Karakteristik Kimia Dan Viabilitas Sel Keju yang Difermentasi dengan Kultur Starter Lokal *Lactobacillus plantarum* Kita-3

INTISARI

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Peningkatan konsumen keju konsumsi keju di Indonesia belum didukung oleh ketersediaan bahan baku lokal terutama kultur starter. *Lactobacillus plantarum* Kita-3 yang diisolasi dari keju Halloumi lokal yang memiliki potensi sebagai kultur starter untuk menjadi alternatif lain dari kultur starter impor. Dalam penelitian ini, pembuatan keju fermentasi menggunakan kultur lokal *Lactobacillus plantarum* Kita-3 dianalisis viabilitasnya dan karakteristik kimia dibandingkan dengan keju yang dibuat dengan kultur impor Flora Danica. Hasil menunjukkan bahwa viabilitas sel *Lactobacillus plantarum* Kita-3 terjaga sampai produk akhir dengan jumlah sel 9,40 ± 0,05 logCFU/gram. Sedangkan pada analisis karakteristik kimia hasil menunjukkan ($T<0,05$) kadar air bahan tanpa lemak, total padatan, kadar lemak, dan kadar karbohidrat dengan kultur starter komersial sebesar 47.28 ± 0.02 % , 94.19 ± 0.00 %, 45.42 ± 0.01 %, 6.26 ± 0.01 % ; pada keju fermentasi dengan *Lactobacillus plantarum* Kita-3 sebesar 59.13 ± 0.01 % , 93.00 ± 0.00 % , 38.34 ± 0.01 % , 10.78 ± 0.01 % Sedangkan pada *yield*, pH, dan kadar protein tidak berbeda signifikan ($T>0,05$).

Kata Kunci : keju fermentasi, *Lactobacillus plantarum* Kita-3, viabilitas sel, karakteristik kimia

Chemical Characteristics and Cell Viability in Fermented Cheese with Local Starter Culture *Lactobacillus plantarum* Kita-3

ABSTRACT

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The growth of cheese consumers in Indonesia has not been supported by local raw materials, especially starter cultures. *Lactobacillus plantarum* Kita-3 is isolated from local Halloumi cheese which has the potential as a starter culture to be an alternative to imported starter cultures. In this study, the manufacture of fermented cheese using local cultures of *Lactobacillus plantarum* Kita-3 was analyzed for its viability and chemical characteristic compared to cheese made with imported Flora Danica cultures. The results showed that the viability of *Lactobacillus plantarum* Kita-3 cells was maintained until the final product with a cell count of 9.40 ± 0.05 logCFU / gram. Whereas in the chemical characteristic analysis the results showed (T <0.05) the moisture content of a fat-free bassis, total solids, fat content, and carbohydrate content with imported Flora Danica starter culture was 47.28 ± 0.02%, 94.19 ± 0.00%, 45.42 ± 0.01%, 6.26 ± 0 .01%; In fermented cheese with *Lactobacillus plantarum* Kita-3, it was 59.13 ± 0.01%, 93.00 ± 0.00%, 38.34 ± 0.01%, 10.78 ± 0.01%, while the yield, pH, and protein content were not significantly different (T> 0.05).

Keywords: fermented cheese, *Lactobacillus plantarum* Kita-3, cell viability, chemical characteristic