BSFD-ZLGJ (-80)°C Vacuum Freeze Drying Machine

Wide-Mouth Bottle T-Shaped Holder



Application Area

Freeze drying is a technique that utilizes the principle of sublimation for drying. It involves rapidly freezing the dried substance at low temperatures, and then in an appropriate vacuum environment, directly sublimating the frozen water molecules into a process of water vapor overflow. The substance is always at a low temperature (frozen state) before drying, and ice crystals are evenly distributed in the substance. During the sublimation process, concentration will not occur due to dehydration, and side effects such as foam and oxidation caused by water vapor are avoided. Freeze dried products are sponge like, non drying shrinkage, good rehydration, and have low moisture content. After packaging, they can be stored and transported at room temperature for a long time.

Suitable for

Suitable for the preservation of freeze-drying bacterial strains in fields such as biological research, medicine, pharmaceuticals, chemical engineering, food processing, colleges, etc.

(Freeze drying can protect the activity of thermosensitive substances, preserve their nutritional value well to prevent oxidation, have no additives, and maintain their freshness for an extended period of time. After drying, the substance is loose, porous, and sponge like. After adding water, it dissolves quickly and completely, almost immediately restoring its original shape.)

Key Features — Wide-Mouth Bottle T-Shaped Holder (-80°C)

- T-shaped multi-port manifold for simultaneous processing of multiple wide-mouth bottles
- Designed for high-volume and bulk sample handling
- -80°C condenser system for deep freezing and efficient sublimation of low eutectic solvents
- Compatible with wide-mouth glass bottles for easy loading/unloading
- High vacuum system ensuring rapid and efficient drying cycles
- Microprocessor-based control with digital display for precise operation
- Programmable freeze drying cycles (freezing, primary drying, secondary drying)
- Uniform temperature distribution for consistent product quality
- Chemically resistant stainless steel manifold and connectors
- Individual valve control for each port for process flexibility
- Transparent containers for real-time monitoring of samples
- Compact, mobile design with integrated vacuum pump compatibility
- Low noise operation with energy-efficient refrigeration system
- Easy cleaning, maintenance, and quick changeover between batches
- Safety features including over-temperature, vacuum protection, and system alarms

Product Features

- Rapid cooling, uniform temperature on the inner wall of the cold trap, professional gas guiding technology, and good water capture effect.
- Adopting the brand Secop compressor and single machine hybrid environmentally friendly refrigeration technology.
- Configure the pre-freezing function of the cold trap sample, without the need for a matching ultra-low temperature refrigerator or liquid nitrogen treatment.
- 7 inch color LCD touch screen, user-friendly human-computer interaction interface, equipped with lock screen function, optional remote control on mobile phone and computer.
- The main interface of the display screen is concise and clear, displaying parameters such as cold trap temperature, vacuum degree, sample temperature, and running time. The operation is simple and direct, and misoperation permission management is set.
- With data viewing, export, and deletion functions, freeze-drying data is automatically saved to prevent data loss, and supports USB data export.
- It has functions of viewing, exporting, and deleting, automatically saving freeze-dried data to prevent data loss, and supports USB data export.
- Support freeze-drying of ampoules, penicillin bottles, glass flasks, plasma bottles or plates.
- The cold trap has an independent pre-freezing function for early samples and is equipped with a one-click defrosting function.
- Built-in maintenance reminder function to remind users of instrument maintenance.
- Equipped with vacuum alarm function, it can timely remind users whether the vacuum level is normal.
- High precision micro adjustment vacuum valve, which can achieve micro adjustment of vacuum degree.
- Equipped with stainless steel corrosion-resistant vacuum connecting pipe, equipped with standard KF25 vacuum quick coupling clamp.

Technical Parameter

Model	BSFDZLGJ-12 -80°C Wide-mouth Bottle T-type Holder
Freeze dried area	100ml (2 pcs), 150ml (2 pcs), 250ml (2 pcs), 500ml (2 pcs)
Cold trap temperature	-80°C
Catching water volume	4 Kg/batch
Standard vacuum degree	≤ 5Pa (no-load)
Ultimate vacuum	0.1Pa
Pumping speed	2 L/S
Bottled loading capacity of penicillin	None
Whole machine power	950W (including vacuum pump)
Machine size:	Width 480 × Depth 600 × Height 770 mm
Machine net weight	63 kg
Packaging size	Width 620 × Depth 850 × Height 920 mm
Total weight with packaging	140 kg
Power supply	AC220V 50Hz or 110V/60Hz
Application environment	Environmental temperature ≤ 35°C
Operating noise of the entire machine	≤ 55 dB
Warranty Period	Free one-year warranty for the entire machine