

## **The Pegmatites of Minas Gerais, Brazil**

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The pegmatite of Minas Gerais State (Brazil) are two pegmatites group: zoned Li-bearing pegmatites, and Be-bearing pegmatites and simple ceramic pegmatites. The first pegmatites group result to fractionate crystallisation process linked to syn-granites. The syn-tectonic magmatic series are related to a crustal melting produced by a decompression and a thermal relaxation (550-700°C, 4-5kbar). They consist in leucogranites and zoned Li-bearing pegmatites which emplacement, 582Ma, is controlled by a main compressive deformation phase D1.

This pegmatite group is localised in pegmatite district Governador Valadares, Galileia, Araçuaí, São José da Safira.

The second pegmatites group cut the first pegmatites group. It associated to second deformation D2 of the Brasiliano event (511 – 500 Ma). During the D2 events a second partial melting of the crust occurred and produced simultaneously the porphyritic leucogranites and the second generation of Be-bearing pegmatites and simple ceramic pegmatites. Petrological and geochemical characters of the porphyritic granitoids attest of a crustal origin different from the syn-orogenic suites, and the source material is probably located in high grade metamorphic rocks, *i.e.* the orthogneiss.

The second pegmatites group is localised in pegmatite district Espera Feliz, Marilac and Santa Maria de Itabira.

The main purpose of this paper is to interpret the chemical compositions of the studied minerals of pegmatite bodies.