

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

0,50

0,25

0,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

0,25

0,50

0,75

1,00

chromaticness c^*

$n^* = 1,0$

$n^* = 0,50$

$n^* = 0,25$

$n^* = 0,00$

blackness n^*

chromaticness c^*

TLS70; adapted (a) CIELAB data

	$L^* = L^*_{a,b}$	$a^*_{a,b}$	$b^*_{a,b}$	$C^*_{a,b}$	$h^*_{a,b}$
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

0,50

0,25

0,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

$n^* = 1,0$

$n^* = 0,50$

$n^* = 0,25$

$n^* = 0,00$

blackness n^*

chromaticness c^*

$n^* = 1,0$

$n^* = 0,50$

$n^* = 0,25$

$n^* = 0,00$

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

0,50

0,25

0,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

$n^* = 1,0$

$n^* = 0,50$

$n^* = 0,25$

$n^* = 0,00$

blackness n^*

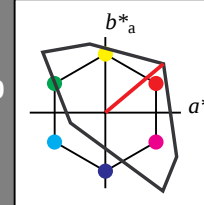
chromaticness c^*

$n^* = 1,0$

$n^* = 0,50$

$n^* = 0,25$

$n^* = 0,00$



%Gamut

$u^*_{rel} = 158$

%Regularity

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

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

0,75

0,50

0,25

0,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

$n^* = 1,0$

$n^* = 0,50$

$n^* = 0,25$

$n^* = 0,00$

blackness n^*

chromaticness c^*

$n^* = 1,0$

$n^* = 0,50$

$n^* = 0,25$

$n^* = 0,00$

chromaticness c^*

TLS00; adapted (a) CIELAB data

	$L^* = L^*_{a,b}$	$a^*_{a,b}$	$b^*_{a,b}$	$C^*_{a,b}$	$h^*_{a,b}$
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

0,50

0,25

0,00

blackness n^*

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

$n^* = 1,0$

$n^* = 0,50$

$n^* = 0,25$

$n^* = 0,00$

blackness n^*

chromaticness c^*

$n^* = 1,0$

$n^* = 0,50$

$n^* = 0,25$

$n^* = 0,00$

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

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

BAM-test chart OE48; Colorimetric systems ORS18 & ORS18

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

input: $cmY0^* setcmykcolor$

output: Startup (S) data dependend

Input: Colorimetric Television Luminous System TLS70

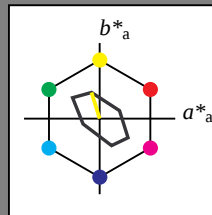
for hue $h^* = lab \cdot h = 107/360 = 0.298$ $lab \cdot tch$ and $lab \cdot nch$

D65: hue Y

LCH*Ma: 94 36 107

olv*Ma: 1.0 1.0 0.0

triangle lightness



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

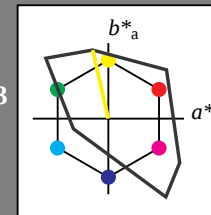
for hue $h^* = lab \cdot h = 103/360 = 0.286$ $lab \cdot tch$ and $lab \cdot nch$

D65: hue Y

LCH*Ma: 93 93 103

olv*Ma: 1.0 1.0 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 107/360 = 0.298 (left)

5 step scales for constant CIELAB hue 103/360 = 0.286 (right)

BAM-test chart OE48; Colorimetric systems ORS18 & ORS18

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

input: $cmv0^* \text{ setcmvcolor}$

output: Startup (S) data dependend

Input: Colorimetric Television Luminous System TLS70

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

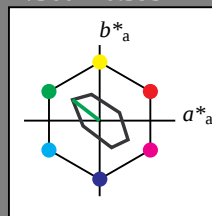
lab*tch and lab*nch

D65: hue L

LCH*Ma: 89 45 142

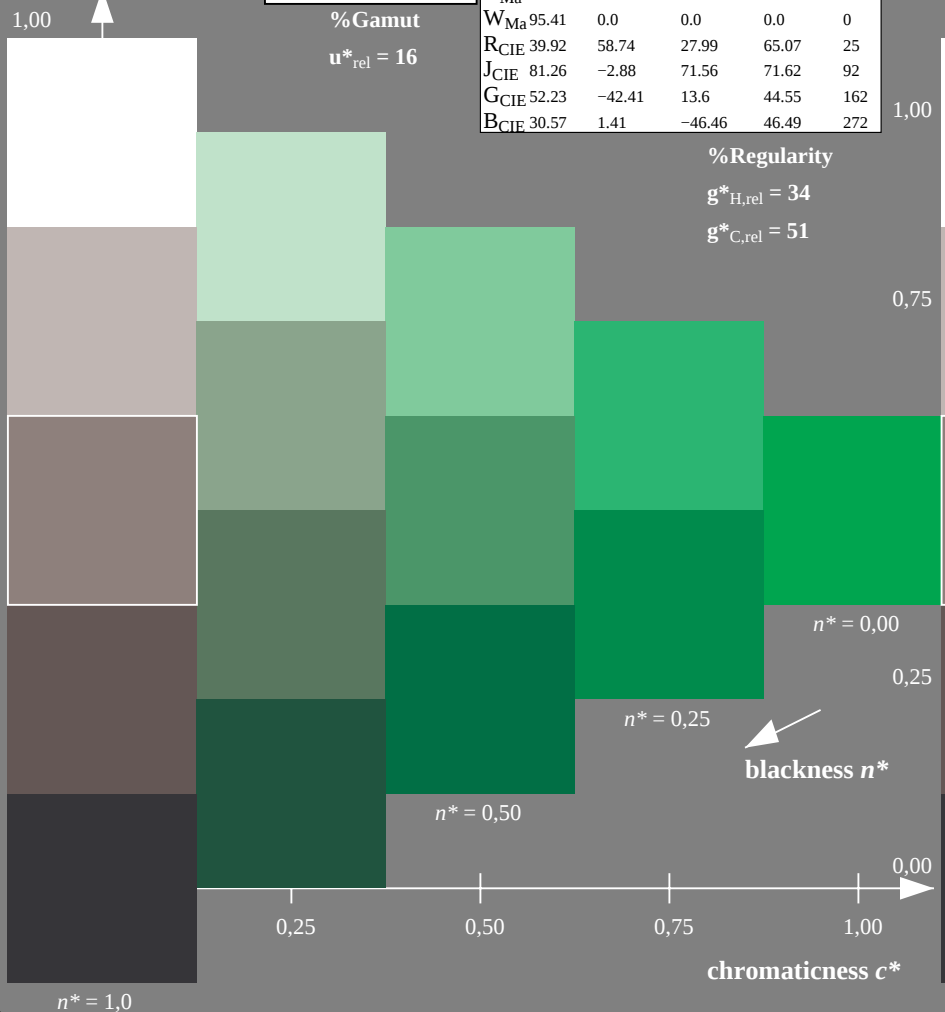
olv*Ma: 0.0 1.0 0.0

triangle lightness


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

TLS70; adapted (a) CIELAB data					
	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 ORS18 & ORS18

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

Output: Colorimetric Television Luminous System TLS00

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

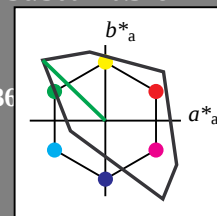
lab*tch and lab*nch

D65: hue L

LCH*Ma: 84 115 136

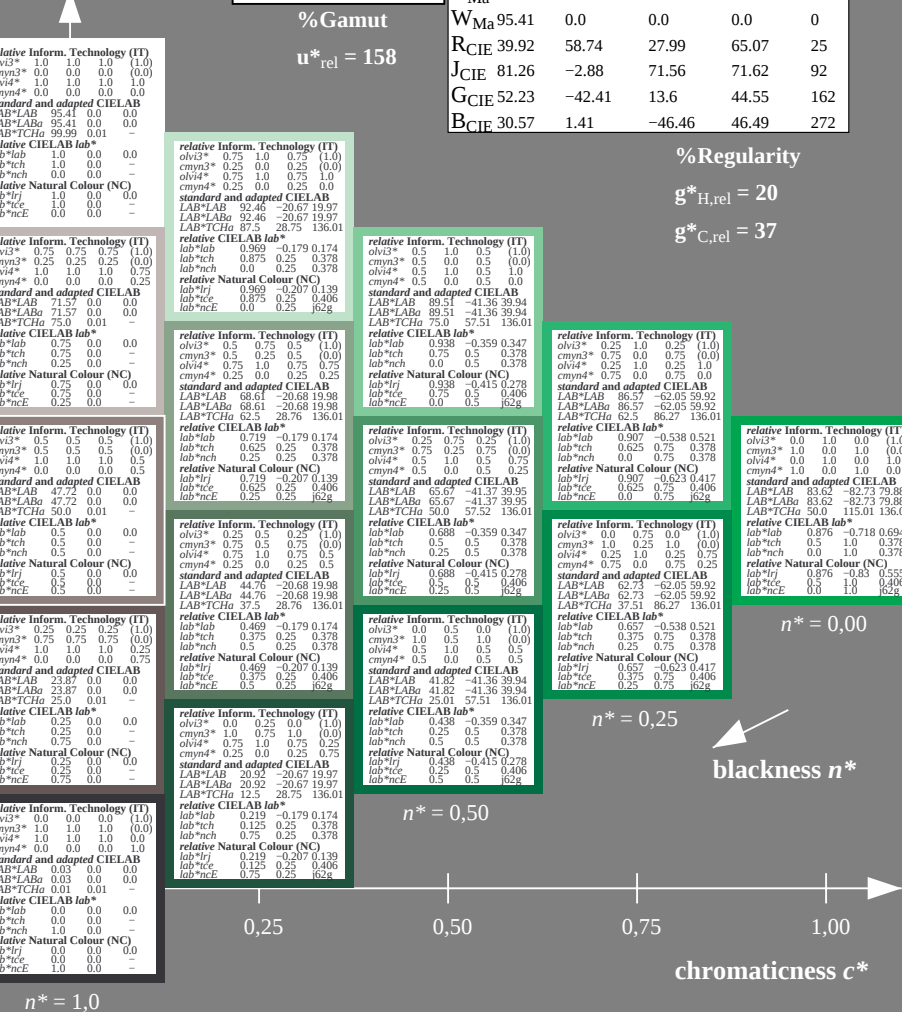
olv*Ma: 0.0 1.0 0.0

triangle lightness


$$u_{rel}^* = 158$$

TSL00; 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	44.45	162
B _{CIE}	30.57	1.41	-46.46	46.49	272

%Regularity

$$g^*_{H,rel} = 20$$
$$g^*_{C,rel} = 37$$


5 step scales for constant CIELAB hue 136/360 = 0.378 (right)

input: *cmy0** *setcmykcolor*

output: *Startup (S) data dependend*

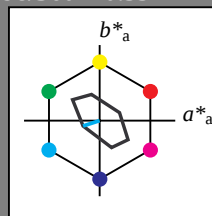
Input: Colorimetric Television Luminous System TLS70

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

$n^* = 0,25$

$n^* = 0,50$

chromaticness c^*

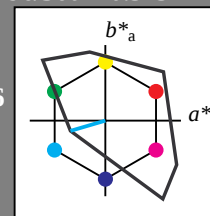
Output: Colorimetric Television Luminous System TLS00

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

$n^* = 0,25$

$n^* = 0,50$

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 ORS18 & ORS18

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

input: $cmy0^* \text{ setcmykcolor}$

output: Startup (S) data dependend

Input: Colorimetric Television Luminous System TLS70

for hue $h^* = lab \cdot h = 294/360 = 0.816$ $lab \cdot tch$ and $lab \cdot nch$

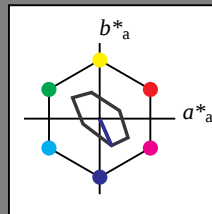
D65: hue V

LCH*Ma: 72 39 294

olv*Ma: 0.0 0.0 1.0

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

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

Output: Colorimetric Television Luminous System TLS00

for hue $h^* = lab \cdot h = 306/360 = 0.851$ $lab \cdot tch$ and $lab \cdot nch$

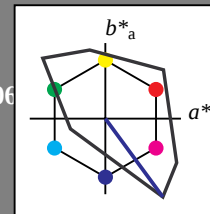
D65: hue V

LCH*Ma: 30 129 306

olv*Ma: 0.0 0.0 1.0

triangle lightness

1,00



%Gamut

 $u^*_{rel} = 158$

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

 $g^*_{H,rel} = 20$ $g^*_{C,rel} = 37$

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*tch	95.41	0.0	0.0	
lab*nch	95.41	0.0	0.0	
relative CIELAB lab*				
lab*lab	1.0	0.0	0.0	
lab*tch	1.0	0.0	0.0	
lab*nch	1.0	0.0	0.0	
relative Natural Colour (NC)				
lab*trj	1.0	0.0	0.0	
lab*tce	1.0	0.0	0.0	
lab*nce	0.0	0.0	0.0	

relative Inform. Technology (IT)				
olvi3*	0.75	0.75	1.0	(1.0)
cmyn3*	0.25	0.25	0.0	(0.0)
olvi4*	0.75	0.75	1.0	(1.0)
cmyn4*	0.25	0.25	0.0	(0.0)
standard and adapted CIELAB				
lab*lab	79.15	19.01	-25.88	
lab*tch	79.15	19.01	-25.88	
lab*nch	79.15	19.01	-25.88	
relative CIELAB lab*				
lab*lab	0.83	0.148	-0.2	
lab*tch	0.83	0.148	-0.2	
lab*nch	0.83	0.148	-0.2	
relative Natural Colour (NC)				
lab*trj	0.83	0.148	-0.2	
lab*tce	0.83	0.148	-0.2	
lab*nce	0.83	0.148	-0.2	

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	62.9	38.02	-51.78	
lab*tch	62.9	38.02	-51.78	
lab*nch	62.9	38.02	-51.78	
relative CIELAB lab*				
lab*lab	0.659	0.296	-0.402	
lab*tch	0.659	0.296	-0.402	
lab*nch	0.659	0.296	-0.402	
relative Natural Colour (NC)				
lab*trj	0.659	0.296	-0.402	
lab*tce	0.659	0.296	-0.402	
lab*nce	0.659	0.296	-0.402	

relative Inform. Technology (IT)				
olvi3*	0.25	0.25	1.0	(1.0)
cmyn3*	0.75	0.75	0.0	(0.0)
olvi4*	0.25	0.25	1.0	(1.0)
cmyn4*	0.75	0.75	0.0	(0.0)
standard and adapted CIELAB				
lab*lab	46.64	57.04	-77.68	
lab*tch	46.64	57.04	-77.68	
lab*nch	46.64	57.04	-77.68	
relative CIELAB lab*				
lab*lab	0.489	0.444	-0.603	
lab*tch	0.489	0.444	-0.603	
lab*nch	0.489	0.444	-0.603	
relative Natural Colour (NC)				
lab*trj	0.489	0.444	-0.603	
lab*tce	0.489	0.444	-0.603	
lab*nce	0.489	0.444	-0.603	

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	30.39	76.06	-103.59	
lab*tch	30.39	76.06	-103.59	
lab*nch	30.39	76.06	-103.59	
relative CIELAB lab*				
lab*lab	0.318	0.592	-0.803	
lab*tch	0.318	0.592	-0.803	
lab*nch	0.318	0.592	-0.803	
relative Natural Colour (NC)				
lab*trj	0.318	0.592	-0.803	
lab*tce	0.318	0.592	-0.803	
lab*nce	0.318	0.592	-0.803	

relative Inform. Technology (IT)				
olvi3*	0.5	0.5	1.0	(1.0)
cmyn3*	0.5	0.5	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	47.72	0.0	0.0	
lab*tch	47.72	0.0	0.0	
lab*nch	47.72	0.0	0.0	
relative CIELAB lab*				
lab*lab	0.5	0.0	0.0	
lab*tch	0.5	0.0	0.0	
lab*nch	0.5	0.0	0.0	
relative Natural Colour (NC)				
lab*trj	0.5	0.0	0.0	
lab*tce	0.5	0.0	0.0	
lab*nce	0.5	0.0	0.0	

relative Inform. Technology (IT)				
olvi3*	0.33	0.148	-0.201	
cmyn3*	0.75	0.75	0.0	(0.0)
olvi4*	0.75	0.75	0.0	(0.0)
cmyn4*	0.25	0.25	0.0	(0.0)
standard and adapted CIELAB				
lab*lab	31.46	19.01	-25.89	
lab*tch	31.46	19.01	-25.89	
lab*nch	31.46	19.01	-25.89	
relative CIELAB lab*				
lab*lab	0.33	0.148	-0.201	
lab*tch	0.33	0.148	-0.201	
lab*nch	0.33	0.148	-0.201	
relative Natural Colour (NC)				
lab*trj	0.33	0.148	-0.201	
lab*tce	0.33	0.148	-0.201	
lab*nce	0.33	0.148	-0.201	

relative Inform. Technology (IT)				
olvi3*	0.25	0.25	1.0	(1.0)
cmyn3*	0.75	0.75	0.0	(0.0)
olvi4*	0.25	0.25	1.0	(1.0)
cmyn4*	0.75	0.75	0.0	(0.0)
standard and adapted CIELAB				
lab*lab	22.8	57.04	-77.68	
lab*tch	22.8	57.04	-77.68	
lab*nch	22.8	57.04	-77.68	
relative CIELAB lab*				
lab*lab	0.239	0.444	-0.603	
lab*tch	0.239	0.444	-0.603	
lab*nch	0.239	0.444	-0.603	
relative Natural Colour (NC)				
lab*trj	0.239	0.444	-0.603	
lab*tce	0.239	0.444	-0.603	
lab*nce	0.239	0.444	-0.603	

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	30.39	76.06	-103.59	
lab*tch	30.39	76.06	-103.59	
lab*nch	30.39	76.06	-103.59	
relative CIELAB lab*				
lab*lab	0.318	0.592	-0.803	
lab*tch	0.318	0.592	-0.803	
lab*nch	0.318	0.592	-0.803	
relative Natural Colour (NC)				
lab*trj	0.318	0.592	-0.803	
lab*tce	0.318	0.592	-0.803	
lab*nce	0.318	0.592	-0.803	

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	30.39	76.06	-103.59	
lab*tch	30.39	76.06	-103.59	
lab*nch	30.39	76.06	-103.59	
relative CIELAB lab*				
lab*lab	0.318	0.592	-0.803	
lab*tch	0.318	0.592	-0.803	
lab*nch	0.318	0.592	-0.803	
relative Natural Colour (NC)				
lab*trj	0.318	0.592	-0.803	
lab*tce	0.318	0.592	-0.803	
lab*nce	0.318	0.592	-0.803	

relative Inform. Technology (IT)				
olvi3*	0.0	0.0	1.0	(1.0)
cmyn3*	1.0	1.0	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	0.0	0.0	0.0	
lab*tch	0.0	0.0	0.0	
lab*nch	0.0	0.0	0.0	
relative CIELAB lab*				
lab*lab	0.0	0.0	0.0	
lab*tch	0.0	0.0	0.0	
lab*nch	0.0	0.0	0.0	
relative Natural Colour (NC)				
lab*trj	0.0	0.0	0.0	
lab*tce	0.0	0.0	0.0	
lab*nce	0.0	0.0	0.0	

||
||
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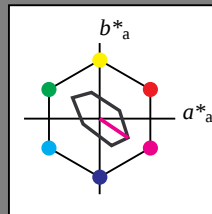
Input: Colorimetric Television Luminous System TLS70

for hue $h^* = lab \cdot h = 326/360 = 0.906$

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

D65: hue M
LCH*Ma: 79 45 326
olv*Ma: 1.0 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^*

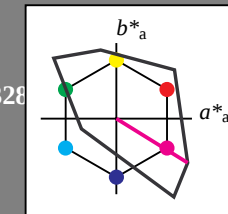
Output: Colorimetric Television Luminous System TLS00

for hue $h^* = lab \cdot h = 328/360 = 0.912$

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

D65: hue M
LCH*Ma: 57 111 328
olv*Ma: 1.0 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

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

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

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

chromaticness c^*

OE480-7, 5 step scales for constant CIELAB hue 326/360 = 0.906 (left)

5 step scales for constant CIELAB hue 328/360 = 0.912 (right)

BAM-test chart OE48; Colorimetric systems ORS18 & ORS18

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

input: $cmY0^* set cmykcolor$

output: Startup (S) data dependent

Input: Colorimetric Television Luminous System TLS70

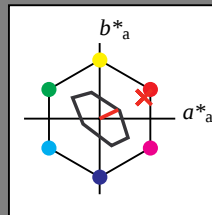
for hue $h^* = lab \cdot h = 25/360 = 0.071$ $lab \cdot tch$ and $lab \cdot nch$

D65: hue R

LCH*Ma: 77 27 25

olv*Ma: 1.0 0.05 0.0

triangle lightness



%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

0,75

 $n^* = 0,00$

0,25

 $n^* = 0,25$ $n^* = 0,50$ chromaticness c^*

Output: Colorimetric Television Luminous System TLS00

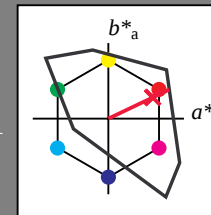
for hue $h^* = lab \cdot h = 25/360 = 0.071$ $lab \cdot tch$ and $lab \cdot nch$

D65: hue R

LCH*Ma: 52 89 25

olv*Ma: 1.0 0.0 0.21

triangle lightness



%Gamut

 $u^*_{rel} = 158$

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

 $n^* = 0,25$ $n^* = 0,50$ chromaticness c^*

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



BAM-test chart OE48; Colorimetric systems ORS18 & ORS18

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

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

input: $cmY0^* \text{ set } cmykcolor$
output: Startup (S) data dependend

Input: Colorimetric Television Luminous System TLS70

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

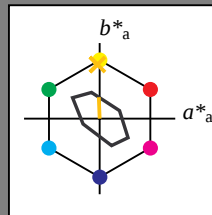
$lab \cdot tch$ and $lab \cdot nch$

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

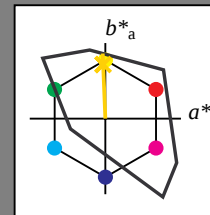
$lab \cdot tch$ and $lab \cdot nch$

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)

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

BAM-test chart OE48; Colorimetric systems ORS18 & ORS18

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

input: $cmY0^* setcmykcolor$

output: Startup (S) data dependent

Input: Colorimetric Television Luminous System TLS70

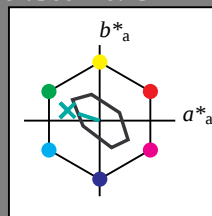
for hue $h^* = lab \cdot h = 162/360 = 0.451$ $lab \cdot tch$ and $lab \cdot nch$

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

 $n^* = 0,25$ $n^* = 0,50$ chromaticness c^*

Output: Colorimetric Television Luminous System TLS00

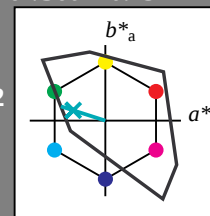
for hue $h^* = lab \cdot h = 162/360 = 0.451$ $lab \cdot tch$ and $lab \cdot nch$

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

 $n^* = 0,25$ $n^* = 0,50$ chromaticness c^*

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



BAM-test chart OE48; Colorimetric systems ORS18 & ORS18

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

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

input: $cmy0^* \text{ setcmykcolor}$
output: $Startup (S) \text{ data dependent}$

Input: Colorimetric Television Luminous System TLS70

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

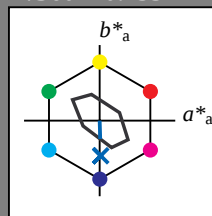
$lab \cdot tch$ and $lab \cdot nch$

D65: hue B

LCH*Ma: 80 24 272

olv*Ma: 0.0 0.4 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

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

OE480-7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)



BAM-test chart OE48; Colorimetric systems ORS18 & ORS18

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

Output: Colorimetric Television Luminous System TLS00

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

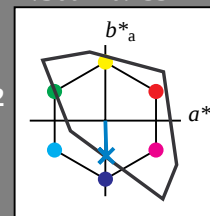
$lab \cdot tch$ and $lab \cdot nch$

D65: hue B

LCH*Ma: 65 49 272

olv*Ma: 0.0 0.61 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

$n^* = 0,25$

$n^* = 0,50$

chromaticness c^*

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

input: $cmY0^* setcmykcolor$

output: Startup (S) data dependend