

ABSTRAK

Ghaniy Aziz Zulfikar. Penelitian dengan judul “Tingkat Kekerasan Dan Warna Keju *Mozzarella* Dengan Penambahan Persentase Ekstrak Kayu Secang (*Caesalpinia sappan*, L.) dilaksanakan di Laboratorium Teknologi Hasil Ternak, Fakultas Peternakan, Universitas Jenderal Soedirman, Purwokerto pada tanggal 22 April sampai 29 April 2025. Tujuan penelitian untuk mengetahui pengaruh penambahan persentase ekstrak kayu secang (*Caesalpinia sappan*, L.) dengan persentase yang berbeda terhadap tingkat kekerasan dan warna keju *mozzarella* serta mengetahui persentase ekstrak kayu secang terbaik terhadap tingkat kekerasan dan warna keju *mozzarella*. Materi penelitian yang digunakan yaitu 20.000 g susu sapi, kayu secang (*Caesalpinia sappan*, L.) 40 g, Asam sitrat 40 g, Akuades 120 ml, Garam 20 g, Air 800 ml, dan *Rennet* 20 ml. Metode penelitian dilakukan secara eksperimental dengan Rancangan Acak Lengkap (RAL) dengan 5 perlakuan dan 4 ulangan. Perlakuan yang diberikan adalah perlakuan kontrol (P0), penambahan ekstrak kayu secang 1% (P1), penambahan ekstrak kayu secang 2% (P2), Penambahan ekstrak kayu secang 3% (P3), penambahan ekstrak kayu secang 4% (P4). Data dianalisis menggunakan analisis variansi dengan uji lanjut orthogonal polinomial. Hasil analisis menunjukkan penambahan ekstrak kayu secang berpengaruh sangat nyata terhadap tingkat kekerasan dan berpengaruh nyata terhadap warna (WI). Rataan tingkat kekerasan adalah 349,203 gr (P0), 205,638 gr (P1), 243,93 gr (P2), 402,298 gr (P3), 694,28 gr (P4) dan rataan warna (WI) adalah 78,51 (P0), 77,11 (P1), 76,11 (P2), 73,96 (P3), 71,35 (P4). Kesimpulan, semakin tinggi penambahan ekstrak kayu secang meningkatkan tingkat kekerasan (*hardness*) dan menurunkan nilai warna (WI).

Kata Kunci: Keju, Keju *Mozzarella*, susu sapi, ekstrak kayu secang, tingkat kekerasan, warna (WI) *whiteness index*.

ABSTRACT

Ghaniy Aziz Zulfikar. The research with the title "Level of Hardness and Color of *Mozzarella Cheese* with the Addition of Percentage of Secang Wood Extract (*Caesalpinia sappan*, L.)" was conducted at the Laboratory of Animal Products Technology, Faculty of Animal Husbandry, Universitas Jenderal Soedirman, Purwokerto on April 22 to April 29, 2025. The purpose of the study was to determine the effect of the addition of a different percentage of sappan wood extract (*Caesalpinia sappan*, L.) on the level of *hardness* and color of mozzarella cheese and to determine the best percentage of sappan wood extract on the level of hardness and color of *mozzarella cheese*. The research materials used were 20,000 g cow's milk, 40 g sappan wood (*Caesalpinia sappan*, L.), 40 g citric acid, 120 ml distilled water, 20 g salt, 800 ml water, and 20 ml rennet. The research method was conducted experimentally with a completely randomized design (CRD) with 5 treatments and 4 replicates. The treatments given were control treatment (P0), addition of 1% secang wood extract (P1), addition of 2% secang wood extract (P2), addition of 3% secang wood extract (P3), addition of 4% secang wood extract (P4). Data were analyzed using analysis of variance with orthogonal polynomial further test. The results of the analysis showed that the addition of secang wood extract had a very significant effect on the level of *hardness* and a significant effect on color (WI). The average hardness level was 349.203 gr (P0), 205.638 gr (P1), 243.93 gr (P2), 402.298 gr (P3), 694.28 gr (P4) and the average color (WI) was 78.51 (P0), 77.11 (P1), 76.11 (P2), 73.96 (P3), 71.35 (P4). In conclusion, the higher addition of sappan wood extract increases the *hardness* level and decreases the color value (WI).

Keywords: Cheese, *Mozzarella Cheese*, cow's milk, sappan wood extract, hardness, color (WI) *whiteness index*.