

Powdered Senna Leaf

Cassia leaf; *Cassia angustifolia*

Powdered Senna is Senna dried compound leaves of *Cassia angustifolia* or *Cassia senna* Vahl. (Fam. Leguminosae) reduced to a fine or very fine powder.

Senna leaf contains not less than 1.0 per cent w/w of total *sennosides* calculated as *sennoside B*, on the dried basis.

Category. Purgative, anthelmintic, febrifuge, vibandha

Description. A light brown to dark brown powder with faint and distinctive odour; taste, mucilaginous and disagreeable but not distinctly bitter.

IDENTIFICATION

A. Microscopic examination

i. Powder study

Examine under a microscope (Ref of general chapter). The powder shows the following diagnostic characters: Fragments of upper and lower epidermis, composed of cells with smooth and straight anticlinal walls, polygonal in outline, embedded with numerous paracytic and few anomocytic stomata; numerous, thick walled, unicellular, warty, straight or bent trichomes scattered and/or attached to the cells of epidermis, both epidermises have cicatrices where the trichomes were attached; abundant calcium oxalate crystals, as prisms in cells of parenchymatous sheath surrounding the group of fibres (crystal sheath), as cluster crystals in cells of spongy mesophyll, both crystals are also found scattered; fibres in groups, thick-walled, lignified with few pits; few simple spherical starch grains scattered or in parenchymatous cells.

- ii. **Quantitative microscopy** (Ref of general chapter). **Stomatal index** (upper surface) for *Cassia angustifolia* is 17.1 to 19.0 to 20.7, (lower surface) is 17.0 to 18.3 to 19.3; for *Cassia senna* (upper surface) 11.4 to 12.4 to 13.3, (lower Surface) is 10.8 to 11.8 to 12.6.

Vein-islet numbers for *C. angustifolia* is range 19.5-22.5; average 21; *C. senna* is 15-29.5; average 26

Vein termination numbers: *C. angustifolia* is 25.9-32.8; *C. senna* 32.7-40.2

- iii. **Microchemistry** ((Ref of general chapter). Under *Microsublimation*- test for anthraquinones and under *Histochemical determination of cell wall and contents* – test for lignified fibres and mucilage.
- iv. **Adulteration with *Cassia auriculata* and *Ailanthus glandulosa*, describing their presence based on specific features like stomata, trichomes and calcium oxalate crystals**

Followed by as suggested in IP Monograph of Senna leaf