

## Determination of Duration of Consistency of the Antacid Activity in Aqueous, Ethanolic, Hexane Extracts and Quantitative Determination of Flavonoids and Polyphenols of *Evolvulus alsinoides* (L.) L

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*Evolvulus alsinoides* (family Convolvulaceae) is commonly known as “Nil Vishnukranthi” or “Shankhpushpi” in Sri Lanka and is used in the treatment of gastric ulceration. In our previous studies, we have investigated the *in-vitro* antacid potential of aqueous extract (aqE), ethanolic extract (EE) and hexane extract (HE) of *E. alsinoides* by neutralization of artificial gastric juice and modified Fordtran’s titration method. This study aimed at (a) determination of duration of consistency of the antacid activity of aqE, EE and HE of *E. alsinoides*; and (b) quantitative determination of total flavonoids content (TFC) and total polyphenol content (TPC). The duration of consistent antacid activity was determined using Vatie’s artificial stomach model (pH of artificial gastric juice =1.2 at a rate of 3 mL/min). Test solutions were prepared from aqE, EE and HE and the reference drug (ENO). The time taken for an amount of 10mL of each sample to reach pH 3.0 at 37°C and 50rpm was recorded. Each test was triplicated. TPC and TFC of each fraction were quantified using gallic acid (GA) and quercetin (QE) as the standards respectively. The aqE exhibited a statistically significant duration of consistency of antacid activity (<0.001) compared to the negative control. The duration of consistency of the EE and HE were not significant compared to the respective negative controls. TFC in aqE, EE, and HE were 464.53±0.05, 570.63 ±0.11 and 523.34 ±0.02 mgQE/g and TPC were 246.02±0.00, 302.19±0.01, and 17.14±0.00 mgGAE/g respectively. Hence, flavonoids and polyphenols present in *E. alsinoides* may not significantly contribute to the antacid activity of aqE.

**Keywords:** *Evolvulus alsinoides*, antacid, gastroprotective, Fordtran’s model, Vatie’s artificial stomach model