

Input: Colorimetric Reflective System ORS18

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

lab^*tch and lab^*nch

D65: hue O

LCH*Ma: 48 83 38

olw*Ma: 1.0 0.0 0.0

triangle lightness t^*



% Gamut

$u^*_{rel} = 93$

% Regularity

$g^*_{Hrel} = 57$

$g^*_{Crel} = 59$

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 -0.97 4.75
LAB*LABo 95.41 0.0 0.0
LAB*TCHo 39.39 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*nce 1.0 0.0 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 56.71 -0.23 2.14
LAB*LABo 56.71 0.0 0.0
LAB*TCHo 30.0 0.01 -

relative CIELAB lab*
lab*lab 0.5 0.0 0.0
lab*tch 0.5 0.0 0.0
lab*nch 0.5 0.0 -
relative Natural Colour (NC)
lab*lrj 0.5 0.0 0.0
lab*nce 0.5 0.0 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 18.02 0.5 -0.46
LAB*LABo 18.02 0.0 0.0
LAB*TCHo 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 1.0 0.0 -
relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*nce 0.0 0.0 0.0
lab*nce 1.0 0.0 -

$n^* = 1.0$

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	47.94	65.37	50.52	82.62	38
YMa	90.37	-10.27	91.77	92.34	96
LMa	50.9	-62.79	34.95	71.87	151
CMa	58.62	-30.35	-45.01	54.3	236
VMa	25.71	31.11	-44.42	54.24	305
MMa	48.13	75.27	-8.35	75.73	354
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.66	26.98	64.56	25
JCIE	81.26	-2.17	67.76	67.79	92
GCIE	52.23	-42.26	11.75	43.87	164
BCIE	30.57	1.15	-46.84	46.87	271

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 0.0 (0.0)
cmyn4* 0.0 0.5 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 71.67 32.15 28.41
LAB*LABo 71.67 32.68 25.25
LAB*TCHo 75.0 41.3 37.7

relative CIELAB lab*
lab*lab 0.693 0.396 0.306
lab*tch 0.75 0.5 0.105
lab*nch 0.0 0.5 0.105
relative Natural Colour (NC)
lab*lrj 0.693 0.477 0.15
lab*nce 0.75 0.5 0.048
lab*nce 0.0 0.5 0.15

relative Inform. Technology (IT)
olvi3* 0.5 0.0 0.0 (1.0)
cmyn3* 0.5 0.0 0.0 (0.0)
olvi4* 1.0 0.5 0.5 (0.0)
cmyn4* 0.0 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 32.98 32.9 25.8
LAB*LABo 32.98 32.68 25.25
LAB*TCHo 25.01 41.3 37.7

relative CIELAB lab*
lab*lab 0.193 0.396 0.306
lab*tch 0.25 0.5 0.105
lab*nch 0.0 0.5 0.105
relative Natural Colour (NC)
lab*lrj 0.193 0.477 0.15
lab*nce 0.25 0.5 0.048
lab*nce 0.0 0.5 0.15

relative Inform. Technology (IT)
olvi3* 1.0 0.0 0.0 (1.0)
cmyn3* 0.0 1.0 0.0 (0.0)
olvi4* 1.0 0.0 1.0 0.0
cmyn4* 0.0 0.0 1.0 0.0
standard and adapted CIELAB
LAB*LAB 47.95 65.29 52.06
LAB*LABo 47.95 65.36 50.51
LAB*TCHo 50.0 82.6 37.7

relative CIELAB lab*
lab*lab 0.387 0.791 0.611
lab*tch 0.387 0.5 0.105
lab*nch 0.0 1.0 0.105
relative Natural Colour (NC)
lab*lrj 0.387 0.5 0.248
lab*nce 0.5 1.0 0.048
lab*nce 0.0 1.0 0.15

$n^* = 0.00$

blackness n^*

chromaticness c^*

Output: Colorimetric Reflective System MRS18

for hue $h^* = lab^*h = 30/360 = 0.083$

lab^*tch and lab^*nch

D65: hue R

LCH*Ma: 50 77 30

olw*Ma: 1.0 0.0 0.0

triangle lightness t^*



% Gamut

$u^*_{rel} = 91$

% Regularity

$g^*_{Hrel} = 41$

$g^*_{Crel} = 52$

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 -0.97 4.75
LAB*LABo 95.41 0.0 0.0
LAB*TCHo 39.39 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*nce 1.0 0.0 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 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 56.71 -0.23 2.14
LAB*LABo 56.71 0.0 0.0
LAB*TCHo 30.0 0.01 -

relative CIELAB lab*
lab*lab 0.5 0.0 0.0
lab*tch 0.5 0.0 0.0
lab*nch 0.5 0.0 -
relative Natural Colour (NC)
lab*lrj 0.5 0.0 0.0
lab*nce 0.5 0.0 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 18.02 0.5 -0.46
LAB*LABo 18.02 0.0 0.0
LAB*TCHo 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 1.0 0.0 -
relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*nce 0.0 0.0 0.0
lab*nce 1.0 0.0 -

$n^* = 1.0$

MRS18; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	49.63	66.96	38.37	77.18	30
JMa	90.7	-6.36	88.75	88.98	94
LMa	52.11	-69.73	9.44	70.37	172
G50bMa	45.03	-36.57	-28.47	67.38	218
BMa	36.65	23.19	-63.05	67.18	290
B50RMa	34.94	57.17	-44.26	72.31	322
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.66	26.98	64.56	25
JCIE	81.26	-2.17	67.76	67.79	92
GCIE	52.23	-42.26	11.75	43.87	164
BCIE	30.57	1.15	-46.84	46.87	271

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 0.0 (0.0)
cmyn4* 0.0 0.5 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 72.52 32.93 22.4
LAB*LABo 72.52 33.47 19.18
LAB*TCHo 75.0 38.58 29.82

relative CIELAB lab*
lab*lab 0.704 0.434 0.249
lab*tch 0.75 0.5 0.083
lab*nch 0.0 0.5 0.083
relative Natural Colour (NC)
lab*lrj 0.704 0.496 0.06
lab*nce 0.75 0.5 0.019
lab*nce 0.0 0.5 0.071

relative Inform. Technology (IT)
olvi3* 0.5 0.0 0.0 (1.0)
cmyn3* 0.5 0.0 0.0 (0.0)
olvi4* 1.0 0.5 0.5 (0.0)
cmyn4* 0.0 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 33.83 33.67 19.79
LAB*LABo 33.82 33.47 19.18
LAB*TCHo 25.01 38.58 29.82

relative CIELAB lab*
lab*lab 0.204 0.434 0.249
lab*tch 0.25 0.5 0.083
lab*nch 0.0 1.0 0.083
relative Natural Colour (NC)
lab*lrj 0.204 0.496 0.06
lab*nce 0.25 0.5 0.019
lab*nce 0.0 1.0 0.071

relative Inform. Technology (IT)
olvi3* 1.0 0.0 0.0 (1.0)
cmyn3* 0.0 1.0 0.0 (0.0)
olvi4* 1.0 0.0 1.0 0.0
cmyn4* 0.0 1.0 0.0 0.0
standard and adapted CIELAB
LAB*LAB 49.63 66.84 40.03
LAB*LABo 49.63 66.96 38.36
LAB*TCHo 50.0 77.16 29.82

relative CIELAB lab*
lab*lab 0.409 0.867 0.497
lab*tch 0.409 0.993 0.119
lab*nch 0.0 1.0 0.019
relative Natural Colour (NC)
lab*lrj 0.409 0.993 0.119
lab*nce 0.0 1.0 0.019
lab*nce 0.0 1.0 0.071

$n^* = 0.00$

blackness n^*

chromaticness c^*

TE100-7, 3 step scales for constant CIELAB hue 38/360 = 0.105 (left)

BAM-test chart TE10; Colorimetric systems ORS18 & MRS18

D65: 2 coordinate data of 3 step colour scales for 10 hues

3 step scales for constant CIELAB hue 30/360 = 0.083 (right)

input: olw* setrgbcolor

output: olw* setrgbcolor / w* setgray