Abstract

The distribution of selected aromatic compounds and microbiology were assessed in superficial sediments from Suruí Mangrove, Guanabara Bay. Samples were collected at 23 stations, and particle size, organic matter, aromatic compounds, microbiology activity, biopolymers, and topography were determined. The concentration of aromatic compounds was distributed in patches over the entire mangrove, and their highest total concentration was determined in the mangrove's central area. Particle size differed from most mangroves in that Suruí Mangrove has chernies on the edges and in front of the mangrove, and sand across the whole surface, which hampers the relationship between particle size and hydrocarbons. An average @ 10% p/p of organic matter was obtained, and biopolymers presented high concentrations, especially in the central and back areas of the mangrove. The biopolymers were distributed in high concentrations. The presence of fine sediments is an important factor in hydrocarbon accumulation. With high concentration of organic matter and biopolymers, and the topography with chernies and roots protecting the mangrove, calmer areas are created with the deposition of material transported by wave action. Compared to global distributions, concentrations of aromatic compounds in Suruí Mangrove may be classified from moderate to high, showing that the studied area is highly impacted.

Keywords

microbiologic activity, Guanabara Bay, biopolymers, phenol, Aromatic Polycyclic Hydrocarbons and Monoaromatics.