

ABSTRAK

APLIKASI *EDIBLE COATING* BERBAHAN DASAR UMBI MBOTE (*Xanthosoma sagittifolium* (L.) Schott) TERHADAP MUTU DAN KETAHANAN BUAH CABAI MERAH (*Capsicum annuum* L.) YANG DIINFEKSI JAMUR *Colletotrichum* sp.

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Buah cabai merah (*Capsicum annuum* L.) merupakan salah satu buah yang banyak dimanfaatkan sebagai bahan masakan, namun rentan mengalami kerusakan pasca panen akibat daya simpannya pendek dan mudah terserang jamur patogen *Colletotrichum* sp. penyebab penyakit antraknosa. Aplikasi *edible coating* berbahan dasar pati dinilai dapat memperpanjang daya simpan buah cabai merah dan aman dikonsumsi. Salah satu sumber pati yang dapat digunakan adalah umbi mbote (*Xanthosoma sagittifolium* (L.) Schott). Penelitian ini bertujuan untuk menentukan konsentrasi ekstrak umbi mbote yang efektif dalam mempertahankan mutu dan ketahanan buah cabai merah (*Capsicum annuum* L.) terhadap penyakit antraknosa. Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) dengan 6 taraf perlakuan konsentrasi ekstrak umbi mbote yaitu 0%, 1%, 2%, 3%, 4%, 5% dan diulang sebanyak 4 kali. Hasil ANOVA pada taraf 5% menunjukkan bahwa aplikasi *edible coating* umbi mbote berpengaruh nyata terhadap keparahan penyakit dengan konsentrasi ekstrak umbi mbote yang paling efektif adalah 2%. Aplikasi *edible coating* umbi mbote tidak efektif untuk mempertahankan mutu buah cabai merah selama masa penyimpanan sehingga diperlukan optimalisasi formula dengan menambahkan bahan aktif seperti antioksidan sebagai kombinasi untuk meningkatkan fungsi *edible coating*.

Kata Kunci: *Capsicum annuum* L., *Colletotrichum* sp., *Edible Coating*, Infeksi, *Xanthosoma sagittifolium* L.

ABSTRACT

APPLICATION OF EDIBLE COATING BASED ON MBOTE TUBERS (*Xanthosoma sagittifolium* (L.) Schott) ON THE QUALITY AND DURABILITY OF RED CHILLIES (*Capsicum annuum* L.) INFECTED WITH *Colletotrichum* sp.

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Red chili (*Capsicum annuum* L.) are widely used as a cooking ingredient, but they are prone to post-harvest damage due to their short shelf life and susceptibility to the pathogenic fungus *Colletotrichum* sp., which causes anthracnose disease. The application of an edible coating made from starch is considered to extend the shelf life of red chili and is safe for consumption. One source of starch that can be used is mbote tuber (*Xanthosoma sagittifolium* (L.) Schott). This study aims to determine the effective concentration of mbote tuber extract in maintaining the quality and resistance of red chili (*Capsicum annuum* L.) against anthracnose. This study used a Completely Randomized Design (CRD) with six treatment levels of mbote tuber extract concentration: 0%, 1%, 2%, 3%, 4%, and 5%, repeated four times. The ANOVA results at the 5% level showed that the application of edible coating from mbote tubers had a significant effect on disease severity, with the most effective concentration of mbote tuber extract being 2%. The application of edible coating from mbote tubers was not effective in maintaining the quality of red chili during storage, so optimization of the formula is needed by adding active ingredients such as antioxidants as a combination to enhance the function of the edible coating.

Keywords: *Capsicum annuum* L., *Colletotrichum* sp., Edible Coating, Infection, *Xanthosoma sagittifolium* L.