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The Review on Herbal Cosmetics

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Abstract:

Human beings have been using herbs for different purposes like food, medicine, and beautification. The word cosmetic was derived from the Greek word "kosmtikos" meaning having the power, arrangement, and skill in decorating. The origin of cosmetics forms a continuous narrative throughout the history of man as they developed. The man in prehistoric times 3000 BC used colours for decoration to attract the animals that he wished to hunt and also the man survived an attack from the enemy by colouring his skin and adorning his body for protection to provoke fear in an enemy (whether man or animal). The origin of cosmetics was associated with hunting, fighting, religion and superstition and later associated with medicine Herbal Cosmetics, here in after referred to as Products, are formulated, using various permissible cosmetic ingredients to form the base in which one or more herbal ingredients are used to provide defined cosmetic benefits only, shall be called as "Herbal Cosmetics".

Keywords: Herbal cosmetics, skin cosmetics, tooth cosmetics, hair cosmetics

Introduction:

Advantages of Herbal Cosmetic on Traditional Cosmetics:

1. They do not provoke allergic reactions and do not have any negative side effects.

2. They are easily incorporated into skin and hair.

3. These are very effective than other cosmetics in small quantities.

4. Extractingthe form of the plants decreases the bulk properties of the cosmetics and gives appropriate pharmacological effects.

5. Easy to availability and found in a large variety of plants.

6. They have more stability, purity, and efficacy, with their herbal constituents.

7. Easy to manufacture.

8. The storage and handling of herbal cosmetics are easier and for a prolonged period.

9. Cheap in cost.

Raw Materials Generally Used in Herbal Cosmetics

Oils, Waxes, Gums, Hydrophilic Colloids, Colours, Perfumes, Protective Agents, Bleaching Agents, Preservatives, Antioxidants And Other Agents.

The beauty of the skin depends on health, habits, routine, environmental conditions and maintenance. Skin becomes dehydrated during the summer and causes wrinkles, freckles, imperfections, pigmentation and sunburn. In winter, skin damage occurs in the form of cracks, cuts, macerations and infections. Skin

diseases are common to all age groups and may be due to exposure to microorganisms, chemicals, toxins, microbes, chemical agents, and biological toxins present in the environment and also partly due to malnutrition. The natural content in plants does not cause side effects in the human body; Instead, it enriches the body with nutrients and other useful minerals. The only factor to rely on was the knowledge of nature compiled in Ayurveda. The science of Ayurveda had used many herbs and flowers to create cosmetics to beautify and protect against external effects.

BASIC SKIN CARE:

Skin is the outermost covering of the body. It is the largest organ of the body. It constitutes the first line of defence, skin contains many cells and structures, and it is decided into three main layers,

1. Epidermis:

The outermost layer varies in thickness in different regions of the body. Provide a waterproof barrier and create our skin tone. The epidermis is divided into five layers. The stratum basal called keratinocytes is the cell that manufactures and stores the protein keratin. Keratin is a fibrous protein that gives hair, nails, and skins their hardness and water resistance properties. The stratum basal called keratinocytes is a cell that manufactures and stores the protein keratin. Keratin is a fibrous protein that gives hair, nails, and skin their hardness and water resistance property Markel cell, which is responsible for stimulating sensory nerves. melanocyte produces the pigment melanin gives skin colour and protects living cells of the epidermis from ultraviolet radiation. Stratum spinosum is spiny in appearance due to the cell processes that join the cells via a structure called desmosomes. The stratum lucidum is a smooth, translucent layer of the epidermis. Stratum corneum is the most superficial layer and it is exposed to the outside environment Keratin is a fibrous protein that gives hair, nails, and skin their hardness and water resistance properties.

COSMETIC PREPARATION:

The physical states of cosmetics preparation are divided into the following three categories: Solids: Face powders, Talcum powders, Face packs, Masks, Compact powders, Cake makeup, etc.

Semi solids:

Creams, Ointments, Liniments, Wax base creams, pastes, etc. Liquids: Lotions, Moisturizers, Cleansing milk, Mouthwashes, Deodorants, Liniments, Sprays, etc. The preparation of any herbal cosmetics basically follows a similar procedure as in the case of cosmetics. In preparation, suitable bioactive ingredients of their extracts are used along with requisite ingredients basically used for cosmetics. It requires the selection of a suitable emulsifying agent, and modified methodology to obtain a desirable product of specified parameters. The herbal cosmetics formulation is a sophistically sensitive technological profile because it retains the bioactivity of the botanical during excessive processing and ascertains their availability after application on the skin. It is desirable that manufacturers should ensure the quality of products through systematic testing at their level.

Dermis:

The dermis contains tough connective tissue hair follicles and sweat glands. Also contain collagen, a protein which is responsible for skin strength and elasticity.

Hypodermis:

The hypodermis is made up of fat and connective tissue. Fat serves as insulation for the body.

Oils:

Oils are derived from vegetable and mineral sources and are used in cosmetics. Examples of vegetable oils are almond oil, arches oil, castor oil, olive oil and coconut oil. Examples of mineral oils are light and heavy paraffin.

a) Almond Oil:

It is a fixed oil obtained by expressing the seeds of Prunes Amygdalus, Family Rosaceae, The oil is pale yellow in colour, with a characteristic odour. The active principles are mainly the mixture of glycoside with oleic acid, linoleic acid, myristic and palmitic acid. It has an emollient action, so it is used in the preparation of creams and lotions.

b) Arachis Oil:

This is also a fixed oil obtained from the seeds belonging to the family Leguminosae. The oil is pale yellow in colour, with a faint nutty odour. Refined groundnut oil is colourless, with active principles like oleic. Linoleic acid and a smallnumber of other acids. At 3°C, it is cloudy, at a lower temperature, it solidifies. It is used in the preparation of hair oils and brilliantines. Castor Oil: Oil is obtained from the seeds of Ricinus Communis belonging to the family, Euphorbiaceae. It has a slight odour; the oil is either yellow in colour or colourless. It consists of a mixture of glycosides, in which 80% of ricinoleic acid is the major constituent. At 0° C, it forms a clear liquid. It is used as an emollient, in the preparation of lipsticks, hair oils, creams and lotions.

c) Olive Oil:

This oil is obtained from the fruit of the Oleaeuropea, belonging to the family, Oleaceae. The oil is either pale yellow or greenish yellow in colour, it has a slight odour. It consists of the glycerides of oleic acid, palmitic, linoleic, stearic and myristic acids. At a lower temperature, it is solid or partly solid. It has emollient, soothing properties. It is used in the manufacturing of creams, lotions and bath oils.

d) Coconut Oil:

This oil is obtained from the dried solid part of the endosperm of the coconut - Cocosnucifera, family Palmae. It is a white or pearl-white unctuous mass in winter and colourless in summer.

e) Light liquid paraffin:

It consists of a mixture of hydrocarbons in the form of an oily liquid which has no colour or odour. Viscosity and weight per ml (0.83-0.87g) are both low.

Colours:

Colours have been used in cosmetics, since time immemorial, by human beings. Basically, the desire to buy a cosmetic product is controlled by three senses, namely, sight, touch and smell. So colour is one of the most important ingredients of cosmetic formulations. Colour is a visual sensation which can be caused by a definite wavelength or a group of wavelengths by an object through one or more of the

following phenomena - emission, reflection, refraction or transmission. Natural colours such as cochineal, saffron and chlorophyll are discussed in brief here.

a) Cochineal:

Cochineal is a red dyestuff derived from the dried female insect, Dactilopiuscoccus, which belongs to the Coccidae family. Carminic acid is the main colouring constituent in the cochineal. On crystallization, carminic acid forms red needles and at 130°C, the needles darken and also carbonize at 250°C. For the preparation of carmine, the cochineal is extracted with water. Alum is added to this solution to precipitate the red aluminium salt called a carmine lake.

b) Saffron:

It consists of the stigmas and tops of the styles of the plant, Crocus Sativa, which belongs to the Iridaceae family. It is a perennial plant grown in Jammu and Kashmir in India. Saffron powder is yellowish and is easily soluble in water, so it is used as a flavouring and colouring agent in food preparations. Saffron contains a number of carotenoids - crocin is an important natural saffron carotenoid. Picrocrocin is a colourless bitter glycoside responsible for saffron characteristic odour.

c) Chlorophyll:

It is the natural green pigment, found abundantly in nature. It is the component that is responsible for photosynthesis.

d) Rose:

It is obtained by the steam distillation process from the flower petals of Rosmarinus officinalis which belongs to the Labiatae family. For obtaining rose oil, the blossoms are collected before they open, a little before sunrise.

e) Jasmine Essential Oil:

Obtained from the flowers of Jasminumgrandiflorum which belongs to the Oleaceae family, the oil is obtained by the solvent extraction method and its essence is used in the perfumery industry.

f) Lavender:

It is obtained from the flowers and stalk of Lavandula Officinalis which belongs to the Labiatae family.

g) Tuberose:

The nickname of the tuberose is "mistress of the night". The oil is a brown, viscous liquid with a sweet, heavy and sensuous scent.

h) Geranium:

This oil is obtained from the flowers, leaves and stalks of the Pelargonium graveolens, which belongs to the Geraniaceae family. Its essence is obtained by the distillation process, from the flowers and stems of the plant. The geranium is known as geranium bourbon.

i) Champa:

It is obtained from the flowers of the Micheliachampaka. The colour of the flower is yellow to deep orange.

Classification of Herbal Cosmetics:

1. Skin cosmetics

• Cream

• Scrub

• Lip balm

• Powder

• Lotion & Liniment

• Face pack

• Deodorant & antiperspirant

• Bath preparation

2. Hair cosmetics:

• Shampoo

• Hair Oil

• Hair colourant

3. Tooth cosmetics

• Toothpowder

• Toothpaste

• Mouth wash

4. Nail preparations

5. Shaving preparations

6. Foot preparations

Applications of Herbal Products in Cosmetics.

• Herbal Skin Care Products:

Lavender Silk Soaps, Lotions creams, Body powder, Lavender Herbal body powder, 7 Skin Care Creams.

• Herbal Hair Care Cosmetics:

Henna (LawsoniaInermis), Amla (EmblicaOfficinalis), Shikakai (Acacia Concinna), Brahmi (BacopaMonnieri), Bhringraj (Eclipta Alba), Guar Gum (Cyamopsistetragonolobus.

• Herbal Lip Care Cosmetics:

Herbal Lipsticks, Herbal Lip Gloss, Herbal Lip Balm, Herbal Lip plumper

• Herbal Eye Care Cosmetics:

Eye Makeup, EyeShadows, Eye Gloss, Liquid Eye Liners Creams: Aloe Moisturizing Hand Cream, Rich Face and Hand Cream, Herbal Moisturizers • Herbal Oils: Herbal oils are Effective for Baldness, Falling of Hair, Thinning of Hair, Dandruff, and Irritation & Itching of Scalp, Patchy Baldness, and Maintenance of fine head of Hair

• Herbal Perfumes &fragrances:

Citrus Fragrance: The light, fresh character of citrus notes (bergamot, orange, lemon, petitgrain, mandarin etc.) is often combined with more feminine scents (flowers, fruits and chypre).

• Chypre Fragrance: Based on a woody, mossy and flowery complex, sometimes with aspects. Chypre fragrances smell slightly dry, not very sweet.

Protective Agents: In the formulation of creams, silicones act as protective agents; a combination of silicones with other barrier agents like petroleum jelly beeswax, paraffin etc can produce excellent barrier creams.

a) Bleaching Agents: The most commonly used bleaching agents are given below. Mercury Compounds: Mercuric chloride (Hgcl), red mercuric oxide (HgO) and ammoniated mercury are examples of mercury compounds that can be used, for their skin-bleaching effects. Currently, the use of mercury compounds is prohibited in cosmetics.

b) Hydroquinones: They are mostly used as bleaching agents for temporarily lighting skin at a concentration of 1.5%-2%. In the case of 5% concentration, redness and burning may be produced. The reverse action of hydroquinones takes place on exposure to sunlight. If the cosmetics containing hydroquinone are discontinued, then too, a similar effect can be observed.

c) Catechol and its derivatives: Catechol exhibits skin lighting effects to an extent. 4- Isopropyl catechol has been found to be among the most potent de-pigmenting agents. They can produce irritation and a sensitization reaction at concentrations of 3% or more.

d) Ascorbic Acid and its derivatives: Ascorbic acid does not seem to be very effective as a de-pigmenting agent, but its use has been found to be safe. It is mostly used in skin bleaching creams, which contain hydroquinone as a stabilizer (antioxidant). Ascorbyloleate used in skin bleaching cream for bleaching freckles in human skin is used at a concentration of 3% and 5%.

Formulation and evaluation:

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

must be taken to prevent the bacterial attack completely. The list of various categories of ingredients used in cosmetics with its herbal and counter part is listed in (Table-3). The evaluation of herbal cosmetics is very essential and there is no hard and fast code of practice, which can be laid down for all products or even product types.

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

The microbial test, toxicity test and stability studies were also performed for evaluating the cosmetics products. The traditional documented applications of herbs in cosmetics are available along with some modern trials which have established the utility of these materials in cosmetic preparation. The evaluations based on analytical methods are used to support the commercial development and application of new ingredients to ensure that specifications are met to confirm the quality of manufactured products and to satisfy that the process are operating correctly. The analytical methods are regularly employed by enforcement and regulatory authorities to ensure that the products confirm to legal standards and are safe and accurately described. The analytical chemist continues to have a major role in selecting the most appropriate method, managing the data, interpreting the results. The analytical techniques are basically classified into classical method and instrumental method. The classical methods are based on the observation and measurement of the chemical reactivity of analytes in solution. The instrumental methods are based upon the detailed examination.

Conclusion:

Herbs play a significant role, especially in modern pharmaceutical preparations, when the damaging effects of food processing and overmedication have assumed alarming proportions. They are now being increasingly cosmetics, food and teas, as well as alternative medicines. The growing interest in herbs is a part of the movements towards change in lifestyles. This movement is based on the belief that plants have a vast potential for their use as curative medicines.

The knowledge of medicinal plants used by the people of seems to be well-knownin its culture and tradition. In the present study, we identified many plants used by people to cure dermatological disorders and as cosmetics. Some of the plants were found to have dual use, both as curative and cosmetic. Quality control tests must be safe for longer periods of time. There is ample room to launch numerous herbal cosmetics with inappropriate bioactive ingredients with a fatty oil, essential oils, proteins and

appropriate additives. It is mandatory to carry out safety tests appropriate to the existing and well-documented standards together with the composition of the ingredients.

References:

1. M. Vimladevi; Textbook of Cosmetics; Edition (2005); CBS Publishers & Distributor; Page No. 29, 67, 88, 101, 253.
2. Shah C.S., Quadry J.S. "Textbook of Pharmacognosy" B. S. Shah Prakashan, Ahemdabad 5th edition 1985-86, 2007-289.
3. Kokate C.K., Purohit A.P., Goyal S.B. "Pharmacognosy" Nirali Prakashan, Pune, 29theduition, 2004; 167-250.
4. Trease E.G., Evans C.W., "Pharmacognosy", ELBS Publisher, USA. 12th edition, 1985, 383-413, 488-509.
5. Torkelson R.A., "The Cross Name Index To Medicinal Plant", Volume 4 CRC Press, 1999; 1571.
6. Asolkar L.V., Kakkar K.K. Chakre O.J., "Second Supplement to Glossary of Indian Medicinal Plant with active Principles", Part 1, Publication Information Directorate, New Delhi, 2nd Edition, 1992; 47.
7. Bhaskar Rama Murti P., Seshadri T.R., "Calcium Salt Containing Extract of the Leaves", Department of Chemical Technology, Andhra University Walter.
8. Chatterjee A., Prakashi C.S., "The Treatse of Indian Medicinal Plants", Vol.5, National Institue of Science Communication, New Delhi, 1997; 36.
9. Taylor V.E., Brady R.L, Robbers E.J., Pharmacognosy", 8 th Edition, lea Febiger, USA, 1981; 57-77.
10. Pandey Shivanand, Meshya Nilam, D. viral. Herbs play an important role in the field of cosmetics, International journal of pharm Tech Research.
11. Harry RG, "Modern Cosmeticology: vol.1", L. Hill, 1962.
12. Kole, Prashant L and Jadhav, Hemant R and Thakurdesai, Prasad and Nagappa, Anantha Naik, "Cosmetic potential of herbal extracts," CSIR, Vol. 4, pp.315-321, Aug 2005.
13. Sumit, Kumar, Swarankar Vivek, Sharma Sujata, and Baldi Ashish. "Herbal cosmetics: used for skin and hair." Invent. J, pp. 1-7, Oct 2012.
14. Lawton, S., "Skin 1: the structure and functions of the skin," Nursing Times, vol. 115, pp.30-33, Dec 2019.
15. Van Loon, Gabriel, "Charaka Samhita: Handbook on Ayurveda," Volume I–PV Sharma & ChaukhambhaOrientalia, 2003.
16. Gediya, Shweta K., Rajan B. Mistry, Urvashi K. Patel, M. Blessy, and Hitesh N. Jain. "Herbal plants: used as a cosmetic." J Nat Prod Plant Resour, vol. 1, no. 1, 2011, pp. 24-32.
17. Athar, M. and Nasir, S.M, "Taxonomic perspective of plant species yielding vegetable oils used in cosmetics and skincare products," African journal of biotechnology, vol. 4, pp.36-44, Mar 2005.
18. Awasthi, P. K., and S. C. Dixit., "Chemical composition of Curcuma Longa leaves and rhizome oil from the plains of Northern India." Journal of Young Pharmacists, vol. 1, pp. 312, Oct 2009.
19. Koch, Wojciech, Justyna Zagórska, Zbigniew Marzec, and Wirginia Kukula-Koch., "Applications of Tea (Camellia sinensis) and Its Active Constituents in Cosmetics." Molecules, vol. 24, p. 4277, Jan 2019.

20. De Caluwé, Emmy, Kateřina Halamová, and Patrick Van Damme., "Tamarindus indica L.–A review of traditional uses, phytochemistry and pharmacology." Afrika focus, vol. 23, pp. Feb 2010.
21. Joshi, Laxmi S., and Harshal A. Pawar., "Herbal cosmetics and cosmeceuticals: An overview." Nat Prod Chem Res, vol. 3, pp. 170.
22. Kadam VS, Chintale AG, Deshmukh KP, Nalwad DN., "Cosmeceuticals an emerging concept: A Comprehensive Review," International journal of research in pharmacy and chemistry, vol. 3, pp.308-316, 2013.
23. FUJIYAMA-FUJIWARA, Yoko, Rumi UMEDA, and Osamu IGARASHI. "Effects of sesamin and curcumin on Δ5- desaturation and chain elongation of polyunsaturated fatty acid metabolism in primary cultured rat hepatocytes." Journal of nutritional science and vitaminology, vol. 38, pp. 353-363, 1992.
24. Mazumder, Abhijit, Krishnamachari Raghavan, John Weinstein, Kurt W. Kohn, and Yves Pommier. "Inhibition of human immunodeficiency virus type-1 integrase by curcumin." Biochemical pharmacology, vol 49, pp. 1165-1170, April 1995.
25. Mesa, M. Dolores, M. Carmen Ramírez-Tortosa, C. M. Aguilera, and A. Gil. "Nutritional and pharmacological effects of Curcuma longa L. extracts." Recent research developments in nutrition, vol. 3, pp.157-171, 2000.
26. Bhagirathaswami-Ratirahasya-Koka kavivirachita (13th cen.A.D.)-Lohia S.C.195/2. Harison Road, Calcutta: 1930.P. 236. Chapter 15:84.
27. Upadhyaya S.C., Ratirahasya (13th Cen.A.D.) Mumbai: D.R. Taraporevala Sons and Co. Pri. Ltd; 1965.P.96. Chapter 15:84.
28. Charaka Samhita, Handbook on Ayurveda, Editor, Gabriel Van Loon, 2002-2003 Vol 1.
29. Prashant, L., Kole et al, Cosmetics potential of herbal Extracts, natural Product Radiance, Vol 4(4), 2005, p 315-321.
30. The Wealth of India: A Dictionary of Indian raw Materials and Industrial products- Raw materials Series, Publication & Information Directorate, CSIR, New Delhi, Vols I-XI, 1948-1976; Revised Series IA, 1985; 2B, 1988; 3 Ca-Ci, 1992.
31. Chopra R.N., Nayar S.I., Chopra I.C., Glossary of Indian Medicinal Plants, Publications & Information Directorate, CSIR, New Delhi, 1956.
32. D'Amelio F.S, Sr, In: Botanicals A Phytocosmetic Desk Reference (Ed. FS D'Amelio, Sr), 1999, CRC Press, London.
33. Kumar S, Medicinal Plants in Skin Care Director, Central Institute of Medicinal and Aromatic Plants, Lucknow, 1994.
34. Thakur R.S., Puri, H.S., Hussain, A, In: Major Medicinal Plants of India, 1989, CIMAP, Lucknow.
35. The British herbal Pharmacopoeia, British Herbal Medicine Association, 1996.
36. Ceres A, The healing power of herbal teas. Thorsons Publishers, London, 1984.
37. Gabriel.K.L et al, Application of new technologies for the evaluation of the skin changes, Cosmet.Toil.Manuf, 1991/2, 215.
38. Maclennan.A et al, Comparative assessment of hair talc slip using a sensory analysis technique, Int.J.Cosmet. Chem, 1992, 27(1), 3.
39. Rennie.J.H.S et al, A Model for the shine of hair arrays, Int.J.Cosmet.Sci, 1997, 19(3), 131.
40. Poucher, W.A., Perfumes, Cosmetics and Soaps, Vol.3, Cosmetics 6th edn. Chapman and Hall, London, 1941.