

Aroma oils as cosmeceuticals

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Abstract

Aroma oils, also known as essential oils are the highly concentrated extracts from plants, herbs and flowers. They exhibit calming, stimulating, pain alleviating and mood enhancing effects and improve the functionality of internal organs, like heart, lungs, etc. Essential oils are important components of cosmetics. Recently, cosmeceuticals are becoming popular throughout the world. In American market, all the cosmetics and toiletries are now being named as cosmeceuticals, as they claim to have therapeutic effect along with their effect on skin and hairs as cosmetic also. This article highlights the cosmeceutical applications of essential oils.

Keywords: Aromatic oils, Essential oils, Cosmetics, Cosmeceutical, Pharmaceutical product.

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Introduction

The highly concentrated extracts from plants, herbs and flowers are known as aroma or essential oils (Urdang, 1948; Dixit, 2004). They are used singularly or in combination to bring about restorative and curative processes in the mind and body, offering a gentle alternative to medicines and drugs. Aroma oils have a calming, stimulating, pain alleviating and mood enhancing effects. They improve the functionality of internal organs like heart, lungs, etc. Till now, they were on the periphery of pharmacological preparations and were used extensively as carminatives, antiseptics, analgesics, anti-inflammatory and flavouring agents. Based on the applications of aroma oils, a therapeutic system, namely, aromatherapy has emerged. They are utilized in perfumery, pharmaceuticals and

allied industries (Buchbauer & Jirorentz, 1994).

Essential oils are important components of cosmetics. Recently, cosmeceuticals are becoming popular throughout the world. In American market, all the cosmetics and toiletries are now being named as cosmeceuticals, as they claim to have therapeutic effect. In general, essential oils consist of chemical compounds that have carbon, hydrogen and oxygen as their building blocks. These can be subdivided into two groups, namely, the hydrocarbons and oxygenated compounds. The hydrocarbons are mainly terpenes like monoterpenes, sesquiterpenes and diterpenes and oxygenated compounds including esters, aldehydes, ketones, alcohols, phenols and oxides. Acids, lactones, sulphur and nitrogen compounds are also present in some cases (Geissman & Crout, 1969).

Uses of aroma oils

The essential oils are used for a variety of therapeutic applications. They can act on different organs and bring relief in various ailments. The essential oils offer the following potential benefits:

- The fragrance works on limbic system evoking a neurochemical response.
- The oils have maximum soothing effects and minimum side effects on the skin.
- They get absorbed by the lungs and bring relief within no time.

Due to these reasons, pure essential oils are gaining much popularity now-a-days in manufacturing cosmeceuticals (Dixit, 2004). The effects of essential oils on different organs and their applications are described below.

Therapeutic uses

1. Skin

Skin problems are often surface manifestation of deeper conditions, such as accumulation of toxins in blood, hormonal imbalance or nervous and emotional problems. In these areas, essential oils are particularly valuable, since they can combat such complaints at different levels (Anonymous, 1994; Jadhav

& Phadnis, 2001). The common uses of essential oils on skin are given below (Cooksley, 1996; Padin *et al*, 2000; Fox, 2002; Marwah & Marwah, 2004; Makhaik *et al*, 2005).

Antiseptics: For cuts, insect bites and spots. Thyme, sage, eucalyptus, tea tree, lavender and lemon oils are good examples of antiseptics.

Anti-inflammatory: For eczema, infected wounds and bruises. Chamomile, lavender and yarrow are applied.

Fungicidal: For athlete's foot, candida, ringworm. Lavender, tea tree, myrrh and sweet marjoram are some important oils.

Healing: For burns, cuts, scars and stretch marks. Examples are lavender, chamomile, rose and geranium.

Deoderants: For excessive perspiration. Commonly used oils are lavender, thyme, cypress, lemongrass and bergamot.

Parasiticides and insect repellents: For lice, fleas, scabies, mosquitoes, moths and ants. The examples include lavender, geranium, citronella, eucalyptus, clove and camphor.

2. Muscles, Joints and Circulation

Essential oils get easily absorbed from skin into the bloodstream and affect the nature of circulation as a whole. For example, oils with rubefacient effect improve the local blood circulation and also bring warmth and glow to the surface of skin. They also act as pain relievers (Wells & Billot, 1981; Bauchbauer & Jirorentz,

1994; O'Hara, 1998; Alistar, 2000). Some of the activities of essential oils on circulation, muscles and joints are as follows:

Rubefacients: For rheumatism, muscular cramps, lumbago, etc. black pepper, rosemary, camphor and sweet marjoram give good results.

Depurative or antitoxic agents: For arthritis, gout, congestion and skin eruptions commonly used oils are juniper, lemon and fennel.

Astringents: For swellings, inflammations and varicose veins, cypress, yarrow and lemon oils are used for relief.

Hypotensives: For high blood pressure, stress and palpitations, oils used are lavender, lemon and sweet marjoram.

Hypertensives: Rosemary, spike lavender, eucalyptus, peppermint and thyme oils are used for improving poor circulation.

3. Respiratory System

The essential oils can be applied to lungs, throat and nose through inhalations to reduce the infections. In lungs, they cause an increase in bronchial secretions, which is beneficial for many respiratory ailments (Cooksley, 1996; Valnet, 1990). The essential oils can be used for the following actions on respiratory system.

Antiseptics: For getting relief from flu, cold, sore throat and tonsillitis, thyme, sage, eucalyptus, pine and tea tree oils are used.

Antispasmodics: In asthma, dry cough and whooping cough the oils used are cypress, hyssop, chamomile and cajeput.

Expectorants: For the treatment of sinusitis, cough and bronchitis, eucalyptus, pine, thyme myrrh, sandalwood and fennel are the commonly used oils for the therapy.

4. Digestive System

Although essential oils are not meant for oral administration, they can effect changes in the digestive system by external application. The effectiveness of essential oils can be improved by combining them with bitters, tannins and mucilage. Some of the common applications include the following (Vollhardt, 2000; Urdang, 1948; Wells & Billot, 1981; Garg, 2003):

Antispasmodics: For spasm, pain and indigestion chamomile, caraway, fennel, orange, peppermint, cinnamon are best known examples.

Carminatives: For relief from flatulence, dyspepsia, aerophagia and nausea basil, chamomile and peppermint oil are commonly used oils.

Hepatics: For liver problems and jaundice, lemon, lime, rosemary and peppermint oils are the commonly used essential oils.

5. Endocrine and Urinogenital System

The reproductive organs can be affected by absorption of essential oils through the skin into systemic circulation.

Some essential oils such as jasmine have affinity towards reproductive system. They can combat specific complaints such as menstrual disorders, genital infections and sexual difficulties (Wells & Billot, 1981; Singh, 2001; Buckle, 2003; Schnaubelt, 2005). Some oils contain plant hormones, which mimic human hormones and influence menstrual cycle and lactation. Some essential oils are known to influence the hormone secretion of other endocrine glands such as thyroid, adrenal medulla and adrenal cortex. The following are the applications of essential oils for therapy of endocrine and urinogenital disorders (Valnet, 1990; O'Hara, 1998; Alistar, 2000).

Antispasmodics: For relief from menstrual cramps and labour pains, the sweet marjoram, chamomile, clary sage, jasmine and lavender are used.

Uterine tonics: For pregnancy and menorrhagia, jasmine, rose, myrrh, lemons are the commonly used oils.

Antiseptic: For leucorrhoea, vaginal pruritis and thrush bergamot, chamomile, myrrh, rose and tea tree are the oils used for treating these problems.

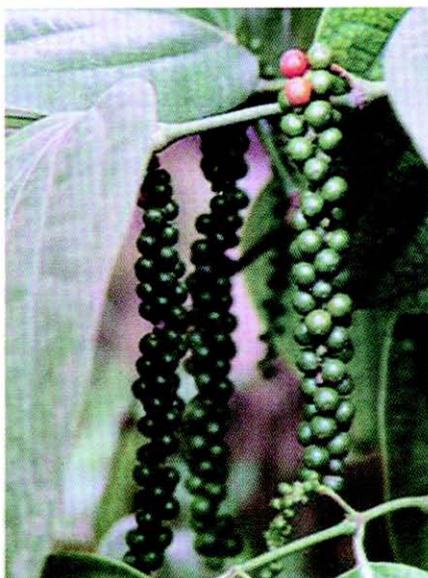
Aphrodisiacs: For treatment of impotence and frigidity, black pepper, cardamom, neroli, jasmine, rose and sandalwood are applied.

Adrenal stimulants: Basil, geranium, rosemary borneol, sage, pine and savory oils treat the anxiety and stress-related conditions.

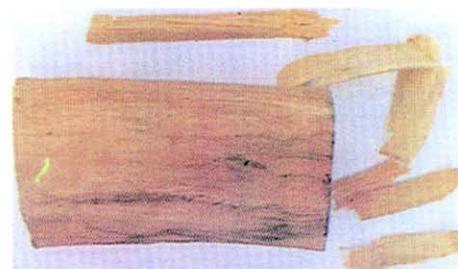
6. Nervous System

The action of essential oils on nervous system can be classified into three categories, namely, sedative, stimulant and nerve tonic. The common sedatives are chamomile, bergamot, sandalwood, lavender and valerian, which are used for treating nervous tensions, stress, insomnia, etc. The stimulants are used to treat convalescence, nervous fatigue and such

conditions. The examples are basil, jasmine, peppermint, neroli and rosemary. Some oils like sage, chamomile, lavender and rosemary are used to strengthen the nervous system as nerve tonics (Prasad, 1980; Berkowsky, 1995; Griffiths, 1995).



Black pepper



Sandalwood



Clary sage



Sweet marjoram



Jasmine

Uses in Cosmetics

Normally, it is preferable to use the essential oils in pure form or along with some carrier oils. Massaging, baths, inhalation and use of diffusers are some of the common methods by which they are used. But, they are essential components of cosmetic preparations like soaps, shampoos, creams, sprays, colognes, face packs, hair colours and other such products. The use of essential oils in cosmetics to bring about a therapeutic effect is gaining a tremendous momentum in the cosmetic industries (Dixit, 2004). Presently, cosmeceutical industry is the fastest growing segment of natural product industry. Sale of cosmeceuticals forms 17 percent of the total sale of all personal care products in US market. Hence, US FDA has declared all the cosmetics as cosmeceuticals.

Conclusion

The use of essential oils in cosmetics is not new to the industry. But, in the recent past, aromatherapy, use of essential oils to bring about therapeutic effects, has gained much interest, which in turn has led to development of cosmeceuticals. The essential oils can be used in cosmetics to get different effects on different organs. Hence, it can be predicted that in the near future, cosmeceuticals will occupy a major share in the pharmaceutical industry.

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