

Pengaruh variasi konsentrasi glukosa teknis terhadap kemampuan aspergillus flavus UICC 360 dalam menghasilkan lovastatin = The effect of concentration variation of glucose technical grade on the ability of aspergillus flavus UICC 360 to produce

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Abstrak

Aspergillus flavus UICC 360 has been reported to produce lovastatin. This research was carried out to determine the effect of concentration variation of glucose technical grade on the ability of *A. flavus* UICC 360 to produce lovastatin. The fermentation process was carried out using inoculum 2% (v/v) modified Czapek's Dox Broth (CDB). Variation of glucose technical grade concentration used were 0 g/L, 5 g/L, 10 g/L, 15 g/L, 20 g/L, 25 g/L, 30 g/L and 35 g/L. Fermentation was carried out for 6 days at room temperature (27--30°C) with agitation speed of 90 rpm. Extraction of lovastatin was done with ethyl acetate solvent. The extract was assayed by disk diffusion method against *Candida albicans* UICC Y-29.

The results revealed that the fermentation extract on glucose technical grade at 15 g/L showed the highest inhibition index of 0.77 ± 0.09 . Analysis using Least Significant Difference (LSD) ($P < 0.05$) showed there was significant difference on the ability of *A. flavus* UICC 360 to produce lovastatin at different glucose technical grade concentration. High Performance of Liquid Chromatography (HPLC) showed that concentration of 15 g/L glucose technical grade had the same retention time with standard lovastatin at 4.52 minutes and 54.2 mg/L concentration.