Uji aktivitas antioksidan dan uji penghambatan aktivitas lipoksigenase serta penetapan kadar flavonoida total dari ekstrak daun garcinia hombroniana pierre = Antioxidant activity and lipoxygenase enzyme inhibition assay with total flavonoid content from garcinia hombroniana pierre leaves extract

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Abstrak

Ekstrak daun Garcinia hombroniana Pierre telah diketahui mengandung senyawa flavonoida, namun belum diketahui aktivitas antioksidan dan penghambatan aktivitas lipoksigenasenya. Penelitian ini bertujuan untuk mengetahui aktivitas antioksidan dengan metode FRAP (Ferric Reducing Antioxidant Power) dan penghambatan aktivitas lipoksigenase dari ekstrak daun G. hombroniana menggunakan kontrol positif baikalein. Pada penelitian ini dilakukan juga penetapan kadar flavonoida total secara kuantitatif dengan metode kolorimetri AlCl3 pada ekstrak teraktif menggunakan kontrol positif kuersetin.

Hasil uji menunjukkan bahwa ekstrak n-heksana, etil asetat dan metanol daun G. hombroniana Pierre memiliki aktivitas antioksidan dengan nilai EC50 berturut-turut yaitu 36,260; 2,969; dan 7,416 μg/mL dan dapat menghambat aktivitas lipoksigenase dengan nilai IC50 berturut-turut yaitu 2,052; 0,134; dan 1,314 μg/mL. Ekstrak etil asetat daun G. hombroniana Pierre memiliki aktivitas antioksidan dan penghambatan aktivitas lipoksigenase teraktif. Kadar flavonoida total ekstrak etil asetat daun G. hombroniana Pierre sebesar 42,004 mg QE/g sampel. Ekstrak daun Garcinia hombroniana Pierre memiliki aktivitas antioksidan dan dapat menghambat aktivitas lipoksigenase.
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Garcinia hombroniana Pierre leaves extract have been known to contain flavonoid compounds, but it has not been known yet for its antioxidant activity and inhibition of lipoxygenase activity. This study aims to determine antioxidant activity tested by using FRAP (Ferric Reducing Antioxidant Power) method and inhibition of lipoxygenase activity of G. Hombroniana leaves extract using baicalein as the positive control. Total flavonoid assay is also quantitatively done by AlCl3 colorimetric method on the most active extract using quercetin as the positive control.

The test results showed that the n-hexane, ethyl acetate and methanol extract of G. hombroniana Pierre leaves have antioxidant activity which showed by EC50 value consecutively are 36.260; 2.969; dan 7.416 μg/mL, and can inhibit lipoxygenase activity which showed by IC50 value consecutively are 2.052; 0.134; and 1.314 μg/mL. Ethyl acetate extract of G. hombroniana Pierre leaves has the most active antioxidant activity and inhibition of lipoxygenase activity. Total flavonoid content of ethyl acetate extract of G. hombroniana Pierre leaves is 42.004 mg QE/g sample. Garcinia hombroniana Pierre leaves extract has antioxidant activity and can inhibit lipoxygenase activity.