PENGARUH PENYINARAN UV-C, NANOZEOLIT, DAN PENGEMASAN INDIVIDU PLASTIK *LOW DENSITY POLYETHYLENE* TERHADAP KUALITAS MIKROBIOLOGIS BUAH SALAK PONDOH SELAMA PENYIMPANAN

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ABSTRAK

Salak Pondoh (*Salacca edulis* Reinw) merupakan salah satu jenis buah tropis yang berasal dari Indonesia dan banyak ditemukan di daerah Sleman, Yogyakarta. Salak Pondoh memiliki potensi yang cukup tinggi dalam perdagangan internasional. Sehingga perlu dijaga mutu dan kualitasnya untuk memperpanjang umur simpan dan mengurangi kerusakan selama transporatsi dan penyimpanan. Kerusakan mikrobiologis terutama infeksi jamur sering ditemukan pada salak karena buah salak mengandung a_w yang tinggi. Tujuan dari penelitian ini adalah untuk mempertahankan mutu dan umur simpan buah salak selama penyimpanan. Pada penelitian ini dilakukan penyinaran UV-C 60 Watt (0,17-0,26 kJ/cm^2) selama 30, 40, dan 50 menit sebagai disinfektan, penggunaan nanozeolit sebagai penyerap etilen, dan pengemasan individu *Low Density Polyethylene* (LDPE). Buah salak Pondoh disimpan di ruang pendingin dengan suhu 4^{o}C, 10^{o}C, dan suhu ruang 26^{o}C selama 30 hari. Hasil penelitian menunjukkan bahwa salak Pondoh layak konsumsi kurang dari 5 hari, pada hari ke-10 sudah tidak memenuhi standar mutu mikrobiologi. Penyinaran UV-C 60 Watt pada berbagai variasi waktu penyinaran, nanozeolit, dan pengemasan individu plastik LDPE tidak berpengaruh terhadap kualitas mikrobiologi buah salak pondoh selama penyimpanan 30 hari. Namun diperoleh suhu penyimpanan yang dapat menghambat kerusakan mikrobiologi pada buah salak yaitu 4-10^{o}C.

Kata kunci: mikrobiologi, pengemasan, penyimpanan, salak pondoh

EFFECT OF UV-C LIGHT, NANOZEOLITE, AND LOW DENSITY POLYETHYLENE INDIVIDUAL PACKAGING AGAINST MICROBIOLOGICAL QUALITY OF SNAKE FRUIT DURING STORAGE

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ABSTRACT

Snake fruit (*Salacca edulis* Reinw.) is one of the tropical fruits from Indonesia which grows excessively in the region of Sleman, Yogyarakta. Snake fruit has superior potential as Indonesia commodities in international trade. So that the quality must be preserved to extend shelf life and reduce post-harvest loss during transportation and storage. Microbiological loss especially fungal infection can be found frequently in snake fruit because of the high amount of water activity (a_w). Therefore, the aim of this study is to maintain the quality and shelf life of snake fruit during storage. In this study, snake fruit was exposed with 60 Watt UV-C light (0,17-0,26 kJ/cm^2) for 30, 40, and 50 minutes as disinfectant, nano-zeolite was added as ethylene adsorbent, and the fruit was packed with *Low Density Polyethylene* (LDPE) individually. The snake fruit was stored in cool room at 4^{o}C, 10^{o}C, and room temperature at 26^{o}C for 30 days. The result showed that each treatment of the snake fruit were suitable for consumption up to 5 days because on day 10th the microbiological quality of snake fruit did not fulfill the quality standard. UV-C 60 Watt light treatment with time variations, nanozeolite, and LDPE individual packaging did not affect microbiological quality of snake fruit during storage of 30 days. However the storage temperature of 4-10^{o}C could prevent microbiological spoilage of snake fruit.

Keywords: microbiology, packaging, storage, snake fruit