

INVITING TENDER/QUOTATION

Ref.No. DST-FIST/Chem/NMR-2010

Dated: 5 th August

ENQUIRY/ TENDER

LAST DATE OF SUBMISSION	30th August 2010
HOURS (I.S.T.)	4.30 p.m.

Please quote your lowest rate(s) for the following item(s) so as to reach to Co-ordinator, DST-FIST-II, Dept. of Chemistry, Visva-Bharati, Santiniketan – 731235 on or before the date and time noted above. Please see terms & Conditions as mentioned below/overleaf, which are essential, items 1-28, the failure in compliance of which may lead to rejection of the quotation.

Item: 400 MHz NMR Spectrophotometer and its accessories (quantity -1)

Detail specifications:

- 1. Frequency of Operation:** 400 MHz digital FT NMR spectrometer
- 1. Magnet:** Latest technology based, stable and shielded high performance super conducting magnetic system (9.4 T) with narrow bore approximately 5 cm bore with an operation frequency of 400 MHz for ¹H. Liquid Helium hold time: at least 340 days (Boil off rate should be low), automatic Helium level monitoring. Liquid Nitrogen hold time at lease 2 weeks. Exact frequency of refilling and refilling volume must be mentioned. It should have the arrangement of anti vibration legs to avoid the vibration shocks.
- 2. Probes:** Auto tunable 5mm multinuclear direct probe with ¹⁹F decoupled with ¹H facility. Please specify S/N ratio with detection limit in term of ppm label concentration.
- 3. No. of channels:** Two (upgradeable to more number of channels).
- 4. Transmitter:** A broad band linear amplifier for range 400 MHz with decoupling channel of 50 watts and observe channel of 150 watts.
- 5. Receiver:** Receiver amplifier with all standard features like digital quadrature detection, pre amplifiers, necessary RF filters, digital lock channels etc.(Digital lock providing higher stability & 16 bit analog to digital converter).
- 6. Field Gradient Unit:** A field gradient unit of 50G/cm or more with gradient shim and gradient pulse shaping.
- 7. Cooling /heating:** Specify the conditions. To study the kinetics of the reactions.

8. **VT Unit:** Low and high temperature controlled accessories. Computer controlled temperature and air pressure. High temperature range, ambient to +150⁰C and nitrogen cooling system -150⁰C. Specify resolution.
9. **Test Samples:** Test sample kit with all standard samples.
10. **Spectroscopy kit:** Should include non magnetic tools, RF-testing cables, 100 no of 5 mm sample tubes.
11. **Computer, Printer and Software:** Latest state of art, PC work station with LCD monitor with Windows Operating system. 1D, 2D, 3D NMR acquisition & processing software under multiple CPUs. Laser printer with high DPI. Mention the capacity of Hard Disk, Processor, RAM etc. Data analysis for 2nd computer/simulation software. Higher configuration is always preferred.
12. **Installation:** The liquid nitrogen and helium required for installation should be provided by the NMR supplier at their expense. The price should be quoted in INR : **Warranty :** Comprehensive warranty (on-site) and maintenance (With factory trained Engineer) minimum (5 years for all parts and labour with co maintenance and service and free shipping on warranty items and also for regular upgrades to all software during the entire warranty period from the date of installation.
13. **Training:** Onsite technical/ operational training should be given by service and application engineer. (a) two person from scientific side as well as from technical side should be given ; (b) Onsite training should also be provided to the staff after installation.

14. Accessories:

- a) **Compressor :** One oil and dust free air compressor of appropriate capacity with drying and filtering systems which can provide compressed air of required quality and purity.
- (b) **Dewar flasks:** Three (3) liquid nitrogen Dewar flasks (can); each of 55 Lit. capacity with nitrogen transfer line with trolley.
- c) **UPS :** A suitable UPS system with 1 h or more power backup for complete system(specify technical details).
- d) Alternative arrangement for power supply (for twelve hours or more) in the time of power cut.
- e) Arrangement for room preparation required for NMR instrument installation and smooth running of this instrument

In addition to institutes terms and condition following should be noted specifically.

- 1) Invoice should have the costing of each unit/component of NMR and its accessories separately.
- 2) Principal should provide a certificate that they will provide the spares in future at least for ten years.
- 3) During the guarantee / warranty and contract period, the tenderer will be responsible to maintain the equipment in good working conditions for a period of 328 days (i.e. 90% uptime) in a block of 365 days. All the complaints will be attended by them within 3 days of receipt of the complaint in their office. In case

photo copy of the latest clearance certificate of the above be enclosed with the offer, failing which the offer will not be considered.

- (v) Provincial Sales Tax :- As detailed under (iv) above.
 - (vi) Excise Duty :- As detailed under (iv) above (V.B. can provide Excise Duty exemption certificate wherever applicable)
 - (vii) Insurance: - If the rates are inclusive of insurance, please write 'Included in the prices' otherwise state "Not included". In case local suppliers where insurance is not necessary, they may mention "Does not arise".
 - (viii) Packing and forwarding charges: - If these charges are accounted for in the prices quoted by you, please mention 'Included in the prices', otherwise please given an approximate charge thereof. It may be noted that the University will pay only the actual expenses on these accounts.
 - (ix) Other incidental charges: - Other charges which are not fully accounted for by the replies given above may be mentioned.
4. University reserves the right to accept/cancel any of the tender or part thereof without assigning any reason.
 5. Suppliers having Rate Contract with Central or Provincial Government should quote along with a certified copy of the current Government Rate Contract.
 6. The Offer must be accompanied by the related catalogues, leaflets brochures and samples wherever possible. While every effort is made to return the samples to the suppliers, the HOD/P.I./Coordinator/Indenter cannot accept any responsibility in this respect
 7. All quotations should be net, after showing discounts etc.
 8. If the terms of the quotation etc. are vague, incomplete, contradictory and confusing, the offer will be rejected without any explanation.
 9. The suppliers will be informed of the decision in due course in case of decision in their favour and any interim enquiries about offers will not be attended to.
 10. Once the offer is accepted by the HOD/P.I./Coordinator/Indenter and the order is placed on the basis, the suppliers will have to deliver the goods accordingly within the stipulated time, or meeting the compensation for loss, if any, on account of non execution of the supply order.

11. Liquidated Damage:- Visva-Bharati reserves the right to impose liquidated damage as and when required; the rate of penalty will be at par with the same of the Govt. of India's instruction.
12. Bank commission where applicable will have to be borne by the supplier.
13. All disputes subject to "Bolpur Birbhum, W.B. Jurisdiction" only.

Prof. Asim Kr. Das,
The Head of the Department
Department of Chemistry
Visva-Bharati, Santiniketan, 731235