

**SOLID WASTE TREATMENT OF SLUDGE FROM ALCOHOL
FERMENTATION OF ENERGETIC PLANTS (SWEAT SORGHUM) USING
BIOLOGICAL METHODS**

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ABSTRACT

In anaerobic digestion experiments, the solid/liquid wastes from alcohol fermentation of energetic plants (sweat Sorghum) were treated, in order to study the hydrolysis and degradation rates of organic matter and the ability of anaerobic systems to produce energy in the form of biogas (CH₄ and CO₂) using such solids wastes. Optimal conditions for the anaerobic digestion of this particular waste were determined using different organic loadings, concluding that solids hydrolysis was the process limiting step. A scheme based on the prehydrolysis of the separated solid wastes and the subsequent digestion by a high rate digester is shown to be a promising alternative.