

## **INVITATION FOR TENDER FOR SUPPLY OF EQUIPMENT**

Sealed tender offers are invited in two separate sealed covers (Technical and Commercial offers) from eligible manufacturers/suppliers or their direct Indian agents for the supply of the following equipment.

### **A. BIO-CHEMICAL ANALYSIS SYSTEM**

### **B. BENCHTOP MULTIPARAMETER SYSTEM**

### **C. METAGENOMIC SAMPLE HANDLING SYSTEM**

Please send offers, ALONG WITH DESCRIPTIVE CATALOGUE/ BROCHURE. The validity of the bid should be at least four months (120 days) or more from the date of the opening of this tender. Please ensure that your quotation reaches not later than **28.12.2017 at 15:00 Hrs** at the following address:

**Dr. Pinaki Sar**  
**Associate Professor,**  
**Department of Biotechnology**  
**Indian Institute of Technology**  
**Kharagpur – 721 302, West Bengal, India**

Earnest money of Rs. **5,000/-** is to be deposited in the form of Account payee Demand Draft in favour of IIT Kharagpur, payable at Kharagpur, India. Any bid which is not accompanied with an EMD shall be summarily rejected. Earnest money deposited will be forfeited if the tenderer withdraws or amends its tender or impairs or derogates from the tender in any respect within the period of validity of its tender. No interest will be paid on the earnest money of the unsuccessful bidders.

Tender Reference	<b>IIT/SRIC/BT/GKR/PS/2017-18/EQ-4, Dated: 06.12.2017</b>
Price of Tender Document	<b>NIL</b>
Last Date and Time for submitting the tender document	<b>28.12.2017; 15:00 Hrs (IST)</b>
Time and Date of Opening of Bids	<b>To be announced later</b>
Place of Opening tender offers	<b>Department of Biotechnology, Indian Institute of Technology Kharagpur – 721 302, West Bengal, India</b>
Address of Communication	<b>As stated above</b>
Contact Telephone Numbers	<b>+91- 3222 - 283754</b>
E-mail:	<b>psar@hijli.iitkgp.ernet.in</b>

## DETAILED TECHNICAL SPECIFICATIONS

### A. SPECIFICATION FOR BIO-CHEMICAL ANALYSIS SYSTEM

- It must be a Cuvette-based, single beam absorption system along with a reference beam, which must be able to perform both fluorescence and UV/Vis spectrometric quantitative application for biochemical analysis. Sample volume in the range of <math><2 \mu\text{L}</math> to 4mL.
- The system should have Inbuilt Operating Software system to minimize errors; with a system of data transfer.
- For photometric analysis system should have preprogrammed methods for fast and reliable detection of various biomolecules with spectral wavelengths between 200 – 800 nm (smallest increase of 1 nm).
- Xenon flash lamp should be provided as a light source, with a suitable beam receiver. System must have suitable data analysis systems and must allow maximum flexibility in wavelength selections for all current and future applications.
- For fluoremetric analysis measuring principle should be confocal filter fluorimeter with reference beam, with an excitation wavelength around 400 nm and emission wavelengths around 500 nm and must be able to detect biomolecules even at ultralow concentrations.
- It must have in-built programs for commonly used nucleic acids and protein fluorescent dyes, with fluorescence intensity across a range of 1 nM - 2000 nM fluorescein. LED should be provided as a light source along with a suitable beam receiver. Random errors should be minimum.
- Should be supplied with enough numbers (500 at least) of plastic cuvettes to handle minimum of 50  $\mu\text{L}$  sample volume. One suitable UPS must be provided.
- Warranty: 3 years.

### B. SPECIFICATION OF BENCH TOP MULTIPARAMETER SYSTEM

#### • METER SPECIFICATION :

1. **pH:** Range must be between 1.000 to 20.000; Resolution; minimum upto 4 significant digits with a relative accuracy of  $\pm 0.004$ ;
2. **ORP:** Range must be between  $\pm 2000.0$  mV; with 0.1 resolution; **ISE:** Range: 0 to 19999 with a resolution up to 4 significant digits.
3. **Conductivity:** Range must be around 0.001  $\mu\text{S}$  to 3000 mS, with minimum resolution upto 4 significant figures minimum with a relative accuracy in the range of 0.5 % - 1% reading  $\pm 1$  digit.
4. **Dissolved Oxygen:** Polarographic Concentration must be in the range of 0 to 90 mg/L; RDO concentration range must be between 0 to 50 mg/L, with resolution upto two significant digits.
5. **Resistivity:** Range must be between 2 ohm to 100 meg-ohm; **TDS:** Range must be between 0 to 200 ppt; **Salinity:** Range should be between 0.01 to 80.0 ppt and NaCl equivalent; 0.01 to 42 ppt sea water; Up to 6 points calibration must be provided.
6. System must hold up to 2000 data points with date and time. Should have good quality housing handles and should be easily cleanable.
7. System should enable us to place different modules in the any of the channels and the meter should recognize the module change immediately. It should also accompany a stirrer which can be controlled with the main instrument.

#### • ELECTRODE SPECIFICATION :

1. **pH Electrode type:** ROSS pH/ATC Triode TRIS BUFFER Compatible electrode; Temperature: 0 to 100°C.
2. **Conductivity Electrode:** 2-cell conductivity Duraprobe with temp sensor; Range: 0.1  $\mu\text{S}$  to

200 mS/cm; Temperature: 0 to 40°C, **Dissolved Oxygen probe type:** Polarographic DO Probe; Temperature: 0 to 50°C; **ORP Electrode type:** Epoxy body gel filled TRIODE with temp. sensor; Temperature: 0 to 80°C.

- **SUPPLY MUST INCLUDE :** Main Benchtop pH/Cond/ISE/DO/TDS/Salinity meter with two pH/ISE modules, Conductivity module, RDO/DO module, pH/ATC electrode, ORP/ATC Electrode, Conductivity sensor, DO sensor and calibration sleeve, Stirrer probe, pH buffer & solution kit, 1413uS conductivity standard, DO maintenance kit, BOD adapter/funnel/stirrer, ORP standard, Electrode stand, and Universal power adapter.
- **Warranty:** 3 years

### **C. SPECIFICATIONS FOR METAGENOMIC SAMPLE HANDLING SYSTEM**

- An enclosed, germ free, sterilized, air flow system for metagenome extraction, handing and processing for PCR and other molecular analysis.
- System should have approx. dimension (External Dimensions 40"x24"x 37" [ L x W x H] and Internal Work Zone 36" x 21" x 21"[ L x W x H]).
- It should provide greater protection against contamination from the ambient environment and cross contamination within the main chamber and ideal for high sensitive DNA handling work.
- It should have antimicrobial coating on all painted surface to minimize contamination.
- It should have high quality Pre-Filter and main HEPA Filter with a typical efficiency of >99.99% at 0.3 microns.
- It should contain built-in UV lamp with timer to facilitate decontamination in between PCR cycles.
- There should be microprocessor controller to supervise all functions.
- There should be high level of visibility in to the work zone from front and side glass wall.
- The system should have a double flap safety cover for UV-absorbing beta radiation and should be highly resistant.
- The UV lamp should be placed out of operator's direct line of sight.
- A reliable interlock safety system should be present to prevent the activation of UV Lamp unless the safety cover is closed. The lamp will be deactivated if the cover is opened.
- Mini-pleat separatorless HEPA filter technology should be present.
- It should have password protected administration set up to restrict access to main menu.
- This cabinet should have at least ISO Class 4 air cleanliness within the work zone.
- Additional Pre-Filter traps larger particles should be present.
- It should have audible/visual alarm to alert user in the event of low airflow.
- The control unit should also monitor the performance and usages hours of UV Lamp, pre-filter and main filter, and alert us when a replacement is required.

- The cabinet main body should be constructed of industrial grade electrogalvanized steel and should be superior to the less durable plastic constructed cabinets offered by the competition.
- The workstation should incorporate permanently lubricated direct drive centrifugal blowers.
- An energy efficient external rotor motor design should be present to reduce operating costs and has extremely low noise and vibration levels.
- The workstation should have support stand with Caster Wheels for easy movement of cabinet or table top model can also be provided.
- The workstation should provide fluorescent light.
- Pre-filter should be washable with > 85% arrestance.
- It should have extremely quiet operation (<53 dBA).
- It should have optimum laminar airflow velocity (0.30 m/s) and light intensity (>975 lux).
- Warranty: 3 years

### **GENERAL TERMS & CONDITIONS**

PLEASE SPECIFICALLY INDICATE THE FOLLOWING POINTS IN YOUR QUOTATIONS AND COMPLY THE TERMS AS MENTIONED HEREUNDER:-

1. TENDER ARE INVITED COMPLYING THE REQUIREMENT FOR TENDER AS DETAILED IN THE TENDER SPECIFICATION TO BE SUBMITTED IN THE COMPANY'S / FIRM'S LETTERHEAD NEATLY PRINTED / TYPED DULY SIGNED BY AUTHORIZED PERSON WITH THE SEAL OF THE BIDDERS. ALL ENVELOPS CONTAINING THE TENDER SHOULD BE PROPERLY SEALED. SEPARATE ENVELOPS SHOULD BE USED FOR TECHNICAL AND PRICE BID AND INDICATION TO THEIR EFFECT MAY PLEASE BE SUPERSCRIBED ON THE ENVELOP.

**THE FOLLOWING DOCUMENTS ARE REQUIRED FROM THE INDIAN AGENTS OF FOREIGN FIRMS:**

- 1.1 FOREIGN PRINCIPAL'S PROFORMA INVOICE INDICATING THE COMMISSION PAYABLE TO THE INDIAN AGENT AND NATURE OF AFTER SALES SERVICE TO BE RENDERED BY THE INDIAN AGENT.
- 1.2 COPY OF THE AGENCY AGREEMENT WITH THE FOREIGN PRINCIPAL INDICATING THE NATURE OF AFTER SALES SERVICES, PRECISE RELATIONSHIP BETWEEN THEM AND THEIR MUTUAL INTEREST IN THE BUSINESS.
- 1.3 PLEASE ENCLOSE THE DOCUMENT(S) RELATED TO THE ENLISTMENT OF THE INDIAN AGENT WITH DIRECTOR GENERAL OF SUPPLIES & DISPOSALS (DGS & R) UNDER THE COMPULSORY REGISTRATION SCHEME OF MINISTRY OF FINANCE.
2. TECHNICAL CATALOGUE/LEAFLET SHOULD BE ENCLOSED WITHOUT FAIL. PROVIDE COMPLIANCE STATEMENT WITH RESPECT TO THE TECHNICAL SPECIFICATIONS MENTIONED ABOVE.
3. PLEASE CONFIRM WHETHER YOU ARE AUTHORISED TO QUOTE ON BEHALF OF YOUR PRINCIPALS AND IF SO, PLEASE ENCLOSE A COPY OF SUCH AUTHORISATION WITH YOUR

QUOTATION.

4. **PRICE BIDS FOR FOREIGN FIRMS:** PRICES ARE TO BE QUOTED ON ‘EX-WORKS’ DULY PACKED OR ON “FCA/FOB” INTERNATIONAL PORT” BASIS AND ALSO INCLUDING AGENCY COMMISSION PAYABLE TO YOUR INDIAN AGENTS, IF ANY SHOWING CLEARLY THE FOLLOWING BREAK UP:-

- I) EX-WORKS PRICE
- II) PACKING & FORWARDING
- III) FREIGHT
- IV) ANY OTHER RELEVANT EXPENSES.
- V) TAXES PAYABLE BY THE INSTITUTE

INSURANCE WILL BE PAID BY OUR INSTITUTE SEPARATELY AND SHOULD NOT FORM PART OF THE QUOTED PRICE.

**PRICE BIDS FOR INDIAN FIRMS:** PRICES ARE TO BE QUOTED ON F.O.R., IIT KHARAGPUR, ON DOOR DELIVERY BASIS CLEARLY SHOWING THE BREAK UP.

5. **PERIOD OF VALIDITY:** BIDS SHALL REMAIN VALID FOR ACCEPTANCE FOR A PERIOD OF 120 DAYS FROM THE DATE OF OPENING.
6. INDIAN AGENTS ADDRESS AND PERCENTAGE OF AGENCY COMMISSION INCLUDED IN ABOVE F.O.B./EX-WORKS PRICE. (THIS WILL BE PAID TO THE INDIAN AGENTS IN INDIAN RUPEES ONLY AND NOT IN FE). PLEASE ENCLOSE COPY OF AGENCY AGREEMENT ENTERED INTO WITH YOUR PRINCIPALS INDICATING THE NATURE OF AFTER SALES SERVICES OF INDIAN AGENTS, PRECISE RELATIONSHIP & MUTUAL INTEREST IN THE BUSINESS.
7. **MEASUREMENTS/WEIGHT:** NETT/GROSS OF THE CONSIGNMENT. IN CASE OF AN ORDER, YOU SHALL USE AIR WORTHY PACKAGE (AS APPLICABLE) DULY CERTIFIED WITH DOCUMENTS – PLYTO – SANITARY CERTIFICATE (AS PER QUARANTINE ORDER 2003).
8. **SCOPE OF SUPPLY:** SHOULD INCLUDE FREE INSTALLATION AND COMMISSIONING
9. **PAYMENT TERMS FOR FOREIGN FIRMS**
- A) 100% PAYMENT THROUGH SIGHTDRAFT/FORIGN DEMAND DRAFT/LC (EXCEPTIONAL CASES)/SWIFT TELE TRANSFER AFTER RECEIPT OF STORE IN GOOD ORDER AND CONDITION.
  - B) BANK CHARGES ON LC/SD (WITHIN INDIA APPLICANT ACCOUNT AND OUTSIDE INDIA TO BENEFICIARY ACCOUNT).

**PAYMENT TERMS FOR INDIAN FIRMS**

- A) 100% PAYMENT THROUGH CROSSED ACCOUNT PAYEE CHEQUE / ELECTRONIC TRANSFER AFTER RECEIPT OF STORE IN GOOD ORDER AND CONDITION.
- B) ENSURE MENTIONING
  - i) BANK DETAILS OF THE BENEFICIARY AND PAN NUMBER
  - ii) FULL NAME AND ADDRESS OF THE BENEFICIARY ON WHOM ORDER HAS TO BE PLACED

10. WHETHER ANY EXPORT LICENCE IS REQUIRED FROM YOUR GOVERNMENT, IF SO, PLEASE CONFIRM WITH DETAILS.
11. COUNTRY OF ORIGIN OF THE GOODS IS TO BE MENTIONED.
12. THE INSTITUTE SHALL PROVIDE THE CONCESSIONAL CUSTOMS DUTY AND EXCISE DUTY EXEMPTION CERTIFICATE AS PER GOVT. NOTIFICATION NO. 51/96 CUSTOMS DATED: 23.07.1996 AND CENTRAL EXCISE DUTY EXCEMPTION IN TERMS OF GOVT. NOTOFICATION NO. 10/97 – CENTRAL EXCISE DATED: 01.03.1997 AS AMENDED FROM TIME TO TIME.
13. **LIQUIDATED DAMAGES:** THE STORES SHOULD BE DELIVERED / DISPATCHED TO DESTINATION AND READY FOR OPERATION NOT LATER THAN THE DELIVERY DATE SPECIFIED. IT THE SUPPLIER FAILS TO DELIVER ANY OR ALL THE STORES OR PERFORM THE SERVICE BY THE SPECIFIED DATE, LIQUIDATED DAMAGES AT 1% PER MONTH OR PART THEREOF IN RESPECT OF THE VALUE OF STORES WILL BE DEDUCTED FROM THE CONTRACT PRICE SUBJECT TO A MAXIMUM OF 5%. ALTERNATIVELY, THE ORDER WILL BE CANCELLED AND THE UNDELIVERED STORES PURCHASED FROM ELSEWHERE AT THE RISK AND EXPENSE OF SUPPLIER.
14. **PATENT RIGHTS:** THE SUPPLIER SHALL INDEMNIFY THE PURCHASE AGAINST ALL THIRD PARTY CLAIMS OF INFRINGEMENT OF PATENT, TRADEMARK OR INDUSTRIAL DESIGN RIGHTS ARISING FROM USE OF THE GOODS OR ANY PART THEREOF IN INDIA.
15. ONLY THOSE BIDDERS WHO’S BIDS HAVE BEEN TECHNICALLY FOUND ACCEPTABLE WILL ONLY BE INVITED FOR PARTICIPATION IN THE PRICE BID.
16. THOSE BIDDERS WHO DO NOT RECEIVE ANY COMMUNICATION FOR PARTICIPATION IN PRICE BID OPENING MEETING MAY PRESUME THAT THEIR BID HAS NOT BEEN ACCEPTED BY THE INSTITUTE.
17. CONDITIONAL OFFER WILL NOT BE ACCEPTED.
18. LATE TENDERS I.E. TENDER RECEIVED AFTER THE DUE DATE AND TIME OF SUBMISSION AS MENTIONED ABOVE SHALL NOT BE ACCEPTED.
19. BIDDERS TO ENCLOSE THE FOLLOWING DOCUMENTS:-
  - A) CURRENT INCOME TAX AND SALES TAX CLEARANCE CERTIFICATES AND PAN NO.
  - C) BANKER’S SOLVENCY CERTIFICATE
  - C) SUMMARY OF AUDITED STATEMENT OF ACCOUNTS FOR THE LAST THREE YEARS TO BE ENCLOSED AND FINANCIAL HIGHLIGHTS AND THE KEY PERFORMANCE DURING THE LAST THREE QUARTERS TO BE ENCLOSED AS PER FORMAT:-

COMPANY’S KEY PERFORMANCE

DESCRIPTION	JAN. TO MARCH	APRIL TO JUNE	JULY TO SEPT.
GROSS REVENUE			
PROFIT BEFORE TAX			

PROFIT AFTER TAX			
RETURN ON INVESTED			
CAPITAL (ROIC)			

D) CUSTOMER SATISFACTION CERTIFICATE FROM ONE SUCH ORGANIZATION IS TO BE ATTACHED WITH THE TECHNICAL BID AND PRICE BID.

E) NAME AND ADDRESS OF MINIMUM THREE CLIENTS TO WHOM SUCH EQUIPMENT HAVE BEEN SUPPLIED SHOULD BE MENTIONED.

20. **WARRANTY / GUARANTEE:** THIS COMPREHENSIVE WARRANTY / GUARANTEE SHALL REMAIN VALID FOR **36 MONTHS** AFTER THE GOODS (OR ANY PORTION THEREOF AS THE CASE MAY BE) HAVE BEEN DELIVERED AND COMMISSIONED TO THE FINAL DESTINATION.

21. THE INSTITUTE DOES NOT BIND ITSELF TO OFFER ANY EXPLANATION TO THOSE BIDDERS WHO'S TECHNICAL BID HAS NOT BEEN FOUND ACCEPTABLE BY THE EVALUATION COMMITTEE OF THE INSTITUTE.

ALL TENDERS (UNLESS OTHERWISE SPECIFIED) ARE TO BE SUBMITTED / HANDED OVER TO **DR. PINAKI SAR, DEPARTMENT OF BIOTECHNOLOGY, INDIAN INSTITUTE OF TECHNOLOGY, KHARAGPUR - 721 302** AND ACKNOWLEDGEMENT TO BE OBTAINED.

**IMPORTANT**

1. IIT Kharagpur authority may accept or reject any or all the bids in part or in full without assigning any reason and does not bind itself to accept the lowest bid. The Institute at its discretion may change the quantity / upgrade the criteria / drop any item or part thereof at any time before placing the Purchase Order.
2. Promptly make arrangements for repair and / or replacement of any damaged item (s) irrespective of settlement of claim.
3. In case of any dispute, the decision of the Institute authority shall be final and binding on the bidders.
4. For any query pertaining to this bid document correspondence may be addressed to **Dr. Pinaki Sar**, at the address mentioned above.

**LAST DATE FOR SUBMISSION OF SEALED BIDS: 28.12.2017**

- 1) Please Note that the Institute remains closed during Saturdays & Sundays and all specified government holidays.
- 2) Fax, e-mail Tender will not be accepted.
- 3) The General Terms and Conditions as stated above relate to supply of stores / equipment /assets etc. and for specific service other terms and conditions of the Institute will apply.

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