Title Study on an Appropriate Test to Evaluate Texture Characteristics of White Shrimp during Iced Storage

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Abstract

The objective of this research was to determine an appropriate test to evaluate texture characteristics of white shrimp during iced storage by using Texture Analyzer (SMS-TA.XT plus). The effect of crosshead speeds was considered in this study. They were set at 0.1, 0.5 and 1.0 mm/s. Texture Profile analysis, Compression, Cutting, and Relaxation Tests were determined. It was found that crosshead speed at 0.1 mm/s gave the lowest standard deviation, the highest resolution and the clearest between shrimp skin and tissues. Therefore, crosshead speed at 0.1 mm/s was selected to perform in the rest of experiments. Stiffness and F_{max} obtained from penetration test with round probe can clearly distinguish texture characteristics of white shrimp at various iced storage time to 2 groups. Increase of storage time increased F_{max} and decreased springiness of flesh shrimp. It can be concluded that the penetration test at 0.1 mm/s of crosshead speed should be an appropriate method to clarify the texture characteristics of white shrimp.