

PONDICHERRY UNIVERSITY, PUDUCHERRY – 605 014
(A central University)

DEPARTMENT OF EARTH SCIENCES

Ref. No.: PU/ES/UGC-MRP/9112/2

Date: 09-01-2013

Sealed quotations under single bid systems are invited for the purchase of **water quality analyzer and allied equipments** under UGC Major Research project. The quotations can be submitted for one or more equipments. The quotations duly signed and sealed should be submitted to **Dr. K.Srinivasamoorthy, Associate Professor, Department of Earth Sciences, Pondicherry University, Puducherry-605 014**. The quotation should be sent by post (normal/speed/Registered/courier) only. The price quoted should include all the costs such as delivery, installation, testing etc and also inclusive of all taxes. Warranty terms should be explicitly specified in your quotation. The technical specifications are given below. Last date for receiving quotation is **29.01.2013**.

Name of the required items:

- 1. Portable Water quality Analyzer: 1 No.**
- 2. Portable pH/TDS/Conductivity meter: 1 No.**
- 3. Visible digital spectrophotometer: 1 No.**
- 4. Digital Electronic Balance: 1.No.**
- 5. Adjustable Micro-pipette of different Volumes: 5 Nos.**
- 6. Refrigerator: 1.No.**
- 7. All Glass Double distillation unit: 1No**

1. Portable Water quality Analyzer:1.No

Technical Specification:

pH:

pH Range : 0 to 14 pH
Resolution : 0.01/0.001 pH
Accuracy : ± 0.01 pH ± 1 digit
Sensor : GE & RE/ Comb. Electrodes
Temp. Compensation: Auto/Manual

mV/ORP:

Range : ± 1999 mV
Resolution : 1 mV
Accuracy : ± 1 mV ± 1 digit
Sensor : GE & RE/ Comb. Electrodes

Colorimeter:

Range : ± 2.00 Abs
0 to 100 % T
Conc: 0-1999
Resolution : 0.001 Abs
Accuracy : 0.0001 Abs, 0.1% T
Sensor : Photo Diode
Source : Tungsten Lamp
Filters : Blue (440 nm)
Green (540 nm)
Red (660 nm)

D.O:

Range : 0 to 20 ppm
Resolution : 0.1 ppm
Accuracy : ± 1 of FS ± 1 digit ± 0.1
Sensor : Au/Ag Probe
Temp. Compensation: Auto/Manual

Temperature:

Range : ± 0 to 100°C
Resolution : 0.1°C
Accuracy : ± 0.5 °C ± 1 digit
Sensor : PT 100

Turbidity:

Range : 0 to 1 NTU
0 to 10 NTU
0 to 100 NTU
Accuracy : $\pm 2\%$ of FS
Sensor : Photo Diode
Source : Tungsten Lamp

Conductivity/TDS:

Range : 0 to 100 mS, 5 ranges,
0 ppm to 100 ppt 5 ranges at TDS factor 0.5(approx.) & TEMPCO 2%

Accuracy : $\pm 1\%$ OF FS ± 1 digit
Sensor : Glass/PVC cond. Cell (Acceptable from 0.1 to 5.0 cell constant)
Temp. Compensation: Auto/Manual

Salinity:

Range : 0 to 40 ppt
Resolution : 0.1 ppt

Accuracy : ± 2 of FS ± 1 digit
Sensor : Glass/PVC cond. Cell (Acceptable from 0.1 to 5.0 cell constant)
Temp. Compensation: Auto/Manual

General Specification:

Display (LCD) : 2 Line 20 Char. Alphanumeric
Printer Pot : Centronic Printer interface
Optional : Pt.Electrode
Power : 230 V 50Hz $\pm 10\%$ or Internal Battery with charger
Dimensions : 420 x 520 x 175mm (DxWxH)
Weight : 7.5 kg (Approx.)

2. Portable pH/TDS/Conductivity meter:1.No

Technical Specification:

pH	Cond.	TDS	Temperature
Range : 0 to 14 pH	0.00 to 20.00 mS/cm	0.00 to 10.00 ppt	0 to 100°C
Resolution: 0.01 pH	0.01 mS/cm	0.01 ppt	0.1°C / 0.1°F
Accuracy: ± 0.05 pH	$\pm 2\%$ F.S.	$\pm 2\%$ F.S.	$\pm 0.5^\circ\text{C}$ / $\pm 1^\circ\text{F}$
Temperature Compensation: pH: automatic; EC/TDS: automatic with β adjustable from 0.0 to 2.4% / °C			

Calibration: pH automatic, 1 or 2 points with 2 sets memorized buffers (pH 4.01/7.01/10.01 or 4.01/6.86/9.18; EC/TDS automatic 1 point.

TDS Conversion Factor: adjustable from 0.45 to 1.00

pH Electrode: replaceable
Environment: 0 to 50°C (32 to 122°F); RH max 100%
Battery Type / Life: 4 x 1.5V / approx. 100 hours of continuous use; auto-off after 8 minutes of non-use
Dimensions: 163 x 40 x 26 mm (6.4 x 1.6 x 1.0")
Weight: 200 g (approx)
Power Supply: 4 x 1.5V

Display : Dual LCD and automatic shut off.

Spares & Accessories:

Price of spare electrodes, consumables, battery etc., should be quoted separately.

3. Micro controller based visible digital spectrophotometer: 1 No.

Technical specification

Wavelength: 340-990 nm
Absorbance range: -0.3 to 2.500 Abs
Spectral band width: 5 nm
Wavelength resolution: 1-5nm
Wavelength Display: digital
Wavelength accuracy: $\pm 2 - 5$ nm
Photometric resolution: 0.1% T
Photometric accuracy: ± 0.005 to 1.0 Abs
Concentration: 0.000 to 9999 with floating decimal point
K factor: 0.000 to 9999 with floating decimal point
Read out: LED display (at least 4 digit)
Sample holder: 5mm to 10 mm path length
Power: 230 V $\pm 10\%$, 50 Hz
Grating: 400 – 600 lines/mm

Detector: Silica photo diode
Source: Halogen Lamp 10V - 50 W
Sample holder: 5 – 10 mm path length

4. Digital Electronic Balance: 1.No.

Technical specification

Capacity : 250 g with 5 digit display
Readability : 0.01 mg or better
Response time (avg) : 3 seconds
Repeatability: 0.1 mg
Linearity: 0.2 mg (approx)
Pan size : minimum 90 mm diameter
Main body dimension (approx): 185x182x230 mm
Calibration : Internal/Built-in
Display : LCD
Operating ambient Temp. : 10 to 40°C
Electrical details : Volts : 220V, 50-60 Hz fitted with Indian type plug
Leveling indicator for positioning
Warranty: 3 years

5. Adjustable Micro-pipette of different Volumes as mentioned below

- a. Volume range: 0.1 µl to 2µl: **1 No.**
- b. Volume range: 2µl to 20µl: **1 No.**
- c. Volume range: 20µl to 200µl: **1 No.**
- d. Volume range: 100µl to 1000µl: **1 No.**
- e. Volume range: 10µl to 100µl: **1 No.**

Technical specification

Adjustable digital micropipette with refillable tips & pipette stand.
Ultra light weight & fully Autoclavable, Pipette Piston with high resistance to heat, acids and alkalies, bleaches, aging, sunlight and abrasion. Viable calibration seal to indicate factory calibration not changed.

6. Refrigerator: 1.No.

Technical specification

Volume: 195 liters
Frost free,
Fire retardant wires,
Rust resistance body,
Single door,
Anti fungal door gasket,
5 star energy rating,
Automatic defrosting,
Large bottle shelf with spill guard,
Shelf type- wire,
Deodorizer,
Automatic voltage stabilizer and stand

7. All Glass Double distillation unit: 1No.

Technical specification

Input capacity: 10 ltrs

Output capacity (approx): 5 ltrs/hour or more than that

Power rating: 9 KW or less

Cooling water consumption: 120 – 150 ltrs/hr or less than that.

TERMS AND CONDITIONS

I. General Information:

- a. Last date and time of receipt of the Quotations: **January 29, 2013, 3.00 PM**
- b. Date and Time of Opening of the Quotations: **January 29, 2013, 3.30 PM**
- c. Quoting merely the lowest price does not confer any right to any bidder for award of supply order. The University's Purchase Committee, reserves the right to select the equipment any bid under the grounds of specification compliance, technologically advanced quality, proven performance track record, brand reputation, service backup support & training, offer of additional / special features, compatibility with the existing System, etc.
- d. The tender / quotation must be submitted in the sealed cover, super-scribing the name of the Department / Centre for whose equipments the tender is quoted for.
- e. The cover should also contain the information like, Name of the Equipment and Serial Number of Equipments for which the bids are submitted. The name and address of the bidder should also be mentioned at the from address space.
- f. The tenders should be addressed to

**Dr. K. Srinivasamoorthy,
Project Investigator and Associate Professor,
Department of Earth Sciences,
Pondicherry University,
Puducherry – 605 014.**

The example for super-scribing the envelopes of the different categories of tenders are given below: -

<p style="text-align: center;">Tender Submitted under Single bid system for the Department of Earth Sciences</p> <p>Name of the Equipment with serial No: _____</p> <p style="text-align: center;">To Dr. K. Srinivasamoorthy, Principal Investigator and Associate Professor, Department of Earth Sciences, Pondicherry University, Puducherry – 605 014.</p> <p>From Supplier's Address</p>

II. Common Conditions:

a. Quoting the core price, & Tax, Duties, Discount etc.

The taxes / duties / discounts, if applicable, are to be explicitly and separately shown in the bid and under no circumstances these components shall be added to the basic price and shown as single price. All the components of taxes, if applicable, should be shown explicitly and separately. **The Indian component of the supply should be quoted in rupees.**

b. The validity of the Quotation:

The validity of the quotation should be for at least 180 days from the closing date of the bid.

c. Late Bids:

The offers will not be considered if received after the bid closing date and time.

d. Invalid quotes:

The offers received through telex / tele-fax / e-mail will not be accepted by the University under any circumstances.

e. In case of Postal loss:

The University shall not be responsible for any delay / loss or non-receipt of tenders by post / courier service.

f. No unsolicited correspondence:

No unsolicited correspondence shall be entertained after the submission of the offer.

g. Purchase Agreement:

If an order is placed with the firm, the purchase shall be governed by an agreement as per the University rules in force at the time.

III. Additions in terms and conditions:

Additional terms and conditions will be incorporated in the purchase order, if needed, to safeguard the interests of the University.

a. Non-transferable:

Tender is not transferable.

b. Power to reject the offer:

Any offer containing incorrect and incomplete information shall be liable for rejection.

Pondicherry University reserves the right to accept / reject any offer in full or in part or accept any offer other than the lowest offer without assigning any reason thereof.

III. Price Schedule

1. The price should include the Delivery, installation, training charges (if any), etc. at the Department of Earth Sciences, Pondicherry University, Puducherry.

IV. Eligibility:

1. The firm must have the requisite domain expertise with regard to supply, installation and post sale service of the items for which they are quoting.
2. The firm should have sufficient number of installations of the similar Equipment in the premier Research Institutes in India.
3. The firm should have nation-wide Service Network all over India, especially in Chennai/ Bangaluru.
4. Any other techno commercial information, pertaining to this particular Equipment, principal suppliers, technical background and capability, local agents' background on Scientific Equipment Business, etc. may also be appended along with Testimonials and documentary proof.

V. Conditions of Contract: -

1. The offer must be in English. The rates should be indicated both in figures and words against item specified in the given Annexure. It is preferable that the price be quoted in Indian Rupees or in US Dollars or in major foreign currencies.
2. **The total cost should be quoted for FOB as well as CIF – Pondicherry University, Puducherry.**
3. The price quotes under FOB and CIF should also include the expected installation cost in the University Laboratory at Puducherry and also cost of consumables which are required for the main equipment for initial operation up to a reasonable period.
4. In case of the Principal supplier of Foreign country unable to meet the conditions stated at para No.4, the local agent / dealer should fulfill the above said conditions in respect of Local Insurance, Freight, safety transport and installation, etc.
5. The prices quoted shall remain firm until the equipment is supplied.

6. The University has been granted the benefit of exemption from the payment of the Central Excise Duty and Customs Duty by the Department of Scientific and Industrial Research (DSIR), India, vide their Notification No. 10/97 dt. 01-03-1997 and 51/96 dt. 23.07.96 respectively.

In respect of

- a) Scientific and technical instruments, apparatus, equipment including computers.
- b) Accessories and spare parts of goods specified in (a) above and consumables.
- c) Computer softwares, compact disks, CD ROM, Recording magnetic tapes, microfilms, micro- chips etc.
- d) Prototypes.

Customs duties at Indian port, if any, will be to the account of the University.

7. Infra-structural, power and any other requirement for satisfactory installation and commissioning of the whole system must be provided, at least 60 days in advance of the installation to be commenced. All drawing for electrical connections, electrical safety items piping work etc. must be provided in detail.
8. Complete technical specifications and literature, including process flow, to be included with the quotation. Manufacturers of various major parts/equipment must be mentioned explicitly.
9. A clear statement regarding availability of after-sales service and availability of spare-parts for next 5 to 10 years should be included.
10. Furnish a recent customers list (within last five years) with contact details including email address.
11. If the firm has an authorized representative in India, it is requested to inform its technical ability to take care of the problems in the system, if developed later within the warranty and outside the warranty period. The responsibility of the Indian agent must be clearly specified.
12. The bidder from abroad shall obtain, if required, export permission from the appropriate authorities in his country or the country of origin for items to be shipped to India in case of items to be imported. The University shall provide necessary information if required for this purpose.
13. The bidder from within India shall obtain the requisite approval for Imports etc., if required.
14. **Warranty:** The material covered under the purchase order, when installed, shall be warranted for the quality, workmanship, trouble free operation and performance for a period of **at least 12 months from the date of putting the system into operation** at the Pondicherry University. **A minimum of 2 years AMC after the expiry of Warranty**

has to be covered. (A signed Bidder's Warranty and AMC has to be submitted along with the Bid Document)

If any item covered under warranty fails, the same shall be replaced free of cost including all the applicable charges including shipping cost both ways.

15. All equipment must operate at 230V/50 Hz single phase and / or equivalent three phase electrical power.
16. In case of any dispute in respect of the tender, all legal matters shall be instituted within the jurisdiction of the place where the purchaser ordinarily resides.
17. No Agency commission will be paid to any authorized agent.
18. **Liquidated damages:** Timely supply of the ordered items, installation, commissioning (wherever is applicable) and training etc. is the essence of the contract. In case of failure to supply within the time specified in the Purchase order, a penalty/LD of 0.5% of the total value per week or a part thereof shall be levied subject to a maximum of 7.5% in respect of items which are not supplied. The decision of Pondicherry University shall be final in this regard.
19. The training should be provided by the firm on the specimen and operation of the equipment for a minimum period of two weeks from the date of installation with an expert team for two persons.

For any clarification with respect to technical specifications, please contact:

**Dr. K.Srinivasamoorthy, Principal Investigator and Associate Professor,
Department of Earth sciences, Pondicherry University,
Puducherry (Tel: 0413-2654489, 2655562 Email: moorthy_ks@gmail.com)**