

Input: Colorimetric Reflective System MRS18

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

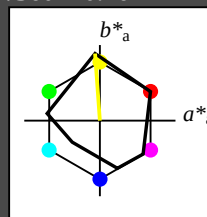
lab^*tch and lab^*nch

D65: hue J

LCH*Ma: 91 89 94

rgb*Ma: 1.0 1.0 0.0

triangle lightness 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
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

%Regularity

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

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

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

relative CIELAB lab*
 lab*lab 1.0 0.0 0.0
 lab*tch 1.0 0.0 0.0
 lab*nch 0.0 0.0 0.0
 relative Natural Colour (NC)
 lab*trj 1.0 0.0 0.0
 lab*tce 1.0 0.0 0.0
 lab*nce 0.0 0.0 0.0

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 0.5 (1.0)
 cmy4* 0.0 0.0 0.5 (0.0)
 standard and adapted CIELAB
 LAB*LAB 94.22 -2.54 26.86
 LAB*LABa 94.22 -1.58 22.18
 LAB*TCHa 97.5 22.24 94.1

relative CIELAB lab*
 lab*lab 0.985 -0.017 0.249
 lab*tch 0.875 0.25 0.261
 lab*nch 0.0 0.25 0.261
 relative Natural Colour (NC)
 lab*trj 0.985 -0.011 0.25
 lab*tce 0.875 0.25 0.261
 lab*nce 0.0 0.25 0.261

relative Inform. Technology (IT)
 olv3* 0.75 0.75 0.75 (1.0)
 cmy3* 0.25 0.25 0.25 (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 76.06 -0.6 3.44
 LAB*LABa 76.06 0.0 0.0
 LAB*TCHa 75.0 0.01 0.0

relative CIELAB lab*
 lab*lab 0.985 -0.017 0.249
 lab*tch 0.875 0.25 0.261
 lab*nch 0.0 0.25 0.261
 relative Natural Colour (NC)
 lab*trj 0.985 -0.011 0.25
 lab*tce 0.875 0.25 0.261
 lab*nce 0.0 0.25 0.261

relative Inform. Technology (IT)
 olv3* 0.75 0.75 0.5 (1.0)
 cmy3* 0.25 0.25 0.5 (0.0)
 olv4* 1.0 1.0 0.5 (1.0)
 cmy4* 0.0 0.0 0.5 (0.0)
 standard and adapted CIELAB
 LAB*LAB 74.88 -2.17 25.56
 LAB*LABa 74.88 -1.58 22.19
 LAB*TCHa 62.5 22.24 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*trj 0.969 -0.035 0.499
 lab*tce 0.75 0.5 0.261
 lab*nce 0.0 0.5 0.261

relative Inform. Technology (IT)
 olv3* 0.75 0.75 0.25 (1.0)
 cmy3* 0.25 0.25 0.25 (0.0)
 olv4* 1.0 1.0 0.25 (1.0)
 cmy4* 0.0 0.0 0.25 (0.0)
 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 0.0

relative CIELAB lab*
 lab*lab 0.954 -0.053 0.748
 lab*tch 0.625 0.25 0.261
 lab*nch 0.0 0.25 0.261
 relative Natural Colour (NC)
 lab*trj 0.954 -0.053 0.748
 lab*tce 0.625 0.25 0.261
 lab*nce 0.0 0.25 0.261

relative Inform. Technology (IT)
 olv3* 0.75 0.75 0.0 (1.0)
 cmy3* 0.25 0.25 0.0 (0.0)
 olv4* 1.0 1.0 0.0 (1.0)
 cmy4* 0.0 0.0 0.0 (0.0)
 standard and adapted CIELAB
 LAB*LAB 31.7 -3.17 44.38
 LAB*LABa 31.7 -3.17 44.38
 LAB*TCHa 50.0 44.49 94.1

relative CIELAB lab*
 lab*lab 0.939 -0.071 0.997
 lab*tch 0.5 0.0 0.261
 lab*nch 0.0 0.0 0.261
 relative Natural Colour (NC)
 lab*trj 0.939 -0.071 0.997
 lab*tce 0.5 0.0 0.261
 lab*nce 0.0 0.0 0.261

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 (1.0)
 cmy4* 0.0 0.0 0.0 (0.0)
 standard and adapted CIELAB
 LAB*LAB 36.16 -0.43 22.94
 LAB*LABa 36.16 -1.58 22.18
 LAB*TCHa 37.5 22.24 94.1

relative CIELAB lab*
 lab*lab 0.485 -0.053 0.748
 lab*tch 0.375 0.25 0.261
 lab*nch 0.0 0.25 0.261
 relative Natural Colour (NC)
 lab*trj 0.485 -0.053 0.748
 lab*tce 0.375 0.25 0.261
 lab*nce 0.0 0.25 0.261

relative Inform. Technology (IT)
 olv3* 0.5 0.5 0.0 (1.0)
 cmy3* 0.25 0.25 0.0 (0.0)
 olv4* 1.0 1.0 0.0 (1.0)
 cmy4* 0.0 0.0 0.0 (0.0)
 standard and adapted CIELAB
 LAB*LAB 23.7 -3.74 47.67
 LAB*LABa 23.7 -3.74 47.67
 LAB*TCHa 50.0 44.49 94.1

relative CIELAB lab*
 lab*lab 0.704 -0.053 0.748
 lab*tch 0.375 0.25 0.261
 lab*nch 0.0 0.25 0.261
 relative Natural Colour (NC)
 lab*trj 0.704 -0.053 0.748
 lab*tce 0.375 0.25 0.261
 lab*nce 0.0 0.25 0.261

relative Inform. Technology (IT)
 olv3* 0.25 0.25 0.25 (1.0)
 cmy3* 0.75 0.75 0.75 (0.0)
 olv4* 1.0 1.0 0.25 (1.0)
 cmy4* 0.0 0.0 0.25 (0.0)
 standard and adapted CIELAB
 LAB*LAB 18.02 18.02 0.46
 LAB*LABa 18.02 0.0 0.0
 LAB*TCHa 0.01 0.01 0.0

relative CIELAB lab*
 lab*lab 0.235 -0.017 0.249
 lab*tch 0.125 0.25 0.261
 lab*nch 0.0 0.25 0.261
 relative Natural Colour (NC)
 lab*trj 0.235 -0.017 0.249
 lab*tce 0.125 0.25 0.261
 lab*nce 0.0 0.25 0.261

relative Inform. Technology (IT)
 olv3* 0.25 0.25 0.0 (1.0)
 cmy3* 0.75 0.75 0.0 (0.0)
 olv4* 1.0 1.0 0.0 (1.0)
 cmy4* 0.0 0.0 0.0 (0.0)
 standard and adapted CIELAB
 LAB*LAB 11.1 0.0 0.0
 LAB*LABa 11.1 0.0 0.0
 LAB*TCHa 0.0 0.0 0.0

relative CIELAB lab*
 lab*lab 0.0 0.0 0.0
 lab*tch 0.0 0.0 0.0
 lab*nch 0.0 0.0 0.0
 relative Natural Colour (NC)
 lab*trj 0.0 0.0 0.0
 lab*tce 0.0 0.0 0.0
 lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
 olv3* 0.25 0.25 0.0 (1.0)
 cmy3* 0.75 0.75 0.0 (0.0)
 olv4* 1.0 1.0 0.0 (1.0)
 cmy4* 0.0 0.0 0.0 (0.0)
 standard and adapted CIELAB
 LAB*LAB 11.01 0.0 0.0
 LAB*LABa 11.01 0.0 0.0
 LAB*TCHa 0.0 0.0 0.0

relative CIELAB lab*
 lab*lab 0.0 0.0 0.0
 lab*tch 0.0 0.0 0.0
 lab*nch 0.0 0.0 0.0
 relative Natural Colour (NC)
 lab*trj 0.0 0.0 0.0
 lab*tce 0.0 0.0 0.0
 lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
 olv3* 0.25 0.25 0.5 (1.0)
 cmy3* 0.75 0.75 0.5 (0.0)
 olv4* 1.0 1.0 0.5 (1.0)
 cmy4* 0.0 0.0 0.5 (0.0)
 standard and adapted CIELAB
 LAB*LAB 11.01 0.0 0.0
 LAB*LABa 11.01 0.0 0.0
 LAB*TCHa 0.0 0.0 0.0

relative CIELAB lab*
 lab*lab 0.0 0.0 0.0
 lab*tch 0.0 0.0 0.0
 lab*nch 0.0 0.0 0.0
 relative Natural Colour (NC)
 lab*trj 0.0 0.0 0.0
 lab*tce 0.0 0.0 0.0
 lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
 olv3* 0.25 0.25 0.5 (1.0)
 cmy3* 0.75 0.75 0.5 (0.0)
 olv4* 1.0 1.0 0.5 (1.0)
 cmy4* 0.0 0.0 0.5 (0.0)
 standard and adapted CIELAB
 LAB*LAB 11.01 0.0 0.0
 LAB*LABa 11.01 0.0 0.0
 LAB*TCHa 0.0 0.0 0.0

relative CIELAB lab*
 lab*lab 0.0 0.0 0.0
 lab*tch 0.0 0.0 0.0
 lab*nch 0.0 0.0 0.0
 relative Natural Colour (NC)
 lab*trj 0.0 0.0 0.0
 lab*tce 0.0 0.0 0.0
 lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
 olv3* 0.25 0.25 0.0 (1.0)
 cmy3* 0.75 0.75 0.0 (0.0)
 olv4* 1.0 1.0 0.0 (1.0)
 cmy4* 0.0 0.0 0.0 (0.0)
 standard and adapted CIELAB
 LAB*LAB 11.01 0.0 0.0
 LAB*LABa 11.01 0.0 0.0
 LAB*TCHa 0.0 0.0 0.0

relative CIELAB lab*
 lab*lab 0.0 0.0 0.0
 lab*tch 0.0 0.0 0.0
 lab*nch 0.0 0.0 0.0
 relative Natural Colour (NC)
 lab*trj 0.0 0.0 0.0
 lab*tce 0.0 0.0 0.0
 lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
 olv3* 0.25 0.25 0.0 (1.0)
 cmy3* 0.75 0.75 0.0 (0.0)
 olv4* 1.0 1.0 0.0 (1.0)
 cmy4* 0.0 0.0 0.0 (0.0)
 standard and adapted CIELAB
 LAB*LAB 11.01 0.0 0.0
 LAB*LABa 11.01 0.0 0.0
 LAB*TCHa 0.0 0.0 0.0

relative CIELAB lab*
 lab*lab 0.0 0.0 0.0
 lab*tch 0.0 0.0 0.0
 lab*nch 0.0 0.0 0.0
 relative Natural Colour (NC)
 lab*trj 0.0 0.0 0.0
 lab*tce 0.0 0.0 0.0
 lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
 olv3* 0.25 0.25 0.5 (1.0)
 cmy3* 0.75 0.75 0.5 (0.0)
 olv4* 1.0 1.0 0.5 (1.0)
 cmy4* 0.0 0.0 0.5 (0.0)
 standard and adapted CIELAB
 LAB*LAB 11.01 0.0 0.0
 LAB*LABa 11.01 0.0 0.0
 LAB*TCHa 0.0 0.0 0.0

relative CIELAB lab*
 lab*lab 0.0 0.0 0.0
 lab*tch 0.0 0.0 0.0
 lab*nch 0.0 0.0 0.0
 relative Natural Colour (NC)
 lab*trj 0.0 0.0 0.0
 lab*tce 0.0 0.0 0.0
 lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
 olv3* 0.25 0.25 0.0 (1.0)
 cmy3* 0.75 0.75 0.0 (0.0)
 olv4* 1.0 1.0 0.0 (1.0)
 cmy4* 0.0 0.0 0.0 (0.0)
 standard and adapted CIELAB
 LAB*LAB 11.01 0.0 0.0
 LAB*LABa 11.01 0.0 0.0
 LAB*TCHa 0.0 0.0 0.0

relative CIELAB lab*
 lab*lab 0.0 0.0 0.0
 lab*tch 0.0 0.0 0.0
 lab*nch 0.0 0.0 0.0
 relative Natural Colour (NC)
 lab*trj 0.0 0.0 0.0
 lab*tce 0.0 0.0 0.0
 lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
 olv3* 0.25 0.25 0.5 (1.0)
 cmy3* 0.75 0.75 0.5 (0.0)
 olv4* 1.0 1.0 0.5 (1.0)
 cmy4* 0.0 0.0 0.5 (0.0)
 standard and adapted CIELAB
 LAB*LAB 11.01 0.0 0.0
 LAB*LABa 11.01 0.0 0.0
 LAB*TCHa 0.0 0.0 0.0

relative CIELAB lab*
 lab*lab 0.0 0.0 0.0
 lab*tch 0.0 0.0 0.0
 lab*nch 0.0 0.0 0.0
 relative Natural Colour (NC)
 lab*trj 0.0 0.0 0.0
 lab*tce 0.0 0.0 0.0
 lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
 olv3* 0.25 0.25 0.0 (1.0)
 cmy3* 0.75 0.75 0.0 (0.0)
 olv4* 1.0 1.0 0.0 (1.0)
 cmy4* 0.0 0.0 0.0 (0.0)
 standard and adapted CIELAB
 LAB*LAB 11.01 0.0 0.0
 LAB*LABa 11.01 0.0 0.0
 LAB*TCHa 0.0 0.0 0.0

relative CIELAB lab*
 lab*lab 0.0 0.0 0.0
 lab*tch 0.0 0.0 0.0
 lab*nch 0.0 0.0 0.0
 relative Natural Colour (NC)
 lab*trj 0.0 0.0 0.0
 lab*tce 0.0 0.0 0.0
 lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
 olv3* 0.25 0.25 0.5 (1.0)
 cmy3* 0.75 0.75 0.5 (0.0)
 olv4* 1.0 1.0 0.5 (1.0)
 cmy4* 0.0 0.0 0.5 (0.0)
 standard and adapted CIELAB
 LAB*LAB 11.01 0.0 0.0
 LAB*LABa 11.01 0.0 0.0
 LAB*TCHa 0.0 0.0 0.0

relative CIELAB lab*
 lab*lab 0.0 0.0 0.0
 lab*tch 0.0 0.0 0.0
 lab*nch 0.0 0.0 0.0
 relative Natural Colour (NC)
 lab*trj 0.0 0.0 0.0
 lab*tce 0.0 0.0 0.0
 lab*nce 0.0 0.0 0.0

Output: Colorimetric Reflective System NCS11

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

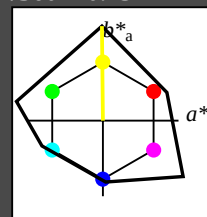
lab^*tch and lab^*nch

D65: hue J

LCH*Ma: 91 125 91

rgb*Ma: 1.0 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
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

%Regularity

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

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

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 0.0

relative CIELAB lab*
 lab*lab 1.0 0.0 0.0
 lab*tch 1.0 0.0 0.0
 lab*nch 0.0 0.0 0.0
 relative Natural Colour (NC)
 lab*trj 1.0 0.0 0.0
 lab*tce 1.0 0.0 0.0
 lab*nce 0.0 0.0 0.0

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 0.5 (1.0)
 cmy4* 0.0 0.0 0.5 (0.0)
 standard and adapted CIELAB
 LAB*LAB 94.39 -0.3 31.24
 LAB*LABa 94.39 -0.31 31.24
 LAB*TCHa 87.5 31.25 90.59

relative CIELAB lab*
 lab*lab 0.988 -0.002 0.25
 lab*tch 0.875 0.25 0.252
 lab*nch 0.0 0.25 0.252
 relative Natural Colour (NC)
 lab*trj 0.988 0.01 0.25
 lab*tce 0.875 0.25 0.252
 lab*nce 0.0 0.25 0.252

Input: Colorimetric Reflective System MRS18

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

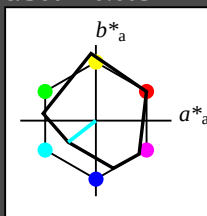
lab^*tch and lab^*nch

D65: hue G50B

LCH*Ma: 45 46 218

rgb*Ma: 0.0 1.0 1.0

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

%Regularity

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

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

$n^* = 0.00$

$n^* = 0.25$

$n^* = 0.50$

$n^* = 0.75$

$n^* = 1.00$

chromaticness c^*

Output: Colorimetric Reflective System NCS11

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

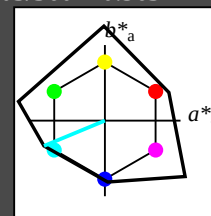
lab^*tch and lab^*nch

D65: hue G50B

LCH*Ma: 59 87 203

rgb*Ma: 0.0 1.0 1.0

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

%Regularity

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

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

$n^* = 0.00$

$n^* = 0.25$

$n^* = 0.50$

$n^* = 0.75$

$n^* = 1.00$

chromaticness c^*

UE530-7, 5 step scales for constant CIELAB hue 218/360 = 0.605 (left)

5 step scales for constant CIELAB hue 203/360 = 0.563 (right)

BAM-test chart UE53; Colorimetric systems MRS18 & NCS11a input: $cmY0^* \text{ setcmYcolor}$

D65: 2 coordinate data of 5 step colour scales for 10 hues

output: $olV^* \text{ setrgbcolor} / w^* \text{ setgray}$

Input: Colorimetric Reflective System MRS18

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

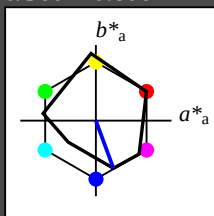
lab^*tch and lab^*nch

D65: hue B

LCH*Ma: 37 67 290

rgb*Ma: 0.0 0.0 1.0

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
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

%Regularity

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

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

1,00

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

blackness n^*

chromaticness c^*

$n^* = 1,0$

Output: Colorimetric Reflective System NCS11

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

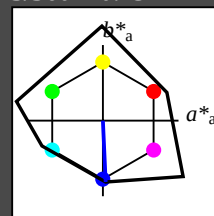
lab^*tch and lab^*nch

D65: hue B

LCH*Ma: 49 81 273

rgb*Ma: 0.0 0.0 1.0

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
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

%Regularity

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

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

1,00

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

blackness n^*

chromaticness c^*

$n^* = 1,0$

UE530-7, 5 step scales for constant CIELAB hue 290/360 = 0.806 (left)

5 step scales for constant CIELAB hue 273/360 = 0.757 (right)

BAM-test chart UE53; Colorimetric systems MRS18 & NCS11a input: $cmv0^* setcmykcolor$

D65: 2 coordinate data of 5 step colour scales for 10 hues

output: $olv^* setrgbcolor / w^* setgray$

www.ps.bam.de/UE53/10S/S53E07FP.PS/.PDF; linearized output
 F: Output Linearization (OL) data UE53/10S/S53E07FP.DAT in File (F)

Input: Colorimetric Reflective System MRS18

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

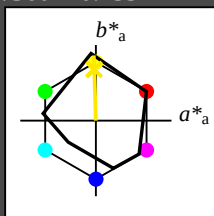
lab^*tch and lab^*nch

D65: hue J

LCH*Ma: 89 86 92

rgb*Ma: 1.0 0.95 0.0

triangle lightness t^*



% Gamut

$u^*_{rel} = 91$

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

relative CIELAB lab*
 lab*lab 1.0 0.0 0.0
 lab*tch 1.0 0.0 0.0
 lab*nch 0.0 0.0 0.0
 relative Natural Colour (NC)
 lab*trj 1.0 0.0 0.0
 lab*tce 1.0 0.0 0.0
 lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
 olv3* 0.75 0.75 0.75 (1.0)
 cmy3* 0.25 0.25 0.25 (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 76.06 -0.6 3.44
 LAB*LABa 76.06 0.0 0.0
 LAB*LABb 75.00 0.01 0.0

relative CIELAB lab*
 lab*lab 0.75 0.0 0.0
 lab*tch 0.75 0.0 0.0
 lab*nch 0.0 0.0 0.0
 relative Natural Colour (NC)
 lab*trj 0.75 0.0 0.0
 lab*tce 0.75 0.0 0.0
 lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
 olv3* 0.5 0.5 0.5 (0.0)
 cmy3* 0.5 0.5 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 56.71 -0.23 2.14
 LAB*LABa 56.71 0.0 0.0
 LAB*LABb 50.00 0.01 0.0

relative CIELAB lab*
 lab*lab 0.5 0.0 0.0
 lab*tch 0.5 0.0 0.0
 lab*nch 0.0 0.0 0.0
 relative Natural Colour (NC)
 lab*trj 0.5 0.0 0.0
 lab*tce 0.5 0.0 0.0
 lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
 olv3* 0.25 0.25 0.25 (1.0)
 cmy3* 0.75 0.75 0.75 (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 37.36 -0.63 0.83
 LAB*LABa 37.36 0.0 0.0
 LAB*LABb 25.00 0.01 0.0

relative CIELAB lab*
 lab*lab 0.25 0.0 0.0
 lab*tch 0.25 0.0 0.0
 lab*nch 0.0 0.0 0.0
 relative Natural Colour (NC)
 lab*trj 0.25 0.0 0.0
 lab*tce 0.25 0.0 0.0
 lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
 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 (1.0)
 cmy4* 0.0 0.0 0.0 (0.0)
 standard and adapted CIELAB
 LAB*LAB 18.02 0.0 0.46
 LAB*LABa 18.02 0.0 0.0
 LAB*LABb 0.01 0.01 0.0

relative CIELAB lab*
 lab*lab 0.0 0.0 0.0
 lab*tch 0.0 0.0 0.0
 lab*nch 1.0 0.0 0.0
 relative Natural Colour (NC)
 lab*trj 0.0 0.0 0.0
 lab*tce 0.0 0.0 0.0
 lab*nce 1.0 0.0 0.0

relative Inform. Technology (IT)
 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 (1.0)
 cmy4* 0.0 0.0 0.0 (0.0)
 standard and adapted CIELAB
 LAB*LAB 18.02 0.0 0.46
 LAB*LABa 18.02 0.0 0.0
 LAB*LABb 0.01 0.01 0.0

relative CIELAB lab*
 lab*lab 0.0 0.0 0.0
 lab*tch 0.0 0.0 0.0
 lab*nch 1.0 0.0 0.0
 relative Natural Colour (NC)
 lab*trj 0.0 0.0 0.0
 lab*tce 0.0 0.0 0.0
 lab*nce 1.0 0.0 0.0

relative Inform. Technology (IT)
 olv3* 1.0 0.988 0.75 (1.0)
 cmy3* 0.0 0.012 0.25 (0.0)
 olv4* 1.0 0.988 0.75 (1.0)
 cmy4* 0.0 0.012 0.25 (0.0)
 standard and adapted CIELAB
 LAB*LAB 93.72 -1.64 26.21
 LAB*LABa 93.72 -0.69 21.57
 LAB*LABb 87.5 21.58 91.86

relative CIELAB lab*
 lab*lab 0.978 -0.007 0.25
 lab*tch 0.875 0.25 0.255
 lab*nch 0.0 0.25 0.255
 relative Natural Colour (NC)
 lab*trj 0.978 0.0 0.25
 lab*tce 0.875 0.25 0.25
 lab*nce 0.0 0.25 0.25

relative Inform. Technology (IT)
 olv3* 0.75 0.738 0.5 (1.0)
 cmy3* 0.25 0.262 0.5 (0.0)
 olv4* 1.0 0.988 0.75 (1.0)
 cmy4* 0.0 0.012 0.25 (0.0)
 standard and adapted CIELAB
 LAB*LAB 74.38 -1.26 24.91
 LAB*LABa 74.38 -0.68 21.57
 LAB*LABb 62.5 21.58 91.84

relative CIELAB lab*
 lab*lab 0.726 0.25 0.255
 lab*tch 0.625 0.25 0.255
 lab*nch 0.0 0.25 0.255
 relative Natural Colour (NC)
 lab*trj 0.726 0.0 0.25
 lab*tce 0.625 0.25 0.25
 lab*nce 0.0 0.25 0.25

relative Inform. Technology (IT)
 olv3* 0.5 0.512 0.75 (0.0)
 cmy3* 0.5 0.988 0.75 (0.0)
 olv4* 1.0 0.988 0.75 (1.0)
 cmy4* 0.0 0.012 0.25 (0.0)
 standard and adapted CIELAB
 LAB*LAB 55.03 -0.89 23.16
 LAB*LABa 55.03 -0.68 21.57
 LAB*LABb 37.5 21.58 91.84

relative CIELAB lab*
 lab*lab 0.478 -0.007 0.25
 lab*tch 0.375 0.25 0.255
 lab*nch 0.0 0.25 0.255
 relative Natural Colour (NC)
 lab*trj 0.478 0.0 0.25
 lab*tce 0.375 0.25 0.25
 lab*nce 0.0 0.25 0.25

relative Inform. Technology (IT)
 olv3* 0.25 0.478 0.5 (1.0)
 cmy3* 0.75 0.762 0.5 (0.0)
 olv4* 1.0 0.988 0.75 (1.0)
 cmy4* 0.0 0.012 0.25 (0.0)
 standard and adapted CIELAB
 LAB*LAB 35.68 -0.52 22.29
 LAB*LABa 35.68 -0.68 21.56
 LAB*LABb 12.5 21.57 91.84

relative CIELAB lab*
 lab*lab 0.228 -0.007 0.25
 lab*tch 0.125 0.25 0.255
 lab*nch 0.0 0.25 0.255
 relative Natural Colour (NC)
 lab*trj 0.228 0.0 0.25
 lab*tce 0.125 0.25 0.25
 lab*nce 0.0 0.25 0.25

relative Inform. Technology (IT)
 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 (1.0)
 cmy4* 0.0 0.0 0.0 (0.0)
 standard and adapted CIELAB
 LAB*LAB 18.02 0.0 0.46
 LAB*LABa 18.02 0.0 0.0
 LAB*LABb 0.01 0.01 0.0

relative CIELAB lab*
 lab*lab 0.0 0.0 0.0
 lab*tch 0.0 0.0 0.0
 lab*nch 1.0 0.0 0.0
 relative Natural Colour (NC)
 lab*trj 0.0 0.0 0.0
 lab*tce 0.0 0.0 0.0
 lab*nce 1.0 0.0 0.0

relative Inform. Technology (IT)
 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 (1.0)
 cmy4* 0.0 0.0 0.0 (0.0)
 standard and adapted CIELAB
 LAB*LAB 18.02 0.0 0.46
 LAB*LABa 18.02 0.0 0.0
 LAB*LABb 0.01 0.01 0.0

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

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

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

relative Inform. Technology (IT)
 olv3* 1.0 0.976 0.5 (1.0)
 cmy3* 0.0 0.024 0.5 (0.0)
 olv4* 1.0 0.976 0.5 (1.0)
 cmy4* 0.0 0.024 0.5 (0.0)
 standard and adapted CIELAB
 LAB*LAB 92.04 -1.39 43.14
 LAB*LABa 92.04 -0.43 31.85
 LAB*LABb 75.0 43.16 91.85

relative CIELAB lab*
 lab*lab 0.957 -0.015 0.5
 lab*tch 0.75 0.5 0.5
 lab*nch 0.0 0.5 0.255
 relative Natural Colour (NC)
 lab*trj 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)
 olv3* 0.75 0.713 0.0 (1.0)
 cmy3* 0.25 0.274 0.75 (0.0)
 olv4* 1.0 0.976 0.5 (1.0)
 cmy4* 0.0 0.024 0.5 (0.0)
 standard and adapted CIELAB
 LAB*LAB 72.7 -1.92 46.37
 LAB*LABa 72.7 -1.38 43.14
 LAB*LABb 50.0 43.16 91.84

relative CIELAB lab*
 lab*lab 0.707 -0.015 0.5
 lab*tch 0.5 0.5 0.255
 lab*nch 0.0 0.5 0.255
 relative Natural Colour (NC)
 lab*trj 0.707 0.0 0.5
 lab*tce 0.5 0.5 0.25
 lab*nce 0.0 0.5 0.25

relative Inform. Technology (IT)
 olv3* 0.5 0.476 0.0 (1.0)
 cmy3* 0.5 0.512 0.75 (0.0)
 olv4* 1.0 0.988 0.75 (1.0)
 cmy4* 0.0 0.012 0.25 (0.0)
 standard and adapted CIELAB
 LAB*LAB 55.03 -0.89 23.16
 LAB*LABa 55.03 -0.68 21.57
 LAB*LABb 37.5 21.58 91.84

relative CIELAB lab*
 lab*lab 0.478 -0.007 0.25
 lab*tch 0.375 0.25 0.255
 lab*nch 0.0 0.25 0.255
 relative Natural Colour (NC)
 lab*trj 0.478 0.0 0.25
 lab*tce 0.375 0.25 0.25
 lab*nce 0.0 0.25 0.25

relative Inform. Technology (IT)
 olv3* 0.25 0.476 0.0 (1.0)
 cmy3* 0.75 0.762 0.5 (0.0)
 olv4* 1.0 0.988 0.75 (1.0)
 cmy4* 0.0 0.012 0.25 (0.0)
 standard and adapted CIELAB
 LAB*LAB 35.68 -0.52 22.29
 LAB*LABa 35.68 -0.68 21.56
 LAB*LABb 12.5 21.57 91.84

relative CIELAB lab*
 lab*lab 0.228 -0.007 0.25
 lab*tch 0.125 0.25 0.255
 lab*nch 0.0 0.25 0.255
 relative Natural Colour (NC)
 lab*trj 0.228 0.0 0.25
 lab*tce 0.125 0.25 0.25
 lab*nce 0.0 0.25 0.25

relative Inform. Technology (IT)
 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 (1.0)
 cmy4* 0.0 0.0 0.0 (0.0)
 standard and adapted CIELAB
 LAB*LAB 18.02 0.0 0.46
 LAB*LABa 18.02 0.0 0.0
 LAB*LABb 0.01 0.01 0.0

relative CIELAB lab*
 lab*lab 0.0 0.0 0.0
 lab*tch 0.0 0.0 0.0
 lab*nch 1.0 0.0 0.0
 relative Natural Colour (NC)
 lab*trj 0.0 0.0 0.0
 lab*tce 0.0 0.0 0.0
 lab*nce 1.0 0.0 0.0

$n^* = 0.00$

$n^* = 0.25$

$n^* = 0.50$

$n^* = 0.75$

$n^* = 1.00$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

Output: Colorimetric Reflective System NCS11

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

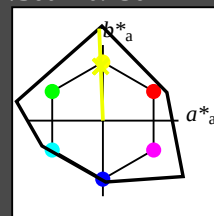
lab^*tch and lab^*nch

D65: hue J

LCH*Ma: 90 122 92

rgb*Ma: 0.97 1.0 0.0

triangle lightness t^*



% Gamut

$u^*_{rel} = 149$

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*LABb 99.99 0.01 0.0

relative CIELAB lab*
 lab*lab 1.0 0.0 0.0
 lab*tch 1.0 0.0 0.0
 lab*nch 0.0 0.0 0.0
 relative Natural Colour (NC)
 lab*trj 1.0 0.0 0.0
 lab*tce 1.0 0.0 0.0
 lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
 olv3* 0.75 0.75 0.75 (1.0)
 cmy3* 0.25 0.25 0.25 (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 74.31 0.02 0.0
 LAB*LABa 74.31 0.0 0.0
 LAB*LABb 75.00 0.01 0.0

relative CIELAB lab*
 lab*lab 0.75 0.0 0.0
 lab*tch 0.75 0.0 0.0
 lab*nch 0.0 0.0 0.0
 relative Natural Colour (NC)
 lab*trj 0.75 0.0 0.0
 lab*tce 0.75 0.0 0.0
 lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
 olv3* 0.5 0.5 0.5 (0.0)
 cmy3* 0.5 0.5 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 53.21 0.04 0.0
 LAB*LABa 53.21 0.0 0.0
 LAB*LABb 50.00 0.01 0.0

relative CIELAB lab*
 lab*lab 0.5 0.0 0.0
 lab*tch 0.5 0.0 0.0
 lab*nch 0.0 0.0 0.0
 relative Natural Colour (NC)
 lab*trj 0.5 0.0 0.0
 lab*tce 0.5 0.0 0.0
 lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
 olv3* 0.25 0.25 0.25 (1.0)
 cmy3* 0.75 0.75 0.75 (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 37.36 -0.63 0.83
 LAB*LABa 37.36 0.0 0.0
 LAB*LABb 25.00 0.01 0.0

relative CIELAB lab*
 lab*lab 0.25 0.0 0.0
 lab*tch 0.25 0.0 0.0
 lab*nch 0.0 0.0 0.0
 relative Natural Colour (NC)
 lab*trj 0.25 0.0 0.0
 lab*tce 0.25 0.0 0.0
 lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
 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 (1.0)
 cmy4* 0.0 0.0 0.0 (0.0)
 standard and adapted CIELAB
 LAB*LAB 18.02 0.0 0.46
 LAB*LABa 18.02 0.0 0.0
 LAB*LABb 0.01 0.01 0.0

relative CIELAB lab*
 lab*lab 0.0 0.0 0.0
 lab*tch 0.0 0.0 0.0
 lab*nch 1.0 0.0 0.0
 relative Natural Colour (NC)
 lab*trj 0.0 0.0 0.0
 lab*tce 0.0 0.0 0.0
 lab*nce 1.0 0.0 0.0

relative Inform. Technology (IT)
 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 (1.0)
 cmy4* 0.0 0.0 0.0 (0.0)
 standard and adapted CIELAB
 LAB*LAB 18.02 0.0 0.46
 LAB*LABa 18.02 0.0 0.0
 LAB*LABb 0.01 0.01 0.0

relative CIELAB lab*<

