

Department of Zoology

University of Delhi

April 15, 2014

NOTICE INVITING TENDERS

The Department of Zoology invites sealed tender offers eligible manufacturers/authorized distributors/dealers for the supply of **Multiparameter Analyzer** in the Department of Zoology, University of Delhi, Delhi. The vendors intending to bid may follow the specifications listed and the other details and submit their bids to Prof. Rina Chakrabarti, Principal Investigator, Indo-Norwegian project, Department of Zoology, University of Delhi, Delhi-110007 within 21 days of this call.

SPECIFICATIONS OF MULTI PARAMETER ANALYZER WITH pH, CONDUCTIVITY, DISSOLVED OXYGEN & ISE ELECTRODES.

Multi parameter system for use in field & laboratory for pH, conductivity, Dissolved Oxygen (luminescence), Ammonia, Ammonium, Sodium, Nitrate, Fluoride, Chloride testing parameters with standard intellical-probe. System should have measurement flexibility and ease of operation with interchangeable probes and automatic parameter recognition.

Plug-and-play simultaneously with at least two intellical probes to measure pH, conductivity, dissolved oxygen using luminescence technology (No membrane and no electrolyte solution using in DO electrode, it should be used optical technology), Ammonia, Ammonium, Nitrate, Fluoride and Chloride in any combination. Meter must have dual connection ports—for measurement of any selected parameter and an additional port for USB connectivity and external power. Transfer the entire data log or individual readings (GLP/ISO) to PC or USB flash stick. The meter should be password-protected for accurate, tamper-proof reporting. Meter should come with USB and A/C adapters, Meter stand, Universal probe stand for standard electrode size & carrying case.

METER SPECIFICATIONS

Power

4 AA batteries

USB/DC and AC/DC power connection included

Display: Display readings from two probes Simultaneous readings from two probes

pH: pH, mV, temperature

Conductivity: Conductivity, TDS, salinity, resistivity, temperature

DO: dissolved oxygen, temperature

Ammonia: Ammonia, mV, temperature

Ammonium: Ammonium, mV, temperature.

Sodium: Sodium, temperature

Nitrate: Nitrate, temperature

Fluoride: Fluoride , temperature

Chloride:Chloride, temperature

Data Memory : 500 results

Data Storage

GLP/ISO compliant reading data stored with calibration details.

Data Export: Download via USB connection to PC or flash stick.

Automatically transfer entire data log or as readings are taken.

Temperature Correction/Compensation

Off, automatic, and manual

Water Resistance: Meter Casing: 1 meter submersion for 30 minutes (IP67)

IntelliCAL Probes & Electrodes Specifications -

Temperature

Range: -10.0 to 110.0°C; **Resolution:** 0.1°C; **Accuracy:** ±0.3°C (±0.54°F)

pH

Range: 0 to 14 pH (standard gel-filled probe); **Resolution:** 0.1/0.01/0.001 selectable,

Conductivity

Range: 0.01 µS/cm to 200 mS/cm; **Resolution:** 0.01 µS/cm (5 digits, maximum)

Resistivity

Range: 2.5 ohm cm to 49 Mohm cm; **Resolution:** 0.1 ohm cm (5 digits, maximum)

Salinity

Range: 0 to 42 g/kg or ‰; **Resolution:** 0.01 ppt

Total Dissolved Solids

Range: 0.0 to 50.0 g/L; **Resolution:** 0.1 mg/L

Dissolved Oxygen (luminescence technology)

Range: 0.1 to 20.00 mg/L (1 to 200%); **Resolution:** 0.01 mg/L

Fluoride: Range: 0.02 mg/L (1×10^{-6} M) to 19,000 mg/L (1 M) F⁻ Dry storage & Fast response time.

Nitrate: -Range: 0.1 mg/L (7×10^{-6} M) to 14,000 mg/L (1 M) NO₃⁻N; Dry storage & Fast response time.

Ammonia: Range: 0.007 mg/L (5×10^{-7} M) to 14,000 mg/L (1 M) NH₃-N; Dry storage & fast response time

Chloride: - Range: 1 to 35,000 mg/L Cl⁻

Ammonium: - Range: 0.07 mg/l to 7,000 mg/L NH₄

Sodium: - Range: 0.023 - 23,000 mg/L Na⁺

Magnetic stirrer:

Extremely convenient magnetic mini-stirrer for mixing quantities up to 250 ml.

-with Durable, brushless motor,-Infinitely variable speed range,-High magnetic adhesion

Technical Specification:

Number of stirring Positions : 1

Stirring quantity max. per stirring position : 0.25 L

Motor rating input : 1

Motor rating output :0.8

Speed range : 300 - 1800

Set-up plate material synthetic (PP)

Permissible ambient temperature :[°C] 5 - 40

Permissible relative moisture :[%] 80

Instructions to the suppliers:

Two kinds of quotations may be submitted, one technical quotation consisting of all technical details along with commercial terms and conditions, and one financial quotation containing item wise price for the items mentioned in the technical quotation. Both the quotations should be sealed by the supplier in separate covers duly super scribed and both these sealed covers are to be put in a bigger cover which should also be sealed and super scribed. Company should attach user's list and performance certificate. The supplier shall bear all costs associated with the preparation and submission of its quotation including samples, literatures, etc.

Conditions of the Contract:

The bidders will have to quote all the items together, partial quotes will not be considered. Quantity, make, model and technical specifications should be mentioned clearly. It may be

stated if the rates are inclusive of taxes applicable and charges for onsite installation. Validity period of quotation should be 180 days from the due date. Any alteration/overwriting should be initialed. Kindly enclose a written authorization or certificate from the manufacturer. The supplier may mention the period of warranty in the quotation. The period of warranty will start only after successful installation and satisfactory operation. The bidders have to provide the following information with their technical quote. University reserves the right to order equipment with better quality over lower price and to accept or reject any or all quotation without assigning reasons thereof. Kindly enclose the followings.

- Manufacturer authorization certificate.
- Details of support and service centres.
- Warranty compliance statement.
- Complete user list with name, address and telephone number for the past three years.

Prof. Rina Chakrabarti
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