

# INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE

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

**NIT No. : IACS/IC/AD/2018-19/16**

**Date: 17/05/2018**

Sealed tender in two bids system (technical bid and price bid) is invited from bonafide, resourceful and eligible manufacturer/exclusive distributor/vendors for “**Ion Chromatography 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 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.	<b>NIT No. IACS/IC/AD/2018-19/16</b> <b>Date: 17-05-18</b>
Last date and time of submitting tender	11 <sup>th</sup> June, 2018 12:30 p.m.
Pre-bid meeting(date, time & place) to discuss technical specification	4 <sup>th</sup> June, 2018 12:30-1:30 pm, Room 1, 2 <sup>nd</sup> floor, ERU building, IACS
Date and time of opening tender (Technical Bids)	14 <sup>th</sup> June, 2018 12:30 pm
Place of opening tender	Room 1, 2 <sup>nd</sup> floor, ERU 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	Email: <a href="mailto:icad@iacs.res.in">icad@iacs.res.in</a> Tel.+91 33 2473 4971 [Ext.1366]

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 Ion Chromatography system"**.

### Technical Specification for *Ion Chromatography system*:

#### ION CHROMATOGRAPHY SYSTEM SPECIFICATIONS

The Ion Chromatography system should have low running cost, must have inert, metal free PEEK fluidic components throughout the system to ensure solvent compatibility and metal contamination-free chromatography **and able to do both suppressed as well as non-suppressed chromatography**. Must meet the following specifications: -

Ion Chromatography System with isocratic/binary pump facility with a flow rate from 0.1-10 mL/min with a resolution of 0.001ml/min, to analyze various ions and **must include** Acetate, Formate, Chloride, Bromide, Bromate, Nitrate, Sulfate, Sulfite, Fluoride, Nitrite, Phosphate, Trimethylammonium, Triethylammonium, MMA, Sodium, Potassium, Ammonium, Calcium etc. by using suitable column, guard column and detectors. Detection limit **must be** 100 nanomolar to 10 millimolar.

**1) Solvent Delivery Pump** - The pump must be of a serial dual piston design to reduce maintenance cost and ensure precision must have a high-pressure pump capable of continuously operating at pressures of 5000 psi or better and should be compatible with 4um High Pressure IC (HPIC) Column for fast IC or columns required to analyze the above listed ions.

- The flow range must be 0.000–10.000 mL/min or better without changing pumps in settable flow increments at 0.001 mL/min. or better
- Flow Rate Precision & Accuracy :<  $\pm 0.1\%$  or better
- Pressure Ripple :< 1% at 1.0 mL/min, typical or better
- In case MSA/NaOH are used as the elutant, the pump must have as an option a piston seal wash, which can be continuously operated when connected to rinse solution supply.
- In case MSA/NaOH are used as the elutant, there must be a built-in vacuum degas assembly which provides in-line degassing of eluents ensuring reproducibility and protection of eluents from contamination and decomposition.

**2) DETECTORS**—The main system should have option to couple multiple detector.

**2a) CONDUCTIVITY DETECTOR (CD)**—The conductivity detector must allow for advanced single-range digital output that is autoranging with operating range to 15000  $\mu\text{S}/\text{cm}$  or better full-scale and single-range analog signal output to 15000  $\mu\text{S}/\text{cm}$  or better

- Must have a cell volume no greater than 0.7  $\mu\text{L}$ . or lower.
- **It must have variable temperature compensation facility with temperature stability of  $\leq 0.001$  °C or better.**
- **Electronic noise < 0.1 nS/cm at 1  $\mu\text{S}/\text{cm}$  level.**

4) **SUPPRESSION** –Suitable suppressor for analysis of above listed ions with provision for regeneration by external mode. The complete set of accessories and chemicals required for regeneration must be quoted with the system.

5) **COLUMNS** -Non Metallic PEEK based Ion exchange column and its guard column compatible and suitable of 0-14 pH for the mention application for the mentioned application details.

6) **SOFTWARE** -The software must be able to provide full automatic control of the process of analyzing samples. This must include acquiring data, quantitation, producing a report, and the option to upgrade to an incorporated excel like spreadsheet for report flexibility.

- The software must be a 64 bit application for future upgradeability.
- Standard curves must be generated using a variety of curve fitting routines.
- Must be able to select curves with up to 5 point calibration curves
- Must be able to select linear, quadratic, or cubic fit curves

Local Accessories:

Branded PC & Printer

3KVa UPS 30min back up.

Warranty Three years from the date of installation.

7) **Installation** Installation and demonstration to be done by supplier

**Warranty:** Minimum 1 year while 3 years extendable warranty is preferred.

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. The vendor should have at least **FIVE** previous successful installations of **Ion Chromatography with the proposed technology** in the country.

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.**

**3. BID SECURITY:**

a. 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 alongwith 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 nationalized bank of India or Bank Guarantee (BG) of any Indian Nationalized 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.

**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 to visit the website ([www.iacs.res.in/tender](http://www.iacs.res.in/tender)) for any amendment.
5. Installation/Demonstration/Application training 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 Abhishek Dey (icad@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**