

عنوان مقاله:

Fenton process for removal of Sunset yellow as an edible dye

محل انتشار:

همایش ملی نانو فناوری و شیمی سبز (سال: 1391)

تعداد صفحات اصل مقاله: 7

نویسندگان:

Afroz Khavaran - Department of Chemistry, North Tehran Branch, Islamic Azad University, Tehran, Iran

Shahab Shariati - Department of Chemistry, Science and Research Branch, Islamic Azad University, Guilan, Iran

Mahmood Reza Sohrabi - Department of Chemistry, North Tehran Branch, Islamic Azad University, Tehran, Iran

خلاصه مقاله:

This research was designed to investigate the oxidation (decolorization/degradation) of Sunset Yellow azo dye which is used greatly as colorant in food and drug industries in aqueous solutions using Fenton (H_2O_2/Fe^{2+}) reagent. The effect of operating parameters affecting the removal efficiency such as H_2O_2 , Fe^{2+} and dye concentrations and pH were investigated and optimized. In order to optimize the parameters, the Taguchi fractional factorial design was used (4 factors in 4 levels). Optimum conditions for Fenton process were established as: (0.005 mmol Fe, 0.1 mmol H_2O_2 , 20 mg/L initial dye concentration and pH=3). The results showed that Fenton process have high ability in Sunset yellow removal, so this advanced oxidation process can be used for removal of Sunset yellow from waste waters.

کلمات کلیدی:

Advanced oxidation process, Fenton, Sunset yellow, Experimental design, Taguchi

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/203439>

