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The effect of component modification of “double bottom filter” recirculation system to ammonia content and survival rate at rearing media of clownfish (*Amphiprion percula*)

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Clownfish (*Amphiprion percula*), is a variety of marine ornamental fish. In rearing ornamental fish, water quality management is required to maintain the optimal condition of water quality. Filtration and recirculation are proven as preeminent ways to manage the optimal condition of water quality in aquarium as the vessel for rearing ornamental fish. Simple recirculation system double bottom filter was applied in this research with treatments of components modification of the system. The objective of the research were to identify the concentration of ammonia and survival rate in rearing media of clownfish (*A. percula*) using recirculation system double bottom filter with several modification components. The treatments are: 1) no recirculation/aeration only (treatment A), 2) system with components of gravel, activated carbon and Dacron (treatment B) and 3) sand, activated carbon and Dacron (treatment C). The result showed that the ammonia concentration in system A (control) was 8.323 mg/l, system B (gravel, activated carbon and Dacron) was 1.599 mg/l and system C (sand, activated carbon and Dacron) was 0.088 mg/l. The highest value of survival rate was in system C (sand, activated carbon and Dacron) which valued 90%. Water quality was monitored twice daily included water temperature (26.3–27.4 °C), pH (8.27-8.36), dissolved oxygen (4.95-5.30 mg/L) and water salinity (33.0-34.3 ppt). As the conclusion, component sand, activated carbon and Dacron in recirculation system double bottom filter provided better performance in reducing ammonia in rearing media of blue devil (*A. percula*) which also confirmed with the survival rate value.

Biography

Jacqueline Marleen Francischa Sahetapy has completed her MSc from Bogor Agricultural University School of Aquaculture Science. She is currently working as a Lecturer at Aquaculture study program, Fisheries and Marine Science Faculty Pattimura University Ambon Indonesia. She has published two papers in international journal and others in national proceedings and local journal. She has participated in three international conferences and two papers are on the way of publication.

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