

PREPARATION AND EVALUATION OF HERBAL SHAMPOO

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ABSTRACT

Shampoo is a liquid or cream- grounded admixture of cleaner or soap used to cleanse hair. Soaps are the products that clean the crown and hair shaft of face oil painting and smut. The most popular type of hair treatment is shampooing. Soaps are products that are substantially used to clean the crown and hair. Indeed though herbal soap performs better and is safer than synthetic soap, it does not feel likely that consumers will embrace it in the current terrain. A further drastic strategy to make herbal soap more extensively used would be to alter client prospects by placing further of a focus on efficacy and safety in soaps. This study's primary thing was to replace dangerous synthetic constituents in the expression of herbal soap with safe druthers

Keywords: Herbal Shampoo, Evaluation, Standardization.

I. INTRODUCTION

As protective appendages on the body, hair is generated from the ectoderm of the skin and is regarded an accessory structure of the integument, along with sweat glands, sebaceous glands, and nails. Because they begin in the epidermis during the development of the embryo, they are also referred to as epidermal derivatives. A key component of the human body's overall attractiveness is its hair. Throughout history, head hair has been linked to social status and attractiveness. There are countless examples from all artistic mediums that attest to the unique importance that people of almost all eras and civilizations place on hair .Though hair has been styled, cut, and even colored since the beginning of time, cleaning has not received as much attention as it should. The development of a true method for cleansing the hair and scalp dates only to this century. First came the mass providing sanitary facilities and cake soap to encourage personal hygiene and bodily cleanliness. The specialty of branded shampoo products for the hair and scalp, available in a wide variety of sorts and shapes, followed. Shampooing the hair and scalp has now become almost a universal habit. Today, shampoos are arguably the most popular hair product, containing both synthetic and herbal elements . Shampoos are presumably applied to the skin like makeup. It is a product for hair care that is used in daily life to clean the hair and scalp. Shampoos are a viscous detergent solution with appropriate additions, preservatives, and active chemicals that are mostly used as beautifying agents. Typically, wet hair is treated with it, rinsing with water to remove any remaining product. Shampoo is used to remove built-up debris from hair without significantly reducing sebum production

Defination:

A shampoo is a mixture of surfactant (also known as surface active substance) in a liquid, solid, or powder form that, when applied according to directions, will remove skin debris, grease, and filth from the scalp and hair shaft without harming the user.

Types of Shampoo

Shampoos are of the following types

1. Powder Shampoo
2. Liquid Shampoo
3. Lotion Shampoo
4. Cream Shampoo
5. Jelly Shampoo
6. Aerosol Shampoo
7. Specialized Shampoo

8. Conditioning Shampoo
9. Anti-dandruff Shampoo

Ideal Properties of a Shampoo:

1. It should remove loose corneal cells from the hair as well as dust, excessive sebum, or other fatty substances completely and effectively.
2. It must generate a significant volume of foam in order to meet the psychological needs of the user.
3. When you rinse it with water, it ought to come off with ease.
4. It ought to give the hair a pleasing scent.
5. It shouldn't irritate the skin or eyes or have other negative consequences.
6. The hand shouldn't become rough or chapped as a result.
7. To give the hair a glossy, silky finish.
8. Make a sizable quantity of foam.
9. Shouldn't irritate the skin, scalp, or eyes.
10. Must effectively and fully eliminate dirt.
11. Give hair a pleasing scent

Functions of Shampoo:

1. The dirt or soil should be removed completely and effectively.
2. The hair should be well cleaned.
3. To please the user, a sufficient amount of foam should be produced.
4. Rinsing with water should be an easy way to get rid of it.
5. It ought to give the hair a pleasing scent.
6. It shouldn't irritate the skin or eyes or have any negative consequences

Advantages of Herbal Shampoo:

1. Pure and Organic Ingredient
2. Free from Side Effects
3. No Surfactants eg:- SLS
4. No Synthetic Additives
5. No Animal Testing
6. Earth And Skin Friendly
7. No Petroleum based Ingredients

Desired Properties of Herbal Shampoo:

1. Ease of Application
2. Removal of More Debris
3. Easy Wet Combing
4. Fragrance
5. Low Level of irritation
6. Well Preserved

II. LITERATURE REVIEW

1. Eldrige J.M- 1997- Surfactant Science Series

They came to the overall introduction, surface activity, and applications of surfactants conclusions. Significant progress has been made in the methods available to examine surfactant function, leading to a greater knowledge of molecular interactions in science degree

2. Ebling F.I.G – 1987- The biology of hair, Clinical Dermatology

Hair follicles, which are tiny pits in the skin, produce hair. The primary characteristic of hair follicles is their sporadic activity; after each active phase, known as anagen, there is a transitional phase, known as catagen, and

a resting phase, known as telogen, during which the entirely Forming "club hair" is held onto for a while before being shed. Androgens are necessary for the development of pubic, axillary, facial, and body hair. High amounts of testosterone and its conversion to 5-alpha-dihydrotestosterone are necessary for the growth of facial and body hair.

3. Cash T.F- 2001- The psychology of hair loss and its implication for Patient care, Clinical Dermatology

FPHL is a little-known organization. More than ¼ of ladies over 50 experience noticeable hair loss. A thorough understanding of the condition's potential underlying causes, physical co-morbidities, potential differential diagnosis, and the various accessible therapeutic methods. It also requires consideration for the possible psychological impact that hair loss may have on those who are impacted and for tact when speaking with patients.

PREPARATION OF HERBAL LIQUID SHAMPOO

All plant material was gathered from an Ayurvedic store, including ritha fruits, fenugreek seeds, amla, and shikakai.

Table 1: Formula of Prepared Shampoo

Sr.No.	Name of Plant	Purpose / Uses
1	Fengreek	Promotes hair growth
2	Ritha	Detergent
3	Amla	Help enhance hair texture
4	Shikakai	Shine to hair
5	Distilled Water	For soaking
6	Methyl Paraben	Preservation

Weigh each ingredient precisely, then let it soak for the entire night. After soaking all night, the following morning (after the mixture has cooled and become puffed and full of water), boil the ingredients in the same water over medium heat. To it, methyl paraben was added. preservation as well as The developed shampoo was put to use for additional analysis and kept in an appropriate container.

III. EVALUATION OF HERBAL SHAMPOO

The resulting formulation's solid content, pH, physicochemical characterization, and organoleptic characteristics were all assessed in terms of product performance. Tests were conducted on the goods to ensure their nature, including surface tension, foam volume, and foam stability and wetness duration using accepted procedures

1. Visual assessment

The prepared product was tested for color, clarity, odor, and foam content.

2. pH determination

A pH analyzer was used to measure the pH of the produced herbal shampoo in 10% v/v distilled water at room temperature.

3. Determination of solid content percentage

To find the percentage of solid material, weigh approximately 4 grams of shampoo in a dish that is dry, clean, and evaporating. Specific tests were carried out utilizing standard protocol for surface tension, foam volume, foam stability, and wetting time in order to validate the goods.

4. Determination of solid content percentage

To find the percentage of solid material, weigh approximately 4 grams of shampoo in a dish that is dry, clean, and evaporating. The process was conducted once more to validate the outcome. The shampoo's liquid component was evaporated in a dish by setting it on a hot plate. The Following full drying, the weight and percentage of the solid ingredients in the shampoo were determined.

5. Surface tension measurement

A stalagmometer was used to measure the surface tension of the produced shampoo in 10% w/v distilled water at room temperature.

6. Testing of wetting

By recording the amount of time needed for the canvas paper to fully sink, the wetting time was determined. A 1. inch in diameter disc was cut from a 0.44 g piece of canvas paper. The canvas paper disc was placed over the shampoo (1% v/v) surface, and the timer was used to time how long it took for the paper to sink.

7. Foam stability test

The cylinder shake method was utilized to ascertain the stability of the foam. A graduated 250 ml cylinder was filled with approximately 50 ml of the 1% solution for shampoo and given ten vigorous shakes. The foam volume was noted in order to determine the foam stability of the shake test, respectively, after one and four minutes. After shaking the foam for one minute, the total volume was measured.

8. Dirt dispersion test

Two drops of cleanser were added to 10 milliliters of filtered water and placed in a test tube with a wide mouth. Once the test tube was sealed with a stopper, one drop of Indian ink was added to the shampoo mixture and agitated for ten minutes. It was determined how much ink there was in the foam, and There were four possible grades for the outcome: none, slight, medium, and heavy.

9. Conditioning performance evaluation

An artificial Indian woman's hairstyle was purchased from a salon and split into two swatches, each measuring roughly 10 cm in length and 5 grams in weight. The swatch that was not washed served as the control, and the swatch that was tested using the Shampoo formulation was used for washing. Each hair was added for two minutes to a mixture of shampoo and water (10:15) in a conical flask, and then 50 milliliters of distilled water was used for washing. The process was done a maximum of ten times, allowing each hair to air dry at room temperature. A blind touch test was used to assess the conditioning impact of the produced shampoo in terms of smoothness and softness. Twenty randomly chosen student volunteers participated in the test.

IV. CONCLUSION

In addition to being safer than chemical conditioning products, the specially designed shampoo also significantly lessens hair loss while combining and fortifies hair development. To preserve the scalp's acidic mantle, the shampoo's pH was raised to 5. The physicochemical method is employed to preserve the formulations in order to minimize the risk associated with chemical preservatives. However, the laboratory shampoo's visual qualities—such as its clarity and lather do not compare favorably to those of commercial shampoos. One par is the volume of foam. Despite being safer and performing better than synthetic shampoos, it appears unlikely that herbal shampoos would catch on with customers in the current market. Manufacturers need to actively engage in informing customers about the possible negative consequences of shampoos with artificial detergent. It is imperative that formulators shift consumers' notions of what constitutes a good shampoo.

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