

Input: Colorimetric Reflective System MRS18a

for hue $h^* = lab \cdot h = 31/360 = 0.086$

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

D65: hue R
LCH*Ma: 50 78 31
rgb*Ma: 1.0 0.0 0.0

triangle lightness

1,00

% Gamut

$u^*_{rel} = 92$

% Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

0,75

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

1,00

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

1,00

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

1,00

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

1,00

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

1,00

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

1,00

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

1,00

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

1,00

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

1,00

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

1,00

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

1,00

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

1,00

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

1,00

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

1,00

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

1,00

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

1,00

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

1,00

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

1,00

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

1,00

0,75

0,50

0,25

0,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

Input: Colorimetric Reflective System MRS18a

for hue $h^* = lab \cdot h = 94/360 = 0.262$

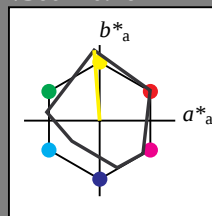
$lab \cdot tch$ and $lab \cdot nch$

D65: hue J

LCH*Ma: 91 93 94

rgb*Ma: 1.0 1.0 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	49.63	66.8	40.02	77.87	31
JMa	90.7	-7.27	93.19	93.48	94
GMa	52.11	-69.93	11.26	70.85	171
G50B _{Ma}	45.03	-36.65	-27.13	45.61	217
B _{Ma}	36.65	23.26	-62.27	66.49	290
B50R _{Ma}	34.94	57.27	-43.6	71.99	323
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	58.67	27.97	64.99	25
JCIE	81.26	-2.91	71.56	71.62	92
GCIE	52.23	-42.47	13.58	44.6	162
BCIE	30.57	1.33	-46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

1,00

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

Output: Colorimetric Reflective System ORS18

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

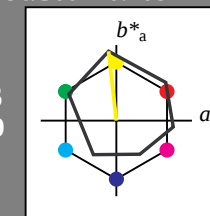
$lab \cdot tch$ and $lab \cdot nch$

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
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

$n^* = 0,25$

$n^* = 0,50$

chromaticness c^*

UE460-7, 5 step scales for constant CIELAB hue 94/360 = 0.262 (left)

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

BAM-test chart UE46; Colorimetric systems MRS18a & ORS18 input: *cmY0* setcmykcolor*

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

output: *no change compared to input*

Input: Colorimetric Reflective System MRS18a

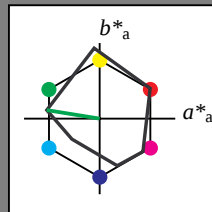
for hue $h^* = lab \cdot h = 171/360 = 0.475$

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

D65: hue G
LCH*Ma: 52 71 171
rgb*Ma: 0.0 1.0 0.0

triangle lightness

1,00



MRS18a; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	49.63	66.8	40.02	77.87	31
JMa	90.7	-7.27	93.19	93.48	94
GMa	52.11	-69.93	11.26	70.85	171
G50BMa	45.03	-36.65	-27.13	45.61	217
BMa	36.65	23.26	-62.27	66.49	290
B50RMa	34.94	57.27	-43.6	71.99	323
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.67	27.97	64.99	25
JCIE	81.26	-2.91	71.56	71.62	92
GCIE	52.23	-42.47	13.58	44.6	162
BCIE	30.57	1.33	-46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

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*TCHa	99.91	0.01	0.0		
relative CIELAB lab*					
lab*lab	1.0	0.0	0.0		
lab*tch	1.0	0.0	0.0		
lab*nch	0.0	0.0	0.0		
relative Natural Colour (NC)					
lab*trj	1.0	0.0	0.0		
lab*tce	1.0	0.0	0.0		
lab*nce	0.0	0.0	0.0		

relative Inform. Technology (IT)					
olvi3*	0.75	0.75	0.75	(1.0)	
cmyn3*	0.25	0.25	0.25	(0.0)	
olvi4*	1.0	1.0	1.0	(1.0)	
cmyn4*	0.0	0.0	0.0	(0.0)	
standard and adapted CIELAB					
LAB*LAB	76.06	-0.6	3.44		
LAB*LABa	76.06	0.0	0.0		
LAB*TCHa	75.0	0.01	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*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	37.36	0.13	0.83		
LAB*LABa	37.36	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	18.02	0.3	-0.46		
LAB*LABa	18.02	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		

$n^* = 1,0$

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

BAM-test chart UE46; Colorimetric systems MRS18a & ORS18 input: *cmY0* setcmykcolor*

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

output: *no change compared to input*

Output: Colorimetric Reflective System ORS18

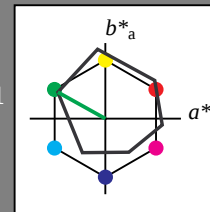
for hue $h^* = lab \cdot h = 151/360 = 0.419$

$lab \cdot tch$ 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

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

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

relative Inform. Technology (IT)					
olvi3*	0.75	1.0	0.75	(1.0)	
cmyn3*	0.25	0.0	0.25	(0.0)	
olvi4*	0.75	1.0	0.75	(1.0)	
cmyn4*	0.0	0.0	0.0	(0.0)	
standard and adapted CIELAB					
LAB*LAB	84.28	-16.45	12.74		
LAB*LABa	84.28	-15.68	8.73		
LAB*TCHa	87.5	17.96	150.91		
relative CIELAB lab*					
lab*lab	0.75	1.0	0.75		
lab*tch	0.75	1.0	0.75		
lab*nch	0.0	0.0	0.0		
relative Natural Colour (NC)					
lab*trj	0.75	1.0	0.75		
lab*tce	0.75	1.0	0.75		
lab*nce	0.0	0.0	0.0		

relative Inform. Technology (IT)					
olvi3*	0.5	0.75	0.5	(1.0)	
cmyn3*	0.5	0.25	0.5	(0.0)	
olvi4*	0.75	1.0	0.75	(1.0)	
cmyn4*	0.0	0.0	0.0	(0.0)	
standard and adapted CIELAB					
LAB*LAB	64.93	-16.09	11.44		
LAB*LABa	64.93	-15.69	8.74		
LAB*TCHa	62.5	17.97	150.91		
relative CIELAB lab*					
lab*lab	0.5	0.75	0.5		
lab*tch	0.5	0.75	0.5		
lab*nch	0.25	0.0	0.25		
relative Natural Colour (NC)					
lab*trj	0.5	0.75	0.5		
lab*tce	0.5	0.75	0.5		
lab*nce	0.25	0.0	0.25		

relative Inform. Technology (IT)					
olvi3*	0.25	0.5	0.25	(1.0)	
cmyn3*	0.75	0.25	0.75	(0.0)	
olvi4*	0.5	1.0	0.5	(1.0)	
cmyn4*	0.0	0.0	0.0	(0.0)	
standard and adapted CIELAB					
LAB*LAB	53.8	-31.57	19.42		
LAB*LABa	53.8	-31.39	17.47		
LAB*TCHa	50.0	35.93	150.91		
relative CIELAB lab*					
lab*lab	0.25	0.5	0.25		
lab*tch	0.25	0.5	0.25		
lab*nch	0.75	0.0	0.75		
relative Natural Colour (NC)					
lab*trj	0.25	0.5	0.25		
lab*tce	0.25	0.5	0.25		
lab*nce	0.75	0.0	0.75		

relative Inform. Technology (IT)					
olvi3*	0.0	0.5	0.0	(1.0)	
cmyn3*	1.0	0.5	1.0	(0.0)	
olvi4*	0.5	1.0	0.5	(1.0)	
cmyn4*	0.0	0.0	0.0	(0.0)	
standard and adapted CIELAB					
LAB*LAB	45.58	-15.72	10.13		
LAB*LABa	45.58	-15.69	8.74		
LAB*TCHa	37.5	17.97	150.91		
relative CIELAB lab*					
lab*lab	0.0	0.5	0.0		
lab*tch	0.0	0.5	0.0		
lab*nch	1.0	0.5	1.0		
relative Natural Colour (NC)					
lab*trj	0.0	0.5	0.0		
lab*tce	0.0	0.5	0.0		
lab*nce	1.0	0.5	1.0		

relative Inform. Technology (IT)					
olvi3*	0.0	0.0	0.0	(1.0)	
cmyn3*	1.0	0.75	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	34.46	-31.2	18.11		
LAB*LABa	34.46	-31.38	17.47		
LAB*TCHa	25.01	35.93	150.91		
relative CIELAB lab*					
lab*lab	0.0	0.213	-0.436	0.243	
lab*tch	0.25	0.5	0.419		
lab*nch	0.5	0.5	0.419		
relative Natural Colour (NC)					
lab*trj	0.106	-0.238	0.144		
lab*tce	0.25	0.5	0.453		
lab*nce	0.75	0.25	0.818		

$n^* = 0,50$

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

BAM-test chart UE46; Colorimetric systems MRS18a & ORS18 input: *cmY0* setcmykcolor*

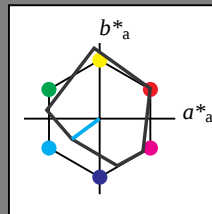
Input: Colorimetric Reflective System MRS18a

for hue $h^* = lab \cdot h = 217/360 = 0.601$

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

D65: hue G50B
LCH*Ma: 45 46 217
rgb*Ma: 0.0 1.0 1.0

triangle lightness

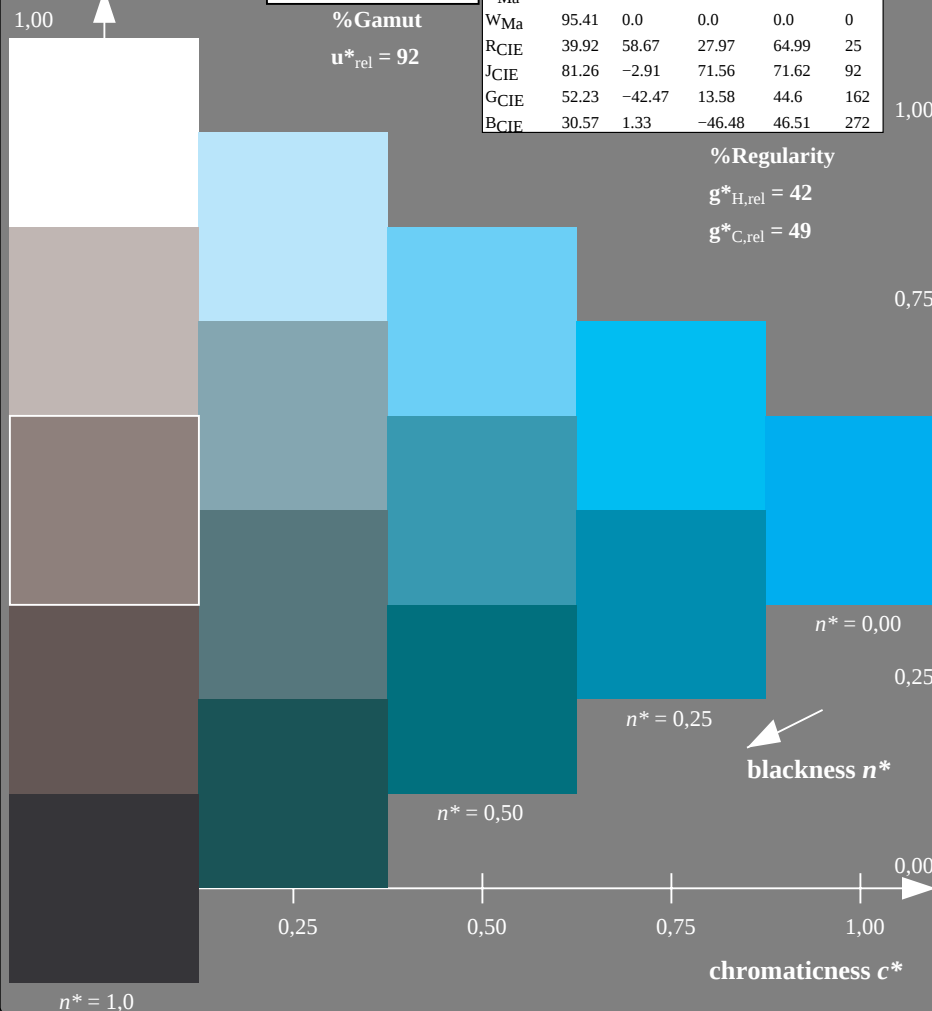


MRS18a; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	49.63	66.8	40.02	77.87	31
JMa	90.7	-7.27	93.19	93.48	94
GMa	52.11	-69.93	11.26	70.85	171
G50B _{Ma}	45.03	-36.65	-27.13	45.61	217
B _{Ma}	36.65	23.26	-62.27	66.49	290
B50R _{Ma}	34.94	57.27	-43.6	71.99	323
N _{Ma}	18.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.67	27.97	64.99	25
JCIE	81.26	-2.91	71.56	71.62	92
GCIE	52.23	-42.47	13.58	44.6	162
BCIE	30.57	1.33	-46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



UE460-7, 5 step scales for constant CIELAB hue 217/360 = 0.601 (left)

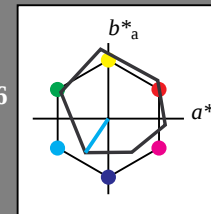
Output: Colorimetric Reflective System ORS18

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

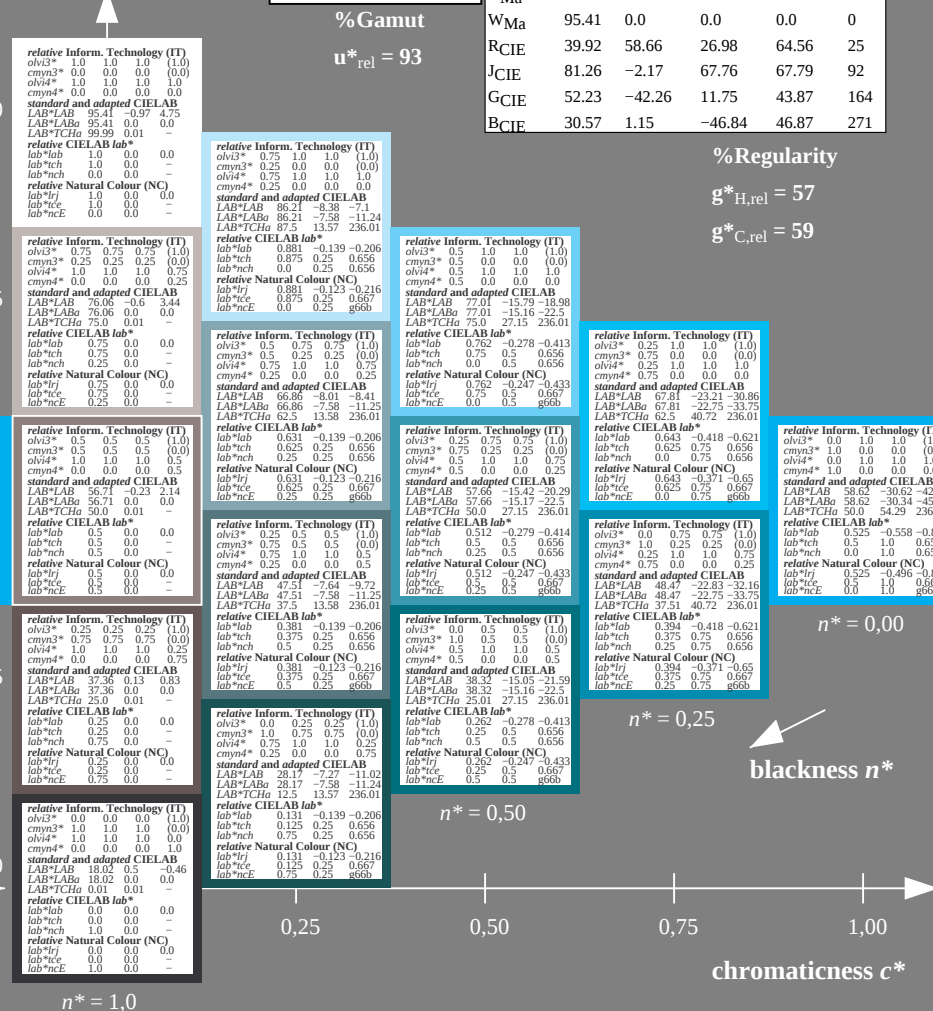


ORS18; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	47.94	65.37	50.52	82.62	38
YMa	90.37	-10.27	91.77	92.34	96
LMa	50.9	-62.79	34.95	71.87	151
CMa	58.62	-30.35	-45.01	54.3	236
VMa	25.71	31.11	-44.42	54.24	305
MMa	48.13	75.27	-8.35	75.73	354
N _{Ma}	18.01	0.0	0.0	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 236/360 = 0.656 (right)

BAM-test chart UE46; Colorimetric systems MRS18a & 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 MRS18a

for hue $h^* = lab \cdot h = 323/360 = 0.896$

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

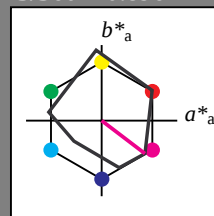
D65: hue B50R

LCH*Ma: 35 72 323

rgb*Ma: 1.0 0.0 1.0

triangle lightness

1,00



% Gamut

$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	49.63	66.8	40.02	77.87	31
JMa	90.7	-7.27	93.19	93.48	94
GMa	52.11	-69.93	11.26	70.85	171
G50B _{Ma}	45.03	-36.65	-27.13	45.61	217
B _{Ma}	36.65	23.26	-62.27	66.49	290
B50R _{Ma}	34.94	57.27	-43.6	71.99	323
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	58.67	27.97	64.99	25
JCIE	81.26	-2.91	71.56	71.62	92
GCIE	52.23	-42.47	13.58	44.6	162
BCIE	30.57	1.33	-46.48	46.51	272

% Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

1,00

relative Inform. Technology (IT)					
olvi3*	1.0	1.0	1.0	1.0	1.0
olvi4*	0.0	0.0	0.0	0.0	0.0
olvi5*	0.0	0.0	0.0	0.0	0.0
olvi6*	0.0	0.0	0.0	0.0	0.0
olvi7*	0.0	0.0	0.0	0.0	0.0
olvi8*	0.0	0.0	0.0	0.0	0.0
olvi9*	0.0	0.0	0.0	0.0	0.0
olvi10*	0.0	0.0	0.0	0.0	0.0
olvi11*	0.0	0.0	0.0	0.0	0.0
olvi12*	0.0	0.0	0.0	0.0	0.0
olvi13*	0.0	0.0	0.0	0.0	0.0
olvi14*	0.0	0.0	0.0	0.0	0.0
olvi15*	0.0	0.0	0.0	0.0	0.0
olvi16*	0.0	0.0	0.0	0.0	0.0
olvi17*	0.0	0.0	0.0	0.0	0.0
olvi18*	0.0	0.0	0.0	0.0	0.0
olvi19*	0.0	0.0	0.0	0.0	0.0
olvi20*	0.0	0.0	0.0	0.0	0.0
olvi21*	0.0	0.0	0.0	0.0	0.0
olvi22*	0.0	0.0	0.0	0.0	0.0
olvi23*	0.0	0.0	0.0	0.0	0.0
olvi24*	0.0	0.0	0.0	0.0	0.0
olvi25*	0.0	0.0	0.0	0.0	0.0
olvi26*	0.0	0.0	0.0	0.0	0.0
olvi27*	0.0	0.0	0.0	0.0	0.0
olvi28*	0.0	0.0	0.0	0.0	0.0
olvi29*	0.0	0.0	0.0	0.0	0.0
olvi30*	0.0	0.0	0.0	0.0	0.0
olvi31*	0.0	0.0	0.0	0.0	0.0
olvi32*	0.0	0.0	0.0	0.0	0.0
olvi33*	0.0	0.0	0.0	0.0	0.0
olvi34*	0.0	0.0	0.0	0.0	0.0
olvi35*	0.0	0.0	0.0	0.0	0.0
olvi36*	0.0	0.0	0.0	0.0	0.0
olvi37*	0.0	0.0	0.0	0.0	0.0
olvi38*	0.0	0.0	0.0	0.0	0.0
olvi39*	0.0	0.0	0.0	0.0	0.0
olvi40*	0.0	0.0	0.0	0.0	0.0
olvi41*	0.0	0.0	0.0	0.0	0.0
olvi42*	0.0	0.0	0.0	0.0	0.0
olvi43*	0.0	0.0	0.0	0.0	0.0
olvi44*	0.0	0.0	0.0	0.0	0.0
olvi45*	0.0	0.0	0.0	0.0	0.0
olvi46*	0.0	0.0	0.0	0.0	0.0
olvi47*	0.0	0.0	0.0	0.0	0.0
olvi48*	0.0	0.0	0.0	0.0	0.0
olvi49*	0.0	0.0	0.0	0.0	0.0
olvi50*	0.0	0.0	0.0	0.0	0.0
olvi51*	0.0	0.0	0.0	0.0	0.0
olvi52*	0.0	0.0	0.0	0.0	0.0
olvi53*	0.0	0.0	0.0	0.0	0.0
olvi54*	0.0	0.0	0.0	0.0	0.0
olvi55*	0.0	0.0	0.0	0.0	0.0
olvi56*	0.0	0.0	0.0	0.0	0.0
olvi57*	0.0	0.0	0.0	0.0	0.0
olvi58*	0.0	0.0	0.0	0.0	0.0
olvi59*	0.0	0.0	0.0	0.0	0.0
olvi60*	0.0	0.0	0.0	0.0	0.0
olvi61*	0.0	0.0	0.0	0.0	0.0
olvi62*	0.0	0.0	0.0	0.0	0.0
olvi63*	0.0	0.0	0.0	0.0	0.0
olvi64*	0.0	0.0	0.0	0.0	0.0
olvi65*	0.0	0.0	0.0	0.0	0.0
olvi66*	0.0	0.0	0.0	0.0	0.0
olvi67*	0.0	0.0	0.0	0.0	0.0
olvi68*	0.0	0.0	0.0	0.0	0.0
olvi69*	0.0	0.0	0.0	0.0	0.0
olvi70*	0.0	0.0	0.0	0.0	0.0
olvi71*	0.0	0.0	0.0	0.0	0.0
olvi72*	0.0	0.0	0.0	0.0	0.0
olvi73*	0.0	0.0	0.0	0.0	0.0
olvi74*	0.0	0.0	0.0	0.0	0.0
olvi75*	0.0	0.0	0.0	0.0	0.0
olvi76*	0.0	0.0	0.0	0.0	0.0
olvi77*	0.0	0.0	0.0	0.0	0.0
olvi78*	0.0	0.0	0.0	0.0	0.0
olvi79*	0.0	0.0	0.0	0.0	0.0
olvi80*	0.0	0.0	0.0	0.0	0.0
olvi81*	0.0	0.0	0.0	0.0	0.0
olvi82*	0.0	0.0	0.0	0.0	0.0
olvi83*	0.0	0.0	0.0	0.0	0.0
olvi84*	0.0	0.0	0.0	0.0	0.0
olvi85*	0.0	0.0	0.0	0.0	0.0
olvi86*	0.0	0.0	0.0	0.0	0.0
olvi87*	0.0	0.0	0.0	0.0	0.0
olvi88*	0.0	0.0	0.0	0.0	0.0
olvi89*	0.0	0.0	0.0	0.0	0.0
olvi90*	0.0	0.0	0.0	0.0	0.0
olvi91*	0.0	0.0	0.0	0.0	0.0
olvi92*	0.0	0.0	0.0	0.0	0.0
olvi93*	0.0	0.0	0.0	0.0	0.0
olvi94*	0.0	0.0	0.0	0.0	0.0
olvi95*	0.0	0.0	0.0	0.0	0.0
olvi96*	0.0	0.0	0.0	0.0	0.0
olvi97*	0.0	0.0	0.0	0.0	0.0
olvi98*	0.0	0.0	0.0	0.0	0.0
olvi99*	0.0	0.0	0.0	0.0	0.0
olvi100*	0.0	0.0	0.0	0.0	0.0

Output: Colorimetric Reflective System ORS18

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

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

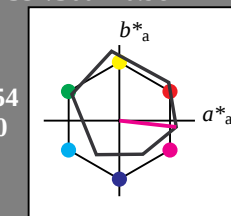
D65: hue M

LCH*Ma: 48 76 354

rgb*Ma: 1.0 0.0 1.0

triangle lightness

1,00



% 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
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

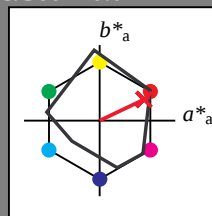
LAB* <i>TCHa</i>	99.99	0.01	–
relative CIELAB <i>lab</i> *			
<i>lab</i> * <i>lab</i>	1.0	0.0	0.0
<i>lab</i> * <i>tch</i>	1.0	0.0	–
<i>lab</i> * <i>nch</i>	0.0	0.0	–
relative Natural Colour (NC)			
<i>lab</i> * <i>lrj</i>	1.0	0.0	0.0
<i>lab</i> * <i>tce</i>	1.0	0.0	–
<i>lab</i> * <i>nCe</i>	0.0	0.0	–

Input: Colorimetric Reflective System MRS18a

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

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

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



MRS18a; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	49.63	66.8	40.02	77.87	31
JMa	90.7	-7.27	93.19	93.48	94
GMa	52.11	-69.93	11.26	70.85	171
G50B _{Ma}	45.03	-36.65	-27.13	45.61	217
B _{Ma}	36.65	23.26	-62.27	66.49	290
B50R _{Ma}	34.94	57.27	-43.6	71.99	323
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	58.67	27.97	64.99	25
JCIE	81.26	-2.91	71.56	71.62	92
GCIE	52.23	-42.47	13.58	44.6	162
BCIE	30.57	1.33	-46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

1,00

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

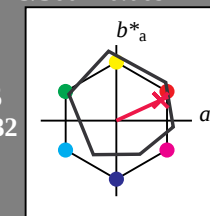
chromaticness c^*

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

$n^* = 0,00$

0,25

$n^* = 0,25$

$n^* = 0,50$

chromaticness c^*

UE460-7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

BAM-test chart UE46; Colorimetric systems MRS18a & ORS18 input: *cmY0* setcmykcolor*

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

output: *no change compared to input*

Input: Colorimetric Reflective System MRS18a

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

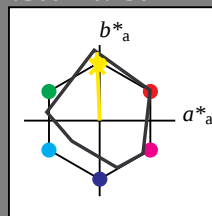
lab^*tch and lab^*nch

D65: hue J

LCH*Ma: 89 91 92

rgb*Ma: 1.0 0.95 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data					
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	49.63	66.8	40.02	77.87	31
JMa	90.7	-7.27	93.19	93.48	94
GMa	52.11	-69.93	11.26	70.85	171
G50B _{Ma}	45.03	-36.65	-27.13	45.61	217
B _{Ma}	36.65	23.26	-62.27	66.49	290
B50R _{Ma}	34.94	57.27	-43.6	71.99	323
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	58.67	27.97	64.99	25
JCIE	81.26	-2.91	71.56	71.62	92
GCIE	52.23	-42.47	13.58	44.6	162
BCIE	30.57	1.33	-46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

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

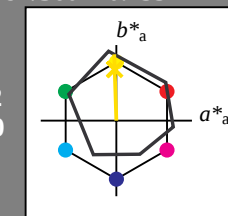
lab^*tch and lab^*nch

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

0,50

0,25

0,00

0,25

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42,25

42,50

42,75

43,00

43,25

43,50

43,75

44,00

44,25

44,50

44,75

45,00

45,25

45,50

45,75

46,00

46,25

46,50

46,75

47,00

47,25

47,50

47,75

48,00

48,25

48,50

48,75

49,00

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55,75

56,00

56,25

56,50

56,75

57,00

57,25

57,50

57,75

58,00

58,25

58,50

58,75

59,00

</

Input: Colorimetric Reflective System MRS18a

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

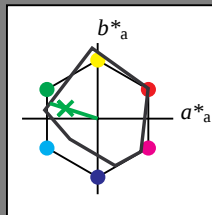
$lab \cdot tch$ and $lab \cdot nch$

D65: hue G

LCH*Ma: 56 66 162

rgb*Ma: 0.11 1.0 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	49.63	66.8	40.02	77.87	31
JMa	90.7	-7.27	93.19	93.48	94
GMa	52.11	-69.93	11.26	70.85	171
G50B _{Ma}	45.03	-36.65	-27.13	45.61	217
B _{Ma}	36.65	23.26	-62.27	66.49	290
B50R _{Ma}	34.94	57.27	-43.6	71.99	323
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	58.67	27.97	64.99	25
JCIE	81.26	-2.91	71.56	71.62	92
GCIE	52.23	-42.47	13.58	44.6	162
BCIE	30.57	1.33	-46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

1,00

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

Output: Colorimetric Reflective System ORS18

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

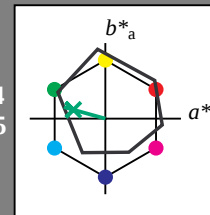
$lab \cdot tch$ and $lab \cdot nch$

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
C _{Ma}	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

$n^* = 0,25$

$n^* = 0,50$

chromaticness c^*

UE460-7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

BAM-test chart UE46; Colorimetric systems MRS18a & ORS18 input: *cmY0* setcmykcolor*

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

output: *no change compared to input*

Input: Colorimetric Reflective System MRS18a

for hue $h^* = \text{lab}^*h = 272/360 = 0.755$

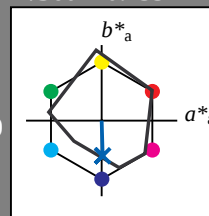
lab^*tch and lab^*nch

D65: hue B

LCH*Ma: 40 49 272

rgb*Ma: 0.0 0.36 1.0

triangle lightness



MRS18a; adapted (a) CIELAB data					
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	49.63	66.8	40.02	77.87	31
JMa	90.7	-7.27	93.19	93.48	94
GMa	52.11	-69.93	11.26	70.85	171
G50B _{Ma}	45.03	-36.65	-27.13	45.61	217
B _{Ma}	36.65	23.26	-62.27	66.49	290
B50R _{Ma}	34.94	57.27	-43.6	71.99	323
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	58.67	27.97	64.99	25
JCIE	81.26	-2.91	71.56	71.62	92
GCIE	52.23	-42.47	13.58	44.6	162
BCIE	30.57	1.33	-46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

1,00

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

Output: Colorimetric Reflective System ORS18

for hue $h^* = \text{lab}^*h = 271/360 = 0.754$

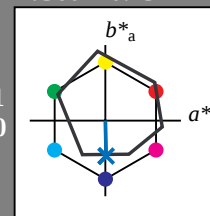
lab^*tch and lab^*nch

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
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

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

UE460-7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

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

BAM-test chart UE46; Colorimetric systems MRS18a & ORS18 input: $\text{cmy}0^* \text{ setcmykcolor}$

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

output: no change compared to input