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Determination of the Toxicities of Fenpropathrin (Pyrethroid) and Neem Formulation (RB-a+PBO+Tx-100) Against Alphitobius diaperinus Adults and Their Effects on Transaminases

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Abstract: This report describes the determination of the toxicity of two pesticides, neem formulation (RB-a+PBO+Tx-100) and fenpropathrin, on *Alphitobius diaperinus* adults. The mortalities caused by the two compounds were found to be 70% for a 117.8 $\mu\text{g}/\text{cm}^2$ dose of neem formulation, and 88% for a 1.96 $\mu\text{g}/\text{cm}^2$ dose of synthetic pyrethroid, fenpropathrin (Danitol). The LD 50 value of Danitol was found to be 0.2749 $\mu\text{g}/\text{cm}^2$, and that of neem formulation was found to be 58.92 $\mu\text{g}/\text{cm}^2$. Danitol-treated *Alphitobius diaperinus* adults showed inhibitions of 44.66% and 45.91% in GPT and GOT activity, respectively, Whereas insects treated with neem formulation showed inhibitions of 52.48% and 12.15% in GPT and GOT activity, respectively.

Key Words: Toxicity, Pyrethroid, *Azadirachta indica*, Transaminases, *Alphitobius*.

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