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

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Abstract

Recovery techniques have been employed for organic and reusable/recycable domiciliary solid waste.However, the recovery of the third type of waste, comprising the domiciliary solid reject (DR), is rare or, in the most of cases, non-existent. Recent studies show that DRs can be used in pyrolysis processes to obtain coal and liquid and solid hydrocarbons. However, to size them the qualification and quantification of DRs are required. In this context, the paper presents the generation potential of DR 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 urban population of each municipality. Through thematic maps, a subdivision of the municipalities in five DR management regions is proposed. In each region, an anchor municipality would receive the installation of an DR processing center. Thus, the DR processing plant installed in the city of São Miguel do Iguaçu would be responsible for processing 48,50 ton per day; in Campo Bonito 48,29 ton per day; in Marechal Cândido Rondon 15,48 ton per day; in Céu Azul 3,11 ton per day; and in Iracema do Oeste 4,93 ton per day. From this perspective, the DR would be converted into raw material and the products of its recovery would return to the production cycle.

Keywords: *household solid waste; management models; potential generation of rejects.*