ORIGINS

Tagetes originate from South America and was brought into South Africa during the Anglo Boer War (1899 - 1902) with the fodder for the British Army's horses and it is known in South Africa as 'Khaki bush'. The leaves and flowers are a good insect repellent and are often seen hanging from native huts to deter swarms of flies and mosquitoes.

OVERVIEW

ROSA DAMASCENA

Essential Oil; Flower concrete; Leaf concrete

LATIN NAME: Rosa Damascena
OTHER NAMES: Bulgarian rose;
SOURCE: Steam distilled from the flowering plant.
Hexane concrete from flowers
Hexane concrete from leaves

COLOUR: Pale yellow
AROMA: Floral Dry Sweet,
VISCOSITY: Semi solid
CULTIVATION: Organically grown

Climatic conditions

In South Africa, the rose blossoms of Rosa damascena begin to bloom around the end of September to beginning of October, and will continue for three or four weeks depending upon climatic conditions. The yield of oil can be dramatically affected by the prevailing weather conditions - for example during very hot and dry weather the harvest may last only two weeks and the yield of the oil is lowered due to loss by evaporation. Conversely, during mild and humid weather the harvest time can be extended whilst at the same time increasing the oil yield.

During late unexpected frost the harvest can also be damaged drastically

The total yield of oil will depend upon several conditions: climate, the time of the harvest, condition of the flowers and the method of distillation. During the middle of the harvest period the yield is higher than at the beginning, and mild weather will result in a further increase in the oil produced.

just below the calyx harvesters are paid by the weight of flowers Collection begins at sunrise when the oil yield is at its highest.
The chemical composition of rose oil is one of the most complex and contains more than 400 compounds, not all of which have been identified to date.

The main chemical components of rose oil can be listed as -citronellol, phenyl ethanol, geraniol, nerol, farnesol and stearpoten with traces of nonanol, linalool, nonanal, phenyl acetaldehyde, citral, carvone, citronellyl acetate, 2-phenylmenthyl acetate, methyl eugenol, eugenol and rose oxide.

- **Citronellol** – effective mosquito repellant
- **Citral** – strong antimicrobial that is necessary for vitamin A synthesis
- **Carvone** – effective digestive aid
- **Citronellyl Acetate** – responsible for the pleasant flavor and aroma of roses, which is why it’s used in many skin and beauty products.
- **Eugenol** – the richest antioxidant in the world.
- **Farnesol** – natural pesticide
- **Methyl Eugenol** – local antiseptic and anesthetic
- **Nerol** – sweet-smelling aromatic antibiotic compound
- **Phenyl Acetaldehyde** – another sweet-smelling and aromatic compound
- **Phenyl Geraniol** – natural form of geraniol, which is commonly used in perfumes and fruit flavorings.
Rose oil is a volatile oil produced by a process of water–steam distillation of the fresh flowers of *Rosa damascena*. It is pale yellow in color and it congeals to a waxy thickness when cooled below room temperature. During distillation a large amount of oil is absorbed into the distillation water, and this is known as the 'First Water'. The rose oil must be recovered from this water to produce an acceptable yield, and this is achieved by skilfully re-distilling the water to separate the oil; a process known as cohobation. The heat used in the distillation process is carefully controlled, as the aroma can be damaged if the heat is too high.

On average, *Rosa damascena* will yield 1 kilo of oil per 4,000 kilos of flowers = 0.02 -0.05 %. Due to the specific correlation of its components, the rose oil has a multilateral application. It is used mainly in perfumery, cosmetics, pharmacy and aroma therapy.

Rose concrete is obtained by cold extraction of fresh flowers with hexane. It is an orange red waxy semi solid material with a fresh rose fragrance. This softly solid concrete contains waxes as well as all the rose absolute. Approximately 350kg of fresh roses produce 1kg of Rose concrete. Rose concrete has a diverse and rich content of more than 166 components, of which 30 are hydrocarbons. It consists of all components of the rose oil. The predominant ingredient is phenylethyl alcohol–about 70%. The Rose Concrete is used primarily to obtain absolute and in small amounts in cosmetics and perfumery products.

Rose leaf concrete is obtained by cold extraction of fresh Rose Gallica and Damacene leaves with hexane. It is light brown green waxy solid material with a fresh rose fragrance.
Therapeutic properties: The therapeutic properties of damask rose oil are antidepressant, antiphlogistic, antiseptic, antispasmodic, antiviral, aphrodisiac, astringent, bactericidal, choleretic, cicatrisant, depurative, emmenagogue, haemostatic, hepatic, laxative, nervous system sedative, stomachic and a tonic for the heart, liver, stomach and uterus. Rose oil has been used for centuries to treat asthma, coughs, congestion and fever.

Skin Treatment: Extracts of this delicate flower may be used on all skin types but are often included in products for dry, sensitive, and mature skin. Containing a complex array of vitamins, minerals, and antioxidants, rose essential oil has excellent emollient properties for moisturizing dry skin; it also offers antiseptic and astringent properties to treat acneic skin, as well as anti-inflammatory properties that help treat redness and inflammation. Rose oil can also help refine skin texture, controlling skin diseases such as psoriasis and atopic dermatitis. Rose essential oil can help heal wounds, inhibits water loss in the skin, helps balance moisture levels in the skin, promotes an even skin tone, reduces the appearance of skin imperfections and healthy complexion. Roses are known for their ability to soothe skin irritations. Rose oil can also help reduce inflammation on the skin while helping to treat herpes and eczema.

Pain Relief: Using rose oil in a hot or cold compress can help treat pain associated with swelling, sprains and cramps.

Emotional Properties: Emotionally uplifting. Emotionally and energetically, rose oil benefits the heart as well. It's said to have the highest vibrational frequency of any other oil. Rose oil possesses harmonizing aroma therapeutic properties, promoting inner relaxation, balance and sleep.

Stress and anxiety relief – relaxation response, decreased breathing rate and blood pressure–lowering benefits.

Hormonal Properties: Menstrual cramps – applying rose topically effectively reduced menstrual cramps. Menopausal symptoms - weekly massages using rose essential oils have a significantly greater improvement in menopausal symptoms.

PRE CAUTION

Damask rose oil is non-toxic, non-irritant and non-sensitizing but can pose a risk of irritation and allergic contact dermatitis in some persons.

Avoid during pregnancy.