

Input and Output: Offset Reflective System ORS18a for relative CIELAB hue  $h_{ab,a,rel} = h_{ab}/360 = 298/360 = 0.82$

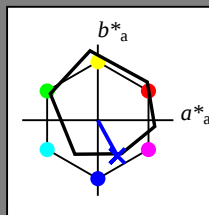
Data for any device (d) or elementary (e) colour:

$HIC^*$

hue text for the colours of this page:

$H^*_- = B00R_-$

triangle lightness  $T^*$



| ORS18a; adapted (a) CIELAB data |             |         |         |              |              |
|---------------------------------|-------------|---------|---------|--------------|--------------|
| name                            | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| R-,Ma                           | 47.9        | 65.3    | 50.5    | 82.6         | 37           |
| Y-,Ma                           | 90.3        | -10.2   | 91.7    | 92.3         | 96           |
| G-,Ma                           | 50.9        | -62.8   | 34.9    | 71.9         | 150          |
| C-,Ma                           | 58.6        | -30.3   | -45.0   | 54.2         | 236          |
| B-,Ma                           | 25.7        | 31.0    | -44.4   | 54.2         | 305          |
| M-,Ma                           | 48.1        | 75.2    | -8.3    | 75.7         | 353          |
| N-,Ma                           | 18.0        | 0.0     | 0.0     | 0.0          | 0            |
| W-,Ma                           | 95.4        | 0.0     | 0.0     | 0.0          | 0            |
| R-,CIE                          | 39.9        | 58.7    | 27.9    | 65.0         | 25           |
| Y-,CIE                          | 81.2        | -2.8    | 71.5    | 71.6         | 92           |
| G-,CIE                          | 52.2        | -42.4   | 13.6    | 44.5         | 162          |
| B-,CIE                          | 30.5        | 1.4     | -46.4   | 46.4         | 271          |

Data for maximum colour (Ma):

$LabCh^*_{-,Ma}$ : 27 25 -47 53 298

$HIC^*_{-,Ma}$ : B00R\_100\_100-

$rgbic^*_{-,Ma}$ :

0.0 0.0 1.0 1.0 1.0

triangle lightness  $T^*$

% Gamut

$u^*_{rel} = 92$

% Regularity

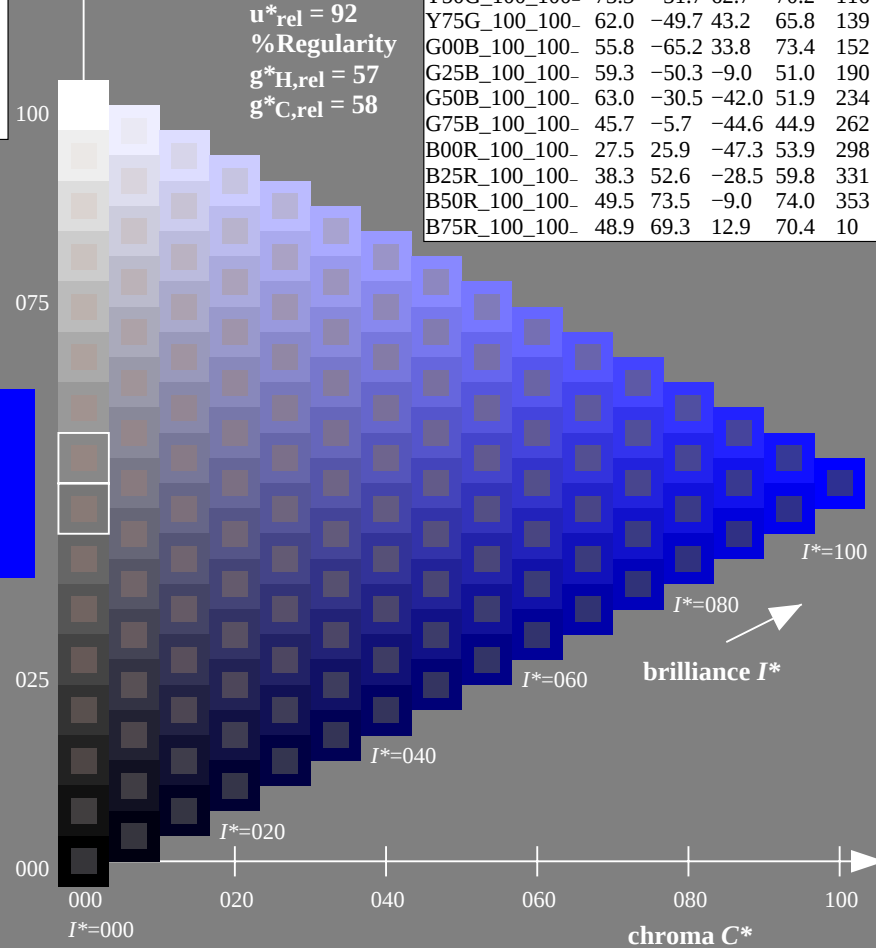
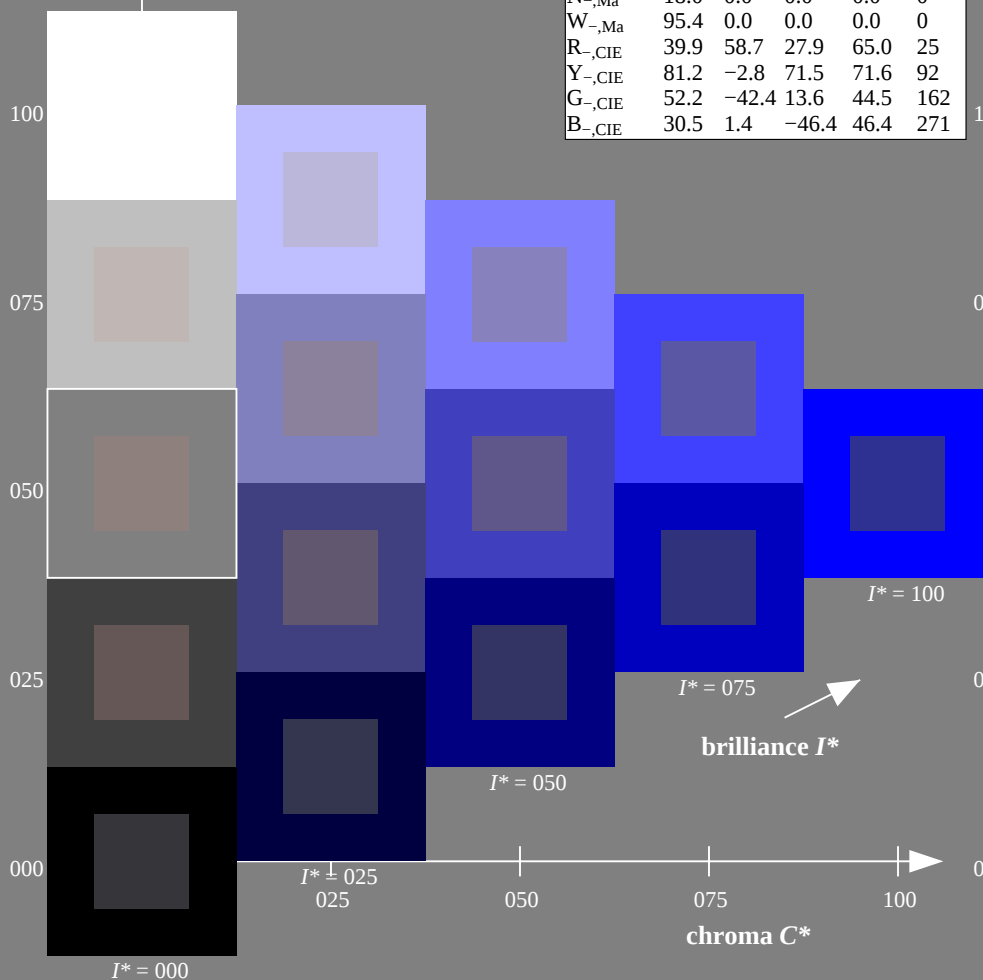
$g^*_{H,rel} = 57$

$g^*_{C,rel} = 58$

ORS20a; adapted (a) CIELAB data

| $H^*_-$       | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|---------------|-------------|---------|---------|--------------|--------------|
| R00Y_100_100- | 48.4        | 66.1    | 40.2    | 77.3         | 31           |
| R25Y_100_100- | 56.8        | 48.0    | 50.5    | 69.6         | 46           |
| R50Y_100_100- | 68.6        | 25.0    | 63.9    | 68.6         | 68           |
| R75Y_100_100- | 80.6        | 4.8     | 77.2    | 77.3         | 86           |
| Y00G_100_100- | 90.2        | -9.6    | 88.2    | 88.7         | 96           |
| Y25G_100_100- | 83.2        | -18.4   | 79.9    | 81.9         | 102          |
| Y50G_100_100- | 73.3        | -31.7   | 62.7    | 70.2         | 116          |
| Y75G_100_100- | 62.0        | -49.7   | 43.2    | 65.8         | 139          |
| G00B_100_100- | 55.8        | -65.2   | 33.8    | 73.4         | 152          |
| G25B_100_100- | 59.3        | -50.3   | -9.0    | 51.0         | 190          |
| G50B_100_100- | 63.0        | -30.5   | -42.0   | 51.9         | 234          |
| G75B_100_100- | 45.7        | -5.7    | -44.6   | 44.9         | 262          |
| B00R_100_100- | 27.5        | 25.9    | -47.3   | 53.9         | 298          |
| B25R_100_100- | 38.3        | 52.6    | -28.5   | 59.8         | 331          |
| B50R_100_100- | 49.5        | 73.5    | -9.0    | 74.0         | 353          |
| B75R_100_100- | 48.9        | 69.3    | 12.9    | 70.4         | 10           |

$H^*_- = B00R_-$



TUB-test chart RE16; hue code:  $H^*_- = B00R_-$   
Test chart according to DIN 33872, 3D=1, de=0,  $cm y0^*$

input:  $rgb/cmyk \rightarrow rgb/cmyk$   
output: no change

Input and Output: Offset Reflective System ORS18a for relative CIELAB hue  $h_{ab,a,rel} = h_{ab}/360 = 306/360 = 0.85$

$H^*_d = B00R_d$

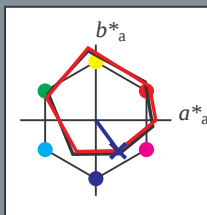
Data for any device (d) or elementary (e) colour:

$HIC^*_d$

hue text for the colours of this page:

$H^*_d = B00R_d$

triangle lightness  $T^*$



| ORS20a; adapted (a) CIELAB data |             |         |         |              |              |
|---------------------------------|-------------|---------|---------|--------------|--------------|
| name                            | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| R <sub>d,Ma</sub>               | 45.4        | 70.9    | 44.8    | 83.9         | 32           |
| Y <sub>d,Ma</sub>               | 87.8        | -10.2   | 95.4    | 96.0         | 96           |
| G <sub>d,Ma</sub>               | 50.0        | -65.0   | 29.6    | 71.4         | 155          |
| C <sub>d,Ma</sub>               | 56.8        | -25.5   | -41.5   | 48.7         | 238          |
| B <sub>d,Ma</sub>               | 25.0        | 29.5    | -40.4   | 50.0         | 306          |
| M <sub>d,Ma</sub>               | 46.1        | 79.3    | -0.2    | 79.3         | 359          |
| N <sub>d,Ma</sub>               | 24.3        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>d,Ma</sub>               | 95.6        | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>d,CIE</sub>              | 39.9        | 58.7    | 27.9    | 65.0         | 25           |
| Y <sub>d,CIE</sub>              | 81.2        | -2.8    | 71.5    | 71.6         | 92           |
| G <sub>d,CIE</sub>              | 52.2        | -42.4   | 13.6    | 44.5         | 162          |
| B <sub>d,CIE</sub>              | 30.5        | 1.4     | -46.4   | 46.4         | 271          |

Data for maximum colour (Ma):

$LabCh^*_d, Ma$ : 25 29 -40 50 306

$HIC^*_d, Ma$ : B00R\_100\_100<sub>d</sub>

$rgbic^*_d, Ma$ :

0.0 0.0 1.0 1.0 1.0

triangle lightness  $T^*$

% Gamut

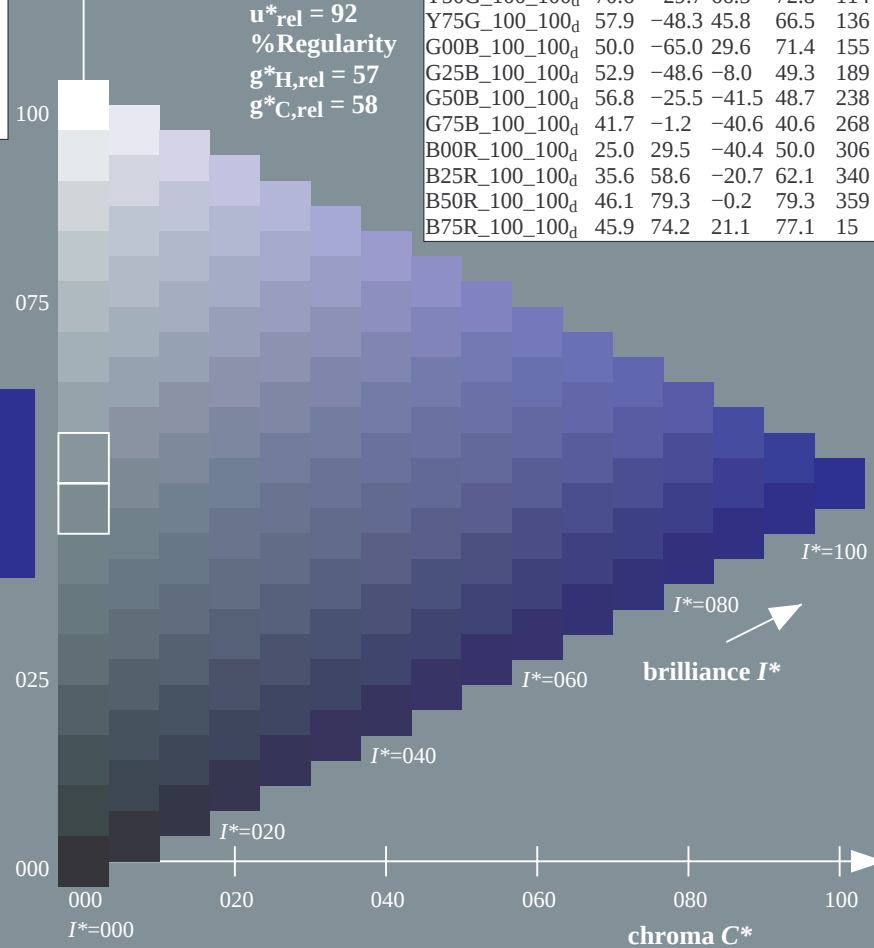
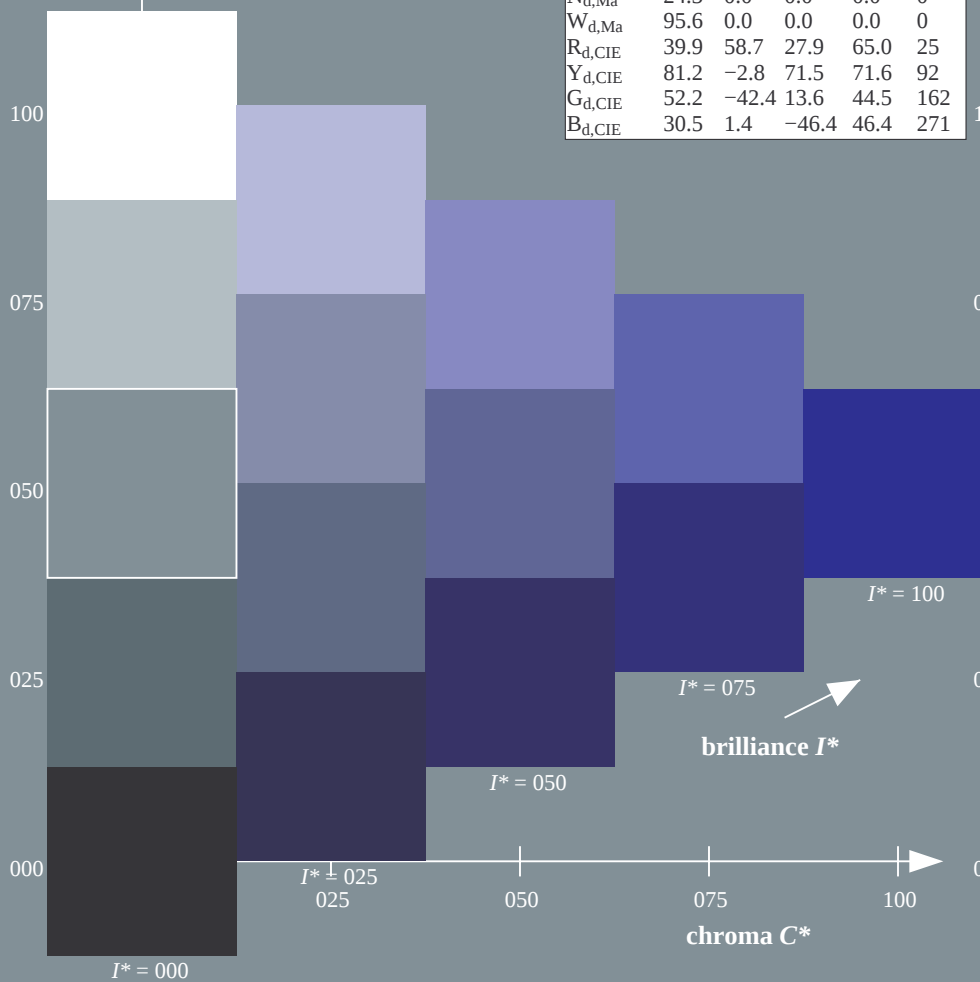
$u^*_{rel} = 92$

% Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 58$

| ORS20a; adapted (a) CIELAB data |             |         |         |              |              |
|---------------------------------|-------------|---------|---------|--------------|--------------|
| $H^*_d$                         | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| R00Y_100_100 <sub>d</sub>       | 45.4        | 70.9    | 44.8    | 83.9         | 32           |
| R25Y_100_100 <sub>d</sub>       | 53.0        | 53.4    | 54.8    | 76.5         | 45           |
| R50Y_100_100 <sub>d</sub>       | 64.9        | 28.9    | 68.6    | 74.5         | 67           |
| R75Y_100_100 <sub>d</sub>       | 78.6        | 4.3     | 84.7    | 84.8         | 87           |
| Y00G_100_100 <sub>d</sub>       | 87.8        | -10.2   | 95.4    | 96.0         | 96           |
| Y25G_100_100 <sub>d</sub>       | 81.2        | -17.0   | 84.3    | 86.0         | 101          |
| Y50G_100_100 <sub>d</sub>       | 70.6        | -29.7   | 66.5    | 72.8         | 114          |
| Y75G_100_100 <sub>d</sub>       | 57.9        | -48.3   | 45.8    | 66.5         | 136          |
| G00B_100_100 <sub>d</sub>       | 50.0        | -65.0   | 29.6    | 71.4         | 155          |
| G25B_100_100 <sub>d</sub>       | 52.9        | -48.6   | -8.0    | 49.3         | 189          |
| G50B_100_100 <sub>d</sub>       | 56.8        | -25.5   | -41.5   | 48.7         | 238          |
| G75B_100_100 <sub>d</sub>       | 41.7        | -1.2    | -40.6   | 40.6         | 268          |
| B00R_100_100 <sub>d</sub>       | 25.0        | 29.5    | -40.4   | 50.0         | 306          |
| B25R_100_100 <sub>d</sub>       | 35.6        | 58.6    | -20.7   | 62.1         | 340          |
| B50R_100_100 <sub>d</sub>       | 46.1        | 79.3    | -0.2    | 79.3         | 359          |
| B75R_100_100 <sub>d</sub>       | 45.9        | 74.2    | 21.1    | 77.1         | 15           |



TUB-test chart RE16; hue code:  $H^*_d = B00R_d$   
Test chart according to DIN 33872, 3D=1, de=0,  $cmy0^*$

input:  $rgb/cmyk \rightarrow rgb_{dd}$   
output: 3D-linearization to  $cmy0^*_{dd}$

TUB registration: 20150701-RE16/RE16L0FP.PDF /.PS  
application for measurement of offset print output, separation  $cmy0^*$  (CMY0)

TUB material: code=rha4ta

Input and Output: Offset Reflective System ORS18a for relative CIELAB hue  $h_{ab,a,rel} = h_{ab}/360 = 298/360 = 0.82$

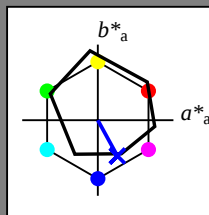
Data for any device (d) or elementary (e) colour:

$HIC^*$

hue text for the colours of this page:

$H^*_- = B00R_-$

triangle lightness  $T^*$



| ORS18a; adapted (a) CIELAB data |             |         |         |              |              |
|---------------------------------|-------------|---------|---------|--------------|--------------|
| name                            | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| R-,Ma                           | 47.9        | 65.3    | 50.5    | 82.6         | 37           |
| Y-,Ma                           | 90.3        | -10.2   | 91.7    | 92.3         | 96           |
| G-,Ma                           | 50.9        | -62.8   | 34.9    | 71.9         | 150          |
| C-,Ma                           | 58.6        | -30.3   | -45.0   | 54.2         | 236          |
| B-,Ma                           | 25.7        | 31.0    | -44.4   | 54.2         | 305          |
| M-,Ma                           | 48.1        | 75.2    | -8.3    | 75.7         | 353          |
| N-,Ma                           | 18.0        | 0.0     | 0.0     | 0.0          | 0            |
| W-,Ma                           | 95.4        | 0.0     | 0.0     | 0.0          | 0            |
| R-,CIE                          | 39.9        | 58.7    | 27.9    | 65.0         | 25           |
| Y-,CIE                          | 81.2        | -2.8    | 71.5    | 71.6         | 92           |
| G-,CIE                          | 52.2        | -42.4   | 13.6    | 44.5         | 162          |
| B-,CIE                          | 30.5        | 1.4     | -46.4   | 46.4         | 271          |

Data for maximum colour (Ma):

$LabCh^*_{-,Ma}$ : 27 25 -47 53 298

$HIC^*_{-,Ma}$ : B00R\_100\_100\_

$rgbic^*_{-,Ma}$ :

0.0 0.0 1.0 1.0 1.0

triangle lightness  $T^*$

% Gamut

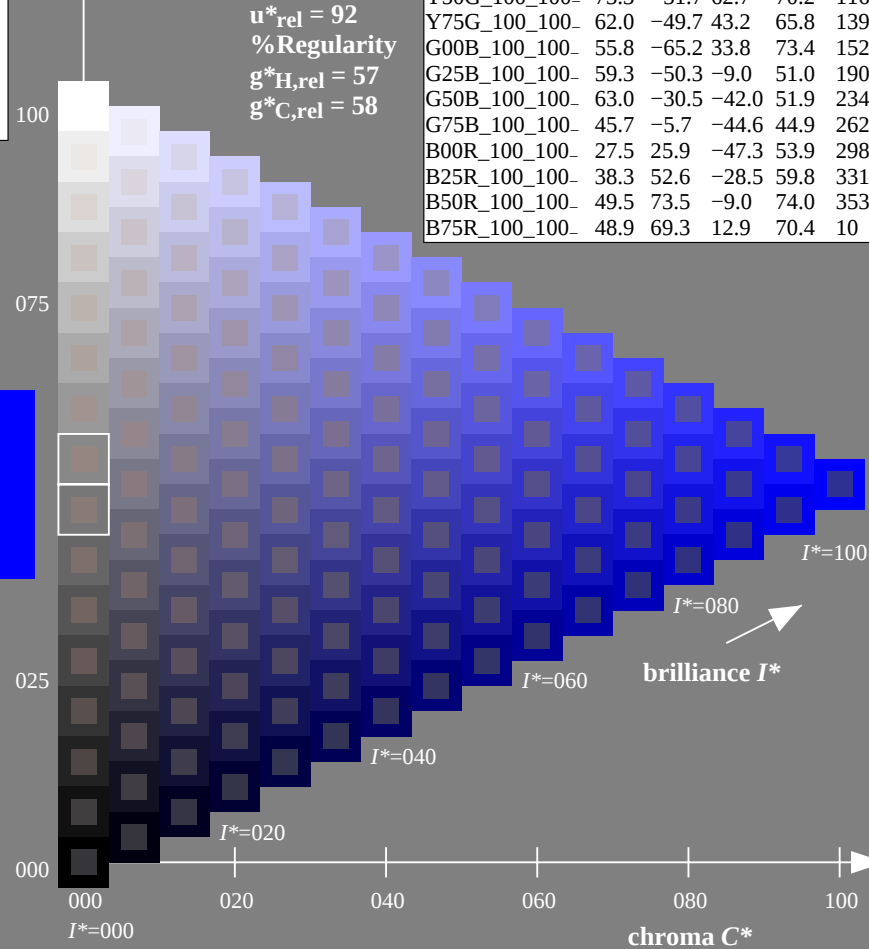
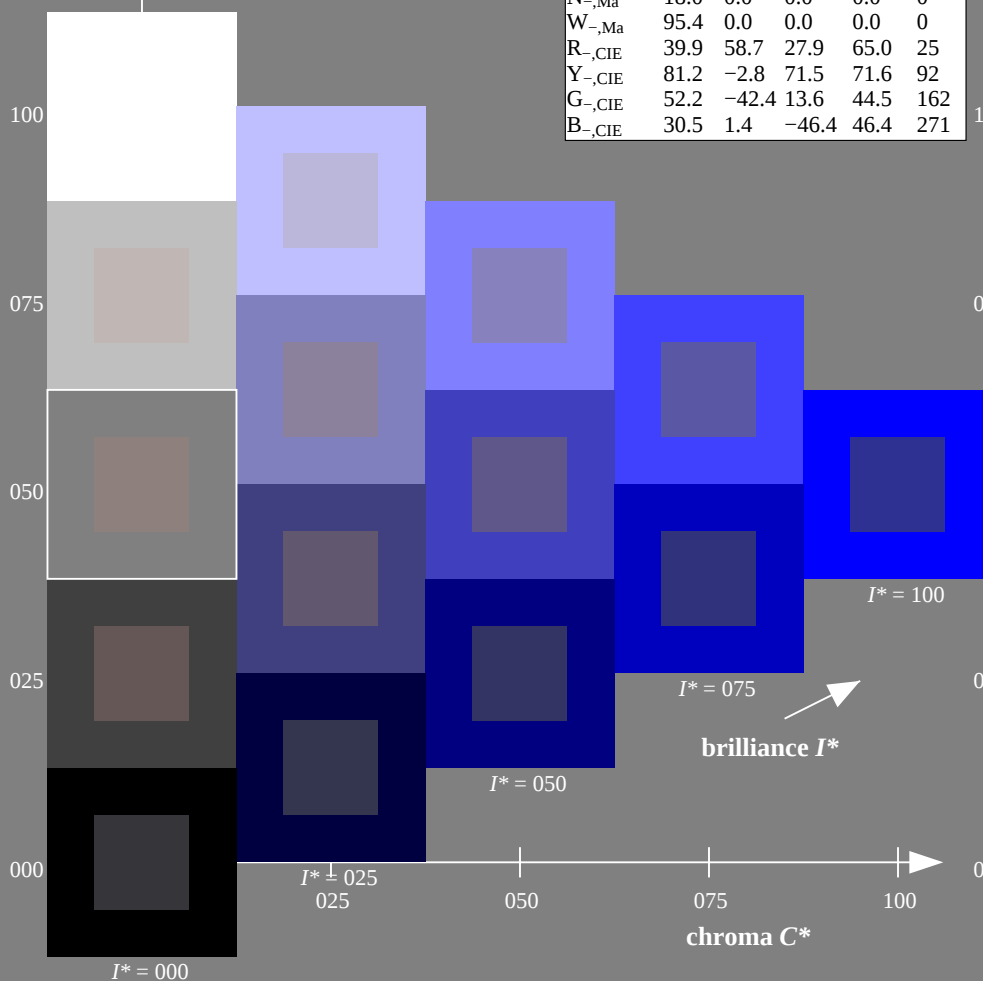
$u^*_{rel} = 92$

% Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 58$

| ORS20a; adapted (a) CIELAB data |             |         |         |              |              |
|---------------------------------|-------------|---------|---------|--------------|--------------|
| $H^*_-$                         | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| R00Y_100_100_                   | 48.4        | 66.1    | 40.2    | 77.3         | 31           |
| R25Y_100_100_                   | 56.8        | 48.0    | 50.5    | 69.6         | 46           |
| R50Y_100_100_                   | 68.6        | 25.0    | 63.9    | 68.6         | 68           |
| R75Y_100_100_                   | 80.6        | 4.8     | 77.2    | 77.3         | 86           |
| Y00G_100_100_                   | 90.2        | -9.6    | 88.2    | 88.7         | 96           |
| Y25G_100_100_                   | 83.2        | -18.4   | 79.9    | 81.9         | 102          |
| Y50G_100_100_                   | 73.3        | -31.7   | 62.7    | 70.2         | 116          |
| Y75G_100_100_                   | 62.0        | -49.7   | 43.2    | 65.8         | 139          |
| G00B_100_100_                   | 55.8        | -65.2   | 33.8    | 73.4         | 152          |
| G25B_100_100_                   | 59.3        | -50.3   | -9.0    | 51.0         | 190          |
| G50B_100_100_                   | 63.0        | -30.5   | -42.0   | 51.9         | 234          |
| G75B_100_100_                   | 45.7        | -5.7    | -44.6   | 44.9         | 262          |
| B00R_100_100_                   | 27.5        | 25.9    | -47.3   | 53.9         | 298          |
| B25R_100_100_                   | 38.3        | 52.6    | -28.5   | 59.8         | 331          |
| B50R_100_100_                   | 49.5        | 73.5    | -9.0    | 74.0         | 353          |
| B75R_100_100_                   | 48.9        | 69.3    | 12.9    | 70.4         | 10           |



TUB-test chart RE16; hue code:  $H^*_- = B00R_-$   
Test chart according to DIN 33872, 3D=1, de=1, cmy0\*

input:  $rgb/cmyk \rightarrow rgb/cmyk$   
output: no change

Input and Output: Offset Reflective System ORS18a for relative CIELAB hue  $h_{ab,a,rel} = h_{ab}/360 = 271/360 = 0.75$

$H^*_e = B00R_e$

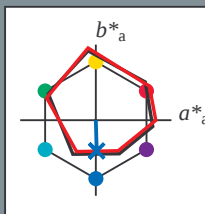
Data for any device (d) or elementary (e) colour:

$HIC^*_e$

hue text for the colours of this page:

$H^*_e = B00R_e$

triangle lightness  $T^*$



| ORS20a; adapted (a) CIELAB data |             |         |         |              |              |
|---------------------------------|-------------|---------|---------|--------------|--------------|
| name                            | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| $R_e, Ma$                       | 45.6        | 72.2    | 34.4    | 80.0         | 25           |
| $Y_e, Ma$                       | 83.6        | -3.6    | 90.4    | 90.4         | 92           |
| $G_e, Ma$                       | 50.6        | -62.1   | 19.9    | 65.2         | 162          |
| $C_e, Ma$                       | 55.0        | -36.2   | -27.2   | 45.3         | 216          |
| $B_e, Ma$                       | 40.2        | 1.2     | -40.6   | 40.6         | 271          |
| $M_e, Ma$                       | 31.1        | 47.7    | -29.1   | 55.9         | 328          |
| $N_e, Ma$                       | 24.3        | 0.0     | 0.0     | 0.0          | 0            |
| $W_e, Ma$                       | 95.6        | 0.0     | 0.0     | 0.0          | 0            |
| $R_e, CIE$                      | 39.9        | 58.7    | 27.9    | 65.0         | 25           |
| $Y_e, CIE$                      | 81.2        | -2.8    | 71.5    | 71.6         | 92           |
| $G_e, CIE$                      | 52.2        | -42.4   | 13.6    | 44.5         | 162          |
| $B_e, CIE$                      | 30.5        | 1.4     | -46.4   | 46.4         | 271          |

Data for maximum colour (Ma):

$LabCh^*_e, Ma: 40 \ 1 \ -40 \ 40 \ 271$

$HIC^*_e, Ma: B00R\_100\_100_e$

$rgbic^*_e, Ma:$

0.0 0.45 1.0 1.0 1.0

triangle lightness  $T^*$

% Gamut

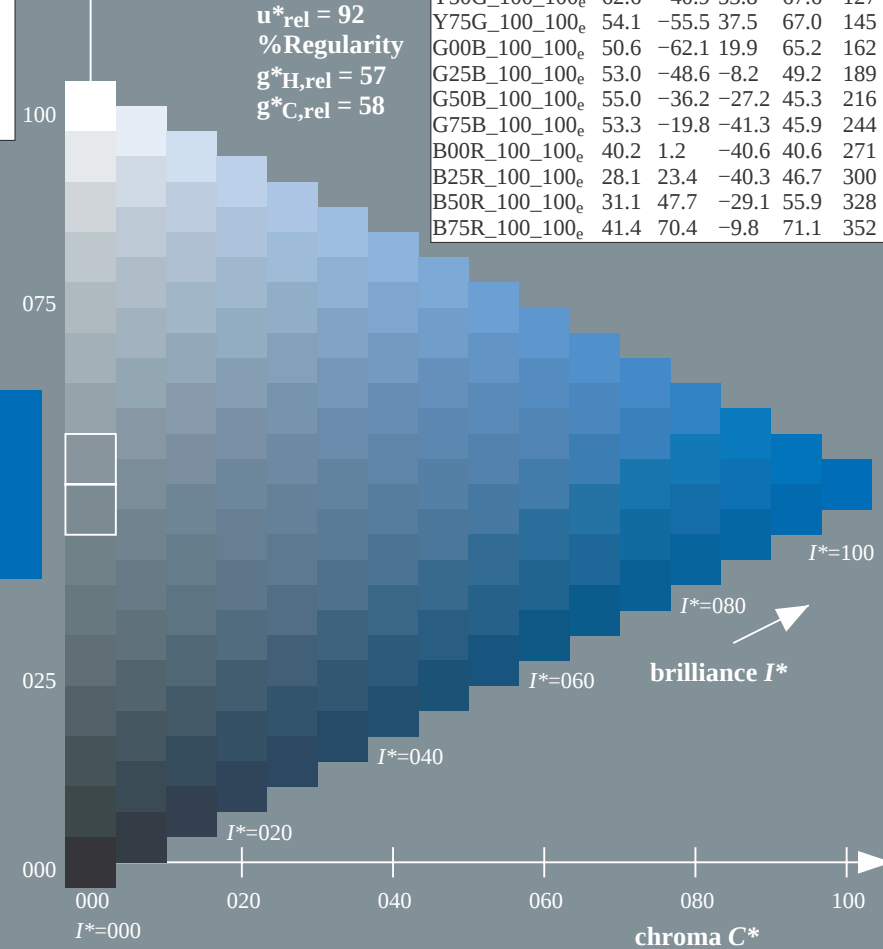
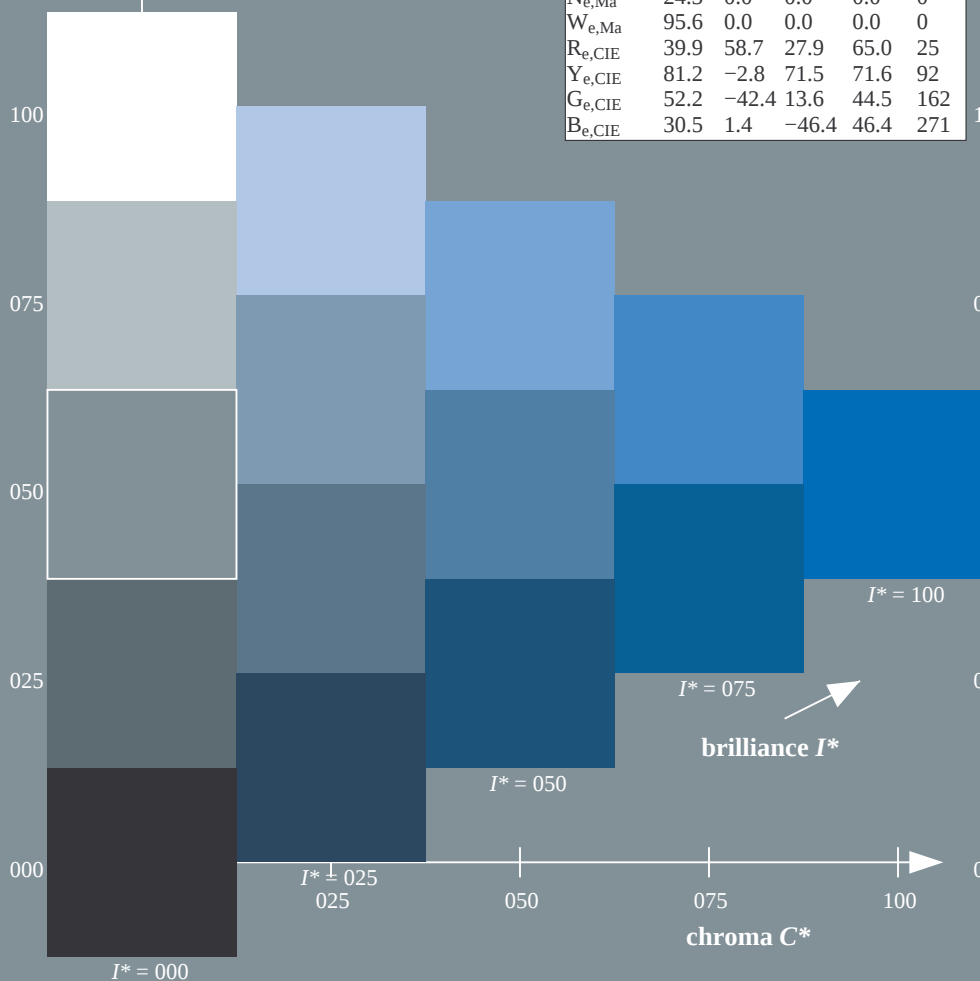
$u^*_{rel} = 92$

% Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 58$

| ORS20a; adapted (a) CIELAB data |             |         |         |              |              |
|---------------------------------|-------------|---------|---------|--------------|--------------|
| $H^*_e$                         | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| $R00Y\_100\_100_e$              | 45.6        | 72.2    | 34.4    | 80.0         | 25           |
| $R25Y\_100\_100_e$              | 50.5        | 59.2    | 51.6    | 78.6         | 41           |
| $R50Y\_100\_100_e$              | 60.2        | 38.2    | 63.4    | 74.1         | 58           |
| $R75Y\_100\_100_e$              | 70.9        | 17.9    | 75.9    | 77.9         | 76           |
| $Y00G\_100\_100_e$              | 83.6        | -3.6    | 90.4    | 90.4         | 92           |
| $Y25G\_100\_100_e$              | 74.5        | -25.0   | 74.3    | 78.4         | 108          |
| $Y50G\_100\_100_e$              | 62.6        | -40.9   | 53.8    | 67.6         | 127          |
| $Y75G\_100\_100_e$              | 54.1        | -55.5   | 37.5    | 67.0         | 145          |
| $G00B\_100\_100_e$              | 50.6        | -62.1   | 19.9    | 65.2         | 162          |
| $G25B\_100\_100_e$              | 53.0        | -48.6   | -8.2    | 49.2         | 189          |
| $G50B\_100\_100_e$              | 55.0        | -36.2   | -27.2   | 45.3         | 216          |
| $G75B\_100\_100_e$              | 53.3        | -19.8   | -41.3   | 45.9         | 244          |
| $B00R\_100\_100_e$              | 40.2        | 1.2     | -40.6   | 40.6         | 271          |
| $B25R\_100\_100_e$              | 28.1        | 23.4    | -40.3   | 46.7         | 300          |
| $B50R\_100\_100_e$              | 31.1        | 47.7    | -29.1   | 55.9         | 328          |
| $B75R\_100\_100_e$              | 41.4        | 70.4    | -9.8    | 71.1         | 352          |



TUB-test chart RE16; hue code:  $H^*_e = B00R_e$   
Test chart according to DIN 33872, 3D=1, de=1,  $cmY0^*$

input:  $rgb/cmyk \rightarrow rgb_{de}$   
output: 3D-linearization to  $cmY0^*_{de}$