

# YC-910实验室挤出滚圆包衣机



YC-910实验室挤出式滚圆制粒包衣机是一款适用于实验室范围、小批量样品的微型挤出滚圆机，处理量为1-3kg/hr。YC-910实验室挤出式滚圆制粒包衣机还可以选配小规格的筛网，能实现一台设备处理更宽范围的样品，满足实验和科研的需求。YC-910实验室挤出式滚圆制粒包衣机可制备空白小丸、含药丸心，是制药、食品等行业进行小丸实验研究的理想设备。

YC-910 mini extrusion spheronizator is a kind of spheronizator which is suitable for laboratory-scale condition and small-volume samples with a throughput of 1-3 kg / hr. Mini-extrusion spheronizator can also be equipped with a small-size sifter, to achieve a wider processing range and satisfy the needs of experimental and scientific research. YC-910 mini-extrusion spheronizator can fabricate blank pellets and pellets with fillings, which is regarded as the ideal equipment for pellet experimental study in the areas of pharmaceutical, food and other industries. e separator for inspecting. All the data and function are controlled by PLC, English language.

## 一、YC-910挤出滚圆包衣机（多功能制丸包衣机）工作原理 PRINCIPLE

将需要制丸的物料（药物、辅料粉末加入粘合剂）加入挤出筒内，送料螺杆不断旋转将物料向网孔传送、挤压，物料送入网孔板后通过机械挤压成柱状后进入滚圆锅内，物料在高速离心转盘上运动，短圆柱颗粒经离心力和摩擦力，并在物料表面补充溶液的环境中物料逐渐球化，制成圆球度极高的球形颗粒，最后用干燥设备干燥掉多余水份，对所需要的球形颗粒最后进行干燥、包衣。

在此过程中，系统自带冰水装置，能对送料螺杆及料桶进行冷却，保证挤出过程中物料不发热，不变性，适用于对热敏性物料进行快速高效的挤出制丸。用此法所得颗粒大小均匀、粒度分布窄、药物含量均匀。

设备主要材质：接触物料部分为SUS304不锈钢，外包板材质为SUS304不锈钢；机器框架均为SUS304不锈钢，无需任何防锈处理。设备含主机1台，0.2mm、0.5mm、1mm、3mm网孔板各一块，两把喷枪，两台蠕动泵，全无油空气压缩机以及实现上述功能所必需的配件。

## 二、YC-910挤出滚圆包衣机（多功能制丸包衣机）主要特点CHARACTERISTIC

1. 三机一体设计，同台机可实现挤出滚圆、干燥、包衣三种基本功能。温控精确、可自由调节压缩空气的雾化压力和流量，配备恒流泵可任意调节喷浆流量的大小，对不同尺寸的药粒，都能获得最佳的制粒及包衣效果。在离心转盘狭缝中通入洁净气流，使物料在离心滚圆过程中有一定流化作用，有利于防止微丸粘连，从而制得微丸球形度更好，粒度分布更均匀；
- 1.Clean air passes the slit in the centrifugal turntable, so that materials have certain fluidization in the centrifugal spheronization process, which helps prevent pellet adhesion and results in better spherical shape of pellets and more uniform size distribution of particles;
2. 系统自带冰水装置，适用于热敏物料的高效制丸，不影响物料的活性；独特控温结构，轴内外均可控温，确保生产过程物料不升温、不变性，工艺稳定。具有进风除湿功能，即使低温度的进风仍有较高包衣效率，特适合热敏物料。
- 2.The system is equipped with ice water device, which is suitable for heat-sensitive materials to extrude pellets efficiently and does not affect the activity of the materials;
3. 多种孔径网孔板，可制备0.1mm~0.3mm 细粒剂，及0.3mm 以上微丸。制备的微丸粒度呈正态分布，强度高，密度大，得率高，批次间重现性好，一次性合格率高，可制备载药量高的药物；
- 3.The produced pellets have normal distribution of particle size, high strength, high density, high yield, good reproducibility between batches, high one-time pass rate and the ability to produce pills with high drug content;
4. 球化时间短，生产效率高。造粒时间短（一批料只需3分钟）且微丸均匀，成品率高,无需筛选；
- 4.Time of manufacturing particles is short (only 3 minutes for one batch of materials) and the yield is high (up to 95% or more basically) without screening;
5. 在湿润的状态下进行挤压制丸操作，避免了粉尘飞扬，符合GMP要求；
- 5.Pellets extruded in wet state avoids dust flying and meets GMP requirements;
6. 具备气流机构、物料水份补充机构，适用于不同产品制丸生产,制备出来的微丸球形度和流动性好，更适合高效包衣和计量分装；包衣时，物料在旋转的放射状气流上做柔和的圆周、上下、内外多向立体混合运动。
- 6.Produced pellets have good sphericity and fluidity and are more suitable for efficient coating and metering packing;
7. 易于实现不兼容活性成份间的均匀混合；
- 7.It is easy to achieve uniform mixing between incompatible active ingredients;
8. 设备一体化设计，自动化程度高，操作方便；组合式结构，拆洗方便，符合GMP 要求。
- 8.The equipment has integrated design, high degree of automation and is easy to operate;





### 三、YC-910挤出滚圆包衣机（多功能制丸包衣机）技术参数

1. 系统自带冰水装置，适用于热敏物料的高效制丸，不影响物料的活性；  
1. The system is equipped with ice water device, which is suitable for heat-sensitive materials to extrude pellets efficiently and does not affect the activity of the materials;
2. 物料处理量 1-3KG/H  
2. Capacity 1-3KG/H
3. 挤出桶直径50mm，挤出转速5-40 rpm/min挤出速度 50RPM  
3. Extrusion speed 50RPM
4. 筛网直径0.2-3.0mm，滚圆盘Φ250mm，滚圆转速200-2000 rpm /min  
4. Rolling speed 200-2000RPM
5. 包衣锅及滚圆桶Φ250mm\*500，高微丸直径 0.3-3mm，包衣过滤网100 目不锈钢筛网制成  
5. Pellet diameter 0.3-3mm
6. 转盘直径 250mm  
6. Turntable diameter
7. 制丸产量1-3kg/h，包衣批量300g-1800g/批，包衣加热功率2kw, 包衣风量2.4m<sup>3</sup>/min 变频调节  
7. Heating power 2KW
8. 功率 5KW 尺寸 1150\*700\*1350mm  
8. Power 5KW Dimension 1150\*700\*1350mm
9. 包衣风量2.4m<sup>3</sup>/min 变频调节, 压缩空气 0.3m<sup>3</sup>/h  
9. Compressed air
10. 设备挤出滚圆和包衣功能一体化设计，自动化程度高，操作方便；  
10. The equipment has integrated design, high degree of automation and is easy to operate, Built-in coating function.
- 11) 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，中英文操作界面：  
11. Automatic-mode and Eye-monitored mode for the purpose of easily controlling experimental process, Chinese and English interface.