

عنوان مقاله:

(Dairy Wastewater Treatment using Three-Stage Rotating Biological Contactor (NRBC

محل انتشار:

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خلاصه مقاله:

Dairy wastewater is enriched in organic matter (about ۴۵-۷۲ g/l, COD) and also contains biodegradable carbohydrates. A three-stage system, NRBC was fabricated as a bench scale unit for lab experiments, to remove organic carbon from the whey. The fabricated NRBC had several advantages, such as quick start-up, high biomass concentration and was additionally able to handle high organic loading rates. In this study, the COD removal efficiencies of ۸۰ and ۸۳ percent were achieved at HRT of ۱۶ and ۲۴ h, respectively. While the HRT was increased to ۳۶ h, the COD removal efficiency was increased to ۹۲ percent. High surface COD loading rate of ۳۸-۲۱۰ g COD/m².day was achieved. The high organic loading rate of whey was successfully treated in the fabricated NRBC. The COD removal efficiency of ۹۶ percent was achieved, while the discs surface was increased by ۱۰ percent.

کلمات کلیدی:

Whey, Dairy Wastewater, RBC, COD removal

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