

# The Feasibility of Pyrethrins Extract from *Chrysanthemum morifolium* Using Different Liquids as Insecticide for *Reticulitermes flavipes* (wood termites)

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## Abstract

*Termites are dangerous pests that have been eating away and destroying our woodwork for decades. While many underestimate the severity of damages caused by them, houses infested with termites have gone through severe economic drawbacks because of it. To combat this dilemma, people have created and mass-produced insecticides such as Propoxur (Baygon). While this propoxur may prove effective against termites, this also comes at the cost of endangering the surrounding environment. Exposure to this propoxur may lead to multiple severe health complications such as carbamate poisoning, decreased cholesterol levels and even death. A viable solution to both address the problems of termites and the dangers of propoxur is by implementing natural pyrethrin extract into insecticides. Commonly found in chrysanthemum flowers, pyrethrin is a natural chemical that is effective in exterminating insects such as termites. This study sought to investigate the efficiency of two extraction methods, water and alcohol, and determine which is more efficient in terminating the termites. The measured time to kill the termites using the alcohol extraction method obtained a mean value of 2.00 minutes, as compared to the water extraction method which obtained a mean value of 5.03 minutes. This means that the alcohol extraction method is 3.03 minutes faster - a 60% increase in time efficiency.*

*Keywords: Termites, propoxur, pyrethrin*