

Biosorption of iron (III) from aqueous solution using pleurotus ostreatus spent mushroom compost as biosorbent

Abstract

The ability of *Pleurotus ostreatus* spent mushroom compost for the biosorption of Iron (III) from aqueous solutions was investigated. The study was conducted in batch experiments under varying operating conditions. The optimum Iron (III) biosorption was achieved at an initial pH ranging from 4 to 5, contact time of 10 minutes and initial Iron (III) concentration of 50 mg/L using half-saturation constant of 0.4 g biosorbent dosages. The results indicated that the Iron (III) biosorption onto *Pleurotus ostreatus* spent mushroom compost were well fitted with the Langmuir isotherm model and a second-pseudo order kinetic model.

Keywords

Biosorption; Iron (III) removal; *Pleurotus ostreatus* spent mushroom compost