



Dhirendra S. Katti, PhD
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Tender: Enquiry for benchtop freeze dryer and accessories

Enquiry No. IITK/BSBE/2017-2018/NC-01

Enquiry Date: 26/02/2018

Closing Date: 06/03/2018

Kindly send us sealed quotations for a **Benchtop freeze dryer with accessories** against tender number IITK/BSBE/2017-2018/NC-01. Quotations should be addressed to Prof. Dhirendra S. Katti, Department of Biological Sciences and Bioengineering, IIT Kanpur, - 208016. **Please send technical and financial bids separately.** The technical bid should clearly indicate if the equipment and accessories meet each of the required technical specifications as listed below. The last date for receipt of sealed quotations is **06/03/2018**.

Minimum technical specifications

Freeze dryer:

1. Microprocessor controlled freeze dryer with all its component resistant to corrosion due to organic solvent/chemical.
2. Corrosion resistant (SS) condenser coil and condenser chamber.
3. Drying performance $\geq 4\text{ltr}/24$ hours and condenser temperature $\leq -85^\circ\text{C}$.
4. Two 051 KW compressors.
5. Hot gas defrosting, drain valve and separate venting / gas purging valve.
6. Touchscreen graphical display having access-protection by password.
7. Vacuum control with pressure control valve.
8. Sensor for product temperature corresponding to pressure curve.
9. Programmable sequencing of freeze drying processes system.
10. Functionality for leakage and performance test.

Accessories:

i. Vacuum pump

- Four stage hybrid vacuum pump that should be suitable for all types of solvents
- Minimum pumping speed of $5.9\text{ m}^3/\text{h}$.

ii. Drying chamber

- Acrylic chamber with atleast 12 individually controlled rubber valve connections.

iii. Drying in shelves

- Minimum three shelves to hold plates ~ 300 mm diameter.

- Base plate to hold shelves, beakers, tube racks, plates etc.
 - Round bottom flasks 250 and 500 ml.
- iv. Accessories for increasing the drying rate and controlling vacuum having electromagnetic pressure control to control vacuum.
- v. Accessory to prevent the product transport into the condenser
- Filter insert for each round bottom flasks.
 - Filter paper for filter inserts
- vi. Suitable vacuum oil ~10 liters for vacuum pump.

Terms and Conditions:

1. **Technical bid and price bid should be submitted in separate sealed envelopes. The two sealed envelopes could be sent together in one larger envelope.**
2. Quotations are required in a sealed envelope with enquiry number mentioned on the envelope.
3. Quotation should have minimum validity of 90 days from the date of opening.
4. Price must include all taxes and charges (including delivery, installation, etc.).
5. Quotation should carry proprietary certificates (if applicable) and authorization letters/certificates.
6. Quotation should carry list of users in India for the equipment.
7. Maximum educational discount should be applied.
8. Quoted price should be for CIF New Delhi
9. Warranty/ Guarantee should be clearly mentioned.
10. The Institute reserves the right of accepting and rejecting any quotations without assigning any reason.
11. **Only those bids will be considered valid which will have equipment with all accessories listed above.**
12. IITK has exemption on excise and custom duty. Suitable certificate would be provided by IITK if required by the supplier.
13. **Those not fulfilling any of the above criteria will be disqualified.**

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