

KUALITAS MIKROBIOLOGIS, FISIKO-KIMIA DAN SENSORIS KEFIR DENGAN PENAMBAHAN BUBUK DAUN STEVIA (*Stevia rebaudiana* Bertoni) SELAMA PENYIMPANAN SUHU DINGIN

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INTISARI

Kefir merupakan produk fermentasi yang dapat dibuat dari susu dengan penambahan biji kefir sebagai starter yang terdiri sejumlah bakteri asam laktat, asam asetat dan yeast. Stevia memiliki kandungan senyawa steviosida dan rebaudiosida yang berperan sebagai pemanis. Penelitian ini bertujuan untuk mengetahui pengaruh penambahan bubuk daun stevia terhadap kualitas mikrobiologis, fisiko-kimia dan sensoris kefir susu sapi selama penyimpanan. Perlakuan dalam penelitian ini terdiri dari penambahan stevia 0; 1,25; 1,50; dan 1,75% serta penyimpanan 0, 7, dan 14 hari. Data yang diperoleh dianalisis dengan metode *two-way* ANOVA dan dilanjutkan dengan uji DMRT (*Duncan's New Multiple Range Test*). Data uji sensoris diolah menggunakan analisis *Kruskal Wallis* serta dilanjutkan uji *Mann Whitney*. Penambahan stevia 0; 1,25; 1,50; dan 1,75% memberikan pengaruh sangat signifikan ($P < 0,01$) terhadap viskositas kefir secara berturut-turut yaitu 1044,33; 1158,33; 1281,66; dan 1457,77 mPa s. Penambahan stevia 0; 1,25; 1,50; dan 1,75% memberikan pengaruh signifikan ($P < 0,05$) secara berturut-turut terhadap sineresis kefir yaitu 14,72, 12,22, 9,93, dan 9,03%; serta sensoris (warna, rasa, dan keseluruhan). Lama penyimpanan 0, 7, dan 14 hari memberikan pengaruh sangat signifikan ($P < 0,01$) terhadap total yeast secara berturut-turut yaitu 6,70; 5,92; dan 5,87 log CFU/ml. Lama penyimpanan 0, 7, dan 14 hari memberikan pengaruh signifikan ($P < 0,05$) pada viskositas kefir secara berurutan yaitu 1125,33; 1217,91; dan 1363,33 mPa s, keasaman kefir yang meningkat 1,00 hingga 1,27% serta nilai pH 3,98 hingga 4,10. Penambahan stevia berpengaruh terhadap parameter warna, rasa dan keseluruhan. Kesimpulan penelitian ini penambahan stevia tidak mempengaruhi kualitas mikrobiologis, kimia dan sensoris berdasarkan aroma dan tekstur, namun dapat meningkatkan viskositas dan penurunan sineresis.

Kata kunci: Kefir, Bubuk daun stevia, Lama penyimpanan, Kualitas fisiko-kimia, Mikrobiologis, Sensoris.

MICROBIOLOGICAL, PHYSICO-CHEMICAL AND SENSORY QUALITIES OF KEFIR WITH ADDITION OF STEVIA (*Stevia rebaudiana* Bertoni) LEAF POWDER DURING COLD STORAGE

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ABSTRACT

Kefir is a fermented product that can be made from milk with the addition of kefir seeds as a starter consisting of a number of lactic acid bacteria, acetic acid and yeast. Stevia contains stevioside and rebaudioside compounds that act as sweeteners. This study aimed to determine the effect of stevia leaf powder addition on the physico-chemical, microbiological, and sensory quality of cow's milk kefir during storage. The treatments in this study consisted of the addition of stevia 0; 1.25; 1.50; and 1.75% and storage of 0, 7, and 14 days. Each treatment was replicated three times. The data obtained were analyzed by two-way ANOVA method and continued with DMRT (Duncan's New Multiple Range Test) test. Sensory test data were processed using Kruskal Wallis analysis and followed by Mann Whitney test. The addition of stevia 0; 1.25; 1.50; and 1.75% gave a very significant effect ($P < 0.01$) on the viscosity of kefir, namely 1044.33; 1158.33; 1281.66; and 1457.77 mPa s, respectively. Addition of stevia 0; 1.25; 1.50; and 1.75% gave significant effect ($P < 0.05$) on kefir syneresis of 14.72, 12.22, 9.93, and 9.03%, respectively; and sensory (color, taste, and overall). Storage period of 0, 7, and 14 days had a highly significant effect ($P < 0.01$) on total yeast, namely 6.70, 5.92, and 5.87 log CFU/ml, respectively. Storage duration of 0, 7, and 14 days gave a significant effect ($P < 0.05$) on the viscosity of kefir, namely 1125.33; 1217.91; and 1363.33 mPa s, increasing kefir acidity by 1.00 to 1.27% and pH value of 3.98 to 4.10, respectively. The addition of stevia affects the color, taste and overall parameters. The conclusion of this study is that the addition of stevia does not affect the microbiological, chemical and sensory quality based on aroma and texture, but can increase viscosity and decrease syneresis.

Keywords: Kefir, Stevia leaf powder, Storage time, Physico-chemical quality, Microbiological quality, Sensory quality.