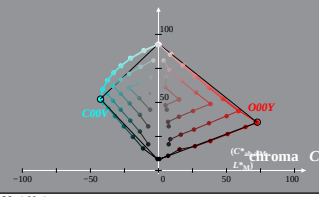
See original or copy: http://web.me.com/klaus.richter/JE98/JE98L0NP.PDF /.PS
Technical information: http://www.ps.bam.de or http://130.149.60.45/~farbmetrik

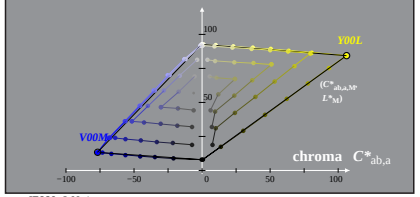
TUB registration: 20100301-JE98/JE98L0NP.PDF /.PS
application for evaluation and measurement of printer or monitor systems
TUB material: code=rha4ta

Linear relation CIELAB (L^*, a^*, b^*) and *adapted (a)* CIELAB ($C^*_{ab,a}$, L^*)
System: JE98_FRS09_92_D65_olv*
Hue: h^*_{O00Y}=38 /360; h^*_{C00V}=236 /360
$l^*_{lab*}=(L^*-L^*_N)/(L^*_W-L^*_N)$
$a^*_a=a^*-a^*_N-l^*_{lab*}[a^*_W-a^*_N]$
$b^*_a=b^*-b^*_N-l^*_{lab*}[b^*_W-b^*_N]$
$C^*_{ab,a}=[a^{*2}_a+b^{*2}_a]^{1/2}$



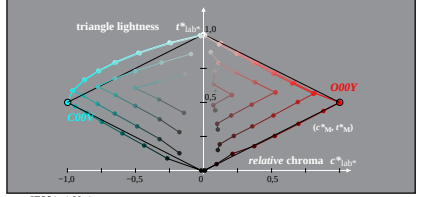
JE980−1 N, 1

Linear relation CIELAB (L^*, a^*, b^*) and *adapted (a)* CIELAB ($C^*_{ab,a}$, L^*)
System: JE98_FRS09_92_D65_olv*
Hue: h^*_{Y00L}=96 /360; h^*_{V00M}=305 /360
$l^*_{lab*}=(L^*-L^*_N)/(L^*_W-L^*_N)$
$a^*_a=a^*-a^*_N-l^*_{lab*}[a^*_W-a^*_N]$
$b^*_a=b^*-b^*_N-l^*_{lab*}[b^*_W-b^*_N]$
$C^*_{ab,a}=[a^{*2}_a+b^{*2}_a]^{1/2}$



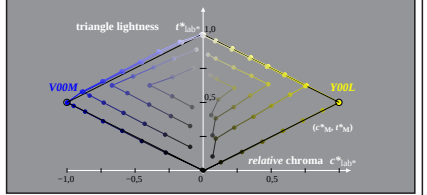
JE980−2 N, 1

Linear relation *adapted (a)* CIELAB ($C^*_{ab,a}$, L^*) and *relative* CIELAB (c^*, t^*)
System: JE98_FRS09_92_D65_olv*
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



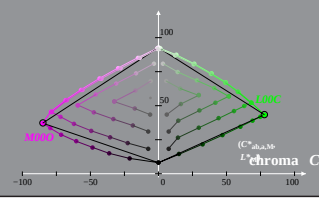
JE981−1 N, 1

Linear relation *adapted (a)* CIELAB ($C^*_{ab,a}$, L^*) and *relative* CIELAB (c^*, t^*)
System: JE98_FRS09_92_D65_olv*
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



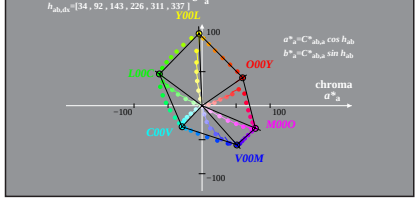
JE981−2 N, 1

Linear relation CIELAB (L^*, a^*, b^*) and *adapted (a)* CIELAB ($C^*_{ab,a}$, L^*)
System: JE98_FRS09_92_D65_olv*
Hue: h^*_{L00C}=151 /360; h^*_{M00O}=354 /360
$l^*_{lab*}=(L^*-L^*_N)/(L^*_W-L^*_N)$
$a^*_a=a^*-a^*_N-l^*_{lab*}[a^*_W-a^*_N]$
$b^*_a=b^*-b^*_N-l^*_{lab*}[b^*_W-b^*_N]$
$C^*_{ab,a}=[a^{*2}_a+b^{*2}_a]^{1/2}$



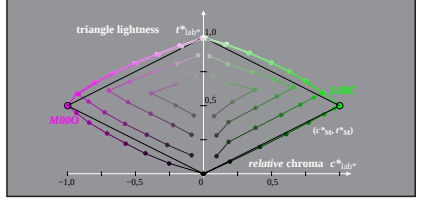
JE980−3 N, 1

Linear relation CIELAB (L^*, a^*, b^*) and *adapted (a)* CIELAB ($C^*_{ab,a}$, L^*)
System: JE98_FRS09_92_D65_olv*
$l^*_{lab*}=(L^*-L^*_N)/(L^*_W-L^*_N)$
$a^*_a=a^*-a^*_N-l^*_{lab*}[a^*_W-a^*_N]$
$b^*_a=b^*-b^*_N-l^*_{lab*}[b^*_W-b^*_N]$
$C^*_{ab,a}=[a^{*2}_a+b^{*2}_a]^{1/2}$
CIELAB hue angles:
$h_{ab,a}$=[34 , 92 , 143 , 226 , 312 , 337]
$h_{ab,dc}$=[34 , 92 , 143 , 226 , 311 , 337]
$a^*_a=C^*_{ab,a}\cos h_{ab}$
$b^*_a=C^*_{ab,a}\sin h_{ab}$



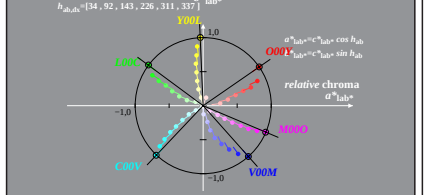
JE980−4 N, 1

Linear relation *adapted (a)* CIELAB ($C^*_{ab,a}$, L^*) and *relative* CIELAB (c^*, t^*)
System: JE98_FRS09_92_D65_olv*
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



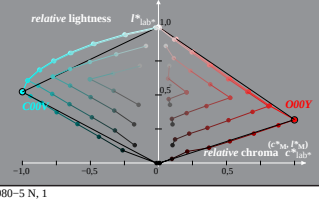
JE981−3 N, 1

Linear relation *adapted (a)* CIELAB ($C^*_{ab,a}$, L^*) and *relative* CIELAB (c^*, t^*)
System: JE98_FRS09_92_D65_olv*
$l^*_M=(L^*_M-L^*_N)/(L^*_W-L^*_N)$
$t^*_{lab*}=l^*_{lab*}-c^*_{lab*}[l^*_M-0,5]$
$c^*_{lab*}=C^*_{ab,a}/C^*_{ab,a,M}$
M=Maximum colour
CIELAB hue angles:
$h_{ab,a}$=[34 , 92 , 143 , 226 , 312 , 337]
$h_{ab,dc}$=[34 , 92 , 143 , 226 , 311 , 337]
$a^*_{lab*}=c^*_{lab*}\cos h_{ab}$
$b^*_{lab*}=c^*_{lab*}\sin h_{ab}$



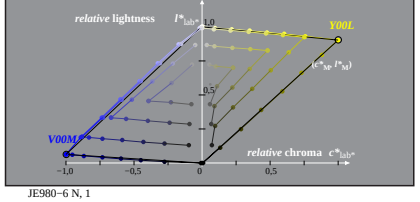
JE981−4 N, 1

***Adapted (a)* CIELAB ($C^*_{ab,a}$, L^*) and *relative* CIELAB (c^*_{lab*}, l^*_{lab*})**
System: JE98_FRS09_92_D65_olv*
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



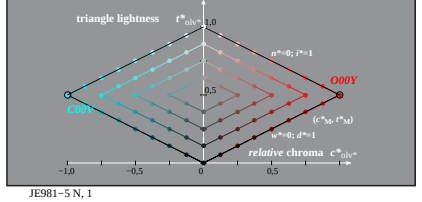
JE980−5 N, 1

***Adapted (a)* CIELAB ($C^*_{ab,a}$, L^*) and *relative* CIELAB (c^*_{lab*}, l^*_{lab*})**
System: JE98_FRS09_92_D65_olv*
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



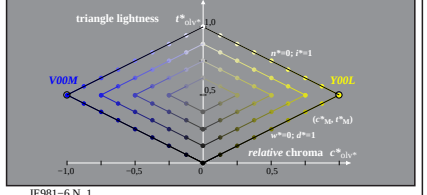
JE980−6 N, 1

Linear relation *olv and *relative* chroma c^*_{olv*} and triangle lightness t^*_{olv*}**
System: JE98_FRS09_92_D65_olv*
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



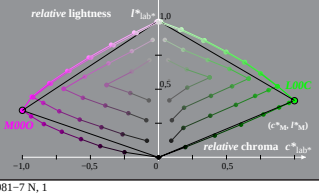
JE981−5 N, 1

Linear relation *olv and *relative* chroma c^*_{olv*} and triangle lightness t^*_{olv*}**
System: JE98_FRS09_92_D65_olv*
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



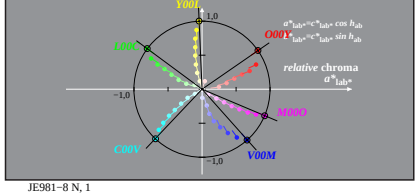
JE981−6 N, 1

***Adapted (a)* CIELAB ($C^*_{ab,a}$, L^*) and *relative* CIELAB (c^*_{lab*}, l^*_{lab*})**
System: JE98_FRS09_92_D65_olv*
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



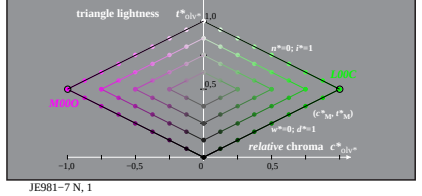
JE981−7 N, 1

***Adapted (a)* CIELAB ($C^*_{ab,a}$, L^*) and *relative* CIELAB (c^*_{lab*}, l^*_{lab*})**
System: JE98_FRS09_92_D65_olv*
$l^*_{lab*}=(L^*-L^*_N)/(L^*_W-L^*_N)$
$c^*_{lab*}=C^*_{ab,a}/C^*_{ab,a,M}$
M=Maximum colour
CIELAB hue angles:
$h_{ab,a}$=[34 , 92 , 143 , 226 , 312 , 337]
$h_{ab,dc}$=[34 , 92 , 143 , 226 , 311 , 337]
$a^*_{lab*}=c^*_{lab*}\cos h_{ab}$
$b^*_{lab*}=c^*_{lab*}\sin h_{ab}$



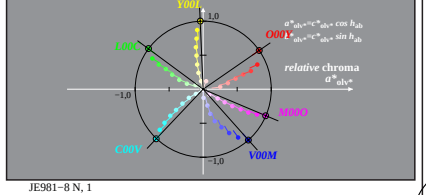
JE981−8 N, 1

Linear relation *olv and *relative* chroma c^*_{olv*} and triangle lightness t^*_{olv*}**
System: JE98_FRS09_92_D65_olv*
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



JE981−7 N, 1

Linear relation *olv and *relative* chroma c^*_{olv*} or chroma a^*_{olv*}, b^*_{olv*}**
System: JE98_FRS09_92_D65_olv*
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:
$a^*_{lab*}=c^*_{lab*}\cos h_{ab}$
$b^*_{lab*}=c^*_{lab*}\sin h_{ab}$



JE981−8 N, 1

JE980−7N: Measurement: JE98_FRS09_92_D65_olv*_LUT.DAT, 243 colours, 090115, Separation olv*, adapted