

**VIABILITAS BAKTERI ASAM LAKTAT DAN PROBIOTIK PADA KEJU
CHEDDAR PROBIOTIK MENGGUNAKAN INOKULUM LOKAL
SELAMA PEMERAMAN**

ABSTRAK

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Penelitian ini bertujuan untuk mengetahui viabilitas bakteri asam laktat (BAL), probiotik dan pH pada keju *cheddar* probiotik menggunakan inokulum lokal selama pemeraman 8 minggu. Keju *cheddar* probiotik dibuat menggunakan inokulum lokal *Lactiplantibacillus plantarum subsp. plantarum* Dad-13 dan *Streptococcus thermophilus* Dad-11. Keju *cheddar* probiotik dikemas, dilakukan pemeraman selama 8 minggu, dan dilakukan pengujian viabilitas BAL, probiotik dan pH setiap dua minggu sekali. Pembuatan keju *cheddar* menggunakan inokulum impor MA4002 dilakukan sebagai pembanding. Pengujian viabilitas BAL dilakukan menggunakan media MRS, viabilitas bakteri probiotik dilakukan menggunakan media LPSM, dan pengukuran pH dilakukan menggunakan pH meter. Hasil penelitian ini menunjukkan bahwa viabilitas BAL keju *cheddar* probiotik dengan inokulum lokal selama pemeraman cenderung stabil pada angka 8 log CFU/gram. Viabilitas probiotik cenderung stabil pada angka 7 log CFU/gram dan produk akhir menunjukkan viabilitas probiotik sebesar 7,75 log CFU/gram sehingga termasuk ke dalam pangan probiotik. pH keju *cheddar* probiotik cenderung mengalami kenaikan selama 8 minggu pemeraman dan diperoleh pH akhir sebesar 5,3 yang memenuhi syarat pembuatan keju *cheddar*.

Kata kunci: inokulum lokal, *Lactiplantibacillus plantarum subsp. plantarum* Dad-13, viabilitas, pemeraman

VIABILITY OF LACTIC ACID BACTERIA AND PROBIOTIC IN PROBIOTIC CHEDDAR CHEESE WITH LOCAL INOCULUM DURING AGING

ABSTRACT

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This research aims to evaluate the viability of lactic acid bacteria (LAB), probiotics and the pH of probiotic cheddar cheese using local inoculum during 8 weeks of aging. Probiotic cheddar cheese has been produced using local inoculum of *Lactiplantibacillus plantarum subsp. plantarum* Dad-13 and *Streptococcus thermophilus* Dad-11. Probiotic cheddar cheese was packaged, aged for 8 weeks, and determined for LAB viability, probiotics, and pH every two weeks. Cheddar cheese production using imported inoculum MA4002 was carried out as a comparison. LAB viability was determined using MRS media, probiotic bacteria viability was determined using LPSM media, and pH was determined using a pH meter. The results of this study indicated that the LAB viability of probiotic cheddar cheese during aging tends to be stable at 8 log CFU/gram. Probiotic viability tends to be stable at 7 log CFU/gram, and the final product showing probiotic viability of 7.75 log CFU/gram, therefore meeting the criteria as a probiotic food. The pH of probiotic cheddar cheese tends to increase during 8 weeks of aging, and the final product pH of 5,3 has been obtained, which meets the requirements for making cheddar cheese.

Keywords: local inoculum, *Lactiplantibacillus plantarum subsp. plantarum* Dad-13, viability, aging