

## Membrane bioreactor technology for treatment of nitrogen rich wastewaters — A critical review

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Received 19 July 2008; Accepted in revised form 6 December 2009

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### ABSTRACT

Membrane bioreactor (MBR) technology combines the activated sludge process and membrane filtration in a single step, where the separation of activated sludge and effluent is achieved with the help of the membranes. MBR permits good control of biological activity and high organic loading rates resulting in high quality effluent and small plant size. This paper reviews the potential applications of the MBR technology for the removal of nitrogen from effluents. The study reveals the prospects of choosing the right configuration of MBR (aerobic, anoxic/ anaerobic, completely anaerobic, integrated anaerobic/aerobic) for treatment of nitrogen rich wastewaters.

*Keywords:* Membrane bioreactor (MBR); Aerobic MBR; Anaerobic MBR; Nitrogen removal; Membrane fouling

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