

Sitti Sulfina Hadiyanti, NPM 200331100115, Pengaruh Lama dan Suhu Pengeringan Terhadap Karakteristik Minuman Fungsional Berbasis Buah Salak (*Salacca zalacca*), Dibawah Bimbingan **R. Arief Firmansyah, S. TP., M. Si.** dan **Dr. Askur Rahman, S. TP., MP.**

ABSTRAK

Buah salak (*Salacca zalacca*) merupakan salah satu buah tropis yang memiliki kandungan senyawa bioaktif sehingga berpotensi dikembangkan menjadi minuman fungsional. Salah satu faktor yang memengaruhi mutu produk minuman fungsional adalah proses pengeringan. Penelitian ini bertujuan untuk mengetahui pengaruh lama dan suhu pengeringan terhadap karakteristik minuman fungsional berbasis buah salak serta menentukan kombinasi perlakuan terbaik. Penelitian menggunakan Rancangan Acak Lengkap (RAL) pola faktorial yang terdiri atas dua faktor, yaitu lama pengeringan (5 jam dan 7 jam) dan suhu pengeringan (60°C, 70°C, dan 80°C), sehingga diperoleh enam kombinasi perlakuan dengan tiga kali ulangan. Parameter yang diamati meliputi kadar air, pH, warna (L^* , a^* , dan b^*) menggunakan *Colour Reader*, serta uji sensoris hedonik terhadap aroma, rasa, dan warna. Data dianalisis menggunakan *Two-way Analysis of Variance* (ANOVA) pada taraf nyata 5% dan dilanjutkan dengan *Duncan Multiple Range Test* (DMRT) apabila terdapat perbedaan nyata. Hasil penelitian menunjukkan bahwa lama pengeringan berpengaruh nyata terhadap kadar air, pH, dan parameter warna (L^* , a^* , dan b^*). Suhu pengeringan berpengaruh sangat nyata terhadap karakteristik warna (L^* , a^* , dan b^*), namun tidak berpengaruh nyata terhadap nilai pH. Interaksi antara lama dan suhu pengeringan memberikan pengaruh sangat nyata terhadap nilai pH serta parameter warna. Semakin lama waktu pengeringan dan semakin tinggi suhu pengeringan menyebabkan kadar air menurun, nilai L^* , a^* , dan b^* semakin rendah sehingga warna produk menjadi lebih gelap akibat proses pencoklatan selama pengeringan. Hasil uji hedonik menunjukkan bahwa perlakuan memberikan pengaruh sangat nyata terhadap tingkat kesukaan panelis pada atribut aroma, rasa, dan warna ($p < 0,05$). Kombinasi perlakuan T2S2 (lama pengeringan 7 jam dan suhu 70°C) merupakan perlakuan terbaik karena menghasilkan karakteristik fisik, kimia, dan sensoris yang paling baik serta memperoleh tingkat penerimaan panelis tertinggi.

Kata kunci: *Buah salak, Minuman fungsional, Lama, Suhu, Warna, Uji hedonik.*

Sitti Sulfina Hadiyanti, NPM 200331100115, *The Effect of Drying Time and Temperature on the Characteristics of Functional Beverage Based on Snake Fruit (Salacca zalacca)*, Under the supervision of **R. Arief Firmansyah, S. TP., M. Si. and Dr. Askur Rahman, S. TP., MP.**

ABSTRACT

Snake fruit (*Salacca zalacca*) is one of the tropical fruits containing various bioactive compounds, making it a potential raw material for the development of functional beverages. One of the factors affecting the quality of functional beverage products is the drying process. This study aimed to determine the effect of drying time and temperature on the characteristics of a snake fruit-based functional beverage and to identify the best treatment combination. The experiment employed a Completely Randomized Design (CRD) with a 2×3 factorial arrangement, consisting of two factors: drying time (5 and 7 hours) and drying temperature (60°C, 70°C, and 80°C). Six treatment combinations were obtained, each replicated three times. The observed parameters included moisture content, pH, color characteristics (L^* , a^* , and b^*) measured using a Color Reader, and hedonic sensory evaluation covering aroma, taste, and color. Data were analyzed using Two-way Analysis of Variance (ANOVA) at a 5% significance level, followed by Duncan's Multiple Range Test (DMRT) when significant differences were detected. The results showed that drying time had a significant effect on moisture content, pH, and color parameters (L^* , a^* , and b^*). Drying temperature significantly affected the color parameters (L^* , a^* , and b^*), but had no significant effect on pH. The interaction between drying time and drying temperature significantly influenced pH and color characteristics. Increasing drying time and temperature reduced the moisture content and decreased the L^* , a^* , and b^* values, indicating a darker product color due to browning reactions occurring during the drying process. The hedonic test demonstrated that the treatments significantly affected panelists' preferences for aroma, taste, and color ($p < 0.05$). The T2S2 treatment (7 hours of drying at 70°C) was identified as the best treatment, as it produced the most favorable physical, chemical, and sensory characteristics and received the highest level of panelist acceptance.

Keywords: Snake fruit, Functional beverage, Drying, Drying, Color, Hedonic test.