

Input: Colorimetric Reflective System NCS11

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

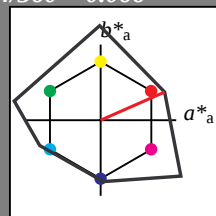
lab^*tch and lab^*nch

D65: hue R

LCH*Ma: 47 92 24

olv*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 149$

%Regularity

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

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

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

Output: Colorimetric Reflective System MRS18

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

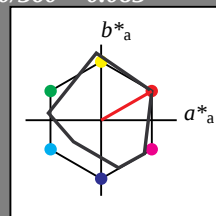
lab^*tch and lab^*nch

D65: hue R

LCH*Ma: 50 77 30

olv*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 91$

%Regularity

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

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

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

relative Inform. Technology (IT)
 $olvi3^* = 1.0$ 1.0 1.0 (1.0)
 $cmyn3^* = 0.0$ 0.0 0.0 (0.0)
 $olvi4^* = 1.0$ 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 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)
 $olvi3^* = 0.5$ 0.5 0.5 (1.0)
 $cmyn3^* = 0.5$ 0.5 0.5 (0.0)
 $olvi4^* = 1.0$ 1.0 1.0 0.5
 $cmyn4^* = 0.0$ 0.0 0.0 0.5

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 -

relative Inform. Technology (IT)
 $olvi3^* = 0.0$ 0.0 0.0 (1.0)
 $cmyn3^* = 1.0$ 1.0 1.0 (0.0)
 $olvi4^* = 1.0$ 1.0 1.0 0.0
 $cmyn4^* = 0.0$ 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 -

relative Inform. Technology (IT)
 $olvi3^* = 1.0$ 0.5 0.5 (1.0)
 $cmyn3^* = 0.0$ 0.5 0.5 (0.0)
 $olvi4^* = 1.0$ 0.5 0.5 1.0
 $cmyn4^* = 0.0$ 0.5 0.5 0.0

standard and adapted CIELAB
 $LAB^*LAB = 72.52$ 32.93 22.4
 $LAB^*LABa = 72.52$ 33.47 19.18
 $LAB^*TCHa = 75.0$ 38.58 29.82

relative CIELAB lab*
 $lab^*lab = 0.704$ 0.434 0.249
 $lab^*tch = 0.75$ 0.5 0.083
 $lab^*nch = 0.0$ 0.5 0.083

relative Natural Colour (NC)
 $lab^*lrj = 0.704$ 0.496 0.06
 $lab^*tce = 0.75$ 0.5 0.019
 $lab^*nce = 0.0$ 0.5 0.07

relative Inform. Technology (IT)
 $olvi3^* = 0.5$ 0.0 0.0 (1.0)
 $cmyn3^* = 0.5$ 1.0 1.0 (0.0)
 $olvi4^* = 1.0$ 0.5 0.5 0.5
 $cmyn4^* = 0.0$ 0.5 0.5 0.5

standard and adapted CIELAB
 $LAB^*LAB = 33.82$ 33.67 19.79
 $LAB^*LABa = 33.82$ 33.47 19.18
 $LAB^*TCHa = 25.01$ 38.58 29.82

relative CIELAB lab*
 $lab^*lab = 0.204$ 0.434 0.249
 $lab^*tch = 0.25$ 0.5 0.083
 $lab^*nch = 0.5$ 0.5 0.083

relative Natural Colour (NC)
 $lab^*lrj = 0.204$ 0.496 0.06
 $lab^*tce = 0.25$ 0.5 0.019
 $lab^*nce = 0.5$ 0.5 0.07

relative Inform. Technology (IT)
 $olvi3^* = 1.0$ 0.0 0.0 (1.0)
 $cmyn3^* = 0.0$ 1.0 1.0 (0.0)
 $olvi4^* = 1.0$ 0.0 0.0 1.0
 $cmyn4^* = 0.0$ 1.0 1.0 0.0

standard and adapted CIELAB
 $LAB^*LAB = 49.63$ 66.84 40.03
 $LAB^*LABa = 49.63$ 66.95 38.36
 $LAB^*TCHa = 50.0$ 77.16 29.82

relative CIELAB lab*
 $lab^*lab = 0.409$ 0.867 0.497
 $lab^*tch = 0.5$ 1.0 0.083
 $lab^*nch = 0.0$ 1.0 0.083

relative Natural Colour (NC)
 $lab^*lrj = 0.409$ 0.993 0.119
 $lab^*tce = 0.5$ 1.0 0.019
 $lab^*nce = 0.0$ 1.0 0.07

Input: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 91/360 = 0.252$

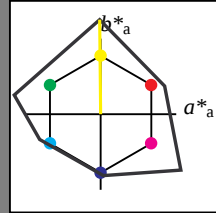
lab^*tch and lab^*nch

D65: hue J

LCH*Ma: 91 125 91

olv*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 149$

%Regularity

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

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

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

Output: Colorimetric Reflective System MRS18

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

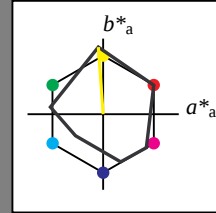
lab^*tch and lab^*nch

D65: hue J

LCH*Ma: 91 89 94

olv*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 91$

%Regularity

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

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

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

relative Inform. Technology (IT)			
olvi3*	1.0	1.0	1.0 (1.0)
cmyn3*	0.0	0.0	0.0 (0.0)
olvi4*	1.0	1.0	1.0
cmyn4*	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)			
olvi3*	0.5	0.5	0.5 (1.0)
cmyn3*	0.5	0.5	0.5 (0.0)
olvi4*	1.0	1.0	1.0
cmyn4*	0.0	0.0	0.5
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	-

relative Inform. Technology (IT)			
olvi3*	0.0	0.0	0.0 (1.0)
cmyn3*	1.0	1.0	1.0 (0.0)
olvi4*	1.0	1.0	1.0
cmyn4*	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	-

relative Inform. Technology (IT)			
olvi3*	1.0	1.0	0.5 (1.0)
cmyn3*	0.0	0.0	0.5 (0.0)
olvi4*	1.0	1.0	0.5
cmyn4*	0.0	0.0	0.5
standard and adapted CIELAB			
LAB*LAB	93.05	-4.11	48.97
LAB*LABa	93.05	-3.17	44.37
LAB*TCHa	75.0	44.48	94.1

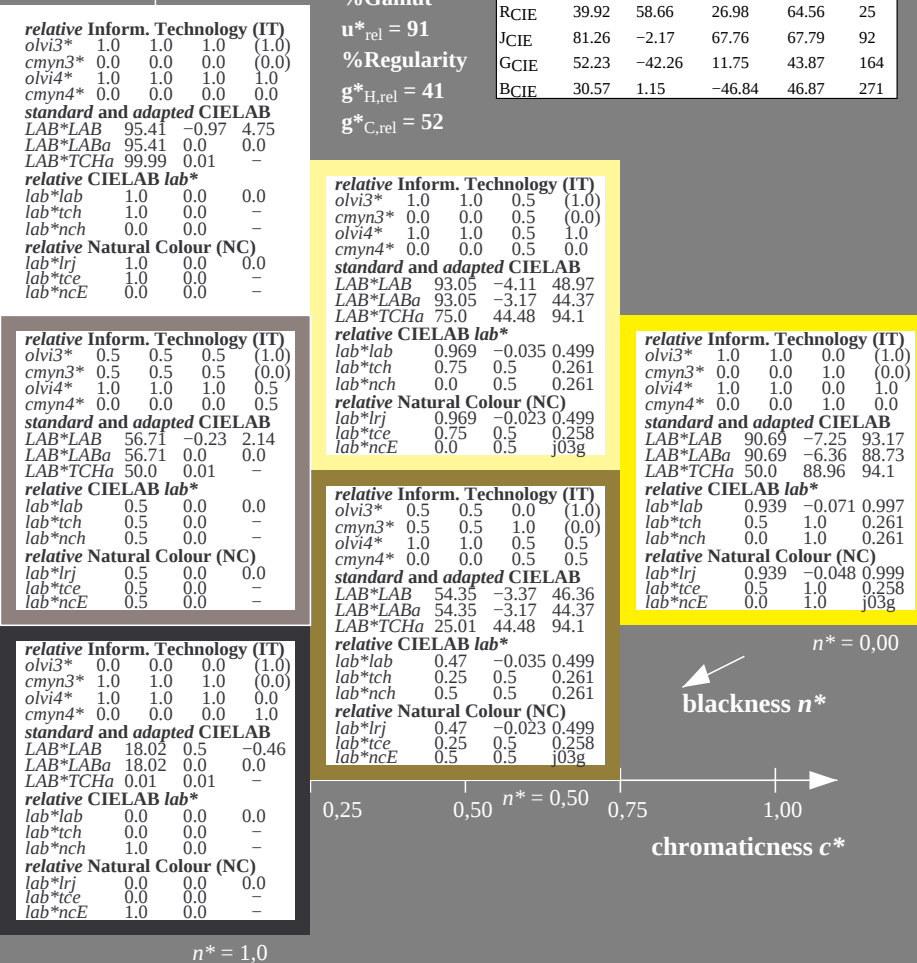
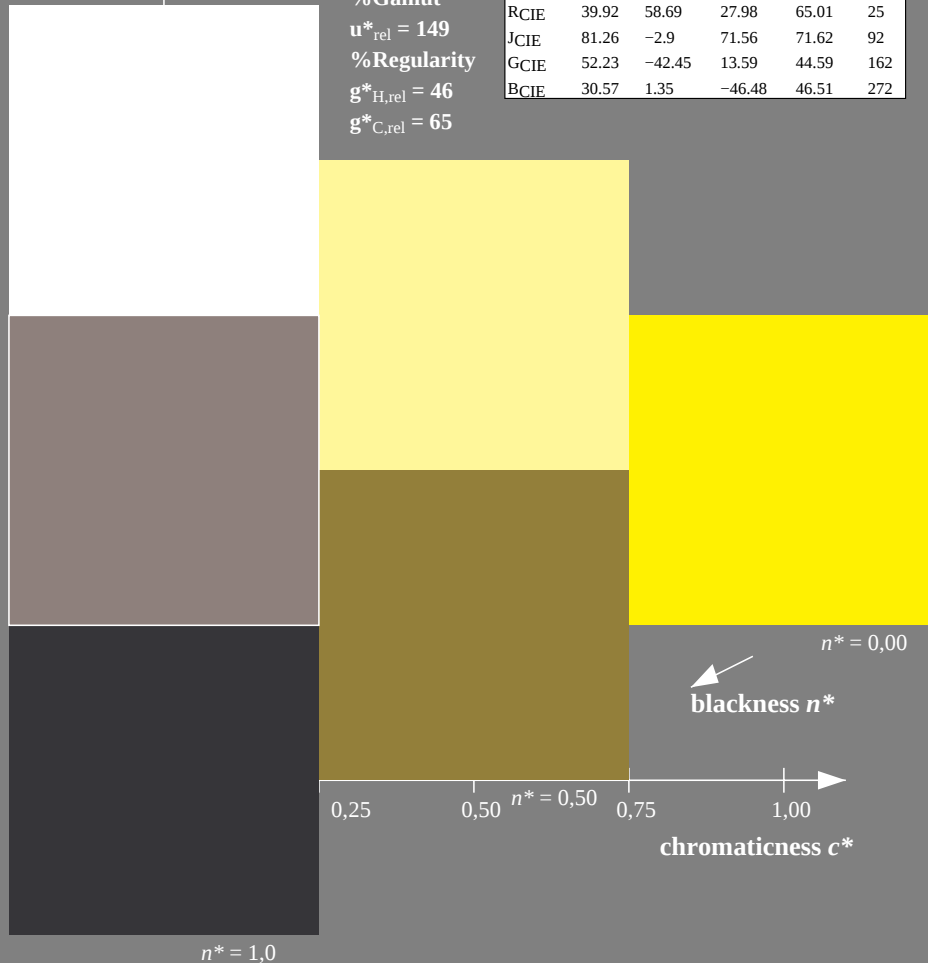
relative CIELAB lab*			
lab*lab	0.969	-0.035	0.499
lab*tch	0.75	0.5	0.261
lab*nch	0.0	0.5	0.261
relative Natural Colour (NC)			
lab*lrj	0.969	-0.023	0.499
lab*tce	0.75	0.5	0.258
lab*nce	0.0	0.5	j03g

relative Inform. Technology (IT)			
olvi3*	0.5	0.5	0.0 (1.0)
cmyn3*	0.5	0.5	1.0 (0.0)
olvi4*	1.0	1.0	0.5
cmyn4*	0.0	0.0	0.5
standard and adapted CIELAB			
LAB*LAB	54.35	-3.37	46.36
LAB*LABa	54.35	-3.17	44.37
LAB*TCHa	25.01	44.48	94.1

relative CIELAB lab*			
lab*lab	0.47	-0.035	0.499
lab*tch	0.25	0.5	0.261
lab*nch	0.5	0.5	0.261
relative Natural Colour (NC)			
lab*lrj	0.47	-0.023	0.499
lab*tce	0.25	0.5	0.258
lab*nce	0.5	0.5	j03g

relative Inform. Technology (IT)			
olvi3*	1.0	1.0	0.0 (1.0)
cmyn3*	0.0	0.0	1.0 (0.0)
olvi4*	1.0	1.0	1.0
cmyn4*	0.0	0.0	1.0
standard and adapted CIELAB			
LAB*LAB	90.69	-7.25	93.17
LAB*LABa	90.69	-6.36	88.73
LAB*TCHa	50.0	88.96	94.1

relative CIELAB lab*			
lab*lab	0.939	-0.071	0.997
lab*tch	0.5	1.0	0.261
lab*nch	0.0	1.0	0.261
relative Natural Colour (NC)			
lab*lrj	0.939	-0.048	0.999
lab*tce	0.5	1.0	0.258
lab*nce	0.0	1.0	j03g



UE080-7, 3 step scales for constant CIELAB hue 91/360 = 0.252 (left)

3 step scales for constant CIELAB hue 94/360 = 0.261 (right)

BAM-test chart UE08; Colorimetric systems NCS11a & MRS18 input: *cmv0* setcmkcolor*

D65: 3 step colour scales and coordinate data for 10 hues

output: no change compared to input

Input: Colorimetric Reflective System NCS11

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

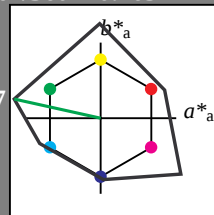
lab^*tch and lab^*nch

D65: hue G

LCH*Ma: 63 117 167

olv*Ma: 0.0 1.0 0.0

triangle lightness t^*



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

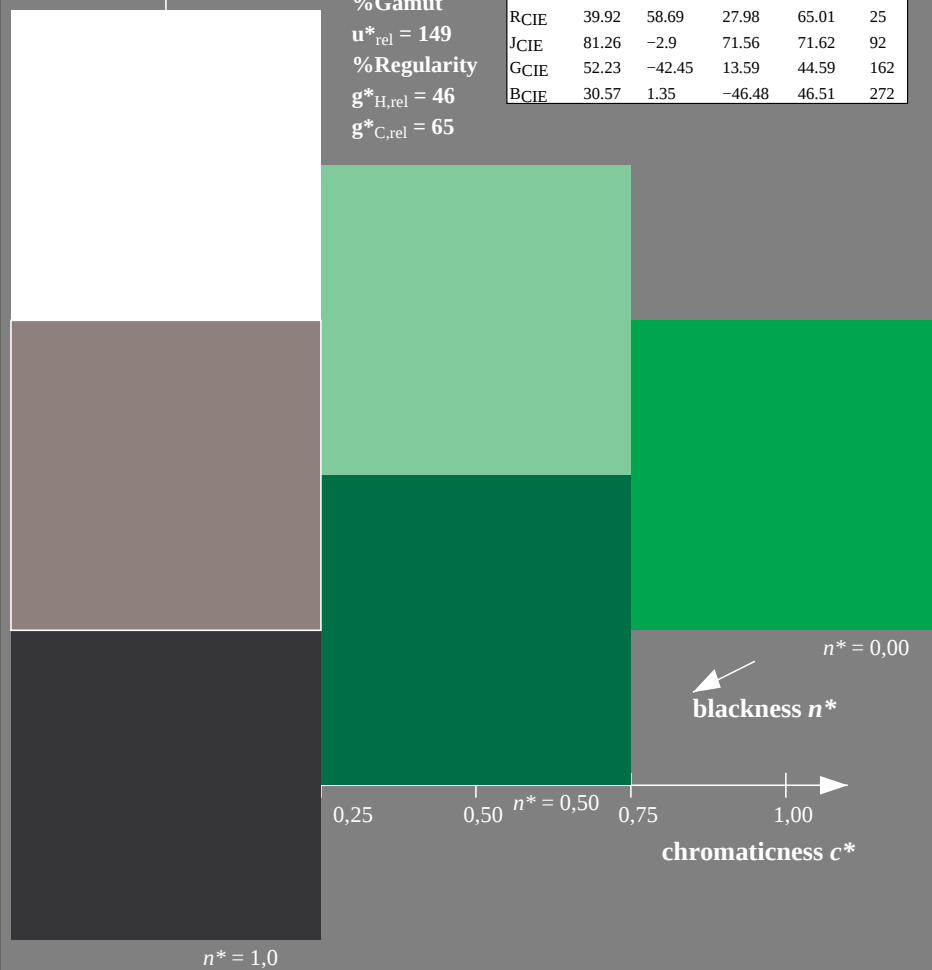
%Gamut

$u^*_{rel} = 149$

%Regularity

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

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



Output: Colorimetric Reflective System MRS18

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

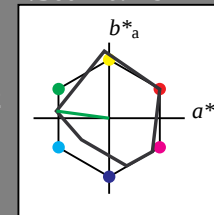
lab^*tch and lab^*nch

D65: hue G

LCH*Ma: 52 70 172

olv*Ma: 0.0 1.0 0.0

triangle lightness t^*



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

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

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

relative Inform. Technology (IT)					
olvi3*	1.0	1.0	1.0	(1.0)	
cmyn3*	0.0	0.0	0.0	(0.0)	
olvi4*	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	4.75		
LAB*LABa	95.41	0.0	0.0		
LAB*TCa	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)					
olvi3*	0.5	1.0	0.5	(1.0)	
cmyn3*	0.5	0.0	0.5	(0.0)	
olvi4*	0.5	1.0	0.5	1.0	
cmyn4*	0.5	0.0	0.5	0.0	
standard and adapted CIELAB					
LAB*LAB	73.75	-35.42	8.02		
LAB*LABa	73.75	-34.85	4.72		
LAB*TCa	75.0	35.18	172.29		
relative CIELAB lab*					
lab*lab	0.72	-0.494	0.067		
lab*tch	0.75	0.5	0.479		
lab*nch	0.0	0.5	0.479		
relative Natural Colour (NC)					
lab*lrj	0.72	-0.496	-0.056		
lab*tce	0.75	0.5	0.518		
lab*nce	0.0	0.5	g07b		

relative Inform. Technology (IT)					
olvi3*	0.0	1.0	0.0	(1.0)	
cmyn3*	1.0	0.0	1.0	(0.0)	
olvi4*	0.0	1.0	0.0	1.0	
cmyn4*	1.0	0.0	1.0	0.0	
standard and adapted CIELAB					
LAB*LAB	52.11	-69.86	11.28		
LAB*LABa	52.11	-69.71	9.44		
LAB*TCa	50.0	70.36	172.29		
relative CIELAB lab*					
lab*lab	0.441	-0.99	0.134		
lab*tch	0.5	1.0	0.479		
lab*nch	0.0	1.0	0.479		
relative Natural Colour (NC)					
lab*lrj	0.441	-0.992	-0.114		
lab*tce	0.5	1.0	0.518		
lab*nce	0.0	1.0	g07b		

relative Inform. Technology (IT)					
olvi3*	0.5	0.5	0.5	(1.0)	
cmyn3*	0.5	0.5	0.5	(0.0)	
olvi4*	1.0	1.0	1.0	0.5	
cmyn4*	0.0	0.0	0.0	0.5	
standard and adapted CIELAB					
LAB*LAB	56.71	-0.23	2.14		
LAB*LABa	56.71	0.0	0.0		
LAB*TCa	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)					
olvi3*	0.0	0.5	0.0	(1.0)	
cmyn3*	1.0	0.5	1.0	(0.0)	
olvi4*	0.5	1.0	0.5	0.5	
cmyn4*	0.5	0.0	0.5	0.5	
standard and adapted CIELAB					
LAB*LAB	35.06	-34.67	5.41		
LAB*LABa	35.06	-34.85	4.72		
LAB*TCa	25.01	35.18	172.29		
relative CIELAB lab*					
lab*lab	0.22	-0.494	0.067		
lab*tch	0.25	0.5	0.479		
lab*nch	0.5	0.5	0.479		
relative Natural Colour (NC)					
lab*lrj	0.22	-0.496	-0.056		
lab*tce	0.25	0.5	0.518		
lab*nce	0.5	0.5	g07b		

relative Inform. Technology (IT)					
olvi3*	0.0	0.0	0.0	(1.0)	
cmyn3*	1.0	1.0	1.0	(0.0)	
olvi4*	1.0	1.0	1.0	0.0	
cmyn4*	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*TCa	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	-		

relative Inform. Technology (IT)					
olvi3*	0.0	0.0	0.0	(1.0)	
cmyn3*	1.0	1.0	1.0	(0.0)	
olvi4*	1.0	1.0	1.0	0.0	
cmyn4*	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*TCa	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	-		

3 step scales for constant CIELAB hue 172/360 = 0.479 (right)

output: no change compared to input

BAM-test chart UE08; Colorimetric systems NCS11a & MRS18 input: $cmv0^* setcmykcolor$
D65: 3 step colour scales and coordinate data for 10 hues

Input: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 203/360 = 0.563$

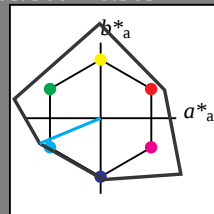
lab^*tch and lab^*nch

D65: hue G50B

LCH*Ma: 59 87 203

olv*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 149$

%Regularity

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

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

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	
G50B _{Ma}	59.47	-80.6	-33.45	87.28	203	
B _{Ma}	49.01	3.65	-81.19	81.28	273	
B50R _{Ma}	44.06	106.09	-73.93	129.32	325	
N _{Ma}	10.99	0.0	0.0	0.0	0	
W _{Ma}	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	

Output: Colorimetric Reflective System MRS18

for hue $h^* = lab^*h = 218/360 = 0.605$

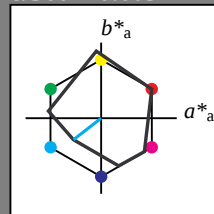
lab^*tch and lab^*nch

D65: hue G50B

LCH*Ma: 45 46 218

olv*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 91$

%Regularity

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

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

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	
G50B _{Ma}	45.03	-36.57	-28.47	46.36	218	
B _{Ma}	36.65	23.19	-63.05	67.18	290	
B50R _{Ma}	34.94	57.17	-44.26	72.31	322	
N _{Ma}	18.01	0.0	0.0	0.0	0	
W _{Ma}	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)
 $olvi3^* = 1.0 \ 1.0 \ 1.0 \ (1.0)$
 $cmyn3^* = 0.0 \ 0.0 \ 0.0 \ (0.0)$
 $olvi4^* = 1.0 \ 1.0 \ 1.0 \ 1.0$
 $cmyn4^* = 0.0 \ 0.0 \ 0.0 \ 0.0$

standard and adapted CIELAB
 $LAB^*LAB = 95.41 \ -0.97 \ 4.75$
 $LAB^*LABa = 95.41 \ 0.0 \ 0.0$
 $LAB^*TCHa = 99.99 \ 0.01 \ -$

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)
 $olvi3^* = 0.5 \ 0.5 \ 0.5 \ (1.0)$
 $cmyn3^* = 0.5 \ 0.5 \ 0.5 \ (0.0)$
 $olvi4^* = 1.0 \ 1.0 \ 1.0 \ 0.5$
 $cmyn4^* = 0.0 \ 0.0 \ 0.0 \ 0.5$

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)
 $lab^*lrj = 0.5 \ 0.0 \ 0.0$
 $lab^*tce = 0.5 \ 0.0 \ -$
 $lab^*nce = 0.5 \ 0.0 \ -$

relative Inform. Technology (IT)
 $olvi3^* = 0.0 \ 0.0 \ 0.0 \ (1.0)$
 $cmyn3^* = 1.0 \ 1.0 \ 1.0 \ (0.0)$
 $olvi4^* = 1.0 \ 1.0 \ 1.0 \ 0.0$
 $cmyn4^* = 0.0 \ 0.0 \ 0.0 \ 1.0$

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)
 $lab^*lrj = 0.0 \ 0.0 \ 0.0$
 $lab^*tce = 0.0 \ 0.0 \ -$
 $lab^*nce = 1.0 \ 0.0 \ -$

relative Inform. Technology (IT)
 $olvi3^* = 0.5 \ 1.0 \ 1.0 \ (1.0)$
 $cmyn3^* = 0.5 \ 0.0 \ 0.0 \ (0.0)$
 $olvi4^* = 0.5 \ 1.0 \ 1.0 \ 1.0$
 $cmyn4^* = 0.5 \ 0.0 \ 0.0 \ 0.0$

standard and adapted CIELAB
 $LAB^*LAB = 70.21 \ -18.77 \ -11.17$
 $LAB^*LABa = 70.21 \ -18.27 \ -14.23$
 $LAB^*TCHa = 75.0 \ 23.17 \ 217.91$

relative CIELAB lab*
 $lab^*lab = 0.674 \ -0.393 \ -0.306$
 $lab^*tch = 0.75 \ 0.5 \ 0.605$
 $lab^*nch = 0.0 \ 0.5 \ 0.605$

relative Natural Colour (NC)
 $lab^*lrj = 0.674 \ -0.353 \ -0.352$
 $lab^*tce = 0.75 \ 0.5 \ 0.625$
 $lab^*nce = 0.0 \ 0.5 \ g49b$

relative Inform. Technology (IT)
 $olvi3^* = 0.0 \ 0.5 \ 0.5 \ (1.0)$
 $cmyn3^* = 1.0 \ 0.5 \ 0.5 \ (0.0)$
 $olvi4^* = 0.5 \ 1.0 \ 1.0 \ 0.5$
 $cmyn4^* = 0.5 \ 0.0 \ 0.0 \ 0.5$

standard and adapted CIELAB
 $LAB^*LAB = 31.52 \ -18.03 \ -13.78$
 $LAB^*LABa = 31.52 \ -18.27 \ -14.23$
 $LAB^*TCHa = 25.01 \ 23.17 \ 217.91$

relative CIELAB lab*
 $lab^*lab = 0.175 \ -0.393 \ -0.306$
 $lab^*tch = 0.25 \ 0.5 \ 0.605$
 $lab^*nch = 0.5 \ 0.5 \ 0.605$

relative Natural Colour (NC)
 $lab^*lrj = 0.175 \ -0.353 \ -0.352$
 $lab^*tce = 0.25 \ 0.5 \ 0.625$
 $lab^*nce = 0.5 \ 0.5 \ g49b$

relative Inform. Technology (IT)
 $olvi3^* = 0.0 \ 1.0 \ 1.0 \ (1.0)$
 $cmyn3^* = 1.0 \ 0.0 \ 0.0 \ (0.0)$
 $olvi4^* = 0.0 \ 1.0 \ 1.0 \ 1.0$
 $cmyn4^* = 1.0 \ 0.0 \ 0.0 \ 0.0$

standard and adapted CIELAB
 $LAB^*LAB = 45.03 \ -36.57 \ -27.11$
 $LAB^*LABa = 45.03 \ -36.56 \ -28.47$
 $LAB^*TCHa = 50.0 \ 46.35 \ 217.91$

relative CIELAB lab*
 $lab^*lab = 0.349 \ -0.788 \ -0.613$
 $lab^*tch = 0.5 \ 1.0 \ 0.605$
 $lab^*nch = 0.0 \ 1.0 \ 0.605$

relative Natural Colour (NC)
 $lab^*lrj = 0.349 \ -0.706 \ -0.706$
 $lab^*tce = 0.5 \ 1.0 \ 0.625$
 $lab^*nce = 0.0 \ 1.0 \ g49b$

BAM-test chart UE08; Colorimetric systems NCS11a & MRS18 input: $cmv0^* setcmykcolor$

D65: 3 step colour scales and coordinate data for 10 hues

output: no change compared to input

Input: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 273/360 = 0.757$

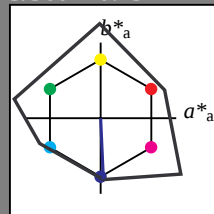
lab^*tch and lab^*nch

D65: hue B

LCH*Ma: 49 81 273

olv*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 149$

%Regularity

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

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

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

Output: Colorimetric Reflective System MRS18

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

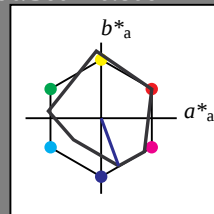
lab^*tch and lab^*nch

D65: hue B

LCH*Ma: 37 67 290

olv*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 91$

%Regularity

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

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

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

relative Inform. Technology (IT)
 $olvi3^* = 1.0 \ 1.0 \ 1.0 \ (1.0)$
 $cmyn3^* = 0.0 \ 0.0 \ 0.0 \ (0.0)$
 $olvi4^* = 1.0 \ 1.0 \ 1.0 \ 1.0$
 $cmyn4^* = 0.0 \ 0.0 \ 0.0 \ 0.0$

standard and adapted CIELAB
 $LAB^*LAB = 95.41 \ -0.97 \ 4.75$
 $LAB^*LABa = 95.41 \ 0.0 \ 0.0$
 $LAB^*TCHa = 99.99 \ 0.01 \ -$

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)
 $olvi3^* = 0.5 \ 0.5 \ 0.5 \ (1.0)$
 $cmyn3^* = 0.5 \ 0.5 \ 0.5 \ (0.0)$
 $olvi4^* = 1.0 \ 1.0 \ 1.0 \ 0.5$
 $cmyn4^* = 0.0 \ 0.0 \ 0.0 \ 0.5$

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)
 $lab^*lrj = 0.5 \ 0.0 \ 0.0$
 $lab^*tce = 0.5 \ 0.0 \ -$
 $lab^*nce = 0.5 \ 0.0 \ -$

relative Inform. Technology (IT)
 $olvi3^* = 0.0 \ 0.0 \ 0.0 \ (1.0)$
 $cmyn3^* = 1.0 \ 1.0 \ 1.0 \ (0.0)$
 $olvi4^* = 1.0 \ 1.0 \ 1.0 \ 0.0$
 $cmyn4^* = 0.0 \ 0.0 \ 0.0 \ 1.0$

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)
 $lab^*lrj = 0.0 \ 0.0 \ 0.0$
 $lab^*tce = 0.0 \ 0.0 \ -$
 $lab^*nce = 1.0 \ 0.0 \ -$

relative Inform. Technology (IT)
 $olvi3^* = 0.5 \ 0.5 \ 1.0 \ (1.0)$
 $cmyn3^* = 0.5 \ 0.5 \ 0.0 \ (0.0)$
 $olvi4^* = 0.5 \ 0.5 \ 1.0 \ 1.0$
 $cmyn4^* = 0.5 \ 0.5 \ 0.0 \ 0.0$

standard and adapted CIELAB
 $LAB^*LAB = 66.03 \ 11.17 \ -28.74$
 $LAB^*LABa = 66.03 \ 11.59 \ -31.51$
 $LAB^*TCHa = 75.0 \ 33.59 \ 290.19$

relative CIELAB lab^*
 $lab^*lab = 0.62 \ 0.173 \ -0.468$
 $lab^*tch = 0.75 \ 0.5 \ 0.806$
 $lab^*nch = 0.0 \ 0.5 \ 0.806$

relative Natural Colour (NC)
 $lab^*lrj = 0.62 \ 0.129 \ -0.482$
 $lab^*tce = 0.75 \ 0.5 \ 0.791$
 $lab^*nce = 0.0 \ 0.5 \ b16r$

relative Inform. Technology (IT)
 $olvi3^* = 0.0 \ 0.0 \ 0.5 \ (1.0)$
 $cmyn3^* = 1.0 \ 1.0 \ 0.5 \ (0.0)$
 $olvi4^* = 0.5 \ 0.5 \ 1.0 \ 0.5$
 $cmyn4^* = 0.5 \ 0.5 \ 0.0 \ 0.5$

standard and adapted CIELAB
 $LAB^*LAB = 27.34 \ 11.92 \ -31.35$
 $LAB^*LABa = 27.34 \ 11.59 \ -31.51$
 $LAB^*TCHa = 25.01 \ 33.59 \ 290.19$

relative CIELAB lab^*
 $lab^*lab = 0.12 \ 0.173 \ -0.468$
 $lab^*tch = 0.25 \ 0.5 \ 0.806$
 $lab^*nch = 0.5 \ 0.5 \ 0.806$

relative Natural Colour (NC)
 $lab^*lrj = 0.12 \ 0.129 \ -0.482$
 $lab^*tce = 0.25 \ 0.5 \ 0.791$
 $lab^*nce = 0.5 \ 0.5 \ b16r$

relative Inform. Technology (IT)
 $olvi3^* = 0.0 \ 0.0 \ 1.0 \ (1.0)$
 $cmyn3^* = 1.0 \ 1.0 \ 0.0 \ (0.0)$
 $olvi4^* = 0.0 \ 0.0 \ 1.0 \ 1.0$
 $cmyn4^* = 1.0 \ 1.0 \ 0.0 \ 0.0$

standard and adapted CIELAB
 $LAB^*LAB = 36.65 \ 23.33 \ -62.24$
 $LAB^*LABa = 36.65 \ 23.18 \ -63.03$
 $LAB^*TCHa = 50.0 \ 67.17 \ 290.19$

relative CIELAB lab^*
 $lab^*lab = 0.241 \ 0.345 \ -0.937$
 $lab^*tch = 0.5 \ 1.0 \ 0.806$
 $lab^*nch = 0.0 \ 1.0 \ 0.806$

relative Natural Colour (NC)
 $lab^*lrj = 0.241 \ 0.257 \ -0.965$
 $lab^*tce = 0.5 \ 1.0 \ 0.791$
 $lab^*nce = 0.0 \ 1.0 \ b16r$

BAM-test chart UE08; Colorimetric systems NCS11a & MRS18 input: $cmv0^* setcmykcolor$

D65: 3 step colour scales and coordinate data for 10 hues

output: no change compared to input

Input: Colorimetric Reflective System NCS11

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

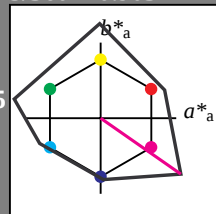
lab^*tch and lab^*nch

D65: hue B50R

LCH*Ma: 44 129 325

olv*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 149$

%Regularity

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

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

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

Output: Colorimetric Reflective System MRS18

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

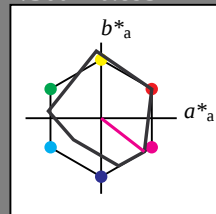
lab^*tch and lab^*nch

D65: hue B50R

LCH*Ma: 35 72 322

olv*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 91$

%Regularity

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

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

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

relative Inform. Technology (IT)
 $olvi3^* = 1.0 \ 1.0 \ 1.0 \ (1.0)$
 $cmyn3^* = 0.0 \ 0.0 \ 0.0 \ (0.0)$
 $olvi4^* = 1.0 \ 1.0 \ 1.0 \ 1.0$
 $cmyn4^* = 0.0 \ 0.0 \ 0.0 \ 0.0$

standard and adapted CIELAB
 $LAB^*LAB = 95.41 \ -0.97 \ 4.75$
 $LAB^*LABa = 95.41 \ 0.0 \ 0.0$
 $LAB^*TCHa = 99.99 \ 0.01 \ -$

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)
 $olvi3^* = 0.5 \ 0.5 \ 0.5 \ (1.0)$
 $cmyn3^* = 0.5 \ 0.5 \ 0.5 \ (0.0)$
 $olvi4^* = 1.0 \ 1.0 \ 1.0 \ 0.5$
 $cmyn4^* = 0.0 \ 0.0 \ 0.0 \ 0.5$

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)
 $lab^*lrj = 0.5 \ 0.0 \ 0.0$
 $lab^*tce = 0.5 \ 0.0 \ -$
 $lab^*nce = 0.5 \ 0.0 \ -$

relative Inform. Technology (IT)
 $olvi3^* = 0.0 \ 0.0 \ 0.0 \ (1.0)$
 $cmyn3^* = 1.0 \ 1.0 \ 1.0 \ (0.0)$
 $olvi4^* = 1.0 \ 1.0 \ 1.0 \ 0.0$
 $cmyn4^* = 0.0 \ 0.0 \ 0.0 \ 1.0$

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)
 $lab^*lrj = 0.0 \ 0.0 \ 0.0$
 $lab^*tce = 0.0 \ 0.0 \ -$
 $lab^*nce = 1.0 \ 0.0 \ -$

relative Inform. Technology (IT)
 $olvi3^* = 1.0 \ 0.5 \ 1.0 \ (1.0)$
 $cmyn3^* = 0.0 \ 0.5 \ 0.0 \ (0.0)$
 $olvi4^* = 1.0 \ 0.5 \ 1.0 \ 1.0$
 $cmyn4^* = 0.0 \ 0.5 \ 0.0 \ 0.0$

standard and adapted CIELAB
 $LAB^*LAB = 65.17 \ 28.18 \ -19.4$
 $LAB^*LABa = 65.17 \ 28.58 \ -22.12$
 $LAB^*TCHa = 75.0 \ 36.15 \ 322.25$

relative CIELAB lab*
 $lab^*lab = 0.609 \ 0.395 \ -0.305$
 $lab^*tch = 0.75 \ 0.5 \ 0.895$
 $lab^*nch = 0.0 \ 0.5 \ 0.895$

relative Natural Colour (NC)
 $lab^*lrj = 0.609 \ 0.324 \ -0.38$
 $lab^*tce = 0.75 \ 0.5 \ 0.862$
 $lab^*nce = 0.0 \ 0.5 \ b44r$

relative Inform. Technology (IT)
 $olvi3^* = 0.5 \ 0.0 \ 0.5 \ (1.0)$
 $cmyn3^* = 0.5 \ 1.0 \ 0.5 \ (0.0)$
 $olvi4^* = 1.0 \ 0.5 \ 1.0 \ 0.5$
 $cmyn4^* = 0.0 \ 0.5 \ 0.0 \ 0.5$

standard and adapted CIELAB
 $LAB^*LAB = 26.48 \ 28.92 \ -22.01$
 $LAB^*LABa = 26.48 \ 28.58 \ -22.12$
 $LAB^*TCHa = 25.01 \ 36.15 \ 322.25$

relative CIELAB lab*
 $lab^*lab = 0.109 \ 0.395 \ -0.305$
 $lab^*tch = 0.25 \ 0.5 \ 0.895$
 $lab^*nch = 0.5 \ 0.5 \ 0.895$

relative Natural Colour (NC)
 $lab^*lrj = 0.109 \ 0.324 \ -0.38$
 $lab^*tce = 0.25 \ 0.5 \ 0.862$
 $lab^*nce = 0.5 \ 0.5 \ b44r$

relative Inform. Technology (IT)
 $olvi3^* = 1.0 \ 0.0 \ 1.0 \ (1.0)$
 $cmyn3^* = 0.0 \ 1.0 \ 0.0 \ (0.0)$
 $olvi4^* = 1.0 \ 0.0 \ 1.0 \ 1.0$
 $cmyn4^* = 0.0 \ 1.0 \ 0.0 \ 0.0$

standard and adapted CIELAB
 $LAB^*LAB = 34.95 \ 57.34 \ -43.57$
 $LAB^*LABa = 34.95 \ 57.16 \ -44.25$
 $LAB^*TCHa = 50.0 \ 72.29 \ 322.25$

relative CIELAB lab*
 $lab^*lab = 0.219 \ 0.791 \ -0.611$
 $lab^*tch = 0.5 \ 1.0 \ 0.895$
 $lab^*nch = 0.0 \ 1.0 \ 0.895$

relative Natural Colour (NC)
 $lab^*lrj = 0.219 \ 0.648 \ -0.76$
 $lab^*tce = 0.5 \ 1.0 \ 0.862$
 $lab^*nce = 0.0 \ 1.0 \ b44r$

BAM-test chart UE08; Colorimetric systems NCS11a & MRS18 input: $cmv0^* setcmykcolor$

D65: 3 step colour scales and coordinate data for 10 hues

output: no change compared to input

Input: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 25/360 = 0.071$

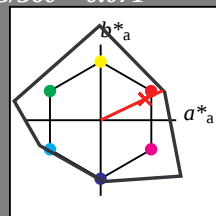
lab^*tch and lab^*nch

D65: hue R

LCH*Ma: 48 91 25

olv*Ma: 1.0 0.02 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 149$

%Regularity

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

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

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

Output: Colorimetric Reflective System MRS18

for hue $h^* = lab^*h = 25/360 = 0.069$

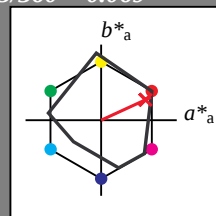
lab^*tch and lab^*nch

D65: hue R

LCH*Ma: 48 73 25

olv*Ma: 1.0 0.0 0.1

triangle lightness t^*



%Gamut

$u^*_{rel} = 91$

%Regularity

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

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

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

relative Inform. Technology (IT)	$olvi3^*$	$cmyn3^*$	$olvi4^*$	$cmyn4^*$
	1.0	0.0	1.0	0.0
	1.0	0.0	0.0	0.0
	0.0	1.0	1.0	0.0
	0.0	0.0	0.0	1.0
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)	$olvi3^*$	$cmyn3^*$	$olvi4^*$	$cmyn4^*$
	1.0	0.5	0.548	0.0
	0.0	0.5	0.452	0.0
	1.0	0.5	0.549	1.0
	0.0	0.5	0.451	0.0
standard and adapted CIELAB	LAB^*LAB	71.8	32.47	18.34
	LAB^*LABa	71.8	33.0	15.17
	LAB^*TCHa	75.0	36.32	24.7
relative CIELAB lab*	lab^*lab	0.695	0.454	0.209
	lab^*tch	0.75	0.5	0.069
	lab^*nch	0.0	0.5	0.069
relative Natural Colour (NC)	lab^*lrj	0.695	0.5	0.0
	lab^*tce	0.75	0.5	1.0
	lab^*nce	0.0	0.5	0.999

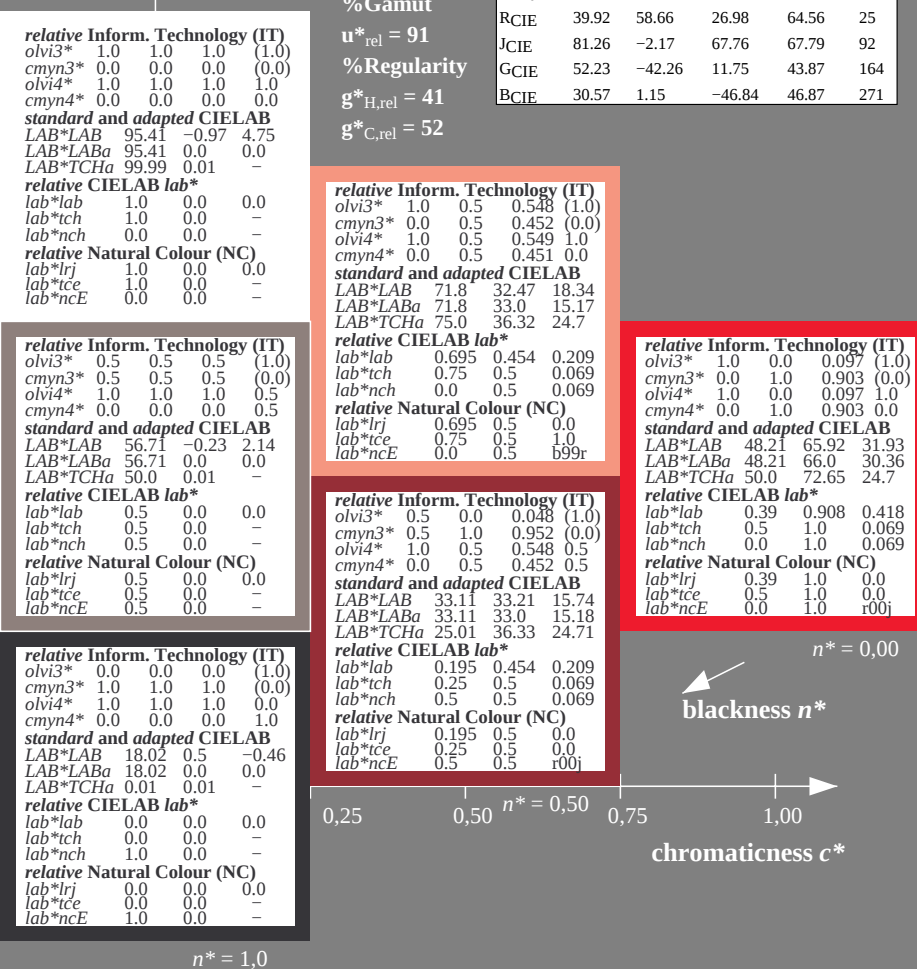
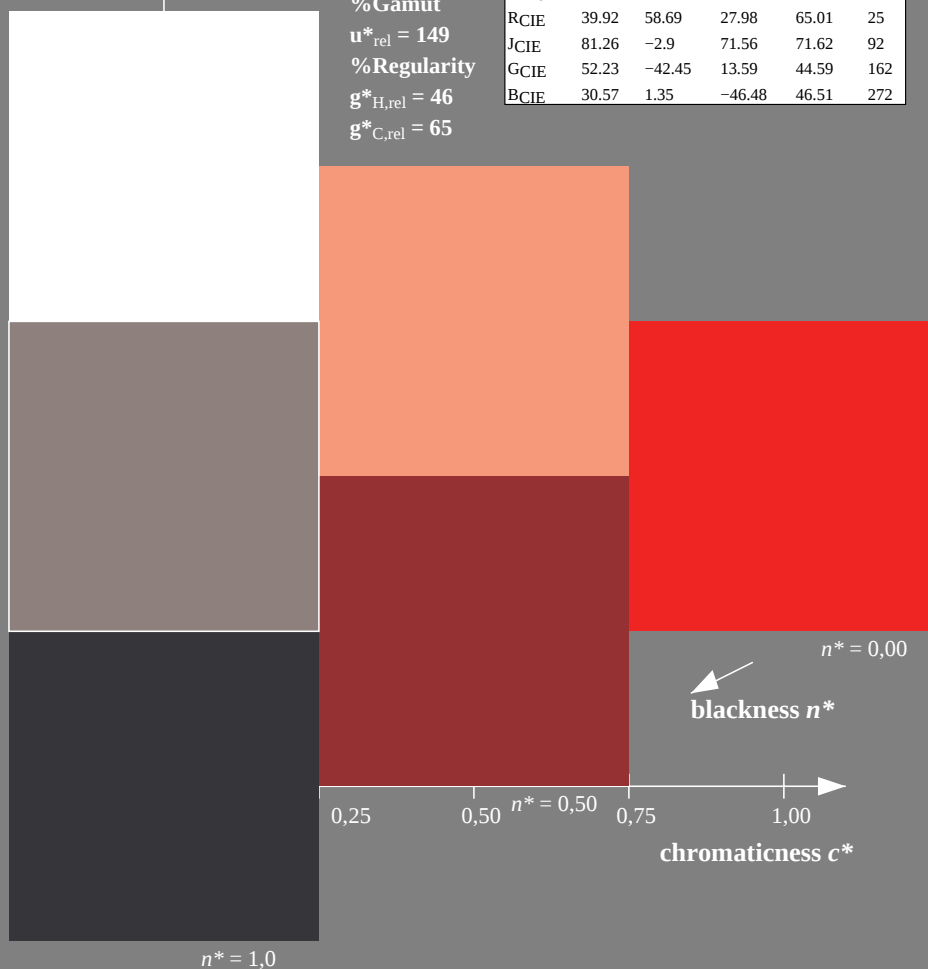
relative Inform. Technology (IT)	$olvi3^*$	$cmyn3^*$	$olvi4^*$	$cmyn4^*$
	1.0	0.0	0.097	0.0
	0.0	1.0	0.903	0.0
	1.0	0.0	0.097	1.0
	0.0	1.0	0.903	0.0
standard and adapted CIELAB	LAB^*LAB	48.21	65.92	31.93
	LAB^*LABa	48.21	66.0	30.36
	LAB^*TCHa	50.0	72.65	24.7
relative CIELAB lab*	lab^*lab	0.39	0.908	0.418
	lab^*tch	0.5	1.0	0.069
	lab^*nch	0.0	1.0	0.069
relative Natural Colour (NC)	lab^*lrj	0.39	1.0	0.0
	lab^*tce	0.5	1.0	0.0
	lab^*nce	0.0	1.0	0.903

relative Inform. Technology (IT)	$olvi3^*$	$cmyn3^*$	$olvi4^*$	$cmyn4^*$
	0.5	0.5	0.5	0.0
	0.5	0.5	0.5	0.0
	1.0	1.0	1.0	0.5
	0.0	0.0	0.0	0.5
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	-

relative Inform. Technology (IT)	$olvi3^*$	$cmyn3^*$	$olvi4^*$	$cmyn4^*$
	0.5	0.0	0.048	0.0
	0.5	1.0	0.952	0.0
	1.0	0.5	0.548	0.5
	0.0	0.5	0.452	0.5
standard and adapted CIELAB	LAB^*LAB	33.11	33.21	15.74
	LAB^*LABa	33.11	33.0	15.18
	LAB^*TCHa	25.01	36.33	24.71
relative CIELAB lab*	lab^*lab	0.195	0.454	0.209
	lab^*tch	0.25	0.5	0.069
	lab^*nch	0.5	0.5	0.069
relative Natural Colour (NC)	lab^*lrj	0.195	0.5	0.0
	lab^*tce	0.25	0.5	0.0
	lab^*nce	0.5	0.5	0.903

relative Inform. Technology (IT)	$olvi3^*$	$cmyn3^*$	$olvi4^*$	$cmyn4^*$
	0.0	0.0	0.0	0.0
	1.0	1.0	1.0	0.0
	1.0	1.0	1.0	0.0
	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	-

relative Inform. Technology (IT)	$olvi3^*$	$cmyn3^*$	$olvi4^*$	$cmyn4^*$
	0.39	0.908	0.418	0.0
	0.5	1.0	0.069	0.0
	0.0	1.0	0.069	0.0
relative Natural Colour (NC)	lab^*lrj	0.39	1.0	0.0
	lab^*tce	0.5	1.0	0.0
	lab^*nce	0.0	1.0	0.903



UE080-7, 3 step scales for constant CIELAB hue 25/360 = 0.071 (left)

3 step scales for constant CIELAB hue 25/360 = 0.069 (right)

BAM-test chart UE08; Colorimetric systems NCS11a & MRS18 input: $cmv0^* setcmvcolor$

D65: 3 step colour scales and coordinate data for 10 hues

output: no change compared to input

Input: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 92/360 = 0.256$

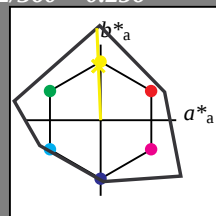
lab^*tch and lab^*nch

D65: hue J

LCH*Ma: 90 122 92

olv*Ma: 0.97 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 149$

%Regularity

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

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

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

Output: Colorimetric Reflective System MRS18

for hue $h^* = lab^*h = 92/360 = 0.255$

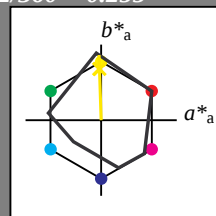
lab^*tch and lab^*nch

D65: hue J

LCH*Ma: 89 86 92

olv*Ma: 1.0 0.95 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 91$

%Regularity

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

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

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

relative Inform. Technology (IT)
olvi3* 1.0 1.0 1.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 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 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)
olvi3* 0.5 0.5 0.5 (1.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 1.0 1.0 1.0 0.5
cmyn4* 0.0 0.0 0.0 0.5

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 -

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 0.0
cmyn4* 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 -

relative Inform. Technology (IT)
olvi3* 1.0 0.976 0.5 (1.0)
cmyn3* 0.0 0.024 0.5 (0.0)
olvi4* 1.0 0.976 0.5 1.0
cmyn4* 0.0 0.024 0.5 0.0

standard and adapted CIELAB
LAB*LAB 92.04 -2.3 47.67
LAB*LABa 92.04 -1.39 43.14
LAB*TCHa 75.0 43.16 91.85

relative CIELAB lab*
lab*lab 0.957 -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 0.957 0.0 0.5
lab*tce 0.75 0.5 0.25
lab*nce 0.0 0.5 0.25

relative Inform. Technology (IT)
olvi3* 0.5 0.476 0.0 (1.0)
cmyn3* 0.5 0.524 1.0 (0.0)
olvi4* 1.0 0.976 0.5 0.5
cmyn4* 0.0 0.024 0.5 0.5

standard and adapted CIELAB
LAB*LAB 53.35 -1.55 45.05
LAB*LABa 53.35 -1.38 43.13
LAB*TCHa 25.01 43.16 91.84

relative CIELAB lab*
lab*lab 0.457 -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 0.457 0.0 0.5
lab*tce 0.25 0.5 0.25
lab*nce 0.5 0.5 0.25

relative Inform. Technology (IT)
olvi3* 1.0 0.951 0.0 (1.0)
cmyn3* 0.0 0.049 1.0 (0.0)
olvi4* 1.0 0.951 0.0 1.0
cmyn4* 0.0 0.049 1.0 0.0

standard and adapted CIELAB
LAB*LAB 88.68 -3.62 90.58
LAB*LABa 88.68 -2.77 86.27
LAB*TCHa 50.0 86.32 91.85

relative CIELAB lab*
lab*lab 0.913 -0.031 0.999
lab*tch 0.5 1.0 0.255
lab*nch 0.0 1.0 0.255

relative Natural Colour (NC)
lab*lrj 0.913 0.0 1.0
lab*tce 0.5 1.0 0.25
lab*nce 0.0 1.0 0.25

Input: Colorimetric Reflective System NCS11

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

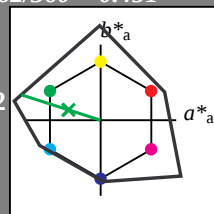
lab^*tch and lab^*nch

D65: hue G

LCH*Ma: 65 110 162

olv*Ma: 0.08 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 149$

%Regularity

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

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

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	

Output: Colorimetric Reflective System MRS18

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

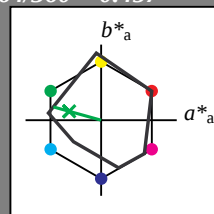
lab^*tch and lab^*nch

D65: hue G

LCH*Ma: 56 66 164

olv*Ma: 0.1 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 91$

%Regularity

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

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

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	

relative Inform. Technology (IT)
 $olvi3^* = 1.0$ 1.0 1.0 (1.0)
 $cmyn3^* = 0.0$ 0.0 0.0 (0.0)
 $olvi4^* = 1.0$ 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 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)
 $olvi3^* = 0.5$ 0.5 0.5 (1.0)
 $cmyn3^* = 0.5$ 0.5 0.5 (0.0)
 $olvi4^* = 1.0$ 1.0 1.0 0.5
 $cmyn4^* = 0.0$ 0.0 0.0 0.5

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 -

relative Inform. Technology (IT)
 $olvi3^* = 0.0$ 0.0 0.0 (1.0)
 $cmyn3^* = 1.0$ 1.0 1.0 (0.0)
 $olvi4^* = 1.0$ 1.0 1.0 0.0
 $cmyn4^* = 0.0$ 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 -

relative Inform. Technology (IT)
 $olvi3^* = 0.551$ 1.0 0.5 (1.0)
 $cmyn3^* = 0.449$ 0.0 0.5 (0.0)
 $olvi4^* = 0.551$ 1.0 0.5 1.0
 $cmyn4^* = 0.449$ 0.0 0.5 0.0

standard and adapted CIELAB
 $LAB^*LAB = 75.74$ -32.2 12.22
 $LAB^*LABa = 75.74$ -31.6 8.79
 $LAB^*TCHa = 75.0$ 32.81 164.46

relative CIELAB lab^*
 $lab^*lab = 0.746$ -0.481 0.134
 $lab^*tch = 0.75$ 0.5 0.457
 $lab^*nch = 0.0$ 0.5 0.457

relative Natural Colour (NC)
 $lab^*lrj = 0.746$ -0.499 0.0
 $lab^*tce = 0.75$ 0.5 0.5
 $lab^*nce = 0.0$ 0.5 0.99g

relative Inform. Technology (IT)
 $olvi3^* = 0.051$ 0.5 0.0 (1.0)
 $cmyn3^* = 0.949$ 0.5 1.0 (0.0)
 $olvi4^* = 0.551$ 1.0 0.5 0.5
 $cmyn4^* = 0.449$ 0.0 0.5 0.5

standard and adapted CIELAB
 $LAB^*LAB = 37.04$ -31.47 9.6
 $LAB^*LABa = 37.04$ -31.6 8.78
 $LAB^*TCHa = 25.01$ 32.81 164.47

relative CIELAB lab^*
 $lab^*lab = 0.246$ -0.481 0.134
 $lab^*tch = 0.25$ 0.5 0.457
 $lab^*nch = 0.5$ 0.5 0.457

relative Natural Colour (NC)
 $lab^*lrj = 0.246$ -0.499 0.0
 $lab^*tce = 0.25$ 0.5 0.5
 $lab^*nce = 0.5$ 0.5 g00b

relative Inform. Technology (IT)
 $olvi3^* = 0.103$ 1.0 0.0 (1.0)
 $cmyn3^* = 0.897$ 0.0 1.0 (0.0)
 $olvi4^* = 0.103$ 1.0 0.0 1.0
 $cmyn4^* = 0.897$ 0.0 1.0 0.0

standard and adapted CIELAB
 $LAB^*LAB = 56.07$ -63.44 19.68
 $LAB^*LABa = 56.07$ -63.21 17.58
 $LAB^*TCHa = 50.0$ 65.62 164.46

relative CIELAB lab^*
 $lab^*lab = 0.492$ -0.962 0.268
 $lab^*tch = 0.5$ 1.0 0.457
 $lab^*nch = 0.0$ 1.0 0.457

relative Natural Colour (NC)
 $lab^*lrj = 0.492$ -0.999 0.0
 $lab^*tce = 0.5$ 1.0 0.5
 $lab^*nce = 0.0$ 1.0 g00b

See for similar files: <http://www.ps.bam.de/UE08/>
 Technical information: <http://www.ps.bam.de> Version 2.1, io=0,0

BAM registration: 20060101-UE08/10/L08E09NP.PS.PDF BAM material: code=rha4ta
application for evaluation and measurement of printer or monitor systems

/UE08/ Form: 10/10/05; Serie: 1/1, Page: 10 Page: count: 10

Input: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 272/360 = 0.755$

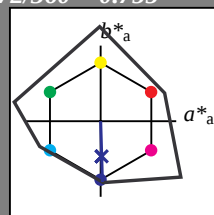
lab*tch and lab*nch

D65: hue B

LCH*Ma: 49 80 272

olv*Ma: 0.0 0.02 1.0

triangle lightness t^*



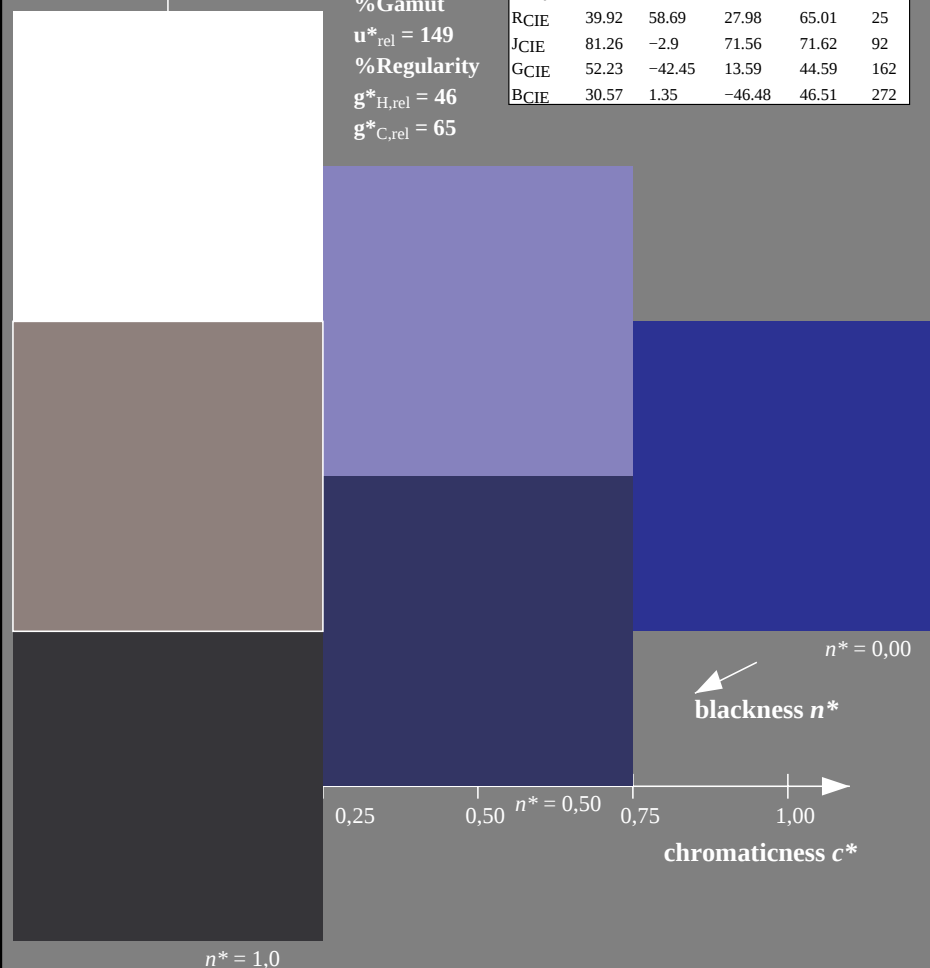
%Gamut

$$\mathbf{u}_{\text{rel}}^* = 149$$

%Regularity

$$g^*_{H\text{ rel}} = 46$$
$$g^*_{C_{rel}} = 65$$

	$L^* = L^*_a$	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
GCIE	52.23	-42.45	13.59	44.59	162
BCIE	30.57	1.35	-46.48	46.51	273



Output: Colorimetric Reflective System MRS18

for hue $h^* = lab^*h = 271/360 = 0.754$

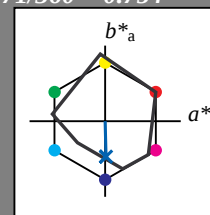
lab*tch and lab*nch

D65: hue B

LCH*Ma: 40 50 271

olv*Ma: 0.0 0.37 1.0

triangle lightness t^*



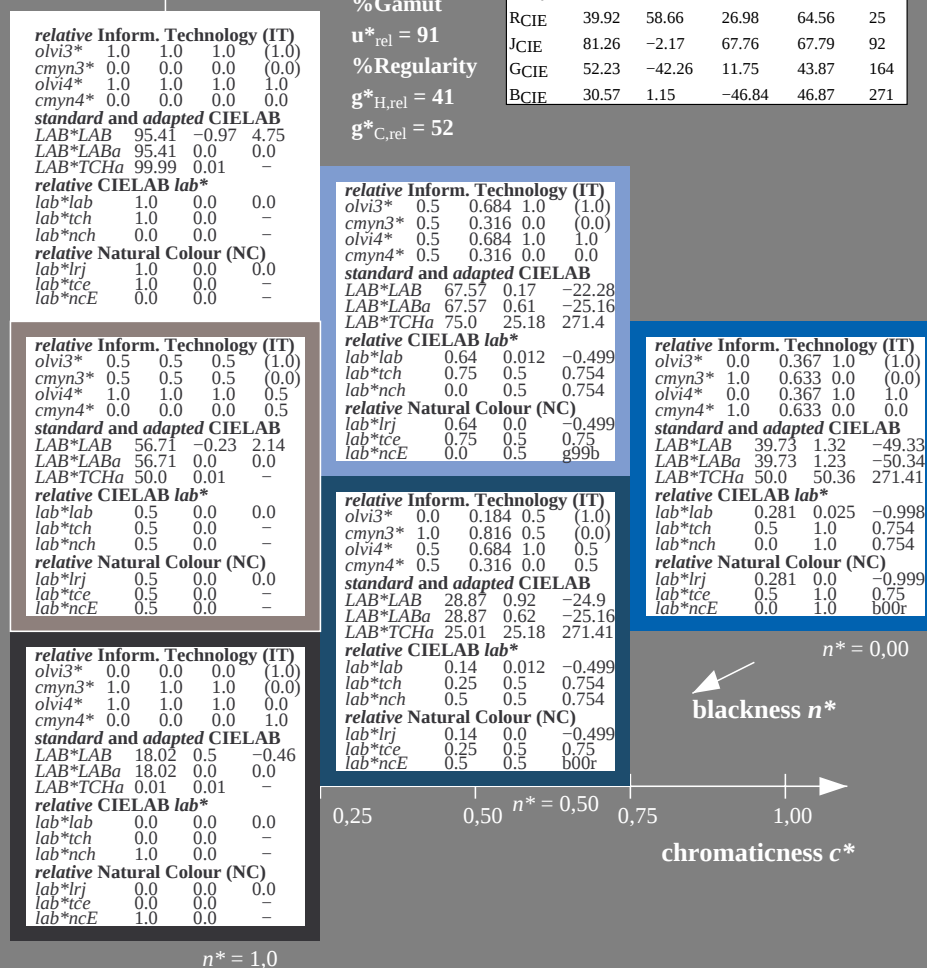
%Gamut

$$\mathbf{u}_{\text{rel}}^* = 91$$

%Regularity

$$g^*_{H\text{rel}} = 41$$
$$g^*_{C_{rel}} = 52$$

MRS18; adapted (a) CIELAB data						
	L^*_a	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$	
a	R _{Ma}	49.63	66.96	38.37	77.18	30
	J _{Ma}	90.7	-6.36	88.75	88.98	94
	G _{Ma}	52.11	-69.73	9.44	70.37	172
	G50B _{Ma}	45.03	-36.57	-28.47	46.36	218
	B _{Ma}	36.65	23.19	-63.05	67.18	290
	B50R _{Ma}	34.94	57.17	-44.26	72.31	322
	N _{Ma}	18.01	0.0	0.0	0.0	0
	W _{Ma}	95.41	0.0	0.0	0.0	0
	R _{CIE}	39.92	58.66	26.98	64.56	25
J _{CIE}	81.26	-2.17	67.76	67.79	92	
G _{CIE}	52.23	-42.26	11.75	43.87	164	
B _{CIE}	30.57	1.15	-46.84	46.87	277	



UE080-7, 3 step scales for constant CIELAB hue 272/360 = 0.755 (left)

3 step scales for constant CIELAB hue 271/360 = 0.754 (right)

BAM-test chart UE08; Colorimetric systems NCS11a & MRS18 input: *cmY0** *setcmykcolor*

D65: 3 step colour scales and coordinate data for 10 hues

output: no change compared to input