

STEVIA

Scientific name: *Stevia rebaudiana* (Bertoni) Bertoni

Family: Asteraceae (Compositae)

Popular names: Sweet herb, Sweetleaf⁽¹⁾.

Used parts: Leaves^(1,4,9,10).

Botanical characteristics: *Stevia rebaudiana* is a semi-shrub that grows up to 30 cm high. The leaves are sessile, 3 to 4 cm long with an elongate-lanceolate or spatulate, blunt-tipped lamina. The leaves are serrate from the middle to the tip and entire below. The upper surface of the leaf is slightly glandular pubescent. The stem is weakly downy-pubescent at the bottom and woody. The tough rhizome has slightly branching roots. The composite flowers are surrounded by an involucre. The capitula are in loose, irregular, sympodial cymes. There are 5 overlapping epicalyx sepals, with 5 tubular florets per composite flower. The flowers have light purple rhaxis, white tips and 5 stamens. The fruit is a 5-ribbed, spindle-shaped achene with 15 to 17 awns⁽¹⁾.

Habitat: The plant is indigenous to Paraguay^(1,2,7). Stevia is also cultivated in Brazil, Indonesia, Korea, Mexico, Tanzania, USA, Canada, Singapore, Thailand and China⁽²⁾.

Chemical composition: diterpenes glycosides (stevioside, rebaudioside A, B, C, D and E, dulcoside A and steviolbioside)^(1,6), flavonoids (apigenin-4-O-glucoside, luteolin-7-O-glucoside) and volatile oil –0.1% (chief components nerolidol and caryophyllene oxide)⁽¹⁾.

Indications: Folk medicine uses include contraceptive^(1,10), hypertension^(1,4,10), and as a diabetes^(1,6,9,10).

Dose: Stevia is available as cut drug for oral administration⁽¹⁾.

Others informations:

- Stevia and its extracts are extensively used as a sugar substitute in South America, in Asian countries, and in some European countries⁽²⁾.
- That extract from *Stevia rebaudiana* (SE) has an activity in vitro anti-human rotavirus (HRV). SE inhibited the replication of all four serotypes of HRV in vitro⁽⁸⁾.
- The inhibitory components of SE were found to be heterogeneous anionic polysaccharides with different ion charges⁽⁸⁾.
- Stevioside is the main sweet component in the leaves⁽⁷⁾.
- The advantages of stevioside as a dietary supplement for human subjects are manifold: it is stable, it is non-calorific, it maintains good dental health by reducing the intake of sugar and opens the possibility for use by diabetic and phenylketonuria patients and obese persons⁽⁸⁾.