

Four elementary colours and four intermediate colours

Hue circle	Miescher/Munsell hue	$X_c$	$Y_c$	$Z_c$	$x_c$	$y_c$
Elementary Red R	08/6.0R-V5	32.53	18.11	5.32	0.5813	0.3236
red yellow R50J	05/3.7YR-V5	60.31	45.44	5.55	0.5419	0.4083
Elementary Yellow J	02/8.5Y-V5	70.52	77.82	10.18	0.4449	0.4909
yellow green J50G	23/9.5GY-V5	25.23	45.15	14.00	0.2990	0.5351
Green G	20/5.9G-V5	8.51	20.24	16.28	0.1890	0.4495
green blue G50B	17/8.5BG-V5	8.83	14.56	31.55	0.1607	0.2650
Blue B	14/5.3PB-V5	11.92	9.35	48.79	0.1701	0.1335
blue red B50R	11/7.4P-V5	16.15	8.47	30.90	0.2909	0.1526

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Elementary colour and CIE illuminant

CIE-test colour	ill.	$L^*$	$a^*$	$b^*$	$C^*_{ab}$	$h_{ab}$	X	Y	Z	x	y
09. Red R	D65	40.04	58.98	28.32	65.43	25.7	20.64	11.27	4.34	0.5693	0.3110
10. Yellow J		81.30	-2.99	71.82	71.89	92.4	54.89	59.01	12.02	0.4359	0.4686
11. Green G		52.27	-42.40	13.64	44.54	162.2	12.15	20.38	15.34	0.2538	0.4258
12. Blue B		30.52	1.21	-46.35	46.37	271.5	6.24	6.45	27.59	0.1550	0.1601
09. Red R	D50	41.88	62.00	31.82	69.69	27.2	23.31	12.42	3.24	0.5982	0.3188
10. Yellow J		81.97	1.81	71.59	71.61	88.5	58.84	60.24	9.50	0.4576	0.4685
11. Green G		51.62	-41.12	11.52	42.70	164.4	12.10	19.81	11.95	0.2759	0.4515
12. Blue B		29.20	-5.28	-49.34	49.62	263.9	5.25	5.92	21.25	0.1621	0.1825

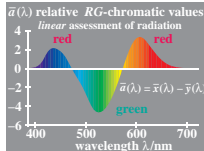
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Elementary and intermediate colours

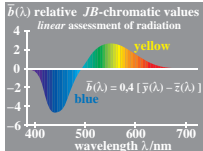
Hue	Observer				Munsell Notation (Value 5) and dominant wavelength	
	K.R.	G.W.	A.V.	K.M.	mean Munsell value and dominant wavelength	correction for Bezold-Brücke effect
Red R	6.5R 700	5.8R 494c	6.0R 494c	5.8R 494c	6.0R 494c	494c 700 495c
R50J	3.75YR 592	4.2YR 591	3.5YR 593	3.7YR 592	3.7YR 592±1	590±2
Yellow J	7.5Y 575	8.5Y 574	10.0Y 572	10.0Y 572	8.5Y 574±2	572±2
J50G	10GY 542	8.75GY 550	9.0GY 548	0.5G 548	9.5GY 544±8	542±10
Green G	6.0G 502.5	5.0G 504	6.0G 502.5	6.7G 501.5	5.9G 503±2	503±2
G50B	7.5BG 488.5	8.75BG 487.5	8.0BG 488	10.0BG 486.5	8.5BG 488±2	489±2
Blue B	5.6PB 472	5.0PB 474.5	5.1PB 474	5.0PB 474.5	5.3PB 474±2	472±2
B50R	7.5P 558c	7.5P 558c	7.0P 560c	7.5P 558c	7.4P 559c±1	559c±1

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TUB-test chart JE52; colour vision and elementary colours  
 CIE-test colours, Miescher data, Munsell data



JE521-1



JE521-2

Elementary colour and CIE illuminant

CIE-test colour	ill.	$L^*$	$a^*$	$b^*$	$C^*_{ab}$	$h_{ab}$	X	Y	Z	x	y
09. Red R	D65	40.04	58.98	28.32	65.43	25.7	20.64	11.27	4.34	0.5693	0.3110
10. Yellow J		81.30	-2.99	71.82	71.89	92.4	54.89	59.01	12.02	0.4359	0.4686
11. Green G		52.27	-42.40	13.64	44.54	162.2	12.15	20.38	15.34	0.2538	0.4258
12. Blue B		30.52	1.21	-46.35	46.37	271.5	6.24	6.45	27.59	0.1550	0.1601
09. Red R	A	47.79	61.74	42.56	74.99	34.6	33.54	16.63	1.36	0.6509	0.3227
10. Yellow J		83.82	7.06	70.78	71.13	84.3	73.49	63.71	4.63	0.5181	0.4492
11. Green G		49.00	-35.96	4.34	36.22	173.1	12.80	17.60	5.56	0.3560	0.4893
12. Blue B		25.14	-17.25	-56.25	58.83	253.0	3.60	4.46	9.15	0.2094	0.2591

JE521-3

Elementary colours R, J, G, B

CIE-test colour	R(380nm), R(480nm), R(580nm), R(680nm)	R(385nm), R(485nm), R(585nm), R(685nm)	R(475nm), R(575nm), R(675nm), R(770nm)	0.066	0.058	0.052	0.051	0.050	0.048	0.046	0.042	0.038	0.033
CIE no. 09, Red R	0.030	0.028	0.028	0.030	0.031	0.032	0.033	0.035	0.041	0.048	0.060	0.102	0.190
CIE no. 10, Yellow J	0.060	0.102	0.190	0.336	0.505	0.641	0.717	0.758	0.781	0.797	0.809	0.819	0.828
CIE no. 11, Green G	0.111	0.127	0.127	0.116	0.108	0.104	0.105	0.110	0.123	0.148	0.192	0.252	0.325
CIE no. 12, Blue B	0.017	0.016	0.016	0.016	0.016	0.018	0.018	0.019	0.023	0.026	0.035	0.056	0.097

TUB material: code=thata

input: rgb -> olv\* setrgbcolor  
 output: no change compared to input