

| Basic television colour or<br>mixture colour for D65<br>CIE data for $Y_W=100$                                                                                                                                                                                                                                                                                                                       | chromaticity |       | tristimulus values<br>( $Y_d=100,0$ for white D65) |        |        | Standard CIELAB data $LabC^*_{ab}h_{ab}$<br>( $L^*_d=100,0$ for white; $L^*_d=0,0$ for black) |         |         |              |            | Standard YABCh data $YABC_{AB}h_{AB}$<br>( $Y_d=100,0$ for white; $Y_d=0,0$ for black) |        |        |            |            |
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|                                                                                                                                                                                                                                                                                                                                                                                                      | $x_d$        | $y_d$ | $X_d$                                              | $Y_d$  | $Z_d$  | $L^*_d$                                                                                       | $a^*_d$ | $b^*_d$ | $C^*_{ab,d}$ | $h_{ab,d}$ | $Y_d$                                                                                  | $A_d$  | $B_d$  | $C_{AB,d}$ | $h_{AB,d}$ |
| three additive mixture colours: television colours according to ITU-R BT.709.3 and sRGB display according to IEC 61966-2-1                                                                                                                                                                                                                                                                           |              |       |                                                    |        |        |                                                                                               |         |         |              |            |                                                                                        |        |        |            |            |
| $C_d$ cyan (cyan blue)                                                                                                                                                                                                                                                                                                                                                                               | 0,224        | 0,328 | 53,81                                              | 78,74  | 106,98 | 91,11                                                                                         | -48,08  | -14,13  | 50,11        | 196        | 78,74                                                                                  | -22,12 | -7,79  | 23,46      | 199        |
| $M_d$ magenta (magenta red)                                                                                                                                                                                                                                                                                                                                                                          | 0,320        | 0,154 | 59,28                                              | 28,48  | 96,99  | 60,31                                                                                         | 98,22   | -60,84  | 115,54       | 328        | 28,48                                                                                  | 33,88  | -24,23 | 41,66      | 324        |
| $Y_d$ yellow                                                                                                                                                                                                                                                                                                                                                                                         | 0,419        | 0,505 | 76,99                                              | 92,78  | 13,85  | 97,13                                                                                         | -21,57  | 94,48   | 96,91        | 102        | 92,78                                                                                  | -11,77 | 32,02  | 34,12      | 110        |
| three additive basic colours: television colours according to ITU-R BT.709.3 and sRGB display according to IEC 61966-2-1                                                                                                                                                                                                                                                                             |              |       |                                                    |        |        |                                                                                               |         |         |              |            |                                                                                        |        |        |            |            |
| $R_d$ Red (orange red)                                                                                                                                                                                                                                                                                                                                                                               | 0,640        | 0,330 | 41,23                                              | 21,26  | 1,93   | 53,23                                                                                         | 80,07   | 67,19   | 104,53       | 40         | 21,26                                                                                  | 22,11  | 7,79   | 23,45      | 19         |
| $G_d$ Green (leaf green)                                                                                                                                                                                                                                                                                                                                                                             | 0,300        | 0,600 | 35,76                                              | 71,52  | 11,91  | 87,73                                                                                         | -86,18  | 83,18   | 119,78       | 136        | 71,52                                                                                  | -33,89 | 24,22  | 41,66      | 144        |
| $B_d$ Blue (violet blue)                                                                                                                                                                                                                                                                                                                                                                             | 0,150        | 0,060 | 18,05                                              | 7,22   | 95,06  | 32,30                                                                                         | 79,19   | -107,86 | 133,81       | 306        | 7,22                                                                                   | 11,77  | -32,02 | 34,12      | 290        |
| achromatic colours and equations:<br>$X_0 = X_d / 0,9505$ ; $Y_0 = Y_d$ ; $Z_0 = Z_d / 1,0890$ ; $A_d = X_0 - Y_0$ ; $B_d = 0,4 [Y_0 - Z_0]$ ; $C_{AB,d} = [A_d^2 + B_d^2]^{1/2}$ ; $h_{AB,d} = \text{atan}[B_d / A_d]$<br>or $a_n = x_w / y_w$ ; $b_n = -0,4 [z_w / y_w]$ ; $a_d = x_d / y_d$ ; $b_d = -0,4 [z_d / y_d]$ ; $A_d = [a_d - a_n] Y_d$ ; $B_d = [b_d - b_n] Y_d$ ; compare CIE 230:2019 |              |       |                                                    |        |        |                                                                                               |         |         |              |            |                                                                                        |        |        |            |            |
| $W_0$ (white monitor, 100%)                                                                                                                                                                                                                                                                                                                                                                          | 0,312        | 0,329 | 95,05                                              | 100,00 | 108,90 | 100,00                                                                                        | 0,00    | 0,00    | 0,00         | 0          | 100,00                                                                                 | 0,00   | 0,00   | 0,00       | 0          |
| $W_1$ (white monitor, 88,6%)                                                                                                                                                                                                                                                                                                                                                                         | 0,312        | 0,329 | 84,21                                              | 88,60  | 96,48  | 95,40                                                                                         | 0,00    | 0,00    | 0,00         | 0          | 88,60                                                                                  | 0,00   | 0,00   | 0,00       | 0          |
| $N_1$ (black monitor, 2,5%)                                                                                                                                                                                                                                                                                                                                                                          | 0,312        | 0,329 | 2,37                                               | 2,50   | 2,72   | 18,00                                                                                         | 0,00    | 0,00    | 0,00         | 0          | 2,50                                                                                   | 0,00   | 0,00   | 0,00       | 0          |
| $N_0$ (black monitor, 0,00%)                                                                                                                                                                                                                                                                                                                                                                         | 0,312        | 0,329 | 0,00                                               | 0,00   | 0,00   | 0,00                                                                                          | 0,00    | 0,00    | 0,00         | 0          | 0,00                                                                                   | 0,00   | 0,00   | 0,00       | 0          |

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| Basic television colour or<br>mixture colour for D65<br>CIE data for $Y_W=100$                                                                                                                                                                                                                                                                                                                       | chromaticity |       | tristimulus values<br>( $Y_d=100,0$ for white D65) |        |        | Standard CIELAB data $LabC^*_{ab}h_{ab}$<br>( $L^*_d=100,0$ for white; $L^*_d=0,0$ for black) |         |         |              |            | Standard YABCh data $YABC_{AB}h_{AB}$<br>( $Y_d=100,0$ for white; $Y_d=0,0$ for black) |        |        |            |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------|----------------------------------------------------|--------|--------|-----------------------------------------------------------------------------------------------|---------|---------|--------------|------------|----------------------------------------------------------------------------------------|--------|--------|------------|------------|
|                                                                                                                                                                                                                                                                                                                                                                                                      | $x_d$        | $y_d$ | $X_d$                                              | $Y_d$  | $Z_d$  | $L^*_d$                                                                                       | $a^*_d$ | $b^*_d$ | $C^*_{ab,d}$ | $h_{ab,d}$ | $Y_d$                                                                                  | $A_d$  | $B_d$  | $C_{AB,d}$ | $h_{AB,d}$ |
| three additive mixture colours: television colours according to ITU-R BT.2020-2 and Wide Colour Gamut WCG display                                                                                                                                                                                                                                                                                    |              |       |                                                    |        |        |                                                                                               |         |         |              |            |                                                                                        |        |        |            |            |
| $C_d$ cyan (cyan blue)                                                                                                                                                                                                                                                                                                                                                                               | 0,146        | 0,344 | 31,34                                              | 73,72  | 108,90 | 88,79                                                                                         | -106,24 | -19,32  | 107,98       | 190        | 73,72                                                                                  | -40,74 | -10,50 | 42,08      | 194        |
| $M_d$ magenta (magenta red)                                                                                                                                                                                                                                                                                                                                                                          | 0,368        | 0,147 | 80,58                                              | 32,20  | 106,09 | 63,50                                                                                         | 130,51  | -61,18  | 144,14       | 334        | 32,20                                                                                  | 52,57  | -26,08 | 58,69      | 333        |
| $Y_d$ yellow                                                                                                                                                                                                                                                                                                                                                                                         | 0,446        | 0,537 | 78,15                                              | 94,06  | 2,80   | 97,66                                                                                         | -21,48  | 136,88  | 138,56       | 98         | 94,06                                                                                  | -11,84 | 36,59  | 38,46      | 107        |
| three additive basic colours: television colours according to ITU-R BT.2020-2 and Wide Colour Gamut WCG display                                                                                                                                                                                                                                                                                      |              |       |                                                    |        |        |                                                                                               |         |         |              |            |                                                                                        |        |        |            |            |
| $R_d$ Red (orange red)                                                                                                                                                                                                                                                                                                                                                                               | 0,708        | 0,292 | 63,69                                              | 26,26  | 0,00   | 58,29                                                                                         | 117,31  | 100,50  | 154,48       | 40         | 26,26                                                                                  | 40,74  | 10,50  | 42,07      | 14         |
| $G_d$ Green (leaf green)                                                                                                                                                                                                                                                                                                                                                                             | 0,170        | 0,797 | 14,46                                              | 67,79  | 2,80   | 85,90                                                                                         | -172,32 | 116,61  | 208,07       | 145        | 67,79                                                                                  | -52,58 | 26,08  | 58,70      | 153        |
| $B_d$ Blue (violet blue)                                                                                                                                                                                                                                                                                                                                                                             | 0,131        | 0,046 | 16,88                                              | 5,93   | 106,09 | 29,23                                                                                         | 86,10   | -120,27 | 147,92       | 305        | 5,93                                                                                   | 11,83  | -36,59 | 38,46      | 287        |
| achromatic colours and equations:<br>$X_0 = X_d / 0,9505$ ; $Y_0 = Y_d$ ; $Z_0 = Z_d / 1,0890$ ; $A_d = X_0 - Y_0$ ; $B_d = 0,4 [Y_0 - Z_0]$ ; $C_{AB,d} = [A_d^2 + B_d^2]^{1/2}$ ; $h_{AB,d} = \text{atan}[B_d / A_d]$<br>or $a_n = x_w / y_w$ ; $b_n = -0,4 [z_w / y_w]$ ; $a_d = x_d / y_d$ ; $b_d = -0,4 [z_d / y_d]$ ; $A_d = [a_d - a_n] Y_d$ ; $B_d = [b_d - b_n] Y_d$ ; compare CIE 230:2019 |              |       |                                                    |        |        |                                                                                               |         |         |              |            |                                                                                        |        |        |            |            |
| $W_0$ (white monitor, 100%)                                                                                                                                                                                                                                                                                                                                                                          | 0,312        | 0,329 | 95,05                                              | 100,00 | 108,90 | 100,00                                                                                        | 0,00    | 0,00    | 0,00         | 0          | 100,00                                                                                 | 0,00   | 0,00   | 0,00       | 0          |
| $W_1$ (white monitor, 88,6%)                                                                                                                                                                                                                                                                                                                                                                         | 0,312        | 0,329 | 84,21                                              | 88,60  | 96,48  | 95,40                                                                                         | 0,00    | 0,00    | 0,00         | 0          | 88,60                                                                                  | 0,00   | 0,00   | 0,00       | 0          |
| $N_1$ (black monitor, 2,5%)                                                                                                                                                                                                                                                                                                                                                                          | 0,312        | 0,329 | 2,37                                               | 2,50   | 2,72   | 18,00                                                                                         | 0,00    | 0,00    | 0,00         | 0          | 2,50                                                                                   | 0,00   | 0,00   | 0,00       | 0          |
| $N_0$ (black monitor, 0,00%)                                                                                                                                                                                                                                                                                                                                                                         | 0,312        | 0,329 | 0,00                                               | 0,00   | 0,00   | 0,00                                                                                          | 0,00    | 0,00    | 0,00         | 0          | 0,00                                                                                   | 0,00   | 0,00   | 0,00       | 0          |

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