

Chitinases, enzymes produced by diverse organisms like bacteria, fungi, insects, plants, and humans, play a crucial role in degrading the biopolymer chitin. They have wide-ranging applications, including isolating protoplasts from fungi, controlling pathogenic fungi, treating chitinous waste, and managing disease transmission by insects due to their chitin-degrading ability. This study focused on determining optimal conditions for chitinase production using the fungus *Beauveria bassiana*, acknowledging the enzyme's significant importance. The strain employed was *B. bassiana* 487 from Embrapa, registered in the ARSEF database. Three media (Hill, Adams, and Medium 2) were assessed with or without shrimp exoskeletons as an inducer over a 10-day period. Initial fermentation conditions included a pH of 5.5, a temperature of 28 °C, stirring at 120 rpm, and an inoculum size of 107 cells/mL. Production and enzymatic activity were evaluated, monitored for 7 days, with the tenth day dedicated to identifying optimal production conditions. Medium 2 demonstrated superior production when supplemented with the inducer, reaching its peak on the seventh day. Post-medium selection, the chitinase enzymatic activity in Medium 2 with the inducer was assessed. Until the eighth day, *B. bassiana* 487 showed low enzyme production, with an enzymatic activity of 6.08 nmol/mL.min. A significant increase occurred on the ninth day, reaching 348.94 nmol/mL.min. High activity persisted on the tenth and eleventh days, with values of 302.45 and 264.59 nmol/mL.min, respectively. In conclusion, for enhanced chitinase production by *B. bassiana* 487, Medium 2 during a 10-day fermentation period under suitable conditions is recommended.