

Input and Output: Offset Reflective System ORS18a for relative CIELAB hue $h_{ab,a,rel} = h_{ab}/360 = 68/360 = 0.19$

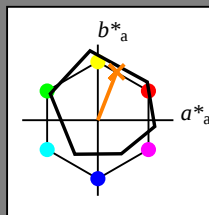
Data for any device (d) or elementary (e) colour:

HIC^*_-

hue text for the colours of this page:

$H^*_- = R50Y_-$

triangle lightness T^*



ORS18a; adapted (a) CIELAB data					
name	$L^*=L^*_a a^*_a$	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$	
R ₋ ,Ma	47.9	65.3	50.5	82.6	37
Y ₋ ,Ma	90.3	-10.2	91.7	92.3	96
G ₋ ,Ma	50.9	-62.8	34.9	71.9	150
C ₋ ,Ma	58.6	-30.3	-45.0	54.2	236
B ₋ ,Ma	25.7	31.0	-44.4	54.2	305
M ₋ ,Ma	48.1	75.2	-8.3	75.7	353
N ₋ ,Ma	18.0	0.0	0.0	0.0	0
W ₋ ,Ma	95.4	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: 68 25 63 68 68

HIC^*_- ,Ma: R50Y_100_100_

$rgbic^*_-$,Ma:

1.0 0.5 0.0 1.0 1.0

triangle lightness T^*

% Gamut

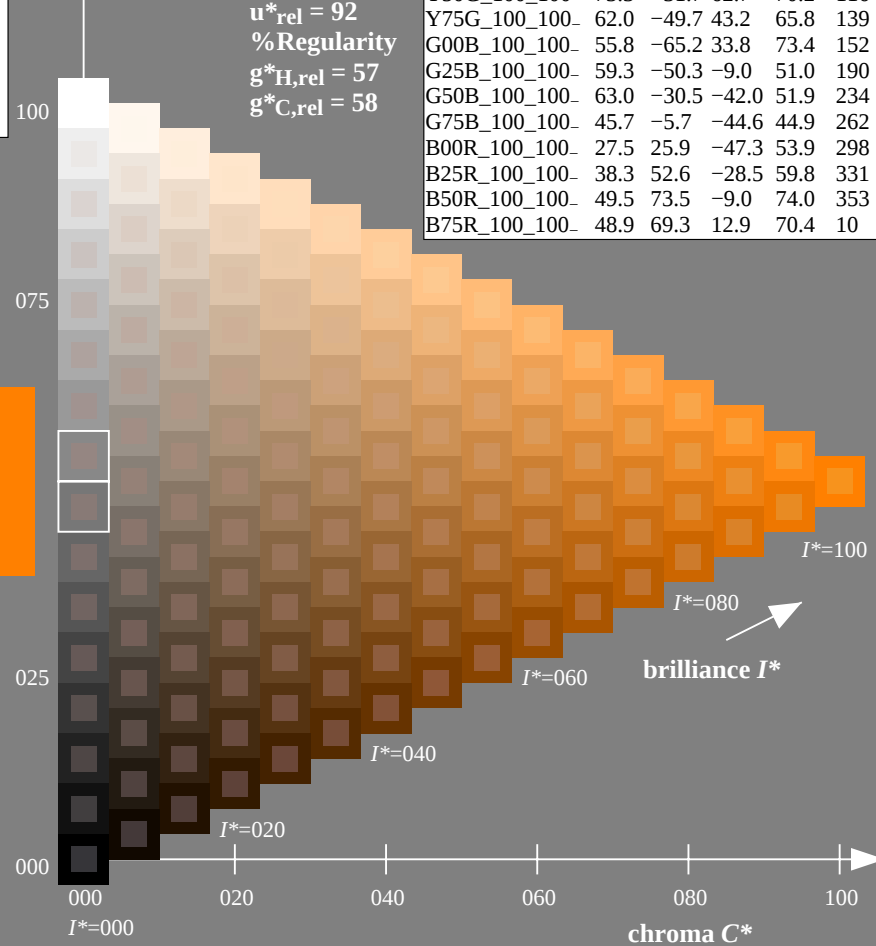
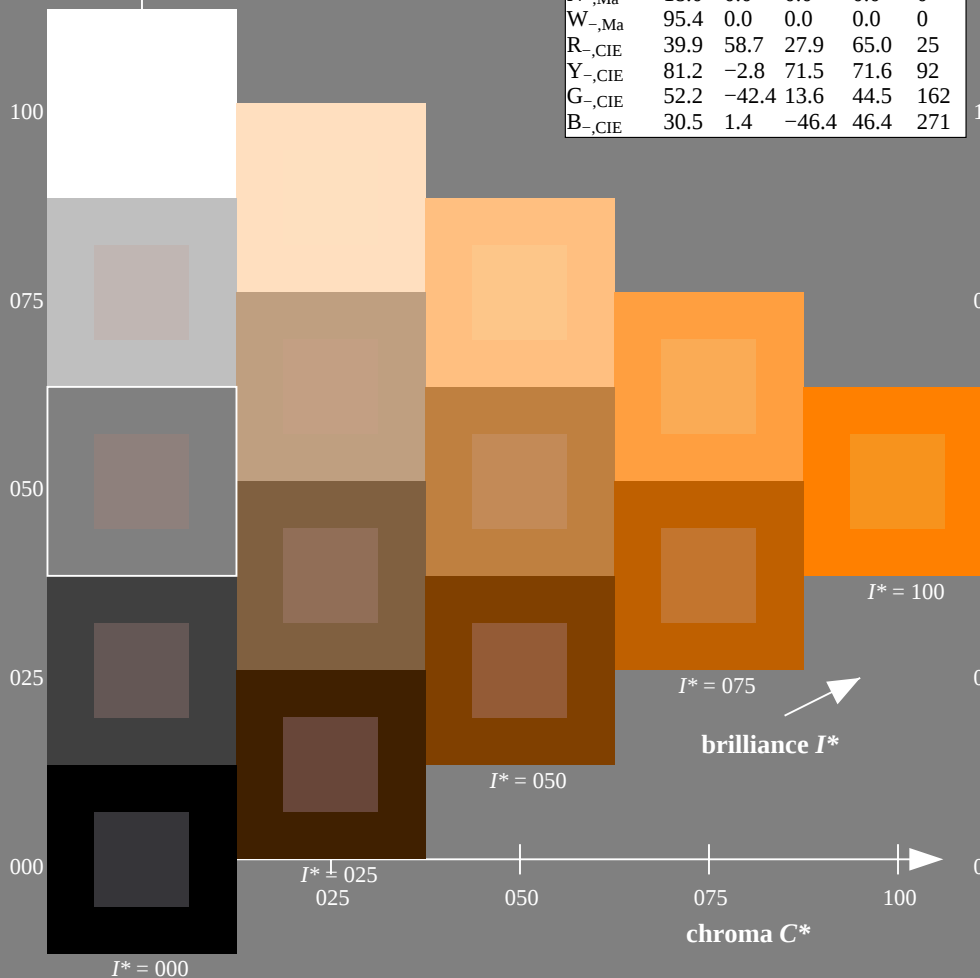
$u^*_{rel} = 92$

% Regularity

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

$g^*_{C,rel} = 58$

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



Input and Output: Offset Reflective System ORS18a for relative CIELAB hue $h_{ab,a,rel} = h_{ab}/360 = 67/360 = 0.18$

$H^*_d = R50Y_d$

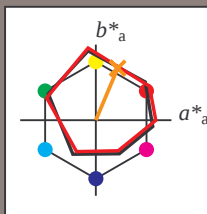
Data for any device (d) or elementary (e) colour:

HIC^*_d

hue text for the colours of this page:

$H^*_d = R50Y_d$

triangle lightness T^*



ORS20a; adapted (a) CIELAB data					
name	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R _d ,Ma	45.4	70.9	44.8	83.9	32
Y _d ,Ma	87.8	-10.2	95.4	96.0	96
G _d ,Ma	50.0	-65.0	29.6	71.4	155
C _d ,Ma	56.8	-25.5	-41.5	48.7	238
B _d ,Ma	25.0	29.5	-40.4	50.0	306
M _d ,Ma	46.1	79.3	-0.2	79.3	359
N _d ,Ma	24.3	0.0	0.0	0.0	0
W _d ,Ma	95.6	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):

$LabCh^*_d, Ma$: 64 28 68 74 67

HIC^*_d, Ma : R50Y_100_100_d

$rgbic^*_d, Ma$:

1.0 0.5 0.0 1.0 1.0

triangle lightness T^*

% Gamut

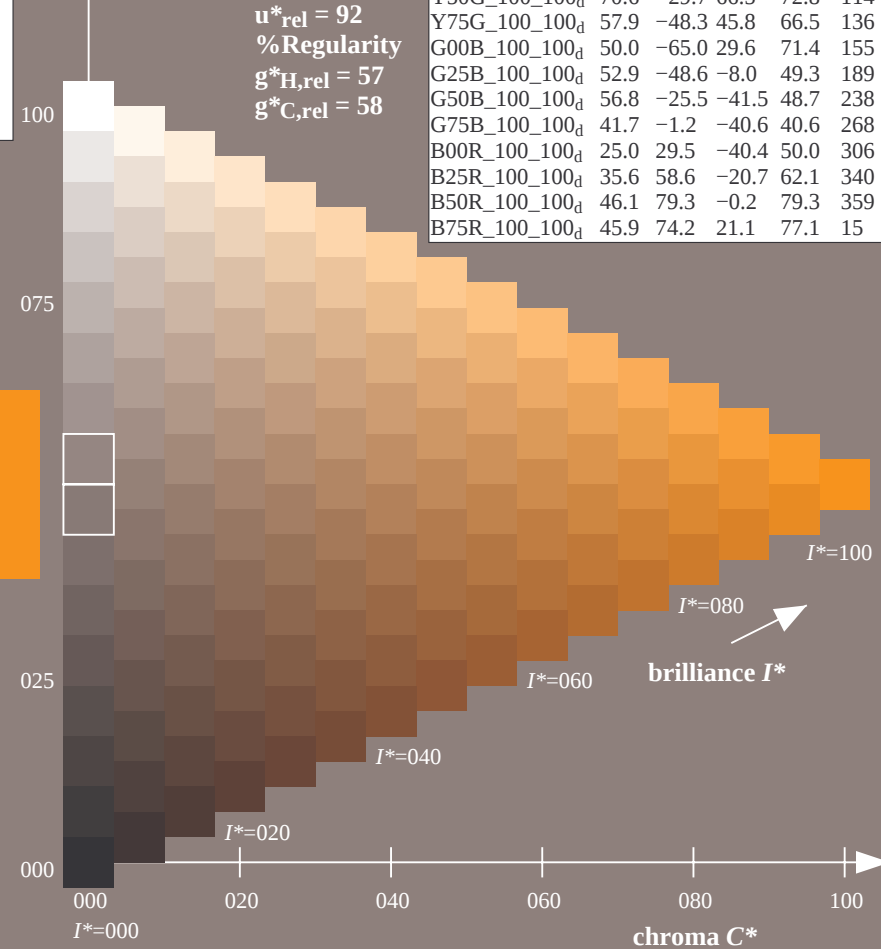
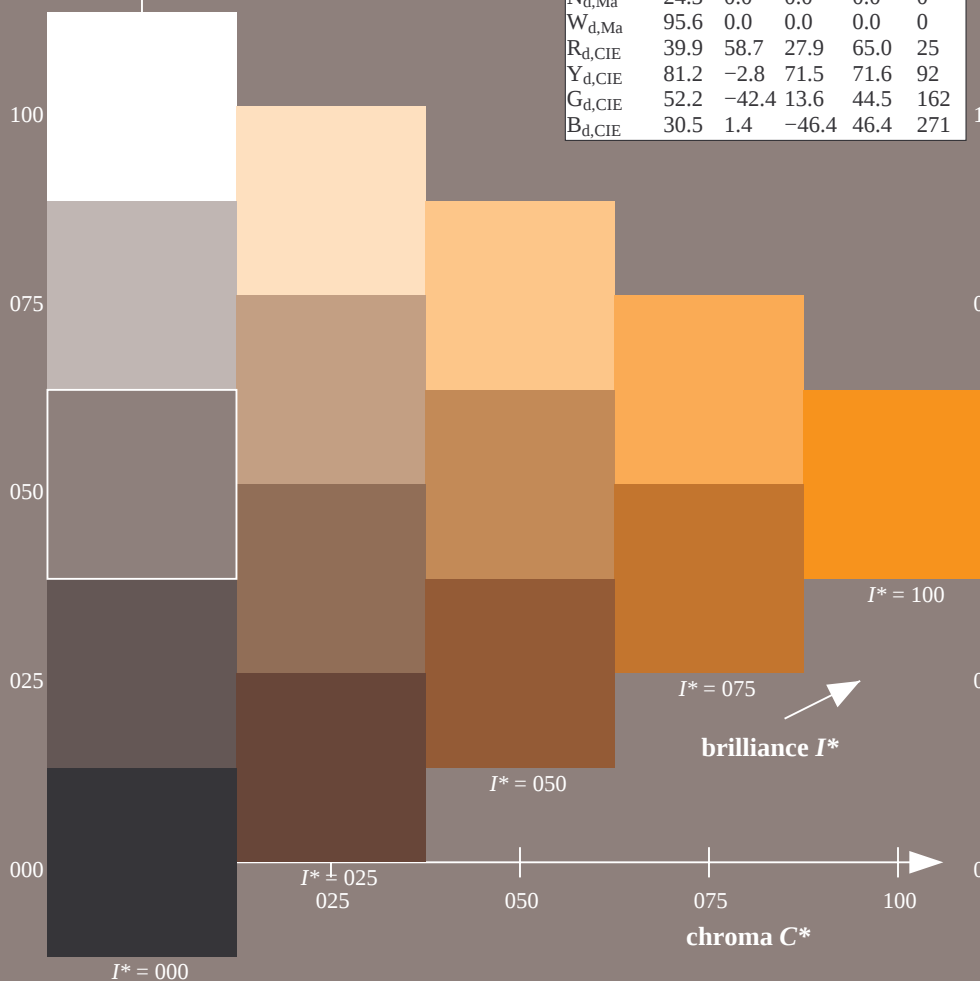
$u^*_{rel} = 92$

% Regularity

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

$g^*_{C,rel} = 58$

ORS20a; adapted (a) CIELAB data					
H^*_d	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R00Y_100_100 _d	45.4	70.9	44.8	83.9	32
R25Y_100_100 _d	53.0	53.4	54.8	76.5	45
R50Y_100_100 _d	64.9	28.9	68.6	74.5	67
R75Y_100_100 _d	78.6	4.3	84.7	84.8	87
Y00G_100_100 _d	87.8	-10.2	95.4	96.0	96
Y25G_100_100 _d	81.2	-17.0	84.3	86.0	101
Y50G_100_100 _d	70.6	-29.7	66.5	72.8	114
Y75G_100_100 _d	57.9	-48.3	45.8	66.5	136
G00B_100_100 _d	50.0	-65.0	29.6	71.4	155
G25B_100_100 _d	52.9	-48.6	-8.0	49.3	189
G50B_100_100 _d	56.8	-25.5	-41.5	48.7	238
G75B_100_100 _d	41.7	-1.2	-40.6	40.6	268
B00R_100_100 _d	25.0	29.5	-40.4	50.0	306
B25R_100_100 _d	35.6	58.6	-20.7	62.1	340
B50R_100_100 _d	46.1	79.3	-0.2	79.3	359
B75R_100_100 _d	45.9	74.2	21.1	77.1	15



TUB-test chart QE17; hue code: $H^*_d = R50Y_d$
Test chart according to DIN 33872, 3D=0, de=0, cmy0

input: $rgb/cmyk \rightarrow rgb_d$
output: transfer to $cmy0_d$

TUB registration: 20130201-QE17/QE17L0NP.PDF /.PS
application for measurement of offset print output, separation cmy0 (CMY0)

TUB material: code=rha4ta

Input and Output: Offset Reflective System ORS18a for relative CIELAB hue $h_{ab,a,rel} = h_{ab}/360 = 67/360 = 0.18$

$H^*_d = R50Y_d$

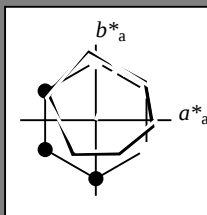
Data for any device (d) or elementary (e) colour:

HIC^*_d

hue text for the colours of this page:

$H^*_d = R50Y_d$

triangle lightness T^*



ORS20a; adapted (a) CIELAB data					
name	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
$R_{d,Ma}$	45.4	70.9	44.8	83.9	32
$Y_{d,Ma}$	87.8	-10.2	95.4	96.0	96
$G_{d,Ma}$	50.0	-65.0	29.6	71.4	155
$C_{d,Ma}$	56.8	-25.5	-41.5	48.7	238
$B_{d,Ma}$	25.0	29.5	-40.4	50.0	306
$M_{d,Ma}$	46.1	79.3	-0.2	79.3	359
$N_{d,Ma}$	24.3	0.0	0.0	0.0	0
$W_{d,Ma}$	95.6	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):

$LabCh^*_{d,Ma}$: 64 28 68 74 67

$HIC^*_{d,Ma}$: R50Y_100_100d

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

1.0 0.5 0.0 1.0 1.0

triangle lightness T^*

% Gamut

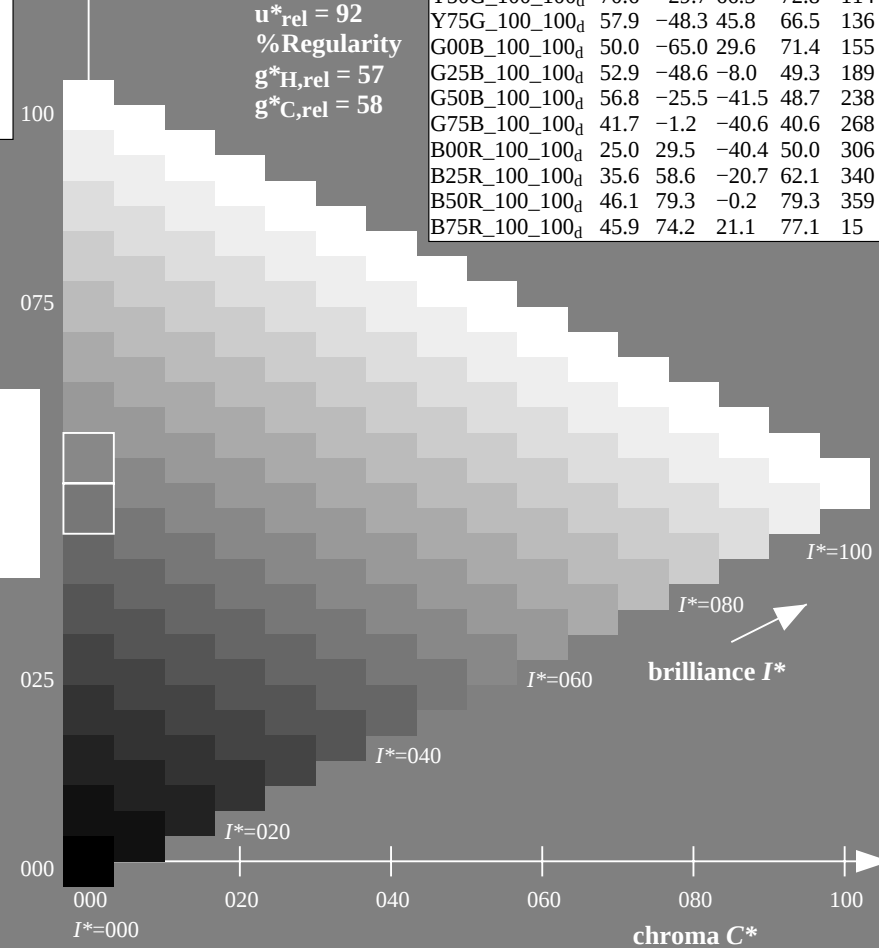
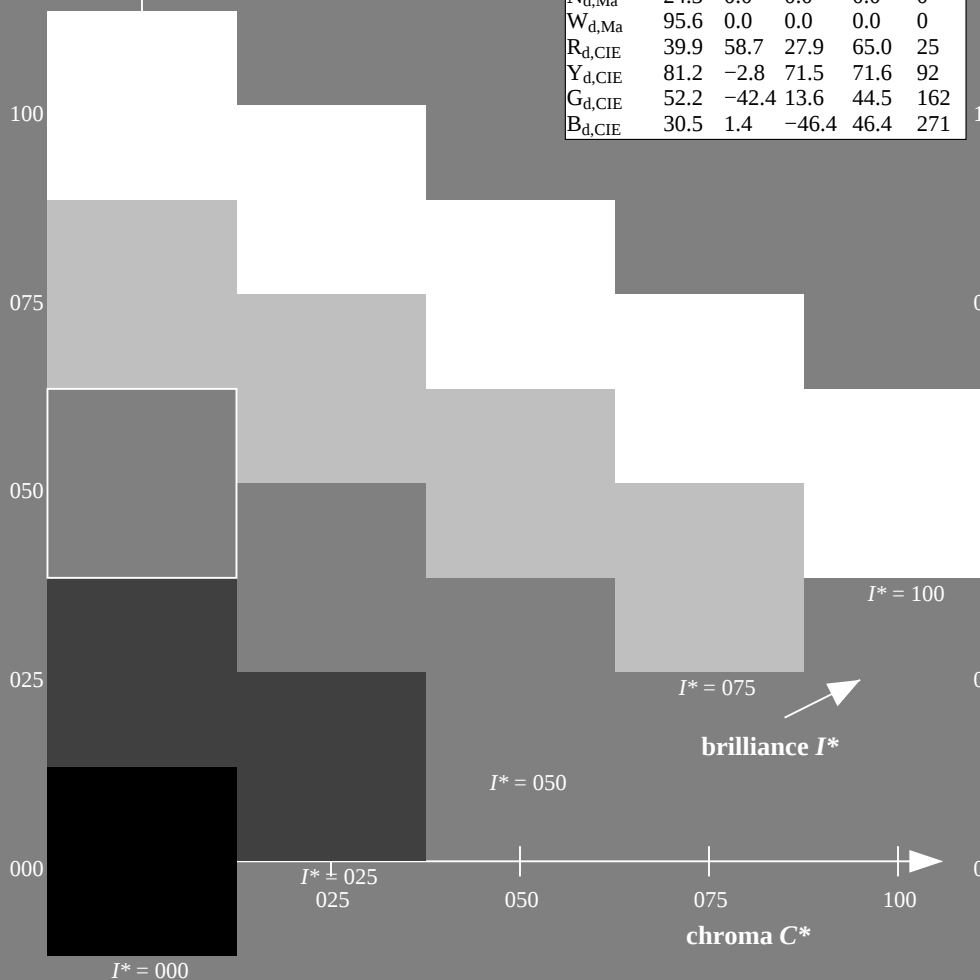
$u^*_{rel} = 92$

% Regularity

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

$g^*_{C,rel} = 58$

ORS20a; adapted (a) CIELAB data					
H^*_d	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
$R00Y_100_100_d$	45.4	70.9	44.8	83.9	32
$R25Y_100_100_d$	53.0	53.4	54.8	76.5	45
$R50Y_100_100_d$	64.9	28.9	68.6	74.5	67
$R75Y_100_100_d$	78.6	4.3	84.7	84.8	87
$Y00G_100_100_d$	87.8	-10.2	95.4	96.0	96
$Y25G_100_100_d$	81.2	-17.0	84.3	86.0	101
$Y50G_100_100_d$	70.6	-29.7	66.5	72.8	114
$Y75G_100_100_d$	57.9	-48.3	45.8	66.5	136
$G00B_100_100_d$	50.0	-65.0	29.6	71.4	155
$G25B_100_100_d$	52.9	-48.6	-8.0	49.3	189
$G50B_100_100_d$	56.8	-25.5	-41.5	48.7	238
$G75B_100_100_d$	41.7	-1.2	-40.6	40.6	268
$B00R_100_100_d$	25.0	29.5	-40.4	50.0	306
$B25R_100_100_d$	35.6	58.6	-20.7	62.1	340
$B50R_100_100_d$	46.1	79.3	-0.2	79.3	359
$B75R_100_100_d$	45.9	74.2	21.1	77.1	15



TUB-test chart QE17; hue code: $H^*_d=R50Y_d$
Test chart according to DIN 33872, 3D=0, de=0, cmy0

input: $rgb/cmyk \rightarrow rgb_d$
output: transfer to $cmy0_d$

Input and Output: Offset Reflective System ORS18a for relative CIELAB hue $h_{ab,a,rel} = h_{ab}/360 = 67/360 = 0.18$

$H^*_d = R50Y_d$

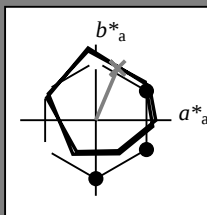
Data for any device (d) or elementary (e) colour:

HIC^*_d

hue text for the colours
of this page:

$H^*_d = R50Y_d$

triangle lightness T^*



ORS20a; adapted (a) CIELAB data					
name	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R _d ,Ma	45.4	70.9	44.8	83.9	32
Y _d ,Ma	87.8	-10.2	95.4	96.0	96
G _d ,Ma	50.0	-65.0	29.6	71.4	155
C _d ,Ma	56.8	-25.5	-41.5	48.7	238
B _d ,Ma	25.0	29.5	-40.4	50.0	306
M _d ,Ma	46.1	79.3	-0.2	79.3	359
N _d ,Ma	24.3	0.0	0.0	0.0	0
W _d ,Ma	95.6	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):

$LabCh^*_{d,Ma}$: 64 28 68 74 67

$HIC^*_{d,Ma}$: R50Y_100_100_d

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

1.0 0.5 0.0 1.0 1.0

triangle lightness T^*

% Gamut

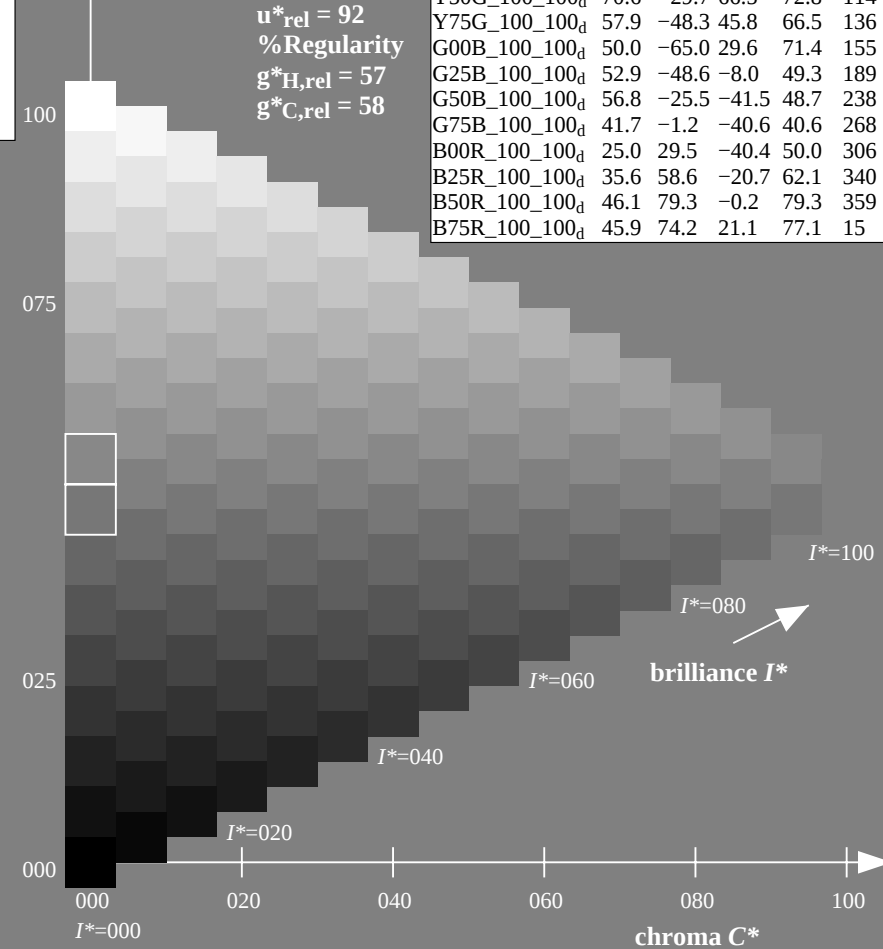
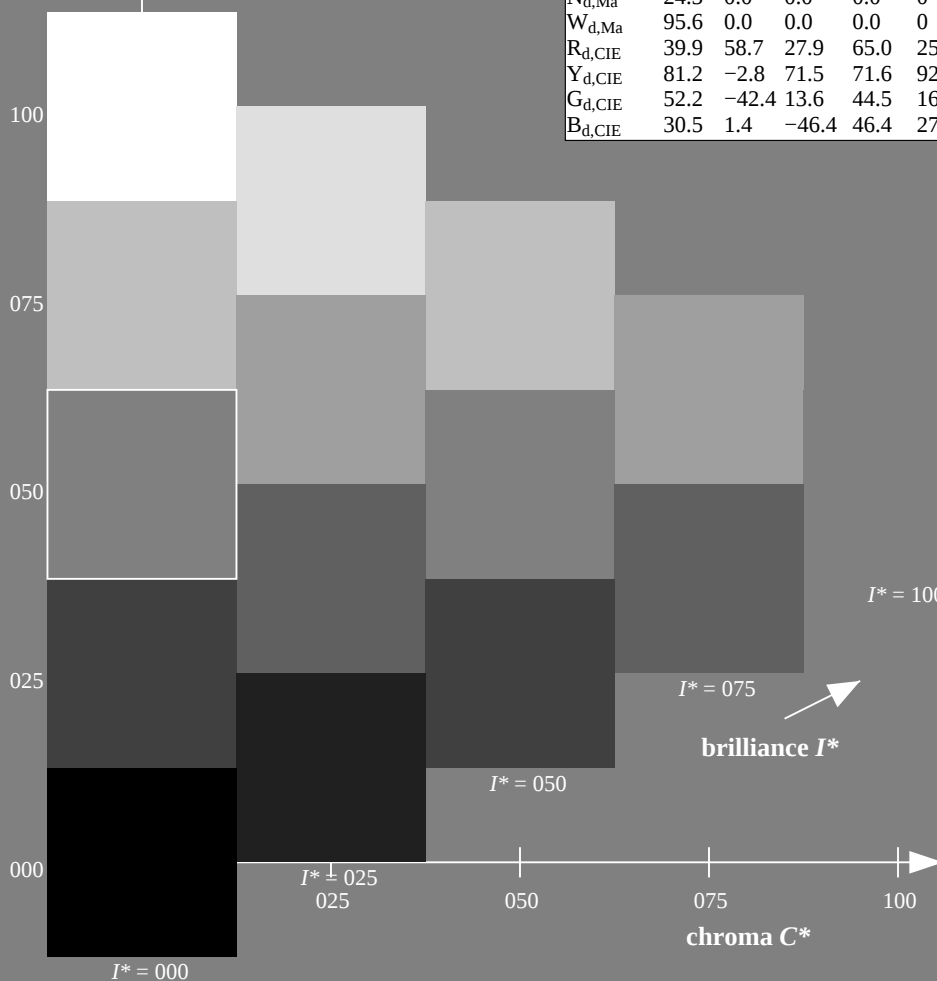
$u^*_{rel} = 92$

% Regularity

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

$g^*_{C,rel} = 58$

ORS20a; adapted (a) CIELAB data					
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R25Y_100_100 _d	53.0	53.4	54.8	76.5	45
R50Y_100_100 _d	64.9	28.9	68.6	74.5	67
R75Y_100_100 _d	78.6	4.3	84.7	84.8	87
Y00G_100_100 _d	87.8	-10.2	95.4	96.0	96
Y25G_100_100 _d	81.2	-17.0	84.3	86.0	101
Y50G_100_100 _d	70.6	-29.7	66.5	72.8	114
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G25B_100_100 _d	52.9	-48.6	-8.0	49.3	189
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B25R_100_100 _d	35.6	58.6	-20.7	62.1	340
B50R_100_100 _d	46.1	79.3	-0.2	79.3	359
B75R_100_100 _d	45.9	74.2	21.1	77.1	15



TUB-test chart QE17; hue code: $H^*_d=R50Y_d$
Test chart according to DIN 33872, 3D=0, de=0, cmy0

input: $rgb/cmyk \rightarrow rgb_d$
output: transfer to $cmy0_d$

Input and Output: Offset Reflective System ORS18a for relative CIELAB hue $h_{ab,a,rel} = h_{ab}/360 = 67/360 = 0.18$

$H^*_d = R50Y_d$

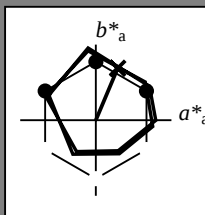
Data for any device (d) or elementary (e) colour:

HIC^*_d

hue text for the colours of this page:

$H^*_d = R50Y_d$

triangle lightness T^*



ORS20a; adapted (a) CIELAB data					
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W _d ,Ma	95.6	0.0	0.0	0.0	0
R _d ,CIE	39.9	58.7	27.9	65.0	25
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B _d ,CIE	30.5	1.4	-46.4	46.4	271

Data for maximum colour (Ma):

$LabCh^*_{d,Ma}$: 64 28 68 74 67

$HIC^*_{d,Ma}$: R50Y_100_100_d

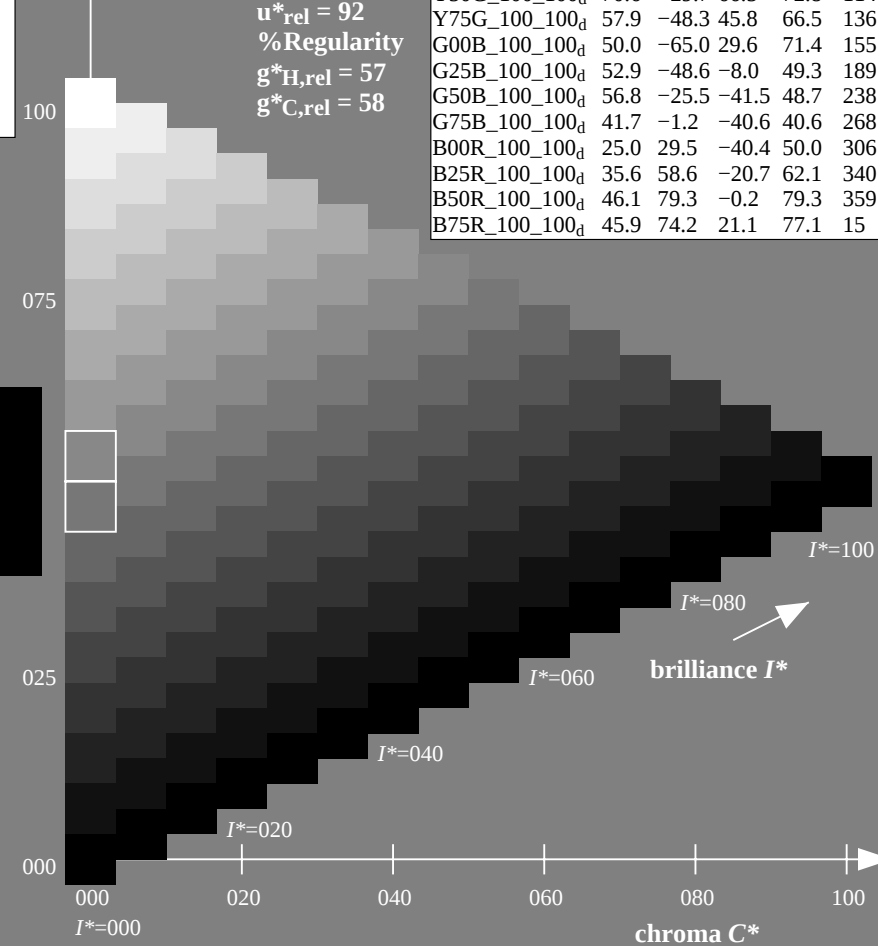
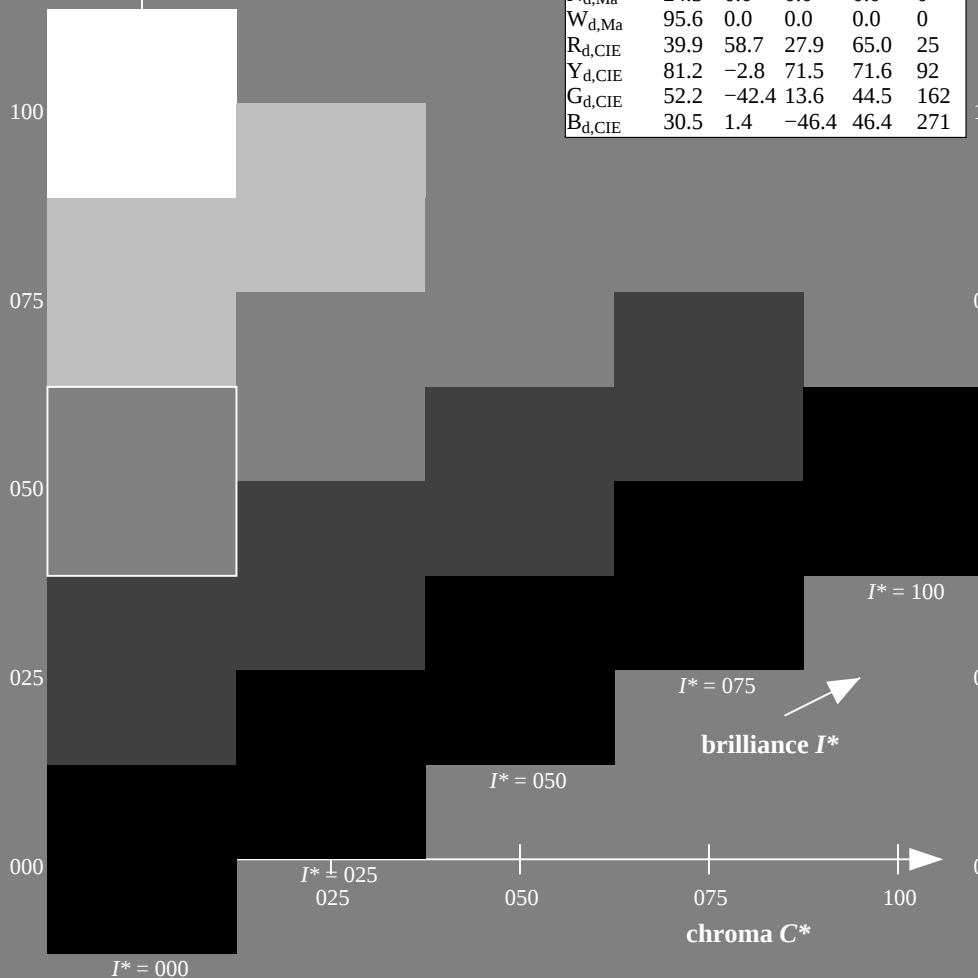
$rgbic^*_{d,Ma}$:

1.0 0.5 0.0 1.0 1.0

triangle lightness T^*

% Gamut
 $u^*_{rel} = 92$
% Regularity
 $g^*_{H,rel} = 57$
 $g^*_{C,rel} = 58$

ORS20a; adapted (a) CIELAB data					
H^*_d	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
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R50Y_100_100 _d	64.9	28.9	68.6	74.5	67
R75Y_100_100 _d	78.6	4.3	84.7	84.8	87
Y00G_100_100 _d	87.8	-10.2	95.4	96.0	96
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Y50G_100_100 _d	70.6	-29.7	66.5	72.8	114
Y75G_100_100 _d	57.9	-48.3	45.8	66.5	136
G00B_100_100 _d	50.0	-65.0	29.6	71.4	155
G25B_100_100 _d	52.9	-48.6	-8.0	49.3	189
G50B_100_100 _d	56.8	-25.5	-41.5	48.7	238
G75B_100_100 _d	41.7	-1.2	-40.6	40.6	268
B00R_100_100 _d	25.0	29.5	-40.4	50.0	306
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B50R_100_100 _d	46.1	79.3	-0.2	79.3	359
B75R_100_100 _d	45.9	74.2	21.1	77.1	15



TUB-test chart QE17; hue code: $H^*_d = R50Y_d$
Test chart according to DIN 33872, 3D=0, de=0, cmy0

input: $rgb/cmyk \rightarrow rgb_d$
output: transfer to $cmy0_d$

TUB registration: 20130201-QE17/QE17L0NP.PDF /.PS
application for measurement of offset print output, separation cmy0 (CMY0)

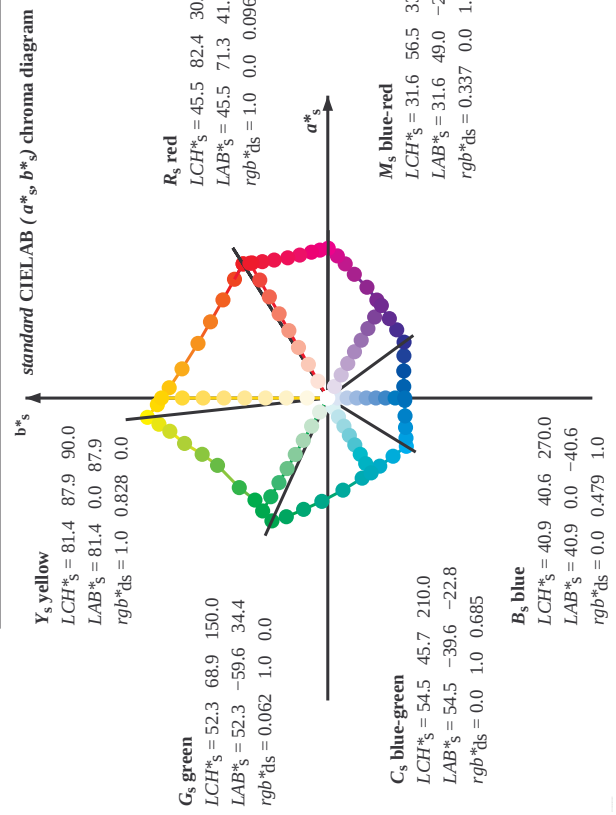
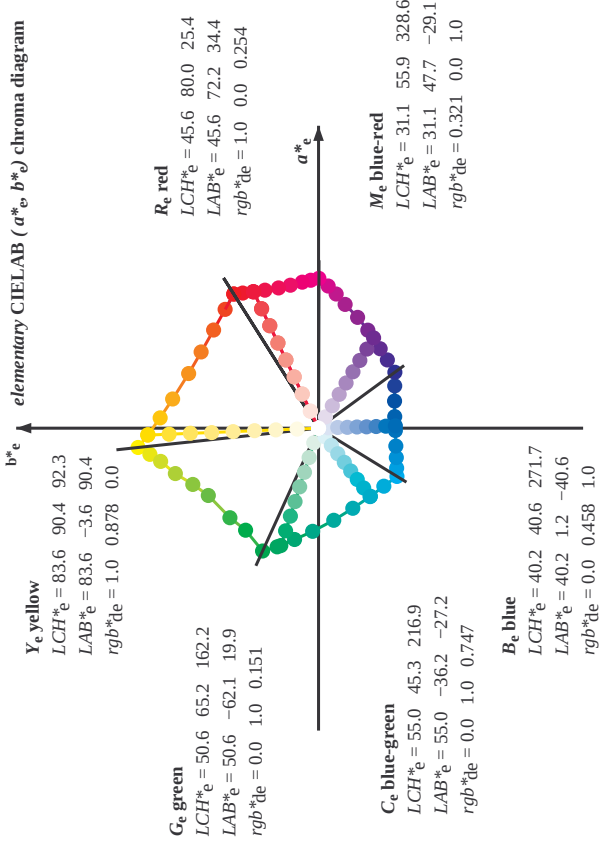
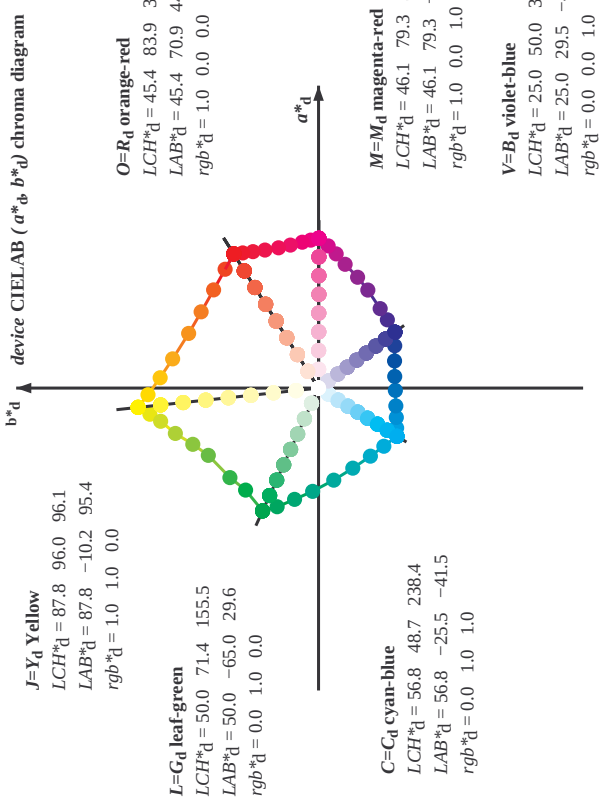
TUB material: code=rha4ta





http://130.149.60.45/~farbmatrik/QE17/QE17L0NP.PDF /.PS; transfer output N: no 3D-linearization (OL) in file (F) or PS-startup (S), page 7/33

Data of Maximum color M in colorimetric system Offset standard print; separation cmy0*: D65 for input or output; Six hue angles of the 60 degree standard colours RYGBCM; $h_{ab,ds} = 30.0, 90.0, 150.0, 210.0, 270.0, 330.0$; Six hue angles of the device colours RYGBCM; $h_{ab,d} = 32.3, 96.1, 155.5, 238.4, 306.2, 359.8$; Six hue angles of the elementary colours RYGBCM; $h_{ab,e} = 25.5, 92.3, 162.2, 217.0, 271.7, 328.6$



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} use for any device values rgb^*_e the equation:
$$h_{ab,s} = \arctan \left[\frac{r^*_d \cos(30) + g^*_d \sin(150)}{1 / r^*_d \sin(30) + g^*_d \sin(270)} \right] \quad (1)$$
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 e : $h_{ab,e} = 30.0, 90.0, 150.0, 210.0, 270.0, 330.0, 390.0$ ($i=0,6$) and the equations for a 48 and 360 step hue circle:
$$h_{48ab,sij} = h_{ab,si+1} - h_{ab,si} \cdot i / 8 \quad (i = 0, 1, \dots, 5; j = 0, 1, \dots, 7) \quad (2)$$
$$h_{360ab,sij} = h_{ab,si} + j \cdot h_{ab,si+1} - h_{ab,si} \cdot j / 60 \quad (i = 0, 1, \dots, 5; j = 0, 1, \dots, 59) \quad (3)$$
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:
$$h_{48ab,eij} = h_{ab,ei+1} - h_{ab,ei} \cdot i / 8 \quad (i = 0, 1, \dots, 5; j = 0, 1, \dots, 7) \quad (4)$$
$$h_{360ab,eij} = h_{ab,ei} + j \cdot h_{ab,ei+1} - h_{ab,ei} \cdot j / 60 \quad (i = 0, 1, \dots, 5; j = 0, 1, \dots, 59) \quad (5)$$
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^*_e produce the output of the device-independent elementary hues

LAB*_{la0}, YN=0%, XY Z_{mnw}=3.6, 4.2, 6.1, 85.4, 89.1, 104.8, LAB*_{mnw}=24.4, 0.0, 0.0, 95.6, 0.0, 0.0
TUB-test chart QE17; hue code: H*_d=R50Y_d
48 step hue circles; rgb-LabCh*tables
input: rgb/cmyk -> rgbd
output: transfer to cmy0_d



TUB registration: 20130201-QE17/QE17L0NP.PDF /.PS TUB material: code=rha4ta
application for measurement of offset print output, separation cmy0 (CMY0)

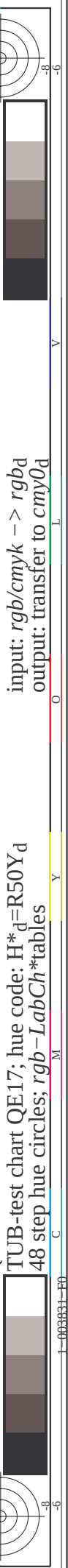
Six hue angles of the device colours RYGBM; $h_{ab,d} = 32.3, 96.1, 155.5, 238.4, 306.2, 359.8$; Six hue angles of the elementary colours RYGBM; $h_{ab,e} = 25.5, 92.3, 162.2, 217.0, 271.7, 328.6$

Six hue angles of the device colours RYGBM; $h_{ab,d} = 32.3, 96.1, 155.5, 238.4, 306.2, 359.8$			Six hue angles of the elementary colours RYGBM; $h_{ab,e} = 25.5, 92.3, 162.2, 217.0, 271.7, 328.6$		
$h_{ab,d}$	$h_{ab,s}$	$h_{ab,e}$	$h_{ab,d}$	$h_{ab,s}$	$h_{ab,e}$
32.3	30.0	25.4	1.0	0.0	0.0
38.1	37.5	33.8	1.0	0.125	0.0
46.8	45.0	42.1	1.0	0.25	0.0
56.9	52.5	50.5	1.0	0.375	0.0
67.1	60.0	58.8	1.0	0.5	0.0
78.6	67.5	67.2	1.0	0.625	0.0
86.2	75.0	75.6	1.0	0.75	0.0
92.1	82.5	83.9	1.0	0.875	0.0
96.1	90.0	92.3	1.0	1.0	0.0
98.8	97.5	101.0	0.0	0.875	1.0
101.8	105.0	109.7	0.0	0.75	1.0
107.6	112.5	118.5	0.0	0.625	1.0
114.0	120.0	127.2	0.0	0.5	1.0
121.4	127.5	136.0	0.0	0.375	1.0
135.3	135.0	144.7	0.0	0.25	1.0
144.4	142.5	153.4	0.0	0.125	1.0
155.5	150.0	162.2	0.0	0.0	1.0
160.7	157.5	169.0	0.0	0.125	0.0
167.7	165.0	175.9	0.0	0.25	0.0
176.7	172.5	182.7	0.0	0.375	0.0
189.3	180.0	189.6	0.0	0.5	0.0
203.2	187.5	196.4	0.0	0.625	0.0
217.2	195.0	203.2	0.0	0.75	0.0
228.3	202.5	210.1	0.0	0.875	0.0
238.4	210.0	216.9	0.0	1.0	0.0
242.9	217.5	223.8	0.0	0.875	1.0
249.3	225.0	230.6	0.0	0.75	1.0
256.9	232.5	237.5	0.0	0.625	1.0
268.2	240.0	244.3	0.0	0.5	1.0
278.6	247.5	251.2	0.0	0.375	1.0
289.6	255.0	258.0	0.0	0.25	1.0
299.0	262.5	264.8	0.0	0.125	1.0
306.2	270.0	271.7	0.0	0.0	1.0
314.7	277.5	278.8	0.0	0.125	0.0
322.1	285.0	285.9	0.0	0.25	0.0
333.3	292.5	293.0	0.0	0.375	0.0
340.5	300.0	300.1	0.0	0.5	0.0
347.9	307.5	307.2	0.0	0.625	0.0
352.5	315.0	314.3	0.0	0.75	0.0
356.1	322.5	321.4	0.0	0.875	0.0
359.8	330.0	328.6	0.0	1.0	0.0
363.0	337.5	335.7	0.0	0.875	1.0
366.4	345.0	342.8	0.0	0.75	1.0
371.1	352.5	349.9	0.0	0.625	1.0
381.2	367.5	364.1	0.0	0.5	1.0
385.6	375.0	371.2	0.0	0.375	1.0
389.3	382.5	378.3	0.0	0.25	1.0
392.3	390.0	385.4	0.0	0.125	1.0
392.3	390.0	385.4	0.0	0.0	1.0

see similar files: <http://130.149.60.45/~farbmatrik/QE17/QE17.HTM>
technical information: <http://www.ps.bam.de> or <http://130.149.60.45/~farbmatrik>

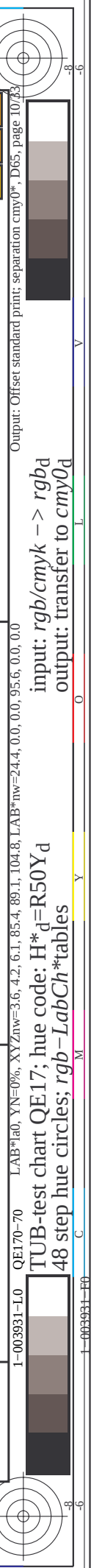
input: $rgb/cmyk \rightarrow rgba$
output: transfer to $cmy0d$

Output: Offset standard print; separation $cmy0^*$, D65, page 9/33





Data of Maximum color M in colorimetric system Offset standard print; separation cmy0*: D65 for input or output; Six hue angles of the 60 degree standard colours RYGBCM; $h_{ab,d} = 30.0, 90.0, 150.0, 210.0, 270.0, 330.0$; Six hue angles of the device colours RYGBCM; $h_{ab,d} = 155.5, 238.4, 306.2, 359.8$; Six hue angles of the elementary colours RYGBCM; $h_{ab,e} = 25.5, 92.3, 162.2, 217.0, 271.7, 328.6$																					
$h_{ab,d}$	$h_{ab,s}$	$h_{ab,e}$	rgb^*_{ds}	rgb^*_{ds}	rgb^*_{ds}	rgb^*_{ds}	rgb^*_{ds}	rgb^*_{ds}	rgb^*_{ds}	rgb^*_{ds}	rgb^*_{ds}	rgb^*_{ds}	rgb^*_{ds}	rgb^*_{ds}	rgb^*_{ds}	rgb^*_{ds}	rgb^*_{ds}	rgb^*_{ds}	rgb^*_{ds}		
32	30	25	1.0	0.0	0.0	45.4	70.9	44.8	83.9	32	R_d	rgb^*_{ds}	rgb^*_{ds}	rgb^*_{ds}	rgb^*_{ds}	rgb^*_{ds}	rgb^*_{ds}	rgb^*_{ds}	rgb^*_{ds}		
33	31	26	1.0	0.016	0.0	45.9	69.8	45.5	83.4	33	1.0	0.0	0.055	45.5	71.2	42.8	83.1	31	1.0	0.017	0.0
33	32	27	1.0	0.033	0.0	46.3	68.8	46.1	82.8	33	1.0	0.0	0.013	45.5	71.0	44.4	83.7	32	1.0	0.033	0.0
34	33	28	1.0	0.005	0.0	46.8	67.7	46.8	82.3	34	1.0	0.0015	0.0	45.9	70.0	45.5	83.5	33	1.0	0.005	0.0
35	34	29	1.0	0.066	0.0	47.3	66.6	47.4	81.8	35	1.0	0.036	0.0	46.5	68.6	46.3	82.8	34	1.0	0.067	0.0
36	35	31	1.0	0.083	0.0	47.7	65.5	48.0	81.2	36	1.0	0.057	0.0	47.1	67.3	47.1	82.1	35	1.0	0.083	0.0
36	36	32	1.0	0.1	0.0	48.2	64.4	48.5	80.7	36	1.0	0.079	0.0	47.6	65.9	47.9	81.4	36	1.0	0.1	0.0
37	37	33	1.0	0.116	0.0	48.6	63.3	49.1	80.2	37	1.0	0.1	0.0	48.2	64.5	48.6	80.7	37	1.0	0.117	0.0
38	38	34	1.0	0.133	0.0	49.2	62.1	49.8	79.6	38	1.0	0.121	0.0	48.8	63.1	49.3	80.1	38	1.0	0.133	0.0
39	39	35	1.0	0.15	0.0	49.8	60.7	50.7	79.1	39	1.0	0.137	0.0	49.4	61.8	50.1	79.6	39	1.0	0.15	0.0
41	40	36	1.0	0.166	0.0	50.5	59.2	51.6	78.6	41	1.0	0.151	0.0	49.9	60.6	50.9	79.1	40	1.0	0.167	0.0
42	41	37	1.0	0.183	0.0	51.1	57.8	52.5	78.1	42	1.0	0.166	0.0	50.5	59.4	51.6	78.7	41	1.0	0.183	0.0
43	42	38	1.0	0.2	0.0	51.7	56.3	53.3	77.5	43	1.0	0.18	0.0	51.0	58.1	52.3	78.2	42	1.0	0.2	0.0
44	43	39	1.0	0.216	0.0	52.4	54.9	54.0	77.0	44	1.0	0.194	0.0	51.6	56.9	53.0	77.8	43	1.0	0.217	0.0
45	44	41	1.0	0.233	0.0	53.0	53.4	54.8	76.5	45	1.0	0.209	0.0	52.1	55.6	53.7	77.3	44	1.0	0.233	0.0
46	45	42	1.0	0.25	0.0	53.6	51.9	55.5	76.0	46	1.0	0.223	0.0	52.7	54.4	54.4	76.9	45	1.0	0.25	0.0
48	46	43	1.0	0.266	0.0	54.4	50.4	56.5	75.7	48	1.0	0.237	0.0	53.2	53.1	55.0	76.4	46	1.0	0.267	0.0
49	47	44	1.0	0.283	0.0	55.1	48.9	57.4	75.4	49	1.0	0.251	0.0	53.7	51.8	55.6	76.0	47	1.0	0.283	0.0
50	48	45	1.0	0.3	0.0	55.8	47.4	58.4	75.2	50	1.0	0.264	0.0	54.3	50.7	56.3	75.8	48	1.0	0.3	0.0
52	49	46	1.0	0.316	0.0	56.6	45.8	59.2	74.9	52	1.0	0.276	0.0	54.8	49.6	57.1	75.6	49	1.0	0.317	0.0
53	50	47	1.0	0.333	0.0	57.3	44.2	60.1	74.6	53	1.0	0.288	0.0	55.4	48.5	57.8	75.4	50	1.0	0.333	0.0
54	51	48	1.0	0.35	0.0	58.0	42.7	60.9	74.4	54	1.0	0.301	0.0	55.9	47.3	58.5	75.2	51	1.0	0.35	0.0
56	52	49	1.0	0.366	0.0	58.8	41.1	61.7	74.1	56	1.0	0.313	0.0	56.5	46.2	59.1	75.0	52	1.0	0.367	0.0
57	53	51	1.0	0.383	0.0	59.5	39.5	62.5	74.0	57	1.0	0.326	0.0	57.0	45.0	59.8	74.8	53	1.0	0.383	0.0
59	54	52	1.0	0.4	0.0	60.3	38.1	63.5	74.1	59	1.0	0.338	0.0	57.6	43.9	60.4	74.6	54	1.0	0.4	0.0
60	55	53	1.0	0.416	0.0	61.0	36.6	64.5	74.1	60	1.0	0.35	0.0	58.1	42.7	61.0	74.4	55	1.0	0.417	0.0
61	56	54	1.0	0.433	0.0	61.8	35.1	65.4	74.2	61	1.0	0.363	0.0	58.6	41.5	61.5	74.2	56	1.0	0.433	0.0
63	57	55	1.0	0.45	0.0	62.6	33.6	66.2	74.3	63	1.0	0.375	0.0	59.2	40.3	62.1	74.0	57	1.0	0.45	0.0
64	58	56	1.0	0.466	0.0	63.3	32.0	67.1	74.4	64	1.0	0.387	0.0	59.8	39.3	62.8	74.1	58	1.0	0.467	0.0
65	59	57	1.0	0.483	0.0	64.1	30.5	67.9	74.4	65	1.0	0.4	0.0	60.3	38.2	63.5	74.1	59	1.0	0.483	0.0
67	60	58	1.0	0.5	0.0	64.9	28.9	68.6	74.5	67	1.0	0.412	0.0	60.9	37.1	64.2	74.2	60	1.0	0.5	0.0
68	61	60	1.0	0.516	0.0	65.8	27.2	69.9	75.0	68	1.0	0.424	0.0	61.4	36.0	64.9	74.2	61	1.0	0.517	0.0
70	62	61	1.0	0.533	0.0	66.8	25.5	71.1	75.6	70	1.0	0.436	0.0	62.0	34.9	65.6	74.3	62	1.0	0.533	0.0
71	63	62	1.0	0.55	0.0	67.7	23.8	72.3	76.1	71	1.0	0.449	0.0	62.6	33.7	66.2	74.3	63	1.0	0.55	0.0
73	64	63	1.0	0.566	0.0	68.7	22.0	73.5	76.7	73	1.0	0.461	0.0	63.1	32.6	66.9	74.4	64	1.0	0.567	0.0
74	65	64	1.0	0.583	0.0	69.7	20.2	74.6	77.3	74	1.0	0.473	0.0	63.7	31.5	67.5	74.4	65	1.0	0.583	0.0
76	66	65	1.0	0.6	0.0	70.6	18.3	75.6	77.8	76	1.0	0.486	0.0	64.2	30.3	68.0	74.5	66	1.0	0.6	0.0
77	67	66	1.0	0.616	0.0	71.6	16.4	76.6	78.4	77	1.0	0.498	0.0	64.8	29.1	68.6	74.5	67	1.0	0.617	0.0
79	68	67	1.0	0.633	0.0	72.5	14.8	77.6	79.0	79	1.0	0.509	0.0	65.4	28.0	69.4	74.8	68	1.0	0.633	0.0
80	69	68	1.0	0.65	0.0	73.2	13.6	78.5	79.7	80	1.0	0.52	0.0	66.1	26.9	70.2	75.2	69	1.0	0.65	0.0
81	70	70	1.0	0.666	0.0	74.0	12.3	79.5	80.4	81	1.0	0.531	0.0	66.7	25.8	71.0	75.6	70	1.0	0.667	0.0
82	71	71	1.0	0.683	0.0	74.8	11.0	80.4	81.1	82	1.0	0.542	0.0	67.3	24.7	71.8	75.9	71	1.0	0.683	0.0
83	72	72	1.0	0.7	0.0	75.6	9.6	81.3	81.9	83	1.0	0.553	0.0	67.9	23.6	72.6	76.3	72	1.0	0.7	0.0
84	73	73	1.0	0.716	0.0	76.3	8.3	82.2	82.6	84	1.0	0.564	0.0	68.6	22.4	73.3	76.6	73	1.0	0.717	0.0
85	74	74	1.0	0.733	0.0	77.1	6.9	83.0	83.3	85	1.0	0.574	0.0	69.2	21.2	74.0	77.0	74	1.0	0.733	0.0
86	75	75	1.0	0.75	0.0	77.9	5.4	83.8	84.0	86	1.0	0.585	0.0	69.8	20.0	74.7	77.4	75	1.0	0.75	0.0



input: $rgb/cmyk \rightarrow rgb$
output: transfer to $cmy0_d$

TUB-test chart QE17; hue code: $H^*_d=R50Y_d$
48 step hue circles; $rgb-LabCh$ *tables



Output: Offset standard print; separation $cmy0^*$, D65, page 10/33



Six hue angles of the device colours RYGBM; $h_{ab,d} = 32.3, 96.1, 155.5, 238.4, 306.2, 359.8$; 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^*_{d361M}	LAB^*_{d361M}	LAB^*_{ds361M}	LAB^*_{ds361M}	rgb^*_{d361M}	LAB^*_{ds361M}	LAB^*_{ds361M}	rgb^*_{d361M}	LAB^*_{ds361M}	LAB^*_{ds361M}	rgb^*_{d361M}	LAB^*_{ds361M}	LAB^*_{ds361M}	rgb^*_{d361M}	LAB^*_{ds361M}	LAB^*_{ds361M}	rgb^*_{d361M}	LAB^*_{ds361M}			
114	120	127	0.5	1.0	0.0	70.6	-29.7	66.5	72.8	114	0.399	1.0	0.0	66.7	-34.5	59.9	69.2	120	0.5	1.0	0.0		
115	121	128	0.483	1.0	0.0	69.9	-30.5	65.4	72.2	115	0.382	1.0	0.0	66.0	-35.2	58.8	68.6	121	0.483	1.0	0.0		
116	122	129	0.466	1.0	0.0	69.3	-31.4	64.3	71.6	116	0.37	1.0	0.0	65.4	-36.1	57.9	68.3	122	0.467	1.0	0.0		
117	123	130	0.45	1.0	0.0	68.6	-32.2	63.2	71.0	117	0.361	1.0	0.0	64.9	-37.0	57.1	68.1	123	0.45	1.0	0.0		
118	124	131	0.433	1.0	0.0	68.0	-33.0	62.1	70.4	118	0.352	1.0	0.0	64.4	-37.9	56.4	68.0	124	0.433	1.0	0.0		
119	126	134	0.4	1.0	0.0	66.7	-34.5	59.9	69.2	119	0.334	1.0	0.0	63.3	-39.7	54.8	67.8	126	0.4	1.0	0.0		
120	127	135	0.383	1.0	0.0	66.0	-35.2	58.8	68.6	120	0.325	1.0	0.0	62.8	-40.6	54.0	67.6	127	0.383	1.0	0.0		
122	128	136	0.366	1.0	0.0	65.2	-36.4	57.6	68.2	122	0.316	1.0	0.0	62.3	-41.5	53.2	67.5	128	0.367	1.0	0.0		
124	129	137	0.35	1.0	0.0	64.2	-38.2	56.2	67.9	124	0.307	1.0	0.0	61.7	-42.3	52.4	67.4	129	0.35	1.0	0.0		
126	130	138	0.333	1.0	0.0	63.2	-39.8	54.7	67.7	126	0.298	1.0	0.0	61.2	-43.1	51.5	67.3	130	0.333	1.0	0.0		
127	131	140	0.316	1.0	0.0	62.3	-41.4	53.2	67.5	127	0.289	1.0	0.0	60.7	-44.0	50.7	67.2	131	0.317	1.0	0.0		
129	132	141	0.3	1.0	0.0	61.3	-43.0	51.7	67.3	129	0.28	1.0	0.0	60.2	-44.8	49.8	67.0	132	0.3	1.0	0.0		
131	133	142	0.283	1.0	0.0	60.3	-44.5	50.1	67.0	131	0.271	1.0	0.0	59.6	-45.5	48.9	66.9	133	0.283	1.0	0.0		
133	134	143	0.266	1.0	0.0	59.3	-45.9	48.5	66.8	133	0.262	1.0	0.0	59.1	-46.3	48.0	66.8	134	0.267	1.0	0.0		
135	135	144	0.25	1.0	0.0	58.4	-47.3	46.8	66.6	135	0.253	1.0	0.0	58.6	-47.0	47.1	66.7	135	0.25	1.0	0.0		
136	136	145	0.233	1.0	0.0	57.9	-48.3	45.8	66.5	136	0.241	1.0	0.0	58.1	-47.8	46.3	66.6	136	0.233	1.0	0.0		
137	137	147	0.216	1.0	0.0	57.4	-49.2	44.7	66.5	137	0.227	1.0	0.0	57.7	-48.6	45.4	66.6	137	0.217	1.0	0.0		
138	138	148	0.2	1.0	0.0	56.9	-50.1	43.6	66.5	138	0.213	1.0	0.0	57.3	-49.4	44.5	66.6	138	0.2	1.0	0.0		
140	139	149	0.183	1.0	0.0	56.4	-51.0	42.5	66.4	140	0.2	1.0	0.0	56.9	-50.1	43.6	66.5	139	0.183	1.0	0.0		
141	140	150	0.166	1.0	0.0	55.9	-51.9	41.4	66.4	141	0.186	1.0	0.0	56.5	-50.8	42.7	66.5	140	0.167	1.0	0.0		
142	141	151	0.15	1.0	0.0	55.4	-52.7	40.3	66.4	142	0.172	1.0	0.0	56.1	-51.6	41.8	66.5	141	0.15	1.0	0.0		
143	142	152	0.133	1.0	0.0	54.9	-53.5	39.1	66.3	143	0.159	1.0	0.0	55.7	-52.3	40.9	66.4	142	0.133	1.0	0.0		
145	143	154	0.116	1.0	0.0	54.4	-54.7	38.0	66.6	145	0.145	1.0	0.0	55.3	-52.9	40.0	66.4	143	0.117	1.0	0.0		
146	144	155	0.1	1.0	0.0	53.7	-56.2	37.0	67.3	146	0.131	1.0	0.0	54.9	-53.6	39.0	66.4	144	0.1	1.0	0.0		
148	145	156	0.083	1.0	0.0	53.1	-57.7	35.9	68.0	148	0.119	1.0	0.0	54.5	-54.5	38.2	66.6	145	0.083	1.0	0.0		
149	146	157	0.066	1.0	0.0	52.5	-59.2	34.7	68.7	149	0.107	1.0	0.0	54.1	-55.5	37.5	67.1	146	0.067	1.0	0.0		
151	147	158	0.049	1.0	0.0	51.9	-60.7	33.5	69.4	151	0.096	1.0	0.0	53.7	-56.5	36.8	67.5	147	0.05	1.0	0.0		
152	148	159	0.033	1.0	0.0	51.3	-62.2	32.2	70.0	152	0.085	1.0	0.0	53.2	-57.6	36.0	68.0	148	0.033	1.0	0.0		
154	149	161	0.016	1.0	0.0	50.6	-63.6	30.9	70.7	154	0.074	1.0	0.0	52.8	-58.6	35.3	68.4	149	0.017	1.0	0.0		
155	150	162	0.0	1.0	0.0	50.0	-65.0	29.6	71.4	155	0.062	1.0	0.0	52.4	-59.6	34.5	68.9	150	0.0	1.0	0.0		
156	151	163	0.0	1.0	0.0	0.016	50.1	-64.7	28.5	70.7	156	0.051	1.0	0.0	52.0	-60.6	33.6	69.4	151	0.0	1.0	0.0	
156	152	164	0.0	1.0	0.0	0.033	50.1	-64.5	27.4	70.1	156	0.04	1.0	0.0	51.5	-61.6	32.8	69.8	152	0.0	1.0	0.0	
157	153	164	0.0	1.0	0.0	0.05	50.2	-64.2	26.4	69.4	157	0.028	1.0	0.0	51.1	-62.5	31.9	70.3	153	0.0	1.0	0.0	
158	154	165	0.0	1.0	0.0	0.066	50.3	-63.9	25.4	68.8	158	0.017	1.0	0.0	50.7	-63.5	31.0	70.7	154	0.0	1.0	0.0	
159	155	166	0.0	1.0	0.0	0.083	50.3	-63.6	24.4	68.1	159	0.006	1.0	0.0	50.3	-64.4	30.1	71.2	155	0.0	1.0	0.0	
159	156	167	0.0	1.0	0.0	0.1	50.4	-63.3	23.4	67.5	159	0.0	1.0	0.0	0.012	50.1	-64.7	28.9	71.0	156	0.0	1.0	0.0
160	157	168	0.0	1.0	0.0	0.116	50.5	-62.9	22.4	66.8	160	0.0	1.0	0.0	0.035	50.2	-64.4	27.4	70.0	157	0.0	1.0	0.0
161	158	169	0.0	1.0	0.0	0.133	50.5	-62.5	21.2	66.1	161	0.0	1.0	0.0	0.059	50.3	-64.0	25.9	69.1	158	0.0	1.0	0.0
162	159	170	0.0	1.0	0.0	0.15	50.6	-62.1	19.9	65.2	162	0.0	1.0	0.0	0.083	50.4	-63.5	24.4	68.2	159	0.0	1.0	0.0
163	160	171	0.0	1.0	0.0	0.166	50.7	-61.6	18.7	64.4	163	0.0	1.0	0.0	0.107	50.5	-63.1	23.0	67.2	160	0.0	1.0	0.0
164	161	172	0.0	1.0	0.0	0.183	50.8	-61.1	17.4	63.6	164	0.0	1.0	0.0	0.129	50.6	-62.6	21.6	66.3	161	0.0	1.0	0.0
164	162	173	0.0	1.0	0.0	0.2	50.9	-60.6	16.2	62.7	164	0.0	1.0	0.0	0.147	50.7	-62.1	20.2	65.4	162	0.0	1.0	0.0
165	163	174	0.0	1.0	0.0	0.216	51.0	-60.1	15.0	61.9	165	0.0	1.0	0.0	0.165	50.8	-61.6	18.9	64.5	163	0.0	1.0	0.0
166	164	175	0.0	1.0	0.0	0.233	51.1	-59.5	13.9	61.1	166	0.0	1.0	0.0	0.183	50.9	-61.1	17.5	63.7	164	0.0	1.0	0.0
167	165	175	0.0	1.0	0.0	0.25	51.2	-58.9	12.7	60.3	167	0.0	1.0	0.0	0.2	51.0	-60.5	16.2	62.8	165	0.0	1.0	0.0

Data of Maximum color M in colorimetric system Offset standard print; separation cmv0*, D65 for input or output; Six hue angles of the 60 degree standard colours RYGCMB; $s_{hab,ds} = 30.0, 90.0, 150.0, 210.0, 270.0, 330.0$;

see similar files: <http://130.149.60.45/~farbmatrik/QE17/QE17.HTM>
technical information: <http://www.ps.bam.de> or <http://130.149.60.45/~farbmatrik>

[illegible]

95.6, 0.0, 0.0

Output: Offset standard print; separation cmv0*, D65, page 13/33



http://130.149.60.45/~farbmetrik/QE17/QE17L0NP.PDF /.PS; transfer output
N: no 3D-linearization (OL) in file (F) or PS-startup (S), page 14/33

Data of Maximum color M in colorimetric system Offset standard print; separation cmy0*: D65 for input or output; Six hue angles of the 60 degree standard colours RYGBCM; h _{ab,ds} = 30.0, 90.0, 150.0, 210.0, 270.0, 330.0;									
Six hue angles of the device colours RYGBCM; h _{ab,d} = 32.3, 96.1, 155.5, 238.4, 306.2, 359.8; 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}	rgb* _{ds}	rgb* _{ds}	rgb* _{ds}	rgb* _{ds}	rgb* _{ds}	rgb* _{ds}	rgb* _{ds}
238	210	216	0.0	1.0	1.0	56.8	-25.5	-41.5	48.7
239	211	217	0.0	0.983	1.0	56.4	-24.9	-41.5	48.4
239	212	218	0.0	0.966	1.0	56.1	-24.3	-41.5	48.1
240	213	219	0.0	0.95	1.0	55.7	-23.7	-41.5	47.8
240	214	220	0.0	0.933	1.0	55.4	-23.1	-41.5	47.5
241	215	221	0.0	0.916	1.0	55.0	-22.5	-41.4	47.2
242	216	222	0.0	0.9	1.0	54.6	-22.0	-41.4	46.9
242	217	223	0.0	0.883	1.0	54.3	-21.4	-41.4	46.6
243	218	224	0.0	0.866	1.0	53.9	-20.7	-41.3	46.3
244	219	225	0.0	0.85	1.0	53.4	-20.0	-41.3	45.9
245	220	226	0.0	0.833	1.0	52.9	-19.2	-41.3	45.6
245	221	227	0.0	0.816	1.0	52.4	-18.5	-41.3	45.3
246	222	227	0.0	0.8	1.0	51.9	-17.7	-41.3	44.9
247	223	228	0.0	0.783	1.0	51.4	-17.0	-41.2	44.6
248	224	229	0.0	0.766	1.0	50.9	-16.2	-41.2	44.2
249	225	230	0.0	0.75	1.0	50.4	-15.5	-41.1	43.9
250	226	231	0.0	0.733	1.0	49.9	-14.7	-41.1	43.6
251	227	232	0.0	0.716	1.0	49.4	-13.8	-41.1	43.4
252	228	233	0.0	0.7	1.0	48.8	-13.0	-41.1	43.1
253	229	234	0.0	0.683	1.0	48.3	-12.2	-41.1	42.9
254	230	235	0.0	0.666	1.0	47.8	-11.4	-41.0	42.6
255	231	236	0.0	0.65	1.0	47.3	-10.6	-41.0	42.3
256	232	237	0.0	0.633	1.0	46.8	-9.8	-40.9	42.1
257	233	237	0.0	0.616	1.0	46.2	-8.9	-40.9	41.8
259	234	238	0.0	0.6	1.0	45.5	-7.8	-40.9	41.7
260	235	239	0.0	0.583	1.0	44.9	-6.6	-41.0	41.5
262	236	240	0.0	0.566	1.0	44.2	-5.5	-40.9	41.3
263	237	241	0.0	0.55	1.0	43.6	-4.4	-40.9	41.1
265	238	242	0.0	0.533	1.0	43.0	-3.3	-40.8	41.0
266	239	243	0.0	0.516	1.0	42.3	-2.3	-40.7	40.8
268	240	244	0.0	0.5	1.0	41.7	-1.2	-40.6	40.6
269	241	245	0.0	0.483	1.0	41.1	-0.2	-40.6	40.6
271	242	246	0.0	0.466	1.0	40.5	0.7	-40.6	40.6
272	243	247	0.0	0.45	1.0	39.9	1.7	-40.6	40.6
273	244	248	0.0	0.433	1.0	39.3	2.7	-40.6	40.6
275	245	248	0.0	0.416	1.0	38.8	3.6	-40.5	40.6
276	246	249	0.0	0.4	1.0	38.2	4.6	-40.4	40.7
277	247	250	0.0	0.383	1.0	37.6	5.6	-40.3	40.7
279	248	251	0.0	0.366	1.0	37.0	6.6	-40.2	40.8
280	249	252	0.0	0.35	1.0	36.4	7.7	-40.3	41.1
282	250	253	0.0	0.333	1.0	35.8	8.8	-40.4	41.3
283	251	254	0.0	0.316	1.0	35.2	9.9	-40.4	41.6
285	252	255	0.0	0.3	1.0	34.6	11.0	-40.4	41.9
286	253	256	0.0	0.283	1.0	34.0	12.1	-40.3	42.1
288	254	257	0.0	0.266	1.0	33.4	13.2	-40.3	42.4
289	255	258	0.0	0.25	1.0	32.8	14.3	-40.2	42.7

Input: **rgb/cmyk** -> **rgba**
Output: **transfer to cmy0d**

Output: Offset standard print; separation cmy0*, D65, page 14/33



Data of Maximum color M in colorimetric system Offset standard print; separation cmy0*: D65 for input or output; Six hue angles of the 60 degree standard colours RYGBCM; h _{ab,ds} = 30.0, 90.0, 150.0, 210.0, 270.0, 330.0;									
Six hue angles of the device colours RYGBCM; h _{ab,d} = 32.3, 96.1, 155.5, 238.4, 306.2, 359.8; 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* _{s361M}	Lab* _{e361M}	Lab* _{d361M}	Lab* _{s361M}	Lab* _{e361M}	Lab* _{d361M}
340	300	300	0.5	0.0	1.0	35.6	58.6	-20.7	62.1
341	301	301	0.516	0.0	1.0	35.9	59.5	-19.9	62.8
342	302	302	0.533	0.0	1.0	36.2	60.5	-19.0	63.4
343	303	303	0.550	0.0	1.0	36.6	61.4	-18.2	64.0
344	304	304	0.566	0.0	1.0	36.9	62.3	-17.3	64.7
345	305	304	0.583	0.0	1.0	37.2	63.2	-16.4	65.3
346	306	305	0.6	0.0	1.0	37.6	64.1	-15.4	66.0
347	307	306	0.616	0.0	1.0	37.9	65.0	-14.5	66.6
348	308	307	0.633	0.0	1.0	38.3	65.8	-13.7	67.2
349	309	308	0.650	0.0	1.0	38.8	66.6	-13.1	67.9
350	310	309	0.666	0.0	1.0	39.3	67.3	-12.5	68.5
351	311	310	0.683	0.0	1.0	39.8	68.1	-11.9	69.1
352	312	311	0.7	0.0	1.0	40.3	68.8	-11.2	69.7
353	313	312	0.716	0.0	1.0	40.8	69.5	-10.6	70.4
354	314	313	0.733	0.0	1.0	41.3	70.3	-9.9	71.0
355	315	314	0.750	0.0	1.0	41.8	71.0	-9.2	71.6
356	316	315	0.766	0.0	1.0	42.1	71.6	-8.7	72.1
357	317	316	0.783	0.0	1.0	42.4	72.1	-8.1	72.6
358	318	317	0.8	0.0	1.0	42.7	72.7	-7.6	73.1
359	319	318	0.816	0.0	1.0	43.1	73.2	-7.0	73.6
360	320	319	0.833	0.0	1.0	43.4	73.8	-6.5	74.1
361	321	320	0.850	0.0	1.0	43.7	74.3	-5.9	74.6
362	322	321	0.866	0.0	1.0	44.0	74.9	-5.3	75.1
363	323	322	0.883	0.0	1.0	44.3	75.4	-4.7	75.6
364	324	323	0.9	0.0	1.0	44.6	76.0	-4.1	76.1
365	325	324	0.916	0.0	1.0	44.8	76.6	-3.5	76.6
366	326	325	0.933	0.0	1.0	45.1	77.1	-2.8	77.2
367	327	326	0.950	0.0	1.0	45.3	77.7	-2.2	77.7
368	328	327	0.966	0.0	1.0	45.6	78.2	-1.5	78.2
369	329	328	0.983	0.0	1.0	45.8	78.7	-0.8	78.7
370	330	329	1.0	0.0	1.0	46.1	79.3	-0.2	79.3
371	331	330	0.983	46.1	79.1	0.3	79.1	360	
372	332	331	0.966	46.0	79.0	0.9	79.0	360	
373	333	332	0.95	46.0	78.9	1.5	78.9	361	
374	334	333	0.933	46.0	78.7	2.1	78.8	361	
375	335	334	0.916	46.0	78.6	2.7	78.6	361	
376	336	335	0.9	46.0	78.4	3.2	78.5	362	
377	337	336	0.883	45.9	78.3	3.8	78.4	362	
378	338	337	0.866	45.9	78.1	4.4	78.3	363	
379	339	338	0.85	45.9	78.0	5.0	78.2	363	
380	340	339	0.833	45.9	77.9	5.6	78.1	364	
381	341	340	0.816	45.9	77.7	6.2	78.0	364	
382	342	341	0.8	45.9	77.6	6.8	77.9	365	
383	343	342	0.783	45.9	77.4	7.4	77.8	365	
384	344	343	0.766	45.9	77.3	8.0	77.7	365	
385	345	344	0.75	45.9	77.1	8.6	77.6	366	
386	346	345	0.733	45.9	76.9	9.2	77.3	366	

input: *rgb/cmyk* -> *rgba*
output: transfer to *cmy0d*

LAB*a0, YN=0%, XY Znw=3.6, 4.2, 6.1, 85.4, 89.1, 104.8, LAB*rw=24.4, 0.0, 95.6, 0.0, 0.0

Output: Offset standard print; separation cmy0*, D65, page 16/33

TUB registration: 20130201-QE17/QE17L0NP.PDF /.PS
- application for measurement of offset print output, separ

TUB material: code=rha4ta
my0 (CMY0)

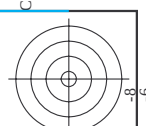
Data of Maximum color M in colorimetric system Offset standard print; separation cm^2 ; D65 for input or output; Six hue angles of the 60 degree standard colours RYGBM; $h_{\text{dbs}} = 30.0, 90.0, 150.0, 210.0, 270.0, 330.0$;

1-0031631-I.0	OE170-70	LAB*la0, YN=0%, XYZnw=3.6, 4.2, 6.1, 85.4, 89.1, 104.8, LAB*rw=24.4, 0.0, 0.0, 95.6, 0.0, 0.0
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TUB-test chart QE17; hue code: H_d^{*}=R50Y_d
48 step hue circles; *rgb-LabCh**tables

Output: Offset standard print; separation cmv0*, D65, page 17/33

[illegible]



-see similar files: <http://130.149.60.45/~farbmatrik/QE17/QE17.HTM>
technical information: <http://www.ps.bam.de> or <http://130.149.60.45/~farbmatrik>



TUB registration: 20130201-QE17/QE17L0NP.PDF /.PS
+ application for measurement of offset print output, separate

TUB material: code=rha4ta
ny0 (CMY0)

[illegible]

input: *rgb/cmyk* → *rgb*_d
output: transfer to *cmy*_d*0*_d

TUB-test chart QE17; hue code: H^{*}_d=R50Y_d
colors and differences, ΔE^* ,

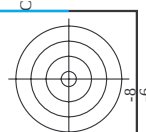


-see similar files: <http://130.149.60.45/~farbmetrik/QE17/QE17.HTM>
technical information: <http://www.ps.bam.de> or <http://130.149.60.45/~farbmetrik>



TUB registration: 20130201-QE17/QE17L0NP.PDF /.PS
- application for measurement of offset print output, separate

TUB material: code=rha4ta
ny0 (CMY0)



http://130.149.60.45/~farbmatrik/QE17/QE17LONP.PDF /PS; transfer output
N: no 3D-linearization (OL) in file (F) or PS-startup (S), page 32/33

n	HIC-Fid	rgb-Fid	icL-Fid	h_{α} -Fid	rgb ⁺ -Fid	LabCh ⁺ -Fid	LabCh ⁺ -Fid	rgb ⁺ -Fid	LabCh ⁺ -Fid	DF [±] -Fid	h_{α} -Fid	rgb ⁺ -Fid	LabCh ⁺ -Fid
972	NW_000a	0.0	0.125	0.0	0.0	0.0	0.0	0.0	0.0	2.2	360	1.0	1.0
973	NW_012a	0.125	0.125	0.125	0.0	0.0	0.0	0.0	0.0	26.4	10.1	360	1.0
974	NW_025a	0.25	0.25	0.25	0.125	0.125	0.125	0.125	0.125	42.5	13.9	360	1.0
975	NW_037a	0.375	0.375	0.375	0.25	0.25	0.25	0.25	0.25	14.8	47.1	15.9	360
976	NW_050a	0.5	0.5	0.5	0.375	0.375	0.375	0.375	0.375	48.4	14.2	360	1.0
977	NW_062a	0.625	0.625	0.625	0.625	0.625	0.625	0.625	0.625	58.3	10.9	360	1.0
978	NW_075a	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	57.9	7.6	360	1.0
979	NW_087a	0.875	0.875	0.875	0.875	0.875	0.875	0.875	0.875	3.6	360	1.0	1.0
980	NW_100a	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	70.5	3.6	360	1.0
981	NW_000a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	126.7	0.1	360	1.0
982	NW_012a	0.125	0.125	0.125	0.0	0.0	0.0	0.0	0.0	332.7	2.0	360	1.0
983	NW_025a	0.25	0.25	0.25	0.125	0.125	0.125	0.125	0.125	43.2	10.5	360	1.0
984	NW_037a	0.375	0.375	0.375	0.25	0.25	0.25	0.25	0.25	47.9	15.8	360	1.0
985	NW_050a	0.5	0.5	0.5	0.375	0.375	0.375	0.375	0.375	49.1	14.0	360	1.0
986	NW_062a	0.625	0.625	0.625	0.625	0.625	0.625	0.625	0.625	58.2	11.1	360	1.0
987	NW_075a	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	7.6	360	1.0	1.0
988	NW_087a	0.875	0.875	0.875	0.875	0.875	0.875	0.875	0.875	3.6	70.8	3.6	360
989	NW_100a	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	133.9	0.1	360	1.0
990	NW_000a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	307.9	1.6	360	1.0
991	NW_012a	0.125	0.125	0.125	0.0	0.0	0.0	0.0	0.0	9.2	30.9	10.6	360
992	NW_025a	0.25	0.25	0.25	0.125	0.125	0.125	0.125	0.125	45.2	14.3	360	1.0
993	NW_037a	0.375	0.375	0.375	0.25	0.25	0.25	0.25	0.25	48.2	16.3	360	1.0
994	NW_050a	0.5	0.5	0.5	0.375	0.375	0.375	0.375	0.375	48.3	14.3	360	1.0
995	NW_062a	0.625	0.625	0.625	0.625	0.625	0.625	0.625	0.625	59.9	11.2	360	1.0
996	NW_075a	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	56.9	7.8	360	1.0
997	NW_087a	0.875	0.875	0.875	0.875	0.875	0.875	0.875	0.875	71.6	3.6	360	1.0
998	NW_100a	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	120.9	0.2	360	1.0
999	NW_000a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	317.5	1.7	360	1.0
1000	NW_012a	0.125	0.125	0.125	0.0	0.0	0.0	0.0	0.0	28.8	10.5	360	1.0
1001	NW_025a	0.25	0.25	0.25	0.125	0.125	0.125	0.125	0.125	43.5	14.3	360	1.0
1002	NW_037a	0.375	0.375	0.375	0.25	0.25	0.25	0.25	0.25	48.4	16.4	360	1.0
1003	NW_050a	0.5	0.5	0.5	0.375	0.375	0.375	0.375	0.375	48.7	14.3	360	1.0
1004	NW_062a	0.625	0.625	0.625	0.625	0.625	0.625	0.625	0.625	59.3	11.4	360	1.0
1005	NW_075a	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	71.3	7.9	360	1.0
1006	NW_087a	0.875	0.875	0.875	0.875	0.875	0.875	0.875	0.875	113.6	0.1	360	1.0
1007	NW_100a	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	306.9	2.7	360	1.0
1008	NW_000a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8	2.4	6.6	360
1009	NW_012a	0.125	0.125	0.125	0.0	0.0	0.0	0.0	0.0	19.7	10.3	360	1.0
1010	NW_025a	0.25	0.25	0.25	0.125	0.125	0.125	0.125	0.125	42.4	13.8	360	1.0
1011	NW_037a	0.375	0.375	0.375	0.25	0.25	0.25	0.25	0.25	47.7	14.3	360	1.0
1012	NW_050a	0.5	0.5	0.5	0.375	0.375	0.375	0.375	0.375	48.0	14.5	360	1.0
1013	NW_062a	0.625	0.625	0.625	0.625	0.625	0.625	0.625	0.625	57.1	10.7	360	1.0
1014	NW_075a	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	71.4	3.6	360	1.0
1015	NW_087a	0.875	0.875	0.875	0.875	0.875	0.875	0.875	0.875	113.6	0.1	360	1.0
1016	NW_100a	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	318.9	2.6	360	1.0
1017	NW_000a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	6.9	360	1.0
1018	NW_012a	0.125	0.125	0.125	0.0	0.0	0.0	0.0	0.0	9.2	30.9	10.6	360
1019	NW_025a	0.25	0.25	0.25	0.125	0.125	0.125	0.125	0.125	45.2	14.3	360	1.0
1020	NW_037a	0.375	0.375	0.375	0.25	0.25	0.25	0.25	0.25	48.2	16.3	360	1.0
1021	NW_050a	0.5	0.5	0.5	0.375	0.375	0.375	0.375	0.375	48.3	14.3	360	1.0
1022	NW_062a	0.625	0.625	0.625	0.625	0.625	0.625	0.625	0.625	59.9	11.2	360	1.0
1023	NW_075a	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	56.9	7.8	360	1.0
1024	NW_087a	0.875	0.875	0.875	0.875	0.875	0.875	0.875	0.875	71.6	3.6	360	1.0
1025	NW_100a	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	120.9	0.2	360	1.0
1026	NW_000a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	317.5	1.7	360	1.0
1027	NW_012a	0.125	0.125	0.125	0.0	0.0	0.0	0.0	0.0	28.8	10.5	360	1.0
1028	NW_025a	0.25	0.25	0.25	0.125	0.125	0.125	0.125	0.125	43.5	14.3	360	1.0
1029	NW_037a	0.375	0.375	0.375	0.25	0.25	0.25	0.25	0.25	48.4	16.4	360	1.0
1030	NW_050a	0.5	0.5	0.5	0.375	0.375	0.375	0.375	0.375	48.7	14.3	360	1.0
1031	NW_062a	0.625	0.625	0.625	0.625	0.625	0.625	0.625	0.625	59.3	11.4	360	1.0
1032	NW_075a	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	71.3	7.9	360	1.0
1033	NW_087a	0.875	0.875	0.875	0.875	0.875	0.875	0.875	0.875	113.6	0.1	360	1.0
1034	NW_100a	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	306.9	2.7	360	1.0
1035	NW_000a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8	2.4	6.6	360
1036	NW_012a	0.125	0.125	0.125	0.0	0.0	0.0	0.0	0.0	19.7	10.3	360	1.0
1037	NW_025a	0.25	0.25	0.25	0.125	0.125	0.125	0.125	0.125	42.4	13.8	360	1.0
1038	NW_037a	0.375	0.375	0.375	0.25	0.25	0.25	0.25	0.25	47.7	14.3	360	1.0
1039	NW_050a	0.5	0.5	0.5	0.375	0.375	0.375	0.375	0.375	48.0	14.5	360	1.0
1040	NW_062a	0.625	0.625	0.625	0.625	0.625	0.625	0.625	0.625	57.1	10.7	360	1.0
1041	NW_075a	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	71.4	3.6	360	1.0
1042	NW_087a	0.875	0.875	0.875	0.875	0.875	0.875	0.875	0.875	113.6	0.1	360	1.0
1043	NW_100a	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	318.9	2.6	360	1.0
1044	NW_000a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	6.9	360	1.0
1045	NW_012a	0.125	0.125	0.125	0.0	0.0	0.0	0.0	0.0	9.2	30.9	10.6	360
1046	NW_025a	0.25	0.25	0.25	0.125	0.125	0.125	0.125	0.125	45.2	14.3	360	1.0
1047	NW_037a	0.375	0.375	0.375	0.25	0.25	0.25	0.25	0.25	48.2	16.3	360	1.0
1048	NW_050a	0.5	0.5	0.5	0.375	0.375	0.375	0.375	0.375	48.3	14.3	360	1.0
1049	NW_062a	0.625	0.625	0.625	0.625	0.625	0.625	0.625	0.625	59.9	11.2	360	1.0
1050	NW_075a	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	56.9	7.8	360	1.0
1051	NW_087a	0.875	0.875	0.875	0.875	0.875	0.875	0.875	0.875	71.6	3.6	360	1.0
1052	NW_100a	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	120.9	0.2	360	1.0

Mean color difference of this name:

delta E** = 9.2

-0033131-F0

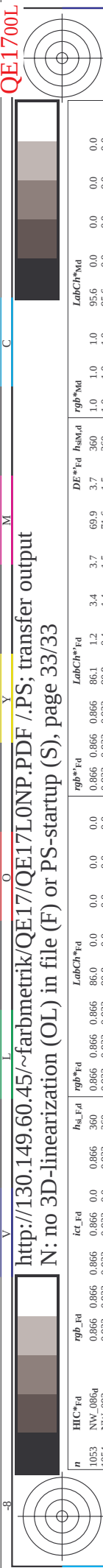
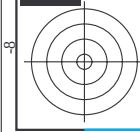
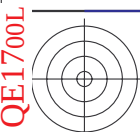
QE170-7N, Page 32/33-F

TUB-test chart QE17; hue code: $H_d^* = R50Y_d$ colors and differences. ΔE^* ,

input: *rgb/cmyk* → *rgb*
output: transfer to *cmv0d*



see similar files: <http://130.149.60.45/~farbmatrik/QE17/QE17.HTM>
technical information: <http://www.ps.bam.de> or <http://130.149.60.45/~farbmatrik>



TUB registration: 20130201-QE17/QE17L0NP.PDF /.PS TUB material: code=rha4ta application for measurement of offset print output, separation cmy0 (CMY0)

http://130.149.60.45/~farbmetrik/QE17/QE17L0NP.PDF /.PS; transfer output N: no 3D-linearization (OL) in file (F) or PS-startup (S), page 33/33

n	HVC*Fid	rgb_Fid	icr_Fid	hsv_Fid	rgb*Fid	LabCh*Fid	hsv*Fid	LabCh*Fid	rgb**Fid	DF*Fid	hsv.d	rgb**Md	LabCh**Md
1053	NW_086q	0.866	0.866	0.866	0.866	0.866	0.866	0.866	0.866	3.7	360	1.0	956
1054	NW_093d	0.933	0.933	0.933	0.933	0.933	0.933	0.933	0.933	1.5	360	1.0	956
1055	NW_100d	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.1	360	1.0	956
1056	NW_006q	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	360	1.0	956
1057	NW_006d	0.066	0.066	0.066	0.066	0.066	0.066	0.066	0.066	6.7	360	1.0	956
1058	NW_013q	0.133	0.133	0.133	0.133	0.133	0.133	0.133	0.133	22.4	360	1.0	956
1059	NW_026q	0.266	0.266	0.266	0.266	0.266	0.266	0.266	0.266	30.4	360	1.0	956
1060	NW_026d	0.266	0.266	0.266	0.266	0.266	0.266	0.266	0.266	11.6	360	1.0	956
1061	NW_033q	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	13.3	360	1.0	956
1062	NW_040q	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	40.4	360	1.0	956
1063	NW_046q	0.466	0.466	0.466	0.466	0.466	0.466	0.466	0.466	48.4	360	1.0	956
1064	NW_053q	0.533	0.533	0.533	0.533	0.533	0.533	0.533	0.533	51.6	360	1.0	956
1065	NW_060q	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	56.7	360	1.0	956
1066	NW_066q	0.666	0.666	0.666	0.666	0.666	0.666	0.666	0.666	62.0	360	1.0	956
1067	NW_073q	0.734	0.734	0.734	0.734	0.734	0.734	0.734	0.734	69.4	360	1.0	956
1068	NW_080q	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	81.3	360	1.0	956
1069	NW_086q	0.866	0.866	0.866	0.866	0.866	0.866	0.866	0.866	86.6	360	1.0	956
1070	NW_093d	0.933	0.933	0.933	0.933	0.933	0.933	0.933	0.933	90.7	360	1.0	956
1071	NW_100d	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	95.7	360	1.0	956
1072	NW_000q	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	360	1.0	956
1073	ROY_100_100d	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.8	360	1.0	956
1074	G50B_100_100d	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	138.7	360	1.0	956
1075	Y06C_100_100d	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	32.8	360	1.0	956
1076	B06C_100_100d	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	48.8	360	1.0	956
1077	P06C_100_100d	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36.0	360	1.0	956
1078	B06C_100_100d	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	306.9	360	1.0	956
1079	B50R_100_100d	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	73.2	360	1.0	956

Mean color difference of this page: delta E** = 5.8

see similar files: http://130.149.60.45/~farbmetrik/QE17/QE17.HTM technical information: http://www.ps.bam.de or http://130.149.60.45/~farbmetrik

input: rgb/cmyk -> rgba output: transfer to cmy0d

TUB-test chart QE17; hue code: H*d=R50Yd colors and differences, ΔE*

