

5. SD-8000 Lab Spray Dryer, 2L/h, water-based solution



Labfreez SD-8000 Spray dryer is mainly used in the production of micro-particle powder in universities, research institutes and food and pharmaceutical chemical enterprises. It has broad-spectrum applicability to all solutions such as emulsions and suspensions. It is suitable for drying sensitive substances such as biological products. Biological pesticides, enzyme preparations, etc., because the materials sprayed are only subjected to high temperature when sprayed into mist-sized particles, so they are only heated instantaneously, and the active materials can be kept from being damaged after drying.

Features:

- It adopts large-color touch screen operation, automatic control and manual control, ten-stage program temperature control, and its own memory function, which is the only one in China.
- Full-automatic control: one-button start-up, after setting the spray process parameters, the temperature reaches the predetermined temperature, the peristaltic pump starts itself, the running animation is displayed on the touch screen, and the running process is clearly displayed; when the machine is shut down, just press the stop button, the machine is automatically safe. Shut down.
- Manual control: If the process parameters need to be adjusted during the experiment, it is convenient to switch to the manual state. The color touch screen is dynamically displayed (animation) throughout the experiment.
- Shutdown protection function: Just press the stop button when shutting down, the machine will stop running immediately except the fan, to ensure that the equipment will not burn out due to misoperation (forced off the fan).
- The spray, drying and collection system is made of high-quality stainless steel material, which makes the spray drying process in a non-polluting and stable environment, which provides great convenience for researchers to control the experimental process and experimental results. All stainless steel components are easy to disassemble and easy to clean.
- The organic solvent spray dryer has built-in imported oil-free air compressor. The particle diameter of the powder spray is normally distributed, the fluidity is very good, and the noise is very low, less than 60db, in line with the national laboratory noise standard;
- The atomization structure of the two-fluid spray, the whole machine is made of high-quality stainless steel material with

precision design, compact design, no need for auxiliary equipment, convenient to use, and lasts for a long time.

- In order to meet the requirements of the user to adjust various parameters in the experimental range, the real-time regulation PID constant temperature control technology is adopted in the design of the drying temperature control, so that the temperature control in the full temperature zone is accurate, and the heating temperature control precision is ± 1 °C.
- In order to keep the sample clean, an air inlet filter is provided.
- The feed amount can be adjusted by the feed peristaltic pump, and the minimum sample volume can reach 10ml.
- Dry powder after drying, the particle size is relatively uniform, and more than 95% of the dry powder is in the same particle size range.
- The small spray dryer is equipped with a nozzle cleaner (passing needle) for the viscous material. When the nozzle is blocked, it will be automatically cleared, and the frequency of the needle can be automatically adjusted.
- Innovative tower wall purging device with higher material recovery rate.
- Automatic cleaning function, greatly enhancing the dry sample recovery rate.
- The automatic cleaning function of the drying tower eliminates the need for manual cleaning, which greatly saves the experiment time.



Specifications:

Model	SD-8000S	SD-8000G
Chamber material	Full stainless steel	High borosilicate glass
Picture		
Control	Fully automatic control and manual control dual control mode, color touch screen dynamic display (animation) throughout the experiment	
Inlet air temperature control	30 ° C ~ 400 ° C	
Outlet temperature control	30 ° C ~ 200 ° C	
Evaporation water volume	50mL/H~2200ml/h	

Maximum feed amount	peristaltic pump adjustable up to 2200ml / h
Minimum amount of feed	50mL
Temperature control accuracy	±0.5°C, Real-time PID temperature control technology, real-time online display of inlet air temperature and outlet temperature
Drying time	0.8 ~ 1.0S
With shutdown protection function	just press the stop button when shutting down, the machine will stop running immediately except the fan to ensure that the equipment will not burn out due to misoperation (forced off the fan).
Color LCD touch screen parameter display	air inlet temperature / air outlet temperature / peristaltic pump speed / air volume / needle frequency
Nozzle diameter	0.5mm/0.75mm/1.0mm/1.5mm/2.0mm optional, and can be customized according to requirements
Time setting function	the user can set the working time of the machine by himself, without manual guarding, the working time ends the machine to stop working, no need to manually guard, which greatly saves the precious time for the customer to do the experiment.
Automatic fan stop function	After the instrument is finished, the working state of the fan should be kept, so that the glass is partially cooled. The machine is set by intelligent program. When the inlet temperature is lower than 30 degrees, the fan is automatically turned off, and there is no need to manually turn off the fan manually.
Powder particle size requirements	dry powder after drying, the particle size is more uniform, more than 95% of the dry powder in the same particle size range
machine power	2-3.0KW/Single phase 220V
Spray head cooling device	(optional)
Equipment size	1380 (H) × 770 (L) × 590 (W) mm
Outer packaging size	1500 (H) × 910 (L) × 730 (W) mm
Package weight	90KG

Note:

- Can be upgraded to a two-stage separation and collection system
- There is a nozzle cleaner (needle blocking), which will automatically clear when the nozzle is blocked, and the frequency of the needle can be adjusted automatically.
- The spray dryer is made of stainless steel, the atomization structure of the two-fluid spray, the spray, drying and collection system is made of transparent high-quality borosilicate heat-resistant glass material.
- Built-in imported oil-free air compressor, the particle diameter of the powder is normally distributed, the fluidity is good, and the noise is very low, in line with the national laboratory noise standard;
- Intelligent control system, replacing the PLC control on the market, the stability is stronger
- The machine has the function of misoperation protection. When the order of the fan and heater switch is wrong, the machine automatically reminds you to prevent the novice from mishandling the machine.
- Tower wall purging device, material yield is higher
- Can be directly upgraded to a nitrogen circulation system for drying organic solvent materials

Spare parts

Item Name	Qty
Small spray dryer SD-8000	1 set
Air compressor (built-in)	1 set
LCD screen MCGS(built-in)	1 pc
Fan RB022 (built-in)	1 set
Stainless steel drying room	1 set
Stainless steel cyclone separator	1 set
Stainless steel sample collection bottle 500ML	1pc
Stainless steel sample collection cold trap	1pc
Medical grade feed tube	1.5 m
Imported atomizer (0.5/0.75/1.0/1.5/2.0mm optional)	1 pc
Clamp LY12	1 set
Polytetrafluoroethylene gasket	1 piece

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