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## “Formulation and Evaluation of Herbal-Based Natural Body Wash for Enhanced Skin Care”

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### ABSTRACT:

In response to increasing demand from customers for natural and skin-friendly personal care products, this study focuses on developing and testing an herbal-based body wash containing turmeric, watermelon juice, aloe vera, and tragacanth. These ingredients were chosen for their well-documented skin benefits: turmeric for its antimicrobial and anti-inflammatory properties, watermelon juice for hydration and vitamin enrichment, aloe vera for soothing and moisturizing effects, and tragacanth for natural thickening and stabilizing properties.

The formulation was tested for critical criteria such as pH, appearance, foaming capacity, stability, and skin compatibility. During basic consumer trials, the final product revealed an appropriate pH, steady viscosity, good washing and foaming ability, and no evidence of skin irritation. The combination of these plant ingredients produced a soothing, effective body wash with potential uses in natural skincare. This composition represents a promising alternative to synthetic body cleansers, meeting the growing demand for clean-label and plant-based skincare.

**Keywords:** Vitamin, Formulation, Evaluation, Skincare.

### Introduction:

Cleansing is essential for both health and hygiene.<sup>1</sup> Personal cleansing agents such as soaps, one of the earliest to be developed were initially expected to deliver only cleansing benefits.<sup>2</sup> But consumer expectations came up with time to encompass health and cosmetic benefits.<sup>3</sup> This demand led to the development of an array of milder cleansing agents with broader spectrum of application.<sup>4</sup>

In recent years, there has been a significant shift in consumer preferences toward natural and herbal-based personal care products due to concerns over the potential side effects of synthetic chemicals.<sup>5</sup> Among these, body wash formulations have gained popularity for their dual role in cleansing and maintaining skin health. Herbal ingredients are known to be rich in bioactive compounds, offering therapeutic properties such as antimicrobial, anti-inflammatory, moisturizing, and antioxidant effects.<sup>6</sup>

This study focuses on the formulation of a natural body wash using four key herbal ingredients: turmeric, watermelon juice, aloe vera, and tragacanth. Turmeric (*Curcuma longa*) is well recognized for its antimicrobial and anti-inflammatory properties, making it beneficial for treating minor skin conditions.<sup>7</sup> Watermelon juice is a rich source of vitamins A, C, and antioxidants, known for hydrating and revitalizing dull skin. Aloe vera is widely used in skincare for its soothing, moisturizing, and healing effects.<sup>8</sup> Tragacanth, a natural gum, functions as a stabilizer and thickener, contributing to the desirable consistency of the formulation without synthetic additives.<sup>9,10</sup>

The primary objective of this research is to formulate an herbal-based natural body wash and evaluate its physicochemical properties, stability, and skin compatibility.<sup>11</sup> By combining these herbal ingredients, the study aims to develop a product that is both effective and safe for regular skin care, aligning with the increasing demand for clean-label, eco-friendly cosmetic products.<sup>12</sup>

### 1. Ingredients for Herbal-Based Natural Body Wash.



Fig. No. 1 Ingredients of Turmeric, Watermelon Juice, Aloe vera, Tragacanth, Glycerin, Orange Peel, Liquorice, Rose Water.

### Formulation Profile of Herbal-Based Natural Body Wash.

Table No – 1 Ingredients Profile.

Sr.no	Ingredients	Quantity	Uses
1.	Turmeric	4.5 gm	Anti-Bacterial Agent.

2.	Watermelon Juice	5 ml	Hydration & Vit. C
3.	Aloe vera	4 ml	Skin moisturizer, healing and regeneration.
4.	Tragacanth	3 gm	Reduce Inflammation & Viscosity enhancer
5.	Glycerin	5 ml	Protects the skin barrier
6.	Orange Peel	2 gm	Natural exfoliation & vit. C
7.	Gelatin	1.5 gm	Improves Skin texture
8.	Liquorice	1 gm	Inhibits melanin production & Foaming Agent
9.	Rose Water	5 ml	Fragrance and Suitable for sensitive skin

### Procedure of Herbal-Based Natural Body Wash.

#### Step 1: Prepare Tragacanth Gel Base -

- Immerse 3 grams of tragacanth gum in one fourth of a cup of purified water in a day.
- In the early hours of the morning, it will swell to the gel-like properties consistency.

#### Step 2: Blend Liquids form -

- In a newly cleaned basin, mix all of the components.
- Watermelon juice, aloe vera gel, glycerin, and rose water.
- Mix completely with a smoothie maker.

#### Step 3: Add Other Powders

- Gradually add turmeric, orange peel powder, and Liquorice a fine powder.
- Mix thoroughly to prevent sticking.

#### Step 4: Mix with Gel

- Combine the tragacanth gel with the herbal liquor mixture.
- Properly mix until homogeneous and jelly-like.

#### Step 5: Packaging & Storage of sample

- Keep in a sterile plastic bottle container.
- To label the item.

### Formulated Herbal-Based Natural Body Wash Sample:



Fig. No. 2 Formulated Herbal-Based Natural Body Wash Sample.

### Physical Evaluation Parameter and Results of Herbal-Based Natural Body Wash:

Table No. 2 Evaluation Parameter Natural Body Wash.

Sr.no	Parameter	Observation
1	Color	Yellow
2	Odor	Pleasant (rose like)
3	Appearance	Viscous
4	Thickness	Thick
5	pH	5.7
6	Foam Height	5.5cm
7	Irritation	No
8	Stability	Stable in room temp.
9	Consistency	Liquid
10	Spreadable	Uniform
11	Washing capability	Easily washable
12	Solubility	Soluble

### Discussion:

The herbal-based body wash made with turmeric, watermelon juice, aloe vera, tragacanth gum, glycerin, orange peel, licorice, and rose water showed physical and functional properties. The resulting product is a solid gel-like consistency.

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**Conclusion:**

The herbal-based natural body wash, which contains turmeric, watermelon juice, aloe vera, tragacanth, glycerin, orange peel, licorice, and rose water, has demonstrated good skin care benefits. Each ingredient was picked for its benefits, which include anti-inflammatory and antioxidant activity, as well as hydrating and brightening characteristics.

The evaluation findings supported the product's stability and skin compatibility, demonstrating that it is a safe and effective alternative to typical synthetic body wash. The results show that such formulations are practical and have no detrimental effects on the body. Because it is chemical-free.

**Conflict of Interests:**

The authors acknowledge no economic or personal interest that may have influenced the work presented in this article.

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