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Sustainable Aquaculture for a Secure Future

Title: **A study of using crude bromelain enzyme in producing salty fermented fish product from commercial snakehead fish**

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The study of using crude bromelain enzyme in producing of salty fermented fish product from commercial snakehead fish was conducted from March to November 2014 at college of Aquaculture and Fisheries of Can Tho University with two main experiments (i) the effect of mechanical handle on proximate composition and texture property of product (ii) effect of supplementing crude bromelain enzyme at different rates and different fermentation times on product quality. In the first experiment, snakehead was applied [by] mechanical handle for 10 minutes and soaked with salt for 5, 10, 15, 20, 25 and 30 days. In the control group, fish were not applied [by] mechanical handle and soaked with salt for 30 days. In the second experiment, salty snakehead fish was supplemented with 2, 3, 4 and 5% of crude bromelain and fermented for 2, 4, 6, and 8 weeks. The control group was done without crude bromelain addition and fermented for 8 weeks. The results in the first experiment indicated that the group with mechanical handle snakehead fish and soaked with salt for 20 days gained the highest proximate composition (salt content 20.62%, moisture content 55.53%, protein content 18.94%) and hardness (20091 g force). In the second experiment, salty snakehead fish of 20 days was fermented with 3% crude bromelain and fermented for 6 weeks provided high proximate composition (20.67% of salt, 56.45% of moisture, 19.79% of protein, 8.02 mg total amino acids, 10-2 g fermented fish) and hardness (16607 g force) and had higher sensory score (color: 6.13, aroma: 6.07, taste: 6.00, and overall: 6.20) (1: extremely undesirable and 7: extremely desirable) in comparison with control group. Therefore, applying of crude bromelain enzyme can shorten the processing period of the salty fermented snakehead fish product and still ensures quality on nutrition and sensory quality compared with traditional methods.

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