

**Pharmacognostic and HPTLC finger printing studies on Leaf of
Gymnathemum amygdalinum(delile) sch.bip. Ex walp (Asteraceae) A New
Report from Telnagana State, India, with anti Diabetic Properties.**

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ABSTRACT

Gymnathemum amygdalinum(Delile) Sch.Bip. ex Walp is a small tree belonging to the family Asteraceae .during a short visit to the Sriramagiri forests of Mahabubabad District, the authors collected a *Gymnathemum* spices in flowering and fruiting, which was later identified as *G. amygdalinum*. Scrutiny of literatures reveled that this species has been so far reported from Bihar, Madhya Pradesh, Odisha and West Bengal of North India not from South India. Hence, it is reported here as a new addition to the flora of south India. The leaves are used as folk medicine an anti diabetic. The leaves are alternate, elliptic, elliptic-lanceolate, ovate, obovate, serrate, and highly variable. The leaf surface view presents glandular and non-glandular trichomes on both epidermal surfaces. The non-glandular trichomes are comparatively more abundant. They are long, multicellular and uniseriate, having about 5-15 cells and an elongated apical cell. An evident striate cuticle coats the epidermis. In view, the epidermal cells are wavy on the adaxial side and sinuous on the abaxial surface. There are anomocytic stomata on both sides. In transverse section (TS), the epidermis is uniseriate and the stomata are inserted at the same level as, or slightly above, the surroundings cells. The mesophyll is dorsiventral, usvally encompassing one layer of palisade parenchyma and five to seven rows of spongy parenchyma. Minor collateral bundles are distributed in the chlorenchyma and encircled by a parenchymatic sheath. The midrib and petiole are alike. Both have a plano-convex shape, in transverse section traversing the ground parenchyma, several collateral vascular bundles with cambial zone is arranged in an open arc. A few crystals of calcium oxalate, resembling rough druses, are located near some vascular bundles. The powder microscopically and organoleptic characters are presented. Preliminary Phytochemical screening revealed the presence of alkaloids, glycosides, flavanoids, phinolics, saponins, terpenoids etc. HPTLC finger printing studies also presented.

The present work can serve as a useful tool in the identification, authentication and standardization of the plant material.

Key words: *Gymnathemum amygdalinum*, Asteraceae, , Pharmacognosy, HPTLC, anti Diabetic, Telnagana state.