

## RINGKASAN

Kopi *mix* gula kelapa dengan penambahan minyak sawit merah merupakan alternatif minuman fungsional tinggi antioksidan. Penelitian ini mengkaji tentang sifat fisik dan sensoris kopi *mix* gula kelapa pada berbagai variasi suhu dan lama penyimpanan. Penelitian ini bertujuan untuk: 1. mengetahui pengaruh variasi suhu penyimpanan terhadap karakteristik fisik dan sensoris kopi *mix* gula kelapa. 2. mengetahui pengaruh lama penyimpanan terhadap karakteristik fisik dan sensoris kopi *mix* gula kelapa. 3. menentukan kombinasi perlakuan terbaik suhu dan lama penyimpanan berdasarkan karakteristik fisik dan sensoris kopi *mix* gula kelapa.

Penelitian ini menggunakan Rancangan Acak Kelompok (RAK). Faktor yang diteliti meliputi variasi suhu penyimpanan yang terdiri atas S1= suhu ruang (27-30°C); S2= suhu *refrigerator* (10°C); dan S3= suhu *freezer* (-20°C) dan lama penyimpanan yang terdiri atas L0= 0 bulan; L1= 1,5 bulan; dan L2= 3 bulan. Data variabel fisik dan sensoris dianalisis dengan menggunakan analisis ragam (uji F) pada taraf 5%. Apabila berbeda nyata dilanjutkan dengan uji *Duncan's Multiple Range Test* (DMRT) pada taraf 5%.

Hasil penelitian menunjukkan bahwa peningkatan suhu penyimpanan menyebabkan penurunan aroma, rasa pahit, dan *flavor* kopi *mix* gula kelapa makin meningkat. Makin lama penyimpanan maka intensitas kecerahan (L) kopi *mix* gula kelapa makin gelap, aroma dan rasa pahit kopi *mix* gula kelapa makin menurun, serta *off-flavor* kopi *mix* gula kelapa makin meningkat. Kombinasi perlakuan terbaik berdasarkan uji indeks efektivitas adalah kopi *mix* gula kelapa yang disimpan pada suhu *freezer* (-20°C) selama 1,5 bulan (S3L1). Karakteristik fisik dan sensoris produk yaitu: intensitas kecerahan (L) : 28,79; aroma agak kuat (4,20); rasa manis agak manis (4,48); rasa pahit agak pahit (3,76); *flavor* agak enak (4,48); *off-flavor* tidak kuat (2,40); kesukaan aroma agak suka (4,32); kesukaan rasa agak suka (4,24); kesukaan *flavor* agak suka (4,40); dan kesukaan keseluruhan suka (4,56).

## SUMMARY

*Coconut sugar-mixed coffee with the addition of red palm oil is an alternative functional drink that are high in antioxidants. This research examines about physical and sensory characteristics of coconut sugar-mixed coffee in various temperature and storage duration. This study aims to: 1. knowing the effect of storage temperature variations towards physical and sensory characteristics of coconut sugar-mixed coffee. 2. knowing the effect of storage durations toward physical and sensory characteristics of coconut sugar-mixed coffee. 3. determine the best combination of temperature and storage duration based on physical and sensory characteristics of coconut sugar-mixed coffee.*

*This research using a Randomized Block Design (RBD). Factors studied including variations in storage temperature consisting of S1 = room temperature (27-30 °C); S2 = refrigerator temperature (10 °C); and S3 = freezer temperature (-20 °C) and storage duration consisting of L1 = 0 months; L2 = 1.5 months; L3 = and 3 months. The data on physical and sensory variables were analyzed using analysis of variance (F test) at the level of 5%. If it is significantly different, the test will be continued with the Duncan Multiple Range Test (DMRT) at the level of 5%.*

*The results showed that the increase in storage temperature can caused a decrease in aroma, bitter taste, and flavor of coconut sugar-mixed coffee increased. The longer the storage duration, the brightness intensity (L) gets darker, the aroma and bitter taste decreases, and the off-flavor of coconut sugar-mixed coffee. The results of this research showed that the best combination treatment based on the effectiveness index test was coconut sugar-mixed coffee stored at freezer temperature (-20 °C) for 1.5 months (S3L1). The physical and sensory characteristic of product was: the intensity of the brightness value (L): 28.79, the aroma slightly strong (4.20); the sweet taste slightly sweet (4.48); the bitter taste slightly bitter (3.76); the flavor slightly delicious (4.48); the off-flavor not strong (2.40); the aroma preference slightly like (4.32); the taste preference slightly like (4.24); the flavor preference slightly like (4.40); and the overall preference like (4.56).*