

**Enquiry number: IITK/BSBE/AKT/2016/01**

**Date 20<sup>th</sup> December, 2016**

**Request for submission of quotation for “Freeze Dryer”**

Sealed quotations are invited (technical and price bid separately sealed) for a Benchtop Freeze dryer with concentrator for biological applications having following features. The closing date for receiving application is **5<sup>th</sup> January, 2017, before 5 pm.**

**Specification for Benchtop Freeze Dryer with Concentrator**

1. Microprocessor Controlled CE/EU certified International brand for organic and aqueous solvent.
2. SS316 cooling coil and condenser chamber volume  $\geq 6.5$  liter, drying performance  $\geq 4$ ltr/24 hours
3. Ice condenser temperature  $\leq -85$  @ room temperature of  $25^{\circ}\text{C}$ .
4. Refrigeration System: CFC/HCFC Free, Minimum 2/3 HP X 02
5. Organic solvent resistant vacuum sensor.
6. Hot gas defrosting and drain valve
7. Digital Graphical Display interface: Ice condenser temperature, both set and current values of vacuum, process time, section time, product temperature corresponding to vacuum. Inbuilt user guide
8. Programmable System: Freezing, vacuum warmup, main drying, final drying and vacuum control.
9. Drying chamber: Acrylic drum type with minimum 12 nos. individual controlled rubber valves for drying in round bottom flask and wide neck filter bottles. Platform for drying inside chamber in beaker, tube racks etc. Additional three selves apart from platform with minimum diameter of 260 mm to be quoted.
10. Minimum six filter accessories to prevent transport of dried sample from Round bottle flask to ice condenser.
11. Vacuum pump: Compatible silent chemical resistant hybrid pump resistant to organic solvents, Pump must be automatically powered by main unit as per program, suction capacity  $\geq 5.80$  cubic Meter/Hour, exhaust filter, vacuum grease, vacuum oil.

**Concentrator Unit:**

12. Drive: Magnetic Drive, variable speed  $\sim 1500$ rpm, Sample Capacity: 72 or more 1.5/2.2 ml tubes and 6 or more 50 ml Tubes.
13. SS Chamber, Temperature : $30^{\circ}\text{C}$  to  $60^{\circ}\text{C}$  with  $1^{\circ}\text{C}$  increment, Glass Lid
14. Digital LCD Display: Rotor/chamber temperature, Timer (set and lapsed), Cover Status, Vacuum (evacuated or aerated) etc.
15. Automatic sequence of Start and Stop, Vacuum On and off based on rotor speed, Automatic aeration to prevent spitting of samples.

**Standard Accessories:**

- 1- Compatible round bottom Flask: 250mlx02nos, 500mlx02nos, Wide Neck Flask with complete: 150mlx01 no, 300mlx02 nos,600mlx02nos
- 2- 200 filters for round bottom and 200 filters for wide neck flask
- 3- Vacuum oil minimum two liters
- 4- Rotors: 24x1.5/2.2 ml X One No.

Optional: Suitable Servo Controlled Stabilizer

6x10-15ml tube X One No.

**Terms and Conditions:**

- Maximum discount should be offered and mentioned.
- Copy of the items including relevant accessories with technical specifications should be mentioned in detail.
- Quoted price should include the cost for installation, warranty and required accessories.
- Validity of the quote at least for 90 days.
- FOB (indicating port of shipment) and CIF (New Delhi) values should be quoted separately if import is required. For quotes in INR, the price quote should be for delivery at IIT Kanpur.
- The quote should cover insurance for transport up to Kanpur.
- Indian agency commission if applicable (should be certified by the principal if no agency commission is applicable) in case of import.
- Authorization certificate from the principal if you are a local agent.
- Terms and conditions for the payment, including the banker's name of the principal and the account number, if any, for electronic transfer.
- Include proprietary item certificate if applicable.
- Technical literature to support your product (in technical bid).
- Users' list with contact address in technical bid.
- Participating company should have direct presence in India with relevant application and service specialist for anytime support.
- Requirement on warranty period from installation date not less than 2 years.

Kindly send your quotation to

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