



# **Egyptian Herbal Monograph**

**Volume 4**

**Herbal Formulations used in Egypt**

**Egyptian Drug Authority (EDA)**

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## Herbal Formulations Used in Egypt

### Guava/ Tilia

### جوافة / تيليو

#### 1. Names & Synonyms (1)

##### Guava

*Psidium guajava* L.

Family: Myrtaceae.

Syns: *Guajava pyrifera* Kuntze, *Myrtus guajava* (L.) Kuntze, *Myrtus guajava* var. *pyrifera* Kuntze, *Psidium pyriferum* L.

Arabic: جوافة

English name: Guava (2).

##### Tilia

*Tilia cordata* Mill.

Family: Tiliaceae (Malvaceae).

Arabic: تيليو

English: Lime flower (3), Linden, Tilia and small leaf linden, small leaf lime (4).

*Tilia platyphyllos* Scop.

Family: Tiliaceae (Malvaceae).

Arabic: تيليو

English: Lime flower (3), Linden, Tilia and large-leaf Linden.

*Tilia x vulgaris* Heyne

Naturally occurring hybrid of *T. cordata* and *T. platyphyllos* Scop.

Family: Tiliaceae (Malvaceae).

Syns: *T. europaea* auct. non L.

Arabic: تيليو

English: European linden (3), European lime tree, Linden and Tilia (4).

#### 2. Parts used for medicinal purpose

Guava: Dried leaves (2).

Tilia: Flowers (7-9).

#### 3. Major chemical constituents



**Guava:**

**Phenolic compounds (7)**

-Flavonoids: Quercetin and its glycosides, avicularin, apigenin, guaijaverin, kaempferol, kaempferol-3-arabofuranoside, hyperin, myricetin, rutin, catechin, epicatechin, epigallocatechin gallate and proanthocyanidins.

-Phenolic acids: Gallic acid and caffeic acid.

**Essential oil (8,9)**

$\beta$ -Caryophyllene,  $4\alpha$ -selin-7 (11)-enol,  $\beta$ -caryophyllene oxide,  $\alpha$ -selinene,  $\beta$ -selinene,  $\delta$ -cadinene, daucol, cubenol, 1,8-cineole (eucalyptol) and aromadendrene.

**Others (7)**

Sugars: Sulphated and unsulphated polysaccharides (uronic acid), minerals (calcium, potassium, sulfur, sodium, iron, boron, magnesium, manganese and zinc), vitamins (C and B) and macronutrients (protein and fat).

**Tilia:**

**Phenolic compounds (3, 5)**

Flavonoids: Kaempferol, quercetin, myricetin and their glycosides (mainly Kaempferol-3-*O*- $\beta$ -D-(6''-*E*-*p*-coumaroyl)-glucopyranoside "tiliroside") and proanthocyanidins.

Phenolic acids: Caffeic, chlorogenic and *p*-coumaric acids.

**Essential oil:** Alkanes (mainly tricosane) (6), phenolic alcohols and esters, and terpenes including citral, citronellal, citronellol, eugenol, limonene, nerol,  $\alpha$ -pinene and terpineol (monoterpenes), and farnesol (sesquiterpene) (3).

**Others:** Mucilage, tocopherol (phytosterol) and amino acids (3).

#### 4. Medicinal Uses (Indications)

Cough sedative, relief irritation of the throat in colds and catarrh of the respiratory tract (2,3,4,8,10,11).

#### 5. Herbal preparations correlated to medicinal use

1. Combination of aqueous liquid extracts of Guava (2:1) and Tilia (1:1).
2. Combination of aqueous liquid extracts of Guava (1:1) and Tilia (1:1).
3. Combination of aqueous liquid extracts of Guava (2:1) and Tilia (15:1).
4. Combination of Guava aqueous liquid extract (4:1) and Tilia dry extract (ethanol 95%) (8:1).
5. Combination of aqueous dry extracts of Guava (2:1) and Tilia (1.5:1).

**Herbal preparations are in pharmaceutical dosage forms. The pharmaceutical form**



should be described by the pharmacopoeia full standard term.

## 6. Posology and method of administration correlated to medicinal use.

### Preparation 1

#### Adolescents and Adults

- 333.375 mg Guava extract and 52.5 mg Tilia extract, 3 times daily.

#### Children above 4 years

- 111.125 - 222.250 mg Guava extract and 17.5 – 35 mg Tilia extract, 3 times daily.

### Preparation 2

#### Adolescents and Adults

- 0.75 -1.5 ml of Guava extract and 0.75 -1.5 ml of Tilia extract, 3-4 times daily.

#### Children above 4 years

- 111.125 - 222.250 mg Guava extract and 17.5 - 35mg Tilia extract, 3 times daily.
- 0.125 - 0.250 ml Guava extract and 0.125 -0.25 ml Tilia extract, 3-4 times daily.

### Preparation 3

#### Adolescents and Adults

- 140 - 280 mg Guava extract and 31.2- 62.4 mg Tilia extract, 3-4 times daily.

#### Children above 4 years

- 15.6 - 31.2 mg Guava extract and 15.6 – 31.2 mg Tilia extract, 3-4 times daily.

### Preparation 4

#### Adolescents and Adults

- 125 - 250 mg Guava extract and 15-30 mg Tilia extract, 3-4 times daily.

#### Children above 4 years

- 62.5 - 125 mg Guava extract and 7.5-15 mg Tilia extract, 3-4 times daily.

### Preparation 5

#### Adolescents and Adults

- 140 mg Guava extract and 31.2 mg Tilia extract, 3-4 times daily.

#### Children above 4 years

- 70 mg Guava extract and 15.6 mg Tilia extract, 3-4 times daily.

### Duration of use (3):

- If the symptoms persist longer than one week during the use of the medicinal product, a doctor or a pharmacist should be consulted.



**Method of administration:** Oral use (6).

## 7. Contraindications (3, 4)

Hypersensitivity to active substances and to other plants of the same family.

## 8. Special warnings and precautions for use (3, 4)

- If the symptoms worsen during the use of the medicinal product, a doctor or a pharmacist should be consulted.
- The use in children under 4 years of age is not recommended.

## 9. Interactions with other medicinal products and other forms of interaction (3, 4)

None reported.

## 10. Fertility, pregnancy and lactation (4,7)

- Safety during pregnancy and lactation has not been established. In the absence of sufficient data, the use during pregnancy and lactation is not recommended.
- No fertility data available.

## 11. Effects on ability to drive and use machines (7)

No studies on the effect on the ability to drive and use machines have been performed.

## 12. Undesirable effects (7)

- None reported.
- If adverse reactions occur, a doctor or a pharmacist should be consulted.

## 13. Overdose (7)

No case of overdose has been reported.

## 14. Relevant biological activities

Not required as per Egyptian guidelines for registration of herbal medicines.

## 15. Additional Information

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## 16. Date of compilation/last revision

13/09/2023.

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