

## PERUBAHAN KUALITAS *DEHYDRATED STRAWBERRY* (*Fragaria x Ananassa*) YANG DIKEMAS SECARA *VACUUM* MENGGUNAKAN KEMASAN PLASTIK

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### INTISARI

Penanganan pascapanen seperti buah kering merupakan salah satu alternatif untuk memperpanjang umur simpan dan menghasilkan produk baru. Namun, adanya pengaruh lingkungan tropis yang tidak menguntungkan dapat mempercepat penurunan kualitas buah kering. Untuk menjaga kualitas stroberi kering maka diperlukan penanganan yang tepat dengan menerapkan penggunaan kemasan. Tujuan dari penelitian ini adalah untuk mengidentifikasi perubahan kualitas produk buah stroberi kering yang dikemas secara *vacuum* menggunakan beberapa jenis kemasan plastik dan mengidentifikasi jenis kemasan plastik yang dapat mempertahankan kualitas produk buah stroberi kering pada kondisi penyimpanan ruangan lingkungan tropis.

Stroberi varietas *California* dan *Kellybright* dengan tingkat kematangan 100% diperoleh dari Kebun Buah Stroberi Inggit dan diberi *pre-treatment* dehidrasi osmotik. Proses pengeringan dilakukan menggunakan *Tray Dryer* pada suhu 70°C selama 9 jam. Penelitian ini disusun dalam rancangan acak lengkap (RAL) faktorial 3x2. Faktor pertama, jenis kemasan plastik meliputi multilayer PA/PE ketebalan 80 micron, monolayer PE ketebalan 70 micron, dan monolayer Nylon ketebalan 75 micron. Faktor kedua, lama penyimpanan meliputi 0, 1, 3, dan 5 minggu. Pengujian parameter kualitas meliputi fisik (warna dan tekstur), kimiawi (kadar air, vitamin C, total fenolik, total asam, dan total padatan terlarut), dan mikrobiologi (aW dan *total plate count* bakteri). Hasil pengujian dianalisis menggunakan ANOVA *Two-Way*.

Berdasarkan hasil penelitian yang diperoleh, bahwa selama penyimpanan menggunakan ketiga jenis kemasan, stroberi kering mengalami penurunan kualitas fisik (tekstur dan warna) dan kimiawi (kadar air, vitamin C, total fenolik, dan total asam). Penggunaan kemasan Multilayer PA/PE ketebalan 80 micron dan Monolayer Nylon ketebalan 75 micron dapat meningkatkan nilai total padatan terlarut dan dapat mereduksi jumlah *total plate count* bakteri. Jenis kemasan plastik yang dapat mempertahankan kualitas stroberi kering berdasarkan parameter yang termasuk ke dalam *critical control point*, yaitu *total plate count* bakteri adalah Monolayer Nylon ketebalan 75 micron.

Kata kunci : stroberi kering, kemasan plastik, *vacuum*

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## QUALITY CHANGES OF *DEHYDRATED STRAWBERRY* (*Fragaria x ananassa*) WHICH WERE VACUUM PACKED USING PLASTIC PACKAGING

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### ABSTRACT

Postharvest handling of such as dehydrated fruit is an alternative for increasing the shelf life and create new products. However, the unfavorable tropical environmental influences can accelerate the decline in the quality of dehydrated fruit. To maintain the quality of dehydrated strawberries, proper handling is required by applying the use of packaging. The objective of this study was to identify changes in the quality of dehydrated strawberries that were vacuum packed using several types of plastic packaging and to identify the types of plastic packaging that could maintain the quality of dehydrated strawberries in tropical environmental storage conditions.

California and Kellybright strawberry varieties with a maturity level of 100%, was obtained from Inggit Strawberry Farm and given an osmotic dehydration pre-treatment. The drying process carried out using a Tray Dryer at a temperature of 70°C for 9 hours. The experiment was arranged in a 3 x 2 Factorial Completely Randomized Design (CRD). The first factor, the type of plastics include multilayer PA/PE with a thickness of 80 microns, a monolayer of PE with a thickness of 70 microns, and a monolayer of Nylon with a thickness of 75 microns. The second factor, the length of storage includes 0, 1, 3, and 5 weeks. Testing of quality parameters includes physical (color and texture), chemical (moisture content, vitamin C, total phenolic, total acid, and total dissolved solids), and microbiology (aW and total bacterial plate count). The test results were analyzed by two-way ANOVA.

Based on the result that during storage using the three types of packaging, dehydrated strawberries experienced a decrease in physical (texture and color) and chemical quality (water content, vitamin C, total phenolic, and total acid). The use of a Multilayer of PA/PE with a thickness of 80 microns and a Monolayer of PA with a thickness of 75 microns can increase the total dissolved solids and can reduce bacterial plate counts. The type of plastic packaging that can maintain the quality of dehydrated strawberries based on the parameters included in the critical control point is the bacterial total plate counts is a Monolayer Nylon with a thickness of 75 microns.

Keywords : dehydrated strawberries, plastic packaging, vacuum

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