

Input and Output: Printer Reflective System FRS06a for relative CIELAB hue $h_{ab,a,rel} = h_{ab}/360 = 31/360 = 0.08$

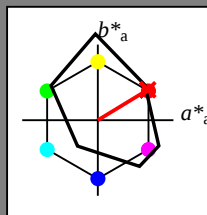
Data for any device (d) or elementary (e) colour:

HIC^*_-

hue text for the colours of this page:

$H^*_- = R00Y_-$

triangle lightness T^*



FRS06a; adapted (a) CIELAB data

name	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R-,Ma	32.5	62.3	46.4	77.7	36
Y-,Ma	82.7	-3.1	113.9	114.0	91
G-,Ma	39.4	-61.8	45.8	76.9	143
C-,Ma	47.8	-26.8	-34.2	43.4	231
B-,Ma	10.1	55.1	-61.0	82.2	312
M-,Ma	34.5	80.6	-33.9	87.5	337
N-,Ma	6.2	0.0	0.0	0.0	0
W-,Ma	91.9	0.0	0.0	0.0	0
R-,CIE	39.9	58.7	27.9	65.0	25
Y-,CIE	81.2	-2.8	71.5	71.6	92
G-,CIE	52.2	-42.4	13.6	44.5	162
B-,CIE	30.5	1.4	-46.4	46.4	271

Data for maximum colour (Ma):

$LabCh^*_-Ma$: 48 66 40 77 31

HIC^*_-Ma : R00Y_100_100_

$rgbic^*_-Ma$:

1.0 0.0 0.0 1.0 1.0

triangle lightness T^*

% Gamut

$u^*_{rel} = 114$

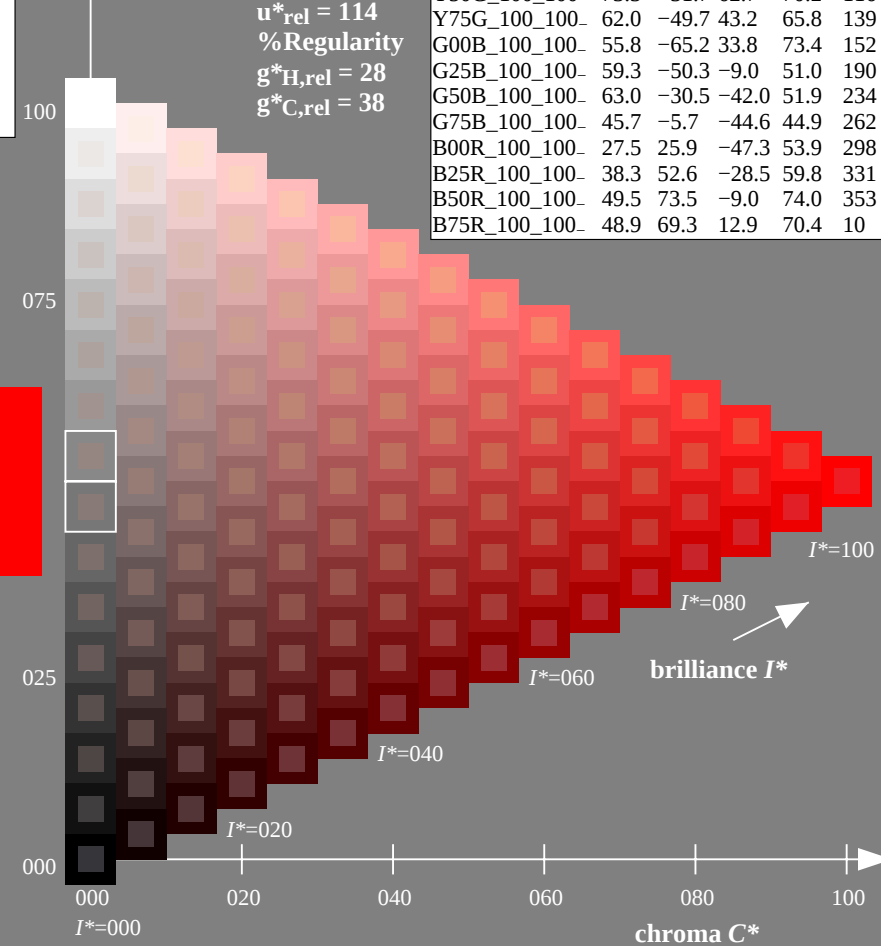
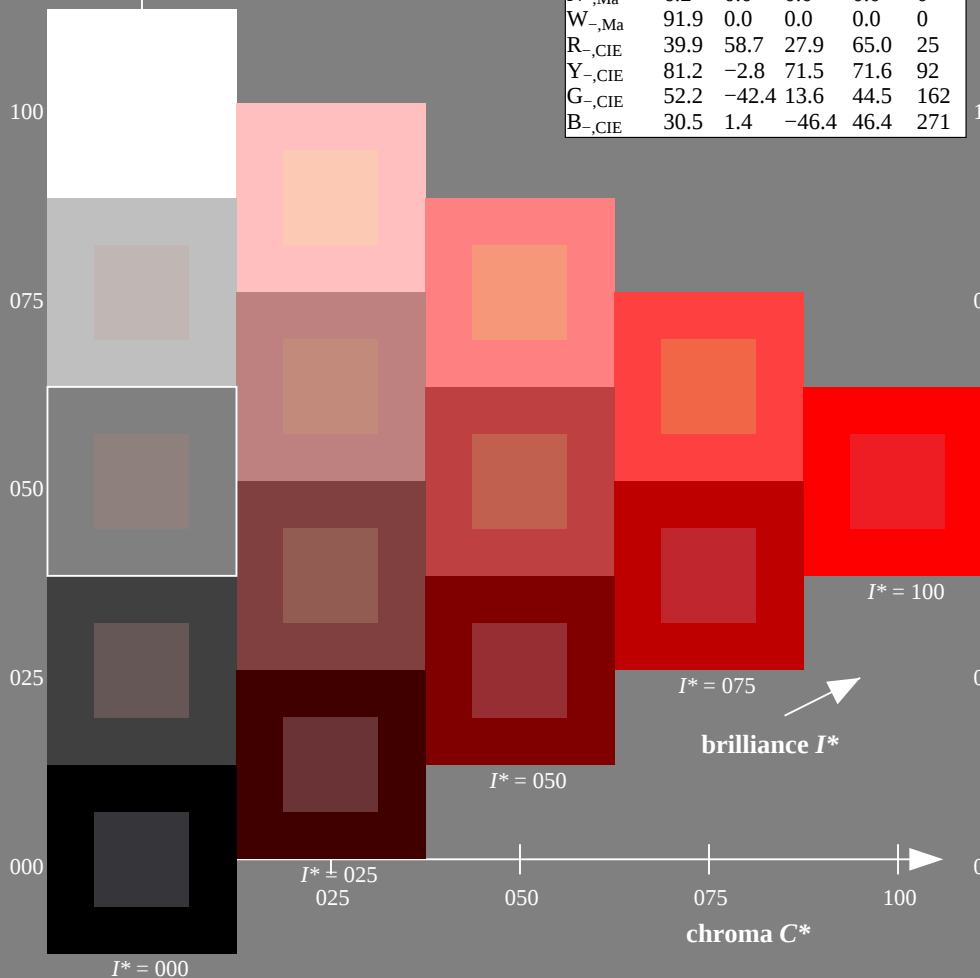
% Regularity

$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$

ORS20a; adapted (a) CIELAB data

H^*_-	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R00Y_100_100_	48.4	66.1	40.2	77.3	31
R25Y_100_100_	56.8	48.0	50.5	69.6	46
R50Y_100_100_	68.6	25.0	63.9	68.6	68
R75Y_100_100_	80.6	4.8	77.2	77.3	86
Y00G_100_100_	90.2	-9.6	88.2	88.7	96
Y25G_100_100_	83.2	-18.4	79.9	81.9	102
Y50G_100_100_	73.3	-31.7	62.7	70.2	116
Y75G_100_100_	62.0	-49.7	43.2	65.8	139
G00B_100_100_	55.8	-65.2	33.8	73.4	152
G25B_100_100_	59.3	-50.3	-9.0	51.0	190
G50B_100_100_	63.0	-30.5	-42.0	51.9	234
G75B_100_100_	45.7	-5.7	-44.6	44.9	262
B00R_100_100_	27.5	25.9	-47.3	53.9	298
B25R_100_100_	38.3	52.6	-28.5	59.8	331
B50R_100_100_	49.5	73.5	-9.0	74.0	353
B75R_100_100_	48.9	69.3	12.9	70.4	10



TUB-test chart PE99; hue code: $H^*_- = R00Y_-$
Test chart according to DIN 33872, 3D=0, de=0, cmyk

input: $rgb/cmyk \rightarrow rgb/cmyk$
output: no change

TUB registration: 20150701-PE99/PE99L0NP.PDF /.PS
application for measurement of laser printer output

TUB material: code=rha4ta

Input and Output: Printer Reflective System FRS06a for relative CIELAB hue $h_{ab,a,rel} = h_{ab}/360 = 33/360 = 0.09$

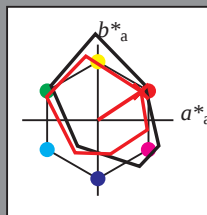
Data for any device (d) or elementary (e) colour:

HIC^*_d

hue text for the colours of this page:

$H^*_d = R00Y_d$

triangle lightness T^*



LRS18a; adapted (a) CIELAB data

name	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R _{d,Ma}	47.5	57.2	37.8	68.6	33
Y _{d,Ma}	91.5	-15.8	84.6	86.1	100
G _{d,Ma}	54.3	-67.6	30.8	74.3	155
C _{d,Ma}	53.1	-30.0	-43.1	52.5	235
B _{d,Ma}	32.5	16.9	-44.6	47.7	290
M _{d,Ma}	48.1	65.4	-12.7	66.6	348
N _{d,Ma}	23.8	0.0	0.0	0.0	0
W _{d,Ma}	95.8	0.0	0.0	0.0	0
R _{d,CIE}	39.9	58.7	27.9	65.0	25
Y _{d,CIE}	81.2	-2.8	71.5	71.6	92
G _{d,CIE}	52.2	-42.4	13.6	44.5	162
B _{d,CIE}	30.5	1.4	-46.4	46.4	271

Data for maximum colour (Ma):

$LabCh^*_d, Ma$: 47 57 37 68 33

HIC^*_d, Ma : R00Y_100_100_d

$rgbic^*_d, Ma$:

1.0 0.0 0.0 1.0 1.0

triangle lightness T^*

% Gamut

$u^*_{rel} = 114$

% Regularity

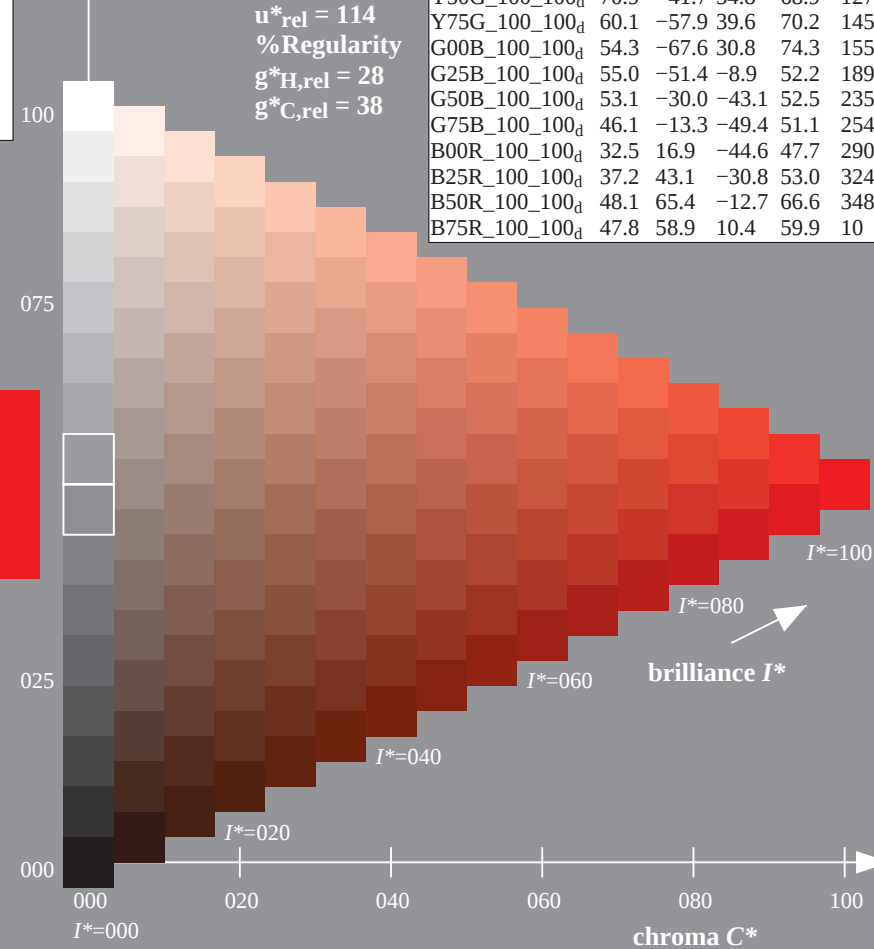
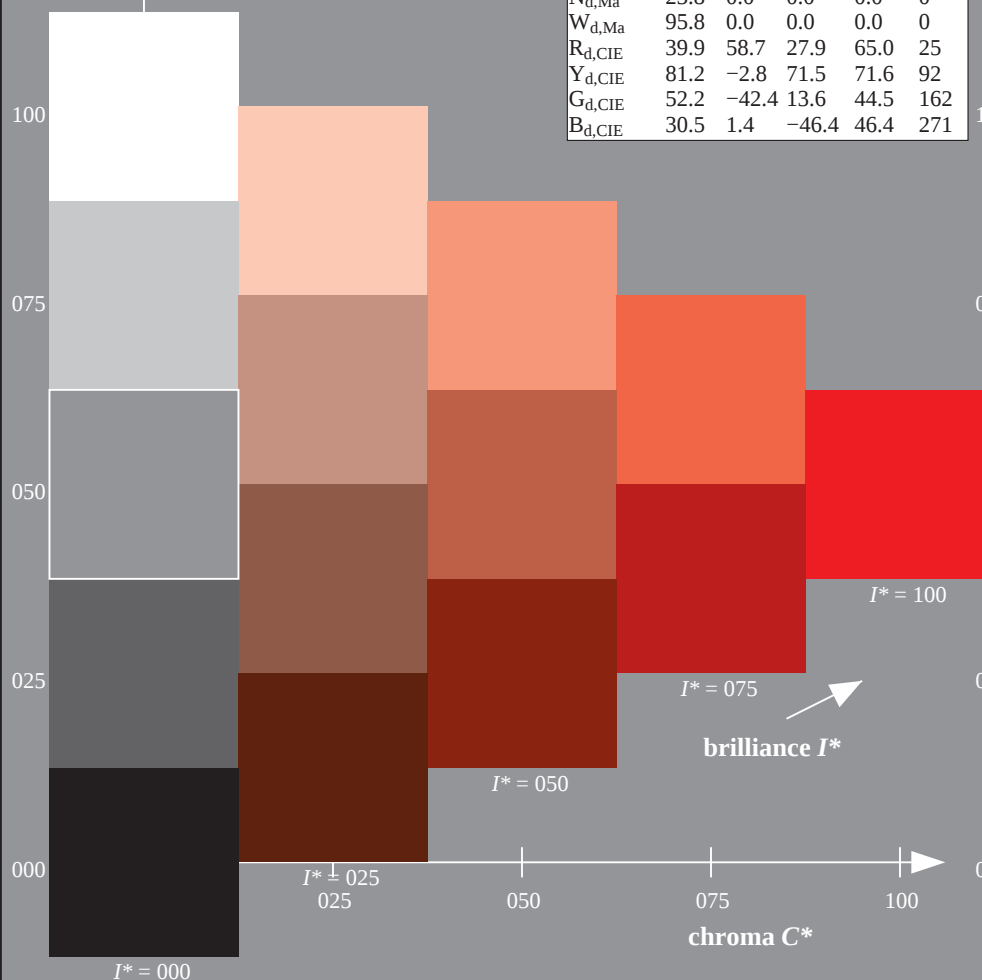
$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$

$H^*_d = R00Y_d$

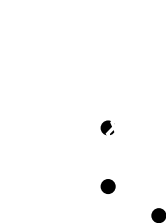
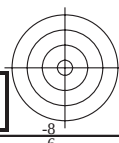
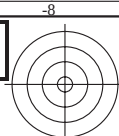
LRS18a; adapted (a) CIELAB data

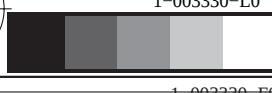
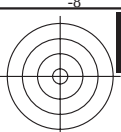
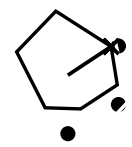
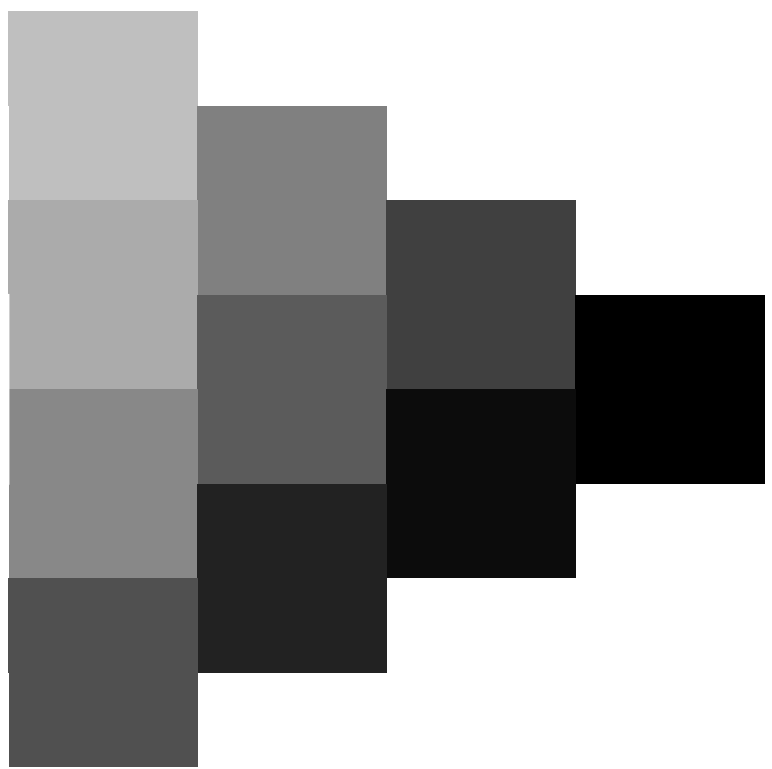
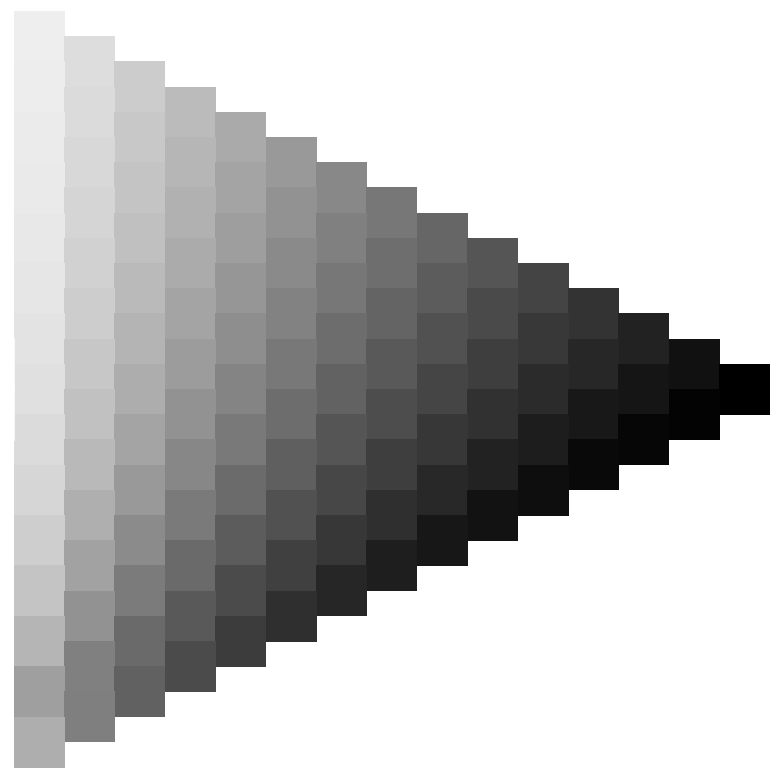
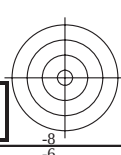
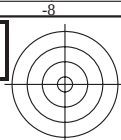
H^*_d	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R00Y_100_100 _d	47.5	57.2	37.8	68.6	33
R25Y_100_100 _d	57.4	43.5	54.5	69.7	51
R50Y_100_100 _d	70.5	19.2	66.2	69.0	73
R75Y_100_100 _d	83.5	-2.9	76.8	76.9	92
Y00G_100_100 _d	91.5	-15.8	84.6	86.1	100
Y25G_100_100 _d	90.4	-20.9	86.5	89.0	103
Y50G_100_100 _d	70.9	-41.7	54.8	68.9	127
Y75G_100_100 _d	60.1	-57.9	39.6	70.2	145
G00B_100_100 _d	54.3	-67.6	30.8	74.3	155
G25B_100_100 _d	55.0	-51.4	-8.9	52.2	189
G50B_100_100 _d	53.1	-30.0	-43.1	52.5	235
G75B_100_100 _d	46.1	-13.3	-49.4	51.1	254
B00R_100_100 _d	32.5	16.9	-44.6	47.7	290
B25R_100_100 _d	37.2	43.1	-30.8	53.0	324
B50R_100_100 _d	48.1	65.4	-12.7	66.6	348
B75R_100_100 _d	47.8	58.9	10.4	59.9	10

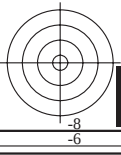
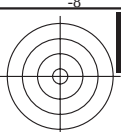
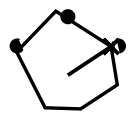
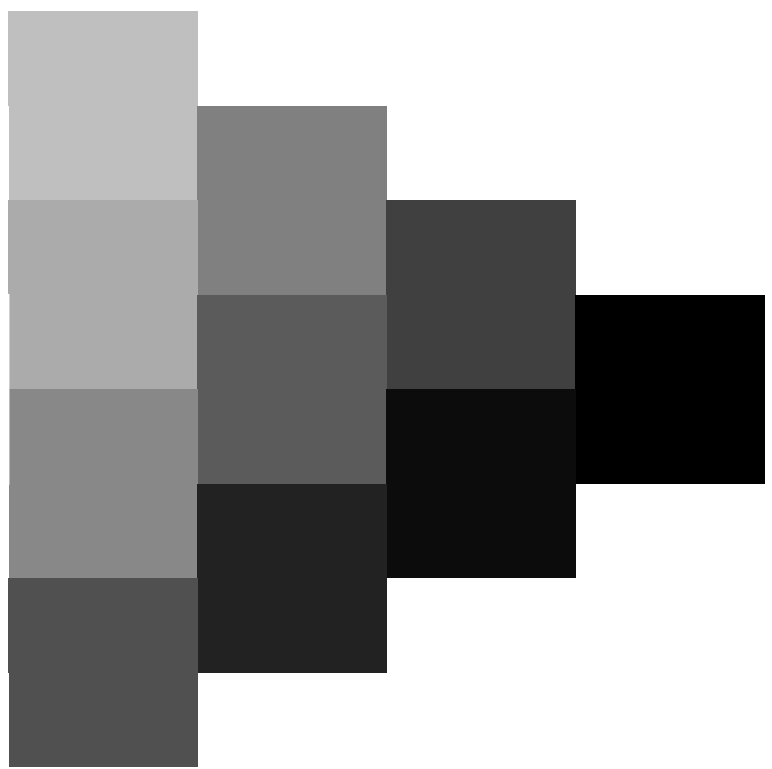
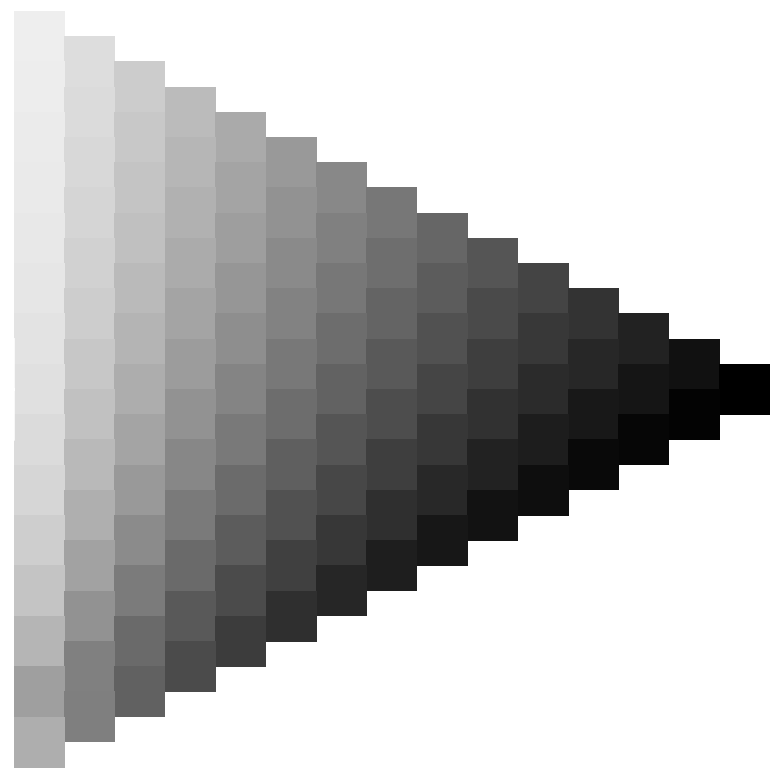


TUB-test chart PE99; hue code: $H^*_d = R00Y_d$
 Test chart according to DIN 33872, 3D=0, de=0, cmyk

input: $rgb/cmyk \rightarrow rgb_d$
 output: transfer to $cmyk_d$







Input and Output: Printer Reflective System FRS06a for relative CIELAB hue $h_{ab,a,rel} = h_{ab}/360 = 33/360 = 0.09$

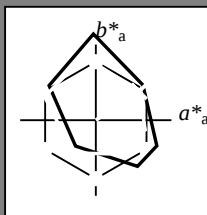
Data for any device (d) or elementary (e) colour:

HIC^*_d

hue text for the colours of this page:

$H^*_d = R00Y_d$

triangle lightness T^*



LRS18a; adapted (a) CIELAB data

name	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
$R_{d,Ma}$	47.5	57.2	37.8	68.6	33
$Y_{d,Ma}$	91.5	-15.8	84.6	86.1	100
$G_{d,Ma}$	54.3	-67.6	30.8	74.3	155
$C_{d,Ma}$	53.1	-30.0	-43.1	52.5	235
$B_{d,Ma}$	32.5	16.9	-44.6	47.7	290
$M_{d,Ma}$	48.1	65.4	-12.7	66.6	348
$N_{d,Ma}$	23.8	0.0	0.0	0.0	0
$W_{d,Ma}$	95.8	0.0	0.0	0.0	0
$R_{d,CIE}$	39.9	58.7	27.9	65.0	25
$Y_{d,CIE}$	81.2	-2.8	71.5	71.6	92
$G_{d,CIE}$	52.2	-42.4	13.6	44.5	162
$B_{d,CIE}$	30.5	1.4	-46.4	46.4	271

Data for maximum colour (Ma):

$LabCh^*_{d,Ma}$: 47 57 37 68 33

$HIC^*_{d,Ma}$: R00Y_100_100d

$rgbic^*_{d,Ma}$:

1.0 0.0 0.0 1.0 1.0

triangle lightness T^*

% Gamut

$u^*_{rel} = 114$

% Regularity

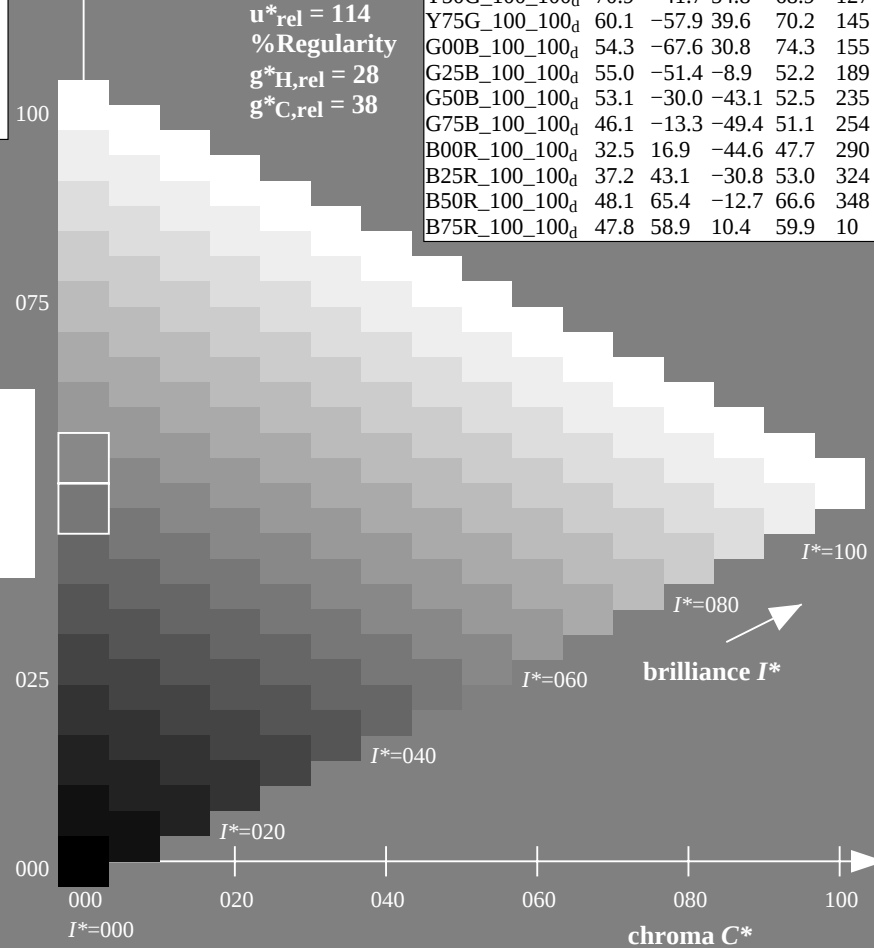
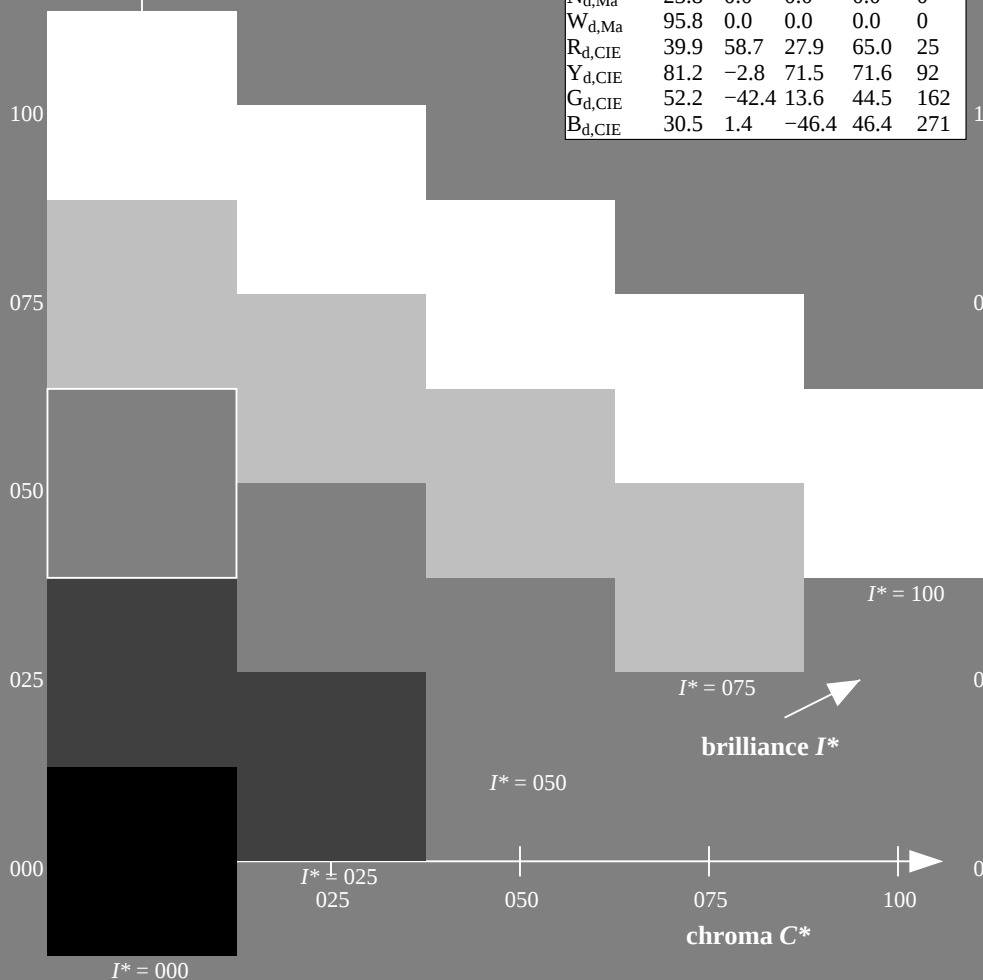
$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$

$H^*_d = R00Y_d$

LRS18a; adapted (a) CIELAB data

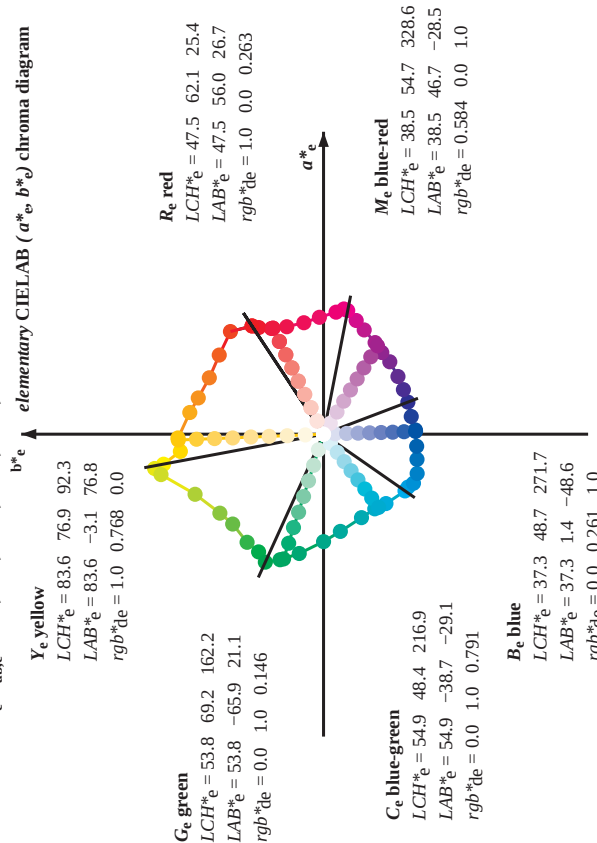
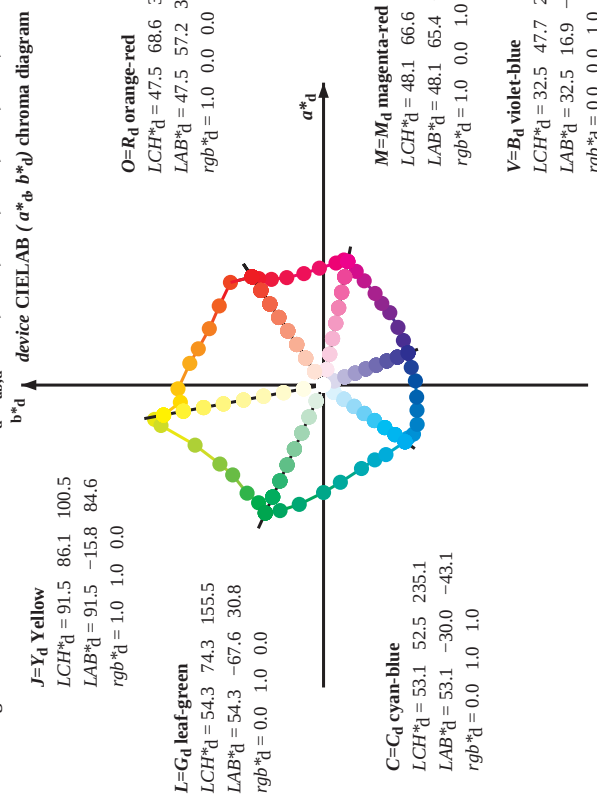
H^*_d	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R00Y_100_100d	47.5	57.2	37.8	68.6	33
R25Y_100_100d	57.4	43.5	54.5	69.7	51
R50Y_100_100d	70.5	19.2	66.2	69.0	73
R75Y_100_100d	83.5	-2.9	76.8	76.9	92
Y00G_100_100d	91.5	-15.8	84.6	86.1	100
Y25G_100_100d	90.4	-20.9	86.5	89.0	103
Y50G_100_100d	70.9	-41.7	54.8	68.9	127
Y75G_100_100d	60.1	-57.9	39.6	70.2	145
G00B_100_100d	54.3	-67.6	30.8	74.3	155
G25B_100_100d	55.0	-51.4	-8.9	52.2	189
G50B_100_100d	53.1	-30.0	-43.1	52.5	235
G75B_100_100d	46.1	-13.3	-49.4	51.1	254
B00R_100_100d	32.5	16.9	-44.6	47.7	290
B25R_100_100d	37.2	43.1	-30.8	53.0	324
B50R_100_100d	48.1	65.4	-12.7	66.6	348
B75R_100_100d	47.8	58.9	10.4	59.9	10



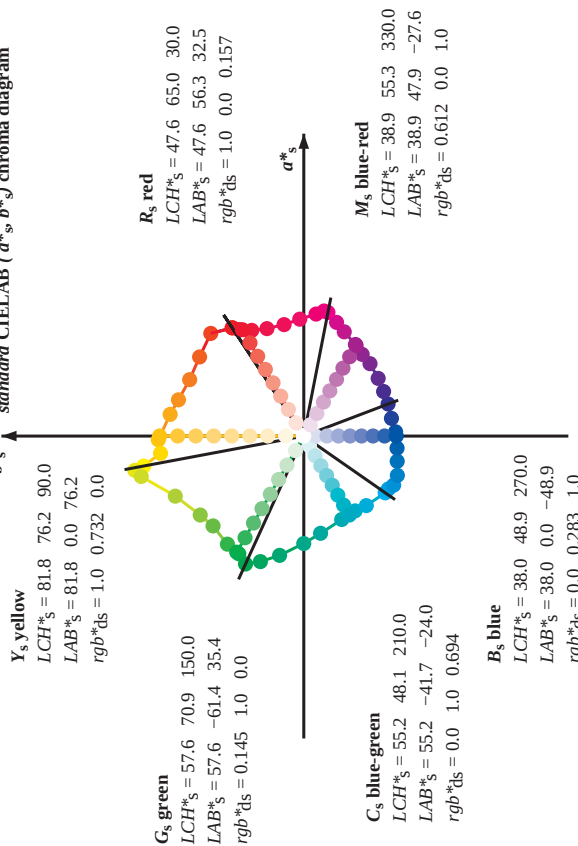
TUB-test chart PE99; hue code: $H^*_d=R00Y_d$
Test chart according to DIN 33872, 3D=0, de=0, cmyk

input: $rgb/cmyk \rightarrow rgb_d$
output: transfer to $cmyk_d$

Data of Maximum color M in colorimetric system Laser printer output; separation cmyk6*, D65 for input or output; Six hue angles of the 60 degree standard colours RYGBM; $h_{ab,ds} = 30.0, 90.0, 150.0, 210.0, 270.0, 330.0$;
Six hue angles of the device colours RYGBM; $h_{ab,d} = 33.5, 100.6, 155.5, 235.2, 290.8, 348.9$; Six hue angles of the elementary colours RYGBM; $h_{ab,e} = 25.5, 92.3, 162.2, 217.0, 271.7, 328.6$



standard CIELAB (a^*_s, b^*_s) chroma diagram



Notes to the CIELAB chroma diagrams (a^*_d, b^*_d), (a^*_s, b^*_s), (a^*_e, b^*_e)

1. For the rgb^*_d -input values the CIELAB data LCH^*_d and LAB^*_d have been calculated.
2. For the calculation of the standard hue angle h_{ab} use for any device values rgb^*_d the equation:

$$h_{ab,s} = \arctan \left[\frac{r^*_d \cos(30) + g^*_d \cos(150)}{1 / r^*_d \sin(30) + g^*_d \sin(150)} \right] + b^*_d \sin(270) \quad (1)$$
3. For the 48 or 360 equally spaced standard hue angles h_{ab} of the colours of maximum chroma use the seven hue angles of the 60 degree colours s : $h_{ab,s} = 30.0, 90.0, 150.0, 210.0, 270.0, 330.0, 390.0$ ($i=0,6$) and the equations for a 48 and 360 step hue circle:

$$h_{48ab,sij} = h_{ab,si} + j [h_{ab,si+1} - h_{ab,si}] / 8 \quad (i = 0, 1, \dots, 5; j = 0, 1, \dots, 7) \quad (2)$$

$$h_{360ab,sij} = h_{ab,si} + j [h_{ab,si+1} - h_{ab,si}] / 60 \quad (i = 0, 1, \dots, 5; j = 0, 1, \dots, 59) \quad (3)$$
4. For the 48 or 360 elementary hue angles h_{ab} of the colours of maximum chroma use the seven hue angles of the elementary colours e : $h_{ab,e} = 25.5, 92.3, 162.2, 217.0, 271.7, 328.6, 385.5$ ($i=0,6$) and the equations for a 48 and 360 step elementary hue circle:

$$h_{48ab,eij} = h_{ab,ei} + j [h_{ab,ei+1} - h_{ab,ei}] / 8 \quad (i = 0, 1, \dots, 5; j = 0, 1, \dots, 7) \quad (4)$$

$$h_{360ab,eij} = h_{ab,ei} + j [h_{ab,ei+1} - h_{ab,ei}] / 60 \quad (i = 0, 1, \dots, 5; j = 0, 1, \dots, 59) \quad (5)$$
5. For any elementary hue angle h_{ab} there is a well defined device hue angle $h_{ab,d}$ see the following tables, columns 1 to 5 or 1 to 4.
6. The values rgb^*_d produce the output of the device-independent elementary hues

Output: Laser printer output; separation cmyk6*, D65, page 7/38

input: $rgb/cmyk \rightarrow rgb_d$
output: transfer to $cmyk_d$

TUB-test chart PE99; hue code: $H^*_d=R00Y_d$
48 step hue circles; $rgb-LabCh^*$ tables

http://130.149.60.45/~farbmatrik/PE99/PE99L0NP.PDF /PS; transfer output
N: no 3D-linearization (OL) in file (F) or PS-startup (S), page 8/33

[illegible][illegible]

input: *rgb/cmyk* $\rightarrow$ *rgb*
output: transfer to *cmyk*

TTUB-test chart PE99; hue code: $H^*_d=R00Y_d$
48 step hue circles: *rab-LabCh**tables

Output: Laser printer output; separation cmyn6*, D65, page 8/33

 $\mu_{AB}^* n_w = 23.9, 0.0, 0.0, 95.8, 0.0, 0.0$

Output: Laser printer output; separation cmyn6*, D65, page 8/33

http://130.149.60.45/~farbmatrik/PE99/PE99LONP.PDF /.PS; transfer output
N: no 3D-linearization (OL) in file (F) or PS-startup (S), page 9/33

Data of Maximum color M in colorimetric system Laser printer output; separation cmyk6*, D65 for input or output; Six hue angles of the 60 degree standard colours RYGBM; $h_{ab,ds} = 30.0, 90.0, 150.0, 210.0, 270.0, 330.0$; Six hue angles of the device colours RYGBM; $h_{ab,d} = 33.5, 100.6, 155.5, 235.2, 290.8, 348.9$; Six hue angles of the elementary colours RYGBM; $h_{ab,e} = 25.5, 92.3, 162.2, 217.0, 271.7, 328.6$																					
$h_{ab,d}$	$h_{ab,s}$	$h_{ab,e}$	rgb^*	rgb^*	rgb^*	rgb^*	rgb^*	rgb^*	rgb^*	rgb^*	rgb^*	rgb^*	rgb^*	rgb^*	rgb^*	rgb^*	rgb^*	rgb^*	rgb^*		
$h_{ab,d}$	$h_{ab,s}$	$h_{ab,e}$	rgb^*	rgb^*	rgb^*	rgb^*	rgb^*	rgb^*	rgb^*	rgb^*	rgb^*	rgb^*	rgb^*	rgb^*	rgb^*	rgb^*	rgb^*	rgb^*	rgb^*		
33.4	30.0	25.4	1.0	0.0	0.0	47.5	57.2	37.8	68.6	33.4	33.4	1.0	0.0	0.263	47.6	56.1	26.7	62.1	25		
42.1	37.5	33.8	1.0	0.125	0.0	51.9	54.3	49.2	73.2	42.1	42.1	1.0	0.0	0.012	47.6	57.2	37.5	68.4	33		
52.8	45.0	42.1	1.0	0.25	0.0	58.2	41.8	55.1	69.2	52.8	52.8	1.0	0.125	0.0	52.0	54.3	49.2	73.3	42		
63.7	52.5	50.5	1.0	0.375	0.0	64.6	29.8	60.4	67.3	63.7	63.7	1.0	0.25	0.0	56.6	45.2	53.9	70.3	49		
73.8	60.0	58.8	1.0	0.5	0.0	70.5	19.2	66.2	69.0	73.8	73.8	1.0	0.375	0.0	61.8	35.2	58.4	68.2	58		
80.7	67.5	67.2	1.0	0.625	0.0	74.9	11.4	70.7	71.6	80.7	80.7	1.0	0.5	0.0	66.4	26.9	62.3	67.9	66		
91.5	75.0	75.6	1.0	0.75	0.0	82.9	-2.0	76.9	77.0	91.5	91.5	1.0	0.625	0.0	71.6	17.3	67.5	69.7	75		
96.8	82.5	83.9	1.0	0.875	0.0	87.6	-9.0	75.7	76.3	96.8	96.8	1.0	0.75	0.0	76.9	8.4	72.5	73.0	83		
100.5	90.0	92.3	1.0	1.0	0.0	91.5	-15.8	84.6	86.1	100.5	100.5	1.0	0.875	0.0	83.7	-3.0	76.8	76.9	92		
101.4	97.5	101.0	1.0	0.875	1.0	92.8	-18.1	89.4	91.2	101.4	101.4	1.0	1.0	0.0	87.6	-15.5	84.4	85.8	100		
103.9	105.0	109.7	0.75	1.0	0.0	90.1	-21.3	86.0	88.6	103.9	103.9	0.75	1.0	0.0	84.7	-27.5	76.7	81.5	109		
115.0	112.5	118.5	0.625	1.0	0.0	79.9	-31.7	67.9	75.0	115.0	115.0	0.625	1.0	0.0	77.8	-34.4	65.0	73.6	117		
127.3	120.0	127.2	0.5	1.0	0.0	70.9	-41.7	54.8	68.9	127.3	127.3	0.5	1.0	0.0	71.0	-41.6	54.9	68.9	127		
134.7	127.5	136.0	0.375	1.0	0.0	66.5	-47.5	48.0	67.6	134.7	134.7	0.375	1.0	0.0	66.2	-48.2	47.6	67.8	135		
144.7	135.0	144.7	0.25	1.0	0.0	60.6	-57.2	40.4	70.1	144.7	144.7	0.25	1.0	0.0	60.6	-57.1	40.5	70.1	144		
151.0	142.5	153.4	0.125	1.0	0.0	57.0	-62.2	34.4	71.1	151.0	151.0	0.125	1.0	0.0	55.9	-64.4	33.0	72.5	152		
155.5	150.0	162.2	0.0	1.0	0.0	54.3	-67.6	30.8	74.3	155.5	155.5	0.0	1.0	0.147	53.8	-65.9	21.1	69.3	162		
160.8	157.5	169.0	0.0	1.0	0.125	53.8	-66.4	23.0	70.2	160.8	160.8	0.0	1.0	0.251	53.8	-63.0	12.7	64.4	168		
168.5	165.0	175.9	0.0	1.0	0.25	53.7	-63.1	12.8	64.4	168.5	168.5	0.0	1.0	0.331	54.4	-59.3	4.2	59.5	175		
179.9	172.5	182.7	0.0	1.0	0.375	54.7	-56.8	0.0	56.8	179.9	179.9	0.0	1.0	0.405	54.8	-55.6	-2.1	55.7	182		
189.8	180.0	189.6	0.0	1.0	0.5	55.0	-51.4	-8.9	52.2	189.8	189.8	0.0	1.0	0.497	55.0	-51.5	-8.6	52.3	189		
204.4	187.5	196.4	0.0	1.0	0.625	55.3	-44.1	-20.0	48.5	204.4	204.4	0.0	1.0	0.553	55.2	-48.6	-13.9	50.7	195		
214.4	190.5	203.2	0.0	1.0	0.75	55.2	-39.5	-27.1	47.9	214.4	214.4	0.0	1.0	0.615	55.3	-44.7	-19.2	48.8	203		
221.9	202.5	210.1	0.0	1.0	0.875	54.4	-36.7	-33.0	49.4	221.9	221.9	0.0	1.0	0.69	55.3	-41.8	-23.8	48.2	209		
235.1	210.0	216.9	0.0	1.0	1.0	53.1	-30.0	-43.1	52.5	235.1	235.1	0.0	1.0	0.792	55.0	-38.6	-29.0	48.4	216		
237.9	215.0	223.8	0.0	0.875	1.0	53.1	-27.9	-44.7	52.7	237.9	237.9	0.0	0.875	1.0	0.888	54.3	-36.1	-34.1	49.8	223	
241.3	220.5	230.6	0.0	0.75	1.0	52.9	-25.9	-47.5	54.1	241.3	241.3	0.0	0.75	1.0	0.957	53.6	-32.5	-39.7	51.5	230	
247.2	232.5	237.5	0.0	0.625	1.0	50.5	-20.8	-49.5	53.7	247.2	247.2	0.0	0.625	1.0	0.916	1.0	53.1	-28.6	-44.1	52.7	237
254.9	240.0	244.3	0.0	0.5	1.0	46.1	-13.3	-49.4	51.1	254.9	254.9	0.0	0.5	1.0	0.686	1.0	51.7	-23.3	-48.5	54.0	244
262.6	247.5	251.2	0.0	0.375	1.0	41.4	-6.3	-49.2	49.6	262.6	262.6	0.0	0.375	1.0	0.568	1.0	48.6	-17.2	-49.5	52.6	250
272.6	255.0	258.0	0.0	0.25	1.0	36.8	2.2	-48.5	48.6	272.6	272.6	0.0	0.25	1.0	0.449	1.0	44.2	-10.4	-49.4	50.6	258
281.4	262.5	264.8	0.0	0.125	1.0	35.0	9.4	-46.3	47.3	281.4	281.4	0.0	0.125	1.0	0.353	1.0	40.6	-4.7	-49.2	49.5	264
290.8	270.0	271.7	0.0	0.0	1.0	32.5	16.9	-44.6	47.7	290.8	290.8	0.0	0.0	1.0	0.261	1.0	37.3	1.5	-48.6	48.7	271
299.2	277.5	278.8	0.125	0.0	1.0	31.6	23.6	-42.2	48.4	299.2	299.2	0.125	0.0	1.0	0.169	1.0	35.7	7.0	-47.2	47.8	278
307.8	285.0	285.9	0.25	0.0	1.0	31.0	30.5	-39.3	49.8	307.8	307.8	0.25	0.0	1.0	0.065	1.0	33.9	13.1	-45.6	47.5	285
317.5	292.5	293.0	0.375	0.0	1.0	34.2	38.2	-35.0	51.8	317.5	317.5	0.375	0.0	1.0	0.026	1.0	32.4	18.4	-44.1	47.9	292
324.4	300.0	300.1	0.5	0.0	1.0	37.2	43.1	-30.8	53.0	324.4	324.4	0.5	0.0	1.0	0.0	31.5	24.4	-41.9	48.6	300	
330.6	307.5	307.2	0.625	0.0	1.0	39.1	48.4	-27.2	55.6	330.6	330.6	0.625	0.0	1.0	0.0	31.1	29.8	-39.7	49.7	306	
338.7	315.0	314.3	0.75	0.0	1.0	41.8	55.1	-21.4	59.1	338.7	338.7	0.75	0.0	1.0	0.0	33.2	35.8	-36.5	51.2	314	
343.9	322.5	321.4	0.875	0.0	1.0	45.6	60.1	-17.3	62.6	343.9	343.9	0.875	0.0	1.0	0.0	35.8	40.8	-32.9	52.5	321	
348.9	330.0	328.6	1.0	0.0	1.0	48.1	65.4	-12.7	66.6	348.9	348.9	1.0	0.0	1.0	0.0	38.5	46.8	-28.4	54.8	328	
350.7	337.5	335.7	1.0	0.0	0.875	49.5	66.1	-10.7	67.0	350.7	350.7	1.0	0.0	0.875	49.5	66.1	-10.7	67.0	350.7	350.7	
354.2	345.0	342.8	1.0	0.0	0.75	49.3	64.5	-6.5	64.8	354.2	354.2	1.0	0.0	0.75	49.3	64.5	-6.5	64.8	354.2	354.2	
361.9	352.5	349.9	1.0	0.0	0.625	48.0	61.8	2.1	61.8	361.9	361.9	1.0	0.0	0.625	48.0	61.8	2.1	61.8	361.9	361.9	
370.0	360.0	357.0	1.0	0.0	0.5	47.8	58.9	10.4	59.9	370.0	370.0	1.0	0.0	0.5	47.8	58.9	10.4	59.9	370.0	370.0	
378.9	367.5	364.1	1.0	0.0	0.375	47.4	56.8	19.5	60.0	378.9	378.9	1.0	0.0	0.375	47.4	56.8	19.5	60.0	378.9	378.9	
386.2	375.0	371.2	1.0	0.0	0.25	47.5	55.9	27.5	62.3	386.2	386.2	1.0	0.0	0.25	47.5	55.9	27.5	62.3	386.2	386.2	
391.3	382.5	378.3	1.0	0.0	0.125	47.6	56.3	34.2	65.9	391.3	391.3	1.0	0.0	0.125	47.6	56.3	34.2	65.9	391.3	391.3	
393.4	390.0	385.4	1.0	0.0	0.0	47.5	57.2	37.8	68.6	393.4	393.4	1.0	0.0	0.0	47.5	57.2	37.8	68.6	393.4	393.4	

Output: Laser printer output; separation cmyk6*, D65, page 9/35

input: $rgb/cmyk \rightarrow rgb$
output: transfer to $cmyk$

TUB-test chart PE99; hue code: $H^*_d=R00Y_d$
48 step hue circles; $rgb-LabCh$ *tables

Data of Maximum color M in colorimetric system Laser printer output; separation cmyk6*, D65 for input or output; Six hue angles of the 60 degree standard colours RYGBM; $h_{ab,ds} = 30.0, 90.0, 150.0, 210.0, 270.0, 330.0$;
Six hue angles of the device colours RYGBM; $h_{ab,d} = 33.5, 100.6, 155.5, 235.2, 290.8, 348.9$; Six hue angles of the elementary colours RYGBM; $h_{ab,e} = 25.5, 92.3, 162.2, 217.0, 271.7, 328.6$

$h_{ab,d}$ -268 75	$h_{ab,s}$ 75	$h_{ab,e}$ 75	rgb^*_{ds361M} 1.0 0.75 0.0	rgb^*_{ds361M} 82.9 -2.0 76.9 77.0 -268 92	rgb^*_{ds361M} 1.0 0.521 0.0	$LAB^*_{ds361M}(x=LabCh)$ 71.3 18.0 67.1 69.5 75	rgb^*_{ds361M} 1.0 0.75 0.0	$LAB^*_{ds361M}(x=LabCh)$ 71.6 17.3 67.5 69.7 75	rgb^*_{ds361M} 1.0 0.532 0.0	$LAB^*_{ds361M}(x=LabCh)$ 71.6 17.3 67.5 69.7 75	rgb^*_{ds361M} 1.0 0.75 0.0
92 76	76	76	1.0 0.766 0.0	83.5 -2.9 76.8 76.9 92	1.0 0.539 0.0	71.9 16.9 67.8 69.8 76	1.0 0.767 0.0	72.3 16.1 68.2 70.1 76	1.0 0.552 0.0	72.3 16.1 68.2 70.1 76	1.0 0.767 0.0
92 77	77	77	1.0 0.783 0.0	84.2 -3.9 76.7 76.8 92	1.0 0.557 0.0	72.5 15.8 68.4 70.2 77	1.0 0.783 0.0	73.0 14.9 69.0 70.5 77	1.0 0.572 0.0	73.0 14.9 69.0 70.5 77	1.0 0.783 0.0
93 78	78	78	1.0 0.8 0.0	84.8 -4.8 76.5 76.7 93	1.0 0.575 0.0	73.1 14.7 69.1 70.6 78	1.0 0.8 0.0	73.7 13.6 69.7 71.0 78	1.0 0.592 0.0	73.7 13.6 69.7 71.0 78	1.0 0.8 0.0
94 79	80	80	1.0 0.816 0.0	85.4 -5.8 76.4 76.6 94	1.0 0.593 0.0	73.8 13.5 69.7 71.0 79	1.0 0.817 0.0	74.4 12.3 70.3 71.4 80	1.0 0.612 0.0	74.4 12.3 70.3 71.4 80	1.0 0.817 0.0
95 80	81	81	1.0 0.833 0.0	86.0 -6.7 76.2 76.5 95	1.0 0.611 0.0	74.4 12.4 70.3 71.4 80	1.0 0.833 0.0	75.2 11.0 71.0 71.9 81	1.0 0.629 0.0	75.2 11.0 71.0 71.9 81	1.0 0.833 0.0
95 81	82	82	1.0 0.85 0.0	86.6 -7.6 76.0 76.4 95	1.0 0.627 0.0	75.1 11.2 70.9 71.8 81	1.0 0.85 0.0	76.0 9.7 71.8 72.4 82	1.0 0.642 0.0	76.0 9.7 71.8 72.4 82	1.0 0.85 0.0
96 82	83	83	1.0 0.866 0.0	87.3 -8.6 75.8 76.3 96	1.0 0.639 0.0	75.8 10.1 71.6 72.3 82	1.0 0.867 0.0	76.9 8.4 72.5 73.0 83	1.0 0.655 0.0	76.9 8.4 72.5 73.0 83	1.0 0.867 0.0
97 83	84	84	1.0 0.883 0.0	87.8 -9.4 76.3 76.9 97	1.0 0.651 0.0	76.6 8.9 72.2 72.8 83	1.0 0.883 0.0	77.7 7.0 73.2 73.5 84	1.0 0.668 0.0	77.7 7.0 73.2 73.5 84	1.0 0.883 0.0
97 84	85	85	1.0 0.9 0.0	88.4 -10.3 77.8 78.2 97	1.0 0.662 0.0	77.3 7.7 72.9 73.3 84	1.0 0.9 0.0	78.5 5.6 73.9 74.1 85	1.0 0.681 0.0	78.5 5.6 73.9 74.1 85	1.0 0.9 0.0
98 85	86	86	1.0 0.916 0.0	88.9 -11.2 78.6 79.6 98	1.0 0.674 0.0	78.1 6.4 73.5 73.8 85	1.0 0.917 0.0	79.4 4.2 74.5 74.6 86	1.0 0.694 0.0	79.4 4.2 74.5 74.6 86	1.0 0.917 0.0
98 86	87	87	1.0 0.933 0.0	89.4 -12.0 80.0 80.9 98	1.0 0.686 0.0	78.8 5.2 74.1 74.3 86	1.0 0.933 0.0	80.2 2.8 75.1 75.2 87	1.0 0.707 0.0	80.2 2.8 75.1 75.2 87	1.0 0.933 0.0
99 87	88	88	1.0 0.95 0.0	89.9 -12.9 81.1 82.2 99	1.0 0.697 0.0	79.6 3.9 74.7 74.8 87	1.0 0.95 0.0	81.1 1.4 75.7 75.7 88	1.0 0.72 0.0	81.1 1.4 75.7 75.7 88	1.0 0.95 0.0
99 88	90	90	1.0 0.966 0.0	90.5 -13.9 82.3 83.5 99	1.0 0.709 0.0	80.3 2.6 75.2 75.3 88	1.0 0.967 0.0	81.9 0.0 76.3 76.3 90	1.0 0.733 0.0	81.9 0.0 76.3 76.3 90	1.0 0.967 0.0
100 89	91	91	1.0 0.983 0.0	91.0 -14.8 83.5 84.8 100	1.0 0.721 0.0	81.1 1.3 75.8 75.8 89	1.0 0.983 0.0	82.7 -1.5 76.8 76.9 91	1.0 0.746 0.0	82.7 -1.5 76.8 76.9 91	1.0 0.983 0.0
100 90	92	92	1.0 1.0 0.0	91.5 -15.8 84.6 86.1 100	1.0 0.732 0.0	81.8 0.0 76.3 76.3 90	1.0 1.0 0.0	83.7 -3.0 76.8 76.9 92	1.0 0.769 0.0	83.7 -3.0 76.8 76.9 92	1.0 1.0 0.0
100 91	93	93	0.983 1.0 0.0	91.7 -16.1 85.3 86.8 100	1.0 0.744 0.0	82.6 -1.2 76.7 76.8 91	0.983 1.0 0.0	84.7 -4.6 76.6 76.8 93	1.0 0.796 0.0	84.7 -4.6 76.6 76.8 93	0.983 1.0 0.0
100 92	94	94	0.966 1.0 0.0	91.9 -16.4 85.9 87.5 100	1.0 0.761 0.0	83.4 -2.6 76.9 77.0 92	0.967 1.0 0.0	85.7 -6.1 76.4 76.6 94	1.0 0.823 0.0	85.7 -6.1 76.4 76.6 94	0.967 1.0 0.0
100 93	95	95	0.95 1.0 0.0	92.0 -16.7 86.5 88.2 100	1.0 0.785 0.0	84.3 -3.9 76.7 76.8 93	0.95 1.0 0.0	86.7 -7.6 76.1 76.5 95	1.0 0.851 0.0	86.7 -7.6 76.1 76.5 95	0.95 1.0 0.0
101 94	96	96	0.933 1.0 0.0	92.2 -17.0 87.2 88.8 101	1.0 0.808 0.0	85.1 -5.2 76.5 76.7 94	0.933 1.0 0.0	87.8 -9.2 76.1 76.7 96	1.0 0.879 0.0	87.8 -9.2 76.1 76.7 96	0.933 1.0 0.0
101 95	98	98	0.916 1.0 0.0	92.4 -17.3 87.8 89.5 101	1.0 0.832 0.0	86.0 -6.6 76.3 76.6 95	0.917 1.0 0.0	89.0 -11.2 78.9 79.7 98	1.0 0.918 0.0	89.0 -11.2 78.9 79.7 98	0.917 1.0 0.0
101 96	99	99	0.9 1.0 0.0	92.5 -17.6 88.4 90.2 101	1.0 0.855 0.0	86.9 -7.9 76.0 76.4 96	0.9 1.0 0.0	90.2 -13.3 81.7 82.8 99	1.0 0.957 0.0	90.2 -13.3 81.7 82.8 99	0.9 1.0 0.0
101 97	100	100	0.883 1.0 0.0	92.7 -18.0 89.1 90.9 101	1.0 0.88 0.0	87.8 -9.3 76.2 76.7 97	0.883 1.0 0.0	91.5 -15.5 84.4 85.8 100	1.0 0.996 0.0	91.5 -15.5 84.4 85.8 100	0.883 1.0 0.0
101 98	101	101	0.866 1.0 0.0	92.6 -18.3 89.2 91.0 101	1.0 0.914 0.0	88.8 -10.9 78.6 79.4 98	0.867 1.0 0.0	92.6 -18.3 89.2 91.1 101	1.0 0.867 1.0	92.6 -18.3 89.2 91.1 101	0.867 1.0 0.0
101 99	102	102	0.85 1.0 0.0	92.2 -18.8 88.7 90.7 101	1.0 0.947 0.0	89.9 -12.7 81.0 82.0 99	0.85 1.0 0.0	91.4 -19.8 87.6 89.9 102	1.0 0.808 1.0	91.4 -19.8 87.6 89.9 102	0.85 1.0 0.0
102 100	103	103	0.833 1.0 0.0	91.9 -19.2 88.3 90.3 102	1.0 0.98 0.0	91.0 -14.6 83.3 84.6 100	0.833 1.0 0.0	90.1 -21.3 86.0 88.6 103	1.0 0.75 1.0	90.1 -21.3 86.0 88.6 103	0.833 1.0 0.0
102 101	105	105	0.816 1.0 0.0	91.5 -19.6 87.8 90.0 102	0.943 1.0 0.0	92.2 -16.8 86.9 88.5 101	0.817 1.0 0.0	89.0 -22.7 84.2 87.2 105	1.0 0.737 1.0	89.0 -22.7 84.2 87.2 105	0.817 1.0 0.0
102 102	106	106	0.8 1.0 0.0	91.1 -20.1 87.4 89.7 102	0.849 1.0 0.0	92.2 -18.8 88.7 90.7 102	0.8 1.0 0.0	88.0 -24.0 82.3 85.8 106	1.0 0.724 1.0	88.0 -24.0 82.3 85.8 106	0.8 1.0 0.0
103 103	107	107	0.783 1.0 0.0	90.8 -20.5 86.9 89.3 103	0.798 1.0 0.0	91.2 -20.1 87.4 89.7 103	0.783 1.0 0.0	86.9 -25.2 80.5 84.3 107	1.0 0.71 1.0	86.9 -25.2 80.5 84.3 107	0.783 1.0 0.0
103 104	108	108	0.766 1.0 0.0	90.4 -20.9 86.5 89.0 103	0.749 1.0 0.0	90.1 -21.3 86.0 88.6 104	0.767 1.0 0.0	85.8 -26.4 78.6 82.9 108	1.0 0.697 1.0	85.8 -26.4 78.6 82.9 108	0.767 1.0 0.0
103 105	109	109	0.75 1.0 0.0	90.1 -21.3 86.0 88.6 103	0.738 1.0 0.0	89.2 -22.5 84.4 87.4 105	0.75 1.0 0.0	84.7 -27.5 76.7 81.5 109	1.0 0.684 1.0	84.7 -27.5 76.7 81.5 109	0.75 1.0 0.0
105 106	110	110	0.733 1.0 0.0	88.7 -23.1 83.7 86.8 105	0.727 1.0 0.0	88.2 -23.6 82.8 86.1 106	0.733 1.0 0.0	83.7 -28.5 74.8 80.0 110	1.0 0.671 1.0	83.7 -28.5 74.8 80.0 110	0.733 1.0 0.0
106 107	112	112	0.716 1.0 0.0	87.3 -24.7 81.3 85.0 106	0.716 1.0 0.0	87.3 -24.7 81.2 84.9 107	0.717 1.0 0.0	82.6 -29.5 72.8 78.6 112	1.0 0.658 1.0	82.6 -29.5 72.8 78.6 112	0.717 1.0 0.0
108 108	113	113	0.7 1.0 0.0	86.0 -26.2 78.9 83.2 108	0.704 1.0 0.0	86.4 -25.8 79.6 83.7 108	0.7 1.0 0.0	81.5 -30.4 70.9 77.2 113	1.0 0.645 1.0	81.5 -30.4 70.9 77.2 113	0.7 1.0 0.0
109 109	114	114	0.683 1.0 0.0	84.6 -27.6 76.5 81.3 109	0.693 1.0 0.0	85.5 -26.7 78.0 82.5 109	0.683 1.0 0.0	80.4 -31.3 69.0 75.7 114	1.0 0.632 1.0	80.4 -31.3 69.0 75.7 114	0.683 1.0 0.0
111 110	115	115	0.666 1.0 0.0	83.3 -28.9 74.1 79.5 111	0.682 1.0 0.0	84.5 -27.7 76.3 81.2 110	0.667 1.0 0.0	79.5 -32.2 67.4 74.7 115	1.0 0.619 1.0	79.5 -32.2 67.4 74.7 115	0.667 1.0 0.0
112 111	116	116	0.65 1.0 0.0	81.0 -30.1 71.6 77.7 112	0.67 1.0 0.0	83.6 -28.6 74.7 80.0 111	0.65 1.0 0.0	78.6 -33.3 66.2 74.2 116	1.0 0.607 1.0	78.6 -33.3 66.2 74.2 116	0.65 1.0 0.0
114 112	117	117	0.633 1.0 0.0	80.5 -31.2 69.2 75.9 114	0.659 1.0 0.0	82.7 -29.4 73.0 78.8 112	0.633 1.0 0.0	77.8 -34.4 65.0 73.6 117	1.0 0.595 1.0	77.8 -34.4 65.0 73.6 117	0.633 1.0 0.0
115 113	119	119	0.616 1.0 0.0	79.3 -32.5 67.1 74.6 115	0.648 1.0 0.0	81.8 -30.2 71.4 77.5 113	0.617 1.0 0.0	77.0 -35.4 63.8 73.0 119	1.0 0.584 1.0	77.0 -35.4 63.8 73.0 119	0.617 1.0 0.0
117 114	120	120	0.6 1.0 0.0	78.1 -34.0 65.4 73.8 117	0.637 1.0 0.0	80.9 -30.9 69.7 76.3 114	0.6 1.0 0.0	76.1 -36.4 62.5 72.4 120	1.0 0.572 1.0	76.1 -36.4 62.5 72.4 120	0.6 1.0 0.0
119 115	121	121	0.583 1.0 0.0	76.9 -35.5 63.7 72.9 119	0.625 1.0 0.0	79.9 -31.6 68.0 75.1 115	0.583 1.0 0.0	75.3 -37.4 61.3 71.8 121	1.0 0.56 1.0	75.3 -37.4 61.3 71.8 121	0.583 1.0 0.0
120 116	122	122	0.566 1.0 0.0	75.7 -36.9 62.0 72.1 120	0.615 1.0 0.0	79.2 -32.6 67.0 74.5 116	0.567 1.0 0.0	74.4 -38.3 60.0 71.3 122	1.0 0.548 1.0	74.4 -38.3 60.0 71.3 122	0.567 1.0 0.0
122 117	123	123	0.55 1.0 0.0	74.5 -38.2 60.2 71.3 122	0.605 1.0 0.0	78.5 -33.5 66.0 74.1 117	0.55 1.0 0.0	73.6 -39.2 58.8 70.7 123	1.0 0.536 1.0	73.6 -39.2 58.8 70.7 123	0.55 1.0 0.0
124 118	124	124	0.533 1.0 0.0	73.3 -39.4 58.4 70.5 124	0.595 1.0 0.0	77.8 -34.4 64.9 73.6 118	0.533 1.0 0.0	72.7 -40.0 57.5 70.1 124	1.0 0.524 1.0	72.7 -40.0 57.5 70.1 124	0.533 1.0 0.0
125 119	126	126	0.516 1.0 0.0	72.1 -40.6 56.6 69.7 125	0.585 1.0 0.0	77.0 -35.3 63.9 73.1 119	0.517 1.0 0.0	71.9 -40.9 56.2 69.5 126	1.0 0.512 1.0	71.9 -40.9 56.2 69.5 126	0.517 1.0 0.0
127 120	127	127	0.5 1.0 0.0	70.9 -41.7 54.8 68.9 127	0.574 1.0 0.0	76.3 -36.2 62.8 72.6 120	0.5 1.0 0.0	71.0 -41.6 54.9 68.9 127	1.0 0.501 1.0	71.0 -41.6 54.9 68.9 127	0.5 1.0 0.0

1-0031030-L0 PE990-70 LAB*lab, YN=0%, XY Znw=3.9, 4.1, 84.7, 89.6, 93.9, LAB*rw=23.9, 0.0, 0.0, 95.8, 0.0, 0.0

TUB-test chart PE99; hue code: H*d=R00Yd
48 step hue circles; $rgb-LabCh$ *tables

input: $rgb/cmyk -> rgb$
output: transfer to $cmyk$

Output: Laser printer output; separation cmyk6*, D65, page 11/83

Data of Maximum color M in colorimetric system Laser printer output; separation cmyk6*, D65 for input or output; Six hue angles of the 60 degree standard colours RYGBCM; $h_{ab,d5} = 30.0, 90.0, 150.0, 210.0, 270.0, 330.0$;										Six hue angles of the device colours RYGBCM; $h_{ab,d} = 33.5, 100.6, 155.5, 235.2, 290.8, 348.9$; Six hue angles of the elementary colours RYGBCM; $h_{ab,e} = 25.5, 92.3, 162.2, 217.0, 271.7, 328.6$																							
$h_{ab,d}$	$h_{ab,s}$	$h_{ab,e}$	Lab^*_{d361M}	Lab^*_{d361M}	Lab^*_{d361M}	Lab^*_{d361M}	Lab^*_{d361M}	Lab^*_{d361M}	Lab^*_{d361M}	Lab^*_{d361M}	Lab^*_{d361M}	Lab^*_{d361M}	Lab^*_{d361M}	Lab^*_{d361M}	Lab^*_{d361M}	Lab^*_{d361M}	Lab^*_{d361M}	Lab^*_{d361M}	Lab^*_{d361M}														
127	120	127	0.5	1.0	0.0	70.9	-41.7	54.8	68.9	127	0.574	1.0	0.0	76.3	-36.2	62.8	72.6	120	0.5	1.0	0.0	0.501	1.0	0.0	71.0	-41.6	54.9	68.9	127	0.5	1.0	0.0	
128	121	128	0.0	0.0	0.0	70.4	-42.6	53.9	68.7	128	0.564	1.0	0.0	75.6	-37.0	61.8	72.1	121	0.483	1.0	0.0	0.481	1.0	0.0	70.3	-42.6	53.8	68.7	128	0.483	1.0	0.0	
129	122	129	0.0	0.0	0.0	69.8	-43.4	53.0	68.5	129	0.554	1.0	0.0	74.9	-37.8	60.7	71.6	122	0.467	1.0	0.0	0.462	1.0	0.0	69.6	-43.6	52.8	68.5	129	0.467	1.0	0.0	
130	123	130	0.0	0.0	0.0	69.2	-44.2	52.1	68.3	130	0.544	1.0	0.0	74.1	-38.6	59.6	71.1	123	0.45	1.0	0.0	0.442	1.0	0.0	68.9	-44.5	51.7	68.3	130	0.45	1.0	0.0	
131	124	131	0.0	0.0	0.0	68.6	-45.0	51.2	68.2	131	0.534	1.0	0.0	73.4	-39.4	58.5	70.6	124	0.433	1.0	0.0	0.422	1.0	0.0	68.3	-45.4	50.7	68.1	131	0.433	1.0	0.0	
132	125	132	0.0	0.0	0.0	68.0	-45.7	50.3	68.0	132	0.524	1.0	0.0	72.7	-40.1	57.4	70.1	125	0.417	1.0	0.0	0.403	1.0	0.0	67.6	-46.3	49.6	67.9	132	0.417	1.0	0.0	
133	126	133	0.0	0.0	0.0	67.4	-46.5	49.4	67.8	133	0.513	1.0	0.0	72.0	-40.8	56.3	69.6	126	0.4	1.0	0.0	0.383	1.0	0.0	66.9	-47.1	48.5	67.7	133	0.4	1.0	0.0	
134	127	134	0.0	0.0	0.0	66.8	-47.2	48.5	67.7	134	0.503	1.0	0.0	71.2	-41.5	55.2	69.1	127	0.383	1.0	0.0	0.366	1.0	0.0	66.2	-48.2	47.6	67.8	135	0.383	1.0	0.0	
135	128	135	0.0	0.0	0.0	66.1	-48.2	47.5	67.7	135	0.489	1.0	0.0	70.6	-42.3	54.2	68.8	128	0.367	1.0	0.0	0.352	1.0	0.0	65.5	-49.4	46.8	68.1	136	0.367	1.0	0.0	
136	129	136	0.0	0.0	0.0	65.4	-49.5	46.6	68.1	136	0.472	1.0	0.0	70.0	-43.1	53.3	68.6	129	0.35	1.0	0.0	0.337	1.0	0.0	64.8	-50.5	46.0	68.4	137	0.35	1.0	0.0	
137	130	137	0.0	0.0	0.0	64.6	-50.9	45.7	68.4	137	0.455	1.0	0.0	69.4	-43.9	52.4	68.4	130	0.333	1.0	0.0	0.323	1.0	0.0	64.1	-51.7	45.1	68.7	138	0.333	1.0	0.0	
138	131	138	0.0	0.0	0.0	63.8	-52.2	44.7	68.7	138	0.438	1.0	0.0	68.8	-44.7	51.5	68.3	131	0.317	1.0	0.0	0.308	1.0	0.0	63.4	-52.8	44.2	68.9	140	0.317	1.0	0.0	
139	132	139	0.0	0.0	0.0	63.0	-53.5	43.7	69.1	139	0.421	1.0	0.0	68.2	-45.5	50.6	68.1	132	0.3	1.0	0.0	0.294	1.0	0.0	62.7	-53.9	43.3	69.2	141	0.3	1.0	0.0	
140	133	140	0.0	0.0	0.0	62.2	-54.7	42.6	69.4	140	0.404	1.0	0.0	67.6	-46.2	49.7	67.9	133	0.283	1.0	0.0	0.279	1.0	0.0	62.0	-55.0	42.4	69.5	142	0.283	1.0	0.0	
141	134	141	0.0	0.0	0.0	61.4	-56.0	41.5	69.7	141	0.387	1.0	0.0	67.0	-47.0	48.7	67.7	134	0.267	1.0	0.0	0.265	1.0	0.0	61.3	-56.1	41.4	69.8	143	0.267	1.0	0.0	
142	135	142	0.0	0.0	0.0	60.6	-57.2	40.4	70.1	142	0.372	1.0	0.0	66.4	-47.8	47.9	67.7	135	0.25	1.0	0.0	0.25	1.0	0.0	60.6	-57.1	40.5	70.1	144	0.25	1.0	0.0	
143	136	143	0.0	0.0	0.0	60.1	-57.9	39.6	70.2	143	0.359	1.0	0.0	65.8	-48.8	47.2	67.9	136	0.233	1.0	0.0	0.227	1.0	0.0	60.0	-58.1	39.4	70.3	145	0.233	1.0	0.0	
144	137	144	0.0	0.0	0.0	59.6	-58.6	38.9	70.3	144	0.347	1.0	0.0	65.2	-49.8	46.5	68.2	137	0.217	1.0	0.0	0.204	1.0	0.0	59.3	-59.1	38.3	70.5	147	0.217	1.0	0.0	
145	138	145	0.0	0.0	0.0	59.1	-59.3	38.1	70.5	145	0.334	1.0	0.0	64.7	-50.8	45.8	68.4	138	0.2	1.0	0.0	0.181	1.0	0.0	58.6	-60.0	37.2	70.7	148	0.2	1.0	0.0	
146	139	146	0.0	0.0	0.0	58.7	-59.9	37.3	70.6	146	0.322	1.0	0.0	64.1	-51.7	45.1	68.7	139	0.183	1.0	0.0	0.158	1.0	0.0	58.0	-60.9	36.1	70.8	149	0.183	1.0	0.0	
147	140	147	0.0	0.0	0.0	58.2	-60.6	36.4	70.7	147	0.309	1.0	0.0	63.5	-52.7	44.3	68.9	140	0.167	1.0	0.0	0.135	1.0	0.0	57.3	-61.8	34.9	71.0	150	0.167	1.0	0.0	
148	141	148	0.0	0.0	0.0	57.7	-61.2	35.6	70.9	148	0.297	1.0	0.0	62.9	-53.7	43.5	69.2	141	0.15	1.0	0.0	0.106	1.0	0.0	56.6	-63.0	33.9	71.6	151	0.15	1.0	0.0	
149	142	149	0.0	0.0	0.0	57.2	-61.9	34.8	71.0	149	0.284	1.0	0.0	62.3	-54.6	42.7	69.4	142	0.133	1.0	0.0	0.073	1.0	0.0	55.9	-64.4	33.0	72.5	152	0.133	1.0	0.0	
150	143	150	0.0	0.0	0.0	56.8	-62.5	34.1	71.3	150	0.272	1.0	0.0	61.7	-55.5	41.9	69.7	143	0.117	1.0	0.0	0.041	1.0	0.0	55.2	-65.8	32.1	73.3	154	0.117	1.0	0.0	
151	144	151	0.0	0.0	0.0	56.4	-63.3	33.7	71.7	151	0.259	1.0	0.0	61.1	-56.5	41.1	69.9	144	0.1	1.0	0.0	0.008	1.0	0.0	54.5	-67.2	31.1	74.2	155	0.1	1.0	0.0	
152	145	152	0.0	0.0	0.0	56.1	-64.0	33.2	72.1	152	0.245	1.0	0.0	60.5	-57.4	40.2	70.1	145	0.083	1.0	0.0	0.0	1.0	0.0	0.021	54.3	-67.4	29.5	73.7	156	0.083	1.0	0.0
153	146	153	0.0	0.0	0.0	55.7	-64.7	32.8	72.6	153	0.225	1.0	0.0	59.9	-58.2	39.3	70.3	146	0.067	1.0	0.0	0.0	1.0	0.0	0.004	54.1	-67.2	27.8	72.8	157	0.067	1.0	0.0
154	147	154	0.0	0.0	0.0	55.4	-65.5	32.3	73.0	154	0.205	1.0	0.0	59.3	-59.0	38.4	70.5	147	0.05	1.0	0.0	0.0	1.0	0.0	0.001	54.0	-66.9	26.1	71.9	158	0.05	1.0	0.0
155	148	155	0.0	0.0	0.0	55.0	-66.2	31.8	73.5	155	0.186	1.0	0.0	58.8	-59.8	37.4	70.6	148	0.033	1.0	0.0	0.0	1.0	0.0	0.001	53.9	-66.6	24.4	71.0	159	0.033	1.0	0.0
156	149	156	0.0	0.0	0.0	54.7	-66.9	31.3	73.9	156	0.166	1.0	0.0	58.2	-60.6	36.5	70.8	149	0.017	1.0	0.0	0.0	1.0	0.0	0.001	53.8	-66.3	22.8	70.2	161	0.017	1.0	0.0
157	150	157	0.0	0.0	0.0	54.3	-67.6	30.8	74.3	157	0.146	1.0	0.0	57.6	-61.3	35.5	70.9	150	0.0	1.0	0.0	0.0	1.0	0.0	0.001	53.8	-65.9	21.1	69.3	162	0.0	1.0	0.0
158	151	158	0.0	0.0	0.0	54.2	-67.5	29.7	73.8	158	0.126	1.0	0.0	57.0	-62.1	34.5	71.1	151	0.0	1.0	0.0	0.0	1.0	0.0	0.001	53.8	-65.5	19.9	68.6	163	0.0	1.0	0.0
159	152	159	0.0	0.0	0.0	54.2	-67.4	28.6	73.2	159	0.099	1.0	0.0	56.4	-63.3	33.7	71.8	152	0.0	1.0	0.0	0.0	1.0	0.0	0.001	53.8	-65.2	18.7	67.9	164	0.0	1.0	0.0
160	153	160	0.0	0.0	0.0	54.1	-67.2	27.6	72.7	160	0.071	1.0	0.0	55.9	-64.5	32.9	72.5	153	0.0	1.0	0.0	0.0	1.0	0.0	0.001	53.8	-64.8	17.4	67.2	164	0.0	1.0	0.0
161	154	161	0.0	0.0	0.0	54.0	-67.1	26.6	72.1	161	0.042	1.0	0.0	55.3	-65.7	32.1	73.3	154	0.0	1.0	0.0	0.0	1.0	0.0	0.001	53.8	-64.4	16.2	66.5	165	0.0	1.0	0.0
162	155	162	0.0	0.0	0.0	53.9	-66.9	25.5	71.6	162	0.014	1.0	0.0	54.7	-67.0	31.3	74.0	155	0.0	1.0	0.0	0.0	1.0	0.0	0.001	53.8	-63.9	15.0	65.8	166	0.0	1.0	0.0
163	156	163	0.0	0.0	0.0	53.9	-66.7	24.5	71.1	163	0.0	1.0	0.0	54.3	-67.5	30.1	74.0	156	0.0	1.0	0.0	0.0	1.0	0.0	0.001	53.8	-63.5	13.9	65.1	167	0.0	1.0	0.0
164	157	164	0.0	0.0	0.0	53.8	-66.5	23.5	70.5	164	0.0	1.0	0.0	54.2	-67.3	28.6	73.2	157	0.0	1.0	0.0	0.0	1.0	0.0	0.001	53.8	-63.0	12.7	64.4	168	0.0	1.0	0.0
165	158	165	0.0	0.0	0.0	53.8	-66.2	22.3	69.9	165	0.0	1.0	0.0	54.1	-67.1	27.2	72.5	158	0.0	1.0	0.0	0.0	1.0	0.0	0.001	53.8	-62.6	11.6	63.8	169	0.0	1.0	0.0
166	159	166	0.0	0.0	0.0	53.8	-65.8	20.8	69.1	166	0.0	1.0	0.0	54.0	-66.9	25.7	71.7	159	0.0	1.0	0.0	0.0	1.0	0.0	0								

see similar files: <http://130.149.60.45/~farbmatrik/PE99/PE99.HTM>
technical information: <http://www.ps.bam.de> or <http://130.149.60.45/~farbmatrik>

<http://130.149.60.45/~farbmatrik/PE99/PE99L0NP.PDF> /PS; transfer output N: no 3D-linearization (OL) in file (F) or PS-startup (S), page 16/33

LAB*a0, YN=0%, XYZnw=3.9, 4.1, 4.1, 84.7, 89.6, 93.9, 1.1
 PE990-70
 TUB-test chart PE99; hue code: H*d=R00Yd
 48 step hue circles: *rab-LabCh**tables

input: *rgb/cmyk* $\rightarrow$ *rgb*
output: transfer to *cmyk*

-0031530-1.0	PF990-70	LAB*1a0, YN=0%, XYZ _{nw} =3.9, 4.1, 84.7, 89.6, 93.9, LAB* _{nw} =23.9, 0.0, 0.0, 95.8, 0.0, 0.0
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Output: Laser printer output; separation cmyn6*, D65, page 16/33



TUB material: code=rha4ta
cmyn6 (CMYK)

input: *rgb/cmyk* → *rgb*
output: transfer to *cmyk*

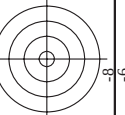
TTUB-test chart PE99; hue code: $H_d^* = R00Y_d$
colors and differences, ΔE^* ,

PDF990-7N Page 18/33-F

-0031730-E0

see similar files: <http://130.149.60.45/~farbmatrik/PE99/PE99.HTM>
technical information: <http://www.ps.bam.de> or <http://130.149.60.45/~farbmatrik>

n/	HIC*Fd	rgb*Fd	tc*Fd	hs*Fd	rgb*Fd	LabCh*Fd	LabCh*Fd	rgb*Fd	DB*Fd	hs*Fd	rgb*Fd	LabCh*Fd
0/648	R00Y_100_100d	1.0	0.0	1.0	0.0	47.5	57.2	33.4	68.6	37.8	68.6	33.4
1/657	R13Y_100_100d	1.0	0.125	1.0	0.0	51.6	54.5	48.4	72.9	41.6	68.6	33.4
2/666	R28Y_100_100d	1.0	0.25	1.0	0.0	57.4	43.5	69.7	51.4	60.1	68.6	33.4
3/675	R38Y_100_100d	1.0	0.375	1.0	0.0	64.2	30.6	60.1	67.5	63.0	68.6	33.4
4/684	R50Y_100_100d	1.0	0.5	1.0	0.0	70.5	19.2	66.2	69.0	73.8	68.6	33.4
5/693	R63Y_100_100d	1.0	0.625	1.0	0.0	75.4	10.6	71.2	72.0	81.5	68.6	33.4
6/702	R75Y_100_100d	1.0	0.75	1.0	0.0	83.5	-2.9	76.9	92.2	91.5	68.6	33.4
7/711	R88Y_100_100d	1.0	0.875	1.0	0.0	87.8	-9.4	76.3	97.0	97.2	68.6	33.4
8/720	Y00G_100_100d	1.0	1.0	1.0	0.0	91.5	-15.8	84.6	86.1	100.5	68.6	33.4
9/639	Y13G_100_100d	0.875	1.0	0.0	0.927	92.7	-18.0	89.1	90.9	101.4	68.6	33.4
10/558	Y28G_100_100d	0.75	1.0	0.0	0.904	-20.9	86.5	89.0	103.6	101.4	68.6	33.4
11/477	Y38G_100_100d	0.625	1.0	0.0	0.805	-31.2	69.2	75.9	114.2	111	68.6	33.4
12/396	Y50G_100_100d	0.5	1.0	0.0	0.709	-41.7	54.8	68.9	127.3	0.5	68.6	33.4
13/315	Y63G_100_100d	0.375	1.0	0.0	0.661	-48.2	47.5	68.9	127.3	0.5	68.6	33.4
14/234	Y75G_100_100d	0.25	1.0	0.0	0.606	-57.9	39.6	70.2	145.5	1.1	68.6	33.4
15/153	Y88G_100_100d	0.125	1.0	0.0	0.568	-62.5	34.1	71.3	151.3	0.4	68.6	33.4
16/72	G00C_100_100d	0.0	1.0	0.0	0.0	54.3	-67.6	30.8	74.3	155.5	0.0	149
17/73	G13C_100_100d	0.0	1.0	0.0	0.116	53.8	-66.5	23.5	70.2	168.0	0.0	156
18/75	G28C_100_100d	0.0	1.0	0.0	0.233	53.7	-63.6	14.1	65.2	167.4	0.0	162
19/78	G38C_100_100d	0.0	1.0	0.0	0.366	54.7	-57.3	0.8	57.3	179.1	0.0	171
20/79	G50C_100_100d	0.0	1.0	0.0	0.5	55.0	-51.4	-8.9	52.2	189.8	0.0	180
21/77	G63C_100_100d	0.0	1.0	0.0	0.633	55.3	-43.8	-20.5	48.4	205.1	0.0	188
22/78	G75C_100_100d	0.0	1.0	0.0	0.75	55.1	-38.2	-27.9	48.1	215.4	0.0	197
23/79	G88C_100_100d	0.0	1.0	0.0	0.883	54.3	-36.4	-33.7	49.6	222.8	0.0	203
24/80	C00B_100_100d	0.0	1.0	1.0	0.0	53.1	-30.0	-43.1	52.5	235.1	0.0	210
25/81	C13B_100_100d	0.0	0.883	1.0	0.0	53.1	-29.1	-41.6	52.7	237.0	0.1	216
26/82	C28B_100_100d	0.0	0.766	1.0	0.0	52.9	-26.2	-47.2	54.1	241.3	0.3	223
27/83	C38B_100_100d	0.0	0.633	1.0	0.0	50.7	-21.1	-49.4	53.7	254.9	0.3	231
28/84	C50B_100_100d	0.0	0.5	1.0	0.0	46.1	-13.3	-49.4	51.1	254.9	0.0	240
29/85	C63B_100_100d	0.0	0.366	1.0	0.0	41.1	-5.7	-49.2	49.6	263.3	0.0	248
30/86	C75B_100_100d	0.0	0.233	1.0	0.0	36.6	3.2	-48.3	48.4	273.8	0.0	257
31/87	C88B_100_1											



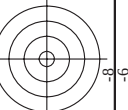
TUB material: code=rha4ta
cmy6 (CMYK)

input: $rgb/cmyk \rightarrow rgb_d$
output: transfer to $cmyk_d$



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[illegible]



TUB material: code=rha4ta

input: *rgb/cmyk* → *rgbd*
output: transfer to *cmyka*

technical information: <http://www.ps.bam.de> or <http://130.149.60.45/~farbmetrik>

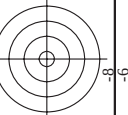
colors and differences, ΔE^* ,

[illegible]

Mean color difference of this page:

PE990-7N

1-0032130-F0



TUB material: code=rha4ta
cmyn6 (CMYK)

input: *rgb/cmyk* -> *rgb*_d
output: transfer to *cmyk*_d

TUB-test chart PE99; hue code: $H^*_d=R00Y_d$
colors and differences. ΔE^* ,

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[illegible]

input: `rgb/cmyk` - $\rightarrow$ `rgb`

[illegible]

see similar files: <http://130.149.60.45/~farbmatrik/PE99/PE99.HTM>
technical information: <http://www.ps.bam.de> or <http://130.149.60.45/~farbmatrik>

TUB-test chart PE99; hue code: $H^*_d=R00Y_d$
 colors and differences ΔE^* ,

input: *rgb/cmyk* → *rgb*
output: transfer to *cmyk*

[illegible]



TUB material: code=rha4ta
cmyn6 (CMYK)

input: *rgb/cmyk* → *rgb*
output: transfer to *cmyk*

TU8-test chart PE99; hue code: H_d^{*}=R00Y_d

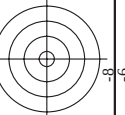
n	HIC*	$rgb_{-}Fd$	$lcr_{-}Fd$	$hsa_{-}Fd$	$rgb^{*}Fd$	$LabCh^{*}Fd$	$DE^{*}Fd$	$hsa^{*}Fd$	$rgb^{*}Ma$	$LabCh^{*}Ma$																						
567	R00Y_087_087A	0.875	0.0	0.875	0.875	0.437	390	44.6	50.0	33.1	60.0	33.4	0.0	0.875	0.0	0.0	43.6	51.3	31.6	60.2	31.6	2.1	389	1.0	0.0	0.133	47.5	57.2	37.8	68.6	33.4	
568	R36Y_087_087A	0.875	0.0	0.875	0.875	0.437	382	44.6	49.3	29.6	57.5	30.9	0.875	0.0	0.125	43.2	51.0	26.3	57.5	27.3	3.9	382	1.0	0.0	0.133	47.5	57.2	37.8	68.6	33.4		
569	R23Y_087_087A	0.875	0.0	0.875	0.875	0.437	374	44.6	49.3	23.1	54.3	25.2	0.875	0.0	0.235	43.0	51.3	21.4	55.1	21.4	4.0	365	1.0	0.0	0.266	47.5	56.1	26.5	62.0	25.2		
570	R00Y_087_087A	0.875	0.0	0.875	0.875	0.437	365	44.6	50.5	14.4	52.5	15.9	0.875	0.0	0.375	43.3	51.3	10.6	54.2	11.3	4.7	375	1.0	0.0	0.416	47.5	57.7	16.5	60.0	15.9		
571	B70R_087_087A	0.875	0.0	0.875	0.875	0.437	355	44.6	53.3	4.3	53.5	4.6	0.875	0.0	0.5	43.4	55.6	1.4	55.6	1.4	4.0	354	1.0	0.0	0.583	47.9	60.9	4.9	61.1	4.6		
572	B63R_087_087A	0.875	0.0	0.875	0.875	0.437	346	44.6	56.2	-4.6	56.4	35.5	0.875	0.0	0.625	43.8	59.4	-6.7	59.8	35.5	4.3	344	1.0	0.0	0.733	49.1	64.2	-5.3	64.4	35.2		
573	B56R_087_087A	0.875	0.0	0.875	0.875	0.437	338	44.6	57.8	-9.1	58.3	35.0	0.875	0.0	0.875	45.4	60.7	-16.8	61.1	34.0	4.7	337	1.0	0.0	0.866	49.5	66.0	-10.4	66.6	35.0		
574	B50R_087_087A	0.875	0.0	0.875	0.875	0.437	330	44.6	57.2	-11.1	58.5	34.8	0.875	0.0	0.875	45.5	59.0	-16.8	61.4	34.0	4.9	330	1.0	0.0	1.0	48.1	65.4	-12.7	66.6	34.8		
575	B44R_100_100A	0.875	0.0	1.0	0.0	0.5	323	48.8	60.5	-17.0	62.8	42.9	0.875	0.0	1.0	45.6	60.1	-17.3	62.6	34.3	4.9	323	1.0	0.0	0.883	0.0	1.0	45.8	60.5	-17.0	62.8	34.4
576	R13Y_087_087A	0.875	0.0	0.875	0.875	0.437	38	48.8	46.8	43.3	63.8	42.9	0.875	0.125	0.0	49.7	50.4	46.7	68.7	42.8	4.9	37	1.0	0.133	0.0	52.3	53.4	49.7	73.0	42.9		
577	R35Y_087_075A	0.875	0.125	0.875	0.875	0.125	50.6	42.2	28.3	51.4	33.4	30.3	0.875	0.125	0.125	49.6	47.7	41.6	63.3	41.1	14.1	389	1.0	0.0	0.0	47.5	57.2	37.8	68.6	33.4		
578	R18Y_087_075A	0.875	0.125	0.875	0.875	0.125	50.7	42.2	24.6	48.9	30.3	0.875	0.125	0.125	49.6	47.7	41.6	63.3	41.1	14.1	389	1.0	0.0	0.0	47.5	57.2	37.8	68.6	33.4			
579	R18Y_087_075A	0.875	0.125	0.875	0.875	0.125	50.7	42.2	24.6	48.9	30.3	0.875	0.125	0.125	49.6	47.7	41.6	63.3	41.1	14.1	389	1.0	0.0	0.0	47.5	57.2	37.8	68.6	33.4			
580	R00Y_087_075A	0.875	0.125	0.875	0.875	0.125	50.7	42.2	24.6	48.9	30.3	0.875	0.125	0.125	49.6	47.7	41.6	6														



TUB material: code=rha4ta
myn6 (CMYK)

input: *rgb/cmyk* → *rgb*
output: transfer to *cmyk*

see similar files: <http://130.149.60.45/~farbmatrik/PE99/PE99.HTM>
technical information: <http://www.ps-bam.de> or <http://130.149.60.45/~farbmatrik/>



TUB material: code=rha4ta
cmyn6 (CMYK)

input: *rgb/cmyk* → *rgb*
output: transfer to *cmyk*

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[illegible]



TUB material: code=rha4ta
myn6 (CMYK)

input: *rgb/cmyk* → *rgb*
output: transfer to *cmyk*

TTUB-test chart PE99; hue code: $H_d^* = R00Y_d$
colors and differences, ΔE^* ,

[illegible]

Input and Output: Printer Reflective System FRS06a for relative CIELAB hue $h_{ab,a,rel} = h_{ab}/360 = 31/360 = 0.08$

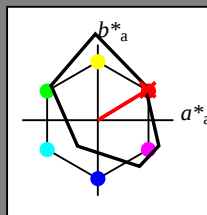
Data for any device (d) or elementary (e) colour:

HIC^*

hue text for the colours of this page:

$H^*_- = R00Y_-$

triangle lightness T^*



FRS06a; adapted (a) CIELAB data

name	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R-,Ma	32.5	62.3	46.4	77.7	36
Y-,Ma	82.7	-3.1	113.9	114.0	91
G-,Ma	39.4	-61.8	45.8	76.9	143
C-,Ma	47.8	-26.8	-34.2	43.4	231
B-,Ma	10.1	55.1	-61.0	82.2	312
M-,Ma	34.5	80.6	-33.9	87.5	337
N-,Ma	6.2	0.0	0.0	0.0	0
W-,Ma	91.9	0.0	0.0	0.0	0
R-,CIE	39.9	58.7	27.9	65.0	25
Y-,CIE	81.2	-2.8	71.5	71.6	92
G-,CIE	52.2	-42.4	13.6	44.5	162
B-,CIE	30.5	1.4	-46.4	46.4	271

Data for maximum colour (Ma):

$LabCh^*_{-,Ma}$: 48 66 40 77 31

$HIC^*_{-,Ma}$: R00Y_100_100_

$rgbic^*_{-,Ma}$:

1.0 0.0 0.0 1.0 1.0

triangle lightness T^*

% Gamut

$u^*_{rel} = 114$

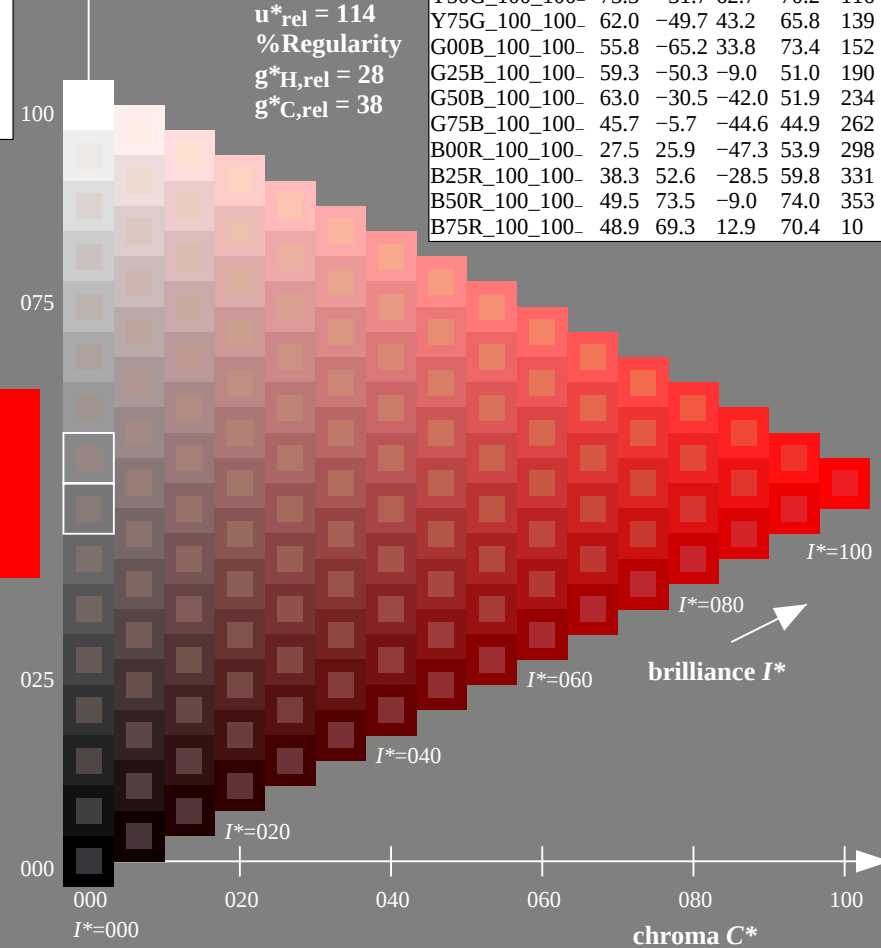
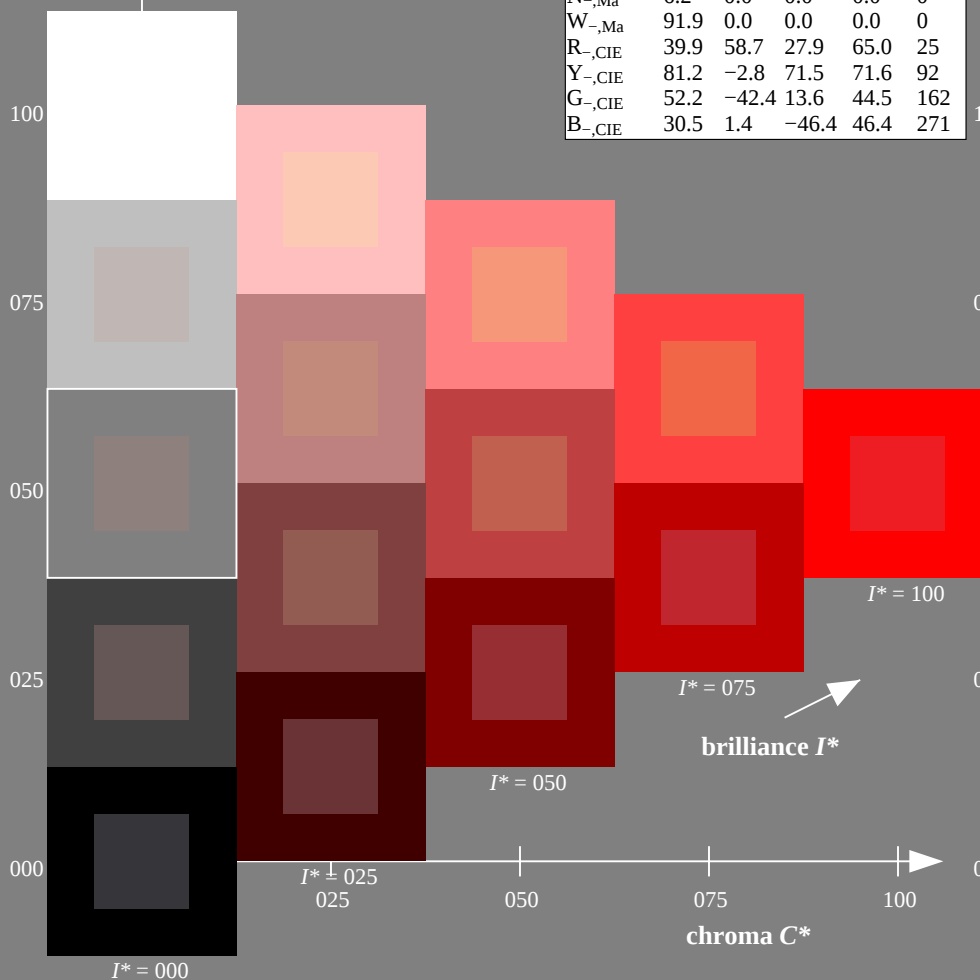
% Regularity

$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$

ORS20a; adapted (a) CIELAB data

H^*_-	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R00Y_100_100_	48.4	66.1	40.2	77.3	31
R25Y_100_100_	56.8	48.0	50.5	69.6	46
R50Y_100_100_	68.6	25.0	63.9	68.6	68
R75Y_100_100_	80.6	4.8	77.2	77.3	86
Y00G_100_100_	90.2	-9.6	88.2	88.7	96
Y25G_100_100_	83.2	-18.4	79.9	81.9	102
Y50G_100_100_	73.3	-31.7	62.7	70.2	116
Y75G_100_100_	62.0	-49.7	43.2	65.8	139
G00B_100_100_	55.8	-65.2	33.8	73.4	152
G25B_100_100_	59.3	-50.3	-9.0	51.0	190
G50B_100_100_	63.0	-30.5	-42.0	51.9	234
G75B_100_100_	45.7	-5.7	-44.6	44.9	262
B00R_100_100_	27.5	25.9	-47.3	53.9	298
B25R_100_100_	38.3	52.6	-28.5	59.8	331
B50R_100_100_	49.5	73.5	-9.0	74.0	353
B75R_100_100_	48.9	69.3	12.9	70.4	10



TUB-test chart PE99; hue code: $H^*_- = R00Y_-$
Test chart according to DIN 33872, 3D=0, de=1, cmyk

input: $rgb/cmyk \rightarrow rgb/cmyk$
output: no change

TUB registration: 20150701-PE99/PE99L0NP.PDF /.PS
application for measurement of laser printer output

TUB material: code=rha4ta

Input and Output: Printer Reflective System FRS06a for relative CIELAB hue $h_{ab,a,rel} = h_{ab}/360 = 25/360 = 0.07$

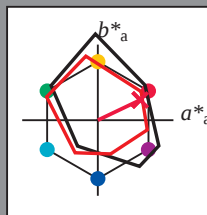
Data for any device (d) or elementary (e) colour:

HIC_e^*

hue text for the colours of this page:

$H_e^* = R00Y_e$

triangle lightness T^*



LRS18a; adapted (a) CIELAB data

name	$L^* = L_a^*$	a^*	b^*	$C_{ab,a}^*$	$h_{ab,a}^*$
$R_{e,Ma}$	47.5	56.0	26.7	62.1	25
$Y_{e,Ma}$	83.6	-3.1	76.8	76.9	92
$G_{e,Ma}$	53.8	-65.9	21.1	69.2	162
$C_{e,Ma}$	54.9	-38.7	-29.1	48.4	216
$B_{e,Ma}$	37.3	1.4	-48.6	48.7	271
$M_{e,Ma}$	38.5	46.7	-28.5	54.7	328
$N_{e,Ma}$	23.8	0.0	0.0	0.0	0
$W_{e,Ma}$	95.8	0.0	0.0	0.0	0
$R_{e,CIE}$	39.9	58.7	27.9	65.0	25
$Y_{e,CIE}$	81.2	-2.8	71.5	71.6	92
$G_{e,CIE}$	52.2	-42.4	13.6	44.5	162
$B_{e,CIE}$	30.5	1.4	-46.4	46.4	271

Data for maximum colour (Ma):

$LabCh_e^*, Ma: 47\ 56\ 26\ 62\ 25$

$HIC_e^*, Ma: R00Y_{100}100_e$

$rgbic_e^*, Ma:$

1.0 0.0 0.26 1.0 1.0

triangle lightness T^*

% Gamut

$u_{rel}^* = 114$

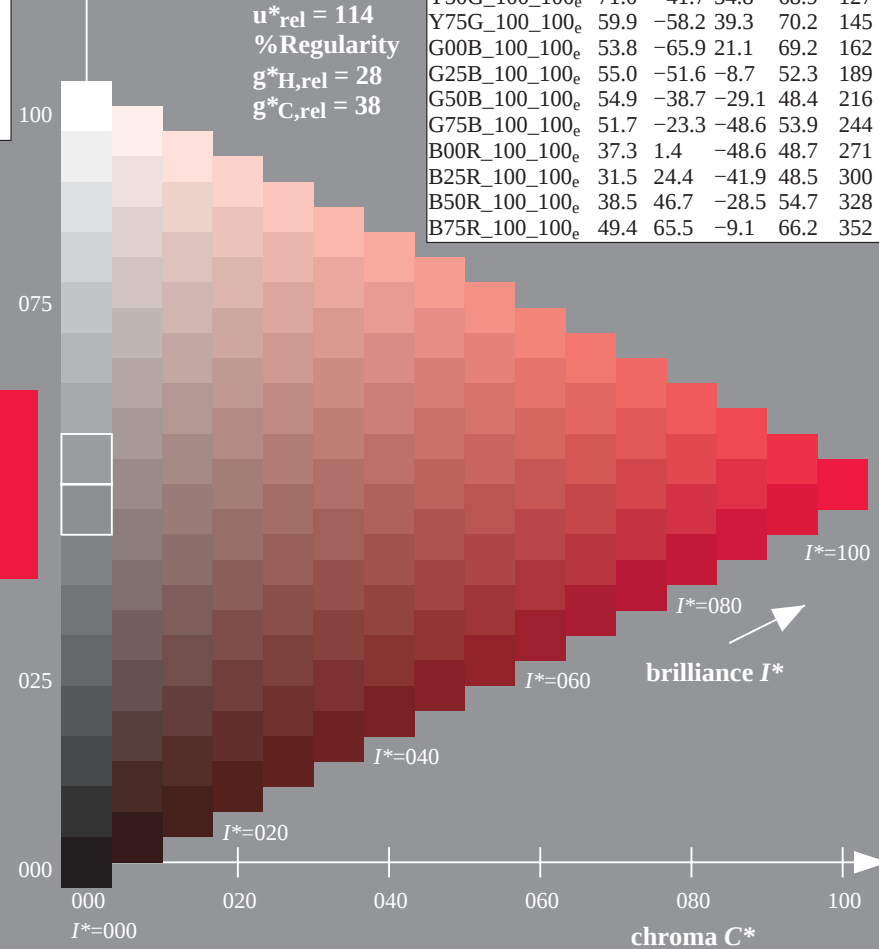
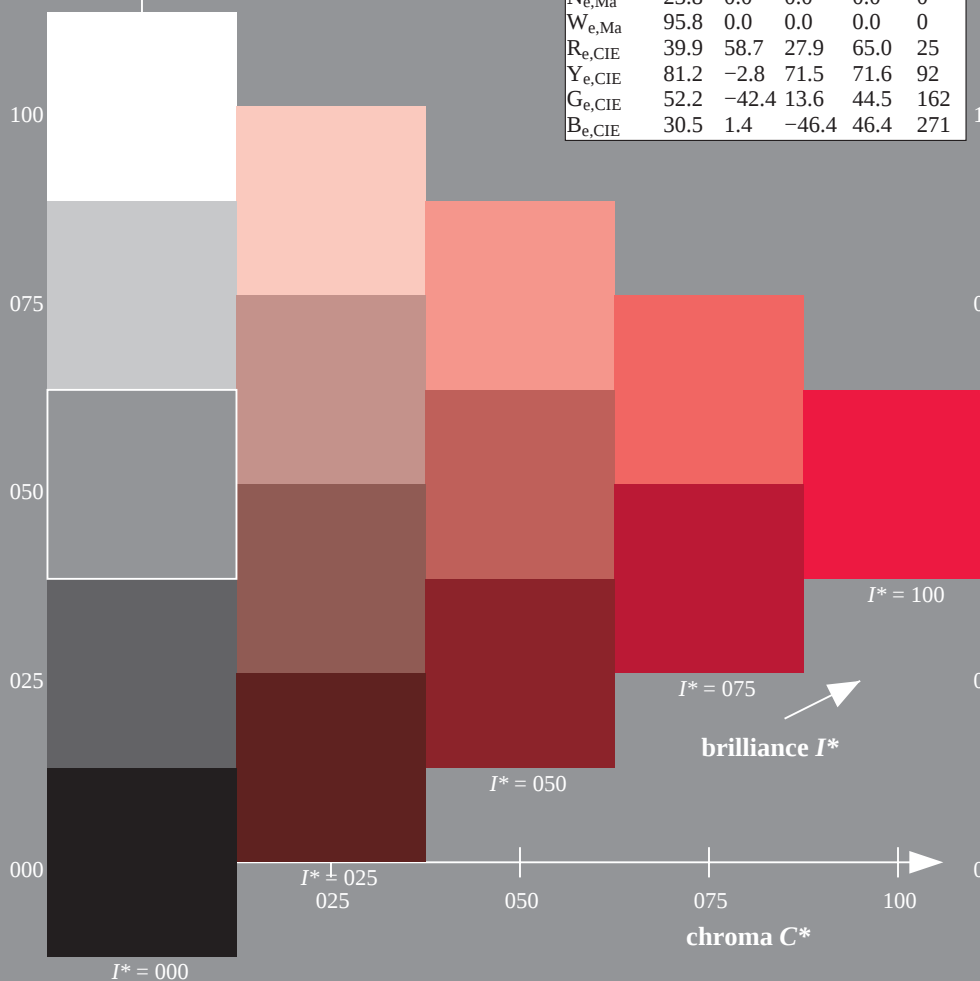
% Regularity

$g_{H,rel}^* = 28$

$g_{C,rel}^* = 38$

LRS18a; adapted (a) CIELAB data

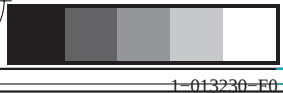
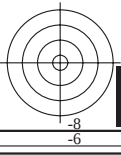
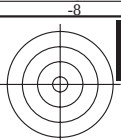
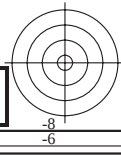
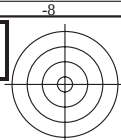
H_e^*	$L^* = L_a^*$	a^*	b^*	$C_{ab,a}^*$	$h_{ab,a}^*$
$R00Y_{100}100_e$	47.5	56.0	26.7	62.1	25
$R25Y_{100}100_e$	51.4	54.8	47.7	72.6	41
$R50Y_{100}100_e$	61.8	35.2	58.4	68.2	58
$R75Y_{100}100_e$	72.3	16.1	68.2	70.1	76
$Y00G_{100}100_e$	83.6	-3.1	76.8	76.9	92
$Y25G_{100}100_e$	85.8	-26.4	78.5	82.9	108
$Y50G_{100}100_e$	71.0	-41.7	54.8	68.9	127
$Y75G_{100}100_e$	59.9	-58.2	39.3	70.2	145
$G00B_{100}100_e$	53.8	-65.9	21.1	69.2	162
$G25B_{100}100_e$	55.0	-51.6	-8.7	52.3	189
$G50B_{100}100_e$	54.9	-38.7	-29.1	48.4	216
$G75B_{100}100_e$	51.7	-23.3	-48.6	53.9	244
$B00R_{100}100_e$	37.3	1.4	-48.6	48.7	271
$B25R_{100}100_e$	31.5	24.4	-41.9	48.5	300
$B50R_{100}100_e$	38.5	46.7	-28.5	54.7	328
$B75R_{100}100_e$	49.4	65.5	-9.1	66.2	352

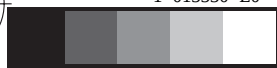
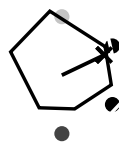
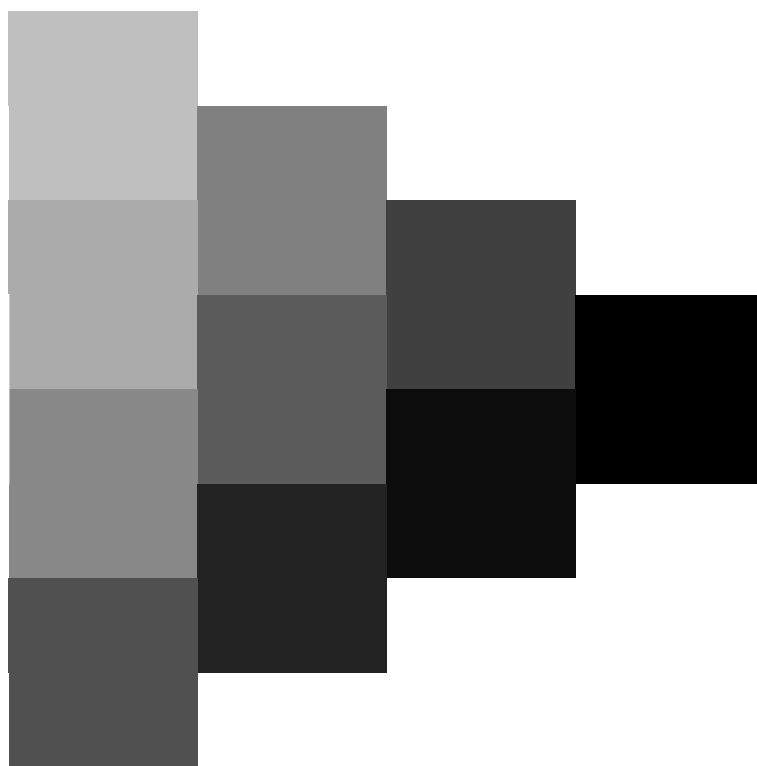
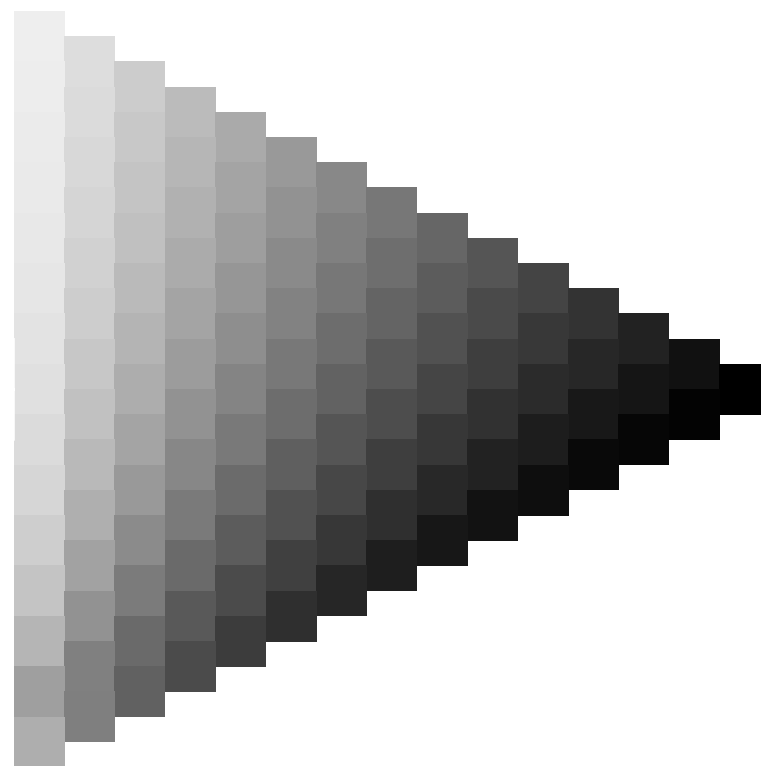
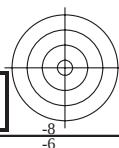
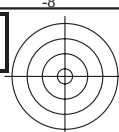


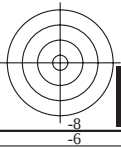
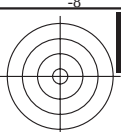
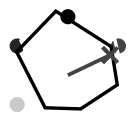
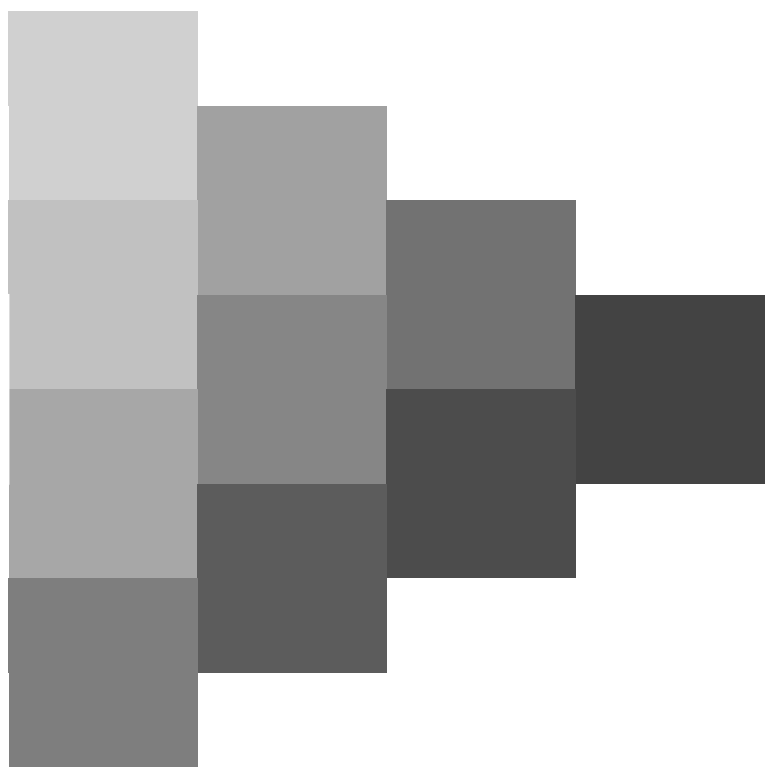
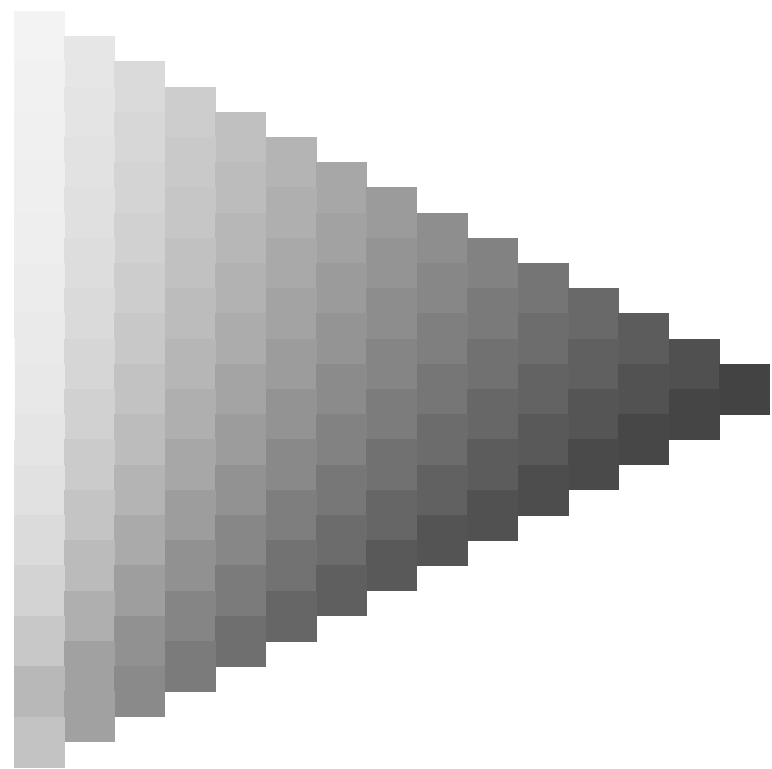
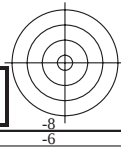
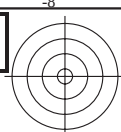
1-013130-L0 PE990-71

TUB-test chart PE99; hue code: $H_e^* = R00Y_e$
Test chart according to DIN 33872, 3D=0, de=1, cmyk

input: $rgb/cmyk \rightarrow rgb_e$
output: transfer to $cmyk_e$







Input and Output: Printer Reflective System FRS06a for relative CIELAB hue $h_{ab,a,rel} = h_{ab}/360 = 25/360 = 0.07$

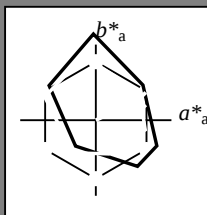
Data for any device (d) or elementary (e) colour:

HIC^*_e

hue text for the colours of this page:

$H^*_e = R00Y_e$

triangle lightness T^*



LRS18a; adapted (a) CIELAB data

name	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
$R_{e,Ma}$	47.5	56.0	26.7	62.1	25
$Y_{e,Ma}$	83.6	-3.1	76.8	76.9	92
$G_{e,Ma}$	53.8	-65.9	21.1	69.2	162
$C_{e,Ma}$	54.9	-38.7	-29.1	48.4	216
$B_{e,Ma}$	37.3	1.4	-48.6	48.7	271
$M_{e,Ma}$	38.5	46.7	-28.5	54.7	328
$N_{e,Ma}$	23.8	0.0	0.0	0.0	0
$W_{e,Ma}$	95.8	0.0	0.0	0.0	0
$R_{e,CIE}$	39.9	58.7	27.9	65.0	25
$Y_{e,CIE}$	81.2	-2.8	71.5	71.6	92
$G_{e,CIE}$	52.2	-42.4	13.6	44.5	162
$B_{e,CIE}$	30.5	1.4	-46.4	46.4	271

Data for maximum colour (Ma):

$LabCh^*_{e,Ma}$: 47 56 26 62 25

$HIC^*_{e,Ma}$: R00Y_100_100_e

$rgbic^*_{e,Ma}$:

1.0 0.0 0.26 1.0 1.0

triangle lightness T^*

% Gamut

$u^*_{rel} = 114$

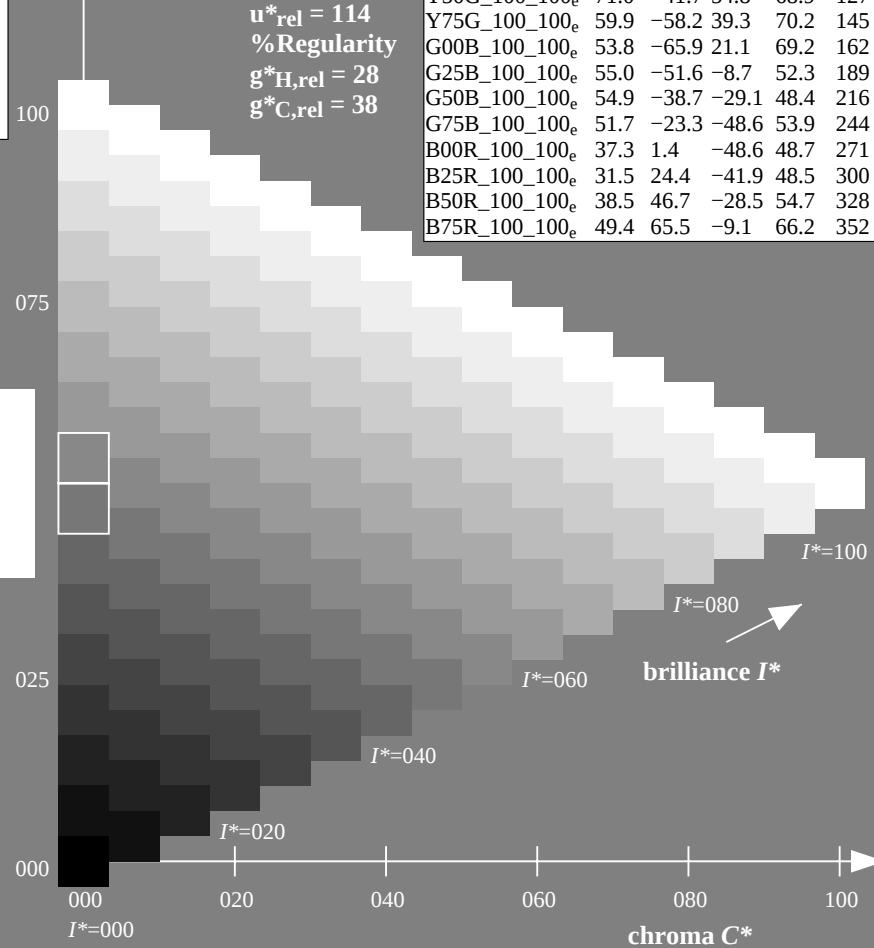
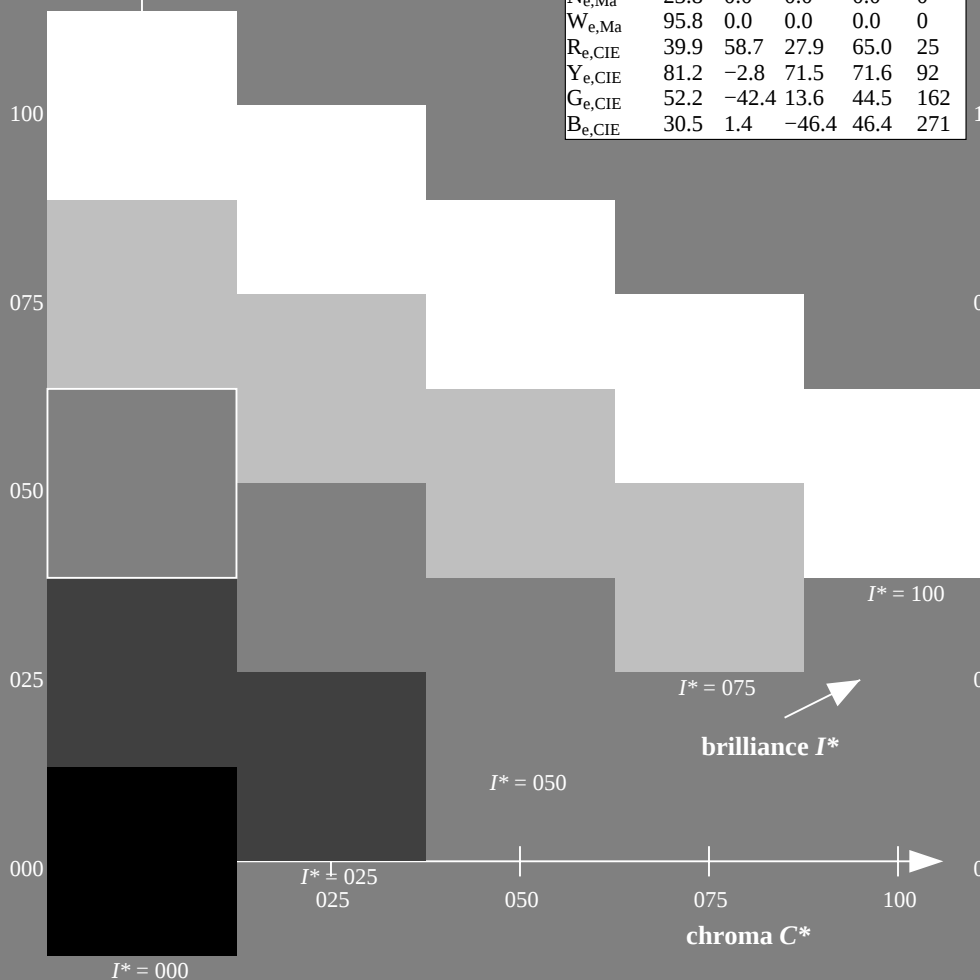
% Regularity

$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$

LRS18a; adapted (a) CIELAB data

H^*_e	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R00Y_100_100_e	47.5	56.0	26.7	62.1	25
R25Y_100_100_e	51.4	54.8	47.7	72.6	41
R50Y_100_100_e	61.8	35.2	58.4	68.2	58
R75Y_100_100_e	72.3	16.1	68.2	70.1	76
Y00G_100_100_e	83.6	-3.1	76.8	76.9	92
Y25G_100_100_e	85.8	-26.4	78.5	82.9	108
Y50G_100_100_e	71.0	-41.7	54.8	68.9	127
Y75G_100_100_e	59.9	-58.2	39.3	70.2	145
G00B_100_100_e	53.8	-65.9	21.1	69.2	162
G25B_100_100_e	55.0	-51.6	-8.7	52.3	189
G50B_100_100_e	54.9	-38.7	-29.1	48.4	216
G75B_100_100_e	51.7	-23.3	-48.6	53.9	244
B00R_100_100_e	37.3	1.4	-48.6	48.7	271
B25R_100_100_e	31.5	24.4	-41.9	48.5	300
B50R_100_100_e	38.5	46.7	-28.5	54.7	328
B75R_100_100_e	49.4	65.5	-9.1	66.2	352



1-013530-L0 PE990-71

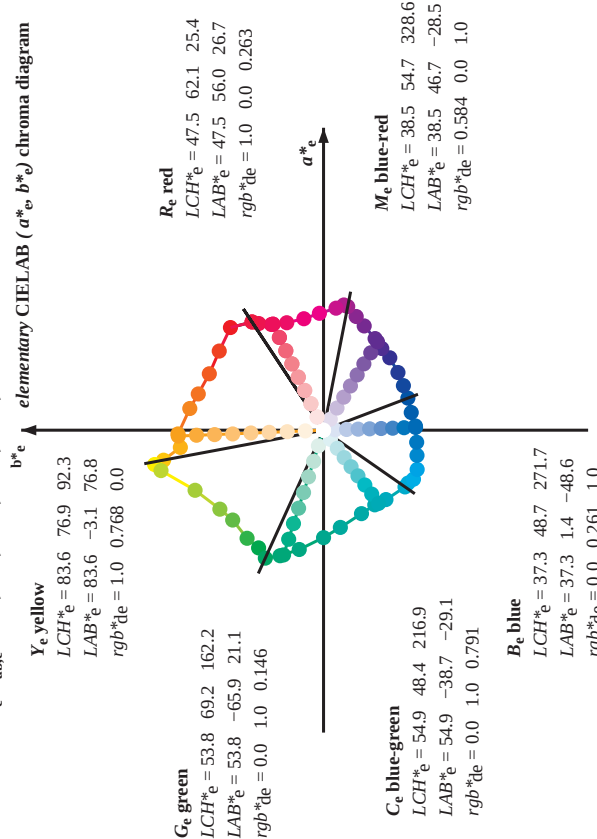
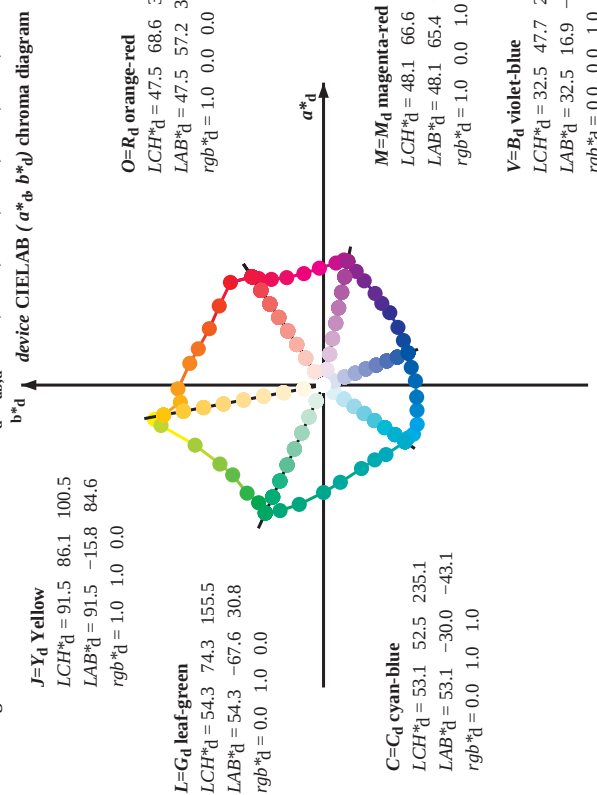
TUB-test chart PE99; hue code: $H^*_e=R00Y_e$

Test chart according to DIN 33872, 3D=0, de=1, cmyk

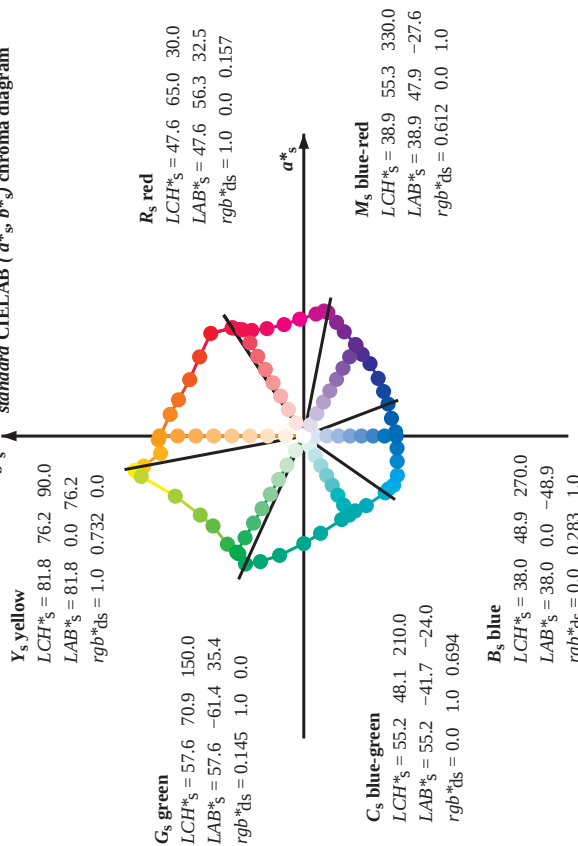
input: $rgb/cmyk \rightarrow rgb_e$

output: transfer to $cmyk_e$

Data of Maximum color M in colorimetric system Laser printer output; separation cmyk6*, D65 for input or output; Six hue angles of the 60 degree standard colours RYGBM; $h_{ab,ds} = 30.0, 90.0, 150.0, 210.0, 270.0, 330.0$;
Six hue angles of the device colours RYGBM; $h_{ab,d} = 33.5, 100.6, 155.5, 235.2, 290.8, 348.9$; Six hue angles of the elementary colours RYGBM; $h_{ab,e} = 25.5, 92.3, 162.2, 217.0, 271.7, 328.6$



standard CIELAB (a^*_s, b^*_s) chroma diagram



Notes to the CIELAB chroma diagrams (a^*_d, b^*_d), (a^*_s, b^*_s), (a^*_e, b^*_e)

- For the rgb^*_e -input values the CIELAB data LCH^*_e and LAB^*_e have been calculated.
- For the calculation of the standard hue angle $h_{ab,s}$ use for any device values rgb^*_e the equation:

$$h_{ab,s} = \arctan \left[\frac{r^*_d \cos(30) + g^*_d \sin(150)}{1 / r^*_d \sin(30) + b^*_d \sin(270)} \right] \quad (1)$$
- For the 48 or 360 equally spaced standard hue angles $h_{ab,s}$ of the colours of maximum chroma use the seven hue angles of the 60 degree colours s : $h_{ab,s} = 30.0, 90.0, 150.0, 210.0, 270.0, 330.0, 390.0$ ($i=0,6$) and the equations for a 48 and 360 step hue circle:

$$h_{48ab,sij} = h_{ab,si} + j [h_{ab,si+1} - h_{ab,si}] / 8 \quad (i = 0, 1, \dots, 5; j = 0, 1, \dots, 7) \quad (2)$$

$$h_{360ab,sij} = h_{ab,si} + j [h_{ab,si+1} - h_{ab,si}] / 60 \quad (i = 0, 1, \dots, 5; j = 0, 1, \dots, 59) \quad (3)$$
- For the 48 or 360 elementary hue angles $h_{ab,e}$ of the colours of maximum chroma use the seven hue angles of the elementary colours e : $h_{ab,e} = 25.5, 92.3, 162.2, 217.0, 271.7, 328.6, 385.5$ ($i=0,6$) and the equations for a 48 and 360 step elementary hue circle:

$$h_{48ab,eij} = h_{ab,ei} + j [h_{ab,ei+1} - h_{ab,ei}] / 8 \quad (i = 0, 1, \dots, 5; j = 0, 1, \dots, 7) \quad (4)$$

$$h_{360ab,eij} = h_{ab,ei} + j [h_{ab,ei+1} - h_{ab,ei}] / 60 \quad (i = 0, 1, \dots, 5; j = 0, 1, \dots, 59) \quad (5)$$
- For any elementary hue angle $h_{ab,e}$ there is a well defined device hue angle $h_{ab,d}$ see the following tables, columns 1 to 5 or 1 to 4.
- The values rgb^*_e produce the output of the device-independent elementary hues

LAB*_{la0}, YN=0%, XY Znw=3.9, 4.1, 84.7, 89.6, 93.9, LAB*nw=23.9, 0.0, 0.0, 95.8, 0.0, 0.0

TUB-test chart PE99; hue code: H*_e=R00Y_e
48 step hue circles; $rgb-LabCh$ *tables

input: $rgb/cmyk -> rgb_e$
output: transfer to $cmyk_e$

Output: Laser printer output; separation cmyk6*, D65, page 7/38

<http://130.149.60.45/~farbmatrik/PE99/PE99L0NP.PDF> /PS; transfer output N: no 3D-linearization (OL) in file (F) or PS-startup (S), page 9/33

5.8, 0.0, 0.0	input: <i>rgb/cmyk</i> → <i>rgbe</i> output: transfer to <i>cmyke</i>
---------------	--

LAB*a0, YN=0%, XYZnw=3.9, 4.1, 4.1, 84.7, 89.6, 93.9, 1.1
 E990-71
 TUB-test chart PE99; hue code: H*_e=R00Y_e
 48 step hue circles; *rgb-LabCh**tables

[illegible]

http://130.149.60.45/~farbmatrik/PE99/PE99LONP.PDF /.PS; transfer output
N: no 3D-linearization (OL) in file (F) or PS-startup (S), page 15/33

Data of Maximum color M in colorimetric system Laser printer output; separation cmyk6*, D65 for input or output; Six hue angles of the 60 degree standard colours RYGBM; $h_{ab,ds} = 30.0, 90.0, 150.0, 210.0, 270.0, 330.0$;									
Six hue angles of the device colours RYGBM; $h_{ab,d} = 33.5, 100.6, 155.5, 235.2, 290.8, 348.9$; Six hue angles of the elementary colours RYGBM; $h_{ab,e} = 25.5, 92.3, 162.2, 217.0, 271.7, 328.6$									
$h_{ab,d}$	$h_{ab,s}$	$h_{ab,e}$	rgb^*_{ds361M}	$rgb^*_{ds361Mi}$	$LAB^*_{ds361Mi}$	$LAB^*_{ds361Mi}$	$LAB^*_{ds361Mi}$	$LAB^*_{ds361Mi}$	$LAB^*_{ds361Mi}$
272	255	258	0.0	0.25	1.0	36.8	2.2	-48.5	48.6
273	256	258	0.0	0.233	1.0	36.6	3.2	-48.3	48.4
274	257	259	0.0	0.216	1.0	36.4	4.1	-48.0	48.2
276	258	260	0.0	0.2	1.0	36.1	5.1	-47.8	48.1
277	259	261	0.0	0.183	1.0	35.9	6.1	-47.5	47.9
278	260	262	0.0	0.166	1.0	35.6	7.0	-47.2	47.7
279	261	263	0.0	0.15	1.0	35.4	8.0	-46.9	47.5
280	262	264	0.0	0.133	1.0	35.2	8.9	-46.5	47.4
282	263	265	0.0	0.116	1.0	34.9	9.9	-46.3	47.3
283	264	266	0.0	0.083	1.0	34.2	11.9	-45.9	47.4
284	265	267	0.0	0.066	1.0	33.9	12.9	-45.7	47.5
285	266	268	0.0	0.049	1.0	33.5	13.9	-45.4	47.5
287	267	269	0.0	0.033	1.0	33.2	14.9	-45.2	47.6
288	268	269	0.0	0.016	1.0	32.9	15.9	-44.9	47.6
289	269	270	0.0	0.0	1.0	32.5	16.9	-44.6	47.7
290	270	271	0.0	0.0	1.0	32.1	17.8	-44.3	47.8
291	271	272	0.0016	0.0	1.0	32.4	17.8	-44.3	47.8
293	272	273	0.033	0.0	1.0	32.3	18.7	-44.0	47.9
294	273	274	0.05	0.0	1.0	32.1	19.6	-43.7	47.9
295	274	275	0.066	0.0	1.0	32.0	20.5	-43.4	48.0
296	275	276	0.083	0.0	1.0	31.9	21.4	-43.1	48.1
297	276	277	0.1	0.0	1.0	31.8	22.3	-42.7	48.2
298	277	278	0.116	0.0	1.0	31.6	23.1	-42.4	48.3
299	278	279	0.133	0.0	1.0	31.5	24.1	-42.0	48.4
300	279	280	0.15	0.0	1.0	31.4	25.0	-41.7	48.6
302	280	281	0.166	0.0	1.0	31.3	25.9	-41.4	48.8
303	281	282	0.183	0.0	1.0	31.3	26.8	-41.0	49.0
304	282	283	0.2	0.0	1.0	31.2	27.8	-40.6	49.2
305	283	284	0.216	0.0	1.0	31.1	28.7	-40.2	49.4
306	284	285	0.233	0.0	1.0	31.1	29.6	-39.8	49.6
307	285	286	0.25	0.0	1.0	31.0	30.5	-39.3	49.8
309	286	287	0.266	0.0	1.0	31.4	31.6	-38.8	50.1
310	287	288	0.283	0.0	1.0	31.8	32.6	-38.3	50.3
311	288	289	0.3	0.0	1.0	32.3	33.6	-37.8	50.6
312	289	289	0.316	0.0	1.0	32.7	34.7	-37.2	50.9
314	290	290	0.333	0.0	1.0	33.1	35.7	-36.6	51.2
315	291	291	0.35	0.0	1.0	33.6	36.7	-36.0	51.4
316	292	292	0.366	0.0	1.0	34.0	37.7	-35.3	51.7
317	293	293	0.383	0.0	1.0	34.4	38.5	-34.7	51.9
318	294	294	0.4	0.0	1.0	34.8	39.2	-34.2	52.1
319	295	295	0.416	0.0	1.0	35.2	39.9	-33.7	52.2
320	296	296	0.433	0.0	1.0	35.6	40.5	-33.1	52.4
321	297	297	0.45	0.0	1.0	36.0	41.2	-32.6	52.5
322	298	298	0.466	0.0	1.0	36.4	41.8	-32.0	52.7
323	299	299	0.483	0.0	1.0	36.8	42.5	-31.4	52.9
324	300	300	0.5	0.0	1.0	37.2	43.1	-30.8	53.0

Input: Laser printer output; separation cmyk6*, D65, page 15/83
input: $rgb/cmyk -> rgb_e$
output: transfer to $cmyk_e$

http://130.149.60.45/~farbmatrik/PE99/PE99L0NP.PDF /PS; transfer output
N: no 3D-linearization (OL) in file (F) or PS-startup (S), page 17/33

Data of Maximum color M in colorimetric system Laser printer output; D65 for input or output; Six hue angles of the 60 degree standard colours RYGCBM; $h_{ab,ds} = 30.0, 90.0, 150.0, 210.0, 270.0, 330.0$.

E990-71 LAB*_{a0}, YN=0%, XY_{Znw}=3.9, 4.1, 4.1, 84.7, 89.6, 93.9, LAB*_{nw}=23.9, 0.0, 0.0, 95.8, 0.0, 0.0
 TTUB-test chart PE99; hue code: H*_e=R00Y_e
 48 step hue circles: *rgb-cmyk* -> *rgb*
 input: *rgb/cmyk* -> *rgb*
 output: transfer to *cmyk*

[illegible]



TUB material: code=rha4ta
cmyn6 (CMYK)

input: *rgb/cmyk* → *rgb*_e
output: transfer to *cmyk*_e

TTUB-test chart PE99; hue code: $H_e^* = R00Y_e$
colors and differences, ΔE^* ,

PDF990-7N Page 18/33-E

-0131730-E0

 $\in$ [illegible]

see similar files: <http://130.149.60.45/~farbmetrik/PE99/PE99.HTM>
technical information: <http://www.ps.bam.de> or <http://130.149.60.45/~farbmetrik>

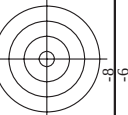
http://130.149.60.45/~farbmatrik/PE99/PE99LONP.PDF /PS; transfer output
N: no 3D-linearization (OL) in file (F) or PS-startup (S), page 22/33

PE990-7N, Page 22/33-F

TUB-test chart PE99; hue code: $H^*_e=R00Y_e$

input: *rgb/cmyk* $\rightarrow$ *rgbe*
output: transfer to *cmyk_e*

[illegible]



TUB material: code=rha4ta
cmyn6 (CMYK)

TTUB-test chart PE99; hue code: $H_e^* = R00Y_e$
colors and differences, ΔE^* ,

Mean color difference of this page:

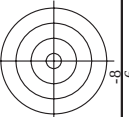
	HIC-Fe										rgb-Fe										tcl-Fe										h ₂ -Fe										rgb+Fe										LabCh+Fe										LabCh+Fe										DF+Fe										rgb+Fe										h ₂ -Fe										LabCh+Fe									
n	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323																													
R00Y_037_037e	0.375	0.0	0.375	0.375	0.187	390	0.375	0.0	0.098	32.7	21.0	10.0	23.2	25.4	0.375	0.0	0.375	0.0	0.0	31.0	26.1	19.6	32.8	37.1	11.2	375	1.0	0.0	0.263	47.5	56.0	62.1	25.4																																																																													
R18Y_037_037e	0.375	0.0	0.125	0.375	0.375	0.187	371	0.375	0.0	0.375	32.8	22.9	17.0	22.9	0.375	0.0	0.375	0.0	0.125	33.0	25.3	19.8	32.8	35.1	11.2	375	1.0	0.0	0.263	47.5	56.0	62.1	25.4																																																																													
B65R_037_037e	0.375	0.0	0.125	0.375	0.375	0.187	349	0.353	0.0	0.375	32.5	23.6	-5.6	24.2	0.375	0.0	0.375	0.0	0.125	33.0	25.3	19.8	32.8	35.1	11.2	375	1.0	0.0	0.263	47.5	56.0	62.1	25.4																																																																													
B50R_037_037e	0.375	0.0	0.125	0.375	0.375	0.187	330	0.353	0.0	0.375	32.5	23.6	-5.6	24.2	0.375	0.0	0.375	0.0	0.125	33.0	25.3	19.8	32.8	35.1	11.2	375	1.0	0.0	0.263	47.5	56.0	62.1	25.4																																																																													
B38R_050_050e	0.375	0.0	0.5	0.5	0.5	316	0.173	0.0	0.625	28.3	18.6	-24.0	25.7	0.375	0.0	0.375	0.0	0.625	32.2	37.2	-24.4	44.5	36.7	19.9	289	0.347	0.0	1.0	38.5	46.7	-28.5	54.7	328.6																																																																													
B38R_062_062e	0.375	0.0	0.625	0.625	0.312	307	0.147	0.0	0.625	28.3	18.6	-24.0	25.7	0.375	0.0	0.375	0.0	0.625	32.2	37.2	-24.4	44.5	36.7	19.9	289	0.347	0.0	1.0	38.5	46.7	-28.5	54.7	328.6																																																																													
B25R_075_075e	0.375	0.0	0.75	0.75	0.375	300	0.104	0.0	0.75	31.0	18.0	-38.0	36.4	0.375	0.0	0.375	0.0	0.75	34.5	38.8	-31.1	51.0	31.5	21.6	273	0.138	0.0	1.0	32.0	20.6	-43.4	48.5	300.1																																																																													
B25R_087_087e	0.375	0.0	0.875	0.875	0.437	295	0.06	0.0	0.875	31.0	18.0	-38.0	36.4	0.375	0.0	0.375	0.0	0.875	34.5	38.8	-31.1	51.0	31.5	21.6	273	0.138	0.0	1.0	32.0	20.6	-43.4	48.5	300.1																																																																													
B18R_100_100e	0.375	0.0	1.0	1.0	0.5	292	0.026	0.0	1.0	32.3	18.3	-44.1	47.8	0.292	0.0	0.375	0.0	1.0	34.2	38.2	-35.0	51.8	31.7	21.9	271	0.026	0.0	1.0	32.3	18.3	-44.1	47.8	292.5																																																																													
R31Y_037_037e	0.375	0.125	0.0	0.375	0.375	0.187	49	0.375	0.066	0.0	35.3	18.4	5.5	26.8	0.375	0.125	0.0	0.375	0.125	36.6	13.7	16.1	21.2	49.5	9.4	39	1.0	0.0	0.177	0.0	54.6	49.1	52.0	47.8	292.5																																																																											
R00Y_037_025e	0.375	0.125	0.0	0.375	0.375	0.187	49	0.375	0.066	0.0	35.3	18.4	5.5	26.8	0.375	0.125	0.0	0.375	0.125	36.6	13.7	16.1	21.2	49.5	9.4	39	1.0	0.0	0.177	0.0	54.6	49.1	52.0	47.8	292.5																																																																											
R00Y_037_025e	0.375	0.125	0.0	0.375	0.375	0.187	49	0.375	0.066	0.0	35.3	18.4	5.5	26.8	0.375	0.125	0.0	0.375	0.125	36.6	13.7	16.1	21.2	49.5	9.4	39	1.0	0.0	0.177	0.0	54.6	49.1	52.0	47.8	292.5																																																																											
R00Y_037_025e	0.375	0.125	0.0	0.375	0.375	0.187	49	0.375	0.066	0.0	35.3	18.4	5.5	26.8	0.375	0.125	0.0	0.375	0.125	36.6	13.7	16.1	21.2	49.5	9.4	39	1.0	0.0	0.177	0.0	54.6	49.1	52.0	47.8	292.5																																																																											
B50R_037_025e	0.375	0.125	0.0	0.375	0.375	0.187	49	0.375	0.066	0.0	35.3	18.4	5.5	26.8	0.375	0.125	0.0	0.375	0.125	36.6	13.7	16.1	21.2	49.5	9.4	39	1.0	0.0	0.177	0.0	54.6	49.1	52.0	47.8	292.5																																																																											
B50R_037_025e	0.375	0.125	0.0	0.375	0.375	0.187	49	0.375	0.066	0.0	35.3	18.4	5.5	26.8	0.375	0.125	0.0	0.375	0.125	36.6	13.7	16.1	21.2	49.5	9.4	39	1.0	0.0	0.177	0.0	54.6	49.1	52.0	47.8	292.5																																																																											
B34R_050_037e	0.375	0.125	0.5	0.5	0.375	311	0.232	0.124	0.375	36.5	11.6	-7.1	13.6	328.6	0.375	0.125	0.375	38.9	24.5	-10.9	31.0	326.8	13.2	286	0.285	0.0	1.0	38.5	46.7	-28.5	54.7	328.6																																																																														
B34R_050_037e	0.375	0.125	0.5	0.5	0.375	311	0.232	0.124	0.375	36.5	11.6	-7.1	13.6	328.6	0.375	0.125	0.375	38.9	24.5	-10.9	31.0	326.8	13.2	286	0.285	0.0	1.0	38.5	46.7	-28.5	54.7	328.6																																																																														
B25R_062_050e	0.375	0.125	0.625	0.625	0.5	303	0.194	0.125	0.625	36.6	12.2	-29.0	24.2	300.1	0.375	0.125	0.625	38.1	26.8	-29.2	33.9	312.3	14.7	277	0.138	0.0	1.0	31.5	24.4	-41.9	48.5	300.1																																																																														
B19R_075_062e	0.375	0.125	0.75	0.75	0.625	293	0.15	0.125	0.75	38.1	11.9	-27.4	29.9	293.5	0.375	0.125	0.75	39.9	26.8	-29.2	33.9	312.3	14.7	277	0.138	0.0	1.0	31.5	24.4	-41.9	48.5	300.1																																																																														
B19R_075_062e	0.375	0.125	0.75	0.75	0.625	293	0.15	0.125	0.75	38.1	11.9	-27.4	29.9	293.5	0.375	0.125	0.75	39.9	26.8	-29.2	33.9	312.3	14.7	277	0.138	0.0	1.0	31.5	24.4	-41.9	48.5	300.1																																																																														
B15R_087_075e	0.375	0.125	0.875	0.875	0.75	289	0.125	0.135	0.875	39.6	12.0	-39.8	35.7	286.9	0.375	0.125	0.875	36.6	33.1	-35.8	48.7	312.4	21.3	269	0.0	0.014	1.0	32.8	16.1	-44.8	47.6	289.7																																																																														
B15R_087_075e	0.375	0.125	0.875	0.875	0.75	289	0.125	0.135	0.875	39.6	12.0	-39.8	35.7	286.9	0.375	0.125	0.875	36.6	33.1	-35.8	48.7	312.4	21.3	269	0.0	0.014	1.0	32.8	16.1	-44.8	47.6	289.7																																																																														
B13R_100_087e	0.375	0.125	1.0	1.0	0.875	286	0.10	0.875	1.0	41.3	12.0	-39.8	35.7	286.9	0.375	0.125	1.0	36.6	31.2	-36.3	36.3	89.4	14.4	57	0.0	0.052	1.0	33.6	13.8	-46.5	47.6	286.9																																																																														
B13R_100_087e	0.375	0.125	1.0	1.0	0.875	286	0.10	0.875	1.0	41.3	12.0	-39.8	35.7	286.9	0.375	0.125	1.0	36.6	31.2	-36.3	36.3	89.4	14.4	57	0.0	0.052	1.0	33.6	13.8	-46.5	47.6	286.9																																																																														
R68Y_037_037e	0.375	0.25	0.0	0.375	0.375	0.187	71	0.375	0.175	0.0	40.7	8.3	24.3	25.7	0.375	0.25	0.0	41.9	30.3	36.3	36.3	89.4	14.4	57	0.0	0.052	1.0	33.6	13.8	-46.5	47.6	286.9																																																																														
R68Y_037_037e	0.375	0.25	0.0	0.375	0.375	0.187	71	0.375	0.175	0.0	40.7	8.3	24.3	25.7	0.375	0.25	0.0	41.9	30.3	36.3	36.3	89.4	14.4	57	0.0	0.052	1.0	33.6	13.8	-46.5	47.6	286.9																																																																														
R50Y_037_025e	0.375	0.25	0.125	0.375	0.375	0.187	60	0.375	0.204	0.124	42.3	8.8	14.6	17.0	58.8	0.375	0.25	0.125	46.0	19.9	22.4	22.4	89.4	14.4	57	0.0	0.052	1.0	33.6	13.8	-46.5	47.6	286.9																																																																													
R50Y_037_025e	0.375	0.25	0.125	0.375	0.375	0.187	60	0.375	0.204	0.124	42.3	8.8	14.6	17.0	58.8	0.375	0.25	0.125	46.0	19.9	22.4	22.4	89.4	14.4	57	0.0	0.052	1.0	33.6	13.8	-46.5	47.6	286.9																																																																													
R00Y_037_012e	0.375	0.25	0.375	0.375	0.125	332	0.330	0.249	0.375	44.8	7.0	3.3	7.7	25.6	0.375	0.25	0.375	44.6	12.6	-8.2	10.3	37.2	3.2	305	0.584	0.0	1.0	38.5	46.7	-28.5	54.7	328.6																																																																														
R00Y_037_012e	0.375	0.25	0.375	0.375	0.125	332	0.330	0.249	0.375	44.8	7.0	3.3	7.7	25.6	0.375	0.25	0.375	44.6	12.6	-8.2	10.3	37.2	3.2	305	0.584	0.0	1.0	38.5	46.7	-28.5	54.7	328.6																																																																														
B25R_050_025e	0.375	0.25	0.5	0.5	0.25	333	0.329	0.249	0.375	44.8	7.0	3.3	7.7	25.6	0.375	0.25	0.375	44.6	12.6	-8.2	10.3	37.2	3.2	305	0.584	0.0	1.0	38.5	46.7	-28.5	54.7	328.6																																																																														
B25R_050_025e	0.375	0.25	0.5	0.5	0.25	333	0.329	0.249	0.375	44.8	7.0	3.3	7.7	25.6	0.375	0.25	0.375	44.6	12.6	-8.2	10.3	37.2	3.2	305	0.584	0.0	1.0	38.5	46.7	-28.5	54.7	328.6																																																																														
B19R_062_037e	0.375	0.25	0.75	0.75	0.5	284	0.25	0.288	0.75	46.9	6.1	-22.9	23.7	283.1	0.375	0.25	0.75	45.3	17.2	-29.4	34.1	300.3	12.9	266	0.0	0.017	1.0	34.1	12.2	-46.8	47.6	289.7																																																																														
B19R_062_037e	0.375	0.25	0.75	0.75	0.5	284	0.25	0.288	0.75	46.9	6.1	-22.9	23.7	283.1	0.375	0.25	0.75	45.3	17.2	-29.4	34.1	300.3	12.9	266	0.0	0.017	1.0	34.1	12.2	-46.8	47.6	289.7																																																																														
B19R_075_062e	0.375	0.25	0.875	0.875	0.625	279	0.25	0.322	0.875	48.7	6.2	-28.9	29.5	282.3	0.375	0.25	0.875	41.4	23.6	-38.0	44.7	303.8	20.6	263	0.0	0.017	1.0	34.1	12.2	-46.8	47.6	289.7																																																																														
B19R_075_062e	0.375	0.25	0.875	0.875	0.625	279	0.25	0.322	0.875	48.7	6.2	-28.9	29.5	282.3	0.375	0.25	0.875	41.4	23.6	-38.0	44.7	303.8	20.6	263	0.0	0.017	1.0	34.1	12.2	-46.8	47.6	289.7																																																																														
B07R_100_075e	0.375	0.25	1.0	1.0	0.75	263	0.25	0.356	1.0	5																																																																																																				

see similar files: <http://130.149.60.45/~farbmatrik/PE99/PE99.HTM>
technical information: <http://www.ps.bam.de> or <http://130.149.60.45/~farbmatrik>

TUB-test chart PE99; hue code: $H^*_e=R00Y_e$
colors and differences, ΔE^* ,

input: $rgb/cmyk \rightarrow rgbe$
output: transfer to $cmyk_e$

[illegible]



TUB material: code=rha4ta

see similar files: <http://130.149.60.45/~farbmatrik/PE99/PE99.HTM>
technical information: <http://www.ps.bam.de> or <http://130.149.60.45/~farbmatrik>

TUB-test chart PE99; hue code: $H_e^* = R00Y_e$
colors and differences, ΔE^* ,

n	HIC ^{Fe}	rgb^{Fe}	lct^{Fe}	h_{α}^{Fe}	rgb^{Fe}	$LabCh^{Fe}$	$LabCh^{Fe}$	rgb^{Fe}	rgb^{Fe}	DE^{Fe}	h_{α}^{Fe}	rgb^{Fe}	$LabCh^{Fe}$	$LabCh^{Fe}$							
567	R00Y_087_087e	0.875	0.0	0.875	0.875	0.437	390	25.4	16.5	31.6	8.6	375	1.0	0.0	0.263	47.5	56.0	62.1	62.1	25.4	
568	R36Y_087_087e	0.875	0.0	0.875	0.875	0.437	382	54.3	50.3	23.3	52.5	51.3	43.6	51.0	0.0	0.408	47.5	57.5	17.1	60.4	
569	R23Y_087_087e	0.875	0.0	0.875	0.875	0.437	374	52.4	7.6	0.875	0.0	0.125	43.2	51.0	0.0	0.536	48.7	59.9	8.0	60.4	
570	R00Y_087_087e	0.875	0.0	0.875	0.875	0.437	365	55.5	-2.2	55.6	357.6	0.0	0.375	43.3	0.0	0.0	0.695	48.7	63.4	-2.6	63.5
571	B70R_087_087e	0.875	0.0	0.875	0.875	0.437	355	57.2	57.8	352.3	0.875	0.0	0.5	43.4	55.6	1.4	0.0	0.818	49.4	65.4	
572	B63R_087_087e	0.875	0.0	0.875	0.875	0.437	346	52.5	-15.2	54.6	328.6	0.0	0.625	43.8	59.4	-6.7	59.8	353.5	11.0	32.3	
573	B56R_087_087e	0.875	0.0	0.875	0.875	0.437	338	46.4	-20.9	50.8	336.1	0.0	0.875	45.4	60.7	-12.1	62.1	344.0	17.5	31.3	
574	B50R_087_087e	0.875	0.0	0.875	0.875	0.437	330	40.9	-24.9	47.9	326.6	0.0	0.875	45.5	59.0	-16.8	61.1	348.1	17.5	31.3	
575	B44R_100_100e	0.875	0.0	1.0	0.875	0.437	323	52.6	32.1	52.6	321.9	0.0	0.875	45.6	60.1	-17.3	62.6	343.9	15.8	29.7	
576	R13Y_087_087e	0.875	0.125	0.875	0.875	0.437	38	49.8	34.1	60.4	34.3	0.0	0.875	45.7	50.4	46.7	68.7	42.8	13.4	30	
577	R00Y_087_075e	0.875	0.125	0.875	0.875	0.437	38	49.8	34.1	60.4	34.3	0.0	0.875	45.7	50.4	46.7	68.7	42.8	13.4	30	
578	R35Y_087_075e	0.875	0.125	0.875	0.875	0.437	381	45.0	15.4	0.875	0.125	0.875	45.8	59.4	0.0	0.0	0.263	47.5	56.0	62.1	25.4
579	R18Y_087_075e	0.875	0.125	0.875	0.875	0.437	371	45.0	15.4	0.875	0.125	0.875	45.8	59.4	0.0	0.0	0.263	47.5	56.0	62.1	25.4
580	R00Y_087_075e	0.875	0.125	0.875	0.875	0.437	360	49.1	4.3	0.875	0.125	0.875	45.8	59.4	0.0	0.0	0.263	47.5	56.0	62.1	25.4
581	B65R_087_075e	0.875	0.125	0.875	0.875	0.437	349	49.1	4.3	0.875	0.125	0.875	45.8	59.4	0.0	0.0	0.263	47.5	56.0	62.1	25.4
582	B57R_087_075e	0.875	0.125	0.875	0.875	0.437	340	49.1	4.3	0.875	0.125	0.875	45.8	59.4	0.0	0.0	0.263	47.5	56.0	62.1	25.4
583	B50R_087_075e	0.875	0.125	0.875	0.875	0.437	330	49.1	4.3	0.875	0.125	0.875	45.8	59.4	0.0	0.0	0.263	47.5	56.0	62.1	25.4
584	B43Y_087_087e	0.875	0.125	0.875	0.875	0.437	322	35.7	25.8	43.9	321.0	0.0	0.875	45.9	60.1	-17.3	62.6	343.9	15.8	29.7	
585	R36Y_087_087e	0.875	0.125	0.875	0.875	0.437	313	43.9	63.5	32.1	52.6	321.9	0.0	0.875	45.9	60.1	-17.3	62.6	343.9	15.8	29.7
586	R13Y_087_087e	0.875	0.125	0.875	0.875	0.437	306	49.8	34.1	60.4	34.3	0.0	0.875	45.9	60.1	-17.3	62.6	343.9	15.8	29.7	
587	R00Y_087_062e	0.875	0.25	0.875	0.625	0.562	390	25.4	16.5	31.6	8.6	375	1.0	0.0	0.263	47.5	56.0	62.1	62.1	25.4	
588	R31Y_087_062e	0.875	0.25	0.875	0.625	0.562	379	36.1	8.5	37.4	13.2	38.6	38.2	15.0	41.1	0.0	0.454	47.6	58.3	13.7	59.9
589	R11Y_087_062e	0.875	0.25	0.875	0.625	0.562	369	36.1	8.5	37.4	13.2	38.6	38.2	15.0	41.1	0.0	0.454	47.6	58.3	13.7	59.9
590	B69R_087_062e	0.875	0.25	0.875	0.625	0.562	353	34.6	-13.9	41.8	350.4	0.0	0.875	46.2	60.1	0.0	0.659	48.3	62.6	-0.1	62.6
591	B59R_087_062e	0.875	0.25	0.875	0.625	0.562	341	34.6	-13.9	41.8	350.4	0.0	0.875	46.2	60.1	0.0	0.659	48.3	62.6	-0.1	62.6
592	B42R_100_075e	0.875	0.25	0.875	0.625	0.562	330	34.6	-13.9	41.8	350.4	0.0	0.875	46.2	60.1	0.0	0.659	48.3	62.6	-0.1	62.6
593	B42R_100_075e	0.875	0.25	1.0	0.75	0.625	321	50.4	30.0	-25.1	39.2	32.0	0.875	46.2	60.1	0.0	0.899	49.2	66.0	-11.1	66.9
594	R31Y_087_075e	0.875	0.375	0.875	0.437	0.562	313	54.9	59.5	49.5	49.5	0.0	0.875	46.2	60.1	0.0	0.899	49.2	66.0	-11.1	66.9
595	R41Y_087_075e	0.875	0.375	0.875	0.437	0.562	301	54.9	59.5	49.5	49.5	0.0	0.875	46.2	60.1	0.0	0.899	49.2	66.0	-11.1	66.9
596	R18Y_087_062e	0.875	0.375	0.875	0.625	0.562	290	36.8	30.0	53.7	46.6	0.875	0.375	0.125	61.5	24.8	49.6	55.5	14.1	33	
597	R00Y_087_050e	0.875	0.375	0.875	0.625	0.562	280	36.8	30.0	53.7	46.6	0.875	0.375	0.125	61.5	24.8	49.6	55.5	14.1	33	
598	R26Y_087_050e	0.875	0.375	0.875	0.625	0.562	268	36.8	30.0	53.7	46.6	0.875	0.375	0.125	61.5	24.8	49.6	55.5	14.1	33	
599	R00Y_087_050e	0.875	0.375	0.875	0.625	0.562	250	36.8	30.0	53.7	46.6	0.875	0.375	0.125	61.5	24.8	49.6	55.5	14.1	33	
600	B61R_087_050e	0.875	0.375	0.875	0.625	0.562	238	36.8	30.0	53.7	46.6	0.875	0.375	0.125	61.5	24.8	49.6	55.5	14.1	33	
601	B50R_087_050e	0.875	0.375	0.875	0.625	0.562	221	36.8	30.0	53.7	46.6	0.875	0.375	0.125	61.5	24.8	49.6	55.5	14.1	33	
602	B40R_100_062e	0.875	0.375	1.0	1.0	0.625	209	36.8	30.0	53.7	46.6	0.875	0.375	0.125	61.5	24.8	49.6	55.5	14.1	33	
603	R58Y_087_087e	0.875	0.5	0.875	0.875	0.437	65	60.4	34.3	0.0	0.875	0.5	0.125	68.9	14.1	57.3	59.0	75.1	19.5	48	
604	R30Y_087_075e	0.875	0.5	0.875	0.875	0.437	65	60.4	34.3	0.0	0.875	0.5	0.125	68.9	14.1	57.3	59.0	75.1	19.5	48	
605	R30Y_087_062e	0.875	0.5	0.875	0.625	0.562	53	60.4	34.3	0.0	0.875	0.5	0.125	68.9	14.1	57.3	59.0	75.1	19.5	48	
606	R23Y_087_050e	0.875	0.5	0.875	0.625	0.562	40	60.4	34.3	0.0	0.875	0.5	0.125	68.9	14.1	57.3	59.0	75.1	19.5	48	
607	R00Y_087_037e	0.875	0.5	0.875	0.375	0.687	390	25.4	16.5	31.6	8.6	375	1.0	0.0	0.263	47.5	56.0	62.1	62.1	25.4	
608	R18Y_087_037e	0.875	0.5	0.875	0.375	0.687	371	25.4	16.5	31.6	8.6	375	1.0	0.0	0.263	47.5	56.0	62.1	62.1	25.4	
609	B65R_087_037e	0.875	0.5	0.875	0.375	0.687	349	25.4	16.5	31.6	8.6	375	1.0	0.0	0.263	47.5	56.0	62.1	62.1	25.4	
610	R30R_100_050e	0.875	0.5	1.0	0.5	0.75	316	64.6	18.2	-58.4	60.6	74.1	0.875	0.5	0.1	0.685	30.3	33.5	11.3	289	
611	B38R_100_050e	0.875	0.5	1.0	0.5	0.75	316	64.6	18.2	-58.4	60.6	74.1	0.875	0.5	0.1	0.685	30.3	33.5	11.3	289	
612	R73Y_087_087e	0.875	0.625	1.0	0.875	0.875	437	74.1	0.875	0.447	0.0	65.0	16.2	58.4	60.6	74.1	0.875	0.625	0.125	75.1	
613	R68Y_087_075e	0.875	0.625	1.0	0.875	0.625	437	74.1	0.875	0.447	0.0	65.0	16.2	58.4	60.6	74.1	0.875	0.625	0.125	75.1	
614	R61Y_087_062e	0.875	0.625	1.0	0.875	0.625	437	74.1	0.875	0.447	0.0	65.0	16.2	58.4	60.6	74.1	0.875	0.625	0.125	75.1	
615	R30Y_087_050e	0.875	0.625	1.0	0.875	0.625	437	74.1	0.875	0.447	0.0	65.0	16.2	58.4	60.6	74.1	0.875	0.625	0.125	75.1	
616	R11Y_087_050e	0.875	0.625	1.0	0.875	0.625	437	74.1	0.875	0.447	0.0	65.0	16.2	58.4	60.6	74.1	0.875	0.625	0.125	75.1	
617	R11Y_087_037e	0.875	0.625	1.0	0.875	0.625	437	74.1	0.875	0.447	0.0	65.0	16.2	58.4	60.6	74.1	0.875	0.625	0.125	75.1	
618	R00Y_087_025e	0.875	0.625	0.75	0.875	0.625	437	74.1	0.875	0.447	0.0	65.0	16.2	58.4	60.6	74.1	0.875	0.625	0.125	75.1	
619	B34R_100_037e	0.875	0.625	1.0	0.875	0.625	437	74.1	0.875	0.447	0.0	65.0	16.2	58.4	60.6	74.1	0.875	0.625	0.125	75.1	
620	B34R_100_037e	0.875	0.625	1.0	1.0	0.375	412	74.1	0.875	0.447	0.0	65.0	16.2	58.4	60.6	74.1	0.875	0.625	0.125	75.1	
621	R66Y_087_087e	0.875	0.75	0.875	0.875	0.437	82	72.4	72.9	83.4	0.0	0.875	0.75	0.1	0.655	0.0	1.0	31.9	32.8	50.4	
622	R65Y_087_075e	0.875	0.75	0.875	0.875	0.437	82	72.4	72.9	83.4	0.0	0.875	0.75	0.1	0.655	0.0	1.0	31.9	32.8	50.4	
623	R61Y_087_062e	0.875	0.75	0.875	0.625	0.562	79	71.7	71.7	83.4	0.0	0.875	0.75	0.1	0.655	0.0	1.0	31.9	32.8	50.4	
624	R76Y_087_050e	0.875	0.75	0.875	0.625	0.562	76	71.7	71.7	83.4	0.0	0.875	0.75	0.1	0.655	0.0	1.0	31.9	32.8	50.4	
625	R68Y_087_037e	0.875	0.75	0.875	0.625	0.562	71	71.7	71.7	83.4	0.0	0.875	0.75	0.1	0.655	0.0	1.0	31.9	32.8	50.4	
626	R50Y_087_025e	0.875	0.75	0.875	0.625	0.562	66	7													

n	HC*Fe	rgb_Fe	icr_Fe	hsa_Fa	rgb_Fe	LabCH*Fe	LabCH*Fe	rgb_Fe	DF*Fe	hsa_Fe	LabCH*Fe	rgb_Fe	LabCH*Fe
729	NW_100%	0.875	1.0	1.0	1.0	0.958	0.0	0.0	0.0	360	96.1	1.0	95.8
730	G50B_100.012%	0.875	1.0	1.0	1.0	0.973	0.0	0.0	0.0	360	96.1	1.0	95.8
731	G50B_100.025%	0.875	1.0	1.0	1.0	0.988	0.0	0.0	0.0	360	96.1	1.0	95.8
732	G50B_100.037%	0.875	1.0	1.0	1.0	1.000	0.0	0.0	0.0	360	96.1	1.0	95.8
733	G50B_100.050%	0.875	1.0	1.0	1.0	1.012	0.0	0.0	0.0	360	96.1	1.0	95.8
734	G50B_100.062%	0.875	1.0	1.0	1.0	1.025	0.0	0.0	0.0	360	96.1	1.0	95.8
735	G50B_100.075%	0.875	1.0	1.0	1.0	1.037	0.0	0.0	0.0	360	96.1	1.0	95.8
736	G50B_100.087%	0.875	1.0	1.0	1.0	1.050	0.0	0.0	0.0	360	96.1	1.0	95.8
737	G50B_100.100%	0.875	1.0	1.0	1.0	1.062	0.0	0.0	0.0	360	96.1	1.0	95.8
738	ROY_100.012%	0.875	1.0	1.0	1.0	1.075	0.0	0.0	0.0	360	96.1	1.0	95.8
739	ROY_100.025%	0.875	1.0	1.0	1.0	1.087	0.0	0.0	0.0	360	96.1	1.0	95.8
740	ROY_100.037%	0.875	1.0	1.0	1.0	1.100	0.0	0.0	0.0	360	96.1	1.0	95.8
741	ROY_100.050%	0.875	1.0	1.0	1.0	1.112	0.0	0.0	0.0	360	96.1	1.0	95.8
742	ROY_100.062%	0.875	1.0	1.0	1.0	1.125	0.0	0.0	0.0	360	96.1	1.0	95.8
743	ROY_100.075%	0.875	1.0	1.0	1.0	1.137	0.0	0.0	0.0	360	96.1	1.0	95.8
744	ROY_100.087%	0.875	1.0	1.0	1.0	1.150	0.0	0.0	0.0	360	96.1	1.0	95.8
745	ROY_100.100%	0.875	1.0	1.0	1.0	1.162	0.0	0.0	0.0	360	96.1	1.0	95.8
746	ROY_100.012%	0.875	1.0	1.0	1.0	1.175	0.0	0.0	0.0	360	96.1	1.0	95.8
747	ROY_100.025%	0.875	1.0	1.0	1.0	1.187	0.0	0.0	0.0	360	96.1	1.0	95.8
748	ROY_100.037%	0.875	1.0	1.0	1.0	1.200	0.0	0.0	0.0	360	96.1	1.0	95.8
749	ROY_100.050%	0.875	1.0	1.0	1.0	1.212	0.0	0.0	0.0	360	96.1	1.0	95.8
750	ROY_100.062%	0.875	1.0	1.0	1.0	1.225	0.0	0.0	0.0	360	96.1	1.0	95.8
751	ROY_100.075%	0.875	1.0	1.0	1.0	1.237	0.0	0.0	0.0	360	96.1	1.0	95.8
752	ROY_100.087%	0.875	1.0	1.0	1.0	1.250	0.0	0.0	0.0	360	96.1	1.0	95.8
753	ROY_100.100%	0.875	1.0	1.0	1.0	1.262	0.0	0.0	0.0	360	96.1	1.0	95.8
754	ROY_100.012%	0.875	1.0	1.0	1.0	1.275	0.0	0.0	0.0	360	96.1	1.0	95.8
755	ROY_100.025%	0.875	1.0	1.0	1.0	1.287	0.0	0.0	0.0	360	96.1	1.0	95.8
756	ROY_100.037%	0.875	1.0	1.0	1.0	1.300	0.0	0.0	0.0	360	96.1	1.0	95.8
757	ROY_100.050%	0.875	1.0	1.0	1.0	1.312	0.0	0.0	0.0	360	96.1	1.0	95.8
758	ROY_100.062%	0.875	1.0	1.0	1.0	1.325	0.0	0.0	0.0	360	96.1	1.0	95.8
759	ROY_100.075%	0.875	1.0	1.0	1.0	1.337	0.0	0.0	0.0	360	96.1	1.0	95.8
760	ROY_100.087%	0.875	1.0	1.0	1.0	1.350	0.0	0.0	0.0	360	96.1	1.0	95.8
761	ROY_100.100%	0.875	1.0	1.0	1.0	1.362	0.0	0.0	0.0	360	96.1	1.0	95.8
762	ROY_100.012%	0.875	1.0	1.0	1.0	1.375	0.0	0.0	0.0	360	96.1	1.0	95.8
763	ROY_100.025%	0.875	1.0	1.0	1.0	1.387	0.0	0.0	0.0	360	96.1	1.0	95.8
764	ROY_100.037%	0.875	1.0	1.0	1.0	1.400	0.0	0.0	0.0	360	96.1	1.0	95.8
765	ROY_100.050%	0.875	1.0	1.0	1.0	1.412	0.0	0.0	0.0	360	96.1	1.0	95.8
766	ROY_100.062%	0.875	1.0	1.0	1.0	1.425	0.0	0.0	0.0	360	96.1	1.0	95.8
767	ROY_100.075%	0.875	1.0	1.0	1.0	1.437	0.0	0.0	0.0	360	96.1	1.0	95.8
768	ROY_100.087%	0.875	1.0	1.0	1.0	1.450	0.0	0.0	0.0	360	96.1	1.0	95.8
769	ROY_100.100%	0.875	1.0	1.0	1.0	1.462	0.0	0.0	0.0	360	96.1	1.0	95.8
770	ROY_100.012%	0.875	1.0	1.0	1.0	1.475	0.0	0.0	0.0	360	96.1	1.0	95.8
771	ROY_100.025%	0.875	1.0	1.0	1.0	1.487	0.0	0.0	0.0	360	96.1	1.0	95.8
772	ROY_100.037%	0.875	1.0	1.0	1.0	1.500	0.0	0.0	0.0	360	96.1	1.0	95.8
773	ROY_100.050%	0.875	1.0	1.0	1.0	1.512	0.0	0.0	0.0	360	96.1	1.0	95.8
774	ROY_100.062%	0.875	1.0	1.0	1.0	1.525	0.0	0.0	0.0	360	96.1	1.0	95.8
775	ROY_100.075%	0.875	1.0	1.0	1.0	1.537	0.0	0.0	0.0	360	96.1	1.0	95.8
776	ROY_100.087%	0.875	1.0	1.0	1.0	1.550	0.0	0.0	0.0	360	96.1	1.0	95.8
777	ROY_100.100%	0.875	1.0	1.0	1.0	1.562	0.0	0.0	0.0	360	96.1	1.0	95.8
778	ROY_100.012%	0.875	1.0	1.0	1.0	1.575	0.0	0.0	0.0	360	96.1	1.0	95.8
779	ROY_100.025%	0.875	1.0	1.0	1.0	1.587	0.0	0.0	0.0	360	96.1	1.0	95.8
780	ROY_100.037%	0.875	1.0	1.0	1.0	1.600	0.0	0.0	0.0	360	96.1	1.0	95.8
781	ROY_100.050%	0.875	1.0	1.0	1.0	1.612	0.0	0.0	0.0	360	96.1	1.0	95.8
782	ROY_100.062%	0.875	1.0	1.0	1.0	1.625	0.0	0.0	0.0	360	96.1	1.0	95.8
783	ROY_100.075%	0.875	1.0	1.0	1.0	1.637	0.0	0.0	0.0	360	96.1	1.0	95.8
784	ROY_100.087%	0.875	1.0	1.0	1.0	1.650	0.0	0.0	0.0	360	96.1	1.0	95.8
785	ROY_100.100%	0.875	1.0	1.0	1.0	1.662	0.0	0.0	0.0	360	96.1	1.0	95.8
786	ROY_100.012%	0.875	1.0	1.0	1.0	1.675	0.0	0.0	0.0	360	96.1	1.0	95.8
787	ROY_100.025%	0.875	1.0	1.0	1.0	1.687	0.0	0.0	0.0	360	96.1	1.0	95.8
788	ROY_100.037%	0.875	1.0	1.0	1.0	1.700	0.0	0.0	0.0	360	96.1	1.0	95.8
789	ROY_100.050%	0.875	1.0	1.0	1.0	1.712	0.0	0.0	0.0	360	96.1	1.0	95.8
790	ROY_100.062%	0.875	1.0	1.0	1.0	1.725	0.0	0.0	0.0	360	96.1	1.0	95.8
791	ROY_100.075%	0.875	1.0	1.0	1.0	1.737	0.0	0.0	0.0	360	96.1	1.0	95.8
792	ROY_100.087%	0.875	1.0	1.0	1.0	1.750	0.0	0.0	0.0	360	96.1	1.0	95.8
793	ROY_100.100%	0.875	1.0	1.0	1.0	1.762	0.0	0.0	0.0	360	96.1	1.0	95.8
794	ROY_100.012%	0.875	1.0	1.0	1.0	1.775	0.0	0.0	0.0	360	96.1	1.0	95.8
795	ROY_100.025%	0.875	1.0	1.0	1.0	1.787	0.0	0.0	0.0	360	96.1	1.0	95.8
796	ROY_100.037%	0.875	1.0	1.0	1.0	1.800	0.0	0.0	0.0	360	96.1	1.0	95.8
797	ROY_100.050%	0.875	1.0	1.0	1.0	1.812	0.0	0.0	0.0	360	96.1	1.0	95.8
798	ROY_100.062%	0.875	1.0	1.0	1.0	1.825	0.0	0.0	0.0	360	96.1	1.0	95.8
799	ROY_100.075%	0.875	1.0	1.0	1.0	1.837	0.0	0.0	0.0	360	96.1	1.0	95.8
800	ROY_100.087%	0.875	1.0	1.0	1.0	1.850	0.0	0.0	0.0	360	96.1	1.0	95.8
801	ROY_100.100%	0.875	1.0	1.0	1.0	1.862	0.0	0.0	0.0	360	96.1	1.0	95.8
802	ROY_100.012%	0.875	1.0	1.0	1.0	1.875	0.0	0.0	0.0	360	96.1	1.0	95.8
803	ROY_100.025%	0.875	1.0	1.0	1.0	1.887	0.0	0.0	0.0	360	96.1	1.0	95.8
804	ROY_100.037%	0.875	1.0	1.0	1.0	1.900	0.0	0.0	0.0	360	96.1	1.0	95.8
805	ROY_100.050%	0.875	1.0	1.0	1.0	1.912	0.0	0.0	0.0	360	96.1	1.0	95.8
806	ROY_100.062%	0.875	1.0	1.0	1.0	1.925	0.0	0.0	0.0	360	96.1	1.0	95.8
807	ROY_100.075%	0.875	1.0	1.0	1.0	1.937	0.0	0.0	0.0	360	96.1	1.0	95.8
808	ROY_100.087%	0.875	1.0	1.0	1.0	1.950	0.0	0.0	0.0	360	96.1	1.0	95.8
809	ROY_100.100%	0.875	1.0	1.0	1.0	1.962	0.0	0.0	0.0	360	96.1	1.0	95.8

Mean color difference of this page: $\Delta E^* = 11.3$



TUB material: code=rha4ta
cmyn6 (CMYK)

input: *rgb/cmyk* $\rightarrow$ *rgbe*
output: transfer to *cmyk_e*

TUB-test chart PE99; hue code: $H_e^* = R00Y_e$
colors and differences. ΔE^* ,

[illegible]