

# Herbal Cosmetics for Skin and Hair Care in Ayurveda

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## ABSTRACT

The cosmetics are the beneficial compound used widely all over the world for balancing and improving normal appearance of face and various parts of body e.g. hand, mouth, finger, hair, eye etc. It includes powders, creams, face pack, moisturizers, lotions, shampoo, hair oil, hair conditioners, nail polish, etc. Soft, shining, healthy skin and hair certainly count for a handsome man or beautiful woman. In environment there are many reason for damage to skin like- microorganisms, chemical toxins, chemicals. Cosmetics alone are not sufficient to take care of skin and body parts, it require combination of active ingredients to check the damage and ageing of the skin. Herbal cosmetics are now appeared as the suitable solution to the current problem. Personal care industry is more concentrated now on herbal cosmetics as it is a fast growing segment with a huge scope of many development in coming years. Herbal cosmetics are the formulations, which represent cosmetics associated with active bio-ingredients, nutraceuticals or pharmaceuticals. Normally, botanicals provide different antioxidants, vitamins, various oils, hydrocolloids, essential oils, proteins, terpenoids and other bioactive molecules. Our traditional knowledge about the use of plant wealth as mentioned in Ayurveda, Unani, Siddha and Tibetan system of medicine, is of great help to identify the phytochemicals.

**KEYWORDS:** Herbal cosmetics, Skin care, Hair care, Natural colors, Natural dyes

## INTRODUCTION

Today the world is turn towards the use of herbal products and to accept more natural way of life. People like natural food, herbal medicines and natural curing practices for healthy life. The usage of herbal products has been risen to many folds in personal care system and there is a vast demand for the herbal cosmetics. All this occurred due to the more and more use of synthetic based products, synthetic chemicals, chemical dyes and their derived products. These cause human health problems with several side-effects and many diseases. It also disturbed our eco-system and caused environmental pollution. The beauty of skin and hairs fundamentally depends on individual's health, habits, diet, job routine, environmental conditions and maintenance. Excessive heat exposure, in summer dehydrates the skin and increases melanin content which causes freckles, blemishes, wrinkles, sunburns and pigmentation. In winters, extreme cold also damage skin as cuts, maceration, cracks and infection are normally seen. Skin disease is common of all age groups because of the infection of a variety of microorganism, chemical agents and biological toxin present in the atmosphere and also due to physical factors, malnutrition and environmental pollution. Similar problems occur with hairs as hair fall and their greying at early age becomes a normal feature.

## Cosmetics

It's not easy to define the term "cosmetic" as its liberty and application to the care of various body parts is very large. Cosmetics are proposed to be rubbed, poured, sprinkled for

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beautifying, cleansing, changing the look. Increases normal appearance of face and other body parts through less chance of skin defects is the main aim of cosmetics. It is used to improve or maintain the status of skin and hair. Cosmetic helps men and women to look more beautiful, impressive and smart. The other aims of cosmetic are Social, Psychological and Clinical.

Psychological effect- Provides mental satisfaction to user. In middle age or young age grey hair is common problem. These kinds of problems can be solved by use hair dyes and conditioners. beauty parlours, hair dresser's saloons is evidence of Social effect of cosmetics. These saloons also seen in backward or rural areas now a days. Skin wrinkling, pre-mature ageing, skin cracking, sun burn, effects of wind burn etc. these types of problems normally treat by cosmetics.

## Preparations of Cosmetic-

The cosmetics formulations are mainly divided into three categories:-

1. Solid
  2. Semi solid
  3. Liquids
- Talcum powders, Face powders, face packs, masks etc. are included in solid category.
  - Creams, liniments, ointments, wax base creams etc. are included in semi-solid category.

- Lotions, hair oil, moisturizers, conditioners, cleansing milk, shampoos, mouthwashes, liniments, deodorants, sprays, etc. are included in liquid category.

### Herbal Cosmetics

Herbal cosmetics are the formulations, which represent cosmetics related with active bioactive contents. Normally botanicals provide different vitamins, antioxidants, various oils, essential oils, dyes, tannins, alkaloids, carbohydrates, proteins, terpenoids and other bioactive molecules.

### Preparation of herbal cosmetics

In preparation, suitable bioactive contents or their extracts are used along with requisite ingredients basically used for cosmetics. It need selection of suitable emulsifying agent,

appropriate ingredient composition and modified methodology to obtain desirable product of specified parameters. Other parameters like organoleptic characteristics, viscosity, pH, stability towards light and refrigeration should also be evaluated.

### Coloring ingredients

Every person has his own choice and liking for color and nature manifests itself. Since Ancient time colors are well recognized. Addition of colors enhances the general appearance of products. The cosmetics products are generally colored by synthetic or natural coloring agents but in herbal-based cosmetics, use natural coloring agents because of their non-toxic, safe and eco-friendly characteristics.

**Table 1: Botanicals used for skin care and hair care-**

S. No.	Botanical/Common name	Family	Distribution	Uses
1.	<i>Adhatoda vasica</i> Nees ( <i>Vasaca</i> );	<i>Acanthaceae</i>	Throughout India	Fresh leaves juice/extract- skin affection and control of scabies
2.	<i>Ailanthus excelsa</i> Roxb. ( <i>Maharukh</i> ),	<i>Simaroubaceae</i>	Throughout India	Leaves extract-skin eruption and useful in skin creams and lotions.
3.	<i>Allium sativum</i> Linn. ( <i>Garlic</i> ), -	<i>Alliaceae</i>	Throughout India	Garlic oil - 1. source of sulphur 2. useful to control sores, pimples and acne. 3. used in skin lotions and creams.
4.	<i>Aloe vera</i> Linn. ( <i>Ghikanwar</i> ),	<i>Liliaceae</i>	Indian continent	1.Leaves juice, pulp or extracted material - applied on skin for smoothness, healing, controlling skin burn, sun burn and injury. 2.Used in moisturizers, lotions, creams, hair tonic, shaving creams, etc.
5.	<i>Andropogon muricatus</i> Retz. ( <i>Khas</i> ),	<i>Poaceae</i>	Throughout India	Powdered root paste with red sandal wood - used to cure irritated skin and allergies.
6.	<i>Azadirachta indica</i> A. Juss. ( <i>Neem</i> );	<i>Meliaceae</i>	Indian warmer parts	1.Bark, seed, fruits and leaves- contain diterpenes 2.antiseptic agent; 3.useful in curing wounds, skin diseases, leprosy, ulcers etc.
7.	<i>Buchanania lanzan</i> Spreng. ( <i>Chironnji</i> ),	<i>Anacardiaceae</i> ;	Throughout India (up to 1000 m)	Kernel powder is useful in skin ointments to cure itch, blemishes, rashes and spots.
8.	<i>Butea frondosa</i> Koenig ex Roxb. ( <i>Dhak</i> ),	<i>Fabaceae</i> ;	Throughout India (up to 1200 m).-	1.Leaves extract - useful in pimples 2. seed extract- fungal infection and bruises.
9.	<i>Carica papaya</i> Linn. ( <i>Papaya</i> ),	<i>Caricaceae</i> ;	Throughout India	1.Milky juice of unripe fruit - for facial and face cream 2.fruit pulp -make skin soft and remove blemishes.
10.	<i>Cassia tora</i> Linn. ( <i>Panwar</i> ); -	<i>Caesalpiaceae</i>	Throughout India	Leaves and seed extract- useful for skin infection, ringworm, eruption, etc.
11.	<i>Citrus limon</i> (Linn.) Burm.f. ( <i>Nimbu</i> ),	<i>Rutaceae</i> ;	Throughout India-	1.Potential source of vitamin C 2. oil - reduce skin itching and skin nourishment 3. pulp - useful as a facial ingredients.
12.	<i>Cocos nucifera</i> Linn. ( <i>Nariyal</i> ),	<i>Arecaceae</i>	Hot damp region of India	Coconut oil-useful for skin itching and rashes.
13.	<i>Cucumis sativus</i> Linn. ( <i>Khira</i> ), -	<i>Cucurbitaceae</i> ;	Throughout India	Water extract of fruits and seeds protect skin from sunburn.
14.	<i>Curcuma longa</i> Linn. ( <i>Haldi</i> ),	<i>Zingiberaceae</i> ;	Throughout India-	1.Rhizome powder- possesses anti-inflammatory and anti-oxidant properties; 2.used extensively in facial, face creams and ointments.
15.	<i>Cuscuta reflexa</i> Roxb. ( <i>Akash bel</i> ),	<i>Convolvulaceae</i>	Throughout India	Plant extract is useful to control dermatitis, itching and ringworm.

16.	<i>Cydonia oblonga</i> Mill. (Bile)	Rosaceae	North-West Himalayas	Seed extract - used for beautification and protection of skin.
17.	<i>Eclipta alba</i> (Linn.) Hassk. (Bhringraj),	Asteraceae;	Throughout India	Paste of herb -useful to control skin diseases and eczema
18.	<i>Euphorbia thymifolia</i> Linn. (Choti dhudhi),	Euphorbiaceae;	Throughout India	Plant extract -useful to control ringworm and skin infections.
19.	<i>Jasminum grandiflorum</i> Linn. (Chameli),	Oleaceae;	Throughout India	1. Essential oil extracted from flowers- used in skin creams and lotions to control skin diseases. 2. Essential oil extracted from plant-used in creams for the protection from sunburn.
20.	<i>Juniperus communis</i> Linn. (Aaraar),;	Cupressaceae	Himalaya region (1700-4200 m)-	Whole plant extract-useful in skin creams to control skin rejuvenation.
21.	<i>Lavandula vera</i> DC. syn. <i>L. officinalis</i> Chaix (Lavender),	Lamiaceae;	Jammu & Kashmir-	Essential oil -used in skin anti-acne cream.
22.	<i>Leucas aspera</i> Spreng. (Hul Khusa),; -	Lamiaceae	Throughout India	Juice of leaves - applied to control scabies, skin psoriasis, chronic skin, skin eruption and eczema
23.	<i>Mallotus philippensis</i> Muell.-Arg. (Kamala),	Euphorbiaceae;	Throughout India-	Flower powder - useful to control scabies, ringworm, leprous eruption, etc.
24.	<i>Mangifera indica</i> Linn. (Aam),	Anacardiaceae;	Throughout India-	Plant extract possesses anti-oxidant properties.
25.	<i>Matricaria chamomilla</i> Linn. (Babuna), -	Asteraceae;	Himalayan hills	Leaves extract - applied in anti-acne cream.
26.	<i>Mimosa pudica</i> Linn. (Lajwanti),	Mimosaceae;	Throughout India	Herb extract -applied in skin creams and lotions to control itching.
27.	<i>Momordica charantia</i> Linn. (Karela), -	Cucurbitaceae;	Throughout India	Plant extract possesses antioxidant properties.
28.	<i>Ocimum sanctum</i> Linn. and other <i>Ocimum</i> spp. (Tulsi), -	Lamiaceae,	Throughout India	Leaves extract -useful to control skin infection and rejuvenation.
29.	<i>Phyllanthus emblica</i> Linn. syn. <i>Emblica officinalis</i> Gaertn., (Amla),	Euphorbiaceae;	Tropical and subtropical regions of India	Fruit extract possesses anti-oxidant properties.
30.	<i>Pistia stratiotes</i> Linn. (Water lettuce), -	Araceae	throughout India	Leaves extract - applied to control chronic skin disorders.
31.	<i>Prunus amygdalus</i> Batsch (Badam),	Rosaceae;	Himalayan regions (2300 meters)	Kernel extract - used in sun creams and other formulations to make the skin fair and beautification creams.
32.	<i>Psoralea corylifolia</i> Linn. (Babchi), -	Fabaceae;	Throughout India	Seeds extract possesses potential to control skin diseases.
33.	<i>Rosa damascena</i> Mill. (Lal gulab),	Rosaceae;	Throughout India	Essential oil extracted from flowers - used in skin creams, lotions and ointment for beautification, smoothness and protection from sunburns.
34.	<i>Santalum album</i> Linn. (Chandan),	Santalaceae;	Dry regions of India-	1.Paste of hardwood- used in face pack; essential oil used in preparation of creams, ointments and lotions for skin beautification and protection from sunburn; 2. possesses anti-oxidant properties.
35.	<i>Saussurea lappa</i> C.B. Clarke (Kuth),	Asteraceae;	Himalayan hills	Roots extract -used in ointments for chronic skin diseases.
36.	<i>Sesamum indicum</i> Linn. (Til),	Pedaliaceae;	Throughout India	Seed extract -useful for skin protection and rejuvenation.
37.	<i>Swertia chirayita</i> (Roxb. ex Flem.) Karst. (Cheretta),	Gentianaceae;	Himalayas	Bark powder extract controls skin affections; possesses antioxidant properties.
38.	<i>Withania somnifera</i> Dunal (Aswagandha),	Solanaceae;	Drier parts of Himalayas	Whole plant extract - used in skin cleansing formulations and possesses antioxidant properties.
39.	<i>Zea mays</i> Linn. (Makka),;	Poaceae	Throughout India-	Stigma extract - used in creams and lotions for skin rejuvenation
40.	<i>Acacia concinna</i> DC. (Shikakai),	Mimosaceae;	Tropical forest of India -	Pods extract - used as hair cleanser and for control of dandruff.

41	<i>Arnica montana</i> Linn. ( <i>Arnica</i> ),	<i>Asteraceae</i> ;	Cultivated sparingly in India	1. Flowers extract - used in hair oil as a tonic material. 2. It stimulates the hair follicles.
42	<i>Betula pendula</i> ( <i>Birch</i> ),	<i>Betulaceae</i> ;	North West India	Extract of leaves - used as anti-dandruff.
43	<i>Brassica</i> spp. ( <i>Mustard</i> ), -	<i>Brassicaceae</i> ;	Throughout India	Seed oil - used as hair oil and useful for hair nourishment.
44	<i>Calendula officinalis</i> Linn.- ( <i>Marigold</i> ),	<i>Asteraceae</i> ;	Cultivated in India	Flowers extract - used in hair creams for smoothening effect.
45	<i>Carthamus tinctorius</i> Linn. ( <i>Safflower</i> ),	<i>Asteraceae</i> ;	Indian plains-	Alcoholic extract - used in hair tonics.
46	<i>Centella asiatica</i> (Linn.) Urban ( <i>Mandukaparni</i> ),	<i>Apiaceae</i> ;	Throughout India	Whole plant extract - used for the growth and maintenance of hairs
47	<i>Cocos nucifera</i> Linn. ( <i>Nariyal</i> ), -	<i>Arecaceae</i> ;	Coastal parts of India	Kernel oil is a well-established hair oil, which is used as such or as a basic raw material for preparing hair oils and tonics
48	<i>Eclipta alba</i> (Linn.) Hassk. ( <i>Bhangra</i> ),	<i>Asteraceae</i> ;	Himalayas regions	Whole plant extract - useful for hair's nourishment and dyeing.
50.	<i>Ficus racemosa</i> Linn. ( <i>Bargad</i> ),	<i>Moraceae</i> ;	Throughout India	Aerial root powder is mixed with coconut oil for massage to check falling hairs.
51.	<i>Juglans regia</i> Linn. ( <i>Akroot</i> ),	<i>Juglandaceae</i> ;	Himalayas (temperate region)	Leaves and hull of fruits - used for hair dyeing.
52.	<i>Lawsonia inermis</i> Linn. ( <i>Henna</i> ),	<i>Lythraceae</i> ;	Throughout India	Leaves paste - used for hair dyeing and nourishment
53.	<i>Nardostachys jatamansi</i> DC. ( <i>Jatamansi</i> ),	<i>Valerianaceae</i> ;	Alpine Himalayas -	Extract of rhizome - used in hair tonics for their growth.
54.	<i>Phyllanthus emblica</i> Linn. ( <i>Amla</i> ),	<i>Euphorbiaceae</i> ;	Throughout India	Fruit extract - used in oils for promotion of hair growth.
55.	<i>Salvia officinalis</i> Linn. ( <i>Sage</i> ),	<i>Lamiaceae</i> ;	Cultivated in gardens	Aqueous extract - used as hair conditioner.
56.	<i>Sapindus mukorossi</i> Gaertn. ( <i>Ritha</i> ),	<i>Sapindaceae</i> ;	Cultivated in India	Extract of fruit coat works as natural shampoo: used in herbal shampoo as hair cleanser.
57.	<i>Saussurea lappa</i> C.B. Clarke ( <i>Kuth</i> ),	<i>Asteraceae</i> ;	Himalayas	Roots extract - used in hair dyeing
58.	<i>Sesamum indicum</i> Linn. ( <i>Til</i> ),	<i>Pedaliaceae</i> ;	Warmer regions of India	Seed oil is one of the major source of hair oils, which is used as such or a base for preparing specific hair oils.
59.	<i>Terminalia bellirica</i> Roxb. ( <i>Behera</i> ),	<i>Combretaceae</i> ;	Throughout India-	Seed extract and oil is good for hair dyeing preparation.
60.	<i>Terminalia chebula</i> Retz. ( <i>Harra</i> ),	<i>Combretaceae</i> ;	Throughout India-	Seed extract - used in hair care formulations.
61.	<i>Thymus serpyllum</i> Willd. ( <i>Banajwain</i> ),	<i>Lamiaceae</i> ;	Himalayas-	Whole herb extract - useful for preparing hair tonics.
62.	<i>Trigonella foenum-graecum</i> Linn. ( <i>Fenugreek</i> ),	<i>Fabaceae</i> ;	Throughout India	Seed extract - used as hair cleanser.

### Natural colors and dyes:-

Natural color are obtained from following categories:-

1. Vegetable Origin
2. Animal Origin
3. Mineral Origin

#### 1. Vegetable Origin :

➤ From root, bark, stem, wood, flower, leaf and seed of plants.

Indigo, kachnar, catechu, tesu, lal kher, turmeric, henna, cherry, saffron etc.

#### 2. Animal Origin:

1. By dye yielding insects
2. Lac, cochineal, kermes, etc.

#### 3. Mineral Origin:

➤ Various inorganic metallic salts and metal oxide.

Natural dyes - See table no.3



**Table3: Classified commercial dyes**

Chemical group	Prominent example	Color
1. Indigoids	Indigo, tyrian purple	Blue-pink
2. Anthraquinones	Madder (Alizarin) Lac Kermes, Cochineal	Red class of dyes
3. Alpha-naphthaquinone	Henna (Lawsonia)	Orange
4. Flavones	Weld ( <i>Reseda luteola</i> Linn.) Wood of pines, Dahlia, Sunflower, Marigold, Palas, Kamala, Chrysanthemum, Tea, etc.	Natural Yellow class of dyes
5. Anthocyanines	Grape skin extract, Bignonia chica Humb. & Bonpl.	Red Orange
6. Betalains	Beet-root	Red to blue-red
7. Carotenoids	Annatto ( <i>Bixa orellana</i> Linn.) Carrots Saffron	Yellow-orange Orange Jafran (yellow)
8. Diferuloyl- methane	Curcumin from turmeric	Yellow
9. Alkaloids	Berberine	Yellow
10. Chlorophyll	Leaves of lucerne, nettles, mulberry, green plants, pasture grasses, algae, etc.	Green

### Conclusion

The usage of herbal cosmetics has been grow to many folds in personal care system and there is a huge demand for the herbal cosmetics. Normally botanicals provide various vitamins, antioxidants, essential oils, various oils, proteins, hydrocolloids, terpenoids and other bioactive molecules. There is great scope to launch various herbal cosmetics using appropriate bioactive ingredients with suitable fatty oil, proteins, essential oils and additives.

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