

Colorimetric standard CIELAB data and linearly related adapted and relative CIELAB data

colori- metric name	family	family member	coordinate kind	coordinate (compare CIELAB $L^*, C^*_{ab}, h_{ab}, a^*, b^*$)	coordinate name
standard CIELAB	LAB*	LAB*LCH* or LAB*LAB*	cylindrical or kartesic	$L^* = LAB^*L^*$ $C^* = LAB^*C^*_{ab}$ $H^* = LAB^*h_{ab}$ $A^* = LAB^*a^*$ $B^* = LAB^*b^*$	lightness chroma hue angle red green chroma yellow blue chroma
adapted CIELAB (a)	LAB* _a	LAB*LCH* _a or LAB*LAB* _a	cylindrical or kartesic	$L^*_a = LAB^*_aL^*_a$ $C^*_a = LAB^*_aC^*_a$ $H^*_a = LAB^*_aH^*_a$	adapted lightness (= L^*) adapted chroma adapted hue angle ($0 \leq H^*_a \leq 360$)
relative CIELAB (r)	lab*	lab*lch* or lab*lab* or lab*tch* or lab*tab*	cylindrical kartesic cylindrical kartesic	$l^* = lab^*l^*$ $c^* = lab^*c^*$ $h^* = lab^*h^*$ $a^*_r = lab^*a^*_r$ $b^*_r = lab^*b^*_r$ $t^* = lab^*t^*$	relative lightness relative chroma relative hue relative a-red green chroma relative b-yellow blue chroma relative triangle lightness
		lab*nch* or lab*nce* or lab*ncu* or lab*tce* or lab*try*	triangle-cylindrical triangle-cylindrical triangle-cylindrical cylindrical kartesic	$n^* = lab^*n^*$ $c^* = lab^*c^*$ $h^* = lab^*h^*$ $e^* = lab^*e^*$ $u^* = lab^*u^*$ $r^* = lab^*r^*$ $y^* = lab^*y^*$ $t^* = lab^*t^*$	relative blackness relative chroma relative hue relative elementary hue text relative elementary hue relative r-red green chroma relative j-yellow blue chroma relative triangle lightness
		lab*rgb*d	kartesic	$r^*_d = lab^*r^*_d$ $g^*_d = lab^*g^*_d$ $b^*_d = lab^*b^*_d$	relative device red relative device green relative device blue
		lab*cm*y*d	kartesic	$c^*_d = lab^*c^*_d$ $m^*_d = lab^*m^*_d$ $y^*_d = lab^*y^*_d$	relative device cyan relative device magenta relative device yellow
		lab*rgb*e	kartesic	$r^*_e = lab^*r^*_e$ $g^*_e = lab^*g^*_e$ $b^*_e = lab^*b^*_e$	relative elementary red relative elementary green relative elementary blue
		lab*cm*y_e	kartesic	$c^*_e = lab^*c^*_e$ $m^*_e = lab^*m^*_e$ $y^*_e = lab^*y^*_e$	relative elementary cyan relative elementary magenta relative elementary yellow