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## ACCELERATED CORROSION BEHAVIOR OF Cu-Zn TOMBAC USED IN PRODUCTION OF PATRIMONY GOODS

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### Abstract

Heritage objects made of different metals are exposed to environmental atmospheric impact systematically affected over time by corrosion damage. Corrosion behaviour of Cu-Zn alloy samples (yellow tombac) was studied by accelerated corrosion tests in different environments: continuous wet heating, salt fog and 3.5% NaCl saline. The rate corrosion and resistance of samples was modified according to the corrosive environments tested. Accelerated corrosion tests that were conducted showed a differential behaviour of metal surfaces. By exposing the aggressive corrosion conditions, the samples are shown to be more opaque and have lower values of reflexivity for the ones exposed to salt fog. A morphological analysis was made for metal surfaces by scanning electron microscopy (SEM) and shown the formation of corrosion products due to intensifying the corrosion process, through oxide compounds formed on the sample surfaces, confirmed by XRD diffractograms.

*Key words:* accelerated corrosion, optical features, SEM, tombac

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