



Strains	ITS1-5.8S-ITS2 Sequence			
	Closest relative	Similarity (%)	Size (bp)	GenBank accession no.
BA 2-2	<i>Aspergillus</i> sp.	100	508	OL701322
BA 1-4	<i>Aspergillus</i> sp.	100	512	OL701323
AM 1-1	<i>Aspergillus</i> sp.	97	504	OL701320
MM 1-1	<i>Aspergillus</i> sp.	97	516	OL454641
MM 3-3	<i>Aspergillus</i> sp.	100	505	OL701315
BSL 2-2	<i>Aspergillus</i> sp.	100	501	OL701318
BA 2-3	<i>Aspergillus</i> sp.	100	505	OL701319
BSL 3-1	<i>Aspergillus</i> sp.	99.7	443	OL701316
BSL 1-2	<i>Aspergillus</i> sp.	99.3	456	OL454642
MM 1-4	<i>Penicillium</i> sp.	99.7	456	OL454639
MM 3-2	<i>Penicillium</i> sp.	99.5	421	ON796029
BSL 3-2	<i>Penicillium</i> sp.	99.7	415	OL454640
MM 2-3	<i>Emericellopsis</i> sp.	99.5	431	OL701321
MM 1-2	<i>Emericellopsis</i> sp.	99	469	OL454638
MM2	<i>Emericellopsis</i> sp.	99.5	470	OL701314
AM1	<i>Emericellopsis</i> sp.	99.5	470	OL701317
O	<i>Bipolaris</i> sp.	100	446	ON796023
HT	<i>Bipolaris</i> sp.	99.7	455	ON796028
G2	<i>Bipolaris</i> sp.	99.7	462	ON796026
G1	<i>Bipolaris</i> sp.	99.7	471	ON796027
HG	<i>Bipolaris</i> sp.	99.3	469	ON796024

Table S1. List of fungal strains used in the present study and accession numbers of their partial ITS1-5.8S-ITS2 sequence.



Figure S1. Painted laboratory models divided in squares for inoculation of fungi. Row 1.1 and Row 2.5 - inoculation with *Penicillium* sp. BSL3-2; Row 1.2 and Row 2.6 - inoculation with *Aspergillus* sp. BSL 2-2; Row 1.3 and Row 2.7 - inoculation with *Emericellopsis* sp. MM2; Row 1.4 and Row 2.8 - inoculation with strain H1.

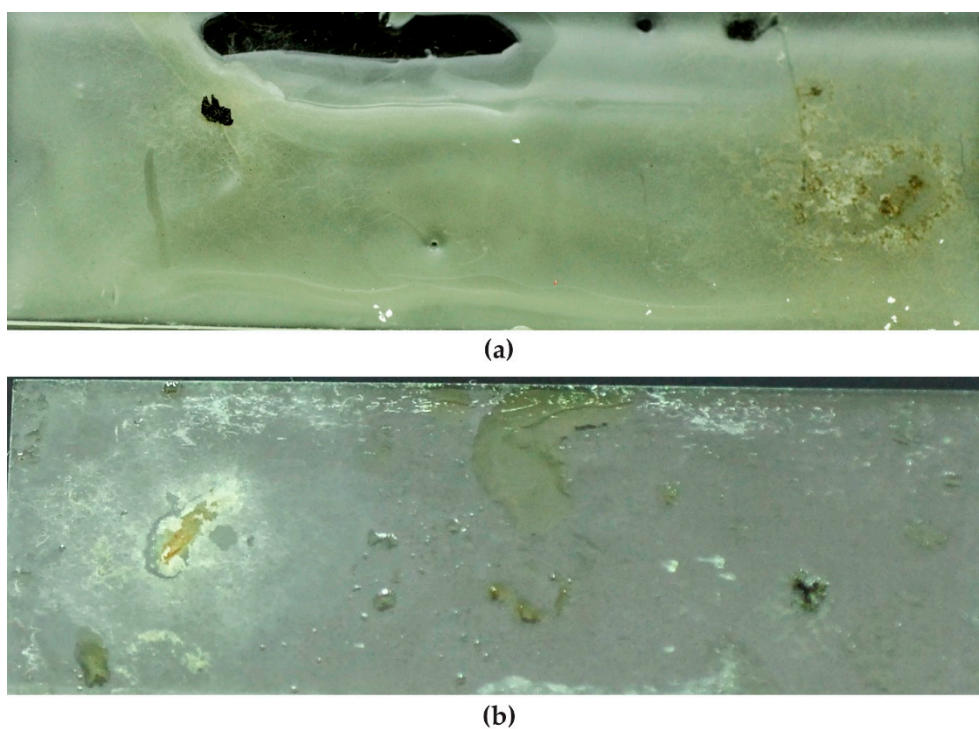


Figure S2. Qualitative evaluation of lipase activity by slide cultures. (a) Decomposition of beeswax by *Aspergillus* sp. BSL 1-2 and *Emericellopsis* sp. MM2; (b) Decomposition of sunflower oil by *Emericellopsis* sp. MM2 and *Penicillium* sp. BSL 3-2.

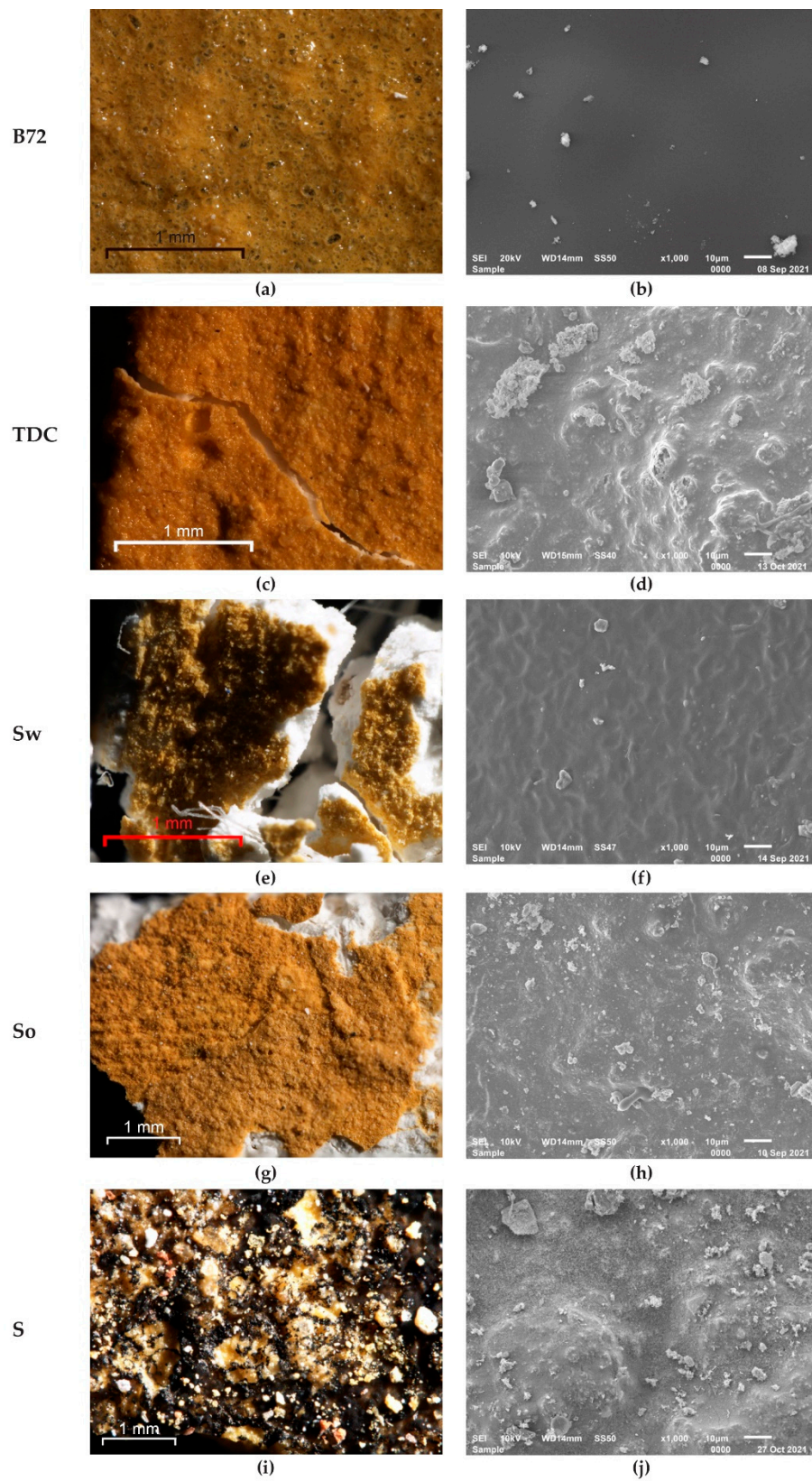


Figure S3. Images of morphological aspects of organic deposits on painted laboratory models (control). (a) OM on Paraloid B72 ; (b) SEM on Paraloid B72; (c) OM on TDC; (d) SEM on TDC; (e) OM on Beeswax; (f) SEM on Beeswax; (g) OM on sunflower oil; (h) SEM on sunflower oil; (i) OM on Soot; (j) SEM on Soot.

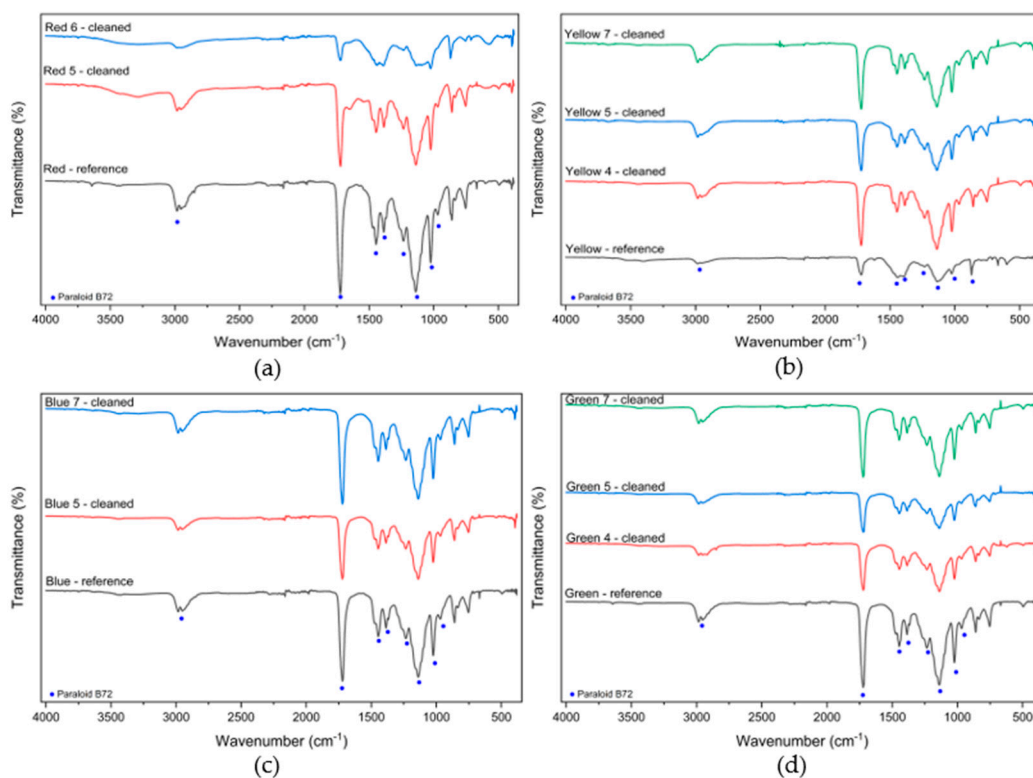


Figure S4. FTIR spectra acquired for the Paraloid B72 sample. (a) red square; (b) yellow square; (c) blue square; (d) green square.

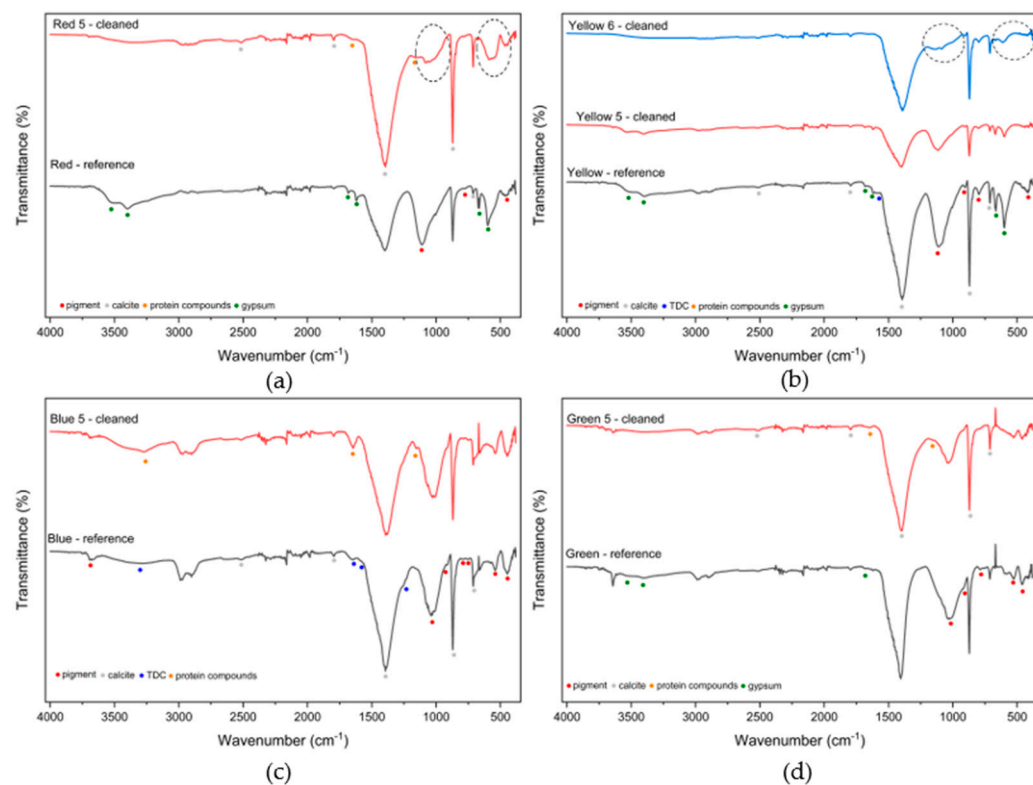


Figure S5. FTIR spectra acquired for the TDC sample. (a) red square; (b) yellow square; (c) blue square; (d) green square.

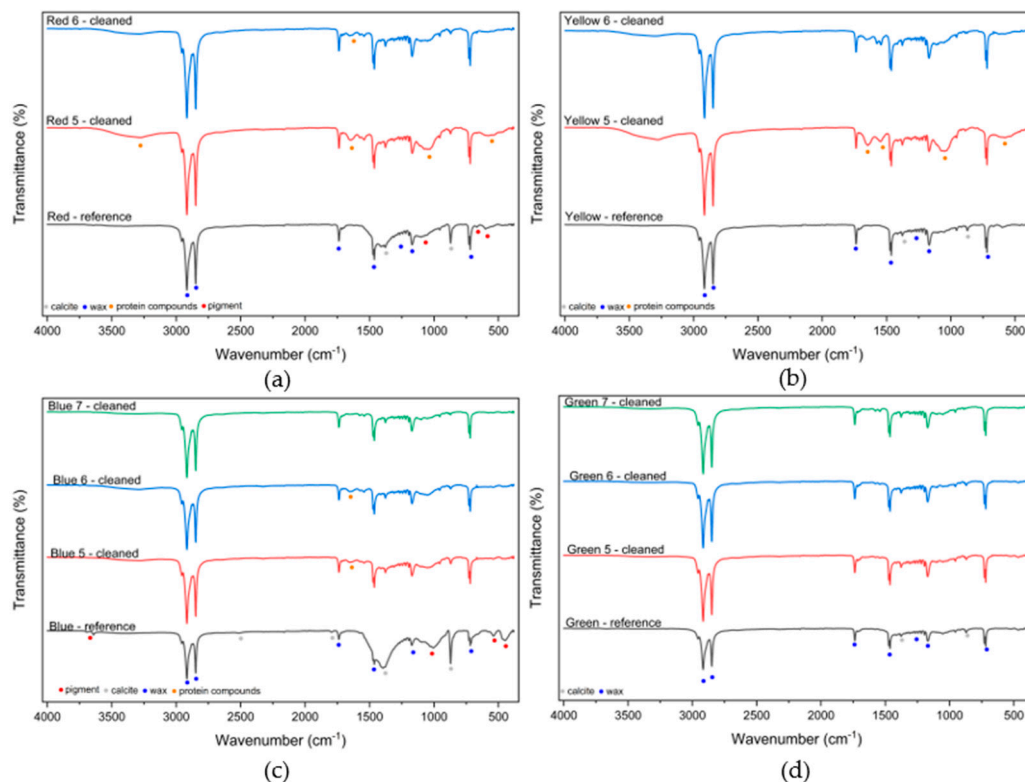


Figure S6. FTIR spectra acquired for BW sample. (a) red square; (b) yellow square; (c) blue square; (d) green square.

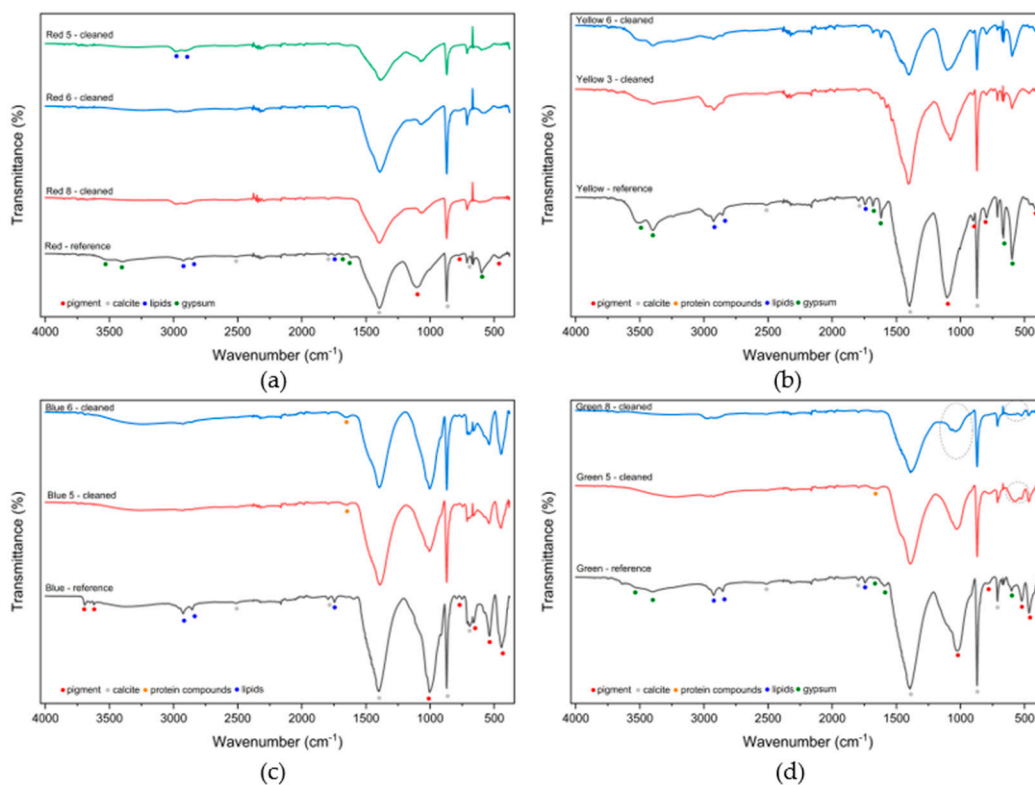


Figure S7. FTIR spectra acquired for the SO sample. (a) red square ; (b) yellow square; (c) blue square; (d) green square.

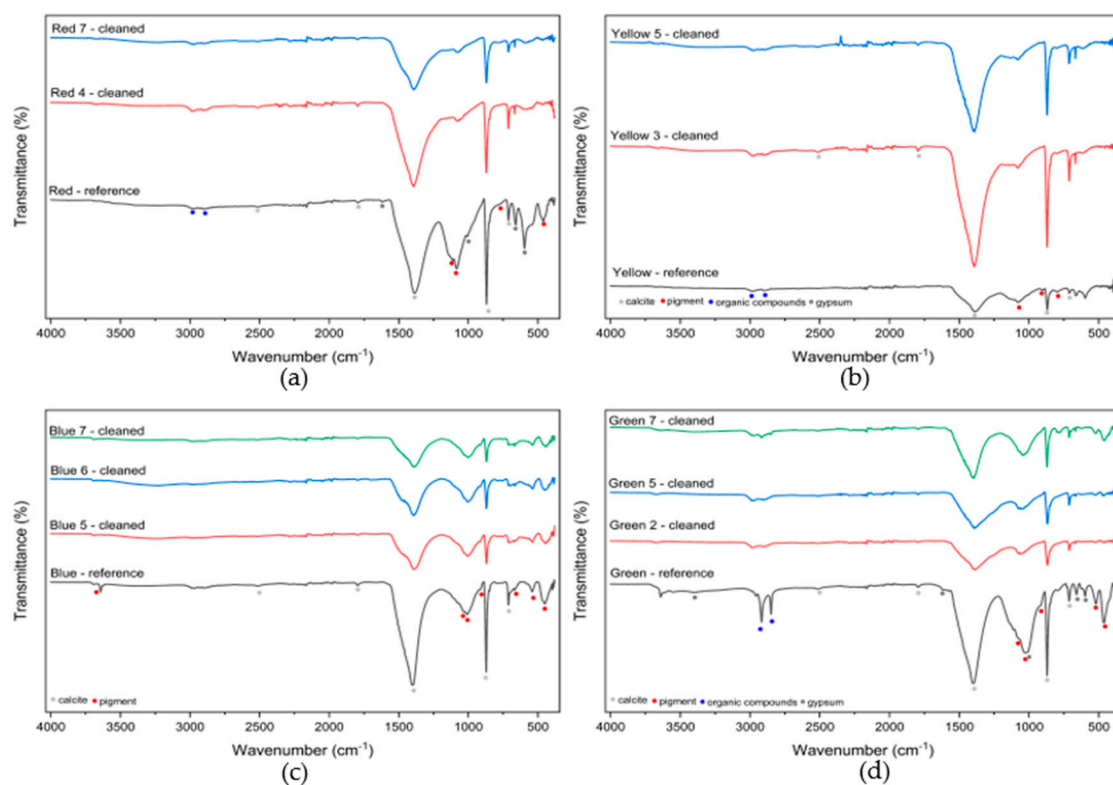


Figure S8. FTIR spectra acquired for the S sample. (a) red square; (b) yellow square ; (c) blue square ; (d) green square.

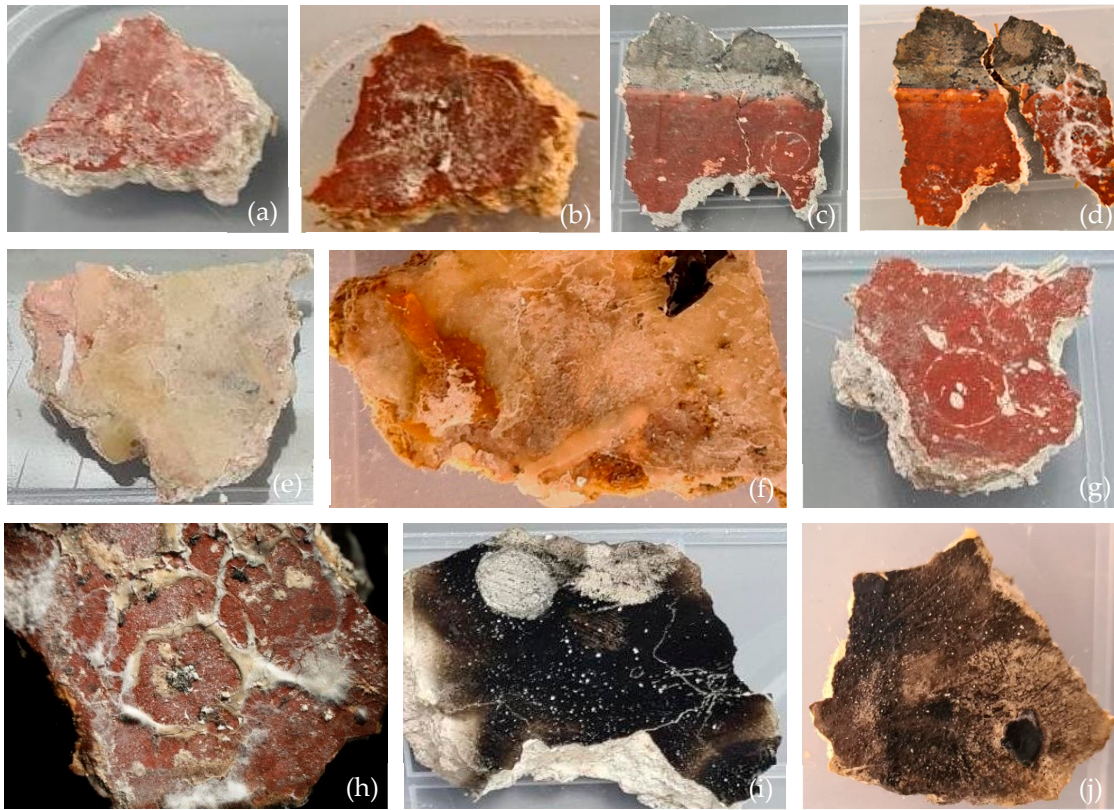


Figure S9. Colonization of different deposits applied on the surface of frescoes fragments by *Penicillium* sp. BSL 2-3. (a) Fresco covered with Paraloid B72 – control; (b) Fresco covered with Paraloid B72 – colonized; (c) Fresco covered with TDC – control; (d) Fresco with TDC – colonized; (e) Fresco covered with BW – control; (f) Fresco covered with BW – colonized; (g) Fresco covered with SO – control; (h) Fresco covered with SO – colonized; (i) Fresco covered with S – control; (j) Fresco covered with S – colonized.

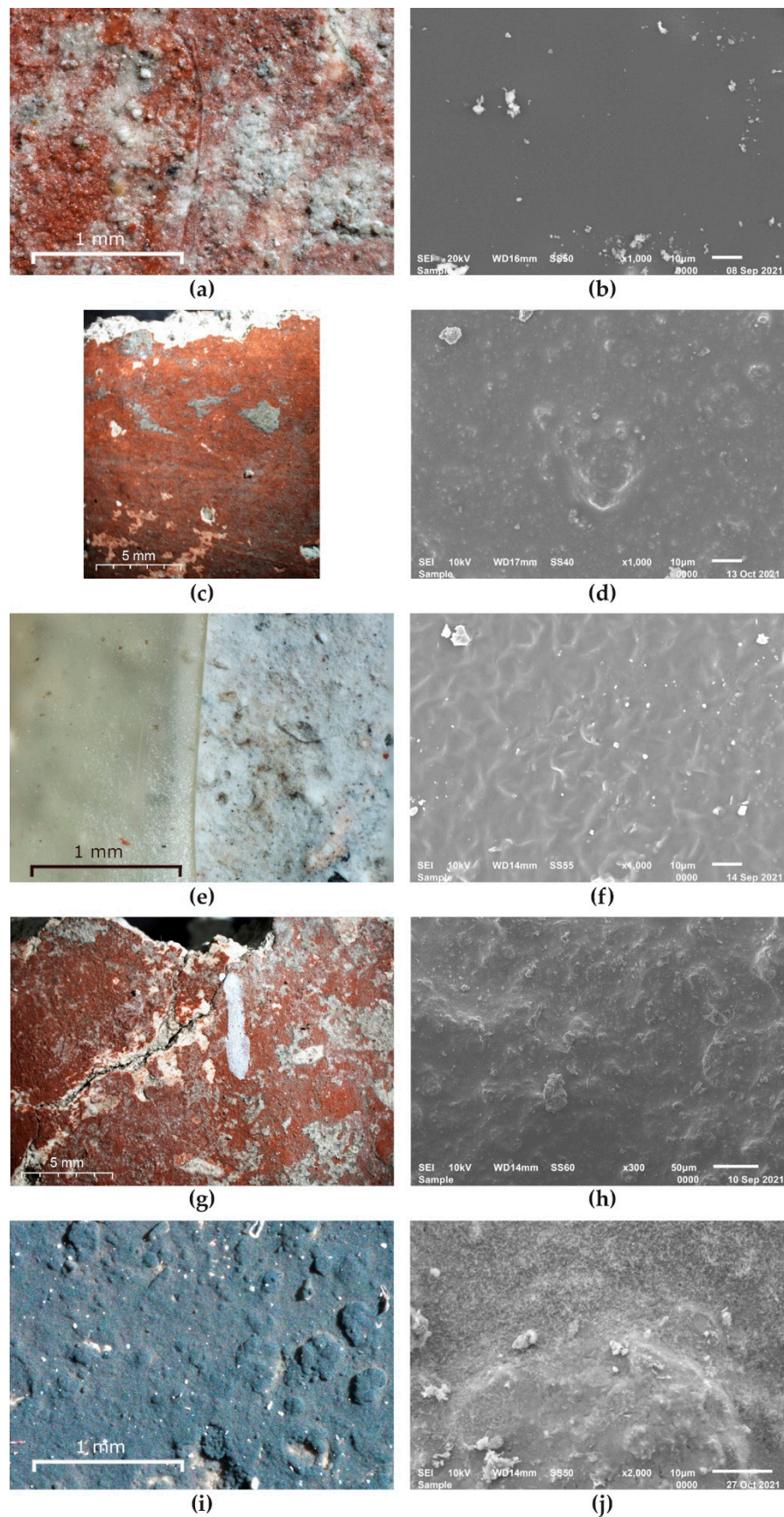


Figure S10. Morphological aspects of frescoes uninoculated –control. (a) OM on Paraloid B72; (b) SEM on Paraloid B72; (c) OM on TDC; (d) SEM on TDC; (e) OM on BW; (f) SEM on BW; (g) OM on SO; (h) SEM on SO; (i) OM on S; (j) SEM on S.