

**ΔY und
ΔY/ΔY_u** **LABJND-Normfarbwertdifferenz**
ΔY normiert für ΔY_u

text lightness

$$L^*/L^*_u = (t/a) \{ \ln(1 + a \cdot Y) - \ln(1 + a \cdot Y_u) \}$$

[1a]

$$L^*/L^*_u = (t/a) \{ \ln[1 + b \cdot (Y/Y_u)] - \ln(1 + b) \}$$

[1b]

text relative lightness

normierte Normfarbwert-Y-Differenz

[3e]

text log(L*/L*_u)

$$dY/dY_u = (1 + a \cdot Y) / (1 + a \cdot Y_u)$$

[3d]

text ln(L*/Lu)

text L*/L*_u=e**x

hgp20-5a

**ΔY und
ΔY/ΔY_u** **IECsRGB-Normfarbwertdifferenz**
ΔY normiert für ΔY_u

text lightness

$$L^* = s(Y/Y_n)^n - d \quad (Y_n=100, Y_u=18, s=100, n=1/2,4, d=0)$$

[1a]

$$L^* = r(Y/Y_n)^n - d \quad (r = s(Y_u/Y_n)^n = 48,94, L^*_u = r - d)$$

[1b]

text relative lightness

$$dY = [Y_n / (n s)] (Y / Y_n)^{1-n}$$

[2c]

text log(L*/L*_u)

$$dY_u = [Y_n / (n s)] (Y_u / Y_n)^{1-n} = 1,1746$$

[2d]

text ln(L*/Lu)

$$dY / dY_u = (Y / Y_u)^{1-n}$$

[2e]

text L*/L*_u=e**x

$$\log(dY / dY_u) = (1-n) \log(Y / Y_u)$$

[2f]

hgp20-7a

hgp20-7n

**ΔY und
ΔY/ΔY_u** **CIELAB-Normfarbwertdifferenz**
ΔY normiert für ΔY_u

text lightness

$$L^* = s(Y/Y_n)^n - d \quad (Y_n=100, Y_u=18, s=116, n=1/3, d=16)$$

[1a]

$$L^* = r(Y/Y_n)^n - d \quad (r = s(Y_u/Y_n)^n = 65,49, L^*_u = r - d)$$

[1b]

text relative lightness

$$dY = [Y_n / (n s)] (Y / Y_n)^{1-n}$$

[2c]

text log(L*/L*_u)

$$dY_u = [Y_n / (n s)] (Y_u / Y_n)^{1-n} = 1,4602$$

[2d]

text ln(L*/Lu)

$$dY / dY_u = (Y / Y_u)^{1-n}$$

[2e]

text L*/L*_u=e**x

$$\log(dY / dY_u) = (1-n) \log(Y / Y_u)$$

[2f]

hgp20-6a

**ΔY und
ΔY/ΔY_u** **TUBsRGB-Normfarbwertdifferenz**
ΔY normiert für ΔY_u

text lightness

$$L^* = s(Y/Y_n)^n - d \quad (Y_n=100, Y_u=18, s=100, n=1/\ln(10), d=0)$$

[1a]

$$L^* = r(Y/Y_n)^n - d \quad (r = s(Y_u/Y_n)^n = 47,48, L^*_u = r - d)$$

[1b]

text relative lightness

$$dY = [Y_n / (n s)] (Y / Y_n)^{1-n}$$

[2c]

text log(L*/L*_u)

$$dY_u = [Y_n / (n s)] (Y_u / Y_n)^{1-n} = 1,0934$$

[2d]

text ln(L*/Lu)

$$dY / dY_u = (Y / Y_u)^{1-n}$$

[2e]

text L*/L*_u=e**x

$$\log(dY / dY_u) = (1-n) \log(Y / Y_u)$$

[2f]

hgp20-8a