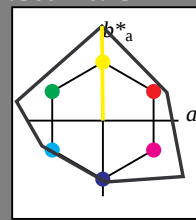


C	M	Y	O	L	V
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NCS11; adapted (a) CIELAB data
$$L^* = L_a^* \quad a_a^* \quad b_a^* \quad C_{ab,a}^* \quad h_{ab,a}^*$$

R _{M3}	47.15	84.64	37.25	92.48	24
-----------------	-------	-------	-------	-------	----



R _{Ma}	47.15
-----------------	-------

JMa	91.37	-1.27	1
Gas	63.07	114.38	3

GMa	63.07	-114.28	2
G50B _{M2}	59.47	-80.6	-

B _{Ma}	49.01	3.65
B ₅₀₀	44.86	126.88

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

$$g^*_{C,rel} = 65$$

Inform. Technology (IT)			
1.0	1.0	0.0	(1.0)
0.0	0.0	1.0	(0.0)
1.0	1.0	0.0	1.0
0.0	0.0	1.0	0.0
and adapted CIELAB			
91.36	-1.26	125.0	
91.36	-1.27	125.0	
50.0	125.01	90.59	

ess n^*

Page: count: 

1,00
ness c^*

BAM-test chart UE53; Colorimetric systems MRS18 & NCS11a input: *cmy0** *setcmykcolor*

output: *no change compared to input*

See for similar files: <http://www.ps.bam.de/UE53/>
Technical information: <http://www.ps.bam.de> Version 2.1, io=0,0

Page count: 3

www.ps.bam.de/UE53/10L/L53E02NP.PS/.PDF; start output
N: No Output Linearization (OL) data in File (F), Startup (S) or Device (D)

BAM registration: 20060101-UE53/10L/L53E02NP.PS/.PDF
application for evaluation and measurement of printer or monitor systems
/UE53/ Form 3/10, Serie: 1/1, Page: 3

Input: Colorimetric Reflective System MRS18

for hue $h^* = lab \cdot h = 172/360 = 0.479$

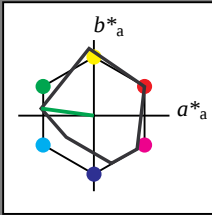
$lab \cdot tch$ and $lab \cdot nch$

D65: hue G

LCH*Ma: 52 70 172

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



relative Inform. Technology (IT)
olvi3* 1.0 1.0 1.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 95.41 -0.97 4.75
LAB*Lab 95.41 0.0 0.0
LAB*TCa 99.99 0.01 0.0

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

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.75 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 76.06 -0.6 3.44
LAB*Lab 76.06 0.0 0.0
LAB*TCa 75.0 0.01 0.0

relative CIELAB lab*
lab*lab 0.86 -0.247 0.034
lab*tch 0.875 0.25 0.479
lab*nch 0.0 0.25 0.479
relative Natural Colour (NC)
lab*trj 0.86 -0.247 -0.028
lab*tce 0.875 0.25 0.518
lab*nce 0.0 0.25 0.607

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*TCa 50.0 0.01 0.0

relative CIELAB lab*
lab*lab 0.61 -0.247 0.034
lab*tch 0.625 0.25 0.479
lab*nch 0.0 0.25 0.479
relative Natural Colour (NC)
lab*trj 0.61 -0.247 -0.028
lab*tce 0.625 0.25 0.518
lab*nce 0.0 0.25 0.607

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*Lab 37.36 0.0 0.0
LAB*TCa 25.0 0.01 0.0

relative CIELAB lab*
lab*lab 0.36 -0.247 0.034
lab*tch 0.375 0.25 0.479
lab*nch 0.0 0.25 0.479
relative Natural Colour (NC)
lab*trj 0.36 -0.247 -0.028
lab*tce 0.375 0.25 0.518
lab*nce 0.0 0.25 0.607

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 18.02 0.0 0.46
LAB*Lab 18.02 0.0 0.0
LAB*TCa 0.01 0.01 0.0

relative CIELAB lab*
lab*lab 0.11 -0.247 0.034
lab*tch 0.125 0.25 0.479
lab*nch 0.0 0.25 0.479
relative Natural Colour (NC)
lab*trj 0.11 -0.247 -0.028
lab*tce 0.125 0.25 0.518
lab*nce 0.0 0.25 0.607

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 (0.0)
cmyn4* 0.0 0.0 0.0 (1.0)
standard and adapted CIELAB
LAB*LAB 18.02 0.0 0.46
LAB*Lab 18.02 0.0 0.0
LAB*TCa 0.01 0.01 0.0

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 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 (1.0)
standard and adapted CIELAB
LAB*LAB 18.02 0.0 0.46
LAB*Lab 18.02 0.0 0.0
LAB*TCa 0.01 0.01 0.0

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 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 (1.0)
standard and adapted CIELAB
LAB*LAB 18.02 0.0 0.46
LAB*Lab 18.02 0.0 0.0
LAB*TCa 0.01 0.01 0.0

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 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 (1.0)
standard and adapted CIELAB
LAB*LAB 18.02 0.0 0.46
LAB*Lab 18.02 0.0 0.0
LAB*TCa 0.01 0.01 0.0

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 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 (1.0)
standard and adapted CIELAB
LAB*LAB 18.02 0.0 0.46
LAB*Lab 18.02 0.0 0.0
LAB*TCa 0.01 0.01 0.0

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 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 (1.0)
standard and adapted CIELAB
LAB*LAB 18.02 0.0 0.46
LAB*Lab 18.02 0.0 0.0
LAB*TCa 0.01 0.01 0.0

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

MRS18; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	49.63	66.96	38.37	77.18	30
JMa	90.7	-6.36	88.75	88.98	94
GMa	52.11	-69.73	9.44	70.37	172
G50BMa	45.03	-36.57	-28.47	46.36	218
BMa	36.65	23.19	-63.05	67.18	290
B50RMa	34.94	57.17	-44.26	72.31	322
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.66	26.98	64.56	25
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

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

$n^* = 0.00$

$n^* = 0.25$

$n^* = 0.50$

$n^* = 0.75$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

Output: Colorimetric Reflective System NCS11

for hue $h^* = lab \cdot h = 167/360 = 0.465$

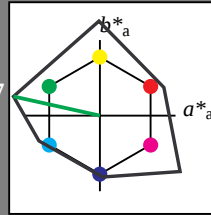
$lab \cdot tch$ and $lab \cdot nch$

D65: hue G

LCH*Ma: 63 117 167

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



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

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

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.75 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 74.31 0.02 0.0
LAB*Lab 74.31 0.0 0.0
LAB*TCa 75.0 0.01 0.0

relative CIELAB lab*
lab*lab 0.86 -0.247 0.034
lab*tch 0.875 0.25 0.465
lab*nch 0.0 0.25 0.465
relative Natural Colour (NC)
lab*trj 0.86 -0.247 -0.018
lab*tce 0.875 0.25 0.512
lab*nce 0.0 0.25 0.604

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 52.11 -69.86 11.28
LAB*Lab 52.11 -69.71 9.44
LAB*TCa 50.0 0.01 0.0

relative CIELAB lab*
lab*lab 0.61 -0.247 0.034
lab*tch 0.625 0.25 0.465
lab*nch 0.0 0.25 0.465
relative Natural Colour (NC)
lab*trj 0.61 -0.247 -0.028
lab*tce 0.625 0.25 0.512
lab*nce 0.0 0.25 0.604

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 32.11 0.05 0.16
LAB*Lab 32.11 0.0 0.0
LAB*TCa 25.0 0.01 0.0

relative CIELAB lab*
lab*lab 0.36 -0.247 0.034
lab*tch 0.375 0.25 0.465
lab*nch 0.0 0.25 0.465
relative Natural Colour (NC)
lab*trj 0.36 -0.247 -0.028
lab*tce 0.375 0.25 0.512
lab*nce 0.0 0.25 0.604

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 (0.0)
cmyn4* 0.0 0.0 0.0 (1.0)
standard and adapted CIELAB
LAB*LAB 32.11 0.05 0.16
LAB*Lab 32.11 0.0 0.0
LAB*TCa 25.0 0.01 0.0

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 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 (1.0)
standard and adapted CIELAB
LAB*LAB 32.11 0.05 0.16
LAB*Lab 32.11 0.0 0.0
LAB*TCa 25.0 0.01 0.0

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 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 (1.0)
standard and adapted CIELAB
LAB*LAB 32.11 0.05 0.16
LAB*Lab 32.11 0.0 0.0
LAB*TCa 25.0 0.01 0.0

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 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 (1.0)
standard and adapted CIELAB
LAB*LAB 32.11 0.05 0.16
LAB*Lab 32.11 0.0 0.0
LAB*TCa 25.0 0.01 0.0

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 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 (1.0)
standard and adapted CIELAB
LAB*LAB 32.11 0.05 0.16
LAB*Lab 32.11 0.0 0.0
LAB*TCa 25.0 0.01 0.0

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 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 (1.0)
standard and adapted CIELAB
LAB*LAB 32.11 0.05 0.16
LAB*Lab 32.11 0.0 0.0
LAB*TCa 25.0 0.01 0.0

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 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 (1.0)
standard and adapted CIELAB
LAB*LAB 32.11 0.05 0.16
LAB*Lab 32.11 0.0 0.0
LAB*TCa 25.0 0.01 0.0

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

NCS11; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	47.15	84.64	37.25	92.48	24
JMa	91.37	-1.27	125.03	125.03	91
GMa	63.07	-114.28	25.35	117.06	167
G50BMa	59.47	-80.6	-33.45	87.28	203
BMa	49.01	3.65	-81.19	81.28	273
B50RMa	44.06	106.09	-73.93	129.32	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

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$

(

version 2.1, io=0,0

output: *no change compared to input*

Input: Colorimetric Reflective System MRS18

for hue $h^* = lab^*h = 290/360 = 0.806$

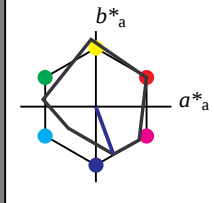
lab^*tch and lab^*nch

D65: hue B

LCH*Ma: 37 67 290

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*TCRa 99.99 0.01 -

relative Inform. Technology (IT)
olvi3* 0.75 0.75 1.0 (1.0)
cmyn3* 0.25 0.25 0.0 (0.0)
olvi4* 0.75 0.75 1.0 (1.0)
cmyn4* 0.25 0.25 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 80.72 5.1 -11.98
LAB*Lab 80.72 5.9 -15.75
LAB*TCRa 87.5 16.79 290.19

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.75 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 1.0 1.0 1.0 0.75
cmyn4* 0.0 0.0 0.0 0.25
standard and adapted CIELAB
LAB*LAB 76.06 -0.6 3.44
LAB*Lab 76.06 0.0 0.0
LAB*TCRa 75.0 0.01 -

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (1.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 0.75 0.75 1.0 (0.0)
cmyn4* 0.25 0.25 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 61.37 5.47 -13.29
LAB*Lab 61.37 5.9 -15.75
LAB*TCRa 62.5 16.8 290.19

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.0 (0.0)
cmyn3* 0.5 0.5 0.0 (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*TCRa 50.0 0.01 -

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.25 (1.0)
cmyn3* 0.75 0.75 0.25 (0.0)
olvi4* 0.75 0.75 1.0 (0.0)
cmyn4* 0.25 0.25 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 42.06 5.84 -14.6
LAB*Lab 42.06 5.9 -15.75
LAB*TCRa 37.5 16.8 290.19

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.0 (0.0)
cmyn3* 0.75 0.75 0.0 (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 11.92 -0.63
LAB*Lab 37.36 0.0 0.0
LAB*TCRa 25.0 0.01 -

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.0 (0.0)
cmyn3* 0.75 0.75 0.0 (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 27.34 11.92 -0.63
LAB*Lab 27.34 0.0 0.0
LAB*TCRa 25.0 0.01 -

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.0 (0.0)
cmyn3* 0.75 0.75 0.0 (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 18.02 18.02 0.46
LAB*Lab 18.02 0.0 0.0
LAB*TCRa 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 0.0
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 0.0 0.0
LAB*TCRa 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 0.0
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 0.0 0.0
LAB*TCRa 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 0.0
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 0.0 0.0
LAB*TCRa 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 0.0
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 0.0 0.0
LAB*TCRa 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 0.0
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 0.0 0.0
LAB*TCRa 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 0.0
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 0.0 0.0
LAB*TCRa 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 0.0
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 0.0 0.0
LAB*TCRa 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 0.0
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 0.0 0.0
LAB*TCRa 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 0.0
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 0.0 0.0
LAB*TCRa 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 0.0
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 0.0 0.0
LAB*TCRa 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 0.0
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 0.0 0.0
LAB*TCRa 0.01 0.01 -

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	49.63	66.96	38.37	77.18	30
JMa	90.7	-6.36	88.75	88.98	94
GMa	52.11	-69.73	9.44	70.37	172
G50BMa	45.03	-36.57	-28.47	46.36	218
BMa	36.65	23.19	-63.05	67.18	290
B50RMa	34.94	57.17	-44.26	72.31	322
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.66	26.98	64.56	25
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

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

%Regularity

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	49.63	66.96	38.37	77.18	30
JMa	90.7	-6.36	88.75	88.98	94
GMa	52.11	-69.73	9.44	70.37	172
G50BMa	45.03	-36.57	-28.47	46.36	218
BMa	36.65	23.19	-63.05	67.18	290
B50RMa	34.94	57.17	-44.26	72.31	322
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.66	26.98	64.56	25
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

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	49.63	66.96	38.37	77.18	30
JMa	90.7	-6.36	88.75	88.98	94
GMa	52.11	-69.73	9.44	70.37	172
G50BMa	45.03	-36.57	-28.47	46.36	218
BMa	36.65	23.19	-63.05	67.18	290
B50RMa	34.94	57.17	-44.26	72.31	322
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.66	26.98	64.56	25
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

blackness n^*

chromaticness c^*

Output: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 273/360 = 0.757$

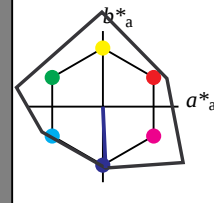
lab^*tch and lab^*nch

D65: hue B

LCH*Ma: 49 81 273

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*TCRa 99.99 0.01 -

relative Inform. Technology (IT)
olvi3* 0.75 0.75 1.0 (1.0)
cmyn3* 0.25 0.25 0.0 (0.0)
olvi4* 0.75 0.75 1.0 (1.0)
cmyn4* 0.25 0.25 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 83.81 0.93 -20.28
LAB*Lab 83.81 0.91 -20.28
LAB*TCRa 87.5 20.31 272.57

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.75 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 1.0 1.0 1.0 0.75
cmyn4* 0.0 0.0 0.0 0.25
standard and adapted CIELAB
LAB*LAB 74.31 0.02 0.0
LAB*Lab 74.31 0.0 0.0
LAB*TCRa 75.0 0.01 -

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (1.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 0.75 0.75 1.0 (0.0)
cmyn4* 0.25 0.25 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 62.71 0.91 -20.28
LAB*Lab 62.71 0.91 -20.28
LAB*TCRa 62.5 20.31 272.57

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.0 (0.0)
cmyn3* 0.5 0.5 0.0 (0.0)
olvi4* 1.0 1.0 1.0 0.5
cmyn4* 0.0 0.0 0.0 0.5
standard and adapted CIELAB
LAB*LAB 53.21 0.04 0.0
LAB*Lab 53.21 0.0 0.0
LAB*TCRa 50.0 0.01 -

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.25 (1.0)
cmyn3* 0.75 0.75 0.25 (0.0)
olvi4* 0.75 0.75 1.0 (0.0)
cmyn4* 0.25 0.25 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 41.6 0.96 -20.28
LAB*Lab 41.6 0.91 -20.28
LAB*TCRa 37.5 20.31 272.57

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.0 (0.0)
cmyn3* 0.75 0.75 0.0 (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 32.11 0.03 -0.249
LAB*Lab 32.11 0.0 0.0
LAB*TCRa 25.0 0.01 -

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.0 (0.0)
cmyn3* 0.75 0.75 0.0 (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 22.62 0.06 -0.499
LAB*Lab 22.62 0.0 0.0
LAB*TCRa 25.0 0.01 -

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.0 (0.0)
cmyn3* 0.75 0.75 0.0 (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 12.5 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 0.0
cmyn4* 0.0 0.0 0.0 0.0
standard and adapted CIELAB
LAB*LAB 12.5 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 0.0
cmyn4* 0.0 0.0 0.0 0.0
standard and adapted CIELAB
LAB*LAB 12.5 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 0.0
cmyn4* 0.0 0.0 0.0 0.0
standard and adapted CIELAB
LAB*LAB 12.5 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 0.0
cmyn4* 0.0 0.0 0.0 0.0
standard and adapted CIELAB
LAB*LAB 12.5 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 0.0
cmyn4* 0.0 0.0 0.0 0.0
standard and adapted CIELAB
LAB*LAB 12.5 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 0.0
cmyn4* 0.0 0.0 0.0 0.0
standard and adapted CIELAB
LAB*LAB 12.5 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 0.0
cmyn4* 0.0 0.0 0.0 0.0
standard and adapted CIELAB
LAB*LAB 12.5 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 0.0
cmyn4* 0.0 0.0 0.0 0.0
standard and adapted CIELAB
LAB*LAB 12.5 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 0.0
cmyn4* 0.0 0.0 0.0 0.0
standard and adapted CIELAB
LAB*LAB 12.5 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 0.0
cmyn4* 0.0 0.0 0.0 0.0
standard and adapted CIELAB
LAB*LAB 12.5 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 0.0
cmyn4* 0.0 0.0 0.0 0.0
standard and adapted CIELAB
LAB*LAB 12.5 0.01 -

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	47.15	84.64	37.25	92.48	24
JMa	91.37	-1.27	125.03	125.03	91
GMa	63.07	-114.28	25.35	117.06	167
G50BMa	59.47	-80.6	-33.45	87.28	203
BMa	49.01	3.65	-81.19	81.28	273
B50RMa	44.06	106.09	-73.93	129.32	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

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$

Technology (T1)					g* = 0.5				
0.5	1.0	1.0	1.0	1.0					
0.5	1.0	0.0	0.0	0.0					
0.5	1.0	1.0	1.0	1.0					
0.5	0.0	0.0	0.0	0.0					
1.7	1.85	-40.58							
21	1.82	-40.58							
0	40.63	272.57							
lab*									
0.5	0.022	-0.498			relative information, Technology (T1)				
0.5	0.75	0.75	0.0	0.0	olvs*	0.25	0.25	1.0	1.0
0.5	0.75	0.75	0.0	0.0	cmyn3*	0.75	0.75	0.0	0.0
0.5	0.75	0.75	0.0	0.0	olvs4*	0.25	0.25	1.0	1.0
adapted CIELAB					cmyn4*	0.75	0.75	0.0	0.0
Colour (NC)					standard and adapted CIELAB				
0.5	0.006	-0.499			LAB*	49.01	29.74	60.88	
0.5	0.75	0.75	0.0	0.0	LAB+Tc/a	60.91	29.74	59.88	
0.5	0.5	0.5	0.0	0.0	LAB+Tc/b	62.5	60.91	27.57	70.57
lab*					relative information, Technology (T1)				
0.5	0.022	-0.498			lab/lab	0.588	0.034	-0.748	
0.5	0.75	0.75	0.0	0.0	lab/tch	0.625	0.75	0.0	0.75
0.5	0.75	0.75	0.0	0.0	lab/tcb	0.625	0.75	0.0	0.75
adapted CIELAB					relative Natural Colour (NC)				
0.5	0.006	-0.499			lab/tce	0.625	0.75	0.752	
0.5	0.75	0.75	0.0	0.0	lab/tch	0.625	0.75	0.752	
0.5	1.82	-40.58			lab/tcb	0.625	0.75	0.752	
0	40.63	272.57			relative information, Technology (T1)				
lab*					olvs*	0.0	0.0	0.75	1.0
0.5	0.022	-0.498			olvs3*	1.0	1.0	0.25	0.0
0.5	0.75	0.75	0.0	0.0	olvs4*	0.25	0.25	1.0	0.75
0.5	0.75	0.75	0.0	0.0	cmyn4*	0.75	0.75	0.0	0.75
standard and adapted CIELAB					relative Natural Colour (NC)				
0.5	0.006	-0.499			LAB*	49.01	29.74	60.88	
0.5	0.75	0.75	0.0	0.0	LAB+Tc/a	60.91	29.74	59.88	
0.5	0.75	0.75	0.0	0.0	LAB+Tc/b	62.5	60.91	27.57	70.57
lab*					relative information, Technology (T1)				
0.5	0.022	-0.498			lab/lab	0.588	0.034	-0.748	
0.5	0.75	0.75	0.0	0.0	lab/tch	0.625	0.75	0.0	0.75
0.5	0.75	0.75	0.0	0.0	lab/tcb	0.625	0.75	0.0	0.75
adapted CIELAB					relative Natural Colour (NC)				
0.5	0.006	-0.499			lab/tce	0.625	0.75	0.752	
0.5	0.75	0.75	0.0	0.0	lab/tch	0.625	0.75	0.752	
0.5	1.82	-40.58			lab/tcb	0.625	0.75	0.752	
0	40.63	272.57			relative information, Technology (T1)				
lab*					olvs*	0.0	0.0	0.75	1.0
0.5	0.022	-0.498			olvs3*	1.0	1.0	0.25	0.0
0.5	0.75	0.75	0.0	0.0	olvs4*	0.25	0.25	1.0	0.75
0.5	0.75	0.75	0.0	0.0	cmyn4*	0.75	0.75	0.0	0.75
standard and adapted CIELAB					relative Natural Colour (NC)				
0.5	0.006	-0.499			LAB*	49.01	29.74	60.88	
0.5	0.75	0.75	0.0	0.0	LAB+Tc/a	60.91	29.74	59.88	
0.5	0.75	0.75	0.0	0.0	LAB+Tc/b	62.5	60.91	27.57	70.57

Input: Colorimetric Reflective System MRS18

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

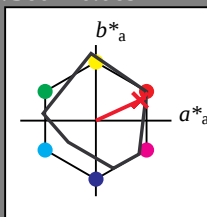
lab^*tch and lab^*nch

D65: hue R

LCH*Ma: 48 73 25

rgb*Ma: 1.0 0.0 0.1

triangle lightness t^*



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	49.63	66.96	38.37	77.18	30
JMa	90.7	-6.36	88.75	88.98	94
GMa	52.11	-69.73	9.44	70.37	172
G50B _{Ma}	45.03	-36.57	-28.47	46.36	218
B _{Ma}	36.65	23.19	-63.05	67.18	290
B50R _{Ma}	34.94	57.17	-44.26	72.31	322
N _{Ma}	18.01	0.0	0.0	0.0	0
W _{Ma}	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

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

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*TCh 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*Lab 76.06 0.0 0.0
LAB*TCh 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 (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*TCh 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 (0.0)
cmyn3* 0.75 0.75 0.75 (0.0)
olvi4* 1.0 1.0 1.0 (0.25)
cmyn4* 0.0 0.0 0.0 (0.75)
standard and adapted CIELAB
LAB*LAB 37.36 -0.08 0.63
LAB*Lab 37.36 0.0 0.0
LAB*TCh 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 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 (0.0)
cmyn4* 0.0 0.0 0.0 (1.0)
standard and adapted CIELAB
LAB*LAB 18.02 0.0 0.46
LAB*Lab 18.02 0.0 0.0
LAB*TCh 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 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*tce 0.0 0.0 0.0
lab*nce 1.0 0.0 0.0

$n^* = 1.0$

relative Inform. Technology (IT)
olvi3* 1.0 0.75 0.774 (1.0)
cmyn3* 0.0 0.25 0.226 (0.0)
olvi4* 1.0 0.75 0.774 (1.0)
cmyn4* 0.0 0.25 0.226 (0.0)
standard and adapted CIELAB
LAB*LAB 83.6 15.74 11.55
LAB*Lab 83.6 16.5 7.59
LAB*TCh 97.5 18.16 24.29

relative CIELAB lab*
lab*lab 0.847 0.25 0.104
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*tce 0.875 0.25 0.0
lab*nce 0.0 0.25 0.069

relative Inform. Technology (IT)
olvi3* 0.75 0.5 0.526 (1.0)
cmyn3* 0.25 0.5 0.526 (0.0)
olvi4* 1.0 0.75 0.774 (0.0)
cmyn4* 0.0 0.25 0.226 (0.5)
standard and adapted CIELAB
LAB*LAB 64.26 16.12 10.25
LAB*Lab 64.26 16.5 7.59
LAB*TCh 62.5 18.16 24.7

relative CIELAB lab*
lab*lab 0.598 0.22 0.104
lab*tch 0.625 0.25 0.069
lab*nch 0.25 0.25 0.069
relative Natural Colour (NC)
lab*trj 0.598 0.25 0.0
lab*tce 0.625 0.25 0.0
lab*nce 0.25 0.25 0.069

relative Inform. Technology (IT)
olvi3* 0.5 0.25 0.258 (1.0)
cmyn3* 0.5 0.75 0.702 (0.0)
olvi4* 1.0 0.5 0.548 (0.0)
cmyn4* 0.0 0.5 0.452 (0.5)
standard and adapted CIELAB
LAB*LAB 44.51 16.49 8.94
LAB*Lab 44.51 16.5 7.59
LAB*TCh 37.5 18.16 24.7

relative CIELAB lab*
lab*lab 0.348 0.22 0.104
lab*tch 0.375 0.25 0.069
lab*nch 0.25 0.25 0.069
relative Natural Colour (NC)
lab*trj 0.348 0.25 0.0
lab*tce 0.375 0.25 0.0
lab*nce 0.25 0.25 0.069

relative Inform. Technology (IT)
olvi3* 0.25 0.0 0.082 (1.0)
cmyn3* 0.75 1.0 0.976 (0.0)
olvi4* 1.0 0.75 0.774 (0.0)
cmyn4* 0.0 0.25 0.226 (0.75)
standard and adapted CIELAB
LAB*LAB 25.56 16.86 7.64
LAB*Lab 25.56 16.5 7.59
LAB*TCh 12.5 18.16 24.72

relative CIELAB lab*
lab*lab 0.098 0.22 0.104
lab*tch 0.125 0.25 0.069
lab*nch 0.25 0.25 0.069
relative Natural Colour (NC)
lab*trj 0.098 0.25 0.0
lab*tce 0.125 0.25 0.0
lab*nce 0.25 0.25 0.069

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 (0.0)
cmyn4* 0.0 0.0 0.0 (1.0)
standard and adapted CIELAB
LAB*LAB 18.02 0.0 0.46
LAB*Lab 18.02 0.0 0.0
LAB*TCh 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 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*tce 0.0 0.0 0.0
lab*nce 1.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 1.0 0.5 0.548 (1.0)
cmyn3* 0.0 0.5 0.452 (0.0)
olvi4* 1.0 0.5 0.548 (1.0)
cmyn4* 0.0 0.5 0.452 (0.0)
standard and adapted CIELAB
LAB*LAB 71.8 32.47 18.34
LAB*Lab 71.8 33.0 15.17
LAB*TCh 75.0 36.32 24.7

relative CIELAB lab*
lab*lab 0.695 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 0.695 0.5 0.0
lab*tce 0.75 0.5 0.0
lab*nce 0.0 0.5 0.069

relative Inform. Technology (IT)
olvi3* 0.75 0.0 0.073 (1.0)
cmyn3* 0.25 0.75 0.702 (0.0)
olvi4* 1.0 0.5 0.548 (0.0)
cmyn4* 0.0 0.5 0.452 (0.5)
standard and adapted CIELAB
LAB*LAB 32.46 33.01 15.18
LAB*Lab 32.46 33.01 15.18
LAB*TCh 50.0 36.32 24.7

relative CIELAB lab*
lab*lab 0.542 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 0.542 0.75 0.0
lab*tce 0.625 0.75 0.0
lab*nce 0.0 0.75 0.069

relative Inform. Technology (IT)
olvi3* 0.5 0.0 0.073 (1.0)
cmyn3* 0.25 1.0 0.903 (0.0)
olvi4* 1.0 0.0 0.097 (1.0)
cmyn4* 0.0 1.0 0.097 (0.0)
standard and adapted CIELAB
LAB*LAB 60.0 49.2 25.13
LAB*Lab 60.0 49.5 22.76
LAB*TCh 62.5 54.49 24.7

relative CIELAB lab*
lab*lab 0.293 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 0.293 0.75 0.0
lab*tce 0.375 0.75 0.0
lab*nce 0.0 0.75 0.069

relative Inform. Technology (IT)
olvi3* 0.5 0.0 0.082 (1.0)
cmyn3* 0.5 1.0 0.958 (0.0)
olvi4* 1.0 0.0 0.097 (1.0)
cmyn4* 0.0 1.0 0.097 (0.0)
standard and adapted CIELAB
LAB*LAB 33.11 32.21 15.74
LAB*Lab 33.11 33.0 15.18
LAB*TCh 25.01 36.32 24.7

relative CIELAB lab*
lab*lab 0.195 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 0.195 0.5 0.0
lab*tce 0.25 0.5 0.0
lab*nce 0.0 0.5 0.069

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 (0.0)
cmyn4* 0.0 0.0 0.0 (1.0)
standard and adapted CIELAB
LAB*LAB 11.01 0.0 0.01
LAB*Lab 11.01 0.0 0.0
LAB*TCh 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 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*tce 0.0 0.0 0.0
lab*nce 1.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 1.0 0.25 0.323 (1.0)
cmyn3* 0.0 0.75 0.677 (0.0)
olvi4* 1.0 0.25 0.323 (1.0)
cmyn4* 0.0 0.75 0.677 (0.0)
standard and adapted CIELAB
LAB*LAB 60.0 49.2 25.13
LAB*Lab 60.0 49.5 22.76
LAB*TCh 62.5 54.49 24.7

relative CIELAB lab*
lab*lab 0.542 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 0.542 0.75 0.0
lab*tce 0.625 0.75 0.0
lab*nce 0.0 0.75 0.069

relative Inform. Technology (IT)
olvi3* 0.75 0.0 0.073 (1.0)
cmyn3* 0.25 0.75 0.702 (0.0)
olvi4* 1.0 0.5 0.548 (0.0)
cmyn4* 0.0 0.5 0.452 (0.5)
standard and adapted CIELAB
LAB*LAB 32.46 33.01 15.18
LAB*Lab 32.46 33.01 15.18
LAB*TCh 50.0 36.32 24.7

relative CIELAB lab*
lab*lab 0.542 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 0.542 0.75 0.0
lab*tce 0.625 0.75 0.0
lab*nce 0.0 0.75 0.069

relative Inform. Technology (IT)
olvi3* 0.5 0.0 0.073 (1.0)
cmyn3* 0.25 1.0 0.903 (0.0)
olvi4* 1.0 0.0 0.097 (1.0)
cmyn4* 0.0 1.0 0.097 (0.0)
standard and adapted CIELAB
LAB*LAB 60.0 49.2 25.13
LAB*Lab 60.0 49.5 22.76
LAB*TCh 62.5 54.49 24.7

relative CIELAB lab*
lab*lab 0.293 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 0.293 0.75 0.0
lab*tce 0.375 0.75 0.0
lab*nce 0.0 0.75 0.069

relative Inform. Technology (IT)
olvi3* 0.5 0.0 0.082 (1.0)
cmyn3* 0.5 1.0 0.958 (0.0)
olvi4* 1.0 0.0 0.097 (1.0)
cmyn4* 0.0 1.0 0.097 (0.0)
standard and adapted CIELAB
LAB*LAB 33.11 32.21 15.74
LAB*Lab 33.11 33.0 15.18
LAB*TCh 25.01 36.32 24.7

relative CIELAB lab*
lab*lab 0.195 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 0.195 0.5 0.0
lab*tce 0.25 0.5 0.0
lab*nce 0.0 0.5 0.069

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 (0.0)
cmyn4* 0.0 0.0 0.0 (1.0)
standard and adapted CIELAB
LAB*LAB 11.01 0.0 0.01
LAB*Lab 11.01 0.0 0.0
LAB*TCh 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 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*tce 0.0 0.0 0.0
lab*nce 1.0 0.0 0.0

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

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

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.75 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 1.0 1.0 1.0 (0.75)
cmyn4* 0.0 0.0 0.0 (0.25)
standard and adapted CIELAB
LAB*LAB 74.31 0.02 0.0
LAB*Lab 74.31 0.0 0.0
LAB*TCh 75.0 0.01 -

relative CIELAB lab*
lab*lab 0.5 0.0 0.0
lab*tch 0.75 0.0 0.0
lab*nch 0.25 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 (0.5)
cmyn4* 0.0 0.0 0.0 (0.5)
standard and adapted CIELAB
LAB*LAB 53.21 0.04 0.0
LAB*Lab 53.21 0.0 0.0
LAB*TCh 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 0.75 0.75 (0.0)
olvi4* 1.0 1.0 1.0 (0.25)
cmyn4* 0.0 0.0 0.0 (0.75)
standard and adapted CIELAB
LAB*LAB 37.36 0.05 0.63
LAB*Lab 37.36 0.0 0.0
LAB*TCh 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 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 (0.0)
cmyn4* 0.0 0.0 0.0 (1.0)
standard and adapted CIELAB
LAB*LAB 11.01 0.0 0.01
LAB*Lab 11.01 0.0 0.0
LAB*TCh 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 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*tce 0.0 0.0 0.0
lab*nce 1.0 0.0 0.0

Output: Colorimetric Reflective System NCS11

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

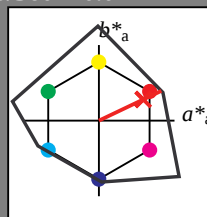
lab^*tch and lab^*nch

D65: hue R

LCH*Ma: 48 91 25

rgb*Ma: 1.0 0.02 0.0

triangle lightness t^*



NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	47.15	84.64	37.25	92.48	24
JMa	91.37	-1.27	125.03	125.03	91
GMa	63.07	-114.28	25.35	117.06	167
G50B _{Ma}	59.47	-80.6	-33.45	87.28	203
B _{Ma}	49.01	3.65	-81.19	81.28	273
B50R _{Ma}	44.06	106.09	-73.93	129.32	325
N _{Ma}	10.99	0.0	0.0	0.0	0
W _{Ma}	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

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$

relative Inform. Technology (IT)
olvi3* 1.0 1.0 1.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4*

Input: Colorimetric Reflective System MRS18

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

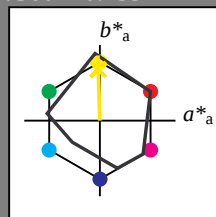
lab^*tch and lab^*nch

D65: hue J

LCH*Ma: 89 86 92

rgb*Ma: 1.0 0.95 0.0

triangle lightness t^*



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	49.63	66.96	38.37	77.18	30
JMa	90.7	-6.36	88.75	88.98	94
GMa	52.11	-69.73	9.44	70.37	172
G50B _{Ma}	45.03	-36.57	-28.47	46.36	218
B _{Ma}	36.65	23.19	-63.05	67.18	290
B50R _{Ma}	34.94	57.17	-44.26	72.31	322
N _{Ma}	18.01	0.0	0.0	0.0	0
W _{Ma}	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

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

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*TC_{Ma} 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*TC_{Ma} 75.0 0.01 -

relative CIELAB lab*
lab*lab 0.978 -0.007 0.25
lab*tch 0.875 0.25 0.255
lab*nch 0.0 0.25 0.255
relative Natural Colour (NC)
lab*trj 0.978 0.0 0.25
lab*tce 0.875 0.25 0.255
lab*nce 0.0 0.25 0.255

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 92.04 -1.39 43.14
LAB*LABa 92.04 0.0 0.0
LAB*TC_{Ma} 91.5 21.58 91.86

relative CIELAB lab*
lab*lab 0.957 -0.015 0.5
lab*tch 0.75 0.5 0.255
lab*nch 0.0 0.5 0.255
relative Natural Colour (NC)
lab*trj 0.957 0.0 0.5
lab*tce 0.75 0.5 0.255
lab*nce 0.0 0.5 0.255

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*TC_{Ma} 50.0 0.01 -

relative CIELAB lab*
lab*lab 0.726 0.25 0.255
lab*tch 0.625 0.25 0.255
lab*nch 0.0 0.25 0.255
relative Natural Colour (NC)
lab*trj 0.726 0.0 0.25
lab*tce 0.625 0.25 0.255
lab*nce 0.0 0.25 0.255

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 72.7 -1.92 46.37
LAB*LABa 72.7 0.0 0.0
LAB*TC_{Ma} 72.7 0.0 0.0

relative CIELAB lab*
lab*lab 0.935 -0.023 0.75
lab*tch 0.625 0.75 0.255
lab*nch 0.0 0.75 0.255
relative Natural Colour (NC)
lab*trj 0.935 0.0 0.75
lab*tce 0.625 0.75 0.255
lab*nce 0.0 0.75 0.255

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*TC_{Ma} 50.0 0.01 -

relative CIELAB lab*
lab*lab 0.726 0.25 0.255
lab*tch 0.625 0.25 0.255
lab*nch 0.0 0.25 0.255
relative Natural Colour (NC)
lab*trj 0.726 0.0 0.25
lab*tce 0.625 0.25 0.255
lab*nce 0.0 0.25 0.255

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 72.7 -1.92 46.37
LAB*LABa 72.7 0.0 0.0
LAB*TC_{Ma} 72.7 0.0 0.0

relative CIELAB lab*
lab*lab 0.935 -0.023 0.75
lab*tch 0.625 0.75 0.255
lab*nch 0.0 0.75 0.255
relative Natural Colour (NC)
lab*trj 0.935 0.0 0.75
lab*tce 0.625 0.75 0.255
lab*nce 0.0 0.75 0.255

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*TC_{Ma} 50.0 0.01 -

relative CIELAB lab*
lab*lab 0.726 0.25 0.255
lab*tch 0.625 0.25 0.255
lab*nch 0.0 0.25 0.255
relative Natural Colour (NC)
lab*trj 0.726 0.0 0.25
lab*tce 0.625 0.25 0.255
lab*nce 0.0 0.25 0.255

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 72.7 -1.92 46.37
LAB*LABa 72.7 0.0 0.0
LAB*TC_{Ma} 72.7 0.0 0.0

relative CIELAB lab*
lab*lab 0.935 -0.023 0.75
lab*tch 0.625 0.75 0.255
lab*nch 0.0 0.75 0.255
relative Natural Colour (NC)
lab*trj 0.935 0.0 0.75
lab*tce 0.625 0.75 0.255
lab*nce 0.0 0.75 0.255

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*TC_{Ma} 50.0 0.01 -

relative CIELAB lab*
lab*lab 0.726 0.25 0.255
lab*tch 0.625 0.25 0.255
lab*nch 0.0 0.25 0.255
relative Natural Colour (NC)
lab*trj 0.726 0.0 0.25
lab*tce 0.625 0.25 0.255
lab*nce 0.0 0.25 0.255

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 72.7 -1.92 46.37
LAB*LABa 72.7 0.0 0.0
LAB*TC_{Ma} 72.7 0.0 0.0

relative CIELAB lab*
lab*lab 0.935 -0.023 0.75
lab*tch 0.625 0.75 0.255
lab*nch 0.0 0.75 0.255
relative Natural Colour (NC)
lab*trj 0.935 0.0 0.75
lab*tce 0.625 0.75 0.255
lab*nce 0.0 0.75 0.255

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*TC_{Ma} 50.0 0.01 -

relative CIELAB lab*
lab*lab 0.726 0.25 0.255
lab*tch 0.625 0.25 0.255
lab*nch 0.0 0.25 0.255
relative Natural Colour (NC)
lab*trj 0.726 0.0 0.25
lab*tce 0.625 0.25 0.255
lab*nce 0.0 0.25 0.255

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 72.7 -1.92 46.37
LAB*LABa 72.7 0.0 0.0
LAB*TC_{Ma} 72.7 0.0 0.0

relative CIELAB lab*
lab*lab 0.935 -0.023 0.75
lab*tch 0.625 0.75 0.255
lab*nch 0.0 0.75 0.255
relative Natural Colour (NC)
lab*trj 0.935 0.0 0.75
lab*tce 0.625 0.75 0.255
lab*nce 0.0 0.75 0.255

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*TC_{Ma} 50.0 0.01 -

relative CIELAB lab*
lab*lab 0.726 0.25 0.255
lab*tch 0.625 0.25 0.255
lab*nch 0.0 0.25 0.255
relative Natural Colour (NC)
lab*trj 0.726 0.0 0.25
lab*tce 0.625 0.25 0.255
lab*nce 0.0 0.25 0.255

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 72.7 -1.92 46.37
LAB*LABa 72.7 0.0 0.0
LAB*TC_{Ma} 72.7 0.0 0.0

relative CIELAB lab*
lab*lab 0.935 -0.023 0.75
lab*tch 0.625 0.75 0.255
lab*nch 0.0 0.75 0.255
relative Natural Colour (NC)
lab*trj 0.935 0.0 0.75
lab*tce 0.625 0.75 0.255
lab*nce 0.0 0.75 0.255

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*TC_{Ma} 50.0 0.01 -

relative CIELAB lab*
lab*lab 0.726 0.25 0.255
lab*tch 0.625 0.25 0.255
lab*nch 0.0 0.25 0.255
relative Natural Colour (NC)
lab*trj 0.726 0.0 0.25
lab*tce 0.625 0.25 0.255
lab*nce 0.0 0.25 0.255

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 72.7 -1.92 46.37
LAB*LABa 72.7 0.0 0.0
LAB*TC_{Ma} 72.7 0.0 0.0

relative CIELAB lab*
lab*lab 0.935 -0.023 0.75
lab*tch 0.625 0.75 0.255
lab*nch 0.0 0.75 0.255
relative Natural Colour (NC)
lab*trj 0.935 0.0 0.75
lab*tce 0.625 0.75 0.255
lab*nce 0.0 0.75 0.255

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*TC_{Ma} 50.0 0.01 -

relative CIELAB lab*
lab*lab 0.726 0.25 0.255
lab*tch 0.625 0.25 0.255
lab*nch 0.0 0.25 0.255
relative Natural Colour (NC)
lab*trj 0.726 0.0 0.25
lab*tce 0.625 0.25 0.255
lab*nce 0.0 0.25 0.255

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 72.7 -1.92 46.37
LAB*LABa 72.7 0.0 0.0
LAB*TC_{Ma} 72.7 0.0 0.0

relative CIELAB lab*
lab*lab 0.935 -0.023 0.75
lab*tch 0.625 0.75 0.255
lab*nch 0.0 0.75 0.255
relative Natural Colour (NC)
lab*trj 0.935 0.0 0.75
lab*tce 0.625 0.75 0.255
lab*nce 0.0 0.75 0.255

Output: Colorimetric Reflective System NCS11

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

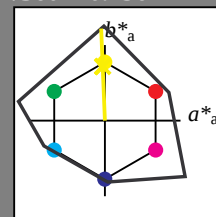
lab^*tch and lab^*nch

D65: hue J

LCH*Ma: 90 122 92

rgb*Ma: 0.97 1.0 0.0

triangle lightness t^*



NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	47.15	84.64	37.25	92.48	24
JMa	91.37	-1.27	125.03	125.03	91
GMa	63.07	-114.28	25.35	117.06	167
G50B _{Ma}	59.47	-80.6	-33.45	87.28	203
B _{Ma}	49.01	3.65	-81.19	81.28	273
B50R _{Ma}	44.06	106.09	-73.93	129.32	325
N _{Ma}	10.99	0.0	0.0	0.0	0
W _{Ma}	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

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$

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*TC_{Ma} 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 74.31 0.02 0.0
LAB*LABa 74.31 0.0 0.0
LAB*TC_{Ma} 75.0 0.01 -

relative CIELAB lab*
lab*lab 0.985 -0.009 0.25
lab*tch 0.875 0.25 0.256
lab*nch 0.0 0.25 0.256
relative Natural Colour (NC)
lab*trj 0.985 0.0 0.25
lab*tce 0.875 0.25 0.256
lab*nce 0.0 0.25 0.256

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 90.36 -2.96 69.13
LAB*LABa 90.36 0.0 0.0
LAB*TC_{Ma} 90.36 0.0 0.0

relative CIELAB lab*
lab*lab 0.957 0.0 0.5
lab*tch 0.75 0.5 0.255
lab*nch 0.0 0.5 0.255
relative Natural Colour (NC)
lab*trj 0.957 0.0 0.5
lab*tce 0.75 0.5 0.255
lab*nce 0.0 0.5 0.255

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.75 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 53.21 0.04 0.0
LAB*LABa 53.21 0.0 0.0
LAB*TC_{Ma} 50.0 0.01 -

relative CIELAB lab*
lab*lab 0.735 -0.009 0.25
lab*tch 0.625 0.25 0.256
lab*nch 0.0 0.25 0.256
relative Natural Colour (NC)
lab*trj 0.735 0.0 0.25
lab*tce 0.625 0.25 0.256
lab*nce 0.0 0.25 0.256

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 71.83 -2.47 60.89
LAB*LABa 71.83 0.0 0.0
LAB*TC_{Ma} 71.83 0.0 0.0

relative CIELAB lab*
lab*lab 0.971 -0.019 0.5
lab*tch 0.75 0.5 0.256
lab*nch 0.0 0.5 0.256
relative Natural Colour (NC)
lab*trj 0.971 0.0 0.5
lab*tce 0.75 0.5 0.256
lab*nce 0.0 0.5 0.256

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 51.96

Input: Colorimetric Reflective System MRS18

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

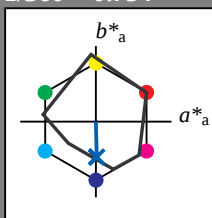
$lab \cdot tch$ and $lab \cdot nch$

D65: hue B

LCH*Ma: 40 50 271

rgb*Ma: 0.0 0.37 1.0

triangle lightness t^*



% Gamut

$u^*_{rel} = 91$

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*TCh 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 -
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*Lab 76.06 0.0 0.0
LAB*TCh 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*tce 0.75 0.0 0.0
lab*nce 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*Lab 56.71 0.0 0.0
LAB*TCh 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*tce 0.5 0.0 0.0
lab*nce 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 -0.38 0.63
LAB*Lab 37.36 0.0 0.0
LAB*TCh 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*tce 0.25 0.0 0.0
lab*nce 0.0 0.0 -

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 18.02 0.0 0.46
LAB*Lab 18.02 0.0 0.0
LAB*TCh 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*tce 0.0 0.0 0.0
lab*nce 1.0 0.0 -

$n^* = 1.0$

MRS18; adapted (a) CIELAB data

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

RMa	49.63	66.96	38.37	77.18	30
JMa	90.7	-6.36	88.75	88.98	94
GMa	52.11	-69.73	9.44	70.37	172
G50BMa	45.03	-36.57	-28.47	46.36	218
BMa	36.65	23.19	-63.05	67.18	290
B50RMa	34.94	57.17	-44.26	72.31	322
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.66	26.98	64.56	25
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

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

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 67.57 0.17 -22.28
LAB*Lab 67.57 0.17 -22.28
LAB*TCh 75.0 25.18 27.14

relative CIELAB lab*
lab*lab 0.64 0.012 -0.499
lab*tch 0.75 0.5 0.754
lab*nch 0.0 0.5 0.754
relative Natural Colour (NC)
lab*trj 0.64 0.0 -0.499
lab*tce 0.75 0.5 0.754
lab*nce 0.0 0.5 0.754

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.25 (1.0)
cmyn3* 0.75 0.75 0.75 (1.0)
olvi4* 0.5 0.5 0.5 (0.0)
cmyn4* 0.5 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 48.22 0.62 -25.17
LAB*Lab 48.22 0.62 -25.17
LAB*TCh 50.0 25.18 27.14

relative CIELAB lab*
lab*lab 0.46 0.018 -0.749
lab*tch 0.625 0.75 0.754
lab*nch 0.0 0.75 0.754
relative Natural Colour (NC)
lab*trj 0.46 0.0 -0.749
lab*tce 0.625 0.75 0.754
lab*nce 0.0 0.75 0.754

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 (0.0)
cmyn4* 0.5 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 39.73 1.32 -49.33
LAB*Lab 39.73 1.32 -49.33
LAB*TCh 50.0 50.36 27.14

relative CIELAB lab*
lab*lab 0.281 0.025 -0.998
lab*tch 0.5 1.0 0.754
lab*nch 0.0 1.0 0.754
relative Natural Colour (NC)
lab*trj 0.281 0.0 -0.999
lab*tce 0.5 1.0 0.754
lab*nce 0.0 1.0 0.754

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 (0.0)
cmyn4* 0.5 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 28.87 0.62 -25.16
LAB*Lab 28.87 0.62 -25.16
LAB*TCh 25.01 25.18 27.14

relative CIELAB lab*
lab*lab 0.14 0.012 -0.499
lab*tch 0.25 0.5 0.754
lab*nch 0.0 0.5 0.754
relative Natural Colour (NC)
lab*trj 0.14 0.0 -0.499
lab*tce 0.25 0.5 0.754
lab*nce 0.0 0.5 0.754

$n^* = 0.50$

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.25 (1.0)
cmyn3* 0.75 0.75 0.75 (1.0)
olvi4* 0.5 0.5 0.5 (0.0)
cmyn4* 0.5 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 34.3 1.11 -37.12
LAB*Lab 34.3 1.11 -37.12
LAB*TCh 37.51 37.77 27.14

relative CIELAB lab*
lab*lab 0.211 0.018 -0.749
lab*tch 0.375 0.75 0.754
lab*nch 0.0 0.75 0.754
relative Natural Colour (NC)
lab*trj 0.211 0.0 -0.749
lab*tce 0.375 0.75 0.754
lab*nce 0.0 0.75 0.754

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 (0.0)
cmyn4* 0.5 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 32.11 0.0 -0.999
LAB*Lab 32.11 0.0 -0.999
LAB*TCh 50.0 50.36 27.14

relative CIELAB lab*
lab*lab 0.211 0.018 -0.749
lab*tch 0.375 0.75 0.754
lab*nch 0.0 0.75 0.754
relative Natural Colour (NC)
lab*trj 0.211 0.0 -0.749
lab*tce 0.375 0.75 0.754
lab*nce 0.0 0.75 0.754

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 (0.0)
cmyn4* 0.5 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 32.11 0.0 -0.999
LAB*Lab 32.11 0.0 -0.999
LAB*TCh 50.0 50.36 27.14

relative CIELAB lab*
lab*lab 0.211 0.018 -0.749
lab*tch 0.375 0.75 0.754
lab*nch 0.0 0.75 0.754
relative Natural Colour (NC)
lab*trj 0.211 0.0 -0.749
lab*tce 0.375 0.75 0.754
lab*nce 0.0 0.75 0.754

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 (0.0)
cmyn4* 0.5 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 32.11 0.0 -0.999
LAB*Lab 32.11 0.0 -0.999
LAB*TCh 50.0 50.36 27.14

relative CIELAB lab*
lab*lab 0.211 0.018 -0.749
lab*tch 0.375 0.75 0.754
lab*nch 0.0 0.75 0.754
relative Natural Colour (NC)
lab*trj 0.211 0.0 -0.749
lab*tce 0.375 0.75 0.754
lab*nce 0.0 0.75 0.754

$n^* = 0.25$

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 (0.0)
cmyn4* 0.5 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 32.11 0.0 -0.999
LAB*Lab 32.11 0.0 -0.999
LAB*TCh 50.0 50.36 27.14

relative CIELAB lab*
lab*lab 0.211 0.018 -0.749
lab*tch 0.375 0.75 0.754
lab*nch 0.0 0.75 0.754
relative Natural Colour (NC)
lab*trj 0.211 0.0 -0.749
lab*tce 0.375 0.75 0.754
lab*nce 0.0 0.75 0.754

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 (0.0)
cmyn4* 0.5 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 32.11 0.0 -0.999
LAB*Lab 32.11 0.0 -0.999
LAB*TCh 50.0 50.36 27.14

relative CIELAB lab*
lab*lab 0.211 0.018 -0.749
lab*tch 0.375 0.75 0.754
lab*nch 0.0 0.75 0.754
relative Natural Colour (NC)
lab*trj 0.211 0.0 -0.749
lab*tce 0.375 0.75 0.754
lab*nce 0.0 0.75 0.754

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 (0.0)
cmyn4* 0.5 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 32.11 0.0 -0.999
LAB*Lab 32.11 0.0 -0.999
LAB*TCh 50.0 50.36 27.14

relative CIELAB lab*
lab*lab 0.211 0.018 -0.749
lab*tch 0.375 0.75 0.754
lab*nch 0.0 0.75 0.754
relative Natural Colour (NC)
lab*trj 0.211 0.0 -0.749
lab*tce 0.375 0.75 0.754
lab*nce 0.0 0.75 0.754

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 (0.0)
cmyn4* 0.5 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 32.11 0.0 -0.999
LAB*Lab 32.11 0.0 -0.999
LAB*TCh 50.0 50.36 27.14

relative CIELAB lab*
lab*lab 0.211 0.018 -0.749
lab*tch 0.375 0.75 0.754
lab*nch 0.0 0.75 0.754
relative Natural Colour (NC)
lab*trj 0.211 0.0 -0.749
lab*tce 0.375 0.75 0.754
lab*nce 0.0 0.75 0.754

$n^* = 0.00$

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 (0.0)
cmyn4* 0.5 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 32.11 0.0 -0.999
LAB*Lab 32.11 0.0 -0.999
LAB*TCh 50.0 50.36 27.14

relative CIELAB lab*
lab*lab 0.211 0.018 -0.749
lab*tch 0.375 0.75 0.754
lab*nch 0.0 0.75 0.754
relative Natural Colour (NC)
lab*trj 0.211 0.0 -0.749
lab*tce 0.375 0.75 0.754
lab*nce 0.0 0.75 0.754

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 (0.0)
cmyn4* 0.5 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 32.11 0.0 -0.999
LAB*Lab 32.11 0.0 -0.999
LAB*TCh 50.0 50.36 27.14

relative CIELAB lab*
lab*lab 0.211 0.018 -0.749
lab*tch 0.375 0.75 0.754
lab*nch 0.0 0.75 0.754
relative Natural Colour (NC)
lab*trj 0.211 0.0 -0.749
lab*tce 0.375 0.75 0.754
lab*nce 0.0 0.75 0.754

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 (0.0)
cmyn4* 0.5 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 32.11 0.0 -0.999
LAB*Lab 32.11 0.0 -0.999
LAB*TCh 50.0 50.36 27.14

relative CIELAB lab*
lab*lab 0.211 0.018 -0.749
lab*tch 0.375 0.75 0.754
lab*nch 0.0 0.75 0.754
relative Natural Colour (NC)
lab*trj 0.211 0.0 -0.749
lab*tce 0.375 0.75 0.754
lab*nce 0.0 0.75 0.754

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 (0.0)
cmyn4* 0.5 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 32.11 0.0 -0.999
LAB*Lab 32.11 0.0 -0.999
LAB*TCh 50.0 50.36 27.14

relative CIELAB lab*
lab*lab 0.211 0.018 -0.749
lab*tch 0.375 0.75 0.754
lab*nch 0.0 0.75 0.754
relative Natural Colour (NC)
lab*trj 0.211 0.0 -0.749
lab*tce 0.375 0.75 0.754
lab*nce 0.0 0.75 0.754

$n^* = 0.25$

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 (0.0)
cmyn4* 0.5 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 32.11 0.0 -0.999
LAB*Lab 32.11 0.0 -0.999
LAB*TCh 50.0 50.36 27.14

relative CIELAB lab*
lab*lab 0.211 0.018 -0.749
lab*tch 0.375 0.75 0.754
lab*nch 0.0 0.75 0.754
relative Natural Colour (NC)
lab*trj 0.211 0.0 -0.749
lab*tce 0.375 0.75 0.754
lab*nce 0.0 0.75 0.754

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 (0.0)
cmyn4* 0.5 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 32.11 0.0 -0.999
LAB*Lab 32.11 0.0 -0.999
LAB*TCh 50.0 50.36 27.14

relative CIELAB lab*
lab*lab 0.211 0.018 -0.749
lab*tch 0.375 0.75 0.754
lab*nch 0.0 0.75 0.754
relative Natural Colour (NC)
lab*trj 0.211 0.0 -0.749
lab*tce 0.375 0.75 0.754
lab*nce 0.0 0.75 0.754

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 (0.0)
cmyn4* 0.5 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 32.11 0.0 -0.999
LAB*Lab 32.11 0.0 -0.999
LAB*TCh 50.0 50.36 27.14

relative CIELAB lab*
lab*lab 0.211 0.018 -0.749
lab*tch 0.375 0.75 0.754
lab*nch 0.0 0.75 0.754
relative Natural Colour (NC)
lab*trj 0.211 0.0 -0.749
lab*tce 0.375 0.75 0.754
lab*nce 0.0 0.75 0.754

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 (0.0)
cmyn4* 0.5 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 32.11 0.0 -0.999
LAB*Lab 32.11 0.0 -0.999
LAB*TCh 50.0 50.36 27.14

relative CIELAB lab*
lab*lab 0.211 0.018 -0.749
lab*tch 0.375 0.75 0.754
lab*nch 0.0 0.75 0.754
relative Natural Colour (NC)
lab*trj 0.211 0.0 -0.749
lab*tce 0.375 0.75 0.754
lab*nce 0.0 0.75 0.754

$n^* = 0.50$

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 (0.0)
cmyn4* 0.5 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 32.11 0.0 -0.999
LAB*Lab 32.11 0.0 -0.999
LAB*TCh 50.0 50.36 27.14

relative CIELAB lab*
lab*lab 0.211 0.018 -0.749
lab*tch 0.375 0.75 0.754
lab*nch 0.0 0.75 0.754
relative Natural Colour (NC)
lab*trj 0.211 0.0 -0.749
lab*tce 0.375 0.75 0.754
lab*nce 0.0 0.75 0.754

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 (0.0)
cmyn4* 0.5 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 32.11 0.0 -0.999
LAB*Lab 32.11 0.0 -0.999
LAB*TCh 50.0 50.36 27.14

relative CIELAB lab*
lab*lab 0.211 0.018 -0.749
lab*tch 0.375 0.75 0.754
lab*nch 0.0 0.75 0.754
relative Natural Colour (NC)
lab*trj 0.211 0.0 -0.749
lab*tce 0.375 0.75 0.754
lab*nce 0.0 0.75 0.754

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 (0.0)
cmyn4* 0.5 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 32.11 0.0 -0.999
LAB*Lab 32.11 0.0 -0.999
LAB*TCh 50.0 50.36 27.14

relative CIELAB lab*
lab*lab 0.211 0.018 -0.749
lab*tch 0.375 0.75 0.754
lab*nch 0.0