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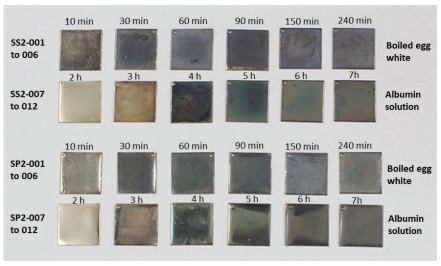

Fig. 1 : Ag925 (SS) and Ag999 (SP) coupons artificially aged with green methods (boiled egg white or albumin solution) and used as test systems of cleaning methods. © Qing Wu, HE-Arc CR

GoGreen

Green strategies to conserve the past and preserve the future of cultural heritage

OBJECTIVES

The Haute Ecole Arc Conservation-restauration, as part of the HES-SO network, is involved in a research project entitled GoGreen (Green strategies to conserve the past and preserve the future of cultural heritage). GoGreen promotes preventive and remedial conservation practices based on green principles to spearhead the green revolution within conservation.

PROGRAM

HE-Arc CR competences are exploited for the cleaning of tarnishing on historical metal artefacts (copper, iron and silver) and the stabilization of copper and iron archaeological objects. Such green solutions include those inspired by historical recipes reevaluated based on their level of greenness, and recently developed bio-originated methods, using gels amended by microorganisms, metabolites (as chelating agents) and greener solvents for the uptake of metal ions.

The core activity includes :

- selection of traditional materials that are considered effective by conservators as a reference benchmark, and preparation of test systems
- development and evaluation of innovative methods inspired by historical recipes,
- development and evaluation of innovative green methods inspired by biological processes and green synthesis,
- in-situ application of the best-performing technologies on selected case studies.

In addition, researchers are involved in the transversal tasks related to the characterization and monitoring (ageing tests), and to the determination of damage functions and sensitivity of iron. HE-Arc CR conservation educators will participate for the preparation of didactic materials and organisation of workshops focusing on the application and assessment of cleaning and stabilization on metal artefacts.

RESULTS

Within this project, we will propose more reliable and conscious conservation practices that would lead to decreased risks for artworks, operators and environment.

MORE

https://gogreenconservation.eu/hes-so

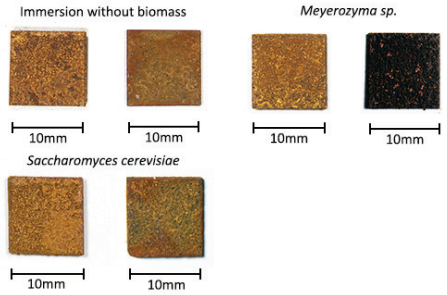

Fig. 2 : Corroded iron samples used for the development of a stabilization method with yeasts. Untreated coupons (top left), coupons treated with *Meyerozyma* sp. (top right) and with *Saccharomyces cerevisiae* (below), before (left) and after (right) treatment.

FUNDING

State Secretary for Education, Research and Innovation -SERI and European Research Executive Agency-REA

PROJECT LEADER

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PARTNERS

University of Amsterdam (UvA), University of Bologna (UNIBO), Italian Institute of Technology (IIT), National Centre for Scientific Research (CNRS), Ecole Normale Supérieure Paris Saclay (ENS Saclay), Norwegian Institute for Cultural Heritage Research (NIKU), Rijksmuseum (RM), SAATI, Jerzy Haber Institute of Catalysis and Surface Chemistry PAS (IKIFP), Université Paris1 Panthéon-Sorbonne (Sor), English Heritage Trust (EH), Courtauld Institute of Art (CRT).

DURATION

48 months
01.10.2022 – 30.09.2026

Hes·so