



THE REVIEW ON COSMETIC SCIENCE

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Abstract: -

The review aims to explain the fundamental information concerning Cosmetics Science. The word ‘cosmetics’ is taken from a Greek word “kosmeticos” which implies to adorn. Since period material used for change of state or improvement of look comes below the class of cosmetics. Individuals need to seem stunning and also the construct of cosmetics is as previous as group and civilization.

The herbal cosmetics are known as the preparation containing variety of botanical sources which influence the functions of skin and provide nutrients necessary for the healthy skin or hair. Straightening treatments, hair colors, and henna, Hair cosmetics are a valuable technique for improving patient adherence to alopecia and scalp treatments.

Key words: Hair, hair cosmetics, Herbal shampoo, hair tonics, hair straightens.

1.1 INTRODUCTION

Cosmetics are substances used to enhance the appearance or odor of the human body. Cosmetics include skin-care creams, lotions, powders, perfumes, lipstick, fingernail polish and facial makeup, permanent waves, colored contact lenses, hair colors. A subset of cosmetics is called “make-up”, which refer primarily to colored products intended to alter the user’s appearance.

1.1 Hair (1-10- 17)

Hair is a complex system with unusual chemical and physical properties. It’s a complicated structure made up of various morphological components that work together as a whole. The cuticle, cortex, and medulla are the three primary sections of a mammalian hair shaft. The medulla is present in coarse hair, such as grey hair, thick hair, and beard hair, but not in fine children’s hair. Asian’ coarser hair has more medulla than Caucasians.’

The medulla may be crucial in hair splitting because it provides a point of weakness that causes cracks to progress along the fibers axis. The cuticle, like shingles on a roof, is a chemically resistant region made up of tiny overlapping scales (keratinocytes). Figure 1 depicts the hair follicle anatomy. ^{1, 10, 17}

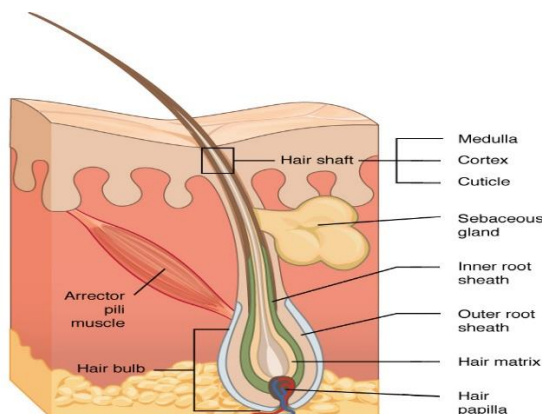


Figure 1: The anatomy of hair follicle

The differential friction effect in hair is created by the shape and orientation of the cuticle cells. Asian hair has a cuticle that is 6-8 scales thick, slightly less in Caucasians, and even less in African hair. African hair is more prone to breakage due to its thinner cuticle layer. The epicuticle is a thin proteinaceous membrane that is covered by a lipid layer that contains 18-methyl eicosanoic acid (18-MEA) and free lipids. The A-layer, the exocuticle or B-layer, and the endocuticle are three layers beneath the cuticle cell membranes, all of which contain strongly cross-linked protein, mostly cysteine. The first one contains the most cysteine, whilst the third one contains at least. The cortex, which is composed up of elongated, fusiform cells connected by a CMC and contains protein and melanin granules, make up the majority of the mass of human hair. The cortex cell also contains macrofibrils, which are spindle-shaped fibrous structures made up of microfibrils, which are highly structured fibrillar units, and matrix. The matrix is made up of crystalline cysteine-rich protein. In a spiral structure, the macrofibrils are arranged.

1.2 Reason for hair loss/hair damage. ⁽¹⁰⁾

- 1) Stress:** Although emotional stress is less likely than physical stress to cause hair loss, it can still occur in situations such as divorce, ageing parents, or the death of a loved one. It would be beneficial to have a hair fall tip to manage stress and anxiety using yoga, meditation, and talk therapy.
- 2) Dietary habits:** Vitamin deficiency is the leading cause of hair loss. Hair loss is commonly caused by low vitamin B levels and a lack of necessary minerals. It occurs when there is a lack of nutrients in the diet and the food is not nutritious.
- 3) Protein storage:** Hair loss is frequently caused by a protein deficiency. If you don't get enough protein in your diet, your body will break down more protein. This depletes the hair of the required protein for growth and prevents the inflow of keratin into the hair.
- 4) Chemical-based products/wrong product:** One of the most common causes of hair loss is the use of incorrect hair products. It's always a good idea to utilize products that keep your hair healthy and prevent hair loss. Anti-dandruff shampoo and conditioner for dry or damaged hair, for example, will not help you fix the problem. Instead, use a shampoo that is designed to help you combat hair loss in a targeted approach.
- 5) Heredity:** Hair loss can be caused by genetic diversity, which is a significant factor. Hair loss with a pattern is inherited by both males and women. Hair loss is caused by a number of genes that have been found.

HERBAL HAIR OIL: -

Hair is one of the vital parts of our body and it influences the overall appearance of the person. Hair care products are defined as those formulations which are used for cleansing, modifying the texture of the hair, changing the color, giving life to stressed hair, providing nourishment to the hair and giving the healthy appearance to the hair. (33) There are two categories of hair care products these are hair tonics and second is hair grooming aids. Hair oil those contain herbal drugs are called as hair tonics.

These are formulated by herbal extracts in an oil base. Hair oil are hair care formulations applied for treatment of hair disorders such as baldness, aggression of hair, discoloring of hair, hair falling and dryness of hair etc. Nature of oil is non-sticky and addition of perfumes enhance the fragrance and overall improves its popularity. Proper application of hair oil gives luster to hair, softening the hair, give flowness to hair and more important give cooling effect to brain.

1.3 COMMON HERBS USED IN HAIR COSMETIC ARE AS FOLLOW ⁽⁶⁻²⁴⁻³⁶⁾

1.3.1 Brahmi: -



Fig: 2 Brahmi

Brahmi is used in Ayurveda for nourishment and to prevent hair loss. Head massaging using Brahmi oil increases blood circulation in the scalp and makes the roots of the hair stronger. Brahmi oil is used to treat dry, flaky scalp and dandruff. Brahmi used as a powder in a mask or oil can reduce pre-mature greying, hair-loss, promotes hair density, shine and treats scalp treatments.

1.3.2 CASTOR OIL: -



Fig: 3 Castor oil

Castor oil is an old remedy to prevent hair loss or assist with hair regrowth. This is because castor oil has the ability to improve circulation and increase blood flow. It contains anti-inflammatory and anti-microbial properties. The anti-fungal properties in castor oil are Ricin and Resinoleic acid which nourishes the hair. Castor oil is one of the few natural ingredients that stimulates hair growth, combats split ends, moisturizes hair and scalp, adds luster and shine, prevent frequent hair fall or breakage, thickness hair, makes it grow longer fast and fights against dryness and dandruff. Unrefined and extra virgin castor oil is best for hair health.

1.3.3. COCONUT OIL: -



Fig:4 Coconut oil

I have growth up using coconut oil for my hair! My mother always said, “Oils are food for my hair.” Coconut oil is best for pitta dosh individuals as this is cooling oil that is also rich in vitamin E and K, lauric acid and minerals.

1 3.4. Aloe Vera: -



Fig: 5 Aloe Vera for hair

The use of Aloe Vera gel on a regular basis will aid in the maintenance of the hair’s pH balance. It will also aid in the opening of blocked scalp pores and the stimulation of hair follicle development.

1.3.5 Lavender: -



Fig: 6 Lavender for hair

Lavender is one of the most well-known herbs for promoting hair growth and reducing balding. *Lavandula angustifolia* oil has anti-inflammatory, anti-microbial, and antiseptic properties. Lavender oil improves scalp circulation, strengthens new hair growth, and helps to regulate the scalp’s natural oil production. Lavender oil is also a natural insect repellent, making it effective against disease carrying parasites such as fleas, ticks, mosquitoes, and head lice.

1.3.6 Hibiscus: -



Fig: 7 Hibiscus for hair growth

Hibiscus is packed full of antioxidants and vitamins that help to improve the overall health of the scalp and hair. It is also a very effective treatment for dandruff which can interfere with healthy hair growth.

1.4 FACTORS AFFECTING HAIR GROWTH: -

- a. Rest and sleep
- b. Climate also effect the hair growth
- c. Exercise, stress, genes
- d. Vitamins and minerals effect the hair growth
- e. Moderate exercise regime help simulate
- f. Habits those are beneficial for the tresses

2. TREATMENT OF HAIR LOSS:

A patient's quality of life might be negatively impacted by hair loss, which can be distressing. Family doctors may be the first place to look for patients with diffuse or patchy thinning hair. Scarring alopecia should be evaluated by a dermatologist, who is the best person to do so. This type of alopecia, known as alopecia areata, can be diagnosed and treated by your family doctor. Alopecia can be treated with androgenetic Minoxidil, which is clinically diagnosed. By its distinctive areas of hair loss, Alopecia areata can be identified. The treatment should be systemic. Non-inflammatory and non-scarring, telogen effluvium is an alopecia that occurs unexpectedly. Stress, either physical or emotional, is to fault. When the triggering source is removed, hair normally comes back. In order to treat trichotillomania, the underlying psychological issue must be addressed. Condition. Damaged hairs are called Trichorrhhexis nodosa, and they are broken by stress.

2.1 HERBAL PRODUCTS:

Tea bags, pills, tablets, liquids, and powders are among the various types available. Black cohosh, Echinacea, garlic, ginkgo, saw palmetto, and St. John's wort are examples of common herbal health remedies and supplements. These are some examples of herbal products.

2.1.1 Ingredients/composition:

Table No 1: Composition of Natural Herbs and Quantities

Ingredients	Quality
Soap nuts	25g(1/3)cup
Dried gooseberry	25g(1/3)cup
Dried shikakai	25g(1/3)cup
Aloe Vera	½ cup (64g)
Hibiscus	½ cup (64g)
Tulsi leaves	½ cup (64g)

2.2 Best Herbs for Hair Growth for Natural Hair:

Ginseng, Aloe Vera, Lavender, Hibiscus, Rose Petals.

The well-known Chinese plant is a natural herbal cure for a variety of ailments, including hair loss. Green Tea is a famous natural plant because of its numerous health advantages.

Below figure 8 represent the herbs used for hair growth.



Fig: 8 Ayurveda herbs

3.Hair Cosmetic Reactions:

The following are the most common reactions to cosmetic chemicals, in decreasing order of frequency: Formaldehyde, parabens, quaternium-15

Have been left on in most cases, short-contact cosmetics do not cause irritation or allergies. Edoema of the eyelids was described by Van Lerberghe and Baeck. The patient received a Hair-smoothing treatment the day before, using INOAR Moroccan Hair Treatment Containing formaldehyde that her stylist had purchased in Morocco.

3.1 HENNA:

Her stylist had acquired a formaldehyde-containing hair treatment in Morocco. The patch Test revealed that formaldehyde and non-formaldehyde components were presents. The dried and powdered leaf of Lawson inermis is used to make red henna. Henna has long been used as skin, Hair, and nail color. There have been few cases of allergic contact dermatitis due to the use of Red henna and its active component Lawson.



Fig: 9 Banjaras Herbal Henna

4. TREATMENT FOR HAIR FALLS:

Hair loss treatments are one option for dealing with hair loss:

When someone arrives with hair loss, a medication evaluation is necessary to see if there is a nutritional shortage such as anaemia, thyroid problem, or PCOS. It's possible that blood tests will be required to confirm this. The treatment must include the treatment of any medical conditions that may present. In this case, a timely visit with your dermatologist will be beneficial. Even if you don't have such significant issues, you can take nutritional supplements to prevent hair loss under the supervision of a doctor.

5. HERBAL SHAMPOO:

Shampoos are normally made up of 10-30 ingredients, while there are others that have as little as four. The ingredients are divided into four categories: (1) cleansing Agents; (2) additives that contribute to the product's stability and comfort;(3) Conditioning agents that imparts softness and gloss, reduce flyaway, and improve Disentangling ability; and (4) special care ingredients that target specific issues like Dandruff and greasy hair shampoos not only clean the scalp, but they also protect the hair shaft from Damage. Active chemicals added to shampoo formulas can also treat a variety of Scalp ailments. Whatever the disease or condition (dermatitis, seborrhea, alopecia, Psoriasis), it is preferable to keep the hair strands visually presentable by retaining their softness, and lustre while treating the scalp.



Fig: 10 Marketed Herbal shampoos

6. Need of Shampoo:

Shampoo is one of those things that most of us take for granted. We get in the shower, lather up, and rinse. However, if you've ever had hair or scalp issues, you know that the kind of shampoo you use matters. Here are ten reasons why shampoos are important, including reasons that go beyond your hair.

- Shampoo keeps your scalp clean
- It can make your hair oilier
- It can dry out your scalp
- Shampoo can help with hair loss
- Washing your hair reduces cortisol
- They can clean chrome and carpet
- Shampoo can clean your hairbrushes
- People are drawn to natural and organic shampoo

6.2 Ideal properties of shampoo:

- Remove dirt completely
- Readily removed
- Low toxicity
- Smooth and shiny
- Good bio degradable
- No irritation
- Produce foam

7. CONDITIONERS

The purpose of a hair-conditioning ingredient is to give the hair manageability, shine, and antistatic characteristics. This might be incorporated in the shampoo, which would then serve both a cleaner and a conditioner. Silicone (dimethicone) droplets contained in a surfactant mixture were used by Procter and Gamble to produce "2 in 1" shampoos/conditioners in 1987. These are ideal for those who want to shampoo their hair every day and for those who have dry, damaged, or chemically treated hair.

Conditioner can restore the fibers hydrophobicity while also neutralising static electricity. The conditioner may reach the cuticle surface or the interior section

of the cortex, depending on its ability to enter the surface. The cuticle is affected by the larger ones. Polypeptides with a low molecular weight (less than 10,000 Da) can diffuse into hair. On bleached hair, larger molecules (500,000 Da) can disperse through the cuticle. Although intracellular diffusion is possible, intracellular diffusion or diffusion through Nonkeratin areas is flavoured.

7.1 Functions of conditioners

- Restore hydrophobicity
- Seal the cuticle
- Avoid or minimize frizz, friction: Neutralize the negative charge.

Hair Conditioner



Fig: 11 Marketed hair Conditioners

8. SHAMPOO AND CONDITIONER

Adopting a healthy hair wash practise is important not only for hair hygiene but also for its long-Term health. Choosing the proper shampoo and conditioner for your hair type is also an import long part of creating the ideal hair care regimen. You must determine the purpose of the substances in your potential hair care products in order to select the best option for you. In this post, we'll go overall of the well-known and lesser-known advantages of utilizing shampoos and conditioners.

Why do we use conditioner after shampoo?

Conditioner is usually the second step to hair washing. While shampoo is formulated specifically to clean off sweat, dead skin cells, and hair products. A shampoo can only remove dirt, oil, and product buildup, as previously stated. Apply the shampoo to avoid drying out your hairs ends, apply only to your scalp.

Conditioner aids in the replacement of the moisture in the middle and ends of your hair.

How often should you use shampoo and conditioner?

As previously stated, a shampoo can only eliminate dirt, oil, and product buildup. To avoid Drying out your hair ends, apply the shampoo only to your scalp. Conditioner replenishes Moisture in the middle and ends of your hair.

9. APPLICATIONS OF HERBAL COSMETICS. ⁽²⁴⁾

1. They do not provoke allergic reaction & do not have negative side effect.
2. Compared to other beauty products, natural cosmetics are safe to use.
3. Herbal cosmetics are suitable for all skin types
i.e. compatible with all skin type
4. Herbal cosmetics are not that expensive.
5. They are easily incorporated with skin and hair.

6. With small quantity they are very effective as compared to synthetic cosmetics.

7. Easily available & found in large variety and quantity.

10. CONCLUSION:

This review article contains information about hair, hair growth natural, hair care products, and Hair tonics, herbal products, hair care cosmetics, shampoo conditioner, and combination of shampoo and conditioner. The article explains the significance of herbs used for hair. The ethnic hair care industry has already grown to be multibillion-dollar sector, fueled by expanding trends like natural hair.

When it comes to hair care, there are a lot of questions and problems that comes up Hygiene. Indeed, the goal of cosmetic technology is to develop new methods and procedures for the development of cosmetic goods that are primarily composed of natural origin materials while minimising associated costs and meeting market demands.

Herbal hairs cosmetics are formulated using various herbal ingredients are used to treat the skin and hair for the beautification. The natural content in the herbs does not have any side effects on the human body; instead provide the body with nutrients and other useful minerals. So in future herbal hair cosmetic is promising approach to herbal cosmetic industry's.

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