

# Ginger

*Zingiber officinale*



**Botanical Family:** Zingiberaceae

**Botany:** *Zingiber officinale* is an erect, leafy perennial, that grows to about 1m, and is usually cultivated as an annual. It has green reed-like stalks, with narrow spear shaped leaves, white, yellow, or purple orchid like flowers, and a robust branched rhizome growing horizontally near the soils surface. The root is a sympodial rhizome, 6-20 cm depending on the cultivar. The rhizome is firm, the skin corky and small scaled, and skin thickness and appearance are a cultivar characteristic. The skin color varies from buff to very dark brown almost black; and the flesh color from pale yellow to deep orange red. It likes water, humidity, and heat, and is grown commercially in many tropical climates, it is native to India and China.

**Country of Origin:** Sri Lanka

**Part of Plant used:** Rhizome

**Extraction method:** Distillation  
\* "A major factor influencing oil yield is whether rhizomes are peeled or unpeeled, since oil-containing cells are especially numerous in the epidermal tissue, thus peeled or scraped rhizomes have less oil."<sup>1</sup>

**Oil yield:** 1.5 - 3%

**Color of Oil:** Clear

**Odor Description:** Warming, spicy

**Blending Factor:** 4

**Notes:** Top-strong Mid-strong Base-weak

**Volatility Rate:** Unknown

## Safety Information:

### Chemical Constituents:

**Monoterpenes:** a-pinene (trace-0.5%), b-pinene (0.1-2.3%), camphene (1.1-8%), myrcene (0.1-1%), limonene (1.2-3%), b-phellandrene (1.3-4%)  
**Sesquiterpenes:** zingiberene (20-50.9%), b-sesquiphellandrene (1.6-9%), ar-curcumene (8-19%), cis-g-bisabolene (7%), copaene, b-ylangene, b-elemene, b-farnesene (19.8%), calamenene, b-bisabolene (0.2-12%), b-selinene (1.4%)  
**Alcohols:** citronellol (6%), linalool (1-5.5%), 2-butanol, 2-nonanol (2.1-7.8%), 2-heptanol trace, nerolidol (trace-8.9%), elemol, b-bisabol, singiberol, trans-b-sesquiphellandrol, gingerol, d-borneol (1.3%)  
**Aldehydes:** citronellal, myrtenal, phellandral, neral (1-10%), geranial (3-20%)  
**Ketones:** acetone, 2-hexanone, 2-heptanone, gingerone  
**Oxides:** 1,8 cineole (4.1-11.2%)

**Actions on the body:** Analgesic, antibacterial, antiseptic, antiscorbutic, aperitif, aphrodisiac, carminative, cephalic, expectorant, febrifuge, laxative, rubefacient, spasmolytic, stimulant, stomachic, sudorific, tonic

**Keywords:** Warming, digestive, invigorating

### Main Therapeutic Properties

**The Circulatory system:** stimulates general circulation of blood and lymph, supports detoxification by warming the body, increases perspiration, chilblains, poor circulation and varicose veins, strengthens immune system

**The Digestive system:** promotes the secretion of gastric juices, diarrhea, colic, indigestion, nausea, loss of appetite, travel sickness, hang over, food poisoning, and flatulence

**The Muscular system:** good oil for muscular aches and pains, arthritis, sprains, rheumatism

**The Nervous system:** nervous exhaustion, debility, neuralgia

**The Respiratory system:** warming, aids the elimination of excess mucous, catarrh, bronchitis, congestion, sinusitis, sinus headaches, sore throat, laryngitis, tonsillitis, colds, able to reduce fevers, balancing mucous secretion

**The Reproductive system:** said to be a powerful aphrodisiac, good in treating impotence, warming quality helps to alleviate cramps and pain brought on with menstruation, regulating to menstruation, helpful after childbirth to break down clots

**The Skin:** Bruises, carbuncles

**Psychology of:** warming, nurturing, esp. during winter or when feeling cold, flat, and unenthusiastic, sedative, calming, stimulating, and grounding. Gives confidence, sharpens the senses, and helps memory

## History and Myth

It has been highly valued since ancient times both as a spice and medicine, especially in the East. The ancient Egyptians used it in cooking and to keep epidemics at bay. The Greeks and Romans used it for its warming properties, as an antidote to poison and also to help with cataracts. Fresh ginger is used in traditional Chinese medicine for cold, moist conditions such as excess mucus and diarrhoea. In India the tea is taken for stomach upsets. It spread to Europe in the Middle Ages and was used to counteract the Black Death as it provoked sweating. It was introduced to the West Indies by the Spanish Conquistadors, and Jamaica is now one of the world's largest producers. It is a sacred spice to the natives of the Pacific Island of Dohu who believe it to have remarkable healing powers. It is used by the women of Senegal to make belts for their husbands to awaken their dormant sexual power. Preserved and crystallized ginger is a popular sweet both in the East and West. It is used in digestive, carminative and laxative preparations, in cosmetics and perfumery and in all major food categories, alcohol, and soft drinks.