Preserving Technique of Fish Red Tilapia Fillet, Oreochromis niloticus with Antimicrobes Compound produced by Lactic Acid Bacteria Cocktail as Probiotics Candidates

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ABSTRACT

Red tilapia is a good commodity to be developed because it has a high nutritional value composition, with a protein content 17.8%, fat 2.8%, 1.2%, and others composition. The fillet of red tilapia fish is easy to spoil, because of S. aureus, Salmonella sp., and other spoilage microbes. Many methods are used to save and preserve the quality of fillet, such fillet preparation through good sanitation practices, cooling process, but the effort were not optimal. The objectives of this study were to: 1) evaluate the potency of antimicrobes produced by LAB cocktail as probiotic candidates to inhibit the growth of spoilage bacteria that contaminated the red tilapia fillet; 2) evaluate the effect of antimicrobes compounds produced by LAB cocktail as probiotic candidates of inhibiting the setback fillet quality, 3) determine the shelf life of red tilapia fillet at room temperature. The LAB cocktail as probiotic candidates produced by LAB cocktail are able to inhibit the growth of spoilage bacteria; Pseudomonas aeruginosa and Listeria monocytogenes through the well diffusion method. The antimicrobe compounds could inhibit the rate of deterioration quality of red tilapia fillets until 12 hours, so that compound of antimicrobe can be used as natural preservative at fish product.

**Key words**: fillet, red tilapia, antimicrobes, LAB, cocktail