



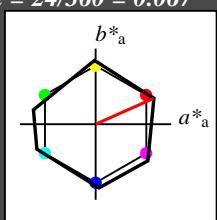
Eingabe: Farbmétrisches Reflexions-System NRS11
 für Bunton $h^* = lab^*h = 24/360 = 0.067$
 lab^*tch und lab^*nch

D65: Bunton R

LCH*Ma: 53 84 24

olv*Ma: 1.0 0.0 0.0

Dreiecks-Helligkeit t^*



relative Inform. Technology (IT)
 $olv^3* 1.0 \quad 1.0 \quad 1.0 \quad (1.0)$

$cmy^3* 0.0 \quad 0.0 \quad 0.0 \quad (0.0)$

$olv^4* 1.0 \quad 1.0 \quad 1.0 \quad 1.0$

$cmy^4* 0.0 \quad 0.0 \quad 0.0 \quad 0.0$

standard and adapted CIELAB

$LAB^*LAB \quad 95.41 \quad 0.0 \quad -0.01$

$LAB^*LABa \quad 95.41 \quad 0.0 \quad 0.0$

$LAB^*TChA \quad 99.99 \quad 0.01 \quad -$

relative CIELAB lab^*

$lab^*lab \quad 1.0 \quad 0.0 \quad 0.0$

$lab^*tch \quad 1.0 \quad 0.0 \quad -$

$lab^*nch \quad 0.0 \quad 0.0 \quad -$

relative Natural Colour (NC)

$lab^*lrij \quad 1.0 \quad 0.0 \quad 0.0$

$lab^*ice \quad 1.0 \quad 0.0 \quad -$

$lab^*ncE \quad 0.0 \quad 0.0 \quad -$

relative Inform. Technology (IT)
 $olv^3* 0.5 \quad 0.5 \quad 0.5 \quad (1.0)$

$cmy^3* 0.5 \quad 0.5 \quad 0.5 \quad (0.0)$

$olv^4* 1.0 \quad 1.0 \quad 1.0 \quad 0.5$

$cmy^4* 0.0 \quad 0.0 \quad 0.0 \quad 0.5$

standard and adapted CIELAB

$LAB^*LAB \quad 53.21 \quad 0.04 \quad 0.0$

$LAB^*LABa \quad 53.21 \quad 0.0 \quad 0.0$

$LAB^*TChA \quad 50.0 \quad 0.01 \quad -$

relative CIELAB lab^*

$lab^*lab \quad 0.5 \quad 0.0 \quad 0.0$

$lab^*tch \quad 0.5 \quad 0.0 \quad -$

$lab^*nch \quad 0.5 \quad 0.0 \quad -$

relative Natural Colour (NC)

$lab^*lrij \quad 0.5 \quad 0.0 \quad 0.0$

$lab^*ice \quad 0.5 \quad 0.0 \quad -$

$lab^*ncE \quad 0.5 \quad 0.0 \quad -$

relative Inform. Technology (IT)
 $olv^3* 0.0 \quad 0.0 \quad 0.0 \quad (1.0)$

$cmy^3* 1.0 \quad 1.0 \quad 1.0 \quad (0.0)$

$olv^4* 1.0 \quad 1.0 \quad 1.0 \quad 0.0$

$cmy^4* 0.0 \quad 0.0 \quad 0.0 \quad 1.0$

standard and adapted CIELAB

$LAB^*LAB \quad 11.01 \quad 0.07 \quad 0.01$

$LAB^*LABa \quad 11.01 \quad 0.0 \quad 0.0$

$LAB^*TChA \quad 0.01 \quad 0.01 \quad -$

relative CIELAB lab^*

$lab^*lab \quad 0.0 \quad 0.0 \quad 0.0$

$lab^*tch \quad 0.0 \quad 0.0 \quad -$

$lab^*nch \quad 1.0 \quad 0.0 \quad -$

relative Natural Colour (NC)

$lab^*lrij \quad 0.0 \quad 0.0 \quad 0.0$

$lab^*ice \quad 0.0 \quad 0.0 \quad -$

$lab^*ncE \quad 1.0 \quad 0.0 \quad -$

$n^* = 1,0$

NRS11; adaptierte CIELAB-Daten

	$L^*=L_a^*$	a^*_a	b^*_a	$C_{ab,a}^*$	$h_{ab,a}^*$
RMa	53.2	77.06	34.32	84.36	24
JMa	53.2	-1.51	84.38	84.39	91
GMa	53.2	-82.27	18.98	84.44	167
B50BMa	53.2	-77.72	-32.98	84.44	203
BMa	53.2	4.37	-84.28	84.41	273
B50RMa	53.2	69.09	-48.41	84.37	325
NMa	10.99	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.69	27.98	65.01	25
JCIE	81.26	-2.9	71.56	71.62	92
GCIE	52.23	-42.45	13.59	44.59	162
BCIE	30.57	1.35	-46.48	46.51	272

%Umfang

$u^*_{rel} = 119$

%Regularität

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

Ausgabe: Farbmétrisches Reflexions-System ORS18

für Bunton $h^* = lab^*h = 38/360 = 0.105$

lab*tch und lab*nch

D65: Bunton O

LCH*Ma: 48 83 38

olv*Ma: 1.0 0.0 0.0

Dreiecks-Helligkeit t^*

%Umfang

$u^*_{rel} = 93$

%Regularität

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

$g^*_{C,rel} = 59$

ORS18; adaptierte CIELAB-Daten

	$L^*=L_a^*$	a^*_a	b^*_a	$C_{ab,a}^*$	$h_{ab,a}^*$
OMa	47.94	65.37	50.52	82.62	38
YMa	90.37	-10.27	91.77	92.34	96
LMa	50.9	-62.79	34.95	71.87	151
CMa	58.62	-30.35	-45.01	54.3	236
VMa	25.71	31.11	-44.42	54.24	305
MMa	48.13	75.27	-8.35	75.73	354
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.66	26.98	64.56	25
JCIE	81.26	-2.17	67.76	67.79	92
GCIE	52.23	-42.26	11.75	43.87	164
BCIE	30.57	1.15	-46.84	46.87	271

$n^* = 0,00$

Schwarzheit n^*

$n^* = 0,50 \quad n^* = 0,50 \quad n^* = 1,00$

relative Buntheit c^*

$n^* = 0,00$

relative Inform. Technology (IT)

$olv^3* 0.5 \quad 0.5 \quad 0.5 \quad (1.0)$

$cmy^3* 0.0 \quad 0.5 \quad 0.5 \quad (0.0)$

$olv^4* 1.0 \quad 0.0 \quad 0.0 \quad 1.0$

$cmy^4* 0.0 \quad 0.5 \quad 0.5 \quad 0.0$

standard and adapted CIELAB

$LAB^*LAB \quad 71.67 \quad 32.15 \quad 28.41$

$LAB^*LABa \quad 71.67 \quad 32.68 \quad 25.25$

$LAB^*TChA \quad 75.0 \quad 41.3 \quad 37.7$

relative CIELAB lab^*

$lab^*lab \quad 0.693 \quad 0.396 \quad 0.306$

$lab^*tch \quad 0.75 \quad 0.5 \quad 0.105$

$lab^*nch \quad 0.0 \quad 0.5 \quad 0.105$

relative Natural Colour (NC)

$lab^*lrij \quad 0.693 \quad 0.477 \quad 0.15$

$lab^*ice \quad 0.75 \quad 0.5 \quad 0.048$

$lab^*ncE \quad 0.0 \quad 0.5 \quad r19j$

$n^* = 0,00$

Schwarzheit n^*

$n^* = 0,50 \quad n^* = 0,50 \quad n^* = 1,00$

relative Buntheit c^*

$n^* = 0,00$

relative Inform. Technology (IT)

$olv^3* 0.5 \quad 0.0 \quad 0.0 \quad (1.0)$

$cmy^3* 0.5 \quad 1.0 \quad 1.0 \quad (0.0)$

$olv^4* 1.0 \quad 0.5 \quad 0.5 \quad 0.5$

$cmy^4* 0.0 \quad 0.5 \quad 0.5 \quad 0.5$

standard and adapted CIELAB

$LAB^*LAB \quad 32.98 \quad 32.9 \quad 25.8$

$LAB^*LABa \quad 32.98 \quad 32.68 \quad 25.25$

$LAB^*TChA \quad 25.01 \quad 41.3 \quad 37.7$

relative CIELAB lab^*

$lab^*lab \quad 0.193 \quad 0.396 \quad 0.306$

$lab^*tch \quad 0.25 \quad 0.5 \quad 0.105$

$lab^*nch \quad 0.5 \quad 0.5 \quad 0.105$

relative Natural Colour (NC)

$lab^*lrij \quad 0.193 \quad 0.477 \quad 0.15$

$lab^*ice \quad 0.25 \quad 0.5 \quad 0.048$

$lab^*ncE \quad 0.5 \quad 0.5 \quad r19j$

$n^* = 0,00$

Schwarzheit n^*

$n^* = 1,0$

UG170-7, 3 stufige Reihen für konstanten CIELAB Bunton 24/360 = 0.067 (links)

3 stufige Reihen für konstanten CIELAB Bunton 38/360 = 0.105 (rechts)

BAM-Prüfvorlage UG17; Farbmétrik-Systeme NRS11 & ORS18 input: $cmy0* setcmykcolor$
 D65: 2 Koordinaten-Daten von 3stufigen Farbreihen für 10 Bunttöne output: $olv* setrgbcolor / w* setgray$

Eingabe: Farbmétrisches Reflexions-System NRS11

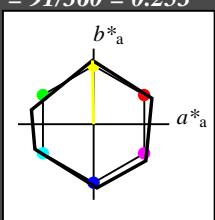
für Bunton $h^* = lab^*h = 91/360 = 0.253$
 lab^*tch und lab^*nch

D65: Bunton J

LCH*Ma: 53 84 91

olv*Ma: 1.0 1.0 0.0

Dreiecks-Helligkeit t^*



relative Inform. Technology (IT)

olv3* 1.0 1.0 1.0 (1.0)

cmy3* 0.0 0.0 0.0 (0.0)

olv4* 1.0 1.0 1.0 1.0

cmy4* 0.0 0.0 0.0 0.0

standard and adapted CIELAB

LAB*LAB 95.41 0.0 -0.01

LAB*LABa 95.41 0.0 0.0

LAB*TChA 99.99 0.01 -

relative CIELAB lab*

lab*lab 1.0 0.0 0.0

lab*tch 1.0 0.0 -

lab*nch 0.0 0.0 -

relative Natural Colour (NC)

lab*lrj 1.0 0.0 0.0

lab*tce 1.0 0.0 -

lab*ncE 0.0 0.0 -

relative Inform. Technology (IT)

olv3* 0.5 0.5 0.5 (1.0)

cmy3* 0.5 0.5 0.5 (0.0)

olv4* 1.0 1.0 1.0 0.5

cmy4* 0.0 0.0 0.0 0.5

standard and adapted CIELAB

LAB*LAB 53.21 0.04 0.0

LAB*LABa 53.21 0.0 0.0

LAB*TChA 50.0 0.01 -

relative CIELAB lab*

lab*lab 0.5 0.0 0.0

lab*tch 0.5 0.0 -

lab*nch 0.5 0.0 -

relative Natural Colour (NC)

lab*lrj 0.5 0.0 0.0

lab*tce 0.5 0.0 -

lab*ncE 0.5 0.0 -

relative Inform. Technology (IT)

olv3* 0.5 0.5 0.0 (1.0)

cmy3* 0.5 0.5 1.0 (0.0)

olv4* 1.0 1.0 0.5 0.5

cmy4* 0.0 0.0 0.5 0.5

standard and adapted CIELAB

LAB*LAB 32.1 -0.69 42.2

LAB*LABa 32.1 -0.75 42.18

LAB*TChA 25.01 42.19 91.03

relative CIELAB lab*

lab*lab 0.25 -0.008 0.5

lab*tch 0.25 0.5 0.253

lab*nch 0.5 0.5 0.253

relative Natural Colour (NC)

lab*lrj 0.25 0.015 0.5

lab*tce 0.25 0.5 0.245

lab*ncE 0.5 0.5 r98j

n* = 0,00

n* = 1,0

	L^* = L_a^*	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	53.2	77.06	34.32	84.36	24
JMa	53.2	-1.51	84.38	84.39	91
GMa	53.2	-82.27	18.98	84.44	167
G50BMa	53.2	-77.72	-32.98	84.44	203
BMa	53.2	4.37	-84.28	84.41	273
B50RMa	53.2	69.09	-48.41	84.37	325
NMa	10.99	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.69	27.98	65.01	25
JCIE	81.26	-2.9	71.56	71.62	92
GCIE	52.23	-42.45	13.59	44.59	162
BCIE	30.57	1.35	-46.48	46.51	272

Ausgabe: Farbmétrisches Reflexions-System ORS18

für Bunton $h^* = lab^*h = 96/360 = 0.268$

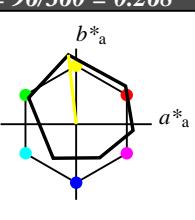
lab*tch und lab*nch

D65: Bunton Y

LCH*Ma: 90 92 96

olv*Ma: 1.0 1.0 0.0

Dreiecks-Helligkeit t^*



	L^* = L_a^*	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	47.94	65.37	50.52	82.62	38
YMa	90.37	-10.27	91.77	92.34	96
LMa	50.9	-62.79	34.95	71.87	151
CMa	58.62	-30.35	-45.01	54.3	236
VMa	25.71	31.11	-44.42	54.24	305
MMa	48.13	75.27	-8.35	75.73	354
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.66	26.98	64.56	25
JCIE	81.26	-2.17	67.76	67.79	92
GCIE	52.23	-42.26	11.75	43.87	164
BCIE	30.57	1.15	-46.84	46.87	271

n* = 0,00

n* = 1,0

relative Buntheit c^*

Schwarzheit n^*

n* = 0,00

relative Inform. Technology (IT)

olv3* 1.0 1.0 0.5 (1.0)

cmy3* 0.0 0.0 0.5 (0.0)

olv4* 1.0 1.0 1.0 1.0

cmy4* 0.0 0.0 0.0 0.0

standard and adapted CIELAB

LAB*LAB 92.88 -0.06 50.46

LAB*LABa 92.88 -5.13 45.87

LAB*TChA 75.0 46.16 96.39

relative CIELAB lab*

lab*lab 0.967 -0.048 0.497

lab*tch 0.75 0.5 0.268

lab*nch 0.0 0.5 0.268

relative Natural Colour (NC)

lab*lrj 0.967 -0.11 0.994

lab*tce 0.5 0.0 0.268

lab*ncE 0.0 0.5 0.268

n* = 0,00

relative Inform. Technology (IT)

olv3* 0.0 0.0 0.0 (1.0)

cmy3* 0.5 0.5 1.0 (0.0)

olv4* 1.0 1.0 1.0 0.5

cmy4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB

LAB*LAB 56.71 -0.23 2.14

LAB*LABa 56.71 0.0 0.0

LAB*TChA 50.0 0.01 -

relative CIELAB lab*

lab*lab 0.5 0.0 0.0

lab*tch 0.5 0.0 -

lab*nch 0.5 0.0 -

relative Natural Colour (NC)

lab*lrj 0.5 0.0 0.0

lab*tce 0.5 0.0 -

lab*ncE 0.5 0.0 -

n* = 0,00

n* = 1,0

n* = 0,00

relative Buntheit c^*

Schwarzheit n^*

n* = 0,00

relative Inform. Technology (IT)

olv3* 0.0 0.0 1.0 (0.0)

cmy3* 0.0 0.0 1.0 (0.0)

olv4* 1.0 1.0 0.0 1.0

cmy4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB

LAB*LAB 54.19 -5.32 47.85

LAB*LABa 54.19 -5.13 45.87

LAB*TChA 25.01 46.16 96.39

relative CIELAB lab*

lab*lab 0.467 -0.055 0.497

lab*tch 0.25 0.5 0.268

lab*nch 0.5 0.5 0.268

relative Natural Colour (NC)

lab*lrj 0.467 -0.048 0.497

lab*tce 0.25 0.5 0.266

lab*ncE 0.5 0.5 j06g

n* = 0,00

n* = 1,0

relative Buntheit c^*

Schwarzheit n^*

n* = 0,00

n* = 1,0

relative Inform. Technology (IT)

olv3* 0.0 0.0 0.0 0.0

cmy3* 0.0 0.0 0.0 0.0

olv4* 1.0 1.0 0.0 0.0

cmy4* 0.0 0.0 0.0 0.0

standard and adapted CIELAB

LAB*LAB 18.02 0.5 -0.46

LAB*LABa 18.02 0.0 0.0

LAB*TChA 0.01 0.01 -

relative CIELAB lab*

lab*lab 0.0 0.0 0.0

lab*tch 0.0 0.0 -

lab*nch 1.0 0.0 -

relative Natural Colour (NC)

lab*lrj 0.0 0.0 0.0

lab*tce 0.0 0.0 -

lab*ncE 1.0 0.0 -

n* = 0,00

n* = 1,0

relative Inform. Technology (IT)

olv3* 1.0 1.0 0.0 0.0

cmy3* 0.0 0.0 0.0 0.0

olv4* 1.0 1.0 0.0 0.0

cmy4* 0.0 0.0 0.0 0.0

standard and adapted CIELAB

LAB*LAB 2.5 -0.06 0.0

LAB*LABa 2.5 0.0 0.0

LAB*TChA 0.01 0.01 -

relative CIELAB lab*

lab*lab 0.0 0.0 0.0

lab*tch 0.0 0.0 -

lab*nch 1.0 0.0 -

relative Natural Colour (NC)

lab*lrj 0.0 0.0 0.0

lab*tce 0.0 0.0 -

lab*ncE 1.0 0.0 -

n* = 0,00

n* = 1,0

relative Inform. Technology (IT)

olv3* 1.0 1.0 0.0 0.0

cmy3* 0.0 0.0 0.0 0.0

olv4* 1.0 1.0 0.0 0.0

cmy4* 0.0 0.0 0.0 0.0

standard and adapted CIELAB

LAB*LAB 0.0 0.0 0.0

LAB*LABa 0.0 0.0 0.0

LAB*TChA 0.01 0.01 -

relative CIELAB lab*

lab*lab 0.0 0.0 0.0

lab*tch 0.0 0.0 -

lab*nch 1.0 0.0 -

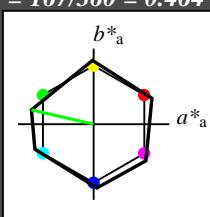
relative Natural Colour (NC)</

Eingabe: Farbmétrisches Reflexions-System NRS11

für Bunton $h^* = lab^*h = 167/360 = 0.464$
 lab^*tch und lab^*nch

D65: Bunton G
 LCH*Ma: 53 84 167
 olv*Ma: 0.0 1.0 0.0

Dreiecks-Helligkeit t^*



relative Inform. Technology (IT)
 $olv3^*$ 1.0 1.0 1.0 (1.0)
 $cmy3^*$ 0.0 0.0 0.0 (0.0)
 $olv4^*$ 1.0 1.0 1.0 1.0
 $cmy4^*$ 0.0 0.0 0.0 0.0

standard and adapted CIELAB
 LAB^*LAB 95.41 0.0 -0.01
 LAB^*LAb 95.41 0.0 0.0
 LAB^*TCh 99.99 0.01 -

relative CIELAB lab^*

lab^*lab 1.0 0.0 0.0

lab^*tch 1.0 0.0 -

lab^*nch 0.0 0.0 -

relative Natural Colour (NC)

lab^*lrij 1.0 0.0 0.0

lab^*ice 1.0 0.0 -

lab^*nCE 0.0 0.0 -

relative Inform. Technology (IT)

$olv3^*$ 0.5 0.5 0.5 (1.0)
 $cmy3^*$ 0.5 0.5 0.5 (0.0)
 $olv4^*$ 0.5 1.0 0.5 1.0
 $cmy4^*$ 0.5 0.0 0.5 0.5

standard and adapted CIELAB
 LAB^*LAB 74.3 -41.1 9.49
 LAB^*LAb 74.3 -41.12 9.49
 LAB^*TCh 75.0 42.21 167.01

relative CIELAB lab^*

lab^*lab 0.75 -0.486 0.112

lab^*tch 0.75 0.5 0.464

lab^*nch 0.0 0.5 0.464

relative Natural Colour (NC)

lab^*lrij 0.75 -0.498 -0.033

lab^*ice 0.75 0.5 0.511

lab^*nCE 0.0 0.5 g04b

relative Inform. Technology (IT)

$olv3^*$ 0.0 0.5 0.0 (1.0)
 $cmy3^*$ 1.0 0.5 1.0 (0.0)
 $olv4^*$ 0.5 1.0 0.5 0.5
 $cmy4^*$ 0.5 0.0 0.5 0.5

standard and adapted CIELAB
 LAB^*LAB 32.1 -41.06 9.5
 LAB^*LAb 32.1 -41.12 9.49
 LAB^*TCh 25.01 42.21 167.01

relative CIELAB lab^*

lab^*lab 0.25 -0.486 0.112

lab^*tch 0.25 0.5 0.464

lab^*nch 0.5 0.5 0.464

relative Natural Colour (NC)

lab^*lrij 0.25 -0.498 -0.033

lab^*ice 0.25 0.5 0.511

lab^*nCE 0.5 0.5 g04b

relative Inform. Technology (IT)

$olv3^*$ 1.0 1.0 1.0 (0.0)
 $cmy3^*$ 0.0 0.0 0.0 (0.0)
 $olv4^*$ 1.0 1.0 1.0 0.0
 $cmy4^*$ 0.0 0.0 0.0 1.0

standard and adapted CIELAB
 LAB^*LAB 11.01 0.07 0.01
 LAB^*LAb 11.01 0.0 0.0
 LAB^*TCh 0.01 0.01 -

relative CIELAB lab^*

lab^*lab 0.0 0.0 0.0

lab^*tch 0.0 0.0 -

lab^*nch 1.0 0.0 -

relative Natural Colour (NC)

lab^*lrij 0.0 0.0 0.0

lab^*ice 0.0 0.0 -

lab^*nCE 1.0 0.0 -

$n^* = 1,0$

NRS11; adaptierte CIELAB-Daten

	$L^*=L_a^*$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	53.2	77.06	34.32	84.36	24
JMa	53.2	-1.51	84.38	84.39	91
GMa	53.2	-82.27	18.98	84.44	167
G50BMa	53.2	-77.72	-32.98	84.44	203
BMa	53.2	4.37	-84.28	84.41	273
B50RMa	53.2	69.09	-48.41	84.37	325
NMa	10.99	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.69	27.98	65.01	25
JCIE	81.26	-2.9	71.56	71.62	92
GCIE	52.23	-42.45	13.59	44.59	162
BCIE	30.57	1.35	-46.48	46.51	272

Ausgabe: Farbmétrisches Reflexions-System ORS18

für Bunton $h^* = lab^*h = 151/360 = 0.419$

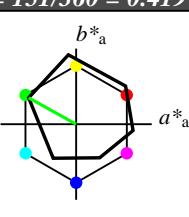
lab^*tch und lab^*nch

D65: Bunton L

LCH*Ma: 51 72 151

olv*Ma: 0.0 1.0 0.0

Dreiecks-Helligkeit t^*



%Umfang

$u^*_{rel} = 119$

%Regularität

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

ORS18; adaptierte CIELAB-Daten

	$L^*=L_a^*$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	47.94	65.37	50.52	82.62	38
YMa	90.37	-10.27	91.77	92.34	96
LMa	50.9	-62.79	34.95	71.87	151
CMa	58.62	-30.35	-45.01	54.3	236
VMa	25.71	31.11	-44.42	54.24	305
MMa	48.13	75.27	-8.35	75.73	354
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.66	26.98	64.56	25
JCIE	81.26	-2.17	67.76	67.79	92
GCIE	52.23	-42.26	11.75	43.87	164
BCIE	30.57	1.15	-46.84	46.87	271

%Umfang

$u^*_{rel} = 93$

%Regularität

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

$g^*_{C,rel} = 59$

$n^* = 0,00$

Schwarzheit n^*

$n^* = 1,00$

	$L^*=L_a^*$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OLV3*	0.5	1.0	0.5	(1.0)	
CMY3*	0.5	0.0	0.5	(0.0)	
OLV4*	1.0	1.0	1.0	1.0	
CMY4*	0.0	0.0	0.0	0.0	
standard and adapted CIELAB					
LAB^*LAB	95.41	-0.97	4.75		
LAB^*LAb	95.41	0.0	0.0		
LAB^*TCh	99.99	0.01	-		
relative CIELAB lab^*					
lab^*lab	1.0	0.0	0.0		
lab^*tch	1.0	0.0	-		
lab^*nch	0.0	0.0	-		
relative Natural Colour (NC)					
lab^*lrij	1.0	0.0	0.0		
lab^*ice	1.0	0.0	-		
lab^*nCE	0.0	0.0	-		
relative Inform. Technology (IT)					
$olv3^*$	0.5	0.5	0.5	(1.0)	
$cmy3^*$	0.5	0.0	0.5	(0.0)	
$olv4^*$	0.5	1.0	0.5	1.0	
$cmy4^*$	0.5	0.0	0.5	0.0	
standard and adapted CIELAB					
LAB^*LAB	73.15	-31.94	20.73		
LAB^*LAb	73.15	-31.38	17.47		
LAB^*TCh	75.0	35.93	150.91		
relative CIELAB lab^*					
lab^*lab	0.712	-0.436	0.243		
lab^*tch	0.75	0.5	0.419		
lab^*nch	0.0	0.5	0.419		
relative Natural Colour (NC)					
lab^*lrij	0.712	-0.478	0.144		
lab^*ice	0.75	0.5	0.453		
lab^*nCE	0.0	0.5	81g		
relative Inform. Technology (IT)					
$olv3^*$	0.0	0.5	0.0	(1.0)	
$cmy3^*$	1.0	0.5	1.0	(0.0)	
$olv4^*$	0.5	1.0	0.5	0.5	
$cmy4^*$	0.5	0.0	0.5	0.5	
standard and adapted CIELAB					
LAB^*LAB	50.9	-62.91	36.69		
LAB^*LAb	50.9	-62.78	34.94		
LAB^*TCh	50.0	71.86	150.91		
relative CIELAB lab^*					
lab^*lab	0.425	-0.873	0.486		
lab^*tch	0.5	1.0	0.419		
lab^*nch	0.0	1.0	0.419		
relative Natural Colour (NC)					
lab^*lrij	0.425	-0.956	0.289		
lab^*ice	0.5	1.0	0.453		
lab^*nCE	0.0	1.0	81g		

$n^* = 0,00$

Schwarzheit n^*

$n^* = 1,00$

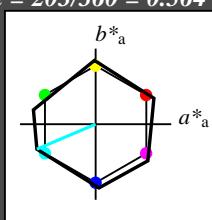
	$L^*=L_a^*$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OLV3*	0.0	0.0	0.0	(1.0)	
CMY3*	1.0	1.0	1.0	(0.0)	
OLV4*	1.0	1.0	1.0	0.0	
CMY4*	0.0	0.0	0.0	1.0	
standard and adapted CIELAB					
LAB^*LAB	18.02	0.5	-0.46		
LAB^*LAb	18.02	0.0	0.0		
LAB^*TCh	0.01	0.01	-		
relative CIELAB lab^*					
lab^*lab	0.0	0.0	0.0		
lab^*tch	0.0	0.0	-		
lab^*nch	1.0	0.0	-		
relative Natural Colour (NC)					
lab^*lrij	0.0	0.0	0.0		
lab^*ice	0.0	0.0	-		
lab^*nCE	1.0	0.0	-		
relative Inform. Technology (IT)					
$olv3^*$	0.213	-0.436	0.243		
$cmy3^*$	0.25	0.5	0.419		
$olv4^*$	0.5	0.5	0.419		
$cmy4^*$	0.5	0.5	0.419		
standard and adapted CIELAB					
LAB^*LAB	34.46	-31.2	18.11		
LAB^*LAb	34.46	-31.38	17.47		
LAB^*TCh	25.01	35.93	150.91		
relative CIELAB lab^*					
lab^*lab	0.213	-0.478	0.144		
lab^*tch	0.25	0.5	0.453		
lab^*nch	0.5	0.5	81g		
relative Natural Colour (NC)					
lab^*lrij	0.213	-0.478	0.144		
lab^*ice	0.25				



Eingabe: Farbmétrisches Reflexions-System NRS11
 für Bunton $h^* = lab^*h = 203/360 = 0.564$
 lab^*tch und lab^*nch

D65: Bunton G50B
 LCH*Ma: 53 84 203
 oly*Ma: 0.0 1.0 1.0

Dreiecks-Helligkeit t^*



relative Inform. Technology (IT)
 $olv^3* 1.0 \quad 1.0 \quad 1.0 \quad (1.0)$
 $cmy3* 0.0 \quad 0.0 \quad 0.0 \quad (0.0)$
 $olv^4* 1.0 \quad 1.0 \quad 1.0 \quad 1.0$
 $cmy4* 0.0 \quad 0.0 \quad 0.0 \quad 0.0$
 standard and adapted CIELAB
 $LAB^*LAB \quad 95.41 \quad 0.0 \quad -0.01$
 $LAB^*LABa \quad 95.41 \quad 0.0 \quad 0.0$
 $LAB^*TCh \quad 99.99 \quad 0.01 \quad -$

relative CIELAB lab^*
 $lab^*lab \quad 1.0 \quad 0.0 \quad 0.0$
 $lab^*tch \quad 1.0 \quad 0.0 \quad -$
 $lab^*nch \quad 0.0 \quad 0.0 \quad -$
 relative Natural Colour (NC)
 $lab^*lrij \quad 1.0 \quad 0.0 \quad 0.0$
 $lab^*ice \quad 1.0 \quad 0.0 \quad -$
 $lab^*nCE \quad 0.0 \quad 0.0 \quad -$

relative Inform. Technology (IT)
 $olv^3* 0.5 \quad 0.5 \quad 0.5 \quad (1.0)$
 $cmy3* 0.5 \quad 0.5 \quad 0.5 \quad (0.0)$
 $olv^4* 1.0 \quad 1.0 \quad 1.0 \quad 0.5$
 $cmy4* 0.0 \quad 0.0 \quad 0.0 \quad 0.5$
 standard and adapted CIELAB
 $LAB^*LAB \quad 53.21 \quad 0.04 \quad 0.0$
 $LAB^*LABa \quad 53.21 \quad 0.0 \quad 0.0$
 $LAB^*TCh \quad 50.0 \quad 0.01 \quad -$
 relative CIELAB lab^*
 $lab^*lab \quad 0.5 \quad 0.0 \quad 0.0$
 $lab^*tch \quad 0.5 \quad 0.0 \quad -$
 $lab^*nch \quad 0.5 \quad 0.0 \quad -$
 relative Natural Colour (NC)
 $lab^*lrij \quad 0.5 \quad 0.0 \quad 0.0$
 $lab^*ice \quad 0.5 \quad 0.0 \quad -$
 $lab^*nCE \quad 0.5 \quad 0.0 \quad -$

relative Inform. Technology (IT)
 $olv^3* 0.0 \quad 0.0 \quad 0.0 \quad (1.0)$
 $cmy3* 1.0 \quad 1.0 \quad 1.0 \quad (0.0)$
 $olv^4* 1.0 \quad 1.0 \quad 1.0 \quad 0.0$
 $cmy4* 0.0 \quad 0.0 \quad 0.0 \quad 1.0$
 standard and adapted CIELAB
 $LAB^*LAB \quad 11.01 \quad 0.07 \quad 0.01$
 $LAB^*LABa \quad 11.01 \quad 0.0 \quad 0.0$
 $LAB^*TCh \quad 0.01 \quad 0.01 \quad -$
 relative CIELAB lab^*
 $lab^*lab \quad 0.0 \quad 0.0 \quad 0.0$
 $lab^*tch \quad 0.0 \quad 0.0 \quad -$
 $lab^*nch \quad 1.0 \quad 0.0 \quad -$
 relative Natural Colour (NC)
 $lab^*lrij \quad 0.0 \quad 0.0 \quad 0.0$
 $lab^*ice \quad 0.0 \quad 0.0 \quad -$
 $lab^*nCE \quad 1.0 \quad 0.0 \quad -$

$n^* = 1,0$

NRS11; adaptierte CIELAB-Daten

	L^* = L^*_a	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	53.2	77.06	34.32	84.36	24
JMa	53.2	-1.51	84.38	84.39	91
GMa	53.2	-82.27	18.98	84.44	167
G50BMa	53.2	-77.72	-32.98	84.44	203
BMa	53.2	4.37	-84.28	84.41	273
B50RMa	53.2	69.09	-48.41	84.37	325
NMa	10.99	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.69	27.98	65.01	25
JCIE	81.26	-2.9	71.56	71.62	92
GCIE	52.23	-42.45	13.59	44.59	162
BCIE	30.57	1.35	-46.48	46.51	272

relative Inform. Technology (IT)
 $olv^3* 0.5 \quad 1.0 \quad 1.0 \quad (1.0)$
 $cmy3* 0.5 \quad 0.0 \quad 0.0 \quad (0.0)$
 $olv^4* 0.5 \quad 1.0 \quad 1.0 \quad 1.0$
 $cmy4* 0.5 \quad 0.0 \quad 0.0 \quad 0.0$
 standard and adapted CIELAB
 $LAB^*LAB \quad 74.3 \quad -38.82 \quad -16.48$
 $LAB^*LABa \quad 74.3 \quad -38.85 \quad -16.48$
 $LAB^*TCh \quad 75.0 \quad 42.21 \quad 203.0$
 relative CIELAB lab^*
 $lab^*lab \quad 0.75 \quad -0.459 \quad -0.194$
 $lab^*tch \quad 0.75 \quad 0.5 \quad 0.564$
 $lab^*nch \quad 0.0 \quad 0.5 \quad 0.564$
 relative Natural Colour (NC)
 $lab^*lrij \quad 0.75 \quad -0.416 \quad -0.275$
 $lab^*ice \quad 0.75 \quad 0.5 \quad 0.593$
 $lab^*nCE \quad 0.0 \quad 0.5 \quad g37b$

relative Inform. Technology (IT)
 $olv^3* 0.0 \quad 1.0 \quad 1.0 \quad (1.0)$
 $cmy3* 1.0 \quad 0.0 \quad 0.0 \quad (0.0)$
 $olv^4* 0.0 \quad 1.0 \quad 1.0 \quad 1.0$
 $cmy4* 1.0 \quad 0.0 \quad 0.0 \quad 0.0$
 standard and adapted CIELAB
 $LAB^*LAB \quad 53.2 \quad -77.67 \quad -32.96$
 $LAB^*LABa \quad 53.2 \quad -77.71 \quad -32.97$
 $LAB^*TCh \quad 50.0 \quad 84.43 \quad 202.99$
 relative CIELAB lab^*
 $lab^*lab \quad 0.5 \quad -0.919 \quad -0.39$
 $lab^*tch \quad 0.5 \quad 1.0 \quad 0.564$
 $lab^*nch \quad 0.0 \quad 1.0 \quad 0.564$
 relative Natural Colour (NC)
 $lab^*lrij \quad 0.5 \quad -0.833 \quad -0.551$
 $lab^*ice \quad 0.5 \quad 1.0 \quad 0.593$
 $lab^*nCE \quad 0.0 \quad 1.0 \quad g37b$

$n^* = 0,00$

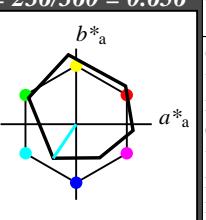
 Schwarzeit n^*
 $0,25 \quad 0,50 \quad n^* = 0,50 \quad 0,75 \quad 1,00$
 relative Buntheit c^*

Ausgabe: Farbmétrisches Reflexions-System ORS18

für Bunton $h^* = lab^*h = 236/360 = 0.656$
 lab^*tch und lab^*nch

D65: Bunton C
 LCH*Ma: 59 54 236
 oly*Ma: 0.0 1.0 1.0

Dreiecks-Helligkeit t^*



%Umfang
 $u^*_{rel} = 119$
 %Regularität
 $g^*_{H,rel} = 47$
 $g^*_{C,rel} = 100$

relative Inform. Technology (IT)
 $olv^3* 1.0 \quad 1.0 \quad 1.0 \quad (1.0)$
 $cmy3* 0.0 \quad 0.0 \quad 0.0 \quad (0.0)$
 $olv^4* 1.0 \quad 1.0 \quad 1.0 \quad 1.0$
 $cmy4* 0.0 \quad 0.0 \quad 0.0 \quad 0.0$
 standard and adapted CIELAB
 $LAB^*LAB \quad 95.41 \quad -0.97 \quad 4.75$
 $LAB^*LABa \quad 95.41 \quad 0.0 \quad 0.0$
 $LAB^*TCh \quad 99.99 \quad 0.01 \quad -$

relative CIELAB lab^*
 $lab^*lab \quad 1.0 \quad 0.0 \quad 0.0$
 $lab^*tch \quad 1.0 \quad 0.0 \quad -$
 $lab^*nch \quad 0.0 \quad 0.0 \quad -$
 relative Natural Colour (NC)
 $lab^*lrij \quad 1.0 \quad 0.0 \quad 0.0$
 $lab^*ice \quad 1.0 \quad 0.0 \quad -$
 $lab^*nCE \quad 0.0 \quad 0.0 \quad -$

relative Inform. Technology (IT)
 $olv^3* 0.5 \quad 1.0 \quad 1.0 \quad (1.0)$
 $cmy3* 0.5 \quad 0.0 \quad 0.0 \quad (0.0)$
 $olv^4* 0.5 \quad 1.0 \quad 1.0 \quad 1.0$
 $cmy4* 0.5 \quad 0.0 \quad 0.0 \quad 0.0$
 standard and adapted CIELAB
 $LAB^*LAB \quad 77.01 \quad -15.79 \quad -18.98$
 $LAB^*LABa \quad 77.01 \quad -15.16 \quad -22.5$
 $LAB^*TCh \quad 75.0 \quad 27.15 \quad 236.01$
 relative CIELAB lab^*
 $lab^*lab \quad 0.762 \quad -0.247 \quad -0.433$
 $lab^*tch \quad 0.75 \quad 0.5 \quad 0.656$
 $lab^*nch \quad 0.0 \quad 0.5 \quad 0.656$
 relative Natural Colour (NC)
 $lab^*lrij \quad 0.762 \quad -0.247 \quad -0.433$
 $lab^*ice \quad 0.75 \quad 0.5 \quad 0.667$
 $lab^*nCE \quad 0.0 \quad 0.5 \quad g66b$

$n^* = 1,00$

 Schwarzeit n^*
 $0,25 \quad 0,50 \quad n^* = 0,50 \quad 0,75 \quad 1,00$
 relative Buntheit c^*

ORS18; adaptierte CIELAB-Daten

	L^* = L^*_a	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	47.94	65.37	50.52	82.62	38
YMa	90.37	-10.27	91.77	92.34	96
LMa	50.9	-62.79	34.95	71.87	151
CMa	58.62	-30.35	-45.01	54.3	236
VMa	25.71	31.11	-44.42	54.24	305
MMa	48.13	75.27	-8.35	75.73	354
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.66	26.98	64.56	25
JCIE	81.26	-2.17	67.76	67.79	92
GCIE	52.23	-42.26	11.75	43.87	164
BCIE	30.57	1.15	-46.84	46.87	271

relative Inform. Technology (IT)
 $olv^3* 0.5 \quad 1.0 \quad 1.0 \quad (1.0)$
 $cmy3* 0.5 \quad 0.0 \quad 0.0 \quad (0.0)$
 $olv^4* 0.5 \quad 1.0 \quad 1.0 \quad 1.0$
 $cmy4* 0.5 \quad 0.0 \quad 0.0 \quad 0.0$
 standard and adapted CIELAB
 $LAB^*LAB \quad 77.01 \quad -15.79 \quad -18.98$
 $LAB^*LABa \quad 77.01 \quad -15.16 \quad -22.5$
 $LAB^*TCh \quad 75.0 \quad 27.15 \quad 236.01$
 relative CIELAB lab^*
 $lab^*lab \quad 0.762 \quad -0.247 \quad -0.433$
 $lab^*tch \quad 0.75 \quad 0.5 \quad 0.656$
 $lab^*nch \quad 0.0 \quad 0.5 \quad 0.656$
 relative Natural Colour (NC)
 $lab^*lrij \quad 0.762 \quad -0.247 \quad -0.433$
 $lab^*ice \quad 0.75 \quad 0.5 \quad 0.667$
 $lab^*nCE \quad 0.0 \quad 0.5 \quad g66b$

$n^* = 0,00$

 Schwarzeit n^*
 $0,25 \quad 0,50 \quad n^* = 0,50 \quad 0,75 \quad 1,00$
 relative Buntheit c^*

relative Inform. Technology (IT)
 $olv^3* 0.0 \quad 0.5 \quad 0.5 \quad (1.0)$
 $cmy3* 1.0 \quad 0.5 \quad 0.5 \quad (0.0)$
 $olv^4* 0.5 \quad 1.0 \quad 1.0 \quad 0.5$
 $cmy4* 0.5 \quad 0.0 \quad 0.0 \quad 0.5$
 standard and adapted CIELAB
 $LAB^*LAB \quad 58.62 \quad -30.62 \quad -42.73$
 $LAB^*LABa \quad 58.62 \quad -30.34 \quad -45.01$
 $LAB^*TCh \quad 50.0 \quad 54.29 \quad 236.01$
 relative CIELAB lab^*
 $lab^*lab \quad 0.525 \quad -0.558 \quad -0.828$
 $lab^*tch \quad 0.5 \quad 1.0 \quad 0.656$
 $lab^*nch \quad 0.0 \quad 1.0 \quad 0.656$
 relative Natural Colour (NC)
 $lab^*lrij \quad 0.525 \quad -0.496 \quad -0.867$
 $lab^*ice \quad 0.5 \quad 1.0 \quad 0.667$
 $lab^*nCE \quad 0.0 \quad 1.0 \quad g66b$

$n^* = 1,00$

 Schwarzeit n^*
 $0,25 \quad 0,50 \quad n^* = 0,50 \quad 0,75 \quad 1,00$
 relative Buntheit c^*

Siehe ähnliche Dateien: <http://www.ps.bam.de> UG17/ Version 2.1, io=0,1, CIEXYZ

UG17-7, 3 stufige Reihen für konstanten CIELAB Bunnton 203/360 = 0.564 (links)

BAM-Prüfvorlage UG17; Farbmétrik-Systeme NRS11 & ORS18 input: $cmy0* setcmykcolor$
 D65: 2 Koordinaten-Daten von 3stufigen Farbreihen für 10 Bunntöne output: $olv* setrgbcolor / w* setgray$

Eingabe: Farbmétrisches Reflexions-System NRS11

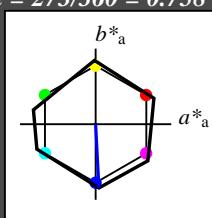
für Bunton $h^* = lab^*h = 273/360 = 0.758$
 lab^*tch und lab^*nch

D65: Bunton B

LCH*Ma: 53 84 273

olv*Ma: 0.0 0.0 1.0

Dreiecks-Helligkeit t^*



relative Inform. Technology (IT)
 $olv^3* 1.0 \quad 1.0 \quad 1.0 \quad (1.0)$

$cmy^3* 0.0 \quad 0.0 \quad 0.0 \quad (0.0)$

$olv^4* 1.0 \quad 1.0 \quad 1.0 \quad 1.0$

$cmy^4* 0.0 \quad 0.0 \quad 0.0 \quad 0.0$

standard and adapted CIELAB

$LAB^*LAB \quad 95.41 \quad 0.0 \quad -0.01$

$LAB^*LABa \quad 95.41 \quad 0.0 \quad 0.0$

$LAB^*TCh \quad 99.99 \quad 0.01 \quad -$

relative CIELAB lab^*

$lab^*lab \quad 1.0 \quad 0.0 \quad 0.0$

$lab^*tch \quad 1.0 \quad 0.0 \quad -$

$lab^*nch \quad 0.0 \quad 0.0 \quad -$

relative Natural Colour (NC)

$lab^*lrij \quad 1.0 \quad 0.0 \quad 0.0$

$lab^*ice \quad 1.0 \quad 0.0 \quad -$

$lab^*ncE \quad 0.0 \quad 0.0 \quad -$

relative Inform. Technology (IT)
 $olv^3* 0.5 \quad 0.5 \quad 0.5 \quad (1.0)$

$cmy^3* 0.5 \quad 0.5 \quad 0.5 \quad (0.0)$

$olv^4* 1.0 \quad 1.0 \quad 1.0 \quad 0.5$

$cmy^4* 0.0 \quad 0.0 \quad 0.0 \quad 0.5$

standard and adapted CIELAB

$LAB^*LAB \quad 74.3 \quad 2.21 \quad -42.13$

$LAB^*LABa \quad 74.3 \quad 2.19 \quad -42.13$

$LAB^*TCh \quad 75.0 \quad 42.2 \quad 272.97$

relative CIELAB lab^*

$lab^*lab \quad 0.75 \quad 0.026 \quad -0.498$

$lab^*tch \quad 0.75 \quad 0.5 \quad 0.758$

$lab^*nch \quad 0.0 \quad 0.5 \quad 0.758$

relative Natural Colour (NC)

$lab^*lrij \quad 0.75 \quad 0.009 \quad -0.499$

$lab^*ice \quad 0.75 \quad 0.5 \quad 0.753$

$lab^*ncE \quad 0.0 \quad 0.5 \quad b01r$

relative Inform. Technology (IT)
 $olv^3* 0.0 \quad 0.0 \quad 0.5 \quad (1.0)$

$cmy^3* 1.0 \quad 1.0 \quad 0.5 \quad (0.0)$

$olv^4* 0.5 \quad 0.5 \quad 1.0 \quad 0.5$

$cmy^4* 0.5 \quad 0.5 \quad 0.0 \quad 0.5$

standard and adapted CIELAB

$LAB^*LAB \quad 32.1 \quad 2.25 \quad -42.11$

$LAB^*LABa \quad 32.1 \quad 2.19 \quad -42.13$

$LAB^*TCh \quad 25.01 \quad 42.2 \quad 272.97$

relative CIELAB lab^*

$lab^*lab \quad 0.25 \quad 0.026 \quad -0.498$

$lab^*tch \quad 0.25 \quad 0.5 \quad 0.758$

$lab^*nch \quad 0.5 \quad 0.5 \quad 0.758$

relative Natural Colour (NC)

$lab^*lrij \quad 0.25 \quad 0.009 \quad -0.499$

$lab^*ice \quad 0.25 \quad 0.5 \quad 0.753$

$lab^*ncE \quad 0.5 \quad 0.5 \quad b01r$

relative Inform. Technology (IT)
 $olv^3* 0.0 \quad 0.0 \quad 0.0 \quad (1.0)$

$cmy^3* 1.0 \quad 1.0 \quad 1.0 \quad (0.0)$

$olv^4* 1.0 \quad 1.0 \quad 1.0 \quad 0.0$

$cmy^4* 0.0 \quad 0.0 \quad 0.0 \quad 1.0$

standard and adapted CIELAB

$LAB^*LAB \quad 11.01 \quad 0.07 \quad 0.01$

$LAB^*LABa \quad 11.01 \quad 0.0 \quad 0.0$

$LAB^*TCh \quad 0.01 \quad 0.01 \quad -$

relative CIELAB lab^*

$lab^*lab \quad 0.0 \quad 0.0 \quad 0.0$

$lab^*tch \quad 0.0 \quad 0.0 \quad -$

$lab^*nch \quad 1.0 \quad 0.0 \quad -$

relative Natural Colour (NC)

$lab^*lrij \quad 0.0 \quad 0.0 \quad 0.0$

$lab^*ice \quad 0.0 \quad 0.0 \quad -$

$lab^*ncE \quad 1.0 \quad 0.0 \quad -$

$n^* = 1,0$

$n^* = 0,50$

$n^* = 0,00$

$relative Buntheit c^*$

$Schwarzheit n^*$

$n^* = 0,00$

Ausgabe: Farbmétrisches Reflexions-System ORS18

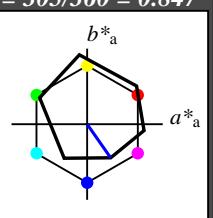
für Bunton $h^* = lab^*h = 305/360 = 0.847$
 lab^*tch und lab^*nch

D65: Bunton V

LCH*Ma: 26 54 305

olv*Ma: 0.0 0.0 1.0

Dreiecks-Helligkeit t^*



%Umfang

$u^*_{rel} = 119$

%Regularität

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

relative Inform. Technology (IT)
 $olv^3* 1.0 \quad 1.0 \quad 1.0 \quad (1.0)$

$cmy^3* 0.0 \quad 0.0 \quad 0.0 \quad (0.0)$

$olv^4* 1.0 \quad 1.0 \quad 1.0 \quad 1.0$

$cmy^4* 0.0 \quad 0.0 \quad 0.0 \quad 0.0$

standard and adapted CIELAB

$LAB^*LAB \quad 95.41 \quad -0.97 \quad 4.75$

$LAB^*LABa \quad 95.41 \quad 0.0 \quad 0.0$

$LAB^*TCh \quad 99.99 \quad 0.01 \quad -$

relative CIELAB lab^*

$lab^*lab \quad 1.0 \quad 0.0 \quad 0.0$

$lab^*tch \quad 1.0 \quad 0.0 \quad -$

$lab^*nch \quad 0.0 \quad 0.0 \quad -$

relative Natural Colour (NC)

$lab^*lrij \quad 1.0 \quad 0.0 \quad 0.0$

$lab^*ice \quad 1.0 \quad 0.0 \quad -$

$lab^*ncE \quad 0.0 \quad 0.0 \quad -$

relative Inform. Technology (IT)
 $olv^3* 0.5 \quad 0.5 \quad 1.0 \quad (1.0)$

$cmy^3* 0.5 \quad 0.5 \quad 0.0 \quad (0.0)$

$olv^4* 0.0 \quad 0.0 \quad 1.0 \quad 0.5$

$cmy^4* 0.0 \quad 0.0 \quad 0.0 \quad 0.5$

standard and adapted CIELAB

$LAB^*LAB \quad 60.56 \quad 15.24 \quad -19.79$

$LAB^*LABa \quad 60.56 \quad 15.55 \quad -22.22$

$LAB^*TCh \quad 75.0 \quad 27.11 \quad 305.0$

relative CIELAB lab^*

$lab^*lab \quad 0.55 \quad 0.287 \quad -0.408$

$lab^*tch \quad 0.75 \quad 0.5 \quad 0.847$

$lab^*nch \quad 0.0 \quad 0.5 \quad 0.847$

relative Natural Colour (NC)

$lab^*lrij \quad 0.55 \quad 0.225 \quad -0.446$

$lab^*ice \quad 0.75 \quad 0.5 \quad 0.824$

$lab^*ncE \quad 0.0 \quad 0.5 \quad b29r$

relative Inform. Technology (IT)
 $olv^3* 0.0 \quad 0.0 \quad 0.5 \quad (1.0)$

$cmy^3* 1.0 \quad 1.0 \quad 1.0 \quad (0.0)$

$olv^4* 0.5 \quad 0.5 \quad 1.0 \quad 0.5$

$cmy^4* 0.5 \quad 0.5 \quad 0.0 \quad 0.5$

standard and adapted CIELAB

$LAB^*LAB \quad 21.87 \quad 15.98 \quad -22.4$

$LAB^*LABa \quad 21.87 \quad 15.55 \quad -22.2$

$LAB^*TCh \quad 25.01 \quad 27.11 \quad 305.0$

relative CIELAB lab^*

$lab^*lab \quad 0.05 \quad 0.287 \quad -0.408$

$lab^*tch \quad 0.25 \quad 0.5 \quad 0.847$

$lab^*nch \quad 0.5 \quad 0.5 \quad 0.847$

relative Natural Colour (NC)

$lab^*lrij \quad 0.05 \quad 0.225 \quad -0.446$

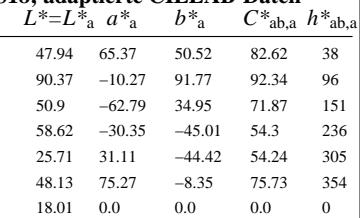
$lab^*ice \quad 0.25 \quad 0.5 \quad 0.824$

$lab^*ncE \quad 0.5 \quad 0.5 \quad b29r$

$n^* = 1,0$

$n^* = 0,50$

$n^* = 0,00$



%Umfang

$u^*_{rel} = 93$

%Regularität

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

$g^*_{C,rel} = 59$

relative Inform. Technology (IT)
 $olv^3* 1.0 \quad 1.0 \quad 1.0 \quad (1.0)$

$cmy^3* 0.0 \quad 0.0 \quad 0.0 \quad (0.0)$

$olv^4* 1.0 \quad 1.0 \quad 1.0 \quad 1.0$

$cmy^4* 0.0 \quad 0.0 \quad 0.0 \quad 0.0$

standard and adapted CIELAB

$LAB^*LAB \quad 95.41 \quad -0.97 \quad 4.75$

$LAB^*LABa \quad 95.41 \quad 0.0 \quad 0.0$

$LAB^*TCh \quad 99.99 \quad 0.01 \quad -$

relative CIELAB lab^*

$lab^*lab \quad 1.0 \quad 0.0 \quad 0.0$

$lab^*tch \quad 1.0 \quad 0.0 \quad -$

$lab^*nch \quad 0.0 \quad 0.0 \quad -$

relative Natural Colour (NC)

$lab^*lrij \quad 1.0 \quad 0.0 \quad 0.0$

$lab^*ice \quad 1.0 \quad 0.0 \quad -$

$lab^*ncE \quad 0.0 \quad 0.0 \quad -$

relative Inform. Technology (IT)
 $olv^3* 0.5 \quad 0.5 \quad 1.0 \quad (1.0)$

$cmy^3* 0.5 \quad 0.5 \quad 0.0 \quad (0.0)$

$olv^4* 0.0 \quad 0.0 \quad 1.0 \quad 0.5$

$cmy^4* 0.0 \quad 0.0 \quad 0.0 \quad 0.5$

standard and adapted CIELAB

$LAB^*LAB \quad 60.56 \quad 15.24 \quad -19.79$

$LAB^*LABa \quad 60.56 \quad 15.55 \quad -22.22$

$LAB^*TCh \quad 75.0 \quad 27.11 \quad 305.0$

relative CIELAB lab^*

$lab^*lab \quad 0.55 \quad 0.287 \quad -0.408$

$lab^*tch \quad 0.75 \quad 0.5 \quad 0.847$

$lab^*nch \quad 0.0 \quad 0.5 \quad 0.847$

relative Natural Colour (NC)

$lab^*lrij \quad 0.55 \quad 0.225 \quad -0.446$

$lab^*ice \quad 0.75 \quad 0.5 \quad 0.824$

$lab^*ncE \quad 0.0 \quad 0.5 \quad b29r$

$n^* = 1,0$

$n^* = 0,50$

$n^* = 0,00$

$UG17-7, 3$ stufige Reihen für konstanten CIELAB Bunnton $273/360 = 0.758$ (links)

3 stufige Reihen für konstanten CIELAB Bunnton $305/360 = 0.847$ (rechts)

BAM-Prüfvorlage UG17; Farbmétrik-Systeme NRS11 & ORS18 input: $cmy0* setcmykcolor$
 D65: 2 Koordinaten-Daten von 3stufigen Farbreihen für 10 Bunntöne output: $olv* setrgbcolor / w* setgray$

Eingabe: Farbmétrisches Reflexions-System NRS11

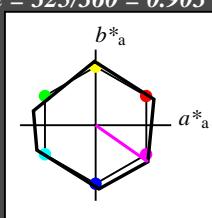
für Bunton $h^* = lab^*h = 325/360 = 0.903$
 lab^*tch und lab^*nch

D65: Bunton B50R

LCH*Ma: 53 84 325

olv*Ma: 1.0 0.0 1.0

Dreiecks-Helligkeit t^*



NRS11; adaptierte CIELAB-Daten

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	53.2	77.06	34.32	84.36	24
JMa	53.2	-1.51	84.38	84.39	91
GMa	53.2	-82.27	18.98	84.44	167
G50BMa	53.2	-77.72	-32.98	84.44	203
BMa	53.2	4.37	-84.28	84.41	273
B50RMa	53.2	69.09	-48.41	84.37	325
NMa	10.99	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.69	27.98	65.01	25
JCIE	81.26	-2.9	71.56	71.62	92
GCIE	52.23	-42.45	13.59	44.59	162
BCIE	30.57	1.35	-46.48	46.51	272

relative Inform. Technology (IT)

olv*i*3* 1.0 1.0 1.0 (1.0)

cmy*n*3* 0.0 0.0 0.0 (0.0)

olv*i*4* 1.0 1.0 1.0 1.0

cmy*n*4* 0.0 0.0 0.0 0.0

standard and adapted CIELAB

LAB*LAB 95.41 0.0 -0.01

LAB*LABa 95.41 0.0 0.0

LAB*TChA 99.99 0.01 -

relative CIELAB lab*

lab*lab 1.0 0.0 0.0

lab*tch 1.0 0.0 -

lab*nch 0.0 0.0 -

relative Natural Colour (NC)

lab*lrj 1.0 0.0 0.0

lab*tce 1.0 0.0 -

lab*ncE 0.0 0.0 -

relative Inform. Technology (IT)

olv*i*3* 0.5 0.5 0.5 (1.0)

cmy*n*3* 0.5 0.5 0.5 (0.0)

olv*i*4* 1.0 1.0 1.0 0.5

cmy*n*4* 0.0 0.0 0.0 0.5

standard and adapted CIELAB

LAB*LAB 53.21 0.04 0.0

LAB*LABa 53.21 0.0 0.0

LAB*TChA 50.0 0.01 -

relative CIELAB lab*

lab*lab 0.5 0.0 0.0

lab*tch 0.5 0.0 -

lab*nch 0.5 0.0 -

relative Natural Colour (NC)

lab*lrj 0.5 0.0 0.0

lab*tce 0.5 0.0 -

lab*ncE 0.5 0.0 -

relative Inform. Technology (IT)

olv*i*3* 0.5 0.0 0.5 (1.0)

cmy*n*3* 0.5 1.0 0.5 (0.0)

olv*i*4* 1.0 0.5 1.0 0.5

cmy*n*4* 0.0 0.5 0.0 0.5

standard and adapted CIELAB

LAB*LAB 32.1 34.6 -24.18

LAB*LABa 32.1 34.54 -24.2

LAB*TChA 25.01 42.18 324.98

relative CIELAB lab*

lab*lab 0.25 0.409 -0.286

lab*tch 0.25 0.5 0.903

lab*nch 0.5 0.5 0.903

relative Natural Colour (NC)

lab*lrj 0.25 0.336 -0.37

lab*tce 0.25 0.5 0.867

lab*ncE 0.5 0.5 b46r

relative Inform. Technology (IT)

olv*i*3* 0.0 0.0 0.0 (1.0)

cmy*n*3* 1.0 1.0 1.0 (0.0)

olv*i*4* 1.0 1.0 1.0 0.0

cmy*n*4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB

LAB*LAB 11.01 0.07 0.01

LAB*LABa 11.01 0.0 0.0

LAB*TChA 0.01 0.01 -

relative CIELAB lab*

lab*lab 0.0 0.0 0.0

lab*tch 0.0 0.0 -

lab*nch 1.0 0.0 -

relative Natural Colour (NC)

lab*lrj 0.0 0.0 0.0

lab*tce 0.0 0.0 -

lab*ncE 1.0 0.0 -

n* = 0,00

n* = 1,0

Ausgabe: Farbmétrisches Reflexions-System ORS18

für Bunton $h^* = lab^*h = 354/360 = 0.982$

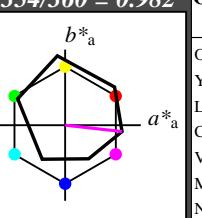
lab*tch und lab*nch

D65: Bunton M

LCH*Ma: 48 76 354

olv*Ma: 1.0 0.0 1.0

Dreiecks-Helligkeit t^*



ORS18; adaptierte CIELAB-Daten

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	47.94	65.37	50.52	82.62	38
YMa	90.37	-10.27	91.77	92.34	96
LMa	50.9	-62.79	34.95	71.87	151
CMa	58.62	-30.35	-45.01	54.3	236
VMa	25.71	31.11	-44.42	54.24	305
MMa	48.13	75.27	-8.35	75.73	354
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.66	26.98	64.56	25
JCIE	81.26	-2.17	67.76	67.79	92
GCIE	52.23	-42.26	11.75	43.87	164
BCIE	30.57	1.15	-46.84	46.87	271

relative Inform. Technology (IT)

olv*i*3* 1.0 1.0 1.0 (1.0)

cmy*n*3* 0.0 0.0 0.0 (0.0)

olv*i*4* 1.0 1.0 1.0 1.0

cmy*n*4* 0.0 0.0 0.0 0.0

standard and adapted CIELAB

LAB*LAB 95.41 -0.97 4.75

LAB*LABa 95.41 0.0 0.0

LAB*TChA 99.99 0.01 -

relative CIELAB lab*

lab*lab 1.0 0.0 0.0

lab*tch 1.0 0.0 -

lab*nch 0.0 0.0 -

relative Natural Colour (NC)

lab*lrj 1.0 0.0 0.0

lab*tce 1.0 0.0 -

lab*ncE 0.0 0.0 -

relative Inform. Technology (IT)

olv*i*3* 0.5 0.5 0.5 (1.0)

cmy*n*3* 0.5 1.0 0.5 (0.0)

olv*i*4* 1.0 1.0 1.0 0.5

cmy*n*4* 0.0 0.5 0.0 0.5

standard and adapted CIELAB

LAB*LAB 53.2 69.12 -48.39

LAB*LABa 53.2 69.08 -48.4

LAB*TChA 50.0 84.35 324.98

relative CIELAB lab*

lab*lab 0.5 0.819 -0.573

lab*tch 0.5 1.0 0.903

lab*nch 0.0 1.0 0.903

relative Natural Colour (NC)

lab*lrj 0.5 0.671 -0.74

lab*tce 0.5 1.0 0.867

lab*ncE 0.0 1.0 b46r

relative Inform. Technology (IT)

olv*i*3* 0.0 0.0 0.0 (1.0)

cmy*n*3* 1.0 1.0 1.0 (0.0)

olv*i*4* 1.0 1.0 1.0 0.0

cmy*n*4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB

LAB*LAB 18.02 0.5 -0.46

LAB*LABa 18.02 0.0 0.0

LAB*TChA 0.01 0.01 -

relative CIELAB lab*

lab*lab 0.0 0.0 0.0

lab*tch 0.0 0.0 -

lab*nch 1.0 0.0 -

relative Natural Colour (NC)

lab*lrj 0.0 0.0 0.0

lab*tce 0.0 0.0 -

lab*ncE 1.0 0.0 -

n* = 1,0

n* = 0,00

Schwarzheit n^*

relative Buntheit c^*

UG17-7, 3 stufige Reihen für konstanten CIELAB Bunnton 325/360 = 0.903 (links)

3 stufige Reihen für konstanten CIELAB Bunnton 354/360 = 0.982 (rechts)

BAM-Prüfvorlage UG17; Farbmétrik-Systeme NRS11 & ORS18 input: cmy0* setcmykcolor
 D65: 2 Koordinaten-Daten von 3stufigen Farbreihen für 10 Bunttöne output: olv* setrgbcolor / w* setgray

Eingabe: Farbmétrisches Reflexions-System NRS11

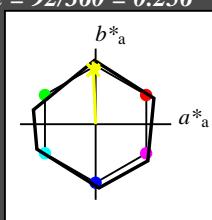
für Bunton $h^* = lab^*h = 92/360 = 0.256$
 lab^*tch und lab^*nch

D65: Bunton J

LCH*Ma: 53 83 92

olv*Ma: 0.98 1.0 0.0

Dreiecks-Helligkeit t^*



relative Inform. Technology (IT)

olv3* 1.0 1.0 1.0 (1.0)
 cmyn3* 0.0 0.0 0.0 (0.0)

olv4* 1.0 1.0 1.0 1.0
 cmyn4* 0.0 0.0 0.0 0.0

standard and adapted CIELAB

LAB*LAB 95.41 0.0 -0.01
 LAB*LABa 95.41 0.0 0.0
 LAB*TChA 99.99 0.01 -

relative CIELAB lab*

lab*lab 1.0 0.0 0.0
 lab*tch 1.0 0.0 -
 lab*nch 0.0 0.0 -

relative Natural Colour (NC)

lab*lrj 1.0 0.0 0.0
 lab*tce 1.0 0.0 -
 lab*nCE 0.0 0.0 -

relative Inform. Technology (IT)

olv3* 0.5 0.5 0.5 (1.0)
 cmyn3* 0.5 0.5 0.5 (0.0)

olv4* 1.0 1.0 1.0 0.5
 cmyn4* 0.0 0.0 0.0 0.5

standard and adapted CIELAB

LAB*LAB 53.21 0.04 0.0
 LAB*LABa 53.21 0.0 0.0
 LAB*TChA 50.0 0.01 -

relative CIELAB lab*

lab*lab 0.5 0.0 0.0
 lab*tch 0.5 0.0 -
 lab*nch 0.5 0.0 -

relative Natural Colour (NC)

lab*lrj 0.5 0.0 0.0
 lab*tce 0.5 0.0 -
 lab*nCE 0.5 0.0 -

relative Inform. Technology (IT)

olv3* 0.0 0.0 0.0 (1.0)
 cmyn3* 1.0 1.0 1.0 (0.0)

olv4* 1.0 1.0 1.0 0.0
 cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB

LAB*LAB 11.01 0.07 0.01
 LAB*LABa 11.01 0.0 0.0
 LAB*TChA 0.01 0.01 -

relative CIELAB lab*

lab*lab 0.0 0.0 0.0
 lab*tch 0.0 0.0 -
 lab*nch 1.0 0.0 -

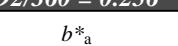
relative Natural Colour (NC)

lab*lrj 0.0 0.0 0.0
 lab*tce 0.0 0.0 -
 lab*nCE 1.0 0.0 -

$n^* = 1,0$

NRS11; adaptierte CIELAB-Daten

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	53.2	77.06	34.32	84.36	24
JMa	53.2	-1.51	84.38	84.39	91
GMa	53.2	-82.27	18.98	84.44	167
G50BMa	53.2	-77.72	-32.98	84.44	203
BMa	53.2	4.37	-84.28	84.41	273
B50RMa	53.2	69.09	-48.41	84.37	325
NMa	10.99	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.69	27.98	65.01	25
JCIE	81.26	-2.9	71.56	71.62	92
GCIE	52.23	-42.45	13.59	44.59	162
BCIE	30.57	1.35	-46.48	46.51	272



%Umfang

$u^*_{rel} = 119$

%Regularität

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

relative Inform. Technology (IT)

olv3* 0.989 1.0 0.5 (1.0)
 cmyn3* 0.011 0.0 0.5 (0.0)

olv4* 0.989 1.0 0.5 1.0
 cmyn4* 0.011 0.0 0.5 0.0

standard and adapted CIELAB

LAB*LAB 74.3 -1.64 41.44
 LAB*LABa 74.3 -1.67 41.44
 LAB*TChA 75.0 41.47 92.32

relative CIELAB lab*

lab*lab 0.75 -0.019 0.499
 lab*tch 0.75 0.5 0.256
 lab*nch 0.0 0.5 0.256

relative Natural Colour (NC)

lab*lrj 0.75 0.0 0.5
 lab*tce 0.75 0.5 0.25
 lab*nCE 0.0 0.5 r99j

relative Inform. Technology (IT)

olv3* 0.977 1.0 0.0 (1.0)
 cmyn3* 0.023 0.0 1.0 (0.0)

olv4* 0.977 1.0 0.0 1.0
 cmyn4* 0.023 0.0 1.0 0.0

standard and adapted CIELAB

LAB*LAB 53.2 -3.31 82.87
 LAB*LABa 53.2 -3.35 82.86
 LAB*TChA 50.0 82.93 92.32

relative CIELAB lab*

lab*lab 0.5 -0.04 0.999
 lab*tch 0.5 0.0 0.256
 lab*nch 0.0 1.0 0.256

relative Natural Colour (NC)

lab*lrj 0.5 0.0 1.0
 lab*tce 0.5 1.0 0.25
 lab*nCE 0.0 1.0 r99j

relative Inform. Technology (IT)

olv3* 0.25 0.0 0.0 (1.0)
 cmyn3* 0.25 0.5 0.256

olv4* 0.25 0.5 0.256
 cmyn4* 0.5 0.5 0.256

relative Natural Colour (NC)

lab*lrj 0.25 0.0 0.5
 lab*tce 0.25 0.5 0.25
 lab*nCE 0.5 0.5 j00g

$n^* = 0,00$

Schwarzheit n^*

$n^* = 0,50$

$n^* = 1,00$

relative Buntheit c^*

$n^* = 1,0$

Ausgabe: Farbmétrisches Reflexions-System ORS18

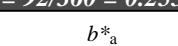
für Bunton $h^* = lab^*h = 92/360 = 0.255$
 lab^*tch und lab^*nch

D65: Bunton J

LCH*Ma: 86 88 92

olv*Ma: 1.0 0.9 0.0

Dreiecks-Helligkeit t^*



%Umfang

$u^*_{rel} = 93$

%Regularität

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

$g^*_{C,rel} = 59$

relative Inform. Technology (IT)

olv3* 1.0 1.0 1.0 (1.0)
 cmyn3* 0.0 0.0 0.0 (0.0)

olv4* 1.0 1.0 1.0 1.0
 cmyn4* 0.0 0.0 0.0 0.0

standard and adapted CIELAB

LAB*LAB 95.41 -0.97 47.5
 LAB*LABa 95.41 0.0 0.0
 LAB*TChA 99.99 0.01 -

relative CIELAB lab*

lab*lab 1.0 0.0 0.0
 lab*tch 1.0 0.0 -
 lab*nch 0.0 0.0 -

relative Natural Colour (NC)

lab*lrj 1.0 0.0 0.0
 lab*tce 1.0 0.0 -
 lab*nCE 0.0 0.0 -

relative Inform. Technology (IT)

olv3* 0.951 0.951 0.5 (1.0)
 cmyn3* 0.049 0.5 0.0 (0.0)

olv4* 0.951 0.5 0.5 1.0
 cmyn4* 0.049 0.5 0.0 0.0

standard and adapted CIELAB

LAB*LAB 90.8 -2.3 48.29
 LAB*LABa 90.8 -1.41 43.85
 LAB*TChA 75.0 43.87 91.85

relative CIELAB lab*

lab*lab 0.94 -0.015 0.5
 lab*tch 0.75 0.5 0.255
 lab*nch 0.0 0.5 0.255

relative Natural Colour (NC)

lab*lrj 0.94 0.0 0.5
 lab*tce 0.75 0.5 0.25
 lab*nCE 0.0 0.5 j00g

relative Inform. Technology (IT)

olv3* 0.451 0.451 0.0 (1.0)
 cmyn3* 0.549 1.0 0.0 (0.0)

olv4* 1.0 0.951 0.5 0.5
 cmyn4* 0.0 0.49 0.5 0.5

standard and adapted CIELAB

LAB*LAB 52.1 -1.55 45.68
 LAB*LABa 52.1 -1.4 43.84
 LAB*TChA 25.01 43.87 91.84

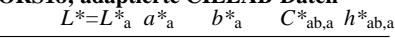
relative CIELAB lab*

lab*lab 0.44 -0.015 0.5
 lab*tch 0.25 0.5 0.255
 lab*nch 0.5 0.5 0.255

relative Natural Colour (NC)

lab*lrj 0.44 0.0 0.5
 lab*tce 0.25 0.5 0.25
 lab*nCE 0.5 0.5 r99j

$n^* = 0,00$



%Umfang

$u^*_{rel} = 93$

%Regularität

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

$g^*_{C,rel} = 59$

relative Inform. Technology (IT)

olv3* 1.0 1.0 1.0 (1.0)
 cmyn3* 0.0 0.0 0.0 (0.0)

olv4* 1.0 1.0 1.0 1.0
 cmyn4* 0.0 0.0 0.0 0.0

standard and adapted CIELAB

LAB*LAB 90.8 -2.3 48.29
 LAB*LABa 90.8 -1.41 43.85
 LAB*TChA 50.0 43.87 91.85

relative CIELAB lab*

lab*lab 0.94 -0.015 0.5
 lab*tch 0.75 0.5 0.255
 lab*nch 0.0 0.5 0.255

relative Natural Colour (NC)

lab*lrj 0.94 0.0 0.5
 lab*tce 0.75 0.5 0.25
 lab*nCE 0.0 0.5 j00g

relative Inform. Technology (IT)

olv3* 0.451 0.451 0.0 (1.0)
 cmyn3* 0.549 1.0 0.0 (0.0)

olv4* 1.0 0.951 0.5 0.5
 cmyn4* 0.0 0.49 0.5 0.5

standard and adapted CIELAB

LAB*LAB 52.1 -1.55 45.68
 LAB*LABa 52.1 -1.4 43.84
 LAB*TChA 25.01 43.87 91.84

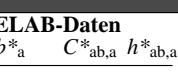
relative CIELAB lab*

lab*lab 0.44 -0.015 0.5
 lab*tch 0.25 0.5 0.255
 lab*nch 0.5 0.5 0.255

relative Natural Colour (NC)

lab*lrj 0.44 0.0 0.5
 lab*tce 0.25 0.5 0.25
 lab*nCE 0.5 0.5 r99j

$n^* = 0,00$



%Umfang

$u^*_{rel} = 93$

%Regularität

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

$g^*_{C,rel} = 59$

relative Inform. Technology (IT)

olv3* 1.0 1.0 1.0 (1.0)
 cmyn3* 0.0 0.0 0.0 (0.0)

olv4* 1.0 1.0 1.0 1.0
 cmyn4* 0.0 0.0 0.0 0.0

standard and adapted CIELAB

LAB*LAB 86.19 -3.62 91.85
 LAB*LABa 86.19 -2.82 87.69
 LAB*TChA 50.0 87.73 91.85

relative CIELAB lab*

lab*lab 0.881 0.0 0.0
 lab*tch 0.5 1.0 0.255
 lab*nch 0.0 1.0 0.255

relative Natural Colour (NC)

lab*lrj 0.881 0.0 0.0
 lab*tce 0.5 1.0 0.25
 lab*nCE 0.0 1.0 j00g

relative Inform. Technology (IT)

olv3* 0.451 0.451 0.0 (1.0)
 cmyn3* 0.549 1.0 0.0 (0.0)

olv4* 1.0 0.951 0.5 0.5
 cmyn4* 0.0 0.49 0.5 0.5

standard and adapted CIELAB

LAB*LAB 52.1 -1.55 45.68
 LAB*LABa 52.1 -1.4 43.84
 LAB*TChA 25.01 43.87 91.84

relative CIELAB lab*

lab*lab 0.44 -0.015 0.5
 lab*tch 0.25 0.5 0.255
 lab*nch 0.5 0.5 0.255

relative Natural Colour (NC)

lab*lrj 0.44 0.0 0.5
 lab*tce 0.25 0.5 0.25
 lab*nCE 0.5 0.5 r99j

$n^* = 0,00$



%Umfang

$u^*_{rel} = 93$

%Regularität

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

$g^*_{C,rel} = 59$

relative Inform. Technology (IT)

olv3* 1.0 1.0 1.0 (1.0)
 cmyn3* 0.0 0.0 0.0 (0.0)

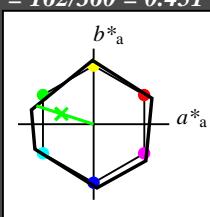
olv4* 1.0 1.0 1.0 1.0
 cmyn4* 0.0 0.0 0.0 0.0

Eingabe: Farbmétrisches Reflexions-System NRS11

für Bunton $h^* = lab^*h = 162/360 = 0.451$
 lab^*tch und lab^*nch

D65: Bunton G
 LCH*Ma: 53 80 162
 oly*Ma: 0.08 1.0 0.0

Dreiecks-Helligkeit t^*



relative Inform. Technology (IT)
 $olv^3* 1.0 1.0 1.0 (1.0)$

$cmy^3* 0.0 0.0 0.0 (0.0)$

$olv^4* 1.0 1.0 1.0 1.0$

$cmy^4* 0.0 0.0 0.0 0.0$

standard and adapted CIELAB

$LAB^*LAB 95.41 0.0 -0.01$

$LAB^*LAb 95.41 0.0 0.0$

$LAB^*TCh 99.99 0.01 -$

relative CIELAB lab^*

$lab^*lab 1.0 0.0 0.0$

$lab^*tch 1.0 0.0 -$

$lab^*nch 0.0 0.0 -$

relative Natural Colour (NC)

$lab^*lrij 1.0 0.0 0.0$

$lab^*tce 1.0 0.0 -$

$lab^*ncE 0.0 0.0 -$

relative Inform. Technology (IT)
 $olv^3* 0.5 0.5 0.5 (1.0)$

$cmy^3* 0.5 0.5 0.5 (0.0)$

$olv^4* 1.0 1.0 1.0 0.5$

$cmy^4* 0.0 0.0 0.0 0.5$

standard and adapted CIELAB

$LAB^*LAB 53.21 0.04 0.0$

$LAB^*LAb 53.21 0.0 0.0$

$LAB^*TCh 50.0 0.01 -$

relative CIELAB lab^*

$lab^*lab 0.5 0.0 0.0$

$lab^*tch 0.5 0.0 -$

$lab^*nch 0.5 0.0 -$

relative Natural Colour (NC)

$lab^*lrij 0.5 0.0 0.0$

$lab^*tce 0.5 0.0 -$

$lab^*ncE 0.5 0.0 -$

relative Inform. Technology (IT)
 $olv^3* 0.0 0.0 0.0 (1.0)$

$cmy^3* 1.0 1.0 1.0 (0.0)$

$olv^4* 1.0 1.0 1.0 0.0$

$cmy^4* 0.0 0.0 0.0 1.0$

standard and adapted CIELAB

$LAB^*LAB 11.01 0.07 0.01$

$LAB^*LAb 11.01 0.0 0.0$

$LAB^*TCh 0.01 0.01 -$

relative CIELAB lab^*

$lab^*lab 0.0 0.0 0.0$

$lab^*tch 0.0 0.0 -$

$lab^*nch 1.0 0.0 -$

relative Natural Colour (NC)

$lab^*lrij 0.0 0.0 0.0$

$lab^*tce 0.0 0.0 -$

$lab^*ncE 1.0 0.0 -$

$n^* = 1,0$

$n^* = 0,50$

$n^* = 0,00$

relative Buntheit c^*

Schwarzheit n^*

Eingabe: Farbmétrisches Reflexions-System NRS11

für Bunton $h^* = lab^*h = 162/360 = 0.451$
 lab^*tch und lab^*nch

D65: Bunton G

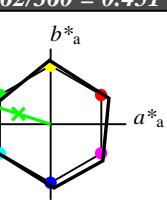
LCH*Ma: 53 57 164

oly*Ma: 0.08 1.0 0.0

Dreiecks-Helligkeit t^*

NRS11; adaptierte CIELAB-Daten

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	53.2	77.06	34.32	84.36	24
JMa	53.2	-1.51	84.38	84.39	91
GMa	53.2	-82.27	18.98	84.44	167
G50BMa	53.2	-77.72	-32.98	84.44	203
BMa	53.2	4.37	-84.28	84.41	273
B50RMa	53.2	69.09	-48.41	84.37	325
NMa	10.99	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.69	27.98	65.01	25
JCIE	81.26	-2.9	71.56	71.62	92
GCIE	52.23	-42.45	13.59	44.59	162
BCIE	30.57	1.35	-46.48	46.51	272



%Umfang
 $u^*_{rel} = 119$

%Regularität

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

Ausgabe: Farbmétrisches Reflexions-System ORS18

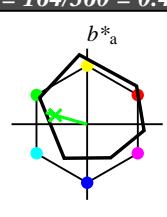
für Bunton $h^* = lab^*h = 164/360 = 0.457$
 lab^*tch und lab^*nch

D65: Bunton G

LCH*Ma: 53 57 164

oly*Ma: 0.0 1.0 0.25

Dreiecks-Helligkeit t^*



%Umfang
 $u^*_{rel} = 93$

%Regularität

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

$g^*_{C,rel} = 59$

ORS18; adaptierte CIELAB-Daten

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	47.94	65.37	50.52	82.62	38
YMa	90.37	-10.27	91.77	92.34	96
LMa	50.9	-62.79	34.95	71.87	151
CMa	58.62	-30.35	-45.01	54.3	236
VMa	25.71	31.11	-44.42	54.24	305
MMa	48.13	75.27	-8.35	75.73	354
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.66	26.98	64.56	25
JCIE	81.26	-2.17	67.76	67.79	92
GCIE	52.23	-42.26	11.75	43.87	164
BCIE	30.57	1.15	-46.84	46.87	271

relative Inform. Technology (IT)
 $olv^3* 1.0 1.0 1.0 (1.0)$

$cmy^3* 0.0 0.0 0.0 (0.0)$

$olv^4* 1.0 1.0 1.0 1.0$

$cmy^4* 0.0 0.0 0.0 0.0$

standard and adapted CIELAB

$LAB^*LAB 95.41 -0.97 4.75$

$LAB^*LAb 95.41 0.0 0.0$

$LAB^*TCh 99.99 0.01 -$

relative CIELAB lab^*

$lab^*lab 1.0 0.0 0.0$

$lab^*tch 1.0 0.0 -$

$lab^*nch 0.0 0.0 -$

relative Natural Colour (NC)

$lab^*lrij 1.0 0.0 0.0$

$lab^*tce 1.0 0.0 -$

$lab^*ncE 0.0 0.0 -$

relative Inform. Technology (IT)
 $olv^3* 0.5 1.0 0.623 (1.0)$

$cmy^3* 0.5 0.0 0.377 (0.0)$

$olv^4* 0.5 1.0 0.623 1.0$

$cmy^4* 0.5 0.0 0.377 0.0$

standard and adapted CIELAB

$LAB^*LAB 74.1 -27.96 10.94$

$LAB^*LAb 74.1 -27.39 7.62$

$LAB^*TCh 75.0 28.44 164.46$

relative CIELAB lab^*

$lab^*lab 0.725 -0.481 0.134$

$lab^*tch 0.75 0.5 0.457$

$lab^*nch 0.0 0.5 0.457$

relative Natural Colour (NC)

$lab^*lrij 0.725 -0.499 0.0$

$lab^*tce 0.75 0.5 0.5$

$lab^*ncE 0.0 0.5 g00b$

relative Inform. Technology (IT)
 $olv^3* 0.0 0.5 0.123 (1.0)$

$cmy^3* 1.0 1.0 1.0 (0.0)$

$olv^4* 1.0 1.0 1.0 0.0$

$cmy^4* 0.0 0.0 0.1 1.0$

standard and adapted CIELAB

$LAB^*LAB 18.02 0.5 -0.46$

$LAB^*LAb 18.02 0.0 0.0$

$LAB^*TCh 0.01 0.01 -$

relative CIELAB lab^*

$lab^*lab 0.225 -0.481 0.134$

$lab^*tch 0.25 0.5 0.457$

$lab^*nch 0.5 0.5 0.457$

relative Natural Colour (NC)

$lab^*lrij 0.225 -0.499 0.0$

$lab^*tce 0.25 0.5 0.5$

$lab^*ncE 0.5 0.5 g99g$

Ausgabe: Farbmétrisches Reflexions-System ORS18

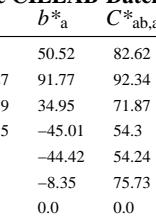
für Bunton $h^* = lab^*h = 164/360 = 0.457$
 lab^*tch und lab^*nch

D65: Bunton G

LCH*Ma: 53 57 164

oly*Ma: 0.0 1.0 0.25

Dreiecks-Helligkeit t^*



%Umfang
 $u^*_{rel} = 93$

%Regularität

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

$g^*_{C,rel} = 59$

standard and adapted CIELAB

$LAB^*LAB 95.41 -0.97 4.75$

$LAB^*LAb 95.41 0.0 0.0$

$LAB^*TCh 99.99 0.01 -$

relative CIELAB lab^*

$lab^*lab 1.0 0.0 0.0$

$lab^*tch 1.0 0.0 -$

$lab^*nch 0.0 0.0 -$

relative Natural Colour (NC)

$lab^*lrij 1.0 0.0 0.0$

$lab^*tce 1.0 0.0 -$

$lab^*ncE 0.0 0.0 -$

relative Inform. Technology (IT)
 $olv^3* 0.0 0.5 0.246 (1.0)$

$cmy^3* 1.0 0.0 0.754 (0.0)$

$olv^4* 0.0 1.0 0.246 1.0$

$cmy^4* 0.0 0.0 0.754 0.0$

standard and adapted CIELAB

$LAB^*LAB 74.1 -27.96 10.94$

$LAB^*LAb 74.1 -27.39 7.62$

$LAB^*TCh 75.0 28.44 164.46$

relative CIELAB lab^*

$lab^*lab 0.725 -0.481 0.134$

$lab^*tch 0.75 0.5 0.457$

$lab^*nch 0.0 0.5 0.457$

relative Natural Colour (NC)

$lab^*lrij 0.725 -0.499 0.0$

$lab^*tce 0.75 0.5 0.5$

$lab^*ncE 0.0 0.5 g00b$

$n^* = 1,0$ </p

Eingabe: Farbmétrisches Reflexions-System NRS11

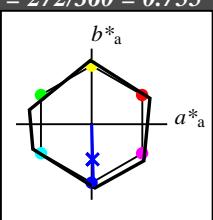
für Bunton $h^* = lab^*h = 272/360 = 0.755$
 lab^*tch und lab^*nch

D65: Bunton B

LCH*Ma: 53 83 272

olv*Ma: 0.0 0.02 1.0

Dreiecks-Helligkeit t^*



relative Inform. Technology (IT)

olv13* 1.0 1.0 1.0 (1.0)

cmy3* 0.0 0.0 0.0 (0.0)

olv4* 1.0 1.0 1.0 1.0

cmy4* 0.0 0.0 0.0 0.0

standard and adapted CIELAB

LAB*LAB 95.41 0.0 -0.01

LAB*LABa 95.41 0.0 0.0

LAB*TChA 99.99 0.01 -

relative CIELAB lab*

lab*lab 1.0 0.0 0.0

lab*tch 1.0 0.0 -

lab*nch 0.0 0.0 -

relative Natural Colour (NC)

lab*lrj 1.0 0.0 0.0

lab*tce 1.0 0.0 -

lab*ncE 0.0 0.0 -

relative Inform. Technology (IT)

olv13* 0.5 0.5 0.5 (1.0)

cmy3* 0.5 0.5 0.5 (0.0)

olv4* 1.0 1.0 1.0 0.5

cmy4* 0.0 0.0 0.0 0.5

standard and adapted CIELAB

LAB*LAB 53.21 0.04 0.0

LAB*LABa 53.21 0.0 0.0

LAB*TChA 50.0 0.01 -

relative CIELAB lab*

lab*lab 0.5 0.0 0.0

lab*tch 0.5 0.0 -

lab*nch 0.5 0.0 -

relative Natural Colour (NC)

lab*lrj 0.5 0.0 0.0

lab*tce 0.5 0.0 -

lab*ncE 0.5 0.0 -

relative Inform. Technology (IT)

olv13* 0.0 0.02 0.5 (1.0)

cmy3* 1.0 0.988 0.5 (0.0)

olv4* 0.5 0.512 1.0 0.5

cmy4* 0.5 0.488 0.0 0.5

standard and adapted CIELAB

LAB*LAB 32.1 1.27 -41.5

LAB*LABa 32.1 1.21 -41.52

LAB*TChA 25.01 41.55 271.67

relative CIELAB lab*

lab*lab 0.25 0.015 -0.499

lab*tch 0.25 0.5 0.755

lab*nch 0.5 0.5 0.755

relative Natural Colour (NC)

lab*lrj 0.25 0.0 -0.499

lab*tce 0.25 0.5 0.75

lab*ncE 0.5 0.5 b00r

relative Inform. Technology (IT)

olv13* 1.0 1.0 1.0 (0.0)

cmy3* 1.0 1.0 1.0 0.0

olv4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB

LAB*LAB 11.01 0.07 0.01

LAB*LABa 11.01 0.0 0.0

LAB*TChA 0.01 0.01 -

relative CIELAB lab*

lab*lab 0.0 0.0 0.0

lab*tch 0.0 0.0 -

lab*nch 1.0 0.0 -

relative Natural Colour (NC)

lab*lrj 0.0 0.0 0.0

lab*tce 0.0 0.0 -

lab*ncE 1.0 0.0 -

n* = 0,00

n* = 1,0

0,25

n* = 0,50

relative Buntheit c^*

Schwarzheit n^*

0,75

1,00

UG170-7, 3 stufige Reihen für konstanten CIELAB Bunton 272/360 = 0.755 (links)

Ausgabe: Farbmétrisches Reflexions-System ORS18

für Bunton $h^* = lab^*h = 271/360 = 0.754$

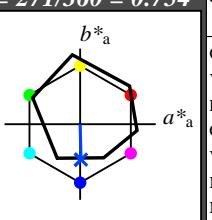
lab*tch und lab*nch

D65: Bunton B

LCH*Ma: 42 45 271

olv*Ma: 0.0 0.49 1.0

Dreiecks-Helligkeit t^*



%Umfang

u*_{rel} = 119

%Regularität

g*_{H,rel} = 47

g*_{C,rel} = 100

relative Inform. Technology (IT)

olv13* 1.0 1.0 1.0 (1.0)

cmy3* 0.0 0.0 0.0 (0.0)

olv4* 1.0 1.0 1.0 1.0

cmy4* 0.0 0.0 0.0 0.0

standard and adapted CIELAB

LAB*LAB 95.41 -0.97 4.75

LAB*LABa 95.41 0.0 0.0

LAB*TChA 99.99 0.01 -

relative CIELAB lab*

lab*lab 1.0 0.0 0.0

lab*tch 1.0 0.0 -

lab*nch 0.0 0.0 -

relative Natural Colour (NC)

lab*lrj 1.0 0.0 0.0

lab*tce 1.0 0.0 -

lab*ncE 0.0 0.0 -

relative Inform. Technology (IT)

olv13* 0.5 0.512 1.0 (0.0)

cmy3* 0.5 0.488 0.0 (0.0)

olv4* 0.0 0.0 0.0 1.0

cmy4* 0.5 0.488 0.0 0.0

standard and adapted CIELAB

LAB*LAB 74.3 1.23 -41.51

LAB*LABa 74.3 1.2 41.52

LAB*TChA 75.0 41.54 271.66

relative CIELAB lab*

lab*lab 0.75 0.014 -0.499

lab*tch 0.75 0.5 0.755

lab*nch 0.0 0.5 0.755

relative Natural Colour (NC)

lab*lrj 0.75 0.0 -0.499

lab*tce 0.75 0.5 0.75

lab*ncE 0.0 0.5 g99b

relative Inform. Technology (IT)

olv13* 0.0 0.024 1.0 (1.0)

cmy3* 1.0 0.976 0.0 (0.0)

olv4* 0.0 0.024 1.0 1.0

cmy4* 1.0 0.976 0.0 0.0

standard and adapted CIELAB

LAB*LAB 53.2 2.46 -83.04

LAB*LABa 53.2 2.42 -83.05

LAB*TChA 50.0 83.09 271.67

relative CIELAB lab*

lab*lab 0.5 0.029 -0.998

lab*tch 0.5 1.0 0.755

lab*nch 0.0 1.0 0.755

relative Natural Colour (NC)

lab*lrj 0.5 0.0 -0.999

lab*tce 0.5 1.0 0.75

lab*ncE 0.0 1.0 b00r

n* = 0,00

n* = 1,0

0,25

n* = 0,50

relative Buntheit c^*

Schwarzheit n^*

0,75

1,00

n* = 1,0

ORS18; adaptierte CIELAB-Daten

L* = L*_a a*_a b*_a C*_{ab,a} h*_{ab,a}

OMa 47.94 65.37 50.52 82.62 38

YMa 90.37 -10.27 91.77 92.34 96

LMa 50.9 -62.79 34.95 71.87 151

CMa 58.62 -30.35 -45.01 54.3 236

VMa 25.71 31.11 -44.42 54.24 305

MMa 48.13 75.27 -8.35 75.73 354

NMa 18.01 0.0 0.0 0.0 0

WMa 95.41 0.0 0.0 0.0 0

RCIE 39.92 58.66 26.98 64.56 25

JCIE 81.26 -2.17 67.76 67.79 92

GCIE 52.23 -42.26 11.75 43.87 164

BCIE 30.57 1.15 -46.84 46.87 271

relative Inform. Technology (IT)

olv13* 1.0 1.0 1.0 (1.0)

cmy3* 0.0 0.0 0.0 (0.0)

olv4* 1.0 1.0 1.0 1.0

cmy4* 0.0 0.0 0.0 0.0

standard and adapted CIELAB

LAB*LAB 68.59 0.08 -19.4

LAB*LABa 68.59 0.54 -22.35

LAB*TChA 75.0 22.36 271.4

relative CIELAB lab*

lab*lab 0.654 0.012 -0.499

lab*tch 0.75 0.5 0.754

lab*nch 0.0 0.5 0.754

relative Natural Colour (NC)

lab*lrj 0.654 0.0 -0.499

lab*tce 0.75 0.5 0.75

lab*ncE 0.0 0.5 g99b

relative Inform. Technology (IT)

olv13* 0.0 0.488 1.0 (1.0)

cmy3* 1.0 0.512 0.0 (0.0)

olv4* 0.0 0.488 1.0 1.0

cmy4* 1.0 0.512 0.0 0.0

standard and adapted CIELAB

LAB*LAB 41.79 1.14 -43.56

LAB*LABa 41.79 1.1 -44.7

LAB*TChA 50.0 44.73 271.4

relative CIELAB lab*

lab*lab 0.307 0.024 -0.998

lab*tch 0.5 1.0 0.754

lab*nch 0.0 1.0 0.754

relative Natural Colour (NC)

lab*lrj 0.307 0.0 -0.999

lab*tce 0.5 1.0 0.75

lab*ncE 0.0 1.0 b00r

n* = 0,00

n* = 1,0

0,25

n* = 0,50

relative Buntheit c^*

Schwarzheit n^*

0,75

1,00

n* = 1,0

n* = 1,0

0,25

n* = 0,50

relative Buntheit c^*

Schwarzheit n^*

0,75

1,00

UG170-7, 3 stufige Reihen für konstanten CIELAB Bunton 272/360 = 0.755 (links)

3 stufige Reihen für konstanten CIELAB Bunton 271/360 = 0.754 (rechts)

BAM-Prüfvorlage UG17; Farbmétrik-Systeme NRS11 & ORS18 input: cmy0* setcmykcolor

D65: 2 Koordinaten-Daten von 3stufigen Farbreihen für 10 Bunntöne output: olv* setrgbcolor / w* setgray