# FORMULATION OF CELLULOSE EXFOLIATORS FOR BODY 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.

**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.

## CELLULOSE EXFOLIATOR :

Cellulose exfoliaitors , 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.

### 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

## 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

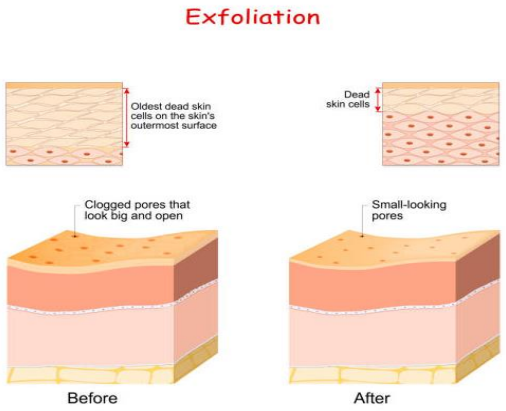
**Loss on drying** - NMT 8.0%

## 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 EXFOLIATORS IN BODY SCRUB:**




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 scalp. So Cellulose exfoliator helps lightly clear out dead cells from the surface of the skin pulls out bacteria, poisons, chemicals, dirt and other micro-particles to the surface of skin it also sucks out impurities of the skin.

**FORMULATION PROCEDURE:**

**Stage 1:** Meter water of part A into appropriate vessel .Add EDTA and mix until dissolved .With moderate propeller agitation, add the carbomer and mix for 20 min.

**Stage 2:** Add ingredients of part B to part A with moderate propeller agitation.

**Stage 3:** Add Part C to Part AB in order listed with moderate propeller agitation .Mix 20-30 min with moderate agitation.

**Stage 4:** Add Part D to batch in order listed .Mix with moderate agitation for 20 min.

**Stage 5 :** Adjust batch to pH 5.5 with Part E

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

**STORAGE:** Temperature between 5° C -25 ° C

| **FORMULATION TIP** | |
|---|---|
| **Ingredients** | **Qty (wt %)** |
| Part A :<br>1.Deionized Water/Diluent<br>2.Disodium EDTA/Chelating agent<br>3.Carbomer(l)/Thickener | <br>51.45<br>0.05<br>1.00 |
| Part B:<br>1.Propylene Glycol/Humectant<br>2.Glycerin (96%)/Humectant | <br>1.00<br>2.00 |
| Part C:<br>1.Sodium Laureth Sulfate (28-30%)/Surfactant<br>2.Disodium Dimethicone Copolyol Sulfosuccinate(30%)(2)/ Surfactant<br>3.Polysorbate-20/Emulsifier<br>4.Dimethicone (and) Laureth-4 (and) Laureth-Z3(SM2169)(3)/Conditioning<br>5.Cocamidopropyl Betaine/Surfactant | <br>16.00<br>15.00<br>1.00<br>5.00<br><br>3.00 |
| Part D:<br>1.Polyquaternium-39(4)/Conditioning<br>2.DMDM Hydantoin (and) Iodopropynyl Butylcarbarnate(5)/ Preservative<br>3. Fragrance(6) | <br>3.00<br>0.15<br><br>0.25 |
| Part E:<br>1.Triethanolamine( 99% ) /pH adjustment | <br>1.10 |
| Cellulose Exfoliator | 0.5-2% |