

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

0,25

0,50

0,75

1,00

1,00

0,25

0,50

0,75

1,00

1,00

0,25

0,50

0,75

1,00

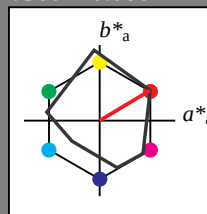
1,00

0,25

0,50

0,75

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
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
R _{CIE}	39.92	58.67	27.97	64.99	25
J _{CIE}	81.26	-2.91	71.56	71.62	92
G _{CIE}	52.23	-42.47	13.58	44.6	162
B _{CIE}	30.57	1.33	-46.48	46.51	272

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

% Gamut

$u^*_{rel} = 93$

% Regularity

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

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

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

0,25

0,50

0,75

1,00

1,00

0,25

0,50

0,75

1,00

1,00

0,25

0,50

0,75

1,00

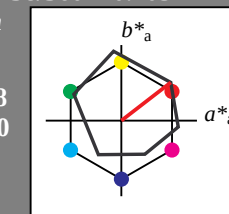
1,00

0,25

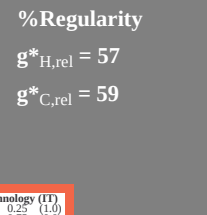
0,50

0,75

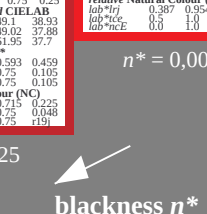
1,00



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
N _{Ma}	18.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.66	26.98	64.56	25
J _{CIE}	81.26	-2.17	67.76	67.79	92
G _{CIE}	52.23	-42.26	11.75	43.87	164
B _{CIE}	30.57	1.15	-46.84	46.87	271



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
R _{CIE}	39.92	58.66	26.98	64.56	25
J _{CIE}	81.26	-2.17	67.76	67.79	92
G _{CIE}	52.23	-42.26	11.75	43.87	164
B _{CIE}	30.57	1.15	-46.84	46.87	271



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
R _{CIE}	39.92	58.66	26.98	64.56	25
J _{CIE}	81.26	-2.17	67.76	67.79	92
G _{CIE}	52.23	-42.26	11.75	43.87	164
B _{CIE}	30.57	1.15	-46.84	46.87	271

UE460-7, 5 step scales for constant CIELAB hue 31/360 = 0.086 (left)

5 step scales for constant CIELAB hue 38/360 = 0.105 (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 $h^* = lab^*h = 94/360 = 0.262$

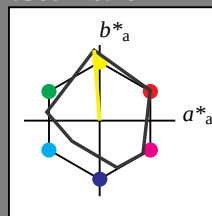
lab^*tch and lab^*nch

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
R _{CIE}	39.92	58.67	27.97	64.99	25
J _{CIE}	81.26	-2.91	71.56	71.62	92
G _{CIE}	52.23	-42.47	13.58	44.6	162
B _{CIE}	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 $h^* = lab^*h = 96/360 = 0.268$

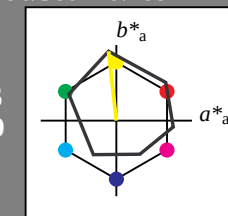
lab^*tch and lab^*nch

D65: hue Y

LCH*Ma: 90 92 96

rgb*Ma: 1.0 1.0 0.0

triangle lightness



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
R _{CIE}	39.92	58.66	26.98	64.56	25
J _{CIE}	81.26	-2.17	67.76	67.79	92
G _{CIE}	52.23	-42.26	11.75	43.87	164
B _{CIE}	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

%Gamut

$u^*_{rel} = 92$

%Regularity

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

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

0,75

%Regularity

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

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

0,25

%Regularity

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

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

0,00

%Regularity

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

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

0,00

%Regularity

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

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

0,00

%Regularity

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

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

0,00

%Regularity

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

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

0,00

%Regularity

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

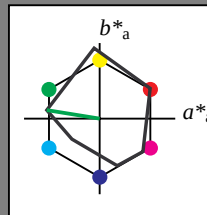
$g^*_{C,rel} = 59$

0,00

%Regularity

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

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



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

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

%Gamut

$u^*_{rel} = 93$

%Regularity

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

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

0,75

%Regularity

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

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

0,25

%Regularity

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

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

0,00

%Regularity

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

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

0,00

%Regularity

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

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

0,00

%Regularity

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

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

0,00

%Regularity

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

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

0,00

%Regularity

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

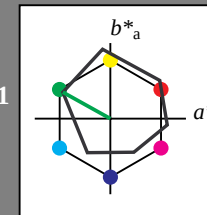
$g^*_{C,rel} = 59$

0,00

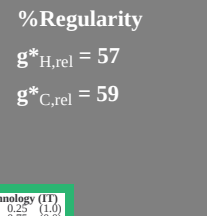
%Regularity

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

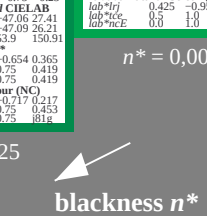
$g^*_{C,rel} = 59$



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



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



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

UE460-7, 5 step scales for constant CIELAB hue 171/360 = 0.475 (left)

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*

Input: Colorimetric Reflective System MRS18a

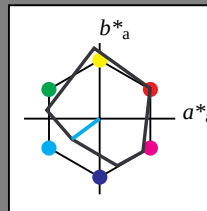
for hue $h^* = lab \cdot h = 217/360 = 0.601$

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

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

triangle lightness

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
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

Output: Colorimetric Reflective System ORS18

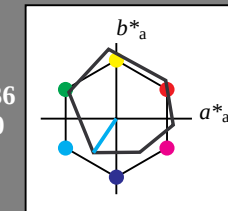
for hue $h^* = lab \cdot h = 236/360 = 0.656$

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

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

triangle lightness

1,00



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

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

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

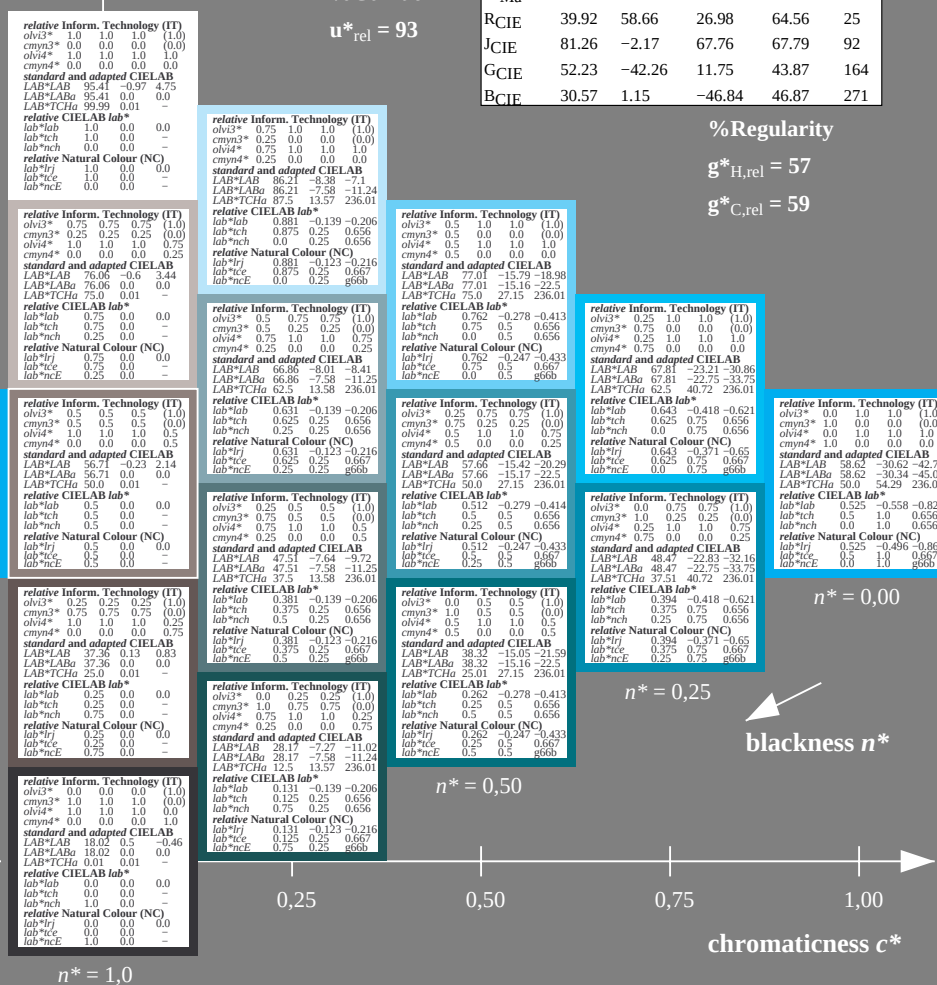
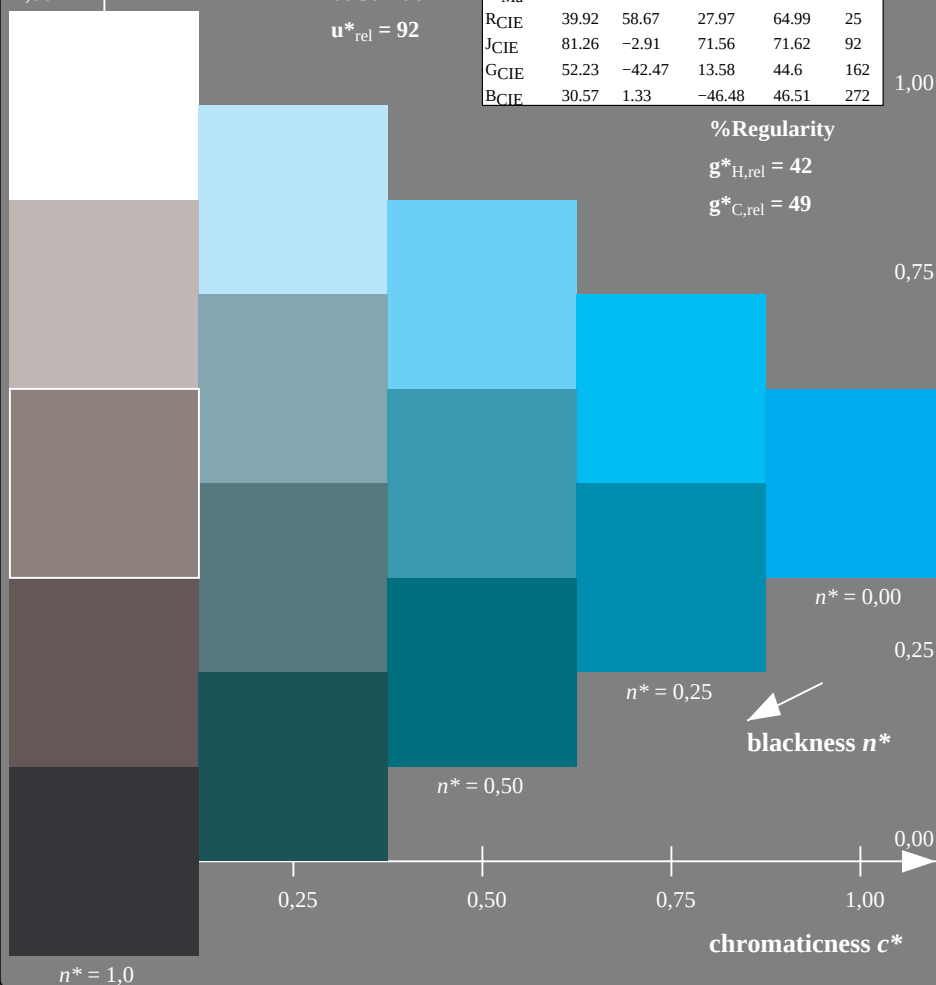
1,00

1,00

1,00

1,00

1,00



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

5 step scales for constant CIELAB hue 236/360 = 0.656 (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 $h^* = lab \cdot h = 290/360 = 0.807$

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

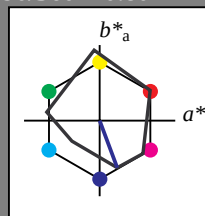
D65: hue B

LCH*Ma: 37 66 290

rgb*Ma: 0.0 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
R _{CIE}	39.92	58.67	27.97	64.99	25
J _{CIE}	81.26	-2.91	71.56	71.62	92
G _{CIE}	52.23	-42.47	13.58	44.6	162
B _{CIE}	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)
cmyn3*	0.0	0.0	0.0	0.0	(0.0)
olvi4*	1.0	1.0	1.0	1.0	(1.0)
cmyn4*	0.0	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		
LAB*LABc	95.41	0.0	0.0		
relative CIELAB lab*					
lab*lab	1.0	0.0	0.0		
lab*tch	1.0	0.0	0.0		
lab*nch	0.0	0.0	0.0		
lab*trj	1.0	0.0	0.0		
relative Natural Colour (NC)					
lab*trj	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	0.75	(1.0)
cmyn3*	0.25	0.25	0.25	0.25	(0.0)
olvi4*	1.0	1.0	1.0	1.0	(1.0)
cmyn4*	0.0	0.0	0.0	0.0	(0.0)
standard and adapted CIELAB					
LAB*LAB	77.98	7.13	-7.51		
LAB*LABa	77.98	7.13	-7.51		
LAB*LABb	77.98	7.13	-7.51		
LAB*LABc	77.98	7.13	-7.51		
relative CIELAB lab*					
lab*lab	0.75	0.75	0.75		
lab*tch	0.75	0.75	0.75		
lab*nch	0.0	0.0	0.0		
lab*trj	0.75	0.75	0.75		
relative Natural Colour (NC)					
lab*trj	0.75	0.75	0.75		
lab*tch	0.75	0.75	0.75		
lab*nch	0.0	0.0	0.0		

relative Inform. Technology (IT)					
olvi3*	0.5	0.5	0.5	0.5	(1.0)
cmyn3*	0.5	0.5	0.5	0.5	(0.0)
olvi4*	0.75	0.75	0.75	0.75	(1.0)
cmyn4*	0.0	0.0	0.0	0.0	(0.0)
standard and adapted CIELAB					
LAB*LAB	58.63	7.5	-8.82		
LAB*LABa	58.63	7.5	-8.82		
LAB*LABb	58.63	7.5	-8.82		
LAB*LABc	58.63	7.5	-8.82		
relative CIELAB lab*					
lab*lab	0.5	0.5	0.5		
lab*tch	0.5	0.5	0.5		
lab*nch	0.0	0.0	0.0		
lab*trj	0.5	0.5	0.5		
relative Natural Colour (NC)					
lab*trj	0.5	0.5	0.5		
lab*tch	0.5	0.5	0.5		
lab*nch	0.0	0.0	0.0		

relative Inform. Technology (IT)					
olvi3*	0.25	0.25	0.25	0.25	(1.0)
cmyn3*	0.75	0.75	0.75	0.75	(0.0)
olvi4*	0.75	0.75	0.75	0.75	(1.0)
cmyn4*	0.0	0.0	0.0	0.0	(0.0)
standard and adapted CIELAB					
LAB*LAB	56.71	0.23	2.14		
LAB*LABa	56.71	0.23	2.14		
LAB*LABb	56.71	0.23	2.14		
LAB*LABc	56.71	0.23	2.14		
relative CIELAB lab*					
lab*lab	0.25	0.25	0.25		
lab*tch	0.25	0.25	0.25		
lab*nch	0.0	0.0	0.0		
lab*trj	0.25	0.25	0.25		
relative Natural Colour (NC)					
lab*trj	0.25	0.25	0.25		
lab*tch	0.25	0.25	0.25		
lab*nch	0.0	0.0	0.0		

relative Inform. Technology (IT)					
olvi3*	0.25	0.25	0.25	0.25	(1.0)
cmyn3*	0.75	0.75	0.75	0.75	(0.0)
olvi4*	0.75	0.75	0.75	0.75	(1.0)
cmyn4*	0.0	0.0	0.0	0.0	(0.0)
standard and adapted CIELAB					
LAB*LAB	39.28	7.87	-10.13		
LAB*LABa	39.28	7.87	-10.13		
LAB*LABb	39.28	7.87	-10.13		
LAB*LABc	39.28	7.87	-10.13		
relative CIELAB lab*					
lab*lab	0.25	0.25	0.25		
lab*tch	0.25	0.25	0.25		
lab*nch	0.0	0.0	0.0		
lab*trj	0.25	0.25	0.25		
relative Natural Colour (NC)					
lab*trj	0.25	0.25	0.25		
lab*tch	0.25	0.25	0.25		
lab*nch	0.0	0.0	0.0		

relative Inform. Technology (IT)					
olvi3*	0.0	0.0	0.0	0.0	(1.0)
cmyn3*	1.0	1.0	1.0	1.0	(0.0)
olvi4*	1.0	1.0	1.0	1.0	(1.0)
cmyn4*	0.0	0.0	0.0	0.0	(0.0)
standard and adapted CIELAB					
LAB*LAB	37.36	0.13	0.83		
LAB*LABa	37.36	0.13	0.83		
LAB*LABb	37.36	0.13	0.83		
LAB*LABc	37.36	0.13	0.83		
relative CIELAB lab*					
lab*lab	0.0	0.0	0.0		
lab*tch	0.0	0.0	0.0		
lab*nch	0.0	0.0	0.0		
lab*trj	0.0	0.0	0.0		
relative Natural Colour (NC)					
lab*trj	0.0	0.0	0.0		
lab*tch	0.0	0.0	0.0		
lab*nch	0.0	0.0	0.0		

relative Inform. Technology (IT)					
olvi3*	0.0	0.0	0.0	0.0	(1.0)
cmyn3*	1.0	1.0	1.0	1.0	(0.0)
olvi4*	1.0	1.0	1.0	1.0	(1.0)
cmyn4*	0.0	0.0	0.0	0.0	(0.0)
standard and adapted CIELAB					
LAB*LAB	19.02	0.5	-0.46		
LAB*LABa	19.02	0.5	-0.46		
LAB*LABb	19.02	0.5	-0.46		
LAB*LABc	19.02	0.5	-0.46		
relative CIELAB lab*					
lab*lab	0.0	0.0	0.0		
lab*tch	0.0	0.0	0.0		
lab*nch	0.0	0.0	0.0		
lab*trj	0.0	0.0	0.0		
relative Natural Colour (NC)					
lab*trj	0.0	0.0	0.0		
lab*tch	0.0	0.0	0.0		
lab*nch	0.0	0.0	0.0		

relative Inform. Technology (IT)					
olvi3*	0.0	0.0	0.0	0.0	(1.0)
cmyn3*	1.0	1.0	1.0	1.0	(0.0)
olvi4*	1.0	1.0	1.0	1.0	(1.0)
cmyn4*	0.0	0.0	0.0	0.0	(0.0)
standard and adapted CIELAB					
LAB*LAB	18.02	0.0	0.0		
LAB*LABa	18.02	0.0	0.0		
LAB*LABb	18.02	0.0	0.0		
LAB*LABc	18.02	0.0	0.0		
relative CIELAB lab*					
lab*lab	0.0	0.0	0.0		
lab*tch	0.0	0.0	0.0		
lab*nch	0.0	0.0	0.0		
lab*trj	0.0	0.0	0.0		
relative Natural Colour (NC)					
lab*trj	0.0	0.0	0.0		
lab*tch	0.0	0.0	0.0		
lab*nch	0.0	0.0	0.0		

relative Inform. Technology (IT)					
olvi3*	0.0	0.0	0.0	0.0	(1.0)
cmyn3*	1.0	1.0	1.0	1.0	(0.0)
olvi4*	1.0	1.0	1.0	1.0	(1.0)
cmyn4*	0.0	0.0	0.0	0.0	(0.0)
standard and adapted CIELAB					
LAB*LAB	18.02	0.0	0.0		
LAB*LABa	18.02	0.0	0.0		
LAB*LABb	18.02	0.0	0.0		
LAB*LABc	18.02	0.0	0.0		
relative CIELAB lab*					
lab*lab	0.0	0.0	0.0		
lab*tch	0.0	0.0	0.0		
lab*nch	0.0	0.0	0.0		
lab*trj	0.0	0.0	0.0		
relative Natural Colour (NC)					
lab*trj	0.0	0.0	0.0		
lab*tch	0.0	0.0	0.0		
lab*nch	0.0	0.0	0.0		

relative Inform. Technology (IT)					
olvi3*	0.0	0.0	0.0	0.0	(1.0)
cmyn3*	1.0	1.0	1.0	1.0	(0.0)
olvi4*	1.0	1.0	1.0	1.0	(1.0)
cmyn4*	0.0	0.0	0.0	0.0	(0.0)
standard and adapted CIELAB					
LAB*LAB	18.02	0.0	0.0		
LAB*LABa	18.02	0.0	0.0		
LAB*LABb	18.02	0.0	0.0		
LAB*LABc	18.02	0.0	0.0		
relative CIELAB lab*					
lab*lab	0.0	0.0	0.0		
lab*tch	0.0	0.0	0.0		
lab*nch	0.0	0.0	0.0		
lab*trj	0.0	0.0	0.0		
relative Natural Colour (NC)					
lab*trj	0.0	0.0	0.0		
lab*tch	0.0	0.0	0.0		
lab*nch	0.0	0.0	0.0		

relative Inform. Technology (IT)					
olvi3*	0.0	0.0	0.0	0.0	(1.0)
cmyn3*	1.0	1.0	1.0	1.0	(0.0)
olvi4*	1.0	1.0	1.0	1.0	(1.0)
cmyn4*	0.0	0.0	0.0	0.0	(0.0)
standard and adapted CIELAB					
LAB*LAB	18.02	0.0	0.0		
LAB*LABa	18.02	0.0	0.0		
LAB*LABb	18.02	0.0	0.0		
LAB*LABc	18.02	0.0	0.0		
relative CIELAB lab*				<	

Input: Colorimetric Reflective System MRS18a

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

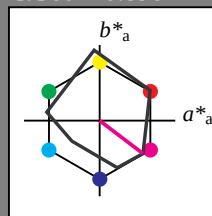
$lab \cdot tch$ and $lab \cdot nch$

D65: hue B50R

LCH*Ma: 35 72 323

rgb*Ma: 1.0 0.0 1.0

triangle lightness



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
R _{CIE}	39.92	58.67	27.97	64.99	25
J _{CIE}	81.26	-2.91	71.56	71.62	92
G _{CIE}	52.23	-42.47	13.58	44.6	162
B _{CIE}	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

$n^* = 0,25$

$n^* = 0,50$

chromaticness c^*

Output: Colorimetric Reflective System ORS18

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

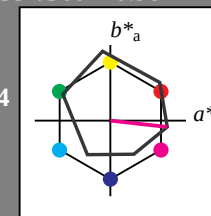
$lab \cdot tch$ and $lab \cdot nch$

D65: hue M

LCH*Ma: 48 76 354

rgb*Ma: 1.0 0.0 1.0

triangle lightness



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
R _{CIE}	39.92	58.66	26.98	64.56	25
J _{CIE}	81.26	-2.17	67.76	67.79	92
G _{CIE}	52.23	-42.26	11.75	43.87	164
B _{CIE}	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 323/360 = 0.896 (left)

5 step scales for constant CIELAB hue 354/360 = 0.982 (right)

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

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

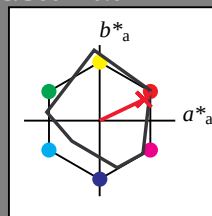
output: *no change compared to input*

Input: Colorimetric Reflective System MRS18a

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

$lab \cdot tch$ 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

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

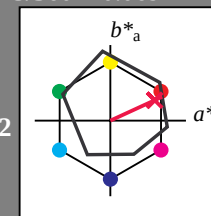
$g^*_{C,rel} = 49$

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

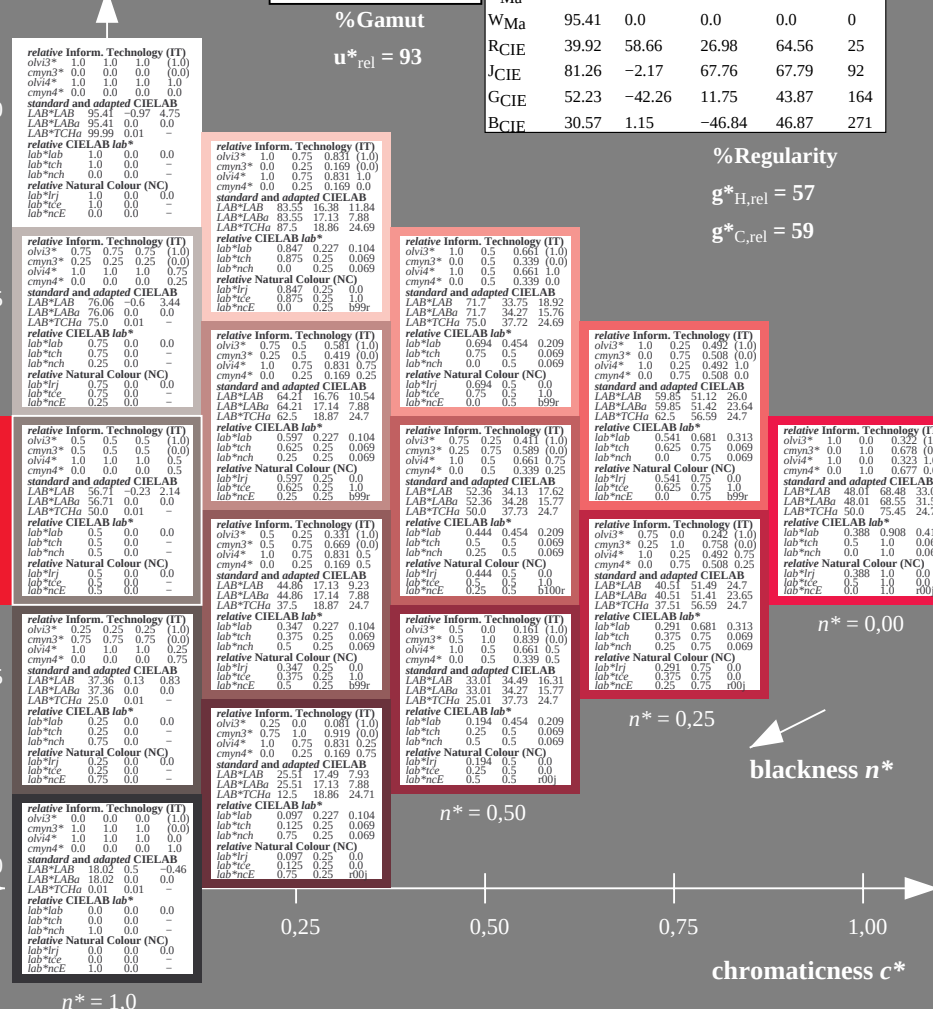
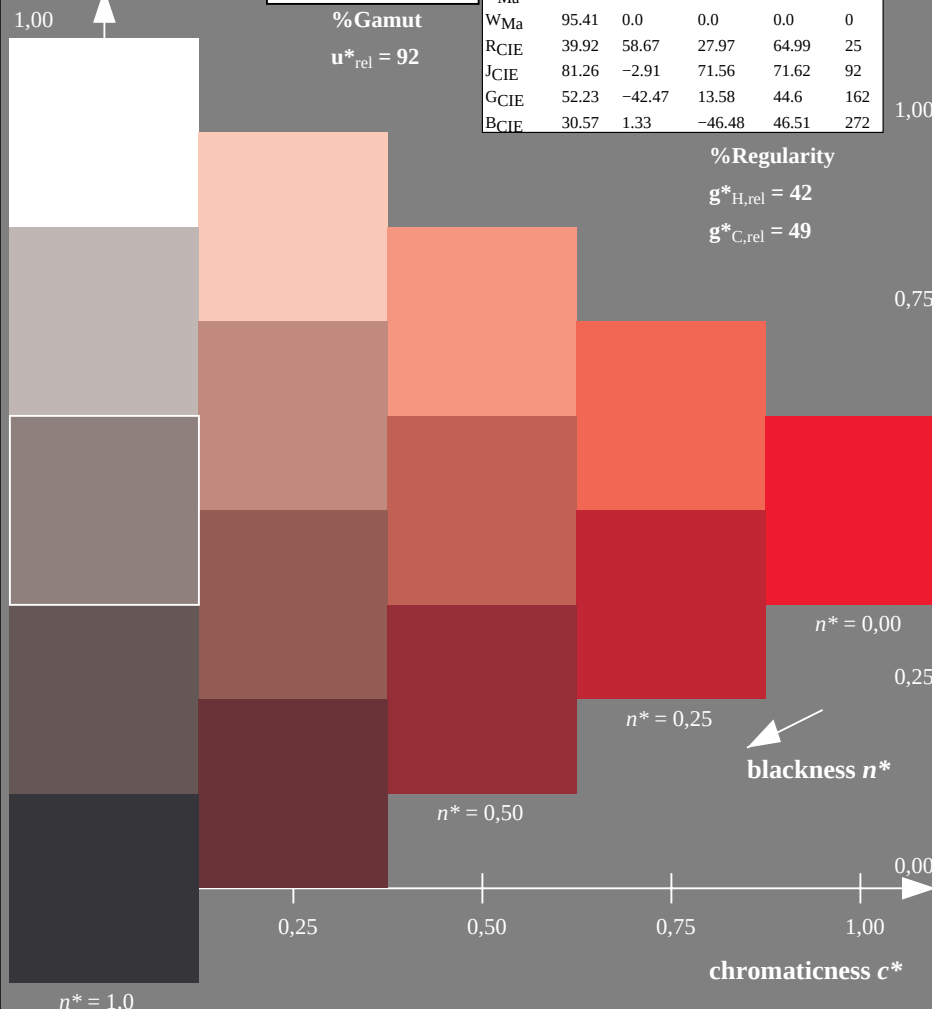


ORS18; adapted (a) CIELAB data					
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	47.94	65.37	50.52	82.62	38
YMa	90.37	-10.27	91.77	92.34	96
LMa	50.9	-62.79	34.95	71.87	151
CMa	58.62	-30.35	-45.01	54.3	236
V _{Ma}	25.71	31.11	-44.42	54.24	305
M _{Ma}	48.13	75.27	-8.35	75.73	354
N _{Ma}	18.01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

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

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



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

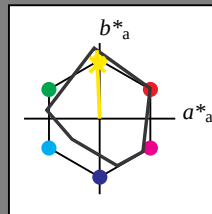
lab^*tch and lab^*nch

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

$n^* = 0,25$

$n^* = 0,50$

chromaticness c^*

Output: Colorimetric Reflective System ORS18

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

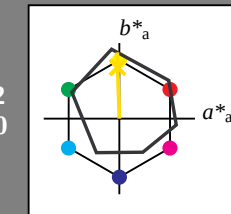
lab^*tch and lab^*nch

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

$n^* = 0,00$

0,25

$n^* = 0,25$

$n^* = 0,50$

chromaticness c^*

UE460-7, 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 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 $h^* = lab \cdot h = 162/360 = 0.451$

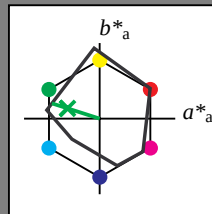
$lab \cdot tch$ and $lab \cdot nch$

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

$n^* = 0,25$

$n^* = 0,50$

0,00

chromaticness c^*

$n^* = 1,0$

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



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

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

Output: Colorimetric Reflective System ORS18

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

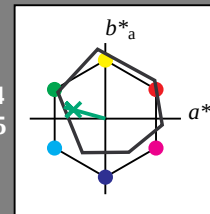
$lab \cdot tch$ and $lab \cdot nch$

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

$n^* = 0,25$

$n^* = 0,50$

0,00

chromaticness c^*

$n^* = 1,0$

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

BAM material: code=rhda4a

output: no change compared to input

Input: Colorimetric Reflective System MRS18a

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

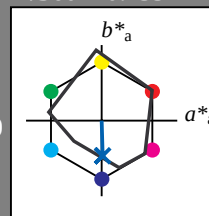
$lab \cdot tch$ and $lab \cdot nch$

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

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,00$

chromaticness c^*

Output: Colorimetric Reflective System ORS18

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

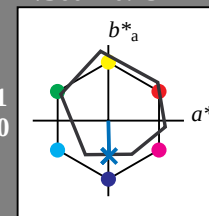
$lab \cdot tch$ and $lab \cdot nch$

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
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

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

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

1,00

0,75

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,00$

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: $cmY0^* set cmykcolor$

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

output: no change compared to input