

**AKTIVITAS ANTIOKSIDAN SEDIAAN GEL
MENGANDUNG EKSTRAK ETANOL DAN
FRAKSI ETIL ASETAT DAUN *Aquilaria
microcarpa***

**ANTIOXIDANT ACTIVITY of GEL CONSISTING
ETHANOLIC EXTRACT AND ETHYL ACETATE
FRACTION of *Aquilaria microcarpa* LEAVES**

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Abstract. Herbal medicine in pharmaceutical therapy has widely studied and developed. However, *Aquilaria microcarpa* as one of plants existing in South Kalimantan, has not been studied for its benefit yet. *Aquilaria microcarpa* leaves extract has been proved could lowered mice blood sugar level, probably because of its flavonoid content. Flavonoid were known has antioxidant activity. Extract and fraction were difficult to apply, therefore it is needed to make them to a dosage form. This study was aimed to determine antioxidant activity of gel consisting ethanolic extract and ethyl acetate fraction of *Aquilaria microcarpa* leaves. Antioxidant activity were evaluated for IC₅₀ value using DPPH (2,2-diphenyl-1-picrylhydrazyle) methode. Extract were obtained from ultrasonicated-maceration in ethanol 96% solvent. Extract were processed further in n-hexane and ethyl acetate, where latter fraction were used. Each extract and fraction then made to gel, using HPMC as gel-base (1-2%). Result showed IC₅₀ value for gel extract were 26,39 – 28,94 ppm and for gel fraction were 22,22 – 23,05 ppm. Both has highly active antioxidant activity.

Keywords: *Aquilaria microcarpa* leaves, ethanolic extract, ethyl acetate fraction, antioxidant activity, gel

Abstrak. Penggunaan obat herbal sebagai terapi penyakit semakin banyak diteliti dan dikembangkan. Namun, *Aquilaria microcarpa* sebagai salah satu tanaman yang dapat ditemukan di Kalimantan Selatan, belum banyak digali kemanfaatannya secara ilmiah. Ekstrak daun *Aquilaria microcarpa* telah dibuktikan memiliki kemampuan untuk menurunkan kadar glukosa darah pada mencit, diduga karena kandungan flavonoidnya. Flavonoid diketahui memiliki aktivitas antioksidan. Bentuk ekstrak dan fraksi menyulitkan ketika digunakan, sehingga perlu dibuat menjadi suatu bentuk sediaan. Penelitian ini bertujuan untuk menentukan aktivitas antioksidan sediaan gel ekstrak etanol dan fraksi etil asetat daun *Aquilaria microcarpa*. Uji aktivitas antioksidan dilakukan dengan penentuan IC_{50} menggunakan metode DPPH (2,2-difenil-1-pikril-hidrazil). Ekstrak diperoleh dengan metode maserasi ultrasonikasi menggunakan etanol 96%. Ekstrak difraksinasi dengan *n*-heksan dan etil asetat, dan diambil fraksi etil asetat. Ekstrak dan fraksi masing-masing dibuat menjadi gel, dengan basis HPMC (1-2%). Hasil penelitian menunjukkan sediaan gel ekstrak memiliki IC_{50} 26,39 – 28,94 ppm dan sediaan gel fraksi 22,22 – 23,05 ppm. Keduanya memiliki aktivitas antioksidan sangat aktif.

Kata kunci: daun *Aquilaria microcarpa*, ekstrak etanol, fraksi etil asetat, aktivitas antioksidan, gel