

SOFT GELATIN CAPSULE



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SOFT GELATIN

CAPSULES



SOFT GELATIN CAPSULES

- These are used for administration of liquid medicaments.
- Soft gelatin are used to enclose liquid medicaments-oils,suspension,semi solid,ophthalmic products.
- Example - Cyclosporine capsules .



SHAPE OF CAPSULE



Special shapes



Tubes



Ovals



Oblong

MANUFACTURING OF SOFT GELATIN

CAPSULES.

Soft gelatin capsules may be prepared by

- Plate process
- Die process

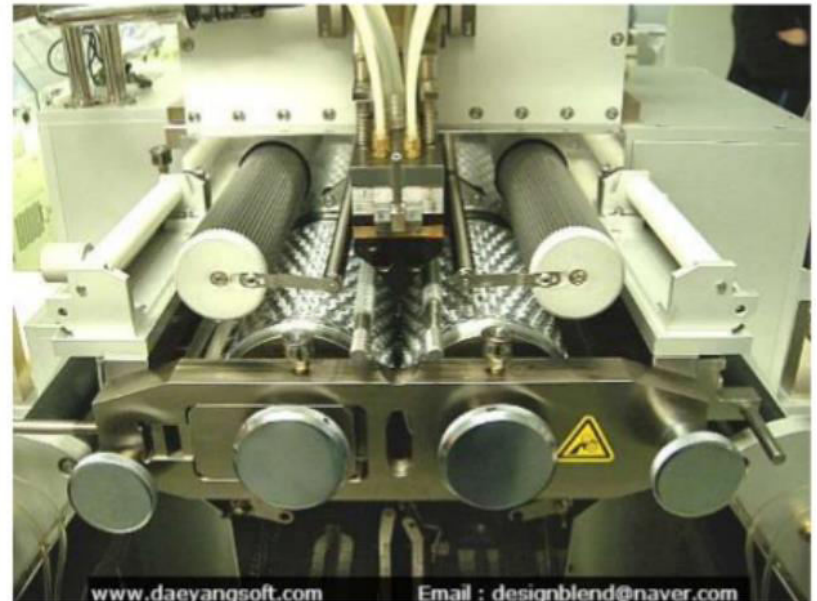


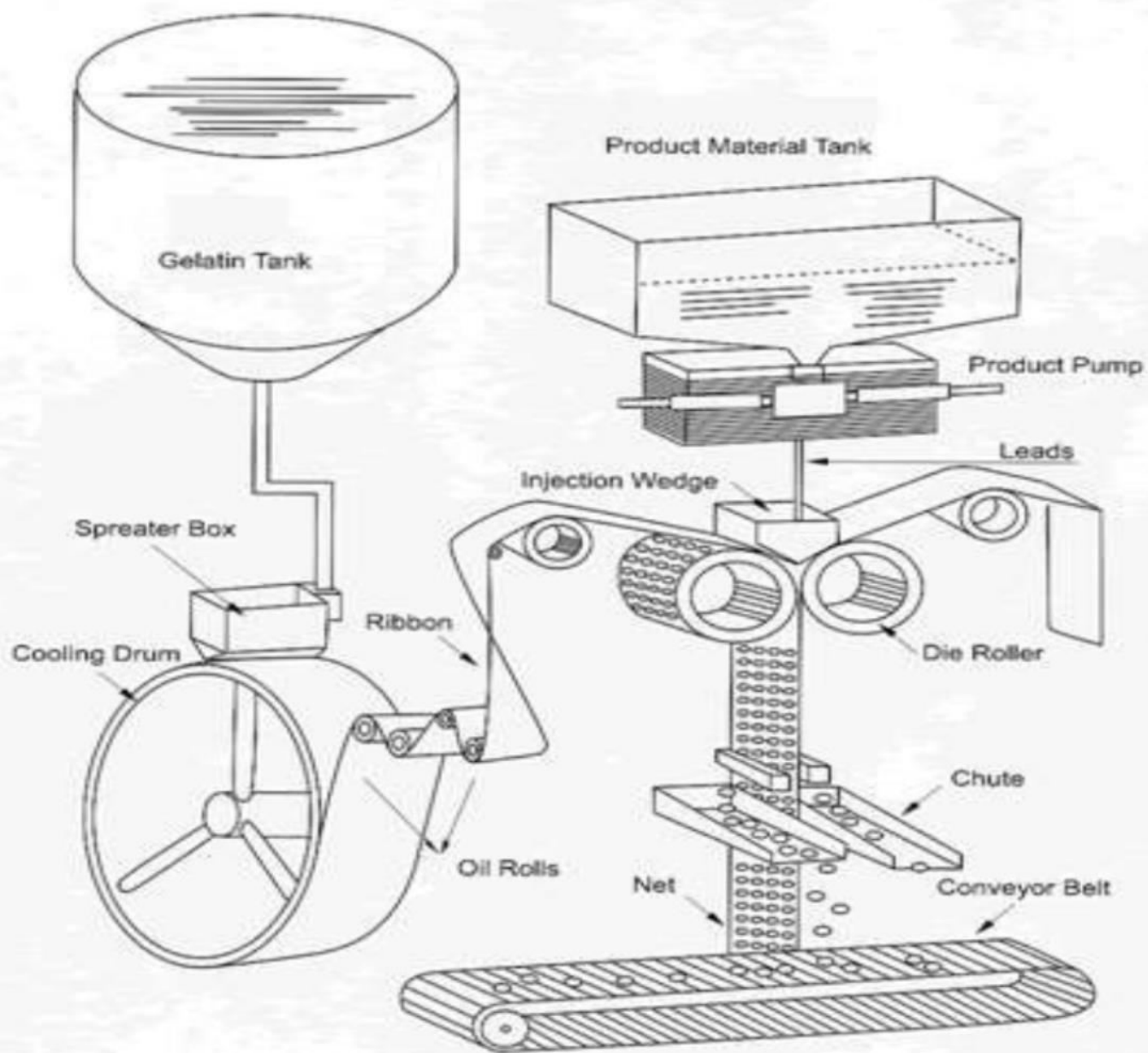
PLATE PROCESS

- A warm sheet of gelatin is placed on the bottom plate of the mold.
- The liquid medication is poured on it
- Then the second sheet of the prepared gelatin is carefully laid in place on top of the medication, and the top plate of the mold is put in place
- The entire mold is then subjected to a press where pressure is applied to form fill and seal the capsules simultaneously.
- Then the capsule is removed.

DIE PROCESS

- Rotary machine
- In rotary die machine ,the soft gelatin capsules are prepared and then filled immediately with the liquid medicaments.





- The warm liquid gelatin flows over the two chilled drums which are located at both sides of the machine through a spreader box that sits over each drum and this transforms the liquid gelatin into two solid ribbons of gel.
- The left and the right ribbons pass over rollers which feed them through two die rolls.
- These die rolls determine the shape and size of soft gels and cut the soft gel shell from the ribbon as they turned around
- Simultaneously, displacement pump delivers the fill materials into the heated wedge which sits between the rotary dies.
- The wedge injects the fill material into die cavities between ribbons just right before the die rolls cut the ribbons and seal the two halves together.

DRYING:

- After the soft gels are formed through the die rolls, they contain around 20 % of water
- This process is divided into two stages:



STAGE 1:

- Performed by tumble dryer .
- This equipment tumbles the soft gelatin around 30-40 minutes .
- It removes approximately 25 % of water content in the soft gelatin capsules.



www.softgelencapsulationmachine.com

STAGE 2:

- Soft gelatin capsules are spread on stackable trays and transferred to the drying room or tunnel where high air flows exists and they stay around 24-48 hours or until the soft gels become hard enough.
- This process is called natural manual drying.

INSPECTION :

- Any damaged and/or not fully filled capsules are removed manually in small batch size production.
- Fully automatic soft gel sorting machine equipped with electronic sensors can be used to sort and remove the damaged gelatin capsules



POLISHING

- The final step before packing is to clean and polish the soft gel capsule to remove any mineral oil or glycerine that the capsules may have on their outer skin.

- **STORAGE**

- Finished soft gelatin capsule product should be stored in the temperature around 20-24 °C .

THANK YOU

