

DATA SHEET – SWEET ORANGE

Citrus sinensis

Aka *Citrus x sinensis*, *Citrus aurantium* var. *dulcis*, or *C. aurantium* var. *sinensis*



DESCRIPTION AND BOTANICAL INFORMATION: The sweet orange tree is a small, spiny tree that typically grows to about 20 feet in height although it can reach about 50 feet in some cases. This is an evergreen tree and the leathery, green leaves range in shape from elliptical to oblong to oval. It produces very fragrant small, white flowers that mature to large, round orange fruit. Orange blossoms are an important source of nectar for honey bees and in the US more honey is produced from orange blossoms than from any other source. The sweet orange is native to China, where it's been cultivated and used in their medicine for thousands of years, but it's grown now all over the world in warm climates. This is the main orange that we eat and drink as orange juice; it accounts for about 70% of citrus production and is grown commercially in California, Florida, Spain, France, Italy, Israel, Brazil, and on the island of Cyprus.

FOLKLORE AND HISTORY: The name *orange* comes from the Sanskrit name of the fruit, *naranga*; in Arabic it becomes *naranj*. Sweet oranges were brought from China to India very early on and then Portuguese traders brought them from India to Europe. Portuguese, Spanish, Arab and Dutch traders planted

oranges along trade routes to prevent scurvy. Columbus brought sweet orange seeds, along with lemon and citron seeds, to Haiti and the Caribbean in 1493 and they were introduced into Florida by Ponce de Leon in 1513. The word was not used as a color until the 16th century.

The dried peel has long been used in Chinese medicine to treat coughs, colds, anorexia, and malignant breast sores and for stomach complaints. The fruit is high in Vitamin C as well as Vitamins A and B. The essential oil is extensively used as a fragrance product and in foods, drinks, detergents and other commercial products.

EXTRACTION: There are two types of sweet orange essential oil: one is distilled from the fresh peel of the fruit and one is expressed (pressed) from the fresh peel. The expressed oil is the only one used in aromatherapy and is not phototoxic (the distilled oil is phototoxic). An inferior essential oil is also produced by distilling the leftovers from the manufacture of orange juice.

Because orange oil is pressed from the rind it's definitely important to buy organic since anything that was on the rind at the time of pressing will also be in the essential oil.

PHYSICAL AND AROMATIC PROPERTIES: Pressed sweet orange essential oil is a yellowy orange to dark orange very mobile liquid. It has a sweet, rich, fruity scent much like the smell of a slice of orange. It is a good balance of top, middle and base notes and aromatically it blends well with lavender, bergamot, neroli, frankincense, clary sage and many spice oils, such as cinnamon.

MAIN COMPONENTS (SWEET ORANGE, ITALY):

Compounds (40)

<u>Name</u>	<u>%</u>
<u>Limonene</u>	95.50
<u>Myrcene</u>	1.72
<u>Sabinene</u>	0.61
<u>alpha-Pinene</u>	0.47
<u>Linalool</u>	0.35
<u>Decanal</u>	0.17
<u>para-Cymene</u>	0.16

<u>Octanal</u>	0.10
<u>delta-3-Carene</u>	0.08
<u>Valencene</u>	0.08
<u>Geranial</u>	0.06
<u>beta-Pinene</u>	0.04
<u>alpha-Phellandrene</u>	0.04
<u>Nonanal</u>	0.04
<u>1-Octanol</u>	0.04
<u>Neral</u>	0.03
<u>Citronellal</u>	0.03
<u>alpha-Terpineol</u>	0.03
<u>(E)-beta-Ocimene</u>	0.03
<u>Methyl N-methyl anthranilate</u>	0.02
<u>beta-Cubebene</u>	0.02
<u>alpha-Copaene</u>	0.02
<u>beta-Caryophyllene</u>	0.02
<u>Terpinolene</u>	0.02
<u>beta-Elemene</u>	0.01
<u>alpha-Cubebene</u>	0.01
<u>cis-Sabinene hydrate</u>	0.01
<u>alpha-Humulene</u>	0.01
<u>Geranyl acetate</u>	0.01
<u>Neryl acetate</u>	0.01
<u>Citronellyl acetate</u>	0.01
<u>Nerol</u>	0.01
<u>Citronellol</u>	0.01
<u>Terpinen-4-ol</u>	0.01
<u>Undecanal</u>	0.01
<u>gamma-Terpinene</u>	0.01
<u>(Z)-beta-Ocimene</u>	0.01
<u>Camphene</u>	0.01
<u>alpha-Thujene</u>	0.01
<u>beta-Sinensal</u>	0.01

WESTERN ACTIONS WITH EMPIRICAL SUPPORT:

Antidepressant, anxiolytic, anti-inflammatory, antioxidant, antibacterial, antifungal

A sampling of references:

Choi, H-S. et al. Radical-scavenging activities of citrus oils and their components: detection using 1, 1-diphenyl-2-picrylhydrazyl. *Journal of Agricultural and Food Chemistry*, 48 (9): 4156-4161

Faturi, C. B. et al. (2010) Anxiolytic-like effect of sweet orange aroma in Wistar rats. *Progress in Neuropsychopharmacology and Biological Psychiatry*, 34 (4): 605-609.

Gitti, O. et al. (2013) Essential oil of *Citrus sinensis* for treatment of premenstrual syndrome. *Scientific Information Data Base*,
<http://www.sid.ir/en/ViewPaper.asp?ID=195676&varStr=8;OZGOLI>

Lehrner, J. et al. (2000) Ambient odor of orange in a dental office reduces anxiety and improves mood in female patients. *Physiology and Behavior*, 71 (1-2): 83-86

Viuda-Martos, M. (2008) Antifungal activity of lemon (*Citrus lemon* L.), mandarin (*Citrus reticulata* L.), grapefruit (*Citrus paradisi* L.) and orange (*Citrus sinensis* L.) essential oils. *Food Control*, 19 (12): 1130-1138

TRADITIONAL AROMATHERAPY ACTIONS:

Antidepressant

Anti-inflammatory

Antibacterial and antifungal

Antispasmodic

Calming, mildly sedative

Carminative

Normalizes peristalsis

Improves dull or dry skin

Somewhat diuretic and depurative and is a lymphatic stimulant

TYPICAL WESTERN INDICATIONS:

Orange oil is used primarily for its calming and relaxing/releasing action; for its uplifting effect; and for digestive upsets. It works well in formulas for sleep (with lavender) and for tension and tension headaches and I use it for the energetic emotional effects that it is said to have in Chinese Medicine.

CHINESE MEDICINE CORRELATES

Energy:	Cool to neutral Neutral moisture
Main Element:	Wood (Mojay) Fire and Wood (Wilmont)
Level of Action:	Body, Mind, Spirit

CM ACTIONS:

- Unblocks and circulates stagnant qi, esp. in the Liver, Stomach, and intestines
- Stimulates the Liver and helps with symptoms of Liver qi stagnation such as headaches, irritability, insomnia and moodiness.
- Circulates Qi and smooths the flow of Qi

CM INDICATIONS:

Sweet orange's ability to stimulate and unblock stagnant Qi in the Liver, stomach and intestines makes it an excellent oil to use for digestive system complaints and it will have a tonic and antispasmodic effect in that system. Its actions in the Liver and on stagnant Qi also make it useful for headaches, insomnia, irritability and moodiness. Its ability to circulate and smooth the flow of qi makes it good for tense, angry, perfectionistic, Type A people who are all tied up and armored in the body with muscle tension.

SUBTLE ACTIONS: Helps to relieve chronic stress and frustration thereby releasing the Hun, also known as the Ethereal Soul, from constriction. A healthy Hun is necessary for maintaining emotional balance, decision making, and for our capacities of vision, inspiration, and imagination. For this reason, the subtle

effects of orange oil are very restorative to people who have been hindered on their life paths by chronic negative emotional states arising from stress/anger, etc.

SUBTLE INDICATIONS: Work-aholic types who strive to succeed at the cost of their physical and/or emotional health; perfectionists who cannot be happy with what they accomplish; tense and irritable or angry people; anyone who needs to take a more relaxed approach.

BEST USES BY SYSTEM:

SKIN CARE: dull and oily complexions

MUSCULOSKELETAL COMPLAINTS: may be a helpful addition to blends for people who have general body armoring from chronic stress

DIGESTIVE SYSTEM COMPLAINTS: stress-related digestive complaints, including indigestion, bloating, cramping, constipation, gas and poor appetite

NERVOUS SYSTEM ISSUES: insomnia, headaches, nervous tension, nervous exhaustion

MENTAL/EMOTIONAL ISSUES: depression, anxiety, stress, anger, irritability

ENDOCRINE AND REPRODUCTIVE COMPLAINTS: PMS; may help where there is decreased libido related to chronic stress

CIRCULATORY SYSTEM: palpitations (can be indicative of serious medical disorders; medical evaluation is recommended); excessive water retention, poor circulation (blood and lymph)

IMMUNE SYSTEM: may benefit immune function through stress reduction.

SAFETY: Expressed Sweet orange essential oil is generally regarded as non-toxic, non-irritant and non-sensitizing in reasonable doses for most people but a few people have shown sensitization. Be aware that this essential oil oxidizes readily and oxidized samples are known to produce skin sensitization. **Some authors report it to be PHOTOTOXIC, however according to Tisserand & Young (2014) it is not. It oxidizes readily and oxidized oils are irritating to the skin so properly**

stored sweet orange essential oil should be used or replaced within three months. If stored in the refrigerator it may be kept up to six months.

Sweet orange essential oil is said to have narcotic effects in high doses and those who work commercially in the preparation of the oil are reported to be subject to mental confusion, muscular debility, vesicles on the skin and other signs of toxicity.

Sweet orange is not on Tisserand and Young's (2014) list of essential oils that should be avoided in pregnancy and in their profile of this essential oil they state that it is not hazardous in pregnancy.

Tisserand, R. and Young, R. (2014) *Essential Oil Safety: Second Edition*.