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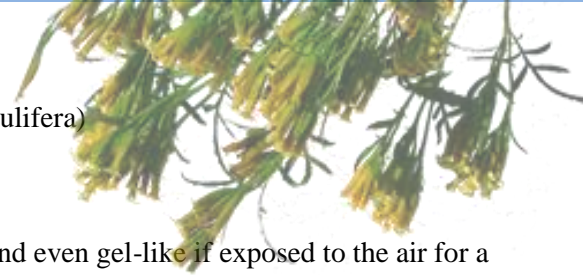


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TAGETE MINUTA ESSENTIAL OIL

LATIN NAME: Tagetes minuta (also known as Tagetes glandulifera)
OTHER NAMES: African Marigold, Khakibos, Khakibush
SOURCE: Steam distilled from the flowering plant.
COLOUR: Clear light yellow to, amber.
VISCOSITY: It is of medium viscosity that can turn thick and even gel-like if exposed to the air for a long time.



OVERVIEW



Tagete originate from South America and was brought into South Africa during the Anglo Boer War (1899-1902) together 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.

Tagete oil is extracted from the leaves, stalks and flowers by means of steam distillation. The harvesting time starts when the flowers are just starting to flower which is from middle March to seed time until end of May

Tagete is commercially planted and harvested at Highland Essential Oils but also harvested in the wild by the local people.

The bulk of our annual plant feedstock requirement of raw Tagete material supply comes from commercially cultivation on our own farm. Today, we cultivate around 500 ha of Tagete annually, which furnishes some 50% or more of our need for an output of 1 ton of oil per year. The targeted production volume is changed annually according to our best reading of the market.

EXTRACTION

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PRODUCTION

TAGETE CULTIVATION AT HEO

Preparation of the fields starts in early spring, after the first rains

The pre treated seeds are sown in intervals

End of February fully grown





Middle of March- flower
Start harvesting



Middle of April
Full in flower



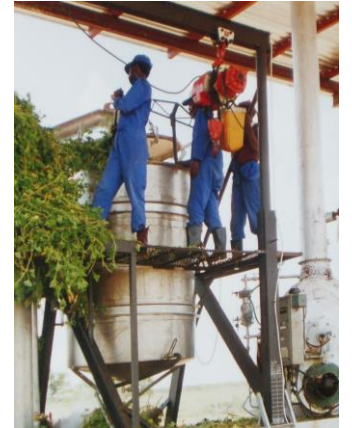
Tagete are harvested with a transformed wheat harvester



Transport to Factory



Highland Essential Oils also buy Tagete from jobless locals harvesting it in the wild and bringing it to the factory



CHEMICAL COMPOSITION

The main chemical components are Tagetone, Tagetenone and Ocimene

Oil Changes During Harvesting

Tagete oil chemical composition changes during the season and starts with low Ocimene, high Tagetone at the beginning of the season and ending with high Ocimene, low Tagetone at the end

Crop maturity	Early season: First flowering	Mid-season: Full flowering	Seed oil:
Oil yield:	0.1%	0.25%	0.5%
Oil Colour	Dark Reddish	Dark Yellow	Yellow
Oil composition:			
Cis- β -ocimene	28.3	33.9	51.9
Dihydrotagetone	13.7	10.2	3.5
(e)-tagetone	1.6	1.3	0.5
(z)-tagetone	9.2	6.8	2.8
(e)- tagetenone	18.7	19.6	14.0
(z)-tagetone	8.6	10.0	8.7

OIL CHANGES DURING MATURING

A 'maturation' period of 9-12 months is necessary before the final, stable composition is attained

- 1) 0-6 Months Tagete has a wild unpleasant smell
- 2) 6-12 Months The oil matures to a pleasant fruity (mango-like) smell
- 3) 1-5 Years The oil gets darker and a pleasant fully aroma develops
The oil gradually forms more resin and a thick gluey oil
- 4) After 5 years The oil's quality starts deteriorating
Always keep the oil at a constant temperature as possible and in a cold dark room to ensure a longer shelf life.

There are numerous factors influencing the Tagete oil quality and distillation yield

FACTORS INFLUENCING TAGETE OIL QUALITY & DISTILLATION YIELD

1. There are natural variations or chemo types between the wild population and from one district to another, the oil can differ substantially.
2. The plant maturity stage at harvesting influence the chemical compound of the oil. More flowers towards seeds stage are the best but, due to weather changes this time of the year it might be only a couple of days.
3. Rain or draught while growing as well as harvesting time influence the yield.
4. The proportion of stems vs. flowering or seeding heads influence the profitability and yield.
5. Stems without leaves reduce the oil yield and increases the red colour in oil
6. Duration of 'maturation' before sale. It takes 9-12 months from distillation to stabilize and mature.

USES

Insecticide: The Tagetes Essential Oil is lethal to insects and kills them. It keeps away parasitic insects such as mosquitoes, fleas, bed bugs, lice etc. as well as common household insects such as cockroaches, ants or termites and other such. Repels flies and is one of the ingredients in insect repellent as well as in dog shampoo to repel ticks and fleas and in a 5% dilution it is used to clear wounds and eliminate growth of maggots in them.

Fungicide: can help with fungal infestation. Mix a 5% blend with water - shaken well and sprayed it on the inside walls of green houses

Perfumes: It is also used in some perfumes especially as a fixative

Health benefits: The therapeutic properties of Tagetes oil are anti-infectious, anti-microbial, antibiotic, anti-spasmodic, anti-parasitic, anti-fungal, antiseptic. It is used for chest infections, coughs and catarrh, dilating the bronchi, facilitating the flow of mucus and dislodging congestion and can be used in cases of skin infections. It has a healing effect on calluses and bunions.

Disinfectant: The anti- microbial, anti- parasitic and anti- biotic properties of the essential oil of Tagetes prove very effective in disinfecting an area. When used in fumigants, vapourizers, sprays etc. it disinfects the whole space within its reach. This also protects from wind borne diseases like common cold, mumps, measles, pox and others

Flavourant: It is used in the food industry as a flavourant

PRE CAUTION

The FDA has not evaluated the statements on this website. No claims are made by HEO as to the medicinal value of any products from HEO. The information presented here is for educating our customers about the traditional uses of essential oils and is not intended to diagnose, treat, cure, or prevent any disease. You are responsible for understanding the safe application of these products

Tagetes oil is a very powerful oil and should be used sparingly

Not to be used on a sensitive skin. It may cause sensitization and irritation. Cases of dermatitis have been reported.

When using on skin dilute well and use at less than 0.01%. (1 drop in 200ml) in leave on products

Photo toxic- meaning some of its chemicals absorb light instead of repelling it- do not use prior to going into the sun as it may cause photosensitivity.

Avoid during pregnancy.

