Effect of hexavalent chromium on bioremoval of tetrabromobisphenol A (TBBPA) by *Pycnoporus sanguineus*

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Effect of Cr(VI) on TBBPA remoal

As shown in Fig.1, Cr(VI) posed evident inhibitory effect on TBBPA removal, the removal rate of TBBPA decreased with increasing Cr(VI) level (75.4%, 72%, 67.3%, 55% and 44.8% at 5, 10, 20, 30 and 40 mg/L of Cr(VI), respectively.

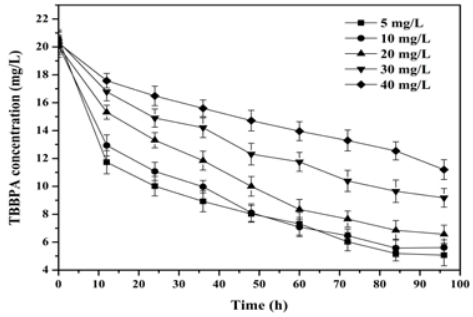

Figure 1: Effect of Cr(VI) on TBBPA removal

Discussion of Results

There was also report verifying the inhibition of Cu(II)、Pb(II) and Cd(II) on BDE-209 degradation by white-rot fungus *Phlebia lindtneri* [1].Toxic heavy metals can affect the growth and reproduction of white-rot fungi as well as cause morphological and physiological changes [2]. The decline of removal efficiencies for TBBPA due to increasing initial Cr(VI) concentration was an obvious resultant of Cr(VI) toxicity towards *P. sanguineus* which we demonstrated in our other studies,including impeding the fungal growth and intracellular proteins synthesis, depressing cell viability and ATP enzyme activity, impairing the cell membrane integrity and altering the surface morphology and intracellular structure of *P. sanguineus*.

[1] Xu *et al.* (2014) *Chemosphere* **110**, 70-77. [2] Baldrian, P. (2003) *Enzyme. Microb. Technol.* **32**, 78-91.