



**INDIAN INSTITUTE OF TECHNOLOGY, KANPUR**  
**GT ROAD, KALYANPUR, KANPUR – 208016**  
**UTTAR PRADESH, INDIA**

**TENDER REFERENCE NO. : IITK/CHM/Head/2020/NMR/01**

**BID SUBMISSION END DATE- 06.02.2020**

**TENDER DOCUMENTS**

**FOR**

**“Purchase of 500 MHz Nuclear Magnetic Resonance Spectrometer”**

## **BID DOCUMENT**

Online bids (Technical & Financial) from eligible bidders which are valid for a period of 120 days from the date of Technical Bid opening (i.e. 07.02.2020) are invited for and on behalf of the Assistant Registrar, IIT Kanpur for **“Purchase of 500 MHz Nuclear Magnetic Resonance Spectrometer”**.

Name of Work	Purchase of 500 MHz Nuclear Magnetic Resonance Spectrometer
<b>Date of Publishing</b>	16.01.2020 (12:45 hrs)
Clarification Start Date and Time	16.01.2020 (12:45 hrs)
Clarification End Date and Time	17.01.2020 (16:00 hrs)
Queries (if any)	No queries will be entertained after clarification end date and time
<b>Bid Submission Start Date</b>	16.01.2020 (12:45 hrs)
Last Date and time of uploading of Bids	06.02.2020 (16:00 hrs)
Last Date and time of <b>submitting</b> , EMD and other documents at IIT Kanpur (if any)	NA
Date and time of opening of Technical Bids	07.02.2020 (16:00 hrs)
Date and time of opening of Financial Bids	Will be separately notified for Technically shortlisted/qualified bidders

Interested parties may view and download the tender document containing the detailed terms & conditions from the website <http://eprocure.gov.in/eprocure/app>

**(The bids have to be submitted online in electronic form on [www.eprocure.gov.in](http://www.eprocure.gov.in) only. No physical bids will be accepted.)**

## **INSTRUCTION FOR ONLINE BID SUBMISSION**

The bidders are required to submit soft copies of their bids electronically on the Central Public Procurement (CPP) Portal ie <http://eprocure.gov.in/eprocure/app> , using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal.

### **REGISTRATION**

- (i)** Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL:<https://eprocure.gov.in/eprocure/app>) by clicking on the link “Online Bidder Enrolment” option available on the home page. **Enrolment on the CPP Portal is free of charge.**
- (ii)** During enrolment/ registration, the bidders should provide the correct/ true information including valid email-id & mobile no. All the correspondence shall be made directly with the contractors/ bidders through email-id provided.
- (iii)** As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
- (iv)** For e-tendering possession of valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) is mandatory which can be obtained from SIFY /nCode/eMudra or any Certifying Authority recognized by CCA India on eToken/ SmartCard.
- (v)** Upon enrolment on CPP Portal for e-tendering, the bidders shall register their valid Digital Signature Certificate with their profile.
- (vi)** Only one valid DSC should be registered by a bidder. Bidders are responsible to ensure that they do not lend their DSCs to others which may lead to misuse and should ensure safety of the same.
- (vii)** Bidders can then log into the site through the secured login by entering their userID/ password and the password of the DSC/ eToken.

### **SEARCHING FOR TENDER DOCUMENTS**

- 1) There are various search options built in the CPP Portal to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, organization name, location, date, value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as organization name, form of contract, location, date, other keywords, etc., to search for a tender published on the CPP Portal.
- 2) Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective ‘My Tenders’ folder. This would enable the CPP Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.
- 3) The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

#### **PREPARATION OF BIDS:**

- (i) For preparation of bid Bidders shall search the tender from published tender list available on site and download the complete tender document and should take into account corrigendum if any published before submitting their bids.  
After selecting the tender document same shall be moved to the 'My favourite' folder of bidders account from where bidder can view all the details of the tender document.
- (ii) Bidder shall go through the tender document carefully to understand the documents required to be submitted as part of the bid. Bidders shall note the number of covers in which the bid documents have to be submitted, the number of documents – including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
- (iii) Any pre-bid clarifications if required, then same may be obtained online through the tender site, or through the contact details given in the tender document.
- (iv) Bidders should get ready in advance the bid documents in the required format (PDF/xls/rar/dwf/jpg formats) to be submitted as indicated in the tender document/schedule.  
**Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.**
- (v) Bidders can update well in advance, the documents such as experience certificates, annual report, PAN, EPF & other details etc., under "My Space/ Other Important Document" option, which can be submitted as per tender requirements. This will facilitate the bid submission process faster by reducing upload time of bids.

#### **SUBMISSION OF BIDS:**

- (i) Bidder should log into the site well in advance for bid submission so that he/ she upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay.
- (ii) Bidder should prepare the EMD as per the instructions specified in the NIT/ tender document. The details of the DD/BC/BG/ others physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise the uploaded bid will be rejected.
- (iii) While submitting the bids online, the bidder shall read the terms & conditions (of CPP portal) and accepts the same in order to proceed further to submit their bid.
- (iv) Bidders shall select the payment option as offline to pay the EMD and enter details of the DD/BC/BG/others.
- (v) Bidder shall digitally sign and upload the required bid documents one by one as indicated in the tender document.
- (vi) Bidders shall note that the very act of using DSC for downloading the tender document and uploading their offers is deemed to be a confirmation that they have read all sections and pages of the tender document without any exception and have understood the complete tender document and are clear about the requirements of the tender document.
- (vii) Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document. For the file size of less than 1 MB, the transaction

uploading time will be very fast.

- (viii) **If price quotes are required in XLS format, utmost care shall be taken for uploading Schedule of quantities & Prices and any change/ modification of the price schedule shall render it unfit for bidding.**

**Bidders shall download the Schedule of Quantities & Prices i.e. Schedule-A, in XLS format and save it without changing the name of the file. Bidder shall quote their rate in figures in the appropriate cells, thereafter save and upload the file in financial bid cover (Price bid) only.**

**If the template of Schedule of Quantities & Prices file is found to be modified/corrupted in the eventuality by the bidder, the bid will be rejected and further dealt as per provision of clause no 23.0 of ITB including forfeiture of EMD.**

**The bidders are cautioned that uploading of financial bid elsewhere i.e. other than in cover 2 will result in rejection of the tender.**

- (ix) Bidders shall submit their bids through online e-tendering system to the Tender Inviting Authority (TIA) well before the bid submission end date & time (as per Server System Clock). **The TIA will not be held responsible for any sort of delay or the difficulties faced during the submission of bids online by the bidders at the eleventh hour.**
- (x) After the bid submission (i.e. after Clicking “Freeze Bid Submission” in the portal), the bidders shall **take print out of system generated acknowledgement** number and keep it as a record of evidence for online submission of bid, which will also act as an entry pass to participate in the bid opening.
- (xi) Bidders should follow the server time being displayed on bidder’s dashboard at the top of the tender site, which shall be considered valid for all actions of requesting, bid submission, bid opening etc., in the e-tender system.
- (xii) All the documents being submitted by the bidders would be encrypted using PKI (Public Key Infrastructure) encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology.

#### **ASSISTANCE TO BIDDERS:**

- (i) Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contract person indicated in the tender. The contact number for the helpdesk is 0512-259-6537 between 10:30 hrs to 17:00 hrs.
- (ii) Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24X7 CPP Portal Helpdesk. The 24 x 7 Help Desk Number 0512-2596537/+91 96211 46252. The helpdesk email id is support. **- ddethe@iitk.ac.in**

## INSTRUCTION FOR e-PROCUREMENT

### 1. PREPARATION AND SUBMISSION OF BIDS :

- a. The detailed tender documents may be downloaded from <http://eprocure.gov.in/eprocure/app> till the last date of submission of tender. The Tender may be submitted online through CPP Portal <http://eprocure.gov.in/eprocure/app>
- b. The bidder should submit the bid online in two parts viz. Technical Bid and Financial Bid. Technical Bid should be upload online in cover 1 and Financial Bid in “.Xls” should be upload online in cover-2

### 2. SUBMISSION OF THE BID : All interested eligible bidders are requested to submit their bids online on CPP Portal: <http://eprocure.gov.in/eprocure/app> as per the criteria given in this document:

- a. Technical Bid should be upload online in cover-1.
- b. Financial Bid should be upload online in cover-2

Both Technical and Financial Bid covers should be placed online on the CPP Portal (<http://eprocure.gov.in/eprocure/app>).

### 3. TECHNICAL BID: Signed and Scanned copies of the Technical bid documents as under must be submitted online on CPP Portal: <http://eprocure.gov.in/eprocure/app>.

#### a) **List of Documents to be scanned and uploaded (Under Cover-1) within the period of bid submission:-**

- i. Scanned copy of Bank details. (Bank details of principal supplier in case of Import shipments)
- ii. Scanned copy of work experience.
- iii. Scanned copy of certificate of GST. (GSTIN of Indian Agent in case of Import Shipments)
- iv. Scan copy of tender acceptance letter.
- v. Scanned copy of specifications or brochures (if any).
- vi. Scanned copy of other document mentioned in tender document (if any)

#### b) **For Import Shipments – Shipping Terms Ex-Works/FOB are preferred.**

**NOTE - no indication of the rates/amounts be made in any of the documents submitted with the TC-BID.**

### 4. **Financial Bid**

- a. The currency of all quoted rates shall be Indian Rupees/USD/Eur/JPY/GBP/CHF.
- b. In preparing the financial bids, bidders are expected to take into account the requirements and conditions laid down in this Tender document. The financial bids should be uploaded online as per the specified “.Xls” format i.e. Price Bid Excel

sheet attached as **‘.Xls’** with the tender and based on the scope of work, service conditions and other terms of the Tender document. It should include all costs associated with the Terms of Reference/Scope of Work of the assignment.

- c. The Financial Proposal should be inclusive of all applicable taxes, duties, fees, levies, and other charges imposed under the applicable laws. The rates quoted in the Tender are inclusive of all applicable taxes, duties etc. **except service tax**. The service tax component shall be re-immersible by the department after receipt of paid challans etc. if applicable.

**5. Last Date for Submission of Tender:**

- a. Online bids complete in all respects, must be submitted on or before the last date and time specified in the schedule of events.
- b. The IIT, Kanpur may, at its own discretion, alter/extend the last date for submission of tenders.

**6. Bid Validity**

- a. All the Bids must be valid for a period of 120 days from the last date of submission of the tender for execution of Contract. However, the quoted rates should be valid for the initial/ extended period of the Contract from the effective date of the Contract. No request will be considered for price revision during the original Contract period.
- b. A bid valid for a shorter period shall be declared as non-responsive.
- c. In exceptional circumstances, prior to expiry of the original time limit, the IIT may request the bidders to extend the period of validity for a specified additional period beyond the original validity of 120 days. The request and the bidders' responses shall be made in writing. The bidders, not agreeing for such extensions will be allowed to withdraw their bids without forfeiture of their Bid Security.

**7. Modification / Substitution/ Withdrawal of bids:**

- a. No Bid shall be modified, substituted or withdrawn by the Bidder after the Bid's due Date.
- b. Any alteration/ modification in the Bid or additional information supplied subsequent to the Bid's due Date, unless the same has been expressly sought for by the Authority, shall be disregarded.

**8. Rejection of the Bid:** The bid submitted shall become invalid and tender fee shall not be refunded if:-

- a. The bidder is found ineligible.
- b. The bidder does not upload all the documents as stipulated in the bid document.

## Tender document

Department of Chemistry  
Indian Institute of Technology Kanpur  
Kanpur (UP) 208016 India

Enquiry date: January 16, 2020

Enquiry No: IITK/CHM/Head/2020/xx

Online quotations are invited for **PURCHASE OF 500 MHz NMR**. The detailed specification is described below.

**Dr. D.H. Dethé**

Department of Chemistry  
Indian Institute of Technology Kanpur  
Kanpur 208 016, India

### **Technical Specifications For a “500 MHz Nuclear Magnetic Resonance Spectrometer ”**

**Name of machine / equipment /item: 500 MHz Nuclear Magnetic Resonance Spectrometer. Installation certificate will be issued only after satisfactory working of the instrument (Demo of all the modules) & onsite training at IIT Kanpur, Staff and Students.**

#### 500MHz NMR SPECIFICATIONS

<b>Sr No</b>	<b>Item Description</b>	<b>Specifications</b>
1	Magnet	Latest technology based stable and actively shielded superconducting magnet with an operational frequency of 500 MHz for <sup>1</sup> H (~11.7 Tesla) and standard bore size. Shortest possible 5G (radial from the centre of the magnet 0.6 m or less, and axial from the centre of the magnet 1.2 m or less) fringe field with advanced shielding technology. Expected field drift 5 Hz/hr or less. Liquid helium hold time of 150 days or longer. Liquid nitrogen minimum hold time of 14 days (specify the refill volume and total volume). High performance cryo- and room temperature shim system for optimal line shape. Anti-vibration feet pad for dampening floor vibrations (Specify the damp-frequency limit).
2	Spectrometer Console	(a) Two independent radiofrequency channels (full frequency range generation) for <sup>1</sup> H, <sup>13</sup> C, <sup>15</sup> N, <sup>31</sup> P, <sup>19</sup> F and other active nuclei with highest frequency and phase resolution; fast switching time for all parameters, without any hidden delays. It should include waveform generators for pulse shaping, amplitude, phase and composite pulse decoupling
		Two high performance linear amplifier for observation-or decoupling of <sup>1</sup> H or <sup>19</sup> F, with 100 W or more pulse power maximum, and 300 W



		or more pulse power maximum in the range of 31P to 15N or better. All relevant parameters including power, frequency range, duty cycle, maximum pulse duration etc. have to be explicitly specified. Minimum 2 channel architecture with up-gradation possibility to 3 channels. RF electronics should be ready for solid state work
		(b) Digital lock channel. Lock system with high precision phase- and field- correction, and correction for short-term disturbances
		(c) Acquisition system with a control for a minimum of two RF channels and expandable to more in the future. Advanced quadrature detection with digital receiver. Multinuclear preamplifiers with standard filters, Over-sampling and on-line digital filtering along with complete elimination of the quadrature images/spikes, artefacts in the center of the NMR spectrum. Built-in tune/match display in the pre-amplifier. Add-on filters for noise reduction, if required.
		(d) 2H amplifier with gradient shimming capability
		(e) Pulsed Field Gradient with strength $\geq 30$ G/cm
		(f) Variable temperature experiments to be done in the range 200K to 400K with + 0.1°C variations or more comprehensive range should be provided. Accessories and consumables if any required for the variable temperature control should be quoted appropriately. Nitrogen separator for VT gas supply probe and liquid nitrogen dewar
		(g) System is ready model for future upgradation of solid state measurement.
3	Probes	5mm multinuclear broad band direct/observe Z-gradient Probe (specify the range of nuclei supported) with automatic tuning and matching (ATM) and with inverse experiments capabilities with high S/N ratio of 1H in 0.1 % ethyl benzene of 800(or more), 13C in 10% ethylbenzene in Chloroform-d with 300 (or more), 19F with 550 (or more), 31P with 135 (or more) and 15N with (35 or more) on standard test samples. The sensitivity for 13C, 19F, 31P and 15N based on standard test sample (probably according to ASTM test) and quote the exact test name. The probe should be capable to perform wide variety of advanced 1H and 19F NMR experiments including decoupling experiments[1H{19FDec} and 19F {1H Dec}]. VT range +150°C to -100 °C along with required Dewar and other accessories required.
4	User Interface	a) High performance state-of-the-art workstation (Windows operating system) for spectral acquisition and processing that can be easily serviced in India in case of any fault: The work station should at least have 4 GB RAM, 500GB hard disk capacity, with 24'' LED display, latest available processor, CD-DVD read-write drives, USB Ports, LAN connectivity for offline processing of data

		b) One laser printer with network capability, Provide all other necessary accessories.
		c) Licensed Software Modules to include: Acquisition, Processing, Plotting, Structure drawing and presentation, J-coupling analysis Tools and Analysis-1D and 2D (HSQC, TOCSY, COSY, HETCOR, NOESY, HMBC, DOSY STD etc.) data, Experiment Simulation, Spectra Simulation, Multiplet Analysis, Teaching Software, Deconvolution, Automation, Projection Reconstruction Spectroscopy.
		d) Most recent and advanced software for data analysis are required. At least 10 free licenses within the campus for data analysis should be provided
		e) A complete set of operation manuals should be provided. All required hardware and software documents, installation manuals, CDs/DVDs etc. to be provided. All manuals (service and operational) should be provided as hard copies as well as soft copies (on CDs)
5	Accessories:	(a) An ISO-9001 certified imported oil-free scroll air-compressor complete with dryer with proper ratings and specification capable of catering all the needs, with a sufficiently big buffer tank along with the system with 5 years warranty including annual maintenance for 5 years with consumables required
		(b) Liquid helium transfer line with accessories to transfer helium from the storage tank to the cryo-magnet should be quoted.
		(c) One set of Liquid nitrogen Line with cork for transfer liquid nitrogen should be provided.
		(d) Auto sampler with a capacity of 60 or more NMR samples carousel slot with necessary accessories including 60 or more spinners to load the samples. All spinner should work for low temperature (minimum - 80 °C) to High temperature (minimum +130° C) experiments.
		(e) 500 high quality NMR tubes with caps
		(f) 100 ltr capacity liquid nitrogen containers: 1 nos.
		(g) A set of standard samples for calibration (observe and de-coupler pulse calibration, sensitivity and resolution test for 1H, 13C, 15N, 19F and 31P nuclei).
		(h) 100 NMR software for processing the FID file in PC/Laptop.
		(i) Vendor should commit to liquid helium filling by technical person/engineer on time to time basis without any extra charge during entire warranty period and keep the super conducting magnet active (Liquid Helium will be provided by Dept of Chemistry, IIT Kanpur). In case of magnet quench during the installation or at subsequent times due to faulty design or any other technical failure, the necessary costs for recharging or replacing should be borne by the vendor
7	UPS System	A suitable ISO-9001 certified make online UPS (10 KVA) for the whole system with a minimum backup of 1 hour or more with 5 years warranty
8	Performance	Satisfactory performance of instrument and after sales service from existing users will be considered by the committee in evaluating the

		technical bid.
9	Training	(a) Initial on-site training to the staff for two weeks after successful installation (b) Comprehensive training for two persons for 2-3 weeks at the vendor's application laboratory in India (1 for operation and 1 for maintenance). After few months advanced application training should be provided. Apart from these two, there will be application training every six months on mutually convenient dates
10	Warranty	The system should be quoted with 5 years on-site comprehensive warranty including all parts, consumables and labour. Fee maintenance, service and regular upgrade of all software during the entire warranty period
11	Installation in India:	The quoted system or equivalent category system should have at least 5 numbers of installations in India by the vendor. List of such 5 users and copy of their installation report should be enclosed
12	Service facility and downtime call attendance	Supplier should clearly mention about their service set up in India (preferably in Northern part of India) for prompt service support along with contact details of service engineers specially trained on the offered system. Service should be provided within 48 hrs. from the report of technical problem so that machine down time is minimized. In case the Equipment / System remains non-operational for more than 7 days then warranty period will be extended for the equivalent period for which Equipment / System remained non-operational. Warranty extension in such case shall be done without prejudice to any other Term & condition of the contract.
13	Spares:	Supplier should confirm the availability of spares for next 10 years from the date of installation. All essential spares for day-to-day operation needs should be provided as standard supply
14	Pre Installation Requirement	Necessary pre-installation advice should be sent immediately after the placement of the order
15	Validity of Quotation	Minimum 4 months
16	Submission of Bids	Tender should be submitted in two parts – technical and financial
17	Optional Items	Items:
		Standard Samples: Standard test samples for multinuclear studies-5 nos
		One extra probe with same specification mentioned in point 3 above
		CMC for 5 years soon after warranty as an optional item should be quoted separately by the bidder
		AMC for 5 years soon after warranty as an optional item should be quoted separately by the bidder
		The 500W pulse power maximum in the range of 31P to 15N should be quoted as an option in the specification
		High quality NMR solvents – CDCl <sub>3</sub> , DMSO, D <sub>2</sub> O, CD <sub>3</sub> CN-1Lit each

**TENDER ACCEPTANCE LETTER**  
**(To be given on Company Letter Head)**

Date: \_\_\_\_\_

To,

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Sub: Acceptance of Terms & Conditions of Tender.

Tender Reference No: \_\_\_\_\_

Name of Tender / Work: - \_\_\_\_\_

Dear Sir,

1. I / We have downloaded / obtained the tender document(s) for the above mentioned 'Tender/Work' 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 annexure(s), schedule(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. I / We do hereby declare that our Firm has not been blacklisted/ debarred/ terminated/ banned by any Govt. Department/Public sector undertaking.

6. I / We certify that all information furnished by our Firm is true & correct and in the event that the information is found to be incorrect/untrue or found violated, then your department/ organisation shall without giving any notice or reason therefore or summarily reject the bid or terminate the contract, without prejudice to any other rights or remedy including the forfeiture of the full said earnest money deposit absolutely.

**Yours Faithfully,**  
**(Signature of the Bidder, with Official Seal)**