

Herbal cosmetics

Herbal cosmetics are the products which contain various cosmetics as a base in permissible limit & one or more herbal ingredients. These using products derived from plants, animals, minerals & other organic products as cosmetics.

Advantages of herbal cosmetics (1) Herbal cosmetics are made up from natural products. Herbal cosmetics utilize plant parts, plant extracts or nutrients which are easily available in nature like neem, aloe vera gel etc.

- (2) Safe to use
- (3) Wide varieties of herbal cosmetics are now available.
- (4) They are available at affordable price.
- (5) They are mostly free from side effects.
- (6) Herbal ingredients are widely available at cheaper rates.

Disadvantages of herbal cosmetics (1) Herbal drugs have slower effects as compare to allopathic dosage form.

- (2) They are difficult to hide ^{taste} & odor.

⑤ Manufacturing process are time consuming & complicated.

⑥ No pharmacopoeia defines any specific procedure of ingredients to be used in any of herbal cosmetics.

Classification of Herbal cosmetics It can be classified into two ways.

[1] Based on dosage form The categories of cosmetics based on dosage forms are

(a) Emulsion For example Cold cream, vanishing cream

(b) Powders For example Face powder, Talcum powder, Tooth powder.

(c) Cakes For example Rouge compacts, Make-up cake

(d) Oils For example Hair oils

(e) Paste For example Tooth paste, Deodarant paste

(f) Soaps For example Shaving soap, Toilet soap.

(g) Solutions For example After shave lotion, Hair set solⁿ.

[2] Based on application on body parts Different types are as follows.

(a) Cosmetics for skin care For example Creams, lotions,

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Sunscreen, Deodorants, Bath products

(b) Cosmetics for hair care For example, oils, shampoos, Dyes, shaving products.

(c) Cosmetics for nail care For example, Nail polishes, Manicure products.

(d) Cosmetics for dental & oral care Tooth pastes, Mouth washes, Dentifrices.

Raw materials of herbal origin used as fixed oils

① Coconut oil

Biological source It consists of fixed oil obtained from kernels of plant *Cocos nucifera* belonging to family - *Palmae/Arecaceae*.

Chemical constituents It contains lauric acid (41.8%), myristic acid (16.7%), palmitic acid (8.6%), caprylic acid (6.8%), monounsaturated fat (6%), phytosterol.

Uses ① It is potent skin moisturizer & softener.

② It is used as antibacterial, antifungal.

Olive oil

Biological source It consists of fixed oil extracted from the fruits of *Olea europaea* belonging to family - Oleaceae.

Chemical constituents It contains oleic acid (83%), linoleic acid (21%), palmitic acid (20%), myristic acid, eicosanoic acid, triolein, tripalmitin, monoesterate, β -sitosterol, squalene.

Uses ① It is good for skin & hair conditioner.

② It is used as antioxidant.

③ It is used in treatment for skin problems such as psoriasis, skin inflammation.

Sunflower oil

Biological source It consists of fixed oil extracted from the seeds of plant *Helianthus annuus* belonging to family - Asteraceae.

Chemical constituents It contains Palmitic acid (5%), stearic acid (6%), oleic acid (30%), Linoleic acid (59%), lecithin, tocopherols, carotenoids, waxes.

Uses ① It is used for soothing properties.

② It is widely used in face & body care products.

Jojoba oil

Biological source It consists of fixed oil extracted from seeds of *Simmondsia chinensis*. belonging to family - *Simmondsiaceae*.

Chemical constituents It consists of fatty acid such as stearic acid, palmitic acid, palmitoleic acid, oleic acid, linoleic acid, triglycerides, arachidonic acid.

- Uses
- ① It is used in cosmetics as a moisturizer
 - ② It is used in lotions, hair shampoos & conditioners
 - ③ The pure oil can be directly applied on skin, hair
 - ④ It is also used has analgesic, anti-inflammatory, antioxidant.

Castor oil

Biological source It is obtained from fixed oil of seeds *Ricinus communis* belonging to family - *Euphorbiaceae*.

Chemical constituents It contain ricinoleic acid, oleic acid, palmitic acid, stearic acid, linoleic acid, α -linoleic acid, Dihydroxystearic acid.

- Uses
- ① The oil protects skin & soothing effect.

- ② It is potent skin cleanser & conditioner
- ③ It is used in cosmetics, hair & skin care

Waxes

Beeswax

Biological source It is most commonly used purified wax obtained from the honeycomb of bees. *Apis mellifera* belonging to family - Apidae.

Chemical constituents It contains ester myricyl palmitate (70%), esters of fatty acids & fatty alcohol, Myricin, cerotic acid (15%), melissic acid & aromatic cerolein.

Uses ① It is used in preparation of ointments, plasters & polishes.

② It is also used in the manufacturing of candles, cosmetics for lipsticks & face cream.

Carnauba wax

Biological source It is obtained from leaves of plant *Copernicia cerifera* belonging to family Palmae.

Chemical constituents It contains mainly esters of fatty acids (80-85%), fatty alcohol (10-16%)

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Acid (3-6%), hydro-carbon (1-3%), aliphatic esters (40%), methoxycinnamic acid

Uses: ① It is used to produce furniture polishes.
② It is used in shoe polishes, automobiles, paper coating.

paraffin wax.

Biological source: It is derived by distillation of petroleum.

Chemical constituents: It mainly consists of paraffins & isomers. It is a mixture of hydrocarbon molecules, polymers, microcrystalline liquid.

Uses: It is used for making candles, cosmetic polishes, crayons.

Spermaceti

Biological source: It is obtained from the head & bladder of the sperm whale. It is a polyester of cerolodol belonging to family - Physeteridae.

Chemical constituents: It contains cetyl palmitate, cetyl myristate, lauric acid, stearic acid, fatty acid, alcohol, etc.

Uses It is used for making candles, cosmetic creams, ointment, lamp oil, soap, detergent, industrial lubricants for various machinery such as sewing machine.

Gum

Acacia

Biological source It is the dried gummy exudation obtained by making incisions on stem & branches of *Acacia Arabica* belonging to family - Leguminosae.

Chemical constituents It contain L-rhamnose, L-arabinose, aldobionic acid, d-galactose, enzymes, pectinase, chitinase, it also contain arabin that is a mixture of calcium magnesium & potassium salt of Asabic acid, the water content about 14%.

Uses It is used as an emulsifying & suspending agent.

- ① It is used in binder & adhesive in tablets
- ② It is also used in lithographic printing & in the sizing of paper & cloth.

Tragacanth

Biological source It is the dried gummy exudation obtained by making incisions on

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Stems & branches of *Astragalus gummifer* belonging to family - Leguminosae.

Chemical constituents - It consists of two fractions of which one is soluble in water. The water portion known as tragacanthin, constituting about 8-10% of the gum. Insoluble portion known as bassorin about 50-70%, moisture (15%), tragacanthin acid, the bassorin insoluble part of the drug contain 5% methoxy group & swell in water.

Uses - It is used as an emulsifying & suspending agent.

(2) It is used in confectionery, demulcent, emollient in cosmetic, binding agent

Gelatin

Biological source - Gelatin is a mixture of animal protein obtained from the bones & skin trimming of animal by treatment with hot water belonging to family - Bovidae.

Chemical constituents - It contain isoleucine, lysine, arginine, aspartic acid, glycine.

Uses - (1) It is mainly used in manufacturing hard & flexible capsule shells.

- (2) It is also used in preparing paste & suppositories, suspending, binding agent
- (5) It is used as a finishing agent in leather manufacture in water proof paper.

Colours

Saffron.

Biological source It consists of dried stigmas & upper part of styles of *Crocus sativus* belonging to family - Iridaceae.

Chemical constituents It contain crocin, Crocetin, picrocrocin, safranal, Riboflavin, hydrophilic, terpenes, ester, terpene alcohol

Uses of colouring agent, flavouring agent, stimulant, Antispasmodic, antioxidant, health benefits such as improved mood, increase weight loss.

Sandalwood

Biological source It consists of heartwood of the stem & root of *Santalum album* belonging to family - Santalaceae.

Chemical constituents It contain Santalin, Santalol hydrocarbon santene, α , β -santalene, sesquiterpene, santenone, alcohol.

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Uses: ① It is used perfume in cosmetics, incense sticks

② It is used as an antiseptic, astringent, headache, stomachic, urinary disorder, inflammatory & skin diseases

Turmeric

Biological source: It consists of dried & fresh root & rhizome of *Curcuma longa* belonging to family - Zingiberaceae.

Chemical constituents: It contains curcuminoids, curcumin, volatile oil, fixed oil, demethoxycurcumin, Eugenol, dihydrocurcumin, borneol, camphene, cineol, turmerone.

Uses: It is used as liver disease, high cholesterol, depression, fever, osteoarthritis, itching, skin disease, antiseptic, inflammation, kidney

Perfumes

Rose oil

Biological source: It is obtained from essential oil produced from the petals of *Rosa centifolia* belonging to family - Rosaceae.

Chemical constituents It contain citronellol, geraniol, nerol, linalool, farnesol, β & α -pinene, α -terpinene, limonene, β -cymene, Camphene, β -caryophyllene, citronellyl acetate, methyl eugenol, eugenol, α , β -Damascenone

Uses lubricant, skin healthy, elastic, ↓ anxiety & stress, Antibacterial, antifungal, aromatic Eucalyptus oil cosmetic, skin

Biological source It obtained by steam distillation from the leaves of *Eucalyptus cinerea* belonging to family - Myrtaceae.

Chemical constituents It contain: eucalyptol (70%), Limonene (4-12%), α -pinene (2-8%), α -phellandrene (1.5%), β -pinene (0.5%), camphor (0.1%)

Uses It is used as cooling properties, analgesic, anti-inflammatory, cough syrups, ointment, toothpaste & also as pharmaceutical flavour.

Lavender oil

Biological source It is obtained from plant *Lavendula angustifolia* belonging to family - Lamiaceae.

Chemical constituents It contain linalool, α , β -terpeniol, borneol, linalyl acetate, geranyl acetate, β & α -pinene, camphor, limonene, tannin, terpenoids, coumarins, β -caryophyllene

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Uses ① It is used in skin disorders, like burning stretch marks, rashes, spots, sunburns.

- ② It is used as antibacterial, hence avoid acne
- ③ It is used in treatment of psoriasis & eczema
- ④ It help to avoid wrinkles.

Protective agents

Aloe vera:

Biological source It consist of dried juice of the leaves Aloe *Barbatenis* belonging to family - Liliaceae.

Chemical constituents It consists of barbaloin, Isobarbaloin, β -barbaloin, aloinoside A & B, capaloresnotannol, aloe-emodin, cinnamic acid, Barbaloresnotannol, resin.

- Uses ① Aloe is used as irritant purgative
- ② Aloe gel is viscous viscid juice, mucilaginous used in cosmetic industry as a protectives in the treatment of sun-burn.
 - ③ It clears skin blemishes & grow new healthy tissues
 - ④ It stimulate the growth of hairs
 - ⑤ Externally, it is applied for painful inflammation.

Ritha

Biological source: It consists of dried fruit of *Sapindus Trifoliatus* belonging to family - Sapindaceae.

Chemical constituents: It contains saponin (10-12%) mucilage, 6 saponoside A, B, C, D & mukorosi saponin, Dioson, protodiosin, diosgenin, gitogenin, Chosogenin & rusogenin, fatty acid, β -sitosterol, starch, sugar, protein.

Uses: It is used in cosmetics, as a hair tonic. It is used as anti-inflammatory, antimicrobial activity, insecticidal activity, epilepsy, emetic.

Shikakai

Biological source: It is obtained from fruit pods, leaves & bark of the plant of *Acacia concinna* belonging to family - Fabaceae.

Chemical constituents: It contains lupeol, spinasterol, -ol, acacic acid, lactone, natural sugar, glucose, arabinose, rhamnose, hexalosenal, spinasterone, oxalic acid, tartaric acid, citric acid, succinic acid, ascorbic acid.

Uses: ① It is used for controlling hair fall & dandruff.

② It can be used alone or in combination with

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Neetha & alma as a shampoo to help manage hair fall & prevent dandruff due to its cleansing & antifungal properties.

- ⑤ It provides shine to the hair, as well as prevents its greying.

Lemon juice

Biological source: It is obtained from fruit of Citrus Limon belonging to family - Rutaceae.

Chemical constituents: It contains flavonones: eriodictyol, hesperidin, hesperetin, narangin, apigenin, doosmin, quercetin, citric acid, vitamin C, limonene, Citronellal, linalool, neral, sabinene.

Uses: ① It may prevent & help fight cancer, kidney stones, digestion.

- ② It helps regular blood sugar
 ③ Promotes weight loss, clear skin, lemon water used in the morning

Bleaching agent

(Turmeric, saffron, Aloe, lemon juice, sandalwood)

Gram flour

Biological source - It is obtained from seed of *Cicer arietinum* belonging to family Leguminosae / Fabaceae.

Chemical constituents - It contains carbohydrates, protein, amino acids, fixed oils, phytosterols, alkaloid, phenolic compound, tannin, flavonoids, glycosides, saponins, amino acid, iron, phosphate, sulphate & Chloride.

Uses - It is used as antioxidant, antidiabetic, anti-inflammatory.

- ① It is used as a food, medicine & spice for thousands of years.
- ② It can be used or added to soups, stews to improve their flavour & make them tastier.

Kushen (Chinese plant)

Biological source - It consists of dried root of *Sophora flavescens* belonging to family - Fabaceae.

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Chemical constituents It contain sophora flavanone, G₁, sophoridene, sophocarpine, sophoramine, oxymatrine, oxysophocarpine, aloperine, sparteine.

- Uses
- ① It is used in Bone, Brain, Breast, colorectal, cervical cancer.
 - ② It is used in skin diseases, skin disease, ulcers.

Antioxidant

Apple

Biological source It consists of apple peels of *Malus domestica* belonging to family - Rosaceae.

Chemical constituents It contain quercetin, epicatechin, procyanidin β -2, riboflavin, vitamin, carbohydrates, sugar, calcium, iron, magnesium, manganese, phosphorus, potassium, zinc, asparagine, D-catechin, Farnese, p-coumaric acid, rutin, Ursolic acid, protocatech-uic acid.

- Uses
- It may lower your risk of cancer, diabetes & heart disease, antioxidant
- ② It is also used commercially for vinegar, juice, jelly
 - ③ It is also used for wine, brandy.

- ④ Fresh apples are eaten raw or cooked, pastry filling & excellent source of dietary fibres.

Orange oil

Biological source It is obtained from the pericarp portion of the fruit of *Citrus aurantium* belonging to family - Rutaceae.

Chemical constituents It contains Hesperidin, Iso-hesperidene, vit-C, limonene, carotenoids, flavonoids, Linalool, Myrcene, β -pinene, α -pinene, sabinene

Uses ① It is used as antioxidant, perfume industry.

- ② It is used in skin & hair care product
 ③ It is used to reduce pain or inflammation
 ④ It is used to relieve stomach upset & give flavour to a variety of food & beverages

Walnut

Biological source It is an edible seed *Juglans regia* belonging to family - Juglandaceae.

Chemical constituents It contains tocopherol, juglone amino acids, unsaturated fatty acids, linoleic acid, α - β hydrojuglone caffeic acid, ellagic acid, hyperin, kaempferol, tannin

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galloylglucose, ellagitannin, polyphenols, vit E

Uses ① It is used as antioxidant.

② It is used in skin care product - UV rays protecting activity

③ It is used in cancer, improve brain health, may support weight loss.

Garlic

Biological source It consists of dried bulb of *Allium sativum* belonging to family - Liliaceae.

C.C, & uses. (Turmeric, lemon juice)

Carrot

Biological source It is obtained from the plant of *Daucus Carota* belonging to family - Apiaceae.

Chemical constituents It contain β -carotene, lesser amount of α & γ Carotene, vitamin A, sucrose, glucose, xylose, fructose, potassium

Uses ① It is used for skin good.

② It is used as antioxidant, cancer-like prostate, colon, stomach.

③ It is used to help promote healthy vision, weight loss.

skin, immunity, such source of dietary
④ It is used into juice, soups & smoothies for a naturally sweet, mild flavor.

Skin Care

Mango

Biological source It consists of dried fruit of *Mangifera Indica* belonging to family - *Anacardiaceae*.

Chemical constituents It contain mangiferin, isomangiferin, tannin, gallic acid, protocatechic acid, catechin, alanine, glycine, γ -aminobutyric acid, Nitric acid, shikimic acid.

Uses It is used as antioxidant

- ② It is used to improved immunity & digestive health
- ③ It may help to reduce weight in those fighting with obesity
- ④ It may help to improve vision

Akash bel

Biological source It consists of dried fruit of *Cuscuta reflexa* belonging to family - *Convolvulaceae*.

Chemical constituents It contain marmelosin A, B, C, furocoumarin, marmesin, psoralin,

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cumbelliferone, carbohydrates, protein, volatile oil, tannins, vitamin C & A, β -sitosterol, glucopyranoside, myricetin, luteolin, quercetin, stigmasterol, Cuscutamine, cuscutin, amarbelon.

Uses: (1) It is used to control dermatitis, itching & ringworm infection.

- (2) It is used in eye drops to treat conjunctivitis.
- (3) The fresh paste of the plant is applied over wound to control bleeding & reduce inflammation.
- (4) It is used in diarrhoea, indigestion, cough, asthma.

Almond.

Biological source: It is a fixed oil obtained by expression from the seeds of *Prunus amygdalus* belonging to family - Rosaceae.

Chemical constituents: It contains Amygdalin, benzoic acid (4.80%), hexadecane (3.97%), benzaldehyde (62.52%), oleic acid, terpene alcohol, squalene, aliphatic alcohol, tocopherol, dimethylsterols, glucopyranoside, naringenin 7-O- β -D-glucopyranoside, protocatechuic acid, catechin, ~~pro~~ p -hydroxybenzoic acid.

Uses: (1) It is used for skin & beautification.

- (2) It is used to treat dry skin conditions such as psoriasis & eczema.
- (3) It is used as anti-aging & UV protection.
- (4) It is used in heart disease.

Cucumbers

Biological source - It consists of fruit of *Cucumis sativus* belonging to family -
- Cucurbitaceae.

Chemical constituents - It contain alkaloids, tannin, flavonoids, phenolic compound, fat carbohydrates, protein, terpenoids, reducing sugar, glycosides, phytosterol, vit, minerals, amino acid, Cucurbitacin, Bitterbitacins

Uses - ① It is used as antioxidant, anticancer,
② It is used for jaundice, antimicrobial, antiulcer, anthelmintic, bleeding disorder.

Palash

Biological source - It consists of dried flower/leaves of *Butea frondosa* belonging to family -
Fabaceae.

Chemical constituents - It contain fixed oil, Linoleic acid, oleic acid, Linolenic acid, palmitic acid, arachidic acid, behenic acid, linoleic acid, alkaloid, monospermine, palasonin, palasonin-N-phenyl imide, butein, butrin, flavonoids, steroids, isocoumarin, sulphurein, pyrocatechin

Uses - ① It is used for pimples, antifungal infections.
② It is used as astringent, anti-inflammatory, aphrodisiac

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- ③ It is used as cooling costipating, diuretic.
- ④ It is also used as arthritis, diabetes.

Hair care.

Brahmi

Biological source It consists of herb of *Centella asiatica* belonging to family - Umbelliferae.

Chemical Constituents It contain Brahme acid, Brahmostide, rhamnose, glucose, arabinose, flavonoid, glycoside, 3-glucosylquercetin, 3-glucosylkaempferol Alkaloids, Hydrocotylme, saponin, β -sitosterol

Uses ① It is used as anti-inflammatory, analgesic, antimicrobial

- ② Brahmi reduces stress & anxiety; memory booster insomnia
- ③ when applied on the hair regularly will help in promoting hair growth.
- ④ Some evidence supports using fish oil for psoriasis, inflammatory & skin condition.

Bhrungraj

Biological source It is obtained from plant *Beluola alba* belonging to family - Asteraceae.

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Chemical constituents It contain dimethyl wedelolactone, wedelolactone, ecliptin alkaloid, β -amyrin, glycosides, triterpenic acid, ecalbasaponin steroids

Uses ^{Bhringraj} oil is very good hair tonic

- ① It is used for getting healthy, black & long hair.
- ② It is used as antioxidant, relieve headache & dandruff & hair fall.

Henna

Biological source It is a natural colorant obtained from leaves of *Lawsonia inermis* belonging to family - Lythraceae.

Chemical constituents It contain Gallic acid, Lawsonic acid, Sugar, Fraxetin, Tannin, hemotannic acid, Lawsonone is 2-hydroxy-1,4 naphthoquinone, naphthalene, naphthoquinone

Uses ① It is used to increased hair growth & hair colour

- ② It relieve headache, Dandruff

Hibiscus

Biological source It consists of flowers of *Hibiscus rosa sinensis* belonging to family Malvaceae.

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Chemical constituents It contain taxaxeryl acetate, β -sitosterol, Campesterol, Stigmasterol, Cholesterol, Ergosterol, flavonoids, glycosides, lipid, citric acid, oxalic acid, Ascorbic acid, phenols, tannin, cyanidin-3-sophoroside, methyl sterulate

- Uses
- ① It act as hair tonic, stimulate hair growth, hair loss, scalp disorder
 - ② It is used as hair conditioners & in hair washes.
 - ③ It is used for eye problems, liver disorders, high blood pressure.

(Shikaki, Amla, Fenugreek.)

Biological source It consists of seed of

Oral hygiene products

Tulsi

Biological source It consists of fresh dried leaves of *Ocimum sanctum* belonging to family- Labiatae.

Chemical constituents It contain eugenol (70%), Carvacrol (3%), eugenol-methyl-ether (20%). It also contain Caryophyllin, alkaloids, glycosides, saponin, tannin, vit. C, fixed oil

- Uses ① It is used as anti-inflammatory, antirheumatic, antimicrobial, stress.
- ② It is used as analgesic, anticancer, asthma, emetic, diaphoretic, hepatoprotective.

Pomegranate

Biological source It consists of fruit of *Punica granatum* belonging to family - *Punicaceae* / *Lythraceae*.

Chemical constituents It contains ellagic acid, ellagitannin, punicalagins, anthocyanidins, anthocyanins, flavonols, flavones, ~~Punicic acid~~ Hydroxybenzoic acid Gallic acid, Chlorogenic, Caffeic acid, p-coumaric acid, Quinic acid.

Uses It is used for high blood pressure, heart disease, diabetes, stress, cancer, throat infection, anti-inflammatory, antibacterial.

Mitswala

Biological source It consists of dried stem bark of *Salvadora persica* belonging to family - *Salvadoraceae*.

Chemical constituents It contains salvadorin, saponin, trimethylamine, tannin, silica, flavonoids, chloride & high amount of fluoride.

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sulphur, Vitamin C.

Uses ① Miswak Keeps the gum healthy & prevent inflammation.

② It is used for antimicrobial

Neem

Biological source It consists of dried leaves & seed oil of Azadirachta indica belonging to family - Meliaceae.

Chemical constituent It contain azadirachtin, nembasterol, β -sitosterol, azadirachtol, nimbin, nimbinine, nimbidine, nimbidol, ascorbic acid, Carotenoids, amino acid.

Uses ① It is used in jaundice & skin disease Rheumatism.

② It is used as antiviral, antifungal

③ It is used for soap making.