

## عنوان مقاله:

Removal of Acid Red ۱۸ dye from Aqueous Solutions Using Nanoscale Zero-Valent Iron

## محل انتشار:

مجله علوم پزشکی ایران، دوره 3، شماره 3 (سال: 1394)

تعداد صفحات اصل مقاله: 7

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## خلاصه مقاله:

**Background and Purpose:** Organic dyes with a complex structure are often toxic, carcinogenic, mutagenic, non-biodegradation and stable in the environment and if released to the environment without treatment can endanger the environment and human health. The aim was to evaluate the performance nanoscale zero-valent iron (NZVI) in the removal of dye acid red ۱۸ (AR۱۸) from aqueous solutions. **Materials and Methods:** This study was conducted at the laboratory scale. In this study, the removal efficiency of AR۱۸ from a synthetic solution by NZVI was investigated. As well as the effect of solution pH, dye concentration, the concentration of NZVI and contact time in decolorization efficiency was investigated. **Results:** The results show that in pH = ۳, contact time of ۸۰ minutes, dye concentration of ۲۵ mg/l and concentration of NZVI of ۲ g/l, the removal efficiency was about ۹۴%. **Conclusion:** According to the results of experiments, NZVI has high efficiency in removal of AR۱۸ from aqueous solution.

## کلمات کلیدی:

Acid Red ۱۸ (AR۱۸), Dye Removal, Nanoscale Zero-Valent Iron

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1837235>

