

EFEKTIVITAS ENZIM BROMELIN PADA PROSES *BATING* TERHADAP SIFAT FISIKOKIMIA KULIT KAMBING TERSAMAK

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INTISARI

Penelitian ini bertujuan untuk mengetahui tingkat efektivitas enzim bromelin sebagai *bating agent* pada kulit kambing tersamak terhadap sifat fisikokimianya. Sampel yang digunakan adalah menggunakan kulit kambing PE segar sebanyak 6 lembar utuh yang dibagi dua menjadi 12 lembar sampel kulit. Terdapat 4 perlakuan dengan 3 ulangan untuk setiap perlakuan. Perlakuan masing – masing digunakan P0 (kontrol) : Oropon 2% (aktivitas enzim 2000 U/g) , P1 : Enzim Bromelin 0,02% (aktivitas enzim 50,000 U/g), P2 : Enzim Bromelin 0,08% (aktivitas enzim 50,000 U/g) dan P3 : Enzim Bromelin 0,14% (aktivitas enzim 50,000 U/g). Parameter yang diuji yaitu sifat kimia dan fisik. Sifat kimia kulit kambing yaitu kadar protein terlarut pada air limbah *bating*. Sifat fisik yang diuji yaitu ketahanan bengkung. Data yang dapat dianalisis secara deskriptif untuk pengujian ketahanan bengkung kulit samak dan analisis statistik RAL pola searah untuk pengujian kadar protein terlarut air limbah *bating*. Hasil penelitian menunjukkan bahwa penggunaan *bating agent* Oropon 2% (aktivitas enzim 2000 U/g) dan ekstrak enzim bromelin (aktivitas enzim 50,000 U/g) dari buah nanas dengan konsentrasi berbeda (0,02%, 0,08 dan 0,14%) berpengaruh sangat nyata pada sifat kimia kadar protein terlarut pada air limbah *bating* dengan perlakuan terbaik bromelin 0,02% didapatkan hasil $0,9910 \pm 0,0052\%$. Namun, penggunaan *bating agent* pada hasil uji kuat bengkung tidak memiliki perbedaan yang signifikan (semua tidak retak) yang menandakan keduanya telah sesuai SNI.

Kata kunci : Bromelin, Pengikisan Protein, Kulit Kambing

EFFECTIVENESS OF BROMELAIN ENZYME IN BATING PROCESS ON PHYSICOCHEMICAL PROPERTIES OF TANNED GOAT SKINS

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ABSTRACT

This study aims to determine the effectiveness of bromelain enzyme as a bating agent in tanned goat leather on its physicochemical properties. The samples used were fresh PE goat skins as much as 6 whole sheets which were divided into 12 pieces of skin samples. There were 4 treatments with 3 replicates for each treatment. Each treatment used P0 (control): Oropon 2% (enzyme activity 2000 U/g), P1: Bromelin enzyme 0.02% (enzyme activity 50,000 U/g), P2: Bromelin enzyme 0.08% (enzyme activity 50,000 U/g) and P3: Bromelin enzyme 0.14% (enzyme activity 50,000 U/g). The parameters tested were chemical and physical properties. The chemical properties of goat skin are the soluble protein content in bating wastewater. The physical properties tested were bending resistance. The data were analyzed descriptively for testing the bending resistance of tanned leather and statistical analysis of RAL unidirectional pattern for testing the soluble protein content of bating wastewater. The results showed that the use of bating agent Oropon 2% (enzyme activity 2000 U/g) and bromelain enzyme extract (enzyme activity 50,000 U/g) from pineapple fruit with different concentrations (0.02%, 0.08 and 0.14%) had a very significant effect on the chemical properties of soluble protein content in bating wastewater with the best treatment of bromelain 0.02% obtained the result of $0.9910 \pm 0.0052\%$. However, the use of bating agents on the results of the bending strength test did not have a significant difference (all did not crack) which indicates that both.

Keyword : Bating, Bromelain, Goat Skin