

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

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 Professor : GUHAN JAYARAMAN
 Date: 20.11.2018

 Ref: BT/GUHA/2018/032/SPL
 Dt. 20.11.18
 Due Dt. 11.12.18

- 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.

## SPECIFICATIONS OF LARGE CAPACITY STACKABLE REFRIGERATED SHAKER

- ♦ Should be stackable upto 3 levels.
- ♦ The shaking orbit dia should be 26 mm with speed range of at least as peed of 25-400 rpm while 3 stacked within +/- 1rpm
- ♦ Movement of the shaker should be Magnetic (or) Triple Eccentric Counter balanced drive, driven by Brushless AC drive for uniform agitation.
- $\Rightarrow$  Shaker temperature range should be from 5°C to 80°C with an accuracy of  $\pm$  0.1°C at 37°Cor better at an ambient temperature <26°C.
- ♦ Clamp should be made of single piece stainless steel material (without welding) and leaves tied with three spring.
- ♦ The platform should be capable of using assorted clamps and with option to use Sticky mat.
- ♦ A minimum space of 25mm should be available between 5 Ltr flask with cotton plug flask and top of the inner chamber for better oxygen transfer
- ♦ Control should be Membrane Keypad with Digital LED display
- ♦ Side Mounted refrigeration unit with ease of access for service to all electronic and heating/cooling components without having to un-stack the units
- ♦ Wide front glazed insulated window for clean view of culture.
- ❖ Swing down front open door with large viewing window and gas spring damper for convenient sliding of platform and resting is preferred, without disturbing the access to second or third deck when stacked.
- ♦ Should have interlocking stacking kit arrangement for shakers as standard.
- ♦ Should be future upgradable with photosynthetic light bank, Gas purging facility to address various applications on research.
- ♦ Shaker should have minimal foot print of 1.1m²(approx)and Maximum Weight of shaker should not exceed 240 kg per unit
- ♦ Optional: The universal platform should hold at least 40 nos of 250ml flasks (or) 24 nos of 500ml flasks (or) 15 nos of 1000ml flasks (or) 12 nos of 2000ml flasks (or) 6 nos. of 5000ml flasks and facility to hold test tube racks and micro plate holders.

- ♦ Height of the third unit platform should not exceed 1.6m from the ground.
- ❖ Related published document, web links and list of publication in support of your claims on shakers supplied/manufactured by you.
- ♦ Manufacturer should have the products being CE Marked.
- ❖ Number of Installations in India in reputed organization Like IIT's, IISER's, CSIR, ICAR institutions etc
- ♦ Should have service in Chennai
- ♦ Tenders should be in two-bid system separate technical and financial bids.