Research on gamma ray-induced removal of Cr(VI) from aqueous solutions

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Abstract

Reduction and removal of Cr(VI) from water by irradiation of γ ray were investigated. Experimental results showed that little concentration change was found when aqueous solutions of Cr(VI) were irradiated with γ ray either directly, or after bubbled with He gas. On the other hand, reduction of metal ions was realized by the irradiation in existence of Na_2SO_3. Precipitates were observed in the irradiated solutions of Cr(VI). After filtration of the irradiated solution, the residual total Cr was between 0.03~0.13 ppm.