



The Science of Natural Beauty: A Review of Herbal Cosmetics and their Benefits

Ajith Kumar.V, Dhinesh. T, L.V. Vigneshwaran, Ajith. P, Mohana Krishnan.P*

RKP College of Pharmacy, Krishnagiri, Tamilnadu, India.

ABSTRACT:

Herbal cosmetics represent beauty products from nature, created from plant extracts, giving skin along with hair benefits, plus few of any adverse effects. These specific items contain several antibacterial, anti-inflammatory, antiseptic, and moisturizing phytochemicals to combat many hair and skin issues such as aging, acne, and dryness. Compared to many man-made beauty items, plant-derived alternatives usually don't trigger allergic reactions, are truly ecologically friendly, and don't have harmful components such as parabens. However, they generally require somewhat extended treatment durations for truly discernible results. This study digs into the past changes as well as the types, along with the uses, the pros, and the cons tied to herbal makeup, naming key parts such as neem, aloe vera, turmeric, and amla. Herbal cosmetics offer benefits. They are also influential in present-day beauty routines, as more clients want all-natural products.

INTRODUCTION;

Herbal cosmetics are **cosmetic products that contain herbs in their raw or extracted form**. They are created by mixing one or more herbal substances with other cosmetic elements to treat a variety of skin conditions. The preparations contain phytochemicals from a variety of botanical sources, which influence the functions of skin and provide nutrients necessary for healthy skin or hair. The natural herbs and their products when used for their aromatic value in cosmetic preparation are termed as herbal cosmetics.

A range of qualities, including antibacterial, anti-inflammatory, antiseptic, emollient, anti-seborrheic, and anti-kerolytic action, should be present in the herbs.

Cosmetics are designed to combat acne, lessen wrinkles, and regulate oil production. Formulations such as skin protection, sunscreen, anti-acne, anti-wrinkle, and anti-aging are made with a range of natural and synthetic components to treat different kinds of skin conditions^[1]. Individuals' health, habits, regular jobs, climate, and upkeep all affect how beautiful their skin and hair are. Overexposure to heat throughout the summer dehydrates the skin, resulting in wrinkles, freckles, blemishes, pigmentation, and sunburns. The severe winter months harm the skin by causing infections, maceration, wounds, and cracks^[2]. Since the beginning of human history, beauty care products have developed continuously. Man employed shading to attract the species he needed to hunt in ancient times, around 3000 BC. He also used tones to protect himself from competitors by augmenting his body and shading his skin for protection and to instill fear in an adversary, whether he be a man or a creature^[3]. Originally associated with hunting, combat, religion, and credulity, cosmetics were later linked to medicine^[4]. Founded by Raymond Reed of the American Society of Cosmetics, "cosmeceuticals" were first introduced in 1961. He really made use of the term to illustrate dynamic, science-based beauty care goods. In 1984, Dr. Albert Kligman used the term "beauty care products" to refer to medications that have both therapeutic and restorative qualities^[5]. Cosmeceuticals are corrective medication components designed to improve the organic surface and functionality of the skin in order to promote wellbeing and engaging quality^[6].

Present Status

Today's herbalists think that using natural sources might help people develop good health. Since herbs are entire, all-natural, and pure—just as nature intended—they are regarded as food rather than medicine. The body starts to cleanse itself when taking herbs; it starts to decontaminate itself. Herbs can successfully realign the body's defenses, in contrast to highly concentrated, chemically created medications that may have several negative effects. Instead than producing instant fixes, herbs provide a way to bring the body into harmony with nature. People have been using herbs for a very long time. The following are some uses for herbs: as fragrances, as disinfectants, to flavor food in the kitchen, to ward against infections, and as medications to treat illnesses^[7].

Cosmetics:

Because the term "cosmetic" has such a broad definition and application to many bodily parts, it is challenging to define. Cosmetics are meant to be applied to the skin in the form of rubs, pours, or sprinkles in order to clean, beautify, and change appearance. By lowering the risk of skin issues, cosmetics primarily aim to enhance the appearance of the face and other body parts. It is applied to maintain or improve the health of the skin and hair. Both men and women appear more attractive, impressive, and clever when using cosmetics^[8].

Preparations of Cosmetics The cosmetics formulations are mainly divided into three categories

1. Solid
2. Semi solid
3. Liquids

The solid category includes things like face packs, masks, talcum powders, and face powders.

The semi-solid category includes things like creams, liniments, ointments, and wax base creams.

The liquid category includes products including shampoos, mouthwashes, liniments, deodorants, hair oils, moisturizers, conditioners, cleaning milk, and sprays^[9].

SafeUse:

Natural cosmetics are safer to use and more effective than traditional beauty products. Because they are hypoallergenic, dermatologists have tested and determined that they are safe to use anywhere, at any time. People don't have to be concerned about developing skin rashes or itching because they are constructed of natural materials

Less side effect:

Corrective products that are manufactured may aggravate your skin and cause rashes. They could clog pores and make the skin greasy or dry. When using home-grown beauty care products, we don't have to worry about any unfortunate side effects. The regular components ensure that there are no harmful effects and that the skin is safe to use. For example, parabens, a commonly used ingredient in cosmetics that may penetrate the skin, are absent from natural beauty care products. They are also linked to interfering with chemical ability^[11,12]. (endocrine disruption).^[10]

Advantage of Herbal Cosmetics:

- Availability of medicinal plants isn't a haul especially in developing countries like India having rich agro climatic, cultural and ethnic biodiversity.
- They do not provoke allergies & don't have negative side effects.
- They are easily incorporated within skin and hair.
- With small quantities, they are very effective as compared to synthetic cosmetics.
- Easily available in large variety & quantity.

Disadvantage of Herbal Cosmetics:

- Herbal drugs have slower effects as compare to allopathic dosage form. Also, it requires long term therapy.
- They are difficult to hide taste and odour.
- Manufacturing process are time consuming and complicated.
- No pharmacopoeia defines any specific procedure or ingredients to be used in any of herbal cosmetics.
- If an individual decides to take the herbal alternative to pharmaceuticals, he or she must be very patient.
- Herbal medicines are often self-administered. As a result, there is no dosage or warnings specified.

The Benefits of Herbs

1. Enhance physical and mental well-being
2. Strengthen the immune system
3. Detoxification

4. Aid in sleeping, digestion
5. Increase stamina and reduce fatigue
6. Improves brain function and memory
7. Reduce nausea
8. Has anti-inflammatory effects
9. Helps fight infections
10. Helps reduce appetite
11. Have anti-cancer properties
12. Improves blood sugar levels
13. Help prevent allergies
14. Improve heart health.

Indian Extracts for Herbal Cosmetics ^[7]:

Herbs have an important function, particularly in the modern era when the negative consequences of overmedication and food processing have reached frightening dimensions. These days, they are increasingly being used in teas, meals, cosmetics, and alternative medications. The growing interest in herbs is a component of the shift in lifestyles.

This advancement is predicated on the belief that the plants have enormous potential for use as a therapeutic drug.

1. **Amla (*Embilica officinalis*):** Growing all over India, amla is the name given to the fruit of a tiny, leafy tree. This fruit is used to cure issues with the hair and scalp because of its high vitamin C content, which is derived from its seeds.
2. **Brahmi (*Bacopa monnieri*):** It can be applied to hair to make it lustrous and to cure lice and dandruff, and it can be used as a face pack to improve the complexion of the face.
3. **The Shikaka, or *Acacia cancellata*,** is a little tree that resembles a shrub that thrives in the arid, warm plains of central India. It effectively removes oil and grime from hair and aids in the removal of lice and dandruff.
4. **Sarva Roga Nivardini,** often known as neem (*Azadirachata indica*), is "the cure for all diseases." As far back as 4500 years ago, neem was emphasized as a miracle medication. Among its many health advantages are blood purification, skin infection prevention, and immunity boosting.
5. India uses **reetha powder:** It is also known as soap nut powder, as a natural body and hair cleanser.
6. **Tulsi (*Ocimum sanctum*):** In Hinduism, holy basil, also known as Tulsi in India, is widely used. It can be used as an antiviral, therapeutic herb, and to cure a variety of illnesses.
7. **Aloe vera, or Ghrithkumar:** It is used to relieve pain and it is used both internally and externally to treat hemorrhoids, as well as for sunburn, scratches, and skin or body cleansing. It helps to promote the growth of new tissue and slow the progression of sun-induced skin cancer.
8. **Fuller's Earth, or Multani Mitts:** It is the baby powder found in Mother Nature. It helps clear clogged pores, remove debris and flakes from the skin, and heal sunburn and pimple marks.

Herbal Cosmetics Used for Skin ^[13]:

The Requirements for the Basic Skincare;

1. Cleansing agent:

It aids in clearing the dirt, dead cells, and dust that clog the skin's pores. Vegetable oils such as coconut, sesame, and vegetable oil are among the popular cleansers.

2. Toners:

The toners aid in skin tightening and protect the skin from airborne toxins and other environmental contaminants such as pollution. Herbs including witch hazel, geranium, sage, lemon, and essential oils are among those utilized as toners.

3. Moisturizing:

The moisturizer aids in the skin's softness and suppleness. Those who moisturize appear healthier and are less prone to aging. Vegetable glycerine, sorbitol, rose water, jojoba oil, aloe vera, and iris are a few examples of herbal moisturizers.

These three actions are taken to shield the skin from the ongoing effects of stress, the environment, and the skin's natural cell-degradation process, regardless of the kind of skin. Consequently, to make the skin appear youthful and glowing.

- Dead skin cells are removed by exfoliation.
- Induction of new cell growth through epidermal stimulation.
- Antioxidant qualities for the repair and renewal of cells.
- Increase blood flow in capillaries.
- Restoring all skin layers by penetrating hydration and nutrients.

Applications of Herbal Products in Cosmetics: ^[14,15]

Herbs play an important role in the field of cosmetic

- **Herbal Skin Care Products:**

Lavender body powder and body soap, Silk Soaps and Care Creams.

- **Herbal Hair Care Cosmetics:**

Herbal hair care cosmetics have a several ingredient e.g *Shikakai* (*Acacia concinna*), *Henna* (*Lawsonia inermis*), *Guar Gum* (*Cyamopsis tetragonolobus*) *Amla* (*Embllica officinalis*), *Brahmi* (*Bacopa monnieri*).

- **Herbal Lip Care Cosmetics:**

Herbal Lip plumper, Herbal Lipsticks, Herbal Lip Balm and Herbal Lip Gloss.

- **Herbal Eye Care Cosmetics:**

Eye Shadow, Eye Gloss, Eye Make Up, Liquid Eye Liners

- **Herbal Creams, Lotions, Gel: Creams:**

Rich Face and Hand Cream, Aloe Moisturizing Hand

- **Herbal Oils:**

Herbal oils are effective for baldness, falling of hair, thinning of hair, in treating irritation & Itching of scalp vii) Herbal Perfumes & fragrances: Citrus Fragrance: The light, fresh character of citrus notes (bergamot, orange, lemon, petitgrain, mandarin etc.) is often combined with more feminine scents (flowers, fruits and chypre).

Table 1: Herbal skin care products:

Products	Brand Name
Face pack	Amazine Herbal Scars Face Pack
Massage gel	Amazine herbal fruit massage gel
Gel	Dr.Jain's forest cucumber
Face wash	Combi neem Face wash
Cream	Vicco turmeric cream
Face scrub	Aloe indica face scrub
Cold cream	Gayatri papaya & strawberry cold cream

Skin care: ^[17-19]

Dry skin treatment:

Coconut oil:

It is made by crushing the dried kernel of copra, which contains 60–65% oil. Glycerides of lower chain fatty acids are abundant in coconut oil. The fruit or seed of the Palmae coconut tree is the source of coconut oil. Copra oil, which has a freezing point of 24 to 25°C (75 to 76 degrees Fahrenheit), is frequently used readily in both liquid and solid forms and is typically used in baking and cooking. Coconut oil works wonders as a skin softener and moisturizer.



Figure 1: coconut oil



Figure2: Sunflower oil

Sunflower oil:

It is the common sunflower composite's non-volatile oil that is derived from sunflower seeds. Lecithin, carotenoids, tocopherols, and waxes are the constituents of sunflower oil. It is thought to be non-comedogenic and provides calming effects. A straightforward yet reasonably priced oil that has been tried for centuries in a wide range of emulsions made for body and face care products.

Aloe Vera:



Figure3: Aloe Vera

Originally from southern Africa, this plant features red or yellow blossoms together with fleshy, spiny-toothed leaves. Because it softens, hydrates, and heals skin, it is a common element in cosmetics. To extract the calming gel, simply cut one of the aloe vera leaves. Aloe vera includes vitamins A, C, E, B, choline, B12, folic acid, and amino acids including leucine, isoleucine, and saponin glycosides that have cleaning properties in addition to antioxidant activity ^[16].

Anti-aging treatment: ^[20]

Carrot:

Daucus carota, a plant in the Apiaceae family, is the source of this vegetable. Carrot seed oil has anti-aging, renewing, and rejuvenating properties. because it encourages the growth of new cells and lessens wrinkles. It serves as the skin's natural toner and rejuvenator.



Figure 4: Carrot



Figure 5: Ginkgo

Ginkgo: ^[21]

Ginkgo biloba is a member of the Ginkgoaceae family and is derived from the ginkgo tree. Its most well-known use is as a circulatory tonic, namely for fortifying the minuscule capillaries that supply all of the organs, but particularly the brain. As we age, the capillaries become more flexible, which increases the amount of oxygen that reaches the brain and eyes (protecting against degenerative eye illnesses like macular degeneration).



Figure 6: Rhodiola rosea

Rhodiola rosea:

Rhodiola rosea is also referred to as lignum rhodium, orpin rose, arctic root, golden root, roseroot, Aaron's rod, and king's crown. *R. rosea* was utilized in traditional folk medicine to cure weariness, depression, anemia, impotence, gastrointestinal problems, infections, and abnormalities of the neurological system, as well as to improve physical endurance, work productivity, and resistance to high altitude sickness ^[22]. Phenolic chemicals, which are abundant in *R. rosea*, are well-known for their potent antioxidant qualities.



Figure 7: Neem

Neem:

It has been discovered that the herb *Azadirachta indica*, which belongs to the Meliaceae family, possesses blood-purifying and beauty-enhancing qualities. Neem is a popular remedy for dandruff because it contains antifungal, antibacterial, analgesic, and anti-dandruff components ^[23].

Skin Protection: ^[29-31]



Figure 8: Green tea

Green tea:

Asia has long been home to the tea plant (*Camellia sinensis*) cultivation. Tea leaves include four main polyphenolic catechins: (2)-epicatechin (EC), EGC, (2)-EC 3-gallate, and EGCG, which is the most prevalent. It was discovered that green tea extracts or a single green tea polyphenol (GTPP), particularly epigallocatechin (EGC) 3-gallate (EGCG), inhibited photocarcinogenesis (caused by UVB) and carcinogenesis (e.g., two-stage induced methylbenz(a)anthracene [DMBA] by and chemical 7,12-di 12-O tetradecanoylphorbol 13-acetate.

Calendula:



Figure 9: Calendula

Calendula officinalis exhibits exceptional anti-inflammatory, antioxidant, and wound-healing properties. α -thujene, α -pinene, 1,8-cineole, dihydrotanetone, and T-muurolol are among the significant constituents of calendula essential oil, according to a prior study.

Turmeric:

Several Hindu holidays involve the usage of turmeric. In Hindu weddings in particular, brides would apply turmeric to their bodies to give them a radiant appearance. Additionally, newborns applied turmeric on their foreheads for good fortune. Women have always used turmeric on their cheeks to create a natural, golden glow.



Figure 10: Turmeric

Herbal Tooth Preparations ^[24]:

help prevent and manage dental conditions, such as mouthwash, dentifrices, herbal tooth powder, and paste.

Dentifrices:

The basic requirements of a dentifrice are-

1. To get rid of stains, grime, and food debris.
2. A clean, fresh sensation ought to exit the mouth.

3. It should be safe, enjoyable, and easy to use.

Tooth paste:

To minimally harm a hard surface by removing adhering soil particles. It is used to encourage good oral hygiene and acts as an abrasive to assist remove food particles and dental plaque from teeth, preventing gum disease and tooth decay.

Mouthwash:

A product that improve oral hygiene could be mouthwash or mouth rinse. It acts as an antiseptic to eradicate bacteria that may reside on your tongue and in the spaces between your teeth. Mouthwash is used by some to prevent cavities, while others use it to combat foul breath.

Herbal Toothpastes:

1. Divya Dant Kanti Tooth Paste:
2. Vajradanti Extract
3. Pilu Extract
4. Babool Extract
5. Akarkara Extract (Anacyclus Pyrethrum)
6. Majuphal Extract (Quercus infectoria)
7. Kapur Extract (Cinnamomum camphora)
8. Vidang Extract
9. Nimba or Neem Extract
10. Lavang Extract

Herbal as an antioxidant:

By scavenging or encouraging the breakdown of free radicals, antioxidants, whether synthetic or natural, can effectively prevent the genesis of many illnesses^[25]. Natural antioxidants found in herbal resources are currently gaining popularity^[26]. Numerous healthy substances known as antioxidants naturally regulate the production of free radicals. Herbs without any special nutritional value can also be a significant source of antioxidants, in addition to fruits and vegetables. The leaves of black and green tea (*Camellia sinensis*) are the most often consumed plant on a daily basis worldwide and are a significant source of antioxidants that may protect against disease.

Vitamin C^[27]:

The hydroxylation of proline, procollagen, and lysine depends on vitamin C. Vitamin C repairs the harm that photographs do. Many of the effects of photoaging on skin have been eliminated by using vitamin C to promote collagen repair.

vitami E^[28]:

Alpha-tocopherol, or vitamin E, is the main lipophilic antioxidant found in tissues and plasma membranes. Thirty molecules—four tocopherols and four tocotrienols—that all have vitamin E action are together referred to as vitamin E.

By scavenging lipid peroxy radicals, it is usually thought to play a significant role in halting chain propagation and lipid peroxidation, so preventing the cell membrane from being destroyed.

CONCLUSION:

Due to their natural makeup, safety, and usefulness, plant-based beauty goods are turning into a sound option to man-made beauty goods. Common use of herbal extracts in skincare and haircare has shown many benefits, including anti-aging, anti-inflammatory, and moisturizing properties. Herbal cosmetics have benefits. However, they also present certain challenges like comparatively slower effects and an absence of standardized formulations. Yet, even greater interest in truly green and natural goods has sharply pushed more study and fresh invention in the area. Herbal cosmetics, in addition to progress within herbal formulations along with quality control, have the potential for transforming the beauty industry via provision of safe, sustainable, and effective skincare solutions.

REFERENCE:

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1. Laxmi S Joshi and Harshal A Pawar, *Cosmetics and Cosmeceuticals*, 2015, 1-8.
 2. Kapoor V.p, *Natural product Resources*, 2005, 306-314.
 3. Saudagar R. B. and Sisodiya M. H. Review on Herbal Cosmetics. *World Journal of Pharmaceutical Research*, Vol 7, Issue 7, 2018.

4. Draelos ZD, Botanical antioxidants, *Cosmetic Dermatol*, 2003; 16(10): 41-42.
5. Rohit Kumar Bijauliya, Shashi Alok, Mayank Kumar, Dilip Kumar Chanchal and Shrishti Yadav. A Comprehensive Review on Herbal Cosmetics, *International Journal of Pharmaceutical Sciences and Research, IJPSR*, 2017; Vol. 8(12): 4930-4949.
6. Sharma HD, Paramesh R, Trends in aging and skin care: Ayurvedic concepts. *Journal of Ayurveda and Integrative Medicine*, 2010; 1: 110-113.
7. Gediya SK, Mistry RB, Patel UK, Blessy M, Jain HN. Herbal plants: used as cosmetics. *J. Nat Prod Plant Resour*. 2011; 1:24-32.
8. Dr. Sanjay Kholiya, Dr. Jyoti Gangwal, Dr. Rajendra Prasad Sharma. Herbal Cosmetics for Skin and Hair Care in Ayurveda, *International Journal of Trend in Scientific Research and Development (IJTSRD)*, Volume 4 Issue 1, December 2019, 1001-1005
9. VP Kapoor. Herbal Cosmetics for Skin and Hair care, National Botanical Research Institute, Lucknow, vol4(4) July-August-2005
10. Suzuki D: The "Dirty Dozen" ingredients investigated in the David Suzuki Foundation Survey of chemicals Backgrounder, 2010; 1-15.
11. Prajakta N. Dongare, Ravindra L. Bakal, Prashant V. Ajmire, Prerna A. Patinge, Manisha P. More, Jagdish V. Manwar. An Overview on Herbal Cosmetics and Cosmeceuticals, *Int. J. Pharm. Sci. Rev. Res.*, 68(1), May - June 2021; Article No. 13, Pages: 75-78.
12. U.S. Food and Drug Administration, "Parabens".
13. Dixit SN, Srivastava HS, Tripathi RD, Lawsons, The antifungal antibiotic from leaves of *Lawsonia inermis* and some aspects of its mode of action. *Indian phytopathol*, 1980; 31: 131-133.
14. Basmatekar G, Jais N, Daud F. Aloe vera: A valuable multifunctional cosmetic ingredient *Int. J. Med Arom Plants*. 2011; 1:338-341.
15. Brown RP, Gerbarg PL, Ramazanov Z. *Rhodiola rosea*: A phytomedicine overview. *Herbal Gram. The Journal of the American Botanical Council*, 2002; 56:40-52.
16. Maeda K, Fukuda M. Arbutin: mechanism of its depigmenting action in human melanocyte culture. *J. Pharmacol. Exp. Ther*, 1996; 276:765-769.
17. Anand N, Aquicio JM, Anand A, Antifungal properties of Neem (*Azadirachta indica*) leaves extract to treat Hair Dandruff. *E-International Scientific Research Journal*, 2010; 2: 244-252.
18. Adhami VM, Mukhtar H, Ahmad N, Farrukh A, Yukihiro H, Tea polyphenols as cancer chemopreventive agents, *T cell Biochem suppl*, 1995; 22: 169-180.
19. Katiyar SK, Elmets CA, Green tea polyphenols skin protection and antioxidant (Review). *Int J oncol*, 2001; 18: 1307-1313.
20. Mukhtar H, Katiyar SK, Agarwal R, Green tea and skin anticarcinogenic effects. *J Invest Dermatol*, 1994; 102: 3-7.
21. Fujiyama YF, Effects of sesamin and curcumin on delta 5 desaturation and chain elongation of polyunsaturated fatty acid metabolism in primary cultured fatty acid metabolism in primary cultured rat hepatocytes, *J Nutr sci vitaminol (Tokyo)*, 1992; 38: 353-363.
22. Shimogaki H, Tanaka Y, Tamai H, Masuda M. In vitro and in vivo evaluation of ellagic acid on melanogenesis inhibition. *Int J Cosmet Sci*, 2000; 22(4):291-303.
23. Shuster S, Black MM, Mcvitie E. The influence of age and sex on skin thickness, skin collagen and density, *Br. J. Dermatol*. 1975; 93:639-643.
24. Sefidkon F, Assareh MH, Abravesh Z, Barzandeh MM, Chemical composition of the Essential oils of four cultivated Eucalyptus species in Iran as medicinal plants [*E. microtheca*, *E. spatulata*, *E. largiflorens* and *E. torquata*]. *Iranian Journal of Pharmaceutical Research*, 2007; 6: 135-140.
25. Tournas JA, Lin FH, Burch JA, et al. Ubiquinone, idebenone, and kinetin provide ineffective photoprotection to skin when compared to a topical antioxidant combination of vitamins C and E with ferulic acid. *J Invest Dermatol*. 2006; 126:1185-1187.
26. Craig WJ. Health-promoting properties of common herbs. *Am J Clin Nutr*. 1999; 70:491S-499S.
27. Bonte F, Dumas M, Maybeck A, Cosmetic or dermatologic composition containing at least one saponin of the ginsenoside type, and its applications particularly to hair care, March 31st, 1994; WO1994006402 A2.
28. Kadam VS, Chintale AG, Deshmukh KP, Nalwad DN, Cosmeceuticals an emerging concept: A comprehensive Review. *International journal of research in pharmacy and chemistry*, 2013; 3: 308-316.
29. Chaudhari KR, Turmeric, haldi or haridra, in eye diseases. *Antiseptic*, 1950; 47: 67-68.
30. Nadkarni KM, *Curcuma longa* in India material, Popular Prakashan, 1976; 414-418.
31. Saikia AP, Ryakala VK, Sharma P, Goswami P, Bora U, Ethnobotany of medicinal plants used by Assamese people for various skin ailments and cosmetics, *J Ethnopharmacol*, 2006; 149-157.