



HERBAL COSMETICS AND COSMECEUTICALS

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ABSTRACT

India is a focus for development of Ayurveda, Unani, Siddha, Homoeopathy and another natural herb based health science (AYUSH). Highly probable and dependent in the future for the production of saundry prasadkas (herbal cosmetics) in the Ayush Pharmaceutical industry. Natural beauty helps blessing and cosmetics present and enhance facets of human beings' appearance and personality. The preparation of Sundry Prasadak is a cosmetic base in conjunction with the known active ingredient Ayurveda, Siddha and Unani (ASU), a reference readily available in Schedule 1, book of Drug and cosmetic act 1940 and rule 1945). In ancient times people were used for saundrya prasadan karma to different leps, Alepa, Pralepa, Udavartan, Prakshalan etc. Nature has offered the way to keep up that parity. Herbs! Yes herbs are one such means. An herb is a plant or plant extract, including leaves, bark, berries, roots, gums, seeds, stems and flowers which are favour with nourishing and healing elements. Cosmetics alone are not competent to take care of skin and others body parts, it requires association of active ingredients to check the casualty and ageing of the skin. The use of herbal cosmetics among the population has increased significantly. The effectiveness and inherent acceptability of herbal products was stated through regular use in everyday life and the adverse effects commonly seen in synthetic products were avoided.

KEYWORDS: Cosmetic; Cosmeceutical; Antioxidant; Drug; Herb,, Ayurveda.

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INTRODUCTION

An herbal cosmetic is also known as "natural cosmetics". As there are no side effects, demand for herbal medicines is growing quickly [1]. With the beginning of the civilization; humankind had the attractive plunge towards impressing others with their looks. No fairness creams or cosmetic operations were available at that time. To begin with just thing they had was the information of nature, aggregated in the Ayurveda. With the art of Ayurveda, a few herbs and floras were used to make Ayurvedic cosmetics that truly worked. Ayurvedic cosmetics not only improve the skin but also protect the body from all adverse effects. The same admirable capabilities exist in the present age even with Ayurvedic cosmetics called herbal cosmetics. Many traditional medicines in use are derived from medicinal plants, minerals and organic matter [2].

There is a wide variety of herbal cosmetics, which are manufactured and used every day. Herbal cosmetics are extremely popular among the masses, such as herbal conditioners, herbal soaps, herb-faced washings, herbal shampoos and many more. It is made entirely of herbs and shrubs, which is the best thing about herbal cosmetics.

The natural content in the herbs does not have any on the human body; rather enhance the body with supplements and other helpful minerals. Herbal cosmetics consist of plants such as saffron (kesar), ashwagandha, sandal (chandan) and numerous, increasingly supported by the various essential elements and healthy nutrients. It is evaluated that roughly 400 flavors are utilized far and wide, although only about 70 spices are officially recognized. Herbs act in various ways, such as food tastes, cosmetics and medicines in tea, pills, capsules, teas, creams, syrups and liquids. The worldwide herbal industry is currently evaluated to be more than US\$10 billion dollars and expanding at a rate of three to four percent annually for reasons of increased consumption in processed foods and demand for ethnic foods, natural fragrances, and innovation in beverage products. The biggest markets, regarding of manufacturing and consumption, are in Europe, followed by Asia [2-4].

The main aim of this review article is to cumulate the information about the herbal cosmetics, which are the preparations used to enhance and improved the human appearance and there are no or less side effects compare to synthetic products.

HISTORY

The word cosmetic was derived from the Greek word "kosmtikos" meaning having the power, arrange, skill in decorating [3]. "Cosmetics of different sources, science-compounded and used for (i) purifying, (ii) cleaning of skin issues, (iii) covering imperfection and (iv) embellish" The origin of cosmetics forms an ongoing myth in human history. This origin of cosmetics was associated with chasing, battling, religion and superstition and later connected with medicine [4]. The man in ancient circumstances utilized hues for improvement to draw in the creatures that he wished to chase, and the man survived an assault from the adversary by shading his skin and embellished his body for insurance to incite fear in a foe (regardless of whether man or creature) [5]. Ashtanga Hridaya (a 1500-year-old book of Ayurveda) offers six unique plans to be utilized for the six periods of the year. For facial embellishment, special thailams (olive oil) and ghrilas were used. Unnecessary hair was thought to be a disgrace, and a substantial number of depilatory specialists were prescribed to dispose of it. Special ingredients were utilized for hair washes [6]. Numerous cures have been demonstrated for hair development, the counteractive action of falling hair and untimely turning grey [7]. Hair colours, fragrant hair washes, and fumigants were likewise being used. Fragrant shower powders and body antiperspirants were additionally used [8]. Oral cleanliness as care of teeth, mouth antiperspirants and shading of lips were everyday errands to be religiously sought after [9]. It gives the idea that the full scope of present-day corrective use was brought about by the ancient Indians and was rehearsed with the assistance of natural products that were available [10].

The details eventually went to pharmacy from the drug. The old man had the magic tip to charm others with his look. The time during which there was no fairness creams or any cosmetics surgeries to modify the appearance, the skin and hair excellence of people relies upon the wellbeing, propensities, routine employment, climatic conditions and support. The skin because of exorbitant introduction to warmth will get dried out amid summer and causes wrinkle, spots, flaws, pigmentation and sunburns. The outrageous winter make harms the skin as breaks, cuts, maceration, and contaminations [11, 12]. The most important factor on which they had to rely was the nature information in Ayurveda. The art of Ayurveda had used numerous herbs and verdures to make beauty care products for beautification and security from outside influences [13]. The normal substance in the botanicals does not bring about any reactions on the human body; rather enhance the body with supplements and other helpful minerals [14]. The Drug and Cosmetics Act specifies that herbs and essential oils used in embellishments do not claim to penetrate the skin's surface [15]. The lawful prerequisite and the administrative techniques for natural beauty care products are the same as that for other synthetic chemicals utilized as a part of cosmetic formulations [16].

Definition of Cosmetics

"Particles to be rubbed, poured, sprayed, injected, or used otherwise for humans under the Drugs and Cosmetics Act shall be classified as cosmetics" For cleansing, embellishing, fostering or altering appearance the body or

any part thereof. The cosmetics are not subject to the drug license forecast [17].

Definition of Herbal Cosmetics

These are cosmetics that are made with cosmetic behavior of plant materials. Botanical extracts have recently been more commonly used in cosmetics, primarily due to mild action and non-toxicity. Organic as well as synthetic components are used in cosmetics. Natural products include oils, extracts, secretions etc. Phyto-ingredients include pure constituents obtained by various process [17].

Present Status

Today, herbalists believe in helping people with natural resources to develop their good health. Herbs are known as food rather than medicine because they are growing, pure and all-natural. Once you take plants, the body starts to purify, to purify itself. Unlike chemically synthesized, highly concentrated drugs that may produce many side effects, herbs can effectively realign the body's protection. Herbs do not provide instant remedies, but they provide a way to render the body unsatisfactory with nature, because people have been using herbs for thousands of years. Herbs have been used as follows – to defend us against sprouts, as medicines when we prepare for flavoring food, as perfumes, as disinfectants, are sick [18, 19].

Advantages of Herbal Cosmetics over Synthetic

The modern trend in beauty and fashion is herbal cosmetics. These agents are increasingly popular as today most women prefer natural products rather than chemicals to enhance their beauty by providing the body with these products. nutrients and enhance health and provide satisfaction as these are free from synthetic chemicals and have relatively less side-effects compared to the synthetic cosmetics [20]. The following are some of the benefits that make it a better alternative than the synthetic cosmetics:

Natural Products

This is also considered pure, free of all the dangerous synthetic chemicals which may otherwise prove harmful to the skin. Various plant components and plant extracts are used in these products instead of conventional synthetic products, e.g. *Aloe Vera*. There are also natural nutrients such as vitamin E, which keeps the skin clean, glittery and beautiful. For example, *Aloe Vera* is a herbal plant species belonging to Liliaceae family and is naturally and easily available [21]. Products such as synthetic chemicals, mineral oils that require more natural products without traceability or natural ingredients are becoming increasingly concerned harmful chemicals and with an emphasis on the properties of botanicals [22].

Safe to Use

Natural cosmetics are safe to use compared with other beauty products. They are hypo-allergenic 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 about getting skin rashes or experience skin itchiness. Example - BHA (Butylated Hydroxy-anisole) and BHT (Butylated Hydroxytoluene) are closely related synthetic antioxidants and are used as

preservatives in lipsticks and moisturizers [23]. BHA and BHT can induce allergic reactions in the skin [24]. The international Agency for Research on Cancer classifies BHA as a possible human carcinogen [25]. Herbal cosmetics contain natural antioxidants like Vitamin C [5].

Compatible with All Skin Types

Natural cosmetics are suitable for all skin types. Whether dark or white, you will find the most appropriate natural beauty items, such as foundation, eye shadow and lipstick, regardless of your skin tone. Females with oily or sensitive skin can use it and must never worry about the degradation of their skin. Coal tar derived colours are used extensively in cosmetics; coal tar is recognized as a human carcinogen and the main concern with individual coal tar a colour (whether produced from coal tar or synthetically) are they can cause cancer [6]. But natural colours that are obtained from herbs are safer.

Large selection to pick from

Natural cosmetics may still be a new type in the beauty industry but they already offer a variety of beauty products for all make up crazy people out there to choose from. A variety of basics, eye shadow, lipstick, blush, mascara, coverer, etc. are all naturally formulated. Addition, natural cosmetics made locally or produced by renowned designers worldwide can be found. There exist a large variety of herbal extracts, to name a few *Andrographis paniculata* (Kalmegh), *Asparagus racemosus* (Shatawari), *Boswellia serrata* (Salai Guggal), *Asphalt* (Shilajit) etc.[26].

Fits Your Budget

Natural cosmetics are not that expensive. In fact, some of these products are more affordable than synthetic ones. They are offered at discounted prices and are sold for a cheap price during sales. You just have to look around for great offers. An estimate of WHO demonstrates about 80 % of world population depends on natural products for their health care, because of side effects inflicted and rising cost of modern medicine. World Health Organization currently recommends and encourages traditional herbal cures in natural health care programs as these drugs are easily available at low cost and are comparatively safe [27].

Not tested on animals

Some cosmetics was first tested for safe and successful human use on animals. But it is not appropriate to check natural cosmetics in animals. These natural formulations are tested by experts in laboratories using state of the art equipment with no animals involved [20].

No Side Effects

Synthetic beauty products can cause skin irritation and punching. They might block your pores and make your skin dry or oily. You don't have to think about natural cosmetics. The natural ingredients that are used do not cause side effects; they can be used anywhere, anywhere. For example herbal cosmetics are free from parabens that are the most widely used preservative in cosmetics and can penetrate the skin [28]. And are suspected of interfering with hormone function (endocrine disruption) [23].

Necessity of cosmetics

Some are born beautiful but others are made to look beautiful, cosmetics are made available for both men and women. Women depend more on cosmetic for beautifying them. Beauty has become vital in this modern world. It increases personality and look of a person. In the olden days homemade remedies were used as cosmetics, women prepared their own face packs and applied to their skin and body [29]. The use of cosmetics not only confined to women, but the usages of various cosmetics for self beautification by both men and women were evident in ancient India [30]. Many of these practices were related with the seasons (Sanskrit: Rutus) and the normal rituals of life (Sanskrit: Dinacharyā). Cosmetics not only upgrades personality but also associated with merit or Punya, longevity or Aayush, good health or Aarogyam, and happiness or Anandam [29]. Modern day cosmetics have also been developed with natural or synthetic constituents to fight UV-rays, aging, wrinkles, acne and oil secretion [31, 32].

Cosmeceuticals

The beauty section 'Cosmeceuticals' is the fastest rising. Cosmeceuticals are cosmetic drug products intended for a particular purpose, including acne prevention and anti-drinking effects, to improve health and attractiveness of the skin, and sun safety. The concept discovered by Dr. Albert Kingman states that 'The Cosmeceuticals are topical agents that are distributed across broad spectrum of materials, lying somewhere between pure cosmetics (lipstick and rouge) and pure drug (antibiotics, corticosteroids) [33].

Regulatory status of cosmeceuticals

Cosmeceuticals - cosmetics or drugs? The legal distinction between a cosmetic and a medication depends on the intended use of a drug. The existing definition does not create a well-defined limit for a cosmetic product, and specific laws and regulations apply to particular product types. The Drug and Cosmetic Act 1940 describes pharmaceutical products and cosmetics as medication "All medicines to use humans or animals internally or externally and all the substances intended to use. to be used for ; or in the diagnosis, treatment, mitigation or prevention of any disease or disorder in humans or animals"[34]. Cosmetic-"Any object that is intended for cleansing, embellishing, promoting attractive or applied on or in, or applied to, any part of the human body. Switch in look and any substance planned for use as a cosmetic part [35].

Cosmetic and drug:

Those products follow both cosmetic and therapeutic requirements. This may happen when a product has more than one intended uses. A shampoo, for example, is a product that cleanses the hair. A shampoo against dandruff is a drug since it is meant for the treatment of dandruff. Among the cosmetic/drug combinations are toothpastes that contain fluoride, deodorants that are antiperspirants and moisturizers with sun-protection claims [36]. The claims made about drugs are subject to detailed analysis by the Food and Drug Administration (FDA) review and approval process, but cosmetics are not subject to mandatory FDA review.

Although there is no legal category called cosmeceuticals, the term has found application to designate the products at the borderline between cosmetics and pharmaceuticals [37, 38]. The word does not recognize the Federal Food, Drug and Cosmetic Act. Consumers also find it often difficult to decide whether "claims" about cosmeceutical action or effectiveness apply without FDA approval. In certain countries, the product groups differ between the two types of cosmetics and drugs: Japan, for example, has 'quasi-drug' products; Thailand has 'cosmetics regulated' and Hong Kong, 'cosmetic-type drugs'. The regulations of cosmeceuticals have not been harmonized between the USA, European, Asian and other countries [39].

INDIAN EXTRACTS FOR HERBAL COSMETICS

Herbs assume a significant role, especially in present day times, when the harming effects of food processing and overmedication have accepted alarming proportions. They are currently 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 ways of life. This development depends on the conviction that the plants have a tremendous potential for their utilization as a remedial medication[33].

i) Amla (*Emblica officinalis*)

Amla grows throughout India and the name given to the fruit of a small leafy tree (*Emblica Officinalis*). This fruit have a high content of vitamin C which is extracted from its seeds it is used as a treatment for hair and scalp problem.



Fig. : 1. Amla fruits

ii) Brahmi (*Bacopa monnieri*)

This can be used as a facial kit for the purpose of enhancing facial complexion, Render your hair clear, also removes hair pulp and lice.



Fig. : 2. Brahmi leaves

iii) Shikakai (*Acasia cancina*)

It is a small shrub-like tree, which grows in the warm, dry plains of central India. It Help to remove the pelts and lice and to remove oil and dirt from hair very effectively.



Fig. : 3. Shikakai fruits

iv) Neem (*Azadirachata indica*)

The role of Neem, as a wonder medicine, is stressed 4500 years ago as "Sarva Roga Nivarini – the healer of all afflictions." The health advantages include improving immunity, efficient skin infection, blood washing, etc.



Fig. : 4. Neem leaves & fruits

v) Reetha Powder (Soap nut)

This is used as a hair and body purifier in India.



Fig. : 5. Reetha fruits

vi) Tulsi (*Ocimum sanctum*)

In Indian culture, Holy Basil, called Tulsi, is omnipresent. Its role is to cure the herb, the antiviral and many disorders as well.



Fig. : 6. tulsi leaves

vii) Ghritkumar (*Aloe vera*)

Used both internally and externally, it is used to relieve pain and treat 'hemorrhoids, even for sunburn, itch and scrub for body and skin. It helps to grow new tissues and alleviates the development of sun-related skin cancer.



Fig. : 7. Alovera

viii) Multani Mitts (Fullers Earth)

It is Mother Nature's own baby powder. It is useful in removing pimple marks, treating sunburn; helps unclog pores, to cleanse the skin of flakes and dirt.



Fig. : 8. Multani mitts

APPLICATIONS OF HERBAL PRODUCTS IN COSMETICS [40, 41].

In cosmetics, herbs play an significant role

i) Herbal Skin Care Products

Lavender body powder, body soap, soaps and care creams.

ii) Herbal Hair Care Cosmetics

Herbal hair-treatment cosmetics include different components such as Shikakai, Henna, (*Lauzonia inermis*), Guar gum, Amla (*Embllica officinalis*) Brahmi (*Bacopa monnieri*). There are also a wide range of ingredients.

iii) Herbal Lip Care Cosmetics

Herbal hair-lip care cosmetics are included plumper Herbal Lip, Lipsticks, Herbal Lip and Herbal Lip Gloss & Herbal lipsticks.

iv) Herbal Eye Care Cosmetics

Shadow of the Auge, Lipstick of the Skin, Eye Make up, Liners of the Lens

v) Herbal Creams, Lotions, Gel: Creams

Aloe Moisturizing Hand, Rich face and hand cream

vi) Herbal Oils

Sweetness, hair loss, hair dilution and treatment of irritation are effective in grass oils
Scalp Juckling

vii) Herbal Perfumes & fragrances

A citrus fragrance: the light character of citrus notes is typically mixed with more feminine fragrances (flowers, fruit and cattle) [40,41]. The aroma of citrus notes is fresh (bergamot and orange), lemon and mandarin.

MARKETED PRODUCTS OF HERBAL COSMETICS [42]

Different herbal preparations on the market are described in the table below.

Table 1: Herbal skin care products

Products	Brand Name
Face pack	Face Pack of Amazine Herbal Wounds
Massage gel	Massage gel Amazine herbal fruit
Gel	The Cucumber of Dr. Jain Forest
Face wash	Face wash combination
Cream	Currant milk Vicco/ Vicco turmeric cream
Face scrub	Face scrub for Aloe indica
Cold cream	Strawberry cold cream and Gayatri papaya
Face powder	Face powder Agarwal tulsi

Table 2: Herbal hair care products

Products	Brand Name
Shampoo	Agarwal honey aloe vera shampoo
Anti-dandruff shampoo	Himalaya antidandruff shampoo
Hair gel	Tulsi hair gel & Aroma sikakai
Hair conditioner	Vedico aloevare hair conditioner
Hair colour	Crown heena hair colours
Hair oil	Prakriti sesam gold hair oil

Table 3: Herbal Lip Care

Products	Brand name
Lip gloss	Komet kozmetik lip gloss
Lip plumper	Ruhi lip plumper
Lipstick	Kamey lipstick
Lip balm	Pallido lip balm

Table 4: Herbal Eye care Products

Products	Brand name
Eye shadow	Matrix eye shadow
Eye liners	Tonnie eye liners
Mascaras	Uniclor mascararas
Eye pencils	Organic rose eye pencils
Perfumes	Devy perfumes
Deodorants	Always deodorants
Soaps	Carmino herbal soaps
Foundations	Carmine foundations



Fig. : 10 . Sunflower oil

• **Jojoba oil**

It is a mixture of long chain, linear wax esters mined from the seeds of a wilderness bubble, the simmondsiaceae, a family. It is easily processed, oxidatively stable in odour, and is often used as a moisturizer and as a carrier for exotic fragrances in cosmetics. Human sebum is almost identical to that of jojoba oil. Sebum protects and humidifies the skin and hair but is removed through chemicals, pollutants, sunlight and the process of aging which lead to dry hair and skin. Jojoba oil fills the skin and hair loss and returns it to its normal pH balance [44].



Fig. : 11. Jojoba fruits & oil

• **Olive oil**

This oil is a fixed oil derived from olea europaea (family oleaceae) fruits. Triolein, trilinolein, triarachidine, triarachidine, β -sitosterol and tocopherol are the main components. This is used in cosmetics including lotions, shampoos and so on as a skin and hair conditioner. It is a potent fatty acid penetration enhancer [44].



Fig. : 12. Olive fruits & oil

HERBS USED IN COSMETICS/COSMECEUTICALS

(A) SKINCARE

• **Coconut oil**

The dried kernel, which contains around 60-65 percent of the oil, is produced from crushing Copra. Coconut oil contains many low-chain fatty acid glycerides. Coconut oil is derived from the fruit or seed of the coconut palm tree *Cocos nucifera*, family *Arecaceae*. 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. Coconut oil is excellent as a skin moisturizer and softener [33].



Fig. : 9. Coconut fruits / seeds & oil

• **Sunflower oil**

It is the non-volatile oil extracted from sunflower seeds obtained from *Helianthus annuus*, family *Asteraceae*. Sunflower oil contains lecithin, tocopherols, carotenoids and waxes. It has smoothing properties and is considered non-comedogenic [35]. Clear but inexpensive butter, well tried and tested in different emulsions for face and body items for decades [43].

- **Aloevera**

Aloevera is a herbal plant species belonging to liliaceae family that is found only in cultivation, having no naturally occurring populations, although closely related aloes do have presence in northern Africa [45]. In many cosmetics it is an ingredient because it heals, moistens and smooths the skin. Simply cut one of the aloe vera leaves to extract the soothing gel [33]. Aloe vera contains amino acids like leucine, isoleucine, saponin glycosides that provide cleansing action, vitamins A,C,E,B, choline, B12 and folic acid and provide antioxidant activity [42].



Fig : 13. Aloe vera

(B) ANTIAGING

- **Rhodiola rosea**

It is generally referred to as golden root, rose red, arctic root, rod of the king, rhodium lignum, orpine rose. It is a plant in the *Crassulaceae* family that inhabits in cold regions of the world. Throughout the arctic regions of Europe and Asia, traditional folk medicine grows mostly in dry sandy ground at high altitudes used *Rhodiola rosea* to increase physical endurance, work productivity, longevity, resistance to high altitude sickness, and to treat fatigue, depression, anemia, impotence, gastrointestinal ailments, infections, and nervous system disorders [43]. *Rhodiola rosea* is rich in phenolic compounds, known to have strong antioxidant properties [46].



Fig : 14. Rhodiola rosea

- **Carrot**

It is obtained from the plant *Daucus carota* belonging to family Apiaceae. It has been a valuable herb for many years because of its vitamin A richness and other essential vitamins. Carrot seed oil is used as anti-aging, revitalizing and rejuvenating agent [33]. The carote is made from β -carotene and less α -carotene and β -carotene. Carotenes are typical and bright orange. α and β -carotenes are partly metabolized into vitamin A in humans [47].



Fig : 15. Carrot

- **Ginkgo**

Biloba (G. biloba) leaves and nuts have long been used in China and Japan to treat various conditions of medicine, including impaired blood circulation; hypertension; poor memory and depression, especially among the elderly; and male impotence. It is also renowned as an antioxidant and anti-inflammatory agent. *Ginkgo biloba*, which grows to a large size, belongs to the Ginkgoaceae family [48]. The tree leaves extract EGb 761 is a natural mixture containing the number of ultraviolet B (UVB)-induced sunburn cells of mice (33 percent), mostly quercetine, and kaempferol derivatives, and terpenes (6 percent)[49].



Fig : 16 Ginkgo

(C) DANDRUFF TREATMENT

Ayurveda has numerous natural medications wherein the most common herbs include Neem, Kapoor (naphthalene), and Henna, Hirda, Behada, and Amalaki, Magic nut, Bringaraj, Rosary Pea, Sweet Flag, Cashmere tree and Mandor [33].

- **Henna**

Henna comes from the *Lawsonia inermis* Lythraceae family plant, which contains a coloring molecule called Lawsone and produces henna powder during processing. Besides gallic acid, glucose, mannitol, fats, resin (2 percent), mucilage and traces of alkaloid are other constituents of the legislation. Leaves yield henna tannic acid and an olive oil green resin, soluble in ether and alcohol [50]. Lawsone isolated from the leaves of *L. inermis* has shown significant antifungal antibiotic effect [51].



Fig. :17 Henna leaves

• **Neem**

Neem or Margosa is a botanical relative of mahogany. It belongs to the family Meliaceae. Neem- Azadirachta 's Latin name is derived from the Persian language. Azad=Free, dirakht=Tree, i-Hind=of Indian Origin. The common treatment for the dandruff is Neem as it produces antifungal, antibacterial, pain-relieving, and anti-compounds that would treat dandruff [52].



Fig. : 18. Neem leaves

(D) SKIN PROTECTION

• **Green tea**

The tea plant (*Camellia sinensis*) has been cultivated in Asia for thousands of years [53]. The 4 major polyphenolic catechins present in green tea leaves are (2)-epicatechin (EC), EGC, (2)-EC-3-gallate, and EGCG, which is the most abundant [54, 55]. It was found that green tea extracts or an individual green tea polyphenol (GTPP), especially epigallocatechin (EGC)-3-gallate (EGCG), inhibited two-stage chemical carcinogenesis (eg, induced by 7,12-dimethylbenz(a)anthracene [DMBA] and 12-O-tetradecanoylphorbol 13-acetate [TPA]), and photocarcinogenesis (induced by UVB) [56].

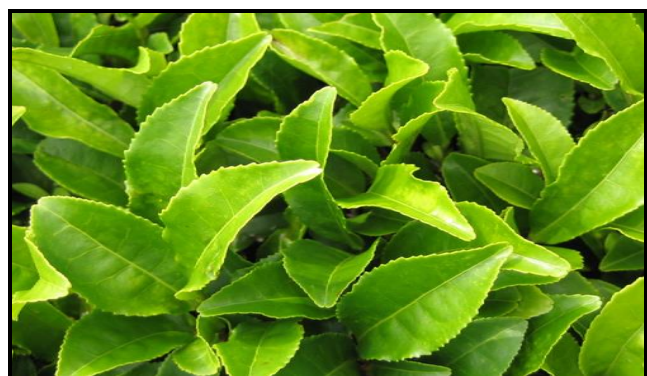


Fig. : 19. Green Tea

• **Calendula**

Calendula officinalis is reported to have a remarkable antioxidant activity, anti-inflammatory activity and wound healing activity [57]. A previous study demonstrated that the essential oil of *Calendula* consists mainly of α -thujene, α -pinene, 1,8-Cineole, dihydrotageton and T-muurolo [58].



Fig. : 20. Calendula

• **Turmeric**

Turmeric is used in many celebrations of Hindus. Especially in Hindu marriages, turmeric would rub to the glistening look of their bodies. New born babies also rubbed with turmeric on their forehead for good luck. Traditionally women rub turmeric on their cheeks to produce a natural golden glow [59]. It is a deep yellow-to-orange powder that comes reduce the number of Ultraviolet B (UVB)-induced sunburn cells in mice [53].



Fig. : 21. Turmeric

(E) HAIRCARE

Different oils derived from and used in cosmetics from a vegetable and mineral source. Vegetable oils include almond oil, arachis oil, beaver oil, olive oil and coconut oil for example. The light and heavy paraffin are examples of mineral oil [59].

• **Amla**

Amla is the name given to the fruit of a small leafy tree (*Emblca Officinalis*), which grows throughout India and yields an edible fruit. The high level of vitamin C as well as the precious oil extracted from its seeds and pulp is highly praised and used as a therapy. for hair and scalp problems. It is used in eye syndromes, hair loss, and children ailments etc [60].



Fig. : 22 Amla fruits

• **Shikakai**

Acacia concinna Linn. (Leguminosae) is a medicinal plant that grows in tropical rainforests of southern Asia. The fruits of this plant are used as expectorants, emetics and purgatives for the wash of hair, for improving hair growth. The powder of *Acacia Concinna* Linn shows the presence of saponins, alkaloid, sugar, tannin, flavanoids, anthraquinone glycosides [61].



Fig. : 23. Shikakai fruits

• **Rose oil**

Because of its wide variety of plant habitat and floral properties, roses are commonly regarded as the world's favorite flora. For oil production, there are mainly four rose species. Those are Mill., R., R. L., R. Gaul, L. the master of moschata. And R. And R. Pinhole L. Most of the Rose Oil and Rose Water medicinal results. Rose oil calms the mind and cures grief, sadness, nervous stress and pain. The wound and skin health can also be cured [62].



Fig. : 24. Rose flowers

• **Eucalyptus oil**

About 700 species of eucalyptus, at least 500 of which produce essential oil, exist in the world. It is produced by steam distillation from the leaves of Eucalyptus species (*E. cinerea* F. Muell., *E. baueriana* F. Muell., *E. smithii* R. T. Baker, *E. bridgesiana* R. T. Baker, *E. microtheca* F. Muell., *E. foecunda* Schau., *E. pulverulenta* Sims, *E. propinqua* Deane and Maiden, *E. erythrocorys* F. Muell.) etc. The inhalants, cough syrups, ointments, toothpastes, and pharmaceuticals are widely used in preparing liniments and other products. Eucalyptus monographs of the European pharmacopeia include: 1.8-cineols (eucalyptol; no less than 70%), limonene (4%-12%), α -pinene (2%-8%), α -phellandrene (less than 1.5%), β -pinene (not less than 0.5%), camphor (less than 0.1%) [63].



Fig. : 25. Eucalyptus leaves & oil

• **Coconut Oil**

This oil is extracted from the coconut- *Cocos nucifera* family Palmae, a dry solid component of the endosperm. In winter the unctuous mass is white or pearl white and in summer it is colorless.



Fig. : 26 Coconut fruits/ seeds & oil

• **Almond Oil**

Almond oil from *Prunus dulcis* is produced. This is very nutritious, which makes hair smooth which strong. The almond oil is also an outstanding purifier.



Fig. : 27. Almond fruits & oil

• **Arachis Oil**

This is also a fixed oil obtained from the seeds of the *Arachis hypogea* belonging to the family Leguminosae. The oil is pale yellow in colour, with a faint nutty odour. It is used in the preparation of hair oils and "Brilliantines".



Fig : 28. Arachis fruits & oil

• **Castor Oil**

This oil is obtained from the seeds of *Ricinus communis* belonging to the family, Euphorbiaceae. It is used as an emollient, in the preparation of lipstick, hair oils, creams and lotions.



Fig : 29. Castor fruits & oil

• **Citronella Oil**

It is one of the essential oils derived from the leaves and stalks of various species of the *Cardioperidaceae* family *Cymbopogon*. Crisp, rich citrus or lemon flavour, the oil is used in deodorants and body sprays, even though it can cause skin irritation in very small quantities, because its large doses. This is also ideal for a soothing bath with the bath water.



Fig : 30. Citronella leaves & oil

• **Olive Oil**

This oil is a fixed oil from *Olea europaea*, oleaceae of the tree. Triolein, tripalmitin, trilinolein, depression, monosterate, triarachidine, squalene, β -sitosterol and tocopherol are the primary constituents. It is used in cosmetics such as lotions, shampoos etc. as a skin and hair conditioner. It enhances the penetration of powerful fatty acids.



Fig : 31. Olive fruits & Oil

• **Sunflower Oil**

It is the non-volatile oil extracted from sunflower seeds obtained from *Helianthus annuus*, family Asteraceae. Sunflower oil contains lecithin, tocopherols, carotenoids and waxes. It has soothing properties and is considered non-comedogenic [64]. Clear but inexpensive butter, well tried and tested in different emulsions for face and body items for decades[65].



Fig : 32. Sunflower seeds & oil

• **Light Liquid Paraffin**

It is made up of a mixture of oily liquid hydrocarbons that has no color or smell. This has a stronger dissemination and is used in the production of bathroom oils, hair oils, lotions and creams.

• **Heavy Liquid Paraffin**

It consists of a mixture of hydrocarbons in the form of an oily liquid without colours. It is used in creams, lotions and hair oil because of its calming effect on the skin.

- **Waxes**

They are the esters resulting from the condensation of high molecular straight chain fatty acids with high molecular straight chain mono-hydric alcohol of the methanol series. They are used in cosmetics as a base, along with oils and fats. Examples: lipstick.



Fig : 33. Waxes

- **Beeswax**

It is a purified wax separated from the honeycomb of bees, *Apis mellifera* which belong to the family, Apidae. 70 percent ester myricyl palmitate consists of beeswax. Beeswax helps in the incorporation of water to form an emulsion [66].



Fig : 34. beeswax

ANTIOXIDANTS

Antioxidants either synthetic or natural can be effective in preventing free radical formation by scavenging them or promoting their decomposition and suppressing such disorders [65]. Currently, there is a growing interest toward natural antioxidants of herbal resources [66].

- **Tamarind**

Tamarind or *Tamarindus indica* L. of the Fabaceae, subfamily Caesalpinioideae consists of amino acids, fatty acids and minerals of tamarind plant parts. The most distinguished characteristic of tamarind is its sweet acidic taste due to tartaric acid. In addition to being a source of high intakes of sugar, tamarind frucht is also an excellent vitamin B source, and contains minerals with a high phenolic content, and thus can be an important food source [67 -71].



Fig : 35. Tamarind

- **Vitamin C**

Vitamin C is necessary for the hydroxylation of proline, procollagen, and lysine. Vitamin C improves the changes caused by photo damage. Vitamin C was used to promote collagen repair effectively and to prevent other photo-aging effects on the skin.



Fig : 36. Source of vitamin C

- **Vitamin E**

(Alpha-tocopherol) is the major lipophilic antioxidant in plasma membranes and tissues. The term E refers to 30 molecules (4 tocopherols and 4 tocotrienols) which all have vitamin E activity. Two three molecules are naturally produced. Its major role is generally considered to be the arrest of chain propagation and lipid peroxidation by scavenging lipid peroxy radicals, hence protecting the cell membrane from destruction [5].

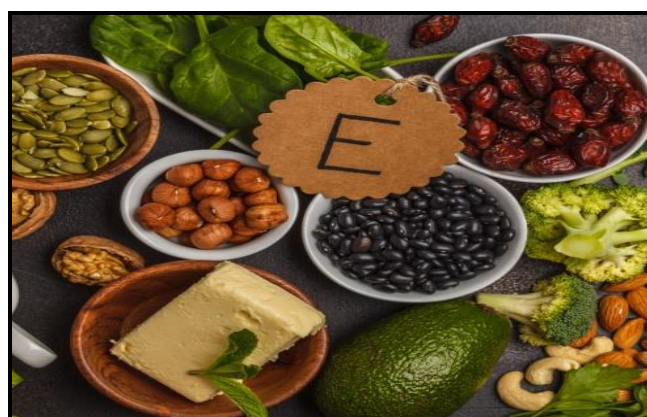


Fig : 37. Source of vitamin E

Table 5: List of some plants with used part , for herbal cosmetics [72 , 73].

Common Name	Botanical Name	Parts used
Aam	<i>Mangifera indica L.</i>	Leaf
Aaraa	<i>Juniperus communis L.</i>	Whole plant
Akashbel	<i>Cuscuta reflexa Roxb.</i>	Whole plant
Akroot	<i>Juglans regia L.</i>	Leaf and fruit
Amla	<i>Emblia officinalis Gaertn.</i>	Fruit
Anantmool	<i>Hemidesmus indicus (L.) R. Br. ex Schult.</i>	Root
Apamarg	<i>Achyranthes aspera L.</i>	Whole plant
Arnica	<i>Arnica montana L.</i>	Flower
Aswagandha	<i>Withania somnifera (L.) Dunal</i>	Whole plant
Avadago	<i>Persea americana Mill.</i>	Fruit
Babool	<i>Acacia arabica (Lam.) Willd.</i>	Bark
Babchi	<i>Psoralea corylifolia L.</i>	Seeds
Babuna	<i>Matricaria chamomilla L.</i>	Leaf
Badam	<i>Prunus amygdalus Batsch</i>	Fruit
Banaba	<i>Lagerstroemia speciosa (L.) Pers.</i>	Leaf
Banajwain	<i>Thymus serpyllum L.</i>	Whole plant
Bargad	<i>Ficus racemosa L.</i>	Aerial root
Basil	<i>Ocimum basilicum L.</i>	Whole plant
Beetroot	<i>Beta vulgaris L.</i>	Root
Behera	<i>Terminalia bellirica (Gaertn.) Roxb.</i>	Seed
Ber	<i>Ziziphus jujuba Mill.</i>	Fruit
Bile	<i>Cydonia oblonga Mill.</i>	Seed
Birch	<i>Betula pendula Roth</i>	Leaf
Brahmi	<i>Bacopa monnieri (L.) Wettst.</i>	Whole plant
Chameli	<i>Jasminum grandiflorum L.</i>	Flower
Chia	<i>Salvia hispanica L.</i>	Seed
Choti dhudhi	<i>Euphorbia thymifolia L.</i>	Whole plant
Cheretta	<i>Swertia chirayita Roxb. ex Fleming</i>	Bark
Chili Pepper	<i>Capsicum frutescens L.</i>	Fruit
Cocoa butter	<i>Theobroma cacao L.</i>	Fruit

Coffee	<i>Coffea arabica L.</i>	Beans
Coriander	<i>Coriandrum sativum L.</i>	Fruit
Cucumber	<i>Cucumis sativus L.</i>	Fruit
Dhak	<i>Butea frondosa Roxb.</i>	Leaf and seed
Daruharidra	<i>Berberis aristata DC.</i>	Bark
Egg plant	<i>Solanum melongena L.</i>	Leaf
Garlic	<i>Allium sativum L.</i>	Fruit
Ghritakumari	<i>Aloe indica Royle</i>	Leaf
Ginger	<i>Zingiber officinale Roscoe</i>	Rhizome
Grape	<i>Vitis vinifera L.</i>	Fruit
Guava	<i>Psidium guajava L.</i>	Leaf
Gulab	<i>Rosa centifolia L.</i>	Flower
Harra	<i>Terminalia chebula Retz.</i>	Seed
Henna	<i>Lawsonia inermis L.</i>	Leaf
Holy basil	<i>Ocimum basilicum L.</i>	Leaf
HulKhusa	<i>Leucas aspera (Willd.) Link</i>	Leaf
Jaiphal	<i>Myristica fragrance Houtt.</i>	Fruit
Jatamansi	<i>Nardostachys jatamansi (D.Don) DC.</i>	Rhizome
Kamala	<i>Mallotus philippensis (Lam.) Müll. Arg</i>	Flower
Khas	<i>Andropogon muricatus Retz.</i>	Root
Kamal Naal	<i>Nelumbo nucifera Gaertn.</i>	Flower
Karela	<i>Momordica charantia L.</i>	Whole plant

CONCLUSION

More than 70 % of people in India use herbal cosmetics for their wellbeing. In the current system of personal care herbal cosmetics have been marked, and in daily life there is a high demand for herbal cosmetics. Healthy teeth, shiny hair and glowing skin are significant for the good looking of the human body. Herbal cosmetics are prepared, using cosmetic ingredients to form the base in which one and another herbal ingredients are used to treat different skin ailments and for the beautification. The chemical formulation of all these cosmetic products includes addition of various natural additives like waxes, oils natural colour, natural fragrances and parts of plants like leaves, etc. The Cosmeceuticals are agents that lie elsewhere between pure cosmetics (lipstick and rouge) and pure drug (antibiotics, corticosteroids) methods. Natural beauty preparation based on corrective formulation with a cosmetic benefit or safe additive properties in synthetic product substitution. There is need to do more R and D in the field of herbal cosmetic to prove effectiveness and established herbal cosmetic in safety profile. It is needed to conduct adequate safety testing as

perexisting regulatory rule and present requirement. The ability to desire the right cosmetics for you depends on accurate ingredient knowledge, body Prakriti assessment, personal needs, customer perception about product, benchmark product. Quality control is predominantly important for the capacity and safety of herbal cosmetic products. Therefore, the quality test for herbal cosmetics must be carried out. It is assumed to be safe for longer periods of time.

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