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عنوان مقاله:

Feasibility Studies on Application of Photo-Fenton Oxidation for Methylene Blue

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خلاصه مقاله:

Several industries are using dyes as colouring agents. The effluents from these industries are discharged mainly in to river streams which increasingly creates an environmental problem. The removal of dyes from aqueous solution has a great potential in the field of environmental engineering. There are many methods being employed in the dye removal. Among these methods, Fenton process-based advanced oxidation processes are an emerging prospect in the field of dye removal. This project focuses on the suitability of photo-Fenton process for the degradation of methylene blue dye in terms of COD removal and it is optimized for experimental parameters such as pH, H2O2 concentration, FeSO4.7H2O concentration and contact time. The photo-Fenton process is effective under pH 3. The maximum efficiency of COD removal for 50 mg/L of methylene blue is attained at optimum concentration of 10 mg/L of H2O2, 50 .mg/L of Fe2+ and contact time of 30 minutes

کلمات کلیدی:

Dye, Advanced oxidation process, Photo-Fenton process, COD removal, Methylene blue

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