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Microscopic Characteristics and Phytochemical Screening of *Crudia zeylanica*

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Abstract

Crudia zeylanica (Fabaceae) is a native, critically endangered plant in Sri Lanka. It was rediscovered recently after recorded in 1911. Its uses or any activity have not been reported. The objectives of this study were to observe the microscopical characteristics and to screen the secondary metabolites present in *C. zeylanica*. In the methods, transverse section (TS), upper and lower epidermal peels of the leaf and the TS of the stem were examined under light microscope (x40). Plant leaves and stem twigs were separately dried and ground to obtain a coarse powder. Powder of the stem twigs was subjected to dry powder analysis while plant leaves were extracted into methanol and subjected to selective qualitative phytochemical screening. Microscopical observations of the leaf showed the presence of a brown pigment in some of the cells in the lower epidermal peel, in parenchymal cells and cells around phloem tissue of the central vascular bundle. Small irregular shape, light brown, and colourless droplets were present in the central pith of the TS of the stem twigs. In powder microscopy, sclerenchyma, phloem and phloem sieve plate, lignified fibres, xylem with annular type tracheid and cells with brown pigment were observed. Phytochemical screening revealed the presence of coumarins, flavonoids, glycosides, phenols, resins, saponins and tannins. Special features observed in cross sections could be used to identify the plant. Presence of flavonoids and other phytochemicals suggests that the *C. zeylanica* may have medicinal importance over some diseases.

Keywords: *C. zeylanica, Pharmacognostical study, Powder microscopy, Phytochemical screening*