

# WCGa data $rgb^*$ , $XYZ_{xy}$ , and $L^*ABCh_{AB2}$ in $L^*AB2$ JND-colour space

Tristimulus values of black and white:  $Y_N=0,0$ ,  $Y_W=88,6$

|       | $rgb_d^*$ | $L_d^*$ | $A_{2,d}$ | $B_{2,d}$ | $C_{AB2,d}$ | $h_{AB2,d}$ |
|-------|-----------|---------|-----------|-----------|-------------|-------------|
| $R_d$ | 1 0 0     | 55      | 83        | 20        | 85          | 13          |
| $Y_d$ | 1 1 0     | 93      | 2         | 70        | 70          | 88          |
| $G_d$ | 0 1 0     | 81      | -81       | 50        | 95          | 148         |
| $C_d$ | 0 1 1     | 85      | -85       | -19       | 87          | 192         |
| $B_d$ | 0 0 1     | 27      | -2        | -70       | 70          | 268         |
| $M_d$ | 1 0 1     | 60      | 81        | -50       | 95          | 328         |
| $N_d$ | 0 0 0     | 0       | 0         | 0         | 0           | 0           |
| $W_d$ | 1 1 1     | 95      | 0         | 0         | 0           | 0           |

$$a_2 = a_{20} [ (x - x_c) / y ]$$

$$b_2 = b_{20} [ z / y ]$$

$$a_{20} = 1, \quad b_{20} = -0,4$$

$$x_c = 0,110, \quad B_c = 0,800$$

$$A_2 = 2,5 (a_2 - a_{2,n}) Y \quad [1d]$$

$$B_2 = 2,5 B_c (b_2 - b_{2,n}) Y \quad [2d]$$

$$C_{AB2} = [ A_2^2 + B_2^2 ]^{0,5} \quad [3d]$$

$$h_{AB2} = \text{atan} [ B_2 / A_2 ] \quad [4d]$$

