

**PHYSICOCHEMICAL AND PHYTOCHEMICAL
COMPARISON OF IMPORTED AND LOCALLY
AVAILABLE SPPS OF *Rubia cordifolia*
(WALMADATA)**

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ABSTRACT

In the commercial level, it is difficult to find quality medicinal plant material though it is important in Ayurvedic preparations. *R. cordifolia* is a common and important medicinal plant belongs to Rubaceia family. It totally imports from India though favorable growing conditions exists in Sri Lanka. Therefore, this study was conducted to investigate the important phytochemical properties of imported and locally available materials of *Rubia cordifolia*. The imported market sample was collected from the Uva Provincial Department of Ayurveda, Diyathalawa and fresh locally available sample was collected from Maspanna (IM1a) forest area in Welimada. Those samples were washed and dried under the shade, oven-dried at 40°C and sonication proceeded for phytochemical extraction using 70% methanol. Prior to the extraction, samples were observed for macroscopic and microscopic features of the root and stem. Phytochemical properties such as total polyphenols, antioxidant activity, flavonoid and anthocyanin were quantitatively analyzed by using standard protocols available in the literature with slight modifications. There was no significant difference between morphological characteristics of locally available *Rubia cordifolia* and Indian species according to the literature except the colour of the stem and roots. However physicochemical properties of the locally available sample are in better in compared to imported market available sample. 7.412 ± 0.45 mg gallic acid/1 g dry weight of polyphenol was received from the local sample and it was significantly higher amount compare to the imported sample (4.182 ± 0.399 mg gallic acid/1 g dry weight). A significantly high antioxidant activity was observed in the locally available sample $239.08 \mu\text{g/ml}$ compare to the imported sample $228.48 \mu\text{g/ml}$. Flavonoid content and monomeric anthocyanin in local available *R. cordifolia* is significantly lower than the imported sample of *R. cordifolia*. This implies the potential of using locally available materials for the drug manufacturing and different ayurvedic preparations.

Keywords: Antioxidants, Polyphenols, Flavonoids