

## **DIRECT INCORPORATE OF AVACADO OIL VS ENCAPSULATED AVACADO OIL FILMS FOR BATHBOMB AND SOAP FORMULATION**



**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. Actifilms rapidly disintegrate and also have greater stability and shelf life.

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

### **BENEFITS OF AVACADO OIL:**

- Avacado Oil contains a high percentage of Vitamin E, as well as potassium, lecithin, and many other nutrients which can nourish and moisturize supporting healing and cooling the skin.
- Avocado oil is also a great skin cleanser vitamins and nutrients play a big role in adding moisture, protection and elasticity to skin.
- The anti-inflammatory properties and mono-saturated fats components in the Avacado oil provide skin with a much-needed protective layer, the polyhydroxylated fatty alcohols specifically found in avocado oil reduce any UVB damage and inflammation.
- Avocado oil benefits for skin include reduction of wrinkles and fine lines, dryness, and free radical damage.

### **WHY ENCAPSULATED AVACADO OIL ?**

Encapsulation Technology used in the development of formulations that more stable, more effective and with improved sensory properties. Avacado Oil is a natural compound and its sensory properties can change due to heating or chemical interaction, which will alter the quality of the product. These all problems can minimize by the encapsulation of Avacado Oil , as it can improve shelf life and maintain its stability.

### **UNIQUE FUNCTIONS:**

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

### **MANUFACTURING PROCESS OF ACTIFILMS™ AF CONTAINING AVACADO OIL :**



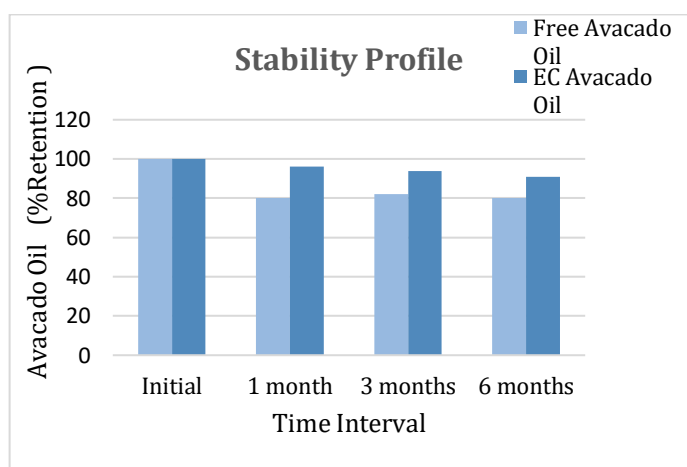
The Solution Casting method : It is ideally suited for a water-soluble polymer, “Water soluble” refers to a film which, when exposed to water, begins to dissolve or disintegrate to its smallest components. . Film coating is the process whereby active material is surrounded by a thin layer of polymeric material. Film coating method generally involves the steps of continuously pumping a feed of polymer solution with primary component i.e HPMC Both HPMC and color

**UMANG PHARMATECH  
UCFC-600 FILM  
CASTING MACHINE**

weighed accurately and mixing of all ingredients to achieve homogeneous primary solution and further combining with secondary component to polymer solution. Secondary components such as active functional or decorative ingredients are finally deposited into the primary solution onto the casting surface for film formation using Umang Pharmatech's **UCFC-600**(Solution tank ,Film Casting). The resulting solution is cast as a film and allowed to dry, which are then cut into pieces of the desired size and shape.

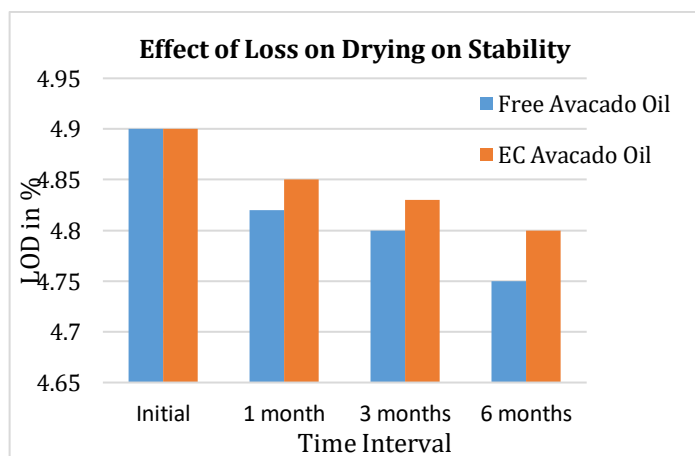
### IMPROVED SHELF LIFE STUDY:

Free Avacado Oil and Actifilm™ containing Avacado Oil were kept in an air tight glass bottle and place in Stability Chambers at temperatures of 30°C ± 2°C for 180 days, HPLC analysis show that the Actifilm™ containing Avacado Oil retain 85 % of the Avacado Oil while the free Avacado Oil only retained 80 % .



### TEMPERATURE EFFECT ON LOD STABILITY:

Free Avacado Oil and Actifilm™ containing Avacado Oil were placed in a air tight glass bottles at 30°C ± 2°C for 180 days in a stability chamber. The sampling and analysis was done at fixed time intervals for their LOD ,to check the moisture loss in the samples. Results mentioned in below graph.



### CONCLUSION:

The results obtained from this study show that using encapsulated Avacado Oil i.e. Actifilm™ containing Avacado Oil are more stable and deliver desire amount of dose of Avacado Oil for skin nourishment.

### REFERENCES:

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