

The Application of Mahoni, Lansium Domesticum and



ChemTech

International Journal of ChemTech Research

CODEN(USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555

Vol.10 No.4, pp513-521,2017

Lasium Parasiticum Leaf from Gorontalo as Natural Pest Insecticide on Soybean Plant

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Abstract: Vegetable insecticide testing is an important step that needs to be done in finding new plant-based insecticides as a means of monitoring the bioactivity of the test material in the process of isolation of the active compound. This study aims to apply the results of the previous studies that is to apply the isolates of the three species of plants from Gorontalo that contain secondary metabolites which are alleged to have bioactivity as a natural insecticide, i.e. Mahogany (*Swieteniamahagoni* Jacq).

Langsat (*Lansium domesticum* Corr) and Duku (*Lansium domesticum* Corr.). This research uses contact method that is the feeds are dipped in a solution formulation. The tests are conducted to determine the inhibitory of eating activity (*antifeedant*) of insects *Spodopteralitura* and *Epilachnavarivestis* which are the major pest of soybean plants.

The isolate test results of mahogany leaves for the three fractions: methanol, ethyl acetate and n-hexane, show that the higher value of the eating activity inhibition, the higher isolates concentration will be also and the fractions that give highest inhibition is the ethyl acetate fraction of 71% followed by the methanol fraction which reaches 65% and the lowest fraction is n-hexane of 62%.

At the langsat leaf isolate testing, the test result data for the three fractions methanol, ethyl acetate and n-hexane show that the higher inhibition of eating activity, the higher the concentration of isolates will be, and the fraction that gives the highest inhibition value is the ethyl acetate fraction of 71% followed by the methanol fraction of 65% and the lowest fraction is n-hexane of 62%.

The duku leaf isolate testing result for the three fractions methanol, ethyl acetate and n-hexane show that the inhibition of eating activity as occurred in two previous isolates that is the higher inhibition value, the higher the isolate concentration will be, where the fraction that gives the highest inhibition value is ethyl acetate fraction of 70% followed by the n-hexane fraction of 67% and the lowest is methanol fraction of 62%. In general, among the isolates of three leaves (mahogany, langsat and duku) which are applied to the larvae *Spodopteralitura*, the one which gives the highest eating activity inhibitory is on mahogany leaf isolate at the ethyl acetate fraction followed by methanol fraction, particularly the application results at *Spodopteralitura* larvae.

Keywords: Applications, Isolate, Antifeedant, Natural Insecticide.

Opir Rumape *et al*/International Journal of ChemTech Research, 2017,10(4): 513-521.
