



Egyptian Herbal Monograph

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Volume 3

Herbal Formulations Used in Egypt

Egyptian Drug Authority (EDA)

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Dandelion, Fennel, Peppermint, Rosemary, Betaine HCl, Glutamic acid
هندباء / شمر / نعناع / روزماری / بيتايين هيدروكلوريد / حمض الجلوتاميك

1. Names & Synonyms

Dandelion (1)

***Taraxacum officinale* Weber**

Family: Asteraceae/Compositae (2 - 7).

Syns.: *Leontodon taraxacum* L., *Taraxacum vulgare* (Lam.) Schrank, *T. campylodes* G. E. Haglund. (1-2).

Arabic: Handebaa, Hindbeh, Hindiba هندباء

English: Lion's Tooth (6, 8 -10), Common Dandelion (8, 9), Dandelion (1).

Fennel (11)

***Foeniculum vulgare* Mill.**

Family: Apiaceae (Umbelliferae).

Syns: *Anethum foeniculum* Clairv., *A. foeniculum* L., *A. rupestre* Salisb., *Feniculum commune* Bubani., *F. azoricum* Mill., *F. capillaceum* Gilib., *F. dulce* DC., *F. foeniculum* L. H. Karst., *F. officinale* All., *F. panmorium* DC., *F. piperitum* DC., *F. sativum* Bertol., *Ligusticum divaricatum* Hoffmannsegg et Link, L., *Foeniculum* Crantz., *Meum foeniculum* L. Spreng., *Ozodia foeniculacea* Wight et Arn., *Selinum foeniculum* L. E.H.L.Krause.

Arabic: Shamar شمر

English: Fennel.



Peppermint (12)

***Mentha piperita* L.**

Family: Lamiaceae.

Arabic: نعناع

English: Peppermint.

Rosemary (1)

***Salvia rosmarinus* Spenn.**

Family: Lamiaceae (Labiatae).

Syn.: *Rosmarinus officinalis* L. (13,14).

Arabic: Iklyl aljabal إكليل الجبل (15), Haṣa l-ban حصى البان (16), Ruzmari روزماري (16,17).

English: Rosemary.

2. Parts used for medicinal purpose

Dandelion: Leaves, roots and root with herb (whole plant) (3 - 7).

Fennel: Dried ripe fruits (18).

Peppermint: The fresh overground parts and the dried leaves (12, 19, 20).

Rosemary: Fresh and dried leaves (21,22). Flowering aerial parts (23-26).

3. Major chemical constituents

Dandelion

Generally, dandelion plant is rich in polysaccharides, phenolic acids, flavonoids, terpenoids, minerals (particularly potassium), amino acids, and vitamins (9, 10, 27).

Roots:

- **Polysaccharides:** Inulin (9, 27).

- **Phenolic acids:** Chicoric, chlorogenic, caffeic, monocaffeoyltartaric, hydroxycinnamic, synergic, vanillic and *p*-hydroxyphenyl acetic acids (9, 27).



- **Sesquiterpene lactones:** 4,11 β , 13, 15''-Tetrahydroridentin B and taraxacolide-Oglucopyranoside (7, 28), 11,13-dihydrolactucin and ixerin D (29), and taraxinic acid Dglucopyranoside, its 11,13-dihydro-derivative (7) and ainslioside (28-30).
- **Minerals:** Mainly potassium (31).
- **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 (28, 32, 33). A Triterpenoid: 3 β hydroxylup-18(19)-ene-21-one in fresh roots (29).

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 (34).
- **Coumarins:** Cichoriin and aesculin (9).
- **Minerals:** Mainly potassium (31).
- Others:** Polysaccharides and ascorbic acid (9).

Fennel (35)

- **Essential oil:** *trans*-anethole (+)-fenchone, estragole (methylchavicol), limonene, *p*-anisaldehyde, α -pinene and α -phellandrene.
- **Phenolic acids:** rosmarinic acid and caffeoylquinic acid derivatives.
- **Flavonoids:** eriodictyol-7-rutinoside, quercetin-3-rutinoside.
- **Others:** triterpenes, smaller terpenes (monoterpenoids, sesquiterpenoids and diterpenoids) and reducing sugars.

Peppermint

- **Essential oils:** Menthol, menthone, menthyl acetate, menthofuran, and 1,8cineole (eucalyptol) (36).



- **Flavonoids:** Luteolin, luteolin-7-O-glucoside, naringenin-7-O-glucoside, isorhoifolin, eriodictyol, eriocitrin glycoside and apigenin (37).

Rosemary

- **Essential oil:** 1,8-Cineole, α -pinene, camphor (38,39), limonene, camphene and linalool (40).
- **Phenolic acids:** Rosmarinic, caffeic and chlorogenic acids (13).
- **Diterpenes:** Carnosic acid, carnosol, epirosmannol and hinokiol (41).
- **Triterpenes:** Ursolic, oleanolic and betulinic acids (41).

4. Medicinal uses (Indications)

- A) Symptomatic treatment of mild digestive disorders (such as feeling of abdominal fullness, bloating, flatulence, and slow digestion) and temporary loss of appetite.
- B) Symptomatic treatment of minor spasms of the gastrointestinal tract, abdominal pain and irritable bowel syndrome.

5. Herbal preparations correlated to medicinal use

Combination of dandelion dry extract (Extraction solvent: ethanol), fennel dry extract (Extraction solvent: water & ethanol), peppermint dry powder extract (Extraction solvent: ethanol & water), rosemary dry extract (Extraction solvent: ethanol & water), betaine HCl, and L-glutamic acid.

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 35 mg of dandelion extract, 35 mg of fennel extract, 50 mg of peppermint extract, 35 mg of rosemary extract, 150 mg of betaine HCl, and 120 mg of L-glutamic acid, 2–3 times daily.



Duration of Use: As directed by physician.

Method of administration: Oral use.

7. Contraindications

- Hypersensitivity to the active substance(s) or to other plants of the same families.
- Obstructions of bile ducts, cholangitis, liver diseases, gallstones, peptic ulcer and any other biliary diseases (4,6,7,21).
- The use in patients with renal failure, diabetes and/or heart failure should be avoided because of possible risks due to hyperkalemia (3,4).
- In case of gastroesophageal reflux (heartburn), because heartburn may increase (42).

8. Special warnings and precautions for use

- If the symptoms worsen or if complaints or symptoms such as fever, dysuria, spasms or blood in urine occur during the use of the medicinal product, a doctor or a pharmacist should be consulted (3-5).
- The use in children under 12 years of age is not recommended (3-5).
- It is not recommended in patients with conditions where reduced fluid intake is advised by a medical doctor (3-5).
- Bleeding disorders: The product might slow blood clotting; it might increase the risk of bleeding or bruising in people with bleeding disorders (43).

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

- **Antacids, H2-blockers, proton pump inhibitors:** May decrease their action.
- **Anticoagulants, antiplatelets, NSAIDs, salicylates:** May increase bleeding when used with these products.
- **Antihypertensives, insulin, antidiabetics and hypoglycemic herbs:** May increase their effects; concurrent use should be avoided.



- **Diuretics and diuretic herbs:** May increase diuresis when used concurrently with diuretics, leading to fluid loss and electrolyte imbalances; concurrent use should be avoided.
- **Lithium:** Toxicity may occur as a result of sodium excretion if dandelion is used concurrently with lithium.
- **Ciprofloxacin:** concurrent use with Ciprofloxacin may affects the Absorption, distribution, and elimination of ciprofloxacin. If the two are used concurrently, their dosages should be separated by at least 2 hours (10, 25)

Lab test:

- **AST, ALT, alkaline phosphatase, APTT, INR, PT:** Dandelion may increase these levels.
- **Blood glucose:** Dandelion may decrease blood glucose levels.

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.
- 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

- Nausea, anorexia, increased indigestion with hiatal hernia, exacerbation of biliary colic, bronchospasm, gastroesophageal reflux may worsen and heartburn may increase (10).
- Allergic reactions (contact dermatitis, rhinoconjunctivitis and occupational asthma) may occur in sensitive patients (3-5, 21).
- If adverse reactions occur, a doctor or a pharmacist should be consulted.



13. Overdose

No case of overdose has been reported.

14. Relevant biological properties

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

15. Additional information

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16. Date of compilation/last revision

21/05/2026.



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Egyptian Herbal Monograph

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