ABSTRACT

BAYU MAULANA. Effect of Various Processing Methods on Glycaemic Index of Sweet Potato (Ipomea batatas) Cilembu. Under direction of LILIK KUSTIYAH and MIRA DEWI

People are suggested to consume carbohydrate from foods sources of carbohydrate with low glycaemic index to prevent degenerative disease, especially diabetes mellitus. Sweet potatoes (Ipomea batatas) cilembu are originally harvested at Tanjungsari, Sumedang, West of Java. Most people acknowledge this kind of sweet potato have most sweetness taste than other kinds of sweet potato. This study was aimed to measure and analyze the impact between types of processing methods and the glycaemic index of sweet potato (Ipomea batatas) cilembu. In this study, sweet potato were conducted of three types of processing methods: steamed, baked, and deep fried (made into chips). Sweet potatoes was steamed at 100°C (30, 40, and 50 minutes); baked at 180°C (60, 70, 80 minutes); and deep fried at 175°C (60, 70, 80 second). Based on hedonic organoleptic test, one from each processing methods was selected: 40 minutes for steamed, 80 minutes for baked, and 70 second for deep fried.Selected products were then analyzed proximate, dietary fiber, amylose content, and glycaemic index. To analyze glycaemic index, ten volunteers had to consume equal 50 g of available carbohydrate from each products. Available carbohydrate value was obtained by difference of proximate analyze of moisture, ash, protein, fat, and dietary fiber. Overnight fasting subjects blood glucose level were measured at 0, 15, 30, 45, 60, 90, and 120 minutes after consumed 50 g of D-Glucose or tested foods. Glycaemic index of each products were measured by area under curve (AUC). The result showed that glycaemic indices of steamed, baked, and deep fried were 58.22 (medium GI), 79.95 (high GI), and 56.27 (medium GI), respectively. ANOVA test showed that processing methods have significant impact on glycaemic indices of products (p<0,05).

Key words: sweet potato (Ipomea batatas) cilembu, processing methods, glycaemic index