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Phytochemical analysis of *Evolvulus alsinoides* (L.) L

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Background: *Evolvulus alsinoides* L. is a perennial herb which belongs to the family Convolvulaceae and commonly known as “Vishnukranthi” in Sinhala or “Shankpushpi” in Sanskrit. The whole plant and the different parts of the plant are used in traditional medicine for many illnesses including gastric ulceration. The *in vitro* gastro-protective activity of aqueous extract of *E. alsinoides* was evaluated by Fordtran’s method in our previous study.

Objective: The aim of the study was to (a) screen phytochemical classes (b) compare Thin Layer Chromatography (TLC) fingerprints using hexane, ethanolic and aqueous extracts of *E. alsinoides* and (c) quantify the major phytochemical classes in *E. alsinoides* powder.

Method: Plants were collected from Southern Province, Sri Lanka. Hot aqueous, ethanolic and hexane extracts were prepared by refluxing 100 g of air-dried whole-plant powder in 1 L of each of the solvent for 4 hours. Phytochemical screening and quantification were performed as per the standard protocols. TLC fingerprints of three extracts were developed using a solvent system of toluene: ethyl acetate: and formic acid at a ratio of 20:8:1. TLC fingerprints were observed at 254 nm and 365 nm under UV light and the R_f values of each spot were calculated.

Results: Preliminary phytochemical screening revealed that the presence of tannins, alkaloids, saponins, flavonoids and phenolics in aqueous and ethanolic extracts. Terpenoids and cardiac glycosides were present only in the aqueous extract. Hexane extract contained flavonoids and trace amounts of phenols. Total amounts of tannins, alkaloids and saponins were 0.7%±0.2, 2.4%±0.2 and 1.5%±0.4 respectively in *E. alsinoides* powder. R_f values of TLC fingerprints of hexane, ethanol, and aqueous extracts were different from each other.

Conclusion: *E. alsinoides* is a rich source of phytochemicals. Among the tested extracts most of the phytochemicals were found in the aqueous extract.

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