

Optimasi Konsentrasi Glukosa dan Waktu Inkubasi Terhadap Bobot β -Glukan Jamur Schizophyllum commune

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Author Order	3 of 3
Accreditation	4
Abstract	<p>Schizophyllum commune is a fungus that grows wild in nature which contains β-glucan which has the potential to develop drugs for several diseases and human health. The main purpose of this study was to determine the effect glucose concentration and incubation time on the growth of fungus S. commune and its β-glucan production. The research was conducted by experimental method of completely randomized factorial design (CRD factorial) with two factors carried out in three repetitions. The treatments provided included variations in glucose concentration (G) with three variations, namely 10 g/L (G1), 20 g/L (G2), and 30 g/L (G3), and variations in three different incubation times (W), such as 20 days (I1), incubation time of 25 days (I2), and incubation time of 30 days (I3). Variables which used in this research independent and dependent variables. The independent variables were glucose concentration and incubation time, while the dependent variables were fungal mycelium growth and β-glucan production. The main parameter observed was β-glucan weight. The supporting parameters were dry biomass weight and the final pH medium. Data analysis was performed by Analysis of Variance (ANOVA) at 95% accuracy levels, followed by Duncan's test (Duncan Multiple Range Test). The results showed that glucose concentration and incubation time were significantly affected to the growth and production of β-glucan fungus S. commune. Glucose concentration of 30 g/L and incubation time of 25 days was the optimum condition for the growth of S. commune and its β-glucan production with an average dry weight of betaglucan is 0.363 g/L</p>
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