

SARPAGANDHA

Sarpagandha consists of air dried root of *Rauwolfia serpentina* (Linn.) Benth. Ex Kurz (Fam. Apocynaceae); a perennial under shrub widely distributed in India in the sub- Himalayan tracts upto 1,000 m as well as, in the lower ranges of the Eastern and Western Ghats and in the Andamans.

SYNONYMS

Sanskrit : Nakuli, Candrika, Chandramarah

Bengali : Chaandar

English : Rauwolfia Root, Serpentina Root

Gujrati : Amelpodee

Hindi : Chhotaa Chaand, Dhavalbaruaa

Kannada : Sutranaabhu

Malayalam : Amalpori

Marathi : Adkai, Chandra

Oriya : Dhanbarua, Sanochado

Tamil : Sarpaganti

Telugu : Sarpagandhi

DESCRIPTION

a) Macroscopic

Pieces of roots mostly about 8 to 15 cm long and 0.5 to 2 cm in thickness, subcylindrical, curved, stout, thick and rarely branched; outer surface greyish-yellow to brown with irregular longitudinal fissures; rootlets 0.1mm in dia; fracture, short, slight odour and bitter taste.

b) Microscopic

Root- Root comprises of stratified cork of about 18 layers, of which the cells of 8 to 12 layers are smaller, suberized and unlignified; cells of remaining layers large, suberized and lignified; phelloderm parenchymatous, some cells packed with starch grains and prismatic and clusters crystals of calcium oxalate; secondary phloem tissue consists of sieve cells, companion cells and parenchymatous cell containing starch grains and crystals of calcium oxalate; phloem fibres absent; phloem parenchyma occasionally filled with granular substances; starch grains mostly simple but compound granules also occur with 2 to 4 components; individual granules spherical, about 5 to 15 μm in 194 diameter, with well marked hilum simple or split in a radiate form; stone cells are absent (distinction from many other species such as *R. canescens*, *R. micrantha*, *R. densiflora*, *R. perakensis* and *R. vomitoria*); secondary xylem is traversed by well developed lignified medullary rays of about 1 to 5 cell wide but uniseriate rays are more prominent; vessels singly or in pairs; xylem parenchyma cells lignified; fibres present; cells of medullary rays thick walled also filled with starch grains and calcium oxalate prisms.

Powder - Coarse to fine, yellowish-brown, free flowing, odour slight, bitter in taste; characterized by spherical, simple to compound starch grains, calcium oxalate prisms and clusters; vessels with simple perforation, occasionally tailed; tracheids lignified; xylem fibres irregular in shape, occurs singly or in small groups, walls lignified, tips occasionally forked or

truncated; wood parenchyma cells are filled with calcium oxalate crystals and starch grains; stone cells phloem fibres absent.

IDENTITY, PURITY AND STRENGTH

Foreign matter not more than 2 per cent, Appendix 2.2.2.

Total Ash Not more than 8 per cent, Appendix 2.2.3.

Acid-insoluble ash not more than 1 per cent, Appendix 2.2.4.

Alcohol-soluble extractive not less than 4 per cent, Appendix 2.2.6.

Water-soluble extractive not less than 10 per cent, Appendix 2.2.7.

T.L.C.-

T.L.C. of the methanol and Ammonia extract of root powder on silica gel 'G' plate using Toluene : Ethyl acetate : Diethylamine (70 : 20: 10) shows eight spot on spraying with Dragendorff reagent at Rf. 0.11, 0.13, 0.25, 0.37, 0.47, 0.51, 0.61 and 0.82 (all reddish brown). The spot at Rf. 0.82 is of reserpine.

CONSTITUENTS - Rauwolfia contains indole alkaloids, such as reserpine, serpentine and ajmalicine.

PROPERTIES AND ACTION-

Rasa : Katu, Tikta

Guna : Laghu, Ruksha

Virya : Ushna

Vipaka : Katu

Karma : Depana, Kaphahara, Mutral (diuretic), Pachana, Rucya, Vatahara, Vishaghna.

IMPORTANT FORMULATIONS –

Sarpagandhidi Choorna, Sarpagandhiyoga, Sarpagandhi Vati, Sarpagandhi Ghana Vati.

THERAPEUTIC USES –

Anidra (insomnia), Apasmara (epilepsy), Bhrama (disorientation), Jvara (Fever), Krimiroga (Worm infestation), Madaroga , Unmada, Raktavata, Manasaroga (Mental ailments), Vrana (injuries).

DOSE –

1-2 g.

REFERENCES-

API