

# Uji aktivitas antioksidan dan penghambatan aktivitas lipoksigenase serta penetapan kadar flavonoida total dari ekstrak kulit batang *Garcinia hombroniana pierre* = Antioxidant activity and lipoxygenase enzyme inhibitory assay with total flavonoids content from *Garcinia hombroniana pierre* stem bark extract

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## Abstrak

*Garcinia hombroniana* Pierre merupakan salah satu spesies dari genus *Garcinia* yang telah diketahui memiliki aktivitas antioksidan dan secara tradisional digunakan sebagai antiinflamasi. Tujuan dari penelitian ini adalah untuk memperoleh data aktivitas antioksidan dan menilai potensi penghambatan aktivitas lipoksigenase teraktif dari ekstrak metanol, etil asetat dan n-heksana kulit batang *G. hombroniana* Pierre serta memperoleh nilai kadar flavonoida total dari ekstrak teraktif. Aktivitas antioksidan diukur menggunakan metode ferric reducing antioxidant power (FRAP), aktivitas antiinflamasi diukur dengan metode penghambatan aktivitas lipoksigenase, analisis kualitatif flavonoida menggunakan kromatografi lapis tipis serta kadar flavonoida total menggunakan metode kolorimetri  $AlCl_3$ .

Hasil uji menunjukkan  $EC_{50}$  aktivitas antioksidan ekstrak metanol, etil asetat dan n-heksana berturut-turut adalah 27,21; 15,34; 110,9 g/mL dan  $IC_{50}$  penghambatan aktivitas lipoksigenase berturut-turut sebanyak 0,95; 0,26; 5,09 g/mL. Ekstrak etil asetat merupakan ekstrak teraktif dengan kadar flavonoida sebesar 7,430 mg QE(quersetin equivalent)/g ekstrak. Hasil dari penelitian ini menunjukkan ekstrak kulit batang *Garcinia hombroniana* Pierre memiliki aktivitas antioksidan dan aktivitas penghambatan lipoksigenase.

.....*Garcinia hombroniana* Pierre is one species of genus *Garcinia* that has been known have antioxidant activity and has been used traditionally as anti-inflammatory. The aim of this study was to obtain data of antioxidant activity and to observe potential inhibition of lipoxygenase activity that most active from methanolic, ethyl acetate, and n-hexane extracts with total flavonoids content from most active extracts from the bark of *Garcinia hombroniana* Pierre. The antioxidant activity was measured using ferric reducing antioxidant power (FRAP), anti-inflammatory assay was measured using inhibition of lipoxygenase activity test, and qualitative analysis of flavonoids using thin layer chromatography, with total flavonoids content was measured using  $AlCl_3$  colorimetric method.

The results showed  $EC_{50}$  of antioxidant activity of methanolic, ethyl acetate, and n-hexane extracts respectively 27,21; 15,34; 110,9 g/mL and  $IC_{50}$  inhibition of lipoxygenase activity respectively 0,95; 0,26; 5,09 g/mL. Ethyl acetate extract was the most active extract with total flavonoids contents was 7,430 mg QE (quersetin equivalent)/g extract. The results of this study showed bark extract *Garcinia hombroniana* Pierre has antioxidant activity and potent to inhibit lipoxygenase activity.