



### Input: Colorimetric Reflective System MRS18

for hue  $h^* = lab^*h = 30/360 = 0.083$

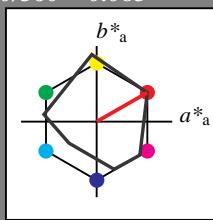
$lab^*tch$  and  $lab^*nch$

D65: hue R

LCH\*Ma: 50 77 30

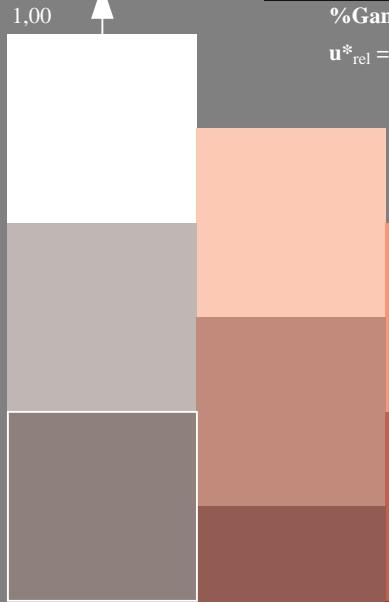
rgb\*Ma: 1.0 0.0 0.0

triangle lightness



### MRS18; adapted (a) CIELAB data

	$L^*$ = $L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	49.63	66.96	38.37	77.18	30
JMa	90.7	-6.36	88.75	88.98	94
GMa	52.11	-69.73	9.44	70.37	172
G50BMa	45.03	-36.57	-28.47	46.36	218
BMa	36.65	23.19	-63.05	67.18	290
B50RMa	34.94	57.17	-44.26	72.31	322
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



### MRS18; adapted (a) CIELAB data

	$L^*$ = $L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	47.15	84.64	37.25	92.48	24
JMa	91.37	-1.27	125.03	125.03	91
GMa	63.07	-114.28	25.35	117.06	167
G50BMa	59.47	-80.6	-33.45	87.28	203
BMa	49.01	3.65	-81.19	81.28	273
B50RMa	44.06	106.09	-73.93	129.32	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

### %Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

### Output: Colorimetric Reflective System NCS11

for hue  $h^* = lab^*h = 24/360 = 0.066$

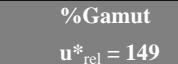
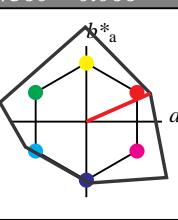
$lab^*tch$  and  $lab^*nch$

D65: hue R

LCH\*Ma: 47 92 24

rgb\*Ma: 1.0 0.0 0.0

triangle lightness



### %Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$

	$L^*$ = $L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	47.15	84.64	37.25	92.48	24
JMa	91.37	-1.27	125.03	125.03	91
GMa	63.07	-114.28	25.35	117.06	167
G50BMa	59.47	-80.6	-33.45	87.28	203
BMa	49.01	3.65	-81.19	81.28	273
B50RMa	44.06	106.09	-73.93	129.32	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
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BCIE	30.57	1.35	-46.48	46.51	272

### %Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$

	$L^*$ = $L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	47.15	84.64	37.25	92.48	24
JMa	91.37	-1.27	125.03	125.03	91
GMa	63.07	-114.28	25.35	117.06	167
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BMa	49.01	3.65	-81.19	81.28	273
B50RMa	44.06	106.09	-73.93	129.32	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
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### %Regularity

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	$L^*$ = $L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
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NMa	10.99	0.0	0.0	0.0	0
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RCIE	39.92	58.69	27.98	65.01	25
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	$L^*$ = $L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	47.15	84.64	37.25	92.48	24
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WMa	95.41	0.0	0.0	0.0	0
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$g^*_{C,rel} = 65$

	$L^*$ = $L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
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B50RMa	44.06	106.09	-73.93	129.32	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
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BCIE	30.57	1.35	-46.48	46.51	272

### %Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$

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





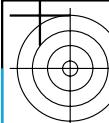
<tbl\_r cells="6" ix="5" maxcspan="1"



-8



-6



### Input: Colorimetric Reflective System MRS18

for hue  $h^* = lab^*h = 94/360 = 0.261$

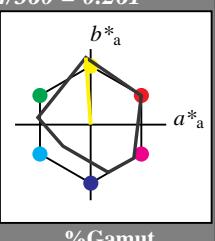
$lab^*tch$  and  $lab^*nch$

D65: hue J

LCH\*Ma: 91 89 94

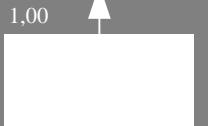
rgb\*Ma: 1.0 1.0 0.0

triangle lightness



#### MRS18; adapted (a) CIELAB data

	$L^*=L_a^*$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	49.63	66.96	38.37	77.18	30
JMa	90.7	-6.36	88.75	88.98	94
GMa	52.11	-69.73	9.44	70.37	172
G50BMa	45.03	-36.57	-28.47	46.36	218
BMa	36.65	23.19	-63.05	67.18	290
B50RMa	34.94	57.17	-44.26	72.31	322
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

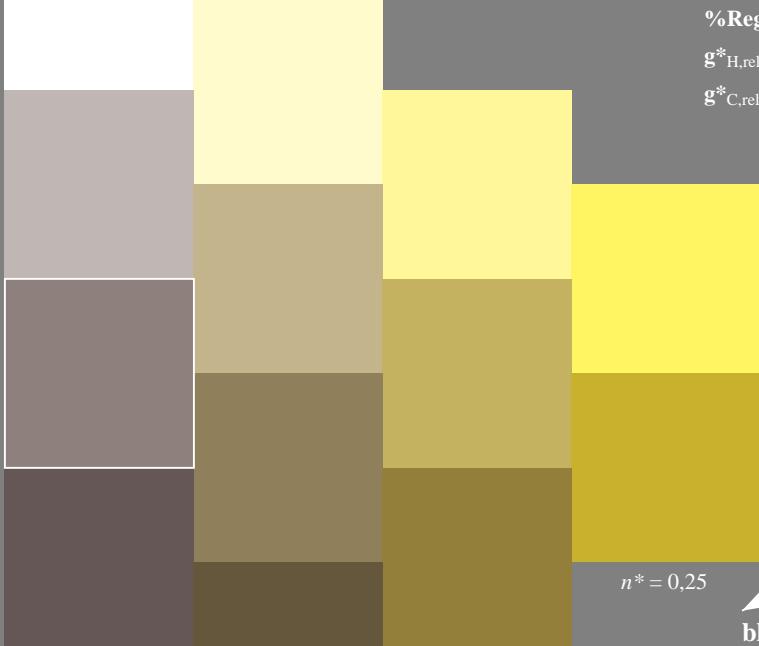


%Gamut  
 $u^*_{rel} = 91$

#### %Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



$n^* = 0,50$

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$n^* = 0,50$

$n^* = 1,00$

&lt;p



### Input: Colorimetric Reflective System MRS18

for hue  $h^* = lab^*h = 172/360 = 0.479$

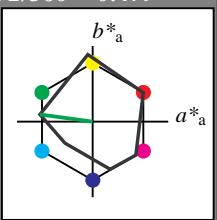
$lab^*tch$  and  $lab^*nch$

D65: hue G

LCH\*Ma: 52 70 172

rgb\*Ma: 0.0 1.0 0.0

triangle lightness



#### MRS18; adapted (a) CIELAB data

	$L^*=L_a^*$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	49.63	66.96	38.37	77.18	30
JMa	90.7	-6.36	88.75	88.98	94
GMa	52.11	-69.73	9.44	70.37	172
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BMa	36.65	23.19	-63.05	67.18	290
B50RMa	34.94	57.17	-44.26	72.31	322
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



%Gamut  
 $u^*_{rel} = 91$

### Output: Colorimetric Reflective System NCS11

for hue  $h^* = lab^*h = 167/360 = 0.465$

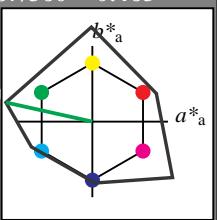
$lab^*tch$  and  $lab^*nch$

D65: hue G

LCH\*Ma: 63 117 167

rgb\*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut  
 $u^*_{rel} = 149$

#### NCS11; adapted (a) CIELAB data

	$L^*=L_a^*$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	47.15	84.64	37.25	92.48	24
JMa	91.37	-1.27	125.03	125.03	91
GMa	63.07	-114.28	25.35	117.06	167
G50BMa	59.47	-80.6	-33.45	87.28	203
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BCIE	30.57	1.35	-46.48	46.51	272



%Regularity  
 $g^*_{H,rel} = 41$   
 $g^*_{C,rel} = 52$



%Regularity  
 $g^*_{H,rel} = 46$   
 $g^*_{C,rel} = 65$



%Regularity  
 $g^*_{H,rel} = 49$   
 $g^*_{C,rel} = 65$



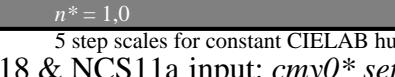
%Regularity  
 $g^*_{H,rel} = 51$   
 $g^*_{C,rel} = 65$



%Regularity  
 $g^*_{H,rel} = 53$   
 $g^*_{C,rel} = 65$

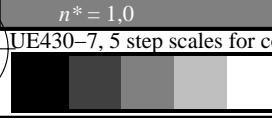


%Regularity  
 $g^*_{H,rel} = 55$   
 $g^*_{C,rel} = 65$



%Regularity  
 $g^*_{H,rel} = 57$   
 $g^*_{C,rel} = 65$

%Regularity  
 $g^*_{H,rel} = 59$   
 $g^*_{C,rel} = 65$



BAM-test chart UE43; Colorimetric systems MRS18 & NCS11a input:  $cmy0*$  setcmykcolor  
D65: 5 step colour scales and coordinate data for 10 hues

5 step scales for constant CIELAB hue 172/360 = 0.479 (left)

5 step scales for constant CIELAB hue 167/360 = 0.465 (right)

output: no change compared to input





[www.ps.bam.de/UE43/10L/L43E04NP.PS/.PDF](http://www.ps.bam.de/UE43/10L/L43E04NP.PS/.PDF); start output

N: No Output Linearization (OL) data in File (F), Startup (S) or Device (D)

## Input: Colorimetric Reflective System MRS18

for hue  $h^* = lab^*h = 290/360 = 0.806$

### *lab\*tch* and *lab\*nch*

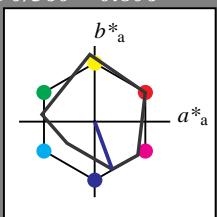
the ten and w

## D65: hue B

LCH\*Ma: 37 67 290

rgb\*Ma: 0.0 0.0

#### triangle lightness



%Gamut

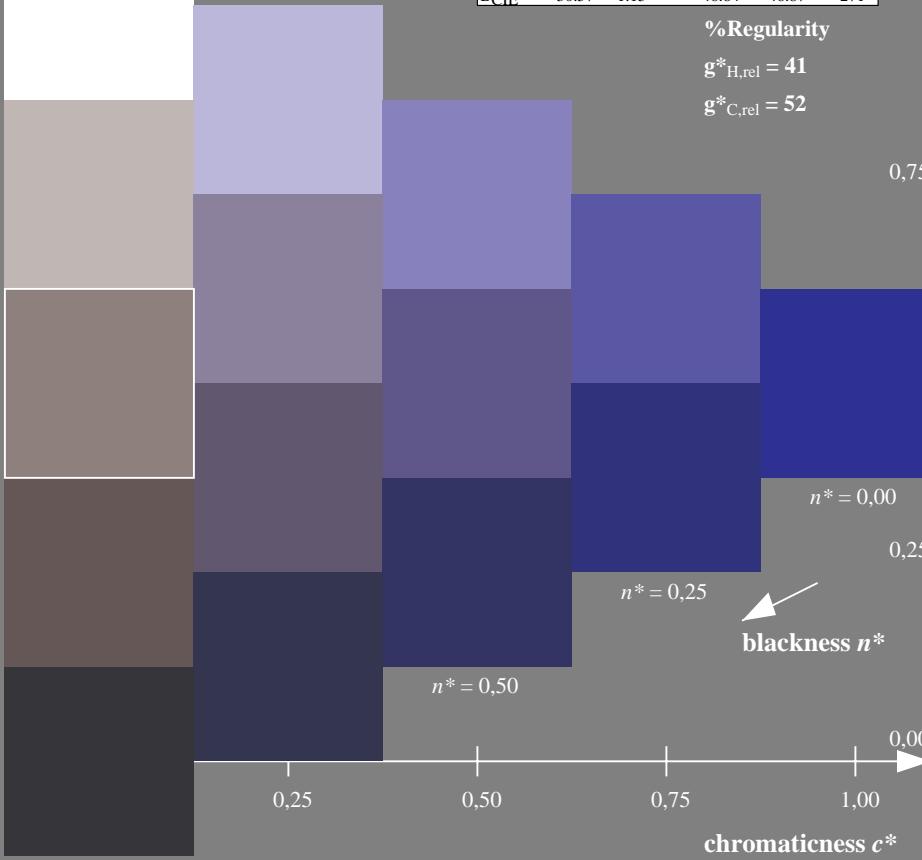
u\*<sub>1</sub> = 91

MRS18; adapted (a) CIELAB data						
	$L^*$	$L^*_a$	$a^*_a$	$b^*_a$	$C^*_a$	$h^*_a$
RMa	49.63	66.96		38.37	77.18	30
jMa	90.7	-6.36		88.75	88.98	94
GMa	52.11	-69.73		9.44	70.37	172
G50BMa	45.03	-36.57		-28.47	46.36	218
BMa	36.65	23.19		-63.05	67.18	290
B50RMa	34.94	57.17		-44.26	72.31	322
NMa	18.01	0.0		0.0	0.0	0
WMa	95.41	0.0		0.0	0.0	0
R <sub>c</sub> IIE	39.92	58.66		26.98	64.56	25
J <sub>c</sub> IIE	81.26	-2.17		67.76	67.79	92
G <sub>c</sub> IIE	52.23	-42.26		11.75	43.87	164
B <sub>c</sub> IIE	30.57	1.15		-46.84	46.87	271

### % Regularity

$g^*_H = 41$

$$g^*_{\text{C rel}} = 52$$



n\* = 1,0

BAM-test chart UE43; Colorimetric systems MRS18 & NCS11a input: *cmy0\* setcmykcolor*  
 D65: 5 step colour scales and coordinate data for 10 hues      output: *no change compared to input*

Input: *cmy0\** setcmykcolor  
Output: no change compared to input



BAM registration: 20060101-UE43/10L/L43E04NP.PS./PDF  
application for evaluation and measurement of printer or monitor  
11/TE43/

IE43 Form 5/10 Serie

Page:

1

Input: *cmy0\** setcmykcolor  
Output: no change compared to input

See for similar files: <http://www.ps.bam.de/UE43/>  
Technical information: <http://www.ps.bam.de>

Version 2.1, io=0.0



Input: Colorimetric Reflective System MRS18

for hue  $h^* = lab^*h = 322/360 = 0.895$

$lab^*tch$  and  $lab^*nch$

D65: hue B50R

LCH\*Ma: 35 72 322

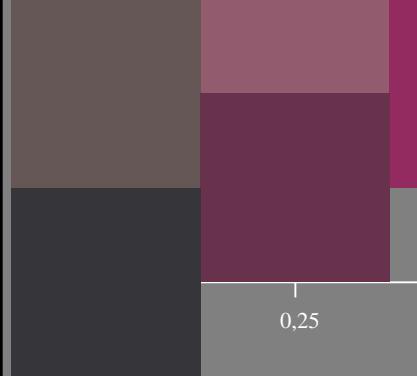
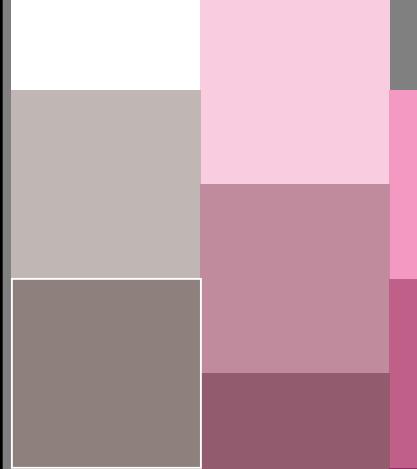
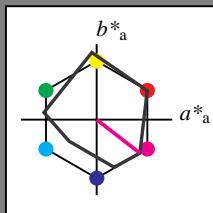
rgb\*Ma: 1.0 0.0 1.0

triangle lightness

1,00

%Gamut

$u^*_{rel} = 91$



MRS18; adapted (a) CIELAB data

	$L^*$	$a^*$	$b^*$	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	49.63	66.96	38.37	77.18	30
JMa	90.7	-6.36	88.75	88.98	94
GMa	52.11	-69.73	9.44	70.37	172
G50BMa	45.03	-36.57	-28.47	46.36	218
BMa	36.65	23.19	-63.05	67.18	290
B50RMa	34.94	57.17	-44.26	72.31	322
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

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

chromaticness  $c^*$

$n^* = 0,00$

blackness  $n^*$

$n^* = 0,50$

$n^* = 1,00$

Output: Colorimetric Reflective System NCS11

for hue  $h^* = lab^*h = 325/360 = 0.903$

$lab^*tch$  and  $lab^*nch$

D65: hue B50R

LCH\*Ma: 44 129 325

rgb\*Ma: 1.0 0.0 1.0

triangle lightness

1,00

%Gamut

$u^*_{rel} = 149$



%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$

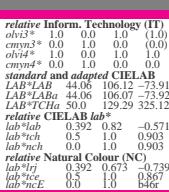
chromaticness  $c^*$

$n^* = 0,00$

blackness  $n^*$

$n^* = 0,50$

$n^* = 1,00$



$n^* = 0,00$

blackness  $n^*$

UE430-7, 5 step scales for constant CIELAB hue 322/360 = 0.895 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

BAM-test chart UE43; Colorimetric systems MRS18 & NCS11a input:  $cmy0^*$  setcmykcolor

output: no change compared to input

D65: 5 step colour scales and coordinate data for 10 hues



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$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 0,75$

$n^* = 1,00$

$n^* = 1,25$

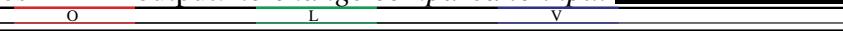
$n^* = 1,50$

$n^* = 0,00$   
 $n^* = 0,25$   
 $n^* = 0,50$   
 $n^* = 0,75$   
 $n^* = 1,00$

chromaticness  $c^*$

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

BAM-test chart UE43; Colorimetric systems MRS18 & NCS11a input:  $cmy0^*$  setcmykcolor  
D65: 5 step colour scales and coordinate data for 10 hues  
output: no change compared to input



Input: Colorimetric Reflective System MRS18

for hue  $h^* = lab^*h = 164/360 = 0.457$

$lab^*tch$  and  $lab^*nch$

D65: hue G

LCH\*Ma: 56 66 164

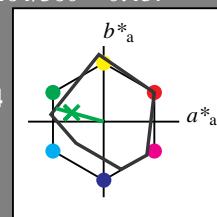
rgb\*Ma: 0.1 1.0 0.0

triangle lightness

1,00

%Gamut

$u^*_{rel} = 91$



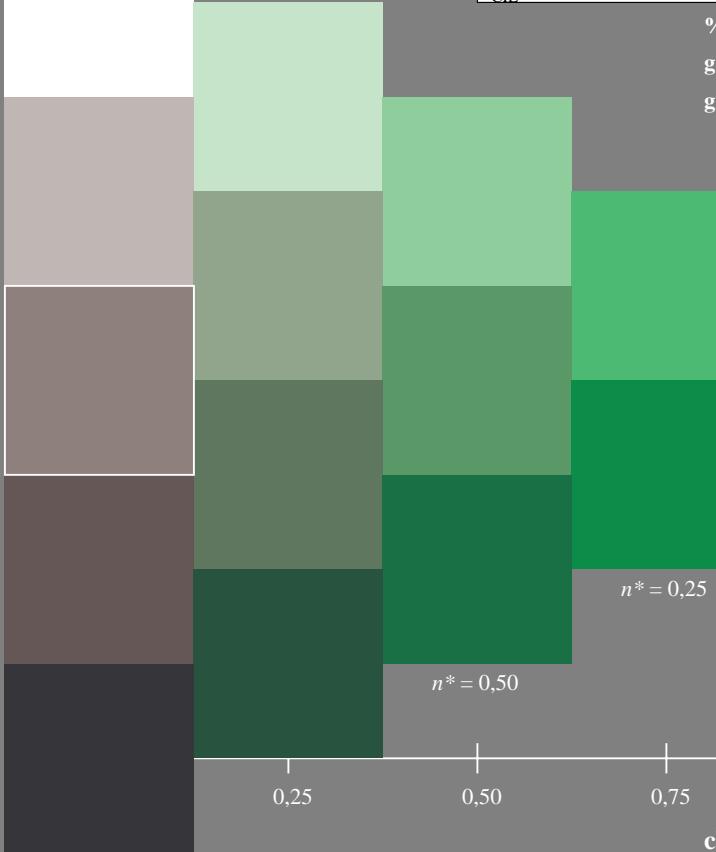
MRS18; adapted (a) CIELAB data

	$L^*=L_a^*$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	49.63	66.96	38.37	77.18	30
JMa	90.7	-6.36	88.75	88.98	94
GMa	52.11	-69.73	9.44	70.37	172
G50BMa	45.03	-36.57	-28.47	46.36	218
BMa	36.65	23.19	-63.05	67.18	290
B50RMa	34.94	57.17	-44.26	72.31	322
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

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System NCS11

for hue  $h^* = lab^*h = 162/360 = 0.451$

$lab^*tch$  and  $lab^*nch$

D65: hue G

LCH\*Ma: 65 110 162

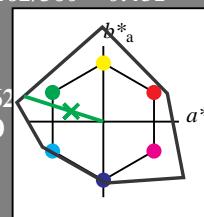
rgb\*Ma: 0.08 1.0 0.0

triangle lightness

1,00

%Gamut

$u^*_{rel} = 149$



NCS11; adapted (a) CIELAB data

	$L^*=L_a^*$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	47.15	84.64	37.25	92.48	24
JMa	91.37	-1.27	125.03	125.03	91
GMa	63.07	-114.28	25.35	117.06	167
G50BMa	59.47	-80.6	-33.45	87.28	203
BMa	49.01	3.65	-81.19	81.28	273
B50RMa	44.06	106.09	-73.93	129.32	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

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$

