

## DIRECT INCORPORATE OF ARGAN OIL VS ENCAPSULATED ARGAN OIL FOR COSMETIC FORMULATION



**INTRODUCTION:** Argan Oil is naturally occurring plant oil extracted from the kernels of the Argan tree belongs to *Sapotaceae* family. Argan Oil is golden colour, odorless, extremely moisturizing and non-greasy. Argan Oil contain 80% of unsaturated fatty acids also contain Vitamin E ,Carotenes and Squalene. Argan Oil has anti-inflammatory, antioxidant, antiseptic, anti-allergic, anti-aging properties. Argan Oil easily absorb into the skin so it can be used in many cosmetic formulation.

### BENEFITS OF ARGAN OIL:

- Argan oil treat the acne ,stretch marks. It protect the skin ultra violet light and may help to nourishes the dry skin.
- Argan oil treat the wrinkles, signs of skin aging due to its antioxidant properties also helps to speed up healing, prevent breakouts and support the skin's immune system and it promotes natural moisturizing - which means it helps to hydrate the skin effectively, giving it a radiant glow.
- Argan oil mainly use for the hair care, it stimulate the hair follicles and promote the hair growth also increase the hair thickness.
- Argan Oil nourishes the hair and restoring their smoothness preventing damage hair.

### WHY ENCAPSULATED ARGAN OIL ?



Encapsulation Technology used in the development of cosmetic formulations that more stable, more effective and with improved sensory properties. Encapsulation protect the active ingredient from the unwanted reactions. Argan oil easily degrade and giving the undesired interaction with external surface so it become unstable. To improve the stability and protect sensory properties encapsulation technology use for the Argan Oil.

### UNIQUE FUNCTIONS:

- Sprayspheres®- SC beads containing Argan Oil are stable so easily applied into formulation.
- Sprayspheres®- SC beads containing Argan Oil When rubbed onto the skin and hair they break easily and releasing the active contents.
- Sprayspheres®- SC beads containing Argan Oil hard and solid in bulk (easy to process and delivery).
- Sprayspheres®- SC beads containing Argan Oil are hard and dry but soften in contact with at least 20% of water.

### MANUFACTURING PROCESS OF SPRAYSPHERES® – SC BEADS CONTAINING ARGAN OIL:

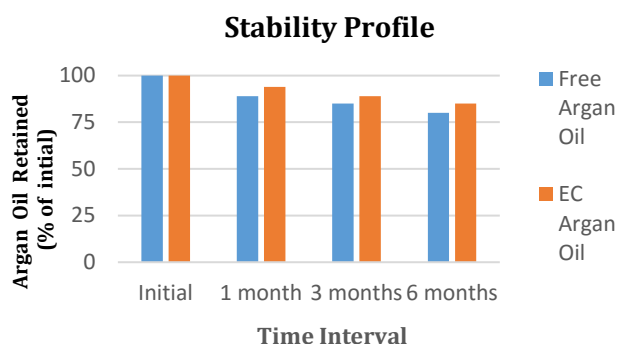
Argan Oil, lactose ,Microcrystalline cellulose, HPMC and color were weighed accurately and Dry mixing of all ingredients is done to achieve homogeneous powder dispersion, The obtained blend was granulated using purified water to form wet mass. Dry mixing and wet granulation are carried out using Umang Rapid Mixer granulator (URMG-10). This wet mass



was then extruded through Umang Single screw Extruder (USSE- 60) which produces rod shaped particles of uniform diameter from the wet mass. Extrudes were then spheronized using Umang Spheronizer (USPH-150). After spheronization process, the obtained beads were kept for drying.

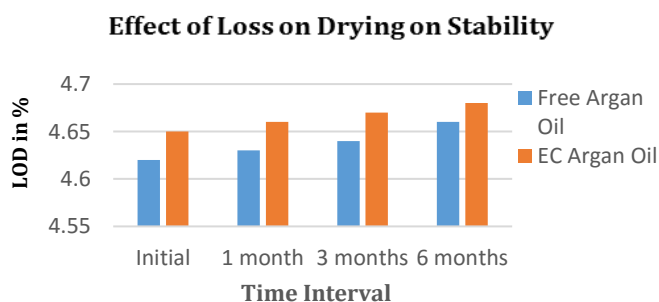
### IMPROVED SHELF LIFE STUDY:

The Free Argan oil and Sprayspheres®-SC beads containing Argan 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 Sprayspheres®-SC beads containing Argan oil retain 85 % of the Argan oil while the free Argan Oil only retained 80 % .



### TEMPERATURE EFFECT ON LOD STABILITY:

The Free Argan Oil and Sprayspheres®-SC beads containing Argan Oil were place 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.



### APPLICATIONS:

- Hair Serum
- Hair Shampoo
- Body /Face Creams
- Body /Face Lotions
- Body /Face Gels

### CONCLUSION:

The results obtained from this study show that using encapsulated Argan Oil i.e Sprayspheres®-SC beads containing Argan Oil are more stable and deliver desire amount of dose of Argan Oil for skin nourishment and hair growth.

### REFERENCES:

1. Dom Guillaume; Zoubida Charrouf. Argan Oil. Alternative Medicine Review.275-279.
2. Dominique Guillaume and Zoubida Charrouf. Argan oil and other argan products: Use in dermo cosmetology. Eur. J. Lipid Sci. Technol. 2011, 113, 403-408.
3. Hanae El Monfaloutia; Dom Guillaumea ;Clément Denheza and Zoubida Charrouf. Therapeutic potential of argan oil: a review. Journal of Pharmacy and Pharmacology 2010; 62: 1669-1675.
4. <https://www.ulprospector.com/en/asia/PersonalCare/Detail/33363/746769/ECOCAPS-ARGAN>.

### KEY WORDS:

Encapsulated Beads, Spheres, Cosmetic beads, Beads for special effects, Cosmetic beads for aesthetic effect.