Abstract

Varieties of kaolin ore were sampled from a sedimentary deposit in Pará state and processed in a pilot plant for spectrocolorimetry studies. The aim was to provide a tool for the mining and processing operations. Ores like that contain textural and mineralogical variations that define whether the ore blocks may or may not be processed. The decision making depends, first, on the ore color subjective analysis: reddish blocks are inappropriate, but the whitish ones are appropriate. The ore color depends on the mineral paragenesis contaminant. Fifteen representative samples of five varieties of kaolin were analyzed under different parameters. These samples were visually defined by the ore color. The reflectance curves of the sandless product defined seven spectrocolorimetric groups, four of which were appropriate for generating a quality product for the market. This study presents both the analyses and the results for each group, what they represent as a tool to support the mining and processing operations, and some considerations about the blending among the kaolin groups.

Keywords

Kaolin ore, spectrocolorimetry, reflectance curves.