

## **Determination of Elementary Basal Levels in Sediments of Baixada Santista, São Paulo, Brazil.**

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Sediments may accumulate contaminants in concentration relatively high that can persist for long periods over the time. The presence of these pollutants represents a threat for the environment and for the ecological system. A major problem concerning environmental studies that uses sediments for the evaluation of environmental impact is to determine the natural levels of the elements of interest. The concentration of the determined elements can be compared to reference values as shale or mean values of the crust. A more realistic scenario is obtained when the basal concentration is used as the standard for comparison. The objective of this work is to determine the basal levels of the elements As, Ba, Br, Ce, Cs, Co, Cr, Eu, Fe, Hf, K, La, Lu, Na, Nd, Rb, Sb, Sc, Se, Sm, Ta, Tb, Yb and Zn by using neutron activation analysis in sediments of Baixada Santista, South-Easter of São Paulo state. This region comprises a dense urbanization area that holds the biggest Brazilian industrial complex with predominant presence of petrochemical, siderurgy and fertilizer industries. For the determination of the basal levels of the elements ten cores whose depth varied from 50 to 100 cm were collected, sliced each two centimeter, grounded and homogenized. For the multielemental analyses, it was applied instrumental neutron activations analysis. Statistics applied to the results showed that the concentrations observed in core button may be considered as the natural level for the region.