STABILITY OF CELLULOSE EXFOLIATORS FOR PERSONAL CARE USES

INTRODUCTION

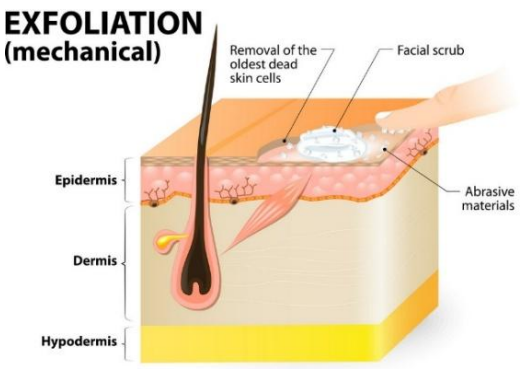
Exfoliation is the process of removing dead skin cells from the surface of your skin using a chemical, granular substance, or exfoliation tool.
Cosmetic exfoliation may be accomplished by chemical or mechanical means. Chemical exfoliation methods include acids, non-acid peels, enzymes, or other agents. Mechanical exfoliation may be accomplished using a device or small particles of various types. Both chemical and mechanical exfoliation may be performed as an in-ofce procedure or at home, depending on the type and strength of treatments desired.

Cellulose coming from wood pulp not only are the cellulose beads good for the environment, they feel great on your skin because of their uniform shape and smooth texture. No irritation. No micro-tears. No clogged pores or dullness. These exfoliators gently exfoliates and deep cleanses your skin while protecting and nourishing it at the same time.

This article shows the Stability of Cellulose Exfoliator.

Key words: Exfoliators beads, Scrub beads, Natural Exfoliators, Cosmetic beads for aesthetic effects, Peel off, flake off, throw out, shed off, scrap, eliminate, rub.

MECANISM OF EXFOLIATION PROCESS



Exfoliation occurs naturally as outworn stratum corneum cells detach and are removed from the skin's surface. Replacement of stratum corneum cells occurs by a self-renewal process as epidermal cells move upward from the basal layer, the stratum basalis, and through the subsequent two layers, the stratum spinosum and stratum granulosum, to reach the stratum corneum. This process requires about four weeks, although it can be prolonged in aging and other skin conditions. Normal desquamation occurs invisibly as single corneocytes, or very small aggregates of them, detach from the skin's surface and are shed.

BENEFITS OF OAT EXFOLIATORS

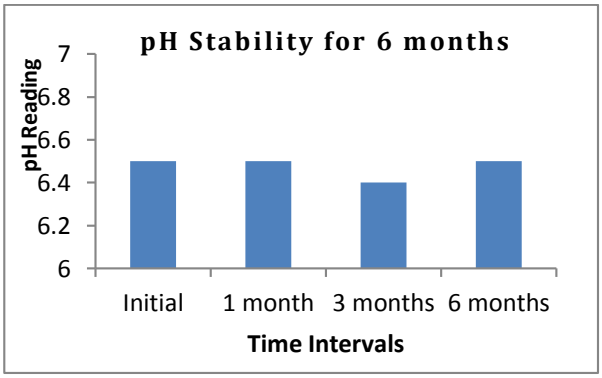
- Reduce Dead skin cells.
- Reduces Dullness to A Great Extent.
- Softens and exfoliates skin.
- Works Best in Removing Blackheads.
- Takes Care of Tanned Skin Really Well.
- It reduces the appearance of cellulite.
- Allows for better absorption of moisturizers and serums.
- Stimulates blood flow

STABILITY STUDIES:

- Due to the inert ingredients used for manufacturing, the spheres are very stable at temperatures up to 25°C.
- It can withstand the pH range of 5 to 8 except blue color.
- Cellulose Exfoliators were prepared by using Umang's Extrusion-Spheronization technology and kept for stability studies at a temperature 25˚C ± 2˚C/ 60± 5 RH for 6 months and analyzed the changes occur during the testing period.

➢ pH Stability:

The sampling was done at fixed time intervals and analyzed in different pH solutions ranging from pH 6 to 8 and checked on pH meter for their pH.
Results mentioned in below graph.



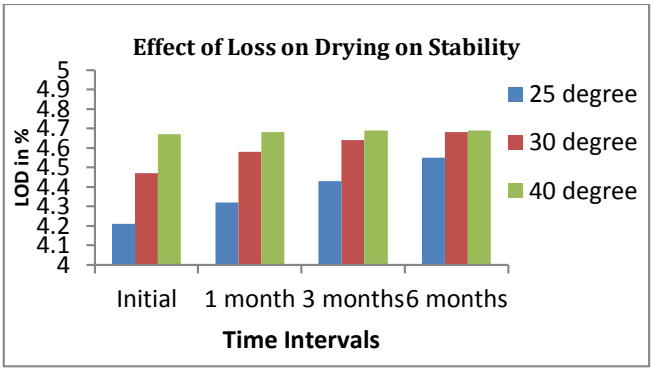
➢ Leach Test -

The sampling was done at fixed time intervals and then placed in three different pH solutions and checked visually for any color leaching. Results mentioned in below table.

TIME INTERVALS	VISUAL RESULTS
Initial	No change in color
After 1 month	No change in color
After 3 months	No change in color
After 6 months	No change in color

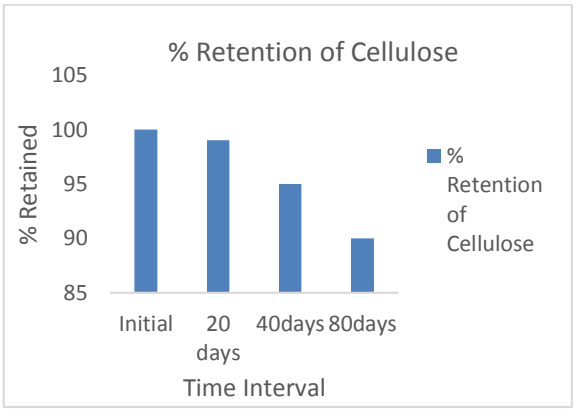
➢ Temperature Effect on LOD Stability:

The incubated Cellulose Exfoliators were place in an air tight glass bottles at 25˚C, 30˚C and 40˚C ± 2˚C for 3hours.
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.



➢ % Active Content retention:

The stability of Cellulose Exfoliators was compared to that with the initial amount present in Umang's Spray spheres® -SE beads. After 80 days at 42°C, HPLC analysis revealed that the encapsulation technology facilitated retention of 90% of the cellulose of initial record. Results mentioned in below graph.



CONCLUSIONS:

The above studies show that Cellulose Exfoliators do not change the appearance when analyzed for different pH, Leach test and Temperature as testing parameters and demonstrated the desirable retention throughout the stability studies.

Thus, make it an ideal for use in personal care formulation.

REFERENCES:

- ICH Harmonised Tripartite Guideline Stability Testing of New Drug Substances and Products Q1A (R2).
- Nilani Packianathan; Ruckmani Kandasamy; Skin Care with Herbal Exfoliants; Functional Plant Science and Biotechnology; (Special Issue 1); 2011; 94-97.