

Input: Colorimetric Reflective System ORS18

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

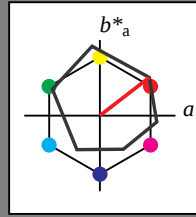
lab^*tch and lab^*nch

D65: hue O

LCH*Ma: 48 83 38

rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



$u^*_{rel} = 93$

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 47.5
LAB*LABa 95.41 0.0 0.0
LAB*TCHa 99.99 0.01 -

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 75.0 0.01 -

relative CIELAB lab*
lab*lab 0.847 0.198 0.153
lab*tch 0.875 0.25 0.105
lab*nch 0.0 0.25 0.105
relative Natural Colour (NC)
lab*trj 0.847 0.238 0.075
lab*tce 0.875 0.25 0.048
lab*nce 0.0 0.25 0.191

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 56.71 -0.23 2.14
LAB*LABa 56.71 0.0 0.0
LAB*TCHa 50.0 0.01 -

relative CIELAB lab*
lab*lab 0.57 0.25 0.153
lab*tch 0.625 0.25 0.105
lab*nch 0.25 0.25 0.105
relative Natural Colour (NC)
lab*trj 0.597 0.239 0.075
lab*tce 0.625 0.25 0.048
lab*nce 0.25 0.25 0.191

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 37.36 -0.38 0.63
LAB*LABa 37.36 0.0 0.0
LAB*TCHa 25.0 0.01 -

relative CIELAB lab*
lab*lab 0.347 0.198 0.153
lab*tch 0.375 0.25 0.105
lab*nch 0.25 0.25 0.105
relative Natural Colour (NC)
lab*trj 0.347 0.239 0.075
lab*tce 0.375 0.25 0.048
lab*nce 0.25 0.25 0.191

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 18.02 0.0 0.46
LAB*LABa 18.02 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.097 0.198 0.153
lab*tch 0.125 0.25 0.105
lab*nch 0.25 0.25 0.105
relative Natural Colour (NC)
lab*trj 0.097 0.239 0.075
lab*tce 0.125 0.25 0.048
lab*nce 0.25 0.25 0.191

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*LABa 0.0 0.0 0.0
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 0.0 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 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 0.0 0.0 0.0
LAB*LABa 0.0 0.0 0.0
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 0.0 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 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 0.0 0.0 0.0
LAB*LABa 0.0 0.0 0.0
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 0.0 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 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 0.0 0.0 0.0
LAB*LABa 0.0 0.0 0.0
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 0.0 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 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 0.0 0.0 0.0
LAB*LABa 0.0 0.0 0.0
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 0.0 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 0.0 0.0 0.0

UE510-7, 5 step scales for constant CIELAB hue 38/360 = 0.105 (left)

BAM-test chart UE51; Colorimetric systems ORS18 & MRS18a input: cmy0* setcmykcolor

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

Output: Colorimetric Reflective System MRS18a

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

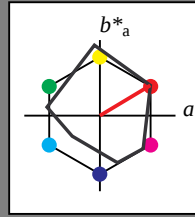
lab^*tch and lab^*nch

D65: hue R

LCH*Ma: 50 78 31

rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



$u^*_{rel} = 92$

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

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 0.03 0.25
LAB*LABa 76.06 0.0 0.0
LAB*TCHa 75.0 0.01 -

relative CIELAB lab*
lab*lab 0.852 0.214 0.128
lab*tch 0.875 0.25 0.086
lab*nch 0.0 0.25 0.086
relative Natural Colour (NC)
lab*trj 0.852 0.248 0.032
lab*tce 0.875 0.25 0.02
lab*nce 0.0 0.25 0.081

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 56.71 0.05 0.17
LAB*LABa 56.71 0.0 0.0
LAB*TCHa 50.0 0.01 -

relative CIELAB lab*
lab*lab 0.57 0.25 0.153
lab*tch 0.625 0.25 0.105
lab*nch 0.25 0.25 0.105
relative Natural Colour (NC)
lab*trj 0.597 0.239 0.075
lab*tce 0.625 0.25 0.048
lab*nce 0.25 0.25 0.191

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 37.36 0.07 0.17
LAB*LABa 37.36 0.0 0.0
LAB*TCHa 25.0 0.01 -

relative CIELAB lab*
lab*lab 0.347 0.198 0.153
lab*tch 0.375 0.25 0.105
lab*nch 0.25 0.25 0.105
relative Natural Colour (NC)
lab*trj 0.347 0.239 0.075
lab*tce 0.375 0.25 0.048
lab*nce 0.25 0.25 0.191

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 18.02 0.0 0.46
LAB*LABa 18.02 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.097 0.198 0.153
lab*tch 0.125 0.25 0.105
lab*nch 0.25 0.25 0.105
relative Natural Colour (NC)
lab*trj 0.097 0.239 0.075
lab*tce 0.125 0.25 0.048
lab*nce 0.25 0.25 0.191

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*LABa 0.0 0.0 0.0
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 0.0 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 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 0.0 0.0 0.0
LAB*LABa 0.0 0.0 0.0
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 0.0 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 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 0.0 0.0 0.0
LAB*LABa 0.0 0.0 0.0
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 0.0 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 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 0.0 0.0 0.0
LAB*LABa 0.0 0.0 0.0
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 0.0 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 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 0.0 0.0 0.0
LAB*LABa 0.0 0.0 0.0
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 0.0 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 0.0 0.0 0.0

5 step scales for constant CIELAB hue 31/360 = 0.086 (right)

output: no change compared to input

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

G50BMa 45.03 -36.65 -27.13 45.61 217

BMa 36.65 23.26 -62.27 66.49 290

B50RMa 34.94 57.27 -43.6 71.99 323

NMa 18.01 0.0 0.0 0.0 0

WMa 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

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

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

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 72.52 33.43 20.01
LAB*LABa 72.52 33.39 20.01
LAB*TCHa 75.0 38.93 30.93

relative CIELAB lab*
lab*lab 0.704 0.429 0.257
lab*tch 0.75 0.5 0.086
lab*nch 0.0 0.5 0.086
relative Natural Colour (NC)
lab*trj 0.704 0.496 0.064
lab*tce 0.725 0.5 0.02
lab*nce 0.0 0.5 0.081

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 0.75
cmyn4* 0.0 0.5 0.5 0.25
standard and adapted CIELAB
LAB*LAB 53.17 33.46 20.03
LAB*LABa 53.17 33.4 20.01
LAB*TCHa 50.0 38.93 30.93

relative CIELAB lab*
lab*lab 0.306 0.643 0.385
lab*tch 0.625 0.75 0.086
lab*nch 0.0 0.75 0.086
relative Natural Colour (NC)
lab*trj 0.556 0.744 0.096
lab*tce 0.625 0.75 0.02
lab*nce 0.0 0.75 0.081

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 0.75
cmyn4* 0.0 0.5 0.5 0.25
standard and adapted CIELAB
LAB*LAB 33.82 33.39 20.01
LAB*LABa 33.82 33.39 20.01
LAB*TCHa 37.5 58.39 30.93

relative CIELAB lab*
lab*lab 0.204 0.429 0.257
lab*tch 0.25 0.5 0.086
lab*nch 0.0 0.5 0.086
relative Natural Colour (NC)
lab*trj 0.204 0.496 0.064
lab*tce 0.225 0.5 0.02
lab*nce 0.0 0.5 0.081

relative Inform. Technology (IT)
olvi3* 0.5 0.0 0.0 (1.0)
cmyn3* 0.5 0.75 0.75 (0.0)
olvi4* 1.0 0.5 0.5 0.75
cmyn4* 0.0 0.5 0.5 0.25
standard and adapted CIELAB
LAB*LAB 18.02 0.0 0.46
LAB*LABa 18.02 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.097 0.198 0.153
lab*tch 0.125 0.25 0.105
lab*nch 0.25 0.25 0.105
relative Natural Colour (NC)
lab*trj 0.097 0.239 0.075
lab*tce 0.125 0.25 0.048
lab*nce 0.25 0.25 0.191

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 0.0 0.0 0.0
LAB*LABa 0.0 0.0 0.0
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 0.0 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 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 0.0 0.0 0.0
LAB*LABa 0.0 0.0 0.0
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 0.0 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 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 0.0 0.0 0.0
LAB*LABa 0.0 0.0 0.0
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 0.0 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 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 0.0 0.0 0.0

Input: Colorimetric Reflective System ORS18

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

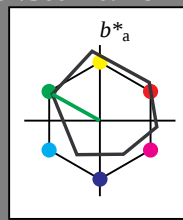
$lab \cdot tch$ and $lab \cdot nch$

D65: hue L

LCH*Ma: 51 72 151

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



ORS18; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
QMa	47.94	65.37	50.52	82.62	38
YMa	90.37	-10.27	91.77	92.34	96
LMa	50.59	-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* 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 47.5
LAB*Lab 95.41 0.0 0.0
LAB*TCMa 99.99 0.01 -

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 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*Lab 84.28 -15.68 8.73
LAB*TCMa 97.5 17.7 170.85

relative CIELAB lab*
lab*lab 0.86 -0.217 0.122
lab*tch 0.875 0.25 0.419
lab*nch 0.0 0.25 0.419
relative Natural Colour (NC)
lab*trj 0.856 -0.238 0.072
lab*tce 0.875 0.25 0.453
lab*nce 0.0 0.25 0.419

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*TCMa 75.0 0.01 -

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* 0.75 1.0 0.75 (1.0)
cmyn4* 0.25 0.0 0.25 (0.0)
standard and adapted CIELAB
LAB*LAB 64.93 -16.09 11.44
LAB*Lab 64.93 -15.69 8.74
LAB*TCMa 62.5 17.7 170.85

relative CIELAB lab*
lab*lab 0.625 0.25 0.453
lab*tch 0.625 0.25 0.453
lab*nch 0.0 0.25 0.419

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*Lab 56.71 0.0 0.0
LAB*TCMa 50.0 0.01 -

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 0.25 0.75 (0.0)
olvi4* 0.75 1.0 0.75 (0.5)
cmyn4* 0.25 0.0 0.25 (0.5)
standard and adapted CIELAB
LAB*LAB 45.56 -15.72 10.13
LAB*Lab 45.56 -15.69 8.74
LAB*TCMa 37.5 17.7 170.85

relative CIELAB lab*
lab*lab 0.375 0.25 0.419
lab*tch 0.375 0.25 0.419
lab*nch 0.0 0.25 0.419

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 (0.25)
cmyn4* 0.0 0.0 0.0 (0.25)
standard and adapted CIELAB
LAB*LAB 37.36 -0.07 0.63
LAB*Lab 37.36 0.0 0.0
LAB*TCMa 25.0 0.01 -

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 0.0 1.0 (0.0)
olvi4* 0.5 0.5 0.5 (0.0)
cmyn4* 0.5 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 34.46 -31.2 18.11
LAB*Lab 34.46 -31.38 17.47
LAB*TCMa 25.01 35.93 150.91

relative CIELAB lab*
lab*lab 0.319 -0.654 0.365
lab*tch 0.375 0.75 0.419
lab*nch 0.25 0.75 0.419

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 (0.0)
standard and adapted CIELAB
LAB*LAB 18.02 0.0 0.46
LAB*Lab 18.02 0.0 0.0
LAB*TCMa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 0.0 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 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 0.5 1.0 (0.0)
olvi4* 0.5 0.5 0.5 (0.0)
cmyn4* 0.5 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 12.5 -15.68 8.73
LAB*Lab 12.5 -15.69 8.73
LAB*TCMa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.106 -0.217 0.122
lab*tch 0.125 0.25 0.419
lab*nch 0.0 0.25 0.419

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 (0.0)
standard and adapted CIELAB
LAB*LAB 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 0.0 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 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 (0.0)
standard and adapted CIELAB
LAB*LAB 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 0.0 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 0.0 0.0 0.0

Output: Colorimetric Reflective System MRS18a

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

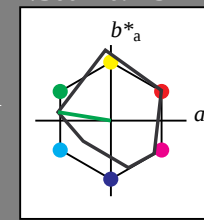
$lab \cdot tch$ and $lab \cdot nch$

D65: hue G

LCH*Ma: 52 71 171

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



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
G50BMa	45.03	-36.65	-27.13	45.61	217
BMa	36.65	23.26	-62.27	66.49	290
B50RMa	34.94	57.27	-43.6	71.99	323
NMa	18.01	0.0	0.0	0.0	0
WMa	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

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

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

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 0.01 0.0
LAB*Lab 95.41 0.0 0.0
LAB*TCMa 99.99 0.01 -

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 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 84.58 -17.45 2.82
LAB*Lab 84.58 -17.47 2.82
LAB*TCMa 87.5 17.7 170.85

relative CIELAB lab*
lab*lab 0.86 -0.246 0.04
lab*tch 0.875 0.25 0.475
lab*nch 0.0 0.25 0.475

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 (0.75)
standard and adapted CIELAB
LAB*LAB 76.06 0.03 0.52
LAB*Lab 76.06 0.0 0.0
LAB*TCMa 75.0 0.01 -

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* 0.75 1.0 0.75 (0.5)
cmyn4* 0.25 0.0 0.25 (0.5)
standard and adapted CIELAB
LAB*LAB 65.23 -17.43 2.83
LAB*Lab 65.23 -17.48 2.82
LAB*TCMa 62.5 17.7 170.85

relative CIELAB lab*
lab*lab 0.625 0.25 0.52
lab*tch 0.625 0.25 0.52
lab*nch 0.0 0.25 0.475

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 0.05 0.52
LAB*Lab 56.71 0.0 0.0
LAB*TCMa 50.0 0.01 -

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 0.25 0.75 (0.0)
olvi4* 0.75 1.0 0.75 (0.5)
cmyn4* 0.25 0.0 0.25 (0.5)
standard and adapted CIELAB
LAB*LAB 45.88 -17.41 2.83
LAB*Lab 45.88 -17.48 2.82
LAB*TCMa 37.5 17.7 170.85

relative CIELAB lab*
lab*lab 0.375 0.25 0.475
lab*tch 0.375 0.25 0.475
lab*nch 0.0 0.25 0.475

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 (0.25)
cmyn4* 0.0 0.0 0.0 (0.25)
standard and adapted CIELAB
LAB*LAB 37.36 0.07 0.63
LAB*Lab 37.36 0.0 0.0
LAB*TCMa 25.0 0.01 -

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 0.5 1.0 (0.0)
olvi4* 0.5 0.5 0.5 (0.0)
cmyn4* 0.5 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 34.46 -31.2 18.11
LAB*Lab 34.46 -31.38 17.47
LAB*TCMa 25.01 35.93 150.91

relative CIELAB lab*
lab*lab 0.319 -0.654 0.365
lab*tch 0.375 0.75 0.419
lab*nch 0.25 0.75 0.419

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 (0.0)
standard and adapted CIELAB
LAB*LAB 18.02 0.0 0.11
LAB*Lab 18.02 0.0 0.0
LAB*TCMa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 0.0 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 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 0.5 1.0 (0.0)
olvi4* 0.5 0.5 0.5 (0.0)
cmyn4* 0.5 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 12.5 -15.68 8.74
LAB*Lab 12.5 -15.69 8.73
LAB*TCMa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.11 -0.246 0.04
lab*tch 0.125 0.25 0.475
lab*nch 0.0 0.25 0.475

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 (0.0)
standard and adapted CIELAB
LAB*LAB 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 0.0 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 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 (0.0)
standard and adapted CIELAB
LAB*LAB 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 0.0 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 0.0 0.0 0.0

UE510-7, 5 step scales for constant CIELAB hue 151/360 = 0.419 (left)

5 step scales for constant CIELAB hue 171/360 = 0.475 (right)

BAM-test chart UE51; Colorimetric systems ORS18 & MRS18a input: $cm y 0^* set c m y k c o l o r$

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

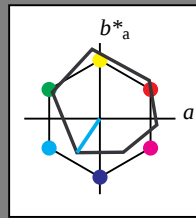
output: no change compared to input

Input: 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 t^*



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
QMa	47.94	65.37	50.52	82.62	38
YMa	90.37	-10.27	91.77	92.34	96
LMa	50.59	-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* 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 47.5
LAB*LABa 95.41 0.0 0.0
LAB*TCMa 99.99 0.01 -

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 -
relative Natural Colour (NC)
lab*trj 1.0 0.0 0.0
lab*trc 1.0 0.0 -
lab*ncc 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*TCMa 75.0 0.01 -

relative CIELAB lab*
lab*lab 0.881 -0.139 -0.206
lab*tch 0.875 0.25 0.656
lab*nch 0.0 0.25 0.656
relative Natural Colour (NC)
lab*trj 0.881 -0.123 -0.216
lab*trc 0.875 0.25 0.656
lab*ncc 0.0 0.25 0.656

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*LABa 56.71 0.0 0.0
LAB*TCMa 50.0 0.01 -

relative CIELAB lab*
lab*lab 0.631 -0.139 -0.206
lab*tch 0.625 0.25 0.656
lab*nch 0.0 0.25 0.656
relative Natural Colour (NC)
lab*trj 0.631 -0.123 -0.216
lab*trc 0.625 0.25 0.656
lab*ncc 0.0 0.25 0.656

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 37.36 -0.08 0.63
LAB*LABa 37.36 0.0 0.0
LAB*TCMa 25.0 0.01 -

relative CIELAB lab*
lab*lab 0.381 -0.139 -0.206
lab*tch 0.375 0.25 0.656
lab*nch 0.0 0.25 0.656
relative Natural Colour (NC)
lab*trj 0.381 -0.123 -0.216
lab*trc 0.375 0.25 0.656
lab*ncc 0.0 0.25 0.656

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 0.0
LAB*LABa 18.02 0.0 0.0
LAB*TCMa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.131 -0.139 -0.206
lab*tch 0.125 0.25 0.656
lab*nch 0.0 0.25 0.656
relative Natural Colour (NC)
lab*trj 0.131 -0.123 -0.216
lab*trc 0.125 0.25 0.656
lab*ncc 0.0 0.25 0.656

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 0.0 0.0
LAB*LABa 0.01 0.0 0.0
LAB*TCMa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0131 -0.139 -0.206
lab*tch 0.0125 0.25 0.656
lab*nch 0.0 0.25 0.656
relative Natural Colour (NC)
lab*trj 0.0131 -0.123 -0.216
lab*trc 0.0125 0.25 0.656
lab*ncc 0.0 0.25 0.656

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 0.001 0.0 0.0
LAB*LABa 0.001 0.0 0.0
LAB*TCMa 0.001 0.01 -

relative CIELAB lab*
lab*lab 0.00131 -0.139 -0.206
lab*tch 0.00125 0.25 0.656
lab*nch 0.0 0.25 0.656
relative Natural Colour (NC)
lab*trj 0.00131 -0.123 -0.216
lab*trc 0.00125 0.25 0.656
lab*ncc 0.0 0.25 0.656

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 0.0001 0.0 0.0
LAB*LABa 0.0001 0.0 0.0
LAB*TCMa 0.0001 0.01 -

relative CIELAB lab*
lab*lab 0.000131 -0.139 -0.206
lab*tch 0.000125 0.25 0.656
lab*nch 0.0 0.25 0.656
relative Natural Colour (NC)
lab*trj 0.000131 -0.123 -0.216
lab*trc 0.000125 0.25 0.656
lab*ncc 0.0 0.25 0.656

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 0.00001 0.0 0.0
LAB*LABa 0.00001 0.0 0.0
LAB*TCMa 0.00001 0.01 -

relative CIELAB lab*
lab*lab 0.0000131 -0.139 -0.206
lab*tch 0.0000125 0.25 0.656
lab*nch 0.0 0.25 0.656
relative Natural Colour (NC)
lab*trj 0.0000131 -0.123 -0.216
lab*trc 0.0000125 0.25 0.656
lab*ncc 0.0 0.25 0.656

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 0.000001 0.0 0.0
LAB*LABa 0.000001 0.0 0.0
LAB*TCMa 0.000001 0.01 -

relative CIELAB lab*
lab*lab 0.00000131 -0.139 -0.206
lab*tch 0.00000125 0.25 0.656
lab*nch 0.0 0.25 0.656
relative Natural Colour (NC)
lab*trj 0.00000131 -0.123 -0.216
lab*trc 0.00000125 0.25 0.656
lab*ncc 0.0 0.25 0.656

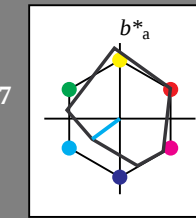
UE510-7, 5 step scales for constant CIELAB hue 236/360 = 0.656 (left)

Output: 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 t^*



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
G50BMa	45.03	-36.65	-27.13	45.61	217
BMa	36.65	23.26	-62.27	66.49	290
B50RMa	34.94	57.27	-43.6	71.99	323
NMa	18.01	0.0	0.0	0.0	0
WMa	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

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

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

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 0.01 0.0
LAB*LABa 95.41 0.0 0.0
LAB*TCMa 99.99 0.01 -

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 -
relative Natural Colour (NC)
lab*trj 1.0 0.0 0.0
lab*trc 1.0 0.0 -
lab*ncc 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 0.03 0.01
LAB*LABa 76.06 0.0 0.0
LAB*TCMa 75.0 0.01 -

relative CIELAB lab*
lab*lab 0.837 -0.177 -0.175
lab*tch 0.837 0.25 0.624
lab*nch 0.0 0.25 0.624

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 0.05 0.01
LAB*LABa 56.71 0.0 0.0
LAB*TCMa 50.0 0.01 -

relative CIELAB lab*
lab*lab 0.637 -0.177 -0.175
lab*tch 0.637 0.25 0.624
lab*nch 0.0 0.25 0.624

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 37.36 0.07 0.01
LAB*LABa 37.36 0.0 0.0
LAB*TCMa 25.0 0.01 -

relative CIELAB lab*
lab*lab 0.387 -0.177 -0.175
lab*tch 0.387 0.25 0.624
lab*nch 0.0 0.25 0.624

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 0.0
LAB*LABa 18.02 0.0 0.0
LAB*TCMa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.137 -0.177 -0.175
lab*tch 0.137 0.25 0.624
lab*nch 0.0 0.25 0.624

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 0.0 0.0
LAB*LABa 0.01 0.0 0.0
LAB*TCMa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0137 -0.177 -0.175
lab*tch 0.0137 0.25 0.624
lab*nch 0.0 0.25 0.624

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 0.001 0.0 0.0
LAB*LABa 0.001 0.0 0.0
LAB*TCMa 0.001 0.01 -

relative CIELAB lab*
lab*lab 0.00137 -0.177 -0.175
lab*tch 0.00137 0.25 0.624
lab*nch 0.0 0.25 0.624

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 0.0001 0.0 0.0
LAB*LABa 0.0001 0.0 0.0
LAB*TCMa 0.0001 0.01 -

relative CIELAB lab*
lab*lab 0.000137 -0.177 -0.175
lab*tch 0.000137 0.25 0.624
lab*nch 0.0 0.25 0.624

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 0.00001 0.0 0.0
LAB*LABa 0.00001 0.0 0.0
LAB*TCMa 0.00001 0.01 -

relative CIELAB lab*
lab*lab 0.0000137 -0.177 -0.175
lab*tch 0.0000137 0.25 0.624
lab*nch 0.0 0.25 0.624

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 0.000001 0.0 0.0
LAB*LABa 0.000001 0.0 0.0
LAB*TCMa 0.000001 0.01 -

relative CIELAB lab*
lab*lab 0.00000137 -0.177 -0.175
lab*tch 0.00000137 0.25 0.624
lab*nch 0.0 0.25 0.624

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 0.0000001 0.0 0.0
LAB*LABa 0.0000001 0.0 0.0
LAB*TCMa 0.0000001 0.01 -

relative CIELAB lab*
lab*lab 0.000000137 -0.177 -0.175
lab*tch 0.000000137 0.25 0.624
lab*nch 0.0 0.25 0.624

5 step scales for constant CIELAB hue 217/360 = 0.601 (right)

BAM-test chart UE51; Colorimetric systems ORS18 & MRS18a input: $cmv0^* setcmykcolor$

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

output: no change compared to input

Input: Colorimetric Reflective System ORS18

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

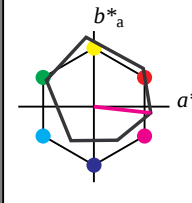
lab^*tch and lab^*nch

D65: hue M

LCH*Ma: 48 76 354

rgb*Ma: 1.0 0.0 1.0

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 47.5
LAB*LABa 95.41 0.0 0.0
LAB*LABb 95.41 0.0 0.0
LAB*LABc 95.41 0.0 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*trc 1.0 0.0 0.0
lab*trce 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*LABb 76.06 0.0 0.0
LAB*LABc 76.06 0.0 0.0

relative CIELAB lab*
lab*lab 0.847 0.248 -0.027
lab*tch 0.875 0.25 0.982
lab*nch 0.0 0.25 0.982
relative Natural Colour (NC)
lab*trj 0.847 0.227 -0.103
lab*trc 0.875 0.25 0.982
lab*trce 0.0 0.25 0.982

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*LABb 76.06 0.0 0.0
LAB*LABc 76.06 0.0 0.0

relative CIELAB lab*
lab*lab 0.847 0.248 -0.027
lab*tch 0.875 0.25 0.982
lab*nch 0.0 0.25 0.982
relative Natural Colour (NC)
lab*trj 0.847 0.227 -0.103
lab*trc 0.875 0.25 0.982
lab*trce 0.0 0.25 0.982

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 0.0 0.0
LAB*LABb 56.71 0.0 0.0
LAB*LABc 56.71 0.0 0.0

relative CIELAB lab*
lab*lab 0.597 0.227 -0.103
lab*tch 0.625 0.25 0.982
lab*nch 0.25 0.25 0.982
relative Natural Colour (NC)
lab*trj 0.597 0.227 -0.103
lab*trc 0.625 0.25 0.982
lab*trce 0.25 0.25 0.982

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 37.36 -0.07 0.63
LAB*LABa 37.36 0.0 0.0
LAB*LABb 37.36 0.0 0.0
LAB*LABc 37.36 0.0 0.0

relative CIELAB lab*
lab*lab 0.347 0.248 -0.027
lab*tch 0.375 0.25 0.982
lab*nch 0.0 0.25 0.982
relative Natural Colour (NC)
lab*trj 0.347 0.227 -0.103
lab*trc 0.375 0.25 0.982
lab*trce 0.0 0.25 0.982

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 37.36 -0.07 0.63
LAB*LABa 37.36 0.0 0.0
LAB*LABb 37.36 0.0 0.0
LAB*LABc 37.36 0.0 0.0

relative CIELAB lab*
lab*lab 0.347 0.248 -0.027
lab*tch 0.375 0.25 0.982
lab*nch 0.0 0.25 0.982
relative Natural Colour (NC)
lab*trj 0.347 0.227 -0.103
lab*trc 0.375 0.25 0.982
lab*trce 0.0 0.25 0.982

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 37.36 -0.07 0.63
LAB*LABa 37.36 0.0 0.0
LAB*LABb 37.36 0.0 0.0
LAB*LABc 37.36 0.0 0.0

relative CIELAB lab*
lab*lab 0.347 0.248 -0.027
lab*tch 0.375 0.25 0.982
lab*nch 0.0 0.25 0.982
relative Natural Colour (NC)
lab*trj 0.347 0.227 -0.103
lab*trc 0.375 0.25 0.982
lab*trce 0.0 0.25 0.982

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*LABa 18.02 0.0 0.0
LAB*LABb 18.02 0.0 0.0
LAB*LABc 18.02 0.0 0.0

relative CIELAB lab*
lab*lab 0.097 0.248 -0.027
lab*tch 0.125 0.25 0.982
lab*nch 0.0 0.25 0.982
relative Natural Colour (NC)
lab*trj 0.097 0.227 -0.103
lab*trc 0.125 0.25 0.982
lab*trce 0.0 0.25 0.982

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*LABa 18.02 0.0 0.0
LAB*LABb 18.02 0.0 0.0
LAB*LABc 18.02 0.0 0.0

relative CIELAB lab*
lab*lab 0.097 0.248 -0.027
lab*tch 0.125 0.25 0.982
lab*nch 0.0 0.25 0.982
relative Natural Colour (NC)
lab*trj 0.097 0.227 -0.103
lab*trc 0.125 0.25 0.982
lab*trce 0.0 0.25 0.982

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*LABa 18.02 0.0 0.0
LAB*LABb 18.02 0.0 0.0
LAB*LABc 18.02 0.0 0.0

relative CIELAB lab*
lab*lab 0.097 0.248 -0.027
lab*tch 0.125 0.25 0.982
lab*nch 0.0 0.25 0.982
relative Natural Colour (NC)
lab*trj 0.097 0.227 -0.103
lab*trc 0.125 0.25 0.982
lab*trce 0.0 0.25 0.982

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* 1.0 0.5 1.0 (1.0)
cmyn3* 0.0 0.5 0.0 (0.0)	olvi4* 1.0 0.5 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)	standard and adapted CIELAB
LAB*LAB 71.77 37.1 -1.01	LAB*LABa 71.77 37.1 -1.01
LAB*LABb 71.77 37.1 -1.01	LAB*LABc 71.77 37.1 -1.01
LAB*LABd 71.77 37.1 -1.01	LAB*LABe 71.77 37.1 -1.01

relative Inform. Technology (IT)	olvi3* 1.0 0.5 1.0 (1.0)
cmyn3* 0.0 0.5 0.0 (0.0)	olvi4* 1.0 0.5 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)	standard and adapted CIELAB
LAB*LAB 59.95 56.14 -3.9	LAB*LABa 59.95 56.14 -3.9
LAB*LABb 59.95 56.14 -3.9	LAB*LABc 59.95 56.14 -3.9
LAB*LABd 59.95 56.14 -3.9	LAB*LABe 59.95 56.14 -3.9

relative Inform. Technology (IT)	olvi3* 1.0 0.5 1.0 (1.0)
cmyn3* 0.0 0.5 0.0 (0.0)	olvi4* 1.0 0.5 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)	standard and adapted CIELAB
LAB*LAB 59.95 56.14 -3.9	LAB*LABa 59.95 56.14 -3.9
LAB*LABb 59.95 56.14 -3.9	LAB*LABc 59.95 56.14 -3.9
LAB*LABd 59.95 56.14 -3.9	LAB*LABe 59.95 56.14 -3.9

relative Inform. Technology (IT)	olvi3* 1.0 0.5 1.0 (1.0)
cmyn3* 0.0 0.5 0.0 (0.0)	olvi4* 1.0 0.5 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)	standard and adapted CIELAB
LAB*LAB 59.95 56.14 -3.9	LAB*LABa 59.95 56.14 -3.9
LAB*LABb 59.95 56.14 -3.9	LAB*LABc 59.95 56.14 -3.9
LAB*LABd 59.95 56.14 -3.9	LAB*LABe 59.95 56.14 -3.9

relative Inform. Technology (IT)	olvi3* 1.0 0.5 1.0 (1.0)
cmyn3* 0.0 0.5 0.0 (0.0)	olvi4* 1.0 0.5 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)	standard and adapted CIELAB
LAB*LAB 59.95 56.14 -3.9	LAB*LABa 59.95 56.14 -3.9
LAB*LABb 59.95 56.14 -3.9	LAB*LABc 59.95 56.14 -3.9
LAB*LABd 59.95 56.14 -3.9	LAB*LABe 59.95 56.14 -3.9

relative Inform. Technology (IT)	olvi3* 1.0 0.5 1.0 (1.0)
cmyn3* 0.0 0.5 0.0 (0.0)	olvi4* 1.0 0.5 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)	standard and adapted CIELAB
LAB*LAB 59.95 56.14 -3.9	LAB*LABa 59.95 56.14 -3.9
LAB*LABb 59.95 56.14 -3.9	LAB*LABc 59.95 56.14 -3.9
LAB*LABd 59.95 56.14 -3.9	LAB*LABe 59.95 56.14 -3.9

relative Inform. Technology (IT)	olvi3* 1.0 0.5 1.0 (1.0)
cmyn3* 0.0 0.5 0.0 (0.0)	olvi4* 1.0 0.5 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)	standard and adapted CIELAB
LAB*LAB 59.95 56.14 -3.9	LAB*LABa 59.95 56.14 -3.9
LAB*LABb 59.95 56.14 -3.9	LAB*LABc 59.95 56.14 -3.9
LAB*LABd 59.95 56.14 -3.9	LAB*LABe 59.95 56.14 -3.9

relative Inform. Technology (IT)	olvi3* 1.0 0.5 1.0 (1.0)
cmyn3* 0.0 0.5 0.0 (0.0)	olvi4* 1.0 0.5 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)	standard and adapted CIELAB
LAB*LAB 59.95 56.14 -3.9	LAB*LABa 59.95 56.14 -3.9
LAB*LABb 59.95 56.14 -3.9	LAB*LABc 59.95 56.14 -3.9
LAB*LABd 59.95 56.14 -3.9	LAB*LABe 59.95 56.14 -3.9

relative Inform. Technology (IT)	olvi3* 1.0 0.5 1.0 (1.0)
cmyn3* 0.0 0.5 0.0 (0.0)	olvi4* 1.0 0.5 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)	standard and adapted CIELAB
LAB*LAB 59.95 56.14 -3.9	LAB*LABa 59.95 56.14 -3.9
LAB*LABb 59.95 56.14 -3.9	LAB*LABc 59.95 56.14 -3.9
LAB*LABd 59.95 56.14 -3.9	LAB*LABe 59.95 56.14 -3.9

Output: Colorimetric Reflective System MRS18a

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

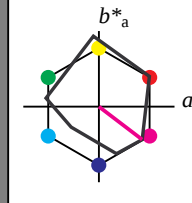
lab^*tch and lab^*nch

D65: hue B50R

LCH*Ma: 35 72 323

rgb*Ma: 1.0 0.0 1.0

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 0.01 0.0
LAB*LABa 95.41 0.01 0.0
LAB*LABb 95.41 0.01 0.0
LAB*LABc 95.41 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*trc 1.0 0.0 0.0
lab*trce 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 0.03 0.25
LAB*LABa 76.06 0.03 0.25
LAB*LABb 76.06 0.03 0.25
LAB*LABc 76.06 0.03 0.25

relative CIELAB lab*
lab*lab 0.805 0.199 -0.15
lab*tch 0.875 0.25 0.896
lab*nch 0.0 0.25 0.896
relative Natural Colour (NC)
lab*trj 0.805 0.199 -0.15
lab*trc 0.875 0.25 0.896
lab*trce 0.0 0.25 0.896

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 0.03 0.25
LAB*LABa 76.06 0.03 0.25
LAB*LABb 76.06 0.03 0.25
LAB*LABc 76.06 0.03 0.25

relative CIELAB lab*
lab*lab 0.805 0.199 -0.15
lab*tch 0.875 0.25 0.896
lab*nch 0.0 0.25 0.896
relative Natural Colour (NC)
lab*trj 0.805 0.199 -0.15
lab*trc 0.875 0.25 0.896
lab*trce 0.0 0.25 0.896

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 0.05 0.5
LAB*LABa 56.71 0.05 0.5
LAB*LABb 56.71 0.05 0.5
LAB*LABc 56.71 0.05 0.5

relative CIELAB lab*
lab*lab 0.555 0.199 -0.15
lab*tch 0.625 0.25 0.896
lab*nch 0.25 0.25 0.896
relative Natural Colour (NC)
lab*trj 0.555 0.199 -0.15
lab*trc 0.625 0.25 0.896
lab*trce 0.25 0.25 0.896

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 37.36 0.07 0.63
LAB*LABa 37.36 0.07 0.63
LAB*LABb 37.36 0.07 0.63
LAB*LABc 37.36 0.07 0.63

relative CIELAB lab*
lab*lab 0.355 0.199 -0.15
lab*tch 0.375 0.25 0.896
lab*nch 0.0 0.25 0.896
relative Natural Colour (NC)
lab*trj 0.355 0.199 -0.15
lab*trc 0.375 0.25 0.896
lab*trce 0.0 0.25 0.896

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 37.36 0.07 0.63
LAB*LABa 37.36 0.07 0.63
LAB*LABb 37.36 0.07 0.63
LAB*LABc 37.36 0.07 0.63

relative CIELAB lab*
lab*lab 0.355 0.199 -0.15
lab*tch 0.375 0.25 0.896
lab*nch 0.0 0.25 0.896
relative Natural Colour (NC)
lab*trj 0.355 0.199 -0.15
lab*trc 0.375 0.25 0.896
lab*trce 0.0 0.25 0.896

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 37.36 0.07 0.63
LAB*LABa 37.36 0.07 0.63
LAB*LABb 37.36 0.07 0.63
LAB*LABc 37.36 0.07 0.63

relative CIELAB lab*
lab*lab 0.355 0.199 -0.15
lab*tch 0.375 0.25 0.896
lab*nch 0.0 0.25 0.896
relative Natural Colour (NC)
lab*trj 0.355 0.199 -0.15
lab*trc 0.375 0.25 0.896
lab*trce 0.0 0.25 0.896

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*LABa 18.02 0.0 0.0
LAB*LABb 18.02 0.0 0.0
LAB*LABc 18.02 0.0 0.0

relative CIELAB lab*
lab*lab 0.055 0.199 -0.15
lab*tch 0.125 0.25 0.896
lab*nch 0.0 0.25 0.896
relative Natural Colour (NC)
lab*trj 0.055 0.199 -0.15
lab*trc 0.125 0.25 0.896
lab*trce 0.0 0.25 0.896

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

Input: Colorimetric Reflective System ORS18

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

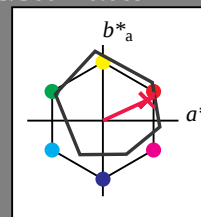
$lab \cdot tch$ and $lab \cdot nch$

D65: hue R

LCH*Ma: 48 75 25

rgb*Ma: 1.0 0.0 0.32

triangle lightness 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	7.5
LAB*Lab	95.41	0.0	0.0
LAB*Lab	95.41	0.0	0.0

relative CIELAB lab*

lab*lab	1.0	0.0	0.0
lab*tch	0.0	1.0	0.0
lab*nch	0.0	0.0	1.0

relative Natural Colour (NC)

lab*trj	1.0	0.0	0.0
lab*tch	0.0	1.0	0.0
lab*nch	0.0	0.0	1.0

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*Lab	76.06	0.0	0.0

relative CIELAB lab*

lab*lab	0.847	0.25	0.0
lab*tch	0.875	0.25	0.069
lab*nch	0.0	0.25	0.069

relative Natural Colour (NC)

lab*trj	0.847	0.25	0.0
lab*tch	0.875	0.25	0.0
lab*nch	0.0	0.25	0.069

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	56.71	-0.23	2.14
LAB*Lab	56.71	0.0	0.0
LAB*Lab	56.71	0.0	0.0

relative CIELAB lab*

lab*lab	0.597	0.25	0.0
lab*tch	0.625	0.25	0.069
lab*nch	0.0	0.25	0.069

relative Natural Colour (NC)

lab*trj	0.597	0.25	0.0
lab*tch	0.625	0.25	0.0
lab*nch	0.0	0.25	0.069

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	37.36	-0.08	0.63
LAB*Lab	37.36	0.0	0.0
LAB*Lab	37.36	0.0	0.0

relative CIELAB lab*

lab*lab	0.347	0.25	0.0
lab*tch	0.375	0.25	0.069
lab*nch	0.0	0.25	0.069

relative Natural Colour (NC)

lab*trj	0.347	0.25	0.0
lab*tch	0.375	0.25	0.0
lab*nch	0.0	0.25	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	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	0.0
LAB*Lab	18.02	0.0	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*tch	0.25	0.0	0.0
lab*nch	0.0	0.0	0.0

UE510-7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

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*	1.0	0.5	0.661	(1.0)
cmyn3*	0.0	0.5	0.339	(0.0)
olvi4*	1.0	0.5	0.661	(1.0)
cmyn4*	0.0	0.5	0.339	(0.0)

standard and adapted CIELAB

LAB*Lab	71.7	33.75	18.92
LAB*Lab	71.7	34.27	15.76
LAB*Lab	71.7	34.27	15.76

relative CIELAB lab*

lab*lab	0.694	0.454	0.209
lab*tch	0.75	0.5	0.069
lab*nch	0.0	0.5	0.069

relative Natural Colour (NC)

lab*trj	0.694	0.5	0.0
lab*tch	0.75	0.5	0.0
lab*nch	0.0	0.5	0.069

relative Inform. Technology (IT)

olvi3*	0.75	0.5	0.661	(1.0)
cmyn3*	0.25	0.5	0.339	(0.0)
olvi4*	1.0	0.5	0.661	(1.0)
cmyn4*	0.0	0.5	0.339	(0.0)

standard and adapted CIELAB

LAB*Lab	52.36	34.28	15.77
LAB*Lab	52.36	34.28	15.77
LAB*Lab	52.36	34.28	15.77

relative CIELAB lab*

lab*lab	0.541	0.681	0.313
lab*tch	0.625	0.75	0.069
lab*nch	0.0	0.75	0.069

relative Natural Colour (NC)

lab*trj	0.541	0.75	0.0
lab*tch	0.625	0.75	0.0
lab*nch	0.0	0.75	0.069

relative Inform. Technology (IT)

olvi3*	0.75	0.5	0.661	(1.0)
cmyn3*	0.25	0.5	0.339	(0.0)
olvi4*	1.0	0.5	0.661	(1.0)
cmyn4*	0.0	0.5	0.339	(0.0)

standard and adapted CIELAB

LAB*Lab	33.01	34.27	15.77
LAB*Lab	33.01	34.27	15.77
LAB*Lab	33.01	34.27	15.77

relative CIELAB lab*

lab*lab	0.291	0.681	0.313
lab*tch	0.375	0.75	0.069
lab*nch	0.0	0.75	0.069

relative Natural Colour (NC)

lab*trj	0.291	0.75	0.0
lab*tch	0.375	0.75	0.0
lab*nch	0.0	0.75	0.069

relative Inform. Technology (IT)

olvi3*	0.5	0.0	0.839	(0.0)
cmyn3*	0.5	0.0	0.161	(0.0)
olvi4*	1.0	0.0	0.839	(0.0)
cmyn4*	0.0	0.0	0.161	(0.0)

standard and adapted CIELAB

LAB*Lab	25.51	17.49	7.88
LAB*Lab	25.51	17.49	7.88
LAB*Lab	25.51	17.49	7.88

relative CIELAB lab*

lab*lab	0.194	0.454	0.209
lab*tch	0.25	0.5	0.069
lab*nch	0.0	0.5	0.069

relative Natural Colour (NC)

lab*trj	0.194	0.5	0.0
lab*tch	0.25	0.5	0.0
lab*nch	0.0	0.5	0.069

blackness n^*

$n^* = 0.00$

$n^* = 0.25$

$n^* = 0.50$

$n^* = 0.75$

$n^* = 1.00$

chromaticness c^*

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

BAM-test chart UE51; Colorimetric systems ORS18 & MRS18a input: $cmv0^* setcmykcolor$

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

output: no change compared to input

triangle lightness t^*

$u^*_{rel} = 92$

% 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

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

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

% 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

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

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

% 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

Input: Colorimetric Reflective System ORS18

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

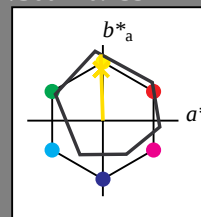
$lab \cdot tch$ and $lab \cdot nch$

D65: hue J

LCH*Ma: 86 88 92

rgb*Ma: 1.0 0.9 0.0

triangle lightness t^*



ORS18; adapted (a) CIELAB data

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

QMa	49.94	65.37	50.52	82.62	38
YMa	90.37	-10.27	91.77	92.34	96
LMa	50.59	-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* 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 47.5
LAB*LABa 95.41 0.0 0.0
LAB*TCMa 99.99 0.01 -

relative Inform. Technology (IT)
olvi3* 1.0 0.975 0.75 (1.0)
cmyn3* 0.0 0.025 0.25 (0.0)
olvi4* 1.0 0.975 0.75 (1.0)
cmyn4* 0.0 0.025 0.25 (0.0)
standard and adapted CIELAB
LAB*LAB 93.11 -1.64 26.52
LAB*LABa 93.11 -0.7 21.93
LAB*TCMa 97.5 21.93 91.86

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*LABa 90.8 -1.41 43.85
LAB*TCMa 75.0 43.87 91.85

relative Inform. Technology (IT)
olvi3* 1.0 0.926 0.25 (1.0)
cmyn3* 0.0 0.074 0.25 (0.0)
olvi4* 1.0 0.926 0.25 (1.0)
cmyn4* 0.0 0.074 0.25 (0.0)
standard and adapted CIELAB
LAB*LAB 88.49 -2.96 70.06
LAB*LABa 88.49 -2.11 65.77
LAB*TCMa 62.5 65.81 91.85

relative Inform. Technology (IT)
olvi3* 1.0 0.901 0.0 (1.0)
cmyn3* 0.0 0.099 1.0 (0.0)
olvi4* 1.0 0.902 0.0 (1.0)
cmyn4* 0.0 0.099 1.0 (0.0)
standard and adapted CIELAB
LAB*LAB 86.15 -3.62 91.83
LAB*LABa 86.15 -2.82 87.69
LAB*TCMa 50.0 87.73 91.85

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 0.05 0.0
LAB*LABa 56.71 0.0 0.0
LAB*TCMa 50.0 0.01 -

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*TCMa 75.0 0.01 -

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 0.975 0.75 (1.0)
cmyn4* 0.0 0.025 0.25 (0.0)
standard and adapted CIELAB
LAB*LAB 73.75 -1.26 25.22
LAB*LABa 73.75 -0.7 21.93
LAB*TCMa 62.5 21.94 91.84

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*LABa 71.45 -1.4 43.85
LAB*TCMa 50.0 43.87 91.84

relative Inform. Technology (IT)
olvi3* 0.75 0.675 0.0 (1.0)
cmyn3* 0.25 0.299 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 68.15 -2.58 68.75
LAB*LABa 68.15 -2.11 65.77
LAB*TCMa 37.51 65.8 91.84

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 0.05 0.0
LAB*LABa 56.71 0.0 0.0
LAB*TCMa 50.0 0.01 -

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 0.988 0.75 (1.0)
cmyn4* 0.0 0.012 0.25 (0.0)
standard and adapted CIELAB
LAB*LAB 55.03 -0.86 22.67
LAB*LABa 55.03 -0.91 22.66
LAB*TCMa 37.5 22.67 92.33

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 0.0 0.0
LAB*TCMa 50.0 0.01 -

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 54.4 -0.89 23.92
LAB*LABa 54.4 -0.7 21.93
LAB*TCMa 37.5 21.94 91.84

relative Inform. Technology (IT)
olvi3* 0.5 0.451 0.0 (1.0)
cmyn3* 0.5 0.549 1.0 (0.0)
olvi4* 1.0 0.913 0.0 (1.0)
cmyn4* 0.0 0.087 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 52.1 -1.5 45.68
LAB*LABa 52.1 -1.4 43.84
LAB*TCMa 25.01 43.87 91.84

relative Inform. Technology (IT)
olvi3* 0.4 0.4 0.4 (0.0)
cmyn3* 0.6 0.6 0.6 (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 49.0 -2.0 49.0
LAB*LABa 49.0 -2.0 49.0
LAB*TCMa 25.0 49.0 91.84

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 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 43.75 -0.07 0.63
LAB*LABa 43.75 0.0 0.0
LAB*TCMa 25.0 0.01 -

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 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 37.5 -0.07 0.63
LAB*LABa 37.5 0.0 0.0
LAB*TCMa 25.0 0.01 -

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 37.36 -0.07 0.63
LAB*LABa 37.36 0.0 0.0
LAB*TCMa 25.0 0.01 -

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 35.05 -0.52 22.6
LAB*LABa 35.05 -0.69 21.92
LAB*TCMa 12.5 21.93 91.84

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 33.05 -0.52 22.6
LAB*LABa 33.05 -0.69 21.92
LAB*TCMa 12.5 21.93 91.84

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 31.05 -0.52 22.6
LAB*LABa 31.05 -0.69 21.92
LAB*TCMa 12.5 21.93 91.84

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 29.05 -0.52 22.6
LAB*LABa 29.05 -0.69 21.92
LAB*TCMa 12.5 21.93 91.84

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 27.05 -0.52 22.6
LAB*LABa 27.05 -0.69 21.92
LAB*TCMa 12.5 21.93 91.84

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 25.05 -0.52 22.6
LAB*LABa 25.05 -0.69 21.92
LAB*TCMa 12.5 21.93 91.84

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 23.05 -0.52 22.6
LAB*LABa 23.05 -0.69 21.92
LAB*TCMa 12.5 21.93 91.84

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 21.05 -0.52 22.6
LAB*LABa 21.05 -0.69 21.92
LAB*TCMa 12.5 21.93 91.84

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 19.05 -0.52 22.6
LAB*LABa 19.05 -0.69 21.92
LAB*TCMa 12.5 21.93 91.84

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 17.05 -0.52 22.6
LAB*LABa 17.05 -0.69 21.92
LAB*TCMa 12.5 21.93 91.84

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 15.05 -0.52 22.6
LAB*LABa 15.05 -0.69 21.92
LAB*TCMa 12.5 21.93 91.84

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 13.05 -0.52 22.6
LAB*LABa 13.05 -0.69 21.92
LAB*TCMa 12.5 21.93 91.84

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 11.05 -0.52 22.6
LAB*LABa 11.05 -0.69 21.92
LAB*TCMa 12.5 21.93 91.84

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 9.05 -0.52 22.6
LAB*LABa 9.05 -0.69 21.92
LAB*TCMa 12.5 21.93 91.84

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 7.05 -0.52 22.6
LAB*LABa 7.05 -0.69 21.92
LAB*TCMa 12.5 21.93 91.84

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 5.05 -0.52 22.6
LAB*LABa 5.05 -0.69 21.92
LAB*TCMa 12.5 21.93 91.84

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 3.05 -0.52 22.6
LAB*LABa 3.05 -0.69 21.92
LAB*TCMa 12.5 21.93 91.84

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 1.05 -0.52 22.6
LAB*LABa 1.05 -0.69 21.92
LAB*TCMa 12.5 21.93 91.84

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 0.05 -0.52 22.6
LAB*LABa 0.05 -0.69 21.92
LAB*TCMa 12.5 21.93 91.84

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 0.05 -0.52 22.6
LAB*LABa 0.05 -0.69 21.92
LAB*TCMa 12.5 21.93 91.84

UE510-7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

BAM-test chart UE51; Colorimetric systems ORS18 & MRS18a input: $cmv0^* setcmykcolor$

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

output: no change compared to input

