

**Farbenraum CIELAB 1976, Farbwerte, -merkmale und -arten (a\*, b\*)**

Normfarbwerte X, Y, Z -> Farbmerkmale L\*, a\*, b\*

Helligkeit  $L^* = 116 (Y/Y_n)^{1/3} - 16$   
 RG-Buntheit  $a^* = 500 [(X/X_n)^{1/3} - (Y/Y_n)^{1/3}] = 500 [a' - a'_n] Y^{1/3}$   
 JB-Buntheit  $b^* = 200 [(Y/Y_n)^{1/3} - (Z/Z_n)^{1/3}] = 500 [b' - b'_n] Y^{1/3}$

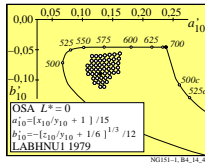
Farbmerkmale L\*, a\*, b\* -> Normfarbwerte X, Y, Z

Normfarbwerte  $X = X_n [(L^* + 16) / 116 + a^*/500]^3$   
 $Y = Y_n [(L^* + 16) / 116]^3$   
 $Z = Z_n [(L^* + 16) / 116 - b^*/200]^3$

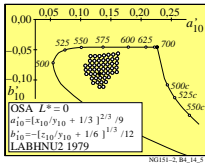
Farbarten für CIELAB 1976, LABHNU 1977, LABHNUx 1979

CIELAB 1976, 2°  $a^* = 0,2191 (x/y)^{1/3}$   $b^* = -0,08376 (z/y)^{1/3}$   
 LABHNU 1977  $a^* = (x/y + 1/6)^{1/3} / 4$   $b^* = -(z/y + 1/6)^{1/3} / 12$   
 LABHNU1 1979  $a^* = (x/y + 1) / 15$  linear!  $b^* = -(z/y + 1/6)^{1/3} / 12$   
 LABHNU2 1979  $a^* = (x/y + 1/6)^{2/3} / 15$   $b^* = -(z/y + 1/6)^{1/3} / 12$   
 CIELAB 1976, 10°  $a^* = 0,2193 (\tau_{10}/y_{10})^{1/3}$   $b^* = -0,08417 (\tau_{10}/y_{10})^{1/3}$   
 Farbart-Konstanten  $a_2 = 500 (1/X_n)^{1/3} = 0,2191$   $b_2 = -200 (1/Z_n)^{1/3} = -0,08376$   
 CIELAB, 2°, 10°  $a_{10} = 500 (1/X_{a10})^{1/3} = 0,2193$   $b_{10} = -200 (1/Z_{a10})^{1/3} = -0,08417$

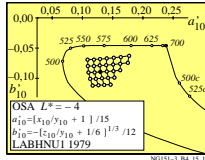
NG150-3, B4,12



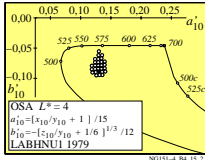
NG151-1, B4,14,4



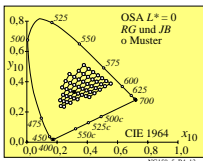
NG151-2, B4,14,5



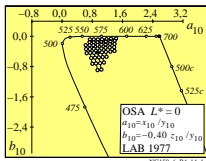
NG151-3, B4,15,1



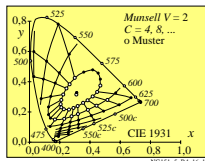
NG151-4, B4,15,2



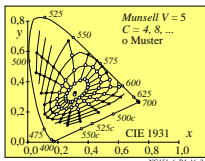
NG150-5, B4,13



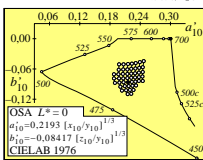
NG150-6, B4,14,1



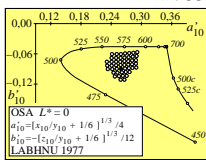
NG151-5, B4,16,1



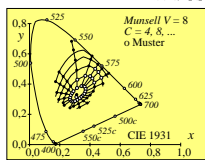
NG151-6, B4,16,2



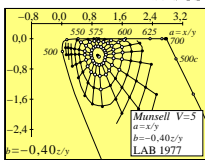
NG150-7, B4,14,2



NG150-8, B4,14,3



NG151-7, B4,16,3



NG151-8, B4,16,3

Siehe Original/Kopie: http://web.me.com/klaus\_richter/NG15/NG15L0N1.TXT /PS  
 Technische Information: http://www.ps.bam.de oder http://130.149.60.45/~farbmetrik

TUB-Registrierung: 20101101-NG15/NG15L0N1.TXT /PS  
 Anwendung für Messung von Drucker- oder Monitorssystemen

TUB-Material: Code=th44a