METAL ACCUMULATION IN TWO SPECIES OF SEAWEED AFTER WATERBORNE METAL EXPOSURE

Sasha L. Booth, Department of Biology

Faculty Sponsor: Dr. Gretchen Bielmyer, Department of Biology

Marine environments are commonly exposed to metal pollutants from anthropogenic activities such as agriculture, mining, and storm water runoff, as well as natural inputs from volcanoes and forest fires. In excess, metals may accumulate in marine biota and potentially cause toxicity. The goal of this experiment was to measure metal accumulation in two species of marine seaweed after 48 hours of waterborne exposure to 100 µg/L of cadmium, copper, lead, nickel, and zinc. *Ulva lactuca* and *Agardhiella subulata* were ideal for use in this study because they occupy a variety of coastal habitats such as inner bays and estuaries, and are therefore commonly exposed to polluted environments. Metal accumulation in the seaweed varied between species and among metals, however, significant copper accumulation was observed in both species. This study provides important information concerning metal accumulation in sensitive lower trophic levels, which serve as vital constituents in many food chains.