

A REVIEW ON HERBAL ESSENTIAL OILS USED IN HERBAL COSMETICS

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ABSTRACT

Essential oils are frequently used in cosmetics, perfumes, and other home products because of their diverse characteristics, but primarily because of their pleasant odour. The content of these volatile natural complex mixtures might vary depending on the grade of plant material used to make them and the extraction method used to make them. These elements are also crucial in ensuring that essential oils be used safely in personal care products. They may cause skin sensitivity and irritations, as well as other symptoms, because they include chemicals with varying chemical structures and effects. Although essential oils are deemed safe and harmless when used in small amounts, scientific

evidence suggests that essential oils and their constituents may have hazardous properties.

KEYWORDS: Activity, essentialoil, side effects, allergy.

1. INTRODUCTION

Cosmetics can be defined as a product with mild action on human body for purpose of cleansing, beautifying, adding to attractiveness altering the appearance or keeping the skin in good condition.^[1] Essential oils are complex mixture of low molecular weight compounds which are extracted by steam distillation or solvent extraction major constituent of essential oils are phenylpropanoid sterpenoids some aromatic and aliphatic constituent.^[2] Essential oils and their isolated compounds are broadly used in cosmetic products because of their merits essential oil have number of antifungal antioxidant analgesic anti-viral properties. Essential oils are widely used in cosmetic because of their pleasant Aroma.^[3] In cosmetic production there is use of fatty acids, surfactants and due to which there is unpleasant scent in cosmetic products and so to mask them the is use of perfume, essential oils and such product if not properly labelled as no perfume nonscented fragrance free then there can be an assumption

that the product contain fragrant chemicals. Many cosmetics and homoeopathic medicines contain botanical extracts, which has resulted in an increase in reports of allergic contact sensitivity to certain components, particularly tea tree oil.^[4] Cinnamon oil (Cassia oil) is a popular flavouring agent in baked goods, particularly pastries. Cinnamon is a common cause of hand dermatitis in pastry chefs. Lipstick, bitters, alcoholic and nonalcoholic beverages, toothpaste, and chewing gum all use it as a flavouring. Cinnamon in chewing gum can induce perioral dermatitis. Patch testing is done with a 5% cinnamon solution in olive oil. Dentists employ eugenol, clove oil, and eucalyptus oil, which can cause contact dermatitis in patients. Sensitization can be caused by anise, peppermint, and spearmint oils.^[5] Spice allergies are caused by nutmeg, paprika, and cloves. A useful indication allergen is fragrance mix. Vanillin is extracted from the vanilla plant and is known to cause contact dermatitis, or vanillism, in persons who work with it.^[6]

2. CLASSIFICATION OF AROMATHERAPY

Aromatherapy refers to a therapy which makes use of essential oil in cosmetics which are applied on skin., Hair, body cosmetic products. And this product shows cleansing, moisturizing, toning and drying.^[6]

- Cosmetic aromatherapy
- Massage aromatherapy
- Olfactory aromatherapy
- Psycho aromatherapy

2.1 Massage aromatherapy

The therapy makes use of pure vegetable oil, jojoba oil grap oil, lavender, geranium cedarwood this therapy promotes relaxation, encourages positive emotion. It is linked to short time decrease in physical pain. Nearly 7 percentage of U.S adult make use of this therapy on regular basis according to NCCIH.^[7]

2.2 Cosmetic aromatherapy

This therapy utilizes orange EO, lemon EO, rose EO, sandalwood EU, tea tree EO Essential oils in many cosmetic products as this essential oil have antiinflammatory, antibacterial and antiviral properties. Apart from pleasant aroma, they are able to act as preservatives and active agent.^[6,8]

2.3 Olfactory aromatherapy

Inhalation of essential oil has given rise to olfactory aromatherapy. Inhalation of EO such as clove, and eucalyptus EO can result in relaxation of body increased emotional wellbeing it also release the stress.^[9]

2.4 Psycho aromatherapy

Olfactory and Psycho Aromatherapy are generally used to influence mood and emotions, as well as produce a pleasant aroma in a living place. Aromatherapy's effects on mood and emotions have been hotly contested, with some praising it and others mocking it.^[9,10]

3. USES OF ESSENTIAL OIL

- Essential oils are used to make a variety of items. Essential oils are used in the cosmetic and cosmetics business to generate perfumes, add scent to lotions and body washes, and even as natural antioxidant sources in some beauty care products.
- Essential oils are used by many natural medicine practitioners, such as aromatherapists. Aromatherapy is the practice of diffusing essential oils into the air
- Aromatherapists think that inhaling essential oils allows them to reach the circulation and lungs.
- Aromatherapy is used by everyone who has used a mentholated vapour rub to help clean their sinuses. Inhaling menthol in this method can relieve congestion and shortness of breath, according to the authors of a 2013 study.
- In addition to inhalation, essential oils can be mixed with a carrier oil and massaged into the skin to deliver active chemicals to the body.
- Improve your mood.
- Reduce stress and boost attention
- Sleep better.
- Bacteria, fungi, and viruses are all killed.
- Anxiety and suffering are reduced.
- Inflammation is reduced.
- Eliminate nausea.
- Headaches are relieved.^[11]

4. CONSEQUENCE OF ESSENTIAL OIL

- Many people believe that essential oils have no side effects because they are natural goods. This is incorrect. Essential oils may have the following negative effects:

- Irritation and burning: Before applying oils to the skin, dilute them with a carrier oil. To test for any responses, apply a tiny amount to a small area of skin.
- While essential oils are generally safe to inhale, some people with asthma may have an allergic reaction to the fumes.
- Headaches: Inhaling essential oils may relieve headaches in some people, but inhaling too much may cause a headache in others.^[12]

5. MECHANISM OF ACTION

There are three fundamental strategies that EOs could use to affect how the brain works. In the first process, nasal olfactory chemoreceptors are activated, and olfactory signals then have an impact on the brain. Being directly anatomically and functionally connected to the limbic system makes the olfactory system stand out among the other sense systems. Olfactory sensations can so significantly affect mood. The second proposed method of action involves the direct entry of EO molecules into associated brain regions through the olfactory nerve and the subsequent stimulation of cellular and molecular processes. Alveolar absorption of EO molecules into blood circulation, which then crosses the blood–brain barrier (BBB) to interact with particular brain regions, is the third possible method.^[13]

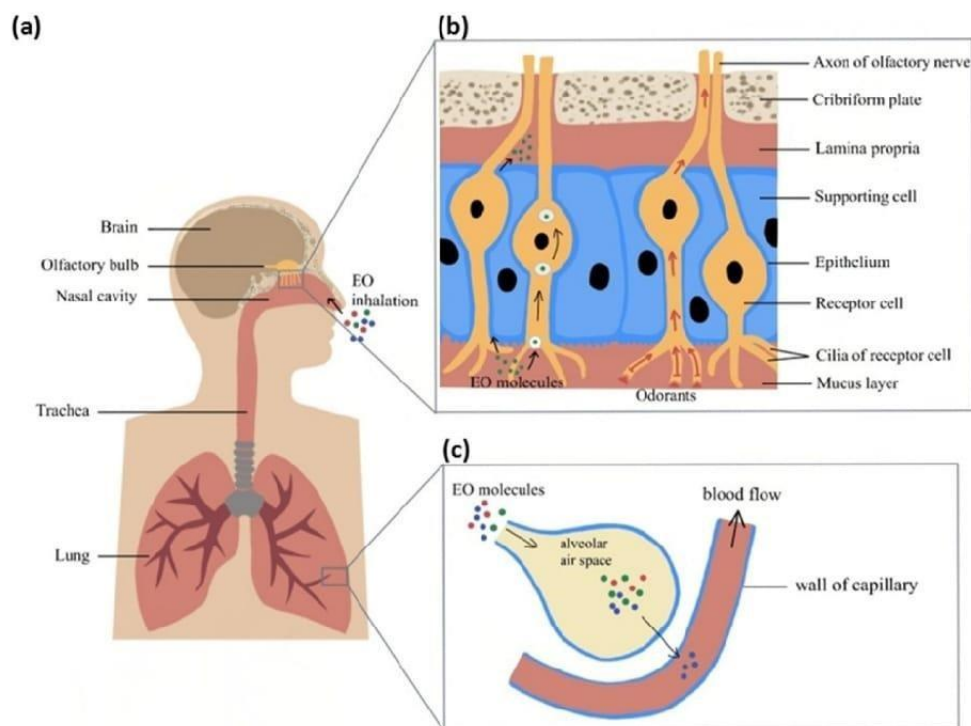


Figure 1: Inhaled EO response delivery to brain through respiratory and olfactory system.

- (a) Inhaled EO passes through the nasal cavity and reaches the olfactory system or respiratory system
- (b) Overview of EO molecules' delivery pathway in the olfactory system
- (c) Overview of EO molecules crossing the air–blood barrier to reach the circulatory system.

6. DRY SKIN ESSENTIAL OILS

Dry skin is common during particular periods of the year and in desert-like areas. Dry skin can also be caused by age or decreased activity in the sebaceous (oil) glands in your pores. Creams and moisturisers are commonly used to treat dry skin, but essential oils may also help.^[14]

6.1 Lavender

One of the most often utilised essential oils is lavender oil (*Lavandula angustifolia*). Because of its efficiency and pleasant aroma, it may be the most popular essential oil on the market. Although lavender oil is widely used, the mechanisms of action — the hows and whys of how it works are still unknown to most people.

Lavender oil is one of the most valuable aromatherapy oils, with major components such as linalool, linalyl acetate, lavandulol, geraniol, and eucalyptol explaining its antibacterial and antifungal properties. The researchers wanted to see how antimicrobial activities of two distinct lavender oils worked on a diverse microbes from facial skin. The researchers employed commercial lavender oil and essential lavender oil from the Crimean Peninsula, both of which have yet to be reported chemical compositions and activities. Gas chromatography with mass spectrometry was used to examine both oils. The content and characteristics of the oils analysed differed greatly.

The Crimean lavender oil had 10% more linalool and linalyl acetate than the commercial ETJA lavender oil.^[14,15] On the combo facial, both oils had different impacts. Gram-positive bacteria were more responsive to ETJA lavender oil, while Gram-negative bacteria were more susceptible to Crimean lavender oil. Neither of the oils examined, however, prevented Gram-positive cocci from growing.

The lavender oils examined reduced the number of cells in the mixed microbiota on the skin, although ETJA oil was more effective than Crimean lavender oil, owing to its greater contents of monoterpenoids and monoterpenes.^[16]



Figure 2: Lavender Oil.

6.2 Skin Benefits of Lavender Oil

Aromatherapists frequently use lavender oil to calm and soothe the psyche. Similarly, it has the same effect on your skin. Check out these lavender oil skin benefits to see how you may use this essential oil to improve the health of your skin.

➤ It's a Hero Who Fights Aging

Lavender oil for skin is high in antioxidants and helps combat free radical damage. It also acts as a protective barrier, preventing free radicals from inflicting further harm. This combats visible indications of ageing like wrinkles and fine lines.

➤ Acne Treatment with Lavender Oil

One of the most beneficial properties of lavender oil for skin is that it aids in the treatment of acne and the healing of outbreaks. It kills acne-causing germs, unclogs pores, and decreases inflammation because to its antibacterial qualities.

➤ It helps with Eczema

Lavender oil for skin is an excellent antifungal agent, especially if you have eczema or psoriasis. A few drops mixed with a carrier oil can help moisturise skin while also addressing redness, irritation, and infection.

➤ Lavender Oil Has Anti-Inflammatory Properties

Lavender oil has anti-inflammatory properties, which is one of its many advantages. This indicates that it can calm irritated and inflammatory skin. The oil's beta-caryophyllene is a natural anti-inflammatory. This also works on minor sunburns.

➤ **It heals wound**

Lavender oil for skin also has medical and therapeutic effects. It helps the healing of wounds such as burns and cuts.^[17]

7. SANDALWOOD OIL

Sandalwood is a valuable Indian plant that produces aromatic sandalwood oil, which was one of the first products sold to the Middle East and other countries. Sandalwood oil is a wonderful base and fixative for other high-end perfumes, as well as a wonderful, gentle, long-lasting, and pleasant scent on its own. Sandalwood and its oil are used in over a thousand items.

Antipyretic, antibacterial, antiscabetic, and diuretic qualities are all found in sandalwood. It can also be used to treat bronchitis, cystitis, dysuria, and urinary tract infections. The major component of sandalwood oil is alpha-santalol, beta-santalol which offers a wide range of therapeutic benefits. For millennia, sandalwood oil has been employed in the Indian Ayurvedic system. It's famous for its aphrodisiac, diuretic, and urinary antiseptic qualities.

It has been discovered to assist in the removal of negative programming from cells as well as increasing oxygen levels around the pituitary and pineal glands. The major ingredients of sandalwood oil are alpha-santalol, beta-santalol, and santenone.^[18]



Figure 3: Sandalwood Oil.

7.1 Benefits of sandalwood essential oil

➤ **Reduce scarring**

Sandalwood oil may be beneficial for Scarring Sandalwood oil nourishes the skin, improves skin cell suppleness, and evens out skin tone. It can help to reduce the appearance of scars

because of these properties. Sandalwood and honey were found to prevent or decrease hypertrophic or thick, elevated scarring in a 2018 study.

➤ **Minimize Wrinkles**

Sandalwood oil includes antioxidants that assist skin cells keep their buoyancy and structure. It also improves skin suppleness by reducing dryness and replenishing moisture.

"Sandalwood can help prevent wrinkles by preventing free radical production," Bhanote said, citing its high antioxidant content.

➤ **Skin whitening or even skin tone**

Excessive skin pigmentation may signify an overabundance of heat in the body, according to Ayurveda, or traditional Indian medicine. "Sandalwood looks to have a relaxing and cooling impact on the skin from an Ayurvedic perspective, which can improve the pitta [fire] dosha. Sandalwood's skinlightening properties are well-known., the alpha-santalol component of sandalwood inhibits tyrosinase, a vital enzyme in the formation of the skin pigment melanin. It "may possibly serve as an inhibitor of aberrant pigmentation linked with age and UV radiation exposure."^[19]

8. OILY SKIN AND ESSENTIAL OILS

Your sebaceous glands are working overtime if you have oily skin, producing abundant oil on the surface. Humidity, heat, and hormones can all aggravate oily skin. The essential oils listed below may help with oily skin.^[20]

8.1 Rosemary essential oil

The anti-inflammatory, stimulant, and analgesic qualities of rosemary oil are well known. Its active components, such as esters, may aid in the control of excess sebum. Researchers have shown that it can aid with oily hair and dandruff, as well as stimulate hair growth.

P-cymene (44.02%), linalool (20.5%), gamma-terpinene (16.62%), thymol (1.81%), beta-pinene (3.61%), alpha-pinene (2.83%), and eucalyptol (2.83%) were the primary constituents of the oils (2.64 percent). Monoterpenic hydrocarbons, oxygenated monoterpenes, and sesquiterpene hydrocarbons were found in the oil.^[20]



Figure 4: Rosemary Oil.

8.2 Uses of rosemary essential oil

- The capacity of rosemary to eliminate excess oil is the herb's main attribute in skincare and natural cosmetics. It contains a natural astringent that refreshes greasy skin and hair without drying it out. Without using harsh chemicals, facial cleansers and natural cosmetics with rosemary aid with oily skin. Instead of drying out your skin and causing increased oil production, pimples, and a greasy appearance, rosemary softly and naturally eliminates oil.
- Rosemary's anti-inflammatory properties, when used topically in natural cosmetics, reduce puffiness beneath the eyes caused by age or a restless night by promoting circulation. Rosemary helps to relieve redness and edoema caused by wind burned skin. Increased circulation improves skin elasticity, reducing the look of sagging and wrinkled skin for a firm, toned, and healthy appearance. Antioxidants in rosemary help tighten skin and minimise fine wrinkles, slowing down the signs of ageing. Rosemary's cell regeneration properties successfully erase the appearance of scars, spots, and sun damage, reducing acne and blemishes.
- Hair loss can be reduced by the same blood circulation stimulation that enhances skin appearance. For millennia, rosemary has been used to prevent hair loss by encouraging hair growth by increasing blood flow in the scalp. For men with male-pattern baldness or women with thinning hair, massaging the scalp with rosemary extract or rosemary shampoos helps prevent hair loss and promote new growth.^[21]

9. NEROLI

Neroli is another essential oil that contains citral. It may help balance out sebum without drying your skin. Linalool (34.4 percent), linalyl acetate (11.3 percent), and limonene were the most prominent components in neroli oil (flowers) (10.9 percent). Linalool (36.8%), linalyl acetate (22.1%), and -terpineol were the predominant components in the petitgrain oil (leaves) (11.7 percent) The aroma of neroli oil is rich and flowery, with citrus undertones. In perfumes and scented items, it's employed as a base note. Neroli oil is commonly used in body lotions and cosmetics because of its calming impact on the mind. It's also good for aromatherapy. According to some data, neroli oil can help with depression, anxiety, high blood pressure, seizures, and menopausal symptoms.^[22]



Figure 5: NEROLI OIL.

9.1 Uses of neroli essential oil

➤ Rejuvenate the appearance of your skin

Neroli Essential Oil deeply moisturizes the skin and stimulates the natural process of cell renewal when applied to the skin.

Other Essential Oils, like as Green Mandarin Essential Oil, can help to deepen the targeting of wrinkles and fine lines.^[22]

➤ Acne treatment

Neroli Essential Oil has strong antibacterial characteristics, making it an excellent element for treating acne and balancing sebum production. It's high in antioxidants, which help to fight free radicals and reduce acne-related inflammation and redness.

- Stress, depression, and anxiety can all be treated. Neroli essential oil is also used to treat anxiety, depression, and stress naturally. Inhale deeply and inhale the strong smell to instantly relax your thoughts.
- Pain and inflammation can be managed. Neroli Essential Oil possesses active compounds that can target acute inflammation and lower pain sensitivity when applied topically.^[23]

10. ACNE-PRONE SKIN ESSENTIAL OILS

It's critical to eliminate excess oils and germs from acne-prone skin without drying it out, as this might contribute to increased oil production. Inflammation can be another contributing factor to acne outbreaks. Both rosemary and frankincense are recognised for decreasing microbials and inflammation, which helps to treat acne. Clary sage can be used to treat acne and greasy skin. The following oils may also benefit acne-prone skin types.^[19,24]

10.1 Lemon

Lemon essential oil is a natural element that can potentially be used as a home treatment for a variety of ailments. Steam extraction or, less frequently, a "coldpressing" procedure that pricks and spins the peel as oil is released is used to extract it from fresh lemon peels. -Pinene (25.44 percent), Limonene (39.74 percent), Linalool (2.16 percent), -Terpineol (7.30 percent), linalyl acetate (3.01 percent), Acétategeranyl (3.03 percent), Nerolidol (6.91 percent), Acetate neryl (1.74 percent), and Farnesol (1.74 percent) were the top nine discovered components (4.28 percent).

PineneIt has anti-inflammatory properties, promotes pain relief and relaxation, improves memory and respiratory function, and may help bacteria and viruses spread. Aside from it, another significant advantage is the excellent flavour that various cultivars provide.^[25]

Limonene It possesses anti-inflammatory, antioxidant, anti-stress, and maybe disease-prevention effects.^[26]

Linalylacetate has antibacterial substance Microorganisms, such as bacteria, viruses, fungi, and protozoans, are killed or slowed by a chemical that kills or inhibits their growth component of food; Any substance that is delivered in foodstuffs plays a physiological role. It comprises vitamins and minerals originating from plants or animals, as well as environmental pollutants.



Figure 6: LEMON OIL.

Benefits of lemon essential oil

- It contains anti-inflammatory qualities aids in pain relief and relaxation, boosts memory and respiratory function, and may aid in the transmission of bacteria and viruses. Aside from it, the superb flavour provided by varied cultivars is another key benefit.
- It has the potential to be a pain reliever.

Lemon essential oil is occasionally used as a natural analgesic in aromatherapy. This oil's anti-stress and antidepressant properties could be due to the way it helps our bodies comprehend pain without panicking. It's possible that it'll help you treat and prevent acne breakouts.

- Lemon oil is used to treat a range of skin problems, including acne. Lemon essential oil, when diluted and applied topically, helps eliminate bacteria that can become caught in pores and cause outbreaks. It can also gently clear your skin.
- Possesses antifungal properties

Lemon essential oil contains potent antifungal qualities that can be used to treat a variety of skin infections. When administered topically, it's effective against fungi that cause athlete's foot, thrush, and yeast infections.^[27]

10.2 Tea tree

Tropical tree oil (TTO) is a steam-distilled essential oil derived from *Melaleuca alternifolia*, an Australian native plant. It has a minimum of terpinen-4-ol and a maximum of 1,8-cineole content. Terpinen-4-ol, a prominent TTO component with antibacterial and anti-inflammatory activities, is a key component. Tea tree oil is an antioxidant with broad-spectrum antibacterial activity against bacterial, viral, fungal, and protozoal diseases that

affect the skin and mucosa. TTO has been proposed as a treatment for acne vulgaris, seborrheic dermatitis, and chronic gingivitis in several investigations. It also has anti-skin cancer properties and helps to speed up wound healing.^[28]



Figure 7: Tea Tree Oil.

10.3 Benefits of tea tree essential oil

- Tea Tree Essential Oil has a wide range of applications, from medical to odorous to cosmetic. Oils, gels, lotions, soaps, shampoos, and sprays, to mention a few examples of DIY goods, come in a variety of formats.
- Tea Tree Essential Oil is inhaled in aromatherapy, and scent receptors in the brain's emotional powerhouse process the scent as relaxing, helping the brain and body to rest. A few drops smoothed across a pillow, on the other hand, may aid in the commencement of deeper sleep by reducing anxiety and enhancing sleep quality. Tea Tree Oil's expectorant characteristics make it useful for relieving congestion and infections of the respiratory tract. Tea Tree Oil can be used to clear up a sinus infection by putting a few drops in a steaming bowl of hot water and bending over it to inhale the aromatic fumes with a towel thrown over the head and the bowl
- This calming oil, which has anti-microbial and anti-inflammatory characteristics, relieves small burns, sores, bites, and wounds by reducing pain, slowing bleeding, removing bacteria from the wound, and aiding scar closure. Its ability to restore skin colour and improve the look and feel of blemished skin is also proved when used on acne-prone skin, where its high antioxidant effect reduces the appearance of ageing.^[29]

11. ESSENTIAL OIL USED IN HAIR CARE PRODUCT

11.1 ylangylang

The entire flower is steam distilled to extract YlangYlang Essential Oil. Acne, hair loss, stress, and other issues can all be helped with this oil. YlangYlang Essential Oil contains a wide range of medicinal properties, from hypnotic and antidepressant to antibacterial. It's also utilised for aphrodisiac purposes. YlangYlang Essential Oil is a fantastic hair care component. Its history stretches back to the Victorian era, when it was employed as a natural hair growth treatment in England. The following components are present in various proportions in all types of ylang-ylang oil: p-cresol, p-cresyl acetate, eugenol, methyl benzoate, methyl salicylate, and numerous acids, as well as d-pinene, l-linalool, geraniol, benzyl alcohol and esters, benzyl alcohol and esters, benzyl alcohol and esters, benzyl alcohol and esters, benzyl alcohol and esters, benzyl alcohol and esters, benzyl.^[30]



Figure 8: YLANG YLANG OIL.

11.3 Benefits of ylangylang essential oil

➤ **Hair Loss Treatment**

YlangYlang Essential Oil is an effective natural treatment for alopecia and stress-related hair loss. Its use dates back to the Victorian era, when it was introduced to Macassar hair oil by the Victorians.

It encourages hair growth when massaged into the hair follicles. It's a natural technique to deal with hair loss.

➤ Conditioner made from natural ingredients

When sebum production is insufficient, the scalp gets dry, and the hair becomes thin and fragile. As a result, those with dry hair can use YlangYlang Essential Oil as a natural conditioner. It stimulates the sebaceous glands and increases sebum production, resulting in healthy, conditioned hair. Regular application of YlangYlang oil is claimed to help prevent split ends and hair breakage.

➤ Stress is lessened. Stress, is a primary cause of hair loss. Because of work, family, and/or relationships, most of us are living increasingly stressful lives. One of the many benefits of YlangYlang Essential Oil is that it can be used as a sedative. It is used in aromatherapy to help people relax and ease stress. The oil's relaxing scent has a euphoric effect on the nervous system, lowering anxiety, tension, fear, and other negative emotions, as well as stress-related hair loss.^[31]

12. LEMONGRASS

Lemon grass volatile oils are utilised in traditional medicine as treatments for a variety of ailments, as well as for hair maintenance. Myrcene, limonene, citral, geraniol, citronellol, geranyl acetate, neral, and nerol are the active components in lemongrass essential oil. Although aromatic molecules like myrcene and limonene, citral and geraniol have antibacterial and insecticidal properties, respectively.^[32] LGEO's chemical profile, as measured by gas chromatography– mass spectrometry examination, revealed two primary components: geranial (42.2 percent) and neral (42.2 percent) (31.5 percent). L^[33]



Figure 9: LEMONGRASS OIL.

12.1 Benefits of lemongrass essential oil

- Lemongrass oil has antibacterial properties. Thus, it prevents any scalp infection such as dandruff or psoriasis, eczema from occurring.
- Since lemongrass oil deep cleanses the scalp, it removes any accumulation of pollutants or dirt in the hair follicles, thus creating a conducive environment for a healthy scalp.
- Lemongrass oil strengthens hair follicles when used on a regular basis. This helps to prevent hair loss while also encouraging hair growth.
- If you have a lice infestation, applying lemongrass oil to your hair will help you get rid of the lice quickly.^[34]

THYME

It's a phenolic monoterpene that's typically found in thyme species. Traditional medicine has traditionally utilized thymol and thyme essential oil as expectorants, anti-inflammatory, antiviral, antibacterial, and antiseptic agents, mostly to treat upper respiratory infections. The major constituents of thyme are thymol, carvacrol, linalool, α-terpineol and 1,8-cineole.^[35]



Figure 10: THYME OIL.

13.1 Benefits of thyme essential oil

- It Promotes Healthier Hair
- Thyme essential oil is a nutrient-dense ingredient found in many hair-care products that aids in the growth of healthy hair.
- It Has Been Proven To Help People With Alopecia Thyme essential oil has anti-inflammatory effects, making it ideal for decreasing hair loss and encouraging hair growth.^[36]

CONCLUSION

Essential oils and their aroma compounds play an essential role in the perfume and cosmetic industries since they can act as natural or natural-like chemical preservatives while also providing a variety of skin and body benefits. Furthermore, due to their attractive odour, these compounds boost the value of cosmetic products. As a result, the cosmetic and perfume industries would be unthinkable without these rare materials. Essential oils and their components, on the other hand, have the potential to trigger allergic reactions and symptoms. 79 distinct essential oils have been linked to contact allergy or allergic contact dermatitis, according to de Groot and Schmidt, The majority of the publications only detailed single cases of allergy contact dermatitis produced by essential oils, and many of the investigations were conducted on people with higher-than-average allergic potential, as well as patients with dermatitis or other skin illnesses. The use of cosmetic care items or perfumes containing possible allergens may pose a risk for these people. As a result, potential allergen labelling is required in order for those with skin problems to avoid products that contain harmful compounds. During all phases of the process, the requirements for proper storage and handling of products containing aroma compounds are also critical (industry, trade and consumer).^[37]

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