

Input: Colorimetric Television Luminous System TLS70

for hue $h^* = lab \cdot h = 22/360 = 0.061$

$lab \cdot tch$ and $lab \cdot nch$

D65: hue O
LCH*Ma: 76 28 22
olv*Ma: 1.0 0.0 0.0

triangle lightness

1,00

%Gamut

$u^*_{rel} = 16$

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

0,75

0,25

0,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

0,25

0,50

0,75

1,00

0,25

0,50

0,75

1,00

0,25

0,50

0,75

1,00

0,25

0,50

0,75

1,00

0,25

0,50

0,75

1,00

TLS70; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	76.43	26.27	10.57	28.32	22
Y _{Ma}	93.93	-10.76	34.63	36.27	107
L _{Ma}	89.32	-35.8	27.64	45.24	142
C _{Ma}	90.93	-21.95	-7.07	23.07	198
V _{Ma}	72.1	15.76	-35.63	38.97	294
M _{Ma}	78.5	37.52	-25.23	45.22	326
N _{Ma}	69.7	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.74	27.99	65.07	25
J _{CIE}	81.26	-2.88	71.56	71.62	92
G _{CIE}	52.23	-42.41	13.6	44.55	162
B _{CIE}	30.57	1.41	-46.46	46.49	272

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

0,75

0,25

0,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

0,25

0,50

0,75

1,00

0,25

0,50

0,75

1,00

0,25

0,50

0,75

1,00

0,25

0,50

0,75

1,00

0,25

0,50

0,75

1,00

Output: Colorimetric Television Luminous System TLS00

for hue $h^* = lab \cdot h = 40/360 = 0.111$

$lab \cdot tch$ and $lab \cdot nch$

D65: hue O
LCH*Ma: 51 100 40
olv*Ma: 1.0 0.0 0.0

triangle lightness

1,00

%Gamut

$u^*_{rel} = 158$

%Regularity

$g^*_{H,rel} = 20$

$g^*_{C,rel} = 37$

0,75

0,25

0,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

0,25

0,50

0,75

1,00

0,25

0,50

0,75

1,00

0,25

0,50

0,75

1,00

0,25

0,50

0,75

1,00

0,25

0,50

0,75

1,00

TLS00; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	50.5	76.92	64.55	100.42	40
Y _{Ma}	92.66	-20.69	90.75	93.08	103
L _{Ma}	83.63	-82.75	79.9	115.04	136
C _{Ma}	86.88	-46.16	-13.55	48.12	196
V _{Ma}	30.39	76.06	-103.59	128.52	306
M _{Ma}	57.3	94.35	-58.41	110.97	328
N _{Ma}	0.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.74	27.99	65.07	25
J _{CIE}	81.26	-2.88	71.56	71.62	92
G _{CIE}	52.23	-42.41	13.6	44.55	162
B _{CIE}	30.57	1.41	-46.46	46.49	272

%Regularity

$g^*_{H,rel} = 20$

$g^*_{C,rel} = 37$

0,75

0,25

0,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

0,25

0,50

0,75

1,00

0,25

0,50

0,75

1,00

0,25

0,50

0,75

1,00

0,25

0,50

0,75

1,00

0,25

0,50

0,75

1,00

0,25

0,50

0,75

1,00

OE480-7, 5 step scales for constant CIELAB hue 22/360 = 0.061 (left)

BAM-test chart OE48; Colorimetric systems TLS70 & TLS00

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

5 step scales for constant CIELAB hue 40/360 = 0.111 (right)

input: $cmY0^* set cmykcolor$

output: no change compared to input

Input: Colorimetric Television Luminous System TLS70

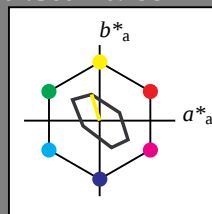
for hue $h^* = lab \cdot h = 107/360 = 0.298$

$lab \cdot tch$ and $lab \cdot nch$

D65: hue Y
LCH*Ma: 94 36 107
olv*Ma: 1.0 1.0 0.0

triangle lightness

1,00



%Gamut

$u^*_{rel} = 16$

TLS70; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	76.43	26.27	10.57	28.32	22
Y _{Ma}	93.93	-10.76	34.63	36.27	107
L _{Ma}	89.32	-35.8	27.64	45.24	142
C _{Ma}	90.93	-21.95	-7.07	23.07	198
V _{Ma}	72.1	15.76	-35.63	38.97	294
M _{Ma}	78.5	37.52	-25.23	45.22	326
N _{Ma}	69.7	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.74	27.99	65.07	25
J _{CIE}	81.26	-2.88	71.56	71.62	92
G _{CIE}	52.23	-42.41	13.6	44.55	162
B _{CIE}	30.57	1.41	-46.46	46.49	272

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

1,00

relative Inform. Technology (IT)	relative Inform. Technology (IT)
olvi3* 1.0 1.0 1.0 (1.0)	olvi3* 1.0 1.0 0.75 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)	cmyn3* 0.0 0.0 0.25 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)	olvi4* 1.0 1.0 0.75 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)	cmyn4* 0.0 0.0 0.25 (0.0)
standard and adapted CIELAB	standard and adapted CIELAB
LAB*LAB 95.41 0.0 0.0	LAB*LAB 94.71 -5.16 22.68
LAB*Lab 95.41 0.0 0.0	LAB*Lab 94.71 -5.16 22.68
LAB*TCa 95.41 0.0 0.0	LAB*TCa 94.71 -5.16 22.68

relative CIELAB lab*	relative CIELAB lab*
lab*lab 1.0 0.0 0.0	lab*lab 1.0 0.0 0.0
lab*tch 1.0 0.0 0.0	lab*tch 1.0 0.0 0.0
lab*nch 0.0 0.0 0.0	lab*nch 0.0 0.0 0.0
lab*trj 1.0 0.0 0.0	lab*trj 1.0 0.0 0.0
lab*nce 0.0 0.0 0.0	lab*nce 0.0 0.0 0.0

relative Natural Colour (NC)	relative Natural Colour (NC)
lab*trj 1.0 0.0 0.0	lab*trj 1.0 0.0 0.0
lab*nce 0.0 0.0 0.0	lab*nce 0.0 0.0 0.0

standard and adapted CIELAB	standard and adapted CIELAB
LAB*LAB 71.57 0.0 0.0	LAB*LAB 70.87 -5.17 22.69
LAB*Lab 71.57 0.0 0.0	LAB*Lab 70.87 -5.17 22.69
LAB*TCa 71.57 0.0 0.0	LAB*TCa 70.87 -5.17 22.69

relative CIELAB lab*	relative CIELAB lab*
lab*lab 0.75 0.0 0.0	lab*lab 0.75 0.0 0.0
lab*tch 0.75 0.0 0.0	lab*tch 0.75 0.0 0.0
lab*nch 0.25 0.0 0.0	lab*nch 0.25 0.0 0.0
lab*trj 0.75 0.0 0.0	lab*trj 0.75 0.0 0.0
lab*nce 0.25 0.0 0.0	lab*nce 0.25 0.0 0.0

relative Natural Colour (NC)	relative Natural Colour (NC)
lab*trj 0.75 0.0 0.0	lab*trj 0.75 0.0 0.0
lab*nce 0.25 0.0 0.0	lab*nce 0.25 0.0 0.0

standard and adapted CIELAB	standard and adapted CIELAB
LAB*LAB 47.72 0.0 0.0	LAB*LAB 47.02 -5.17 22.69
LAB*Lab 47.72 0.0 0.0	LAB*Lab 47.02 -5.17 22.69
LAB*TCa 47.72 0.0 0.0	LAB*TCa 47.02 -5.17 22.69

relative CIELAB lab*	relative CIELAB lab*
lab*lab 0.5 0.0 0.0	lab*lab 0.5 0.0 0.0
lab*tch 0.5 0.0 0.0	lab*tch 0.5 0.0 0.0
lab*nch 0.25 0.0 0.0	lab*nch 0.25 0.0 0.0
lab*trj 0.5 0.0 0.0	lab*trj 0.5 0.0 0.0
lab*nce 0.25 0.0 0.0	lab*nce 0.25 0.0 0.0

relative Natural Colour (NC)	relative Natural Colour (NC)
lab*trj 0.5 0.0 0.0	lab*trj 0.5 0.0 0.0
lab*nce 0.25 0.0 0.0	lab*nce 0.25 0.0 0.0

standard and adapted CIELAB	standard and adapted CIELAB
LAB*LAB 23.87 0.0 0.0	LAB*LAB 23.17 -5.16 22.68
LAB*Lab 23.87 0.0 0.0	LAB*Lab 23.17 -5.16 22.68
LAB*TCa 23.87 0.0 0.0	LAB*TCa 23.17 -5.16 22.68

relative CIELAB lab*	relative CIELAB lab*
lab*lab 0.25 0.0 0.0	lab*lab 0.25 0.0 0.0
lab*tch 0.25 0.0 0.0	lab*tch 0.25 0.0 0.0
lab*nch 0.125 0.0 0.0	lab*nch 0.125 0.0 0.0
lab*trj 0.25 0.0 0.0	lab*trj 0.25 0.0 0.0
lab*nce 0.125 0.0 0.0	lab*nce 0.125 0.0 0.0

relative Natural Colour (NC)	relative Natural Colour (NC)
lab*trj 0.25 0.0 0.0	lab*trj 0.25 0.0 0.0
lab*nce 0.125 0.0 0.0	lab*nce 0.125 0.0 0.0

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

$c^* = 0,00$

$c^* = 0,25$

$c^* = 0,50$

$c^* = 1,0$

triangle lightness

$u^*_{rel} = 16$

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

%Gamut

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

%Gamut

%Regularity

triangle lightness

$u^*_{rel} = 16$

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

%Gamut

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

%Gamut

%Regularity

triangle lightness

$u^*_{rel} = 16$

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

%Gamut

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

%Gamut

%Regularity

triangle lightness

$u^*_{rel} = 16$

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

%Gamut

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

%Gamut

%Regularity

triangle lightness

$u^*_{rel} = 16$

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

%Gamut

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

%Gamut

%Regularity

triangle lightness

$u^*_{rel} = 16$

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

%Gamut

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

%Gamut

%Regularity

triangle lightness

$u^*_{rel} = 16$

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

%Gamut

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

%Gamut

%Regularity

triangle lightness

$u^*_{rel} = 16$

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

%Gamut

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

%Gamut

%Regularity

triangle lightness

$u^*_{rel} = 16$

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

%Gamut

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

%Gamut

%Regularity

triangle lightness

$u^*_{rel} = 16$

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

%Gamut

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

%Gamut

%Regularity

triangle lightness

$u^*_{rel} = 16$

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

%Gamut

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

%Gamut

%Regularity

triangle lightness

$u^*_{rel} = 16$

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

%Gamut

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

%Gamut

%Regularity

triangle lightness

$u^*_{rel} = 16$

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

%Gamut

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

%Gamut

%Regularity

triangle lightness

$u^*_{rel} = 16$

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

%Gamut

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

%Gamut

%Regularity

triangle lightness

$u^*_{rel} = 16$

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

%Gamut

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

%Gamut

%Regularity

triangle lightness

$u^*_{rel} = 16$

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

%Gamut

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

%Gamut

%Regularity

triangle lightness

$u^*_{rel} = 16$

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

%Gamut

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

%Gamut

%Regularity

triangle lightness

$u^*_{rel} = 16$

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

%Gamut

%Regularity

$g^*_{H,rel} = 34$

Input: Colorimetric Television Luminous System TLS70

for hue $h^* = lab^*h = 142/360 = 0.395$

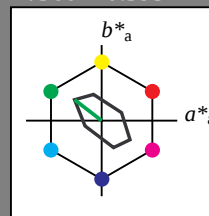
lab*tch and lab*nch

D65: hue L

LCH*Ma: 89 45 142

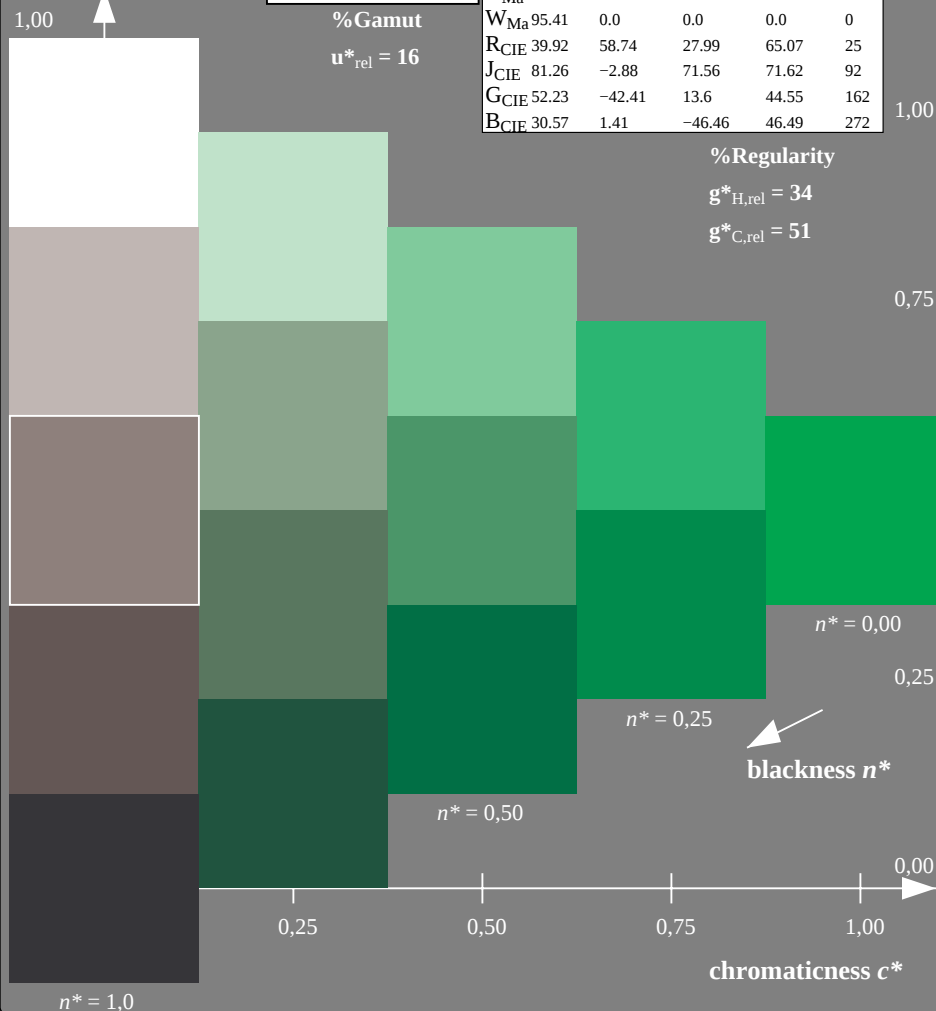
olv*Ma: 0.0 1.0 0.0

triangle lightness


$$\mathbf{u}_{\text{rel}}^* = 16$$

a		b		c	
TL50; adapted (a)		CIELAB data			
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	76.43	26.27	10.57	28.32	22
Y _{Ma}	93.93	-10.76	34.63	36.27	107
L _{Ma}	89.32	-35.8	27.64	45.24	142
C _{Ma}	90.93	-21.95	-7.07	23.07	198
V _{Ma}	72.1	15.76	-35.63	38.97	294
M _{Ma}	78.5	37.52	-25.23	45.22	326
N _{Ma}	69.7	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.74	27.99	65.07	25
J _{CIE}	81.26	-2.88	71.56	71.62	92
G _{CIE}	52.23	-42.41	13.6	44.55	162
B _{CIE}	30.57	1.41	-46.46	46.49	272

%Regularity

$$g^*_{H_{rel}} = 34$$
$$g^*_{C,rel} = 51$$


OE480-7, 5 step scales for constant CIELAB hue $142/360 = 0.395$ (left)

BAM-test chart OE48; Colorimetric systems TLS70 & T

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

Output: Colorimetric Television Luminous System TLS00

for hue $h^* = lab^*h = 136/360 = 0.378$

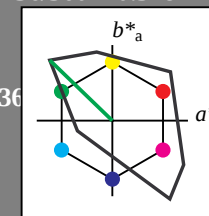
*lab*tch* and *lab*nch*

D65: hue L

LCH*Ma: 84 115 130

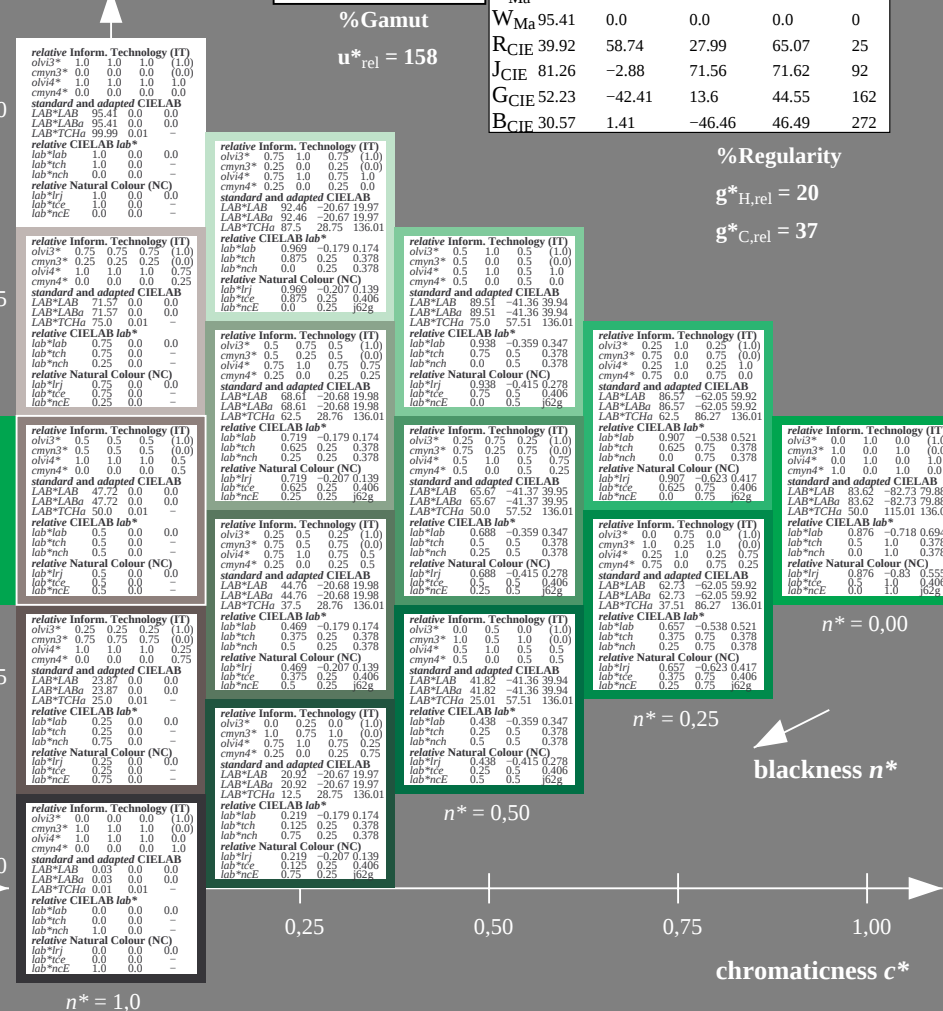
olv*Ma: 0.0 1.0 0.0

triangle lightness


$$\mathbf{u}_{rel}^* = \mathbf{1}$$

TLS00; adapted (a) CIELAB data					
	L^*_a	a^*_a	b^*_a	$C^*_{ab,a}$	h^*_{ab}
O _{Ma}	50.5	76.92	64.55	100.42	40
Y _{Ma}	92.66	-20.69	90.75	93.08	103
L _{Ma}	83.63	-82.75	79.9	115.04	136
C _{Ma}	86.88	-46.16	-13.55	48.12	196
V _{Ma}	30.39	76.06	-103.59	128.52	306
M _{Ma}	57.3	94.35	-58.41	110.97	328
N _{Ma}	0.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.74	27.99	65.07	25
J _{CIE}	81.26	-2.88	71.56	71.62	92
G _{CIE}	52.23	-42.41	13.6	44.55	162
B _{CIE}	30.57	1.41	-46.46	46.49	272

%Regularity

$$g^*_{H\text{rel}} = 20$$
$$g^*_{C,rel} = 37$$
5 step scales for constant CIELAB hue $136/360 = 0.378$ (right)

input: *cmv0** *setcmvcolor*

output: *no change compared to input*

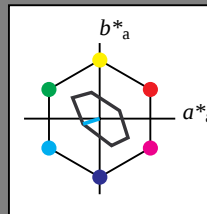
Input: Colorimetric Television Luminous System TLS70

for hue $h^* = lab \cdot h = 198/360 = 0.55$

$lab \cdot tch$ and $lab \cdot nch$

D65: hue C
LCH*Ma: 91 23 198
olv*Ma: 0.0 1.0 1.0

triangle lightness



TLS70; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	76.43	26.27	10.57	28.32	22
Y _{Ma}	93.93	-10.76	34.63	36.27	107
L _{Ma}	89.32	-35.8	27.64	45.24	142
C _{Ma}	90.93	-21.95	-7.07	23.07	198
V _{Ma}	72.1	15.76	-35.63	38.97	294
M _{Ma}	78.5	37.52	-25.23	45.22	326
N _{Ma}	69.7	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.74	27.99	65.07	25
J _{CIE}	81.26	-2.88	71.56	71.62	92
G _{CIE}	52.23	-42.41	13.6	44.55	162
B _{CIE}	30.57	1.41	-46.46	46.49	272

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

1,00

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

$n^* = 0,50$

blackness n^*

chromaticness c^*

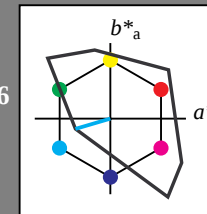
Output: Colorimetric Television Luminous System TLS00

for hue $h^* = lab \cdot h = 196/360 = 0.545$

$lab \cdot tch$ and $lab \cdot nch$

D65: hue C
LCH*Ma: 87 48 196
olv*Ma: 0.0 1.0 1.0

triangle lightness



TLS00; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	50.5	76.92	64.55	100.42	40
Y _{Ma}	92.66	-20.69	90.75	93.08	103
L _{Ma}	83.63	-82.75	79.9	115.04	136
C _{Ma}	86.88	-46.16	-13.55	48.12	196
V _{Ma}	30.39	76.06	-103.59	128.52	306
M _{Ma}	57.3	94.35	-58.41	110.97	328
N _{Ma}	0.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.74	27.99	65.07	25
J _{CIE}	81.26	-2.88	71.56	71.62	92
G _{CIE}	52.23	-42.41	13.6	44.55	162
B _{CIE}	30.57	1.41	-46.46	46.49	272

%Regularity

$g^*_{H,rel} = 20$

$g^*_{C,rel} = 37$

$n^* = 0,00$

0,25

$n^* = 0,25$

blackness n^*

chromaticness c^*

OE480-7, 5 step scales for constant CIELAB hue 198/360 = 0.55 (left)

5 step scales for constant CIELAB hue 196/360 = 0.545 (right)

BAM-test chart OE48; Colorimetric systems TLS70 & TLS00

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

input: `cmv0* setcmvcolor`

output: *no change compared to input*

Input: Colorimetric Television Luminous System TLS70

for hue $h^* = lab^*h = 294/360 = 0.816$

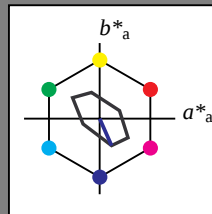
lab^*tch and lab^*nch

D65: hue V

LCH*Ma: 72 39 294

olv*Ma: 0.0 0.0 1.0

triangle lightness



TLS70; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	76.43	26.27	10.57	28.32	22
Y _{Ma}	93.93	-10.76	34.63	36.27	107
L _{Ma}	89.32	-35.8	27.64	45.24	142
C _{Ma}	90.93	-21.95	-7.07	23.07	198
V _{Ma}	72.1	15.76	-35.63	38.97	294
M _{Ma}	78.5	37.52	-25.23	45.22	326
N _{Ma}	69.7	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.74	27.99	65.07	25
J _{CIE}	81.26	-2.88	71.56	71.62	92
G _{CIE}	52.23	-42.41	13.6	44.55	162
B _{CIE}	30.57	1.41	-46.46	46.49	272

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

1,00

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

$n^* = 0,50$

chromaticness c^*

$n^* = 1,0$

OE480-7, 5 step scales for constant CIELAB hue 294/360 = 0.816 (left)



BAM-test chart OE48; Colorimetric systems TLS70 & TLS00

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

Output: Colorimetric Television Luminous System TLS00

for hue $h^* = lab^*h = 306/360 = 0.851$

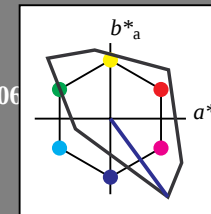
lab^*tch and lab^*nch

D65: hue V

LCH*Ma: 30 129 306

olv*Ma: 0.0 0.0 1.0

triangle lightness



TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	50.5	76.92	64.55	100.42	40
Y _{Ma}	92.66	-20.69	90.75	93.08	103
L _{Ma}	83.63	-82.75	79.9	115.04	136
C _{Ma}	86.88	-46.16	-13.55	48.12	196
V _{Ma}	30.39	76.06	-103.59	128.52	306
M _{Ma}	57.3	94.35	-58.41	110.97	328
N _{Ma}	0.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.74	27.99	65.07	25
J _{CIE}	81.26	-2.88	71.56	71.62	92
G _{CIE}	52.23	-42.41	13.6	44.55	162
B _{CIE}	30.57	1.41	-46.46	46.49	272

%Regularity

$g^*_{H,rel} = 20$

$g^*_{C,rel} = 37$

1,00

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

$n^* = 0,50$

chromaticness c^*

$n^* = 1,0$

5 step scales for constant CIELAB hue 306/360 = 0.851 (right)

input: $cmY0^* setcmykcolor$

output: no change compared to input

Input: Colorimetric Television Luminous System TLS70

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

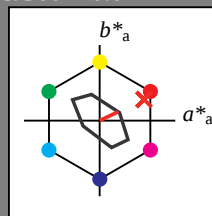
$lab \cdot tch$ and $lab \cdot nch$

D65: hue R

LCH*Ma: 77 27 25

olv*Ma: 1.0 0.05 0.0

triangle lightness



TLS70; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	76.43	26.27	10.57	28.32	22
Y _{Ma}	93.93	-10.76	34.63	36.27	107
L _{Ma}	89.32	-35.8	27.64	45.24	142
C _{Ma}	90.93	-21.95	-7.07	23.07	198
V _{Ma}	72.1	15.76	-35.63	38.97	294
M _{Ma}	78.5	37.52	-25.23	45.22	326
N _{Ma}	69.7	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.74	27.99	65.07	25
J _{CIE}	81.26	-2.88	71.56	71.62	92
G _{CIE}	52.23	-42.41	13.6	44.55	162
B _{CIE}	30.57	1.41	-46.46	46.49	272

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

1,00

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

$n^* = 0,50$

chromaticness c^*

Output: Colorimetric Television Luminous System TLS00

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

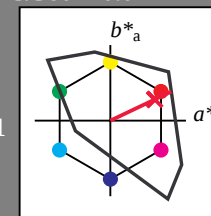
$lab \cdot tch$ and $lab \cdot nch$

D65: hue R

LCH*Ma: 52 89 25

olv*Ma: 1.0 0.0 0.21

triangle lightness



TLS00; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	50.5	76.92	64.55	100.42	40
Y _{Ma}	92.66	-20.69	90.75	93.08	103
L _{Ma}	83.63	-82.75	79.9	115.04	136
C _{Ma}	86.88	-46.16	-13.55	48.12	196
V _{Ma}	30.39	76.06	-103.59	128.52	306
M _{Ma}	57.3	94.35	-58.41	110.97	328
N _{Ma}	0.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.74	27.99	65.07	25
J _{CIE}	81.26	-2.88	71.56	71.62	92
G _{CIE}	52.23	-42.41	13.6	44.55	162
B _{CIE}	30.57	1.41	-46.46	46.49	272

%Regularity

$g^*_{H,rel} = 20$

$g^*_{C,rel} = 37$

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

chromaticness c^*

OE480-7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

BAM-test chart OE48; Colorimetric systems TLS70 & TLS00

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

input: $cmY0^* set cmykcolor$

output: no change compared to input

Input: Colorimetric Television Luminous System TLS70

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

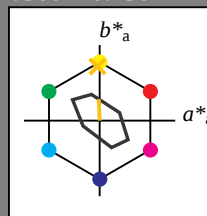
$lab \cdot tch$ and $lab \cdot nch$

D65: hue J

LCH*Ma: 89 28 92

olv*Ma: 1.0 0.74 0.0

triangle lightness



TLS70; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	76.43	26.27	10.57	28.32	22
Y _{Ma}	93.93	-10.76	34.63	36.27	107
L _{Ma}	89.32	-35.8	27.64	45.24	142
C _{Ma}	90.93	-21.95	-7.07	23.07	198
V _{Ma}	72.1	15.76	-35.63	38.97	294
M _{Ma}	78.5	37.52	-25.23	45.22	326
N _{Ma}	69.7	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.74	27.99	65.07	25
J _{CIE}	81.26	-2.88	71.56	71.62	92
G _{CIE}	52.23	-42.41	13.6	44.55	162
B _{CIE}	30.57	1.41	-46.46	46.49	272

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

1,00

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

$n^* = 0,50$

chromaticness c^*

Output: Colorimetric Television Luminous System TLS00

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

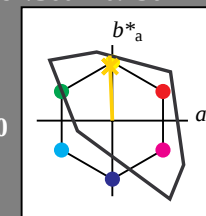
$lab \cdot tch$ and $lab \cdot nch$

D65: hue J

LCH*Ma: 85 86 92

olv*Ma: 1.0 0.82 0.0

triangle lightness



TLS00; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	50.5	76.92	64.55	100.42	40
Y _{Ma}	92.66	-20.69	90.75	93.08	103
L _{Ma}	83.63	-82.75	79.9	115.04	136
C _{Ma}	86.88	-46.16	-13.55	48.12	196
V _{Ma}	30.39	76.06	-103.59	128.52	306
M _{Ma}	57.3	94.35	-58.41	110.97	328
N _{Ma}	0.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.74	27.99	65.07	25
J _{CIE}	81.26	-2.88	71.56	71.62	92
G _{CIE}	52.23	-42.41	13.6	44.55	162
B _{CIE}	30.57	1.41	-46.46	46.49	272

%Regularity

$g^*_{H,rel} = 20$

$g^*_{C,rel} = 37$

1,00

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

$n^* = 0,50$

chromaticness c^*

OE480-7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

BAM-test chart OE48; Colorimetric systems TLS70 & TLS00

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

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

input: $cmY0^* set cmykcolor$

output: no change compared to input

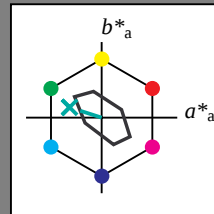
Input: Colorimetric Television Luminous System TLS70

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

$lab \cdot tch$ and $lab \cdot nch$

D65: hue G
LCH*Ma: 90 30 162
olv*Ma: 0.0 1.0 0.53

triangle lightness



TLS70; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	76.43	26.27	10.57	28.32	22
Y _{Ma}	93.93	-10.76	34.63	36.27	107
L _{Ma}	89.32	-35.8	27.64	45.24	142
C _{Ma}	90.93	-21.95	-7.07	23.07	198
V _{Ma}	72.1	15.76	-35.63	38.97	294
M _{Ma}	78.5	37.52	-25.23	45.22	326
N _{Ma}	69.7	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.74	27.99	65.07	25
J _{CIE}	81.26	-2.88	71.56	71.62	92
G _{CIE}	52.23	-42.41	13.6	44.55	162
B _{CIE}	30.57	1.41	-46.46	46.49	272

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

1,00

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

OE480-7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)



BAM-test chart OE48; Colorimetric systems TLS70 & TLS00
D65: 5 step colour scales and coordinate data for 10 hues

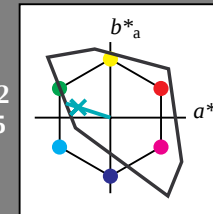
Output: Colorimetric Television Luminous System TLS00

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

$lab \cdot tch$ and $lab \cdot nch$

D65: hue G
LCH*Ma: 86 62 162
olv*Ma: 0.0 1.0 0.65

triangle lightness



TLS00; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	50.5	76.92	64.55	100.42	40
Y _{Ma}	92.66	-20.69	90.75	93.08	103
L _{Ma}	83.63	-82.75	79.9	115.04	136
C _{Ma}	86.88	-46.16	-13.55	48.12	196
V _{Ma}	30.39	76.06	-103.59	128.52	306
M _{Ma}	57.3	94.35	-58.41	110.97	328
N _{Ma}	0.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.74	27.99	65.07	25
J _{CIE}	81.26	-2.88	71.56	71.62	92
G _{CIE}	52.23	-42.41	13.6	44.55	162
B _{CIE}	30.57	1.41	-46.46	46.49	272

%Regularity

$g^*_{H,rel} = 20$

$g^*_{C,rel} = 37$

1,00

0,75

$n^* = 0,00$

0,25

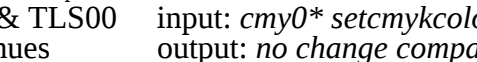
$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

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



input: $cmY0^* set cmykcolor$
output: no change compared to input

BAM material: code=rh4ta