

**PENENTUAN UMUR SIMPAN TEMPE OLAHAN DALAM KALENG
BERBAHAN BAKU KEDELAI LOKAL DENGAN METODE
*ACCELERATED SHELF LIFE TESTING (ASLT)***

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INTISARI

Kedelai lokal yang diproduksi oleh Attempe merupakan kedelai varietas grobogan yang telah lolos uji kedelai non-GMO dan lolos uji residu pestisida. Salah satu produk yang ingin dikembangkan untuk meningkatkan variasi produksi dari Attempe adalah dengan menciptakan produk tempe kaleng. Namun, dalam proses pengembangan produk ini muncul beberapa kendala meliputi belum adanya pengujian mengenai umur simpan produk dan belum adanya analisis atribut mutu yang terkandung. Produk tempe kaleng diproduksi dalam dua varian rasa yaitu olahan tumis tempe dan olahan kari tempe.

Penelitian ini bertujuan untuk mengidentifikasi atribut mutu tempe kaleng dan memprediksi umur simpan produk tempe kaleng. Atribut mutu yang diukur meliputi kadar air, kadar abu, kadar lemak, kadar protein, karbohidrat dan kadar serat kasar. Penentuan umur simpan dianalisis dengan *metode Accelerated Shelf Life Testing (ASLT)* dengan pendekatan Arrhenius. Parameter yang digunakan dalam pengukuran umur simpan adalah pH, viskositas dan warna. Dilakukan uji organoleptik meliputi uji hedonik untuk mengetahui tingkat kesukaan konsumen dan uji sensoris untuk mengetahui perubahan karakteristik produk selama penyimpanan.

Berdasarkan hasil penelitian, dapat diketahui atribut mutu olahan tumis tempe adalah kadar air 82,18%, kadar abu 0,82%, kadar lemak 2,7%, kadar protein 7,2%, karbohidrat 6,925%, dan kadar serat kasar adalah 0,87%. Sedangkan untuk atribut mutu olahan kari tempe dalam kaleng adalah kadar air 82,2%, kadar abu 0,6%, kadar lemak 3,11%, kadar protein 4,6%, karbohidrat 5,42% dan kadar serat kasar adalah 1,2%. Serta diperoleh prediksi umur simpan olahan tumis tempe yaitu 364 hari dan olahan kari tempe yaitu 223 hari.

Kata kunci: tempe kaleng, *accelerated shelf life testing*, ASLT, kedelai lokal

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DETERMINATION OF THE SHELF LIFE OF CANNED TEMPE MADE FROM RAW LOCAL SOYBEAN WITH ACCELERATED SHELF LIFE TESTING (ASLT) METHOD

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ABSTRACT

Local soybeans produced by *Attempe* are *grobogan* varieties of soybeans that have passed both the non-GMO soybean test and the pesticide residue test. One of the products to be developed to increase the production variation from *Attempe* is to produce canned fermented-soybean (*tempe*) products. However, in the process of developing this product, several obstacles emerged including the absence of testing regarding the product shelf life and the absence of quality attribute analysis contained. These canned *tempe* products are produced in two flavors, which are stir-fried *tempe* product and curry *tempe* product.

This study aims to identify the quality attributes of canned *tempe* products and predict the shelf life of canned *tempe* products. The quality attributes measured include water content, ash content, fat content, protein content, carbohydrate and crude fiber content. The determination of shelf life was analyzed using the Accelerated Shelf Life Testing (ASLT) method with the Arrhenius approach. The parameters used in the measurement of shelf life are pH, viscosity and color. The organoleptic tests included hedonic tests to discover the level of consumer preference and sensory testing to discover changes in product characteristics during storage.

Based on the results of the study, it can be found out that the quality attributes of stir-fried *tempe* product are 82.18% of water content, 0.82% of ash content, 2.7% of fat content, 7.2% of protein content, 6.925% of carbohydrate, and 0.87% of crude fiber content, whereas the quality attributes of curry *tempe* product are 82.2% of water content, 0.6% of ash content, 3.11% of fat content, 4.6% of protein content, 5.42% of carbohydrate and 1.2% of crude fiber content. While the prediction of the shelf life of stir-fried *tempe* product is 364 days and curry *tempe* product is 223 days.

Keywords: canned tempe, accelerated shelf life testing, ASLT, local soybean

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