

Karakteristik Fisik dan Kimia Minuman Serbuk Serai dan Apel Malang
Physical and Chemical Characteristics of The Lemongrass and Malang's Apple Powder Drink

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Abstrak

Imunitas tubuh manusia dapat ditingkatkan melalui makanan dan minuman. Produk minuman pada umumnya memiliki umur simpan yang pendek maka perlu dibuat menjadi minuman serbuk. Minuman yang sedang populer berasal dari rempah karena rempah mengandung antioksidan yang dapat menaikkan imunitas tubuh. Untuk mempertahankan senyawa antioksidan yang ada, diperlukan adanya bahan pelapis. Penelitian ini bertujuan untuk mempelajari pengaruh jenis pelapis dan suhu pengeringan terhadap mutu minuman serbuk serai dan apel malang. Penelitian menggunakan desain Rancangan Acak Lengkap dengan dua faktor dan dua ulangan. Faktor pertama adalah jenis pelapis dengan 3 taraf (maltodekstrin, dekstrin, gum arab). Faktor kedua adalah suhu pengering dengan 3 taraf (40°C, 45°C, 50°C). Data dianalisis dengan uji ANAVA dan uji lanjut duncan jika perlakuan berbeda nyata. Mutu minuman serbuk ditentukan berdasarkan densitas kamba, kelarutan, stabilitas, aktivitas antioksidan, vitamin C, kadar air, kadar abu, dan aktivitas air. Hasil terbaik berdasarkan kadar antioksidan yang tinggi yaitu perlakuan jenis pelapis dekstrin dengan suhu pengeringan 45°C. Karakteristik produk yaitu, kelarutan 0.96 detik, densitas kamba 0.58 gr/ml, stabilitas 89.19%, kadar air 2.38%, kadar abu 1.21%, vitamin C 70.22%, persen inhibisi antioksidan 50.97%, kadar IC₅₀ 1.29, dan aktivitas air 0.50.

Kata Kunci: Apel, Minuman Serbuk, Serai

Abstract

The body's immunity in humans can be increased through food and drink. Beverage products generally have a short shelf life, so they need to be made into powdered drinks. Spices are known to contain antioxidants that are able to capture free radicals so that they can increase the body's immunity. To maintain the existing volatile compounds, it is necessary to have a coating material. This study aimed to study the effect of drying type and drying temperature on the quality of lemongrass powder and Malang's apples. This study used a Completely Randomized Design with two factors and two replications. The first factor was the 33

type of coating which consists of 3 levels (maltodextrin, dextrin, gum arabic). The second factor was the drying temperature which consists of 3 levels (40°C, 45°C, 50°C). The data were analyzed statistically using the ANOVA test. If the treatment shows any significant differences, then Duncan's test is carried out as a follow-up test. The quality of the lemongrass powder and the Malang's apple powder was determined based on the physical quality (kamba density, solubility and stability); chemical quality (antioxidant activity, vitamin C, moisture content, ash content, water activity); and organoleptic quality in the form of powder and steeping (hedonic and hedonic quality parameters of color, aroma, appearance and taste). The best results in research on lemongrass powder and Malang's apples were using a dextrin coating with a drying temperature of 45°C. The test results obtained were 0.96 seconds solubility, 0.58 gr/ml kamba density, 89.19% stability, 2.38% water content, 1.21 ash content. %, vitamin C 70.22%, antioxidant inhibition level 50.97%, IC₅₀ content 1.29, and water activity 0.50

Keywords: *Apple, Lemongrass, Powder Drink.*