

Libs portable system for the determination of chemical elements present in the deterioration of patrimonial buildings

[Sistema libs portable para la determinación de elementos químicos presentes en el deterioro de construcciones de valor patrimonial]

[Moreira, L.^{ab}](#), [Ponce, L.^b](#), [Valdés, C.^c](#), [Corvo, F.^d](#), [Arronte, M.^b](#), [De Posada, E.^b](#), [Pérez, Y.^a](#), [Flores, T.^b](#), [Ravelo, I.^a](#), [Cruzata, O.^a](#), [Lambert, B.^a](#), [Cabrera, J.L.^a](#), [Borges, A.^a](#), [Ponce, A.^a](#), [Hernández, L.C.^{ab}](#)

^a IMRE-Universidad de La Habana, Vedado 10400, Habana, Cuba

^b CICATA-IPN, km 14,5 Carretera Tampico Puerto industrial, Altamira 89600, Tamps, Mexico

^c Centro Nacional de Investigaciones Científicas (CNIC), Cuba

^d Centro de Investigación en Corrosión, Universidad Autónoma de Campeche, Mexico

Abstract

Stone materials, despite their great stability as construction materials, are not free from deterioration caused by nature, an effect that has been intensified by urban and industrial developments. Laser-induced breakdown spectroscopy (LIBS) is considered one of the most dynamic and promising techniques in the field of analytical spectroscopy. LIBS, which is performed in situ and is virtually non-destructive, offers a potential alternative to other techniques used in fields such as archaeology, preservation and restoration. In this work, the LIBS technique identifies key components and contaminants on the surface of the walls of the Convento y Basílica Menor de San Francisco de Asís, a historical building located in Old Havana, Cuba. The results are compared to previously performed analyses by X-ray fluorescence (XRF).

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