MINERAL CHEMISTRY OF ALKALINE ROCKS OF BÚZIOS ISLAND, NORTHERN COAST OF SÃO PAULO STATE, SE BRAZIL.

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Mineral chemistry of alkaline rocks from Búzios Island, Brazil, has been studied in order to constrain magmatic processes. Alkali feldspars in felsic rocks exhibit lamellae, which vary between Ab100-Or100 (An0-10), either continuously or grouping in the end-member. In the mafic rocks these minerals appear interstitially or in ocelli as pure potassium phase. Larger plagioclase are zoned (An75 and An15) and smaller crystals from the matrix are more sodic. Feldspathoids are locally present. In the mafic dykes, olivine varies between Fo75 and Fo85. Pyroxene goes from diopsidic, in mafic rocks, to hedenbergitic, towards more calcic-sodic, in syenites. Pyroxene is even more sodic in felsic dykes, up to aegirines in phonolites. In mafic dykes, pyroxene becomes richer in Ti and Al, falling out from Quad field, possibly with Ti-Tschermakitic substitutions. Amphiboles of mafic dykes are mainly kaersutites. In the syenites, amphiboles are calcic (Mg hornblende) to calcic-sodic, evolving towards sodic types in felsic dykes. Clinopyroxenes and amphiboles evolve, from magnesian to iron-rich compositions, deviating towards more sodium-rich ones, according to rock-types. Biotite varies continuously, from phlogopite/Mg-biotite in the mafic dykes, to Fe-biotite in the felsic dykes. Opaque oxides are either from Mt-Usp series, or from Ilm-Hem.The continuous character of mineral chemistry among different rock types is suggestive of a continuous process of differentiation, starting with a mafic type, towards the syenites and phonolites, by AFC.