

# **Egyptian Herbal Monograph**

**Volume 3**

**Medicinal Plants used in Egypt**

**Egyptian Drug Authority (EDA)**

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## Medicinal Plants Used in Egypt

*Matricaria chamomilla* L.

بابونج

### 1. Names & Synonyms

*Matricaria chamomilla* L. (1,2).

**Family:** Asteraceae (Compositae) (1).

**Syns.:** *Chamomilla recutita* (L.) Rausch., *Chamomilla officinalis* K. Koch, *Matricaria recutita* L. and others (1,3).

**Arabic:** Baboonig بابونج

**English name:** Matricaria Flower (4), Blue Chamomile, Hungarian Chamomile, Matricaria, Sweet False Chamomile, Wild Chamomile (3), German Chamomile (5).

### 2. Parts used for medicinal purpose

Flowerheads (4-7).

### 3. Major chemical constituents

- **Essential oil:**  $\alpha$  and  $\beta$ -Farnesene,  $\alpha$ -bisabolol and its oxide, chamazulene, germacrene D, spiroether, proazulenes (matricarin and matricin) (5,8).

- **Phenolic compounds:** **Phenylpropanoids:** Chlorogenic and caffeic acids; **Flavonoids:** Apigenin, luteolin, quercetin (and their glycosides) and naringenin; **Coumarins:**  $\gamma$ -Herniarin and umbelliferone (9).

- **Others:** Polyacetylenes, polysaccharides, fatty acids, anthemis acid and triterpene hydrocarbons (e.g. triacontane) (5,9).

### 4. Medicinal Uses (Indications) (4,6)

#### Internal:

- A. Symptomatic treatment of minor digestive ailments such as dyspepsia, epigastric bloating, impaired digestion, and flatulence.
- B. Treatment of restlessness and mild cases of insomnia due to nervous disorders.

**External:**

- C. Treatment of minor inflammation of the skin (sunburn), superficial wounds, small boils (furuncles), skin cracks, bruises, frostbite and insect bites.
- D. Treatment of minor ulcers and inflammations of the mouth and throat.
- E. Irritations of skin and mucosa in the anal and genital, after serious conditions have been excluded by a medical doctor (10).

**Inhalation:**

- F. Symptomatic relief of irritations of the respiratory tract due to the common cold.

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

1. **Comminuted herbal substance** (3-6).
2. **Fluid (liquid) extract**
  - 2.1 Ethanol 45% (1:1) (5,6).
  - 2.2 Ethanol 48% V/V (4).
  - 2.3 Ethanol 55% V/V (4).
  - 2.4 Ethanol 96% V/V: water: ammonia solution 10% m/m (50:47.5:2.5) (4).
  - 2.5 Ethanol 45% V/V: ammonia solution 10% m/m (14.7:1) (4).
3. **Dry Extract, extraction solvent:** ethanol 50% m/m (4).
4. **Tincture** (6,7,11).
5. **Oil** (10).

Herbal preparations (2-5) 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****Indication A (as infusion) (4)**

**Adolescents, adults and elderly:** 1.5 - 4 g in 150 ml of boiling water, 3 - 4 times daily.

**Children (6 - 12 years):** 1.5 - 3.0 g, 2 - 4 times daily.

**Children (2 - 6 years):** 1.0 - 1.5 g, 2 - 4 times daily.

**Children (6 months - 2 years):** 0.5 - 1.0 g, 2 - 4 times daily.

**Indication B (as infusion)**

**Adults:** 2 – 8 g, 3 times daily (5,6,11)

**Adolescents and children from 3 years:** 2 g, 3 times daily (6).

**Indication C (4,6,12)**

**Adolescents, adults and elderly:** Washings and impregnated dressings: 3 – 10% (30 – 100g/l water), several times daily.

**Indication D**

**Adolescents, adults and elderly:** Oromucosal use for rinsing and gargling: 1 – 5% (10 – 50g/l water) (4) or 3 – 10% (30 – 100g/l) (6,13), several times daily (4).

**Children (6 - 12 years):** 3 – 10% (30 – 100g/l) (13).

**Indication E (4)**

**Adolescents, adults and elderly:** 4.5 - 5 g/l water (irrigation), several times daily.

**Indication F (4)**

**Adolescents, adults and elderly:** 3 - 10 g in 100 ml hot water, several times daily.

**Children (6-12 years):** 2 - 5 g in 100 ml hot water, 1-2 times daily.

**Preparation 2**

**Preparation 2.1 (6)**

**Indications A and B**

**Adults:** 1 – 4ml, 3 times daily (5).

**Children from 3 years:** Single dose: 0.6 – 2ml.

**Preparation 2.2 (4)**

**Indication A**

**Adolescents, adults and elderly:** 1.5 ml in 150 ml water, 3 - 4 times daily.

**Children (6-12 years):** 0.7 – 1 ml in 150 ml water, 3 - 4 times daily.

**Preparations 2.2 and 2.3**

**Indications C and E (4)**

**Adolescents, adults and elderly:** 15 ml / l hot water. One to several times daily.

**Indication D**

**Adolescents, adults and elderly:** 1-2 ml in 150 ml water, 3 - 4 times daily (4) or 1% v/v fluid extract (1 ml of fluid extract per 100 ml of finished liquid formulation) (13).

**Children (6-12 years):** 0.5 – 1 ml in 150 ml water, 3 - 4 times daily (4).

or 1% v/v fluid extract (1 ml of fluid extract per 100 ml of finished liquid formulation) (13).



**Indication F (4)**

**Adolescents, adults and elderly:** 15 ml/l hot water, 1 - 2 times daily.

**Preparation 2.3 (4)**

**Indications C and E**

**Adolescents, adults and elderly:** Single dose: 15 - 30 ml/5l warm water for partial baths. One to several times daily.

**Preparation 2.4 (4)**

**Indication A**

**Adolescents, adults and elderly:** 2 g in 150 ml warm water, 3 - 4 times daily.

**Preparation 2.5 (4)**

**Indication A**

**Adolescents, adults and elderly:** 5 ml in 150 ml water, up to 4 times daily.

**Children (6-12 years):** 2.5 ml in 150 ml water, up to 4 times daily.

**Indications C and E**

**Adolescents, adults and elderly:** 20 ml/l water for compresses and irrigation **or** 10 ml/l water for partial baths, several times daily.

**Indication D**

**Adolescents, adults and elderly:** 2.5 ml in 125 ml water for gargling or rinsing, 3-4 times daily.

**Indication F**

**Adolescents, adults and elderly:** 5 ml in 150 ml hot water for inhalation, several times daily.

**Preparation 3 (4)**

**Indication C**

**Adolescents, adults and elderly Single dose:** in case of sunburns, few drops are applied in a thin layer on affected area, several times daily.

**Preparation 4**

**Indications A and B**

**Adults: Tincture (1:5):** 3 – 10 ml, 3 times daily (11).

**Indication D**

**Children from 6 years of age, adolescents and adults:** 5% v/v tincture (5 ml of tincture/100 ml of finished liquid formulation) (13).

**Preparation 5**

**Indications C and E**



**Adolescents, adults and elderly:** 5 drops per 100 ml of oil, or per 100 g of cream or ointment (11):

**Indication E (10)**

**Adolescents, adults and elderly:** Single dose: Use as bath additive: 0.5 – 1 mg/l.

**Average daily dose**

Full bath: One bath per day or every second day.

Partial bath: One or two times per day.

**Duration of bath:** 10 – 20 minutes.

**Use as bath additive.** Recommended temperature of bath: 35 – 38 °C.

**Indication F**

**Adolescents, adults and elderly:** 5 drops of essential oil in one l hot water (11).

**Duration of use (4)**

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

**Method of administration (4):**

**Indications A and B:** Oral use.

**Indications C and E:** Cutaneous use.

**Indications D:** Oromucosal (buccal) use.

**Indication F:** Inhalation use.

## 7. Contraindications

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

**Use as bath additive (4,10):**

- Full baths are contraindicated in cases of open wounds, large skin injuries, acute skin diseases, high fever, severe infections, severe circulatory disturbances and cardiac insufficiency.
- Partial baths or hip baths are contraindicated in cases of open wounds, large skin injuries, acute skin diseases, high fever and severe infections

## 8. Special warnings and precautions for use

If the symptoms worsen during the use of the medicinal product, a doctor or a pharmacist should be consulted.

- The oral use of the **herbal preparation 1** is neither recommended for indication A in children below 6 months of age nor indication B in children below 3 years of age (4).

- The use of the **herbal preparation 1** as mouth wash or steam inhalation is neither recommended in children below 6 years of age nor in partial bath or local cutaneous use in children below 12 years of age (4).
- The oral use of the **herbal preparation 2.1** is not recommended for in children under 3 years of age (6). Also; the oral use of the **herbal preparations 2.2 and 2.5** is not recommended in children under 6 years of age (4,13).
- As mouth wash or gargling, the **herbal preparations 2.2, 2.3 and 4** is not recommended in children under 6 years of age (4,13). Also, the **herbal preparation 2.5** is not recommended in children under 12 years of age (4).
- The **herbal preparations 2.2, 2.3 and 2.5** are not recommended in children under 12 years of age as partial bath, for local cutaneous use or as steam inhalation (4,13).
- The use of **oil, dry extract and herbal preparation 2.4** in children under 12 years of age is not recommended (4,10,14).

## 9. Interactions with other medicinal products and other forms of interaction

### Oral use:

- For patients after renal transplantation taking high dosages for longer periods (about two months) interactions based on effects on CYP450 have been reported (4).
- Due to the content of hydroxy coumarins in *M. recutita*, there may be an additive effect when taken with warfarin (15).
- **CNS depressants:** Chamomile may increase the effects of other sedatives; concurrent use should be avoided (14,15).

### Cutaneous, oromucosal use, inhalation, or as bath additive:

- None reported (4,10).

## 10. Fertility, pregnancy and lactation

- Safety during pregnancy and lactation has been established for **preparation 1**. If applied before nursing the baby, the nipples should be cleaned of Matricaria containing products for cutaneous use to prevent a sensitization of the baby (4).
- **For other preparations**, safety during pregnancy and lactation has not been established. In the absence of sufficient data, the use during pregnancy and lactation is not recommended (4,10).
- No fertility data available (4,10).

## 11. Effects on ability to drive and use machines

No studies on the effect on the ability to drive and use machines have been performed (4,10).

## 12. Undesirable effects

- If adverse reactions occur, a doctor or a pharmacist should be consulted.
- Hypersensitivity reactions (4,6,10,15) including severe allergic reaction (dyspnoea, Quincke's disease, vascular collapse, anaphylactic shock) following mucosal contact with liquid chamomile preparations have been reported (4,10).
- Burning of the face, eyes and mucous membranes (topical) (14).

## 13. Overdose

No case of overdose has been reported (4,6, 10).

## 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 last revision

23/08/2022.



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