



**DEPARTMENT OF BIOTECHNOLOGY**  
**Indian Institute of Technology, Madras, Chennai, 600 036.**

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Date: 29.11.2018

**Ref: BT/GSAT/2018/034/SPL**

**Dt. 29.11.18**

**Due Dt. 19.12.18**

1. Quotations are invited in duplicate for the various items shown below/overleaf/ enclosed list.
2. The quotations duly sealed and super scribed on the envelope with the reference No. and due date, should be addressed to the undersigned so as to reach him on or before the due date stipulated above.
3. The quotations should be valid for sixty days from the due date and the period of delivery required should also be clearly indicated.
4. If the item is under DGS & D Rate Contract, Rate Contract Number and the price must be mentioned. It may also please be indicated whether the supply can be made direct to us at the rate contract price. If so, please send copy of the R.C. (Please note that we are not Direct Demanding Officers).
5. Relevant literature pertaining to the items quoted with full specifications (and drawing, if any) should be sent along with the Quotations, wherever applicable. Samples if called for should be submitted free of charges and collected back at the supplier's expenses.
6. **Local Firms:** Quotations should be for free delivery to this Institute. If quotations are for Ex-Godown, delivery charges should be indicated separately.
7. **Firms outside Chennai:** Quotations should be for F.O.R Chennai. If F.O.R. Consigner stationer freight charges by passenger train/lorry transport must be indicated. If Ex-Godown, Packing, forwarding and freight charges must be indicated.
8. The rates of Sales/General Taxes and the percentage of such other taxes legally leviable and intended to be claimed should be distinctly shown along with the price quoted. Where this is not done, no claim for Sales/General Taxes will be admitted at any stage and on any ground whatsoever. **The taxes leviable should take into consideration that we are entitled to have concessional sales tax applicable to non-government educational institutions run with no profit motive for which a Concession. Sales tax certificates will be issued at the time of final settlement of the bill.**
9. Goods should be supplied carriage paid and insured.
10. Goods shall not be supplied without an official supply order.
11. **Payment:** Every attempt will be made to make payment within 30 days from the date of receipt of bill/acceptance of goods, whichever is later.

## **General Specifications**

Three decks stackable incubator with following general specifications

Shaking –Orbital shaking

Speed - 30 to 300 RPM,  $\pm 1$  RPM with minimized vibration

Speed Controller-Digital with accuracy of 5 RPM

Temperature – with coolers for below ambient temperatures devoid of condensation issues

Heavy duty eccentric driving with minimal vibration

Each deck with separate control pads/panels (digital)

Each deck with separate door, foldable door handles with top deck at easily accessible height

Flask holders with sliders inside each deck

Flask holders compatible for 50 ml, 250 ml, 500ml, 1000ml & 2000 ml erlen meyer flasks

Inner chambers with high grade stainless steel, rounded corners

Casing with cold rolled steel

Storage memory to save settings during power outage

Auto restart after power outage

## Specifications in Detail

Control Modes	Fixed parameters & programmable
Shaking mode	Orbital
Control unit/Panel	Digital
Volume/ Compartment	180 -200 L
Temperature Range (°C)	4-60
Accuracy (°C)	0.1
Timer	In minutes
Control Processor	P.I.D microprocessor
Heat transfer	Forced air convection
Shaker Trays	To be included /Slider with sticky mats or Flask Holder
Exterior Dimensions (WxDxH)	4.5x3.5x6.5 (in feet)
Gross Weight (Kg)	Shall not exceed 750 Kgs
Power requirements	Shall not exceed 4000 W
Electricity	220-240 V, 50/60 Hz
Standrards	ISO
Default modes/Shortcut control settings	Automatic cooling control, Power off recovery, Dedicated door switch/control
Temperature uniformity	±1°C throughout the deck at ambient temperature
Security features	Compressor overload protection, Over temperature protection, Minimal running noise and other electrical protections
	Upgradable with LED units for algal/ plant cell cultures

- ❖ Tenders should be submitted in Two-bid system: separate technical and financial bids