



तेजपुर विश्वविद्यालय / TEZPUR UNIVERSITY

(केंद्रीय विश्वविद्यालय / A Central University)

- कुलाध्यक्ष का सर्वोत्तम विश्वविद्यालय पुरस्कार, 2016 और एनआईआरएफ भारत रैंकिंग 2016: नं. 05
- Visitor's Best University Award, 2016 and NIRF India Ranking 2016: No. 05

कुल सचिव का कार्यालय / OFFICE OF THE REGISTRAR

तेजपुर-784028 :: असम / TEZPUR-784028 :: ASSAM

SHORT QUOTATION NOTICE

TU/11-24/Pur/Qtn/2016/1452 dated:- 15.07.2016

Sealed quotations are invited from reputed manufacturers/authorized dealers/vendors for supply, installation & commissioning of following equipment required for the DeitY Project of Dr. Nidhi S Bhattacharyya, Department of Physics, Tezpur University.

Item with Specifications:

1. Microwave Synthesis system with following components and specifications

- Homogeneous microwave distribution in the cavity (Preferably dual magnetron with rotating diffuser).
- Magnetron should be protected from reflected microwave energy.
- Sufficient microwave power (1800 watts or higher) with precise controlling.
- Precisely controllable microwave power setting.
- Non-pulse and continuous generation of microwave heating.
- Corrosion resistant cavity.
- Proper illumination of cavity.
- Reaction temperature should be ranges from room temperature to 300°C.
- Reliable temperature control sensor (IR and in situ).
- Reaction pressure should be upto 1450 Psi.
- Should be equipped with pressure sensor (in situ).
- Large scale synthesis in a single use.
- Reliable safety measures, exhaust systems for any kind of fumes/gases.
- Should be equipped with stirring capability (microwave solvent and non- microwave solvent) with continuously adjustable speed.
- Should be equipped with reflux and condenser with high pressure vessel and the vessel for rotatable inert and vacuum circumference.
- Should be equipped with the provision for nitrogen or inert gas and vacuum arrangement.
- Provision for unlimited present reaction methods, variables changeable in each method e.g. time, temperature, step, microwave power, stirring speed, etc.
- System should be controllable in respect with time, temperature and power program.
- Clearly visible graphic interface with good quality resolution and user friendly interface.
- Reaction vessel for homogenous/ heterogeneous, high pressure closed vessel for solid phase reaction and reflux reaction from 100 ml – 500 ml or more.
- The system must be installed at the laboratory, and after installation a basic training must also be provided by the supplier or their Indian counterpart without any additional costs.
- Warranty of the system must be specified.

2. Polymer Pulverisette (Disk Mill) with following component and specifications

- System should be optimal for materials like soft, medium-hard, brittle, fibrous, polymer and temperature-sensitive samples.
- Depending of samples, maximum sample feed size should be around 10 mm and final fitness of the sample must be 0.08 mm or less than that.
- Minimum sample quantity must be less than 10 ml.
- Motor speed of the system must be controllable in the limit 6000-20000 rpm.



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- Impact rotors, sieving rings and impact bars must be made up of stainless steel. Sieving rings of different perforation must be included in the tender.
- The system must be installed at the laboratory, and after installation a basic training must also be provided by the supplier or their Indian counterpart without any additional costs.
- Warranty of the system must be specified.

3. Automatic mortar grinder with following component and specifications

- System must be fast for uniform mixing of nano-polymer composites, homogenization of pastes and creams on a laboratory scale.
- There must have options for sample filling even during grinding.
- System should be equipped with different types of grinding sets
- Pestle pressure must be precisely adjustable.
- System must have timer for automatic on-off after specific time.
- The system must be installed at the laboratory, and after installation a basic training must also be provided by the supplier or their Indian counterpart without any additional costs.
- Warranty of the system must be specified.

4. Microwave free space measurement system with following components and specifications

- The system must be compatible with Agilent PNA (model no. E8362C).
- The system must be capable of measuring the material parameters and EMC parameters precisely in C-band and X-band. However system must have options to upgrade it to other microwave frequency band.
- System should be accompanied by dielectric lenses or highly directive antennas for minimize the sample size.
- System should be capable of measuring material parameters (reflection and transmission losses, permittivity and permeability) in normal incident as well as at different angle of incident with minimum step size of 15°.
- Calibration and graph plotter software (English language supported) should be included with the system. Data analysis software must have the following features: Permittivity and permeability measurement, Reflection and transmission loss calculation, RCS calculation.
- Standard samples with datasheet have to be supplied with the system for calibration and comparison.
- Adaptors and microwave cables must be included.
- The system must be installed at the laboratory, and after installation a basic training must also be provided by the supplier or their Indian counterpart without any additional costs.
- Warranty of the system must be specified.

GENERAL TERMS & CONDITIONS:

1. No separate tender paper will be issued from the office; one should only download the specifications/List from the website.
2. **The rates should be preferably quoted in Indian Rupee and FOR Tezpur University, Napaam basis. Charges for clearing and transportation should be incurred by the supplier.**
3. *Quotations should be accompanied by i) An EMD (in the form of Demand Draft/Call Deposit/TDR) of ₹. 5,000/- (Rupees Five Thousand) only drawn/pledged in favor of Registrar, Tezpur University, payable at Tezpur. **No request for consideration of earlier deposited EMD will be considered.** ii) A non refundable application (quotation) fee of ₹.1000.00 (Rupees One Thousand) only have to be paid only by Demand Draft drawn in favour of Registrar, Tezpur University payable at Tezpur.*
4. The rates should be exclusive of taxes and applicable tax % should be clearly indicated.



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5. Quoted rates should be valid at least for a period of 01 year.
6. The rates should be quoted along with supporting documents of specifications and technical features and list of users.
7. The system must be installed at the laboratory, and after installation a basic training must also be provided by the supplier or their Indian counterpart without any additional costs.
8. All the quotations must be accompanied with supporting documents and / or literature.
9. Demonstration may be sought from the vendors for authentication of quoted specification.
10. Details of availability of after sales support will have to be furnished. After sales support directly from manufacturer and from Assam (Guwahati / Tezpur) will be preferred.
11. The University is exempted from paying Custom and Excise duty.
12. Proprietary items should be quoted with sole Manufacturer/Distributorship certificate.
13. Warranty/Guarantee period should be specifically mentioned in the quotation.
14. No Advance payment will be made. However, for foreign supplier, advance payment will be made either by FDD/Wire Transfer/LC. In such cases 10% Performance Bank Guarantee should be submitted before issuing FDD/Wire Transfer/LC, covering the warranty period.
15. Performance Bank Guarantee also has to be submitted for Major equipments of Indian origin, covering the warranty period.
16. Items of Foreign origin should have Insurance up to installation on site.
17. The University reserves the right to accept or reject any or all the quotations without assigning any reason.
18. Quoted price should be inclusive of essential accessories and should be CIF Tezpur University, Tezpur
19. Applications for release of EMD should be submitted to the Registrar/ Deputy Registrar.
20. Apart from the above terms and conditions the University has the right to include any other terms and conditions as and when felt necessary.
21. **Quotation should be submitted in the DROP BOX placed in the reception of the Administrative Building of the University within 21 days from the issue of the notice. If posted/couriered, should reach within 21 days from the issue of this notice addressed to "The Joint Registrar, Tezpur University". The Quotation Notice No. and date should be clearly superscribed in the the envelope/packet containing the quotation.**

Sd/- Joint Registrar
Tezpur University