

# INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE

2A & 2B, Raja S.C. Mullick Road, Jadavpur, Kolkata-700032

## Tender Notice

**NIT No.: IACS / PSU / Prof. S. Ghosh / 2016-17 / 32      Date: 18/08/2016**

Sealed tender in two bids system (technical bid and price bid) is invited from bonafide, resourceful, and eligible manufacturer/exclusive distributor/vendors for a **Micro-DSC System**.

Part-I (Technical Bid) of the tender should contain technical specifications in detail as well as commercial terms and conditions. Part-II (Price Bid) should clearly indicate group-wise price, if needed, as mentioned in the technical bid. The Technical Bid and Price Bid are to be submitted in separately sealed envelopes, distinctly marked accordingly and both to be put inside another envelop, that should be sealed and superscribed with tender notice no. and due date. The bidders may submit bids duly signed in their own letterheads.

Completed tender bids should reach the office of **Polymer Science Unit, Indian Association for the Cultivation of Science (IACS), 2A & 2B Raja S. C. Mullick Road, Jadavpur, Kolkata-700032** on or before the scheduled date and time specified below:

<b>Tender Notice No.</b>	<b>IACS/PSU/2016-17/32 Dtd. 18/08/2016</b>
Last date and time of submitting tender	19/09/2016 UPTO 2.00pm
Pre-bid meeting to discuss technical specification	06/09/2016 at 4.00PM
Date and time of opening of technical bid of tender	19/09/2016 at 4.00 PM
Date and time of opening of price bids	The Price Bids of the bidders qualifying the technical bid will only be opened, the date of which will be intimated to the short-listed bidders at their email addresses. The rest of the bids will be rejected.
<b>Contact</b>	<b>Email: psusg2@iacs.res.in Tel. +91 33 2473 4971 [Ext. 1563]</b>

The technical bids will be opened first to judge/evaluate the technical specifications of the said instrument and thereafter the price bids of only technically qualified bidders will be opened.

**Technical Bid Evaluation:** The Technical Bids will be evaluated in the presence of the representatives of intending bidders who will be able to clarify technical aspects of their bids, if any, required by the Technical Evaluation Team.

**Opening of price-bid:** The Price Bids of the bidders qualifying the technical bid will only be opened, the date of which will be intimated to the short-listed bidders at their email addresses. The rest of the bids will be rejected.

Please note that IACS will not provide any accommodation or reimburse any expenses to any of the bidders for attending opening of technical bid.

### 1. TECHNICAL BID

The technical bid should contain technical specifications and should be kept in a separate sealed envelope duly super scribed as 'TECHNICAL BID' on the outer cover of the envelope as already detailed above. It should be clearly mentioned on the envelope as "Technical Specification for Micro-DSC System".

### **Technical Specification for : Micro-DSC System**

#### **Micro DSC (Differential Scanning Calorimeter)**

#### **Desired Specifications for Micro-DSC system**

##### **Application:**

The instrument should allow measurements of  $\Delta H$  (enthalpy) and  $T_m$  (melting temperature) in the events of (i) gel-to-sol transition (ii) lower critical solution temperature (LCST) of macromolecules (iii) probing membrane structure (iv) denaturation of protein or other biomolecules (iv) and various other self-assembled structures. Instrument should allow measurements in organic as well as aqueous solutions, solids, gels, dispersions, liquids etc.

##### **Required instrument parameters:**

Operating temperature range: -40 to 120 °C or more

Temperature accuracy:  $\pm 1^\circ\text{C}$  or better

Heating/cooling rates: 0.1- 2 °C/min (should be tunable by software)

Detection Limit: 0.2  $\mu\text{W}$  or less

Short Term Noise Level: 0.2  $\mu\text{W}$  or less

Cell size: 1 mL (maximum)

Cell Geometry: Removable Cylindrical Cells for easy removal and cleaning

Sample Cells: Multiple cell is preferred so that one can do multiple experiments at a time. However, as the price for single cell and multiple cell may vary significantly, final decision on single/ multiple cell will be taken only after receiving the quotation. If some vendors have both single and multiple cell options, they are requested to provide separate quotation for both the equipments.

##### **Calorimetric measurement requirements :**

Calorimetric measurement should be independent of the experimental conditions: The weight, shape, nature (powder, fibre, liquid, etc.) of the sample, Quality of contact between the sample and the ampoule, The type of ampoule used, The nature of the purge gas (inert, oxidizing, reducing, wet, etc.) and its flow rate. The instrument must feature Peltier sensors for higher sensitivity.

- Calibration can be applied to any temperature, including sub-ambient and to any type of thermal profile (heating, isothermal or cooling).
- The instrument must feature removable sample/reference ampoules for easy cleaning.
- Ampoules must be made of corrosion resistant material such as Hastelloy-C.
- Ampoules must have a sample volume of less than 1 .0 ml
- Instrument must offer specialty ampoules for the following measurements
  - (i) Standard batch measurements
  - (ii) High pressure measurements up to 400bars
  - (iii) Batch mixing for solids in liquids or liquids in liquids
  - (iv) Mixing of solids to circulating fluids (liquids or gases including controlled relative humidity)
  - (v) Mixing of circulating liquids
  - (vi) Heat capacity measurements of liquids.

##### **Warranty: 3 years or more from the date of installation**

##### **Modes of Operation:**

Isothermal: Allows a sample to be analyzed at a constant temperature, measuring the heat produced at that temperature. Applications include: studying respiration, growth rates, shelf-life, water adsorption, etc.

Scanning: Collects data in both heating and cooling modes with equal sensitivity. Applications include:

Super cooling, freezing, melting transitions

**Software Features:** Software for all data analysis.

**Other essential accessories:** External cooling unit (if necessary) for temperature scan in the entire range (As mentioned above), computer, UPS and all other essential accessories that is required to install the machine must be quoted long with the equipment.

**Warranty:** 3 years.

**Service Facility:** Supplier should mention the details of their service setup and man powers in India, preferably Kolkata.

Technical compliance chart should be provided following format,

Sl. No	Tender specification	Your offered instrument specification	Extent of compliance

Tender will not be accepted if the technical compliance chart is not provided following the above format.

## 2. PRICE BID

The financial bid indicating (item-wise, if required) price for the item(s) mentioned in the technical bid should be kept in a separate sealed envelope duly superscribed as 'PRICE BID' on the outer cover of the envelop as already detailed above. Price bids of only technically qualified bidders will be opened and the corresponding manufacturer/exclusive distributor/vendors will be intimated the date and time of the opening of price bid at their e-mail ids. Rest of the bidders will stand rejected.

PRICE: Price to be quoted on CIF Kolkata and also FOB basis.

## 3. BID SECURITY:

a. An Account payee Demand Draft/Pay Order for Rs. 10000.00 (Ten thousand only) drawn in favour of "Indian Association for the Cultivation of Science (State Bank of India, Jadavpur University Branch, A/C No. 11079699211, IFSC: SBIN000093, MICR Code: 700002048)" is to be furnished by the bidders except those who are registered with the Central Purchase Organizations, National Small Industries Corporation or the concerned Ministry or Department, as Bid Security money or Earnest Money Deposit (EMD).

b. The Demand Draft for the Bid-Security should have at least 90 (ninety) days validity period of opening of the bids.

c. In case of non-award of the work the Bid Security money would be returned to the unsuccessful Bidders.

## 4. PERFORMANCE SECURITY:

An Account Payee Demand Draft of 10% of the order value in the name of "Indian Association for the Cultivation of Science" is to be furnished by the successful bidder as Performance security. Performance security money should remain valid for a period of 60 days beyond the date of completion of all contractual obligations of the supplier including warranty obligations. Bid security money or EMD will be refunded to successful bidder on receipt of the Performance security money.

## GENERAL INSTRUCTIONS

1. Validity of tender: Tender submitted should remain valid for at least six months from the date of opening the tender. Validity beyond six months from the date of opening of the tender shall be lapsed by mutual consent.
2. The tender should accompany a compliance chart.
3. Incomplete and conditional tenders as well as tenders received after the due date will be summarily rejected without assigning any reasons thereof.
4. At any time prior to the bid due date, IACS may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder during pre-bid meeting, modify the bidding documents. The amendment(s) will be notified on the institute website. Prospective bidders are advised to occasionally to visit the website ([www.iacs.res.in/tender](http://www.iacs.res.in/tender)) for any amendment.
5. Payments: 90% against delivery and rest 10% successful installation satisfactory performance or 100% Letter of Credit.
6. Installation/Demonstration/Application training at site: Installation & user training at IACS, free of cost by the supplier.
7. Service facility: In India, preferably Kolkata, supplier should mention their details of service setup and man powers who are responsible for after sales support. Response time should be within 24 hrs.
8. The model number, make and a printed literature of the product should be submitted positively.
9. Proposed delivery schedule should be mentioned clearly.
10. Manufacturers / exclusive distributors / vendors should have history of supplying this type of instruments to this or other scientific organizations. Availability of a list in this regard would be preferred.
11. Authorized dealership certificate should be provided in case of principal manufacturing company is not quoting directly.
12. Guarantee certificate, users manuals etc. are to be handed over to the user after successful commissioning of the system.
13. In the event of date being declared a closed holiday for purchaser's office, the due date for submission of bids and opening of the technical bids will be the following working day at the appointed time.
14. In case of any dispute, the decision of IACS authority shall be final and bidding on the bidders.
15. For any clarification regarding technical specifications, information etc., please send your queries to [Suhrit Ghosh \(psusg2@iacs.res.in\)](mailto:Suhrit_Ghosh@iacs.res.in).
16. The authority of IACS reserves the right to reject any or all of the tenders received without assigning any reason thereof.

**Registrar ( Acting )**