

Input and Output: Printer Reflective System FRS06a for relative CIELAB hue $h_{ab,a,rel} = h_{ab}/360 = 10/360 = 0.02$

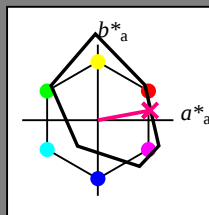
Data for any device (d) or elementary (e) colour:

HIC^*

hue text for the colours of this page:

$H^*_ = B75R_-$

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 69 12 70 10

$HIC^*_{-,Ma}$: B75R_100_100_

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

1.0 0.0 0.5 1.0 1.0

triangle lightness T^*

% Gamut

$u^*_{rel} = 114$

% Regularity

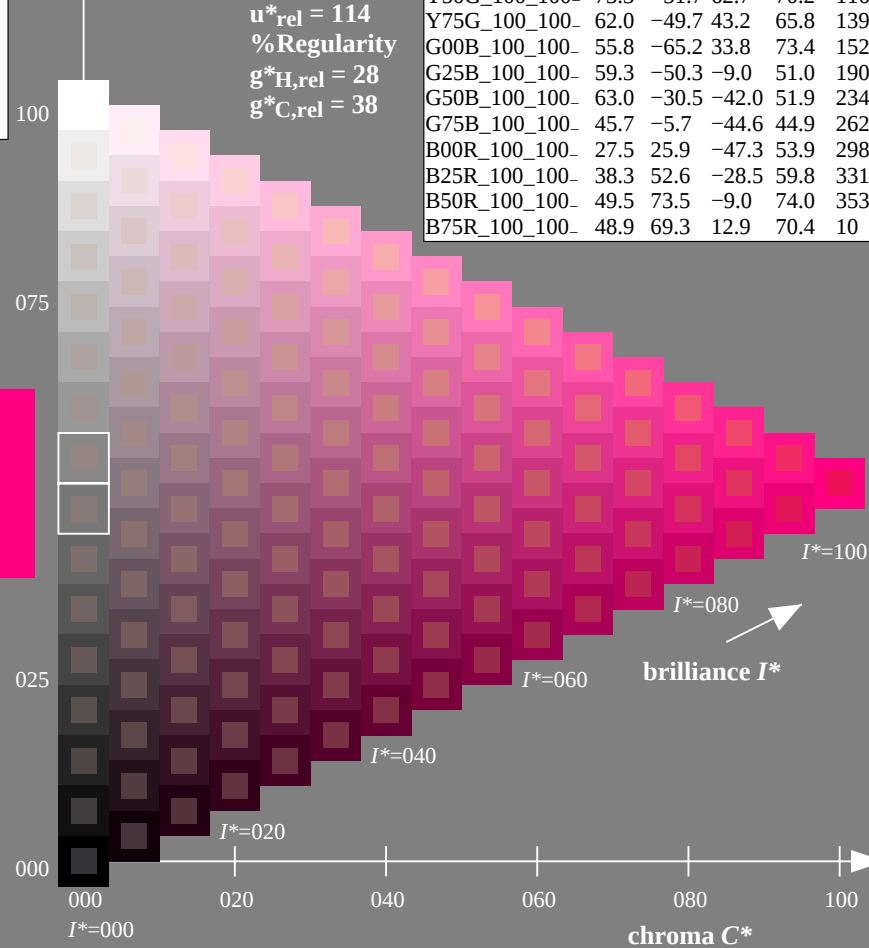
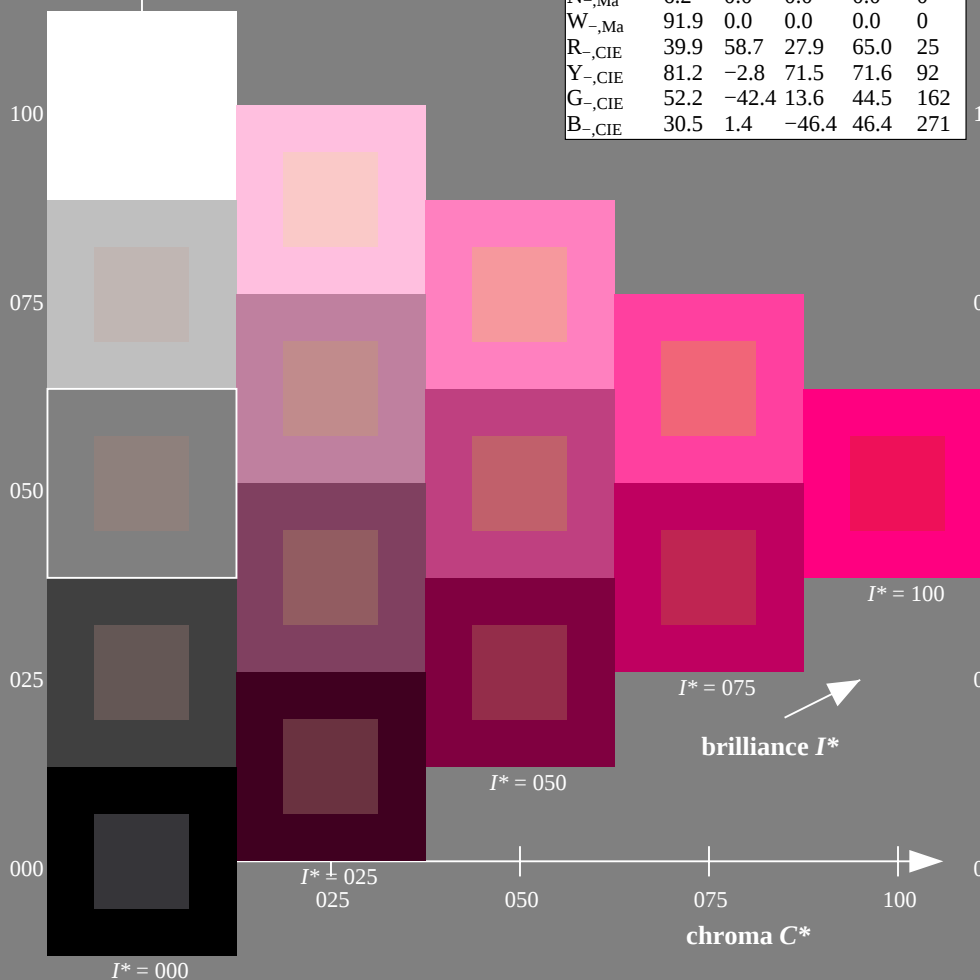
$g^*_{H,rel} = 28$

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

$H^*_ = B75R_-$

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 RE49; hue code: $H^*_ = B75R_-$
Test chart according to DIN 33872, 3D=1, de=0, $cm\dot{y}k^*$

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

http://130.149.60.45/~farbmetrik/RE49/RE49L0FA.TXT /.PS; 3D-linearization
F: 3D-linearization RE49/RE49LE30FA.DAT in file (F), page 2/33

Input and Output: Printer Reflective System FRS06a for relative CIELAB hue $h_{ab,a,rel} = h_{ab}/360 = 10/360 = 0.02$

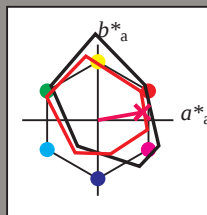
Data for any device (d) or elementary (e) colour:

HIC^*_d

hue text for the colours
of this page:

$H^*_d = B75R_d$

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 58 10 59 10

$HIC^*_{d,Ma}$: B75R_100_100d

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

1.0 0.0 0.5 1.0 1.0

triangle lightness T^*

% Gamut

$u^*_{rel} = 114$

% Regularity

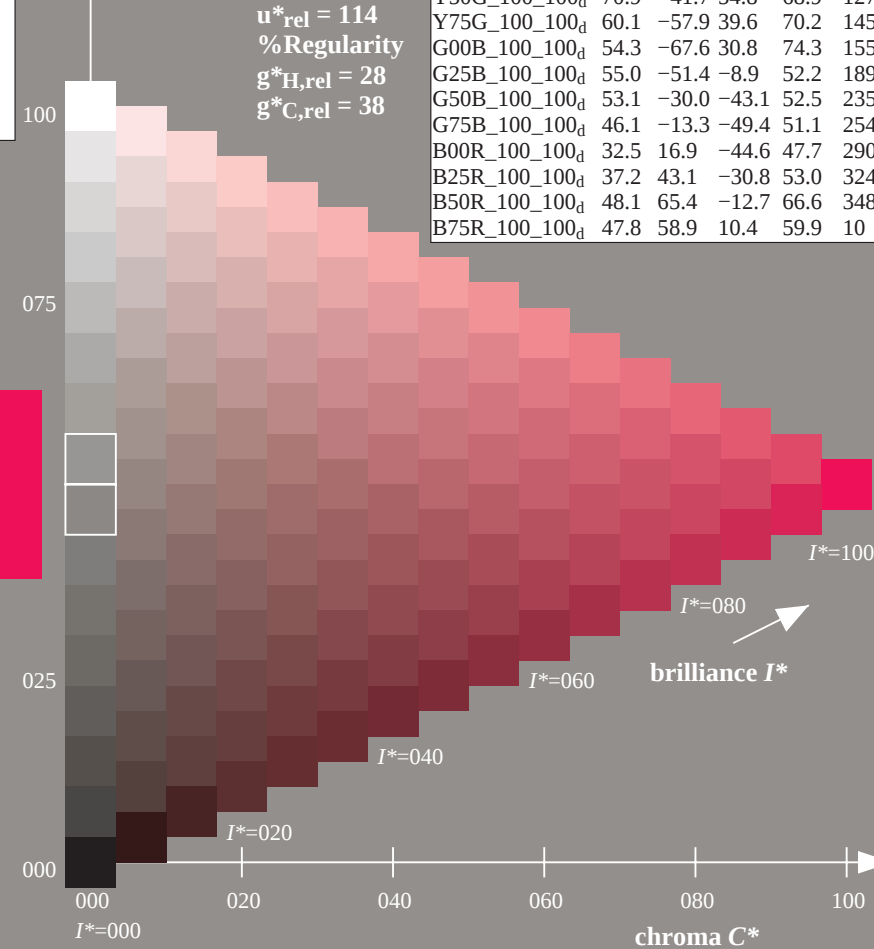
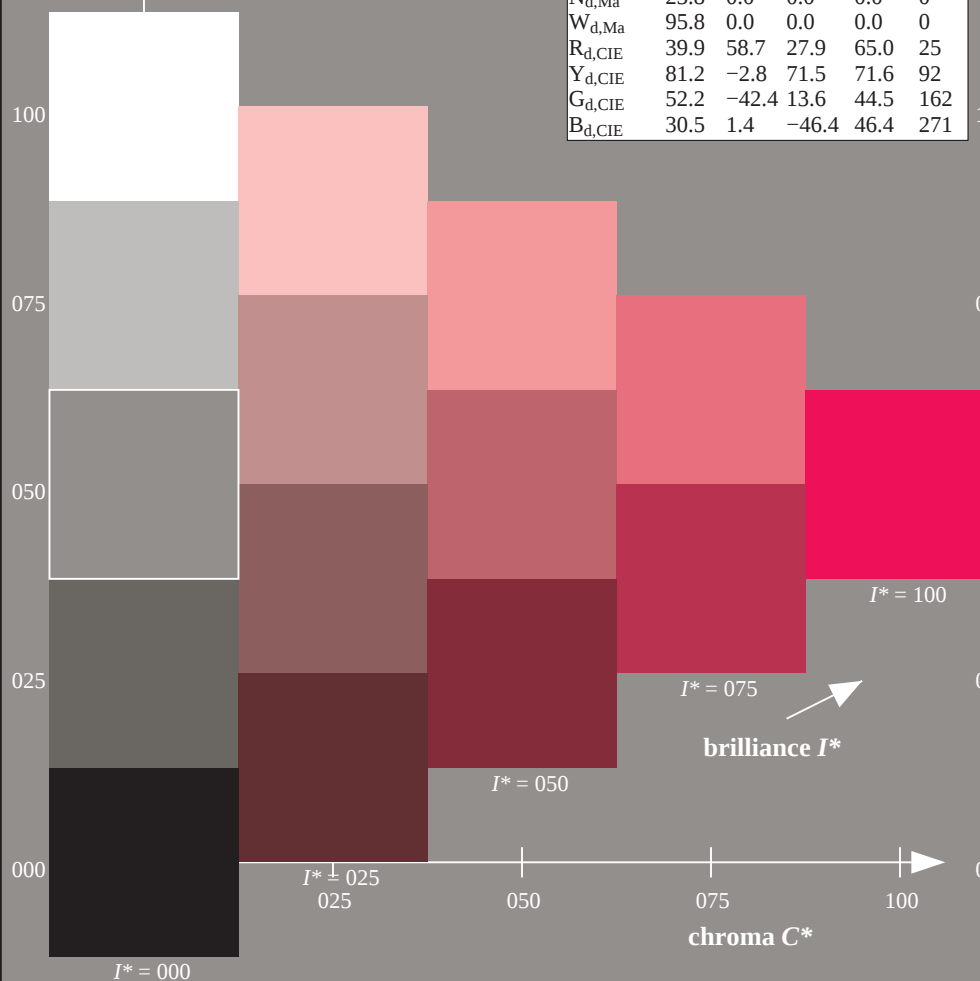
$g^*_{H,rel} = 28$

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

$H^*_d = B75R_d$

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



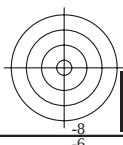
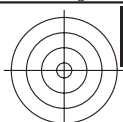
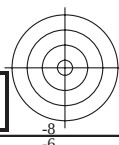
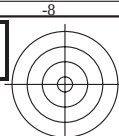
1-103130-L0 RE490-72

TUB-test chart RE49; hue code: $H^*_d=B75R_d$
Test chart according to DIN 33872, 3D=1, de=0, $cm\dot{y}k^*$

input: $rgb/cmyk \rightarrow rgb_{dd}$
output: 3D-linearization to $cm\dot{y}k^*_{dd}$

TUB registration: 20150701-RE49/RE49L0FA.TXT /.PS
application for measurement of laser printer output, separation $cm\dot{y}n6^*$ (CMYK)

TUB material: code=rha4ta



Input and Output: Printer Reflective System PRS06a for relative CIELAB hue $h_{ab,d,rel} = h_{ab}/360 = 10/360 = 0.02$

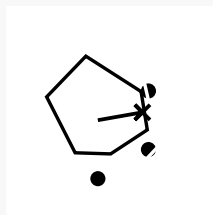
Data for any device (d) or elementary (e) colour:

HIC^*_d

hue text for the colours of this page:

$H^*_d = B75R_d$

triangle lightness T^*



Data for maximum colour (Ma):

$LabCh^*_{d,Ma}$: 47 58 10 59 10

$HIC^*_{d,Ma}$: B75R_100_100d

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

1.0 0.0 0.5 1.0 1.0

triangle lightness T^*

%Gamut

$u^*_{rel} = 114$

%Regularity

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

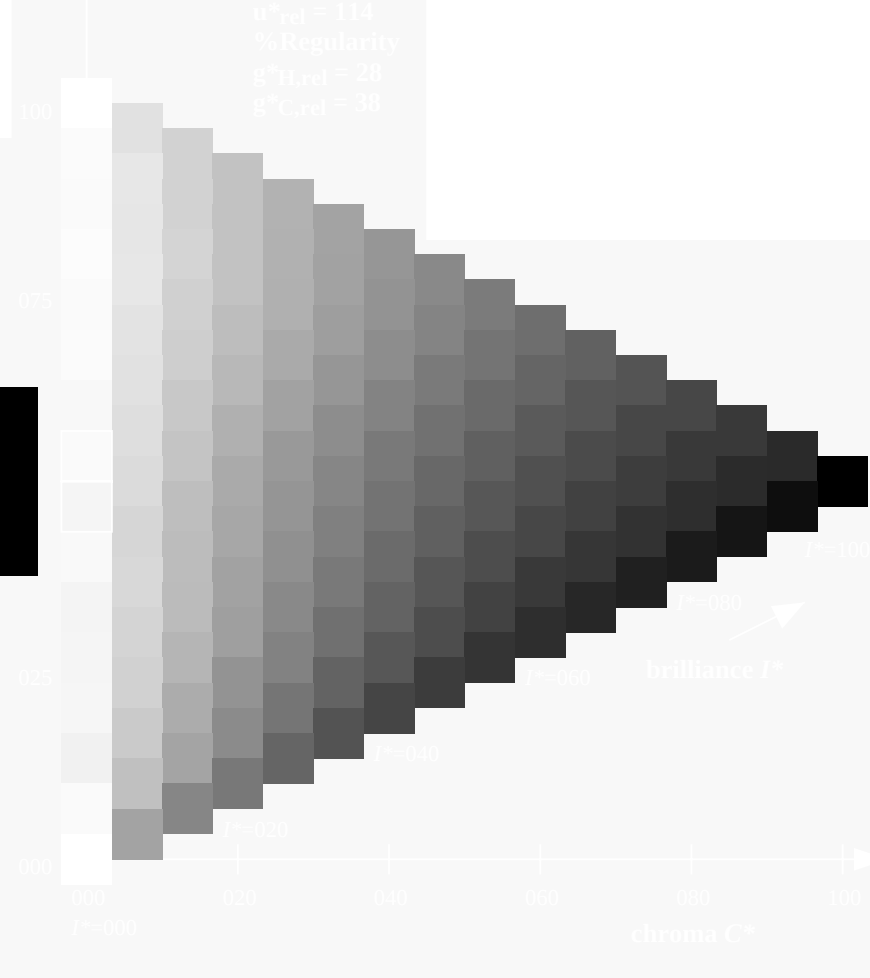
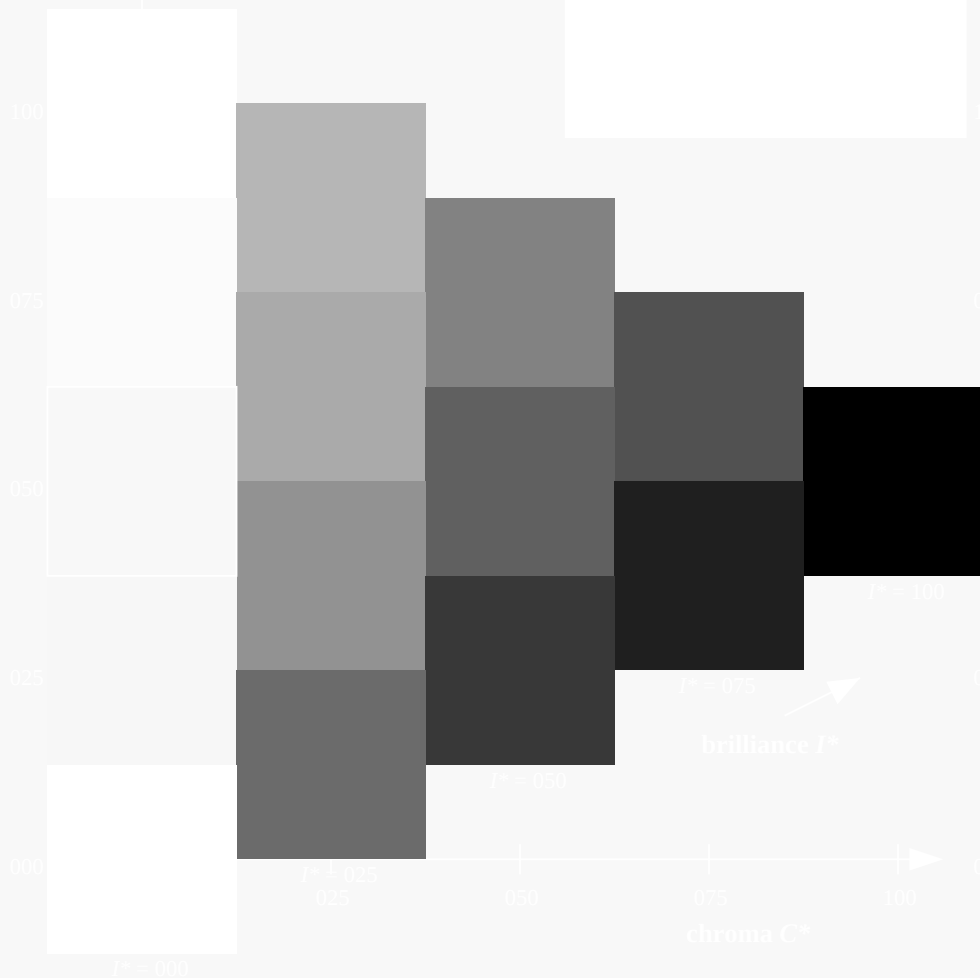
$g^*_{C,rel} = 38$

$H^*_d = B75R_d$

see similar files: <http://130.149.60.45/~farbmetrik/RE49/RE49.HTM>
technical information: <http://www.ps.bam.de> or <http://130.149.60.45/~farbmetrik>

TUB registration: 20150701-RE49/RE49L0FA.TXT /.PS
application for measurement of laser printer output, separation $cmyn6^*$ (CMYK)

TUB material: code=rha4ta



1-103330-L0 RE490-72

TUB-test chart RE49; hue code: $H^*_d=B75R_d$

Test chart according to DIN 33872, 3D=1, de=0, $cmyn^*$

input: $rgb/cmyk \rightarrow rgb_{dd}$

output: 3D-linearization to $cmyn^*_{dd}$

Input and Output: Printer Reflective System FRS06a for relative CIELAB hue $h_{ab,a,rel} = h_{ab}/360 = 10/360 = 0.02$

$H^*_d = B75R_d$

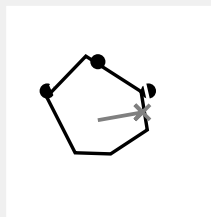
Data for any device (d) or elementary (e) colour:

HIC^*_d

hue text for the colours of this page:

$H^*_d = B75R_d$

triangle lightness T^*



Data for maximum colour (Ma):

$LabCh^*_{d,Ma}$: 47 58 10 59 10

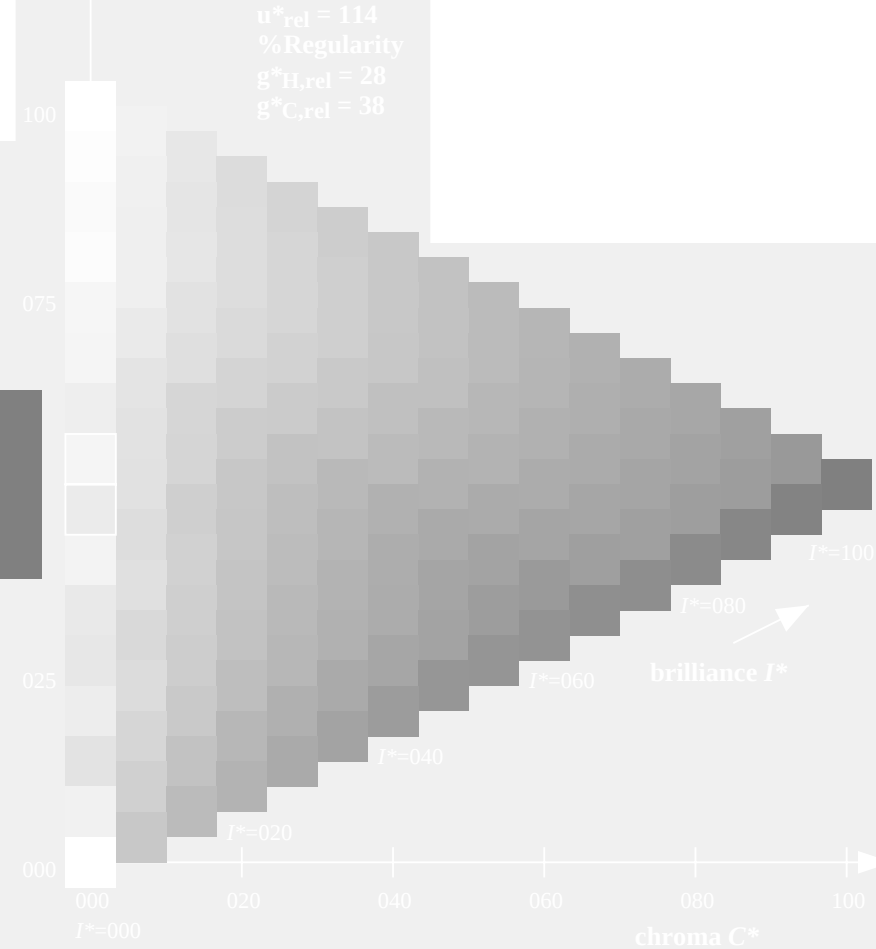
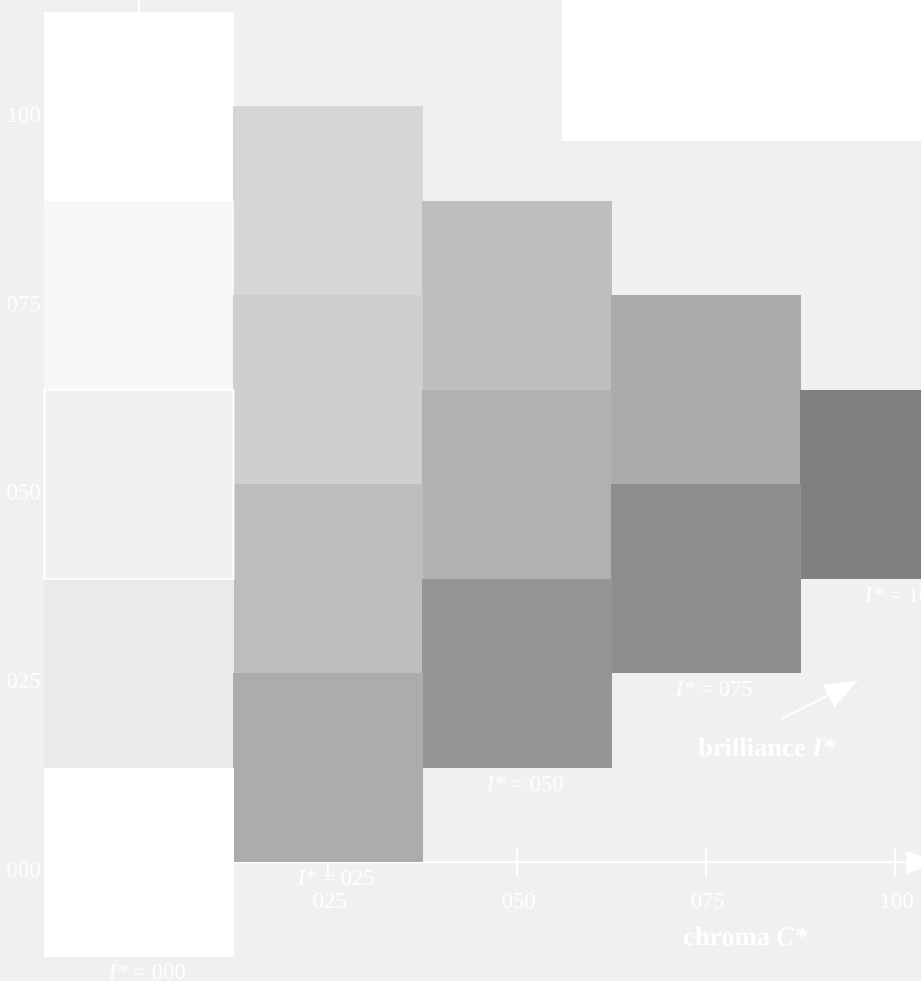
$HIC^*_{d,Ma}$: B75R_100_100d

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

1.0 0.0 0.5 1.0 1.0

triangle lightness T^*

% Gamut
 $u^*_{rel} = 114$
% Regularity
 $g^*_{H,rel} = 28$
 $g^*_{C,rel} = 38$



1-103430-L0 RE490-72
TUB-test chart RE49; hue code: $H^*_d=B75R_d$
Test chart according to DIN 33872, 3D=1, de=0, $cm\dot{y}k^*$

input: $rgb/cmyk \rightarrow rgb_{dd}$
output: 3D-linearization to $cm\dot{y}k^*_{dd}$

Input and Output: Printer Reflective System FRS06a for relative CIELAB hue $h_{ab,a,rel} = h_{ab}/360 = 10/360 = 0.02$

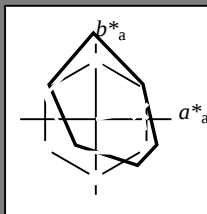
Data for any device (d) or elementary (e) colour:

HIC^*_d

hue text for the colours of this page:

$H^*_d = B75R_d$

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 58 10 59 10

$HIC^*_{d,Ma}$: B75R_100_100d

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

1.0 0.0 0.5 1.0 1.0

triangle lightness T^*

% Gamut

$u^*_{rel} = 114$

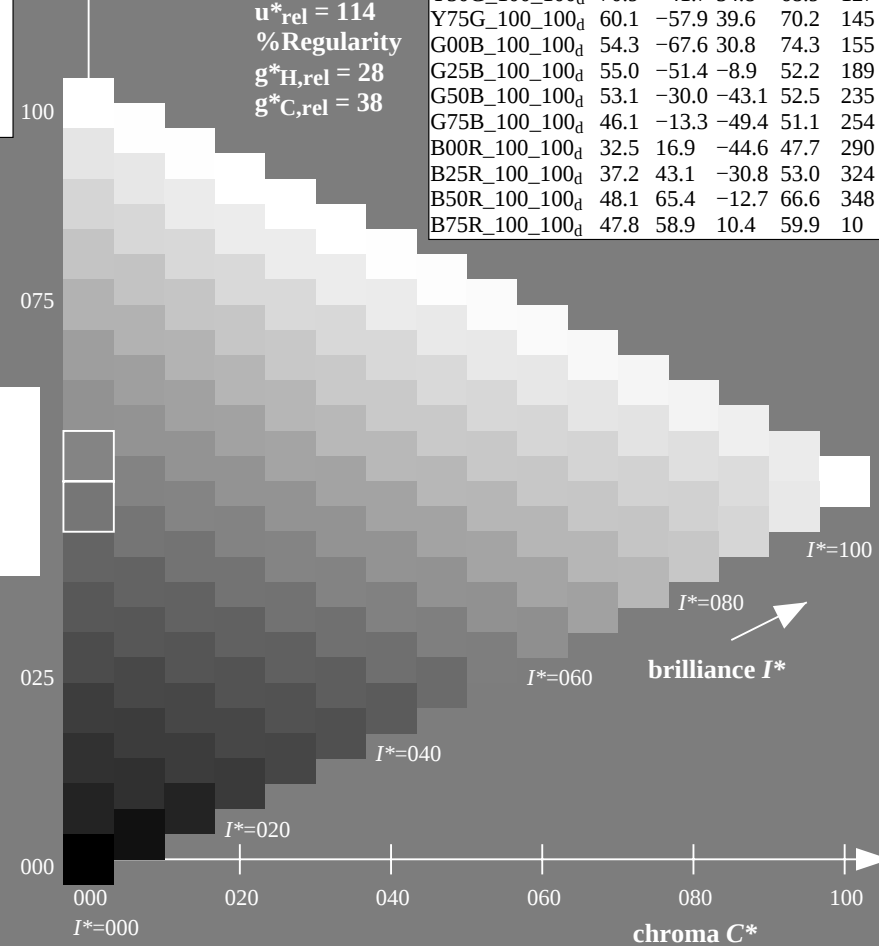
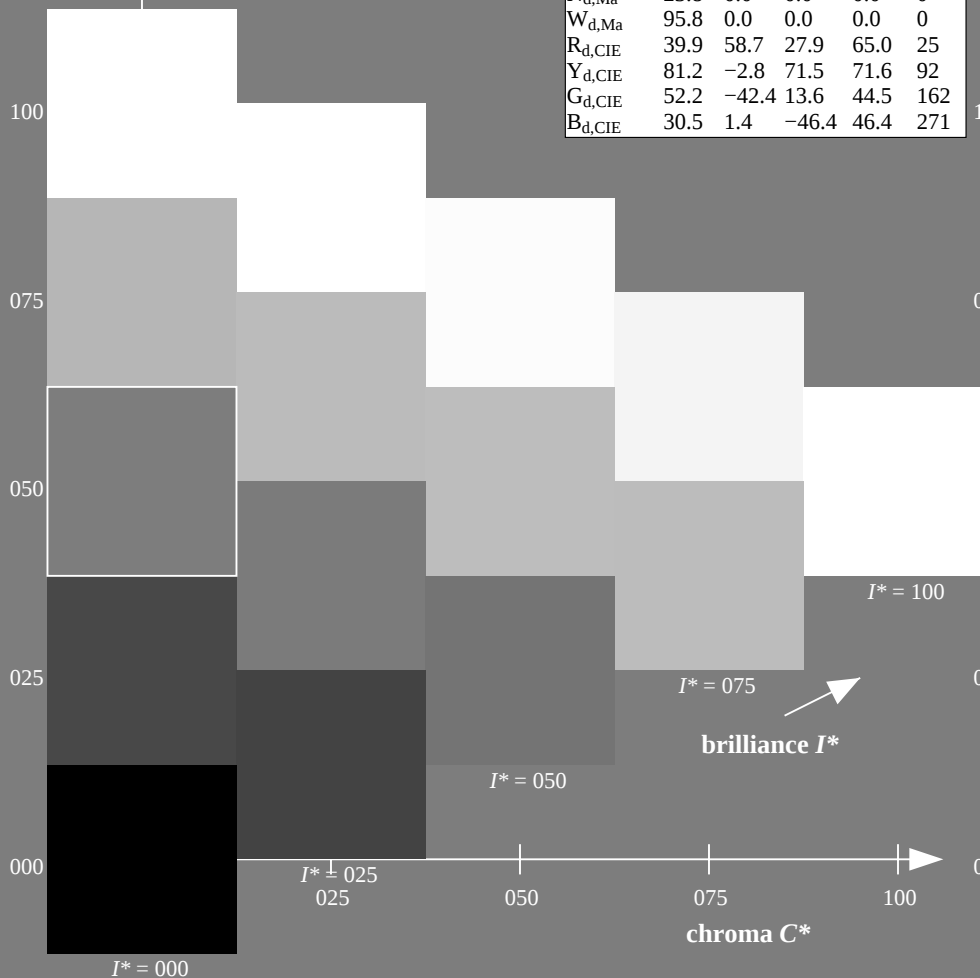
% Regularity

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

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

LRS18a; adapted (a) CIELAB data

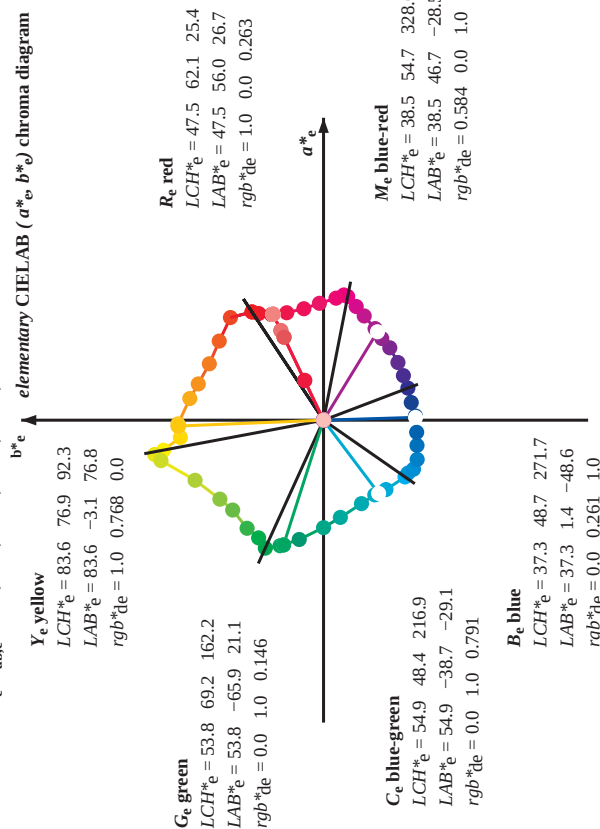
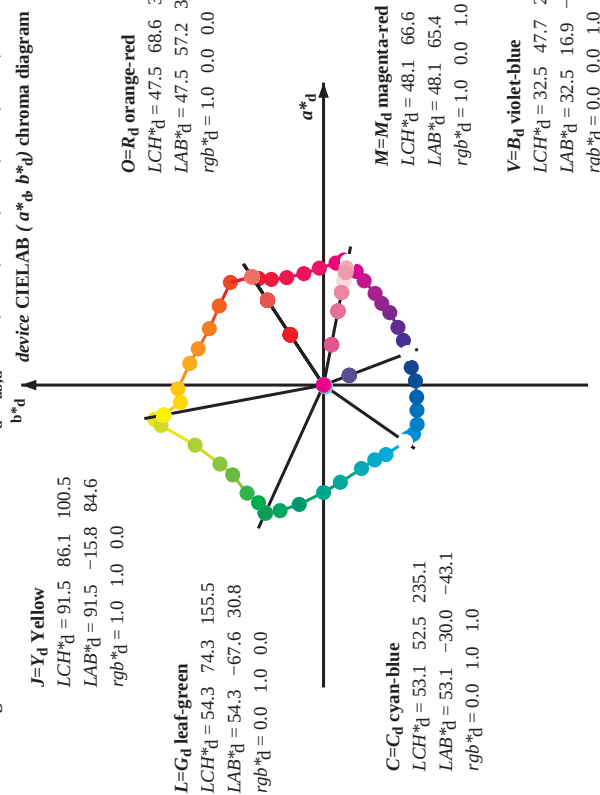
H^*_d	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
$R00Y_{100_100d}$	47.5	57.2	37.8	68.6	33
$R25Y_{100_100d}$	57.4	43.5	54.5	69.7	51
$R50Y_{100_100d}$	70.5	19.2	66.2	69.0	73
$R75Y_{100_100d}$	83.5	-2.9	76.8	76.9	92
$Y00G_{100_100d}$	91.5	-15.8	84.6	86.1	100
$Y25G_{100_100d}$	90.4	-20.9	86.5	89.0	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



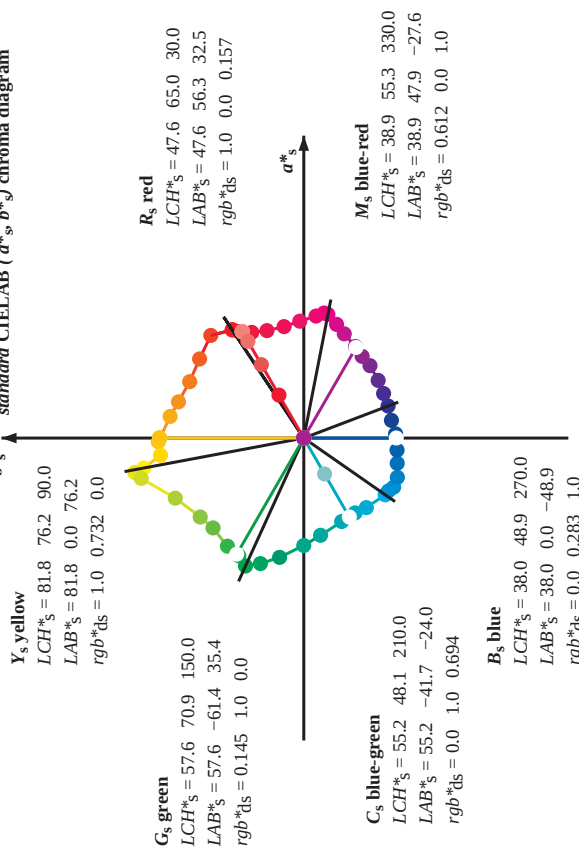
TUB-test chart RE49; hue code: $H^*_d=B75R_d$
Test chart according to DIN 33872, 3D=1, de=0, $cm\dot{y}k^*$

input: $rgb/cmyk \rightarrow rgb_{dd}$
output: 3D-linearization to $cm\dot{y}k^*_{dd}$

Data of Maximum color M in colorimetric system Laser printer output; separation cmyk*, 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^*_e -input values the CIELAB data LCH^*_e and LAB^*_e have been calculated.
2. For the calculation of the standard hue angle $h_{ab,s}$ use for any device values rgb^*_s 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 $h_{ab,s}$ 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:
$$h_{48ab,sij} = h_{ab,si} + j [h_{ab,si+1} - h_{ab,si}] / 8 \quad (i = 0, 1, \dots, 5; j = 0, 1, \dots, 7) \quad (2)$$
$$h_{360ab,sij} = h_{ab,si} + j [h_{ab,si+1} - h_{ab,si}] / 60 \quad (i = 0, 1, \dots, 5; j = 0, 1, \dots, 59) \quad (3)$$
4. 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:
$$h_{48ab,eij} = h_{ab,ei} + j [h_{ab,ei+1} - h_{ab,ei}] / 8 \quad (i = 0, 1, \dots, 5; j = 0, 1, \dots, 7) \quad (4)$$
$$h_{360ab,eij} = h_{ab,ei} + j [h_{ab,ei+1} - h_{ab,ei}] / 60 \quad (i = 0, 1, \dots, 5; j = 0, 1, \dots, 59) \quad (5)$$
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^*_s produce the output of the device-independent elementary hues

LAB*la0, YN=0%, XYZnw=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 RE49; hue code: H*_d=B75Rd
48 step hue circles; $rgb-LabCh^*$ tables

input: $rgb/cmyk \rightarrow rgb_{dd}$
output: 3D-linearization to $cmyk^*_{dd}$

Output: Laser printer output; separation cmyk*, D65, page 7/33

Data of Maximum color M in colorimetric system Laser printer output; separation cmyk*, 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; $h_{ab,e} = 25.5, 92.3, 162.2, 217.0, 271.7, 328.6$									
$h_{ab,d}$	$h_{ab,s}$	$h_{ab,e}$	$rgb^*_{ds361MI}$	$LAB^*_{ds361MI}$	$LAB^*_{ds361MI} (x=LabCh)$	$rgb^*_{ds361MI}$	$rgb^*_{ds361MI}$	$LAB^*_{ds361MI}$	$rgb^*_{ds361MI}$
235	210	216	0.0	1.0	1.0	0.0	1.0	0.694	55.3
235	211	217	0.0	0.983	1.0	0.0	1.0	0.707	55.3
235	212	218	0.0	0.966	1.0	0.0	1.0	0.719	55.3
236	213	219	0.0	0.95	1.0	0.0	1.0	0.732	55.3
236	214	220	0.0	0.933	1.0	0.0	1.0	0.744	55.2
237	215	221	0.0	0.916	1.0	0.0	1.0	0.759	55.2
237	216	222	0.0	0.9	1.0	0.0	1.0	0.775	55.1
237	217	223	0.0	0.883	1.0	0.0	1.0	0.792	55.0
238	218	224	0.0	0.866	1.0	0.0	1.0	0.809	54.9
238	219	225	0.0	0.85	1.0	0.0	1.0	0.825	54.8
239	220	226	0.0	0.833	1.0	0.0	1.0	0.842	54.7
239	221	227	0.0	0.816	1.0	0.0	1.0	0.859	54.6
240	222	227	0.0	0.8	1.0	0.0	1.0	0.875	54.5
240	223	228	0.0	0.783	1.0	0.0	1.0	0.885	54.4
241	224	229	0.0	0.766	1.0	0.0	1.0	0.894	54.3
241	225	230	0.0	0.75	1.0	0.0	1.0	0.904	54.2
242	226	231	0.0	0.733	1.0	0.0	1.0	0.913	54.1
242	227	232	0.0	0.716	1.0	0.0	1.0	0.923	54.0
243	228	233	0.0	0.7	1.0	0.0	1.0	0.932	53.9
244	229	234	0.0	0.683	1.0	0.0	1.0	0.942	53.8
245	230	235	0.0	0.666	1.0	0.0	1.0	0.951	53.7
246	231	236	0.0	0.65	1.0	0.0	1.0	0.961	53.6
246	232	237	0.0	0.633	1.0	0.0	1.0	0.97	53.5
247	233	237	0.0	0.616	1.0	0.0	1.0	0.98	53.4
248	234	238	0.0	0.6	1.0	0.0	1.0	0.989	53.2
249	235	239	0.0	0.583	1.0	0.0	1.0	0.999	53.1
250	236	240	0.0	0.566	1.0	0.0	1.0	0.963	53.1
251	237	241	0.0	0.55	1.0	0.0	1.0	0.918	53.1
252	238	242	0.0	0.533	1.0	0.0	1.0	0.874	53.1
253	239	243	0.0	0.516	1.0	0.0	1.0	0.838	53.0
254	240	244	0.0	0.5	1.0	0.0	1.0	0.801	53.0
255	241	245	0.0	0.483	1.0	0.0	1.0	0.764	52.9
256	242	246	0.0	0.466	1.0	0.0	1.0	0.737	52.7
258	243	247	0.0	0.45	1.0	0.0	1.0	0.716	52.3
259	244	248	0.0	0.433	1.0	0.0	1.0	0.694	51.9
260	245	249	0.0	0.416	1.0	0.0	1.0	0.673	51.5
261	246	249	0.0	0.4	1.0	0.0	1.0	0.651	51.1
262	247	250	0.0	0.383	1.0	0.0	1.0	0.63	50.7
263	248	251	0.0	0.366	1.0	0.0	1.0	0.612	50.1
264	249	252	0.0	0.35	1.0	0.0	1.0	0.596	49.6
265	250	253	0.0	0.333	1.0	0.0	1.0	0.58	49.0
267	251	254	0.0	0.316	1.0	0.0	1.0	0.564	48.4
268	252	255	0.0	0.3	1.0	0.0	1.0	0.547	47.8
269	253	256	0.0	0.283	1.0	0.0	1.0	0.531	47.3
271	254	257	0.0	0.266	1.0	0.0	1.0	0.515	46.7
272	255	258	0.0	0.25	1.0	0.0	1.0	0.499	46.1

Six hue angles of the device colours $RYGBM_d$; $h_{ab,d} = 33.5, 100.6, 155.5, 235.2, 290.8, 348.9$; Six hue angles of the elementary colours $RYGBM_e$; $h_{ab,e} = 25.5, 92.3, 162.2, 217.0, 271.7, 328.6$										
$h_{ab,d}$	$h_{ab,s}$	$h_{ab,e}$	rgb^*_{ds361M}	$LAB^*_{ds361Mi}$	$LAB^*_{ds361Mi}$	$rgb^*_{ds361Mi}$	$LAB^*_{ds361Mi}$	$LAB^*_{ds361Mi}$	$rgb^*_{ds361Mi}$	
272	255	258	0.0	0.25	1.0	36.8	2.2	-48.5	48.6	272
273	256	258	0.0	0.233	1.0	36.6	3.2	-48.3	48.4	273
274	257	259	0.0	0.216	1.0	36.4	4.1	-48.0	48.2	274
276	258	260	0.0	0.2	1.0	36.1	5.1	-47.8	48.1	276
277	259	261	0.0	0.183	1.0	35.9	6.1	-47.5	47.9	277
278	260	262	0.0	0.166	1.0	35.6	7.0	-47.2	47.7	278
279	261	263	0.0	0.15	1.0	35.4	8.0	-46.9	47.5	279
280	262	264	0.0	0.133	1.0	35.2	8.9	-46.5	47.4	280
282	263	265	0.0	0.116	1.0	34.9	9.9	-46.3	47.3	282
283	264	266	0.0	0.1	1.0	34.5	10.9	-46.1	47.4	283
284	265	267	0.0	0.083	1.0	34.2	11.9	-45.9	47.4	284
285	266	268	0.0	0.066	1.0	33.9	12.9	-45.7	47.5	285
287	267	269	0.0	0.049	1.0	33.5	13.9	-45.4	47.5	287
288	268	269	0.0	0.033	1.0	33.2	14.9	-45.2	47.6	288
289	269	270	0.0	0.016	1.0	32.9	15.9	-44.9	47.6	289
290	270	271	0.0	0.0	1.0	32.5	16.9	-44.6	47.7	290
291	271	272	0.016	0.0	1.0	32.4	17.8	-44.3	47.8	291
293	272	273	0.033	0.0	1.0	32.3	18.7	-44.0	47.9	293
294	273	274	0.05	0.0	1.0	32.1	19.6	-43.7	47.9	294
295	274	275	0.066	0.0	1.0	32.0	20.5	-43.4	48.0	295
296	275	276	0.083	0.0	1.0	31.9	21.4	-43.1	48.1	296
297	276	277	0.1	0.0	1.0	31.8	22.3	-42.7	48.2	297
298	277	278	0.116	0.0	1.0	31.6	23.1	-42.4	48.3	298
299	278	279	0.133	0.0	1.0	31.5	24.1	-42.0	48.4	299
300	279	280	0.15	0.0	1.0	31.4	25.0	-41.7	48.6	300
302	280	281	0.166	0.0	1.0	31.4	25.9	-41.4	48.8	302
303	281	282	0.183	0.0	1.0	31.3	26.8	-41.0	49.0	303
304	282	283	0.2	0.0	1.0	31.2	27.8	-40.6	49.2	304
305	283	284	0.216	0.0	1.0	31.1	28.7	-40.2	49.4	305
306	284	285	0.233	0.0	1.0	31.1	29.6	-39.8	49.6	306
307	285	286	0.25	0.0	1.0	31.0	30.5	-39.3	49.8	307
309	286	287	0.266	0.0	1.0	31.4	31.6	-38.8	50.1	309
310	287	288	0.283	0.0	1.0	31.8	32.6	-38.3	50.3	310
311	288	288	0.3	0.0	1.0	32.3	33.6	-37.8	50.6	311
312	289	289	0.316	0.0	1.0	32.7	34.7	-37.2	50.9	312
314	290	290	0.333	0.0	1.0	33.1	35.7	-36.6	51.2	314
315	291	291	0.35	0.0	1.0	33.6	36.7	-36.0	51.4	315
316	292	292	0.366	0.0	1.0	34.0	37.7	-35.3	51.7	316
317	293	293	0.383	0.0	1.0	34.4	38.5	-34.7	51.9	317
318	294	294	0.4	0.0	1.0	34.8	39.2	-34.2	52.1	318
319	295	295	0.416	0.0	1.0	35.2	39.9	-33.7	52.2	319
320	296	296	0.433	0.0	1.0	35.6	40.5	-33.1	52.4	320
321	297	297	0.45	0.0	1.0	36.0	41.2	-32.6	52.5	321
322	298	298	0.466	0.0	1.0	36.4	41.8	-32.0	52.7	322
323	299	299	0.483	0.0	1.0	36.8	42.5	-31.4	52.9	323
324	300	300	0.5	0.0	1.0	37.2	43.1	-30.8	53.0	324

1-1031430-L0

RE490-72

LAB*lab, YN=0%, XY Znw=3.9, 4.1, 84.7, 89.6, 93.9, LAB*mnw=23.9, 0.0, 0.0, 95.8, 0.0, 0.0

1-1031430-F0

input: $rgb/cmyk \rightarrow rgb_{dd}$

output: 3D-linearization to $cmyk^*_{dd}$

Output: Laser printer output; separation cmyk*, D65, page 15/83



TUB material: code=rha4ta
cmyn6* (CMYK)

```
input: rgb/cmyk -> rgbdd
output: 3D-linearization to cmyk*dd
```

TUB-test chart RE49; hue code: $H^*_d=B75R_d$
colors and differences, $\Delta E^{*,*}$

[illegible]



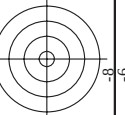
TUB material: code=rha4ta
myn6* (CMYK)

input: *rgb/cmyk* $\rightarrow$ *rgb_{dd}*
output: 3D-linearization to *cmyk_{dd}*



RE490-7N, Page 19/33-F

n/j	H1C* _{Fold}	rgb _{Fold}	lcl _{Yld}	h _u _Yld	rgb _{Fold}	LabCH* _{Yld}	cmym* _{sep} _Fold	h _{sn} _Yld	rgb _h _Yld	LabCH* _{Yld}	delta
0/648	R25Y_100_100 _{Yld}	1.0	0.0	0.0	1.0	0.0	0.0	389	1.0	0.0	33.4
1/666	R25Y_100_100 _{Yld}	1.0	0.25	0.5	44	37.8	0.0	42	0.0	0.0	68.6
2/684	R50Y_100_100 _{Yld}	1.0	0.5	0.0	1.0	43.5	0.0	59	0.0	0.0	54.5
3/702	R75Y_100_100 _{Yld}	1.0	0.75	0.0	0.0	54.5	0.0	77	0.0	0.0	69.7
4/720	R100Y_100_100 _{Yld}	1.0	1.0	0.0	0.0	68.6	0.0	89	0.0	0.0	73.8
5/738	R125Y_100_100 _{Yld}	1.0	1.0	0.0	0.0	73.8	0.0	102	0.0	0.0	76.9
6/756	R150Y_100_100 _{Yld}	1.0	1.0	0.0	0.0	76.9	0.0	119	0.0	0.0	86.1
7/774	R175Y_100_100 _{Yld}	1.0	1.0	0.0	0.0	86.1	0.0	137	0.0	0.0	100.5
8/792	R200Y_100_100 _{Yld}	1.0	1.0	0.0	0.0	100.5	0.0	149	0.0	0.0	103.6
9/810	R225Y_100_100 _{Yld}	1.0	1.0	0.0	0.0	103.6	0.0	166	0.0	0.0	104.6
10/828	R250Y_100_100 _{Yld}	1.0	1.0	0.0	0.0	104.6	0.0	184	0.0	0.0	105.6
11/846	R275Y_100_100 _{Yld}	1.0	1.0	0.0	0.0	105.6	0.0	202	0.0	0.0	106.6
12/864	R300Y_100_100 _{Yld}	1.0	1.0	0.0	0.0	106.6	0.0	220	0.0	0.0	107.6
13/882	R325Y_100_100 _{Yld}	1.0	1.0	0.0	0.0	107.6	0.0	238	0.0	0.0	108.6
14/900	R350Y_100_100 _{Yld}	1.0	1.0	0.0	0.0	108.6	0.0	256	0.0	0.0	109.6
15/918	R375Y_100_100 _{Yld}	1.0	1.0	0.0	0.0	109.6	0.0	274	0.0	0.0	110.6
16/936	R400Y_100_100 _{Yld}	1.0	1.0	0.0	0.0	110.6	0.0	292	0.0	0.0	111.6
17/954	R425Y_100_100 _{Yld}	1.0	1.0	0.0	0.0	111.6	0.0	310	0.0	0.0	112.6
18/972	R450Y_100_100 _{Yld}	1.0	1.0	0.0	0.0	112.6	0.0	328	0.0	0.0	113.6
19/990	R475Y_100_100 _{Yld}	1.0	1.0	0.0	0.0	113.6	0.0	346	0.0	0.0	114.6
20/1008	R500Y_100_100 _{Yld}	1.0	1.0	0.0	0.0	114.6	0.0	364	0.0	0.0	115.6
21/1026	R525Y_100_100 _{Yld}	1.0	1.0	0.0	0.0	115.6	0.0	382	0.0	0.0	116.6
22/1044	R550Y_100_100 _{Yld}	1.0	1.0	0.0	0.0	116.6	0.0	400	0.0	0.0	117.6
23/1062	R575Y_100_100 _{Yld}	1.0	1.0	0.0	0.0	117.6	0.0	418	0.0	0.0	118.6
24/1080	R600Y_100_100 _{Yld}	1.0	1.0	0.0	0.0	118.6	0.0	436	0.0	0.0	119.6
25/1098	R625Y_100_100 _{Yld}	1.0	1.0	0.0	0.0	119.6	0.0	454	0.0	0.0	120.6
26/1116	R650Y_100_100 _{Yld}	1.0	1.0	0.0	0.0	120.6	0.0	472	0.0	0.0	121.6
27/1134	R675Y_100_100 _{Yld}	1.0	1.0	0.0	0.0	121.6	0.0	490	0.0	0.0	122.6
28/1152	R700Y_100_100 _{Yld}	1.0	1.0	0.0	0.0	122.6	0.0	508	0.0	0.0	123.6
29/1170	R725Y_100_100 _{Yld}	1.0	1.0	0.0	0.0	123.6	0.0	526	0.0	0.0	124.6
30/1188	R750Y_100_100 _{Yld}	1.0	1.0	0.0	0.0	124.6	0.0	544	0.0	0.0	125.6
31/1206	R775Y_100_100 _{Yld}	1.0	1.0	0.0	0.0	125.6	0.0	562	0.0	0.0	126.6
32/1224	R800Y										



TUB material: code=rha4ta
cmyn6* (CMYK)

input: *rgb/cmyk* $\rightarrow$ *rgb_{dd}*
 output: 3D-linearization to *cmyk*_{dd}*

1-1032030-F0

RE400-7N, Page 21/33-F

TUB-test chart RE49; hue code: $H^*_d = B75R_d$

colors and differences, ΔE^*

input: $rgb/cmyk \rightarrow rgb_{dd}$

output: 3D-linearization to $cmyk^*_{dd}$

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32

33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52

53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72

73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92

93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112

113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132

133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152

153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172

173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192

193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212

213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232

233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252

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

313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332

333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352

353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372

373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392

393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412

413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432

433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452

453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472

473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492

493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512

513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532

533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552

553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572

573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592

593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612

613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632

633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652

653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672

673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692

693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712

713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732

733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752

753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772

773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792

793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812

813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832

833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852

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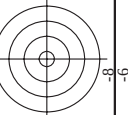
873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892

893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912

913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932

933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952

953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 97



TUB material: code=rha4ta
cmyn6* (CMYK)

TUB-test chart RE49; hue code: $H^*_d=B75R_d$
colors and differences, ΔE^*

1-1032130-E0

0.3
0.4
0.5
0.6

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http://130.149.60.45/~farbmatrik/RE49/RE49L0FA.TXT /PS; 3D-linearization
F: 3D-linearization RE49/RE49LE30FA.DAT in file (F), page 24/33

	n	HC ⁺ Fold	rgb ⁺ Fold	lcr ⁺ Fold	hs ⁺ Fold	rgb ⁺ Fold	LabCh ⁺ Fold	hs ⁺ ΔId	cmv ⁺ sp ⁺ Fold	0.705	0.52	0.0	0.803	0.0	0.0	0.0	0.233	0.0	0.0	47.5	57.2	37.8	68.6	33.4
3224		ROY ⁺ 050_050ΔId	0.5	0.0	0.125	0.5	0.0	0.116	18.9	34.3	33.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3225		ROY ⁺ 050_050ΔId	0.5	0.0	0.125	0.5	0.0	0.116	18.9	34.3	33.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3226		ROY ⁺ 050_050ΔId	0.5	0.0	0.125	0.5	0.0	0.116	18.9	34.3	33.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3227		ROY ⁺ 050_050ΔId	0.5	0.0	0.125	0.5	0.0	0.116	18.9	34.3	33.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3228		ROY ⁺ 050_050ΔId	0.5	0.0	0.125	0.5	0.0	0.116	18.9	34.3	33.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3229		ROY ⁺ 050_050ΔId	0.5	0.0	0.125	0.5	0.0	0.116	18.9	34.3	33.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3230		ROY ⁺ 050_050ΔId	0.5	0.0	0.125	0.5	0.0	0.116	18.9	34.3	33.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3231		ROY ⁺ 050_050ΔId	0.5	0.0	0.125	0.5	0.0	0.116	18.9	34.3	33.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3232		ROY ⁺ 050_050ΔId	0.5	0.0	0.125	0.5	0.0	0.116	18.9	34.3	33.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3233		ROY ⁺ 050_050ΔId	0.5	0.0	0.125	0.5	0.0	0.116	18.9	34.3	33.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3234		ROY ⁺ 050_050ΔId	0.5	0.0	0.125	0.5	0.0	0.116	18.9	34.3	33.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3235		ROY ⁺ 050_050ΔId	0.5	0.0	0.125	0.5	0.0	0.116	18.9	34.3	33.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3236		ROY ⁺ 050_050ΔId	0.5	0.0	0.125	0.5	0.0	0.116	18.9	34.3	33.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3237		ROY ⁺ 050_050ΔId	0.5	0.0	0.125	0.5	0.0	0.116	18.9	34.3	33.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3238		ROY ⁺ 050_050ΔId	0.5	0.0	0.125	0.5	0.0	0.116	18.9	34.3	33.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3239		ROY ⁺ 050_050ΔId	0.5	0.0	0.125	0.5	0.0	0.116	18.9	34.3	33.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3240		ROY ⁺ 050_050ΔId	0.5	0.0	0.125	0.5	0.0	0.116	18.9	34.3	33.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3241		ROY ⁺ 050_050ΔId	0.5	0.0	0.125	0.5	0																	

```
input: rgb/cmyk -> rgbdd  
output: 3D-linearization to cmykdd
```

TUB-test chart RE49; hue code: $H^*_d=B75R_d$
 colors and differences, ΔE^*

see similar files: <http://130.149.60.45/~farbmatrik/RE49/RE49.HTM>
technical information: <http://www.ps.bam.de> or <http://130.149.60.45/~farbmatrik>

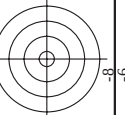


TUB material: code=rha4ta
cmyn6* (CMYK)

```
input: rgb/cmyk -> rgbdd
output: 3D-linearization to cmyk*dd
```

1-1032490-F0	RE490-7N, Page 25/33-F	 TUB-test chart RE49; hue code: H*_d=B75R_d colors and differences, ΔE^*_{ab} input: <i>rgb/cmyk</i> → <i>rgb</i>_{dd} output: 3D-linearization to <i>cmyk</i>*_{dd} 	
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1-1022420-E0

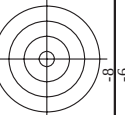


TUB material: code=rha4ta
cmyn6* (CMYK)

input: *rgb/cmyk* $\rightarrow$ *rgb_{dd}*
output: 3D-linearization to *cmyk_{dd}*

TUB-test chart RE49; hue code: H_d^{*}=B75R_d
colors and differences, ΔE^*

<i>n</i>	HIC [°] Fold	rgb [°] Fold	lcr [°] Fold	hsa [°] Fold	rgb [°] Fold	LabCh [°] Fold	cmym [°] exp [°] Fold	hsa [°] Fold	rgb [°] Fold	LabCh [°] Fold						
567	R00Y.087.087.041	0.875	0.0	0.875	0.875	0.437	390	390	1.0	0.0	47.5	57.2	37.8	68.6	33.4	
568	R36Y.087.087.041	0.875	0.125	0.875	0.875	0.437	382	382	1.0	0.0	0.133	47.6	56.3	33.8	65.7	30.9
569	R23Y.087.087.041	0.875	0.0	0.875	0.875	0.437	374	374	1.0	0.0	0.266	47.5	56.1	26.5	62.0	25.2
570	R00Y.087.087.041	0.875	0.375	0.875	0.875	0.437	365	365	1.0	0.0	0.416	47.5	57.7	16.5	60.0	15.9
571	B70R.087.087.041	0.875	0.0	0.875	0.875	0.437	355	355	1.0	0.0	0.583	47.9	60.9	4.9	61.1	4.6
572	B63R.087.087.041	0.875	0.0	0.875	0.875	0.437	346	346	1.0	0.0	0.733	49.1	64.2	-5.3	64.4	355.2
573	B56R.087.087.041	0.875	0.0	0.875	0.875	0.437	338	338	1.0	0.0	0.866	49.5	66.0	-10.4	66.9	350.9
574	B50R.087.087.041	0.875	0.0	0.875	0.875	0.437	330	330	1.0	0.0	0.866	49.5	66.0	-12.7	66.6	348.9
575	B44R.100.100.041	0.875	0.0	1.0	0.875	0.437	323	323	1.0	0.0	0.866	49.5	66.0	-17.0	62.8	344.2
576	R13Y.087.087.041	0.875	0.125	0.875	0.875	0.437	316	316	1.0	0.133	0.0	52.3	53.4	49.7	73.0	42.9
577	R00Y.087.075.041	0.875	0.125	0.875	0.875	0.437	308	308	1.0	0.0	0.0	47.5	57.2	37.8	68.6	33.4
578	R35Y.087.075.041	0.875	0.125	0.875	0.875	0.437	301	301	1.0	0.0	0.15	47.6	56.3	32.9	65.2	30.3
579	R18Y.087.075.041	0.875	0.125	0.875	0.875	0.437	293	293	1.0	0.0	0.316	47.4	56.5	23.2	61.1	22.3
580	R00Y.087.075.041	0.875	0.125	0.875	0.875	0.437	285	285	1.0	0.0	0.5	47.8	58.9	10.4	59.9	10.0
581	B65R.087.075.041	0.875	0.125	0.875	0.875	0.437	278	278	1.0	0.0	0.683	48.6	63.2	-1.8	63.2	358.3
582	B57R.087.075.041	0.875	0.125	0.875	0.875	0.437	270	270	1.0	0.0	0.85	49.4	65.8	-9.9	66.6	351.4
583	B50R.087.075.041	0.875	0.125	0.875	0.875	0.437	262	262	1.0	0.0	0.85	49.4	65.8	-12.7	66.6	348.9
584	B43R.100.100.041	0.875	0.125	1.0	0.875	0.437	254	254	1.0	0.0	0.866	49.5	66.0	-17.0	62.8	344.2
585	R26Y.087.087.041	0.875	0.25	0.875	0.875	0.437	246	246	1.0	0.266	0.0	53.1	40.2	56.0	69.0	54.2
586	R15Y.087.075.041	0.875	0.25	0.875	0.875	0.437	238	238	1.0	0.0	0.0	52.2	51.8	50.6	72.4	44.3
587	R38Y.087.062.041	0.875	0.25	0.875	0.875	0.437	230	230	1.0	0.0	0.0	52.2	51.8	50.6	72.4	44.3
588	R31Y.087.062.041	0.875	0.25	0.875	0.875	0.437	222	222	1.0	0.0	0.183	47.6	56.2	31.1	64.2	28.9
589	R11Y.087.062.041	0.875	0.25	0.875	0.875	0.437	214	214	1.0	0.0	0.183	47.6	56.2	31.1	64.2	28.9
590	B69R.087.062.041	0.875	0.25	0.875	0.875	0.437										



TUB material: code=rha4ta
cmyn6* (CMYK)

input: *rgb/cmyk* $\rightarrow$ *rgbd*
output: 3D-linearization to *cmyk*^{*dd}

TTUB-test chart RE49; hue code: $H^*_d=B75R_d$
 colors and differences, ΔE^*

RE490-7N, Page 28/33-F

1-1032730-F0

<i>n</i>	HIC ³ _{Fold}	<i>rgb₃</i> _{Fold}	<i>lcr₃</i> _{Fold}	<i>h₃</i> _{Fold}	<i>rgb₃</i> _{Fold}	<i>LabCh³</i> _{Fold}	<i>cmym³</i> _{sep,Fold}	<i>h₃</i> _{Mid}	<i>rgb₃</i> _{Mid}	<i>LabCh³</i> _{Mid}	<i>delta</i>
648	R00Y_100_100d	1.0	0.0	390	1.0	0.0	0.0	389	1.0	0.0	33.4
649	R38Y_100_100d	1.0	0.125	383	1.0	0.0	0.0	383	1.0	0.0	68.6
650	R26Y_100_100d	1.0	0.0	376	1.0	0.0	0.0	367	1.0	0.0	34.5
651	R13Y_100_100d	1.0	0.375	368	1.0	0.0	0.0	378	1.0	0.0	66.1
652	R68R_100_100d	1.0	0.0	360	1.0	0.0	0.0	360	1.0	0.0	28.4
653	R68R_100_100d	1.0	0.0	352	1.0	0.0	0.0	351	1.0	0.0	62.8
654	B61R_100_100d	1.0	0.0	344	1.0	0.0	0.0	346	1.0	0.0	20.0
655	B55R_100_100d	1.0	0.0	337	1.0	0.0	0.0	336	1.0	0.0	19.4
656	B50R_100_100d	1.0	0.0	330	1.0	0.0	0.0	332	1.0	0.0	47.8
657	R11Y_100_100d	1.0	0.0	330	1.0	0.0	0.0	330	1.0	0.0	59.0
658	R00Y_100_087d	1.0	0.0	330	1.0	0.0	0.0	330	1.0	0.0	10.0
659	R36Y_100_087d	1.0	0.125	382	1.0	0.0	0.0	389	1.0	0.0	62.0
660	R23Y_100_087d	1.0	0.125	390	1.0	0.0	0.0	382	1.0	0.0	65.1
661	R08Y_100_087d	1.0	0.0	365	1.0	0.0	0.0	375	1.0	0.0	37.8
662	B70R_100_087d	1.0	0.125	355	1.0	0.0	0.0	365	1.0	0.0	30.9
663	B63R_100_087d	1.0	0.0	346	1.0	0.0	0.0	354	1.0	0.0	56.1
664	B56R_100_087d	1.0	0.125	338	1.0	0.0	0.0	344	1.0	0.0	26.5
665	B50R_100_087d	1.0	0.125	330	1.0	0.0	0.0	337	1.0	0.0	62.0
666	R23Y_100_100d	1.0	0.0	44	1.0	0.0	0.0	42	1.0	0.0	15.9
667	R13Y_100_087d	1.0	0.0	38	1.0	0.0	0.0	37	1.0	0.0	49.9
668	R00Y_100_075d	1.0	0.25	390	1.0	0.0	0.0	389	1.0	0.0	61.4
669	R35Y_100_075d	1.0	0.375	381	1.0	0.0	0.0	382	1.0	0.0	76.6
670	R18Y_100_075d	1.0	0.0	371	1.0	0.0	0.0	369	1.0	0.0	33.4
671	R00Y_100_075d	1.0	0.0	360	1.0	0.0	0.0	371	1.0	0.0	62.0
672	B65R_100_075d	1.0	0.0	349	1.0	0.0	0.0	360	1.0	0.0	58.9
673	B57R_100_075d	1.0	0.0	339	1.0	0.0	0.0	348	1.0	0.0	10.4
674	B50R_100_075d	1.0	0.0	330	1.0	0.0	0.0	337	1.0	0.0	35.3
675	R26Y_100_087d	1.0	0.0	52	1.0	0.0	0.0	51	1.0	0.0	-1.8
676	R26Y_100_087d	1.0	0.0	63	1.0	0.0	0.0	62	1.0	0.0	63.2
677	R15Y_100_075d	1.0	0.0	60	1.0	0.0	0.0	59	1.0	0.0	35.8
678	R00Y_100_062d	1.0	0.375	390	1.0	0.0	0.0	389	1.0	0.0	31.4
679	R11Y_100_062d	1.0	0.375	379	1.0	0.0	0.0	380	1.0	0.0	62.9
680	R11Y_100_062d	1.0	0.375	367	1.0	0.0	0.0	367	1.0	0.0	18.3
681	B69R_100_062d	1.0	0.375	353	1.0	0.0	0.0	352	1.0	0.0	61.7
682	B59R_100_062d	1.0	0.375	341	1.0	0.0	0.0	339	1.0		

n	HVC-Fid	rgb-Fid	lcr-Fid	hsa-Fid	rgb*Fid	LabCh*Fid	cmyk*sep-Fid	mean	delta
729	NW_1000ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
730	G50B_100.012ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
731	G50B_100.025ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
732	G50B_100.037ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
733	G50B_100.050ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
734	G50B_100.062ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
735	G50B_100.075ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
736	G50B_100.087ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
737	G50B_100.100ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
738	ROY_100.012ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
739	ROY_100.025ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
740	ROY_100.037ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
741	ROY_100.050ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
742	ROY_100.062ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
743	ROY_100.075ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
744	ROY_100.087ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
745	ROY_100.100ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
746	ROY_100.012ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
747	ROY_100.025ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
748	ROY_100.037ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
749	ROY_100.050ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
750	ROY_100.062ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
751	ROY_100.075ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
752	ROY_100.087ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
753	ROY_100.100ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
754	ROY_100.012ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
755	ROY_100.025ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
756	ROY_100.037ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
757	ROY_100.050ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
758	ROY_100.062ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
759	ROY_100.075ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
760	ROY_100.087ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
761	ROY_100.100ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
762	ROY_100.012ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
763	ROY_100.025ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
764	ROY_100.037ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
765	ROY_100.050ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
766	ROY_100.062ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
767	ROY_100.075ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
768	ROY_100.087ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
769	ROY_100.100ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
770	ROY_100.012ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
771	ROY_100.025ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
772	ROY_100.037ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
773	ROY_100.050ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
774	ROY_100.062ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
775	ROY_100.075ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
776	ROY_100.087ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
777	ROY_100.100ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
778	ROY_100.012ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
779	ROY_100.025ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
780	ROY_100.037ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
781	ROY_100.050ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
782	ROY_100.062ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
783	ROY_100.075ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
784	ROY_100.087ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
785	ROY_100.100ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
786	ROY_100.012ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
787	ROY_100.025ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
788	ROY_100.037ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
789	ROY_100.050ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
790	ROY_100.062ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
791	ROY_100.075ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
792	ROY_100.087ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
793	ROY_100.100ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
794	ROY_100.012ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
795	ROY_100.025ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
796	ROY_100.037ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
797	ROY_100.050ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
798	ROY_100.062ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
799	ROY_100.075ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
800	ROY_100.087ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
801	ROY_100.100ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
802	ROY_100.012ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
803	ROY_100.025ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
804	ROY_100.037ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
805	ROY_100.050ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
806	ROY_100.062ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
807	ROY_100.075ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
808	ROY_100.087ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0
809	ROY_100.100ad	0.875	1.0	1.0	1.0	95.8	0.0	0.0	0.0

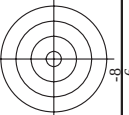
see similar files: <http://130.149.60.45/~farbmatrik/RE49/RE49.HTM>
technical information: <http://www.ps.bam.de> or <http://130.149.60.45/~farbmatrik>

http://130.149.60.45/~farbmatrik/RE49/RE49L0FA.TXT /PS; 3D-linearization
F: 3D-linearization RE49/RE49LE30FA.DAT in file (F), page 30/33

RE490-7N, Page 30/33-F

```
input: rgb/cmyk -> rgbdd
output: 3D-linearization to cmyk*dd
```

[illegible]



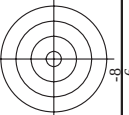
TUB material: code=rha4ta
rmy6* (CMYK)

input: *rgb/cmyk* → *rgb*_{dd}
output: 3D-linearization to *cmyk**_{dd}



see similar files: <http://130.149.60.45/~farbmetrik/RE49/RE49.HTM>
technical information: <http://www.ps.bam.de> or <http://130.149.60.45/~farbmetrik>

see similar files: <http://130.149.60.45/~farbmatrik/RE49/RE49.HTM>
technical information: <http://www.ps.bam.de> or <http://130.149.60.45/~farbmatrik>



TUB material: code=rha4ta
cmyn6* (CMYK)

input: *rgb/cmyk* $\rightarrow$ *rgb*_{dd}
 output: 3D-linearization to *cmyk*^{*}_{dd}

A target diagram with a vertical line and a horizontal line intersecting at the center. The vertical line has a '6' on the left and an '8' on the right. The horizontal line has a '6' on the left and an '8' on the right. The target consists of concentric circles. The score is 86.




TUB-test chart RE49; hue code: H_d=B75R_d
 colors and differences, ΔE^*

input: *rgb/cmyk* – > *rgb*_{dd}
 output: 3D-linearization to *cmyk*_{dd}

I-1033130-F0
 RE490-7N, Page 32/33-F

TUB registration: 20150701-RE49/RE49L0FA.TXT /.PS
application for measurement of laser printer output, separation cmyk* (CMYK)

TUB material: code=rha4ta

see similar files: <http://130.149.60.45/~farbmetrik/RE49/RE49.HTM>
technical information: <http://www.ps.bam.de> or <http://130.149.60.45/~farbmetrik>

<http://130.149.60.45/~farbmetrik/RE49/RE49L0FA.TXT> /.PS; 3D-linearization
F: 3D-linearization RE49/RE49LE30FA.DAT in file (F), page 33/33

n	HC*Fid	rgb_Fid	lcr_Fid	hsa_Fid	rgb*Fid	LabCH*Fid	0.0	0.0	0.0	cmyk*_sep_Fid	0.02	0.164	hsa_dld	rgb*_dld	LabCH*_dld	0.0	0.0	0.0
1053	NW_086dd	0.866	0.866	0.866	0.866	0.866	0.0	0.0	0.0	0.0	0.019	0.164	360	1.0	1.0	95.8	0.0	0.0
1054	NW_093dd	0.933	0.933	0.933	0.933	0.933	0.0	0.0	0.0	0.0	0.016	0.103	360	1.0	1.0	95.8	0.0	0.0
1055	NW_100dd	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	360	1.0	1.0	95.8	0.0	0.0
1056	NW_100dd	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	360	1.0	1.0	95.8	0.0	0.0
1057	NW_006dd	0.066	0.066	0.066	0.066	0.066	0.0	0.0	0.0	0.0	0.016	0.865	360	1.0	1.0	95.8	0.0	0.0
1058	NW_013dd	0.133	0.133	0.133	0.133	0.133	0.0	0.0	0.0	0.0	0.053	0.809	360	1.0	1.0	95.8	0.0	0.0
1059	NW_020dd	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.034	0.76	360	1.0	1.0	95.8	0.0	0.0
1060	NW_026dd	0.266	0.266	0.266	0.266	0.266	0.0	0.0	0.0	0.0	0.039	0.688	360	1.0	1.0	95.8	0.0	0.0
1061	NW_033dd	0.333	0.333	0.333	0.333	0.333	0.0	0.0	0.0	0.0	0.044	0.652	360	1.0	1.0	95.8	0.0	0.0
1062	NW_040dd	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.023	0.608	360	1.0	1.0	95.8	0.0	0.0
1063	NW_046dd	0.466	0.466	0.466	0.466	0.466	0.0	0.0	0.0	0.0	0.038	0.539	360	1.0	1.0	95.8	0.0	0.0
1064	NW_053dd	0.533	0.533	0.533	0.533	0.533	0.0	0.0	0.0	0.0	0.017	0.482	360	1.0	1.0	95.8	0.0	0.0
1065	NW_060dd	0.6	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.028	0.427	360	1.0	1.0	95.8	0.0	0.0
1066	NW_066dd	0.666	0.666	0.666	0.666	0.666	0.0	0.0	0.0	0.0	0.015	0.381	360	1.0	1.0	95.8	0.0	0.0
1067	NW_073dd	0.734	0.734	0.734	0.734	0.734	0.0	0.0	0.0	0.0	0.017	0.331	360	1.0	1.0	95.8	0.0	0.0
1068	NW_080dd	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.011	0.23	360	1.0	1.0	95.8	0.0	0.0
1069	NW_086dd	0.866	0.866	0.866	0.866	0.866	0.0	0.0	0.0	0.0	0.019	0.164	360	1.0	1.0	95.8	0.0	0.0
1070	NW_093dd	0.933	0.933	0.933	0.933	0.933	0.0	0.0	0.0	0.0	0.016	0.103	360	1.0	1.0	95.8	0.0	0.0
1071	NW_100dd	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	360	1.0	1.0	95.8	0.0	0.0
1072	NW_100dd	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	360	1.0	1.0	95.8	0.0	0.0
1073	ROXY_100_100dd	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	360	1.0	1.0	95.8	0.0	0.0
1074	G50B_100_100dd	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	360	1.0	1.0	95.8	0.0	0.0
1075	G50B_100_100dd	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	360	1.0	1.0	95.8	0.0	0.0
1076	Y06C_100_100dd	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	360	1.0	1.0	95.8	0.0	0.0
1077	B06C_100_100dd	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	360	1.0	1.0	95.8	0.0	0.0
1078	B06C_100_100dd	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	360	1.0	1.0	95.8	0.0	0.0
1079	B50R_100_100dd	1.0	0.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	360	1.0	1.0	95.8	0.0	0.0

Mean color difference of this page:

delta

RE490-7N, Page 33/33-F

TUB-test chart RE49; hue code: H*_d=B75Rd
colors and differences, ΔE^*

input: *rgb/cmyk* -> *rgbdd*
output: 3D-linearization to *cmyk*_dd*

http://130.149.60.45/~farbmetrik/RE49/RE49L0FA.TXT /.PS; start output
F: 3D-linearization RE49/RE49LE30FA.DAT in file (F), page 1/33

Input and Output: Printer Reflective System FRS06a for relative CIELAB hue $h_{ab,a,rel} = h_{ab}/360 = 10/360 = 0.02$

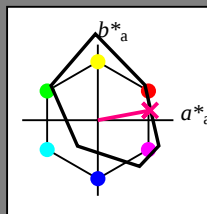
Data for any device (d) or elementary (e) colour:

HIC^*_-

hue text for the colours of this page:

$H^*_- = B75R_-$

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 69 12 70 10

$HIC^*_{-,Ma}$: B75R_100_100_

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

1.0 0.0 0.5 1.0 1.0

triangle lightness T^*

% Gamut

$u^*_{rel} = 114$

% Regularity

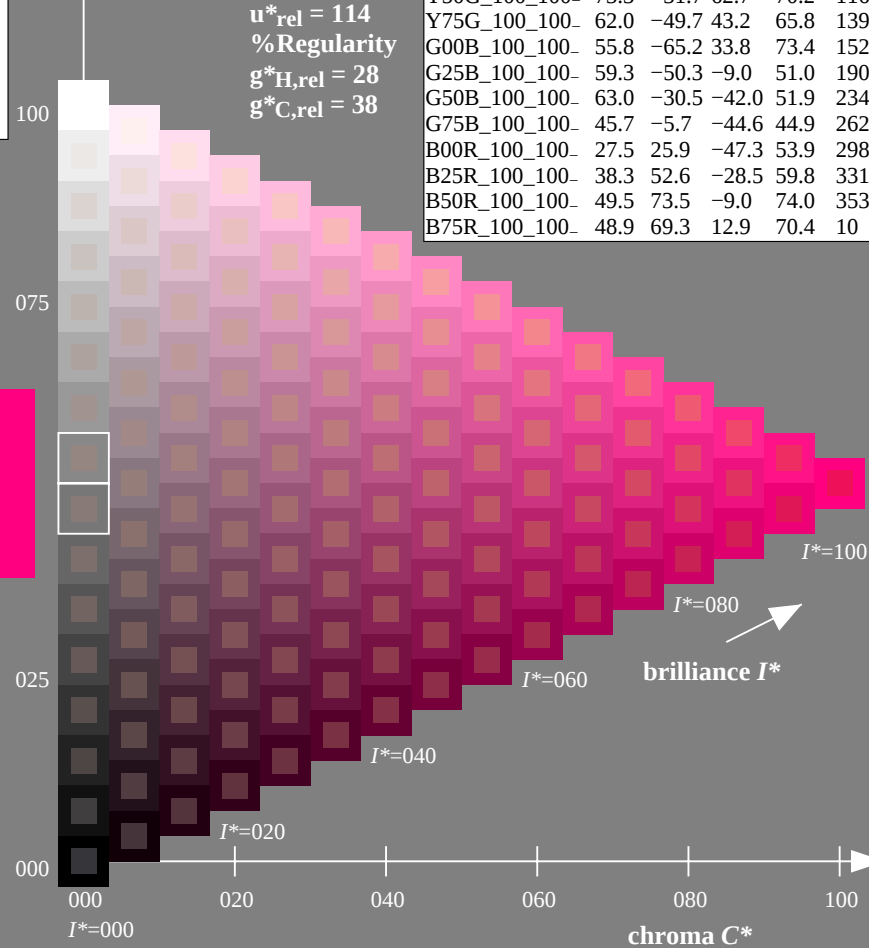
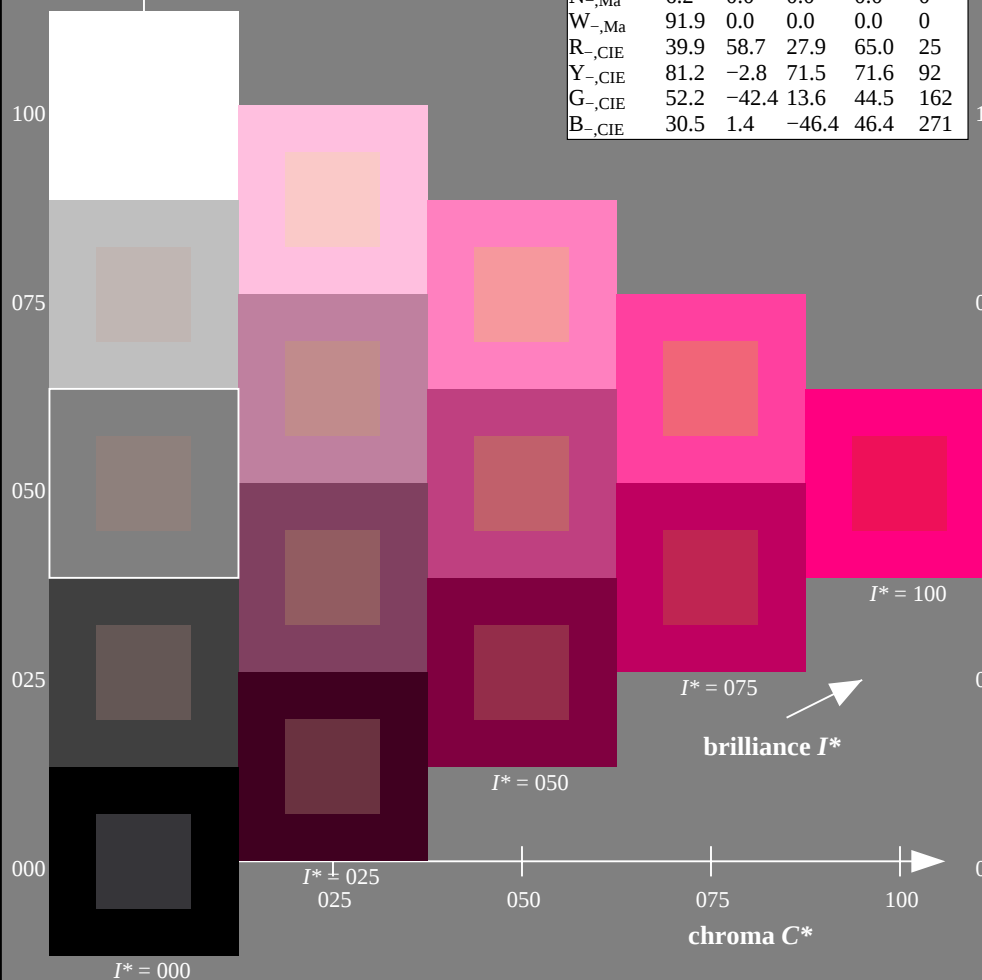
$g^*_{H,rel} = 28$

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

$H^*_- = B75R_-$

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 RE49; hue code: $H^*_- = B75R_-$
Test chart according to DIN 33872, 3D=1, de=1, cm^*k^*

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

TUB registration: 20150701-RE49/RE49L0FA.TXT /.PS
application for measurement of laser printer output

TUB material: code=rha4ta

Input and Output: Printer Reflective System FRS06a for relative CIELAB hue $h_{ab,a,rel} = h_{ab}/360 = 352/360 = 0.97$

$H^*_e = B75R_e$

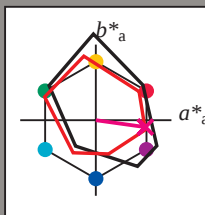
Data for any device (d) or elementary (e) colour:

HIC^*_e

hue text for the colours of this page:

$H^*_e = B75R_e$

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):

$LabCh^*_e, Ma$: 49 65 -9 66 352

HIC^*_e, Ma : B75R_100_100_e

$rgbic^*_e, Ma$:

1.0 0.0 0.82 1.0 1.0

triangle lightness T^*

% Gamut

$u^*_{rel} = 114$

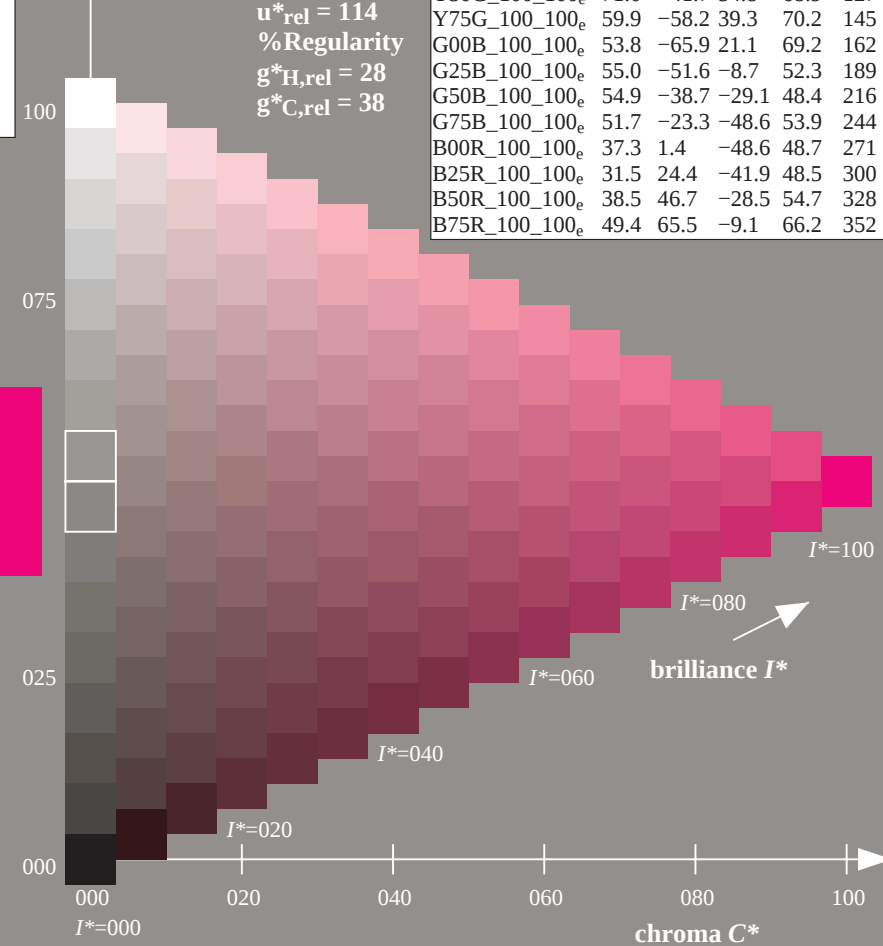
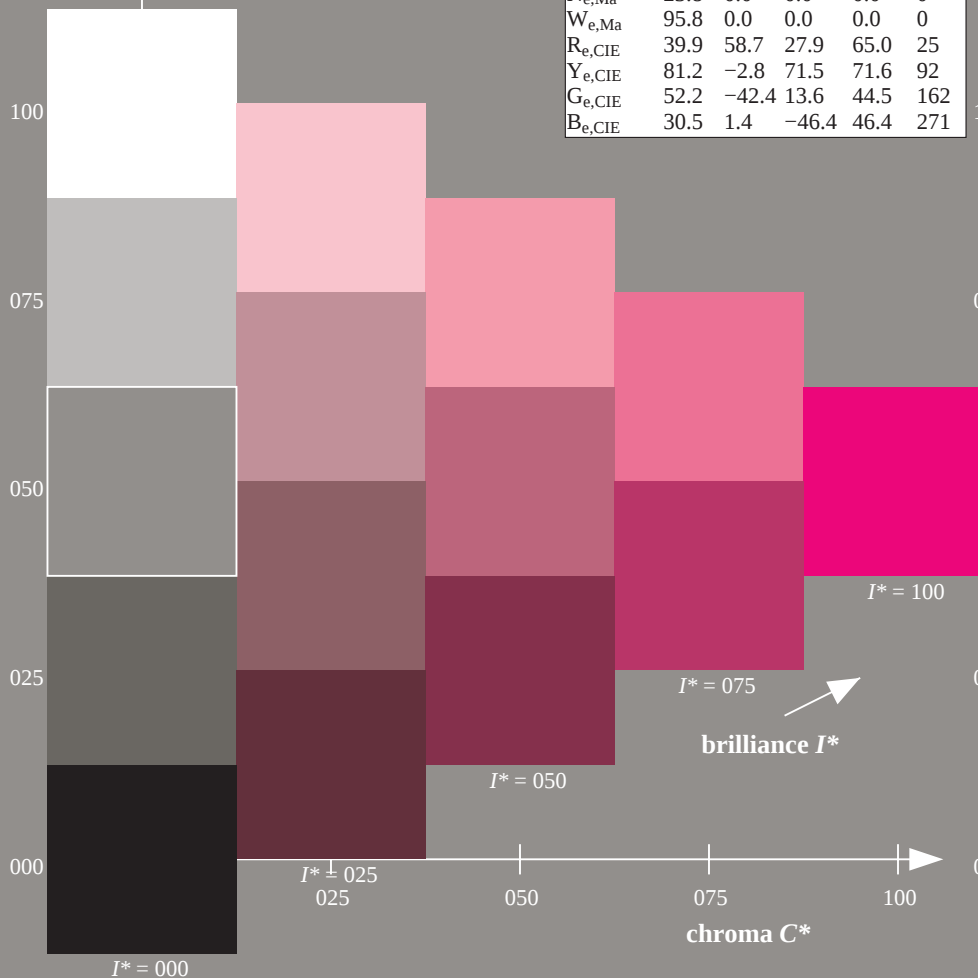
% Regularity

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

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

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



TUB-test chart RE49; hue code: $H^*_e = B75R_e$
Test chart according to DIN 33872, 3D=1, de=1, $cm\dot{y}k^*$

input: $rgb/cmyk \rightarrow rgb_{de}$
output: 3D-linearization to $cm\dot{y}k^*_{de}$

TUB registration: 20150701-RE49/RE49L0FA.TXT /.PS
application for measurement of laser printer output, separation $cm\dot{y}n\dot{b}^*$ (CMYK)

TUB material: code=rha4ta

Input and Output: Printer Reflective System FRS06a for relative CIELAB hue $h_{ab,a,rel} = h_{ab}/360 = 352/360 = 0.97$
Data for any device (d) or elementary (e) colour:
 HIC^*_e
hue text for the colours of this page:
 $H^*_e = B75R_e$
triangle lightness T^*

$H^*_e = B75R_e$

Data for maximum colour (Ma):

$LabCh^*_e, Ma$: 49 65 -9 66 352

HIC^*_e, Ma : B75R_100_100_e

$rgbic^*_e, Ma$:

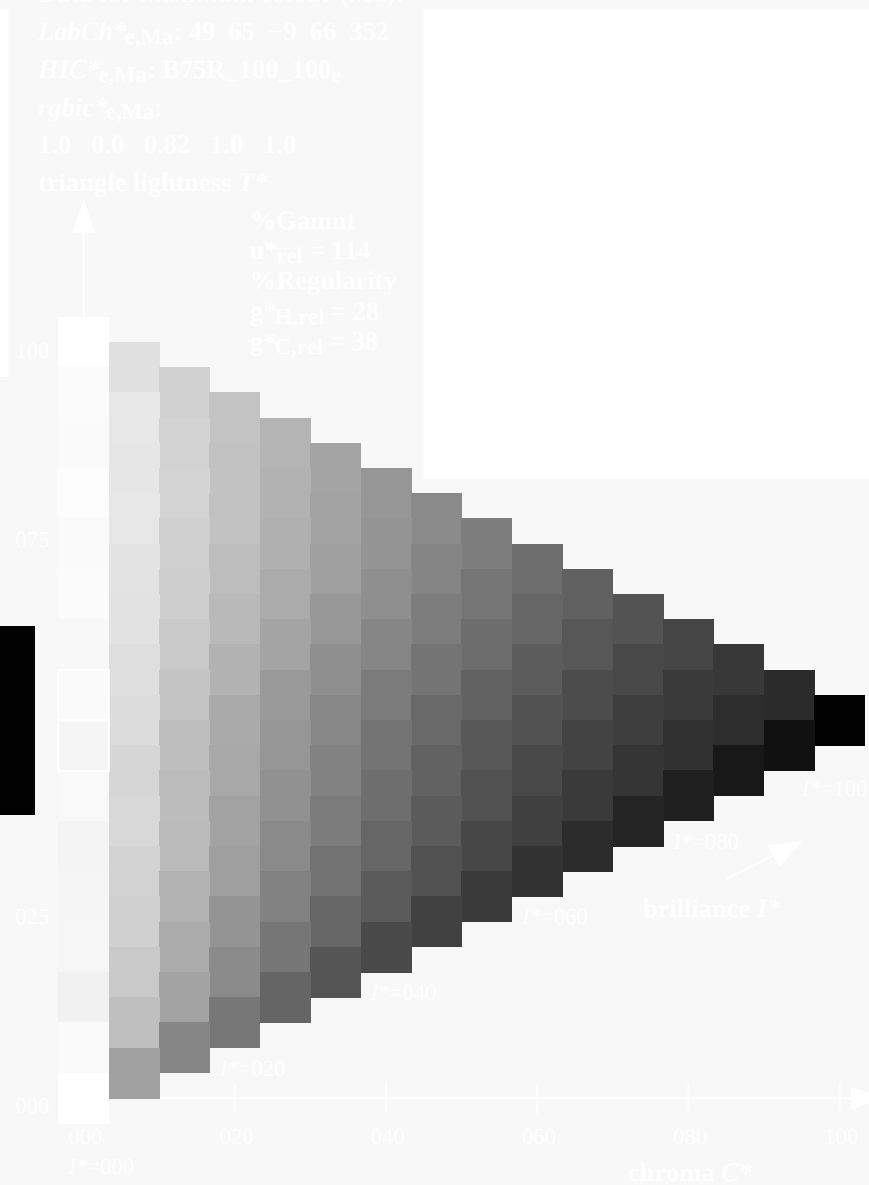
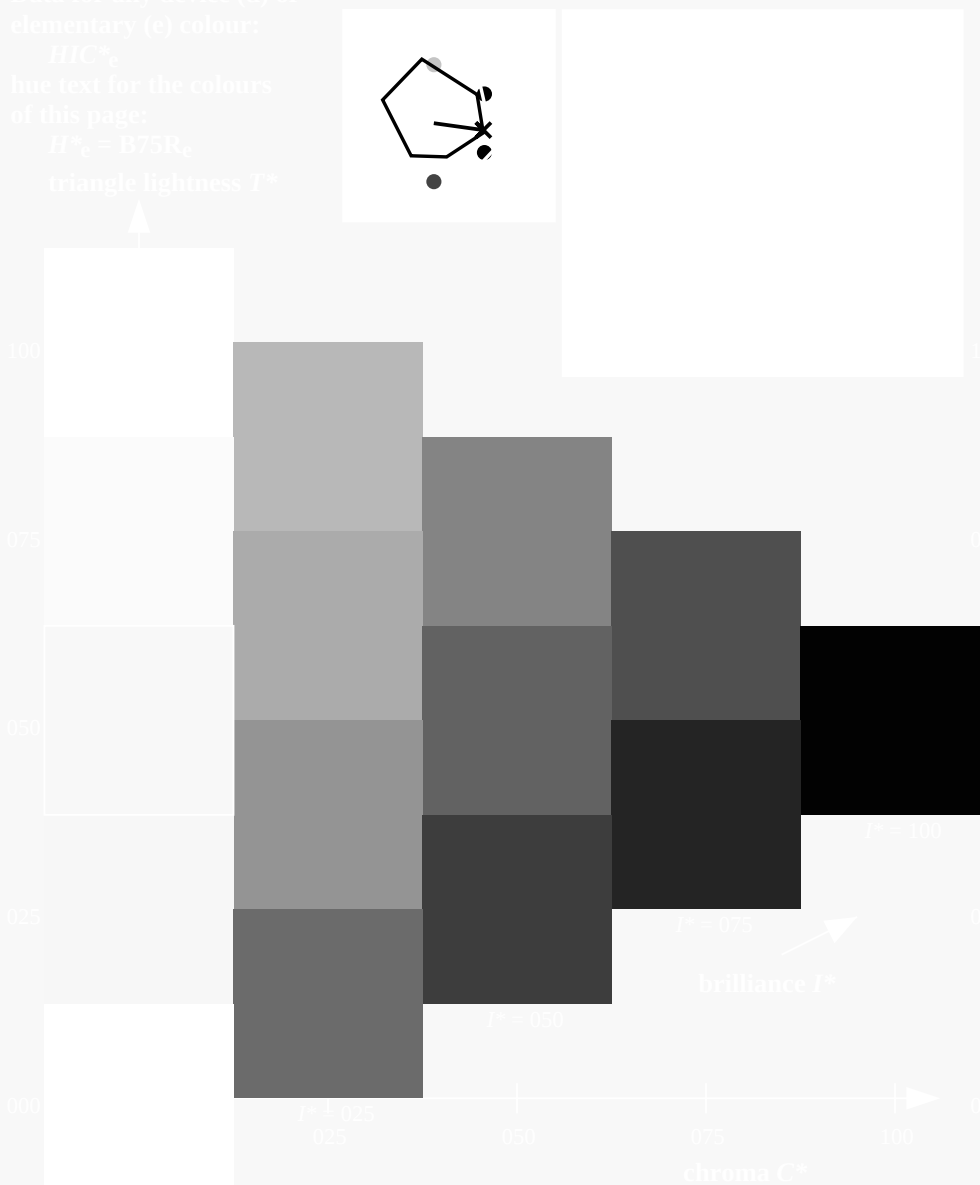
1.0 0.0 0.82 1.0 1.0

triangle lightness T^*

%Gamut
 $u^*_{rel} = 114$
%Regularity
 $g^*_{H,rel} = 26$
 $g^*_{C,rel} = 38$

see similar files: <http://130.149.60.45/~farbmetrik/RE49/RE49L0FA.TXT> /.PS
technical information: <http://www.ps.bam.de> or <http://130.149.60.45/~farbmetrik>

TUB registration: 20150701-RE49/RE49L0FA.TXT /.PS
application for measurement of laser printer output, separation $cmyn6^*$ (CMYK)
TUB material: code=rha4ta



1-113330-L0 RE490-73

TUB-test chart RE49; hue code: $H^*_e = B75R_e$
Test chart according to DIN 33872, 3D=1, de=1, $cmynk^*$

input: $rgb/cmyk \rightarrow rgb_{de}$
output: 3D-linearization to $cmynk^*_{de}$

Input and Output: Printer Reflective System FRS06a for relative CIELAB hue $h_{ab,a,rel} = h_{ab}/360 = 352/360 = 0.97$

$H^*_e = B75R_e$

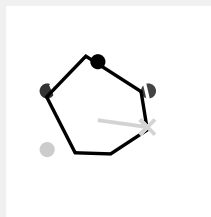
Data for any device (d) or elementary (e) colour:

HIC^*_e

hue text for the colours of this page:

$H^*_e = B75R_e$

triangle lightness T^*



Data for maximum colour (Ma):

$LabCh^*_{e, Ma}$: 49 65 -9 66 352

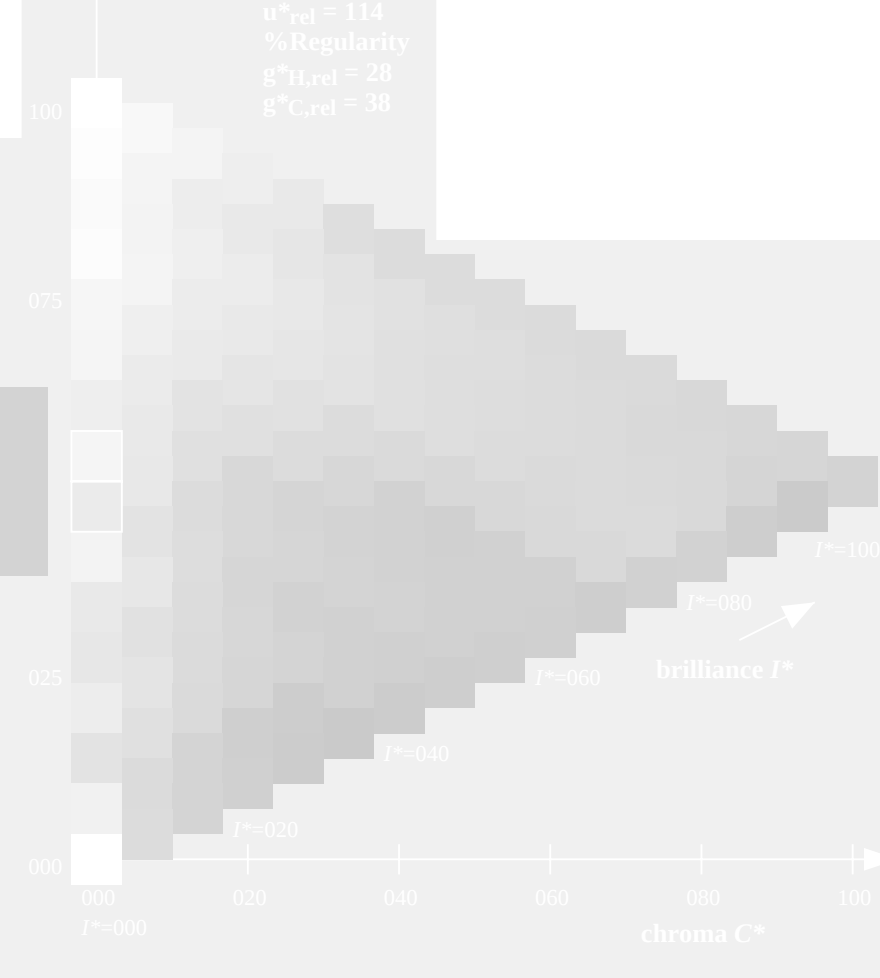
$HIC^*_{e, Ma}$: B75R_100_100_e

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

1.0 0.0 0.82 1.0 1.0

triangle lightness T^*

% Gamut
 $u^*_{rel} = 114$
% Regularity
 $g^*_{H, rel} = 28$
 $g^*_{C, rel} = 38$



TUB-test chart RE49; hue code: $H^*_e = B75R_e$
Test chart according to DIN 33872, 3D=1, de=1, $cm\dot{y}k^*$

input: $rgb/cmyk \rightarrow rgb_{de}$
output: 3D-linearization to $cm\dot{y}k^*_{de}$

Input and Output: Printer Reflective System FRS06a for relative CIELAB hue $h_{ab,a,rel} = h_{ab}/360 = 352/360 = 0.97$

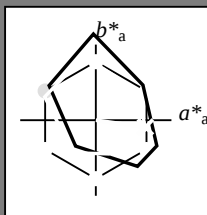
Data for any device (d) or elementary (e) colour:

HIC^*_e

hue text for the colours of this page:

$H^*_e = B75R_e$

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):

$LabCh^*_e, Ma: 49\ 65\ -9\ 66\ 352$

$HIC^*_e, Ma: B75R_100_100_e$

$rgbic^*_e, Ma:$

1.0 0.0 0.82 1.0 1.0

triangle lightness T^*

% Gamut

$u^*_{rel} = 114$

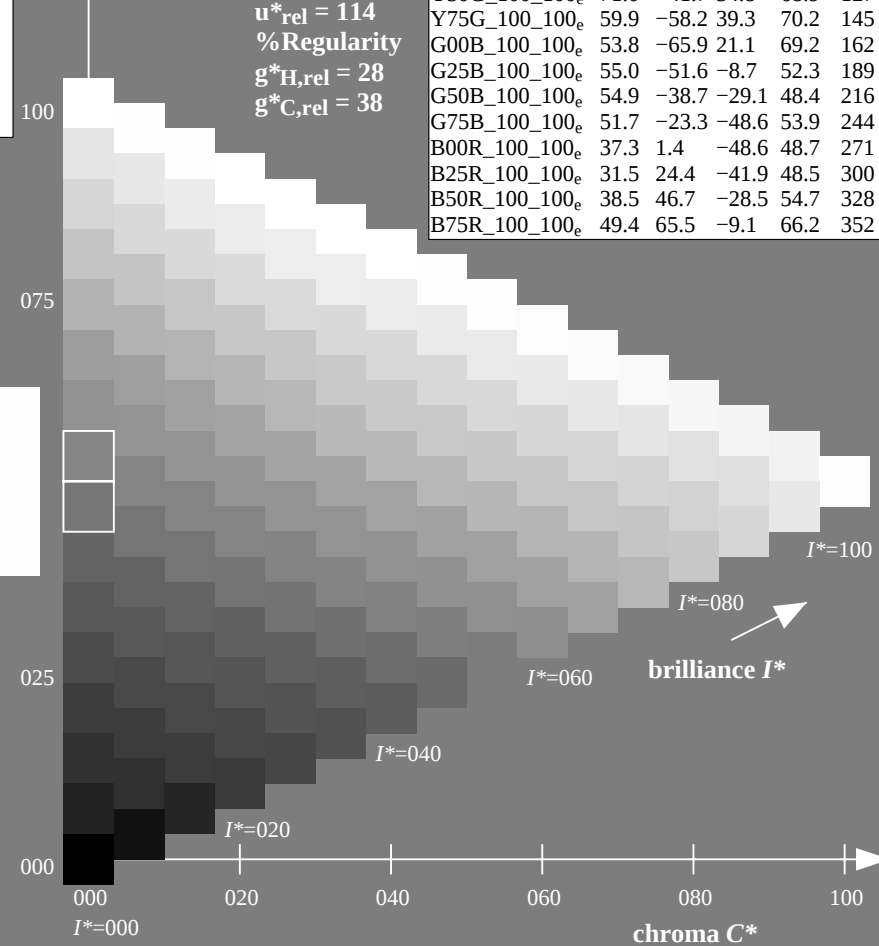
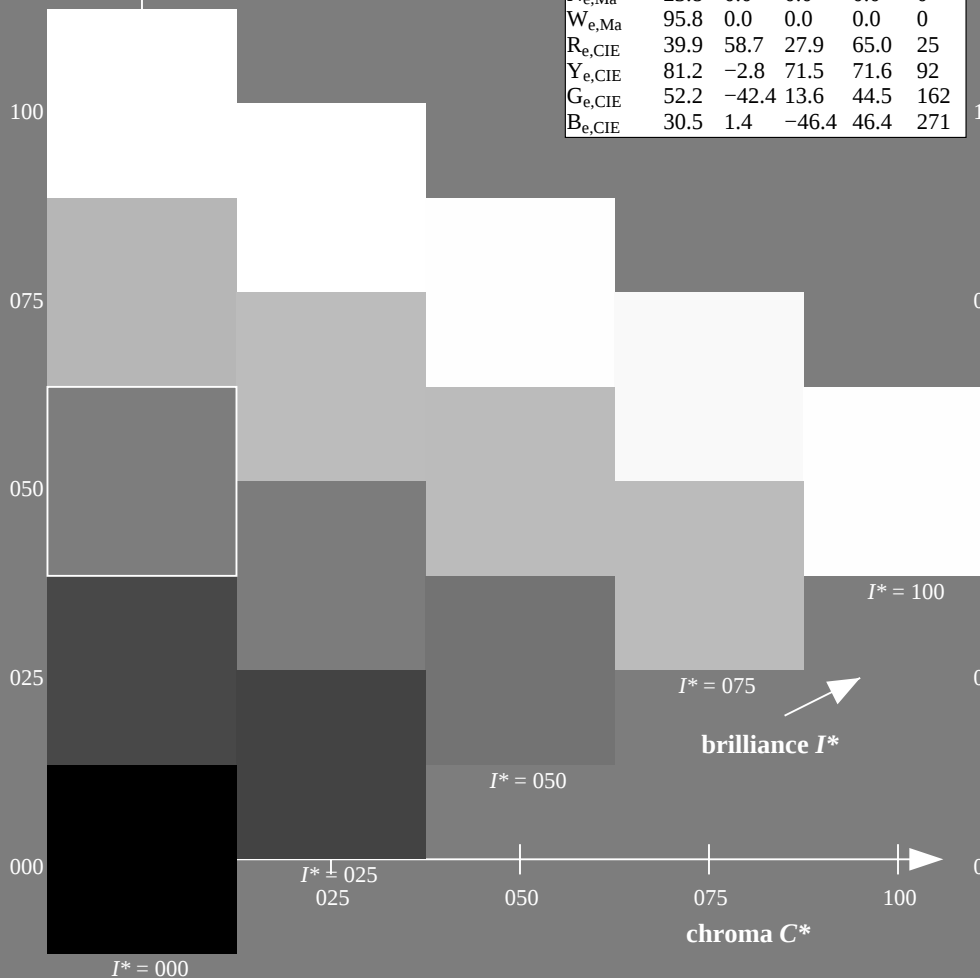
% Regularity

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

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

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



1-113530-L0 RE490-73

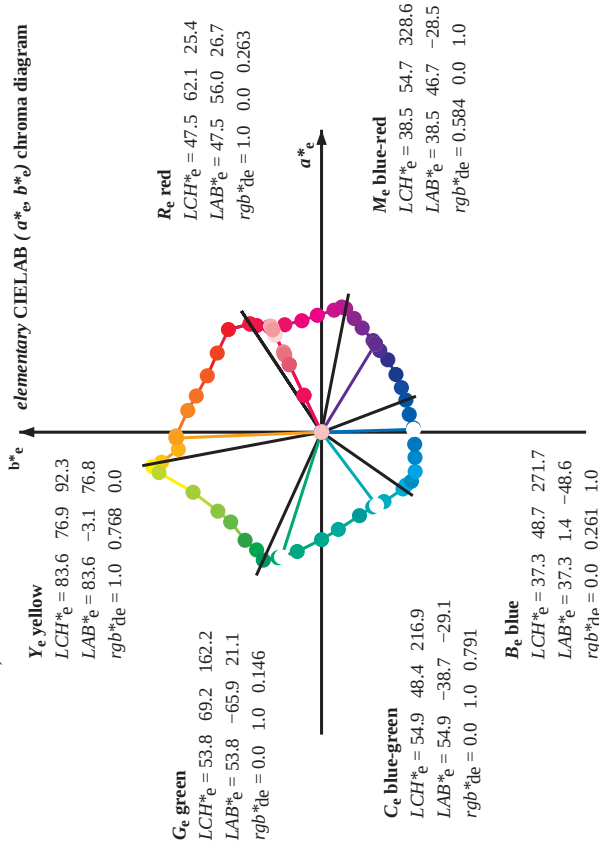
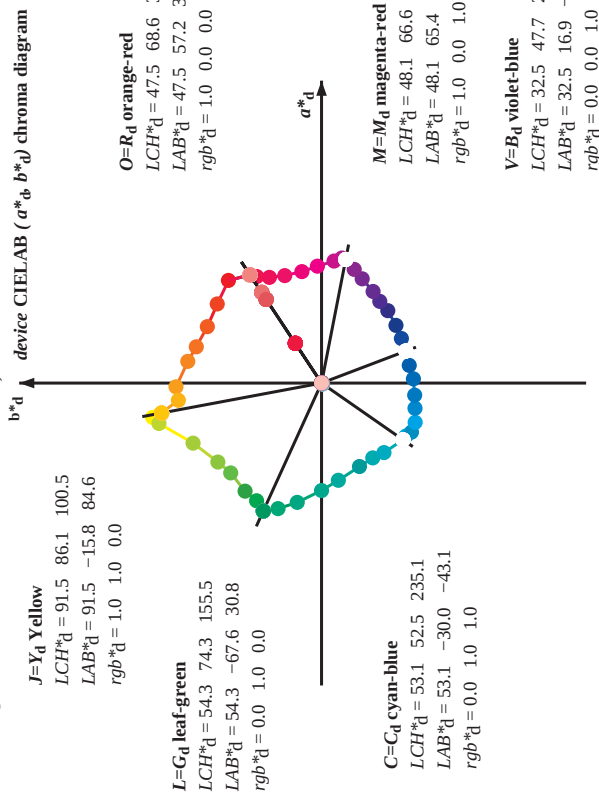
TUB-test chart RE49; hue code: $H^*_e = B75R_e$

Test chart according to DIN 33872, 3D=1, $de=1$, $cm\dot{y}k^*$

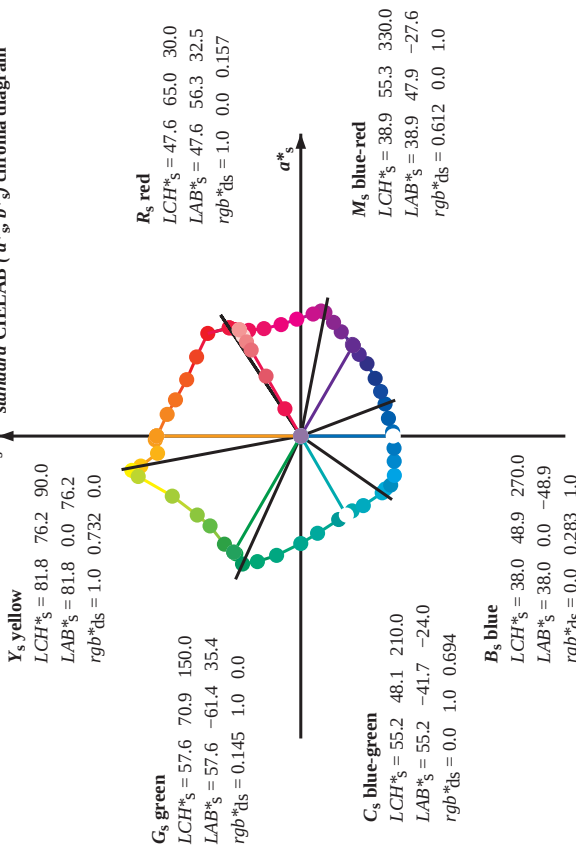
input: $rgb/cmyk \rightarrow rgb_{de}$

output: 3D-linearization to $cm\dot{y}k^*_{de}$

Data of Maximum color M in colorimetric system Laser printer output; separation cmyk*, D65 for input or output; Six hue angles of the 60 degree standard colours RYGBM; $h_{ab,d} = 30.0, 90.0, 150.0, 210.0, 270.0, 330.0$;
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^* , b^*) chroma diagram



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

- 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} 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} 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:

$$h_{48ab,si} = h_{ab,si} + j \left[\frac{h_{ab,si+1} - h_{ab,si}}{18} \right] \quad (i=0,1,...,5; j=0,1,...,7) \quad (2)$$

$$h_{360ab,sij} = h_{ab,si} + j \left[\frac{h_{ab,si+1} - h_{ab,si}}{60} \right] \quad (i=0,1,...,5; j=0,1,...,59) \quad (3)$$
- 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:

$$h_{48ab,eij} = h_{ab,ei} + j \left[\frac{h_{ab,ei+1} - h_{ab,ei}}{18} \right] \quad (i=0,1,...,5; j=0,1,...,7) \quad (4)$$

$$h_{360ab,eij} = h_{ab,ei} + j \left[\frac{h_{ab,ei+1} - h_{ab,ei}}{60} \right] \quad (i=0,1,...,5; j=0,1,...,59) \quad (5)$$
- 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.
- The values rgb^*_e produce the output of the device-independent elementary hues

LAB*_{ab}, 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 RE49; hue code: H*_e=B75R_e
48 step hue circles; $rgb-LabCh^*$ tables

input: $rgb/cmyk \rightarrow rgbde$
output: 3D-linearization to $cmyk^*_de$

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

Output: Laser printer output; separation cmyn6*, D65, page 9/33

see similar files: <http://130.149.60.45/~farbmatrik/RE49/RE49.HTM>
technical information: <http://www.ps.bam.de> or <http://130.149.60.45/~farbmatrik>

<http://130.149.60.45/~farbmatrik/RE49/RE49L0FA.TXT> /PS; 3D-linearization
F: 3D-linearization RE49/RE49LE30FA.DAT in file (F), page 11/33

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; $h_{ab,ds} = 30.0, 90.0, 150.0, 210.0, 270.0, 330.0$;

```

5.8,0.0,0.0
Output: Laser print
input: rgb/cmyk -> rgbde
output: 3D-linearization to cmyk* de

```

LAB*la0, YN=0%, XYZnw=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

RE490-73 LAB*1a0, YN=0%, XYZnw=3.9, 4.1, 4.1, 84.7, 89.6, 93.9, 100.0
TUB-test chart RE49; hue code: H*_e=B75R_e

1-1131030-L0

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

<http://130.149.60.45/~farbmatrik/RE49/RE49LOFA.TXT> /PS; 3D-linearization
 RE49/RE49LE30FA.DAT in file (F), page 13/33

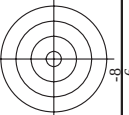
```

3.8, 0.0, 0.0
Output: Laser print
input: rgb/cmyk -> rgbde
output: 3D-linearization to cmyk*de

```

LAB*a0, YN=0%, XYZnw=3.9, 4.1, 4.1, 84.7, 89.6, 93.9, RE490-73

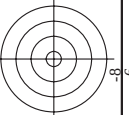
[illegible]



TUB material: code=rha4ta
cmyn6* (CMYK)

input: $rgb/cmyk \rightarrow rgb_{de}$
output: 3D-linearization to $cmyk^*_{de}$

n-j	HIC*Fde	rgb_Fde	lcr_Fde	hsa_Fde	rgb*Fde	LabCh*Fde	cmym*sep_Fde	cmym*Fde	hsa*Fde	rgb*Fde	LabCh*Fde	delta
0	0	0	0	0	0	0	0	0	0	0	0	0
1	NW_000r_012_012de	360	0.0	0.0	0.0	23.8	0.0	0.0	1.0	1.0	95.8	0.0
2	B00R_012_012de	270	0.0	0.032 0.125	25.5	0.1	-6.0	6.0	0.0	0.0	271.7	0.0
3	B00R_025_025de	270	0.0	0.065 0.25	27.2	0.3	-12.1	12.1	0.0	0.0	271.7	0.0
4	B00R_037_037de	270	0.0	0.097 0.375	28.8	0.5	-18.2	18.2	0.0	0.0	271.7	0.0
5	B00R_050_050de	270	0.0	0.13 0.5	30.5	0.7	-24.3	24.3	0.0	0.0	271.7	0.0
6	B00R_062_062de	270	0.0	0.163 0.625	32.2	0.9	-30.4	30.4	0.0	0.0	271.7	0.0
7	B00R_075_075de	270	0.0	0.195 0.75	33.9	1.1	-36.5	36.5	0.0	0.0	271.7	0.0
8	B00R_087_087de	270	0.0	0.228 0.875	35.6	1.2	-42.6	42.6	0.0	0.0	271.7	0.0
9	B00R_100_100de	270	0.0	0.261 1.0	37.3	1.4	-48.6	48.7	0.0	0.0	271.7	0.0
10	G00B_012_012de	150	0.0	0.125 0.125	27.0	0.0	8.2	8.6	0.0	0.0	146.6	53.8
11	G50B_012_012de	240	0.0	0.125 0.125	27.0	-4.8	-3.6	6.0	0.125	0.0	93.5	-65.9
12	G75B_012_012de	240	0.0	0.171 0.25	30.8	-5.8	-12.1	13.4	0.244	0.0	93.5	-38.7
13	G84B_037_037de	251	0.0	0.19 0.375	32.3	-5.1	-18.5	19.2	0.244	0.0	93.5	-46.4
14	G88B_050_050de	256	0.0	0.217 0.5	33.7	-4.8	-24.7	25.1	0.244	0.0	93.5	-49.4
15	G88B_062_062de	259	0.0	0.244 0.625	35.1	-4.5	-30.9	31.1	0.244	0.0	93.5	-49.4
16	G92B_075_075de	261	0.0	0.273 0.75	36.7	-4.1	-36.9	37.1	0.244	0.0	93.5	-49.4
17	G94B_087_087de	262	0.0	0.308 0.875	38.5	-4.1	-43.1	43.4	0.244	0.0	93.5	-49.4
18	G94B_100_100de	263	0.0	0.341 1.0	40.1	-4.0	-49.2	49.4	0.244	0.0	93.5	-49.4
19	G00B_025_025de	150	0.0	0.25 0.125	31.3	-16.4	5.2	17.3	0.166	0.0	348.4	65.9
20	G25B_025_025de	180	0.0	0.25 0.125	31.6	-12.9	-2.1	13.0	0.166	0.0	348.4	65.9
21	G50B_025_025de	210	0.0	0.25 0.125	31.6	-9.6	-7.2	12.1	0.166	0.0	348.4	65.9
22	G50B_037_037de	229	0.0	0.375 0.375	37.2	-11.4	-13.9	14.3	0.166	0.0	348.4	65.9
23	G75B_037_037de	247	0.0	0.375 0.375	37.7	-11.6	-24.3	24.8	0.166	0.0	348.4	65.9
24	G84B_050_050de	254	0.0	0.34 0.5	38.2	-10.3	-37.0	38.3	0.166	0.0	348.4	65.9
25	G88B_050_050de	254	0.0	0.38 0.5	39.5	-10.3	-43.4	43.7	0.166	0.0	348.4	65.9
26	G88B_062_062de	256	0.0	0.406 0.625	41.6	-9.6	-49.4	50.3	0.166	0.0	348.4	65.9
27	G92B_075_075de	259	0.0	0.434 0.75	43.6	-9.6	-55.9	56.8	0.166	0.0	348.4	65.9
28	G94B_087_087de	150	0.0	0.375 0.375	35.0	-24.7	7.9	25.9	0.166	0.0	348.4	65.9
29	G94B_037_037de	169	0.0	0.375 0.375	35.4	-21.4	0.1	21.4	0.166	0.0	348.4	65.9
30	G34B_037_037de	191	0.0	0.375 0.375	35.6	-17.5	-6.2	18.6	0.166	0.0	348.4	65.9
31	G61											



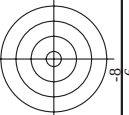
TUB material: code=rha4ta
cmyn6* (CMYK)

input: $rgb/cmyk \rightarrow rgb_{de}$
output: 3D-linearization to $cmyk^*_{de}$

output: 3D-linearization to $\text{cmyk}^*_{\text{de}}$

1-1132030-E0

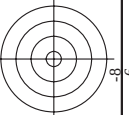
[illegible]



TUB material: code=rha4ta
cmyn6* (CMYK)

input: $rgb/cmyk \rightarrow rgb_{de}$
output: $3D\text{-linearization to } cmyk^*_{de}$

TUB-test chart RE49; hue code: $H^*_e=B75R_e$
colors and differences, ΔE^*

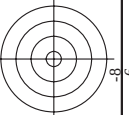


TUB material: code=rha4ta
cmyn6* (CMYK)

input: $rgb/cmyk \rightarrow rgb_{de}$
output: 3D-linearization to $cmyk^*_{de}$

TUB-test chart RE49; hue code: $H^*_e=B75R_e$
colors and differences, ΔE^*

[illegible]

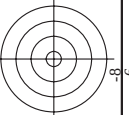


TUB material: code=rha4ta
cmyn6* (CMYK)

input: *rgb/cmyk* $\rightarrow$ *rgb*_{de}
output: *3D-linearization to cmyk*_{de}

RE490-7N, Page 24/33-F

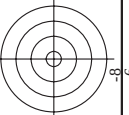
[illegible]



TUB material: code=rha4ta
cmyn6* (CMYK)

input: $rgb/cmyk \rightarrow rgb_{de}$
output: 3D-linearization to $cmyk^*_{de}$

1-113240-F0	RE490-7N, Page 25/33-F	
	TUB-test chart RE49; hue code: $H^*_e = B75R_e$ colors and differences, $\Delta E'^*$	
	input: $rgb/cmyk \rightarrow rgb_{de}$ output: 3D-linearization to $cmyk^*_{de}$	

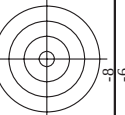


TUB material: code=rha4ta
cmyn6* (CMYK)

input: *rgb/cmyk* $\rightarrow$ *rgb*_{de}
output: 3D-linearization to *cmyk*_{de}

RE490-7N, Page 27/33-F

<i>n</i>	<i>HIC^z_{Fde}</i>	<i>rgb^z_{Fde}</i>	<i>lct^z_{Fde}</i>	<i>h_g^z_{Fde}</i>	<i>rgb^z_{Fde}</i>	<i>LabCh^z_{Fde}</i>	<i>cmym^z_{supFde}</i>	<i>h_{sd}^z_{Fde}</i>	<i>rgb^z_{Mid}</i>	<i>LabCh^z_{Mid}</i>	<i>delta</i>
567	R00Y.087.087 _{Fde}	0.875	0.0	0.875	0.875	0.437	390	23.3	54.5	62.1	25.4
568	R36Y.087.087 _{Fde}	0.875	0.0	0.875	0.875	0.437	382	52.3	52.3	26.7	62.1
569	R23Y.087.087 _{Fde}	0.875	0.0	0.875	0.875	0.437	374	52.9	52.9	17.1	60.0
570	R08Y.087.087 _{Fde}	0.875	0.0	0.875	0.875	0.437	365	55.5	55.5	8.0	60.4
571	B70R.087.087 _{Fde}	0.875	0.0	0.875	0.875	0.437	355	57.2	57.2	63.4	7.6
572	B70R.087.087 _{Fde}	0.875	0.0	0.875	0.875	0.437	346	52.5	52.5	63.5	357.6
573	B56R.087.087 _{Fde}	0.875	0.0	0.875	0.875	0.437	338	46.2	46.2	65.4	8.8
574	B50R.087.087 _{Fde}	0.875	0.0	0.875	0.875	0.437	330	46.4	46.4	62.5	343.7
575	B44R.100.100 _{Fde}	0.875	0.0	0.875	0.875	0.437	323	40.9	40.9	53.1	28.4
576	R13Y.087.087 _{Fde}	0.875	0.0	0.875	0.875	0.437	318	36.6	36.6	46.7	328.6
577	R13Y.087.087 _{Fde}	0.875	0.0	0.875	0.875	0.437	310	41.4	41.4	32.4	52.6
578	R00Y.087.075 _{Fde}	0.875	0.0	0.875	0.875	0.437	308	45.8	45.8	56.0	62.1
579	R18Y.087.075 _{Fde}	0.875	0.0	0.875	0.875	0.437	300	45.4	45.4	15.4	25.4
580	R00Y.087.075 _{Fde}	0.875	0.0	0.875	0.875	0.437	295	45.4	45.4	61.2	4.3
581	B65R.087.075 _{Fde}	0.875	0.0	0.875	0.875	0.437	290	45.4	45.4	61.2	4.3
582	B57R.087.075 _{Fde}	0.875	0.0	0.875	0.875	0.437	285	45.4	45.4	61.2	4.3
583	B43R.100.087 _{Fde}	0.875	0.0	0.875	0.875	0.437	282	45.4	45.4	61.2	4.3
584	R26Y.087.075 _{Fde}	0.875	0.0	0.875	0.875	0.437	277	45.4	45.4	61.2	4.3
585	R16Y.087.075 _{Fde}	0.875	0.0	0.875	0.875	0.437	272	45.4	45.4	61.2	4.3
586	R16Y.087.075 _{Fde}	0.875	0.0	0.875	0.875	0.437	267	45.4	45.4	61.2	4.3
587	R11Y.087.062 _{Fde}	0.875	0.0	0.875	0.875	0.437	262	45.4	45.4	61.2	4.3
588	R00Y.087.062 _{Fde}	0.875	0.0	0.875	0.875	0.437	257	45.4	45.4	61.2	4.3
589	R00Y.087.062 _{Fde}	0.875	0.0	0.875	0.875	0.437	252	45.4	45.4	61.2	4.3
590	B69R.087.062 _{Fde}	0.875	0.0	0.875	0.875	0.437	247	45.4	45.4	61.2	4.3
591	B59R.087.062 _{Fde}	0.875	0.0	0.875	0.875	0.437	242	45.4	45.4	61.2	4.3
592	B50R.087.062 _{Fde}	0.875	0.0	0.875	0.875	0.437	237	45.4	45.4	61.2	4.3
593	B42R.100.075 _{Fde}	0.875	0.0	0.875	0.875	0.437	232	45.4	45.4	61.2	4.3
594	R41Y.087.075 _{Fde}	0.875	0.0	0.875	0.875	0.437	227	45.4	45.4	61.2	4.3
595	R31Y.087.075 _{Fde}	0.875	0.0	0.875	0.875	0.437	222	45.4	45.4	61.2	4.3
596	R18Y.087.062 _{Fde}	0.875	0.0	0.875	0.875	0.437	217	45.4	45.4	61.2	4.3
597	R00Y.087.062 _{Fde}	0.875	0.0	0.875	0.875						



TUB material: code=rha4ta
cmyn6* (CMYK)

input: $rgb/cmyk \rightarrow rgb_{de}$
output: 3D-linearization to $cmyk^*_{de}$

1-1132930-F0

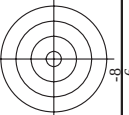
RE490-7N, Page 30/33-F

TUB-test chart RE49; hue code: H*_e=B75R_e

input: *rgb/cmyk* - > *rgb*_{de}
output: 3D-linearization to *cmyk**_{de}

colors and differences, ΔE^*

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100



TUB material: code=rha4ta
cmyn6* (CMYK)

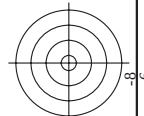
input: *rgb/cmyk* $\rightarrow$ *rgb*_{de}
output: 3D-linearization to *cmyk**_{de}

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1-1133130-F0

see similar files: <http://130.149.60.45/~farbmetrik/RE49/RE49.HTM>
technical information: <http://www.ps.bam.de> or <http://130.149.60.45/~farbmetrik>

λ	HIC*Fide	rgb_Fide	icr_Fide	hsa_Fide	rgb*Fide	LabCh*Fide	cmvny*sep_Fide	hsa_Nde	rgb_Nde	LabCh*Nde	delta
9772	NW_0004e	0.0	0.0	0.0	0.0	360	0.0	0.0	0.0	0.0	0.0
9773	NW_0124e	0.125	0.125	0.125	0.125	360	0.0	0.0	0.0	0.0	0.0
9774	NW_0254e	0.25	0.25	0.25	0.25	360	0.0	0.0	0.0	0.0	0.0
9775	NW_0374e	0.375	0.375	0.375	0.375	360	0.0	0.0	0.0	0.0	0.0
9776	NW_0504e	0.5	0.5	0.5	0.5	360	0.0	0.0	0.0	0.0	0.0
9777	NW_0624e	0.625	0.625	0.625	0.625	360	0.0	0.0	0.0	0.0	0.0
9778	NW_0754e	0.75	0.75	0.75	0.75	360	0.0	0.0	0.0	0.0	0.0
9779	NW_0874e	0.875	0.875	0.875	0.875	360	0.0	0.0	0.0	0.0	0.0
980	NW_1004e	1.0	1.0	1.0	1.0	360	0.0	0.0	0.0	0.0	0.0
981	NW_0004e	0.0	0.0	0.0	0.0	360	0.0	0.0	0.0	0.0	0.0
982	NW_0124e	0.125	0.125	0.125	0.125	360	0.0	0.0	0.0	0.0	0.0
983	NW_0254e	0.25	0.25	0.25	0.25	360	0.0	0.0	0.0	0.0	0.0
984	NW_0374e	0.375	0.375	0.375	0.375	360	0.0	0.0	0.0	0.0	0.0
985	NW_0504e	0.5	0.5	0.5	0.5	360	0.0	0.0	0.0	0.0	0.0
986	NW_0624e	0.625	0.625	0.625	0.625	360	0.0	0.0	0.0	0.0	0.0
987	NW_0754e	0.75	0.75	0.75	0.75	360	0.0	0.0	0.0	0.0	0.0
988	NW_0874e	0.875	0.875	0.875	0.875	360	0.0	0.0	0.0	0.0	0.0
989	NW_1004e	1.0	1.0	1.0	1.0	360	0.0	0.0	0.0	0.0	0.0
990	NW_0004e	0.0	0.0	0.0	0.0	360	0.0	0.0	0.0	0.0	0.0
991	NW_0124e	0.125	0.125	0.125	0.125	360	0.0	0.0	0.0	0.0	0.0
992	NW_0254e	0.25	0.25	0.25	0.25	360	0.0	0.0	0.0	0.0	0.0
993	NW_0374e	0.375	0.375	0.375	0.375	360	0.0	0.0	0.0	0.0	0.0
994	NW_0504e	0.5	0.5	0.5	0.5	360	0.0	0.0	0.0	0.0	0.0
995	NW_0624e	0.625	0.625	0.625	0.625	360	0.0	0.0	0.0	0.0	0.0
996	NW_0754e	0.75	0.75	0.75	0.75	360	0.0	0.0	0.0	0.0	0.0
997	NW_0874e	0.875	0.875	0.875	0.875	360	0.0	0.0	0.0	0.0	0.0
998	NW_1004e	1.0	1.0	1.0	1.0	360	0.0	0.0	0.0	0.0	0.0
999	NW_0004e	0.0	0.0	0.0	0.0	360	0.0	0.0	0.0	0.0	0.0
1000	NW_0124e	0.125	0.125	0.125	0.125	360	0.0	0.0	0.0	0.0	0.0
1001	NW_0254e	0.25	0.25	0.25	0.25	360	0.0	0.0	0.0	0.0	0.0
1002	NW_0374e	0.375	0.375	0.375	0.375	360	0.0	0.0	0.0	0.0	0.0
1003	NW_0504e	0.5	0.5	0.5	0.5	360	0.0	0.0	0.0	0.0	0.0
1004	NW_0624e	0.625	0.625	0.625	0.625	360	0.0	0.0	0.0	0.0	0.0
1005	NW_0754e	0.75	0.75	0.75	0.75	360	0.0	0.0	0.0	0.0	0.0
1006	NW_0874e	0.875	0.875	0.875	0.875	360	0.0	0.0	0.0	0.0	0.0
1007	NW_1004e	1.0	1.0	1.0	1.0	360	0.0	0.0	0.0	0.0	0.0
1008	NW_0004e	0.0	0.0	0.0	0.0	360					



TUB material: code=rha4ta
cmyn6* (CMYK)

input: $rgb/cmyk \rightarrow rgb_{de}$
output: 3D-linearization to $cmyk^*_{de}$

TUB-test chart RE49; hue code: $H_e^* = B75R_e$
colors and differences, ΔE^*

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-1133230-F0

id	HC*	Fide	rgb_Fide	ict_Fide	hsa_Fide	rgb*			LabCh*			Fide	hsa.de	rgb* _{Med}	LabCh* _{Med}	delta				
						0.866	0.866	0.866	0.866	0.866	0.866									
1053	NW_086de	0.866	0.866	0.866	0.866	360	0.866	0.866	0.866	86.1	0.0	0.0	0.0	360	1.0	1.0	95.8	0.0	0.0	0.0
1054	NW_093de	0.933	0.933	0.933	0.933	360	0.933	0.933	0.933	91.0	0.0	0.0	0.0	360	1.0	1.0	95.8	0.0	0.0	0.0
1055	NW_100de	1.0	1.0	1.0	1.0	360	1.0	1.0	1.0	95.8	0.0	0.0	0.0	360	1.0	1.0	95.8	0.0	0.0	0.0
1056	NW_000de	0.0	0.0	0.0	0.0	360	0.0	0.0	0.0	23.8	0.0	0.0	0.0	360	1.0	1.0	95.8	0.0	0.0	0.0
1057	NW_006de	0.066	0.066	0.066	0.066	360	0.066	0.066	0.066	28.6	0.0	0.0	0.0	360	1.0	1.0	95.8	0.0	0.0	0.0
1058	NW_013de	0.133	0.133	0.133	0.133	360	0.133	0.133	0.133	33.4	0.0	0.0	0.0	360	1.0	1.0	95.8	0.0	0.0	0.0
1059	NW_020de	0.2	0.2	0.2	0.2	360	0.2	0.2	0.2	38.2	0.0	0.0	0.0	360	1.0	1.0	95.8	0.0	0.0	0.0
1060	NW_026de	0.266	0.266	0.266	0.266	360	0.266	0.266	0.266	42.9	0.0	0.0	0.0	360	1.0	1.0	95.8	0.0	0.0	0.0
1061	NW_033de	0.333	0.333	0.333	0.333	360	0.333	0.333	0.333	47.8	0.0	0.0	0.0	360	1.0	1.0	95.8	0.0	0.0	0.0
1062	NW_040de	0.4	0.4	0.4	0.4	360	0.4	0.4	0.4	52.6	0.0	0.0	0.0	360	1.0	1.0	95.8	0.0	0.0	0.0
1063	NW_046de	0.466	0.466	0.466	0.466	360	0.466	0.466	0.466	57.3	0.0	0.0	0.0	360	1.0	1.0	95.8	0.0	0.0	0.0
1064	NW_053de	0.533	0.533	0.533	0.533	360	0.533	0.533	0.533	62.2	0.0	0.0	0.0	360	1.0	1.0	95.8	0.0	0.0	0.0
1065	NW_060de	0.6	0.6	0.6	0.6	360	0.6	0.6	0.6	67.0	0.0	0.0	0.0	360	1.0	1.0	95.8	0.0	0.0	0.0
1066	NW_066de	0.666	0.666	0.666	0.666	360	0.666	0.666	0.666	71.7	0.0	0.0	0.0	360	1.0	1.0	95.8	0.0	0.0	0.0
1067	NW_073de	0.734	0.734	0.734	0.734	360	0.734	0.734	0.734	76.6	0.0	0.0	0.0	360	1.0	1.0	95.8	0.0	0.0	0.0
1068	NW_080de	0.8	0.8	0.8	0.8	360	0.8	0.8	0.8	81.4	0.0	0.0	0.0	360	1.0	1.0	95.8	0.0	0.0	0.0
1069	NW_086de	0.866	0.866	0.866	0.866	360	0.866	0.866	0.866	86.1	0.0	0.0	0.0	360	1.0	1.0	95.8	0.0	0.0	0.0
1070	NW_093de	0.933	0.933	0.933	0.933	360	0.933	0.933	0.933	91.0	0.0	0.0	0.0	360	1.0	1.0	95.8	0.0	0.0	0.0
1071	NW_100de	1.0	1.0	1.0	1.0	360	1.0	1.0	1.0	95.8	0.0	0.0	0.0	360	1.0	1.0	95.8	0.0	0.0	0.0
1072	NW_000de	0.0	0.0	0.0	0.0	360	0.0	0.0	0.0	23.8	0.0	0.0	0.0	360	1.0	1.0	95.8	0.0	0.0	0.0
1073	NW_006de	1.0	1.0	1.0	1.0	360	1.0	1.0	1.0	95.8	0.0	0.0	0.0	360	1.0	1.0	95.8	0.0	0.0	0.0
1074	R00Y_100_100de	1.0	0.0	0.0	1.0	0.5	390	1.0	0.0	0.263	47.5	56.0	26.7	375	1.0	0.0	0.263	47.5	56.0	25.4
1075	G50R_100_100de	0.0	1.0	1.0	1.0	0.5	210	0.0	1.0	0.791	54.9	-38.7	-29.1	198	0.0	1.0	0.791	54.9	-38.7	216.9
1076	Y00C_100_100de	1.0	1.0	1.0	1.0	0.5	90	1.0	0.768	0.0	83.6	-3.1	76.8	77	1.0	0.768	0.0	83.6	-3.1	92.3
1077	B00R_100_100de	0.0	0.0	1.0	1.0	0.5	270	0.0	0.261	1.0	37.3	1.4	-48.6	255	0.0	0.261	1.0	37.3	1.4	271.7
1078	G00E_100_100de	0.0	1.0	1.0	1.0	0.5	150	0.0	1.0	0.146	53.8	-65.9	21.1	157	0.0	1.0	0.146	53.8	-65.9	162.2
1079	B50R_100_100de	1.0	0.0	1.0	1.0	0.5	330	0.584	0.0	1.0	38.5	46.7	-28.5	305	0.584	0.0	1.0	38.5	46.7	328.6