

# PENGARUH KONSENTRASI METANOL TERHADAP AKTIVITAS PEREDAMAN RADIKAL BEBAS DPPH DARI FRAKSI EKSTRAK DAUN JAMBU BIJI PUTIH

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## INTISARI

**Latar Belakang:** Jambu biji putih (*Psidium guajava* L.) merupakan salah satu tanaman yang diketahui memiliki aktivitas antioksidan karena mengandung senyawa flavonoid. Diperlukan pelarut metanol untuk mengekstraksi senyawa flavonoid. Konsentrasi pelarut diketahui berpengaruh terhadap kandungan senyawa dan aktivitas antioksidan.

**Tujuan Penelitian:** Mengetahui pengaruh konsentrasi metanol terhadap kemampuan fraksi daun jambu biji putih (*Psidium guajava* L.) dalam meredam radikal bebas DPPH.

**Metode Penelitian:** Penelitian ini bersifat eksperimental dengan sampel daun jambu biji yang diekstrak menggunakan metode ekstraksi maserasi. Sampel diekstraksi dengan metanol 50% dan 100% kemudian masing-masing difraksinasi dengan air, etil asetat dan *n*-heksan. Masing-masing fraksi diuji aktivitas antioksidannya dengan metode peredaman radikal bebas DPPH.

**Hasil Penelitian:** Hasil penelitian menunjukkan nilai IC<sub>50</sub> paling kecil secara berurutan yaitu kuersetin (2,931 ppm), fraksi etil asetat konsentrasi 100% (129,911 ppm), air konsentrasi 100% (131,167 ppm), fraksi etil asetat konsentrasi 50% (201,384 ppm), air konsentrasi 50% (263,636 ppm), fraksi *n*-heksan konsentrasi 100% (5044,408 ppm) dan fraksi *n*-heksan fraksi 50% (374133,333 ppm).

**Kesimpulan:** Konsentrasi metanol 50% dan 100% berpengaruh terhadap kemampuan fraksi ekstrak daun jambu biji putih (*Psidium guajava* L.) dalam meredam radikal bebas DPPH.

**Kata Kunci:** Daun jambu biji, DPPH, Fraksi

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# THE EFFECT OF METHANOL CONCENTRATION ON DPPH FREE RADICAL SCAVENGING ACTIVITY ON FRACTION FROM WHITE GUAVA LEAF EXTRACT

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## ABSTRACT

**Background:** White guava (*Psidium guajava* L.) is a plant that is known to have antioxidant activity because it contains flavonoids. Methanol solvent is needed to extract flavonoid compounds. Solvent concentration is known to affect the compound content and antioxidant activity.

**Objective:** To determine the effect of methanol concentration on the ability of the white guava leaf fraction (*Psidium guajava* L.) in scavenging DPPH free radicals.

**Methods:** This research is experimental with samples of guava leaves extracted using the maceration extraction method. Samples were extracted with 50% and 100% methanol and then fractionated with water, ethyl acetate and *n*-hexane. Each fraction was tested for its antioxidant activity using the DPPH free radical scavenging method.

**Result:** The results of the research show the value of IC<sub>50</sub> the smallest sequentially, namely quercetin (2,931 ppm), 100% concentration of ethyl acetate fraction (129,911 ppm), 100% concentration of water (131,167 ppm), 50% concentration of ethyl acetate fraction (201,384 ppm), 50% concentration of water (263,636 ppm), fraction *n*-hexane concentration 100% (5044.408 ppm) and fractions *n*-hexane fraction 50% (374133.333 ppm).

**Conclusion:** The methanol concentration of 50% and 100% had an effect on the ability of the white guava leaf extract fraction (*Psidium guajava* L.) in scavenging DPPH free radicals.

**Keywords:** DPPH, Fraction, Guava leaves

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