

Anti-Fungal Activity of Edible Film from Cassava Starch added with Cinnamon Powder and its Physicochemical Characteristics as Coffee Instant Packaging

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Abstract- Hydrocolloids, lipids, and other naturally digestible components are used to make edible film, a type of packaging. Cassava starch is a form of hydrocolloid that is used as the major component to create edible films with brittle properties so that culinary goods like coffee powder can be packaged. Dry items like coffee grounds enable fungus growth, lowering the quality of the coffee. In this study, the impact of cinnamon powder addition on edible film properties such as antifungals, the physicochemical (thickness, tensile strength, elongation, and moisture content), as well as the sensory of edible films will be examined. This study had a totally random design with two replications. The collected data were examined using a one-way ANOVA test, followed by Duncan's test. The results demonstrated that the diameter of the clear zone increased with increasing cinnamon powder concentration, indicating that the edible film's capacity to block fungal growth was also increasing. With the addition of cinnamon powder, the physicochemical



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properties of the edible film were considerably changed. The sensory test revealed that the addition of cinnamon powder significantly improved the aroma but not the flavor.

Keywords- Cassava starch, cinnamon powder, edible film, instant coffee, anti-fungal.