

**PENGARUH WAKTU FERMENTASI DAN KONSENTRASI STARTER
TERHADAP TOTAL BAKTERI ASAM LAKTAT, TOTAL KHAMIR, DAN
MUTU HEDONIK KEFIR KOLOSTRUM**

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ABSTRAK

Kolostrum dijadikan bahan baku pembuatan kefir karena keunggulannya dibandingkan susu laktasi. Kolostrum difermentasi menjadi kefir melibatkan bakteri asam laktat dan khamir yang bermanfaat sebagai probiotik alami. Aktivitas bakteri asam laktat dan khamir dalam proses fermentasi menentukan kualitas kefir. Penelitian ini bertujuan untuk menentukan waktu fermentasi (24 jam, 48 jam, dan 72 jam) dan konsentrasi starter (5%, 10%, dan 15%) optimal agar didapatkan kefir kolostrum yang berkualitas baik sesuai dengan standar susu fermentasi Codex No. 243 tahun 2003 dan disukai masyarakat. Digunakan metode eksperimental untuk uji TPC (Total Plate Count) terhadap total bakteri asam laktat dan total khamir, serta uji mutu hedonik kefir kolostrum meliputi rasa, warna, aroma, tekstur, dan penerimaan keseluruhan. Didapatkan hasil bahwa setiap gabungan perlakuan waktu fermentasi dan konsentrasi starter, jumlah bakteri asam laktat berkisar antara $2,6 \times 10^7$ - $7,1 \times 10^7$ CFU/mL, sementara jumlah khamir berkisar antara $1,1 \times 10^6$ - $2,2 \times 10^7$ CFU/mL, yang berarti jumlah bakteri asam laktat dan khamir sudah sesuai standar Codex No. 243 tahun 2003, didapatkan skor penilaian tertinggi berdasarkan penerimaan keseluruhan pada perlakuan waktu fermentasi 24 jam dan konsentrasi starter 5% dari masyarakat yang menyukai produk makanan dengan rasa yang tidak terlalu asam, aroma yang tidak terlalu menyengat, warna yang menarik, serta tekstur yang kental dan lembut. Ditinjau dari efektivitas waktu dan starter serta penilaian masyarakat, disimpulkan bahwa kefir dengan waktu fermentasi 24 jam dan konsentrasi starter 5% merupakan yang paling optimal.

Kata Kunci: bakteri asam laktat, fermentasi, kefir kolostrum, khamir

**THE EFFECT OF FERMENTATION TIME AND STARTER
CONCENTRATION ON TOTAL LACTIC ACID BACTERIA, TOTAL
YEAST, AND HEDONIC QUALITY OF KEFIR COLOSTRUM**

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ABSTRACT

Colostrum is used as a raw material for making kefir because of its advantages over lactating milk. Colostrum is fermented into kefir involving lactic acid bacteria and yeast which are useful as natural probiotics. The activity of lactic acid bacteria and yeast in the fermentation process determines the quality of kefir. This study aims to determine the optimal fermentation time (24 hours, 48 hours, and 72 hours) and starter concentrations (5%, 10%, and 15%) in order to obtain good quality colostrum kefir according to Codex standards for fermented milks (Codex STAN 243-2003) and favored by the public. Experimental methods were used to test TPC (Total Plate Count) on total lactic acid bacteria and total yeast, as well as hedonic quality tests on kefir samples including taste, color, aroma, texture, and overall acceptance. The results showed that for each combination of fermentation time and starter concentration, the number of lactic acid bacteria ranged from 2.6×10^7 - 7.1×10^7 CFU/mL, while the number of yeasts ranged from 1.1×10^6 - 2.2×10^7 CFU /mL, which means the number of lactic acid bacteria and yeasts is in accordance with the Codex standards (Codex STAN 243-2003) the highest score obtained based on overall acceptance of the 24 - hour fermentation time treatment and 5% starter concentration from people who like food products with a less sour taste, a mild aroma too pungent, attractive colors, and thick-soft texture. Judging from the effectiveness of time and starter as well as community assessment, it was concluded that kefir with a fermentation time of 24 hours and a starter concentration of 5% was the most optimal.

Key words: fermentation, kefir colostrum, lactic acid bacteria, yeast