

The characterisation of materials from the *Roman Thermae* of Reggio Calabria (Calabria, South Italy).

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This work focuses on a study of materials occurring in the Roman *Thermae* of Reggio Calabria (Calabria, South Italy). Founded between the I and II century B.C. the area represents one of the greatest evidence of roman architecture and it includes ancient imperial ruins of thermal sources.

A multidisciplinary investigation was performed on natural and artificial archaeological stone artefacts in order to a complete characterisation and in addition to study their state of preservation. Selected fragments of different nature, such as bricks, carbonatic and volcanic specimens, have been studied by combining scanning electron microscopy coupled with energy dispersive spectrometry (SEM-EDS), polarized optical microscopy and X-ray diffraction. In addition, biological techniques were applied to study the nature and extent of degradation forms.

All these diagnostic analysis represent an essential tool for the characterisation of the raw materials and the decay and in addition, for the selection of an appropriate cleaning procedure, since the latter is a fundamental process aimed to the conservation of archaeological items over time.

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