Purification of food waste plant treated water by PSI coagulant: A preparation of PSI and its effect on purification of waste water with commercial coagulants

이보열, A.G. Ramu, 문일식†
순천대학교
(ismoon@sunchon.ac.kr†)

Coagulant is a practical method to remove major particle in the waste water removal process. Because of toxicity of some coagulants, PSI (poly silicate iron) started use but, no commercial PSI is available in less expensive cost. In the present investigation, preparation of PSI was developed and its application to food waste treated water was compared with commercial coagulants. We synthesized PSI coagulant from the sodium silicate with suitable acid ratio and concentration. The prepared coagulant was applied to waste water obtained from food waste treatment process. The turbidity, COD, pH change, TOC and dosage concentration of PSI ware conducted in purification process and compared with the commercial coagulants for its effectiveness.
Keywords: Coagulant preparation, Poly-silicate iron, Effluent treatment, Coagulation.