

QUASSIA

Scientific name: *Picrasma excelsa* or *Quassia amara* L.

Family: Simaroubaceae ^(2,3).

Popular names: Ash ⁽¹⁾, Bitterwood, Bitter Ash ^(1, 2), Jamaica Quassia, Quassia amara ⁽²⁾, Quassia lignum and Leño de Cuasia ^(2,4).

Used parts: dried trunk wood ^(1,2) and branches ⁽²⁾.

Botanical characteristics: An evergreen, this tree is usually dioecious and grows to a height of up to 25 m. the leaves are alternate, 15 to 35 cm long, odd pinnate, with 9 to 13 leaflets. The leaflets are 5 to 13 cm long, 20 to 45 cm wide, blunt-acuminate and glossy. The trunk has gray grooved bark. The flowers are in leaf-axillary, richly blossomed cymose panicles. The flowers structures are in fours or fives. There are 5, 0.6 to 0.9 mm long, pubescent sepals, 5 yellow-green (in male flowers approximately 2 mm long, in androgynous flowers 3 mm long) petals, 10 stamens and 5 carpells surrounded by a disc. The fruit is a 1-seeded, orbicular to oval, blue-black drupe ⁽¹⁾.

Habitat: The tree is indigenous to the Caribbean and northern Venezuela ⁽¹⁾ and is naturally distributed in several tropical countries ⁽⁶⁾.

Chemical composition: Triterpenes (picrasan derivates, quassinoids, simaroubolides, nigaki lactone D, neoquassin, isoquassin and 18-hydroxyquassin), indole alkaloids (N-methoxy-2-vinyl-beta-carboline, canthine-6-one, 4-methoxy-5-hydroxycanthine-6-one) ^(1, 5), steroids (stigmasterol, -sitosterol and campesterol) ⁽⁵⁾,

Active compounds: quassin, neoquassin

Indications: Folk medicine uses include dyspepsia (Mexico and Brazil), loss of appetite ^(1, 2), and stimulation of gastric juice and saliva production. Quassia is also used for fever (Costa Rica and Surinam) ⁽¹⁾, malaria ^(1,6), dysentery, gonorrhea (Brazil) ⁽¹⁾, lice and worm infestations, as an antiseptic wound treatment, for diarrhea (Costa Rica and Brazil) ^(1,6), for snake bites (Guyana), for liver disease, edema and menstrual complaints ⁽¹⁾. Quassia was formerly given as an enema for the expulsion of threadworms and was applied for pediculosis ⁽⁴⁾.

Homeopathic uses: poor digestion and liver disease ⁽¹⁾.

Dose:

- Daily dosage:
- Drug – single dose, 0.3 to 0.6 g, 3 times daily; Tincture: daily dose; 2 to 4 ml; Lice: apply tincture twice weekly to the scalp

Others informations:

- Gastric mucous irritation has been observed with cases of overdose, followed by vomiting. It is said that prolonged use can lead to weakened vision and total blindness ⁽¹⁾.
- Quassia wood is reputed in traditional medicine to have antimicrobial, antianemic, cytotoxic and antimalarial activities ⁽⁵⁾.
- *Quassia amara* extract may represent a potential new source of drugs for the treatment of pain well have demonstrated a sedative and antiedematogenic activity ⁽²⁾.
- Bark extract of *Q. amara* suggest an antifertility potential with a site of action in the testis, the epididymis, or both ⁽⁶⁾.

References:

1. MEDICAL ECONOMICS COMPANY. **PDR for herbal medicines**. 2. ed. Montvale: Copyright, 2000.
2. GRIEZE, M. **A Modern Herbal: The Medicinal, Culinary, Cosmetic and Economic Properties, Cultivation and Folk Lore of Herbs, Grasses, Fungi, Shrubs and Trees with All Their Modern Scientific Uses**. London: Tiger Books International, 1998.
3. GLASBY, J. S. **Dictionary of Plants Containing Secondary Metabolites**. London: Taylor e Francis, 1991.
4. **MARTINDALE: The Extra Pharmacopoeia**. London: The Pharmaceutical Press, 1989.
5. TOMA, W. et al. Evaluation of the analgesic and antiedematogenic activities of Quassia amara bark extract. **Journal of Ethnopharmacology**, v. 85, p. 19-23, 2003.
6. PARVEEN, S. et al. A Comprehensive evaluation of the reproductive toxicity of *Quassia amara* in male rats. **Reproductive Toxicology**, v. 17, p. 45-50, 2003.