

ABSTRACT

THE EFFECT OF CITRIC ACID AND WHITE CRYSTAL SUGAR ADDITION ON THE CHEMICAL AND SENSORY PROPERTIES OF COFFEE SKIN JAM

By

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Coffee skin was an agricultural by-product with potential to be processed into value-added food products, such as jam. Coffee skin can be made into jam because it contains pectin. The pectin content in coffee skin is 27,20-57,24%. This study aimed to determine the effects of citric acid and white crystal sugar addition, as well as their interaction, on the chemical and sensorial characteristics of coffee skin jam. The research was arranged in a Completely Randomized Block Design (CRBD) with two factors and three replications. The first factor was citric acid addition with two concentration levels: 0.5% (A1) and 0.9% (A2). The second factor was white crystal sugar addition with four concentration levels: 40% (G1), 50% (G2), 60% (G3), and 70% (G4). Data homogeneity was tested using the Bartlett test, data additivity with the Tuckey test, followed by analysis of variance (ANOVA), and further analysis using the Honestly Significant Difference (HSD) test at 5% significance level. Observed parameters included moisture content, total soluble solids, spreadability, color (L^* , a^* , b^*), as well as sensory attributes (color score, taste score, texture score), and overall liking (hedonic test). The results showed that the interaction between citric acid and white crystal sugar significantly affected moisture content, brightness value (L^*), red-green value (a^*), yellow-blue value (b^*), color score, texture score, and overall acceptance.

Keywords: citric acid, coffee skin, food chemistry, jam, white crystal sugar

ABSTRAK

PENGARUH PENAMBAHAN ASAM SITRAT DAN GULA KRISTAL PUTIH TERHADAP SIFAT KIMIA DAN SENSORI SELAI KULIT KOPI

Oleh

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Kulit kopi merupakan hasil samping pertanian yang berpotensi untuk diolah menjadi produk pangan bernilai tambah, seperti selai. Kulit kopi dapat dibuat menjadi selai karena memiliki kandungan pektin. Kandungan pektin di dalam kulit kopi sebesar 27,20-57,24%. Penelitian ini bertujuan untuk mengetahui pengaruh penambahan asam sitrat dan gula kristal putih, serta interaksi keduanya terhadap sifat kimia dan sensori selai kulit kopi. Penelitian disusun menggunakan Rancangan Acak Kelompok Lengkap (RAKL) dengan dua faktor dan tiga ulangan. Faktor pertama adalah penambahan asam sitrat dengan 2 taraf konsentrasi 0,5% (A1) dan 0,9% (A2) dan faktor kedua adalah penambahan gula kristal putih dengan 4 taraf konsentrasi 40% (G1), 50% (G2), 60% (G3), dan 70% (G4). Kehomogenan data duji dengan uji Bartlett, penambahan data dengan uji Tuckey, kemudian data dianalisis ragam untuk mengetahui pengaruh antar perlakuan dan analisis lebih lanjut dengan Beda Nyata Jujur (BNJ) Taraf 5%. Parameter yang diamati meliputi kadar air, total padatan terlarut, daya oles, warna (L^* , a^* , b^*) serta atribut sensori (skor warna, skor rasa, skor tekstur) dan penerimaan keseluruhan tingkat kesukaan. Hasil penelitian menunjukkan bahwa interaksi penambahan asam sitrat dan gula kristal putih berpengaruh terhadap kadar air, nilai warna (L^* , a^* , b^*), skor warna, skor tekstur dan penerimaan keseluruhan.

Kata kunci: asam sitrat, gula kristal putih, kimia pangan, kulit kopi, selai