

SIFAT FISIK DAN UMUR SIMPAN PRODUK SARI KACANG KENARI DENGAN PENAMBAHAN *MULTIGRAIN FLAKES* DAN PROBIOTIK LOKAL

Abstrak

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Minuman sereal nabati probiotik merupakan produk minuman instan berbahan dasar sari kacang kenari yang dikembangkan seiring dengan meningkatnya tren *plant-based food* dan vegetarian. Probiotik ditambahkan untuk memberikan nilai fungsionalitas produk yang dapat memberikan manfaat bagi pencernaan dengan memperbaiki mikroflora pada usus. Dalam pengembangan produk minuman sereal nabati probiotik digunakan probiotik lokal *Lactiplantibacillus plantarum* subsp. *plantarum* Dad-13. Selama pengembangan produk minuman sereal nabati probiotik, dilakukan juga penentuan sifat fisik yang meliputi warna, tekstur, daya serap air, a_w , *solubility*, *dispersibility*, *wettability*, dan *bulk density*. Selain itu, dilakukan juga penentuan umur simpan produk probiotik. Pengujian umur simpan dilakukan menggunakan metode ASLT (*Accelerated Shelf-Life Testing*) dengan variasi suhu penyimpanan 4°C, 20°C, dan 30°C. Hasil penelitian menunjukkan umur simpan optimal produk adalah 16 bulan 3 hari (490 hari) pada suhu penyimpanan 4°C.

Kata Kunci: minuman sereal, sifat fisik, umur simpan, ASLT, *Lactiplantibacillus plantarum* subsp. *plantarum* Dad-13

THE PHYSICAL PROPERTIES AND SHELF-LIFE OF PLANT BASED CEREAL DRINK WITH THE ADDITION OF MULTIGRAIN FLAKES AND LOCAL PROBIOTIC

Abstract

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Probiotic plant-based cereal drink is an instant drink product made from walnuts which was developed in line with the increasing trend of plant-based food. Probiotics are added to provide product functionality value which can provide digestive benefits by improving the microflora in the intestine of the host. In this product, local probiotic *Lactiplantibacillus plantarum* subsp. *plantarum* Dad-13 is used. Physical properties were also determined including color, texture, water absorption capacity, aw, solubility, dispersibility, wettability and bulk density. Apart from that, shelf-life of the product was also determined. Shelf-life testing was carried out using the ASLT (Accelerated Shelf-Life Testing) method with varying storage temperatures of 4°C, 20°C and 30°C. The research results show that the optimal shelf life of the product is 16 months 3 days (490 days) at a storage temperature of 4°C.

Keywords: cereal drink, physical properties, shelf-life, ASLT, *Lactiplantibacillus plantarum* subsp. *plantarum* Dad-13