





Encapsulated Tulsi Oil beads      Rupture by Chemical,Physical factors      Stage of Release

### ENCAPSULATION MECHANISM

#### How Encapsulation Works

- Hand Sanitizers with Encapsulated beads contains molecules of active ingredients that are coated in a polysaccharide shell—think of it as a shiny, slippery, protective coating.
- Hand Sanitizers contain not less than 70% alcohol content in order to kill microbes, germs present on the skin by dissolving their protective outer layer of proteins and disrupting their metabolism thus works immediately and effectively kills bacteria and most viruses.
- The encapsulated coatings in the form of beads in hand sanitizers 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** (Phase I): Mix Carbopol slowly with water. Add ,Methyl paraben ,Propyl paraben, Glycerine, Tween 20 and mix well.

Phase II: Mix Ethanol , and add Encapsulated Tulsi Oil beads .

**Step II:** Mix Phase I & II and at the end add Triethanolamine in dropwise manner for thickness.

#### INCI NAME:

Microcrystalline cellulose, Hydroxy propylmethyl cellulose, Lactose, OcimumSanctum (Leaf) Oil.

#### Formulation Tip

Ingredients	Qty
<b>Carbopol</b>	<b>5 gm</b>
<b>Glycerin</b>	<b>25 gm</b>
<b>Methyl paraben</b>	<b>0.18 gm</b>
<b>Propyl paraben</b>	<b>0.2 gm</b>
<b>Triethanolamine</b>	<b>0.5gm</b>
<b>Tween 20</b>	<b>5 gm</b>
<b>DI Water</b>	<b>430gm</b>
<b>Tulsi Oil beads</b>	<b>2%</b>