

# Preliminary Phytochemical Screening of Different Extracts of Whole Plant of *Enicostemma littorale* Blume

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## Abstract

*Enicostemma littorale* Blume (Gentianaceae family), which is commonly known as Mamajaka (Sanskrit), Vellarugu (Tamil) and Indian gentian (English). *E. littorale* is a perennial herb which grows in coastal areas of Northern and Eastern province of Sri Lanka. The whole plant is dried and powdered and used to treat rheumatism, swelling, back pain, diabetes mellitus, constipation, and skin diseases. The aim of this study is to evaluate the phytochemical constituents in different extracts of *E. littorale* according to the standard procedures. Quantitative estimation of some of the active constituents like alkaloids, flavonoids and saponins were also carried out. The preliminary phytochemical screening of hot and cold ethanol, methanol and aqueous extracts showed the presence of alkaloids, saponins, flavonoids, steroids, tannins, proteins, reducing sugar coumarins and quinones and absence of anthraquinones. Cold and hot water extracts showed the presence of fat and fixed oil. The total alkaloid and flavonoid contents were found to be  $2.25 \pm 0.01$  % and  $25.34 \pm 0.24$  % respectively and total saponin content was (Foaming Index) FI < 100. The phytochemicals identified in the present study may be used as tools for quality control of drugs prepared with *E. littorale* in the future, for the treatment of a variety of disease conditions.

**Keywords:** *Enicostemma littorale*; Different extracts; Phytochemical Screening

## 1. Introduction

Herbal medicine is widely practiced from ancient period throughout the world. These medicines are safe and environment friendly. According to World Health Organization 80% of the world's population relies on traditional medicine for their primary health care [1]. In the traditional system of medicine, which dates back many centuries, many herbal extracts are used to cure a variety of diseases [2].

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