

X	Y	Z	x	y	L*	a*	b*	a'	b'	OYLCVM_ONW_0	
CIE Illuminant E											
61.49	35.75	0.03	0.632	0.367	66.3	70.3	113.7	0.2581	-0.0089	%O=JR	00 575_770
83.16	86.74	1.54	0.485	0.505	94.6	-6.6	140.9	0.2124	-0.0224	%Y=J=JG+JR	01 515_770
21.66	50.98	1.5	0.292	0.687	76.6	-99.1	110.4	0.1619	-0.0266	%L=JG	02 515_575
8.5	25.04	11.07	0.19	0.561	57.1	-95.3	30.0	0.1502	-0.0656	%Gs	03 0,35*JG+0,65*BG
1.41	11.08	16.22	0.049	0.385	39.7	-119.2	-13.0	0.1084	-0.0978	%Cs=BG	04 475_515
16.83	13.25	98.45	0.13	0.103	43.1	21.1	-96.9	0.2333	-0.1681	%V=B=BR+BG	05 380_515
15.41	2.17	82.23	0.154	0.021	16.3	128.5	-131.5	0.4139	-0.2892	%Ms=BR	06 380_475
55.04	31.05	11.54	0.563	0.318	62.5	71.1	38.0	0.2607	-0.0619	%Rs	07 0,14*BR+0,86*JR
61.49	35.75	0.03	0.632	0.367	66.3	70.3	113.7	0.2581	-0.0089	%O=JR	08 575_770
0.1	0.1	0.1	0.332	0.332	0.9	0.0	0.0	0.2154	-0.0861	%N0 (β=0,001)	09 380_770
100.0	100.0	100.0	0.333	0.333	100.0	0.0	0.0	0.2154	-0.0861	%W1 (β=1,000)	10 380_770
CIE Standard Illuminant D65											
54.81	32.31	0.03	0.628	0.37	63.6	73.0	109.1	0.2613	-0.0087	%O=JR	00 575_770
76.89	85.27	1.63	0.469	0.52	94.0	-8.2	140.2	0.2116	-0.0224	%Y=J=JG+JR	01 515_770
22.07	52.96	1.6	0.288	0.69	77.8	-97.1	112.7	0.1636	-0.0261	%L=JG	02 515_575
8.78	26.49	12.51	0.183	0.554	58.5	-95.0	31.2	0.1516	-0.0652	%Gs	03 0,35*JG+0,65*BG
1.61	12.23	18.38	0.05	0.379	41.5	-119.5	-11.2	0.1116	-0.0959	%Cs=BG	04 475_515
18.14	14.72	107.25	0.129	0.105	45.2	23.9	-93.3	0.2349	-0.1623	%V=B=BR+BG	05 380_515
16.52	2.48	88.86	0.153	0.023	17.8	133.2	-128.5	0.4121	-0.276	%Ms=BR	06 380_475
49.45	28.13	12.47	0.549	0.312	60.0	74.5	33.9	0.2644	-0.0638	%Rs	07 0,14*BR+0,86*JR
54.81	32.31	0.03	0.628	0.37	63.6	73.0	109.1	0.2613	-0.0087	%O=JR	08 575_770
0.09	0.1	0.1	0.311	0.327	0.9	0.0	0.0	0.2154	-0.0861	%N0 (β=0,001)	09 380_770
95.04	100.0	108.89	0.312	0.329	100.0	0.0	0.0	0.2154	-0.0861	%W1 (β=1,000)	10 380_770
CIE Illuminant D50											
60.96	35.4	0.03	0.632	0.367	66.0	75.4	113.1	0.2613	-0.0094	%O=JR	00 575_770
82.98	87.33	1.55	0.482	0.508	94.8	-2.3	137.9	0.2143	-0.0239	%Y=J=JG+JR	01 515_770
22.02	51.93	1.51	0.291	0.688	77.2	-96.2	107.9	0.1638	-0.0282	%L=JG	02 515_575
8.58	25.16	10.63	0.193	0.566	57.2	-92.3	25.2	0.1523	-0.0689	%Gs	03 0,35*JG+0,65*BG
1.35	10.74	15.54	0.049	0.388	39.1	-117.0	-19.5	0.1093	-0.1039	%Cs=BG	04 475_515
13.44	12.66	80.94	0.125	0.118	42.2	8.1	-98.2	0.2224	-0.1705	%V=B=BR+BG	05 380_515
12.08	1.91	65.39	0.152	0.024	15.0	116.5	-131.6	0.4032	-0.2982	%Ms=BR	06 380_475
54.11	30.71	9.18	0.575	0.326	62.2	75.0	38.7	0.2633	-0.0614	%Rs	07 0,14*BR+0,86*JR
60.96	35.4	0.03	0.632	0.367	66.0	75.4	113.1	0.2613	-0.0094	%O=JR	08 575_770
0.09	0.09	0.08	0.344	0.357	0.9	0.0	0.0	0.2154	-0.0861	%N0 (β=0,001)	09 380_770
96.42	100.0	82.49	0.345	0.358	100.0	0.0	0.0	0.2154	-0.0861	%W1 (β=1,000)	10 380_770

$$a^* = 500 \left[\left(\frac{X}{X_n} \right)^{1/3} - \left(\frac{Y}{Y_n} \right)^{1/3} \right] \quad b^* = 200 \left[\left(\frac{Y}{Y_n} \right)^{1/3} - \left(\frac{Z}{Z_n} \right)^{1/3} \right] \quad a' = \left(\frac{1}{X_n} \right)^{1/3} (x/y)^{1/3} \quad b' = -0,4 \left(\frac{1}{Z_n} \right)^{1/3} (z/y)^{1/3} \quad (X, Y, Z \geq 0,89)$$

$$= 500 (a' - a'_n) Y^{1/3} \quad = 500 (b' - b'_n) Y^{1/3} \quad = 0,2191 (x/y)^{1/3} \quad = -0,08376 (z/y)^{1/3} \quad \text{CIELAB für } n=D65$$

X	Y	Z	x	y	L*	a*	b*	a'	b'	OYLCVM_ONW_1
CIE Illuminant E										
61.49	35.75	0.03	0.632	0.367	66.3	70.3	113.7	0.2581	-0.0089	%O=JR 00 575_770
83.16	86.74	1.54	0.485	0.505	94.6	-6.6	140.9	0.2124	-0.0224	%Y=J=JG+JR 01 515_770
21.66	50.98	1.5	0.292	0.687	76.6	-99.1	110.4	0.1619	-0.0266	%L=JG 02 515_575
26.71	54.96	31.04	0.237	0.487	79.0	-87.5	28.4	0.1693	-0.0712	%G 03 0,70*L+0,30*C
38.5	64.24	99.96	0.189	0.316	84.0	-67.6	-27.4	0.1816	-0.0998	%C=L+V 04 380_575
16.83	13.25	98.45	0.13	0.103	43.1	21.1	-96.9	0.2333	-0.1681	%V=B=BR+BG 05 380_515
78.33	49.01	98.49	0.346	0.217	75.4	66.6	-41.3	0.2518	-0.1087	%M=V+O 06 380_515+575_770
64.52	38.14	17.76	0.535	0.316	68.1	69.4	32.6	0.2567	-0.0667	%R 07 0,18*M+0,82*O
61.49	35.75	0.03	0.632	0.367	66.3	70.3	113.7	0.2581	-0.0089	%O=JR 08 575_770
0.1	0.1	0.1	0.332	0.332	0.9	0.0	0.0	0.2154	-0.0861	%N0 (β=0,001) 09 380_770
100.0	100.0	100.0	0.333	0.333	100.0	0.0	0.0	0.2154	-0.0861	%W1 (β=1,000) 10 380_770
CIE Standard Illuminant D65										
54.81	32.31	0.03	0.628	0.37	63.6	73.0	109.1	0.2613	-0.0087	%O=JR 00 575_770
76.89	85.27	1.63	0.469	0.52	94.0	-8.2	140.2	0.2116	-0.0224	%Y=J=JG+JR 01 515_770
22.07	52.96	1.6	0.288	0.69	77.8	-97.1	112.7	0.1636	-0.0261	%L=JG 02 515_575
27.52	57.37	33.77	0.231	0.483	80.3	-84.6	30.8	0.1715	-0.0702	%G 03 0,70*L+0,30*C
40.22	67.68	108.85	0.185	0.312	85.8	-63.5	-24.3	0.1842	-0.0981	%C=L+V 04 380_575
18.14	14.72	107.25	0.129	0.105	45.2	23.9	-93.3	0.2349	-0.1623	%V=B=BR+BG 05 380_515
72.96	47.03	107.28	0.321	0.206	74.2	68.9	-43.4	0.2536	-0.1102	%M=V+O 06 380_515+575_770
58.08	34.96	19.34	0.516	0.311	65.7	72.0	28.4	0.2595	-0.0687	%R 07 0,18*M+0,82*O
54.81	32.31	0.03	0.628	0.37	63.6	73.0	109.1	0.2613	-0.0087	%O=JR 08 575_770
0.09	0.1	0.1	0.311	0.327	0.9	0.0	0.0	0.2154	-0.0861	%N0 (β=0,001) 09 380_770
95.04	100.0	108.89	0.312	0.329	100.0	0.0	0.0	0.2154	-0.0861	%W1 (β=1,000) 10 380_770
CIE Illuminant D50										
60.96	35.4	0.03	0.632	0.367	66.0	75.4	113.1	0.2613	-0.0094	%O=JR 00 575_770
82.98	87.33	1.55	0.482	0.508	94.8	-2.3	137.9	0.2143	-0.0239	%Y=J=JG+JR 01 515_770
22.02	51.93	1.51	0.291	0.688	77.2	-96.2	107.9	0.1638	-0.0282	%L=JG 02 515_575
26.05	55.73	25.79	0.242	0.518	79.4	-88.2	28.8	0.1692	-0.071	%G 03 0,70*L+0,30*C
35.46	64.59	82.45	0.194	0.353	84.2	-73.9	-27.0	0.1785	-0.0996	%C=L+V 04 380_575
13.44	12.66	80.94	0.125	0.118	42.2	8.1	-98.2	0.2224	-0.1705	%V=B=BR+BG 05 380_515
74.4	48.06	80.97	0.365	0.236	74.8	66.9	-42.0	0.2522	-0.1093	%M=V+O 06 380_515+575_770
63.37	37.68	14.6	0.547	0.325	67.7	73.6	32.1	0.2593	-0.0669	%R 07 0,18*M+0,82*O
60.96	35.4	0.03	0.632	0.367	66.0	75.4	113.1	0.2613	-0.0094	%O=JR 08 575_770
0.09	0.09	0.08	0.344	0.357	0.9	0.0	0.0	0.2154	-0.0861	%N0 (β=0,001) 09 380_770
96.42	100.0	82.49	0.345	0.358	100.0	0.0	0.0	0.2154	-0.0861	%W1 (β=1,000) 10 380_770

$$\begin{aligned} a^* &= 500 \left[\left(\frac{X}{X_n} \right)^{1/3} - \left(\frac{Y}{Y_n} \right)^{1/3} \right] & b^* &= 200 \left[\left(\frac{Y}{Y_n} \right)^{1/3} - \left(\frac{Z}{Z_n} \right)^{1/3} \right] & a' &= \left(\frac{1}{X_n} \right)^{1/3} (x/y)^{1/3} & b' &= -0,4 \left(\frac{1}{Z_n} \right)^{1/3} (z/y)^{1/3} & (X, Y, Z \geq 0,89) \\ &= 500 (a' - a'_n) Y^{1/3} & &= 500 (b' - b'_n) Y^{1/3} & &= 0,2191 (x/y)^{1/3} & &= -0,08376 (z/y)^{1/3} & \text{CIELAB für } n=D65 \end{aligned}$$