

**UNIVERSITI TEKNOLOGY MARA**

**A PRELIMINARY STUDY OF AQUEOUS  
EXTRACT FROM *Mikania micrantha* LEAVES  
ON BLOOD COAGULATION ACTIVITY**

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Project submitted in fulfilment of the requirements for the degree of  
**Bachelor of Medical Laboratory Technology (Hons.)**

**Faculty of Health Sciences**

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## DECLARATION

Project entitled “A Preliminary Study of Aqueous Extract From *Mikania micrantha* leaves on Blood Coagulation Activity” is a presentation of my original research work. Whenever contributions of others are involved, every effort is made to indicate this clearly, with due reference to literature, and acknowledgment of collaborative research and discussions. The project was done under the guidance of Project Supervisor, Dr. Emida Binti Mohamed. It has been submitted to the Faculty of Health Sciences in partial fulfilment of the requirement for the Degree of Bachelor in Medical Laboratory Technology (Hons).

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## ABSTRACT

*Mikania micrantha* also known as 'Selaput tunggul', is widely known with their invasiveness habit that can caused damage to natural ecosystem. Despite of the invasiveness habits, *M. micrantha* have been used as the first aid to stop bleeding by crushing together the leaves to get the juice. Limitation of previous study on this plant against coagulation even though was proven traditionally, have led to the research. Thus, this current study was conducted to evaluate the potential of *Mikania micrantha* leaves as a procoagulant agent via decoction method. The different percentages of extract were prepared at 100%, 50%, 25%, 12.5% and 0% (control) using saline. Then, procaguant activity was evaluated by prothrombin time (PT) and activated partial thromboplastin time (aPTT) using commercial control plasma. The statistical analysis was done by using One-Way ANOVA and post-hoc Dunnett's test. The results of the study showed a trend in which the coagulation time decreased as the concentrations of aqueous extract increase from 0% (control) to 100%. Highly significant effect was observed for aPTT test (0.000  $p > 0.05$ ). Meanwhile, only extract at the percentages of 100 showed significant effect on PT test (6.33 seconds,  $p > 0.001$ ). This findings revealed that *Mikania micrantha* leaves aqueous extract possess significant procoagulant activities in vitro when at the percentages of 100. Therefore, further studies on the presence of phytochemical or bioactive compound in *M. micrantha* leaves is required, to find the important bioactive compound that promote procoagulation.

Keywords: *Mikania micrantha*, Procoagulant, Aquoues extract, Decoction Method, Prothrombin time, Activated Partial Thromboplastin Time