color space CIELAB 1976, color values, -attributes, -chromaticities *(a', b')*

tristimulus values *X, Y, Z* –> color attributes *L*, a*, b**

lightness $L^* = 116\,(Y/Y_n)^{1/3} - 16$

RG−chromaticness $a^* = 500\,[\,(X/X_n)^{1/3} - (Y/Y_n)^{1/3}\,] = 500\,[\,a' - a'_n\,]\,Y^{1/3}$

JB−chromaticness $b^* = 200\,[\,(Y/Y_n)^{1/3} - (Z/Z_n)^{1/3}\,] = 500\,[\,b' - b'_n\,]\,Y^{1/3}$

color attributes *L*, a*, b –> tristimulus values *X, Y, Z***

tristimulus values

$X = X_n\,[\,(L^* + 16)\,/\,116 + a^*/500\,]^3$

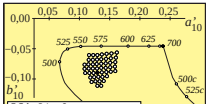
$Y = Y_n\,[\,(L^* + 16)\,/\,116\,]^3$

$Z = Z_n\,[\,(L^* + 16)\,/\,116 - b^*/200\,]^3$

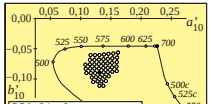
chromaticity for CIELAB 1976, LABHNU 1977, LABHNUx 1979

CIELAB 1976, 2^0	$a' = 0{,}2191\ (x/y)^{1/3}$	$b' = -\,0{,}08376\ (z/y)^{1/3}$
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, 10^0	$a' = 0{,}2193\ (x_{10}\,/\,y_{10})^{1/3}$	$b' = -\,0{,}08417\ (z_{10}\,/\,y_{10})^{1/3}$
chromaticity constants	$a_2 = 500\ (1/X_n)^{1/3} = 0{,}2191$	$b_2 = -\,200\ (1/Z_n)^{1/3} = -\,0{,}08376$
CIELAB, 2^0,10^0	$a_{10} = 500\ (1/X_{n10})^{1/3} = 0{,}2193$	$b_{10^0} = -\,200\ (1/Z_{n10})^{1/3} = -\,0{,}08417$

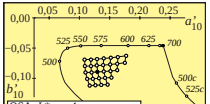
ME150−3, B4_12



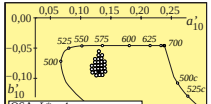
ME151−1, B4_14_4



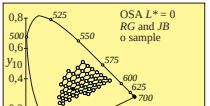
ME151−2, B4_14_5



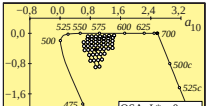
ME151−3, B4_15_1



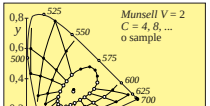
ME151−4, B4_15_2



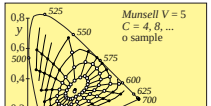
ME150−5, B4_13



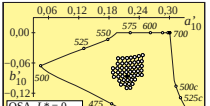
ME150−6, B4_14_1



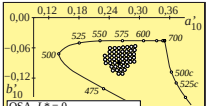
ME151−5, B4_16_1



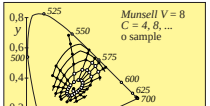
ME151−6, B4_16_2



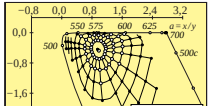
ME150−7, B4_14_2



ME150−8, B4_14_3



ME151−7, B4_60_3



ME151−8, B4_17_1

input: *cmyk setcmykcolor*
output: no colour data change