



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/2016-17/4374-A dated:-25.01.2017

Sealed quotations are invited from reputed manufacturers/authorized dealers/vendors for supply, installation & commissioning etc. of following items required for the Department of Environmental Science (DST-FIST Programme), Tezpur University.

1. Specifications of ICP-MS Spectrometer:

A Computer Controlled bench top ICPMS compatible to be coupled with Liquid chromatography required for Environmental applications having following minimum specifications:

1	Sample Introduction system	Sample Introduction Kit including Peltier Cooled Spray Chamber quartz/PFA Nebulizer, Ni Sample and Skimmer cones. Suitable Accessory to aspirate liquid samples with TDS 3 % directly or better For high TDS more than 3% they should provide necessary accessories. HF Resistant kit to be quoted in the offer including Spray Chamber, Nebulizer, torch, Pt cones, tubing for HF digested samples to be quoted
2	Ion Source and RF plasma:	Computer controlled 40/27 MHz RF generator operating from 500 to 1600 watts for automatic control of torch ignition, shutdown, and system warm up. The system should be able to change over from normal Plasma conditions to cool Plasma with direct control from software. The Plasma torch should have provision for software controlled alignment for horizontal position, vertical position and sampling depth.
3	Ion Extraction Interface:	Standard large orifice Ni sampling and skimming cones with suitable diameters. Pt Sample and Skimmer cones should also be quoted.
4	Ion Focusing System:	The ion extraction/deflection system should have efficient mechanism for removing all neutrals from the Ion path. The Ion path must be maintenance free.
5	Cell Technology	ICP MS shall incorporate a Cell offering operation: Standard Mode, Collision Cell (He) Mode with KED and Reaction Cell for interference removal. Reaction cell should allow Hydrogen/ Methane / Ammonia/Oxygen as applicable. Cell must be Non-consumable with zero maintenance
6	Gas control	System should have MFC device
7	Quadrupole Assembly	User definable resolution for improved dynamic range and abundance sensitivity Mass calibration assessed and automatically updated. The Mass range should be from 2-260 u or better Scan speed: 3000 u/sec or better
8	Ion Detector Assembly	The ion detector is a simultaneous dual mode discrete dynode electron multiplier, 9 order or more magnitude of dynamic range The dual-mode detector assembly must come standard with the system.
9	Vacuum System	Turbo pump should be differential pumping. In the event of power failure, either high vacuum is maintained or the



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		entire vacuum system is to be automatically back-filled by inert gas to preserve the cleanliness of the system
10	Performance Specifications	Sensitivity specifications will be considered (Guaranteed/factory specifications will be considered. Not the Typical performance.) To be demonstrated during Demo): Oxide ratio (%) CeO/Ce <2 or better Ba ⁺⁺ /Ba or Ce ⁺⁺ /Ce <3 or better Background mass 1 cps or better Short Term Stability <3% RSD or better Long Term Stability <4% RSD or better
11	System Controller and Operating System:	Suitable Data Station with all Software controls & future upgrade controls with Instrument software. Software should compatible with LC, provide comprehensive functionality for analysis through fully automated process with auto tuning.
12		NIST Certified Multi element (at least 23 elements) aqueous calibration standard (100 ml) of 6 No. with minimum 2 years self life. SRM: NIES CRM Number 31, Lake sediment SRM NIST 979 Chromium (Isotopic) SRM NIST 1577C Bovine Liver SRM NIST 3108 Cadmium (Cd) Standard Solution SRM NIST 987 Strontium Carbonate (Isotopic Standard) SRM NIST 683 Zinc, Metal Fume hood with accessories. Argon Gas Cylinder – 6 no's Helium Gas Cylinder – 2 no. Reaction Gas Cylinder like Oxygen/Ammonia, Hydrogen 1 no. each Double stage SS Gas Regulator for all the gases mentioned above – 1 no. each
13	Computer Configuration	Branded HP/Dell Personal Computer should be supplied alongwith instrument from manufacturer. • Latest Laser Jet color printer
14	-	System should have built in mass shift mode facility
15	Optional accessory	1. Auto sampler of more than 200 samples capacity to be quoted optionally. 2. The system should be supplied with software suitable for LC Speciation studies for As, Cr, Fe, Hg etc. element in plant, water and soil samples. 3. Peltier cooled organic kit for running organic samples in ICPMS 4. Quaternary HPLC should be quoted in optional
16	-	Each vendor should give the maintenance chart in terms of all the possible component which required frequent maintenance and cleaning along with their prices.
17	Consumables	List of consumables should be provided in the tender with price considering 50 samples per day and for 3 year operation.
18	Warranty/User list	The ICPMS system should be covered for 3 years comprehensive warranty. Detailed scope of warranty should be mentioned. The items which are not covered in warranty should be clearly mentioned in the bid with their price. Warranty should contain special part number like other line items. Each vendor much provide the List of customers that LC-ICPMS installed.



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19	UPS	Suitable online UPS for the complete system with at least half hour backup should be quoted.
20	Training	Basic operator onsite training for at least one week should be given at the time of installation.
21	Technical Manual / Calibration Certificate	A set of technical manuals are to be supplied with the system. Equipment will be supplied with manufacturer's calibration certificate having reference to NIST or equivalent standard.
22	Availability of consumables & spare parts	Supply of consumables, Spares, accessories for next ten (10) years to be assured

2. Specification of Upright Fluorescence Microscope with dedicated microscopic Imaging Systems

1	Frame	Microscope stand with quintuple revolving nosepiece and high color reproducible LED/Halogen transmitted light source application and high sensitivity fine focusing Knob minimum adjustment of 0.002 Micrometer
2	Optical system	Infinity color corrected for maximum S/N ratio and best optical performance from UV to near-infrared
3	Stage	Double layer rotatable mechanical stage of proportionate size with anti-corrosive and anti-friction arrangements and suitable moving range
4	Transmitted illumination system	Wide voltage range : 100-240V, built in transmitted Koehler illumination 12V-50W Halogen or 3W Super glowing white LED light , pre-centered with intensity adjustable.
5	Reflected fluorescence illumination system	Reflected Koehler illumination with alterable field diaphragm and aperture diaphragm with mercury lamp house and filament adjustable knob and 100W mercury bulb with wide voltage range (100-240 V).
6	Fluorescence attachment	EPI fluorescence attachment with mercury burner with 6 filter cube cassette having four filter blocks of Blue, Green, UV, and Violet with all standard accessories like excitation filter, fluorescence mirror, and barrier filter. The microscope with specified filter blocks should be suitable for required excitation techniques
7	Observation Tube	Tube with Interpupillary distance adjustment of 54-75 mm, (F.N.22) Must have the Trinocular port for Photomicrography attachment.
8	Condenser	Abbe or swing type achromatic condenser with phase slider for phase objective 20X
9	Objectives	Infinity or Achromatic Plan Fluorescence cum Bright Field Objectives: 4X (N.A. 0.10), 10X(NA0.25), PH1-20X(0.4) 40X(NA 0.75/0.65), and 100X (NA1.30/1.25) oil for better resolution
10	Eyepieces	Widefield eyepieces with diopter adjustment 10X(F. N. 22 or more) Interference Green Contrast Filter, dust cover, daylight filter.
11	High Resolution Camera, Software, and data acquisition systems	8 or more mega-pixel CCD camera suitable for Real Time Viewing with real time measurements on live image facility and real time image preview and capture with true color imaging, auto / manual exposure, auto / manual white balance, darkfield correction, time lapse sequence, scale bar facility (Micron Bar), magnifying function, and compatible software. Full control over all camera features, including Binning for increased sensitivity, ROI for increased image capture speed and image cropping. The data acquisition system must be equipped with core i3 processor,



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	500 GB HDD, Graphic card with DVD Rom, and Windows 7 or 10.
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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 ₹. 5000/- (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.
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. All the quotations must be accompanied with supporting documents and / or literature.
8. 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.
9. The University is exempted from paying Custom and Excise duty.
10. Proprietary items should be quoted with sole Manufacturer/Distributorship certificate.
11. Warranty/Guarantee period should be specifically mentioned in the quotation.
12. 10% Performance Bank Guarantee on the ordered value covering the warranty period is required for items of higher values for foreign equipment as well as Indian equipment.
13. No Advance payment will be made. However, for foreign supplier, advance payment may be considered by FDD/Wire Transfer/LC etc.. In such cases 10% Performance Bank Guarantee should be submitted before issuing FDD/Wire Transfer/LC, covering the warranty period.
14. The University reserves the right to accept or reject any or all the quotations without assigning any reason.
15. Quoted price should be inclusive of essential accessories and should be CIF Tezpur University, Tezpur
16. Applications for release of EMD should be submitted to the Registrar/ Joint Registrar.
17. Apart from the above terms and conditions the University has the right to include any other terms and conditions as and when felt necessary.
18. Authorization/Dealership Certificate of the Company(s) whose product has been quoted has to be provided.
19. **Quotation should be submitted in the DROP BOX placed in the reception of the Administrative Building of the University within 15 days from the issue of the notice. If posted/couriered, should be reached within 15 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