

**DEPARTMENT OF BIOCHEMICAL ENGINEERING AND BIOTECHNOLOGY  
IIT DELHI, HAUZ KHAS, NEW DELHI - 110016**

February 1, 2012

**NOTICE INVITING QUOTATIONS  
Sub: Purchase of Two no. Double Decker Shaker**

The Department of Biochemical Engineering and Biotechnology, IIT Delhi, requires “**Two Double Decker Shaker**”. Interested vendors are required to submit their technical and commercial bids in separately sealed envelopes and marked respectively as “Technical Bids” and “Commercial Bids” on the top of the envelope. Both envelopes should be enclosed in a sealed envelope (bearing the address of the quoting party and marked “Quotations for the Double Decker Shaker”). The single sealed envelope should be addressed to “**Professor A.K. Srivastava, Department of Biochemical Engg. & Biotechnology, IIT Delhi, Hauz Khas, New Delhi-110016**” and must reach the office of Head, Department of Biochemical Engineering and Biotechnology (Room No. I-223) latest by 17/2/2012, 5:00 pm.

**Specifications: Double Decker Shaker**

- Shaker should incorporate five Pin system and mounted with a counter balanced flywheel to ensure uniformity in motion with eccentric pin coupled by long life rubber.
- The system to have safety cut out for over current
- The system should be Upgradeable for illumination for the both deck of the systems.
- The tray size should be of 770 x 770 mm with two tiers, to accommodate various sizes of clamps with the universal tray (without changing the tray.)
- Universal tray to hold 64 Nos of 100 ml flasks (or) 64 Nos of 250 ml flasks 36 Nos of 500 ml flasks (or) 25 Nos of 1000 ml flasks (or) 16 Nos of 2000 ml flasks. **(Top Tier)**
- Universal tray to hold 61 Nos of 100 ml flasks (or) 61 Nos of 250 ml flasks 35 Nos of 500 ml flasks (or) 21 Nos of 1000 ml flasks (or) 12 Nos of 2000 ml flasks. **(Bottom Tier)**
- External dimension : 100 x 100 x 100 cm
- Shaking frequency should be 30 –200 RPM with max of +/- 2% deviation of the set value.
- The shaking amplitude of 50mm should be without deviation ensuring maximum OTR (Oxygen Transfer rate) of cultures
- The system should be driven by brush less motor
- Speed control of the shaker should possess current vector control mode using inverter system (or) V/F control mode with membrane key pad & digital display.
- Should comprise multifunctional input/output features and software functionalities configurable.
- The unit should be absolutely noise – free and vibration less even at maximum RPM.
- The unit should be CE certified to comply for international safety measures. (certificate to be provided)
- The company should be ISO 9001: 2008 certified
- Technical Demonstration of Equipment is necessary before finalization.
- **User list with contact no to be furnished for particular quoted model.**

### **Terms and Conditions -**

1. The prices quoted should be for delivery at Delhi.
2. **Taxes, if any, should be indicated separately**
3. Letter from the manufacturers in original to be attached for authenticity as authorized service provider.
4. Technical bid should contain **compliance chart** based on specifications as per NIQ, but must not contain any commercial information
5. The Institute has the right to reject any bid
6. The material should be delivered at DBEB, IIT Delhi and installation of Shaker will be done satisfactorily by vendors free of cost.
7. Delivery should be with-in 4-6 week after receiving the purchase order
8. Payment : 100 % after delivery and installation
9. Quote must be valid for 90 days from the date of the offer.