PENGARUH PERBEDAAN METANOL DAN ETANOL TERHADAP AKTIVITAS PEREDAMAN RADIKAL BEBAS DPPH EKSTRAK DAUN KUPU-KUPU (*Bauhinia purpurea* L.)

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INTISARI

Latar Belakang: Daun kupu-kupu (*Bauhinia purpurea* L.) merupakan salah satu tanaman yang memiliki aktivitas antioksidan secara alami karena mengandung senyawa flavonoid. senyawa flavonoid merupakan suatu senyawa yang bersifat polar sehingga untuk mengekstraksi senyawa flavonoid diperlukan pelarut yang sesuai dengan tingkat kepolarannya. Pelarut yang bersifat polar yaitu metanol dan etanol.
Tujuan Penelitian: Mengevaluasi pengaruh pelarut metanol dan etanol terhadap kemampuan sampel Daun kupu-kupu *(Bauhinia purpurea* L.*)* dalam meredam radikal bebas DPPH (*2,2-diphenyl-1-picrylhydrazyl*).
Metode Penelitian: Ekstrak daun kupu-kupu dimaserasi menggunakan pelarut metanol dan etanol (1:10). Kemudian dikentalkan dengan suhu 40^{O}C hingga didapat ekstrak kental. Selanjutnya dilakukan uji penapisan fitokimia, dan Uji peredaman radikal bebas dengan metode DPPH. Aktivitas peredaman radikal bebas dihitung dengan nilai IC_{50}.
Hasil Penelitian: Ekstrak metanol, etanol 96% dan etanol 70% daun kupu-kupu Mengandung senyawa flavonoid, saponin, tanin dan fenolik. Aktivitas peredaman radikal bebas dengan metode DPPH dihitung berdasarkan nilai IC_{50}. Standar kuersetin menunjukkan aktivitas peredaman radikal bebas yang sangat kuat dengan nilai IC_{50} 2,519 ± 0,015 ppm, sedangkan pada sampel termasuk kategori sangat lemah dengan nilai IC_{50} etanol 96%, metanol dan etanol 70% berturut-turut 274,051 ± 6,804 ppm; 276,248 ± 26,654 ppm; dan 405,268 ± 24,534 ppm.
Kesimpulan: Terdapat perbedaan signifikan antara penggunaan pelarut metanol etanol 96% dan etanol 70% terhadap aktivitas peredaman radikal bebas DPPH ekstrak daun kupu-kupu.

Kata Kunci: Daun kupu-kupu, *Bauhinia purpurea* L., Antioksidan, DPPH (*2,2 diphenyl-1- picrylhydrazyl*), metanol dan etanol.

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THE EFFECT OF METHANOL AND ETHANOL ON THE DPPH RADICAL SCAVENGING ACTIVITY OF *Bauhinia purpurea* L. LEAVES EXTRACT

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ABSTRACT

Background: *Bauhinia purpurea* L. is a plant that has natural antioxidant activity because it contains flavonoid compounds. Flavonoid compounds are compounds that are polar in nature, so to extract flavonoid compounds a solvent is needed that is appropriate to their polarity level. Solvents that are polar are methanol and ethanol.
Research Objective: Evaluating the effect of methanol and ethanol solvents on the ability of *Bauhinia purpurea* L. samples to reduce DPPH *(2,2-diphenyl-1-picryhydrazyl)* free radicals.
Research Method: Butterfly leaf extract was macerated using methanol and ethanol (1:10) solvents. Then it is thickened at 40^{O}C until a thick extract is obtained. Next, a phytochemical screening test was carried out and a free radical reduction test was carried out using the DPPH method. Free radical scavenging activity was calculated by the IC_{50} value.
Research Results: Methanol, 96% ethanol and 70% ethanol extracts of butterfly leaves contain flavonoid, saponin, tannin and phenolic compounds. Free radical scavenging activity using the DPPH method is calculated based on the IC_{50} value. The quercetin standard showed very strong free radical scavenging activity with an IC_{50} value of 2.519 ± 0.015 ppm, while the sample was in the very weak category with IC_{50} values of 96% ethanol, methanol and 70% ethanol respectively 274.051 ± 6.804 ppm; 276,248 ± 26,654 ppm; and 405,268 ± 24,534 ppm.
Conclusion: There is a significant difference between the use of methanol, 96% ethanol and 70% ethanol solvents on the DPPH free radical scavenging activity of butterfly leaf extract.

Keywords: Butterfly leaf, *Bauhinia purpurea* L., Antioxidant, DPPH (*2,2-diphenyl-1-picrihydraz,* methanol, ethanol.

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