

Comparison of biofouling and sediment accumulation in open-flow and recirculating aquaria

Biofouling and sediment accumulation within aquaria can be detrimental to the organisms that are kept within them. In this study, plexiglass plates were placed inside both recirculating and open-flow aquaria under the same conditions. These plates were weighed prior to and after the experiment to determine the accumulation of both organic and inorganic material on them. Sediment was also removed from the tanks after the experiment and weighed to determine how much sediment accumulation had occurred. Statistical analysis of the mean difference in the weight of the plexiglass plates with a T-Test determined there was no significant difference ($P=0.150$) between the biofouling in the recirculating aquaria and the open-flow aquaria. Statistical analysis of the mean sediment accumulation rate of each tank using a T-Test determined there was significantly more sediment accumulation ($P=0.031$) in the open-flow aquaria than in the recirculating aquaria.