

ABSTRACT

Gita Martya Arista. B.1910742. Chemical and Sensory Characteristics of Robusta Coffee Jelly Candy (*Coffea Canephora* P.) with Proportion of Sucrose and Isomalt. Under the guidance of Distya Riski Hapsari and Raden Siti Nurlaela.

Jelly candy is a type of non-crystalline candy that is transparent/clear and has a certain degree of chewiness. Robusta coffee has a high content of caffeine, ferulic acid, chlorogenic acid and caffeic acid which are useful as antioxidants. Isomalt is an artificial sweetener that can partially replace sucrose because it has similar properties to sucrose. This study aims to determine the effect of the proportion of sucrose and isomalt on the chemical and sensory characteristics of robusta coffee jelly candy and find the selected jelly candy formulation. This study used a completely randomized design (CRD) with one factor, namely the ratio of sucrose and isomalt (100%: 0%), (90%: 10%), (80%: 20%), and (70%: 30%). Product analysis included chemical analysis of moisture content, ash content, reducing sugar content, sucrose content and sensory and hedonic quality tests. Selected treatments were then tested for antioxidant activity. Data analysis used was Analysis of Variance (ANOVA) with Duncan's further test at 95% confidence interval. The ratio of sucrose and isomalt affects the water content, reducing sugar content, sucrose content, as well as the sensory quality of color, sweetness and bitterness. The results showed that the selected formulation of robusta coffee jelly candy has a texture sensory quality towards chewy, dark brown in color, has an aroma towards typical coffee, has a taste towards sweetness and towards not bitter and in the hedonic test parameters of texture, color, aroma, sweetness, bitter taste and overall which leads to liking, has a moisture content of 25.77%, ash content of 1.84%, reduced sugar content of 11.68%, sucrose content of 34.45% and antioxidant activity of 74.53%.

Keywords: Robusta coffee, jelly candy, sucrose, isomalt.

ABSTRAK

Gita Martya Arista. B.1910742. Karakteristik Kimia dan Sensori Permen *Jelly* Kopi Robusta (*Coffea canephora* P.) dengan Proporsi Sukrosa dan Isomalt. di bawah bimbingan Distya Riski Hapsari dan Raden Siti Nurlaela.

Permen *jelly* merupakan salah satu permen non kristalin yang memiliki ciri khas transparan/bening dengan tingkat kekenyalan tertentu. Kopi robusta mempunyai kandungan asam klorogenat yang tinggi sehingga bermanfaat sebagai antioksidan. Isomalt merupakan pemanis buatan yang dapat menggantikan sebagian sukrosa karena memiliki kemiripan sifat dengan sukrosa. Penelitian bertujuan mengetahui pengaruh proporsi sukrosa dan isomalt terhadap karakteristik kimia dan sensoris permen *jelly* kopi robusta dan mencari formulasi permen *jelly* terpilih. Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) dengan satu faktor yaitu proporsi sukrosa dan isomalt (100%: 0%), (90%: 10%), (80%: 20%), dan (70%: 30%). Analisis produk meliputi analisis kimia kadar air, kadar abu, kadar gula reduksi, kadar sukrosa serta dilakukan uji mutu sensoris dan hedonik. Perlakuan terpilih kemudian dilakukan uji aktivitas antioksidan. Analisis data yang digunakan yaitu *Analysis of Variance* (ANOVA) dengan uji lanjut Duncan pada selang kepercayaan 95%. Perbandingan sukrosa dan isomalt mempengaruhi kadar air, kadar gula reduksi, kadar sukrosa, serta mutu sensoris warna, rasa manis dan rasa pahit. Hasil penelitian menunjukkan bahwa permen *jelly* kopi robusta formulasi terpilih memiliki mutu sensoris tekstur mengarah ke kenyal, berwarna kearah coklat pekat, memiliki aroma mengarah ke khas kopi, memiliki rasa kearah manis dan kearah tidak pahit serta pada uji hedonik parameter tekstur, warna, aroma, rasa manis, rasa pahit dan *overall* yang mengarah ke suka, memiliki kadar air 25,77%, kadar abu 1,84%, kadar gula reduksi 11,68%, kadar sukrosa 34,45% dan aktivitas antioksidan sebesar 74,53%.

Kata kunci: Kopi Robusta, Permen *Jelly*, Sukrosa, Isomalt.