Title Evaluation of 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 Test 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 Fmax 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 Fmax 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.