

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

System: TLS70

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

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

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

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

CIELAB hue angles:

$$h_{ab,d} = [21, 107, 142, 197, 293, 326]$$

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

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

