

Supplementary Materials: Surface and Interface Treatments on Wooden Artefacts: Poten-Tialities and Limits of a Non-Invasive Multi-Technique Study

Claudia Invernizzi ^{1,2}, Giacomo Fiocco ^{1,3}, Magdalena Iwanicka ⁴, Piotr Targowski ⁵, Anna Piccirillo ⁶, Manuela Vagnini ⁷, Maurizio Licchelli ^{1,8}, Marco Malagodi ^{1,9,*} and Danilo Bersani ²

- ¹ Arvedi Laboratory of non-Invasive Diagnostics, CISRiC, University of Pavia, Via Bell'Aspa 3, 26100 Cremona, Italy; claudia.invernizzi@unipv.it (C.I.); giacomo.fiocco@unipv.it (G.F.); maurizio.lucchelli@unipv.it (M.L.)
- ² Department of Mathematical, Physical and Computer Sciences, University of Parma, Parco Area delle Scienze 7/A, 43124 Parma, Italy; danilo.bersani@unipr.it
- ³ Department of Chemistry, University of Torino, Via Pietro Giuria 5, 10125, Torino, Italy
- ⁴ Faculty of Fine Arts, Nicolaus Copernicus University in Toruń, Sienkiewicza 30/32, 87-100 Toruń, Poland; magiwani@gmail.com
- ⁵ Institute of Physics, Department of Physics, Astronomy and Informatics, Nicolaus Copernicus University in Toruń, Grudziądzka 5, 87-100 Toruń, Poland; ptarg@umk.pl
- ⁶ Conservation and Restoration Center “La Venaria Reale”, Via XX Settembre 18, 10078 Venaria Reale (TO), Italy; anna.piccirillo@centrorestauraovenaria.it
- ⁷ Associazione Laboratorio di Diagnostica per i Beni Culturali, Piazza Campello 2, 06049 Spoleto (PG), Italy; m.vagnini@diagnosticabeniculturali.it
- ⁸ Department of Chemistry, University of Pavia, Via Taramelli 12, 27100, Pavia, Italy
- ⁹ Department of Musicology and Cultural Heritage, University of Pavia, Corso Garibaldi 178, 26100 Cremona, Italy
- * Correspondence: marco.malagodi@unipv.it; Tel.: +39-349-644-5217

Citation: Invernizzi, C.; Fiocco, G.; Iwanicka, M.; Targowski, P.; Piccirillo, A.; Vagnini, M.; Licchelli, M.; Malagodi, M.; Bersani, D. Surface and Interface Treatments on Wooden Artefacts: Poten-Tialities and Limits of a Non-Invasive Multi-Technique Study. *Coatings* **2021**, *11*, 29. <https://doi.org/10.3390/coatings11010029>

Received: 28 November 2020

Accepted: 24 December 2020

Published: 29 December 2020

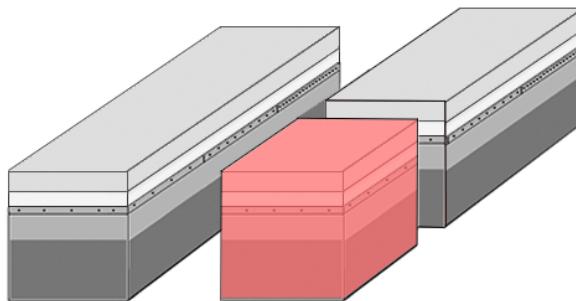


Figure S1. Representative mock-up, after cutting, with the portion exposed to artificial solar ageing highlighted in red color. At the ground level, this portion is characterized by talc concentration of 1%.

Publisher's Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Copyright: © 2020 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>).

Table S1. Net area count estimation of the peak K α of the elements detected by XRF on the different stratigraphic systems of the mock-ups, with the related Standard Deviation of Mean (SDOM). Each value corresponds to the average of three measurements, normalized to the mean value - calculated on the whole data set - of the net area counts of the coherent scattering peak (K α) of Rh. The second and third columns indicate the percentages of talc in K-caseinate (T1%, T5%, T10%, where the letter T stands for talc) and of hematite in varnish (H0%, H1%, H2%, H5%, H10%, where the letter H stands for hematite), respectively.

Name	Talc %	Fe ₂ O ₃ %	Si	SDOM (Si)	S	SDOM (S)	Fe	SDOM (Fe)	K	SDOM (K)
m.A	T1%		0.133	0.004	0.079	0.018	0.222	0.015	0.506	0.066
	T5%	H0%	0.404	0.006	0.107	0.005	0.278	0.011	0.565	0.021
	T10%		0.574	0.031	0.068	0.009	0.402	0.060	0.425	0.005
m.B	T1%		0.116	0.044	0.064	0.019	0.239	0.023	0.527	0.073
	T5%	H0%	0.063	0.021	0.029	0.009	0.358	0.001	0.425	0.078
	T10%		0.211	0.137	0.033	0.016	0.520	0.039	0.356	0.044
m.C	T1%		0.072	0.017	0.076	0.004	0.512	0.039	0.661	0.013
	T5%	H1%	0.070	0.001	0.033	0.003	0.608	0.017	0.463	0.047
	T10%		0.058	0.009	0.025	0.001	0.775	0.038	0.347	0.008
m.D	T1%		0.045	0.025	0.059	0.014	1.396	0.059	0.632	0.119
	T5%	H2%	0.063	0.009	0.048	0.015	1.578	0.073	0.428	0.020
	T10%		0.086	0.001	0.028	0.002	1.669	0.073	0.341	0.013
m.E	T1%		0.014	0.014	0.031	0.001	6.849	0.585	0.513	0.050
	T5%	H5%	0.043	0.006	0.023	0.003	6.022	0.343	0.454	0.002
	T10%		0.079	0.006	0.022	0.001	5.625	0.703	0.413	0.014
m.F	T1%		—	—	—	—	9.441	0.729	0.305	0.043
	T5%	H10%	0.025	0.012	0.014	0.008	6.082	0.541	0.408	0.045
	T10%		—	—	0.009	0.009	8.407	0.818	0.258	0.014
m.G	T1%		0.036	0.004	0.047	0.006	1.503	0.042	0.649	0.048
	T5%	H5%	0.090	0.002	0.040	0.002	1.915	0.082	0.558	0.029
	T10%		0.154	0.012	0.045	0.016	2.010	0.150	0.434	0.025
m.H	T1%		—	—	—	—	4.476	0.154	0.292	0.021
	T5%	H10%	—	—	—	—	4.969	0.286	0.310	0.042
	T10%		0.018	0.009	0.003	0.003	4.713	0.083	0.249	0.012