

Input: Colorimetric Reflective System MRS18a

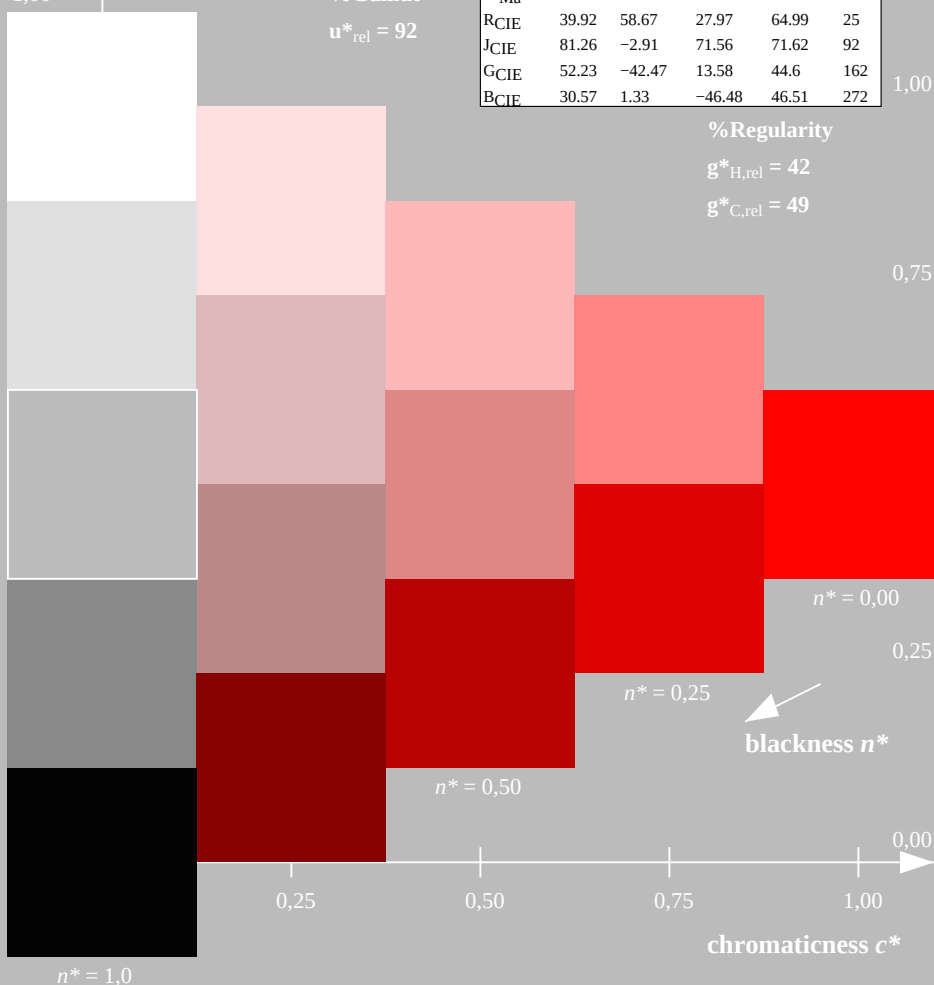
for hue  $h^* = lab \cdot h = 31/360 = 0.086$

$lab \cdot tch$  and  $lab \cdot nch$

D65: hue R  
LCH\*Ma: 50 78 31  
rgb\*Ma: 1.0 0.0 0.0

triangle lightness

1,00



Output: Colorimetric Reflective System ORS18

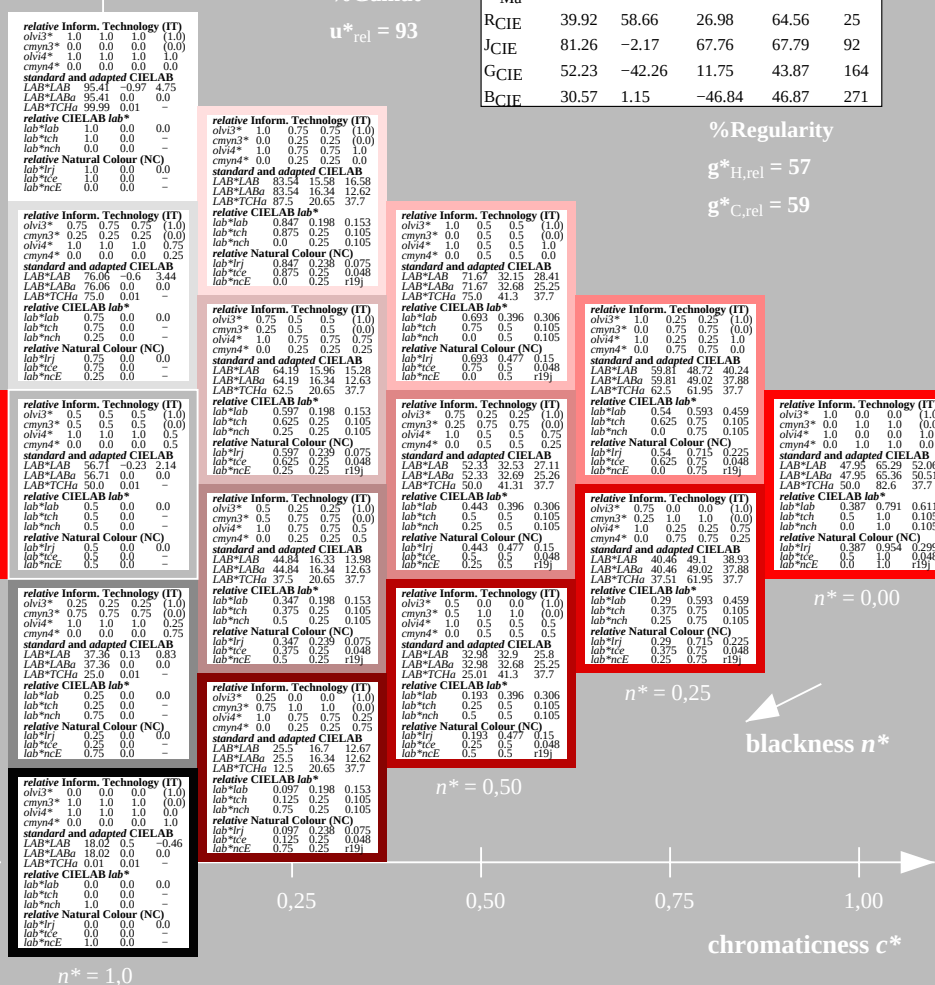
for hue  $h^* = lab \cdot h = 38/360 = 0.105$

$lab \cdot tch$  and  $lab \cdot nch$

D65: hue O  
LCH\*Ma: 48 83 38  
rgb\*Ma: 1.0 0.0 0.0

triangle lightness

1,00



Input: Colorimetric Reflective System MRS18a

for hue  $h^* = lab^*h = 94/360 = 0.262$

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

D65: hue J

LCH\*Ma: 91 93 94

rgb\*Ma: 1.0 1.0 0.0

triangle lightness

1,00



%Gamut

$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data

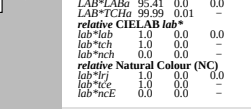
|                    | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------------------|-------------|---------|---------|--------------|--------------|
| RMa                | 49.63       | 66.8    | 40.02   | 77.87        | 31           |
| JMa                | 90.7        | -7.27   | 93.19   | 93.48        | 94           |
| GMa                | 52.11       | -69.93  | 11.26   | 70.85        | 171          |
| G50B <sub>Ma</sub> | 45.03       | -36.65  | -27.13  | 45.61        | 217          |
| B <sub>Ma</sub>    | 36.65       | 23.26   | -62.27  | 66.49        | 290          |
| B50R <sub>Ma</sub> | 34.94       | 57.27   | -43.6   | 71.99        | 323          |
| N <sub>Ma</sub>    | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>    | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE               | 39.92       | 58.67   | 27.97   | 64.99        | 25           |
| JCIE               | 81.26       | -2.91   | 71.56   | 71.62        | 92           |
| GCIE               | 52.23       | -42.47  | 13.58   | 44.6         | 162          |
| BCIE               | 30.57       | 1.33    | -46.48  | 46.51        | 272          |

%Regularity

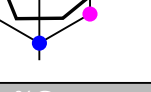
$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

1,00



$b^*_a$



%Gamut

$u^*_{rel} = 93$

Output: Colorimetric Reflective System ORS18

for hue  $h^* = lab^*h = 96/360 = 0.268$

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

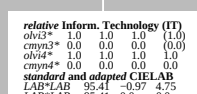
D65: hue Y

LCH\*Ma: 90 92 96

rgb\*Ma: 1.0 1.0 0.0

triangle lightness

1,00



%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        | 38           |
| YMa             | 90.37       | -10.27  | 91.77   | 92.34        | 96           |
| LMa             | 50.9        | -62.79  | 34.95   | 71.87        | 151          |
| CMa             | 58.62       | -30.35  | -45.01  | 54.3         | 236          |
| V <sub>Ma</sub> | 25.71       | 31.11   | -44.42  | 54.24        | 305          |
| M <sub>Ma</sub> | 48.13       | 75.27   | -8.35   | 75.73        | 354          |
| N <sub>Ma</sub> | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub> | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE            | 39.92       | 58.66   | 26.98   | 64.56        | 25           |
| JCIE            | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| GCIE            | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| BCIE            | 30.57       | 1.15    | -46.84  | 46.87        | 271          |

%Regularity

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

$g^*_{C,rel} = 59$

UE460-7, 5 step scales for constant CIELAB hue 94/360 = 0.262 (left)

5 step scales for constant CIELAB hue 96/360 = 0.268 (right)

BAM-test chart UE46; Colorimetric systems MRS18a & ORS18 input:  $cmy0^* setcmykcolor$

D65: 5 step colour scales and coordinate data for 10 hues

output:  $olv^* setrgbcolor / w^* setgray$

Input: Colorimetric Reflective System MRS18a

for hue  $h^* = lab^*h = 171/360 = 0.475$

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

D65: hue G

LCH\*Ma: 52 71 171

rgb\*Ma: 0.0 1.0 0.0

triangle lightness

1,00

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

0,75

%Regularity

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

$g^*_{C,rel} = 59$

0,25

%Regularity

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

$g^*_{C,rel} = 59$

0,00

%Regularity

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

$g^*_{C,rel} = 59$

0,25

%Regularity

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

$g^*_{C,rel} = 59$

0,00

%Regularity

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

$g^*_{C,rel} = 59$

0,25

%Regularity

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

$g^*_{C,rel} = 59$

0,00

%Regularity

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

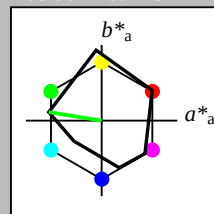
$g^*_{C,rel} = 59$

0,25

%Regularity

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

$g^*_{C,rel} = 59$



| MRS18a; adapted (a) CIELAB data |             |         |         |              |              |
|---------------------------------|-------------|---------|---------|--------------|--------------|
|                                 | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| RMa                             | 49.63       | 66.8    | 40.02   | 77.87        | 31           |
| JMa                             | 90.7        | -7.27   | 93.19   | 93.48        | 94           |
| GMa                             | 52.11       | -69.93  | 11.26   | 70.85        | 171          |
| G50B <sub>Ma</sub>              | 45.03       | -36.65  | -27.13  | 45.61        | 217          |
| B <sub>Ma</sub>                 | 36.65       | 23.26   | -62.27  | 66.49        | 290          |
| B50R <sub>Ma</sub>              | 34.94       | 57.27   | -43.6   | 71.99        | 323          |
| N <sub>Ma</sub>                 | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>                 | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE                            | 39.92       | 58.67   | 27.97   | 64.99        | 25           |
| JCIE                            | 81.26       | -2.91   | 71.56   | 71.62        | 92           |
| GCIE                            | 52.23       | -42.47  | 13.58   | 44.6         | 162          |
| BCIE                            | 30.57       | 1.33    | -46.48  | 46.51        | 272          |

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

0,75

%Regularity

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

$g^*_{C,rel} = 59$

0,25

%Regularity

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

$g^*_{C,rel} = 59$

0,00

%Regularity

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

$g^*_{C,rel} = 59$

0,25

%Regularity

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

$g^*_{C,rel} = 59$

0,00

%Regularity

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

$g^*_{C,rel} = 59$

0,25

%Regularity

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

$g^*_{C,rel} = 59$

0,00

%Regularity

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

$g^*_{C,rel} = 59$

0,25

%Regularity

Output: Colorimetric Reflective System ORS18

for hue  $h^* = lab^*h = 151/360 = 0.419$

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

D65: hue L

LCH\*Ma: 51 72 151

rgb\*Ma: 0.0 1.0 0.0

triangle lightness

1,00

%Gamut

$u^*_{rel} = 93$

%Regularity

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

$g^*_{C,rel} = 59$

0,75

%Regularity

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

$g^*_{C,rel} = 59$

0,25

%Regularity

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

$g^*_{C,rel} = 59$

0,00

%Regularity

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

$g^*_{C,rel} = 59$

0,25

%Regularity

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

$g^*_{C,rel} = 59$

0,00

%Regularity

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

$g^*_{C,rel} = 59$

0,25

%Regularity

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

$g^*_{C,rel} = 59$

0,00

%Regularity

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

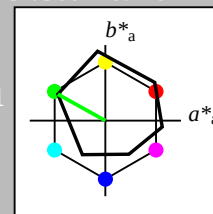
$g^*_{C,rel} = 59$

0,25

%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        | 38           |
| YMa                            | 90.37       | -10.27  | 91.77   | 92.34        | 96           |
| LMa                            | 50.9        | -62.79  | 34.95   | 71.87        | 151          |
| CMa                            | 58.62       | -30.35  | -45.01  | 54.3         | 236          |
| VMa                            | 25.71       | 31.11   | -44.42  | 54.24        | 305          |
| MMa                            | 48.13       | 75.27   | -8.35   | 75.73        | 354          |
| N <sub>Ma</sub>                | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>                | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE                           | 39.92       | 58.66   | 26.98   | 64.56        | 25           |
| JCIE                           | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| GCIE                           | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| BCIE                           | 30.57       | 1.15    | -46.84  | 46.87        | 271          |

%Regularity

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

$g^*_{C,rel} = 59$

0,75

%Regularity

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

$g^*_{C,rel} = 59$

0,25

%Regularity

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

$g^*_{C,rel} = 59$

0,00

%Regularity

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

$g^*_{C,rel} = 59$

0,25

%Regularity

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

$g^*_{C,rel} = 59$

0,00

%Regularity

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

$g^*_{C,rel} = 59$

0,25

%Regularity

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

$g^*_{C,rel} = 59$

0,00

%Regularity

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

$g^*_{C,rel} = 59$

0,25

%Regularity

| 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*LABa                         | 95.41 | 0.0   | 0.0  |       |  |
| LAB*LABb                         | 95.41 | 0.0   | 0.0  |       |  |
| LAB*LABc                         | 95.41 | 0.0   | 0.0  |       |  |
| LAB*LABd                         | 95.41 | 0.0   | 0.0  |       |  |
| LAB*LABe                         | 95.41 | 0.0   | 0.0  |       |  |
| LAB*LABf                         | 95.41 | 0.0   | 0.0  |       |  |
| LAB*LABg                         | 95.41 | 0.0   | 0.0  |       |  |
| LAB*LABh                         | 95.41 | 0.0   | 0.0  |       |  |
| LAB*LABi                         | 95.41 | 0.0   | 0.0  |       |  |
| LAB*LABj                         | 95.41 | 0.0   | 0.0  |       |  |
| LAB*LABk                         | 95.41 | 0.0   | 0.0  |       |  |
| LAB*LABl                         | 95.41 | 0.0   | 0.0  |       |  |
| LAB*LABm                         | 95.41 | 0.0   | 0.0  |       |  |
| LAB*LABn                         | 95.41 | 0.0   | 0.0  |       |  |
| LAB*LABo                         | 95.41 | 0.0   | 0.0  |       |  |
| LAB*LABp                         | 95.41 | 0.0   | 0.0  |       |  |
| LAB*LABq                         | 95.41 | 0.0   | 0.0  |       |  |
| LAB*LABr                         | 95.41 | 0.0   | 0.0  |       |  |
| LAB*LABs                         | 95.41 | 0.0   | 0.0  |       |  |
| LAB*LABt                         | 95.41 | 0.0   | 0.0  |       |  |
| LAB*LABu                         | 95.41 | 0.0   | 0.0  |       |  |
| LAB*LABv                         | 95.41 | 0.0   | 0.0  |       |  |
| LAB*LABw                         | 95.41 | 0.0   | 0.0  |       |  |
| LAB*LABx                         | 95.41 | 0.0   | 0.0  |       |  |
| LAB*LABy                         | 95.41 | 0.0   | 0.0  |       |  |
| LAB*LABz                         | 95.41 | 0.0   | 0.0  |       |  |

| relative Inform. Technology (IT) |       |        |        |       |  |
|----------------------------------|-------|--------|--------|-------|--|
| olvi3*                           | 0.75  | 1.0    | 0.75   | (1.0) |  |
| cmyn3*                           | 0.25  | 0.0    | 0.25   | (0.0) |  |
| olvi4*                           | 0.75  | 1.0    | 0.75   | 1.0   |  |
| cmyn4*                           | 0.25  | 0.0    | 0.25   | 0.0   |  |
| standard and adapted CIELAB      |       |        |        |       |  |
| LAB*LAB                          | 84.28 | -16.45 | 12.74  |       |  |
| LAB*LABa                         | 84.28 | -15.68 | 8.73   |       |  |
| LAB*LABb                         | 84.28 | 17.96  | 150.91 |       |  |
| LAB*LABc                         | 84.28 | 0.0    | 0.0    |       |  |
| LAB*LABd                         | 84.28 | 0.0    | 0.0    |       |  |
| LAB*LABe                         | 84.28 | 0.0    | 0.0    |       |  |
| LAB*LABf                         | 84.28 | 0.0    | 0.0    |       |  |
| LAB*LABg                         | 84.28 | 0.0    | 0.0    |       |  |
| LAB*LABh                         | 84.28 | 0.0    | 0.0    |       |  |
| LAB*LABi                         | 84.28 | 0.0    | 0.0    |       |  |
| LAB*LABj                         | 84.28 | 0.0    | 0.0    |       |  |
| LAB*LABk                         | 84.28 | 0.0    | 0.0    |       |  |
| LAB*LABl                         | 84.28 | 0.0    | 0.0    |       |  |
| LAB*LABm                         | 84.28 | 0.0    | 0.0    |       |  |
| LAB*LABn                         | 84.28 | 0.0    | 0.0    |       |  |
| LAB*LABo                         | 84.28 | 0.0    | 0.0    |       |  |
| LAB*LABp                         | 84.28 | 0.0    | 0.0    |       |  |
| LAB*LABq                         | 84.28 | 0.0    | 0.0    |       |  |
| LAB*LABr                         | 84.28 | 0.0    | 0.0    |       |  |
| LAB*LABs                         | 84.28 | 0.0    | 0.0    |       |  |
| LAB*LABt                         | 84.28 | 0.0    | 0.0    |       |  |
| LAB*LABu                         | 84.28 | 0.0    | 0.0    |       |  |
| LAB*LABv                         | 84.28 | 0.0    | 0.0    |       |  |
| LAB*LABw                         | 84.28 | 0.0    | 0.0    |       |  |
| LAB*LABx                         | 84.28 | 0.0    | 0.0    |       |  |
| LAB*LABy                         | 84.28 | 0.0    | 0.0    |       |  |
| LAB*LABz                         | 84.28 | 0.0    | 0.0    |       |  |

|                     |        |       |  |          |
|---------------------|--------|-------|--|----------|
| CIE Lab lab*        |        |       |  | relative |
| 0.856               | -0.217 | 0.122 |  | olvi3*   |
| 0.875               | 0.25   | 0.419 |  | cmyn3*   |
| 0.0                 | 0.25   | 0.419 |  | olvi4*   |
| Natural Colour (NC) |        |       |  | cmyn4*   |
| 0.856               | -0.238 | 0.072 |  | standard |
| 0.875               | 0.25   | 0.453 |  | LAB*LAB  |
| 0.0                 | 0.25   | j81g  |  | LAB*LAB  |

Input: Colorimetric Reflective System MRS18a

for hue  $h^* = lab^*h = 217/360 = 0.601$

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

D65: hue G50B

LCH\*Ma: 45 46 217

rgb\*Ma: 0.0 1.0 1.0

triangle lightness

1,00

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

%Regularity

$g^*_{H,rel} = 42$

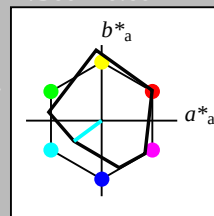
$g^*_{C,rel} = 49$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

%Regularity



| MRS18a; adapted (a) CIELAB data |             |         |         |              |              |
|---------------------------------|-------------|---------|---------|--------------|--------------|
|                                 | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| RMa                             | 49.63       | 66.8    | 40.02   | 77.87        | 31           |
| JMa                             | 90.7        | -7.27   | 93.19   | 93.48        | 94           |
| GMa                             | 52.11       | -69.93  | 11.26   | 70.85        | 171          |
| G50B <sub>Ma</sub>              | 45.03       | -36.65  | -27.13  | 45.61        | 217          |
| B <sub>Ma</sub>                 | 36.65       | 23.26   | -62.27  | 66.49        | 290          |
| B50R <sub>Ma</sub>              | 34.94       | 57.27   | -43.6   | 71.99        | 323          |
| N <sub>Ma</sub>                 | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>                 | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE                            | 39.92       | 58.67   | 27.97   | 64.99        | 25           |
| JCIE                            | 81.26       | -2.91   | 71.56   | 71.62        | 92           |
| GCIE                            | 52.23       | -42.47  | 13.58   | 44.6         | 162          |
| BCIE                            | 30.57       | 1.33    | -46.48  | 46.51        | 272          |

Output: Colorimetric Reflective System ORS18

for hue  $h^* = lab^*h = 236/360 = 0.656$

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

D65: hue C

LCH\*Ma: 59 54 236

rgb\*Ma: 0.0 1.0 1.0

triangle lightness

1,00

%Gamut

$u^*_{rel} = 93$

%Regularity

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

$g^*_{C,rel} = 59$

%Regularity

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

$g^*_{C,rel} = 59$

%Regularity

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

$g^*_{C,rel} = 59$

%Regularity

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

$g^*_{C,rel} = 59$

%Regularity

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

$g^*_{C,rel} = 59$

%Regularity

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

$g^*_{C,rel} = 59$

%Regularity

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

$g^*_{C,rel} = 59$

%Regularity

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

$g^*_{C,rel} = 59$

%Regularity

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

$g^*_{C,rel} = 59$

%Regularity

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

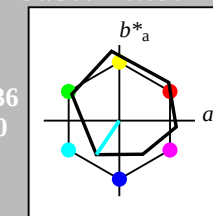
$g^*_{C,rel} = 59$

%Regularity

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

$g^*_{C,rel} = 59$

%Regularity



| 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        | 38           |
| YMa                            | 90.37       | -10.27  | 91.77   | 92.34        | 96           |
| LMa                            | 50.9        | -62.79  | 34.95   | 71.87        | 151          |
| CMa                            | 58.62       | -30.35  | -45.01  | 54.3         | 236          |
| VMa                            | 25.71       | 31.11   | -44.42  | 54.24        | 305          |
| MMa                            | 48.13       | 75.27   | -8.35   | 75.73        | 354          |
| N <sub>Ma</sub>                | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>                | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE                           | 39.92       | 58.66   | 26.98   | 64.56        | 25           |
| JCIE                           | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| GCIE                           | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| BCIE                           | 30.57       | 1.15    | -46.84  | 46.87        | 271          |

%Regularity

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

$g^*_{C,rel} = 59$

%Regularity

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

$g^*_{C,rel} = 59$

%Regularity

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

$g^*_{C,rel} = 59$

%Regularity

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

$g^*_{C,rel} = 59$

%Regularity

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

$g^*_{C,rel} = 59$

%Regularity

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

$g^*_{C,rel} = 59$

%Regularity

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

$g^*_{C,rel} = 59$

%Regularity

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

$g^*_{C,rel} = 59$

%Regularity

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

$g^*_{C,rel} = 59$

%Regularity

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

$g^*_{C,rel} = 59$

%Regularity

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

$g^*_{C,rel} = 59$

UE460-7, 5 step scales for constant CIELAB hue 217/360 = 0.601 (left)

5 step scales for constant CIELAB hue 236/360 = 0.656 (right)

BAM-test chart UE46; Colorimetric systems MRS18a & ORS18 input:  $cmY0^* setcmykcolor$

D65: 5 step colour scales and coordinate data for 10 hues

output:  $olv^* setrgbcolor / w^* setgray$



Input: Colorimetric Reflective System MRS18a

for hue  $h^* = lab^*h = 290/360 = 0.807$

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

D65: hue B

LCH\*Ma: 37 66 290

rgb\*Ma: 0.0 0.0 1.0

triangle lightness

1,00

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

0,00

$n^* = 0,50$

0,25

$n^* = 1,0$

chromaticness  $c^*$

0,25

0,50

0,75

1,00

blackness  $n^*$

0,25

0,50

0,75

1,00

blackness  $n^*$

0,25

0,50

0,75

1,00

blackness  $n^*$

0,25

0,50

0,75

1,00

blackness  $n^*$

0,25

0,50

0,75

1,00

MRS18a; adapted (a) CIELAB data

$L^* = L^*_a$   $a^*_a$   $b^*_a$   $C^*_{ab,a}$   $h^*_{ab,a}$

RMa 49.63 66.8 40.02 77.87 31

JMa 90.7 -7.27 93.19 93.48 94

GMa 52.11 -69.93 11.26 70.85 171

G50B<sub>Ma</sub> 45.03 -36.65 -27.13 45.61 217

B<sub>Ma</sub> 36.65 23.26 -62.27 66.49 290

B50R<sub>Ma</sub> 34.94 57.27 -43.6 71.99 323

N<sub>Ma</sub> 18.01 0.0 0.0 0.0 0

W<sub>Ma</sub> 95.41 0.0 0.0 0.0 0

RCIE 39.92 58.67 27.97 64.99 25

JCIE 81.26 -2.91 71.56 71.62 92

GCIE 52.23 -42.47 13.58 44.6 162

BCIE 30.57 1.33 -46.48 46.51 272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

0,00

$n^* = 0,50$

0,25

$n^* = 1,0$

chromaticness  $c^*$

0,25

0,50

0,75

1,00

blackness  $n^*$

0,25

0,50

0,75

1,00

blackness  $n^*$

0,25

0,50

0,75

1,00

blackness  $n^*$

0,25

0,50

0,75

1,00

Output: Colorimetric Reflective System ORS18

for hue  $h^* = lab^*h = 305/360 = 0.847$

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

D65: hue V

LCH\*Ma: 26 54 305

rgb\*Ma: 0.0 0.0 1.0

triangle lightness

1,00

%Gamut

$u^*_{rel} = 93$

%Regularity

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

$g^*_{C,rel} = 59$

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

0,00

$n^* = 0,50$

0,25

$n^* = 1,0$

chromaticness  $c^*$

0,25

0,50

0,75

1,00

blackness  $n^*$

0,25

0,50

0,75

1,00

blackness  $n^*$

0,25

0,50

0,75

1,00

blackness  $n^*$

0,25

0,50

0,75

1,00

blackness  $n^*$

0,25

0,50

0,75

1,00

MRS18a; adapted (a) CIELAB data

$L^* = L^*_a$   $a^*_a$   $b^*_a$   $C^*_{ab,a}$   $h^*_{ab,a}$

RMa 47.94 65.37 50.52 82.62 38

JMa 90.37 -10.27 91.77 92.34 96

GMa 50.9 -62.79 34.95 71.87 151

C<sub>Ma</sub> 58.62 -30.35 -45.01 54.3 236

V<sub>Ma</sub> 25.71 31.11 -44.42 54.24 305

M<sub>Ma</sub> 48.13 75.27 -8.35 75.73 354

N<sub>Ma</sub> 18.01 0.0 0.0 0.0 0

W<sub>Ma</sub> 95.41 0.0 0.0 0.0 0

RCIE 39.92 58.66 26.98 64.56 25

JCIE 81.26 -2.17 67.76 67.79 92

GCIE 52.23 -42.26 11.75 43.87 164

BCIE 30.57 1.15 -46.84 46.87 271

%Regularity

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

$g^*_{C,rel} = 59$

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

0,00

$n^* = 0,50$

0,25

$n^* = 1,0$

chromaticness  $c^*$

0,25

0,50

0,75

1,00

blackness  $n^*$

0,25

0,50

0,75

1,00

blackness  $n^*$

0,25

0,50

0,75

1,00

blackness  $n^*$

0,25

0,50

0,75

1,00

ORS18; adapted (a) CIELAB data

$L^* = L^*_a$   $a^*_a$   $b^*_a$   $C^*_{ab,a}$   $h^*_{ab,a}$

RMa 47.94 65.37 50.52 82.62 38

JMa 90.37 -10.27 91.77 92.34 96

GMa 50.9 -62.79 34.95 71.87 151

C<sub>Ma</sub> 58.62 -30.35 -45.01 54.3 236

V<sub>Ma</sub> 25.71 31.11 -44.42 54.24 305

M<sub>Ma</sub> 48.13 75.27 -8.35 75.73 354

N<sub>Ma</sub> 18.01 0.0 0.0 0.0 0

W<sub>Ma</sub> 95.41 0.0 0.0 0.0 0

RCIE 39.92 58.66 26.98 64.56 25

JCIE 81.26 -2.17 67.76 67.79 92

GCIE 52.23 -42.26 11.75 43.87 164

BCIE 30.57 1.15 -46.84 46.87 271

%Regularity

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

$g^*_{C,rel} = 59$

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

0,00

$n^* = 0,50$

0,25

$n^* = 1,0$

chromaticness  $c^*$

0,25

0,50

0,75

1,00

blackness  $n^*$

0,25

0,50

0,75

1,00

blackness  $n^*$

0,25

0,50

0,75

1,00

blackness  $n^*$

0,25

0,50

0,75

1,00

UE460-7, 5 step scales for constant CIELAB hue 290/360 = 0.807 (left)

5 step scales for constant CIELAB hue 305/360 = 0.847 (right)

BAM-test chart UE46; Colorimetric systems MRS18a & ORS18 input: *cmY0\* setcmykcolor*

D65: 5 step colour scales and coordinate data for 10 hues

output: *olv\* setrgbcolor / w\* setgray*

Input: Colorimetric Reflective System MRS18a

for hue  $h^* = lab \cdot h = 323/360 = 0.896$

$lab \cdot tch$  and  $lab \cdot nch$

D65: hue B50R

LCH\*Ma: 35 72 323

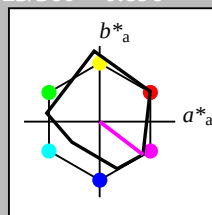
rgb\*Ma: 1.0 0.0 1.0

triangle lightness

1,00

%Gamut

$u^*_{rel} = 92$



| MRS18a; adapted (a) CIELAB data |               |         |         |              |              |
|---------------------------------|---------------|---------|---------|--------------|--------------|
|                                 | $L^* = L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| RMa                             | 49.63         | 66.8    | 40.02   | 77.87        | 31           |
| JMa                             | 90.7          | -7.27   | 93.19   | 93.48        | 94           |
| GMa                             | 52.11         | -69.93  | 11.26   | 70.85        | 171          |
| G50B <sub>Ma</sub>              | 45.03         | -36.65  | -27.13  | 45.61        | 217          |
| B <sub>Ma</sub>                 | 36.65         | 23.26   | -62.27  | 66.49        | 290          |
| B50R <sub>Ma</sub>              | 34.94         | 57.27   | -43.6   | 71.99        | 323          |
| N <sub>Ma</sub>                 | 18.01         | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>                 | 95.41         | 0.0     | 0.0     | 0.0          | 0            |
| RCIE                            | 39.92         | 58.67   | 27.97   | 64.99        | 25           |
| JCIE                            | 81.26         | -2.91   | 71.56   | 71.62        | 92           |
| GCIE                            | 52.23         | -42.47  | 13.58   | 44.6         | 162          |
| BCIE                            | 30.57         | 1.33    | -46.48  | 46.51        | 272          |

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

1,00

%Gamut

$u^*_{rel} = 93$

%Regularity

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

$g^*_{C,rel} = 59$

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

%Gamut

$u^*_{rel} = 93$

%Regularity

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

$g^*_{C,rel} = 59$

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

%Gamut

$u^*_{rel} = 93$

%Regularity

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

$g^*_{C,rel} = 59$

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

%Gamut

$u^*_{rel} = 93$

%Regularity

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

$g^*_{C,rel} = 59$

Output: Colorimetric Reflective System ORS18

for hue  $h^* = lab \cdot h = 354/360 = 0.982$

$lab \cdot tch$  and  $lab \cdot nch$

D65: hue M

LCH\*Ma: 48 76 354

rgb\*Ma: 1.0 0.0 1.0

triangle lightness

1,00

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

%Gamut

$u^*_{rel} = 93$

%Regularity

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

$g^*_{C,rel} = 59$

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

%Gamut

$u^*_{rel} = 93$

%Regularity

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

$g^*_{C,rel} = 59$

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

%Gamut

$u^*_{rel} = 93$

%Regularity

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

$g^*_{C,rel} = 59$

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

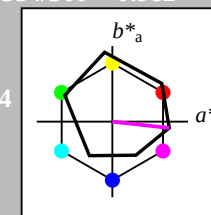
%Gamut

$u^*_{rel} = 93$

%Regularity

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

$g^*_{C,rel} = 59$



%Gamut

$u^*_{rel} = 93$

%Regularity

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

$g^*_{C,rel} = 59$

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

%Gamut

$u^*_{rel} = 93$

%Regularity

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

$g^*_{C,rel} = 59$

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

%Gamut

$u^*_{rel} = 93$

%Regularity

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

$g^*_{C,rel} = 59$

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

%Gamut

$u^*_{rel} = 93$

%Regularity

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

$g^*_{C,rel} = 59$

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

| 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        | 38           |
| YMa                            | 90.37         | -10.27  | 91.77   | 92.34        | 96           |
| LMa                            | 50.9          | -62.79  | 34.95   | 71.87        | 151          |
| CMa                            | 58.62         | -30.35  | -45.01  | 54.3         | 236          |
| VMa                            | 25.71         | 31.11   | -44.42  | 54.24        | 305          |
| MMa                            | 48.13         | 75.27   | -8.35   | 75.73        | 354          |
| N <sub>Ma</sub>                | 18.01         | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>                | 95.41         | 0.0     | 0.0     | 0.0          | 0            |
| RCIE                           | 39.92         | 58.66   | 26.98   | 64.56        | 25           |
| JCIE                           | 81.26         | -2.17   | 67.76   | 67.79        | 92           |
| GCIE                           | 52.23         | -42.26  | 11.75   | 43.87        | 164          |
| BCIE                           | 30.57         | 1.15    | -46.84  | 46.87        | 271          |

%Regularity

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

$g^*_{C,rel} = 59$

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

%Gamut

$u^*_{rel} = 93$

%Regularity

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

$g^*_{C,rel} = 59$

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

%Gamut

$u^*_{rel} = 93$

%Regularity

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

$g^*_{C,rel} = 59$

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

%Gamut

$u^*_{rel} = 93$

%Regularity

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

$g^*_{C,rel} = 59$

%Regularity

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

$g^*_{C,rel} = 59$

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

%Gamut

$u^*_{rel} = 93$

%Regularity

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

$g^*_{C,rel} = 59$

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

%Gamut

$u^*_{rel} = 93$

%Regularity

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

$g^*_{C,rel} = 59$

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

%Gamut

$u^*_{rel} = 93$

%Regularity

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

$g^*_{C,rel} = 59$

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

%Gamut

$u^*_{rel} = 93$

%Regularity

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

$g^*_{C,rel} = 59$

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

%Gamut

$u^*_{rel} = 93$

%Regularity

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

$g^*_{C,rel} = 59$

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

%Gamut

$u^*_{rel} = 93$

%Regularity

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

$g^*_{C,rel} = 59$

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

%Gamut

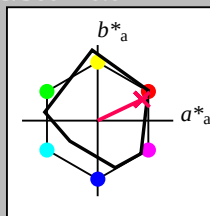
<

Input: Colorimetric Reflective System MRS18a

for hue  $h^* = lab \cdot h = 25/360 = 0.071$

$lab \cdot tch$  and  $lab \cdot nch$

D65: hue R  
LCH\*Ma: 48 73 25  
rgb\*Ma: 1.0 0.0 0.1  
triangle lightness



| MRS18a; adapted (a) CIELAB data |               |         |         |              |              |
|---------------------------------|---------------|---------|---------|--------------|--------------|
|                                 | $L^* = L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| RMa                             | 49.63         | 66.8    | 40.02   | 77.87        | 31           |
| JMa                             | 90.7          | -7.27   | 93.19   | 93.48        | 94           |
| GMa                             | 52.11         | -69.93  | 11.26   | 70.85        | 171          |
| G50B <sub>Ma</sub>              | 45.03         | -36.65  | -27.13  | 45.61        | 217          |
| B <sub>Ma</sub>                 | 36.65         | 23.26   | -62.27  | 66.49        | 290          |
| B50R <sub>Ma</sub>              | 34.94         | 57.27   | -43.6   | 71.99        | 323          |
| N <sub>Ma</sub>                 | 18.01         | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>                 | 95.41         | 0.0     | 0.0     | 0.0          | 0            |
| RCIE                            | 39.92         | 58.67   | 27.97   | 64.99        | 25           |
| JCIE                            | 81.26         | -2.91   | 71.56   | 71.62        | 92           |
| GCIE                            | 52.23         | -42.47  | 13.58   | 44.6         | 162          |
| BCIE                            | 30.57         | 1.33    | -46.48  | 46.51        | 272          |

%Regularity

$g^*_{H,rel} = 42$

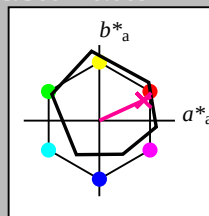
$g^*_{C,rel} = 49$

Output: Colorimetric Reflective System ORS18

for hue  $h^* = lab \cdot h = 25/360 = 0.069$

$lab \cdot tch$  and  $lab \cdot nch$

D65: hue R  
LCH\*Ma: 48 75 25  
rgb\*Ma: 1.0 0.0 0.32  
triangle lightness

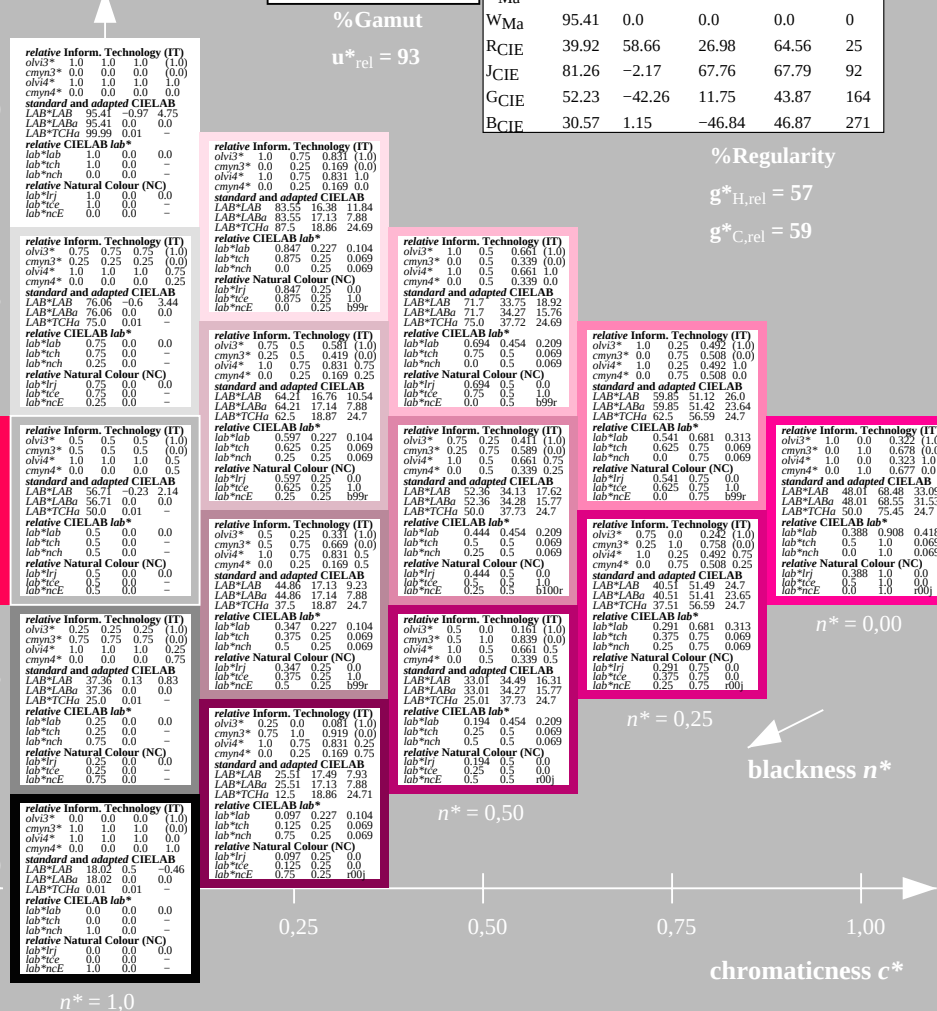
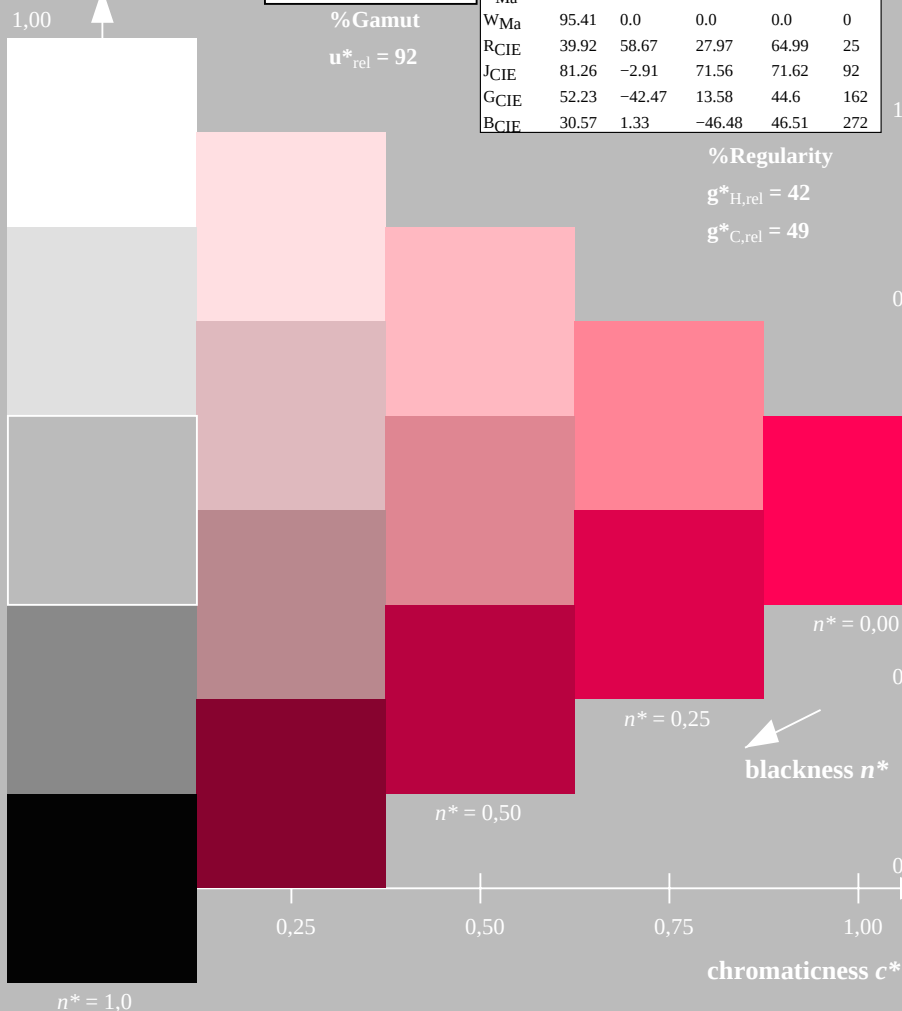


| ORS18; adapted (a) CIELAB data |               |         |         |              |              |
|--------------------------------|---------------|---------|---------|--------------|--------------|
|                                | $L^* = L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| OMa                            | 47.94         | 65.37   | 50.52   | 82.62        | 38           |
| YMa                            | 90.37         | -10.27  | 91.77   | 92.34        | 96           |
| LMa                            | 50.9          | -62.79  | 34.95   | 71.87        | 151          |
| CMa                            | 58.62         | -30.35  | -45.01  | 54.3         | 236          |
| VMa                            | 25.71         | 31.11   | -44.42  | 54.24        | 305          |
| MMa                            | 48.13         | 75.27   | -8.35   | 75.73        | 354          |
| N <sub>Ma</sub>                | 18.01         | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>                | 95.41         | 0.0     | 0.0     | 0.0          | 0            |
| RCIE                           | 39.92         | 58.66   | 26.98   | 64.56        | 25           |
| JCIE                           | 81.26         | -2.17   | 67.76   | 67.79        | 92           |
| GCIE                           | 52.23         | -42.26  | 11.75   | 43.87        | 164          |
| BCIE                           | 30.57         | 1.15    | -46.84  | 46.87        | 271          |

%Regularity

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

$g^*_{C,rel} = 59$



UE460-7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.069 (right)

BAM-test chart UE46; Colorimetric systems MRS18a & ORS18 input: `cmY0* setcmykcolor`

D65: 5 step colour scales and coordinate data for 10 hues

output: `olv* setrgbcolor / w* setgray`

Input: Colorimetric Reflective System MRS18a

for hue  $h^* = lab^*h = 92/360 = 0.256$

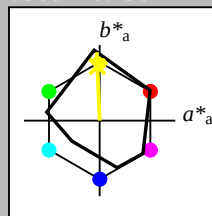
$lab^*tch$  and  $lab^*nch$

D65: hue J

LCH\*Ma: 89 91 92

rgb\*Ma: 1.0 0.95 0.0

triangle lightness



| MRS18a; adapted (a) CIELAB data |             |         |         |              |              |
|---------------------------------|-------------|---------|---------|--------------|--------------|
|                                 | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| RMa                             | 49.63       | 66.8    | 40.02   | 77.87        | 31           |
| JMa                             | 90.7        | -7.27   | 93.19   | 93.48        | 94           |
| GMa                             | 52.11       | -69.93  | 11.26   | 70.85        | 171          |
| G50B <sub>Ma</sub>              | 45.03       | -36.65  | -27.13  | 45.61        | 217          |
| B <sub>Ma</sub>                 | 36.65       | 23.26   | -62.27  | 66.49        | 290          |
| B50R <sub>Ma</sub>              | 34.94       | 57.27   | -43.6   | 71.99        | 323          |
| N <sub>Ma</sub>                 | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>                 | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE                            | 39.92       | 58.67   | 27.97   | 64.99        | 25           |
| JCIE                            | 81.26       | -2.91   | 71.56   | 71.62        | 92           |
| GCIE                            | 52.23       | -42.47  | 13.58   | 44.6         | 162          |
| BCIE                            | 30.57       | 1.33    | -46.48  | 46.51        | 272          |

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

1,00

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

$n^* = 0,50$

0,00

$n^* = 1,0$

chromaticness  $c^*$

UE460-7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)



BAM-test chart UE46; Colorimetric systems MRS18a & ORS18 input:  $cmY0^* setcmykcolor$

D65: 5 step colour scales and coordinate data for 10 hues

Output: Colorimetric Reflective System ORS18

for hue  $h^* = lab^*h = 92/360 = 0.255$

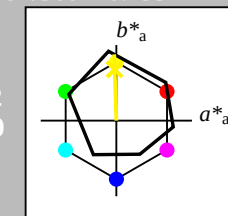
$lab^*tch$  and  $lab^*nch$

D65: hue J

LCH\*Ma: 86 88 92

rgb\*Ma: 1.0 0.9 0.0

triangle lightness



| 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        | 38           |
| YMa                            | 90.37       | -10.27  | 91.77   | 92.34        | 96           |
| LMa                            | 50.9        | -62.79  | 34.95   | 71.87        | 151          |
| CMa                            | 58.62       | -30.35  | -45.01  | 54.3         | 236          |
| V <sub>Ma</sub>                | 25.71       | 31.11   | -44.42  | 54.24        | 305          |
| M <sub>Ma</sub>                | 48.13       | 75.27   | -8.35   | 75.73        | 354          |
| N <sub>Ma</sub>                | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>                | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE                           | 39.92       | 58.66   | 26.98   | 64.56        | 25           |
| JCIE                           | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| GCIE                           | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| BCIE                           | 30.57       | 1.15    | -46.84  | 46.87        | 271          |

%Regularity

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

$g^*_{C,rel} = 59$

1,00

0,75

$n^* = 0,00$

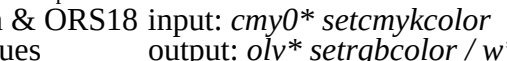
0,25

$n^* = 0,25$

$n^* = 0,50$

chromaticness  $c^*$

5 step scales for constant CIELAB hue 92/360 = 0.255 (right)



BAM material: code=rh4ta

output:  $olv^* setrgbcolor / w^* setgray$



Input: Colorimetric Reflective System MRS18a

for hue  $h^* = lab^*h = 162/360 = 0.451$

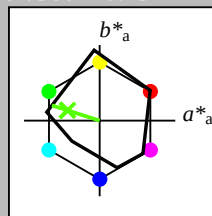
$lab^*tch$  and  $lab^*nch$

D65: hue G

LCH\*Ma: 56 66 162

rgb\*Ma: 0.11 1.0 0.0

triangle lightness

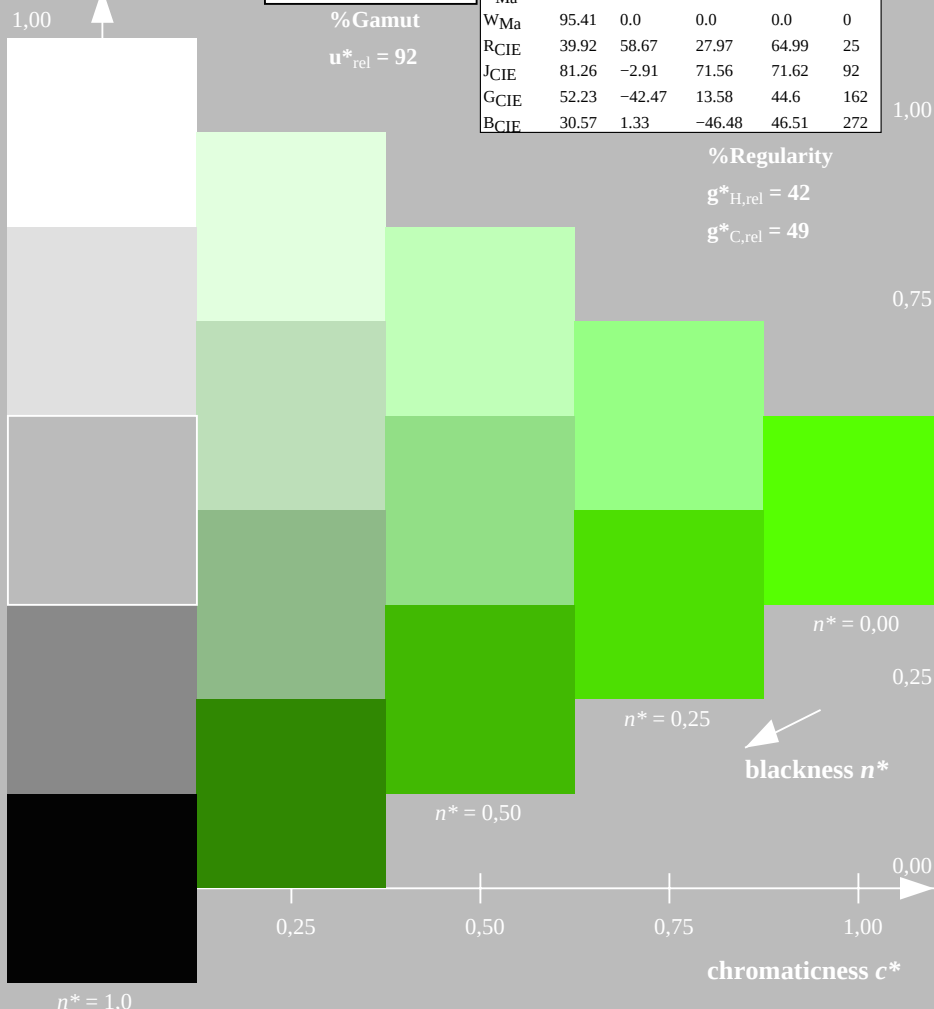


| MRS18a; adapted (a) CIELAB data |             |         |         |              |              |
|---------------------------------|-------------|---------|---------|--------------|--------------|
|                                 | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| RMa                             | 49.63       | 66.8    | 40.02   | 77.87        | 31           |
| JMa                             | 90.7        | -7.27   | 93.19   | 93.48        | 94           |
| GMa                             | 52.11       | -69.93  | 11.26   | 70.85        | 171          |
| G50B <sub>Ma</sub>              | 45.03       | -36.65  | -27.13  | 45.61        | 217          |
| B <sub>Ma</sub>                 | 36.65       | 23.26   | -62.27  | 66.49        | 290          |
| B50R <sub>Ma</sub>              | 34.94       | 57.27   | -43.6   | 71.99        | 323          |
| N <sub>Ma</sub>                 | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>                 | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE                            | 39.92       | 58.67   | 27.97   | 64.99        | 25           |
| JCIE                            | 81.26       | -2.91   | 71.56   | 71.62        | 92           |
| GCIE                            | 52.23       | -42.47  | 13.58   | 44.6         | 162          |
| BCIE                            | 30.57       | 1.33    | -46.48  | 46.51        | 272          |

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



UE460-7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

BAM-test chart UE46; Colorimetric systems MRS18a & ORS18 input:  $cmy0^* setcmykcolor$

D65: 5 step colour scales and coordinate data for 10 hues

Output: Colorimetric Reflective System ORS18

for hue  $h^* = lab^*h = 164/360 = 0.457$

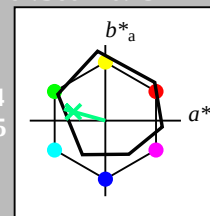
$lab^*tch$  and  $lab^*nch$

D65: hue G

LCH\*Ma: 53 57 164

rgb\*Ma: 0.0 1.0 0.25

triangle lightness

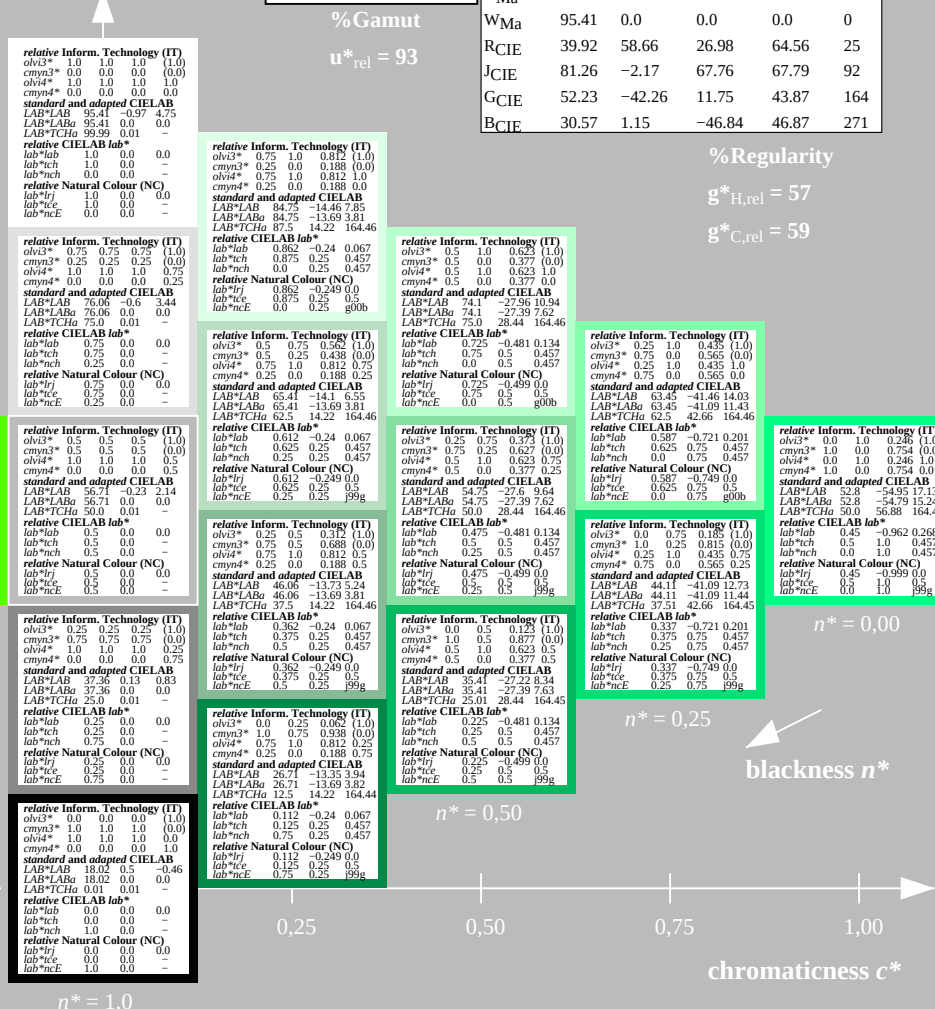


| ORS18; adapted (a) CIELAB data |             |         |         |              |              |
|--------------------------------|-------------|---------|---------|--------------|--------------|
|                                | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| OMa                            | 47.94       | 65.37   | 50.52   | 82.62        | 38           |
| YMa                            | 90.37       | -10.27  | 91.77   | 92.34        | 96           |
| LMa                            | 50.9        | -62.79  | 34.95   | 71.87        | 151          |
| C <sub>Ma</sub>                | 58.62       | -30.35  | -45.01  | 54.3         | 236          |
| V <sub>Ma</sub>                | 25.71       | 31.11   | -44.42  | 54.24        | 305          |
| M <sub>Ma</sub>                | 48.13       | 75.27   | -8.35   | 75.73        | 354          |
| N <sub>Ma</sub>                | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>                | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE                           | 39.92       | 58.66   | 26.98   | 64.56        | 25           |
| JCIE                           | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| GCIE                           | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| BCIE                           | 30.57       | 1.15    | -46.84  | 46.87        | 271          |

%Regularity

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

$g^*_{C,rel} = 59$



5 step scales for constant CIELAB hue 164/360 = 0.457 (right)

output:  $cmy0^* setrgbcolor / w^* setgray$

Input: Colorimetric Reflective System MRS18a

for hue  $h^* = lab^*h = 272/360 = 0.755$

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

D65: hue B

LCH\*Ma: 40 49 272

rgb\*Ma: 0.0 0.36 1.0

triangle lightness

1,00

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

0,75

%Regularity

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

$g^*_{C,rel} = 59$

0,50

%Regularity

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

$g^*_{C,rel} = 59$

0,25

%Regularity

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

$g^*_{C,rel} = 59$

0,00

%Regularity

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

$g^*_{C,rel} = 59$

0,00

%Regularity

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

$g^*_{C,rel} = 59$

0,00

%Regularity

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

$g^*_{C,rel} = 59$

0,00

%Regularity

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

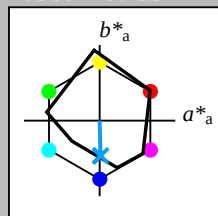
$g^*_{C,rel} = 59$

0,00

%Regularity

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

$g^*_{C,rel} = 59$



| MRS18a; adapted (a) CIELAB data |             |         |         |              |              |
|---------------------------------|-------------|---------|---------|--------------|--------------|
|                                 | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| RMa                             | 49.63       | 66.8    | 40.02   | 77.87        | 31           |
| JMa                             | 90.7        | -7.27   | 93.19   | 93.48        | 94           |
| GMa                             | 52.11       | -69.93  | 11.26   | 70.85        | 171          |
| G50B <sub>Ma</sub>              | 45.03       | -36.65  | -27.13  | 45.61        | 217          |
| B <sub>Ma</sub>                 | 36.65       | 23.26   | -62.27  | 66.49        | 290          |
| B50R <sub>Ma</sub>              | 34.94       | 57.27   | -43.6   | 71.99        | 323          |
| N <sub>Ma</sub>                 | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>                 | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE                            | 39.92       | 58.67   | 27.97   | 64.99        | 25           |
| JCIE                            | 81.26       | -2.91   | 71.56   | 71.62        | 92           |
| GCIE                            | 52.23       | -42.47  | 13.58   | 44.6         | 162          |
| BCIE                            | 30.57       | 1.33    | -46.48  | 46.51        | 272          |

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

0,75

%Regularity

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

$g^*_{C,rel} = 59$

0,50

%Regularity

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

$g^*_{C,rel} = 59$

0,25

%Regularity

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

$g^*_{C,rel} = 59$

0,00

%Regularity

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

$g^*_{C,rel} = 59$

0,00

%Regularity

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

$g^*_{C,rel} = 59$

0,00

%Regularity

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

$g^*_{C,rel} = 59$

0,00

%Regularity

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

$g^*_{C,rel} = 59$

0,00

%Regularity

Output: Colorimetric Reflective System ORS18

for hue  $h^* = lab^*h = 271/360 = 0.754$

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

D65: hue B

LCH\*Ma: 42 45 271

rgb\*Ma: 0.0 0.49 1.0

triangle lightness

1,00

%Gamut

$u^*_{rel} = 93$

%Regularity

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

$g^*_{C,rel} = 59$

0,75

%Regularity

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

$g^*_{C,rel} = 59$

0,50

%Regularity

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

$g^*_{C,rel} = 59$

0,25

%Regularity

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

$g^*_{C,rel} = 59$

0,00

%Regularity

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

$g^*_{C,rel} = 59$

0,00

%Regularity

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

$g^*_{C,rel} = 59$

0,00

%Regularity

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

$g^*_{C,rel} = 59$

0,00

%Regularity

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

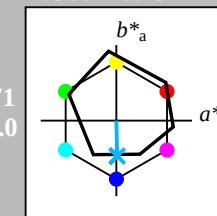
$g^*_{C,rel} = 59$

0,00

%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        | 38           |
| YMa                            | 90.37       | -10.27  | 91.77   | 92.34        | 96           |
| LMa                            | 50.9        | -62.79  | 34.95   | 71.87        | 151          |
| CMa                            | 58.62       | -30.35  | -45.01  | 54.3         | 236          |
| VMa                            | 25.71       | 31.11   | -44.42  | 54.24        | 305          |
| MMa                            | 48.13       | 75.27   | -8.35   | 75.73        | 354          |
| N <sub>Ma</sub>                | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>                | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE                           | 39.92       | 58.66   | 26.98   | 64.56        | 25           |
| JCIE                           | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| GCIE                           | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| BCIE                           | 30.57       | 1.15    | -46.84  | 46.87        | 271          |

%Regularity

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

$g^*_{C,rel} = 59$

0,75

%Regularity

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

$g^*_{C,rel} = 59$

0,50

%Regularity

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

$g^*_{C,rel} = 59$

0,25

%Regularity

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

$g^*_{C,rel} = 59$

0,00

%Regularity

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

$g^*_{C,rel} = 59$

0,00

%Regularity

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

$g^*_{C,rel} = 59$

0,00

%Regularity

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

$g^*_{C,rel} = 59$

0,00

%Regularity

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

$g^*_{C,rel} = 59$

0,00

%Regularity

5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

BAM-test chart UE46; Colorimetric systems MRS18a & ORS18 input:  $cmy0^* setcmykcolor$

D65: 5 step colour scales and coordinate data for 10 hues

output:  $olv^* setrgbcolor / w^* setgray$