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# “Formulation and Performance Evaluation of a Natural Herbal Shampoo”

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### ABSTRACT:

The increased desire for natural and eco-friendly personal care products has prompted interest in herbal alternatives to synthetic shampoos. This study focuses on the formulation and performance evaluation of a plant-based herbal shampoo with Shikakai (*Acacia concinna*), Reetha (*Sapindus mukorossi*), Amla (*Phyllanthus emblica*), Hibiscus leaves (*Hibiscus rosa-sinensis*), Tea Tree essential oil, and water as the main constituents. The ingredients were chosen based on their known cleansing, conditioning, antimicrobial, and hair-strengthening properties. Additionally, user acceptability was assessed. The results revealed that the manufactured shampoo has advantageous qualities such as a mild pH, good foaming ability, effective washing action, and the absence of hazardous synthetic ingredients. The formulation showed promise as a safe, effective, and sustainable alternative to traditional shampoos.

**Keywords:** Antibacterial, Evaluation, Herbal, Shampoo, Formulation.

### Introduction:

Consumers' preferences for herbal and natural beauty products have increased in recent years, as they become more aware of the hazards of synthetic components.<sup>1</sup> Hair care, particularly shampoos, has undergone a dramatic shift toward formulas based on traditional medicinal plants known for their therapeutic and beauty properties.<sup>2</sup> Herbal shampoos have a number of advantages, including gentle washing, scalp nourishment, and decreased hair loss.<sup>3,4</sup>

Shampoos are most commonly used to improve appearance. It is a daily-use hair care product that cleanses both the scalp and hair.<sup>5</sup> Shampoos are the most popular beauty products, and they are a viscous combination of detergents with added preservatives and active chemicals.<sup>6</sup> It is typically applied to wet hair, massaged in, and then washed with water. The purpose of shampoo is to eliminate debris from the hair without removing too much sebum.<sup>7</sup> There are several synthetic shampoos on the market today, both medicated and unmedicated; however, herbal shampoo has grown in popularity due to its natural nature, which is safer, improves client demand, and has no negative side effects.<sup>8</sup>

Shampoo is basically a detergent solution that provides additional benefits such as improved hair conditioning, lubrication, medication, and so on.<sup>9</sup> There are numerous synthetic, herbal, medicated, and non-medicated shampoos on the market today, but herbal shampoo is gaining popularity among customers who believe it is safe and free of negative effects.<sup>10</sup> Shampoo contains synthetic surfactants to provide foam and wash action, but prolonged usage causes hair dryness, hair loss, scalp irritation, and eye pain.<sup>11</sup>

## Main Ingredients of Natural Herbal Shampoo.

Fig No. 1 Ingredients of shampoo Shikakai, Reetha, Amla, Hibiscus leaves, Tea Tree Essential oil.



### Formulation Profile of Natural Herbal Shampoo:

Table No. 1 Formulation Profile of Herbal Shampoo.

Sr. No	Ingredients	Quantity
1.	Reetha	1 gm.
2.	Amla	0.5 gm.
3.	Shikakai	1 gm.
4.	Hibiscus leaves	1 gm.
5.	Tea Tree oil	0.5 gm.
6.	water	q. s.

### Procedure for Preparing of Natural Herbal Shampoo.

- Soak the Shikakai, Reetha, Amla, and Hibiscus leaves in water overnight.
- In the morning, boil the soaked mixture for 15-20 minutes.
- Allow to cool, then thoroughly mash the mixture.

- Strain the liquid through a fine cloth or strainer.
- Mix Tea Tree Oil into the strained liquid.
- Pour into a new container and keep in the refrigerator.

#### **Physical Evaluation Parameter and Results of Herbal Shampoo:**

**Table No. 2 Physical Evaluation Parameter Natural Herbal Shampoo.**

Sr No.	Evaluation Test	Observation
1.	Color	Brown
2.	Transparency	Clear
3.	Oduor	Characteristics
4.	pH	7.6
5.	Foam Volume	26 ml
6.	Skin irritancy test	No irritation
7.	Surface Tension (dynes/cm)	35.11
8.	Wetting Time (s)	118 sec.
9.	Stability	Stable in 1 month
10.	Foamability	Good
11.	Appearance	Liquid

#### **Discussion:**

The process resulted in the creation of an environmentally friendly herbal conditioner infused with Shikakai, Reetha, Amla, Hibiscus leaves, and Tea Tree Essential Oil. These ingredients were chosen because they are commonly used in traditional hair care and have been linked to various positive health effects.

#### **Conclusion:**

The herbal shampoo was made by blending different natural ingredients. Based on the overall results, we can conclude that the herbal shampoo formulation was more secure, beneficial, and safe in terms of the evaluation criteria. There are no chemicals introduced that are harmful to humans.

#### **Conflict of Interests:**

The writers acknowledge neither commercial or personal motives that may have influenced the work presented in this paper.

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