



भारतीय विज्ञान शिक्षा एवं अनुसंधान संस्थान मोहाली

शिक्षा मंत्रालय, भारत सरकार द्वारा स्थापित
सैक्टर 81, नॉलेज सिटी, प. ओ. मनोली, एस. ए. एस. नगर, मोहाली, पंजाब 140306
INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH MOHALI

(Established by Ministry of Education, Govt. of India)

Sector-81, Knowledge city, PO-Manauli, SAS Nagar Mohali-140306, Punjab

PAN No. - AAAAI1781K GSTIN – 03AAAAI1781K2ZS

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CPPP/Institute Website

IISERM (1419-2)21/22-Pur-GTE

Dated: 03rd September 2021

NOTICE INVITING E-TENDER

Online tenders are invited on behalf of the Director, IISER Mohali in **TWO BID SYSTEM** for the **Supply and Installation of three-channel NMR spectrometer along with accessories (for solution NMR experiments only)** as per technical specification and details given below and BOQ list from the original manufacturer/supplier at CPPP i.e. <https://eprocure.gov.in/eprocure/app>. Tender documents may please be downloaded from the E-procurement portal website <https://eprocure.gov.in/eprocure/app> & Institute website www.iisermohali.ac.in.

-Sd-
Assistant Registrar (P&S)



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E-TENDER NOTICE

Tender Ref.- IISERM(1419-2)21/22-Pur-GTE

Dated : 03rd September 2021

Critical Date Sections

Sr.	Description	Date	Time
1.	Tender Publishing Date and time	03 rd September 2021	6:00pm
2.	Tender Document download start Date & Time	03 rd September 2021	6:00pm
3.	Bid Submission start Date & Time	03 rd September 2021	6:00pm
4.	Bid Submission End date and Time	04 th October 2021	Upto 11:00am
5.	Tender opening Date and Time	05 th October 2021	At 11:30am

Online tenders are invited on behalf of the Director, IISER Mohali in **TWO BID SYSTEM** for following item(s) from the original manufacturer/supplier at CPPP i.e. <https://eprocure.gov.in/eprocure/app>. Tender documents may please be downloaded from the E-procurement portal website <https://eprocure.gov.in/eprocure/app> & Institute website www.iisermohali.ac.in. Tender fee in shape of Demand Draft of Rs 590/- (Non-refundable) should be submitted by bidder in favour of the Registrar, IISER Mohali payable at Mohali or through Online mode in Institute Account (Canara Bank Saving Account Number 4790101001912 and IFSC Code CNRB0004790) However, scanned copy of the Tender fee should be uploaded on website along with technical bid. The hard copy of the same in original to be sent to the address mentioned below duly superscribing the supply/work name and reference/tender ID on the envelope and same must reach before opening of the bid and if not received before due date the bid will be summarily rejected. **Micro & MSME/NSIC and Firms registered and the firms registered with concerned Ministries/ Departments, the bidders are exempted from payment of Tender Fee/EMD as per GOI notifications/GFR (2017) and Ministry of Finance OM No. F.9/4/2020-PPD dated 12 November 2020.**

Bidders will also be required to execute bond/undertaking Bid Security Declaration Form attached as ANNEXURE-I for availing exemption to submit EMD/Tender Fee.

The Original Tender Fee should be sent to:

Assistant Registrar (P&S)
Indian Institute of Science Education and Research Mohali
Sector-81, Knowledge City, SAS Nagar, Mohali, Punjab,
India, Pin: 140306

Non-receipt of original Tender Fee will lead to rejection of tender.

ITEM WISE DETAILS

Sr. No.	Description	Qty. (in units)
1.	SUPPLY AND INSTALLATION OF THREE-CHANNEL NMR SPECTROMETER ALONG WITH ACCESSORIES (FOR SOLUTION NMR EXPERIMENTS ONLY) <u>TECHNICAL SPECIFICATIONS: AS PER ANNEXURE-II</u>	01

A) IMPORTANT NOTES:-

- I. The online updated Price BOQ is in INR format. If bidder want to quote other than INR please specify the quoted currency in the technical bid/part and fill the amount in same updated BOQ.**
- II. Please bifurcate the price on shipping terms i.e. Ex-works -> FCA/FOB -> CIP/CIF in price BOQ and specify the same in technical bid without price.**
- III. If quoted in foreign currency, kindly clearly specify the terms of delivery/country of origin/bank details with swift code/weight/size/dimension of shipment.**
- IV. The Online bids should be submitted directly by the original manufacturer/supplier. If quotation is submitted/filled by any representative/agent/dealer then they must upload a authority certificate from the principal company.**
- V. All MSME/NSIC/Startup Units shall be considered as per provisions/rules prescribed by Govt of India.**
- VI. Auto-extension of last date for E-Tenders has been activated by CPP Portal which has participation 2 bids or less.**

B) SUBMISSION OF TENDER

- I. All bid/ tender documents are to be uploaded online at Central Public Procurement portal i.e. <https://eprocure.gov.in/eprocure/app> only and in the designated cover/ part on the website against tender ID. Tenders/ bids shall be accepted only through online mode and no manual submission of the same shall be entertained except tender fee and EMD. Late tenders will not be accepted.**
- II. The online bids shall be opened at the office of the Assistant Registrar (P&S), IISER Mohali, on above given date and time. If the tender opening date happens to be on a holiday or non-working day due to any other valid reason, the tender opening process will be attended on the next working day at same time and place. IISER Mohali will not be responsible for any error like missing of schedule data while downloading by the Bidder.**
- III. The bidder shall upload the tender documents duly filled in and stamped by the authorized signatory on each and every page. Tender not submitted/uploaded in the prescribed form and as per the tender terms and conditions shall be liable for rejection.**
- IV. The bidder shall upload scanned copy of the PAN Card, GST number duly signed and stamped. Also bidders applying against ‘MSME/NSIC Certificate’ issued by appropriate Authority, should ensure that the certificate attached is relevant to the area of service/supply. For example, If the tender is for “supply & installation of Desktop” the certificate should be issued for activity/area of “Computer supply and services activities etc” otherwise bid will be REJECTED without notice.**

- V. E-procurement system ensures locking on the scheduled date and time. The system will not accept any bid after the scheduled date and time of submission of bid.

C) INSTRUCTIONS

1. The Online bids should be submitted directly by the original manufacturer/supplier, If quotation is submitted/filled by any representative/agent/dealer then they must upload a authority certificate from the principal company for quoting the price otherwise such quotation will be rejected.
2. The quantity mentioned in this inquiry is and shall be deemed to be only approximate and will not in any manner be binding on the Institute. Before the deadline for submission of the online bid, IISER Mohali reserves the right to modify the tender document terms and conditions. Such amendment/modification will be notified on website against said tender ID.
3. The rates offered should be FOR Chandigarh/Mohali in case of firms situated outside Chandigarh/Mohali, and free delivery at the Institute premises in case of local firms. Supplier from outside India should mention the Ex-works/FOB/FCA/CIF/CIP price clearly. Conditional tenders will be summarily rejected.
4. In case of Ex-godown terms the amount of packaging forwarding freight etc. should clearly be indicated by percentage or lump sum amount. Institute has policy not to make any advance payments towards any purchase, Letter of credit can be opened if required.
5. THE INSTITUTE IS EXEMPTED FROM CUSTOM DUTY under notification no-TU/V/RG-CDE(1062)/2016 CUSTOM DT. 12.10.2018.
6. Tax: This Institute is not exempted from the payment of GST. The current rate (i.e. percentage of GST should be clearly indicated included or excluded) wherever chargeable. Please also provide/upload the copy of PAN card, GST number duly self-attested.
7. Concessional GST is applicable for all the items purchased for Research labs vide Ministry of Finance, notification no. 45/22017 dated 14.11.2017 and 47/2017 dated 14.11.2017.
8. Bidder/s quoting in currency other than **Indian Rupee (INR)** should explicitly mention the currency in which tender quoted wherever applicable in Technical Bid along the tender documents.
9. The delivery period should be specifically stated. Earlier delivery will be preferred.
10. The firms are requested to provide/upload detailed description and specifications together with the detailed drawings, printed leaflets and literature of the article quoted. The name of the manufactures and country of manufacture should also invariably be stated. In the absence of these particulars, the quotation is liable for rejection.
11. Validity of offer: 90 days.
12. The warranty period after satisfactory installation should be mentioned and firm should replace all manufacturing defect parts/ whole item under warranty without any extra cost including clearance, freight, taxes. Security deposit/ Bank Performance Guarantee @ 3% of the value of supply order, in terms of *Ministry of Finance, DoE, GOI, OM. No. F.9/42020-PPD dated 12-11-2020* and as per norms may be sought from the firms.

13. The right to reject all or any of the quotation and to split up the requirements for itemized L-1 or relax any or all the above conditions without assigning any reason is reserved by the IISER Mohali. For any corrigendum and addendum please be checked the website <https://eprocure.gov.in/eprocure/app> and <http://www.iisermohali.ac.in>
14. Disputes, if any, shall be subject to jurisdiction in the court of Mohali only.

–Sd-
Assistant Registrar (P&S)

ANNEXURE-I

Bid Securing Declaration Form

Date:_____ E-Tender No. _____ E-Tender ID _____

To (insert complete name and address of the purchaser)

I/We. The undersigned, declare that:

I/We understand that, according to your conditions, bids must be supported by a Bid Securing Declaration.

I/We accept that I/We may be disqualified from bidding for any contract with you for a period of one year from the date of notification if I am /We are in a breach of any obligation under the bid conditions, because I/We

a) have withdrawn/modified/amended, impairs or derogates from the tender, my/our Bid during the period of bid validity specified in the form of Bid; or

b) having been notified of the acceptance of our Bid by the purchaser during the period of bid validity (i) fail or reuse to execute the contract, if required, or (ii) fail or refuse to furnish the Performance Security, in accordance with the Instructions to Bidders. I/We understand this Bid Securing Declaration shall cease to be valid if I am/we are not the successful Bidder, upon the earlier of (i) the receipt of your notification of the name of the successful Bidder; or (ii) thirty days after the expiration of the validity of my/our Bid.

Signed: (insert signature of person whose name and capacity are shown)
in the capacity of (insert legal capacity of person signing the Bid Securing Declaration)

Name: (insert complete name of person signing the Bid Securing Declaration)
Duly authorized to sign the bid for an on behalf of (insert complete name of Bidder)

Dated on _____ day of _____ (insert date of signing)
Corporate Seal (where appropriate)

(Note: In case of a Joint Venture, the Bid Securing Declaration must be in the name of all partners to the Joint Venture that submits the bid)

PS: *Furnish the above in original stationary/letter head with signed and sealed.*

ANNEXURE-II

Specifications of three-channel NMR spectrometer along with accessories

(for solution NMR experiments only)

Item-A (PART A)

I. Magnet:

1. 9.4T active shielded superconducting magnet (liquid-state NMR capabilities) with an operational frequency of 400 MHz for ^1H based on latest technology.
2. 5G (radial from the centre of the magnet ($<0.6\text{ m}$) and axial from the centre of the magnet ($<1\text{ m}$) fringe field with advanced shielding technology.
3. Bore diameter: 54 mm (standard bore).
4. Anti-vibration legs to damp frequency for smooth NMR spectra 10Hz or above
5. Expected field drift $< 5\text{ Hz/hr}$.
6. Liquid Helium hold time a minimum of 365 days or more, along with lesser refill volume + N_2 hold time. (Specify both total volume/ refill volume).
7. Digital level indicator for Helium and Nitrogen with alarm function.
8. All support equipment of magnet (Helium and nitrogen transfer lines, O rings, coupling attachments, spares etc. should be provided for smooth transfer of liquid gases. (Provide complete list)

II. Spectrometer Console:

1. Advanced feature based three broadband frequency generation independent RF channels (full frequency range generation upto 400 MHz) with highest frequency and phase resolution; fast switching time for all parameters, without any hidden delays along with its importance in the quality of the spectra. It should include wave form generators for pulse shaping, amplitude, phase and composite pulse decoupling generator, preamplifiers with standard filters and digital receiver control with over sampling and quadrature detection with digitizer's facility for complete elimination of quadrature spikes.
2. Digital 2H lock channel. Lock system with high precision phase and field correction, corrections for short term disturbances.
3. Receiver System with digital quadrature detection (DQD). Wide sampling range and on line digital filtering along with complete elimination of the quadrature images/spikes, artifacts in the center of the NMR spectrum
4. 3 Channel Amplifier System: **High performance linear amplifier for observation or decoupling of ^1H or ^{19}F** , with 100 W pulse power minimum and **300 W pulse power minimum** in the range of 31 P to 15N. All relevant parameters including power, frequency range, duty cycle, maximum pulse duration etc. have to be explicitly specified.
5. Simultaneous acquisition on multiple channels.

III. Preamplifiers:

1. ^1H preamplifier
2. Multinuclear preamplifier
3. 2H preamplifier for lock and 2H experiments
4. Built in tune/match display
5. Add on filters for noise reduction

IV. Gradients:

1. Gradient system for Z shielded gradient with a gradient strength of minimum of 30 G/cm with 10A for gradient NMR experiments in solution. Pulse field gradients (PFG) of any desired shape. Gradient shimming capabilities, for diffusion based experiment.

V. Variable Temp Unit (Low and high temperature accessories):

1. Computer controlled temperature and air
2. High temperature range: Ambient to approx. +150°C
3. Nitrogen cooling system range: approx. -100 °C to +150°C
4. Temperature resolution 0.1°C

VI. Probes:

❖ Liquids:

1. 5mm solution-NMR probe (triple channel or two-channel) with Z shielded gradient capable of (i) detecting less sensitive (X) nuclei with decoupling on ¹H or ¹⁹F or both (ii) ¹⁹F detection with ¹H decoupling (and 2H lock) and inverse detection (iii) the tuning frequency of the 'X' nucleus should be broad (maximum frequency should be to that of ³¹P and minimum frequency should be to that of ¹⁰⁹Ag) (iv) Homonuclear and Heteronuclear correlation experiments involving ¹H and X; ¹H and ¹⁹F **OR** ¹⁹F and X nucleus.
2. Sensitivity (¹H – 500 or higher; ¹³C – 200 or higher; ³¹P – 100 or higher; ¹⁵N –20 or higher; ¹⁹F –500 or higher
3. (Note: preference would be given to probes that satisfy the above specifications)
4. Automatic tuning and matching (ATM).
5. Sample diameter: 5 mm
6. Variable temperature operation (-100°C to +150°C)
7. Built in Z Gradient coil for PFG
8. Please specify line width, pulse width, sensitivity, RF duty cycle, frequency range, temperature range etc. for each probe and each nucleus.
9. Standard test samples for probe.
10. Spectra of ¹H{¹⁹F} and ¹⁹F{¹H} should be enclosed for similar configuration

VII. Workstation (2 nos):

1. Factory workstation should be provided with higher configurations for sample acquisition and processing. It should have >2 TB (or more) hard drive, DVD Read Write Drive, 24’’ or more wider LED colour monitor, with latest version of windows based operating software.
2. LaserJet printer

VIII. Licensed Software Modules include:

1. Acquisition,
2. Processing,
3. Plotting,
4. Experiment Simulation, Spectra Simulation,
5. Multiplet Analysis,
6. Deconvolution, Automation,
7. Software verification for small molecules
8. Floating license for off line processing at least 20 users

IX. Installation charges (should include the following items):

1. (Liquid Helium and Liquid Nitrogen supply at the time of installation, Liquid N₂ and Liquid He transfer lines (1 each), Liquid N₂ cryo cans (55 L, at least 2) along with trolley
2. Air compressor and Dryer-scroll compressor with appropriate filters (preferably an ISO 9001 certified reputed make oil free air compressor 3 HP capability, complete with dryer with proper ratings and specification capable of catering all the needs, with a 90 litre buffer tank along with the system (proprietary item). The system should be noiseless to house the compressor in NMR room)
3. Power backup: 10kVA UPS with minimum 1 hour backup for the system, laser printer (one).

X. Warranty, Reinstallation & Service requirements:

1. Initial onsite training at the time of installation (with no charge).
2. Installation at the desired place of the institute.
3. Availability of spares and consumables (for at least 10 years) for the installed spectrometer model from the date of installation. Third party/ local items supplied along with the instrument should have same warranty period like the main instrument.

Item-B (PART B)

- I. **Item B1:** 5 mm double resonance probe (two-channel) capable of (i) direct X-nuclei observation with ¹H decoupling and ¹H observation (Indirect detection) (ii) the tuning frequency of the 'X' nucleus should be broad (maximum frequency should be to that of ³¹P and minimum frequency should be to that of ¹⁰⁹Ag).
- II. **Sensitivity** (¹H – 500 or higher; ¹³C – 200 or higher; ³¹P – 100 or higher; ¹⁵N –30 or higher; ¹⁹F –500 or higher)
- III. **Item B2:** Automatic Sample Changer (minimum 24 samples). Should contain the desired number of spinners that can work in both low and high temperatures.
- IV. **Item B3:** Automatic Sample Changer (minimum 60 samples). Should contain the desired number of spinners that can work in both low and high temperatures.
- V. **For all B1, B2 and B3 prices to be quoted separately.**

Item-C (PART C)

I. Accessories:

1. Sample spinner for 5 mm NMR tubes: 30
2. Variable temperature sample spinner for 5 mm NMR tubes: 5
3. For routine operation at RT, one additional spinner for VT (Variable Temperature)
4. NMR Tubes (1000 nos.)
5. Low pressure/vacuum NMR tubes (20 nos.)
6. Digital oxygen sensor for the NMR room
7. Ladder for changing samples

II. Warranty, Reinstallation & Service requirements:

1. Annual Maintenance Contract (AMC) or extended warranty, AMC amount should be quoted for additional 4 years after the initial warranty period.
2. Liquid Helium refilling and maintenance charges for 4 years (after the initial fill).
3. **For all the above items the prices to be quoted separately and any of the item in part C will be supplied by default with the machine in part A it can be mentioned as a default supply material/item.**

III. Terms and Conditions:

1. Both Part A and Part B (B1 and or B2 and or B3) will be considered for finding the L1. To qualify in the technical bidding process, it is mandatory for the vendors to give a proper quote **for all the items mentioned** in Part-A and Part-B. The responsibility of providing this information and adhering to this condition lies with the vendor only.

2. If no fund available for the purchase of any of the parts of Part B (B1 and or B2 and or B3) then only Part A will be solely considered for finding the L1 given the limitation of fund availability. After finding the technically qualified firm with regard to Part A and Part B, for whatever the Institute intends to place an order from Part B only will be exclusively considered with Part A to find the L1.
3. Items mentioned in Part C are optional items to be quoted by the vendors and depending on the fund availability the Institute may consider placing an order for the optional items.
4. The Institute may place two purchase orders simultaneously, after finding the L1: First PO (purchase order) will consist of an order solely related to items of Part A after finding the L1.
5. The second PO (purchase order) will consist of an order related to Part B (B1 and or B2/B3, after finding the L1) and optional items of Part C, if any depending on the fund availability, after finding the L1.
6. **All other terms and conditions of Institute as per rules will apply.**
7. **The Institute reserves all rights.**