

PENGARUH PENAMBAHAN INULIN CHICORY (*Chicoryum intybus L.*) TERHADAP KUALITAS MIKROBIOLOGIS, FISIK DAN SENSORIS KEJU SINBIOTIK

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INTISARI

Penelitian ini bertujuan untuk mengetahui pengaruh penambahan inulin chicory (*Chicoryum intybus L.*) terhadap kualitas mikrobiologis, fisik dan sensoris keju yang diperam selama 21 hari dengan menggunakan starter *Streptococcus thermophilus* dan *Lactobacillus plantarum dad-13*. Penelitian ini terdiri dari 2 perlakuan yaitu keju tanpa penambahan inulin (P1) dan keju dengan penambahan inulin (P2). Keju diperam dan diamati kualitas mikrobiologis dan fisik pada hari ke-0 dan 21. Uji kualitas sensoris dilakukan pada hari ke-0. Parameter yang diamati meliputi kualitas mikrobiologis (total bakteri asam laktat, bakteri proteolitik, total bakteri serta yeast), kualitas fisik (tekstur keju) serta kualitas sensoris. Analisis data yang digunakan adalah pola faktorial 2x2 untuk uji mikrobiologis dan fisik, sedangkan uji sensoris menggunakan metode Kruskal-Wallis. Hasil penelitian menunjukkan bahwa penambahan inulin dan lama pemeraman tidak berpengaruh terhadap total bakteri asam laktat, bakteri proteolitik, total bakteri, yeast, tekstur dan sensoris. Hasil penelitian yang diperoleh pada keju selama pemeraman 0 dan 21 hari berturut-turut mempunyai jumlah total bakteri asam laktat $8,90 \pm 1,23$ log CFU/g dan $10,08 \pm 0,43$ log CFU/g, bakteri proteolitik $8,56 \pm 0,25$ log CFU/g dan $8,69 \pm 0,10$ log CFU/g, total bakteri $9,94 \pm 0,42$ log CFU/g dan $10,27 \pm 0,57$ log CFU/g serta yeast $2,72 \pm 2,10$ log CFU/g dan $4,80 \pm 0,77$ log CFU/g. Rerata tekstur keju selama pemeraman adalah $20,83 \pm 4,44$ N dan $24,33 \pm 5,23$ N. Hasil uji sensoris mempunyai rerata warna dan penampakan $10,60 \pm 3,00$, tekstur dan kekompakan $26,30 \pm 5,09$ serta rasa dan aroma $37,70 \pm 5,82$. Penambahan inulin pada keju dengan menggunakan starter *Streptococcus thermophilus* dan *Lactobacillus plantarum dad-13* yang diperam selama 21 hari tidak mempengaruhi kualitas mikrobiologis, fisik dan sensoris keju. Keju yang ditambah inulin memenuhi syarat sebagai makanan probiotik.

Kata Kunci : Keju, *Streptococcus thermophilus*, *Lactobacillus plantarum dad-13*, Inulin, Pemeraman

The Effects Of Inulin Chicory (*Chicoryum intybus L.*) Addition On Microbiological, Physical Quality and Sensory Of Synbiotic Cheese

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ABSTRACT

The experiment was aimed to determine the effect of adding inulin chicory on microbiological and physical quality, and sensory of synbiotic cheese ripened for 21 days by using starters *Streptococcus thermophilus* and *Lactobacillus plantarum dad-13*. There were two groups of treatments : cheese without adding inulin (P1) and with inulin (P2). Cheese was ripened and observed on microbiological and physical quality for 0 and 21 days. Sensory of synbiotic cheese for 0 days. Parameter observed were microbiological quality (lactic acid bacteria count, proteolytic bacteria count, total bacteria count), physical quality (texture) and sensory of cheese. Data analysis was analysed with factorial variance analysis (ANNOVA) 2x2 for microbiology quality and physical quality, sensory of cheese was analyzed with Kruskal-Wallis test. Data showed that the addition of inulin chicory was not significantly affected the value of lactic acid bacteria count, proteolytic bacteria count, total bacteria count, texture and sensory of cheese. Average cheese during ripened 0 and 21 day respectively, were lactic acid bacteria $8,90 \pm 1,23$ log CFU/g and $10,08 \pm 0,43$ log CFU/g, proteolytic bacteria $8,56 \pm 0,25$ log CFU/g and $8,69 \pm 0,10$ log CFU/g, total bacteria $9,94 \pm 0,42$ log CFU/g and $10,27 \pm 0,57$ log CFU/g and yeast $2,72 \pm 2,10$ log CFU/g and $4,80 \pm 0,77$ log CFU/g. Average texture cheese during ripened were $20,83 \pm 4,44$ N and $24,33 \pm 5,23$ N. The result sensory of cheese had average colour and appearance $10,60 \pm 3,00$, body and texture $26,30 \pm 5,09$ and flavor $37,70 \pm 5,82$. Conclusion, addition of inulin chicory by using starters *Streptococcus thermophilus* dan *Lactobacillus plantarum dad-13* during 21-days ripening process was not significantly affected the quality of microbiological, texture and sensory of cheese. Cheese was added inulin qualifies as food probiotic.

Keywords: Cheese, *Streptococcus thermophilus*, *Lactobacillus plantarum dad-13*, Inulin, ripened