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Atoms for Peace

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Preserving cultural heritage artefacts in Latin America

The challenge…

Latin America's cultural heritage is one of the region's principal sources of historical knowledge, and a powerful symbol of cultural identity. The classification, preservation and restoration of objects require scientific, technical and historical knowledge. Nuclear analytical techniques are used to identify the chemical composition of the artefacts. This is used for profile establishment and can also help with the fight against counterfeiting or the illegal trafficking of cultural goods. The documentation of historical artefacts in a database which allows detailed recording and cross-referencing is also of great importance.

The project…

The project's main aim was to assist the participating counties (Argentina, Brazil, Chile, Costa Rica, Cuba, Ecuador, Mexico and Peru) with the study and preservation of their national cultural heritage, through the provision of analytical information for the characterization and contextualization of cultural heritage artefacts. Expertise was provided through workshops, training and expert missions on the use of nuclear analytical techniques. A database was developed for curators, researchers, archaeologists and other analysts, to support and promote the use of nuclear analytical techniques.

This golden artefact, 'el gran chaman', was analysed at Costa Rica's Research Center on Nuclear and Molecular Sciences (CICANUM).

The impact…

- **The database developed through the project is the first in the region to contain descriptive and analytical data on samples of archaeological and other cultural property, accessible to different users.**
- **Several laboratories in the region have successfully employed nuclear techniques to study archaeological ceramics and samples of obsidian (volcanic rock) and bones.**
- **The nuclear techniques have been promoted through publications, outreach seminars and talks aimed at representatives of institutes related to the study of cultural heritage.**

Fragments of colonial pottery found at cooking sites dating from the 16th and 18th century.

RLA/8/043 Use of Nuclear Analysis Techniques and Development of Databases for Characterization and Preservation of National Cultural Heritage Objects (ARCAL XCIV)