

# A Review on Skin, Skin Cosmetic and Relative Herbal Ingredients

Karishma Khabiya\*<sup>1</sup>, Shravan Somani\*<sup>2</sup>

\*<sup>1</sup>Author -Student of the Pratibhatai Pawar College of Pharmacy, Shrirampur

\*<sup>2</sup>Co-Author- Assistant Professor of the Pratibhatai Pawar College of Pharmacy, Shrirampur  
Corresponding Author\*

**Abstract:-** Cosmetics are multipurpose materials that are widely used globally to preserve and enhance the overall appearance of the face and other body parts, such as the mouth, fingers, eyes, hair, and so on. It consists of nail paint, shampoo, hair oil, conditioners, face packs, lotions, moisturizers, and creams and powders. A gorgeous woman or attractive man is undoubtedly characterized by their healthy, glowing, and smooth skin and hair. Skin damage is caused by a variety of chemical poisons, microbes, chemicals, and illnesses found in the atmosphere. Cosmetics by themselves are insufficient to care for the skin and other body parts; active substances must be combined to monitor skin damage and aging. Herbal cosmetics have just come to light as the suitable remedy for the existing issue. Herbal cosmetics are currently the focus of the personal care sector. This comprehensive review explores the dynamic landscape of skin cosmetics, shedding light on the latest trends, key ingredients, and efficacy assessments. In an era where skincare has become a central aspect of personal well-being, understanding the intricacies of cosmetic products is paramount. The review delves into the evolving preferences of consumers, considering factors such as natural and organic formulations, sustainability, and cruelty-free practices. The review addresses challenges within the cosmetics industry, including concerns related to product safety, regulatory frameworks, and the potential environmental impact of certain ingredients.

**Keywords:-** Skin, Cosmetic, Serum, Sunscreen, Lipstick, Aloe Vera, Turmeric.

## I. INTRODUCTION

### ➤ Skin:

Skin is the biggest organ in the human body. The average skin surface area for an adult human is 1.5 to 2.0 square meters. All areas of the body have different skin thicknesses, and men's skin is thicker than women's (1.26 mm vs. 1.3 mm). The epidermis, dermis, and hypodermis are the three main layers that make up the skin. The ranges in pH from 4.5 to 6<sup>[1]</sup>.

### ➤ Layer of Skin:

#### • Epidermis-

The stratum basale, the thickest layer of the epidermis, is followed by the stratum spinosum, stratum granulosum,

stratum lucidum, and stratum corneum, the epidermis' most superficial layer.

The basement membrane (basal lamina), which separates stratum basale, also known as stratum germinativum, from the dermis, and hemidesmosomes, which are linked to the basement membrane, make up the deepest layer. The cuboidal to columnar mitotically active stem cells that make keratinocytes continuously are present in this stratum. Melanocytes are also present in this stratum.

Eight to ten cell layers thick, the stratum spinosum, also known as the prickle cell layer, is composed of irregular, polyhedral cells with cytoplasmic extensions that are frequently referred to as "spines" that extend outward and make contact with nearby cells via desmosomes. This layer contains dendritic cells.

The stratum granulosum, which has three to five cell layers, has diamond-shaped cells with lamellar and keratohyalin granules. Keratin precursors are found in keratohyalin granules, where they eventually gather, crosslink, and form bundles. The glycolipids that are released to the surface of the cells and serve as a glue to hold the cells together are found in the lamellar granules.

The stratum lucidum, which consists of 2-3 cell layers and is present in the thicker skin seen on the palms and soles, is a thin, transparent layer made of eleidin, a byproduct of keratohyalin transformation.

The top layer, the stratum corneum, is composed of keratin and horny scales made of dead keratinocytes, also known as anucleate squamous cells. It has 20–30 cell layers. The thickness of this layer fluctuates the most, notably in callused skin. The dead keratinocytes in this layer secrete defensins, which are a component of our first line of immunological defense.

Keratinocytes, Melanocytes, Langerhans cells, Merkel cells, and other Epidermis Cells

#### • Keratinocytes

The majority of the epidermis's cells, known as keratinocytes, begin in the basal layer, manufacture keratin, and help to create the epidermal water barrier by producing and secreting lipids. By causing the formation of vitamin D

from the activation of cholesterol precursors by UVB light, keratinocytes also control calcium absorption.

• *Melanocytes*

The main product of melanocytes, which are descended from neural crest cells, is melanin, which gives skin its colour. They generate melanin and are situated between stratum basale cells. As a built-in sunscreen, UVB light induces the release of melanin, which protects against UV radiation.

Tyrosinase, an enzyme, converts tyrosine to DOPA, which results in the production of melanin. The lengthy processes connecting the melanocytes to the nearby epidermal cells are then used to transport melanin from one cell to the next. Long processes carry melanin granules from melanocytes to the cytoplasm of basal keratinocytes. The "pigment donation" mechanism, which includes keratinocytes phagocytosing the tips of melanocyte processes, transfers melanin to nearby keratinocytes.

• *Cells of Langerhans*

Dendritic cells, also known as Langerhans cells, are the skin's first line of defense and are crucial to antigen presentation. To visualize these cells, which are mostly present in the stratum spinosum, specific stains are required. These cells come from CD34-positive bone marrow stem cells and are of mesenchymal origin. They are a component of the mononuclear phagocytic system. They contain tennis racket-shaped cytoplasmic organelles called Birbeck granules. Both MHC I and MHC II molecules are expressed by these cells, which also take in cutaneous antigens and transport them to the lymph node.

• *Margaret Cells*

Oval-shaped modified epidermal cells known as merkel cells are located in the stratum basale, directly above the basement membrane. These cells, which are mostly found in the fingertips but are also present in the palms, soles, oral

mucosa, and vaginal mucosa, have a sensory role as mechanoreceptors for mild touch. Their membranes interact with free nerve endings in the skin and they are connected to neighboring keratinocytes by desmosomes. They also include intermediate keratin filaments.

• *Dermis*

The papillary and reticular connective tissue layers of the dermis, which link to the epidermis at the level of the basement membrane, blend together without a distinct boundary. The papillary layer is the upper, thinner layer that connects to the epidermis and is made up of loose connective tissue. The layer that is deeper, thicker, and less cellular is called the reticular layer, and it is made up of dense connective tissue and bundles of collagen fibers. The sweat glands, hair, hair follicles, muscles, sensory neurons, and blood arteries are all located in the dermis.

• *Hypodermis*

The hypodermis, also known as subcutaneous fascia, is located close to the dermis. Adipose lobules, some skin appendages including hair follicles, sensory neurons, and blood arteries are all present in this layer of skin, which is the deepest layer of the skin [2].

➤ *The skin's functions include:*

- Protection from pathogens, dehydration, UV light, and mechanical damage; the skin is the body's initial physical defense against the outside world.
- The skin is the first organ to detect pain, warmth, touch, and deep pressure.
- Mobility: The skin permits fluid body motion.
- Endocrine activity: Vitamin D production, which is necessary for calcium absorption and healthy bone metabolism, is triggered by biochemical reactions in the skin. Water, urea, and ammonia are released during exocrine action [3].

**Table 1 Classification of the skin.**

Normal skin	It possesses a smooth, even tone, no visible pores, no greasy or flaky spots, and no visible pores. possesses a surface that is transparent, fine, supple, silky, and neither oily nor dry.	Herbal: gingili oil, pomegranate leaf juice. Lemon, lavender, and chamomile essential oils.
Dry skin	Dry skin Low level of sebum and prone to sensitivity. Has parched look, feels tight. Chapping sign cracking of dehydrated and extremely dry skin..	Herbal- Calendula, Olive oil, Aloe Vera. Essential oils- Fennel, Rose oil, Almond oil, Sandal wood, Avocado..Aloe Vera, calendula, and olive oil are herbal. Essential oils: avocado, sandalwood, rose, almond, and fennel.
Oily skin	greasy skindull, thick, and glossy skin tone. acne, rough pores, and other unsightly imperfections. prone to having dark hair.	Herbal: Aloe Vera, lemon grass, thyme, chamomile, rose buds, and oat straw. Essential oils: lavender, sage, lemon, and juniper.
Combination skin	the middle of your face, your nose, chin, and forehead are oily, other areas of your face are dry or flaky.	Herbs: Aloe Vera, Sweet Flag, Turmeric, and Menthol. Essential oils include sandalwood oil, jasmine, and citrus oil.

➤ *Cosmetic*

Cosmetics are a class of health and beauty goods that are used to enhance or change a person's look, as well as to care for the face and body. In addition to being used to enhance one's look, cosmetics can also be used to care for one's skin and body and to add fragrance. There are many different forms of cosmetics with distinct and important purposes, even though they are typically associated with skin and body care [4]. To enhance appearance, cosmetics are used frequently and everywhere in a variety of ways. Cosmetics are created to decrease oil production, treat acne, and lessen the appearance of wrinkles. Formulations such as skin protection, sunscreen, anti-acne, anti-wrinkle, and anti-aging are created for a variety of skin conditions employing a variety of ingredients, either natural or manufactured. The preservation of quality standards is necessary during the formulation development process for cosmetics. A formulation's performance quality should meet the needs of the consumer. The many qualities of the herbs employed in cosmetic preparations include anti-inflammatory, antiseptic, and antibacterial effects, among others. These natural goods assert that they don't have the negative side effects associated with products made with synthetic ingredients [5].

➤ *Cosmetics classification:*

The following categories often apply to cosmetics: based on the features of the product. Based on how the product is used. based on the actual dose form of the product.

• *In line of their roles*

• A cosmetic purpose, such as lipstick. • Corrective properties, like those of face powder. • Protection, like in the case of dry cream. • A therapeutic purpose, such as the preparation of hair.

• *In line with how they use*

• Powder, cream, and cosmetics for the skin. • For the hair, such as shampoo and hair products. • Manicure preparation and nail paint, for example. • Mouthwashes, for example, for the teeth and mouth. • Compromised and related products, such as bug repellent and eye products.

• *Considering their physical characteristics*

aerosols, such as hair setting. Cakes, such as the Rouge compact. • Emulsion, for instance, Cold and Vanishing Cream. • Jellies, such as hand gel. • Mucins, such as hand lotion. Oils, such as hair oil Pastes, including tooth paste. • Cosmetics such as face powder. • Soaps, such as shampoo-based soaps. • Remedies, such as lotion. • Sticks, such as lip gloss. • Liquid powder suspension, for example [6].

➤ *Skin Cosmetic:*

• *Cleansing*

Cleaning is necessary to get rid of the debris, dead skin cells, and pollutants that clog the pores. The more you skip this fundamental step, the more skin problems you get. The cleaners made from herbs eliminate filth and impurities. Aloe Vera is frequently used in skin care products. In the presence of glycerine, it functions well as a cleansing agent. Camphor has a powerful purifying, calming, and energizing impact. It

completely eliminates makeup and pollutants. Toning: Timbers assist to tighten the skin and shield it from pollutants and toxins that are in the air. Fresh lemon juice is used as a toner together with grape seed oil, which is an effective astringent for toning and tightening skin. Natural astringents such as lemon peel oil function [7].

• *Serum*

A concentrated solution called serum is frequently used in cosmetology. In the field of professional cosmetology, the name originates from itself. In water or oil, the cosmetic serum is just as potent as any other cream. Cream is outclassed by serum or another concentrated preparation in terms of the amount of organic content it contains. A skin care product known as serum contains a gel, light moisturizer, or lotion and has the power to deeply penetrate the skin to deliver active ingredients. A decent skin serum might provide your skin elasticity, a smooth texture, smaller-looking pores, and more hydration. All skin care products, whether smooth texture, smaller-looking pores, and more hydration. All skin care products, whether they are hydrating, anti-aging, anti-wrinkle, or serums, should contain antioxidants, compounds derived from cells, and ingredients that resemble skin [8].

• *Lipstick*

Lipsticks are essentially dispersions of colouring matter in a base comprising a blend of appropriate oils, fats, and waxes that has been perfumed, flavoured, and molded into the shape of a stick and packaged in a case. Emollient action at the base. It should smell good and taste good. During storage, it shouldn't lose its smooth, shining aspect; it shouldn't blossom or sweat; and it should stay firm within a fair range of climatic temperature. Lipstick comes in a variety of hues and varieties. To enhance colour and hydration, some lipsticks double as lip balms [9].

• *Sunscreen*

It has been demonstrated that photo protectants, in particular sunscreen, have a significant effect in reducing the incidence of UV-induced human skin illnesses (such as skin aging and pigment symptoms). Sunscreen has been a crucial component of photo protection methods all around the world since it was first commercialized in the United States in 1928. It has been demonstrated that its capacity to absorb, reflect, and scatter sunlight helps to prevent and lessen UV radiation's detrimental effects. The efficiency of sunscreen's photo protective properties is influenced by its sun protection factor (SPF) and UVA protection grade (PA) values. Commercial items must be labelled with SPF ratings that indicate how long and how efficiently they last, in accordance with FDA standards [10].

• *Mascara*

Mascara is a beauty product that gives eyelashes a desirable appearance. The length, waves, and darkening of the eyelashes are all provided by mascara to the amplifier. You need a mascara that adds some intensity and length if the lashes are short, thin, or brittle. There are numerous formulations with appropriate features for mascara, including quick drying, shine, weight, ease of application, even

pigment, and no allergic response. They provide all the benefits of good mascara, but because of their chemical and organic makeup, they are also bad for the skin. Even some of the chemicals used in mascara have a long-term carcinogenic effect, cause skin irritation, and cause eye puffiness. For these reasons, rosin has been utilized, which has certain undesirable side effects <sup>[11]</sup>.

## II. DIFFERENT TYPES OF SKIN COSMETIC

### ➤ Cream

When an occlusive effect is not required, creams are homogenous, semisolid, or viscous formulations with a relatively fluid consistency that are applied externally to the skin or some mucous membranes for preventive, therapeutic, or protective purposes.

- They are semisolids that often contain one or more medications in the form of solutions or dispersion in appropriate bases.
- To create treatments that are substantially miscible with skin secretion, they are prepared with hydrophilic or hydrophobic bases <sup>[12]</sup>.

Skin cream type:

They fall into two categories: 1. An oil-in-water (O/W) emulsion is one in which the oil is scattered as droplets throughout the aqueous phase. Oil-in-water (O/W) creams are formed of minute droplets of oil dispersed in a continuous phase. 2. Water-in-Oil (W/O) creams which are composed of minute droplets of water spread in a continuous oily phase. The water-in-oil (W/O) kind of emulsion is created when water is the dispersed phase and oil is the dispersion medium <sup>[13]</sup>.

Ingredient used in formulation of cream: Aloe Vera, Amla, Cucumber peel, Bees wax, White soft paraben, Methyl paraben, Distilled water, Methanol, Glycerine, Propylene glycol, Zinc oxide, Sodium benzoate.

Method and material: Aloe Vera and amla are the planned study's plant materials. Cucumber skin gathered from the neighbourhood. Extract Preparation: Aloe Vera, Amla, and cucumber peel have been air dried and are roughly powdered. were added to the Soxhlet individually, first with petroleum ether and then, subsequently, with ethanol. Under reduced pressure and a controlled temperature, the extract was then condensed to dryness before being stored in a refrigerator.

Formulation: In the first beaker, beeswax and propylene glycol were added to create the cream. Then, for even mixing, heat on a water bath. A little while later, an oil phase developed. In the second beaker, aloe Vera, amla, cucumber peel, distilled water, white soft paraffin, glycerine, zinc oxide, and sodium benzoate were added. The aqueous phase was created by boiling all the components together on a water bath. A semisolid mass was generated after the oil phase was continuously stirred into the aqueous phase <sup>[14]</sup>.

### ➤ Moisturizer

Due to their effectiveness in both preventing and treating a variety of dermatological problems, moisturizers are among the most frequently prescribed dermatological products. Both normal and dry skin benefit from moisturizers <sup>[15]</sup>.

Ingredient used in formulation of moisturizing cream  
Oil phase: Steric acid, Liquid paraffin, Lanoline, glyceryl mono stearate. Water phase: Glycerine, propylene glycol, isopropyl myristate, tri ethanolamine, methyl paraben, propyl paraben, perfume.

Method for Preparation of Moisturizing Cream: Sunflower wax was first melted at 70–80 °C, and then stearic acid, liquid paraffin, lanoline, and glyceryl monostearate were added to the molten mass. Aqueous phase heated to the same temperature as the oil phase along with propylene glycol, isopropyl myristate, tri ethanolamine, glycerin, and water constantly. When the temperature dropped to 35 °C, perfume was added. Before mixing, preservatives are applied to the water phase <sup>[16]</sup>.

### ➤ Serum

The term "serum" refers to a concentrated product that is frequently used in professional cosmetology. The cosmetic serum treats cosmetic issues since it is concentrated in water or oil like any other cream, serum, or concentrated product and has 10 times more organic substance than cream. Serum is a topical solution with a thin viscosity and concentrated amounts of active chemicals. It is applied first, following skin cleansing, and is lighter and faster at delivering active ingredients to the skin <sup>[17]</sup>.

Ingredients used in Formulation of Face Serum: Chrysanthemum Extract, Olive oil, almond oil, glycerin, coconut oil, tween 20, distilled water.

Method: The oily component, which consists of olive oil, sandalwood oil, tween 20 and coconut oil, is mixed for 10 minutes to produce a homogenous solution. In order to create the water phase, chrysanthemum glycerine and a little amount of distilled water were uniformly mixed together. The oil phase is dropped one at a time into the liquid phase while being physically vibrated at 2500 rpm to generate an oil in water based biphasic emulsion <sup>[18]</sup>.

### ➤ Sunscreen

Sunscreen is a lotion or liquid that is applied to the skin to shield it from the sun's damaging rays and avoid sunburn. However, in the United States, the word "suntan lotion" typically refers to lotion created to hydrate and promote UV exposure and tanning rather than block it, which is the opposite of what sunscreen does. Sunscreen is a lotion, spray, gel, foam stick, or other topical preparation that absorbs or reflects some of the sun's ultraviolet (UV) rays and helps prevent sunburn. It is also known as sun-cream, sun block, or suntan lotion <sup>[19]</sup>.

List of Ingredient used in Formulation of Sunscreen: Aloe Vera, Rose water, Butterfly pea, flower Extract.

Method: I have to take butterfly pea flower extract in order to manufacture the sunscreen cream formulation. Then I must take aloe vera gel because it has been shown to be effective in both treating and preventing skin burns. Rose water was then added to the concoction, which has a cooling effect. then gradually incorporate vitamin E and coconut oil. After aggressively mixing all the ingredients with a spatula for 20–30 minutes, they were placed <sup>[20]</sup>.

#### ➤ *Lipstick*

One of the most popular cosmetic items is lipstick. Using lipstick has social, psychological, and therapeutic advantages. Lipsticks colour the lips and shield them from the outside environment, enhancing a person's beauty and appeal. However, modern lip care products prioritize both aesthetic and, ideally, medical benefits for the lips of users. This caused the market for medicated lipsticks containing active pharmaceutical components to arise. Due to the formulation's inclusion of an active medical ingredient, medicated lipsticks may offer defense against bacterial infections. This function complements lipsticks' already important roles as emollient agents that moisturize lips and prevent chapping <sup>[21]</sup>.

List of Ingredient used in Formulation of Lipstick: Bees Wax, White soft paraffin, Olive Oil, Pigment, Acacia, Orange juice, Vitamin E Strawberry essence, Perfume

Procedure: 1. Weigh all the ingredients in the porcelain dish. Put the porcelain dish in a water bath after melting all the ingredients. 2. Following that, olive oil and beeswax are continuously blended. 3. Next, the acacia was added to the mixture. Orange juice, colouring, antioxidants, and preservatives are also included. 4. Lip moisturizing and white soft paraffin are added. 5. Vitamin E was then added since new cells are developing and becoming smoother. 6. Strawberry essential flavouring is added. 7. Finally, perfume was added for flavour. 8. Put the freezer in. 9. Using a sharp knife, remove the top layer and the stick attached to the mold. 10. Quickly pass the lipstick into the flame to provide the top layer of the lipstick gloss. 11. Testing the softening temperature. 12. Insert the lipstick in the case <sup>[22]</sup>.

#### ➤ *Facial Scrub*

To exfoliate and clean the skin on the face and body, use a facial scrub, a cosmetic or beauty product. With the aid of facial scrubs, blackheads, whiteheads, sebum, and skin cells can all be eliminated. It also encourages maintaining healthy-looking skin. Scrubs are an effective way to cure all of the factors that contribute to dull, lifeless skin. Dry skin, oily skin, and sensitive skin are the three different types of skin. Regular use of scrubs exposes new skin cells since dead skin cells are removed, resulting in skin that is glowing, smooth, soft, and healthy. Face scrubs exfoliate the skin, remove oil and pore blockages, maintain supple skin, and hasten cell turnover. Depending on the kind of skin, face scrubs should be used twice or three times a week <sup>[23]</sup>.

List of Ingredient used in Formulation of Scrub: Green apple, Cinnamon, Millet, Honey, Sandalwood, Neem, Turmeric, Carbapol, Methyl paraben, Tri ethanolamine, Propylene glycol, Sodium lauryl sulphate, Distilled water.

making of the gel: Weighed methyl paraben was dissolved in water in a beaker. This had carbopol added to it, and it was continually agitated for a little while until a gel formed. Weighed sodium lauryl sulfate was separately dissolved in water and then added to the aforementioned gel. Propylene glycol was added after this. To balance the pH, add tri ethanolamine to the gel drop by drop. The produced gel was then filled with the active component combination, which was then mixed in <sup>[24]</sup>.

#### ➤ *Face Wash*

The products that are used to wash your face without drying it out are called face washes. The term "cleanser" is another name for face wash. All skin types have been proven to benefit equally from face wash products. Face wash is highly beneficial in getting rid of oil and debris and giving dry skin moisture. Face washes and cleansers are both used to remove dirt, oil, pollutants, etc. off your face. A cleanser removes dirt, makeup, and extra oil from your face. These contaminants are oil soluble. A facial wash can also be used to get rid of them, but its effectiveness might not be 100%. Ordinary soaps might cause facial skin to dry out because it is so fragile. Face washes are gentle cleansers that do the essential work of keeping skin smooth, clean, and fresh while moisturizing the horny layer without causing any harm to the skin. so that skin seems fresh and vibrant. Face washes may be used to impart cleansing, anti-aging, anti-acne, moisturizing, and skin fairness benefits <sup>[25]</sup>.

List of Ingredient used in formulation of Face wash: Stearic acid, Sodium phosphate, Liquid paraffin, Propyl paraben, Propylene glycol, Potassium hydroxide, Sodium lauryl sulphate, Sorbitol, Methyl paraben, Water, Charcoal, Perfume.

Procedure: Making of Mixture A - Grab a dry, clean mortar and pestle. To properly triturate, add stearic acid and sodium phosphate to the mortar and pestle. Continue triturating after adding one gram of propyl paraben to this.

Building up Mixture B - Propylene glycol, potassium hydroxide, and triturate should be added to another thoroughly cleaned and dried mortar and pestle. To the aforementioned mixture, sorbitol, methyl paraben, and sodium lauryl sulphate were added. In order to get the desired consistency, mixtures A and B were combined and triturated. Add water and charcoal to this and combine well. This fragrance was enhanced. Mix the components listed above thoroughly <sup>[26]</sup>.

#### ➤ *Toner*

After using a face cleanser, a facial toner is used as a second washing agent. Toner, however, is now more frequently used as a cosmetic or skincare item to balance the pH of the face, hydrate the skin, treat acne, and cover pores.

An anti-acne toner is one of the advantages of a toner that is frequently employed [27].

Materials used in formulation of face toner: Aloe Vera, Cucumber juice, Peppermint, rose water, Lemon grass, Distilled water.

Procedure for preparation: Stir together mint juice and cucumber juice in a beaker. Then add rose water in the mixture. After that, add aloe Vera gel and 4 lemon grass. Add distilled water to the volume and stir the mixture [28].

### III. DIFFERENT INGREDIENT USED FOR SKIN COSMETIC

- **Coconut oil:** Crushed copra, the dried kernel that contains 60–65 percent oil, is used to make coconut oil. Lower chain fatty acid glycerides are abundant in coconut oil. The fruit or seed of the Arecaceae family coconut palm tree, *Cocos nucifera*, is used to make coconut oil. Since coconut oil melts at 24 to 25°C (75–76°F), it is frequently used in baking and cooking. It may be utilized readily in both liquid and solid form. Coconut oil does wonders for softening and moisturizing skin [29]. This oil restores your skin's natural oils and leaves your complexion looking radiant. It also keeps your skin hydrated, which maintains it smooth and supple, and helps to slow down the signs of aging. In addition, applying coconut oil to the skin as a moisturizer is both safe and effective [30].
- **Jjoba oil:** The family Simmondsiaceae includes the American plant *Simmondsia chinensis*, which is the source of jjoba oil. Because of its distinct scent, this oil can be used as a carrier oil and as a moisturizer in cosmetic products. Jjoba oil and human sebum are comparatively similar. Human sebum coats and shields the skin, but it is removed by pollutants, chemicals, and sunlight, which causes the skin to become brittle. Jjoba oil can be used as a natural skin conditioner because of its ability to replenish damaged hair and skin and return them to their appropriate pH level [30]. Jjoba oil is frequently used in cosmetics as a moisturizer and as a carrier oil for exotic perfumes since it is easily refined to remove any odour, colour, and stability against oxidation [31].
- **Carrot:** It is derived from the Apiaceae family plant *Daucus carota*. Because of its abundance in vitamin A and other important vitamins, this herb has been valued for years. Carrot seed oil is a renewing, anti-aging, and rejuvenating substance. Carrots' distinctive vivid orange hue is derived by  $\beta$ -carotene, with lesser quantities of  $\alpha$ -carotene and  $\gamma$ -carotene also contributing. In humans,  $\alpha$  and  $\beta$ -carotene undergo partial metabolism to produce vitamin A [29]. When applied topically, vitamin A helps to maintain healthy skin conditions, promotes the skin's natural metabolism, and lessens roughness and healing while also reducing the overall effects of skin aging. Numerous effects of vitamin A are seen in adult skin [30].
- **Turmeric:** *Curcuma longa*, the botanical name for this rhizomatous perennial plant, belongs to the Zingiberaceae family of gingers. Periclinical studies have revealed the impact of curcuminoid polyphenol, a bioactive molecule, on a variety of chronic illnesses. The US Food and Drug Administration typically considers its oleoresins and essential oils to be safe (Singletary Keith2020). Curcuminoids appear to have a comparatively low potential for toxicity, according to animal studies. Hindus employ turmeric in many of their festivities, including marriage ceremonies. Hindu brides, in particular, would apply turmeric to their bodies to give them a radiant appearance. Babies applied turmeric to their foreheads as a lucky charm. Women have historically used turmeric on their cheeks to create a subtle golden glow [32]. It treats skin conditions brought on by blood impurities. It is an excellent anti-allergic and anti-inflammatory drug. Its phytoconstituents, particularly the terpenoids, contribute to a lighter skin tone. Turmeric increases skin suppleness and postpones aging symptoms like wrinkles. It treats dull skin, uneven skin tone, and pigmentation [33].
- **Green tea:** Theaceae family member *Camellia sinensis* leaves are used to make green tea. UV light is absorbed by tea leaf extract, shielding the skin from its damaging effects. It is a photoprotective ingredient found in cosmetics for everyday usage. Strong antioxidant properties are exhibited by the polyphenolic chemicals found in tea. Sunscreen cosmetics with tea extract provide UV protection [34].
- **Aloe vera:** Aloe vera is a species of herbal plant in the Liliaceae family that is exclusively found in cultivation; it does not occur natively, however there are aloe species that are closely related that are found in northern Africa. Aloe vera is rich in amino acids, including leucine and isoleucine, as well as vitamins A, C, E, B, choline, B12, and folic acid, which have cleaning properties and antioxidant properties [34]. Traditional medicine uses aloe vera as a skin treatment. There is little, and sometimes conflicting, scientific proof supporting aloe Vera's medicinal and cosmetic benefits. Cosmetic businesses frequently add aloe vera sap or its derivatives to makeup, tissues, moisturizers, soaps, sunscreens, incense, razors, and shampoos, among other products [29].
- **Sandalwood:** The Indian sandalwood tree is a member of the S. album tree or shrub family, which is the most well-known and commercially valuable species of woody flowering plant. *Santalum album* L. The majority are parasitic roots that produce their own food but feed on the roots of other plants to obtain water and inorganic nutrients. Highly aromatic wood, particularly that of *S. album*, is produced by a number of species and is utilized in herbal medicine and perfumery. In Ayurvedic medicine, it is also utilized as a flavouring agent to control the inflammatory reactions that trigger certain skin conditions. It has also been applied as an astringent. It is applied as a mask, face pack, etc. [29]. Anti-aging and anti-tanning properties are found in sandalwood. Additionally, it has numerous benefits for skin, including

toning, emollient, antibacterial, cooling, astringent, relaxing, and healing properties [33].

#### IV. EVALUATION PARAMETER

- **Organoleptic Test:** Colour was used to evaluate organoleptic characteristics [7]. The preparation's texture, colour, and scent were evaluated using the organoleptic test. This test's objective is to raise practice standards. It is evident that the addition of turmeric kombucha to the production of the face toner caused it to turn yellow. The colour will get increasingly hazy the more turmeric kombucha is added. Every turmeric kombucha face toner solution has a sour scent to it. The fermented kombucha turmeric gives off the aroma, and acetic acid, which gives kombucha 25 its sour flavour and vinegar-like aroma, is one among its constituents. Each turmeric kombucha face toner formula is easily absorbed, has a liquid viscosity, and is not sticky [27].
- **Viscosity:** The formulation's viscosity was measured using Ostwald's viscometer. Centipoise was used to measure the formulation's viscosity and that of the water [7]. The Brookfield Viscometer can be used to measure the viscosity of cream formulations [13]. When a liquid layer is allowed to travel across a surface or another layer of serum liquid, the fluid particles have a tendency to resist this movement. This resistance is known as viscosity [17].
- **pH measurement:** Using a normal digital pH meter at room temperature, the pH of the cream can be determined by taking a sufficient amount of the formulation and diluting it with a suitable solvent in a suitable beaker [13]. A pH strip is used to measure the pH of a serum. The pH strip is dipped into the serum, removed a half-second later, and its colour is finally assessed by observing the change in colour [17].
- **Surface tension:** The stalagmometer was used to transfer the formulation, and the surface tension was noted [7].
- **Skin irritation:** After a brief period of time, a small amount of the toner was sprayed on the dorsal skin of the left hand, and the skin was found to be non-irritating [7]. An irritant is defined as a substance that, when given at a high enough concentration for the right amount of time, will cause inflammation in almost everyone. An inflammatory reaction that is not connected to the immune system but rather results from the irritant's direct contact with the skin [11]. The cream was applied to the designated location, and the duration was recorded. Any irritability, erythema, or edema was noted and monitored for up to 24 hours at regular intervals [20].
- **Homogeneity Test:** The homogeneity test was used to identify any particles in the formula that were not evenly blended. The homogeneity of kombucha turmeric facial toner preparations is shown by the mixing of the active ingredient and additives in the toner preparation recipe. The outcomes demonstrated that no insoluble particles

were produced by any of the kombucha turmeric face toner recipes. The humectant and co solvent properties of propylene glycol can help make turmeric kombucha formulations more soluble [27]. The extracted materials were distributed evenly throughout the created formulation. The homogeneity of the preparation was verified both tactilely by touching the product and visually by the lack of any particle matter [17]. Both touch and visual appearance were used to test the formulations for homogeneity. Appearance: The colour, pearlescence, and roughness of the cream were used to score its appearance [20].

- **Spreadability test:** The face serum's ability to spread across the skin, or spread ability, is essential for applying a typical dose of pharmaceutical formulation to the skin. The spread ability of face serum is 5 to 6 cm [18].

#### V. CONCLUSION

In conclusion, To sum it up, exploring various skincare and cosmetic products, from serums to lipsticks, reveals a rich tapestry of ingredients like aloe vera, neem, turmeric, and avocado oil. Tailoring your routine with these diverse elements can contribute to healthier, more radiant skin. Remember, the key is understanding your skin's needs and embracing the beauty in diversity when it comes to skincare ingredients and products. Based on various skin cosmetic review papers, it seems conclusions vary. However, common themes include the importance of individual skin types, the effectiveness of certain ingredients, and the need for personalized skincare routines. Always consider your unique skin needs before choosing cosmetics.

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