

Data of Maximum color M in colorimetric system Offset print ORS08_18_96; separation cmyn4*, D65 and D50 for input or output; Six hue angles of the 60 degree standard colours s: $h_{ab,s} = 30.0, 90.0, 150.0, 210.0, 270.0, 330.0$;
Six hue angles of the device colours d: $h_{ab,d} = 31.7, 96.0, 152.6, 234.4, 299.0, 354.5$; Six hue angles of the elementary colours e: $h_{ab,e} = 25.5, 92.3, 162.2, 217.0, 271.7, 328.6$

Y=J_d Yellow
device CIELAB (a^*_d, b^*_d) chroma diagram

$LCH^*_d = 90.3 \ 90.6 \ 96.0$
 $LAB^*_d = 90.3 \ -9.5 \ 90.1$
 $rgb^*_d = 1.0 \ 1.0 \ 0.0$

L=G_d Leaf green

$LCH^*_d = 55.9 \ 73.1 \ 152.6$
 $LAB^*_d = 55.9 \ -64.9 \ 33.6$
 $rgb^*_d = 0.0 \ 1.0 \ 0.0$

C=C_d Cyan blue

$LCH^*_d = 62.8 \ 51.8 \ 234.3$
 $LAB^*_d = 62.8 \ -30.2 \ -42.1$
 $rgb^*_d = 0.0 \ 1.0 \ 1.0$

O=R_d Orange red

$LCH^*_d = 47.8 \ 78.6 \ 31.7$
 $LAB^*_d = 47.8 \ 66.8 \ 41.3$
 $rgb^*_d = 1.0 \ 0.0 \ 0.0$

M=M_d Magenta red

$LCH^*_d = 48.2 \ 75.1 \ 354.5$
 $LAB^*_d = 48.2 \ 74.8 \ -7.1$
 $rgb^*_d = 1.0 \ 0.0 \ 1.0$

V=B_d Violet blue (very different to elementary Blue)

$LCH^*_d = 27.2 \ 54.0 \ 299.0$
 $LAB^*_d = 27.2 \ 26.1 \ -47.2$
 $rgb^*_d = 0.0 \ 0.0 \ 1.0$

J_e Yellow
elementary CIELAB (a^*_e, b^*_e) chroma diagram

$LCH^*_e = 85.8 \ 85.1 \ 92.0$
 $LAB^*_e = 85.8 \ -2.9 \ 85.0$
 $rgb^*_e = 1.0 \ 0.895 \ 0.0$

G_e Green

$LCH^*_e = 56.7 \ 65.0 \ 162.0$
 $LAB^*_e = 56.7 \ -61.8 \ 20.0$
 $rgb^*_e = 0.0 \ 1.0 \ 0.162$

C_e Blue green

$LCH^*_e = 61.4 \ 48.9 \ 217.0$
 $LAB^*_e = 61.4 \ -39.0 \ -29.4$
 $rgb^*_e = 0.0 \ 1.0 \ 0.797$

B_e Blue

$LCH^*_e = 41.0 \ 45.3 \ 272.0$
 $LAB^*_e = 41.0 \ 1.5 \ -45.2$
 $rgb^*_e = 0.0 \ 0.0 \ 1.0$

R_e Red

$LCH^*_e = 47.8 \ 75.1 \ 25.0$
 $LAB^*_e = 47.8 \ 68.0 \ 31.7$
 $rgb^*_e = 1.0 \ 0.0 \ 0.203$

M_e Blue red

$LCH^*_e = 36.0 \ 58.9 \ 329.0$
 $LAB^*_e = 36.0 \ 50.5 \ -30.3$
 $rgb^*_e = 0.45 \ 0.0 \ 1.0$

J_s Yellow
standard CIELAB (a^*_s, b^*_s) chroma diagram

$LCH^*_s = 83.9 \ 82.8 \ 90.0$
 $LAB^*_s = 83.9 \ 0.0 \ 82.8$
 $rgb^*_s = 1.0 \ 0.847 \ 0.0$

G_s Green

$LCH^*_s = 57.3 \ 71.3 \ 150.0$
 $LAB^*_s = 57.3 \ -61.7 \ 35.6$
 $rgb^*_s = 0.048 \ 1.0 \ 0.0$

R_s Red

$LCH^*_s = 47.8 \ 77.6 \ 30.0$
 $LAB^*_s = 47.8 \ 67.2 \ 38.8$
 $rgb^*_s = 1.0 \ 0.0 \ 0.057$

C_s Blue green

$LCH^*_s = 60.8 \ 48.8 \ 210.0$
 $LAB^*_s = 60.8 \ -42.2 \ -24.4$
 $rgb^*_s = 0.0 \ 1.0 \ 0.716$

M_s Blue red

$LCH^*_s = 36.4 \ 59.2 \ 330.0$
 $LAB^*_s = 36.4 \ 51.3 \ -29.6$
 $rgb^*_s = 0.464 \ 0.0 \ 1.0$

B_s Blue

$LCH^*_s = 42.1 \ 45.2 \ 270.0$
 $LAB^*_s = 42.1 \ 0.0 \ -45.2$
 $rgb^*_s = 0.0 \ 0.407 \ 1.0$

Notes to the CIELAB chroma diagrams (a^*_d, b^*_d), (a^*_e, b^*_e), (a^*_s, b^*_s)

- For the rgb^*_d -input values the CIELAB data LCH^*_d and LAB^*_d have been measured.
- For the calculation of the standard hue angle $h_{ab,s}$ use for any device values rgb^*_d the equation:
$$h_{ab,s} = \arctan \left(\frac{r^*_d \cos(30) + g^*_d \cos(150)}{r^*_d \sin(30) + g^*_d \sin(150)} + b^*_d \sin(270) \right) \quad (1)$$
- For the 48 or 360 equally spaced standard hue angles $h_{ab,s}$ of the colours of maximum chroma use the seven hue angles of the 60 degree colours s: $h_{ab,s} = 30.0, 90.0, 150.0, 210.0, 270.0, 330.0, 390.0$ ($i=0,5$) and the equations for a 48 and 360 step hue circle:
$$h_{ab,ab,s,j} = h_{ab,s} + j |h_{ab,s,i+1} - h_{ab,s,i}| / 8 \quad (i = 0, 1, \dots, 5; j = 0, 1, \dots, 7) \quad (2)$$

$$h_{360,ab,s,j} = h_{ab,s} + j |h_{ab,s,i+1} - h_{ab,s,i}| / 60 \quad (i = 0, 1, \dots, 5; j = 0, 1, \dots, 59) \quad (3)$$
- For the 48 or 360 elementary hue angles $h_{ab,e}$ of the colours of maximum chroma use the seven hue angles of the elementary colours e: $h_{ab,e} = 25.5, 92.3, 162.2, 217.0, 271.7, 328.6, 385.5$ ($i=0,5$) and the equations for a 48 and 360 step elementary hue circle:
$$h_{ab,ab,e,j} = h_{ab,e} + j |h_{ab,e,i+1} - h_{ab,e,i}| / 8 \quad (i = 0, 1, \dots, 5; j = 0, 1, \dots, 7) \quad (4)$$

$$h_{360,ab,e,j} = h_{ab,e} + j |h_{ab,e,i+1} - h_{ab,e,i}| / 60 \quad (i = 0, 1, \dots, 5; j = 0, 1, \dots, 59) \quad (5)$$
- For any elementary hue angle $h_{ab,e}$ there is a well defined device hue angle $h_{ab,d}$ see the following tables, columns 1 to 3.
- The values rgb^*_d produce the output of the device-independent elementary hues