

$\log(\Delta Y)$

CIELABn5

tristimulus value difference

$Y_{nc} = Y_W \text{RGB}_{nc} = 100, 21, 72, 7$

$$t^*_{\text{CIELABn5}} = 116(Y/Y_n)^{1/3,0} - 16 \quad (Y_n = 100, Y_{nc}/100 < Y \leq Y_{nc})$$

$$\log(dY) = (1/3,0) \log[3,0(Y_u/115)] + [1 - (1/3,0)] \log(Y)$$

2
100
1
10
0
1
-1
-2

$$t^*_u = 50, dY_u = 4,60, dY_u/Y_u = 0,2555$$

$$\log(dY) = 4,60, m_u = 0,66$$

$$dY_{90} = 13,45, \gamma = 3,0, 1/3,0 = 1/3,0 = 0,33$$

$$dY_{18} = 4,60, S_n = 115,49, D_n = -15,49$$

$$dY_{3,6} = 1,56, Y_n = 100, dY_n = 4,60$$

application
range

0,1

1

10

100

$Y_u = 18$

Y

$Y_N = 3,6$

1

$Y_W = 90$

2

$\log(Y)$