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## Ornamental Plants in Aromatherapy

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### Abstract

Aromatherapy is one of the most actively growing forms of alternative medicines that use essential oils and aromatic plant compounds combined with massage. Aromatherapy using essential oils can help the human to relieve from stress and anxiety symptoms. Essential oil extracted from aromatic plants were used in this therapy. Mostly medicinal and aromatic plants imparts aromatic properties, in addition, some ornamentals contributes to fragrance. Oil extracted from aromatic plants like geranium, lemon grass, palmarosa, sandal wood, Thyme, Davana, Vetiver, Rosemary has good market value and also explored in various cosmetic and herbal industries. Apart from that, ornamental plants which possess good fragrance also exploited for its unique value. Jasmine, Rose, Lavender, Tuberose, etc., are some of the flowering ornamentals with beautiful flowers and fragrance.

### Introduction

Aromatherapy popularly known as Essential oil therapy defined as an art and science of utilizing naturally extracted aromatic essences from plants to balance, harmonize and promote the health, mind and spirit of a human. It eventually unifies physiological, psychological and spiritual processes which in turn enhance the healing process. The use of essential oils for therapeutic purposes started from ancient civilizations such as Indians, Chinese, Egyptians, Greeks, and Romans who used them in cosmetics, perfumes and drugs. Essential oil extracted perfume considered as an icon of luxury. It is also used in increasing the shelf life of wine and food's taste.

### Popularity of Aromatherapy

- Use essential oils as the major source of therapeutic agents.
- Ancient civilizations like Egypt, China, and India have used this as a common complementary and alternative therapy for at least 6,000 years (Cooke and Ernst, 2000).
- It came into existence after scientists understood the antiseptic and skin permeability properties of essential oils.
- It gained a lot of attention in the late 20<sup>th</sup> century and is very popular in the 21<sup>st</sup> century.

### Essential Oils

Essential oils are the mixture of alcohol, aldehydes, esters, ethers, ketones, oxides, phenols, and terpenes which produce distinctive scents and are potent. Concentrated essential oil works well on pressure points (Figure 7). It possesses well-established antibacterial, antimicrobial, and antiviral properties. Most importantly it outperforms the synthetic scents in aromatherapy.

## Mode of Action

(Ali *et al.*, 2015)

Integration of essential oils into biological signal of the receptor cells in the nose when inhaled



Transmission of signal to limbic and hypothalamus part of the brain through olfactory lobe



Cause brain to release neuro messengers - serotonin, endorphin etc.



Link our nervous and other body systems

## Mode of Application

(Hedao and Chandurkar, 2019)

- **Direct inhalation** is used for psychological effects, expectoration, and respiratory disinfection.
- **Aerial diffusion** is used for environmental fragrance or aerial disinfection.
- **Topical application** uses include general massage, baths, compresses, and cosmetic skin care.

## Classification of Aromatherapy

(Bhadra and Parid, 2021)

- **Cosmetic Aromatherapy:** Specific essential oils used in cosmetic products preparation particularly for the skin, body, face, and hair. Products manufactured from these oil base used in cleansing, moisturizing, drying, and toning. A foot bath or full-body aromatherapy treatment will provide a reviving and refreshing experience.
- **Massage aromatherapy:** Also known as healing touch of massage therapy. Blending oils are used.
- **Medical aromatherapy:** Essential oils have been massaged into surgical patients by Rene-Maurice Gattefosse, the father of contemporary aromatherapy.
- **Olfactory aromatherapy:** The human body has been rejuvenated or has experienced improved emotional wellbeing as a result of simple inhalation.
- **Psycho-aromatherapy:** These oils provide the pleasure of rest, energization, or a happy recollection. In this therapy, the oils are directly inhaled by the patient while they are being infused in their room.

## Ornamental Plants used in Aromatherapy

Lowering ornamental plants rich in fragrance can also be used in aromatherapy. Each flower gives difference types of smell which helps in recognizing the flower easily. Some of the ornamental plants used in aromatherapy are:

### Lavender (*Lavandula officinalis*) (Family: Lamiaceae)

Lavender (Figure 1) is a strongly aromatic shrub with pinkish-purple (lavender-coloured) flowers produced on spikes at the top of slender, leafless stems. Lavender essential oil, when diluted with a carrier oil can be used as a relaxant in massage therapy. Lavender essential oil contains 1,8-cineole, camphor, terpinen-4-ol, linalool, linalyl acetate, and beta-ocimene. Linalool and linalyl acetate have excellent skin absorption capabilities and CNS depressants. Both linalyl acetate and linalyl linalool have sedative and narcotic properties. Utilized for patients with sleeping disorder in which medicines are ineffective, lavender oil demonstrates its antibacterial and antifungal properties.

### Rose (*Rosa sp.*) (Family: Rosaceae)

*Rosa damascena* (Damask rose) (Figure 2) is the most important scented rose species cultivated for rose oil production. *Rosa bourboniana* L. (Edward rose) is also a popular species which has longer blooming period and ease of propagation. Rose is either a woody perennial flowering plant in the family Rosaceae. Flower colour varies from light pink to Pinkish red. Petals consist of Farnesol, stearpoten, traces of nonanal, nonanol, linalool, phenylacetaldehyde, carvone, citral, and citrine. It also contains citronellol, phenyl ethanol, nerol, and geraniol. Depression, anxiety, and digestive problems are all helped by it. It aids in the treatment of asthma, cardiac issues, and circulation issues.

### Jasmine (*Jasminum sp.*) (Family: Oleaceae)

The essential oil of *Jasminum officinale* (Figure 5) is used in aromatherapy. Jasmine absolute is known as the 'King of Oils', and its heavy, sweet scent is loved by most people. The flowers release their perfume at dusk, so flowers are picked. It is rich in linalool, eugenol, benzyl benzoate, benzyl acetate, methyl anthranilate, indole. It is known most for its relaxing properties, to ease depression and childbirth. Used for respiratory problems, addiction issues, and reducing tension and stress.

## Other Species of Jasmine

The world famous jasmine oil is extracted from the flowers of Spanish jasmine (*Jasminum grandiflorum*) (Figure 4). The oil is used in the preparation of soap, cosmetic industries, mouthwashes, dentifrices, incense

industries etc. The flowers of the arabian jasmine (*Jasminum sambac*) are used in flavoring tea. Since the odour of jasmine flowers cannot be imitated by any other synthetic chemicals, it occupies an important place in the perfume industries.

**Tuberose (*Polianthes tuberosa*) (Family: Asparagaceae)**

**T**uberose (Figure 3) is an important half hardy bulbous perennial plant known for its colour, elegance and fragrance. Flower petals consist of eugenol, benzyl alcohol, farnesol, butyric acid, methyl benzoate, nerol, geraniol and methyl anthranilate. It is aphrodisiac, relaxes brain and muscles, sedative and increases blood circulation in the body thereby inducing a warming effect.

**Carnation (*Dianthus caryophyllus*) (Family: Caryophyllaceae)**

**C**arnation (Figure 6) is an herbaceous perennial plant grows upto 80 cm. The leaves are glaucous greyish green to blue-green, slender, up to 15 cm long. The flowers are

produced singly or up to five together in a cyme. Flower petals contain eugenol, salicylates, benzoates and cis-hex-3-enyl esters. It has anti-anxiety, antidepressant, anti-inflammatory, antiseptic, aphrodisiac, muscle relaxant, sedative, stimulant and styptic properties.

**Helichrysum (*Helichrysum italicum*) (Family: Asteraceae)**

**H**elichrysum *italicum* (Figure 8) is a species of flowering plant in the family Asteraceae. It is sometimes called the curry plant because of the strong smell of its leaves. Helichrysum steam distilled to produce a yellow-reddish essential oil popular in fragrance for its unique scent, best described as herbaceous, sweet, and honey-like. Helichrysum is a healing and restorative powerhouse. It soothes inflammation, while also reducing pain with its built-in analgesic properties. It is a multifaceted aid in acute trauma conditions as well as a daily tonic to keep skin healthy.

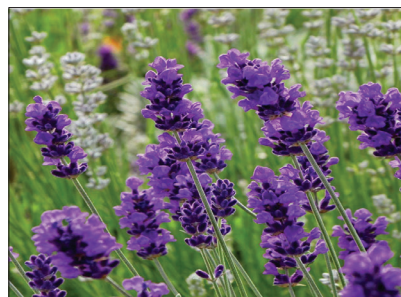


Figure 1: Lavender



Figure 2: Damask rose



Figure 3: Tuberose

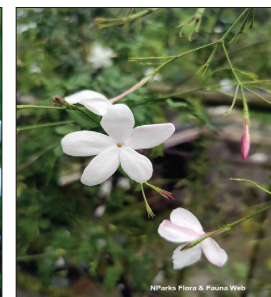


Figure 4: Spanish jasmine

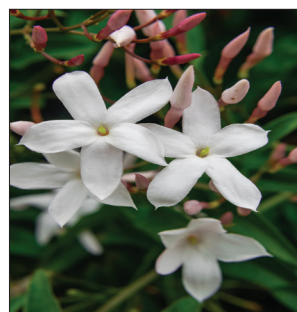


Figure 5: Common jasmine



Figure 6: Carnation



Figure 7: Essential oil

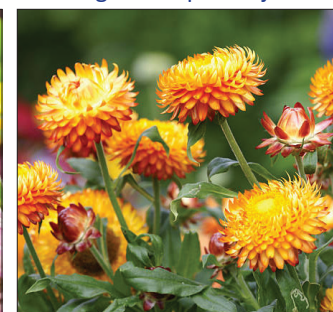


Figure 8: Helichrysum

**Conclusion**

**T**hough medicinal and aromatic plants rich in quality fragrance, some of the ornamental plants having rich fragrance and medicinal property also involved in aromatherapy. In contrary, Aromatherapy carries a number of risks of adverse effects and with this in consideration, combined effect studies and individual reaction has to be studied.

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