



DEPARTMENT OF BIOTECHNOLOGY
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MUKESH DOBLE
Professor and Head

Date: 13.06.2013

Ref: BT/GSAT/2013/14/SPL

Dt. 13.06.13

Due Dt.08.07.13

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.

Specifications for Bioreactor

Vessel	Glass vessel with a maximum working volume of 1 L
Agitation	Rushton turbine impellor with 6 blades X 2 blades along the shaft
	Agitation range 50 - 1000 rpm with manual setting/programmable control
	Removable baffles
Temperature	A temperature sensor with detection range : 10° C – 100° C
	Heating/cooling block/jacket for temperature control
Aeration	Orifice/porous sparger for air inlet
	Rotameter for air-flow control (1-10 Litre per minute)
	Autoclavable DO sensor with a detection range 0-200%
	DO control - 2 stage cascading
pH	Gel-filled autoclavable pH probe with detection range 2-12 pH and 0.01 resolution
	2 programmable peristaltic pumps for acid/base and single inlet ports for acid and base
Foam control	Height adjustable foam sensor
	Single inlet port for antifoam
Sampling port	Aseptic sampling port to avoid contamination
Controller units	Dissolved oxygen
	pH
	Temperature
	Antifoam
	Feed Pumps
Computer control	Controller units connected to the computer for remote control
Others	Additional single inlet port and peristaltic pump for feed addition
	Exit gas cooler

Corrigendum

1. Quotation is for autoclavable bioreactor
2. Vendors need to submit technical bid and financial bid separately
- otherwise vendor will be eliminated from tendering process
3. Technical compliance is necessary
4. Last date for tender is July 8, 2013

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Head of the Department