Egyptian Herbal Monograph

Volume 3

Herbal Formulations Used in Egypt

Egyptian Drug Authority (EDA)

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Dandelion, Milk thistle هندباء / شوك الجمل

1. Names & Synonyms (1)

Dandelion

***Taraxacum officinale* Weber**
Family: Asteraceae/Compositae (2-5).
Syns.: *Leontodon taraxacum* L., *Taraxacum vulgare* (Lam.) Schrank, *T. campylodes* G. E. Haglund (6,7).
Arabic: Handebaa, Hindbeh, Hindiba هندباء
English name: Lion's Tooth (8-10,11), Common Dandelion (8,9), Dandelion (1).

Milk thistle

***Silybum marianum* L. Gaertn.** (11).
Family: Compositae (Asteraceae) (11).
Syns.: Carduus marianus L. (11).
Arabic: Shawk Sennari شوك سناري, Shok El-Gamal شوك الجمل (12).
English: Milk thistle and St. Mary's thistle (12).

2. Parts used for medicinal purpose

Dandelion: Leaves, roots and root with herb (whole plant) (2,3,5,8,11).

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

3. Major chemical constituents

Dandelion

Generally, dandelion plant is rich in polysaccharides, phenolic acids, flavonoids, terpenoids, minerals (particularly potassium), amino acids, and vitamins (9,13).

Roots:

- **Polysaccharides:** Inulin (9,13).
- **Phenolic acids**: Chicoric, chlorogenic, caffeic, monocaffeoyltartaric, hydroxycinnamic, synergic, vanillic and *p*-hydroxyphenyl acetic acids (9,13).
- **Sesquiterpene lactones:** 4,11*β*, 13, 15''-Tetrahydroridentin B and taraxacolide-Oglucopyranoside (5, 14), 11,13-dihydrolactucin and ixerin D (15), and taraxinic acid Dglucopyranoside, its 11,13-dihydro-derivative (5) and ainslioside (14-16).
- **Minerals**: Mainly potassium (17).
- **Others: Sterols/Triterpenes:** Taraxasterol, *β*-taraxasterol, their acetates and their 16-hydroxy derivatives arnidol and faradiol, *β*-sitosterol, *β*-sitosterol-Dglucopyranoside and stigmasterol, and *β*-amyrin (14, 18, 19). A Triterpenoid: 3*β*hydroxylup-18(19)-ene-21-one in fresh roots (15).

Leaves:

- **Phenolic acids**: Chicoric, caffeic and chlorogenic acids (9).
- **Flavonoids**: Luteolin, quercetin, apigenin, and their glycosides (9).
- **Sesquiterpene lactones:** Taraxinic acid *β*-D-glucopyranoside and 11*β*, 13dihydrotaraxinic acid (20).
- **Coumarins**: Cichoriin and aesculin (9).
- **Minerals**: Mainly potassium (17).
- **Others**: Polysaccharides and ascorbic acid (9).

Milk thistle (11,12,21-23)

- **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.

4. Medicinal Uses (Indications)

A) Symptomatic relief of digestive disorders, sensation of fullness and indigestion.

B) Support the liver function, after serious medical conditions have been excluded by a medical doctor.

5. Herbal preparations correlated to medicinal use

Combination of dandelion dry extract and milk thistle dry extract.

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: Combination of 15 mg of dandelion dry extract and 350 mg of milk thistle dry extract, twice daily, preferably with meals.

Duration of use: as prescribed by the physician.

Method of administration: Oral use.

7. Contraindications.

- Hypersensitivity to active substance(s) or to other plants of the same families.

- Hormone-sensitive conditions such as breast, uterine and ovarian cancers, endometriosis or uterine fibroids (24,25).
- Obstructions of bile ducts, cholangitis, gallstones, active peptic ulcer and any other biliary diseases (3, 5,11).
- The use in patients with renal failure, diabetes and/or heart failure should be avoided because of possible risks due to hyperkalemia (2,3).

8. Special warnings and precautions for use (2-4)

- The use in children and adolescent under 12 years not recommended.
- If complaints or symptoms such as fever, dysuria, spasms or blood in urine occur during the use of the medicinal products, a doctor or a pharmacist should be consulted.
- If icterus or a change in colour of urine or stool appears, a doctor should be consulted immediately (26).
- If patients with conditions where reduced fluid intake is advised by a medical doctor, the product is not recommended (4).

9. Interactions with other medicinal products and other forms of interaction (10)

- **Antacid, H2 blockers, proton pump inhibitors:** The product may decrease their action.
- **Anticoagulants, antiplatelet, NSAIDs, salicylates**: The product may increase bleeding when used with these products.
- **Antihypertensive, insulin, anti-diabetics and hypoglycemic herbs:** The product may increase their effects, concurrent use should be avoided.
- **Diuretics and diuretic herbs:** The product may increase diuresis when used concurrent with diuretics, leading to fluid loss.
- **Lithium:** Toxicity may occur as a result of sodium excretion if the product is used concurrently with lithium.

Lab test:

- **AST, ALT, alkaline phosphatase, APTE, INR. PT:** The product may increase these levels.
- **Blood glucose:** The product may decrease blood glucose levels.

10. Fertility, pregnancy and lactation (2-4, 26)

- 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 (2-4, 26)

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.
- Silymarin may occasionally produce a mild laxative effect (11).
- Allergic reactions including anaphylaxis and pseudo allergic contact dermatitis.
- Cross reactivity has been reported in individuals with an allergy to the pollen of other members of Asteraceae family (2,3,5,12).
- If adverse reactions occur, a doctor or a pharmacist should be consulted.

13. Overdose

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

20/4/2026.

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