



INTERNATIONAL JOURNAL
OF
PHYTOPHARMACY RESEARCH
www.phytopharmacyresearch.com

A RESEARCH WORK ON HERBAL COSMETIC PRESERVATIVES

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ABSTRACT

Preservative is an “additive used to protect against decay, discoloration or spoilage”. They have been used and known to mankind since long time. Cosmetic products become easily contaminated by bacteria and fungi. Containing water, oils, peptides, and carbohydrates cosmetics are a very good medium for growth of microbes. All these factors contribute to the fact that cosmetic products need preservation to prevent microbial growth and spoiling of the cosmetic product and also infection of the skin. Herbal cosmetic preservatives have potent antimicrobial properties preventing personal care products effectively from spoiling and prolonging substantially the shelf-life. This review covers all essential aspects of potential of herbals as cosmetic preservative agents and its future prospects.

Keywords: Herbal cosmetic preservative, Future prospects.

INTRODUCTION

The use of natural cosmetics to treat the appearance of the face and condition of the skin is common among many cultures. The word “cosmetics” arises from a Greek word “kosmetikos” which means to adorn. Since that time, any material used for beautification or improvement of appearance is known as cosmetics. The urge to adorn one's own body and look beautiful has been an urge in the human race since the tribal days. The practice of adornment or improvement of appearance continued unabated across the centuries. Various kinds of natural materials were used for that purpose. In modern days, cosmetics are the rage and are considered to be essential commodities of life. This made the scientist carry out research in cosmetics and as a result, more and more products are being developed and marketed. A large segment of the world population is showing greater inclination toward natural cosmetics which seems to be the future hope. Cosmetics or dermocosmetic preparations are used for skin care, cleaning, and protection. They have contact with external parts of human body (epidermis, hair, nails, lips, and external sexual organs), or with teeth and mouth mucosa. They clean, perfume, change look and/or make correction of body smells and/or keep them in appropriate condition. Preservatives are included in cosmetic formulations to ensure that products are safe to use for a long time. They protect cosmetics from

contamination by micro-organisms present in the air, in water and on our own skin [1].

Cosmetics contaminated with bacteria and yeasts could cause irritations or infections, particularly on damaged or broken skin, or the sensitive areas around the eyes. To prevent this, preservatives are used. Consumer health and safety is the main reason for including preservatives in cosmetics. Safety is the number one priority for the industry; therefore, preservatives are included in product manufacture to prevent contamination by micro-organisms during use.

Most cosmetics need preservatives, including products made from natural ingredients such as Garlic oil, Cinnamon oil, Clove oil, Menthe oil, Lanata indica, Caraway oil, Coconut Fat, Glycerine and Seaweed Extract, etc.,

Advantages of herbal cosmetic preservatives

- Consumers generally prefer natural preservatives over synthetic preservatives.
- Relatively low cost
- Safety/toxicity profiles well understood.
- Broad-spectrum of activity against bacteria and fungi.
- Many options are available.
- Compatibility with other cosmetic and personal care product ingredients is well understood.

- Consistent from batch to batch.
- Low concentrations required to effectively preserve products.
- Generally do not interfere with fragrance, lather, color, or other aspects of a given formulation.
- Often function over a broad pH range.
- Many confer natural fragrances to products.

COCONUT BUTTER

Botanical Name: *Cocos nucifera*

Family: Arecaceae

Description

Coconut butter is derived from dried or fresh copra or fleshy part of the coconut. Firstly, it is shredded and cleaned to get rid of any unwanted particles. Then it is steamed at about 220°F for half an hour. The processed coconut pulp is then put into an expeller and pressure is exerted upon it mechanically for extraction of oil. The oil or butter, thus obtained is filtered and packed in bottles. Ninety percent of coconut butter is saturated fat. It also contains a number of fatty acids that include auric acid, myristic acid, palmitic acid, etc. Coconut butter has excellent skin moisturizing properties and is suitable for all types of skin. It improves the skin condition of dry, flaky skin and makes it soft and glowing. It has an antioxidant property that prevents the degeneration of the skin. Thus it delays the process of skin aging and other problems associated with it, such as wrinkles and sagging skin. It can effectively treat a number of skin conditions such as eczema psoriasis, dermatitis, etc. Due to so many benefits of coconut butter on skin, it is widely used as ingredients in soaps, lotions, creams and various other skin care products [2].

ROSE OIL

Botanical name: *Rosa damascena*

Family: Rosaceae

Description

Rose oil is obtained by steam distillation has one of the most valuable and distinct fragrances. Rose oil is widely used in the cosmetics and the perfume industry because of its complex molecular composition, healing, beautifying and therapeutic properties as well as its multilayered and deep fragrance. At 25°C the rose oil is a viscous liquid. Upon cooling, it becomes a crystallized mass, which can be liquified by warming. Rose oil is a complex blend of more than 300 different components. The major component in a rose blossom is phenyl-ethyl alcohol. However, phenyl-ethyl alcohol is highly soluble in water and is usually lost in the distillation process, unless collected as rose water. Major components are also: geraniol, citronellol, and nerol. Many other components are present in very small amounts, but have a substantial effect on the overall rose oil quality. An example is a compound called damascenone, which is one of the most potent odor constituents. The rose oil creates a feeling of calm and well-being. It is also an antidepressant, antiseptic, antiviral, sedative, tonic and an appetite regulator. Rose oil is often

used to treat skin problems, asthma, cough, depression, headache and insomnia. Rose Oil is also considered very safe for topical use. The rich molecular composition of rose oil makes it one of the most beneficial essential oils for skin and personal care products.

SEAWEED EXTRACT

Botanical Name: *Ascophyllum nodosum*

Family: Fucaceae

Description

Seaweed includes various groups of red, brown and green algae, and its extract provides a number of health benefits due to its richness in iron and iodine. Seaweed has been used in bath, body and skincare products for many centuries to improve circulation and balance natural moisture levels. This can help restore the texture and tone of the skin and reduce the appearance of cellulite. This usually refers to the use of alginate or carrageenan in the product. Historically Seaweed has been used for its detoxifying properties and as an aid to skin healing. Seaweed is rich in mineral salts, amino acids and Vitamins A, C, B1, B12, E, K and D. The lipid, protein, mineral and vitamin content are easy to absorb and offer a richly hydrating and skin nurturing treatment [3].

VANILLIN RESINOID

Botanical Name: *Vanilla planifolia*

Family: Orchidaceae

Description

Vanilla beans (pods) are the dried unripe fruits the Vanilla orchid. Vanilla absolute is extracted from the beans of the plant. These plants can be found growing in Madagascar and Indonesia. Every flower is pollinated by hand and each blossom produces a single bean that is normally harvested after 8/9 months. The unripe beans are picked when yellowish in color and are boiled in water for 3 minutes. They are then dried slowly over the next 3 to 4 months in the sun. Each day, they are exposed to sunlight for 2 hours, then covered in blankets and taken in at night to allow the chemical process to take place. The beans shrivel, become flexible, and turn a very dark color. Vanilla absolute is obtained from the pods by a complex process. Vanilla absolute, resinoid and vanillin are popular perfumery ingredients and are heavily used in aromatherapy. Vanilla pods are made up of sugars, vanillin, fats and mineral salts. When applied topically, the sugars in vanilla act as a humectant. The humectant action also forms a barrier on skin, which prevents moisture loss. Vanillin is the main source of the characteristic vanilla scent and it has also been shown to have antioxidant properties.

EUCALYPTUS OIL

Botanical Name: *Eucalyptus globulus*

Family: Myrtaceae

Description

Eucalyptus oil is the generic name for distilled oil from

the leaf of Eucalyptus; the leaves of selected Eucalyptus species are steam distilled to extract eucalyptus oil. Cineole - based eucalyptus oil is used as a preservative at low levels (0.002%) in various cosmetic products. It draws out moisture and creates an environment inhospitable to bacteria. Eucalyptus oil is used as a fragrance in perfumes and cosmetics. It is also used as a mouthwash, antiseptic, liniment and ointment, and in toothpaste, cough drops, and lozenges.

CITRONELLA OIL

Botanical Name: *Cymbopogon nardus*

Family: Graminae

Description

Citronella oil is a volatile oil which is distilled using steam from the greenish blue, lemon-scented leaves and stem of the plant, Citronella oil is a colourless or light yellow liquid with a characteristic woody, grassy or lemony odour. Natural citronella oil uses include applying topically to repel mosquitoes, ticks, fleas and other insects.

REFERENCES

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The principal chemical constituents of citronella, geraniol and citronellol, are antiseptics, hence their use in various cosmetic products [4].

Other Essential oils

Other essential oils which are used in cosmetics include Anise oil, Coriander oil, Grapefruit oil, Jasmine oil, Palma Rose oil, Sandal Wood oil, Neem oil, Sweet Orange Oil, Lemon Grass oil, Garlic oil, Cinnamon oil, Clove oil, Mentha oil, Caraway oil and Bergamot oil.

CONCLUSION

Natural preservatives are considered safer by many because they have always existed in nature and our immune systems are used to them. Most of the preservatives that come from a plant source are safe for humans. The main disagreement when it comes down to the use of natural preservatives in cosmetics is that they are not powerful enough. This may be true but, it does not mean that because of this more chemical or synthetic preservatives need to be used.