

ABSTRAK

Nama : Christine Eva Diana
Program Studi : Farmasi
Judul : UJI AKTIVITAS ANTIOKSIDAN EKSTRAK ETANOL, ETIL ASETAT DAN N-HEKSANA KELOPAK BUNGA ROSELLA (*Hibiscus sabdariffa* Linn.) DENGAN METODE FRAP

Kelopak bunga rosella (*Hibiscus sabdariffa* L.) mengandung senyawa-senyawa flavonoid, tannin dan saponin yang merupakan metabolit sekunder bersifat antioksidan. Polaritas pelarut pengekstrak dapat mempengaruhi kapasitas antioksidan hasil ekstrak dari suatu bahan tanaman. Penggunaan 3 macam pelarut pengekstrak (n-heksana, etil asetat dan etanol 96%) untuk tujuan skrining fitokimia secara kualitatif dan uji aktifitas antioksidan 3 sampel uji dari ekstrak kelopak bunga rosella (*Hibiscus sabdariffa* L.) telah dilakukan. Uji aktivitas antioksidan masing-masing ekstrak dilakukan dengan metode FRAP berdasarkan pengukuran serapan hasil reduksi $\text{Fe}(\text{o-phenanthroline})_3^{3+}$ menggunakan Spektrofotometer UV-Vis pada λ_{max} 510 nm. Aktivitas antioksidan sampel-uji ditetapkan berdasarkan nilai IC_{50} . Hasil percobaan menunjukkan bahwa skrining fitokimia ekstrak n-heksana positif mengandung glikosida; ekstrak etil asetat positif mengandung flavonoid dan glikosida; dan ekstrak etanol 96% positif mengandung alkaloid, flavonoid, saponin, steroid dan glikosida. Uji aktivitas antioksidan berdasarkan nilai IC_{50} , menunjukkan bahwa nilai IC_{50} ekstrak n-heksana sampel = 185,42 ppm (kategori sedang), IC_{50} ekstrak etil asetat sampel = 42,53 ppm (kategori sangat kuat), dan IC_{50} ekstrak etanol 96% sampel = 123,98 ppm (kategori sedang).

Kata kunci: Antioksidan, FRAP, *Hibiscus sabdariffa* L.

ABSTRACT

Name : Christine Eva Diana
Study Program : Pharmacy
Title : ANTIOXIDANT ACTIVITY OF ETHANOL, ETHYL ACETATE AND N-HEXANE EXTRACT OF ROSELLA FLOWER (*Hibiscus sabdariffa* Linn.) WITH FRAP METHOD

Rosella flower petals (*Hibiscus sabdariffa* L.) contain compounds flavonoids, tannins and saponins which is a secondary metabolite with antioxidant properties. The polarity of the extracting solvent can affect the antioxidant capacity of the extract from a plant material. The use of 3 kinds of extracting solvents (n-hexane, ethyl acetate and 96% ethanol) for the purpose of qualitative phytochemical screening and antioxidant activity test of 3 samples of rosella flower petal extract (*Hibiscus sabdariffa* L.) has been carried out. The antioxidant activity test of each extract was carried out using the FRAP method based on the measurement of the absorption of the reduced $\text{Fe}(\text{o-phenanthroline})_3^{3+}$ using a UV-Vis Spectrophotometer at max 510 nm. The antioxidant activity of the test-sample was determined based on the IC_{50} value. The experimental results showed that the phytochemical screening of the n-hexane extract was positive for glycosides; ethyl acetate extract was positive for flavonoids and glycosides; and 96% ethanol extract was positive for alkaloids, flavonoids, saponins, steroids and glycosides. The antioxidant activity test based on the IC_{50} value, showed that the IC_{50} value of the sample n-hexane extract = 185.42 ppm (medium category), IC_{50} sample of ethyl acetate extract = 42.53 ppm (very strong category), and IC_{50} of 96% ethanol extract sample = 123.98 ppm (medium category).

Keywords: Antioxidants, FRAP, *Hibiscus sabdariffa* L.