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Short Communication

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Biotechnology Reuse of Vinasse Produced at BIOCOM in an Anaerobic Fluidized Bed Reactor for Energy Purposes

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Summary: The agricultural use of vinasse produced in the sugarcane industry has been through the ages through various changes and studies to analyze its reuse. From the 90s, with the increasing technological development allied to the great concern in the improvement of the agrarian processes, its optimization has advanced enormously. Also, it is important to note that its discharge into "vacant" fields with agricultural potential has been a very large handicap for several crops, taking into account the microbial, chemical and biochemical load that it has (BOD, COD, pH).

Figure: Vinasse storage lagoon at Biocom with view of natural rocks of the region of Pungo Andongo in Cacuso, Malange

In this work, we propose alternatives to the use of a fluidized bed reactor to study the kinetics of load reduction of these parameters (COD and BOD) to later evaluate the conditions of their use in biogas production with the ultimate objective of generating electricity. Thus, different concentrations of vinasse were studied to analyze the percentage of the decrease in the chemical and biochemical demand. The Biocom vineyard has a pH close to 4.5.

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