PENGARUH PELAPISAN *EDIBLE COATING* LIDAH BUAYA DAN EKSTRAK SERAI PADA DAUN PISANG DAN DAUN JATI SEBAGAI PEMBUNGKUS NASI TERHADAP KETAHANAN MASA SIMPAN NASI

Wasilatul Ulum[1], Narto[2], Choirul Amri[3]
Jurusan Kesehatan Lingkungan Poltekkes Kemenkes Yogyakarta
Jl. Tatabumi No.3 Banyuraden, Gamping, Sleman
Email: wasilatul.ulm@gmail.com

ABSTRAK

Latar Belakang: Penggunaan bahan alami sebagai pelapis makanan terus dikembangkan untuk meningkatkan daya simpan produk pangan. *Edible coating* dari bahan alami seperti lidah buaya dan ekstrak serai berpotensi digunakan untuk memperpanjang masa simpan nasi yang dibungkus dengan daun.

Tujuan: Penelitian ini bertujuan untuk mengetahui efektivitas *edible coating* berbahan dasar lidah buaya dan ekstrak serai yang diaplikasikan pada daun pisang dan daun jati sebagai pembungkus nasi terhadap masa simpan nasi.

Metode: Penelitian ini menggunakan rancangan *Post Test Only Control Group Design* dengan 4 perlakuan dan 5 kali pengulangan. Sampel terdiri dari 4 perlakuan yaitu daun pisang berlapis *edible coating*, daun jati berlapis *edible coating*, daun pisang tanpa pelapisan, dan daun jati tanpa pelapisan. Masing-masing perlakuan dilakukan pengulangan sebanyak 5 kali. Masa simpan nasi diamati secara *organoleptic* (warna, bau, tekstur) setiap 3 jam hingga nasi dinyatakan tidak layak konsumsi. Data dianalisis menggunakan uji *Friedman,* dilanjutkan dengan uji *Wilcoxon Signed-Rank Test.*

Hasil: Hasil menunjukkan bahwa masa simpan nasi terlama diperoleh pada perlakuan daun jati berlapis *edible coating* dengan rata-rata 25,4 jam, mengalami peningkatan sebesar 3,2 jam dibandingkan daun jati tanpa pelapisan (22,2 jam), dan perbedaan tersebut signifikan secara statistik (p = 0,039). Sementara itu, perlakuan daun pisang yang dilapisi *edible coating* menghasilkan masa simpan rata-rata 22 jam, hanya meningkat 2,2 jam dibandingkan daun pisang tanpa pelapisan (19,8 jam), namun perbedaannya tidak signifikan secara statistik (p = 0,138).

Kesimpulan: Daun jati yang dilapisi *edible coating* terbukti menjadi perlakuan paling efektif dalam memperpanjang masa simpan nasi secara alami dibandingkan perlakuan lainnya.

Kata Kunci: *edible coating*, daun jati, daun pisang, masa simpan.

THE EFFECT OF ALOE VERA AND LEMONGRASS-BASED EDIBLE COATING APPLIED TO BANANA AND TEAK LEAVES AS RICE WRAPPERS ON THE SHELF LIFE OF RICE

Wasilatul Ulum[1], Narto[2], Choirul Amri[3]
Jurusan Kesehatan Lingkungan Poltekkes Kemenkes Yogyakarta
Jl. Tatabumi No.3 Banyuraden, Gamping, Sleman
Email: wasilatul.ulm@gmail.com

ABSTRACT

***Background**: The use of natural materials as food coatings continues to be developed to improve the shelf life of food products. Edible coatings made from natural ingredients such as aloe vera and lemongrass extract have the potential to extend the shelf life of rice wrapped in leaves.*

***Objective**: This study aimed to determine the effectiveness of edible coating made from aloe vera and lemongrass extract applied to banana leaves and teak leaves as rice wrappers in extending the shelf life of rice.*

***Methods**: This research used a Post Test Only Control Group Design with four treatments and five replications. The treatments consisted of banana leaves with edible coating, teak leaves with edible coating, banana leaves without coating, and teak leaves without coating. Each treatment was replicated five times. The shelf life of the rice was observed organoleptically (color, odor, and texture) every 3 hours until the rice was considered unfit for consumption. Data were analyzed using the Friedman test, followed by the Wilcoxon Signed-Rank Test.*

***Results**: The longest shelf life was observed in the treatment using teak leaves coated with edible coating, with an average of 25.4 hours, representing an increase of 3.2 hours compared to uncoated teak leaves (22.2 hours), and the difference was statistically significant ($p = 0.039$). Meanwhile, the treatment using banana leaves with edible coating resulted in an average shelf life of 22 hours, only 2.2 hours longer than uncoated banana leaves (19.8 hours), and the difference was not statistically significant ($p = 0.138$).*

***Conclusion**: Teak leaves coated with aloe vera and lemongrass-based edible coating proved to be the most effective treatment in naturally extending the shelf life of rice compared to other treatments.*

***Keywords**: edible coating, teak leaves, banana leaves, shelf life.*