

Analisis Energi, Zat Gizi Makro, Zat Besi, dan Daya Terima Susu Wijen Kurma Sebagai Alternatif Pencegah Anemia Defisiensi Besi

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ABSTRAK

Latar Belakang: Susu nabati adalah salah satu bentuk produk nabati yang saat ini terus mengalami pertumbuhan. Susu wijen kurma menjadi salah satu inovasi produk sumber protein nabati yang kaya kandungan zat besi, sehingga dapat menjadi alternatif solusi untuk mencegah anemia defisiensi besi, seperti pada vegetarian yang hanya mengonsumsi sumber nabati.

Tujuan: Penelitian ini bertujuan untuk menganalisis kandungan energi, zat gizi makro, zat besi, dan daya terima pada susu wijen kurma.

Metode: Penelitian eksperimental menggunakan Rancangan Acak Lengkap (RAL) berupa perbandingan antara susu wijen dengan sari kurma; F1 (70:30), F2 (60:40), dan F3 (50:50). Kandungan energi ditentukan dengan metode *Atwater*, protein dengan metode *Mikro Kjeldahl*, lemak dengan metode *Soxhlet* modifikasi *Wilbull*, karbohidrat *by difference*, zat besi dengan metode *Atomic Absorption Spectroscopy*, daya terima dengan uji hedonik 4 skala, dan formulasi terbaik dengan *multiattribute decision using compensatory model additive weighting technique*. Seluruh kandungan gizi dianalisis dengan uji ANOVA, sementara daya terima menggunakan uji *Kruskal-Wallis*.

Hasil: Susu wijen kurma dalam 100 mL mengandung energi 78-89 kkal, protein 2,3-2,9%, lemak 1,5-2%, karbohidrat 12-17%, dan zat besi 5-10 mg. Terdapat perbedaan signifikan kandungan energi ($p < 0,001$), protein ($p = 0,001$), lemak ($p = 0,008$), karbohidrat ($p < 0,001$), zat besi ($p = 0,003$), serta daya terima pada aspek warna ($p < 0,001$), aroma ($p = 0,004$), dan rasa ($p < 0,001$) pada setiap formulasi susu wijen kurma. Formulasi susu wijen kurma terbaik merupakan F3 (50:50) yang mengandung energi 89,01 kkal, protein 2,30%, lemak 1,51%, karbohidrat 17,01%, dan zat besi 5,39 mg.

Simpulan: Kandungan energi dan karbohidrat susu wijen kurma meningkat, sementara kandungan protein, lemak, dan zat besi menurun seiring dengan semakin banyaknya komposisi sari kurma. Formulasi susu wijen kurma terbaik merupakan F3 (50:50).

Kata kunci: Susu nabati, biji wijen, kurma, zat gizi, anemia

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Analysis of Energy, Macronutrients, Iron, and Acceptability of Date Sesame Milk as an Alternative to Preventing Iron Deficiency Anemia

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ABSTRACT

Background: Plant-based milk is one of the plant-based products that is currently continuing to grow. Date sesame milk is an innovative product source of vegetable protein that is rich in iron, so it can be an alternative solution to prevent iron deficiency anemia, such as for vegetarians who only consume vegetable sources.

Objective: This study aims to analyze the energy content, macronutrients, iron, and acceptability of date sesame milk.

Methods: Experimental research used a Completely Randomized Design (CRD) in the form of a comparison between sesame milk and date juice; F1 (70:30), F2 (60:40), and F3 (50:50). Energy content was determined by the Atwater method, protein used the Micro Kjeldahl method, fat used the Wilbull modified Soxhlet method, carbohydrates by difference, iron used the Atomic Absorption Spectroscopy method, acceptability used the 4-scale hedonic test, and the best formulation was determined by the multiattribute decision using compensatory model additive weighting technique. All nutritional content is analyzed by the ANOVA test, while acceptability is analyzed by the Kruskal-Wallis test.

Results: In 100 mL of sesame date milk contained 78-89 kcal of energy, 2,3-2,9% protein, 1,5-2% fat, 12-17% carbohydrates, and 5-10 mg of iron. There were significant differences in energy content ($p < 0,001$), protein ($p = 0,001$), fat ($p = 0,008$), carbohydrates ($p < 0,001$), iron ($p = 0,003$), as well as acceptability in the color aspect ($p < 0,001$), aroma ($p = 0,004$), and taste ($p < 0,001$) in each date sesame milk formulation. The best date sesame milk formulation is F3 (50:50), which contains 89,01 kcal of energy, 2,30% protein, 1,51% fat, 17,01% carbohydrates, and 5,39 mg iron.

Conclusion: The energy and carbohydrate content of sesame date milk increased, while the protein, fat, and iron content decreased as the composition of date juice increased. The best date sesame milk formulation is F3 (50:50).

Keywords: Plant-based milk, sesame seeds, dates, nutrients, anaemia

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