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Effect of chromium on granule-based anammox processes

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Abstract:

In this study, the feasibility of application of anaerobic ammonium oxidation (anammox) to treat wastewater containing chromium was assessed. Anammox granule activity decreased with increasing Cr(VI) concentration and pre-exposure time in batch tests, and the 50% inhibition concentration of Cr(VI) on anammox biomass was 296.5 mg L⁻¹. Approximately 93.9% chromium was absorbed by loosely bound-extracellular polymeric substances and tightly bound-extracellular polymeric substances when less than 60 mg L⁻¹ Cr(VI) was added. During long-term operation in up-flow anaerobic sludge blanket reactor, significant inhibitory effects anammox

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