EFEKTIVITAS DAYA HAMBAT EKSTRAK ETANOL DAGING BUAH PALA (*Myristica fragrans*) TERHADAP PERTUMBUHAN *Candida albicans* SECARA *IN VITRO*

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Abstrak

Candida albicans merupakan etiologi kandidiasis yang paling umum. Kandidiasis dapat menginfeksi lapisan superfisial dan sistemik. Kandidiasis diderita 90% pasien infeksi HIV/AIDS. Penggunaan flukonazol secara luas dalam terapi kuratif maupun preventif, dilaporkan menyebabkan adanya peningkatan insidensi resistensi terhadap *C. albicans.* Daging buah pala (*Myristica fragrans*) merupakan bagian tanaman yang kurang dimanfaatkan dibanding biji dan salut biji. Buah pala mengandung senyawa aktif alkaloid, saponin, tanin, flavonoid, dan tepernoid. Senyawa terpenoid dinilai paling berperan dalam daya hambat ekstrak, karena mekanisme antifunginya mampu menghambat pectin methylesterase dinding sel, mengubah struktur asam lemak membran, dan menghambat siklus sel fungi. Penelitian ini bertujuan untuk mengetahui adanya daya hambat ekstrak daging buah pala terhadap pertumbuhan *C. albicans*. Jenis penelitian ini adalah studi eksperimen menggunakan desain *post test only control group,* dengan kelompok uji ekstrak konsentrasi 5%, 10%, 25%, 50%, 75%, dan 100%. Metode uji menggunakan difusi sumuran pada media *Saboraud Dextrose Agar* yang diinkubasi selama 24, 48, dan 72 jam. Data dianalisis menggunakan uji *One-Way ANOVA* atau *Kruskal-Wallis* dengan nilai p=0,00 pada setiap waktu inkubasi, artinya ada perbedaan bermakna ekstrak daging buah pala dalam menghambat *C.albicans*. Terjadi peningkatan zona hambat pada konsentrasi 50%, 75%, dan 100%, sedangkan pada konsentrasi 5%, 10%, dan 25% terjadi penurunan. Ekstrak konsentrasi 50% paling efektif, karena daya hambatnya tidak berbeda signifikan dengan konsentrasi 75% pada 24 dan 48 jam inkubasi dan termasuk dalam kategori respon inhibisi kuat.

Kata kunci : Antifungi, *Candida albicans,* Daging buah pala, Zona hambat

INHIBITION EFFECTIVITY OF NUTMEG FLESH ETHANOL EXTRACT (*Myristica fragrans*) ON THE IN VITRO GROWTH OF *Candida albicans*

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Abstract

Candida albicans is the most common etiology of candidiasis. Candidiasis can infect both the superficial and systemic. Candidiasis affects 90% of patients infected with HIV/AIDS. The widespread use of fluconazole in curative and preventive therapy has been reported to cause an increased incidence of resistance to *C. albicans*. Nutmeg flesh (*Myristica fragrans*) is an underused part of the plant compared to seeds and mace. Nutmeg contains active compounds of alkaloids, saponins, tannins, flavonoids, and terpenoids. Terpenoid considered affect the most in the extract inhibition capability, because their antifungal mechanism can inhibit cell wall pectin methylesterase, alter fatty acid membrane structure, and inhibit fungal cell cycle. The aimed of this research is to determine the inhibition ability of nutmeg flesh extract on the growth of *C. albicans*. This research is an experimental study using a post test only control group design, using concentrations extract 5%, 10%, 25%, 50%, 75%, and 100%. The test using well diffusion method on Saboraud Dextrose Agar which was incubated for 24, 48, and 72 hours The data analyzed using One-Way ANOVA or Kruskal-Wallis test with p value=0.00 on each incubation time, which shows significant difference outcome between nutmeg flesh extract and inhibitory zone of *C. albicans*. The inhibition zone at concentration 50,%, 75%, and 100% are increasing, while the inhibition zone at concentration 5%, 10%, and 25% are decreasing. The extract concentration 50% is the most effective because there is no significant difference of the inhibitory zone from concentration 75% in 24 and 48 hour incubation time and it belongs to strong inhibition response category.

Keywords : Antifungal, *Candida albicans,* Nutmeg flesh, Inhibitory zone