

POTENTIAL OF FERRATES APPLICATION IN REMEDIAL TECHNOLOGIES

POTENCIÁL VYUŽITÍ FERRÁTŮ V SANAČNÍCH TECHNOLOGIÍCH

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Abstract:

Strong oxidation reagents utilized by ISCO has negative side effects. In the case of Fenton reagent it is the production of huge amounts of oxygen and heat, application of peroxodisulfates often leads to toxic metals mobilization. Although these negative aspects could be minimized, it is worthy to search for new reagents. Potassium ferrate became recently commercially available and could represent one of such new "green oxidants". Batch tests with chlorinated hydrocarbons contaminated groundwater and potassium ferrate were performed. Although target pollutants destruction was in many cases satisfactory, we can see no way for this reagent real application because of its high price and energy intensity of its production.

Keywords:

in situ chemical oxidation (ISCO), potassium ferrate, iron, chlorinated hydrocarbons, AOX