

GC-MS analysis of biologically active compounds in *Indigofera viscosa* Lam.

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SUMMARY

A medicinal herb can be viewed as a synthetic laboratory as it produces and contains a number of chemical compounds. Gas chromatography (GC) and mass spectroscopy (MS) can be used to study traditional medicines and characterize the compound of interest. *Indigofera viscosa* Lam. is herb distributed in hill slopes of southern peninsular India. The macerate of the crushed whole plant is used as rectal application, twice a week for one week, to stop diarrhea. Sterols, triterpenes, polar and other constituents in whole plant of *Indigofera viscosa* Lam. were analyzed by gas chromatography-mass spectrometry. Over 23 compounds were identified. Sitosterol and stigmasterol were the most abundant of sterols identified in the sterol fraction.

Key Words : Gas chromatography (GC), Mass spectroscopy (MS), *Indigofera viscosa*

How to cite this article : Rajabudeen, E., Ganthi, A. Saravana, Subramanian, M. Padma and Natarajan, K. (2013). GC-MS analysis of biologically active compounds in *Indigofera viscosa* Lam.. *Internat. J. Plant Sci.*, **8** (1) : 116-119.

Article chronicle : Received : 06.08.2012; Revised : 24.09.2012; Accepted : 14.11.2012

A large proportion of the world's population depends on traditional medicines to meet its needs. Recently, WHO introduced guidelines on research evaluation of traditional medicine and practice. These guidelines have a major objective of developing traditional drugs and aim to ensure quality and safety of botanicals before being evaluated for its efficacy. On this background phytochemistry is playing a paramount role in the evolution of novel medicines, taking lead from natural products. A great number of screening programs are going on worldwide for new plant based bioactive molecules. Gas chromatography (GC) and mass

spectroscopy (MS) can be used to study traditional medicines and characterize the compound of interest. The Fabaceae family (= Leguminosae) consists of approximately 650 genera and 18,000 species; it is one of the largest Angiosperm families (Polhill *et al.*, 1981; Judd *et al.*, 1999). Many plants of this family have been used in traditional systems of medicine. Still, several potent plants of Fabaceae are unexplored which deserve attention and research. *Indigofera viscosa* Lam. is such plant which has not been explored extensively by the scientific world so far. The genus *Indigofera* comprises around 700 species that are distributed geographically in tropical regions (Bakasso, 2008). *Indigofera viscosa* Lam. is herb distributed in hill slopes of southern peninsular India. The macerate of the crushed whole plant is used as rectal application, twice a week for one week, to stop diarrhea (Kusamba Chifundera, 2001). The objective of the present work was to identify the biologically active compounds in *Indigofera viscosa* Lam.

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MATERIALS AND METHODS

Plant material :

The medicinal plant *Indigofera viscosa* Lam. was