

**KUALITAS KEJU *MOZZARELLA* MENGGUNAKAN STARTER  
*Lactobacillus bulgaricus* DENGAN PENAMBAHAN  
GELATIN DAN KARAGENAN**

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**Intisari**

Penelitian ini bertujuan untuk mengetahui pengaruh penambahan gelatin dan karagenan terhadap kualitas fisiko-kimia yang meliputi rendemen, tekstur, kemuluran, pH, kadar lemak, kadar air dan kadar protein serta total BAL (mikrobiologis) starter *Lactobacillus bulgaricus* dalam produk keju *mozzarella*. Keju *mozzarella* dibuat dengan menggunakan starter *Lactobacillus bulgaricus* dengan 4 perlakuan penambahan gelatin dan karagenan: 1) kontrol (tanpa gelatin dan karagenan); 2) gelatin 0,3% dan karagenan 0% ; 3) gelatin 0% dan karagenan 0,3%; 4) gelatin 0,15% dan karagenan 0,15%. Parameter yang diamati meliputi uji kualitas fisik (tekstur, rendemen dan kemuluran) dan kimia (kadar lemak, kadar protein, kadar air dan pH), uji mikrobiologis (total starter bakteri asam laktat) dan uji sensoris. Data hasil penelitian dianalisis menggunakan analisis variansi pola searah untuk sifat fisiko-kimia dan K-independent Kruskal Wallis untuk sifat sensoris keju *mozzarella*, kemudian dilanjutkan dengan *Duncan's New Multiple Range Test* (DMRT). Kesimpulan penelitian ini adalah penambahan gelatin dan karagenan pada keju *mozzarella* menggunakan starter *Lactobacillus bulgaricus* tidak mempengaruhi kualitas fisiko-kimia, namun meningkatkan kualitas warna dan daya terima keju.

Kata-kata kunci: Keju *mozzarella*, Fisiko-kimia, Susu Sapi, *Lactobacillus bulgaricus*, Gelatin, Karagenan

## QUALITY OF MOZZARELLA CHEESE USING STARTER *Lactobacillus bulgaricus* WITH GELATIN AND KARAGENAN ADDITION

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### Abstract

This research aimed to determine the effect of adding gelatin and carrageenan on physico-chemical quality which included yield, texture, elongation, pH, fat content, water content and protein content and total LAB (microbiological) starter of *Lactobacillus bulgaricus* in mozzarella cheese products. Mozzarella cheese was made by using a starter of *Lactobacillus bulgaricus* with 4 treatments of gelatin and carrageenan added: 1) control (without gelatin and carrageenan); 2) 0.3% gelatin and 0% carrageenan; 3) 0% gelatin and carrageenan 0.3%; 4) 0.15% gelatin and 0.15% carrageenan. The parameters observed included of physical quality test (texture, yield and elongation) and chemistry test (fat content, protein content, water content and pH), microbiological test (total starter of lactic acid bacteria) and sensory test. Result data from the research were analyzed using unidirectional patterns analysis of variance for physico-chemical test and K-independent Kruskal Wallis for the sensory test of mozzarella cheese, then continued with Duncan's New Multiple Range Test (DMRT). The conclusion of this research is addition of gelatin and carrageenan in mozzarella cheese using a starter of *Lactobacillus bulgaricus* did not affect in physico-chemical quality, but improves the quality of color and acceptability of mozzarella cheese.

Keywords : *Mozzarella* cheese, Physicochemical, Cow's milk ,  
*Lactobacillus bulgaricus*, Gelatin, Carrageenan