

## عنوان مقاله:

Process performance of an aerobic SBR removing CNP from an industrial estate wastewater: A case study for Faraman's Industrial wastewaters

## محل انتشار:

پنجمین همایش ملی مهندسی محیط زیست (سال: 1390)

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## خلاصه مقاله:

In this study, the performance of an aerobic sequence batch reactor (SBR) removing carbon and nutrient (N & P) from Faraman's industrial wastewater (FIW) was investigated. This study was performed by varying two significant independent variables viz. aeration time and biomass concentration. The experiments were conducted based on a central composite design (CCD) and analyzed using response surface methodology (RSM). The region of exploration for the process was taken as the area enclosed by aeration time (6-24 h) and MLVSS concentration (2000-7000 mg/l) boundaries. Seven dependent parameters as the process responses were measured and calculated. Direct and interactive effects of the variables on the responses were described by the models given by RSM. The results showed that the maximum value of COD removal was obtained to be 73.89 at the highest value of the factors (24 h and 7000 mg/l). The maximum values of TN removal efficiency were found to be 36.39 %. The low TN removal directed the study to reduction of the oxygen level from 7 to 3 mg/l. The DO reduction with the extended aeration mode resulted in an increase in TN removal while decreased TCOD, nbCOD and BOD removal efficiencies. The oxygen concentration had diminutive effect on p removal.

## کلمات کلیدی:

Sequence batch reactor (SBR), industrial wastewater treatment, CNP removal

## لینک ثابت مقاله در پایگاه سیویلیکا:

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