

**Pengaruh Substitusi Tepung dan Chips Ubi Jalar Ungu Terhadap
Karakteristik Fisik, Kimia, dan Sensorik Cookies**
*The Effect of Substituting Flour and Purple Sweet Potato Chips on the Physical,
Chemical, and Sensory Characteristics of Cookies*
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ABSTRACT

Cookies are widely consumed food products with potential for development through the utilization of local food ingredients. This study aimed to analyze the effects of purple sweet potato flour substitution, purple sweet potato chip addition, and their interaction on the physical, chemical, and sensory characteristics of cookies. The study employed a factorial Completely Randomized Design (CRD) with two factors: factor A, consisting of purple sweet potato flour substitution at 5%, 10%, and 15%, and factor B, consisting of purple sweet potato chip addition at 5%, 10%, and 15%, along with a control treatment consisting of 100% wheat flour without chips, with two replications. The observed parameters included color (L, a, b), texture, moisture content, ash content, antioxidant activity, and sensory characteristics including color, aroma, taste, and texture. Data were analyzed using ANOVA at a 95% confidence level, followed by Duncan's test when significant differences were observed. The results showed that purple sweet potato flour substitution, chip addition, and their interaction significantly affected several physical, chemical, and sensory parameters. Treatment A3B3 produced L, a, and b values of 51.58, 12.04, and 15.19, respectively, texture of 11.30 N, moisture content of 3.08%, ash content of 1.06%, antioxidant activity of 65.67%, color hedonic score of 4.00, and color hedonic quality score of 4.12. This study provides a reference for the development and diversification of cookies based on local food ingredients. The best treatment was A3B3, consisting of 15% purple sweet potato flour substitution and 15% purple sweet potato chip addition.

Keywords: cookies, purple sweet potato flour, purple sweet potato chips, physical properties, chemical properties, sensory properties.