

## **Functional Compounds Activity of Analog Rice Based on Purple Yam and Bran as Alternative Food for People with Diabetes Mellitus Type II**

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**Abstract :** Diabetes mellitus (DM) is a metabolism disorder that tends to increase its prevalence in the world, including in Indonesia. The development of DM type 2 can cause oxidative stress characterized by an imbalance between oxidants and antioxidants in the body. Increased oxidative stress causes type 2 diabetes mellitus to require intake of exogenous antioxidants in large quantities to inhibit oxidative damage in the body. Bran can be defined as a functional food because it consists of 11.39% fiber and 28.7% antioxidants and the purple yam consists of anthocyanin which functions as an antioxidant. With abundant amount and low price, purple yam and bran can be used for analog rice as the effort to diversify functional food. The antioxidant's activity of analog rice from purple yam and bran which is measured by using DPPH's method is 12,963%. The rough fiber's level on the analog rice from purple yam is 2.985%. The water amount of analog rice from purple yam and bran is 8.726%. Analog rice from purple yam and bran has the similar texture as the usual rice, tasted slightly sweet, light purple colored, and smelled like bran.

**Keywords :** antioxidant, analog rice, functional food, diabetes mellitus

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