



Ref: NCB/F-192019/2019-2020 (N)

Date: January 13, 2020

SPECIFICATIONS FOR BENCHTOP MODEL ULTRACENTRIFUGE

Lyophilizer/Freezer Dryer System: Specifications

1. The system should be Microprocessor Controlled Laboratory scale freeze dryer with suitable vacuum pump and facility for lyophilizing the products in vials and ampoules, sealing under vacuum.
2. The system should be sterilizable freeze-dryer as it will be used for bacterial samples.
3. The system should be upright stainless steel PTFE coated collector coil and should be able to hold 4.5 Liters of ice before defrosting.
4. The system should have digital display. The digital display should be clear, easy to read LCD/LED touch screen to display all the parameters and alarms.
5. Condenser temperature should be: -50°C to -110°C
6. The system should be compact bench-top model.
7. The system should have Real time display of collector temperature, vacuum level etc
8. The system should have Operating mode both standby or run.
9. The system should have Data logger to store data and should be exported via USB or Ethernet.
10. The system should have Maintenance alert settings including vacuum pump oil change, refrigeration cleaning, total operating hours etc.
11. The system should have security lock with password to prevent changing of program and other system parameters
12. The system should have Moisture sensor to prevents refrigeration or vacuum start-up when moisture is detected in the drain line.
13. The system should have Vacuum control valve to maintain vacuum level set point.
14. The system should have both automatic and manual operating system.
15. The system should have automatic restart function in case of power failure
16. The system should have safety shuts off, if temperature exceeds to high temperature limit.
17. Vacuum pump should be High quality, corrosion resistant vacuum pump and Displacement capacity: 150 L/min. The Inlet must be properly isolated to prevent oil and air contamination of the system in the event of power failure
18. The system should have quick-disconnect drain hose fitting with silicone tubing and clamp.
19. The system should have a 304 Stainless Steel Drying Chamber and Acrylic lid with neoprene gasket and valves and plastic molded knobs for 1/2" and 3/4" flask adaptors.
20. The system Should be supplied with a glassware flask of 150ml, 300ml, 600ml and 750ml 2 sets with suitable adaptors.
21. The system Should have many optional drying chambers for multiple user requirements and quoted optionally
22. The system must have upgradation option to connect to concentrator which has the option to concentrate samples from 2ml to 50ml samples.
23. System should operate at 230 V/ 50 Hz.
24. The system should be CE/ ISO certified.
25. The system should have the warranty for 3 years.
26. The system should be supplied with all accessories required to function.
27. The product should be as per CE/IEC guideline and certificate from authorized body should be submitted. No self-declaration will be accepted.
28. The service team should be in Bangalore. Contact details of Engineer should be submitted with this offer
29. The suitable accessories for the freezer dryer should be quoted with the main offer

- 30.**The system should be installed by the trained Engineer and should be trained on Application, operation and maintenance.
- 31.**The product should be as per CE/IEC guideline and certificate from authorized body should be submitted. No self-declaration will be accepted.
- 32.**Compliance to each of the above points should be separately indicated and evidence presence for each of them (Product brochures should be highlighted wherever required).
- 33.**The service team should be stationed in Bangalore. Contact details of Engineer and office Address should be submitted with this offer.
- 34.**The past performance/service support in NCBS/INSTEM/CCAMP should be satisfactory and the technical evaluation will be done accordingly.