Article Abstract

Title:	Removal of cadmium (ii) from aqueous solutions by two kinds of manganese coagulants
Author(s):	Yongpeng Xu [1, 2,*], Leisan Yang[2], Jingkun Yang[2]
Address(es):	[1*]State Key Laboratory of Urban Water Resource and Environment, Harbin Institute of Technology, Harbin 150090, CHINA [2]School of Municipal and Environmental Engineering, Harbin Institute of Technology, Harbin 150090, CHINA [*]Corresponding author: e-mail: xuyongpeng123@163.com, Tel 13946110707
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Abstract:	The study presents the removal of trace cadmium (II) in water with batch experiments by two kinds of manganese coagulants, HMO prepared from $KMnO_4$ and $Na_2S_2O_3$, and HFMO prepared from $KMnO_4$ and $FeSO_4$. Various parameters such as turbidity, pH, initial concentration of Cd(II) and coagulation time were investigated. The results showed that the cadmium can be better removed using HMO than by HFMO. With pH =6.72 and the Cd(II) initial concentration, 1mg/L, the dosage of HMO is 20mg/L, as the removal rate of cadmium is 85.04%. However, with pH = 8.03 and the Cd(II) initial concentration, 1mg/L, the dosage of HFMO is 20mg/L, as the removal rate of cadmium is 53.23%. The effectiveness of these two kinds of manganese coagulants for removal of cadmium and turbidity in natural water from Canal Jingmi in Beijing performed better when HMO is used than HFMO used. The paper indicated that HMO was an easily available and effective coagulant for the disposal of trace cadmium in water.
Keywords:	Cadmium (II), HMO, HFMO, coagulation, binding site