ABSTRAK

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UJI AKTIVITAS PENGHAMBATAN ASETILKOLINESTERASE PADA *Ficus adenosperma* **Warb.**
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(XIV+55 halaman; 6 tabel; 12 gambar; 12 lampiran)

Penyakit yang disebabkan karena hilangnya fungsi serta struktur sel saraf merupakan definisi dari penyakit Alzheimer. Penderita penyakit Alzheimer pada tahun 2018 mencapai 50 juta orang dan diperkirakan akan meningkat tiga kali lipat pada tahun 2050. Untuk mengobati penyakit ini digunakan obat yang memiliki efek penghambat asetilkolinesterase. Tanaman dengan famili moraceae memiliki potensi menghambat asetilkolinesterase, tanaman *Ficus adenosperma* termasuk kedalam tanaman dengan famili moraceae. Penelitian ini akan menguji total flavonoid dan total fenolik dari ekstrak N-Hexane, Etil asetat, dan Etanol daun *Ficus adenosperma* Warb serta aktivitas penghambat dari asetilkolinesterase yang dilihat dalam persen penghambatan. Ekstraksi dilakukan menggunakan metode refluks bertingkat dengan tiga pelarut yang berbeda kepolaran. Dilanjutkan dengan uji penghambatan asetilkolinesterase menggunakan metode *ellman.* Hasil uji total fenolik paling besar pada ekstrak n-heksan dengan nilai 43,85 mg GAE/g. Pada uji total flavonoid paling besar pada ekstrak etil asetat dengan nilai 114,27 mg QE/g. Dilakukan uji penghambatan enzim asetilkolinesterase dimana hasilnya menunjukan aktivitas penghambatan berada pada ekstrak etil asetat dengan nilai persen inhibisi 35,72% pada konsentrasi 1000 ppm. Metabolit sekunder yang bekerja pada penghambatan enzim asetilkolinesterase yaitu flavonoid dilihat dari nilai korelasinya, terdapat korelasi sangat kuat antara total flavonoid dan aktivitas penghambatan enzim asetilkolinesterase.

Kata Kunci : Alzheimer, *Ficus adenosperma* Warb., Refluks, Total Fenolik, Total Flavonoid, Enzim asetilkolinesterase, metode *ellman.*

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ABSTRACT

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***INHIBITION ACTIVITY TEST OF ACETYLCHOLINESTERASE IN Ficus adenosperma* Warb.**

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(XIV +55 pages; 6 tables; 12 pictures; 12 attachments)

Disease caused by loss of function and structure of nerve cells is the definition of Alzheimer's disease. In 2018, 50 million people suffered from Alzheimer's disease and it is estimated that this will increase threefold by 2050. To treat this disease, drugs are used that have an acetylcholinesterase inhibitory effect. This research will test the total flavonoids and total phenolics from N-Hexane, Ethyl acetate and Ethanol extracts of Ficus adenosperma Warb leaves as well as the inhibitory activity of acetylcholinesterase seen in percent inhibition. Extraction was carried out using a multistage reflux method with three solvents of different polarities. Followed by the acetylcholinesterase inhibition test using the Ellman method. The total phenolic test results were greatest in n-hexane extract with a value of 43.85 mg GAE/g. In the total flavonoid test, the largest was in the ethyl acetate extract with a value of 114.27 mg QE/g. A preliminary test for inhibition of the acetylcholinesterase enzyme was carried out using three solvent extracts, where the results showed that the inhibitory activity was in the extract with ethyl acetate solvent with a percent inhibition value of 35.72% at a concentration of 1000 ppm. Secondary metabolites that work in inhibiting the acetylcholinesterase enzyme are flavonoids. Judging from the correlation value, there is a very strong correlation between total flavonoids and the inhibitory activity of the acetylcholinesterase enzyme.

Keywords: Alzheimer's, Ficus adenosperma Warb, Reflux, Total Phenolics, Total Flavonoids, acetylcholinesterase enzyme, Ellman method.

Reference: 59 (1867-2023)