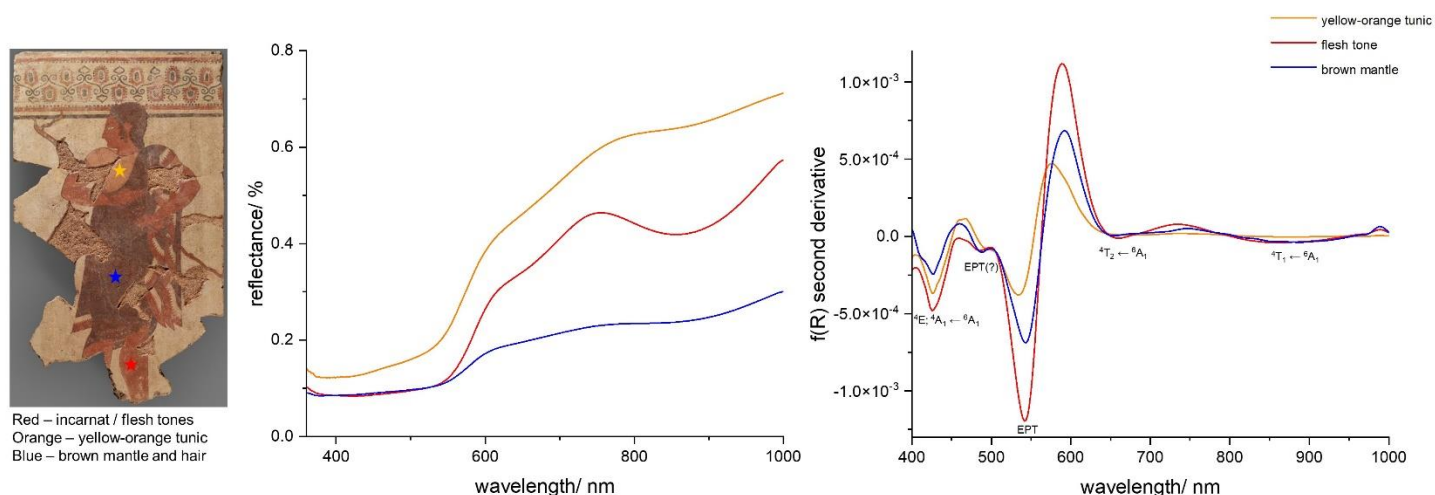


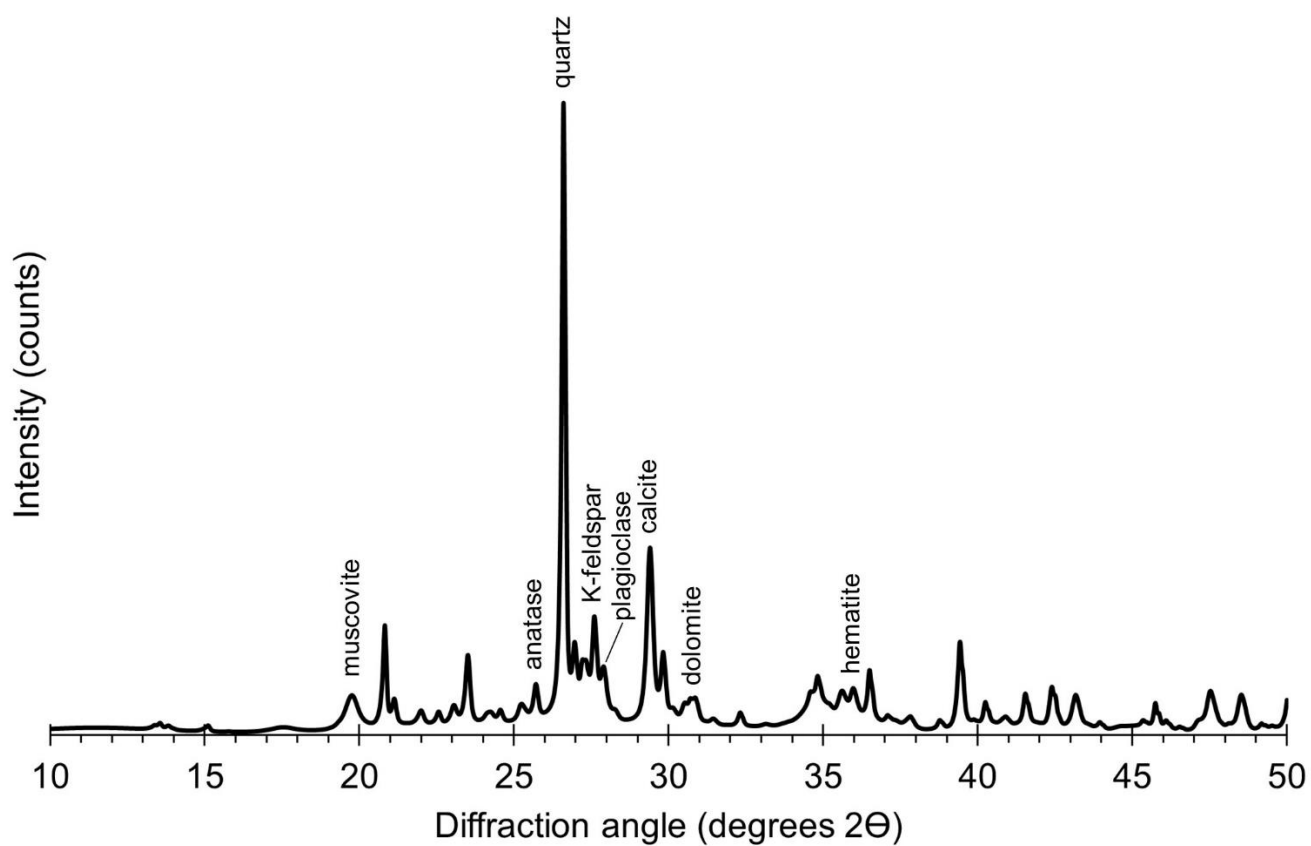
Figure S1. (a) spot map showing the locations of the FORS measurements (star symbols) on the Etruscan slab; (b) reflectance spectra from three iron-rich areas representative of the yellow-orange tunic, red flesh tone, and brown mantle and hair; (c) second derivative spectra.



The use of derivative spectroscopy previously has been shown to help distinguish between different species of iron oxide by enhancing minor spectral features and providing better separation of overlapping absorption bands. The second derivative of the Kubelka-Munk remission function $f(R)$ from the spectra acquired in the yellow-orange (yellow trace), red (red trace), and dark-brown (blue trace) areas (see S1c) shows that the spectra are dominated by the strong electron pair transition (EPT), occurring at 535, 541, and 543 nm, and the ${}^4E; {}^4A_1 \leftarrow {}^6A_1$ transition at 425, 425, and 427 nm, for the yellow-orange, red, and dark-brown pigments, respectively. The two minima at longer wavelengths, assigned to the ${}^4T_1 \leftarrow {}^6A_1$ and ${}^4T_2 \leftarrow {}^6A_1$ transitions occur at 874/674 nm for the yellow-orange species, 900/659 nm for the red, and 874/653 nm for the dark brown. A small band located around 485-495 nm remains unassigned, but could be assigned to the electron pair transition (EPT) of a different iron oxide, therefore suggesting a mixture of multiple iron oxides [35]. Previous studies [1-3] have shown that the median EPT position for hematite is located above 500 nm, and other iron oxides (schwertmannite, maghemite, lepidocrocite, goethite, ferrihydrite, feroxyhite, and akaganeite) that may be present all have EPT below 500 nm. Closer inspection of the spectra reveal a difference in both the intensity and position of the local minimum in the 485-495 nm band, with the yellow-orange differing from the other measured areas.

1. Scheinost, A.; Chavernas, A.; Barrón, V.; Torrent, J. Use and limitations of second-derivative diffuse reflectance spectroscopy in the visible to near-infrared range to identify and quantify Fe oxide minerals in soils. *Clays and Clay Minerals* **1998**, 46, 528-536.
2. Sherman, D.M.; Waite, T.D. Electronic spectra of Fe³⁺ oxides and oxide hydroxides in the near IR to near UV. *American Mineralogist* **1985**, 70, 1262-1269.
3. Cornell, R.; Schwertmann, U. The Iron Oxides: Structures, Properties, Reactions, Occurrences and Uses. VCH Verlagsgesellschaft GMBH, Weinheim, Germany **1996**, 533-559.

Figure S2. X-ray diffraction pattern for the terracotta substrate. The primary diffraction peak for each phase is labelled; a table provides the diffraction angle (2θ), d spacing (nm), intensity, relative intensity, and hkl information for the most abundant phases.



phase	diffraction angle (2θ)	d spacing (nm)	intensity	relative intensity	h	k	l
k-feld	13.58	0.65	377	1.90	0	2	0
k-feld	15.14	0.58	297	1.50	1	1	-1
muscovite	19.80	0.45	1246	6.28	0	2	0
k-feld	21.15	0.42	1140	5.75	2	0	-1
plagioclase	22.02	0.40	769	3.87	2	0	-1
k-feld	22.59	0.39	731	3.69	1	1	1
calcite	23.07	0.39	942	4.75	1	-1	2
k-feld	23.53	0.38	2512	12.66	1	3	0
plagioclase	24.27	0.37	733	3.69	1	3	-1
k-feld	24.58	0.36	793	4.00	1	3	-1
anatase	25.28	0.35	977	4.92	1	0	1
k-feld	25.73	0.35	1599	8.06	1	1	-2
quartz	26.63	0.33	19847	100.00	1	-1	1
k-feld	26.99	0.33	2923	14.73	2	2	0
k-feld	27.23	0.33	2378	11.98	2	0	-2
k-feld	27.36	0.33	2366	11.92	0	4	0
k-feld	27.62	0.32	3724	18.76	0	0	2
plagioclase	27.92	0.32	2152	10.84	0	0	2
calcite	29.42	0.30	5883	29.64	1	-1	-4
k-feld	29.85	0.30	2605	13.13	1	3	1
k-feld	30.55	0.29	1022	5.15	2	2	-2
k-feld	30.73	0.29	1158	5.83	0	4	1
dolomite	30.89	0.29	1176	5.92	1	-1	-4
k-feld	32.34	0.28	704	3.55	1	3	-2
hematite	33.16	0.27	349	1.76	1	-1	-4
k-feld	34.61	0.26	1373	6.92	3	1	-2
k-feld	34.85	0.26	1856	9.35	2	2	1
hematite	35.62	0.25	1390	7.00	2	-1	0
calcite	35.99	0.25	1471	7.41	2	-1	0
quartz	36.52	0.25	2039	10.27	-2	1	0
k-feld	37.11	0.24	611	3.08	1	5	-1
k-feld	37.86	0.24	587	2.96	3	3	-1
k-feld	38.79	0.23	467	2.35	1	1	-3
quartz	39.45	0.23	2927	14.75	1	-1	-2
quartz	40.27	0.22	1034	5.21	2	-1	-1
dolomite	40.87	0.22	580	2.92	2	-1	-3
k-feld	41.56	0.22	1300	6.55	0	6	0
quartz	42.43	0.21	1513	7.62	2	-2	0
calcite	43.18	0.21	1258	6.34	2	-2	-2
k-feld	45.37	0.20	467	2.35	4	2	-2
quartz	45.77	0.20	1004	5.06	2	-2	-1
calcite	47.54	0.19	1381	6.96	1	-1	8
calcite	48.54	0.19	1262	6.36	2	-1	6