

ABSTRAK

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Pengujian Efektivitas Ekstrak Etanol Daun Kersen (*Muntingia Calabura*) Dan Daun Salam (*Syzygium Polyanthum Wight.*) Terhadap Penghambatan Enzim A – Amylase Secara In Vitro

Daun Kersen (*Muntingia Calabura*) dan daun Salam (*Syzygium Polyanthum Wight.*) merupakan tanaman yang dijadikan sebagai tanaman obat keluarga. Daun Kersen (*Muntingia Calabura*) dan daun Salam (*Syzygium Polyanthum Wight.*) memiliki kandungan flavonoid yang dapat mengobati diabetes melitus dan menghambat enzim α -Amylase. Penelitian ini bertujuan untuk mengetahui efektivitas penghambatan enzim α -Amylase pada ekstrak daun Kersen (*Muntingia Calabura*) dan ekstrak daun Salam (*Syzygium Polyanthum Wight.*). Metode yang dilakukan eksperimental di laboratorium dengan ekstraksi menggunakan metode maserasi, dan untuk uji penghambatan enzim α -Amylase menggunakan reaksi enzimatis dengan pengukuran intensitas warna menggunakan *microplate reader* dengan panjang gelombang 630 nm. Hasil skrining fitokimia dari ekstrak daun salam dan ekstrak daun kersen mengandung positif flavonoid, tanin, saponin, steroid dan alkaloid. Hasil nilai IC_{50} yang diperoleh dari penelitian ekstrak daun salam 24,75 $\mu\text{g/mL}$, IC_{50} ekstrak daun kersen 122,76 $\mu\text{g/mL}$, IC_{50} ekstrak kombinasi S+K 16,36 $\mu\text{g/mL}$ dan nilai IC_{50} acarbose 61,52 $\mu\text{g/mL}$. Hasil data di analisis dengan menggunakan Regresi linear $y = a+bx$. Hasil ini menunjukkan bahwa ekstrak daun salam dan ekstrak kombinasi S+K lebih baik dibandingkan dengan acarbose karena nilai IC_{50} acarbose lebih besar.

Kata Kunci : Antidiabetik, Daun Kersen, Daun Salam, α -Amilase, *microplate reader*

ABSTRACT

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Testing the Effectiveness of Ethanol Extract of Kersen Leaves (*Muntingia Calabura*) and Bay Leaves (*Syzygium Polyanthum* Wight.) Against Inhibiting the Enzyme α -Amylase In Vitro

Kersen leaves (*Muntingia Calabura*) and bay leaves (*Syzygium Polyanthum* Wight.) are plants used as family medicinal plants. Kersen leaves (*Muntingia Calabura*) and bay leaves (*Syzygium Polyanthum* Wight.) contain flavonoids which can treat diabetes mellitus and inhibit the enzyme α -Amylase. This research aims to determine the effectiveness of inhibiting the α -Amylase enzyme in Kersen (*Muntingia Calabura*) leaf extract and Salam (*Syzygium Polyanthum* Wight.) leaf extract. The study aims to determine the effectiveness of inhibiting the α -Amylase enzyme in Kersen (*Muntingia Calabura*) leaf extract and Salam (*Syzygium Polyanthum* Wight.) leaf extract. The method was the experimental design in the laboratory by extraction using the maceration method, and for the α -Amylase enzyme inhibition test using an enzymatic reaction with color intensity measurement using a microplate reader with a wavelength of 630 nm. The results of the phytochemical screening explained that bay leaf extract and cherry leaf extract positively contained flavonoids, tannins, saponins, steroids and alkaloids. Furthermore, The IC₅₀ value obtained from the bay leaf extract research was 24.75 $\mu\text{g/mL}$, the IC₅₀ of cherry leaf extract was 122.76 $\mu\text{g/mL}$, the IC₅₀ of the S+K combination extract was 16.36 $\mu\text{g/mL}$ and the IC₅₀ value of acarbose was 61.52 $\mu\text{g/mL}$. The results of the data analysed using linear regression were $y = a+bx$. It means Bay leaf extract and S+K combination extract was better compared to acarbose because the IC₅₀ value of acarbose is greater.

Keywords: Antidiabetic, Kersen Leaves, Bay Leaves, α -Amylase, microplate reader