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KEY WORD : FISH AQUARIUM/WATER TREATMENT/FILTER/FILTER MEDIA

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TYPES OF FILTER. THESIS ADVISOR : ASSO. PROF. MUNSIN
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This study was performed to find out the efficiency in removal of COD, $\text{NH}_3\text{-N}$, $\text{NO}_3\text{-N}$ and $\text{NO}_2\text{-N}$ from the fish aquarium. By comparing between the inner filter and the outer filter that each filled with coral, gravel and gravel-sulphur acted as three types of filter. Not only that parameters comparing, but also comparison of the fish growth rate in each aquarium. From COD removal in each aquarium, the coral filter gave the best efficiency, 34.26 mg/l, the inner filter, 39.11 mg/l, the gravel-sulphur filter, 46.75 mg/l and the gravel filter, 51.39 mg/l. The other parameter $\text{NH}_3\text{-N}$ that found in each aquarium the coral filter also gave the best efficiency, that was 0.088 mg/l and as the inner filter gave the efficiency of 0.093 mg/l, but for the gravel filter, the $\text{NH}_3\text{-N}$ removal was better than gravel-sulphur filter, 0.189 mg/l and 0.502 mg/l, respectively. When considering the $\text{NO}_2\text{-N}$ left in each aquarium, the inner filter gave the best efficiency, 0.57 mg/l following by gravel-sulphur, coral and gravel filter, that was 0.61 mg/l, and 0.80 mg/l, in consequenced. Gravel-sulphur, gravel, coral filter and the inner filter had shown the $\text{NO}_3\text{-N}$ reduction efficiency from the left of each aquarium 0.408 mg/l, 0.444 mg/l, 0.584 mg/l, and 0.943 mg/l, respectively. By comparison of the fish growth rate in each aquarium found that the aquarium having the coral filter had the highest growth rate, the gravel filter gave the higher growth rate than the inner filter, meanwhile, the aquarium having gravel-sulphur filter had the lowest fish growth rate.