ABSTRACT

THE EFFECT OF TEMPERATURE AND DRYING TIME ON THE PHYSICAL, CHEMICAL AND SENSORY CHARACTERISTICS OF RAJA BULU BANANA PEEL FLOUR (Musa sapientum)

By

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This study aims to determine the effect of temperature and drying time as well as their interaction on the physical, chemical and sensory characteristics of raja bulu banana peel flour. The study was arranged in a factorial Randomized Completely Block Design (RCBD) with 2 factors and 3 replications. The first factor is the drying temperature which consists of 3 levels, T1 (60^0C), T2 (70^0C) and T3 (80^0C). The second factor is drying time which consists of 3 levels, t1 (22 hours), t2 (24 hours) and t3 (26 hours). The data obtained were tested for homogeneity with the Bartlett test, additional data were tested with the Tukey test, then the data were analyzed for variance to determine the effect of treatment and if there was a significant effect, the data were further processed with Orthogonal Polynomials at the 5% level. The results showed that temperature and drying time had a significant effect on the fineness, yield, solubility, moisture, ash, fat, fiber, color, aroma and texture of raja bulu banana peel flour, while the interaction of the two only had no significant effect on the fiber. The best treatment was found in the treatment combination of S2L2 (drying temperature 70^0C and drying time 24 hours) with the characteristics of the raja bulu banana peel flour produced, fineness 37.55% wb, yield 5.66% wb, solubility 39.13% wb, moisture 10.35 % wb, ash 9.11% wb, fat 13.70% db, fiber 11.34% wb, yellowish brown color, typical banana aroma and smooth texture.

Keywords: *banana peel, drying temperature, drying time, interaction, raja bulu banana peel flour*

ABSTRAK

PENGARUH SUHU DAN LAMA PENGERINGAN TERHADAP KARAKTERISTIK FISIK, KIMIA DAN SENSORI TEPUNG KULIT PISANG RAJA BULU (*Musa sapientum*)

Oleh

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Penelitian ini bertujuan untuk mengetahui pengaruh suhu dan lama pengeringan serta interaksi keduanya terhadap karakteristik fisik, kimia dan sensori tepung kulit pisang raja bulu. Penelitian disusun dalam Rancangan Acak Kelompok Lengkap (RAKL) faktorial dengan 2 faktor dan 3 kali ulangan. Faktor pertama adalah suhu pengeringan yang terdiri dari 3 taraf yaitu S1 (60^0C), S2 (70^0C) dan S3 (80^0C). Faktor kedua adalah lama pengeringan yang terdiri dari 3 taraf yaitu L1 (22 jam), L2 (24 jam) dan L3 (26 jam). Data yang diperoleh diuji kehomogenannya dengan uji *Bartlett*, kemenambahan data diuji dengan uji *Tukey*, kemudian data dianalisis sidik ragam untuk mengetahui pengaruh perlakuan dan apabila terdapat pengaruh nyata maka data diolah lebih lanjut dengan Polinomial Ortogonal pada taraf 5%. Hasil penelitian menunjukkan bahwa suhu dan lama pengeringan berpengaruh nyata terhadap kehalusan, rendemen, kelarutan, kadar air, kadar abu, kadar lemak, kadar serat kasar, warna, aroma dan tekstur tepung kulit pisang raja bulu, sedangkan interaksi keduanya hanya tidak berpengaruh nyata pada kadar serat kasar. Perlakuan terbaik terdapat pada kombinasi perlakuan S2L2 (suhu pengeringan 70^0C dan lama pengeringan 24 jam) dengan karakteristik tepung kulit pisang raja bulu yang dihasilkan yaitu kehalusan 37,55% bb, rendemen 5,66% bb, kelarutan 39,13% bb, kadar air 10,35% bb, kadar abu 9,11% bb, kadar lemak 13,70% bk, kadar serat kasar 11,34% bb, warna coklat kekuningan, aroma khas pisang dan tekstur halus.

Kata kunci: interaksi, kulit pisang, lama pengeringan, suhu pengeringan, tepung kulit pisang raja bulu