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Reducing Metabolism Residues in Maintenance Goldfish (Carrasius auratus auratus) by Phytoremediation Plant

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Abstract : Water quality affects the body condition of aquatic organisms. One of the methods to manage water quality, usually called phytoremediation, involves using aquatic plants. The purpose of this study is to find out the best aquatic plants to reducing metabolism residues from aquatic organism. 5 aquariums (40x30x30 cm) containing 100 grams from each 4 different plants such as water hyacinth (Eichhornia crassipes), salvinia (Salvinia molesta), cabomba (Cabomba caroliniana), and hydrilla (Hydrilla verticillata), thirteen goldfis (Carrasius auratus auratus) are maintained. The maintenance is conducted through a week and water quality measurements are performed three times. The results show that pH value tends to range between 7,22-8,72. The temperature varies between 25-26 °C. DO values varies between 5,2-10,5 mg/L. Amoniac value is between 0,005–5,2 mg/L. Nitrite value is between 0,005 mg/L-2,356 mg/L. Nitrate value is between 0,791 mg/L-1,737 mg/L. CO2 value is between 2,2 mg/L-6,1 mg/L. The result of survival rate of goldfish for all treatments is 100%. Based on this study, the best aquatic plant to reduce metabolism residues is hydrilla.

Keywords : phytoremediation, goldfish, aquatic plants, water quality
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