

# YLANG YLANG

**Latin Name:** *Cananga odorata (Lam)*

**Botanical Family:** Annonaceae (custard-apple family)

**Other Common Names:** ilang ilang

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## Extraction Information

<b>Country of Origin:</b>	Reunion Islands, Comoros, Madagascar
<b>Part of Plant Used:</b>	Flowers
<b>Extraction Method:</b>	Distillation: Fractional distillation (see note at end)
<b>Oil Content:</b>	2 – 2.5%
<b>Color of Oil:</b>	Clear, Pale yellow

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## Blending Information

<b>Odor Description:</b>	Warm, Exotic, Sweet, Heavy, Sensual
<b>Blending Factor:</b>	4
<b>Note:</b>	Base to Middle
<b>Energy:</b>	Cooling, Balancing
<b>Blends Well With:</b>	Bergamot, Cardamom, Cinnamon Leaf, Clary Sage, Geranium, Ginger, Jasmine, Lavender, Mandarin, Nard/Jatamansi, Rose, Sweet Orange
<b>Indicated For:</b>	Oily/Combination Skin, Aging or stressed skin, scalp tonic

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**Safety Information:** Moderate Skin Sensitizer<sup>1</sup>

**Cautions (dermal):** Hypersensitive, diseased or damaged skin, children under 2 years of age.<sup>2</sup>

**GRAS status:** ☒

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## Chemical Composition

Ylang ylang is a fractionated essential oil, meaning different fractions are removed based on distillation time. Currently there are five grades available: Extra Super, Extra, First, Second, and Third<sup>3</sup>. Ylang ylang compete is a combination of the first four distillates.<sup>4</sup>

## Botany:

During the distillation process, the grades become richer in less volatile compounds (sesquiterpenes) and poorer in volatile compounds (esters, aldehydes, alcohols...). Ylang ylang is a tropical aromatic tree which originated in the Philippines and has now spread throughout tropical Asia. The tree can grow up to 100ft. The leaves are large, oval, and shiny. At first when the flowers appear, they are greenish. Over a period of 20 days, they open and become mainly yellow-green flowers which exude an intense aroma at night. The flowers appear constantly and are more abundant during the rainy season.

## History + Myth

The name 'Ylang ylang' has been interpreted as 'flower of flowers.' It originates from the Malay 'ilang-ilang'. On the Hawaiian Islands, Ylang is mixed with coconut oil to create a mixture known as 'borriborri' which is rubbed into the body for its aroma as well as its protective abilities. The women used this mixture to protect their hair from the sea salt, while the flowers were used to adorn their hair. The oil was an ingredient of Macasser oil (hair tonic), hence the use of anti-macassers on the backs of chairs to prevent greasy stains. The oil is sometimes called 'poor man's Jasmine' and blends well with jasmine, neroli, and sandalwood.

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## Therapeutic Actions

**Antidepressant** (YY complete), antiseptic, **antispasmodic**, **aphrodisiac**, **hypotensive**, **nervine**

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### Chemical Feature:

### Chemical Composition

#### Chemical Variation in Ylang Ylang Fractions

Ylang ylang Cananga odorata forma genuina

The essential oil is fractionated, based on distillation time, resulting in the five grades that are currently commercially available: Extra Super, Extra, First, Second and Third. During the distillation process, the grades become richer in less volatile compounds (sesquiterpenes) and poorer in volatile compounds (esters, aldehydes, alcohols . . .)

The three most common fractions in the market are (all major components have been listed):

Ylang ylang #1: linalol (23.3%), benzyl acetate (28.73%), geranyl acetate (9.02%), p-Cresyl methyl ether (12.778%)

Ylang ylang #2: linalol (12.3%), benzyl acetate (25.68%), geranyl acetate (22.41%)

Ylang ylang #3: linalol (3.44%), benzyl acetate (6.43%), geranyl acetate (21.89%), Germacrene-D (13.32%), Benzyl benzoate (10.49%)<sup>35</sup>

Benini C, Ringuet M, Wathelet J-P, Lognay G, du Jardin P, Fauconnier M-L. (2012) Variations in the essential oils from ylang-ylang (*Cananga odorata* [Lam.] Hook f. & Thomson forma genuina) in the Western Indian Ocean islands *Flavour Fragr. J.* 27, 356–366

### Core Aromatic Applications:

**Circulatory system:** high blood pressure, tachycardia, heart palpitations

**Reproductive/Endocrine system:** male impotence, PMS (low self-esteem), dysmenorrhea

**Skin:** oily/combo skin, aging or stressed skin, scalp tonic<sup>5</sup>

**Psyche and Emotion:** can help soothe and reduce anxiety, anger, and fright. Antidepressant, very calming, reassuring, brings feelings of inner trust, aphrodisiac, euphoria, joy and peace, builds self-confidence, releases endorphins helping to reduce pain and create a euphoric mood, considered to be one of the best aphrodisiacs, bereavement, separations, post-traumatic stress syndrome, nervous tension or depression, frigidity

**Subtle/Energetic aromatherapy:** Ylang ylang helps to dispel anger and negative emotional states and can assist an individual in overcoming sexual dysfunctions or concerns.<sup>6</sup> Ylang ylang has an incredible ability to calm the heart and ease the mind.

**Ayurveda:** Soothes excess vata (anxiety, fear) and pitta (anger, frustration), balancing for kapha

**TCM:** For TCM, ylang ylang can help to clear heat from the heart while simultaneously harmonizing the mind (Shen).<sup>7</sup>

General Chemical Composition of <i>Cananga odorata</i> Extra		VS	General Chemical Composition of <i>Cananga odorata</i> Complete	
Chemical Family	Components		Chemical Family	Components
Monoterpenes	$\alpha$ -pinene (0.23%), $\beta$ -pinene (0.09%), $\beta$ -myrcene (0.15%), limonene (0.06%)		Monoterpenes	$\alpha$ -pinene (0.03%), $\beta$ -pinene (0.1%), $\beta$ -myrcene (0.013%)
Sesquiterpenes	<b><math>\beta</math>-caryophyllene (7.38%)</b> , $\beta$ -cubenene (0.3%), $\beta$ -elemene (0.25%), ylangene (0.26%), $\alpha$ -copaene (0.62%), $\beta$ -elemene (0.25%), $\beta$ -cubebene (0.3%), $\beta$ -farnesene (0.06%), zonarene (0.12%), $\alpha$ -humulene (2.31%), <b>Germacrene D (9.92%)</b> , $\alpha$ -muurolene (0.1%), cadina-1,4-diene (0.12%), $\alpha$ -cubenene (0.07%), epsilon-cadinene (0.49%), cadina-3,5-diene (0.1%), (Z,E)- $\alpha$ -farnesene (0.98%), bicyclogermacrene (0.57%), (E,E)- $\alpha$ -farnesene (3.07%), delta-cadinene (1.75%), gamma-cadinene (0.455)		Sesquiterpenes	$\alpha$ -cubebene (0.104%), $\alpha$ -ylangene (0.08%), $\beta$ -elemene (0.53%), $\beta$ -caryophyllene (11.15%), b-copaene (0.41%), iso-germacrene D (0.23%), $\alpha$ -humulene (3.395), trans-cadina-1(6),4-diene (0.15%), gamma-bulgarene (0.69%), gamma-muurolene (1.3%), Germacrene D (19.536%), bicyclogermacrene (0.58%), $\alpha$ -muurolene (0.81%), (E,E)- $\alpha$ -farnesene (9.88%), gamma-cadinene (0.88%), delta-cadinene (3.078%), cis-calamenene (0.32%), $\alpha$ -cadinene (0.23%)
Monoterpene Alcohols	<b>linalol (18.72%)</b> , geraniol (2.32%)		Monoterpene Alcohols	linalol (3.003%), $\alpha$ -terpineol (0.054%), geraniol (0.063%)
Sesquiterpene Alcohols	farnesol (1.6%), $\alpha$ -cadinol (0.935), cadinol isomer (0.11%), cubenol isomer (0.17%), $\alpha$ -muurolol (0.46%), t-cadinol (0.3%), sesquiterpenol (0.11%), viridiflorol (0.06%), guaialol (0.07%), globulol (0.08%), elemol and para-cresol (0.28%), cubenol and levoglucineol (0.08%), nerolidol (0.7%), sesquiterpenol (0.09%), epi-cubenol (0.09%)		Sesquiterpene Alcohols	elemol (0.115%), (E)-nerolidol (0.12%), spathulenol (0.15%), guaialol (0.14%), 1-epi-cubenol (0.308%), epi- $\alpha$ -cadinol (0.385%), epi- $\alpha$ -muurolol (1.09%), $\alpha$ -copaenol (0.385%), $\alpha$ -cadinol (2.33%), (E)-farnesol (3.428%)
Aldehydes	nonanal (0.06%), neral (0.05%), geraniol (4.92%)		Esters	methyl benzoate (0.48%), benzyl acetate (0.75%), methyl salicylate (0.02%), phenylethyle acetate (0.961%), cinnamyl acetate (0.9%), benzyl benzoate (11.635%), farnesyle acetate (2.573%), benzyl salicylate (3.31%)
Esters	prenyle acetate (0.38%), d-hexyle acetate (0.11%), <b>methyl benzoate (4.77%)</b> , <b>benzyl acetate (4.92%)</b> , methyl salicylate (0.14%), eugenyl acetate (0.09%), farnesyl acetate (1.02%), geranyl benzoate (0.06%), <b>benzyl benzoate (5.46%)</b> , benzyl salicylate (1.01%), cinnamyl acetate (0.96%), <b>geranyl acetate (9.07%)</b>		Phenylpropanoids	methyl chavicol (0.047%), trans-anethole (0.024%), eugenol (0.61%), isoeugenol (0.17%), methyl-para-cresol (0.58%)
Phenylpropanoids	isoeugenol (0.11%), methyl eugenol (0.06%), trans-anethole (0.07%), methyl chavicol (0.63%), eugenol (0.85%), <b>methyl-para-cresol (9.57%)</b>		Oxides	1,8 cineole (0.012%), caryophyllene oxide (0.18%)
Oxides	1,8 cineole (0.51%), caryophyllene oxide and benzoate d'isoprenyle (0.19%)			
www.florihana.com Ylang ylang extra Lot#: P040214MG			www.florihana.com Ylang ylang extra Lot#: P040214MG	

## So What's the Difference?

Not a huge difference per se, mostly subtle difference in ester content and sesquiterpene content. Ylang ylang extra has a higher content of monoterpene alcohol components (>20%) (specifically, linalool) versus the complete (<4%). This could indicate that ylang ylang extra may be of slightly more benefit to the skin. Both have a similar ester content supporting their antispasmodic activity. Ylang ylang complete has a much higher content of benzyl benzoate. All in all, this comparison helps to understand why and how different fractions of ylang ylang can be applied for their similar therapeutic actions.

## Ylang ylang extra versus Ylang ylang complete

<i>Cananga odorata</i> forma genuina	Fractions	
Component	Extra	Complete
$\beta$ -caryophyllene	7.38%	11.15%
$\alpha$ -humulene	2.31%	3.4%
Germacrene D	9.92%	19.53%
(E,E)- $\alpha$ -farnesene	3.07%	9.88%
delta-cadinene	1.75%	3.08%
linalol	18.72%	3.00%
geraniol	2.32%	0.06%
Sesquiterpenes	5.135%	8.45%
benzyl benzoate	5.46%	11.635%
methyl benzoate	4.77%	0.48%
benzyl acetate	4.92%	0.75%
geranyl acetate	9.07%	<4%
benzyl salicylate	1.01%	3.31%
Total Esters	approx. 25%	approx. 20-22%
methyl-para-cresol (*Technically an ether)	9.75%	0.584%

**Keywords:** Euphoric, Aphrodisiac, Antidepressant, Calming, Regulator, Harmonizing

## Research/ Additional Notes:

**Ylang ylang exhibits harmonizing activity.** The present investigation showed that ylang-ylang oil may be characterized by the concept of "harmonization" rather than relaxation/sedation. Compared to an odorless placebo, ylang-ylang oil caused significant decreases in blood pressure and pulse rate as well as significant increases of subjective attentiveness and alertness. Correlational analyses revealed that the observed effects are mainly due to a subjective odor experience. (fraction not given, but I would assume all three fractions would have this result either due to linalool content or rich ester content).<sup>8</sup>

**Ylang ylang exhibits relaxing effect.** The ylang ylang oil caused a significant decrease of blood pressure and a significant increase of skin temperature. At the behavioral level, subjects in the ylang ylang oil group rated themselves more calm and more relaxed than subjects in the control group. These findings are likely to represent a relaxing effect of the ylang

ylang oil and provide some evidence for the useage of the ylang ylang oil in aromatherapy such as causing a relief of depression and stress in humans.<sup>9</sup>

**Inhalation of Ylang ylang exhibits sedative activity.**<sup>10</sup> A combination of lemon, ylang ylang, and lavender used via inhalation lowers systolic blood pressure and sympathetic nerve system activity.<sup>11</sup>

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