

$\log(\Delta Y)$

CIELABu3

tristimulus value difference

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

ΔY

2
100

$$l^*_{\text{CIELABu3}} = 50(Y/Y_u)^{1/2,0} + 1 \quad (Y_u=18, Y_{nc}/100 < Y \leq Y_{nc})$$

$$\log(dY) = (1/2,0) \log[2,0(Y_u/49)] + [1-(1/2,0)] \log(Y)$$

1
10

$$l^*_{u}=50, dY_u=4,06, dY_u/Y_u=0,2257$$

$$\log(dY)=4,06, m_u=0,50$$

0
-1

$$dY_{90}=9,08, \gamma=2,0, 1/\gamma=1/2,0=0,50$$

$$dY_{18}=4,06, S_n=49,21, D_n=0,78$$

$$dY_{3,6}=1,81, Y_u=18, dY_u=4,06$$

application range

0,1

1

10

1

1

1

1

1

1

1

1

$Y_N=3,6$

1

1

1

1

1

1

1

1

1

1

1

1

1

1

$Y_u=18$

100

1

1

1

1

1

1

1

1

1

1

1

1

1

1

$Y_W=90$

2

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

$\log(Y)$