

Egyptian Herbal Monograph

Volume 1

Wild Medicinal Plants

Egyptian Drug Authority (EDA)

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***Acacia nilotica* L. Delile**

السنت / القرض

1. Names & Synonyms (1-3)

***Acacia nilotica* L. Delile.**

Family: Fabaceae (Leguminosae).

Syn. *Mimosa nilotica* L.

Arabic: *Sant* سنط - *Aschawkah Al misriyah* الشوكة المصرية - Fruit: Qarad قرض الثمرة:

English: Egyptian Acacia, Egyptian Thorn.

Two subspecies occur in Egypt (2):

a. subsp. *nilotica*

Pod glabrous.

b. subsp. *tomentosa* (Benth.)

Syns. *Mimosa arabica* Lam.

Acacia arabica (Lam.) Willd.

Pod whitish-grey tomentose.

2. Geographical distribution

Confined to the Nile region (south of Aswan) (3), The Nile Delta, Nile Valley, Oases, Sinai and Western Desert (2).

3. Parts used for medicinal purposes

The fruits (pods), the bark, the leaves (2) and the gum which *A. nilotica* tree exudes (3).

4. Major chemical constituents

The fruit: High percentage of phenolics; m-digallic acid, gallic acid, its methyl and ethyl esters, protocatechuic and ellagic acids, leucocyanidin, m-digallic dimer 3,4,5,7-tetrahydroxy flavan-3-ol, oligomer 3,4,7-trihydroxy flavan 3,4-diol and 3,4,5,7-tetrahydroxy flavan-3-ol and (-) epicatechol. Others: alkaloids, mucilage and saponins (4, 5).

The bark: Phenolics; gallic acid, protocatechuic acid, condensed tannins and phlobatannin, (+) - catechin, (-) epigallocatechin-7-gallate, and (-) epigallocatechin-5, 7-digallate (2).

The leaves: Phenolics; tannins (6), apigenin, 6-8-bis-D-glucoside, rutin, Quercetin 3-glucoside, quercetin 3-sophoroside (7), catechin, catechin 7-*O*-gallate, catechin 3'-*O*-gallate, catechin 4'-gallate, catechin 7,3'-di-*O*-gallate and catechin 7,4'-di-*O*-gallate (8).

Gum: Galactoaraban; on hydrolysis gives L-arabinose, D-galactose, L-rhamnose, D-glucuronic acid and 4-*O*-methyl- D-glucuronic acid (9).

5. Traditional medicinal uses (3)

Fruits: For diarrhea, dysentery, diabetes. It is also given for hemorrhage and as sedative in labour, for sore gum and loose teeth.

Bark: For cough, bronchitis, diarrhea, dysentery, burning sensation, piles. Decoction used as a nerve stimulant and aid for digestion.

Leaves: For bronchitis, piles, urethral discharges and as liver tonic. Antipyretic, cures leucoderma, gonorrhea and chewed for nausea.

Gum: For diarrhea, urinary/vaginal and uterine discharges, sore throat, diabetes mellitus, healing of fractures and as a liver tonic.

Acacia nilotica is a traditional medicinal plant for use in the specified indications exclusively based upon long-standing use.

6. Herbal preparations correlated to medicinal use (10)

a) Orally:

1. Infusion:

Pour freshly boiled water on 2 teaspoonful of the herbal substance in a cup, cover the cup with the lid and infuse for 5 minutes. Drink it sweetened if desired.

2. Decoction:

Pour cold water on 2 teaspoonful of the herbal substance and boil, Simmer for 10 minutes. Pour into a cup and drink it sweetened if desired.

b) Externally:

Place some herbal substance in a warm water bath.

7. Posology and method of administration correlated to medicinal use

a) Oral use:

1. Infusion: Average daily dose: 3 cups/day.

2. Decoction: Average daily dose: 3 cups/day (10).

b) External use:

Sit and relax in the water basin for half an hour, as often as required. Average daily dose: 1-2 times/day (10).

Duration of use:

Up to 30 grams daily has been used safely for 6 weeks (11).

If the symptoms persist longer than 2 weeks during the use of the medicinal product, a doctor or pharmacist should be consulted.

8. Contraindications

Hypersensitivity to active substances and to other plants of the same family.

9. 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.

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

Acacia gum can prevent the body from absorbing the antibiotic amoxicillin. To prevent this interaction, take *Acacia* gum at least four hours before or after taking amoxicillin (11).

11. 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.

12. Effects on ability to drive and use machines

No studies on the effect on the ability to drive and use machines have been performed.

13. Undesirable effects

- If adverse reactions occur, a doctor or a pharmacist should be consulted.
- It may cause minor adverse effects, including gas, bloating, nausea, and loose stools (11).

14. Overdose

No case of overdose has been reported.

15. Relevant biological activities

- Chloroform extract of *Acacia* bark significantly decreased blood glucose of alloxan-diabetic rats and reversed values of TC, LDL-C, HDL-C and TGs (12).
- The aqueous extracts of *A. nilotica* leaves reduced pain, inflammation and fever mostly at dose of 150 mg/kg body weight in Albino mice (13).

16. Additional information:

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17. Date of compilation/last revision

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