Imaging diagnostics coupled with non-invasive and micro-invasive analyses for the restoration of ethnographic artifacts from French Polynesia

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Table S1. Results of XRF analysis on selected points of tapa and headdress. The values in the table are the counts per second of each detected element, referred to the main signature of the spectrum.

Points	Photo	Chemical elements (cps)					
		Cl	K	Ca	Mn	Fe	As
				TAPA			
X1, black		59	258	254	-	156	-
X2, black		46	131	260	-	141	-
X3, red-brown		56	240	205	-	216	-
X4, brown		71	244	201	-	182	-
X5, light yellow		50	134	128	-	100	-
X6, yellow		150	493	604	-	344	-
X7, fibers		165	397	491	-	335	-
X8, red		297	680	746	-	420	
X9, fibers		812	354	396	-	313	-
X10, fibers		200	99	123	-	73	-

HEADDRESS							
X1, brown		-	-	131	-	751	253
X2, white		-	-	95	-	270	-
X3, fibers		-	-	215	-	-	200
X4, red		-	172	62	-	183	568
X5, lacuna		-	-	73	-	132	231
X6, back side		-	-	75	-	170	135

Table S2. FTIR band assignment of sample T3 from Tapa whose spectrum is shown in the Figure 10a.

Band position (cm^{-1})	**Tentative assignment**
3423	OH stretching
2888	C-H streching
1612	Intramolecular H_2O in polysaccharides
1423	C-H and C-OH deformation
1383	C-H and C-OH deformation
1100	C-O stretching in polysaccharides
673	Skeletal vibration modes in polysaccharides
602	Skeletal vibration modes in polysaccharides
497	C1-O-C4 glucoside bond vibration

Table S3. FTIR band assignment of sample P3 from headdress whose spectrum is shown in the Figure 10b.

Band position (cm^{-1})	**Tentative assignment**
3298	NH stretching of proteins
2923, 2869	C-H streching
1732	C=O stretching of esters
1659	C=O stretching of proteins (amide I band)
1543	NH_2 deformation of proteins (amide II band)
1459	C-H deformation of organics
1375	C-H deformation of organics
1246	C-O stretching of esters and proteins
1168	C-O stretching and C-H deformation
1090	C-O stretching in proteins
1028	C-O stretching in esters
900	C=C deformation and C-H vibration
786	C-H deformation
667	C=C deformation
609	$-CH_2$ deformation
525	Organics deformation mode
468	Organics deformation mode

Table S4. Raman signature assignments for samples T5, T7 and T8 of tapa, and sample C2 of tiara.

T5 bands (cm^{-1})	Tentative assignment	T7 bands (cm^{-1})	Tentative assignment	T8 bands (cm^{-1})	Tentative assignment	C2 bands (cm^{-1})	Tentative assignment
						531	(**Ellagic acid**)
						561	
						574	(**Ellagic acid**)
621						620	
633							
		647		648			
653		653				648	(**Ellagic acid**)
						667	
		694		691			
734		734		733		733	
791							
880							
960		959		959			
976		977					
1006		1004		1005			
1031		1033					
1052		1051		1050			
1073		1075		1077			
1144				1143			
		1153	OCH_3 bending (**Morinda**)	1158	OCH_3 bending (**Morinda**)		
		1172		1178			
				1202			
		1225					
				1241			
				1251 (shoulder)			
		1263					
		1287	C-OH (**Cochineal**) or C-OCH_3 bending (**Morinda**)			1285 (shoulder)	

1329	C-OH (**Cochineal**) or C-OCH_3 bending (**Morinda**)	1332	C-OH (**Cochineal**) or C-OCH_3 bending (**Morinda**)	1334	C-OH (**Cochineal**) or C-OCH_3 bending (**Morinda**)		
						1343	
		1363					
1372		1373				1371	Aromatic C-C stretching (**Ellagic acid**)
				1384			
1396	Aromatic C-C stretching, C-OH bending (**Anthraquinones**)						
		1425	Aromatic C-C stretching, C-OH bending (**Anthraquinones**)				
1438				1438 (shoulder)			
		1455	Aromatic C-C stretching, C-OH bending (**Anthraquinones**)				
				1467	Aromatic C-C stretching, C-OH bending (**Anthraquinones**)		
1481						1484	Aromatic C-C stretching (**Ellagic acid**)
		1496					
		1535					
				1553	Aromatic C-C stretching (**Anthraquinones**)		
		1569					
1578	Aromatic C-C stretching (**Anthraquinones**)						
		1591		1592			

1603						1600	Aromatic C-C stretching (**Ellagic acid**)
1618	Aromatic C-C stretching (**Anthraquinones**)	1620	Aromatic C-C stretching (**Anthraquinones**)	1622	Aromatic C-C stretching (**Anthraquinones**)	1615	
		1647					