### Natural Aromatherapy: Herbs & Essences

### Doğal Aromaterapötik Bitkiler ve Uçucu Yağlar

#### Ahmet BAŞARANa

<sup>a</sup>Farmakognozi AD, Hacettepe Üniversitesi Eczacılık Fakültesi, ANKARA

Yazışma Adresi/Correspondence: Ahmet BAŞARAN Hacettepe Üniversitesi Eczacılık Fakültesi, Farmakognozi AD, ANKARA abasaran@hacettepe.edu.tr **ABSTRACT** Aromatherapy is an alternative field of medicine used for the treatment or prevention of diseases. It works in two ways; through the sense of smell or inhalation and during massage or bathing. Aromatherapy activates the limbic system and emotional centers of the brain, activate thermal receptors, and kill microbes and fungi. It involves use of herbal oils extracted from the various parts of a plant including the balsam, bark, flowers, fruits, leaves, resin, roots, seeds, and wood. Essential oils are highly concentrated, regenerating, and oxygenating natural chemicals. They contain hormones, vitamins & active terpenic and aromatic metabolites consist of hundreds of components including alcohols, aldehydes, esters, ketones, oxides and phenols that work on many levels. In this study some of important herbs giving important aromatherapeutic essential oils will be revised

Key Words: Aromatherapy, herbs, essences

ÖZET Hastalıkların tedavisinde ve korunmada kullanılan alternatif bir yöntem de aromaterapidir. Etkisi koku duyusu ve inhalasyon ile masaj ve banyo yollarını kullanılarak iki şekilde görülmektedir. Etki mekanizması limbik sistem ile beyindeki duyu merkezlerinin ve termal reseptörlerinin uyarılmasına, mikrop ve mantarların öldürülmesine dayanmaktadır. Aromaterapide bitkideki balzam, reçine, kabuk, çiçek, yaprak, tohum, kök ve odunsu kısımlar gibi değişik kısımlarından elde edilen uçucu yağlar kullanılmaktadır. Uçucu yağlar derişik, rejeneratif ve oksijen kaynağı doğal bileşiklerdir. Hormonları, vitaminleri ve alkol, ester, keton, oksit, fenol gibi birçok aktif terpenik ve aromatik metabolitleri taşımaktadır. Bu çalışmada önemli aromaterapötik uçucu yağları veren önemli bitkiler özetlenecektir.

Anahtar Kelimeler: Aromaterapi, bitkiler, uçucu yağlar

Turkiye Klinikleri J Med Sci 2009;29(Suppl):S86-S94

## AROMATHERAPY

Aromatherapy is an alternative field of medicine used for the treatment or prevention of various diseases such as bronchitis, fatigue, migraines, respiratory ailments, acne, arthritis, muscular aches and pains, cystitis, cold and flu. Aromatherapy also encourages emotional peace and calm with a gently calming effect on mind, body and emotions. Aromatherapy works in two ways; through the sense of smell or inhalation and during massage or bathing. Aromatherapy activates the limbic system and emotional centers of the brain, activate thermal receptors, and kill microbes and fungi. Aromatherapy is the use of essential oils extracted from the various parts

Copyright © 2009 by Türkiye Klinikleri

of a plant including the balsam, bark, flowers, fruits, leaves, resin, roots, seeds, and wood to enhance the well being of our body, mind & spirit. For centuries essential oils have been considered the most therapeutic & rejuvenating of all botanical extracts. They are highly concentrated, regenerating, and oxygenating and should be used with care and respect. Essential oils contain hormones, vitamins & active terpenic and aromatic metabolites consist of hundreds of components including alcohols, aldehydes, esters, ketones, oxides, phenols & terpenes that work on many levels<sup>1,2</sup>.

#### AROMATHERAPY APPLICATIONS

**Aromatic Diffusion:** Diffusion is the easiest and most rapid and comprehensive way to benefit from aromatherapy. Select a pure, fresh essential oil or blend, according to your needs. Diffuse for 10-15 minutes intermittently when desired. The best diffusers use a glass nebulizer to diffuse the oil on a stream of air.

**Massage:** This honored and ancient holistic treatment is delightfully enhanced with aroma oils, and can be designed to benefit specific tissues, imbalances and emotional conditions. For most oils, use 5-12 drops per 100 ml of base oil. However, halve the amount for sensitive skin. Add the essential oil to certain fresh vegetable oil such as almond, olive or sesame. Slightly warming the oil enhances the pleasure of the massage.

**Aromatic Bath:** For a soothing, sensual, cleansing treatment for body, mind and spirit, vigorously mix 5-8 drops of your favorite essential oil or synergistic blend with the water; or use an emulsifier such as a tablespoon of honey, cream or bath gel and add to the tub just before getting in. For a soothing, restorative bath, try a mixture of Lavender, Mandarin and Geranium. For detoxifying, experiment with a little Juniper and Lemon with Lavender in a bath which is hot, but not scalding.

**Steam Inhalation:** Fill a glass of stainless steel pot with 2/3 quarts of very hot water. Add 2-5 drops of essential oil or synergistic blend. Position your face, eyes closed, about 25 cm above the water, or as close as is comfortable. If you wish drape a towel over your head and around the sides of the basin. Relax, breathing in the steam, for 5-10 minutes. Additional 1-2 drops can be added as needed.

**Topical Applications:** Topical Application can take several different forms: A limited number of oils, such as Lavender or Tea Tree can be applied neat to a small

area of skin for a cut, bruise, or blister, etc. A compress can be made by mixing 6 drops of essential oil or blend in a bowl of hot or cold water (depending on need). Dip gauze into water, squeeze excess out and apply to affected area. Use up to 15 drops in a little base oil to massage a sore muscle group, etc. Essential oils in alcohol can be used as a scalp massage or liniment<sup>3</sup>.

# QUALITY CONTROL OF AROMATHERAPEUTIC ESSENTIAL OILS

Gas Chromatography is a cheap, efficient and reliable method to identify oils that have been processed, reconstituted, rectified or in other ways chemically manipulated. It also shows the variation in the natural chemical constituents - an important factor in determining the therapeutic quality of the oils. The chiral capillary column can distinguish between synthetic and natural aromatic compounds. A "nature-identical" synthetic compound has the same composition as a natural compound; however, it differs in physical specification, optical rotation. The synthetic compounds are racemic, whereas naturals optically active. The handedness of the aromatic plant molecules is specific to their physiological effect.

# SOME IMPORTANT HERBS CONTAINING ESSENTIAL OILS USED IN AROMATHERAPY

The herbs used in aromatherapy have got lot of medical benefits which can enhance both physical and mental health and have to be selected carefully after much research. In this article some of the important herbs containing essential oils are selected and their important properties are given for natural aromatherapy<sup>1,5</sup>.

**Angelica** - Angelica archangelica, A. officinalis, A. glauca (Apiaceae [Umbelleferae])

Source: Seed and root, Production method: steam distillation. Main Constituents:- Phellandrene, pinene, limonene, linalol, borneol. Aromatherapy class: anchoring, restorative, strengthening. Traditional use: in depression. Safety Information: Avoid during pregnancy & Avoid use in the sun

**Aniseed** - *Pimpinella anisum*, (Apiaceae [Umbelliferae]) Source: ripe fruit./ Production method: steam distillation/ Main constituents:- Anethol/Aromatherapy class: energizing, toning / Traditional use: muscle aches, bronchitis, indigestion. Added to perfumes for a rich, sweet fragrance. Safety Information: slight dermal toxicity.

**Basil** - Ocimum basilicum L. (Labiatae) Source: leaves,/ Production method: Steam distillation Main Constituents: Linalol, methyl chavicol, eugenol, limonene, citronellal./Aromatherapy class: soothing, energizing, toning/ Traditional use: deodorant, insect repellent, muscle relaxant; a good nerve tonic after a stressful day /Safety Information: use recommended dilution or less. CAUTION: Do not use Basil during pregnancy, can be a skin irritant.

**Bay or Laurel** - *Laurus nobilis* (Lauraceae) Source: Leaves/Production Method: Steam Distilled / Main constituents: Cineol, pinene, linalol, terpineol, acetate and traces of methyl eugenol and/or methyl chavicol/ Uses: Amenorrhea, colds, dyspepsia, flu, loss of appetite, tonsillitis. / Safety Information: can be narcotic, cause dermatitis and should not be used in pregnancy.

Bergamot - Citrus bergamia (Rutaceae) Source: fruit peel/ Production method: expression / Main Constituents:- Citral, Linalyl acetate, linalol, other mono and sesquiterpenes, bergapten and other furocoumarins./ Aromatherapy class: uplifting, calming, balancing/ Traditional use: antiseptic, deodorant, perfume, soothing agent, skin conditioner and antiseptic; relaxes and refreshes and is good for confidence building. It is familiar to many as the flavouring in Earl Grey Tea. / Safety Information: phototoxic Warning: Do not apply to skin or use in bath prior to exposure to the sun or tanning lamp - It can increase the susceptibility of the skin to severe burning.

Cajeput- Melaleuca cajeputi (Myrtaceae) Source: leaves and stems/ Production method: steam distillation / Main Constituents:- Cineol, terpoineol, pinene, eucalyptol, nerolidol / Aromatherapy class: soothing, stimulating, energizing / Traditional use: antiseptic, deodorant Improves mood, increases resistance to infections. It can be used in a Steam inhalation to help clear the nasal passages, also helpful when treating oily skin and spots.\*\*\*\*Warning Cajeput is a stimulant and a skin irritant and must be used with care.

Cardamom - Elettaria cardamomum (Zingiberaceae) Source: seeds / Production method: steam distillation/ Main constituents; Terpinyl acetate, Cineol, Limonene, Sabinene, Linalol, Linalyl acetate, Pinenes, Zingiberene / Aromatherapy class: stimulating, toning /Uses: muscle relaxant, skin conditioneer, soothing agent. It can be used as an aid to digestion and makes an excellent bath oil as which refreshes and invigorates.

**Cedarwood -** *Cedrus atlantica; C.virginiana* (Pinaceae) Source: Needle, Production method: Steam distillation / Main constituents: Atlantone, caryophyllene, cedrol, cadinene

Uses: Eases aches and pains and is especially good in cosmetic preparations for oily skin. Also used in hair care products. Helps to clear the breathing passage.

**Chamomile -** *Matricaria chamomilla* or *M. recutita* (Asteraceae [Compositae]) Source: flowers/ Production method: steam distillation/ Main constituents: Chamazulene, (Produced during steam distillation, not present in the fresh plant) bisabolol oxide, farnesene/Aromatherapy class: soothing, toning / Traditional use: muscle relaxant, skin conditioner, aphrodisiac.

Chamomile, Roman - Anthemis nobilis (Asteraceae [Compositae]) / Source: flowers / Production method: steam distillation / Main constituents:- Esters, pinene, fanesol, nerolidol, chamazulene, pinocarvone, cineol./ Aromatherapy class: soothing, relaxing and calming./ Traditional use: muscle relaxant, skin conditioner. It is excellent for protecting dry skin. They have many uses e.g. can be used to treat nerve, headache, insomnia, menstrual disorders and the Roman is a comforting oil during high pollen count. \*\*\*(Unless you have an allergy to the ragweeds). One of the few essential oils that can be used on inflamed skin conditions.

Cinnamon -Cinnamomum ceylanicum Nees, C. verum, (Lauraceae) Source: leaves and stems/ Production method: steam distillation / Main constituents: (Bark oil), Cinnamaldehyde, eugenol, benzaldehyde, pinene, cineol, phellandrene, furol, cymene, linalol. (Leaf oil) Eugenol, eugenol acetate, cinnamaldehyde, benzyl benzoate, linalol./ Aromatherapy class: stimulating, energizing; a strong antiseptic and cleansing effect / Traditional use: anti-inflammatory agent, aphrodisiac, skin conditioner, deodorant. Used as a comforting oil during cold seasons. Safety Information: can cause skin irritation; moderate dermal toxicity

Citronella - Cymbopogon narduus L, Andropogon narduus (Poaceae [Gramineae])/ Source: aerial parts/ Production method: steam distillation / Main constituent: citronellal / Aromatherapy class: soothing, and uplifting / Traditional use: a natural deodorizer, and an insect and cat repellent, skin conditioner

**Clary Sage** - Salvia sclarea, (Lamiaceae [Labiatae]) /Source: flowering tops, / Production method: steam distillation / Main constituents: Linalyl acetate, linalol, pionene, myrcene, sclareol, phellandrene / Aromatherapy

class: balancing, calming, toning/ Traditional use: skin conditioner, soothing agent, aphrodisiac, muscle relaxant. is said to promote dreaming. Contains a hormone-like compound similar to estrogen that regulates hormonal balance. Massage on muscles and on abdomen before and during menstruation induces feeling of wellbeing. Helpful with oily hair and skin, dandruff and treating wrinkles. Safety Information Do not use during pregnancy. Do not drink alcohol or drive.

Clove Bud - Eugenia caryophyllus, Syzygium aromaticum, E. aromatica, (Myrtaceae) Source: flowers /Production method: steam distillation / Main constituents: (Clove bud) Eugenol, eugenyl acetate, caryophyllene. (Clove Leaf) Eugenol, eugenyl acetate./ Aromatherapy class: stimulating, energizing / Traditional use: muscle relaxant, soothing agent. An antiseptic and stimulating oil useful in mouthwash and gargle. Comforting rubbed onto gums, traditionally used to relieve toothache. Could be an effective mosquito repellent. CAUTION: Clove is a powerful skin irritant and should be used carefully. Do not use during pregnancy. Safety Information: use a recommended dilution or less; can cause skin irritation

**Coriander** - *Coriandum sativum* (Apiacea [Umbelliferae]) Source: seeds / Production method: steam distillation / Main constituents:- Linalol, decyl aldehyde, borneol, geraniol, carvone, anethole / Aromatherapy class: warming, stimulating / Traditional use: muscle relaxant, deodorant, soothing agent, aphrodisiac. It makes a good massage blend to relieve stiffness and muscle ache. In the bath it is refreshing and stimulating.\*\*\*\*Warning Due to its slight toxicity this oil should be used sparingly.

**Cypress -** *Cupressus sempervirens* (Cupressaceae) Source: leaves and stem / Production method: steam distillation /Main constituents: Pirene, camphene, sylvestrene, cymene, sabinol.

/ Aromatherapy class: stimulating and a soothing oil / Traditional use: insect repellent, antiseptic, astringent, deodorant, soothing agent, skin conditioner, eases aches and pains and coughs. With its smoky woody fragrance it refreshes, restores and tones. Useful for refreshing and caring for oily and blemished skin, As an anti-perspirant it is good for sweaty feet. Being a good menopausal oil massage on abdomen during menstruation works well; if there is cellulite massage on abdomen is good. Natural deodorant. Safety Information: FLAM-MABLE

**Elemi** -*Canarium luzonicum* Source: resin Production method: steam distilling a resin that oozes from the tree in places where it is punctured or injured./Uses: It is antiseptic, soothing to skin, fortifying and tonic, regulatory, stimulant, expectorant, and stomachic. It helps skin to heal. It is excellent to use for skin rejuvenation, and infected cuts and wounds. It is known as an 'anti-wrinkle' oil. It is also used to help clear bronchitis and when there is coughing. It is said to be helpful in cases of nervous exhaustion.

**Lemon Eucalyptus-** *Eucalyptus citriodora* (Myrtaceae) Source: Leaves/Production method: steam distillation/Main constituents: citral/ Uses: a great air freshener and good for clearing the air and killing germs (has anti-staph properties). It is a strong anti-fungal oil, and great for removing the musty smell in basements (especially carpeted basements) and is also recommended as an insect repellant.

**Eucalyptus** - Eucalyptus globulus (Myrtaceae) Source: leaves and stems/Production method: steam distillation/ Main constituents:- Cineol, pinene, limonene, cymene, phellandrene, terpinene, aromadendrene./ Aromatherapy class: toning, stimulating /Traditional use: deodorant, antiseptic, soothing agent, skin conditioner, insect repellent. A fresh and stimulating oil with a penetrating scent and antiseptic properties. It is widely used as a component of preparations for relieving congestion and muscle aches. Powerful antiseptic, used in baths and massage during the cold season.

Blend oil in chest rubs and use in a vaporizer to keep air germ free in sick room.

**Fennel -** *Foeniculum vulgare* var. *dulce* B&T, *F. of-ficinale*, (Apiaceae [Umbelliferae]) Source: fruits

Production method: steam distillation/ Main constituents: Anethol, anisic acid, anisic aldehyde, pinene, camphene, estragol, fenone, phellandrene./ Aromatherapy class: energizing, toning/

Traditional use: antiseptic, aphrodisiac, soothing agent, muscle relaxant. For massage where there is cellulite and for the digestive system, especially the dreaded wind. Good for breast firming massage and to promote milk production, use sparingly. Safety Information: slight dermal toxicity; use recommended dilution or less. Do not use it on young children. Do not use if pregnant. Do not use if suffering from epilepsy.

**Fir**, **Canadian Balsam**- *Abies balsamea* (Coniferae) Also: Siberian Fir, (*A. siberica*); Hemlock, (*Tsuga canadensis*); Pine q.v.; Black Spruce, (*Picea mariana*); Tere-

binth, (*P. Palustris* and others). Source: Needles, resin/Use: Antiseptic and odor changer Warning Dilute well. It can be a skin irritant.

**Frankincense 'Olibanum'-** *Boswellia carteri, B. thurifera* or *B. carteri* (Burseraceae) Source: resin /Production method: steam distillation /Main constituents: Pinene, dipentene, limonene, thujene, phellandrene, cymene, myrcene, terpinene./Aromatherapy class: stimulating, toning, grounding and comforting/Traditional use: skin conditioner, soothing agent. Soothes, warms and aids meditation. It has been used for centuries, and burnt on alters and in temples. 'Creates a spiritual atmosphere'. oil, Excellent for toning and caring for mature/aging skin. (claimed to have rejuvenating qualities [the Egyptians used it in rejuvenation face-masks.])

Galbanum-Ferula galbaniflua, F. cummosa, F. rubicaulis (Apiaceae) Source: resin, Production method: steam distillation /Main constituents: - Carvone, cadinene, myrcene, cadinol, limonene, pinene./Aromatherapy class: toning, stimulating /Traditional use: skin conditioner, muscle relaxant. It may aid mature skin types, eases the aches and pains of rheumatism, and assist in clearing congested breathing. Galbanum is an ancient aromatic substance used in temple incense ritual anointings for springtime.

Geranium - Pelargonium graveolens (Geraniaceae) Source: leaves and stems / Production method: steam distillation / Main constituents: Geraniol, borneol, citronellol, linalol, termineol, limonene, phellandrene, pinene. / Aromatherapy class: balancing, uplifting and calming; soothing /Traditional use: An astringent oil, skin refresher, used in skin care products for both its fragrance and cleansing properties, useful insect repellent. For massage where there is cellulite and treating eczema and psoriasis, relaxes, restores and maintains stability of the emotions

**Ginger**- Zingiber officinale Roscoe (Family, Zingiberaceae). Source: roots / Production method: steam distillation /Main constituents: Gingerin, linalol, camphene, phellandrene, citral, cineol, borneol/Aromatherapy class: energizing, warming, fiery and fortifying / traditional use: aphrodisiac, astringent. Comforting oil and for massaging on the muscles. Good for nausea and sickness

**Grapefruit -** *Citrus x paradisi, C. racemosa* (Rutaceae) Source: fruit / Production method: expression /Main constituents: Limonene, paradisiol. neral, geraniol, citronellal/Aromatherapy class: energizing and helps to elevate the spirits/Traditional use: antiseptic, soothing agent

and skin conditioner, good when treating cellulitis. Warning: Do not use this oil on the skin or in the bath for 12 hours prior to sun or sunlamp exposure.

Helichrysum - Helichrysum italicum, H. angustifolium (Asteraceae) Source: flower / Production method: steam distillation/Main constituents: sineol, sesqui and diterpenoids/ Uses: an anti-depressant. Used to freshen the air, helps to clear the mind, chest and sinus and relieves aches, pains and menstrual discomfort.

**Hyssop -** *Hyssopus officinalis*, *H. officinalis* var. *decumbens* (Lamiaceae [Labiatae]) Source: roots / Production method: steam distillation/Main constituents: cineol, citral, terpinens, terpineol,/ Aromatherapy class: warming, stimulating, balancing, vibrant / Traditional use: soothing agent, skin conditioner, promote alertness and clarity of thought. Used to treat colds and flu, helps heal bruised skin. Safety Information: Powerful oil not to be used when pregnant, suffering from epilepsy, or high blood pressure.

Jasmine - Jasminum grandiflorum, J. officinale (Oleaceae) Source: flowers /Production method: solvent, extraction /Main constituents: Jasmone, benzyl acetate, benzyl alcohol, indol, linalol, linalyl acetate, phenylacetic acid, methyl jasmonate/Aromatherapy class: uplifting, balancing, emotionally warming, exquisite /Traditional use: antiseptic, aphrodisiac, emollient, soothing agent, helps self confidence. Good for stress and general anxiety.

**Juniper -** *Juniperus communis* (Coniferae) Source: berries/ Production method: steam distillation /Main constituents: Pinene, myrcene, borneol, camphene, thujene, terpineol./Aromatherapy class: antiseptic, and detoxifier; energizing /Traditional use: astringent, skin detoxifier, deodorant, soothing agent is said to exert a cleansing effect on the mental and spiritual planes as well as on the physical. Has a cleansing effect on the body, has a calming effect on the emotions. Reputed to strengthen the immune system. Safety Information: FLAMMABLE /

Lavender – Lavandula angustifolia, L. officinalis, L. vera (Lamiaceae [Labiatae]) Source: flowering tops /Production method: steam distillation/Main constituents: Linalol, linalyl acetate, lavandulol, lavandulyl acetate, terpineol, limonene, caryophyllene./Aromatherapy class: calming, balancing, soothing /Traditional use: muscle relaxant, soothing agent, skin conditioner. relaxing and refreshing, uplifts the spirits, and helps to relieve the distress of muscle pain. Prepare a peaceful sleep. Treats

burns and reduces scaring. Can be used blended with a carrier oil in small amounts on burns. Lavandin- Lavandula hybrida grosso, L. fragrans, L. hortensis (Lamiacea-e [Labiatae]) Source: leaves/Production method: steam distillation/Main constituents: Borneol, camphor, cineol, geraniol, linalol, linalyl acetate./Aromatherapy class: stimulating, energizing, refreshing, purifying, gently clarifying /Traditional use: soothing agent, muscle relaxant, skin conditioner.

**Lemon -** *Citrus limonum* (Rutaceae) Source: fruit peels / Production method: expression, there is some steam distilled/Main constituents: Limonene, terpinene, pinene, myrcene, citral, linalol, geraniol, citronellal/Aromatherapy class: Astringent, antibacterial and antiseptic, energizing, and uplifting /Traditional use: It is tonic, antiseptic, soothing agent, useful for relief of cold symptoms. Widely used in revitalizing and beauty care. It cleanses, refreshes, cools and stimulates. oil. Warning: Do not use Lemon on the skin or in a bath for 12 hours prior to sun or sunlamp exposure/

Lemongrass - Cymbopogon citratus (D.C.) Stapf. (Poaceae [Gramineae]) Source: aerial parts Production method: steam distillation/Main constituents: Citral, dipentene, linalol, geraniol/Aromatherapy class: calming antiseptic and astringent/Traditional use: insect repellent, skin conditioner, soothing agent, muscle relaxant, deodorant, antiseptic. refreshing, cleansing and stimulating tonic activity.

**Lime -** *Citrus aurantifolia* (Rutaceae) Source - Fruit peels Production Method; Cold expression but some steam distillation /Aromatherapy Class; Energizing, Uplifting/Traditional use; Soothing Agent, astringent, skin conditioner. Do not use on the skin in direct sunlight. Dilute to 1% and use only 3 drops in a bath as it may cause irritation of the skin.

**Litsea** - *Litsea cubeba* (Lauraceae) Source: Production Method: steam distillation. Main constituents: citral, geraniol, neral Aromatherapy class: anti- inflammatory and calming, astringent, Traditional uses: antiseptic, insecticide, hypotensive, stimulant and tonic. Said to be helpful for general skin cleansing due to its antiseptic properties. treatment of oily, acne infected skin areas. in treatment of fatigue, lethargy, insomnia, anxiety and depression. Safety Information: Use diluted in a carrier oil to decrease potential for skin irritation. Should not be applied to skin which is diseased or damaged.

**Mandarin** - Citrus reticulata Blanco v. 'Mandarin', C. nobilis (Rutaceae) Source: Production method: ex-

pression/Main constituents: Limonene, citral, citronellal, geraniol, linalol, perminol, bergapten, auraptenol and acids/Aromatherapy class: calming /Traditional use: soothing agent, astringent, skin conditioner, Use it in massage for the digestive system and, like Lavender, it can be used in massage oil to help prevent stretch marks. Do not use Mandarin on the skin if you're going to be in the sun.

**Manuka** - Leptospermum scoparium – (Myrtaceae) Source: leaves and small stems / Production method: steam distillation / Traditional uses: antiseptic, antibacterial, antifungal and for ulcers and burns. Useful for muscular pain relief, against athlete's foot and ringworm.

**Marjoram -** *Origanum majorana, Majorana horten- sis* (Sweet) (Lamiaceae {Labiatae})

Source; Flowering tops/Production Method; Steam distillation/Main Constituents; Carvacrol, Thymol, Camphor, Borneol, Pinene, Sabinene, Terpineol./Aromatherapy Class; Calming/Traditional Use: Antiseptic. It helps to relieve the misery of the common cold, including congestion & muscle aches & pains, and is also comforting in times of stress. Also it is very useful on tired muscles and for massaging on abdomen during menstruation. And it is used to regulate the nervous system and treat insomnia. Do not use during pregnancy. Care must be taken due to its sedative action.

**Melissa**- *Melissa* officinalis (Lamiaceae[Labiatae]) – Source: Leaves/Production method: Steam distillation/Main constituents: Citral, citronellol, eugenol, geraniol, linalyl acetate/Aromatherapy class: Soothing but uplifting effect on mind and body./ Traditional use: used indigestion, depression for calming the nerves. Warning: Do not use Melissa on the skin in direct sunlight.

Myrhh - Commiphora myrrha, C. Molmol, Balsamodendrom myrra (Burseraceae) Source: sap or resin from a tree rather than a true essential oil/ Production method: Steam distillation/Main constituents: Heerabolene, limone, dipentene, pinene, eugenol./Aromatherapeutic class: toning, stimulating, soothing/Traditional use: As a sacred incense, a perfume, and as a insect repellent, antiseptic, anti-inflammatory agent, emollient. Warning: During pregnancy use Myrrh only in moderation.

**Neroli**- *Citrus aurantium L. ssp amara* L. (Rutacea-e) Source:Flowers/Production method:Solvent extraction/Main Constituents; Linalol, Linalyl acetate, Limonene, Pinene, Nerolidol, Geraniol, Nerol, Indole, Citral, Jasmone./Aromatherapy class; Stimulation, balan-

cing, uplifting./Traditional use; Antiseptic, Emollient. Excellent skincare oil. Perfect for ageing, dry and sensitive skin, for scars and stretch marks. Relieve tension, stress & anxiety, and very useful for apprehension, like stage fright.

**Niaouli -** *Melaleuca viridifloria* (Myrtaceae) Source: Leaves/Production method:steam distillation/Main constituents: Eucayptol, /Traditional uses: analgesic; anticatarrhal; antirheumatic; antiseptic; antispasmodic; diaphoretic; expectorant; febrifuge; stimulant; balances and regulates body functions; soothes. strengthen the immune system. have direct antiviral action against herpes simplex, some strains of influenza and viral hepatitis.

Nutmeg - Myristica aromata, M. fragrans, M. officinalis, Nux moschata (Myristicaceae) Source. Fruits/ Production method:Steam distillation/Main Constituents; Borneol, Camphene, Cymol, Dipentene, Eugenol, Geraniol, Linalol, Pinene, Sapol, Terpineol, Myristicin, Safron./Aromatherapy class; Energizing, Stimulating, warming/Traditional use; Antiseptic, Muscle relaxant, Aphrodisiac, good for digestion and calming to promote a restful sleep. Nutmeg oil is toxic in large quantities.

**Orange,** *Citrus sinensis*(Rutaceae) Source: fruit peels/Production method: expression Main constituents: Limonene, citral, citronellal, geraniol, linalol, perminol, bergapten, auraptenol and acids./Aromatherapy class: calming /Traditional use: astringent, soothing agent, skin conditioner,

calming to the nerves and encourages sleep. Warning: Do not use this oil on the skin or in baths 12 hours prior to sun or sunlamp exposure.

**Oregano** - *Origanum vulgare* L. (Lamiaceae[Labiatae] source: Flowers, leaves, herbs/Production methods: steam distillation/Uses: warms & assists improvement of circulation, digestion, mental clarity and alertness. Relieves muscle aches and pains,, assists in increasing physical endurance and energy, and may assist in reducing cellulite. CAUTION: Should not be used on the skin directly Dermal toxin, skin irritant, mucous membrane irritant. Avoid during pregnancy.

Palmarosa- Cymbopogon martini Staph v motia, Andropogon martinii [Graminaceae (Poaceae)] - Source: aerial parts/Production method: steam distillation/Main constituents: Mainly geraniol, with citronellal, citral, farnesol, limonene, dipentene/Aromatherapy class:uplifting /Traditional use: insect repellent, skin conditioner, soothing agent, emollient, muscle relaxant.

It aids clarity of mind and also makes a wonderful skincare oil when mixed with Sweet Almond.

**Patchouli**- Pogostemon cablin, P. patchouli (Lamiaceae [Labiatae]) Source: leaves / Production method: steam distillation/Main constituents:- Patchoulil, pogostol, bulnesol, nor patchoulenol, bulnese, patchoulene./Aromatherapy class: soothing, toning/Traditional use: anti-inflammatory agent, antiseptic, astringent, aphrodisiac, Useful in protecting dry, mature or blemished skin, Can prevent sleep with its nerve stimulating properties.

**Pepper -** *Piper nigrum* L. (Piperaceae) Source; Fruits/Production Method: Steam distillation//Main Constituents; Thujene, Pinene, Camphene, Sabinene, Carene, Myrcene, Limonene, Phellandrene, Beta-caryohyllene/Traditional Use: muscle relaxant, aphrodisiac. CAUTION: It can be a skin irritant.

Peppermint - Mentha piperita (Lamiaceae [Labiatae]) Source: aerial parts/Production method: steam distillation/Main constituents: Menthol, carovne, cineol, limonene, menthone, pinene, thymol/Aromatherapy class: energizing, stimulating /Traditional use: insect repellent, emollient, antiseptic, muscle relaxant and good for the digestive system and in colds. Excellent for refreshing tired head and feet. Safety Information: can cause skin irritation Warning: do not use Peppermint when pregnant.

**Petitgrain** *Citrus aurantium v. amara, C. bigaradia* (Rutaceae) Source: leaves and stems/ Production method: steam distillation/Main constituents: Linalyl acetate geranyl acetate, linalol, nerol, terpineol/Aromatherapy class: calming / Traditional uses: It has a toning effect on the skin. Deodorant and helps to relieve anxiety and stress.

**Pine** *Pinus sylvestris* L. (Pinaceae) Source: resins/Production methods: steam distillation/Main constituents: Bornyl acetate, citral, cadinene, dipentene, phellandrene, pinene, sylvertrene/ Aromatherapeutic class: Stimulating, refreshing and cleansing. /Traditional use: a powerful antiseptic, deodorant. Warning Dilute and use with care it may cause skin irritation.

Rose - Rosa damascena Mill. (Rosaceae) Source: flowers/Production method: steam distillation//Main constituents: Very complex with over 300 different chemical constituents but mainly citronellol, geraniol, phenyl ethanol, nerol, stearopten/Aromatherapy class: cooling, balancing, calming, toning / Traditional use: astringent. The oil is also used in skin creams, powders,

and lotions. Warning: Avoid using during the first four months of pregnancy.

Rose Geranium Pelargonium graveolens (Geraniaceae) Source: leaves and stems Production method: steam distillation/Main constituents: Geraniol, borneol, citronellol, linalol, termineol,limonene, phellandrene, pinene/Aromatherapy class: balancing, soothing / Traditional use: skin refresher, astringent

Rosemary - Rosemarinus officinalis, R. coronarium (Lamiaceae [Labiatae]) Source: leaves/ Production method: steam distillation /Main constituents: Borneol, camphene, camphor, cineol, lineol, pinene, terpineol. /Aromatherapy class: energizing, stimulating /Traditional use: antiseptic, muscle relaxant, combats mental fatigue, soothing agent, skin conditioner, helps combat water retention and cellulite. A good hair tonic, Usage in the daytime to energize may keep awake at night. Safety Information: use recommended dilution or less. Warning: Do not use Rosemary when pregnant, having high blood pressure, or suffering from epilepsy. It may also cause irritation of the skin.

Sandalwood - Santalum album (Santalaceae) Source: wood / Production method: steam distillation/Main constituents: Santalols, fusanols, farnesol, santalone/Aromatherapy class: calming, grounding/Traditional use: antiseptic, emollient, soothing agent, astringent, insect repellent, skin conditioner. It is uplifting and relaxing and is beneficial for all types of skin, used in religious ceremonies. It creates an exotic, sensual atmosphere with a reputation as an aphrodisiac. useful for dry and damaged hair.

Sage - Salvia lavandifolia (Lamiaceae [Labiatae]) Source: leaves /production method: steam distillation/Main constituents: sineol, camphor, thujone, diterpenoid compounds/aromatherapy class: energizing, stimulating / traditional use: soothing agent. A useful regulator of the central nervous system and may help with menstrual and digestive disorders. Warning Do not use Sage when pregnant or suffering from epilepsy.

**Spearmint** - *Mentha spicata* (Lamiaceae [Labiatae]) Source: flowering tops / Production method: steam distillation /Main constituents: pulegone, sineol, menthone/Aromatherapy class: refreshing, cooling, calming /Traditional use: insect repellent, emollient, astringent, soothing agent, muscle relaxant, gently vitalizing as well as energizing to mind and body. Safety use: recommended dilution or less.

**Spruce** - *Picea marina* (Coniferae) Source: need-le/Production method: steam distillation, main constituents: Pinenes, limonene, bornyl acetate, tricyclene, phellandrene, myrcrene, thujone, dipentene, cadinene/ Uses: Coughing, depression.

**Tagetes** *Tagetes grandulifera* (Asteraceae [Compositae]) Source: flowers/ Production method: steam distillation/Main constituents: Tagetones, ocimene, myrcene, linalool, limonene, pinenes, carvone, citral, camphene, valeric acid, salicylaldehyde/Uses: in corns, warts Safety: Possibly toxic. Severely phototoxic. Do not use if the area of application will be exposed to sunlight for 24 hours due to its phototoxicity.

**Tangerine** *Citrus reticulata* (Family, Rutaceae) Source: outer peels/Production method: Cold expression/Main constituents; Limonene, methyl methyl-anthranilate, geraniol, citral, citronellal/

Antiseptic, antispasmodic, carminative, digestive, mild diuretic, laxative, tonic. Safety: Possibly phototoxic, avoid use in the sun

Tea Tree Melaleuca alternifolia, M. linariifolia, M. uncintata (Family, Myrtaceae) Source: leaves and stems, Australia / Production method: steam distillation/Main constituents: Terpinene-4-ol, cineol, pinene, terpenes, cymene./ Aromatherapy class: energizing, stimulating, toning/ Traditional use: insect repellent, antiseptic, antifungal and anti-viral. Good for acne, cold sores, warts, and burns. Use for vaporising to kill germs. Useful cleansing agent for skin. Helps combat foot odor and athletes foot. Tea Tree, as it is also known, has a wide range of uses, including some aids related illnesses. Warning: May cause irritation to sensitive skins.

Thyme - Thymus vulgaris L. (Lamiaceae (Labiatae) Source: flowering tops, Spain / Production method: steam distillation / Main constituents: Thymol, carvacrol, borneol, cineol, methone and pinene, may contain geraniol, linalool, thujanol-4 or alpha-terpineol./Aromatherapy class: energizing, stimulating, toning / Traditional use: deodorant, antiseptic; household disinfectant. and is said that it can ward off rodents and get rid of fleas. Safety Information: use recommended dilution or less; can cause skin irritation / Warning: Do not use Thyme when pregnant or having high blood pressure. Dilute to no more than 2% Thyme before use. It may cause irritation to sensitive skins.

**Vetiver** - *Vetiveria zizanoides* (L.) Staph., *Andropogon muricatus* (Poaceae [Gramineae]) Source: roots / Production method: steam distillation / Main constituents: Vetiverol, vitivone, vetivenes./Aromatherapy class: balancing, grounding / Traditional use: emollient, deeply relaxing, soothing oil for mind and body. Assists in reducing blood pressure

Yarrow - Achillea millefolium (Asteraceae [Compositae]) Source: Flowers and leaves/Production method: steam distillation/ Main constituents: mono and diterpenoids/ Aromatherapy class:sedative/Traditional use: Used for a wide variety of complaints, including chest infections, menstural problems, digestive problems, rheumatism and nervous exhaustion, It is also used for skin

complaint including acne, reducing scaring for burns and cuts.

Ylang Ylang - Cananga odorata (Annonaceae) Source: flowers/Production method: solvent extraction/Main constituents: Methyl benzoat, m. salicylate, linalyl acetate, cadinene, caryophyllene, pinene, cresol, eugenol, linalol, geraniol/Aromatherapy class: calming, balancing/ Traditional use: Soothing and relaxing during times of tension and stress. Ideal for both oily and dry skin and as a hair rinse. Used also as perfume, aphrodisiac.

#### REFERENCES

- Price S, Price L. Aromatherapy for Healthy Professionals. London Churchill Livingstone 1999.
- Clarke DB, Doel MA, Segrott J. No alternative? The Regulation and Professionalization of Complementary and Alternative Medicine
- in the United Kingdom. Health and Place 2004: 10:329-338.
- Steflitsch W, Steflitsch M. Clinical Aromatherapy. Jmh 2008; 5(1): 74-85.
- 4. Marriott PJ, Shellie R, Cornwell C. Gas Chro-
- matographic Technologies for the analysis of Essential Oils. Journal of Chromatography. 2001 936: 1-22.
- Trease and Evans. Ed. By EC Evans, Pharmacognosy. 15th ed.Edinburgh, WB Saunders 2002.