

## Non-Destructive Spectrophotometric Analysis for Compounds Present in Egyptian Archeological Textile Samples<sup>♦</sup>

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### Abstract:

Since archeological samples are of great importance national and international values, hence, non-destructive spectrophotometry provides ideal tool for their analysis through consolidation and conservation processes. Thus, x-ray diffraction was applied to determine the types of metallic, nonmetallic compounds and impurities in very small quantities present in the colored fibers that were spread around the artifacts. Also, identifying the types of mordants used through dyeing. Also, the types of metallic alloys in the attached sequences to the artifacts were identified. Moreover, atomic absorption was used for qualitative and quantitative analysis of these accompanied sequences. In addition, Infrared spectral analysis was used to identify the types of the natural dyes pre-used with these examined artifacts. The applied identification techniques were proved to be successful nondestructive tools for such analysis.

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