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**Mantle xenoliths from intracratonic eastern Paraguay (south America latform) and andean domain: A comparison**

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Protogranular spinel-peridotite mantle xenoliths and host sodic alkaline lavas from  $\approx 26^\circ\text{S}$ , central Eastern Paraguay) and Andes are studied for: (1) trace element behaviour; (2) Sr-Nd-Pb relationships among host lavas, mantle xenoliths and hosted pyroxenes. Two main suites of mantle xenoliths are apparent; i.e. LK (relatively low in K and incompatible elements, IE) and HK (high in K and IE), both ranging from lherzolite to dunite and showing trends of "melt extraction". The inter- and intracrystalline temperature and pressure are in the ranges 800-1200°C and 11-23 kb, respectively, corresponding to the oxygen isotope equilibration for the clinopyroxene-olivine pairs.

O-C isotopes are well in the range of the values from lithospheric mantle. Also Sr?Nd?Pb isotope ratios, both for alkaline mafic intra-plate magmatism and mantle xenoliths, constrain the isotopic compositions on the lithospheric mantle. Most small-volume sodic lavas of Cretaceous to Paleogene age were derived from a depleted lithospheric mantle source with rather uniform initial  $^{143}\text{Nd}/^{144}\text{Nd}$  ( $\sim 0.5127$ - $0.5128$ ) and  $^{87}\text{Sr}/^{86}\text{Sr}$  ( $\sim 0.7032$ - $0.7040$ ). The initial  $^{206}\text{Pb}/^{204}\text{Pb}$  ratios are variable (18.5-19.7) at uniform  $^{207}\text{Pb}/^{204}\text{Pb}$  ratios (15.600.05). The variable Sr and Pb isotope ratios are probably due to radiogenic growth in a metasomatized lithospheric mantle, and the Sr-Nd-Pb isotope signatures are similar to the isotopic composition of old sub-continental lithospheric mantle of the Brazilian Shield.

On the whole, the isotopic Sr-Nd-Pb data and trace elements seem to indicate that the lithospheric mantle prior to the enrichment event was dominated by a depleted component, isotopically resembling MORB source or even more depleted. Model ages (Nd-TDM) of clinopyroxenes and host rocks allow to confine main metasomatic events (fluids variously enriched in IE, REE and CO<sub>2</sub>) at the Brasiliano cycle (i.e. 900-460 Ma). On the contrast, Rb-Sr isotope systematics may be related with fluids induced by melting episodes occurred at Early Cretaceous times, during the different phases of lithospheric thinning in the area.

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