

DAYA ANTIMIKROBA METABOLIT BIOAKTIF JAMUR SHIITAKE (*Lentinula edodes* (Berk.) Pegler) YANG DIKULTUR PADA TIGA JENIS MEDIUM FERMENTASI

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Abstract	<p>Shiitake mushroom (<i>Lentinula edodes</i> (Berk.) Pegler) is one of the fungi that has potentially been used as food and medicinal mushroom. Cultivation in liquid medium by the fermentation process has been developed over recent years. Four isolates of <i>L.edodes</i> (isolates from Malang, Cianjur, Lembang and Yogyakarta) cultured on three types of fermentation media (KM: Medium Kauffman; GYMT: Glucose, Yeast Extract, Malt Extract, Thiamin; YEMR: Yeast extract, Malt Extract, Rice bran). Bioactive metabolites extracted from mycelium biomass and fermentation culture filtrates were tested using pathogenic microbial <i>Staphylococcus aureus</i> ATCC 25923, <i>Escherichia coli</i> ATCC 35218, <i>Candida albicans</i> ATCC 10231, and <i>Trichophyton mentagrophytes</i>. Inhibition zone diameter data were analyzed using analysis of variance followed by Duncan test at 5% error rate. The results showed that bioactive compounds in the culture filtrates and mycelium biomass of <i>L. edodes</i> extracted using chloroform, ethyl acetate and water, were able to inhibit <i>S. aureus</i>, <i>E. coli</i> and <i>C. albicans</i>, but were not able to inhibit <i>T.mentagrophytes</i>. Isolates of <i>L.edodes</i> from Lembang and Yogyakarta cultured on Kauffman Medium gave the best results with inhibitory zones of 24.97 to 31.14 mm. Microbes which gave the most sensitive of bioactive compounds test from <i>L. edodes</i> were <i>C. albicans</i> followed by <i>E. coli</i>, <i>S. aureus</i> and <i>T. mentagrophytes</i>. Bioactive metabolites from <i>L. edodes</i> inhibited potentially pathogenic microbes from the group of bacteria and yeasts but did not inhibit the fungus.</p>
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