ABSTRACT

THE EFFECT OF ADDITIONAL CINNAMON (Cinnamomum burmanni) EXTRACT ON THE CHEMICAL AND MICROBIOLOGICAL PROPERTIES OF SWEET CORN (Zea mays Saccharata) PROBIOTIC DRINKS DURING STORAGE

By

Melinia Ramdhani Putri

The abundance of corn in Indonesia has not been balanced with varied processing. One of the processed creations made from sweet corn is a sweet corn juice probiotic drink. The aim of the study was to determine the effect of adding cinnamon extract on the chemical properties and microbiology of sweet corn extract probiotic drink during storage. The research was arranged in a Completely Randomized Block Design factorial with 2 factors. The first factor being the concentration of cinnamon extract (0%, 2%, 4%, and 6%) and the second factor being storage time (0 day, 1 day, 2 days, and 3 days). The data obtained was carried out by the Bartlett, Tuckey, Anara test and further tested with an orthogonal polynomial (OP). Cinnamon extract concentration and storage time have a linear effect on pH and total LAB. The interaction of the two factors has no effect on all parameters. The highest water content was the treatment with a concentration of 6% cinnamon extract and a storage time of 3 days, namely 90.19%. The lowest pH was the concentration of 6% cinnamon extract and 3 days of storage, namely 4.1. The average total LAB obtained was 9.53 log cfu/mL (3.39x109 cfu/mL). The highest overall acceptance rate was the 4% cinnamon extract treatment with a score of 3.29 (somewhat liked).

Keywords: Sweet corn extract probiotic drink, cinnamon extract, storage time.

ABSTRAK

PENGARUH PENAMBAHAN EKSTRAK KAYU MANIS (*Cinnamomum burmanni*) TERHADAP SIFAT KIMIA DAN MIKROBIOLOGI MINUMAN PROBIOTIK SARI JAGUNG MANIS (*Zea mays Saccharata*) SELAMA PENYIMPANAN

Oleh

Melinia Ramdhani Putri

Jagung yang melimpah di Indonesia belum diimbangi dengan pengolahan yang bervariatif. Salah satu kreasi olahan berbahan baku jagung manis yaitu minuman probiotik sari jagung manis. Tujuan penelitian yaitu untuk mengetahui pengaruh penambahan ekstrak kayu manis terhadap sifat kimia, dan mikrobiologi minuman probiotik sari jagung manis selama penyimpanan. Penelitian disusun dalam Rancangan Acak Kelompok Lengkap faktorial dengan 2 faktor. Faktor pertama adalah konsentrasi ekstrak kayu manis (0%, 2%, 4%, dan 6%) dan faktor kedua yaitu lama penyimpanan (0 hari, 1 hari, 2 hari, dan 3 hari). Data yang diperoleh dilakukan uji Bartlett, Tuckey, Anara dan diuji lanjut dengan ortoghonal polinomial (OP). Konsentrasi ekstrak kayu manis dan lama penyimpanan berpengaruh secara linear terhadap pH dan total BAL. Interaksi kedua faktor tidak berpengaruh terhadap semua parameter. Kadar air tertinggi adalah perlakuan konsentrasi ekstrak kayu manis 6% dan lama penyimpanan 3 hari yaitu 90,19%. pH terendah adalah perlakuan konsentrasi ekstrak kayu manis 6% dan lama penyimpanan 3 hari yaitu 4,1. Rata-rata total BAL yang diperoleh adalah 9,53 log cfu/mL ($3,39x10^9$ cfu/mL). Tingkat penerimaan keseluruhan tertinggi adalah perlakuan ekstrak kayu manis 4% dengan skor 3,29 (agak suka).

Kata kunci : Minuman probiotik sari jagung manis, ekstrak kayu manis, lama penyimpanan.