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PHYTOCHEMICAL SCREENING AND ANTIOXIDANT ACTIVITY TEST OF SEVERAL FRACTIONS OF (Ipomoea carnea jacq.) FLOWERS WITH DPPH (2,2-DIPHENYL-1-PICRYLHYDRAZYL) REAGENT

ABSTRACT

Background : *Ipomoea carnea Jacq.* (fence morning glory) is a traditional medicinal plant containing bioactive compounds such as flavonoids, saponins, tannins, and alkaloids. These compounds have potential as antioxidants capable of neutralizing free radicals that cause degenerative diseases. Antioxidant activity may vary among solvent fractions; therefore, it is necessary to investigate which fraction has the highest potential.

Research Objective : To determine the phytochemical constituents and compare the antioxidant activity of several fractions of I. carnea Jacq. flower extract using the DPPH method, as well as to identify the fraction with the highest antioxidant activity.

Research Methods : This experimental study involved extracting dried flower simplicia by maceration with 96% ethanol, followed by liquid–liquid fractionation using n-hexane, ethyl acetate, and water. Phytochemical screening was performed to identify bioactive compounds, followed by flavonoid identification using thin-layer chromatography (TLC). Antioxidant activity was evaluated by the DPPH method, and IC_{50} values were determined using a UV-Vis spectrophotometer.

Research Results : The ethanol extract contains alkaloids, flavonoids, and saponins. The water fraction contains alkaloids, flavonoids, tannins, polyphenols, and saponins, while the ethyl acetate fraction contains flavonoids, tannins, and saponins. The IC_{50} values were obtained as follows: n-hexane fraction 65.926 µg/mL (strong), ethyl acetate fraction 56.51 µg/mL (strong), water fraction 51.92 µg/mL (moderate), and vitamin C as a reference 5.618 µg/mL (very strong). The water fraction has the highest antioxidant activity.

Keywords : *Ipomoea carnea Jacq*., phytochemical screening, fractionation, DPPH, antioxidant