

Egyptian Herbal Monograph

Volume 2

Medicinal plants used in Egypt

Egyptian Drug Authority (EDA)

2026



Egyptian Herbal Monograph

Medicinal Plants Used in Egypt

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

-

16. Date of compilation/last revision

15/01/2024

References

1.	powo.science.kew.org
2.	www.identify.plantnet.org
3.	Natural Health Product, Goldenseal - <i>Hydrastis canadensis</i> (2019). Health Canada https://webprod.hc-sc.gc.ca/nhpdbdipsn/atReq.do?atid=goldenseal.oral&lang=eng
4.	ESCOP Monographs (2013). Hydrastis rhizome - Goldenseal rhizome. European Scientific Cooperative on Phytotherapy. Edited by Roberta Hutchins and Simon Mills.
5.	Edwards, S. E., Rocha, I. D. C., Williamson, E. M. and Heinrich, M. (2015). Phytopharmacy: An evidence-based guide to herbal medicinal products. 1 st edition. John Wiley & Sons, Ltd.
6.	Barnes, J., Anderson, L. A. and Phillipson, J. D. (2007). Herbal Medicines, 3 rd edition. Published by the Pharmaceutical Press. ISBN 978 0 85369 623 0.
7.	Brown, P. N., Paley, L. A., Roman, M. C. and Chan, M. (2008). Single-laboratory validation of a method for the detection and/or quantification of select alkaloids in goldenseal supplements and raw materials by reversed-phase high-performance liquid chromatography. <i>Pharmaceutical Biology</i> , 46, 1-2, 135 - 144, DOI: 10.1080/13880200701735171
8.	Mandal, S. K., Maji, A. K., Mishra, S. K., Ishfaq, P. M., Devkota, H. P., Silva, A. S. and Das, N. (2020). Goldenseal (<i>Hydrastis canadensis</i> L.) and its active constituents: A critical review of their efficacy and toxicological issues. <i>Pharmacological Research</i> , 160, 105085. doi: 10.1016/j.phrs.2020.105085.
9.	WHO monographs on selected medicinal plants (2007). Monographs on selected medicinal plants, 3, 194 - 203.
10.	Duke, J. A. (2002). Handbook of Medicinal Herbs. CRC Press, 2 nd edition, ISBN 9780849312847.
11.	Skidmore-Roth, L. Mosby's Handbook of Herbs and Natural Supplements (2010). 4 th ed., ISBN: 978-0-323-05741-7.
12.	Spiteri, M. (2011). Herbal Monographs including Herbal Medicinal Products and Food Supplements. Department of Pharmacy University of Malta. Set and printed by Print Right Ltd, Qormi.
13.	Braun, L. and Cohen, M. (2010). Herbs and Natural Supplements - An evidence-based guide. 3 rd edition, Churchill Livingstone is an imprint of Elsevier. ISBN: 978 0 7295 3910 4.