

### Input: Colorimetric Reflective System NRS11

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

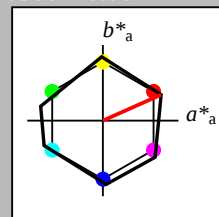
$lab^*tch$  and  $lab^*nch$

D65: hue R

LCH\*Ma: 53 84 24

rgb\*Ma: 1.0 0.0 0.0

triangle lightness  $t^*$



% Gamut

$u^*_{rel} = 119$

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 0.0 -0.01  
LAB\*LABa 95.41 0.0 0.0  
LAB\*TCHa 99.99 0.01 0.0

relative CIELAB lab\*  
lab\*lab 1.0 0.0 0.0  
lab\*tch 1.0 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 1.0 0.0 0.0  
lab\*tce 1.0 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olvi3\* 0.75 0.75 0.75 (1.0)  
cmyn3\* 0.25 0.25 0.25 (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 74.31 0.02 0.0  
LAB\*LABa 74.31 0.02 0.0  
LAB\*TCHa 75.00 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.75 0.0 0.0  
lab\*tch 0.75 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.75 0.0 0.0  
lab\*tce 0.75 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olvi3\* 0.75 0.75 0.75 (1.0)  
cmyn3\* 0.25 0.25 0.25 (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 53.21 0.04 0.0  
LAB\*LABa 53.21 0.04 0.0  
LAB\*TCHa 50.00 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.5 0.0 0.0  
lab\*tch 0.5 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.5 0.0 0.0  
lab\*tce 0.5 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olvi3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.75 0.75 (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 32.11 0.07 0.01  
LAB\*LABa 32.11 0.07 0.01  
LAB\*TCHa 25.00 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.25 0.0 0.0  
lab\*tch 0.25 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.25 0.0 0.0  
lab\*tce 0.25 0.0 0.0  
lab\*nce 0.0 0.0 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 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 11.01 0.07 0.01  
LAB\*LABa 11.01 0.07 0.01  
LAB\*TCHa 0.01 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*tch 0.0 0.0 0.0  
lab\*nch 1.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.0 0.0 0.0  
lab\*tce 0.0 0.0 0.0  
lab\*nce 1.0 0.0 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 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 11.01 0.07 0.01  
LAB\*LABa 11.01 0.07 0.01  
LAB\*TCHa 0.01 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*tch 0.0 0.0 0.0  
lab\*nch 1.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.0 0.0 0.0  
lab\*tce 0.0 0.0 0.0  
lab\*nce 1.0 0.0 0.0

### 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        | 24           |
| JMa    | 53.2          | -1.51   | 84.38   | 84.39        | 91           |
| GMa    | 53.2          | -82.27  | 18.98   | 84.44        | 167          |
| G50BMa | 53.2          | -77.72  | -32.98  | 84.44        | 203          |
| BMa    | 53.2          | 4.37    | -84.28  | 84.41        | 273          |
| B50RMa | 53.2          | 69.09   | -48.41  | 84.37        | 325          |
| NMa    | 10.99         | 0.0     | 0.0     | 0.0          | 0            |
| WMa    | 95.41         | 0.0     | 0.0     | 0.0          | 0            |
| RCIE   | 39.92         | 58.69   | 27.98   | 65.01        | 25           |
| JCIE   | 81.26         | -2.9    | 71.56   | 71.62        | 92           |
| GCIE   | 52.23         | -42.45  | 13.59   | 44.59        | 162          |
| BCIE   | 30.57         | 1.35    | -46.48  | 46.51        | 272          |

% Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

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 74.3 38.55 17.16  
LAB\*LABa 74.3 38.52 17.16  
LAB\*TCHa 75.0 42.17 24.01

relative CIELAB lab\*  
lab\*lab 0.75 0.457 0.203  
lab\*tch 0.75 0.5 0.067  
lab\*nch 0.0 0.5 0.067  
relative Natural Colour (NC)  
lab\*trj 0.75 0.5 -0.009  
lab\*tce 0.75 0.5 0.997  
lab\*nce 0.0 0.5 0.998

relative Inform. Technology (IT)  
olvi3\* 0.75 0.25 0.25 (1.0)  
cmyn3\* 0.25 0.75 0.75 (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 53.2 38.57 17.17  
LAB\*LABa 53.2 38.53 17.16  
LAB\*TCHa 50.0 42.18 24.01

relative CIELAB lab\*  
lab\*lab 0.5 0.457 0.203  
lab\*tch 0.5 0.5 0.067  
lab\*nch 0.0 0.5 0.067  
relative Natural Colour (NC)  
lab\*trj 0.5 0.5 -0.009  
lab\*tce 0.5 0.5 0.997  
lab\*nce 0.0 0.5 0.998

relative Inform. Technology (IT)  
olvi3\* 0.5 0.0 0.0 (1.0)  
cmyn3\* 0.5 0.0 0.0 (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 32.1 38.58 17.17  
LAB\*LABa 32.1 38.52 17.16  
LAB\*TCHa 25.0 42.17 24.01

relative CIELAB lab\*  
lab\*lab 0.375 0.685 0.305  
lab\*tch 0.375 0.75 0.067  
lab\*nch 0.0 0.75 0.067  
relative Natural Colour (NC)  
lab\*trj 0.375 0.75 -0.014  
lab\*tce 0.375 0.75 0.997  
lab\*nce 0.0 0.75 0.998

relative Inform. Technology (IT)  
olvi3\* 0.25 0.0 0.0 (1.0)  
cmyn3\* 0.25 0.0 0.0 (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 18.0 18.0 0.5  
LAB\*LABa 18.0 18.0 0.5  
LAB\*TCHa 0.0 0.0 0.0

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*tch 0.0 0.0 0.0  
lab\*nch 1.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.0 0.0 0.0  
lab\*tce 0.0 0.0 0.0  
lab\*nce 1.0 0.0 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 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 18.02 0.5 0.46  
LAB\*LABa 18.02 0.5 0.46  
LAB\*TCHa 0.0 0.0 0.0

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*tch 0.0 0.0 0.0  
lab\*nch 1.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.0 0.0 0.0  
lab\*tce 0.0 0.0 0.0  
lab\*nce 1.0 0.0 0.0

### Output: Colorimetric Reflective System ORS18

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

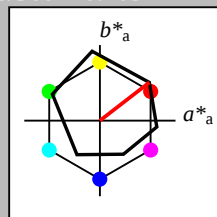
$lab^*tch$  and  $lab^*nch$

D65: hue O

LCH\*Ma: 48 83 38

rgb\*Ma: 1.0 0.0 0.0

triangle lightness  $t^*$



% Gamut

$u^*_{rel} = 93$

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\*TCHa 99.99 0.01 0.0

relative CIELAB lab\*  
lab\*lab 1.0 0.0 0.0  
lab\*tch 1.0 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 1.0 0.0 0.0  
lab\*tce 1.0 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olvi3\* 0.75 0.75 0.75 (1.0)  
cmyn3\* 0.25 0.25 0.25 (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 76.06 -0.6 3.44  
LAB\*LABa 76.06 0.0 0.0  
LAB\*TCHa 75.00 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.75 0.0 0.0  
lab\*tch 0.75 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.75 0.0 0.0  
lab\*tce 0.75 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olvi3\* 0.75 0.25 0.25 (1.0)  
cmyn3\* 0.25 0.75 0.75 (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 56.71 0.23 2.14  
LAB\*LABa 56.71 0.23 2.14  
LAB\*TCHa 50.0 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.5 0.5 0.5 (1.0)  
lab\*tch 0.5 0.5 0.067  
lab\*nch 0.0 0.5 0.067  
relative Natural Colour (NC)  
lab\*trj 0.5 0.5 -0.019  
lab\*tce 0.5 0.5 0.998  
lab\*nce 0.0 0.5 0.998

relative Inform. Technology (IT)  
olvi3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.75 0.75 (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 32.1 38.58 17.17  
LAB\*LABa 32.1 38.52 17.16  
LAB\*TCHa 25.0 42.17 24.01

relative CIELAB lab\*  
lab\*lab 0.375 0.685 0.305  
lab\*tch 0.375 0.75 0.067  
lab\*nch 0.0 0.75 0.067  
relative Natural Colour (NC)  
lab\*trj 0.375 0.75 -0.014  
lab\*tce 0.375 0.75 0.997  
lab\*nce 0.0 0.75 0.998

relative Inform. Technology (IT)  
olvi3\* 0.25 0.0 0.0 (1.0)  
cmyn3\* 0.25 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 18.0 18.0 0.5  
LAB\*LABa 18.0 18.0 0.5  
LAB\*TCHa 0.0 0.0 0.0

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*tch 0.0 0.0 0.0  
lab\*nch 1.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.0 0.0 0.0  
lab\*tce 0.0 0.0 0.0  
lab\*nce 1.0 0.0 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 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 18.02 0.5 0.46  
LAB\*LABa 18.02 0.5 0.46  
LAB\*TCHa 0.0 0.0 0.0

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*tch 0.0 0.0 0.0  
lab\*nch 1.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.0 0.0 0.0  
lab\*tce 0.0 0.0 0.0  
lab\*nce 1.0 0.0 0.0

### 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          |
| 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           |
| 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

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

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

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\*LABa 71.67 32.08 28.25  
LAB\*TCHa 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\*trj 0.693 0.477 0.15  
lab\*tce 0.75 0.5 0.048  
lab\*nce 0.0 0.5 0.191

relative Inform. Technology (IT)  
olvi3\* 0.75 0.25 0.25 (1.0)  
cmyn3\* 0.25 0.75 0.75 (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 52.33 32.53 27.11  
LAB\*LABa 52.33 32.09 25.26  
LAB\*TCHa 50.0 41.31 37.7

relative CIELAB lab\*  
lab\*lab 0.54 0.593 0.459  
lab\*tch 0.75 0.5 0.105  
lab\*nch 0.0 0.5 0.105  
relative Natural Colour (NC)  
lab\*trj 0.54 0.715 0.225  
lab\*tce 0.625 0.75 0.048  
lab\*nce 0.0 0.75 0.191

relative Inform. Technology (IT)  
olvi3\* 0.75 0.0 0.0 (1.0)  
cmyn3\* 0.25 0.0 0.0 (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 32.36 32.58 17.17  
LAB\*LABa 32.36 32.08 17.16  
LAB\*TCHa 25.0 41.3 37.7

relative CIELAB lab\*  
lab\*lab 0.25 0.593 0.459  
lab\*tch 0.375 0.75 0.105  
lab\*nch 0.0 0.75 0.105  
relative Natural Colour (NC)  
lab\*trj 0.25 0.715 0.225  
lab\*tce 0.375 0.75 0.048  
lab\*nce 0.0 0.75 0.191

relative Inform. Technology (IT)  
olvi3\* 0.25 0.0 0.0 (1.0)  
cmyn3\* 0.25 0.0 0.0 (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 18.02 0.5 0.46  
LAB\*LABa 18.02 0.5 0.46  
LAB\*TCHa 0.0 0.0 0.0

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*tch 0.0 0.0 0.0  
lab\*nch 1.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.0 0.0 0.0  
lab\*tce 0.0 0.0 0.0  
lab\*nce 1.0 0.0 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 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 18.02 0.5 0.46  
LAB\*LABa 18.02 0.5 0.46  
LAB\*TCHa 0.0 0.0 0.0

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*tch 0.0 0.0 0.0  
lab\*nch 1.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.0 0.0 0.0  
lab\*tce 0.0 0.0 0.0  
lab\*nce 1.0 0.0 0.0

relative Inform. Technology (IT)  
olvi3\* 0.75 0.25 0.25 (1.0)  
cmyn3\* 0.25 0.75 0.75 (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 52.33 32.53 27.11  
LAB\*LABa 52.33 32.09 25.26  
LAB\*TCHa 50.0 41.31 37.7

relative CIELAB lab\*  
lab\*lab 0.54 0.593 0.459  
lab\*tch 0.75 0.5 0.105  
lab\*nch 0.0 0.5 0.105  
relative Natural Colour (NC)  
lab\*trj 0.54 0.715 0.225  
lab\*tce 0.625 0.75 0.048  
lab\*nce 0.0 0.75 0.191

relative Inform. Technology (IT)  
olvi3\* 0.75 0.0 0.0 (1.0)  
cmyn3\* 0.25 0.0 0.0 (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 32.36 32.58 17.17  
LAB\*LABa 32.36 32.08 17.16  
LAB\*TCHa 25.0 41.3 37.7

relative CIELAB lab\*  
lab\*lab 0.25 0.593 0.459  
lab\*tch 0.375 0.75 0.105  
lab\*nch 0.0 0.75 0.105  
relative Natural Colour (NC)  
lab\*trj 0.25 0.715 0.225  
lab\*tce 0.375 0.75 0.048  
lab\*nce 0.0 0.75 0.191

relative Inform. Technology (IT)  
olvi3\* 0.25 0.0 0.0 (1.0)  
cmyn3\* 0.25 0.0 0.0 (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 18.02 0.5 0.46  
LAB\*LABa 18.02 0.5 0.46  
LAB\*TCHa 0.0 0.0 0.0

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*tch 0.0 0.0 0.0  
lab\*nch 1.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.0 0.0 0.0  
lab\*tce 0.0 0.0 0.0  
lab\*nce 1.0 0.0 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 (0.0)  
standard



# Input: Colorimetric Reflective System NRS11

for hue  $h^* = lab^*h = 167/360 = 0.464$

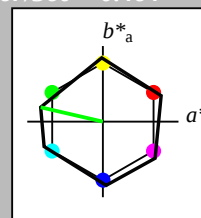
$lab^*tch$  and  $lab^*nch$

D65: hue G

LCH\*Ma: 53 84 167

rgb\*Ma: 0.0 1.0 0.0

triangle lightness  $t^*$



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 0.0 -0.01  
LAB\*LABa 95.41 0.0 0.0  
LAB\*TCHa 99.99 0.01 0.0

relative CIELAB lab\*  
lab\*lab 1.0 0.0 0.0  
lab\*tch 1.0 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 1.0 0.0 0.0  
lab\*tce 1.0 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olvi3\* 0.75 0.75 0.75 (1.0)  
cmyn3\* 0.25 0.25 0.25 (0.0)  
olvi4\* 1.0 1.0 1.0 0.75  
cmyn4\* 0.0 0.0 0.0 0.25  
standard and adapted CIELAB  
LAB\*LAB 74.31 0.02 0.0  
LAB\*LABa 74.31 0.0 0.0  
LAB\*TCHa 75.00 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.75 0.0 0.0  
lab\*tch 0.75 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.75 0.0 0.0  
lab\*tce 0.75 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olvi3\* 0.5 0.5 0.5 (0.0)  
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 53.21 0.04 0.0  
LAB\*LABa 53.21 0.0 0.0  
LAB\*TCHa 50.00 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.5 0.0 0.0  
lab\*tch 0.5 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.5 0.0 0.0  
lab\*tce 0.5 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olvi3\* 0.25 0.25 0.25 (0.0)  
cmyn3\* 0.75 0.75 0.75 (0.0)  
olvi4\* 1.0 1.0 1.0 0.25  
cmyn4\* 0.0 0.0 0.0 0.75  
standard and adapted CIELAB  
LAB\*LAB 32.11 0.07 0.01  
LAB\*LABa 32.11 0.0 0.0  
LAB\*TCHa 25.00 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.25 0.0 0.0  
lab\*tch 0.25 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.25 0.0 0.0  
lab\*tce 0.25 0.0 0.0  
lab\*nce 0.0 0.0 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 (0.0)  
cmyn4\* 0.0 0.0 0.0 (1.0)  
standard and adapted CIELAB  
LAB\*LAB 11.01 0.07 0.01  
LAB\*LABa 11.01 0.0 0.0  
LAB\*TCHa 0.01 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*tch 0.0 0.0 0.0  
lab\*nch 1.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.0 0.0 0.0  
lab\*tce 0.0 0.0 0.0  
lab\*nce 1.0 0.0 0.0

$n^* = 1.0$

## 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        | 24           |
| JMa    | 53.2          | -1.51   | 84.38   | 84.39        | 91           |
| GMa    | 53.2          | -82.27  | 18.98   | 84.44        | 167          |
| G50BMa | 53.2          | -77.72  | -32.98  | 84.44        | 203          |
| BMa    | 53.2          | 4.37    | -84.28  | 84.41        | 273          |
| B50RMa | 53.2          | 69.09   | -48.41  | 84.37        | 325          |
| NMa    | 10.99         | 0.0     | 0.0     | 0.0          | 0            |
| WMa    | 95.41         | 0.0     | 0.0     | 0.0          | 0            |
| RCIE   | 39.92         | 58.69   | 27.98   | 65.01        | 25           |
| JCIE   | 81.26         | -2.9    | 71.56   | 71.62        | 92           |
| GCIE   | 52.23         | -42.45  | 13.59   | 44.59        | 162          |
| BCIE   | 30.57         | 1.35    | -46.48  | 46.51        | 272          |

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

relative Inform. Technology (IT)  
olvi3\* 0.5 1.0 0.5 (1.0)  
cmyn3\* 0.5 0.5 0.5 (0.0)  
olvi4\* 0.5 1.0 0.5 0.75  
cmyn4\* 0.5 0.0 0.0 0.25  
standard and adapted CIELAB  
LAB\*LAB 74.3 41.1 9.49  
LAB\*LABa 74.3 -41.1 9.49  
LAB\*TCHa 75.0 42.21 167.01

relative CIELAB lab\*  
lab\*lab 0.75 -0.486 0.112  
lab\*tch 0.75 0.5 0.464  
lab\*nch 0.0 0.5 0.464  
relative Natural Colour (NC)  
lab\*trj 0.75 -0.486 0.112  
lab\*tce 0.75 0.5 0.464  
lab\*nce 0.0 0.5 0.464

relative Inform. Technology (IT)  
olvi3\* 0.25 0.75 0.25 (1.0)  
cmyn3\* 0.75 0.25 0.75 (0.0)  
olvi4\* 0.5 1.0 0.5 0.75  
cmyn4\* 0.5 0.0 0.5 0.25  
standard and adapted CIELAB  
LAB\*LAB 53.2 -41.09 9.5  
LAB\*LABa 53.2 -41.1 9.49  
LAB\*TCHa 50.0 42.22 167.01

relative CIELAB lab\*  
lab\*lab 0.5 -0.486 0.112  
lab\*tch 0.5 0.5 0.464  
lab\*nch 0.0 0.5 0.464  
relative Natural Colour (NC)  
lab\*trj 0.5 -0.486 0.112  
lab\*tce 0.5 0.5 0.464  
lab\*nce 0.0 0.5 0.464

relative Inform. Technology (IT)  
olvi3\* 0.0 0.75 0.0 (1.0)  
cmyn3\* 1.0 0.0 0.0 (0.0)  
olvi4\* 0.5 1.0 0.0 0.5  
cmyn4\* 0.5 0.0 0.0 0.5  
standard and adapted CIELAB  
LAB\*LAB 32.1 -41.06 9.5  
LAB\*LABa 32.1 -41.1 9.49  
LAB\*TCHa 25.0 42.21 167.01

relative CIELAB lab\*  
lab\*lab 0.25 -0.486 0.112  
lab\*tch 0.25 0.5 0.464  
lab\*nch 0.0 0.5 0.464  
relative Natural Colour (NC)  
lab\*trj 0.25 -0.486 0.112  
lab\*tce 0.25 0.5 0.464  
lab\*nce 0.0 0.5 0.464

relative Inform. Technology (IT)  
olvi3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 0.75 1.0 (0.0)  
olvi4\* 1.0 0.0 0.0 0.75  
cmyn4\* 0.0 0.25 0.0 0.75  
standard and adapted CIELAB  
LAB\*LAB 11.01 -20.48 4.76  
LAB\*LABa 11.01 -20.5 4.74  
LAB\*TCHa 12.5 21.1 167.01

relative CIELAB lab\*  
lab\*lab 0.125 -0.243 0.056  
lab\*tch 0.125 0.25 0.464  
lab\*nch 0.0 0.25 0.464  
relative Natural Colour (NC)  
lab\*trj 0.125 -0.243 0.056  
lab\*tce 0.125 0.25 0.464  
lab\*nce 0.0 0.25 0.464

$n^* = 0.50$

relative Inform. Technology (IT)  
olvi3\* 0.25 1.0 0.25 (1.0)  
cmyn3\* 0.25 0.5 0.25 (0.0)  
olvi4\* 0.25 1.0 0.25 1.0  
cmyn4\* 0.25 0.0 0.25 0.0  
standard and adapted CIELAB  
LAB\*LAB 63.75 -61.66 14.24  
LAB\*LABa 63.75 -61.69 14.23  
LAB\*TCHa 62.5 63.32 167.01

relative CIELAB lab\*  
lab\*lab 0.52 -0.73 0.169  
lab\*tch 0.625 0.75 0.464  
lab\*nch 0.0 0.75 0.464  
relative Natural Colour (NC)  
lab\*trj 0.52 -0.73 0.169  
lab\*tce 0.625 0.75 0.464  
lab\*nce 0.0 0.75 0.464

relative Inform. Technology (IT)  
olvi3\* 0.0 1.0 0.0 (0.0)  
cmyn3\* 1.0 0.0 1.0 (0.0)  
olvi4\* 0.25 1.0 0.25 0.5  
cmyn4\* 0.25 0.0 0.25 0.5  
standard and adapted CIELAB  
LAB\*LAB 53.2 -82.21 18.98  
LAB\*LABa 53.2 -82.25 18.97  
LAB\*TCHa 50.0 84.42 167.01

relative CIELAB lab\*  
lab\*lab 0.5 -0.973 0.225  
lab\*tch 0.5 1.0 0.464  
lab\*nch 0.0 1.0 0.464  
relative Natural Colour (NC)  
lab\*trj 0.5 -0.973 0.225  
lab\*tce 0.5 1.0 0.464  
lab\*nce 0.0 1.0 0.464

relative Inform. Technology (IT)  
olvi3\* 0.0 0.25 0.0 (1.0)  
cmyn3\* 1.0 0.0 0.0 (0.0)  
olvi4\* 0.25 1.0 0.25 0.0  
cmyn4\* 0.25 0.0 0.25 0.0  
standard and adapted CIELAB  
LAB\*LAB 32.1 -41.06 9.5  
LAB\*LABa 32.1 -41.1 9.49  
LAB\*TCHa 25.0 42.21 167.01

relative CIELAB lab\*  
lab\*lab 0.25 -0.486 0.112  
lab\*tch 0.25 0.5 0.464  
lab\*nch 0.0 0.5 0.464  
relative Natural Colour (NC)  
lab\*trj 0.25 -0.486 0.112  
lab\*tce 0.25 0.5 0.464  
lab\*nce 0.0 0.5 0.464

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 0.0 0.0 1.0  
cmyn4\* 0.0 0.0 0.0 1.0  
standard and adapted CIELAB  
LAB\*LAB 18.02 0.0 0.46  
LAB\*LABa 18.02 0.0 0.46  
LAB\*TCHa 0.0 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*tch 0.0 0.0 0.0  
lab\*nch 1.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.0 0.0 0.0  
lab\*tce 0.0 0.0 0.0  
lab\*nce 1.0 0.0 0.0

$n^* = 0.00$

blackness  $n^*$

chromaticness  $c^*$

# Output: Colorimetric Reflective System ORS18

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

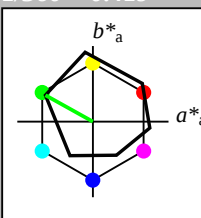
$lab^*tch$  and  $lab^*nch$

D65: hue L

LCH\*Ma: 51 72 151

rgb\*Ma: 0.0 1.0 0.0

triangle lightness  $t^*$



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\*TCHa 99.99 0.01 0.0

relative CIELAB lab\*  
lab\*lab 1.0 0.0 0.0  
lab\*tch 1.0 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 1.0 0.0 0.0  
lab\*tce 1.0 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olvi3\* 0.75 0.75 0.75 (1.0)  
cmyn3\* 0.25 0.25 0.25 (0.0)  
olvi4\* 1.0 1.0 1.0 0.75  
cmyn4\* 0.0 0.0 0.0 0.25  
standard and adapted CIELAB  
LAB\*LAB 76.06 -0.6 3.44  
LAB\*LABa 76.06 0.0 0.0  
LAB\*TCHa 75.00 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.75 0.0 0.0  
lab\*tch 0.75 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.75 0.0 0.0  
lab\*tce 0.75 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olvi3\* 0.5 0.5 0.5 (0.0)  
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\*LABa 56.71 0.0 0.0  
LAB\*TCHa 50.00 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.5 0.0 0.0  
lab\*tch 0.5 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.5 0.0 0.0  
lab\*tce 0.5 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olvi3\* 0.25 0.25 0.25 (0.0)  
cmyn3\* 0.75 0.75 0.75 (0.0)  
olvi4\* 1.0 1.0 1.0 0.25  
cmyn4\* 0.0 0.0 0.0 0.75  
standard and adapted CIELAB  
LAB\*LAB 32.11 0.13 0.83  
LAB\*LABa 32.11 0.0 0.0  
LAB\*TCHa 25.00 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.25 0.0 0.0  
lab\*tch 0.25 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.25 0.0 0.0  
lab\*tce 0.25 0.0 0.0  
lab\*nce 0.0 0.0 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 0.0 0.0 1.0  
cmyn4\* 0.0 0.0 0.0 1.0  
standard and adapted CIELAB  
LAB\*LAB 18.02 0.0 0.46  
LAB\*LABa 18.02 0.0 0.46  
LAB\*TCHa 0.0 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*tch 0.0 0.0 0.0  
lab\*nch 1.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.0 0.0 0.0  
lab\*tce 0.0 0.0 0.0  
lab\*nce 1.0 0.0 0.0

$n^* = 1.0$

blackness  $n^*$

chromaticness  $c^*$

## 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          |
| 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           |
| 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

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

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

relative Inform. Technology (IT)  
olvi3\* 0.5 1.0 0.5 (1.0)  
cmyn3\* 0.5 0.5 0.5 (0.0)  
olvi4\* 0.5 1.0 0.5 0.75  
cmyn4\* 0.5 0.0 0.0 0.25  
standard and adapted CIELAB  
LAB\*LAB 73.15 -31.94 20.73  
LAB\*LABa 73.15 -31.98 17.47  
LAB\*TCHa 75.0 35.93 150.91

relative CIELAB lab\*  
lab\*lab 0.712 -0.436 0.243  
lab\*tch 0.712 0.5 0.419  
lab\*nch 0.0 0.5 0.419  
relative Natural Colour (NC)  
lab\*trj 0.712 -0.436 0.243  
lab\*tce 0.712 0.5 0.419  
lab\*nce 0.0 0.5 0.419

relative Inform. Technology (IT)  
olvi3\* 0.25 0.75 0.25 (1.0)  
cmyn3\* 0.75 0.25 0.75 (0.0)  
olvi4\* 0.5 1.0 0.5 0.75  
cmyn4\* 0.5 0.0 0.5 0.25  
standard and adapted CIELAB  
LAB\*LAB 53.8 -31.57 19.42  
LAB\*LABa 53.8 -31.59 17.47  
LAB\*TCHa 50.0 35.94 150.91

relative CIELAB lab\*  
lab\*lab 0.569 -0.654 0.365  
lab\*tch 0.569 0.5 0.419  
lab\*nch 0.0 0.5 0.419  
relative Natural Colour (NC)  
lab\*trj 0.569 -0.654 0.365  
lab\*tce 0.569 0.5 0.419  
lab\*nce 0.0 0.5 0.419

relative Inform. Technology (IT)  
olvi3\* 0.0 0.75 0.0 (1.0)  
cmyn3\* 1.0 0.0 0.0 (0.0)  
olvi4\* 0.25 1.0 0.25 0.5  
cmyn4\* 0.25 0.0 0.25 0.5  
standard and adapted CIELAB  
LAB\*LAB 32.11 -47.06 27.41  
LAB\*LABa 32.11 -47.09 26.21  
LAB\*TCHa 25.0 53.9 150.91

relative CIELAB lab\*  
lab\*lab 0.319 -0.873 0.486  
lab\*tch 0.319 0.5 0.419  
lab\*nch 0.0 0.5 0.419  
relative Natural Colour (NC)  
lab\*trj 0.319 -0.873 0.486  
lab\*tce 0.319 0.5 0.419  
lab\*nce 0.0 0.5 0.419

relative Inform. Technology (IT)  
olvi3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 0.5 1.0 (0.0)  
olvi4\* 1.0 0.0 0.0 0.5  
cmyn4\* 0.0 0.25 0.0 0.5  
standard and adapted CIELAB  
LAB\*LAB 11.01 -20.48 4.76  
LAB\*LABa 11.01 -20.5 4.74  
LAB\*TCHa 12.5 21.1 167.01

relative CIELAB lab\*  
lab\*lab 0.125 -0.243 0.056  
lab\*tch 0.125 0.25 0.464  
lab\*nch 0.0 0.25 0.464  
relative Natural Colour (NC)  
lab\*trj 0.125 -0.243 0.056  
lab\*tce 0.125 0.25 0.464  
lab\*nce 0.0 0.25 0.464

$n^* = 0.50$

blackness  $n^*$

chromaticness  $c^*$

TE570-7, 5 step scales for constant CIELAB hue 167/360 = 0.464 (left)

5 step scales for constant CIELAB hue 151/360 = 0.419 (right)

BAM-test chart TE57; Colorimetric systems NRS11 & ORS18

D65: 2 coordinate data of 5 step colour scales for 10 hues

input: `olv* setrgbcolor`

output: `olv* setrgbcolor / w* setgray`



### Input: Colorimetric Reflective System NRS11

for hue  $h^* = lab^*h = 273/360 = 0.758$

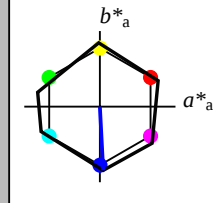
$lab^*tch$  and  $lab^*nch$

D65: hue B

LCH\*Ma: 53 84 273

rgb\*Ma: 0.0 0.0 1.0

triangle lightness  $t^*$



% Gamut

$u^*_{rel} = 119$

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 0.0 -0.01  
LAB\*LABa 95.41 0.0 0.0  
LAB\*TCHa 99.99 0.01 0.0

relative CIELAB lab\*  
lab\*lab 1.0 0.0 0.0  
lab\*tch 1.0 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 1.0 0.0 0.0  
lab\*tce 1.0 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olvi3\* 0.75 0.75 0.75 (1.0)  
cmyn3\* 0.25 0.25 0.25 (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 74.31 0.02 0.0  
LAB\*LABa 74.31 0.02 0.0  
LAB\*TCHa 75.00 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.75 0.0 0.0  
lab\*tch 0.75 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.75 0.0 0.0  
lab\*tce 0.75 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olvi3\* 0.5 0.5 0.5 (0.0)  
cmyn3\* 0.5 0.5 0.5 (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 53.21 0.04 0.0  
LAB\*LABa 53.21 0.04 0.0  
LAB\*TCHa 50.00 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.5 0.0 0.0  
lab\*tch 0.5 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.5 0.0 0.0  
lab\*tce 0.5 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olvi3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.75 0.75 (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 32.11 0.07 0.01  
LAB\*LABa 32.11 0.07 0.01  
LAB\*TCHa 25.00 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.25 0.0 0.0  
lab\*tch 0.25 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.25 0.0 0.0  
lab\*tce 0.25 0.0 0.0  
lab\*nce 0.0 0.0 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 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 11.01 0.07 0.01  
LAB\*LABa 11.01 0.07 0.01  
LAB\*TCHa 0.01 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*tch 0.0 0.0 0.0  
lab\*nch 1.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.0 0.0 0.0  
lab\*tce 0.0 0.0 0.0  
lab\*nce 1.0 0.0 0.0

$n^* = 1.0$

### 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        | 24           |
| JMa    | 53.2          | -1.51   | 84.38   | 84.39        | 91           |
| GMa    | 53.2          | -82.27  | 18.98   | 84.44        | 167          |
| G50BMa | 53.2          | -77.72  | -32.98  | 84.44        | 203          |
| BMa    | 53.2          | 4.37    | -84.28  | 84.41        | 273          |
| B50RMa | 53.2          | 69.09   | -48.41  | 84.37        | 325          |
| NMa    | 10.99         | 0.0     | 0.0     | 0.0          | 0            |
| WMa    | 95.41         | 0.0     | 0.0     | 0.0          | 0            |
| RCIE   | 39.92         | 58.69   | 27.98   | 65.01        | 25           |
| JCIE   | 81.26         | -2.9    | 71.56   | 71.62        | 92           |
| GCIE   | 52.23         | -42.45  | 13.59   | 44.59        | 162          |
| BCIE   | 30.57         | 1.35    | -46.48  | 46.51        | 272          |

% Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

relative Inform. Technology (IT)  
olvi3\* 0.5 0.5 0.5 (1.0)  
cmyn3\* 0.5 0.5 0.5 (0.0)  
olvi4\* 0.5 0.5 0.5 (1.0)  
cmyn4\* 0.5 0.5 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 74.31 0.02 0.0  
LAB\*LABa 74.31 0.02 0.0  
LAB\*TCHa 75.00 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.75 0.026 -0.498  
lab\*tch 0.75 0.0 0.758  
lab\*nch 0.0 0.5 0.758  
relative Natural Colour (NC)  
lab\*trj 0.75 0.009 -0.499  
lab\*tce 0.75 0.0 0.753  
lab\*nce 0.0 0.5 0.011

relative Inform. Technology (IT)  
olvi3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.75 0.75 (0.0)  
olvi4\* 0.5 0.5 0.5 (1.0)  
cmyn4\* 0.5 0.5 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 53.2 2.23 -42.13  
LAB\*LABa 53.2 2.19 -42.14  
LAB\*TCHa 50.0 42.2 272.97

relative CIELAB lab\*  
lab\*lab 0.5 0.026 -0.498  
lab\*tch 0.5 0.5 0.758  
lab\*nch 0.0 0.5 0.758  
relative Natural Colour (NC)  
lab\*trj 0.5 0.009 -0.499  
lab\*tce 0.5 0.0 0.753  
lab\*nce 0.0 0.5 0.011

relative Inform. Technology (IT)  
olvi3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 0.0 (0.0)  
olvi4\* 0.5 0.5 0.5 (1.0)  
cmyn4\* 0.5 0.5 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 32.1 2.23 -42.11  
LAB\*LABa 32.1 2.19 -42.13  
LAB\*TCHa 25.01 42.2 272.97

relative CIELAB lab\*  
lab\*lab 0.25 0.026 -0.498  
lab\*tch 0.25 0.5 0.758  
lab\*nch 0.0 0.5 0.758  
relative Natural Colour (NC)  
lab\*trj 0.25 0.009 -0.499  
lab\*tce 0.25 0.0 0.753  
lab\*nce 0.0 0.5 0.011

$n^* = 0.50$

relative Inform. Technology (IT)  
olvi3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 0.0 (0.0)  
olvi4\* 0.5 0.5 0.5 (1.0)  
cmyn4\* 0.5 0.5 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 11.01 0.07 0.01  
LAB\*LABa 11.01 0.07 0.01  
LAB\*TCHa 0.01 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*tch 0.0 0.0 0.0  
lab\*nch 1.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.0 0.0 0.0  
lab\*tce 0.0 0.0 0.0  
lab\*nce 1.0 0.0 0.0

$n^* = 0.25$

$n^* = 0.00$

relative Inform. Technology (IT)  
olvi3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.75 0.75 (0.0)  
olvi4\* 0.25 0.25 0.25 (1.0)  
cmyn4\* 0.75 0.75 0.75 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 63.75 3.31 -63.2  
LAB\*LABa 63.75 3.28 -63.2  
LAB\*TCHa 62.5 63.3 272.97

relative CIELAB lab\*  
lab\*lab 0.52 0.039 -0.748  
lab\*tch 0.625 0.75 0.758  
lab\*nch 0.0 0.75 0.758  
relative Natural Colour (NC)  
lab\*trj 0.625 0.014 -0.749  
lab\*tce 0.625 0.75 0.753  
lab\*nce 0.0 0.75 0.011

relative Inform. Technology (IT)  
olvi3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 0.0 (0.0)  
olvi4\* 0.0 0.0 0.0 (1.0)  
cmyn4\* 1.0 1.0 0.0 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 53.2 4.2 84.26  
LAB\*LABa 53.2 4.37 -84.27  
LAB\*TCHa 50.0 84.39 272.97

relative CIELAB lab\*  
lab\*lab 0.5 0.052 -0.997  
lab\*tch 0.5 0.0 1.0 0.758  
lab\*nch 0.0 0.0 1.0 0.758  
relative Natural Colour (NC)  
lab\*trj 0.5 0.018 -0.999  
lab\*tce 0.5 0.0 1.0 0.758  
lab\*nce 0.0 0.0 1.0 0.758

relative Inform. Technology (IT)  
olvi3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 0.0 (0.0)  
olvi4\* 0.0 0.0 0.0 (1.0)  
cmyn4\* 1.0 1.0 0.0 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 18.02 0.5 0.46  
LAB\*LABa 18.02 0.5 0.46  
LAB\*TCHa 0.01 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*tch 0.0 0.0 0.0  
lab\*nch 1.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.0 0.0 0.0  
lab\*tce 0.0 0.0 0.0  
lab\*nce 1.0 0.0 0.0

$n^* = 0.00$

relative Inform. Technology (IT)  
olvi3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 0.0 (0.0)  
olvi4\* 0.0 0.0 0.0 (1.0)  
cmyn4\* 1.0 1.0 0.0 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 18.02 0.5 0.46  
LAB\*LABa 18.02 0.5 0.46  
LAB\*TCHa 0.01 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*tch 0.0 0.0 0.0  
lab\*nch 1.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.0 0.0 0.0  
lab\*tce 0.0 0.0 0.0  
lab\*nce 1.0 0.0 0.0

$n^* = 1.0$

### Output: Colorimetric Reflective System ORS18

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

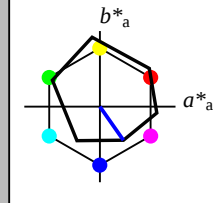
$lab^*tch$  and  $lab^*nch$

D65: hue V

LCH\*Ma: 26 54 305

rgb\*Ma: 0.0 0.0 1.0

triangle lightness  $t^*$



% Gamut

$u^*_{rel} = 93$

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\*TCHa 99.99 0.01 0.0

relative CIELAB lab\*  
lab\*lab 1.0 0.0 0.0  
lab\*tch 1.0 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 1.0 0.0 0.0  
lab\*tce 1.0 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olvi3\* 0.75 0.75 0.75 (1.0)  
cmyn3\* 0.25 0.25 0.25 (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 76.06 -0.6 3.44  
LAB\*LABa 76.06 0.0 0.0  
LAB\*TCHa 75.00 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.75 0.0 0.0  
lab\*tch 0.75 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.75 0.0 0.0  
lab\*tce 0.75 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olvi3\* 0.5 0.5 0.5 (0.0)  
cmyn3\* 0.5 0.5 0.5 (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 56.71 0.23 2.14  
LAB\*LABa 56.71 0.21 0.0  
LAB\*TCHa 50.0 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.5 0.0 0.0  
lab\*tch 0.5 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.5 0.0 0.0  
lab\*tce 0.5 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olvi3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.75 0.75 (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 32.11 0.07 0.01  
LAB\*LABa 32.11 0.07 0.01  
LAB\*TCHa 25.00 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.25 0.0 0.0  
lab\*tch 0.25 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.25 0.0 0.0  
lab\*tce 0.25 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olvi3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 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 11.01 0.07 0.01  
LAB\*LABa 11.01 0.07 0.01  
LAB\*TCHa 0.01 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*tch 0.0 0.0 0.0  
lab\*nch 1.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.0 0.0 0.0  
lab\*tce 0.0 0.0 0.0  
lab\*nce 1.0 0.0 0.0

$n^* = 1.0$

relative Inform. Technology (IT)  
olvi3\* 0.5 0.5 0.5 (1.0)  
cmyn3\* 0.5 0.5 0.5 (0.0)  
olvi4\* 0.5 0.5 0.5 (1.0)  
cmyn4\* 0.5 0.5 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 77.98 7.13 -7.51  
LAB\*LABa 77.98 7.77 -11.09  
LAB\*TCHa 87.5 13.55 305.0

relative CIELAB lab\*  
lab\*lab 0.75 0.143 -0.204  
lab\*tch 0.875 0.25 0.847  
lab\*nch 0.0 0.25 0.847  
relative Natural Colour (NC)  
lab\*trj 0.75 0.112 -0.222  
lab\*tce 0.875 0.25 0.824  
lab\*nce 0.0 0.25 0.824

relative Inform. Technology (IT)  
olvi3\* 0.5 0.5 0.5 (1.0)  
cmyn3\* 0.5 0.5 0.5 (0.0)  
olvi4\* 0.75 0.75 0.75 (1.0)  
cmyn4\* 0.25 0.25 0.25 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 58.63 7.5 -8.82  
LAB\*LABa 58.63 7.78 -11.1  
LAB\*TCHa 62.5 13.56 305.0

relative CIELAB lab\*  
lab\*lab 0.5 0.25 0.143 -0.204  
lab\*tch 0.625 0.25 0.847  
lab\*nch 0.0 0.25 0.847  
relative Natural Colour (NC)  
lab\*trj 0.5 0.112 -0.222  
lab\*tce 0.625 0.25 0.824  
lab\*nce 0.0 0.25 0.824

relative Inform. Technology (IT)  
olvi3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.75 0.75 (0.0)  
olvi4\* 0.75 0.75 0.75 (1.0)  
cmyn4\* 0.25 0.25 0.25 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 41.21 15.61 -21.1  
LAB\*LABa 41.21 15.35 -22.21  
LAB\*TCHa 50.0 27.12 305.0

relative CIELAB lab\*  
lab\*lab 0.25 0.287 -0.409  
lab\*tch 0.5 0.5 0.847  
lab\*nch 0.0 0.5 0.847  
relative Natural Colour (NC)  
lab\*trj 0.25 0.112 -0.222  
lab\*tce 0.5 0.25 0.824  
lab\*nce 0.0 0.5 0.824

relative Inform. Technology (IT)  
olvi3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 0.0 (0.0)  
olvi4\* 0.5 0.5 0.5 (1.0)  
cmyn4\* 0.5 0.5 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 21.87 15.55 -22.2  
LAB\*LABa 21.87 15.55 -22.2  
LAB\*TCHa 25.01 27.12 305.0

relative CIELAB lab\*  
lab\*lab 0.0 0.287 -0.409  
lab\*tch 0.25 0.5 0.847  
lab\*nch 0.0 0.5 0.847  
relative Natural Colour (NC)  
lab\*trj 0.0 0.112 -0.222  
lab\*tce 0.25 0.25 0.824  
lab\*nce 0.0 0.5 0.824

relative Inform. Technology (IT)  
olvi3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 0.0 (0.0)  
olvi4\* 0.0 0.0 0.0 (1.0)  
cmyn4\* 1.0 1.0 0.0 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 18.02 0.5 0.46  
LAB\*LABa 18.02 0.5 0.46  
LAB\*TCHa 0.01 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*tch 0.0 0.0 0.0  
lab\*nch 1.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.0 0.0 0.0  
lab\*tce 0.0 0.0 0.0  
lab\*nce 1.0 0.0 0.0

### 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           |
| 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

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

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

relative Inform. Technology (IT)  
olvi3\* 0.5 0.5 0.5 (1.0)  
cmyn3\* 0.5 0.5 0.5 (0.0)  
olvi4\* 0.5 0.5 0.5 (1.0)  
cmyn4\* 0.5 0.5 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 60.56 15.24 -19.79  
LAB\*LABa 60.56 15.55 -22.2  
LAB\*TCHa 75.0 27.12 305.0

relative CIELAB lab\*  
lab\*lab 0.55 0.287 -0.409  
lab\*tch 0.75 0.5 0.847  
lab\*nch 0.0 0.5 0.847  
relative Natural Colour (NC)  
lab\*trj 0.55 0.225 -0.446  
lab\*tce 0.75 0.5 0.824  
lab\*nce 0.0 0.5 0.824

relative Inform. Technology (IT)  
olvi3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.75 0.75 (0.0)  
olvi4\* 0.5 0.5 0.5 (1.0)  
cmyn4\* 0.5 0.5 0.5 (0.0)  
standard and adapted CIELAB  
LAB



## Input: Colorimetric Reflective System NRS11

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

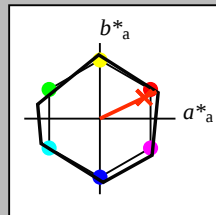
$lab^*tch$  and  $lab^*nch$

D65: hue R

LCH\*Ma: 53 83 25

rgb\*Ma: 1.0 0.03 0.0

triangle lightness  $t^*$



% Gamut

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 0.0 -0.01  
LAB\*Lab 95.41 0.0 0.0  
LAB\*TCh 99.99 0.01 0.0

relative CIELAB lab\*  
lab\*lab 1.0 0.0 0.0  
lab\*tch 1.0 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 1.0 0.0 0.0  
lab\*tce 1.0 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olvi3\* 0.75 0.75 0.75 (1.0)  
cmyn3\* 0.25 0.25 0.25 (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 74.31 0.02 0.0  
LAB\*Lab 74.31 0.02 0.0  
LAB\*TCh 75.00 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.75 0.0 0.0  
lab\*tch 0.75 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.75 0.0 0.0  
lab\*tce 0.75 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olvi3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.5 0.5 0.5 (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 53.21 0.04 0.0  
LAB\*Lab 53.21 0.04 0.0  
LAB\*TCh 50.00 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.5 0.0 0.0  
lab\*tch 0.5 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.5 0.0 0.0  
lab\*tce 0.5 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olvi3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.75 0.75 (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 32.11 0.07 0.01  
LAB\*Lab 32.11 0.07 0.01  
LAB\*TCh 25.00 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.25 0.0 0.0  
lab\*tch 0.25 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.25 0.0 0.0  
lab\*tce 0.25 0.0 0.0  
lab\*nce 0.0 0.0 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 (0.0)  
standard and adapted CIELAB  
LAB\*Lab 11.01 0.07 0.01  
LAB\*Lab 11.01 0.07 0.01  
LAB\*TCh 0.01 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*tch 0.0 0.0 0.0  
lab\*nch 1.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.0 0.0 0.0  
lab\*tce 0.0 0.0 0.0  
lab\*nce 1.0 0.0 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 (0.0)  
standard and adapted CIELAB  
LAB\*Lab 0.01 0.01 0.0  
LAB\*Lab 0.01 0.01 0.0  
LAB\*TCh 0.01 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*tch 0.0 0.0 0.0  
lab\*nch 1.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.0 0.0 0.0  
lab\*tce 0.0 0.0 0.0  
lab\*nce 1.0 0.0 0.0

## 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 | 24  |
| JMa    | 53.2  | -1.51  | 84.38  | 84.39 | 91  |
| GMa    | 53.2  | -82.27 | 18.98  | 84.44 | 167 |
| G50BMa | 53.2  | -77.72 | -32.98 | 84.44 | 203 |
| BMa    | 53.2  | 4.37   | -84.28 | 84.41 | 273 |
| B50RMa | 53.2  | 69.09  | -48.41 | 84.37 | 325 |
| NMa    | 10.99 | 0.0    | 0.0    | 0.0   | 0   |
| WMa    | 95.41 | 0.0    | 0.0    | 0.0   | 0   |
| RCIE   | 39.92 | 58.69  | 27.98  | 65.01 | 25  |
| JCIE   | 81.26 | -2.9   | 71.56  | 71.62 | 92  |
| GCIE   | 52.23 | -42.45 | 13.59  | 44.59 | 162 |
| BCIE   | 30.57 | 1.35   | -46.48 | 46.51 | 272 |

% Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

relative Inform. Technology (IT)  
olvi3\* 1.0 0.514 0.5 (1.0)  
cmyn3\* 0.0 0.243 0.25 (0.0)  
olvi4\* 1.0 0.514 0.5 (1.0)  
cmyn4\* 0.0 0.243 0.25 (0.0)  
standard and adapted CIELAB  
LAB\*Lab 84.85 18.73 8.92  
LAB\*Lab 84.85 18.73 8.92  
LAB\*TCh 87.5 25.49

relative CIELAB lab\*  
lab\*lab 0.75 0.514 0.5 (1.0)  
lab\*tch 0.75 0.514 0.5 (1.0)  
lab\*nch 0.0 0.243 0.25 (0.0)  
relative Natural Colour (NC)  
lab\*trj 0.75 0.514 0.5 (1.0)  
lab\*tce 0.75 0.514 0.5 (1.0)  
lab\*nce 0.0 0.243 0.25 (0.0)

relative Inform. Technology (IT)  
olvi3\* 0.75 0.264 0.25 (1.0)  
cmyn3\* 0.25 0.736 0.75 (0.0)  
olvi4\* 1.0 0.514 0.5 (1.0)  
cmyn4\* 0.0 0.243 0.25 (0.0)  
standard and adapted CIELAB  
LAB\*Lab 53.2 37.45 17.85  
LAB\*Lab 53.2 37.45 17.85  
LAB\*TCh 50.0 41.48 25.49

relative CIELAB lab\*  
lab\*lab 0.75 0.264 0.25 (1.0)  
lab\*tch 0.75 0.264 0.25 (1.0)  
lab\*nch 0.0 0.736 0.75 (0.0)  
relative Natural Colour (NC)  
lab\*trj 0.75 0.264 0.25 (1.0)  
lab\*tce 0.75 0.264 0.25 (1.0)  
lab\*nce 0.0 0.736 0.75 (0.0)

relative Inform. Technology (IT)  
olvi3\* 0.25 0.014 0.0 (1.0)  
cmyn3\* 0.5 0.986 1.0 (0.0)  
olvi4\* 1.0 0.514 0.5 (1.0)  
cmyn4\* 0.0 0.243 0.25 (0.0)  
standard and adapted CIELAB  
LAB\*Lab 32.1 37.51 17.86  
LAB\*Lab 32.1 37.51 17.86  
LAB\*TCh 25.0 41.48 25.49

relative CIELAB lab\*  
lab\*lab 0.25 0.014 0.0 (1.0)  
lab\*tch 0.25 0.014 0.0 (1.0)  
lab\*nch 0.0 0.986 1.0 (0.0)  
relative Natural Colour (NC)  
lab\*trj 0.25 0.014 0.0 (1.0)  
lab\*tce 0.25 0.014 0.0 (1.0)  
lab\*nce 0.0 0.986 1.0 (0.0)

relative Inform. Technology (IT)  
olvi3\* 0.25 0.451 0.215 (1.0)  
cmyn3\* 0.75 0.993 1.0 (0.0)  
olvi4\* 1.0 0.514 0.5 (1.0)  
cmyn4\* 0.0 0.243 0.25 (0.0)  
standard and adapted CIELAB  
LAB\*Lab 21.55 18.73 8.92  
LAB\*Lab 21.55 18.73 8.92  
LAB\*TCh 12.5 20.74 25.47

relative CIELAB lab\*  
lab\*lab 0.25 0.451 0.215 (1.0)  
lab\*tch 0.25 0.451 0.215 (1.0)  
lab\*nch 0.0 0.993 1.0 (0.0)  
relative Natural Colour (NC)  
lab\*trj 0.25 0.451 0.215 (1.0)  
lab\*tce 0.25 0.451 0.215 (1.0)  
lab\*nce 0.0 0.993 1.0 (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 (0.0)  
standard and adapted CIELAB  
LAB\*Lab 0.0 0.0 0.0  
LAB\*Lab 0.0 0.0 0.0  
LAB\*TCh 0.0 0.0 0.0

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*tch 0.0 0.0 0.0  
lab\*nch 1.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.0 0.0 0.0  
lab\*tce 0.0 0.0 0.0  
lab\*nce 1.0 0.0 0.0

## Output: Colorimetric Reflective System ORS18

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

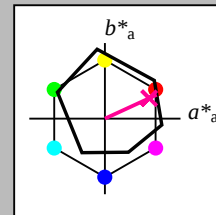
$lab^*tch$  and  $lab^*nch$

D65: hue R

LCH\*Ma: 48 75 25

rgb\*Ma: 1.0 0.0 0.32

triangle lightness  $t^*$



% Gamut

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 0.0

relative CIELAB lab\*  
lab\*lab 1.0 0.0 0.0  
lab\*tch 1.0 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 1.0 0.0 0.0  
lab\*tce 1.0 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olvi3\* 0.75 0.75 0.75 (1.0)  
cmyn3\* 0.25 0.25 0.25 (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 76.06 -0.6 3.44  
LAB\*Lab 76.06 0.0 0.0  
LAB\*TCh 75.00 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.75 0.0 0.0  
lab\*tch 0.75 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.75 0.0 0.0  
lab\*tce 0.75 0.0 0.0  
lab\*nce 0.0 0.0 0.0

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 (1.0)  
cmyn4\* 0.0 0.0 0.0 (0.0)  
standard and adapted CIELAB  
LAB\*Lab 56.71 0.23 2.14  
LAB\*Lab 56.71 0.23 2.14  
LAB\*TCh 50.00 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.5 0.0 0.0  
lab\*tch 0.5 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.5 0.0 0.0  
lab\*tce 0.5 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olvi3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.75 0.75 (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 34.97 0.13 1.08  
LAB\*Lab 34.97 0.13 1.08  
LAB\*TCh 25.00 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.25 0.0 0.0  
lab\*tch 0.25 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.25 0.0 0.0  
lab\*tce 0.25 0.0 0.0  
lab\*nce 0.0 0.0 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 (0.0)  
standard and adapted CIELAB  
LAB\*Lab 18.02 0.5 0.46  
LAB\*Lab 18.02 0.5 0.46  
LAB\*TCh 0.01 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*tch 0.0 0.0 0.0  
lab\*nch 1.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.0 0.0 0.0  
lab\*tce 0.0 0.0 0.0  
lab\*nce 1.0 0.0 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 (0.0)  
standard and adapted CIELAB  
LAB\*Lab 0.0 0.0 0.0  
LAB\*Lab 0.0 0.0 0.0  
LAB\*TCh 0.0 0.0 0.0

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*tch 0.0 0.0 0.0  
lab\*nch 1.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.0 0.0 0.0  
lab\*tce 0.0 0.0 0.0  
lab\*nce 1.0 0.0 0.0

## 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 |
| 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  |
| 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

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

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

relative Inform. Technology (IT)  
olvi3\* 1.0 0.5 0.5 (1.0)  
cmyn3\* 0.0 0.25 0.25 (0.0)  
olvi4\* 1.0 0.5 0.5 (1.0)  
cmyn4\* 0.0 0.25 0.25 (0.0)  
standard and adapted CIELAB  
LAB\*Lab 83.55 16.38 11.84  
LAB\*Lab 83.55 16.38 11.84  
LAB\*TCh 87.5 18.86 24.69

relative CIELAB lab\*  
lab\*lab 1.0 0.5 0.5 (1.0)  
lab\*tch 0.875 0.25 0.069  
lab\*nch 0.0 0.25 0.069  
relative Natural Colour (NC)  
lab\*trj 0.875 0.25 0.069  
lab\*tce 0.875 0.25 0.069  
lab\*nce 0.0 0.25 0.069

relative Inform. Technology (IT)  
olvi3\* 0.75 0.5 0.5 (1.0)  
cmyn3\* 0.25 0.75 0.75 (0.0)  
olvi4\* 1.0 0.5 0.5 (1.0)  
cmyn4\* 0.0 0.25 0.25 (0.0)  
standard and adapted CIELAB  
LAB\*Lab 64.21 16.76 10.54  
LAB\*Lab 64.21 16.76 10.54  
LAB\*TCh 62.5 18.87 24.7

relative CIELAB lab\*  
lab\*lab 0.75 0.5 0.5 (1.0)  
lab\*tch 0.625 0.25 0.069  
lab\*nch 0.0 0.25 0.069  
relative Natural Colour (NC)  
lab\*trj 0.625 0.25 0.069  
lab\*tce 0.625 0.25 0.069  
lab\*nce 0.0 0.25 0.069

relative Inform. Technology (IT)  
olvi3\* 0.5 0.25 0.25 (1.0)  
cmyn3\* 0.5 0.75 0.75 (0.0)  
olvi4\* 1.0 0.5 0.5 (1.0)  
cmyn4\* 0.0 0.25 0.25 (0.0)  
standard and adapted CIELAB  
LAB\*Lab 44.86 17.13 9.23  
LAB\*Lab 44.86 17.13 9.23  
LAB\*TCh 37.5 20.74 25.49

relative CIELAB lab\*  
lab\*lab 0.5 0.25 0.25 (1.0)  
lab\*tch 0.375 0.125 0.069  
lab\*nch 0.0 0.25 0.069  
relative Natural Colour (NC)  
lab\*trj 0.375 0.125 0.069  
lab\*tce 0.375 0.125 0.069  
lab\*nce 0.0 0.25 0.069

relative Inform. Technology (IT)  
olvi3\* 0.25 0.0 0.0 (1.0)  
cmyn3\* 0.75 1.0 0.0 (0.0)  
olvi4\* 1.0 0.5 0.5 (1.0)  
cmyn4\* 0.0 0.25 0.25 (0.0)  
standard and adapted CIELAB  
LAB\*Lab 33.01 34.93 15.31  
LAB\*Lab 33.01 34.93 15.31  
LAB\*TCh 25.01 37.73 24.7

relative CIELAB lab\*  
lab\*lab 0.25 0.0 0.0 (1.0)  
lab\*tch 0.194 0.54 0.209  
lab\*nch 0.0 0.25 0.069  
relative Natural Colour (NC)  
lab\*trj 0.194 0.54 0.209  
lab\*tce 0.194 0.54 0.209  
lab\*nce 0.0 0.25 0.069

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 (0.0)  
standard and adapted CIELAB  
LAB\*Lab 0.0 0.0 0.0  
LAB\*Lab 0.0 0.0 0.0  
LAB\*TCh 0.0 0.0 0.0

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*tch 0.0 0.0 0.0  
lab\*nch 1.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*trj 0.0 0.0 0.0  
lab\*tce 0.0 0.0 0.0  
lab\*nce 1.0 0.0 0.0

relative Inform. Technology (IT)  
olvi3\* 0.75 0.25 0.25 (1.0)  
cmyn3\* 0.25 0.75 0.75 (0.0)  
olvi4\* 1.0 0.25 0.25 (1.0)  
cmyn4\* 0.0 0.75 0.75 (0.0)  
standard and adapted CIELAB  
LAB\*Lab 59.85 51.12 26.0  
LAB\*Lab 59.85 51.12 26.0  
LAB\*TCh 62.5 56.59 24.7

relative CIELAB lab\*  
lab\*lab 0.75 0.25 0.25 (1.0)  
lab\*tch 0.625 0.125 0.069  
lab\*nch 0.0 0.75 0.069  
relative Natural Colour (NC)  
lab\*trj 0.625 0.125 0.069  
lab\*tce 0.625 0.125 0.069  
lab\*nce 0.0 0.75 0.069

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 0.5 0.5 (1.0)  
cmyn4\* 0.0 0.5 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*Lab 48.01 68.48 33.09  
LAB\*Lab 48.01 68.48 33.09  
LAB\*TCh 50.0 75.45 24.7

relative CIELAB lab\*  
lab\*lab 0.5 0.5 0.5 (1.0)  
lab\*tch 0.375 0.25 0.069  
lab\*nch 0.0 0.5 0.069  
relative Natural Colour (NC)  
lab\*trj 0.375 0.25 0.069  
lab\*tce 0.375 0.25 0.069  
lab\*nce 0.0 0.5 0.069

relative Inform. Technology (IT)  
olvi3\* 0.25 0.0 0.0 (1.0)  
cmyn3\* 0.75 1.0 0.0 (0.0)  
olvi4\* 1.0 0.25 0.25 (1.0)  
cmyn4\* 0.0 0.75 0.75 (0.0)  
standard and adapted CIELAB  
LAB\*Lab 33.01 34.93 15.31  
LAB\*Lab 33.01 34.93 15.31  
LAB\*TCh 25.01 37.73 24.7

relative CIELAB lab\*  
lab\*lab 0.25 0.0 0.0 (1.0)  
lab\*tch 0.194 0.54 0.209  
lab\*nch 0.0 0.25 0.069  
relative Natural Colour (NC)  
lab\*trj 0.194 0.54 0.209  
lab\*tce 0.194 0.54 0.209  
lab\*nce 0.0 0.25 0.069

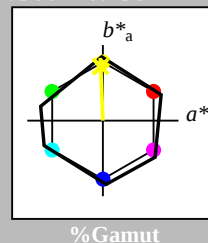
## Input: Colorimetric Reflective System NRS11

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

$lab^*ch$  and  $lab^*nch$

D65: hue J  
LCH\*Ma: 53 83 92  
rgb\*Ma: 0.98 1.0 0.0

triangle lightness  $t^*$



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 0.0 -0.01  
LAB\*Lab 95.41 0.0 0.0  
LAB\*TCla 99.99 0.01 0.0

relative CIELAB lab\*  
lab\*lab 1.0 0.0 0.0  
lab\*ch 1.0 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*tr 1.0 0.0 0.0  
lab\*tc 1.0 0.0 0.0  
lab\*ncc 0.0 0.0 0.0

relative Inform. Technology (IT)  
olvi3\* 0.75 0.75 0.75 (1.0)  
cmyn3\* 0.25 0.25 0.25 (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 74.31 0.02 0.0  
LAB\*Lab 74.31 0.02 0.0  
LAB\*TCla 75.00 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.75 0.0 0.0  
lab\*ch 0.75 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*tr 0.75 0.0 0.0  
lab\*tc 0.75 0.0 0.0  
lab\*ncc 0.0 0.0 0.0

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 (1.0)  
cmyn4\* 0.0 0.0 0.0 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 53.21 0.04 0.0  
LAB\*Lab 53.21 0.04 0.0  
LAB\*TCla 50.00 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.5 0.0 0.0  
lab\*ch 0.5 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*tr 0.5 0.0 0.0  
lab\*tc 0.5 0.0 0.0  
lab\*ncc 0.0 0.0 0.0

relative Inform. Technology (IT)  
olvi3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.75 0.75 (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 32.11 0.07 0.01  
LAB\*Lab 32.11 0.07 0.01  
LAB\*TCla 25.00 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.25 0.0 0.0  
lab\*ch 0.25 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*tr 0.25 0.0 0.0  
lab\*tc 0.25 0.0 0.0  
lab\*ncc 0.0 0.0 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 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 11.01 0.07 0.01  
LAB\*Lab 11.01 0.07 0.01  
LAB\*TCla 0.01 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*ch 0.0 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*tr 0.0 0.0 0.0  
lab\*tc 0.0 0.0 0.0  
lab\*ncc 0.0 0.0 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 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 11.01 0.07 0.01  
LAB\*Lab 11.01 0.07 0.01  
LAB\*TCla 0.01 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*ch 0.0 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*tr 0.0 0.0 0.0  
lab\*tc 0.0 0.0 0.0  
lab\*ncc 0.0 0.0 0.0

## 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        | 24           |
| JMa    | 53.2        | -1.51   | 84.38   | 84.39        | 91           |
| GMa    | 53.2        | -82.27  | 18.98   | 84.44        | 167          |
| G50BMa | 53.2        | -77.72  | -32.98  | 84.44        | 203          |
| BMa    | 53.2        | 4.37    | -84.28  | 84.41        | 273          |
| B50RMa | 53.2        | 69.09   | -48.41  | 84.37        | 325          |
| NMa    | 10.99       | 0.0     | 0.0     | 0.0          | 0            |
| WMa    | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE   | 39.92       | 58.69   | 27.98   | 65.01        | 25           |
| JCIE   | 81.26       | -2.9    | 71.56   | 71.62        | 92           |
| GCIE   | 52.23       | -42.45  | 13.59   | 44.59        | 162          |
| BCIE   | 30.57       | 1.35    | -46.48  | 46.51        | 272          |

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

relative Inform. Technology (IT)  
olvi3\* 0.989 1.0 0.5 (1.0)  
cmyn3\* 0.011 0.0 0.5 (0.0)  
olvi4\* 0.989 1.0 0.5 (1.0)  
cmyn4\* 0.011 0.0 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 95.41 0.0 -0.01  
LAB\*Lab 95.41 0.0 0.0  
LAB\*TCla 99.99 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.989 0.5 0.25 (1.0)  
lab\*ch 0.989 0.5 0.25 (1.0)  
lab\*nch 0.0 0.5 0.25 (0.0)  
relative Natural Colour (NC)  
lab\*tr 0.989 0.5 0.25 (1.0)  
lab\*tc 0.989 0.5 0.25 (1.0)  
lab\*ncc 0.0 0.5 0.25 (0.0)

relative Inform. Technology (IT)  
olvi3\* 0.739 0.75 0.25 (1.0)  
cmyn3\* 0.261 0.25 0.75 (0.0)  
olvi4\* 0.989 1.0 0.5 (1.0)  
cmyn4\* 0.011 0.0 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 53.2 -1.63 41.45  
LAB\*Lab 53.2 -1.63 41.45  
LAB\*TCla 50.0 41.47 92.33

relative CIELAB lab\*  
lab\*lab 0.739 0.75 0.25 (1.0)  
lab\*ch 0.739 0.75 0.25 (1.0)  
lab\*nch 0.0 0.75 0.25 (0.0)  
relative Natural Colour (NC)  
lab\*tr 0.739 0.75 0.25 (1.0)  
lab\*tc 0.739 0.75 0.25 (1.0)  
lab\*ncc 0.0 0.75 0.25 (0.0)

relative Inform. Technology (IT)  
olvi3\* 0.489 0.5 0.0 (1.0)  
cmyn3\* 0.506 0.5 0.75 (0.0)  
olvi4\* 0.989 1.0 0.5 (1.0)  
cmyn4\* 0.006 0.0 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 32.1 -1.62 41.45  
LAB\*Lab 32.1 -1.62 41.45  
LAB\*TCla 25.0 41.47 92.33

relative CIELAB lab\*  
lab\*lab 0.489 0.5 0.0 (1.0)  
lab\*ch 0.489 0.5 0.0 (1.0)  
lab\*nch 0.0 0.5 0.0 (0.0)  
relative Natural Colour (NC)  
lab\*tr 0.489 0.5 0.0 (1.0)  
lab\*tc 0.489 0.5 0.0 (1.0)  
lab\*ncc 0.0 0.5 0.0 (0.0)

relative Inform. Technology (IT)  
olvi3\* 0.244 0.25 0.0 (1.0)  
cmyn3\* 0.756 0.75 1.0 (0.0)  
olvi4\* 0.989 1.0 0.5 (1.0)  
cmyn4\* 0.006 0.0 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 11.01 0.07 0.01  
LAB\*Lab 11.01 0.07 0.01  
LAB\*TCla 0.01 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.244 0.25 0.0 (1.0)  
lab\*ch 0.244 0.25 0.0 (1.0)  
lab\*nch 0.0 0.25 0.0 (0.0)  
relative Natural Colour (NC)  
lab\*tr 0.244 0.25 0.0 (1.0)  
lab\*tc 0.244 0.25 0.0 (1.0)  
lab\*ncc 0.0 0.25 0.0 (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 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 11.01 0.07 0.01  
LAB\*Lab 11.01 0.07 0.01  
LAB\*TCla 0.01 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*ch 0.0 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*tr 0.0 0.0 0.0  
lab\*tc 0.0 0.0 0.0  
lab\*ncc 0.0 0.0 0.0

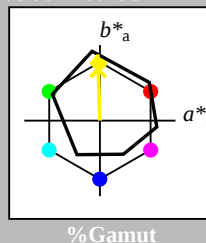
## Output: Colorimetric Reflective System ORS18

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

$lab^*ch$  and  $lab^*nch$

D65: hue J  
LCH\*Ma: 86 88 92  
rgb\*Ma: 1.0 0.9 0.0

triangle lightness  $t^*$



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\*TCla 99.99 0.01 0.0

relative CIELAB lab\*  
lab\*lab 1.0 0.0 0.0  
lab\*ch 1.0 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*tr 1.0 0.0 0.0  
lab\*tc 1.0 0.0 0.0  
lab\*ncc 0.0 0.0 0.0

relative Inform. Technology (IT)  
olvi3\* 0.75 0.75 0.75 (1.0)  
cmyn3\* 0.25 0.25 0.25 (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 76.06 -0.6 3.44  
LAB\*Lab 76.06 0.0 0.0  
LAB\*TCla 75.00 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.75 0.75 0.75 (1.0)  
lab\*ch 0.75 0.75 0.75 (1.0)  
lab\*nch 0.0 0.75 0.75 (0.0)  
relative Natural Colour (NC)  
lab\*tr 0.75 0.75 0.75 (1.0)  
lab\*tc 0.75 0.75 0.75 (1.0)  
lab\*ncc 0.0 0.75 0.75 (0.0)

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 (1.0)  
cmyn4\* 0.0 0.0 0.0 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 56.71 0.23 2.14  
LAB\*Lab 56.71 0.23 2.14  
LAB\*TCla 50.00 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.5 0.5 0.5 (1.0)  
lab\*ch 0.5 0.5 0.5 (1.0)  
lab\*nch 0.0 0.5 0.5 (0.0)  
relative Natural Colour (NC)  
lab\*tr 0.5 0.5 0.5 (1.0)  
lab\*tc 0.5 0.5 0.5 (1.0)  
lab\*ncc 0.0 0.5 0.5 (0.0)

relative Inform. Technology (IT)  
olvi3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.75 0.75 (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 32.11 0.07 0.01  
LAB\*Lab 32.11 0.07 0.01  
LAB\*TCla 25.00 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.25 0.25 0.25 (1.0)  
lab\*ch 0.25 0.25 0.25 (1.0)  
lab\*nch 0.0 0.25 0.25 (0.0)  
relative Natural Colour (NC)  
lab\*tr 0.25 0.25 0.25 (1.0)  
lab\*tc 0.25 0.25 0.25 (1.0)  
lab\*ncc 0.0 0.25 0.25 (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 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 18.02 0.0 0.46  
LAB\*Lab 18.02 0.0 0.46  
LAB\*TCla 0.01 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*ch 0.0 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*tr 0.0 0.0 0.0  
lab\*tc 0.0 0.0 0.0  
lab\*ncc 0.0 0.0 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 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 18.02 0.0 0.46  
LAB\*Lab 18.02 0.0 0.46  
LAB\*TCla 0.01 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*ch 0.0 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*tr 0.0 0.0 0.0  
lab\*tc 0.0 0.0 0.0  
lab\*ncc 0.0 0.0 0.0

## 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          |
| 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           |
| 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

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

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

relative Inform. Technology (IT)  
olvi3\* 1.0 0.951 0.5 (1.0)  
cmyn3\* 0.0 0.049 0.5 (0.0)  
olvi4\* 1.0 0.951 0.5 (1.0)  
cmyn4\* 0.0 0.049 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 90.8 -2.3 48.29  
LAB\*Lab 90.8 -2.3 48.29  
LAB\*TCla 90.8 -2.3 48.29

relative CIELAB lab\*  
lab\*lab 0.94 -0.015 0.5 (1.0)  
lab\*ch 0.94 -0.015 0.5 (1.0)  
lab\*nch 0.0 0.5 0.25 (0.0)  
relative Natural Colour (NC)  
lab\*tr 0.94 0.0 0.5 (1.0)  
lab\*tc 0.94 0.0 0.5 (1.0)  
lab\*ncc 0.0 0.5 0.25 (0.0)

relative Inform. Technology (IT)  
olvi3\* 0.75 0.75 0.75 (1.0)  
cmyn3\* 0.25 0.25 0.25 (0.0)  
olvi4\* 1.0 0.951 0.5 (1.0)  
cmyn4\* 0.0 0.049 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 71.45 -1.92 46.99  
LAB\*Lab 71.45 -1.92 46.99  
LAB\*TCla 71.45 -1.92 46.99

relative CIELAB lab\*  
lab\*lab 0.75 0.75 0.75 (1.0)  
lab\*ch 0.75 0.75 0.75 (1.0)  
lab\*nch 0.0 0.75 0.75 (0.0)  
relative Natural Colour (NC)  
lab\*tr 0.75 0.75 0.75 (1.0)  
lab\*tc 0.75 0.75 0.75 (1.0)  
lab\*ncc 0.0 0.75 0.75 (0.0)

relative Inform. Technology (IT)  
olvi3\* 0.5 0.451 0.0 (1.0)  
cmyn3\* 0.5 0.525 0.75 (0.0)  
olvi4\* 1.0 0.951 0.5 (1.0)  
cmyn4\* 0.0 0.049 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 54.4 -0.89 23.92  
LAB\*Lab 54.4 -0.89 23.92  
LAB\*TCla 54.4 -0.89 23.92

relative CIELAB lab\*  
lab\*lab 0.5 0.451 0.0 (1.0)  
lab\*ch 0.5 0.451 0.0 (1.0)  
lab\*nch 0.0 0.5 0.25 (0.0)  
relative Natural Colour (NC)  
lab\*tr 0.5 0.451 0.0 (1.0)  
lab\*tc 0.5 0.451 0.0 (1.0)  
lab\*ncc 0.0 0.5 0.25 (0.0)

relative Inform. Technology (IT)  
olvi3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.75 0.75 (0.0)  
olvi4\* 1.0 0.951 0.5 (1.0)  
cmyn4\* 0.0 0.049 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 32.11 0.07 0.01  
LAB\*Lab 32.11 0.07 0.01  
LAB\*TCla 25.00 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.25 0.25 0.25 (1.0)  
lab\*ch 0.25 0.25 0.25 (1.0)  
lab\*nch 0.0 0.25 0.25 (0.0)  
relative Natural Colour (NC)  
lab\*tr 0.25 0.25 0.25 (1.0)  
lab\*tc 0.25 0.25 0.25 (1.0)  
lab\*ncc 0.0 0.25 0.25 (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 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 18.02 0.0 0.46  
LAB\*Lab 18.02 0.0 0.46  
LAB\*TCla 0.01 0.01 0.0

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*ch 0.0 0.0 0.0  
lab\*nch 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*tr 0.0 0.0 0.0  
lab\*tc 0.0 0.0 0.0  
lab\*ncc 0.0 0.0 0.0

BAM-test chart TE57; Colorimetric systems NRS11 & ORS18

D65: 2 coordinate data of 5 step colour scales for 10 hues

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

input: `olv* setrgbcolor`

output: `lab* setrgbcolor / w* setgray`

### Input: Colorimetric Reflective System NRS11

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

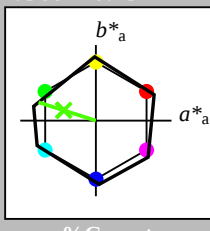
$lab^*tch$  and  $lab^*nch$

D65: hue G

LCH\*Ma: 53 80 162

rgb\*Ma: 0.08 1.0 0.0

triangle lightness  $t^*$



### 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        | 24           |
| JMa    | 53.2        | -1.51   | 84.38   | 84.39        | 91           |
| GMa    | 53.2        | -82.27  | 18.98   | 84.44        | 167          |
| G50BMa | 53.2        | -77.72  | -32.98  | 84.44        | 203          |
| BMa    | 53.2        | 4.37    | -84.28  | 84.41        | 273          |
| B50RMa | 53.2        | 69.09   | -48.41  | 84.37        | 325          |
| NMa    | 10.99       | 0.0     | 0.0     | 0.0          | 0            |
| WMa    | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE   | 39.92       | 58.69   | 27.98   | 65.01        | 25           |
| JCIE   | 81.26       | -2.9    | 71.56   | 71.62        | 92           |
| GCIE   | 52.23       | -42.45  | 13.59   | 44.59        | 162          |
| BCIE   | 30.57       | 1.35    | -46.48  | 46.51        | 272          |

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

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 0.0 -0.01  
LAB\*LABa 95.41 0.0 0.0  
LAB\*TCHa 99.99 0.01 0.0

relative Inform. Technology (IT)  
olvi3\* 0.77 1.0 0.75 (1.0)  
cmyn3\* 0.23 0.0 0.25 (0.0)  
olvi4\* 0.77 1.0 0.75 (1.0)  
cmyn4\* 0.23 0.0 0.25 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 84.85 -18.92 6.06  
LAB\*LABa 84.85 -18.92 6.06  
LAB\*TCHa 97.5 19.88 162.25

relative Inform. Technology (IT)  
olvi3\* 0.54 1.0 0.5 (1.0)  
cmyn3\* 0.46 0.0 0.5 (0.0)  
olvi4\* 0.54 1.0 0.5 (1.0)  
cmyn4\* 0.46 0.0 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 74.3 -37.84 12.13  
LAB\*LABa 74.3 -37.84 12.13  
LAB\*TCHa 75.0 39.77 162.25

relative Inform. Technology (IT)  
olvi3\* 0.31 1.0 0.25 (1.0)  
cmyn3\* 0.69 0.0 0.75 (0.0)  
olvi4\* 0.31 1.0 0.25 (1.0)  
cmyn4\* 0.69 0.0 0.75 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 63.75 -56.77 18.19  
LAB\*LABa 63.75 -56.77 18.19  
LAB\*TCHa 62.5 59.66 162.25

relative Inform. Technology (IT)  
olvi3\* 0.08 1.0 0.0 (1.0)  
cmyn3\* 0.91 0.0 1.0 (0.0)  
olvi4\* 0.08 1.0 0.0 (1.0)  
cmyn4\* 0.91 0.0 1.0 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 53.2 -75.71 24.25  
LAB\*LABa 53.2 -75.71 24.25  
LAB\*TCHa 50.0 79.54 162.25

relative Inform. Technology (IT)  
olvi3\* 0.25 0.5 0.5 (0.0)  
cmyn3\* 0.75 0.5 0.5 (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 56.71 0.23 2.14  
LAB\*LABa 56.71 0.23 2.14  
LAB\*TCHa 50.0 0.0 0.0

relative Inform. Technology (IT)  
olvi3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.75 0.75 (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 53.21 0.04 0.0  
LAB\*LABa 53.21 0.04 0.0  
LAB\*TCHa 50.0 0.01 0.0

relative Inform. Technology (IT)  
olvi3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.75 0.75 (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 53.21 0.04 0.0  
LAB\*LABa 53.21 0.04 0.0  
LAB\*TCHa 50.0 0.01 0.0

relative Inform. Technology (IT)  
olvi3\* 0.29 0.75 0.25 (1.0)  
cmyn3\* 0.71 0.25 0.75 (0.0)  
olvi4\* 0.54 1.0 0.5 (0.75)  
cmyn4\* 0.46 0.0 0.5 (0.25)  
standard and adapted CIELAB  
LAB\*LAB 53.2 -37.87 12.12  
LAB\*LABa 53.2 -37.87 12.12  
LAB\*TCHa 50.0 39.78 162.25

relative Inform. Technology (IT)  
olvi3\* 0.375 0.75 0.375 (1.0)  
cmyn3\* 0.625 0.25 0.625 (0.0)  
olvi4\* 0.5 1.0 0.5 (0.5)  
cmyn4\* 0.5 0.0 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 53.2 -37.87 12.12  
LAB\*LABa 53.2 -37.87 12.12  
LAB\*TCHa 50.0 39.78 162.25

relative Inform. Technology (IT)  
olvi3\* 0.375 0.75 0.375 (1.0)  
cmyn3\* 0.625 0.25 0.625 (0.0)  
olvi4\* 0.5 1.0 0.5 (0.5)  
cmyn4\* 0.5 0.0 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 53.2 -37.87 12.12  
LAB\*LABa 53.2 -37.87 12.12  
LAB\*TCHa 50.0 39.78 162.25

relative Inform. Technology (IT)  
olvi3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.75 0.75 (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 56.71 0.23 2.14  
LAB\*LABa 56.71 0.23 2.14  
LAB\*TCHa 50.0 0.0 0.0

relative Inform. Technology (IT)  
olvi3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.75 0.75 (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 53.21 0.04 0.0  
LAB\*LABa 53.21 0.04 0.0  
LAB\*TCHa 50.0 0.01 0.0

relative Inform. Technology (IT)  
olvi3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.75 0.75 (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 53.21 0.04 0.0  
LAB\*LABa 53.21 0.04 0.0  
LAB\*TCHa 50.0 0.01 0.0

relative Inform. Technology (IT)  
olvi3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.75 0.75 (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 53.21 0.04 0.0  
LAB\*LABa 53.21 0.04 0.0  
LAB\*TCHa 50.0 0.01 0.0

relative Inform. Technology (IT)  
olvi3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.75 0.75 (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 53.21 0.04 0.0  
LAB\*LABa 53.21 0.04 0.0  
LAB\*TCHa 50.0 0.01 0.0

relative Inform. Technology (IT)  
olvi3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.75 0.75 (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 53.21 0.04 0.0  
LAB\*LABa 53.21 0.04 0.0  
LAB\*TCHa 50.0 0.01 0.0

relative Inform. Technology (IT)  
olvi3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.75 0.75 (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 53.21 0.04 0.0  
LAB\*LABa 53.21 0.04 0.0  
LAB\*TCHa 50.0 0.01 0.0

relative Inform. Technology (IT)  
olvi3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.75 0.75 (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 53.21 0.04 0.0  
LAB\*LABa 53.21 0.04 0.0  
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relative Inform. Technology (IT)  
olvi3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.75 0.75 (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 53.21 0.04 0.0  
LAB\*LABa 53.21 0.04 0.0  
LAB\*TCHa 50.0 0.01 0.0

relative Inform. Technology (IT)  
olvi3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.75 0.75 (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 53.21 0.04 0.0  
LAB\*LABa 53.21 0.04 0.0  
LAB\*TCHa 50.0 0.01 0.0

relative Inform. Technology (IT)  
olvi3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.75 0.75 (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 53.21 0.04 0.0  
LAB\*LABa 53.21 0.04 0.0  
LAB\*TCHa 50.0 0.01 0.0

relative Inform. Technology (IT)  
olvi3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.75 0.75 (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 53.21 0.04 0.0  
LAB\*LABa 53.21 0.04 0.0  
LAB\*TCHa 50.0 0.01 0.0

relative Inform. Technology (IT)  
olvi3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.75 0.75 (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 53.21 0.04 0.0  
LAB\*LABa 53.21 0.04 0.0  
LAB\*TCHa 50.0 0.01 0.0

