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Palaeometry: Non-destructive analysis of fossil materials
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Abstract

Palaeometry involves the combined use of different non-destructive analytical techniques on the study of fossil and subfossil materials. This work reports the results of the first Palaeometric analysis using Visible Fluorescence Induced by the UV-Light and PIXE (Particle Induced X-ray Emission spectrometry) applied on fossil samples from Tlayúa quarry, Mexico (Tlayúa Formation, Early Cretaceous, Albian). This paper provides a short discussion on the results implications for the understanding of the fossilization process occurred on Tlayúa. Also, results suggest the presence of characteristic fossil fingerprints for the exceptional preservation of fossils for this Konservat-Lagerstätte, determined by the contents of elements such as Calcium, Phosphorus, Manganese, Iron and Arsenic.

Keywords

Fluorescence induced by UV-Light, PIXE, Tlayúa, Konservat-Lagerstätte

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