

**NATIONAL INSTITUTE FOR RESEARCH IN TUBERCULOSIS**

Technical specification of Laboratory Freezer -80 °C at Clinical Pharmacology Departmen  
NIRT.Chennai

<b>Sl. No.</b>	<b>Specification</b>	<b>Complaints Yes or No</b>	<b>Remarks</b>
1	Capacity: Above 600 Liters		
2	Cabinet type: Upright, Single door		
3	Exterior Cabinet construction: Heavy gauge, cold-rolled steel exterior with powder coated paint finish to resist chipping and rust		
4	Insulation: Polyurethane (or) Vaccum Insulation Panel		
5	Inner compartments: Four or more adjustable inner compartments with individual doors to improve temperature recovery after door closing and to help maintain cabinet temperature during door opening		
6	Temperature Range: Programmable or adjustable temperature from -50 °C to -86 °C with an increment of 1 °C		
7	Operating temperature of -80°C at ambient temp of 32°C.		
8	Compressors: Certified Dual stage system/ Dual Compressors. Should be Energy efficient and and it must be <60 dB while operating. Compressor should be capable to run in voltage between 190 – 270V.		
9	Controller: Microprocessor with LED display eye level with pass word protection		
10	Alarm systems: Should have alarm (visual & audible) for high & low cabin temperature, high room temperature, sensor failures, incorrect voltage settings and power failures		
11	Power: 230 Volts/50 Hz AC operation. Pull-down time to -80°C should be <6 hrs, Power Consumption should be < 12KWh/day, Heat Output should be < 800W, Power supply: The main unit, accessories, cables should conform to Indian standards & specifications.		
12	Should be equipped with castor wheels for easy movement		
13	It have time and temperature sensitive auto defrost and manual deforest function		

14	Digital temperature monitoring system capable of recording/storing freezer temperature with auto dialers to provide SMS alerts in case of temperature deviation from set points		
15	Corrosion resistant 2 inch stainless steel drawer, sliding racks to keep 2 inch high cryo boxes for the full capacity of the freezer		
16	The cryo gloves full length, ice scraper, Cryo aprons, racks and plastic cryo boxes needed for the freezers are included as essential accessories.		
17	Freezer must use CFC-FREE, HCFC-FREE non-flammable, environment friendly refrigerants .		
18	Easily accessible vacuum release port		
19	Freezer must have ISO 9001 safety requirements and CE certification or equivalent standards.		
20	One 5KVA servo stabilizer should be supplied with freezer and used during installation		
21	The ultra-low deep freezers must be quoted by Original Equipment Manufacturers with Sales and service support facilities in India through their branch office / Indian Agent (or) Indian agent with extensive sales (Minimum 5 years) and service support in India representing foreign principals / Original Equipment manufacturers. The Indian agency / dealership certificate with details of sales and service support should be enclosed with the technical bid.		
22	The firm should provide necessary original documentary evidence of the features of the offered model in the technical bid to facilitate proper technical evaluation.		
	<b>others</b>		
1.	Free Installation and training with certificates to the end-users.		
2.	Complete installation and testing the main system and the accessories to their specifications done at the site of installation free of cost. All utility requirements for installation and running the system should be mentioned in the offer		
3.	The company should provide installation qualification, operational qualification and performance qualification with log book for maintenance of the equipment at no extra cost.		

4.	Purchase orders, contact details and user satisfactory reports of the quoted model from Nationalized or reputed laboratories all over the India must be shared with quotation		
5.	Indicate the year in which the model offered was introduced into the market and confirm whether the spares for the system would be available for a minimum period of 10 years and shall not be obsolete within ten years of procurement		
6.	The entire ultra- low deep freezer should be provided WITH 3 years comprehensive and 2 years non-comprehensive warranty from the date of completion of installation		
7.	Special discount on list price of all spare parts must be given up to 10 years.		
8.	Availability of local service support and response time for a service call during and after warranty specified		