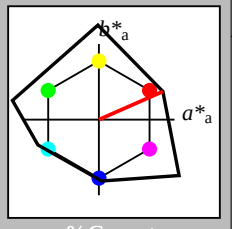
See for similar files: http://www.ps.bam.de/TE58/
Technical information: http://www.ps.bam.de Version 2.1, io=1,1, CIEXYZ

BAM registration: 20060101-TE58/10Q/Q58E00FP.PS/.PDF
application for evaluation and measurement of printer or monitor systems, Yr=2.5, XYZ
BAM material: code=rha4ta
/TE58/ Form: 1/10, Serie: 1/1, Page: 1 Page: count: 1

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 24/360 = 0.066$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

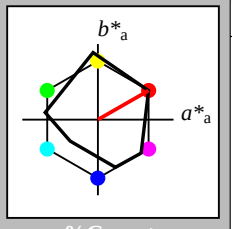
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 30/360 = 0.083$
lab*tch* and *lab*nch

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

triangle lightness t^*



%Gamut
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	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
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
$g^*_{H,rel}$ = 41
$g^*_{C,rel}$ = 52

TE580−7, 5 step scales for constant CIELAB hue 24/360 = 0.066 (left)

5 step scales for constant CIELAB hue 30/360 = 0.083 (right)

BAM-test chart TE58; Colorimetric systems NCS11a & MRS18 input: *olv* setrgbcolor*
D65: 2 coordinate data of 5 step colour scales for 10 hues output: *olv* setrgbcolor / w* setgray*

See for similar files: http://www.ps.bam.de/TE58/
Technical information: http://www.ps.bam.de Version 2.1, io=1,1, CIEXYZ

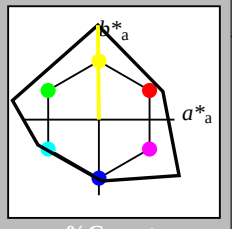
BAM registration: 20060101-TE58/10Q/Q58E01FP.PS/.PDF
application for evaluation and measurement of printer or monitor systems, Yr=2.5, XYZ
BAM material: code=rha4ta
/TE58/ Form: 2/10, Serie: 1/1, Page: 2 Page: count: 2

Input: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 91/360 = 0.252$
*lab*tch* and *lab*nch*

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*

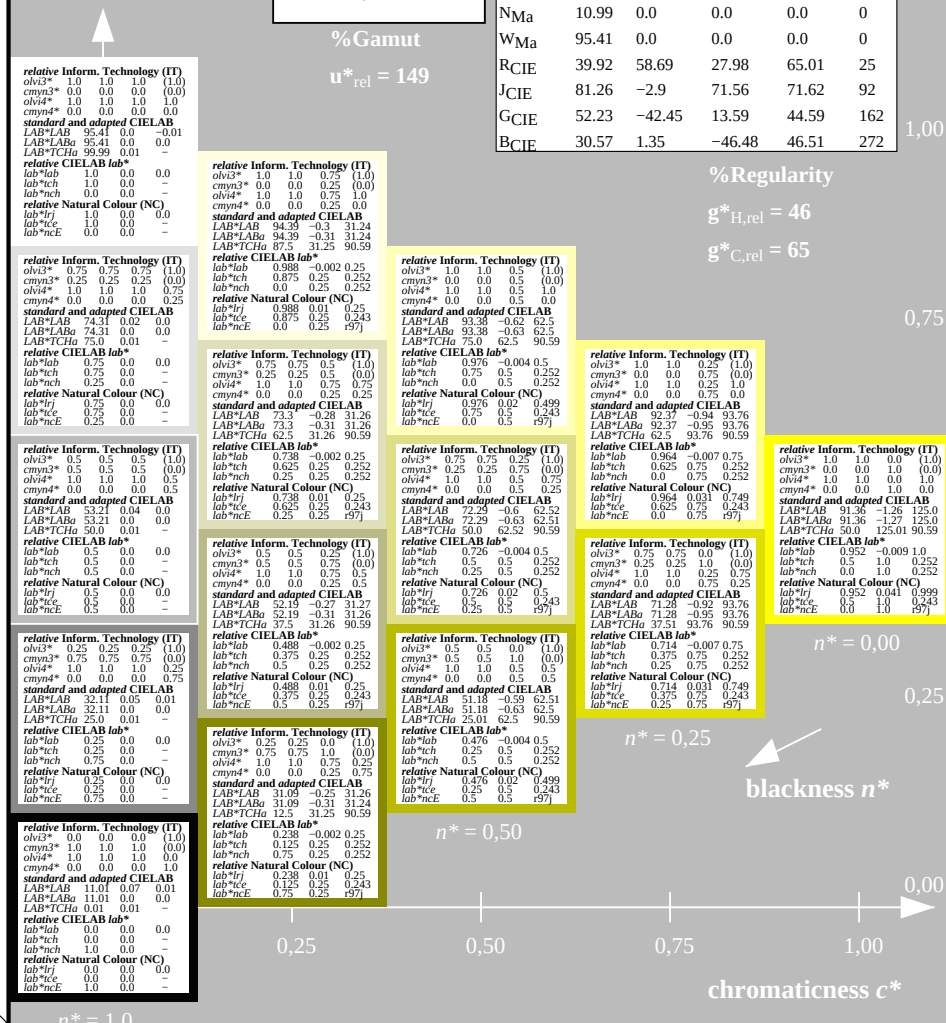


%Gamut
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



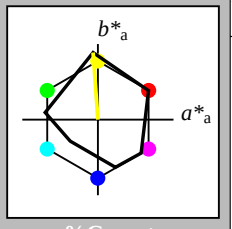
TE580−7, 5 step scales for constant CIELAB hue 91/360 = 0.252 (left)

Output: 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 t^*

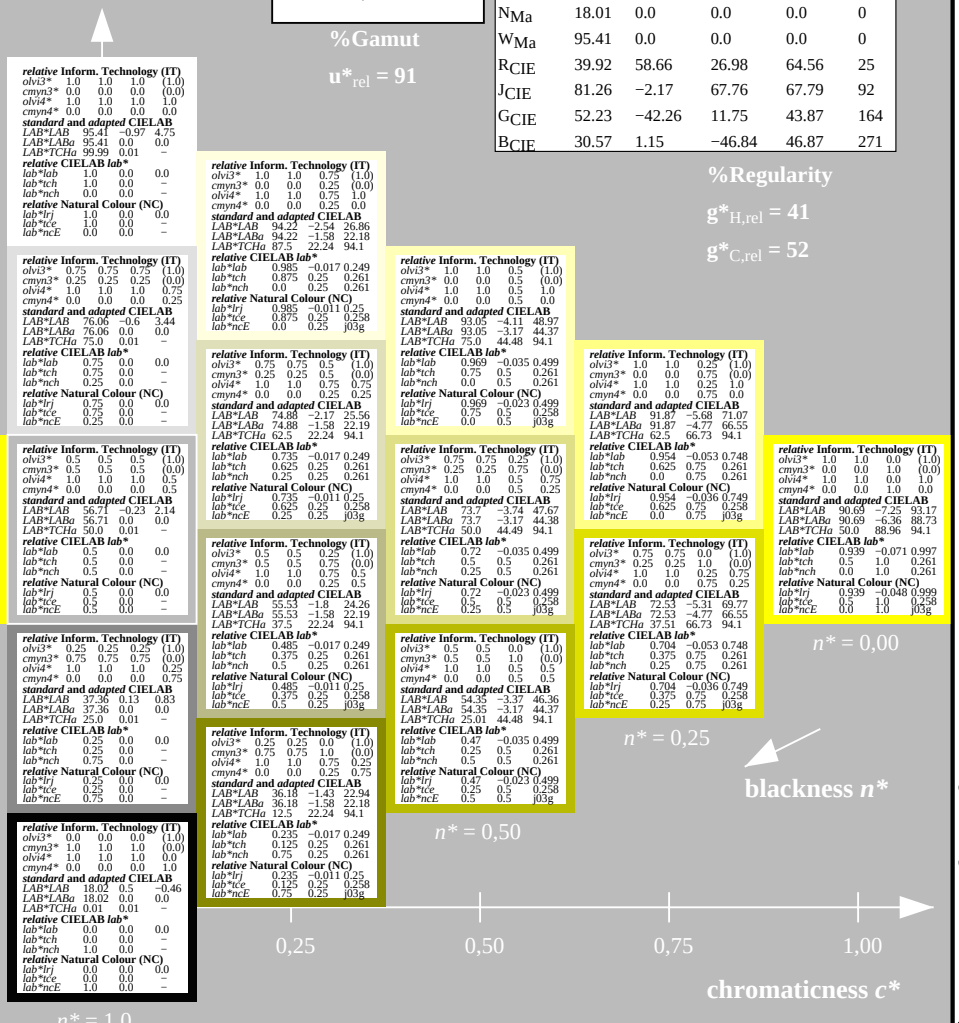


%Gamut
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	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
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
$g^*_{H,rel}$ = 41
$g^*_{C,rel}$ = 52



5 step scales for constant CIELAB hue 94/360 = 0.261 (right)

See for similar files: http://www.ps.bam.de/TE58/
Technical information: http://www.ps.bam.de Version 2.1, io=1,1, CIEXYZ

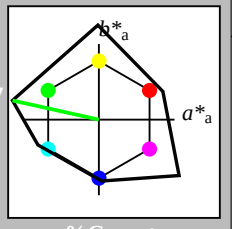
BAM registration: 20060101-TE58/10Q/Q58E02FP.PS/.PDF
application for evaluation and measurement of printer or monitor systems, Yr=2.5, XYZ
BAM material: code=rha4ta
/TE58/ Form: 3/10, Serie: 1/1, Page: 3 Page: count: 3

Input: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 167/360 = 0.465$
*lab*tch* and *lab*nch*

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*

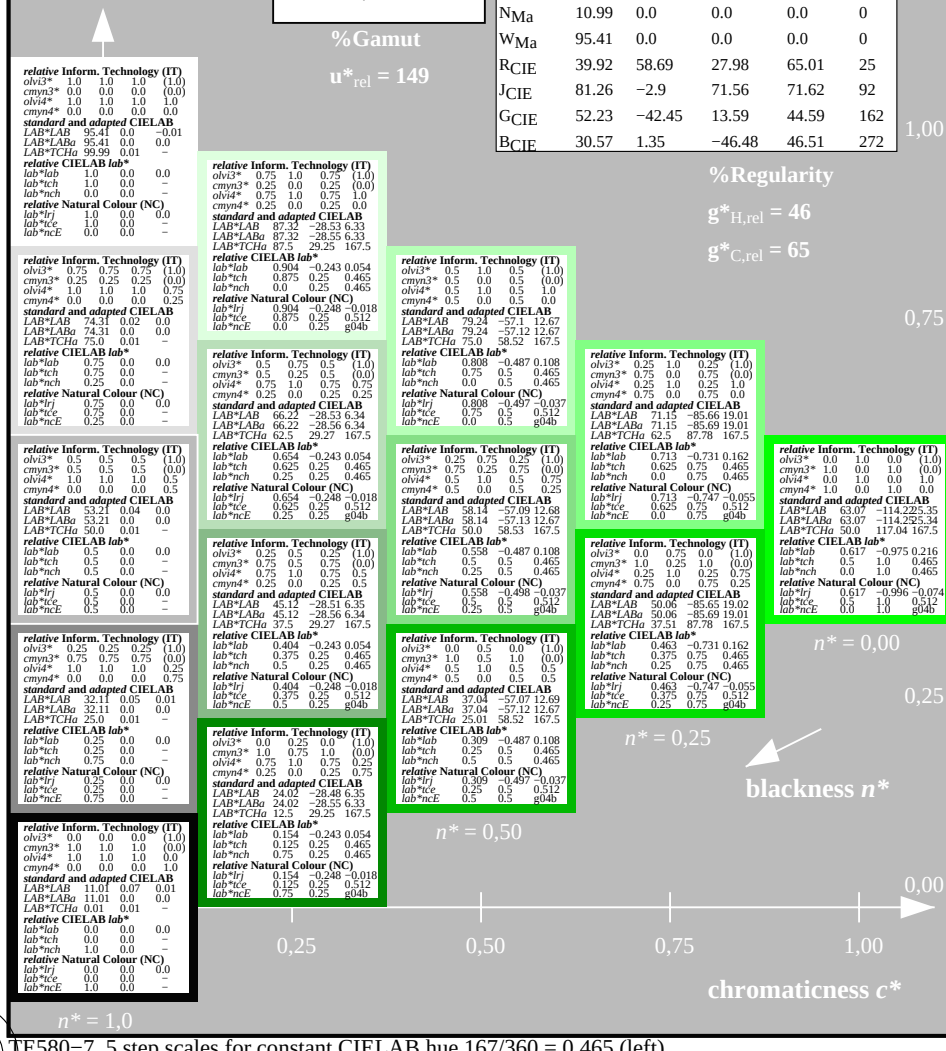


%Gamut
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65

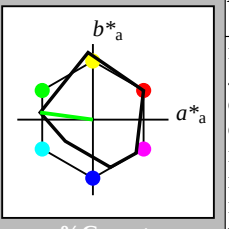


Output: Colorimetric Reflective System MRS18

for hue $h^* = lab^*h = 172/360 = 0.479$
*lab*tch* and *lab*nch*

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

triangle lightness t^*

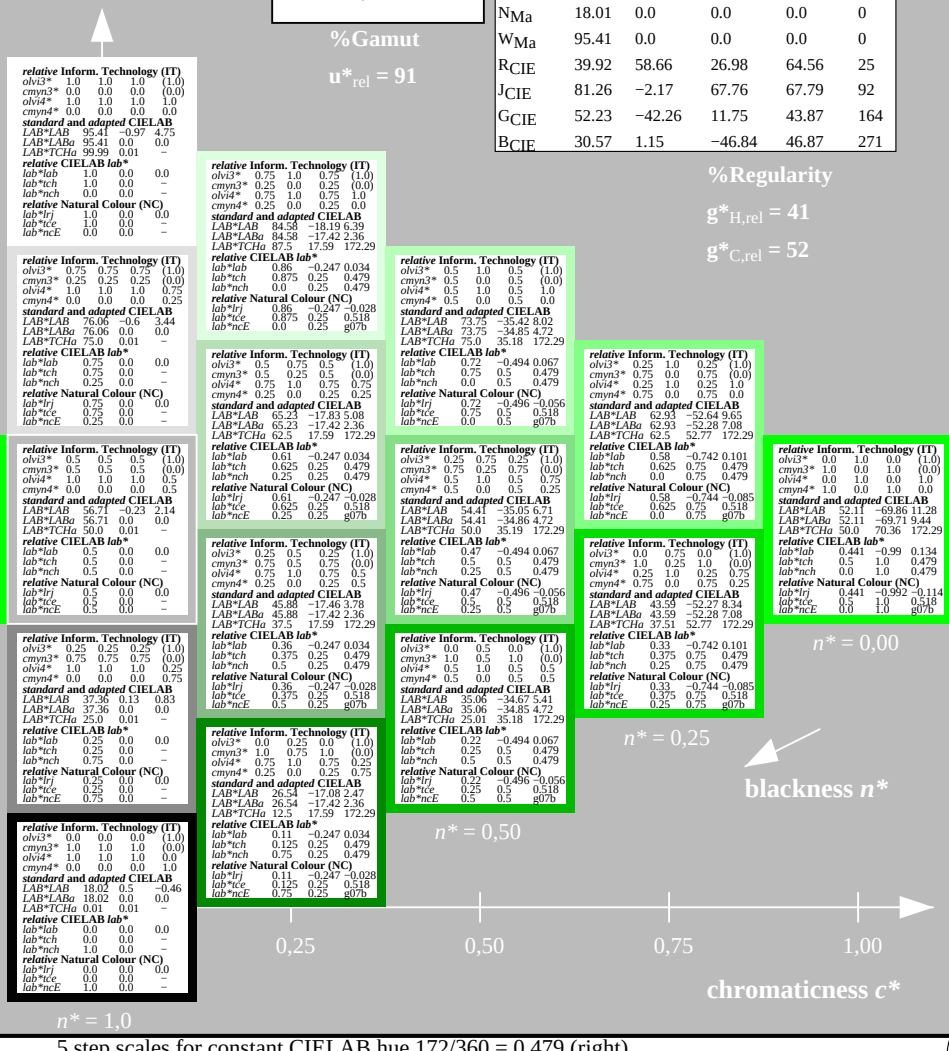


%Gamut
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	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
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
$g^*_{H,rel}$ = 41
$g^*_{C,rel}$ = 52



TE580−7, 5 step scales for constant CIELAB hue 167/360 = 0.465 (left)

5 step scales for constant CIELAB hue 172/360 = 0.479 (right)

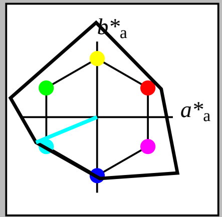
BAM-test chart TE58; Colorimetric systems NCS11a & MRS18 input: *olv* setrgbcolor*
D65: 2 coordinate data of 5 step colour scales for 10 hues output: *olv* setrgbcolor / w* setgray*

Input: Colorimetric Reflective System NCS11

for hue *h = *lab*h* = 203/360 = 0.563**
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness *t*



%Gamut

u*rel = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

g*H,rel = 46

g*C,rel = 65

relative Inform. Technology (IT)				
*olvi3**	1.0	1.0	1.0	(1.0)
*cmyn3**	0.0	0.0	0.0	(0.0)
*olvi4**	1.0	1.0	1.0	1.0
*cmyn4**	0.0	0.0	0.0	0.0
standard and *adapted* CIELAB				
*LAB*LAB*	95.41	0.0	−0.01	
*LAB*LABa*	95.41	0.0	0.0	
*LAB*TCHa*	99.99	0.01	−	
relative* CIELAB *lab*				
*lab*lab*	1.0	0.0	0.0	
*lab*tch*	1.0	0.0	−	
*lab*nch*	0.0	0.0	−	
***relative* Natural Colour (NC)**				
*lab*lrj*	1.0	0.0	0.0	
*lab*tce*	1.0	0.0	−	
*lab*ncE*	0.0	0.0	−	

relative Inform. Technology (IT)				
*olvi3**	0.75	1.0	1.0	(1.0)
*cmyn3**	0.25	0.0	0.0	(0.0)
*olvi4**	0.75	1.0	1.0	1.0
*cmyn4**	0.25	0.0	0.0	0.0
standard and *adapted* CIELAB				
*LAB*LAB*	86.42	−20.12	−8.35	
*LAB*LABa*	86.42	−20.13	−8.35	
*LAB*TCHa*	87.5	21.81	202.54	
relative* CIELAB *lab*				
*lab*lab*	0.893	−0.23	−0.095	
*lab*tch*	0.875	0.25	0.563	
*lab*nch*	0.0	0.25	0.563	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.893	−0.208	−0.136	
*lab*tce*	0.875	0.25	0.592	
*lab*ncE*	0.0	0.25	g36b	

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	0.75
*cmyn4**	0.0	0.0	0.0	0.25
standard and *adapted* CIELAB				
*LAB*LAB*	74.31	0.02	0.0	
*LAB*LABa*	74.31	0.0	0.0	
*LAB*TCHa*	75.0	0.01	−	
relative* CIELAB *lab*				
*lab*lab*	0.75	0.0	0.0	
*lab*tch*	0.75	0.0	−	
*lab*nch*	0.25	0.0	−	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.75	0.0	0.0	
*lab*tce*	0.75	0.0	−	
*lab*ncE*	0.25	0.0	−	

relative Inform. Technology (IT)				
*olvi3**	0.5	1.0	1.0	(1.0)
*cmyn3**	0.5	0.0	0.0	(0.0)
*olvi4**	0.5	1.0	1.0	1.0
*cmyn4**	0.5	0.0	0.0	0.0
standard and *adapted* CIELAB				
*LAB*LAB*	77.43	−40.26	−16.71	
*LAB*LABa*	77.43	−40.29	−16.72	
*LAB*TCHa*	75.0	43.63	202.54	
relative* CIELAB *lab*				
*lab*lab*	0.787	−0.461	−0.191	
*lab*tch*	0.75	0.5	0.563	
*lab*nch*	0.0	0.5	0.563	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.787	−0.418	−0.272	
*lab*tce*	0.75	0.5	0.592	
*lab*ncE*	0.0	0.5	g36b	

relative Inform. Technology (IT)				
*olvi3**	0.5	0.75	0.75	(1.0)
*cmyn3**	0.5	0.25	0.25	(0.0)
*olvi4**	0.75	1.0	1.0	0.75
*cmyn4**	0.25	0.0	0.0	0.25
standard and *adapted* CIELAB				
*LAB*LAB*	65.32	−20.11	−8.35	
*LAB*LABa*	65.32	−20.14	−8.36	
*LAB*TCHa*	62.5	21.82	202.54	
relative* CIELAB *lab*				
*lab*lab*	0.644	−0.23	−0.095	
*lab*tch*	0.625	0.25	0.563	
*lab*nch*	0.25	0.25	0.563	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.644	−0.208	−0.136	
*lab*tce*	0.625	0.25	0.592	
*lab*ncE*	0.25	0.25	g36b	

relative Inform. Technology (IT)				
*olvi3**	0.25	1.0	1.0	(1.0)
*cmyn3**	0.75	0.0	0.0	(0.0)
*olvi4**	0.25	1.0	1.0	1.0
*cmyn4**	0.75	0.0	0.0	0.0
standard and *adapted* CIELAB				
*LAB*LAB*	68.45	−60.41	−25.08	
*LAB*LABa*	68.45	−60.44	−25.08	
*LAB*TCHa*	62.5	65.45	202.54	
relative* CIELAB *lab*				
*lab*lab*	0.681	−0.692	−0.286	
*lab*tch*	0.625	0.75	0.563	
*lab*nch*	0.0	0.75	0.563	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.681	−0.627	−0.409	
*lab*tce*	0.625	0.75	0.592	
*lab*ncE*	0.0	0.75	g36b	

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	0.5
*cmyn4**	0.0	0.0	0.0	0.5
standard and *adapted* CIELAB				
*LAB*LAB*	53.21	0.04	0.0	
*LAB*LABa*	53.21	0.0	0.0	
*LAB*TCHa*	50.0	0.01	−	
relative* CIELAB *lab*				
*lab*lab*	0.5	0.0	0.0	
*lab*tch*	0.5	0.0	−	
*lab*nch*	0.5	0.0	−	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.5	0.0	0.0	
*lab*tce*	0.5	0.0	−	
*lab*ncE*	0.5	0.0	−	

relative Inform. Technology (IT)				
*olvi3**	0.25	0.75	0.75	(1.0)
*cmyn3**	0.75	0.25	0.25	(0.0)
*olvi4**	0.5	1.0	1.0	0.75
*cmyn4**	0.5	0.0	0.0	0.25
standard and *adapted* CIELAB				
*LAB*LAB*	56.33	−40.26	−16.71	
*LAB*LABa*	56.33	−40.3	−16.72	
*LAB*TCHa*	50.0	43.64	202.54	
relative* CIELAB *lab*				
*lab*lab*	0.537	−0.461	−0.191	
*lab*tch*	0.5	0.5	0.563	
*lab*nch*	0.25	0.5	0.563	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.537	−0.418	−0.272	
*lab*tce*	0.5	0.5	0.592	
*lab*ncE*	0.25	0.5	g36b	

relative Inform. Technology (IT)				
*olvi3**	0.0	1.0	1.0	(1.0)
*cmyn3**	1.0	0.0	0.0	(0.0)
*olvi4**	0.0	1.0	1.0	1.0
*cmyn4**	1.0	0.0	0.0	0.0
standard and *adapted* CIELAB				
*LAB*LAB*	59.47	−80.55	−33.44	
*LAB*LABa*	59.47	−80.59	−33.44	
*LAB*TCHa*	50.0	87.26	202.54	
relative* CIELAB *lab*				
*lab*lab*	0.574	−0.922	−0.382	
*lab*tch*	0.5	1.0	0.563	
*lab*nch*	0.0	1.0	0.563	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.574	−0.836	−0.546	
*lab*tce*	0.5	1.0	0.592	
*lab*ncE*	0.0	1.0	g36b	

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	0.25
*cmyn4**	0.0	0.0	0.0	0.75
standard and *adapted* CIELAB				
*LAB*LAB*	32.11	0.05	0.01	
*LAB*LABa*	32.11	0.0	0.0	
*LAB*TCHa*	25.0	0.01	−	
relative* CIELAB *lab*				
*lab*lab*	0.25	0.0	0.0	
*lab*tch*	0.25	0.0	−	
*lab*nch*	0.75	0.0	−	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.25	0.0	0.0	
*lab*tce*	0.25	0.0	−	
*lab*ncE*	0.75	0.0	−	

relative Inform. Technology (IT)				
*olvi3**	0.25	0.5	0.5	(1.0)
*cmyn3**	0.75	0.5	0.5	(0.0)
*olvi4**	0.75	1.0	1.0	0.5
*cmyn4**	0.25	0.0	0.0	0.5
standard and *adapted* CIELAB				
*LAB*LAB*	44.22	−20.09	−8.34	
*LAB*LABa*	44.22	−20.14	−8.36	
*LAB*TCHa*	37.5	21.82	202.54	
relative* CIELAB *lab*				
*lab*lab*	0.394	−0.23	−0.095	
*lab*tch*	0.375	0.25	0.563	
*lab*nch*	0.5	0.25	0.563	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.394	−0.208	−0.136	
*lab*tce*	0.375	0.25	0.592	
*lab*ncE*	0.5	0.25	g36b	

relative Inform. Technology (IT)				
*olvi3**	0.0	0.5	0.5	(1.0)
*cmyn3**	1.0	0.5	0.5	(0.0)
*olvi4**	0.5	1.0	1.0	0.5
*cmyn4**	0.5	0.0	0.0	0.5
standard and *adapted* CIELAB				
*LAB*LAB*	35.23	−40.23	−16.7	
*LAB*LABa*	35.23	−40.29	−16.72	
*LAB*TCHa*	25.01	43.63	202.54	
relative* CIELAB *lab*				
*lab*lab*	0.287	−0.461	−0.191	
*lab*tch*	0.25	0.5	0.563	
*lab*nch*	0.5	0.5	0.563	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.287	−0.418	−0.272	
*lab*tce*	0.25	0.5	0.592	
*lab*ncE*	0.5	0.5	g36b	

relative Inform. Technology (IT)				
*olvi3**	0.0	0.75	0.75	(1.0)
*cmyn3**	1.0	0.25	0.25	(0.0)
*olvi4**	0.25	1.0	1.0	0.75
*cmyn4**	0.75	0.0	0.0	0.25
standard and *adapted* CIELAB				
*LAB*LAB*	47.35	−60.39	−25.07	
*LAB*LABa*	47.35	−60.44	−25.08	
*LAB*TCHa*	37.51	65.45	202.54	
relative* CIELAB *lab*				
*lab*lab*	0.431	−0.692	−0.286	
*lab*tch*	0.375	0.75	0.563	
*lab*nch*	0.25	0.75	0.563	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.431	−0.627	−0.409	
*lab*tce*	0.375	0.75	0.592	
*lab*ncE*	0.25	0.75	g36b	

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

relative Inform. Technology (IT)				
*olvi3**	0.0	0.25	0.25	(1.0)
*cmyn3**	1.0	0.75	0.75	(0.0)
*olvi4**	0.75	1.0	1.0	0.25
*cmyn4**	0.25	0.0	0.0	0.75
standard and *adapted* CIELAB				
*LAB*LAB*	23.11	−20.07	−8.33	
*LAB*LABa*	23.11	−20.13	−8.35	
*LAB*TCHa*	12.5	21.81	202.54	
relative* CIELAB *lab*				
*lab*lab*	0.144	−0.23	−0.095	
*lab*tch*	0.125	0.25	0.563	
*lab*nch*	0.75	0.25	0.563	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.144	−0.208	−0.136	
*lab*tce*	0.125	0.25	0.592	
*lab*ncE*	0.75	0.25	g36b	

1,00 0,75 0,25 0,00

*n** = 0,00 *n** = 0,25 *n** = 0,50 *n** = 1,0

blackness *n*

0,25 0,50 0,75 1,00

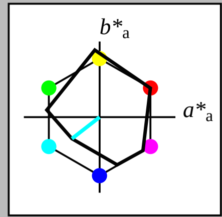
chromaticness *c*

Output: Colorimetric Reflective System MRS18

for hue *h = *lab*h* = 218/360 = 0.605**
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 218
rgb*Ma: 0.0 1.0 1.0

triangle lightness *t*



%Gamut

u*rel = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	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
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 = 41

g*C,rel = 52

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*	99.99	0.01	−	
relative* CIELAB *lab*				
*lab*lab*	1.0	0.0	0.0	
*lab*tch*	1.0	0.0	−	
*lab*nch*	0.0	0.0	−	
***relative* Natural Colour (NC)**				
*lab*lrj*	1.0	0.0	0.0	
*lab*tce*	1.0	0.0	−	
*lab*ncE*	0.0	0.0	−	

relative Inform. Technology (IT)				
*olvi3**	0.75	1.0	1.0	(1.0)
*cmyn3**	0.25	0.0	0.0	(0.0)
*olvi4**	0.75	1.0	1.0	1.0
*cmyn4**	0.25	0.0	0.0	0.0
standard and *adapted* CIELAB				
*LAB*LAB*	82.81	−9.87	−3.2	
*LAB*LABa*	82.81	−9.13	−7.11	
*LAB*TCHa*	87.5	11.58	217.91	
relative* CIELAB *lab*				
*lab*lab*	0.837	−0.196	−0.153	
*lab*tch*	0.875	0.25	0.605	
*lab*nch*	0.0	0.25	0.605	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.837	−0.176	−0.176	
*lab*tce*	0.875	0.25	0.625	
*lab*ncE*	0.0	0.25	g49b	

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	0.75
*cmyn4**	0.0	0.0	0.0	0.25
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	−	
relative* CIELAB *lab*				
*lab*lab*	0.75	0.0	0.0	
*lab*tch*	0.75	0.0	−	
*lab*nch*	0.25	0.0	−	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.75	0.0	0.0	
*lab*tce*	0.75	0.0	−	
*lab*ncE*	0.25	0.0	−	

relative Inform. Technology (IT)				
*olvi3**	0.5	1.0	1.0	(1.0)
*cmyn3**	0.5	0.0	0.0	(0.0)
*olvi4**	0.5	1.0	1.0	1.0
*cmyn4**	0.5	0.0	0.0	0.0
standard and *adapted* CIELAB				
*LAB*LAB*	70.21	−18.77	−11.17	
*LAB*LABa*	70.21	−18.27	−14.23	
*LAB*TCHa*	75.0	23.17	217.91	
relative* CIELAB *lab*				
*lab*lab*	0.674	−0.393	−0.306	
*lab*tch*	0.75	0.5	0.605	
*lab*nch*	0.0	0.5	0.605	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.674	−0.353	−0.352	
*lab*tce*	0.75	0.5	0.625	
*lab*ncE*	0.0	0.5	g49b	

relative Inform. Technology (IT)				
*olvi3**	0.5	0.75	0.75	(1.0)
*cmyn3**	0.5	0.25	0.25	(0.0)
*olvi4**	0.75	1.0	1.0	0.75
*cmyn4**	0.25	0.0	0.0	0.25
standard and *adapted* CIELAB				
*LAB*LAB*	63.46	−9.5	−4.51	
*LAB*LABa*	63.46	−9.13	−7.11	
*LAB*TCHa*	62.5	11.59	217.91	
relative* CIELAB *lab*				
*lab*lab*	0.587	−0.196	−0.153	
*lab*tch*	0.625	0.25	0.605	
*lab*nch*	0.25	0.25	0.605	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.587	−0.176	−0.176	
*lab*tce*	0.625	0.25	0.625	
*lab*ncE*	0.25	0.25	g49b	

relative Inform. Technology (IT)				
*olvi3**	0.25	1.0	1.0	(1.0)
*cmyn3**	0.75	0.0	0.0	(0.0)
*olvi4**	0.25	1.0	1.0	1.0
*cmyn4**	0.75	0.0	0.0	0.0
standard and *adapted* CIELAB				
*LAB*LAB*	57.62	−27.67	−19.14	
*LAB*LABa*	57.62	−27.42	−21.35	
*LAB*TCHa*	62.5	34.76	217.91	
relative* CIELAB *lab*				
*lab*lab*	0.512	−0.591	−0.46	
*lab*tch*	0.625	0.75	0.605	
*lab*nch*	0.0	0.75	0.605	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.512	−0.529	−0.529	
*lab*tce*	0.625	0.75	0.625	
*lab*ncE*	0.0	0.75	g49b	

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	0.5
*cmyn4**	0.0	0.0	0.0	0.5
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	−	
relative* CIELAB *lab*				
*lab*lab*	0.5	0.0	0.0	
*lab*tch*	0.5	0.0	−	
*lab*nch*	0.5	0.0	−	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.5	0.0	0.0	
*lab*tce*	0.5	0.0	−	
*lab*ncE*	0.5	0.0	−	

relative Inform. Technology (IT)				
*olvi3**	0.25	0.75	0.75	(1.0)
*cmyn3**	0.75	0.25	0.25	(0.0)
*olvi4**	0.5	1.0	1.0	0.75
*cmyn4**	0.5	0.0	0.0	0.25
standard and *adapted* CIELAB				
*LAB*LAB*	50.87	−18.4	−12.48	
*LAB*LABa*	50.87	−18.28	−14.23	
*LAB*TCHa*	50.0	23.18	217.91	
relative* CIELAB *lab*				
*lab*lab*	0.425	−0.394	−0.306	
*lab*tch*	0.5	0.5	0.605	
*lab*nch*	0.25	0.5	0.605	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.425	−0.353	−0.352	
*lab*tce*	0.5	0.5	0.625	
*lab*ncE*	0.25	0.5	g49b	

relative Inform. Technology (IT)				
*olvi3**	0.0	1.0	1.0	(1.0)
*cmyn3**	1.0	0.0	0.0	(0.0)
*olvi4**	0.0	1.0	1.0	1.0
*cmyn4**	1.0	0.0	0.0	0.0
standard and *adapted* CIELAB				
*LAB*LAB*	45.03	−36.57	−27.11	
*LAB*LABa*	45.03	−36.56	−28.47	
*LAB*TCHa*	50.0	46.35	217.91	
relative* CIELAB *lab*				
*lab*lab*	0.349	−0.788	−0.613	
*lab*tch*	0.5	1.0	0.605	
*lab*nch*	0.0	1.0	0.605	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.349	−0.706	−0.706	
*lab*tce*	0.5	1.0	0.625	
*lab*ncE*	0.0	1.0	g49b	

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	0.25
*cmyn4**	0.0	0.0	0.0	0.75
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	−	
relative* CIELAB *lab*				
*lab*lab*	0.25	0.0	0.0	
*lab*tch*	0.25	0.0	−	
*lab*nch*	0.75	0.0	−	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.25	0.0	0.0	
*lab*tce*	0.25	0.0	−	
*lab*ncE*	0.75	0.0	−	

relative Inform. Technology (IT)				
*olvi3**	0.25	0.5	0.5	(1.0)
*cmyn3**	0.75	0.5	0.5	(0.0)
*olvi4**	0.75	1.0	1.0	0.5
*cmyn4**	0.25	0.0	0.0	0.5
standard and *adapted* CIELAB				
*LAB*LAB*	44.11	−9.13	−5.81	
*LAB*LABa*	44.11	−9.13	−7.11	
*LAB*TCHa*	37.5	11.59	217.91	
relative* CIELAB *lab*				
*lab*lab*	0.337	−0.196	−0.153	
*lab*tch*	0.375	0.25	0.605	
*lab*nch*	0.5	0.25	0.605	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.337	−0.176	−0.176	
*lab*tce*	0.375	0.25	0.625	
*lab*ncE*	0.5	0.25	g49b	

relative Inform. Technology (IT)				
*olvi3**	0.0	0.5	0.5	(1.0)
*cmyn3**	1.0	0.5	0.5	(0.0)
*olvi4**	0.5	1.0	1.0	0.5
*cmyn4**	0.5	0.0	0.0	0.5
standard and *adapted* CIELAB				
*LAB*LAB*	31.52	−18.03	−13.78	
*LAB*LABa*	31.52	−18.27	−14.23	
*LAB*TCHa*	25.01	23.17	217.91	
relative* CIELAB *lab*				
*lab*lab*	0.175	−0.393	−0.306	
*lab*tch*	0.25	0.5	0.605	
*lab*nch*	0.5	0.5	0.605	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.175	−0.353	−0.352	
*lab*tce*	0.25	0.5	0.625	
*lab*ncE*	0.5	0.5	g49b	

relative Inform. Technology (IT)				
*olvi3**	0.0	0.75	0.75	(1.0)
*cmyn3**	1.0	0.25	0.25	(0.0)
*olvi4**	0.25	1.0	1.0	0.75
*cmyn4**	0.75	0.0	0.0	0.25
standard and *adapted* CIELAB				
*LAB*LAB*	38.28	−27.3	−20.44	
*LAB*LABa*	38.28	−27.42	−21.35	
*LAB*TCHa*	37.51	34.76	217.91	
relative* CIELAB *lab*				
*lab*lab*	0.262	−0.591	−0.46	
*lab*tch*	0.375	0.75	0.605	
*lab*nch*	0.25	0.75	0.605	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.262	−0.529	−0.529	
*lab*tce*	0.375	0.75	0.625	
*lab*ncE*	0.25	0.75	g49b	

relative Inform. Technology (IT)				
*olvi3**	0.0	0.0	0.0	(1.0)
*cmyn3**	1.0	1.0	1.0	(0.0)
*olvi4**	1.0	1.0	1.0	0.0
*cmyn4**	0.0	0.0	0.0	1.0
standard and *adapted* CIELAB				
*LAB*LAB*	18.02	0.5	−0.46	
*LAB*LABa*	18.02	0.0	0.0	
*LAB*TCHa*	0.01	0.01	−	
relative* CIELAB *lab*				
*lab*lab*	0.0	0.0	0.0	
*lab*tch*	0.0	0.0	−	
*lab*nch*	1.0	0.0	−	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.0	0.0	0.0	
*lab*tce*	0.0	0.0	−	
*lab*ncE*	1.0	0.0	−	

relative Inform. Technology (IT)				
*olvi3**	0.0	0.25	0.25	(1.0)
*cmyn3**	1.0	0.75	0.75	(0.0)
*olvi4**	0.75	1.0	1.0	0.25
*cmyn4**	0.25	0.0	0.0	0.75
standard and *adapted* CIELAB				
*LAB*LAB*	24.77	−8.76	−7.12	
*LAB*LABa*	24.77	−9.13	−7.11	
*LAB*TCHa*	12.5	11.58	217.91	
relative* CIELAB *lab*				
*lab*lab*	0.087	−0.196	−0.153	
*lab*tch*	0.125	0.25	0.605	
*lab*nch*	0.75	0.25	0.605	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.087	−0.176	−0.176	
*lab*tce*	0.125	0.25	0.625	
*lab*ncE*	0.75	0.25	g49b	

*n** = 0,00 *n** = 0,25 *n** = 0,50 *n** = 1,0

blackness *n*

0,25 0,50 0,75 1,00

chromaticness *c*

TE580−7, 5 step scales for constant CIELAB hue 203/360 = 0.563 (left)   5 step scales for constant CIELAB hue 218/360 = 0.605 (right)

See for similar files: http://www.ps.bam.de/TE58/
Technical information: http://www.ps.bam.de Version 2.1, io=1,1, CIEXYZ

BAM registration: 20060101-TE58/10Q/Q58E03FP.PS/.PDF BAM material: code=rha4ta
application for evaluation and measurement of printer or monitor systems, Yr=2.5, XYZ

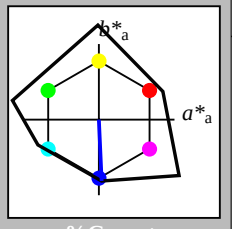
See for similar files: http://www.ps.bam.de/TE58/
Technical information: http://www.ps.bam.de Version 2.1, io=1,1, CIEXYZ

BAM registration: 20060101-TE58/10Q/Q58E04FP.PS/.PDF
application for evaluation and measurement of printer or monitor systems, Yr=2.5, XYZ
BAM material: code=rha4ta
/TE58/ Form: 5/10, Serie: 1/1, Page: 5 Page: count: 5

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

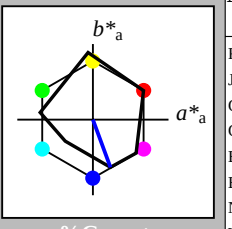
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 290/360 = 0.806$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 67 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*

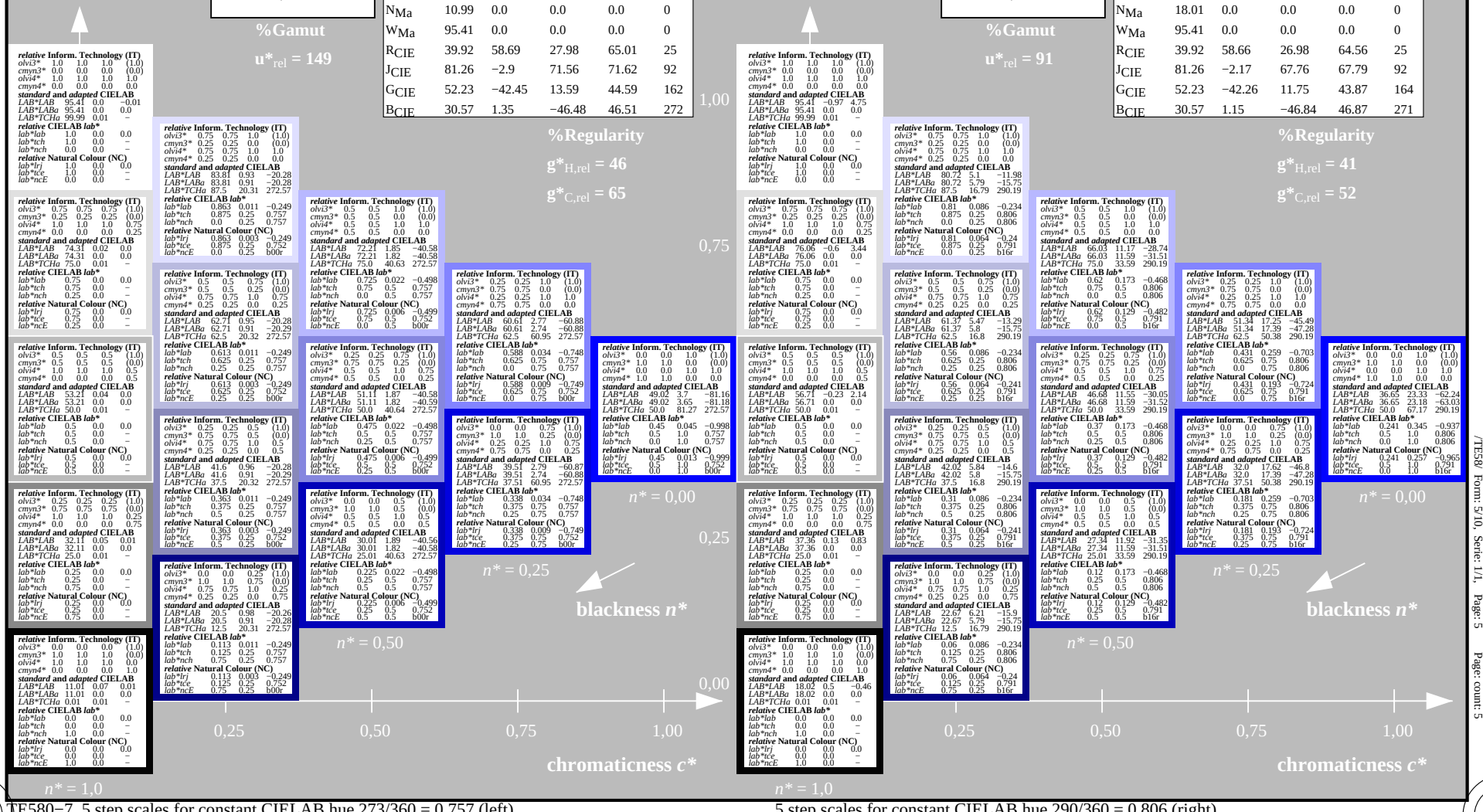


%Gamut
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	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
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
$g^*_{H,rel}$ = 41
$g^*_{C,rel}$ = 52



TE580−7, 5 step scales for constant CIELAB hue 273/360 = 0.757 (left)

5 step scales for constant CIELAB hue 290/360 = 0.806 (right)

BAM-test chart TE58; Colorimetric systems NCS11a & MRS18 input: *olv* setrgbcolor*
D65: 2 coordinate data of 5 step colour scales for 10 hues output: *olv* setrgbcolor / w* setgray*

See for similar files: http://www.ps.bam.de/TE58/
Technical information: http://www.ps.bam.de Version 2.1, io=1,1, CIEXYZ

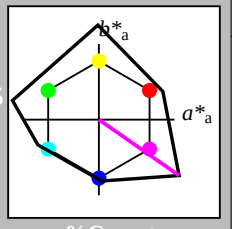
BAM registration: 20060101-TE58/10Q/Q58E05FP.PS/.PDF
application for evaluation and measurement of printer or monitor systems, Yr=2.5, XYZ
BAM material: code=rha4ta
/TE58/ Form: 6/10, Serie: 1/1, Page: 6 Page: count: 6

Input: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 325/360 = 0.903$
*lab*tch* and *lab*nch*

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

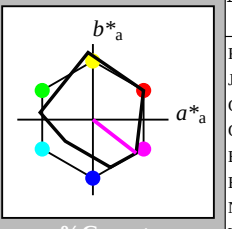
%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System MRS18

for hue $h^* = lab^*h = 322/360 = 0.895$
*lab*tch* and *lab*nch*

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

triangle lightness t^*

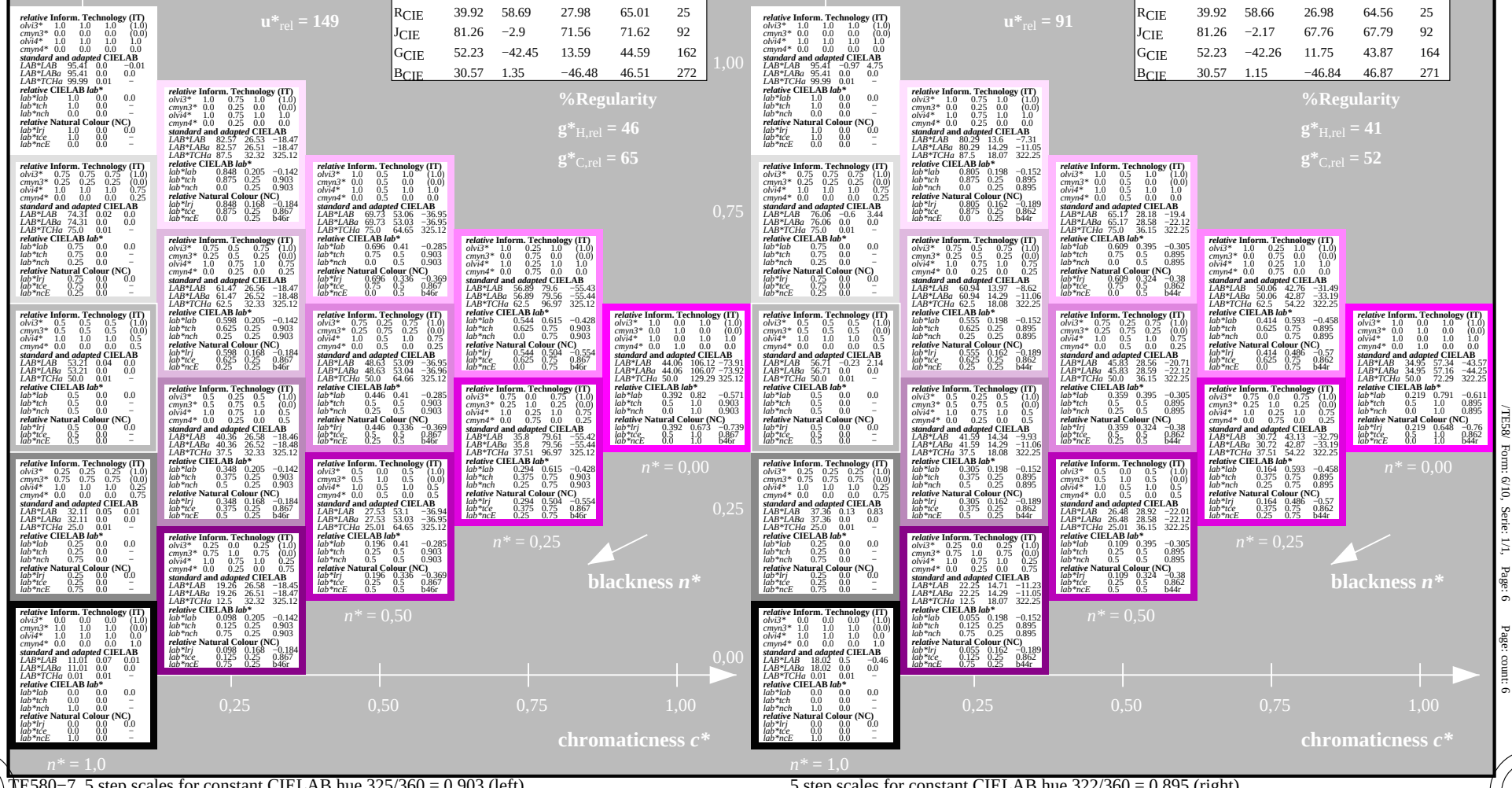


%Gamut
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	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
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
$g^*_{H,rel}$ = 41
$g^*_{C,rel}$ = 52



TE580−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 322/360 = 0.895 (right)

BAM-test chart TE58; Colorimetric systems NCS11a & MRS18 input: *olv* setrgbcolor*
D65: 2 coordinate data of 5 step colour scales for 10 hues output: *olv* setrgbcolor / w* setgray*

www.ps.bam.de/TE58/10Q/Q58E06FP.PS/.PDF; linearized output
F: Output Linearization (OL) data TE58/10Q/Q58E06FP.DAT in File (F)

See for similar files: http://www.ps.bam.de/TE58/
Technical information: http://www.ps.bam.de Version 2.1, io=1,1, CIEXYZ

BAM registration: 20060101-TE58/10Q/Q58E06FP.PS/.PDF
application for evaluation and measurement of printer or monitor systems, Yr=2.5, XYZ
BAM material: code=rha4ta

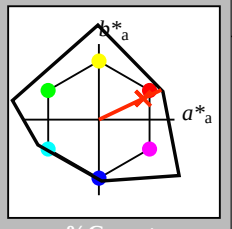
/TE58/ Form: 7/10, Serie: 1/1, Page: 7 Page: count: 7

Input: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 25/360 = 0.071$
*lab*tch* and *lab*nch*

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness t^*



%Gamut
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

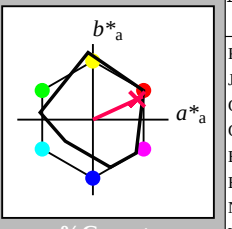
%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System MRS18

for hue $h^* = lab^*h = 25/360 = 0.069$
*lab*tch* and *lab*nch*

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

triangle lightness t^*



%Gamut
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	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
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
$g^*_{H,rel}$ = 41
$g^*_{C,rel}$ = 52

TE580−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

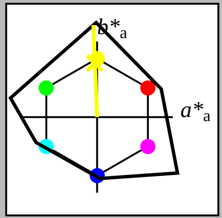
5 step scales for constant CIELAB hue 25/360 = 0.069 (right)

BAM-test chart TE58; Colorimetric systems NCS11a & MRS18 input: *olv* setrgbcolor*
D65: 2 coordinate data of 5 step colour scales for 10 hues output: *olv* setrgbcolor / w* setgray*

Input: Colorimetric Reflective System NCS11
for hue *h* = lab*h = 92/360 = 0.256*
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness *t**



NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut
u^*_{rel} = 149

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65

relative **Inform. Technology (IT)**				
olvi3*	1.0	1.0	1.0	(1.0)
cmyn3*	0.0	0.0	0.0	(0.0)
olvi4*	1.0	1.0	1.0	1.0
cmyn4*	0.0	0.0	0.0	0.0
standard and *adapted* **CIELAB**				
LAB*LAB	95.41	0.0	−0.01	
LAB*LABa	95.41	0.0	0.0	
LAB*TCHa	99.99	0.01	−	
relative **CIELAB *lab****				
lab*lab	1.0	0.0	0.0	
lab*tch	1.0	0.0	−	
lab*nch	0.0	0.0	−	
relative **Natural Colour (NC)**				
lab*lrj	1.0	0.0	0.0	
lab*tce	1.0	0.0	−	
lab*ncE	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	0.75
cmyn4*	0.0	0.0	0.0	0.25
standard and *adapted* **CIELAB**				
LAB*LAB	74.31	0.02	0.0	
LAB*LABa	74.31	0.0	0.0	
LAB*TCHa	75.0	0.01	−	
relative **CIELAB *lab****				
lab*lab	0.75	0.0	0.0	
lab*tch	0.75	0.0	−	
lab*nch	0.25	0.0	−	
relative **Natural Colour (NC)**				
lab*lrj	0.75	0.0	0.0	
lab*tce	0.75	0.0	−	
lab*ncE	0.25	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	0.5
cmyn4*	0.0	0.0	0.0	0.5
standard and *adapted* **CIELAB**				
LAB*LAB	53.21	0.04	0.0	
LAB*LABa	53.21	0.0	0.0	
LAB*TCHa	50.0	0.01	−	
relative **CIELAB *lab****				
lab*lab	0.5	0.0	0.0	
lab*tch	0.5	0.0	−	
lab*nch	0.5	0.0	−	
relative **Natural Colour (NC)**				
lab*lrj	0.5	0.0	0.0	
lab*tce	0.5	0.0	−	
lab*ncE	0.5	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	0.25
cmyn4*	0.0	0.0	0.0	0.75
standard and *adapted* **CIELAB**				
LAB*LAB	32.11	0.05	0.01	
LAB*LABa	32.11	0.0	0.0	
LAB*TCHa	25.0	0.01	−	
relative **CIELAB *lab****				
lab*lab	0.25	0.0	0.0	
lab*tch	0.25	0.0	−	
lab*nch	0.75	0.0	−	
relative **Natural Colour (NC)**				
lab*lrj	0.25	0.0	0.0	
lab*tce	0.25	0.0	−	
lab*ncE	0.75	0.0	−	

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

relative **Inform. Technology (IT)**				
olvi3*	0.992	1.0	0.75	(1.0)
cmyn3*	0.008	0.0	0.25	(0.0)
olvi4*	0.992	1.0	0.75	1.0
cmyn4*	0.008	0.0	0.25	0.0
standard and *adapted* **CIELAB**				
LAB*LAB	94.16	−1.21	30.44	
LAB*LABa	94.16	−1.22	30.44	
LAB*TCHa	87.5	30.47	92.31	
relative **CIELAB *lab****				
lab*lab	0.985	−0.009	0.25	
lab*tch	0.875	0.25	0.256	
lab*nch	0.0	0.25	0.256	
relative **Natural Colour (NC)**				
lab*lrj	0.985	0.0	0.25	
lab*tce	0.875	0.25	0.25	
lab*ncE	0.0	0.25	r99j	

relative **Inform. Technology (IT)**				
olvi3*	0.742	0.75	0.5	(1.0)
cmyn3*	0.258	0.25	0.5	(0.0)
olvi4*	0.992	1.0	0.75	0.75
cmyn4*	0.008	0.0	0.25	0.25
standard and *adapted* **CIELAB**				
LAB*LAB	73.07	−1.2	30.45	
LAB*LABa	73.07	−1.23	30.45	
LAB*TCHa	62.5	30.47	92.33	
relative **CIELAB *lab****				
lab*lab	0.735	−0.009	0.25	
lab*tch	0.625	0.25	0.256	
lab*nch	0.25	0.25	0.256	
relative **Natural Colour (NC)**				
lab*lrj	0.735	0.0	0.25	
lab*tce	0.625	0.25	0.25	
lab*ncE	0.25	0.25	r99j	

relative **Inform. Technology (IT)**				
olvi3*	0.492	0.5	0.25	(1.0)
cmyn3*	0.508	0.5	0.75	(0.0)
olvi4*	0.992	1.0	0.75	0.5
cmyn4*	0.008	0.0	0.25	0.5
standard and *adapted* **CIELAB**				
LAB*LAB	51.96	−1.18	30.46	
LAB*LABa	51.96	−1.23	30.45	
LAB*TCHa	37.5	30.47	92.33	
relative **CIELAB *lab****				
lab*lab	0.485	−0.009	0.25	
lab*tch	0.375	0.25	0.256	
lab*nch	0.5	0.25	0.256	
relative **Natural Colour (NC)**				
lab*lrj	0.485	0.0	0.25	
lab*tce	0.375	0.25	0.25	
lab*ncE	0.5	0.25	r99j	

relative **Inform. Technology (IT)**				
olvi3*	0.242	0.25	0.0	(1.0)
cmyn3*	0.758	0.75	1.0	(0.0)
olvi4*	0.992	1.0	0.75	0.25
cmyn4*	0.008	0.0	0.25	0.75
standard and *adapted* **CIELAB**				
LAB*LAB	30.86	−1.17	30.45	
LAB*LABa	30.86	−1.23	30.43	
LAB*TCHa	12.5	30.46	92.33	
relative **CIELAB *lab****				
lab*lab	0.235	−0.009	0.25	
lab*tch	0.125	0.25	0.256	
lab*nch	0.75	0.25	0.256	
relative **Natural Colour (NC)**				
lab*lrj	0.235	0.0	0.25	
lab*tce	0.125	0.25	0.25	
lab*ncE	0.75	0.25	j00g	

relative **Inform. Technology (IT)**				
olvi3*	0.984	1.0	0.5	(1.0)
cmyn3*	0.016	0.0	0.5	(0.0)
olvi4*	0.984	1.0	0.5	1.0
cmyn4*	0.016	0.0	0.5	0.0
standard and *adapted* **CIELAB**				
LAB*LAB	92.92	−2.44	60.89	
LAB*LABa	92.92	−2.46	60.89	
LAB*TCHa	75.0	60.94	92.32	
relative **CIELAB *lab****				
lab*lab	0.971	−0.019	0.499	
lab*tch	0.75	0.5	0.256	
lab*nch	0.0	0.5	0.256	
relative **Natural Colour (NC)**				
lab*lrj	0.971	0.0	0.5	
lab*tce	0.75	0.5	0.25	
lab*ncE	0.0	0.5	r99j	

relative **Inform. Technology (IT)**				
olvi3*	0.734	0.75	0.25	(1.0)
cmyn3*	0.266	0.25	0.75	(0.0)
olvi4*	0.984	1.0	0.5	0.75
cmyn4*	0.016	0.0	0.5	0.25
standard and *adapted* **CIELAB**				
LAB*LAB	71.83	−2.44	60.9	
LAB*LABa	71.83	−2.47	60.89	
LAB*TCHa	50.0	60.94	92.33	
relative **CIELAB *lab****				
lab*lab	0.721	−0.019	0.5	
lab*tch	0.5	0.5	0.256	
lab*nch	0.25	0.5	0.256	
relative **Natural Colour (NC)**				
lab*lrj	0.721	0.0	0.5	
lab*tce	0.5	0.5	0.25	
lab*ncE	0.25	0.5	r99j	

relative **Inform. Technology (IT)**				
olvi3*	0.484	0.5	0.0	(1.0)
cmyn3*	0.516	0.5	1.0	(0.0)
olvi4*	0.984	1.0	0.5	0.5
cmyn4*	0.016	0.0	0.5	0.5
standard and *adapted* **CIELAB**				
LAB*LAB	50.72	−2.42	60.89	
LAB*LABa	50.72	−2.47	60.88	
LAB*TCHa	25.01	60.93	92.33	
relative **CIELAB *lab****				
lab*lab	0.471	−0.019	0.499	
lab*tch	0.25	0.5	0.256	
lab*nch	0.5	0.5	0.256	
relative **Natural Colour (NC)**				
lab*lrj	0.471	0.0	0.5	
lab*tce	0.25	0.5	0.25	
lab*ncE	0.5	0.5	j00g	

relative **Inform. Technology (IT)**				
olvi3*	0.976	1.0	0.25	(1.0)
cmyn3*	0.024	0.0	0.75	(0.0)
olvi4*	0.976	1.0	0.25	1.0
cmyn4*	0.024	0.0	0.75	0.0
standard and *adapted* **CIELAB**				
LAB*LAB	91.68	−3.68	91.34	
LAB*LABa	91.68	−3.69	91.34	
LAB*TCHa	62.5	91.41	92.32	
relative **CIELAB *lab****				
lab*lab	0.956	−0.029	0.749	
lab*tch	0.625	0.75	0.256	
lab*nch	0.0	0.75	0.256	
relative **Natural Colour (NC)**				
lab*lrj	0.956	0.0	0.75	
lab*tce	0.625	0.75	0.25	
lab*ncE	0.0	0.75	r99j	

relative **Inform. Technology (IT)**				
olvi3*	0.726	0.75	0.0	(1.0)
cmyn3*	0.274	0.25	1.0	(0.0)
olvi4*	0.976	1.0	0.25	0.75
cmyn4*	0.024	0.0	0.75	0.25
standard and *adapted* **CIELAB**				
LAB*LAB	70.59	−3.68	91.33	
LAB*LABa	70.59	−3.71	91.33	
LAB*TCHa	37.51	91.4	92.33	
relative **CIELAB *lab****				
lab*lab	0.706	−0.029	0.749	
lab*tch	0.375	0.75	0.256	
lab*nch	0.25	0.75	0.256	
relative **Natural Colour (NC)**				
lab*lrj	0.706	0.0	0.75	
lab*tce	0.375	0.75	0.25	
lab*ncE	0.25	0.75	j00g	

relative **Inform. Technology (IT)**				
olvi3*	0.967	1.0	0.0	(1.0)
cmyn3*	0.033	0.0	1.0	(0.0)
olvi4*	0.968	1.0	0.0	1.0
cmyn4*	0.032	0.0	1.0	0.0
standard and *adapted* **CIELAB**				
LAB*LAB	90.45	−4.92	121.77	
LAB*LABa	90.45	−4.93	121.77	
LAB*TCHa	50.0	121.87	92.32	
relative **CIELAB *lab****				
lab*lab	0.941	−0.04	0.999	
lab*tch	0.5	1.0	0.256	
lab*nch	0.0	1.0	0.256	
relative **Natural Colour (NC)**				
lab*lrj	0.941	0.0	1.0	
lab*tce	0.5	1.0	0.25	
lab*ncE	0.0	1.0	r99j	

*n** = 0,00
*n** = 0,25
*n** = 0,50
*n** = 1,0

blackness *n**

1,00 0,75 0,25 0,00

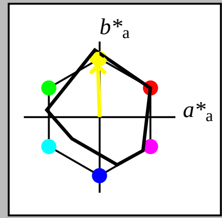
0,25 0,50 0,75 1,00

chromaticness *c**

Output: 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 *t**



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	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
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

%Gamut
u^*_{rel} = 91

%Regularity
$g^*_{H,rel}$ = 41
$g^*_{C,rel}$ = 52

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	99.99	0.01	−	
relative **CIELAB *lab****				
lab*lab	1.0	0.0	0.0	
lab*tch	1.0	0.0	−	
lab*nch	0.0	0.0	−	
relative **Natural Colour (NC)**				
lab*lrj	1.0	0.0	0.0	
lab*tce	1.0	0.0	−	
lab*ncE	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	0.75
cmyn4*	0.0	0.0	0.0	0.25
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	−	
relative **CIELAB *lab****				
lab*lab	0.75	0.0	0.0	
lab*tch	0.75	0.0	−	
lab*nch	0.25	0.0	−	
relative **Natural Colour (NC)**				
lab*lrj	0.75	0.0	0.0	
lab*tce	0.75	0.0	−	
lab*ncE	0.25	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	0.5
cmyn4*	0.0	0.0	0.0	0.5
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	−	
relative **CIELAB *lab****				
lab*lab	0.5	0.0	0.0	
lab*tch	0.5	0.0	−	
lab*nch	0.5	0.0	−	
relative **Natural Colour (NC)**				
lab*lrj	0.5	0.0	0.0	
lab*tce	0.5	0.0	−	
lab*ncE	0.5	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	0.25
cmyn4*	0.0	0.0	0.0	0.75
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	−	
relative **CIELAB *lab****				
lab*lab	0.25	0.0	0.0	
lab*tch	0.25	0.0	−	
lab*nch	0.75	0.0	−	
relative **Natural Colour (NC)**				
lab*lrj	0.25	0.0	0.0	
lab*tce	0.25	0.0	−	
lab*ncE	0.75	0.0	−	

relative **Inform. Technology (IT)**				
olvi3*	0.0	0.0	0.0	(1.0)
cmyn3*	1.0	1.0	1.0	(0.0)
olvi4*	1.0	1.0	1.0	0.0
cmyn4*	0.0	0.0	0.0	1.0
standard and *adapted* **CIELAB**				
LAB*LAB	18.02	0.5	−0.46	
LAB*LABa	18.02	0.0	0.0	
LAB*TCHa	0.01	0.01	−	
relative **CIELAB *lab****				
lab*lab	0.0	0.0	0.0	
lab*tch	0.0	0.0	−	
lab*nch	1.0	0.0	−	
relative **Natural Colour (NC)**				
lab*lrj	0.0	0.0	0.0	
lab*tce	0.0	0.0	−	
lab*ncE	1.0	0.0	−	

relative **Inform. Technology (IT)**				
olvi3*	1.0	0.988	0.75	(1.0)
cmyn3*	0.0	0.012	0.25	(0.0)
olvi4*	1.0	0.988	0.75	1.0
cmyn4*	0.0	0.012	0.25	0.0
standard and *adapted* **CIELAB**				
LAB*LAB	93.72	−1.64	26.21	
LAB*LABa	93.72	−0.69	21.57	
LAB*TCHa	87.5	21.58	91.86	
relative **CIELAB *lab****				
lab*lab	0.978	−0.007	0.25	
lab*tch	0.875	0.25	0.255	
lab*nch	0.0	0.25	0.255	
relative **Natural Colour (NC)**				
lab*lrj	0.978	0.0	0.25	
lab*tce	0.875	0.25	0.25	
lab*ncE	0.0	0.25	j00g	

relative **Inform. Technology (IT)**				
olvi3*	0.75	0.738	0.5	(1.0)
cmyn3*	0.25	0.262	0.5	(0.0)
olvi4*	1.0	0.988	0.75	0.75
cmyn4*	0.0	0.012	0.25	0.25
standard and *adapted* **CIELAB**				
LAB*LAB	74.38	−1.26	24.91	
LAB*LABa	74.38	−0.68	21.57	
LAB*TCHa	62.5	21.58	91.84	
relative **CIELAB *lab****				
lab*lab	0.728	−0.007	0.25	
lab*tch	0.625	0.25	0.255	
lab*nch	0.25	0.25	0.255	
relative **Natural Colour (NC)**				
lab*lrj	0.728	0.0	0.25	
lab*tce	0.625	0.25	0.25	
lab*ncE	0.25	0.25	r99j	

relative **Inform. Technology (IT)**				
olvi3*	0.5	0.488	0.25	(1.0)
cmyn3*	0.5	0.512	0.75	(0.0)
olvi4*	1.0	0.988	0.75	0.5
cmyn4*	0.0	0.012	0.25	0.5
standard and *adapted* **CIELAB**				
LAB*LAB	55.03	−0.89	23.6	
LAB*LABa	55.03	−0.68	21.57	
LAB*TCHa	37.5	21.58	91.84	
relative **CIELAB *lab****				
lab*lab	0.478	−0.007	0.25	
lab*tch	0.375	0.25	0.255	
lab*nch	0.5	0.25	0.255	
relative **Natural Colour (NC)**				
lab*lrj	0.478	0.0	0.25	
lab*tce	0.375	0.25	0.25	
lab*ncE	0.5	0.25	r99j	

relative **Inform. Technology (IT)**				
olvi3*	0.25	0.238	0.0	(1.0)
cmyn3*	0.75	0.762	1.0	(0.0)
olvi4*	1.0	0.988	0.75	0.25
cmyn4*	0.0	0.012	0.25	0.75
standard and *adapted* **CIELAB**				
LAB*LAB	35.68	−0.52	22.29	
LAB*LABa	35.68	−0.68	21.56	
LAB*TCHa	12.5	21.57	91.84	
relative **CIELAB *lab****				
lab*lab	0.228	−0.007	0.25	
lab*tch	0.125	0.25	0.255	
lab*nch	0.75	0.25	0.255	
relative **Natural Colour (NC)**				
lab*lrj	0.228	0.0	0.25	
lab*tce	0.125	0.25	0.25	
lab*ncE	0.75	0.25	r99j	

relative **Inform. Technology (IT)**				
olvi3*	1.0	0.976	0.5	(1.0)
cmyn3*	0.0	0.024	0.5	(0.0)
olvi4*	1.0	0.976	0.5	1.0
cmyn4*	0.0	0.024	0.5	0.0
standard and *adapted* **CIELAB**				
LAB*LAB	92.04	−2.3	47.67	
LAB*LABa	92.04	−1.39	43.14	
LAB*TCHa	75.0	43.16	91.85	
relative **CIELAB *lab****				
lab*lab	0.957	−0.015	0.5	
lab*tch	0.75	0.5	0.255	
lab*nch	0.0	0.5	0.255	
relative **Natural Colour (NC)**				
lab*lrj	0.957	0.0	0.5	
lab*tce	0.75	0.5	0.25	
lab*ncE	0.0	0.5	j00g	

relative **Inform. Technology (IT)**				
olvi3*	0.75	0.726	0.25	(1.0)
cmyn3*	0.25	0.274	0.75	(0.0)
olvi4*	1.0	0.976	0.5	0.75
cmyn4*	0.0	0.024	0.5	0.25
standard and *adapted* **CIELAB**				
LAB*LAB	72.7	−1.92	46.37	
LAB*LABa	72.7	−1.38	43.14	
LAB*TCHa	50.0	43.16	91.84	
relative **CIELAB *lab****				
lab*lab	0.707	−0.015	0.5	
lab*tch	0.5	0.5	0.255	
lab*nch	0.25	0.5	0.255	
relative **Natural Colour (NC)**				
lab*lrj	0.707	0.0	0.5	
lab*tce	0.5	0.5	0.25	
lab*ncE	0.25	0.5	r99j	

relative **Inform. Technology (IT)**				
olvi3*	0.5	0.476	0.0	(1.0)
cmyn3*	0.5	0.524	1.0	(0.0)
olvi4*	1.0	0.976	0.5	0.5
cmyn4*	0.0	0.024	0.5	0.5
standard and *adapted* **CIELAB**				
LAB*LAB	53.35	−1.55	45.05	
LAB*LABa	53.35	−1.38	43.13	
LAB*TCHa	25.01	43.16	91.84	
relative **CIELAB *lab****				
lab*lab	0.457	−0.015	0.5	
lab*tch	0.25	0.5	0.255	
lab*nch	0.5	0.5	0.255	
relative **Natural Colour (NC)**				
lab*lrj	0.457	0.0	0.5	
lab*tce	0.25	0.5	0.25	
lab*ncE	0.5	0.5	r99j	

relative **Inform. Technology (IT)**				
olvi3*	1.0	0.963	0.25	(1.0)
cmyn3*	0.0	0.037	0.75	(0.0)
olvi4*	1.0	0.963	0.25	1.0
cmyn4*	0.0	0.037	0.75	0.0
standard and *adapted* **CIELAB**				
LAB*LAB	90.36	−2.96	69.13	
LAB*LABa	90.36	−2.08	64.71	
LAB*TCHa	62.5	64.74	91.85	
relative **CIELAB *lab****				
lab*lab	0.935	−0.023	0.75	
lab*tch	0.625	0.75	0.255	
lab*nch	0.0	0.75	0.255	
relative **Natural Colour (NC)**				
lab*lrj	0.935	0.0	0.75	
lab*tce	0.625	0.75	0.25	
lab*ncE	0.0	0.75	j00g	

relative **Inform. Technology (IT)**				
olvi3*	0.75	0.713	0.0	(1.0)
cmyn3*	0.25	0.287	1.0	(0.0)
olvi4*	1.0	0.963	0.25	0.75
cmyn4*	0.0	0.037	0.75	0.25
standard and *adapted* **CIELAB**				
LAB*LAB	71.02	−2.59	67.82	
LAB*LABa	71.02	−2.07	64.7	
LAB*TCHa	37.51	64.74	91.84	
relative **CIELAB *lab****				
lab*lab	0.685	−0.023	0.75	
lab*tch	0.375	0.75	0.255	
lab*nch	0.25	0.75	0.255	
relative **Natural Colour (NC)**				
lab*lrj	0.685	0.0	0.75	
lab*tce	0.375	0.75	0.25	
lab*ncE	0.25	0.75	r99j	

relative **Inform. Technology (IT)**				
olvi3*	1.0	0.951	0.0	(1.0)
cmyn3*	0.0	0.049	1.0	(0.0)
olvi4*	1.0	0.951	0.0	1.0
cmyn4*	0.0	0.049	1.0	0.0
standard and *adapted* **CIELAB**				
LAB*LAB	88.68	−3.62	90.58	
LAB*LABa	88.68	−2.77	86.27	
LAB*TCHa	50.0	86.32	91.85	
relative **CIELAB *lab****				
lab*lab	0.913	−0.031	0.999	
lab*tch	0.5	1.0	0.255	
lab*nch	0.0	1.0	0.255	
relative **Natural Colour (NC)**				
lab*lrj	0.913	0.0	1.0	
lab*tce	0.5	1.0	0.25	
lab*ncE	0.0	1.0	j00g	

*n** = 0,00
*n** = 0,25
*n** = 0,50
*n** = 1,0

blackness *n**

0,25 0,50 0,75 1,00

chromaticness *c**

TE580−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)
5 step scales for constant CIELAB hue 92/360 = 0.255 (right)

See for similar files: http://www.ps.bam.de/TE58/
Technical information: http://www.ps.bam.de
Version 2.1, io=1,1, CIEXYZ

BAM registration: 20060101-TE58/10Q/Q58E07FP.PS/.PDF
application for evaluation and measurement of printer or monitor systems
BAM material: code=rha4ta
Yr=2.5, XYZ
/TE58/ Form: 8/10, Serie: 1/1, Page: 8 Page: count: 8

See for similar files: http://www.ps.bam.de/TE58/
Technical information: http://www.ps.bam.de Version 2.1, io=1,1, CIEXYZ

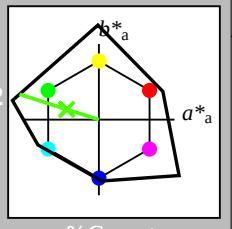
BAM registration: 20060101-TE58/10Q/Q58E08FP.PS/.PDF
application for evaluation and measurement of printer or monitor systems, Yr=2.5, XYZ
BAM material: code=rha4ta
/TE58/ Form: 9/10, Serie: 1/1, Page: 9 Page: count: 9

Input: Colorimetric Reflective System NCS11

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

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness t^*



%Gamut
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

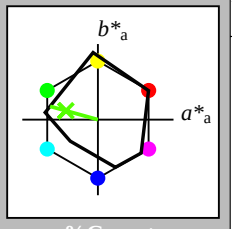
%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System MRS18

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

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

triangle lightness t^*

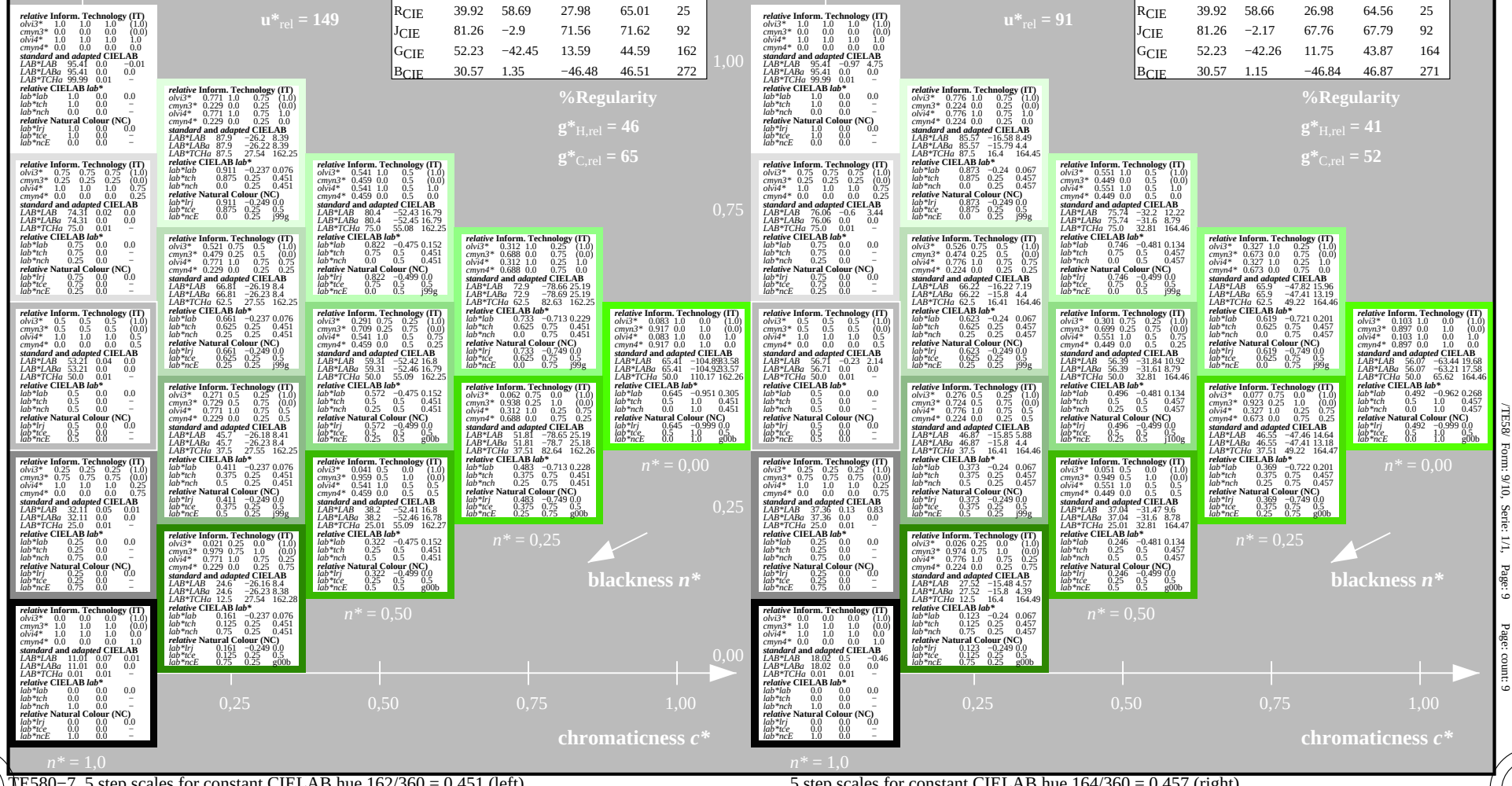


%Gamut
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	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
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
$g^*_{H,rel}$ = 41
$g^*_{C,rel}$ = 52



TE580−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

See for similar files: http://www.ps.bam.de/TE58/
Technical information: http://www.ps.bam.de Version 2.1, io=1,1, CIEXYZ

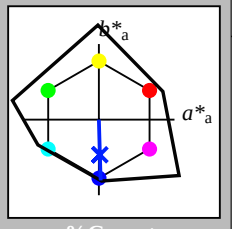
BAM registration: 20060101-TE58/10Q/Q58E09FP.PS/.PDF
application for evaluation and measurement of printer or monitor systems, Yr=2.5, XYZ
BAM material: code=rha4ta
/TE58/ Form: 10/10,Serie: 1/1, Page: 10 Page: count: 10

Input: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 272/360 = 0.755$
*lab*tch* and *lab*nch*

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness t^*



%Gamut
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

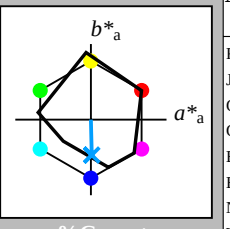
%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System MRS18

for hue $h^* = lab^*h = 271/360 = 0.754$
*lab*tch* and *lab*nch*

D65: hue B
LCH*Ma: 40 50 271
rgb*Ma: 0.0 0.37 1.0

triangle lightness t^*

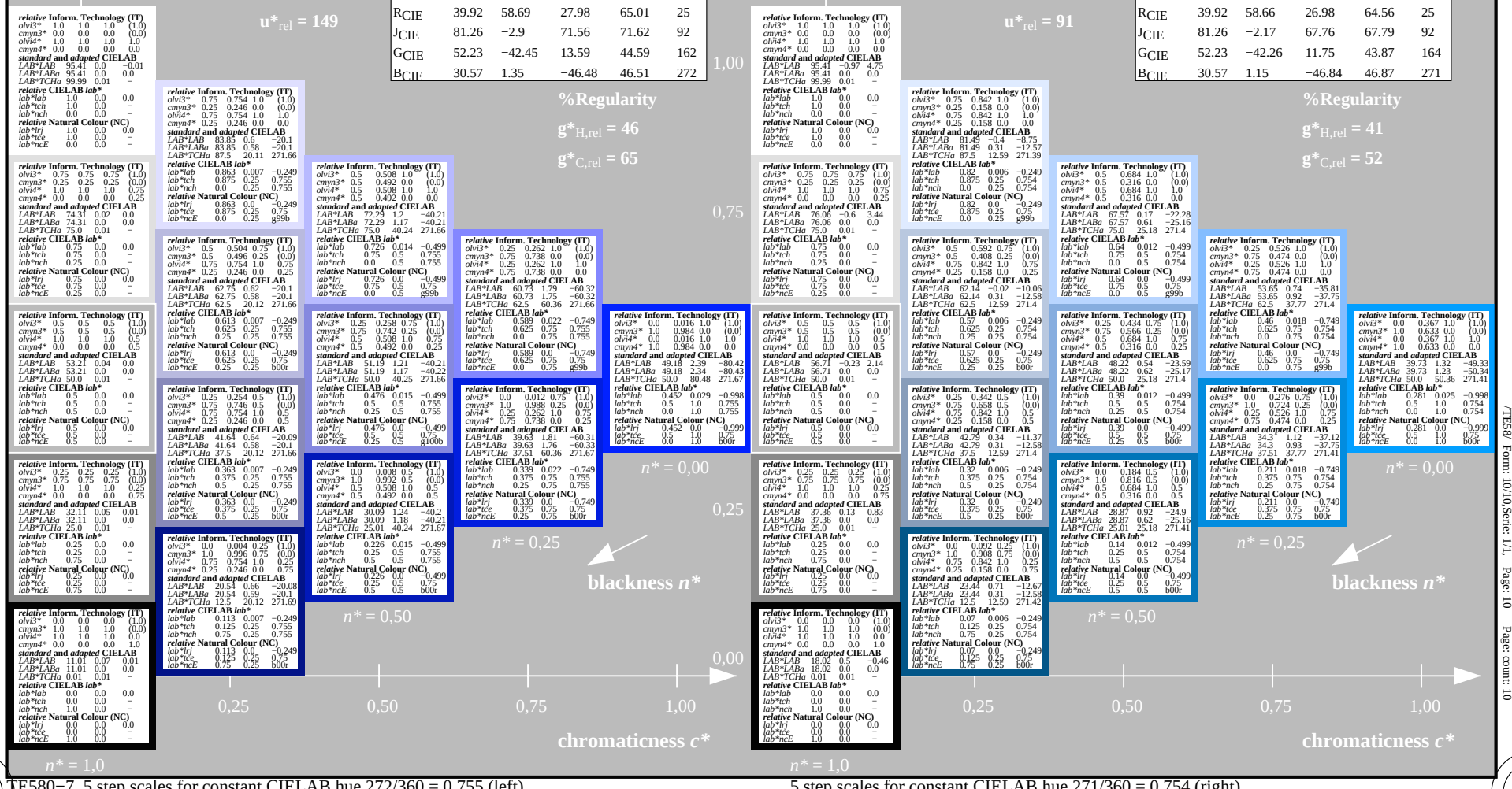


%Gamut
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	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
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
$g^*_{H,rel}$ = 41
$g^*_{C,rel}$ = 52



TE580−7, 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 TE58; Colorimetric systems NCS11a & MRS18 input: *olv* setrgbcolor*
D65: 2 coordinate data of 5 step colour scales for 10 hues output: *olv* setrgbcolor / w* setgray*