

ANALISIS MUTU KIMIA, MIKROBIOLOGI DAN ORGANOLEPTIK TEMPE KEDELAI DENGAN PENAMBAHAN SARI BELIMBING WULUH (*Averrhoa bilimbi*) PADA PROSES PERENDAMAN KEDELAI

*[Analysis of Chemical, Microbiology and Organoleptic Quality of Soybean Tempe with the Addition of Bilimbi Juice (*Averrhoa bilimbi*) On the Process Soybean Soaking]*

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ABSTRACT

The aimed of this study was to analyze the chemical, microbiological and organoleptic quality of soybean tempe with the addition of bilimbi juice in the soy soaking process. The research method used was an experimental method with a single factor completely randomized design (CRD), namely the addition of bilimbi juice to the soybean soaking process by 0%, 12.5%, 25%, 37.5%, 50% and 62.5%. Each treatment was repeated 3 times in order to obtain 18 experimental units. The observed parameters in this study were moisture content, ash content, protein content, pH, total mold as well as organoleptic scoring and hedonic (compactness, texture, smell and color) of soybean tempe. The data were analyzed using Analysis of Variance with a real level of 5% using Costat software. If there is a significant difference, a further test was carried out with the Orthogonal Polynomial test for chemical and microbiological parameters, and Honest Significant Difference (HSD) for organoleptic parameters. The results showed that the addition of 25% bilimbi juice was the best treatment for soaking soybeans in the process of making soybean tempe with a pH value of 6.24, water content of 63.5262%, ash content of 1.1375%, protein content of 18.7258% and total mold log 3.27 CFU/g in accordance with the quality requirements of tempe based on SNI 3144: 2009 and organoleptics that can be accepted by panelists.

Keywords: *Bilimbi (*Averrhoa bilimbi*), soaking, soybean tempe.*

ABSTRAK

Penelitian ini bertujuan untuk menganalisis mutu kimia, mikrobiologi dan organoleptik tempe kedelai dengan penambahan sari belimbing wuluh pada proses perendaman kedelai. Metode penelitian yang digunakan adalah metode eksperimental dengan Rancangan Acak Lengkap (RAL) faktor tunggal yaitu penambahan sari belimbing wuluh pada proses perendaman kedelai sebesar 0%, 12,5%, 25%, 37,5%, 50% dan 62,5%. Masing-masing perlakuan diulang sebanyak 3 kali sehingga diperoleh 18 unit percobaan. Parameter yang dianalisis pada penelitian ini adalah kadar air, kadar abu, kadar protein, pH, total kapang serta organoleptik skoring dan hedonik (kekompakkan, tekstur, aroma dan warna) dari tempe kedelai. Data hasil pengamatan dianalisis menggunakan analisis keragaman (*Analysis of Variance*) dengan taraf nyata 5% dengan menggunakan *software* Costat. Apabila terdapat beda nyata, dilakukan uji lanjut dengan uji *Polynomial Orthogonal* untuk parameter kimia dan mikrobiologi, serta Beda Nyata Jujur (BNJ) untuk parameter organoleptik. Hasil penelitian menunjukkan bahwa penambahan 25% sari belimbing wuluh merupakan perlakuan terbaik untuk perendaman kedelai pada proses pembuatan tempe kedelai dengan nilai pH 6,24, kadar air 63,5262%, kadar abu 1,1375%, kadar protein 18,7258% dan jumlah total kapang log 3,27 CFU/g yang sesuai dengan persyaratan mutu tempe berdasarkan SNI 3144:2009 serta organoleptik yang dapat diterima oleh panelis.

Kata Kunci: Belimbing wuluh (*Averrhoa bilimbi*), perendaman, tempe kedelai.