

Bioadsorption of Cu^{2+} and Ni^{2+} using Surface Display of Polyhistidine on *Bacillus subtilis* spore by use of the cotE anchor protein

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We studied removing heavy metal using *Bacillus subtilis* spore surface display system. We used cot E protein as an anchoring motif because of its high abundance in coat layer and inserted double 6histidine tag at the C-terminal end of anchoring motif. We checked the surface expression of histidine tag using flow cytometry with FITC labelled anti-his6-antibody. Histogram of flow cytometry showed higher fluorescence intensity, possibly due to their outer location on *Bacillus subtilis* spore. We tried Cu^{2+} and Ni^{2+} adsorption with recombinant spore(CotE-His12) and DB104(wild type) used by atomic adsorption spectrometer. We confirmed that Cu^{2+} and Ni^{2+} adsorption capacity of CotE-His12 is higher than DB104(wild type).