

neutron activation analysis. In these measurements approximately 100mg of sample were irradiated together with certified reference materials, for a period of 8 hours under a neutron flux in the order of  $10^{12} \text{ n cm}^{-2} \text{ s}^{-1}$ . The activities were determined by gamma spectrometry using high-purity Ge detectors. Both, in natura and matured samples presented similar coefficient of variation for most of the elements, with Ca, Co, Cr, Cs, Fe, La, Th and U having a coefficient of variation lower than 30%, the elements As, Sm, Tb, Zn and Zr presented a coefficient of variation between 30 and 60% and the elements K, Nd, Sb, Se, Tb and Yb presented the highest coefficients of variation, above 60%.

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## **BENTONITE MATURATION WITH "ÁGUAS DE LINDÓIA" WATER (SP) P33**

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In the therapeutic treatments involving clays, they are used in mud form also called peloids and are obtained by maturation process. Peloid is a natural product consisting of a mixture of solid phase (inorganic and organic materials) with a liquid phase (mineral medicinal, salt lake or sea water). The maturation process occurs during the interaction of the solid and liquid phases that can vary up to many months. The peloids can be applied to different parts of the body or on the whole body by means of masks and poultices, or even by bathing the body partially or totally, for therapeutic or cosmetic purposes. This study proposes to characterize the elemental composition of the peloids artificially obtained by the maturation process of mixing bentonite with mineral-medicinal water from Águas de Lindóia (SP). For this procedure, bentonite samples were left in contact with running water for three months, after this, they were collected, dried, transferred to a mortar, crushed and irradiated in the IEA-R1 reactor at IPEN, together with certified reference materials, to be analyzed by neutron activation analysis. The irradiation occurs at a neutron flux of  $10^{12} \text{ cm}^{-2} \text{ s}^{-1}$ , during 8 hours and the induced activity were measured by gamma spectrometry.

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