

## Macro-microscopic and physico-chemical details of *Rostellularia procumbens* (L.) Nees var. *simplex* (D. Don) Yamasaki

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### SUMMARY

*Rostellularia procumbens* var. *simplex* is used in several Ayurvedic drugs for the treatment of asthma, cough, bone diseases and rheumatism. The botanical, macro-, microscopic characters, macerate, powder analysis, histochemical tests and physicochemical details are presented.

**Key words :** Macro-microscopic characters, Macerate, Physical constants fluorescence studies.

The genus *Rostellularia* is distributed in India and Sri Lanka. The genus consists of 21 species (Gamble and Fischer, 1967). The genus *Rostellularia procumbens* is being pharmacologically and chemically screened in recent years (Mruthyunjaya Swamy *et al.*, 1998; Chen *et al.*, 1998; Weng *et al.*, 2004). However in *R. procumbens* var. *simplex* pharmacognostical work is lacking. Some of the medicinal properties attributed to *Rostellularia procumbens* var. *simplex* are whole plant is used as medicine in asthma, cough, rheumatism, backache, flatulence and lumbago. Decoction of the leaves is sometimes used in the diseases of the bone (Anonymous, 1959). A perusal of the literature revealed that no pharmacognostical work has been carried out (Gurudeva and Yoganarasimhan 2009). Hence, the present work to cover the morphology of the taxon, macro-, microscopic characters of the root, stem and leaves, physical constants and fluorescence were studied.

### MATERIALS AND METHODS

The plant material was collected from Japalitheertham, Tirumala hills and the voucher herbarium specimen was processed followed by standard methods (Jain and Rao, 1977). Macro and microscopical studies were carried out (Johansen, 1940 and Wallis, 1985) during the year 2005.

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Physical constants were carried out by standard methods (Kokoski *et al.*, 1958; Chase and Pratt, 1949; Krebs *et al.*, 1969) and fluorescence studies followed by standard procedures (Khandelwal *et al.*, 1996).

#### Taxonomy:

Diffuse herb, branchlets strigose-hispid, upto 30 cm. Leaves elliptic, 4-4.5 x 1.5 cm scabrous above, glabrescent to strigose below, acute at both ends, petiole upto 0.5 cm spikes terminal, 1-2 cm, bracts obovate, 4 x 2 mm, scarios, midrib broad, shortly excurrent, margin ciliate acute, bracteoles lanceolate, 4x0.7 cm, midrib, broad, margin thinly scarios, ciliate, acute. Calyx lobes-4, some times with a 5<sup>th</sup> rudimentary lobe, sub-equal, lanceolate 4 mm, midrib ridged, scarios, closely ciliate, acute. Corolla 6x3 mm across, tube 3.5 mm, upper lip 3.5 mm, truncate shortly, emarginate, lower lip sub orbicular, 5x5 mm puberulous without. Stamens 2 to 3 mm anthers, 0.7 mm. Ovary 1.5 mm, pubescent, style 4 mm, capsule oblong, 4 x 1.5 mm sparsely hairy, pointed, seeds 1mm across (Plate:1)

#### Herbarium specimen examined:

Author (212) collected on 23<sup>rd</sup> November 2006, on way to Japalitheertham, Tirumala hills, Chittoor district of Andhra Pradesh and it is authenticated with D.Rangacharyulu(2292) deposited at the Herbarium of S.V.University, Tirupati.

### RESULTS AND DISCUSSION

The results obtained from the present investigation are presented below:

#### Root:

*Macroscopical characters:*

Fairly thick, 1.1 mm thickness, tap root is small,