

# Input: 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  
 $g^*_{H,rel} = 57$   
 $g^*_{C,rel} = 59$

relative Inform. Technology (IT)  
olv13\* 1.0 1.0 1.0 (1.0)  
cmyn3\* 0.0 0.0 0.0 (0.0)  
olv14\* 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\*LABo 95.41 0.0 0.0  
LAB\*TCHo 99.99 0.01 -

relative CIELAB lab\*  
lab\*lab 1.0 0.0 0.0  
lab\*tch 1.0 0.0 -  
lab\*nch 0.0 0.0 -  
relative Natural Colour (NC)  
lab\*lrj 1.0 0.0 0.0  
lab\*nce 1.0 0.0 0.0  
lab\*nce 0.0 0.0 -

relative Inform. Technology (IT)  
olv13\* 0.5 0.5 0.5 (1.0)  
cmyn3\* 0.5 0.5 0.5 (0.0)  
olv14\* 1.0 1.0 1.0 (1.0)  
cmyn4\* 0.0 0.0 0.0 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 56.71 -0.23 2.14  
LAB\*LABo 56.71 0.0 0.0  
LAB\*TCHo 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\*lrj 0.5 0.0 0.0  
lab\*nce 0.5 0.0 0.0  
lab\*nce 0.0 0.0 -

relative Inform. Technology (IT)  
olv13\* 1.0 1.0 1.0 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olv14\* 1.0 1.0 1.0 (1.0)  
cmyn4\* 0.0 0.0 0.0 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 18.02 0.5 -0.46  
LAB\*LABo 18.02 0.0 0.0  
LAB\*TCHo 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 0.0 -  
relative Natural Colour (NC)  
lab\*lrj 0.0 0.0 0.0  
lab\*nce 0.0 0.0 -  
lab\*nce 0.0 0.0 -

$n^* = 1.0$

## 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          |
| NMa  | 18.01         | 0.0     | 0.0     | 0.0          | 0            |
| WMa  | 95.41         | 0.0     | 0.0     | 0.0          | 0            |
| RCIE | 39.92         | 58.66   | 26.98   | 64.56        | 25           |
| ICIE | 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          |

relative Inform. Technology (IT)  
olv13\* 1.0 0.5 0.5 (1.0)  
cmyn3\* 0.0 0.5 0.5 (0.0)  
olv14\* 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\*LABo 71.67 32.15 28.41  
LAB\*TCHo 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  
relative Natural Colour (NC)  
lab\*lrj 0.693 0.477 0.15  
lab\*nce 0.75 0.5 0.048  
lab\*nce 0.0 0.5 0.15

relative Inform. Technology (IT)  
olv13\* 0.5 0.0 0.0 (1.0)  
cmyn3\* 0.5 0.0 0.0 (0.0)  
olv14\* 1.0 0.5 0.5 (1.0)  
cmyn4\* 0.0 0.5 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 32.98 32.9 25.8  
LAB\*LABo 32.98 32.98 25.25  
LAB\*TCHo 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 0.0 0.5 0.105  
relative Natural Colour (NC)  
lab\*lrj 0.193 0.477 0.15  
lab\*nce 0.25 0.5 0.048  
lab\*nce 0.0 0.5 0.15

relative Inform. Technology (IT)  
olv13\* 1.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 0.0 0.0 (0.0)  
olv14\* 1.0 0.0 0.0 (1.0)  
cmyn4\* 0.0 0.0 0.0 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 47.95 65.29 52.06  
LAB\*LABo 47.95 65.36 50.51  
LAB\*TCHo 50.0 82.6 37.7

relative CIELAB lab\*  
lab\*lab 0.387 0.791 0.611  
lab\*tch 0.5 0.0 0.0  
lab\*nch 0.0 1.0 0.105  
relative Natural Colour (NC)  
lab\*lrj 0.387 0.954 0.299  
lab\*nce 0.5 0.0 0.48  
lab\*nce 0.0 1.0 0.15

$n^* = 0.00$

blackness  $n^*$

chromaticness  $c^*$

# Output: Colorimetric Reflective System MRS18

for hue  $h^* = lab^*h = 30/360 = 0.083$   
 $lab^*tch$  and  $lab^*nch$

D65: hue R  
LCH\*Ma: 50 77 30  
olv\*Ma: 1.0 0.0 0.0

triangle lightness  $t^*$



%Gamut  
 $u^*_{rel} = 91$   
%Regularity  
 $g^*_{H,rel} = 41$   
 $g^*_{C,rel} = 52$

relative Inform. Technology (IT)  
olv13\* 1.0 1.0 1.0 (1.0)  
cmyn3\* 0.0 0.0 0.0 (0.0)  
olv14\* 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\*LABo 95.41 0.0 0.0  
LAB\*TCHo 99.99 0.01 -

relative CIELAB lab\*  
lab\*lab 1.0 0.0 0.0  
lab\*tch 1.0 0.0 -  
lab\*nch 0.0 0.0 -  
relative Natural Colour (NC)  
lab\*lrj 1.0 0.0 0.0  
lab\*nce 1.0 0.0 0.0  
lab\*nce 0.0 0.0 -

relative Inform. Technology (IT)  
olv13\* 0.5 0.5 0.5 (1.0)  
cmyn3\* 0.5 0.5 0.5 (0.0)  
olv14\* 1.0 1.0 1.0 (1.0)  
cmyn4\* 0.0 0.5 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 56.71 -0.23 2.14  
LAB\*LABo 56.71 0.0 0.0  
LAB\*TCHo 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\*lrj 0.5 0.0 0.0  
lab\*nce 0.5 0.0 0.0  
lab\*nce 0.0 0.0 -

relative Inform. Technology (IT)  
olv13\* 1.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olv14\* 1.0 0.5 0.5 (0.0)  
cmyn4\* 0.0 0.0 0.0 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 18.02 0.5 -0.46  
LAB\*LABo 18.02 0.0 0.0  
LAB\*TCHo 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 0.0 -  
relative Natural Colour (NC)  
lab\*lrj 0.0 0.0 0.0  
lab\*nce 0.0 0.0 -  
lab\*nce 0.0 0.0 -

$n^* = 1.0$

## MRS18; adapted (a) CIELAB data

|         | $L^* = L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{a,b,a}$ | $h^*_{a,b,a}$ |
|---------|---------------|---------|---------|---------------|---------------|
| RMa     | 49.63         | 66.96   | 38.37   | 77.18         | 30            |
| YMa     | 90.7          | -6.36   | 88.75   | 88.98         | 94            |
| LMa     | 52.11         | -69.73  | 9.44    | 70.37         | 172           |
| G50BMa  | 45.03         | -36.57  | -28.47  | 46.36         | 218           |
| BMa     | 36.65         | 23.19   | -63.05  | 67.18         | 290           |
| B50RBMa | 34.94         | 57.17   | -44.26  | 72.31         | 322           |
| NMa     | 18.01         | 0.0     | 0.0     | 0.0           | 0             |
| WMa     | 95.41         | 0.0     | 0.0     | 0.0           | 0             |
| RCIE    | 39.92         | 58.66   | 26.98   | 64.56         | 25            |
| ICIE    | 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           |

relative Inform. Technology (IT)  
olv13\* 1.0 0.5 0.5 (1.0)  
cmyn3\* 0.0 0.5 0.5 (0.0)  
olv14\* 1.0 0.5 0.5 (1.0)  
cmyn4\* 0.0 0.5 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 72.52 32.93 22.4  
LAB\*LABo 72.52 32.93 22.4  
LAB\*TCHo 75.0 38.58 29.82

relative CIELAB lab\*  
lab\*lab 0.704 0.434 0.249  
lab\*tch 0.75 0.5 0.083  
lab\*nch 0.0 0.5 0.083  
relative Natural Colour (NC)  
lab\*lrj 0.704 0.496 0.06  
lab\*nce 0.75 0.5 0.019  
lab\*nce 0.0 0.5 0.071

relative Inform. Technology (IT)  
olv13\* 0.5 0.0 0.0 (1.0)  
cmyn3\* 0.5 0.0 0.0 (0.0)  
olv14\* 1.0 0.5 0.5 (1.0)  
cmyn4\* 0.0 0.5 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 33.82 33.67 19.79  
LAB\*LABo 33.82 33.67 19.79  
LAB\*TCHo 25.01 38.58 29.82

relative CIELAB lab\*  
lab\*lab 0.204 0.434 0.249  
lab\*tch 0.25 0.5 0.083  
lab\*nch 0.0 0.5 0.083  
relative Natural Colour (NC)  
lab\*lrj 0.204 0.496 0.06  
lab\*nce 0.25 0.5 0.019  
lab\*nce 0.0 0.5 0.071

blackness  $n^*$

chromaticness  $c^*$

$n^* = 1.0$