

AKTIVITAS ANTIDIABETES EKSTRAK AKA KALESI (*Spatholobus ferrugineus*) SECARA IN VITRO MELALUI INHIBISI ENZIM ALFA GLUKOSIDASE DITINJAU DARI KEDOKTERAN DAN ISLAM

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ABSTRAK

Latar Belakang: Indonesia menempati posisi kelima teratas di antara negara-negara dengan jumlah penderita penyakit diabetes terbanyak di dunia. Aka Kalesi adalah tanaman yang mengandung senyawa metabolit sekunder yang berperan penting dalam pencegahan diabetes. Allah telah menciptakan berbagai jenis tanaman yang dapat bermanfaat bagi manusia. Penelitian ini bertujuan untuk mengetahui kemampuan ekstrak aka kalesi sebagai antidiabetes dari sisi kedokteran dan Islam.

Metode: Penelitian ini menggunakan metode in vitro yang bersifat kuantitatif. Batang aka kalesi dihaluskan dengan peralatan penggiling kemudian diolah menjadi ekstrak. Ekstrak aka kalesi diuji menggunakan metode pengukuran aktivitas daya hambat terhadap enzim alfa glukosidase. Analisis data dilakukan menggunakan penghitungan nilai nilai IC₅₀.

Hasil: Bobot akhir ekstrak aka kalesi yang diperoleh sebanyak 35,2 gram. Dari hasil uji menggunakan metode pengukuran aktivitas daya hambat terhadap enzim alfa-glukosidase dengan menghitung nilai IC₅₀ didapatkan nilai $5,39 \pm 0,08$, sehingga ekstrak tersebut tergolong sangat aktif untuk menghambat enzim alfa-glukosidase. Hal ini dikarenakan aka kalesi memiliki senyawa metabolit sekunder yang dapat dijadikan sebagai zat antidiabetes. Islam memotivasi terhadap perkembangan IPTEK dalam mencari pengobatan jika dalam keadaaan sakit. Sebagaimana sabda Rasullah SAW “Sesungguhnya Allah telah menurunkan penyakit dan obatnya. Maka berobatlah kalian dan janganlah berobat dengan yang haram”

Simpulan: Ekstrak Aka Kalesi mampu menginhibisi enzim alfa glukosidase dan dapat digunakan sebagai zat antidiabetes. Islam mengajarkan agar umat muslim senantiasa menjaga kesehatan dan melakukan pengobatan jika dalam keadaan sakit.

Kata Kunci: Diabetes, Aka Kalesi, *Spatholobus ferrugineus*, alfa-glukosidase enzyme

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**ANTIDIABETIC ACTIVITY OF AKA KALESI (*Spatholobus ferrugineus*)
EXTRACT THROUGH IN VITRO ENZYME INHIBITION OF ALFA
GLUCOSIDASE ANALYZED FROM MEDICINE AND ISLAM**

ABSTRACT

Background: Indonesia ranks 5th among countries with the largest number of diabetics in the world. Aka Kalesi is a plant that contains secondary metabolite compounds that play a lot of important role in the prevention of diabetes and its complications. In Islam, Allah has created various types of plants in this nature that can provide various benefits for humans. This study aims to determine the ability of aka kalesi extract as antidiabetes from the side of medicine and Islam.

Method: This Research is an experimental quantitative study using in vitro method. The aka kalesi (*Spatholobus ferrugineus*) rod is smoothed with grinding equipment and then processed into extract. This extract was tested using a method of measuring the inhibitory activity of the alpha glucosidase enzyme. Data analysis was done using IC50 value calculation.

Result: The final weight of aka kalesi extract was 35.2 grams. From the test results using the method of measuring the activity of inhibitory power to alpha-glucosidase enzyme by calculating the value of IC50 obtained value of 5.39 ± 0.08 , so the extract is classified as very active to inhibit alpha-glucosidase enzyme. It's because aka kalesi has a secondary metabolite compounds that can be used as an antidiabetic substance. Islam motivates the development of science and technology in seeking treatment if in sick condition. As the saying of Rasullah SAW "Allah has sent down both the disease and the cure, and He has appointed a cure for every disease, so seek treatment, but use nothing unlawful"

Conclusion: The extract of Aka Kalesi is capable of showing inhibition of antidiabetic enzymes so it can be used as an antidiabetic agent. Islam teaches Muslims to always keep their health and medication if they are sick.

Keywords: Diabetes, Aka Kalesi, *Spatholobus ferrugineus*, alpha-glucosidase enzyme

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