

FORMULATION OF CELLULOSE EXFOLIATORS FOR FOOT SCRUB

EXFOLIATORS: Exfoliation is a natural process of healthy skin, where the body sheds dead skin cells, allowing brand-new, fresh skin to be revealed beneath.

Natural Exfoliating agents are used to remove dead cells present on the skin and boost blood circulation, giving renewed and glowing skin. Natural exfoliation spheres gently exfoliates and deep cleans the skin while protecting and nourishing it at the same time.

Umang Pharmatech manufactures **Sprayspheres SE®** beads contain natural products specially used for exfoliation .

KEY WORDS: Exfoliate, peel off ,flake off ,throw out, shed off ,scrap, eliminate ,rub ,
Exfoliators beads , Scrub beads , Natural Exfoliators ,Cosmetic beads for aesthetic effect.

EXFOLIATION BENEFITS:

- Removal of dead skin cells
- Smoother, firmer skin
- Even-toned complexion
- Refined pores
- Reduces fine wrinkles, hyperpigmentation and scars
- Stimulates blood flow
- Allows for better absorption of moisturizers and serums.



CELLULOSE EXFOLIATOR:

Cellulose exfoliators or cellulose beads, get destroyed during skin application so that they naturally disappear from the body surface without any rinsing. These cellulose particles can be advantageously used in a body care composition, and notably for exfoliating composition. Cellulose

exfoliator have an average particle size less than 1 mm and preferably comprised between 200 µm and 900 µm. Exfoliators like cellulose deeply scraps off dead skin cells and allows new cells to replace them. Cellulose Exfoliator helps in removal of the oldest dead skin cells on the skin's outermost surface, and gives you crack free feet for long period..

INCI NAME:

Cellulose

PHYSICAL AND CHEMICAL PROPERTIES

Appearance - Free flowing white to(many different colour)spheres

Solubility – Practically insoluble in water

Bulk Density - NLT 0.6 gm/cc

pH Value (1.0% Slurry) - 5.0 to 8.0

Loss on drying - NMT 8.0%

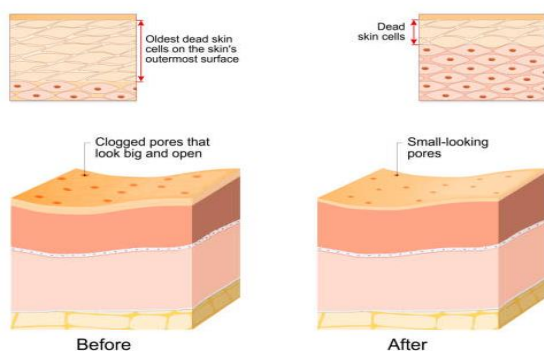
KEY PROPERTIES OF CELLULOSE EXFOLIATORS

- Does not disappear on gentle rub
- Preservative Free.
- Non GMO
- Provides Soft to mild Exfoliation
- Composition has GRAs status.

- Only approved synthetic & natural colors used
- Provide visual effects
- It is natural, non-toxic, non-comedogenic and non-allergenic properties and also biodegradable.
- Soft but effective abrasive, exfoliates naturally restore skin's beauty

EFFECT OF CELLULOSE EXFOLIATOR IN FOOT SCRUB:

Exfoliation



Cellulose Exfoliators are composed between 80% and 100% by wt., preferably between 95% and 99.9%, of cellulose, and between 0% and 20% by wt., preferably between 0.1% and 5%, of hydroxypropyl-methylcellulose. Thus, 99% of the beads disintegrate under mechanical stress or during massage movements after an average time less than 3 minutes, when applied on human skin or skin.

PARTICLE SIZES OF EXFOLIATOR BEADS

XS = Extra Small = 0.2 mm
 VVS = Very Very Small = 0.2 - 0.3 mm
 VS = Very Small = 0.3 - 0.6 mm
 S = Small = 0.6 - 0.8 mm
 M = Medium = 0.8 - 1.4 mm
 L = Large = 1.4 - 2.0 mm
 XL = Extra Large = 2 - 5 mm

FORMULATION PROCEDURE:

Stage 1: Disperse carbopol ETD 2020 and Ultrez 10 polymer in the deionized water, Continue stirring slowly to hydrate for about 20 min.

Stage 2: Partially neutralize the carbopol dispersion with TEA in Part A and mix until smooth.

Stage 3: Add part B to Part A with slow, sweep mixing to avoid foaming.

Stage 4: Pre-combine ingredients in part C and add part C to parts A/B. Mix slowly until homogeneous

Stage 5: Add ingredients in part D to parts A/B/C, in order mixing thoroughly between. Finish by adding remaining TEA to neutralize.

DOSAGE: 0.5 % to 2% for visual effect and up to 10 % for colour or active delivery

STORAGE: Temperature between 5° C and 25 ° C

FORMULATION TIP	
FOOT SCRUB	
Ingredient	Qty (wt %)
Part A	
1. Deionized water	79.00
2. Carbomer/carbopol Ultrez 10	0.25
3. Acrylates / C10-30 Alkyl Acrylate crosspolymer/Carbopol ETD 2020	0.40
4. Triethanolamine (99%)	0.16
Part B	
1. TEA Lauryl sulfate (40%)/ standapol T	4.00
2. Propylene Glycol	2.50
Part C	
1. Glycerine	2.50
2. Cellulose Exfoliator	0.5-2%
3. Propylene Glycol and water and Matricaria (Chamomilla Recuita) Extract/Actiphyte of Chamomile	0.05
4. Propylene glycol and water and Ivy (Hedera Helix) Extract /Actiphyte of Ivy	0.05
5. Polymethoxy Bicyclic Oxidilidine/Nuosept C	0.20
Part D	
1. Pumice	10.00
2. D&C No.33 (0.1%)	0.35
3. Triethanolamine(99%)	0.44