

Evaluation the best condition of Fibrinolytic Protease Production using factorial design by *Streptomyces* sp DPUA 1573

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Fibrinolytic enzymes have the ability to degrade fibrin clots formed for avoiding intravascular thrombosis. In the pharmaceutical industry there is a search for new fibrinolytic agent that reduces the production cost and increasing productivity. The use of microorganism for enzyme production, such as the genus *Streptomyces* has been reported. *Streptomyces* is a Gram-positive bacteria, responsible for producing many bioactive compounds and extracellular enzymes of pharmaceutical interest. This study aimed to evaluated the production of fibrinolytic protease by *Streptomyces* sp DPUA 1573. Microbial cells were cultivated in the ISP2 for 48 hours, after this period the strains were inoculated in MS2 (soybean medium) that according with factorial design 2⁴ (concentrations of soybean 0.5; 1.0 and 1.5%, glucose 0; 0.5 and 1.0% and different speeds 150 rpm; 200 rpm and 250 rpm and temperature 28C; 30C and 32C). The factorial design was analyzed by variance analysis (anova) and the glucose concentration showed a positive and significative effect. The results showed that the variable interaction had significant effect. that the best condition was composed 1.5% soybean, 1% glucose, 28 °C and 150 speed in 48 hours, with production fibrinolytic 1391.66 U/mL. These values were higher than those reported in the literature. However these results show the biggest potencial in production fibrinolytic enzyme by *Streptomyces*.

Keys-Word: *Streptomyces*, fibrinolytic enzyme, intravascular thrombosis.
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