PROGRAMME AND ABSTRACTS

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Etruscan render mortars from *Domus dei Dolia* (Vetulónia, Italy)

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Destroyed as a result of a fire, the ruins of the *Domus dei Dolia* remained hidden until 2009, the year of the beginning of the archaeological work. The *Domus dei Dolia* is located in the Hellenistic quarter of the old town of Vetulonia, now Poggio Renzetti. Basing on the classification of the archaeological materials recovered the *Domus, and the whole city,* was probably destroyed around the first century BC. The city was destroyed due to the reprisals made by Lucio Cornelio Silla after the victory over Gaio Mario in the bitter dispute that saw the Etrurian cities take party in favour of the latter during the Roman civil war. The different materials used and the artifacts found reveal the richness of the building and its inhabitants.

In the context of the collaboration between the HERCULES laboratory, the Isidoro Falchi de Vetulónia Museum and the Town Hall of Castiglione della Pescaia, eight render mortar samples were collected for their compositional and textural characterization. All the samples come from the same division of the house, the *triclinum*, and display red, blue, yellow and black mural painting. Most of the samples exhibit a clear stratigraphy: a chromatic layer over a white/grey mortar render, which in turn rests on a beige/yellowish mortar. The data acquisition techniques consisted of X-ray diffraction (XRD), thermogravimetric analysis (TGA), scanning electron microscopy coupled to X-ray dispersive energy detector (SEM-EDS) and thin-section optical microscopy.

The integration of the various techniques indicates that render mortars consist of a preparatory layer (*intonaco*) with calcitic aggregates displaying very angular contours which suggest the use of in situ brittled recrystallized limestone/marble. Quartz aggregates are rare and very small in size. The binder is an aerial calcite lime. Due to the presence of calcitic aggregates in this layer, the determination of the trace (binder:aggregate) of 1:1 was made by point counting on thin section.

The underlying beige/yellowish mortar is clearly contrasting from the compositional and textural point of view. The aggregates are mainly silicates prevailing the quartz over the feldspars and lithics (sandstones, slates, cherts), being still observed nodules of lime. The shape of the aggregates is rolled to well rolled suggesting a significant transport, probably corresponding to a river sand. The binder is identical to the intonaco that is an aerial lime of calcitic composition. For the arricio the trace was determined using the TGA; in these layers values of 9 to 11% were obtained for mass loss in the range 500-900°C corresponding to a calcite amount of 21 to 39% attributed to the binder. That is a trace of 1: 1.5 to 1:4 for the masonry mortars. The dispersion obtained may be related to the small sample size.

The results obtained for the different samples show a strong coherence with each other, corroborating the fact that it is a single division coating. On the other hand they reveal clear criteria in the choice of the raw materials as well as the specific techniques of application for each layer.