

Department of Environmental Sciences, University of Kerala
Kariavattom, Thiruvananthapuram

e-Tender Notice

TENDER - No. 2899/EVS/16

Dated 10 .01.2017

E-Tender Notice

Department of Environmental Sciences, University of Kerala, Kariavattom invites open tender through e-Procurement (two cover system) from the Original Equipment Manufacturers or their Authorised Dealers for the **Supply and Installation and Commissioning of Atomic Absorption Spectrophotometer.**

Last date and time for submission of tender : 25.01.2017 at 5.30 P.M.

online

Last date and time for submission of tender offline : 25.01.2017 at 5.30 P.M.

Date and time of opening of tender : 30.01.2017 at 11.00 A.M.

Hard copies of the sealed tenders to be submitted to the office of The Registrar, University of Kerala, Senate House campus, Palayam Trivandrum- 695 034, Kerala Tel: +91-471-2305631, 2386202 (O)

e-mail: regrku@gmail.com

For technical details contact

Associate Prof. & Head, Department of Environmental Sciences, University of Kerala, Kariavattom campus, Kariavattom P.O., Trivandrum- 695581, Kerala.

Phone: 9895822161.

Email: jayvijayds@gmail.com

[For further details logon to www.etenders.kerala.gov.in](http://www.etenders.kerala.gov.in)

TECHNICAL SPECIFICATIONS FOR DOUBLE BEAM ATOMIC ABSORPTION
SPECTROPHOTOMETER (FLAME ONLY) AND OTHER ACCESSORIES

Double beam Atomic Absorption Spectrophotometer (Flame Only) and Accessories

- System should be a true Real Time Double Beam Spectrometer with Wavelength Range 185nm – 900 nm. Capable of measuring both Sample & Reference signal simultaneously.
- Diffraction grating monochromator with dual blazed (Blazed at UV & Visible region) and Ruling density of 1800 lines /mm, RLD 1.6 nm /mm.
- Spectral bandwidths of 3 different types programmable through software using auto slit selection mode.
- Minimum 4 Lamps fixed position Automatic Lamp Holder with computer Controlled Lamp selection, its alignment and automatic optimization of Energy using Coded Lamps.
- Instrument has separate Power supply for 2 Nos EDL/ Super/ Ultra lamps. Adaptability of EDL/ Ultra lamp, Super lamp and its power supply details to be clearly mentioned in the vendor's literature/ specification sheet and not only in Quotation.
- The Detector used shall be Solid-State Detector
- The instrument must have latest fiber optics technology or equivalent for better sensitivity to avoid the energy loss in conventional mirror technology
- Total Gas Flow Control System to maintain gas flows (Ratio of fuel/oxidant) at set levels even when subjected to outside variations like nebulizer adjustments. Automatic Gas Flow adjustment during change over between Air, C₂H₂ and N₂O.
- All safety interlocks like Burner Head Interlock, Nebulizer/End Cap Interlock, drain Interlock etc. to built-in.
- Following Coded Hollow Cathode lamps to be quoted.

Aluminum, Calcium, Copper, Iron, Magnesium, Chromium, Manganese, Nickel

- Following EDL/ Super/ Ultra lamps to be quoted.

Cadmium, Lead, Zinc

- Include imported Air compressor, Air Filter, Acetylene Filter, 50 mm Nitrous Oxide Burner head, 100mm Acetylene Titanium Burner head,
- Computer controlled motorized burner adjustments with highest precision and reproducibility for adjustment of Flame position in light path as well as fully automatic adjustment of Burner Head. The height of Burner Head should also store with method file.
- Adjustable **GemTip** Nebulizer to take analysis with acids, corrosive samples including HF.
- Carbon filled PPS Spray Chamber to analyze all types of samples, has high mechanical strength and fast drainage characteristics.
- Windows based Software for system function including control of major accessories, both of single element or multi-elements methods for Flame
- Imported Nitrous oxide regulator with heater to be supplied along with the instrument
- Branded PC with latest configuration, Laser jet black & white printer, SS Fume hood, Acetylene gas cylinder with regulator, Nitrous Oxide gas cylinder, 5 KVA UPS with 1 hour back up have to be supplied
- Branded PC with latest configuration, Laser jet black & white printer, SS Fume hood, Acetylene gas cylinder with regulator, Nitrous Oxide gas cylinder, 3 KVA UPS with 1 hour back have to be supplied.
- Warranty: 3 years
- Installation & Demo: free of cost.

Other Conditions

- **Warranty: 3 years complete warranty for the instrument**
- Installation & Demonstration: Free of cost

Training: Free of cost

A signed compliance matrix (on specifications and conditions) to be submitted along with the quote.

Vendors must have minimum 3 or more installation base in Kerala.

- Vendor should have a service branch in Kerala positively.
Supplier must demonstrate the equipment in customer's place upon request.
- **AMC for extra 2 years to be quoted.**

General Conditions

1. The Bidder should be a manufacturer or their dealer specifically authorised by the manufacturer to quote on their behalf for this tender as per Manufacturer Authorisation 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 equipments 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.
2. Incomplete & conditional tenders and tenders received after the due date will be summarily rejected without assigning any reasons thereof.
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. Vendors 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. 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.
6. The price should be inclusive of all taxes, duties, transportation, installation etc. Nothing extra will be paid in addition to the quoted rate.
7. Payment Terms: 90% payment shall be made through irrevocable L/C 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 and installation should be made at Department of Environmental Sciences University of Kerala, Kariavattom campus, Trivandrum- 695581, without any extra cost.
10. Service facility: Supplier should mention their details of service setup and manpower in Trivandrum 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 quoted item should be under comprehensive warranty for 5 years or more.
14. The undersigned reserves the right to reject any or all of the tenders received without assigning any reason thereof.

Documents to be Uploaded

1. Signed Compliance Matrix
2. Detailed Technical Brochure
3. Under taking of support for next 10 Years
4. BoQ
5. DD/Hard copy of Bank Guarantee if opted

The Registrar,
University of Kerala,
Senate House campus, Palayam
Trivandrum- 695 034, Kerala.