



**EFFECT OF LEAF EXTRACT OF INDIAN RUBBER TREE (*Ficus elastica*
Roxb.) ON TERMITES (*Microcerotermes crassus*)**

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ABSTRACT

The study dealt mainly on the insecticidal effect of *Ficus elastica Roxb.* (Inidan Rubber Tree) leaf extract on *Microcerotermes crassus* (termites) by determining its mortality rate at different concentrations and by identifying which is the most effective against termites. The study was conducted at De La Salle University – Dasmariñas. The leaves of *Ficus elastica* were dried, crushed and soaked in ethanol and were homogenized and filtered using a cheesecloth. The filtered solution was placed in a rotary vaporator to obtain crude *Ficus elastica Roxb.* leaf extract. Range Finding Test was done to determine the lethal dosage of the leaf extract and to formulate the sub – lethal concentrations to be used. A positive control group which is the commonly used commercial pesticide (Baygon™) was used as a comparison. Application of the treatment was done through dermal spraying. The LD₅₀ was 75% and the sub-lethal concentrations used were 25% and 50%. Ten termites were used in each treatment. Each petri dish received 2 sprays and was observed after every 3 minutes. Trial was replicated thrice to achieve consistent results. The statistical tools used were One – Way Analysis of Variance (ANOVA) and Tukey Test. Gathering and analyzing the data, the leaf extract of *Ficus elastica Roxb.* exhibited an insecticidal property against termites. The T3 (75% concentration) yielded the highest mortality rates followed by T2 (50% concentration) and T1 (25% concentration). The T3 concentration showed significant difference against T1, but not with T2 as well as T2 with T1. The positive control group showed significant difference with all the other treatments since its efficiency as an insecticide had been proven already. It was concluded that the level of concentration was directly proportional to the mortality rate of termites. This study proved that *Ficus elastica Roxb.* also possesses insecticidal property. This is due to its content such as caoutouhouc, albuminoids and ortho-dihydroxy phenols which were mainly used in the production of rubber which and irritated the skin and eyes of the termites that caused their death. This study recommends a more thorough study on the histopathological examination of the affected system on termites upon application of the treatment. It is also suggested to use other parts of the plant such as stems, roots and its latex on other test species and some common pests.



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