

UJI SIFAT FISIKO-KIMIA SOY BASED BAR BERBAHAN DASAR UBI KUNING, AMPAS TEMPE, DAN JAGUNG DENGAN BERBAGAI FORMULA SEBAGAI ALTERNATIF PANGAN DARURAT

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INTISARI

Latar Belakang : Pada kondisi setelah bencana, korban bencana rentan mengalami kelaparan dan penurunan status gizi sehingga dibutuhkan makanan khusus. Pangan darurat merupakan pangan khusus yang padat kandungan gizi dan tinggi energi. Pangan darurat dapat berbentuk *bars* dengan komposisi bahan lokal. Ubi jalar kuning, jagung, dan tempe merupakan bahan lokal dan pemanfaatannya sebagai pangan darurat masih sedikit. Untuk itu, diperlukan pengembangan produk pangan darurat yang berasal dari bahan lokal dan sesuai dengan standar pangan darurat.

Tujuan Penelitian : Mengetahui pengaruh perbandingan komposisi tepung ubi jalar kuning, tepung jagung, dan tepung ampas tempe terhadap sifat kimia dan sifat fisik *soy based bar*.

Metode Penelitian : Penelitian ini merupakan penelitian eksperimental dengan desain rancangan acak lengkap. Perbandingan tepung ubi kuning, tepung ampas tempe, dan tepung jagung yang diterapkan adalah 2:4:2, 1:4:3, 3:4:1. Uji yang dilakukan meliputi uji sifat kimia (kadar air, abu, protein, lemak, karbohidrat, serat pangan, dan energi) dan sifat fisik (warna dan tekstur). Hasil analisis diuji statistik menggunakan *One-Way Anova* dengan uji *Post Hoc Tukey*.

Hasil : Berdasarkan sifat kimia, Formula 1 memiliki kadar protein tertinggi. Formula 2 memiliki kadar air dan karbohidrat tertinggi. Formula 3 kadar abu, lemak, serat pangan, dan energi tertinggi. Berdasarkan sifat fisik, ketiga formula mempunyai warna *yellow-red* dengan tingkat kecerahan tertinggi dan tekstur paling rapuh dan mudah patah pada formula 3.

Kesimpulan : Terdapat perbedaan signifikan pada hasil pengujian kadar air, abu, protein, lemak, karbohidrat, serat tak larut, serat pangan total, total energi, warna, kekerasan, dan daya patah, namun tidak terdapat perbedaan yang signifikan pada hasil pengujian kadar serat larut *soy based bar* berbahan dasar tepung ubi jalar kuning, tepung ampas tempe, dan tepung jagung

Kata Kunci : *food bars, pangan darurat, pangan lokal, fisiko-kimia*

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PHYSICS-CHEMICAL CHARACTERISTICS TEST OF SOY BASED BAR FROM YELLOW SWEET POTATO, CORN, AND TEMPEH WASTE WITH VARIOUS FORMULA AS AN EMERGENCY FOOD ALTERNATIVE

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ABSTRACT

Background: *In post disaster condition, disaster victims are susceptible to starve and decline in nutritional status, therefore special food is required. Emergency food is a nutrient dense and high energy food. Emergency food can be shaped bars and made from local ingredients, such as yellow sweet potato, corn, and tempeh. Its use for emergency food is still little known, therefore, it is necessary to develop emergency food products that made from local materials and meet emergency food standards.*

Objective: *To know the effect of composition ratio of yellow sweet potato flour, corn flour, and tempe dregs flour to chemical properties and physical properties of soy based bar.*

Method: *This research is an experimental research with complete randomized design. Ratio of yellow sweet potato flour, tempeh dregs, and corn flour are 2:4:2 (formula 1), 1:4:3 (formula 2), 3:4:1 (formula 3). Value of chemical character (water, ash, protein, fat, carbohydrate, dietary fiber, and energy) and physical character (colour and texture) are tested. Statistical test used One Way Anova with Post-Hoc Duncan.*

Result: *Based on chemical properties, Formula 1 has the highest protein content. Formula 2 has the highest water and carbohydrate levels. Formula 3 levels of ash, fat, dietary fiber, and highest energy. On the basis of physical properties, all three formulas have yellow-red color with the highest brightness and the most fragile textures of formula 3.*

Conclusions: *There were significant differences in the results of water, ash, protein, fat, carbohydrate, insoluble fiber, total dietary fiber, total energy, color, hardness, and fracture tests, but no significant differences in soluble fiber of soy based bar made from yellow sweet potato flour, tempe dregs flour, and corn flour*

Keywords : *food bars, emergency food, local food, physics-chemical*

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