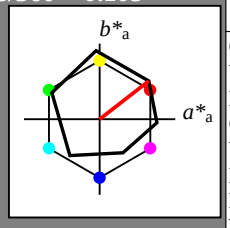
Input: Colorimetric Offset Reflective System ORS18

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

D50: hue O
LCH*Ma: 48 82 38
olv*Ma: 1.0 0.0 0.0

triangle lightness *t**



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.05	50.54	82.38	38
Y_{Ma}	91.0	−4.72	90.58	90.7	93
L_{Ma}	50.9	−63.18	34.98	72.22	151
C_{Ma}	56.99	−39.34	−48.1	62.16	231
V_{Ma}	25.72	30.89	−44.4	54.09	305
M_{Ma}	49.99	75.76	−4.64	75.9	356
N_{Ma}	18.09	0.0	0.0	0.0	0
W_{Ma}	95.46	0.0	0.0	0.0	0
R_{CIE}	41.88	61.66	30.69	68.88	26
J_{CIE}	81.97	2.02	67.79	67.82	88
G_{CIE}	51.62	−41.32	9.74	42.46	167
B_{CIE}	29.2	−5.79	−49.61	49.96	263

%Gamut
u^*_{rel} = 94
%Regularity
$g^*_{H,rel}$ = 65
$g^*_{C,rel}$ = 60

***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*	95.46	−0.39	4.69
*LAB*LABa*	95.46	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*	56.78	0.13	2.11
*LAB*LABa*	56.78	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*	18.1	0.67	−0.46
*LAB*LABa*	18.1	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*	71.7	32.45	28.38
*LAB*LABa*	71.7	32.52	25.26
*LAB*TCHa*	75.0	41.18	37.84

relative* CIELAB *lab*

*lab*lab*	0.693	0.395	0.307
*lab*tch*	0.75	0.5	0.105
*lab*nch*	0.0	0.5	0.105

***relative* Natural Colour (NC)**

*lab*lrj*	0.693	0.479	0.143
*lab*tce*	0.75	0.5	0.046
*lab*ncE*	0.0	0.5	r18j

***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*	33.02	32.98	25.8
*LAB*LABa*	33.02	32.52	25.26
*LAB*TCHa*	25.01	41.18	37.84

relative* CIELAB *lab*

*lab*lab*	0.193	0.395	0.307
*lab*tch*	0.25	0.5	0.105
*lab*nch*	0.5	0.5	0.105

***relative* Natural Colour (NC)**

*lab*lrj*	0.193	0.479	0.143
*lab*tce*	0.25	0.5	0.046
*lab*ncE*	0.5	0.5	r18j

***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*	47.94	65.3	52.06
*LAB*LABa*	47.94	65.04	50.53
*LAB*TCHa*	50.0	82.36	37.84

relative* CIELAB *lab*

*lab*lab*	0.386	0.79	0.613
*lab*tch*	0.5	1.0	0.105
*lab*nch*	0.0	1.0	0.105

***relative* Natural Colour (NC)**

*lab*lrj*	0.386	0.958	0.285
*lab*tce*	0.5	1.0	0.046
*lab*ncE*	0.0	1.0	r18j

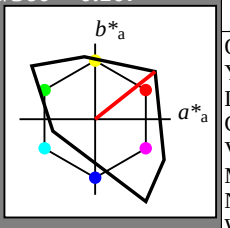
$n^* = 0{,}00$
blackness n^*
0,25 0,50 $n^* = 0{,}50$ 0,75 1,00
chromaticness c^*
$n^* = 1{,}0$

Output: Colorimetric Television Luminous System TLS00

for hue $h^* = lab^*h = 38/360 = 0.107$
*lab*tch* and *lab*nch*

D50: hue O
LCH*Ma: 54 101 38
olv*Ma: 1.0 0.0 0.0

triangle lightness *t**



TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	54.19	79.36	63.0	101.33	38
Y_{Ma}	93.44	−14.18	82.59	83.8	100
L_{Ma}	82.82	−83.73	70.41	109.41	140
C_{Ma}	85.22	−55.9	−15.78	58.1	196
V_{Ma}	25.61	67.05	−108.87	127.87	302
M_{Ma}	58.76	91.18	−53.69	105.82	330
N_{Ma}	0.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	41.88	62.0	31.82	69.69	27
J_{CIE}	81.97	1.81	71.59	71.61	89
G_{CIE}	51.62	−41.11	11.52	42.7	164
B_{CIE}	29.2	−5.27	−49.33	49.62	264

%Gamut
u^*_{rel} = 156
%Regularity
$g^*_{H,rel}$ = 26
$g^*_{C,rel}$ = 45

***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*	47.72	0.0	0.0
*LAB*LABa*	47.72	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*	0.03	0.0	0.0
*LAB*LABa*	0.03	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*	74.79	39.67	31.49
*LAB*LABa*	74.79	39.67	31.49
*LAB*TCHa*	75.0	50.65	38.44

relative* CIELAB *lab*

*lab*lab*	0.784	0.392	0.311
*lab*tch*	0.75	0.5	0.107
*lab*nch*	0.0	0.5	0.107

***relative* Natural Colour (NC)**

*lab*lrj*	0.784	0.479	0.142
*lab*tce*	0.75	0.5	0.046
*lab*ncE*	0.0	0.5	r18j

***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*	27.1	39.67	31.49
*LAB*LABa*	27.1	39.67	31.49
*LAB*TCHa*	25.01	50.65	38.44

relative* CIELAB *lab*

*lab*lab*	0.284	0.392	0.311
*lab*tch*	0.25	0.5	0.107
*lab*nch*	0.5	0.5	0.107

***relative* Natural Colour (NC)**

*lab*lrj*	0.284	0.479	0.142
*lab*tce*	0.25	0.5	0.046
*lab*ncE*	0.5	0.5	r18j

***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*	54.19	79.34	62.99
*LAB*LABa*	54.19	79.34	62.99
*LAB*TCHa*	50.0	101.31	38.44

relative* CIELAB *lab*

*lab*lab*	0.568	0.783	0.622
*lab*tch*	0.5	1.0	0.107
*lab*nch*	0.0	1.0	0.107

***relative* Natural Colour (NC)**

*lab*lrj*	0.568	0.958	0.285
*lab*tce*	0.5	1.0	0.046
*lab*ncE*	0.0	1.0	r18j

$n^* = 0{,}00$
blackness n^*
0,25 0,50 $n^* = 0{,}50$ 0,75 1,00
chromaticness c^*
$n^* = 1{,}0$

PE100−7, 3 step scales for constant CIELAB hue 38/360 = 0.105 (left)
3 step scales for constant CIELAB hue 38/360 = 0.107 (right)

BAM-test chart PE10; Colorimetric systems ORS18 & TLS00
D50: 2 coordinate data of 3 step colour scales for 10 hues

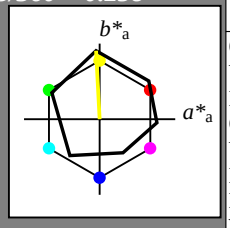
input: *olv* setrgbcolor*
output: *no change compared to input*

Input: Colorimetric Offset Reflective System ORS18

for hue $h^* = lab^*h = 93/360 = 0.258$
*lab*tch* and *lab*nch*

D50: hue Y
LCH*Ma: 91 91 93
olv*Ma: 1.0 1.0 0.0

triangle lightness *t**



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.05	50.54	82.38	38
Y_{Ma}	91.0	−4.72	90.58	90.7	93
L_{Ma}	50.9	−63.18	34.98	72.22	151
C_{Ma}	56.99	−39.34	−48.1	62.16	231
V_{Ma}	25.72	30.89	−44.4	54.09	305
M_{Ma}	49.99	75.76	−4.64	75.9	356
N_{Ma}	18.09	0.0	0.0	0.0	0
W_{Ma}	95.46	0.0	0.0	0.0	0
R_{CIE}	41.88	61.66	30.69	68.88	26
J_{CIE}	81.97	2.02	67.79	67.82	88
G_{CIE}	51.62	−41.32	9.74	42.46	167
B_{CIE}	29.2	−5.79	−49.61	49.96	263

%Gamut
u^*_{rel} = 94
%Regularity
$g^*_{H,rel}$ = 65
$g^*_{C,rel}$ = 60

***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*	95.46	−0.39	4.69
*LAB*LABa*	95.46	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*	56.78	0.13	2.11
*LAB*LABa*	56.78	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*	18.1	0.67	−0.46
*LAB*LABa*	18.1	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	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*	93.22	−2.72	49.83
*LAB*LABa*	93.22	−2.36	45.28
*LAB*TCHa*	75.0	45.34	92.99

relative* CIELAB *lab*

*lab*lab*	0.971	−0.025	0.499
*lab*tch*	0.75	0.5	0.258
*lab*nch*	0.0	0.5	0.258

***relative* Natural Colour (NC)**

*lab*lrj*	0.971	−0.046	0.498
*lab*tce*	0.75	0.5	0.265
*lab*ncE*	0.0	0.5	j05g

***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*	54.55	−2.19	47.25
*LAB*LABa*	54.55	−2.36	45.28
*LAB*TCHa*	25.01	45.34	92.99

relative* CIELAB *lab*

*lab*lab*	0.471	−0.025	0.499
*lab*tch*	0.25	0.5	0.258
*lab*nch*	0.5	0.5	0.258

***relative* Natural Colour (NC)**

*lab*lrj*	0.471	−0.046	0.498
*lab*tce*	0.25	0.5	0.265
*lab*ncE*	0.5	0.5	j05g

***relative* Inform. Technology (IT)**

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

***standard* and *adapted* CIELAB**

*LAB*LAB*	90.99	−5.06	94.96
*LAB*LABa*	90.99	−4.72	90.56
*LAB*TCHa*	50.0	90.68	92.99

relative* CIELAB *lab*

*lab*lab*	0.942	−0.051	0.998
*lab*tch*	0.5	1.0	0.258
*lab*nch*	0.0	1.0	0.258

***relative* Natural Colour (NC)**

*lab*lrj*	0.942	−0.093	0.995
*lab*tce*	0.5	1.0	0.265
*lab*ncE*	0.0	1.0	j05g

$n^* = 0{,}00$

blackness *n**

0,25 0,50 $n^* = 0{,}50$ 0,75 1,00

chromaticness *c**

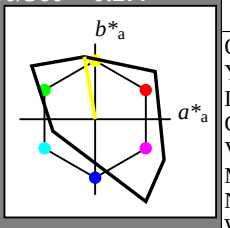
$n^* = 1{,}0$

Output: Colorimetric Television Luminous System TLS00

for hue $h^* = lab^*h = 100/360 = 0.277$
*lab*tch* and *lab*nch*

D50: hue Y
LCH*Ma: 93 84 100
olv*Ma: 1.0 1.0 0.0

triangle lightness *t**



TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	54.19	79.36	63.0	101.33	38
Y_{Ma}	93.44	−14.18	82.59	83.8	100
L_{Ma}	82.82	−83.73	70.41	109.41	140
C_{Ma}	85.22	−55.9	−15.78	58.1	196
V_{Ma}	25.61	67.05	−108.87	127.87	302
M_{Ma}	58.76	91.18	−53.69	105.82	330
N_{Ma}	0.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	41.88	62.0	31.82	69.69	27
J_{CIE}	81.97	1.81	71.59	71.61	89
G_{CIE}	51.62	−41.11	11.52	42.7	164
B_{CIE}	29.2	−5.27	−49.33	49.62	264

%Gamut
u^*_{rel} = 156
%Regularity
$g^*_{H,rel}$ = 26
$g^*_{C,rel}$ = 45

***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*	47.72	0.0	0.0
*LAB*LABa*	47.72	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*	0.03	0.0	0.0
*LAB*LABa*	0.03	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	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*	94.42	−7.08	41.29
*LAB*LABa*	94.42	−7.08	41.29
*LAB*TCHa*	75.0	41.89	99.75

relative* CIELAB *lab*

*lab*lab*	0.99	−0.084	0.493
*lab*tch*	0.75	0.5	0.277
*lab*nch*	0.0	0.5	0.277

***relative* Natural Colour (NC)**

*lab*lrj*	0.99	−0.114	0.487
*lab*tce*	0.75	0.5	0.287
*lab*ncE*	0.0	0.5	j14g

***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*	46.73	−7.08	41.29
*LAB*LABa*	46.73	−7.08	41.29
*LAB*TCHa*	25.01	41.89	99.75

relative* CIELAB *lab*

*lab*lab*	0.49	−0.084	0.493
*lab*tch*	0.25	0.5	0.277
*lab*nch*	0.5	0.5	0.277

***relative* Natural Colour (NC)**

*lab*lrj*	0.49	−0.114	0.487
*lab*tce*	0.25	0.5	0.287
*lab*ncE*	0.5	0.5	j14g

***relative* Inform. Technology (IT)**

*olvi3**	1.0	1.0	0.0	(1.0)
*cmyn3**	0.0	0.0	1.0	(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*	93.43	−14.18	82.57
*LAB*LABa*	93.43	−14.18	82.57
*LAB*TCHa*	50.0	83.78	99.75

relative* CIELAB *lab*

*lab*lab*	0.979	−0.168	0.985
*lab*tch*	0.5	1.0	0.277
*lab*nch*	0.0	1.0	0.277

***relative* Natural Colour (NC)**

*lab*lrj*	0.979	−0.229	0.973
*lab*tce*	0.5	1.0	0.287
*lab*ncE*	0.0	1.0	j14g

$n^* = 0{,}00$

blackness *n**

0,25 0,50 $n^* = 0{,}50$ 0,75 1,00

chromaticness *c**

$n^* = 1{,}0$

PE100−7, 3 step scales for constant CIELAB hue 93/360 = 0.258 (left)

3 step scales for constant CIELAB hue 100/360 = 0.277 (right)

BAM-test chart PE10; Colorimetric systems ORS18 & TLS00
D50: 2 coordinate data of 3 step colour scales for 10 hues

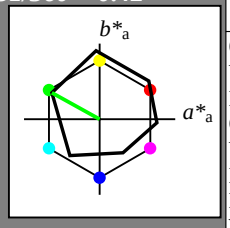
input: *olv* setrgbcolor*
output: *no change compared to input*

Input: Colorimetric Offset Reflective System ORS18

for hue $h^* = lab^*h = 151/360 = 0.42$
*lab*tch* and *lab*nch*

D50: hue L
LCH*Ma: 51 72 151
olv*Ma: 0.0 1.0 0.0

triangle lightness *t**



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.05	50.54	82.38	38
Y_{Ma}	91.0	−4.72	90.58	90.7	93
L_{Ma}	50.9	−63.18	34.98	72.22	151
C_{Ma}	56.99	−39.34	−48.1	62.16	231
V_{Ma}	25.72	30.89	−44.4	54.09	305
M_{Ma}	49.99	75.76	−4.64	75.9	356
N_{Ma}	18.09	0.0	0.0	0.0	0
W_{Ma}	95.46	0.0	0.0	0.0	0
R_{CIE}	41.88	61.66	30.69	68.88	26
J_{CIE}	81.97	2.02	67.79	67.82	88
G_{CIE}	51.62	−41.32	9.74	42.46	167
B_{CIE}	29.2	−5.79	−49.61	49.96	263

%Gamut
u^*_{rel} = 94
%Regularity
$g^*_{H,rel}$ = 65
$g^*_{C,rel}$ = 60

***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*	95.46	−0.39	4.69
*LAB*LABa*	95.46	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*	56.78	0.13	2.11
*LAB*LABa*	56.78	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*	18.1	0.67	−0.46
*LAB*LABa*	18.1	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**	0.5	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*	73.18	−31.67	20.7
*LAB*LABa*	73.18	−31.58	17.49
*LAB*TCHa*	75.0	36.1	151.03

relative* CIELAB *lab*

*lab*lab*	0.712	−0.436	0.242
*lab*tch*	0.75	0.5	0.42
*lab*nch*	0.0	0.5	0.42

***relative* Natural Colour (NC)**

*lab*lrj*	0.712	−0.474	0.155
*lab*tce*	0.75	0.5	0.45
*lab*ncE*	0.0	0.5	j79g

***relative* Inform. Technology (IT)**

*olvi3**	0.0	0.5	0.0	(1.0)
*cmyn3**	1.0	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*	34.5	−31.13	18.12
*LAB*LABa*	34.5	−31.58	17.49
*LAB*TCHa*	25.01	36.1	151.03

relative* CIELAB *lab*

*lab*lab*	0.212	−0.436	0.242
*lab*tch*	0.25	0.5	0.42
*lab*nch*	0.5	0.5	0.42

***relative* Natural Colour (NC)**

*lab*lrj*	0.212	−0.474	0.155
*lab*tce*	0.25	0.5	0.45
*lab*ncE*	0.5	0.5	j79g

***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*	50.9	−62.95	36.7
*LAB*LABa*	50.9	−63.16	34.97
*LAB*TCHa*	50.0	72.21	151.03

relative* CIELAB *lab*

*lab*lab*	0.424	−0.874	0.484
*lab*tch*	0.5	1.0	0.42
*lab*nch*	0.0	1.0	0.42

***relative* Natural Colour (NC)**

*lab*lrj*	0.424	−0.95	0.309
*lab*tce*	0.5	1.0	0.45
*lab*ncE*	0.0	1.0	j79g

$n^* = 0{,}00$

blackness n^*

0,25 0,50 $n^* = 0{,}50$ 0,75 1,00

chromaticness c^*

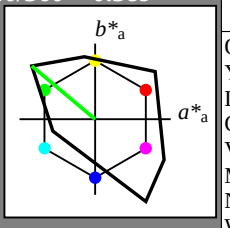
$n^* = 1{,}0$

Output: Colorimetric Television Luminous System TLS00

for hue $h^* = lab^*h = 140/360 = 0.389$
*lab*tch* and *lab*nch*

D50: hue L
LCH*Ma: 83 109 140
olv*Ma: 0.0 1.0 0.0

triangle lightness *t**



TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	54.19	79.36	63.0	101.33	38
Y_{Ma}	93.44	−14.18	82.59	83.8	100
L_{Ma}	82.82	−83.73	70.41	109.41	140
C_{Ma}	85.22	−55.9	−15.78	58.1	196
V_{Ma}	25.61	67.05	−108.87	127.87	302
M_{Ma}	58.76	91.18	−53.69	105.82	330
N_{Ma}	0.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	41.88	62.0	31.82	69.69	27
J_{CIE}	81.97	1.81	71.59	71.61	89
G_{CIE}	51.62	−41.11	11.52	42.7	164
B_{CIE}	29.2	−5.27	−49.33	49.62	264

%Gamut
u^*_{rel} = 156
%Regularity
$g^*_{H,rel}$ = 26
$g^*_{C,rel}$ = 45

***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*	47.72	0.0	0.0
*LAB*LABa*	47.72	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*	0.03	0.0	0.0
*LAB*LABa*	0.03	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**	0.5	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*	89.11	−41.85	35.2
*LAB*LABa*	89.11	−41.85	35.2
*LAB*TCHa*	75.0	54.69	139.94

relative* CIELAB *lab*

*lab*lab*	0.934	−0.382	0.322
*lab*tch*	0.75	0.5	0.389
*lab*nch*	0.0	0.5	0.389

***relative* Natural Colour (NC)**

*lab*lrj*	0.934	−0.436	0.242
*lab*tce*	0.75	0.5	0.419
*lab*ncE*	0.0	0.5	j67g

***relative* Inform. Technology (IT)**

*olvi3**	0.0	0.5	0.0	(1.0)
*cmyn3**	1.0	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*	41.42	−41.85	35.2
*LAB*LABa*	41.42	−41.85	35.2
*LAB*TCHa*	25.01	54.69	139.94

relative* CIELAB *lab*

*lab*lab*	0.434	−0.382	0.322
*lab*tch*	0.25	0.5	0.389
*lab*nch*	0.5	0.5	0.389

***relative* Natural Colour (NC)**

*lab*lrj*	0.434	−0.436	0.242
*lab*tce*	0.25	0.5	0.419
*lab*ncE*	0.5	0.5	j67g

***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*	82.81	−83.71	70.4
*LAB*LABa*	82.81	−83.71	70.4
*LAB*TCHa*	50.0	109.39	139.94

relative* CIELAB *lab*

*lab*lab*	0.868	−0.764	0.643
*lab*tch*	0.5	1.0	0.389
*lab*nch*	0.0	1.0	0.389

***relative* Natural Colour (NC)**

*lab*lrj*	0.868	−0.874	0.484
*lab*tce*	0.5	1.0	0.419
*lab*ncE*	0.0	1.0	j67g

$n^* = 0{,}00$

blackness n^*

0,25 0,50 $n^* = 0{,}50$ 0,75 1,00

chromaticness c^*

$n^* = 1{,}0$

PE100−7, 3 step scales for constant CIELAB hue 151/360 = 0.42 (left)

3 step scales for constant CIELAB hue 140/360 = 0.389 (right)

BAM-test chart PE10; Colorimetric systems ORS18 & TLS00
D50: 2 coordinate data of 3 step colour scales for 10 hues

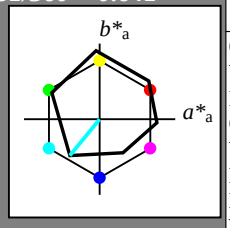
input: *olv* setrgbcolor*
output: *no change compared to input*

Input: Colorimetric Offset Reflective System ORS18

for hue *h* = lab*h = 231/360 = 0.641*
*lab*tch* and *lab*nch*

D50: hue C
LCH*Ma: 57 62 231
olv*Ma: 0.0 1.0 1.0

triangle lightness *t**



ORS18; adapted (a) CIELAB data

	*L**=*L**a	*a**a	*b**a	*C**ab,a	*h**ab,a
O_{Ma}	47.94	65.05	50.54	82.38	38
Y_{Ma}	91.0	−4.72	90.58	90.7	93
L_{Ma}	50.9	−63.18	34.98	72.22	151
C_{Ma}	56.99	−39.34	−48.1	62.16	231
V_{Ma}	25.72	30.89	−44.4	54.09	305
M_{Ma}	49.99	75.76	−4.64	75.9	356
N_{Ma}	18.09	0.0	0.0	0.0	0
W_{Ma}	95.46	0.0	0.0	0.0	0
R_{CIE}	41.88	61.66	30.69	68.88	26
J_{CIE}	81.97	2.02	67.79	67.82	88
G_{CIE}	51.62	−41.32	9.74	42.46	167
B_{CIE}	29.2	−5.79	−49.61	49.96	263

%Gamut
u*rel = 94
%Regularity
g*H,rel = 65
g*C,rel = 60

***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*	95.46	−0.39	4.69	
*LAB*LABa*	95.46	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*	56.78	0.13	2.11	
*LAB*LABa*	56.78	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*	18.1	0.67	−0.46	
*LAB*LABa*	18.1	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**	0.5	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*	76.22	−19.8	−20.63	
*LAB*LABa*	76.22	−19.66	−24.04	
*LAB*TCHa*	75.0	31.07	230.72	
relative* CIELAB *lab				
*lab*lab*	0.751	−0.315	−0.386	
*lab*tch*	0.75	0.5	0.641	
*lab*nch*	0.0	0.5	0.641	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.751	−0.252	−0.43	
*lab*tce*	0.75	0.5	0.666	
*lab*ncE*	0.0	0.5	g66b	

***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*	37.54	−19.26	−23.2	
*LAB*LABa*	37.54	−19.66	−24.04	
*LAB*TCHa*	25.01	31.07	230.72	
relative* CIELAB *lab				
*lab*lab*	0.251	−0.315	−0.386	
*lab*tch*	0.25	0.5	0.641	
*lab*nch*	0.5	0.5	0.641	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.251	−0.252	−0.43	
*lab*tce*	0.25	0.5	0.666	
*lab*ncE*	0.5	0.5	g66b	

***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*	56.99	−39.2	−45.96	
*LAB*LABa*	56.99	−39.33	−48.09	
*LAB*TCHa*	50.0	62.15	230.72	
relative* CIELAB *lab				
*lab*lab*	0.503	−0.632	−0.773	
*lab*tch*	0.5	1.0	0.641	
*lab*nch*	0.0	1.0	0.641	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.503	−0.505	−0.861	
*lab*tce*	0.5	1.0	0.666	
*lab*ncE*	0.0	1.0	g66b	

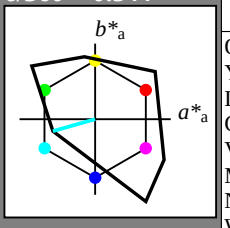
*n** = 0,00
blackness ***n****
0,25 0,50 *n** = 0,50 0,75 1,00
chromaticness ***c****
*n** = 1,0

Output: Colorimetric Television Luminous System TLS00

for hue *h* = lab*h = 196/360 = 0.544*
*lab*tch* and *lab*nch*

D50: hue C
LCH*Ma: 85 58 196
olv*Ma: 0.0 1.0 1.0

triangle lightness *t**



TLS00; adapted (a) CIELAB data

	*L**=*L**a	*a**a	*b**a	*C**ab,a	*h**ab,a
O_{Ma}	54.19	79.36	63.0	101.33	38
Y_{Ma}	93.44	−14.18	82.59	83.8	100
L_{Ma}	82.82	−83.73	70.41	109.41	140
C_{Ma}	85.22	−55.9	−15.78	58.1	196
V_{Ma}	25.61	67.05	−108.87	127.87	302
M_{Ma}	58.76	91.18	−53.69	105.82	330
N_{Ma}	0.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	41.88	62.0	31.82	69.69	27
J_{CIE}	81.97	1.81	71.59	71.61	89
G_{CIE}	51.62	−41.11	11.52	42.7	164
B_{CIE}	29.2	−5.27	−49.33	49.62	264

%Gamut
u*rel = 156
%Regularity
g*H,rel = 26
g*C,rel = 45

***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*	47.72	0.0	0.0	
*LAB*LABa*	47.72	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*	0.03	0.0	0.0	
*LAB*LABa*	0.03	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**	0.5	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*	90.31	−27.94	−7.88	
*LAB*LABa*	90.31	−27.94	−7.88	
*LAB*TCHa*	75.0	29.04	195.77	
relative* CIELAB *lab				
*lab*lab*	0.947	−0.48	−0.135	
*lab*tch*	0.75	0.5	0.544	
*lab*nch*	0.0	0.5	0.544	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.947	−0.439	−0.237	
*lab*tce*	0.75	0.5	0.579	
*lab*ncE*	0.0	0.5	g31b	

***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*	42.62	−27.94	−7.88	
*LAB*LABa*	42.62	−27.94	−7.88	
*LAB*TCHa*	25.01	29.04	195.77	
relative* CIELAB *lab				
*lab*lab*	0.447	−0.48	−0.135	
*lab*tch*	0.25	0.5	0.544	
*lab*nch*	0.5	0.5	0.544	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.447	−0.439	−0.237	
*lab*tce*	0.25	0.5	0.579	
*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*	85.21	−55.89	−15.78	
*LAB*LABa*	85.21	−55.89	−15.78	
*LAB*TCHa*	50.0	58.09	195.77	
relative* CIELAB *lab				
*lab*lab*	0.893	−0.961	−0.271	
*lab*tch*	0.5	1.0	0.544	
*lab*nch*	0.0	1.0	0.544	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.893	−0.878	−0.475	
*lab*tce*	0.5	1.0	0.579	
*lab*ncE*	0.0	1.0	g31b	

*n** = 0,00
blackness ***n****
0,25 0,50 *n** = 0,50 0,75 1,00
chromaticness ***c****
*n** = 1,0

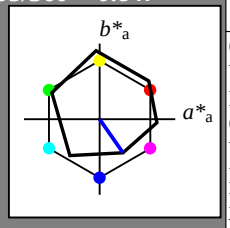
PE100−7, 3 step scales for constant CIELAB hue 231/360 = 0.641 (left)
3 step scales for constant CIELAB hue 196/360 = 0.544 (right)

Input: Colorimetric Offset Reflective System ORS18

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

D50: hue V
LCH*Ma: 26 54 305
olv*Ma: 0.0 0.0 1.0

triangle lightness *t**



%Gamut
u*rel = 94
%Regularity
g*H,rel = 65
g*C,rel = 60

ORS18; adapted (a) CIELAB data

	L*=L*a	a*a	b*a	C*ab,a	h*ab,a
OMa	47.94	65.05	50.54	82.38	38
YMa	91.0	−4.72	90.58	90.7	93
LMa	50.9	−63.18	34.98	72.22	151
CMa	56.99	−39.34	−48.1	62.16	231
VMa	25.72	30.89	−44.4	54.09	305
MMa	49.99	75.76	−4.64	75.9	356
NMa	18.09	0.0	0.0	0.0	0
WMa	95.46	0.0	0.0	0.0	0
RCIE	41.88	61.66	30.69	68.88	26
JCIE	81.97	2.02	67.79	67.82	88
GCIE	51.62	−41.32	9.74	42.46	167
BCIE	29.2	−5.79	−49.61	49.96	263

***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*	95.46	−0.39	4.69
*LAB*LABa*	95.46	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*	56.78	0.13	2.11
*LAB*LABa*	56.78	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*	18.1	0.67	−0.46
*LAB*LABa*	18.1	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**	0.5	0.5	1.0	(1.0)
*cmyn3**	0.5	0.5	0.0	(0.0)
*olvi4**	0.5	0.5	1.0	1.0
*cmyn4**	0.5	0.5	0.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	60.59	15.52	−19.82
*LAB*LABa*	60.59	15.44	−22.19
*LAB*TCHa*	75.0	27.04	304.82

relative* CIELAB *lab*

*lab*lab*	0.549	0.285	−0.409
*lab*tch*	0.75	0.5	0.847
*lab*nch*	0.0	0.5	0.847

***relative* Natural Colour (NC)**

*lab*lrj*	0.549	0.252	−0.431
*lab*tce*	0.75	0.5	0.834
*lab*ncE*	0.0	0.5	b33r

***relative* Inform. Technology (IT)**

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

***standard* and *adapted* CIELAB**

*LAB*LAB*	21.91	16.06	−22.4
*LAB*LABa*	21.91	15.44	−22.19
*LAB*TCHa*	25.01	27.04	304.82

relative* CIELAB *lab*

*lab*lab*	0.049	0.285	−0.409
*lab*tch*	0.25	0.5	0.847
*lab*nch*	0.5	0.5	0.847

***relative* Natural Colour (NC)**

*lab*lrj*	0.049	0.252	−0.431
*lab*tce*	0.25	0.5	0.834
*lab*ncE*	0.5	0.5	b33r

***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*	25.73	31.44	−44.34
*LAB*LABa*	25.73	30.88	−44.39
*LAB*TCHa*	50.0	54.08	304.82

relative* CIELAB *lab*

*lab*lab*	0.099	0.571	−0.82
*lab*tch*	0.5	1.0	0.847
*lab*nch*	0.0	1.0	0.847

***relative* Natural Colour (NC)**

*lab*lrj*	0.099	0.505	−0.862
*lab*tce*	0.5	1.0	0.834
*lab*ncE*	0.0	1.0	b33r

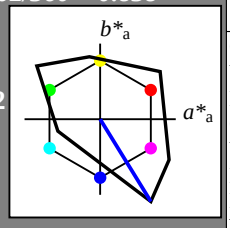
n* = 0,00
blackness *n**
0,25 0,50 n* = 0,50 0,75 1,00
chromaticness *c**
n* = 1,0

Output: Colorimetric Television Luminous System TLS00

for hue *h** = *lab*h* = 302/360 = 0.838
*lab*tch* and *lab*nch*

D50: hue V
LCH*Ma: 26 128 302
olv*Ma: 0.0 0.0 1.0

triangle lightness *t**



%Gamut
u*rel = 156
%Regularity
g*H,rel = 26
g*C,rel = 45

TLS00; adapted (a) CIELAB data

	L*=L*a	a*a	b*a	C*ab,a	h*ab,a
OMa	54.19	79.36	63.0	101.33	38
YMa	93.44	−14.18	82.59	83.8	100
LMa	82.82	−83.73	70.41	109.41	140
CMa	85.22	−55.9	−15.78	58.1	196
VMa	25.61	67.05	−108.87	127.87	302
MMa	58.76	91.18	−53.69	105.82	330
NMa	0.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	41.88	62.0	31.82	69.69	27
JCIE	81.97	1.81	71.59	71.61	89
GCIE	51.62	−41.11	11.52	42.7	164
BCIE	29.2	−5.27	−49.33	49.62	264

***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*	47.72	0.0	0.0
*LAB*LABa*	47.72	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*	0.03	0.0	0.0
*LAB*LABa*	0.03	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**	0.5	0.5	1.0	(1.0)
*cmyn3**	0.5	0.5	0.0	(0.0)
*olvi4**	0.5	0.5	1.0	1.0
*cmyn4**	0.5	0.5	0.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	60.51	33.52	−54.42
*LAB*LABa*	60.51	33.52	−54.42
*LAB*TCHa*	75.0	63.92	301.63

relative* CIELAB *lab*

*lab*lab*	0.634	0.262	−0.425
*lab*tch*	0.75	0.5	0.838
*lab*nch*	0.0	0.5	0.838

***relative* Natural Colour (NC)**

*lab*lrj*	0.634	0.231	−0.442
*lab*tce*	0.75	0.5	0.827
*lab*ncE*	0.0	0.5	b30r

***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*	12.82	33.52	−54.42
*LAB*LABa*	12.82	33.52	−54.42
*LAB*TCHa*	25.01	63.92	301.63

relative* CIELAB *lab*

*lab*lab*	0.134	0.262	−0.425
*lab*tch*	0.25	0.5	0.838
*lab*nch*	0.5	0.5	0.838

***relative* Natural Colour (NC)**

*lab*lrj*	0.134	0.231	−0.442
*lab*tce*	0.25	0.5	0.827
*lab*ncE*	0.5	0.5	b30r

***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*	25.61	67.04	−108.85
*LAB*LABa*	25.61	67.04	−108.85
*LAB*TCHa*	50.0	127.84	301.63

relative* CIELAB *lab*

*lab*lab*	0.268	0.524	−0.85
*lab*tch*	0.5	1.0	0.838
*lab*nch*	0.0	1.0	0.838

***relative* Natural Colour (NC)**

*lab*lrj*	0.268	0.462	−0.885
*lab*tce*	0.5	1.0	0.827
*lab*ncE*	0.0	1.0	b30r

n* = 0,00
blackness *n**
0,25 0,50 n* = 0,50 0,75 1,00
chromaticness *c**
n* = 1,0

PE100−7, 3 step scales for constant CIELAB hue 305/360 = 0.847 (left)
3 step scales for constant CIELAB hue 302/360 = 0.838 (right)

BAM-test chart PE10; Colorimetric systems ORS18 & TLS00
D50: 2 coordinate data of 3 step colour scales for 10 hues

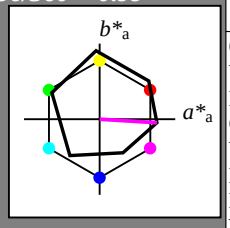
input: *olv* setrgbcolor*
output: *no change compared to input*

Input: Colorimetric Offset Reflective System ORS18

for hue $h^* = lab^*h = 356/360 = 0.99$
*lab*tch* and *lab*nch*

D50: hue M
LCH*Ma: 50 76 356
olv*Ma: 1.0 0.0 1.0

triangle lightness t^*



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.05	50.54	82.38	38
Y_{Ma}	91.0	−4.72	90.58	90.7	93
L_{Ma}	50.9	−63.18	34.98	72.22	151
C_{Ma}	56.99	−39.34	−48.1	62.16	231
V_{Ma}	25.72	30.89	−44.4	54.09	305
M_{Ma}	49.99	75.76	−4.64	75.9	356
N_{Ma}	18.09	0.0	0.0	0.0	0
W_{Ma}	95.46	0.0	0.0	0.0	0
R_{CIE}	41.88	61.66	30.69	68.88	26
J_{CIE}	81.97	2.02	67.79	67.82	88
G_{CIE}	51.62	−41.32	9.74	42.46	167
B_{CIE}	29.2	−5.79	−49.61	49.96	263

%Gamut
u^*_{rel} = 94
%Regularity
$g^*_{H,rel}$ = 65
$g^*_{C,rel}$ = 60

***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*	95.46	−0.39	4.69	
*LAB*LABa*	95.46	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*	56.78	0.13	2.11	
*LAB*LABa*	56.78	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*	18.1	0.67	−0.46	
*LAB*LABa*	18.1	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	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*	72.72	37.79	0.86	
*LAB*LABa*	72.72	37.87	−2.31	
*LAB*TCHa*	75.0	37.94	356.49	
relative* CIELAB *lab*				
*lab*lab*	0.706	0.499	−0.03	
*lab*tch*	0.75	0.5	0.99	
*lab*nch*	0.0	0.5	0.99	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.706	0.464	−0.186	
*lab*tce*	0.75	0.5	0.939	
*lab*ncE*	0.0	0.5	b75r	

***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*	34.04	38.32	−1.71	
*LAB*LABa*	34.04	37.87	−2.31	
*LAB*TCHa*	25.01	37.94	356.49	
relative* CIELAB *lab*				
*lab*lab*	0.206	0.499	−0.03	
*lab*tch*	0.25	0.5	0.99	
*lab*nch*	0.5	0.5	0.99	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.206	0.464	−0.186	
*lab*tce*	0.25	0.5	0.939	
*lab*ncE*	0.5	0.5	b75r	

***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*	49.99	75.97	−2.97	
*LAB*LABa*	49.99	75.75	−4.64	
*LAB*TCHa*	50.0	75.89	356.49	
relative* CIELAB *lab*				
*lab*lab*	0.412	0.998	−0.06	
*lab*tch*	0.5	1.0	0.99	
*lab*nch*	0.0	1.0	0.99	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.412	0.928	−0.372	
*lab*tce*	0.5	1.0	0.939	
*lab*ncE*	0.0	1.0	b75r	

$n^* = 0{,}00$

blackness n^*

0,25 0,50 $n^* = 0{,}50$ 0,75 1,00

chromaticness c^*

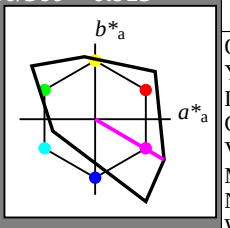
$n^* = 1{,}0$

Output: Colorimetric Television Luminous System TLS00

for hue $h^* = lab^*h = 330/360 = 0.915$
*lab*tch* and *lab*nch*

D50: hue M
LCH*Ma: 59 106 330
olv*Ma: 1.0 0.0 1.0

triangle lightness t^*



TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	54.19	79.36	63.0	101.33	38
Y_{Ma}	93.44	−14.18	82.59	83.8	100
L_{Ma}	82.82	−83.73	70.41	109.41	140
C_{Ma}	85.22	−55.9	−15.78	58.1	196
V_{Ma}	25.61	67.05	−108.87	127.87	302
M_{Ma}	58.76	91.18	−53.69	105.82	330
N_{Ma}	0.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	41.88	62.0	31.82	69.69	27
J_{CIE}	81.97	1.81	71.59	71.61	89
G_{CIE}	51.62	−41.11	11.52	42.7	164
B_{CIE}	29.2	−5.27	−49.33	49.62	264

%Gamut
u^*_{rel} = 156
%Regularity
$g^*_{H,rel}$ = 26
$g^*_{C,rel}$ = 45

***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*	47.72	0.0	0.0	
*LAB*LABa*	47.72	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*	0.03	0.0	0.0	
*LAB*LABa*	0.03	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	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*	77.08	45.58	−26.83	
*LAB*LABa*	77.08	45.58	−26.83	
*LAB*TCHa*	75.0	52.9	329.5	
relative* CIELAB *lab*				
*lab*lab*	0.808	0.431	−0.253	
*lab*tch*	0.75	0.5	0.915	
*lab*nch*	0.0	0.5	0.915	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.808	0.371	−0.334	
*lab*tce*	0.75	0.5	0.883	
*lab*ncE*	0.0	0.5	b53r	

***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*	29.39	45.58	−26.83	
*LAB*LABa*	29.39	45.58	−26.83	
*LAB*TCHa*	25.01	52.9	329.5	
relative* CIELAB *lab*				
*lab*lab*	0.308	0.431	−0.253	
*lab*tch*	0.25	0.5	0.915	
*lab*nch*	0.5	0.5	0.915	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.308	0.371	−0.334	
*lab*tce*	0.25	0.5	0.883	
*lab*ncE*	0.5	0.5	b53r	

***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*	58.76	91.16	−53.68	
*LAB*LABa*	58.76	91.16	−53.68	
*LAB*TCHa*	50.0	105.8	329.5	
relative* CIELAB *lab*				
*lab*lab*	0.616	0.861	−0.506	
*lab*tch*	0.5	1.0	0.915	
*lab*nch*	0.0	1.0	0.915	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.616	0.742	−0.669	
*lab*tce*	0.5	1.0	0.883	
*lab*ncE*	0.0	1.0	b53r	

$n^* = 0{,}00$

blackness n^*

0,25 0,50 $n^* = 0{,}50$ 0,75 1,00

chromaticness c^*

$n^* = 1{,}0$

PE100−7, 3 step scales for constant CIELAB hue 356/360 = 0.99 (left)

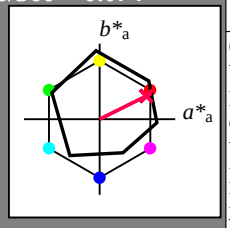
3 step scales for constant CIELAB hue 330/360 = 0.915 (right)

Input: Colorimetric Offset Reflective System ORS18

for hue *h** = *lab*h* = 26/360 = 0.074
*lab*tch* and *lab*nch*

D50: hue R
LCH*Ma: 49 76 26
olv*Ma: 1.0 0.0 0.3

triangle lightness *t**



%Gamut
u*rel = 94
%Regularity
g*H,rel = 65
g*C,rel = 60

ORS18; adapted (a) CIELAB data

	L*=L*a	a*a	b*a	C*ab,a	h*ab,a
OMa	47.94	65.05	50.54	82.38	38
YMa	91.0	−4.72	90.58	90.7	93
LMa	50.9	−63.18	34.98	72.22	151
CMa	56.99	−39.34	−48.1	62.16	231
VMa	25.72	30.89	−44.4	54.09	305
MMa	49.99	75.76	−4.64	75.9	356
NMa	18.09	0.0	0.0	0.0	0
WMa	95.46	0.0	0.0	0.0	0
RCIE	41.88	61.66	30.69	68.88	26
JCIE	81.97	2.02	67.79	67.82	88
GCIE	51.62	−41.32	9.74	42.46	167
BCIE	29.2	−5.79	−49.61	49.96	263

***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*	95.46	−0.39	4.69
*LAB*LABa*	95.46	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*	56.78	0.13	2.11
*LAB*LABa*	56.78	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*	18.1	0.67	−0.46
*LAB*LABa*	18.1	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	0.65	(1.0)
*cmyn3**	0.0	0.5	0.35	(0.0)
*olvi4**	1.0	0.5	0.65	1.0
*cmyn4**	0.0	0.5	0.35	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	72.0	34.05	20.12
*LAB*LABa*	72.0	34.13	16.99
*LAB*TCHa*	75.0	38.12	26.46

relative* CIELAB *lab*

*lab*lab*	0.697	0.448	0.223
*lab*tch*	0.75	0.5	0.074
*lab*nch*	0.0	0.5	0.074

***relative* Natural Colour (NC)**

*lab*lrj*	0.697	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	0.15	(1.0)
*cmyn3**	0.5	1.0	0.85	(0.0)
*olvi4**	1.0	0.5	0.65	0.5
*cmyn4**	0.0	0.5	0.35	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	33.33	34.58	17.55
*LAB*LABa*	33.33	34.13	16.99
*LAB*TCHa*	25.01	38.12	26.47

relative* CIELAB *lab*

*lab*lab*	0.197	0.447	0.223
*lab*tch*	0.25	0.5	0.074
*lab*nch*	0.5	0.5	0.074

***relative* Natural Colour (NC)**

*lab*lrj*	0.197	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	0.3	(1.0)
*cmyn3**	0.0	1.0	0.7	(0.0)
*olvi4**	1.0	0.0	0.3	1.0
*cmyn4**	0.0	1.0	0.7	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	48.56	68.5	35.55
*LAB*LABa*	48.56	68.25	33.98
*LAB*TCHa*	50.0	76.24	26.47

relative* CIELAB *lab*

*lab*lab*	0.394	0.895	0.446
*lab*tch*	0.5	1.0	0.074
*lab*nch*	0.0	1.0	0.074

***relative* Natural Colour (NC)**

*lab*lrj*	0.394	1.0	0.0
*lab*tce*	0.5	1.0	0.0
*lab*ncE*	0.0	1.0	r00j

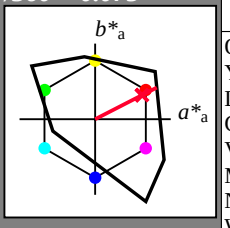
n* = 0,00
blackness *n**
0,25 0,50 n* = 0,50 0,75 1,00
chromaticness *c**
n* = 1,0

Output: Colorimetric Television Luminous System TLS00

for hue *h** = *lab*h* = 27/360 = 0.075
*lab*tch* and *lab*nch*

D50: hue R
LCH*Ma: 55 92 27
olv*Ma: 1.0 0.0 0.18

triangle lightness *t**



%Gamut
u*rel = 156
%Regularity
g*H,rel = 26
g*C,rel = 45

TLS00; adapted (a) CIELAB data

	L*=L*a	a*a	b*a	C*ab,a	h*ab,a
OMa	54.19	79.36	63.0	101.33	38
YMa	93.44	−14.18	82.59	83.8	100
LMa	82.82	−83.73	70.41	109.41	140
CMa	85.22	−55.9	−15.78	58.1	196
VMa	25.61	67.05	−108.87	127.87	302
MMa	58.76	91.18	−53.69	105.82	330
NMa	0.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	41.88	62.0	31.82	69.69	27
JCIE	81.97	1.81	71.59	71.61	89
GCIE	51.62	−41.11	11.52	42.7	164
BCIE	29.2	−5.27	−49.33	49.62	264

***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*	47.72	0.0	0.0
*LAB*LABa*	47.72	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*	0.03	0.0	0.0
*LAB*LABa*	0.03	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	0.591	(1.0)
*cmyn3**	0.0	0.5	0.409	(0.0)
*olvi4**	1.0	0.5	0.591	1.0
*cmyn4**	0.0	0.5	0.409	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	75.21	40.74	20.91
*LAB*LABa*	75.21	40.74	20.91
*LAB*TCHa*	75.0	45.8	27.17

relative* CIELAB *lab*

*lab*lab*	0.788	0.445	0.228
*lab*tch*	0.75	0.5	0.075
*lab*nch*	0.0	0.5	0.075

***relative* Natural Colour (NC)**

*lab*lrj*	0.788	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	0.091	(1.0)
*cmyn3**	0.5	1.0	0.909	(0.0)
*olvi4**	1.0	0.5	0.591	0.5
*cmyn4**	0.0	0.5	0.409	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	27.52	40.74	20.92
*LAB*LABa*	27.52	40.74	20.92
*LAB*TCHa*	25.01	45.8	27.18

relative* CIELAB *lab*

*lab*lab*	0.288	0.445	0.228
*lab*tch*	0.25	0.5	0.075
*lab*nch*	0.5	0.5	0.075

***relative* Natural Colour (NC)**

*lab*lrj*	0.288	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	0.181	(1.0)
*cmyn3**	0.0	1.0	0.819	(0.0)
*olvi4**	1.0	0.0	0.182	1.0
*cmyn4**	0.0	1.0	0.818	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	55.02	81.49	41.83
*LAB*LABa*	55.02	81.49	41.83
*LAB*TCHa*	50.0	91.6	27.17

relative* CIELAB *lab*

*lab*lab*	0.577	0.889	0.457
*lab*tch*	0.5	1.0	0.075
*lab*nch*	0.0	1.0	0.075

***relative* Natural Colour (NC)**

*lab*lrj*	0.577	1.0	0.0
*lab*tce*	0.5	1.0	0.0
*lab*ncE*	0.0	1.0	r00j

n* = 0,00
blackness *n**
0,25 0,50 n* = 0,50 0,75 1,00
chromaticness *c**
n* = 1,0

PE100−7, 3 step scales for constant CIELAB hue 26/360 = 0.074 (left)
3 step scales for constant CIELAB hue 27/360 = 0.075 (right)

BAM-test chart PE10; Colorimetric systems ORS18 & TLS00
D50: 2 coordinate data of 3 step colour scales for 10 hues

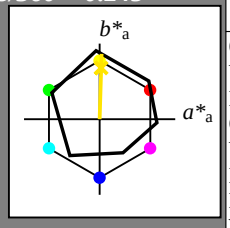
input: *olv* setrgbcolor*
output: *no change compared to input*

Input: Colorimetric Offset Reflective System ORS18

for hue *h** = *lab*h* = 88/360 = 0.245
*lab*tch* and *lab*nch*

D50: hue J
LCH*Ma: 86 86 88
olv*Ma: 1.0 0.9 0.0

triangle lightness *t**



ORS18; adapted (a) CIELAB data

	*L**=*L**a	*a**a	*b**a	*C**ab,a	*h**ab,a
O_{Ma}	47.94	65.05	50.54	82.38	38
Y_{Ma}	91.0	−4.72	90.58	90.7	93
L_{Ma}	50.9	−63.18	34.98	72.22	151
C_{Ma}	56.99	−39.34	−48.1	62.16	231
V_{Ma}	25.72	30.89	−44.4	54.09	305
M_{Ma}	49.99	75.76	−4.64	75.9	356
N_{Ma}	18.09	0.0	0.0	0.0	0
W_{Ma}	95.46	0.0	0.0	0.0	0
R_{CIE}	41.88	61.66	30.69	68.88	26
J_{CIE}	81.97	2.02	67.79	67.82	88
G_{CIE}	51.62	−41.32	9.74	42.46	167
B_{CIE}	29.2	−5.79	−49.61	49.96	263

%Gamut
u*rel = 94
%Regularity
g*H,rel = 65
g*C,rel = 60

***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*	95.46	−0.39	4.69
*LAB*LABa*	95.46	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*	56.78	0.13	2.11
*LAB*LABa*	56.78	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*	18.1	0.67	−0.46
*LAB*LABa*	18.1	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	0.948	0.5	(1.0)
*cmyn3**	0.0	0.052	0.5	(0.0)
*olvi4**	1.0	0.948	0.5	1.0
*cmyn4**	0.0	0.052	0.5	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	90.97	0.94	47.59
*LAB*LABa*	90.97	1.28	43.19
*LAB*TCHa*	75.0	43.21	88.3

relative* CIELAB *lab*

*lab*lab*	0.942	0.015	0.5
*lab*tch*	0.75	0.5	0.245
*lab*nch*	0.0	0.5	0.245

***relative* Natural Colour (NC)**

*lab*lrj*	0.942	0.0	0.5
*lab*tce*	0.75	0.5	0.25
*lab*ncE*	0.0	0.5	j00g

***relative* Inform. Technology (IT)**

*olvi3**	0.5	0.448	0.0	(1.0)
*cmyn3**	0.5	0.552	1.0	(0.0)
*olvi4**	1.0	0.948	0.5	0.5
*cmyn4**	0.0	0.052	0.5	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	52.29	1.49	45.0
*LAB*LABa*	52.29	1.29	43.18
*LAB*TCHa*	25.01	43.2	88.29

relative* CIELAB *lab*

*lab*lab*	0.442	0.015	0.5
*lab*tch*	0.25	0.5	0.245
*lab*nch*	0.5	0.5	0.245

***relative* Natural Colour (NC)**

*lab*lrj*	0.442	0.0	0.5
*lab*tce*	0.25	0.5	0.25
*lab*ncE*	0.5	0.5	r99j

***relative* Inform. Technology (IT)**

*olvi3**	1.0	0.895	0.0	(1.0)
*cmyn3**	0.0	0.105	1.0	(0.0)
*olvi4**	1.0	0.895	0.0	1.0
*cmyn4**	0.0	0.105	1.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	86.49	2.3	90.47
*LAB*LABa*	86.49	2.57	86.37
*LAB*TCHa*	50.0	86.41	88.29

relative* CIELAB *lab*

*lab*lab*	0.884	0.03	0.999
*lab*tch*	0.5	1.0	0.245
*lab*nch*	0.0	1.0	0.245

***relative* Natural Colour (NC)**

*lab*lrj*	0.884	0.0	1.0
*lab*tce*	0.5	1.0	0.25
*lab*ncE*	0.0	1.0	j00g

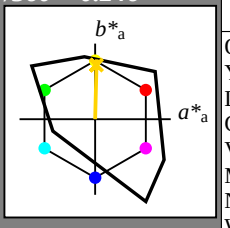
*n** = 0,00
blackness *n**
0,25 0,50 0,75 1,00
*n** = 0,50
chromaticness *c**
*n** = 1,0

Output: Colorimetric Television Luminous System TLS00

for hue *h** = *lab*h* = 89/360 = 0.246
*lab*tch* and *lab*nch*

D50: hue J
LCH*Ma: 87 79 89
olv*Ma: 1.0 0.83 0.0

triangle lightness *t**



TLS00; adapted (a) CIELAB data

	*L**=*L**a	*a**a	*b**a	*C**ab,a	*h**ab,a
O_{Ma}	54.19	79.36	63.0	101.33	38
Y_{Ma}	93.44	−14.18	82.59	83.8	100
L_{Ma}	82.82	−83.73	70.41	109.41	140
C_{Ma}	85.22	−55.9	−15.78	58.1	196
V_{Ma}	25.61	67.05	−108.87	127.87	302
M_{Ma}	58.76	91.18	−53.69	105.82	330
N_{Ma}	0.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	41.88	62.0	31.82	69.69	27
J_{CIE}	81.97	1.81	71.59	71.61	89
G_{CIE}	51.62	−41.11	11.52	42.7	164
B_{CIE}	29.2	−5.27	−49.33	49.62	264

%Gamut
u*rel = 156
%Regularity
g*H,rel = 26
g*C,rel = 45

***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*	47.72	0.0	0.0
*LAB*LABa*	47.72	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*	0.03	0.0	0.0
*LAB*LABa*	0.03	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	0.913	0.5	(1.0)
*cmyn3**	0.0	0.087	0.5	(0.0)
*olvi4**	1.0	0.914	0.5	1.0
*cmyn4**	0.0	0.086	0.5	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	91.02	0.99	39.59
*LAB*LABa*	91.02	0.99	39.59
*LAB*TCHa*	75.0	39.61	88.56

relative* CIELAB *lab*

*lab*lab*	0.954	0.013	0.5
*lab*tch*	0.75	0.5	0.246
*lab*nch*	0.0	0.5	0.246

***relative* Natural Colour (NC)**

*lab*lrj*	0.954	0.0	0.5
*lab*tce*	0.75	0.5	0.25
*lab*ncE*	0.0	0.5	j00g

***relative* Inform. Technology (IT)**

*olvi3**	0.5	0.413	0.0	(1.0)
*cmyn3**	0.5	0.587	1.0	(0.0)
*olvi4**	1.0	0.913	0.5	0.5
*cmyn4**	0.0	0.087	0.5	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	43.33	1.0	39.59
*LAB*LABa*	43.33	1.0	39.59
*LAB*TCHa*	25.01	39.6	88.55

relative* CIELAB *lab*

*lab*lab*	0.454	0.013	0.5
*lab*tch*	0.25	0.5	0.246
*lab*nch*	0.5	0.5	0.246

***relative* Natural Colour (NC)**

*lab*lrj*	0.454	0.0	0.5
*lab*tce*	0.25	0.5	0.25
*lab*ncE*	0.5	0.5	r99j

***relative* Inform. Technology (IT)**

*olvi3**	1.0	0.827	0.0	(1.0)
*cmyn3**	0.0	0.173	1.0	(0.0)
*olvi4**	1.0	0.827	0.0	1.0
*cmyn4**	0.0	0.173	1.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	86.64	2.0	79.18
*LAB*LABa*	86.64	2.0	79.18
*LAB*TCHa*	50.0	79.21	88.56

relative* CIELAB *lab*

*lab*lab*	0.908	0.025	0.999
*lab*tch*	0.5	1.0	0.246
*lab*nch*	0.0	1.0	0.246

***relative* Natural Colour (NC)**

*lab*lrj*	0.908	0.0	1.0
*lab*tce*	0.5	1.0	0.25
*lab*ncE*	0.0	1.0	j00g

*n** = 0,00
blackness *n**
0,25 0,50 0,75 1,00
*n** = 0,50
chromaticness *c**
*n** = 1,0

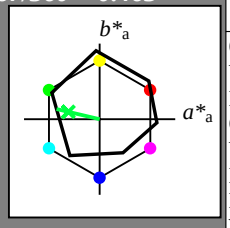
PE100−7, 3 step scales for constant CIELAB hue 88/360 = 0.245 (left)
3 step scales for constant CIELAB hue 89/360 = 0.246 (right)

Input: Colorimetric Offset Reflective System ORS18

for hue $h^* = lab^*h = 167/360 = 0.463$
*lab*tch* and *lab*nch*

D50: hue G
LCH*Ma: 52 59 167
olv*Ma: 0.0 1.0 0.26

triangle lightness *t**



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.05	50.54	82.38	38
Y_{Ma}	91.0	−4.72	90.58	90.7	93
L_{Ma}	50.9	−63.18	34.98	72.22	151
C_{Ma}	56.99	−39.34	−48.1	62.16	231
V_{Ma}	25.72	30.89	−44.4	54.09	305
M_{Ma}	49.99	75.76	−4.64	75.9	356
N_{Ma}	18.09	0.0	0.0	0.0	0
W_{Ma}	95.46	0.0	0.0	0.0	0
R_{CIE}	41.88	61.66	30.69	68.88	26
J_{CIE}	81.97	2.02	67.79	67.82	88
G_{CIE}	51.62	−41.32	9.74	42.46	167
B_{CIE}	29.2	−5.79	−49.61	49.96	263

%Gamut
u^*_{rel} = 94
%Regularity
$g^*_{H,rel}$ = 65
$g^*_{C,rel}$ = 60

***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*	95.46	−0.39	4.69
*LAB*LABa*	95.46	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*	56.78	0.13	2.11
*LAB*LABa*	56.78	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*	18.1	0.67	−0.46
*LAB*LABa*	18.1	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**	0.5	1.0	0.63	(1.0)
*cmyn3**	0.5	0.0	0.37	(0.0)
*olvi4**	0.5	1.0	0.63	1.0
*cmyn4**	0.5	0.0	0.37	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	73.97	−28.59	9.98
*LAB*LABa*	73.97	−28.49	6.72
*LAB*TCHa*	75.0	29.28	166.74

relative* CIELAB *lab*

*lab*lab*	0.722	−0.486	0.115
*lab*tch*	0.75	0.5	0.463
*lab*nch*	0.0	0.5	0.463

***relative* Natural Colour (NC)**

*lab*lrj*	0.722	−0.499	0.0
*lab*tce*	0.75	0.5	0.5
*lab*ncE*	0.0	0.5	g00b

***relative* Inform. Technology (IT)**

*olvi3**	0.0	0.5	0.13	(1.0)
*cmyn3**	1.0	0.5	0.87	(0.0)
*olvi4**	0.5	1.0	0.63	0.5
*cmyn4**	0.5	0.0	0.37	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	35.29	−28.06	7.41
*LAB*LABa*	35.29	−28.49	6.73
*LAB*TCHa*	25.01	29.28	166.72

relative* CIELAB *lab*

*lab*lab*	0.222	−0.486	0.115
*lab*tch*	0.25	0.5	0.463
*lab*nch*	0.5	0.5	0.463

***relative* Natural Colour (NC)**

*lab*lrj*	0.222	−0.499	0.0
*lab*tce*	0.25	0.5	0.5
*lab*ncE*	0.5	0.5	j99g

***relative* Inform. Technology (IT)**

*olvi3**	0.0	1.0	0.259	(1.0)
*cmyn3**	1.0	0.0	0.741	(0.0)
*olvi4**	0.0	1.0	0.259	1.0
*cmyn4**	1.0	0.0	0.741	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	52.48	−56.79	15.28
*LAB*LABa*	52.48	−56.99	13.44
*LAB*TCHa*	50.0	58.56	166.73

relative* CIELAB *lab*

*lab*lab*	0.444	−0.972	0.229
*lab*tch*	0.5	1.0	0.463
*lab*nch*	0.0	1.0	0.463

***relative* Natural Colour (NC)**

*lab*lrj*	0.444	−0.999	0.0
*lab*tce*	0.5	1.0	0.5
*lab*ncE*	0.0	1.0	j99g

$n^* = 0{,}00$

blackness n^*

0,25 0,50 $n^* = 0{,}50$ 0,75 1,00

chromaticness c^*

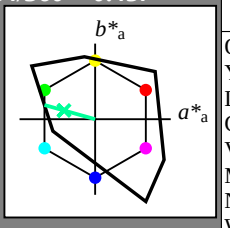
$n^* = 1{,}0$

Output: Colorimetric Television Luminous System TLS00

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

D50: hue G
LCH*Ma: 84 70 164
olv*Ma: 0.0 1.0 0.6

triangle lightness *t**



TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	54.19	79.36	63.0	101.33	38
Y_{Ma}	93.44	−14.18	82.59	83.8	100
L_{Ma}	82.82	−83.73	70.41	109.41	140
C_{Ma}	85.22	−55.9	−15.78	58.1	196
V_{Ma}	25.61	67.05	−108.87	127.87	302
M_{Ma}	58.76	91.18	−53.69	105.82	330
N_{Ma}	0.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	41.88	62.0	31.82	69.69	27
J_{CIE}	81.97	1.81	71.59	71.61	89
G_{CIE}	51.62	−41.11	11.52	42.7	164
B_{CIE}	29.2	−5.27	−49.33	49.62	264

%Gamut
u^*_{rel} = 156
%Regularity
$g^*_{H,rel}$ = 26
$g^*_{C,rel}$ = 45

***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*	47.72	0.0	0.0
*LAB*LABa*	47.72	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*	0.03	0.0	0.0
*LAB*LABa*	0.03	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**	0.5	1.0	0.799	(1.0)
*cmyn3**	0.5	0.0	0.201	(0.0)
*olvi4**	0.5	1.0	0.8	1.0
*cmyn4**	0.5	0.0	0.2	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	89.83	−33.52	9.39
*LAB*LABa*	89.83	−33.52	9.39
*LAB*TCHa*	75.0	34.82	164.36

relative* CIELAB *lab*

*lab*lab*	0.941	−0.48	0.135
*lab*tch*	0.75	0.5	0.457
*lab*nch*	0.0	0.5	0.457

***relative* Natural Colour (NC)**

*lab*lrj*	0.941	−0.499	0.0
*lab*tce*	0.75	0.5	0.5
*lab*ncE*	0.0	0.5	g00b

***relative* Inform. Technology (IT)**

*olvi3**	0.0	0.5	0.299	(1.0)
*cmyn3**	1.0	0.5	0.701	(0.0)
*olvi4**	0.5	1.0	0.799	0.5
*cmyn4**	0.5	0.0	0.201	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	42.13	−33.52	9.4
*LAB*LABa*	42.13	−33.52	9.4
*LAB*TCHa*	25.01	34.82	164.34

relative* CIELAB *lab*

*lab*lab*	0.442	−0.48	0.135
*lab*tch*	0.25	0.5	0.457
*lab*nch*	0.5	0.5	0.457

***relative* Natural Colour (NC)**

*lab*lrj*	0.442	−0.499	0.0
*lab*tce*	0.25	0.5	0.5
*lab*ncE*	0.5	0.5	j99g

***relative* Inform. Technology (IT)**

*olvi3**	0.0	1.0	0.599	(1.0)
*cmyn3**	1.0	0.0	0.401	(0.0)
*olvi4**	0.0	1.0	0.599	1.0
*cmyn4**	1.0	0.0	0.401	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	84.25	−67.05	18.79
*LAB*LABa*	84.25	−67.05	18.79
*LAB*TCHa*	50.0	69.64	164.35

relative* CIELAB *lab*

*lab*lab*	0.883	−0.962	0.27
*lab*tch*	0.5	1.0	0.457
*lab*nch*	0.0	1.0	0.457

***relative* Natural Colour (NC)**

*lab*lrj*	0.883	−0.999	0.0
*lab*tce*	0.5	1.0	0.5
*lab*ncE*	0.0	1.0	g00b

$n^* = 0{,}00$

blackness n^*

0,25 0,50 $n^* = 0{,}50$ 0,75 1,00

chromaticness c^*

$n^* = 1{,}0$

PE100−7, 3 step scales for constant CIELAB hue 167/360 = 0.463 (left)

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

BAM-test chart PE10; Colorimetric systems ORS18 & TLS00
D50: 2 coordinate data of 3 step colour scales for 10 hues

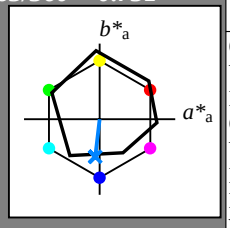
input: *olv* setrgbcolor*
output: *no change compared to input*

Input: Colorimetric Offset Reflective System ORS18

for hue *h** = *lab*h* = 263/360 = 0.731
*lab*tch* and *lab*nch*

D50: hue B
LCH*Ma: 42 47 263
olv*Ma: 0.0 0.52 1.0

triangle lightness *t**



ORS18; adapted (a) CIELAB data

	*L**=*L**a	*a**a	*b**a	*C**ab,a	*h**ab,a
O_{Ma}	47.94	65.05	50.54	82.38	38
Y_{Ma}	91.0	−4.72	90.58	90.7	93
L_{Ma}	50.9	−63.18	34.98	72.22	151
C_{Ma}	56.99	−39.34	−48.1	62.16	231
V_{Ma}	25.72	30.89	−44.4	54.09	305
M_{Ma}	49.99	75.76	−4.64	75.9	356
N_{Ma}	18.09	0.0	0.0	0.0	0
W_{Ma}	95.46	0.0	0.0	0.0	0
R_{CIE}	41.88	61.66	30.69	68.88	26
J_{CIE}	81.97	2.02	67.79	67.82	88
G_{CIE}	51.62	−41.32	9.74	42.46	167
B_{CIE}	29.2	−5.79	−49.61	49.96	263

%Gamut
u*rel = 94
%Regularity
g*H,rel = 65
g*C,rel = 60

***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*	95.46	−0.39	4.69	
*LAB*LABa*	95.46	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*	56.78	0.13	2.11	
*LAB*LABa*	56.78	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*	18.1	0.67	−0.46	
*LAB*LABa*	18.1	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**	0.5	0.758	1.0	(1.0)
*cmyn3**	0.5	0.242	0.0	(0.0)
*olvi4**	0.5	0.758	1.0	1.0
*cmyn4**	0.5	0.242	0.0	0.0
***standard* and *adapted* CIELAB**				
*LAB*LAB*	68.67	−2.73	−20.23	
*LAB*LABa*	68.67	−2.7	−23.15	
*LAB*TCHa*	75.0	23.32	263.33	
relative* CIELAB *lab*				
*lab*lab*	0.654	−0.057	−0.496	
*lab*tch*	0.75	0.5	0.731	
*lab*nch*	0.0	0.5	0.731	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.654	0.0	−0.499	
*lab*tce*	0.75	0.5	0.75	
*lab*ncE*	0.0	0.5	g99b	

***relative* Inform. Technology (IT)**				
*olvi3**	0.0	0.258	0.5	(1.0)
*cmyn3**	1.0	0.742	0.5	(0.0)
*olvi4**	0.5	0.758	1.0	0.5
*cmyn4**	0.5	0.242	0.0	0.5
***standard* and *adapted* CIELAB**				
*LAB*LAB*	29.99	−2.19	−22.81	
*LAB*LABa*	29.99	−2.69	−23.15	
*LAB*TCHa*	25.01	23.31	263.35	
relative* CIELAB *lab*				
*lab*lab*	0.154	−0.057	−0.496	
*lab*tch*	0.25	0.5	0.732	
*lab*nch*	0.5	0.5	0.732	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.154	0.0	−0.499	
*lab*tce*	0.25	0.5	0.75	
*lab*ncE*	0.5	0.5	b00r	

***relative* Inform. Technology (IT)**				
*olvi3**	0.0	0.517	1.0	(1.0)
*cmyn3**	1.0	0.483	0.0	(0.0)
*olvi4**	0.0	0.517	1.0	1.0
*cmyn4**	1.0	0.483	0.0	0.0
***standard* and *adapted* CIELAB**				
*LAB*LAB*	41.88	−5.06	−45.18	
*LAB*LABa*	41.88	−5.4	−46.3	
*LAB*TCHa*	50.0	46.63	263.34	
relative* CIELAB *lab*				
*lab*lab*	0.308	−0.115	−0.992	
*lab*tch*	0.5	1.0	0.731	
*lab*nch*	0.0	1.0	0.731	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.308	0.0	−0.999	
*lab*tce*	0.5	1.0	0.75	
*lab*ncE*	0.0	1.0	g99b	

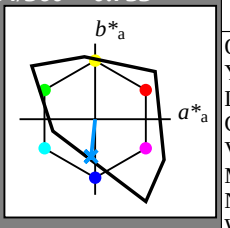
*n** = 0,00
blackness *n**
0,25 0,50 *n** = 0,50 0,75 1,00
chromaticness *c**
*n** = 1,0

Output: Colorimetric Television Luminous System TLS00

for hue *h** = *lab*h* = 264/360 = 0.733
*lab*tch* and *lab*nch*

D50: hue B
LCH*Ma: 61 54 264
olv*Ma: 0.0 0.59 1.0

triangle lightness *t**



TLS00; adapted (a) CIELAB data

	*L**=*L**a	*a**a	*b**a	*C**ab,a	*h**ab,a
O_{Ma}	54.19	79.36	63.0	101.33	38
Y_{Ma}	93.44	−14.18	82.59	83.8	100
L_{Ma}	82.82	−83.73	70.41	109.41	140
C_{Ma}	85.22	−55.9	−15.78	58.1	196
V_{Ma}	25.61	67.05	−108.87	127.87	302
M_{Ma}	58.76	91.18	−53.69	105.82	330
N_{Ma}	0.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	41.88	62.0	31.82	69.69	27
J_{CIE}	81.97	1.81	71.59	71.61	89
G_{CIE}	51.62	−41.11	11.52	42.7	164
B_{CIE}	29.2	−5.27	−49.33	49.62	264

%Gamut
u*rel = 156
%Regularity
g*H,rel = 26
g*C,rel = 45

***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*	47.72	0.0	0.0	
*LAB*LABa*	47.72	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*	0.03	0.0	0.0	
*LAB*LABa*	0.03	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**	0.5	0.796	1.0	(1.0)
*cmyn3**	0.5	0.204	0.0	(0.0)
*olvi4**	0.5	0.796	1.0	1.0
*cmyn4**	0.5	0.204	0.0	0.0
***standard* and *adapted* CIELAB**				
*LAB*LAB*	78.15	−2.87	−26.86	
*LAB*LABa*	78.15	−2.87	−26.86	
*LAB*TCHa*	75.0	27.02	263.88	
relative* CIELAB *lab*				
*lab*lab*	0.819	−0.052	−0.496	
*lab*tch*	0.75	0.5	0.733	
*lab*nch*	0.0	0.5	0.733	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.819	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	0.296	0.5	(1.0)
*cmyn3**	1.0	0.704	0.5	(0.0)
*olvi4**	0.5	0.796	1.0	0.5
*cmyn4**	0.5	0.204	0.0	0.5
***standard* and *adapted* CIELAB**				
*LAB*LAB*	30.46	−2.86	−26.87	
*LAB*LABa*	30.46	−2.86	−26.87	
*LAB*TCHa*	25.01	27.03	263.9	
relative* CIELAB *lab*				
*lab*lab*	0.319	−0.052	−0.496	
*lab*tch*	0.25	0.5	0.733	
*lab*nch*	0.5	0.5	0.733	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.319	0.0	−0.499	
*lab*tce*	0.25	0.5	0.75	
*lab*ncE*	0.5	0.5	b00r	

***relative* Inform. Technology (IT)**				
*olvi3**	0.0	0.592	1.0	(1.0)
*cmyn3**	1.0	0.408	0.0	(0.0)
*olvi4**	0.0	0.592	1.0	1.0
*cmyn4**	1.0	0.408	0.0	0.0
***standard* and *adapted* CIELAB**				
*LAB*LAB*	60.9	−5.74	−53.74	
*LAB*LABa*	60.9	−5.74	−53.74	
*LAB*TCHa*	50.0	54.06	263.89	
relative* CIELAB *lab*				
*lab*lab*	0.638	−0.105	−0.993	
*lab*tch*	0.5	1.0	0.733	
*lab*nch*	0.0	1.0	0.733	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.638	0.0	−0.999	
*lab*tce*	0.5	1.0	0.75	
*lab*ncE*	0.0	1.0	g99b	

*n** = 0,00
blackness *n**
0,25 0,50 *n** = 0,50 0,75 1,00
chromaticness *c**
*n** = 1,0

PE100−7, 3 step scales for constant CIELAB hue 263/360 = 0.731 (left)
3 step scales for constant CIELAB hue 264/360 = 0.733 (right)

BAM-test chart PE10; Colorimetric systems ORS18 & TLS00
D50: 2 coordinate data of 3 step colour scales for 10 hues

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