



94

Views

0

CrossRef citations
to date


0

Altmetric



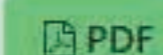


Original Articles

Nitrification in modified sewerage stabilisation ponds prior to discharge into the Ugandan side of Lake Victoria

Jolocam Mbabazi , W. Wanasolo, J. Gava & J. Kwetegyeka

Pages 899-910 | Received 23 Sep 2010, Published online: 08 Dec 2010

 Download citation  <https://doi.org/10.1080/00207233.2010.527184> Full Article Figures & data References Citations Metrics Reprints & Permissions PDF

In this article

[1. Introduction](#)[2 Materials and methods](#)[3 Results and discussion](#)[Conclusion](#)[References](#)

Abstract

Large volumes of wastewater in the Ugandan capital Kampala have seriously polluted Lake Victoria, from which the city draws its freshwater. Untreated effluent drains directly into this lake. In tropical temperatures, oxidation ponds are used for wastewater treatment, especially for organic matter. This technology should be the focus of work to improve its efficacy, and thus to secure the sustainability of the lake and its freshwater fish which are marketed worldwide. A pilot scale plant was set up comprising an anaerobic tank, a facultative pond and four fibre-glass maturation tanks. The total nitrification rates in the tanks T₁-T₄ were 5.5, 7.5, 10.1 and 6.4 (±0.4) mg-N//day, respectively. For more efficient wastewater treatment stabilisation pond systems, a modification similar to that in T₃ should be considered. T₃ was constructed with biofilm attachment surfaces in a manner which allowed effluent to be channelled round them, contrary to direct T₁ flow which is currently in use.

Keywords: Lake Victoria, Wastewater stabilisation ponds, Bacterial attachment surface, Nitrification rates

People also read

Article

Adsorption of Zn(II) in Oxisols as affected by selective removal of soil fractions >

C.P. Jordão et al.

International Journal of Environmental

PDF

Help