

عنوان مقاله:

Study of Kinetic coefficients of a Membrane Bioreactor (MBR) for municipal wastewater treatment

محل انتشار:

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خلاصه مقاله:

Background & Aims of the Study: In order to design membrane bioreactors (MBR) properly, it is essential to comprehend the behavior of microorganisms in such wastewater treatment processes. **Materials & Methods:** In this study, a lab-scale MBR process was operated to determine the biokinetic coefficients of the MBR system under different MLSS concentrations of 6800, 7000, 7400, and 7800 mg/l and organic loading rates of 0.5 kg COD/m³/day. **Results:** The results of this study showed that the yield of microorganisms (Y), the endogenous decay coefficient (kd), the maximum specific growth rate (μ_{max}) and the saturation constant (Ks) were in the range of 0.67 g VSS/g COD, 0.56 d⁻¹, 1.86 d⁻¹ and 6.65 mg COD/l, respectively. **Conclusions:** The kinetic coefficients in this study can be used to improve the operation and design the MBR system in full scale.

کلمات کلیدی:

Biokinetic coefficient, Membrane bioreactor, municipal wastewater

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