Optimasi metode ekstraksi dengan ionic liquid-microwave assisted extraction dan uji penghambatan lipoksigenase dari daun cincau hijau (cyclea barbata miers) = Optimization of extraction method by ionic liquid-microwave assisted extraction and lipoxygenase inhibitory activity of green grass jelly leaf (cyclea barbata miers)

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Abstrak

ABSTRACT
Daun cincau hijau Cyclea barbata Miers. merupakan tanaman yang berasal dari Indonesia yang dipercaya memiliki khasiat sebagai antiinflamasi. Adapun senyawa pada daun cincau hijau yang dapat berperan sebagai antiinflamasi adalah flavonoid. Proses inflamasi dipengaruhi oleh dua jalur yaitu lipoxygenase LOX dan cylooxygenase COX . Tujuan penelitian ini adalah mengetahui kondisi optimum untuk ekstraksi daun cincau hijau dengan metode ionic liquid-microwave assisted extraction IL-MAE serta mengetahui penghambatannya terhadap aktivitas lipoksigenase. Spektrofotometer UV-Vis digunakan untuk penetapan kadar flavonoid total dan uji penghambatan lipoksigenase. Kondisi optimum yang diperoleh berada pada rasio simplisia banding pelarut 1:40 b/v , waktu ekstraksi 15 menit, dan konsentrasi [Bmim][Br] 2 mol/L dimana diperoleh kadar flavonoid total sebanyak 31,25 mgQE/1 g ekstrak kental dengan penghambatan aktivitas lipoksigenase tertinggi 69,29 . Hasil pengujian menunjukkan bahwa kondisi optimum didapatkan kadar flavonoid total tertinggi dan terdapat hubungan yang signifikan antara peningkatan kadar flavonoid total dengan peningkatan penghambatan aktivitas lipoksigenase.
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ABSTRACT
Green grass jelly leaf Cyclea barbata Miers. is a plant from Indonesia that is believed to have anti inflammatory activity. The compound in the leaves of green grass jelly that can act as an anti inflammatory is flavonoids. There are two pathways in which the inflamatory process can occur, lipoxygenase LOX and cylooxygenase COX . The purpose of this research was to find the optimum condition in green grass jelly extraction using the ioninc liquid microwave assisted extraction IL MAE and to find its inhibition activity of lipoxygenase. Spectrophotometry UV Vis was used to determined the total flavonoid content and its inhibition activity of lipoxygenase. The optimum condition was achieved using the simplicia and solvent ratio of 1 40 w v , with 15 minutes of extraction time, and the concentration of Bmim Br 2 mol L. The total flavonoid content obtained was 31.25 mgQE 1 g of viscous extract and the highest inhibition of lipoxygenase activity was 69.29 . Based from the results can be concluded that the total flavonoid content was the highest at the optimal conditions, and there was a linear corelation between the levels of flavonoids and inhibition activity of lipoxygenase.