

Pandit G. P. Wickramarachchi
Memorial International Research Symposium
2012

Recent Advances in Ayurveda
and
Natural Medicines for Human Wellbeing

ABSTRACTS

Research and Publication Division
Gampaha Wickramarachchi Ayurveda Institute
University of Kelaniya
Yakkala, Sri Lanka

Tel. 0094 33 2222748; Fax. 0094 33 2222739

e-mail: ayurgmp@sltnet.lk

Website: www.kln.ac.lk/wickramarachchi/index.html

Quality assessment of medicinal plant *Enicostemma littorale*, Blume by physico-phytochemical analysis

Vinotha S^{1*}, Thabrew I² and Sivapalan SR¹

Enicostemma littorale, Blume (Gentianaceae) also called *Vellarugu* in Tamil, Indian gentian, in English, *Mamajaka* in Sanskrit and *Naahi* in Ayurveda is a glabrous perennial herb which grows up to a height of 1.5ft is found throughout India. In Sri Lanka, it is found in open, sandy places among sparse grass close the beach throughout the dry zone particularly from northwestern to northeastern coastal belt. It is traditionally used to treat (a) inflammatory and painful conditions like arthritis, back pain, (b) diabetes mellitus, and (c) to regulate bowel functions. The objective of this study was to evaluate the physicochemical and phytochemical constituents of the *E. littorale*. Six samples of whole plant powder of *E. littorale* were standardized according to the methods recommended by the World Health Organization (WHO). In the present study, the physicochemical parameters such as loss on drying, ash values, pH value, aqueous, and alcoholic extractive values were calculated. Preliminary phytochemical screening was carried out to ascertain the quality of this plant. All samples were tested and mean values along with standard deviation were recorded. The results showed that it contains loss on drying $10.25 \pm 0.33\%$, ash values (total ash $8.16 \pm 0.1\%$, water soluble ash $2.75 \pm 0.1\%$, acid insoluble ash $1.89 \pm 0.1\%$, and sulfated ash $1.30 \pm 0.1\%$) and pH value 5.12 ± 0.02 . The solubility percentage of *E. littorale* in aqueous hot extraction is higher ($37.21 \pm 1.27\%$), when compared with ethanolic hot extraction ($24.92 \pm 0.64\%$). The phytochemical screening of hot aqueous and ethanolic extracts indicated the presence of alkaloids, saponins, flavonoids, steroids, tannins, proteins, quinines, reducing sugar and coumarins, and does not indicate the presence of anthraquinones. The generated information of the present study will provide data which is helpful in the correct identification and authentication of this medicinal plant.

Key words: *Enicostemma littorale*, *Vellarugu*, Physicochemical, Phytochemical, Evaluation

Acknowledgement: HETC Project funding, JFN/Sidda/N1

1. Unit of Siddha Medicine, University of Jaffna, Jaffna, Sri Lanka.
email: vsanmuga07@gmail.com
2. Institute of Biochemistry, Molecular Biology and Bio technology, University of Colombo, Colombo, Sri Lanka.