

Effects of Boiling Temperature and Time on Colour, Texture and Sensory Properties of *Volutharpa ampullacea perryi* Meat

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Abstract : *Volutharpa ampullacea perryi* is a high-protein marine shellfish. However, few data are available on the effects of boiling temperatures and time on quality of the meat. In this study, colour, texture and sensory characteristics of *Volutharpa ampullacea perryi* meat during the boiling cooking processes (75-100 °C, 5-60 min) were investigated by colors analysis, texture profile analysis (TPA), scanning electron microscope (SEM) and sensory evaluation. The ratio of cooking loss gradually increased with the increase of temperature and time. The colour of meat became lighter and more yellower from 85 °C to 95 °C in a short time (5-20 min), but it became brown after a 30 min treatment. TPA results showed that the *Volutharpa ampullacea perryi* meat were more firm and less cohesive after a higher temperature (95-100 °C) treatment even in a short period (5-15 min). Based on the SEM analysis, it was easily found that the myofibrils structure was destroyed at a higher temperature (85-100 °C). Sensory data revealed that the meat cooked at 85-90 °C in 10-20 min showed higher scores in overall acceptance, as well as color, hardness and taste. Based on these results, it could be constructed that *Volutharpa ampullacea perryi* meat should be heated on a suitable condition (such as 85 °C 15 min or 90 °C 10 min) in the boiling cooking to be ensure a better acceptability.

Keywords : *Volutharpa ampullacea perryi* meat, boiling cooking, colour, sensory, texture

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