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HERBAL SHAMPOO AND ITS EVALUATION:A BRIEF STUDY

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OPENACCESS

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ABS TRAC T

A natural hair care product called herbal shampoo is used to remove oil, debris, and dandruff while strengthening, darkening, and encouraging hair growth. Additionally, it gives the hair gloss, softness, and smoothness. Shampoo for cosmetic purposes is prepared using a variety of medications. These medications have a number of adverse effects, including headaches, nausea, pain, increased scaling, hair loss, and scratching. As a result, an effort is undertaken to create a herbal shampoo that has no negative effects. Herbal shampoo is used to clean hair, condition it, smooth its surface, promote good hair health, and keep it free of dandruff, oil, and lice. Most importantly, its safety benefits are anticipated.Herbal cosmetics have the advantage of being non-toxic, lowering allergic reactions, and having many substances that have been shown to be effective over time. Therefore, in the current investigation, we discovered that the herbal shampoo had good qualities, and we will continue to optimise its benefits for human usage as a cosmetic product. Similar to conventional shampoos, herbal shampoos are cosmetic preparations that use traditional ayurvedic herbs to cleanse the hair and scalp. They are employed to remove pollutants from the environment, oils, dandruff, and grime.

Keywords: Herbal Shampoo, Ayurvedic Herbs, Cosmetic.

INTRODUCTION

In your daily life, shampoos are probably the most popular cosmetic product for cleaning your hair and scalp. In essence, a shampoo is a detergent solution with appropriate additions for additional uses like lubrication, medication, hair conditioning, etc. There are a lot of herbal, synthetic, medicated, and non-medicated shampoos on the market these days [1]. However, customers' belief in herbal shampoos is driving up their popularity. There are no negative effects and the herbal shampoos are safe. Herbal shampoos have been used for many years and are a frequently used, unstable product worldwide. Chemical herbal shampoos are made with a variety of chemicals that can help with hair issues but can also cause damage to hair. Some international researchers said that the chemicals of herbal shampoos also responsible for cancer herbal shampoos are defined as preparation of a surfactant in suitable form liquid , solid or powder which when used under the condition specified will remove surface grease , dirt & skin debris from the hair shaft & scalp [2]. Herbal shampoos have so many types are powder, liquid, lotion,cream, jelly, aerosol and specialized herbal shampoos (conditioning, antidandruff). Herbal shampoos contain all the natural ingredients with herb extract. It helps hair to improve their quality of moisture,growth, thickening, strength of hair roots. The most important thing is that herbal shampoos have no any side effect. The herbal shampoos are better in performance &safer than the synthetic shampoos herbal shampoos are totally natural no any other chemical are added. herbal shampoos won't irritate the skin or scalp .By using herbal shampoos we can prevent the hair loss .Hairs are the integral part of human beauty .people are using herbs for cleansing ,beautifying &managing hair since ancient era .The large amount of people used herbal product which are less expensive and have less side effects. as for as ancient time people used natural extract and resources for health care and cosmetic purposes [3-5] .They are large number of medicinal plant which are beneficially effect on hair and are commonly used in formulation of shampoos . These plant product may use in there powder form, crude form, purified extract or derivate form .Herbal shampoos are used to promote hair growth by naturally stimulating the hair follicles.

Herbal shampoos are environmentally friendly as they contain bio-degradable materials rather than harsh chemicals. Herbal shampoos are safe because it contain all natural ingredients it is non-allergic product with make it suitable for all skin type including sensitive & allergy prone skin [6].

IDEAL PROPERTIES OF HERBAL SHAMPOO

1. It should effectively and completely remove dust or soil, excessive sebum or other fatty substances and loose corneal cells from the hair.
2. It should produce a good amount of foam to satisfy the psychological requirements of user.
3. It should be easily removed on rinsing with water.
4. It should leave the hair non-dry, soft, lustrous with good manage ability and minimum fly away.
5. It should impart a pleasant fragrance to the hair.
6. It should not cause any side-effects / irritation to skin or eye.
7. It should not make the hand rough and chapped.
8.

EVALUATION OF HERBAL SHAMPOO

The prepared formulation was evaluated for product performance which includes organoleptic characters, pH, physicochemical characterization, and for solid content. To guarantee the nature of the items, particular tests were performed for surface tension, foam volume, foam stability and wetting time using standard protocol.

Visual assessment

The prepared formulation was assessed for color, clarity, odor, and froth content.

pH determination

The pH of the prepared herbal shampoo in distilled water (10% v/v) was evaluated by means of pH analyser at room temperature

Determination of solid content percentage

The percentage of solid substance was determined by weighing about 4 g of shampoo in a dry, clean, and evaporating dish. To confirm them the items, particular tests were performed for surface tension, foam volume, foam stability, and wetting time using standard protocol **[7].**

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Surface tension measurement

The prepared shampoo in distilled water (10% w/v) was evaluated for surface tension using stalagmometer in room temperature.

Testing of wetting

Wetting time was calculated by noting the time required by the canvas paper to sink completely. A canvas paper weighing 0.44 g was cut into a disc of diameter measuring 1-inch. Over the shampoo (1% v/v) surface, the canvas paper disc was kept and the time taken for the paper to sink was measured using the stopwatch.

Foam stability test

The stability of the foam was determined using cylinder shake method. About 50 ml of formulated shampoo (1%) solution was taken in a graduated cylinder of 250 ml capacity and shaken for 10 times vigorously. Foam stability was measured by recording the foam volume of shake test after 1 min and 4 min, respectively. The total foam volume was measured after 1 min of shaking **[9].**

STRUCTURE OF HAIR

Hairs

Hairs (*pili*) project above the skin surface over most of the body, except for the sides and soles of the feet, the palms of

the hands, the sides of the fingers and toes, the lips, and parts of the external genitalia. They begin to form during embryologic development and are also known as *epidermal derivatives* because they arise from the epidermis. There are about 2.5 million hairs on the human body, of which over 75% is on the general body surface and not the head. Hairs are structures produced in organs called hair follicles (FIGURE.1). They consist of a large amount of dead keratinized cells, dominated by hard keratin. Hair follicles extend from the skin surface into the dermis, containing hair *roots* that are nourished with dermal blood. Each hair follicle is attached to an arrector pili muscle, which helps the hair *shaft* (in which keratinization is complete) to stand on end when it contracts. This occurs during emotional upset and cold temperatures, causing *gooseflesh* or *goose bumps*. Hairs are pushed upward as epidermal hair cells divide and grow, becoming keratinized and then dying.

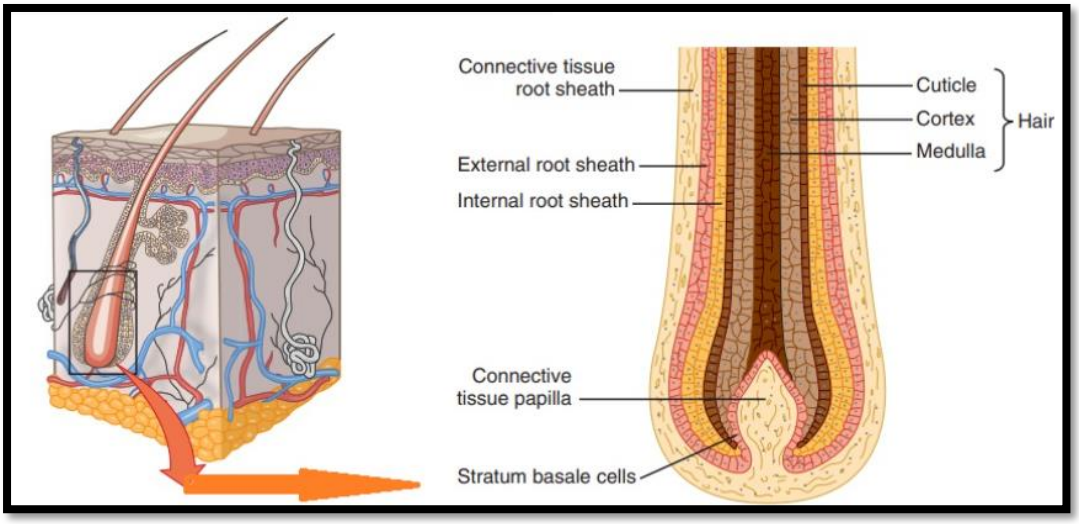

Figure.1; Structure of hair

Each hair follicle is folded from the epidermal sur-face into the dermis. They may extend into the hypo-dermis of the scalp. Each follicle originates at about 4 mm below the skin surface, expanding to form a hair bulb. A *root hair plexus* or *hair follicle receptor* con-sists of a cluster of sensory nerve endings, wrapping around each hair bulb. When the hair is bent, these endings are stimulated, meaning that hairs act as touch receptors with extreme sensitivity. Nipple-like dermal tissue makes up a *hair papilla*, which protrudes into each hair bulb. It contains a knot of capillaries that give nutrients to the growing hair. A *fibrous peripheral connective tissue sheath* makes up the wall of a hair fol-licle. This derives from the dermis. The other compo-nents of the hair follicle wall are the thickened basal *glassy membrane* and the inner *epithelial root sheath*. This sheath becomes thinner as it approaches the hair bulb, with only one layer of epithelial cells covering the papilla.

The hair matrix is the actively dividing part of the hair bulb that produces the hair. It originates in the *hair bulge*, just a small portion of 1 mm above the hair bulb. Chemical signals that reach the hair bulge cause certain cells to move to the papilla, divide, and produce new hair cells. The older part of each hair is then pushed upward, with the fused cells getting more keratin and dying.

Each hair has three concentric layers known as the *medulla*, *cortex*, and *cuticle*. The central core of a hair is the medulla. It is made up of air spaces and large cells. The medulla is the only hair portion that contains soft keratin. It does not exist in fine hairs.

CONCLUSION

The goal of the current study was to create a herbal shampoo that would lessen hair loss and encourage hair growth and strength. The aqueous extract of medicinal plants, which are frequently used for hair washing in ancient practices, was used to produce herbal shampoo. Protein or hair loss is decreased by the use of synthetic conditioning treatments. Shikakai, amla, and other plant extracts are used in this study in place of synthetic ones to produce the desired conditioning effects. The experimental results unmistakably point to a promising composition of high-quality, enhanced herbal shampoo with a distinct colour, scent, and cleansing and foaming capabilities. Shampoo is essential for cleaning the hair shaft and scalp of surface oil and debris.

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