

ABSTRACT

MAKING ANALOG RICE BASED ON BANANA FLOUR (*Musa paradisiaca*)

By

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Analog rice is one of the solutions that can be developed to overcome the problems of food security both in terms of the use of a new food source or for diversification of food. The purposes of this study were to determine the effect of starch as a binder in the manufacture of analog rice and to examine the characteristics of analog rice such as: moisture content, grains diameter, water absorption, bulk density, and expansion ability. Analog rice was performed by using a set of analog rice grain making machine (granulator). Five different compositions of analog rice were made and tested. The formulas are pure bananas flour rice (100 % banana flour) and mixed of banana flour and tapioca flour with ratio of 95 : 5 , 90 : 10 , 85 : 15 and 80 : 20. The results show that the water content of analog rice is between 10.41 % and 13.08 %, water absorption range from 36.98 % to 64.32 %, bulk density of 0.766 g /cm³ to 0.794 g /cm³, and expansion ability range from 5,4% to 14,4%. The addition amount of the flour mixture causes enlargement of the grain diameter.

Keywords: analog rice, banana flour, diversification, granulator, tapioca flour.