PENGARUH KADAR ANTOSIANIN INFUSA DAN FRAKSI BUNGA TELANG (*C. ternatea* L.) TERHADAP AKTIVITAS INHIBISI α-GLUKOSIDASE

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ABSTRAK

Latar Belakang: Diabetes mellitus merupakan penyakit metabolik dengan prevalensi yang terus meningkat dan memerlukan upaya pengendalian baik secara kuratif maupun preventif. Salah satu alternatif pengendalian adalah pemanfaatan tanaman herbal yang memiliki senyawa bioaktif, seperti bunga telang (*C. ternatea* L.) yang diketahui mengandung antosianin dan memiliki potensi sebagai agen antidiabetes.

Tujuan: Penelitian ini bertujuan untuk mengetahui kadar antosianin total dan aktivitas penghambatan α-glukosidase pada infusa dan fraksi bunga telang (*C. ternatea* L.) yang diperoleh melalui metode ekstraksi cair–cair.

Metode: Metode penelitian meliputi determinasi tanaman, karakterisasi, penapisan fitokimia, pembuatan infusa, fraksinasi menggunakan pelarut akuades, etil asetat, dan n-heksan, serta analisis kadar antosianin dengan metode pH diferensial, profil senyawa menggunakan KLT, dan uji inhibisi α-glukosidase secara *in vitro* menggunakan ELISA reader.

Hasil: Fraksi akuades bunga telang (*C. ternatea* L.) memiliki kadar antosianin total tertinggi dan aktivitas inhibisi enzim α-glukosidase terbaik dibandingkan ekstrak infusa dan fraksi etil asetat. Antosianin diduga berkontribusi terhadap aktivitas inhibisi enzim α-glukosidase, namun kemungkinan terdapat metabolit sekunder lain yang juga berperan dalam aktivitas tersebut.

Kata kunci: *C. ternatea* L., antosianin, α-glukosidase, ekstraksi cair–cair, infusa

THE EFFECT OF ANTHOCYANIN LEVELS IN BUTTERFLY PEA (*C. ternatea* L.) INFUSION AND FLOWER FRACTIONS ON α-GLUCOSIDASE INHIBITION ACTIVITY

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ABSTRACT

Background: Diabetes mellitus is a metabolic disease with a continuously increasing prevalence, requiring both curative and preventive control measures. One alternative approach is the utilization of herbal plants containing bioactive compounds, such as butterfly pea (*C. ternatea* L.), which is known to contain anthocyanins and has potential as an antidiabetic agent.

Objective: This study aimed to determine the total anthocyanin content and α-glucosidase inhibitory activity of butterfly pea infusions and fractions obtained through liquid–liquid extraction.

Methods: The research methods include plant identification, characterization, phytochemical screening, making infusions, fractionation using distilled water, ethyl acetate, and n-hexane, as well as analyzing anthocyanin content using the differential pH method, compound profiling with TLC, and in vitro α-glucosidase inhibition tests using an ELISA reader.

Results: The butterfly pea flower water fraction has the highest total anthocyanin content and the best α-glucosidase enzyme inhibition activity compared to the infusion extract and ethyl acetate fraction. Anthocyanins are suspected to contribute to the α-glucosidase inhibition activity, but there are likely other secondary metabolites that also play a role in this activity.

Keywords: *C. ternatea* L., anthocuyanin, α-glucosidase, liquid–liquid extraction, infusion