heritage

MDPI

Supplementary

Identification of Lithol red synthetic organic pigment reveals the cause of paint layer degradation on the Lazar Vozarević painting, "Untitled", with copper plates

Vanja Jovanović [1,†], Suzana Erić [2,†], Philippe Colomban[3,†] and Aleksandar Kremenović [2, †,*]

1 Tehnoart Beograd, Svetog Nikole 39, Belgrade, 11000, Serbia; vanjajov68@gmail.com
2 Faculty of Mining and Geology, University of Belgrade, Đušina 7, Belgrade, 11000, Serbia; suzana.eric@rgf.bg.ac.rs and akremenovic@rgf.bg.ac.rs
3 Sorbonne Université, MONARIS (From the Molecule to the Nano-object: Reactivity, Interaction & Spectroscopies), UMR8233 CNRS, 4 Place Jussieu, 75005 Paris, France; philippe.colomban@sorbonne-universite.fr

* Correspondence: akremenovic@rgf.bg.ac.rs;
.

Table S1. Characteristic Raman peaks and corresponding references used for the assignment.

Name	Composition	Raman signature/cm^{-1}	References
Calcite	$CaCO_3$	1088	[32-37]
Barium white	$BaSO_4$	989	[34, 36, 38, 39]
Zinc white	ZnO	330, 435, 1154	[34, 40, 41]
Carbon black	C	1345, 1585	[36, 42]
Lithol red PR 49:1	$C_{40}H_{26}BaN_4O_8S_2$	340, 531, 602, 724, 1102, 1139, 1170, 1208, 1234, 1350, 1410, 1425, 1488, 1555, 1603, 1620	[21, 22, 43]
Goethite	α-FeO(OH)	248, 303, 390, 482, 551	[3, 44, 45]
Rouge de mars	Synthetic Fe_2O_3	223	[34, 35, 36, 42]

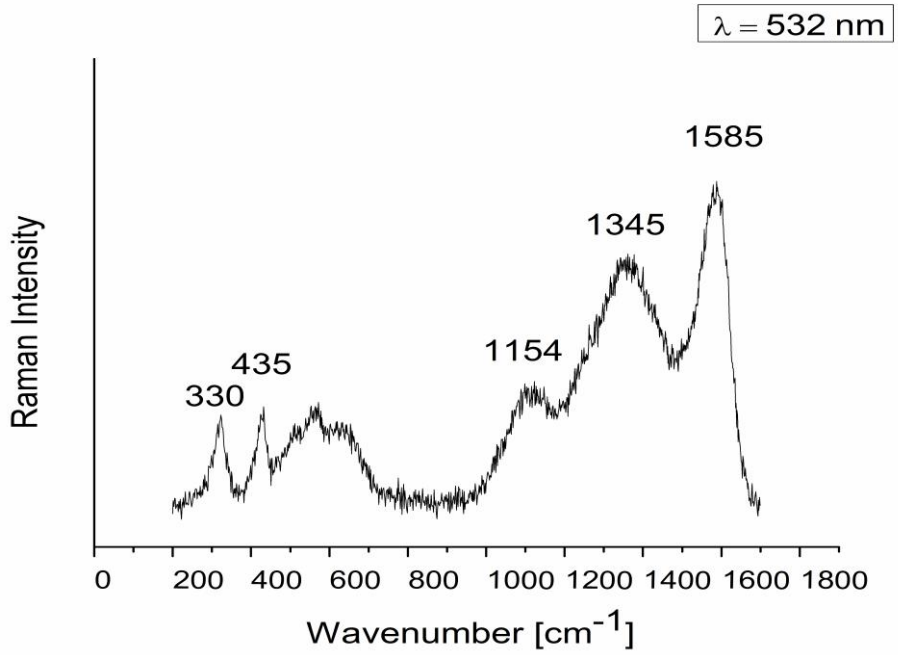

Figure S1. Raman spectra of white/grey part of sample 1 for painting "Untitled" under 532 nm excitation. Bands at ca. 330, 435 and 1154 cm^{-1} belong to ZnO. Bands at ca. 1345 and 1585 cm^{-1} are ascribed to carbon black.

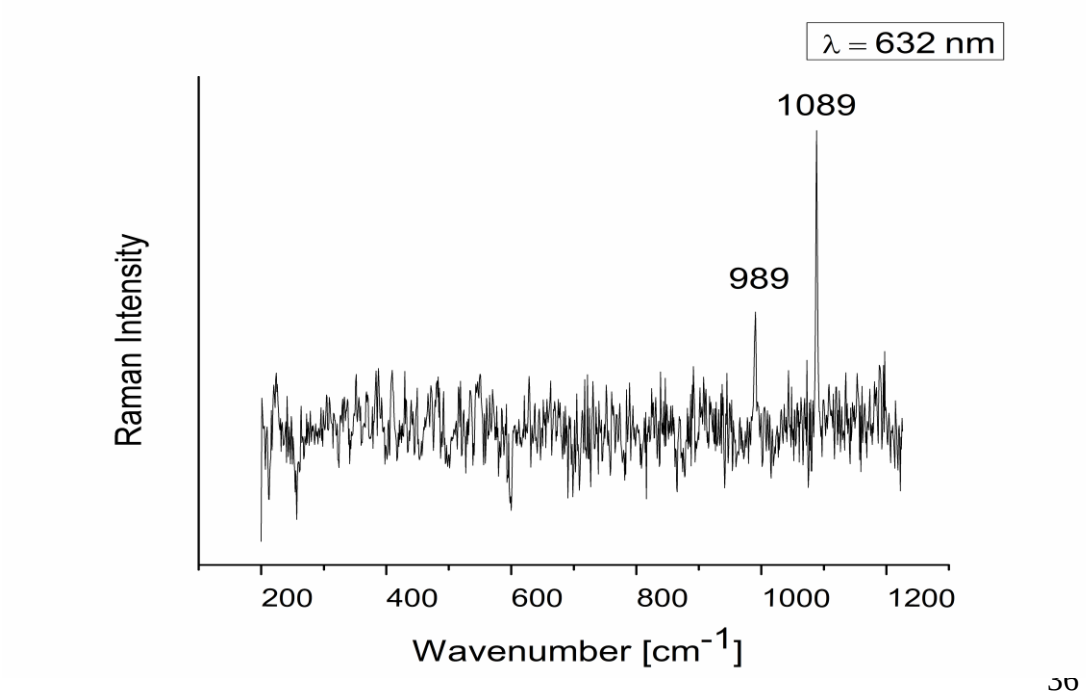

Figure S2. Raman spectra of white part of sample 2 for painting "Untitled" under 632 nm excitation. Band at ca. 989 cm^{-1} belongs to $BaSO_4$. Band at ca. 1089 cm^{-1} is ascribed to $CaCO_3$.