

عنوان مقاله:

A Study on organics, nutrients, coliforms removal and sludge reduction in continuous flow and intermittently decant sequencing batch reactor

محل انتشار:

اولین کنفرانس بین المللی تصفیه فاضلاب و بازیافت آب، فناوری ها و یافته های نو (سال: 1388)

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خلاصه مقاله:

This study was performed to minimize some of the well documented shortcomings possessed by the conventional SBR such as need of two reactors and absence of substrate during denitrification, by virtue of continuous flow of wastewater during the operation cycle. The experiment was carried out using municipal sewage in a pilot scale SBR of 120 L capacity. The results showed that the removal efficiencies that have been achieved were 85.5, 81.6, 73.3, 71.4, and 99% for BOD, COD, TSS, Total N and TC/FC respectively. On most of the occasions FC removal was more than 99.9%. Observations are also made on the effect of Dissolved Oxygen on sludge production in the reactor. It was observed that average reactor MLVSS concentration reduced around 50% at DO more than 6 mg/l showing high degree of maturation and minimal sludge production. The maturation level of the sludge in terms of MLVSS/MLSS ratio improved tremendously from 0.75 to 0.55 at the corresponding DO from 1 to 6 mg/L. Substrate limitation caused deeper diffusion of DO into the floc; thereby increasing the volume of the floc has been cited as a strong reason of increased sludge reduction.

کلمات کلیدی:

Continuous Flow SBR, Low Sludge Production, Organic Removal, Nutrient Removal

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