



Department of Environmental Science
Fakir Mohan University
Vyasavihar, Nuapadhi, Balasore, Odisha-756089
Website: www.fmuniversity.nic.in

No. FMU/Env. Sc./55/ 535

Date: 22.10.24

Indicative Notice Inviting Tender

Sealed quotations are invited from interested Dealers, Suppliers and Manufacturers with valid GSTIN certificate, PAN card and authorised dealer certificate for supply of **Lab Equipment/ Instruments** for PG Dept. of Environmental Science, Fakir Mohan University, Balasore. The last date for submission of quotations by Regd./Speed Post is **12.11.2024 04:00 PM**. For details please visit the University web site www.fmuniversity.nic.in.

P. Singh
22/10/24

GENERAL TERMS AND CONDITIONS

1. Submission of quotation/ tender/ bid in Two Bid System

The Bid/ Tender/ Quotation shall be submitted in two-bid system i.e. Technical Bid & Financial Bid. Technical and Financial bid of the quotation should be separately sealed in two envelopes and it must be clearly mentioned on the top of the envelopes as Cover-A (Technical Bid) and Cover-B (Financial Bid). Both the sealed envelopes (A & B) should then be put in one outer cover indicating thereon:

- i) Reference No. of Tender (in Capital letter on the top of the envelope);
- ii) Tender regarding (in Capital letter on the top of the envelope as **Lab equipment**
- iii) Due date for submission of Tender;
- iv) Name and Address of the firm:

The technical bids are to be opened by the Purchase Committee for evaluation. In the second stage the financial bids of only the technically acceptable offers will be opened for further evaluation, scrutiny and ranking for awarding the Work Order/ Supply Order.

1.1. Technical Bid Should Contain the Following Documents:

- a) The detailed specifications of the equipment along with make and model with respect to the specification specified by the University should be submitted as per the format enclosed in **Annexure I**.
- b) Technical Literature in support of the Lab equipment
- c) Copy of Valid GSTIN Registration Certificate.
- d) Copy of PAN.
- e) Copy of Income Tax Return for last 03 years.
- f) The authorisation certificate of OEM/ authorised Manufacturer/ Distributor/ Dealership Certificate for respective Equipment/Chemical/ Glassware/ or other consumable items.
- g) **EMD @ 2%** of quoted amount in the shape of Bank Draft drawn in favour of **PI, Department Project Fund (Environmental Science), F M University, Balasore** payable at Balasore with three-month validity.
- h) **Non-refundable tender fee Rs. 500/-** in shape of Demand Draft in favour of **PI, Department Project Fund (Environmental Science), F M University, Balasore** payable at Balasore with three-month validity.

1.2. Financial Bid Should Contain the Following Documents:

- a) Break up price as per format enclosed in **Annexure-II**.
- b) Total Price must include all admissible taxes including transportation charges, delivery and installation charges at the PG Dept. of Environmental Science, F M University, Balasore – 756089 trial operation, comprehensive training and clearance charges. The University will make necessary payment in Indian currency only.
- c) No conditional price will be taken into consideration. No escalation of the price in later stage is acceptable.
- d) Warranty period details should be clearly mentioned

2. Goods Eligibility:

ISI, CE, ISO, US FDA/ IEC 60601 or equivalent certificate

3. Other Terms and Conditions:

- i) The cost of the tender is **Rs. 500/- (Non-refundable)**.
- ii) Submission of quotations without tender cost, EMD along with the Technical Bid and received after due date and time will be summarily rejected.
- iii) The quotations completed in all respect should reach to **The Head, PG Department of Environmental Science, Fakir Mohan University, Vysa Vihar, Balasore, PIN -756089 through Speed/Regd. Post (Indian Postal Service) only** on or before **12.11.2024 04:00 PM**. The quotations received after due date or incomplete in any respect shall summarily be rejected. The tender papers will be opened on **12.11.2024 04:30 PM** in the Office Chamber of the Registrar, F.M. University, Vysa Vihar, Nuapadhi, Balasore-756089.
- iv) The supplier must be either manufacturer of the equipment or the authorised agent/ dealer of the manufacturer.
- v) The price should be quoted in the Indian currency only.
- vi) The successful bidders should supply the equipment within a period of 3-4 weeks from the issuing date of purchase order by the competent authority of Fakir Mohan University and shall be delivered to the Person concerned.
- vii) The EMD of the successful bidders will be refunded after the supply and installation of the equipment, on completion of warranty period.
- viii) The EMD of the unsuccessful bidders will be returned to the concerned quotationers immediately after finalisation of the tenders by Regd. Post.
- ix) Documents such as operation manual and other technical specifications of the equipment should be supplied by the successful bidders along with the equipment.
- x) **A warranty certificate for the period of minimum 03 years from the date of installation should be provided. Thus the basic price of all instruments should be quoted along with the warranty period covered.**
- xi) During the warranty period or later whenever the firm will be called upon to attend for the rectification of the defects/ faults in the consignments, the firm shall attend to the repair of instrument within 48-96 hours. They should render timely back up service whenever called upon. A certificate to that effect should be attached along with the invoice or delivery challan
- xii) The invoices should be submitted in triplicate in the name of **“The Head, PG Department of Environmental Science, Fakir Mohan University, Vysa Vihar, Balasore -756089”** for pass and payment. The payments will be made only after successful installation/ Training/ Demonstration of instruments supported with a certificate by the concerned PI.
- xiii) The University authority reserves the right to refuse payment in the event of unsuccessful installation and the non-submission of the installation certificates.
- xiv) **The authority of the F.M. University, Balasore reserves the right to accept/ reject any part or all quotations; and also increase or decrease the number of individual items to be procured; or cancel the entire procurement process without assigning any reason thereof.**
- xv) Once the rate is approved by the Purchase Committee and supply order is placed to the successful bidder and in the event of failure on the part of the bidder for supply of the equipment on any account, the authority reserves the right to forfeit the EMD.
- xvi) The rates/ price should be quoted in Indian currency only and payment shall be made in Indian Currency. The price shall be inclusive of all taxes (Rate & Taxes should be mentioned separately), Transportation cost and Cost of Installation and Commissioning, trial operation, comprehensive training and clearance charges.

- xvii) **The bid should remain valid for a period of 180 days from the date of opening. In case your offer has a different validity period that should be clearly mentioned in the quotation.**
- xviii) Dispute, if any, with regard to the tender/ quotation shall be settled within the jurisdiction of Balasore Court, Odisha only.
- xix) Quoting merely the lowest price does not confer any right to any bidder for award of supply order. The University's Purchase Committee, reserves the right to select any bid / equipment under the grounds of specification compliance, technologically advanced quality, proven performance track record, brand reputation, service backup support, additional warranty, offer of additional / special features, Compatibility with the existing System, Training, etc.

Pw's
22/10/24

Head, Env. Science

1. List of Equipment/Instruments

1. Kjeldahl Apparatus

Kjeldahl Digestion unit

1. No of positions:6
2. Tube capacity: 250 ml
3. Temperature range: up to 470°C with $\pm 1^\circ\text{C}$ precision
4. Graphical real time representation with LCD display. PID based control system.
5. Stainless steel body
6. Power consumption >6A
7. Front Glass Reinforced Polymer control panel
8. Single point and two point calibration of temperature
9. 2.8 KW SS316 cased cartridge for long heater life
10. Data transfer port for PC or printer connectivity
11. First in class borosilicate glass exhaust manifold with tubeless attachment

Fume Scrubber

1. Power consumption:1A
2. Pump delivery: >28 Ltr/min
3. Automatic cooling water cut off post process completion for water saving
4. Vacuum pump technology for evacuation of acid fumes,
5. Transparent PC Protective front shield and easy removable bottle tray

Kjeldahl distillation unit

1. Auto addition of Steam, distilled water, Alkali, Boric acid
2. Auto Tube Drainage
3. 7" touch screen display & Tube capacity of 250ml & 400ml
4. Body constructed of glass reinforced polymer for enhance durability
5. Programmable Reaction Time with Continuous real time monitoring of steam temperature, display at the time of water filling and other parameters
6. Tube capacity: 250/400 ml
7. Adjustable steam power 25-100%
8. Nitrogen recovery->99.5%
9. Nitrogen reproducibility $\pm 1\%$
10. Sensors for reagent level, tube error, door close
11. One point Calibration for alkali and distilled water pump
12. Two point calibration for acid pump
13. Power consumption:1000 W
14. Pre-sets and editable programs
15. Single press precise addition of alkali anytime during the distillation cycle
16. Removable bottom tray extra protection against acidic attack
17. Combined bulb and coiled condenser with condensing surface area 550 Sq cm, SS 304 steam generator
18. Reagent level sensor that indicates refilling for low levels of water, alkali and boric acid
19. Password protection for factory reset and SELV Protection
20. Inbuilt Nitrogen calculator with Nitrogen and protein in different formats

Terms and Conditions:

1. Standard comprehensive warranty and support should be **three years** without any additional cost to the purchaser from the date of satisfactory commissioning of the instrument.
2. Pre-installation requirements should be clearly specified in the quotation.
3. The supplier shall do installation, commissioning and impart training on operation and maintenance of system without any additional cost to the purchaser.
4. After Sale, Service should be available promptly
5. Additional features/accessories if any that can potentially increase the productivity and safety of the instrument should be quoted as optional items.
6. The spare parts/wear & tear consumables, if any, required for trouble free operation of equipment to be quoted separately giving the full nomenclature, rate, quantity and shelf life of each item.

2. Analytical balance

1. Complete with glass wind shield and one touch function key, having sliding door opening/closing system.
2. Overload Protection
3. Leveling feet and Level indicator
4. Anti-theft device
5. In built RS-232 WITH USB to connect PC.
6. Back lit display
7. Maximum Capacity: 220 gm.
8. Readability: 0.1 mg or lower
9. Repeatability and resolution: 0.1 mg.
10. Linearity: 0.2 mg.
11. Response time: 2 sec.
12. AC Adapter 230 Volts.
13. Tare range full.
14. Platform dimension: 90 mm.
15. Protective Covers

Terms and Conditions:

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3. All Quartz Double Distillation unit

1. All Quartz double distillation unit with
2. Distillation Apparatus power supply (DAPS) for 2.5 l model
3. Demountable Boiler Panel Series
4. Model – Vertical
5. Distilled Water Output Capacity – 2.5 Litres / Hours
6. Distillate water quality specifications
 - a. It should be free from pyrogen and organic matter
 - b. Conductivity $<1\times 10^{-6}$ S/cm
 - c. Total Solids < 0.1 mg/l

Terms and Conditions:

1. Standard comprehensive warranty and support should be **three years** without any additional cost to the purchaser from the date of satisfactory commissioning of the instrument.
2. Pre-installation requirements should be clearly specified in the quotation.
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5. Additional features/accessories if any that can potentially increase the productivity and safety of the instrument should be quoted as optional items.
6. The spare parts/wear & tear consumables, if any, required for trouble free operation of equipment to be quoted separately giving the full nomenclature, rate, quantity and shelf life of each item.

4. Portable Electric Autoclave

1. Electrically operated on 220/230 volts A.C
2. Size: 12x12x20
3. Capacity: 20 ltrs
4. Pressure range: 15 psi to 18 psi
5. Pressure indicator Gauge
6. Steam release valve
7. Aluminium Body

Terms and Conditions:

1. Standard comprehensive warranty and support should be **three years** without any additional cost to the purchaser from the date of satisfactory commissioning of the instrument.
2. Pre-installation requirements should be clearly specified in the quotation.
3. The supplier shall do installation, commissioning and impart training on operation and maintenance of system without any additional cost to the purchaser.
4. After Sale, Service should be available promptly
5. Additional features/accessories if any that can potentially increase the productivity and safety of the instrument should be quoted as optional items.
6. The spare parts/wear & tear consumables, if any, required for trouble free operation of equipment to be quoted separately giving the full nomenclature, rate, quantity and shelf life of each item.

5. Inverted Phase Contrast Microscope

Inverted Phase Contrast microscope with digital camera and image analysis software –1 Set consisting of Microscope, digital Camera, Image analysis software, Personal Computer and Accessories including Lamp, Graticule, Dust cover, Glass slide. Detailed specifications of the items listed above are given below:

1. MICROSCOPE

- a) Objectives Plan Achromatic of 4x/5x, 10x, 20x and 40x with long working distance for Bright field and Phase contrast applications.
- b) Condenser: Suitable for Bright field/Dark Field and Phase contrast with Phase rings for 20X and 40X objectives and Dark field Ring.
- c) Eyepiece: Trinocular, 300 viewing angle with IPD 50 – 75 mm with constant focus and widefield 10x eyepiece
- d) Stage: Mechanical stage: Attachable Mechanical stage for X-Y movement. Universal Holder (Adjustable) suitable for all types of specimen holder. Stage movement should have at least X=120mm, Y=78mm or more.
- e) Focus Drive: 3 step focusing coarse, medium, fine with micron scale. Step size for fine focussing should be less 1 micron
- f) Illumination: Suitable Transmitted light Halogen / LED, Stabilized power supply Mains 230V, 50 Hz.

2. COLOR DIGITAL CAMERA

- a) Minimum 5 M Pixel [2048 x 1536] Resolution
- b) USB or Fire wire interface.
- c) Screen: HD screen with minimum 12” size 2

3. IMAGE ANALYSIS SYSTEM Software should have the following features:

- a) Automatic / manual calibration with stage micrometer.
- b) Compare live and stored image side by side on the screen.
- c) Micron marker, point to point length measurement, Annotation and other parameters.
- d) All actions should be reversed by means of Undo.
- e) The annotation should be merged into the image for a permanent record.

4. TECHNICAL SPECIFICATIONS OF PC

Minimum required Core i5, 8 GB RAM, 1 TB HDD, Preloaded licensed Windows operating system and licensed MS Office with recovery DVD, minimum 6 USB ports (2.0/3.0) with 2 USB ports on cabinet front, 21” LCD monitor,

5. ACCESSORIES REQUIRED

- a) Lamp 12V 100W, 2 nos. b) Graticule having 1mm squares, 1 no. c) Dust cover for microscope and camera, 1no. d) Glass slide with calibrated scale of 1 mm, 1no

6. Other terms and conditions:

- a. Standard comprehensive warranty and support should be **three years** without any additional cost to the purchaser from the date of satisfactory commissioning of the instrument.
- b. Details of Annual Maintenance Contract (AMC) after standard warranty should be quoted.
- c. Pre-installation requirements should be clearly specified in the quotation.
- d. The supplier shall do installation, commissioning and impart training on operation and maintenance of system without any additional cost to the purchaser.
- e. After Sale, Service should be available promptly
- f. Additional features/accessories if any that can potentially increase the productivity and safety of the instrument should be quoted as optional items.
- g. The spare parts/wear & tear consumables, if any, required for trouble free operation of equipment to be quoted separately giving the full nomenclature, rate, quantity and shelf life of each item.

6. Rotary Evaporator with vacuum pump

A. ROTARY VACUUM EVAPORATOR WITH JACK-UP FUNCTION (with digital water bath)

1. Driving Unit: Encased induction motor with electronic speed control
2. Condenser: Vertical Double spiral glass coil
3. Drive Unit: Motorized drive unit
4. Jack up Function
5. Rotation Speed: up to 200 rpm or better with microprocessor control.
6. Display: digital display of rotation speed and heating bath.
7. Speed display: Digital
8. Sample Flask: 1L, Pear Style,
9. Receiving flask: 1L, round style with ball joint.
10. Evaporating flask from 50-4000 ml can be used on the same joint adapter without additional connections.
11. 1 liter Evaporating Flask and Receiving Flasks should be provided in standard scope of supply.
12. Vacuum seal: PTFE seal (seal should also be covered in standard warranty period of three year)
13. Liquid Contact parts: Glass & PTFE

Includes Digital Water Bath

1. Temp. Control range: Ambient temp. to 200° C or higher.
2. Accuracy: $\pm 1^{\circ}\text{C}$
3. Bath features: Inner Teflon coating and outer heat resistant cover
4. Bath capacity: should be between 4 to 5L
5. Temp controller: Microprocessor based PID Control
6. Safety features: Overheating protector, auto cut off at 5° C secondary over temperature cut off 250° C

B. VACUUM PUMP:

1. Two stage oil free diaphragm pump made from chemically resistant material.
2. Suction capacity in m^3/hour : $2.0 \text{ m}^3/\text{h}$ or better.
3. Vacuum pump should have ultimate vacuum of 7mbar or better.
4. Power input in watt: 180
5. Supply voltage (V/Hz): 230/50.

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3. The supplier shall do installation, commissioning and impart training on operation and maintenance of system without any additional cost to the purchaser.
4. After Sale, Service should be available promptly
5. Additional features/accessories if any that can potentially increase the productivity and safety of the instrument should be quoted as optional items.