

# Colour stimuli of just noticeable colour thresholds ( $p=50\%$ ) in 2 directions

number Colour series	CIELAB differences lightness, chroma, $\Sigma$				LABJND differences lightness, chroma, $\Sigma$				colour differences			notes experimental series
	$\Delta L^*$	$\Delta a^*$	$\Delta b^*$	$\Delta E^*_{ab}$	$\Delta L^*$	$\Delta a^*$	$\Delta b^*$	$\Delta E^*$	CMC	C94	C00	
0 GDV	0.01	-2.62	0.24	2.63	0.12	-1.66	0.2	1.67	0.86	0.65	0.58	_TM
1 GDV	0.01	-2.04	0.12	2.04	0.11	-1.83	0.18	1.84	0.77	0.65	0.6	grey surround
2 GDV	0.01	-1.07	0.05	1.07	0.12	-1.36	0.12	1.37	0.51	0.46	0.44	$\bar{Y}_G=16.6$
3 GDV	0.01	-0.99	0.04	0.99	0.13	-1.58	0.13	1.6	0.64	0.56	0.63	with white
4 GDV	0.01	-0.91	0.04	0.91	0.11	-1.74	0.16	1.75	0.87	0.69	0.9	border
5 GDV	0.01	-0.76	0.04	0.76	0.13	-1.65	0.17	1.67	1.11	0.75	1.13	$X_W=90.38$
6 GDV	0.01	-0.93	0.02	0.93	0.14	-2.01	0.09	2.02	1.08	0.68	0.89	$Y_W=100.0$
7 GDV	0.01	-0.88	0.04	0.89	0.15	-1.87	0.18	1.88	0.72	0.49	0.53	$Z_W=87.54$
8 GDV	0.01	-0.92	0.02	0.92	0.15	-1.88	0.11	1.89	0.64	0.44	0.43	$x_W=0.3251$
9 GDV	0.01	-0.87	0.01	0.87	0.15	-1.76	0.09	1.77	0.55	0.38	0.37	$y_W=0.3598$
10 GDV	0.01	-0.89	0.02	0.89	0.15	-1.76	0.14	1.77	0.52	0.36	0.34	
11 RDC	0.01	-0.84	0.28	0.89	0.13	-1.41	0.21	1.44	0.62	0.33	0.38	_TM
12 RDC	0.01	-0.94	0.17	0.96	0.13	-1.7	0.26	1.73	0.63	0.36	0.39	grey surround
13 RDC	0.01	-0.76	0.08	0.77	0.12	-1.45	0.23	1.48	0.42	0.29	0.29	$\bar{Y}_G=16.6$
14 RDC	0.01	-0.79	0.05	0.79	0.11	-1.6	0.15	1.61	0.61	0.4	0.43	with white
15 RDC	0.01	-0.79	0.04	0.79	0.11	-1.66	0.14	1.67	0.77	0.53	0.68	border
16 RDC	0.01	-0.7	0.03	0.7	0.11	-1.51	0.12	1.52	1.01	0.69	1.02	$X_W=90.38$
17 RDC	0.01	-0.96	0.03	0.96	0.12	-1.69	0.12	1.7	0.74	0.63	0.77	$Y_W=100.0$
18 RDC	0.01	-1.21	0.04	1.21	0.13	-1.59	0.17	1.6	0.6	0.52	0.52	$Z_W=87.54$
19 RDC	0.01	-1.36	0.02	1.36	0.11	-1.51	0.09	1.51	0.57	0.48	0.48	$x_W=0.3251$
20 RDC	0.01	-1.54	0.03	1.54	0.12	-1.45	0.12	1.46	0.58	0.46	0.46	$y_W=0.3598$
21 RDC	0.01	-2.06	0.03	2.06	0.12	-1.68	0.15	1.69	0.72	0.54	0.54	
22 GDV	0.01	-0.27	-2.11	2.13	0.12	-0.16	-1.83	1.84	0.86	0.81	0.67	_GV
23 GDV	0.0	-0.19	-1.15	1.17	0.0	-0.17	-1.78	1.79	0.55	0.56	0.48	grey surround
24 GDV	0.0	-0.15	-0.82	0.83	0.0	-0.2	-1.94	1.95	0.51	0.52	0.46	$\bar{Y}_G=16.6$
25 GDV	0.0	-0.11	-0.71	0.72	0.0	-0.17	-2.12	2.13	0.59	0.54	0.49	with white
26 GDV	0.0	-0.1	-0.6	0.61	0.0	-0.2	-2.09	2.1	0.71	0.54	0.51	border
27 GDV	0.0	-0.09	-0.52	0.53	0.0	-0.21	-1.99	2.0	0.78	0.51	0.52	$X_W=90.38$
28 GDV	0.01	-0.13	-0.62	0.63	0.14	-0.3	-2.49	2.51	1.09	0.54	0.51	$Y_W=100.0$
29 GDV	0.0	-0.14	-0.55	0.57	0.0	-0.3	-2.33	2.35	0.77	0.41	0.37	$Z_W=87.54$
30 GDV	0.01	-0.12	-0.58	0.59	0.15	-0.27	-2.51	2.53	0.67	0.39	0.35	$x_W=0.3251$
31 GDV	0.01	-0.12	-0.57	0.58	0.15	-0.27	-2.5	2.52	0.6	0.35	0.32	$y_W=0.3598$
32 GDV	0.01	-0.1	-0.54	0.55	0.15	-0.22	-2.41	2.43	0.53	0.32	0.28	
33 RDC	0.01	-0.06	-2.38	2.39	0.13	-0.13	-1.89	1.9	1.59	0.86	1.0	_GV
34 RDC	0.01	-0.1	-1.31	1.32	0.13	-0.2	-2.15	2.16	1.08	0.6	0.65	grey surround
35 RDC	0.01	-0.08	-0.89	0.9	0.12	-0.17	-2.6	2.6	1.0	0.53	0.51	$\bar{Y}_G=16.6$
36 RDC	0.01	-0.11	-0.79	0.8	0.11	-0.24	-2.34	2.36	1.05	0.53	0.52	with white
37 RDC	0.0	-0.09	-0.65	0.65	0.0	-0.19	-2.24	2.25	1.2	0.53	0.5	border
38 RDC	0.0	-0.12	-0.5	0.51	0.0	-0.27	-1.91	1.93	0.75	0.49	0.51	$X_W=90.38$
39 RDC	0.0	-0.1	-0.53	0.54	0.0	-0.19	-2.09	2.1	0.51	0.44	0.42	$Y_W=100.0$
40 RDC	0.0	-0.15	-0.57	0.59	0.0	-0.2	-2.27	2.28	0.36	0.37	0.38	$Z_W=87.54$
41 RDC	0.0	-0.12	-0.52	0.53	0.0	-0.14	-2.05	2.05	0.28	0.3	0.31	$x_W=0.3251$
42 RDC	0.0	-0.15	-0.5	0.52	0.0	-0.15	-1.98	1.99	0.24	0.26	0.27	$y_W=0.3598$
43 RDC	0.01	-0.21	-0.51	0.55	0.12	-0.16	-2.04	2.05	0.24	0.25	0.26	
<b>mean</b>				<b>0.98</b>				<b>1.92</b>	<b>0.72</b>	<b>0.5</b>	<b>0.52</b>	
<b>standard deviation</b>				<b>0.51</b>				<b>0.32</b>	<b>0.26</b>	<b>0.14</b>	<b>0.2</b>	

Samples: Green (G, no. 00), Violet V (no. 10), Red (R, no. 11), Cyan (C, no. 21)

Turquois (T, no. 22), Magenta (M, no. 32), Blue (B, no. 33), Yellow (Y, no. 43)

Source: BAM Research Report no. 115 (1985), Tables 5.40;1 to 11