

Input: Colorimetric Reflective System ORS18

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

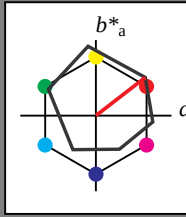
$lab \cdot tch$ and $lab \cdot nch$

D65: hue O

LCH*Ma: 48 83 38

rgb*Ma: 1.0 0.0 0.0

triangle lightness 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 47.5
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 75.0 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 0.597 0.198 0.153
lab*tch 0.625 0.25 0.105
lab*nch 0.0 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 0.0 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 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 0.5 0.5 0.5 (0.0)
lab*tch 0.5 0.5 0.5 (0.0)
lab*nch 0.0 0.5 0.5 (0.0)
relative Natural Colour (NC)
lab*trj 0.5 0.5 0.0
lab*tce 0.5 0.5 0.0
lab*nce 0.0 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 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 0.0 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 0.0 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 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 0.25 0.0 0.0 (0.0)
lab*tch 0.25 0.0 0.0 (0.0)
lab*nch 0.0 0.25 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 0.25 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*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 0.0 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 0.0 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 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 0.0 0.0 0.0 (0.0)
lab*tch 0.0 0.0 0.0 (0.0)
lab*nch 0.0 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 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 0.0 0.0 0.0 (0.0)
lab*tch 0.0 0.0 0.0 (0.0)
lab*nch 0.0 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 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 0.0 0.0 0.0 (0.0)
lab*tch 0.0 0.0 0.0 (0.0)
lab*nch 0.0 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

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 0.5 (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 32.15 28.41
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 0.0 0.0 (1.0)
cmyn3* 0.25 0.75 0.75 (0.0)
olvi4* 1.0 0.5 0.5 (0.0)
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 32.53 27.11
LAB*TCHa 50.0 41.3 37.7

relative CIELAB lab*
lab*lab 0.443 0.396 0.306
lab*tch 0.5 0.5 0.105
lab*nch 0.0 0.5 0.105
relative Natural Colour (NC)
lab*trj 0.443 0.477 0.15
lab*tce 0.5 0.5 0.048
lab*nce 0.0 0.5 0.191

relative Inform. Technology (IT)
olvi3* 0.5 0.0 0.0 (1.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 1.0 0.5 0.5 (0.0)
cmyn4* 0.0 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 40.46 49.1 38.93
LAB*LABa 40.46 49.1 38.93
LAB*TCHa 37.5 61.95 37.7

relative CIELAB lab*
lab*lab 0.29 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 0.29 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 0.5 0.5 (0.0)
olvi4* 1.0 0.25 0.25 (0.0)
cmyn4* 0.0 0.25 0.25 (0.0)
standard and adapted CIELAB
LAB*LAB 22.98 32.9 37.7
LAB*LABa 22.98 32.9 37.7
LAB*TCHa 25.0 41.3 37.7

relative CIELAB lab*
lab*lab 0.193 0.396 0.306
lab*tch 0.25 0.5 0.105
lab*nch 0.0 0.5 0.105
relative Natural Colour (NC)
lab*trj 0.193 0.477 0.15
lab*tce 0.25 0.5 0.048
lab*nce 0.0 0.5 0.191

relative Inform. Technology (IT)
olvi3* 0.25 0.0 0.0 (1.0)
cmyn3* 0.25 0.5 0.5 (0.0)
olvi4* 1.0 0.25 0.25 (0.0)
cmyn4* 0.0 0.25 0.25 (0.0)
standard and adapted CIELAB
LAB*LAB 22.98 32.9 37.7
LAB*LABa 22.98 32.9 37.7
LAB*TCHa 25.0 41.3 37.7

relative CIELAB lab*
lab*lab 0.193 0.396 0.306
lab*tch 0.25 0.5 0.105
lab*nch 0.0 0.5 0.105
relative Natural Colour (NC)
lab*trj 0.193 0.477 0.15
lab*tce 0.25 0.5 0.048
lab*nce 0.0 0.5 0.191

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 0.75 1.0 1.0 (0.0)
olvi4* 1.0 0.75 0.75 (0.0)
cmyn4* 0.0 0.75 0.75 (0.0)
standard and adapted CIELAB
LAB*LAB 12.5 16.7 12.67
LAB*LABa 12.5 16.7 12.67
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 0.0 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 0.0 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 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 0.0 0.0 0.0 (0.0)
lab*tch 0.0 0.0 0.0 (0.0)
lab*nch 0.0 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 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 0.0 0.0 0.0 (0.0)
lab*tch 0.0 0.0 0.0 (0.0)
lab*nch 0.0 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 NRS11

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

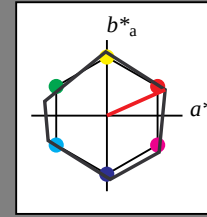
$lab \cdot tch$ and $lab \cdot nch$

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 75.0 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 (0.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.5 0.5 (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 -

relative CIELAB lab*
lab*lab 0.5 0.0 0.0
lab*tch 0.5 0.0 0.0
lab*nch 0.0 0.5 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 0.5 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 0.75 0.75 (0.0)
cmyn4* 0.0 0.75 0.75 (0.0)
standard and adapted CIELAB
LAB*LAB 32.1 0.05 0.048
LAB*LABa 32.1 0.05 0.048
LAB*TCHa 32.1 0.05 0.048

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

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 0.75 0.75 (0.0)
cmyn4* 0.0 0.75 0.75 (0.0)
standard and adapted CIELAB
LAB*LAB 32.1 0.05 0.048
LAB*LABa 32.1 0.05 0.048
LAB*TCHa 32.1 0.05 0.048

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

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 0.0 0.01
LAB*LABa 11.01 0.0 0.01
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0 (0.0)
lab*tch 0.0 0.0 0.0 (0.0)
lab*nch 0.0 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 11.01 0.0 0.01
LAB*LABa 11.01 0.0 0.01
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0 (0.0)
lab*tch 0.0 0.0 0.0 (0.0)
lab*nch 0.0 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 11.01 0.0 0.01
LAB*LABa 11.01 0.0 0.01
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0 (0.0)
lab*tch 0.0 0.0 0.0 (0.0)
lab*nch 0.0 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 11.01 0.0 0.01
LAB*LABa 11.01 0.0 0.01
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0 (0.0)
lab*tch 0.0 0.0 0.0 (0.0)
lab*nch 0.0 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

Input: Colorimetric Reflective System ORS18

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

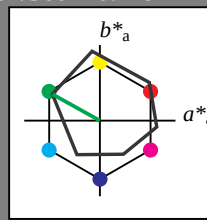
lab^*tch and lab^*nch

D65: hue L

LCH*Ma: 51 72 151

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



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	50.9	-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 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*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*LABa 84.28 -15.68 8.73
LAB*LABb 84.28 -15.68 8.73
LAB*LABc 84.28 -15.68 8.73

relative CIELAB lab*
lab*lab 0.712 -0.436 0.243
lab*tch 0.712 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.712 -0.436 0.243
lab*tce 0.712 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*LABb 76.06 0.0 0.0
LAB*LABc 76.06 0.0 0.0

relative CIELAB lab*
lab*lab 0.856 -0.217 0.122
lab*tch 0.856 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.856 -0.217 0.122
lab*tce 0.856 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 73.15 -31.94 20.73
LAB*LABa 73.15 -31.94 20.73
LAB*LABb 73.15 -31.94 20.73
LAB*LABc 73.15 -31.94 20.73

relative CIELAB lab*
lab*lab 0.712 -0.436 0.243
lab*tch 0.712 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.712 -0.436 0.243
lab*tce 0.712 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*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 0.616 -0.217 0.122
lab*tch 0.616 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.616 -0.217 0.122
lab*tce 0.616 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* 0.5 1.0 0.5 (1.0)
cmyn4* 0.5 0.0 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 53.8 -31.57 19.42
LAB*LABa 53.8 -31.57 19.42
LAB*LABb 53.8 -31.57 19.42
LAB*LABc 53.8 -31.57 19.42

relative CIELAB lab*
lab*lab 0.569 -0.654 0.365
lab*tch 0.569 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.569 -0.654 0.365
lab*tce 0.569 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* 0.5 1.0 0.5 (1.0)
cmyn4* 0.5 0.0 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 50.0 -31.57 19.42
LAB*LABa 50.0 -31.57 19.42
LAB*LABb 50.0 -31.57 19.42
LAB*LABc 50.0 -31.57 19.42

relative CIELAB lab*
lab*lab 0.462 -0.436 0.243
lab*tch 0.462 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.462 -0.436 0.243
lab*tce 0.462 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* 0.75 0.25 0.75 (0.0)
olvi4* 0.5 1.0 0.5 (1.0)
cmyn4* 0.5 0.0 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 50.0 -31.57 19.42
LAB*LABa 50.0 -31.57 19.42
LAB*LABb 50.0 -31.57 19.42
LAB*LABc 50.0 -31.57 19.42

relative CIELAB lab*
lab*lab 0.462 -0.436 0.243
lab*tch 0.462 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.462 -0.436 0.243
lab*tce 0.462 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* 0.5 1.0 0.5 (1.0)
cmyn4* 0.5 0.0 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 45.58 -15.72 10.13
LAB*LABa 45.58 -15.72 10.13
LAB*LABb 45.58 -15.72 10.13
LAB*LABc 45.58 -15.72 10.13

relative CIELAB lab*
lab*lab 0.319 -0.654 0.365
lab*tch 0.319 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.319 -0.654 0.365
lab*tce 0.319 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* 0.75 0.25 0.75 (0.0)
olvi4* 0.5 1.0 0.5 (1.0)
cmyn4* 0.5 0.0 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 42.68 -47.06 27.41
LAB*LABa 42.68 -47.06 27.41
LAB*LABb 42.68 -47.06 27.41
LAB*LABc 42.68 -47.06 27.41

relative CIELAB lab*
lab*lab 0.319 -0.654 0.365
lab*tch 0.319 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.319 -0.654 0.365
lab*tce 0.319 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* 0.5 1.0 0.5 (1.0)
cmyn4* 0.5 0.0 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 37.36 -31.57 19.42
LAB*LABa 37.36 -31.57 19.42
LAB*LABb 37.36 -31.57 19.42
LAB*LABc 37.36 -31.57 19.42

relative CIELAB lab*
lab*lab 0.213 -0.436 0.243
lab*tch 0.213 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.213 -0.436 0.243
lab*tce 0.213 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* 0.75 0.25 0.75 (0.0)
olvi4* 0.5 1.0 0.5 (1.0)
cmyn4* 0.5 0.0 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 34.46 -31.57 19.42
LAB*LABa 34.46 -31.57 19.42
LAB*LABb 34.46 -31.57 19.42
LAB*LABc 34.46 -31.57 19.42

relative CIELAB lab*
lab*lab 0.213 -0.436 0.243
lab*tch 0.213 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.213 -0.436 0.243
lab*tce 0.213 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* 0.5 1.0 0.5 (1.0)
cmyn4* 0.5 0.0 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 32.11 -31.57 19.42
LAB*LABa 32.11 -31.57 19.42
LAB*LABb 32.11 -31.57 19.42
LAB*LABc 32.11 -31.57 19.42

relative CIELAB lab*
lab*lab 0.106 -0.217 0.122
lab*tch 0.106 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.106 -0.217 0.122
lab*tce 0.106 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* 0.75 0.25 0.75 (0.0)
olvi4* 0.5 1.0 0.5 (1.0)
cmyn4* 0.5 0.0 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 30.57 -46.84 46.87
LAB*LABa 30.57 -46.84 46.87
LAB*LABb 30.57 -46.84 46.87
LAB*LABc 30.57 -46.84 46.87

relative CIELAB lab*
lab*lab 0.106 -0.217 0.122
lab*tch 0.106 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.106 -0.217 0.122
lab*tce 0.106 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* 0.75 0.25 0.75 (0.0)
olvi4* 0.5 1.0 0.5 (1.0)
cmyn4* 0.5 0.0 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 18.02 0.0 0.0
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 0.0106 -0.217 0.122
lab*tch 0.0106 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0106 -0.217 0.122
lab*tce 0.0106 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* 0.75 0.25 0.75 (0.0)
olvi4* 0.5 1.0 0.5 (1.0)
cmyn4* 0.5 0.0 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 11.01 0.0 0.0
LAB*LABa 11.01 0.0 0.0
LAB*LABb 11.01 0.0 0.0
LAB*LABc 11.01 0.0 0.0

relative CIELAB lab*
lab*lab 0.0106 -0.217 0.122
lab*tch 0.0106 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0106 -0.217 0.122
lab*tce 0.0106 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* 0.75 0.25 0.75 (0.0)
olvi4* 0.5 1.0 0.5 (1.0)
cmyn4* 0.5 0.0 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 0.01 0.0 0.0
LAB*LABa 0.01 0.0 0.0
LAB*LABb 0.01 0.0 0.0
LAB*LABc 0.01 0.0 0.0

relative CIELAB lab*
lab*lab 0.00106 -0.217 0.122
lab*tch 0.00106 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.00106 -0.217 0.122
lab*tce 0.00106 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* 0.75 0.25 0.75 (0.0)
olvi4* 0.5 1.0 0.5 (1.0)
cmyn4* 0.5 0.0 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 0.0 0.0 0.0
LAB*LABa 0.0 0.0 0.0
LAB*LABb 0.0 0.0 0.0
LAB*LABc 0.0 0.0 0.0

relative CIELAB lab*
lab*lab 0.00106 -0.217 0.122
lab*tch 0.00106 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.00106 -0.217 0.122
lab*tce 0.00106 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* 0.75 0.25 0.75 (0.0)
olvi4* 0.5 1.0 0.5 (1.0)
cmyn4* 0.5 0.0 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 0.0 0.0 0.0
LAB*LABa 0.0 0.0 0.0
LAB*LABb 0.0 0.0 0.0
LAB*LABc 0.0 0.0 0.0

relative CIELAB lab*
lab*lab 0.000106 -0.217 0.122
lab*tch 0.000106 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.000106 -0.217 0.122
lab*tce 0.000106 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* 0.75 0.25 0.75 (0.0)
olvi4* 0.5 1.0 0.5 (1.0)
cmyn4* 0.5 0.0 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 0.0 0.0 0.0
LAB*LABa 0.0 0.0 0.0
LAB*LABb 0.0 0.0 0.0
LAB*LABc 0.0 0.0 0.0

relative CIELAB lab*
lab*lab 0.000106 -0.217 0.122
lab*tch 0.000106 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.000106 -0.217 0.122
lab*tce 0.000106 0.0 0.0
lab*nce 0.0 0.0 0.0

Output: Colorimetric Reflective System NRS11

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

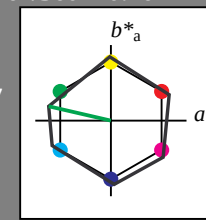
lab^*tch and lab^*nch

D65: hue G

LCH*Ma: 53 84 167

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



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*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*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 84.85 -20.53 4.74
LAB*LABa 84.85 -20.53 4.74
LAB*LABb 84.85 -20.53 4.74
LAB*LABc 84.85 -20.53 4.74

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 74.31 0.02 0.0
LAB*LABa 74.31 0.02 0.0
LAB*LABb 74.31 0.02 0.0
LAB*LABc 74.31 0.02 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 0.25 0.75 (0.0)
olvi4* 0.5 1.0 0.5 (1.0)
cmyn4* 0.5 0.0 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 63.75 -20.53 4.74
LAB*LABa 63.75 -20.53 4.74
LAB*LABb 63.75 -20.53 4.74
LAB*LABc 63.75 -20.53 4.74

relative CIELAB lab*
lab*lab 0.2

Input: Colorimetric Reflective System ORS18

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

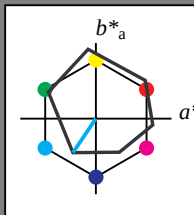
lab^*tch and lab^*nch

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*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 -
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*TCHa 75.0 0.01 -

relative CIELAB lab*
lab*lab 0.75 0.0 0.0
lab*tch 0.75 0.0 -
lab*nch 0.0 0.0 -
relative Natural Colour (NC)
lab*trj 0.75 0.0 0.0
lab*trc 0.75 0.0 -
lab*ncc 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 0.0 0.0
LAB*TCHa 50.0 0.01 -

relative CIELAB lab*
lab*lab 0.5 0.0 0.0
lab*tch 0.5 0.0 -
lab*nch 0.0 0.0 -
relative Natural Colour (NC)
lab*trj 0.5 0.0 0.0
lab*trc 0.5 0.0 -
lab*ncc 0.0 0.0 -

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.25 (0.0)
cmyn3* 0.75 0.75 0.75 (1.0)
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 0.83
LAB*LABa 37.36 0.0 0.0
LAB*TCHa 25.0 0.01 -

relative CIELAB lab*
lab*lab 0.25 0.0 0.0
lab*tch 0.25 0.0 -
lab*nch 0.0 0.0 -
relative Natural Colour (NC)
lab*trj 0.25 0.0 0.0
lab*trc 0.25 0.0 -
lab*ncc 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 (1.0)
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 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 1.0 0.0 -
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*trc 0.0 0.0 -
lab*ncc 1.0 0.0 -

$n^* = 1.0$

relative Inform. Technology (IT)
olvi3* 0.75 1.0 1.0 (1.0)
cmyn3* 0.25 0.0 0.0 (0.0)
olvi4* 0.75 1.0 1.0 (1.0)
cmyn4* 0.25 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 86.21 -8.38 -7.1
LAB*LABa 86.21 -7.58 -11.24
LAB*TCHa 87.5 13.57 236.01

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 0.75 0.75 (1.0)
cmyn3* 0.5 0.25 0.25 (0.0)
olvi4* 0.75 1.0 1.0 (0.0)
cmyn4* 0.25 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 66.86 -8.01 -8.41
LAB*LABa 66.86 -7.58 -11.25
LAB*TCHa 62.5 13.58 236.01

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 0.5 0.5 (1.0)
cmyn3* 0.75 0.5 0.5 (0.0)
olvi4* 0.75 1.0 1.0 (0.0)
cmyn4* 0.25 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 47.51 -7.64 -9.72
LAB*LABa 47.51 -7.58 -11.25
LAB*TCHa 37.5 13.58 236.01

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 0.5 0.5 (1.0)
cmyn3* 1.0 0.5 0.5 (0.0)
olvi4* 0.5 1.0 1.0 (0.0)
cmyn4* 0.5 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 28.12 -15.03 11.59
LAB*LABa 28.12 -15.03 11.59
LAB*TCHa 25.01 27.15 236.01

relative CIELAB lab*
lab*lab 0.262 -0.278 -0.413
lab*tch 0.25 0.5 0.656
lab*nch 0.0 0.5 0.656
relative Natural Colour (NC)
lab*trj 0.262 -0.247 -0.433
lab*trc 0.25 0.5 0.656
lab*ncc 0.0 0.5 0.656

relative Inform. Technology (IT)
olvi3* 0.131 -0.139 -0.206
cmyn3* 1.0 0.75 0.75 (0.0)
olvi4* 0.125 0.25 0.656
cmyn4* 0.25 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 28.17 -7.58 -11.24
LAB*LABa 28.17 -7.58 -11.24
LAB*TCHa 12.5 13.57 236.01

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* 0.5 1.0 1.0 (1.0)
cmyn3* 0.5 0.0 0.0 (0.0)
olvi4* 0.5 1.0 1.0 (1.0)
cmyn4* 0.5 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 77.01 -15.79 -19.98
LAB*LABa 77.01 -15.16 -22.5
LAB*TCHa 75.0 27.15 236.01

relative CIELAB lab*
lab*lab 0.762 -0.278 -0.413
lab*tch 0.75 0.5 0.656
lab*nch 0.0 0.5 0.656
relative Natural Colour (NC)
lab*trj 0.762 -0.247 -0.433
lab*trc 0.75 0.5 0.656
lab*ncc 0.0 0.5 0.656

relative Inform. Technology (IT)
olvi3* 0.25 1.0 1.0 (1.0)
cmyn3* 0.75 0.25 0.25 (0.0)
olvi4* 0.5 1.0 1.0 (0.0)
cmyn4* 0.5 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 57.66 -15.42 -20.29
LAB*LABa 57.66 -15.17 -22.5
LAB*TCHa 50.0 27.15 236.01

relative CIELAB lab*
lab*lab 0.512 -0.278 -0.413
lab*tch 0.5 0.5 0.656
lab*nch 0.0 0.5 0.656
relative Natural Colour (NC)
lab*trj 0.512 -0.247 -0.433
lab*trc 0.5 0.5 0.656
lab*ncc 0.0 0.5 0.656

relative Inform. Technology (IT)
olvi3* 0.0 0.5 0.5 (1.0)
cmyn3* 1.0 0.5 0.5 (0.0)
olvi4* 0.5 1.0 0.5 (0.0)
cmyn4* 0.5 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 48.47 -22.83 -32.16
LAB*LABa 48.47 -22.75 -33.78
LAB*TCHa 37.51 40.72 236.01

relative CIELAB lab*
lab*lab 0.394 -0.418 -0.621
lab*tch 0.375 0.5 0.656
lab*nch 0.0 0.5 0.656
relative Natural Colour (NC)
lab*trj 0.394 -0.371 -0.65
lab*trc 0.375 0.5 0.656
lab*ncc 0.0 0.5 0.656

relative Inform. Technology (IT)
olvi3* 0.0 0.25 0.25 (1.0)
cmyn3* 1.0 0.25 0.25 (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 38.32 -15.16 -22.5
LAB*LABa 38.32 -15.16 -22.5
LAB*TCHa 25.01 27.15 236.01

relative CIELAB lab*
lab*lab 0.262 -0.278 -0.413
lab*tch 0.25 0.5 0.656
lab*nch 0.0 0.5 0.656
relative Natural Colour (NC)
lab*trj 0.262 -0.247 -0.433
lab*trc 0.25 0.5 0.656
lab*ncc 0.0 0.5 0.656

$n^* = 0.50$

relative Inform. Technology (IT)
olvi3* 0.25 1.0 1.0 (1.0)
cmyn3* 0.75 0.0 0.0 (0.0)
olvi4* 0.25 1.0 1.0 (1.0)
cmyn4* 0.75 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 67.81 -23.21 -30.86
LAB*LABa 67.81 -22.75 -33.78
LAB*TCHa 62.5 40.72 236.01

relative CIELAB lab*
lab*lab 0.642 -0.418 -0.621
lab*tch 0.625 0.75 0.656
lab*nch 0.0 0.75 0.656
relative Natural Colour (NC)
lab*trj 0.642 -0.371 -0.65
lab*trc 0.625 0.75 0.656
lab*ncc 0.0 0.75 0.656

relative Inform. Technology (IT)
olvi3* 0.0 0.75 0.75 (1.0)
cmyn3* 1.0 0.0 0.0 (0.0)
olvi4* 0.0 1.0 1.0 (0.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 58.62 -30.34 -45.01
LAB*LABa 58.62 -30.34 -45.01
LAB*TCHa 50.0 54.29 236.01

relative CIELAB lab*
lab*lab 0.525 -0.558 -0.828
lab*tch 0.5 1.0 0.656
lab*nch 0.0 1.0 0.656
relative Natural Colour (NC)
lab*trj 0.525 -0.496 -0.867
lab*trc 0.5 1.0 0.656
lab*ncc 0.0 1.0 0.656

relative Inform. Technology (IT)
olvi3* 0.0 0.25 0.25 (1.0)
cmyn3* 1.0 0.25 0.25 (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 48.47 -22.83 -32.16
LAB*LABa 48.47 -22.75 -33.78
LAB*TCHa 37.51 40.72 236.01

relative CIELAB lab*
lab*lab 0.394 -0.418 -0.621
lab*tch 0.375 0.75 0.656
lab*nch 0.0 0.75 0.656
relative Natural Colour (NC)
lab*trj 0.394 -0.371 -0.65
lab*trc 0.375 0.75 0.656
lab*ncc 0.0 0.75 0.656

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

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

$n^* = 0.00$

blackness n^*

chromaticness c^*

$n^* = 0.25$

$n^* = 1.0$

Output: Colorimetric Reflective System NRS11

for hue $h^* = lab^*h = 203/360 = 0.564$

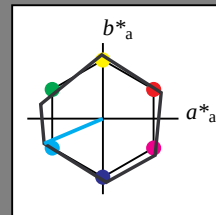
lab^*tch and lab^*nch

D65: hue G50B

LCH*Ma: 53 84 203

rgb*Ma: 0.0 1.0 1.0

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 -

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 0.0 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 74.31 0.02 0.0
LAB*LABa 74.31 0.0 0.0
LAB*TCHa 75.0 0.01 -

relative CIELAB lab*
lab*lab 0.75 0.0 0.0
lab*tch 0.75 0.0 -
lab*nch 0.0 0.0 -
relative Natural Colour (NC)
lab*trj 0.75 0.0 0.0
lab*trc 0.75 0.0 -
lab*ncc 0.0 0.0 -

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (0.0)
cmyn3* 0.5 0.25 0.25 (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 53.21 0.04 0.0
LAB*LABa 53.21 0.0 0.0
LAB*TCHa 50.0 0.01 -

relative CIELAB lab*
lab*lab 0.5 0.0 0.0
lab*tch 0.5 0.0 -
lab*nch 0.0 0.0 -
relative Natural Colour (NC)
lab*trj 0.5 0.0 0.0
lab*trc 0.5 0.0 -
lab*ncc 0.0 0.0 -

relative Inform. Technology (IT)
olvi3* 0.25 0.5 0.5 (1.0)
cmyn3* 0.75 0.5 0.5 (0.0)
olvi4* 0.75 1.0 0.5 (0.0)
cmyn4* 0.25 0.0 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 42.65 -19.37 -8.22
LAB*LABa 42.65 -19.42 -8.24
LAB*TCHa 37.5 21.11 203.0

relative CIELAB lab*
lab*lab 0.375 -0.229 -0.097
lab*tch 0.375 0.25 0.564
lab*nch 0.0 0.25 0.564
relative Natural Colour (NC)
lab*trj 0.375 -0.207 -0.137
lab*trc 0.375 0.25 0.593
lab*ncc 0.0 0.25 0.593

relative Inform. Technology (IT)
olvi3* 0.0 0.5 0.5 (1.0)
cmyn3* 1.0 0.5 0.5 (0.0)
olvi4* 0.5 1.0 0.5 (0.0)
cmyn4* 0.5 0.0 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 32.11 -38.85 -16.48
LAB*LABa 32.11 -38.85 -16.48
LAB*TCHa 25.01 42.21 203.0

relative CIELAB lab*
lab*lab 0.25 -0.459 -0.194
lab*tch 0.25 0.5 0.564
lab*nch 0.0 0.5 0.564
relative Natural Colour (NC)
lab*trj 0.25 -0.416 -0.275
lab*trc 0.25 0.5 0.593
lab*ncc 0.0 0.5 0.593

$n^* = 0.50$

blackness n^*

chromaticness c^*

$n^* = 1.0$

Output: Colorimetric Reflective System NRS11

for hue $h^* = lab^*h = 203/360 = 0.564$

lab^*tch and lab^*nch

D65: hue G50B

LCH*Ma: 53 84 203

rgb*Ma: 0.0 1.0 1.0

Input: Colorimetric Reflective System ORS18

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

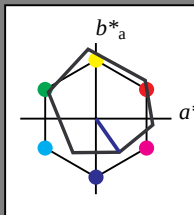
lab^*tch and lab^*nch

D65: hue V

LCH*Ma: 26 54 305

rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



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*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*trc 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*TCha 75.0 0.01 -

relative CIELAB lab*
lab*lab 0.75 0.75 0.75 (1.0)
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*trc 0.875 0.25 0.824
lab*ncc 0.0 0.25 0.824

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*TCha 50.0 0.01 -

relative CIELAB lab*
lab*lab 0.75 0.75 0.75 (1.0)
lab*tch 0.625 0.25 0.847
lab*nch 0.0 0.25 0.847
relative Natural Colour (NC)
lab*trj 0.625 0.112 -0.222
lab*trc 0.625 0.25 0.824
lab*ncc 0.0 0.25 0.824

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 39.28 7.8 -10.13
LAB*Lab 39.28 7.8 -10.13
LAB*TCha 37.5 13.56 305.0

relative CIELAB lab*
lab*lab 0.5 0.5 0.5 (0.0)
lab*tch 0.375 0.25 0.847
lab*nch 0.0 0.25 0.847
relative Natural Colour (NC)
lab*trj 0.375 0.112 -0.222
lab*trc 0.375 0.25 0.824
lab*ncc 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* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 19.24 15.4 11.43
LAB*Lab 19.24 15.4 11.43
LAB*TCha 12.5 13.56 305.0

relative CIELAB lab*
lab*lab 0.25 0.25 0.25 (1.0)
lab*tch 0.375 0.25 0.847
lab*nch 0.0 0.25 0.847
relative Natural Colour (NC)
lab*trj 0.25 0.112 -0.222
lab*trc 0.25 0.25 0.824
lab*ncc 0.0 0.25 0.824

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 18.02 0.46
LAB*Lab 18.02 18.02 0.46
LAB*TCha 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0 (1.0)
lab*tch 0.125 0.25 0.847
lab*nch 0.0 0.25 0.847
relative Natural Colour (NC)
lab*trj 0.125 0.112 -0.222
lab*trc 0.125 0.25 0.824
lab*ncc 0.0 0.25 0.824

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 18.02 0.46
LAB*Lab 18.02 18.02 0.46
LAB*TCha 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0 (1.0)
lab*tch 0.125 0.25 0.847
lab*nch 0.0 0.25 0.847
relative Natural Colour (NC)
lab*trj 0.125 0.112 -0.222
lab*trc 0.125 0.25 0.824
lab*ncc 0.0 0.25 0.824

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 18.02 0.46
LAB*Lab 18.02 18.02 0.46
LAB*TCha 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0 (1.0)
lab*tch 0.125 0.25 0.847
lab*nch 0.0 0.25 0.847
relative Natural Colour (NC)
lab*trj 0.125 0.112 -0.222
lab*trc 0.125 0.25 0.824
lab*ncc 0.0 0.25 0.824

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 18.02 0.46
LAB*Lab 18.02 18.02 0.46
LAB*TCha 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0 (1.0)
lab*tch 0.125 0.25 0.847
lab*nch 0.0 0.25 0.847
relative Natural Colour (NC)
lab*trj 0.125 0.112 -0.222
lab*trc 0.125 0.25 0.824
lab*ncc 0.0 0.25 0.824

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 18.02 0.46
LAB*Lab 18.02 18.02 0.46
LAB*TCha 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0 (1.0)
lab*tch 0.125 0.25 0.847
lab*nch 0.0 0.25 0.847
relative Natural Colour (NC)
lab*trj 0.125 0.112 -0.222
lab*trc 0.125 0.25 0.824
lab*ncc 0.0 0.25 0.824

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*Lab 60.56 15.24 -19.79
LAB*TCha 75.0 27.11 305.0	

relative CIELAB lab*	lab*lab 0.5 0.5 0.5 (1.0)
lab*tch 0.5 0.5 0.5 (1.0)	lab*nch 0.0 0.5 0.847
relative Natural Colour (NC)	lab*trj 0.5 0.225 -0.446
lab*trc 0.5 0.25 0.824	lab*ncc 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*LAB 43.14 23.35 -33.31	LAB*Lab 43.14 23.35 -33.31
LAB*TCha 62.5 40.67 305.0	

relative CIELAB lab*	lab*lab 0.25 0.25 0.25 (1.0)
lab*tch 0.375 0.25 0.847	lab*nch 0.0 0.25 0.847
relative Natural Colour (NC)	lab*trj 0.375 0.112 -0.222
lab*trc 0.375 0.25 0.824	lab*ncc 0.0 0.25 0.824

relative Inform. Technology (IT)	olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (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 -72.2	LAB*Lab 21.87 15.55 -72.2
LAB*TCha 25.01 27.11 305.0	

relative CIELAB lab*	lab*lab 0.0 0.0 0.0 (1.0)
lab*tch 0.25 0.25 0.847	lab*nch 0.0 0.25 0.847
relative Natural Colour (NC)	lab*trj 0.0 0.225 -0.446
lab*trc 0.25 0.25 0.824	lab*ncc 0.0 0.25 0.824

relative Inform. Technology (IT)	olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (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 19.24 15.4 11.43	LAB*Lab 19.24 15.4 11.43
LAB*TCha 12.5 13.56 305.0	

relative CIELAB lab*	lab*lab 0.0 0.0 0.0 (1.0)
lab*tch 0.125 0.25 0.847	lab*nch 0.0 0.25 0.847
relative Natural Colour (NC)	lab*trj 0.0 0.112 -0.222
lab*trc 0.125 0.25 0.824	lab*ncc 0.0 0.25 0.824

relative Inform. Technology (IT)	olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (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 18.02 18.02 0.46	LAB*Lab 18.02 18.02 0.46
LAB*TCha 0.01 0.01 -	

relative CIELAB lab*	lab*lab 0.0 0.0 0.0 (1.0)
lab*tch 0.125 0.25 0.847	lab*nch 0.0 0.25 0.847
relative Natural Colour (NC)	lab*trj 0.0 0.112 -0.222
lab*trc 0.125 0.25 0.824	lab*ncc 0.0 0.25 0.824

Output: Colorimetric Reflective System NRS11

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

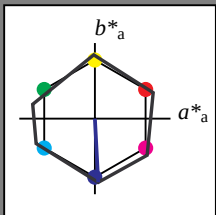
lab^*tch and lab^*nch

D65: hue B

LCH*Ma: 53 84 273

rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



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*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*trc 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*TCha 75.0 0.01 -

relative CIELAB lab*
lab*lab 0.75 0.75 0.75 (1.0)
lab*tch 0.875 0.25 0.758
lab*nch 0.0 0.25 0.758
relative Natural Colour (NC)
lab*trj 0.75 0.005 -0.249
lab*trc 0.875 0.25 0.753
lab*ncc 0.0 0.25 0.753

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (0.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 0.75 0.75 0.75 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 63.75 1.13 -21.06
LAB*Lab 63.75 1.13 -21.06
LAB*TCha 62.5 21.1 272.97

relative CIELAB lab*
lab*lab 0.5 0.5 0.5 (0.0)
lab*tch 0.625 0.25 0.758
lab*nch 0.0 0.25 0.758
relative Natural Colour (NC)
lab*trj 0.625 0.005 -0.249
lab*trc 0.625 0.25 0.753
lab*ncc 0.0 0.25 0.753

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 39.28 7.8 -10.13
LAB*Lab 39.28 7.8 -10.13
LAB*TCha 37.5 13.56 305.0

relative CIELAB lab*
lab*lab 0.25 0.25 0.25 (1.0)
lab*tch 0.375 0.25 0.758
lab*nch 0.0 0.25 0.758
relative Natural Colour (NC)
lab*trj 0.375 0.112 -0.249
lab*trc 0.375 0.25 0.753
lab*ncc 0.0 0.25 0.753

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 18.02 0.46
LAB*Lab 18.02 18.02 0.46
LAB*TCha 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0 (1.0)
lab*tch 0.125 0.25 0.758
lab*nch 0.0 0.25 0.758
relative Natural Colour (NC)
lab*trj 0.0 0.112 -0.249
lab*trc 0.125 0.25 0.753
lab*ncc 0.0 0.25 0.753

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 18.02 0.46
LAB*Lab 18.02 18.02 0.46
LAB*TCha 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0 (1.0)
lab*tch 0.125 0.25 0.758
lab*nch 0.0 0.25 0.758
relative Natural Colour (NC)
lab*trj 0.0 0.112 -0.249
lab*trc 0.125 0.25 0.753
lab*ncc 0.0 0.25 0.753

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 18.02 0.46
LAB*Lab 18.02 18.02 0.46
LAB*TCha 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0 (1.0)
lab*tch 0.125 0.25 0.758
lab*nch 0.0 0.25 0.758
relative Natural Colour (NC)
lab*trj 0.0 0.112 -0.249
lab*trc 0.125 0.25 0.753
lab*ncc 0.0 0.25 0.753

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 18.02 0.46
LAB*Lab 18.02 18.02 0.46
LAB*TCha 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0 (1.0)
lab*tch 0.125 0.25 0.758
lab*nch 0.0 0.25 0.758
relative Natural Colour (NC)
lab*trj 0.0 0.112 -0.249
lab*trc 0.125 0.25 0.753
lab*ncc 0.0 0.25 0.753

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 18.02 0.46
LAB*Lab 18.02 18.02 0.46
LAB*TCha 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0 (1.0)
lab*tch 0.125 0.25 0.758
lab*nch 0.0 0.25 0.758
relative Natural Colour (NC)
lab*trj 0.0 0.112 -0.249
lab*trc 0.125 0.25 0.753
lab*ncc 0.0 0.25 0.753

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 18.02 0.46
LAB*Lab 18.02 18.02 0.46
LAB*TCha 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0 (1.0)
lab*tch 0.125 0.25 0.758
lab*nch 0.0 0.25 0.758
relative Natural Colour (NC)
lab*trj 0.0 0.112 -0.249
lab*trc 0.125 0.25 0.753
lab*ncc 0.0 0.25 0.753

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 18.02 0.46
LAB*Lab 18.02 18.02 0.46
LAB*TCha 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0 (1.0)
lab*tch 0.125 0.25 0.758
lab*nch 0.0 0.25 0.758
relative Natural Colour (NC)
lab*trj 0.0 0.112 -0.249

Differential Equations: Coupled Inductors

Input: Colorimetric Reflective System ORS18

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

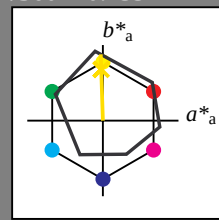
lab^*tch and lab^*nch

D65: hue J

LCH*Ma: 86 88 92

rgb*Ma: 1.0 0.9 0.0

triangle lightness 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 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*LAB 93.11 -0.7 21.92
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*LAB 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*LAB 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 0.098 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 86.19 -3.62 91.83
LAB*LAB 86.19 -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 53.21 0.04 0.0
LAB*LAB 53.21 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 42.65 -0.78 20.73
LAB*LAB 42.65 -0.83 20.72
LAB*TCMa 37.5 20.74 92.33

relative Inform. Technology (IT)
olvi3* 0.494 0.5 0.25 (1.0)
cmyn3* 0.506 0.5 0.75 (0.0)
olvi4* 0.989 1.0 0.75 (0.5)
cmyn4* 0.006 0.0 0.25 (0.5)
standard and adapted CIELAB
LAB*LAB 32.1 -1.68 41.43
LAB*LAB 32.1 -1.68 41.43
LAB*TCMa 25.01 41.46 92.33

relative Inform. Technology (IT)
olvi3* 0.489 0.5 0.0 (1.0)
cmyn3* 0.511 0.5 1.0 (0.0)
olvi4* 0.989 1.0 0.5 (0.5)
cmyn4* 0.011 0.0 0.5 (0.5)
standard and adapted CIELAB
LAB*LAB 32.1 -1.68 41.43
LAB*LAB 32.1 -1.68 41.43
LAB*TCMa 25.01 41.46 92.33

relative Inform. Technology (IT)
olvi3* 0.489 0.5 0.0 (1.0)
cmyn3* 0.511 0.5 1.0 (0.0)
olvi4* 0.989 1.0 0.5 (0.5)
cmyn4* 0.011 0.0 0.5 (0.5)
standard and adapted CIELAB
LAB*LAB 32.1 -1.68 41.43
LAB*LAB 32.1 -1.68 41.43
LAB*TCMa 25.01 41.46 92.33

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

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*TCMa 0.01 0.01 -

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*TCMa 0.01 0.01 -

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*TCMa 0.01 0.01 -

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*TCMa 0.01 0.01 -

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*TCMa 0.01 0.01 -

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*TCMa 0.01 0.01 -

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*TCMa 0.01 0.01 -

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*TCMa 0.01 0.01 -

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*TCMa 0.01 0.01 -

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*TCMa 0.01 0.01 -

UE520-7, 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 UE52; Colorimetric systems ORS18 & NRS11

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

input: cmy0* setcmykcolor

output: no change compared to input

Input: Colorimetric Reflective System ORS18

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

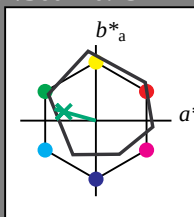
lab^*tch and lab^*nch

D65: hue G

LCH*Ma: 53 57 164

rgb*Ma: 0.0 1.0 0.25

triangle lightness 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*tce 1.0 0.0 -
lab*nce 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 0.862 -0.24 0.067
lab*tch 0.875 0.25 0.457
lab*nch 0.0 0.25 0.457
relative Natural Colour (NC)
lab*trj 0.862 -0.249 0.0
lab*tce 0.875 0.25 0.5
lab*nce 0.0 0.25 0.998

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 74.1 -27.96 10.94
LAB*LABa 74.1 -27.99 7.62
LAB*TCMa 75.0 28.44 164.46

relative CIELAB lab*
lab*lab 0.725 -0.481 0.134
lab*tch 0.75 0.5 0.457
lab*nch 0.0 0.5 0.457
relative Natural Colour (NC)
lab*trj 0.725 -0.499 0.0
lab*tce 0.75 0.5 0.5
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 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 0.612 -0.249 0.0
lab*tch 0.625 0.25 0.5
lab*nch 0.0 0.25 0.998
relative Natural Colour (NC)
lab*trj 0.612 -0.249 0.0
lab*tce 0.625 0.25 0.5
lab*nce 0.0 0.25 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* 0.5 0.5 0.5 (1.0)
cmyn4* 0.5 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 54.75 -27.99 7.62
LAB*LABa 54.75 -27.99 7.62
LAB*TCMa 50.0 28.44 164.46

relative CIELAB lab*
lab*lab 0.587 -0.249 0.0
lab*tch 0.625 0.25 0.5
lab*nch 0.0 0.25 0.998
relative Natural Colour (NC)
lab*trj 0.587 -0.249 0.0
lab*tce 0.625 0.25 0.5
lab*nce 0.0 0.25 0.998

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 0.0 0.0 (0.0)
olvi4* 1.0 0.0 0.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 52.8 -54.95 17.13
LAB*LABa 52.8 -54.95 17.13
LAB*TCMa 50.0 56.88 164.45

relative CIELAB lab*
lab*lab 0.45 -0.962 0.268
lab*tch 0.5 0.5 0.457
lab*nch 0.0 0.5 0.457
relative Natural Colour (NC)
lab*trj 0.45 -0.999 0.0
lab*tce 0.5 0.5 0.5
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 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 0.612 -0.249 0.0
lab*tch 0.625 0.25 0.5
lab*nch 0.0 0.25 0.998
relative Natural Colour (NC)
lab*trj 0.612 -0.249 0.0
lab*tce 0.625 0.25 0.5
lab*nce 0.0 0.25 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* 0.5 0.5 0.5 (1.0)
cmyn4* 0.5 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 54.75 -27.99 7.62
LAB*LABa 54.75 -27.99 7.62
LAB*TCMa 50.0 28.44 164.46

relative CIELAB lab*
lab*lab 0.587 -0.249 0.0
lab*tch 0.625 0.25 0.5
lab*nch 0.0 0.25 0.998
relative Natural Colour (NC)
lab*trj 0.587 -0.249 0.0
lab*tce 0.625 0.25 0.5
lab*nce 0.0 0.25 0.998

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 0.0 0.0 (0.0)
olvi4* 1.0 0.0 0.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 52.8 -54.95 17.13
LAB*LABa 52.8 -54.95 17.13
LAB*TCMa 50.0 56.88 164.45

relative CIELAB lab*
lab*lab 0.45 -0.962 0.268
lab*tch 0.5 0.5 0.457
lab*nch 0.0 0.5 0.457
relative Natural Colour (NC)
lab*trj 0.45 -0.999 0.0
lab*tce 0.5 0.5 0.5
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 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 0.612 -0.249 0.0
lab*tch 0.625 0.25 0.5
lab*nch 0.0 0.25 0.998
relative Natural Colour (NC)
lab*trj 0.612 -0.249 0.0
lab*tce 0.625 0.25 0.5
lab*nce 0.0 0.25 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* 0.5 0.5 0.5 (1.0)
cmyn4* 0.5 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 54.75 -27.99 7.62
LAB*LABa 54.75 -27.99 7.62
LAB*TCMa 50.0 28.44 164.46

relative CIELAB lab*
lab*lab 0.587 -0.249 0.0
lab*tch 0.625 0.25 0.5
lab*nch 0.0 0.25 0.998
relative Natural Colour (NC)
lab*trj 0.587 -0.249 0.0
lab*tce 0.625 0.25 0.5
lab*nce 0.0 0.25 0.998

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 0.0 0.0 (0.0)
olvi4* 1.0 0.0 0.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 52.8 -54.95 17.13
LAB*LABa 52.8 -54.95 17.13
LAB*TCMa 50.0 56.88 164.45

relative CIELAB lab*
lab*lab 0.45 -0.962 0.268
lab*tch 0.5 0.5 0.457
lab*nch 0.0 0.5 0.457
relative Natural Colour (NC)
lab*trj 0.45 -0.999 0.0
lab*tce 0.5 0.5 0.5
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 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 0.612 -0.249 0.0
lab*tch 0.625 0.25 0.5
lab*nch 0.0 0.25 0.998
relative Natural Colour (NC)
lab*trj 0.612 -0.249 0.0
lab*tce 0.625 0.25 0.5
lab*nce 0.0 0.25 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* 0.5 0.5 0.5 (1.0)
cmyn4* 0.5 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 54.75 -27.99 7.62
LAB*LABa 54.75 -27.99 7.62
LAB*TCMa 50.0 28.44 164.46

relative CIELAB lab*
lab*lab 0.587 -0.249 0.0
lab*tch 0.625 0.25 0.5
lab*nch 0.0 0.25 0.998
relative Natural Colour (NC)
lab*trj 0.587 -0.249 0.0
lab*tce 0.625 0.25 0.5
lab*nce 0.0 0.25 0.998

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 0.0 0.0 (0.0)
olvi4* 1.0 0.0 0.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 52.8 -54.95 17.13
LAB*LABa 52.8 -54.95 17.13
LAB*TCMa 50.0 56.88 164.45

relative CIELAB lab*
lab*lab 0.45 -0.962 0.268
lab*tch 0.5 0.5 0.457
lab*nch 0.0 0.5 0.457
relative Natural Colour (NC)
lab*trj 0.45 -0.999 0.0
lab*tce 0.5 0.5 0.5
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 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 0.612 -0.249 0.0
lab*tch 0.625 0.25 0.5
lab*nch 0.0 0.25 0.998
relative Natural Colour (NC)
lab*trj 0.612 -0.249 0.0
lab*tce 0.625 0.25 0.5
lab*nce 0.0 0.25 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* 0.5 0.5 0.5 (1.0)
cmyn4* 0.5 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 54.75 -27.99 7.62
LAB*LABa 54.75 -27.99 7.62
LAB*TCMa 50.0 28.44 164.46

relative CIELAB lab*
lab*lab 0.587 -0.249 0.0
lab*tch 0.625 0.25 0.5
lab*nch 0.0 0.25 0.998
relative Natural Colour (NC)
lab*trj 0.587 -0.249 0.0
lab*tce 0.625 0.25 0.5
lab*nce 0.0 0.25 0.998

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 0.0 0.0 (0.0)
olvi4* 1.0 0.0 0.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 52.8 -54.95 17.13
LAB*LABa 52.8 -54.95 17.13
LAB*TCMa 50.0 56.88 164.45

relative CIELAB lab*
lab*lab 0.45 -0.962 0.268
lab*tch 0.5 0.5 0.457
lab*nch 0.0 0.5 0.457
relative Natural Colour (NC)
lab*trj 0.45 -0.999 0.0
lab*tce 0.5 0.5 0.5
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 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 0.612 -0.249 0.0
lab*tch 0.625 0.25 0.5
lab*nch 0.0 0.25 0.998
relative Natural Colour (NC)
lab*trj 0.612 -0.249 0.0
lab*tce 0.625 0.25 0.5
lab*nce 0.0 0.25 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* 0.5 0.5 0.5 (1.0)
cmyn4* 0.5 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 54.75 -27.99 7.62
LAB*LABa 54.75 -27.99 7.62
LAB*TCMa 50.0 28.44 164.46

relative CIELAB lab*
lab*lab 0.587 -0.249 0.0
lab*tch 0.625 0.25 0.5
lab*nch 0.0 0.25 0.998
relative Natural Colour (NC)
lab*trj 0.587 -0.249 0.0
lab*tce 0.625 0.25 0.5
lab*nce 0.0 0.25 0.998

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 0.0 0.0 (0.0)
olvi4* 1.0 0.0 0.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 52.8 -54.95 17.13
LAB*LABa 52.8 -54.95 17.13
LAB*TCMa 50.0 56.88 164.45

relative CIELAB lab*
lab*lab 0.45 -0.962 0.268
lab*tch 0.5 0.5 0.457
lab*nch 0.0 0.5 0.457
relative Natural Colour (NC)
lab*trj 0.45 -0.999 0.0
lab*tce 0.5 0.5 0.5
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 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 0.612 -0.249 0.0
lab*tch 0.625 0.25 0.5
lab*nch 0.0 0.25 0.998
relative Natural Colour (NC)
lab*trj 0.612 -0.249 0.0
lab*tce 0.625 0.25 0.5
lab*nce 0.0 0.25 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* 0.5 0.5 0.5 (1.0)
cmyn4* 0.5 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 54.75 -27.99 7.62
LAB*LABa 54.75 -27.99 7.62
LAB*TCMa 50.0 28.44 164.46

relative CIELAB lab*
lab*lab 0.587 -0.249 0.0
lab*tch 0.625 0.25 0.5
lab*nch 0.0 0.25 0.998
relative Natural Colour (NC)
lab*trj 0.587 -0.249 0.0
lab*tce 0.625 0.25 0.5
lab*nce 0.0 0.25 0.998

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 0.0 0.0 (0.0)
olvi4* 1.0 0.0 0.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 52.8 -54.95 17.13
LAB*LABa 52.8 -54.95 17.13
LAB*TCMa 50.0 56.88 164.45

relative CIELAB lab*
lab*lab 0.45 -0.962 0.268
lab*tch 0.5 0.5 0.457
lab*nch 0.0 0.5 0.457
relative Natural Colour (NC)
lab*trj 0.45 -0.999 0.0
lab*tce 0.5 0.5 0.5
lab*nce 0.0 0.5 0.998

UE520-7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

BAM-test chart UE52; Colorimetric systems ORS18 & NRS11

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

input: $cmv0^* setcmykcolor$

output: no change compared to input

