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Effect of Combination Treatment of Concentration Liquid Smoke, Immersion Duration, Packaging and Long Storage different Levels of Antibacterials Nila Fish Fillet (*Oreochromis niloticus*)

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Abstract : This study aims to determine of antibacterials inhibititory power diameter (DDH) of fillet of tilapia (*Oreochromis niloticus*) given preservation with liquid smoke derived from a combination of liquid smoke treatment concentration, soaking time, types of packaging and long storage are different. This study was conducted experimentally using factorial experiment with a completely randomized design patterns (RAL) 5 x 3 x 3 x 5 with 3 replicates in order to obtain 675 experimental units. A factor consists of the concentration of liquid smoke consisting of control (smokeless liquid / 0%), 5% and 10%, 15% and 20%; factor B consists of soaking time with liquid smoke is composed of three (3) levels ie soaking time 5 minutes, 10 minutes and 15 minutes; factor C consists of the type of packaging consists of three (3) levels ie without packaging (control), packaging polyethylene (PE) and packaging of polypropylene (PP) and factor D consists of the storage time (days) consists of 5 (five) levels ie 0 , 3,6,9 and 12 days. The parameters measured were the levels ofantibacterials diameter inhibition (DDH) . Results of research on the analysis of variance showed (1) .there was an interaction of treatment with different concentrations of soaking time, soaking time with the storage time, the concentration difference with storage time while the combination of two other treatments showed no significant difference (no interaction). In the treatment of three treatment difference immersion, the concentration of liquid smoke with storage time showed real interaction to the diameter of the inhibition (DDH) Escherichia coli, while the combination of the other three treatments were not significantly different (no interaction). Four combined treatment showed no inhibition of the interaction of the diameter (DDH) *Escherichia coli* which is antibacterial liquid smoke on fillet of tilapia. (2). diameter inhibition (DDH) of liquid smoke against *Escherichia coli* in fillets of tilapia tertinngi contained in four combination treatment that liquid smoke concentration of 20 percent, a 15-minute soaking time, type of packaging polyethylene (PE) and storage for 3 days amounted to 16.697 mm / ppb.(3). the diameter of the power bland (DDH) of liquid smoke against *Escherichia coli* in fillets of tilapia highest in three treatment combinations contained in the treatment liquid smoke concentration of 20 percent, a 15-minute soaking time and storage time of 12 days amounted to 16.693 mm / ppb.(4). diameter inhibition (DDH) of liquid smoke against *Escherichia coli* in fillets of tilapia highest in the treatment of liquid smoke concentration of 20% at 10 minutes soaking time of 12 626 mm / ppb.(5). the diameter of inhibition (DDH) of liquid smoke against *Escherichia coli* in fillets of tilapia highest in the treatment of liquid smoke concentration of 20% in the duration of storage for 12 days amounted to 14 693 mm / ppb.(6). the diameter of inhibition (DDH) of liquid smoke against *Escherichia coli* in fillets of tilapia highs on a combination of old submerged for 15 minutes and for 12 days storage time high of 8.6 mm / ppb.

Key words : fish fillet, immersion, concentration, packaging, storage, antibacterial

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