

ABSTRACT

STUDY ON THE MANUFACTURE OF RICE ANALOGUES FROM FORMULATION OF WAXY CASSAVA FLOUR AND PORANG GLUCOMANNAN

By

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The formulation of waxy cassava flour and glucomannan plays an important role in the quality of the rice analogue produced. This study aims to determine the formulation of waxy cassava flour and glucomannan which produces rice analogues with the best sensory characteristics. The study was arranged in a completely randomized design (CRD) with one factor and four replications. The single factor was the formulation of waxy cassava flour and glucomannan flour with five treatment levels namely (100%:0%), (87.5%:12.5%), (75%:25%), (62.5%:37.5%), and (50%:50%). The similarity of variance used the Barlett test and the addition of data used the Tuckey test. Then tested the least significant difference (LSD) at the 5% level of significance. The results showed that the best analog rice was the F1 treatment (87.5% waxy cassava flour and 12.5% glucomannan) which produced analog rice with a color score of 4.04 (yellowish white), taste with a score of 3.18 (slightly typical of cassava), aroma of 3.09 (slightly typical of cassava), and overall acceptability with a score of 3.90 (close to like), with a moisture content of 11.66%, ash content of 0.38%, fat content of 0.37%, protein content 0.35%, crude fiber content 1.85%, carbohydrate content 8.24%, glucomannan content 18.36%, and calcium oxalate content 0.16%.

Keywords: Formulation, analogue rice, waxy cassava flour, glucomannan

ABSTRAK

KAJIAN PEMBUATAN BERAS ANALOG DARI FORMULASI TEPUNG UBI KAYU *Waxy* DAN GLUKOMANAN PORANG

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Formulasi tepung ubi kayu *waxy* dan glukomanan berperan penting pada kualitas beras analog yang dihasilkan. Penelitian ini bertujuan untuk mengetahui formulasi tepung ubi kayu *waxy* dan glukomanan yang menghasilkan beras analog dengan karakteristik sensori terbaik. Penelitian disusun dalam Rancangan Acak Lengkap (RAL) dengan satu faktor dan empat ulangan. Faktor tunggal adalah formulasi tepung ubi kayu *waxy* dan tepung glukomanan dengan lima taraf perlakuan yaitu (100%:0%), (87,5%:12,5%), (75%:25%), (62,5%:37,5%), dan (50%:50%). Kesamaan ragam menggunakan uji Barlett dan kementerian data menggunakan uji Tuckey. Selanjutnya diuji beda nyata terkecil (BNT) pada taraf nyata 5%. Hasil menunjukkan bahwa beras analog terbaik adalah perlakuan F1 (tepung ubi kayu *waxy* 87,5% dan glukomanan 12,5%) yang menghasilkan beras analog dengan skor warna 4,04 (putih kekuningan), rasa dengan skor 3,18 (agak khas singkong), aroma 3,09 (agak khas singkong), dan penerimaan keseluruhan dengan skor 3,90 (mendekati suka), dengan kadar air sebesar 11,66%, kadar abu 0,38%, kadar lemak 0,37%, kadar protein 0,35%, kadar serat kasar 1,85%, kadar karbohidrat 8,24%, kadar glukomanan 18,36%, dan kadar kalsium oksalat 0,16%.

Kata kunci: Formulasi, beras analog, tepung ubi kayu *waxy*, glukomanan