

Linear relation CIELAB (L^* , a^* , b^*) and adapted (a) CIELAB ($C^*_{ab,a}$, L^*)
 System: ORS18

CIELAB hue angles:

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

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

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

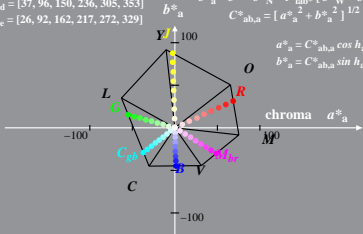
$$a^*_{\ a} = a^* - a^*_N - l^*_{lab^*} [a^*_W - a^*_N]$$

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

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

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

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



Linear relation CIELAB (L^* , a^* , b^*) and adapted (a) CIELAB ($C^*_{ab,a}$, L^*)
 System: TLS00

CIELAB hue angles:

$$h_{ab,d} = [40, 102, 136, 196, 306, 328]$$

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

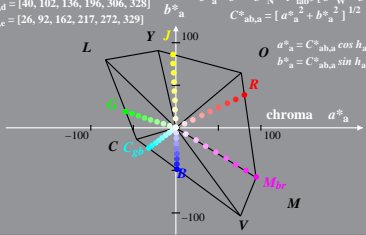
$$l^*_{lab^*} = (L^* - L^*_N) / (L^*_W - L^*_N)$$

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

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

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

$$O \quad \begin{aligned} a^*_{\ a} &= C^*_{ab,a} \cos h_{ab} \\ b^*_{\ a} &= C^*_{ab,a} \sin h_{ab} \end{aligned}$$



Linear relation CIELAB (L^* , a^* , b^*) and adapted (a) CIELAB ($C^*_{ab,a}$, L^*)
 System: FRS06

CIELAB hue angles:

$h_{ab,d} = [36, 91, 143, 231, 312, 337]$

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

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

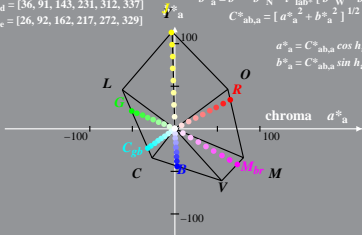
$$a^*_{\ a} = a^* - a^*_N - l^*_{lab^*} [a^*_W - a^*_N]$$

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

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

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

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



Linear relation CIELAB (L^* , a^* , b^*) and adapted (a) CIELAB ($C^*_{ab,a}$, L^*)
 System: TSL18

CIELAB hue angles:

$$h_{ab,d} = [34, 103, 136, 196, 304, 328]$$

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

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

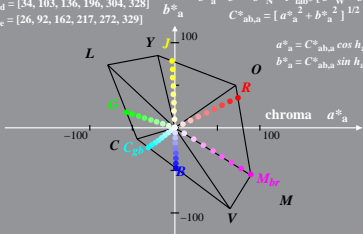
$$a^*_{\ a} = a^* - a^*_N - l^*_{lab^*} [a^*_W - a^*_N]$$

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

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

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

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



Linear relation CIELAB (L^* , a^* , b^*) and adapted (a) CIELAB ($C^*_{ab,a}$, L^*)
 System: NLS00

CIELAB hue angles:

$$h_{ab,d} = [29, 89, 150, 209, 270, 330]$$

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

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

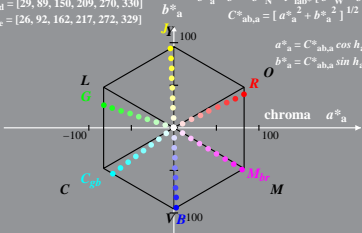
$$a^*_{\ a} = a^* - a^*_N - l^*_{lab^*} [a^*_W - a^*_N]$$

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

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

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

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



Linear relation CIELAB (L^* , a^* , b^*) and adapted (a) CIELAB ($C^*_{ab,a}$, L^*)
 System: NLS18

CIELAB hue angles:

$$h_{ab,d} = [30, 89, 149, 210, 270, 329]$$

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

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

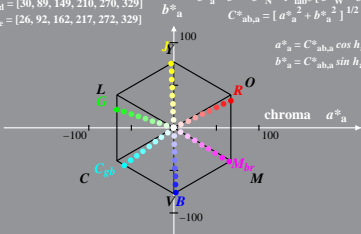
$$a^*_{\ a} = a^* - a^*_N - l^*_{lab^*} [a^*_W - a^*_N]$$

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

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

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

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



Linear relation CIELAB (L^* , a^* , b^*) and adapted (a) CIELAB ($C^*_{ab,a}$, L^*)
 System: NRS11

CIELAB hue angles:

$$h_{ab,d} = [23, 90, 167, 202, 272, 325]$$

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

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

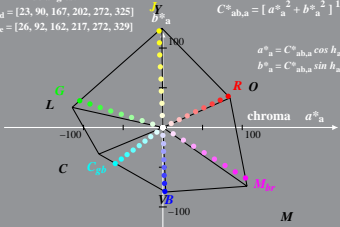
$$a^*_{\ a} = a^* - a^*_N - l^*_{lab^*} [a^*_W - a^*_N]$$

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

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

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

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



Linear relation CIELAB (L^* , a^* , b^*) and adapted (a) CIELAB ($C^*_{ab,a}$, L^*)
 System: TLS70

CIELAB hue angles:

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

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

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

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

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

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

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

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

