
	सामग्री प्रबंधन अनुभाग भारतीय प्रौद्योगिकी संस्थान, रुड़की रुड़की-247667, हरिद्वार, उत्तराखण्ड, भारत Phone-(O) 01332-28-4293, 4693 E-mail: mmiitr@iitr.ac.in	Material Management Section Indian Institute of Technology Roorkee-247667 (Haridwar) (Uttarakhand) (India) Phone-(O) 01332-28-4293, 4693 E-mail: mmiitr@iitr.ac.in	
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निविदा प्रलेख / Tender Document

No. 1100002062/MM-6/IITR/2021-22/Wavelength Dispersive X-r/IIC/338

Date of Uploading of Tender -<https://eprocure.gov.in/eprocure/app>

13/Jan/2022

Bids under two bid systems (Technical and Commercial) are invited Online at CPP Portal (<https://eprocure.gov.in/eprocure/app>) from the reputed manufacturer/authorized supplier/dealer for the following items. **Manual bids will not be accepted.**

वस्तु की तकनीकी विशिष्टताएँ / Technical Specifications of item:

Sr. No	Name of item / Specifications	QTY	UOM
1	Wavelength Dispersive X-ray Florescence	1	Set
(For Detailed Technical Specification Plz refer Annexure-V)			
नोट-1: कृपया वस्तु का मूल्य एवं कर अलग-अलग दर्शाए।			
Note-1: Please quote the Rate & Taxes of the item separately.			
Note-2: E-way bill is to be issued by the Venders/Transporter			
Note-3: The HSN / SAC Code of the item must be mentioned.			
For Reasonability of Rates, The firm must enclose the last two supply orders for the same item with Financial Bid (Annexure-III) only.			
Critical Date Sheet			
1	Published Date	13/Jan/2022	(17:00)
2	Bid Document Download / Sale Start Date	13/Jan/2022	(17:30)
3	Seek Clarification Start Date	13/Jan/2022	(18:00)
4	Seek Clarification End Date	18/Jan/2022	(16:00)
5	Pre Bid Meeting Date	Not Required	Not Required
6	Bid Submission Start Date	19/Jan/2022	(15:00)
7	Bid Submission End Date	3/Feb/2022	(17:00)
8	Bid Opening Date	4/Feb/2022	(12:00)

Chapter-1 : Instruction to bidders

- A. The Tender should be enclosed with proper certifications like Agency Certification, Authorization certificate and/or Proprietary Certificate, as the case may be, in support of your offer.
- B. बोली का जमा किया जाना / Submission of Bids:
The bids should be submitted online in two parts –
 - 1 (i) The Technical Bid (Annexure-I, II, IV & V) with EMD and Tender Acceptance Letter
(ii) The Financial Bid (Annexure-III) & Price Bid in .XLS Format
Rates in .xls format will only be considered for Financial evaluation & further processing.
 - 2 The bids should be on official pad preferably with GST Number of the firm

- 3 The quotations should bear full details and where possible may be duly supported with catalogues, pamphlets, literature, samples of the item/items as the case may be for comparing the quality and rates of the item(s).
- 4 The transportation cost, insurance charge etc., if any, percentage/ rate of GST or all other taxes and duties should be clearly mentioned.
- 5 The bids / rates / tenders should remain valid for a minimum period of 90 days from the date of financial opening.
- 6 **Since this purchase being for research purpose, I.I.T., Roorkee is registered in DSIR, New Delhi, it is therefore exempted from the payment of GST up to the limit of exemption as per Govt. Rules. The bidder should quote accordingly.**
- 7 The rates shall not be subject to escalation of any nature.
- 8 The rates quoted should be applicable to educational institutions and any cost advantage received in lieu thereof should be passed on the Institution.
- 9 While quoting / sending rates, the firm shall give an undertaking as per Annexure-II.

C. विधि निक्षेप/ Earnest Money Deposit (EMD):

The Technical Bid should accompany an EMD of value Rs. 5,00,000/- (Rupees Five Lac only) which should be deposited online into below mentioned account.

Details of IIT Roorkee Bank Account:

Account Name: NON MHRD GOVERNMENT FUND IIT ROORKEE

Account No.: 00000032685865515

Bank Name: STATE BANK OF INDIA

Branch Address: IIT ROORKEE, ROORKEE

IFSC Code: SBIN0001069

MICR: 247002094

The Bidder will have to fill EMD details & provide the tender reference number in the narration/remarks while doing the payment as per quoted items and share the receipt of the same in pdf on CPP Portal (<https://eprocure.gov.in/eprocure/app>). The qualification in Technical bid will be subject to the submission of EMD in above mentioned account within schedule date and time as mentioned in the NIT. IITR shall not be responsible for any delay in submission of EMD.

In case the EMD is not received in above mentioned account within the aforesaid period, the bid will be out rightly rejected.

Exemption on submission of EMD will be given against valid MSME/NSIC certificate under valid category.

The earnest money shall be refunded to all the unsuccessful firms, without any interest after finalization of the contract. EMD shall be refunded to the successful firms on receipt of PBG/Security Deposit. No interest is payable on the EMD to either the successful firms or the unsuccessful firms.

D. निष्पादन बैंक प्रत्याभूति/ Performance Bank Guarantee (PBG):

In case the total order value of items becomes Rs.25.00 Lakhs or above, 3% of the total order value in the form of Bank Guarantee or FDR pledged in favor of "The Registrar, IIT Roorkee" is required at the time of installation of the equipment which should remain valid at least during the warranty period plus sixty days. No interest shall be claimed by the bidder on the PBG submitted.

E. बोलियों का खोला जाना/ Opening of Bids:

- 1 The Technical Bids will be opened online at CPPP Portal (<https://eprocure.gov.in/eprocure/app>)-**Plz refer Critical Date Sheet**
- 2 The Financial bids of only the Technically Qualified bidders will be opened. The date and time for opening the Financial Bid will be communicated to the respective firm later by the system (CPP Portal (<https://eprocure.gov.in/eprocure/app>))
- 3 Representatives of the firms(s) may be present at the time of openings, if they so desire.

Chapter-2 : Conditions of Contract

F. ठेका देना/ Award of Contract:

The final selection of the bidder for the award of the contract will be made on the basis of the lowest commercial bid amongst the Technically Qualified Bidders.

G. पूर्व-आपूर्ति निरीक्षण/ Pre-supply Inspection:

Authorized representative of the Institute shall make the final inspection before supply of the item at site of the firm, if required.

- H.** वस्तु की आपूर्ति / Supply of Item:
The whole supply as per order shall have to be completed within the time mentioned in the order failing which the I.I.T. Roorkee shall have the right to accept or reject any quantity of items ordered. The firm will have to arrange for supply of the material in good condition.
- I.** **भुगतान की शर्तें / Payment Terms:**
- A.** **Payment in INR for supply of goods:**
Where installation is not required: 100% payment will be made after satisfactory delivery of material duly certified by the HOD/P.I. **OR**
Where Installation is required :100% payment will be made after satisfactory delivery and installation of the material duly certified by the HOD/P.I. **OR**
80% payment will be made on receipt and acceptance of goods and balance 20% on successful installation and commissioning duly certified by the HOD/P.I. **OR**
- J.** **दंड/Penalty:**
A penalty of 0.5% of the total order value per week shall be levied for the delay subject to a maximum of 5% of the total order value.
In case of the non-supply of the item after the acceptance of the work/supply order, EMD will be forfeited by the Institute.
- K.** **अप्रत्याशित घटना/Force Majeure:**
For the purpose of and within the scope of contract by way of indication and not of limitation, the term "Force Majeure" shall mean acts of nature, strikes, Lockouts, or other industrial disturbances, act of public/enemy, wars, blockades, insurrection, riots, epidemics, landslides, earthquakes, storms lightening, flood, washouts, civil disturbances, explosion and any other similar even not within the control of either party on which by exercise of due care and diligence neither party is able to prevent or overcome.
- L.** **मध्यस्थता / Arbitration:**
If any dispute which may arise with respect to any term and condition or with respect to the interpretation of any term and condition of the Purchase Order/Work Order, which may be issued to the qualified and successful tenderer subsequently, the same shall be settled strictly in accordance with and in compliance of the Arbitration procedure which is mentioned descriptively in the Purchase Order/ Work Order.
- M.** **बोली अस्वीकृती के लिए मानदंड / Criteria for bid rejection:**
- 1 If technical bid found without the required undertaking (Annexure-II), EMD & Self Certificate (Annexure-IV)
 - 2 If it found at a later date that any information given in the bids is Incorrect/false then the bid is liable to be disqualified/rejected.
 - 3 Canvassing in any form will result to disqualification.
 - 4 If "extra, as actual" etc. are mentioned against any of the price components in the bid the bid will be rejected.
 - 5 If the firm quotes 'NIL' charges / consideration, the bid shall be treated as unresponsive and will not be considered.
 - 6 If financial bid is found along with technical bid in pdf on CPP Portal, then the bid shall be rejected outrightly.
 - 7 If any bidder submitting two/multiple bids for the same item of a tender, both/all the bids of that bidder will be outrightly rejected.

Chapter-3 : Schedules of requirements

- N.** **टिप्पणी / Note:**
- 1 If the supplier/firm is manufacturer/authorized dealer/sole distributor/of the item, the certificate to this effect should be attached.
 - 2 Please note that the firms must submit the compliance Statement in an organized and structured manner in respect of all the specifications as per Annexure-V with the supporting catalogue/leaflet of the firm. Annexure-I, II, & IV have to be submitted with Technical Bid and Annexure-III with financial bid.
 - 3 It may also be noted that the tender bids received after the stipulated date & time or found incomplete and the tender bids containing false/incorrect information shall be summarily rejected. The Institute shall not entertain any communication in this regard, whatsoever.
 - 4 The firm is required to give its Bank Account details with IFSC for the purpose of making e-payment.
 - 5 The Indian Institute of Technology (IIT) Roorkee reserves the right to reject any quotation wholly or partly without assigning any reason.
 - 6 The quantity shown in the tender can be increased or decreased to any extent depending upon the actual requirement.
 - 7 The decision of the institute in all matters relating to eligibility, acceptance, rejection of the bid will be final and binding on the applicants.

- 8 IIT Roorkee discourages High Sea Sale purchase. All tenders with High Sea Sale will be rejected.
- 9 The firms should clearly mention (in the financial bid) the Harmonized System of Classification (HS code) defined by the Central Custom and Excise Board (Govt. of India)- for the item(s) involving import.
- 10 **If the bid opening date happens to be a holiday, then the bid will be opened at 3.30 PM of the next working day followed by the holiday.**
- 11 If an agent submits bid on behalf of the Principal/OEM, the same agent can not submit a bid on behalf of another Principal/OEM in the same tender for the same item/product.
- 12 Indian Agent should submit the certificate from the Foreign Principal that they are the Authorized & Registered Indian Agent.
- 13 The quantity shown against the item is approximate and may vary as per demand of the Institute at the time of placing order. Also, the final requirement of each line item will be decided by the Institute at the time of placing the PO.
- 14 **Any corrigendum/addendum/errata in respect of the Tender Notice/ Enquiry letter shall be made available CPP Portal (<https://eprocure.gov.in/eprocure/app>). Hence prospective bidders are advised to visit the CPP Portal (<https://eprocure.gov.in/eprocure/app>) regularly.**
- 15 Bidders shall be responsible for the correctness of the information provided in the enquiry letter/tender document. If it is found at a later date that any information given in the bid is Incorrect/false then the bid is liable to be disqualified/rejected.
- 16 Before submission of bids, bidders should read the complete enquiry letter/tender document carefully and ensure that the bidders fulfill the eligibility criteria.
- 17 In case the item/product is under rate contract with DGS&D or GeM, then Bidder should certify that the rate quoted is not over and above (higher side) the rates under RC with the DGS&D or GeM.
- 18 **In Item Wise BoQ .xls sheet, In column M, leave blank for the item/service not provided/quoted by you. If quoted 0 then it will be considered that the item/service will be provided free of cost.**
Or
In Item Rate BoQ .xls sheet, If quoted 0 for the items/services in column M then it will be considered that the items/services will be provided free of cost.
- 19 **The bidder must quote the applicable GST appropriately in the price bid format provided i.e BoQ in .xls format. In case column of GST left blank or quoted 0, then total quoted amount shows in column BB would be final inclusive of GST & other charges. The difference in GST amount payable – if any will be borne by the bidder. In this case, the basic unit prices will be suitably adjusted by the bidder – if required.**
- For research purpose(s) ONLY, 5% GST will be applicable for goods. Notification no. 45/2017 & 47/2017 issued by Ministry of Finance and 973/2017 & 145/2018 (Govt. of Uttarakhand).**
- 20 **Only 'Class-I local supplier' and 'Class-II local supplier', as defined in the Public Procurement (Preference to Make in India), Order 2017 shall be eligible to bid in tender. For more details please refer: Order No.: P-45021/2/2017-PP (BE-II), DPIIT, Ministry of Commerce and Industry issued Dated: 16th Sept. 2020.**
- Self-certificate has to be provided in this regard that the item offered meets the local content requirement for 'Class-I local supplier' & 'Class-II local supplier'. (As per annexure-IV)**
- 21 **The Institute reserves the right to rectify any discrepancy of this advertisement, if found later on. In case of any inadvertent mistake in the process which may be detected at any stage even after the issue of purchase order, the Institute reserves the right to modify/withdraw/cancel any communication made to the bidder.**

Chapter-4 : Specifications and allied Technical details

Plz. See Annexure- I, II, IV, V

Chapter-5 : Price Schedule (to be utilized by the bidders for quoting their prices online in .XLS format at CPPP Portal (<https://eprocure.gov.in/eprocure/app>))

Plz. See Annexure- III & Price Bid in .XLS Format

Chapter-6 : Contract Form

Purchase Order is used as Contract Form

Chapter-7 : Other Standard Forms, if any to be utilized by the purchaser and bidders

Tender Acceptance Letter

***उप कुलसचिव (सामग्री प्रबंधन) / सहायक कुलसचिव (सामग्री प्रबंधन)**

Deputy Registrar (MM)/ Assistant Registrar (MM)

***Document Digitally Signed on <https://eprocure.gov.in/eprocure/app>**

For any Clarification regarding technical specifications of item Please Contact:

Prof. Ramesh Chandra

Institute

Ph.-01332-28-4350

Institute Instrumentation Centre

Instrumentation Centre

Email: head@ic.iitr.ac.in

IIT Roorkee

IIT Roorkee

iic@iitr.ac.in

तकनीकी बोली

विस्तृत विवरण अनुपालन रिपोर्ट के साथ प्रस्तुत किया जाना है (अपने आधिकारिक लेटर हेड पर विक्रेता/फर्म द्वारा प्रस्तुत करने के लिए)

Detailed specification cum compliance report to be submitted with the Technical Bid
(to be submitted by the vendor/firm on its official letter head)

(For Detailed Technical Specification Plz refer Annexure-V)

Sr.No	Name & Required Specifications of Item(s)	Qty	UOM	Offered specifications of item(s) by the firm
1	Wavelength Dispersive X-ray Florescence	1	Set	
	Firm's Profile :			
1	Manufacturer/Authorized Agent/Distributor/Dealer/Supplier(valid certificate must be attached)			
2	E-mail I.D. & Telephone/Mobile No. Detail of Bank A/C			
Note:	1. "offered specifications", should be filled up properly in the format provided as per Annexure-I.			
	2. Volume & Weight of the item should also be mentioned.			
	3. The HSN / SAC Code of the item must be mentioned.			

Signature: _____

Name : _____

Designation : _____

Seal of the Organisation

उपबंध / UNDERTAKING

Ref. No. No. 1100002062/MM-6/IITR/2021-22/Wavelength Dispersive X-r/IIC/338
Dated:- 13-Jan-22

That all the terms/conditions mentioned in the enquiry letter/tender against which the rates are being given are acceptable to the firm.

It is certified that the rate quoted is not over and above (higher side) the rates under RC with the DGS&D or GeM.

It is certified that the firm has never been black-listed from any Government Department. (State/Central Govt./ Autonomous/ PSU)

Signature_____

Name_____

Financial Bid

(to be submitted by the vendor/firm on its official letter head)

Ref. No. No. 1100002062/MM-6/IITR/2021-22/Wavelength Dispersive X-r/IIC/338
 Date: 13-Jan-22

Rates :

Sr. No	Name of item / Specifications	Qty	UOM	Rate	Amount (INR Only)
				To be filled in .XLS sheet (attached)	
Total					
Grand Total Rs.					

1) Price of the items should be clearly mentioned if supplied Free of Cost.

Terms & Conditions:

- 1 Prices (quoted in Rs.): FOR Institute Instrumentation Centre
IIT Roorkee
- 2 **Payment:** **Should be clearly mentioned, As per clause-I of tender document.**
- 3 Validity:
- 4 Delivery period:
- 5 Other charges:
- 6 **Warranty:**
- 7 Rejection: Equipment if found not as per the required specification would be rejected.
As per clause-J of tender document.
- 8 Penalty Clause: In case of the non-supply of the item after the acceptance of the work/supply order, EMD will be forfeited by the Institute.
- 9 PBG: In case the total order value of items becomes Rs.25.00 Lakhs or above, 3% of the total order value in the form of Bank Guarantee or FDR pledged in favor of "The Registrar, IIT Roorkee" is required at the time of installation of the equipment which should remain valid at least during the warranty period plus sixty days. No interest shall be claimed by the bidder on the PBG submitted.
- 10 Only GST Exemption Certificate is provided by the Institute (If required).

It is certified that the rate quoted is not over and above (higher side) the rates under RC with the DGS&D or GeM.

Signature_____

Name_____

Designation_____

Seal Of the Firm/Organization_____

Details of Institute :

IEC CODE	0100000011	
AD CODE	0001069-2770325	S.B.I., IIT ROORKEE
	0303974-2770324	P.N.B. IIT ROORKEE

(to be submitted by the vendor/firm on its official letter head)

Self-Certificate for Local Content

Tender No.: No. 1100002062/MM-6/IITR/2021-22/Wavelength Dispersive
X-r/IIC/338

13-Jan-22

We hereby certify that the items quoted by us against above mentioned tender no. has the local content as per below:

Local Content (in %):.....

Local Supplier Class:.....

The details of the Make in India items/parts used in the quoted products is/are as under:

- 1
- 2
- 3

The details of the location(s) at which the local value addition made/manufactured is/are as under:

- 1
- 2
- 3

We also understand, false declarations will be in breach of the code of integrity under rule 175(1)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151(iii) of the General Financial Rules along with such other actions as may be permissible under law.

Signature:

Name:

Designation:

Seal Of the Firm/Organization:

Instructions for Online Bid Submission

Instructions to the Bidders to submit the bids online through the Central Public Procurement Portal for e-Procurement at <https://eprocure.gov.in/eprocure/app>. Also, any modification on CPP portal in reference to below will be applicable. Therefore, for more details and update please refer CPP Portal (<https://eprocure.gov.in/eprocure/app>).

- 1 Possession of valid Digital Signature Certificate (DSC) and enrollment/registration of the contractors/bidders on the e-Procurement/e-tender portal are prerequisite for tendering.
- 2 Bidder should register for the enrollment in the e-Procurement site using the "Online Bidder Enrollment" option available on the home page. Portal enrollment is generally free of charge. During enrollment/registration, the bidders should provide only valid and true information including valid email id. All the correspondence shall be made directly with the contractors/bidders through email id as registered.
- 3 Bidder need to login to the site through their user ID/ password chosen during enrollment/registration.
- 4 Then the Digital Signature Certificate (Class III Certificates with signing key usage) issued by SIFY/nCode/eMudra etc. recognized by Controller of Certifying Authorities (CCA) India on eToken/SmartCard, should be registered.
- 5 The registered DSC only should be used by the bidder in the transactions and should ensure safety of the same.
- 6 Contractor/Bidder may go through the tenders published on the site and download the tender documents/ schedules for the tenders.
- 7 After downloading/getting the tender document/schedules, the Bidder should go through them carefully and then submit the documents as required, otherwise bid will be rejected.
- 8 Any clarifications may be sought online through the tender site, through the contact details or during pre-bid meeting if any. Bidder should take into account the corrigendum if any published before submitting the bids online.
- 9 Bidder may log in to the site through the secured login by the user id/ password chosen during enrolment/registration and then by submitting the password of the e-Token/Smartcard to access DSC.
- 10 Bidder may select the tender in which he/she is interested in by using the search option and then move it to the 'my tenders' folder.
- 11 From my tender folder, he may select the tender to view all the details uploaded there.
- 12 It shall be deemed that the bidder has read and understood all the terms and conditions before submitting the offer. Bidder should go through the tender schedules carefully and upload the documents as asked; otherwise, the incomplete bid shall stand rejected.
- 13 Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document/ schedule and ordinarily it shall be in PDF/xls/rar/jpg/dwf formats. If there is more than one document, all may be clubbed together and provided in the requested format. Bidders Bid documents may be scanned with 100 dpi with black and white option. It is advisable that each document to be uploaded through online for the tenders should be less than 2 MB. If any document is more than 2MB, it can be reduced through zip/rar and the same if permitted may be uploaded. The file size being less than 1 MB the transaction uploading time will be very fast.
- 14 The Bidders can update well in advance, the documents such as certificates, annual report details etc., under "My Space option" and these can be selected as per tender requirements and then send along with bid documents during bid submission. This will facilitate the bid submission process faster by reducing upload time of bids.
- 15 Bidder should submit the Tender Fee/ EMD as specified in the tender. Scanned copy of the same should be uploaded as part of the offer. (if applicable)
- 16 While submitting the bids online, the bidder shall read the terms and conditions and may accept the same to proceed further to submit the bid packets.
- 17 The bidder has to select the payment option as offline to pay the Tender FEE/ EMD as applicable and enter details of the same. (if applicable)
- 18 The details of the DD/any other accepted instrument, physically delivered, should tally with the details available in the scanned copy and the data entered during bid submission time, otherwise submitted bid shall not be acceptable or liable for rejection. (If applicable)
- 19 The bidder has to digitally sign and upload the required bid documents one by one as indicated. Every act of using DSC for downloading the bids and uploading their offers shall be deemed to be a confirmation that they have read, understood and agreed with all clauses of the bid document including General conditions of contract without any exception.

- 20 The bidder has to upload the relevant files required as indicated in the cover content. In case of any irrelevant files, the bid may be rejected.
- 21 If the price bid format is provided in a spread sheet file like BoQ_XXXX.xls, the rates offered should be entered in the allotted space only and uploaded after filling the relevant columns. The Priced-bid/BOQ template shall not be modified / replaced by the bidder; else the bid submitted is liable to be rejected for the tender.
- 22 The bidders are advised to submit the bids through online e-tendering system to the Tender Inviting Authority (TIA) well before the bid submission due date and time (as per Server System Clock). The TIA shall not be held responsible for any delay or the difficulties faced during the submission of bids online by the bidders.
- 23 After the bid submission (i.e. after Clicking "Freeze Bid Submission" in the portal), the acknowledgement number indicated by the system should be printed by the bidder and kept as a record of evidence for online submission of bid for the particular tender and also be used as entry pass to participate in the bid opening.
- 24 The time settings fixed in the server side and displayed at the top of the tender site, shall remain valid for all actions of requesting, bid submission, bid opening etc., in the e- Tender system. The bidders should follow such time during bid submission.
- 25 All the data being entered by the bidders would be encrypted using Public Key Infrastructure (PKI) encryption techniques to ensure the secrecy of the data. The data entered is not retrievable by unauthorized persons during the bid submission and until the time of bid opening by any person.
- 26 Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid openers' public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 27 The confidentiality of the bids is maintained with the use of Secured Socket Layer (SSL) 128 bit encryption technology. Data storage encryption of sensitive fields is done.
- 28 The bidder should logout of the tendering system using the normal logout option available at the top right hand corner and not by selecting the (X) exit option in the browser.
- 29 For any queries regarding e-Tendering process, the bidders may contact at address as provided in the tender document. Parallely for any further queries, the bidders are advised to contact over phone: **0120-4001005** or send an e-mail to – cppp-nic@nic.in.

Prequalification

- 1 An undertaking by the firm that it has never been black-listed must be attached along with the Bid, failing which the Bid shall be rejected. (As per Annexure-II)
- 2 True copy of Permanent Account Number.
- 3 Details of GST along with a copy of certificate to be attached.
- 4 Submission of samples if required, for all items indicated in the NIT. The make of items proposed to be supplied should be indicated and submitted along with the techno commercial unpriced bid without indicating the pricing components.
- 5 Willingness to execute all orders which are placed to meet emergency requirement on priority basis. The Bidder shall note that standards for workmanship, material and equipment, and references to brand names designated by the Purchaser in the tender document are intended to be descriptive only and not restrictive. The Bidder may substitute alternative standards, brand names and/or catalogue numbers in his bid, provided that it demonstrates to the Purchaser's satisfaction that the substitutions ensure substantial equivalence to those designated in the Technical Specifications.

Tender Acceptance Letter
(To be given on Company Letter Head)

Date:

Sub: Acceptance of Terms & Conditions of Tender.

Tender No. 1100002062/MM-6/IITR/2021-22/Wavelength Dispersive X-r/IIC/338

Tender description:

Dear Sir,

- 1 I/We have downloaded/ obtained the tender document(s) for the above mentioned 'Tender No.' from the web site(s) namely:

as per your advertisement, given in the above mentioned website(s).
- 2 I/We hereby certify that I/We have read the entire terms and conditions of the tender documents from Page No. _____ to _____ (including all documents like section(s), schedules(s) etc.), which form part of the contract agreement and I/we shall abide hereby by the terms/conditions/ clauses contained therein.
- 3 The corrigendum(s) issued from time to time by your department/ organisation too have also been taken into consideration, while submitting this acceptance letter.
- 4 I/We hereby unconditionally accept the tender conditions of above mentioned tender document(s)/ corrigendum(s) in its totality/entirety.
- 5 In case any provisions of this tender are found violated, then your department/organisation shall without prejudice to any other right or remedy be at liberty to reject this tender/bid including the forfeiture of the full said earnest money deposit absolutely.

Yours Faithfully,

(Signature of the Bidder, with Official Seal)

Technical Specification for Wavelength Dispersive X-ray Florescence

Quotation are invited for Wavelength Dispersive X-ray Florescence Machine. The vendor must be manufacturer of the instrument or its authorized distributor and should be directly responsible for the instrument performance and its maintenance. The most recent model of the machine should be quoted. The quote should not come through any indirect supplier/vendor.

Component	Desired Specification
Spectral Method	Wavelength dispersive
Analysis Range	Should be able to analyse element from Be (4) to U (92).
	1. X-ray Generator Requirements: <ol style="list-style-type: none"> should have an operating power of 4 kW or more Operating voltage: 60 kV or more Operating current: 150 mA or more Stability: minimum $\pm 0.005\%$ at $\pm 10\%$ input variation
	2. Tube: End-window type X-Ray tube with Rh-target with thin Beryllium Window $\leq 75\mu\text{m}$.
	3. Dust Collection System: To protect the x-ray tube and other accessories inside goniometer from sample particles the spectrometer shall be equipped with in-built dust collection system which can collect the falling particles from the sample before it enters the main chamber.
	1. Collimator: The instrument should have at least 3 primary collimators with proper collimator masks. It should have minimum 4 primary tube filters.
Optics	2. Sample Rotation: The sample spinning mechanism should be supplied as standard.
	3. Crystal Changer: It should have provision to fix minimum eight position bi-directional crystal changer. The instrument should be supplied with at least five crystals, which must include LiF200; LiF220; PET; a multilayer crystal and Ge-curved crystal.
	4. Stability: The temperature stability of the inside spectrometer chamber should be kept at least within ± 0.1 degree.
Goniometer and Detectors	1. Angular reproducibility: Angular reproducibility of ± 0.005 deg. for both high sensitivity and high-resolution measurement.
	2. Detectors: Provision for at least 2 types (Flow proportional, Scintillation detector) detector with fast scanning speed and linearity up to approx. 1.5 million CPS should be supplied. The set of detectors offered should have high efficiency across the entire range of elemental analyses.
Sample preparation	Instrument should have provision for analyses of solid, pellet and fuse-bead samples.
	1. UPS: The vendor must quote an online UPS system of at least 60 kVA capacity (3 phase in 3 phases out) with inbuilt isolation transformer, maintenance bypass, option to parallel up to 6 units, battery charger of more than 30 Amp current rating, batteries for minimum 20-30 minutes back up for the WDXRF instrument, chiller, compressor and all other peripherals. It should include sealed maintenance free batteries. Minimum 36-month warranty should be provided for ups and battery. UPS should be of standard make such as Vertiv, APC, Mitsubishi Electric etc. Battery should be of standard make such as Amaron Quanta, Panasonic, Enersys etc.
	2. Vacuum Pump: An oil-free vacuum pump of reputed make such as Pfeiffer or Edwards, which fits inside the machine cabinet should be included for vacuum.
Accessories	3. Water Chiller: Branded, Compatible recirculating type chiller should be supplied with system.
	4. Air Compressor: The vendors must quote an air compressor, if required, for the quoted model.
	5. Gas Cylinder and Regulators: All required gas cylinders and appropriate gas regulators of standard make such as Concova, Swagelok etc. should be provided for XRF analyses.
	6. Sample Tray & Holders: The vendor must supply at least i) 10 nos. of cups for holding 40 mm pressed pellet/bead or according to the supplied collimator mask of highest diameter ii) 10 nos. of cups for holding 30 mm pressed pellet/bead or according to the supplied collimator mask of medium diameter and iii) 10 nos. of cups for holding 10mm pressed pellet/bead or according to the supplied collimator mask of least diameter. The vendor shall also supply sample tray to hold minimum 10 nos. pf sample cups at a time

PC and Software	<ol style="list-style-type: none"> Spectrometer software: should be compatible with windows latest version including multipoint background correction, line overlap correction, ratio calculation, auto PHD measurement, calibration curve, qualitative analysis incorporating matrix correction, recalibration programme, limit checks, statistical evaluation, data storage & retrieval with connecting facilities. Programme for theoretical alpha generation: should be inbuilt in the software. In addition, software (for constant alpha/variable alpha corrections) must be provided. Extensive analytical software package for qualitative & quantitative analysis. Comprehensive diagnostic software to diagnose all the parts of the equipment's. The remote facility should access the XRF directly. Standard less Software Details: <ol style="list-style-type: none"> For analysing major, minor and trace elements in geological samples, the range of the software should be from Be to U elemental range. All the standards/ meta-data base that are needed to calibrate/setup the standard less analysis software in addition to monitor sample for full calibration at site should be supplied along with the instrument with proper certificates. Quote should include full description of standards, number of standards required for calibration throughout entire range of calibration (major, minor and trace level) including the element presents in them and their corresponding concentrations. The supplier shall be responsible for the calibration of standard less programme whenever it is required at customer's end at free of cost. The standards should also be covered under warranty. Separate Special software for trace element analysis of geological samples shall be supplied. Calibration of the same must be done at site as and when required. Separate Special software for major oxide element analysis of geological samples shall be supplied. Calibration of the same must be done at site as and when required. The licensed copy of the XRF software shall be provided in CD- ROM/Pen Drive along with the necessary help. Instrument Manual/Literature: All operational manuals including instrument manual / flow charts, important published literature of reference should be supplied free of cost in hard copies and soft copies. Computer: <ol style="list-style-type: none"> Branded PC (English US language version) of latest configuration (compatible with your instrument) with high capacity hard disk (1 tb) and CD ROM drives, 24" TFT colour monitor, Key board, mouse should be quoted with Duplex colour laser jet printer with Scanner. Six Nos. additional branded personal computers/All-in-One PC for offline data analysis having at least the following configuration: PC (Intel Core 11th generation i7- Processor, 3.6 GHZ, 8MBCache, 16 GB DDR4 RAM, 1 TB SSD) with latest licensed windows operating system, Branded 24 inch LED monitor and keyboard, mouse.
Power supply Installation Warranty	<p>Power supply for the WDXRF should be as per Indian standards.</p> <p>Complete installation of instrument will be carried out by vender after delivery.</p> <p>Minimum Three (3) years standard warranty for instruments and all the attached accessories (UPS, Batteries, chiller, Fusion bead machine, computer & air compressor) from the date of commissioning. Warranty should also cover the X-Ray tube, Generator, Detectors, System control cards and Crystals.</p>
Installation Training References	<p>and The instrument will be installed at IIT Roorkee, Roorkee Campus. Vendors to provide 3-day application training after installation at our site.</p> <p>Manufactures have to give at least 3 Reference details of Academic/Research Institutes/Private Industries where the quoted model is working satisfactorily.</p>

6.1.2022
 अध्यक्ष / Head
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 Institute Instrumentation Centre
 जी० रा० रुड़की / IIT Roorkee
 रुड़की / Roorkee-247 667 (U.K.)


Optional Items


1. **Crystal:** In addition to above five crystal one additional Dedicated crystal for Be/Boron to be quoted separately.
2. **Fusion beads sample preparation system:** The bidder must quote with an automated fusion-bead system which should have provision to prepare at least one bead with its size must be matching with the quoted XRF model. The bead preparation should be carried out in closed and safe environment.
This instrument should not increase and decrease the temperature abruptly; it should have ways to change the temperature in ramps as defined by the user. The quote must include two platinum crucibles of suitable capacity (~30 ml) required for fusion bead along with 2 Nos. of mould. The vendor should provide required fluxes and other consumables for 1000 fusion-beads and 500 pressed pellet sample preparation.
3. **Precision weighing balance:** A weighing balance with automated calibration, touchscreen display and automatic door controller. This balance should be able to measure weights up to 120 gm with a precision level of 0.01 mg.
4. **Standard:** A set of following U.S.G.S geological standards should be supplied with the instrument (minimum 100 gram each),


S.No.	Reference Material	Collection Site	Bulk Composition
1	AGV-2	California	Andesite
2	BCR-2	Oregon	Basalt
3	BHOV-2	Hawaii	Basalt
4	COQ-1	Canada, Quebec	Carbonatite
5	GSP-2	Colorado	Granodiorite
6	QLO-1	-	Quartz latite
7	RGM-2	California	Rhyolite
8	SDC-1	Washington. DC	Schist
9	STM-2	California	Syenite

NOTE:

1. All essential and recommended spares should be informed and should be supplied. Parts should be available for Next 10 years.
2. WD-XRF Spectrometer control software with lifetime (10-15 years) up-gradation & support.
3. Any accessories that are required to make the instrument operational not mentioned in the document are required to be incorporated by the bidder to make the instrument fully operational.
4. All the accessories/components/software/licenses which are provided by default by the manufacturer must be supplied along with the equipment.
5. Bidders should submit appropriate certificate for low hazard and radiation free instrument.



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(Prof. V.C. Srivastava)


(Prof. Vivek Kumar Malik)


(Prof. Nikhil Dhawan)


(Prof. Kaushik Ghosh)


(Prof. Nachiketa Rai)


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