NATIONAL INSTITUTE OF TECHNOLOGY
ROURKELA – 769 008, ODISHA

Advertised Tender Enquiry

Department: Life Sciences

Tender Notice No: NITR/PW-SR/LS/2019/163 **Dated: 01/11/2019**

To

Through
CPP Portal
(E-procurement)

Important Dates

Event	Date	Time
Pre-bid Conference	**-NA-**	**-NA-**
Last Date of submission of bid	**26/12/2019**	**11:00 AM**
Opening date of techno-commercial bid	**27/12/2019**	**11:00 AM**

Dear Sir,

We intend to purchase the commodities specified below and invite quotations in accordance with the terms and conditions detailed in the bid document. If you are interested, kindly send your offer with prices and complete terms within the time mentioned above.

For any technical query contact to

Attention: Dr. Suman Jha
Department of Life Sciences
National Institute of Technology
Rourkela – 769 008, Odisha
Phone: 0661 – 2462687
Email: jhas@nitrkl.ac.in

Yours sincerely

_____

Name: Dr. Suman Jha
(PIC)

Encl:

1) **Schedule of requirement, specifications, dates etc.**

2) **Bid document containing detail terms and conditions.**

1. **Schedule of requirements**

Sl. No.	Description of Goods/Service	Quantity
1	**Isothermal Titration Calorimeter**	1
2	**Differential Scanning Calorimeter**	1

2. **Specifications and allied Technical Details**

For detailed specification for **Isothermal Titration Calorimeter** see **Annexure I** and for **Differential Scanning Calorimeter** see **Annexure II (***submit list of users along with the quotation*).

3. **Format of Quotation** (tick appropriate box)

☑ It is a two-part bid with separate techno-commercial and price bids.

4. The Bid should be submitted through https://eprocure.gov.in/eprocure/app
5. Quotations should be valid for a period of **120 days** from the date of opening of techno-commercial bid.
6. **Some important dates:**

i.	**Pre-bid Conference:**	**Date: NA**	**Time: NA**
ii.	**Last date for submission of bid**	**Date: 26/12/2019**	**Time: 11:00 AM**
iii.	**Opening date of techno-commercial bid**	**Date: 27/12/2019**	**Time: 11:00 AM**

7. **Warranty**: Warranty must be **1 year** onsite with optional two year extended warranty for both the instruments, which should be clearly mentioned along with the quotation.
8. **GST** should be charge according to applicable rates (if applicable).
9. **EMD (Earnest Money deposit)** in shape of Bank Guarantee/DD (Demand Draft) for **INR 2,00,000/-** (Rupees Two Lakh Only) and **Tender Cost (Non-refundable)** in the form of DD for **INR 1000/-** (Rupees One Thousand Only) in favor of "**Director, NIT Rourkela Payable at Rourkela"** from any Scheduled Commercial Bank except Co-operative and Gramin bank. And Bank Guarantee/DD for the EMD (Earnest Money deposit) should remain valid for a period of 45 days beyond the bid validity period from the date of opening of bids. EMD (Earnest Money deposit) of unsuccessful bidders should be return to them at the earliest and latest on or before the 30th day after the award of the contract. EMD (Earnest Money deposit) and Tender Cost should reach physically through speed post/ register post/courier, containing in an envelope & superscripted with subject, tender reference number addressing to **Registrar, NIT Rourkela-769008, Odisha; on or before 27/12/2019 at 11:00 AM.**
10. **Performance Security**: **INR 5,00,000 (Rupees Five lakh only)** in shape of Bank Guarantee/Demand Draft (DD) in favor of Director, NIT Rourkela payable at Rourkela from any scheduled commercial Bank except co-operative and gramin bank. Additionally, performance security should remain valid a period of 60 days beyond the date of completion of all contractual obligations of the supplier including warranty obligation. EMD amount of the successful bidder will be returned after the receipt of performance security in case of award of contract to successful bidder.
11. **Bidder must provide copies of past ten purchase orders of the instruments, Documents showing financial capacity, GST, PAN and last three years income tax return copies.**
12. Please go through the enclosed "bid document" carefully for other bidding instructions.
13. Please send you quotation through https://eprocure.gov.in/eprocure/app

14. For technical details, you may contact

Dr. Suman Jha,
Department of Life Sciences,
National Institute of Technology, Rourkela – 769 008,
Phone: 0661–2462687;
E-mail: jhas@nitrkl.ac.in, sumjha2004@gmail.com

NB: Please furnish your Dealership Certificate (must) and Proprietary Nature Certificate (If applicable)

NATIONAL INSTITUTE OF TECHNOLOGY
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BID DOCUMENT

1. Instructions to the bidders

1.1 Bids are invited on behalf of the Director, National Institute of Technology (NIT), Rourkela – 769 008, , from the intending bidders for supply of the goods/stores/ equipment for the Institute as detailed in the enquiry letter.

1.2 The bidders should quote their offer/rates in **BOQ** in clear terms without ambiguity.

1.3 In case of any discrepancy between the rates in figures and that in words, the rate in words will be accepted as correct.

1.4 The last date for receipt of the bid is marked in the tender document.

1.5 The Bid should be uploaded in https://eprocure.gov.in/eprocure/app. Please follow the guideline of the site.

1.6 If a prospective bidder requires any clarification in regard to the bidding documents, he may make a request the concerned officer or faculty member at least 15 days before the deadline for receipt of bids.

1.7 Bids received after the deadline of receipt indicated in Para1.4 above shall not be taken in to consideration.

1.8 Each bidder shall submit only one bid. A bidder, who submits more than one bid, shall be disqualified and considered nonresponsive.

1.9 (In respect of high value plant, machinery etc. of a complex and technical nature). The bids may be submitted in two parts, viz., technical bid and financial bid.

1.10 The bidder has to sign in full at all pages of the scanned part of the bidding document. No over-writing in those pages are acceptable.

1.11 The award of contract will be made to L1 firm on the overall cumulative prices (for both the item) basis, not item wise.

1.12 The quoted price will be up to NIT Rourkela.

1.13 Bidders registered with any of the following agencies/ bodies as per Public procurement policy for Micro & Small Enterprises (MSE) order 2012 are exempted categories from payment of EMD provided that the registration Certificate issued by any one of these below mentioned agencies must be valid as on close date of tender. Micro small or medium enterprises who have applied for registration or renewal of registration with any of these agencies/bodies but have not obtained the valid Certificate as on close date of tender are not eligible for exemption.

i) Khadi and Village Industries Commission (KVIC)

ii) National Small Industries Corporation (NSIC)

iii) Any other body specified by Ministry of MSME/GOI

2. Conditions of the bid

2.1 The rates quoted should preferably be net, inclusive of all taxes and duties, packing, forwarding, freight, Insurance and all other incidental charges. In case these charges are quoted extra in addition to the quoted rates, the amount thereof or Ad Valorem rate must be specified. Packing, forwarding, freight etc., when quotes separately are reimbursable at actuals. If external agencies are employed, their receipts must be enclosed with the invoice.

2.2 Duties and Taxes are to be quoted separately. Ad Valorem rates thereof should be clearly indicated with reference to the relevant Acts and Rules.

It may be noted that the Institute is availing custom duty exemption in terms of Notification No. 51/96 – Customs dt. 23.07.1996, Notification No. - 47/2017- Integrated Tax (Rate) dt. 14.11.2017 and Notification No- 45/2017 – Integrated tax (Rate) dt. 14/11/2017 & Notification No. - 45/2017- Central tax (Rate) dt. 14.11.2017, Notification No. - 45/2017- Union Territory Tax (Rate) dt. 14/11/2017 [Vide DSIR, Ministry of Science and Technology, Government of India, Registration No.: TU/V/RG- CDE (227)/2016, dated: 13.11.2018]

2.3 The goods are required to be delivered at the indenting Department of NIT, Rourkela, and must be reached within **90 days** from the date of placement of the supply of order under the risk and arrangement of the bidder and offers with delivery beyond the above period shall be treated as unresponsive. In case the delivery time is higher, the same must be mentioned clearly in the quotation.

2.4 The bid should remain valid for a period of **120 days** from the date of opening. In case your offer has a different validity period that should be clearly mentioned in the quotation.

2.5 Conditional discount, if any, offered by the bidder shall not be considered at the time of evaluation.

2.6 The goods offered should strictly conform to the specification and technical details mentioned in **Annexure I and Annexure II** for **ITC and DSC**, respectively.

2.7 The Institute may like to conduct pre-dispatch inspection of goods, where applicable.

2.8 Period of guarantee/warranty, where applicable, should be specified in the bid.

2.9 If the successful bidder, on receipt of the supply order, fails to execute the order within the stipulated period, in full or part, it will be open to the Director, NIT Rourkela to recover liquidated damage from the firm at the rate of 1 percent of the value of undelivered goods per month or part thereof, subject to a maximum of 5 percent of the value of undelivered goods. Alternatively, it will also be opened to the Director, to arrange procurement of the required goods from any other source at the risk and expenses of the bidder.

2.10 The successful bidder may be required to execute a contract, where applicable.

2.11 The bidder has to furnish up to date Income Tax Clearance Certificate along with the bid.

2.12 Payment (100 percent) will be made by Account Payee Cheque/Bank Draft, within 30 days from the date of receipt of the goods in good condition or receipt of the bill, commissioning of the equipment, where applicable, whichever is later/latest.

2.13 In case of Advance payment, the payment will be made on either in Foreign Demand Draft or Wire Transfer only. The proforma invoice copy need to be sent for advance payment

2.14 In the event of any dispute arising out of the bid or from the resultant contract, the decision of the Director, NIT, Rourkela shall be final.

2.15 The bid document/resultant contract will be interpreted under Indian Laws.

Annexure I

राष्ट्रीय प्रौद्योगिकी संस्थान,राउरकेला

NATIONAL INSTITUTE OF TECHNOLOGY, ROURKELA

Technical Specification for Isothermal Calorimeter (ITC)

Following are the specifications for Isothermal Titration Calorimeter (ITC) system keeping in mind the users from N.I.T. Rourkela.

The system is needed for characterization of thermodynamical parameters, like K_d, ΔH, ΔS, number of binding sites (*n, stoichiometry of binding*), for molecular interactions of ligands with biopolymers, like protein, DNA, RNA, lipid vesicles, metal nanoparticles etc. Additionally, system must be able to do lead optimization, assessment of the effect of biomolecular structures on binding, enzyme kinetics, assessment of biological activity, etc. Most importantly, the parameters measurements must be analysed from direct measured values of heat release or absorb during a binding/interaction study through a heat compensation power feedback loop. Thus, the feedback loop must be sensitive enough to detect a heat change of as low as 50 nanocalorie.

Considering the possible range of samples being used by our users, the material of **the cell must be of inert Hastlelloy material with high sensitivity for heat changes**. Additionally, the geometry of the cell should be such that the heat transfer from cell to feedback and peltier to cell must be homogenous and instant (i.e. **response time must be very very low to avoid data loss, ≤ 11s**), non-coagulant (metal nanoparticles & lipids have propensity to coagulate at the solid-liquid interface), easy to clean. **Cell must have a mixing system with a speed range from 0-1000 rpm** or more to suit broader range of applications, including nanoparticle-protein/peptide titrations.

We are looking for **low volume ITC with working volume <300 µL** (including cell volume, dead volume), since our samples are very precious and hard to get at higher volume and concentrations. Injection volume must be standard as ≥ 40 µL with minimum injection volume of ≤ 0.1 µL with highest precision. Additionally, the feedback loop must come with multiple feedback options to allow broader range of binding/interaction process studies.

The system should be quoted with all the accessories needed for its operation like wash module, control unit/interface, auto-pipetting syringe and assemblies, injection syringes, degassing system (if system require), PC with appropriate interface to operate and analyse the data, printer, online UPS of desired backup and other accessories, like bottle, tubing, needle, rings if needed. Additionally, the quotation must include one year warranty with option of two year extended warranty.

Annexure II

राष्ट्रीय प्रौद्योगिकी संस्थान,राउरकेला

NATIONAL INSTITUTE OF TECHNOLOGY, ROURKELA

Specifications for Differential Scanning Calorimeter (DSC)

Following are the specifications for biomolecular Differential Scanning Calorimeter (DSC) system keeping in mind the users from N.I.T. Rourkela.

The system should directly measure biomolecule's stability in optically transparent and opaque (like nanoparticle suspension) solutions. It should provide insights into mechanisms of Protein/DNA/RNA/Lipids unfolding and refolding process. The system should be a highly sensitive differential scanning calorimeter with **cells enclosed in adiabatic chamber with inbuilt peltier system and power feedback loop for heat compensation and to sense heat differences as low as possible in, range of μCal/°C** for characterizing the stability of proteins and other biomolecules in solution. The DSC system should directly measure the enthalpy (ΔH) and temperature (T_m) of thermally induced structural transitions in solutions.

The cells (reference and sample cells) should be of material that provide fast scan rates and temperature equilibration, which should also be non-reactive for excellent chemical resistance and to **ensure inertness for solution containing metal nanoparticles, proteins and other biomolecules in buffers like tris, HEPES, PIPES, phosphate etc**.

The system should has an **active cell volume as low as possible, with operation volume preferable < 300 μL,** considering the preciousness of biomolecular samples. The Short term noise must preferably be less than 0.05 **μCal/°C/minute with scan rate in the range of 0-4 °C/min for 2 °C to 125 °C temperature range.** All filling, injection and cell cleaning functions should be fully automated to avoid as much as human handling error.

The DSC system should have an user friendly interface to analyse the data, and allow the users to adjust the parameters like scan rate, temperature range, baseline correction etc. for all different kinds of reactions. The interface should also provide at **least four user selectable response times** for different type of sample analysis, which should allow user to optimize sensitivity for the processes being studied. The system should have **minimum response time equal to or less than 5 sec**. The user interface should control all real-time parameters of DSC system including intuitive, graphical tray setup, syringe and cell maintenance controls, methods editor, automated calibration procedures and standardized calibration report generators and fully integrated with data analysis software for post run analysis. Additionally, the data analysis software should have a provision of at least **six user selectable curve fitting models (Two-State, Non Two-State, Two-State with ΔCp, Dissociation with ΔCp curve fitting, Simulation Model and Binding Constant).**

The system should address various listed applications such as protein stability and folding, Protein-Nanoparticle formulations stability, liquid biopharmaceutical formulations stability, antibody domain studies, characterization of membranes, lipids, nucleic acids and micellar systems, assessment of the effects of structural change on a molecule's stability, measurement of ultra-tight molecular interactions etc.

The system should be quoted with all the requisites for its operation like degassing system or aspiration system for samples, syringes, PC with appropriate interface to collect and analyse the data, printer, online UPS of desired backup etc. Additionally, the quotation must include one year warranty with option two year extended warranty.