

ABSTRACT

This study examined the distribution and amounts of selected trace metals dissolved and suspended in seawater as well as trace metals deposited in the sediments of Kingston Harbour. One set of red tide samples was also collected and analyzed.

Four trace metals, copper, lead, cadmium and zinc were detected frequently by anodic stripping voltammetry. Total dissolved metal species were analyzed by atomic absorption spectrophotometry for four metals: iron, zinc, chromium and manganese.

Suspended material in Kingston Harbour was examined qualitatively by X-Ray Fluorescence and quantitatively for iron, zinc and copper.

The sediments were examined mineralogically by X-Ray Diffraction and analyzed for trace metals - iron, zinc, copper, manganese, lead, chromium and cadmium.

From this study, the iron levels at the bottom were generally higher than the surface suggesting a bottom source. The higher lead levels at the surface seem to indicate the effect of fallout. The red tide phenomenon seems to be related to iron and copper levels. More research work is needed in this area for conclusive evidence.