

## <sup>40</sup>Ar/<sup>39</sup>Ar AGES OF BOM REPOUSO ALKALINE SUITE, MG STATE

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The Bom Repouso Alkaline Suite (SABR, 22°31'S e 46°10'W) crops out a main body (~1 km<sup>2</sup>) that develops a moon-shaped topographic high associated to two small satellite plugs. It is made up exclusively of aphytic phonolites divided into five different units. It shows geological and petrographic characteristics typically of igneous nature, such as poikilitic, acicular, skeletal, swallowtail and interstitial crystals textures. It is intruded in the Precambrian basement, in the Intermediate Diatexite Unit of Socorro Nappe, and between the Cabo Frio Magmatic Lineament and Northern Serra do Mar alkaline igneous Provinces. Amphibole and biotite grains from two different units were analyzed by <sup>40</sup>Ar/<sup>39</sup>Ar incremental heating method at the UQ-AGES Laboratory of Queensland University, Australia. The results exhibit a well-defined plateau, with 100% of radiogenic gas extracted, and the integrated, ideogram and isochron ages are statistically equal, confirming that samples did not lose or gain Ar after crystallization. The determination provided an age of 78.8 ± 0.4 Ma of biotite from the biggest satellite plug and 76.5 ± 0.4 Ma of amphibole in the main body. The results are close to ages shown by Hasui et al. (1997) of 70 Ma (K-Ar in amphibole), but the authors did not detail its determination, and interpreted the age like minimum age, resulting in an old isotopic system opened in a regional tectonic event and related the body with other occurrences decidedly Precambrian in age. However, the results confirm the Upper Cretaceous age and its relationship with the Meso-Cenozoic alkaline magmatism of Brazilian Platform, more specifically, with the Cabo Frio Magmatic Lineament.