

Interference of Contaminants in the Characterization of Sugarcane Straw for Energy Purpose

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Abstract : The aim of this study was to determine the interference from contaminants in the characterization of sugarcane straw. The sugarcane straw was collected after the harvest and taken to the drying oven, and then it was crushed in the mill type Willey. Analyzes of ash contents and Klason lignin were done in triplicate and high heating value (HHV) in duplicate, according to ASTM standard. The results obtained for the sugarcane straw were 5.29% for ash content, 29.87% for Klason lignin and 17.67 MJ.kg⁻¹ for HHV. Also, the material was analyzed by scanning electron microscope (SEM). The presence of contaminants was observed, such as silica. The high amount of contaminants in the samples may impact the results of analyzes, also raising its values, for example in the Klason lignin content. These contaminants can also adversely affect the quality of the biomass. Even using the standards is important to know what the purpose of the analysis and care mainly of sampling.

Keywords : biomass, bioenergy, residues, solid fuel

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