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technical information: <http://farbe.li.tu-berlin.de> or <http://130.149.60.45/~farbmeterik>

color threshold formula LABJNDS 1985 (JND=just noticeable difference)

$$\Delta E_{\text{JND}}^* = Y_0 [(\Delta Y)^2 + (a_0 \Delta a'' \cdot Y)^2 + (b_0 \Delta b'' \cdot Y)^2]^{1/2} / (s + d Y^e)$$
$$a = x/y \quad a_n = x_n/y_n \quad b = -0,4 z/y \quad b_n = -0,4 z_n/y_n$$
$$a'' = a_n + (a - a_n) / (1 + 0,5 |a - a_n|) \quad n = D65 \text{ or } A (\text{surround})$$
$$b'' = b_n + (b - b_n) / (1 + 0,5 |b - b_n|)$$
$$Y = (Y_1 + Y_2) / 2 \quad \Delta Y = Y_1 - Y_2 \quad \Delta a'' = a_1'' - a_2'' \quad \Delta b'' = b_1'' - b_2''$$
$$s = 0,0170 \quad d = 0,0058 \quad e = 1,0$$
$$a_0 = 1,0 \quad b_0 = 1,8 \quad Y_0 = 1,5 \quad \text{surround } D65$$
$$a_0 = 1,0 \quad b_0 = 1,7 \quad Y_0 = 1,0 \quad \text{surround } A$$

CET10-7, BT4_01

color mixture and color attributes of low and high color metrics

	mode of color mixture	
	dichromatic	trichromatic
lower color- or valence metrics:		
white value W	V	V
black value N	$100 - Y$	$100 - O$
chromatic value C	$Y - V$	$O - V$
higher color- or sensation metrics:		
whiteness W^*	V^*	V^*
blackness N^*	$100 - Y^*$	$100 - O^*$
chromaticness C^*	$Y^* - V^*$	$O^* - V^*$

CET10-3, BT2_01