Intisari

PENGARUH RASIO MEDIA MINYAK NABATI TERHADAP KARAKTERISTIK UDANG VANAME DALAM KEMASAN *BAG RETORT PACK* TRANSPARAN

Pengembangan produk *ready-to-eat* dilakukan sebagai alternatif pengolahan udang melalui proses sterilisasi. Kemasan *bag retort pack* transparan dipilih untuk mempersingkat sterilisasi dan meningkatkan nilai estetika. Sterilisasi dapat menyebabkan perubahan karakteristik udang. Rasio media cair serta bahan padat merupakan faktor penting dalam proses sterilisasi. Penelitian dilakukan untuk mengetahui karakteristik udang vaname pada berbagai rasio udang dan media minyak nabati yang dikemas dalam *bag retort pack* transparan. Parameter yang diamati adalah sifat sensoris, fisik, kimia, fisikokimia, dan mikrostruktur udang. Penelitian menggunakan Rancangan Acak Lengkap (RAL) dengan satu faktor yaitu rasio udang dan media minyak nabati (1:1, 3:2, dan 7:3 b/b). Evaluasi sensoris QDA terhadap parameter flavor menunjukkan media 1:1 memiliki nilai yang lebih tinggi dibanding rasio media 3:2 dan 7:3 (udang:media), meskipun rasio 1:1 memiliki kandungan asam amino yang lebih rendah. Penilaian terhadap parameter kenampakan dan rasa semua rasio memenuhi SNI 3917:2017. Meskipun rasio 7:3 dinilai lebih tinggi pada parameter tekstur uji skoring dan QDA (*hardness* dan *cohesiveness*), panelis menilai udang dalam rasio media 1:1 memiliki tekstur yang lebih *juicy*. Hasil *Texture Profile Analysis* (TPA) *Hardness, springiness, chewiness*, *cohesiveness* dan *gumminess* antar perlakuan rasio media tidak berbeda nyata. Nilai *whiteness* rasio 7:3 dan udang rebus tidak berbeda nyata. Kadar air paling tinggi ditunjukkan rasio 7:3 sedangkan rasio 1:1 yang paling rendah, penurunan pH juga ditunjukkan perlakuan rasio 1:1. Total asam amino meningkat pada semua perlakuan rasio media kecuali 1:1 dan hasil yang paling tinggi ditunjukkan rasio 7:3 (1358,90 ± 69,22 ppm). *Water Holding Capacity* (WHC), reaksi Maillard, dan intensitas pencoklatan tidak menunjukkan hasil yang berbeda nyata. Rasio media 1:1 menunjukkan gap otot yang lebih kecil dibanding perlakuan lain (11,66 µm). Berdasarkan parameter-parameter tersebut rasio udang dan minyak nabati1:1 memberikan performa yang lebih baik diantara perlakuan lain.

Kata kunci : udang media minyak nabati, *bag retort pack* transparan, QDA, mikrostruktur, asam amino

Abstract

THE EFFECT OF VEGETABLE OIL MEDIA RATIO ON THE CHARACTERISTICS OF VANNAMEI SHRIMP IN TRANSPARENT BAG RETORT PACK PACKAGING

The development of ready-to-eat products was carried out as an alternative to processing shrimp through sterilization. Transparent retort packs were chosen to shorten the sterilization and improve aesthetic value. Sterilization can cause changes in the characteristics of shrimp. The ratio of liquid media and solid ingredients is an important factor in the sterilization process. Research was conducted to determine the characteristics of vannamei shrimp at various ratios of shrimp and vegetable oil media packaged in transparent retort packs. The parameters observed were the sensory, physical, chemical, physicochemical, and microstructure properties of the shrimp. The study used a Completely Randomized Design (CRD) with one factor, namely the ratio of shrimp and vegetable oil media (1:1, 3:2, and 7:3 w/w). QDA sensory evaluation of the flavor parameter showed that the 1:1 media had a higher value than the 3:2 and 7:3 media ratios (shrimp:media), even though the 1:1 ratio had a lower amino acid content. The assessment of the appearance and taste parameters of all ratios met SNI 3917:2017. Although the 7:3 ratio was rated higher on the texture test scoring and QDA parameters (hardness and cohesiveness), the panelists rated the shrimp in the 1:1 media ratio as having a juicier texture. The results of the Texture Profile Analysis (TPA) showed that there were no significant differences in hardness, springiness, chewiness, cohesiveness, and gumminess between the media ratio treatments. The whiteness values of the 7:3 ratio and boiled shrimp were not significantly different. The highest moisture content was shown by the 7:3 ratio, while the lowest was shown by the 1:1 ratio. A decrease in pH was also shown by the 1:1 ratio treatment. Total amino acids increased in all media ratio treatments except 1:1, and the highest result was shown by the 7:3 ratio (1358.90 ± 69.22 ppm). Water Holding Capacity (WHC), Maillard reaction, and browning intensity did not show significant differences. The 1:1 media ratio showed a smaller muscle gap compared to other treatments (11.66 μm). Based on these parameters, the 1:1 media ratio provided better performance than other treatments.

Keywords : shrimp in oil, transparent bag retort pack, QDA, microstructure, amino acids