SUPPORTING INFORMATION OF

Smartphones as portable tools for reliable colour determination using a colorimetric calibration card

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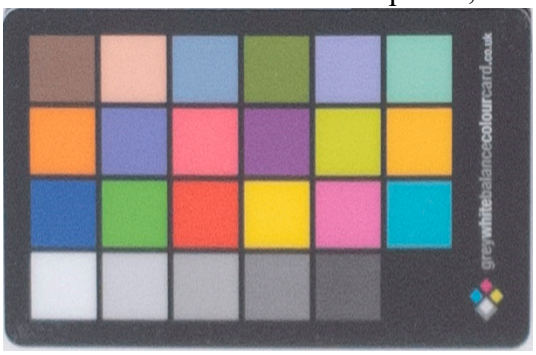
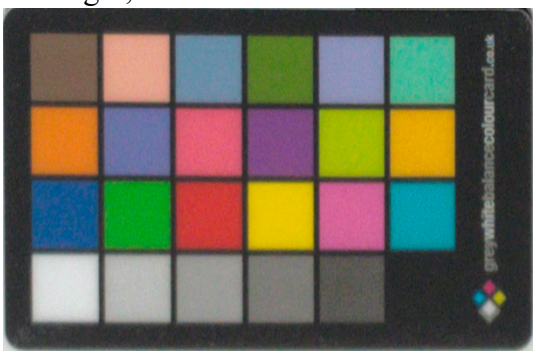
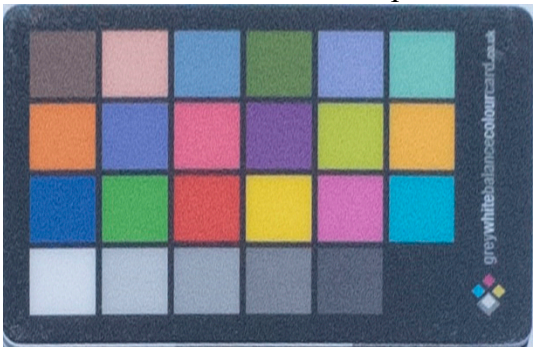
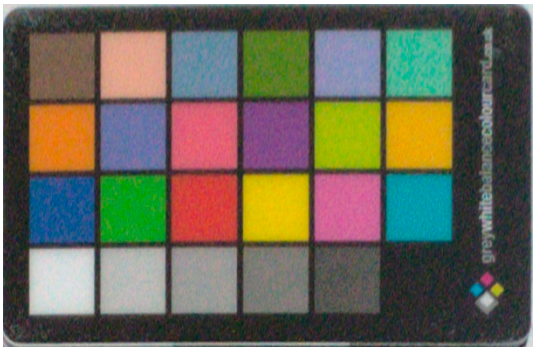
Table S1 - Original and processed images of the colorimetric reference, subdivided by illuminant type and image saving format. All images were calibrated with Darktable.

ORIGINAL IMAGE (OI)	PROCESSED IMAGE (PI)
Device: smartphone; Illuminant: sunlight; Format: RAW	
	
Device: smartphone; Illuminant: shadow; Format: RAW	
	
Device: smartphone; Illuminant: fluorescent light; Format: RAW	



Device: smartphone; Illuminant: sunlight; Format: JPEG



Device: smartphone; Illuminant: shadow; Format: JPEG



Device: smartphone; Illuminant: fluorescent light; Format: JPEG



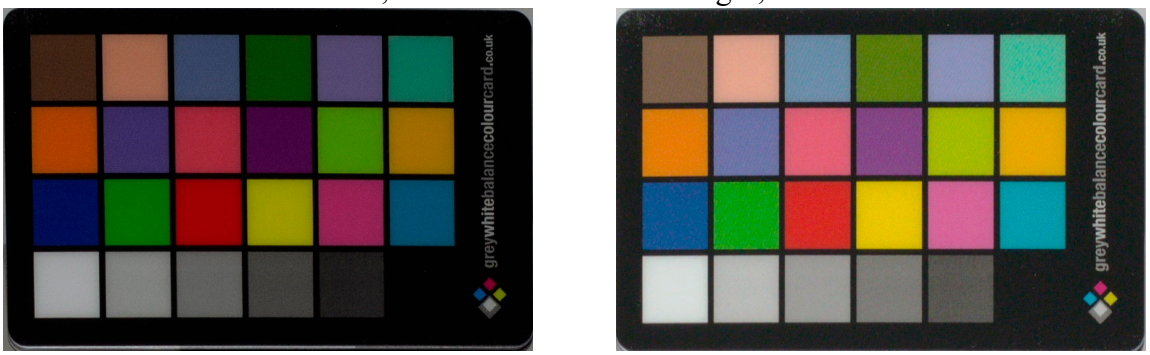
Device: DSLR; Illuminant: sunlight; Format: RAW



Device: DSLR; Illuminant: shadow; Format: RAW



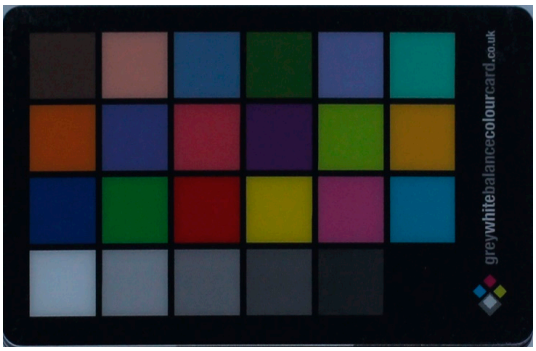
Device: DSLR; Illuminant: fluorescent light; Format: RAW

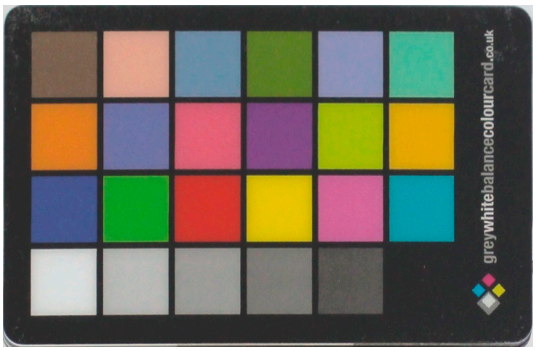


Device: DSLR; Illuminant: sunlight; Format: JPEG

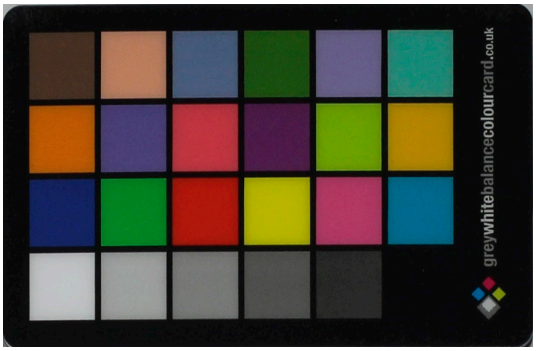


Device: DSLR; Illuminant: shadow; Format: JPEG





Device: DSLR; Illuminant: fluorescent light; Format: JPEG



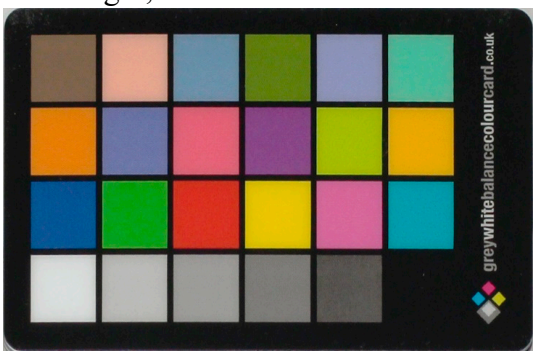


Table S2 - Original and processed colorimetric values of the samples with the metal finishes.

SMARTPHONE RAW									
Sample	Illuminant	ORIGINAL IMAGE (OI)				PROCESSED IMAGE (PI)			
		L*	a*	b*	Color	L*	a*	b*	Color
A	sunlight	40.78	3.23	4.00		32.63	1.64	5.53	
A	shadow	40.44	1.30	-6.95		35.65	1.84	6.27	
A	fluorescent light	49.32	0.54	8.35		28.83	1.16	5.57	
B	sunlight	70.02	2.56	6.77		63.77	1.02	10.68	
B	shadow	66.06	0.07	-6.47		64.36	0.28	7.55	
B	fluorescent light	79.21	2.70	9.28		51.69	0.00	9.98	
C	sunlight	62.95	2.77	1.88		56.80	1.94	6.95	
C	shadow	61.24	0.39	-9.77		58.65	0.38	3.87	
C	fluorescent light	73.07	3.34	6.72		46.26	-0.02	6.84	
D	sunlight	89.31	0.96	-1.82		85.53	0.16	2.13	
D	shadow	84.00	-0.44	-8.76		85.15	0.33	3.03	
D	fluorescent light	91.92	0.99	1.74		69.66	0.36	4.16	
E	sunlight	86.53	0.81	-0.09		80.18	0.20	2.35	
E	shadow	81.74	-0.48	-8.12		81.76	-0.05	3.00	
E	fluorescent light	90.95	1.51	3.67		66.16	0.13	5.59	
F	sunlight	87.48	4.83	21.90		82.76	5.32	31.42	
F	shadow	82.26	2.41	9.89		81.07	4.23	29.63	
F	fluorescent light	89.50	-0.41	20.62		68.81	1.84	31.86	
G	sunlight	86.51	3.73	15.97		81.80	3.54	23.53	
G	shadow	80.48	-2.36	9.38		81.02	2.45	19.09	
G	fluorescent light	90.56	1.48	14.05		66.83	0.91	23.56	

SMARTPHONE JPEG									
Sample	Illuminant	ORIGINAL IMAGE (OI)				PROCESSED IMAGE (PI)			
		L*	a*	b*	Color	L*	a*	b*	Color
A	sunlight	29.81	1.91	5.98		32.52	2.41	8.35	
A	shadow	19.71	-0.41	-3.68		34.80	2.28	6.64	
A	fluorescent light	25.92	2.19	7.55		27.58	2.77	8.36	
B	sunlight	60.12	0.95	7.91		64.51	1.01	10.06	
B	shadow	39.64	-0.84	-4.73		64.04	0.37	8.36	
B	fluorescent light	56.53	1.98	11.31		51.70	0.42	8.27	
C	sunlight	52.09	1.79	4.85		57.65	1.05	6.76	
C	shadow	34.98	-0.90	-7.42		57.79	0.76	4.58	
C	fluorescent light	49.01	1.99	7.99		46.56	0.42	5.87	
D	sunlight	85.12	0.98	-0.73		85.89	0.00	2.99	
D	shadow	61.40	-0.12	-15.19		84.70	1.14	1.86	
D	fluorescent light	77.34	1.24	5.99		69.71	0.44	4.70	
E	sunlight	76.71	1.18	1.54		81.47	0.07	4.87	
E	shadow	59.76	-0.82	-13.17		81.15	0.84	2.70	
E	fluorescent light	76.83	2.12	7.42		66.07	0.85	5.38	
F	sunlight	76.33	5.10	29.84		83.04	2.23	33.45	
F	shadow	61.62	2.15	14.07		80.56	3.42	31.61	
F	fluorescent light	81.15	5.13	35.86		69.13	4.02	29.03	
G	sunlight	73.57	4.57	23.88		82.09	1.66	26.28	
G	shadow	60.12	-0.62	5.60		80.04	2.02	19.45	
G	fluorescent light	79.08	2.88	27.23		67.11	2.14	21.48	

DSLR RAW									
Sample	Illuminant	ORIGINAL IMAGE (OI)				PROCESSED IMAGE (PI)			
		L*	a*	b*	Color	L*	a*	b*	Color
A	sunlight	13.57	4.25	6.20		26.70	2.65	10.67	
A	shadow	4.97	0.78	-0.16		31.28	2.43	9.38	
A	fluorescent light	5.08	1.41	2.99		23.83	1.48	8.91	
B	sunlight	44.10	2.82	7.76		62.28	1.13	12.09	
B	shadow	26.04	1.55	-1.77		64.39	0.93	9.51	
B	fluorescent light	29.77	0.85	8.92		53.60	0.16	9.82	
C	sunlight	38.31	2.95	3.52		56.87	1.34	6.34	
C	shadow	20.32	1.25	-5.48		57.00	1.07	5.09	
C	fluorescent light	22.88	1.48	5.42		47.27	0.45	6.31	
D	sunlight	68.28	1.26	0.65		84.79	-1.27	3.16	
D	shadow	45.37	0.68	-10.44		86.66	0.52	2.90	
D	fluorescent light	50.85	0.06	3.58		72.45	0.81	3.47	
E	sunlight	62.80	1.38	2.46		81.81	-1.40	6.20	
E	shadow	41.40	0.35	-8.52		82.22	0.24	4.35	
E	fluorescent light	47.20	-0.19	4.78		69.51	0.44	4.89	
F	sunlight	64.53	6.78	29.75		83.63	3.13	36.39	
F	shadow	43.12	2.73	14.66		81.03	5.37	32.34	
F	fluorescent light	49.33	2.03	31.00		72.48	2.17	30.90	
G	sunlight	65.07	4.16	20.39		84.37	1.10	25.86	
G	shadow	41.85	1.06	7.34		81.49	2.88	23.55	
G	fluorescent light	47.91	0.78	22.77		70.09	0.97	22.44	

DSLR JPEG									
Sample	Illuminant	ORIGINAL IMAGE (OI)				PROCESSED IMAGE (PI)			
		L*	a*	b*	Color	L*	a*	b*	Color
A	sunlight	15.02	3.31	4.16		24.19	6.04	12.70	
A	shadow	8.39	0.70	-0.52		32.02	10.34	38.14	
A	fluorescent light	10.38	0.31	3.15		22.56	2.45	8.12	
B	sunlight	47.85	2.26	6.91		62.53	1.46	10.33	
B	shadow	31.45	0.08	-1.94		65.44	1.19	10.77	
B	fluorescent light	36.01	-1.18	8.52		53.68	0.00	9.69	
C	sunlight	41.32	2.45	2.77		57.15	1.84	5.38	
C	shadow	25.29	0.20	-4.02		57.14	0.85	6.18	
C	fluorescent light	28.02	-0.06	3.98		46.95	0.20	5.56	
D	sunlight	71.61	0.59	0.78		85.47	-0.48	2.70	
D	shadow	55.22	-0.62	-10.32		86.91	1.31	3.22	
D	fluorescent light	60.74	-1.09	2.52		72.09	0.02	3.11	
E	sunlight	68.30	0.70	1.95		81.01	-0.44	5.41	
E	shadow	50.20	-0.40	-8.62		82.71	1.34	4.81	
E	fluorescent light	57.21	-1.52	4.16		69.46	-0.30	4.60	
F	sunlight	69.12	4.41	28.46		83.45	3.13	36.52	
F	shadow	50.43	2.56	15.91		85.55	3.86	31.59	
F	fluorescent light	58.51	-0.66	32.83		71.97	1.76	31.84	
G	sunlight	68.98	2.66	19.00		84.10	1.83	26.93	
G	shadow	49.82	0.33	7.36		82.42	3.33	23.72	
G	fluorescent light	57.03	0.06	23.26		69.88	0.82	21.91	