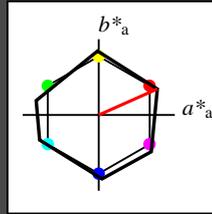


**Input: Colorimetric Reflective System NRS11**

for hue  $h^* = lab^*h = 24/360 = 0.067$   
 $lab^*tch$  and  $lab^*nch$

D65: hue R  
 LCH\*Ma: 53 84 24  
 olv\*Ma: 1.0 0.0 0.0

triangle lightness  $t^*$



**NRS11; adapted (a) CIELAB data**

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

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

**relative Inform. Technology (IT)**  
 $olv3^* 1.0 1.0 1.0 (1.0)$   
 $cmyn3^* 0.0 0.0 0.0 (0.0)$   
 $olv4^* 1.0 1.0 1.0 1.0$   
 $cmyn4^* 0.0 0.0 0.0 0.0$

**standard and adapted CIELAB**  
 $LAB^*LAB 95.41 0.0 -0.01$   
 $LAB^*LABa 95.41 0.0 0.0$   
 $LAB^*TCHa 99.99 0.01 -$

**relative CIELAB lab\***  
 $lab^*lab 1.0 0.0 0.0$   
 $lab^*tch 1.0 0.0 -$   
 $lab^*nch 0.0 0.0 -$

**relative Natural Colour (NC)**  
 $lab^*lrj 1.0 0.0 0.0$   
 $lab^*tce 1.0 0.0 -$   
 $lab^*nce 0.0 0.0 -$

**relative Inform. Technology (IT)**  
 $olv3^* 0.5 0.5 0.5 (1.0)$   
 $cmyn3^* 0.5 0.5 0.5 (0.0)$   
 $olv4^* 1.0 1.0 1.0 0.5$   
 $cmyn4^* 0.0 0.0 0.0 0.5$

**standard and adapted CIELAB**  
 $LAB^*LAB 53.21 0.04 0.0$   
 $LAB^*LABa 53.21 0.0 0.0$   
 $LAB^*TCHa 50.0 0.01 -$

**relative CIELAB lab\***  
 $lab^*lab 0.5 0.0 0.0$   
 $lab^*tch 0.5 0.0 -$   
 $lab^*nch 0.5 0.0 -$

**relative Natural Colour (NC)**  
 $lab^*lrj 0.5 0.0 0.0$   
 $lab^*tce 0.5 0.0 -$   
 $lab^*nce 0.5 0.0 -$

**relative Inform. Technology (IT)**  
 $olv3^* 0.0 0.0 0.0 (1.0)$   
 $cmyn3^* 1.0 1.0 1.0 (0.0)$   
 $olv4^* 1.0 1.0 1.0 0.0$   
 $cmyn4^* 0.0 0.0 0.0 1.0$

**standard and adapted CIELAB**  
 $LAB^*LAB 11.01 0.07 0.01$   
 $LAB^*LABa 11.01 0.0 0.0$   
 $LAB^*TCHa 0.01 0.01 -$

**relative CIELAB lab\***  
 $lab^*lab 0.0 0.0 0.0$   
 $lab^*tch 0.0 0.0 -$   
 $lab^*nch 1.0 0.0 -$

**relative Natural Colour (NC)**  
 $lab^*lrj 0.0 0.0 0.0$   
 $lab^*tce 0.0 0.0 -$   
 $lab^*nce 1.0 0.0 -$

$n^* = 1.0$

**relative Inform. Technology (IT)**  
 $olv3^* 1.0 0.5 0.5 (1.0)$   
 $cmyn3^* 0.0 0.5 0.5 (0.0)$   
 $olv4^* 1.0 0.5 0.5 1.0$   
 $cmyn4^* 0.0 0.5 0.5 0.0$

**standard and adapted CIELAB**  
 $LAB^*LAB 74.3 38.55 17.16$   
 $LAB^*LABa 74.3 38.52 17.16$   
 $LAB^*TCHa 75.0 42.17 24.01$

**relative CIELAB lab\***  
 $lab^*lab 0.75 0.457 0.203$   
 $lab^*tch 0.75 0.5 0.067$   
 $lab^*nch 0.0 0.5 0.067$

**relative Natural Colour (NC)**  
 $lab^*lrj 0.75 0.5 -0.009$   
 $lab^*tce 0.75 0.5 0.997$   
 $lab^*nce 0.0 0.5 b98r$

**relative Inform. Technology (IT)**  
 $olv3^* 0.5 0.0 0.0 (1.0)$   
 $cmyn3^* 0.5 1.0 1.0 (0.0)$   
 $olv4^* 1.0 0.5 0.5 0.5$   
 $cmyn4^* 0.0 0.5 0.5 0.5$

**standard and adapted CIELAB**  
 $LAB^*LAB 32.1 38.58 17.17$   
 $LAB^*LABa 32.1 38.52 17.16$   
 $LAB^*TCHa 25.01 42.17 24.01$

**relative CIELAB lab\***  
 $lab^*lab 0.25 0.457 0.203$   
 $lab^*tch 0.25 0.5 0.067$   
 $lab^*nch 0.5 0.5 0.067$

**relative Natural Colour (NC)**  
 $lab^*lrj 0.25 0.5 -0.009$   
 $lab^*tce 0.25 0.5 0.997$   
 $lab^*nce 0.5 0.5 b98r$

$n^* = 0.50$

**relative Inform. Technology (IT)**  
 $olv3^* 1.0 0.0 0.0 (1.0)$   
 $cmyn3^* 0.0 1.0 1.0 (0.0)$   
 $olv4^* 1.0 0.0 0.0 1.0$   
 $cmyn4^* 0.0 1.0 1.0 0.0$

**standard and adapted CIELAB**  
 $LAB^*LAB 53.2 77.09 34.32$   
 $LAB^*LABa 53.2 77.04 34.31$   
 $LAB^*TCHa 50.0 84.34 24.01$

**relative CIELAB lab\***  
 $lab^*lab 0.5 0.913 0.407$   
 $lab^*tch 0.5 1.0 0.067$   
 $lab^*nch 0.0 1.0 0.067$

**relative Natural Colour (NC)**  
 $lab^*lrj 0.5 1.0 -0.019$   
 $lab^*tce 0.5 1.0 0.997$   
 $lab^*nce 0.0 1.0 b98r$

$n^* = 0.00$

blackness  $n^*$

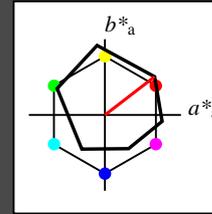
chromaticness  $c^*$

**Output: Colorimetric Reflective System ORS18**

for hue  $h^* = lab^*h = 38/360 = 0.105$   
 $lab^*tch$  and  $lab^*nch$

D65: hue O  
 LCH\*Ma: 48 83 38  
 olv\*Ma: 1.0 0.0 0.0

triangle lightness  $t^*$



**ORS18; adapted (a) CIELAB data**

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

%Gamut  
 $u^*_{rel} = 93$   
 %Regularity  
 $g^*_{H,rel} = 57$   
 $g^*_{C,rel} = 59$

**relative Inform. Technology (IT)**  
 $olv3^* 1.0 1.0 1.0 (1.0)$   
 $cmyn3^* 0.0 0.0 0.0 (0.0)$   
 $olv4^* 1.0 1.0 1.0 1.0$   
 $cmyn4^* 0.0 0.0 0.0 0.0$

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

**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)**  
 $olv3^* 0.5 0.5 0.5 (1.0)$   
 $cmyn3^* 0.5 0.5 0.5 (0.0)$   
 $olv4^* 1.0 1.0 1.0 0.5$   
 $cmyn4^* 0.0 0.0 0.0 0.5$

**standard and adapted CIELAB**  
 $LAB^*LAB 56.71 -0.23 2.14$   
 $LAB^*LABa 56.71 0.0 0.0$   
 $LAB^*TCHa 50.0 0.01 -$

**relative CIELAB lab\***  
 $lab^*lab 0.5 0.0 0.0$   
 $lab^*tch 0.5 0.0 -$   
 $lab^*nch 0.5 0.0 -$

**relative Natural Colour (NC)**  
 $lab^*lrj 0.5 0.0 0.0$   
 $lab^*tce 0.5 0.0 -$   
 $lab^*nce 0.5 0.0 -$

$n^* = 0.00$

blackness  $n^*$

chromaticness  $c^*$

**relative Inform. Technology (IT)**  
 $olv3^* 1.0 0.5 0.5 (1.0)$   
 $cmyn3^* 0.0 0.5 0.5 (0.0)$   
 $olv4^* 1.0 0.5 0.5 1.0$   
 $cmyn4^* 0.0 0.5 0.5 0.0$

**standard and adapted CIELAB**  
 $LAB^*LAB 71.67 32.15 28.41$   
 $LAB^*LABa 71.67 32.68 25.25$   
 $LAB^*TCHa 75.0 41.3 37.7$

**relative CIELAB lab\***  
 $lab^*lab 0.693 0.396 0.306$   
 $lab^*tch 0.75 0.5 0.105$   
 $lab^*nch 0.0 0.5 0.105$

**relative Natural Colour (NC)**  
 $lab^*lrj 0.693 0.477 0.15$   
 $lab^*tce 0.75 0.5 0.048$   
 $lab^*nce 0.0 0.5 r19j$

**relative Inform. Technology (IT)**  
 $olv3^* 0.5 0.0 0.0 (1.0)$   
 $cmyn3^* 0.5 1.0 1.0 (0.0)$   
 $olv4^* 1.0 0.5 0.5 0.5$   
 $cmyn4^* 0.0 0.5 0.5 0.5$

**standard and adapted CIELAB**  
 $LAB^*LAB 32.98 32.9 25.8$   
 $LAB^*LABa 32.98 32.68 25.25$   
 $LAB^*TCHa 25.01 41.3 37.7$

**relative CIELAB lab\***  
 $lab^*lab 0.193 0.396 0.306$   
 $lab^*tch 0.25 0.5 0.105$   
 $lab^*nch 0.5 0.5 0.105$

**relative Natural Colour (NC)**  
 $lab^*lrj 0.193 0.477 0.15$   
 $lab^*tce 0.25 0.5 0.048$   
 $lab^*nce 0.5 0.5 r19j$

$n^* = 0.50$

blackness  $n^*$

chromaticness  $c^*$

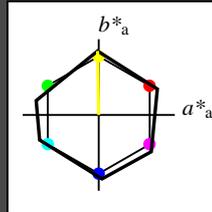
$n^* = 1.0$

Input: Colorimetric Reflective System NRS11

for hue  $h^* = lab^*h = 91/360 = 0.253$   
 $lab^*tch$  and  $lab^*nch$

D65: hue J  
 LCH\*Ma: 53 84 91  
 olv\*Ma: 1.0 1.0 0.0

triangle lightness  $t^*$



**NRS11; adapted (a) CIELAB data**

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

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

**relative Inform. Technology (IT)**  
 $olv^*3^* = 1.0 \ 1.0 \ 1.0 \ (1.0)$   
 $cmyn^*3^* = 0.0 \ 0.0 \ 0.0 \ (0.0)$   
 $olv^*4^* = 1.0 \ 1.0 \ 1.0 \ 1.0$   
 $cmyn^*4^* = 0.0 \ 0.0 \ 0.0 \ 0.0$

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

**relative CIELAB lab\***  
 $lab^*lab = 1.0 \ 0.0 \ 0.0$   
 $lab^*tch = 1.0 \ 0.0 \ -$   
 $lab^*nch = 0.0 \ 0.0 \ -$

**relative Natural Colour (NC)**  
 $lab^*lrj = 1.0 \ 0.0 \ 0.0$   
 $lab^*tce = 1.0 \ 0.0 \ -$   
 $lab^*nce = 0.0 \ 0.0 \ -$

**relative Inform. Technology (IT)**  
 $olv^*3^* = 1.0 \ 1.0 \ 0.5 \ (1.0)$   
 $cmyn^*3^* = 0.0 \ 0.0 \ 0.5 \ (0.0)$   
 $olv^*4^* = 1.0 \ 1.0 \ 0.5 \ 1.0$   
 $cmyn^*4^* = 0.0 \ 0.0 \ 0.5 \ 0.0$

**standard and adapted CIELAB**  
 $LAB^*LAB = 74.3 \ -0.72 \ 42.18$   
 $LAB^*LABa = 74.3 \ -0.75 \ 42.18$   
 $LAB^*TCHa = 75.0 \ 42.19 \ 91.03$

**relative CIELAB lab\***  
 $lab^*lab = 0.75 \ -0.008 \ 0.5$   
 $lab^*tch = 0.75 \ 0.5 \ 0.253$   
 $lab^*nch = 0.0 \ 0.5 \ 0.253$

**relative Natural Colour (NC)**  
 $lab^*lrj = 0.75 \ 0.015 \ 0.5$   
 $lab^*tce = 0.75 \ 0.5 \ 0.245$   
 $lab^*nce = 0.0 \ 0.5 \ r98j$

**relative Inform. Technology (IT)**  
 $olv^*3^* = 0.5 \ 0.5 \ 0.5 \ (1.0)$   
 $cmyn^*3^* = 0.5 \ 0.5 \ 0.5 \ (0.0)$   
 $olv^*4^* = 1.0 \ 1.0 \ 1.0 \ 0.5$   
 $cmyn^*4^* = 0.0 \ 0.0 \ 0.0 \ 0.5$

**standard and adapted CIELAB**  
 $LAB^*LAB = 53.21 \ 0.04 \ 0.0$   
 $LAB^*LABa = 53.21 \ 0.0 \ 0.0$   
 $LAB^*TCHa = 50.0 \ 0.01 \ -$

**relative CIELAB lab\***  
 $lab^*lab = 0.5 \ 0.0 \ 0.0$   
 $lab^*tch = 0.5 \ 0.0 \ -$   
 $lab^*nch = 0.5 \ 0.0 \ -$

**relative Natural Colour (NC)**  
 $lab^*lrj = 0.5 \ 0.0 \ 0.0$   
 $lab^*tce = 0.5 \ 0.0 \ -$   
 $lab^*nce = 0.5 \ 0.0 \ -$

**relative Inform. Technology (IT)**  
 $olv^*3^* = 0.5 \ 0.5 \ 0.0 \ (1.0)$   
 $cmyn^*3^* = 0.5 \ 0.5 \ 1.0 \ (0.0)$   
 $olv^*4^* = 1.0 \ 1.0 \ 0.5 \ 0.5$   
 $cmyn^*4^* = 0.0 \ 0.0 \ 0.5 \ 0.5$

**standard and adapted CIELAB**  
 $LAB^*LAB = 32.1 \ -0.69 \ 42.2$   
 $LAB^*LABa = 32.1 \ -0.75 \ 42.18$   
 $LAB^*TCHa = 25.01 \ 42.19 \ 91.03$

**relative CIELAB lab\***  
 $lab^*lab = 0.25 \ -0.008 \ 0.5$   
 $lab^*tch = 0.25 \ 0.5 \ 0.253$   
 $lab^*nch = 0.5 \ 0.5 \ 0.253$

**relative Natural Colour (NC)**  
 $lab^*lrj = 0.25 \ 0.015 \ 0.5$   
 $lab^*tce = 0.25 \ 0.5 \ 0.245$   
 $lab^*nce = 0.5 \ 0.5 \ r98j$

**relative Inform. Technology (IT)**  
 $olv^*3^* = 0.0 \ 0.0 \ 0.0 \ (1.0)$   
 $cmyn^*3^* = 1.0 \ 1.0 \ 1.0 \ (0.0)$   
 $olv^*4^* = 1.0 \ 1.0 \ 1.0 \ 0.0$   
 $cmyn^*4^* = 0.0 \ 0.0 \ 0.0 \ 1.0$

**standard and adapted CIELAB**  
 $LAB^*LAB = 11.01 \ 0.07 \ 0.01$   
 $LAB^*LABa = 11.01 \ 0.0 \ 0.0$   
 $LAB^*TCHa = 0.01 \ 0.01 \ -$

**relative CIELAB lab\***  
 $lab^*lab = 0.0 \ 0.0 \ 0.0$   
 $lab^*tch = 0.0 \ 0.0 \ -$   
 $lab^*nch = 1.0 \ 0.0 \ -$

**relative Natural Colour (NC)**  
 $lab^*lrj = 0.0 \ 0.0 \ 0.0$   
 $lab^*tce = 0.0 \ 0.0 \ -$   
 $lab^*nce = 1.0 \ 0.0 \ -$

$n^* = 1.0$

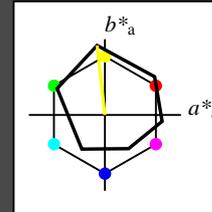


Output: Colorimetric Reflective System ORS18

for hue  $h^* = lab^*h = 96/360 = 0.268$   
 $lab^*tch$  and  $lab^*nch$

D65: hue Y  
 LCH\*Ma: 90 92 96  
 olv\*Ma: 1.0 1.0 0.0

triangle lightness  $t^*$



**ORS18; adapted (a) CIELAB data**

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

%Gamut  
 $u^*_{rel} = 93$   
 %Regularity  
 $g^*_{H,rel} = 57$   
 $g^*_{C,rel} = 59$

**relative Inform. Technology (IT)**  
 $olv^*3^* = 1.0 \ 1.0 \ 1.0 \ (1.0)$   
 $cmyn^*3^* = 0.0 \ 0.0 \ 0.0 \ (0.0)$   
 $olv^*4^* = 1.0 \ 1.0 \ 1.0 \ 1.0$   
 $cmyn^*4^* = 0.0 \ 0.0 \ 0.0 \ 0.0$

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

**relative CIELAB lab\***  
 $lab^*lab = 1.0 \ 0.0 \ 0.0$   
 $lab^*tch = 1.0 \ 0.0 \ -$   
 $lab^*nch = 0.0 \ 0.0 \ -$

**relative Natural Colour (NC)**  
 $lab^*lrj = 1.0 \ 0.0 \ 0.0$   
 $lab^*tce = 1.0 \ 0.0 \ -$   
 $lab^*nce = 0.0 \ 0.0 \ -$

**relative Inform. Technology (IT)**  
 $olv^*3^* = 1.0 \ 1.0 \ 0.5 \ (1.0)$   
 $cmyn^*3^* = 0.0 \ 0.0 \ 0.5 \ (0.0)$   
 $olv^*4^* = 1.0 \ 1.0 \ 0.5 \ 1.0$   
 $cmyn^*4^* = 0.0 \ 0.0 \ 0.5 \ 0.0$

**standard and adapted CIELAB**  
 $LAB^*LAB = 92.88 \ -6.06 \ 50.46$   
 $LAB^*LABa = 92.88 \ -5.13 \ 45.87$   
 $LAB^*TCHa = 75.0 \ 46.16 \ 96.39$

**relative CIELAB lab\***  
 $lab^*lab = 0.967 \ -0.055 \ 0.497$   
 $lab^*tch = 0.75 \ 0.5 \ 0.268$   
 $lab^*nch = 0.0 \ 0.5 \ 0.268$

**relative Natural Colour (NC)**  
 $lab^*lrj = 0.967 \ -0.048 \ 0.497$   
 $lab^*tce = 0.75 \ 0.5 \ 0.266$   
 $lab^*nce = 0.0 \ 0.5 \ j06g$

**relative Inform. Technology (IT)**  
 $olv^*3^* = 0.5 \ 0.5 \ 0.5 \ (1.0)$   
 $cmyn^*3^* = 0.5 \ 0.5 \ 0.5 \ (0.0)$   
 $olv^*4^* = 1.0 \ 1.0 \ 1.0 \ 0.5$   
 $cmyn^*4^* = 0.0 \ 0.0 \ 0.0 \ 0.5$

**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)**  
 $olv^*3^* = 0.5 \ 0.5 \ 0.0 \ (1.0)$   
 $cmyn^*3^* = 0.5 \ 0.5 \ 1.0 \ (0.0)$   
 $olv^*4^* = 1.0 \ 1.0 \ 0.5 \ 0.5$   
 $cmyn^*4^* = 0.0 \ 0.0 \ 0.5 \ 0.5$

**standard and adapted CIELAB**  
 $LAB^*LAB = 54.19 \ -5.32 \ 47.85$   
 $LAB^*LABa = 54.19 \ -5.13 \ 45.87$   
 $LAB^*TCHa = 25.01 \ 46.16 \ 96.39$

**relative CIELAB lab\***  
 $lab^*lab = 0.467 \ -0.055 \ 0.497$   
 $lab^*tch = 0.25 \ 0.5 \ 0.268$   
 $lab^*nch = 0.5 \ 0.5 \ 0.268$

**relative Natural Colour (NC)**  
 $lab^*lrj = 0.467 \ -0.048 \ 0.497$   
 $lab^*tce = 0.25 \ 0.5 \ 0.266$   
 $lab^*nce = 0.5 \ 0.5 \ j06g$

**relative Inform. Technology (IT)**  
 $olv^*3^* = 0.0 \ 0.0 \ 0.0 \ (1.0)$   
 $cmyn^*3^* = 1.0 \ 1.0 \ 1.0 \ (0.0)$   
 $olv^*4^* = 1.0 \ 1.0 \ 1.0 \ 0.0$   
 $cmyn^*4^* = 0.0 \ 0.0 \ 0.0 \ 1.0$

**standard and adapted CIELAB**  
 $LAB^*LAB = 18.02 \ 0.5 \ -0.46$   
 $LAB^*LABa = 18.02 \ 0.0 \ 0.0$   
 $LAB^*TCHa = 0.01 \ 0.01 \ -$

**relative CIELAB lab\***  
 $lab^*lab = 0.0 \ 0.0 \ 0.0$   
 $lab^*tch = 0.0 \ 0.0 \ -$   
 $lab^*nch = 1.0 \ 0.0 \ -$

**relative Natural Colour (NC)**  
 $lab^*lrj = 0.0 \ 0.0 \ 0.0$   
 $lab^*tce = 0.0 \ 0.0 \ -$   
 $lab^*nce = 1.0 \ 0.0 \ -$

$n^* = 1.0$

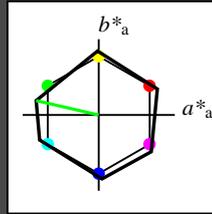


**Input: Colorimetric Reflective System NRS11**

for hue  $h^* = lab^*h = 167/360 = 0.464$   
 $lab^*tch$  and  $lab^*nch$

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

triangle lightness  $t^*$



**NRS11; adapted (a) CIELAB data**

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

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

**relative Inform. Technology (IT)**  
 $olv^*_3$  1.0 1.0 1.0 (1.0)  
 $cmyn^*_3$  0.0 0.0 0.0 (0.0)  
 $olv^*_4$  1.0 1.0 1.0 1.0  
 $cmyn^*_4$  0.0 0.0 0.0 0.0

**standard and adapted CIELAB**  
 $LAB^*LAB$  95.41 0.0 -0.01  
 $LAB^*LABa$  95.41 0.0 0.0  
 $LAB^*TCHa$  99.99 0.01 -

**relative CIELAB lab\***  
 $lab^*lab$  1.0 0.0 0.0  
 $lab^*tch$  1.0 0.0 -  
 $lab^*nch$  0.0 0.0 -

**relative Natural Colour (NC)**  
 $lab^*lrj$  1.0 0.0 0.0  
 $lab^*tce$  1.0 0.0 -  
 $lab^*nce$  0.0 0.0 -

**relative Inform. Technology (IT)**  
 $olv^*_3$  0.5 1.0 0.5 (1.0)  
 $cmyn^*_3$  0.5 0.0 0.5 (0.0)  
 $olv^*_4$  0.5 1.0 0.5 1.0  
 $cmyn^*_4$  0.5 0.0 0.5 0.0

**standard and adapted CIELAB**  
 $LAB^*LAB$  74.3 -41.1 9.49  
 $LAB^*LABa$  74.3 -41.12 9.49  
 $LAB^*TCHa$  75.0 42.21 167.01

**relative CIELAB lab\***  
 $lab^*lab$  0.75 -0.486 0.112  
 $lab^*tch$  0.75 0.5 0.464  
 $lab^*nch$  0.0 0.5 0.464

**relative Natural Colour (NC)**  
 $lab^*lrj$  0.75 -0.498 -0.033  
 $lab^*tce$  0.75 0.5 0.511  
 $lab^*nce$  0.0 0.5 g04b

**relative Inform. Technology (IT)**  
 $olv^*_3$  0.5 0.5 0.5 (1.0)  
 $cmyn^*_3$  0.5 0.5 0.5 (0.0)  
 $olv^*_4$  1.0 1.0 1.0 0.5  
 $cmyn^*_4$  0.0 0.0 0.0 0.5

**standard and adapted CIELAB**  
 $LAB^*LAB$  53.21 0.04 0.0  
 $LAB^*LABa$  53.21 0.0 0.0  
 $LAB^*TCHa$  50.0 0.01 -

**relative CIELAB lab\***  
 $lab^*lab$  0.5 0.0 0.0  
 $lab^*tch$  0.5 0.0 -  
 $lab^*nch$  0.5 0.0 -

**relative Natural Colour (NC)**  
 $lab^*lrj$  0.5 0.0 0.0  
 $lab^*tce$  0.5 0.0 -  
 $lab^*nce$  0.5 0.0 -

**relative Inform. Technology (IT)**  
 $olv^*_3$  0.0 0.5 0.0 (1.0)  
 $cmyn^*_3$  1.0 0.5 1.0 (0.0)  
 $olv^*_4$  0.5 1.0 0.5 0.5  
 $cmyn^*_4$  0.5 0.0 0.5 0.5

**standard and adapted CIELAB**  
 $LAB^*LAB$  32.1 -41.06 9.5  
 $LAB^*LABa$  32.1 -41.12 9.49  
 $LAB^*TCHa$  25.01 42.21 167.01

**relative CIELAB lab\***  
 $lab^*lab$  0.25 -0.486 0.112  
 $lab^*tch$  0.25 0.5 0.464  
 $lab^*nch$  0.5 0.5 0.464

**relative Natural Colour (NC)**  
 $lab^*lrj$  0.25 -0.498 -0.033  
 $lab^*tce$  0.25 0.5 0.511  
 $lab^*nce$  0.5 0.5 g04b

**relative Inform. Technology (IT)**  
 $olv^*_3$  0.0 0.0 0.0 (1.0)  
 $cmyn^*_3$  1.0 1.0 1.0 (0.0)  
 $olv^*_4$  1.0 1.0 1.0 0.0  
 $cmyn^*_4$  0.0 0.0 0.0 1.0

**standard and adapted CIELAB**  
 $LAB^*LAB$  11.01 0.07 0.01  
 $LAB^*LABa$  11.01 0.0 0.0  
 $LAB^*TCHa$  1.01 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)**  
 $olv^*_3$  0.0 0.0 0.0 (1.0)  
 $cmyn^*_3$  1.0 1.0 1.0 (0.0)  
 $olv^*_4$  1.0 1.0 1.0 0.0  
 $cmyn^*_4$  0.0 0.0 0.0 1.0

**standard and adapted CIELAB**  
 $LAB^*LAB$  18.02 0.5 -0.46  
 $LAB^*LABa$  18.02 0.0 0.0  
 $LAB^*TCHa$  0.01 0.01 -

**relative CIELAB lab\***  
 $lab^*lab$  0.0 0.0 0.0  
 $lab^*tch$  0.0 0.0 -  
 $lab^*nch$  1.0 0.0 -

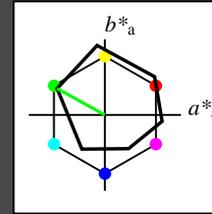
**relative Natural Colour (NC)**  
 $lab^*lrj$  0.0 0.0 0.0  
 $lab^*tce$  0.0 0.0 -  
 $lab^*nce$  1.0 0.0 -

**Output: Colorimetric Reflective System ORS18**

for hue  $h^* = lab^*h = 151/360 = 0.419$   
 $lab^*tch$  and  $lab^*nch$

D65: hue L  
 LCH\*Ma: 51 72 151  
 olv\*Ma: 0.0 1.0 0.0

triangle lightness  $t^*$



**ORS18; adapted (a) CIELAB data**

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

%Gamut  
 $u^*_{rel} = 93$   
 %Regularity  
 $g^*_{H,rel} = 57$   
 $g^*_{C,rel} = 59$

**relative Inform. Technology (IT)**  
 $olv^*_3$  1.0 1.0 1.0 (1.0)  
 $cmyn^*_3$  0.0 0.0 0.0 (0.0)  
 $olv^*_4$  1.0 1.0 1.0 1.0  
 $cmyn^*_4$  0.0 0.0 0.0 0.0

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

**relative CIELAB lab\***  
 $lab^*lab$  1.0 0.0 0.0  
 $lab^*tch$  1.0 0.0 -  
 $lab^*nch$  0.0 0.0 -

**relative Natural Colour (NC)**  
 $lab^*lrj$  1.0 0.0 0.0  
 $lab^*tce$  1.0 0.0 -  
 $lab^*nce$  0.0 0.0 -

**relative Inform. Technology (IT)**  
 $olv^*_3$  0.5 1.0 0.5 (1.0)  
 $cmyn^*_3$  0.5 0.0 0.5 (0.0)  
 $olv^*_4$  0.5 1.0 0.5 1.0  
 $cmyn^*_4$  0.5 0.0 0.5 0.0

**standard and adapted CIELAB**  
 $LAB^*LAB$  73.15 -31.94 20.73  
 $LAB^*LABa$  73.15 -31.38 17.47  
 $LAB^*TCHa$  75.0 35.93 150.91

**relative CIELAB lab\***  
 $lab^*lab$  0.712 -0.436 0.243  
 $lab^*tch$  0.75 0.5 0.419  
 $lab^*nch$  0.0 0.5 0.419

**relative Natural Colour (NC)**  
 $lab^*lrj$  0.712 -0.478 0.144  
 $lab^*tce$  0.75 0.5 0.453  
 $lab^*nce$  0.0 0.5 j81g

**relative Inform. Technology (IT)**  
 $olv^*_3$  0.5 0.5 0.5 (1.0)  
 $cmyn^*_3$  0.5 0.5 0.5 (0.0)  
 $olv^*_4$  1.0 1.0 1.0 0.5  
 $cmyn^*_4$  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)**  
 $olv^*_3$  0.0 0.5 0.0 (1.0)  
 $cmyn^*_3$  1.0 0.5 1.0 (0.0)  
 $olv^*_4$  0.5 1.0 0.5 0.5  
 $cmyn^*_4$  0.5 0.0 0.5 0.5

**standard and adapted CIELAB**  
 $LAB^*LAB$  34.46 -31.2 18.11  
 $LAB^*LABa$  34.46 -31.38 17.47  
 $LAB^*TCHa$  25.01 35.93 150.91

**relative CIELAB lab\***  
 $lab^*lab$  0.213 -0.436 0.243  
 $lab^*tch$  0.25 0.5 0.419  
 $lab^*nch$  0.5 0.5 0.419

**relative Natural Colour (NC)**  
 $lab^*lrj$  0.213 -0.478 0.144  
 $lab^*tce$  0.25 0.5 0.453  
 $lab^*nce$  0.5 0.5 j81g

**relative Inform. Technology (IT)**  
 $olv^*_3$  0.0 0.0 0.0 (1.0)  
 $cmyn^*_3$  1.0 1.0 1.0 (0.0)  
 $olv^*_4$  1.0 1.0 1.0 0.0  
 $cmyn^*_4$  0.0 0.0 0.0 1.0

**standard and adapted CIELAB**  
 $LAB^*LAB$  18.02 0.5 -0.46  
 $LAB^*LABa$  18.02 0.0 0.0  
 $LAB^*TCHa$  0.01 0.01 -

**relative CIELAB lab\***  
 $lab^*lab$  0.0 0.0 0.0  
 $lab^*tch$  0.0 0.0 -  
 $lab^*nch$  1.0 0.0 -

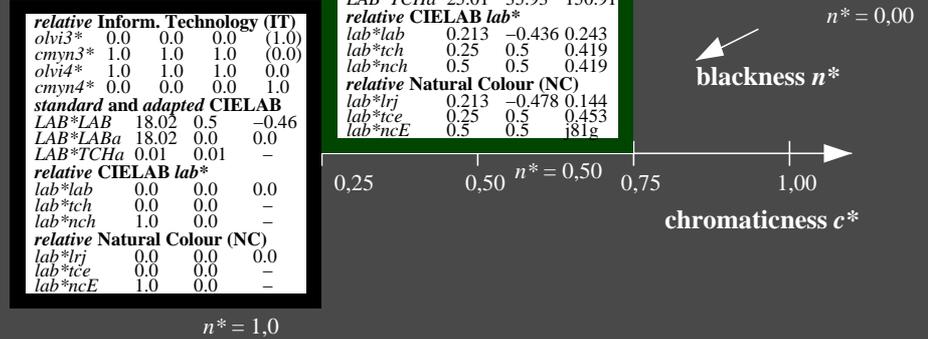
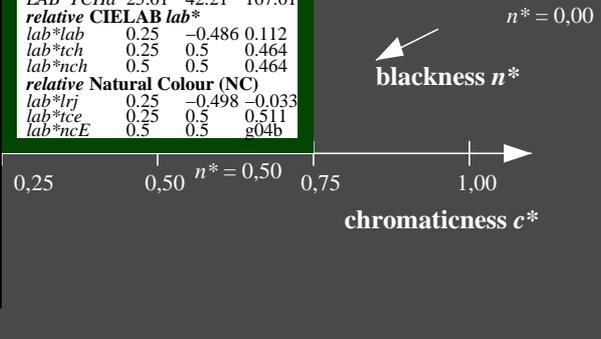
**relative Natural Colour (NC)**  
 $lab^*lrj$  0.0 0.0 0.0  
 $lab^*tce$  0.0 0.0 -  
 $lab^*nce$  1.0 0.0 -

**relative Inform. Technology (IT)**  
 $olv^*_3$  0.0 0.5 0.0 (1.0)  
 $cmyn^*_3$  1.0 0.5 1.0 (0.0)  
 $olv^*_4$  0.5 1.0 0.5 0.5  
 $cmyn^*_4$  0.5 0.0 0.5 0.5

**standard and adapted CIELAB**  
 $LAB^*LAB$  34.46 -31.2 18.11  
 $LAB^*LABa$  34.46 -31.38 17.47  
 $LAB^*TCHa$  25.01 35.93 150.91

**relative CIELAB lab\***  
 $lab^*lab$  0.213 -0.436 0.243  
 $lab^*tch$  0.25 0.5 0.419  
 $lab^*nch$  0.5 0.5 0.419

**relative Natural Colour (NC)**  
 $lab^*lrj$  0.213 -0.478 0.144  
 $lab^*tce$  0.25 0.5 0.453  
 $lab^*nce$  0.5 0.5 j81g



TE170-7, 3 step scales for constant CIELAB hue 167/360 = 0.464 (left)

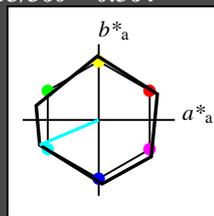
3 step scales for constant CIELAB hue 151/360 = 0.419 (right)

**Input: Colorimetric Reflective System NRS11**

for hue  $h^* = lab^*h = 203/360 = 0.564$   
 $lab^*tch$  and  $lab^*nch$

D65: hue G50B  
 LCH\*Ma: 53 84 203  
 olv\*Ma: 0.0 1.0 1.0

triangle lightness  $t^*$



**NRS11; adapted (a) CIELAB data**

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

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

**relative Inform. Technology (IT)**  
 $olv_i3^* = 1.0 \ 1.0 \ 1.0 \ (1.0)$   
 $cmyn3^* = 0.0 \ 0.0 \ 0.0 \ (0.0)$   
 $olv_i4^* = 1.0 \ 1.0 \ 1.0 \ 1.0$   
 $cmyn4^* = 0.0 \ 0.0 \ 0.0 \ 0.0$

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

**relative CIELAB lab\***  
 $lab^*lab = 1.0 \ 0.0 \ 0.0$   
 $lab^*tch = 1.0 \ 0.0 \ -$   
 $lab^*nch = 0.0 \ 0.0 \ -$

**relative Natural Colour (NC)**  
 $lab^*lrj = 1.0 \ 0.0 \ 0.0$   
 $lab^*tce = 1.0 \ 0.0 \ -$   
 $lab^*nce = 0.0 \ 0.0 \ -$

**relative Inform. Technology (IT)**  
 $olv_i3^* = 0.5 \ 1.0 \ 1.0 \ (1.0)$   
 $cmyn3^* = 0.5 \ 0.0 \ 0.0 \ (0.0)$   
 $olv_i4^* = 0.5 \ 1.0 \ 1.0 \ 1.0$   
 $cmyn4^* = 0.5 \ 0.0 \ 0.0 \ 0.0$

**standard and adapted CIELAB**  
 $LAB^*LAB = 74.3 \ -38.82 \ -16.48$   
 $LAB^*LABa = 74.3 \ -38.85 \ -16.48$   
 $LAB^*TCHa = 75.0 \ 42.21 \ 203.0$

**relative CIELAB lab\***  
 $lab^*lab = 0.75 \ -0.459 \ -0.194$   
 $lab^*tch = 0.75 \ 0.5 \ 0.564$   
 $lab^*nch = 0.0 \ 0.5 \ 0.564$

**relative Natural Colour (NC)**  
 $lab^*lrj = 0.75 \ -0.416 \ -0.275$   
 $lab^*tce = 0.75 \ 0.5 \ 0.593$   
 $lab^*nce = 0.0 \ 0.5 \ g37b$

**relative Inform. Technology (IT)**  
 $olv_i3^* = 0.0 \ 1.0 \ 1.0 \ (1.0)$   
 $cmyn3^* = 1.0 \ 0.0 \ 0.0 \ (0.0)$   
 $olv_i4^* = 1.0 \ 1.0 \ 1.0 \ 0.5$   
 $cmyn4^* = 1.0 \ 0.0 \ 0.0 \ 0.5$

**standard and adapted CIELAB**  
 $LAB^*LAB = 53.2 \ -77.67 \ -32.96$   
 $LAB^*LABa = 53.2 \ -77.71 \ -32.97$   
 $LAB^*TCHa = 50.0 \ 84.43 \ 202.99$

**relative CIELAB lab\***  
 $lab^*lab = 0.5 \ -0.919 \ -0.39$   
 $lab^*tch = 0.5 \ 1.0 \ 0.564$   
 $lab^*nch = 0.0 \ 1.0 \ 0.564$

**relative Natural Colour (NC)**  
 $lab^*lrj = 0.5 \ -0.833 \ -0.551$   
 $lab^*tce = 0.5 \ 1.0 \ 0.593$   
 $lab^*nce = 0.0 \ 1.0 \ g37b$

**relative Inform. Technology (IT)**  
 $olv_i3^* = 0.0 \ 0.5 \ 0.5 \ (1.0)$   
 $cmyn3^* = 1.0 \ 0.5 \ 0.5 \ (0.0)$   
 $olv_i4^* = 0.5 \ 1.0 \ 1.0 \ 0.5$   
 $cmyn4^* = 0.5 \ 0.0 \ 0.0 \ 0.5$

**standard and adapted CIELAB**  
 $LAB^*LAB = 32.1 \ -38.79 \ -16.46$   
 $LAB^*LABa = 32.1 \ -38.85 \ -16.48$   
 $LAB^*TCHa = 25.01 \ 42.21 \ 203.0$

**relative CIELAB lab\***  
 $lab^*lab = 0.25 \ -0.459 \ -0.194$   
 $lab^*tch = 0.25 \ 0.5 \ 0.564$   
 $lab^*nch = 0.5 \ 0.5 \ 0.564$

**relative Natural Colour (NC)**  
 $lab^*lrj = 0.25 \ -0.416 \ -0.275$   
 $lab^*tce = 0.25 \ 0.5 \ 0.593$   
 $lab^*nce = 0.5 \ 0.5 \ g37b$

**relative Inform. Technology (IT)**  
 $olv_i3^* = 0.0 \ 0.0 \ 0.0 \ (1.0)$   
 $cmyn3^* = 1.0 \ 1.0 \ 1.0 \ (0.0)$   
 $olv_i4^* = 1.0 \ 1.0 \ 1.0 \ 0.0$   
 $cmyn4^* = 1.0 \ 0.0 \ 0.0 \ 1.0$

**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)**  
 $olv_i3^* = 0.0 \ 1.0 \ 0.0 \ (1.0)$   
 $cmyn3^* = 1.0 \ 0.0 \ 0.0 \ (0.0)$   
 $olv_i4^* = 1.0 \ 1.0 \ 1.0 \ 0.0$   
 $cmyn4^* = 0.0 \ 0.0 \ 0.0 \ 1.0$

**standard and adapted CIELAB**  
 $LAB^*LAB = 11.01 \ 0.07 \ 0.01$   
 $LAB^*LABa = 11.01 \ 0.0 \ 0.0$   
 $LAB^*TCHa = 0.01 \ 0.01 \ -$

**relative CIELAB lab\***  
 $lab^*lab = 0.0 \ 0.0 \ 0.0$   
 $lab^*tch = 0.0 \ 0.0 \ -$   
 $lab^*nch = 1.0 \ 0.0 \ -$

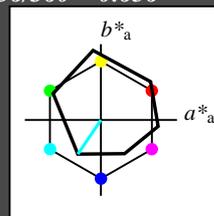
**relative Natural Colour (NC)**  
 $lab^*lrj = 0.0 \ 0.0 \ 0.0$   
 $lab^*tce = 0.0 \ 0.0 \ -$   
 $lab^*nce = 1.0 \ 0.0 \ -$

**Output: Colorimetric Reflective System ORS18**

for hue  $h^* = lab^*h = 236/360 = 0.656$   
 $lab^*tch$  and  $lab^*nch$

D65: hue C  
 LCH\*Ma: 59 54 236  
 olv\*Ma: 0.0 1.0 1.0

triangle lightness  $t^*$



**ORS18; adapted (a) CIELAB data**

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

%Gamut  
 $u^*_{rel} = 93$   
 %Regularity  
 $g^*_{H,rel} = 57$   
 $g^*_{C,rel} = 59$

**relative Inform. Technology (IT)**  
 $olv_i3^* = 1.0 \ 1.0 \ 1.0 \ (1.0)$   
 $cmyn3^* = 0.0 \ 0.0 \ 0.0 \ (0.0)$   
 $olv_i4^* = 1.0 \ 1.0 \ 1.0 \ 1.0$   
 $cmyn4^* = 0.0 \ 0.0 \ 0.0 \ 0.0$

**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)**  
 $olv_i3^* = 0.5 \ 1.0 \ 1.0 \ (1.0)$   
 $cmyn3^* = 0.5 \ 0.0 \ 0.0 \ (0.0)$   
 $olv_i4^* = 0.5 \ 1.0 \ 1.0 \ 1.0$   
 $cmyn4^* = 0.5 \ 0.0 \ 0.0 \ 0.0$

**standard and adapted CIELAB**  
 $LAB^*LAB = 77.01 \ -15.79 \ -18.98$   
 $LAB^*LABa = 77.01 \ -15.16 \ -22.5$   
 $LAB^*TCHa = 75.0 \ 27.15 \ 236.01$

**relative CIELAB lab\***  
 $lab^*lab = 0.762 \ -0.278 \ -0.413$   
 $lab^*tch = 0.75 \ 0.5 \ 0.656$   
 $lab^*nch = 0.0 \ 0.5 \ 0.656$

**relative Natural Colour (NC)**  
 $lab^*lrj = 0.762 \ -0.247 \ -0.433$   
 $lab^*tce = 0.75 \ 0.5 \ 0.667$   
 $lab^*nce = 0.0 \ 0.5 \ g66b$

**relative Inform. Technology (IT)**  
 $olv_i3^* = 0.0 \ 1.0 \ 1.0 \ (1.0)$   
 $cmyn3^* = 1.0 \ 0.0 \ 0.0 \ (0.0)$   
 $olv_i4^* = 0.0 \ 1.0 \ 1.0 \ 1.0$   
 $cmyn4^* = 1.0 \ 0.0 \ 0.0 \ 0.0$

**standard and adapted CIELAB**  
 $LAB^*LAB = 58.62 \ -30.62 \ -42.73$   
 $LAB^*LABa = 58.62 \ -30.34 \ -45.01$   
 $LAB^*TCHa = 50.0 \ 54.29 \ 236.01$

**relative CIELAB lab\***  
 $lab^*lab = 0.525 \ -0.558 \ -0.828$   
 $lab^*tch = 0.5 \ 1.0 \ 0.656$   
 $lab^*nch = 0.0 \ 1.0 \ 0.656$

**relative Natural Colour (NC)**  
 $lab^*lrj = 0.525 \ -0.496 \ -0.867$   
 $lab^*tce = 0.5 \ 1.0 \ 0.667$   
 $lab^*nce = 0.0 \ 1.0 \ g66b$

**relative Inform. Technology (IT)**  
 $olv_i3^* = 0.0 \ 0.5 \ 0.5 \ (1.0)$   
 $cmyn3^* = 1.0 \ 0.5 \ 0.5 \ (0.0)$   
 $olv_i4^* = 0.5 \ 1.0 \ 1.0 \ 0.5$   
 $cmyn4^* = 0.5 \ 0.0 \ 0.0 \ 0.5$

**standard and adapted CIELAB**  
 $LAB^*LAB = 38.32 \ -15.05 \ -21.59$   
 $LAB^*LABa = 38.32 \ -15.16 \ -22.5$   
 $LAB^*TCHa = 25.01 \ 27.15 \ 236.01$

**relative CIELAB lab\***  
 $lab^*lab = 0.262 \ -0.278 \ -0.413$   
 $lab^*tch = 0.25 \ 0.5 \ 0.656$   
 $lab^*nch = 0.5 \ 0.5 \ 0.656$

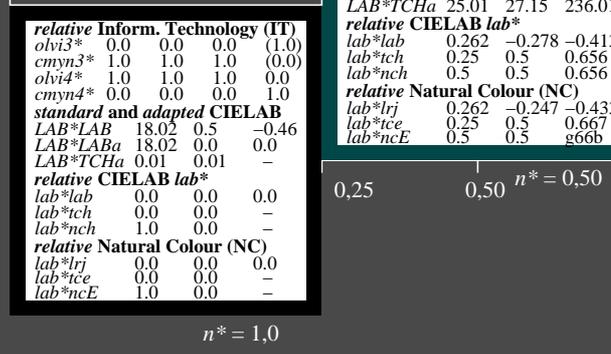
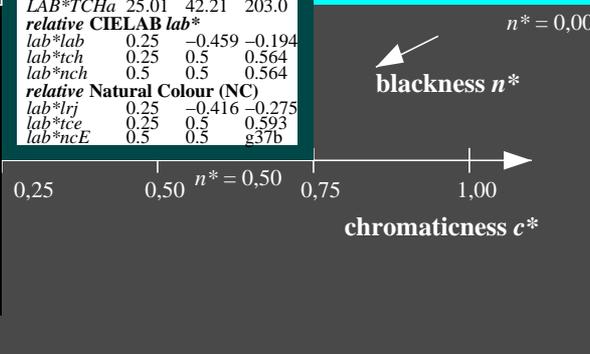
**relative Natural Colour (NC)**  
 $lab^*lrj = 0.262 \ -0.247 \ -0.433$   
 $lab^*tce = 0.25 \ 0.5 \ 0.667$   
 $lab^*nce = 0.5 \ 0.5 \ g66b$

**relative Inform. Technology (IT)**  
 $olv_i3^* = 0.0 \ 0.0 \ 0.0 \ (1.0)$   
 $cmyn3^* = 1.0 \ 1.0 \ 1.0 \ (0.0)$   
 $olv_i4^* = 1.0 \ 1.0 \ 1.0 \ 0.0$   
 $cmyn4^* = 1.0 \ 0.0 \ 0.0 \ 1.0$

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



TE170-7, 3 step scales for constant CIELAB hue 203/360 = 0.564 (left)      3 step scales for constant CIELAB hue 236/360 = 0.656 (right)

BAM-test chart TE17; Colorimetric systems NRS11 & ORS18      input:  $olv^* \ setrgbcolor$   
 D65: 2 coordinate data of 3 step colour scales for 10 hues      output:  $olv^* \ setrgbcolor / w^* \ setgray$

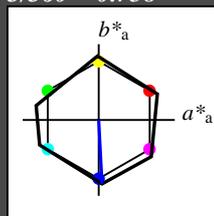
See for similar files: <http://www.ps.bam.de/TE17/>  
 Technical information: <http://www.ps.bam.de>  
 Version 2.1, io=1,1, CIEXYZ

BAM registration: 20060101-TE17/10S/S17E03FP.PS/.PDF      BAM material: code=rh4da  
 application for evaluation and measurement of printer or monitor systems, Yr=2.5, XYZ  
 TE17/ Form: 4/10, Serie: 1/1, Page: 4      Page count: 4

**Input: Colorimetric Reflective System NRS11**

for hue  $h^* = lab^*h = 273/360 = 0.758$   
 $lab^*tch$  and  $lab^*nch$

D65: hue B  
 LCH\*Ma: 53 84 273  
 olv\*Ma: 0.0 0.0 1.0  
 triangle lightness  $t^*$



**NRS11; adapted (a) CIELAB data**

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

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

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

**relative CIELAB lab\***

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

**relative Natural Colour (NC)**

lab*lrj	1.0	0.0	0.0
lab*tce	1.0	0.0	-
lab*nce	0.0	0.0	-

**relative Inform. Technology (IT)**

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	74.3	2.21	-42.13
LAB*LABa	74.3	2.19	-42.13
LAB*TCHa	75.0	42.2	272.97

**relative CIELAB lab\***

lab*lab	0.75	0.026	-0.498
lab*tch	0.75	0.5	0.758
lab*nch	0.0	0.5	0.758

**relative Natural Colour (NC)**

lab*lrj	0.75	0.009	-0.499
lab*tce	0.75	0.5	0.753
lab*nce	0.0	0.5	b01r

**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	53.2	4.42	-84.26
LAB*LABa	53.2	4.37	-84.27
LAB*TCHa	50.0	84.39	272.97

**relative CIELAB lab\***

lab*lab	0.5	0.052	-0.997
lab*tch	0.5	1.0	0.758
lab*nch	0.0	1.0	0.758

**relative Natural Colour (NC)**

lab*lrj	0.5	0.018	-0.999
lab*tce	0.5	1.0	0.753
lab*nce	0.0	1.0	b01r

**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	32.1	2.25	-42.11
LAB*LABa	32.1	2.19	-42.13
LAB*TCHa	25.01	42.2	272.97

**relative CIELAB lab\***

lab*lab	0.25	0.026	-0.498
lab*tch	0.25	0.5	0.758
lab*nch	0.5	0.5	0.758

**relative Natural Colour (NC)**

lab*lrj	0.25	0.009	-0.499
lab*tce	0.25	0.5	0.753
lab*nce	0.5	0.5	b01r

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

**relative CIELAB lab\***

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

**relative Natural Colour (NC)**

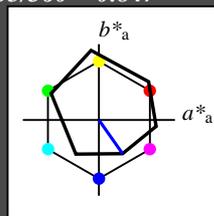
lab*lrj	0.0	0.0	0.0
lab*tce	0.0	0.0	-
lab*nce	1.0	0.0	-



**Output: Colorimetric Reflective System ORS18**

for hue  $h^* = lab^*h = 305/360 = 0.847$   
 $lab^*tch$  and  $lab^*nch$

D65: hue V  
 LCH\*Ma: 26 54 305  
 olv\*Ma: 0.0 0.0 1.0  
 triangle lightness  $t^*$



**ORS18; adapted (a) CIELAB data**

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

%Gamut  
 $u^*_{rel} = 93$   
 %Regularity  
 $g^*_{H,rel} = 57$   
 $g^*_{C,rel} = 59$

**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	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	60.56	15.24	-19.79
LAB*LABa	60.56	15.55	-22.2
LAB*TCHa	75.0	27.11	305.0

**relative CIELAB lab\***

lab*lab	0.55	0.287	-0.408
lab*tch	0.75	0.5	0.847
lab*nch	0.0	0.5	0.847

**relative Natural Colour (NC)**

lab*lrj	0.55	0.225	-0.446
lab*tce	0.75	0.5	0.824
lab*nce	0.0	0.5	b29r

**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	0.5	(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	21.87	15.98	-22.4
LAB*LABa	21.87	15.55	-22.2
LAB*TCHa	25.01	27.11	305.0

**relative CIELAB lab\***

lab*lab	0.05	0.287	-0.408
lab*tch	0.25	0.5	0.847
lab*nch	0.5	0.5	0.847

**relative Natural Colour (NC)**

lab*lrj	0.05	0.225	-0.446
lab*tce	0.25	0.5	0.824
lab*nce	0.5	0.5	b29r

**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**

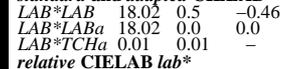
LAB*LAB	18.02	0.5	-0.46
LAB*LABa	18.02	0.0	0.0
LAB*TCHa	0.01	0.01	-

**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	-

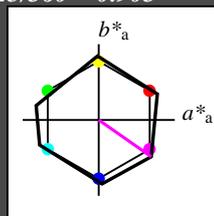


**Input: Colorimetric Reflective System NRS11**

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

D65: hue B50R  
 LCH\*Ma: 53 84 325  
 olv\*Ma: 1.0 0.0 1.0

triangle lightness  $t^*$



**NRS11; adapted (a) CIELAB data**

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

%Gamut

$u^*_{rel} = 119$

%Regularity

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

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

**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 0.0 -0.01  
 LAB\*LABa 95.41 0.0 0.0  
 LAB\*TCHa 99.99 0.01 -

**relative CIELAB lab\***  
 lab\*lab 1.0 0.0 0.0  
 lab\*tch 1.0 0.0 -  
 lab\*nch 0.0 0.0 -

**relative Natural Colour (NC)**  
 lab\*lrj 1.0 0.0 0.0  
 lab\*tce 1.0 0.0 -  
 lab\*nce 0.0 0.0 -

**relative Inform. Technology (IT)**  
 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 74.3 34.57 -24.19  
 LAB\*LABa 74.3 34.54 -24.2  
 LAB\*TCHa 75.0 42.18 324.98

**relative CIELAB lab\***  
 lab\*lab 0.75 0.409 -0.286  
 lab\*tch 0.75 0.5 -0.903  
 lab\*nch 0.0 0.5 0.903

**relative Natural Colour (NC)**  
 lab\*lrj 0.75 0.336 -0.37  
 lab\*tce 0.75 0.5 0.867  
 lab\*nce 0.0 0.5 b46r

**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 53.21 0.04 0.0  
 LAB\*LABa 53.21 0.0 0.0  
 LAB\*TCHa 50.0 0.01 -

**relative CIELAB lab\***  
 lab\*lab 0.5 0.0 0.0  
 lab\*tch 0.5 0.0 -  
 lab\*nch 0.5 0.0 -

**relative Natural Colour (NC)**  
 lab\*lrj 0.5 0.0 0.0  
 lab\*tce 0.5 0.0 -  
 lab\*nce 0.5 0.0 -

**relative Inform. Technology (IT)**  
 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 32.1 34.6 -24.18  
 LAB\*LABa 32.1 34.54 -24.2  
 LAB\*TCHa 25.01 42.18 324.98

**relative CIELAB lab\***  
 lab\*lab 0.25 0.409 -0.286  
 lab\*tch 0.25 0.5 0.903  
 lab\*nch 0.5 0.5 0.903

**relative Natural Colour (NC)**  
 lab\*lrj 0.25 0.336 -0.37  
 lab\*tce 0.25 0.5 0.867  
 lab\*nce 0.5 0.5 b46r

**relative Inform. Technology (IT)**  
 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 11.01 0.07 0.01  
 LAB\*LABa 11.01 0.0 0.0  
 LAB\*TCHa 0.01 0.01 -

**relative CIELAB lab\***  
 lab\*lab 0.0 0.0 0.0  
 lab\*tch 0.0 0.0 -  
 lab\*nch 1.0 0.0 -

**relative Natural Colour (NC)**  
 lab\*lrj 0.0 0.0 0.0  
 lab\*tce 0.0 0.0 -  
 lab\*nce 1.0 0.0 -

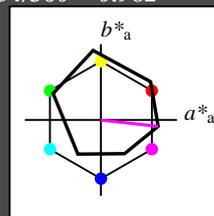
$n^* = 1.0$

**Output: Colorimetric Reflective System ORS18**

for hue  $h^* = lab^*h = 354/360 = 0.982$   
 $lab^*tch$  and  $lab^*nch$

D65: hue M  
 LCH\*Ma: 48 76 354  
 olv\*Ma: 1.0 0.0 1.0

triangle lightness  $t^*$



**ORS18; adapted (a) CIELAB data**

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

%Gamut

$u^*_{rel} = 93$

%Regularity

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

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

**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\* 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 71.77 37.1 -1.01  
 LAB\*LABa 71.77 37.63 -4.17  
 LAB\*TCHa 75.0 37.86 353.66

**relative CIELAB lab\***  
 lab\*lab 0.695 0.497 -0.054  
 lab\*tch 0.75 0.5 0.982  
 lab\*nch 0.0 0.5 0.982

**relative Natural Colour (NC)**  
 lab\*lrj 0.695 0.454 -0.208  
 lab\*tce 0.75 0.5 0.932  
 lab\*nce 0.0 0.5 b72r

**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\* 0.5 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 33.08 37.84 -3.62  
 LAB\*LABa 33.08 37.63 -4.17  
 LAB\*TCHa 25.01 37.86 353.66

**relative CIELAB lab\***  
 lab\*lab 0.195 0.497 -0.054  
 lab\*tch 0.25 0.5 0.982  
 lab\*nch 0.5 0.5 0.982

**relative Natural Colour (NC)**  
 lab\*lrj 0.195 0.454 -0.208  
 lab\*tce 0.25 0.5 0.932  
 lab\*nce 0.5 0.5 b72r

**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 -

$n^* = 1.0$

TE170-7, 3 step scales for constant CIELAB hue 325/360 = 0.903 (left)

3 step scales for constant CIELAB hue 354/360 = 0.982 (right)

BAM-test chart TE17; Colorimetric systems NRS11 & ORS18  
 D65: 2 coordinate data of 3 step colour scales for 10 hues

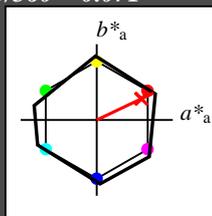
input:  $olv^* setrgbcolor$   
 output:  $olv^* setrgbcolor / w^* setgray$

**Input: Colorimetric Reflective System NRS11**

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

D65: hue R  
 LCH\*Ma: 53 83 25  
 olv\*Ma: 1.0 0.03 0.0

triangle lightness  $t^*$



**NRS11; adapted (a) CIELAB data**

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

%Gamut

$u^*_{rel} = 119$

%Regularity

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

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

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

**relative CIELAB lab\***

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

**relative Natural Colour (NC)**

lab*lrj	1.0	0.0	0.0
lab*tce	1.0	0.0	-
lab*nce	0.0	0.0	-

**relative Inform. Technology (IT)**

olvi3*	1.0	0.514	0.5	(1.0)
cmyn3*	0.0	0.486	0.5	(0.0)
olvi4*	1.0	0.514	0.5	1.0
cmyn4*	0.0	0.486	0.5	0.0

**standard and adapted CIELAB**

LAB*LAB	74.3	37.46	17.85
LAB*LABa	74.3	37.44	17.85
LAB*TCHa	75.0	41.47	25.49

**relative CIELAB lab\***

lab*lab	0.75	0.451	0.215
lab*tch	0.75	0.5	0.071
lab*nch	0.0	0.5	0.071

**relative Natural Colour (NC)**

lab*lrj	0.75	0.5	0.0
lab*tce	0.75	0.5	0.0
lab*nce	0.0	0.5	r00j

**relative Inform. Technology (IT)**

olvi3*	1.0	0.028	0.0	(1.0)
cmyn3*	0.0	0.972	1.0	(0.0)
olvi4*	1.0	0.028	0.0	1.0
cmyn4*	0.0	0.972	1.0	0.0

**standard and adapted CIELAB**

LAB*LAB	53.2	74.93	35.7
LAB*LABa	53.2	74.88	35.69
LAB*TCHa	50.0	82.95	25.48

**relative CIELAB lab\***

lab*lab	0.5	0.903	0.43
lab*tch	0.5	1.0	0.071
lab*nch	0.0	1.0	0.071

**relative Natural Colour (NC)**

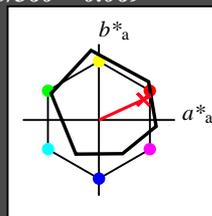
lab*lrj	0.5	1.0	0.0
lab*tce	0.5	1.0	0.0
lab*nce	0.0	1.0	b99r

**Output: Colorimetric Reflective System ORS18**

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

D65: hue R  
 LCH\*Ma: 48 75 25  
 olv\*Ma: 1.0 0.0 0.32

triangle lightness  $t^*$



**ORS18; adapted (a) CIELAB data**

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

%Gamut

$u^*_{rel} = 93$

%Regularity

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

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

**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*	1.0	0.5	0.661	(1.0)
cmyn3*	0.0	0.5	0.339	(0.0)
olvi4*	1.0	0.5	0.661	1.0
cmyn4*	0.0	0.5	0.339	0.0

**standard and adapted CIELAB**

LAB*LAB	71.7	33.75	18.92
LAB*LABa	71.7	34.27	15.76
LAB*TCHa	75.0	37.72	24.69

**relative CIELAB lab\***

lab*lab	0.694	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	0.694	0.5	0.0
lab*tce	0.75	0.5	1.0
lab*nce	0.0	0.5	b99r

**relative Inform. Technology (IT)**

olvi3*	1.0	0.0	0.322	(1.0)
cmyn3*	0.0	1.0	0.678	(0.0)
olvi4*	1.0	0.0	0.322	1.0
cmyn4*	0.0	1.0	0.677	0.0

**standard and adapted CIELAB**

LAB*LAB	48.01	68.48	33.09
LAB*LABa	48.01	68.55	31.53
LAB*TCHa	50.0	75.45	24.7

**relative CIELAB lab\***

lab*lab	0.388	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	0.388	1.0	0.0
lab*tce	0.5	1.0	0.0
lab*nce	0.0	1.0	r00j

**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*	0.5	0.0	0.161	(1.0)
cmyn3*	0.5	1.0	0.839	(0.0)
olvi4*	1.0	0.5	0.661	0.5
cmyn4*	0.0	0.5	0.339	0.5

**standard and adapted CIELAB**

LAB*LAB	33.01	34.49	16.31
LAB*LABa	33.01	34.27	15.77
LAB*TCHa	25.01	37.73	24.7

**relative CIELAB lab\***

lab*lab	0.194	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	0.194	0.5	0.0
lab*tce	0.25	0.5	0.0
lab*nce	0.5	0.5	r00j

**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**

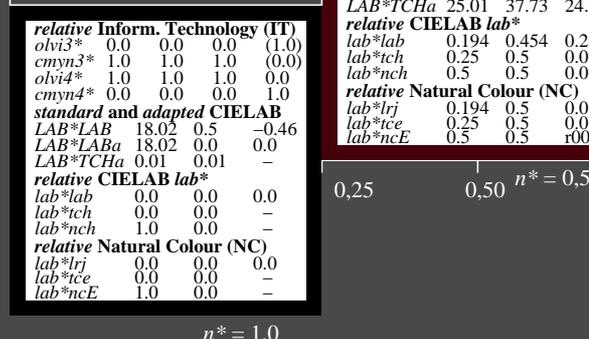
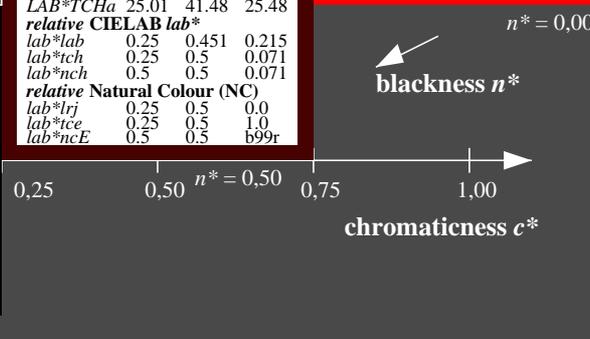
LAB*LAB	18.02	0.5	-0.46
LAB*LABa	18.02	0.0	0.0
LAB*TCHa	0.01	0.01	-

**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	-



TE170-7, 3 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

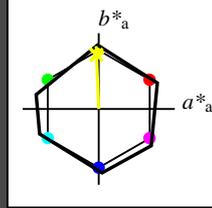
BAM-test chart TE17; Colorimetric systems NRS11 & ORS18  
 D65: 2 coordinate data of 3 step colour scales for 10 hues

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

Input: Colorimetric Reflective System NRS11

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

D65: hue J  
 LCH\*Ma: 53 83 92  
 olv\*Ma: 0.98 1.0 0.0  
 triangle lightness  $t^*$



NRS11; adapted (a) CIELAB data

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

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

relative Inform. Technology (IT)  
 olv3\* 1.0 1.0 1.0 (1.0)  
 cmyn3\* 0.0 0.0 0.0 (0.0)  
 olv4\* 1.0 1.0 1.0 1.0  
 cmyn4\* 0.0 0.0 0.0 0.0

standard and adapted CIELAB  
 LAB\*LAB 95.41 0.0 -0.01  
 LAB\*LABa 95.41 0.0 0.0  
 LAB\*TCHa 99.99 0.01 -

relative CIELAB lab\*  
 lab\*lab 1.0 0.0 0.0  
 lab\*tch 1.0 0.0 -  
 lab\*nch 0.0 0.0 -

relative Natural Colour (NC)  
 lab\*lrj 1.0 0.0 0.0  
 lab\*tce 1.0 0.0 -  
 lab\*nce 0.0 0.0 -

relative Inform. Technology (IT)  
 olv3\* 0.989 1.0 0.5 (1.0)  
 cmyn3\* 0.011 0.0 0.5 (0.0)  
 olv4\* 0.989 1.0 0.5 1.0  
 cmyn4\* 0.011 0.0 0.5 0.0

standard and adapted CIELAB  
 LAB\*LAB 74.3 -1.64 41.44  
 LAB\*LABa 74.3 -1.67 41.44  
 LAB\*TCHa 75.0 41.47 92.32

relative CIELAB lab\*  
 lab\*lab 0.75 -0.019 0.499  
 lab\*tch 0.75 0.5 0.256  
 lab\*nch 0.0 0.5 0.256

relative Natural Colour (NC)  
 lab\*lrj 0.75 0.0 0.5  
 lab\*tce 0.75 0.5 0.25  
 lab\*nce 0.0 0.5 r99j

relative Inform. Technology (IT)  
 olv3\* 0.5 0.5 0.5 (1.0)  
 cmyn3\* 0.5 0.5 0.5 (0.0)  
 olv4\* 1.0 1.0 1.0 0.5  
 cmyn4\* 0.0 0.0 0.0 0.5

standard and adapted CIELAB  
 LAB\*LAB 53.21 0.04 0.0  
 LAB\*LABa 53.21 0.0 0.0  
 LAB\*TCHa 50.0 0.01 -

relative CIELAB lab\*  
 lab\*lab 0.5 0.0 0.0  
 lab\*tch 0.5 0.0 -  
 lab\*nch 0.5 0.0 -

relative Natural Colour (NC)  
 lab\*lrj 0.5 0.0 0.0  
 lab\*tce 0.5 0.0 -  
 lab\*nce 0.5 0.0 -

relative Inform. Technology (IT)  
 olv3\* 0.489 0.5 0.0 (1.0)  
 cmyn3\* 0.511 0.5 1.0 (0.0)  
 olv4\* 0.989 1.0 0.5 0.5  
 cmyn4\* 0.011 0.0 0.5 0.5

standard and adapted CIELAB  
 LAB\*LAB 32.1 -1.62 41.45  
 LAB\*LABa 32.1 -1.68 41.43  
 LAB\*TCHa 25.01 41.46 92.33

relative CIELAB lab\*  
 lab\*lab 0.25 -0.019 0.499  
 lab\*tch 0.25 0.5 0.256  
 lab\*nch 0.5 0.5 0.256

relative Natural Colour (NC)  
 lab\*lrj 0.25 0.0 0.5  
 lab\*tce 0.25 0.5 0.25  
 lab\*nce 0.5 0.5 100g

relative Inform. Technology (IT)  
 olv3\* 0.0 0.0 0.0 (1.0)  
 cmyn3\* 1.0 1.0 1.0 (0.0)  
 olv4\* 1.0 1.0 1.0 0.0  
 cmyn4\* 0.0 0.0 0.0 1.0

standard and adapted CIELAB  
 LAB\*LAB 11.01 0.07 0.01  
 LAB\*LABa 11.01 0.0 0.0  
 LAB\*TCHa 0.01 0.01 -

relative CIELAB lab\*  
 lab\*lab 0.0 0.0 0.0  
 lab\*tch 0.0 0.0 -  
 lab\*nch 1.0 0.0 -

relative Natural Colour (NC)  
 lab\*lrj 0.0 0.0 0.0  
 lab\*tce 0.0 0.0 -  
 lab\*nce 1.0 0.0 -

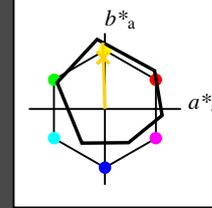
blackness  $n^* = 0,00$   
 chromaticness  $c^*$

$n^* = 1,0$

Output: Colorimetric Reflective System ORS18

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

D65: hue J  
 LCH\*Ma: 86 88 92  
 olv\*Ma: 1.0 0.9 0.0  
 triangle lightness  $t^*$



ORS18; adapted (a) CIELAB data

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

%Gamut  
 $u^*_{rel} = 93$   
 %Regularity  
 $g^*_{H,rel} = 57$   
 $g^*_{C,rel} = 59$

relative Inform. Technology (IT)  
 olv3\* 1.0 1.0 1.0 (1.0)  
 cmyn3\* 0.0 0.0 0.0 (0.0)  
 olv4\* 1.0 1.0 1.0 1.0  
 cmyn4\* 0.0 0.0 0.0 0.0

standard and adapted CIELAB  
 LAB\*LAB 95.41 -0.97 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)  
 olv3\* 1.0 0.951 0.5 (1.0)  
 cmyn3\* 0.0 0.049 0.5 (0.0)  
 olv4\* 1.0 0.951 0.5 1.0  
 cmyn4\* 0.0 0.049 0.5 0.0

standard and adapted CIELAB  
 LAB\*LAB 90.8 -2.3 48.29  
 LAB\*LABa 90.8 -1.41 43.85  
 LAB\*TCHa 75.0 43.87 91.85

relative CIELAB lab\*  
 lab\*lab 0.94 -0.015 0.5  
 lab\*tch 0.75 0.5 0.255  
 lab\*nch 0.0 0.5 0.255

relative Natural Colour (NC)  
 lab\*lrj 0.94 0.0 0.5  
 lab\*tce 0.75 0.5 0.25  
 lab\*nce 0.0 0.5 j00g

relative Inform. Technology (IT)  
 olv3\* 0.5 0.5 0.5 (1.0)  
 cmyn3\* 0.5 0.5 0.5 (0.0)  
 olv4\* 1.0 1.0 1.0 0.5  
 cmyn4\* 0.0 0.0 0.0 0.5

standard and adapted CIELAB  
 LAB\*LAB 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 1.0  
 lab\*tce 0.5 1.0 0.25  
 lab\*nce 0.0 1.0 r99j

relative Inform. Technology (IT)  
 olv3\* 0.5 0.451 0.0 (1.0)  
 cmyn3\* 0.5 0.549 1.0 (0.0)  
 olv4\* 1.0 0.951 0.5 0.5  
 cmyn4\* 0.0 0.049 0.5 0.5

standard and adapted CIELAB  
 LAB\*LAB 52.1 -1.55 45.68  
 LAB\*LABa 52.1 -1.4 43.84  
 LAB\*TCHa 25.01 43.87 91.84

relative CIELAB lab\*  
 lab\*lab 0.44 -0.015 0.5  
 lab\*tch 0.25 0.5 0.255  
 lab\*nch 0.5 0.5 0.255

relative Natural Colour (NC)  
 lab\*lrj 0.44 0.0 0.5  
 lab\*tce 0.25 0.5 0.25  
 lab\*nce 0.5 0.5 r99j

relative Inform. Technology (IT)  
 olv3\* 0.0 0.0 0.0 (1.0)  
 cmyn3\* 1.0 1.0 1.0 (0.0)  
 olv4\* 1.0 1.0 1.0 0.0  
 cmyn4\* 0.0 0.0 0.0 1.0

standard and adapted CIELAB  
 LAB\*LAB 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 -

blackness  $n^* = 0,00$   
 chromaticness  $c^*$

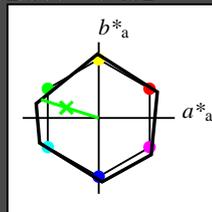
$n^* = 1,0$

Input: Colorimetric Reflective System NRS11

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

D65: hue G  
 LCH\*Ma: 53 80 162  
 olv\*Ma: 0.08 1.0 0.0

triangle lightness  $t^*$



NRS11; adapted (a) CIELAB data

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

%Gamut

$u^*_{rel} = 119$

%Regularity

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

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

relative Inform. Technology (IT)  
 $olv_i3^* = 1.0, 1.0, 1.0, (1.0)$   
 $cmyn3^* = 0.0, 0.0, 0.0, (0.0)$   
 $olv_i4^* = 1.0, 1.0, 1.0, 1.0$   
 $cmyn4^* = 0.0, 0.0, 0.0, 0.0$

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

relative CIELAB lab\*  
 $lab^*lab = 1.0, 0.0, 0.0$   
 $lab^*tch = 1.0, 0.0, -$   
 $lab^*nch = 0.0, 0.0, -$

relative Natural Colour (NC)  
 $lab^*lrj = 1.0, 0.0, 0.0$   
 $lab^*tce = 1.0, 0.0, -$   
 $lab^*nce = 0.0, 0.0, -$

relative Inform. Technology (IT)  
 $olv_i3^* = 0.5, 0.5, 0.5, (1.0)$   
 $cmyn3^* = 0.5, 0.5, 0.5, (0.0)$   
 $olv_i4^* = 1.0, 1.0, 1.0, 0.5$   
 $cmyn4^* = 0.0, 0.0, 0.0, 0.5$

standard and adapted CIELAB  
 $LAB^*LAB = 53.21, 0.04, 0.0$   
 $LAB^*LABa = 53.21, 0.0, 0.0$   
 $LAB^*TCHa = 50.0, 0.01, -$

relative CIELAB lab\*  
 $lab^*lab = 0.5, 0.0, 0.0$   
 $lab^*tch = 0.5, 0.0, -$   
 $lab^*nch = 0.5, 0.0, -$

relative Natural Colour (NC)  
 $lab^*lrj = 0.5, 0.0, 0.0$   
 $lab^*tce = 0.5, 0.0, -$   
 $lab^*nce = 0.5, 0.0, -$

relative Inform. Technology (IT)  
 $olv_i3^* = 0.0, 0.0, 0.0, (1.0)$   
 $cmyn3^* = 1.0, 1.0, 1.0, (0.0)$   
 $olv_i4^* = 1.0, 1.0, 1.0, 0.0$   
 $cmyn4^* = 0.0, 0.0, 0.0, 1.0$

standard and adapted CIELAB  
 $LAB^*LAB = 11.01, 0.07, 0.01$   
 $LAB^*LABa = 11.01, 0.0, 0.0$   
 $LAB^*TCHa = 0.01, 0.01, -$

relative CIELAB lab\*  
 $lab^*lab = 0.0, 0.0, 0.0$   
 $lab^*tch = 0.0, 0.0, -$   
 $lab^*nch = 1.0, 0.0, -$

relative Natural Colour (NC)  
 $lab^*lrj = 0.0, 0.0, 0.0$   
 $lab^*tce = 0.0, 0.0, -$   
 $lab^*nce = 1.0, 0.0, -$

$n^* = 1.0$

relative Inform. Technology (IT)  
 $olv_i3^* = 0.54, 1.0, 0.5, (1.0)$   
 $cmyn3^* = 0.46, 0.0, 0.5, (0.0)$   
 $olv_i4^* = 0.54, 1.0, 0.5, 1.0$   
 $cmyn4^* = 0.46, 0.0, 0.5, 0.0$

standard and adapted CIELAB  
 $LAB^*LAB = 74.3, -37.84, 12.13$   
 $LAB^*LABa = 74.3, -37.87, 12.12$   
 $LAB^*TCHa = 75.0, 39.77, 162.25$

relative CIELAB lab\*  
 $lab^*lab = 0.75, -0.475, 0.152$   
 $lab^*tch = 0.75, 0.5, 0.451$   
 $lab^*nch = 0.0, 0.5, 0.451$

relative Natural Colour (NC)  
 $lab^*lrj = 0.75, -0.499, 0.0$   
 $lab^*tce = 0.75, 0.5, 0.5$   
 $lab^*nce = 0.0, 0.5, 199g$

relative Inform. Technology (IT)  
 $olv_i3^* = 0.04, 0.5, 0.0, (1.0)$   
 $cmyn3^* = 0.96, 0.5, 1.0, (0.0)$   
 $olv_i4^* = 0.54, 1.0, 0.5, 0.5$   
 $cmyn4^* = 0.46, 0.0, 0.5, 0.5$

standard and adapted CIELAB  
 $LAB^*LAB = 32.1, -37.81, 12.13$   
 $LAB^*LABa = 32.1, -37.87, 12.12$   
 $LAB^*TCHa = 25.01, 39.77, 162.27$

relative CIELAB lab\*  
 $lab^*lab = 0.25, -0.475, 0.152$   
 $lab^*tch = 0.25, 0.5, 0.451$   
 $lab^*nch = 0.5, 0.5, 0.451$

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

$n^* = 0.50$

blackness  $n^*$

chromaticness  $c^*$

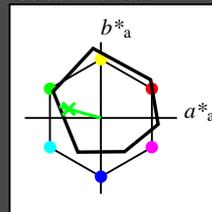
$n^* = 0.00$

Output: Colorimetric Reflective System ORS18

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

D65: hue G  
 LCH\*Ma: 53 57 164  
 olv\*Ma: 0.0 1.0 0.25

triangle lightness  $t^*$



ORS18; adapted (a) CIELAB data

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

%Gamut

$u^*_{rel} = 93$

%Regularity

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

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

relative Inform. Technology (IT)  
 $olv_i3^* = 1.0, 1.0, 1.0, (1.0)$   
 $cmyn3^* = 0.0, 0.0, 0.0, (0.0)$   
 $olv_i4^* = 1.0, 1.0, 1.0, 1.0$   
 $cmyn4^* = 0.0, 0.0, 0.0, 0.0$

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)  
 $olv_i3^* = 0.5, 0.5, 0.5, (1.0)$   
 $cmyn3^* = 0.5, 0.5, 0.5, (0.0)$   
 $olv_i4^* = 1.0, 1.0, 1.0, 0.5$   
 $cmyn4^* = 0.0, 0.0, 0.0, 0.5$

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)  
 $olv_i3^* = 0.0, 0.0, 0.0, (1.0)$   
 $cmyn3^* = 1.0, 1.0, 1.0, (0.0)$   
 $olv_i4^* = 1.0, 1.0, 1.0, 0.0$   
 $cmyn4^* = 0.0, 0.0, 0.0, 1.0$

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

$n^* = 1.0$

relative Inform. Technology (IT)  
 $olv_i3^* = 0.5, 1.0, 0.623, (1.0)$   
 $cmyn3^* = 0.5, 0.0, 0.377, (0.0)$   
 $olv_i4^* = 0.5, 1.0, 0.623, 1.0$   
 $cmyn4^* = 0.5, 0.0, 0.377, 0.0$

standard and adapted CIELAB  
 $LAB^*LAB = 74.1, -27.96, 10.94$   
 $LAB^*LABa = 74.1, -27.39, 7.62$   
 $LAB^*TCHa = 75.0, 28.44, 164.46$

relative CIELAB lab\*  
 $lab^*lab = 0.725, -0.481, 0.134$   
 $lab^*tch = 0.725, 0.5, 0.457$   
 $lab^*nch = 0.0, 0.5, 0.457$

relative Natural Colour (NC)  
 $lab^*lrj = 0.725, -0.499, 0.0$   
 $lab^*tce = 0.725, 0.5, 0.5$   
 $lab^*nce = 0.0, 0.5, g00b$

relative Inform. Technology (IT)  
 $olv_i3^* = 0.0, 0.5, 0.123, (1.0)$   
 $cmyn3^* = 1.0, 0.5, 0.877, (0.0)$   
 $olv_i4^* = 0.5, 1.0, 0.623, 0.5$   
 $cmyn4^* = 0.5, 0.0, 0.377, 0.5$

standard and adapted CIELAB  
 $LAB^*LAB = 35.41, -27.22, 8.34$   
 $LAB^*LABa = 35.41, -27.39, 7.63$   
 $LAB^*TCHa = 25.01, 28.44, 164.45$

relative CIELAB lab\*  
 $lab^*lab = 0.225, -0.481, 0.134$   
 $lab^*tch = 0.225, 0.5, 0.457$   
 $lab^*nch = 0.5, 0.5, 0.457$

relative Natural Colour (NC)  
 $lab^*lrj = 0.225, -0.499, 0.0$   
 $lab^*tce = 0.225, 0.5, 0.5$   
 $lab^*nce = 0.5, 0.5, 199g$

$n^* = 0.50$

blackness  $n^*$

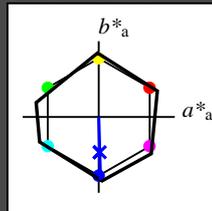
chromaticness  $c^*$

$n^* = 0.00$

**Input: Colorimetric Reflective System NRS11**

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

D65: hue B  
 LCH\*Ma: 53 83 272  
 olv\*Ma: 0.0 0.02 1.0  
 triangle lightness  $t^*$



**NRS11; adapted (a) CIELAB data**

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

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

**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 0.0 -0.01  
 LAB\*LABa 95.41 0.0 0.0  
 LAB\*TCHa 99.99 0.01 -

**relative CIELAB lab\***  
 lab\*lab 1.0 0.0 0.0  
 lab\*tch 1.0 0.0 -  
 lab\*nch 0.0 0.0 -

**relative Natural Colour (NC)**  
 lab\*lrj 1.0 0.0 0.0  
 lab\*tce 1.0 0.0 -  
 lab\*nce 0.0 0.0 -

**relative Inform. Technology (IT)**  
 olvi3\* 0.5 0.512 1.0 (1.0)  
 cmyn3\* 0.5 0.488 0.0 (0.0)  
 olvi4\* 0.5 0.512 1.0 1.0  
 cmyn4\* 0.5 0.488 0.0 0.0

**standard and adapted CIELAB**  
 LAB\*LAB 74.3 1.23 -41.51  
 LAB\*LABa 74.3 1.2 -41.52  
 LAB\*TCHa 75.0 41.54 271.66

**relative CIELAB lab\***  
 lab\*lab 0.75 0.014 -0.499  
 lab\*tch 0.75 0.5 0.755  
 lab\*nch 0.0 0.5 0.755

**relative Natural Colour (NC)**  
 lab\*lrj 0.75 0.0 -0.499  
 lab\*tce 0.75 0.5 0.75  
 lab\*nce 0.0 0.5 g99b

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

**standard and adapted CIELAB**  
 LAB\*LAB 53.2 2.46 -83.04  
 LAB\*LABa 53.2 2.42 -83.05  
 LAB\*TCHa 50.0 83.09 271.67

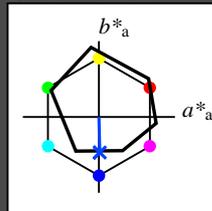
**relative CIELAB lab\***  
 lab\*lab 0.5 0.029 -0.998  
 lab\*tch 0.5 1.0 0.755  
 lab\*nch 0.0 1.0 0.755

**relative Natural Colour (NC)**  
 lab\*lrj 0.5 0.0 -0.999  
 lab\*tce 0.5 1.0 0.75  
 lab\*nce 0.0 1.0 b00r

**Output: Colorimetric Reflective System ORS18**

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

D65: hue B  
 LCH\*Ma: 42 45 271  
 olv\*Ma: 0.0 0.49 1.0  
 triangle lightness  $t^*$



**ORS18; adapted (a) CIELAB data**

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

%Gamut  
 $u^*_{rel} = 93$   
 %Regularity  
 $g^*_{H,rel} = 57$   
 $g^*_{C,rel} = 59$

**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 0.744 1.0 (1.0)  
 cmyn3\* 0.5 0.256 0.0 (0.0)  
 olvi4\* 0.5 0.744 1.0 1.0  
 cmyn4\* 0.5 0.256 0.0 0.0

**standard and adapted CIELAB**  
 LAB\*LAB 68.59 0.08 -19.4  
 LAB\*LABa 68.59 0.54 -22.35  
 LAB\*TCHa 75.0 22.36 271.4

**relative CIELAB lab\***  
 lab\*lab 0.654 0.012 -0.499  
 lab\*tch 0.75 0.5 0.754  
 lab\*nch 0.0 0.5 0.754

**relative Natural Colour (NC)**  
 lab\*lrj 0.654 0.0 -0.499  
 lab\*tce 0.75 0.5 0.75  
 lab\*nce 0.0 0.5 g99b

**relative Inform. Technology (IT)**  
 olvi3\* 0.0 0.488 1.0 (1.0)  
 cmyn3\* 1.0 0.512 0.0 (0.0)  
 olvi4\* 0.0 0.488 1.0 1.0  
 cmyn4\* 1.0 0.512 0.0 0.0

**standard and adapted CIELAB**  
 LAB\*LAB 41.79 1.14 -43.56  
 LAB\*LABa 41.79 1.1 -44.7  
 LAB\*TCHa 50.0 44.73 271.4

**relative CIELAB lab\***  
 lab\*lab 0.307 0.024 -0.998  
 lab\*tch 0.5 1.0 0.754  
 lab\*nch 0.0 1.0 0.754

**relative Natural Colour (NC)**  
 lab\*lrj 0.307 0.0 -0.999  
 lab\*tce 0.5 1.0 0.75  
 lab\*nce 0.0 1.0 b00r

**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 0.244 0.5 (1.0)  
 cmyn3\* 1.0 0.756 0.5 (0.0)  
 olvi4\* 0.5 0.744 1.0 0.5  
 cmyn4\* 0.5 0.256 0.0 0.5

**standard and adapted CIELAB**  
 LAB\*LAB 29.9 0.83 -22.01  
 LAB\*LABa 29.9 0.55 -22.35  
 LAB\*TCHa 25.01 22.36 271.41

**relative CIELAB lab\***  
 lab\*lab 0.154 0.012 -0.499  
 lab\*tch 0.25 0.5 0.754  
 lab\*nch 0.5 0.5 0.754

**relative Natural Colour (NC)**  
 lab\*lrj 0.154 0.0 -0.499  
 lab\*tce 0.25 0.5 0.75  
 lab\*nce 0.5 0.5 b00r

**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\* 1.0 1.0 1.0 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\* 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

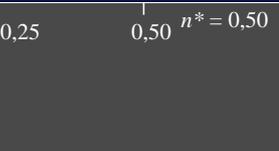
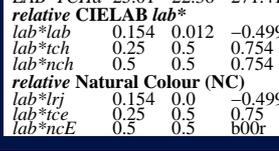
**standard and adapted CIELAB**  
 LAB\*LAB 11.01 0.07 0.01  
 LAB\*LABa 11.01 0.0 0.0  
 LAB\*TCHa 0.01 0.01 -

**relative CIELAB lab\***  
 lab\*lab 0.0 0.0 0.0  
 lab\*tch 0.0 0.0 -  
 lab\*nch 1.0 0.0 -

**relative Natural Colour (NC)**  
 lab\*lrj 0.0 0.0 0.0  
 lab\*tce 0.0 0.0 -  
 lab\*nce 1.0 0.0 -

**relative Inform. Technology (IT)**  
 olvi3\* 0.25 0.015 -0.499  
 lab\*tch 0.25 0.5 0.755  
 lab\*nch 0.5 0.5 0.755

**relative Natural Colour (NC)**  
 lab\*lrj 0.25 0.0 -0.499  
 lab\*tce 0.25 0.5 0.75  
 lab\*nce 0.5 0.5 b00r



TE170-7, 3 step scales for constant CIELAB hue 272/360 = 0.755 (left)

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