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Potential of Generation and Recovery of Hospital Solid Reject in the Western Paraná Region

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Abstract

In Brazil, the recovery of hospital solid reject (HR) is rare or, in the most of cases, non-existent. Recent studies show that HRs can be used in pyrolysis processes to obtain coal and liquid and solid hydrocarbons. However, to size them the qualification and quantification of HRs are required. In this context, the paper presents the generation potential of HR in the 50 municipalities of the western Paraná region and proposes a new management model for these rejects. The methodological design is based on the possibility of recovery through its transformation into value-added products. Therefore, a prospective survey was conducted and its quantitative values were obtained from correlations that depend on different variables, being the main of them the number of hospital beds available in each municipality. Through thematic maps, a subdivision of the municipalities in five HR management regions is proposed. In each region, an anchor municipality would receive the installation of an HR processing center. Thus, the HR processing plant installed in the city of Campo Bonito would be responsible for processing 0.90 ton per day; in Marechal Cândido Rondon 0.75 ton per day; in São Miguel do Iguaçu 0.64 ton per day; in Iracema do Oeste 0.22 ton per day; and in Céu Azul 0.19 ton per day. From this perspective, the HR would be converted into raw material and the products of its recovery would return to the production cycle.

Keywords: *hospital solid waste; health services solid waste; management models.*