

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

Enquiry Number: IITK/BSBE/2016-17/AK/NC 04; Dated: 01-08-2016

Sub.: Inquiry for the supply of: “BOD Shaker/ Incubator”

Opening date: August 1, 2016 at 3:00 PM

Closing date: August 8, 2016 at 5:00 PM

Sealed quotes are invited for the above mentioned laboratory products 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 60 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

**Note: Offers should quote for all components of this facility (see next page for details).
Quotes that do not offer all components will be disqualified.**

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BOD SHAKER/INCUBATOR must possess the following specifications:

Brushless Induction Motor with variable frequency drive suitable for continuous operation
Communication as per USFDA Guidelines.

Step less variable frequency drive with gentle shaking start and maintain set speed

Maximum shaking capacity - 9 flasks x 2000 ml

Powerful fan motor for forced air circulation & Heating by long life SS tubular heaters

Validation protocol with IQ, OQ, PQ Documentation as per ICH guidelines

Counter balanced mechanism for high stability in uneven load of different sized flasks

Microprocessor controller with 4" LCD display for display of shaking speed & temperature

Battery Backup for Controller, Auto tuning of controller, Self-Diagnosis for errors

Power failure and resumption recorded with date and time

Machine filled PUF insulation to eliminate void pockets

Unique design of thermal barrier for better energy efficiency

Hermetically sealed Compressor with CFC free refrigerant

Universal Shaking Platform to accommodate different sized assorted flasks

Additional tray to store samples, Nine Programs memory

Histogram format of 24 hours temperature recording, Settable High / low alarm points

High temperature safety cut off & alarms for high flow set temperature

Electrical circuit breaker and Overload cut off

Memory for storage of up to 1000 records

Centronic interface to record Temperature, shaking speed, Date & Time by attaching Dot Matrix printer with adjustable print interval, Chamber calibration port on side

Temp. Range and Accuracy: 5°C to 60°C, $\pm 0.5^\circ\text{C}$

Internal Volume: 215 Liters approx

Platform size: 580 mm x 600 mm

Shaking Speed; 20 to 250 rpm

Shaking amplitude: 25 mm

Temperature control Microprocessor with PT-100 sensor

Display: 4" LCD Screen, Large size Display for ease of reading

Power Failure Alarm: Audio Visual Alarm

Door Open Alarm: Audio Alarm in case door open for over one minute

Temperature Variation Alarm: Set Temperature $\pm 2^\circ\text{C}$, Audio Visual Alarm

Illumination: 8 Watts Fluorescent Tube

Internal Body Material: Stainless Steel

External Body Material: Powder Coated CRCA Steel

Insulation: CFC free polyurethane foam 70 mm minimum for Body & 80 mm for Door

Noise Level Less Than 65 db

Optionally Quote for:

Alarm report with mention of alarm condition

Mean Kinetic Temperature able to be calculated for any days & alarm deviation report

Reports in graphical and tabular form

Data Stored in PC server with Lan connectivity and monitored on any PC with password authentication

Multi chamber data acquisition on single software

Communication through RS485/TCP-IP