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# The impact of white patina in obscuring usewear traces: An experimental approach

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## Abstract

Lithic artifact usewear traces are a main source of information for reconstructing the behavior and diets of ancient hominins. While the mechanical uses of the stone tool traces have been relatively well-explored experimentally, limited work has been done to understand the acknowledged chemical modifications that lithic artifacts frequently undergo. One type of chemical modification commonly observed on lithic artifacts is patination - a process by which the outer rind is petro-chemically altered by chemical and mechanical weathering. Among these, a common type is known as white (porcelain) patina where the artifact's surface exhibits a granular, chalky white coating.

Here we present preliminary results of an experimental regime that allows us to understand the underlying factors which influence artifact patination and how they might affect lithic usewear.

Understanding the underlying processes which form these patinas is useful as it will also allow us to have a better understanding of the natural processes which lithic artifacts have undergone in geological time and allow us to better deconstruct the behavioral processes underlying archaeological artifacts and sites.

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