

## Technical specification of Table top refrigerated shaker with accessories

Date: 15th Dec. 2014

- 1) Shaking speed: 30 to 350 RPM with pulse width modulation of speed with  $\pm 1$  rpm control with shaking orbit not less than 2.5 cm.
- 2) Universal platform with dimensions not less than 420 x 420 mm to hold at least 25 nos of 250 ml flasks.
- 3) Temperature Range: Should be able to work from 10 to 70 °C temperature range
- 4) Temperature accuracy: Should be  $\leq 0.5$  °C
- 5) Drive Mechanism: Permanent magnet D.C motor driven with triple-eccentric counterbalanced drive with permanently lubricated ball bearings
- 6) Alarm should indicate when temperature deviates from set point, and when timer operation has expired.
- 7) Bright digital LED display of Temperature and RPM
- 8) Front open door with large viewing glass to see the cultures without door opening.
- 9) Universal Tray to accommodate various flasks from 100 ml capacity to 2000 ml .
- 10) Inner chamber should be provided with stationary shelf for stacking petri plates.
- 11) Unit should possess safety devices like
  - (a.) thermostat cut-off for temperature overshoot
  - (b.)Door sensor while opening,
- 12) Uniform air distribution accomplished by air flow fan mounted on the rear side wall of inner chamber to circulate the air horizontally ensuring better uniformity across the tray with minimum noise level.
- 13) Shaker should be Table top model with minimal footprint to use the shaker on the lab counter for space savings.
- 14) The quoted model should comply international safety standard CE certification for user safety and manufacturer should be ISO certified.
- 15) Shaker should be supplied with SS clamps with spring retainer for holding flasks of 250 ml x 10 nos, 500 ml x5 nos , 1000 ml x 3 nos & 2000 ml x 2nos.

### Few Essential Commercial Conditions to be complied by supplier

- 16) A technical compliance statement must be enclosed with the bid with relevant printed catalogue with page nos mentioned of the required specification.
- 17) Technical justification of superiority of the suppliers specifications , if any ,should be clearly brought out in the compliance statement or an additional sheet highlighting these should be enclosed .

- 18) Original company literature with offered specifications should be enclosed with the bid failing which the bid may be treated non-responsive.
- 19) Complete user list of model quoted with contact details such as e.mail & mobile numbers preferably with the name of the end user should be enclosed with quotation.
- 20) Must have installed at least 5 units of the quoted model within last three years.
- 21) The offer should be preferably made direct from the manufacturer.
- 22) In case the manufacturer chooses to offer through their authorized distributor, then only one offer should be submitted. If multiple offers are made from same manufacturer then all offers would be rejected.
- 23) Bidder should be able to demonstrate the equipment if required .
- 24) Manufacturing company should be ISO certified and the product should be CE certified.
- 25) System should be warranted for 36 months from the date of installation.

### **General Terms and Conditions: as per rules of IIT Delhi**

1. Quotations to be made in sealed envelope Technical and commercial bids must be sent separately in two sealed envelopes, subscribed with “technical bid” or “commercial bid” and put together in one envelope address to **Prof. Harpal singh, CBME, Block III/297, IIT, Hauz Khas, New Delhi-110016** latest by 07<sup>th</sup> Jan 2014.
2. Price must be quoted FOB Basis.
3. Mode of payment as per institution rules.
4. The cost should include installation and demonstration.
5. Warranty and delivery period should be mentioned.
6. Tax/Vat should be clearly indicated in the quotation.
7. Printed brochures/catalogue should be provide.

Copy to librarian: Please load this quotation on IIT website.