

# Input: Colorimetric Reflective System NRS11

for hue  $h^* = lab^*h = 24/360 = 0.067$

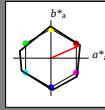
$lab^*tch$  and  $lab^*nch$

D65: hue R

LCH\*Ma: 53 84 24

olv\*Ma: 1.0 0.0 0.0

triangle lightness  $t^*$



%Gamut  
 $u^*_{rel} = 119$   
%Regularity  
 $g^*_{H,rel} = 47$   
 $g^*_{C,rel} = 100$

| NRS11; adapted (a) CIELAB data |         |         |              |              |
|--------------------------------|---------|---------|--------------|--------------|
| $L^* = L^*_a$                  | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| RMa                            | 53.2    | 77.06   | 34.32        | 84.36        |
| YMa                            | 53.2    | -1.51   | 84.38        | 84.39        |
| GMa                            | 53.2    | -82.27  | 18.98        | 84.44        |
| G50BMa                         | 53.2    | -77.72  | -32.98       | 84.44        |
| BMa                            | 53.2    | 4.37    | -84.28       | 84.41        |
| B50RMa                         | 53.2    | 69.09   | -48.41       | 84.37        |
| NMa                            | 10.99   | 0.0     | 0.0          | 0.0          |
| WMa                            | 95.41   | 0.0     | 0.0          | 0.0          |
| RCIE                           | 39.92   | 58.69   | 27.98        | 65.01        |
| JCIE                           | 81.26   | -2.9    | 71.59        | 71.62        |
| GCIE                           | 52.23   | -42.45  | 13.59        | 44.59        |
| BCIE                           | 30.57   | 1.35    | -46.48       | 46.51        |

# Output: Colorimetric Reflective System ORS18

for hue  $h^* = lab^*h = 38/360 = 0.105$

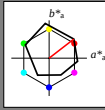
$lab^*tch$  and  $lab^*nch$

D65: hue O

LCH\*Ma: 48 83 38

olv\*Ma: 1.0 0.0 0.0

triangle lightness  $t^*$



%Gamut  
 $u^*_{rel} = 93$   
%Regularity  
 $g^*_{H,rel} = 57$   
 $g^*_{C,rel} = 59$

| ORS18; adapted (a) CIELAB data |         |         |              |              |
|--------------------------------|---------|---------|--------------|--------------|
| $L^* = L^*_a$                  | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| OMa                            | 47.94   | 65.37   | 50.52        | 82.62        |
| YMa                            | 90.37   | -10.27  | 91.77        | 92.34        |
| LMa                            | 50.9    | -62.79  | 34.95        | 71.87        |
| VMa                            | 58.62   | -30.35  | -45.01       | 54.3         |
| WMa                            | 25.71   | 31.11   | -44.42       | 54.24        |
| MMa                            | 48.13   | 75.27   | -8.35        | 75.73        |
| NMa                            | 18.01   | 0.0     | 0.0          | 0.0          |
| WMa                            | 95.41   | 0.0     | 0.0          | 0.0          |
| RCIE                           | 39.92   | 58.66   | 26.98        | 64.56        |
| JCIE                           | 81.26   | -2.17   | 67.76        | 67.79        |
| GCIE                           | 52.23   | -42.26  | 11.75        | 43.87        |
| BCIE                           | 30.57   | 1.15    | -46.84       | 46.87        |

| relative Inform. Technology (IT) |       |       |      |       |
|----------------------------------|-------|-------|------|-------|
| $olvi3^*$                        | 1.0   | 1.0   | 1.0  | (1.0) |
| $cmyn3^*$                        | 0.0   | 0.0   | 0.0  | (0.0) |
| $olvi4^*$                        | 1.0   | 1.0   | 1.0  | 1.0   |
| $cmyn4^*$                        | 0.0   | 0.0   | 0.0  | 0.0   |
| standard and adapted CIELAB      |       |       |      |       |
| $LAB^*LAB$                       | 95.41 | -0.97 | 4.75 |       |
| $LAB^*Lab$                       | 95.41 | 0.0   | 0.0  |       |
| $LAB^*TCh$                       | 99.99 | 0.01  | -    |       |
| relative CIELAB $lab^*$          |       |       |      |       |
| $lab^*lab$                       | 1.0   | 0.5   | 0.5  | (1.0) |
| $lab^*tch$                       | 1.0   | 0.0   | -    |       |
| $lab^*nch$                       | 0.0   | 0.0   | -    |       |
| relative Natural Colour (NC)     |       |       |      |       |
| $lab^*trj$                       | 1.0   | 0.0   | 0.0  |       |
| $lab^*tce$                       | 1.0   | 0.0   | -    |       |
| $lab^*nce$                       | 0.0   | 0.0   | -    |       |

| relative Inform. Technology (IT) |       |       |       |       |
|----------------------------------|-------|-------|-------|-------|
| $olvi3^*$                        | 1.0   | 0.5   | 0.5   | (1.0) |
| $cmyn3^*$                        | 0.0   | 0.5   | 0.5   | (0.0) |
| $olvi4^*$                        | 1.0   | 0.5   | 0.5   | 1.0   |
| $cmyn4^*$                        | 0.0   | 0.5   | 0.5   | 0.0   |
| standard and adapted CIELAB      |       |       |       |       |
| $LAB^*LAB$                       | 71.67 | 32.15 | 28.41 |       |
| $LAB^*Lab$                       | 71.67 | 32.15 | 28.41 |       |
| $LAB^*TCh$                       | 75.0  | 41.3  | 37.7  |       |
| relative CIELAB $lab^*$          |       |       |       |       |
| $lab^*lab$                       | 0.693 | 0.396 | 0.306 |       |
| $lab^*tch$                       | 0.75  | 0.5   | 0.105 |       |
| $lab^*nch$                       | 0.0   | 0.5   | 0.105 |       |
| $lab^*trj$                       | 0.693 | 0.477 | 0.15  |       |
| $lab^*tce$                       | 0.75  | 0.5   | 0.048 |       |
| $lab^*nce$                       | 0.0   | 0.5   | 0.193 |       |

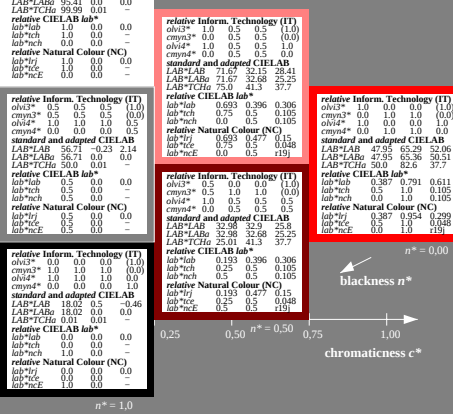
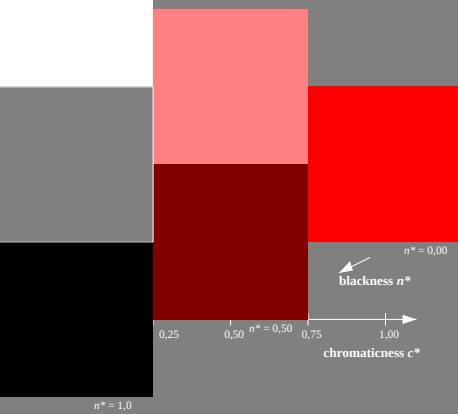
| relative Inform. Technology (IT) |       |       |       |       |
|----------------------------------|-------|-------|-------|-------|
| $olvi3^*$                        | 1.0   | 0.0   | 0.0   | (1.0) |
| $cmyn3^*$                        | 0.0   | 1.0   | 1.0   | (0.0) |
| $olvi4^*$                        | 1.0   | 0.0   | 0.0   | 1.0   |
| $cmyn4^*$                        | 0.0   | 1.0   | 1.0   | 0.0   |
| standard and adapted CIELAB      |       |       |       |       |
| $LAB^*LAB$                       | 47.95 | 65.29 | 52.06 |       |
| $LAB^*Lab$                       | 47.95 | 65.36 | 50.51 |       |
| $LAB^*TCh$                       | 50.0  | 82.6  | 37.7  |       |
| relative CIELAB $lab^*$          |       |       |       |       |
| $lab^*lab$                       | 0.387 | 0.791 | 0.611 |       |
| $lab^*tch$                       | 0.387 | 0.954 | 0.299 |       |
| $lab^*tce$                       | 0.5   | 1.0   | 0.048 |       |
| $lab^*nce$                       | 0.0   | 1.0   | 0.193 |       |

| relative Inform. Technology (IT) |       |       |      |       |
|----------------------------------|-------|-------|------|-------|
| $olvi3^*$                        | 0.5   | 0.5   | 0.5  | (1.0) |
| $cmyn3^*$                        | 0.5   | 0.5   | 0.5  | (0.0) |
| $olvi4^*$                        | 1.0   | 1.0   | 1.0  | 0.5   |
| $cmyn4^*$                        | 0.0   | 0.0   | 0.0  | 0.5   |
| standard and adapted CIELAB      |       |       |      |       |
| $LAB^*LAB$                       | 56.71 | -0.23 | 2.14 |       |
| $LAB^*Lab$                       | 56.71 | 0.0   | 0.0  |       |
| $LAB^*TCh$                       | 50.0  | 0.01  | -    |       |
| relative CIELAB $lab^*$          |       |       |      |       |
| $lab^*lab$                       | 0.5   | 0.0   | 0.0  |       |
| $lab^*tch$                       | 0.5   | 0.0   | -    |       |
| $lab^*nch$                       | 0.5   | 0.0   | -    |       |
| relative Natural Colour (NC)     |       |       |      |       |
| $lab^*trj$                       | 0.5   | 0.0   | 0.0  |       |
| $lab^*tce$                       | 0.5   | 0.0   | -    |       |
| $lab^*nce$                       | 0.5   | 0.0   | -    |       |

| relative Inform. Technology (IT) |       |      |       |       |
|----------------------------------|-------|------|-------|-------|
| $olvi3^*$                        | 0.0   | 0.0  | 0.0   | (1.0) |
| $cmyn3^*$                        | 1.0   | 1.0  | 1.0   | (0.0) |
| $olvi4^*$                        | 1.0   | 1.0  | 1.0   | 1.0   |
| $cmyn4^*$                        | 0.0   | 0.0  | 0.0   | 1.0   |
| standard and adapted CIELAB      |       |      |       |       |
| $LAB^*LAB$                       | 18.02 | 0.5  | -0.46 |       |
| $LAB^*Lab$                       | 18.02 | 0.0  | 0.0   |       |
| $LAB^*TCh$                       | 0.01  | 0.01 | -     |       |
| relative CIELAB $lab^*$          |       |      |       |       |
| $lab^*lab$                       | 0.0   | 0.0  | 0.0   |       |
| $lab^*tch$                       | 0.0   | 0.0  | -     |       |
| $lab^*nch$                       | 1.0   | 1.0  | -     |       |
| relative Natural Colour (NC)     |       |      |       |       |
| $lab^*trj$                       | 0.0   | 0.0  | 0.0   |       |
| $lab^*tce$                       | 0.0   | 0.0  | -     |       |
| $lab^*nce$                       | 1.0   | 0.0  | -     |       |

| relative Inform. Technology (IT) |       |       |       |       |
|----------------------------------|-------|-------|-------|-------|
| $olvi3^*$                        | 0.5   | 0.0   | 0.0   | (1.0) |
| $cmyn3^*$                        | 0.5   | 1.0   | 1.0   | (0.0) |
| $olvi4^*$                        | 1.0   | 0.5   | 0.5   | 0.5   |
| $cmyn4^*$                        | 0.0   | 0.5   | 0.5   | 0.5   |
| standard and adapted CIELAB      |       |       |       |       |
| $LAB^*LAB$                       | 32.98 | 32.9  | 25.8  |       |
| $LAB^*Lab$                       | 32.98 | 32.68 | 25.25 |       |
| $LAB^*TCh$                       | 25.01 | 41.3  | 37.7  |       |
| relative CIELAB $lab^*$          |       |       |       |       |
| $lab^*lab$                       | 0.193 | 0.396 | 0.306 |       |
| $lab^*tch$                       | 0.25  | 0.5   | 0.105 |       |
| $lab^*nch$                       | 0.5   | 0.5   | 0.105 |       |
| relative Natural Colour (NC)     |       |       |       |       |
| $lab^*trj$                       | 0.193 | 0.477 | 0.15  |       |
| $lab^*tce$                       | 0.25  | 0.5   | 0.048 |       |
| $lab^*nce$                       | 0.5   | 0.5   | 0.193 |       |

| relative Inform. Technology (IT) |       |       |       |       |
|----------------------------------|-------|-------|-------|-------|
| $olvi3^*$                        | 0.5   | 0.0   | 0.0   | (1.0) |
| $cmyn3^*$                        | 0.5   | 1.0   | 1.0   | (0.0) |
| $olvi4^*$                        | 1.0   | 0.5   | 0.5   | 0.5   |
| $cmyn4^*$                        | 0.0   | 0.5   | 0.5   | 0.5   |
| standard and adapted CIELAB      |       |       |       |       |
| $LAB^*LAB$                       | 32.98 | 32.9  | 25.8  |       |
| $LAB^*Lab$                       | 32.98 | 32.68 | 25.25 |       |
| $LAB^*TCh$                       | 25.01 | 41.3  | 37.7  |       |
| relative CIELAB $lab^*$          |       |       |       |       |
| $lab^*lab$                       | 0.193 | 0.396 | 0.306 |       |
| $lab^*tch$                       | 0.25  | 0.5   | 0.105 |       |
| $lab^*nch$                       | 0.5   | 0.5   | 0.105 |       |
| relative Natural Colour (NC)     |       |       |       |       |
| $lab^*trj$                       | 0.193 | 0.477 | 0.15  |       |
| $lab^*tce$                       | 0.25  | 0.5   | 0.048 |       |
| $lab^*nce$                       | 0.5   | 0.5   | 0.193 |       |



10/70-7, 3 step scales for constant CIELAB hue 24/360 = 0.067 (left)

3 step scales for constant CIELAB hue 38/360 = 0.105 (right)

BAM-test chart TE07; Colorimetric systems NRS11 & ORS18  
D65: 3 step colour scales and coordinate data for 10 hues

input: olv\* setrgbcolor  
output: no change compared to input