EFFECT OF AMMONIUM HYDROXIDE AND *Carica papaya* LEAVES EXTRACT ON TENDERNESS OF BUFFALO MEAT

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This Final Year Project entitled "**Effect of Ammonium Hydroxide and *Carica papaya* leaves extract on tenderness of buffalo meat"** was submitted by Nur Qhaireen Izzati binti Noor Haslin , in partial fulfilment of the requirements for the Degree of Bachelor of Science (Hons.) Biology , in the Faculty of Applied Science , and was approved by

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ABSTRACT

EFFECT OF AMMONIUM HYDROXIDE AND *Carica papaya* LEAVES EXTRACT ON TENDERNESS OF BUFFALO MEAT

Research comparing between natural and chemical tenderizer consider scarce which most are focussed on either natural or chemical tenderizer only. This study is about to determine the best tenderizing agent between the natural and chemical towards buffalo meat. The *Carica papaya* leaves extract and ammonium hydroxide were choosing based on the previous study where both of them give the best tenderizing effect. Extraction of *Carica papaya* leaves and dilution of 0.5% (v/v) NH_4OH is used for the treatment of the buffalo meat using 100mL of each solution for 48 hours at 2-5°C. The samples were further analysed either in raw or boiled condition using Texture Profile Analysis with 5 observed parameters. In all condition, papaya leaves extract perform as the best tenderizing agent for the hardness and chewiness parameter as proved by statistical analysis which showed a significant different with the p value 0.010 and 0.020 respectively. Papain activity was able to treat meat with high tenderness. Resilience parameter for both condition shows an increasing value from the control. For springiness and cohesiveness parameter, ammonium hydroxide recorded higher value. For the comparison between raw and boiled conditioned , in does not give a huge effect towards the meat. So, further research can be made by using either condition without affect the results. In conclusion, papaya leaves extract can perform well as tenderizing agent compared to ammonium hydroxide as observed through different parameter analysis.