GEOCHRONOLOGY AND TECTONIC IMPLICATIONS OF AMPHIBOLITES AND PLUTONIC BODIES OF THE MINEIRO BELT, SÃO FRANCISCO CRATON, BRAZIL

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The geological-tectonic framework of the southern São Francisco Craton comprises an Archean granite-greenstone terrane (3.20-2.70 Ga), Archean K-rich granitoid intrusions (2.63-2.60 Ga), Archean-Paleoproterozoic Minas Supergroup (< 2.58 Ga) and the Paleoproterozoic Mineiro belt (2.46-2.00 Ga). The lithotypes of the Mineiro belt were subdivided into five age groups: i) 2.46 to 2.41 Ga of the Cassiterita and similar orthogneisses with T_{DM} model age of 2.5 Ga and $\varepsilon Nd_{(2.4\ Ga)}$ value of +2.4; ii) 2.36 to 2.33 Ga of the pyroxene-bearing amphibolites and Resende Costa, Ramos and Lagoa Dourada orthogneisses with TDM ages between 2.4-2.5 Ga and positive $\varepsilon Nd_{(2.3\ Ga)}$ values (+1.0 to +3.2); iii) 2.26 to 2.20 Ga of the Rio das Mortes, Nazareno and Dores do Campos metavolcano-sedimentary sequences and Itutinga, Nazareno, Brumado de Cima and Brumado de Baixo orthogneisses. The orthogneisses show T_{DM} ages of 2.3-2.6 Ga and $\varepsilon Nd_{(2.2\ Ga)}$ values of -0.8 to +1.8; iv) 2.19 to 2.15 Ga of the Fé, Ribeirão do Mosquito, Brejo Alegre and Glória orthogneisses; v) 2.15 a 2.10 Ga of Ritápolis granitoid, Gentio and Ititinga granites and Brumado diorite. The Rio das Mortes metavolcano-sedimentary sequence contains amphibolites and schists interlayered with quartzites, BIF, Mn-rich phyllites and phyllites, as well as scarce metaultramafic rocks. The amphibolites yield U-Pb crystallization ages of 2231 ± 5 Ma and 2202 ± 11 Ma. The Nazareno metavolcano-sedimentary sequence is composed of metakomatiites, serpentinites, talc chlorite schists and amphibolites, while quartzites, Mn-rich phyllites and phyllites are subordinate. The amphibolites yielded U-Pb crystallization age of 2223 ± 4 Ma. The Dores de Campos metavolcano-sedimentary sequence is lesser known than the two other supracrustal units and comprises amphibolites and metaultramafic rocks, minor phyllites, gondites and quartzites. One of these amphibolites yields 2255 ± 51 Ma. In this context, the development of the Mineiro belt involves the amalgamation of magmatic arcs of Siderian and Rhyacian age.