

ABSTRAK

Margareth Christin Boru Padang. Penelitian dengan judul Nilai pH dan Keasaman Es Krim Yoghurt dengan Penambahan Persentase Bubuk Kayu Secang (*Caesalpinia sappan L.*) yang Berbeda dilaksanakan di Laboratorium Teknologi Hasil Ternak, Fakultas Peternakan, Universitas Jenderal Soedirman, Purwokerto pada tanggal 13 Januari - 27 Maret 2025.

Tujuan penelitian untuk mengetahui pengaruh persentase penambahan terbaik bubuk kayu secang pada es krim yoghurt terhadap nilai pH dan keasaman es krim. **Materi penelitian** yang digunakan yaitu 10.000 g susu sapi, 45 g bubuk kayu secang, 15 g *yogourtmeter*, 796 g susu skim, 45 g CMC, 2.260 g gula, 1.386 g minyak dan 1000 g Aquadest.

Metode penelitian dilakukan secara eksperimental dengan Rancangan Acak Lengkap (RAL) dengan 5 perlakuan dan 4 ulangan. Perlakuan yang diberikan adalah penambahan bubuk kayu secang 0,1% (P_1), penambahan bubuk kayu secang 0,2% (P_2), penambahan bubuk kayu secang 0,3% (P_3), penambahan bubuk kayu secang 0,4% (P_4), penambahan bubuk kayu secang 0,5% (P_5) dari berat es krim. Data dianalisis menggunakan analisis variansi dengan uji lanjut *orthogonal polynomial*. **Hasil** analisis menunjukkan penambahan bubuk kayu secang berpengaruh sangat nyata ($P < 0,01$) terhadap nilai pH dan keasaman es krim yoghurt. Rataan nilai pH 5,32 dan rata-rata keasaman 0,60%. **Kesimpulan**, Nilai pH terbaik dihasilkan oleh es krim yoghurt dengan penambahan bubuk kayu secang sebanyak 0,2%, semakin tinggi penambahan bubuk kayu secang pada es krim yoghurt terbukti mampu meningkatkan nilai pH tetapi menurunkan tingkat keasaman es krim yoghurt.

Kata Kunci: Es krim yoghurt, susu sapi, bubuk kayu secang, nilai pH, keasaman.

ABSTRACT

Margareth Christin Boru Padang. The research entitled pH and Acidity Values of Yogurt Ice Cream with Different Percentages of caesalpinia powder (*Caesalpinia sappan L.*) was conducted at the Animal Product Technology Laboratory, Faculty of Animal Husbandry, Jenderal Soedirman University, Purwokerto on January 13 – March 27, 2025. **The purpose** of the study was to determine the effect of the best percentage of caesalpinia powder addition to yogurt ice cream on the pH value and acidity of the ice cream. **The research materials** used were 10,000 g of cow's milk, 45 g of caesalpinia powder, 15 g of yogurt, 796 g of skim milk, 45 g of CMC, 2,260 g of sugar, 1,386 g of oil and 1000 g of Aquadest. The research method was carried out experimentally with a Completely Randomized Design (CRD) with 5 treatments and 4 replications. The treatments given were the addition of 0.1% caesalpinia powder (P1), the addition of 0.2% caesalpinia powder (P2), the addition of 0.3% caesalpinia powder (P3), the addition of 0.4% caesalpinia powder (P4), the addition of 0.5% caesalpinia powder (P5) of the weight of ice cream. Data were analyzed using analysis of variance with orthogonal polynomial further tests. **The results** of the analysis showed that the addition of caesalpinia powder had a very significant effect ($P < 0,01$) on the pH value and acidity of yogurt ice cream. The average pH value was 5.32 and the average acidity was 0.60%. **In conclusion**, The best pH value was produced by yogurt ice cream with the addition of 0.2% caesalpinia powder, the higher the addition of caesalpinia powder to yogurt ice cream was proven to be able to increase the pH value but reduce the acidity level of yogurt ice cream.

Keywords : *Yogurt ice cream, cow's milk, caesalpinia powder, pH value, acidity.*