



Egyptian Herbal Monograph

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Volume 3

Herbal Formulations Used in Egypt

Egyptian Drug Authority (EDA)

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Milk thistle, Licorice, Selenium شوك الجمل/ عرقسوس / سيلينيوم

1. Names & Synonyms (1)

Milk thistle

Silybum marianum L. Gaertn. (2).

Family: Compositae (Asteraceae) (2).

Syn.: *Carduus marianus* L. (2).

Arabic: Shawk Sennari شوك سناري, Shok El-Gamal شوك الجمل (3).

English: Milk thistle and St. Mary's thistle (3).

Licorice

Glycyrrhiza glabra L. and its varieties or *Glycyrrhiza uralensis* Fisch. (4)

Syn. *Liquiritae officinalis* Moench.

Family: Fabaceae (Leguminosae).

Arabic: Irksos, Erqsos عرقسوس

English: licorice, licorice root, liquorice, Licorice root, sweet root and sweet wood.

2. Parts used for medicinal purpose

Milk thistle: Dried ripe fruits, freed from the pappus (1).

Licorice: Dried Root (4-7) and rhizome (4,7).

3. Major chemical constituents

Milk thistle (2,3, 8-10)



- **Flavonolignans:** Silymarin mixture mainly (silybin A, silybin B, isosilybin A, isosilybin B, silychristin, isosilychristin, silydianin).
- **Flavonoids:** Taxifolin, apigenin, kaempferol and their derivatives.
- **Fixed oil:** Linoleic, oleic, palmitic and stearic acids.
- **Sterols:** Tocopherol (vitamin E) and phospholipids.
- **Others:** Mucilage, sugars, amines and saponins.

Licorice

- **Saponins:** Glycyrrhizin and glycyrrhizic acid (glycyrrhizinic acid), as a mixture of potassium and calcium salts. (5)
- **Flavonoids:** glycosides of liquiritigenin and isoliquiritigenin, such as liquiritin, isoliquiritin, liquiritin apioside and licuraside (6).
- **Others:** Essential oil (mainly geraniol and geranyl hexanolate) and sterols (β sitosterol, dihydrostigmasterol) (7).

4. Medicinal Uses (Indications) (15)

- A) Symptomatic relief of digestive disorders, sensation of fullness and indigestion.
- B) Support the liver function, after serious medical conditions have been excluded by medical doctor.

5. Herbal preparations correlated to medicinal use

Combination of milk thistle dry extract, licorice dry extract and selenium.

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

Adults and elderly: 150 mg of milk thistle extract, 10 mg of licorice extract and 5mcg selenium, 2-3 times daily.



Duration of use: If the symptoms persist longer than two weeks during the use of the medicinal product, a doctor or a pharmacist should be consulted.

Method of administration: Oral use.

7. Contraindications.

- Hypersensitivity to the active substance and to plant families.
- Hormone-sensitive conditions such as breast, uterine and ovarian cancers, endometriosis or uterine fibroids (14,15).
- Cholestatic liver disorders, liver cirrhosis, hypertonia, hypokalemia, severe kidney insufficiency and cardiovascular-related disorder, because licorice ingestion has resulted in symptoms of primary hyperaldosteronism, such as water and sodium retention and hypokalemia (2).

8. Special warnings and precautions for use (5,16)

- If the symptoms worsen during the use of the medicinal product, a doctor or a pharmacist should be consulted.
- The use in children and adolescents under 18 years of age has not been established due to lack of adequate data.
- If icterus or a change in colour of urine or stool appears, the medical doctor should be consulted immediately.
- Patients taking Licorice medication should not take other licorice containing products as serious adverse events may occur such as water retention, hypokalemia, hypertension, cardiac rhythm disorders.
- Licorice medication is not recommended to be used in patients affected by hypertension, kidney diseases, liver or cardiovascular disorders or hypokalemia, as they are more sensitive to the adverse effects of liquorice.
- Concomitant use with diuretics, cardiac glycosides, corticosteroids, stimulant laxatives or other medications which may aggravate electrolyte imbalance is not recommended.



- Patients with rare hereditary problems of galactose intolerance, lactase deficiency or glucose-galactose malabsorption should not take this medicine.

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

The product may counteract antihypertensive action of prescribed medications. Not to be used concomitantly with diuretics, cardiac glycosides, corticosteroids, stimulant laxatives or other medications which may aggravate electrolyte imbalance (5).

10. Fertility, pregnancy and lactation

- Safety during pregnancy and lactation has not been established. In the absence of sufficient data, the use during pregnancy and lactation is not recommended (15).
- No fertility data available.

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.

12. Undesirable effects

- Adverse effects are mainly transient, non-serious, gastrointestinal complaints. It is stated that silymarin may occasionally produce a mild laxative effect (2).
- If adverse reactions occur, a doctor or a pharmacist should be consulted.

13. Overdose

Cases of overdose have been reported with prolonged use (more than 4 weeks) and/or intake of high amount of liquorice, with symptoms such as water retention, hypokalaemia, hypertension, cardiac rhythm disorders, and hypertensive encephalopathy (5).



14. Relevant biological activities

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

15. Additional information

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16. 1Date of compilation/last revision

20/4/2026



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