

Linear relation CIELAB ( $L^*$ ,  $a^*$ ,  $b^*$ ) and *adapted (a)* CIELAB ( $C^*_{ab,a}$ ,  $L^*$ )  
 System: HE90\_HRS16\_96\_D65\_00%\_O0

CIELAB hue angles:

$h_{ab,d}=[32, 100, 145, 206, 265, 348]$

$h_{ab,ex}=[26, 92, 162, 217, 272, 329]$

$h_{ab,e}=[26, 92, 162, 217, 272, 329]$

$$I^*_{lab*}=(L^*-L^*_N)/(L^*_W-L^*_N)$$

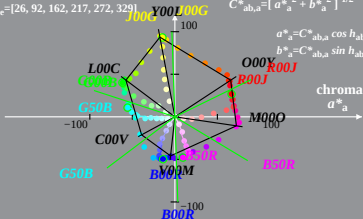
$$a^*_a=a^*-a^*_N-I^*_{lab*}[a^*_W-a^*_N]$$

$$b^*_a=b^*-b^*_N-I^*_{lab*}[b^*_W-b^*_N]$$

$$C^*_{ab,a}=[a^{*2}_a+b^{*2}_a]^{1/2}$$

$$a^*_a=C^*_{ab,a}\cos h_{ab}$$

$$b^*_a=C^*_{ab,a}\sin h_{ab}$$



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

System: HE90\_HRS16\_96\_D65\_00%\_O1  $L^*_{lab,a} = (L^* - L^*_N) / (L^*_W - L^*_N)$

CIELAB hue angles:

$h_{ab,d} = [32, 100, 145, 206, 265, 348]$

$h_{ab,ex} = [26, 92, 162, 217, 272, 329]$

$h_{ab,e} = [26, 92, 162, 217, 272, 329]$

$$a^*_{a} = a^* - a^*_N - L^*_{lab,a} [a^*_W - a^*_N]$$

$$b^*_{a} = b^* - b^*_N - L^*_{lab,a} [b^*_W - b^*_N]$$

$$C^*_{ab,a} = [a^{*2}_{a} + b^{*2}_{a}]^{1/2}$$

$$a^*_{a} = C^*_{ab,a} \cos h_{ab}$$

$$b^*_{a} = C^*_{ab,a} \sin h_{ab}$$

