

**PENGARUH PENGEMASAN DENGAN *OXYGEN ABSORBER*  
TERHADAP KUALITAS STROBERI (*Fragaria x Ananassa*) SEGAR**

**INTISARI**

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Stroberi (*Fragaria x ananassa*) merupakan produk dengan nilai jual tinggi tetapi rentan mengalami penurunan kualitas pasca panen. Laju respirasi yang tinggi merupakan faktor utama penurunan kualitas pasca panen, yang mana akan meningkat seiring dengan kenaikan suhu. Stroberi menggunakan oksigen selama proses respirasi. Penggunaan *oxygen absorber* dapat mengurangi kadar oksigen di dalam kemasan. Penelitian ini bertujuan untuk menentukan kapasitas *oxygen absorber* terbaik dalam mempertahankan kualitas stroberi segar serta mengetahui karakteristik kualitas stroberi *plant factory* segar dengan penerapan kapasitas *oxygen absorber* terbaik berdasarkan hasil stroberi lokal. Rancangan percobaan menggunakan perlakuan kapasitas *oxygen absorber* (0 cc, 60 cc, dan 120 cc) dengan dua suhu penyimpanan ( $\pm 28^{\circ}\text{C}$  dan  $\pm 4^{\circ}\text{C}$ ). Parameter kualitas yang diuji meliputi fisik (susut bobot, tekstur, dan warna) serta kimiawi (kadar air, total padatan terlarut, dan pH). Hasil pengujian dianalisis secara statistik dengan Welch ANOVA dan uji lanjut Games-howell pada taraf signifikansi 5%. Perlakuan terbaik yang diperoleh dari penelitian ini selanjutnya diterapkan pada stroberi *plant factory* untuk mengevaluasi pengaruhnya terhadap mutu selama penyimpanan. Hasil penelitian menunjukkan bahwa perlakuan *oxygen absorber* 120 cc pada suhu  $\pm 4^{\circ}\text{C}$  menghasilkan kecenderungan nilai mutu yang lebih baik. Perlakuan ini mampu menekan susut bobot, menjaga kekerasan buah, meminimalkan perubahan warna, serta menjaga kestabilan kadar air dan pH selama penyimpanan. Perlakuan terbaik tersebut kemudian diterapkan pada stroberi *plant factory*, yang memberikan nilai mutu yang lebih baik dibandingkan tanpa *oxygen absorber*, berupa susut bobot, tekstur, warna, dan kadar air yang lebih baik selama penyimpanan.

Kata Kunci : *Oxygen absorber*, *Plant Factory*, Stroberi, Suhu

**THE EFFECT OF PACKAGING WITH OXYGEN ABSORBER ON THE  
QUALITY OF FRESH STRAWBERRIES (*Fragaria x Ananassa*)**

**ABSTRACT**

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Strawberries (*Fragaria × ananassa*) are high value horticultural products but are highly susceptible to postharvest quality deterioration. A high respiration rate is a major factor contributing to postharvest quality loss, which increases with rising temperatures. Strawberries consume oxygen during respiration, and the use of oxygen absorbers can reduce the oxygen levels inside the packaging. This study aimed to determine the optimal capacity of oxygen absorbers for maintaining the quality of fresh strawberries and to evaluate the quality characteristics of fresh plant factory strawberry using the best-performing oxygen absorber capacity based on results from local strawberries. The experimental design involved three levels of oxygen absorber capacity (0 cc, 60 cc, and 120 cc) at two storage temperatures ( $\pm 28^{\circ}\text{C}$  and  $\pm 4^{\circ}\text{C}$ ). Quality parameters observed included physical attributes (weight loss, texture, and color) and chemical attributes (moisture content, total soluble solids, and pH). The results were statistically analyzed using Welch's ANOVA followed by the Games-Howell post hoc test at a 5% significance level. The best treatment identified in this study was subsequently applied to fresh strawberries grown in a plant factory to assess its effect on quality during storage. The results showed that the treatment with 120 cc of oxygen absorber at a storage temperature of  $\pm 4^{\circ}\text{C}$  tended to produce better quality values. This treatment reduces weight loss, maintains fruit firmness, minimizes color changes, maintains moisture content and pH during storage. The best treatment was then applied to plant factory strawberries, resulting in better quality compared to those without an oxygen absorber, including improvements in weight loss, texture, color, and moisture content during storage.

**Keywords:** Oxygen absorber, Plant factory, Strawberry, Temperature