

Treatment of dyeing wastewater by hollow fiber membrane biological reactor

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ABSTRACT

A submerged hollow fiber membrane bioreactor (MBR) with a capacity up to 400 L/d was used for treatment of dyeing wastewater from a printing and dyeing factory in Changzhou, China. The MBR device was operated continuously for 100 days. The removal ratio of COD reached 90% and the COD values of effluent from the reactor were 52–97 mg/L, when the COD values of inlet were 600–1200 mg/L, 10–20% of which were rejected by membranes. The removal ratios for NH₃-N and colour were 90–95% and 60–75%, respectively. The result of this work could be used as a reference for the application of MBR technology to dyeing wastewater treatment on an industrial scale.

Keywords: MBR; Hollow fiber membranes; Dyeing wastewater; Activated sludge

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