

PHARMACOGNOSTICAL STUDIES ON *DOLICHANDRONE FALCATA* LEAVES

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ABSTRACT

The plant *Dolichandrone falcata* has been used mainly for diabetics and other various disorders by tribals. Since there is no proper information regarding histological character of this plant our efforts were devoted to study the pharmacognostical properties of this plant

KEYWORDS: *Dolichandrone falcata*, Pharmacognostic characters.

INTRODUCTION

Common Name: Medshing, Medasinghi, Mersingi.¹

Dolichandrone falcata (family-Bignoneaceae), is a small to medium-sized tree, 20-50 ft in height, distributed in Rajputana, Uttar Pradesh, Bihar and in the moist forests of Central and Southern India. Leaves simply pinnate, leaflets opposite, sub-orbicular or obovate, sometimes very shortly acuminate (the terminal leaflet rather larger than the lateral ones), pubescent or glabrous.^{1, 2, 3.}

MATERIALS AND METHODS

The leaves of *Dolichandrone falcata* were collected from near by area of Bhivapur region. The plant material was authenticated from Department of Botany, Nagpur University, Nagpur. The leaves were shade dried, pulverized into coarse powder and stored in well-stoppered container.

PHARMACOGNOSTICAL STUDIES

Morphological Studies were done to determine the colour, odour, taste, size, shape and special features, like touch, texture, apex, base and margin.

Microscopical studies were done by preparing a thin section passing through midrib and lamina region of *Dolichandrone falcata*. The section was cleared with chloral hydrate solution and then stained with phloroglucinol followed by addition of hydrochloric acid and mounted in glycerin. A separate section was prepared and stained with iodine solution for the identification of starch grains. The powder of dried leaves was used for the observation of microscopical characters. The powder drug was separately treated with phloroglucinol- HCl solution, glycerin and iodine solution to determine the presence of lignified cells, calcium oxalate crystals and starch grains. As a part of quantitative microscopy, stomatal number, stomatal index, vein islet, and termination numbers were determined by using fresh leaves of the plant^{6,7.}

RESULT AND DISCUSSION

The detailed pharmacognostical evaluation would give valuable information for further studies. The macroscopical and microscopical studies revealed as follows

Macrofeatures

Leaves of *Dolichandrone falcata* are simply pinnate. Leaflets-opposite.

Colour... Green

Odour... Characteristic

Taste.... Characteristic

Size..... 7 to 9 cm in length

Shape..... Suborbicular

Base... Cuneate

Apex.... Acuminate

Margin... Entire

Surface... Pubescent

Texture... Leathery

Vestiture...Hirsute

Trichomes..Present

Ridges.....Present

Microscopy

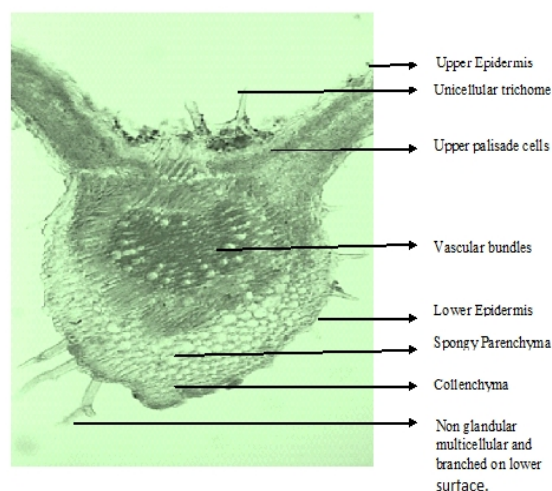
The T.S. of the *Dolichandrone falcata* leaf showed the presence of polygonal epidermis, Palisade cells, Parenchymatous cells, Collenchymatous cells, lignified xylem, Phloem, anomocytic stomata on lower surface and trichomes.

ACKNOWLEDGEMENT

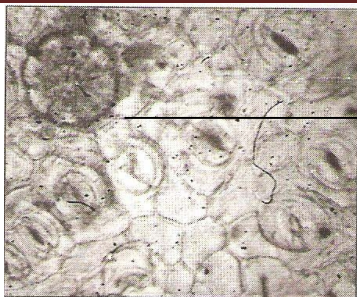
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T.S OF *DOLICHANDRONE FALCATA* LEAF

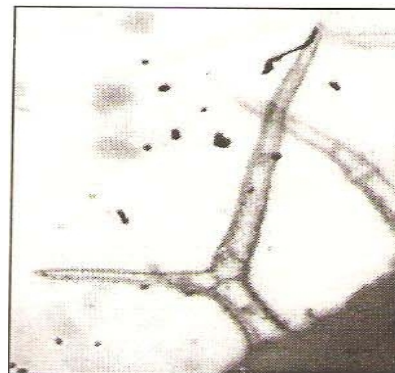


Anomocytic stomata

crystals



POWDERED MICROSCOPY



Quantitative Microscopy Of Leaves Of *Dolichandrone falcate*

Epidermal cells	:	Polygonal
Stomata	:	Upper Surface – absent Lower: Anomocytic
Stomato Index	:	16.3 %
Trichomes	:	Non glandular multicellular and branched on lower surface.
Venation	:	Pinnate reticulate
Vein islet no.	:	11
Vein termination no	:	4

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