

ABSTRACT

This study is about the effects of orange and pomelo oil against termites. *Macrotermes malaccensis* was used as a test organism because they are one of the most common pests. Orange and pomelo oil have a main component, d-limonene, that exhibits negative effects against all pests. The extraction of orange and pomelo oil was done using cold pressing. The vacuum filtration and rotary evaporator were also used to separate the solid particles from the mixture and to separate the hexane from the oil. The Range Finding test was used to determine the different concentrations of orange and pomelo oil. The different concentrations are as follows: T1=50% orange oil, T2=50% pomelo oil, T3=70% orange oil and T4=70% pomelo oil. T0 served as the positive control group which is the commercially available termicide. Application of orange and pomelo oil was done after collection of the termites. The basis for the mortality rates of termites is its inability to move when gently poked with a stick. Mortality rate was the basis for statistical analysis.

Results show that all concentrations of orange and pomelo oil had a termicidal effect against the termites. Pomelo oil yielded a higher mortality rate than orange oil because of its higher d-limonene content. The 70% pomelo oil was as effective as the commercially available termicide; thus, it can be used as an alternative botanical termicide. Recommendations for similar studies are the use of other test organisms and the use of other citrus fruits.