

Egyptian Herbal Monograph

Volume 2

Medicinal plants used in Egypt

Egyptian Drug Authority (EDA)

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Hydrastis canadensis L.

خاتم الذهب

1. Names & Synonyms (1)

Hydrastis canadensis L.

Family: Ranunculaceae.

Syns.: *Warneria canadensis* Mill., *Warneria diphylla* Raf., *Warneria tinctoria* Raf.

- **Arabic:** خاتم الذهب Khatam Al-Zahab (2)

English name: Goldenseal, Orange root, Yellow -puccoon, Yellow root (3-5).

2. Parts used for medicinal purpose

Dried root and rhizome (3-6).

3. Major chemical constituents

- **Isoquinoline alkaloids:** Berberine, hydrastine, canadine, hydrastinine (7,8), canadine, corypalmine, hydrastidine and jatrorrhizine (9).
- **Flavonoids:** Sideroxylin, 8-desmethyl-sideroxylin and 6-desmethyl-sideroxylin (10).
- **Phenolic acids:** Chlorogenic and neochlorogenic acids (8).

4. Medicinal Uses (Indications)

- A. Treatment of digestive complaints, such as dyspepsia, gastritis, feeling of distension and flatulence (3,4,9,10).
- B. Relieve mucous membrane inflammations of the mouth (3) and sore throat (11).
- C. Adjunct in menorrhagia and dysmenorrhoea (3,9,10).
- D. Topically used for skin infections as ringworm and athlete's foot, promote wound healing, reduce haemorrhoids and soothe canker sores (12).



5. Herbal preparations correlated to medicinal use

1. Comminuted herbal substances are added to hot water as herbal tea in the form of infusion or decoction (3,4,9,12).
2. Powdered drug (3,6,10).
3. Extracts (3)
 - 3.1. Liquid extract (1:1, Ethanol 60%) (3,4,9,10,12).
 - 3.2. Dry extract (3,11).
4. Tincture (Ethanol 60%) (3)
 - 4.1. 1:10 (5,6,10,11,12).
 - 4.2. 1:5 (11).
 - 4.3. 1:3 (14).

Herbal preparations (2-4) 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

Adults

Preparation 1

Indications A and C

Oral: 0.5 - 1 g of the drug as a decoction and infusion, 3 times daily (3-6,9,13).

Indication B

Buccal: 2 - 4 g, 3 times daily (11).

Preparation 2

Indications A and C

Oral: 0.5 - 1 g of the drug, 3 times daily (3,11).

Indication B

Buccal: 0.5 - 1 g, 3 times daily (3).

Indication D

External: 0.5 - 1 g, 3 times daily (12).



Preparation 3

Indications A and C

Oral use

Preparation 3.1

- 0.3 - 1 ml, 3 times daily (4-6, 9).
- Equivalent to 0.6 - 3 g of the drug, daily (3).

Preparation 3.2

- 250 - 500 mg, 3 times daily (11).
- Equivalent to 0.6 - 3 g of the drug, daily (3).

Indication B:

Buccal use (3)

Preparation 3.1

- 0.3 - 1 g dried equivalent, 3 times daily (0.3 ml) (3).

Preparation 3.2

- 250 - 500 mg (8% -12% alkaloids), 3 times daily (11).

Indication D (12):

External use

Preparation 3.1

0.3 - 1 ml, 3 times daily.

Preparation 4

Indications A and C

Oral use

Preparation 4.1

- 2 - 4 ml, 3 times daily (5,6,9,12).
- Equivalent to 0.6 - 3 g of the drug (3).

Preparation 4.2

- 6 - 12 ml, 3 times daily (11).

Preparation 4.3

- 2.0 - 4.5 ml, daily (14).

Indication B

Buccal use (3)

Preparation 4.1

- 0.2 - 0.4 g dried equivalent, 3 times daily (2 - 4 ml) (3).



Preparation 4.2

- 6 - 12 ml, 3 times daily (11).

Indication D (12)

External use

2 - 4 ml, 3 times daily.

Duration of use

No restriction. If the symptoms persist or worsen during the use of the medicinal product, a doctor or pharmacist should be consulted (4).

Method of administration:

Indications A and C: Oral use (3, 4).

Indication B: Buccal use (3).

Indication D: External use (12).

Directions for use for buccal use (3):

- Rinse as needed.
- Do not exceed maximum daily dose.

7. Contraindications

- Hypersensitivity to the active substance and to other plants of the same family.
- Individuals with raised blood pressure, bleeding or blood clotting disorders, or if using medications to control such a disorder (5,6,9).
- Kidney disease because of inadequate excretion of the alkaloids (13).
- Goldenseal should not be given to children (5).

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.
- Not to be used as a douche due to potential for mucous membrane irritation. (12)
- Patients with diabetes, glaucoma and a history of cardiovascular disease (9).



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

- Concomitant use with alcohol, other medications and/or natural health products with sedative properties should be avoided (3).

10. Fertility, pregnancy and lactation

- The use during pregnancy or lactation should be avoided (4-6, 13).
- No fertility data available.

11. Effects on ability to drive and use machines (4)

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

12. Undesirable effects

- None reported (4).
- If adverse reactions occur, a doctor or a pharmacist should be consulted.

13. Overdose

- Although no case reports are available, exaggerated reflexes, depression, delirium, vomiting and cyanosis have been mentioned (4,5,9).

14. Relevant biological activities (4)

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

15. Additional information

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16. Date of compilation/last revision

15/01/2024

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