

**Tender Notification for procuring an Isothermal Titration
Calorimeter (ITC) at the Indian Institute of Science, Bangalore.
(Last Date for submission: 26 November 2018, 05:00 pm IST)**

Quotations are invited to procure an “**Isothermal Titration Calorimeter (ITC)**” on C.I.P. Bangalore basis. The quotation should clearly indicate the terms of delivery, delivery schedule, entry tax, payment terms, warranty coverage, etc. The tender should be submitted in two separate sealed envelopes: **Part I containing the technical bid and Part II containing the commercial bid**, both of which should reach us, duly signed on or before 05:00 pm (IST) on 26 November 2018. **Please enclose a compliance certificate along with the technical bid.**

**Detailed technical specifications for “Isothermal Titration
Calorimeter (ITC)”**

Cell Material: The cell should be made with inert material that should not react with non-metal and metal ions such as carboxylates, phosphate ions, silver, gold, and magnesium, detergents and should not react with thiol compounds. Further, the material should not adsorb biomolecules such as oligomeric and aggregated proteins, large nucleic acids etc. The cell material should also be highly resistant to a wide range of pH (2-12) conditions, organic solvents, resistant to mild acid, base, and detergent based cleaning materials.

Cell type: Fixed cell with reaction volume of ~1400 μL (less is preferred). Cells must be enclosed in an adiabatic chamber, with ~1400 μL (or less) cell volume.

Injection syringe capacity: $\leq 300\mu\text{L}$

Samples: In solution state including turbid samples. Detectable heat range: ~50 ncal to ~10.0 μcal

Sensitivity: Base line noise level measured (RMS average) at <1.0 nano calorie/s.

Response Time: The system should be capable to provide user selectable response times with a minimum response time $\sim \leq 15$ seconds.

Mixing or stirring speed: The system should have multiple mixing speed options (rotations per minutes, rpm) with maximum stirring speed up to 1500 rpm.

Operating temperature range: Should be able to operate in the range 2°C to 80°C with temperature stability $\sim \pm 0.005^\circ\text{C}$ at 25°C.

Equilibration option: Fast equilibration and auto injection options should be available.

Binding constants detectable range: Should be able to detect interactions with binding constants in the range of sub-millimolar (10^2 M^{-1}) to nano-molar range (10^9 M^{-1}) [for normal binding} and 10^2 to 10^{12} M^{-1} [for competitive binding].

Pipette assembly: Automated and controlled by instrument control software to minimize sample loss or introduction of air bubbles encountered during manual filling.

Temperature control system: Peltier controlled system.

Degassing: The system should be supplied with appropriate degassing system and necessary accessories should be included.

Service and Maintenance: (a) There should be at least one service engineer and one application scientist based in India trained on the same quoted instrument. (b) Instrument should have a warranty of at least two years, with additional 3 years of AMC. (c) Visits from both service engineer and application scientist is required as and when necessary. (d) A user's list should be provided highlighting instalment of similar equipment in other research institutes in India in the recent past. (e) A good record in supply and service to other research institutes will be considered as a positive point for a particular company.

Software: Should be capable of running instrument, injector control, sample loading the injector, providing user- selectable binding models, and data merging like: single site, two site, sequential site, competitive site, and enzyme kinetics. Non-linear least square analysis of the data should include calculations to correct for the excluded concentrations of the macromolecules and ligands during each injection. It should be easy to export and use data in other formats.

Computer: (a) Computer and necessary software for operation, data collection and analysis, viewing should be provided. (b) Analysis software: should provide copies of offline analysis software and should not require a separate software supporting license.

UPS: Appropriate kVA UPS with minimum 1 hour back up for the entire system is required.

Necessary Accessories: All necessary accessories should be supplied with the instrument, as per standard package offered, including user manuals. Bottle kits, Bottling tubing-external, Filling port adapter with needle, extra tubing sets, drip tube, syringe, wash module, drip tube, cleaning device and O-ring. Also, additional injection syringe and an additional pipette assembly must be provided.

Installation: The machine along with accessories should be installed in Materials Research Centre, IISc and made fully functional by the company or through its authorized agents. The machine acceptance will involve trouble free operation and demonstration of the capability of the system for which necessary consumables to be supplied along with the system.

Compliance statement to be enclosed with the technical bid

Specifications	Comply	Non-comply	Deviation from the specification	Remarks
1) Non-reactive cell material 2) Reaction volume: cell $\leq 1400 \mu\text{L}$; syringe $\leq 300 \mu\text{L}$ 3) Minimum detectable heat: $\leq 50 \text{ ncal}$ 4) Base line noise of $< 1 \text{ nano calorie/s}$. 5) Solution temperature in the range of 4°C to 80°C with temperature stability $\sim \pm 0.005^\circ\text{C}$ at 25°C . 6) Essential standard software for performing automated experiments and data fitting to standard binding models 7) Appropriate degassing system with necessary accessories 8) 2 Years warranty with parts 9) AMC for 3 years beyond the warranty period				

The compliance statement should be supported with brochures, charts etc. and relevant portions should be highlighted.

Procedure of quotation.

1. The quotations should be submitted in **TWO bid system i.e., the Technical bid and the Commercial bid.**
2. The Technical bid must include all the details of technical specifications of the equipment along with commercial terms and conditions, **however, without the price component.** The bill of materials, printed technical brochure and any other documents to help the technical evaluation of the bid may be enclosed.

The **technical proposal must contain a compliance certificate** provided in the preceding section.

3. The commercial bid must include the price of the item(s) in Indian/Foreign currency indicating the breakup of

(a) For Goods manufactured within India

- (i) The price of the goods quoted Ex-works including taxes already paid.
- (ii) GST and other taxes like excise duty etc. which will be payable on the goods if the contract is awarded.
- (iii) The charges for inland transportation, insurance and other local services required for delivering the goods to IISc, Bangalore.
- (iv) The installation, commissioning and training charges including any incidental services, if any.

(b) For Goods manufactured abroad

- (i) The price of the goods @ CIP Bangalore.
- (ii) The installation, commissioning and training charges including any incidental services, if any.

Important: IISc reserves the right to choose the L1 based on the price quoted based on the technical compliance and funds available.

Both the Technical and Commercial bid should be addressed to

**The Chairman,
Materials Research Centre,
Indian Institute of Science, Bangalore-560012**

should be put in **separate sealed envelopes** and both the envelopes should be put in another cover **superscribing “quotation for isothermal titration calorimeter”** and should reach on or before 05:00 pm (IST) on 26 November 2018 at the address:

**Chairman’s Office,
Materials Research Centre,
Indian Institute of Science, Bangalore-560012**

4. Any additional capabilities or technical details, that you would like to bring to the attention of the purchase committee, can be listed at the end of the technical table.
5. Vendors are encouraged to highlight the advantages of their tools over comparable tools from the competitors.
6. As an option, please provide itemized cost for any *suggested* accessories/add-ons that may enhance the usability, capability, accuracy or reliability of the tool. Vendors are encouraged to quote for as many add-ons as their tool portfolio permits.
7. The quotes must be CIP Bangalore, India. So, please include cost of shipping, insurance and other cost.

8. Please indicate the warranty provided with the tool. Warranty of 2 years or more is preferred.
9. Provide itemized cost for *required* spares for 2 years of operation. For the sake of this calculation, the vendor may assume active tool usage of 30 hours/ week. This number will be used to estimate the life cycle cost of the tool.
10. Clarify if periodic (preventive) maintenance to be carried out by a trained on-site engineer or requires a specialist from the OEM.
11. As an additional option, provide cost of an annual maintenance contract (AMC) for 3 years, post warranty. The AMC must cover 1 scheduled and 1 emergency visit per year. It must also indicate who will service the AMC, an Indian agent or the OEM. The AMC cost must also include an itemized list of spares that are essential for the scheduled visits.
12. The RFQ must include references of 3 previous installations, preferable in India. Please provide the names and contact addresses of the referees, so that the committee can contact them independently.
13. Any questions can be directed to Dr. Subinoy Rana, Materials Research Centre, Indian Institute of Science, Bangalore 560012, India. (subinoy@iisc.ac.in)

TERMS AND CONDITIONS FOR SUBMISSION OF BIDS

1. The quotations must reach by 05:00 pm (IST) on 26 November 2018.
2. The decision of purchase committee will be final.
3. The vendor should have a **very good track record** of having previously supplied similar equipment in similar educational institutions in India should be able to provide service as and when required. Please provide the list of customers in reputed public Institutions (such as IITs, IISc, and other reputed R&D Centres)
4. The vendor should have qualified technical service personnel for the equipment based in India, **preferably in Bangalore**.
5. We prefer to make payment by Letter of Credit - 90% against presentation of documents and 10% after installation. All Foreign Bank Charges if any, should be borne by the Beneficiary. In addition to this, LC Amendments, Extension, Confirmation charges if required to be borne by the beneficiary. For Supplies within India, the payment term is after supply and satisfactory acceptance.
6. Please indicate the import code of the items.
7. If the goods are found to be defective, they have to be replaced / rectified at the cost of the supplier within 15 days from the date of receipt of written communication from us. If there is any delay in replacement / rectification, the warranty period should be correspondingly extended.
8. The terms FOB, FCA, CIF, CIP, etc., shall be governed by the rules prescribed in the current edition of the Incoterms published by the International Chambers of Commerce, Paris.

9. The purchases made by the purchaser for scientific purpose are exempt from Custom Duty at a concessional rate is leviable.
10. Conditional tenders shall not be accepted.
11. Bids shall remain valid for minimum of 90 days after the date of bid opening prescribed by the Purchaser.
12. The Purchaser reserves the right to accept or reject any bid, and to annual the bidding process and reject all bids at any time prior to award of Contract, without thereby incurring any liability to the affected Bidder or Bidders.