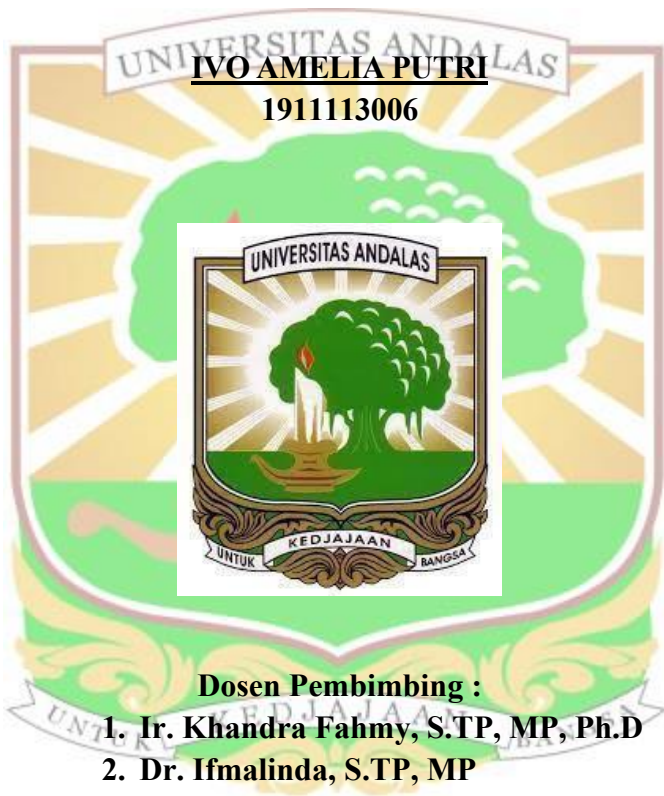


PENGARUH *HOT WATER TREATMENT* (HWT) UNTUK MEMPERTAHANKAN MUTU BUAH PISANG AMBON SELAMA PENYIMPANAN

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PENGARUH *HOT WATER TREATMENT* (HWT) UNTUK MEMPERTAHANKAN MUTU BUAH PISANG AMBON SELAMA PENYIMPANAN

Ivo Amelia Putri¹, Khandra Fahmy², Ifmalinda²

ABSTRAK

Pisang ambon merupakan buah klimakterik yang memiliki laju respirasi tinggi sehingga cepat mengalami pematangan dan penurunan mutu selama penyimpanan. Salah satu teknologi pascapanen yang dapat diterapkan untuk memperlambat proses tersebut adalah *Hot Water Treatment* (HWT). Penelitian ini bertujuan untuk mengkaji pengaruh perbedaan suhu dan lama perlakuan HWT serta menentukan perlakuan terbaik dalam mempertahankan mutu buah pisang ambon selama penyimpanan. Penelitian menggunakan Rancangan Acak Lengkap (RAL) dengan empat perlakuan, yaitu P1 (42°C selama 30 menit), P2 (49°C selama 15 menit), P3 (50°C selama 5 menit), dan P4 (kontrol tanpa HWT). Parameter yang diamati meliputi susut bobot, total padatan terlarut (TPT), derajat keasaman (pH), warna (*Lightness*, *Chroma*, dan *Hue*), serta laju respirasi (RO₂ dan RCO₂). Data dianalisis menggunakan analisis ragam (ANOVA) dan dilanjutkan dengan uji *Duncan* pada taraf nyata 5%. Hasil penelitian menunjukkan bahwa perlakuan HWT memberikan pengaruh nyata terhadap mutu buah pisang ambon selama penyimpanan. Perlakuan P2 (49°C selama 15 menit) menghasilkan susut bobot terendah sebesar 7,11%, nilai pH terendah sebesar 5,39, warna (*light*) terendah sebesar 52,76. Perlakuan P3 (50°C selama 5 menit) menghasilkan nilai TPT tertinggi sebesar 13,86 °Brix, serta memberikan hasil terbaik dalam mempertahankan warna (*chroma dan hue*) sebesar 24,05 (terendah) dan 321,13 (tertinggi) dan menekan laju respirasi O₂ maupun CO₂ selama penyimpanan dengan nilai sebesar 22,33 dan 20,84. Berdasarkan hasil tersebut, perlakuan HWT pada P3 (suhu 50°C selama 5 menit) merupakan perlakuan terbaik dalam mempertahankan mutu buah pisang ambon selama penyimpanan.

Kata kunci : *Hot Water Treatment*, pisang ambon, mutu buah, penyimpanan, pascapanen

The Effect of Hot Water Treatment (HWT) on Maintaining the Quality of Ambon Bananas During Storage

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ABSTRACT

Ambon banana is a climacteric fruit with a high respiration rate, which causes rapid ripening and quality deterioration during storage. One of the postharvest technologies that can be applied to delay this process is Hot Water Treatment (HWT). This study aimed to investigate the effect of different HWT temperatures and treatment durations and to determine the best treatment for maintaining the quality of Ambon bananas during storage. The study was conducted using a Completely Randomized Design (CRD) with four treatments, namely P1 (42°C for 30 minutes), P2 (49°C for 15 minutes), P3 (50°C for 5 minutes), and P4 (control without HWT). The observed parameters included weight loss, total soluble solids (TSS), pH, color characteristics (Lightness, Chroma, and Hue), and respiration rate (RO₂ and RCO₂). The data were analyzed using analysis of variance (ANOVA), followed by Duncan's Multiple Range Test at a 5% significance level. The results showed that HWT treatments significantly affected the quality of Ambon bananas during storage. Treatment P2 (49°C for 15 minutes) resulted in the lowest weight loss (7,11%), the lowest pH value (5,39), and the lowest Lightness value (52,76). Treatment P3 (50°C for 5 minutes) produced the highest total soluble solids (13,86°Brix) and provided the best results in maintaining color characteristics, with Chroma and Hue values of 24,05 (lowest) and 321,13 (highest), respectively. This treatment also reduced the respiration rate of O₂ and CO₂ during storage, with values of 22,33 and 20,84, respectively. Based on these results, HWT treatment at 50°C for 5 minutes (P3) was considered the best treatment for maintaining the quality of ambon bananas during storage.

Keywords : Hot Water Treatment, ambon banana, fruit quality, storage, postharvest