

Traditional Herbal Cosmetics Used By Ethnic Groups in South-East Rajasthan as a Skin Care

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Abstract – Natural beauty is blessing and cosmetics help in enhancing the beauty and personality aspects of human beings. Since ancient times women uses many herbs to increase their own beauty. Even today, people especially in rural areas depend upon plants for traditional cosmetics. Nature has offered the way to keep up that parity. A herb is a plant or plant extract, including leaves, bark, berries, roots, gums, seeds, stems and flowers which contain nourishing and healing elements. Herbal cosmetics have improved much popularity among the population. Herbal cosmetics products do not have adverse effects which are commonly seen in synthetic products.

The research work is confined to herbal cosmetics with special reference of local communities of Hadoti region (Rajasthan). Through questionnaires, study was conducted in different villages of Hadoti region to collect information from local/tribal people for having the detailed knowledge of herbal cosmetics and their conservation. Indigenous data on 37 herbal recipes for skin care were collected from respondent informants.

Keywords: Ethnobotany; Herbal Cosmetics; Indigenous; Local Communities/Tribals; Ayurveda.

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INTRODUCTION

Ethnobotany has emerged as a very important branch of the science, documenting the age old wisdoms and knowledge of the tribal communities or ethnic societies. It is a very fascinating and vital field of research. There is an inextricable link between indigenous ethnic culture and botanical conservation.

From prehistoric days, plants are used for shelter, food and medicine. The use of plants for medicinal purposes is as old as our civilization. The first known written record of curative plants was of Sumerian herbal of 2200 BC. In the 5th century BC, the Greek doctor Hippocrates list out some 400 herbs in common use. Dioscorides, in the first century AD, wrote a herbal by using 600 plants which ultimately became the base for many later studies. Since early age plants have served for human adornment for the millennia and people have been using various kinds of herbs to maintain their beauty.

Cosmetics are any plant part or their product which are applied to the human body or any part for cleansing, beautifying, promoting attractiveness or altering the appearance. The word cosmetic was derived from the Greek word "kosm tikos" meaning having the power, arrange, skill in decorating. The science of Ayurveda had utilized many herbs and

floras to make cosmetics for beautification and protection from external affects. The natural content in these herbs does not cause any side effects on the human body; instead enrich the body with nutrients and other useful minerals. The study revealed that the use of plants as herbal cosmetics is prevalent among the tribal communities and represent not only a part of ethnic culture but also witness the use of plants in their regular health care practices since ancient times.

The natural content in the herbs does not have any reactions on the human body; rather enhance the body with, supplements and other helpful minerals. Herbal cosmetics are comprised of floras like saffron (kesar), ashwagandha, sandal (chandan) that enriched in healthy nutrients and all the various essential components. It is evaluated that roughly 400 flavors are utilized far and wide, although only about 70 spices are officially recognized. Herbs have variety of function such as food flavourings, cosmetics and medicine in the forms of tea, tablet, capsule, tincture, cream, syrup and liquid.

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.

Herbs include crude plant material, such as leaves, flowers, fruit, seeds, stems, wood, bark, roots, rhizomes or other plant parts, which may be entire, fragmented or powdered. Herbal materials include, in addition to herbs, fresh juices, gums, fixed oils, essential oils, resins and dry powders of herbs. In some countries, these materials may be processed by various local procedures, such as steaming, roasting or stir-baking with honey, alcoholic beverages or other materials.

These herbs are used in herbal preparations as finished herbal products. They are produced by extraction, fractionation, purification, concentration, or other physical or biological processes. They also include preparations made by steeping or heating herbal materials in alcoholic beverages and/or honey, or in other materials.

Herbalists today, believe to help people build their good health with the help of natural sources. Herbs are considered to be food rather than medicine because they're complete, all-natural and pure, as nature intended. When herbs are used, the body start getting cleansed, it gets purifying itself. Unlike chemically synthesized, highly concentrated drugs that may produce many side effects, herbs can effectively realign the body's defense mechanism.

The collection and documentation of tribal knowledge based on the cosmetic use of plants is no doubt a remarkable step keeping in view the fading ethnic traditions and culture. Attempts should be made to authenticate and evaluate the efficacy and cosmetic value of these plants and their products used by the tribal. Moreover, there is urgent need to conserve the germplasm and cultivation of such herbal plants in suitable agro climatic zones for their better survival to meet the demand of herbal cosmetic industry for the welfare of human being.

Frequent field surveys were conducted in the rural areas of Hadoti region. The ethno botanical data were collected through interviews and discussions with the tribal practitioners in and around the study area. The current study highlights importance of herbal cosmetics, their advantages over the synthetic counterparts. This article will focus on a selected group of herbal plants, many of which have long traditions in Asian medicine, with potential or exhibited dermatologic applications and simultaneously in skin care.

Following are some of the advantages of using these herbs as cosmetics which make them a better choice over the synthetic ones:

Natural Products: The name itself suggests that herbs 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 as herbal cosmetics, 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. There are a rising number of consumers concerned about ingredients such as synthetic chemicals, mineral oils who demand more natural products with traceable and more natural ingredients, free from harmful chemicals and with an emphasis on the properties of botanicals.

Safe to Use: Compared to other beauty products, these 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. These Herbs contain natural antioxidants like Vitamin C.

These herbs as a natural cosmetics are suitable for all skin types. No matter if you are dark or fair hence compatible with All Skin Types.

No Side Effects: The synthetic beauty products can irritate your skin, and cause pimples or rashes. They might block your pores and make your skin dry or oily. With natural cosmetics, one need not worry about these. The natural ingredients have no side effects; one can apply them anytime, anywhere.

MATERIALS AND METHOD

Study design: Frequent field surveys were conducted in the rural areas of Hadoti region. Group discussion were conducted information providers being mainly tribal who are expert for decorating young girls during wedding ceremonies.

Data solicitation: Data was collected using semi-structured questionnaires and interviews in Local languages. Various questions about cosmetic plants and their methods for preparation and use were asked to women who have traditional knowledge, about these plants used for cosmetics purposes i.e. maintaining/uplifting their appearance. The questionnaire consisted of the two parts:

1. What traditional plants are used for beatification purposes?
2. For what cosmetic/hygiene purposes these plants are used? (i.e. face, hair, skin, nails, the oral tract, decoration of eyes and the maintenance of the skin health.)

The plants were identified with the help of subject experts followed by going through literature, photographed were clicked for further reference.

TABLE 1: IDENTIFYING PLANTS WHICH ARE USED FOR BEATIFICATION PURPOSE

S. No.	Common Name	Plant name	Family	Uses
1.	Aam	<i>Mangifera indica</i>	Anacardiaceae	Plant extract possesses anti-oxidant properties
2	Akash bel	<i>Cuscuta reflexa</i>	Convolvulaceae	Plant extract is used to control dermatitis, itching and ringworm.
3	Amla	<i>Phyllanthus emblica</i>	Euphorbiaceae	Fruit extract possesses anti-oxidant properties
4	Aswagan dha	<i>Withania somnifera</i>	Solanaceae	Whole plant extract is used in skin cleansing formulations and possesses antioxidant properties
5	Babchi	<i>Psoralea corylifolia</i>	Fabaceae	Seeds extract possesses potential to control skin diseases.
6	Babuna	<i>Matricaria chamomilla</i>	Asteraceae	Leaves extract is applied to skin to control acne.
7	Banaba Leaf	<i>Lagerstroemia speciosa</i>	Lythraceae	It is reputed to improve the flexibility of the skin and to reduce the signs of aging. It is a great addition in formulations of gels and lotions
8	Bhringraj	<i>Eclipta alba</i>	Asteraceae	Paste of herb is useful to control skin diseases and eczema.
9	Chameli	<i>Jasminum grandiflorum</i>	Oleaceae	Essential oil extracted from flowers is used in skin creams and lotions to control skin diseases. Essential oil extracted from plant is used in creams for the protection from sunburn
10	Chandan	<i>Santalum album</i>	Santalaceae	Paste of hardwood is used in face pack; essential oil used in

				preparation of lotions for skin beautification and protection from sunburn; possesses anti-oxidant properties
11	Cheretta	<i>Swertia chirayita</i>	Gentianaceae	Bark powder extract controls skin afflictions; possesses antioxidant properties
12	Choti dhudhi	<i>Euphorbia thymifolia</i>	Euphorbiaceae	Plant extract is useful to control ringworm and skin infections
13	Dhak	<i>Butea monosperma</i>	Fabaceae	Leaves extract is useful in pimples and seed extract for fungal infection and bruises.
14	Garlic	<i>Allium sativum</i>	Alliaceae	Garlic oil is useful to control sores, pimples and acne of skin.
15	Ghikanwar	<i>Aloe vera</i>	Liliaceae	Leaves juice, its pulp or extracted material is applied on skin for smoothness, healing controlling skin burn, sun burn and injury Used as moisturizers, lotions, hair tonic and shaving purpose.
16	Haldi	<i>Curcuma longa</i>	Zingiberaceae	Rhizome powder possesses anti-inflammatory and anti-oxidant properties; used in facial, lap (ubtan)
17	Hul Khusa	<i>Leucas aspera</i>	Lamiaceae	Juice of leaves is applied to control scabies, skin psoriasis, chronic skin, skin eruption and eczema
18	Kamala	<i>Mallotus philippensis</i>	Euphorbiaceae	Flower powder is useful to control scabies ringworm, leprous eruption, etc
19	Karela	<i>Momordica charantia</i>	Cucurbitaceae	Plant extract possesses antioxidant properties
20	Khas	<i>Andropogon</i>	Poaceae	Powdered root paste with red

		<i>muricatus</i>		sandal wood is used to cure irritated skin and allergies
21	Khira	<i>Cucumis sativus</i>	Cucurbitaceae	Water extract of fruits and seeds protect skin from sunburn
22	Lajwanti	<i>Mimosa pudica</i>	Mimosaceae	Herb extract applied in skin to control itching
23	Lal gulab	<i>Rosa damasceana</i>	Rosaceae	Essential oil extracted from flowers is used for beautification, smoothness and protection from sunburns
24	Lavender	<i>Lavandula vera</i>	Lamiaceae	Essential oil is used in skin anti-acne
25	Maharukh	<i>Ailanthus excels</i>	Simaroubaceae	Leaves extract checks skin eruption and useful in skin creams and lotions
26	Makka	<i>Zea mays</i>	Poaceae	Stigma extract is used in creams and lotions for skin rejuvenation
27	Nariyal	<i>Cocos nucifera</i>	Arecaceae	Coconut oil is useful for skin itching and rashes
28	Nav-patti	<i>limonia crenulata</i>	Rutaceae	Leaves and Bark useful in curing skin wounds, skin diseases, leprosy, ulcers infection, ringworm, eruption, etc
29	Neem	<i>Azadirachta indica</i>	Meliaceae	Bark, seed, fruits and leaves are useful in curing wounds, skin diseases, leprosy, ulcers etc
30	Nimbu	<i>Citrus limon</i>	Rutaceae	Potential source of vitamin C; It is used to reduce skin itching and skin nourishment, pulp left after extraction of juice is useful as a facial ingredients
31	Panwar	<i>Cassia tora</i>	Caesalpiniaceae	Leaves and seed extract are useful for skin infection, ringworm,

				eruption, etc
32	Papaya	<i>Carica papaya</i>	Caricaceae	Milky juice of unripe fruit is a good ingredient for facial and face cream; fruit pulps make skin soft and remove blemishes
33	Sunflower	Genus Helianthus	Asteraceae	It can be used to add beneficial properties to skin care and hair care products. Its oil enhancing the thickness and shine of the hair.
34	Til	<i>Sesamum indicum</i>	Pedaliaceae	Seed extract is useful for skin protection and rejuvenation
35	Tulsi	<i>Ocimum sanctum</i>	Lamiaceae	Leaves extract is useful to control skin infection and rejuvenation
36	Water lettuce	<i>Pistia stratiotes</i>	Araceae	Leaves extract is applied to control chronic skin disorders
37	Vasaca	<i>Adhatoda vasica</i>	Acanthaceae	Fresh leaves juice / extract is used for skin affection and control of scabies

RESULTS AND DISCUSSION

A cosmetic product refers to any substance or preparation intended to be applied on various external parts of the human body (epidermis, hair system, nails, lips and external genital organs) or on the teeth and the mucous membranes of the oral cavity with a view of cleaning them, perfuming them, changing their appearance and/or correcting body odors and/or protecting them or keeping them in good conditions Since ancient times, raw materials for preparing these products have been derived from plants, animals and minerals. Vitamins (A, C and E) obtained from vegetables and fruits protect cells and tissues against damaging effect of free radicals.

The skin has a highly differentiated and complex organizational structure that is particularly vulnerable to free radical damage because of its contact with oxygen and other environmental stimuli. The effects of aging include wrinkles, roughness, loss of skin elasticity and hyper or depigmentation marks. Herbal extracts or cosmetics containing herbal ingredients act on these areas and produce healing, softening, rejuvenating and sunscreen effects due to the antioxidant activity of phenolic compounds (tannins

and flavonoids) present in most of the herbal plants used for cosmetic purpose.

Some Indian medicinal plants, which have been studied in detail for their use in cosmetics by the tribal people of Hadoti region, Rajasthan are mentioned here for further exploration. In the present investigation 37 plants used by the tribal of Hadoti region (Rajasthan) for skin care which belongs to 27 family (Table 1). The study revealed that the use of plants as herbal cosmetics is prevalent among the tribal communities and represent not only a part of their ethnic culture but also witness the use of plants in their regular health care practices since ancient times. The most common plants recorded are *Curcuma longa*, *Ocimum sanctum*, *Vitex negundo*, *Aloe vera*, *Azadiracta indica*, and flour of *Cicer aritinuma*. The collection and documentation of tribal knowledge based on the cosmetic use of plants is no doubt a remarkable step keeping in view the fading ethnic traditions and culture. Attempts should be made to authenticate and evaluate the efficacy and cosmetic value of these plants and their products used by the tribals. Moreover, there is urgent need to conserve the germplasm and cultivation of such plants in suitable agroclimatic zones for their better survival to meet the demand of herbal cosmetic industry for the welfare of human being.

Biological Forms and Part Used

These plant species are of three botanical forms: trees, shrubs and herbs. Herbs are the most abundant life forms accounting for (49%) of all plants recorded, followed by trees (35%), shrubs (16%) (Figure 1)

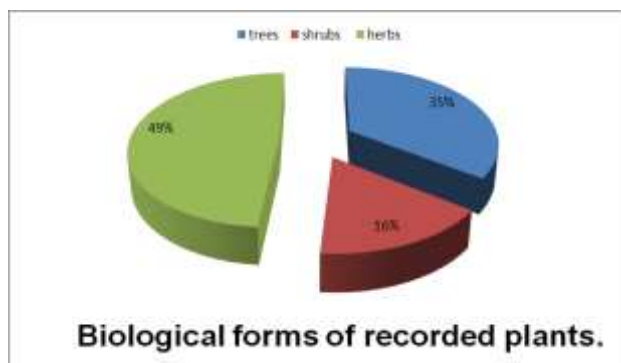


Figure 1. Biological forms of recorded plants.

Different parts of the plant species recorded are used as skin care including bark (5.40%), seeds (16.21%), fruits (10.81%), leaves (27.02%), flower buds (13.51%) root (5.40%) and whole plant (18.91). The leaves and seeds were the most frequently used plant parts (Figure 2).

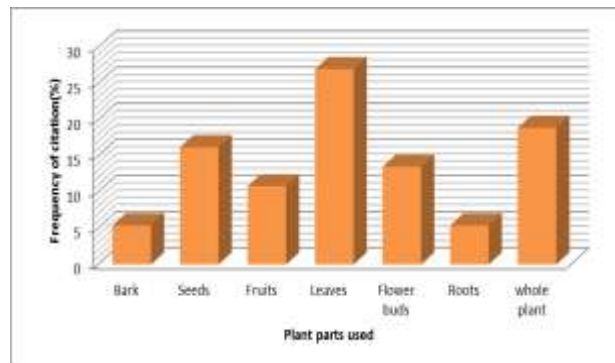


Figure 2. Plant parts used as skin care

CONCLUSION:

In India more than 70 % of the populations use herbal cosmetics for their health care. 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 present article focuses on the potential of herbal extracts for cosmetic purposes by the tribals residing in the rural areas around Hadoti region. It also makes an attempt to give scientific account of use of herbal extracts in cosmetics. The use of bioactive ingredients in cosmetics influence biological functions of skin. The addition of herbal extracts for therapeutic or for excipient purpose requires better understanding of the modern ingredients and herbal extracts. This article may help cosmetic and personal care industry, marketers and modern scientists understand various different trends of potential use to research on anti-aging cosmeceutical approaches to delaying and preventing skin aging.

The development of these traditional systems of medicines with the perspectives of safety, efficacy and quality will help not only to preserve this traditional heritage but also to rationalize the use of natural products in the health care. Thus, we can easily identify rare and extinct plants for the conservation and preserved the traditional heritage of the traditional practitioners. The traditional knowledge with its holistic and systems approach supported by experimental base can serve as an innovative and powerful discovery engine for newer, safer and affordable medicines. These plant species mentioned in the ancient texts of Ayurvedic. The development of these traditional systems of medicines with the perspectives of safety, efficacy and quality will help not only to preserve this traditional heritage but also to rationalize the use of natural products in the health care. Thus, we can easily identify rare and extinct plants for the

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