

A REVIEW ON HERBAL COSMETICS USED IN SKIN AND HAIR CARE

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ABSTRACT

Cosmetics are developed to reduce wrinkles, fight acne and to control oil secretion. For various types of skin ailments formulations like skin protective, sunscreen, anti-acne, anti-wrinkle and anti-aging are designed using varieties of materials, either natural or synthetic. The skin and hair beauty of individuals depends on the health, habits, routine job, climatic conditions and maintenance. The skin due to excessive exposure to heat will dehydrate during summer and causes wrinkle, freckles, blemishes, pigmentation and sunburns. The extreme winter cause damages to the skin in the form of cracks, cuts, maceration and infections. 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 focusing on the growing segment with a vast scope of manifold expansion in coming years. Natural substances are extensively used in the preparations of cosmetics, and there is an ever growing interest in the understanding of their mechanisms of action, in order to achieve a more sophisticated targeted design of skin care products. The demand of herbal medicines is increasing rapidly due to their skin friendliness and lack of side effects. The best thing of the herbal cosmetics is that it is purely made by the herbs and shrubs and thus is side-effects free.

Keywords: Herbal drugs, Cosmetic, Natural, Skin, Hair

I. INTRODUCTION

Cosmetics are the substances is 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 cosmetic was derived from the Greek word "kosm tikos" meaning having the power, arrange, skill in decoratin. The origin of cosmetics was associated with hunting, fighting, religion and superstition and later associated with medicine. Various synthetic compounds, chemicals, dye are proved to cause various skin diseases having numerous side effects. Thus we are using herbal cosmetics as much as possible. The basic idea of skin care cosmetic lies deep in the, Ayurveda and unani and Homeopathic system of medicine. The herbs should have variety of properties like anti-oxidant, anti-inflammatory, antiseptic, emollient, anti-seborrathic, anti-kerolytic activity and anti-bacterial etc. Cosmetics are developed to reduce wrinkles, fight acne and to control oil secretion. For various types of skin ailments formulations like skin protective, sunscreen, anti-acne, anti-wrinkle and anti-aging are designed using varieties of materials, either natural or synthetic. The skin and hair beauty of individuals depends on the health, habits, routine job, climatic conditions and maintenance. The skin due to excessive exposure to heat will dehydrate during summer and causes wrinkle, freckles, blemishes, pigmentation and sunburns. The extreme winter cause damages to the skin in the form of cracks, cuts, maceration and infections. Cosmetics are an extremely various and diversified set of product including creams, powders, perfumes, lotions, washing products, and the wide sector of decorative cosmetics or makeup. Natural substances are extensively used in the preparations of cosmetics, and there is an ever growing interest in the understanding of their mechanisms of action, in order to achieve a more sophisticated targeted design of skin care products. The demand of herbal medicines is increasing rapidly due to their skin friendliness and lack of side effects. The best thing of the herbal cosmetics is that it is purely made by the herbs and shrubs and thus is side-effects free. The natural content in the herbs does not have any side effects on the human body instead provide the body with nutrients and other useful minerals. Compared to other beauty products, natural cosmetics are safe to use. 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.

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. 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. Many of these practices were related with the sea (Sanskrit: Rutas) and the normal rituals of life (Sanskrit Dinacharya). Cosmetics not only upgrade personality but also associated with merit or Punya, longevity or Aayush, good health or Aarogyam and happiness or Anandam. Modern day cosmetics have also been developed with natural or synthetic constituents to fight UV-rays, aging wrinkles, acne and oil secretion.

Cosmetic types:-

Simply cosmetics are substances of varied applications to care human body. They are applied by rubbing, pouring, sprinkling or spraying on any part of human body. Depending on the nature cosmetics are of herbal or synthetic types. Herbal cosmetics have natural origin. On the other hand synthetic cosmetics are made from chemical reactions using natural resources in the factories. Majority of the brands in the market synthetic products as cosmetics.

II. ADVANTAGES

Advantages of Herbal Cosmetic on Traditional Cosmetics:-

1. They do not provoke allergic reactions and do not have any negative side effects.
2. They are easily incorporated with skin and hair.
3. These are very effective than other cosmetics with small quantity.
4. Extract form of the plants decreases the bulk properties of the cosmetics and gives appropriate pharmacological effects.
5. Easy to available and found in large of variety of plants.
6. They have more stability, purity, efficacy, with their herbal constituents.
7. Easy to manufacture.
8. The storage and handling of herbal cosmetics is easier and for a longer period.

Advantages of Herbal Cosmetics over Synthetic:

Herbal cosmetics are the modern trend in the field of beauty and fashion. These agents are gaining popularity as nowadays most women prefer natural products over chemicals for their personal care to enhance their beauty as these products supply nutrients to the body and enhance health and provide satisfaction. Because they are free of synthetic chemicals and have relatively few side effects compared to synthetic cosmetics.

Following are some of the advantages of using natural cosmetics which make them a better choice over the synthetic ones

Natural products: The name itself suggests that herbal cosmetics are natural and free from all the harmful synthetic chemicals which otherwise may prove to be toxic to the skin. Instead of traditional synthetic products different plant parts and plant extracts are used in these products, e.g. aloe-vera gel and coconut oil. They also consist of natural nutrients like Vitamin E that keeps skin healthy, glowing and beautiful. For example, Aloe vera is a herbal plant species belonging to Liliaceae family and is naturally and easily available. An increase in the number of consumers concerned about ingredients such as synthetic chemicals, mineral oils, demand more natural products free of harmful chemicals and with an emphasis on the properties of botanicals.

Safe to use: Compared to other beauty products, natural cosmetics are safe to use. They are hypo-allergenic and have been tested and proven by dermatologists to be safe to use anytime, anywhere. Since they are made from natural ingredients, people do not need to worry about skin rashes or itchy skin. For example; BHA (Butylated Hydroxyanisole) and BHT (Butylated Hydroxytoluene) are closely related synthetic antioxidants and are used as preservatives in lipsticks and moisturizers. BHA and BHT can induce allergic reactions in the skin. The International Agency for Research on Cancer classifies BHA as a possible human carcinogen. Herbal cosmetics contain natural antioxidants like vitamin C.

Compatible with all skin types: Natural cosmetics are suitable for all skin types. No matter if you are dark or fair, you will find natural cosmetics like foundation, eye shadow, and lipstick that are suitable regardless of your skin tone. Women with oily or sensitive skin can also use these and should never worry about their skin condition worsening. Coal tar-derived dyes are widely used in cosmetics, with coal tar being recognized as a human carcinogen and the main concern with individual coal tar being a color (whether produced from coal tar or synthetically) is that they can cause cancer. But natural dyes derived from herbs are safer.

Wide selection to choose from: Natural cosmetics may still be a new type in the beauty industry, but they already offer a crazy variety of beauty products to choose from. One will find a variety of foundations, eye shadows, lipsticks, blushes, mascaras, concealers and much more that are all naturally formulated. Also, one will find locally made natural cosmetics or cosmetics made by renowned designers from all over the world. There exist a large variety of herbal extracts, to name a few Andrographis Paniculata (Kalmegh), Asparagus Racemosus (Shatawari), Boswellia Serrata (SalaiGuggal), Asphalt (Shilajit) etc

Fits your budget:- Natural cosmetics are not that expensive. In fact, some of these products are more affordable than synthetic products. They are offered at discounted prices and are sold at a cheap price during the sale. One just needs to do enough surveys to find great deals. 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.

Not tested on animals: Some cosmetics are initially tested on animals to ensure they are safe and effective for humans. However, there is no need to test natural cosmetics on animals. These natural formulations are tested by experts in laboratories using state of the art equipment with no animals involved

No side effects:- Synthetic beauty products can irritate your skin and cause pimples. They can clog your pores and make your skin dry or oily. With natural cosmetics, one need not worry about these. The natural ingredients used are assured of no side effects; anyone 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. and are suspected of interfering with hormone function (endocrine disruption).

III. HERBAL EXCIPIENTS

Pharmaceutical excipients are defined as a non-active ingredient which is used with therapeutically active compound to formulate the pharmaceutical substance. These affect the quality and efficacy of the drug more & more performance & functionally. Excipients are defined as 'the substance used as a medium for giving a medicament. The specific application of natural polysaccharide polymers in pharmaceutical formulations include to aid in the processing of the drug delivery system during its manufacture, protect, support or enhance stability, bioavailability or patient acceptability, assist in product identification, or enhance any other attribute of the overall safety, effectiveness or delivery of the drug during storage or use. Several pharmaceutical excipients of plant origin, like starch, agar, alginates, carrageenan, guar gum, xanthan gum, gelatin, pectin, acacia, tragacanth, and cellulose find applications in the pharmaceutical industry as binding agents, disintegrates, sustaining agents, protective's, colloids, thickening agents, gelling agents, bases in suppositories, stabilizers, and coating materials.

Classification of herbal excipient:

Classification according to their application and function in the drug

- Colorants
- Sweeteners
- Binder
- Diluents
- Lubricants
- Colidants
- Disintegrants
- Polishing film-forming & coating agent

- Plasticizers
- Coloring agent
- Suspending agent,
- Preservatives,
- Antioxidants etc.

Colorants:

Colorant/ color additive is a substance that is added or applied in order to change the Colour of a material or surface. Colorants can be used for many purposes including printing, painting, and for Colouring many types of materials such as foods and plastics. Colorants work by absorbing varying amounts of light at different wavelengths (or frequencies) of its spectrum, transmitting (if translucent) or reflecting the remaining light in straight lines or scattered. Natural dyes obtained from plants Berry, flower, bark, leaf, seed etc. (e.g. Catechu, Indigofera, Myrobalan and Pomegranate).

- Natural dyes obtained from insects - Cochineal and lac.
- Natural dyes obtained from animal - Mollusk, murex snail, cuttlefish and shellfish.

Natural dyes obtained from mineral-Clay, ochre and malachite.

Sweeteners: A sugar substitute is a food additive that provides a sweet taste like that of sugar while containing significantly less food energy than sugar-based sweeteners, making it a zero-calorie or low-calorie sweetener. Artificial sweeteners may be derived through manufacturing of plant extracts or processed by chemical synthesis. Sugar alcohols such as erythritol, xylitol, and sorbitol are derived from sugars. In 2017, sucralose was the most common sugar substitute used in the manufacture of foods and beverages. Steviol glycosides are a gaggle of extremely sweet diterpene glycosides contained within the leaves of stevia. Mogrosides, extracted from monk fruit are a gaggle of cucurbitane-type triterpenoid glycosides. Glycyrrhizin is an oleanane-type triterpenoid organic compound derived from the underground elements of Glycyrrhiza plant. Dates are wonderful sweeteners loaded with K. copper, iron, manganese, metallic element and pyridoxal. The syrup is an excellent sweetener enriched in manganese, Calcium, Potassium, and Zn.

Binders: Binder excipients are formulated to act as an adhesive to literally "bind together" powders, granules and other dry ingredients to impart to the product the necessary mechanical strength. They can also give volume to low active dose tablets. Commonly used in wet granulation, binders are added to create a more effective and predictable granule formation. Binders are classified according to their application. For example, solution binders are dissolved in a solvent, such as gelatin, cellulose, cellulose derivatives, polyvinylpyrrolidone, starch, sucrose and polyethylene glycol.

Diluents: Diluents act as fillers in pharmaceutical tablets to increase weight and improve content uniformity. Natural diluents include starches, hydrolyzed starches, and partially pre-gelatinized starches. Common diluents include anhydrous lactose, lactose monohydrate, and sugar alcohols such as sorbitol, xylitol and mannitol. Diluents provide better tablet properties such as improved cohesion or to promote flow. Mannitol is one of the costliest diluents, however, it is still often used due to the sensation it provides when it is used in chewable tablets. Diluents must be non-toxic, commercially available in acceptable grade, physiologically inert, and physically and chemically stable by themselves as well as in combination with active pharmaceutical ingredients (APL).

Viscosity builders: Viscosity modifiers are designed to change the thickness or texture of pharmaceutical ingredients. Viscosity modifiers can include such products as thickeners, texturizers, gelation agents and stiffening agents. Many viscosity modifiers can be used to convert liquids to gels, pastes or powders to aid formulators in creating the ideal product for end users. A viscosity modifier can decrease the thickness of a liquid to improve pour ability and ultimately make it more palatable. Various thickeners are found in nature or are derivatives of natural thickeners. These ingredients are polymers that absorb water to expand and increase viscosity. Polyose derivatives like hydroxyethylcellulose are often employed in products like shampoo or body washes. Gum is another example of a naturally derived thickener. Others embrace algarroba bean gum, xanthan gum, and gelatin. Plants and different gums are employed in sensible applications primarily to thicken or gel

binary compound systems and to regulate water. They will conjointly operate as adhesives, foam stabilizers and impart different specific properties.

Disintegrants: Disintegrants are added to oral solid dosage forms to aid in their de-aggregation. Disintegrants are formulated to cause a rapid break-up of solids dosage forms when they come into contact with moisture. Disintegration is typically viewed as the first step in the dissolution process. **Examples:** of Disintegrants include Crosslinked polymers, including crosslinked polyvinylpyrrolidone (crospovidone), crosslinked sodium carboxymethyl cellulose (croscarmellose sodium), and the modified starch sodium starch glycolate. Some of the natural

1. *Lepidus sativum* :*Lepidium sativum* (family-Cruciferae) known as asaliyo and widely used as herbal medicine and pharmaceutical excipient as disintegrating agent,

2. *Isapghula Husk* (*Plantago ovata*)

The seeds of *Plantago ovata* were soaked in distilled water for 48 hrs and then boiled for few minutes for complete release of mucilage into water.

Flavors & perfumes : Since primeval times Flavors and Fragrances has been an element of our life. We have been making it a part of life. By different means we all utilize perfumery and flavor materials, in our everyday life. Fragrances have a key part in religious ceremonies as it was considered to possess strengths to cure and protect from evil. We in our routine life starting from morning till night make different uses of products for personal care and cleanliness which have perfumes. Even consumables like confectionary contain some type of perfume or flavors. Most fragrance comes naturally from many plants. This smell is known as aroma which is a Latin word and those florals which have this aroma are known as aromatic plants. These aromas are extracted from some odoriferous material called essential oils. There is no dearth of aromatic plants in India. The country is famous for its rich endowment with aromatic plant. In fact the Vedic literature one can find many references of Ayurveda Gandhshastra the science of odor which deals with the cosmetics and fragrances.

Flavoring materials are received from a number of sources, and mostly from plants such as from flower, leaf, stem or bark. To be employed in food merchandise, the materials are unit typically extracted from the material to produce an isolate that is simply the flavor. These Flavouring agents have good importance within the business of medication, particularly in camouflaging with the medicines by their indispensable flavors. Thus, they are additionally referred to as "masking agents" or "bitter blockers". The principal flavors employed in the dental merchandise area unit peppermint, spearmint, and wintergreen changed with different essential oils of anise, clove, caraway, pimento, eucalyptus and citrus fruits, menthol, nutmeg, thyme or cinnamon.

Classification is based on source :-

- Plant origin: Shrubs/tree exudates: gum arabic, gum ghatti, gum karaya, gum tragacanth, and khaya and albiziagums.
- Seed gums: guar gum, locust bean gum, starch, amylose, and cellulose;
- Extracts: pectin, larchgum;
- Tuber and roots: potato starch;
- Animal origin: chitin and chitosan, chondroitin sulfate, and hyaluronic acid.

❖ **Herbs and their uses:**

1) **Brahmi:**

Uses: Enhance memory, Anxiety

2) **Dhaniya:**

Uses: Useful in Indigestion, Flatulence, Controls Spasmodic Pain

3) **Kalmegh:**

Uses: Indigestion, Acne, Diarrhea

Classification of Herbal Cosmetic

Skin Care	Hair Care	Oral Hygiene Product
Cream	Shampoo	Dentifrices
Skin protective and hand cream	Conditioners	Mouth washes
Foundation Cream	Hair dressing	Tooth paste
Cosmetics Lotions	Fixatives/Hair spray	Cosmetic for teeth and mouth washes
Hand Lotion	Bleaches	General cosmetics
Skin toing Lotion	Oily scalp hair tonic	Tooth powder
Bleaching	Hair preparation	
After Shaving Lotion	Hair removal wax	
Deodorants	Gel	
Sunscreen	Spray	

Table no. 1: Herbal cosmetic

❖ **Raw Materials use in skin care :-**

1.Coconut oil:-

It is produced by crushing copra, the dried kernel, which contains about 60-65% of the oil. Coconut oil contains high amounts of glycerides of lower chain fatty acids. Coconut oil is obtained 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.



Fig.no1: Coconut oil

2. Sunflower oil:-

It is the non-volatile oil extracted from sunflower seeds obtained from *Helianthus annuus*, belonging to the Family *Asteraceae*. Sunflower oil contains lecithin, tocopherols, carotenoids and waxes. It is suspected of interfering with hormone function (endocrine disruption), carotenoids and waxes. It has smoothing properties and is considered non-comedogenic. Simple yet cost effective oil, well tried and tested for generations in a wide variety of emulsions formulated for face and body products.



Fig.no2: Sunflower oil

3. Jojoba oil:-

It is a mixture of long chain, linear liquid wax esters extracted from the seeds of the desert shrub *Simmondsia chinensis*, and belonging to the Family *Simmondsiaceae*. Jojoba oil is easily refined to remove any odour, colour it is oxidatively stable, and is often used in cosmetics as a moisturizer and as carrier oil for exotic fragrances .



Fig.no3: Jojoba oil

4. 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. Simply cut one of the Aloe vera leaves to extract the soothing 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.



Fig.no4: Aloe vera

5. Carrot:-

It is obtained from the plant *Daucus carota* belonging to family Apiaceae. It is a valuable herb since ages as due to its richness in Vitamin A along with other essential vitamins. Carrot seed oil is used as anti-aging, revitalizing and rejuvenating agent . Carrots get their characteristic bright orange color from β -carotene, and smaller amounts of α -carotene and γ -carotene. α and β -carotene are partially metabolized into vitamin A in humans.



Fig.no5: Carrot

❖ Raw materials used in hair care product:-

1) Amla:

It is obtained from the plant *Emblia Officinalis*, Family Euphorbiaceae. Amla is rich in vitamin C, tannis and minerals such as phosphorus, iron, calcium which provides nutrition to hair and also causes darkening of hair.

2) **Shikakai:** It is obtained from the plant *Acacia Concinna* Linn. The fruits of this plant are used for washing hair, for improving hair growth and also as an expectorant, emetic, and purgatives.

3) Neem:

Neem is commonly used in the treatment of dandruff as it produces antifungal and antibacterial effects.

4) **Rose oil:** Rose oil is obtained from fresh petals of *rosa damascena* by hydro-steam distillation technique.

❖ Raw materials used in oral care:

1) **Clove:** Essential oil obtained from clove used as a breath freshners. it has been used to relieve toothache, in periodontitis, as an anesthetic and also to treat bleeding gums.

2) **Coconut water:**It is used as root canal irrigant as it has antiviral, antifungal and antimicrobial properties and also used as a storage media for avulsed tooth.

3) **Tulsi:-**It has antihelminthic, analgesic, antipyretic, immune stimulatory, antiulcer. it is used in periodontitis.

IV. APPLICATION OF HERBAL PRODUCTS IN COSMETICS:

Herbal skin care product: Lavender silk soaps, Lotion cream, Body powder, Skin care cream.

Herbal Hair care cosmetics: Henna, Amla, Shikakai, Brahmi, Bhringaraj, Guar Gum.

Herbal Lip Care Cosmetics:-Herbal lipsticks, herbal lip gloss, herbal lip balm, herbal lip plumper.

Herbal Eye care cosmetics:-Eye make up, Eyeshadows, Eye Gloss, liquid eye liners

Herbal oils:-Herbal oils are effective for baldness , falling of hair , thinning of hair, dandruff, and irritation and itching of scalp, patchy baldness.

Skin types:

Table no.2: Various Skin type

Skin type	Features	Suitable skin care	
		Herbal	Essential oil
Normal	Has even tone, soft, smooth texture, no visible pores or blemishes and no greasy patches or flaky areas. Has a clear, fine textured, supple and smooth surface which is neither greasy nor dry.	Pomegranate juice, herbal face pack, Gingili oil	Chamomile Fennel, Lavender, Lemon, Rose, sandal wood.
Dry	Low level of sebum and prone to sensitivity. Has parched look, feels	Aloe vera, olive oil, calendula	Chamomile Fennel
Oily	Shiny, thick and dull coloured chronically oily skin has coarse pores and pimples, blackheads.	Aloe vera Lavender Lemon grass Rose buds	Bergamot Lavender
Combination	Some parts of yours face are dry or flaky. While the center part of your face, nose	Witch hazel, menthol, Aloe vera, turmeric, sweet flag	Citrus oils, jasmine oil, sandal wood oil.

V. CONCLUSION

Herbs play a significant role, especially in modern pharmaceutical preparations, when the damaging effects of food processing and over medication have assumed alarming proportions. They are now being increasingly cosmetics, food and teas, as well as alternative medicines. They growing interest in herbs is a part of the movements towards change in life styles. This movement is based on the belief that the plants have a vast potential for their use as a curative medicines.

The knowledge of medicinal plants used by the people of seems to be well known to its culture and tradition. In the present study we identified many plants used by the people to cure dermatological disorders and as cosmetics. Some of plants were found to have dual use, both as curative and cosmetic. Quality control test must be safe for longer period of time. Herbal excipients are preferable as they are not only full filling their role in formulation but give health benefits by discarding the problem of synthetic chemicals.

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