

see similar files: http://130.149.60.45/~farbmetrik/QE13/QE13.HTM  
technical information: http://www.ps.bam.de or http://130.149.60.45/~farbmetrik

TUB registration: 20130201-QE13/QE13L0FA.TXT /PS  
application for measurement of offset print output

TUB material: code=rh4ta

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

$H^*_ = R50Y_$

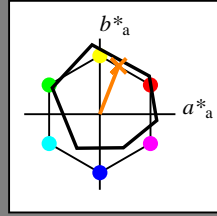
Data for any device (d) or elementary (e) colour:

$HIC^*_$

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 <sub>-,Ma</sub>	47.9	65.3	50.5	82.6	37
Y <sub>-,Ma</sub>	90.3	-10.2	91.7	92.3	96
G <sub>-,Ma</sub>	50.9	-62.8	34.9	71.9	150
C <sub>-,Ma</sub>	58.6	-30.3	-45.0	54.2	236
B <sub>-,Ma</sub>	25.7	31.0	-44.4	54.2	305
M <sub>-,Ma</sub>	48.1	75.2	-8.3	75.7	353
N <sub>-,Ma</sub>	18.0	0.0	0.0	0.0	0
W <sub>-,Ma</sub>	95.4	0.0	0.0	0.0	0
R <sub>-,CIE</sub>	39.9	58.7	27.9	65.0	25
Y <sub>-,CIE</sub>	81.2	-2.8	71.5	71.6	92
G <sub>-,CIE</sub>	52.2	-42.4	13.6	44.5	162
B <sub>-,CIE</sub>	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\_

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

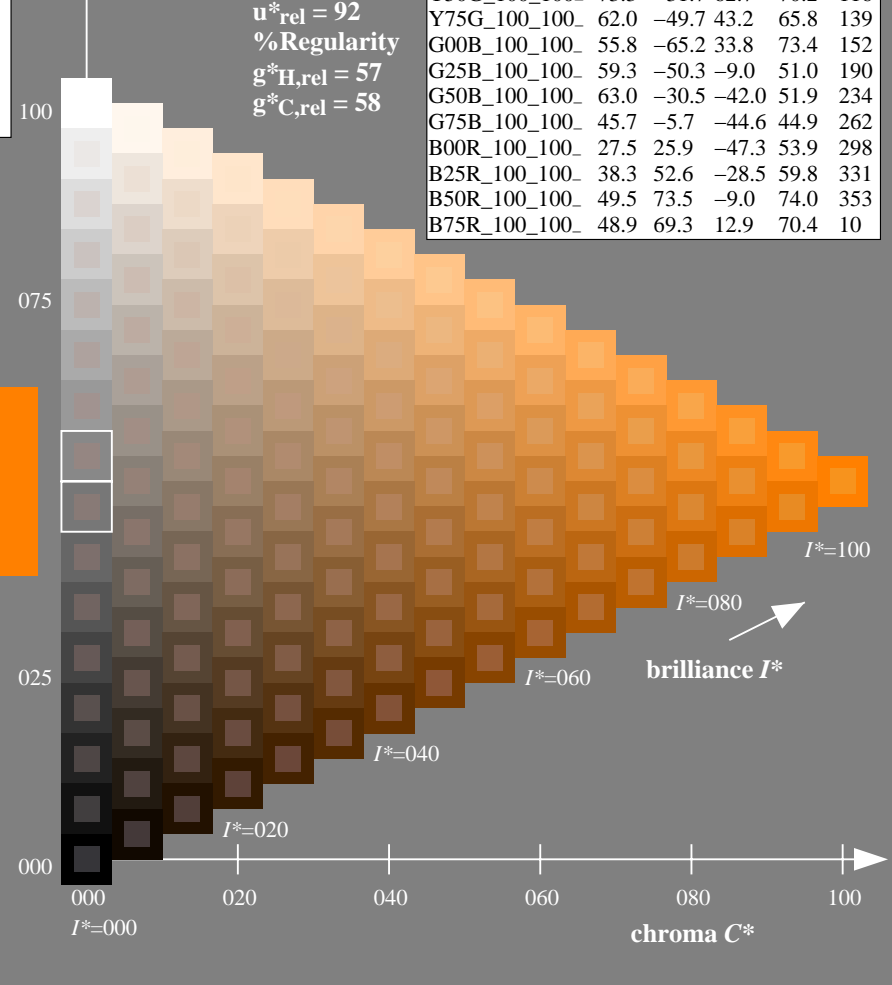
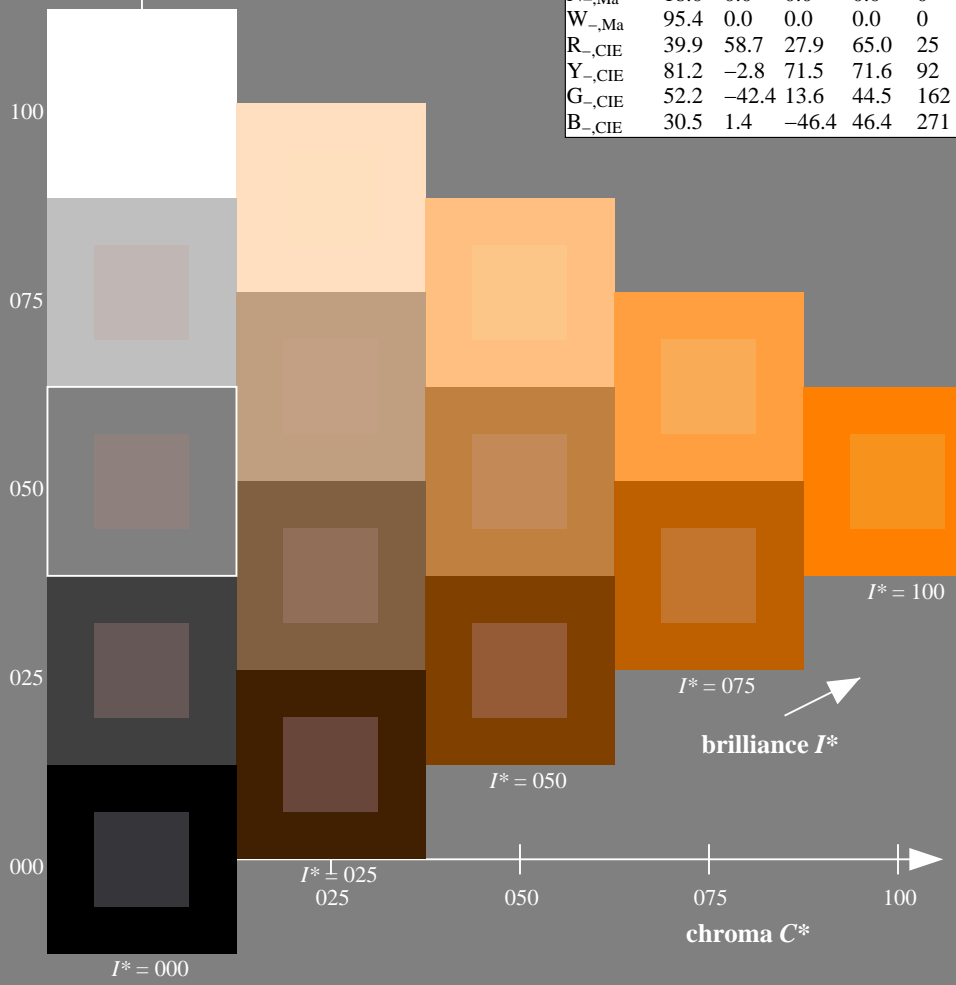
1.0 0.5 0.0 1.0 1.0

triangle lightness  $T^*$

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

**ORS20a; adapted (a) CIELAB data**

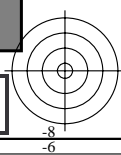
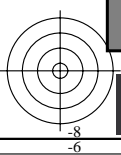
$H^*_$	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
R00Y_100_100_	48.4	66.1	40.2	77.3	31
R25Y_100_100_	56.8	48.0	50.5	69.6	46
R50Y_100_100_	68.6	25.0	63.9	68.6	68
R75Y_100_100_	80.6	4.8	77.2	77.3	86
Y00G_100_100_	90.2	-9.6	88.2	88.7	96
Y25G_100_100_	83.2	-18.4	79.9	81.9	102
Y50G_100_100_	73.3	-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



1-103030-L0 QE130-7N

TUB-test chart QE13; hue code:  $H^*_ = R50Y_$   
Test chart according to DIN 33872, 3D=1, de=0,  $cm\dot{y}k^*$

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

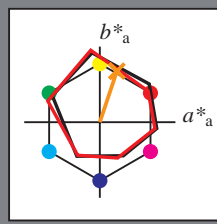


Input and Output: Offset Reflective System ORS18a for relative CIELAB hue  $h_{ab,a,rel} = h_{ab}/360 = 71/360 = 0.19$

$H^*_d = R50Y_d$

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 <sub>d,Ma</sub>	47.3	63.8	41.2	76.0	32
Y <sub>d,Ma</sub>	88.3	-11.9	95.1	95.8	97
G <sub>d,Ma</sub>	51.9	-68.8	28.1	74.3	157
C <sub>d,Ma</sub>	58.3	-29.2	-43.7	52.6	236
B <sub>d,Ma</sub>	25.3	23.5	-47.3	52.8	296
M <sub>d,Ma</sub>	48.2	72.8	-8.5	73.3	353
N <sub>d,Ma</sub>	17.7	0.0	0.0	0.0	0
W <sub>d,Ma</sub>	95.4	0.0	0.0	0.0	0
R <sub>d,CIE</sub>	39.9	58.7	27.9	65.0	25
Y <sub>d,CIE</sub>	81.2	-2.8	71.5	71.6	92
G <sub>d,CIE</sub>	52.2	-42.4	13.6	44.5	162
B <sub>d,CIE</sub>	30.5	1.4	-46.4	46.4	271

Data for maximum colour (Ma):

$LabCh^*_{d,Ma}$ : 67 22 67 71 71

$HIC^*_{d,Ma}$ : R50Y\_100\_100<sub>d</sub>

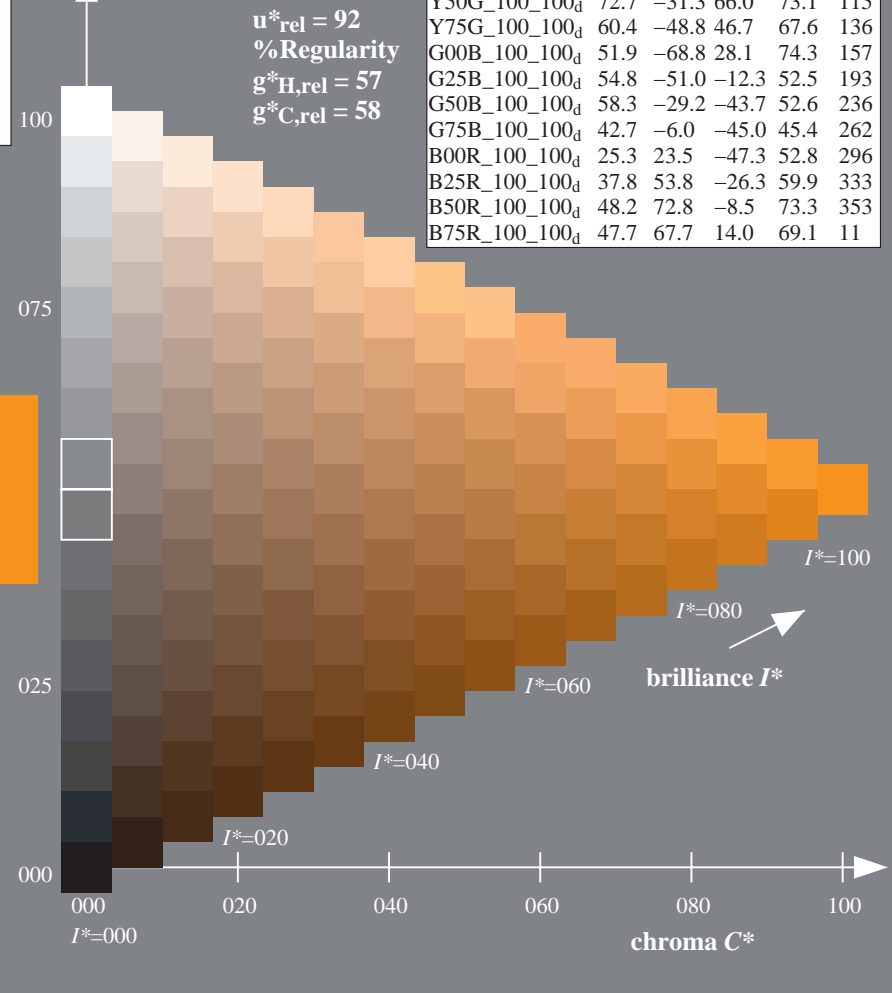
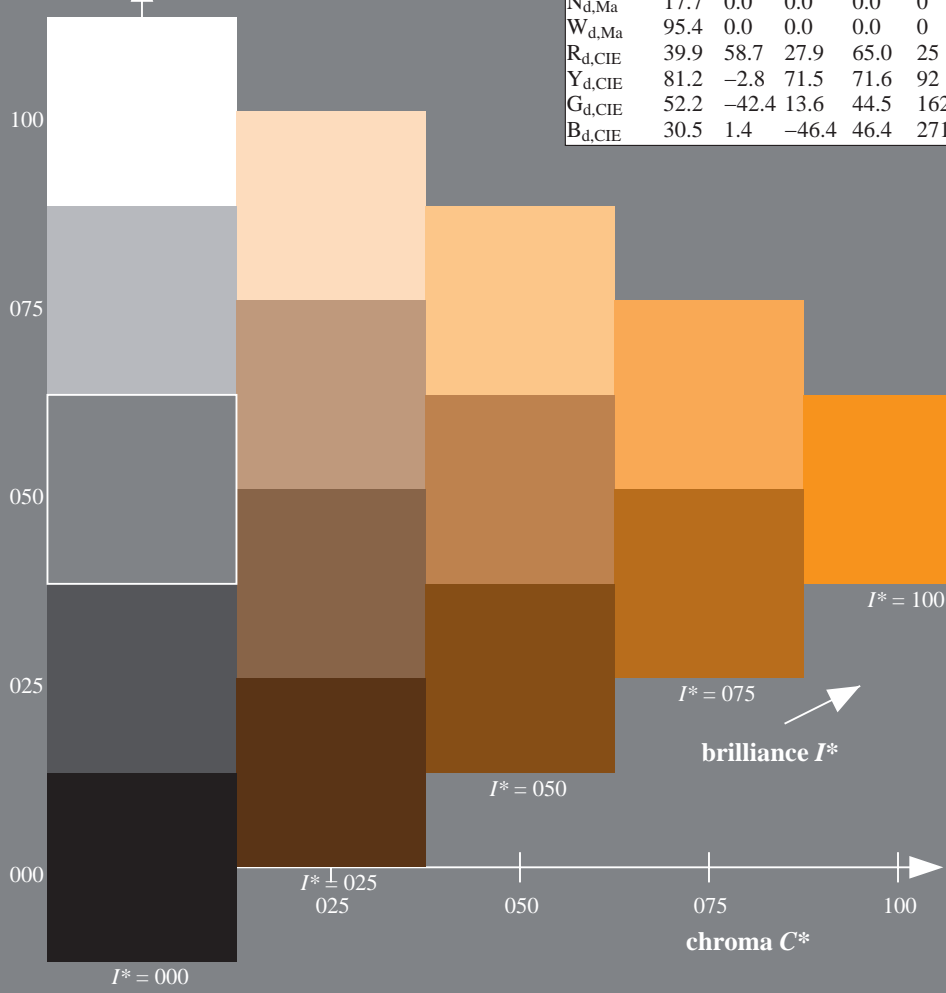
$rgbic^*_{d,Ma}$ : 1.0 0.5 0.0 1.0 1.0

triangle lightness  $T^*$

ORS20a; adapted (a) CIELAB data

$H^*_d$	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
R00Y_100_100 <sub>d</sub>	47.3	63.8	41.2	76.0	32
R25Y_100_100 <sub>d</sub>	55.3	45.8	52.2	69.5	48
R50Y_100_100 <sub>d</sub>	67.2	22.6	67.6	71.2	71
R75Y_100_100 <sub>d</sub>	79.9	1.0	83.9	83.9	89
Y00G_100_100 <sub>d</sub>	88.3	-11.9	95.1	95.8	97
Y25G_100_100 <sub>d</sub>	83.3	-19.2	83.7	85.9	102
Y50G_100_100 <sub>d</sub>	72.7	-31.3	66.0	73.1	115
Y75G_100_100 <sub>d</sub>	60.4	-48.8	46.7	67.6	136
G00B_100_100 <sub>d</sub>	51.9	-68.8	28.1	74.3	157
G25B_100_100 <sub>d</sub>	54.8	-51.0	-12.3	52.5	193
G50B_100_100 <sub>d</sub>	58.3	-29.2	-43.7	52.6	236
G75B_100_100 <sub>d</sub>	42.7	-6.0	-45.0	45.4	262
B00R_100_100 <sub>d</sub>	25.3	23.5	-47.3	52.8	296
B25R_100_100 <sub>d</sub>	37.8	53.8	-26.3	59.9	333
B50R_100_100 <sub>d</sub>	48.2	72.8	-8.5	73.3	353
B75R_100_100 <sub>d</sub>	47.7	67.7	14.0	69.1	11

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

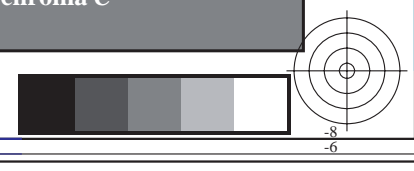
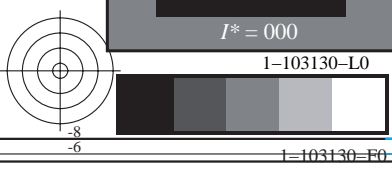


see similar files: http://130.149.60.45/~farbmetrik/QE13/QE13.HTM  
technical information: http://www.ps.bam.de or http://130.149.60.45/~farbmetrik

TUB registration: 20130201-QE13/QE13L0FA.TXT /PS  
application for measurement of offset print output, separation cmyk6\* (CMYK)  
TUB material: code=rh4ta

TUB-test chart QE13; hue code:  $H^*_d=R50Y_d$   
Test chart according to DIN 33872, 3D=1, de=0,  $cmyk^*$

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

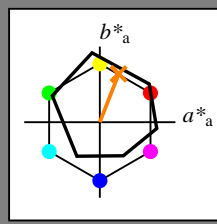


Input and Output: Offset Reflective System ORS18a for relative CIELAB hue  $h_{ab,a,rel} = h_{ab}/360 = 68/360 = 0.19$

$H^*_ = R50Y_$

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\_

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

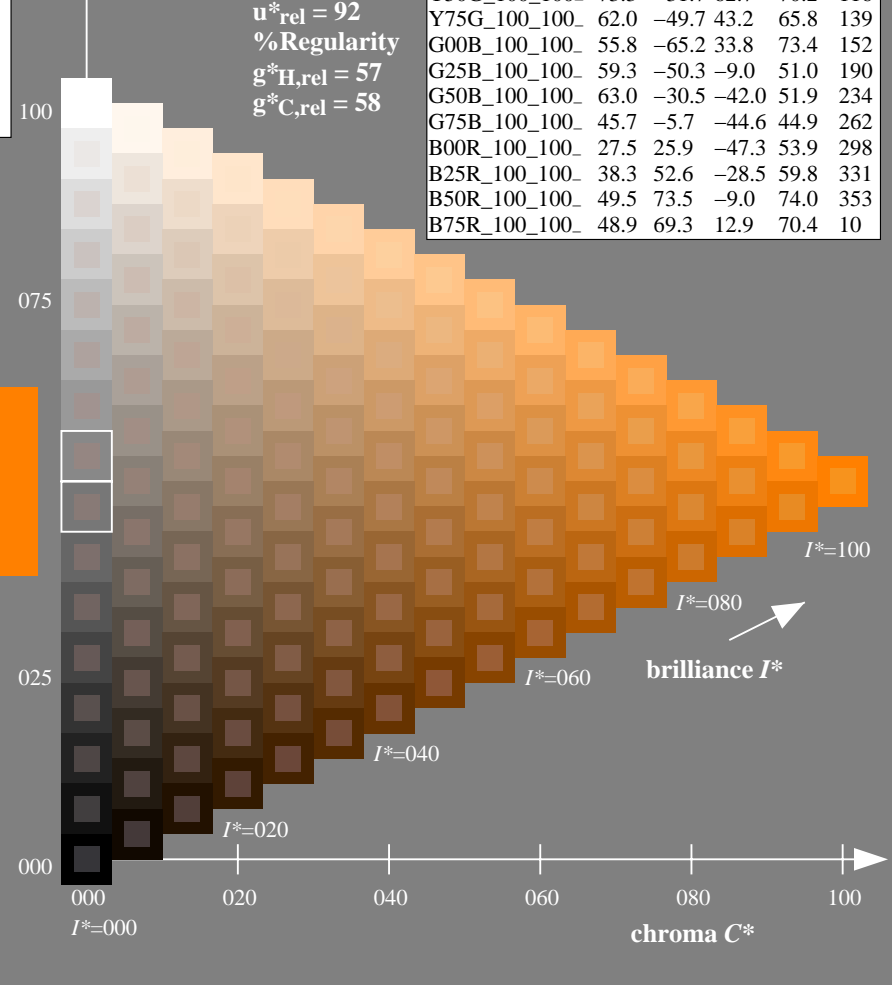
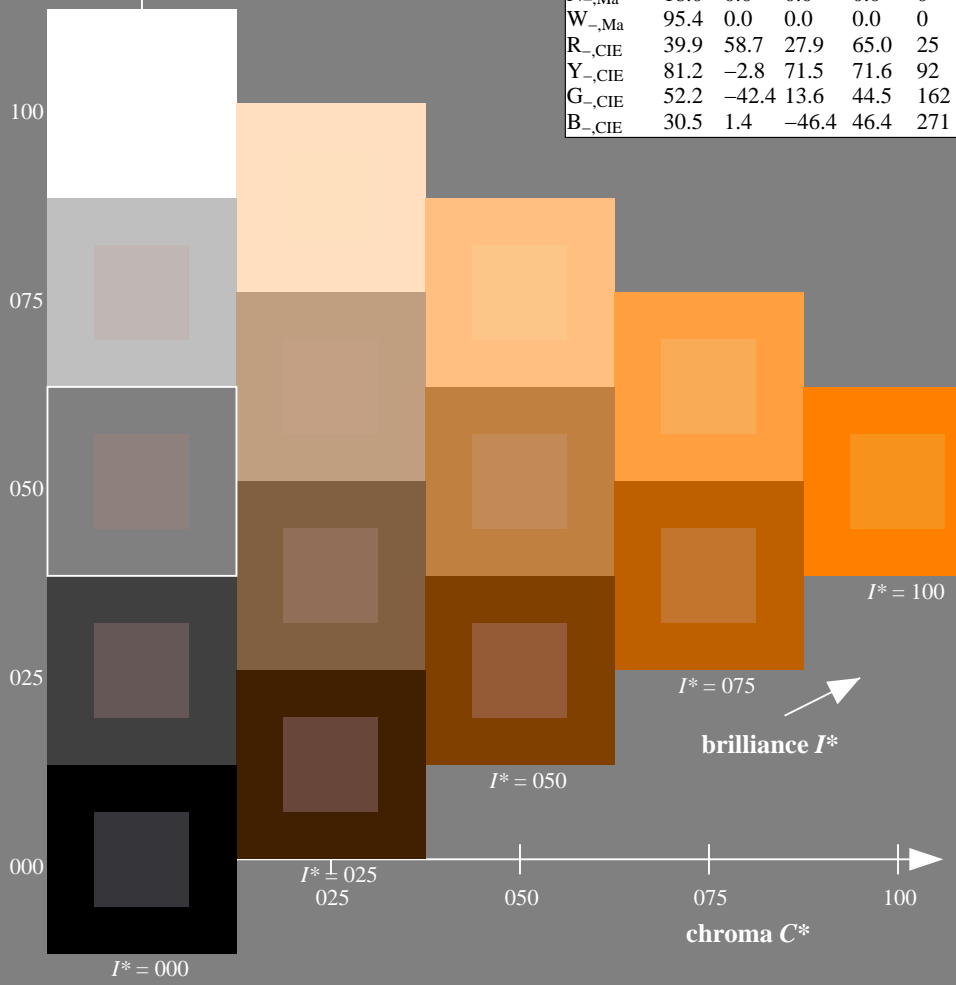
1.0 0.5 0.0 1.0 1.0

triangle lightness  $T^*$

**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

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



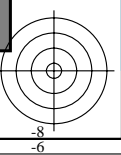
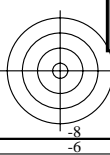
see similar files: <http://130.149.60.45/~farbmetrik/QE13/QE13L0FA.TXT> /PS  
technical information: <http://www.ps.bam.de> or <http://130.149.60.45/~farbmetrik>

TUB registration: 20130201-QE13/QE13L0FA.TXT /PS  
application for measurement of offset print output

TUB material: code=rh4ta

TUB-test chart QE13; hue code:  $H^*_ = R50Y_$   
Test chart according to DIN 33872, 3D=1, de=1,  $cm\dot{y}k^*$

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

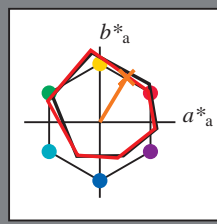


Input and Output: Offset Reflective System ORS18a for relative CIELAB hue  $h_{ab,a,rel} = h_{ab}/360 = 58/360 = 0.16$

$H^*_e = R50Y_e$

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

$HIC^*_e$   
hue text for the colours of this page:  
 $H^*_e = R50Y_e$   
triangle lightness  $T^*$



ORS20a; adapted (a) CIELAB data

name	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
Re,Ma	47.6	64.9	30.9	71.9	25
Ye,Ma	82.9	-3.5	87.8	87.9	92
Ge,Ma	52.4	-67.1	21.5	70.5	162
Ce,Ma	56.6	-39.7	-29.9	49.8	216
Be,Ma	37.9	1.3	-45.4	45.4	271
Me,Ma	34.8	49.2	-30.0	57.7	328
Ne,Ma	17.7	0.0	0.0	0.0	0
We,Ma	95.4	0.0	0.0	0.0	0
Re,CIE	39.9	58.7	27.9	65.0	25
Ye,CIE	81.2	-2.8	71.5	71.6	92
Ge,CIE	52.2	-42.4	13.6	44.5	162
Be,CIE	30.5	1.4	-46.4	46.4	271

Data for maximum colour (Ma):

$LabCh^*_{e, Ma}: 60 \ 35 \ 59 \ 68 \ 58$

$HIC^*_{e, Ma}: R50Y\_100\_100_e$

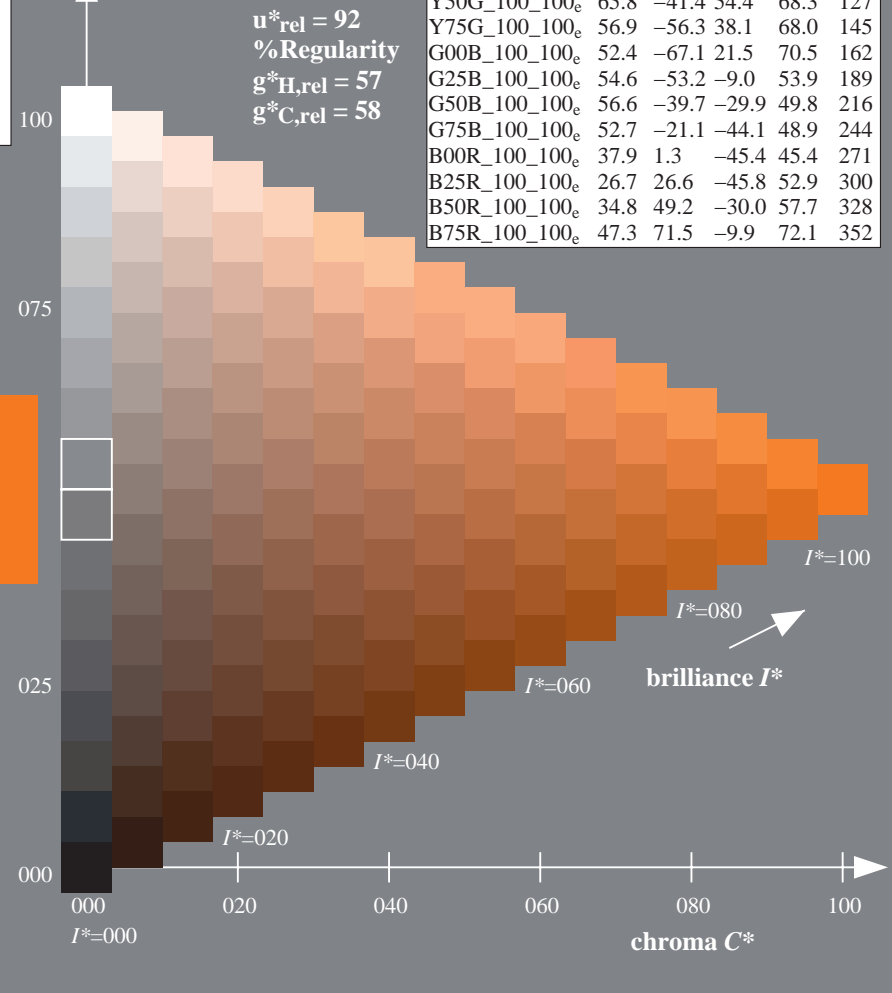
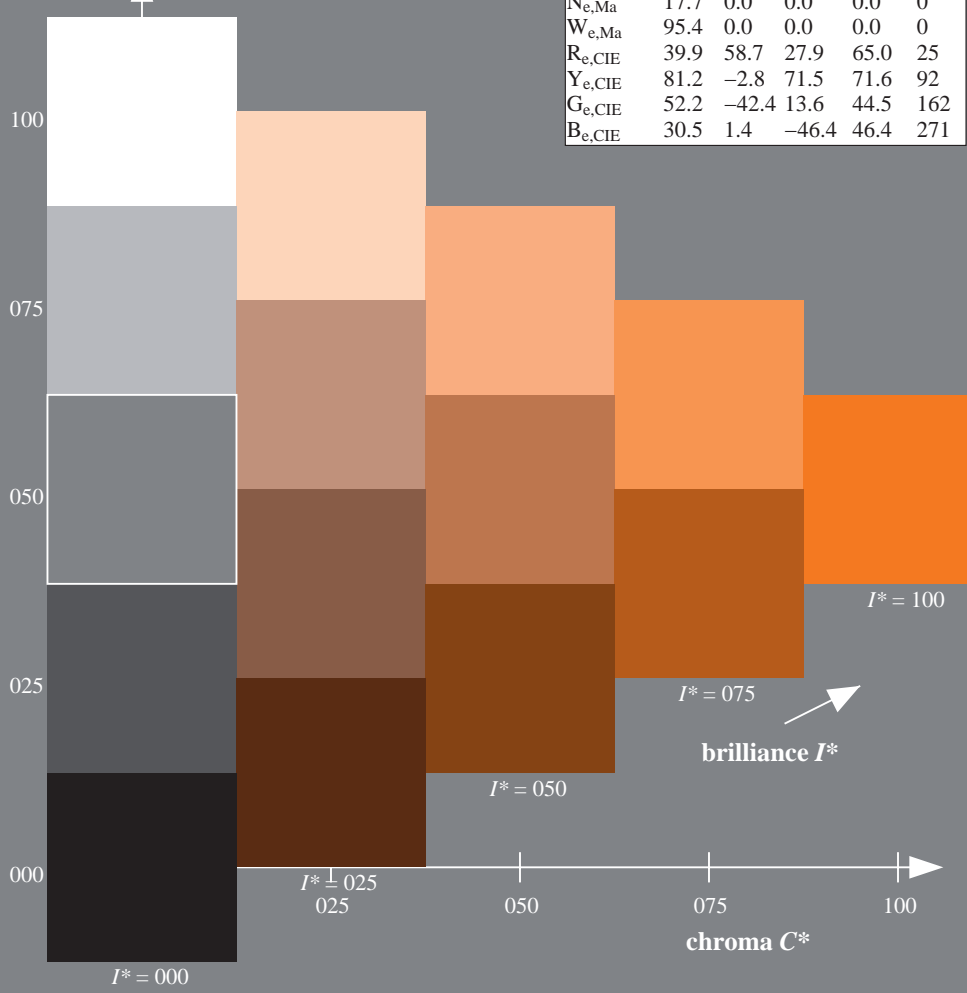
$rgbic^*_{e, Ma}: 1.0 \ 0.34 \ 0.0 \ 1.0 \ 1.0$

triangle lightness  $T^*$

ORS20a; adapted (a) CIELAB data

$H^*_e$	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
R00Y_100_100_e	47.6	64.9	30.9	71.9	25
R25Y_100_100_e	51.5	54.2	47.2	71.9	41
R50Y_100_100_e	60.3	35.6	59.0	68.9	58
R75Y_100_100_e	70.4	17.0	72.2	74.1	76
Y00G_100_100_e	82.9	-3.5	87.8	87.9	92
Y25G_100_100_e	76.9	-25.5	75.9	80.1	108
Y50G_100_100_e	65.8	-41.4	54.4	68.3	127
Y75G_100_100_e	56.9	-56.3	38.1	68.0	145
G00B_100_100_e	52.4	-67.1	21.5	70.5	162
G25B_100_100_e	54.6	-53.2	-9.0	53.9	189
G50B_100_100_e	56.6	-39.7	-29.9	49.8	216
G75B_100_100_e	52.7	-21.1	-44.1	48.9	244
B00R_100_100_e	37.9	1.3	-45.4	45.4	271
B25R_100_100_e	26.7	26.6	-45.8	52.9	300
B50R_100_100_e	34.8	49.2	-30.0	57.7	328
B75R_100_100_e	47.3	71.5	-9.9	72.1	352

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



see similar files: <http://130.149.60.45/~farbmetrik/QE13/QE13L0FA.TXT> /PS  
technical information: <http://www.ps.bam.de> or <http://130.149.60.45/~farbmetrik>

TUB registration: 20130201-QE13/QE13L0FA.TXT /PS  
application for measurement of offset print output, separation cmyk\* (CMYK)  
TUB material: code=rh4ta

1-113130-L0 QE130-73

TUB-test chart QE13; hue code:  $H^*_e=R50Y_e$   
Test chart according to DIN 33872, 3D=1, de=1,  $cmyk^*$

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

1-113130-F0