



Egyptian Herbal Monograph

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Volume 3

Herbal Formulations Used in Egypt

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Echinacea, Nigella

اشنسيا / حبة البركة

1. Names & Synonyms

Echinacea (1-2)

***Echinacea purpurea* L. Moench.**

Family: Asteraceae (Compositae).

Syns.: *Echinacea intermedia* Lindl., *E. purpurea* (L.) Moench var. *arkansana* Steyerem., *E. purpurea* var. *purpurea* f. *liggettii*., *E. speciosa* Paxt., *Brauneria purpurea* (L.) Britton, *Rudbeckia purpurea* L., *R. hispida* Hoffm., *R. serotina* Sweet.

Arabic: Echinacea اشنسيا

English: Purple coneflower.

Nigella (3, 4)

***Nigella sativa* L.**

Family: Ranunculaceae.

Syns: *Nigella cretica* Mill., *Nigella indica* Roxb. ex Flem., *Nigella truncata* Viv.

Arabic: al-haba-el-sauda الحبة السوداء, habat-al-baraka حبة البركة

English : Nigella, black seed, black cumin, black caraway.

2. Parts used for medicinal purpose

Echinacea: Fresh or dried herb (aerial parts) (1,2).

Nigella: Dried seeds (5,6).



3. Major chemical constituents

Echinacea herb

- Phenylpropanoids: Caffeic acid esters;** cichoric acid, caftaric acid, chlorogenic and isochlorogenic acids, and **caffeic acid glycosides;** echinacoside, verbascoside, caffeoylechinacoside (7).
- phenolic acids:** *p*-coumaric, *p*-hydroxybenzoic and protocatechuic acids; betaine (2).
- Flavonoids:** quercetin, kaempferol, isorhamnetin and their glycosides (2,8).
- Alkamides:** Isobutylamides of straight-chain fatty acids with olefinic and/or acetylenic bonds contain mainly 2,4-dienoic units (2,7).
- Polysaccharides:** Methylglucuronoarabinoxylan, rhamnoarabinogalactan, xyloglucan and glycoproteins; arabinogalactan-protein (protein has high concentrations of serine, alanine and hydroxyproline) (2).
- Others: volatile oil components;** borneol, bornyl acetate, germacrene D and caryophyllene (2,7), saturated pyrrolizidine-type alkaloids (tussilagine and isotussilagine) (2,7), anthocyanins, fatty acids, simple sugars, sterols and vanillin (2).

Nigella (9-11)

- Fixed oil:** Unsaturated fatty acids (linoleic, oleic, eicosadienoic and dihomogamma- linolenic acid (DGLA)) and saturated fatty acids (palmitic and stearic acids).
- Essential oil:** Thymoquinone, thymohydroquinone, dithymoquinone (nigellone), *p*-cymene, carvacrol, 4- terpineol, *t*-anethole, sesquiterpene longifolene, α -pinene and thymol.
- Alkaloids:** Isoquinoline alkaloids (e.g. nigellicimine and nigellicimine-N-oxide) and pyrazole alkaloids (e.g.: nigellidine and nigellicine).
- Others:** Sterols (β -sitosterol, stigmasterol)· protein, carbohydrates, vitamins and minerals.



2. Medicinal uses (Indications)

Treatment and prevention of recurrent infections of the common cold, influenza and other upper respiratory tract infections as well as lower urinary tract infections through the immunostimulant effects.

3. Herbal preparations correlated to medicinal use

Combination of echinacea Dry extract (Extraction solvent: Ethanol and water) and nigella seeds powder.

Herbal preparations are in pharmaceutical dosage forms. The pharmaceutical form should be described by the pharmacopoeia full standard term.

4. Posology and method of administration correlated to medicinal use

Adults: Combination of 125mg of echinacea extract and 250mg of nigella powder, 3times daily.

Duration of use: Not more than 10 days.

Method of administration: Oral use.

7. Contraindications (7, 8, 12-14)

- Hypersensitivity to the active substances and to other plants of the same families.
- Progressive systemic disorders, collagen disease, tuberculosis, immunodeficiency (HIV/AIDS), immunosuppression diseases of white blood cell system, and autoimmune diseases such as lupus erythematosus and multiple sclerosis.



8. Special warnings and precautions for use (7)

- If the symptoms worsen during the use of the medicinal product or high fever, a doctor or a pharmacist should be consulted.
- The use in children under 12 years is not recommended without medical supervision due to the risk of rare allergic reactions that may sometimes be severe in this age group (15).
- There is a possible risk of allergic reactions in allergic individuals. Those patients should consult their doctor before using.
- There is a possible risk of anaphylactic reactions in atopic patient. Atopic patient should consult their doctor before using.

9. Interactions with other medicinal products and other forms of interaction (16-18)

- Anti-diabetic drugs: might decrease blood sugar levels. Blood sugar should be monitored closely (19).
- Antihypertensive drugs: might decrease blood pressure levels. Blood pressure should be monitored closely.
- Immunosuppressants: concurrent use might decrease the effects of these medications.
- It may decrease the effects of immunosuppressants, protease inhibitors, corticosteroids and should not be used immediately before, during, or after transplant surgery (14, 20).
- Anticoagulant / antiplatelet drugs: might increase the risk of bruising and bleeding.
- CNS depressants: might cause breathing problems and/or too much sleepiness.
- Diuretic drugs: might make potassium levels drop too low.
- Serotonergic Drugs: might increase serotonin too much. This might cause serious side effects including heart problems, seizures and vomiting.



LAB Tests:

- The product may increase ALT, AST, lymphocyte counts, serum immunoglobulin E (IgE), blood erythrocyte sedimentation rate (ESR) (14).

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

- Stomach upset, vomiting and constipation (17,18).
- 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

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