GEOCHEMISTRY OF THE GNEISSIC ROCKS OF THE BASEMENT COMPLEX AROUND KPATA, NORTH CENTRAL NIGERIA.

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Abstract

The basement rocks around Kpata area of North Central Nigeria consist of gneiss and migmatite-gneiss intruded by the Pan-African granitoids. Foliation in the gneisses defined by parallel mineral banding and indicates evidence of deformation and migmatitic processes. Geochemical analysis shows that major oxides SiO$_2$ (68.42- 71.88 wt %) Al$_2$O$_3$ (14-18 wt %) Fe$_2$O$_3$ (2.40- 5.90 wt %) and K$_2$O ranges from 1.07-2.01 wt %. Linear plots of major oxides against SiO$_2$ exhibit both positive and negative linear trends. Petrogenetic plots of Na$_2$O+K$_2$O versus SiO$_2$ suggest an igneous origin.

Keywords: Deformation, Geochemistry, igneous origin, migmatite, petrogenetic.