Environmental Geochemistry Laboratory
Department of Civil Engineering
Indian Institute of Technology Kanpur

Inquiry no.: IITK/CE/AS/06-2017/01 Date: 22.06.2017
Closing date and time: 04.07.2017 at 3 pm

Sub: Call for quotation for supply and installation of a portable multi parameter water quality meter for pH and specified water quality parameters

Sealed quotations (**Technical and Financial bids separately**) are invited from authorized suppliers for items and their specifications given below before 3 pm of 04.07.2017.

The quotation for supply and installation of **a portable multi parameter water quality meter** should be sent in two parts in sealed envelopes, clearly marked as "**Technical Bid**" and "**Financial Bid**". The Technical Bid should contain detailed technical specifications of the product being offered and **should not mention any prices**. The Financial Bid should include the detailed price quotation clearly, including the cost of the equipment, taxes, service charges, shipping and handling charges, if any. Our organization is an educational institute of repute and liable to get maximum *education discount* from manufacturer. Please specify it, separately.

Note: Clearly highlight the technical parameters of your product when answering to the bid requirements below. A mere copy-paste of the technical parameters specified in the quotations or vague or incomplete responses will be rejected.

S. No.	Product Name & Specifications	Quantity
1.	**Multi parameter water quality meter and electrode stand** The meter should be a microprocessor controlled, freely programmable and user friendly system with ease of operation and should be able to analyse multiple parameters in environmental samples from diverse matrices such as the ones listed below: **pH:** • Range: 0.0 to 14.0 pH or wider range • Resolution: ±0.01 pH or better (prefer user selectable) • Accuracy: ±0.02 pH or better • Calibration with 3 points or higher • Temperature compensation: Automatic, 0.0 to 100.0 °C	1

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ORP:

- Range: 1 to ±1999.9 mV or higher
- Resolution: 0.1 mV or better
- Accuracy: ±0.2 mV or better
- Calibration with at least two points (specify how many)
- Temperature compensation: Automatic, 0.0 to 100.0 °C

Ions:

- Either of fluoride, calcium, bromide and other ions
- Range: 0.001 ppm to 14000 ppm or wider
- Resolution: 3 digits or better (user selectable)
- Accuracy: 0.5 % Full scale (monovalent) / 1 % Full scale (divalent)
- 5 or more calibration points

Conductivity:

- Range: Should span 0 to 2000 mS/cm or higher with multiple ranges.
- Resolution: 0.05% of full scale or better
- Accuracy: ±1 % of Full scale ± 1 LSD or better
- Calibration point: Multiple points with each range spanned with minimum 1 point
- Temperature compensation: 0 to 50°C or better, automatic
- Adjustable cell constant

Dissolved Oxygen:

- Range: 0 to 40 mg/L or higher
- Resolution: 0.1 mg/L or better
- Accuracy: ±0.2 mg/L % Full scale ± 1 LSD or better
- Calibration points: preferred, at least one
- Range for % saturation of oxygen: 0 to 600
- Resolution for % saturation of oxygen: 1% or better
- Accuracy for % saturation of oxygen: ±2% or better

Temperature:

- Range: 0.0 to 100.0 °C or higher
- Resolution: 0.1 °C
- Accuracy: ±0.3°C or better
- Should be integrated with pH sensor

The meter should also have the following additional features:
Memory: Minimum 100 data sets
Data logging: Wireless data logging (preferably via Bluetooth)
Output: USB / IrDA Interface Adapter / RS232 / RS232C
Power supply: Long life compatible (preferably rechargeable) batteries, 9 V DC adapter, AC 230-240V 50/60 Hz
Operating Temperature: 5-55 °C (ambient)

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	Operating Conditions: 5-85 % (non-condensing) **Probe connector:** BNC (Preferance for more than one BNC adapter) **Channel requirement:** 3 (**minimum; should work simultaneously**) **Weight:** Preference for lower weight and robust design Diagnostic message display should be present. Should have the flexibility to be also used as a benchtop pH meter with appropriate size adjustable arms, electrode holders and stands (if needed, quote separately compatible with the meter)	
2.	Compatible electrodes for parameters listed above (**quote electrodes with model numbers and clearly specify whether these are included in the price of item 1; include all that you can supply)**:- a) Stainless steel ATC probe b) Epoxy combination pH electrode, refillable/gel filled with integral temperature sensor c) Fluoride electrode d) Bromide electrode e) Nitrate electrode f) ORP electrode g) Conductivity probe h) Galvanic DO probe with integral temperature sensor i) Dissolved carbonate ISE probe	2 sets
3.	NIST traceable standards for calibrating above parameters. **Quote separately their make, volumes (mL) and expiry dates and clearly specify whether these are included in the price of item 1.**	1 set

Terms and Conditions:

- The vendor should supply list of installation (minimum 5, in last two year) in India of the same model quoted against this enquiry preferably at IITK.
- Manufacturer should have appropriate certification.
- If the Financial Bid is included in the Technical Bid, then the quotation will be rejected.
- **Quotation should have minimum validity of 60 days from the date of opening.**
- Delivery period should be within 60 days from the receipt of the purchase order. Shorter delivery time may be given preference.
- Taxes, packaging, forwarding freight charges, if any should be mentioned.
- Quotation should carry proprietary certificates and authorization letters/certificates.
- Prices should include installation and training of the equipment.

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- Provide contact number/address for complaint, else quotes may be rejected.
- **The warranty period for the meter should be 3 years and at least 6 months for the electrodes from the date of installation**.
- The firms may also quote for optional accessories which will extend the capability or ease of use of the equipment.
- All quotations should be in the currency of the country of origin of the instrument and FOB and CIF, Delhi (if imported), and also converted to ₹.
- The Institute is exempted from excise duty and pays a nominal customs duty of ~5% under Govt. of India notifications 10/97 and 51196, respectively. Custom Duty exemption certificate under notification 51196 and road permit will be provided if applicable.
- Normal payment terms for the Institute will be applicable (90% on delivery of the items and the remaining 10% after satisfactory installation/ inspection).
- The Institute reserves the right for accepting and rejecting any quotations without assigning any reason thereof. **Also, the Institute reserves the right to reject or accept all or any of the offers made above.**

Thanking you,

Sincerely,
Dr. Abhas Singh
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