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**PROBIT ANALYSIS OF THE MORTALITY AND TOXICITY RATES
OF METHYLENE CHLORIDE EXTRACTION**

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ANTHONY CARL BANTILAN TIMBOL
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ABSTRACT

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The study is about the probit analysis of the dichloromethane leaf and bark extracts of the plant named Lumbang (*Aleurites moluccana* Linn.). It aimed to determine the information that can be inferred from the secondary type of data. Specifically, the study sought to: (1) determine the mortality and toxicity rates of the dichloromethane leaf and bark extracts; (2) analyze the mortality rates due to toxicity of the dichloromethane bark extract; and (3) analyze the mortality rates due to toxicity of the dichloromethane leaf extract.

The statistical test was used in the given and computed data, results show that the average mortality rate for the leaf extract ($\mu = 0.5744 \mu\text{g/mL}$) was higher than the computed average mortality rate of the bark extract ($\mu = 0.4005 \mu\text{g/mL}$ according to the descriptives). However, the dichloromethane bark data was more dispersed as compared to the dichloromethane leaf extract based on results of the standard deviation and coefficient of variation.

The probit analysis test produced significant results. For the dichloromethane bark extracts, the p-value (Sig.) was found to have a value of 0.000 which is lower than 0.05 level of significance. Thus, the dichloromethane bark extract is found to be toxic. On the other hand, the probit analysis of the dichloromethane leaf extract also turned out to have significant results, as the same p-value was computed (p-value was also at 0.000) which

is lower than the 0.05 level of significance. Probit regression models and equations for finding the probability of death for each dosage was found. In general, both the extracts were found to be toxic since the covariate (dosage) used has a significant effect on the mortality rates of the data in which the extracts were applied.