


Government eProcurement System		Government eProcurement System	
Tender Details		Date : 14-Jun-2022 11:15 AM	
 Print			
Basic Details			
Organisation Chain	Council of Scientific and Industrial Research CDRI-Lucknow - CSIR Purchase-CDRI - CSIR		
Tender Reference Number	2022/NMR Spectrometer		
Tender ID	2022_CSIR_118964_1		
Tender Type	Open Tender	Form of contract	EOI
Tender Category	Goods	No. of Covers	1
General Technical Evaluation Allowed	No	ItemWise Technical Evaluation Allowed	No
Payment Mode	Not Applicable	Is Multi Currency Allowed For BOQ	No
Is Multi Currency Allowed For Fee	No	Allow Two Stage Bidding	No
Cover Details, No. Of Covers - 1			
Cover No	Cover	Document Type	Description
1	Fee/PreQual/Technical/Finance	.pdf	Credential of firm
		.pdf	Proposal and detailed technical bid
Tender Fee Details, [Total Fee in ₹ * - 0.00]		EMD Fee Details	
Tender Fee in ₹	0.00	EMD Amount in ₹	0.00
Fee Payable To	Nil	EMD through BG/ST or EMD Exemption Allowed	No
Fee Payable At	Nil	EMD Fee Type	fixed
Tender Fee Exemption Allowed	No	EMD Percentage	NA
		EMD Payable To	Nil
		EMD Payable At	Nil
Click to view modification history			
Work /Item(s)			
Title	Nuclear Magnetic Resonance Spectrometer		
Work Description	Supply of Nuclear Magnetic Resonance Spectrometer		
Pre Qualification Details	Please refer Tender documents.		
Independent External Monitor/Remarks	NA		
Show Tender Value in Public Domain	No		
Tender Value in ₹	5,00,00,000	Product Category	Equipments (Hospital / Lab)
Sub category			NA
Contract Type	Tender	Bid Validity(Days)	90
Period Of Work(Days)			60
Location	CSIR-CDRI	Pincode	226031
Pre Bid Meeting Place			NA
Pre Bid Meeting Address	NA	Pre Bid Meeting Date	NA
Bid Opening Place			CSIR-CDRI
Should Allow NDA Tender	No	Allow Preferential Bidder	No

Critical Dates

Publish Date	14-Jun-2022 02:00 PM	Bid Opening Date	24-Jun-2022 03:00 PM
Document Download / Sale Start Date	14-Jun-2022 02:15 PM	Document Download / Sale End Date	23-Jun-2022 02:00 PM
Clarification Start Date	14-Jun-2022 03:00 PM	Clarification End Date	15-Jun-2022 03:00 PM
Bid Submission Start Date	14-Jun-2022 04:00 PM	Bid Submission End Date	23-Jun-2022 02:00 PM

Tender Documents

NIT Document	S.No	Document Name	Description	Document Size (in KB)
	1	Tendernotice_1.pdf	EOI for the procurement of NMR Spectrometer	326.57

Work Item Documents	S.No	Document Type	Document Name	Description	Document Size (in KB)
	1	Tender Documents	NMRSpectrometer.pdf	EOI for the procurement of NMR Spectrometer	313.80
	2	Other Document	technical.pdf	Detailed of 500 MHz Nuclear Magnetic Resonance (NMR) Spectrometer	747.96

Auto Extension Corrigendum Properties for Tender

Iteration	No. of bids required for bid opening a tender	Tender gets extended to No. of days
1.	2	7

Bid Openers List

S.No	Bid Opener Login Id	Bid Opener Name	Certificate Name
1.	dkv.eproc@csir.res.in	Dinesh Kumar Vishwakarma	DINESH KUMAR VISHWAKARMA
2.	jp.eproc@csir.res.in	Jai Prakash	JAI PRAKASH
3.	maheshk.eproc@csir.res.in	Mahesh Kumar	MAHESH KUMAR
4.	anilkumar.eproc@csir.res.in	Anil Kumar	ANIL KUMAR

GeMARPTS Details

GeMARPTS ID	M9I33MTNA9SK
Description	500 MHz NMR SPECTROMETER
Report Initiated On	13-Jun-2022
Valid Until	13-Jul-2022

Tender Properties

Auto Tendering Process allowed	No	Show Technical bid status	Yes
Show Finance bid status	Yes	Show Bids Details	Yes
BoQ Comparative Chart model	NIL	BoQ Comparative chart decimal places	2
BoQ Comparative Chart Rank Type	NIL	Form Based BoQ	No

Tender Inviting Authority

Name	The Stores and Purchase Officer
Address	Sector 10 jankipuram Extension Sitapur Road Lucknow

Tender Creator Details

Created By	Mahesh Kumar
Designation	Astt. SO
Created Date	14-Jun-2022 09:45 AM



सी.एस.आई.आर.-केन्द्रीय औषधि अनुसंधान संस्थान, लखनऊ
(वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद्)
सेक्टर 10, जानकीपुरम विस्तार, सीतापुर रोड, लखनऊ - 226 031 (भारत)
CSIR - Central Drug Research Institute
(Council of Scientific & Industrial Research)
Sector 10, Janakipuram Extension, Sitapur Road, Lucknow - 226 031 (India)



FILE NO: (NMR) Spectrometer

Dated:13.06.2022

Sub- Expression of Interest (EoI) for "500 MHz Nuclear Magnetic Resonance (NMR) Spectrometer".

CSIR-Central Drug Research Institute, Lucknow is a premier Research Institute of India pursuing a vision to strengthen and advance the field of drug discovery and development in the country. It is planning to procure the "500 MHz Nuclear Magnetic Resonance (NMR) Spectrometer" to enhance the capacity of the organisation for Drug Discovery and development **(The tentative Specifications of the proposed System is attached)**

Prospective bidders, those have the instruments are invited to make presentation followed by discussion on technology, features, Design, Utility, Parameters (technical) clientele etc on dated: 24.06.2022 (2:30 pm) at Conference Room of Stores & Purchase Department - at CDRI, Lucknow. For more detail please refer to specification in the supporting document.

(Stores & Purchase Officer)

EXPRESSION OF INTEREST

Technical Specifications:

Description of item/equipment including detailed specifications and summary of its functions are specified below. These specifications can be modified (if required) after the pre-bid conference:

Nuclear Magnetic Resonance (NMR) Spectrometer

Specification: State-of-the-art 500 MHz FT NMR spectrometer with Z-Gradient, double resonance (Two Channels) having capabilities for further upgrading to more channels. This equipment should be compatible for the most up-to-date hetero nuclear multi-dimensional NMR experiments.

Primary Objective: To handle all application related to synthetic/natural product molecules, metabolomics studies on plant/biological samples extracts and native tissue specimens (plant/biological samples).

I. Magnet:

Actively shielded super-conducting magnet with an operational frequency of 500 MHz with the following specifications:

- Shortest possible Radial (less than 0.9 m) and Axial distance (less than 1.6 m) of 5 Gauss stray field from the centre of the magnet. Please specify the overall Magnet dimensions/ceiling height requirements
- Low drift rate (less than 7.0 Hz/hour) of the Magnetic field.
- Long Liquid He hold time (360 days or more)
- Long liquid N₂ hold time (15 days or more).
- Please specify the total Liq. He and N₂ hold volume, refill interval and refill volume for He and N₂
- All support equipments for cryostat (e.g. Liq. He and liq. N₂ transfer lines).
- Digital monitors for He and N₂ levels (mandatory)
- With anti-vibration legs/stand and please specify the lower limit on the frequency of vibrations damped.
- Built-in cryo-shims & room temperature shims
- Pneumatic/ Automatic sample load / spin / eject system

II. Spectrometer Console:

Advance designed two channel spectrometer capable of performing all single and multi-dimensional NMR experiments; fast switching time for all parameters without any hidden delays along with its importance in the quality of the spectra. The console should include capacity for modern pulse shaping, amplitude, phase and composite pulse decoupling creation, preamplifiers with standard

filters and digital receiver control with oversampling, either equipped with digital quadrature detection with digitizer's facility for complete elimination of quadrature spikes or a direct digital receiver. The console should include:

- Waveform generators for all channels for pulse shaping,
- Amplitude, phase and composite pulse decoupling generator
- Pre-amplifiers and filters for noise reduction
- Two Channel Amplifier System: Two high performance linear amplifier (minimum 100 watt for ^1H and a minimum 500 watt for X nuclei). Please specify all relevant parameters including power (Wattage), frequency range, duty cycle, maximum pulse duration etc.
- Frequency synthesizers for each channel.
- Transmitter controllers for each channel.
- ADC with high dynamic range and sampling rate. Please specify the resolution of the ADC (in bits) and the maximum sample rate.
- The console should be ready for HR-MAS /FG-MAS NMR experiments, that including necessary amplifiers, RF trans-receiver peripherals, circuitry and filters. All the necessary accessories, and pneumatic accessories-should be quoted separately.

III. Variable temperature unit:

- Broad temperature range (both low and high) capability along with all accessories is desired: Please specify temperature ranges available for both magic angle spinning and static sample NMR work along with low and high temperature accessories.
- Please specify resolution/accuracy/stability of temperature setting as well as the high and low limits of attainable temperature.

IV. Probe:

State of the Art 5 mm z-gradient multinuclear (HX) resonance broadband room temperature probe with highest possible sensitivity inclusive of mentioning all the nuclei sensitivity for minimum ^1H , ^{19}F , ^{13}C , ^{31}P , ^{15}N and ^{109}Ag .

Following probe specifications to be provided:

- 90° Pulse widths and power for ^1H , ^{13}C and other nuclei. Please also specify maximum duration of R.F. irradiation for each nuclei, duty cycle, etc.
- Best resolution and line-shapes. Please specify the line- widths and resolutions achievable.
- Best Signal-to-noise (S/N) ratio values for ^1H , ^{19}F , ^{13}C , ^{15}N and ^{31}P (Please provide data and mention the sample used).
- Specify maximum temperature range achievable.
- Pulse field gradients with amplifiers capable of generating pulsed gradients of

strength of 40 G/cm or more

- The probe should be capable of recording ^{19}F NMR spectral data with ^1H decoupling and vice versa
- Probe should be equipped with automatic tuning and matching facility
- One set of standard sample kit for probe calibration purpose

V. HR-MAS Probe:

4 mm $^1\text{H}/^{13}\text{C}$ z-gradient HR-MAS Probe: Best resolution and line-shapes. Please specify the line-widths and resolutions achievable. Best Signal-to-noise (S/N) ratio values for ^1H and ^{13}C . (Please provide reference spectral data and mention the standard sample used).

- Additional HR-MAS sample rotor kit.
- Spinning speed: 15 kHz or better
- The effective volume should be 35 μL or more
- One set of standard sample kit for probe calibration purpose
- Probe should be equipped with automatic tuning and matching facility
- Automatic magic angle adjustment capability to reduce manual interference

VI. HR-MAS Control Unit:

Fully automated pneumatic unit for high resolution MAS spectroscopy having the followings:

- Control of the spinning, up and down of rotors should be monitored from the workstation
- Accurate spinning rate (up to 6 KHz) stabilization for tissue sample
- Sample (rotor) ejection and insertion should be performed from the top without taking out probe from the magnet along with for OQ, IQ and PQ compliance
- Top loading facility for sample (rotor) ejection and insertion for OQ, IQ and PQ compliance
- Status indicator
- Interface for remote control of automated operation
- Keyboard for manual local operation
- Cables etc.
- Transfer tube for pneumatic insertion of 4 mm Zirconium rotors MAS
- 4 mm Zirconium oxide rotors full set (20 Nos)

Suitable Power Amplifiers as required for specifications above.

VII. Auto Sampler:

An Automatic Sample Handling System with spinner's capability of loading at least 24 samples from front of the magnet along with spinners

VIII. Data storage/software/Peripherals:

- A high-end work-station with latest configuration (minimum of 32 GB RAM, latest available processor, graphic card, 4TB data storage hard disks) with complete pre-loaded software/data cards for data acquisition, processing and analyses including tools/software for complete automation of data acquisition and peripherals including monitors (23 inch or better), heavy duty automatic duplex printer with scanner 02 Nos. (01 Laserjet B/W and 01 Laserjet colored) (quoted in INR preferred). Compatibility for both Windows and Linux is desirable.
- Multi-user licenses for the software (at least 5 numbers).
- All required hardware and software documents, manuals, installation CDs/DVDs etc.
- All standard samples for testing.
- 500 NMR quality NMR tubes (5 mm).
- One additional workstation (please specify in quote) with processing software including software for multivariate statistical analysis (compatible with the acquired NMR data).
- Additional software for complete structure elucidation & structure verification.
- 1 TB external HDD for data back-up (02 Nos.)
- Spinners for low and high temperature applications; 4 No. each.
- Regular upgrades to all software for a period of minimum 10 years should be provided without any additional cost to the CDRI.

Accessories:

Please quote separately with specifications suitable for the NMR spectrometer:

- An ISO-9001 certified or equivalent 'oil-free' reciprocating type air compressor (3HP power or more, 180 Litre reservoir tank SS make) along with desiccant dryer.
- ISO certified or equivalent online UPS (minimum 10 KVA with required batteries) systems with suitable capacity - minimum backup of 1 hour or more (quoted in INR).
- Transportable Liquid Nitrogen containers 50 Lts. (3 Nos.) with 02 trolley (quoted in INR) along with two transfer line for refilling of Liquid Nitrogen.

Other Requirements and conditions:

- a) The spectrometer and its components must be OQ, PQ and IQ compliance.
- b) The vendor has to take care of all the clearance and transportation, loading, unloading, crane, forklift, labour etc. The vendor has also to take all the responsibilities for installation, testing and commissioning of the equipment.

- c) Comprehensive warranty for 5 years on all items mentioned above.
- d) The liquid helium and Liq N2 required for installation of magnet and its stabilization should be provided by the vendor at their expense. In case of magnet-quench during the installation or at subsequent times due to any technical reason or failure, the supply (including transport) of the liquid Helium, till the magnet is restored to normalcy, is the vendors responsibility and the entire costs for cryogenics, recharging or replacing the magnet, should be borne by the vendor at no additional cost to CDRI. Supply and refilling of liquid helium contract for warranty period from the date of satisfactory installation. Price may be (mandatorily) quoted for each year in INR.
- e) On site complete training on applications and maintenance of the complete system (including probes and platform) to relevant staff members in each case for at least one week.
- f) Technical details of all items should be produced
- g) Hard copy/soft copy of the service and operational manuals for all the modules of the spectrometer, peripherals and accessories must be supplied with the spectrometer
- h) At least three successful installations of 500 MHz NMR in India within five years should also be listed. (an undertaking to this with supporting documentary evidence of the same, and evidence of their satisfactory working & after-sale support should be produced along with the tender documents)
- i) During the warranty period if the system remains Non-functional for more than 7 days then from the 8th day onward, there will be a penalty of Rs. 10,000/- per day subject to a maximum of the value of the Performance Bank Guarantee as mentioned in the purchase order.