

# Hexavalent Chromium Reduction and Its Distribution in the Cell and Medium by Chromium Resistant *Fusarium solani*

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## Abstract

In the present work, batch biosorption of Cr(VI) was studied using the fungal strain isolated from soil. The fungal strain was characterized as *Fusarium solani*. The total Cr distribution in the biomass (fungus) and in the media obtained from the experiment conducted at 500 mg l<sup>-1</sup> initial Cr(VI) concentration and pH 5.0. The results indicated both intracellular and extracellular accumulation and enzymatic reduction of Cr(VI) and this was supported by the Transmission Electron Microscopic (TEM) observation at the same Cr(VI) concentration and pH value. Chromium elution from *Fusarium solani* containing Cr was then tried out using a number of chromium eluting reagents and a maximum Cr could be eluted using 0.5N sodium hydroxide solution without destructing the biomass structure. The total Cr was recovered by pH adjustment from both biomass and media was found to be 44% of the initial Cr(VI) concentration (500 mg l<sup>-1</sup>).

**Keywords:** batch biosorption, Cr (VI), *fusarium solani*, growing cells

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