

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

System: Laser printer

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

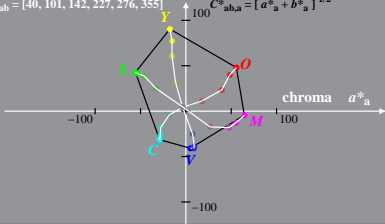
$$a^*_a = a^* - a^*_N - l^*_{lab*} [a^*_W - a^*_N]$$

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

CIELAB hue angles:

$h_{ab} = [40, 101, 142, 227, 276, 355]$

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



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

System: Laser printer

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

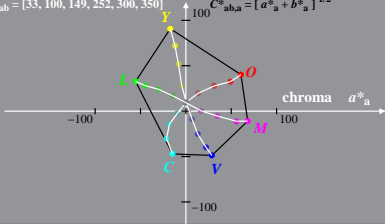
$$a^*_a = a^* - a^*_N - l^*_{lab*} [a^*_W - a^*_N]$$

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

CIELAB hue angles:

$$h_{ab} = [33, 100, 149, 252, 300, 350]$$

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



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

**System: Laser printer**

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

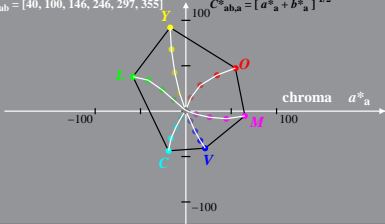
$$a^*_a = a^* - a^*_N - l^*_{lab^*} [a^*_W - a^*_N]$$

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

**CIELAB hue angles:**

$$h_{ab} = [40, 100, 146, 246, 297, 355]$$

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



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

System: Laser printer

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

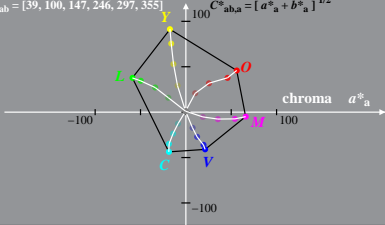
$$a^*_a = a^* - a^*_N - l^*_{lab*} [a^*_W - a^*_N]$$

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

CIELAB hue angles:

$h_{ab} = [39, 100, 147, 246, 297, 355]$

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



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

**System: Laser printer**

**CIELAB hue angles:**

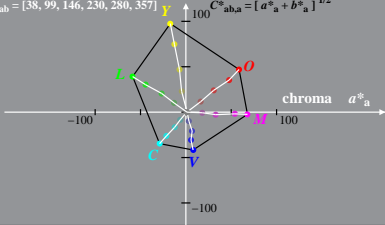
$h_{ab} = [38, 99, 146, 230, 280, 357]$

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

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

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

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



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

**System: Laser printer**

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

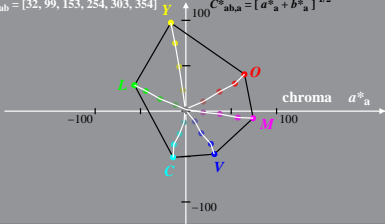
$$a^*_a = a^* - a^*_N - l^*_{lab*} [a^*_W - a^*_N]$$

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

**CIELAB hue angles:**

$$h_{ab} = [32, 99, 153, 254, 303, 354]$$

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



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

**System: Laser printer**

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

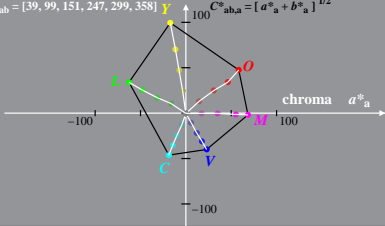
$$a^*_a = a^* - a^*_N - l^*_{lab^*} [a^*_W - a^*_N]$$

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

**CIELAB hue angles:**

$$h_{ab} = [39, 99, 151, 247, 299, 358]$$

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



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

System: Laser printer

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

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

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

CIELAB hue angles:

$$h_{ab} = [40, 99, 151, 247, 299, 359]$$

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

