

FORMULATION OF ENCAPSULATED TEA TREE OIL ACTIFILMS FOR BATH BOMB



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.

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
- 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.

INCI NAME: Melaleuca alternifolia (Tea Tree) Leaf Oil

TEA TREE OIL



Tea Tree Essential Oil is highly volatile, derived from the Australian plant Melaleuca Alternifolia. Extracted through a process of steam distillation. Tea Tree Oil is obtained from the leaves and twigs of the Tea Tree plant. Tea tree oil contains 10- to 40-percent concentration of terpinen, that is the main antiseptic component of tea tree oil well known for treating acne because of its anti-septic, anti-inflammatory and antimicrobial properties preventing infection and promoting healing.

WHY ENCAPSULATE TEA TREE OIL?

Encapsulation Technology is used in the development of cosmetic formulations that more stable, more effective and with improved sensory properties. Essential oil encapsulation improves thermal stability. Encapsulation of Tea Tree Oil is a high potency essential oil that provides gentle detoxifying antifungal, antibacterial, antiseptic, and antimicrobial healing properties. Encapsulated Tea tree oil active relieve acne and psoriasis. Also soothes dry skin by reducing itching and irritation.

EFFECT OF ENCAPSULATED TEA TREE OIL IN BATHBOMB

Bath bombs are single-use, spherical blends of soothing, fragrant extracts and oils .

The primary ingredients are sodium bicarbonate and citric acid, which interact with each other once dissolved in water to create that fizzing effect . Once this reaction occurs, the bath bomb dissolves and breaks apart, releasing all the good stuff inside: from delicious scents to delivering actives that gets dispersed into water to provide clear, soft, healthy and glowing skin . Actives from bathbomb disperse slowly into water 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 Encapsulated Tea Tree oil not only deodorize, clean and repair skin, but also strengthen blood vessels by improving blood circulation and lowering blood pressure .

FORMULATION PROCEDURE:

Step I: Dry mixing of Xanthan Gum and Citric acid .

Step II: Dry mixing of sodium bicarbonate and sodium starch glycolate.

Step III: Dry mixing of mannitol, cross caramellose, sodium lauryl sulphate.

Step IV: PVPK-30,colour,purified water (solution preparation)

Step V: Addition of Step I , II , III is added to the mixture. Stirring under vacuum is resumed without further heating.

Step VI: Addition of Step IV into Step V followed by addition of fragrance. The fragrance added is mixed under vacuum at room temperature. Encapsulated Tea Tree actifilms are added at the end of manufacturing at moderate temperature and at slow stirring.

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

STORAGE: Temperature between 5° C - 25°C

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

Green colour Cross shape

Pink colour Cross shape

Golden colour Snowman shape



FORMULATION TIP	
BATHBOMB	
Ingredients	Qty (%)
Xanthan Gum	55.05
Citric acid	24
Sodium bicarbonate	30
PVPK30	2
Sodium Starch Glycolate	2
Mannitol	5
Cross caramellose	1
Fragrance :Rose	1
Color:Blue	1
Actifilms with Tea Tree Oil	0.2
Purified water	Up to 100%