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Biogeochemical aspects of mineral content in yerba mate from Paraguay

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Yerba mate, Ilex Paraguayensis, is a plant of paraguayan origin used in infusions by the ancient inhabitants of Paraguay as a "reviver"/energy beverage which consumption is lasting up today; furthermore, it is extended almost worldwide. In regard to its mineral content very few studies are known; moreover, none has been published related to the occurrence of REE (rare earth) and other refractory elements in the leaves. In this work, minor and trace elements composition have been investigated by XRF techniques to determine their correlation as well as provenance. The analysis of complex spectra was performed by the AXIL software and the quantitative analysis by the QAES software. Analyzed trace elements were the refractory Rb , Sr, Y, Zr, Nb, Ba, La, Ce, Nd , Y, 3d as Ti,Cr,Ni,Cu, Zn. Minor elements were Mn, Fe which are often related to the above refractory together with S, K, Ca, Br, I, Cs.

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