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[JEP](#) > Vol. 3 No. 6, June 2012



Study and Application of a Novel Tap Water Flocculant

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ABSTRACT

By using polyaluminum chloride (PAC), chitosan (CTS) and montmorillonite (MM) as the main raw materials, a novel tap water flocculant had been prepared. The optimal mass proportion of this flocculant was 1 g·L⁻¹ chitosan: 50 g·L⁻¹ PAC: 3g·L⁻¹ MM = 30: 11: 7. Compared with the traditional polyaluminum chloride (PAC), the concentration of aluminum ion (Al³⁺) and suspended solids (SS) in the exit dropped 66.19% and 5.80% respectively, moreover, the cost was decreased by 9.95%. This flocculant was not only cheaper, but also provided improved flocculating function compared with traditional flocculant. The concentration of Al³⁺ in exit water was decreased greatly so the drinking water would be much safer.

KEYWORDS

Water Treatment; Composite Flocculant; Flocculant; Aluminum Ion

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