

## **FORMULATION OF BAMBOO EXFOLIATORS FOR FOOT SCRUB**



**EXFOLIATORS:** Natural Exfoliating agents are used to remove dead cells from the surface of skin and improve blood circulation, giving renewed and glowing skin. It keeps face free from dirt, collected sebaceous secretions also improves the skin appearance Exfoliators removes dull flaky skin, evens skin tone and diminishes the look of fine lines to reveal radiance. Natural exfoliation spheres gently exfoliate and deep clean skin while protecting and nourishing it at the same. Umang Pharmatech manufactures Sprayspheres SE® beads containing natural products specially used for exfoliation.

### **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.

### **BAMBOO :**

Bamboo is one of the agricultural crops which can be utilized for the design and development of polymer composites. Bamboo is rich in natural silica which improves skin health. It absorb essential minerals such as more than 75% silica ,calcium, potassium, iron, choline, magnesium and betaine. Bamboo is used in Indian Phytotherapy for its remineralizing properties.

### **INCI NAME :**

Bambusa Vulgaris Extract ( Bamboo Powder)

### **PHYSICAL AND CHEMICAL PROPERTIES:**

**Appearance** - Free Flowing White color 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 BAMBOO 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 BAMBOO EXFOLIATORS IN FOOT SCRUB:



Bamboo Exfoliators is naturally antibacterial. It remove the microbes and bacteria from the feet. It is safe for the skin and much easier to keep clean. Bamboo exfoliators used for foot care product that may help to keep feet healthy and soft. Bamboo exfoliators improves the circulation, stimulates the cell renewal and refines skin texture.

**DOSAGE:** 0.5 % to 2% for visual effect and up to 10 % for color or active delivery.

**STORAGE:** Temperature between 5 and 25° C.

### 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.

**Stage 6:** Bamboo exfoliators are added at the end of manufacturing at moderate temperature and at slow stirring. Shearing or other mechanical

stresses should be avoided during all manufacturing and filling process.

FORMULATION TIP	
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. Activated Charcoal Exfoliator	0.10
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
Bamboo Exfoliators	0.5-2

### 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

**KEY WORDS:** Exfoliator Beads, Scrub Beads, Natural Exfoliators, Cosmetic Beads for aesthetic effect, peel off, flake off, shed off, scrap, eliminate.