

ULTRAPOTASSIC METAVOLCANIC ROCKS FROM THE ITAIACOCA BELT. SOUTHERN BRAZIL

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The Itaiacoca Belt comprises a metavolcano-sedimentary sequence pinched between the Três Córregos (SE) and Cunhaporanga (NW) batholiths. The main metamorphic and deformational phases occurred during the Neoproterozoic time just before the granitoid intrusions around which a metamorphic aureole developed. The metavolcanic rocks, which are closely associated with a thick arkosic sandstone, have preserved igneous mineralogy and primary structures and they can be grouped in two types: Foliated Metavolcanic (FMV) and Non Foliated Metavolcanic (NFMV). Despite the deformation that affected both types, only the FMV shows a fine foliation developed under green schist conditions (biotite zone). High contents of K₂O (~11.94) and low CaO (~1.18), MgO (~0.39), Na₂O (~0.65) and H₂O+ (~0.67) allow the characterization of the metavolcanic as high K rocks among them the NFMV can be classified as ultrapotassic. Rb-Sr, Pb-Pb and Sm-Nd whole rock isochrons obtained in metavolcanic rocks are around 1200 ± 100 Ma. The Nd (TDM) model age for the same felsic metavolcanic is 2.5 Ga. These results are in agreement with the data found in metadolerites (1100 Ma) from another formation of the Itaiacoca Belt. The tectonic interpretation of these metavolcanic rocks suggest a Mesoproterozoic continental extension where ultrapotassic metavolcanic rocks are related to the initial stages of the opening and filling of the Itaiacoca Basin.