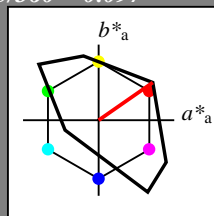


Input: Colorimetric Television Luminous System TLS18

for hue  $h^* = lab^*h = 35/360 = 0.097$   
 $lab^*tch$  and  $lab^*nch$

D65: hue O  
 LCH\*Ma: 53 87 35  
 olv\*Ma: 1.0 0.0 0.0  
 triangle lightness  $t^*$



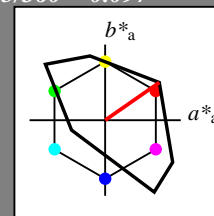
TLS18; adapted (a) CIELAB data					
	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	52.76	71.63	49.88	87.29	35
YMa	92.74	-20.02	84.97	87.3	103
LMa	84.0	-78.98	73.94	108.2	137
CMa	87.14	-44.41	-13.11	46.32	196
VMa	35.47	64.92	-95.06	115.12	304
MMa	59.01	89.33	-55.67	105.26	328
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

%Gamut  
 $u^*_{rel} = 118$   
 %Regularity  
 $g^*_{H,rel} = 22$   
 $g^*_{C,rel} = 40$

Output: Colorimetric Television Luminous System TLS18

for hue  $h^* = lab^*h = 35/360 = 0.097$   
 $lab^*tch$  and  $lab^*nch$

D65: hue O  
 LCH\*Ma: 53 87 35  
 olv\*Ma: 1.0 0.0 0.0  
 triangle lightness  $t^*$



TLS18; adapted (a) CIELAB data					
	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	52.76	71.63	49.88	87.29	35
YMa	92.74	-20.02	84.97	87.3	103
LMa	84.0	-78.98	73.94	108.2	137
CMa	87.14	-44.41	-13.11	46.32	196
VMa	35.47	64.92	-95.06	115.12	304
MMa	59.01	89.33	-55.67	105.26	328
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

%Gamut  
 $u^*_{rel} = 118$   
 %Regularity  
 $g^*_{H,rel} = 22$   
 $g^*_{C,rel} = 40$

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  
 $LAB^*LAB = 95.41 \ 0.0 \ 0.0$   
 $LAB^*LABa = 95.41 \ 0.0 \ 0.0$   
 $LAB^*TCHa = 99.99 \ 0.01 \ -$

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

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

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

standard and adapted CIELAB  
 $LAB^*LAB = 56.72 \ 0.0 \ 0.0$   
 $LAB^*LABa = 56.72 \ 0.0 \ 0.0$   
 $LAB^*TCHa = 50.0 \ 0.01 \ -$

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

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

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

standard and adapted CIELAB  
 $LAB^*LAB = 18.03 \ 0.0 \ 0.0$   
 $LAB^*LABa = 18.03 \ 0.0 \ 0.0$   
 $LAB^*TCHa = 0.01 \ 0.01 \ -$

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

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

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

standard and adapted CIELAB  
 $LAB^*LAB = 74.08 \ 35.81 \ 24.94$   
 $LAB^*LABa = 74.08 \ 35.81 \ 24.94$   
 $LAB^*TCHa = 75.0 \ 43.63 \ 34.85$

relative CIELAB lab\*  
 $lab^*lab = 0.724 \ 0.41 \ 0.286$   
 $lab^*tch = 0.75 \ 0.5 \ 0.097$   
 $lab^*nch = 0.0 \ 0.5 \ 0.097$

relative Natural Colour (NC)  
 $lab^*lrj = 0.724 \ 0.488 \ 0.109$   
 $lab^*tce = 0.75 \ 0.5 \ 0.035$   
 $lab^*nce = 0.0 \ 0.5 \ r14j$

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

standard and adapted CIELAB  
 $LAB^*LAB = 35.39 \ 35.81 \ 24.94$   
 $LAB^*LABa = 35.39 \ 35.81 \ 24.94$   
 $LAB^*TCHa = 25.01 \ 43.63 \ 34.85$

relative CIELAB lab\*  
 $lab^*lab = 0.225 \ 0.41 \ 0.286$   
 $lab^*tch = 0.25 \ 0.5 \ 0.097$   
 $lab^*nch = 0.5 \ 0.5 \ 0.097$

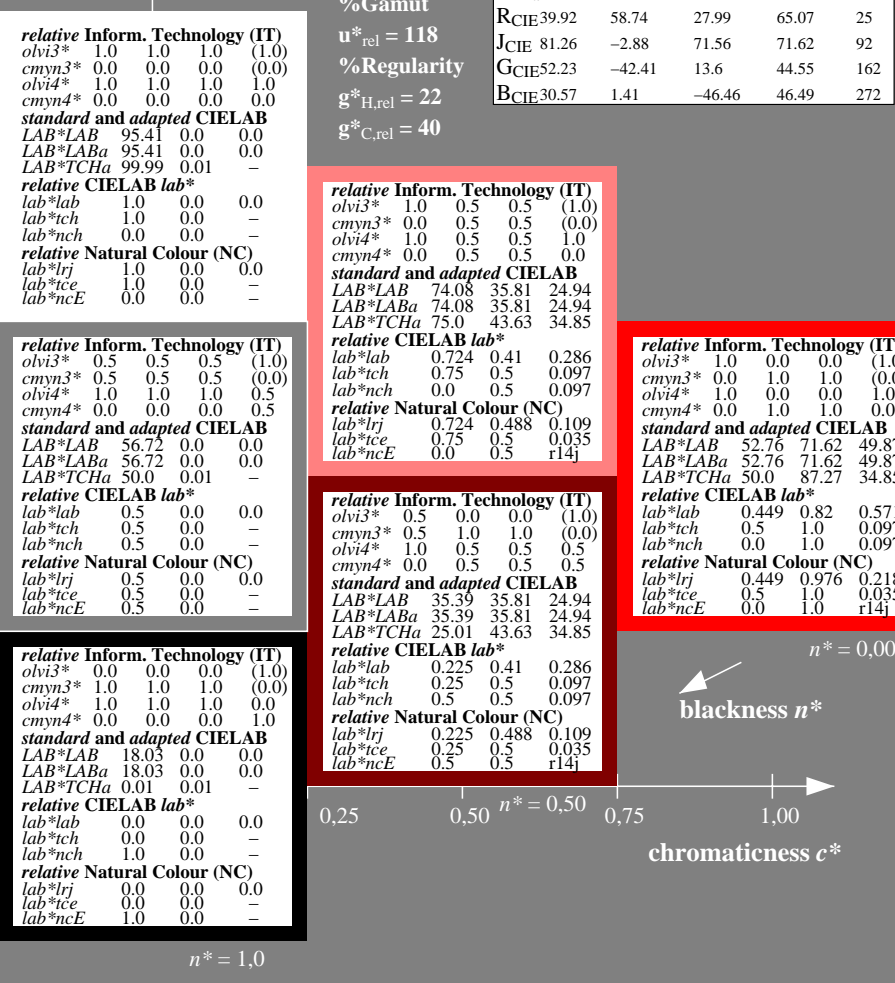
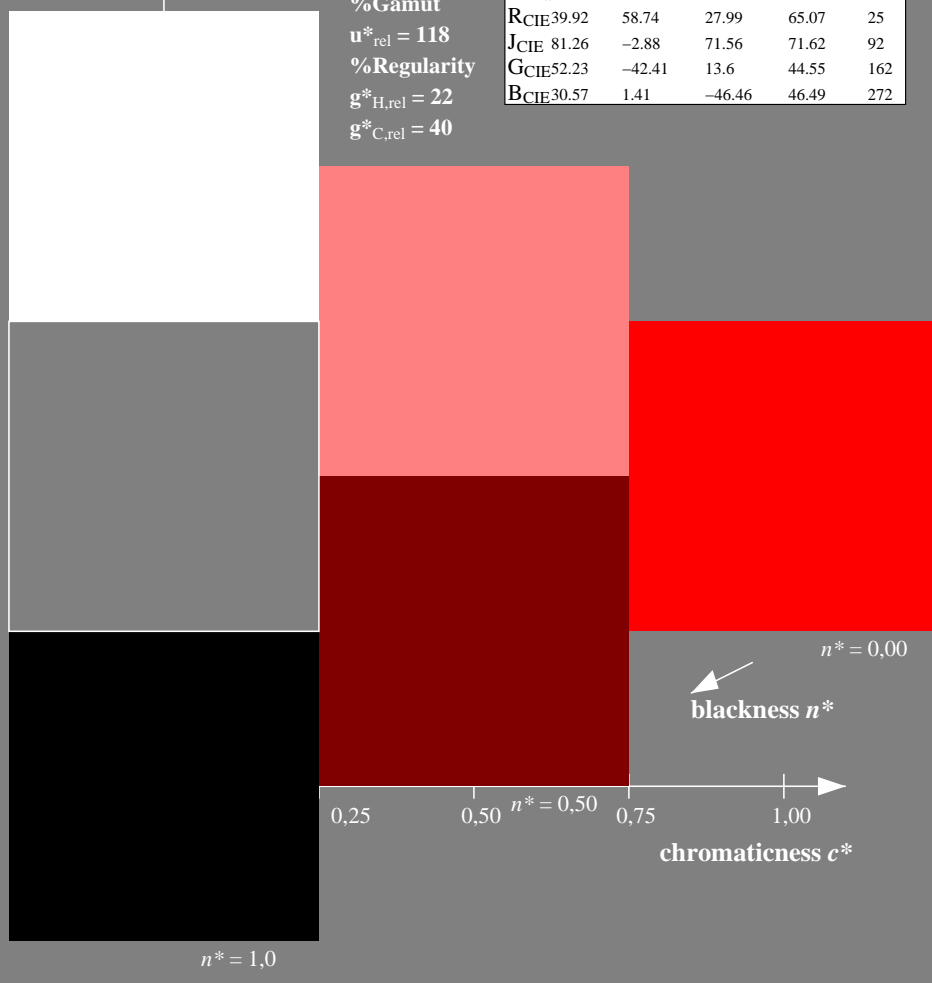
relative Natural Colour (NC)  
 $lab^*lrj = 0.225 \ 0.488 \ 0.109$   
 $lab^*tce = 0.25 \ 0.5 \ 0.035$   
 $lab^*nce = 0.5 \ 0.5 \ r14j$

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

standard and adapted CIELAB  
 $LAB^*LAB = 52.76 \ 71.62 \ 49.87$   
 $LAB^*LABa = 52.76 \ 71.62 \ 49.87$   
 $LAB^*TCHa = 50.0 \ 87.27 \ 34.85$

relative CIELAB lab\*  
 $lab^*lab = 0.449 \ 0.82 \ 0.571$   
 $lab^*tch = 0.5 \ 1.0 \ 0.097$   
 $lab^*nch = 0.0 \ 1.0 \ 0.097$

relative Natural Colour (NC)  
 $lab^*lrj = 0.449 \ 0.976 \ 0.218$   
 $lab^*tce = 0.5 \ 1.0 \ 0.035$   
 $lab^*nce = 0.0 \ 1.0 \ r14j$



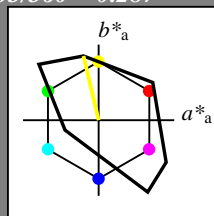
NE090-7, 3 step scales for constant CIELAB hue 35/360 = 0.097 (left)

3 step scales for constant CIELAB hue 35/360 = 0.097 (right)

Input: Colorimetric Television Luminous System TLS18

for hue  $h^* = lab^*h = 103/360 = 0.287$   
 $lab^*tch$  and  $lab^*nch$

D65: hue Y  
 LCH\*Ma: 93 87 103  
 olv\*Ma: 1.0 1.0 0.0  
 triangle lightness  $t^*$



**TLS18; adapted (a) CIELAB data**

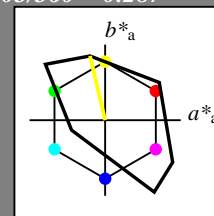
	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	52.76	71.63	49.88	87.29	35
YMa	92.74	-20.02	84.97	87.3	103
LMa	84.0	-78.98	73.94	108.2	137
CMa	87.14	-44.41	-13.11	46.32	196
VMa	35.47	64.92	-95.06	115.12	304
MMa	59.01	89.33	-55.67	105.26	328
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

%Gamut  
 $u^*_{rel} = 118$   
 %Regularity  
 $g^*_{H,rel} = 22$   
 $g^*_{C,rel} = 40$

Output: Colorimetric Television Luminous System TLS18

for hue  $h^* = lab^*h = 103/360 = 0.287$   
 $lab^*tch$  and  $lab^*nch$

D65: hue Y  
 LCH\*Ma: 93 87 103  
 olv\*Ma: 1.0 1.0 0.0  
 triangle lightness  $t^*$



**TLS18; adapted (a) CIELAB data**

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	52.76	71.63	49.88	87.29	35
YMa	92.74	-20.02	84.97	87.3	103
LMa	84.0	-78.98	73.94	108.2	137
CMa	87.14	-44.41	-13.11	46.32	196
VMa	35.47	64.92	-95.06	115.12	304
MMa	59.01	89.33	-55.67	105.26	328
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

%Gamut  
 $u^*_{rel} = 118$   
 %Regularity  
 $g^*_{H,rel} = 22$   
 $g^*_{C,rel} = 40$

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

**standard and adapted CIELAB**

LAB*LAB	94.07	-10.0	42.48
LAB*LABa	94.07	-10.0	42.48
LAB*TCHa	75.0	43.64	103.26

**relative CIELAB lab\***

lab*lab	0.983	-0.114	0.487
lab*tch	0.75	0.5	0.287
lab*nch	0.0	0.5	0.287

**relative Natural Colour (NC)**

lab*lrj	0.983	-0.121	0.485
lab*tce	0.75	0.5	0.289
lab*nce	0.0	0.5	j15g

**relative Inform. Technology (IT)**

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

**standard and adapted CIELAB**

LAB*LAB	92.73	-20.02	84.95
LAB*LABa	92.73	-20.02	84.95
LAB*TCHa	50.0	87.28	103.26

**relative CIELAB lab\***

lab*lab	0.965	-0.228	0.973
lab*tch	0.5	1.0	0.287
lab*nch	0.0	1.0	0.287

**relative Natural Colour (NC)**

lab*lrj	0.965	-0.243	0.97
lab*tce	0.5	1.0	0.289
lab*nce	0.0	1.0	j15g

**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	56.72	0.0	0.0
LAB*LABa	56.72	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	0.5	0.0	(1.0)
cmyn3*	0.5	0.5	1.0	(0.0)
olvi4*	1.0	1.0	0.5	0.5
cmyn4*	0.0	0.0	0.5	0.5

**standard and adapted CIELAB**

LAB*LAB	55.38	-10.0	42.48
LAB*LABa	55.38	-10.0	42.48
LAB*TCHa	25.01	43.64	103.26

**relative CIELAB lab\***

lab*lab	0.483	-0.114	0.487
lab*tch	0.25	0.5	0.287
lab*nch	0.5	0.5	0.287

**relative Natural Colour (NC)**

lab*lrj	0.483	-0.121	0.485
lab*tce	0.25	0.5	0.289
lab*nce	0.5	0.5	j15g

**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**

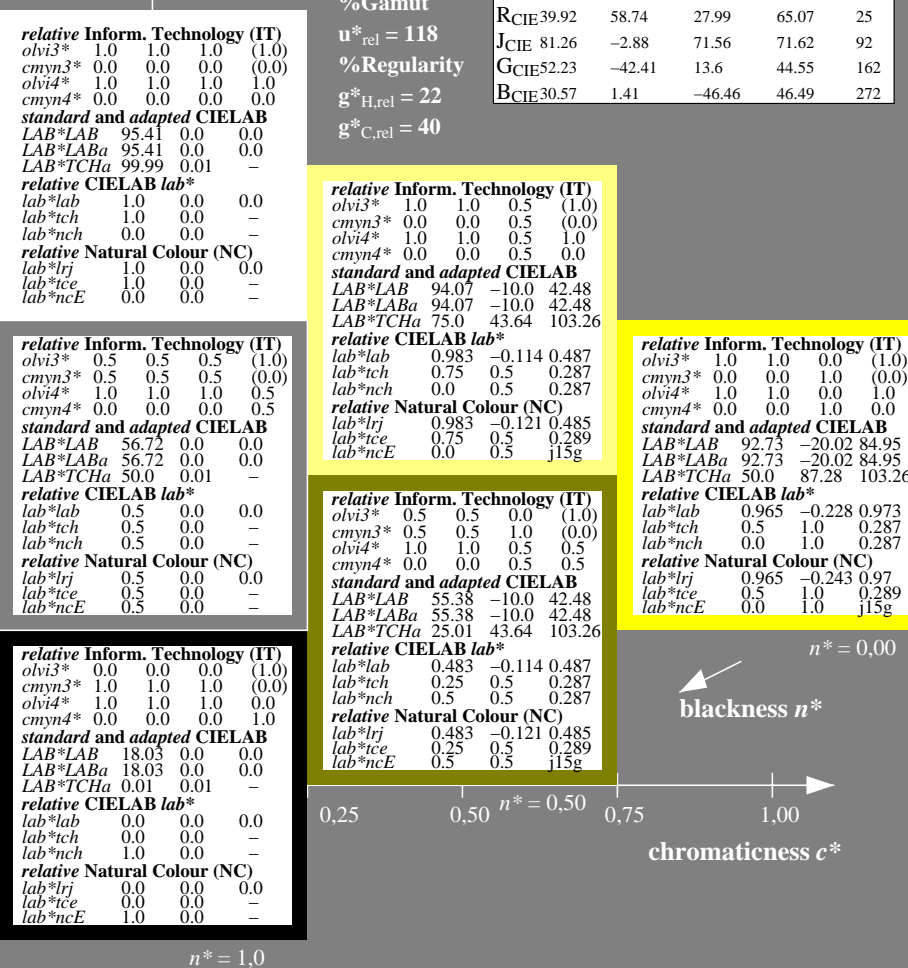
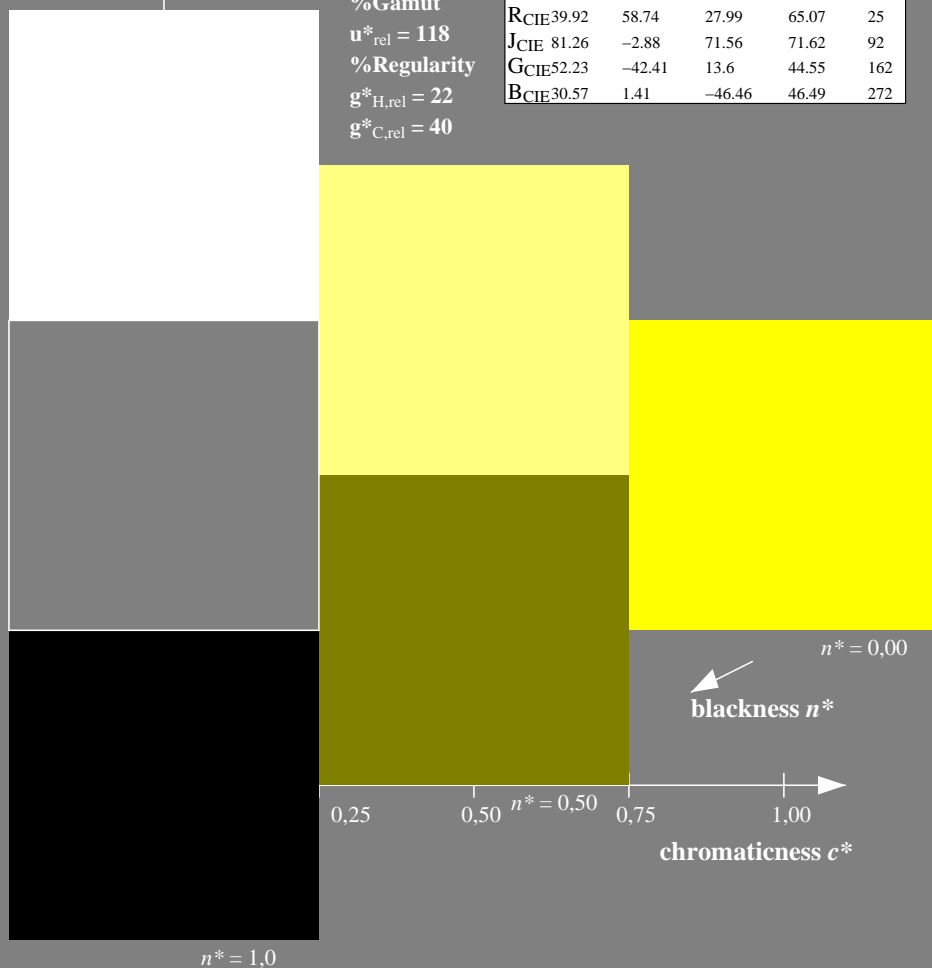
LAB*LAB	18.03	0.0	0.0
LAB*LABa	18.03	0.0	0.0
LAB*TCHa	0.01	0.01	-

**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	-



NE090-7, 3 step scales for constant CIELAB hue 103/360 = 0.287 (left)

3 step scales for constant CIELAB hue 103/360 = 0.287 (right)

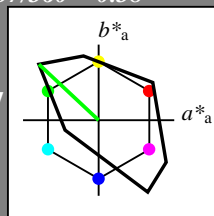
BAM-test chart NE09; Colorimetric systems TLS18 & TLS18  
 D65: 3 step colour scales and coordinate data for 10 hues

input: olv\* setrgbcolor  
 output: no change compared to input

Input: Colorimetric Television Luminous System TLS18

for hue  $h^* = lab^*h = 137/360 = 0.38$   
 $lab^*tch$  and  $lab^*nch$

D65: hue L  
 LCH\*Ma: 84 108 137  
 olv\*Ma: 0.0 1.0 0.0  
 triangle lightness  $t^*$



**TLS18; adapted (a) CIELAB data**

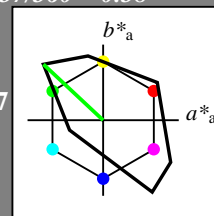
	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	52.76	71.63	49.88	87.29	35
YMa	92.74	-20.02	84.97	87.3	103
LMa	84.0	-78.98	73.94	108.2	137
CMa	87.14	-44.41	-13.11	46.32	196
VMa	35.47	64.92	-95.06	115.12	304
MMa	59.01	89.33	-55.67	105.26	328
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

%Gamut  
 $u^*_{rel} = 118$   
 %Regularity  
 $g^*_{H,rel} = 22$   
 $g^*_{C,rel} = 40$

Output: Colorimetric Television Luminous System TLS18

for hue  $h^* = lab^*h = 137/360 = 0.38$   
 $lab^*tch$  and  $lab^*nch$

D65: hue L  
 LCH\*Ma: 84 108 137  
 olv\*Ma: 0.0 1.0 0.0  
 triangle lightness  $t^*$



**TLS18; adapted (a) CIELAB data**

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	52.76	71.63	49.88	87.29	35
YMa	92.74	-20.02	84.97	87.3	103
LMa	84.0	-78.98	73.94	108.2	137
CMa	87.14	-44.41	-13.11	46.32	196
VMa	35.47	64.92	-95.06	115.12	304
MMa	59.01	89.33	-55.67	105.26	328
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

%Gamut  
 $u^*_{rel} = 118$   
 %Regularity  
 $g^*_{H,rel} = 22$   
 $g^*_{C,rel} = 40$

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

**standard and adapted CIELAB**

LAB*LAB	89.7	-39.48	36.96
LAB*LABa	89.7	-39.48	36.96
LAB*TCHa	75.0	54.09	136.89

**relative CIELAB lab\***

lab*lab	0.926	-0.364	0.342
lab*tch	0.75	0.5	0.38
lab*nch	0.0	0.5	0.38

**relative Natural Colour (NC)**

lab*lrj	0.926	-0.42	0.269
lab*tce	0.75	0.5	0.409
lab*nce	0.0	0.5	0.63g

**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	56.72	0.0	0.0
LAB*LABa	56.72	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	0.5	0.0	(1.0)
cmyn3*	0.25	0.5	1.0	(0.0)
olvi4*	0.5	1.0	0.5	0.5
cmyn4*	0.5	0.0	0.5	0.5

**standard and adapted CIELAB**

LAB*LAB	51.01	-39.48	36.96
LAB*LABa	51.01	-39.48	36.96
LAB*TCHa	25.01	54.09	136.89

**relative CIELAB lab\***

lab*lab	0.426	-0.364	0.342
lab*tch	0.25	0.5	0.38
lab*nch	0.5	0.5	0.38

**relative Natural Colour (NC)**

lab*lrj	0.426	-0.42	0.269
lab*tce	0.25	0.5	0.409
lab*nce	0.5	0.5	0.63g

**relative Inform. Technology (IT)**

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

**standard and adapted CIELAB**

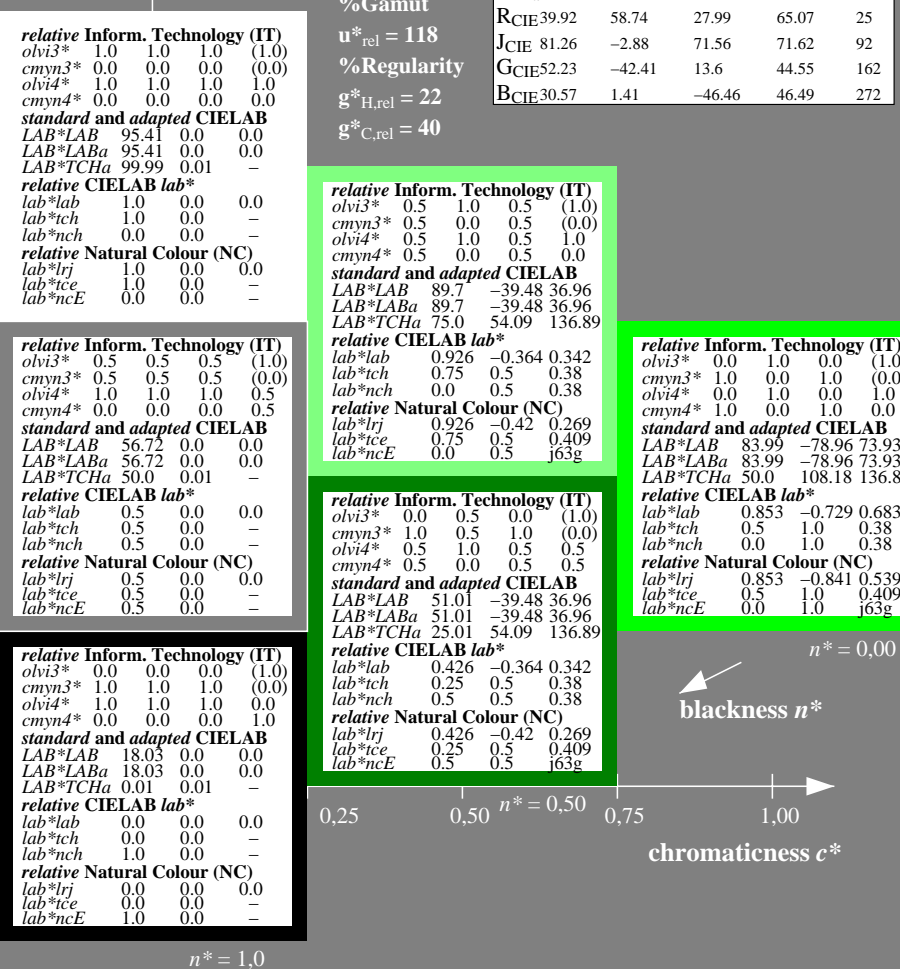
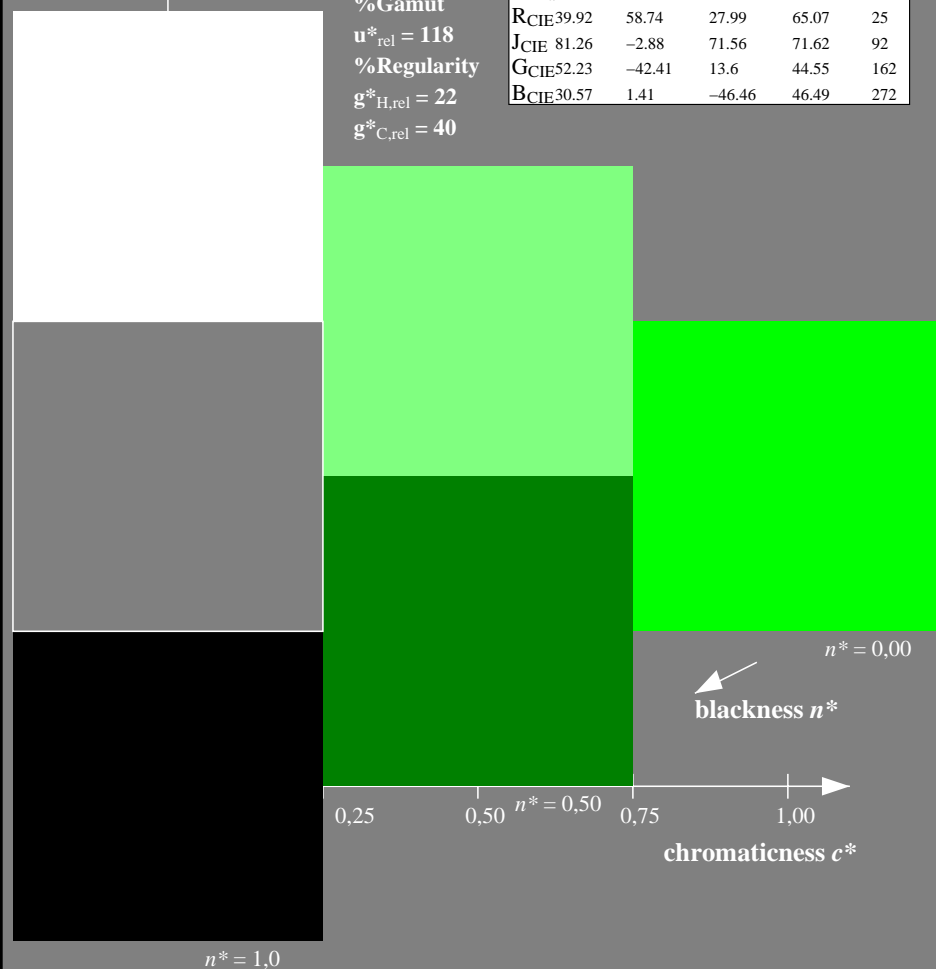
LAB*LAB	83.99	-78.96	73.93
LAB*LABa	83.99	-78.96	73.93
LAB*TCHa	50.0	108.18	136.89

**relative CIELAB lab\***

lab*lab	0.853	-0.729	0.683
lab*tch	0.5	1.0	0.38
lab*nch	0.0	1.0	0.38

**relative Natural Colour (NC)**

lab*lrj	0.853	-0.841	0.539
lab*tce	0.5	1.0	0.409
lab*nce	0.0	1.0	0.63g



NE090-7, 3 step scales for constant CIELAB hue 137/360 = 0.38 (left)

3 step scales for constant CIELAB hue 137/360 = 0.38 (right)

BAM-test chart NE09; Colorimetric systems TLS18 & TLS18  
 D65: 3 step colour scales and coordinate data for 10 hues

input: olv\* setrgbcolor  
 output: no change compared to input

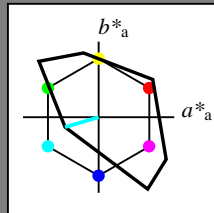
See for similar files: <http://www.ps.bam.de/NE09/>  
 Technical information: <http://www.ps.bam.de>  
 Version 2.1, io=1,1

BAM registration: 20060101-NE09/10Q/Q09E02NP.PS/.PDF BAM material: code=rh4ta  
 application for evaluation and measurement of printer or monitor systems  
 /NE09/ Form: 3/10, Serie: 1/1, Page: 3 Page count: 3

Input: Colorimetric Television Luminous System TLS18

for hue  $h^* = lab^*h = 196/360 = 0.546$   
 $lab^*tch$  and  $lab^*nch$

D65: hue C  
 LCH\*Ma: 87 46 196  
 olv\*Ma: 0.0 1.0 1.0  
 triangle lightness  $t^*$



**TLS18; adapted (a) CIELAB data**

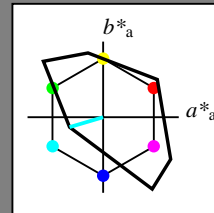
	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	52.76	71.63	49.88	87.29	35
YMa	92.74	-20.02	84.97	87.3	103
LMa	84.0	-78.98	73.94	108.2	137
CMa	87.14	-44.41	-13.11	46.32	196
VMa	35.47	64.92	-95.06	115.12	304
MMa	59.01	89.33	-55.67	105.26	328
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

%Gamut  
 $u^*_{rel} = 118$   
 %Regularity  
 $g^*_{H,rel} = 22$   
 $g^*_{C,rel} = 40$

Output: Colorimetric Television Luminous System TLS18

for hue  $h^* = lab^*h = 196/360 = 0.546$   
 $lab^*tch$  and  $lab^*nch$

D65: hue C  
 LCH\*Ma: 87 46 196  
 olv\*Ma: 0.0 1.0 1.0  
 triangle lightness  $t^*$



**TLS18; adapted (a) CIELAB data**

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	52.76	71.63	49.88	87.29	35
YMa	92.74	-20.02	84.97	87.3	103
LMa	84.0	-78.98	73.94	108.2	137
CMa	87.14	-44.41	-13.11	46.32	196
VMa	35.47	64.92	-95.06	115.12	304
MMa	59.01	89.33	-55.67	105.26	328
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

%Gamut  
 $u^*_{rel} = 118$   
 %Regularity  
 $g^*_{H,rel} = 22$   
 $g^*_{C,rel} = 40$

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

**standard and adapted CIELAB**

LAB*LAB	91.27	-22.2	-6.55
LAB*LABa	91.27	-22.2	-6.55
LAB*TCHa	75.0	23.15	196.46

**relative CIELAB lab\***

lab*lab	0.946	-0.478	-0.141
lab*tch	0.75	0.5	0.546
lab*nch	0.0	0.5	0.546

**relative Natural Colour (NC)**

lab*lrj	0.946	-0.44	-0.235
lab*tce	0.75	0.5	0.578
lab*nce	0.0	0.5	g31b

**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	56.72	0.0	0.0
LAB*LABa	56.72	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	0.5	0.5	(1.0)
cmyn3*	1.0	0.5	0.5	(0.0)
olvi4*	0.5	1.0	1.0	0.5
cmyn4*	0.5	0.0	0.0	0.5

**standard and adapted CIELAB**

LAB*LAB	52.58	-22.2	-6.55
LAB*LABa	52.58	-22.2	-6.55
LAB*TCHa	25.01	23.15	196.46

**relative CIELAB lab\***

lab*lab	0.447	-0.478	-0.141
lab*tch	0.25	0.5	0.546
lab*nch	0.5	0.5	0.546

**relative Natural Colour (NC)**

lab*lrj	0.447	-0.44	-0.235
lab*tce	0.25	0.5	0.578
lab*nce	0.5	0.5	g31b

**relative Inform. Technology (IT)**

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

**standard and adapted CIELAB**

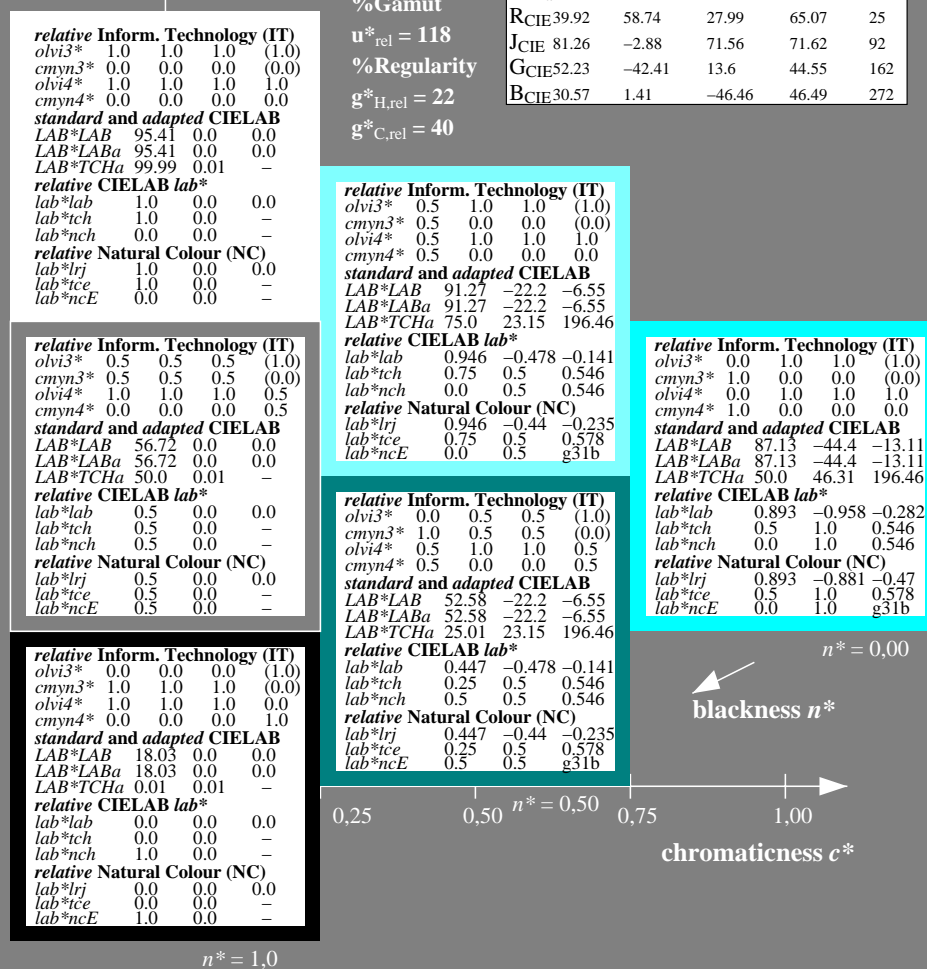
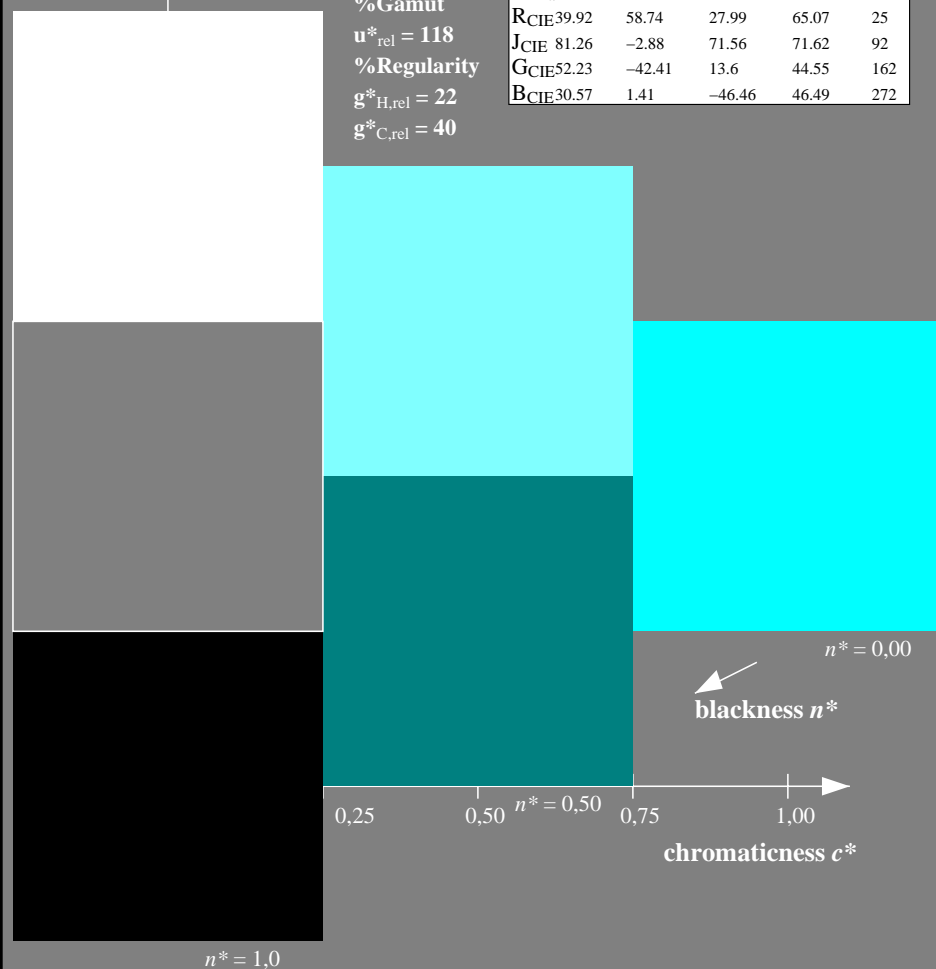
LAB*LAB	87.13	-44.4	-13.11
LAB*LABa	87.13	-44.4	-13.11
LAB*TCHa	50.0	46.31	196.46

**relative CIELAB lab\***

lab*lab	0.893	-0.958	-0.282
lab*tch	0.5	1.0	0.546
lab*nch	0.0	1.0	0.546

**relative Natural Colour (NC)**

lab*lrj	0.893	-0.881	-0.47
lab*tce	0.5	1.0	0.578
lab*nce	0.0	1.0	g31b



NE090-7, 3 step scales for constant CIELAB hue 196/360 = 0.546 (left)

3 step scales for constant CIELAB hue 196/360 = 0.546 (right)

BAM-test chart NE09; Colorimetric systems TLS18 & TLS18  
 D65: 3 step colour scales and coordinate data for 10 hues

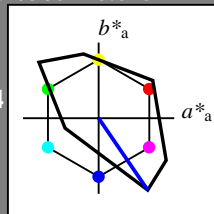
input: olv\* setrgbcolor  
 output: no change compared to input



Input: Colorimetric Television Luminous System TLS18

for hue  $h^* = lab^*h = 304/360 = 0.845$   
 $lab^*tch$  and  $lab^*nch$

D65: hue V  
 LCH\*Ma: 35 115 304  
 olv\*Ma: 0.0 0.0 1.0  
 triangle lightness  $t^*$



**TLS18; adapted (a) CIELAB data**

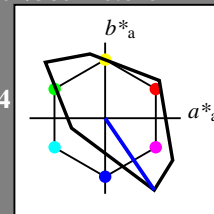
	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	52.76	71.63	49.88	87.29	35
YMa	92.74	-20.02	84.97	87.3	103
LMa	84.0	-78.98	73.94	108.2	137
CMa	87.14	-44.41	-13.11	46.32	196
VMa	35.47	64.92	-95.06	115.12	304
MMa	59.01	89.33	-55.67	105.26	328
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

%Gamut  
 $u^*_{rel} = 118$   
 %Regularity  
 $g^*_{H,rel} = 22$   
 $g^*_{C,rel} = 40$

Output: Colorimetric Television Luminous System TLS18

for hue  $h^* = lab^*h = 304/360 = 0.845$   
 $lab^*tch$  and  $lab^*nch$

D65: hue V  
 LCH\*Ma: 35 115 304  
 olv\*Ma: 0.0 0.0 1.0  
 triangle lightness  $t^*$



**TLS18; adapted (a) CIELAB data**

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	52.76	71.63	49.88	87.29	35
YMa	92.74	-20.02	84.97	87.3	103
LMa	84.0	-78.98	73.94	108.2	137
CMa	87.14	-44.41	-13.11	46.32	196
VMa	35.47	64.92	-95.06	115.12	304
MMa	59.01	89.33	-55.67	105.26	328
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

%Gamut  
 $u^*_{rel} = 118$   
 %Regularity  
 $g^*_{H,rel} = 22$   
 $g^*_{C,rel} = 40$

**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	0.0
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	65.44	32.45	-47.52
LAB*LABa	65.44	32.45	-47.52
LAB*TCHa	75.0	57.55	304.33

**relative CIELAB lab\***

lab*lab	0.613	0.282	-0.412
lab*tch	0.75	0.5	0.845
lab*nch	0.0	0.5	0.845

**relative Natural Colour (NC)**

lab*lrj	0.613	0.217	-0.449
lab*tce	0.75	0.5	0.822
lab*nce	0.0	0.5	b28r

**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	56.72	0.0	0.0
LAB*LABa	56.72	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	26.75	32.45	-47.52
LAB*LABa	26.75	32.45	-47.52
LAB*TCHa	25.01	57.55	304.33

**relative CIELAB lab\***

lab*lab	0.113	0.282	-0.412
lab*tch	0.25	0.5	0.845
lab*nch	0.5	0.5	0.845

**relative Natural Colour (NC)**

lab*lrj	0.113	0.217	-0.449
lab*tce	0.25	0.5	0.822
lab*nce	0.5	0.5	b28r

**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	18.03	0.0	0.0
LAB*LABa	18.03	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	0.5	(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**

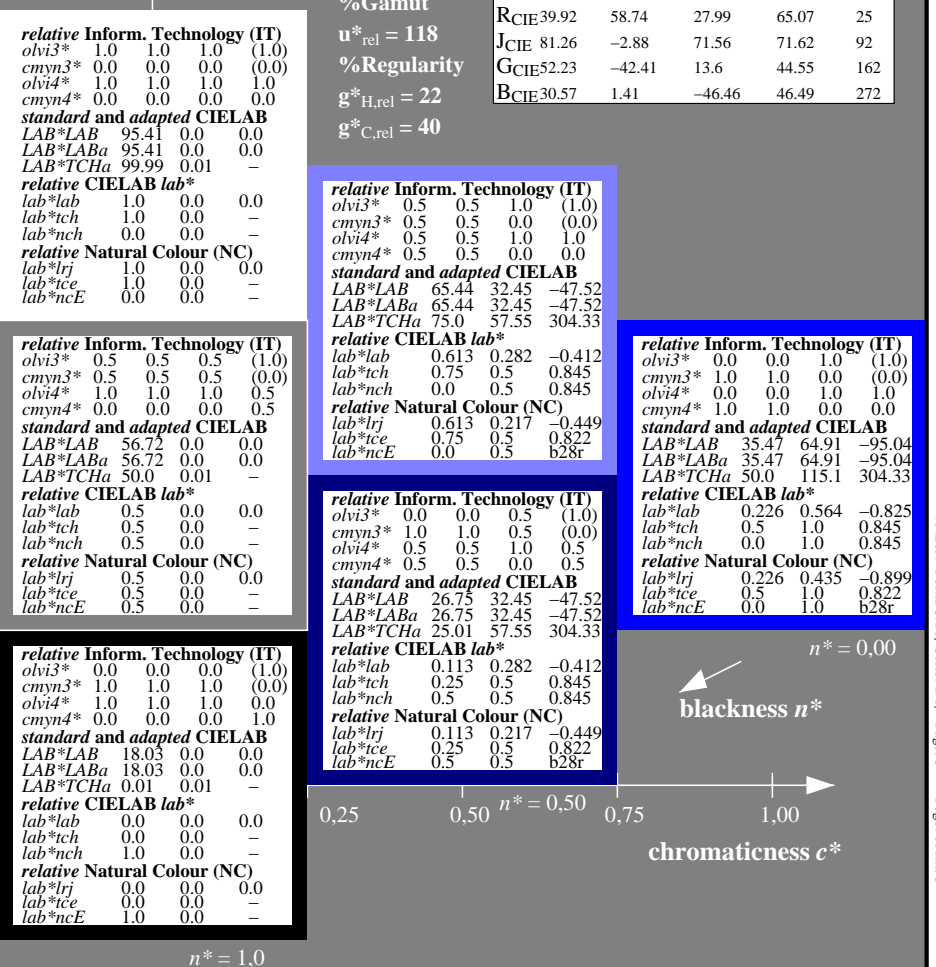
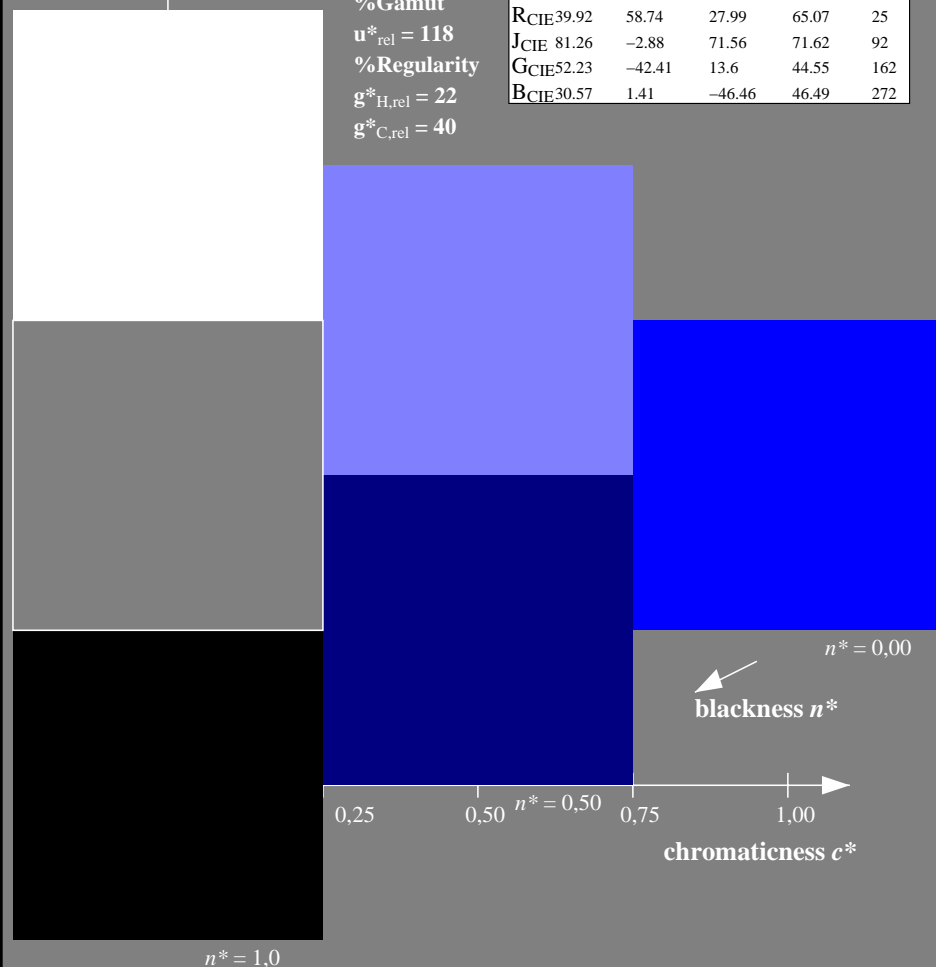
LAB*LAB	26.75	32.45	-47.52
LAB*LABa	26.75	32.45	-47.52
LAB*TCHa	25.01	57.55	304.33

**relative CIELAB lab\***

lab*lab	0.113	0.282	-0.412
lab*tch	0.25	0.5	0.845
lab*nch	0.5	0.5	0.845

**relative Natural Colour (NC)**

lab*lrj	0.113	0.217	-0.449
lab*tce	0.25	0.5	0.822
lab*nce	0.5	0.5	b28r



NE090-7, 3 step scales for constant CIELAB hue 304/360 = 0.845 (left)

3 step scales for constant CIELAB hue 304/360 = 0.845 (right)

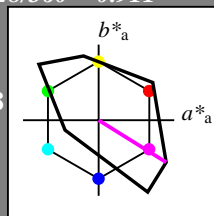
BAM-test chart NE09; Colorimetric systems TLS18 & TLS18  
 D65: 3 step colour scales and coordinate data for 10 hues

input: olv\* setrgbcolor  
 output: no change compared to input

Input: Colorimetric Television Luminous System TLS18

for hue  $h^* = lab^*h = 328/360 = 0.911$   
 $lab^*tch$  and  $lab^*nch$

D65: hue M  
 LCH\*Ma: 59 105 328  
 olv\*Ma: 1.0 0.0 1.0  
 triangle lightness  $t^*$



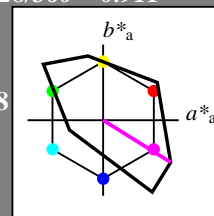
TLS18; adapted (a) CIELAB data					
	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	52.76	71.63	49.88	87.29	35
YMa	92.74	-20.02	84.97	87.3	103
LMa	84.0	-78.98	73.94	108.2	137
CMa	87.14	-44.41	-13.11	46.32	196
VMa	35.47	64.92	-95.06	115.12	304
MMa	59.01	89.33	-55.67	105.26	328
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

%Gamut  
 $u^*_{rel} = 118$   
 %Regularity  
 $g^*_{H,rel} = 22$   
 $g^*_{C,rel} = 40$

Output: Colorimetric Television Luminous System TLS18

for hue  $h^* = lab^*h = 328/360 = 0.911$   
 $lab^*tch$  and  $lab^*nch$

D65: hue M  
 LCH\*Ma: 59 105 328  
 olv\*Ma: 1.0 0.0 1.0  
 triangle lightness  $t^*$



TLS18; adapted (a) CIELAB data					
	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	52.76	71.63	49.88	87.29	35
YMa	92.74	-20.02	84.97	87.3	103
LMa	84.0	-78.98	73.94	108.2	137
CMa	87.14	-44.41	-13.11	46.32	196
VMa	35.47	64.92	-95.06	115.12	304
MMa	59.01	89.33	-55.67	105.26	328
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

%Gamut  
 $u^*_{rel} = 118$   
 %Regularity  
 $g^*_{H,rel} = 22$   
 $g^*_{C,rel} = 40$

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	0.0
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	77.21	44.66	-27.82
LAB*LABa	77.21	44.66	-27.82
LAB*TCHa	75.0	52.62	328.06

relative CIELAB lab\*

lab*lab	0.765	0.424	-0.263
lab*tch	0.75	0.5	0.911
lab*nch	0.0	0.5	0.911

relative Natural Colour (NC)

lab*lrj	0.765	0.351	-0.355
lab*tce	0.75	0.5	0.874
lab*nce	0.0	0.5	b49r

relative Inform. Technology (IT)

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

standard and adapted CIELAB

LAB*LAB	59.01	89.31	-55.66
LAB*LABa	59.01	89.31	-55.66
LAB*TCHa	50.0	105.24	328.06

relative CIELAB lab\*

lab*lab	0.53	0.848	-0.528
lab*tch	0.5	1.0	0.911
lab*nch	0.0	1.0	0.911

relative Natural Colour (NC)

lab*lrj	0.53	0.702	-0.711
lab*tce	0.5	1.0	0.874
lab*nce	0.0	1.0	b49r

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	56.72	0.0	0.0
LAB*LABa	56.72	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	38.51	44.66	-27.82
LAB*LABa	38.51	44.66	-27.82
LAB*TCHa	25.01	52.62	328.06

relative CIELAB lab\*

lab*lab	0.265	0.424	-0.263
lab*tch	0.25	0.5	0.911
lab*nch	0.5	0.5	0.911

relative Natural Colour (NC)

lab*lrj	0.265	0.351	-0.355
lab*tce	0.25	0.5	0.874
lab*nce	0.5	0.5	b49r

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	18.03	0.0	0.0
LAB*LABa	18.03	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

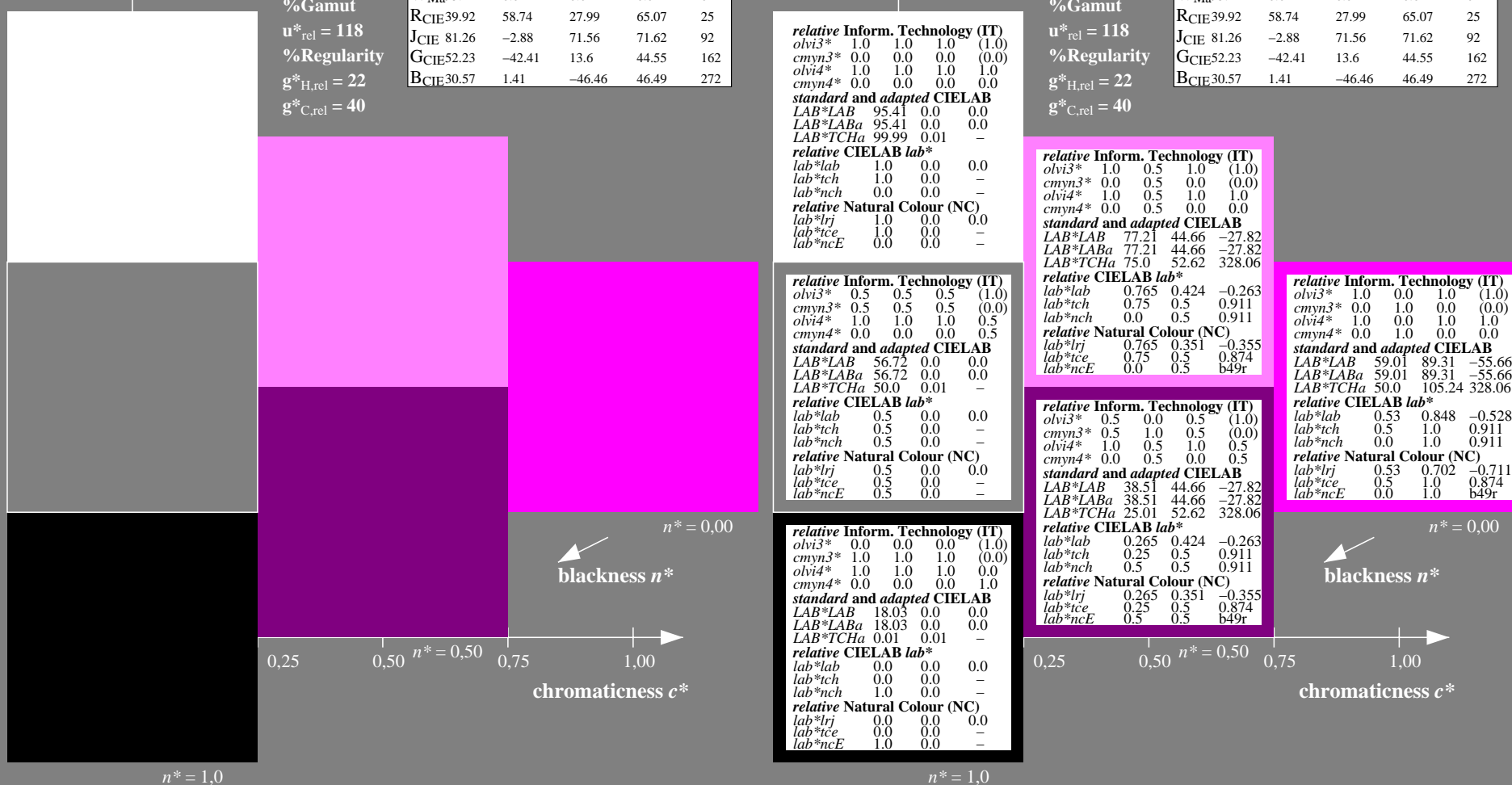
LAB*LAB	18.03	0.0	0.0
LAB*LABa	18.03	0.0	0.0
LAB*TCHa	0.01	0.01	-

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	-



NE090-7, 3 step scales for constant CIELAB hue 328/360 = 0.911 (left)

3 step scales for constant CIELAB hue 328/360 = 0.911 (right)

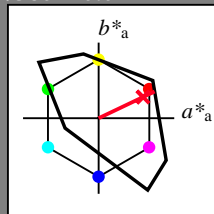
BAM-test chart NE09; Colorimetric systems TLS18 & TLS18  
 D65: 3 step colour scales and coordinate data for 10 hues

input: olv\* setrgbcolor  
 output: no change compared to input

Input: Colorimetric Television Luminous System TLS18

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

D65: hue R  
 LCH\*Ma: 54 82 25  
 olv\*Ma: 1.0 0.0 0.14  
 triangle lightness  $t^*$



**TLS18; adapted (a) CIELAB data**

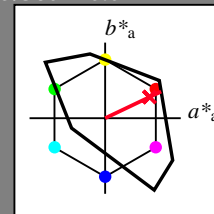
	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	52.76	71.63	49.88	87.29	35
YMa	92.74	-20.02	84.97	87.3	103
LMa	84.0	-78.98	73.94	108.2	137
CMa	87.14	-44.41	-13.11	46.32	196
VMa	35.47	64.92	-95.06	115.12	304
MMa	59.01	89.33	-55.67	105.26	328
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

%Gamut  
 $u^*_{rel} = 118$   
 %Regularity  
 $g^*_{H,rel} = 22$   
 $g^*_{C,rel} = 40$

Output: Colorimetric Television Luminous System TLS18

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

D65: hue R  
 LCH\*Ma: 54 82 25  
 olv\*Ma: 1.0 0.0 0.14  
 triangle lightness  $t^*$



**TLS18; adapted (a) CIELAB data**

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	52.76	71.63	49.88	87.29	35
YMa	92.74	-20.02	84.97	87.3	103
LMa	84.0	-78.98	73.94	108.2	137
CMa	87.14	-44.41	-13.11	46.32	196
VMa	35.47	64.92	-95.06	115.12	304
MMa	59.01	89.33	-55.67	105.26	328
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

%Gamut  
 $u^*_{rel} = 118$   
 %Regularity  
 $g^*_{H,rel} = 22$   
 $g^*_{C,rel} = 40$

**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**  
 $LAB^*LAB = 95.41 \ 0.0 \ 0.0$   
 $LAB^*LABa = 95.41 \ 0.0 \ 0.0$   
 $LAB^*TCHa = 99.99 \ 0.01 \ -$

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

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

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

**standard and adapted CIELAB**  
 $LAB^*LAB = 56.72 \ 0.0 \ 0.0$   
 $LAB^*LABa = 56.72 \ 0.0 \ 0.0$   
 $LAB^*TCHa = 50.0 \ 0.01 \ -$

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

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

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

**standard and adapted CIELAB**  
 $LAB^*LAB = 18.03 \ 0.0 \ 0.0$   
 $LAB^*LABa = 18.03 \ 0.0 \ 0.0$   
 $LAB^*TCHa = 0.01 \ 0.01 \ -$

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

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

**relative Inform. Technology (IT)**  
 $olvi3^* = 1.0 \ 0.5 \ 0.569 \ (1.0)$   
 $cmyn3^* = 0.0 \ 0.5 \ 0.431 \ (0.0)$   
 $olvi4^* = 1.0 \ 0.5 \ 0.569 \ 1.0$   
 $cmyn4^* = 0.0 \ 0.5 \ 0.431 \ 0.0$

**standard and adapted CIELAB**  
 $LAB^*LAB = 74.51 \ 37.03 \ 17.64$   
 $LAB^*LABa = 74.51 \ 37.03 \ 17.64$   
 $LAB^*TCHa = 75.0 \ 41.02 \ 25.48$

**relative CIELAB lab\***  
 $lab^*lab = 0.73 \ 0.451 \ 0.215$   
 $lab^*tch = 0.75 \ 0.5 \ 0.071$   
 $lab^*nch = 0.0 \ 0.5 \ 0.071$

**relative Natural Colour (NC)**  
 $lab^*lrj = 0.73 \ 0.5 \ 0.0$   
 $lab^*tce = 0.75 \ 0.5 \ 1.0$   
 $lab^*nce = 0.0 \ 0.5 \ b99r$

**relative Inform. Technology (IT)**  
 $olvi3^* = 0.5 \ 0.0 \ 0.069 \ (1.0)$   
 $cmyn3^* = 0.5 \ 1.0 \ 0.931 \ (0.0)$   
 $olvi4^* = 1.0 \ 0.5 \ 0.569 \ 0.5$   
 $cmyn4^* = 0.0 \ 0.5 \ 0.431 \ 0.5$

**standard and adapted CIELAB**  
 $LAB^*LAB = 35.82 \ 37.03 \ 17.65$   
 $LAB^*LABa = 35.82 \ 37.03 \ 17.65$   
 $LAB^*TCHa = 25.01 \ 41.02 \ 25.49$

**relative CIELAB lab\***  
 $lab^*lab = 0.23 \ 0.451 \ 0.215$   
 $lab^*tch = 0.25 \ 0.5 \ 0.071$   
 $lab^*nch = 0.5 \ 0.5 \ 0.071$

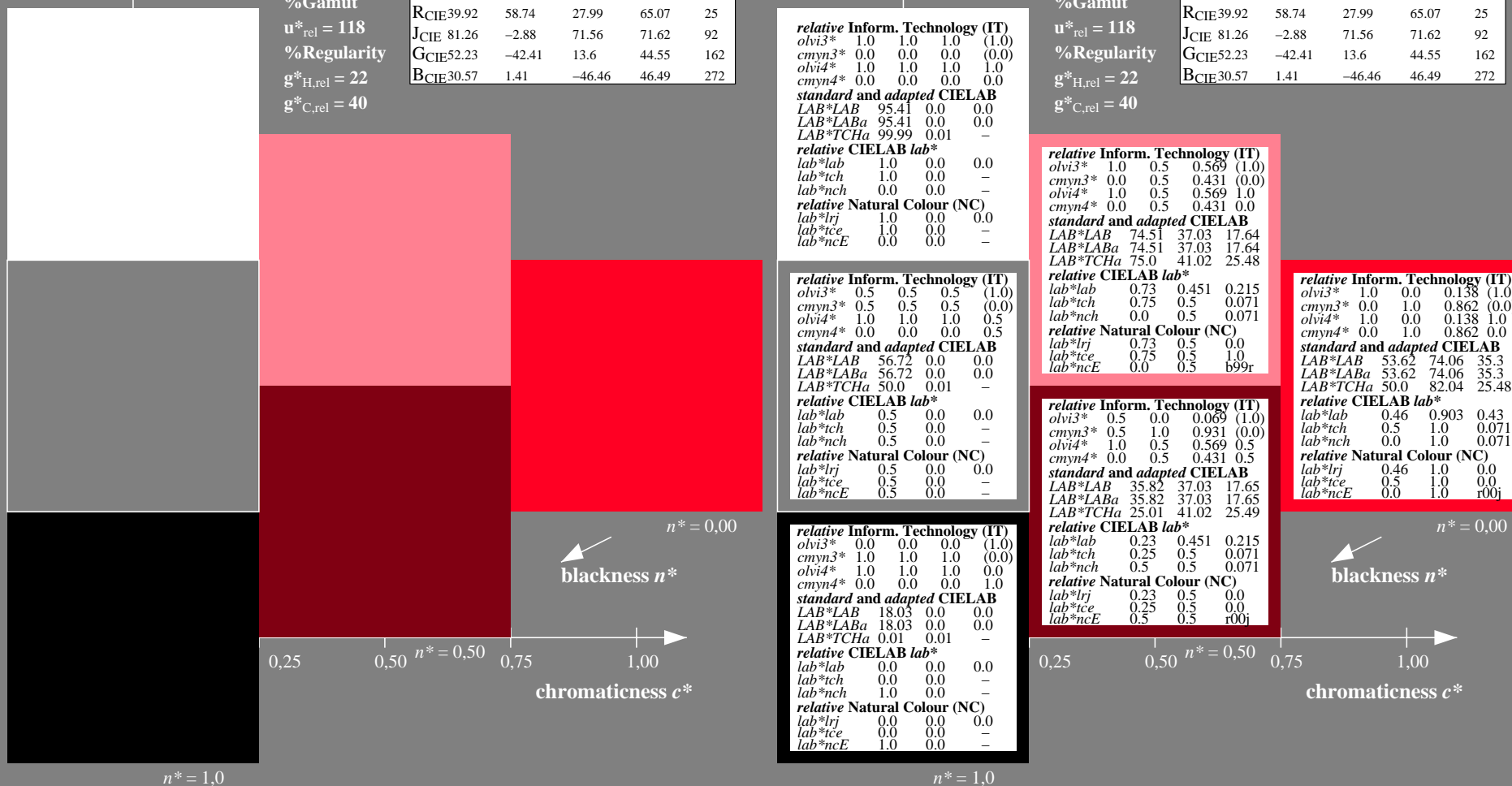
**relative Natural Colour (NC)**  
 $lab^*lrj = 0.23 \ 0.5 \ 0.0$   
 $lab^*tce = 0.25 \ 0.5 \ 0.0$   
 $lab^*nce = 0.5 \ 0.5 \ r00j$

**relative Inform. Technology (IT)**  
 $olvi3^* = 1.0 \ 0.0 \ 0.138 \ (1.0)$   
 $cmyn3^* = 0.0 \ 1.0 \ 0.862 \ (0.0)$   
 $olvi4^* = 1.0 \ 0.0 \ 0.138 \ 1.0$   
 $cmyn4^* = 0.0 \ 1.0 \ 0.862 \ 0.0$

**standard and adapted CIELAB**  
 $LAB^*LAB = 53.62 \ 74.06 \ 35.3$   
 $LAB^*LABa = 53.62 \ 74.06 \ 35.3$   
 $LAB^*TCHa = 50.0 \ 82.04 \ 25.48$

**relative CIELAB lab\***  
 $lab^*lab = 0.46 \ 0.903 \ 0.43$   
 $lab^*tch = 0.5 \ 1.0 \ 0.071$   
 $lab^*nch = 0.0 \ 1.0 \ 0.071$

**relative Natural Colour (NC)**  
 $lab^*lrj = 0.46 \ 1.0 \ 0.0$   
 $lab^*tce = 0.5 \ 1.0 \ 0.0$   
 $lab^*nce = 0.0 \ 1.0 \ r00j$



NE090-7, 3 step scales for constant CIELAB hue 25/360 = 0.071 (left)

3 step scales for constant CIELAB hue 25/360 = 0.071 (right)

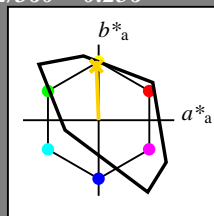
BAM-test chart NE09; Colorimetric systems TLS18 & TLS18  
 D65: 3 step colour scales and coordinate data for 10 hues

input:  $olv^* setrgbcolor$   
 output: no change compared to input

Input: Colorimetric Television Luminous System TLS18

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

D65: hue J  
 LCH\*Ma: 85 79 92  
 olv\*Ma: 1.0 0.82 0.0  
 triangle lightness  $t^*$



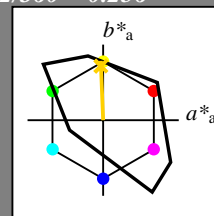
TLS18; adapted (a) CIELAB data					
	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	52.76	71.63	49.88	87.29	35
YMa	92.74	-20.02	84.97	87.3	103
LMa	84.0	-78.98	73.94	108.2	137
CMa	87.14	-44.41	-13.11	46.32	196
VMa	35.47	64.92	-95.06	115.12	304
MMa	59.01	89.33	-55.67	105.26	328
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

%Gamut  
 $u^*_{rel} = 118$   
 %Regularity  
 $g^*_{H,rel} = 22$   
 $g^*_{C,rel} = 40$

Output: Colorimetric Television Luminous System TLS18

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

D65: hue J  
 LCH\*Ma: 85 79 92  
 olv\*Ma: 1.0 0.82 0.0  
 triangle lightness  $t^*$



TLS18; adapted (a) CIELAB data					
	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	52.76	71.63	49.88	87.29	35
YMa	92.74	-20.02	84.97	87.3	103
LMa	84.0	-78.98	73.94	108.2	137
CMa	87.14	-44.41	-13.11	46.32	196
VMa	35.47	64.92	-95.06	115.12	304
MMa	59.01	89.33	-55.67	105.26	328
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

%Gamut  
 $u^*_{rel} = 118$   
 %Regularity  
 $g^*_{H,rel} = 22$   
 $g^*_{C,rel} = 40$

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	0.0
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	0.908	0.5	(1.0)
cmyn3*	0.0	0.092	0.5	(0.0)
olvi4*	1.0	0.908	0.5	1.0
cmyn4*	0.0	0.092	0.5	0.0

standard and adapted CIELAB

LAB*LAB	90.39	-1.58	39.25
LAB*LABa	90.39	-1.58	39.25
LAB*TCHa	75.0	39.29	92.32

relative CIELAB lab\*

lab*lab	0.935	-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	0.935	0.0	0.5
lab*tce	0.75	0.5	0.25
lab*nce	0.0	0.5	j00g

relative Inform. Technology (IT)

olvi3*	1.0	0.816	0.0	(1.0)
cmyn3*	0.0	0.184	1.0	(0.0)
olvi4*	1.0	0.816	0.0	1.0
cmyn4*	0.0	0.184	1.0	0.0

standard and adapted CIELAB

LAB*LAB	85.38	-3.17	78.5
LAB*LABa	85.38	-3.17	78.5
LAB*TCHa	50.0	78.57	92.32

relative CIELAB lab\*

lab*lab	0.87	-0.039	0.999
lab*tch	0.5	1.0	0.256
lab*nch	0.0	1.0	0.256

relative Natural Colour (NC)

lab*lrj	0.87	0.0	1.0
lab*tce	0.5	1.0	0.25
lab*nce	0.0	1.0	j00g

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	56.72	0.0	0.0
LAB*LABa	56.72	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	0.408	0.0	(1.0)
cmyn3*	0.5	0.592	1.0	(0.0)
olvi4*	1.0	0.908	0.5	0.5
cmyn4*	0.0	0.092	0.5	0.5

standard and adapted CIELAB

LAB*LAB	51.7	-1.57	39.25
LAB*LABa	51.7	-1.57	39.25
LAB*TCHa	25.01	39.28	92.31

relative CIELAB lab\*

lab*lab	0.435	-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	0.435	0.0	0.5
lab*tce	0.25	0.5	0.25
lab*nce	0.5	0.5	j99j

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

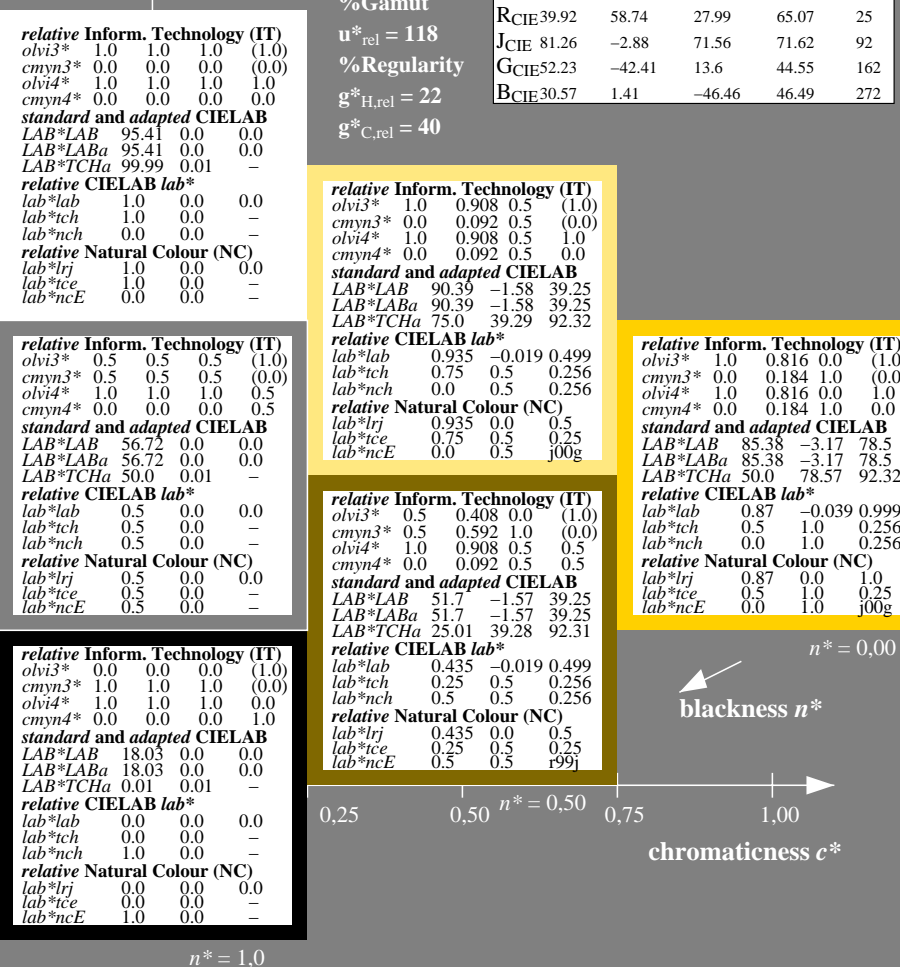
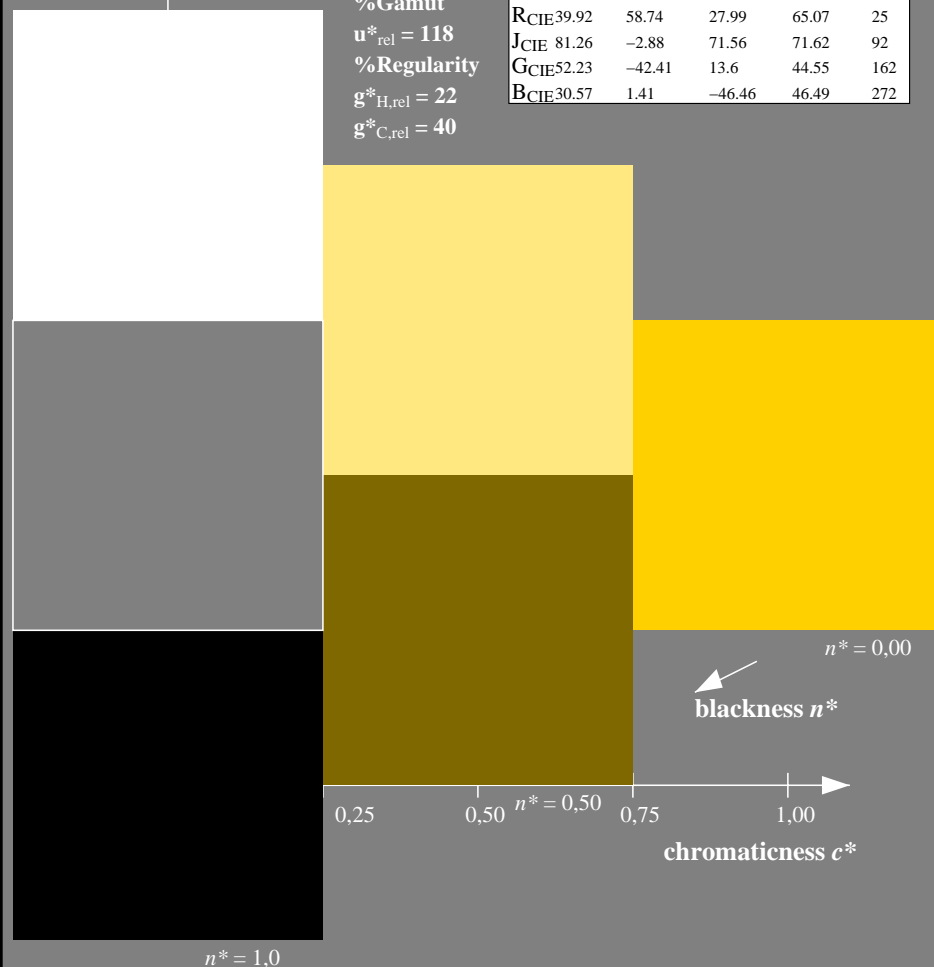
LAB*LAB	18.03	0.0	0.0
LAB*LABa	18.03	0.0	0.0
LAB*TCHa	0.01	0.01	-

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	-



NE090-7, 3 step scales for constant CIELAB hue 92/360 = 0.256 (left)

3 step scales for constant CIELAB hue 92/360 = 0.256 (right)

BAM-test chart NE09; Colorimetric systems TLS18 & TLS18  
 D65: 3 step colour scales and coordinate data for 10 hues

input: olv\* setrgbcolor  
 output: no change compared to input

See for similar files: <http://www.ps.bam.de/NE09/>  
 Technical information: <http://www.ps.bam.de>  
 Version 2.1, io=1,1

BAM registration: 20060101-NE09/10Q/Q09E07NP.PS/.PDF BAM material: code=rh4ta  
 application for evaluation and measurement of printer or monitor systems  
 /NE09/ Form: 8/10, Serie: 1/1, Page: 8 Page count: 8

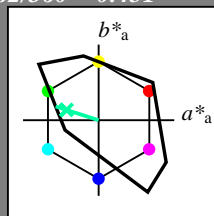


Input: Colorimetric Television Luminous System TLS18

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

D65: hue G  
 LCH\*Ma: 86 60 162  
 olv\*Ma: 0.0 1.0 0.64

triangle lightness  $t^*$



**TLS18; adapted (a) CIELAB data**

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	52.76	71.63	49.88	87.29	35
YMa	92.74	-20.02	84.97	87.3	103
LMa	84.0	-78.98	73.94	108.2	137
CMa	87.14	-44.41	-13.11	46.32	196
VMa	35.47	64.92	-95.06	115.12	304
MMa	59.01	89.33	-55.67	105.26	328
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

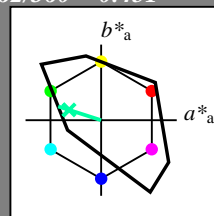
%Gamut  
 $u^*_{rel} = 118$   
 %Regularity  
 $g^*_{H,rel} = 22$   
 $g^*_{C,rel} = 40$

Output: Colorimetric Television Luminous System TLS18

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

D65: hue G  
 LCH\*Ma: 86 60 162  
 olv\*Ma: 0.0 1.0 0.64

triangle lightness  $t^*$



**TLS18; adapted (a) CIELAB data**

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	52.76	71.63	49.88	87.29	35
YMa	92.74	-20.02	84.97	87.3	103
LMa	84.0	-78.98	73.94	108.2	137
CMa	87.14	-44.41	-13.11	46.32	196
VMa	35.47	64.92	-95.06	115.12	304
MMa	59.01	89.33	-55.67	105.26	328
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

%Gamut  
 $u^*_{rel} = 118$   
 %Regularity  
 $g^*_{H,rel} = 22$   
 $g^*_{C,rel} = 40$

**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	0.0
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	1.0	0.82	(1.0)
cmyn3*	0.5	0.0	0.18	(0.0)
olvi4*	0.5	1.0	0.82	1.0
cmyn4*	0.5	0.0	0.18	0.0

**standard and adapted CIELAB**

LAB*LAB	90.7	-28.42	9.11
LAB*LABa	90.7	-28.42	9.11
LAB*TCHa	75.0	29.85	162.23

**relative CIELAB lab\***

lab*lab	0.939	-0.475	0.153
lab*tch	0.75	0.5	0.451
lab*nch	0.0	0.5	0.451

**relative Natural Colour (NC)**

lab*lrj	0.939	-0.499	0.0
lab*tce	0.75	0.5	0.5
lab*nce	0.0	0.5	g00b

**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	56.72	0.0	0.0
LAB*LABa	56.72	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	0.5	0.32	(1.0)
cmyn3*	1.0	0.5	0.68	(0.0)
olvi4*	0.5	1.0	0.82	0.5
cmyn4*	0.5	0.0	0.18	0.5

**standard and adapted CIELAB**

LAB*LAB	52.01	-28.42	9.12
LAB*LABa	52.01	-28.42	9.12
LAB*TCHa	25.01	29.86	162.22

**relative CIELAB lab\***

lab*lab	0.439	-0.475	0.153
lab*tch	0.25	0.5	0.451
lab*nch	0.5	0.5	0.451

**relative Natural Colour (NC)**

lab*lrj	0.439	-0.499	0.0
lab*tce	0.25	0.5	0.5
lab*nce	0.5	0.5	g99g

**relative Inform. Technology (IT)**

olvi3*	0.0	1.0	0.64	(1.0)
cmyn3*	1.0	0.0	0.36	(0.0)
olvi4*	0.0	1.0	0.64	1.0
cmyn4*	1.0	0.0	0.36	0.0

**standard and adapted CIELAB**

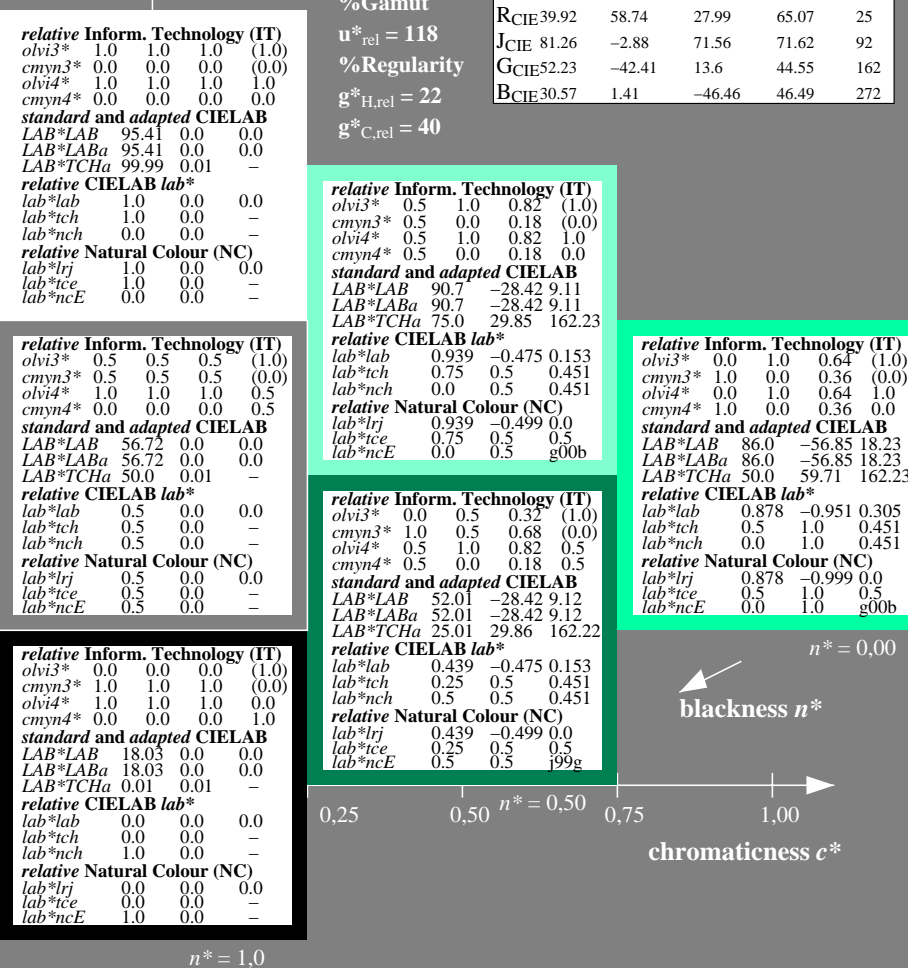
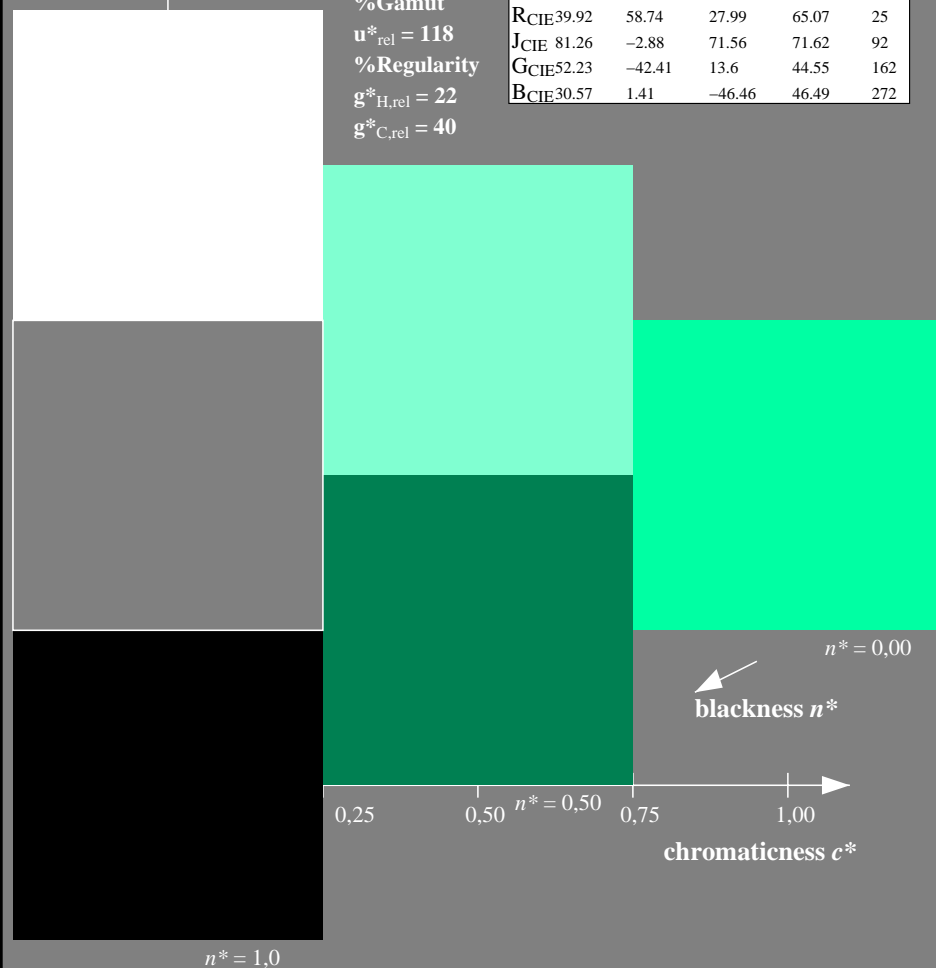
LAB*LAB	86.0	-56.85	18.23
LAB*LABa	86.0	-56.85	18.23
LAB*TCHa	50.0	59.71	162.23

**relative CIELAB lab\***

lab*lab	0.878	-0.951	0.305
lab*tch	0.5	1.0	0.451
lab*nch	0.0	1.0	0.451

**relative Natural Colour (NC)**

lab*lrj	0.878	-0.999	0.0
lab*tce	0.5	1.0	0.5
lab*nce	0.0	1.0	g00b



NE090-7, 3 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

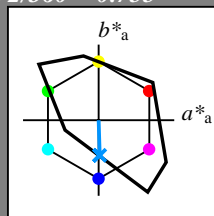
BAM-test chart NE09; Colorimetric systems TLS18 & TLS18  
 D65: 3 step colour scales and coordinate data for 10 hues

input: olv\* setrgbcolor  
 output: no change compared to input

Input: Colorimetric Television Luminous System TLS18

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

D65: hue B  
 LCH\*Ma: 65 48 272  
 olv\*Ma: 0.0 0.58 1.0  
 triangle lightness  $t^*$



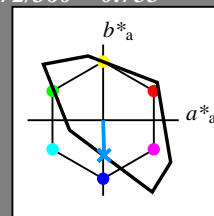
TLS18; adapted (a) CIELAB data					
	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	52.76	71.63	49.88	87.29	35
YMa	92.74	-20.02	84.97	87.3	103
LMa	84.0	-78.98	73.94	108.2	137
CMa	87.14	-44.41	-13.11	46.32	196
VMa	35.47	64.92	-95.06	115.12	304
MMa	59.01	89.33	-55.67	105.26	328
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

%Gamut  
 $u^*_{rel} = 118$   
 %Regularity  
 $g^*_{H,rel} = 22$   
 $g^*_{C,rel} = 40$

Output: Colorimetric Television Luminous System TLS18

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

D65: hue B  
 LCH\*Ma: 65 48 272  
 olv\*Ma: 0.0 0.58 1.0  
 triangle lightness  $t^*$



TLS18; adapted (a) CIELAB data					
	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	52.76	71.63	49.88	87.29	35
YMa	92.74	-20.02	84.97	87.3	103
LMa	84.0	-78.98	73.94	108.2	137
CMa	87.14	-44.41	-13.11	46.32	196
VMa	35.47	64.92	-95.06	115.12	304
MMa	59.01	89.33	-55.67	105.26	328
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

%Gamut  
 $u^*_{rel} = 118$   
 %Regularity  
 $g^*_{H,rel} = 22$   
 $g^*_{C,rel} = 40$

**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	0.0
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	0.79	1.0	(1.0)
cmyn3*	0.5	0.21	0.0	(0.0)
olvi4*	0.5	0.79	1.0	1.0
cmyn4*	0.5	0.21	0.0	0.0

**standard and adapted CIELAB**

LAB*LAB	80.44	0.71	-23.73
LAB*LABa	80.44	0.71	-23.73
LAB*TCHa	75.0	23.75	271.72

**relative CIELAB lab\***

lab*lab	0.807	0.015	-0.499
lab*tch	0.75	0.5	0.755
lab*nch	0.0	0.5	0.755

**relative Natural Colour (NC)**

lab*lrj	0.807	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	0.581	1.0	(1.0)
cmyn3*	1.0	0.419	0.0	(0.0)
olvi4*	0.0	0.581	1.0	1.0
cmyn4*	1.0	0.419	0.0	0.0

**standard and adapted CIELAB**

LAB*LAB	65.47	1.44	-47.47
LAB*LABa	65.47	1.44	-47.47
LAB*TCHa	50.0	47.5	271.74

**relative CIELAB lab\***

lab*lab	0.613	0.03	-0.998
lab*tch	0.5	1.0	0.755
lab*nch	0.0	1.0	0.755

**relative Natural Colour (NC)**

lab*lrj	0.613	0.0	-0.999
lab*tce	0.5	1.0	0.75
lab*nce	0.0	1.0	g99b

**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	56.72	0.0	0.0
LAB*LABa	56.72	0.0	0.0
LAB*TCHa	50.0	0.01	-

**relative CIELAB lab\***

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

**relative Natural Colour (NC)**

lab*lrj	0.5	0.0	0.0
lab*tce	0.5	0.0	-
lab*nce	0.5	0.0	-

**relative Inform. Technology (IT)**

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

**standard and adapted CIELAB**

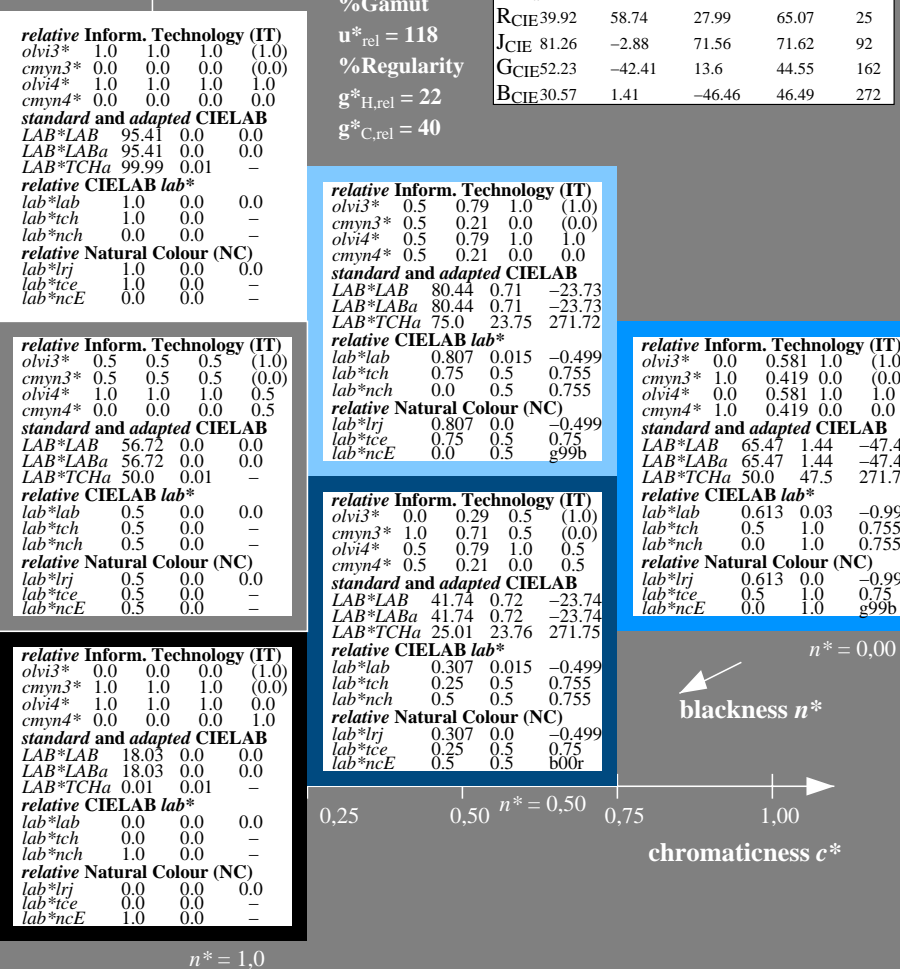
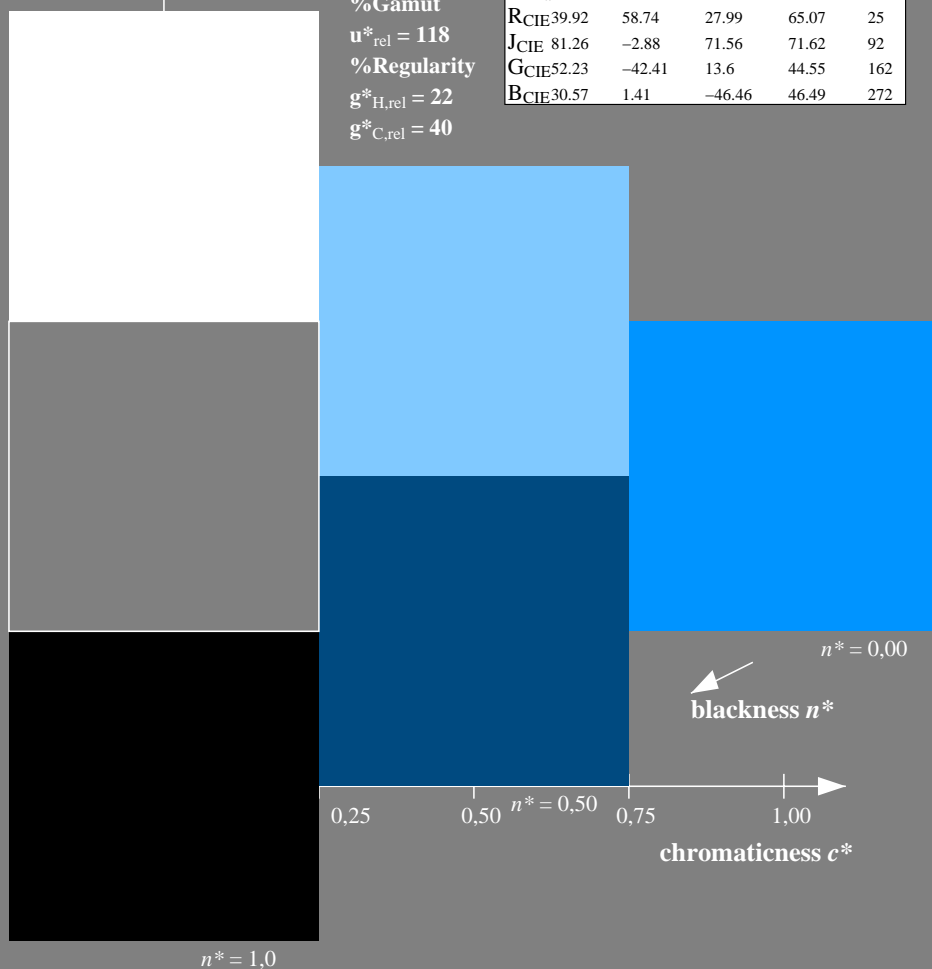
LAB*LAB	18.03	0.0	0.0
LAB*LABa	18.03	0.0	0.0
LAB*TCHa	0.01	0.01	-

**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	-



See for similar files: <http://www.ps.bam.de/NE09/>  
 Technical information: <http://www.ps.bam.de> Version 2.1, io=1,1

BAM registration: 20060101-NE09/10Q/Q09E09NP.PS/.PDF BAM material: code=rh4ta  
 application for evaluation and measurement of printer or monitor systems  
 /NE09/ Form: 10/10Scene: 1/1, Page: 10 Page count: 10

NE090-7, 3 step scales for constant CIELAB hue 272/360 = 0.755 (left)

3 step scales for constant CIELAB hue 272/360 = 0.755 (right)

BAM-test chart NE09; Colorimetric systems TLS18 & TLS18  
 D65: 3 step colour scales and coordinate data for 10 hues

input: olv\* setrgbcolor  
 output: no change compared to input