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Mineralogical characterization of the blue pigment of Michelangelo's fresco “The Last Judgment”

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ABSTRACT

The blue pigment and the plaster layer of Michelangelo's fresco “The Last Judgment” have been characterized by means of powder XRD, FT-IR, and Raman spectroscopy, as well as analytical TEM and SAED. The pigment is composed of a mineralogical assemblage that is consistent with a raw lapis lazuli rock. To try to define the provenance of this pigment, we investigated various lapis lazuli samples from different deposits that are currently considered as possible sources of the material. According to our results, the provenance of the pigment is quite dubious but the Pakistani one seems the most probable.

Keywords: The Last Judgment, mineralogical characterization, Rietveld method, FT-IR spectroscopy, raman spectroscopy, lazurite, TEM, SAED