

ABSTRACT

CHARACTERISTICS OF MILK KEFIR WITH INOCULUM RAGI TAPE

By
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Kefir is a fermented milk product that has the typical flavours (acids and alcohol). Kefir is a fermented milk product that is processed by a number of microbes which include lactic acid bacteria (LAB) and yeasts. The aim at this study is to know the character of the population of lactic acid bacteria (LAB), a population of yeasts, and chemical characters among others total acid, pH and alcohol levels in kefir milk with inoculum ragi tape. The population of LAB and the population of yeast is calculated with the method of calculation of Total Plate Count, the levels of total acid titration method are determined by the acid, acidity is measured using a pH meter and alcohol levels is determined by the method of Conway Micro Diffusion. The results showed the number of LAB has increased to 24 hour fermentations of 9.01 log cells/ml ($1,1 \times 10^9$ cells/ml), then the number of cells does not change much until the fermentation time is 48 hours and 72 hours of fermentation on the decline of 8.07 log cells /ml ($1,2 \times 10^8$ cells/ml) while the yeast experiences increased from 6 hours to 24 hours, then the amount of yeast is not much changed from the 24 to 72 hours of the highest number of yeasts during fermentation 48 hours an amount of 6.12 log cells /ml ($1,3 \times 10^6$ cells/ml) and the amount of yeasts did not decline at the time of 72 hours. Total acid increased by 1.24%, pH decreased 4.27, alcohol content increased by 0.38% w / v.

Key Words: Kefir Milk, Lactic Acid Bacteria, Ragi Tape, Yeast

ABSTRAK

KARAKTERISTIK KEFIR SUSU DENGAN INOKULUM RAGI TAPE

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Kefir adalah produk fermentasi susu yang mempunyai rasa khas (asam dan beralkohol). Penelitian ini bertujuan untuk mengetahui karakter populasi bakteri asam laktat (BAL), populasi khamir, dan karakter kimiawi yaitu total asam, pH pada kefir susu sapi dengan inokulum ragi tape. Populasi BAL dan populasi *yeast* dihitung dengan metode perhitungan cawan (*Total Plate Count*), kadar total asam ditentukan dengan metode titrasi asam, tingkat keasaman diukur menggunakan pH meter dan kadar alkohol ditentukan dengan metode cawan *Micro Conway Diffusion*. Hasil penelitian menunjukkan karakter kefir selama 72 jam fermentasi yakni sebagai berikut: jumlah BAL mengalami peningkatan hingga pada fermentasi 24 jam sebesar 9,01 log sel/ml ($1,1 \times 10^9$ sel/ml), sampai 48 jam inkubasi tidak banyak mengalami perubahan. Selanjutnya populasinya menurun pada 72 jam fermentasi dengan jumlah sel sebesar 8,07 log sel/ml ($1,2 \times 10^8$ sel/ml). Jumlah khamir mengalami peningkatan hingga pada fermentasi 24 jam sebesar 5,88 log sel/ml ($8,9 \times 10^5$ sel/ml), sampai 72 jam inkubasi tidak mengalami perubahan. Total asam mengalami peningkatan dengan jumlah 1,24%, pH mengalami penurunan 4,27, kadar alkohol mengalami peningkatan jumlah 0,38% b/v.

Kata Kunci : Bakteri Asam Laktat, Kefir Susu Sapi, Khamir, Ragi Tape