EXPERIENCES REVIEW IN DOMESTIC WASTEWATER TREATMENT THROUGH UASB REACTORS IN COCHABAMBA-BOLIVIA COMPARED TO LATIN AMERICA, INDIA AND EUROPE

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ABSTRACT

The anaerobic treatment process is increasingly recognized as the basic method of advanced technology for the protection of the environment and the conservation of resources and, together with other appropriate methods, represents a sustainable and appropriate wastewater treatment system for developing countries. Anaerobic wastewater treatment has been successfully implemented in tropical countries since the 1980s, with encouraging results in subtropical and temperate regions. This paper reviews the main characteristics of domestic wastewater treatment, with special emphasis on the Upflow Anaerobic Sludge Blanket (UASB). It reviews the application of the UASB process to the direct treatment of domestic wastewater, with examples from Europe, Asia and the Americas. In Latin America and Bolivia in particular, the use of this technology has increased considerably due to the small requirement of emplacement area and its attractive investment and operating costs. The review showed, based on the operating experience of different treatment plants located in the valleys of Cochabamba, that properly designed anaerobic upflow sludge blanket reactors are suitable for the treatment of domestic wastewater in the regions of valleys and plains of Bolivia because they present environmental conditions that make the use of this anaerobic biotechnology favorable from the perspective of sustainable development.

Keywords: Anaerobic Digestion, Domestic Wastewater Treatment, UASB, Water Treatment Technologies.

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