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## Formulation and Development of Herbal Moisturizing Scrub

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**Abstract-** The present study focuses on the formulation and evaluation of a herbal moisturizing scrub designed specifically for individuals with dry and sensitive skin. Conventional scrubs containing synthetic or harsh exfoliants often lead to irritation, redness, and dryness, necessitating additional moisturizing products. To overcome these drawbacks, a mild exfoliating formulation combining Shata Dhauta Ghrita(SDG) and jojoba beads was developed. SDG, prepared by washing clarified cow ghee one hundred times, serves as a traditional Ayurvedic emollient with strong moisturizing and skin-soothing properties. Jojoba beads, being smooth and spherical, provide gentle exfoliation without abrasion, while Sapindusmukorossi (reetha) extract was incorporated as a natural foaming agent.

**Keywords:** moisturizing exfoliant, skin hydration, jojoba beads, dry and sensitive skin, sapindusmukorossi.

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# Formulation and Development of Herbal Moisturizing Scrub

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**Abstract-** The present study focuses on the formulation and evaluation of a herbal moisturizing scrub designed specifically for individuals with dry and sensitive skin. Conventional scrubs containing synthetic or harsh exfoliants often lead to irritation, redness, and dryness, necessitating additional moisturizing products. To overcome these drawbacks, a mild exfoliating formulation combining Shata Dhauta Ghrita(SDG) and jojoba beads was developed. SDG, prepared by washing clarified cow ghee one hundred times, serves as a traditional Ayurvedic emollient with strong moisturizing and skin-soothing properties. Jojoba beads, being smooth and spherical, provide gentle exfoliation without abrasion, while Sapindusmukorossi (reetha) extract was incorporated as a natural foaming agent.

The prepared formulation was evaluated for various physicochemical and performance parameters, including appearance, pH, foamability, irritability, consistency, stability, washability, and grittiness. Results indicated that the scrub possessed a yellowish-brown color, characteristic odor, pH of 5.9 (within the skin-compatible range of 5.7–7.0), semisolid consistency, and mild grittiness due to the exfoliating agents. It was found to be stable under stress conditions, easily washable, and non-irritant.

Overall, the study concludes that the herbal moisturizing scrub offers dual benefits of gentle exfoliation and intense hydration in a single step. It not only cleanses and nourishes the skin but also protects against acne, pimples, and premature aging, making it a safe and effective cosmetic option for individuals with dry, sensitive skin.

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## I. INTRODUCTION

Harsh scrubs, particularly those that use powerful chemical or synthetic exfoliants, can be too abrasive for people with dry, sensitive skin. Rashes, stinging, or redness may result with these formulations. In order to calm and hydrate the skin after using such exfoliators, people typically need to apply heavy moisturizers afterwards. A very mild exfoliating scrub with moisturizing properties is required to avoid these kinds of responses. A product like this would minimize irritation and do away with the need to apply thick moisturizers separately by combining exfoliating and hydration in one step. This combination method would provide the greatest advantages for a person with dry, sensitive skin: instant hydration to restore softness

and comfort, together with the gentle elimination of dead skin cells without unpleasant side effects.

Plant components used in natural cosmetics typically include antibacterial, antioxidant, and anti-aging qualities. Because there are fewer or no negative effects from herbal beauty care products, their use is growing.<sup>1</sup>

The Shataghrita Exfoliator is an excellent choice for individuals with dry, sensitive skin who cannot tolerate harsh exfoliants that lack any hydration. Built around jojoba beads—which are naturally-derived, smooth, spherical particles—this scrub gently lifts away dead skin cells and surface impurities without abrasion or irritation. The spherical shape of jojoba beads ensures a mild, non-scratching exfoliation, making the process far gentler than that of sharp or synthetic exfoliating agents.

In addition to the exfoliating action, the inclusion of Shata Dhauta Ghrita (a traditional Ayurvedic moisturizer prepared by washing pure desi cow ghee one hundred times) brings deeply soothing and long-lasting hydration. Because SDG is so rich and penetrative, it helps restore moisture, calm the skin, and strengthen the skin's barrier. This dual action—gentle exfoliation plus intense moisturizing—makes the risk of redness, itching, or rashes much lower than when using harsh scrubs alone.

Overall, the formulation delivers cleansing, exfoliation, and nourishment in one step. For those with sensitive, dry skin, this means fewer layers of product, less irritation, and smoother, healthier skin with a minimal risk of adverse reactions.

### Ideal properties of scrub-

1. Should not contain any toxins
2. Has little gritty particles
3. Lightly abrasive
4. Not upsetting
5. The surface is non-sticky
6. Being able to remove dead skin cells.<sup>2</sup>

## II. MATERIALS AND METHODS

1. Goghrita (clarified butter) was placed in a copper vessel <sup>3</sup>, and then water was added and kneading was done. The mixture was left to settle after two to three minutes of kneading, and the water above was then drained. This process was carried out a

hundred times. Shatadhauta. After 100 repetitions of the process, ghrita was obtained.

- Because water is in the dispersed phase and oil is in the continuous phase, the ghrita was triturated with water in this process, creating an emulsion of the water-in-oil type.
- The pressure used during agitation causes the fat granules' particle size to diminish as the washing process proceeds (according to texture, it was smooth and non-granular).
- Eventually, an o/w form of emulsion is produced by repeated washings. It could result in the development of a complicated system similar to w/o/w emulsion. The cause of ghrita swelling could be the transit of water globules in fat molecules through the formation of a water-oil (w/o) emulsion.
- Repeated washings may cause the pigment to seep into the water, altering the item's color (Dhauta). When water is present, the triglyceride is changed into a glycerol throughout this process.<sup>4</sup>
- In the process of making Shatadhautaghrita, ghee was transformed into a soft cream. The presence of water caused fat to break, converting triglycerides into glycerol.
- To it, add 5-7 % jojoba beads. Jojoba beads are tiny, spherical, water-insoluble, and have a subtle scent. Jojoba beads are comfortable to use, non-occlusive, and ensure moderate yet effective exfoliating without being harsh.
- To create enough foaming capacity, add reetha.<sup>5</sup>
- For a variety of uses, including cleaning and the deposition of topical cosmetic and dermatological products, foaming agents like reetha are crucial due to their contact and spreading qualities on natural surfaces.<sup>6</sup>
- 1 gram bacterial cellulose was added as a natural preservative.

Table 1

Ingredients	Quantity taken (for 10 g)	Role
1. Cow ghee	6 grams	Ghrita's lipophilic activity makes it easier to travel to a target organ and deliver it into cells. Hydrates and moisturizes. <sup>7</sup>
2. Jojoba beads	5-7% <sup>7</sup> (0.42 grams)	Exfoliating agent
3. Sapindusmukorossi	2grams	Foaming agent for cleansing <sup>8</sup>
4. Water	Q.s	Preparation of SDG
5. Bacterial cellulose	1 gram	Preservative <sup>9</sup>

Table 2: grams of cow ghee in a copper vessel. Triturate it 100 times with water. Then drain the excess water

↓	An w/o emulsion will form which is called as shatadhautaghrita.
↓	Add 0.42 grams of jojoba beads with a size of 0.2 – 0.3mm
↓	Add 2 grams of Sapindus mukorossi (i.e reetha)
↓	Add 1 gram bacterial cellulose as a preservative.
↓	A herbal moisturizing exfoliator is prepared.

### III. RESULTS AND DISCUSSION

#### 1. Appearance

The prepared shatadhautaghrita scrub was evaluated for its odour and colour. Colour was found to be yellowish to brown. And odour was found to be characteristic.

#### 2. Foamability

In a graduated measuring cylinder, a small amount of scrub was agitated with water, and the amount of foam was measured.

Foam volume was found to be 10 ml at 5 minutes.

#### 3. Irritability

A small amount of scrub was applied on the skin and kept for few minutes and found to be non-irritant.

4. *PH*

Standard value- 5.7-7.0<sup>10</sup>

The prepared scrub's pH was measured. After applying a small bit of scrub to the pH paper, the result was 5.9.

5. *Consistency*

Based on visual inspection, the prepared herbal exfoliator's consistency was determined to be semisolid. As per standard it should be semisolid<sup>11</sup>

6. *Stability*

The cycle test method was used to perform the stability test. After being kept for 24 hours at 4°C, the cream scrub samples were moved to a 40° oven for another 24 hours (one cycle). Physical changes, such as those in pH, homogeneity, and organoleptics, were noted during the six rounds of the test.<sup>12</sup>

7. *Washability test*

Rinsing the applied product under tap water was used to evaluate whether the scrub could be removed with water. The goal is to provide user convenience by verifying that the formulation is easily washable.<sup>13</sup>

8. *Grittiness*

Present (Due to Exfoliating agents)

## IV. RESULT TABLE

Test	Standard value	Result
Appearance	-	Yellowish brown
Colour- Odour –	-	Characteristic
Irritability	Non irritant	Non irritant
PH	7.0	5.9
Consistency	-	Semisolid
Stability	Stable at room temperature	Stable 0°C to R.T
Grittiness	Mild grittiness	Slightly grittiness
Washability	Washable	Washable

## V. CONCLUSION

In this study, we found that jojoba beads and shatadhautaghrita are utilized by the general public as cosmetics and to cure dermatological conditions. The formulated moisturizing exfoliant formulation cleans, moisturizes, and nourishes the skin while shielding it from pimples, acne, and premature aging.

According to test results, the moisturizing exfoliant is safe, effective, and has deep cleansing qualities. It works best on dry, sensitive skin.

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