

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

1,00

%Gamut

$u^*_{rel} = 93$

%Regularity

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

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

0,75

0,50

0,25

0,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

0,25

0,50

0,75

1,00

chromaticness c^*

$n^* = 1,0$

$n^* = 0,50$

$n^* = 0,25$

$n^* = 0,00$

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

0,25

0,50

0,75

1,00

chromaticness c^*

$n^* = 1,0$

$n^* = 0,50$

$n^* = 0,25$

$n^* = 0,00$

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

0,25

0,50

0,75

1,00

chromaticness c^*

$n^* = 1,0$

$n^* = 0,50$

$n^* = 0,25$

$n^* = 0,00$

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

0,25

0,50

0,75

1,00

chromaticness c^*

$n^* = 1,0$

$n^* = 0,50$

$n^* = 0,25$

$n^* = 0,00$

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

0,25

0,50

0,75

1,00

chromaticness c^*

$n^* = 1,0$

$n^* = 0,50$

$n^* = 0,25$

$n^* = 0,00$

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

0,25

0,50

0,75

1,00

chromaticness c^*

$n^* = 1,0$

$n^* = 0,50$

$n^* = 0,25$

$n^* = 0,00$

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

0,25

0,50

0,75

1,00

chromaticness c^*

$n^* = 1,0$

$n^* = 0,50$

$n^* = 0,25$

$n^* = 0,00$

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

0,25

0,50

0,75

1,00

chromaticness c^*

$n^* = 1,0$

$n^* = 0,50$

$n^* = 0,25$

$n^* = 0,00$

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

0,25

0,50

0,75

1,00

chromaticness c^*

$n^* = 1,0$

$n^* = 0,50$

$n^* = 0,25$

$n^* = 0,00$

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

0,25

0,50

0,75

1,00

chromaticness c^*

$n^* = 1,0$

$n^* = 0,50$

$n^* = 0,25$

$n^* = 0,00$

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

0,25

0,50

0,75

1,00

chromaticness c^*

$n^* = 1,0$

$n^* = 0,50$

$n^* = 0,25$

$n^* = 0,00$

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

0,25

0,50

0,75

1,00

chromaticness c^*

$n^* = 1,0$

$n^* = 0,50$

$n^* = 0,25$

$n^* = 0,00$

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

0,25

0,50

0,75

1,00

chromaticness c^*

$n^* = 1,0$

$n^* = 0,50$

$n^* = 0,25$

$n^* = 0,00$

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

0,25

0,50

0,75

1,00

chromaticness c^*

$n^* = 1,0$

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blackness n^*

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0,50

0,75

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$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

0,25

0,50

0,75

1,00

chromaticness c^*

$n^* = 1,0$

Input: Colorimetric Reflective System ORS18

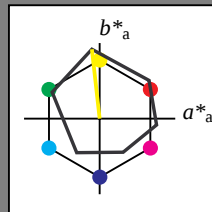
for hue $h^* = lab \cdot h = 96/360 = 0.268$

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

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness

1,00



%Gamut

$u^*_{rel} = 93$

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

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

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

1,00

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 0.0 0.0
LAB*TCha 75.0 0.01 0.0
relative CIELAB lab*
lab*lab 0.75 0.0 0.0
lab*tch 0.75 0.0 0.0
lab*nch 0.25 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.75 0.0 0.0
lab*tce 0.25 0.0 0.0
lab*nce 0.25 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (1.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 53.21 0.04 0.0
LAB*LABa 53.21 0.0 0.0
LAB*TCha 50.0 0.01 0.0
relative CIELAB lab*
lab*lab 0.5 0.0 0.0
lab*tch 0.5 0.0 0.0
lab*nch 0.5 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 0.5 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.25 (1.0)
cmyn3* 0.75 0.75 0.75 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 32.11 0.05 0.01
LAB*LABa 32.11 0.0 0.0
LAB*TCha 25.0 0.01 0.0
relative CIELAB lab*
lab*lab 0.25 0.0 0.0
lab*tch 0.25 0.0 0.0
lab*nch 0.75 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 0.75 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 11.01 0.07 0.01
LAB*LABa 11.01 0.0 0.0
LAB*TCha 0.01 0.01 0.0
relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 1.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*tce 0.0 0.0 0.0
lab*nce 1.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.01 0.01 0.0
LAB*LABa 0.01 0.0 0.0
LAB*TCha 0.01 0.01 0.0
relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 1.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*tce 0.0 0.0 0.0
lab*nce 1.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.01 0.01 0.0
LAB*LABa 0.01 0.0 0.0
LAB*TCha 0.01 0.01 0.0
relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 1.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*tce 0.0 0.0 0.0
lab*nce 1.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.01 0.01 0.0
LAB*LABa 0.01 0.0 0.0
LAB*TCha 0.01 0.01 0.0
relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 1.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*tce 0.0 0.0 0.0
lab*nce 1.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.01 0.01 0.0
LAB*LABa 0.01 0.0 0.0
LAB*TCha 0.01 0.01 0.0
relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 1.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*tce 0.0 0.0 0.0
lab*nce 1.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.01 0.01 0.0
LAB*LABa 0.01 0.0 0.0
LAB*TCha 0.01 0.01 0.0
relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 1.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*tce 0.0 0.0 0.0
lab*nce 1.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.01 0.01 0.0
LAB*LABa 0.01 0.0 0.0
LAB*TCha 0.01 0.01 0.0
relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 1.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*tce 0.0 0.0 0.0
lab*nce 1.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.01 0.01 0.0
LAB*LABa 0.01 0.0 0.0
LAB*TCha 0.01 0.01 0.0
relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 1.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*tce 0.0 0.0 0.0
lab*nce 1.0 0.0 0.0

5 step scales for constant CIELAB hue 91/360 = 0.253 (right)

BAM-test chart UE42; Colorimetric systems ORS18 & ORS18

D65: 5 step colour scales and coordinate data for 10 hues

chromaticness c^*

$n^* = 1.0$

$n^* = 0.50$

$n^* = 0.25$

$n^* = 0.00$

$n^* = 0.00$

$n^* = 0.00$

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Input: Colorimetric Reflective System ORS18

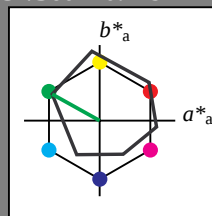
for hue $h^* = lab \cdot h = 151/360 = 0.419$ $lab \cdot tch$ and $lab \cdot nch$

D65: hue L

LCH*Ma: 51 72 151

rgb*Ma: 0.0 1.0 0.0

triangle lightness



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
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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
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JCIE	81.26	-2.17	67.76	67.79	92
GCIE	52.23	-42.26	11.75	43.87	164
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%Regularity

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

1,00

0,75

 $n^* = 0,00$

0,25

 $n^* = 0,25$ $n^* = 0,50$ chromaticness c^*

Output: Colorimetric Reflective System NRS11

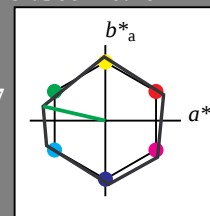
for hue $h^* = lab \cdot h = 167/360 = 0.464$ $lab \cdot tch$ and $lab \cdot nch$

D65: hue G

LCH*Ma: 53 84 167

rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

 $u^*_{rel} = 119$

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

 $g^*_{H,rel} = 47$ $g^*_{C,rel} = 100$

1,00

0,75

 $n^* = 0,00$

0,25

 $n^* = 0,25$ $n^* = 0,50$ chromaticness c^*

UE420-7, 5 step scales for constant CIELAB hue 151/360 = 0.419 (left)

5 step scales for constant CIELAB hue 167/360 = 0.464 (right)

BAM-test chart UE42; Colorimetric systems ORS18 & ORS18

D65: 5 step colour scales and coordinate data for 10 hues

input: $cmY0^* \text{ set } cmYkcolor$

output: Startup (S) data dependend

Input: Colorimetric Reflective System ORS18

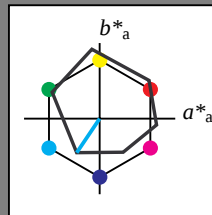
for hue $h^* = lab \cdot h = 236/360 = 0.656$ $lab \cdot tch$ and $lab \cdot nch$

D65: hue C

LCH*Ma: 59 54 236

rgb*Ma: 0.0 1.0 1.0

triangle lightness



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

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

1,00

0,75

 $n^* = 0,00$

0,25

 $n^* = 0,25$ $n^* = 0,50$ blackness n^* chromaticness c^*

Output: Colorimetric Reflective System NRS11

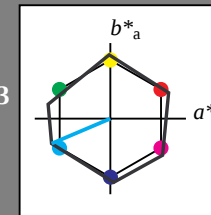
for hue $h^* = lab \cdot h = 203/360 = 0.564$ $lab \cdot tch$ and $lab \cdot nch$

D65: hue G50B

LCH*Ma: 53 84 203

rgb*Ma: 0.0 1.0 1.0

triangle lightness



%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*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	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	84.85	-19.4	-8.23	
LAB*LABa	84.85	-19.42	-8.23	
LAB*LABb	84.85	-19.42	-8.23	
LAB*LABc	84.85	-19.42	-8.23	
relative CIELAB lab*				
lab*lab	0.75	1.0	1.0	
lab*tch	0.75	1.0	1.0	
lab*nch	0.25	0.0	0.0	
relative Natural Colour (NC)				
lab*trj	0.75	1.0	1.0	
lab*tce	0.75	1.0	1.0	
lab*nce	0.25	0.0	0.0	

relative Inform. Technology (IT)				
olvi3*	0.5	0.75	0.75	(1.0)
cmyn3*	0.25	0.25	0.25	(0.0)
olvi4*	0.5	0.75	0.75	(1.0)
cmyn4*	0.25	0.25	0.25	(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	0.75	0.75	
lab*tch	0.5	0.75	0.75	
lab*nch	0.25	0.25	0.25	
relative Natural Colour (NC)				
lab*trj	0.5	0.75	0.75	
lab*tce	0.5	0.75	0.75	
lab*nce	0.25	0.25	0.25	

relative Inform. Technology (IT)				
olvi3*	0.25	0.5	0.5	(1.0)
cmyn3*	0.25	0.25	0.25	(0.0)
olvi4*	0.25	0.5	0.5	(1.0)
cmyn4*	0.25	0.25	0.25	(0.0)
standard and adapted CIELAB				
LAB*LAB	53.21	0.04	0.0	
LAB*LABa	53.21	0.04	0.0	
LAB*LABb	53.21	0.04	0.0	
LAB*LABc	53.21	0.04	0.0	
relative CIELAB lab*				
lab*lab	0.25	0.5	0.5	
lab*tch	0.25	0.5	0.5	
lab*nch	0.25	0.25	0.25	
relative Natural Colour (NC)				
lab*trj	0.25	0.5	0.5	
lab*tce	0.25	0.5	0.5	
lab*nce	0.25	0.25	0.25	

relative Inform. Technology (IT)				
olvi3*	0.25	0.25	0.25	(1.0)
cmyn3*	0.25	0.25	0.25	(0.0)
olvi4*	0.25	0.25	0.25	(1.0)
cmyn4*	0.25	0.25	0.25	(0.0)
standard and adapted CIELAB				
LAB*LAB	53.21	0.04	0.0	
LAB*LABa	53.21	0.04	0.0	
LAB*LABb	53.21	0.04	0.0	
LAB*LABc	53.21	0.04	0.0	
relative CIELAB lab*				
lab*lab	0.25	0.25	0.25	
lab*tch	0.25	0.25	0.25	
lab*nch	0.25	0.25	0.25	
relative Natural Colour (NC)				
lab*trj	0.25	0.25	0.25	
lab*tce	0.25	0.25	0.25	
lab*nce	0.25	0.25	0.25	

relative Inform. Technology (IT)				
olvi3*	0.25	0.25	0.25	(1.0)
cmyn3*	0.25	0.25	0.25	(0.0)
olvi4*	0.25	0.25	0.25	(1.0)
cmyn4*	0.25	0.25	0.25	(0.0)
standard and adapted CIELAB				
LAB*LAB	53.21	0.04	0.0	
LAB*LABa	53.21	0.04	0.0	
LAB*LABb	53.21	0.04	0.0	
LAB*LABc	53.21	0.04	0.0	
relative CIELAB lab*				
lab*lab	0.25	0.25	0.25	
lab*tch	0.25	0.25	0.25	
lab*nch	0.25	0.25	0.25	
relative Natural Colour (NC)				
lab*trj	0.25	0.25	0.25	
lab*tce	0.25	0.25	0.25	
lab*nce	0.25	0.25	0.25	

relative Inform. Technology (IT)				
olvi3*	0.25	0.25	0.25	(1.0)
cmyn3*	0.25	0.25	0.25	(0.0)
olvi4*	0.25	0.25	0.25	(1.0)
cmyn4*	0.25	0.25	0.25	(0.0)
standard and adapted CIELAB				
LAB*LAB	53.21	0.04	0.0	
LAB*LABa	53.21	0.04	0.0	
LAB*LABb	53.21	0.04	0.0	
LAB*LABc	53.21	0.04	0.0	
relative CIELAB lab*				
lab*lab	0.25	0.25	0.25	
lab*tch	0.25	0.25	0.25	
lab*nch	0.25	0.25	0.25	
relative Natural Colour (NC)				
lab*trj	0.25	0.25	0.25	
lab*tce	0.25	0.25	0.25	
lab*nce	0.25	0.25	0.25	

relative Inform. Technology (IT)				
olvi3*	0.25	0.25	0.25	(1.0)
cmyn3*	0.25	0.25	0.25	(0.0)
olvi4*	0.25	0.25	0.25	(1.0)
cmyn4*	0.25	0.25	0.25	(0.0)
standard and adapted CIELAB				
LAB*LAB	53.21	0.04	0.0	
LAB*LABa	53.21	0.04	0.0	
LAB*LABb	53.21	0.04	0.0	
LAB*LABc	53.21	0.04	0.0	
relative CIELAB lab*				
lab*lab	0.25	0.25	0.25	
lab*tch	0.25	0.25	0.25	
lab*nch	0.25	0.25	0.25	
relative Natural Colour (NC)				
lab*trj	0.25	0.25	0.25	
lab*tce	0.25	0.25	0.25	
lab*nce	0.25	0.25	0.25	

relative Inform. Technology (IT)				
olvi3*	0.25	0.25	0.25	(1.0)
cmyn3*	0.25	0.25	0.25	(0.0)
olvi4*	0.25	0.25	0.25	(1.0)
cmyn4*	0.25	0.25	0.25	(0.0)
standard and adapted CIELAB				
LAB*LAB	53.21	0.04	0.0	
LAB*LABa	53.21	0.04	0.0	
LAB*LABb	53.21	0.04	0.0	
LAB*LABc	53.21	0.04	0.0	
relative CIELAB lab*				
lab*lab	0.25	0.25	0.25	
lab*tch	0.25	0.25	0.25	
lab*nch	0.25	0.25	0.25	
relative Natural Colour (NC)				
lab*trj	0.25	0.25	0.25	
lab*tce	0.25	0.25	0.25	
lab*nce	0.25	0.25	0.25	

relative Inform. Technology (IT)				
olvi3*	0.25	0.25	0.25	(1.0)
cmyn3*	0.25	0.25	0.25	(0.0)
olvi4*	0.25	0.25	0.25	(1.0)
cmyn4*	0.25	0.25	0.25	(0.0)
standard and adapted CIELAB				
LAB*LAB	53.21	0.04	0.0	
LAB*LABa	53.21	0.04	0.0	
LAB*LABb	53.21	0.04	0.0	
LAB*LABc	53.21	0.04	0.0	
relative CIELAB lab*				
lab*lab	0.25	0.25	0.25	
lab*tch	0.25	0.25	0.25	
lab*nch	0.25	0.25	0.25	
relative Natural Colour (NC)				
lab*trj	0.25	0.25	0.25	
lab*tce	0.25	0.25	0.25	
lab*nce	0.25	0.25	0.25	

5 step scales for constant CIELAB hue 203/360 = 0.564 (right)

input: $cm y 0^* set c m y k c o l o r$

output: Startup (S) data dependend

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
G50B _{Ma}	53.2	-77.72	-32.98	84.44	203
B _{Ma}	53.2	4.37	-84.28	84.41	273
B50R _{Ma}	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

 $g^*_{H,rel} = 47$ $g^*_{C,rel} = 100$

1,00

0,75

 $n^* = 0,00$

0,25

 $n^* = 0,25$ $n^* = 0,50$ blackness n^* chromaticness c^*

UE420-7, 5 step scales for constant CIELAB hue 236/360 = 0.656 (left)

BAM-test chart UE42; Colorimetric systems ORS18 & ORS18

D65: 5 step colour scales and coordinate data for 10 hues

Input: Colorimetric Reflective System ORS18

for hue $h^* = \text{lab}^*h = 305/360 = 0.847$

lab^*tch and lab^*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness

1,00

%Gamut

$u^*_{\text{rel}} = 93$

%Regularity

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

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

0,75

0,50

0,25

0,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,00$

chromaticness c^*

0,25

0,50

0,75

1,00

$n^* = 1,0$

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

$n^* = 1,0$

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

$n^* = 1,0$

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

$n^* = 1,0$

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

$n^* = 1,0$

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

$n^* = 1,0$

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

$n^* = 1,0$

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

$n^* = 1,0$

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

$n^* = 1,0$

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

$n^* = 1,0$

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

$n^* = 1,0$

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

$n^* = 1,0$

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

$n^* = 1,0$

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

$n^* = 1,0$

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

$n^* = 1,0$

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

$n^* = 1,0$

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

$n^* = 1,0$

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

$n^* = 1,0$

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

$n^* = 1,0$

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

$n^* = 1,0$

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

$n^* = 1,0$

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

$n^* = 1,0$

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

$n^* = 1,0$

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

$n^* = 1,0$

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

$n^* = 1,0$

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

$n^* = 1,0$

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

$n^* = 1,0$

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

Input: Colorimetric Reflective System ORS18

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

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

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness

1,00

%Gamut

$u^*_{rel} = 93$

%Regularity

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

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

0,75

0,50

0,25

0,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

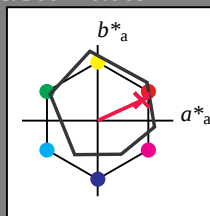
0,50

Input: Colorimetric Reflective System ORS18

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

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

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32
triangle lightness

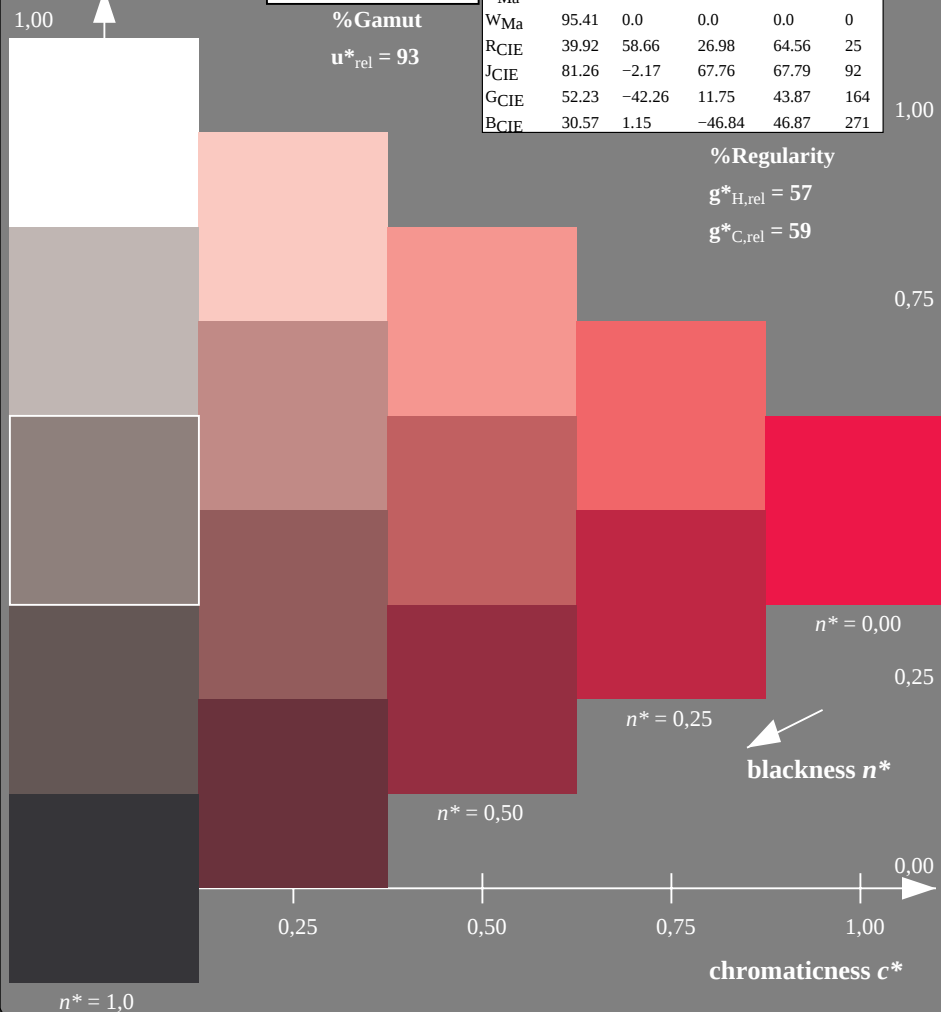


ORS18; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	47.94	65.37	50.52	82.62	38
YMa	90.37	-10.27	91.77	92.34	96
LMa	50.9	-62.79	34.95	71.87	151
CMa	58.62	-30.35	-45.01	54.3	236
VMa	25.71	31.11	-44.42	54.24	305
MMa	48.13	75.27	-8.35	75.73	354
NMa	18.01	0.0	0.0	0.0	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

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

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



UE420-7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

BAM-test chart UE42; Colorimetric systems ORS18 & ORS18

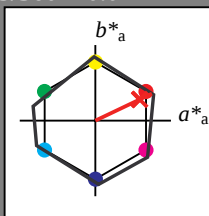
D65: 5 step colour scales and coordinate data for 10 hues

Output: Colorimetric Reflective System NRS11

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

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

D65: hue R
LCH*Ma: 53 83 25
rgb*Ma: 1.0 0.03 0.0
triangle lightness

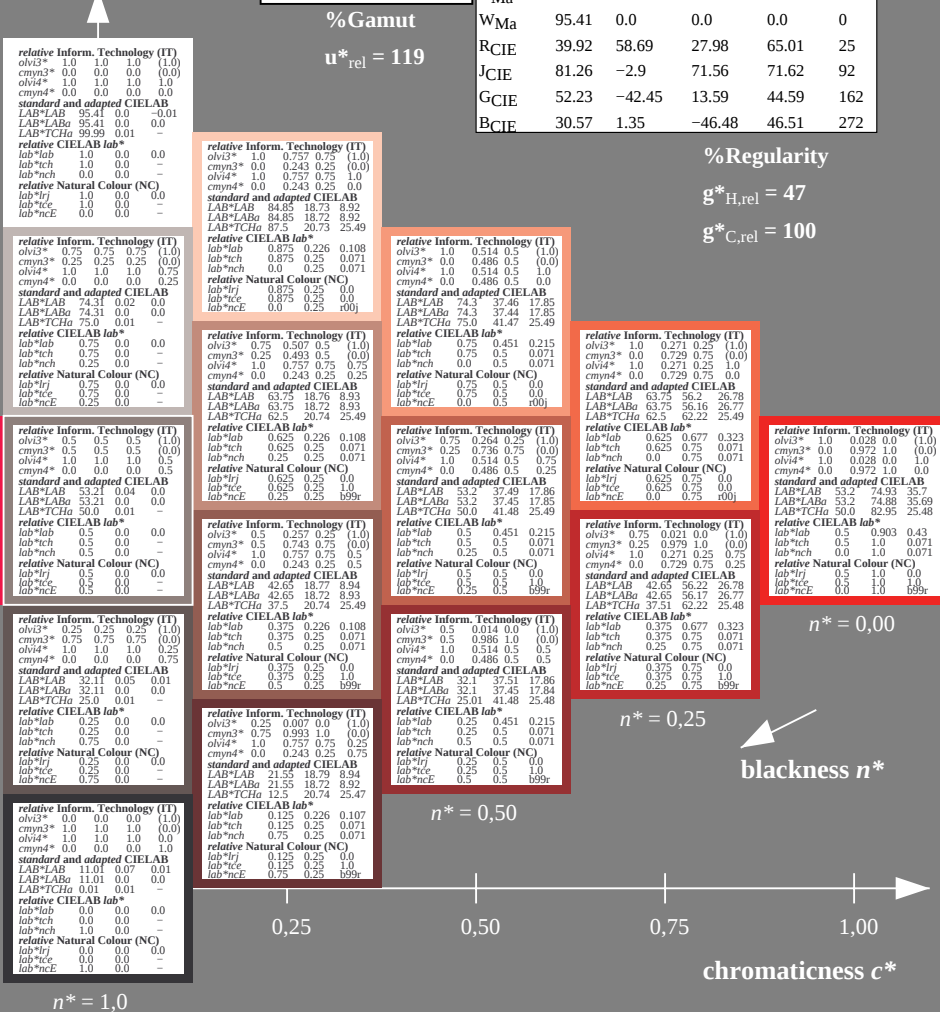


NRS11; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	53.2	77.06	34.32	84.36	24
JMa	53.2	-1.51	84.38	84.39	91
GMa	53.2	-82.27	18.98	84.44	167
G50BMa	53.2	-77.72	-32.98	84.44	203
BMa	53.2	4.37	-84.28	84.41	273
B50RMa	53.2	69.09	-48.41	84.37	325
NMa	10.99	0.0	0.0	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

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

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



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

input: $cmY0^* setcmykcolor$

output: Startup (S) data dependend

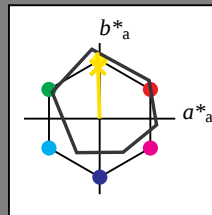
Input: Colorimetric Reflective System ORS18

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

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

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

triangle lightness



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

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

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

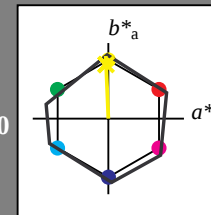
Output: Colorimetric Reflective System NRS11

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

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

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

triangle lightness

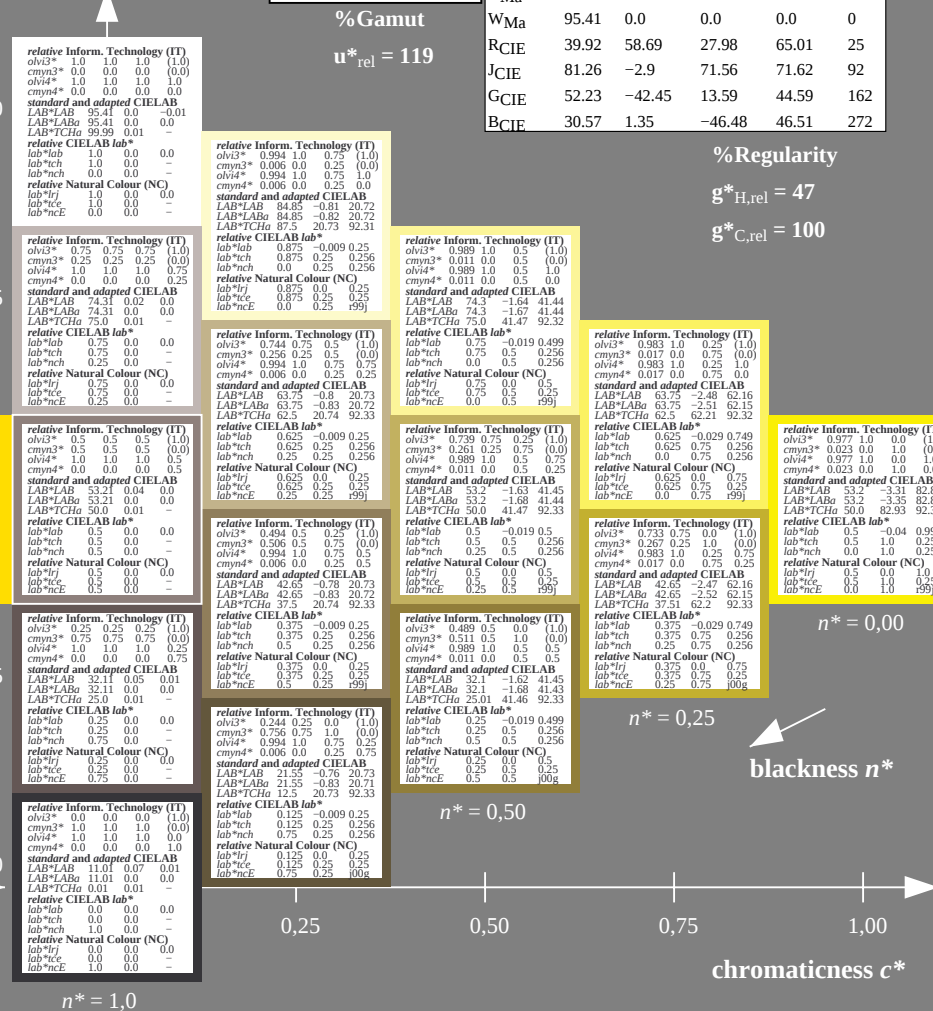
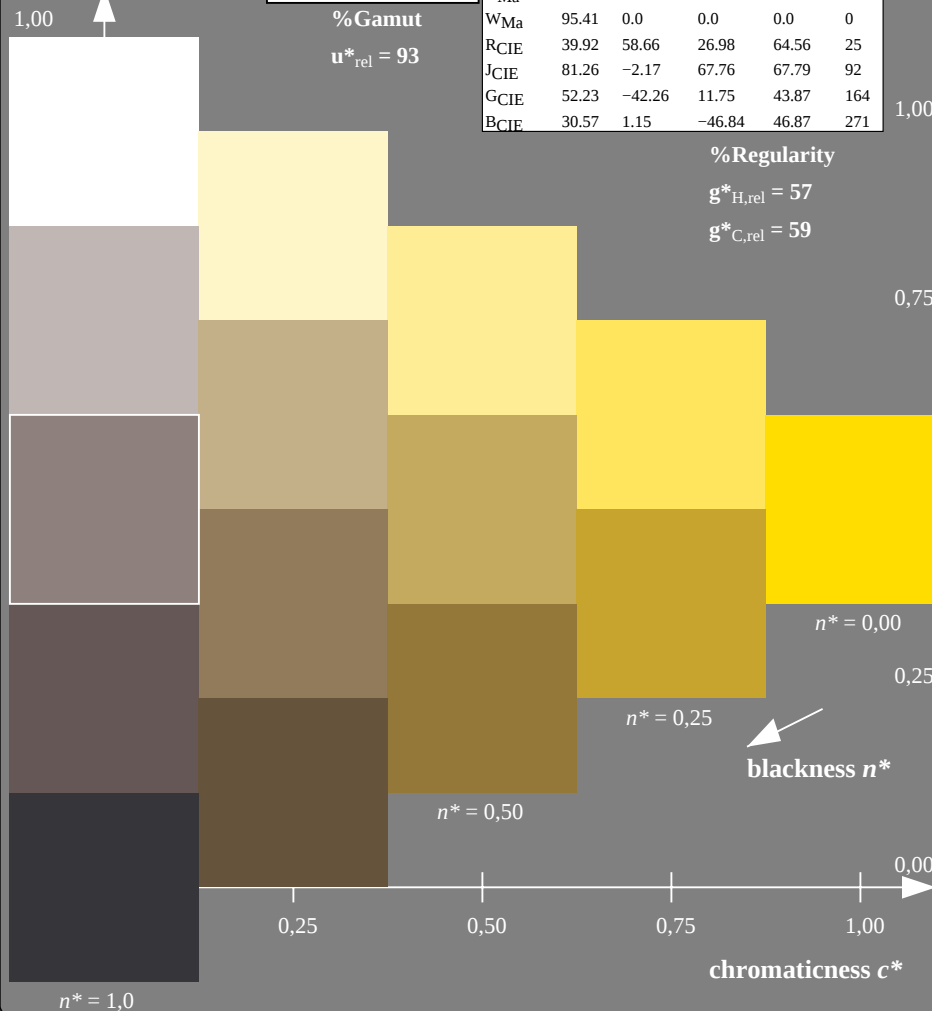


NRS11; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	53.2	77.06	34.32	84.36	24
JMa	53.2	-1.51	84.38	84.39	91
GMa	53.2	-82.27	18.98	84.44	167
G50B _{Ma}	53.2	-77.72	-32.98	84.44	203
B _{Ma}	53.2	4.37	-84.28	84.41	273
B50R _{Ma}	53.2	69.09	-48.41	84.37	325
NMa	10.99	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

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

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



UE420-7, 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 UE42; Colorimetric systems ORS18 & ORS18

D65: 5 step colour scales and coordinate data for 10 hues

input: $cmy0^* \text{ setcmykcolor}$

output: *Startup (S) data dependend*

Input: Colorimetric Reflective System ORS18

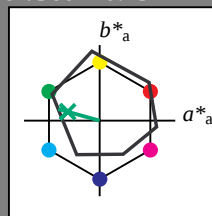
for hue $h^* = lab \cdot h = 164/360 = 0.457$ $lab \cdot tch$ and $lab \cdot nch$

D65: hue G

LCH*Ma: 53 57 164

rgb*Ma: 0.0 1.0 0.25

triangle lightness



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

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

1,00

0,75

 $n^* = 0,00$

0,25

 $n^* = 0,25$ $n^* = 0,50$

0,00

chromaticness c^* $n^* = 1,0$

Output: Colorimetric Reflective System NRS11

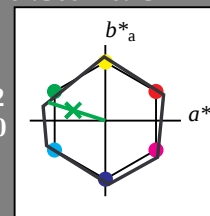
for hue $h^* = lab \cdot h = 162/360 = 0.451$ $lab \cdot tch$ and $lab \cdot nch$

D65: hue G

LCH*Ma: 53 80 162

rgb*Ma: 0.08 1.0 0.0

triangle lightness



%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*Lab 95.41 0.0 0.0
LAB*TCh 99.99 0.01 0.0
relative CIELAB lab*
lab*lab 1.0 0.0 0.0
lab*tch 1.0 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 1.0 0.0 0.0
lab*tce 1.0 0.0 0.0
lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.75 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 74.31 0.02 0.0
LAB*Lab 74.31 0.02 0.0
LAB*TCh 75.0 0.01 0.0
relative CIELAB lab*
lab*lab 0.75 0.0 0.0
lab*tch 0.75 0.0 0.0
lab*nch 0.25 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.75 0.0 0.0
lab*tce 0.25 0.0 0.0
lab*nce 0.25 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (0.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 53.21 0.04 0.0
LAB*Lab 53.21 0.04 0.0
LAB*TCh 50.0 0.01 0.0
relative CIELAB lab*
lab*lab 0.5 0.0 0.0
lab*tch 0.5 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.5 0.0 0.0
lab*tce 0.5 0.0 0.0
lab*nce 0.5 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 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 32.11 0.05 0.0
LAB*Lab 32.11 0.05 0.0
LAB*TCh 25.0 0.01 0.0
relative CIELAB lab*
lab*lab 0.25 0.0 0.0
lab*tch 0.25 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.25 0.0 0.0
lab*tce 0.25 0.0 0.0
lab*nce 0.25 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 (0.0)
cmyn4* 0.0 0.0 0.0 (1.0)
standard and adapted CIELAB
LAB*LAB 11.01 0.07 0.0
LAB*Lab 11.01 0.07 0.0
LAB*TCh 0.01 0.01 0.0
relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 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 1.0 0.0 0.0

 $n^* = 1,0$

relative Inform. Technology (IT)
olvi3* 0.77 1.0 0.75 (1.0)
cmyn3* 0.23 0.0 0.25 (0.0)
olvi4* 0.77 1.0 0.75 1.0
cmyn4* 0.23 0.0 0.25 0.0
standard and adapted CIELAB
LAB*LAB 84.85 -18.91 6.06
LAB*Lab 84.85 -18.92 6.06
LAB*TCh 87.5 19.88 162.25
relative CIELAB lab*
lab*lab 0.77 0.0 0.75
lab*tch 0.77 0.0 0.75
lab*nch 0.0 0.0 0.75
relative Natural Colour (NC)
lab*trj 0.77 0.0 0.75
lab*tce 0.77 0.0 0.75
lab*nce 0.0 0.0 0.75

relative Inform. Technology (IT)
olvi3* 0.52 0.75 0.5 (1.0)
cmyn3* 0.48 0.25 0.5 (0.0)
olvi4* 0.77 1.0 0.75 0.75
cmyn4* 0.23 0.0 0.25 0.25
standard and adapted CIELAB
LAB*LAB 63.75 -18.9 6.07
LAB*Lab 63.75 -18.93 6.06
LAB*TCh 62.5 19.89 162.25
relative CIELAB lab*
lab*lab 0.52 0.0 0.75
lab*tch 0.52 0.0 0.75
lab*nch 0.25 0.0 0.75
relative Natural Colour (NC)
lab*trj 0.52 0.0 0.75
lab*tce 0.52 0.0 0.75
lab*nce 0.25 0.0 0.75

relative Inform. Technology (IT)
olvi3* 0.27 0.5 0.5 (0.0)
cmyn3* 0.73 0.5 0.75 (0.0)
olvi4* 0.77 1.0 0.75 0.5
cmyn4* 0.23 0.0 0.25 0.5
standard and adapted CIELAB
LAB*LAB 42.65 -18.88 6.08
LAB*Lab 42.65 -18.93 6.06
LAB*TCh 37.5 19.89 162.25
relative CIELAB lab*
lab*lab 0.27 0.0 0.5
lab*tch 0.27 0.0 0.5
lab*nch 0.25 0.0 0.5
relative Natural Colour (NC)
lab*trj 0.27 0.0 0.5
lab*tce 0.27 0.0 0.5
lab*nce 0.25 0.0 0.5

relative Inform. Technology (IT)
olvi3* 0.04 0.5 0.5 (0.0)
cmyn3* 0.96 0.5 1.0 (0.0)
olvi4* 0.54 1.0 0.5 0.5
cmyn4* 0.46 0.0 0.5 0.5
standard and adapted CIELAB
LAB*LAB 32.11 0.05 0.0
LAB*Lab 32.11 0.05 0.0
LAB*TCh 25.01 39.77 162.27
relative CIELAB lab*
lab*lab 0.04 0.0 0.5
lab*tch 0.04 0.0 0.5
lab*nch 0.5 0.0 0.5
relative Natural Colour (NC)
lab*trj 0.04 0.0 0.5
lab*tce 0.04 0.0 0.5
lab*nce 0.5 0.0 0.5

relative Inform. Technology (IT)
olvi3* 0.0 0.25 0.0 (1.0)
cmyn3* 0.98 0.75 1.0 (0.0)
olvi4* 0.77 1.0 0.75 0.25
cmyn4* 0.23 0.0 0.25 0.75
standard and adapted CIELAB
LAB*LAB 21.55 -18.93 6.05
LAB*Lab 21.55 -18.93 6.05
LAB*TCh 12.5 19.89 162.28
relative CIELAB lab*
lab*lab 0.125 -0.237 0.076
lab*tch 0.125 0.25 0.451
lab*nch 0.5 0.25 0.451
relative Natural Colour (NC)
lab*trj 0.125 0.25 0.451
lab*tce 0.125 0.25 0.451
lab*nce 0.75 0.25 0.451

 $n^* = 0,50$

relative Inform. Technology (IT)
olvi3* 0.54 1.0 0.5 (1.0)
cmyn3* 0.46 0.0 0.5 (0.0)
olvi4* 0.54 1.0 0.5 1.0
cmyn4* 0.46 0.0 0.5 0.0
standard and adapted CIELAB
LAB*LAB 74.3 -37.84 12.13
LAB*Lab 74.3 -37.87 12.12
LAB*TCh 75.0 39.77 162.25
relative CIELAB lab*
lab*lab 0.54 0.0 0.5
lab*tch 0.54 0.0 0.5
lab*nch 0.0 0.0 0.5
relative Natural Colour (NC)
lab*trj 0.54 0.0 0.5
lab*tce 0.54 0.0 0.5
lab*nce 0.0 0.0 0.5

relative Inform. Technology (IT)
olvi3* 0.29 0.75 0.25 (1.0)
cmyn3* 0.71 0.25 0.75 (0.0)
olvi4* 0.54 1.0 0.5 0.75
cmyn4* 0.46 0.0 0.5 0.25
standard and adapted CIELAB
LAB*LAB 53.2 -37.83 12.13
LAB*Lab 53.2 -37.87 12.12
LAB*TCh 50.0 39.78 162.25
relative CIELAB lab*
lab*lab 0.29 0.0 0.75
lab*tch 0.29 0.0 0.75
lab*nch 0.25 0.0 0.75
relative Natural Colour (NC)
lab*trj 0.29 0.0 0.75
lab*tce 0.29 0.0 0.75
lab*nce 0.25 0.0 0.75

relative Inform. Technology (IT)
olvi3* 0.08 0.5 0.5 (0.0)
cmyn3* 0.92 0.5 1.0 (0.0)
olvi4* 0.54 1.0 0.5 0.5
cmyn4* 0.46 0.0 0.5 0.5
standard and adapted CIELAB
LAB*LAB 42.65 -18.88 6.08
LAB*Lab 42.65 -18.93 6.06
LAB*TCh 37.5 19.89 162.25
relative CIELAB lab*
lab*lab 0.08 0.0 0.5
lab*tch 0.08 0.0 0.5
lab*nch 0.5 0.0 0.5
relative Natural Colour (NC)
lab*trj 0.08 0.0 0.5
lab*tce 0.08 0.0 0.5
lab*nce 0.5 0.0 0.5

relative Inform. Technology (IT)
olvi3* 0.04 0.5 0.5 (0.0)
cmyn3* 0.96 0.5 1.0 (0.0)
olvi4* 0.54 1.0 0.5 0.5
cmyn4* 0.46 0.0 0.5 0.5
standard and adapted CIELAB
LAB*LAB 32.11 0.05 0.0
LAB*Lab 32.11 0.05 0.0
LAB*TCh 25.01 39.77 162.27
relative CIELAB lab*
lab*lab 0.04 0.0 0.5
lab*tch 0.04 0.0 0.5
lab*nch 0.5 0.0 0.5
relative Natural Colour (NC)
lab*trj 0.04 0.0 0.5
lab*tce 0.04 0.0 0.5
lab*nce 0.5 0.0 0.5

relative Inform. Technology (IT)
olvi3* 0.25 0.0 0.25 (1.0)
cmyn3* 0.75 0.0 0.75 (0.0)
olvi4* 0.54 1.0 0.5 0.25
cmyn4* 0.46 0.0 0.5 0.75
standard and adapted CIELAB
LAB*LAB 21.55 -18.93 6.05
LAB*Lab 21.55 -18.93 6.05
LAB*TCh 12.5 19.89 162.28
relative CIELAB lab*
lab*lab 0.25 0.0 0.25
lab*tch 0.25 0.0 0.25
lab*nch 0.5 0.0 0.25
relative Natural Colour (NC)
lab*trj 0.25 0.0 0.25
lab*tce 0.25 0.0 0.25
lab*nce 0.75 0.0 0.25

 $n^* = 0,25$

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
G50B _{Ma}	53.2	-77.72	-32.98	84.44	203
B _{Ma}	53.2	4.37	-84.28	84.41	273
B50R _{Ma}	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

 $g^*_{H,rel} = 47$ $g^*_{C,rel} = 100$

1,00

0,75

 $n^* = 0,00$

0,25

 $n^* = 0,25$ $n^* = 0,50$

0,00

chromaticness c^* $n^* = 1,0$

UE420-7, 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 UE42; Colorimetric systems ORS18 & ORS18

D65: 5 step colour scales and coordinate data for 10 hues

input: *cmY0* setcmykcolor*output: *Startup (S) data dependend*

Input: Colorimetric Reflective System ORS18

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

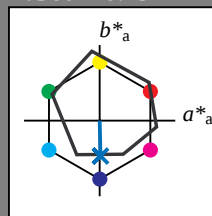
$lab \cdot tch$ and $lab \cdot nch$

D65: hue B

LCH*Ma: 42 45 271

rgb*Ma: 0.0 0.49 1.0

triangle lightness

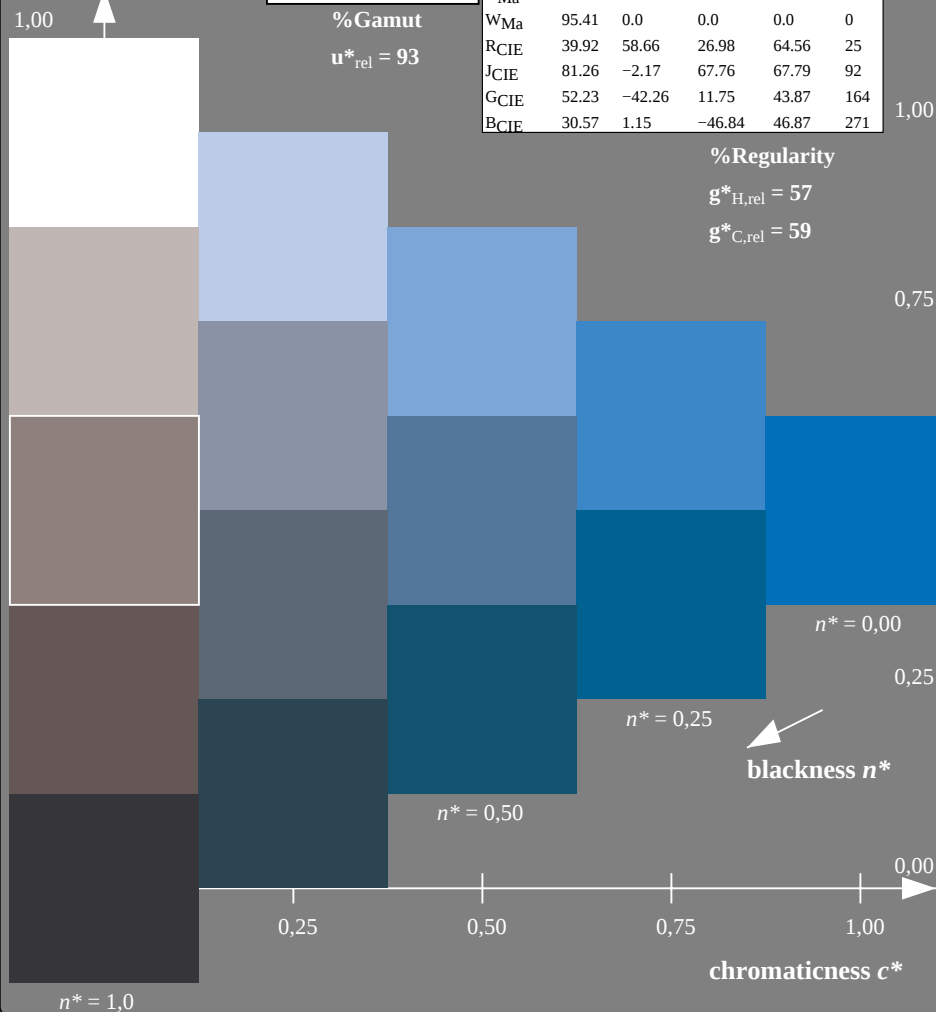


ORS18; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	47.94	65.37	50.52	82.62	38
YMa	90.37	-10.27	91.77	92.34	96
LMa	50.9	-62.79	34.95	71.87	151
CMa	58.62	-30.35	-45.01	54.3	236
VMa	25.71	31.11	-44.42	54.24	305
MMa	48.13	75.27	-8.35	75.73	354
NMa	18.01	0.0	0.0	0.0	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

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

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



UE420-7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

BAM-test chart UE42; Colorimetric systems ORS18 & ORS18

D65: 5 step colour scales and coordinate data for 10 hues

Output: Colorimetric Reflective System NRS11

for hue $h^* = lab \cdot h = 272/360 = 0.755$

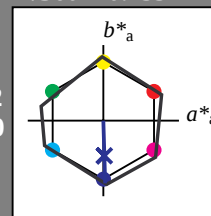
$lab \cdot tch$ and $lab \cdot nch$

D65: hue B

LCH*Ma: 53 83 272

rgb*Ma: 0.0 0.02 1.0

triangle lightness

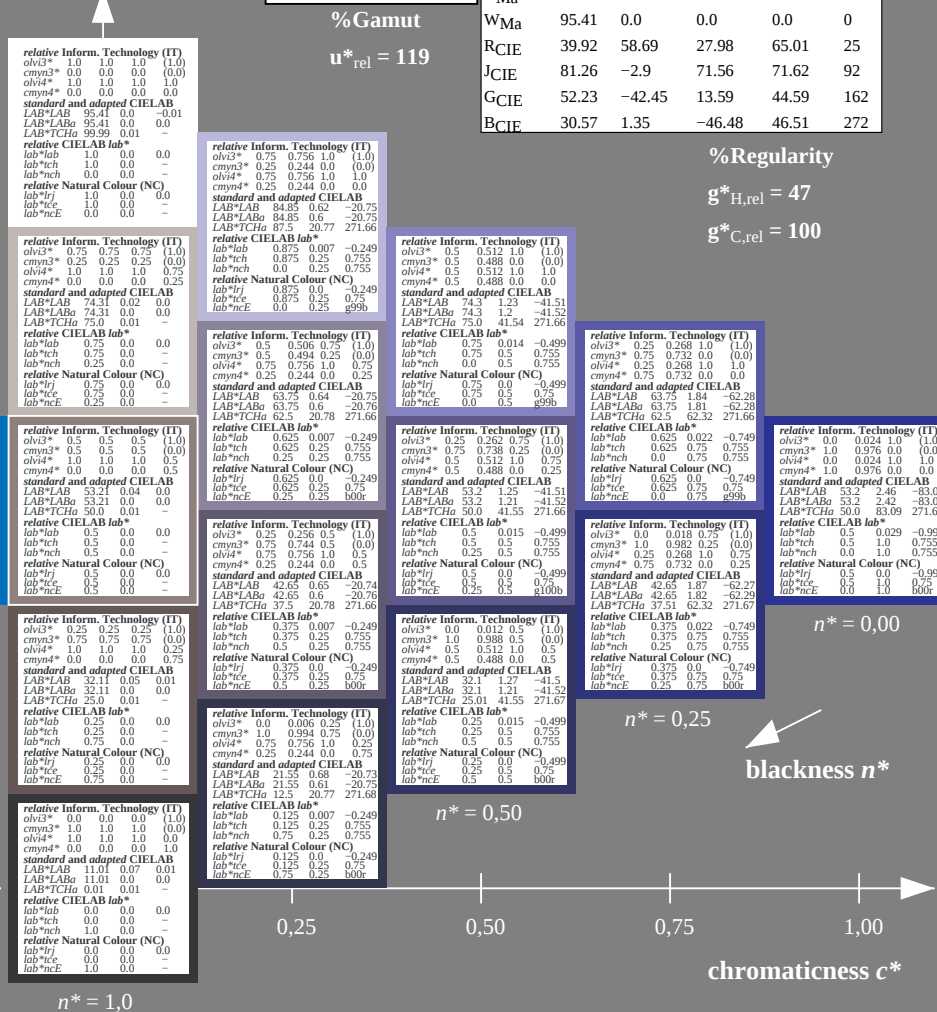


NRS11; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	53.2	77.06	34.32	84.36	24
JMa	53.2	-1.51	84.38	84.39	91
GMa	53.2	-82.27	18.98	84.44	167
G50BMa	53.2	-77.72	-32.98	84.44	203
BMa	53.2	4.37	-84.28	84.41	273
B50RMa	53.2	69.09	-48.41	84.37	325
NMa	10.99	0.0	0.0	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

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

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



5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

input: $cmY0^* setcmykcolor$

output: Startup (S) data dependent