

Input: Colorimetric Television Luminous System TLS00

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

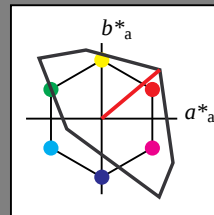
$lab \cdot tch$ and $lab \cdot nch$

D65: hue O

LCH*Ma: 51 100 40

olv*Ma: 1.0 0.0 0.0

triangle lightness



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^*

Output: Colorimetric Offset Reflective System ORS18

for hue $h^* = lab \cdot h = 38/360 = 0.105$

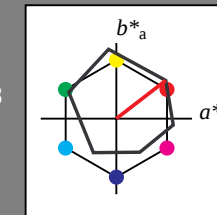
$lab \cdot tch$ and $lab \cdot nch$

D65: hue O

LCH*Ma: 48 83 38

olv*Ma: 1.0 0.0 0.0

triangle lightness



ORS18; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	47.94	65.39	50.52	82.63	38
Y _{Ma}	90.37	-10.26	91.75	92.32	96
L _{Ma}	50.9	-62.83	34.96	71.91	151
C _{Ma}	58.62	-30.34	-45.01	54.3	236
V _{Ma}	25.72	31.1	-44.4	54.22	305
M _{Ma}	48.13	75.28	-8.36	75.74	354
N _{Ma}	18.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.66	26.98	64.57	25
J _{CIE}	81.26	-2.16	67.76	67.79	92
G _{CIE}	52.23	-42.25	11.76	43.87	164
B _{CIE}	30.57	1.15	-46.84	46.86	271

%Gamut

$u^*_{rel} = 93$

%Regularity

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

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

$n^* = 0,00$

0,25

$n^* = 0,25$

chromaticness c^*

OE450-7, 5 step scales for constant CIELAB hue 40/360 = 0.111 (left)

5 step scales for constant CIELAB hue 38/360 = 0.105 (right)

BAM-test chart OE45; Colorimetric systems TLS00 & ORS18

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 TLS00

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

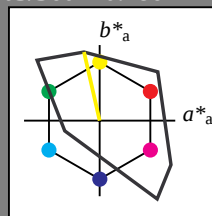
$lab \cdot tch$ and $lab \cdot nch$

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

$n^* = 0,25$

$n^* = 0,50$

0,00

chromaticness c^*

Output: Colorimetric Offset Reflective System ORS18

for hue $h^* = lab \cdot h = 96/360 = 0.268$

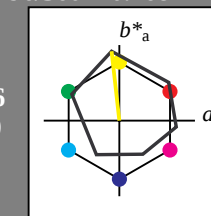
$lab \cdot tch$ and $lab \cdot nch$

D65: hue Y

LCH*Ma: 90 92 96

olv*Ma: 1.0 1.0 0.0

triangle lightness



ORS18; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	47.94	65.39	50.52	82.63	38
Y _{Ma}	90.37	-10.26	91.75	92.32	96
L _{Ma}	50.9	-62.83	34.96	71.91	151
C _{Ma}	58.62	-30.34	-45.01	54.3	236
V _{Ma}	25.72	31.1	-44.4	54.22	305
M _{Ma}	48.13	75.28	-8.36	75.74	354
N _{Ma}	18.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.66	26.98	64.57	25
J _{CIE}	81.26	-2.16	67.76	67.79	92
G _{CIE}	52.23	-42.25	11.76	43.87	164
B _{CIE}	30.57	1.15	-46.84	46.86	271

%Regularity

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

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

OE450-7, 5 step scales for constant CIELAB hue 103/360 = 0.286 (left)

BAM-test chart OE45; Colorimetric systems TLS00 & ORS18

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

5 step scales for constant CIELAB hue 96/360 = 0.268 (right)

input: $cmY0^* set cmykcolor$

output: no change compared to input

Input: Colorimetric Television Luminous System TLS00

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

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

D65: hue L
LCH*Ma: 84 115 136
olv*Ma: 0.0 1.0 0.0

triangle lightness

1,00

%Gamut

$u^*_{rel} = 158$

%Regularity

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

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

0,75

%Regularity

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

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

0,25

%Regularity

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

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

0,00

%Regularity

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

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

0,00

%Regularity

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

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

0,00

%Regularity

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

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

0,00

%Regularity

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

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

0,00

%Regularity

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

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

0,00

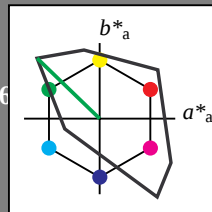
%Regularity

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

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

0,00

%Regularity



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

%Regularity

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

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

0,25

%Regularity

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

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

0,00

%Regularity

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

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

0,00

%Regularity

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

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

0,00

%Regularity

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

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

0,00

%Regularity

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

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

0,00

%Regularity

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

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

0,00

%Regularity

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

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

Output: Colorimetric Offset Reflective System ORS18

for hue $h^* = lab \cdot h = 151/360 = 0.419$

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

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

triangle lightness

1,00

%Gamut

$u^*_{rel} = 93$

%Regularity

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

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

0,75

%Regularity

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

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

0,25

%Regularity

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

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

0,00

%Regularity

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

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

0,00

%Regularity

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

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

0,00

%Regularity

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

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

0,00

%Regularity

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

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

0,00

%Regularity

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

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

0,00

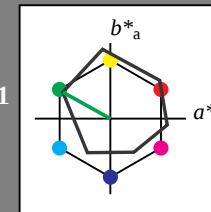
%Regularity

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

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

0,00

%Regularity



ORS18; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	47.94	65.39	50.52	82.63	38
Y _{Ma}	90.37	-10.26	91.75	92.32	96
L _{Ma}	50.9	-62.83	34.96	71.91	151
C _{Ma}	58.62	-30.34	-45.01	54.3	236
V _{Ma}	25.72	31.1	-44.4	54.22	305
M _{Ma}	48.13	75.28	-8.36	75.74	354
N _{Ma}	18.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.66	26.98	64.57	25
J _{CIE}	81.26	-2.16	67.76	67.79	92
G _{CIE}	52.23	-42.25	11.76	43.87	164
B _{CIE}	30.57	1.15	-46.84	46.86	271

%Regularity

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

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

0,75

%Regularity

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

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

0,25

%Regularity

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

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

0,00

%Regularity

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

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

0,00

%Regularity

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

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

0,00

%Regularity

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

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

0,00

%Regularity

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

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

0,00

%Regularity

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

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

0,00

%Regularity

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

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

%Regularity

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

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

0,75

%Regularity

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

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

0,25

%Regularity

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

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

0,00

%Regularity

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

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

0,00

%Regularity

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

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

0,00

%Regularity

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

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

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%Regularity

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

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

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%Regularity

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

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

0,00

%Regularity

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

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

%Regularity

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

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

0,75

%Regularity

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

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

0,25

%Regularity

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

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

0,00

%Regularity

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

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

0,00

%Regularity

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

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

0,00

%Regularity

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

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

0,00

%Regularity

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

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

0,00

%Regularity

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

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

0,00

%Regularity

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

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

%Regularity

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

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

0,75

%Regularity

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

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

0,25

%Regularity

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

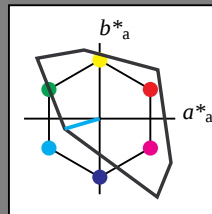
Input: Colorimetric Television Luminous System TLS00

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

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

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

1,00

0,75

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

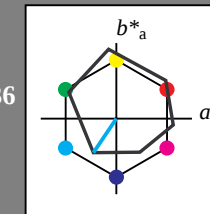
Output: Colorimetric Offset Reflective System ORS18

for hue $h^* = lab \cdot h = 236/360 = 0.656$

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

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

triangle lightness



ORS18; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	47.94	65.39	50.52	82.63	38
Y _{Ma}	90.37	-10.26	91.75	92.32	96
L _{Ma}	50.9	-62.83	34.96	71.91	151
C _{Ma}	58.62	-30.34	-45.01	54.3	236
V _{Ma}	25.72	31.1	-44.4	54.22	305
M _{Ma}	48.13	75.28	-8.36	75.74	354
N _{Ma}	18.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.66	26.98	64.57	25
J _{CIE}	81.26	-2.16	67.76	67.79	92
G _{CIE}	52.23	-42.25	11.76	43.87	164
B _{CIE}	30.57	1.15	-46.84	46.86	271

%Gamut

$u^*_{rel} = 93$

%Regularity

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

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

1,00

0,75

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

OE450-7, 5 step scales for constant CIELAB hue 196/360 = 0.545 (left)



BAM-test chart OE45; Colorimetric systems TLS00 & ORS18

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

5 step scales for constant CIELAB hue 236/360 = 0.656 (right)

input: `cmv0* setcmvcolor`

output: *no change compared to input*

Input: Colorimetric Television Luminous System TLS00

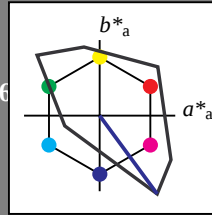
for hue $h^* = \text{lab}^*h = 306/360 = 0.851$

lab^*tch and lab^*nch

D65: hue V
LCH*Ma: 30 129 306
olv*Ma: 0.0 0.0 1.0

triangle lightness

1,00



% Gamut

$u^*_{\text{rel}} = 158$

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

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

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

1,00

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	-0.98	4.75		
LAB*LaBa	95.41	0.0	0.0		
LAB*TCBa	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	0.0	0.0	0.0		
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	0.75	(1.0)	
cmyn3*	0.25	0.25	0.25	(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	77.99	7.12	-7.51		
LAB*LaBa	77.99	7.77	-11.09		
LAB*TCBa	87.5	13.55	305.0		
relative CIELAB lab*					
lab*lab	0.75	0.75	0.75	(1.0)	
lab*tch	0.75	0.75	0.75	(1.0)	
lab*nch	0.0	0.0	0.0	(0.0)	
lab*trj	0.75	0.75	0.75	(1.0)	
lab*tce	0.75	0.75	0.75	(1.0)	
lab*nce	0.0	0.0	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*	0.75	0.75	0.75	(1.0)	
cmyn4*	0.0	0.0	0.0	(0.0)	
standard and adapted CIELAB					
LAB*LAB	58.64	7.49	-8.82		
LAB*LaBa	58.64	7.77	-11.09		
LAB*TCBa	62.5	13.55	305.0		
relative CIELAB lab*					
lab*lab	0.5	0.5	0.5	(1.0)	
lab*tch	0.5	0.5	0.5	(1.0)	
lab*nch	0.0	0.0	0.0	(0.0)	
lab*trj	0.5	0.5	0.5	(1.0)	
lab*tce	0.5	0.5	0.5	(1.0)	
lab*nce	0.0	0.0	0.0	(0.0)	

relative Inform. Technology (IT)					
olvi3*	0.25	0.25	0.25	(1.0)	
cmyn3*	0.25	0.25	0.25	(0.0)	
olvi4*	0.75	0.75	0.75	(1.0)	
cmyn4*	0.0	0.0	0.0	(0.0)	
standard and adapted CIELAB					
LAB*LAB	41.22	15.6	-21.1		
LAB*LaBa	41.22	15.55	-22.2		
LAB*TCBa	50.0	27.1	305.0		
relative CIELAB lab*					
lab*lab	0.25	0.25	0.25	(1.0)	
lab*tch	0.25	0.25	0.25	(1.0)	
lab*nch	0.0	0.0	0.0	(0.0)	
lab*trj	0.25	0.25	0.25	(1.0)	
lab*tce	0.25	0.25	0.25	(1.0)	
lab*nce	0.0	0.0	0.0	(0.0)	

relative Inform. Technology (IT)					
olvi3*	0.0	0.0	0.0	(1.0)	
cmyn3*	0.0	0.0	0.0	(0.0)	
olvi4*	0.75	0.75	0.75	(1.0)	
cmyn4*	0.0	0.0	0.0	(0.0)	
standard and adapted CIELAB					
LAB*LAB	39.29	7.77	-11.09		
LAB*LaBa	39.29	7.77	-11.09		
LAB*TCBa	37.5	13.55	305.0		
relative CIELAB lab*					
lab*lab	0.0	0.0	0.0	(1.0)	
lab*tch	0.0	0.0	0.0	(1.0)	
lab*nch	0.0	0.0	0.0	(0.0)	
lab*trj	0.0	0.0	0.0	(1.0)	
lab*tce	0.0	0.0	0.0	(1.0)	
lab*nce	0.0	0.0	0.0	(0.0)	

relative Inform. Technology (IT)					
olvi3*	0.0	0.0	0.0	(1.0)	
cmyn3*	0.0	0.0	0.0	(0.0)	
olvi4*	0.75	0.75	0.75	(1.0)	
cmyn4*	0.0	0.0	0.0	(0.0)	
standard and adapted CIELAB					
LAB*LAB	37.36	0.13	0.83		
LAB*LaBa	37.36	0.0	0.0		
LAB*TCBa	25.0	0.01	0.0		
relative CIELAB lab*					
lab*lab	0.0	0.0	0.0	(1.0)	
lab*tch	0.0	0.0	0.0	(1.0)	
lab*nch	0.0	0.0	0.0	(0.0)	
lab*trj	0.0	0.0	0.0	(1.0)	
lab*tce	0.0	0.0	0.0	(1.0)	
lab*nce	0.0	0.0	0.0	(0.0)	

relative Inform. Technology (IT)					
olvi3*	0.0	0.0	0.0	(1.0)	
cmyn3*	0.0	0.0	0.0	(0.0)	
olvi4*	0.75	0.75	0.75	(1.0)	
cmyn4*	0.0	0.0	0.0	(0.0)	
standard and adapted CIELAB					
LAB*LAB	19.94	7.77	-11.09		
LAB*LaBa	19.94	7.77	-11.09		
LAB*TCBa	12.5	13.55	305.0		
relative CIELAB lab*					
lab*lab	0.0	0.0	0.0	(1.0)	
lab*tch	0.0	0.0	0.0	(1.0)	
lab*nch	0.0	0.0	0.0	(0.0)	
lab*trj	0.0	0.0	0.0	(1.0)	
lab*tce	0.0	0.0	0.0	(1.0)	
lab*nce	0.0	0.0	0.0	(0.0)	

relative Inform. Technology (IT)					
olvi3*	0.0	0.0	0.0	(1.0)	
cmyn3*	0.0	0.0	0.0	(0.0)	
olvi4*	0.75	0.75	0.75	(1.0)	
cmyn4*	0.0	0.0	0.0	(0.0)	
standard and adapted CIELAB					
LAB*LAB	18.02	0.5	-0.47		
LAB*LaBa	18.02	0.0	0.0		
LAB*TCBa	0.01	0.01	0.0		
relative CIELAB lab*					
lab*lab	0.0	0.0	0.0	(1.0)	
lab*tch	0.0	0.0	0.0	(1.0)	
lab*nch	0.0	0.0	0.0	(0.0)	
lab*trj	0.0	0.0	0.0	(1.0)	
lab*tce	0.0	0.0	0.0	(1.0)	
lab*nce	0.0	0.0	0.0	(0.0)	

relative Inform. Technology (IT)					
olvi3*	0.0	0.0	0.0	(1.0)	
cmyn3*	0.0	0.0	0.0	(0.0)	
olvi4*	0.75	0.75	0.75	(1.0)	
cmyn4*	0.0	0.0	0.0	(0.0)	
standard and adapted CIELAB					
LAB*LAB	18.02	0.5	-0.47		
LAB*LaBa	18.02	0.0	0.0		
LAB*TCBa	0.01	0.01	0.0		
relative CIELAB lab*					
lab*lab	0.0	0.0	0.0	(1.0)	
lab*tch	0.0	0.0	0.0	(1.0)	
lab*nch	0.0	0.0	0.0	(0.0)	
lab*trj	0.0	0.0	0.0	(1.0)	
lab*tce	0.0	0.0	0.0	(1.0)	
lab*nce	0.0	0.0	0.0	(0.0)	

relative Inform. Technology (IT)					
olvi3*	0.0	0.0	0.0	(1.0)	
cmyn3*	0.0	0.0	0.0	(0.0)	
olvi4*	0.75	0.75	0.75	(1.0)	
cmyn4*	0.0	0.0	0.0	(0.0)	
standard and adapted CIELAB					
LAB*LAB	18.02	0.5	-0.47		
LAB*LaBa	18.02	0.0	0.0		
LAB*TCBa	0.01	0.01	0.0		
relative CIELAB lab*					
lab*lab	0.0	0.0	0.0	(1.0)	
lab*tch	0.0	0.0	0.0	(1.0)	
lab*nch	0.0	0.0	0.0	(0.0)	
lab*trj	0.0	0.0	0.0	(1.0)	
lab*tce	0.0	0.0	0.0	(1.0)	
lab*nce	0.0	0.0	0.0	(0.0)	

relative Inform. Technology (IT)					
olvi3*	0.0	0.0	0.0	(1.0)	
cmyn3*	0.0	0.0	0.0	(0.0)	
olvi4*	0.75	0.75	0.75	(1.0)	
cmyn4*	0.0	0.0	0.0	(0.0)	
standard and adapted CIELAB					
LAB*LAB	18.02	0.5	-0.47		
LAB*LaBa	18.02	0.0	0.0		
LAB*TCBa	0.01	0.01	0.0		
relative CIELAB lab*					
lab*lab	0.0	0.0	0.0	(1.0)	
lab*tch	0.0	0.0	0.0	(1.0)	
lab*nch	0.0	0.0	0.0	(0.0)	
lab*trj	0.0	0.0	0.0	(1.0)	
lab*tce	0.0	0.0	0.0	(1.0)	
lab*nce	0.0	0.0	0.0	(0.0)	

relative Inform. Technology (IT)					
olvi3*	0.0	0.0	0.0	(1.0)	
cmyn3*	0.0	0.0	0.0	(0.0)	
olvi4*	0.75	0.75	0.75	(1.0)	
cmyn4*	0.0	0.0	0.0	(0.0)	
standard and adapted CIELAB					
LAB*LAB	18.02	0.5	-0.47		
LAB*LaBa	18.02	0.0	0.0		
LAB*TCBa	0.01	0.01	0.0		
relative CIELAB lab*					
lab*lab	0.0	0.0	0.0	(1.0)	
lab*tch	0.0	0.0	0.0	(1.0)	
lab*nch	0.0	0.0	0.0	(0.0)	
lab*trj	0.0	0.0	0.0	(1.0)	
lab*tce	0.0	0.0	0.0	(1.0)	
lab*nce	0.0	0.0	0.0	(0.0)	

5 step scales for constant CIELAB hue 305/360 = 0.847 (right)

input: $\text{cm}y0^* \text{ set } \text{cm}y\text{color}$

output: no change compared to input

Input: Colorimetric Television Luminous System TLS00

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

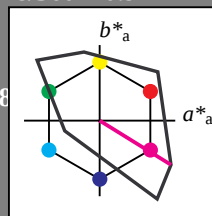
$lab \cdot tch$ and $lab \cdot nch$

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

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

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

1,00

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

Output: Colorimetric Offset Reflective System ORS18

for hue $h^* = lab \cdot h = 354/360 = 0.982$

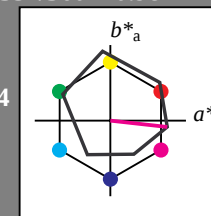
$lab \cdot tch$ and $lab \cdot nch$

D65: hue M

LCH*Ma: 48 76 354

olv*Ma: 1.0 0.0 1.0

triangle lightness



ORS18; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	47.94	65.39	50.52	82.63	38
Y _{Ma}	90.37	-10.26	91.75	92.32	96
L _{Ma}	50.9	-62.83	34.96	71.91	151
C _{Ma}	58.62	-30.34	-45.01	54.3	236
V _{Ma}	25.72	31.1	-44.4	54.22	305
M _{Ma}	48.13	75.28	-8.36	75.74	354
N _{Ma}	18.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.66	26.98	64.57	25
J _{CIE}	81.26	-2.16	67.76	67.79	92
G _{CIE}	52.23	-42.25	11.76	43.87	164
B _{CIE}	30.57	1.15	-46.84	46.86	271

%Regularity

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

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

1,00

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

$n^* = 0,50$

chromaticness c^*

OE450-7, 5 step scales for constant CIELAB hue 328/360 = 0.912 (left)

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

BAM-test chart OE45; Colorimetric systems TLS00 & ORS18

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

input: $cmY0^* \text{ set } cmykcolor$

output: no change compared to input

Input: Colorimetric Television Luminous System TLS00

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

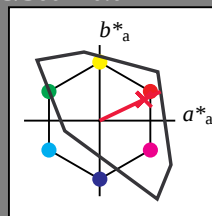
$lab \cdot tch$ and $lab \cdot nch$

D65: hue R

LCH*Ma: 52 89 25

olv*Ma: 1.0 0.0 0.21

triangle lightness



$u^*_{rel} = 158$

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

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

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

Output: Colorimetric Offset Reflective System ORS18

for hue $h^* = lab \cdot h = 25/360 = 0.069$

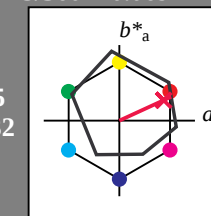
$lab \cdot tch$ and $lab \cdot nch$

D65: hue R

LCH*Ma: 48 75 25

olv*Ma: 1.0 0.0 0.32

triangle lightness



$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	47.94	65.39	50.52	82.63	38
Y _{Ma}	90.37	-10.26	91.75	92.32	96
L _{Ma}	50.9	-62.83	34.96	71.91	151
C _{Ma}	58.62	-30.34	-45.01	54.3	236
V _{Ma}	25.72	31.1	-44.4	54.22	305
M _{Ma}	48.13	75.28	-8.36	75.74	354
N _{Ma}	18.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.66	26.98	64.57	25
J _{CIE}	81.26	-2.16	67.76	67.79	92
G _{CIE}	52.23	-42.25	11.76	43.87	164
B _{CIE}	30.57	1.15	-46.84	46.86	271

%Regularity

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

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

OE450-7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

BAM-test chart OE45; Colorimetric systems TLS00 & ORS18

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

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

input: $cmY0^* set cmykcolor$

output: no change compared to input

Input: Colorimetric Television Luminous System TLS00

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

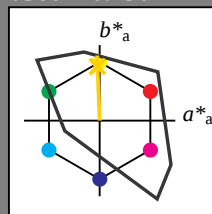
$lab \cdot tch$ and $lab \cdot nch$

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

$n^* = 0,25$

$n^* = 0,50$

0,00

chromaticness c^*

Output: Colorimetric Offset Reflective System ORS18

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

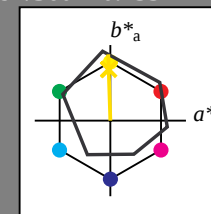
$lab \cdot tch$ and $lab \cdot nch$

D65: hue J

LCH*Ma: 86 88 92

olv*Ma: 1.0 0.9 0.0

triangle lightness



ORS18; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	47.94	65.39	50.52	82.63	38
Y _{Ma}	90.37	-10.26	91.75	92.32	96
L _{Ma}	50.9	-62.83	34.96	71.91	151
C _{Ma}	58.62	-30.34	-45.01	54.3	236
V _{Ma}	25.72	31.1	-44.4	54.22	305
M _{Ma}	48.13	75.28	-8.36	75.74	354
N _{Ma}	18.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.66	26.98	64.57	25
J _{CIE}	81.26	-2.16	67.76	67.79	92
G _{CIE}	52.23	-42.25	11.76	43.87	164
B _{CIE}	30.57	1.15	-46.84	46.86	271

%Regularity

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

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

1,00

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

$n^* = 0,50$

0,00

chromaticness c^*

OE450-7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

BAM-test chart OE45; Colorimetric systems TLS00 & ORS18

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

5 step scales for constant CIELAB hue 92/360 = 0.255 (right)

input: $cmy0^* \text{ set } cmykcolor$

output: no change compared to input

Input: Colorimetric Television Luminous System TLS00

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

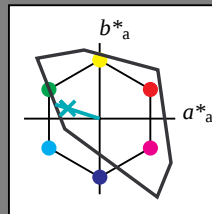
$lab \cdot tch$ and $lab \cdot nch$

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

0,25

0,00

chromaticness c^*

Output: Colorimetric Offset Reflective System ORS18

for hue $h^* = lab \cdot h = 164/360 = 0.457$

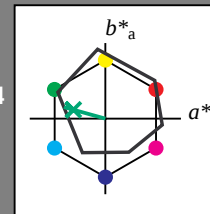
$lab \cdot tch$ and $lab \cdot nch$

D65: hue G

LCH*Ma: 53 57 164

olv*Ma: 0.0 1.0 0.25

triangle lightness



ORS18; adapted (a) CIELAB data					
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	47.94	65.39	50.52	82.63	38
Y _{Ma}	90.37	-10.26	91.75	92.32	96
L _{Ma}	50.9	-62.83	34.96	71.91	151
C _{Ma}	58.62	-30.34	-45.01	54.3	236
V _{Ma}	25.72	31.1	-44.4	54.22	305
M _{Ma}	48.13	75.28	-8.36	75.74	354
N _{Ma}	18.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.66	26.98	64.57	25
J _{CIE}	81.26	-2.16	67.76	67.79	92
G _{CIE}	52.23	-42.25	11.76	43.87	164
B _{CIE}	30.57	1.15	-46.84	46.86	271

%Regularity

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

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

0,75

0,25

chromaticness c^*

OE450-7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)



BAM-test chart OE45; Colorimetric systems TLS00 & ORS18

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

5 step scales for constant CIELAB hue 164/360 = 0.457 (right)

input: `cmY0* setcmykcolor`

output: *no change compared to input*



Input: Colorimetric Television Luminous System TLS00

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

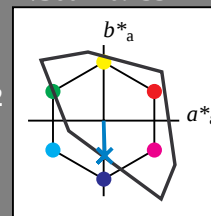
$lab \cdot tch$ and $lab \cdot nch$

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

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

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

1,00

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

$n^* = 0,50$

chromaticness c^*

Output: Colorimetric Offset Reflective System ORS18

for hue $h^* = lab \cdot h = 271/360 = 0.754$

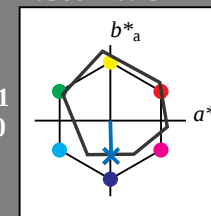
$lab \cdot tch$ and $lab \cdot nch$

D65: hue B

LCH*Ma: 42 45 271

olv*Ma: 0.0 0.49 1.0

triangle lightness



ORS18; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	47.94	65.39	50.52	82.63	38
Y _{Ma}	90.37	-10.26	91.75	92.32	96
L _{Ma}	50.9	-62.83	34.96	71.91	151
C _{Ma}	58.62	-30.34	-45.01	54.3	236
V _{Ma}	25.72	31.1	-44.4	54.22	305
M _{Ma}	48.13	75.28	-8.36	75.74	354
N _{Ma}	18.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.66	26.98	64.57	25
J _{CIE}	81.26	-2.16	67.76	67.79	92
G _{CIE}	52.23	-42.25	11.76	43.87	164
B _{CIE}	30.57	1.15	-46.84	46.86	271

%Regularity

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

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

1,00

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

$n^* = 0,50$

chromaticness c^*

OE450-7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

BAM-test chart OE45; Colorimetric systems TLS00 & ORS18

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

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

input: $cmY0^* set cmykcolor$

output: no change compared to input