
Cosmetics Science: A Review

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Abstract

This review's objective is to clarify the fundamental ideas of cosmetic science. The word "cosmetics" originates from the Greek term "Schedule V," meaning to embellish. Historically, cosmetics have been used not only for enhancing appearance but also for state transitions, dating back to the earliest civilizations. The plant elements used to make herbal cosmetics are diverse and provide essential nutrients to maintain the health of the skin and hair. cosmetics for hair, including coloring and straightening treatments like henna, are effective in supporting therapies for conditions like alopecia and scalp issues. Cosmetics are made up of chemical components combined together from natural or artificial sources. The body or skin can be cleaned or protected with personal hygiene and skin care products. Natural features like eyelashes and eyebrows can be improved, covered up, and enhanced using cosmetics to improve one's appearance. Cosmetics can also be used to enhance color to the face, changing its appearance entirely so that it resembles a new character, person, or item. The body can also be scented using cosmetics. The most controversial things these days are cosmetics, which are seen as necessary for survival. After World War II, cosmetics became increasingly commonplace in daily life.

Keywords - herbal shampoo, hair cosmetics, hair straightening, hair tonics, and skin care products.

INTRODUCTION

Derived from the Greek word "kosmeticos," which means to embellish or accentuate beauty, the word "cosmetics". Throughout history, people have always felt the need to make themselves look attractive. In ancient times, both men and women used different materials to enhance their appearance. While ladies wore flowers and beautiful stones around their wrists and necks, men would adorn themselves with plant leaves and animal parts. They later started applying colored dirt and ointments to their bodies and faces. Additionally, early civilizations wore necklaces and bracelets made of baked earth and natural shells. Discoveries from ancient Egyptian tombs have given us insight into their beauty customs. For example, they used green-colored earth, like malachite, as eyeshadow and lamp black for eyeliner. They even used red to color their hair. Dancers would rub scented creams on their heads, and as they danced, the scent would spread across their bodies. Shakespeare once said, "If Cleopatra had had a longer nose, the shape of the globe would have changed," highlighting her influence. ^[1] Throughout history, women everywhere have been inspired to look their best, using whatever materials they could find. The British Parliament even passed a law in 1770 about the use of cosmetics, suggesting that the practice had

become quite popular. The law targeted women who used beauty products to deceive men into marriage. In short, the desire to improve one's appearance has been around for centuries, and cosmetics have played a big role in that. Cosmetics are products made from natural or artificial ingredients that are used for personal care or beauty enhancement. They can be used for washing, protecting, or improving the appearance of the body or skin. Makeup, a type of cosmetic, helps to highlight or change certain features like eyebrows or eyelashes, or even completely transform someone's look to resemble another person or object. The body can also be scented with cosmetics. Cosmetics are widely used today and are seen to be necessary for daily living. After World War II, using cosmetics became more socially accepted. Experts discovered that cosmetics not only have an impact on our psychological well-being but also maintain our skin supple, postpone wrinkles, and guard against infections and sunburns. Even though attitudes toward makeup changed over time, people continued to use it. For example, in medieval Europe, people made their faces whiter and their cheeks redder. Over time, opinions about makeup shifted, but many people have always used cosmetics to enhance their appearance. ^[2]

Some early important developments in cosmetics include:

Ancient Egyptians using kohl for their eyes.

Egyptians also using castor oil to protect their skin.

The Romans creating skin creams made from ingredients like rose water, olive oil, and beeswax.

The cosmetics can be divided into 41 major categories, including

Skincare Cosmetics.

Hair cosmetics.

Nail cosmetics.

Hygiene Cosmetics (Dental, Bathing, etc.)

Skin Cosmetics

The face is the most important location for cosmetics application, even if the skin covers a significant amount of the body. There are three different forms of skin care products: liquids, semisolids, and solids. The solids have different flow rates and angles of repose and are either compacts or powders. Liquids can be either monophasic or biphasic, while semi-solids can be either emulsions or basic mixes. ^[2]

In 1940, Drug and Cosmetics Act

The Drugs and Cosmetics Act, 1940, is a significant piece of Indian legislation that was designed to regulate the import, manufacture, sale, and distribution of pharmaceuticals and cosmetics while ensuring that the general public had access to effective and safe products. By establishing strict quality standards, this Act aims to shield customers against inferior, mislabelled, and contaminated goods. Its rules make sure that only authorized organizations are allowed to manufacture, distribute, and sell medications and cosmetics by requiring permits for these activities. The Act aims to maintain a uniform standard of quality by establishing a framework of definitions and classifications for medications and cosmetics. Regulatory agencies that monitor compliance include the Central Drugs Standard Control Organization (CDSCO) at the federal level and the State Drug Controllers at the state level. Level was set. These authorities have the authority to conduct facility inspections, conduct product testing, and keep an eye on the industry's compliance with quality standards. To ensure accountability for any infraction of its requirements, the Act also stipulates penalties, such as fines and imprisonment, for offences like the selling of tainted or counterfeit goods. The Act has been strengthened by the introduction of modifications over time,

which have updated safety and efficacy standards and addressed new industry concerns. The Act contains a number of schedules that specify particular rules and requirements that must be adhered to. The 1940 Drugs and Cosmetics Act, which governs the safety and quality of medications and cosmetics in India, is essential to protecting the public's health.

Rules for drugs and cosmetics, 1945

The 1945 Drugs and Cosmetics Rules are a thorough extension of the Drugs and Cosmetics Act that offer thorough instructions for putting it into practice. The Rules, which focus on consumer safety, specify criteria for medications and cosmetics and address licensing, quality control, labeling, and packaging. They oversee import/export protocols, guaranteeing adherence to quality benchmarks. The regulatory financial structure is influenced by the fee schedule. While enforcement gives authorities the authority to conduct inspections and take enforcement measures against non-compliance, amendments reflect changing difficulties and global norms. When taken as a whole, the Acts create a thorough framework that promotes innovation and the welfare of consumers by giving public health, quality, and safety top priority in India's pharmaceutical and cosmetic businesses. [3]

Authority for licensing

Chosen by the federal and state governments to grant and extend licenses for the sale, distribution, manufacturing, and importation of cosmetics and medications.

Unless the licensing authority suspends or terminates them, licenses are valid for an infinite period of time once they are issued.

The majority of licensing officials are known as drug controllers.

The Central License Approval Authority was recently appointed to be the Drug Controller of India. [4]

Cosmetic science store and sales

Cosmetic science stores are authorized to sell in restricted, retail, and wholesale quantities.

Wholesaling: From manufacturers to retailers

Shopkeepers (drug stores, pharmacies, dispensing chemists, and chemists and druggists) to consumers: retail sales.

Permit to Sell Whole

The space must be at least 10 square meters in size

Storeroom: Having a refrigerator and air conditioner on the property is crucial since some drugs, such as insulin injections and immunizations, need to be kept in a refrigerator.

The license must be kept in a visible location.

The medications must be bought from a manufacturer or a merchant with the appropriate licensing.

Documentation

Crucial Records for Obtaining a Drug License:

Fill out and sign the application form.

Business Registration

Tax records and proof of firm incorporation.

Identity Proof

Owners' or authorized staff members' identification.

Substance List

Information about substances, including their CAS numbers and intended uses.

Technical Expertise

Certifications and qualifications of the staff.

Safety Plan

Procedures for handling, storing, and shipping.

Premises Approval

Certificates of conformity and facility layout.

Environmental Compliance

Waste disposal plan and EIA report.

Insurance

Evidence of liability coverage.

Legal Declarations

Regulatory compliance affidavit.

The testimony of a licensed pharmacist or other qualified individual, along with their employment letter in the event of an employee.

Types of Drug License**Drug Manufacturing Licenses (Forms 25, 28, etc.)**

Necessary for the production of pharmaceuticals, including homoeopathic, Ayurvedic, and allopathic remedies.

For example, Form 28 is used for large-volume parenteral and sterile products, while Form 25 is used for allopathic medications.

Schedule M (Good Manufacturing Practices) must be followed by licensees.

Cosmetics Manufacturing License (Form 32)

Necessary for the production of cosmetics in India. granted after fulfilling the requirements of Schedule M-II for the production of cosmetics.

Every location that manufactures cosmetics requires a different license.

Licence for Loans (Forms 25-A and 28-A)

Permits a business to use the facilities of another authorised producer to produce medications or cosmetics. Frequently granted for sterile goods (Form 28-A) and medications (Form 25-A). It is the licence holder's responsibility to make sure that all legal criteria are met.

Licence for Repacking (Form 25-B)

Necessary for organisations that repackage medications into smaller portions for distribution or sale. especially important for medications that are mass-produced or imported and then repackaged for sale in stores. ^[5]

The ideal characteristics of cosmetics are

Dermatologically tested and safe.

Effective with observable outcomes.

Sturdy and durable.

Non-irritating and gentle.

Non-comedogenic and hypoallergenic.

Easy absorption and a smooth texture.

Rich cosmetics color payoff.

Fragrance-free or mildly scented.

Sustainable packaging.

All skin types can use it.

High-quality and reasonably priced.

Ethical (vegan, cruelty-free).

Soluble and hydrating.

SPF, or sun protection.

Classification of cosmetics

There are four primary classifications for cosmetics.

According to their intended use.

According to the roles they play.

Taking into account their physical traits.

In line with state.

Cosmetics are categorized based on their intended use

Depending on the skin type, cosmetics are categorized into five groups.

Apply to the skin.

Apply on nails.

Apply to the mouth and teeth.

Apply to hair.

Apply to the eyes.

Apply to the skin

The skin serves primarily to shield humans from environmental aggressions. Cosmetics that can be applied directly to the skin, massaged, or poured are known as skin cosmetics.

For example, creams, powders.

Apply on nails

Particularly on the hand and foot nail plates, the nails have been adorned with gloss or colour. One example might be nail polish and remover.

Apply to the mouth and teeth

Keeping the oral dental structure strong, healthy, and free from infections is the goal of dental care products.

For instance, mouthwash and dentifrices.

Apply to the eyes

Strong illumination is necessary for the eyes, a sensitive and important part of the body, to appear attractive.

Examples include eyeliners, mascara, and eyeshadow.

Apply for hair

Hair cosmetics are products used to maintain the hygiene of human hair, including scalp, face, and pubic hair

For example, shampoo, hair dyes, and hair sprays.

The purpose of cosmetics determines their classification

Hair preparation and antiperspirants

Hair preparation and antiperspirants are examples of curative and therapeutic uses.

Preventive

Take sunscreens, for instance.

Corrective

Which cures, enhances tone, and covers up facial and hair flaws.

Ornamental

For instance, crack creams.

Gives the individual a feeling of fulfillment and self-assurance. Lipstick and nail polish.

Cosmetic classification based on physical properties

Aerosols

Aerosols are dose forms under pressure. For example, Hair scents.

Cakes

Preparations that are semi-solid and created with exact pressure. For instance, Rouge Compact and Cosmetics Compact.

Biphasic liquid dosage forms are called emulsions. For instance, washing cream and cold cream.

Pastes

Semisolid formulations that are applied topically to the skin. Take toothpaste, for instance.

Powder

Solid dosage forms for external and internal usage. For instance, talc or tooth powder.

Soaps

Sope is a fatty acid salt.

For instance, soaps for bathing and shaving.

Cosmetics are categorized based on their function state.

Solid

Liquid

Semi-solid.

Skin Care Product Types**Vanishing or cold cream**

The thick, emollient moisturizer known as "Vanishing or Cold Cream" is used to soften and nourish the skin. Usually, a combination of water, waxes, and oils are present. While cold cream is heavier and frequently used as a deep moisturizer or makeup remover, vanishing cream absorbs into the skin rapidly and leaves a smooth, non-greasy finish. Dry or sensitive skin types benefit most from these lotions. As the name suggests, cold creams are frequently used in colder locations to keep skin from drying out.

Powders

In skincare, powder is used to manage oil, set makeup, and create a matte, smooth finish. Powders come in a variety of forms, such as finishing powder, which produces a smooth, soft finish; blotting powder, which absorbs excess oil throughout the day; and setting powder, which helps hold makeup in place. While soothing powders can soothe sensitive or irritated skin, certain powders also have exfoliating qualities that gently remove dead skin cells. These powders are well-liked because of their adaptability and capacity to improve the skin's texture and appearance.

Sunscreen and moisturizers

Moisturizers hydrate and seal in moisture, keeping the skin supple and avoiding dryness, while Sunscreen shields the skin from damaging UV rays, preventing sunburn and skin damage. Both are necessary for proper skin care, with moisturizers preserving skin hydrated and sunscreen providing sun protection.^[6]

Types of Skin**Normal Skin**

Because of its balanced oil and moisture content, this skin type has a fine, even, and smooth texture. It's neither dry nor greasy. As a result, the skin usually looks clear and requires very little, mild maintenance.

Dry skin

Seems parched and prone to flaking. Because it does not retain enough moisture, it is prone to creases and lines. The sebaceous glands produce sebum. Constant protection takes the form of a daytime moisturizer and an evening essential that is rich in moisture. The best exfoliants are mild ones like sugar, rice bran, or milu acids.

Greasy (oily) Skin

The excessive production of sebum causes this type of skin surface to be fairly greasy.

A surplus of oil on the skin's surface draws in dust and debris from the surroundings.

Oily skin is more likely to develop pimples, patches, blackheads, and whiteheads.

It requires daily cleansing, especially during hot or humid conditions.

Use a moisturizer that is water-based, non-comedogenic, and oil-free as well.

Fruit acid-based exfoliants are highly advantageous, and fine-grained exfoliants may help clear clogged pores, prevent acne, and enhance the appearance of skin.

Combination Skin

With greasy areas on the face and dry patches elsewhere, it is a mix of dry and oily skin. The T-Zone, a center panel made up of the chin, nose, and forehead, is usually where the greasy areas are located. The cheeks and their surrounding tissues are frequently dry areas. Lips and eyes. In these situations, the skin type of each face area should be taken into consideration.

Sensitive skin

Rashes, irritation, redness, stinging, burning, flaking, and lumpiness can all be symptoms of sensitive skin's reaction to various stimuli. The most common causes of pain include soaps, some flowers, and chemical dyes and fragrances. Additionally, excessive washing or exfoliating, waxing, threading, shaving, bleaching, tanning lotions or spray tans, shaving creams, spice oils, and temperature fluctuations.^[7,8]

Common cosmetic components include**Water**

It dissolves and hydrates materials.

Emollients

They make skin softer and smoother.

Surfactants

They produce lather and cleanse.

Preservatives

Stop the growth of microorganisms.

Fragrances

Incorporate aroma.

Colorants

These give things color.

Thickeners

Modify the consistency of the product.

Humectants

which attract moisture to the skin.

Antioxidants

Prevent damage to the skin.

Active Ingredients

Treat particular skin issues.

Skincare products and their benefits:

Face Cleaning:

To cleanse the skin, use a cosmetic called face wash.

Improves skin complexion.

Helps rejuvenate skin.

Aids in minimizing excess oil. Improves skin moisture.

Neem-Tulsi Face Wash is stunning.

Neem is utilized in the majority of Ayurvedic formulations to treat skin conditions due to its purifying qualities has also been supported by scientific studies. The oil taken from the kernel of wheat grains, known as wheat germ oil, has been shown to prevent *P. acnes* from producing reactive oxygen species (ROS), indicating that it may have anti-inflammatory qualities. Wheat germ oil is a great dietary supplement since it includes numerous important elements, including folic acid, magnesium, potassium, and phosphorus. In India, tulsi is an excellent Ayurveda plant. Its applications in medicine, cosmetics, and other industries are widely acknowledged. Tulsi offers numerous beauty benefits, such as improving skin tone, relaxing sensitive skin, and reducing acne and pimples.

Cleanser

Use a cleanser, such as a face cleanser, to rid the skin of debris, oil, toxins, dead skin cells, and makeup. This helps prevent skin conditions like acne and clear pores. In a skin care routine, cleanser can be used in addition to toner and moisturizer.

Moisturizer

Moisturize your skin regularly, as it is the largest organ in your body. When skin is not adequately hydrated, it gets flaky, dry, and dull, and it may itch. Using makeup can help prevent skin from becoming parched. Using moisturizers will improve the appearance of your skin.

Cream of fairness

Also referred to as skin-lightening lotions, skin-brighteners, or whiteners. They work by lowering the melanin pigment in the skin. The most common method for naturally whitening dark skin is this one. Reduces hyperpigmentation and brightens the skin.

Lipstick

Lipstick prevents dryness and improves lip color when used as a makeup primer.

Ice Cream

Using cold cream on the skin produces a cooling effect because the water in the emulsion gradually evaporates. Usually, aqua and oil are emulsified to make them. Cold cream was traditionally made with animal fat and vegetable oil. Vegetable oils, which can turn rancid and produce fewer stable goods, are replaced with mineral oils. Although cold creams are o/w type emulsions, they undergo phase inversion to w/o type after sufficient water evaporation from the skin. [9]

Oil for Herbal Hair

Hair care products are utilized to clean hair, alter its color and structure, nourish and revive damaged hair, and give it a healthy look. Grooming products and tonics are the two categories into which hair care products fall. Aids Hair tonics are hair oils infused with herbal remedies. These are created with an oil base and herbal extracts. Baldness, hair aggression, discoloration, hair loss, and dryness are just a few of the hair problems that can be resolved with hair oils. Applying perfume enhances the overall scent because oil does not adhere to objects. Popularity. Herbal Hair Oil Properly applied hair oil promotes luster, softness, and flow, among other benefits. Allowing the brain to cool down is crucial.

The following are common plants found in hair cosmetics:

Brahmi

The powerful herb brahmi (*Bacopa monnieri*) is frequently used in hair care products because of its several advantages for supporting healthy hair and scalp. It increases blood flow to the scalp,

promoting hair development, and fortifies hair roots to lessen thinning and hair loss. Brahmi contains antioxidants and has antimicrobial properties, helping to alleviate dandruff, soothe scalp irritation, and prevent infections. It nourishes the hair, making it smoother, shinier, and more manageable, and improves the overall texture and health of the hair.

Lavender for hair

Lavender is a widely used ingredient in hair care products for its calming and rejuvenating effects. Lavender oil also has antibacterial properties that help reduce dandruff, prevent scalp infections, and relieve scalp irritation. It aids in balancing oil production on the scalp, preventing both dryness and excessive oil. Regular use of lavender oil can result in softer, shinier hair and a healthier scalp. Its delightful scent also makes it a popular choice for adding a relaxing aroma to hair care routines.

Hibiscus promotes hair growth

Hibiscus is a powerful natural ingredient for promoting hair growth, thanks to its high levels of vitamins, antioxidants, and amino acids. It stimulates hair follicles, strengthens roots, and enhances blood flow to the scalp, which encourages healthier, faster hair growth. Hibiscus also helps prevent hair thinning and loss by nourishing the scalp, reducing dandruff, and combating dryness. Additionally, it improves the texture of the hair, making it shinier and softer. Regular use of hibiscus in hair care products, whether as oil or a mask, can contribute to long, strong, and vibrant hair. It is also known as Hibiscus sabdariffa. It is an annual plant. A popular beverage in Egypt, Karkade, is made from a part of the flower. ^[10]

Castor oil

Castor oil's exceptional capacity to stimulate hair growth and enhance overall hair health makes it a common ingredient in hair cosmetics. It contains ricinoleic acid, which stimulates hair follicles, increases circulation to the scalp, and speeds up hair growth. Castor oil also strengthens hair strands, minimizes split ends, and protects against breakage by deeply hydrating and nourishing the hair. Its antibacterial capabilities aid to treat scalp infections and dandruff while also encouraging a healthy scalp environment. Because it can make hair thicker, shinier, and easier to manage with consistent usage, castor oil is a common ingredient in many hair care products.

Coconut oil

I've noticed an increase in my hair growth while utilizing coconut oil! My mother would often say, "Oils are food for my hair." Coconut oil is popular in hair care for its ability to hydrate, strengthen, and protect hair. It helps reduce frizz, prevent damage, and support scalp health. Packed with fatty acids, it nourishes hair follicles, stimulates growth, and shields hair from environmental stress and heat, though it may weigh down fine hair.

Aloe Vera for Hair

Aloe vera gel promotes the formation of new hair follicles, unclogs clogged pores on the scalp, and helps keep your hair's pH balanced. ^[11,12,13,14]

Aloe Vera

Aloe Vera possesses anti-inflammatory and anti-wound properties. It can soften the skin and aid healing. Although it cannot treat acne directly, it can help manage the condition. ^[15]

Factors Affecting Hair Growth

Genetics.

Hormones.

Diet and Nutrition.

Stress.

Age.

Scalp Health.

Medical Conditions.

Medications.

Hair Care Practices.

Environmental Factors.

Hair loss treatment

Patients with diffuse or patchy thinning hair may initially consult their family doctor. The best person to examine scarring alopecia is a dermatologist. Alopecia areata is a kind of alopecia that your family doctor can diagnose and treat. Alopecia is treatable with androgenetic Minoxidil, which has been clinically diagnosed. Alopecia areata can be characterized by the distinct patches of hair loss it causes. The treatment should be systemic. Telogen effluvium is a non-inflammatory, non-scarring alopecia that develops abruptly. The cause is stress, both mental and physical. When the causing factor is removed, hair typically regrows. Treating trichotillomania requires addressing the underlying psychological condition. Condition. Trichorrhexis nodosa is a condition characterized by hair damage caused by stress. ^[16]

Herbal Goods

There are many different types of herbal items, such as tea bags, pills, tablets, liquids, and powders. Some common herbal medicines and dietary supplements include saw palmetto, ginkgo, garlic, echinacea, black cohosh, and St. John's wort. This is a sample of a botanical product. ^[17]

Henna

Her hair was treated with a formaldehyde-based treatment in Morocco. Henna has long been used to color nails, skin, and hair. Red henna and its active ingredient, Lawson, have been linked to a few cases of allergic contact dermatitis.

Hair Loss Treatments

An alternate approach to controlling hair loss is to use hair loss treatments. If a patient has hair loss, a medication evaluation is required to determine whether the cause is a nutritional deficiency that showed up as PCOS, thyroid problems, or anemia. Blood testing will probably be necessary to confirm this. Treatment must include the care of any possible medical issues. It would be beneficial in this case to see your dermatologist as soon as possible. Under the guidance of a physician, you can use nutritional supplements to prevent hair loss even if you don't have any severe problems.

Shampoo made from herbs

Some herbal shampoos only contain four ingredients, while most have ten to thirty. Four categories of ingredients are identified: (1) washing agents; (2) comfort and stability-enhancing additives; (3) conditioners that reduce flyaway, improve disentangling ability, and add softness hair gloss; and (4) shampoos that clean the scalp while protecting the hair shaft from damage, and special care ingredients that target specific problems like dandruff and oily hair. Active ingredient-based shampoo formulations can also address a range of scalp conditions. When treating scalp, it is advised to maintain the hair strands' softness and gloss in order to maintain their cosmetic appeal, regardless of the illness or condition (dermatitis, seborrhea, alopecia, or psoriasis).

Need of shampoo

Shampoo is sometimes overlooked as a basic necessity. We enter the shower, make a lather, and then rinse. These seven factors, some of which go beyond your hair, highlight the significance of shampoo. Shampoo maintains a clean scalp.

Your hair may become greasier as a result.

Your scalp may get dry as a result.

Hair loss can be aided by shampoo.

Hair washing reduces cortisol levels.

The carpet and chrome might be cleaned.

Your hairbrush can be cleaned using shampoo.

People choose for organic and natural shampoo.

Ideal properties of shampoo

Shampoo has the following ideal properties:

Remove the grime entirely.

Easily removed.

Low toxicity.

Smooth and glossy.

Good biodegradability.

No irritability.

Produce foam. ^[18]

Conditioner for hair

A hair care product called hair conditioner makes hair feel better, look better, and be easier to manage. Its primary function is to lessen friction between hair strands, which would otherwise damage the scalp and allow for a smoother brushing or combing motion.

Ingredients for hair conditioner

Surfactant (in modest amounts)

aids in the equal distribution of the conditioner (for example, cetyl trimethyl ammonium chloride).

Re-constructors use proteins to repair hair

Humectants: Keep moisture in your hair (e.g., Jojoba oil).

Glossers

Makes your hair shine (examples include dimethicone and cyclomethicone).

Acidifiers

They balance the pH of your hair.

Oily materials soften and smooth hair (for example, lanolin ester).

Sunscreen agent

Protects hair from sun damage (for example, benzophenone or 4- ethylhexylmethoxycinnamate).

Thickeners

These are the ingredients that give the conditioner its creamy texture. Perfume adds aroma.

Bodying agent

Increases hair texture and thickness (for example, fatty alcohols with waxy ester). ^[19]

Conditioner and Shampoo

Maintaining a good hair washing regimen is essential for both long-term health and hair hygiene. Choosing the shampoo and conditioner that are most appropriate for your hair type is another aspect of creating the perfect hair care routine. You must first ascertain the purpose of each ingredient before selecting the ideal hair care product for you. This essay will go over the benefits of using shampoo and conditioner, both well-known and lesser-known.

After shampooing, why do we use conditioner?

The second step in shampooing hair is usually conditioner. On the other hand, shampoo is specifically designed to remove hair products, dead skin cells, and perspiration. " Shampoo just removes debris, oil, and product buildup, as was previously stated. Conditioner aids in restoring moisture to your hair's middle and ends.

What is the recommended frequency of shampoo and conditioner use?

Shampoo will simply get rid of product buildup, oil, and dirt, as mentioned earlier. Your hair's center and ends get hydrated again with conditioner. [20]

Uses for Herbal Cosmetics

They don't have negative side effects or trigger allergic reactions.

Natural cosmetics are safer than other beauty products.

Herbal cosmetics are compatible with all skin types.

The cost of herbal cosmetics is not too high.

When applied in little doses, they work better than synthetic cosmetics.

Widely available in a big range and quantity.

Cosmetics Quality Test

Cosmetic quality tests include

Raw material control.

Controlling packing materials.

Managing product in the middle.

Finalized product oversight. [21]

Herbal Mouthwash

Herbal mouthwash is a natural oral hygiene product created using plant-derived components. [22]

Unlike traditional mouthwashes, which typically contain synthetic chemicals, herbal mouthwashes make use of botanical extracts, essential oils, and other natural ingredients recognized for their cleaning, antibacterial, and calming characteristics. Herbal formulations used to freshen breath may contain artificial colors, tastes, or harsh chemicals. [23] Mouthwashes often contain herbal compounds such as peppermint, tea tree oil, eucalyptus, clove, cinnamon, and sage. [24]

Definition of Herbal Mouthwash

Herbal mouthwash is a departure from traditional mouthwashes, which frequently contain synthetic ingredients. Herbal mouthwashes cleanse and protect the oral cavity with a combination of ingredients. [25]

Handwashing

Wash your hands with soap or water, either traditional or antibacterial. Cleaning procedures may range from a quick hand wash to a thorough scrub. Hand washing in medical environments helps to reduce the transmission of hazardous bacteria and germs. Surveys suggest that doctors and nurses commonly forget to wash their hands before interacting with patients, indicating a lack of proper hand hygiene in hospitals. A study found that frequent hand washing can reduce catheter-related bloodstream infections by 66%. [26]

CONCLUSION

Hair, natural hair growth, hair care products, shampoo and conditioner, shampoo and conditioner combos, hair care cosmetics, hair tonics, and herbal products are all covered in this review article. The importance of hair care herbs is covered in this article. Natural and herbal elements are important in cosmetic science, especially for hair care products. It highlights how using natural substances is becoming more and more important because they are safer, more effective, and don't have as many negative effects as synthetic ones. The article also discusses the rapidly developing discipline of cosmetic technology, which seeks to create novel approaches to producing products

that are both efficient and economical. The study concludes that herbal cosmetics, with their natural nutrients and low risk of side effects, hold great potential for the future of the cosmetic industry. These results support the study's objective of encouraging innovative and sustainable beauty and skincare practices, highlighting the industry's move towards natural and consumer-friendly alternatives.

REFERENCE

1. Amol V. Pore, Sanjay Bais, Swati Deshmukh, Cosmetic Science, International Journal of Pharmacy and Herbal Technology, 2023:1(3):141-167.
2. S. Saraf, Recent Discoveries and Advancements in Herbal Hair Oil Cosmetics, World Journal Pharmaceutical Research, 2014:3(2):78-94.
3. Aniket Tandale, Priyanka Shinde, Megha Salve, Cosmetic Science, International Journal of Pharmaceutical Research and Applications, 2023:8(6):1034-1037.
4. R. Dauber, Hair, The Composition and Reaction to Cosmetic Preparations, Clinical Dermatology, 1996:14(2):105-112.
5. N. Madnani, K. Khan, Cosmetics for Hair, Indian Journal Dermatol, Venereology and Leprology, 2013:79(1):654-667.
6. J. Shapiro, C. Bolduc, Hair Care Products, Coloring, Conditioning, Straightening and Waving, Journal on Applied Polymer Science, 1982:2(7):280-383.
7. M. Ferreira, A. Matos, A. Couras, J. Marto, H. Ribeiro, Overview of Cosmetic Regulatory Frameworks Around the World, Cosmetics: Open Access Journal, 2022:9(4):72-76.
8. G. Baki, K. S. Alexander, Skin Care Products, Introduction to Cosmetic Formulation and Technology, John Wiley & Sons, Hoboken NJ, 2015, pp. 125–147.
9. Diksha, P. K. Sharma, R. Malviya, Developments in The Field of Dermal Care Shampoos Include: Preparation Techniques Commercial Utility and Patents, Novel Developments in Inflammation and Allergy Drug Discovery, 2014:8(1):48–58.
10. Sarfaraz M. Kazi, Sanjay K. Bais, Pruthviraj D. Aiwale, A Review on Herbal Formulation, International Journal of Pharmacy and Herbal Technology, 2023: 1(3):124-131.
11. Diksha Malviya, P. K. Sharma, Advancement in shampoo: Preparation Method, Patents and Commercial Utility, Recent Patents on Inflammation and Allergy Drug Discovery, 2014:8(2):48-58.
12. B. Bhushan, Nanoscale Characterization of Human Hair and Hair Conditioner, Progress in Materials Science, 2008:5(3):585-710.
13. L. S. Abraham, A. M. Moreira, L. H. Moura, M. F. Dias, Hair care: A Medical Overview, Surgical Cosmetic Dermatology, 2009:1(6):130-136.
14. L. S. Abraham, A. M. Moreira, L. H. Moura, M. F. Dias, Hair care: A Medical Overview, Surgical Cosmetic Dermatology, 2009:1(2):178-185.
15. Sarfaraz Kazi, Sanjay Bais, Akshata Chopade, Perspectives in Anti-Acne Strategies: A Comprehensive Overview, International Journal of Pharmacy and Herbal Technology, 2024:2(2):495-509.
16. Z. D. Draelos, Methods of Concealment Shampoos and Conditioners, Dermatologic Clinics, 2013:3(2):173-188.
17. S. P. Singh, V. Nigam, Cosmetic Science, first edition, Thakur Publications Pvt. Ltd., Lucknow, 2021, pp. 15-21.
18. A. R. Mainkar, C. I. Jolly, Evaluation of Commercial Herbal Shampoos, International

- Journal of Cosmetic Science, 2000:1(2):385-391.
19. A. Patil, Phytochemical In-Vitro Evaluation of Formulated Polyherbal Hair Conditioner, *Journal of Pharmacognosy and Phytochemistry*, 2019:8(6):35-39.
 20. V. Pathak, P. Vaidyo, A Textbook on Cosmetic Science: Concepts and Principles, it is the first edition of the book and is published by Nirali Prakashan Advancement of Knowledge, Pune, 2018, pp. 2-15.
 21. I. Pitanguy, Plastic surgery's future directions, 3rd European Congress of Anti-Aging Medicine and Aesthetic Dermatology and Surgery, 2007:2(1):12-14.
 22. Sanjay K. Bais, P.V. Ghatage, Herbal Excipient and Novel Drug Delivery System Used in Liposome and Ethiosome, *International Journal of Creative Research Thoughts*, 2023:11(2):724-735.
 23. J.P. Lavande, Sanjay K. Bais, Balika Ashok Nagane, Novel Drug Delivery System, *International Journal of Advanced Research in Science Communication and Technology*, 2023:3(2):726-737.
 24. S.D. Sonawane, Sanjay K. Bais, S.A. More, Novel Drug Design, *International Journal of Advanced Research in Science Communication and Technology*, 2023:3(8):348-366.
 25. Amol V. Pore, Sanjay K. Bais, Roshan N. Galave, Novel Herbal Drug Delivery System Its Analytical Aspects and Applications, *International Journal of Creative Research Thoughts*, 2023:11(7):232-288.
 26. Shirish B. Nagansurkar, Sanjay K. Bais, Amol V. Pore, Sarfaraz M. Kazi, Nikita D. Pawar, Formulation and Quality Control of Herbal Mouthwash Containing Natural Extracts of Tulsi, Neem, Turmeric, Clove, Liquorice, And Peppermint, *International Journal of Pharmacy and Herbal Technology*, 2023:1(2):63-71.