



**DEPARTMENT OF MICROBIOLOGY
ASSAM UNIVERSITY, SILCHAR**

(A Central University constituted under the Act of Parliament of India in 1994)

Tel: +91-3842-270806, Fax: +91-3842-270802

www.aus.ac.in

NOTICE INVITING TENDERS

Assam University, Silchar, a central university invites SEALED BIDS from reputed manufacturers /authorized distributors / authorized firms with sound technical capabilities for supply, installation and commissioning of the following items, on turnkey basis, to be procured under DBT Project in the Department of Microbiology, Assam University, Silchar.

Sl. No.	Description and specification of the item	Quantity required	Last date of submission of sealed tender
01	<p>Quantitative PCR System</p> <p>Equipment should have the following specifications and features. (96-well, 0.2 mL block)</p> <ul style="list-style-type: none">* Automated System for both PCR and RealTime PCR analysis using inbuilt peltier blockwith full License for PCR Process* Latest generation Peltier-based thermal cycling system, accommodates standard 96-well plates. Reaction volume : 10 µl to 100 µl*Block technology which brings six independently controllable Peltier Blocks together for precise temperature controlled and enhanced PCR functionality.* Supports both Standard and Fast (40-cycles<30 min.)mode without change in the sample block or plastic-wares* Six color detection for flexible applications	One	Mentioned Below

	<ul style="list-style-type: none"> * Intuitive, flexible software and wizards guide * Presence/absence (plus/minus) assays with an Internal positive control * Genotyping (including real-time amplification) * Excitation by single high powered White LED with 10 years of source-life and fluorescence emission through filters on a CCD OptiFlex® technology with 6 decoupled channels with 21 filter combinations and white LED enables optimal Well-to-well and instrument-to-instrument accuracy and maximum multiplexing * The emission filters are optimized for use with FAM/SYBR Green I, VIC/JOE, and ROX dyes NED/Tamara/ABY/CY3/JUN/TEXAS RED/MUSTANG PURPLE CY5/LIZ/CY5.5 dyes. The system is readily calibrated for these dyes * Supports TaqMan and SYBR Green Chemistries * Quantitative real time PCR applications including Gene Expression analysis using relative standard curve and comparative CT (??CT) for relative quantitation and standard curve for absolute quantitation * Qualitative, post-PCR detection for automated allelic discrimination (SNP genotyping) assays and presence/absence (plus/minus) assays that use internal positive controls. * Passive reference ROX for normalization of the Non-PCR related fluctuations * Touchscreen LCD for PC-free operations Power: 230 Volts, 50 Hz operations/Single phase. The QS5 System in user-installable. *Includes: G, FAST 96 WELL RNase P VERIF PLATE TAQMAN FAST REAGENTS STARTER KIT <p>Instrument should be provided with voltage stabilizer/ Online UPS.</p>		
02	<p>Plant Growth Chamber</p> <p>Equipment should have the following specifications and features.</p> <ul style="list-style-type: none"> * Plant Growth Chamber with Racks *Internal Working Size: 2' x 4' x 6' (L x W X H) Capacity - 1200-1300 Ltrs. * Pre Fabricated Cabinet *Exterior: Double walled cabinet structure with Dirt repellent Powder Coated GI 0.5mm thick outer and interior surface Material with Stainless steel, SUS 316/304 • 60 mm polyurethane (Puff) insulation (Puff Density: 42±2 Kg/cum). • Prefabricated panel system will be duly sealed to prevent leakage. 	One	Mentioned below.

<ul style="list-style-type: none"> • A Flushed door (4' x 6') (W x H) with Double leaf door system duly insulated will be provided. The door fitted with heavy duty Gravity Hinges (Imported) with sweep gasket to prevent leakage will be provided. • The door fitted with heavy duty hinges & lock system. • Door with Silicone packing magnet door with window: • Door will be provided with 1.5ft x 1.5ft Hatch window <p>*Temperature Range : 0°C to 60°C (light on: 10°C to 60°C) *Temperature Accuracy: ±0.5°C at 25°C</p> <p>* Cooling/Heating System AC System: Hermetically sealed Compressor, Auto exchange dual evaporator, Power saving sealed compressor (Emerson Make - 1 No.), Cooling Capacity 18,300 BTU/Hr, for one unit of 1 TR AC, Grooved copper tubing, Sealed Fan motors for cooling unit & condensing unit, With sectional component auto detection failure unit</p> <p>* Special Features: With over load protector and fuses, Specially designed Evaporator Coil & condensing coil, Fan GE Make, With proper powder coated enclosure, defrosting and drainage system, Expansion valve ISI mark, Standard copper Piping & allied Fitting and pipe Insulation material with ISI Standards will be used for effective desired operation, refrigerant- CFC free. Piping & Fitting and Insulation-ISI Standards, Easy cleaning for condenser air filter</p> <p>*Humidity Range: 40 to 95% Humidity sensor: Electronic device Humidifier: Evaporation by motor with SS 316 pipe heater Or Through AHU Unit, it creates the simulated natural humidity in Growth Chamber because humid air comes out in cold form.</p> <p>Salient Features:</p> <ol style="list-style-type: none"> 1. Optimum Utilization of water. 2. Instant start 3. No thermal losses. 4. Low Noise 5. Automatic water selection system. 6. Auto off in case of non Availability of water. 7. Low electrical consumption. 8. Dual type water sensor 9. Adjustable water tank position <p>* Illumination System: 50,000 Lux Light Bank - 3 Sides: Photo synthetically Active Radiation Lamp (PAR) : Are specific action spectra lamps for plant photosynthesis of red and blue spectrum specially designed by OSRAM Germany for research and commercial production these lamps are DIN Germany & IEC international & JIN Japan standard lamp for :-</p> <ol style="list-style-type: none"> 1) Night break technique 2) Day length manipulation. 3) Supplement the natural Day light. 4) Higher rate of carbon fixation (Will be provided with Electronic Ballast) <p>* Advantage of Fluorescent Lights & Electronic Ballast / Simulator Minimum heating effect High Frequency No Flickering effect Low voltage start from 120Volts-300Volts Increase lux intensity/radiation in the spectrum Energy saver</p>		
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<p>* MCS (Microprocessor control System) for Growth Chamber Compact control panel facility will also be provided with Main control : Multi Channel full microprocessor programmable Controller display with Mains ON/ OFF Switch (L&T Make) , Light Indicator for main light, Cooling, Humidity, Heating, over temperature cut-off and over current breaker. Alice Control Panels are manufactured with best quality CRCA sheet steels for lasting strength and the fine finish. The fabrication of different parts of the panel is carried out on advanced CNC turret punching press and CNC press brake. All the modular parts and sections are subjected to seven tank process to ensure anti-rust conditioning, smooth finish and protection against corrosive atmosphere/ high Humidity environment. High quality powder coating is applied using the latest Swiss machines</p> <p>* Microclimatic Temperature Controller Specifications: Real time microprocessor based user programmable PID Controller, 4 digit LED display for displaying measured values and another 4-digit LED display for displaying settings, soft touch operation, Platinum sensor probe Pt- 100, Set point lock within the setting panel to protect setting changes, Level lock to ensure that the parameter can be read but cannot be changed, Sensor failure indication, Display resolution 0.1°. Accuracy $\pm 0.1^{\circ}\text{C}$, Automatic hysteresis control. Wide selectable temperature ranges from 0° to 100°C, 4.4 KVA load can be directly connected to the powered output, Input- 200-240 VAC, 50 Hz. Single phase, Ambient 5°-50°C, RH up to 90%.</p> <p>* Microclimatic Humidity Controller Specification: Real Time microprocessor based, On/Off control for Humidifying/Dehum, Hysteresis / Differential 1% - 9%, Delay timer 0-240 sec, Direct / Reverse selectable, Lock functions to prevent miss operating, Feather touch operation, Fast response sensor – line resistance $< 10\Omega$, Display Accuracy- indicating value $\pm 0.2\%$ ± 1 digit, Input- 200-240 VAC, 50 Hz. Single phase. , Ambient 5°-50°C, RH Up to 90%.</p> <p>* Photoperiodic Timer Programmable Specifications: Real time microprocessor based, Accuracy $\pm 2.5\text{sec/day@}20^{\circ}\text{C}$, Week Program, 20 memory locations adjustable to the minutes/Hrs, 150 Hrs. power backup, Random switching can be activated by pressing any key, Summer/ Winter time changeover, Program Saving By EEPROM, Input- 200-240 VAC, 50 Hz, Single phase, Ambient 5°-50°C, RH Up to 90%.</p> <p>* Shelves –6 EA Heavy duty Stainless steel shelves with rounded inner chamber corner for easy cleaning will be provided inside the Chamber.</p> <p>* Electronic Voltage Stabilizer (Blue Bird Make - ISO Certified) Voltage Range 180-240 Volt. Capacity 10KVA Auto cut off device inbuilt With time delay relay</p> <p>* Electrical Device: High quality MCBs needed in electrical fittings to avoid any damage due to short circuit. Heat generating parts of the electrical fittings such as tube light chokes will be placed outside the structure, Complete high / low current / voltage breaker, Safety connection lit for water supply and drainage, including water hose loses, over temperature protection / low water level warning and cut out should be provided</p> <p>* Controlled CO2 in let option</p>		
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	Instrument should be provided with voltage stabilizer		
03	<p>Soxhlet and Rota evaporator</p> <p>** Rota evaporator Equipment should have the following specifications and features. * 6 types of flasks ranging from 50ml to 3000ml * The system equipped with an accurate speed controller. * The main control system is equipped with digital displayer that indicates speed and RPM values at the current state. The digital controller of water Bath can cover the ambient temperature up to 80°C * If water level at heating bath goes down to below the certain threshold, the safe guard system will turn off the main power automatically. * Speed Control 20-280 RPM * Vertical type condenser * Standard distillation * Continuous supply device for large capacity * Central connection * Dimensions(W x D x H):620 x 410 x 879 mm * Power source: AC 220V,50/60 Hz 2-5A * Heating Bath power Wattage:1000W,4.5A * Capacity:4.3L * Size:245H-120 * Weight:19.5Kg</p> <p>* Vacuum Pump Pump speed 100L/min With perfect/Equivalent Motor:¼ HP Motor Speed:400RPM Ambient operation Temp.Range:10°C -40°C Power source:220/230V,50/60 Hz 2A</p> <p>** Soxhlet Extractor</p>	One	Mentioned Below
		Four	Mentioned Below

Closing date of sealed tender: 29-09-2021

Opening date of tender: 29-09-2021

TERMS & CONDITIONS FOR SUBMISSION OF TENDER

1. The tenders complete in all respects should be addressed to **Prof. Piyush Pandey, PI and Head, DBT Project, Department of Microbiology, Assam University, Silchar788011, ASSAM.**
2. The tenderers for equipments must submit the bid(s) in two-bid system (Technical and Financial in separate sealed envelopes) along with EMD of Rs. 47000/- and Tender Fee of Rs. 500/-.
3. Tenders by e-mail, Fax, Telex, Telegram will not be accepted. Tenders must be submitted in sealed envelope only clearly indicating **“TENDER FOR ITEMS FOR DBT /Microbiology-2021”**
4. In case of any modification in specifications / terms and conditions / any clarification to the bid document, it will be hosted in the university website only and the bidders are requested to log to our website from time to time and no separate corrigendum will be issued in this regard.
5. The rate should be exclusive of taxes and applicable tax should be clearly indicated.

6. The rates should be quoted along with supporting documents of specifications, technical features, list of users and authorized dealership documents (if applicable).
7. Details of availability of after sales support will have to be furnished.
8. **The university is exempted from paying Customs and Excise duty.**
9. Proprietary items should be quoted with sole Manufacturer / Dealership certificate. Without dealership or manufacturer's certificate no bids will be accepted.
10. No advance payment will be made. However, if items are of foreign origin, advance payment can only be made in the form of vide **LOC/FDD/Wire Transfer**.
11. Items of foreign origin should have insurance up to installation site.
12. If any item / equipment delivered in damaged condition, the equipment should be replaced with new one immediately.
13. In case of equipment of foreign origin, the Indian agent should submit one undertaking in nonjudicial stamp paper, stating that if any equipment delivered in damaged condition they will be liable to replace the same with a new one **(applicable only when order is placed)**.
14. The university reserves the right to accept or reject any or all the bids without assigning any reason whatsoever.
15. GST registration certificate and PAN to be enclosed by the bidders.
16. **EMD amount to be submitted in the form of call deposit/DD in favour of the Assam University, Silchar to be enclosed with the financial bid.**
17. Technical and Financial Competence: A tenderer must possess the technical competence i.e., having service engineer and/ or associated technical manpower with minimum technical qualification preferably a Diploma in Computer Engineering/ Electronics Engineering. The bidder should have minimum annual business transaction of at least Rs. 50,000,00.00 during last financial year.
18. 3-year on-site warranty on all equipments.

Sd/-
Prof. Piyush Pandey
PI and Head,
DBT Project
Department of Microbiology
Assam University,
Silchar – 788 011, INDIA

Copy to:

1. Copy to Secretary to VC, AUS for VC's kind information.
2. The Head, Department of Microbiology, AUS.
3. The Registrar, AUS.
4. The Finance Officer, AUS.
5. File for record.