

Equations: colorimetric data transfer from nce^* to olv^*_3 (rgb data) and LCH^*_a

Given: nce^* data (similar NCS) of any colour $nce^* = lab^*nce^*$ ($0 \leq n^*, c^*, e^* \leq 1$)

adapted CIELAB data $L^*, C^*_{ab,a}, h_{ab,a}, a^*_a, b^*_a$ of eight basic colours $X = OYLCVMNW$

Aim: rgb device data olv^*_3 and LCH^*_a of the given colour

elementary hue number of a colour e^* ($0 \leq e^* \leq 1$) (1)

CIELAB hue angle of colour and maximum colour M $h_{ab,a} = \text{function} [e^*]$ (with table/equation) (2)

relative whiteness of the given colour $w^* = 1 - n^* - c^*$ (3)

relative triangle lightness of the given colour $t^* = 1 - n^* - 0,5 c^*$ (4)

$olv^*_{3,M}$ data of maximum colour M $o^*_{3,M} = \text{function} [h_{ab,a}]$ (with table/equation) (5)

$l^*_{3,M} = \text{function} [h_{ab,a}]$ (with table/equation) (6)

$v^*_{3,M} = \text{function} [h_{ab,a}]$ (with table/equation) (7)

relative olv^*_3 data of the given colour $o^*_3 = w^* + c^* o^*_{3,M}$ (8)

$l^*_3 = w^* + c^* l^*_{3,M}$ (9)

$v^*_3 = w^* + c^* v^*_{3,M}$ (10)

adapted CIELAB $LCH^*_{a,M}$ data of maximum colour M $L^*_M = \text{function} [h_{ab,a}]$ (with table/equation) (11)

$C^*_{ab,a,M} = \text{function} [h_{ab,a}]$ (with table/equation) (12)

$h_{ab,a,M} = h_{ab,a}$ (13)

relative lightness of maximum colour M $l^*_M = [L^*_M - L^*_N] / [L^*_W - L^*_N]$ (14)

relative lightness of the given colour $l^* = t^* + l^*_M c^* + 0,5 c^*$ (15)

adapted CIELAB LCH^*_a data of the given colour $L^* = l^* [L^*_W - L^*_N] + L^*_N$ (16)

$C^*_{ab,a} = c^* C^*_{ab,a,M}$ (17)

$h_{ab,a} = h_{ab,a,M}$ (18)