

Water cleaning via Zeolites: Removal of Hexavalent Chromium along with Other Competitive ions

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Hexavalent chromium poses a hazardous risk to public health and the environment. Industrial effluents, as well as surface waters, may contain a fair load of Cr(VI) along with other ions. Those ions compete with Cr(VI) for the exchange sites when ion-exchange processes are applied to remove the toxic metal from surface waters or effluents and may hinder the decontamination.

Natural minerals modified with hydrophobic long-chain amines present a fairly large potential in environmental protection. The removal of Cr(VI) from aqueous solutions has been extensively investigated applying a variety of modified with HDTMA-Br minerals. The present study aims to determine the behaviour of the sorption process when competing ions are present in an hexavalent chromium's aqueous solution.