

Elemental Pollution of Golden Horn Surface Sediments

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The total and acid leachable composition of Golden Horn sediments have been investigated for Pb, Zn, Cu, Cr, Ni, Co, Mn and Fe. Quantitatively, the majority of the Pb, Zn and Cu defined to be from anthropogenic origin and the sediments can definitely be classified as polluted with respect to these elements. Acid leachable fractions of Pb, Zn and Cu constitutes nearly 80 percent; Cr, Ni and Co constitutes nearly 45 percent and Mn and Fe constitutes 35 percent of the total metal concentration of the sediments. The natural change in the depth of halocline, results in the remobilization of loosely held metals from sediments. Simulated experiments have shown that high salinity Mediterranean water is more effective in remobilization of the loosely held metals than the brackish Black Sea water.