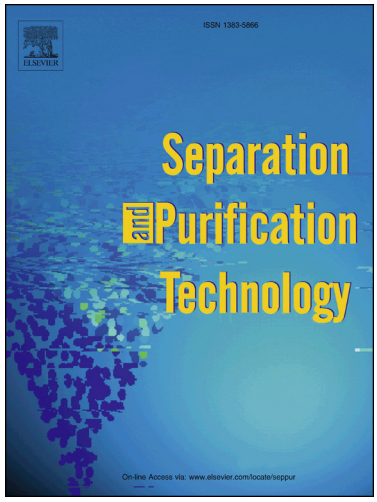

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Removal of sulfate from mining waters by electrocoagulation

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Abstract

This work focuses on the removal of sulfate from mining waters by using electrocoagulation with iron electrodes. A comparison of the results obtained by electrocoagulation with those obtained with the application of conventional chemical coagulation is provided. The results show that sulfate can be removed from synthetic mining waters by electrocoagulation, and that the pH and coagulant dosage play a very important role. During chemical coagulation under acidic conditions, it is possible to use a low dosage of iron and remove more than 80% of the sulfate present in water. However, chemical coagulation seems to behave as a kind of ion-exchange process (from the viewpoint of effluent quality). Thus, significant concentrations of