

Publication

A multianalytical methodology of lithic residue analysis applied to Paleolithic tools from Hummal, Syria

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Lithic residue analysis is traditionally based upon the morphological identification of microresidues preserved on the surfaces of stone tools. In order to improve the reliability of these identifications, we apply multiple techniques beyond morphological description to characterize the residues on stone tools from Hummal, Syria. We first document the residues using visible light microscopy and scanning electron microscopy, and then characterize them using energy dispersive X-ray spectroscopy, Fourier Transform Infrared microscopy, and confocal Raman microscopy. Our analyses confirm that some of the residues are bitumen. X-ray diffraction analysis of associated sediments is used to identify the other residues. (C) 2013 Elsevier Ltd. All rights reserved.

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