

Isniyatin Nazilah. NIM 200331100095. Potensi Enzim Transglutaminase Sebagai Sumber Enzim Untuk Meningkatkan Kualitas Kekenyalan Bakso. Dibawah Bimbingan **Cahyo Indarto, S.TP., MP., Ph.D** dan **Dr. Supriyanto, STP., MP**

Abstrak

Bakso merupakan salah satu olahan daging yang populer di Indonesia. Kualitas bakso yang baik salah satunya ditentukan oleh tekstur yang kenyal. Selain itu, ada beberapa cara yang digunakan untuk mempertahankan tingkat kualitas kekenyalan pada produk yaitu dengan memodifikasi protein dengan menggunakan enzim. Enzim *transglutaminase* memiliki potensi untuk meningkatkan kualitas kekenyalan bakso. Enzim ini mampu mengikat protein antar daging, sehingga menghasilkan tekstur yang lebih padat dan kenyal. Penelitian ini dilakukan dengan mengurangi penggunaan bahan kimia. Tujuan penelitian ini untuk mengetahui konsentrasi enzim *transglutaminase* dan suhu inkubasi yang optimal, serta interaksi penambahan enzim *transglutaminase* dan suhu inkubasi terhadap kualitas kekenyalan bakso. Penelitian ini menggunakan metode Rancangan Acak Lengkap Faktorial (RAL). Terdapat dua perlakuan yaitu penambahan enzim *transglutaminase* dengan konsentrasi dan suhu inkubasi. Hasil pengaruh interaksi konsentrasi enzim terhadap suhu inkubasi memberikan pengaruh nyata terhadap pengujian tekstur, kadar air, pH, warna, dan organoleptik. Hasil terbaik dari semua perlakuan ditunjukkan oleh sampel dengan penambahan enzim *transglutaminase* 1,5% dengan suhu inkubasi 60°C dengan nilai indeks efektivitas sebesar 321,61. Karakteristik fisik dan kimia bakso dengan perlakuan terbaik meliputi nilai kadar air 69,31%, tekstur *springiness* 1,73 N, *Hardness*, 3853,64 N, *hue* 80,44, *chroma* 31,13 dan pH 6,79.

Kata Kunci: Bakso, Enzim, Kekenyalan

Isniyatin Nazilah. NIM 200331100095. *Potential of Transglutaminase Enzyme as an Enzyme Source to Improve Meatball Chewiness Quality.* Dibawah Bimbingan **Cahyo Indarto, S.TP., MP., Ph.D** dan **Dr. Supriyanto, STP., MP**

Abstrak

Meatballs are one of the most popular meatball preparations in Indonesia. The quality of a good meatball is determined by its chewy texture. In addition, there are several ways used to maintain the quality level of chewiness in the product, namely by modifying the protein using enzymes. Transglutaminase enzyme has the potential to improve the quality of meatball chewiness. This enzyme is able to bind proteins between meat, resulting in a denser and chewier texture. This research was conducted by reducing the use of chemicals. The purpose of this study was to determine the optimal concentration of transglutaminase enzyme and incubation temperature, as well as the interaction of transglutaminase enzyme addition and incubation temperature on the quality of meatball chewiness. This study used the method of Factorial Complete Randomized Design (RAL). There were two treatments, namely the addition of transglutaminase enzyme with concentration and incubation temperature. The results of the interaction effect of enzyme concentration on incubation temperature gave a significant effect on texture, moisture content, pH, color, and organoleptic testing. The best results of all treatments were shown by samples with the addition of 1.5% transglutaminase enzyme with an incubation temperature of 60 °C with an effectiveness index value of 321,61. The physical and chemical characteristics of meatballs with the best treatment include the value of water content 69.31%, texture springiness 1.73 N, Hardness, 3853.64 N, hue 80.44, chroma 31.13 and pH 6.79.

Keywords: Meatballs, Enzymes, Chewiness