

## **FORMULATION OF ENCAPSULATED NEEM OIL FILMS FOR ORAL CARE**



Actifilms™ AF is made up of Hydroxypropyl Methyl Cellulose which is a chemically modified cellulose polymer. HPMC is a water soluble synthetic polymer which was used as film former. It is a thin, flexible sheet of polymer in which an active ingredient has been incorporated. Films are rapidly disintegrate and also have greater stability and shelf life. Umang Pharmatech manufactures Actifilms™ i.e AF exclusively available in shapes and varieties of colors available for many personal care applications

### **NEEM OIL:**

Neem oil is a vegetable oil pressed from the fruits and seeds of the neem. belongs to the *Meliaceae* (mahogany) family. It is yellow to brown, has a bitter taste, and a garlic/sulfur smell. It has an acrid taste, which is attributed to several triterpenoids present in it. It is a nondrying oil and, due to its hydrophobic nature.

### **TECHNOLOGY**

Umang Pharmatech has used the Pharmaceutical's popular technology i.e. Encapsulation and Film Casting Technology to Develop Actifilms™ with incorporation of desirable actives in personal care formulations to obtained better Visual impact, deliver desirable actives ingredients and provide stable films within the formulation.

### **INCI NAME:**

Melia Azadirachta (Neem) oil

### **KEY PROPERTIES OF ACTIFILMS™:**

- Easy to handle at the industrial scale.
- Disappear on gentle rubbing without leaving any residue on teeth / oral case use upon application.
- Non toxic and Non irritant ,soluble in water. Available in natural flavors.
- Available in different shapes & color
- Film have more flexibility and better physical properties.



## EFFECT OF ENCAPSULATED NEEM OIL FILMS FOR ORAL CARE:

Neem oil have antioxidants and helps to boost the immune response in gum and tissues of the mouth. Neem is a good remedy for curing mouth ulcers, tooth decay and acts as a pain reliever in toothache problems. Neem oil help to reduce the oral infection, gum disease and also use for the and mouth ulcer. It Promotes remineralization of the teeth.

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

**STORAGE:** Temperature between 5° C and 25° C

### FORMULATION PROCEDURE :

#### Stage 1:

Calcium carbonate, hydrated silica, titanium dioxide was weighed and mixed by adding sorbitol to it.

#### Stage 2:

In a beaker glycerin, Sodium saccharine, Sodium CMC was mixed together and added to Stage 1

#### Stage 3:

Sodium lauryl sulphate and NaCl was weighed and was mixed using 10ml water and mixed with Stage 1

#### Stage 4:

Actifilms™ was added at the last stage and mix it very slowly without pressuring the beads very hardly.

FORMULATION TIP	
TOOTHPASTE	
Ingredients	Qty (%w/w)
Calcium carbonate	25
Hydrated silica	10
Sodium lauryl sulphate	2
Sodium chloride	1
Glycerin	10.3
Sorbitol	10
Sodium CMC	0.8
Titanium dioxide	0.1
Sodium Saccharine	0.25
Sodium benzoate	0.08
Actifilms™	0.2
Distilled Water	QS

### KEY WORDS:

Encapsulated films ,Films for special effects ,HPMC films, dissolving Films.



**Candy Shape**



**Cross Shape**