

FORMULATION OF ENCAPSULATED JOJOBA OIL ACTIFILMS FOR SOAP

Actifilm™: Actifilms are films made up of Hydroxypropylmethyl cellulose which is a chemically modified cellulose polymer. The dissolving film delivery vehicle is just a thin flexible sheet of polymer in which an active ingredient has been incorporated. These actifilms magically disappear upon rubbing by delivering dry actives i.e they are visually dry but soften easily when it gets in contact with water, thus they have the amazing properties to soften in the formula making them more malleable and ready to disintegrate when pressure is applied. Umang Pharmatech manufactures **Actifilm™ i.e AF** exclusively available in shapes and varieties of colors available for personal care applications.

KEYWORDS: Encapsulated films, fast dissolving films, films for special effects, HPMC films, dissolving films for soap, water soluble films for decoration.

JOJOBA OIL:



The nut of the jojoba plant is made into an oil. Jojoba oil contains natural vitamin E.

Vitamin E acts as an antioxidant that helps to produce collagen in body. Thus jojoba oil helps your skin fight oxidative stress caused by everyday exposure to pollutants and other toxins.



KEY PROPERTIES OF ACTIFILMS:

- Non GMO & Paraben free
- Easy to handle at the industrial scale
- Natural, Non toxic and Non irritant, and non-allergenic properties

WHY ENCAPSULATED JOJOBA OIL?

Encapsulation Technology used in the development of cosmetic formulations that more stable, more effective and with improved sensory properties. Encapsulated jojoba oil is useful as it helps relieve dryness, flaking, itching, and related symptoms of skin. Inflammatory skin conditions like psoriasis and eczema is treated with encapsulated jojoba oil especially as it is extremely beneficial due to its antimicrobial and antifungal properties.

INCI NAME:

Simmondsia Chinensis

- Gentle and effective on skin with rapid dispersion and excellent uniformity
- Available in different shapes & colors
- Provides visual effects and activates four senses you can see, smell, taste & touch it and disappears on rubbing the product.

EFFECT OF ENCAPSULATED JOJOBA OIL IN SOAP

Soap contains Hydrophilic end and Hydrophobic properties. The first one is the hydrophilic end which dissolves water and is attracted to it whereas the second one is the hydrophobic end that is dissolved in hydrocarbons and is water repulsive in nature. On application, soap solution appears cloudy forming a colloidal solution. Thus cleaning body and rinsing the dirt away.

Active ingredient like natural fragrance and disinfectant agents are added into soap. Fragrances revitalize us, calm us, and most importantly mask our body odours whereas disinfectant protects body from infections.

Active Ingredient like Jojoba Oil is constituted of eicosanoic acid (66% to 71%), docosanoic acid (14% to 20%), and oleic acid (10% to 13%). Also jojoba oil contains wax that acts directly against aging, moisturizes dry skin, nourishes hair, and prevents the accumulation of sebum. It helps in the renewal process of cells and increases skin elasticity, smoothness, and firmness. Jojoba oil also contains ceramides and flavonoids and vitamin E, which acts as an antioxidant and protects the skin against free radicals. Thus Jojoba oil encapsulated in soaps to cleanse and soothe the skin.

FORMULATION PROCEDURE:

Step I: Add components to water.

Step II: Heat to 70°C.

Step III: Blend until homogeneous; cool to 50°C.

Step IV: Adjust pH to 7.0-7.5 with Citric Acid.

Step V: Add DM and Fragrance.

Step VI: Cool to room temperature. Encapsulated Jojoba oil actifilms are added at the end of manufacturing at moderate temperature and at slow stirring.

FORMULATION TIP	
SOAP	
Ingredients	Qty (%)
Potassium Cocoate	25.0
Disodium Cocoamphodiacetate	20.0
Lauramide DEA	2.0
Glycol Stearate	1.0
DMDM Hydantoin	qs
DI, Water, Fragrance	qs to 100.0
Actifilms with Jojoba Oil	0.2%

DOSAGE: 0.2 % for visual effect and up to 10 % for colour or active delivery.

STORAGE: Temperature between 5° C - 25°C

Different Shapes of Actifilms



Golden colour Flower shape



Blue colour Heart shape



Pink colour Christmas Tree shape