A REVIEW ON ROLE OF HERBS IN COSMETICS

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ABSTRACT

Herbal cosmetic also known as “natural cosmetics”. With the beginning of the civilization, mankind had the magnetic dip towards impressing others with their looks. At the time, there were no fancy fairness creams or any cosmetic surgeries. The only thing they had was the knowledge of nature, compiled in the ayurveda. With the science of ayurveda, several herbs and florals were used to make herbal cosmetics that really worked. Ayurvedic cosmetics not only beautified the skin but acted as the shield against any kind of external affects for the body. Ayurvedic cosmetics also known as the herbal cosmetics have the same estimable assets in the modern era as well. There is a wide gamut of the herbal cosmetics that are manufactured and commonly used for daily purposes. Herbal cosmetics like herbal face wash, herbal conditioner, herbal soaps, herbal shampoo, and many more are highly acclaimed by the masses. The best thing of the herbal cosmetics is that it is purely made by the herbs and shrubs. The natural content in the herbs does not have any side effects on the human body; instead enrich the body with nutrients and other useful minerals. Herbal cosmetics are comprised of florals like sandal (chandan), saffron (kesar) and many more that is augmented with healthy nutrient sand all the other necessary components.

KEYWORDS: natural cosmetics, ayurveda, cosmetic surgeries, herbal conditioner.

INTRODUCTION

The word cosmetic was derived from the Greek word "kosmikos "- meaning the power, arrange, skill in decorating.[1] Cosmetics are substances that are used to enhance the appearance of the human body.[2] FDA defines cosmetics as "intended to be applied to the human body for cleansing, beautifying, promoting attractiveness, or altering the appearance without affecting the body's structure or function".[3] According to drugs and cosmetics act
1940 " any articles intended to be rubbed, poured, sprinkled, or sprayed on or introduced to or applied to any part of the body for cleansing beautifying promoting attractiveness or altering the appearance and includes any articles intended for use as component in cosmetics.[2] The large number of cosmetic formulation have been developed based on herbs.[3] In India, the rich cultural heritage is behind the materials used in cosmetics from the earliest period of medical and cosmetic art.[3] Herbs are defined as plant, that are fresh (young) woody (old) stem and it's consist of any part of the plant like leaves, flowers, fruits, roots and rhizomes, bark, tubers, branches.[4] To study the function and efficacy of plant derived ingredients for their use in cosmetics, a new branch of science is developed known as “cosmetic phytognosy” which deals with biochemical properties of plant derived ingredients to be used in cosmetics.[5] Basically six different types of plant derived ingredients are used in herbal cosmetics which are as.

Follows[5],

1) Fresh materials
2) Dried materials
3) Acellular products (oils, gums, resins)
4) Galenical preparation (infusion, decoction, extracts)
5) Processed extracts
6) Pure isolated compound

Ayurveda makes use of herbs to make cosmetics for beautification and protection from external effects.[6] The natural phytoconstituents not causes any side effects on the body, but provide nutrients and other useful minerals to the body.[6] Herbal cosmetics, here in after referred as products, are formed, using various permissible cosmetic ingredient to form the base in which one or more herbal ingredients are used to provide defined cosmetics. Benefits only shall be called "herbal cosmetics".[7] The history of the herbal cosmetic industry includes very dark chapters in European and western countries from about six countries back.[7] The health, habits, job routine, climate conditions and maintenance are only responsible for the skin & hair beauty.[8] Excessive exposure to heat causes skin to dehydrate during summer and causes wrinkles, blemishes, pigmentation and sunburns extremes of winter causes damage to the skin and hair in the form of cracks, cuts, infections, hair fall and dandruff.[9] The disease of skin and are common among all age groups and can be due to exposure towards microbes, chemical agents, biological toxins, and also due to malnutrition.[10] Large number of herbs are
available commercially as cosmetics for skin care, hair care & anti oxidant effects. The herbal formulation produce cleansing and beautifying effects and improves overall appearance when rubbed, poured, sprayed externally or applied to body parts. \cite{11} Plants are the natural sources of cosmetic formulation. they can be used to design some useful inorganic materials that are called" Green synthesis". \cite{12} they are made from original ingredients in plants, leaves, roots, fruits and flowers which have properties for health and beauty. \cite{13} Major chemical compounds in plants are alkaloids, flavonoids, terpenoids, steroids, tannins and saponins which can be assessed by phytochemical screening. \cite{14} "Herbs serve as important cosmeceuticals as they do not carry any adverse effects". \cite{14}

**Types of herbal cosmetics**\cite{5}

The herbal cosmetics are broadly classified into following categories such as.

1) Skin care

![Fig: 1.1 skin care products.](image)

Skin is constantly exposed to dirt, microbes, irritants, radiation & toxins which can affect the skin in many ways. Hence to protect the skin, cleanse it & restore the tone, soothe it and prevent tanning, wrinkles and scar formation various preparation are used which are enlisted as follows.

- skin cleanser
  Eg: cucumber, citrus peels, aloe.
- Moisturizer
  Eg: Aloe Vera, neem, almond oil, rose
- Nourishers
  Eg: honey, carrot, peach, wheat germ oil
- Antiseptics
Eg: neem, turmeric, tulsi, lavender oil

- **Soothing agents (Emollients)**
  Eg: sesame oil, almond oil, aloe vera

- **Sunscreen**
  Eg: aloe vera, chamomile, calendula, cucumber

- **Anti-wrinkle & anti-aging**
  Eg: peach, liquorice, papaya, aloe vera

- **Ant acne**
  Eg: cucumber gel, vetiver

2) **Hair care products**

![Hair care products image](image)

**Fig: 1.2 Hair care products.**

Hair complexion, colour, style Play an important role in people's physical appearance. Hair care preparation are applied topically to the scalp & hair these contain ingredients which either clean condition or nourish the hair to prevent dandruff formation.

The following are the various hair care preparations.

- **Detergent**
  Eg: soap nut, shikakai, reetha

- **Conditioners**
  Eg: henna, amla, hibiscus, rosemary, tea

- **Nourishers**
  Eg: bhringraj, eggs, coconut oil

- **Hair colourant**
  Eg: henna

- **Hair growth promoters**
  Eg: amla, hibiscus, coconut oil

- **Anti dandruff**
Eg: soap nut, shikekai, lemon, thyme, aloe

3) Other Cosmetics

![Fig 1.3: other cosmetics.](image)

- **Colours**
  Used to prepare various cosmetic products like lipsticks, nail polishes, eye products.
  Eg: anthocyanins, saffron, turmeric, castenoids, indigo, capsicum, chlorophyll.

- **Perfumes**
  Eg: volatile oils of plants like rose, lavender, jasmine, and sandalwood

- **Talcum powders**
  Eg: sandalwood, rose, jasmine, lavender, etc.

### Classification of Herbal Cosmetics
Advantages of herbal cosmetics

HERBAL COSMETICS

Based on Dosage form

A) Emulsion
   - Cold creams
   - Vanishing cream
   - Liquid cream
B) Powders
   - Talcum powder
   - Tooth powder
   - Face powder
C) Cakes
   - Rouge compacts
   - Make up cake
D) Oils
   - Hair oils
E) Mucilage
   - Hand lotion
F) Jellies
   - Hand Jellies
   - Wave set jelly
   - Brilliantine jelly
G) Suspension
   - Cosmetic stockings
H) Paste
   - Tooth paste
   - Deodorant paste
I) Soaps
   - Shampoo soap
   - Shaving soap
   - Toilet soap
J) Solutions
   - After shave lotions
   - Hair set solutions
   - Lotions

Based on Part of the body to be applied

A) Herbal cosmetics for skin
   - Powders
   - Cream
   - Deodorant
   - Lotions
   - Bath cleansing products
B) Herbal cosmetics for hair
   - Shampoo
   - Tonic
   - Beard softeners
   - Hair removers
C) Herbal cosmetics for nail
   - Nail polishes
   - Manicure preparation
D) Herbal cosmetics for teeth and mouth
   - Tooth powder
   - Dentifrices
   - Mouth washes
PURE AND ORGANIC INGREDIENTS

- Free from side effects
- No surfactant (sodium lauryl sulphate)
- No synthetic additives
- No animal testing
- Earth and skin friendly
- No petroleum-based ingredients
- Easy to manufacture and cheap on cost
- Easily available & found in large variety & quantity
- Extracts of plant decrease the bulk property of cosmetics and give appropriate pharmacological effect
- With small quantity they are very effective as compared to synthetic cosmetics
- They are easily incorporated with skin and hair

DRUG PROFILE

Literature was studied in order to obtain the information about herbs that play an important role in cosmetics and its various complications. The search was done on google scholar and other relevant databases, using keywords like herbs, skins, phytoconstituents, care, etc. The information was also extracted from various ayurvedic treaties, textbook of herbal drug technology and books of pharmacognosy and cosmeceuticals available in the library of PPG College of pharmacy, Coimbatore, Tamil Nadu. Available research articles were also investigated.

Study of Herbs and Their Cosmetic Roles

1) Skin care products

1.1) Cucumber

It is an annual creeper plant, Cucumis sativus, that belongs to the family cucurbitaceae (cucumber family). The following six cucumis sativus (Cucumber) derived ingredients as used in cosmetic formulation,

✔ Cucumis sativus (cucumber) fruit extract
✔ Cucumis sativus (cucumber) extract.
✔ Cucumis sativus (cucumber) fruit water
✔ Cucumis sativus (cucumber) juice
✔ Cucumis sativus (cucumber) seed extract. [14]
Vernacular name
- Eng: Cucumber
- Tam: vellarikka\textsuperscript{[15]}

Chemical constituents
It contains 90% of water content, 22.3% linoleic acid, 58.5% oleic acid, 6.8% palmitic acid and 3.7% stearic acid. The fresh cucumber is a very good source of vitamin C, vitamin K, and potassium. It also contains vitamin A, vitamin B6, thiamin, folate, pantothenic acid, magnesium, phosphorus, copper & manganese.\textsuperscript{[16]}

Medicinal uses
The fresh fruit is used internally in the treatment of blemished skin, heat rash, etc. And also used externally as a medicine for burns, sores.\textsuperscript{[17]}

Cosmetic Uses
Its extract is rich in vitamins, especially vitamin C and A, which have some cosmetic benefits for the skin, hence it is used to make sheet masks and gel. Cucumber contains 90% of water content so it has an excellent potential for cooling, healing an irritated skin, whether caused by sun or due to cutaneous eruption. Cucumber extract is a super food for skin. The juice is composed largely of proteins, lipids, vitamin C and a variety of minerals and possesse moisturizing and emollient properties. It also has astringent effects and can soothe and relieve puffy skin. Seed extracts are ingredients made from the cucumber cucumis sativus. These ingredients are used in a wide variety of products including bath products, nail care products, make-up and eye makeup, as well as hair care products. Seed extract functions as skin conditioning agents.\textsuperscript{[17]}

1.2) Almond oil
It is extracted from the dry fruits of *prunus dulcis* (sweet almond) belonging to the family rosaceae (rose family).\[^{18}\]

**Vernacular name**
- Eng: Almond, Indian almond
- Tam: badam\.\[^{18}\]

**Chemical constituents**
It consists of glycerides (80% oleic acid, 15% linoleic acid, 5% palmitic acid) and also it contains 3 to 5% amygdalin so it is called cyanogenic glycosides composed of mandelic nitrile and gentiobiose. It is rich in vitamins, minerals.\[^{19}\]

![](https://example.com/almond-oil.jpg)

**Fig 2: 1.2 Almond oil.**

**Medicinal Uses**
It is a folk remedy for skin, sores, and also the plant contains antitumor properties.\[^{20}\]

**Cosmetic uses**
Almond oil has been used for centuries to soothe the skin and treat minor wounds and cuts. It has been used in ancient Chinese and Ayurvedic practices to treat skin conditions like eczema and psoriasis. More than soothing dry skin, almond oil can improve complexion and skin tone. It’s highly emollient, which means it helps to balance the absorption of moisture and water loss. Because it is antibacterial and full of vitamin A, almond oil can be used to treat acne. Its concentration of vitamin E can also help to heal sun damage, reduce the signs of aging, and fade scars. Almond oil soaks in quickly and is a powerful moisturizer, so it can be used on the face or body. You can apply it straight, or mix it with essential oils to get its benefits. Beyond moisturizing your skin, almond oil is a great massage oil or skin treatment. It also has powerful antifungal properties. Rub it on your feet to prevent athlete’s foot or to
help remove other fungal infections like ringworm. You can use almond oil as a cleanser or to gently remove makeup As well.[20]

1.3) Aloe- Vera

Aloe vera is one of the succulent plants or succulents. Succulent plants are those that retain water in their stem and leaves. They are also called flesh plants. The sticky substance inside the Aloe Vera leaves is called aloe latex. It belongs to the family liliaceae.[21]

Fig. 2: 1.3 Aloe-vera.

Vernacular name
- Eng: Aloe Vera
- Tam: chirukuttali.[22]

Chemical constituents

The main chemical constituents of Aloe vera includes: Amino acids, anthraquinones, enzymes, minerals, vitamins, lignins, monosaccharides, polysaccharides, salicylic acid, saponins, and sterols. Essential amino acids are available in Aloe vera including isoleucine, leucine, lysine, methionine, phenylalanine, threonine, valine and tryptophan. Some of the other non essential amino acids found in Aloe vera includes alanin, arginine, asparagine cysteine, glutamic acid, glycine, histidine, proline, serine, tyrosine, glutamine, and aspartic acid. Anthraquinones are aloin, aloe- emodin and emodin. Enzymes are found in Aloe vera include amylase (breaks down sugars and starches), bradykinase (stimulates immune system, analgesic, anti- inflammatory), catalase (prevents accumulation of water in the body), cellulose (aids digestion- cellulose), lipase (aids digestion- fats), oxidase, alkaline, phosphate, proteolytic enzymes(hydrolyses proteins into their constituent elements), creatine phosphokinase (aids metabolism), and carboxypeptidase. It contains vitamins such as A,C, and E plus the minerals, zinc, and selenium. Other constituents of Aloe vera would include
prostaglandins, tannins, magnesium lactate, resins, proteins such as lectins, mono sulfonic acid gibberellin and saponins. The plant sterols or phytosterols in Aloe vera include cholesterol, campesterol, lupeol, sitosterol. Flavonoids like aloin, aloe resin D, etc. also present.\textsuperscript{[23-24]}

\textbf{Medicinal uses}

It helps to cure regular problems like cough, cold, indigestion, cuts, burns etc.\textsuperscript{[25]}

\textbf{Cosmetic Uses}

It contains vitamins A (beta-carotene), C and E, which are antioxidants. It also contains vitamin B12, folic acid, and choline. Antioxidants neutralize free radicals. It contains 8 enzymes: liaise, alkaline phosphatase, amylase, bradykinase, carboxypeptidase, catalase, cellulase, lipase, and peroxidase. Bradykinase helps to reduce excessive inflammation when applied to the skin topically, while others help in the breakdown of sugars and fats. Aloin and emodin act as analgesics, antibacterials and antivirals. Auxins and gibberellins that help in wound healing and have anti-inflammatory action. Mucopolysaccharides help in binding moisture into the skin. Aloe stimulates fibroblast which produces the collagen and elastin fibers making the skin more elastic and less wrinkled. It also has cohesive effects on the superficial flaking epidermal cells by sticking them together, which softens the skin. The amino acids also soften hardened skin cells and zinc acts as an astringent to tighten pores. Its moisturizing effects has also been studied in treatment of dry skin associated with occupational exposure where aloe vera gel gloves improved the skin integrity, decreases appearance of fine wrinkle and decreases erythema. It also has anti-acne effect. It provides 20 of the 22 human required amino acids and 7 of the 8 essential amino acids. It also contains salicylic acid that possesses anti-inflammatory and antibacterial properties. Lignin, an inert substance, when included in topical preparations, enhances the penetrative effect of the other ingredients into the skin. Saponins that are the soapy substances form about 3\% of the gel and have cleansing and antisepctic properties.\textsuperscript{[25]}

\textbf{2) Hair care products}

\textbf{2.1) Shikakai}

It is a dried plant part of \textit{Acacia concinna}, it belongs to the family fabaceae. Acacia is a climbing, most well-known cosmetic plant.\textsuperscript{[26]}

\textbf{Vernacular name}
Eng: shikakai
Tam: shikakai, sheekay, cikaikkai.\textsuperscript{[26]}

Fig 2: 2.1 shikakai.

**Chemical constituents**
Pods of A. concinna contains several saponins including kinmoonosides A-C, triterpenoid prosapogenols named concinnosides A,B,C,D, and E together with four glycosides, acaciaside (triterpenoid trisaccharide) julibroside A1, A3, albizia saponin C, and their aglycone, acacic acid lactone. The leaves contain oxalic, citric and tartaric acid, tannins, amino acids, proteins and some alkaloids like calyctomine and nicotine. Bark contains saponin, glucose, etc.

**Medicinal uses**
It is popularly referred as "fruit for the hair" as it has a naturally mild pH that gently cleans the hair without stripping it of natural oils. It is a natural conditioner, which removes oil and dirt, and keeps hair free of fungal infections, by detoxifying the blood in the scalp and preventing premature graying of hair.\textsuperscript{[27]}

**Cosmetic uses**
Acacia concinna has been used traditionally for hair care in the Indian subcontinent. It is traditionally used as a shampoo and it is also added in synthetic Ayurvedic shampoos. In order to prepare it, the fruit pods, leaves and bark of the plant are dried, ground into a powder, then made into a paste. It is considered a good cleanser. It is mild, having a naturally low pH, and doesn't strip hair of natural oils. An infusion of the leaves has been used in anti-dandruff preparations. Saponins from the plant's pods have been traditionally used as a detergent.\textsuperscript{[27]}

2.2) Amla
The small fresh juicy fruit of amla obtained from the species of *Emblica officinalis* that belongs to the family Euphorbiaceae.[28]

**Vernacular name**
- Eng: gooseberry, Emblic Myrobalan
- Tam: Nellikai, Malanelli.

![Fig: 2.2.2 Amla.](image)

**Chemical Constituents**
The fruit is a very rich source of vitamin C. The seeds contain a fixed oil, phosphatides, and an essential oil. The fruit bark, and the leaves are rich in tannin. The root contains ellagic acid and lupeol and the bark contains leucodelphinidin. The seeds yield a fixed oil (16%) which is brownish-yellow in colour. It has fatty acids including linolenic (8.8%), linoleic (44%), oleic (28.4%), stearic (2.15%), palmitic (3.0%), and myristic (1%).[28]

**Medicinal uses**
Amla has the most anti-diabetic properties due to the presence of ellagic acid. It increases red blood cell count. It removes excessive salivation, nausea, vomiting, internal body head and menstrual disorders.[28]

**Cosmetic Uses**
Drinking amla juice daily is equally beneficial in stimulating hair growth. Regular intake provides immunity, strengthens hair follicles and adds volume to the hair, besides clearing dandruff. Rich in carotene, iron and antioxidants, amla not only rejuvenates hair follicles but also prevents loss of hair and baldness. Hair fall is a common problem and it is caused due to poor dietary habits, pollution, lack of nutrition, stress, hereditary etc. In fact, regular intake of amla also restricts hair loss.[29]

2.3) Henna
Lawsonia inermis is a glabrous branched shrub that belongs to the family Lythraceae - Loosestrife.\textsuperscript{[30]}

![Henna](image)

**Fig: 2.2.3 Henna.**

**Vernacular name**
- Eng: Henna
- Tam: maruthanii\textsuperscript{[30]}

**Chemical constituents**
The phytochemicals that are present in the Henna are phenols, anthraquinones and glycosides. Lawsone is the active constituent of the Henna leaves. The other chemical constituents of Henna are gallic acid, white resin, sugars, tannins and xanthones. Lawsone is the main colouring constituent of the Henna and is obtained by the degradation of Lawsoniaside A, B. Also rich in vitamin E.\textsuperscript{[31]}

**Medicinal uses**
Relief from headache, reducing inflammation caused by arthritis symptoms, treats a variety of skin conditions, promotes healthy hair, reduce body temperature (fever), promotes healthy gums, reduces pitta in the mind, natural treatment for diaper rashes, to cure dysentery, powerful detoxifier, regulates blood pressure.\textsuperscript{[31]}

**Cosmetic uses**
In traditional medicine, henna is known as an astringent, purgative, and abortifacient. However, it’s also used on hair. “Henna has antifungal properties, which make it beneficial for those with dandruff and hair-fall related issues. Henna also helps reduce premature graying of hair, because it’s loaded with tannins, a plant compound found in teas that contributes to their rich coloring. Henna contains vitamin E, which helps to soften hair. The natural leaves of the plant are rich in proteins and antioxidants that support hair health. Henna has also been used since ancient times as a natural hair dye.”\textsuperscript{[31]}
3) Other cosmetics

3.1) Saffron

*Crocus sativus*, commonly known as saffron crocus, or autumn crocus, is a species of flowering plant of the Crocus genus in the iris family Iridaceae. It is best known for producing the spice saffron from the filaments that grow inside the flower.\(^{[32]}\)

![Fig 2: 3.1 Saffron.](image)

**Vernacular name**
- Eng: saffron flower, saffron
- Tam: kumkumappoo\(^{[32]}\)

**Chemical constituents**
The drug contains volatile oil (1.3%), fixed oil, and wax. Crocin is the chief colouring principle in Saffron. On hydrolysis, it yields gentiobiose and the carotenoid pigment crocetin. Saffron possesses a number of carotenoid coloured compounds such as ester of crocin (a coloured gly-coside), picrocrocin (a colourless bitter glycoside), crocetin (an aromatic compound), gentiobiose, α- and γ-carotenes, lycopene, zeaxanthin, crocin-1, crocin-2, crocin-3, crocin-4, mono- and digentiobiosyl and glucosyl esters of crocetin; β-sitosterol, ursolic, oleanolic, palmitoleic, oleic, linoleic, and linolenic acids (in bulbs).\(^{[33]}\)

**Medicinal uses**
Saffron is used in fevers, cold, melancholia and enlargement of the liver; as colouring and flavouring agent, catarrhal, snake bite, cosmetic pharmaceutical preparations, and as spice. Saffron has stimulant, stomachic, tonic, aphrodisiac, emmenagogue, sedative, and spasmolytic properties.\(^{[34]}\)

**Cosmetic Uses**
More recently, saffron has attracted a renewed interest for its use in cosmetics. Since ancient times, saffron is used for cosmetic purposes, absorbed in infusion or even in the cutaneous application, mixed with fat or macerated in donkey milk, for its eternal youthful properties. Historically, plant pigments such as curcumin, beet anthocyanins, carotenoids from peppers, chlorophyll from green leaves and saffron, have been used to color food and cosmetics, for centuries. It has been used as a substitute for turmeric where light exposure would cause fading of turmeric.[34]

3.2) Jasmine

Jasmine is any of the more than two hundred species of shrubs and vines comprising the plant genus Jasminum of the olive family (Oleaceae). The term also refers to the perfume made from these plants.[35]

![Fig: 2.3.1 Jasmine.](image)

**Vernacular name**
- Eng: jasmine
- Tam: malligaipoo[35]

**Chemical Constituents**
There are well over 100 constituents found in jasmine oil, but the main chemical components are benzyl acetate, linalool, benzyl alcohol, indole, benzyl benzoate, cis-jasmone, geraniol, methyl anthranilate and trace amounts of p. cresol, farnesol, cis-3-hexenyl benzoate, eugenol, nerol, ceosol, benzoic acid, benzaldehyde, y-terpineol, nerolidol, isohytol, phytol etc.[36]

**Medicinal uses**
It is popular as an alternative to standard western allopathic medicine for a variety of problems, including cancer (specially of the bone, lymph nodes and breast), stress relief, anxiety as well as depression.[37]
Cosmetic Uses
Owing to its antibacterial properties, it helps regulate the skin’s natural oil or sebum, thereby keeping the skin oil free and naturally moisturised. It deeply cleanses the skin, without clogging the open pores and thereby soothes acne and breakouts. This also helps keep the scalp free from itching, dryness and dandruff. This further strengthens the hair follicles, to avoid breakage, and maintain healthy hair lengths. Enriched with antioxidants, it helps to protect the skin from environmental stress and harmful UV rays. This oil also helps increase the elasticity of the skin and tone it by maintaining the skin’s pH levels. It deeply moisturises dry skin as well, and nourishes to reduce the stretch marks. It can be used as a natural primer before makeup.[37]

Methods of Preparation
Herbs have been used in dried and fresh forms from earlier times for medicinal and beautification purposes. Previously it was used by mashing and directly applying on the body only. Nowadays, their decoction, Infusion, Extracts, tincture, flower waters, steam distillates, etc, are used.

1) Decoction
IT is prepared by boiling coarse powder of the herb with water in a stainless steel pan. Gently boil and continue boiling for about 2-3 hours on gentle heat till the water is reduced to one quarter of its original volume.

Fig 3.1: Decoction.

2) Infusion
Infusions are actually strong teas of herbs and can be prepared in stainless steel pan or vessels. Place the coarse powder of the herb in a vessel and pour freshly boiled water in it and cover with a lid and keep it for at least 3-5 hours aside. Strain and filter. The quantity of herbs
and solvent depends on whether the herb is fresh or dried. Usually 100 gm of fresh herb or 50 gm of dried herbs required 575 ml of water. Aluminum vessels should not be used as it may spoil the infusions.

Fig 3.2: Infusion.

3) **Tinctures and Extracts**

Tinctures are prepared with either alcohol or hydro- alcoholic solvent mixtures with higher percentage of alcohol. Extracts are generally prepared with hydro- alcoholic solvents. Place coarse powder of herbs or flowers in a macerator with alcohol or water- alcohol mixture. Close the macerator with a lid and leave it overnight. Add more solvent and further macerate for 2-3 days, sometimes it takes one week to complete maceration. Strain the mixture with strainer and filter the tincture/extract. It should be stored in a tightly closed container. Usually 100 gm of fresh herb or flowers requires 575 ml of water, water- alcohol mixture or alcohol.

Fig: 3.3 Tinctures and Extracts.

4) **Flower Waters**

IT is made the same way as infusions. The same proportions of herbs or flowers and water are used. The main difference in flower water and infusion is that solvent is allowed to remain in contact with flowers overnight in case of flower waters.
5) Oil Soluble Extracts

It can be prepared by extracting herbs with petroleum ether. The coarse powder of herbs is placed in water overnight in a stainless steel vessel. More water is added the next day. This herb-water mixture is placed with oil and the vessel is heated till all the water has been removed. The oil is allowed to cool and then filtered. Herbs soak water and its cells get swollen, with further soaking of water cells rupture exposing oil soluble principles. In this way oil soluble principles of herbs get into oil.

Selection and extraction of herbal products

In a typical production process, required parts of the plant are collected, allowed to air dry, then pulverized and added to the extracting solvent. Weight ratio of plant material to solvent, temperature, length of time, solvents and extraction method all are condition dependent upon...
the kind of herb being extracted. The resulting mixture then is filtered and bulk of the solvent removed by continuous evaporation (or other similar type of processes) to yield a syrupy concentrate. Without further processing and refinement, however, this concentrate is not usable in most cosmetic preparations. Solubility is enhanced by blending concentrate with suitable solvents.

Common solvent systems can contain water, propylene glycol, ethoxydiglycol, butylene glycol, and denatured alcohols. There are also special products developed by the industry for anhydrous cosmetic preparations. In these cases the solvents may include mineral oil, apricot kernel oil, and petrolatum, to mention a few. Adequate preservation for the extract also is mandatory since these natural products often allow bacteria to grow and multiply. Most common preservatives for this purpose are paraben, although other cosmetic grade preservatives also can be used. Special attention must be given to preservation of the final cosmetic formula since it does contain natural products. Whenever dealing with natural products of any type there must also be an affect by the supplies of the ingredient to standardize this product given the active variability problem encountered in nature. These standardization procedures are intended to offer a product which is consistent in colour, odour, and major "active" chemical entities.

**DISCUSSION**

**Herbal Cosmetics for Skin**

**Table 1: Discussion of skin care product.**

<table>
<thead>
<tr>
<th>S.No</th>
<th>Name of the Formulations</th>
<th>Ingredients</th>
<th>Role of herb</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>F1: Herbal sun screen cream</td>
<td>Aloe-vera fresh gel, castor oil, avocado oil / butter, titanium dioxide, xanthan powder, hot distilled water.</td>
<td>The chemical constituents of aloe-vera which enhances the skin moisture content and it is a good active ingredient to reach for in your sunscreen. It’s been proven to both treat and prevent burns on your skin.</td>
</tr>
<tr>
<td>2</td>
<td>F2: Anti- wrinkle lotion</td>
<td>Vitis vinifera (grapes), Citrus lemon, Solanum lycopersicum, Aloe Vera fresh gel.</td>
<td>It contains aloe Vera fresh gel its rich in vitamin E which are good anti oxidants its stimulate fibroblast. This produces the collagens and elastin fibers making the skin more elastic and less wrinkle.</td>
</tr>
<tr>
<td>3</td>
<td>F3: Almond cream for dry skin</td>
<td>White wax, Almond oil, Rose water, Sodium benzoate.</td>
<td>Almond oil is one of the amazing natural remedy that can be used to reduce dry skin. its highly emollient which means it help to balance the absorption of moisture and water loss.</td>
</tr>
</tbody>
</table>
F4: Eye cream for dark circles under the eyes

<table>
<thead>
<tr>
<th>Ingredients</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lanolin, Almond oil, Soybean flour, Cold water.</td>
<td></td>
</tr>
</tbody>
</table>

Almond oil is an excellent source of fatty acid, can help you nourish your skin below eyes well and remove dark circles and wrinkles in a natural ways.

Herbal Cosmetics for Hair Care

Table 2: Discussion of hair care product.

<table>
<thead>
<tr>
<th>S.No</th>
<th>Name of the Formulations</th>
<th>Ingredients</th>
<th>Role of herb</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hair oil</td>
<td>Refined coconut oil, Balsam Peru, Sandalwood oil, Henna extract, Amla extract, Alkanet root, Oil rosemary.</td>
<td>Hair oil has a stimulating effect upon the hair follicles. They are generally perfumed with oil of rosemary and other scenes as it possesses a good stimulating property.</td>
</tr>
<tr>
<td>2</td>
<td>shampoo</td>
<td>Shikakai, Tincture cantharides, Aqua samburi, Essential rosemary.</td>
<td>Shampoo is a preparation of a surfactant (i.e. surface-active material) in suitable form - liquids solid, or power which when used under the conditions specified will remove surface grease, dirt, and skin debris from the hair shaft and scalp without affecting adversely the hair, scalp or health of the user.</td>
</tr>
<tr>
<td>3</td>
<td>Hair colourant</td>
<td>Henna, Potash, Ammonia, Glycerine, Alcohol, Rose water.</td>
<td>These are the preparations which are used for the colouring of the hairs. They enhance the attractiveness of the gray hair. They are applied externally on the hair with the help of a brush.</td>
</tr>
</tbody>
</table>

Other cosmetic

Table 3: Discussion of other cosmetics.

<table>
<thead>
<tr>
<th>S.No</th>
<th>Name of the Formulations</th>
<th>Ingredients</th>
<th>Role of herb</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Face powder</td>
<td>Sandalwood powder, Zinc oxide, Talc, Rice starch, Zinc stearate, Perfume and colour.</td>
<td>Sandal wood has antiseptic properties that prevent pimples acne and sores from developing. exposure to dust and dirt can cause bacterial growth on your skin which can further lead to skin problems applying sandalwood powder on your affected area can really kelp.</td>
</tr>
<tr>
<td>2</td>
<td>lip jelly</td>
<td>Petroleum jelly, Anhydrous lanolin, Perfume and colour.</td>
<td>Here saffron act as colouring agent. saffron possesses a number of carotenoid coloured compounds (crocin) it helps in prevent cracks, dryness and repairs sun damage.</td>
</tr>
</tbody>
</table>
CONCLUSION

Herbal cosmetics are prepared, using permissible cosmetic ingredients to form the base in which one or more 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 color, natural fragrances and parts of plants like leaves, etc. The Cosmeceuticals are agents that lie somewhere between pure cosmetics (lipstick and rouge) and pure drug (antibiotics, corticosteroids) methods. The cosmetic products are the best option to reduce skin problems such as hyper pigmentation, skin wrinkling, skin aging and rough skin texture etc. The demand of herbal cosmetic is rapidly expanding. The advantages of herbal cosmetics are lower cost, side effects free, environmental friendly, safe to use etc. Also has a great future ahead as compared to the synthetic cosmetics. Proper regulation of these herbs and standardization will lead to tremendous and significant growth in herbal cosmetics field.

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