Savitribai Phule Pune University

E tender

Notice Inviting Tender

Savitribai Phule Pune University, Pune 411007, MH, India invites sealed tender on two bids system basis from manufactures, their distributors of Indian Agents of Foreign principles for procurement of a Lyophilizer (Freeze dryer).

Tender should be submitted in two parts

1. **Technical bid: TB-1**: Lyophilizer (Freeze dryer)
2. **Financial bid: FB-1**: Lyophilizer (Freeze dryer)

Sr. No	Brief description of the item	Quantity
1	Lyophilizer (Freeze dryer) for drying of nucleic acids, protein or metabolite extracts in aqueous, acid or solvent systems from biological material	1

Tender documents with complete terms and conditions, technical specifications etc. can be downloaded from Savitribai Phule Pune University, Pune website (http://www.unipune.ac.in).

The tenders should reach Head, Department of Biotechnology (with jointly merged Institute of Bioinformatics and Biotechnology) Savitribai Phule Pune University, Pune 411007 on or before 20th November, 2021 at the **IBB building, Stores section**.

Head,
Department of Biotechnology (with jointly merged Institute of Bioinformatics & Biotechnology), SPPU

Technical specifications for Lyophilizer (Freeze dryer)

1. Ice condenser Capacity: minimum holding of 2.5 liters of ice before defrosting.
2. Ice Condenser temperature of minimum -84°C at ambient temperature.
3. Corrosion-free stainless-steel collector coil and condenser chamber with thick SS lid (preferably with PTFE/Teflon or other suitable coating).
4. Condenser coils should be in direct contact with the sublimed vapours for efficient cold trap. Hot gas defrosting facility to be included.
5. Compressor should be minimum 1.0 KW or 1.34 HP.
6. Chemical resistant vacuum dry pump (preferably Scroll pump) without need for oil. Designed for use with acids (at least 20%), acetonitrile and other corrosive solvents. Long life, low maintenance and solvent/acid resistant features are a must for the vacuum pump. Ultimate vacuum of around 2×10^{-3} mBar.
7. The vacuum pump must be provided with noise reducer.
8. Vacuum sensor to monitor the vacuum during process and electromagnetic vacuum control valve for faster drying must be provided.
9. Provision for vacuum control/break valve and moisture sensor should be there to detect system leakage and monitor performance.
10. Should include facility to monitor product temperature while in process on basis of vapor pressure reading.
11. Drying chamber should be with at least three stackable trays for freeze-drying liquids that can be dispensed in tubes, plates or other containers along with appropriate stands.
12. Facility to dry liquids in round bottom flasks (at least 4 or more simultaneously) with connection in Stainless Steel Manifold with appropriate filters, valves, adapters.
13. Flasks (around 12) of different capacities as needed for freeze drying are to be provided.
14. Display screen with clear layout of process data like ice condenser temperature, process time, section time, vacuum, standby/ run, vacuum set point, alerts, diagnostic tests etc.
15. Facility for data logging, storage and display that can be exported via USB or Ethernet with Password protection facility.
16. Maintenance alert settings should be displayed. These include vacuum pump related alerts, refrigeration cleaning, total operating hours and line voltage offset.
17. Should have provision of moisture sensor that prevents refrigeration or vacuum start-up when moisture is detected in the drain line.
18. The equipment should come with a compact benchtop design with small footprint.
19. Should have several installations in India and few in Pune for inspection (Installation list to be provided).
20. Warranty of minimum 2 years and efficient after sales service.

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