

ABSTRAK

Cookies merupakan salah satu produk *bakery* yang digemari berbagai kalangan, namun umumnya rendah kandungan senyawa antioksidan sehingga perlu dikembangkan melalui penambahan bahan alami seperti kopi robusta (*Coffea canephora* L.) dan kayu manis (*Cinnamomum burmannii* (Ness) BL.). Penelitian ini bertujuan untuk mengetahui pengaruh penambahan kedua bahan tersebut terhadap karakteristik kimia dan sensoris *cookies*, serta menentukan formulasi terbaik yang sesuai SNI 2973:2022. Metode penelitian yang digunakan terdiri atas tiga formulasi perlakuan, yaitu C1 (penambahan bubuk kopi robusta 5%), C2 (penambahan bubuk kayu manis 5%), dan C3 (kombinasi kopi robusta 2,5% dan kayu manis 2,5%), masing-masing dengan tiga kali ulangan sehingga diperoleh sembilan satuan percobaan. Pengujian dilakukan terhadap kadar air, aktivitas antioksidan dengan metode DPPH, serta uji hedonik terhadap warna, aroma, rasa, dan tekstur oleh tiga puluh panelis tidak terlatih. Hasil penelitian menunjukkan kadar air *cookies* berkisar antara 4,18%–5,67%, sedangkan aktivitas antioksidan (IC50) berkisar antara 2.195–15.551 ppm. Formulasi C1 memiliki aktivitas antioksidan paling rendah akibat degradasi asam klorogenat selama proses pemanggangan, sedangkan formulasi C3 menunjukkan nilai pertengahan pada hampir seluruh parameter yang diuji. Formulasi C2 (kayu manis 5%) menghasilkan kadar air terendah, aktivitas antioksidan tertinggi, serta nilai kesukaan tertinggi pada seluruh parameter dibandingkan C1 (kopi robusta 5%) dan C3 (kombinasi). Penelitian ini menunjukkan bahwa penambahan bubuk kopi robusta dan bubuk kayu manis berpengaruh terhadap karakteristik kimia dan sensoris *cookies*. Formulasi *cookies* terbaik adalah formulasi C2, yaitu formulasi yang memenuhi syarat kadar air SNI 2973:2022 (maksimal 5%) pada nilai 4,18%, dengan aktivitas antioksidan sebesar 2.195 ppm, serta paling disukai di seluruh parameter pengujian hedonik dengan nilai kesukaan pada warna 4,30%, aroma 3,83%, rasa 4,23%, dan tekstur 3,83%.

Kata kunci: *cookies*, kopi robusta, kayu manis, aktivitas antioksidan, hedonik

ABSTRACT

*Cookies were a bakery product widely favored, but they generally contained low antioxidant levels, so natural ingredients such as robusta coffee powder (*Coffea canephora* L.) and cinnamon powder (*Cinnamomum burmannii* (Ness) BL.) were added to improve functional value. This study aimed to determine the effect of adding both ingredients on the chemical and sensory characteristics of cookies, and to determine the best formulation that complied with SNI 2973:2022. The method consisted of three formulations: C1 (5% robusta coffee powder), C2 (5% cinnamon powder), and C3 (2.5% robusta coffee and 2.5% cinnamon powder), each replicated three times, resulting in nine experimental units. The tests conducted included moisture content, antioxidant activity using the DPPH method, and a hedonic test for color, aroma, taste, and texture by thirty untrained panelists. The results showed that moisture content ranged from 4.18% to 5.67%, while antioxidant activity (IC50) ranged from 2,195 to 15,551 ppm. Formulation C1 had the lowest antioxidant activity due to chlorogenic acid degradation during baking, while C3 showed intermediate values for most parameters tested. Formulation C2 (5% cinnamon) produced the lowest moisture content, the highest antioxidant activity, and the highest preference scores for all parameters compared with C1 (5% robusta coffee) and C3 (combination). These results indicated that the addition of robusta coffee powder and cinnamon powder affected the chemical and sensory characteristics of cookies. The best cookie formulation was C2, which met the SNI 2973:2022 moisture content requirement (maximum 5%) at a value of 4.18%, had an antioxidant activity of 2,195 ppm, and was the most preferred across all hedonic test parameters, with preference scores of 4.30 for color, 3.83 for aroma, 4.23 for taste, and 3.83 for texture.*

Keywords: cookies, robusta coffee, cinnamon, antioxidant activity, hedonic