

ABSTRACT

THE EFFECT OF PROCESSING DELAY ON THE CHEMICAL, PHYSICAL, AND SENSORY PROPERTIES OF STONE BANANA (*Musaa balbisiana* Colla) FLOUR

By

Elfana Risti

Musaa balbisiana Colla, also known as pisang batu or pisang kelutuk or stone banana, contains many nutrients and bioactive components; however, this type of banana has not been fully exploited. One alternative to increase the utilization of stone banana as well as to prolong its shelf life is to process it into flour. Stone banana can be utilized and developed as a functional food in the form of flour. This research was aimed to determine the effect of delaying banana processing after harvest which produces the best chemical, physical and sensory characteristics of stone banana flour. The non-factorial experiment was arranged in a Complete Randomized Block Design (CRBD) with four replications. The treatment was the duration of delay time before processing, consisted of 6 levels delay time : P0 (without delay time), P1 (1 day/24 h), P2 (2 days/48 h), P3 (3 days/72 h), P4 (4 days/96 h), P5 (5 days/120h). The data were subjected to analysis of variance and analyzed further with the Least Significant Difference (LSD) test at the 5% level. The results showed that delaying the processing of stone bananas for 2 days (48 h) was found to be the best treatment. The stone banana flour resulted from the best treatment had moisture content of 7.66%, antioxidant activity of 72.85%, solubility of 30.82%, swelling power of 6.27 g/g, water absorption capacity of 26.35%, yield of 25.46%, color score of 4.48 (yellowish white) and aroma score of 3.57 (not typical of banana flour), and able to perform compact gel.

Keyword: antioxidant activity, banana flour, delay, gel, *Musaa balbisiana* Colla

ABSTRAK

PENGARUH PENUNDAAN PENGOLAHAN TERHADAP SIFAT KIMIA FISIK, DAN SENSORI TEPUNG PISANG BATU (*Musaa balbisiana* Colla)

Oleh

Elfana Risti

Musaa balbisiana Colla, juga dikenal sebagai pisang batu atau pisang kelutuk atau pisang batu, mengandung banyak nutrisi dan komponen bioaktif, namun pisang jenis ini belum dimanfaatkan secara maksimal. Salah satu alternatif untuk meningkatkan pemanfaatan pisang batu sekaligus memperpanjang umur simpannya adalah dengan mengolahnya menjadi tepung. Pisang batu dapat dimanfaatkan dan dikembangkan sebagai pangan fungsional berupa tepung. Penelitian ini bertujuan untuk mengetahui pengaruh penundaan pengolahan pisang setelah panen yang menghasilkan karakteristik kimia, fisik dan sensori tepung pisang batu terbaik. Percobaan non faktorial disusun dalam Rancangan Acak Kelompok Lengkap (RAKL) dengan empat ulangan. Perlakuannya adalah lama waktu tunda sebelum pengolahan, terdiri dari 6 taraf waktu tunda : P0 (tanpa waktu penundaan), P1 (1 hari/24 jam), P2 (2 hari/48 jam), P3 (3 hari/72 jam), P4 (4 hari/96 jam), P5 (5 hari/120 jam). Data yang diperoleh dilakukan analisis varians dan dianalisis lebih lanjut dengan uji Beda Nyata Terkecil (BNT) pada taraf 5%. Hasil penelitian menunjukkan bahwa penundaan pengolahan pisang batu selama 2 hari (48 jam) merupakan perlakuan terbaik. Tepung pisang batu hasil perlakuan terbaik mempunyai kadar air 7,66%, aktivitas antioksidan 72,85%, kelarutan 30,82%, daya pengembangan 6,27 g/g, daya serap air 26,35%, rendemen 25,46%, skor warna 4,48 (putih kekuningan) dan skor aroma 3,57 (tidak khas tepung pisang), serta mampu membentuk gel kompak.

Kata kunci: aktivitas antioksidan, gel, penundaan, pisang batu, tepung pisang batu