

INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE

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

NIT No. : IACS/SAIS/SB/2019-20/64

Date: 26/09/2019

Sealed tender in two bids system (technical bid and price bid) is invited from bonafide, resourceful and eligible manufacturer/exclusive distributor/vendors for “**Modular Compact Rheometer with Accessories**”.

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 envelope, 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 the **Registrar, 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:

Tender Notice No.	NIT No. IACS/SAIS/SB/2019-20/64 Date: 26-09-19
Last date and time of submitting tender	Date: October 18, 2019; Time: 1:00 PM
Pre-bid meeting(date, time & place) to discuss technical specification	Date: October 14, 2019; Time: 11:00 AM; Place: Father Lafont Hall, Main Building, IACS
Date and time of opening tender (Technical Bids)	Date: October 18, 2019; Time: 2:00 PM
Place of opening tender	Father Lafont Hall, Main Building, IACS
Date and time of 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.
Contact	Dr. Parikshit Moitra Email: drupm2@iacs.res.in Tel.+91 33 2473 4971 [Ext. 2140]

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.

Quotations received incomplete or beyond the stipulated time will be summarily rejected.

Bidders should submit their past experience for supplying and successful installation of similar units to other research Institutes/Universities/other organizations in India and abroad. Please provide documentary

proofs of such successful installation and supportive documents that the instruments are running successfully.

1. TECHNICAL BID

The technical bid should contain technical specifications and should be kept in a separate sealed envelope duly superscribed 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 Modular Compact Rheometer with Accessories".**

Technical Specification for Modular Compact Rheometer with Accessories:

Application. The Rheometer should be capable of full characterization of a variety of material like hydrogel, organogel, surfactant suspensions under controlled stress and controlled strain conditions.

System.

ADVANCED RESEARCH GRADE RHEOMETER SYSTEM WITH ACCESSORIES	
MAIN INSTRUMENT	
Operation Mode	Stress control, shear rate control and direct strain controlled oscillation at demand strain amplitude. A pure Sinusoidal Waveform at all times must be ensured irrespective of the Strain imposed.
Motor Technology	Modern up-to-date
Torque Range (Rotation)	5.0 nNm to 200 mNm or better
Torque Range (Oscillation)	3.0 nNm to 200 mNm or better
Bearing	Air Bearing system to ensure lowest radial drag & highest axial stiffness.
Angular Velocity Range	10 nrad/s to 314 rad/s or better
Frequency Range	10 μ rad/s to 628 rad/s or better
Force Range	0.01 N to 50 N or better
Oscillatory Modes	Strain, Direct Strain Amplitude & Control Stress
Gap Control	Automatic Gap Control with high Gap Resolution
TEMPERATURE CONTROL SYSTEM FOR PLATE/PLATE MEASURING GEOMETRIES	
Temperature Control	Peltier Temperature Control
Temperature Range	5 to 200 Deg C
MEASURING SYSTEMS	
Plate/Plate & Cone/Plate	1. Measuring Plate (SS) Diameter 50 or 40 mm - 01 No. 2. Measuring Plate (SS) Diameter 25 or 20 mm - 01 No. 3. Measuring Cone with Diameter 40 mm & Cone Angle 1 or 4 deg - 01 No.
UTILITIES	
Air Compressor and Dryer	Appropriate air compressor, Dryer, Filter to operate the rheometer must be quoted
Computer	Suitable Branded laptop for the operation of the instrument with Color laserjet printer
RHEOLOGY SOFTWARE	
Architecture	Template based with built-in templates pre-programmed for all types of materials
Testing Protocols	Viscometry measurement: Viscometry as a function of time, temperature and shear rate. Yield stress measurements. Oscillation measurement: Oscillation measurement with respect to time, temperature, frequency and amplitude

	Transient Measurements: Creep/Creep recovery measurement Stress relaxation measurements Large Amplitude Oscillatory Measurements: Time-Temperature superposition for generating master curve analysis
OTHER SPECIFICATIONS	
Upgradability	The Rheometer should be upgradable to Rheo-microscopy. The UV Curing Cell should also be mountable on the Rheometer system. Both of this should be clearly mentioned in the Product Catalogues to support the claim.
Warranty	At least of 36 months from the date of installation
Other requirements	1. At least five prior installation report of the exact same model of the instrument in different universities/ institutes/ companies in India is required (should be provided with proper documentation from corresponding authority). 2. Necessary Tool Kit should be provided with the main instrument. 3. All Claims made by the vendor with regards to the above specifications should be supported by specification sheets / brochures / data available on company website. No claims with regards to laboratory data will be accepted.

Warranty: Minimum 3 years from the date of installation is required.

Servicing facility within India is a must while service engineer stationed at Kolkata will be preferred.

A list of other places where the instrument has been installed should also be provided.

A compliance table (see below) must be prepared and submitted along with the technical bid.

Sr. 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) price for the item(s) mentioned in the technical bid should be kept in a separate sealed envelope duly super scribed 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 they 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. Alternatively, the price can be quoted in Indian currency.

3. BID SECURITY:

An Account payee Demand Draft of any of the Commercial Banks for Rs. 50,000 (Rupees fifty 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 along with Technical Bid, except Micro and Small Enterprises (MSEs) as defined in MSE Procurement Policy issued by Department of Micro, Small and Medium Enterprises (MSME) or are registered with the Central Purchase Organisation or the concerned Ministry or Department.

Alternatively, the bidder shall have the option to furnish EMD in the form of Fixed Deposit Receipt, Banker's Cheque or Bank Guarantee from any of the Commercial Banks. The Bid-Security should have at least 90 (ninety) days validity period beyond the final bid validity period.

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 on any commercial bank of India or Bank Guarantee (BG) of any Commercial Bank preferably located at Kolkata 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.

5. TERMS OF PAYMENT:

Payment will be made through irrevocable Letter of Credit in two instalments. 90% of the money will be released on submission of shipping of documents. Remaining 10% will be released after successful installation of the instrument. In case the price has been quoted in Indian currency, 100% payment will be made through NEFT/RTGS after successful installation of the Instrument.

6. 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 visit the website (www.iacs.res.in/tender) for any amendment.
5. Installation/Demonstration/Application training/possible future upgradation at site: Installation & user training at IACS, free of cost by the supplier.
6. 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.
7. The model number, make and a printed literature of the product should be submitted positively.
8. Proposed delivery schedule should be mentioned clearly.
9. 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.
10. Authorized dealership certificate should be provided in case of principal manufacturing company is not quoting directly.
11. Guarantee certificate, users manuals etc. are to be handed over to the user after successful commissioning of the system.

12. 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.
13. In case of any dispute, the decision of IACS authority shall be final and binding on the bidders.
14. In case of any litigation the matter will be dealt within the jurisdiction of the High Court of Calcutta only.
15. For any clarification regarding technical specifications, information etc., please send your queries to Dr. Parikshit Moitra (drupm2@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.

Acting Registrar