Equations: colorimetric data transfer from rgb_e to nce^*_e data and $LCH^*_{a,e}$ data

Given: rgb_e **elementary colour data of any colour** rgb_e = lab^*rgb_e **and of 48 step colour circle** j=0 **to 47**
$rgb_{Me,j}$ **and adapted CIELAB data** $L^*_{Me,j}$, $C^*_{ab,a,Me,j}$, $h_{ab,a,Me,j}$ = $LCH^*_{a,Me,j}$

Aim: calculate nce^*_e **with** ($0 <= n^*_e, c^*_e, e^*_e <= 1$) **(similar to NCS data) and** $LCH^*_{a,e}$ **data of elementary colour**

Data of a given elementary (e) colour

relative chroma of the elementary colour	$c^*_e = max\,[\,rgb_e\,] - min\,[\,rgb_e\,]$	(1)
relative blackness of the elementary colour	$n^*_e = 1 - max\,[\,rgb_e\,]$	(2)
relative triangle lightness of the elementary colour	$t^*_e = 1 - n^*_e - 0{,}5\,c^*_e$	(3)
relative red-green chroma in 4x90 degree system s	$a^*_{rs,e} = r_e\,cos(0) + g_e\,cos(180)$	(4)
relative yellow-blue chroma in 4x90 degree system s	$b^*_{rs,e} = r_e\,sin(0) + g_e\,sin(180) + b_e\,sin(270)$	(5)
hue angle in 4x90 degree system s	$h_{ab,s,e} = arctan[\,b^*_{rs,e} / a^*_{rs,e}]$ ($0 <= h_{ab,s,e} <= 360$)	(6)
hue number in 4x90 degree system s	$e^*_e = h_{ab,s,e}/360$ ($0 <= e^*_e <= 1$)	(7)
CIELAB hue angle in elementary system	$h_{ab,a,e}$ = function $[h_{ab,s,e}]$ (with table/equations)	(8)
adapted CIELAB $LCH^*_{a,e}$ data of maximum colour M_e	L^*_{Me} = function $[h_{ab,a,e}]$ (with table/equations)	(9)
	$C^*_{ab,a,Me}$ = function $[h_{ab,a,e}]$ (with table/equations)	(10)
	$h_{ab,a,Me} = h_{ab,a,e}$	(11)
relative lightness of maximum colour M_e	$l^*_{Me} = [\,L^*_{Me} - L^*_{Ne}\,] / [\,L^*_{We} - L^*_{Ne}\,]$	(12)
relative lightness of the elementary colour	$l^*_e = t^*_e + l^*_{Me}\,c^*_e + 0{,}5\,c^*_e$	(13)
adapted CIELAB $LCH^*_{a,e}$ data of the elementary colour	$L^*_e = l^*_e\,[\,L^*_{We} - L^*_{Ne}\,] + L^*_{Ne}$	(14)
	$C^*_{ab,a,d} = c^*_e\,C^*_{ab,a,Me}$	(15)

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