



UMANG[®]
encapsulation solutions

LABORATORY & PRODUCTION MACHINERY

Solid Drug Layering



Powder layering is similar to the solution or Suspension layering. Instead of these method the layering is performed using a drug powder. The process involves the deposition of successive layers of drug or excepients or both on preformed nuclie or cores (Non pareil seed) with the help of a binding liquid.



It is a centrifugal processing of single unit operation resulting in the formation of uniform size pellets. The operation is carried out using a Drug layering rotating plate, Dry powder dusted on nonpareils adheres seeds, increasing their size and forming larger pellets as per requirements. Growth occurs by a process of blending of powder / liquid binding and consolidation. After liquid addition and layering of active creates the correct diameter pellets & with formation of rope movement uniform pellet size happens.



The requirements of process validation is simplified as the complete spheroid production process is restricted to a single processor.





Special Features

- Unique Layering plate with zero crushing arrangement for starter cores.
- Minimal radial clearance between plate & drum and air purging from bottom.
- Tangential Spray gun with peristaltic pump and ml/min. flow rate controls along with Loss in weight powder feeder controls.
- Complete process Automation with PLC controls & HMI.
- Pneumatic Lifting of Layering plate.

Advantage

- Micronized liquid spraying system on weighing control.
- Variable speed of rotating plate.
- Pneumatic plate lifting for easy cleaning & maintenance to switch from one product to another with minimal downtime.
- Negligible process loss of drug.
- Special design powder feeder with complete control on HMI.

Optional Features

- Stainless steel 316 L construction contact parts.
- Vacuum suction powder feeder system on weighing control
- Various nozzle sizes.
- Jacketing on product bowl.
- UL & CE Certification.
- 21 CFR Part II
- FLP Motor
- Moving Trolley for Layering plate cleaning.

Model	USDL - 220	USDL - 400	USDL - 730	USDL - 930	USDL - 1130	USDL - 1330
Capacity / hr	Upto 600 g	Upto 3 kg	Upto 30 kg	Upto 45 kg	Upto 90 kg	Upto --- kg

Our Global Reach



Umang Global Group Pvt. Ltd.
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Umang Encapsulation Solutions Pvt. Ltd.
(Pharma, Nutraceuticals & Food)

Umang Particle Science Pvt. Ltd.
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Lab Ultima Process Technologies Pvt. Ltd.
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