

# **PENGARUH KONSENTRASI EKSTRAK KAYU MANIS (*Cinnamomum burmannii*) TERHADAP MUTU MIKROBIOLOGIS SUSU KEDELAI SELAMA PENYIMPANAN**

*[Effect of Cinnamon (*Cinnamomum burmannii*) Extract Concentration on the Microbiological Quality of Soymilk During Storage]*

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## **ABSTRACT**

*This study aimed to measure the concentration of cinnamon extract (*Cinnamomum burmannii*) on the microbiological and organoleptic quality of soy milk during its storage. The method was an experimental method with a completely randomized design (CRD), where the treatment of cinnamon extract concentrations was 0%, 15%, 20%, 25%, 30%, and 35% which was repeated 3 times to obtain 18 experimental units. The parameters observed were microbiological quality (Total Plate Count), chemical quality (pH, protein content), and organoleptic quality (color, taste, flavour). Data were analyzed with 5% Honest Significant Difference (HSD) using Co-Stat software. If there was a significant difference, a further test was carried out by Polynomial Orthogonal test (chemical and microbiological parameters) and Honest Significant Difference test (organoleptic parameters). The results showed that the concentration of 25% cinnamon extract was the best treatment for the shelf life of soy milk for 8 hours storage with a pH value 6,52; protein content 2,39; and the number of bacterial colonies 4,68 log CFU/mL that were still below the maximum limit of total microbes based on SNI 7388-2009, and organoleptics that could be accepted by the panelists.*

**Keywords:** *cinnamon, extraction, microbiological quality, shelf life, soy milk*

## **ABSTRAK**

*Penelitian ini bertujuan untuk mengetahui konsentrasi terbaik ekstrak kayu manis (*Cinnamomum burmannii*) terhadap mutu mikrobiologis dan organoleptik susu kedelai. Metode yang digunakan adalah metode eksperimental dengan rancangan penelitian Rancangan Acak Lengkap (RAL), dimana perlakuan akan konsentrasi ekstrak kayu manis 0%, 15%, 20%, 25%, 30%, dan 35% yang diulang sebanyak 3 kali sehingga memperoleh 18 unit percobaan. Parameter yang diamati yaitu mutu mikrobiologi (Total Plate Count), mutu kimia (pH, kadar protein), dan mutu organoleptik (warna, rasa, aroma). Data hasil pengamatan dianalisis dengan keragaman taraf nyata 5% menggunakan aplikasi Co-Stat. Apabila terdapat beda nyata, dilakukan uji lanjut Polynomial Orthogonal (parameter kimia dan mikrobiologis) dan uji Beda Nyata Jujur (parameter organoleptik). Hasil penelitian menunjukkan bahwa konsentrasi 25% ekstrak kayu manis sebagai perlakuan terbaik untuk daya simpan susu kedelai selama 8 jam dengan nilai pH 6,52, kadar protein 2,39, dan jumlah koloni bakteri 4,68 log CFU/mL yang masih di bawah batas maksimum total mikroba berdasarkan SNI 7388-2009, dan organoleptik yang diterima panelis.*

**Kata kunci:** *daya simpan, ekstraksi, kayu manis, mutu mikrobiologi, susu kedelai*