



**Effect of Combination Treatment Of Concentration Liquid Smoke, Immersion Duration, Packaging And Old Type Storage Different Levels Of Phenol And Carbonil Nila Fish Fillet (*Oreochromis niloticus*)**

**I Ketut Budaraga \***

**\* Agricultural Technology Department, Faculty of Agricultural Ekasakti University, Veteran Dalam street 21b Padang City West Sumatera Indonesia**

**Abstract :** This study aims to determine the fenol and carbonil content 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 storage time 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 of fenol and carbonil content. Results of research on the analysis of variance showed 1) the combination of the two treatments on fillet of tilapia which different concentrations of liquid smoke with different types of packaging showed no interaction on the percentage of phenol content, while for two, three and four combinations of other treatments did not show any significant differences (no interaction). 2). levels of phenol fillet of tilapia on a combination of four treatments, namely prolonged submersion, different concentrations of liquid smoke, types of packaging and storage time shows the results of phenol levels low enough that a value ranging from .00 to 0.0025% and already meet the quality requirements of fish fillets smoked tilapia. 3) content carbonyl tilapia fillet between the two combination treatments with a concentration difference types of packaging, keep the concentration difference with storage time and packaging differences with storage time showed their interactions, while the two other treatment combinations that no further interaction interaction occurs in three combined treatment difference concentration, types of packaging and storage of different treatment combinations while three others and four other treatments no interaction. 4). levels of carbonyl tilapia fillet of 4 treatment combinations that different concentrations, dipping time, types of packaging and storage time ranged from 0.00 to 12.01%.

**Key words:** fish fillet, immersion, concentration, packaging, storage, fenol, carbonil.

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