

$\log(\Delta Y/\Delta Y_u)$

relative CIELAB-  
tristimulus value difference

$\Delta Y/\Delta Y_u$

2 100

$$L^*_{\text{CIELAB}} = s(Y/Y_u)^{1/3} - 16 \quad (s=66, Y_u=18, 1 < Y \leq 100)$$

relative CIELAB-tristimulus value difference

$$\begin{aligned} \log(dY) &= \log\left(3(Y_u/116)\right) + (2/3)\log(Y/Y_u) \\ &= \log(3(Y_u^{1/3})/116) + (2/3)\log(Y) \end{aligned}$$

1 10

0 1

$$Y_u=18, dY_u=0,83, dY_u/Y_u=0,0454$$

$$\log[(dY)/(dY_u)]=0, m_u=0,66$$

application  
range

0,1

0

$Y_N=4$  10

$Y_u=18$  100

$Y$

2  $\log(Y)$