

Linear relation CIELAB ( $L^*$ ,  $a^*$ ,  $b^*$ ) and adapted (a) CIELAB ( $C^*_{ab,a}$ ,  $L^*$ )  
System: F\_PRS09\_ZE45N\_CM\_ON  $L^*_{adp} = (L^* - L^*_{min}) / (L^*_{max} - L^*_{min})$

**CIELAB hue angles:**

$$h_{ab,d} = [38, 100, 133, 222, 288, 333]$$

$$I_{\text{lab}}^* = (L^* - L_N^*) / (L_W^* - L_N^*)$$

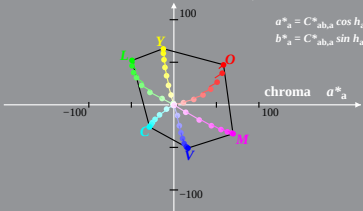
$$a^*_{\text{a}} = a^* - a^*_{\text{N}} - I^*_{\text{lab}} [ a^*_{\text{W}} - a^*_{\text{N}} ]$$

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

$$C_{ab,a}^* = [a_a^{*2} + b_a^{*2}]^{1/2}$$

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

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



Linear relation CIELAB ( $L^*$ ,  $a^*$ ,  $b^*$ ) and *adapted (a)* CIELAB ( $C^*_{ab,a}$ ,  $L^*$ )  
 System: F\_PRS09\_ZE45N\_CM\_OF

CIELAB hue angles:

$h_{ab,d} = [35, 92, 142, 228, 311, 337]$

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

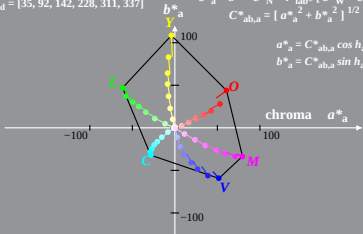
$$a^*_a = a^* - a^*_N - l^*_{lab^*} [a^*_W - a^*_N]$$

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

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

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

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



Linear relation CIELAB ( $L^*$ ,  $a^*$ ,  $b^*$ ) and *adapted (a)* CIELAB ( $C^*_{ab,a}$ ,  $L^*$ )  
 System: F\_PR509\_ZE45F\_CM\_ON

CIELAB hue angles:

$h_{ab,d} = [38, 100, 136, 223, 289, 333]$

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

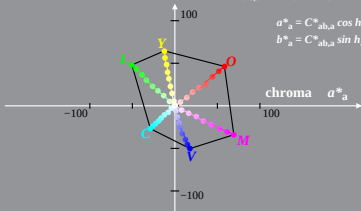
$$a^*_a = a^* - a^*_N - l^*_{lab^*} [a^*_W - a^*_N]$$

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

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

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

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Linear relation CIELAB ( $L^*$ ,  $a^*$ ,  $b^*$ ) and *adapted (a)* CIELAB ( $C^*_{ab,a}$ ,  $L^*$ )  
 System: F\_PR509\_ZE45F\_CM\_OF

CIELAB hue angles:

$h_{ab,d} = [35, 91, 142, 228, 311, 337]$

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

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

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

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

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

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

