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Abstract

Evaluation of *Beauveria bassiana* Hydrolytic Enzymes Produced in FSS on *Cyclocephala lunulata* Burm. (Coleoptera: Melolonthidae)

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Abstract: The enzymes produced by entomopathogenic fungi are potential agents for the biocontrol of pests because of their toxicity. The FSS allows the production of enzymes and it consisted of a minimum media and shrimp shell, $1x10^7$ /ml of spores from *Beauveria bassiana* was inoculated. The obtaining of conidium and enzyme extract of 15 and 5 days, were determined by the enzyme activity of: lipases, proteases, endo and exo chitinases. The larva of *Cyclocephala lunulata* were injected with 10µl of each treatment, under control conditions (25±2 °C; 50% RH). In the extract of 5 days, the activity of lipases, proteases (Pr1) and (Pr2), endo and exo chitinases were observed; responsible for the degradation of the cuticle. The activity as insecticide of the enzymes was demonstrated with a mean difference of ($P<0.05$); the mortality was 100% in: treatment B, C and D; for E was 60% and for F was 90%; the control one was with not deaths. The time of death : with mean difference ($P<0.05$); B and C 1.2 days, F 1.7 days, D and E 2.8 and 8.8 days. The activity of the enzyme extract alone as insecticide was demonstrated and also with conidium of *C. lunulata.*

Keywords: *B. bassiana, solid fermentation, enzymes, insecticide*

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