

ABSTRACT

THE GLYCEMIC INDEX DETERMINATION OF COOKED RICE, COOKED CORN RICE, AND COOKED MIXTURE (1:1) (An Exploration Effort of Alternative Food with Low Glycemic Index For Diabetics)

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Background The cooked mixture of the rice with corn rice as a variety of healthy food can be used to manage the amount of diabetic's diet nutritions. This research replaces a half of carbohydrate portion of rice with corn rice in food serving intake of diabetic's diet which is expected to have a lower glycemic index than cooked rice.

Method The samples are cooked rice, cooked corn rice and cooked mixture of rice and corn rice (1:1). This research is aimed to analyze water content, crude fiber content, reducing sugar content (based on SNI-01-2891-1992) and to determine glycemic index value which used rabbit (*Oryctagalus cuniculus*) as an experimental animal, they fasted overnight (6 h) before the blood glucose was measured in the morning. Researcher fed the rabbit with tested food and glucose as standard food, then the blood glucose is measured for the next 15, 30, 60, 90, 120 minutes.

Results The results show that the glycemic index value of cooked rice is 82 ± 16 , cooked corn rice is 62 ± 24 , and cooked mixture (1:1) is 67 ± 29 . The statistical tests with One Way MANOVA shows that Wilk's Lambda value is 0.00 ($p < 0.05$). It means that there is a significant difference among samples. The Spearmen's correlation test shows that the water content, crude fiber content, and reducing sugar content give an effect in glycemic index value. The change of blood glucose response in the mixture (1:1) gives lower increment than in cooked rice. Meanwhile it gives the same pattern of increment response as cooked corn rice.

Conclusion The mixture (1:1) has higher fiber content than cooked rice. It also gives lower increment than in cooked rice. Moreover mixture has better taste than cooked rice. So that diabetic is suggested to consume the mixture (1:1) as a better alternative for the daily diabetic's diet.

Keyword : Cooked rice, cooked corn rice, mixture, glycemic index.