

A highly unusual constituent in Roman polychromy

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The so-called Campana reliefs are Roman terracotta reliefs produced between the 1st c. BC and the 2nd c. AD, primarily in the area of Latium around the city of Rome. These reliefs were used as exterior and interior wall decorations for temples, public and private buildings. The naturally occurring secondary lead mineral vanadinite ($\text{Pb}_5(\text{VO}_4)_3\text{Cl}$) was reportedly used for a polychrome preparatory drawing (sinopia) underneath the Roman mosaic of Lod, Israel [1]. The use of vanadinite as (part of a) yellow pigment was also attested to Early Islamic painted fragments from Nishapur, NE Iran [2] and to Late Sasanian painted stucco in Ramavand, W Iran [3]. In both cases the exploitation of nearby mineral resources was indicated as the most likely provenance. Here, we investigate the unexpected occurrence of vanadium-containing paint layers on a Campana relief from the antique collection of the NCG. Pigment samples were preliminarily analyzed with XRF. More thorough major and trace element analyses with ICP-MS confirmed the preliminary XRF analyses, and SEM-EDS analyses complemented the assessment with the identification of vanadinite as a main crystalline mineral phase in the sampled green pigment layers. While V-containing pigments are generally not considered to have been used during Antiquity, their presence might not indicate a later addition and should at least warrant critical examination and discussion.

References: [1] Piovesan *et al.* (2014) *Journal of Archaeological Science* **46**, 68-74; [2] Holakooei *et al.* (2016a) *Archaeological and Anthropological Sciences*, 1-21; [3] Holakooei *et al.* (2016b) *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* **169**, 169-174.