

# 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  $0.77 \pm 0.09$ . 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.