



## Review Article on Herbal Cosmetics Used in Skin Care

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### ABSTRACT:

The use of herbal remedies was well-known in ancient societies. They are used for food, medicine or cosmetics. Demand for herbal products in cosmetics is growing day by day due to the high health risks of synthetic ingredients which also contribute to environmental damage. Besides cosmetic biologically active ingredients act as antioxidant, anti-inflammatory, antiseptic, antibacterial agents. These bioactive ingredients include vitamins, antioxidants, fats, dyes, tannins, alkaloids, carbohydrates, proteins and much more. The most important feature of herbal cosmetics is that they have no side effects. Herbal cosmetic has a growing demand in the global market and is a valuable gift of nature. Indian women have long used herbs such as sandalwood and turmeric for skin care, Henna for hair color, palms, and feet; and natural oils for their bodies. The herbal cosmetics manufactured and used commonly for daily purpose include herbal face wash, herbal conditioner, herbal soap, herbal shampoo etc. The industry is now focused on a growing segment with a wide range of varied growth in the coming years. Herbal cosmetics are described as beauty products that have desirable physical properties such as healing, smooth appearance, enhancement and cooling properties due to the herbal ingredient. Here we have reported on the introduction, separation, common remedies used in cosmetics.

**Keywords:** Herbal Cosmetics, Classification, Plants used in skin care, Marketing Product.

### INTRODUCTION:

Now-a-days the usefulness of herbs in the cosmeceutical production has been extensively increased in personal care system and there is a great demand for the herbal cosmetics. Cosmetics are the substances to be applied to the human body for cleansing, beautifying, promoting attractiveness, and altering the appearance without affecting the body's structure or functions. The word of cosmetic is derived from the Greek word "kosm tikos" means that having the power, arrange, skill in decorating. Cosmetics are used to reduce wrinkles, fight acne and to control oil secretion for various types of skin a nourishment formulations like skin protective, sunscreen, anti-acne, anti-wrinkle and anti-aging are designed by using varieties of materials, natural or synthetic [1]. Cosmetic are various product such as cream, perfumes, lotions, skin cleansing products, and decorative cosmetics sector. Natural substances are highly used in cosmetic preparations[2].

During summer Skin becomes dehydrated and causes wrinkles, freckles, pigmentation and sunburn. In winter, skin damage occurs in the form of cracks, cuts, macerations and infections. The Skin diseases are common to all age of groups and may be due to exposure to microorganisms, chemicals, toxins, microbes, chemical agents, biological toxins present in the environment and also partly due to malnutrition [3]. Herbal cosmetics are the products in which herbs are used in crude or extract form[4].

**Definition of Cosmetics:** According to Drug and Cosmetics Act, are defined as substances that are intended to be rubbed, poured, powdered or sprayed are used on the human body or any part of the body for purification, repair, enhancement to attract or change appearance[5].

**Definition of Herbal Cosmetics:** It defined as the beauty products which show desirable physiological activities such as skin healing, smoothening, appearance, enhancing properties with the help of herbal ingredients [6].

## ANATOMY OF SKIN:

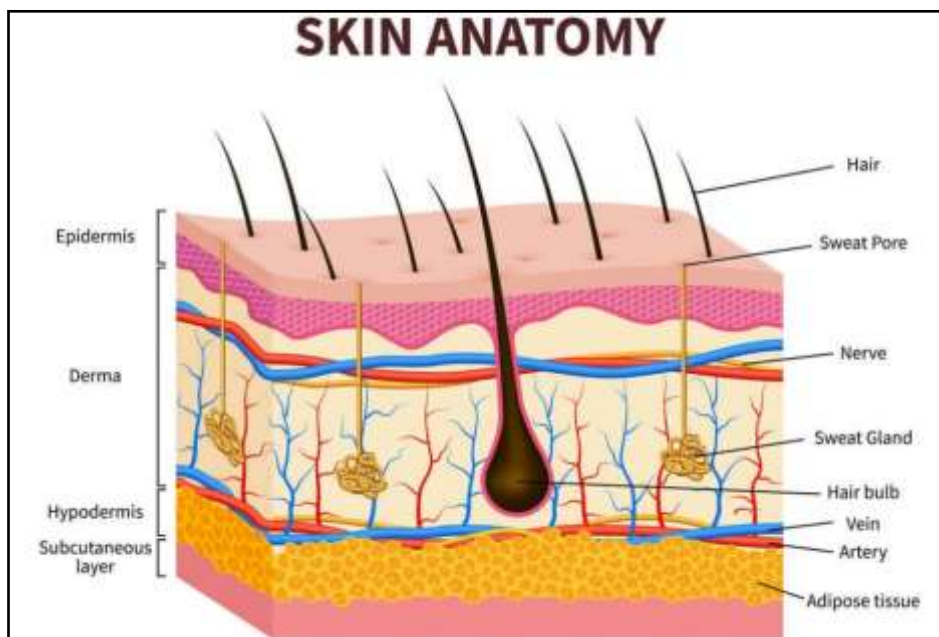


Fig.No.1

The skin is the biggest organ of the body with a complete space of around 20 square feet. The skin shields us from organisms and the components, makes a difference manage internal heat levels and licenses the vibes of touch, heat, cold. The skin monitors the fundamental muscles, bones, tendons and inside organs. There are two general kinds of skin, hairy and glabrous skin . However, the skin can be dry, touchy, pale, drooping or tired. Individuals inadequate in fundamental supplements like beta carotene, the B complex nutrients and nutrients C and E frequently experience the ill effects of the drying of the skin[7].

## SKIN HAS THREE LAYERS:

- The Epidermis, the furthest layer of skin, gives a waterproof Barrier and makes our skin tone.
- The Dermis, underneath the epidermis, contains extreme connective tissue, hair follicles, and sweat glands.
- The more profound subcutaneous tissue (hypodermis) is made of fat and connective tissue[8].

## FUNCTIONS OF SKIN:

- a) Protection:** An anatomical barrier from pathogens and damage between the internal and external environment in bodily defence, Langerhans cells in the skin are part of the adaptive immune system.
- b) Sensation:** Contains a variety of nerve endings that react to heat and cold, touch, pressure, vibration, and tissue injury, sensory system and haptics.
- c) Heat regulation:** The skin contains a blood supply far greater than its requirements which allows precise control of energy loss by radiation, convection and conduction. Dilated blood vessels increase perfusion and heat loss, while constricted vessels greatly reduce cutaneous blood flow and conserve heat.
- d) Water resistance:** The skin acts as a water resistant barrier so essential nutrients aren't washed out of the body[9].

## ADVANTAGES OF HERBAL COSMETICS

- 1.They do not show allergic reaction & do not have any side effects.
- 2.They are easily include in skin and hair.
- 3.With small quantity they are very effective as compared to synthetic.
- 4.Extracts of plant decreases the bulk property of antics and show pharmacological effects.
- 5.Easily available & found in large variety & quantity.
- 6.Easy in manufactures and chief in cost [10].

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## CLASSIFICATION OF COSMETICS

### Cosmetics for the skin

1. Creams
2. Lime night cream or emollient
3. Skin protection & hand cream
4. Vanishing cream -Foundation cream
5. Astringent lotions
6. Bleach bleaching & lotions
7. Fragrances
8. Sun protection
9. Variety of facial powders
10. Toilet powders
11. Lipstick
12. Mascara-eyebrow pencil-eye shadow [11].

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### Methods:

#### *NATURAL COSMECEUTICALS*

Cosmeceuticals are future generation of skin care. They are the advances made within the world of dermatological products and the new backbone in skincare. Cosmeceuticals are typically cosmetic-pharmaceutical hybrids intended to enhance the health and beauty of skin. Some cosmetics product are naturally-derived and others are synthetic, but all contain functional ingredients with therapeutic, disease-fighting or healing properties. Raymond Reed, Founder of U.S. Society of cosmetic chemist, created the concept of "cosmeceutical" was popularized by American dermatologist [12]. The synthetic beauty products can irritate your skin, and cause pimples. They might block your pores and make your skin dry or oily. With natural cosmetics, one need not worry about these. The natural ingredients used assure no side effects; one can apply them anytime, anywhere. For example herbal cosmetics are free from parabens that are the most widely used preservative in cosmetics and can penetrate the skin [13].

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## COSMETIC PREPARATION

The physical states of cosmetics preparation are divided into following three categories:

**Solids:** Face powders, Talcum powders, Face packs, Masks, Compact powders, Cake make-up.

**Semi solids:** Creams, Ointments, Liniments, Wax base creams, pastes, etc.

**Liquids:** Lotions, Moisturizers, Cleansing milk, Mouth washes, Deodorants, Liniments, Sprays, etc. The preparation of any herbal cosmetics basically follows a similar procedure as in the case of cosmetics. In preparation, suitable bioactive ingredients of their extracts are used along with requisite ingredients basically used for cosmetics. It requires selection of suitable emulsifying agent, and modified methodology to obtain desirable product of specified parameters. The herbal cosmetics formulation is a sophisticatedly and sensitive technological profile because it retains the bioactivity of the botanical during excessive processing and ascertains their availability after application on skin. It is desirable that manufacturers should ensure the quality of products through systematic testing at their level [14].

### *Plant use in skin care:*

**Coconut oil:** Coconut oil is derived from the fruit or seed of the coconut palm tree *Cocos nucifera*, belonging to the Family *Arecaceae*. It is produced by crushing copra, the dried kernel, which contains about 60-65% of the oil. Coconut oil contains a high amount of glycerides and lower chain fatty acids. The melting point of coconut oil is 24 to 25°C (75-76°F) and thus can be used easily in liquid or solid forms and is often used in cooking and baking [15].



Fig. No. 2

***Aloe vera:***

Aloe vera is an herbal plant species belonging to the Family Liliaceae.. It is an ingredient in many cosmetics because it heals, moisturizes, and softens skin. Aloe vera leaves to extract the smoothing gel. Aloe vera contains amino acids like leucine, isoleucine, saponin glycosides that provide cleansing action, vitamins A,B,C,E, choline, B12 and folic acid and provide antioxidant activity[16].



Fig. No. 3

**Neem:** Neem or Margosa is a botanical relative of mahogany. It is belonging to the Family Meliaceae. The common treatment for the dandruff is neem as it produces antifungal, antibacterial, pain-relieving, and anti -compounds are used to treat dandruff [17].



Fig. No. 4

***Turmeric:***

Turmeric is used in numerous Hindu celebrations. Turmeric was utilized to upgrade the shining appearance of their bodies, especially at Hindu weddings. Turmeric was likewise spread on the temples of babies for best of luck. Ladies have generally scoured turmeric on their cheeks to give them a characteristic brilliant glow [18]. It is a deep yellow-to-orange powder which is reduce the number of ultraviolet B (UVB)-induced sunburn cells in mice [19].



**Fig No. 5**

***Olive oil:***

This oil is a fixed oil extracted from the fruits of *Olea europaea*, which is belonging to the Family Oleaceae. The major constituents are triolein, tripalmitin, trilinolein, tristearate, monostearate, triarachidin, squalene,  $\beta$ -sitosterol and tocopherol. It is used as skin and hair conditioner in cosmetics like lotions, shampoos etc. It is a potent fatty acid penetration enhancer [20].



**Fig No. 6**

***Amla :***

Amla is the name given to the fruit of a small leafy tree (*Emblica officinalis*), which grows throughout India and bears an edible fruit. This fruit is highly prized both for its high Vitamin C content and for the precious oil, which is extracted from its seeds and pulp and used as a treatment for hair and scalp problems. It is used in eye syndromes, hair loss and children ailments etc [21].



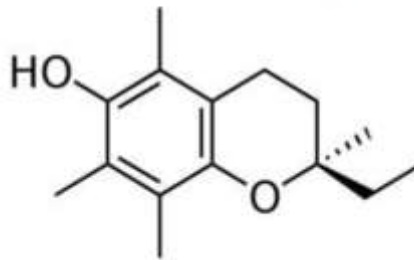
Fig No.7

## ANTIOXIDANTS:

### Vitamin E:

Alpha-tocopherol is the major lipophilic anti-oxidant in plasma membranes and tissues. The term vitamin E refers to 30 naturally occurring molecules (4 tocopherols and 4 tocotrienols), all of which exhibit vitamin E activity[22].

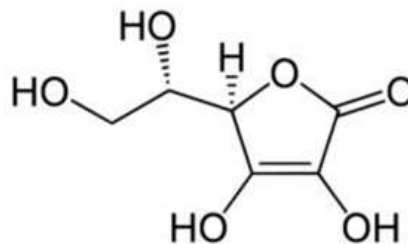
### Vitamin E



### VITAMIN C:

Vitamin C is necessary for the hydroxylation of proline, procollagen and lysine. Vitamin C improves the changes caused by photo damage[23].

### Vitamin C



### List of herbal plants and its application:

Scientific Name	Common Name	Part Used	Uses
Acorus calamus (Araceae)	Sweet flag	Rhizome	Aromatic, Dusting powders, Skin lotions.
Alhagi camelorum (Leguminosae)	Jawasa	Leaves	Skin disorders
Allium sativum (Liliaceae)	Garlic	Bulb	Promotes skin healing, Antibacterial.

Curcuma longa (Zingiberaceae )	Haldi	Rhizome	Wound healing, anti-septic, foodstuff.
Azadirachta indica (Meliaceae )	Neem	Leaves, fruits, roots and bark	Infections, fever, Inflammation.
Aloe barbadensis miller (Liliaceae)	Gwar petha	Leaves	anti-ageing, anti-inflammatory.
Cocos nucifera (Arecaceae)	Coconut	Copra	Moisturizing , anti bacterial, soothing.

**Table No.1** List of herbal plants and its application [24]

### Marketed Preparations :

There are various products that are available in the market, which is based on herbal ingredients. The market size is expanding for herbal cosmetics[25]. Some marketed herbal cosmetics are enlist in table no.2 [26].

Product	Brand name	Company
Face Wash	Deep Cleansing Apricot Face Wash	Himalaya herbals
Shampoo	Anti-Dandruff Shampoo-Volume & Bounce	Himalaya herbals
Hair oil	Amla Brahmi hair oil	Ayur Herbals
Cream	Herbal massage cream	Ayur Herbals
Anti Ageing cream	Dabur Uveda Age Renew 5 cream	Dabur

**Table No.2** Marketed Product

## RESULTS & DISCUSSION:

**Skin care:** In this study prove effective and safe, when used as a moisturizer with absence of adverse reaction. The herbal plants like coconut oil, sunflower oil, jojoba oil, olive oil, aloe vera. Coconut oil is excellent as a skin moisturizer and softener. A study shows that extra virgin coconut oil is effective and safe when used as a moisturizer, with absence of adverse reactions. A study found that coconut oil helped prevent protein loss from the wet combing of hair when used for fourteen hours. Human sebum and jojoba oil are virtually identical. Sebum protects and moisturizes the skin and hair but is stripped away by chemicals, pollutants, sun and the aging process, resulting in dry skin and hair. Jojoba oil replenishes what skin and hair loss and restores them to their natural pH balance. Carrot seed oil is used as anti-aging, revitalizing and rejuvenating agent.

**Anti-aging:** Herbs are rich in vitamins, they have anti-aging, revitalizing and rejuvenating agent. The herbs like Rhodiola rosea, carrot, and ginkgo. R. rosea is rich in phenolic compounds, known to have strong anti-oxidant properties.

**Anti-Dandruff Treatment:** Herbs produce anti-fungal, anti-bacterial and pain relieving that can treat dandruff, Henna, neem. Lawsone isolated from the leaves of L.inermis has shown significant antifungal, antibiotic effect. The common treatment for the dandruff is neem as it produces antifungal, antibacterial, pain-relieving, and anti- compounds that would treat dandruff.

**Skin protection:** The plants produce anti-septic, anti-inflammatory, anti-oxidant, insect repellent, help in wound healing and skin protection. Green tea, calendula, turmeric, shikakai, rose oil. It was found that green tea extracts or an individual green tea polyphenol (GTPP), especially epigallo catechin (EGC)-3-gallate (EGCG), inhibited two-stage chemical carcinogenesis (e.g., induced by 7,12-dimethylbenz(a) anthracene [DMBA] and 12-O-tetra-decanoylphorbol 13- acetate [TPA]), and photo carcinogenesis (induced by UVB). Rose oil helps soothe the mind and heals depression, grief, nervous stress and tension. It also helps to heal wound and skin health.

**Hair care:** Herbs have vitamins and other constituents. They provide nutrition to hair and also cause darkening of hair. Amla, eucalyptus oil.

**Antioxidant:** Vitamin B and vitamin C which provide antioxidant and aging on the skin. Tamarind, vitamin C, vitamin E. Vitamin C has been used effectively to stimulate collagen repair, thus removing some of the effects of photo-aging on skin. Vitamin E is generally considered to be the arrest of chain propagation and lipid per oxidation by scavenging lipid peroxyradicals, hence protecting the cell membrane from destruction.

## CONCLUSION:

There are numerous herbs are available naturally having different uses in cosmetic preparations for skincare, hair care and as antioxidants. The current review highlights importance of herbal cosmetics, the herbs used and their advantages over the synthetic counter parts. The present study revealed that herbal cosmetics are very safe and does not produce any toxic and adverse reactions are compared to marketed cosmetics products. The benefits of herbal

cosmetics are low cost, free side effects, environment, safe to use etc. We suggest that, we use herbal cosmetics in future, we will avoid skin problems and disorders.

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