UJI AKTIVITAS EKSTRAK ETANOL DAN AIR RENDAMAN DAUN DURIAN MONTHONG (*Durio zibethinus* Murr. var. *Monthong*) TERHADAP PERTUMBUHAN *Candida albicans* ATCC 10231 SECARA *IN VITRO*

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ABSTRAK

Infeksi fungi merupakan penyakit yang sering dijumpai pada manusia, baik muda maupun tua. Kandidiasis adalah penyakit infeksi fungi pada manusia dengan persentase terbesar pada saat ini. Kandidiasis disebabkan oleh pertumbuhan fungi *Candida albicans* yang tak terkendali. Daun durian (*Durio zibethinus* Murr.) banyak digunakan sebagai antifungi karena kandungan saponin dan flavonoidnya. Penelitian ini bertujuan untuk mengetahui aktivitas antifungi ekstrak etanol dan air rendaman daun durian, mengetahui konsentrasi hambat minimum (KHM) dan konsentrasi bunuh minimum (KBM).

Ekstraksi daun durian dilakukan dengan metode maserasi menggunakan pelarut etanol 96% dan pembuatan air rendaman daun durian dilakukan dengan perendaman lalu perebusan menggunakan pelarut akuades. Metode pengujian aktivitas antifungi dan KBM adalah metode Kirby-Bauer. Aktivitas antifungi ditandai dengan zona bening di sekitar sumuran (daya hambat). Metode pengujian KHM dengan dilusi padat. Perlakuan meliputi konsentrasi ekstrak yakni 40%, 80%, dan 90% dan konsentrasi air redaman 100% dengan lima kali pengulangan. Analisis data menggunakan uji non-parametrik Kruskall- Wallis.

Hasil menunjukkan bahwa ekstrak etanol daun durian mempunyai aktivitas antifungi pada setiap perlakuan konsentrasi yang diberikan. Semakin tinggi konsentrasi ekstrak maka semakin kuat daya hambatnya. Air rendaman daun durian memiliki aktivitas antifungi yang rendah dan belum mampu menghambat pertumbuhan *C. albicans*. Rata-rata zona hambat ekstrak etanol 40%, 80%, dan 90% berturut-turut adalah 1,63 mm; 2,52 mm; dan 12,13 mm. KHM ekstrak adalah 38% dan KBM ekstrak adalah 39%. Dengan demikian, ekstrak etanol daun durian termasuk fungisidal.

Kata kunci : antifungi, *Candida albicans*, daun durian Monthong (*Durio zibethinus* Murr. var. *Monthong*)

THE ACTIVITY TEST OF DURIO LEAVES VARIETIES MONTHONG (Durio zibethinus **Murr. var.** *Monthong) ETHANOL EXTRACT AND WATER IMMERSION TOWARD THE GROWTH OF Candida albicans ATCC 10231 IN-VITRO*

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ABSTRACT

Fungus infection is the most common infection in humans both old and young. Candidiasis is a fungus infection with the largest percentage that infect human at this time. Candidiasis is caused by the uncontrolled growth ot the Candida albicans fungus. Durio leaves are widely used as a antifungal because of its saponin and flavonoid. This research aims to know the activity of ethanol extract and water immersion from Durio leaves, to know minimum inhibitory concentration (MIC), also minimum fungisidal concentration (MFC).

The durio leaves extraction used cold maseration method with 96% ethanol solvent and the durio leaves water immersion used usual soaking and then boiling method with aquades solvent . The metodology that was used to test antifungal activity and MFC was Kirby-Bauer method. Antifungal activity was characterized by the presence of clear zone arround wells which were called inhibitory zone. Method to test a minimum inhibitory concentration were solid dilution. Ethanol extract concentration that were used were 40%, 80%, and 90%. While durio leaves water immersion concentration was 100%. Each treatment was repeated five times. Data analysis used non-parametrik test, Kruskall-Wallis.

Result showed that ethanol extract of durio leaves has antifungal activity and there is a real difference in each treatment given concentration. The higher concentration of the ethanol extract the stronger inhibitory zone too. Meanwhile, the Durio leaves water immersion has antifungal activity, but too low to inhibit the C. albicans. The average of the inhibition zone 40%, 80%, and 90% of ethanol extract is 1.63mm, 2.52 mm, and 12.13mm consecutively. MIC concentration was 38% and MFC concentration start from 39%. Ethanol extractof durio leaves belongs to fungicidal group .

Keywords : antifungal, Candida albicans, Monthong leaves(Durio zibethinus Murr. var. *Monthong*)