

## **Standardization of *Plectranthus amboinicus* (Lour.) Spreng aerial parts using phytochemical, physico-chemical and HPTLC parameters**

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The majority of Sri Lankan population rely on herbal medicine. Hence, standardization of raw materials is required in Ayurveda preparations. *Plectranthus amboinicus* (Lour.) Spreng (Kapparawalliya) is a herb having morphological ambiguity with other *Plectranthus* species. Thus, the present study was aimed at establishing standardization parameters for the whole aerial part of *P. amboinicus* (Lour.) Spreng. Plants were collected from Western Province, Sri Lanka, oven dried and powdered. Extracts were obtained by cold maceration with methanol and acetone and hot water extraction. Each was subjected to preliminary phytochemical, physico-chemical tests and High Performance Thin Layer Chromatography (HPTLC). All tests were done in triplicate and results were expressed as mean  $\pm$  SD. Phytochemical screening revealed the presence of alkaloids, tannins, sugars, anthraquinones, diterpenes, triterpenes, terpenoids and proteins in all extracts while phenols, flavonoids and amino acids were detected only in methanol and acetone extracts. Physico-chemical parameters; total ash, acid insoluble ash, water soluble ash, loss on drying, extractability in methanol, acetone and water were  $25.65 \pm 0.64\%$  w/w,  $1.20 \pm 0.07\%$  w/w,  $10.80 \pm 0.35\%$  w/w,  $6.73 \pm 0.99\%$  w/w,  $24.04 \pm 3.12\%$  w/w,  $5.37 \pm 0.01\%$  w/w and  $30.81 \pm 1.59\%$  w/w. HPTLC fingerprint of methanol extract showed 16 peaks with methanol: distilled water: acetic acid (2:5:3), and that of acetone extract showed 9 peaks for the solvent systems distilled water: methanol : acetic acid (5:2:3) and distilled water: methanol: acetone (4:2:4). Reverse phase HPTLC fingerprint of aqueous extract showed 10 peaks with methanol: distilled water (3:7). Above parameters can be considered as tools of the standardization process of aerial parts of *P. amboinicus* (Lour.) Spreng.

**Keywords:** *Plectranthus amboinicus* (Lour.) Spreng, physico-chemical, phytochemical, High-Performance Thin Layer Chromatography, fingerprint

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