

ABSTRACT

THE EFFECT OF THE RATIO OF CARROT JUICE AND PINEAPPLE JUICE ON THE PHYSICAL, SENSORY, CHEMICAL CHARACTERISTICS, AND PRODUCTION COST OF CARROT JELLY DRINKS

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Carrots (*Daucus carota*) are known to be vegetables rich in vitamin A, however they have a pungent aroma that came from their *isocoumarin* and *terpenoid* compound content, which limits their consumption. Pineapple (*Ananas comosus*), a tropical fruit rich in nutritional value including vitamins C, A, and various minerals, had a strong and distinctive aroma and taste that helped mask the 'bitter' aroma of carrots. This study aimed to determine the effect of the ratio of carrot juice and pineapple juice (*Ananas comosus*) on the physical, chemical, and sensory characteristics of carrot jelly drinks. The study used a completely randomized design with carrot juice and pineapple juice formulations of (100%:0%), (90%:10%), (80%:20%), (70%:30%), (60%:40%), (50%:50%). The parameters observed included viscosity, pH, color, taste, texture, and overall acceptance. The results showed that the ratio of carrot juice to pineapple juice had a significant effect on viscosity, color, texture, flavour and overall acceptance, but did not affect pH. The best treatment was obtained from a ratio of 70% carrot juice and 30% pineapple juice, with a viscosity of 19.25 dPa.s, pH 5.50, color score 2.00, texture 3.13, flavour 3.00, and overall acceptance 3.58. Production costs were estimated at Rp 3,160 per cup.

Keywords: carrot, pineapple, jelly drink, characteristics, product diversification

ABSTRAK

PENGARUH PERBANDINGAN SARI WORTEL DAN SARI BUAH NANAS TERHADAP KARAKTERISTIK FISIK, SENSORI, KIMIA, DAN HARGA POKOK PRODUKSI MINUMAN JELLY WORTEL

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Wortel (*Daucus carota*) dikenal sebagai sayuran yang kaya akan vitamin A, namun memiliki aroma yang tajam yang berasal dari kandungan isokumarin dan senyawa terpenoidnya, yang membatasi konsumsi sayuran ini. Nanas (*Ananas comosus*), buah tropis yang kaya akan nilai gizi termasuk vitamin C, A, dan berbagai mineral, memiliki aroma dan rasa yang kuat dan khas yang membantu menyamarkan aroma 'pahit' wortel. Studi ini bertujuan untuk menentukan pengaruh perbandingan jus wortel dan jus nanas (*Ananas comosus*) terhadap karakteristik fisik, kimia, dan sensorik minuman jelly wortel. Penelitian ini menggunakan desain acak lengkap dengan formulasi jus wortel dan jus nanas sebesar (100%:0%), (90%:10%), (80%:20%), (70%:30%), (60%:40%), (50%:50%). Parameter yang diamati meliputi viskositas, pH, warna, rasa, tekstur, dan penerimaan keseluruhan. Hasil menunjukkan bahwa perbandingan jus wortel dan jus nanas memiliki pengaruh signifikan terhadap viskositas, warna, tekstur, flavour dan penerimaan keseluruhan, tetapi tidak mempengaruhi pH. Perlakuan terbaik diperoleh dari perbandingan 70% jus wortel dan 30% jus nanas, dengan viskositas 19,25 dPa.s, pH 5,50, skor warna 2,00, tekstur 3,13, flavour 3,00, dan penerimaan keseluruhan 3,58. Biaya produksi diperkirakan sebesar Rp 3.160 per cup.

Kata kunci: wortel, nanas, minuman jelly, karakteristik, diversifikasi produk