

Uji Aktivitas Air dan Total Mikroba Selama Penyimpanan Soy Based Bars Berbahan Dasar Ampas Sari Tempe, Ubi Kuning dan Jagung Dengan Berbagai Formula Sebagai Alternatif Pangan Darurat

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INTISARI

Latar belakang : Sifat yang harus dimiliki pangan darurat adalah bergizi, enak, mudah dikonsumsi, mudah didistribusikan, dan aman dikonsumsi. Dikarenakan pangan darurat pasti mengalami penyimpanan dikarenakan tidak mungkin diproduksi pada saat terjadi kegawatdaruratan, maka diperlukan pemantauan mutu pangan untuk menjamin keamanan produk pangan tersebut selama disimpan. Beberapa parameter yang termasuk dalam mutu pangan aktivitas air dan total mikroba pada produk.

Tujuan : Untuk mengetahui perubahan mutu *soy based bars* selama penyimpanan dengan melihat perubahan nilai aktivitas air dan total mikroba produk.

Metode penelitian : Produk berupa *soy based bars* dibuat dalam 3 formulasi berdasarkan perbandingan tepung yang digunakan untuk memenuhi standar gizi pangan darurat. Produk kemudian disimpan dalam pembungkus vakum di dalam toples kedap udara dengan suhu rata-rata 30,8°C dan kelembaban 84% selama 4 minggu dimana pada minggu ke-0, ke-2 dan ke-4 dilakukan pengujian aktivitas air, angka kuman dan angka kapang-khamir.

Hasil : Terdapat peningkatan nilai aktivitas air, angka kuman dan angka kapang-khamir pada ketiga formula *soy based bars* selama penyimpanan dimana aktivitas air meningkat signifikan sedangkan kedua variabel lain tidak signifikan. Terdapat pengaruh lama penyimpanan, formulasi dan interaksi keduanya terhadap aktivitas air namun tidak pada angka kuman dan angka kapang-khamir.

Kesimpulan : Ketiga formulasi *soy based bars* yang disimpan selama 4 minggu dalam keadaan vakum masih memiliki mutu yang baik dilihat dari nilai aktivitas air dan total mikroba.

Kata kunci: Aktivitas Air, Angka Kapang-Khamir, Pangan Darurat, Total Mikroba

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**Water Activity and Total Microbes Test During Storage of Soy Based Bars
Made from Extract Tempeh, Cassava and Maize With Various Formula as an
Emergency Food Alternative**

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ABSTRACT

Background: The requirement for emergency food product are nutritious, tasty, easy to consume, easy to distribute, and safe to eat. Since emergency food must undergo storage because it is impossible to produce in the event of emergency, it is necessary to monitor the quality of food to ensure the safety of the food product during storage. Some parameters that included in the quality of food are water activities and total microbes of the product.

Objective: To know the change of quality of soy based bars during storage by looking at the changes in water activity and total microbial of the product

Research method:

The product of soy based bars is made in 3 formulations based on the ratio of flour used to meet the emergency food nutrition standards. The product is then stored in a vacuum packing inside an airtight jar with an average temperature of 30.8 ° C and 84% moisture for 4 weeks where in weeks 0, 2 and 4 it is tested for water activity, germs and mold-yeast..

Results: There was an increase in the value of water activity, the number of germs and mold-yeast in the three soy based bars formulas during storage where the water activity increased significantly while the other two were insignificant. There is a long-standing effect of storage, formulation and interaction of both to water activity but not on the number of bacteria and mold-yeast.

Conclusion: The three soy based bars formulations that were stored for 4 weeks under vacuum still have good quality in terms of the value of water activity and total microbial.

Keywords: emergency food, mold-yeast, total microbes, water activity

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