

ABSTRAK

Tujuan dari penelitian ini yaitu untuk mendapatkan produk *Dark Chocolate* yang memiliki nilai fungsional dan memiliki sifat organoleptik yang dapat diterima oleh konsumen serta untuk mengetahui pengaruh penambahan kayu manis dan sukrosa terhadap karakteristik *Dark Chocolate*. Manfaat penelitian ini yaitu untuk meningkatkan nilai fungsional *Dark chocolate* dengan penambahan kayu manis sebagai sumber senyawa flavonoid dan sinamaldehyd yang baik untuk kesehatan serta penambahan sukrosa agar produk dapat diterima oleh konsumen.

Rancangan percobaan yang digunakan adalah Rancangan Acak Kelompok (RAK) dengan pola faktorial 3x3 dengan ulangan sebanyak 3 kali. Faktor pertama yaitu konsentrasi kayu manis yang terdiri dari 3 taraf a1 (4%), a2 (5%), dan a3 (6%). Faktor kedua yaitu konsentrasi sukrosa yang terdiri dari 3 taraf b1 (6.5%), b2 (7.5%) dan b3 (8.5%). Respon pada penelitian ini terdiri dari respon organoleptik (rasa, aroma, tekstur dan *aftertaste*), respon kimia (kadar gula total), respon fisik (titik leleh) serta analisis untuk produk terpilih berupa analisis aktivitas antioksidan, analisis sinamaldehyd, dan kadar flavonoid total.

Hasil penelitian pendahuluan menunjukkan aktivitas antioksidan bahan baku *Dark Chocolate* IC_{50} sebesar 3949,4 $\mu\text{g/mL}$ dan kayu manis *powder* IC_{50} sebesar 13,6 $\mu\text{g/mL}$. Hasil penelitian utama menunjukkan bahwa konsentrasi kayu manis dan sukrosa serta interaksinya berpengaruh terhadap sifat organoleptik (rasa, aroma, tekstur, dan *aftertaste*) tetapi tidak berpengaruh terhadap titik leleh dan kadar gula total. Berdasarkan hasil uji organoleptik, titik leleh, dan kadar gula total didapatkan produk terpilih pada perlakuan a3b3 (konsentrasi kayu manis 6% dan konsentrasi sukrosa 8.5%) dengan aktivitas antioksidan IC_{50} sebesar 67,67 $\mu\text{g/mL}$, senyawa sinamaldehyd sebesar 7%, serta kadar flavonoid total sebesar 0.028%.

Kata kunci : Konsentrasi kayu manis, Konsentrasi Sukrosa, *Dark Chocolate*, flavonoid, sinamaldehyd, aktivitas antioksidan.

ABSTRACT

The purpose of this research was to get Dark Chocolate product which has functional value and has organoleptic properties that can be accepted by consumers and to know the effect of adding cinnamon and sucrose to Dark Chocolate characteristics. The benefits of this research are to increase the functional value of Dark chocolate with the addition of cinnamon as a source of flavonoids and sinamaldehyd compounds that are good for health and the addition of sucrose to make the product acceptable to consumers.

The experimental design used was Randomized Block Design (RBD) factorial design (3x3) with 3 replications. The first factor was cinnamon concentration consisting of 3 levels of a1 (4%), a2 (5%), and a3 (6%). The second factor is the concentration of sucrose which consists of 3 levels b1 (6.5%), b2 (7.5%) and b3 (8.5%). The response in this study consisted of organoleptic response (taste, flavor, texture and aftertaste), chemical response (total sugar content), physical response (melting point) and analysis for selected products in the form of analysis of antioxidant activity, cinamaldehyd analysis, and total flavonoid levels.

Preliminary research results showed the antioxidant activity of Dark Chocolate raw material IC_{50} was 3949.4 $\mu\text{g} / \text{mL}$ and cinnamon powder IC_{50} was 13.6 $\mu\text{g} / \text{mL}$. The main research results showed that the concentration of cinnamon and sucrose as well as its interactions influenced the organoleptic properties (taste, flavor, texture, and aftertaste) but did not affect to melting point and total sugar content. Based on the results of organoleptic test, melting point and total sugar content obtained by selected product on a3b3 treatment (6% cinnamon concentration and 8.5% sucrose concentration) with antioxidant activity IC_{50} was 67.67 $\mu\text{g} / \text{mL}$, Cinamaldehyd compound was 7%, and flavonoid total was 0.028%.

Keywords: Cinnamon concentration, Sucrose Concentration, Dark Chocolate, Flavonoids, Cinamaldehyd, Antioxidant activity.