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**LEAF MICROMORPHOLOGICAL STUDIES AND CHLOROPHYLL  
QUANTIFICATION OF FOUR SPECIES OF FAMILY RUBIACEAE**

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**ABSTRACT**

The present work focuses on the variabilities and similarities in the stomatal index and chlorophyll content of four species *Mitracarpus hirtus* (L.), *Oldenlandia auricularia* (L.), *Ixora javanica* (Bl.) and *Ixora coccinea* (L.). Our study revealed that there is considerable variation in the stomatal index and size of stomata in the upper and lower epidermis of the same species. *Oldenlandia auricularia* (L.) with the highest stomatal index in its upper epidermis also has the largest dimensions for the length and breadth of stomata in the upper epidermis. Out of the four investigated species, three showed paracytic stomata and one showed anomocytic stomata. The number and size of the epidermal cells also varied considerably. Chlorophyll quantification study revealed that there are slight variations among the four species.

**Keywords: Stomatal Index and Chlorophyll Content, *Mitracarpus hirtus* (L.), *Oldenlandia auricularia* (L.), *Ixora javanica* (Bl.) and *Ixora coccinea* (L.)**

**INTRODUCTION**

Rubiaceae is the fourth largest family of angiosperm with representatives widely distributed worldwide presenting diverse habits and life forms. The family is monophyletic and includes about 10700 species, which were recently divided into 2

subfamilies the Cinchonoideae and Rubioideae (Robbrech and Manen, 2006). Rubiaceae are easily recognizable and characterized by opposite decusate leaves that are simple and entire with inter petiolar stipules, tubular sympetalous corollas and an