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Chromium speciation in municipal wastewaters and seawater

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ABSTRACT

In recent years there has been considerable concern about waste discharges of chromium to aquatic ecosystems. The two oxidation states of chromium most commonly encountered in such systems are the trivalent and hexavalent states, Cr (III) and Cr (VI), respectively. Research conducted in this, and other laboratories, has shown the latter form of dissolved chromium to be by far the most toxic, dissolved chromium to be by far the most toxic, while particulate chromium appears to be relatively non-toxic. Thus, it is important that the physical/chemical state of this trace metal be determined in wastewaters and receiving waters, and the values related both to natural concenctrations found in the environment and to threshold toxicity values.