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INTERNATIONAL WORKSHOP ADVANCES IN CLEANER PRODUCTION

“INTEGRATING CLEANER PRODUCTION INTO SUSTAINABILITY STRATEGIES”

Proposed Indicators for Assessing the Environmental Performance of Production Processes of Sugar-Energy Plants

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Abstract

The sugar-energy industry, even governed by a series of laws and ordinances regulating their activities with respect to their environmental impacts, has been subject to seizure by environmentalists because it is a type of industry that employs production processes with intense waste generation. However, there is not in national literature a work that presents a comprehensive set of environmental indicators adapted to the industrial operations of sugar-energy production. Thus, the objective of this work is to develop and present a set of environmental indicators that are applicable to the production processes of sugar-energy plants. From the study of the production process, we identify the steps that generate waste and by-products, the characteristics of each waste or by-product and the relevant legislation. With this, we developed an environmental indicator for each waste/byproduct identified. For the perfect definition of each indicator we define its purpose, its justification, and its standard evaluation procedure. As a result, it is shown a set of 23 architected indicators in order to highlight, from the destination that the plant give to the waste or by-products generated, the level of environmental suitability in the management of each of them.

Keywords: *environmental performance indicators, environmental performance of sugar-energy plants, ethanol production, sugar production*
