

Physical and Chemical Analysis of Vima-1 Mung Bean Flour with Germination Treatment as a Functional Food Ingredient

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ABSTRACT

Green beans have the potential to be developed as a functional food, but they still contain antinutrient compounds in the form of phytic acid so that a germination process is needed. This study aims to analyze the differences in the physical and chemical properties characteristics of mung bean flour and mung bean sprout flour of the Vima-1 variety. The study used an experimental method with two treatments, namely mung bean flour and mung bean sprout flour. Each treatment was carried out as many as three replicas and the data was analyzed using Independent Samples t-test at a significance level of 5%. The results showed that germination increased protein levels from 27.19 grams to 28.65 grams and dietary fiber levels from 7.3% to 10.56%, as well as decreased phytic acid levels from 641 mg/100g to 353 mg/100gr. The increase in protein and dietary fiber and the decrease in phytic acid show that the germination process is able to improve the nutritional quality of mung bean flour through increasing nutrient content and mineral bioavailability, thus potentially increasing its use as a functional food raw material.

Keywords: functional food, germinated mung bean flour, germination, mung bean flour.