

A REVIEW ON HERBAL DRUGS AS SKIN CARE PRODUCTS

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ABSTRACT

It has been estimated that in developed countries such as United States, plants drugs comprise up to 25% of the total drugs, while in fast developing countries such as China and India, it comprise up to 80%. It is expected that there are 250,000 to 500,000 species of plants on Earth. Out of these small percentages (1 to 10%) are used as foods and medicine by both humans and animal. It is possible that rest of plant may be used for foods and medicinal purposes.

Hence, it has turn out to be very important to review on herbal medicine which will play important role in research on plant to find their possible medicinal importance.

Herbal formulations means a dosage form consisting of one or more herbs or processed herbs in specified quantities to provide specific nutritional, cosmetic benefits meant for use to diagnose, treat, mitigate diseases of human beings or animals, alter the structure or physiology of human beings or animals. Herbal formulations contain an active substance or herbal substance or herbal preparation or herbal substance in combination with one or more herbal preparations. Herbal formulations are obtained by subjecting herbal substances to treatments such as extraction, distillation, expression, fractionation, purification, concentration or fermentation include comminuted or powdered. Whole, fragmented or cut plants, plants parts, algae, fungi, lichen in an unprocessed, usually dried form but sometimes fresh were used in the preparations of herbal formulations. Herbal substances are precisely defined by the plant part used and the botanical name according to the binomial system (genus, species, variety and author).

Keywords: Herbal Drugs, Excipients, Extracts, Medicinal Plant, Skin.

INTRODUCTION

A herb is a plant or plant part utilized for its fragrance, flavor, or therapeutic properties. Natural prescriptions are one kind of dietary enhancement. They are sold as tablets, cases, powders, teas, removes, and new or dried plants. Individuals utilize home grown meds to attempt to keep up with or work on their wellbeing.

Ayurveda utilizes numerous spices to make beautifying agents for beautification and security from outside impacts. The regular phytoconstituents not causes any incidental effects on the human body; yet give supplements and other helpful minerals to the body [1]. Natural beautifiers or items are produced using different restorative fixings to shape the base in which at least one home grown fixings are fused for characterized corrective advantages [2]. The wellbeing, propensities, work standard, climatic conditions and support are chiefly answerable for the skin and hair magnificence [3]. Extreme openness to warm, the makes skin get dried out during summer and causes wrinkles, imperfections, pigmentation and burns from the sun.

Limits of winter makes harms the skin and hairs as breaks, trims, diseases, hair fall and dandruff [4]. The illnesses of skin are normal among all age gatherings and can be because of openness towards organisms, compound specialists, natural poisons, and furthermore because of lack of healthy sustenance [5]. enormous number of spices are accessible industrially as beauty care products for skincare, hair care and against oxidant impacts.

These home grown details produce purifying and decorating results and further develops generally appearance when scoured, poured, splashed remotely or applied to body parts [6-10]. Makeup from regular sources are thought about better and more secure [11]. Plants are the normal wellsprings of corrective details. They can be utilized to plan some valuable inorganic materials that are called green combination. [12] They are produced using unique fixings in plants, leaves, roots, leafy foods which have properties for wellbeing and excellence [13]. Significant substance compounds in plants are alkaloids, flavonoids, terpenoids, steroids, tannins and saponins which can be surveyed by phytochemical screening. Spices fill in as significant cosmeceuticals as they don't convey any unfavorable impacts [14]. They can be classified as displayed in Fig. (1).

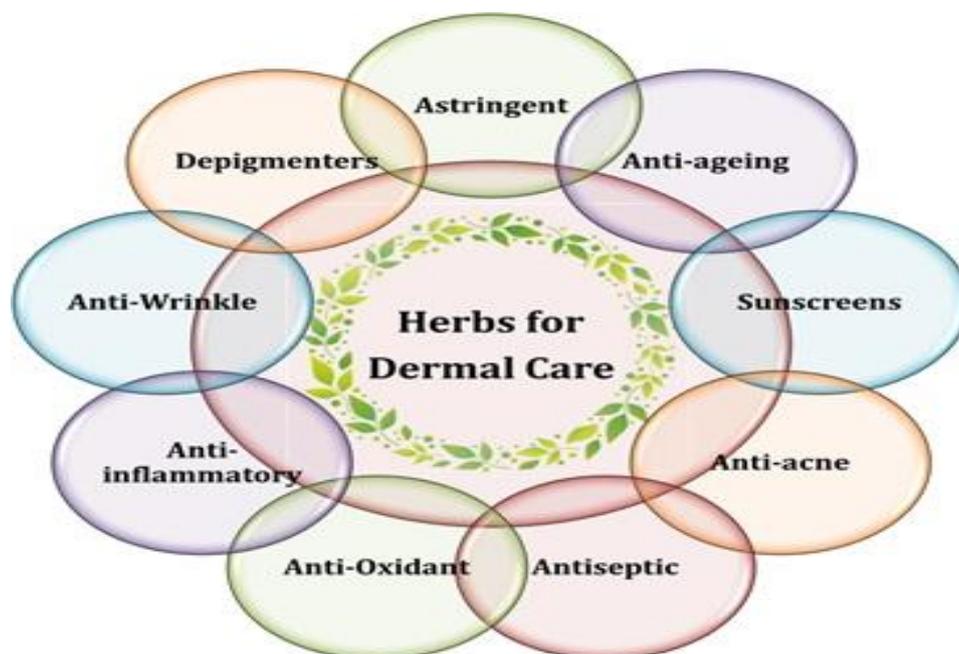


Figure 1. Herbs of Dermal Care.

Popular cosmetics are hair dyes, powders and creams. Examples of Cosmetics: Skin-care creams, powders, lotions, lipsticks, nail polishes, eye and face makeup, deodorants, baby products, hair colorants and sprays.

The knowledge about the structure and basic function of the skin and its appendages and knowledge of natural or herbal care or remedies for its problems will help to widen the importance of herbal cosmetics. The skin has the natural ability in continuously repairing to

maintain its normal function. In young age the common skin problem are greasy skin and acne and during old age the skin becomes dry. To have a better skin, it is important to understand how our skin functions and to take proper precautions to maintain it. The skin are classified into 4 groups and for each class appropriate ingredients should be used to maintain its natural functionality (Table - 1) The requirements for the basic skin care a) Cleansing agent, which remove the dust, dead cells and dirt that chokes the pores on the skin. Some of the common cleansers include vegetable oils like coconut, sesame and palm oil. b) Use of Toners: The toners help to tighten the skin and keep it from being exposed to many of the toxins that are floating in the air or other environmental pollutants. Some of the herbs used as toners are witch hazel, geranium, sage, lemon, ivy burdock and essential oils. c) Moisturizing: The moisturizing helps the skin to become soft and supple. Moisturizing shows a healthy glow and are less prone to aging. Some of the herbal moisturizers include vegetable glycerin, sorbitol, rose water, jojoba oil, aloe vera and iris.

Table 1. Skin Types and Their Care

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 leaves juice, Herbal Face Pack, Gingili Oil	Chamomile Fennel, Geranium, Lavender, Lemon, Rose, Sandal Wood, Patchouli
Dry	Low level of sebum and prone to sensitivity. Has a parched look, feels "tight". Chapping and cracking are signs of extremely dry, dehydrated skin.	Aloe Vera, Olive Oil, Calendula Comfrey	Chamomile Fennel, Geranium, Lavender, Lemon, Rose, Sandal Wood, Patchouli, Almond, Avocado
Oily	Shiny, thick and dull coloured Chronically oily skin has coarse pores and pimples and other embarrassing blemishes. Prone to black heads	Aloe Vera, Burdock Root chamomile Horsetail, Oat Straw, Thyme, Lavender, Lemon Grass, Liquorice, Rose Buds, Witch Hazel Cucumber, Cedar Wood	Bergamot, Cypress Frankincense Geranium, juniper, Lavender, Lemon, Sage Evening Primrose
Combination	Some parts of your	Witch Hazel, Menthol,	Citrus Oils, Jasmine

	face are dry or flaky, while the center part of your face, nose, chin, and forehead (called the Tzone) is oily. Combination skin can also describe conditions where wrinkles and breakouts or rosacea and dry skin are present at the same time.	Aloe Vera, Turmeric, Wheat Germ, Sweet Flag	Oil, Sandal Wood Oil
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FORMULATION AND EVALUATION

In formulating cosmetic preparation non herbal ingredients are commonly used, but now herbal ingredients are gaining more acceptances among consumers. The usage of herbal ingredients should be based on experience, so that the properties of the formulation are not altered. The formulation of herbal cosmetics follows the same procedures as that of the cosmetic preparation prepared with synthetic origin. The formulations are based on the selection of proper emulsifying agents, composition of the appropriate ingredients and modified methodology to get the required product [37-40]. The herbal cosmetics retain the bioactivity of botanicals during excessive processing and should ascertain their availability after application on the skin. The manufacturers should ensure the quality of the raw materials and the finished products by quality control testing. The other parameters tested include organoleptic characteristics, pH, viscosity, refrigeration and stability towards light. The major drawback with herbal ingredient is the attack of microbes rendering them unfit for human use [41-43]. So care must be taken to prevent the bacterial attack completely. The list of various categories of ingredients used in cosmetics with its herbal and nonherbal counter part is listed in (Table-2).

Table .2 Special Skin Problems and Herbal Remedies

S.NO.	SKIN PROBLEM	FEATURES	REMEDIES
1.	Chapped Skin	Rough texture which sometimes causes the skin to crack	Application of oils of St.John Wort, Olive Oil or Mashed Avocado after bathing or massaging with warm Olive Oil, Mustard or Coconut Oil half an hour before bathing
2.	Withered skin	Very tough texture, full of wrinkles	Carrot Juice along with a mixture of egg white and

			honey
3.	Swallow skin	No colour look, skin becomes lusterless and shows lack of vitality	Inclusion of Vitamin B in diet
4.	Sensitive Skin	React quickly to both heat and cold. Sunburns and wind burns occur easily. Skin become dries delicate and prone to allergic reactions. Detergents , Cosmetics and alcohol can cause irritation leaving skin red and blotchy with visible surface veins	Use of essential oil of Chamomile, Lavender, Neroli, Rose and Sandal Wood Oil.
5.	Acne	Pockets of infection that manifest as red sores, boils and pimples.	Usage of Red Sandal Wood Oil.

The evaluation of herbal cosmetics is very essential and there is no hard and fast code of practice, which can be laid down for all products or even product types. The evaluations of cosmetics are performed to ensure the efficiency, storage, processing operation and stability requirements. The evaluation of herbal cosmetics is essentially the same as that for the other common cosmetics products which are available in market. The ingredients used in cosmetics should be of the highest quality so as to minimize the irritancy and sensitivity reaction. The physical evaluation parameters used for herbal cosmetics include the colour, odour, form of physical state, pH, and net content. The other evaluations done for herbal cosmetics are sensitivity test, irritation test and grittiness. The irritancy and sensitivity test can be performed by either diagnostic testing or by the prophetic or predictive testing [44-51].

The diagnostic testing is usually determined by different patch tests, where one can establish the cause of dermatitis produced by cosmetics. In prophetic or predictive testing, which involves the testing for primary irritants, testing for eye irritation (eg: rabbit eye test), testing for animal skin irritation and testing on humans for irritancy. The test will help to detect the irritant and sensitizing potential of new cosmetic ingredients. The evaluations of facial cosmetics are grouped into physical parameters, esthetic and pressure testing. The physical parameters include colour, adhesiveness, pH, net content, odour, size and shape of the particle and finally the moisture content. In esthetic the parameters evaluated are shape control, dispersion of colour, bloom testing, adhesiveness, spreadability, covering power and finally handling test. The pressure testing is evaluated only for compacts to check the presence of air pockets. The dentifrices are evaluated for abrasiveness, degree of luster production, consistency, pH, specific gravity, taste, odour, colour, moisture content and fragrance test. The hair conditioners are evaluated for softness, luster, lubricity, body texture and set retention, irritation on eye, oral toxicity, fragrance test, colour and consistency. The cosmetics in the form of semisolid products are tested for bleeding and rheology in addition to the other routine tests. The microbial test, toxicity test and stability studies were also performed for evaluating

the cosmetics products. The traditional documented applications of herbs in cosmetics are available along with some modern trials which have established the utility of these materials in cosmetic preparation.

The evaluations based on analytical methods are used to support the commercial development and application of new ingredients to ensure that specifications are met to confirm the quality of manufactured products and to satisfy that the process are operating correctly. The analytical methods are regularly employed by enforcement and regulatory authorities to ensure that the products confirm to legal standards and are safe and accurately described. The analytical chemist continues to have a major role in selecting the most appropriate method, managing the data, interpreting the results. The analytical techniques are basically classified into classical method and instrumental method. The classical methods are based on the observation and measurement of the chemical reactivity of analytes in solution. The instrumental methods are based upon the detailed examination of the physical or physicochemical properties of analytes related to their molecular or atomic structures. The methods will provide information of the qualitative data regarding the chemical nature of compound and detection of specific compounds in the cosmetic products. The skin evaluation can be performed visually or by super facial sampling of the skin with image analysis of the cells. The free radical scavenger properties in cosmetics which can counteract the effect of pollution and UV light on skin can be evaluated by fluoroscan II system to determine the concentration of the cutaneous peroxides. The free radical scavenging properties can also be evaluated by inhibition of UVB induced skin erythema by skin reflectance spectrophotometry [51-52].

The skin tanning agents used for producing a healthy skin without risking the acute and chronic ill effects of prolonged UV exposure can be evaluated by inspection or instrumentally using Minolta Chromameter or Diastron Erythema/Melanin Meter [49]. The evaluation of hair care products is done by assessing nine basic cosmetic parameters related to physical or mechanical properties of the hair. The parameters include comb-out on wet hair, comb-out on dry hair, shine, silkiness, absence of static electricity, individualization, bounce, spring back and body. The hair greasiness evaluation can be quantitatively analyzed by means of sensory assessment. The parameters like gloss and individualization are measured by instrumental method utilizing light reflection [53-54]. The hair strength can be evaluated by measuring the force required to stretch and break individual hair fibres by Instron Tester, Dia-stron Miniature Tensile Tester and Automatic Carousel arrangement. The hair fiber cross-sectional area which contributes the tensile strength can be measure by microscopy or by weighing standard lengths of hair fiber. The instrumental method for analyzing the crosssectional area can be done by Dia-strom Fiber Dimensional Analysis System. The instrumental method of analysis of hair properties and their affect by hair-care products include curl retention, friction, resin adhesiveness and drying properties. The antidandruff evaluations are generally carried out during autumn and early spring. The heaviest load of dandruff is seen in the month of winter. The stability testing of cosmetic products during storage is done on the content of the formulated product and container in which the product is packed. The content can be subdivided to physical character like viscosity, texture, colour, odour, pH, and loss of volatile constituent, uptake of water, oxygen or carbon dioxide. The chemical characteristic can be further divided into degradation of active constituent, interaction between constituents and loss of constituent by sorption by

container. In microbiological characteristics are divided into efficacy of antimicrobial preservative and microbial spoilage. The containers used for packing cosmetics are tested for leakage, corrosion and stress cracking. The mechanical properties of the skin include measurement of skin friction to evaluate the degree of smoothness or greasiness of the skin. The measurement of skin elasticity is to evaluate the suppleness or fairness of the skin and the point of indentation are used to measure the skin softness. The evaluations of antidandruff mainly focus on the antimicrobial activity, solubility in sebum, penetrability of the hair follicles and cytostatic effect [53].

RISK OF SYNTHETIC COSMETICS

Raja et al.[16]) reported in his work that data from the Centers for Disease Control and Prevention (CDC) show that male reproductive problems, including undescended testicles and hypospadias, doubled between 1970 and 1993. The reasons behind these problems are Environmental chemicals. Presence of lowlevel concentrations of potential reproductive or developmental toxicants, particularly phthalates, in cosmetics and personal care products was reported. Details chemicals found in consumer products and their potential health impacts was published by Environment California in 2004 issuenamely Up Toxic: Chemical Exposures and Increases in Developmental Diseases.Contemporary issues by the Environmental Working Group (Skin Deep: A Safety Assessment of Ingredients in Personal Care Products) and Friends of the Earth (Shop Till You Drop? Survey of High Street Retailers on Risky Chemicals in Products 2003–2004) support Environment California’s publication. According to these reports, makeup, shampoo, skin lotion, nail polish, and other personal care products contain chemical ingredients that lack safety data. Animal studies indicate their roles in reproductive tissues and pregnancy defects [17]. Cosmetic chemicals are even responsible for increased cases of breast cancer [18]. People are exposed to metals as trace contaminants in their daily used cosmetics as metals are available in the environment and their natural occurrence in rocks, soil and water cause them to be present in the manufacture of pigments and other raw materials used in the cosmetic industry. Cosmetics may have multiple forms, uses and exposure scenarios, and metals contained in them can cause local skin problems but also systemic effects after their absorption via the skin or ingestion as most of these metals are toxic [19-21]. Metal traces can be detected in most cosmetic products as impurities, leading to direct exposure of a large number of individuals. The ever-improving sensitivity of analytical methods enables the detection of increasingly lower trace levels. Consequently, metal traces are more frequently and easily detected in cosmetic products, even when they are manufactured according to good manufacturing practices (GMP)[22]. Metal content in lipstick is an international health concern. This is because lipstick is the basic daily product that is included in face makeup application, in addition to face powder, foundations, eye shadows, and blush [23]. Lipstick is applied on the lips for beautification and looks attractive, but the price for these application women are priced with exposure to heavy metals contained in the lipstick. Lipsticks are containing heavy metals such as lead, nickel, aluminum, arsenic, cadmium, antimony, and chromium [24]. Moreover, heavy metals can be released by the metallic devices used during the manufacturing of products [53].

CONCLUSION

In India, over 70% of the populace favors natural beautifiers for their medical care. Current situation shows that home grown beautifiers have been increased in close to home consideration framework and there is an incredible necessity for natural beautifying agents in day by day life. The synthetic detailing of this load of restorative items incorporates the expansion of different normal added substances, as waxes, oils, regular tones, normal scents and portions of plants like leaves. There is need to accomplish more Research and Development in the field of natural makeup to demonstrate adequacy and remember home grown beautifying agents for wellbeing profile.

Direct satisfactory wellbeing testing according to existing administrative guideline and present prerequisites. Quality control for capacity and security of home grown corrective items is of prevalent significance, despite the fact that it is thought to be ok for longer timeframes.

There are different spices present in nature that improves and scrub the skin tenderly. Above spices are loaded with phytoconstituents, having regular goodness to satisfy the prerequisites of the skin.

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