

## ABSTRACT

### **The Determination of Reducing Sugar Content, Fiber Content and Glycemic Index of Steamed Arrowroot and Tannia Tubers in Rabbit**

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Indonesia has many kinds of tubers such as arrowroot and tannia. Arrowroot has 24,10% carbohydrate content, whereas tannia has 34,20%. Arrowroot tuber which has a lower carbohydrate content than tannia tuber is predicted to have a lower glycemic index than tannia. The glycemic index of a food describes the effect of food on blood glucose rise. This research aimed to determine the content of reducing sugars, fiber and glycemic index of arrowroot and tannia tubers which is processed by steaming for 40 minutes. The determination of reducing sugar content was carried out by using Luff-Schoorl method, while for the determination of fiber content was carried out by using gravimetric method. The determination of the glycemic index used rabbits as subject. The increase of blood glucose levels profiles who carried out using after administration of food samples and standards. The increase of glucose levels were observed at  $t = 0, 15, 30, 60, 90, 120$  minutes using a One Touch Ultra Glucotest. The result showed that reducing sugar content of tannia tuber ( $14,92\% \pm 0,59$ ) was higher than arrowroot tuber ( $6,93\% \pm 0,53$ ). The fiber content of tannia tuber ( $1,62\% \pm 0,17$ ) and arrowroot tuber ( $1,71 \pm 0,05$ ) did not have significant differences. The glycemic index of tannia tuber was  $90 \pm 6,50$  that was categorized as high GI, while the GI of arrowroot tuber was  $67 \pm 10,12$  that categorized as medium GI. Therefore, the arrowroot tuber can be used as an alternative carbohydrate for diabetic patients, whereas the consumption of tannia tuber have to be controlled and the portion should be limited.

Key word: glycemic index, tannia tuber, arrowroot tuber, Luff-Schoorl