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Jurnal Aplikasi Teknologi Pangan or JATP (pISSN 2089–7693, eISSN 2460–5921) is a quarterly scientific food journal (February, May, August, and November) which is accredited (TERAKREDITASI) by Kemenristekdikti (</index.php/jatp/announcement>).

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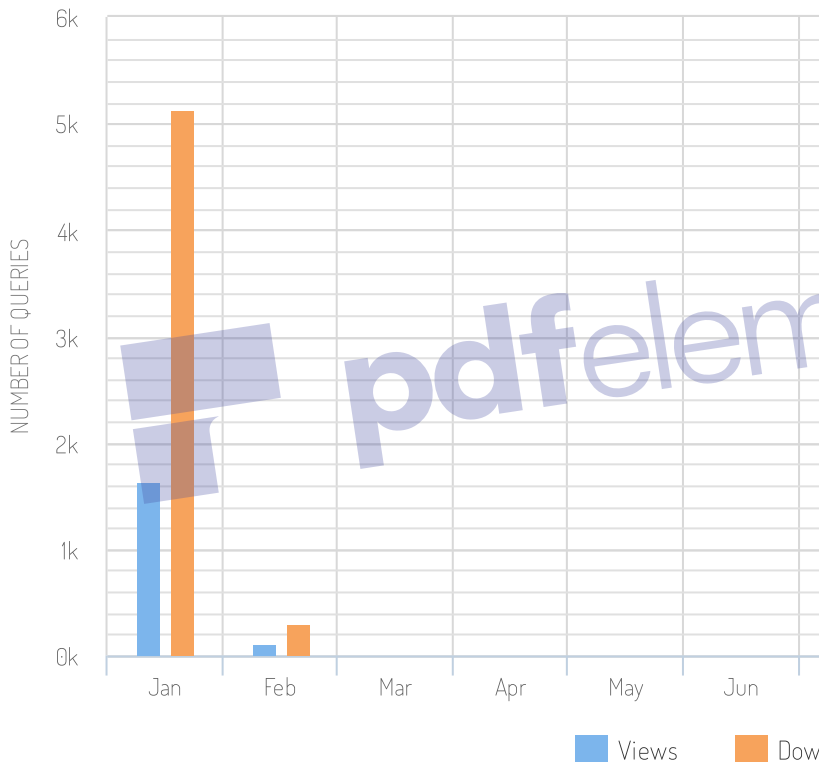
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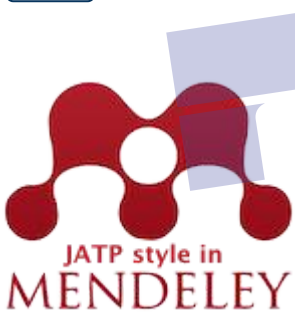
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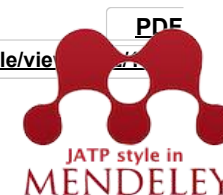
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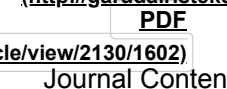
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Abstract


Penelitian bertujuan mengisolasi dan identifikasi jenis bakteri asam laktat (BAL) selulolitik yang berasal dari jus kubis terfermentasi. Tahapan penelitian meliputi isolasi mikrobia dari jus kubis terfermentasi, karakteristik morfologi sel, karakteristik biokimiawi, identifikasi dengan kit api 50 CHL dan pengujian kemampuan mendegradasi selulosa. Penelitian diawali dengan memfermentasi jus kubis selama 6 hari pada kondisi anaerobic fakultatif. Hasil fermentasi diisolasi dengan media de man rogosa and sharpe (MRS) yang ditambahkan CaCO₃ 1% dan diinkubasi selama 24 jam. Reinokulasi dilakukan sebanyak 5 kali sampai ditemukan kultur murni BAL, kemudian diidentifikasi dengan menggunakan kit analytical profile index (API) 50 CHL. Hasil identifikasi kemudian diuji kemampuannya untuk mendegradasi selulosa pada media MRS yang ditambahkan 1% carboxymethyl cellulosa (CMC) dan 0,1% congored sebagai indikator dan diinkubasi selama 24 jam. Hasil penelitian menunjukkan bahwa strain bakteri yang teridentifikasi adalah *Lactobacillus plantarum* dan *Lactobacillus brevis* yang dapat mendegradasi selulosa. Kesimpulan dari penelitian ini adalah ditemukannya 2 jenis bakteri asam laktat dari jus kubis terfermentasi yaitu *Lactobacillus plantarum* dan *Lactobacillus brevis* yang mempunyai sifat selulolitik.

Isolation and Identification of Lactic Acid Bacteria Cellulolitik Originated from Fermented Cabbage Juice**Abstract**

The objective of this study was to isolate and identify the type of lactic acid bacteria (BAL) of cellulolytic originating from fermented cabbage juice. Research was conducted with the following steps: microbial isolation from fermented cabbage juice, cell morphology characteristics, biochemical characteristics, identification with an analytical profile index (API) 50 CHL kit, and cellulose degradability testing. The research was begun by fermenting cabbage juice for 6 days under facultative aerobic condition. The fermentation product was then isolated with de man rogosa and sharpe (MRS) medium which added CaCO₃ 1% and incubated for 24 hours. Reinoculation was performed 5 times until BAL was found. BAL pure cultures were used to identify lactic acid bacteria strains using an analytical profile index (API) 50 CHL kit. After pure culture was found, it was then tested for the ability to degrade cellulose on MRS media with 1% carboxymethyl cellulose (CMC) and 0.1% congored as indicator and incubated for 24 hours. The results showed that the identified bacterial strains were *Lactobacillus plantarum* and *Lactobacillus brevis* which could degrade cellulose. The conclusion of this research was the discovery of two types of lactic acid bacteria from fermented cabbage juice namely *Lactobacillus plantarum* and *Lactobacillus brevis* which had cellulolytic properties.

Keywords: kubis; fermentasi; isolasi; identifikasi; bakteri asam laktat; selulosa

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Kadar Protein, Kadar Lemak dan Solid non Fat Susu Kambing Pasteurisasi pada Penyimpanan Refrigerator

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Abstract

Abstrak

Penelitian bertujuan untuk mengetahui pengaruh lama simpan refrigerator terhadap kadar protein, kadar lemak dan *solid non fat* (SNF) susu kambing pasteurisasi. Penelitian ini telah dilaksanakan di Laboratorium Teknologi Hasil ternak, Fakultas Peternakan, Universitas Islam Malang mulai tanggal 01 Juli – 21 Agustus 2017. Materi yang digunakan adalah susu kambing, gula, alat pasteurisasi sederhana, refrigerator, *lactoscan*. Metode dalam penelitian ini adalah eksperimen. Parameter yang diamati adalah kadar protein, kadar lemak dan *solid non fat* (SNF). Pengujian kadar protein, kadar lemak, dan SNF menggunakan alat *lactoscan*. Rancangan percobaan yang digunakan adalah rancangan acak lengkap dengan 5 perlakuan lama simpan yaitu P1 (1 hari), P2 (3 hari), P3 (6 hari), P4 (9 hari), P5 (12 hari) penyimpanan dan 4 ulangan. Data yang diperoleh dianalisis dengan analisis of variance (ANOVA) dan dilanjut dengan uji duncan apabila terdapat pengaruh. Hasil penelitian menunjukkan adanya lama penyimpanan refrigerator mempengaruhi kadar protein, kadar lemak, dan SNF susu kambing pasteurisasi ($P < 0,05$). Kadar protein, lemak dan SNF tertinggi pada penyimpanan P1 sebesar $4,26 \pm 0,01$, $6,93 \pm 0,01$, $8,30 \pm 0,01$. Penyimpanan susu kambing pasteurisasi pada refrigerator selama 9 hari pada refrigerator menghasilkan kadar protein, kadar lemak dan SNF sesuai standar SNI. Kesimpulannya adalah penyimpanan susu kambing pasteurisasi pada refrigerator selama 9 hari masih dapat dikatakan aman untuk dikonsumsi.

Kata kunci: susu kambing pasteurisasi, penyimpanan refrigerator, protein, lemak, solid non fat

Content of Protein, Fat and Solid Non Fat Pasteurized Goat Milk in Refrigerator Storage

Abstract


The aim of this research is to know the influence of refrigerator saving to protein content, fat content and solid non fat (SNF) of pasteurized goat milk. This research was conducted in Animal Production Technology Laboratory, Faculty of Animal Husbandry, Islamic University of Malang from July 01–August 21st, 2017. Goat milk, sugar, simple pasteurization, refrigerator, lactoscan were used in this research. The obtained fresh goat milk was pasteurized at 71.2°C for 15 seconds. The storage of pasteurized goat milk was done in the refrigerator for 12 days. During storage, protein content, fat content and SNF were observed. Testing protein levels, fat content, and SNF using lactoscan. The experimental design used a complete randomized design with 5 treatments, i.e. P1 (1 day), P2 (3 days), P3 (6 days), P4 (9 days), P5 (12 days) of storage. The data were analyzed by analysis of variance (ANOVA) and continued with Duncan test if there was significant effect. The results showed that refrigerator storage significantly influenced protein level, fat level, and SNF pasteurized goat milk ($P < 0,05$). The highest content of protein, fat and SNF was achieved at P1, i.e. 4.26 ± 0.01 , 6.93 ± 0.01 , 8.30 ± 0.01 , respectively. As conclusion, based on content of protein, fat and SNF pasteurized goat milk stored at refrigerator was still fulfill the requirement in SNI, thus the product was still safe for consumption.

Keywords: pasteurized goat's milk, refrigerator storage, protein, fat, solid non fat

Note: This article has supplementary file(s).

Keywords: susu kambing pasteurisasi; suhu refrigerator; protein; lemak; solid non fat

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Evaluasi Penetapan Kadar Kalsium pada Minuman Yogurt secara Titrasi Kelatometri

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Abstract

Titration kelatometri merupakan salah satu metode analisis kuantitatif yang dapat digunakan untuk menganalisa kadar kalsium. Sampai saat ini, belum ada data validasi analisis kadar kalsium secara titrasi kelatometri pada sampel minuman yogurt. Tujuan dari penelitian ini yaitu mengevaluasi metode penetapan kadar kalsium secara titrasi kelatometri pada sampel minuman yogurt. Hasil uji recovery menunjukkan bahwa metode titrasi kelatometri mempunyai nilai akurasi yang baik, yaitu 100,94% pada konsentrasi spiking larutan standar kalsium sebesar 60 mg/100 ml sampel minuman yogurt. Ripitabilitas dan intra-lab reproduibilitas menunjukkan hasil yang dapat diterima dengan nilai relative standard deviation (RSD) berturut-turut sebesar 1,61% dan 1,74%. Hasil uji ketangguhan metode menunjukkan bahwa penggunaan sampel awal 5,0-10,0 ml menghasilkan kadar kalsium yang sama. Berdasarkan hasil ini, metode analisis kadar kalsium secara titrasi kelatometri dapat diaplikasikan pada sampel minuman yogurt.

Chelatometric titration is one of the quantitative analysis methods that can be used to analyze calcium content. This research aims to evaluate the analytical performance of calcium content analysis in the yogurt drink using chelatometric titration. The results showed that this chelatometric titration had a good accuracy, i.e. 100,94% at spiking concentration of 60 mg /100 ml sample. Repeatability and intra-lab reproducibility indicated acceptable results with relative standard deviation (RSD) values of 1,61% and 1,74%, respectively. The ruggedness test also indicated that chelatometric titration was tough to the volume of initial sample used, i.e. 5,0 ml to 10,0 ml. Based on these results, calcium content analysis using chelatometric titration can be applied in yogurt drink sample.

Note: This article has supplementary file(s).

Keywords: Evaluasi metode; kadar kalsium; minuman yogurt; titrasi kelatometri

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