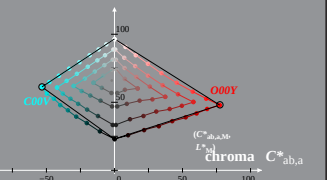
Linear relation CIELAB (*L**, *a**, *b**) and *adapted (a)* CIELAB ($C^*_{ab,a}$, *L**)
System: JE95_ORS20_95_D65_cmyn6*
Hue: h^*_{O00Y}=38 /360; h^*_{C00V}=236 /360

$l^*_{lab*}=(L^*-L^*_N)/(L^*_W-L^*_N)$
$a^*_a=a^*-a^*_N-l^*_{lab*}[a^*_W-a^*_N]$
$b^*_a=b^*-b^*_N-l^*_{lab*}[b^*_W-b^*_N]$
$C^*_{ab,a}=[a^{*2}_a+b^{*2}_a]^{1/2}$

lightness *L**

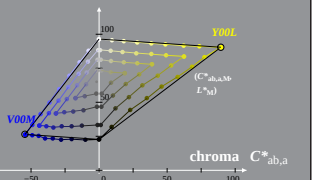


JE950−1 X, 1

Linear relation CIELAB (*L**, *a**, *b**) and *adapted (a)* CIELAB ($C^*_{ab,a}$, *L**)
System: JE95_ORS20_95_D65_cmyn6*
Hue: h^*_{Y00L}=96 /360; h^*_{V00M}=305 /360

$l^*_{lab*}=(L^*-L^*_N)/(L^*_W-L^*_N)$
$a^*_a=a^*-a^*_N-l^*_{lab*}[a^*_W-a^*_N]$
$b^*_a=b^*-b^*_N-l^*_{lab*}[b^*_W-b^*_N]$
$C^*_{ab,a}=[a^{*2}_a+b^{*2}_a]^{1/2}$

lightness *L**

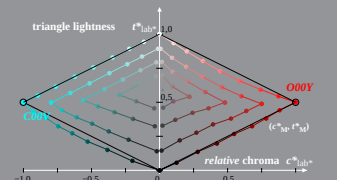


JE950−2 X, 1

Linear relation *adapted (a)* CIELAB ($C^*_{ab,a}$, *L**) and *relative* CIELAB (*c**, *t**)
System: JE95_ORS20_95_D65_cmyn6*
Hue: h^*_{O00Y}=38 /360; h^*_{C00V}=236 /360

$l^*_M=(L^*_M-L^*_N)/(L^*_W-L^*_N)$
$t^*_{lab*}=l^*_{lab*}-c^*_{lab*}[l^*_M-0,5]$
$c^*_{lab*}=C^*_{ab,a}/C^*_{ab,a,M}$
M=Maximum colour

triangle lightness t^*_{lab*}

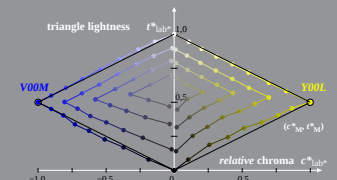


JE951−1 X, 1

Linear relation *adapted (a)* CIELAB ($C^*_{ab,a}$, *L**) and *relative* CIELAB (*c**, *t**)
System: JE95_ORS20_95_D65_cmyn6*
Hue: h^*_{Y00L}=96 /360; h^*_{V00M}=305 /360

$l^*_M=(L^*_M-L^*_N)/(L^*_W-L^*_N)$
$t^*_{lab*}=l^*_{lab*}-c^*_{lab*}[l^*_M-0,5]$
$c^*_{lab*}=C^*_{ab,a}/C^*_{ab,a,M}$
M=Maximum colour

triangle lightness t^*_{lab*}

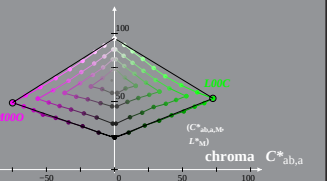


JE951−2 X, 1

Linear relation CIELAB (*L**, *a**, *b**) and *adapted (a)* CIELAB ($C^*_{ab,a}$, *L**)
System: JE95_ORS20_95_D65_cmyn6*
Hue: h^*_{L00C}=151 /360; h^*_{M00O}=354 /360

$l^*_{lab*}=(L^*-L^*_N)/(L^*_W-L^*_N)$
$a^*_a=a^*-a^*_N-l^*_{lab*}[a^*_W-a^*_N]$
$b^*_a=b^*-b^*_N-l^*_{lab*}[b^*_W-b^*_N]$
$C^*_{ab,a}=[a^{*2}_a+b^{*2}_a]^{1/2}$

lightness *L**

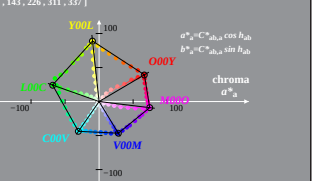


JE950−3 X, 1

Linear relation CIELAB (*L**, *a**, *b**) and *adapted (a)* CIELAB ($C^*_{ab,a}$, *L**)
System: JE95_ORS20_95_D65_cmyn6*

$l^*_{lab*}=(L^*-L^*_N)/(L^*_W-L^*_N)$
$a^*_a=a^*-a^*_N-l^*_{lab*}[a^*_W-a^*_N]$
$b^*_a=b^*-b^*_N-l^*_{lab*}[b^*_W-b^*_N]$
$C^*_{ab,a}=[a^{*2}_a+b^{*2}_a]^{1/2}$

CIELAB hue angles:
$h_{ab,d}$=[34 , 92 , 143 , 226 , 312 , 337]
$h_{ab,dc}$=[34 , 92 , 143 , 226 , 311 , 337]

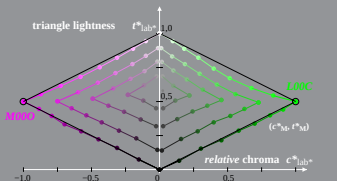


JE950−4 X, 1

Linear relation *adapted (a)* CIELAB ($C^*_{ab,a}$, *L**) and *relative* CIELAB (*c**, *t**)
System: JE95_ORS20_95_D65_cmyn6*
Hue: h^*_{L00C}=151 /360; h^*_{M00O}=354 /360

$l^*_M=(L^*_M-L^*_N)/(L^*_W-L^*_N)$
$t^*_{lab*}=l^*_{lab*}-c^*_{lab*}[l^*_M-0,5]$
$c^*_{lab*}=C^*_{ab,a}/C^*_{ab,a,M}$
M=Maximum colour

triangle lightness t^*_{lab*}

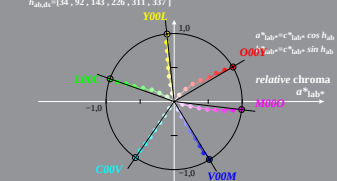


JE951−3 X, 1

Linear relation *adapted (a)* CIELAB ($C^*_{ab,a}$, *L**) and *relative* CIELAB (*c**, *t**)
System: JE95_ORS20_95_D65_cmyn6*

$l^*_M=(L^*_M-L^*_N)/(L^*_W-L^*_N)$
$t^*_{lab*}=l^*_{lab*}-c^*_{lab*}[l^*_M-0,5]$
$c^*_{lab*}=C^*_{ab,a}/C^*_{ab,a,M}$
M=Maximum colour

CIELAB hue angles:
$h_{ab,d}$=[34 , 92 , 143 , 226 , 312 , 337]
$h_{ab,dc}$=[34 , 92 , 143 , 226 , 311 , 337]

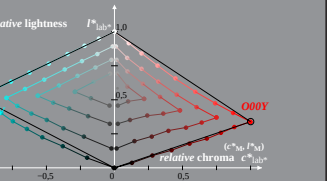


JE951−4 X, 1

Adapted (a) CIELAB ($C^*_{ab,a}$, *L**) and *relative* CIELAB (c^*_{lab*}, l^*_{lab*})
System: JE95_ORS20_95_D65_cmyn6*
Hue: h^*_{O00Y}=38 /360; h^*_{C00V}=236 /360

$l^*_{lab*}=(L^*-L^*_N)/(L^*_W-L^*_N)$
$c^*_{lab*}=C^*_{ab,a}/C^*_{ab,a,M}$
M=Maximum colour

relative lightness l^*_{lab*}

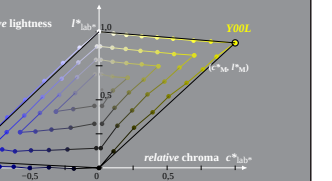


JE950−5 X, 1

Adapted (a) CIELAB ($C^*_{ab,a}$, *L**) and *relative* CIELAB (c^*_{lab*}, l^*_{lab*})
System: JE95_ORS20_95_D65_cmyn6*
Hue: h^*_{Y00L}=96 /360; h^*_{V00M}=305 /360

$l^*_{lab*}=(L^*-L^*_N)/(L^*_W-L^*_N)$
$c^*_{lab*}=C^*_{ab,a}/C^*_{ab,a,M}$
M=Maximum colour

relative lightness l^*_{lab*}

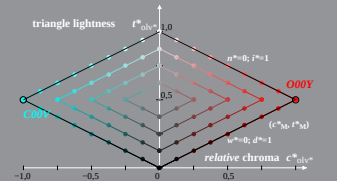


JE950−6 X, 1

Linear relation *olv** and *relative* chroma c^*_{olv*} and triangle lightness t^*_{olv*}
System: JE95_ORS20_95_D65_cmyn6*
Hue: h^*_{O00Y}=38 /360; h^*_{C00V}=236 /360
Result: $c^*_{olv*}=c^*_{lab*}$; $t^*_{olv*}=t^*_{lab*}$

c^*_{olv*}=max (*olv**) − min (*olv**)
n^*=1 − max (*olv**)= 1 − *i**
w^*=min (*olv**)= 1 − *d**
$t^*_{olv*}=w^*+0,5\,c^*_{olv*}$
M=Maximum colour

triangle lightness t^*_{olv*}

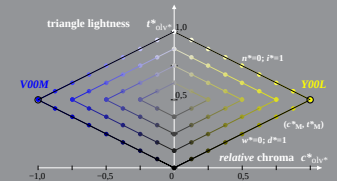


JE951−5 X, 1

Linear relation *olv** and *relative* chroma c^*_{olv*} and triangle lightness t^*_{olv*}
System: JE95_ORS20_95_D65_cmyn6*
Hue: h^*_{Y00L}=96 /360; h^*_{V00M}=305 /360
Result: $c^*_{olv*}=c^*_{lab*}$; $t^*_{olv*}=t^*_{lab*}$

c^*_{olv*}=max (*olv**) − min (*olv**)
n^*=1 − max (*olv**)= 1 − *i**
w^*=min (*olv**)= 1 − *d**
$t^*_{olv*}=w^*+0,5\,c^*_{olv*}$
M=Maximum colour

triangle lightness t^*_{olv*}

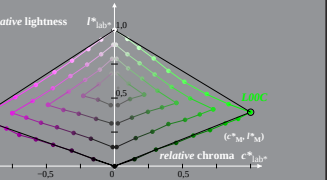


JE951−6 X, 1

Adapted (a) CIELAB ($C^*_{ab,a}$, *L**) and *relative* CIELAB (c^*_{lab*}, l^*_{lab*})
System: JE95_ORS20_95_D65_cmyn6*
Hue: h^*_{L00C}=151 /360; h^*_{M00O}=354 /360

$l^*_{lab*}=(L^*-L^*_N)/(L^*_W-L^*_N)$
$c^*_{lab*}=C^*_{ab,a}/C^*_{ab,a,M}$
M=Maximum colour

relative lightness l^*_{lab*}

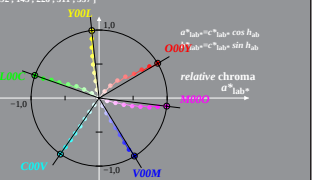


JE951−7 X, 1

Adapted (a) CIELAB ($C^*_{ab,a}$, *L**) and *relative* CIELAB (c^*_{lab*}, l^*_{lab*})
System: JE95_ORS20_95_D65_cmyn6*

$l^*_{lab*}=(L^*-L^*_N)/(L^*_W-L^*_N)$
$c^*_{lab*}=C^*_{ab,a}/C^*_{ab,a,M}$
M=Maximum colour

CIELAB hue angles:
$h_{ab,d}$=[34 , 92 , 143 , 226 , 312 , 337]
$h_{ab,dc}$=[34 , 92 , 143 , 226 , 311 , 337]

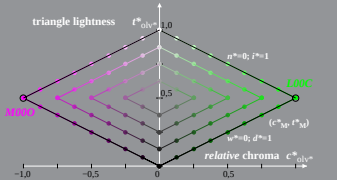


JE951−8 X, 1

Linear relation *olv** and *relative* chroma c^*_{olv*} and triangle lightness t^*_{olv*}
System: JE95_ORS20_95_D65_cmyn6*
Hue: h^*_{L00C}=151 /360; h^*_{M00O}=354 /360
Result: $c^*_{olv*}=c^*_{lab*}$; $t^*_{olv*}=t^*_{lab*}$

c^*_{olv*}=max (*olv**) − min (*olv**)
n^*=1 − max (*olv**)= 1 − *i**
w^*=min (*olv**)= 1 − *d**
$t^*_{olv*}=w^*+0,5\,c^*_{olv*}$
M=Maximum colour

triangle lightness t^*_{olv*}

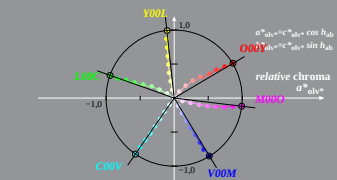


JE951−7 X, 1

Linear relation *olv** and *relative* chroma c^*_{olv*} or chroma a^*_{olv*}, b^*_{olv*}
System: JE95_ORS20_95_D65_cmyn6*
Result: $c^*_{olv*}=c^*_{lab*}$; $t^*_{olv*}=t^*_{lab*}$

c^*_{olv*}=max (*olv**) − min (*olv**)
n^*=1 − max (*olv**)= 1 − *i**
w^*=min (*olv**)= 1 − *d**
$t^*_{olv*}=w^*+0,5\,c^*_{olv*}$

CIELAB hue angles:



JE951−8 X, 1