

Input: Colorimetric Reflective System MRS18

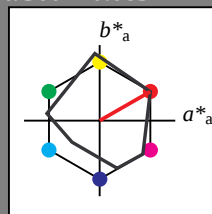
for hue $h^* = lab \cdot h = 30/360 = 0.083$

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

D65: hue R
LCH*Ma: 50 77 30
rgb*Ma: 1.0 0.0 0.0

triangle lightness

1,00



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

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

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

1,00

Output: Colorimetric Reflective System ORS18

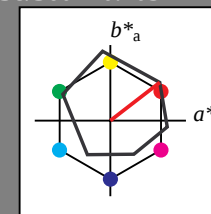
for hue $h^* = lab \cdot h = 38/360 = 0.105$

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

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness

1,00



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

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

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

0,75

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*LABb	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	0.75	0.75	(1.0)	
cmyn3*	0.25	0.25	0.25	(0.0)	
olvi4*	1.0	1.0	1.0	(1.0)	
cmyn4*	0.0	0.0	0.0	(0.0)	
standard and adapted CIELAB					
LAB*LAB	76.06	-0.6	3.44		
LAB*LABa	76.06	0.0	0.0		
LAB*LABb	76.06	0.0	0.0		
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*LABb	56.71	0.0	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*LABb	37.36	0.0	0.0		
relative CIELAB lab*					
lab*lab	0.25	0.0	0.0		
lab*tch	0.25	0.0	0.0		
lab*nch	0.75	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		

$n^* = 1,0$

relative Inform. Technology (IT)					
olvi3*	1.0	0.75	0.75	(1.0)	
cmyn3*	0.0	0.25	0.25	(0.0)	
olvi4*	1.0	0.75	0.75	(1.0)	
cmyn4*	0.0	0.25	0.25	(0.0)	
standard and adapted CIELAB					
LAB*LAB	83.54	15.58	16.58		
LAB*LABa	83.54	16.34	12.62		
LAB*LABb	83.54	16.34	12.62		
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	0.5	0.5	(1.0)	
cmyn3*	0.25	0.5	0.5	(0.0)	
olvi4*	1.0	0.75	0.75	(1.0)	
cmyn4*	0.0	0.25	0.25	(0.0)	
standard and adapted CIELAB					
LAB*LAB	64.19	15.96	15.28		
LAB*LABa	64.19	16.34	12.63		
LAB*LABb	64.19	16.34	12.63		
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	0.25	0.25	(1.0)	
cmyn3*	0.5	0.75	0.75	(0.0)	
olvi4*	1.0	0.75	0.75	(1.0)	
cmyn4*	0.0	0.25	0.25	(0.0)	
standard and adapted CIELAB					
LAB*LAB	44.84	16.33	13.98		
LAB*LABa	44.84	16.34	12.63		
LAB*LABb	44.84	16.34	12.63		
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	0.0	0.0	(1.0)	
cmyn3*	0.75	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	25.5	16.34	12.62		
LAB*LABa	25.5	16.34	12.62		
LAB*LABb	25.5	16.34	12.62		
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		

$n^* = 0,50$

relative Inform. Technology (IT)					
olvi3*	0.75	0.25	0.25	(1.0)	
cmyn3*	0.25	0.75	0.75	(0.0)	
olvi4*	1.0	0.5	0.5	(1.0)	
cmyn4*	0.0	0.5	0.5	(0.0)	
standard and adapted CIELAB					
LAB*LAB	52.33	32.53	27.11		
LAB*LABa	52.33	32.69	25.26		
LAB*LABb	52.33	32.69	25.26		
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	0.5	0.5	(1.0)	
cmyn4*	0.0	0.5	0.5	(0.0)	
standard and adapted CIELAB					
LAB*LAB	40.46	16.33	13.98		
LAB*LABa	40.46	16.34	12.63		
LAB*LABb	40.46	16.34	12.63		
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	0.25	0.25	(1.0)	
cmyn4*	0.0	0.25	0.25	(0.0)	
standard and adapted CIELAB					

Input: Colorimetric Reflective System MRS18

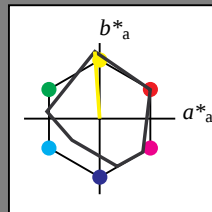
for hue $h^* = lab^*h = 94/360 = 0.261$

lab^*tch and lab^*nch

D65: hue J
LCH*Ma: 91 89 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness

1,00



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

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

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

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*Lab	95.41	0.0	0.0		
LAB*TC _{Ha}	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		
lab*trj	1.0	0.0	0.0		
relative Natural Colour (NC)					
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 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*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		
lab*trj	0.75	0.0	0.0		
relative Natural Colour (NC)					
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 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*Lab	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		
lab*trj	0.5	0.0	0.0		
relative Natural Colour (NC)					
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 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*Lab	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		
lab*trj	0.25	0.0	0.0		
relative Natural Colour (NC)					
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 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*Lab	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		
lab*trj	0.0	0.0	0.0		
relative Natural Colour (NC)					
lab*lab	0.0	0.0	0.0		
lab*tch	0.0	0.0	0.0		
lab*nch	1.0	0.0	0.0		

$n^* = 1,0$

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

BAM-test chart UE45; Colorimetric systems MRS18 & ORS18

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

output: *no change compared to input*

Output: Colorimetric Reflective System ORS18

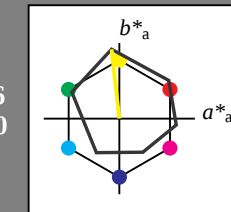
for hue $h^* = lab^*h = 96/360 = 0.268$

lab^*tch and lab^*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
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*	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	92.88	-6.06	50.46		
LAB*Lab	92.88	0.0	0.0		
LAB*TC _{Ha}	92.88	-5.13	45.87		
relative CIELAB lab*					
lab*lab	0.967	-0.055	0.497		
lab*tch	0.75	0.0	0.0		
lab*nch	0.0	0.0	0.0		
lab*trj	0.967	-0.048	0.497		
relative Natural Colour (NC)					
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 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	73.54	-5.69	49.17		
LAB*Lab	73.54	0.0	0.0		
LAB*TC _{Ha}	73.54	-5.13	45.88		
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		
lab*trj	0.75	0.0	0.0		
relative Natural Colour (NC)					
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 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*Lab	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		
lab*trj	0.5	0.0	0.0		
relative Natural Colour (NC)					
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 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*Lab	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		
lab*trj	0.25	0.0	0.0		
relative Natural Colour (NC)					
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 Inform. Technology (IT)			
olvi3*	0.0	0.0	0.0
cmyn3*	1.0	1.0	1.0
olvi4*	1.0	1.0	1.0
cmyn4*	0.0	0.0	0.0
standard and adapted CIELAB			
LAB*LAB	18.02	0.5	-0.46
LAB*Lab	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*TC _{Ha}	0.0	0.0	0.0
relative CIE L*a*b*			
L*a*b*	0.0	0.0	0.0
L*a*TC _{Ha}	0.0	0.0	0.0
L*b*TC _{Ha}	0.0	0.0	0.0
relative CIE L*u*v*			
L*u*v*	0.0	0.0	0.0
L*u*TC _{Ha}	0.0	0.0	0.0
L*v*TC _{Ha}	0.0	0.0	0.0
relative CIE L*w			
L*w	0.0	0.0	0.0
relative CIE L*a*b* (D50)			
L*a*b*	0.0	0.0	0.0
L*a*TC _{Ha}	0.0	0.0	0.0
L*b*TC _{Ha}	0.0	0.0	0.0
relative CIE L*u*v* (D50)			
L*u*v*	0.0	0.0	0.0
L*u*TC _{Ha}	0.0	0.0	0.0
L*v*TC _{Ha}	0.0	0.0	0.0
relative CIE L*w (D50)			
L*w	0.0	0.0	0.0
relative CIE L*a*b* (D50) (L*a*b*)			
L*a*b*	0.0	0.0	0.0
L*a*TC _{Ha}	0.0	0.0	0.0
L*b*TC _{Ha}	0.0	0.0	0.0
relative CIE L*u*v* (D50) (L*u*v*)			
L*u*v*	0.0	0.0	0.0
L*u*TC _{Ha}	0.0	0.0	0.0
L*v*TC _{Ha}	0.0	0.0	0.0
relative CIE L*w (D50) (L*w)			
L*w	0.0	0.0	0.0
relative CIE L*a*b* (D50) (L*a*b*) (L*a*b*)			
L*a*b*	0.0	0.0	0.0
L*a*TC _{Ha}	0.0	0.0	0.0
L*b*TC _{Ha}	0.0	0.0	0.0
relative CIE L*u*v* (D50) (L*u*v*) (L*u*v*)			
L*u*v*	0.0	0.0	0.0
L*u*TC _{Ha}	0.0	0.0	0.0
L*v*TC _{Ha}	0.0	0.0	0.0
relative CIE L*w (D50) (L*w) (L*w)			
L*w	0.0	0.0	0.0
relative CIE L*a*b* (D50) (L*a*b*) (L*a*b*) (L*a*b*)			
L*a*b*	0.0	0.0	0.0
L*a*TC _{Ha}	0.0	0.0	0.0
L*b*TC _{Ha}	0.0	0.0	0.0
relative CIE L*u*v* (D50) (L*u*v*) (L*u*v*) (L*u*v*)			
L*u*v*	0.0	0.0	0.0
L*u*TC _{Ha}	0.0	0.0	0.0
L*v*TC _{Ha}	0.0	0.0	0.0
relative CIE L*w (D50) (L*w) (L*w) (L*w)			
L*w	0.0	0.0	0.0
relative CIE L*a*b* (D50) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*)			
L*a*b*	0.0	0.0	0.0
L*a*TC _{Ha}	0.0	0.0	0.0
L*b*TC _{Ha}	0.0	0.0	0.0
relative CIE L*u*v* (D50) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*)			
L*u*v*	0.0	0.0	0.0
L*u*TC _{Ha}	0.0	0.0	0.0
L*v*TC _{Ha}	0.0	0.0	0.0
relative CIE L*w (D50) (L*w) (L*w) (L*w) (L*w)			
L*w	0.0	0.0	0.0
relative CIE L*a*b* (D50) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*)			
L*a*b*	0.0	0.0	0.0
L*a*TC _{Ha}	0.0	0.0	0.0
L*b*TC _{Ha}	0.0	0.0	0.0
relative CIE L*u*v* (D50) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*)			
L*u*v*	0.0	0.0	0.0
L*u*TC _{Ha}	0.0	0.0	0.0
L*v*TC _{Ha}	0.0	0.0	0.0
relative CIE L*w (D50) (L*w) (L*w) (L*w) (L*w) (L*w)			
L*w	0.0	0.0	0.0
relative CIE L*a*b* (D50) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*)			
L*a*b*	0.0	0.0	0.0
L*a*TC _{Ha}	0.0	0.0	0.0
L*b*TC _{Ha}	0.0	0.0	0.0
relative CIE L*u*v* (D50) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*)			
L*u*v*	0.0	0.0	0.0
L*u*TC _{Ha}	0.0	0.0	0.0
L*v*TC _{Ha}	0.0	0.0	0.0
relative CIE L*w (D50) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w)			
L*w	0.0	0.0	0.0
relative CIE L*a*b* (D50) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*)			
L*a*b*	0.0	0.0	0.0
L*a*TC _{Ha}	0.0	0.0	0.0
L*b*TC _{Ha}	0.0	0.0	0.0
relative CIE L*u*v* (D50) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*)			
L*u*v*	0.0	0.0	0.0
L*u*TC _{Ha}	0.0	0.0	0.0
L*v*TC _{Ha}	0.0	0.0	0.0
relative CIE L*w (D50) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w)			
L*w	0.0	0.0	0.0
relative CIE L*a*b* (D50) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*)			
L*a*b*	0.0	0.0	0.0
L*a*TC _{Ha}	0.0	0.0	0.0
L*b*TC _{Ha}	0.0	0.0	0.0
relative CIE L*u*v* (D50) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*)			
L*u*v*	0.0	0.0	0.0
L*u*TC _{Ha}	0.0	0.0	0.0
L*v*TC _{Ha}	0.0	0.0	0.0
relative CIE L*w (D50) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w)			
L*w	0.0	0.0	0.0
relative CIE L*a*b* (D50) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*)			
L*a*b*	0.0	0.0	0.0
L*a*TC _{Ha}	0.0	0.0	0.0
L*b*TC _{Ha}	0.0	0.0	0.0
relative CIE L*u*v* (D50) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*)			
L*u*v*	0.0	0.0	0.0
L*u*TC _{Ha}	0.0	0.0	0.0
L*v*TC _{Ha}	0.0	0.0	0.0
relative CIE L*w (D50) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w)			
L*w	0.0	0.0	0.0
relative CIE L*a*b* (D50) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*)			
L*a*b*	0.0	0.0	0.0
L*a*TC _{Ha}	0.0	0.0	0.0
L*b*TC _{Ha}	0.0	0.0	0.0
relative CIE L*u*v* (D50) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*)			
L*u*v*	0.0	0.0	0.0
L*u*TC _{Ha}	0.0	0.0	0.0
L*v*TC _{Ha}	0.0	0.0	0.0
relative CIE L*w (D50) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w)			
L*w	0.0	0.0	0.0
relative CIE L*a*b* (D50) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*)			
L*a*b*	0.0	0.0	0.0
L*a*TC _{Ha}	0.0	0.0	0.0
L*b*TC _{Ha}	0.0	0.0	0.0
relative CIE L*u*v* (D50) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*)			
L*u*v*	0.0	0.0	0.0
L*u*TC _{Ha}	0.0	0.0	0.0
L*v*TC _{Ha}	0.0	0.0	0.0
relative CIE L*w (D50) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w)			
L*w	0.0	0.0	0.0
relative CIE L*a*b* (D50) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*)			
L*a*b*	0.0	0.0	0.0
L*a*TC _{Ha}	0.0	0.0	0.0
L*b*TC _{Ha}	0.0	0.0	0.0
relative CIE L*u*v* (D50) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*)			
L*u*v*	0.0	0.0	0.0
L*u*TC _{Ha}	0.0	0.0	0.0
L*v*TC _{Ha}	0.0	0.0	0.0
relative CIE L*w (D50) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w)			
L*w	0.0	0.0	0.0
relative CIE L*a*b* (D50) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*)			
L*a*b*	0.0	0.0	0.0
L*a*TC _{Ha}	0.0	0.0	0.0
L*b*TC _{Ha}	0.0	0.0	0.0
relative CIE L*u*v* (D50) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*)			
L*u*v*	0.0	0.0	0.0
L*u*TC _{Ha}	0.0	0.0	0.0
L*v*TC _{Ha}	0.0	0.0	0.0
relative CIE L*w (D50) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w)			
L*w	0.0	0.0	0.0
relative CIE L*a*b* (D50) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*)			
L*a*b*	0.0	0.0	0.0
L*a*TC _{Ha}	0.0	0.0	0.0
L*b*TC _{Ha}	0.0	0.0	0.0
relative CIE L*u*v* (D50) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*)			
L*u*v*	0.0	0.0	0.0
L*u*TC _{Ha}	0.0	0.0	0.0
L*v*TC _{Ha}	0.0	0.0	0.0
relative CIE L*w (D50) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w)			
L*w	0.0	0.0	0.0
relative CIE L*a*b* (D50) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*)			
L*a*b*	0.0	0.0	0.0
L*a*TC _{Ha}	0.0	0.0	0.0
L*b*TC _{Ha}	0.0	0.0	0.0
relative CIE L*u*v* (D50) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*)			
L*u*v*	0.0	0.0	0.0
L*u*TC _{Ha}	0.0	0.0	0.0
L*v*TC _{Ha}	0.0	0.0	0.0
relative CIE L*w (D50) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w)			
L*w	0.0	0.0	0.0
relative CIE L*a*b* (D50) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*)			
L*a*b*	0.0	0.0	0.0
L*a*TC _{Ha}	0.0	0.0	0.0
L*b*TC _{Ha}	0.0	0.0	0.0
relative CIE L*u*v* (D50) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*)			
L*u*v*	0.0	0.0	0.0
L*u*TC _{Ha}	0.0	0.0	0.0
L*v*TC _{Ha}	0.0	0.0	0.0
relative CIE L*w (D50) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w)			
L*w	0.0	0.0	0.0
relative CIE L*a*b* (D50) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*)			
L*a*b*	0.0	0.0	0.0
L*a*TC _{Ha}	0.0	0.0	0.0
L*b*TC _{Ha}	0.0	0.0	0.0
relative CIE L*u*v* (D50) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*)			
L*u*v*	0.0	0.0	0.0
L*u*TC _{Ha}	0.0	0.0	0.0
L*v*TC _{Ha}	0.0	0.0	0.0
relative CIE L*w (D50) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w)			
L*w	0.0	0.0	0.0
relative CIE L*a*b* (D50) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*)			
L*a*b*	0.0	0.0	0.0
L*a*TC _{Ha}	0.0	0.0	0.0
L*b*TC _{Ha}	0.0	0.0	0.0
relative CIE L*u*v* (D50) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*)			
L*u*v*	0.0	0.0	0.0
L*u*TC _{Ha}	0.0	0.0	0.0
L*v*TC _{Ha}	0.0	0.0	0.0
relative CIE L*w (D50) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w)			
L*w	0.0	0.0	0.0
relative CIE L*a*b* (D50) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*) (L*a*b*)			
L*a*b*	0.0	0.0	0.0
L*a*TC _{Ha}	0.0	0.0	0.0
L*b*TC _{Ha}	0.0	0.0	0.0
relative CIE L*u*v* (D50) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*) (L*u*v*)			
L*u*v*	0.0	0.0	0.0
L*u*TC _{Ha}	0.0	0.0	0.0
L*v*TC _{Ha}	0.0	0.0	0.0
relative CIE L*w (D50) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w) (L*w)			
L*w	0.0	0.0	0.0
relative CIE L*a*b* (D50) (L*a*b*)			
L*a*b*	0.0	0.0	0.0
L*a*TC _{Ha}	0.0	0.0	0.0
L*b*TC _{Ha}	0.0	0.0	0.0
relative CIE L*u*v* (D50) (L*u*v*)			
L*u*v*	0.0	0.0	0.0
L*u*TC _{Ha}	0.0	0.0	0.0
L*v*TC _{Ha}	0.0	0.0	0.0
relative CIE L*w (D50) (L*w)			
L*w	0.0	0.0	0.0
relative CIE L*a*b* (D50) (L*a*b*)			
L*a*b*	0.0	0.0	0.0
L*a*TC _{Ha}	0.0	0.0	0.0
L*b*TC _{Ha}	0.0	0.0	0.0
relative CIE L*u*v* (D50) (L*u*v*)			
L*u*v*	0.0	0.0	0.0
L*u*TC _{Ha}	0.0	0.0	0.0
L*v*TC _{Ha}	0.0	0.0	0.0
relative CIE L*w (D50) (L*w)			
L*w	0.0	0.0	0.0
relative CIE L*a*b* (D50) (L*a*b*)			
L*a*b*	0.0	0.0	0.0
L*a*TC _{Ha}	0.0	0.0	0.0
L*b*TC _{Ha}	0.0	0.0	0.0
relative CIE L*u*v* (D50) (L*u*v*)			
L*u*v*	0.0	0.0	0.0
L*u*TC _{Ha}	0.0	0.0	0.0
L*v*TC _{Ha}	0.0	0.0	0.0
relative CIE L*w (D50) (L*w)			
L*w	0.0	0.0	0.0
relative CIE L*a*b* (D50) (L*a*b*)			
L*a*b*	0.0	0.0	0.0
L*a*TC _{Ha}	0.0	0.0	0.0
L*b*TC _{Ha}	0.0	0.0	0.0

Input: Colorimetric Reflective System MRS18

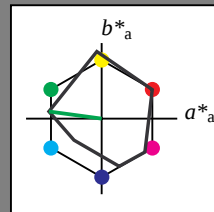
for hue $h^* = lab \cdot h = 172/360 = 0.479$

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

D65: hue G
LCH*Ma: 52 70 172
rgb*Ma: 0.0 1.0 0.0

triangle lightness

1,00



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

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

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

1,00

Output: Colorimetric Reflective System ORS18

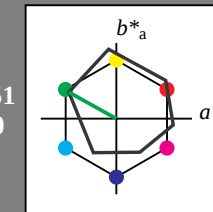
for hue $h^* = lab \cdot h = 151/360 = 0.419$

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

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

triangle lightness

1,00



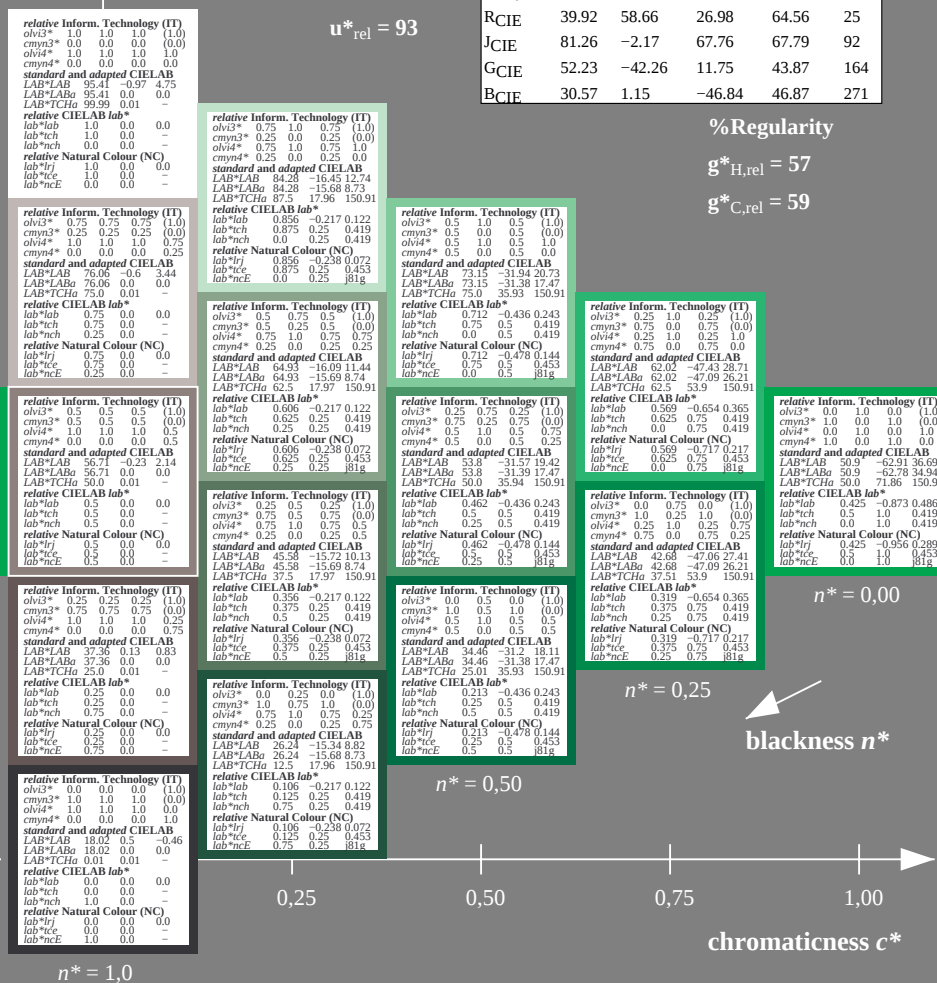
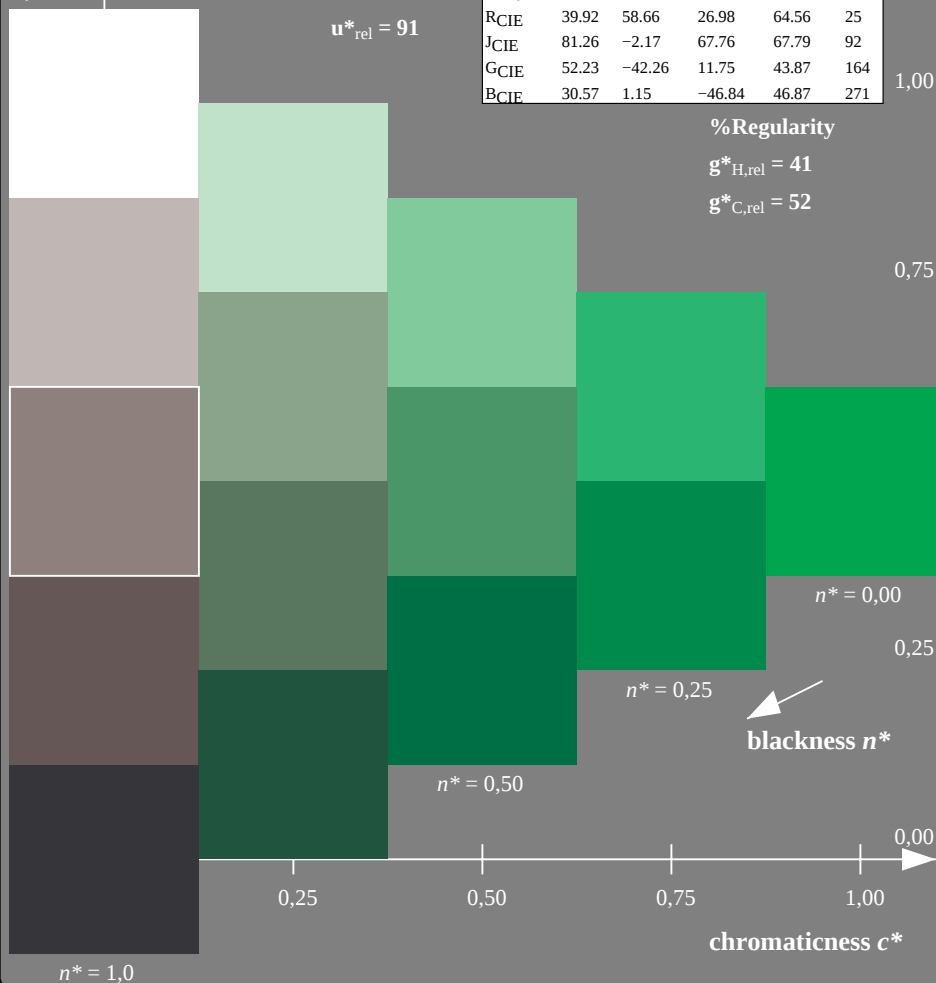
ORS18; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	47.94	65.37	50.52	82.62	38
YMa	90.37	-10.27	91.77	92.34	96
LMa	50.9	-62.79	34.95	71.87	151
CMa	58.62	-30.35	-45.01	54.3	236
VMa	25.71	31.11	-44.42	54.24	305
MMa	48.13	75.27	-8.35	75.73	354
NMa	18.01	0.0	0.0	0.0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



UE450-7, 5 step scales for constant CIELAB hue 172/360 = 0.479 (left)

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

BAM-test chart UE45; Colorimetric systems MRS18 & ORS18

input: $cmY0^* set cmykcolor$

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

output: no change compared to input

Input: Colorimetric Reflective System MRS18

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

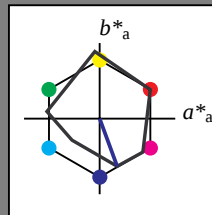
$lab \cdot tch$ and $lab \cdot nch$

D65: hue B

LCH*Ma: 37 67 290

rgb*Ma: 0.0 0.0 1.0

triangle lightness

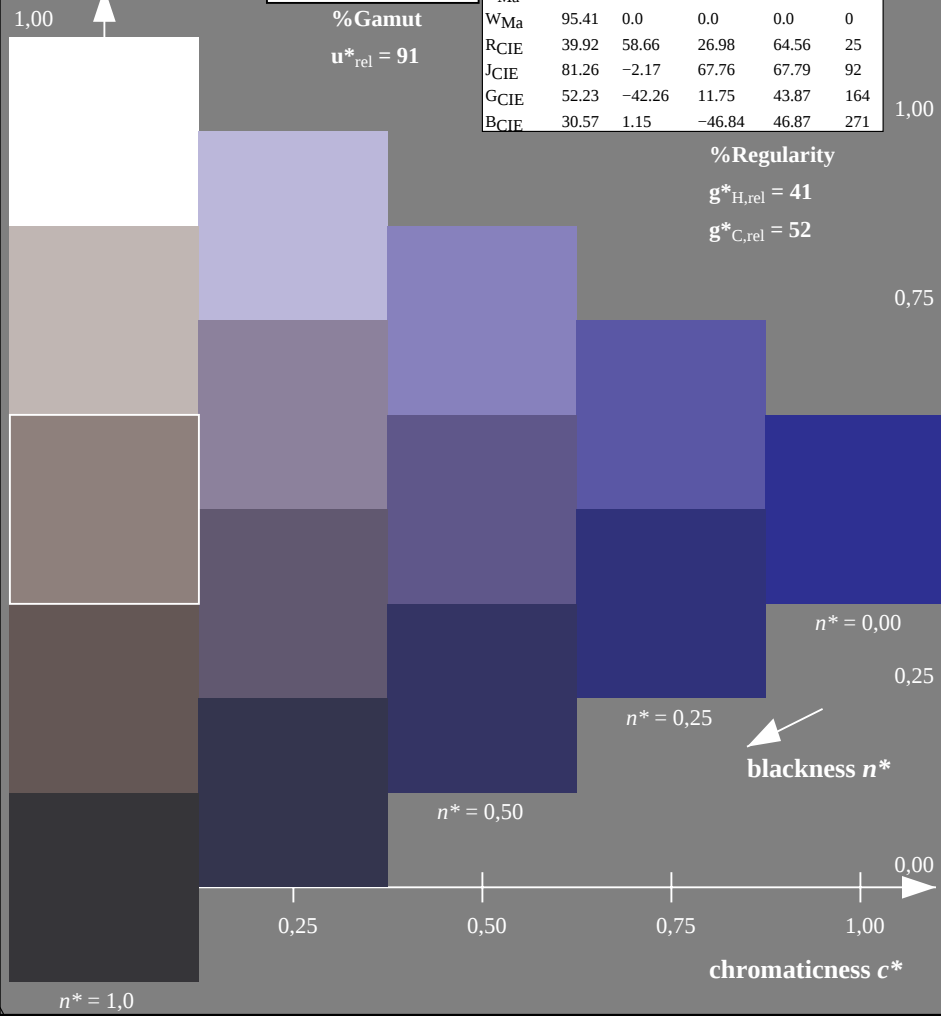


MRS18; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	49.63	66.96	38.37	77.18	30
JMa	90.7	-6.36	88.75	88.98	94
GMa	52.11	-69.73	9.44	70.37	172
G50B _{Ma}	45.03	-36.57	-28.47	46.36	218
B _{Ma}	36.65	23.19	-63.05	67.18	290
B50R _{Ma}	34.94	57.17	-44.26	72.31	322
N _{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

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

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



UE450-7, 5 step scales for constant CIELAB hue 290/360 = 0.806 (left)

Output: Colorimetric Reflective System ORS18

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

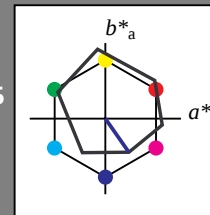
$lab \cdot tch$ and $lab \cdot nch$

D65: hue V

LCH*Ma: 26 54 305

rgb*Ma: 0.0 0.0 1.0

triangle lightness

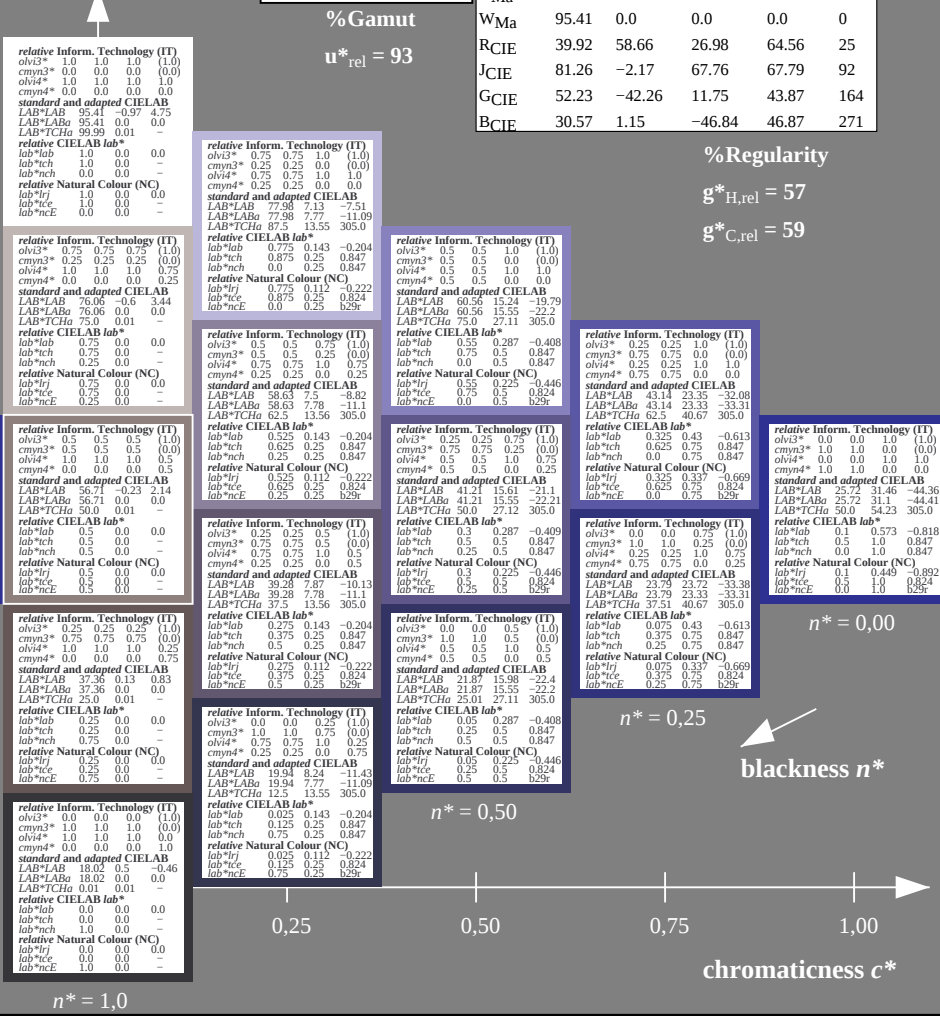


ORS18; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	47.94	65.37	50.52	82.62	38
YMa	90.37	-10.27	91.77	92.34	96
LMa	50.9	-62.79	34.95	71.87	151
CMa	58.62	-30.35	-45.01	54.3	236
V _{Ma}	25.71	31.11	-44.42	54.24	305
M _{Ma}	48.13	75.27	-8.35	75.73	354
N _{Ma}	18.01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

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

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



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

BAM-test chart UE45; Colorimetric systems MRS18 & ORS18

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

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

output: no change compared to input

Input: Colorimetric Reflective System MRS18

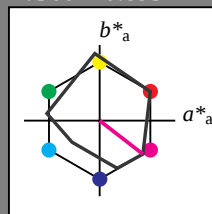
for hue $h^* = lab \cdot h = 322/360 = 0.895$

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

D65: hue B50R
LCH*Ma: 35 72 322
rgb*Ma: 1.0 0.0 1.0

triangle lightness

1,00



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

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

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

1,00

Output: Colorimetric Reflective System ORS18

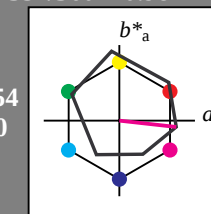
for hue $h^* = lab \cdot h = 354/360 = 0.982$

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

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

triangle lightness

1,00



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
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

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

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

0,75

1,00

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0,50

0,25

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blackness n^*

chromaticness c^*

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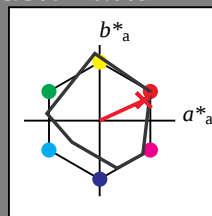
0,75

Input: Colorimetric Reflective System MRS18

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

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

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1
triangle lightness



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

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

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

1,00

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

$n^* = 0,50$

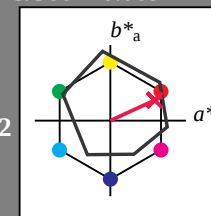
chromaticness c^*

Output: Colorimetric Reflective System ORS18

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

$lab \cdot tch$ 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
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

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

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

1,00

0,75

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

chromaticness c^*

UE450-7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

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

BAM-test chart UE45; Colorimetric systems MRS18 & ORS18

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

input: $cmY0^* set cmykcolor$

output: no change compared to input

Input: Colorimetric Reflective System MRS18

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

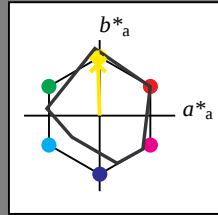
lab^*tch and lab^*nch

D65: hue J

LCH*Ma: 89 86 92

rgb*Ma: 1.0 0.95 0.0

triangle lightness



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

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

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

1,00

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

$n^* = 0,50$

0,00

Output: Colorimetric Reflective System ORS18

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

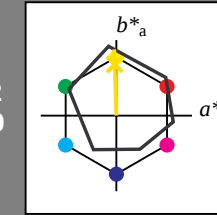
lab^*tch and lab^*nch

D65: hue J

LCH*Ma: 86 88 92

rgb*Ma: 1.0 0.9 0.0

triangle lightness



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
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

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

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

1,00

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

$n^* = 0,50$

0,00

UE450-7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

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

BAM-test chart UE45; Colorimetric systems MRS18 & ORS18

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

input: $cmY0^* setcmykcolor$

output: no change compared to input

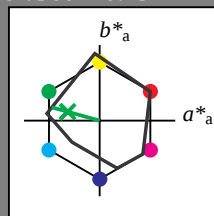
Input: Colorimetric Reflective System MRS18

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

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

D65: hue G
LCH*Ma: 56 66 164
rgb*Ma: 0.1 1.0 0.0

triangle lightness

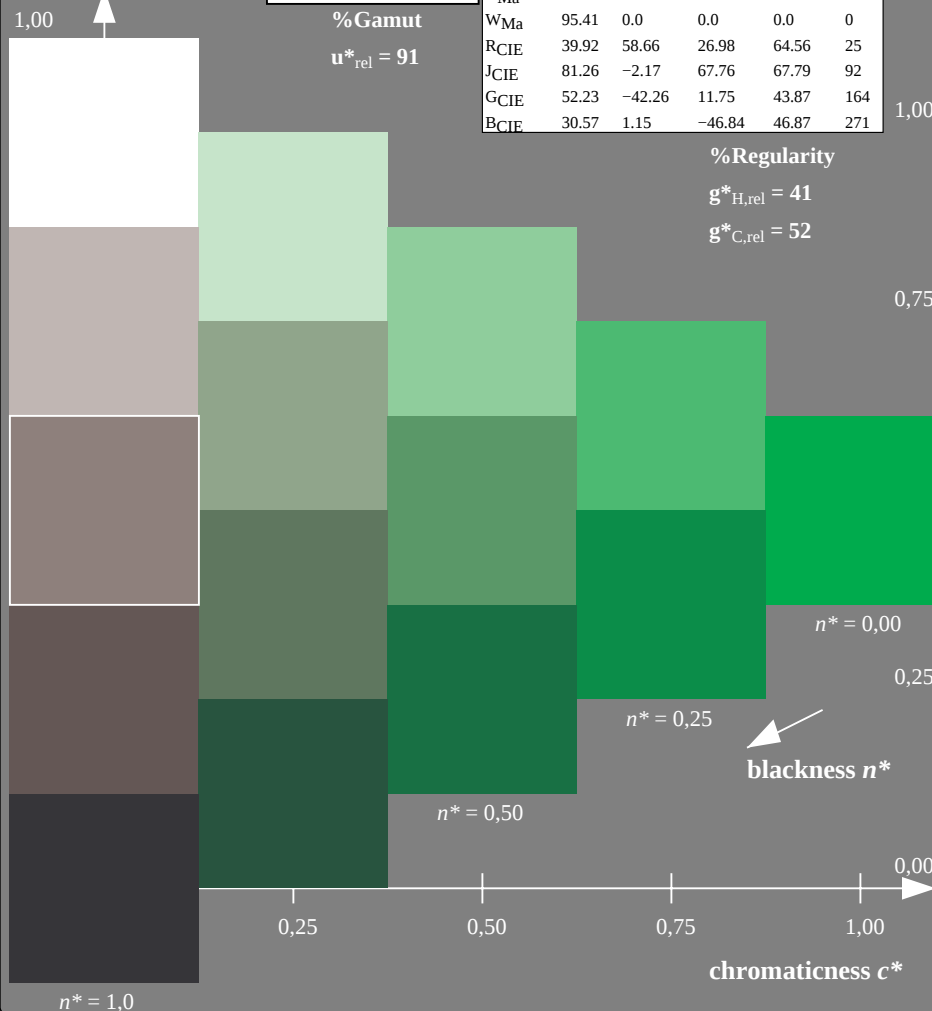


MRS18; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	49.63	66.96	38.37	77.18	30
JMa	90.7	-6.36	88.75	88.98	94
GMa	52.11	-69.73	9.44	70.37	172
G50B _{Ma}	45.03	-36.57	-28.47	46.36	218
B _{Ma}	36.65	23.19	-63.05	67.18	290
B50R _{Ma}	34.94	57.17	-44.26	72.31	322
N _{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

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

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



UE450-7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

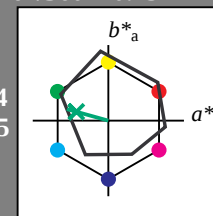
Output: Colorimetric Reflective System ORS18

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

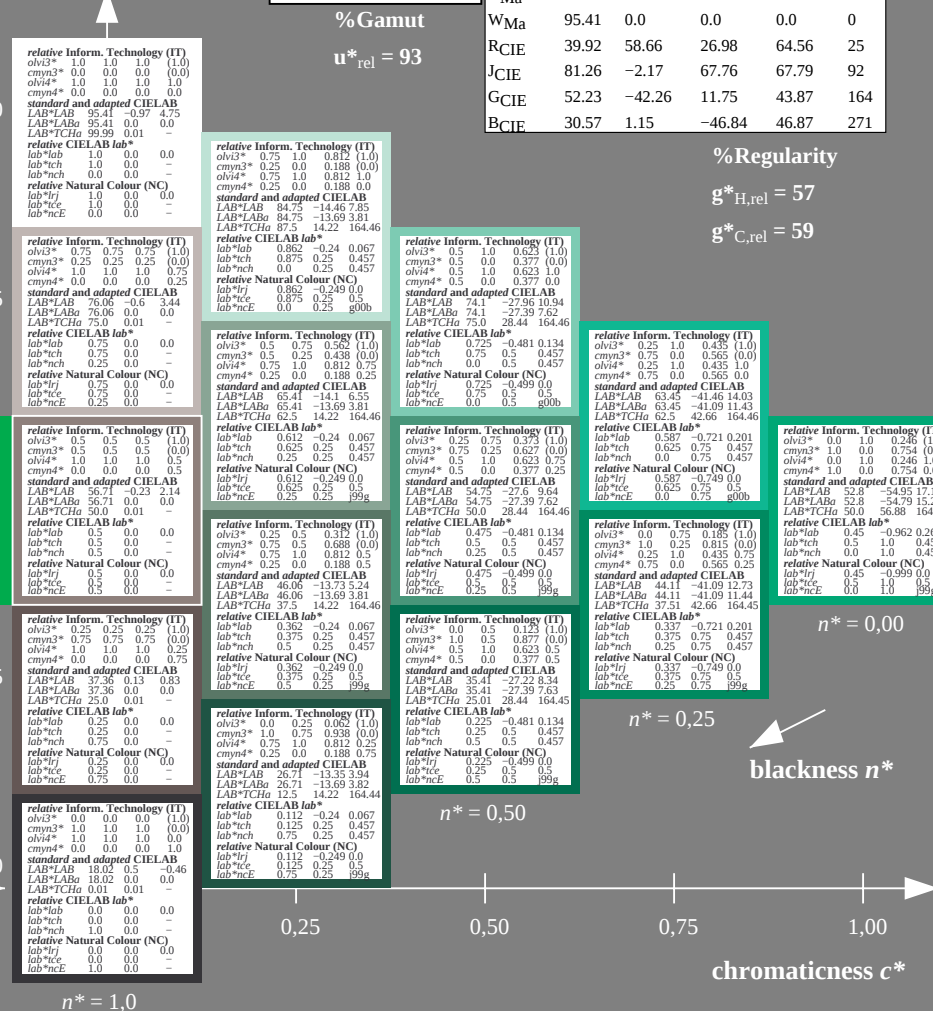


ORS18; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	47.94	65.37	50.52	82.62	38
YMa	90.37	-10.27	91.77	92.34	96
LMa	50.9	-62.79	34.95	71.87	151
CMa	58.62	-30.35	-45.01	54.3	236
VMa	25.71	31.11	-44.42	54.24	305
MMa	48.13	75.27	-8.35	75.73	354
N _{Ma}	18.01	0.0	0.0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

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

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



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

BAM-test chart UE45; Colorimetric systems MRS18 & ORS18

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

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

output: no change compared to input

Input: Colorimetric Reflective System MRS18

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

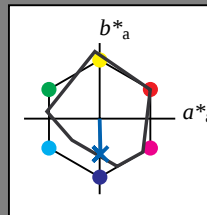
$lab \cdot tch$ and $lab \cdot nch$

D65: hue B

LCH*Ma: 40 50 271

rgb*Ma: 0.0 0.37 1.0

triangle lightness

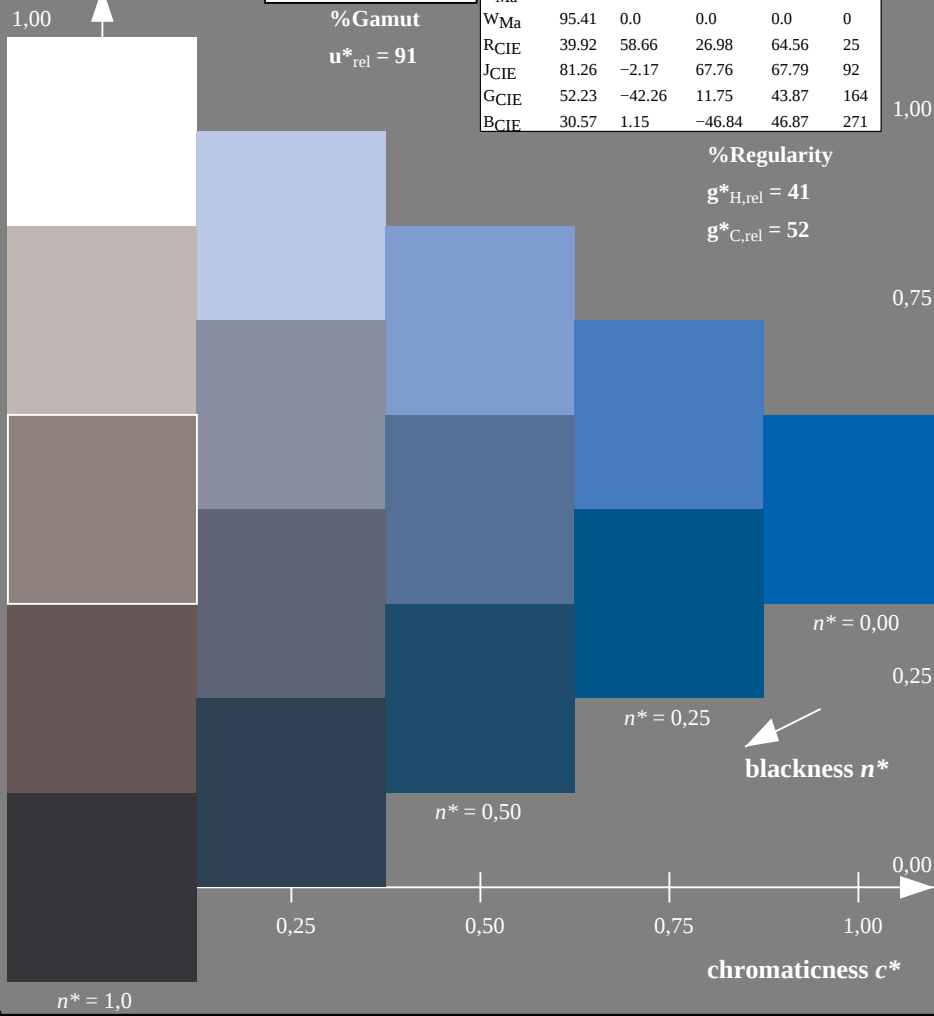


MRS18; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	49.63	66.96	38.37	77.18	30
JMa	90.7	-6.36	88.75	88.98	94
GMa	52.11	-69.73	9.44	70.37	172
G50BMa	45.03	-36.57	-28.47	46.36	218
BMa	36.65	23.19	-63.05	67.18	290
B50RMa	34.94	57.17	-44.26	72.31	322
NMa	18.01	0.0	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

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

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



UE450-7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

BAM-test chart UE45; Colorimetric systems MRS18 & ORS18

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

Output: Colorimetric Reflective System ORS18

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

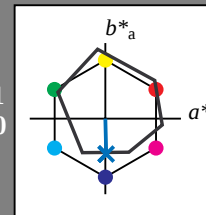
$lab \cdot tch$ and $lab \cdot nch$

D65: hue B

LCH*Ma: 42 45 271

rgb*Ma: 0.0 0.49 1.0

triangle lightness

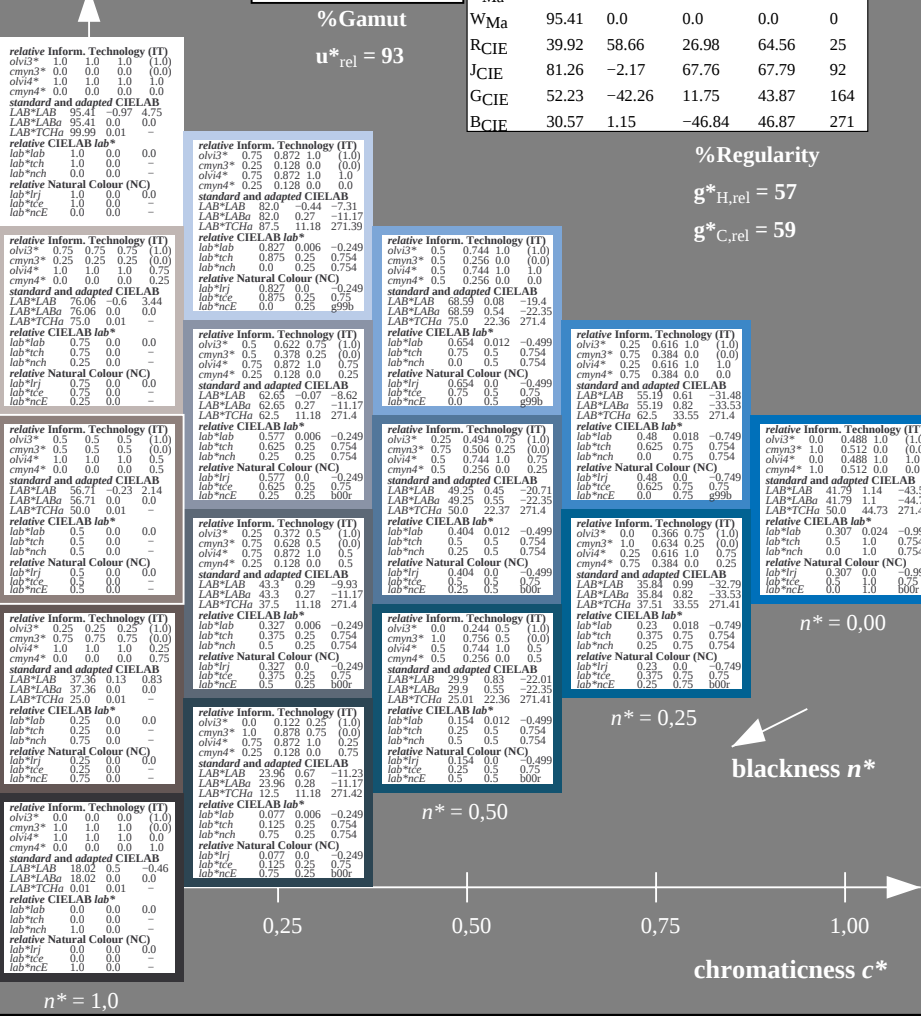


ORS18; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	47.94	65.37	50.52	82.62	38
YMa	90.37	-10.27	91.77	92.34	96
LMa	50.9	-62.79	34.95	71.87	151
CMa	58.62	-30.35	-45.01	54.3	236
VMa	25.71	31.11	-44.42	54.24	305
MMa	48.13	75.27	-8.35	75.73	354
NMa	18.01	0.0	0.0	0.0	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: $cmY0^* set cmykcolor$

output: no change compared to input