PENGARUH PENAMBAHAN SARI BUAH PEPAYA (*Carica papaya,* L) PADA KEFIR SUSU SAPI DAN PERUBAHAN KARAKTERISTIK KIMIA, FISIK, DAN MIKROBIOLOGI SELAMA PENYIMPANAN

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ABSTRAK

Penelitian ini bertujuan untuk mengetahui pengaruh penambahan sari buah pepaya pada kefir susu sapi dan juga perubahan karakteristik yang terjadi selama penyimpanan. Rancangan pada penelitian ini menggunakan Rancangan Acak Lengkap (RAL) dengan 5 perlakuan dan 3 ulangan. Perlakuan pada penelitian ini yaitu kefir susu tanpa sari buah (A), 20% sari buah (B), 30% sari buah (C), 40% sari buah (D), dan 50% sari buah (E). Data hasil penelitian dianalisis dengan metode Analysis of Variance (ANOVA) dan dilanjutkan dengan analisis Duncan's New Multiple Range Test (DNMRT) pada taraf nyata 5%. Hasil penelitian menunjukkan bahwa penambahan sari buah pepaya memberikan pengaruh nyata terhadap hasil analisis pH, total asam tertitrasi, vitamin C, aktifitas antioksidan, dan total padatan terlarut. Perlakuan terbaik berdasarkan analisis yang dilakukan adalah perlakuan E (50% sari pepaya) dengan nilai pH 3,82, total asam tertutrasi 1,62%, vitamin C 2,4 mg/100g, antioksidan 37,89%, dan total padatan terlarut 8,93°Brix. Selama penyimpanan terjadi perubahan karakteristik kefir dimana nilai pH, nilai warna, dan total BAL menurun, sedangkan total asam tertitrasi dan viskositas meningkat dari awal penyimpanan hingga akhir penyimpanan. Pada penelitian ini juga dilakukan analisis pendugaan umur simpan selama 42 hari penyimpanan pada suhu 4°C. Hasil pendugaan umur simpan enunjukkan umur simpan kefir sekitar 14 hingga 28 hari.

Kata kunci: Fermentasi, Kefir, Penyimpanan, Pepaya

THE EFFECT OF ADDING PAPAYA JUICE (carica Papaya, L) TO COW'S MILK KEFIR AND CHANGES IN CHEMICAL, PHYSICAL, AND MICROBIOLOGICAL CHARACTERISTICS DURING STORAGE

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ABSTRACT

This research aims to determine the effect of adding papaya juice on the characteristics of cow's milk kefir and also its effect on shelf life. The design in this research used a Completely Randomized Design (CRD) with 5 treatments and 3 replications. The treatments in this research were milk kefir without fruit juice (A), 20% fruit juice (B), 30% fruit juice (C), 40% fruit juice (D), and 50% fruit juice (E). The research data were analyzed using the Analysis of Variance (ANOVA) method and continued with Duncan's New Multiple Range Test (DNMRT) analysis at a significance level of 5%. The results showed that the addition of papaya fruit juice had a significant effect on the results of pH analysis, total titratable acid, vitamin C, antioxidant activity, and total dissolved solids. The best treatment based on the analysis conducted was treatment E (50% papaya extract) with a pH value of 3.82, total soluble acid 1.62%, vitamin C 2.4 mg/100g, antioxidant 37.89%, and total soluble solids 8.93°Brix. During storage, changes occurred in the characteristics of kefir, where the pH value, color value, and total BAL decreased, while the total titrated acid and viscosity increased from the beginning of storage to the end of storage. In this study, an analysis of the estimated shelf life was also carried out for 42 days of storage at a temperature of 4°C. The results of the estimated shelf life showed that the shelf life of kefir was around 14 to 28 days.

***Keywords*:** fermentation, kefir, papaya, storage