

ABSTRAK

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Judul : Aktivitas Penghambatan Enzim Alfa-Glukosidase Ekstrak Etanol 70% Daun Andong Merah (*Cordyline fruticosa* [L.] A. Cheval)

Andong merah (*Cordyline fruticosa* L.) merupakan salah satu tanaman obat Indonesia. Daun andong merah mengandung senyawa aktif seperti flavonoid dan fenolik yang diketahui memiliki aktivitas antidiabetes. Penelitian ini bertujuan untuk mengetahui aktivitas penghambatan enzim alfa-glukosidase dari ekstrak etanol daun andong merah dan kandungan fenolik total dan flavonoid total. Ekstrak dibuat secara maserasi dalam etanol 70%. Uji penghambatan enzim alfa-glukosidase dengan substrat p-nitrofenil- α -D-glukopiranosida dilakukan secara spektrofotometri UV-Vis pada panjang gelombang 410 nm menggunakan instrumen *microplate reader*. Penetapan kadar fenolik total dilakukan dengan metode *Folin-Ciocalteu* dan penetapan kadar flavonoid total dengan metode *aluminium klorida*. Hasil uji aktivitas penghambatan enzim alfa-glukosidase memperlihatkan bahwa ekstrak etanol 70% daun andong merah memiliki aktivitas penghambatan enzim alfa-glukosidase dengan IC_{50} 19.950,77 μ g/mL. Hasil penetapan kadar fenolik total dan flavonoid total menunjukkan ekstrak etanol 70% daun andong merah mengandung fenolik total sebesar 6,67% GAE dan flavonoid total 0,001% QE.

Kata kunci: Daun andong merah, *Cordyline fruticosa*, alfa-glukosidase, fenolik total, flavonoid total.

ABSTRACT

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Judul : Alpha-Glucosidase Enzyme Inhibitory Activity Of The 70% Ethanol Red Andong Leaves Extract (*Cordyline fruticosa* [L.] A. Cheval)

Red andong (*Cordyline fruticosa* L.) is one of Indonesia medicinal plants. Red andong leaves contain active compounds such as flavonoids and phenolic which have antidiabetic activity. The purpose of this study was to determine α -glucosidase enzyme inhibitory activity of the ethanol red andong leaves and its total phenolic and flavonoid content. The extract was prepared by maceration in 70% ethanol. The α -glucosidase enzyme inhibitory activity test with *p*-nitrophenyl- α -D-glucopyranoside substrate was carried out by UV-Vis Spektrophotometry at a wavelength 410 nm using microplate reader instrument. The total phenolic was determined by Follin-Ciocalteau method and the total flavonoid was determined by aluminium chloride method. The results showed that the 70% ethanol red andong leaves extract had α -glucosidase enzyme inhibitory activity with an IC_{50} 19950.77 μ g/mL. The result of the total phenolic and total flavonoid content determination showed that 70% ethanol red andong leaves extract contained 6.67% GAE and 0.001% QE, respectively.

Keywords: Red andong, *Cordyline fruticosa*, α -glucosidase, total flavonoid, total phenolic