

ABSTRAK
FORMULASI BISKUIT SUMBER PROVITAMIN A BERBASIS TEPUNG
KOMPOSIT LABU KUNING (*Cucurbita moschata*) DAN DAUN KELOR
(*Moringa oleifera*) SEBAGAI MP-ASI BADUTA USIA 9-24 BULAN

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Latar Belakang : Pencegahan Kekurangan Vitamin A dapat melalui peningkatan keragaman pangan kaya vitamin A. Penggunaan bahan alami seperti labu kuning dan daun kelor dapat menjadi alternatif makanan selingan pada baduta usia 9-24 bulan. Penelitian bertujuan mengetahui pengaruh proporsi labu kuning dan daun kelor terhadap kandungan beta karoten, dan mutu hedonik biskuit.

Metode : Penelitian eksperimental dengan Rancangan Acak Kelompok menggunakan 3 formula dengan 6 kali ulangan. Terdapat 3 perlakuan yaitu masing-masing perbandingan tepung terigu : tepung labu kuning : tepung daun kelor yaitu G1 = 20% : 65% : 15% ; G2 = 20% : 70% : 10% ; G3 = 20% : 75% : 5%. Analisis statistik kandungan beta karoten menggunakan ANOVA, sedangkan mutu hedonik menggunakan uji Friedman. Apabila terdapat pengaruh nyata ($p < 0,05$), dilanjutkan dengan uji DMRT. Penentuan formula terbaik menggunakan uji indeks efektivitas De Garmo.

Hasil : Proporsi tepung labu kuning dan tepung daun kelor berpengaruh nyata ($p \text{ value} < 0,05$) terhadap mutu hedonik rasa, warna, dan aroma, namun tidak berpengaruh nyata ($p \text{ value} > 0,05$) terhadap mutu hedonik tekstur dan kandungan beta karoten biskuit. Formula terbaik biskuit (G3) mengandung energi 373,94 kkal, protein 6,96 gram, lemak 2,69 gram, karbohidrat 383,60 gram, kadar air 4,05%, kadar abu 0,05%, dan beta karoten 1185,77 RE.

Kesimpulan : *Serving size* biskuit yaitu 10 gram yang mengandung energi 38,36 kkal, protein 0,70 gram, lemak 0,27 gram, karbohidrat 37,39 gram, dan beta karoten 118,58 µg RE. Konsumsi biskuit memenuhi kebutuhan beta karoten sebesar 296,45% dari kebutuhan selingan sehari.

Kata kunci : Biskuit, Labu Kuning, Daun Kelor, Beta Karoten

ABSTRACT
FORMULATION OF PROVITAMIN A-BASED BISCUITS MADE FROM
COMPOSITE FLOUR OF PUMPKIN (*Cucurbita moschata*) AND
MORINGA LEAVES (*Moringa oleifera*) AS MP-ASI FOR CHILDREN
AGED 9-24 MONTHS

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Background: Prevention of vitamin A deficiency can be achieved by increasing the diversity of foods rich in vitamin A. The consumption of natural ingredients such as pumpkin and moringa leaves can be an alternative snack for children aged 9-24 months. The study aims to determine the effect of the proportion of pumpkin and moringa leaves on beta-carotene content and the hedonic quality of biscuits.

Method : The experimental study used a randomized group design with three formulas and six replicates. There were 3 treatments, each with a different ratio of wheat flour : pumpkin flour : moringa leaf flour, namely G1 = 20% : 65% : 15%; G2 = 20% : 70% : 10%; G3 = 20% : 75% : 5%. Statistical analysis of beta-carotene content was performed using ANOVA, while hedonic quality was assessed using the Friedman test. If a significant effect ($p < 0.05$) was detected, the DMRT test was conducted. The best formula was determined using the De Garmo effectiveness index test.

Results : The proportions of pumpkin flour and moringa leaf flour had a significant effect (p value < 0.05) on the hedonic quality of taste, color, and aroma, but did not have a significant effect (p value > 0.05) on the hedonic quality of texture and beta-carotene content of the biscuits. The best biscuit formula (G3) contains 373.94 kcal of energy, 6.96 grams of protein, 2.69 grams of fat, 383.60 grams of carbohydrates, 4.05% moisture content, 0.05% ash content, and 1185.77 RE of beta-carotene.

Conclusion : Serving size of biscuits is 10 grams which contains 38.36 kcal energy, 0.70 grams protein, 0.27 grams fat, 37.39 grams carbohydrate, and 118.58 μ g RE beta carotene. Consumption of biscuits fulfills the beta carotene requirement of 296.45% of the daily intake.

Keywords: Biscuit, Pumpkin, Moringa leaves, Beta-carotene