CONCENTRATION AND IMMOBILIZATION OF MICROBIAL LIPASE PRODUCED BY Sporidiobolus pararoseus USING SOYBEAN MEAL AS A SUBSTRATE.

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Lipases can be of animal, microbial or plant. The main biological function of lipase (triacylglycerol hydrolase acyl, EC3.1.1.3) is to catalyze the hydrolysis of long chain triglycerides. Unlike many other enzymes, lipases show significant levels of activity and stability in non-aqueous, which facilitates the catalysis of many reactions such as esterification. The objective of this study was to evaluate the concentration and immobilization of lipases produced by Sporidiobolus pararoseus, using soybean meal (SBM) as a substrate in solid state fermentation (SSF). After optimization of the production of lipase activity in terms of esterification (60% humidity and temperature of 30 °C) extracts were concentrated and immobilized enzyme. The concentration by the addition of salts like ammonium sulfate used in this work is based on ionic strength, such that the protein molecules to aggregate and precipitate. The study of the process of concentration (precipitate) was carried out according to plan including different percentages of saturation with ammonium sulfate (32, 40, 60, 80 and 88% and crude extract). The enzyme extract showed greater activity with 60% saturation (295.67 U/g). The technique of immobilization is used to provide stability to the enzyme and to facilitate its recovery and reuse. The crude and precipitated with 60% saturation, have also been immobilized in sodium alginate and activated charcoal. When immobilized, these extracts showed activities of 183.91 U/g and 203.03 U/g, respectively.