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# Spatial distribution and composition of the desert varnish in the Arroyo de Las Flechas rock art site (Caborca, Sonora, Mexico)

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## Résumé

In recent times, the possibility of dating engravings by studying the varnishes that form on their surface has been considered. A preliminary study of the varnishes found in the archaeological site of El Arroyo de las Flechas in the Sierra de El Alamo (Caborca, Sonora, Mexico) is presented here. These groups of petroglyphs are carved on rocks with a dark patina, known as desert varnish. Their chronocultural contextualisation establishes these representations within the pre-Hispanic culture of the Trincheras Tradition. However, the patination of some figures may indicate different chronologies. Therefore, we have analysed the spatial distribution of the panels along the stream to determine whether there was a preference on the part of the authors to engrave on particular rocks. In addition, we carried out thin lamination studies of the varnish to determine its mineralogical composition. The iconography present, the analysis of the colour of the patinas and their geochemical composition can provide us with a great deal of information. This information is not only related to when the engravings were made, but also to what the environment was like at the moment of their formation, i.e. the palaeoenvironmental restitution.

**Mots-Clés:** Rock art, Sonora, petroglyphs, desert varnish, palaeoenvironmental restitution

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