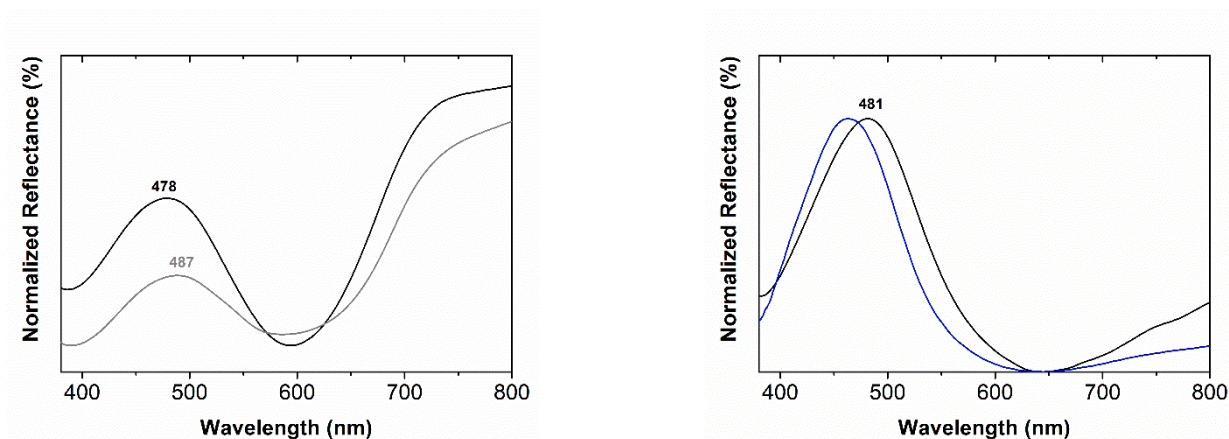
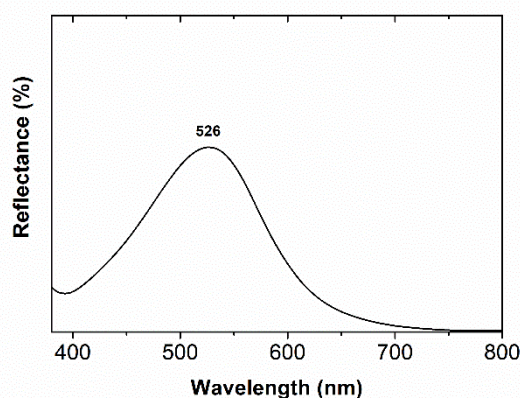


## Supplementary S3. Spectral Data

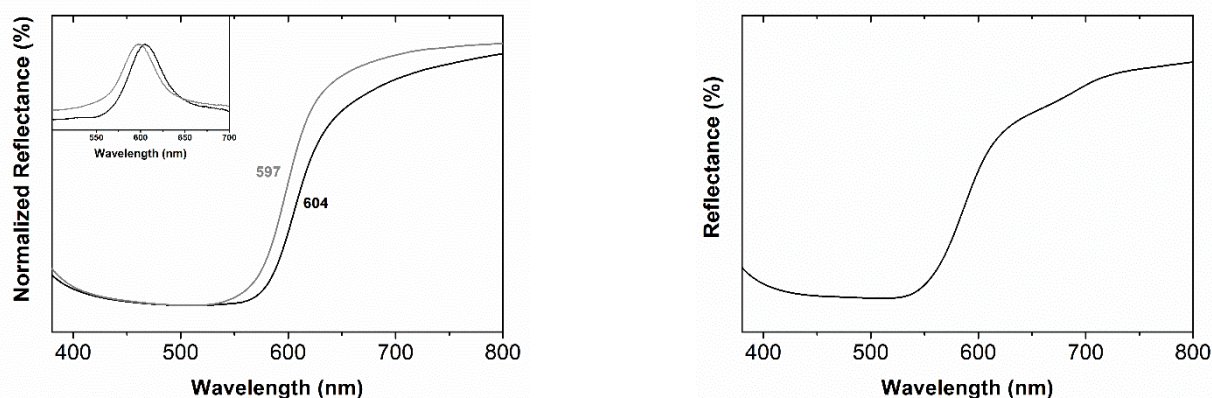
### Supplementary S3.1. Reflectance spectra and Raman spectra



**Figure S21.** Reflectance spectra of blue colors: *right*, lapis lazuli (black), LA152 p. 13, mixture with indigo (grey), LA253 f. 9r; *left*, azurite, LA253 f. 91v (black), compared with a reference of azurite applied on parchment (blue).



**Figure S22.** Reflectance spectrum of malachite, from LA152 p.14.



**Figure S23.** Reflectance spectra of orange-red colors: *right*, vermilion (black), LA253 f. 19v, and a mixture of vermilion and minium (grey), LA152 p. 14. The insert shows the first derivative which allows us to identify the inflection point. *Left*, mixture of minium and orpiment, LA216 f. 11v.

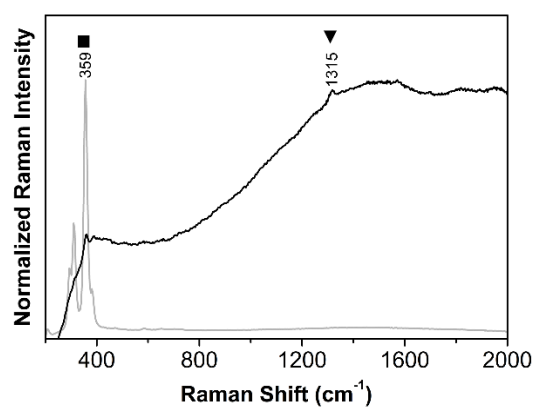


Figure S24. Raman spectra of green color produced with orpiment (■) and lapis lazuli (▼), from LA152 p. 13.

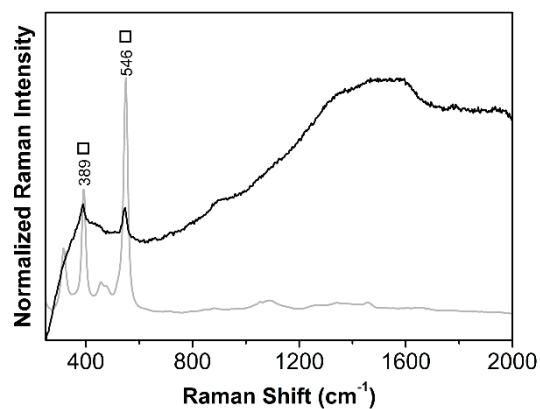


Figure S25. Raman spectra of brown color found in LA152 p. 795, composed by minium (□) and carbon black.

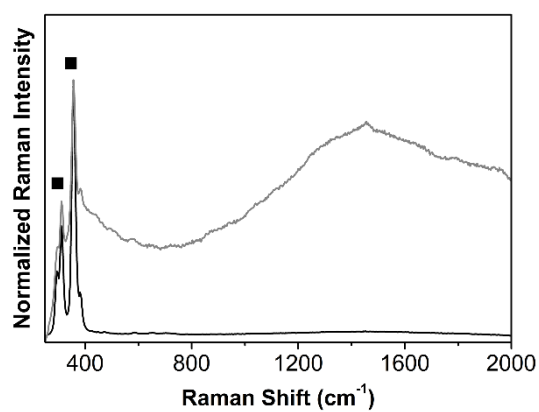


Figure S26. Raman spectra of salmon color found LA152 p. 13, composed by cochineal, previously identified by FORS, and orpiment (■).

## Supplementary S3.2. X-Ray Fluorescence Spectrometry | XRF Data

**Table S3.** Net count areas and standard deviation for the oranges' key elements characteristic peaks.

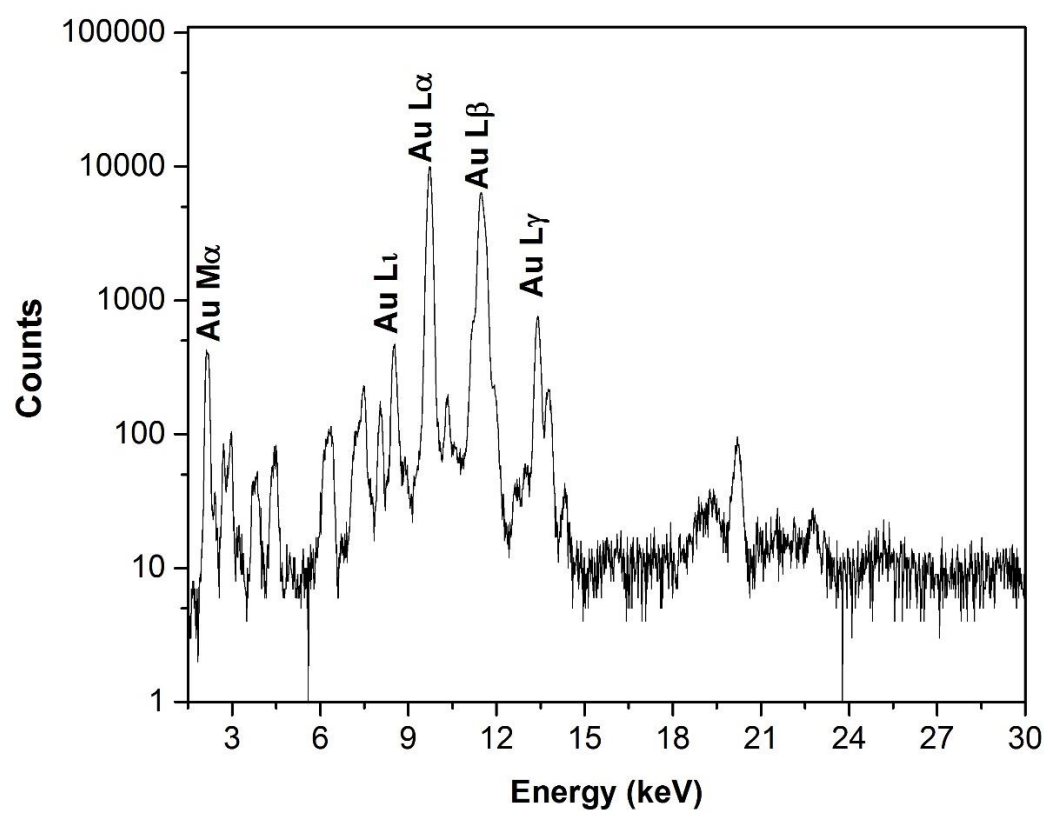
Doc. Ref	Page	Area of Analysis	Area $\pm$ Std.Dev.		
			Hg L $\alpha$	Pb L $\alpha$	As K $\alpha$
LA 152	13	1	4385 $\pm$ 3	22,496 $\pm$ 5	
		6	13,278 $\pm$ 126	7393 $\pm$ 101	
	14	1	19,492 $\pm$ 149	23,721 $\pm$ 164	
		5	1940 $\pm$ 2	4957 $\pm$ 3	
		10	1343 $\pm$ 57	31,357 $\pm$ 181	
	509	4	798 $\pm$ 55	2036 $\pm$ 71	15,452 $\pm$ 159
	588	4	31,171 $\pm$ 184	30,555 $\pm$ 183	
		5	22,064 $\pm$ 161	2357 $\pm$ 76	
	795	7		22,298 $\pm$ 171	21,017 $\pm$ 273
		8	464 $\pm$ 56	1534 $\pm$ 76	28,829 $\pm$ 200
		10	4298 $\pm$ 86	309 $\pm$ 54	
		3	12,254 $\pm$ 124	176 $\pm$ 54	
LA 193	32	3		21,540 $\pm$ 5	6437 $\pm$ 5
		6		11,474 $\pm$ 118	
		7	18,046 $\pm$ 4	17,896 $\pm$ 3	127 $\pm$ 5
	160	2	19,509 $\pm$ 5	3196 $\pm$ 2	
		4	47,038 $\pm$ 7	5813 $\pm$ 3	
		3	16,352 $\pm$ 4	1286 $\pm$ 2	
LA 216	4	4	17,587 $\pm$ 4	3990 $\pm$ 3	1924 $\pm$ 3
		1	11,924 $\pm$ 4	9857 $\pm$ 3	12,854 $\pm$ 5
		3	1464 $\pm$ 69	3658 $\pm$ 100	20,459 $\pm$ 195
		8	3670 $\pm$ 84	4749 $\pm$ 97	976 $\pm$ 132
	11	2	3488 $\pm$ 3	27,052 $\pm$ 4	13,429 $\pm$ 7
		4	6569 $\pm$ 101	25,601 $\pm$ 185	16,510 $\pm$ 281
		6	10,734 $\pm$ 121	12,740 $\pm$ 146	4096 $\pm$ 201
	22	1	11,065 $\pm$ 123	19747 $\pm$ 118	
	23	2	1388 $\pm$ 70	6067 $\pm$ 100	
	141	3	8604 $\pm$ 110	12,493 $\pm$ 146	3229 $\pm$ 199
		5	6117 $\pm$ 98	10,867 $\pm$ 142	7565 $\pm$ 204
		9	489 $\pm$ 57	16,150 $\pm$ 160	4232 $\pm$ 220
	213	5	329 $\pm$ 52	11,344 $\pm$ 139	4564 $\pm$ 193
LA 253	5	5	2902 $\pm$ 2	6462 $\pm$ 3	
	12	4	12,844 $\pm$ 4	34373 $\pm$ 5	7245 $\pm$ 7
	19	2	5327 $\pm$ 3	1514 $\pm$ 1	247 $\pm$ 2
	28	5	23,839 $\pm$ 168	2719 $\pm$ 74	

**Table S4.** Net count areas and standard deviation for the yellows' key elements characteristic peaks.

Doc. Ref.	Page	Area of Analysis	Area $\pm$ Std. Dev.	
			As K $\alpha$	Fe K $\alpha$
LA 152	509	2	8294 $\pm$ 474	
LA 193	168	7	4716 $\pm$ 466	
LA 216	4	3	23,300 $\pm$ 622	
	23	1	2889 $\pm$ 526	
	213	1	19,126 $\pm$ 708	
	217	1	21,436 $\pm$ 871	
		3	13,833 $\pm$ 656	5834 $\pm$ 93
LA 253	12	3	12,296 $\pm$ 621	

**Table S5.** Net count areas and standard deviation for the greens' key elements characteristic peaks.

Doc. Ref.	Page	Areas of Analysis	Area $\pm$ Std. Dev.		
			Cu K $\alpha$	As K $\alpha$	Fe K $\alpha$
LA 152	13	2			
		7		2398 $\pm$ 4	
	14	3	26,510 $\pm$ 169	3787 $\pm$ 441	
		7	83,357 $\pm$ 294	2585 $\pm$ 585	
		8		7860 $\pm$ 3	
	509	1	126,419 $\pm$ 360	3957 $\pm$ 401	
	588	2	8464 $\pm$ 3	2148 $\pm$ 4	2756 $\pm$ 2
	631	1	84,898 $\pm$ 297	2636 $\pm$ 378	
	795	3		14,003 $\pm$ 737	
		9			
LA 193	32	5	7710 $\pm$ 97	1043 $\pm$ 468	
	160	1	51,543 $\pm$ 233	3630 $\pm$ 686	
		3	36,094 $\pm$ 196		
	168	1	42,559 $\pm$ 212		
		2	40,501 $\pm$ 207		
LA 216	4	5		17,858 $\pm$ 5	
		7	15,700 $\pm$ 134	4438 $\pm$ 515	
	11	1		19999 $\pm$ 5	
	141	1		24,323 $\pm$ 859	
		8		11525 $\pm$ 5	
	213	8	33,868 $\pm$ 191	3664 $\pm$ 599	
LA 253	5	1	1848 $\pm$ 53	13,057 $\pm$ 560	28,239 $\pm$ 171
		3	1933 $\pm$ 54	18,032 $\pm$ 574	32,751 $\pm$ 184
		9			
	12	1	3569 $\pm$ 70	8464 $\pm$ 637	16,752 $\pm$ 133
	19	1	1701 $\pm$ 56	50,358 $\pm$ 668	
	28	3		2573 $\pm$ 826	



**Figure S27.** XRF spectrum obtained at a gilded area from Bible LA 152.

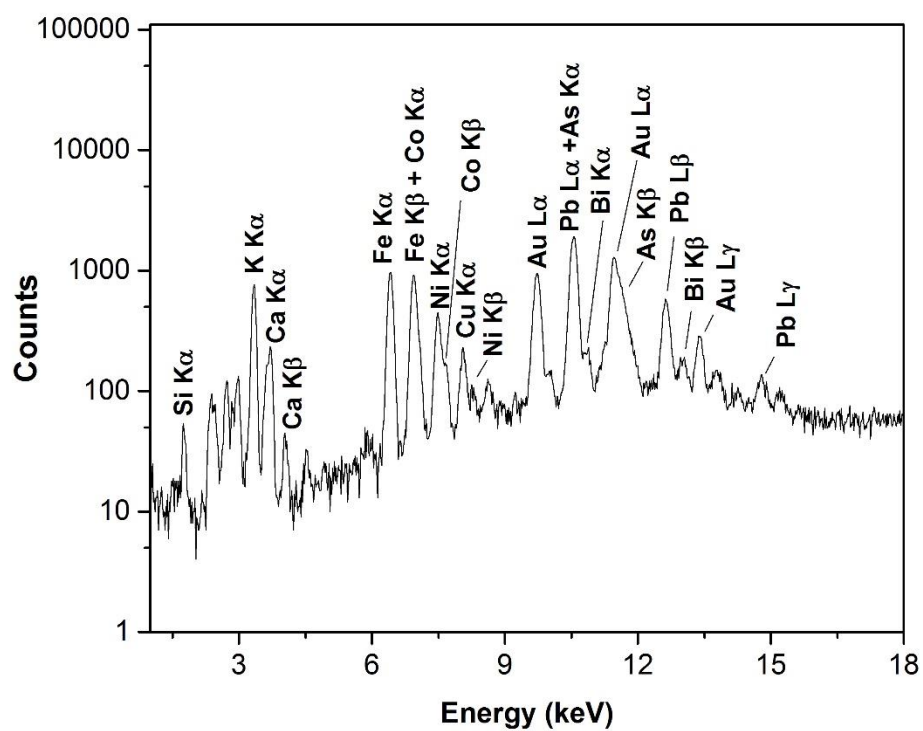


Figure S28. XRF spectrum obtained at a blue area from Gospel LA 216.