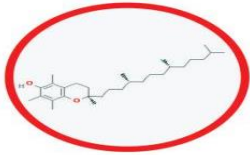


# FORMULATION OF ENCAPSULATED VITAMIN E BEADS FOR FACE WASH



VITAMIN E



Encapsulation is the physical-chemical technique or process by which a active ingredient is protected and surrounded by a polymeric wall made up of Lactose , Mannitol, Microcrystalline cellulose and Hydroxy propylmethyl cellulose(HPMC) that isolates it from its environment.

Sprayspheres SC® beads are specially used for encapsulation that specifically deals with the incorporation of commercially available active material into protective system that can deliver the active to specific site.(e.g. conversion of liquid active agents or essential oils into beads/spheres.

Natural and biodegradable lactose and cellulose based colored beads/spheres infused with Vitamin E i.e Tocopherol acetate via encapsulation.

Encapsulated Vitamin E beads/spheres break down upon rubbing without leaving a residue. Easily dispersed, delivering the active ingredient. Encapsulation Technology deals with these Adjustable properties (actives, particle size, structure, oil etc. Encapsulated Vitamin E beads/spheres in the facewash can do miracles when applied on your skin during bed time or at night for a perfect antiaging treatment.

It naturally softens skin and helps in blood circulation. Vitamin E offers antioxidant (fat-soluble) benefits as well as it helps neutralize harmful free radicals and, due to its antioxidant benefit, can discourage sebum (oil) oxidation, which prevents blackheads. Bonus point is Vitamin E is extremely moisturising due to its inert moisture locking properties deep into the skin.

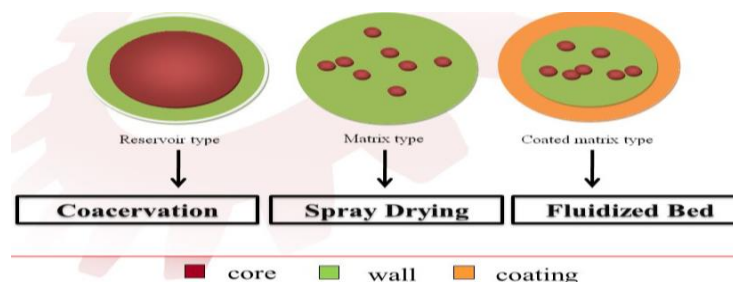
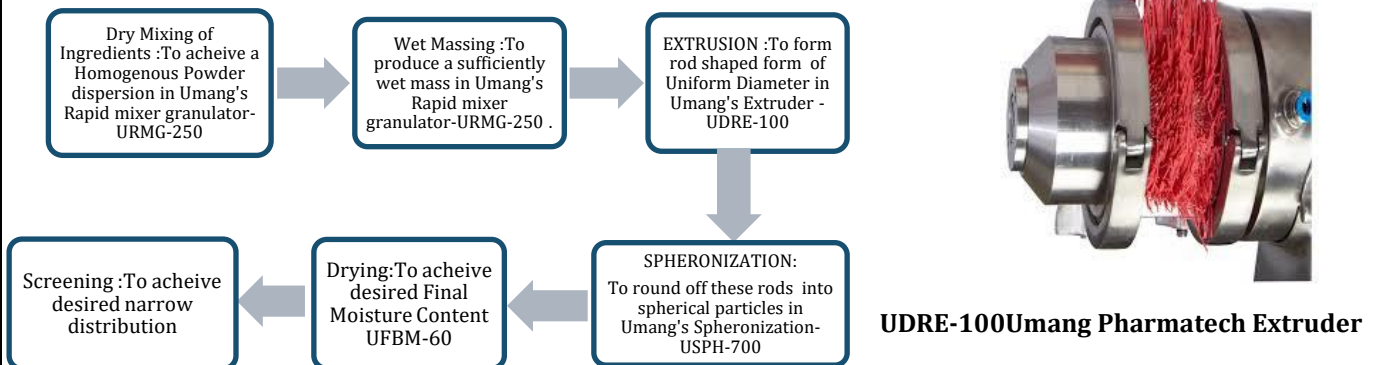
Encapsulated Vitamin E minimizes free radical damage and boosts collagen production .Also Encapsulated Vitamin E beads protects from harmful UV rays and naturally brightens the skin tone.

Overall it is Indeed a Powerhouse to completely tackle skin problems with its amazing moisturizing and antioxidant properties and to keep the Skin's Protective Barrier Intact.

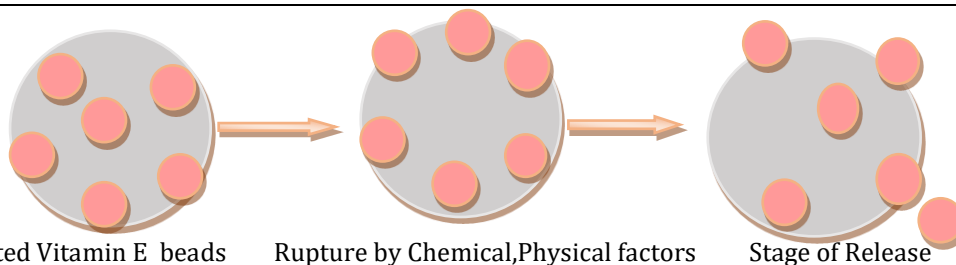
## Key Words:

Encapsulated Beads, Spheres, Cosmetic beads, Beads for special effects, Cosmetic beads for aesthetic effect

## ENCAPSULATION PROCESS



Types of Coating on Core



Encapsulated Vitamin E beads

Rupture by Chemical, Physical factors

Stage of Release

### ENCAPSULATION MECHANISM

#### How Encapsulation Works

- Molecules of active ingredients are coated in a polysaccharide shell—think of it as a shiny, slippery, protective coating.
- This encapsulated coating serves as a carrier system for the active ingredients in your skincare, i.e. the ingredients that are capable of transforming your skin.
- Instead of activating all at once on the surface, encapsulated coatings protect your actives and release them slowly over time. This allows it to sink to deeper layers of your skin, where you can benefit most from active ingredients.
- When a skincare product like face wash with encapsulated ingredients is applied to your skin, the coating starts to fade away, and the active ingredients are released slowly over time, active ingredients are released little by little, which means it's also working on improving your skin with its amazing properties on skin for a longer period of time.

#### Key Properties of Encapsulated beads

- Free of microplastics.
- Non GMO
- Perfect Spherical geometry
- Has non-toxic, non-comedogenic and non-allergenic properties
- Oxidatively stable .
- Gentle and Effective on skin .
- Rapid dispersion with excellent uniformity.
- No change in Product pH.
- Encapsulation Stabilizes actives by protecting them from environmental factors, like UV light.
- Easily dispersed by finger to provide smooth and super feeling.
- Provide visual effects and delivery actives.
- Provide Systems that can incorporate Hydrophobic or Hydrophilic actives such as Fragrance, Colour, Vitamin and Herbal Extract etc

#### Formulation Procedure:

**Step I :-** Take water (62.59) and in this add the xanthan gum & Pvp-k30 & glycerin .(A mixture)

**Step II :-** In another container take 18.14 ml water also add SLS & C.A.P.B heat at the temperature of about 75° C.(B mixture)

**Step III:-** Add (B mixture) in ( A mixture) very slowly & mix well , at the end add fragrance and Encapsulated Vitamin E beads at moderate temperature and at slow stirring.

#### INCI NAME:

Microcrystalline cellulose, Hydroxy propylmethyl cellulose, Lactose, Tocopheryl acetate.

#### Formulation Tip

Ingredients	Qty(%ww)
Xanthan Gum	2.2gm
Pvp-k30	1.45gm
SLS	1.9 gm
Cocomido propyl betain (C.A.P.B)	3.72gm
Fragrance	Q.s (0.18)
Glycerin	10 ml
DI Water	80.73 ml
Vitamin E beads	2%