



A Review on Herbal Cosmetics for Skin Care

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ABSTRACT

Numerous herbal plants available naturally which are having different chemical constituents used in cosmetics preparations. This review focused on cosmeceuticals intended to enhance the health and beauty of the skin. The isolated compounds from herbal plants like coconut oil, olive oil, sunflower oil, jojoba oil, aloe vera were studied for their dry skin treatment. The herbs like carrot, ginkgo and *Rhodiola rosea* were studied for their anti-aging property. Herbal like green tea, calendula and turmeric were studied for their skin protection capacity. Herbal plants like henna, neem and shikakai were studied for their anti-dandruff treatment and also studied the antioxidant property of some vitamins. The results obtained from the study, proved that the herbal plants are safe and effective. Herbs are rich in vitamins, they have anti-aging, revitalizing and rejuvenating agent. Herbs produce anti-fungal, anti-bacterial and pain relieving that can treat dandruff. The plants produce anti-septic, anti-inflammatory, anti-oxidant and insect repellent, helps in wound healing and skin protection. The current review highlights the importance of herbal cosmetics, the herbs used in them and their advantages over the synthetic counterparts. The present study revealed that herbal cosmetics are safe and does not produce any adverse reactions compare to synthetic cosmetics products.

Keywords: Herbal cosmetics, Skin care, *Aloe vera*, Coconut oil, Olive oil, Jojoba oil, Turmeric, etc.

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INTRODUCTION

Herbal cosmetics otherwise known as nature cosmetics. Herbal skin care product is most safe and protect the skin from external environment. It provides appearance to the skin.¹ Cosmetics are a substance which used to apply on the human body parts like face, hands to soothing the skin, promoting beauty, enhancing the without any changes in the body functions and body structures.² Nowadays use of herbal cosmetics by the people increasing day by day and great need of herbal cosmetics skin care products day to day life. Dermatologist proved herbal cosmetics are safe to use due to lack of side effects and more therapeutic activity.³ Types of skin cosmetics are available in markets such as sunscreen, anti-wrinkle, anti-aging, anti-acne etc. are formulated by natural additives.⁴ Creams, perfumes, lotions, etc are the cosmetics used to protect the skin and beautifying the skin. It promotes our looks without damaging the skin.⁵

The word cosmetic was obtained from Greek word "kosmtikos" means decorating skills, having the power.⁶ In ancient period it was used as colours for decoration to kill

the animals and enemy by colouring his body to provoke fear in an enemy. Cosmetics belong to hunting, religion, fighting in prehistoric times 3000 BC. Later it is used as beautifying product and health care product. Cosmetics are developed to control various types of ailments and treatment to the skin like wrinkle, acne, aging, beautiful to control oily skin. The beauty of skin depends upon habits, health, environmental changes.⁷

The requirements for the basic skin care:

Cleansing agent: It removes the dirt that chokes the pores on the skin and dead cells. Examples of cleansers include vegetable oils like sesame oil and palm oil.⁸

Toners: It helps to tighten the skin and prevent it from being exposed to many of the toxins that are present in the atmosphere. Examples of toners include hazel, geranium, sage, lemon, ivy burdock and essential oils.⁹

Moisturizing: It helps the skin to become soft and supple. It shows a healthy glow and are less prone to aging.¹⁰ Examples of herbal moisturizer include vegetable glycerine, sorbitol, rose water, jojoba oil, aloe vera and iris.¹¹

Skin

The largest organ in the human body is skin. For the adult human the average surface area of the skin is between 1.5 – 2.0 square meters. The thickness of the skin varies over all parts of the body and between men (1.3 mm) and women (1.26 mm). The skin is composed of three primary layers, the epidermis, the dermis and the hypodermis. The pH of the varies from 4.5 to 6.



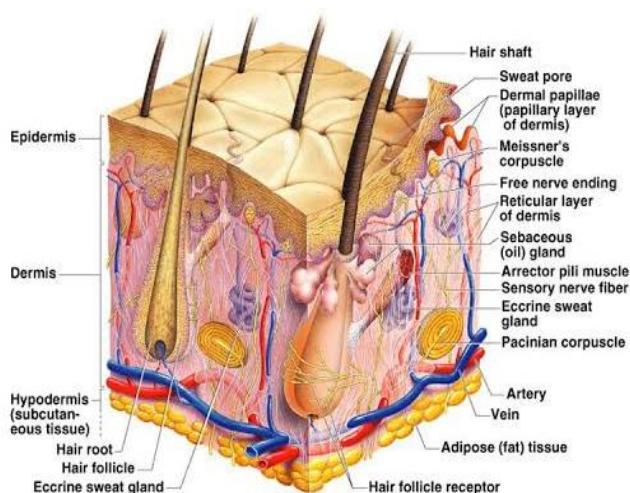


Figure 1: Skin Structure

Epidermis: It is the outer most layer of the skin. The epidermis does not contain blood vessels and by diffusion from the dermis, the epidermis gets nourished. The main type of cell which makes up the epidermis are

keratinocytes, melanocytes, langerhans cells and merkels cells. Epidermis is divided into 5 sublayer or strata,

- Stratum corneum
- Stratum lucidum
- Stratum granulosum
- Stratum spinosum

Stratum germinativum (also called “stratum basale”).

Dermis: It is the layer of skin beneath the epidermis that consist of epithelial tissue and cushions the body from stress and strain. The dermis is tightly connected to the epidermis by basement membrane. It contains hair follicles, sweat gland, sebaceous gland and apocrine.

Hypodermis: It is not the part of skin and lies below the dermis. It consists of loose connective tissue, adipose tissue and elastin. The cell types that hypodermis consists are fibroblasts, macrophages and adipocytes. Fat serves as padding and insulation for the body.¹²

Table 1: Skin Classification

Skin type	Characteristics	Suitable skin care
Normal skin	Has even tone, soft, smooth, no visible pores, no greasy patches or flaky areas. Has clear, fine, supple and smooth surface which is neither oily or dry.	Herbal- Pomegranate leaves juice, gingili oil. Essential oils- Chamomile, Lavender, lemon.
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, Avacado.
Oily skin	Shiny, thick and dull complexion. Coarse pores and pimples and other embarrassing blemishes. Prone to black heads.	Herbal- Rose buds, Oat straw, Thyme, Chamomile, Aloe vera, Lemon grass. Essential oils- Juniper, Lemon, Lavender, sage.
Combination skin	Some parts of your face are dry or flaky, while the centre part of face, nose, chin and forehead is oily	Herbals- Menthol, Turmeric, Sweet flag, Aloe vera. Essential oils- Citrous oil, Jasmine, Sandal wood oil.

Function of skin: Regulation of heat, protective, sensation, water resistant, absorption, evaporation these are controlled by various types of skin care products.

Current study involves details of herbal plants were used to discuss about its activities in cosmetics preparations.

Herbal cosmetics can be grouped into following major categories:

- For enhancing the appearance of facial skin
- For hair growth and care
- For skin care, especially for teenagers (acne, pimples and sustaining)
- Shampoos, soaps, powders and perfumery, etc.
- Miscellaneous products¹³

Advantages of herbal medicine:

Herbs are important for disease prevention and health promotion. The following are the advantages of herbal cosmetics:

Natural products – Herbal cosmetics are natural and free from harmful synthetic chemicals which generally may turn out to be lethal to the skin.

Safe to use – Herbal cosmetics are hypoallergenic and tested and proven by dermatologists to be safe to use anytime, anywhere. Since they are made of natural ingredients, people don’t have to worry getting skin rashes or experience skin itchiness.

Compatible with all skin type – No matter if you are dark or fair; you will find natural cosmetics like foundation, eye shadow and lipstick which are appropriate irrespective of

your skin tone. Women with oily or sensitive skin can also use them and never have to worry about degrading their skin condition.

Wide selection to choose from – These products are more affordable than synthetic products. They are offered at economical prices and are sold for a cheap price than synthetic cosmetics during sales. WHO estimates and demonstrated that about 80% of world population depends on natural products for their health care because of their less side effects and rise in cost of synthetic medicine.

No side effects – The synthetic cosmetic products can irritate our skin and cause pimples, acne etc., that might block the skin pores and make the skin dry or oily. But while using natural cosmetics it cause no side effects and can apply it anytime and anywhere.

Cosmeceuticals – The fastest growing segment of the beauty industry is cosmeceuticals. It means cosmetic-pharmaceutical products that are intended to improve the health and beauty of the skin by providing specific results, ranging from acne-control and anti-wrinkle effects to sun protection effects.

Table 2: List of Plants with Cosmetic Application for Skin Care

Scientific name	Common name	Parts used	Uses
<i>Acacia concinna</i>	Shikakai	Pods	Shampoo, Soap
<i>Acorus calamus</i>	Sweet flag	Rhizome	Aromatic, Dusting powders, Skin lotions
<i>Allium sativum</i>	Garlic	Bulbs	Promote skin healing
<i>Avena sativa</i>	Oat	Fruit	Skin tonic/ Moisturizer
<i>Azadirachta indica</i>	Neem	Leaves	Tooth pastes, Soaps, Shampoo
<i>Calendula officinalis</i>	Marigold	Flowers	Promote skin care
<i>Centella asiatica</i>	Brahmi	Plant	Wound healing, reduce stretch mark
<i>Centella asiatica</i>	Gotu kola	Plant	Wound healing
<i>Cichorium intybus</i>	Chicory	Seed	Relieves sore eyes, clears skin of blemishes
<i>Curcuma longa</i>	Turmeric	Rhizome	Skin cream, skin lotion Antibacterial
<i>Mesua ferrea</i>	Cobras saffron	Flower	Astringent
<i>Panax ginseng</i>	Ginseng	Root	Stimulant blood flow to skin
<i>Zizyphus jujube</i>	Zizyphus	Fruit	Skin care
<i>Zingiber zerumbet</i>	Zamabad	Rhizome	Skin care

Indian Extracts for Herbal Cosmetics:

Herbs has significant role in recent times, when harmful effects of food processing and due to medications have accepted as alarming proportions. They are recently being progressively cosmetics, foods and teas as well as alternative medicines. The developing enthusiasm for herbs is a part of the development towards change in the lifestyle. This development depends on the conviction that plants have more potential for the utilization as a remedy for diseases.¹⁴

Amla (*Embilica officinalis*): It grows throughout India. It is the small leafy tree and the name of the fruit is Embilica officinalis. This fruit contains high content of vitamin C that is extracted from its seed. It is used for treatment of hair and scalp problems.

a) Brahmi (*Bacopa monnieri*): It is used as a face pack to enhance facial complexion, as a hair application to make hair shiny, also removes dandruff and lice in hair.

b) Shikakai (*Acasiacancina*): It is a small shrub like tree. It grows in warm and dry plains in central India. It is

effectively used in hair for removing dandruff, lice, oil and dirt.

c) Neem (*Azadirachta indica*): Neem role as, “a wonder drug” and as “Sarva Roga Nivarini- the curer of all ailments” is stressed as far back as 4500 years ago. It is used as immunity booster, blood purifier and used in treatment of skin infections.

d) Reetha powder (Soap nut): It is used in India as a natural hair and body cleanser.

e) Tulsi (*Ocimum sanctum*): In India, Tulsi is called as Holy basil and is ubiquitous in Hindu tradition. It is used for treatment of various disorders and also as antivirals.

f) Ghritkumar (*Aloe vera*): It is used as pain reliever and heals haemorrhoids and also used for sunburn, scratch and also cleansing agent for the skin. It aid to grow new tissue and preventing the skin cancer caused by the sun.

Multani mitts (Fullers Earth): It is Mother Nature’s own baby powder. It is useful in removing pimple marks, treating sunburn, unclog pores, to cleanse the skin of flakes and dirt.^{15,16}





Figure 2: Best herbs for Skin Care

Herbal Medicines for Skin Care Treatments:

Dry skin treatment:

Aloe Vera: Aloe Vera plant is a native of Southern Africa. It has fleshy spiny-toothed leaves with red or yellow flowers. It is an active ingredient in many cosmetics because it acts as moisturizer and softens skin. By cutting the Aloe Vera leaves we can easily extract the soothing gel. It contains amino acids like leucine, isoleucine and saponin glycosides which provide cleansing property, vitamins A, C, E, B, choline, B₁₂, and folic acid and also provide antioxidant activity.

Olive oil: Olive oil is a fixed oil. It is extracted from the fruits of *Olea europaea*, family Oleaceae. The major constituents present in olive oil are triolein, tripalmitin, trilinolein, tristearate, monostearate, triarachidin, squalene, β – sitosterol and tocopherol. In cosmetics it is mainly used as skin and hair conditioner like lotions, shampoos etc. It is a potent fatty acid penetrant.¹⁷

Coconut oil: The biological source of coconut oil is the dried fruit or seed of coconut palm tree *Cocos nucifera*, family Areaceae. Extra virgin coconut oil is excellent for skin moisturizer. When we used coconut oil for 14 hrs to prevent protein loss from the wet combing of hair.¹⁸

Jojoba oil: It is extracted from the seeds of desert shrub *Simmondsiachinensis* belong to the family, Simmondsiaceae. Jojoba oil is a long chain mixture of linear liquid wax esters. It is easily refined to remove any odour and colour is stable oxidatively. In cosmetics, it is used as moisturizer and carrier oil for exotic fragrances.¹⁹



Figure 3: Jojoba Oil

Sunflower oil: It is simple and cost-effective oil. It is a non-volatile oil extracted from the seeds of *Helianthus annuus*, belong to the family, Asteraceae. It contains lecithin, tocopherols, carotenoids and waxes. It interferes the hormone function (endocrine disruption). It has soothing properties and also considered as non-comidogenic.¹⁴

Skin Protection:

Green Tea: Green tea is a Tea extracted from the leaves of *Camellia sinensis* belong to the family, Theaceae. It protects the skin from direct damage to the cell and moderate inflammation. The main active ingredient in green tea is catechin, it has antioxidant power which 20 times stronger than vitamin E.²⁰

Calendula: *Calendula officinalis*, family Asteraceae is commonly known as Mari gold plant. In cosmetics, it is used in suspension or in tincture to treat acne, to reduce inflammation, to control bleeding and soothing irritated tissue. Calendula cream or ointment is effective in treating radiation dermatitis.²¹



Figure 4: Calendula

Turmeric: It is extracted from the rhizomes of *Curcuma longa*, family Zingiberaceae. It is a perennial plant and it is used in many celebrations of Hindus. It consists of demethoxycurcumin, bisdemethoxycurcumin, zingiberene, curcumol, curcumenol, eugenol, metatrihydrocurcumin, triethylcurcumin, curcumin, turmerin, turmerones. It is used as anti-septic, analgesic, anti-inflammatory, anti-oxidant, anti-malarial, insect repellent etc.²²

Anti-aging Treatment:

Carrot: It is obtained from the plant *Daucus carota* belong to the family Apiaceae. Carrot seed oil is used for anti-aging, revitalizing and rejuvenating and helps to reduce wrinkles. It promotes formation of new cells. It act as a natural toner.²³

Ginkgo: It is obtained from the ginkgo tree, *Ginkgo biloba* belongs to family Ginkgoaceae. It is a best circulatory tonic for strengthening the tiny little capillaries to all the organs especially to brain. Because the capillaries become more flexible, as a result more number of oxygen is delivered to the brain and eye to protect from diseases like macular degeneration.



Figure 5: Ginkgo Tree

Rhodiola rosea: *Lignum rhodium* belongs to the family crassulaceae. It is commonly known as golden root, rose root, arctic root, Aaron's root, king's crown. It is traditional folk medicine used to enhance physical endurance, work productivity, longevity, resistance to high altitude sickness. It is also used to treat fatigue, depression, anemia, impotence, gastrointestinal ailments, infections and nervous disorders.²⁴



Figure 6: Rhodiola rosea

Dandruff Treatment:

Ayurveda has huge number of natural medications in dandruff treatment from that the most common herbs are Neem, Kapoor, Henna, Hirda, Behada, Amalaki, Magic nut, Bringaraj, Rosary pea, Sweet flag, Cashmere tree and Mandor.

Henna: It is obtained from the plant *Lawsoniainermis* belongs to the family, Lythraceae. It contains Lawsone which is responsible for dye property. Other constituents present are gallic acid, glucose, mannitol, fats, resin,

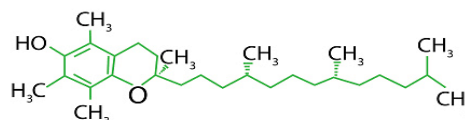
mucilage and alkaloids. It is has natural affinity with proteins in hair, which make it "stain".²⁵

Neem: *Azadirachta indica* belongs to the family, Meliaceae. It has blood purifier property and also enhance beauty and also relieves pain. It is used for the treatment of dandruff as it produces anti-fungal, anti-bacterial activity.²⁶

Shikakai: The dried fruits of *Acacia concinna Linn* belongs to the family Leguminoseae. It is a medicinal plant which grow in tropical rainforest of southern Asia. It contains saponins, alkaloid, sugar, tannin, flavanoids and anthroquinone glycosides. It is used for improving hair growth and also used as an expectorant, emetic and purgative.²⁷

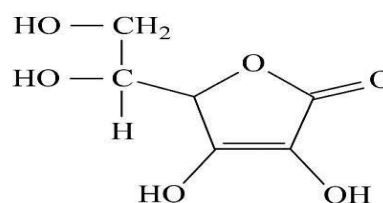
Anti-Oxidants:

Vitamin E: Sources of vitamin E is both plants and animals. It has free radical scavenging activity. It is mainly present in almonds, nuts, whole cereal grains, vegetable oils etc. The major lipophilic anti-oxidant in plasma membrane and tissues is α -tocopherol. The 30 naturally occurring molecules (4 tocopherols and 4 tocotrienols) all of which exhibit vitamin E activity.

VITAMIN E

Tocopherol

Vitamin C: It prevents free radical damage by donating free radicals. It has immune boosting activity. It is mainly present in carrots, peaches, sweet potatoes, oranges, broccolis etc. It is necessary for hydroxylation of proline, precollagen and lysine. It improves the changes caused by photo damage.²⁸



Ascorbic acid
(Vitamin C)

Tamarind: *Tamarindusindical* belongs to the family Fabaceae. The plant parts consist of amino acids, fatty acids and minerals. Tamarind is sweet acidic in taste due to the presence of tartaric acid. It is rich source of sugars, vitamin B and minerals. It exhibits high anti-oxidant capacity because of high phenolic content, thus it is an important food source. Its antioxidant activity is used as anti-wrinkle in cosmetics.²⁹

The Benefits of Herbs May include the Following:

- Improve physical and mental well-being
- It gives strength to immune system

- Detoxification
- It aids in sleeping, digestion etc.,
- Enhance energy and reduce fatigue.³⁰

CONCLUSIONS

Herbal cosmetics are prepared using herbal ingredients to treat different ailments and to promote healthy life and for beautifying the skin without damaging the skin functions and structure. There are numerous herbs available naturally having different uses in cosmetic preparations for skincare. The current review highlights the importance of herbal cosmetics, the herbs used in them and their advantages over the synthetic counterparts. Herbal cosmetics usage for skin has been increased in personal care system and more demand for natural cosmetics. Based on the review here we concluded that herbal cosmetics are very safe and does not produce any toxic and adverse reactions compare to marketed cosmetics products. We suggest that, we use herbal cosmetics in future, we will avoid skin problems.

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