

## YC-015实验室喷雾干燥机

YC-015实验型喷雾干燥机是上海雅程仪器设备有限公司与美国PILOTECH公司在实验喷雾干燥领域多年合作开发的结晶。整机设计紧凑，可安放在专门设计的不锈钢机架或实验台上，自成一体，无需其他设施即可运行。一键式开机，彩色液晶触摸屏操作，可采用全自动或人工监控两种运行模式，方便操作和实验过程的监控。

YC-015, made by Shanghai Yacheng Inc. cooperating with PILOTECH Inc on Spray drying research for many years, is self contained and supplied complete and ready for immediate operation. ALL major components are housed within a stainless steel cabinet and the unit can be used on a bench top or with an optional stainless steel stand. The system was designed to be stand by a keyboard, conducted by a colorful crystal screen of touch guidance mode, and allowed two modes of run: Automatic-mode, and Eye-monitored mode for the purpose of easily controlling experimental process.



## 技术参数 TECHNICAL INFORMATION

全自动控制与手动控制双重控制模式，整个实验过程彩色LCD触摸屏动画显示：

全自动控制：一键式开机，设定喷雾工艺参数后，温度到达预定温度，蠕动泵自行启动；

手动控制：可方便从自动状态切换至手动状态来修改参数  
Two modes of run: Automatic-mode, and Eye-monitored mode for the purpose of easily controlling experimental process . PLC controller, LCD touch panel control fascia with flow path of system.

喷雾头水冷系统以应用于热敏物料——食品和生物材料特别适用(选配)

With cooling device for temperature-sensitive material (optional)

关机保护功能：关机时只需按停止键，机器除风机外立即停止运行，保证设备不会因为误操作（强行关风机）而导致加热部分烧坏。

Shutdown protection: press the stop button and the machine (except the fan) stops working immediately so that heating parts will not be burnt due to misuse (forced shutdown of the fan).

内置进口全无油空压机，喷粉的粒径呈正态分布，流动性好，噪音极小，符合国家实验室噪音标准；

Built-in air oilless compressor , the sound is low than 60db

喷嘴口径：0.5mm/0.7mm/0.75mm/1.0mm/1.5mm/2.0mm可选，并可根据要求定制，设有喷嘴清洁剂（通针），在喷嘴堵塞时，会自动清除，通针的频率可自动调整  
standard with 0.7 mm jet and other sizes are available as accessories

物料处理量：1500mL/h~ 2000mL/h

Evaporation rate of water at inlet temperature of 250℃ using Standard: Approximately 1500 mL/hour~ 2000mL/hour

最大进料量：蠕动泵可调最大为2000mL/h 最小样品量：30~50mL（视物料固形物含量差异）

Max. Sample feed: 2000mL/h

整机全不锈钢制作，二流体喷雾的雾化结构，喷雾、烘干及收集系统采用透明的优质高硼硅耐热玻璃材料制造

Spray chamber, cyclone separator, receiving tank are all made of Borosilicate glass which can resist strong acid/alkali, high temperature. It can work in a no-pollution and stable environment, and the whole process can be inspected. All the spare parts are easy to install and wash.

彩色LCD触摸屏参数显示：进风口温度/出风口温度/蠕动泵转速 /风量/通针频率

As standard a touch screen to display temperature, airflow volume, air pressure, pump speed and de-blocker frequency.

实时调控PID恒温控制技术，加热控温精度： $\pm 1^{\circ}\text{C}$

To assure accurate temperature control and easy parameter adjusting, YC-015 applies PID. Temp. Precision:  $\pm 1^{\circ}\text{C}$ , dry cycle time: 1.0-1.5S

进风温度：30℃~300℃

Air inlet temperature range 30℃ to 300℃

出风温度：30℃~140℃

Air outlet temperature range 30℃ to 140℃

干燥时间：1.0-1.5S

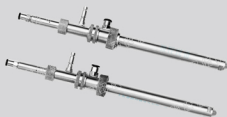
dry cycle time: 1.0-1.5S

塔壁吹扫功能以提高得率

Tower wall purging function

尺寸：1200mm×600mm×500mm

1200mm×600mm×500mm





## 主要特点 ADVANTAGES

彩色大触摸屏操作，全自动控制和手动控制相结合：

全自动控制：一键式开机，设定喷雾工艺参数后，温度到达预定温度，蠕动泵自行启动，触摸屏上显示运行动画，运行流程清晰显示；关机时只需按停止键，机器除风机外立即停止运行，因为机内温度极高，除非断电，否则风机将运行至机内温度至70℃（安全温度）后自行停止，保证设备不会因为误操作（强行关风机）而导致加热部分烧坏。

手动控制：如需在实验过程对工艺参数进行调整，可方便切换至手动状态，整个实验过程彩色触摸屏动态显示（动画）。

Two modes of run: Automatic-mode, and Eye-monitored mode for the purpose of easily controlling experimental process . PLC controller, LCD touch panel control fascia with flow path of system.

喷雾、烘干及收集系统采用透明的优质高硼硅耐热玻璃材料制造，使得喷雾干燥过程在无污染及最稳定的环境下进行，且使整个喷雾干燥实验进程可直接观察，为科研人员掌控实验进程及实验结果提供了极大的便利，并能及时发现解决问题。所有玻璃元件易拆卸，易清洗。

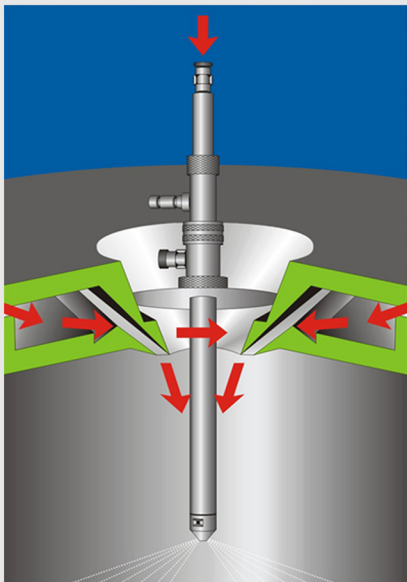
Spray chamber, cyclone separator, receiving tank are all made of Borosilicate glass which can resist strong acid/alk li, high temperature. It can work in a no-pollution and stable environment, and the whole process can be inspected. All the spare parts are easy to install and wash.

内置进口全无油空压机，喷粉的颗粒呈正态分布，流动性非常好，而且噪音非常低，小于60db，符合国家实验室噪音标准；空压机配备不锈钢储气罐以防止腐蚀  
Built-in air oilless compressor, the sound is low than 60db

二流体喷雾的雾化结构，整机采用优质不锈钢材料精密制造，设计紧凑，无需附属设备，方便使用，历久如新。喷雾头为加长型（长度310毫米）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

为了满足用户在实验范围调节各项参数的要求，在干燥温度控制的设计上采用实时调控PID恒温控制技术，使全温区控温准确，加热控温精度 $\pm 1^{\circ}\text{C}$ 。

To assure accurate temperature control and easy parameter adjusting, YC-015 applies PID.



为了保持样品的纯净，配备了进风口过滤器，可以升级为带氮气循环系统的有机溶剂使用机型，尾气配备1微米精密过滤器  
A filter has been equipped to the inlet unit to prevent the sample from contamination .

进料量可通过进料蠕动泵调节，最小样品量可达30ml。磁力搅拌器可选

The self-priming peristaltic pump delivers the sample liquid from a container through a small diameter jet into the main chamber to avoid secondary pollution. To make sure the process conducted steady and smoothly, magnetic agitator is optional to make the solution well mixed.

干燥后的成品干粉，其颗粒度较均匀，95%以上的干粉在同一颗粒度范围。

Narrow size distribution of particles.

针对黏性物料，设有喷咀清洁器（通针），在喷咀被堵塞时，会自动清除，通针的频率可调；

Automatic de-blocking device prevents the nozzle from becoming blocked and variably controlled