UNIVERSITI TEKNOLOGI MARA
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TITLE:

PROXIMATE COMPOSITION ANALYSIS ON FOOD PRODUCTS USING OSMOTIC SHOCK TOWARDS BETEL LEAF AND MUNG BEAN

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AUTHORS DECLARATION

I declare that the work in this final year project report was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work. This final year project report has not been submitted to any other academic institution or non-academic institution for any qualification.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations for Undergraduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

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ABSTRACT

Proximate composition is essential in determining the nutritional content of food products. This study evaluates the proximate composition of betel leaf and mung bean, including moisture, ash, crude protein, crude fibre, lipids, nitrogen, and carbohydrate content. Standard analytical methods were employed, such as oven drying for moisture content, a muffle furnace for ash determination and crude fibre quantification. Calorimetric measurements were also studied for protein, carbohydrate and fat. The results indicate that mung beans possess a greater ash level of 81.44% and crude fibre content of 7.60%, in contrast to betel leaves, which have 65.05% and 2.64%, respectively. This study further emphasizes that mung beans have more protein and fat availability according to calorimetric measures. Conversely, betel leaves exhibit a greater concentration of reducing sugars, accompanied by a moisture content of 78.12%, in comparison to mung beans, which contain 7.4%. The findings provide a basic understanding of how variations in plant cell walls can affect the nutritional qualities of food products, which is essential for consumer awareness and industrial food formulation.

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