

**PENGARUH PENAMBAHAN INULIN CHICORY(*Cichorium intybus*)
TERHADAP KUALITAS KIMIA KEJU YANG DIPERAM DENGAN
KOMBINASI STARTER *Streptococcus thermophilus* DAN
Lactobacillus plantarum dad-13**

Lita Novalia Sinaga
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INTISARI

Penelitian ini bertujuan untuk mengetahui pengaruh penambahan inulin chicory (*Cichorium intybus*) terhadap kualitas kimia keju yang diperam dengan starter *Streptococcus thermophilus* dan *Lactobacillus plantarum* dad-13. Keju dibagi menjadi 2 kelompok perlakuan yaitu P1 (keju tanpa penambahan inulin) dan P2 (keju dengan penambahan inulin). Keju diperam dengan kombinasi starter *Lactobacillus plantarum* dad-13 dan *Streptococcus thermophilus* dan menggunakan rennet sebagai koagulan. Keju diamati perubahan kimia meliputi pH, keasaman, *free fatty acid*, kadar air, dan protein terlarut pada hari ke 0 dan 21. Analisis data dilakukan dengan analisis variansi pola faktorial 2x2. Hasil penelitian menunjukkan bahwa pemberian inulin tidak berpengaruh terhadap nilai pH keju dengan rerata pH keju P1 dan P2 berturut-turut $5,50 \pm 0,47$ dan $5,62 \pm 0,40$. Keasaman keju tidak berbeda nyata dengan nilai rerata keasaman keju P1 dan P2 berturut-turut $0,85 \pm 0,49\%$ dan $0,78 \pm 0,39\%$. *Free fatty acid* keju tidak berbeda nyata dengan rerata *free fatty acid* keju P1 dan P2 berturut-turut $23,47 \pm 9,48\%$ dan $17,21 \pm 3,47\%$. Kadar air keju tidak mengalami perbedaan nyata dengan rerata kadar air keju P1 dan P2 berturut-turut $57,76 \pm 4,94\%$ dan $59,27 \pm 4,02\%$. Kadar protein terlarut keju tidak berbeda nyata dengan rerata kadar protein terlarut keju P1 dan P2 berturut-turut $5,77 \pm 1,87\%$ dan $5,49 \pm 0,61\%$. Penambahan inulin pada keju yang diperam dengan kombinasi starter *Lactobacillus plantarum* dad-13 dan *Streptococcus thermophilus* selama 21 hari tidak mempengaruhi kualitas kimia.

Kata kunci : Inulin, Susu, Keju, Pemeraman

EFFECT OF CHICORY INULIN ADDITION (*Cichorium intybus*) ON CHEMICAL QUALITY OF CHEESE WHICH WAS RIPENED BY COMBINATION STARTERS OF *Streptococcus thermophilus* AND *Lactobacillus plantarum* dad-13

**Lita Novalia Sinaga
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ABSTRACT

This research was aimed to determine the effect of chicory inulin addition on chemical quality of cheese which was ripened with combination starters of *Lactobacillus plantarum* dad-13 and *Streptococcus thermophilus*. There were two treatment groups, P1 (cheese without the addition of inulin) and P2 (cheese with the addition of inulin). Cheese was ripened with starter combination of *Streptococcus thermophilus* and *Lactobacillus plantarum* dad-13 using rennet as the coagulant. Cheese was observed the chemical changes including pH, acidity, free fatty acid, moisture content and soluble protein on 0 and 21 d. Data were analyzed by analysis of variance 2x2 factorial design. The results showed inulin addition did not affect significantly the cheese pH value and pH value of P1 and P2 cheese respectively $5,50 \pm 0,47$ and $0,40 \pm 5,62$. Cheese acidity was not different significantly and the acidity value of P1 and P2 cheese respectively $0,85 \pm 0,49\%$ and $0,78 \pm 0,39\%$. Cheese free fatty acid was not different significantly and free fatty acid value of P1 and P2 cheese $23,47 \pm 9,48\%$ and $17,21 \pm 3,47\%$. The moisture content was not different significantly and the moisture content of P1 and P2 cheese respectively $57,76 \pm 4,94\%$ and $59,27 \pm 4,02\%$. Cheese soluble protein was not different significantly and the soluble protein value of P1 and P2 cheese respectively $5,77 \pm 1,87\%$ and $5,49 \pm 0,61\%$. The addition of inulin in cheese ripened by starters combination *Lactobacillus plantarum* dad-13 and *Streptococcus thermophilus* did not affect the chemical quality.

Keywords: Inulin, Milk, Cheese, Ripening