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THE EFFECT OF ANTIOXIDANT AND ANTIBACTERIAL LIQUID SMOKE NANOCAPSULES ON CATFISH FILLET (*Pangasius* sp.) DURING STORAGE AT ROOM TEMPERATURE AND COLD TEMPERATURE

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ABSTRACT

The purpose of this study was to determine the effect of antioxidant and antibacterial of liquid smoke nanocapsules on a catfish filet (*Pangasius* sp.). A combination of liquid smoke (corncob and coconut shell) were processed into nanocapsules using three encapsulan i.e: gum arabic, maltodextrin, and alginate with a ratio of 1/6: 4/6: 1/6 each. Liquid smoke nanocapsules was containing total phenolic content, carbonyl, and Radical Scavanging Activity, there were 3.682 mg GAE/g, 3.439%, and 91.348%, respectively. Liquid smoke nanocapsules was applied to the catfish and stored at room temperature (28^{o}C±2^{o}C) and cold temperature (5^{o}C). Observations were made on days 0, 2, 4, 6, 8, and 10 to parameter PV, TBA, TVBN and TPC. The results showed that liquid smoke nanocapsules could effectively inhibit the oxidation of fat catfish showed with PV and TBA acceptable. Liquid smoke nanocapsules was also capable of inhibiting the activity of microbes, indicated by the value of TVBN and TPC which were still below standard at all temperatures and long storage time.