

**ANALISIS KUALITATIF DAN PENENTUAN KADAR TOTAL FENOL
DAN FLAVONOID SERTA UJI ANTIOKSIDAN EKSTRAK METANOL
BUNGA KI TOLOD (*Hippobroma longiflora*)**

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ABSTRAK

Radikal bebas merupakan senyawa oksigen reaktif yang memiliki elektron tidak berpasangan dan mencari pasangannya dengan cara mengikat molekul elektron yang ada di sekitarnya. Radikal bebas menjadi salah satu penyebab timbulnya berbagai penyakit degeneratif seperti kardiovaskular, tekanan darah tinggi, stroke, sirosis hati, katarak, diabetes melitus dan kanker. Penyakit ini dapat dihambat oleh senyawa antioksidan untuk menangkap radikal bebas sehingga tidak dapat menginduksi suatu penyakit. Bunga Ki Tolod (*Hippobroma longiflora*) mengandung metabolit sekunder seperti senyawa fenol dan senyawa flavonoid. Flavonoid memiliki potensi untuk menghambat kerja dari radikal bebas. Tujuan dari penelitian ini adalah untuk mengetahui kadar total senyawa fenol, kadar total senyawa flavonoid dan untuk mengetahui aktivitas antioksidan dalam ekstrak metanol bunga Ki Tolod.

Sampel bunga Ki Tolod diekstraksi dengan metode maserasi yang menghasilkan ekstrak berwarna coklat muda sebanyak 2,496 gram. Ekstrak metanol bunga Ki Tolod selanjutnya diuji skrining fitokimia, kadar total fenol, kadar flavonoid dan aktivitas antioksidan menggunakan metode peredaman radikal bebas 1,1 -*diphenyl-2-picrylhydrazine* (DPPH).

Hasil uji skrining fitokimia menunjukkan bahwa ekstrak metanol bunga Ki Tolod mengandung golongan senyawa fenol dan senyawa flavonoid. Kadar total fenol ekstrak metanol bunga Ki Tolod menggunakan metode spektrofotometer dengan pereaksi Folin-Ciocalteu diperoleh sebanyak 42,2214 mg GAE/g ekstrak, kadar total flavonoid dengan metode kolorimetri dan reagen $AlCl_3$ diperoleh sebanyak 1,5950 mg QE/g ekstrak dan hasil pengujian aktivitas antioksidan menunjukkan hasil dalam kategori kuat dengan nilai IC_{50} sebesar 79,67 ppm.

Kata kunci : bunga Ki Tolod, radikal bebas, senyawa fenol, senyawa flavonoid, aktivitas antioksidan

QUALITATIVE ANALYSIS AND DETERMINATION OF TOTAL OF PHENOL AND FLAVONOID LEVELS AND ANTIOXIDANT TEST ON KITOLOD (*Hippobroma longiflora*) FLOWER METHANOL EXTRACT

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ABSTRACT

*Free radical is a reactive oxygen compound which has unpaired electrons and finds its partner by following electron molecules around it. Free radicals have become one of the factors of various degenerative diseases such as cardiovascular, high blood pressure, stroke, cataracts, diabetes mellitus and cancer. These diseases could be prevented by antioxidant compounds to capture free radicals so it cannot induce a disease. Ki Tolod flower (*Hippobroma longiflora*) contains secondary metabolites such as phenol compounds and flavonoid compounds. Flavonoid compounds have the potential to inhibit the action of free radicals. The aim of this study is to detect the total of phenol compound level, the total of flavonoid compound level, as well as to find out the antioxidant activity in the methanol extract of Ki Tolod flowers.*

Ki Tolod flowers samples were extracted by maceration method which produced a light brown extract of 2,496 gram. The methanol extract of Ki Tolod flowers was then tested for phytochemical screening, total phenol content, flavonoid content and antioxidant activity using the free radical scavenging methode 1,1 –diphenyl-2-picrylhydrazine (DPPH).

The results of the study showed that the total of phenol compound level of kitolod flower by using the spectrophotometer method with Folin-Ciocalteu reagent was 42,221 mg GAE/g of extract, the total of flavonoid compound level by calorimetry method with AlCl₃ reagent was 1,595 mg QE/g of extract, and the result of antioxidant activity test showed the result in strong category with the IC₅₀ value of 79,67 ppm.

Keywords: *Ki Tolod flower, free radicals, phenolic compounds, flavonoid compounds, antioxidant activity*