

Characteristic of Taro (*Colocasia esculenta*), Seaweed (*Gracilaria Sp.*), and Fishes Bone Collagens Flour Based Analog Rice

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Abstract : Recently, approximately 9.1 million people of 237.56 million of Indonesian population suffer diabetes. Such condition was caused by high rice consumption of most Indonesian people. It has been known that rice contains low amylose, high calorie, and possesses hyperglycemic properties. Through this study, we tried to solve that problem by creating a super food in order to provide an alternative healthy and balanced diet. We formulated Taro and Seaweed flour based analog rice that fortified by various fishes bone collagens. Corms of Taro contain easily digestible starch and seaweed is rich in fiber, vitamin, and mineral. That mixture was fortified with collagen-containing unique amino acids such as glycine, lysine, alanine, arginine, proline, and hydroxyprolin. Subsequently, super analog rice was characterized about its nutritional composition such are proximate analyses, water, dietary fiber and amylose content. Furthermore, its morphological structure was analyzed by using scanning electron microscopy while the level of consumer preferences was performed by hedonic test. Results demonstrated that fortification by using various fishes bone collagen into analog rice were significantly different in nutritional composition, morphological structure as well as its preferences. Thus, this study was expected as new avenue in functional food discovery especially in the treatment and prevention of diabetic diseases.

Keywords : analogue rice, taro, seaweed, collagen

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