

EFFECTS OF TRICLOSAN ON MARINE BENTHIC AND EPIBENTHIC ORGANISMS

M.M. Perron (Monique_Perron@brown.edu), Brown University, Providence, RI, 02912; K.T.

Ho, M.G. Cantwell, R.M. Burgess, M.C. Pelletier, D.R. Katz, U.S. EPA AED, Narragansett, RI, 02882.

Triclosan is an anti-microbial and anti-bacterial compound that has been widely used since the 1970s in consumer products, such as toothpaste, deodorant, and shampoo. Due to its widespread use, triclosan has been detected in various environmental media including wastewater sludge, receiving waters, and sediments. It has been shown that triclosan is acutely toxic to numerous aquatic organisms, but very few studies have been performed on estuarine/marine organisms or benthic organisms. For whole sediment toxicity tests, the sediment dwelling estuarine amphipod, *Ampelisca abdita*, and the epibenthic mysid shrimp, *Americamysis bahia*, are commonly used organisms. In the present study, median lethal concentration values (LC50) were obtained for both of these organisms using water-only and whole sediment exposures. Acute water-only toxicity tests after 96 hours resulted in LC50 values of 73.4 and 74.3 µg/L for the amphipod and mysid, respectively. For the seven day whole sediment toxicity test, LC50 values were 303 and 257 mg/kg (dry) for the amphipod and mysid, respectively. These whole sediment values are equivalent to interstitial water LC50 values of 230 and 190 µg/L for the amphipod and mysid, respectively. In addition to the acute toxicity tests, a simplified food web study with triclosan will be discussed. These data provide some of the first toxicity data for triclosan with marine benthic and epibenthic species.