

Linear relation CIELAB ( $L^*, a^*, b^*$ ) and adapted (a) CIELAB ( $C^*_{ab,a}, L^*$ )  
System: ORS18a

$$l^* = (L^* - L^*_N) / (L^*_W - L^*_N)$$

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

CIELAB hue angles:

$$h_{ab} = [38, 96, 151, 236, 305, 354]$$

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

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

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

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

