Study on the Production of Cookies with Soybean Flour Substitution as a Snack Source of Iron

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ABSTRACT

The results of the 2018 Riskesdas data state that 26.8% of women aged 5-14 years experience anemia and in women aged 15-24 years is 84.6%, meaning that in Indonesia there are about 3 out of 10 adolescent girls suffering from anemia. Anemia is a condition where the concentration of hemoglobin or the number of red blood cells is lower than normal. The consequences of long-term anemia in adolescent girls are increased risk of bleeding, abortion, giving birth to low-weight babies, and congenital defects. One effort to meet iron needs can be obtained from foods that contain iron. Soy bean flour can be utilized to make iron source foods. This study aims to evaluate the iron content of cookies, organoleptic characteristics, the best treatment, nutritional composition of the best treatment cookies, comparison with SNI 2973 standard: 2022, information on the nutritional value of cookies, claims as a snack in accordance with BPOM from making cookies substituted with soybean flour as an iron source snack food, and comparing with commercial products. The research method used a completely randomized design (CRD) with six formulations and four repetitions with variations in the ratio of wheat flour and soy bean flour, namely P1 (7:13), P2 (6:14), P3 (5:15), P P4 (4:16), P5 (3:17), and P6 (2:18). Based on the results of the study, the best treatment P6 was obtained. The chemical test results of the best treatment cookies (P6) in 100 grams of product contained 468.8 kcal of energy, 18.13% protein, 20.72% fat, 52.45% carbohydrate, 3.59% ash, 5.09% water, and 3.53 mg iron. The portion for 1 meal is 5 pieces (50 grams), the nutritional content of cookies in 5 pieces (50 grams) is 234.36 kcal, protein 9.06 grams, fat 10.36 grams, carbohydrates 26.22 grams, and iron 1.75 mg.

Keywords: Soy bean flour, cookies, anemia, iron.