

REF. NO: DST/FIST/CHEM/XRD: 2013-1014

Quotations are invited from the manufacturing company or authorized dealer or distributor or agency of foreign principal to obtain lowest rate for the followings.

LAST DATE OF TENDER SUBMISSION:

10.04.2014 (THURSDAY), TIME: 5-00 PM

Quotations/bids are invited through Registered Post / UCP / Courier Service in two part system (technical and financial) as described below.

Part I: Description of the items required for CCD based Single Crystal X-ray diffractometer System.

Technical specification of fully automated charged couple device (CCD) detector based single crystal X-ray diffractometer system

1. General requirement :

A Single crystal X-ray diffractometer system with floor mounted state of the art Single crystal X-ray diffractometer system for crystal data collection and structural determination of samples such as organic, inorganic, organometallic complexes etc., with minimum 3 KW or more X-ray Generator, CCD Detector along with internal cooling system, necessary goniometer with other accessories and peripherals required to fully integrate the system including water chiller, UPS and all hardware and software starting from mounting of crystal to crystallographic information file generation.

Technical Specifications:

(i)	Sample/Detector Positioning System: The XRD system should have a fully automated Goniometer. It should have very high angular precision and high angular coverage of minimum 150 deg 2 Theta. Color video microscope for easy alignment of samples should be an in-built feature.
(ii)	X-ray Detector & Optics: (a) X-ray Detector: Single module 4K (or State of the art) Charge Couple Device (CCD), 16 mega pixels detector or more, with a physical dimension of 60 mm or better for single crystal frame data collection and imaging/camera, 1:1 demagnification between scintillator and CCD chip for better spatial resolution & no spatial distortion very high sensitivity of minimum 160 eV or better per X-ray photon for Mo radiation but with out detector saturation condition in practice i.e. the detector quantum efficiency must not get affected or sacrificed with the offered electron gain. Automatic binding mode facility is preferable. CCD chip should be cooled at a temperature of -40 degree C or below so that higher signal to noise ratio can be achieved. b. Beam Optics: Graphite Monochromator with all other necessary accessories/optics for using in both Molybdenum (Mo) and Copper (Cu) radiation.
(iii)	X-ray Generator: In house designed and make computer controlled solid state based X-ray generator with power output of 3KW or above, sealed X-ray generator with maintenance free remote control operation, high speed / safety shutter and fail-safe switch.
(iv).	X-ray Tube: Two Ceramic X-ray tubes one Molybdenum and another Copper anode, 2 KW or more and fine focus should be separately quoted with all necessary optics to be included in the basic system so that both the tubes can be used in the

	<p>offered system for crystallographic work. While using the Copper radiation, all necessary optics must be included in the basic system in order to achieve high sensitivity for the CCD detector. We may go for Mo anode tube or Cu anode tube or for both.</p>
(v)	<p>Radiation enclosure: Fully X-ray protected enclosure as per international safety norms.</p>
(vi)	<p>Low & High Temperature attachment: Temperature from 90K to 400K with very low liquid nitrogen consumption, no icing effect, equipped with liquid nitrogen Dewar flask, pressure regulator, transfer line, line heater, air drier and necessary accessories.</p> <p>Note: The price of this item should be shown separately i.e. should not be included with the price of the diffractometer.</p>
(vi)	<p>Computer and Printer: Square monitor (19 inch or more), 8 GB RAM, 2 tb Hard disk, i5/i7 processor, 4 GB graphix card along with latest configuration suitable for data collection, total instrument control and data storage latest WINDOW/LINUX with license or better.</p>
(vii)	<p>Application software (Original): WINDOWS XP/ LINUX based application software on GUI platform for instrumental control for single crystal, twins, low/high temperature, high pressure, charged density and modulated structure. The software should be able to perform fast and complete data acquisition, scaling, space group determination, structure determination, auto structure/solve facility and final report generation for publication purpose. No public domain software is acceptable.</p>
(viii)	<p>Goniometer: High precision, high quality suitable goniometer having provision for crystal mounting / alignment and positioning of low temperature devices.</p>

(ix)	Warranty: The extended warranty for entire single crystal X-ray Diffractometer system is desirable for at least 2 years (i.e., 1+1 years).
(x)	Crystallographic Databases: The latest Cambridge structural database (CSD) with five year license.
(xi)	<p>Microscope: A stereo Zoom microscope with polarizer 80 X magnification, good working distance, moderate magnification and photographic adapter for selection of suitable crystal.</p> <p>Note: The price of this item should be shown separately i.e. should not be included with the price of the diffractometer.</p>
(xii)	Spares: Ceramic X-ray tube with molybdenum Anode: One (1) No. In addition, spares for at least 3 years normal operation to be included in the offer. Supplier should confirm the availability of spares for next 10 years from the date of installation.
(xiii)	Capillaries: Capillaries made of special glass with wall thickness of 0.01 mm and outer diameter of 0.2mm, 0.3 mm, 0.5mm, 0.7 mm, and 1.5 mm -25 pcs. of each type and other necessary capillaries / accessories.
(xiv)	Test crystal: One test crystals to be included in the basic system along with an additional spare (Total two).
(xv)	Goniometer Head: 3 (Three) Nos. of Goniometer head in the basic system.
(xvi)	Supplier should clearly mention about their service set up in India for after sale prompt service.
(xvii)	Detailed lists of Indian Users for the CCD-based XRD quoted model.
(xviii)	External water chiller for the single crystal X-ray diffractometer System (Preferably imported): Suitable imported external water chiller with heavy-duty motor / pump / compressor / fan system all connected in 3-phase and safety protection devices for the offered single crystal X-ray diffractometer system should be quoted with detailed technical specification of the chiller.

	<p>After sales service should be provided by the Vendor.</p> <p>Note: The price of this item should be shown separately (Both for Imported and Indigenous) i.e. should not be included with the price of the diffractometer.</p>
(xix)	<p>UPS: 30 kVA on-line UPS compatible with the CCD-based XRD system with 3 phase input, 3 phase output with suitable batteries for 2 hours back up.</p> <p>Note: The price of this item should be shown separately i.e. should not be included with the price of the diffractometer.</p>
(xx)	Validity of Quotation: Minimum 6 months.
(xxi)	<p>Installation:</p> <ul style="list-style-type: none"> a) Pre-Installation requirement: Necessary pre-installation advice should be sent immediately after the placement of the order. b) Installation & Commissioning: Free of Cost. c) Application training program: On site hands-on training for a group of workers from operating the instrument to complete structure determination/ solution to be provided for 10 working days after the successful installation and commissioning of the XRD system at our lab. d) Maintenance training program: Free of cost in any reputed laboratory in India or in the factory if necessary.

Part -II: Special conditions of contract (SCC).

[Inclusion of any terms and conditions in respect of installation and commission of the equipment]

Two bid quotations should be submitted.

- (i) Technical bid and financial bid should be sealed by the bidder in separate covers duly superscribed and both covers are to be put in a bigger which should be sealed and duly superscribed.
- (ii) Technical bid consisting of all technical details along with commercial terms and conditions (as stated above in detail & please see below).
- (iii) Financial bid indicating price (detail of which stated above in the technical specification section) for the items mentioned in the technical bid.
- (iv) If requires, the interested bidder may seek clarifying any of related query before submission of the tender documents. If requires, the interested bidder may seek clarification of any relevant query from the office of undersigned appears physically any working day before dropping/submitting the tender document.

The query should be related to the technical details and related terms and conditions etc. in respect of the purchase.

- (v) The technical bids are to be opened at first. At the second stage financial bids of only technically acceptable offers will be opened before awarding contract.
- (vi) Credential of the supplier/and manufacturer/bidders as well as list of their products should be mentioned with document.
- (vii) Vender is requested for arrangement of Customs clearing and transportation of equipment to our Laboratory.
- (viii) **Warranty:** The extended warranty for entire single crystal X-ray Diffractometer system is desirable for at least 2 years (i.e., 1+1 years).
- (ix) **Validity of Quotation:** Minimum 6 months.
- (x) **Supplier should confirm the availability of spares for at least next 10 years from the date of installation.**
- (xi) Technical bid should be enclosed with the following documents
 - a. Trade license, Manufacturing license, Import license (if applicable) and any other licenses required in the related field.
 - b. Company Registration certificate, Partnership deed (in case of Partnership firm), Power of Attorney (if required), and Dealership or Authorisation certificate (in case of dealer/agent) from the manufacturer.

- c. PAN and clearance certificate of VAT, CST, Service Tax, P.Tax. etc.
- d. Credential for dealing with business of sophisticated scientific equipments for at least five years with list of clients to whom such equipments were supplied (Govt.Org.preferable)
- e. Annual turnover for at least Rs.1.0 cr during last three consecutive years supported by the Audited Balance Sheet.
- f. Name, Designation and contact no. of the qualified Engineer/s who will provide services to us against this supply.
- g. Detail of the company from which the Indigenous items (if required) will be procured and provide their information as per Sl. Nos i-iii.
- h. EMD of Rs 1.75 lac in the form of D/D drawn in favour of the Accounts Officer, Visv-Bharati University payable at State Bank of India, Santiniketan Branch, must be enclosed with Technical bid. Tender will be considered CANCELLED without EMD. The EMD for the qualified vendor will be kept as Performance Security Deposit and will be refunded after successful execution of work. There will be no accrued interest for such deposit payable to the vendor.
- i. Price bid will be inclusive all charges like VAT/CST, Insurance, Custom Duty, Packing, installation etc. and FOR at the Department of Chemistry, Visva-Bharati, Santiniketan. Please note that DSIR certificate will be issued and all price components will have to be indicated separately.

[Item nos. (viii) to (x) as also stated earlier]

Part III: General Conditions of Contract (GCC)

(1) Mode of Payment: Payment normally be made through a Letter of Credit (LC). However, in exceptional circumstances payments can also be made by FDD subjected to the restrictions placed by **RBI**.

However, the draft may be arranged to be handed over to the representative of supplier on receipt, acceptance, installation and commission of the equipment.

Payments terms and conditions:

100% of payment will be released against LC subjected to obtain performance security 5%. Performance security mat furnished in the form of an account payee Demand draft/Fixed deposit/Receipt form of commercial bank/Bank guarantee from a commercial bank in an acceptable form. Performance security should remain valid for sixty days after total warranty period.

(2) Currency Conversion: In case of pricing quoted other than in Indian Rupee, the value of the currency to be considered at per with the international rate to be remained on the date of opening of the quotation.

(3) The participant bidders are requested to provide the sales tax registration no./VAT no. and wherever relevant excise registration no.

(4) The bids may be addressed to: **The Coordinator, DST-FIST-II, Department of Chemistry, Visva-Bharati, Santiniketan-731235, Dist.: Birbhum, West Bengal.**

Enquiry No.	Due Date:	On the face of the envelope.
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<i>(i) Validity of offer</i>	<i>(v) Excise Duty</i>	<i>(viii) Other</i>
<i>incidental charges. The rates</i>		

<i>(ii) Period of Delivery</i>	<i>(vi) Insurance</i>	<i>and</i>
<i>terms should be noted on</i>		

<i>(iii) Place of Delivery</i>	<i>(vii) Packing and forwarding</i>	<i>F.O.R./F.O.B.</i>
<i>basis or delivery at V.B. site</i>		

<i>(iv) Central Sales Tax/VAT</i>	<i>Charges and Freight</i>
<i>Sales Tax/Service Tax</i>	

(5) Below are the details of the above points.

(i) Validity of the offer :- Here please mention the time (From _____ to _____) up

to which your quotations shall be current. The quotationer shall have no right to revise them within the period given here on the plea of fluctuations in the marker rate. Normally the validity of the offer should be for a specified period of 90 days (here it is 180 days).

(ii) Time of Delivery:- State the period during which the supplies will be effected by you in full.

(iii) Place of Delivery :- Mention clearly the place of destination, and mode of transit by which the

The supplies will be effected without any extra charges. The University will prefer F.O.R. Santiniketan prices in case of outstation suppliers, and delivery at our site in case of local suppliers.

(iv) Central Sales Tax: State the present rates leviable. In case the same is not applicable, mention

‘Not Applicable’ and if the prices are inclusive of this sales tax, please write ‘Included in the Prices’. The S.T./VAT/I.T Pan No. or Registration Number (as the case may be) should invariably be quoted in the offer, a photo copy of the latest clearance certificate of the above be enclosed with the offer, failing which the offer will not be considered.

(v) Provincial Sales Tax: As detailed under (iv) above.

(vi) Excise Duty:- As detailed under (iv) above (V.B. can provide Excise Duty exemption certificate wherever applicable)

- (vii) Insurance: If the rates are inclusive of insurance, please write 'Included in the prices' otherwise state "Not included". In case local suppliers where insurance is not necessary, they may mention "Does not arise".
- (viii) Packing and forwarding charges: If these charges are accounted for in the prices quoted by you, please mention 'Included in the prices', otherwise please give an approximate charge thereof. It may be noted that the University will pay only the actual expenses on these accounts.
- (ix) Other incidental charges: Other charges which are not fully accounted for by the replies given above, may be mentioned.

(6) University reserves the right to accept/cancel any of the tender or part thereof without assigning any reason.

(7) Suppliers having Rate Contract with Central or Provincial Government should quote along with a certified copy of the current Government Rate Contract.

(8) The Offer must be accompanied by the related catalogues, leaflets brochures and samples wherever possible. While every effort is made to return the samples to the suppliers, the HOD/P.I/Coordinator/Indenter cannot accept any responsibility in this respect.

(9) All quotations should be net, after showing discounts etc.

(10) If the terms of the quotation etc. are vague, incomplete, contradictory and confusing, the offer will be rejected without any explanation.

(11) The suppliers will be informed of the decision in due course in case of decision in their favour and any interim enquiries about offers will not be attended to.

- (12) Once the offer is accepted by the HOD/P.I./Coordinator/Indenter and the order is placed on the basis, the suppliers will have to deliver the goods accordingly within the stipulated time, or meeting the compensation for loss, if any, on account of non execution of the supply order.
- (13) Liquidated Damage:- Visva-Bharati reserves the right to impose liquidated damage as and when required; the rate of penalty will be at par with the same of the Govt. of India's instruction.
- (14) Bank commission where applicable will have to be borne by the supplier.
- (15) All disputes subject to "Bolpur, Birbhum, W.B. Jurisdiction" only.
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