

Department of Geology, University of Kerala

Kariavattom, Thiruvananthapuram

e-Tender Notice

TENDER –Pl.A1 No. 1112/Gol/16

Dated 31.01.2017

E-Tender Notice

Department of Geology, 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 Flame Photometer capable of detecting 5 elements.**

Last date and time for submission of tender online	: 15.02.2017 AT 5.30 P.M
Last date and time for submission of tender offline	: : 15.02.2017 AT 5.30 P.M
Date and time of opening of tender	: 20.02.2017 AT 2.00 P.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	The Associate Professor and Head, Department of Geology, University of Kerala, Kariavattom campus, Kariavattom P. O., Trivandrum-695581, Kerala. Phone:9895245380, 0471 2308403 Email:geopradeep@gmail.com

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

TECHNICAL SPECIFICATIONS for FLAME PHOTOMETER capable of detecting 5 elements – Na, K, Li, Ca, Ba, with Automatic Fluid Handling System, Auto Sampler, 89 well, 5 ml vials with screw caps; Auto Dilutor 100:1, 10:1

Limits of Detection : Na – 0.02 ppm K – 0.02 ppm Li – 0.05 ppm Ca – 1.0 ppm Ba – 10 ppm

Fuel: LPG Gas Built-in air compressor and filter (for oil free air supply); Aspiration Rate : min. 3 ml/min

Range of operation (without dilution): Elements (Lower range Higher range) Na 0-10 ppm 10-100 ppm K 0-10 ppm 10-100ppm Li 0-2 ppm 2-50 ppm Ca 0-100 ppm 100-300 ppm i. Curve fit software to be provided for high concentration mode ii. Curve fit accuracy: $\pm 2\%$ f.s. Full Scale Sensitivity: Na: 2 ppm K: 1 ppm Li: 1 ppm Ca: 30 ppm Minimum Detection Limit: Na: 0.2 ppm K: 0.1 ppm Li: 0.1 ppm Ca: 3 ppm • Filters [10nm typical] : Na , K, Li and Ca . Reproducibility : Low Conc.: $\pm 1\%$ f.s., High conc.: $\pm 2\%$ f.s. • Minimum Sample : Appx. 3 ml Averaging : 2 to 15 seconds; Power supply : 230 V AC, 50 Hz. Accessories: All necessary accessories to make the equipment functional such as Power cord, Operation and service Manual [2 copies each], Electrode stand [preferentially flexible], Beakers for calibration.

Linearisation to be included in the software, and available all five elements. Achievable on both single and multi point calibrations.

Reproducibility : $<1\%$ coefficient of variability for 20 consecutive samples over 10 minutes (after instrument stabilisation) at concentrations of 100ppm or less.

Time to Stability : Less than 15 seconds after sample is introduced into the flame. Interfaces : USB , RS232. Integrated Printer with .CSV. Drift : Less than 1% per 30 minutes after instrument stabilisation. Specificity : Na/K/Li = $<0.5\%$ to each other when equal in concentration at $<100\text{ppm}$.

Standard fluids kit with 5 Calibration standards at 10,000 ppm, 1 litre Diluent Concentrate and cleaning agent concentrate. Built in printer.

Conditions: All necessary accessories to make the equipment functional such as Power cord, Operation and service Manual [2 copies each], Electrode stand [preferentially flexible], Beakers for calibration. Installation and training. Suitable online UPS systems to run the system safely should be quoted. All the prerequisites for installation have to be quoted. Only electricity at 220 v, 50Hz, and space will be provided.

In case of breakdown during the warranty period, a competent service engineer of the supplier should rectify the problem and replace the faulty parts, without any liability of cost, within a reasonable period of time. Supplier should ensure to provide all spares required for making the instrument operational. The spares recommended for keeping in inventory along with the instrument may also be quoted. Installation should be done by the manufacturer. On-site training for operation and application may be given to the users free of cost. For frequently required spares, there should be adequate inventory with the Indian agency. One set of operating manual and service manual including detailed drawings should be provided with the instrument. User list of the supplied instrument with contacts in India should be

provided. The supplier must submit technical brochures and proper application notes adequately explaining and confirming the availability of the features in the model of the equipment being quoted. The supplier must submit a table indicating the compliance of the features of the model of the equipment being quoted with those given in the indent. Features not matching must be clearly indicated. Additional features may be clearly explained.

General Conditions:

- 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.
- Incomplete & conditional tenders and tenders received after the due date will be summarily rejected without assigning any reasons thereof.
- 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 it's working. Also include adequate proof for the claim regarding the performance.
- 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.
- 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.
- The price should be inclusive of all taxes, duties, transportation, installation etc. Nothing extra will be paid in addition to the quoted rate.
- 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.
- 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.

- **Every tenderer should submit an Earnest Money Deposit (EMD) of Rs. 25,000/- or equivalent Bank Guarantee valid upto the installation of the equipment.**
- **Every tenderer should submit Tender fee of Rs. 1000/-**
- Delivery and installation: Proposed delivery schedule should be mentioned clearly. Delivery and installation should be made at Department of Geology, University of Kerala, Kariavattom campus, Trivandrum- 695581, without any extra cost.
- Service facility: Supplier should mention their details of service setup and manpower in Trivandrum who are responsible for after sales support.
- The model number, make, and a printed literature of the product shall submit positively.
- In case of any dispute, the decision of the University authority shall be final and binding on the bidders.
- The quoted item should be under comprehensive warranty for 5 years or more.
- The undersigned reserves the right to reject any or all of the tenders received without assigning any reason thereof.

Documents to be Uploaded

- Signed Compliance Matrix
- Detailed Technical Brochure
- Under taking of support for next 10 Years
- BoQ
- DD/Hard copy of Bank Guarantee if opted

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