

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

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

$$a^*_{ab} = a^* - a^*_{N} - l^*_{lab^*} [a^*_{W} - a^*_{N}]$$

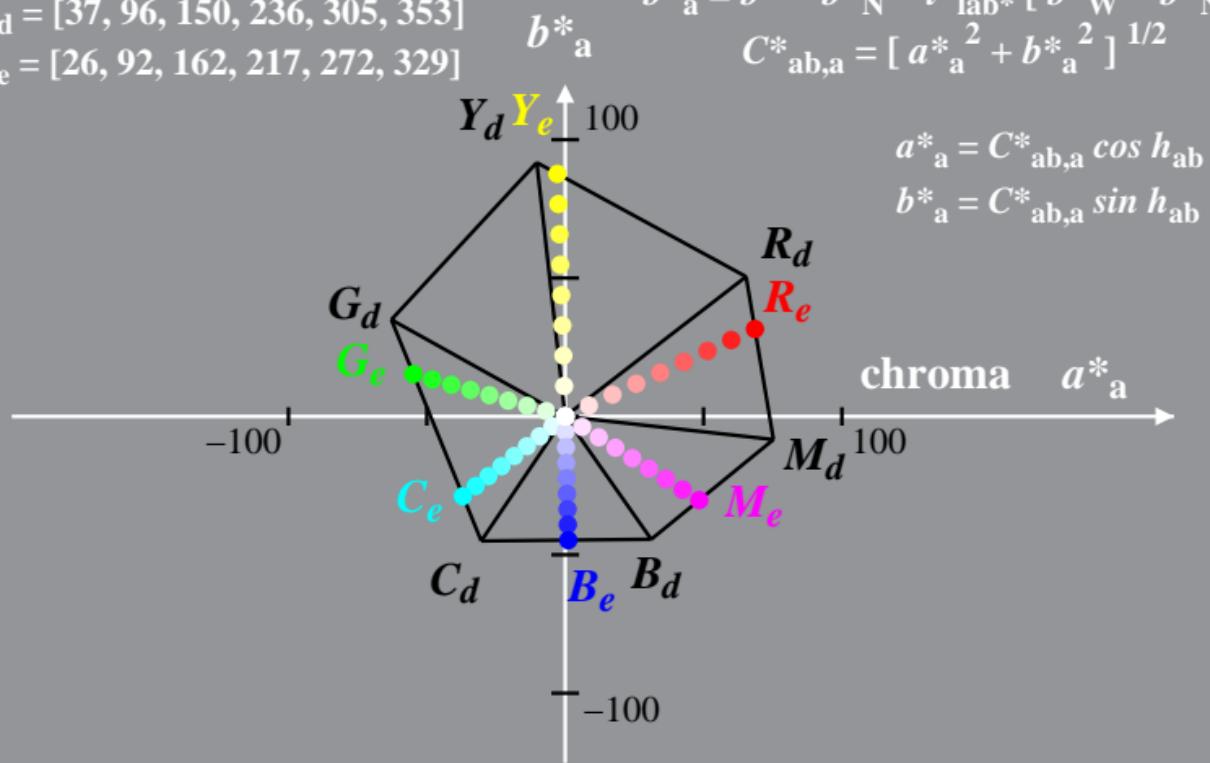
$$b^*_{ab} = b^* - b^*_{N} - l^*_{lab^*} [b^*_{W} - b^*_{N}]$$

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

CIELAB hue angles:

$$h_{ab,d} = [37, 96, 150, 236, 305, 353]$$

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



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

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