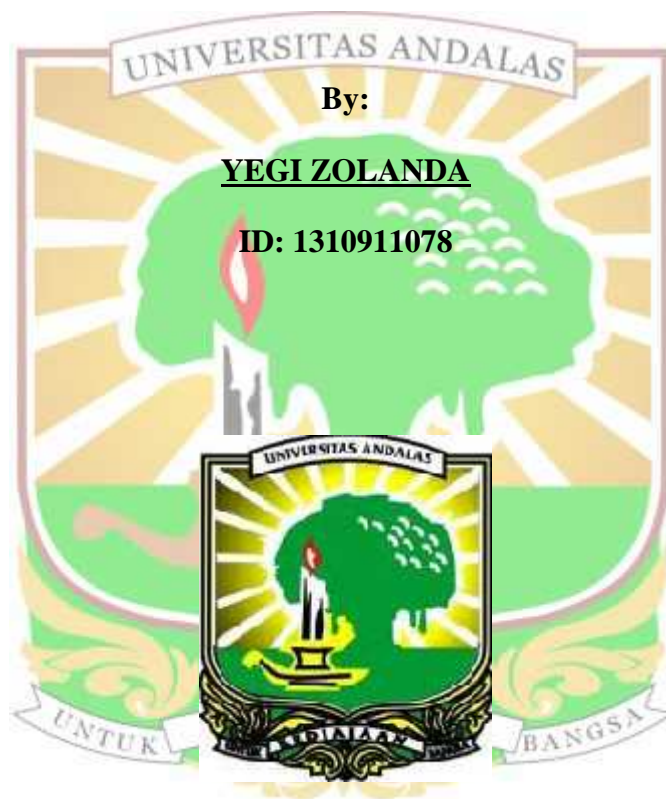


**FINAL PROJECT**

**BIOFILTER NITRIFICATION REACTOR FOR  
WASTEWATER OF FOOD AND FISH FECES**

Conducted as One of The Requirements to Finish Undergraduate Programme



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## ABSTRACT

In the sector of freshwater fish breeding, many fish are found dead suddenly. The cause of the fish death suddenly can occur due to toxic water or low oxygen content in the water. In Maninjau Lake, fish died suddenly because of low oxygen content in the water. The low oxygen content in water is caused by increased ammonia from food waste and fish feces. Results in active bacteria and metamolizes by absorbing oxygen in the water.

One way to overcome this is to react with a biofilter reactor. In operation, the reactor is given an inlet debit of 1 to 3 lt / min for the test material and the inlet is worth 10 to 20 lt / min. The highest reactor effectiveness is at the debit of test material 2 lt / min and the debit of air 15 lt / min. It is characterized by changes in the pH of water that returns to normal.

Keyword : Ammonia, Reactor, Debit.

