

ABSTRAK

MATIN NINGSIH. Total yeast dan kadar alkohol kefir susu-kolostrum sapi selama penyimpanan dingin (4 - 8°C). Penelitian dilaksanakan mulai tanggal 6 Januari 2020 sampai dengan 23 Januari 2020. Tujuan dari penelitian adalah untuk mengetahui pengaruh lama penyimpanan dingin kefir susu-kolostrum sapi terhadap total yeast dan kadar alkohol. Materi yang digunakan dalam penelitian yaitu susu sapi sebanyak 2,5 liter, kolostrum sapi sebanyak 2,5 liter, biji kefir 250 gram, akuades, NaCl fisiologis 0,85%, media *Potato Dekstrosa Agar* (PDA). Penelitian dilaksanakan dengan menggunakan metode eksperimen menggunakan rancangan acak lengkap (RAL) dengan jumlah perlakuan 5 perlakuan dan setiap perlakuan diulang sebanyak 4 kali. Perlakuan yang diuji yaitu pembuatan kefir susu-kolostrum sapi dengan penyimpanan dingin 0 hari (P0), 3 hari (P1), 6 hari (P2), 9 hari (P3), 12 hari (P4) dengan 4 kali ulangan. Data dianalisis menggunakan analisis variansi dengan Uji Lanjut Orthogonal Polinomial. Hasil penelitian menunjukkan rata-rata total yeast untuk perlakuan P0 = $7,36 \pm 0,13$ log cfu/ml ; P1 = $6,86 \pm 0,57$ log cfu/ml ; P2 = $6,48 \pm 0,21$ log cfu/ml ; P3 = $6,50 \pm 0,22$ log cfu/ml ; P4 = $6,52 \pm 0,20$ log cfu/ml sedangkan untuk rata-rata kadar alkohol untuk perlakuan P0 = $0,81 \pm 0,01\%$; P1 = $0,80 \pm 0,00\%$; P2 = $0,80 \pm 0,01\%$; P3 = $0,79 \pm 0,01\%$; P4 = $0,74 \pm 0,01\%$. Lama penyimpanan dingin kefir selama 12 hari berpengaruh sangat nyata ($P < 0,01$) terhadap total yeast dan kadar alkohol kefir. Total yeast kefir tertinggi diperoleh pada hari ke- yaitu $7,36 \pm 0,13$ log cfu/ml, dan total yeast terendah diperoleh pada hari ke- 6 yaitu $6,48 \pm 0,21$ log cfu/ml. Kadar alkohol kefir tertinggi diperoleh pada hari ke- 0 yaitu $0,81 \pm 0,01\%$ kemudian kadar alkohol menurun hari ke-12 menjadi $0,74 \pm 0,01\%$. Hubungan persamaan regresi kuadrat total yeast kefir $Y = 0,0114X^2 - 0,2048X + 7,3564$ dengan R^2 sebesar 60,97 % dan hubungan persamaan regresi kubik kadar alkohol kefir $Y = -0,0001X^3 + 0,002X^2 - 0,0081X + 0,8081$ dengan R^2 sebesar 92,83 % mencerminkan keeratan karena lama penyimpanan terhadap total yeast dan kadar alkohol kefir. Kesimpulan penelitian ini adalah kefir susu-kolostrum dengan penyimpanan dingin (4-8°C) dari hari ke-0 sampai ke-12 kecenderungan adanya penurunan total yeast dan kadar alkohol tetapi dalam standar perbandingan penelitian yang lain masih dalam angka taraf normal.

Kata Kunci : Susu Sapi, Kolostrum Sapi, Total Yeast, Kadar Alkohol

ABSTRACT

MATIN NINGSIH. Total yeast and cow's milk-colostrum kefir alcohol content during cold storage (4 - 8 ° C). The study was conducted from January 6, 2020 to January 23, 2020. The purpose of this study was to determine the effect of cold storage duration of cow's milk-colostrum kefir on total yeast and alcohol content. The material used in the study were 2.5 liters of cow's milk, 2.5 liters of cow colostrum, 250 grams of kefir seeds, distilled water, 0.85% physiological NaCl, Potato dextrose Agar (PDA) media. The study was conducted using an experimental method using a completely randomized design (CRD) with 5 treatments and each treatment was repeated 4 times. The treatments tested were making cow-colostrum milk kefir with cold storage 0 days (P0), 3 days (P1), 6 days (P2), 9 days (P3), 12 days (P4) with 4 replications. Data were analyzed using analysis of variance with the Orthogonal Polynomial Advanced Test. The results showed the average total yeast for treatment P0 = 7.36 ± 0.13 log cfu / ml; P1 = 6.86 ± 0.57 log cfu / ml; P2 = 6.48 ± 0.21 log cfu / ml; P3 = 6.50 ± 0.22 log cfu / ml; P4 = 6.52 ± 0.20 log cfu / ml while for the average alcohol content for the treatment P0 = $0.81 \pm 0.01\%$; P1 = $0.80 \pm 0.00\%$; P2 = $0.80 \pm 0.01\%$; P3 = $0.79 \pm 0.01\%$; P4 = $0.74 \pm 0.01\%$. Kefir cold storage duration for 12 days had a very significant effect ($P < 0.01$) on total yeast and kefir alcohol content. The highest total yeast kefir was obtained on the 7th day which was 7.36 ± 0.13 log cfu / ml, and the lowest total yeast was obtained on the 6th day which was 6.48 ± 0.21 log cfu / ml. The highest kefir alcohol content was obtained on day 0 which was $0.81 \pm 0.01\%$ then the alcohol content decreased on the 12th day to $0.74 \pm 0.01\%$. Relationship between total yeast kefir regression equation $Y = 0.0114X^2 - 0.2048X + 7.3564$ with R^2 of 60.97% and the relationship of cubic regression equation of kefir alcohol content $Y = - 0.0001X^3 + 0.002X^2 - 0.0081X + 0,8081$ with R^2 of 92.83% reflecting closeness due to the length of storage of total yeast and kefir alcohol content. The conclusion of this study is the cold storage of milk-colostrum kefir (4-8 ° C) from day 0 to 12 the tendency of a decrease in total yeast and alcohol content but in the standard comparison of other studies is still in the normal level.

Keywords: Cow's Milk, Cow Colostrum, Total Yeast, Alcohol Content