



# World Heritage / Patrimoine Mondial

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**Nationality of author:** Turkish

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**Title of thesis:** CHARACTERIZATION OF EMECİK  
LIMESTONE FIGURINES

**Type of thesis:** Ph. D.

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■ Please provide a 500 words abstract outlining your thesis; you may wish to attach a table of contents or any other relevant material:

Abstract

Archaeometry, the collaboration of different disciplines with archaeology, has revealed some facts that could change our understanding of the past. Provenance studies should be among the primary topics in interdisciplinary archaeometric studies. Provenance studies, determining the source of the archaeological materials, play an important role in the understanding and reconstruction of trade connections, and social, political and religious relationships of ancient societies.

A group of limestone figurines dated to 6th century BC constitutes an interesting case since they have a high abundance in Eastern Mediterranean region. Generally, it is accepted that these figurines were of Cypriot origin. However, beside the ones made according to Cypriote style and were found in Cyprus; the extended distribution of the figurines and the varieties in their styles raised the questions on the location of production and/or the provenance.

The Sanctuary of Apollon in Emecik is situated in Dağça peninsula. The amount and the variety of types found in Emecik make it reasonable to think that they were produced locally. Therefore, it is reasonable to suggest that possibly a local limestone was used.

The islands of Dodecanese are located at one of the busiest and most important cross roads of the Eastern Mediterranean and readily accessible from all directions, including Asia Minor. Geologically the Dodecanese form an extension of south Western Anatolia known as Caria enclosing Emecik where the figurines within the scope of this project. The two areas appear to have shared a common culture. Indeed, the archaeological evidence seems to agree. The overall interpretations of the results of this project would provide a wide perspective for understanding the common culture of this area.

Provenance studies of Emecik figurines that were already initiated would be continue through the determination of trace and REE (rare earth elements) with ICP- OES (inductively coupled optical emission) and ICP-MS (inductively coupled mass spectrometry) along with mineral examinations through thin section, SEM-EDX (Scanning electron microscope – energy dispersive X-ray spectrometry) and XRD (X-ray diffraction ) analysis. The possibility of the application of LA-ICP-MS (Laser ablation inductively coupled plasma mass spectrometry), the technique which is almost non-destructive, to limestone figurines will also be investigated. The results will be compared to those obtained by above techniques requiring digestion of solid samples. In this way the method which would be developed could allow analyses of well preserved remains. Other than that, LA-ICP-MS can be used to obtain bulk compositional data and to observe changes as a result of diagenesis.

Various statistical approaches will be applied in order to interpret the original data obtained by the determination of concentration values of REE's and major and trace elements in the samples.

Bivariate analysis of the samples will be plotted. In addition, cluster analysis and PCA (principal component analysis) will be used to understand the relation between archaeological and geological samples. The resulting groups and variations as a result of these statistical analyses will be shown in dendrogram plots and graphs.

■ Thematic Structure (max. 5)

<input checked="" type="checkbox"/>	Archaeological Heritage	<input type="checkbox"/>	Cultural Routes and Itineraries, Linear Heritage (Routes, Canals, Railways, Rivers, etc.)
<input type="checkbox"/>	Built Heritage	<input type="checkbox"/>	Natural Heritage and Environment
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<input type="checkbox"/>	Oral & Intangible Heritage	<input type="checkbox"/>	Heritage Legislation (National and International), Conventions, Charters and Declarations
<input type="checkbox"/>	Languages and Toponymy	<input type="checkbox"/>	Climate Change Impacts on Heritage
<input type="checkbox"/>	Genealogy and Heraldry	<input type="checkbox"/>	Restoration
<input checked="" type="checkbox"/>	Other: Raw material investigationn		