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X-ray fluorescence: A different look about the Amazonian issues

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In a moment where knowing world ecosystems become increasingly important, we must use forms of increasingly detailed study on each environmental sample we can get. In this way we can find biomarkers and bioremediation noting the relationship between the absence, presence and accumulation of certain elements in plants and soil, for example.

Once the X-ray fluorescence (XRF) technique works with fresh samples, the results become more interesting. Some works using this methodology can be found in the current literature. Contaminated water samples have been studied, as well as soils, plants and animals, showing the great potential of this new analytical tool.

The Crowfoot Group for X-ray methods has been working in this line since 2006, with studies of soils and waters from different parts of the Amazon region. For a given set of houses built illegally in a forest region, studies have been conducted in a comparative way, to check for possible contamination of the water by metals. Samples of soil and plants from a local biological reserve were also studied for comparison and possible meeting of biomarkers of species of this region. Samples of freshwater sponges are being studied with the same purposes, as well as plants of the same locations.

In this way the XRF methods are proving very relevant in this new environmental approach, where the presence or the absence of certain elements can reveal important environmental physical and chemical properties for your protection, proper use and in the generation of new technologies.

Biography

Claudia Candida Silva has completed his Ph.D. at the age of 29 years from Sao Paulo University. Within the School of Technology at the University of the State of Amazonas, she is the local coordinator of undergraduate research, one of the local coordinators of educational quality, program coordinator of a post-graduation course, and professor of general chemistry course, theoretical and experimental inorganic chemistry, and physical chemistry, for the course of chemical engineering.

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