

**Foundation for Innovation and Technology Transfer
(FITT)**

REF: FT/2023/05/32
Date: 1st August, 2024

Notice Inviting Quotation for XRD

Sl. No.	Technical Specifications	Remarks
1.	Safety Full Radiation protection chamber with fail safe open/close mechanism. Leakage of radiation as per international standard.	
2.	X-Ray Generator	
a)	Maximum Power output: 600 W or better	
b)	Output voltage: 30 kV or better with a step of 1 kV or better	
c)	Maximum current: 15 mA or better with a step of 1 mA or better	
d)	Stability of Generator: $\pm 0.05\%$ for 10% fluctuation in the input power	
3.	X-Ray Tube - Cu Target (Optional Co target may be quoted separately)	
4.	Goniometer	
a)	Automated high-resolution theta-2theta or theta-theta geometry. There should be no spillage of powder specimens in case of theta-2theta geometry for the entire scanning range.	
b)	Two theta range: minimum 0° to 140° or better	
c)	Scanning mode: θ_s/θ_d coupled, or θ_s, θ_d independent	
d)	Step size: 0.002° or better	
5.	Sample Holders – Minimum 12 nos. of Glass / amorphous plastic / stainless steel (0.5 mm or lower) sample holders to be included	
6.	Detector	
a)	Scintillation counter detector or ED solid state detector (0D or 1D) as a standard	
7.	Divergent slit, scattering slit and receiving slit to allow low angle measurements less than $2^\circ 2\theta$	
8.	Sample stage and sample changer	
a)	Standard stage for powder diffraction with minimum 6 stage sample changer	
9.	Software	
	Data acquisition and processing	
	<ul style="list-style-type: none"> - Fully automatic profile fitting with Rietveld analysis - Integrated Intensity calculation - Background subtraction and smoothing - $K\alpha_2$ elimination and Peak search 	

	<ul style="list-style-type: none"> - Crystallography Open Database access - 2θ correction - Pattern simulation from d-I list. - 3D multiple pattern display - Crystal structure data (CIF) input and output - 3D Crystal structure display - RIR quantitative analysis 	
10.	Computer if required (clarification shall be given if not required)	
11.	Compatible UPS	
	Compatible as per system requirement	
12	Chiller Unit	
	Suitable compact indoor chiller unit for smooth running of XRD must be offered as standard. Clarification must be given in case a separate chiller is not required.	
13	Installation & Commissioning	
	Installation and training should be included in the price	
14	Warranty	
	1 year warranty should be included in the price. 2 years of additional AMC must be quoted separately.	
15	Notes	
	The complete set of documentations, manuals and software manuals should be provided both in softcopy and hard copy	
16	User List: Vendor should have supplied at least 5 nos. of similar units as quoted in government laboratories in India in the last 5 years. List of users along with contact details (Address and phone) must be provided.	
17	The following must be quoted separately as optional	
(a)	Optional Silicon standard sample	

Terms & Conditions Details

Preparation of Bids: The offer/bid should be submitted in two bid systems (i.e.) Technical bid and financial bid. The technical bid should consist of all technical details along with commercial terms and conditions. Financial bid should indicate item wise price for the items mentioned in the technical bid

Opening of the tender: The bid will be opened by a committee duly constituted for this purpose. The technical bid will be opened first and it will be examined by a technical committee (as per specification and requirement). The financial offer/bid will be opened only for the offer/bid which technically meets all requirements as per the specification.

Acceptance/ Rejection of bids: The Committee reserves the right to reject any or all offers without assigning any reason.

Two separate sealed envelopes to be submitted for technical and financial bid (clearly labelled as “technical bid” and “financial bid”) respectively.

Last date of submitting the bids will be 21st August, 2024 before 5:00 pm to :

Tender opening date: 22nd August 2024

The quote should reach the following address on or before last date.

Prof. Shashank Bishnoi
Department of Civil Engineering
Indian Institute of Technology Delhi
Hauz Khas, New Delhi 110016
Email: bishnoi@iitd.ac.in

Please quote prices for FOB New Delhi, inclusive of all taxes and duties.

Quote should be in Indian Rupees for agents of Indian manufacturers, or in foreign currency, for agents of foreign manufacturers, and needs to be valid for at least three months.

Attach all the technical literature and a list of similar installations done in India.

If the quote is being submitted by a representative of the manufacturer, a valid agency-ship or dealership certificate authorizing the agent to quote to IIT Delhi on behalf of the manufacturers should be enclosed. The principal and the vendor, both, are not allowed to quote for the same product.

Complete set of manuals for the operation of the equipment should be given.

Please specify all of your terms and conditions clearly, including delivery period.

Mode of payment for purchases in foreign currency are through irrevocable letter of credit, or through wire transfer on delivery. Only bank charges within India are payable by FITT, IIT Delhi, all bank charges outside India are the responsibility of the seller. For purchases in INR, payment is on delivery.