Indian Institute of Technology - Kanpur
Department of Biological Sciences & Bioengineering

Enquiry Number: BSBE/IITK/NC/BA2, dated: 20/09/2013 and Revised 23/09/2013.

Sub.: Inquiry for the supply of equipment for the "Cell Culture Facility".

Opening date: 20th September 2013 at 10:00 AM
Closing date: 27th September 2013 at 5:00 PM (extended to 30th September 2013 at 5:00 pm)

Sealed quotes (technical bid and price bid separately sealed) are invited for the supply **of Cell Culture Facility** as per the specifications given in the next page.

Your quote should mention/include the following:

- Maximum discount if any should be offered and mentioned.
- Quoted price should include the cost for installation, warranty and required accessories (see below).
- Validity of the quote at least for 90 days.
- FOB (indicating port of shipment) and CIF (New Delhi) values should be quoted separately if import is required. For quotes in INR, the price quote should be for delivery at Kanpur.
- The quote should cover insurance for transport up to Kanpur.
- Indian agency commission if applicable (should be certified by the principal if no agency commission is applicable) in case of import.
- Authorization certificate from the principal if you are a local agent.
- Terms and conditions for the payment, including the banker's name of the principal and the account number, if any, for electronic transfer.
- Include proprietary item certificate if applicable.
- Technical literature to support your product (in technical bid).
- Users' list with contact address in technical bid.

Note: Offers for item # 2 should quote for accessories mentioned on the next page.

The quote should reach the undersigned **on or before 5 pm on 30th September 2013**. The envelope should be marked as **"Cell Culture Facility".**

For any query, contact:

Dr. Bushra Ateeq
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Cell Culture Facility

Essential components and features:

Item No. 1: Biosafety Cabinet Type II Class A2 – (Quantity 1)

Specification: Four (4) ft cabinet Bio-safety cabinet of Type II class A2 in which closest to 70% air should be re-circulated and 30% of the air should be exhausted. The working surface should not be less than 30" x 47" x 18" inches.

- Dual DC motor must automatically adjust the airflow speed without the use of a damper to ensure continuous safe working conditions, even without maintenance adjustments.
- The cabinet must use a pressure sensor (rather than anemometer) to detect pressure drop across the supply filter, rather than in just one point across the down flow.
- The front window must be 8" sash opening and be made of laminated safety glass. Working area should be made up of stainless steel.
- Drain pan (beneath the work tray) should be made up of Stainless steel to avoid contamination.
- The front of the cabinet must be angled 10º to help minimize glare.
- The cabinet must automatically reduce fan/blower motor speed to 30% when the front window sash is in closed position.
- The Bio safety Cabinet should be NSF certified, NSF tested cabinet is not accepted.
- The cabinet Should be provided with Microprocessor controller and large LED display for inflow and Down flow air velocity and hours of operation, Audible and visual Alarms for HEPA filter failure, blower failure, airflow speed failure, Incorrect window position.
- The cabinet should be provided with taps for Vacuum, and Combustible Gas Tap adjustable Height Stand, UV Light and one set of preferably detachable arms rest.

Item No. 2: CO2 Incubator – (Quantity 1)

Specification: CO2 Incubator with polished stainless steel chamber & sturdy stainless steel shelves, and temperature must range 5^{o}C above ambient to 50^{o}C and must maintain temperature uniformity to ±0.2 ^{o}C @ 37 ^{o}C. Interior Volume: Minimum 180 liters.

- CO2 : 0-20%. Control, Range Better than ±0.1%, measures with T/C sensor. Readability and Setability 0.1%. Humidity : around 95% @ 37^{o}C (98.6F)
- Should have heat sterilization cycle of 140^{o}C with 'Overnight" cycle operation made possible by total cycle time of 12 hours. Audible alarm if the outer door is open during the sterilization cycle. Should have access code for activating cycle.
- Microprocessor Control System for giving errors messages. Should guide through the cycle with start-up and cycle status messages during decontamination phase.
- Class 100 HEPA filtered chamber airflow - 100% filtration of chamber air every 60 seconds to clean room particulate and air borne contamination to class 100 air quality standards thereby providing constant protection against contaminations.
- Class I00 standard reached in under 5 minutes from door closing - air quality recovery provides near-immediate protection against particulates
- The system should have Built-in preventive maintenance system with adjustable timeframe and snap fit in-chamber HEPA filter.
- System should have good quality inner door air tight gasket which should be removable and cleanable, and adjusts continually to ensure a tight seal. Unique Filtered Air Exchange system - Minimizes the risk of condensation in the unit, even in hot humid ambients. Chamber condensation heightens the risk of contamination.

- Microbiological filters on all gas inlets and outlets and sample ports for reducing contamination.
- Microprocessor control/monitoring system with displays for temperature and CO2. Alphanumeric message center which is easy to read, and easy to program with constant display of operating parameters and alphanumeric status messages.
- Automatic electronic start up and automatic CO2 auto zero on an incubators.
- Programmable tracking alarms for temperature and CO2.
- All probes and sensors located inside the chamber and Field reversible inner and outer doors.
- Dual—directed air flow to provide quicker temperature recovery and better uniformity.
- Unit should be stackable with stacking brackets included to maximize lab space.
- System should have option of humidity monitoring, antimicrobial solid copper interiors, automatic gas tank switchers, data output ports. Incubator should be UL listed, CSA certified and CE marked.

Accessories:

i) Power back-up UPS – (Quantity 1)

Specification: A suitable online UPS of 3 KVA power capacity with one hour of battery backup should be provided that must support both biosafety cabinet and CO2 incubator.

ii) CO2 Gas Regulator– (Quantity 1)

Specification: Standard Stainless Steel regulator for the supplying CO2 to the CO2 incubator.

iii) Vibration free clean surface assembly – (Quantity 1)

Specification: Vibration free clean surface for housing incubator with optimum work area for preparatory experiments. Assembly should be made up of heavy iron frame and granite top. Measurements: 14 ft length, 2 ft width and 3ft height.

Item No. 3: Fume Hood for sample preparation – (Quantity 1)

Specification: Three (3) ft Fume hood made up of industrial grade fire resistant commercial stainless steel (SS-304 grade) with toughened glass (with sliding motion) and lined completely with FRP lining. The working surface should not be less than 3’ x 2’ x 2’ ft.

- Should have Ergonomic Design, Low Noise and Vibration Levels, Conforms to US Federal Standard 209 B and Calibration and Protocol Documentation.
- Should have optimum face velocity of 80 feet-100 feet per minute with an accuracy of + 10 feet/minute.
- Unidirectional Air Flow Control with Three Step air flow speed controller.
- Should have fluorescent light illumination more than 800 Lux.
- Noise level less than 60 db.
- Should have gas/air/vacuum line cocks.

Item No. 4: Air Curtain – (Quantity 1)

Specification: Air Curtain suitable for door width of 1500 mm (5 ft.). Motors should be used off continuous rating with sealed ball-bearings. Should have high quality aluminum sheets, duly balanced both, statically as well as dynamically on computerized digital balancing machines, designed to provide uniform air with minimum noise and no vibration. Should be high velocity models (Approx 10 m/sec).

Warranty period (from date of installation): For item No 1 and 2: Minimum 3 years. For item No. 3 and 4: Minimum 1 year.