

FORMULATION OF ENCAPSULATED CLOVE 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 .

CLOVE OIL:

Clove oil is a natural essential oil. Clove oil has a repressive action against many organisms like *Streptococcus aureus* L. *Monocytogenes*, and *Aspergill*. Clove essential Oil is very helpful for use in blends intended to help relieve pain. Eugenol is active ingredient in clove oil used for local antiseptic and anesthetic. Eugenol fight the oral bacteria, so it is used for relieve the toothache pain. Clove oil has some antimicrobial and antioxidant property.

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:

Eugenia caryophyllus (Clove 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 CLOVE OIL FILMS FOR ORAL CARE:

Clove Oil containing eugenol which can give the anti-inflammatory properties that help to relief from toothache. It can numb the part of the skin that are in close contact with the teeth. Clove Oil help in fending off bad breath due to its antibacterial and antifungal properties.it can also treat the mouth ulcers.

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.

KEY WORDS:

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

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



Heart Shape



Star Shape



Round Shape