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## UJI AKTIVITAS ANTIOKSIDAN EKSTRAK DAN TEH DAUN PECUT KUDA (*Stachytarpheta jamaicensis* L.)

### ABSTRAK

**Latar belakang:** Tanaman pecut kuda (*Stachytarpheta jamaicensis* L) merupakan tanaman yang berpotensi sebagai sumber antioksidan. Berdasarkan penelitian sebelumnya ekstrak daun pecut kuda mengandung tanin, saponin, terpenoid, flavonoid, fenol, alkaloid, steroid dan glikosida yang memiliki manfaat farmakologis salah satunya sebagai antioksidan. Daun pecut kuda dapat dimanfaatkan menjadi sediaan teh yang mudah disajikan. Tujuan penelitian ini adalah menganalisis kandungan metabolit secara kualitatif dan kuantitatif serta aktivitas antioksidan ekstrak dan teh daun pecut kuda.

**Metode:** Jenis penelitian ini adalah penelitian eksperimental. Simplisia ekstrak dan teh diberikan perlakuan pengeringan sinar matahari tidak langsung dan oven suhu 40°C. Skrining fitokimia dilakukan secara kualitatif dan kuantitatif dengan pengukuran kandungan flavonoid total. Aktivitas antioksidan diuji menggunakan Spektrofotometer UV-Vis dengan metode DPPH dan nilai IC<sub>50</sub> sebagai parameter untuk dianalisis SPSS.

**Hasil:** Ekstrak dan teh daun pecut kuda positif mengandung alkaloid, flavonoid, fenol, saponin, tanin dan triterpenoid. Nilai rata-rata kadar flavonoid total ekstrak dan teh pengeringan oven suhu 40°C sebesar 91,263±0,000 mgQE/g dan 3,435±0,002 mgQE/g, ekstrak dan teh pengeringan sinar matahari tidak langsung sebesar 76,926±0,015 mgQE/g dan 3,750±0,002 mgQE/g. Hasil uji aktivitas antioksidan ekstrak dan teh daun pecut kuda menggunakan pengeringan metode oven suhu 40°C memiliki nilai rata-rata IC<sub>50</sub> 98,631 ppm dan 133,387 ppm sedangkan ekstrak dan teh pengeringan sinar matahari tidak langsung memiliki nilai rata-rata IC<sub>50</sub> 117,246 ppm dan 147,784 ppm.

**Kesimpulan:** Ekstrak dan teh daun pecut kuda mengandung alkaloid, flavonoid, fenol, saponin, tanin dan triterpenoid. Aktivitas antioksidan ekstrak dan teh daun pecut kuda memiliki perbedaan yang signifikan (p-value <0,05).

**Kata kunci :** Pecut kuda, teh, ekstrak, antioksidan.

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## **TEST OF ANTIOXIDANT ACTIVITY OF HORSEWHIP LEAVES EXTRACT AND TEA (*Stachytarpheta jamaicensis* L.)**

### **ABSTRACT**

**Background:** The horsehip plant (*Stachytarpheta jamaicensis* L) is a plant that has potential as a source of antioxidants. Based on previous research, horsehip leaf extract contains tannins, saponins, terpenoids, flavonoids, phenols, alkaloids, steroids and glycosides which have pharmacological benefits, one of which is as an antioxidant. Horsehip leaves can be used to make a tea that is easy to serve. The aim of this research was to analyze the metabolite content qualitatively and quantitatively as well as the antioxidant activity of horsehip leaf extract and tea.

**Method:** This type of research is experimental research. Simplicia extract and tea were subjected to drying treatment in indirect sunlight and an oven at 40° C. Phytochemical screening was carried out qualitatively and quantitatively by measuring the total flavonoid content. Antioxidant activity was tested using a UV-Vis Spectrophotometer with the DPPH method and the IC<sub>50</sub> value as a parameter for SPSS analysis.

**Results:** Horsehip leaf extract and tea positively contained alkaloids, flavonoids, phenols, saponins, tannins and triterpenoids. The average value of total flavonoid content of extract and oven dried tea at 40° C was 91.263 ± 0.000 mgQE/g and 3.435 ± 0.002 mgQE/g, extract and indirect sunlight dried tea was 76.926 ± 0.015 mgQE/g and 3.750 ± 0.002 mgQE/g. The results of the antioxidant activity test of horsehip leaf extract and tea dried using an oven at 40° C had an average IC<sub>50</sub> value of 98,631 ppm and 133,387 ppm, while the extract and tea dried in indirect sunlight had an average IC<sub>50</sub> value of 117,246 ppm and 147,784 ppm.

**Conclusion:** Horsehip leaf extract and tea contain alkaloids, flavonoids, phenols, saponins, tannins and triterpenoids. The antioxidant activity of horsehip leaf extract and tea has a significant difference (p-value <0.05).

**Key words:** Horsehip, tea, extract, antioxidant.