

Making *Flakes* substitution of Gadung Flour (*Dioscorea Hispida* Dennst) as a Low Glycemic Index Food for People with Diabetes Mellitus

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ABSTRACT

Type 2 diabetes mellitus is a degenerative disease that occurs due to changes in lifestyle and wrong diet. Diabetes mellitus is related to blood glucose levels and the hormone insulin. Diabetics are recommended to increase the consumption of low glycemic index foods that are beneficial in improving glucose and blood fat levels by slowing down the rate of gastric emptying which results in the digestion of carbohydrates and the absorption of glucose in the small intestine to be slow. This study aims to develop a low glycemic index food product as a snack in the form of flakes substituted with gadung flour. The experimental design used in this study was a Complete Randomized Design (RAL) with 5 formulations and 5 repeats with corn flour treatment : gadung flour, namely 10%: 90%, 20% : 80%, 30% : 70%, 40% : 60%, and 50% : 50%. Based on the results of the study, the best treatment flakes with the proportions of 50% corn flour and 50% gadung flour from the organoleptic test results with an average value of preference for color 5.92 (slightly like), taste 6.42 (slightly like), aroma 5.76 (slightly like), and texture 6.88 (like). The results of the chemical analysis of the best treatment flakes are energy 402.71 kcal, protein 7.11%, fat 6.63%, carbohydrates 78.65%, dietary fiber 3,19 gram, ash 3.89%, water 3.73% and crude fiber 26.87%. The results of the physical test in the form of the level of hardness flakes of the best treatment were 6.94 N. Based on the results of the calculation of the glycemic index value, it can be seen that the gadung flour substitution flakes with the best treatment have an IG value of 54,13 and are included in the category of low glycemic index.

Keywords: Diabetes Mellitus, Glycemic Index, Gadung Flour.