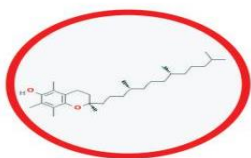


FORMULATION OF ENCAPSULATED VITAMIN E BEADS FOR BODY WASH



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.

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

Encapsulated Vitamin E beads 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 bodywash naturally softens skin and helps in blood circulation.

Encapsulated Vitamin E offers antioxidant (fat-soluble) benefits as well as it helps neutralize harmful free radicals

Bonus point is Encapsulated Vitamin E in bodywash is extremely moisturising due to its inert moisture locking properties deep into the skin.

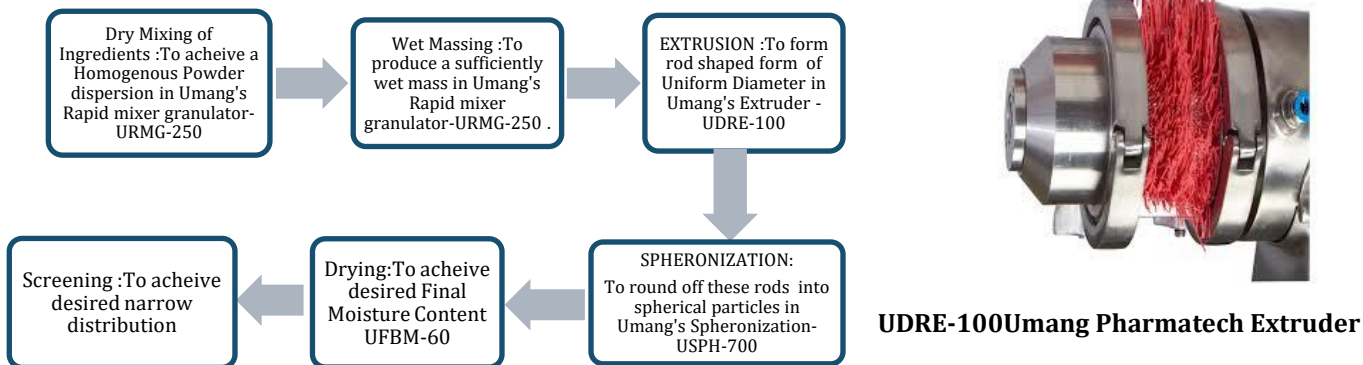
Also Encapsulated Vitamin E beads/spheres protects from harmful UV rays and naturally brightens the skin tone.

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.

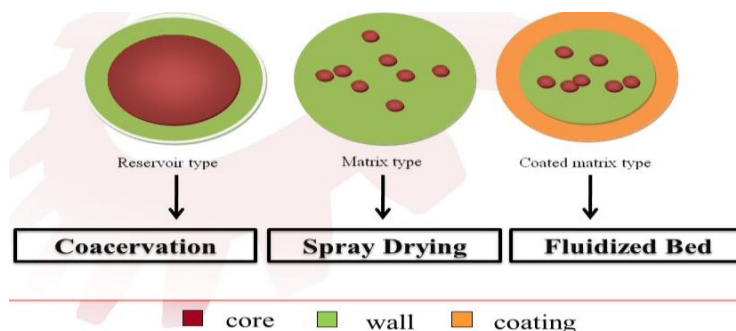
Key Words:

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

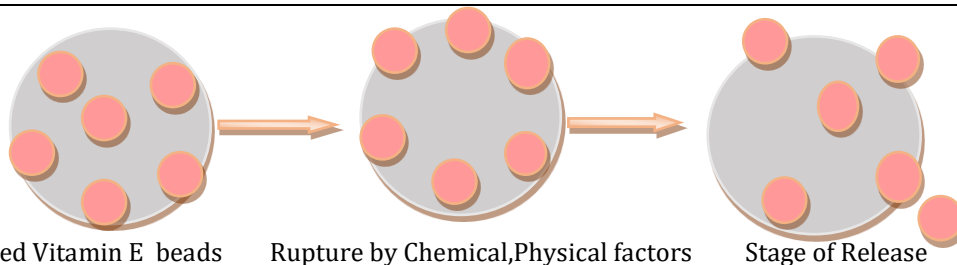
ENCAPSULATION PROCESS



UDRE-100 Umang Pharmatech Extruder



Types of Coating on Core



Encapsulated Vitamin E beads

Rupture by Chemical, Physical factors

Stage of Release

ENCAPSULATION MECHANISM

How Encapsulation Works

- Body wash are generally made up of two parts: a lipophilic part, which is fat-soluble, and a hydrophilic part, which is water-soluble. Dirt itself is lipophilic, which means that it won't dissolve in water. Simply rinsing yourself with water after you've got some dirt on yourself won't get you clean. Only something with a fatty product will dissolve the dirt and lift it off your skin. The moisturizing capabilities often come from the oils and natural active ingredients that are mixed into the formula of these body washes, provides luscious lather, is travel-friendly, gives all-over hydration.
- This combination of lipophilic and hydrophilic ingredients is called a surfactant. A surfactant cleans your skin because the lipophilic part dissolves the dirt on your skin, while the hydrophilic part washes it away.
- Body wash with Encapsulated beads contains active ingredients that 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.

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 (72.59) ml and in this add the xanthan gum & Pvp-k30(A mixture)

Step II : In another container take 18.84 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:

Cellulose, 2-hydroxypropylmethylether, Lactose, Tocopheryl acetate.

Formulation Tip

Ingredients	Qty(%ww)
Xanthan Gum	1.5gm
Pvp-k30	1.45gm
SLS	2.72gm
Cocomido propyl betain (C.A.P.B)	2.72gm
Fragrance	Q.s (0.18)
DI Water	91.43 ml
Vitamin E beads	2%