

## INTISARI

### **ANALISIS TEKNIS PENGARUH JENIS DAN KONSENTRASI RIPENING AGENT (BAHAN PEMATANG) TERHADAP PERUBAHAN SIFAT FISIK BUAH PISANG MAS (*Musa acuminata* Colla)**

Oleh :

**Ahmad Khairuddin**  
**16/400385/TP/11598**

Pematangan buatan merupakan salah satu cara untuk mempercepat pematangan pisang mas. Penambahan gas etilen, gas asetilen dan ethrel merupakan bahan pematang pemacu tambahan yang umum digunakan oleh masyarakat. Tujuan penelitian ini adalah untuk menganalisis pengaruh penambahan ketiga zat tersebut dalam berbagai konsentrasi terhadap kualitas fisik pisang mas selama proses pematangan berlangsung. Konsentrasi yang digunakan sebesar 0 ppm, 100 ppm, 250 ppm dan 500 ppm. Adapun analisis yang dilakukan meliputi laju respirasi, susut bobot, tekstur, derajat keasaman, total padatan terlarut dan warna. Metode analisis yang digunakan adalah analisis statistik dan analisis kinetik. Hasil dari penelitian yang dilakukan menunjukkan perubahan kualitas fisik pisang mas. Pisang mas memiliki nilai susut bobot akhir sekitar 50%-60%. Nilai laju produksi karbon dioksida maksimal berkisar  $11-7 \cdot 10^{-4} \text{ m}^3/\text{kg.jam}$ . Adapun nilai laju konsumsi oksigen maksimal berkisar  $16-12 \cdot 10^{-4} \text{ m}^3/\text{kg.jam}$ . Nilai tekstur pisang mas sekitar  $3-0,5 \text{ kgf/cm}^2$ . Kemudian nilai derajat keasaman sekitar 4-5,5. Total padatan terlarut maksimal sekitar 24-25%. Lalu warna, terdiri atas *lightness*; *hue angle*; *chroma*; *total color difference*, masing-masing secara berturut-turut memiliki nilai sekitar 25-26;  $70-80^\circ$ ; 40-30%; dan 20-30.

Kata Kunci : Pisang mas, etilen, asetilen, ethrel, konsentrasi, analisis teknis

## ABSTRACT

### TECHNICAL ANALYSIS OF THE EFFECT OF RIPENING AGENT TYPES AND CONCENTRATIONS TO BANANA MAS FRUIT (*Musa acuminata* Colla) PHYSICAL PROPERTIES CHANGES

By:

**Ahmad Khairuddin**  
**16/400385/TP/11598**

Artificial ripening is a way to accelerate the ripening of banana mas. The addition of ethylene gas, acetylene gas and ethrel is a type of additive that is commonly used by the public. The purpose of this study was to analyze the effect of the addition of these three substances in various concentrations to the physical quality of banana mas during the maturation process. Concentrates used are 0 ppm, 100 ppm, 250 ppm and 500 ppm. The analysis carried out included respiration rate, Weights losses, firmness, degree of acidity, total dissolved solids and color. The analysis method used is statistical analysis and kinetic analysis. The results of the research showed changes in the physical quality of banana mas during maturation process. Banana mas has a final weight losses value of about 50%-60%. The maximum carbon dioxide production rate ranges from  $11-7 \cdot 10^{-4} \text{ m}^3/\text{kg.h}$ . The maximum value of oxygen consumption rate ranges from  $16-12 \cdot 10^{-4} \text{ m}^3/\text{kg.h}$ . The texture value of banana mas is about  $3-0.5 \text{ kgf/cm}^2$ . Then the value of acidity degree is about 4-5.5. Total dissolved solids maximum of about 24-25%. Then color, consisting of lightness; hue angle; chroma; total color difference, each has a value of about 25-26;  $70-80^\circ$ ; 40-30%; and 20-30.

Keywords : Banana mas, ethylene gas, acetylene gas, ethrel, concentration, technical analysis