LAMPROITES OF THE YBYTYRUZÚ FIELD, GUAIRÁ DEPARTMENT, EASTERN PARAGUAY

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Numerous Mesozoic bodies of lamproite-like intrusions are located NE and E of the city of Villarrica, Guairá Department, in eastern Paraguay. This magmatic field, known as Ybytyruzú Field, lies immediately on the margin of the SW part of Paranapanemá cratonic-block, just of the Asunción rift backs-horst and so related to deep crustal/lithospheric fracture zones.Mostly of observed rocks are weathered, however fresh samples were collected in dykes from Acaty (=Yzu-2), Tacuarita (=Yzu-7); lava/breccias from Mbocayaty (=Yzu-3); and sill from Salto Boni (=Yzu-6). They intrude, both, the sediments (Independencia Group and Misiones Formation) and the tholeiitic basalts of the Paraná Basin. In the present study we have performed petrographic and mineral chemistry data to show that all of the study rocks, from the Ybytyruzú Field, are lamproites (leucite lamproite from Yzu-2/Yzu-3/Yzu-7 and sanidine lamproite from Yzu-6).With respect to Yzu-2, Yzu-3 and Yzu-6, the following analyzes show the lamproite character:- phenocrysts/microphenocrysts of: olivine (mg# (Mg/(Mg+Fe)) 0.80-0.85), Al-poor diopside (Al_2O_3 0.53-2.09% and TiO_2 0.65-1.61%), phlogopite/Al-poor-Ti phlogopite (mg# 0.76-0.85, TiO_2 5.8-10.2% and Al_2O_3 12.7-13.9%), Mg-Ti magnetites and leucite (pseudomorphs). -and matrix phases of: Al-poor diopside (Al_2O_3 0.39-2.46% and TiO_2 0.43-1.55%), Al-poor-Ti phlogopite/biotite (mg# 0.57-0.80, TiO_2 5.6-10.2% and Al_2O_3 8.9-12.8%), Mg-Ti magnetites/Ti-magnetites; sanidine (0-4.0% Fe_2O_3, 0-2.6% BaO and 0-2.5% Na_2O). And as accessory phases, ilmenite (0.2-5.7% MgO and 0.3-6.6% MnO), K and Ti-rich Fe-eckermanite/richterite (1.32-3.6% K_2O and 4.7-9.0% TiO_2), K-rich Fe-Mg-Mn amphiboles, apatite and quartz (Yzu-6).And so, Ybytyruzú lamproite-like intrusions authenticates the true lamproitic province in Paraguay.