

## عنوان مقاله:

Investigation of municipal wastewater treatment in a modified USBF bioreactor using Taguchi method

## محل انتشار:

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## خلاصه مقاله:

In this article, the performance of a modified USBF bioreactor in domestic wastewater treatment is studied. In order to investigate the effect of COD of feed, biomass concentration (MLSS), hydraulic retention time (HRT) on the COD removal and determine the optimal conditions to enhance the efficiency of the modified USBF bioreactor, an experimental design approach are adopted through Taguchi method. The results show that the feed COD, MLSS, HRT factors and the interaction between HRT and COD are more significant and HRT has the most effect on the system. With an increase in the COD, the COD removal decreases while an increase in the biomass concentration increases the removal percentage. The HRT has a non-linear relationship with the removal efficiency. The optimal levels for the 93±1% of the COD removal efficiency are achieved for the COD, MLSS and HRT of 270±20 mg/L, 5000 .mg/L and 8 hr, respectively

## کلمات کلیدی:

Wastewater treatment, Municipal wastewater, Modified USBF, Taguchi method

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/355739>

