the specifications by indicating 'YES' or 'NO'. If 'YES', support the claim by providing original brochures. **Venders should provide clear brochures/data sheets about the equipment and its working. Also include adequate proof for the claim regarding the performance.**
4. **Reference:** Names of Institutes with contact person and telephone/ email where similar equipment supplied by you in India [Preferably South India] shall be mentioned in the bid.
5. Incomplete & conditional tenders and tenders received after the due date will be summarily rejected without assigning any reasons thereof.
6. The price should be inclusive of all taxes, duties, transportation, insurance, installation etc. Nothing extra will be paid in addition to the quoted rate. Any amount in Indian rupees for installation, commission, labour, spares, service etc shall be entered in item 2 of BoQ.
7. **Payment Terms:** 90% payment shall be made through irrevocable LC on presentation of complete and clear shipping documents and balance 10% of the amount shall be released after the receipt, installation commissioning and acceptance of the equipment.
8. **Validity of tender:** Tender submitted shall remain valid at least for 120 days from the date of opening the tender. Validity beyond 120 days, from the date of opening of the tender shall be by mutual consent.
9. **Delivery and installation:** Proposed delivery schedule should be mentioned clearly. Delivery (including transport from airport), installation and training should be made at the Department of

Physics, University of Kerala, Kariavattom campus, Trivandrum without extra cost. University of Kerala will provide customs duty exemption certificates if required.

10. Service facility: Supplier should mention their details of service setup and manpower in Thiruvananthapuram who are responsible for after sales support.
11. The model number, make, and a printed literature of the product shall submit positively.
12. In case of any dispute, the decision of the University authority shall be final and binding on the bidders.
13. The undersigned reserves the right to reject any or all of the tenders received without assigning any reason thereof.
14. The quoted item should be under **comprehensive warranty for 3 years** or more.
15. If any component is found to be defective during the warranty period, the vendor has to replace the defective item immediately at their own cost.

Documents to be Uploaded

- 1 Signed Compliance Matrix
2. Detailed Technical Brochure
3. Under taking of support for next 10 Years
4. BoQ