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Comparative Toxicological Studies of RB-a (Neem Extract) and Coopex (Permethrin+Bioallethrin) Against Sitophilus oryzae With Reference to Their Effects on Oxygen Consumption and Got, Gpt Activity

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Abstract: The toxicity of a neem extract RB-a in comparison with a pyrethroid, Coopex, was studied along with their effects on GPT and GOT activities and oxygen consumption in S. oryzae. The LD 50 value of Coopex was found to be 6.128 μg/cm 2 whereas RB-a was found not to be an acute contact poison. Even at a dose of 1257 μg/cm 2 it could cause 34% mortality of S. oryzae. The oxygen consumption under the effects of Coopex was found to decline less i.e. at 6.12 μg/cm 2 from 0.0005191 to 0.0006589, as compared to RB-a where the rate of respiration declined more i.e. at 1257 μg/cm 2 from 0.0005191 to 0.0002076. Coopex brought about an inhibition of 62.77% in GPt activity and caused almost no inhibition of GOT activity in insects treated with its LD 50 . In th case of neem extract it was noted that GPT was inhibited by about 57.47% and almost no effect on GOT was observed at a dose of 1257 μg/cm 2 .

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