



National Institute of Technology, Manipur, Langol, Imphal West 795004

INVITATION LETTER

Package Code: TEQIP-III/2019/nitm/131

Current Date: 01-Jul-2019

Package Name: NITMN/Ion chromatography

Method: Shopping Goods

To,

Sub: INVITATION LETTER FOR NITMN/Ion chromatography

Dear Sir,

1. You are invited to submit your most competitive quotation for the following goods with item wise detailed specifications given at Annexure I,

Sr. No	Item Name	Quantity	Place of Delivery	Installation Requirement (if any)
1	Ion Chromatography	1	NIT Manipur	
2	Portable Material Analyses	1	NIT Manipur	

2. Government of India has received a credit from the International Development Association (IDA) towards the cost of the **Technical Education Quality Improvement Programme [TEQIP]-Phase III** Project and intends to apply part of the proceeds of this credit to eligible payments under the contract for which this invitation for quotations is issued.

3. Quotation

- 3.1 The contract shall be for the full quantity as described above.
- 3.2 Corrections, if any, shall be made by crossing out, initialling, dating and re writing.
- 3.3 All duties and other levies payable by the supplier under the contract shall be included in the unit Price.
- 3.4 Applicable taxes shall be quoted separately for all items.
- 3.5 The prices quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
- 3.6 The Prices should be quoted in Indian Rupees only.

4. Each bidder shall submit only one quotation.
5. Quotation shall remain valid for a period not less than **26**days after the last date of quotation submission.
6. Evaluation of Quotations: The Purchaser will evaluate and compare the quotations determined to be Substantially responsive i.e. which
 - 6.1 are properly signed; and
 - 6.2 Confirm to the terms and conditions, and specifications.
7. The Quotations would be evaluated for all items together.
8. Award of contract The Purchaser will award the contract to the bidder whose quotation has been determined to be substantially responsive and who has offered the lowest evaluated quotation price.
 - 8.1 Notwithstanding the above, the Purchaser reserves the right to accept or reject any quotations and to cancel the bidding process and reject all quotations at any time prior to the award of Contract.
 - 8.2 The bidder whose bid is accepted will be notified of the award of contract by the Purchaser prior to expiration of the quotation validity period. The terms of the accepted offer shall be Incorporated in the purchase order.
9. Payment shall be made in Indian Rupees as follows:

Satisfactory Delivery & Installation - 10% of total cost
Satisfactory Acceptance - 90% of total cost
10. Liquidated Damages will be applied as per the below:
Liquidated Damages Per Day Min % : N/A
Liquidated Damages Max % : N/A
11. All supplied items are under warranty of **12** months from the date of successful acceptance of items and AMC/Others is .
12. You are requested to provide your offer latest by **17:30** hours on **26-Jul-2019**.
13. Detailed specifications of the items are at Annexure I.
14. Training Clause (if any)
15. Testing/Installation Clause (if any)

16. Performance Security shall be applicable: **0%**
17. Information brochures/ Product catalogue, if any must be accompanied with the quotation clearly indicating the model quoted for.
18. Sealed quotation to be submitted/ delivered at the address mentioned below, **National Institute of Technology, Manipur,Langol, Imphal West 795004**
19. We look forward to receiving your quotation and thank you for your interest in this project.



(Authorized Signatory)

Name & Designation

Annexure I

Sr. No	Item Name	Specifications
1	Ion Chromatography	See Annexure I(A)
2	Portable Material Analyses	See Annexure II(A)

FORMAT FOR QUOTATION SUBMISSION
(In letterhead of the supplier with seal)

Date: _____

To: _____

Sl. No.	Description of goods \ (with full Specifications)	Qty.	Unit	Quoted Unit rate in Rs. (Including Ex-Factory price, excise duty, packing and forwarding, transportation, insurance, other local costs incidental to delivery and warranty/ guaranty commitments)	Total Price (A)	Sales tax and other taxes payable	
						In %	In figures (B)
Total Cost							

Gross Total Cost (A+B): Rs. _____

We agree to supply the above goods in accordance with the technical specifications for a total contract price of Rs. _____ (Amount in figures) (Rupees _____ amount in words) within the period specified in the Invitation for Quotations.

We confirm that the normal commercial warranty/ guarantee of _____ months shall apply to the offered items and we also confirm to agree with terms and conditions as mentioned in the Invitation Letter.

We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in bribery.

Signature of Supplier

Name: _____

Address: _____

Contact No. _____

ANNEXURE -I

Ion Chromatography System

- Ion Chromatography system for analysis of Anions like fluoride, chloride, nitrate, phosphate, sulphate, bromide, chlorite, speciation of arsenic (arsenite and arsenate) etc. cations like sodium, lithium, potassium, calcium, magnesium, barium, strontium, transition metals like cobalt, zinc, nickel, cadmium and various amines by conductivity detection.
- The system should be able to perform both suppressed and non-suppressed conductivity applications.
- The flow paths should be of PEEK material and inert withstanding the entire pH range 0-14.
- The system should be PC based with data acquisition and system control through the same software. The software should be able to identify various components like pump, column, and detectors automatically. The system must be compatible with other detectors such as UV-VIS, Electrochemical apart from the usual conductivity detector as well as auto sampler for future upgradation. The system should have the components with following technical specifications.

PUMP:

One number of high pressure pump of serial dual piston type with selectable 0.001 to 10mL / min flow rate with a flow reproducibility of $\pm 0.1\%$. Pump should have the following specifications :

- Serial dual pistons with two inert check valves.
- Resolution of flow rate : 0.001mL
- Pulsation : Lower than 1%
- Pressure range : 0 – 5000 PSI

Conductivity Detector:

- 1) One number of conductivity detector for analysis of anion and cation, should be microprocessor based with a thermo stated micro-flow cell conductivity block with an accuracy of $\leq 0.001^\circ\text{C}$. The user should be able to set temperature of the conductivity block between $20^\circ - 50^\circ\text{C}$.
- 2) Conductivity measurement range: 0 – 15000 $\mu\text{S}/\text{cm}$ or more.
- 3) Electronic noise $< 0.1\text{nS}/\text{cm}$ at $1\mu\text{S}/\text{cm}$ level
- 4) Temperature co-efficient range: 0-5%

Column Housing:

Housing should be able to identify the columns and thermo stated as well as electrically insulated to set the optimal operating conditions for column operations.

IC Columns:

Suitable columns for analyses of all the above mentioned ions should be quoted with respective guard columns. The columns should have electronic chip to store data and history of column use. It should also be possible to record the number of injections and the working hours.

Injector:

Dual position 6-Port injector valve with fast response time and controlled through software.

Suppressor:

Suitable suppressor with high loading and high back-pressure (at least 300psi or more) tolerance with continuous regeneration. The regeneration of the suppressor should be by external mode. It should be able to take flow rate of 10ml/min. The suppressor should be 100% solvent – acetone, methanol & acetonitrile compatible. It should be covered under at least 5 years warranty along with manufacturer's certificate.

Data Work station:

Software for data acquisition & processing system along with complete system control should be offered. The necessary software should be fully Windows based. The software should be able to control the system.

Optional Item:

Auto Sampler of at least 35 positions with 10mL sample capacity vials should be quoted along with the system. The entire set-up provided should be automatic and controlled through the software.

Others:

- (i) One year instrument warranty on the instrument
- (ii) No gas should be used for complete operation of the system
- (iii) IC should be supplied with monographs and manuals
- (iv) Solvent and sample filtration kit has to be supplied along with the system
- (v) Compatible branded PC, Printer.
- (vi) Mixed anion and cation standard.

The bidder must have experience in dealing with similar products for past 10 years in India.

Annexure II

TECHNICAL SPECIFICATION OF PORTABLE ARSENIC ANALYZER

Based on Voltammetry principal (wide-band low-noise amplifier & potentiostat/ Galvanostat):

Voltage Range: ± 4 V

Current Range: ± 40 mA

Current Measurement: Ranges (10nA to 10mA)

Measured current Resolution: 1pA

Interface: USB

System should be with stirrer, measuring vessel, suitable pipettes, carrying case facility, gold wire screen-printed electrode and compatible laptop. Flexible & comprehensive windows based software needs to be provided with facilities for quantitative or qualitative analysis & following measurement techniques:

- Differential Pulse (DP)
- Square-wave (SQW)
- Linear Sweep

Detection limit: $\leq 10 \mu\text{g L}$ of Arsenic