



Central Purchase unit
National Institute of Technology Srinagar (J&K) -190006

Tel:- 0194-2424792/2429423/2424809/2424797 Fax:- 0194-2420475

No. NITS/CPU/ 2018/ CRFC/3760-65 Dated.:- 28 .02.2018

**"Tender Notice for Invitation of bids for the supply of Energy Dispersive x-Ray
Fluorescence Spectrometer with accessories for Central Research facility Centre"**

-0-0-0-

1. Sealed Bids are invited for the lab equipment having detailed Specifications as given in Annexure -A. in two bid format on the terms & conditions given from para-2.
2. **Envelope- A (Techno-commercial Bid) Containing the following documents:-**
 - (a) Original equipment manufacturer proof.
 - (b) Proof of being Distributor/Marketing agent/ Authorized dealer in the shape of copy of agreement and registration under law in force.
 - (c) PAN card of the firm.
 - (d) Tax registration
 - (e) Proof of annual turnover of the firm for last three years which shall not be less than Rs.3.00 Crores to be proved by way of copy of audited accounts and income tax returns of 3 years.
 - (f) Proof of availability of after sale support/service.
 - (g) Bid security for Rs.3.50 lac in the form of CDR/TDR in favour of Officer In-charge, Central Purchase Unit NIT Srinagar (J&K) and tender document fee Rs.1,000/- in the form of DD, in favour of Director, NIT Srinagar. Tender without CDR/document fee shall be rejected.
 - (h) Proof of legal status.
3. **Envelope-B (Price Bid), Containing the following:-**
 - (a) Bid prices must be quoted both in words & figures. The rates quoted should be covered with transparent tape.
 - (b) The rate quoted should be FOR NIT Srinagar (J&K).
 - (c) Bid price should be without over writing. However minor over writing should be clearly signed by the bidder. In case of any discrepancy between price quoted in figures and words, the price quoted in words will prevail. Bid price should be firm for the bid validity period.
 - (d) **All duties, taxes and levies (GST or other charges) payable, must be quoted separately.**
 - (e) **As per SRO 129 of Government of Jammu & Kashmir, the institute is Exempted from state entry tax. The Institute will provide Entry tax exemption certificate to successful bidder with supply order. The Institute is also exempted from Custom/Excise duty.**
 - (f) The bidder shall fill in Bid form in the format given in Annexure-B, Technical specification Schedule as per Annexure-C and Price bid schedule in the format enclosed in Annexure-D
4. **Validity of Bids**
Bids shall remain valid at least for 120 days from the date of opening of the bids.
5. **Evaluation of Bids.**
 - (a) The purchaser shall evaluate and compare the bids which are found Responsive. i.e
 - (i) Properly signed.
 - (ii) Conform to terms and conditions and technical specifications.
 - (iii) Accompanied with Bid security and all other documents.
 - (b) Bids shall be evaluated separately for each item.

6. Award of contract

- (a) Contract shall be awarded to the bidder whose bid is commercially, technically responsive and offered at lowest evaluated price.
- (b) Successful bidder shall be notified about the award of the contract through a supply order where in terms and conditions of supply shall be incorporated.

7. Payment.

Payment to foreign manufacturer can be made through LC as per approved terms and conditions of the supply order. However, 90% of LC will be released only after receiving the equipment in good condition at NIT, Sgr. and as per prescribed specifications along with all the necessary documents. Indian agent has to take full responsibility of its installation, commissioning and trainings. 10% of payment will be released after successful installation, commissioning and trainings. For indigenous equipment 90% payment shall be made against delivery of equipment at NIT Srinagar in good condition and found as per prescribed specifications and 10% after successful installation/ commissioning and trainings of the equipment.

8. Warranty and after sale service:

- (a) All items shall carry comprehensive standard warranty of two years from the date of commissioning and service support after expiry of warranty.

9. Performance security.

- (a) Performance security shall be retained for the amount as mentioned in the award of contract letter/supply order. However it shall not exceed 10% of the contract value.

10. Settlement of disputes.

Settlement of disputes if any shall be subject to the jurisdiction of Srinagar Courts only.

11. Liquidated Damages.

If the bidder after accepting the purchase order of goods/equipments or services, fails to deliver any or all of the goods/equipments or to perform the services within the specified period, a penalty of 0.50% (half percent) of the price value of the item per week or part thereof shall be imposed. The maximum penalty shall be limited to 10% of the cost. Once maximum is reached NIT Srinagar shall proceed on its own to consider the termination of the supply order, on the risk & responsibility of the defaulting bidder

12. Submission of Bids.

- (a) ***The last date for submission of bids is 28.03.2018 upto 16.00 hours.***

However before closing of Bid, a Pre Bid Conference will be held on 7th March 2018 at Our Institute At 10.00 A.M in the office of the undersigned.

Interested bidders should register themselves for this with Prof. M.F Wani, Chairman CRFC whose email and phone is given on the website.

- (b) Bids should be properly sealed.
- (c) The two envelopes A & B should be separately sealed and superscripted as Techno-Commercial Bid & Price Bid, due date of submission, Name of equipment. These two sealed envelopes should be sealed in a bigger Envelop with the address of the Tender receiving Officer & Tender No.
- (d) Bids should be addressed to Officer In-charge, Central Purchase Unit NIT Srinagar (J&K)-190006.
- (e) Bids not from Srinagar shall be dispatched sufficiently well in advance so as to reach the destination as per scheduled time & date. NIT Srinagar shall not be responsible for any delay by posts Deptt. or Courier agency.

13. Bid opening

- (a) The Technical Bid (Envelope- A) will be opened first and Price Bid (Envelope-B) of the qualified bidders will be opened subsequently. Interested bidders can attend the Bid opening.

14. **Custom clearance will be responsibility of the supplier, however, Institute. will pay custom on Line through on line portal (Indian Customs EDI Gateway)**
15. **Not withstanding above, the purchaser reserves the right to reject any or all the bids received in response to this N.I.T. or withdraw it without assigning any reasons thereof.**

Officer In-charge
Central Purchase unit, NIT Srinagar

N.B.

1. Before preparing your valuable bid kindly go through the document fully and take care of all the requirements.
2. Bidders from outside Srinagar may please send their Bids well in advance so that these are received in time.

Annexure-A
Details of Equipment:-

S.No	Description of items	Specifications	Qty	Delivery Period
1	Energy Dispersive x-Ray Fluorescence Spectrometer with accessories	<p><u>General Requirements</u></p> <p>The Energy Dispersive X-Ray Fluorescence spectrometer must be robust, user-friendly and flexible to analyze solid, powder, liquid samples, and measurement of film thickness as well composition. The spectrometer should be able to do the following general analysis:</p> <ol style="list-style-type: none"> 1. In-built calibration for RoHS(Restriction of hazardous substances /ELV(End of life vehicle), Halogen, and Antimony screening. The result of RoHS/ELV should be shown in excel and HTML format along with the graphs. 2. Thin-film analysis/ plating thickness measurement as well as composition for semiconductors, discs, liquid crystals and solar cells. 3. Ferrous/non-ferrous metal's component analysis and impurity analysis of raw materials, alloys, solder, and precious metals. 4. Analysis of ceramics,cement,glass, polymer,bricks,andclay,etc. 5. Analysis of sulfur in oil, additive elements and mixed elements in lubricating oil. 6. Unit should have facility of comparing samples. 7. Identification of grains with pin point target. 8. Determination of thickness layer by layer i.e depth profile data. 9. Fluid samples 10. Detectable element range. 11. Filters max. 12. Sample chamber size 100mm. <p><u>Detailed Technical Specifications</u></p> <p>1. X-Ray Generator</p> <ol style="list-style-type: none"> 1.1 The generator should be a 50W system. 1.2 The X-ray tube should have a Rhodium or equivalent target for greater X-ray generation 	1No	60 days After date of issue of supply order.

efficiency and should be air-cooled.

- 1.3 The tube voltage should have a range of 4 to 50 kV.
- 1.4 The tube current should have a range 1 to 1000 μ A.
- 1.5 The generator should have a stability of $\pm 0.01\%$.
- 1.6 The system should have a protection circuit to protect it from a surge in voltage or current. Additionally, the circuit must prevent generation of radiations if the circuit is open at any point.
- 1.7 The exposure area should be variable between at least 1mm - 10mm diameter range. Switching of spot size should be automatic among the settings.

2. Detector

- 2.1 The X-ray detector should be of Silicon Drift Detector with high sensitivity and wide dynamic range.
- 2.2 The X-Ray detector should be able to analyze samples in solid, liquid and powder form, as well as film thickness measurement.
- 2.3 It should be capable of a measurement range from Carbon ($_{11}\text{Na}$) to Uranium ($_{92}\text{U}$).
- 2.4 It should be capable of measuring samples in air, vacuum atmosphere.

3 Counting Unit and Control Unit

- 3.1 The counting unit should have a digital signal processing system.
- 3.2 The signal measurement range should be 0 to 40 keV.

4 Measurement Compartment Unit

- 4.1 A large sample chamber to accommodate odd sample sizes and shapes of at least 300mmX275mmX100mm.
- 4.2 The measurement compartment should incorporate a CCD camera for accurate selection of target spot for analysis, sample observation and capturing a snapshot of the target spot for reporting, and future reference.
- 4.3 The unit should have a 12-sample turret automatic sequential analysis of multiple samples for greater workflow efficiency and productivity.
- 4.4 The unit should have a vacuum unit for high-sensitivity analysis of light elements.

		<p>4.5 The spectrometer should have five primary x-ray filters and one open. This is to enable the operator the flexibility to enhance the detection sensitivity of targeted elements of interest. Changing of the filters should be automated.</p> <p>5 Data Management Software</p> <p>5.1 The software should have qualitative and quantitative measurement analysis.</p> <p>5.2 The quantitative analysis software should be capable of performing high accuracy analysis using standard samples and calibration curve.</p> <p>5.3 The quantitative analysis software should also be capable of performing effective analysis where standard samples are not available. This can be used to perform bulk analysis for samples such as oxides, metals and resins. It is effective also for analysis of film-thickness and compositions of coatings and thin films.</p> <p>5.4 The quantitative analysis software should have various correction methods including intensity matrix-correction, intensity calculation, drift correction, blank correction, internal standard correction and overlap correction.</p> <p>5.5 The software should have a wide array of user-defined utilities such selecting and viewing data, changing data display format, changing a processing profile, editing quantitative conditions, reloading and saving analytical conditions.</p> <p>5.6 The software should have various report templates that can be user editable. The report templates must be able to extract and incorporate data such as image, calibration curve, analytical results and statistical data. The reports must be printable.</p> <p>5.7 The software should have a database comprising a content library and an intensity library. The content library should be editable such as adding, deleting, copying and saving.</p> <p>5.8 The software should be able to analyze the less volume as well irregular shape sample effectively.</p>		
--	--	---	--	--

5.9 The spectrometer should have a content matching software provided as standard.

6 Standard Accessories

6.1 One set of 6µm-thick Mylar film consisting at least 500 sheets.

6.2 Should be supplied with He purging unit.

6.3 Should be supplied with Sample turret for minimum 10 samples.

6.4 One set of 100 sample cells for general purpose applications

6.5 One set of start-up kit comprising:

- One set of five disposal sample cells for general purpose use
- One set of five sample cells for general purpose use
- One set of five sample cells for trace analysis

6.6 One set of desktop computer comprising:

- 19" LCD Monitor
- Intel Core i5 processor or equivalent
- 500GB Hard Disk
- 4GB RAM
- DVD-RW Drive
- Preloaded MS Windows 7 Professional edition
- MS Office Small Office edition
- Keyboard and optical mouse
- Colour laser printer

Note:- Equipment should be supplied with warranty and AMC executed.

Final specifications shall be determined in the pre-bid conference for all equipment.

(Tender opening format)
(To be filled-in by the Bidder)

Name of the firm:- _____

Tender for supply of _____

NIT No. &Date:- _____

Technical specification/ literature attached:- Yes/No

Valid tax clearance certificate attached:- Yes/ No

Registration/ Authorization Dealership/
manufacturer certificate attached:- Yes/ No

Revenue stamp affixed. Yes/ No

Rates covered with transparent tape:- Yes/ No

Bid document fee deposited:- Yes/ No

Call Deposit Receipt enclosed:- Yes/ No.

Bid price in Indian Rupees:- Yes/ No

FOR Srinagar:- Yes/No

Bid without correction/overwriting:- Yes/ No

Seal & Signature of the Supplier.

Annexure-B
BID FORM

From M/S.....

.....

To,
Officer In-charge,
Central Purchase unit, NIT Srinagar.

Ref: NIT No.: NITS/CPU/ /2017-18 Dated:.....goods/Equipment for
.....Department

Sir,
With reference to above invitation for bids we would like to say that we have gone through your bid document thoroughly and hence offer our competitive Technical/Price Bid in sealed envelope for the supply of various goods/equipment listed in your document.

The following documents constitute our Bid.

- (a) Bid form
- (b) Price Bid schedule in the requisite format
- (c) Authorization dealer ship certificate from the manufacturer
- (d) Valid sales tax certificate
- (e) Technical literature for the goods/equipment
- (f) Names of organization where this equipment has been supplied. (Applicable for equipment whose unit price exceeds Rs.2.00 lacks
- (g) Bid security as mentioned in the schedule of requirements in the form of CDR drawn in favour of the Officer In-charge Central Purchase Unit NIT Srinagar.
- (h) Telephone No.....

Kindly feel free for any enquiries and clarifications.

Yours Sincerely

(.....)
From M/S.....

Place.....

Date.....

.....

Annexure-C

Technical specification.

Name of Equipment /Goods : e.g., **Energy Dispersive x-Ray Fluorescence Spectrometer**

Make /Model/ Country of origin: e.g.,

S. No.	Technical Specifications (as per. NIT/CPU/13/ aaaa-aaaa Advertised)	Technical Specifications of the Make /Model	Complies	Higher/Better (with detail quantification)	
				Higher/Better	Quantification
1			Yes	----	
2				Higher	
3					

