

Input: Colorimetric Reflective System NRS11

for hue $h^* = lab \cdot h = 91/360 = 0.253$

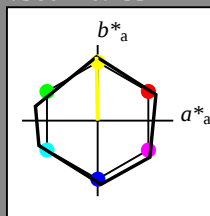
$lab \cdot tch$ and $lab \cdot nch$

D65: hue J

LCH*Ma: 53 84 91

rgb*Ma: 1.0 1.0 0.0

triangle lightness

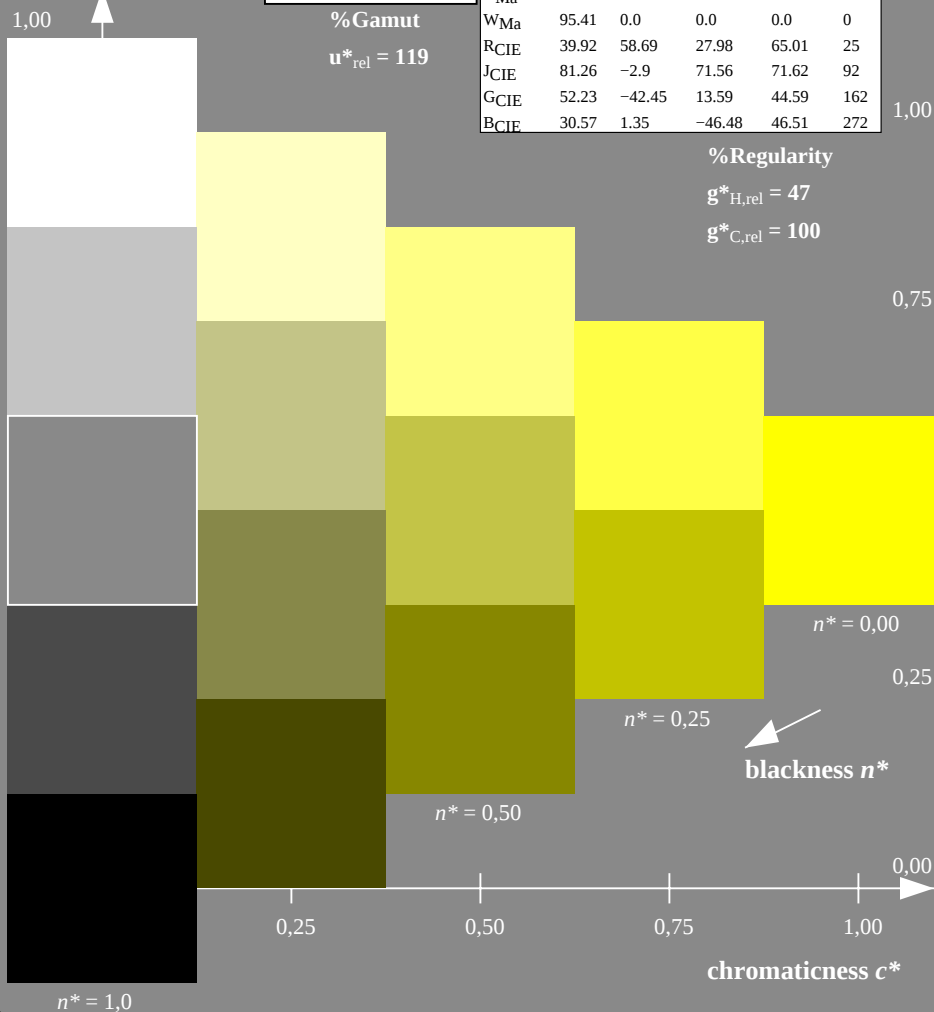


NRS11; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	53.2	77.06	34.32	84.36	24
JMa	53.2	-1.51	84.38	84.39	91
GMa	53.2	-82.27	18.98	84.44	167
G50BMa	53.2	-77.72	-32.98	84.44	203
BMa	53.2	4.37	-84.28	84.41	273
B50RMa	53.2	69.09	-48.41	84.37	325
NMa	10.99	0.0	0.0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

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

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



UE470-7, 5 step scales for constant CIELAB hue 91/360 = 0.253 (left)



BAM-test chart UE47; Colorimetric systems NRS11 & ORS18
D65: 5 step colour scales and coordinate data for 10 hues

Output: Colorimetric Reflective System ORS18

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

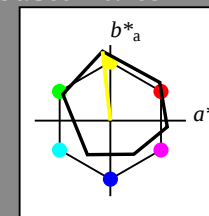
$lab \cdot tch$ and $lab \cdot nch$

D65: hue Y

LCH*Ma: 90 92 96

rgb*Ma: 1.0 1.0 0.0

triangle lightness

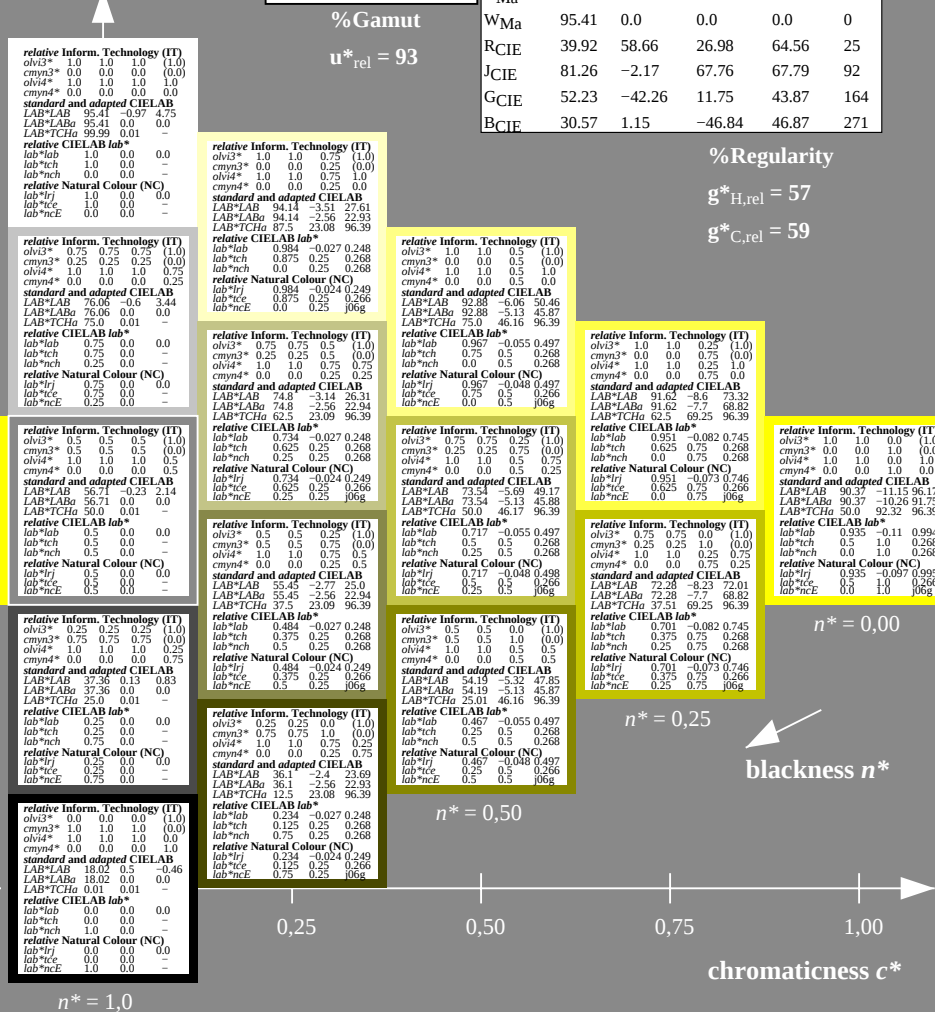


ORS18; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	47.94	65.37	50.52	82.62	38
YMa	90.37	-10.27	91.77	92.34	96
LMa	50.9	-62.79	34.95	71.87	151
CMa	58.62	-30.35	-45.01	54.3	236
VMa	25.71	31.11	-44.42	54.24	305
MMa	48.13	75.27	-8.35	75.73	354
NMa	18.01	0.0	0.0	0.0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

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

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



5 step scales for constant CIELAB hue 96/360 = 0.268 (right)

input: $cmY0^* \text{ setcmYcolor}$
output: $olv^* \text{ setrgbcolor} / w^* \text{ setgray}$

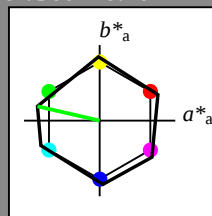
Input: Colorimetric Reflective System NRS11

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

lab^*tch and lab^*nch

D65: hue G
LCH*Ma: 53 84 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



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^*

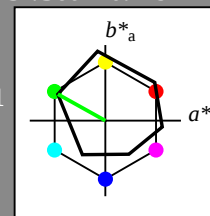
Output: Colorimetric Reflective System ORS18

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

lab^*tch and lab^*nch

D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0

triangle lightness



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

$n^* = 0,25$

$n^* = 0,50$

chromaticness c^*

UE470-7, 5 step scales for constant CIELAB hue 167/360 = 0.464 (left)

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

BAM-test chart UE47; Colorimetric systems NRS11 & ORS18

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

input: `cmY0* setcmYkcolor`

output: `olv* setrgbcolor / w* setgray`

Input: Colorimetric Reflective System NRS11

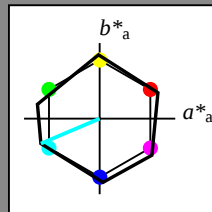
for hue $h^* = lab \cdot h = 203/360 = 0.564$

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

D65: hue G50B
LCH*Ma: 53 84 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness

1,00



% 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
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
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

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

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

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	-0.97	4.75	
	LAB*LABa	95.41	0.0	0.0	
	LAB*TC _{Ha}	95.99	0.01	0.0	
relative CIELAB lab*	lab*lab	1.0	0.0	0.0	
	lab*tch	1.0	0.0	0.0	
	lab*nch	0.0	0.0	0.0	
relative Natural Colour (NC)	lab*trj	1.0	0.0	0.0	
	lab*tce	1.0	0.0	0.0	
	lab*nce	0.0	0.0	0.0	

relative Inform. Technology (IT)	olvi3*	0.75	0.75	0.75	(1.0)
	cmyn3*	0.25	0.25	0.25	(0.0)
	olvi4*	1.0	1.0	1.0	(1.0)
	cmyn4*	0.0	0.0	0.0	(0.0)
standard and adapted CIELAB	LAB*LAB	76.06	-0.6	3.44	
	LAB*LABa	76.06	0.0	0.0	
	LAB*TC _{Ha}	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	0.75	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	56.71	-0.23	2.14	
	LAB*LABa	56.71	0.0	0.0	
	LAB*TC _{Ha}	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	37.36	0.13	0.83	
	LAB*LABa	37.36	0.0	0.0	
	LAB*TC _{Ha}	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	18.02	0.5	-0.46	
	LAB*LABa	18.02	0.0	0.0	
	LAB*TC _{Ha}	0.01	0.01	0.0	
relative CIELAB lab*	lab*lab	0.0	0.0	0.0	
	lab*tch	0.0	0.0	0.0	
	lab*nch	1.0	0.0	0.0	
relative Natural Colour (NC)	lab*trj	0.0	0.0	0.0	
	lab*tce	0.0	0.0	0.0	
	lab*nce	1.0	0.0	0.0	

$n^* = 1.0$

Output: Colorimetric Reflective System ORS18

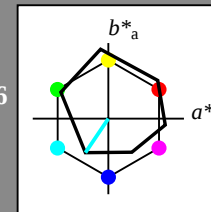
for hue $h^* = lab \cdot h = 236/360 = 0.656$

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

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0

triangle lightness

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
CLMa	58.62	-30.35	-45.01	54.3	236
V _{Ma}	25.71	31.11	-44.42	54.24	305
M _{Ma}	48.13	75.27	-8.35	75.73	354
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

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

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

relative Inform. Technology (IT)	olvi3*	0.75	1.0	1.0	(1.0)
	cmyn3*	0.25	0.0	0.0	(0.0)
	olvi4*	0.75	1.0	1.0	(1.0)
	cmyn4*	0.25	0.0	0.0	(0.0)
standard and adapted CIELAB	LAB*LAB	86.21	-8.38	-7.1	
	LAB*LABa	86.21	-7.58	-11.24	
	LAB*TC _{Ha}	87.5	13.57	236.01	
relative CIELAB lab*	lab*lab	0.881	-0.123	-0.216	
	lab*tch	0.881	-0.123	-0.216	
	lab*nch	0.0	0.25	0.656	
relative Natural Colour (NC)	lab*trj	0.881	-0.123	-0.216	
	lab*tce	0.881	-0.123	-0.216	
	lab*nce	0.0	0.25	0.656	

relative Inform. Technology (IT)	olvi3*	0.5	0.75	0.75	(1.0)
	cmyn3*	0.5	0.25	0.25	(0.0)
	olvi4*	0.75	1.0	1.0	(1.0)
	cmyn4*	0.5	0.0	0.0	(0.0)
standard and adapted CIELAB	LAB*LAB	66.86	-8.01	-8.41	
	LAB*LABa	66.86	-7.58	-11.25	
	LAB*TC _{Ha}	62.5	13.58	236.01	
relative CIELAB lab*	lab*lab	0.631	-0.139	-0.206	
	lab*tch	0.631	-0.139	-0.206	
	lab*nch	0.5	0.25	0.656	
relative Natural Colour (NC)	lab*trj	0.631	-0.139	-0.216	
	lab*tce	0.631	-0.139	-0.216	
	lab*nce	0.5	0.25	0.656	

relative Inform. Technology (IT)	olvi3*	0.25	0.5	0.5	(1.0)
	cmyn3*	0.75	0.25	0.25	(0.0)
	olvi4*	0.5	1.0	1.0	(1.0)
	cmyn4*	0.5	0.0	0.0	(0.0)
standard and adapted CIELAB	LAB*LAB	57.66	-15.42	-20.29	
	LAB*LABa	57.66	-15.17	-22.5	
	LAB*TC _{Ha}	50.0	27.15	236.01	
relative CIELAB lab*	lab*lab	0.512	-0.247	-0.433	
	lab*tch	0.512	-0.247	-0.433	
	lab*nch	0.25	0.5	0.656	
relative Natural Colour (NC)	lab*trj	0.512	-0.247	-0.433	
	lab*tce	0.512	-0.247	-0.433	
	lab*nce	0.25	0.5	0.656	

relative Inform. Technology (IT)	olvi3*	0.0	0.5	0.5	(1.0)
	cmyn3*	1.0	0.5	0.5	(0.0)
	olvi4*	0.5	1.0	1.0	(1.0)
	cmyn4*	0.5	0.0	0.0	(0.0)
standard and adapted CIELAB	LAB*LAB	38.32	-15.03	-21.59	
	LAB*LABa	38.32	-15.16	-22.5	
	LAB*TC _{Ha}	25.01	27.15	236.01	
relative CIELAB lab*	lab*lab	0.262	-0.278	-0.413	
	lab*tch	0.262	-0.278	-0.413	
	lab*nch	0.5	0.5	0.656	
relative Natural Colour (NC)	lab*trj	0.262	-0.278	-0.433	
	lab*tce	0.262	-0.278	-0.433	
	lab*nce	0.5	0.5	0.656	

relative Inform. Technology (IT)	olvi3*	0.0	0.25	0.25	(1.0)
	cmyn3*	1.0	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	28.17	-7.58	-11.24	
	LAB*LABa	28.17	-7.58	-11.24	
	LAB*TC _{Ha}	12.5	13.57	236.01	
relative CIELAB lab*	lab*lab	0.131	-0.139	-0.206	
	lab*tch	0.131	-0.139	-0.206	
	lab*nch	1.0	0.25	0.656	
relative Natural Colour (NC)	lab*trj	0.131	-0.139	-0.216	
	lab*tce	0.131	-0.139	-0.216	
	lab*nce	1.0	0.25	0.656	

$n^* = 0.50$

relative Inform. Technology (IT)	olvi3*	0.5	1.0	1.0	(1.0)
	cmyn3*	0.5	0.0	0.0	(0.0)
	olvi4*	0.5	1.0	1.0	(1.0)
	cmyn4*	0.5	0.0	0.0	(0.0)
standard and adapted CIELAB	LAB*LAB	77.01	-15.79	-18.98	
	LAB*LABa	77.01	-15.16	-22.5	
	LAB*TC _{Ha}	75.0	27.15	236.01	
relative CIELAB lab*	lab*lab	0.762	-0.278	-0.413	
	lab*tch	0.762	-0.278	-0.413	
	lab*nch	0.5	0.5	0.656	
relative Natural Colour (NC)	lab*trj	0.762	-0.278	-0.433	
	lab*tce	0.762	-0.278	-0.433	
	lab*nce	0.5	0.5	0.656	

relative Inform. Technology (IT)	olvi3*	0.25	0.75	0.75	(1.0)
	cmyn3*	0.75	0.25	0.25	(0.0)
	olvi4*	0.5	1.0	1.0	(1.0)
	cmyn4*	0.5	0.0	0.0	(0.0)
standard and adapted CIELAB	LAB*LAB	57.66	-15.42	-20.29	
	LAB*LABa	57.66	-15.17	-22.5	
	LAB*TC _{Ha}	50.0	27.15	236.01	
relative CIELAB lab*	lab*lab	0.512	-0.247	-0.433	
	lab*tch	0.512	-0.247	-0.433	
	lab*nch	0.25	0.5	0.656	
relative Natural Colour (NC)	lab*trj	0.512	-0.247	-0.433	
	lab*tce	0.512	-0.247	-0.433	
	lab*nce	0.25	0.5	0.656	

relative Inform. Technology (IT)	olvi3*	0.0	0.5	0.5	(1.0)
	cmyn3*	1.0	0.5	0.5	(0.0)
	olvi4*	0.5	1.0	1.0	(1.0)
	cmyn4*	0.5	0.0	0.0	(0.0)
standard and adapted CIELAB	LAB*LAB	38.32	-15.03	-21.59	
	LAB*LABa	38.32	-15.16	-22.5	
	LAB*TC _{Ha}	25.01	27.15	236.01	
relative CIELAB lab*	lab*lab	0.262	-0.278	-0.413	
	lab*tch	0.262	-0.278	-0.413	
	lab*nch	0.5	0.5	0.656	
relative Natural Colour (NC)	lab*trj	0.262	-0.278	-0.433	
	lab*tce	0.262	-0.278	-0.433	
	lab*nce	0.5	0.5	0.656	

relative CIELAB lab*			
lab*lab	0.262	-0.278	-0.413
lab*tch	0.25	0.5	0.656
lab*nch	0.5	0.5	0.656
relative Natural Colour (NC)			
lab*lrj	0.262	-0.247	-0.433
lab*tce	0.25	0.5	0.667
lab*nce	0.5	0.5	0.66b

$$n^* = 0,50$$

Input: Colorimetric Reflective System NRS11

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

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

D65: hue B

LCH*Ma: 53 84 273

rgb*Ma: 0.0 0.0 1.0

triangle lightness

1,00

%Gamut

$u^*_{rel} = 119$

%Regularity

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

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

0,75

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

0,25

0,50

0,75

1,00

chromaticness c^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

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

%Gamut

$u^*_{rel} = 119$

%Regularity

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

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

0,75

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

0,25

0,50

0,75

1,00

chromaticness c^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

Output: Colorimetric Reflective System ORS18

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

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

D65: hue V

LCH*Ma: 26 54 305

rgb*Ma: 0.0 0.0 1.0

triangle lightness

1,00

%Gamut

$u^*_{rel} = 93$

%Regularity

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

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

0,75

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

0,25

0,50

0,75

1,00

chromaticness c^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

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

%Gamut

$u^*_{rel} = 93$

%Regularity

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

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

0,75

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

0,25

0,50

0,75

1,00

chromaticness c^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

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

%Gamut

$u^*_{rel} = 93$

%Regularity

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

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

0,75

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

0,25

0,50

0,75

1,00

chromaticness c^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

blackness n^*

UE470-7, 5 step scales for constant CIELAB hue 273/360 = 0.758 (left)

5 step scales for constant CIELAB hue 305/360 = 0.847 (right)

BAM-test chart UE47; Colorimetric systems NRS11 & ORS18

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

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

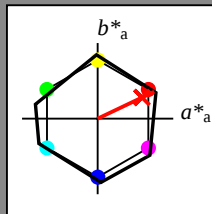
output: $olv^* \text{ set } rgbcolor / w^* \text{ set } gray$

Input: 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

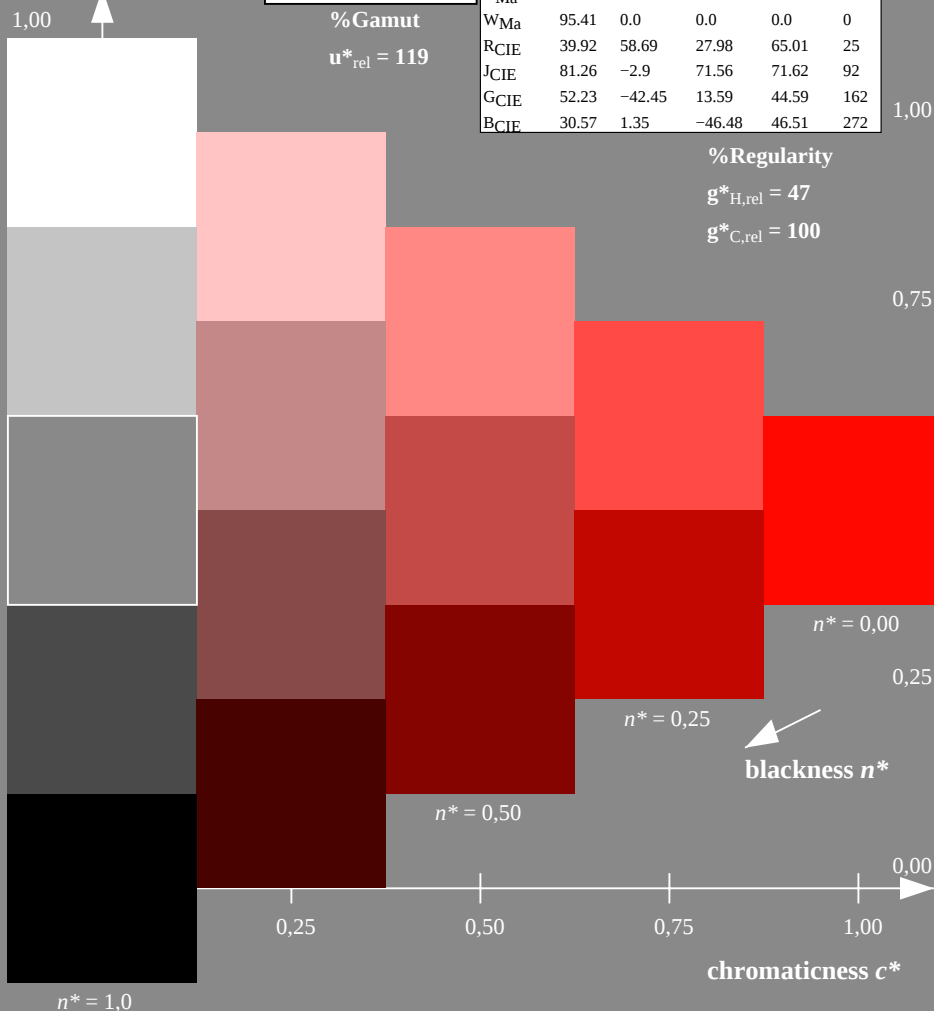


NRS11; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	53.2	77.06	34.32	84.36	24
JMa	53.2	-1.51	84.38	84.39	91
GMa	53.2	-82.27	18.98	84.44	167
G50BMa	53.2	-77.72	-32.98	84.44	203
BMa	53.2	4.37	-84.28	84.41	273
B50RMa	53.2	69.09	-48.41	84.37	325
NMa	10.99	0.0	0.0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

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

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



UE470-7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)



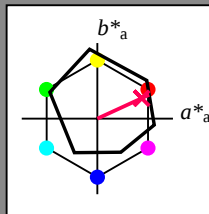
BAM-test chart UE47; Colorimetric systems NRS11 & ORS18
D65: 5 step colour scales and coordinate data for 10 hues

Output: 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

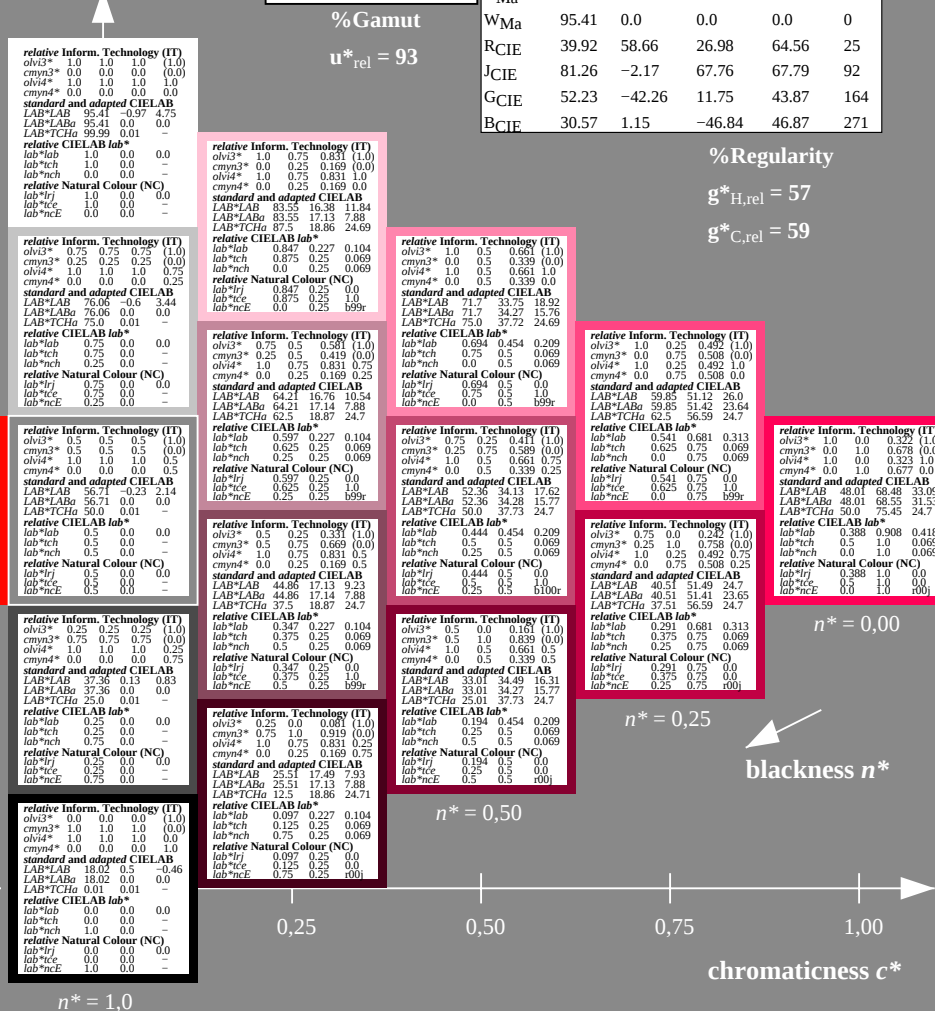


ORS18; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	47.94	65.37	50.52	82.62	38
YMa	90.37	-10.27	91.77	92.34	96
LMa	50.9	-62.79	34.95	71.87	151
CMa	58.62	-30.35	-45.01	54.3	236
VMa	25.71	31.11	-44.42	54.24	305
MMa	48.13	75.27	-8.35	75.73	354
NMa	18.01	0.0	0.0	0.0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

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

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



5 step scales for constant CIELAB hue 25/360 = 0.069 (right)

input: $cmY0^* setcmykcolor$
output: $olv^* setrgbcolor / w^* setgray$

Input: Colorimetric Reflective System NRS11

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

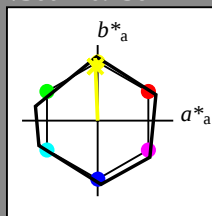
$lab \cdot tch$ and $lab \cdot nch$

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
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

$n^* = 0,25$

$n^* = 0,50$

0,00

chromaticness c^*

Output: Colorimetric Reflective System ORS18

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

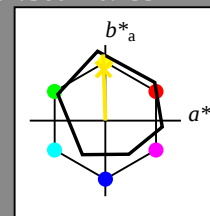
$lab \cdot tch$ and $lab \cdot nch$

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

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

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

1,00

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

$n^* = 0,50$

0,00

chromaticness c^*

UE470-7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

BAM-test chart UE47; Colorimetric systems NRS11 & ORS18

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

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

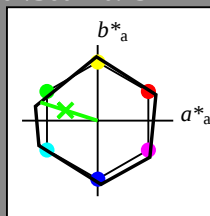
output: $olv^* \text{ setrgbcolor} / w^* \text{ setgray}$

Input: Colorimetric Reflective System NRS11

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

lab^*tch and lab^*nch

D65: hue G
LCH*Ma: 53 80 162
rgb*Ma: 0.08 1.0 0.0
triangle lightness

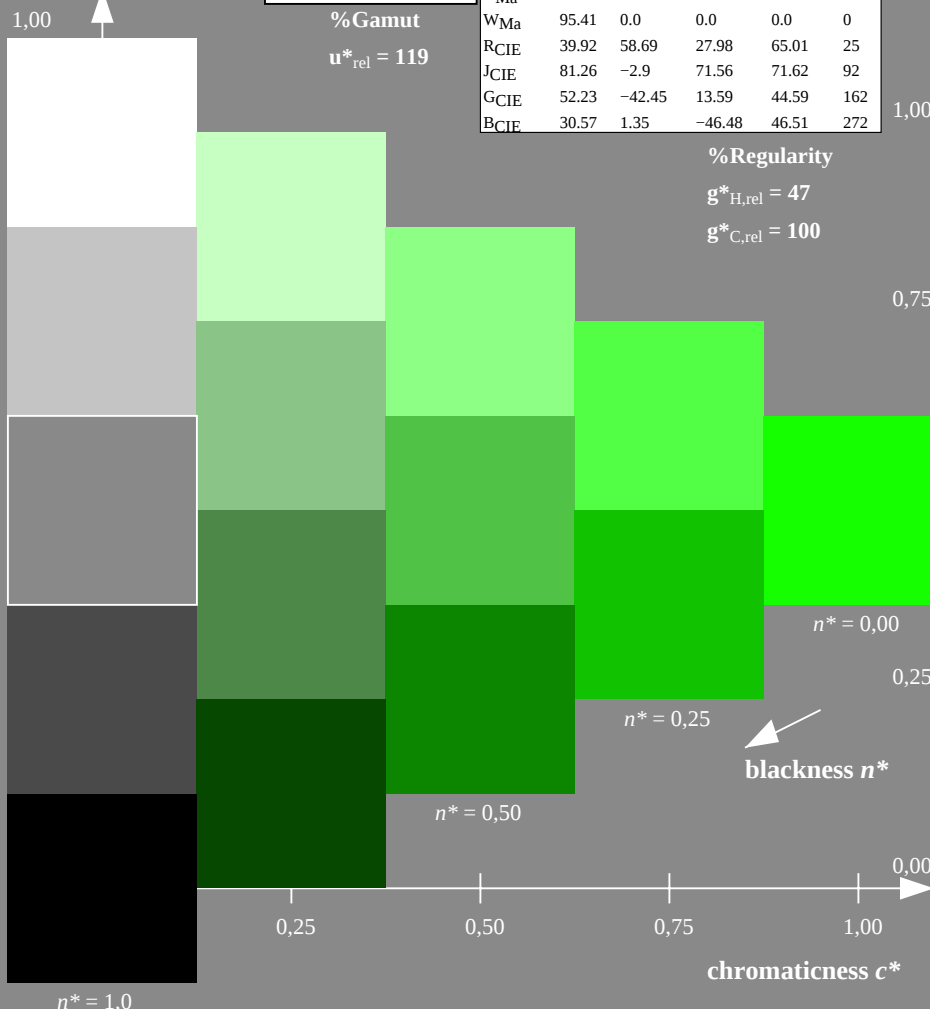


NRS11; adapted (a) CIELAB data					
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	53.2	77.06	34.32	84.36	24
JMa	53.2	-1.51	84.38	84.39	91
GMa	53.2	-82.27	18.98	84.44	167
G50BMa	53.2	-77.72	-32.98	84.44	203
BMa	53.2	4.37	-84.28	84.41	273
B50RMa	53.2	69.09	-48.41	84.37	325
NMa	10.99	0.0	0.0	0.0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

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

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



UE470-7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)



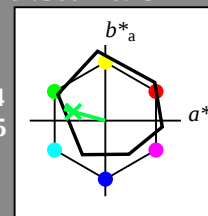
D65: 5 step colour scales and coordinate data for 10 hues

Output: Colorimetric Reflective System ORS18

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

lab^*tch and lab^*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25
triangle lightness

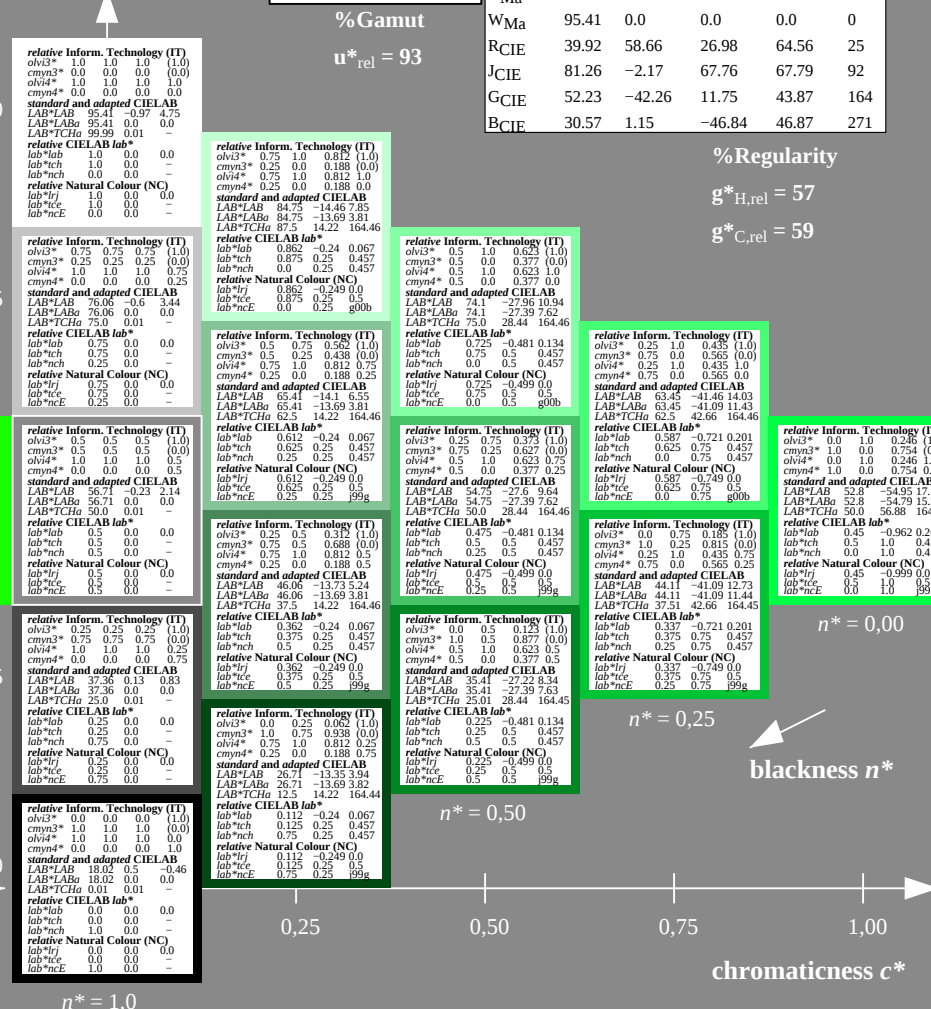


ORS18; adapted (a) CIELAB data					
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	47.94	65.37	50.52	82.62	38
YMa	90.37	-10.27	91.77	92.34	96
LMa	50.9	-62.79	34.95	71.87	151
CLMa	58.62	-30.35	-45.01	54.3	236
VMa	25.71	31.11	-44.42	54.24	305
MMa	48.13	75.27	-8.35	75.73	354
NMa	18.01	0.0	0.0	0.0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

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

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



5 step scales for constant CIELAB hue 164/360 = 0.457 (right)

input: $cmY0^* setcmykcolor$

output: $lsv^* setrgbcolor / w^* setgray$

Input: Colorimetric Reflective System NRS11

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

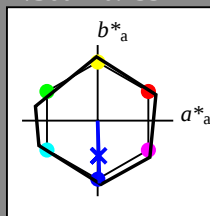
$lab \cdot tch$ and $lab \cdot nch$

D65: hue B

LCH*Ma: 53 83 272

rgb*Ma: 0.0 0.02 1.0

triangle lightness

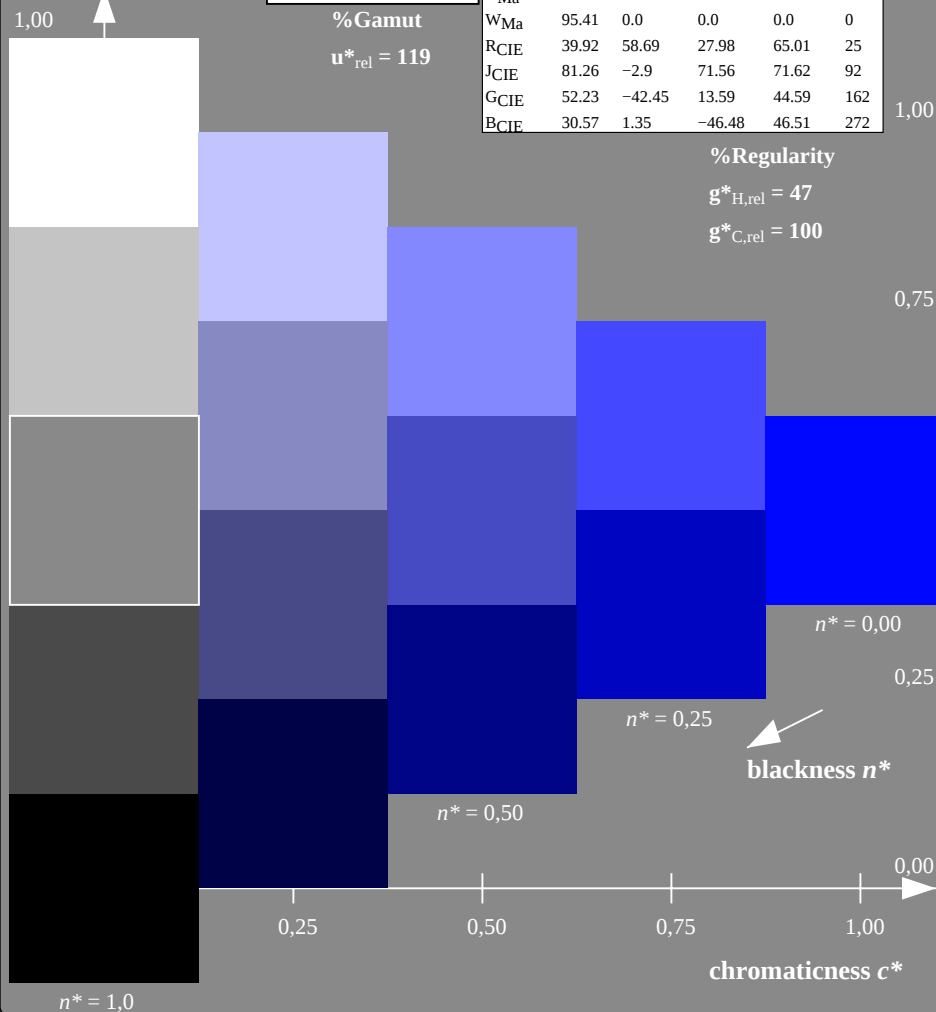


NRS11; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	53.2	77.06	34.32	84.36	24
JMa	53.2	-1.51	84.38	84.39	91
GMa	53.2	-82.27	18.98	84.44	167
G50BMa	53.2	-77.72	-32.98	84.44	203
BMa	53.2	4.37	-84.28	84.41	273
B50RMa	53.2	69.09	-48.41	84.37	325
NMa	10.99	0.0	0.0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

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

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



UE470-7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

BAM-test chart UE47; Colorimetric systems NRS11 & ORS18

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

Output: Colorimetric Reflective System ORS18

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

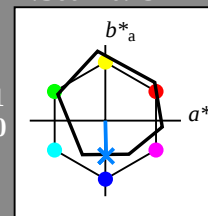
$lab \cdot tch$ and $lab \cdot nch$

D65: hue B

LCH*Ma: 42 45 271

rgb*Ma: 0.0 0.49 1.0

triangle lightness

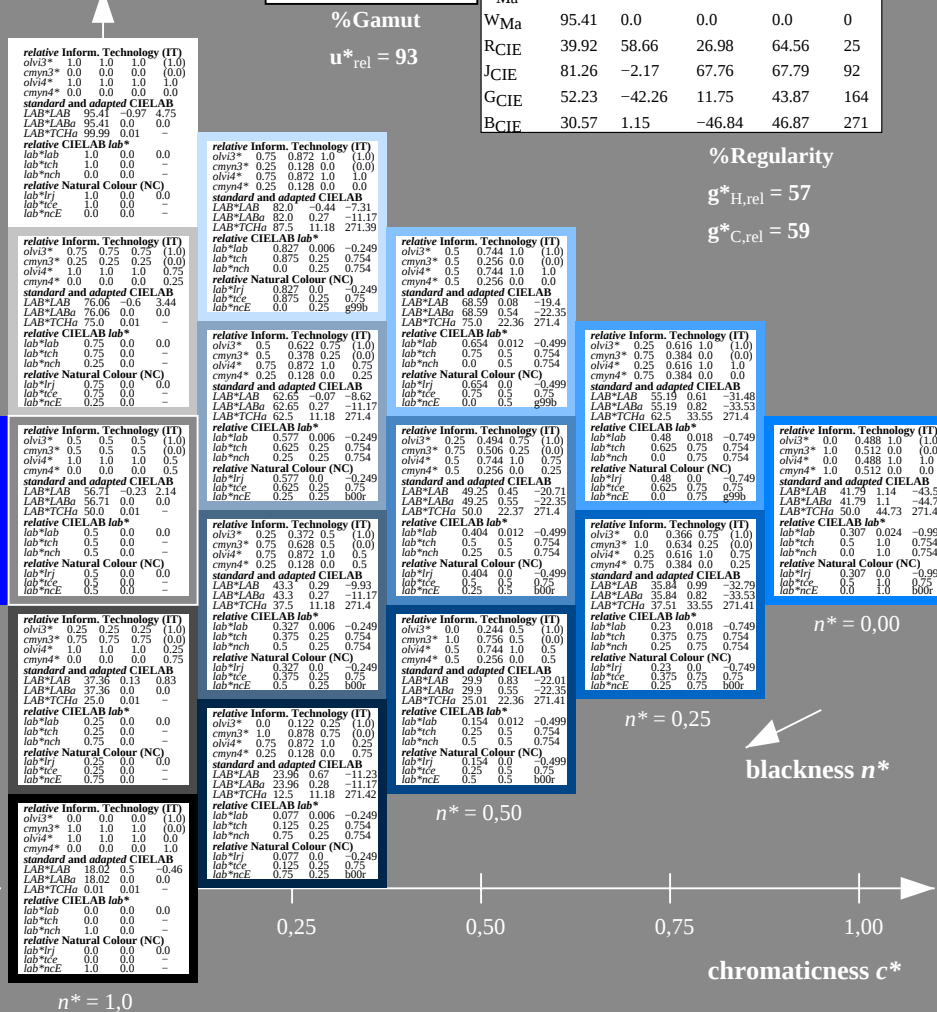


ORS18; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	47.94	65.37	50.52	82.62	38
YMa	90.37	-10.27	91.77	92.34	96
LMa	50.9	-62.79	34.95	71.87	151
CMa	58.62	-30.35	-45.01	54.3	236
VMa	25.71	31.11	-44.42	54.24	305
MMa	48.13	75.27	-8.35	75.73	354
NMa	18.01	0.0	0.0	0.0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

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

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



5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

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

output: $olv^* \text{ setrgbcolor} / w^* \text{ setgray}$