

Data <i>rgb*</i> , <i>XYZ</i> , <i>xy</i> , and <i>LabC*</i> _{hab} of <i>Offs</i> colours												
Tritimulus values of black N and white W: Y _N =0.0, Y _W =88.6												
	<i>rgb*</i>	CIEXYZ _{data}					LabC* _{hab} data					
		X _d	Y _d	Z _d	x _d	y _d	L _a [*]	a _a [*]	b _a [*]	C _{hab} [*]	h _{hab} [*]	
R _d	1 0 0	29.01	16.25	4.27	0.585	0.328	47.31	63.76	41.20	75.92	32	
Y _d	1 1 0	63.75	72.68	8.28	0.440	0.502	88.29	-11.89	95.08	95.82	97	
G _d	0 1 0	18.53	20.05	9.58	0.223	0.525	51.90	-68.80	28.10	74.32	157	
C _d	0 1 1	85.76	26.27	69.03	0.164	0.230	58.29	-12.16	-43.70	52.54	236	
B _d	0 0 1	6.22	4.51	22.66	0.186	0.135	25.31	23.48	-47.28	52.79	296	
N _d	1 0 1	32.46	16.95	23.05	0.447	0.233	48.20	72.77	-8.49	73.26	353	
M _d	0 0 0	0.01	0.01	0.01	0.333	0.333	0.17	0.03	0.02	0.04	0	
W _d	1 1 1	84.21	88.60	96.48	0.312	0.329	95.41	0.00	0.00	0.00	0	
D65		95.05	100.00	108.90	0.312	0.329	100.00	0.00	0.00	0.00	0	

Data *rgb**, *XYZ*, and *LabC**_{ab} of WCGA colours

Tritimulus values of black N and white W: $Y_N=0.0$, $Y_W=88.6$

LabC* _{ab} data					
	<i>rgb*</i> _a	<i>rgb*</i> _b	<i>a*</i> _{ab}	<i>b*</i> _{ab}	<i>C*</i> _{ab,ab}
R _d	1 0 0	47	63	41	75
Y _d	1 1 0	88	-11	95	95
G _d	0 1 0	51	-68	28	74
C _d	0 1 1	58	-29	-43	52
B _d	0 0 1	25	23	-47	52
M _d	1 0 1	48	72	-8	73
N _d	0 0 0	0	0	0	0
W _d	1 1 1	95	0	0	0

Data <i>rgb*</i> , <i>XYZxy</i> , and <i>LabC*</i> <i>h_{ab}</i> of Offs colours											
Tritimulus values of black N and white W: Y _N =2.5, Y _W =88.6											
	<i>rgb*</i>	CIE _{XYZ} data					<i>LabC*</i> <i>h_{ab}</i> data				
		<i>X</i> _t	<i>Y</i> _t	<i>Z</i> _t	<i>x</i> _d	<i>y</i> _d	<i>L</i> _a [*]	<i>a</i> _b [*]	<i>b</i> _a [*]	<i>C</i> _{h,ab} [*]	<i>h</i> _{ab}
R_d	1 0 0	30.58	18.30	6.88	0.548	0.328	49.86	58.70	33.90	67.79	30
Y_d	1 1 0	64.33	73.14	10.78	0.433	0.493	58.51	-11.49	87.67	88.42	97
G_d	0 1 0	10.68	21.99	12.04	0.238	0.493	44.02	-60.56	24.73	65.41	157
C_d	0 1 1	20.61	28.64	69.80	0.174	0.236	59.92	-26.87	-41.53	49.47	237
B_d	0 0 1	8.44	6.90	24.75	0.210	0.172	31.58	17.99	-40.01	43.87	294
M_d	1 0 1	33.93	18.98	25.13	0.434	0.423	50.67	67.33	-7.72	67.77	353
N_d	0 0 0	0.24	2.52	2.74	0.313	0.238	18.04	0.10	0.03	0.11	18
W_d	1 1 1	84.21	88.60	96.48	0.312	0.329	95.41	0.00	0.00	0.00	0
D65		95.05	100.00	108.90	0.312	0.329	100.00	0.00	0.00	0.00	0

Data rgb^* , XYZxy, and LabC $^*h_{ab}$ of WCGA colours

Tritimulus values of black N and white W: $Y_N=2.5$, $Y_W=88.6$

LabC $^*h_{ab}$ data

	rgb^*_d	L^*_d	a^*_d	b^*_d	$C^*_{ab,d}$	$h_{ab,d}$
R_N	1 0 0	49	58	33	67	30
Y_d	1 1 0	88	-11	87	88	97
G_d	0 1 0	54	-60	24	65	157
C_d	0 1 1	59	-26	-41	49	237
B_d	0 0 1	31	17	-40	43	294
M_d	1 0 1	50	67	-7	67	353
N_d	0 0 0	18	0	0	0	18
W_d	1 1 1	95	0	0	0	0

WGCa colours (9 steps) in $L^*(Ch)_{ab}$ colour space

Tristimulus values of black N and white W: $Y_N=0.0$, $Y_W=88.6$

white W
 $L^*(Ch)_{ab,W}=95, 0, 0$
 $rgb^*_W=1, 1, 1$

black N
 $L^*(Ch)_{ab,N}=0, 0, 0$
 $rgb^*_N=0, 0, 0$

9 steps

$L^*(Ch)_{ab,R}=47, 75, 92, 100, 100, 92, 75, 47, 0$
 $rgb^*_R=1, 0, 0$

Chroma C^*_{ab}

WGa colours (9 steps) in $L^*(Ch)_{ab}$ colour space

Tristimulus values of black N and white W: $Y_N=0,0$, $Y_W=88,6$

CIELAB lightness L^*

white W
 $L^*(Ch)_{ab,W}=95, 0, 0$
 $rgb^*_W=1, 1, 1$

black N
 $L^*(Ch)_{ab,N}=0, 0, 0$
 $rgb^*_N=0, 0, 0$

Y
 $rgb^*_Y=1, 1, 0$
 $L^*(Ch)_{ab,Y}=88, 95, 97$

Chroma C^*_{ab}

WGCa colours (9 steps) in $L^*(Ch)_{ab}$ colour space

Tritimulus values of black N and white W: $Y_N=2,5$, $Y_W=88,6$

white W

$L^*(Ch)_{ab,W}=95, 0, 0$
 $rgb^*_W=1, 1, 1$

9 steps

9 steps

black N

$L^*(Ch)_{ab,N}=18, 0, 0$
 $rgb^*_N=0, 0, 0$

$L^*(Ch)_{ab,R}=49, 67, 30$
 $rgb^*_R=1, 0, 0$

100

0

Chroma C^*_{ab}

WCGA colours (9 steps) in $L^*(Ch)_{ab}$ colour space

Tritimulus values of black N and white Y: $Y_N=2.5$, $Y_W=88.6$

white W
 $L^*(Ch)_{ab,W}=95, 0, 0$
 $rgb^*_W=1, 1, 1$

black N
 $L^*(Ch)_{ab,N}=18, 0, 0$
 $rgb^*_N=0, 0, 0$

9 steps

9 steps

9 steps

$rgb^*_Y=1, 1, 0$
 $L^*(Ch)_{ab,Y}=88.6, 87, 97$

0 100

0 100

Chroma C^*_{ab}

WGCa colours (9 steps) in $L^*(Ch)_{ab}$ colour space

Tristimulus values of black N and white W: $Y_N=0.0$, $Y_W=88.6$

white W
 $L^*(Ch)_{ab,W}=95, 0, 0$
 $rgb^*_W=1, 1, 1$

black N
 $L^*(Ch)_{ab,N}=0, 0, 0$
 $rgb^*_N=0, 0, 0$

9 steps

9 steps

9 steps

Chroma C^*_{ab}

$rgb^*_G=0, 1, 0$
 $100\%(Ch)_{ab,G}=51, 74, 157$

WGa colours (9 steps) in $L^*(Ch)_{ab}$ colour space

Tritimulus values of black N and white W: $Y_N=2,5$, $Y_W=88,6$

white W
 $L^*(Ch)_{ab,W}=95, 0, 0$
 $rgb^*_{W}=1, 1, 1$

black N
 $L^*(Ch)_{ab,N}=18, 0, 0$
 $rgb^*_{N}=0, 0, 0$

Chroma C^*_{ab}

$rgb^*_{G}=0, 1, 0$
 $rgb^*_{G}=54, 65, 157$

WGCa colours (9 steps) in $L^*(Ch)_{ab}$ colour space

Tritimulus values of black N and white W: $Y_N=2.5$, $Y_W=88.6$

white W
 $L^*(Ch)_{ab,W}=95, 0, 0$
 $rgb^*_W=1, 1, 1$

black N
 $L^*(Ch)_{ab,N}=18, 0, 0$
 $rgb^*_N=0, 0, 0$

9 steps

9 steps

9 steps

Chroma C^*_{ab}

$rgb^*_C=0, 1, 1$
 $L^*(Ch)_{ab,C}=59, 49, 237$

WGCa colours (9 steps) in $L^*(Ch)_{ab}$ colour space

Tritimulus values of black N and white W: $Y_N=0,0$, $Y_W=88,6$

CIELAB lightness L^*

white W
 $L^*(Ch)_{ab,W}=95, 0, 0$
 $rgb_W=1, 1, 1$

black N
 $L^*(Ch)_{ab,N}=0, 0, 0$
 $rgb_N=0, 0, 0$

$L^*(Ch)_{ab,B}=25, 52, 296$
 $rgb_B=0, 0, 1$

Chroma C^*_{ab}

The diagram illustrates the WGC colour space, which is a 2D plane defined by CIELAB lightness L^* (vertical axis) and Chroma C^*_{ab} (horizontal axis). A path of 9 steps is shown, starting from white W (top left) and ending at black N (bottom left). The path is composed of 9 steps, each represented by a dot. The path starts at $L^*=100$ and $C^*_{ab}=0$ for white W and ends at $L^*=0$ and $C^*_{ab}=0$ for black N . The path is labeled with $L^*(Ch)_{ab,W}=95, 0, 0$ and $rgb^*_W=1, 1, 1$ for white, and $L^*(Ch)_{ab,N}=0, 0, 0$ and $rgb^*_N=0, 0, 0$ for black. The path is also labeled with $L^*(Ch)_{ab,M}=48, 73, 353$ and $rgb^*_M=1, 0, 1$ for the midpoint M . The path is labeled with 9 steps, indicating the number of steps from white to black.

The diagram illustrates the WGCa colour space, which is a 3D coordinate system defined by L*, a*, and b* axes. A path is shown starting from a black point (N) and ending at a white point (W), passing through 9 intermediate steps. The path is represented by a series of black dots connected by a blue line. The L* axis is labeled 'CIELAB lightness L*' and ranges from 0 to 100. The a* axis is labeled 'Chroma C*_{ab}' and ranges from 0 to 100. The b* axis is labeled 'Chroma C*_{ab}' and ranges from 0 to 100. The path starts at black N (L*_N=18, 0, 0) and ends at white W (L*_W=95, 0, 0). The intermediate steps are labeled '9 steps' and '9 steps'.

WGCa colours (9 steps) in $L^*(Ch)_{ab}$ colour space

Tritimulus values of black N and white W: $Y_N=2,5$, $Y_W=88,6$

CIELAB lightness L^*

white W
 $L^*(Ch)_{ab,W}=95, 0, 0$
 $rgb^*_W=1, 1, 1$

9 steps

9 steps

black N
 $L^*(Ch)_{ab,N}=18, 0, 0$
 $rgb^*_N=0, 0, 0$

$L^*(Ch)_{ab,B}=31, 43, 294$
 $rgb^*_B=0, 0, 1$

100

Chroma C^*_{ab}

WGCCA colours (9 steps) in $L^*(Ch)_{ab}$ colour space

Tritimulus values of black N and white W: $Y_N=2.5$, $Y_W=88.6$

CIELAB lightness L^*

white W
 $L^*(Ch)_{ab,W}=95, 0, 0$
 $rgb^*_{W}=1, 1, 1$

black N
 $L^*(Ch)_{ab,N}=18, 0, 0$
 $rgb^*_{N}=0, 0, 0$

$L^*(Ch)_{ab,M}=50, 67, 352$
 $rgb^*_{M}=1, 0, 1$

9 steps

9 steps

Chroma C^*_{ab}

TUB-test chart AEP2; Affine colour metric for six device hues input: *rgb/cmy0 (No 1MR)*
Data *rgb**, *XYZ*, and *L*(Ch)_{ab}* of *Offs*, $Y_N=0$ & 2,52, $Y_W=89$, normalization $Y_W=89$.