

**USE OF MAIRÍ GRANITE RESIDUE FOR THE DEVELOPMENT OF
CERAMIC MASS TO OBTAIN CERAMIC BLOCKS**

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ABSTRACT

The Jacobina Mountains constitutes an important metallogenic province of the State of Bahia, enclosing a series of mineral deposits. It comprises a geotectonic structure with 220 kilometers of extension, north/south direction, result of the amalgamation of sedimentary basins of the Jacobina Group (GJ) and the Mairí Complex (CM), and meta-vulcansedimentary of the Novo Mundo Greenstone Belt (GSBMN). The proposal of this work was the use of granite from the Mairí Complex, The proposal of this work was the use of Mairí Complex granite evidenced by the presence of a mineral association composed by quartz + feldspar + plagioclase + mica which refers to the gray coloration of the rocks, present in the gold region hosted by the green quartzites and conglomerates of the Jacobina Mountains, in mass clayey for the production of ceramic blocks. In this work four groups of samples were prepared with 10, 20, 30% of residue of mairi granite and a group with the standard mass. The raw materials used were characterized by DRX, FRX and thermal analyzes (TGA, DTA and DSC). The specimens were compacted in a uniaxial press and dried at 150° C for 24 hours and sintered at 900, 950, 1000° C on a 60 minute plateau and with a heating rate of 5° C/min. After firing, the three-point flexural strength test, linear retraction test, water absorption, apparent porosity, fire loss and apparent specific mass were performed. Microstructural characterization of the samples was performed by scanning electron microscopy (SEM). In general, the formulations presented adequate physicochemical properties for the production of coating, and it is possible to substitute the use of conventional raw materials for residues. The formulations with percentages

higher than 10% of residue of mairi granite presented the best results, being possible to use them for the production of ceramic coatings. In addition, the adoption of the alternative of using these residues will not only reduce the environmental impact, but also add value to the final product.