

# YC-3000实验室喷雾冷冻干燥机

## YC-3000 Spray Freeze Dryer

上海雅程仪器设备有限公司成功开发出实验室喷雾冷冻干燥机YC-3000，填补了国内实验室喷雾冷冻干燥研发设备领域的空白。适合在实验室内完全模拟喷雾冷冻整个过程，能用于实验室里原始配方确定/配方更新、口味的甄别、颜色的评估、稳定剂/乳化剂应用、货架期实验以及制作赠送客户之样品，实验数据可直接放大应用于工业生产。适用于热敏性、粘稠性、活性物料及含糖量高的物料的低温干燥，如中草药天然产物提取液、乳制品、生物制剂、酶制剂、水果原汁、高分子材料等。也适合纳米材料的干燥。

Shanghai Pilotech Instrument & Equipment Co., Ltd has successfully developed YC-3000 laboratory spray freeze dryer, which fills in the gap of domestic laboratory spray freeze drying equipment research and development. YC-3000 is suitable for laboratory simulation of full process of spray freezing, determination and update of laboratory original formula, taste discrimination, color evaluation, stabilizer/emulsifier application, shelf life experiment as well as customer sample production. Experimental data can be directly applied to industrial production, suitable for low temperature drying of thermo-sensitive, viscous, active and high carbohydrate materials such as Chinese herbal medicine natural product extract, dairy product, biological agent, enzyme preparation, fruit juice and high polymer materials, etc.

把喷雾干燥和真空冷冻干燥二者有机的结合起来，所需的干燥时间极短，干燥时间不超过5个小时（进料量2000ML时），极大的缩短了传统的真空冷冻干燥时间，且干燥后的物料为粉状的固体，经喷雾冷冻干燥的物品，原有的生物、化学特性基本不变，易于长期保存；

Laboratory spray freeze dryer combines spray drying and vacuum freeze drying with very short drying time, which greatly shortens traditional vacuum freeze drying time, and dried materials are powdery solid. Spray freeze dried materials do not change in biological and chemical properties, easy for long-term preservation. When watered, they resume the state before the freezing with original biological and chemical properties retained.

1、采用风冷冷凝式全封闭压缩机制冷系统，制冷迅速，结冰器温度低，吸附水份能力强，温度、真空度显示均为数字式，准确、直观；

YC-3000 adopts air-cooled condensing fully closed compressor refrigeration system that provides rapid refrigeration, low icer temperature, powerful water adsorbing capability, and digital, accurate and direct temperature and vacuum degree.

2、喷雾头为加长型（长度350mm）同心喷雾头，雾化时确保没有任何偏心而导致喷到瓶壁一侧，喷雾头安装后位置可以上下移动，以利于调整雾化位置改善喷雾干燥效果（可选三流体喷雾头，适用更多物料混合需要）；

The spray head is a concentric one. It guarantees no eccentricity during atomization that may lead to spraying to the bottle wall. The spray head can move up and down after installed to facilitate the adjustment of the atomization position to improve the spray drying effect. The spray head is made of SUS316L stainless steel. ;



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Mini Vacuum Spray freeze Dryer  
YC-3000 The world leading  
R&D solution

3、喷雾冷冻干燥物品采用空气自然加热升华，保持样品的安全性；干燥后的物料为颗粒状

Spray freeze drying adopts spontaneous air heating and sublimation to guarantee sample safety.

4、彩色LCD触摸屏参数显示：干燥室温度/蠕动泵转速/风机频率/通针频率/干燥室压力

Color LCD touch screen parameters displays drying chamber temperature/peristaltic pump rotating speed/airflow frequency/ de-blocker frequency/drying chamber pressure

5、处理量：最大2000ml/次（干燥时间不超过5小时）  
Capacity :2000 ml /batch

6、喷雾冷冻进风温度：<-55℃ 出风温度：<-25℃  
Spray freezing temperature: <-55℃

7、冷阱温度：≤ -60℃

Cold trap temperature: ≤-60℃

8、真空泵功率：<1.3KW

Vacuum pump power: <1.3KW

9、极限真空压力 <20Pa（空载）

Ultimate vacuum pressure: <20Pa (idle)

10、喷雾压力：2-5BAR（喷雾压力可调）

Spray pressure: 2-5BAR (adjustable)

11、空压机产气量：4.2M<sup>3</sup>/h

Air compressor gas production rate: 4.2M<sup>3</sup>/h

12、冷风风量：5.5M<sup>3</sup>/min

Cold air volume: 5.5M<sup>3</sup>/min