

DEVELOPING A COMPREHENSIVE REFERENCE COLLECTION FOR THE ANALYSIS OF EXCAVATED TEXTILES

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ABSTRACT

A reference collection for plant fibres that have been used in textile production in Greece was developed, with the aim of aiding the identification of excavated textile finds. Cotton, flax, hemp, nettle and sparto fibres are included. These were collected from local plants or taken from textiles produced in Greece. A combination of different, non-destructive, instrumental analytical techniques was applied, namely, optical and scanning electron microscopy (SEM) coupled with energy dispersive X-ray analyzer (EDX) and Attenuated Total Reflectance - Fourier transform infrared (ATR-FTIR) microspectroscopy. The aim of the analyses was to observe the morphology of the fibres, and to record key characteristic features and measurements, and also elemental composition. A database management system was finally developed, which includes information on the samples, the applied methods of instrumental analysis and the results of the analyses.

KEY WORDS

Plant fibres; Greece; Optical microscopy; SEM-EDX; ATR-FTIR; Database.