

$\log(L^*_{80}/L^*_{80,u})$ HAULAB lightness L^*_{80} normalized to the background lightness $L^*_{80,u}$

$L^*/L^*_{80,u}$
 $100 L^* = s(Y/Y_n)^n - d \quad (Y_n=100, Y_u=37, s=134,6, n=0,31, d=49,5)$ [1a]

$L^* = r(Y/Y_u)^n - d \quad (r = s(Y_u/Y_n)^n = 79,10, L^*_u = r - d = 29,5)$ [1b]

$L^*/L^*_u = g(Y/Y_u)^n - h \quad (g = r/(r-d) = 2,67, h = d/(r-d) = 1,67)$ [1c]

$\log[(L^*/L^*_u + h)/g] = n \log(Y/Y_u) = 0,31 \log(Y/37)$ [1d]

$\ln[(L^*/L^*_u + h)/g] = n \ln(10) \log(Y/Y_u) = 0,71 \log(Y/37)$ [1e]

$(L^*/L^*_u + h)/g = e^{n \ln(10) \log(Y/Y_u)} = e^{0,71 \log(Y/37)}$ [1f]

