The Arraias Formation volcanism, Araí Group, a register of intracontinental rifting Paleoproterozoic in north Brasília Belt, central Brazil

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The Arraias Formation, on Araí Group, is an intermediate continental sequence, located in the northern section of the Brasília Belt, central Brazil. This unit is characterized by a large register of effusives and pyroclastics volcanics rocks, intercalated and associated with the sin-rifts sedimentary sequences. These rocks are essentially subalcaline, classified as basalts, riodacites/dacites and rhyolites, characterizing a typical bimodal volcanism, with affinities with the rocks of the Toleitic Series. An enrichment of LREE in relation to the HREE is identified in these rocks. The spectra also shows that the basalts present a slight europium anomalies, contrasting with the expressive negative anomalies of this element detected in the rhyolites and riodacites/dacites. The different behaviors between the spectra of basalts and dacites/riodacites e rhyolites shows the non-cogeneticity among the most and least evolved terms. These rocks have similar characteristics to the basalts of oceanic islands (OIB). When released in the tectonic affinity diagram, Rb x (Y + Nb) and Zr-Ti / 100-Y *3, recognizes that both riodacites/dacites and rhyolites and basalts are in the field of intraplate magmatism. The samples presented values of εNd (T) ranging from -1.5 to -5.9, and model ages of 2.59 and 2.22 Ga. Moreover, U-Pb (LA-ICP-MS) zircon data concour with a great contribution of the rhyacian continental crusts in the genesis of these magmas, which contaminated the basalts around 1783 ± 17 and produced by partial fusion the rhyolites, dacites/riodacite. [Acknowledgments: University of Brasilia; MCT/CNPq and FAPDF]