

PENGARUH VARIASI KONSENTRASI ETANOL TERHADAP KADAR FENOLIK TOTAL DAN FLAVONOID TOTAL EKSTRAK DAUN KUPU-KUPU (*Bauhinia purpurea* L.)

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INTISARI

Latar Belakang: Daun kupu-kupu (*Bauhinia purpurea* L.) merupakan tumbuhan hias yang jarang diketahui atau dieksplorasi oleh masyarakat, meskipun mempunyai efek antioksidan yang tinggi. Salah satu senyawa yang bertindak sebagai antioksidan adalah fenolik dan flavonoid yang dapat diambil melalui maserasi menggunakan etanol 70% dan etanol 96% yang dapat menyebabkan perubahan polaritas pelarut, yang mempengaruhi kelarutan beberapa senyawa bioaktif.

Tujuan Penelitian: Mengetahui pengaruh konsentrasi etanol 70% dan etanol 96% terhadap kadar fenolik dan flavonoid total daun kupu-kupu (*Bauhinia purpurea* L.)

Metode Penelitian: serbuk daun kupu-kupu dimaserasi dengan pelarut etanol 70% dan etanol 96% lalu diuapkan pada suhu 40°C-50°C. Ekstrak kental yang diperoleh dilakukan uji organoleptis, skrining fitokimia, Kromatografi Lapis tipis, dan Spektrofotometer Uv-Vis digunakan untuk menentukan kadar fenolik total menggunakan standar asam galat (mg GAE/g ekstrak) dan penentuan kadar flavonoid total menggunakan standar kuersetin (mg QE/g ekstrak).

Hasil Penelitian: Hasil ekstrak kental etanol 70% dan 96% daun kupu-kupu yang diperoleh berwarna hijau kehitaman, berbentuk kental, bau khas, dan rasa yang hambar. Hasil skrining fitokimia menunjukkan positif fenolik, flavonoid, saponin dan negatif alkaloid. Kadar fenolik total etanol 70% sebesar $14,644 \pm 0,222$ mg GAE/g sedangkan kadar flavonoid total sebesar $25,519 \pm 0,921$ GAE/g. Kadar fenolik total etanol 96% sebesar $7,176 \pm 0,347$ mg QE/g sedangkan kadar flavonoid total sebesar $11,208 \pm 0,412$ mg QE/g.

Kesimpulan: Terdapat perbedaan signifikan antara penggunaan etanol 70% dan 96% dalam ekstraksi terhadap kadar fenolik dan flavonoid total dalam daun kupu-kupu. Kadar Fenolik dan Flavonoid ekstrak etanol 70% daun kupu-kupu lebih tinggi dibandingkan dengan ekstrak etanol 96%.

Kata Kunci: *B.purpurea* L., Daun Kupu-Kupu, Etanol 70%, Etanol 96% Fenolik, Flavonoid,

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EFFECT OF VARIATIONS IN ETHANOL CONCENTRATION ON TOTAL PHENOLIC AND TOTAL FLAVONOID CONTENTS EXTRACT OF BUTTERFLY LEAF (*Bauhinia purpurea* L.)

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ABSTRACT

Background: *Bauhinia purpurea* L. leaf is an ornamental plant that is rarely known or explored by the public, despite its high antioxidant effect. One of the compounds that act as antioxidants are phenolics and flavonoids that can be extracted through maceration using 70% ethanol and 96% ethanol which can cause changes in solvent polarity, which affects the solubility of some bioactive compounds.

Objective: Determine the effect of 70% ethanol and 96% ethanol concentration on total phenolic and flavonoid content of butterfly leaves (*Bauhinia purpurea* L.).

Method: Butterfly leaf powder was macerated with 70% ethanol and 96% ethanol solvents and then concentrated with a rotary evaporator at 40°C and 100 rpm speed. The thick extract obtained was subjected to organoleptic test, phytochemical screening, Thin Layer Chromatography, and Uv-Vis Spectrophotometer used to determine total phenolic content using gallic acid standard (mg GAE/g extract) and determination of total flavonoid content using quercetin standard (mg QE/g extract).

Results: The results obtained from 70% and 96% thick ethanol extracts of butterfly leaves are blackish green in color, thick in shape, distinctive odor and bland taste. Phytochemical screening results showed positive phenolics, flavonoids, saponins and negative alkaloids. The total phenolic content of 70% ethanol was 14.644 ± 0.222 mg GAE/g while the total flavonoid content was 25.519 ± 0.921 GAE/g. The total phenolic content of 96% ethanol was 7.176 ± 0.347 mg QE/g while the total flavonoid content was 11.208 ± 0.412 mg QE/g.

Conclusion: There is a significant difference between the use of 70% and 96% ethanol in the extraction of total phenolic and flavonoid levels in butterfly leaves. Phenolic and flavonoid content of 70% ethanol extract of butterfly leaves is higher than 96% ethanol extract.

Keywords: *B. purpurea* L., Butterfly Leaf, Flavonoid, Phenolic 70% Ethanol, 96% Ethanol

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