ABSTRAK

Judul : Pengaruh Metode Ekstraksi Terhadap Aktivitas Penghambat Alfa-Glukosidase Ekstrak Etanol Serabut Buah Lontar Muda dan Tua (*Borassus flabellifer* L.)

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Program studi : Farmasi

Lontar (*Borassus flabellifer* L.) merupakan tanaman yang banyak dimanfaatkan sebagai makanan pada buahnya dan memiliki aktivitas sebagai antidiabetes. Penelitian ini bertujuan untuk menentukan pengaruh metode ekstraksi terhadap aktivitas penghambatan alfa-glukosidase ekstrak etanol 96% serabut buah Lontar muda dan tua secara in vitro yang diekstraksi menggunakan metode maserasi, sokletasi, MAE dan UAE, dilanjutkan uji kadar abu, kadar air, skrining fitokimia, total fenol, total flavonoid dan uji alfa-glukosidase. Hasil penelitian ini menunjukkan bahwa skrining fitokimia ekstrak Lontar memiliki senyawa flavonoid, triterpenoid, steroid, saponin, tanin, alkaloid. Kadar total fenol total paling tinggi yaitu LM-S 15,101 mgGAE/g, dan LT-S 18,334 mgGAE/g. Kadar total flavonoid total paling tinggi yaitu 1,036 mgQE/g dan 4,993 mgQE/g. Nilai aktivitas % inhibisi alfa-glukosidase tertinggi pada LT-S, LT-M, LT-UAE dan LT-MAE. Ekstrak Lontar tua dari semua metode memiliki aktivitas inhibisi terhadap enzim alfa-glukosidase tetapi nilai tersebut lebih rendah dibandingkan dengan nilai % inhibisi akarbose sebagai kontrol positif dan pada ekstrak Lontar muda tidak memiliki aktivitas inhibisi alfa-glukosidase. Hasil analisis tersebut diperkirakan komponen aktif yang memiliki aktivitas inhibisi alfa-glukosidase adalah senyawa fenolik dan flavonoid yang berasal dari ektrak etanol 96% Lontar tua.

Kata kunci: Lontar Muda Dan Tua, (*Borassus flabellifer* L), Total Fenol, Total Flavonoid, Alfa-Glukosidase

ABSTRACT

Title : Effect Of Extraction Method On Inhibitor Activity Alpha - Glucosidase Ethanol Extract Of Young And Old Palm Fruit Fibers (*Borassus flabellifer* L.)

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Lontar (*Borassus flabellifer* L.) is a plant that is widely used as food for its fruit and has antidiabetic activity. This study aimed to determine the effect of the extraction method on the alpha-glucosidase inhibitory activity of 96% ethanol extract of young and old Lontar fruit fibers in vitro which were extracted using maceration, soxhletation, MAE and UAE methods, followed by tests for ash content, moisture content, phytochemical screening, total phenol, total flavonoid and alpha-glucosidase assay. The results of this study indicate that the phytochemical screening of Lontar extract has flavonoid compounds, triterpenoids, steroids, saponins, tannins, and alkaloids. The highest total phenol content was LM-S 15,101 mgGAE/g, and LT-S 18,334 mgGAE/g. The highest total levels of total flavonoids were 1.036 mgQE/g and 4.993 mgQE/g. The highest % alpha-glucosidase inhibition activity values were in LT-S, LT-M, LT-UAE and LT-MAE. old Lontar extract from all methods had inhibitory activity against alpha-glucosidase enzyme, but this value was lower than the percentage of acarbose inhibition as a positive control and the young Lontar extract did not have alpha-glucosidase inhibitory activity. The results of the analysis are estimated that the active components that have alpha-glucosidase inhibitory activity are phenolic compounds and flavonoids derived from 96% ethanol extract of old palm fruit fibers.

Keywords: Young and Old Lontar, (*Borassus flabellifer* L), Total Phenol, Total Flavonoid, Alpha-Glucosidase