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Elemental analysis of peloids from some Cuban spas using INAA

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Peloids from some Cuban spas (San Diego, Elguea, Santa Lucía, Cajío and Colony) have been studied using Instrumental Neutron Activation Analysis (INAA). Concentrations of 30 major, minor and trace elements in the peloids are reported, including an important group of REE (La, Ce, Nd, Sm, Eu, Gd, Tb, Tm and Yb). No difference is observed for metal contents (including REE) determined for raw and matured peloids from San Diego spa. Elemental concentrations are compared with other worldwide reported peloids. The iron-normalization using raw (non-matured) mud from San Diego spa as reference material shows that an anthropogenic metal input is present in the Elguea, Cajío and Colony spas. The measured REE contents are in the same order of magnitude as those reported for Earth's upper crust average shales and muds as well as with worldwide reported peloids. However, the behavior of the normalized-to-chondrites REE shows different patterns for Cuban peloids matured with marine and fresh waters, respectively.

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