INDIAN ASSOCITION FOR THE CULTIVATION OF SCIENCE

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

Tender Notice

NIT No. : IACS / TRC / Prof. S. Ghosh / 2016-17 / 41 Date: 19/09/2016

Sealed tender in two bids system (technical bid and price bid) is invited from bonafide, resourceful, and eligible manufacturer/exclusive distributor/vendors for a **GPC Equipment (Gel Permeable Chromatography for Polymer Analysis)**

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:

Venue of Tender :

Tender Notice No.	**IACS / TRC / Prof. S. Ghosh / 2016-17 / 41 Date: 19/09/2016**
Last date and time of submitting tender	09.11.2016 at 12-00 noon
Pre-bid meeting to discuss technical specification	02.11.2016 at 3.00PM
Date and time of opening tender (Technical Bids)	09.11.2016 at 4-00 p.m.
Date and time of opening tender (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.
Place of opening tender	A.K. Roy Chowdhury Hall
Contact	Email: psusg2@iacs.res.in Tel.+91 33 2473 4971 [Ext. 1563]

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 envelop as already detailed above. It should be clearly mentioned on the envelope as "Technical Specification for Gel Permeable Chromatography for Polymer Analysis"

Technical Specification for : Gel Permeable Chromatography for Polymer Analysis

Desired Specification

1. **Isocratic Solvent Manager :**

- Solvent conditioning : Two integrated, vacuum degassing.
- Primary Check Valve should have Intelligent Check Valve technology.
- Pump seal wash has to equipped with a wash system to flush the rear of the high pressure seal & the plunger.
- Compressibility compensation has to be Automatic & Continuous without any user intervention.
- Priming should be Automated at a flow rate of 4 ml/min or better.
- Flow Ramping should be in the range of 0.01 to 30.00 min to reach at least 2 ml/min.
- Flow Accuracy : Should be ± 1.0 % of set flow at 0.5 to 2.0 ml/min for both Water & organic solvent.
- Flow Precision : Should be less than < 0.075 % RSD.
- Integrated Leak Management system: Should have Leak sensors, as standard equipment, compatible with the supported solvents & safe leak handling. Drip trays should direct all leaks to the front of the instrument & into the waste line.
- Maximum operating pressure: 15,000 psi. or more
- Super synchronization: There should be Synchronization between the solvent manager pistons which should enhance the retention time reproducibility.
- Operating Flow range: 0.010 to 2.00 ml/min in 0.001 ml increment.
- pH Range : 2 - 12.
- The APC system should have a low dispersion fluidics system with a wide range of solvent selection capability.
- The system should be flexible enough to run the diverse polymer applications on a single system.
- Unattended operation: There should be a full 96 hours or more diagnostic data displayed through the instrument software.

2. **Sample Manager**

- It should be with Flow Through Needle Technology having injection volume range of 0.5 to 50.0 ul as standard & 0.1 to 250 ul with or without optional extension loops.
- Injection needle wash should be Integral , Active & Programmable.
- Total number of sample plates should be Two in numbers.
- Max. sample capacity should be 96 in 2 ml vial holders.
- Injection accuracy should be ±0.2 ul or better
- Injection Precision should be less than 0.5 % RSD or better
- Sample compartment Temperature range must be between 4^0C to 40^0C settable in 0.1^0C increment with a tolerance range of -2^0 & $+4^0$C.
- Temperature Accuracy : $\pm 0.5^0$C or better
- Temperature stability : $\pm 1.0^0$C.
- Sample Carryover : <0.005%.

3. **Single zone Column Manager**

- The column capacity should be of Four no. 30 - 75 mm columns or Three 150 mm columns when One bank of columns connected in series.
- Solvent conditioning : It should be Active pre-heating.
- Column Tracking : All the columns should have a technology to track the number of injections or management system wherein the Column usage history can be tracked. It should have an E-log book availability in the columns.
- Temperature Range should be between 4^0C to 90^0C or more settable in 0.1^0C increment.
- Temperature Accuracy : $\pm 0.5^0$C or better
- Temperature Precision : $\pm 0.1^0$C or better
- Temperature stability : $\pm 0.3^0$C.

4. **Refractive Index Detector**

- RI Units: 1.00 to 1.75 with measuring range of 5x 10-4 to 7.0x10-9 RIU.
- Linear dynamic range should be ≤5.0% over ±5.0 X 10-4 RIU.
- Flow cell should be temperature controlled or with heat exchangers to have minimum noise of less than 1.5 x 10-9 RIU with 2s time constant.
- Sampling rates should be 80 points/s.
- Temperature control should be 30^0C to 55^0C settable at 0.1^0C.
- Cell should have minimum volume of 10microliter or less to be compatible with flow rates upto 10ml/min.
- Flow Cell : Fused Quartz.
- Flow cell volume: 1.3 µl.
- Light source : LED 870 nm.
- RIU full scale settings should be between 1 to 500 x 10-6 RIU.

5. **Original Manufacturer's Licensed Software**

- Chromatography software with integrated database (Oracle 8.0)
- Oracle database for easy tracking and trending: *Instrument Method, Processing Method, Report Method, etc.
- Custom field / Custom calculations.
- Pre-made templates, customizable data reports, online help and answer Wizards are all included to help maximize your lab's productivity.
- Each injection is time and date stamped for easy archiving, retrieval of data.
- Drag and Drop, look and feel of Windows.
- Report publisher facility for customized reports.
- Custom reporting with view filters for easy retrieval.
- Scale from a single workstation to an enterprise vide network.
- Software should offer multiple levels of password, security to ensure the integrity of all your raw data and results and extensive audit trail.
- Security of data, custom reporting with view filters for easy retrieval.
- Report publisher facility for customized reports.
- It should be able to control single stage LCMS.
- It should come with GPC/SEC option.
- The software should be able to show the capability of the system to operate in at least 11 or more various gradient curve mode including Liner, Step, concave, convex. exponential etc
- It should be up gradable for Automated method development Software.

6. **Columns & Standards**

Columns should deliver advanced sorbent technology for separating complex synthetic polymer and macromolecular species. They must have superior performance and reliability for high resolution polymer characterization with reproducibility.

It should come with Aqueous & Organic Columns with a wide range of Solvent compatibility without changing the columns for several Organic & Aqueous samples.

Extended Temperature Column, 450Å, 2.5 µm, 4.6 mm X 150 mm, 1/pkg for Organic Solvents. One Column should be used for any Organic Solvents.

- Aqueous Column of same Length as of Organic.
- Polystyrene Middle MW Calibration Kit.
- Polystyrene High MW Calibration Kit.

Warranty: Minimum 3 years after installation

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,

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, 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 5 % of the equipment value 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) 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).
16. The authority of IACS reserves the right to reject any or all of the tenders received without assigning any reason thereof.

Registrar (Acting)