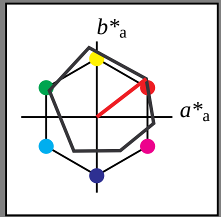
Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 38/360 = 0.105$
lab*tch* and *lab*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*

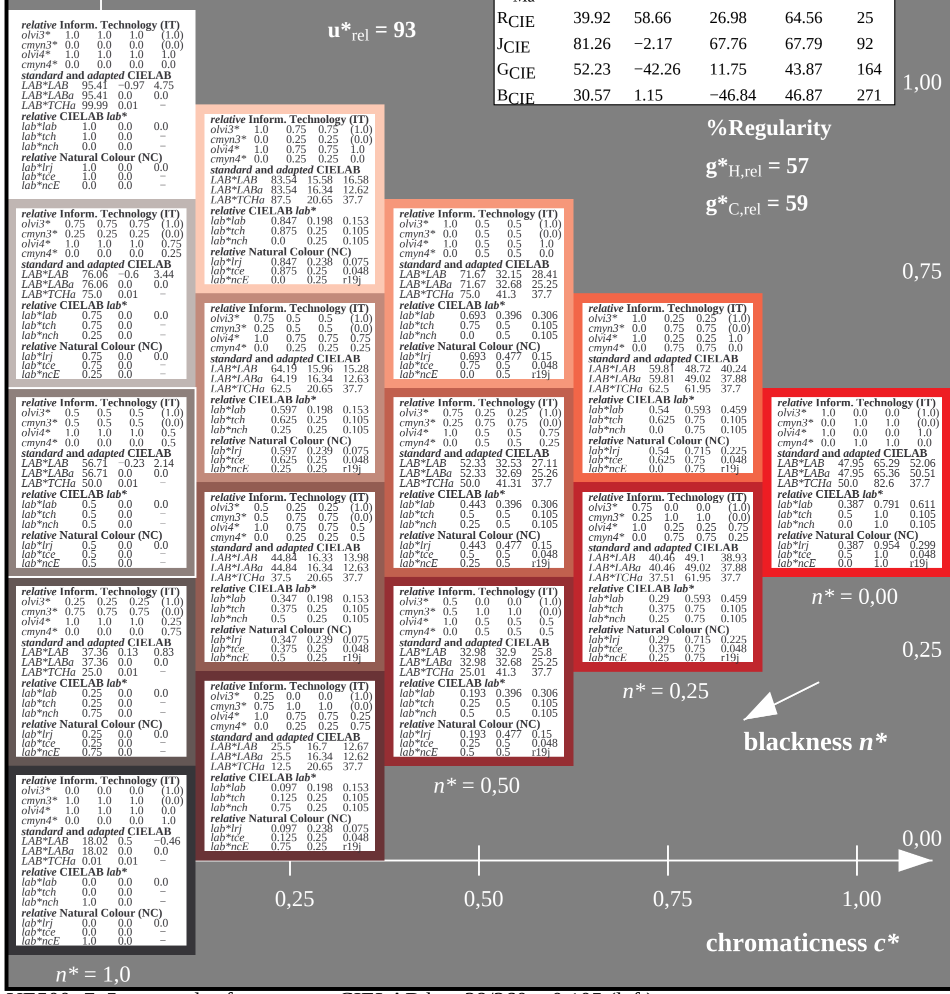


%Gamut
$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

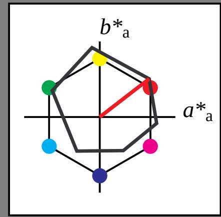
%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



Output: 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
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*

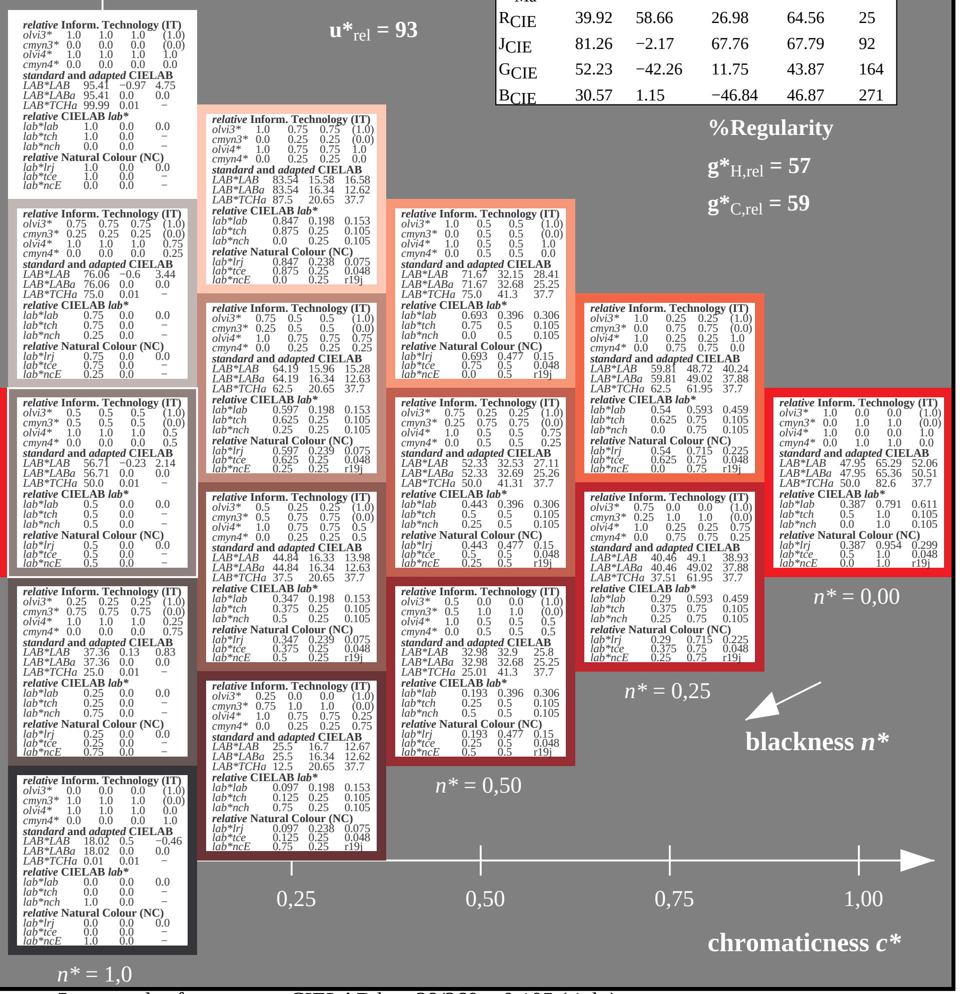


%Gamut
$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



UE500−7, 5 step scales for constant CIELAB hue 38/360 = 0.105 (left)

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

Input: Colorimetric Reflective System ORS18

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

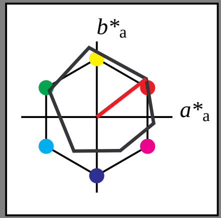
*lab*tch and lab*nch*

D65: hue O

LCH*Ma: 48 83 38

rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*

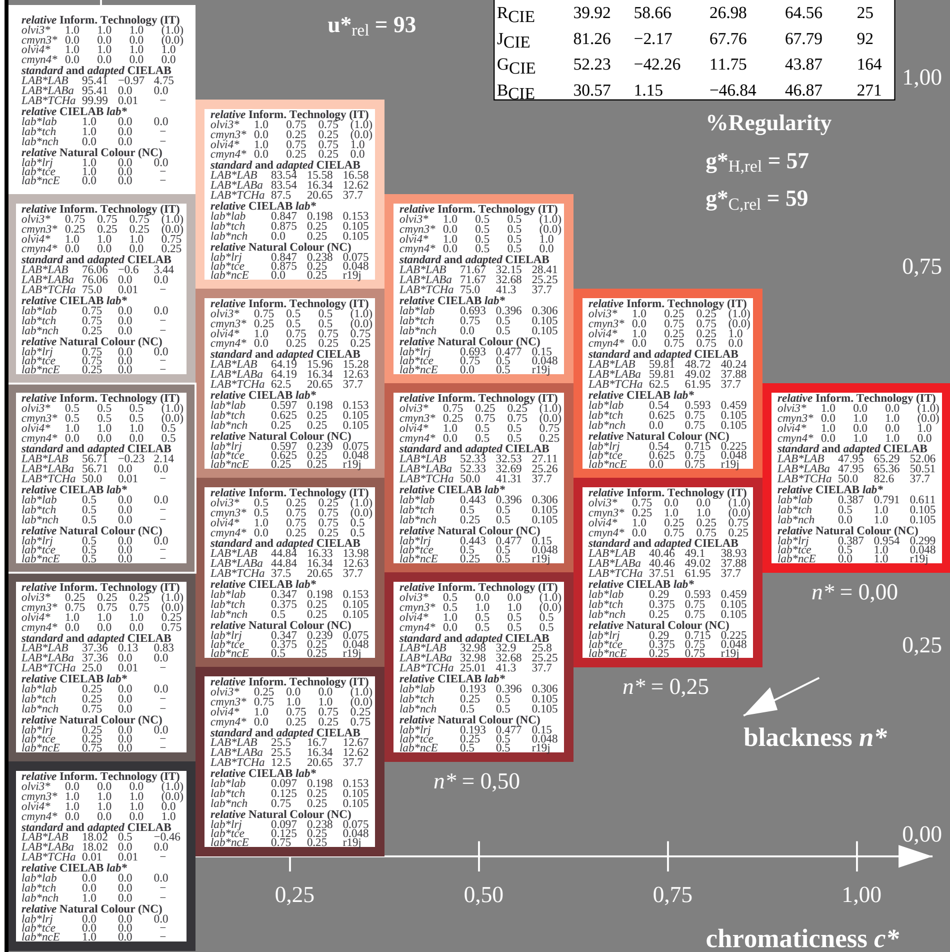


%Gamut

$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



Output: Colorimetric Reflective System MRS18

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

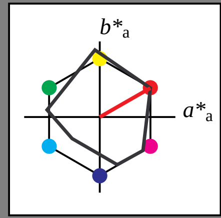
*lab*tch and lab*nch*

D65: hue R

LCH*Ma: 50 77 30

rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*

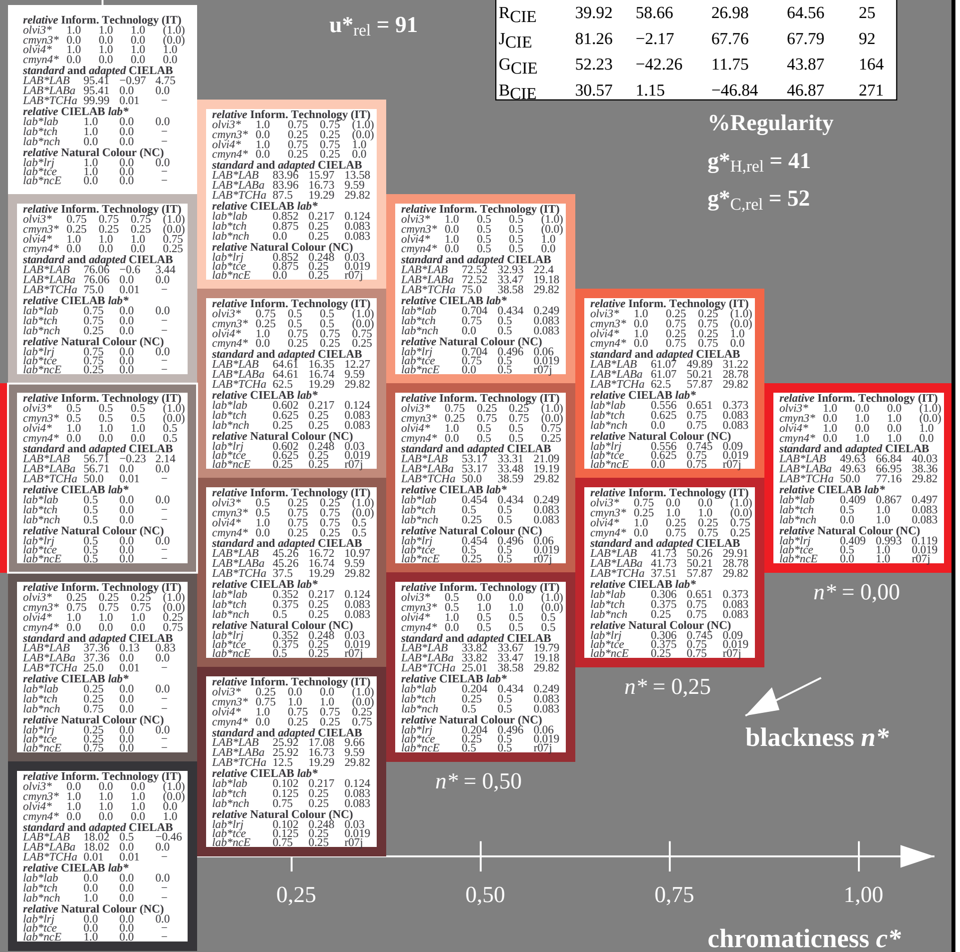


%Gamut

$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



UE500−7, 5 step scales for constant CIELAB hue 38/360 = 0.105 (left)

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

Input: Colorimetric Reflective System ORS18

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

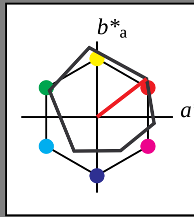
*lab*tch and lab*nch*

D65: hue O

LCH*Ma: 48 83 38

rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 93

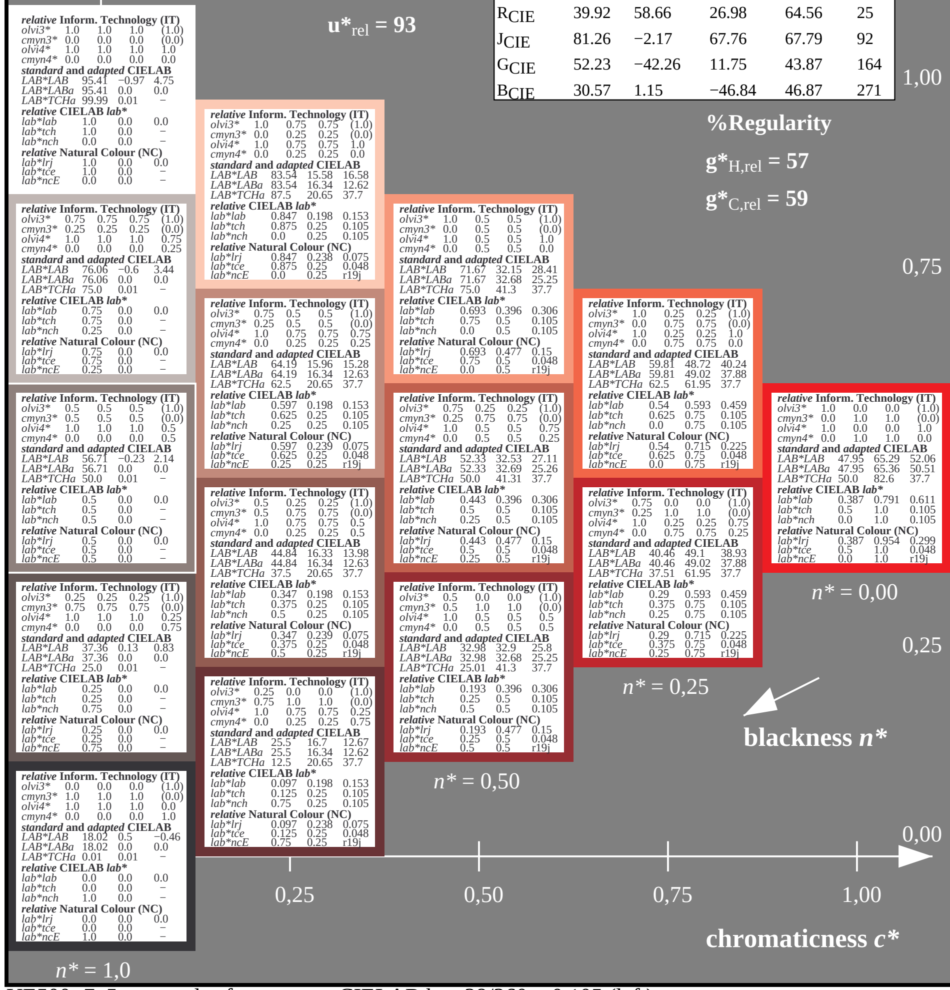
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



Output: Colorimetric Reflective System TRS18

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

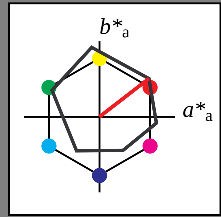
*lab*tch and lab*nch*

D65: hue O

LCH*Ma: 48 83 38

rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 93

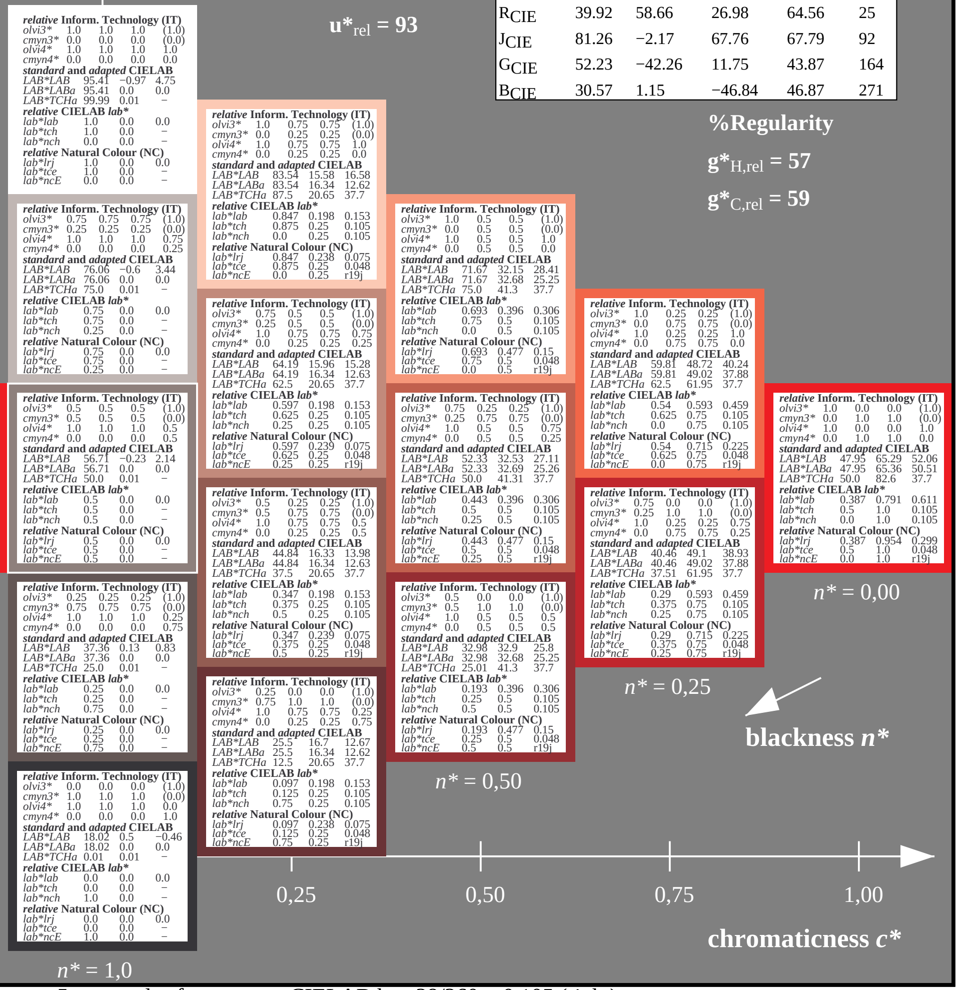
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



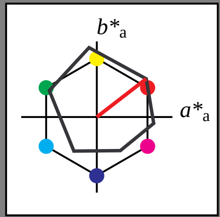
UE500−7, 5 step scales for constant CIELAB hue 38/360 = 0.105 (left)

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

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
rgb*Ma: 1.0 0.0 0.0

triangle lightness *t*



%Gamut

u^*_{rel} = 93

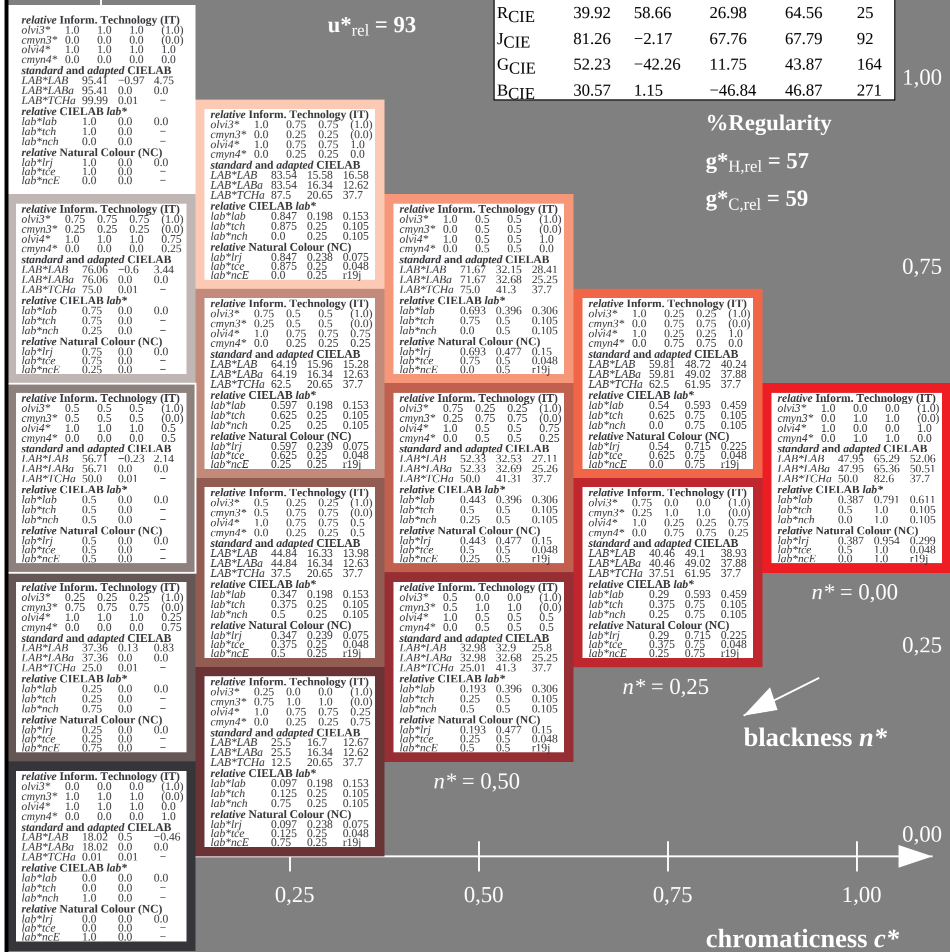
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

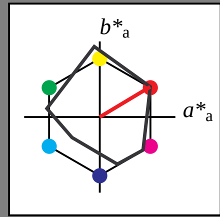
$g^*_{C,rel}$ = 59



Output: Colorimetric Reflective System MRS18a
for hue *h = *lab*h* = 31/360 = 0.086**
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 78 31
rgb*Ma: 1.0 0.0 0.0

triangle lightness *t*



%Gamut

u^*_{rel} = 92

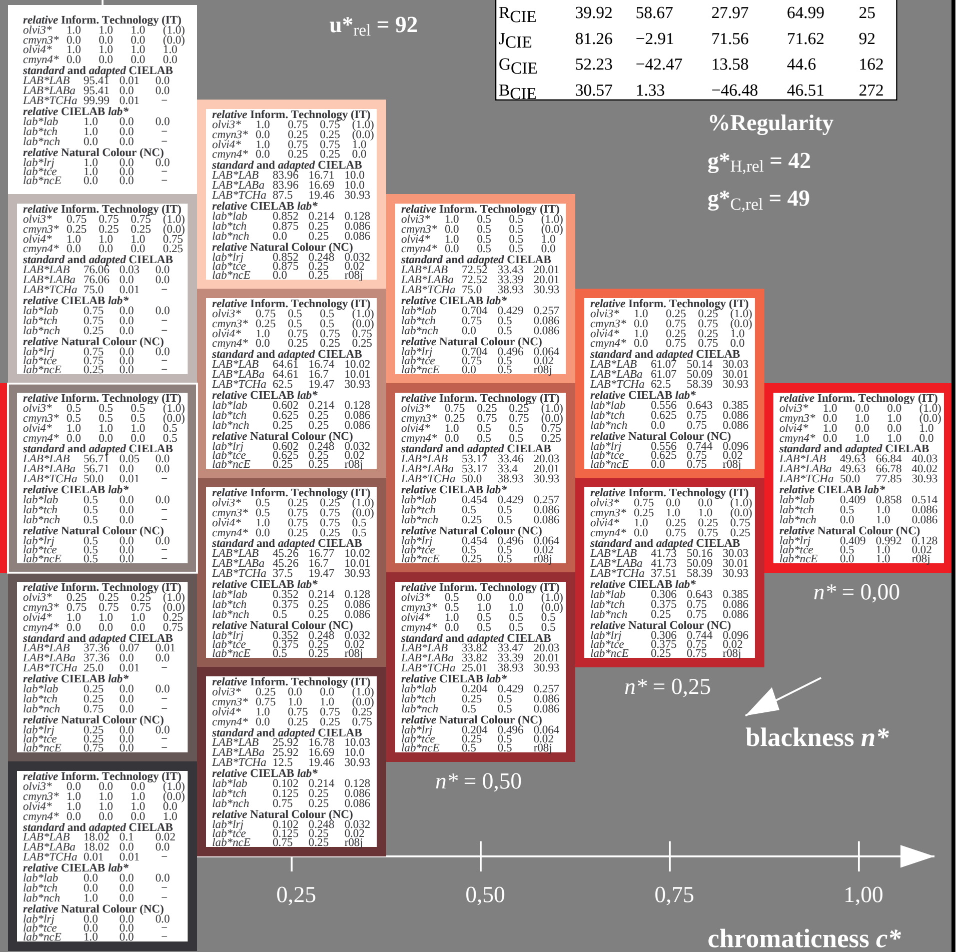
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



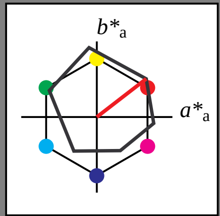
UE500−7, 5 step scales for constant CIELAB hue 38/360 = 0.105 (left)

5 step scales for constant CIELAB hue 31/360 = 0.086 (right)

Input: Colorimetric Reflective System ORS18
for hue *h* = lab*h = 38/360 = 0.105*
lab*tch and lab*nch

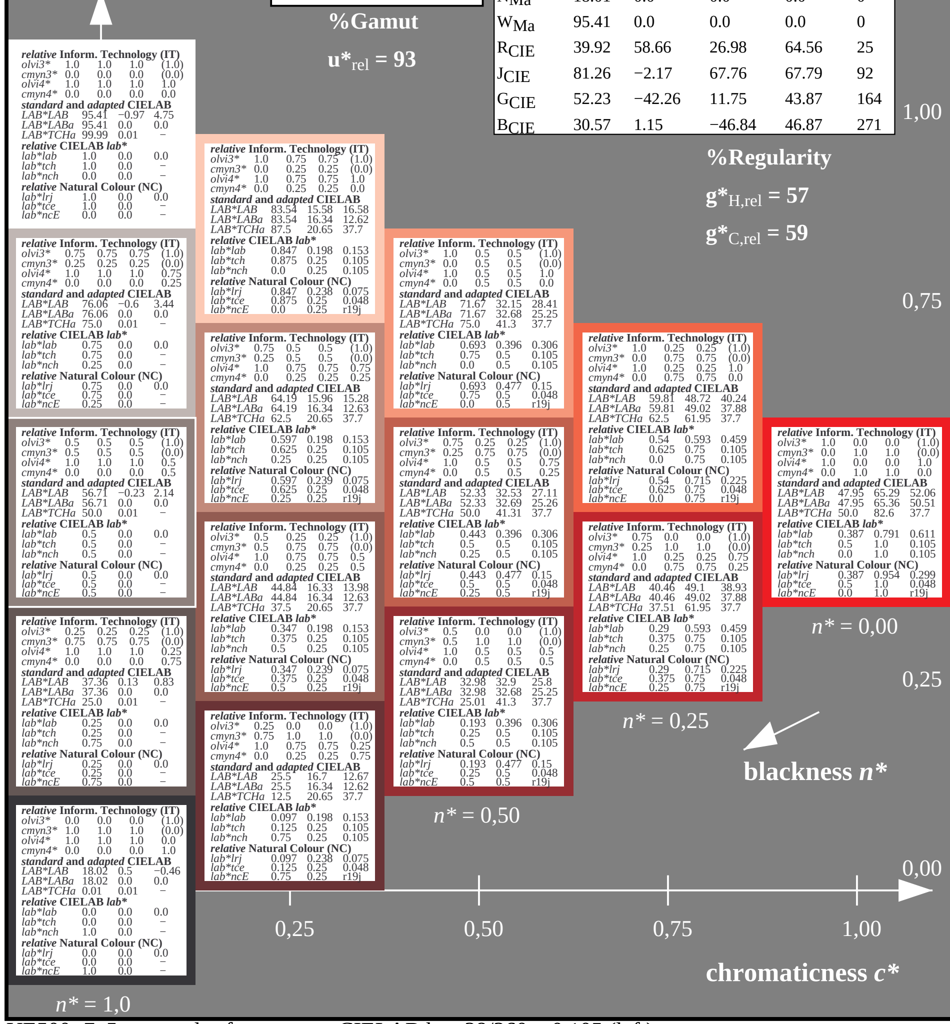
D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness *t**



ORS18; adapted (a) CIELAB data

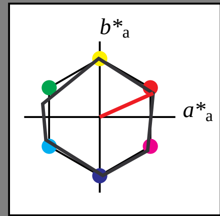
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



Output: Colorimetric Reflective System NRS18
for hue *h* = lab*h = 24/360 = 0.067*
lab*tch and lab*nch

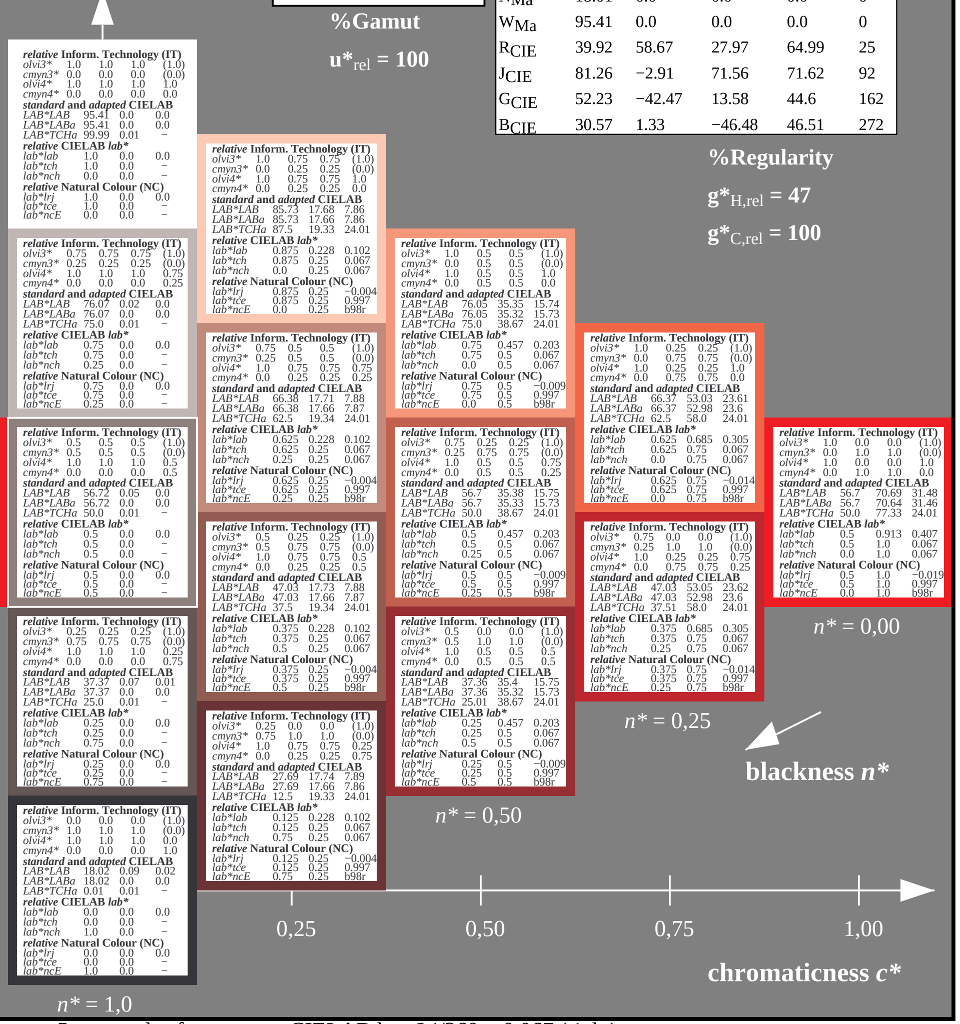
D65: hue R
LCH*Ma: 57 77 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness *t**



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272



UE500−7, 5 step scales for constant CIELAB hue 38/360 = 0.105 (left)   5 step scales for constant CIELAB hue 24/360 = 0.067 (right)

Input: Colorimetric Reflective System ORS18

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

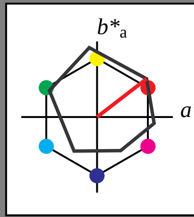
*lab*tch and lab*nch*

D65: hue O

LCH*Ma: 48 83 38

rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*

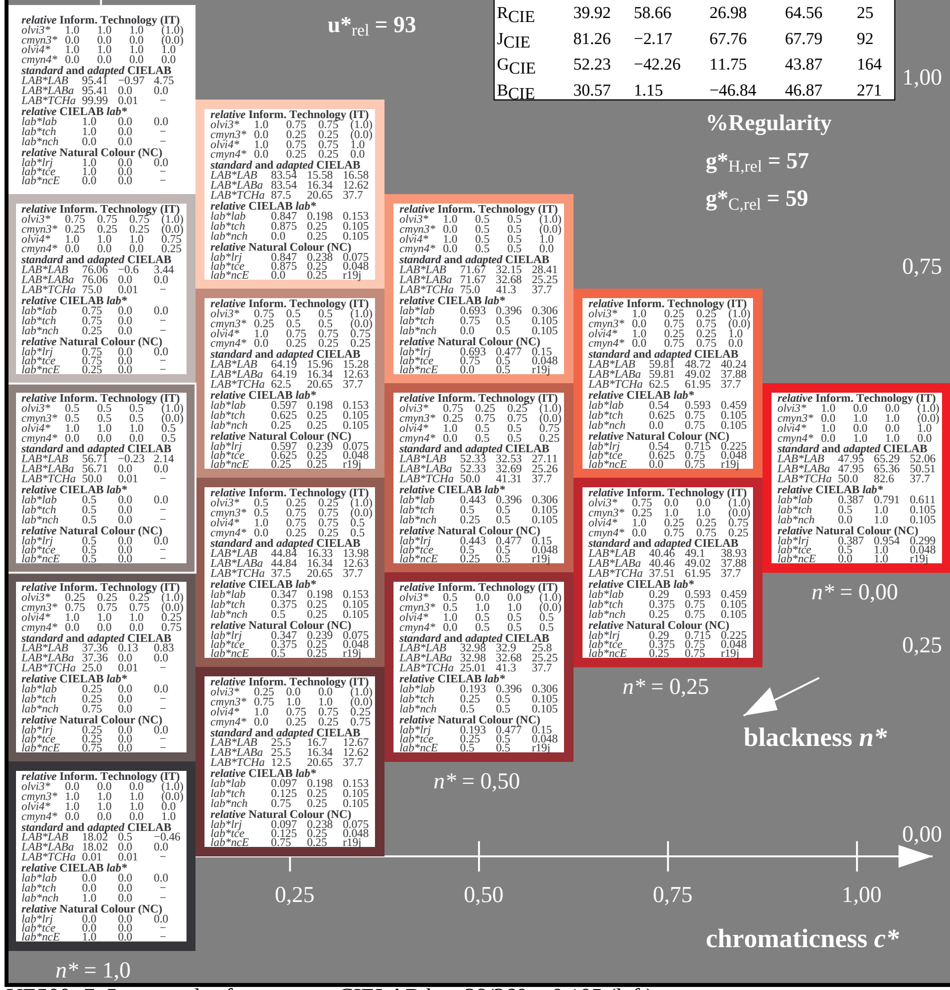


%Gamut

$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



Output: Colorimetric Reflective System NCS18

for hue $h^* = lab^*h = 24/360 = 0.066$

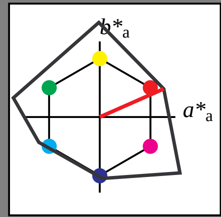
*lab*tch and lab*nch*

D65: hue R

LCH*Ma: 47 92 24

rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*

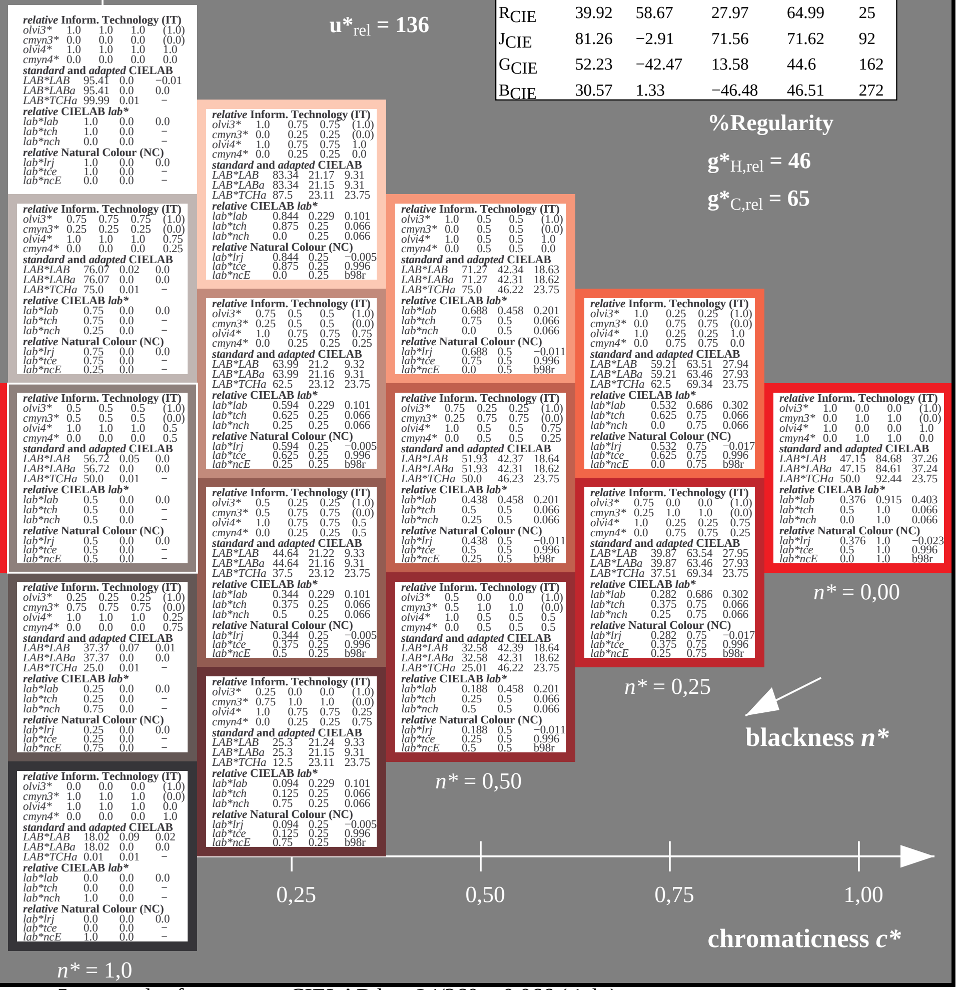


%Gamut

$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272



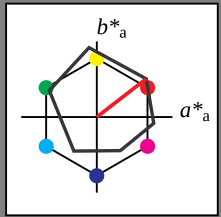
UE500−7, 5 step scales for constant CIELAB hue 38/360 = 0.105 (left)

5 step scales for constant CIELAB hue 24/360 = 0.066 (right)

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
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

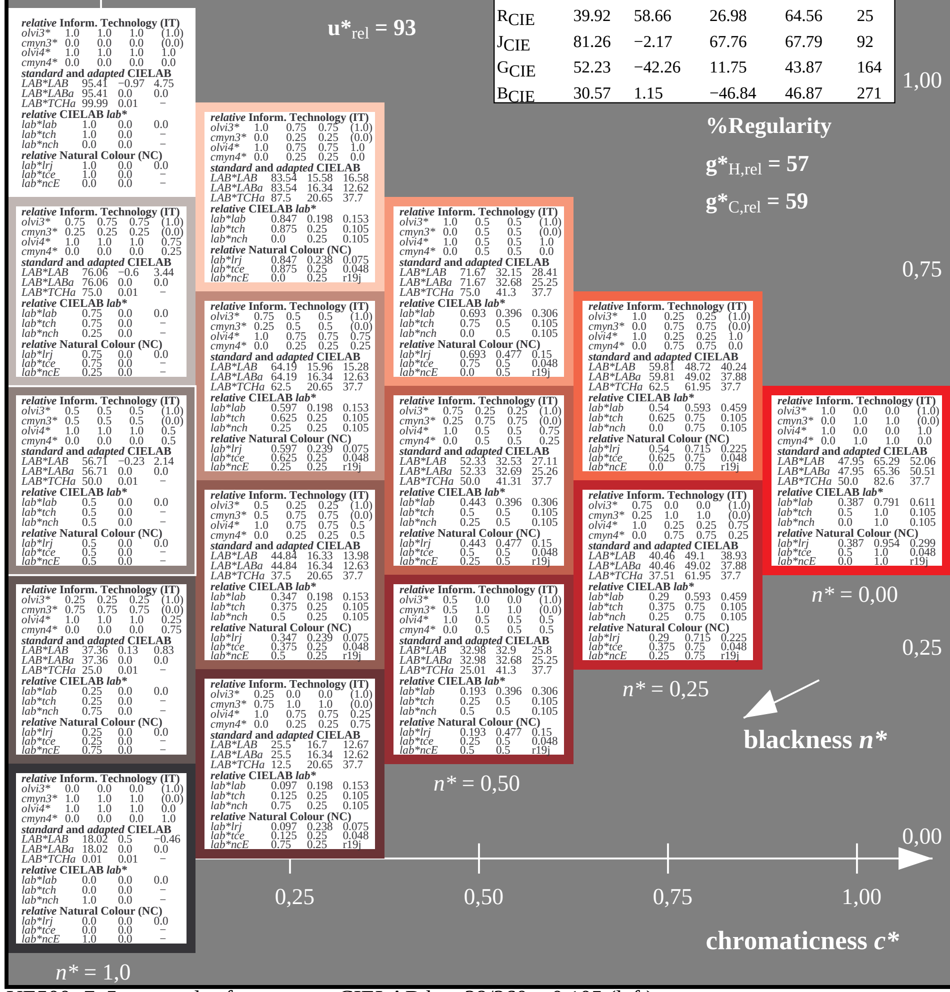
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

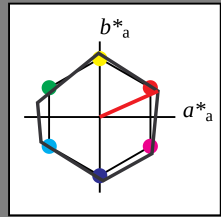
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 24/360 = 0.067$
*lab*tch and lab*nch*

D65: hue R
LCH*Ma: 53 84 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 119$

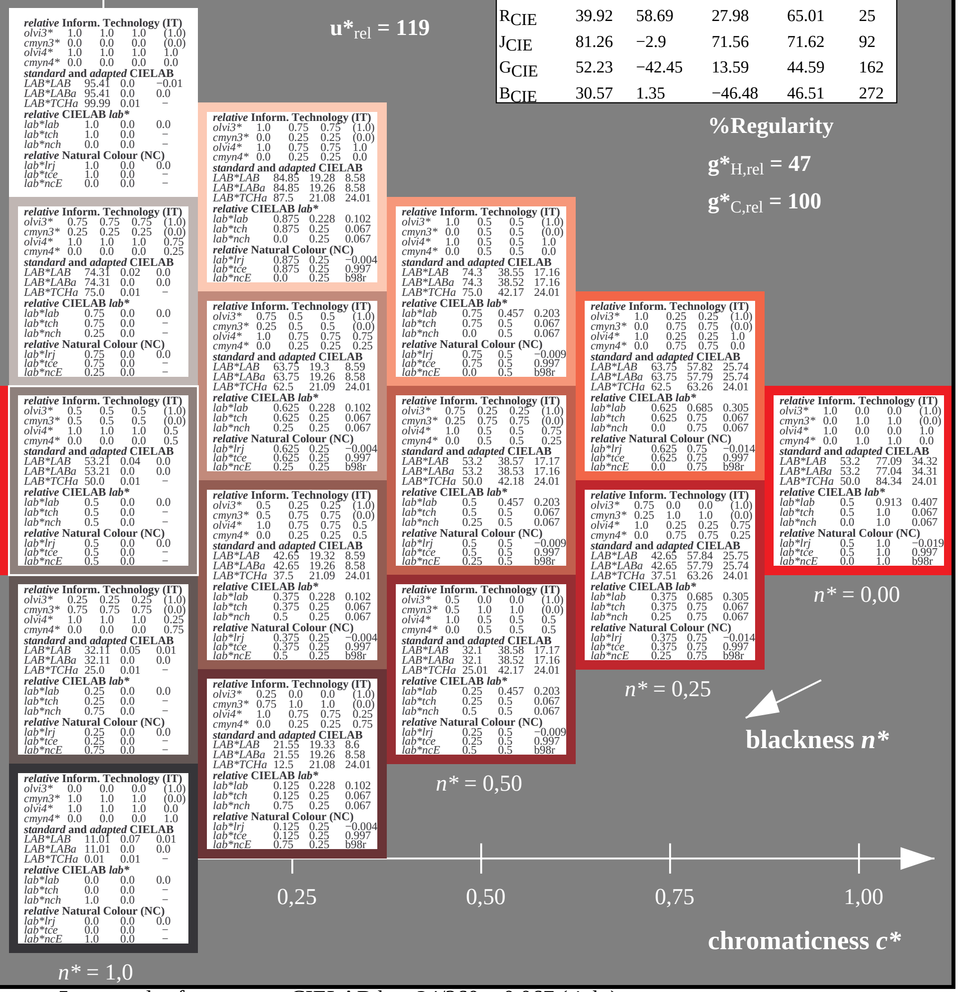
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

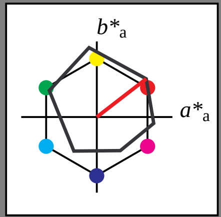


UE500−7, 5 step scales for constant CIELAB hue 38/360 = 0.105 (left)

5 step scales for constant CIELAB hue 24/360 = 0.067 (right)

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
rgb*Ma: 1.0 0.0 0.0
triangle lightness t^*

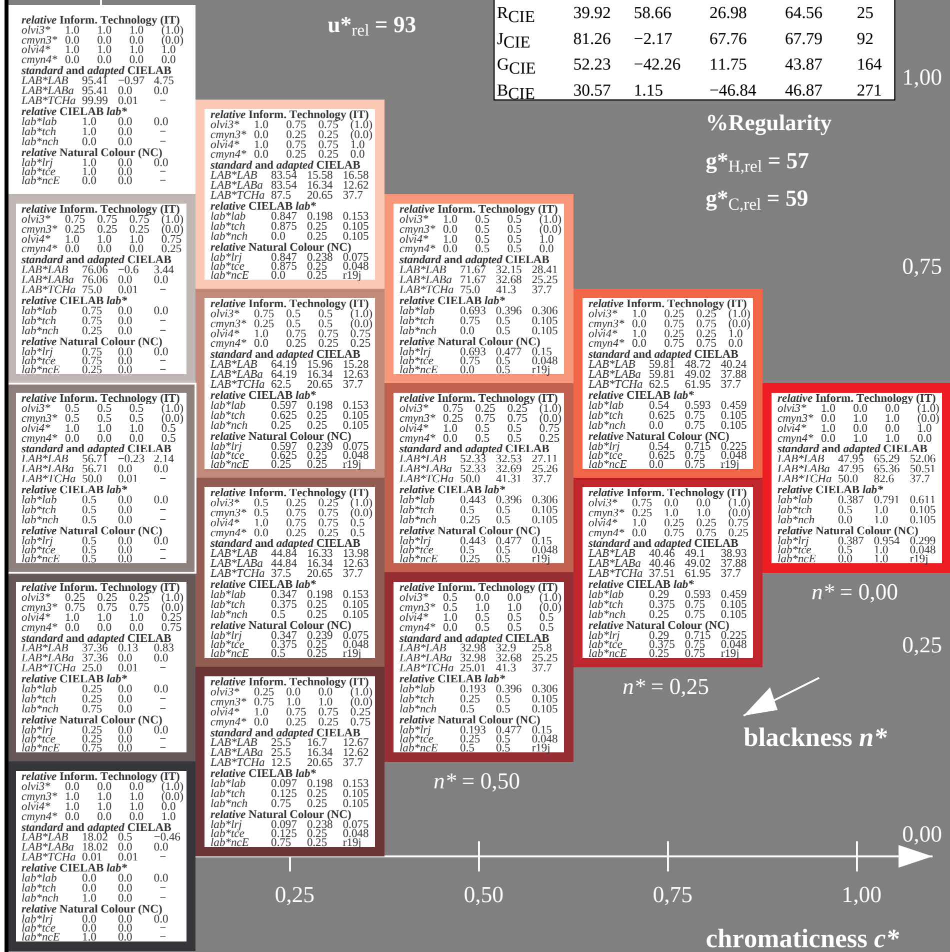


%Gamut
$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data

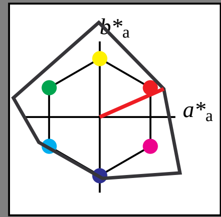
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 24/360 = 0.066$
*lab*tch and lab*nch*

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0
triangle lightness t^*

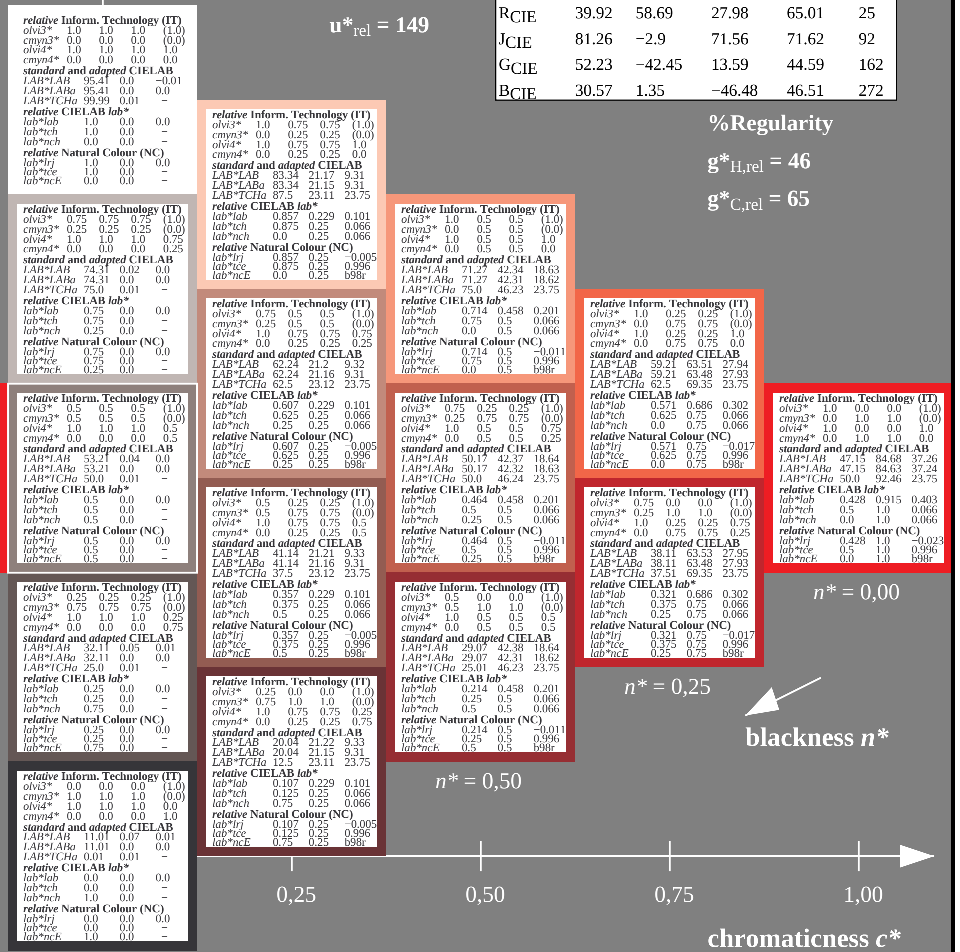


%Gamut
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



UE500−7, 5 step scales for constant CIELAB hue 38/360 = 0.105 (left)

5 step scales for constant CIELAB hue 24/360 = 0.066 (right)

Input: Colorimetric Reflective System MRS18

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

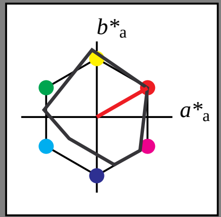
*lab*tch and lab*nch*

D65: hue R

LCH*Ma: 50 77 30

rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 91$

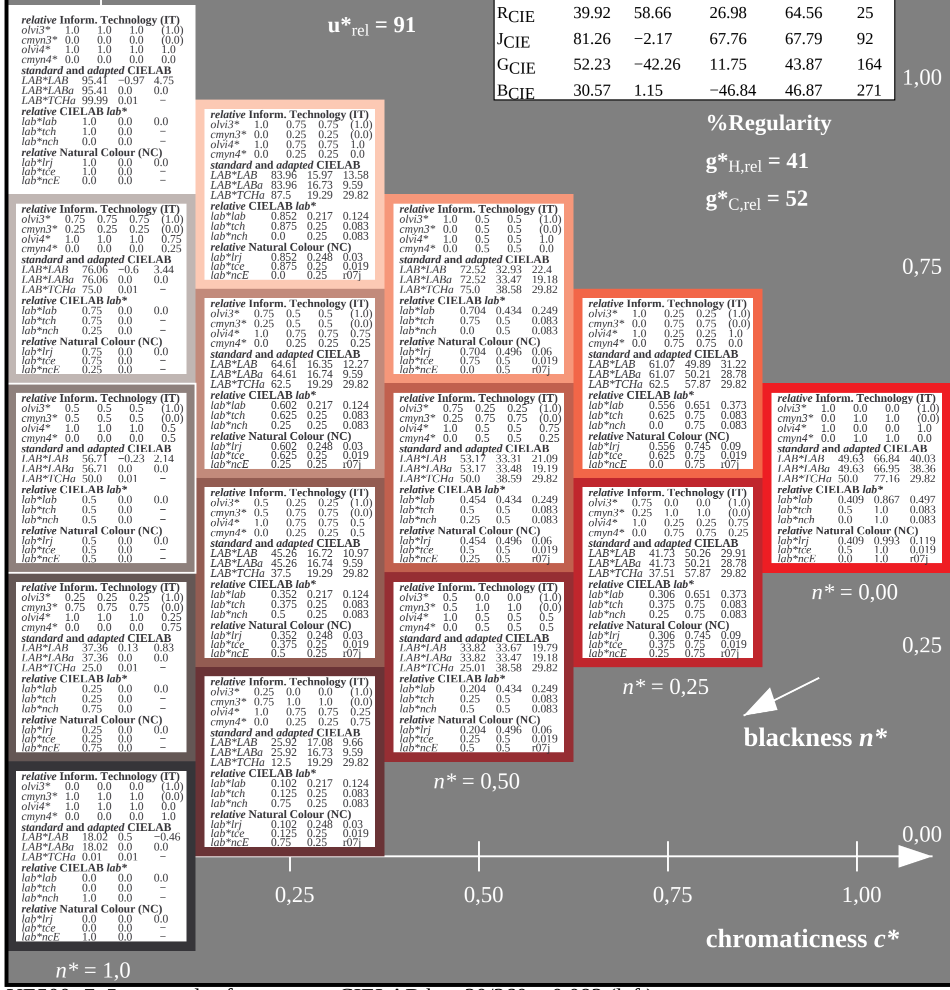
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System ORS18

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

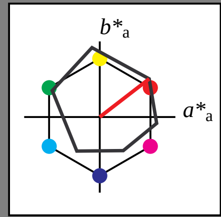
*lab*tch and lab*nch*

D65: hue O

LCH*Ma: 48 83 38

rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

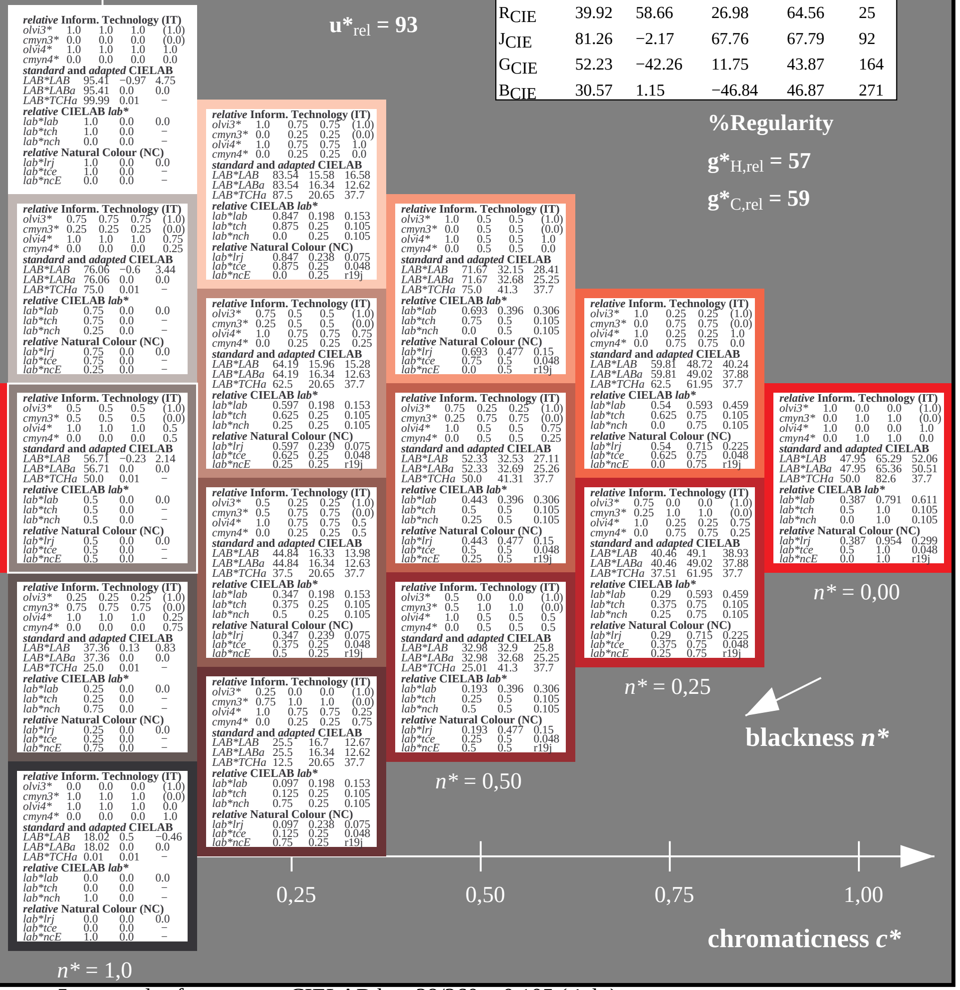
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



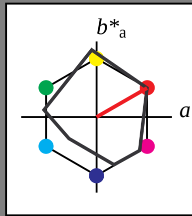
UE500−7, 5 step scales for constant CIELAB hue 30/360 = 0.083 (left)

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

Input: 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
rgb*Ma: 1.0 0.0 0.0

triangle lightness *t*



%Gamut

u^*_{rel} = 91

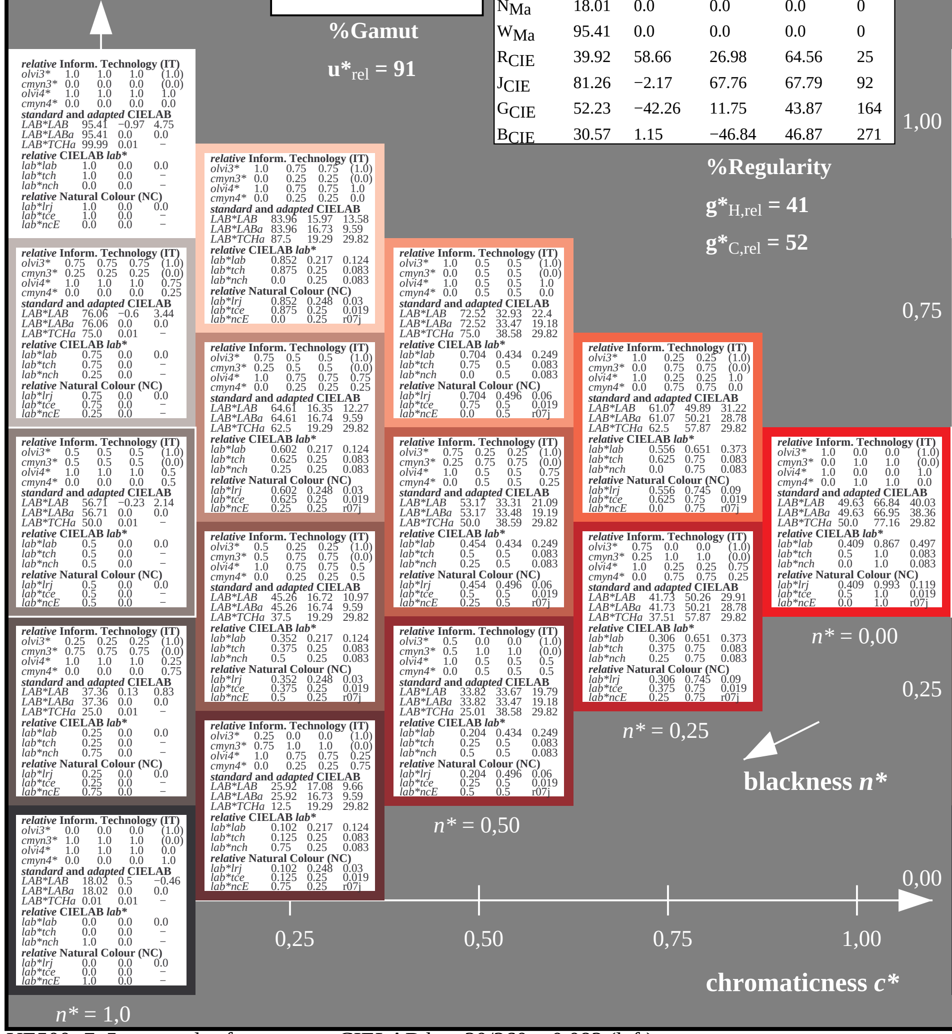
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



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
rgb*Ma: 1.0 0.0 0.0

triangle lightness *t*

%Gamut

u^*_{rel} = 91

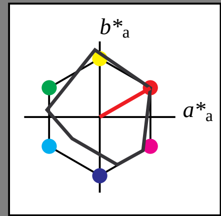
MRS18; adapted (a) CIELAB data

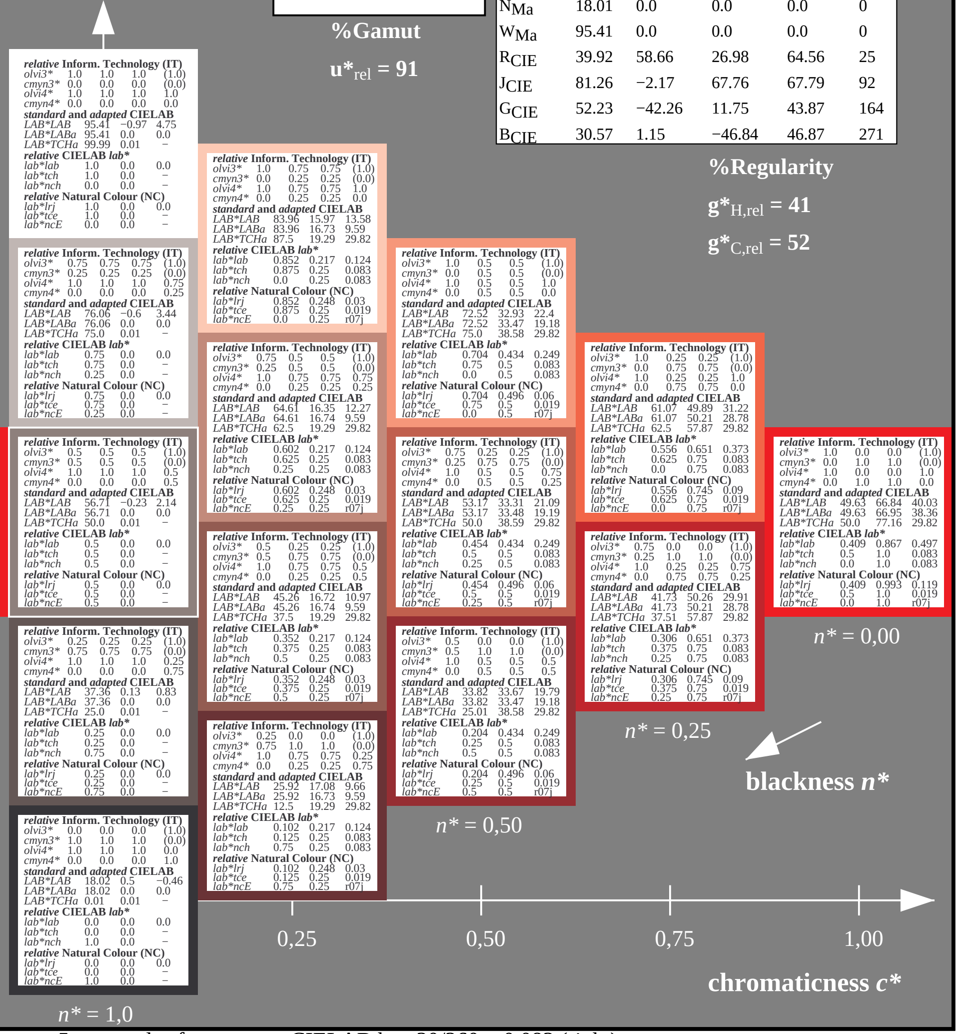
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



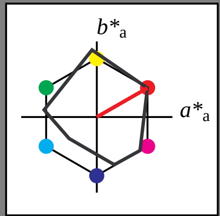


UE500−7, 5 step scales for constant CIELAB hue 30/360 = 0.083 (left)

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

Input: 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
rgb*Ma: 1.0 0.0 0.0
triangle lightness t^*

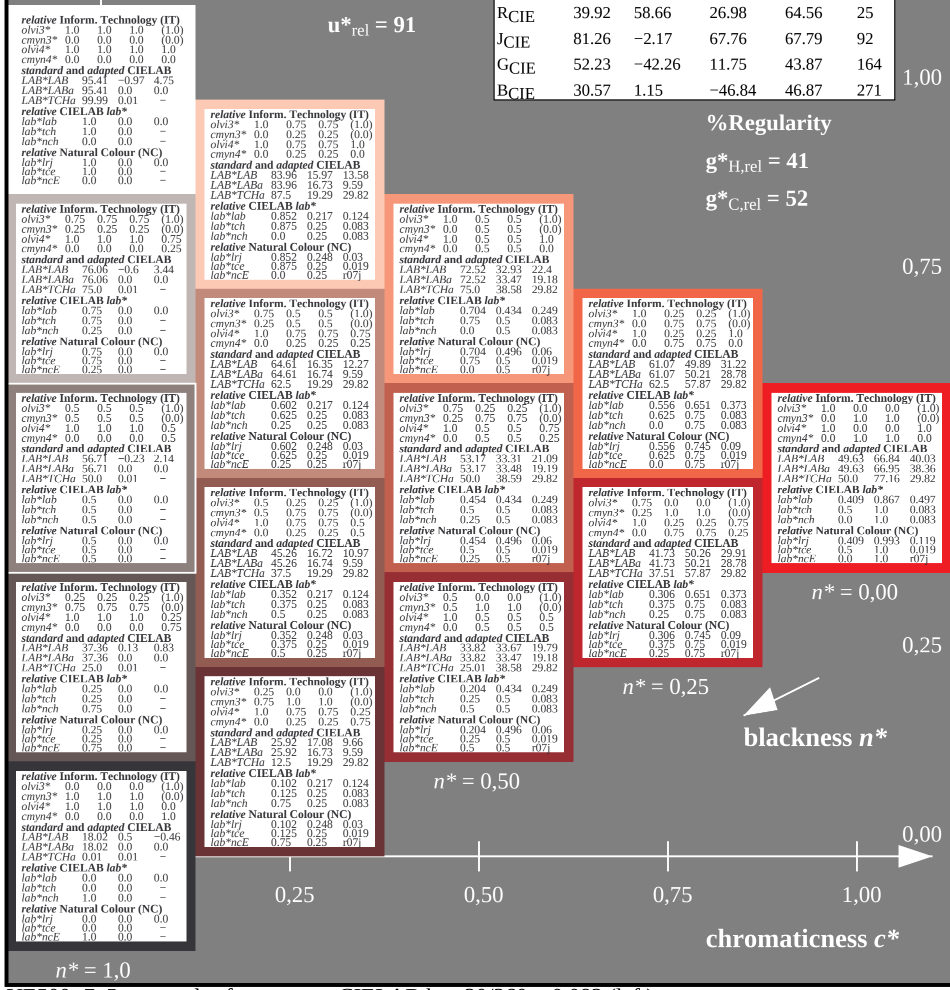


%Gamut
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data

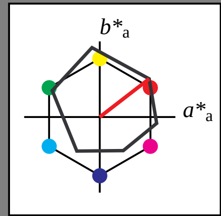
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 41$
$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 38/360 = 0.105$
*lab*tch and lab*nch*

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0
triangle lightness t^*

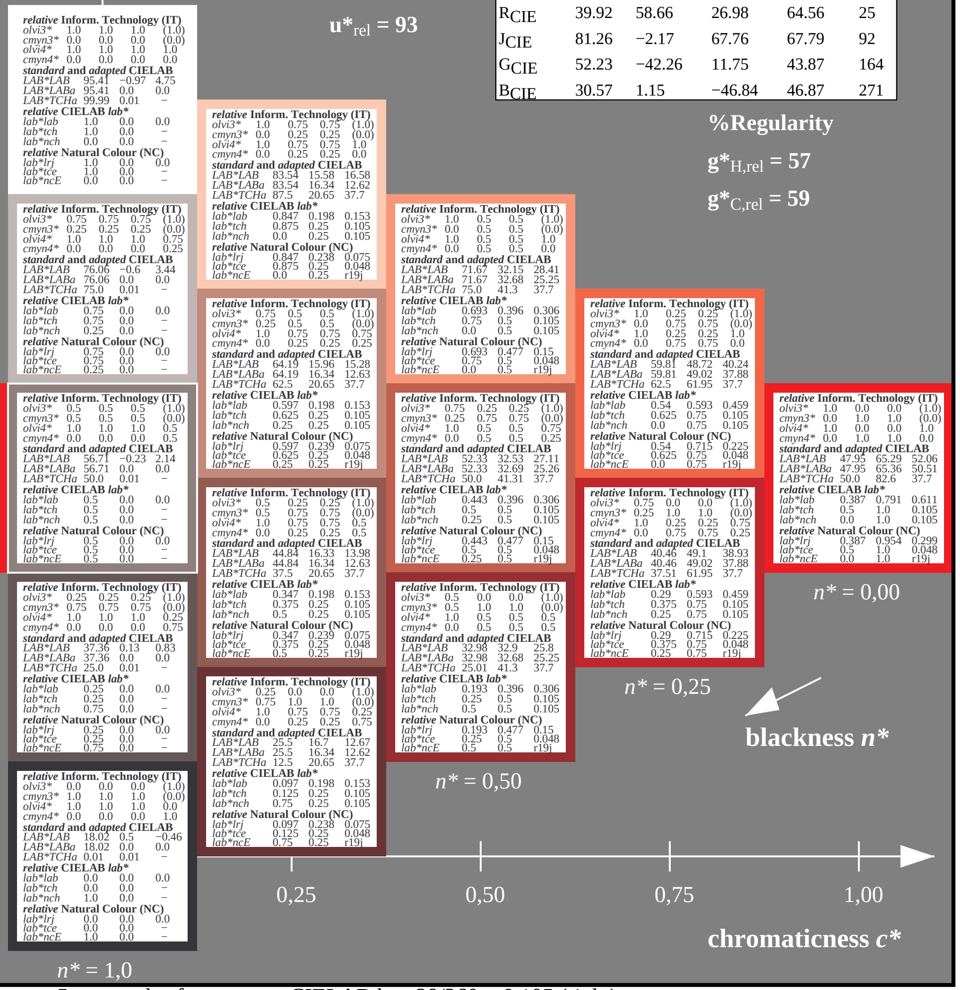


%Gamut
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$

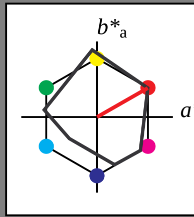


UE500−7, 5 step scales for constant CIELAB hue 30/360 = 0.083 (left)   5 step scales for constant CIELAB hue 38/360 = 0.105 (right)

Input: 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
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

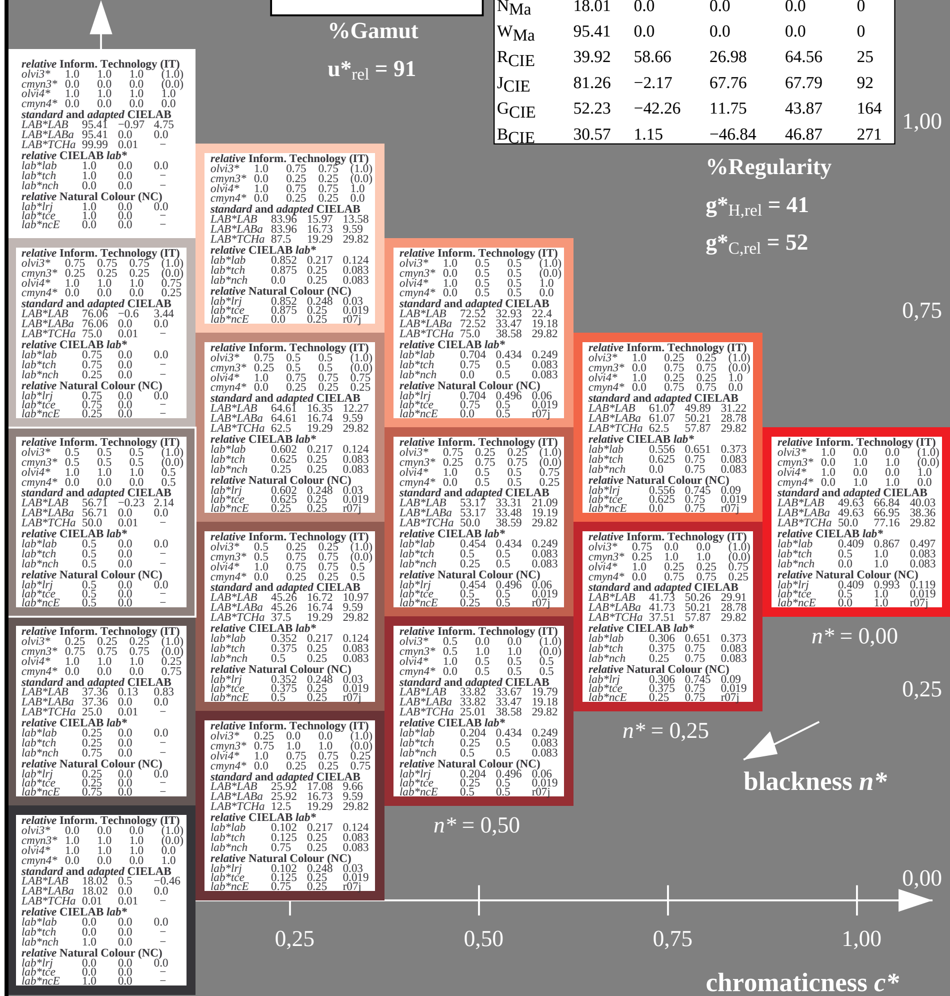
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

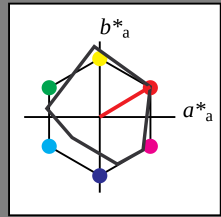
$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 31/360 = 0.086$
lab*tch and lab*nch

D65: hue R
LCH*Ma: 50 78 31
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

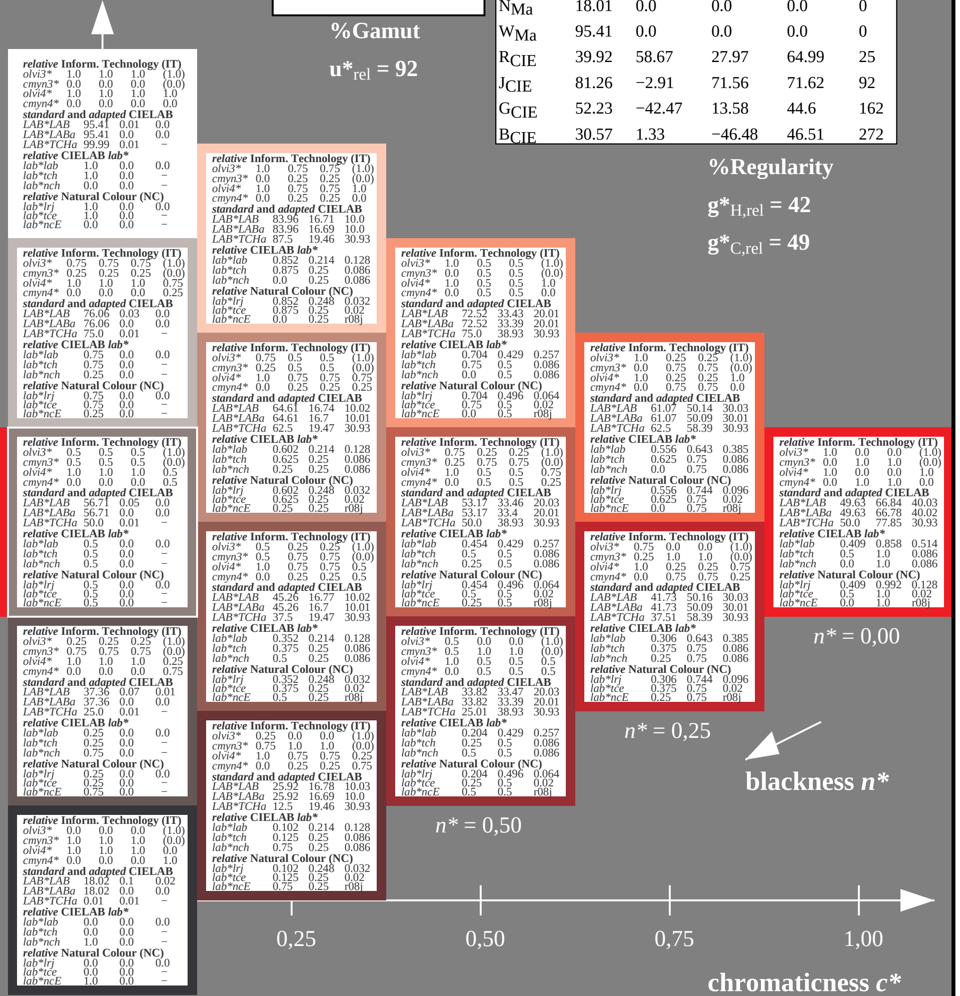
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



UE500−7, 5 step scales for constant CIELAB hue 30/360 = 0.083 (left)

5 step scales for constant CIELAB hue 31/360 = 0.086 (right)

Input: Colorimetric Reflective System MRS18

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

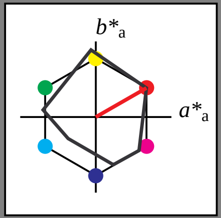
lab*tch* and *lab*nch

D65: hue R

LCH*Ma: 50 77 30

rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 91

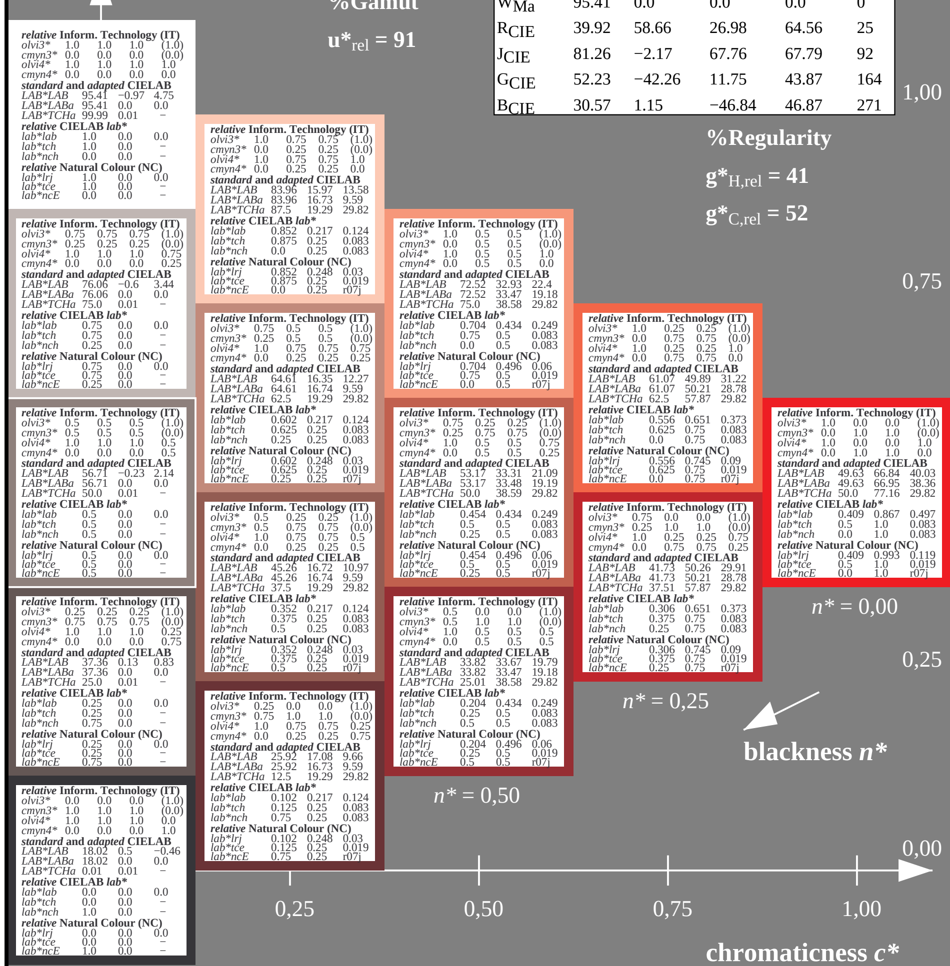
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



Output: Colorimetric Reflective System NRS18

for hue $h^* = lab^*h = 24/360 = 0.067$

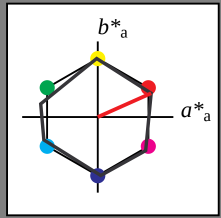
lab*tch* and *lab*nch

D65: hue R

LCH*Ma: 57 77 24

rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 100

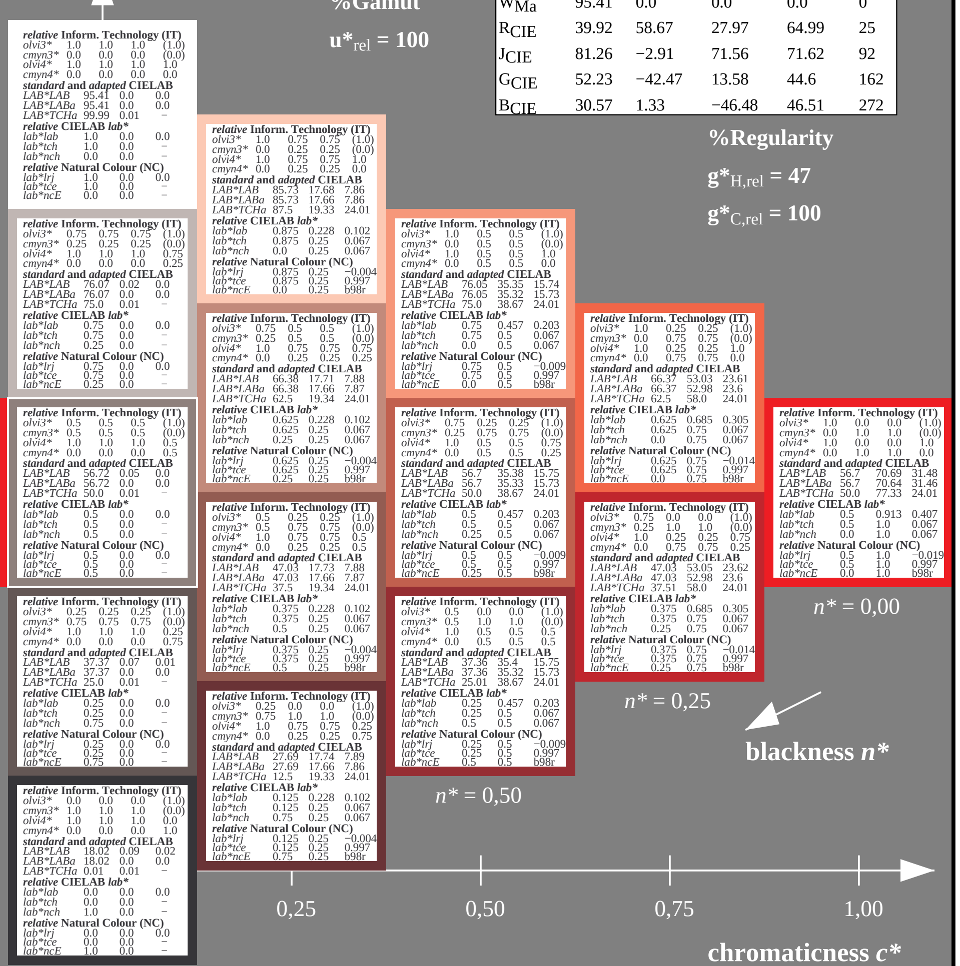
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

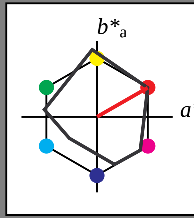


UE500−7, 5 step scales for constant CIELAB hue 30/360 = 0.083 (left) 5 step scales for constant CIELAB hue 24/360 = 0.067 (right)

Input: 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
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 91

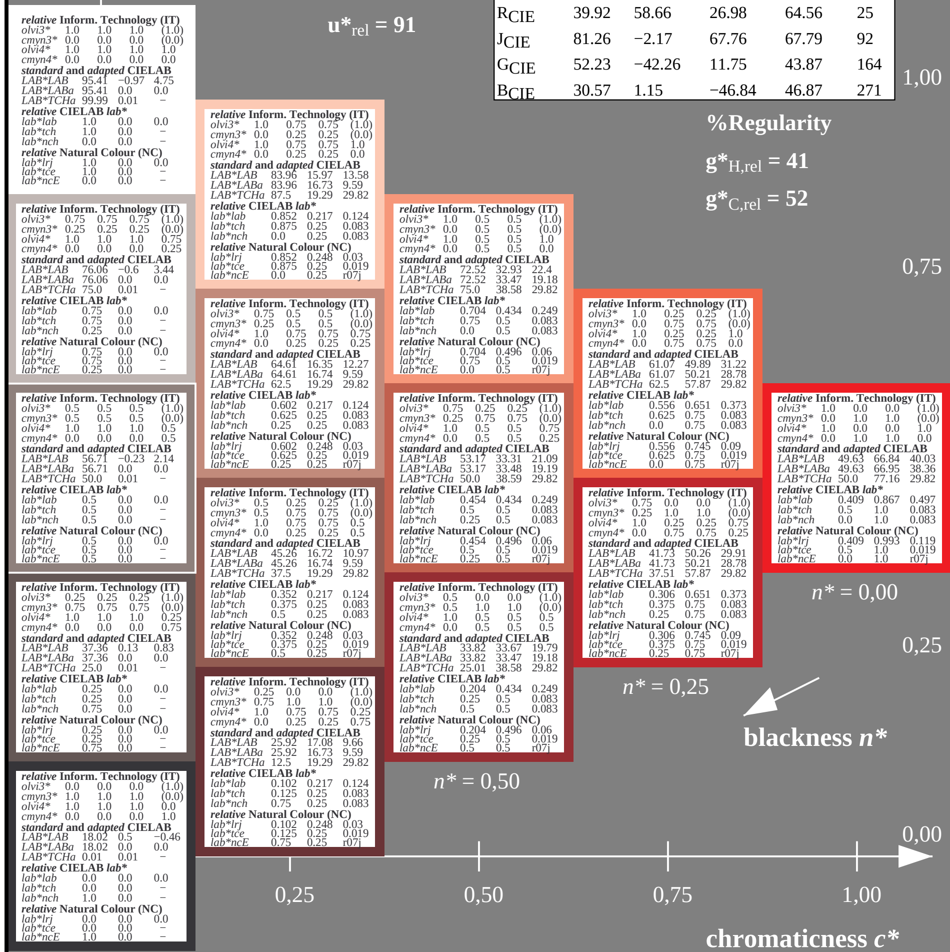
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

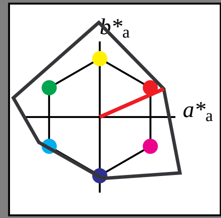
$g^*_{C,rel}$ = 52



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 24/360 = 0.066$
lab*tch and lab*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 136

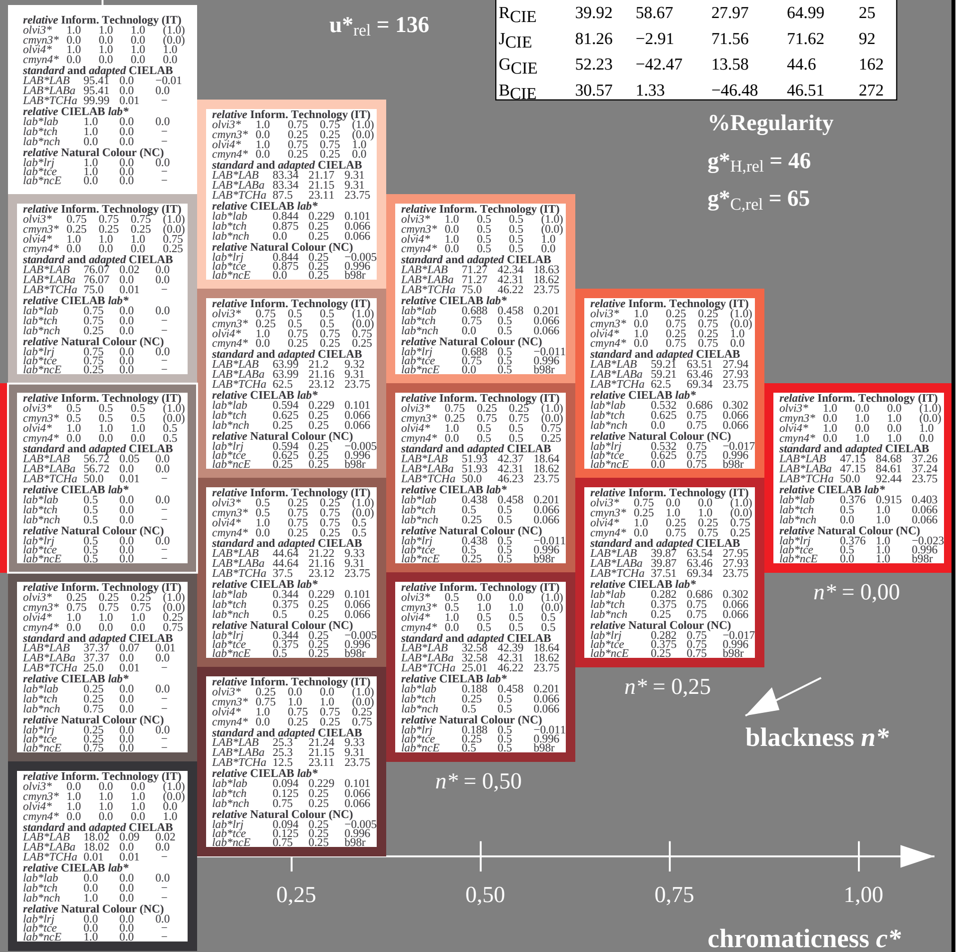
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



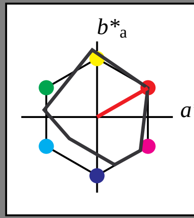
UE500−7, 5 step scales for constant CIELAB hue 30/360 = 0.083 (left)

5 step scales for constant CIELAB hue 24/360 = 0.066 (right)

Input: 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
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*

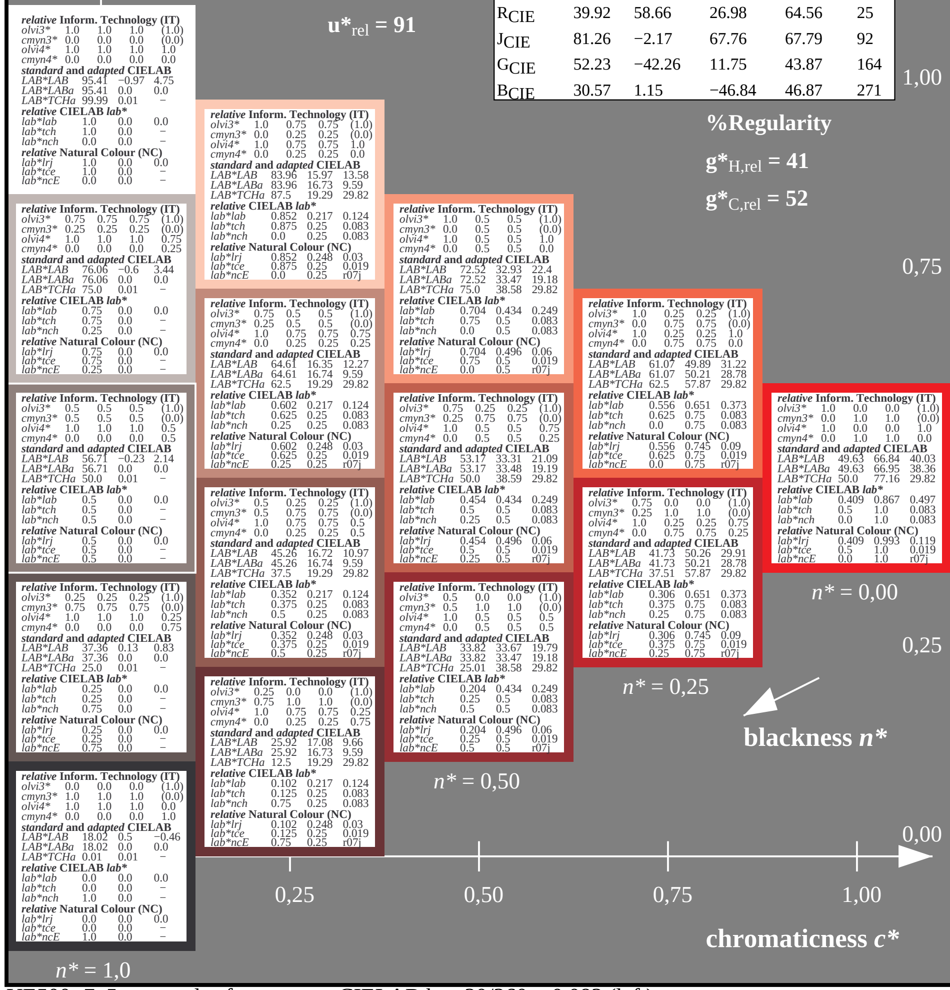


%Gamut
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

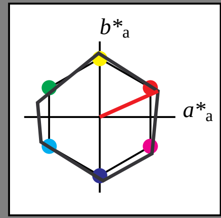
%Regularity
$g^*_{H,rel} = 41$
$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 24/360 = 0.067$
*lab*tch and lab*nch*

D65: hue R
LCH*Ma: 53 84 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*

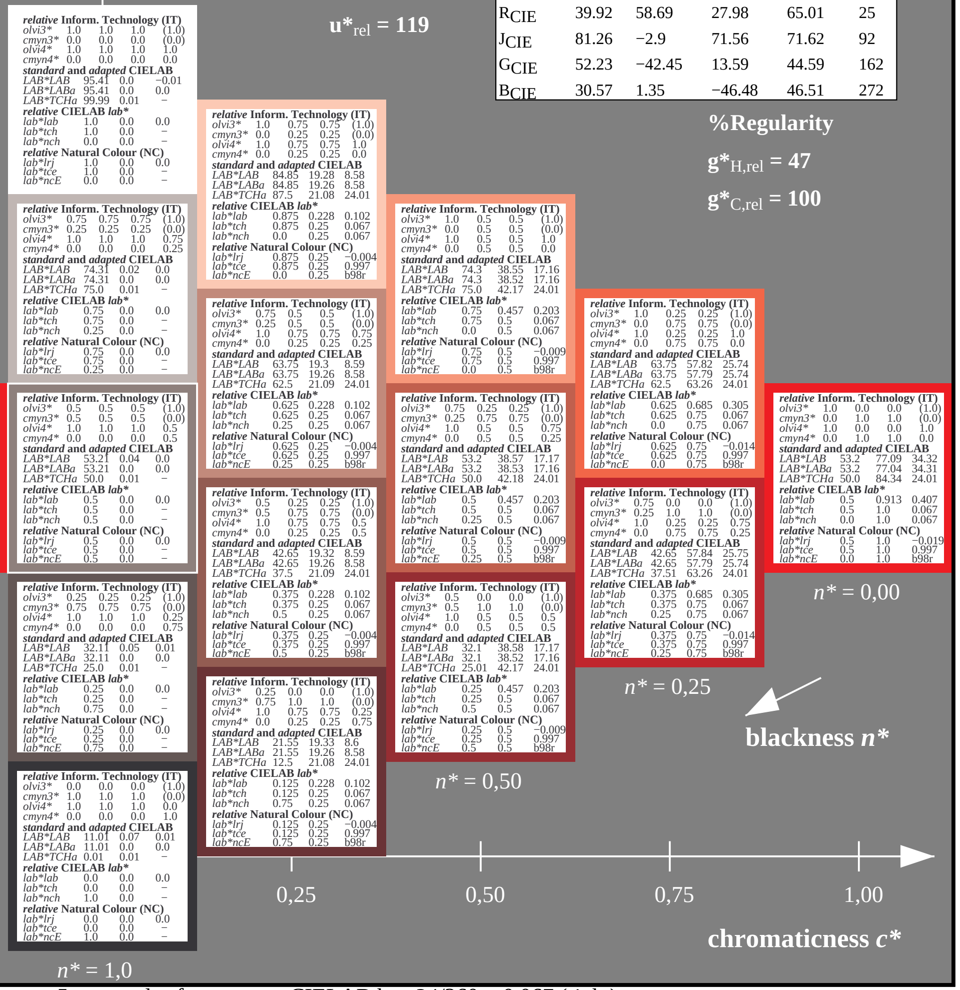


%Gamut
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



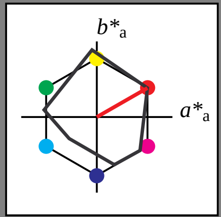
UE500−7, 5 step scales for constant CIELAB hue 30/360 = 0.083 (left)

5 step scales for constant CIELAB hue 24/360 = 0.067 (right)

Input: 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
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

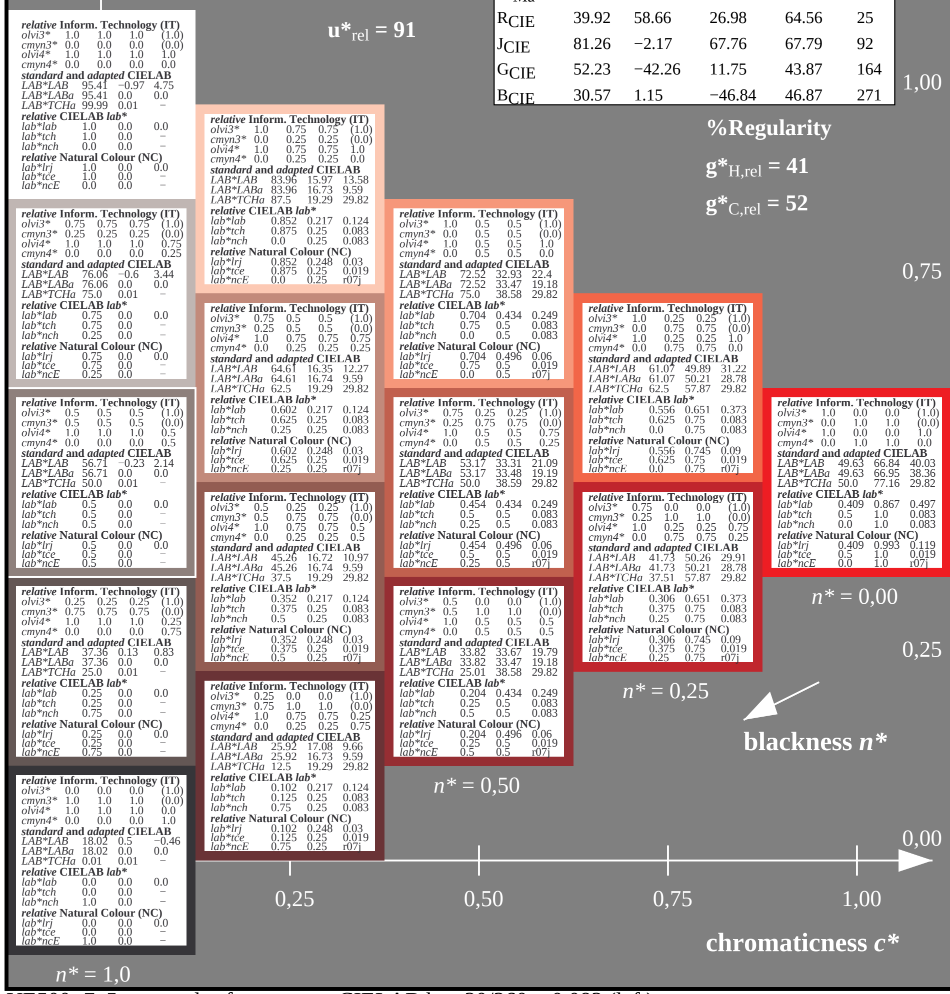
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

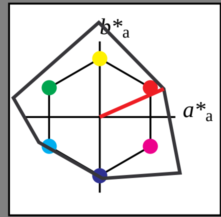
$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 24/360 = 0.066$
*lab*tch and lab*nch*

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

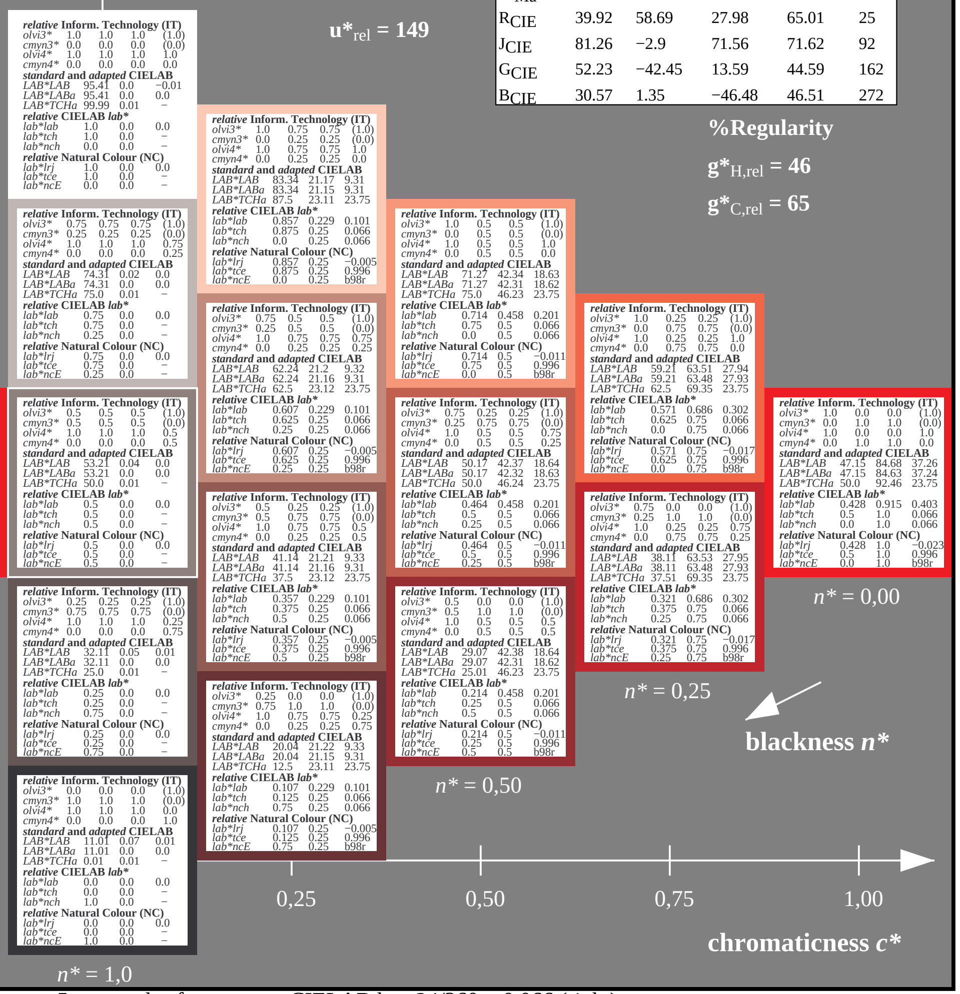
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

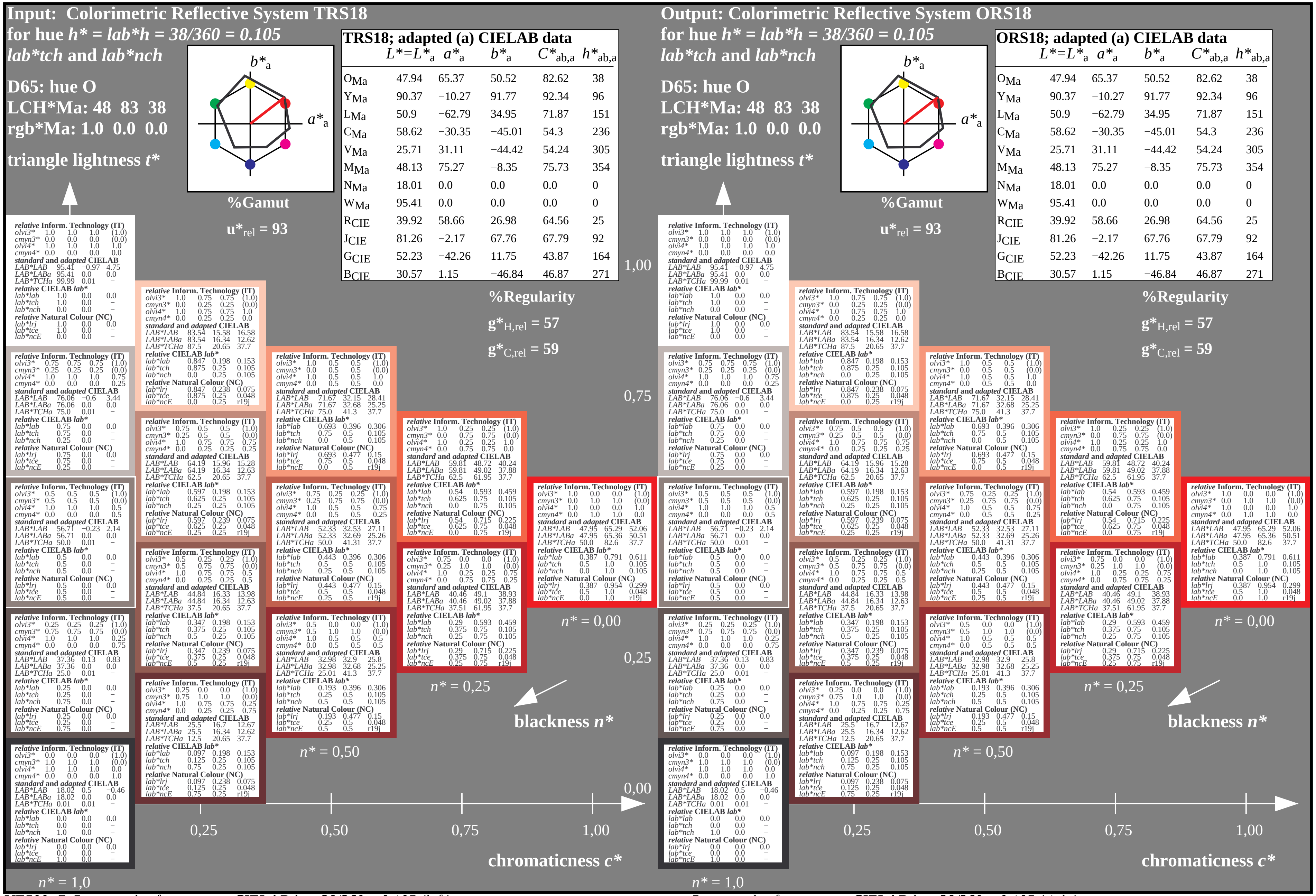
$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



UE500−7, 5 step scales for constant CIELAB hue 30/360 = 0.083 (left)

5 step scales for constant CIELAB hue 24/360 = 0.066 (right)



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

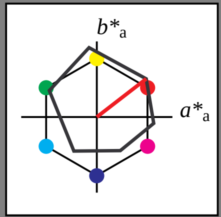
UE500−7, 5 step scales for constant CIELAB hue 38/360 = 0.105 (left)

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

Input: Colorimetric Reflective System TRS18
for hue *h = *lab*h* = 38/360 = 0.105**
lab*tch* and *lab*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness *t*



%Gamut

u^*_{rel} = 93

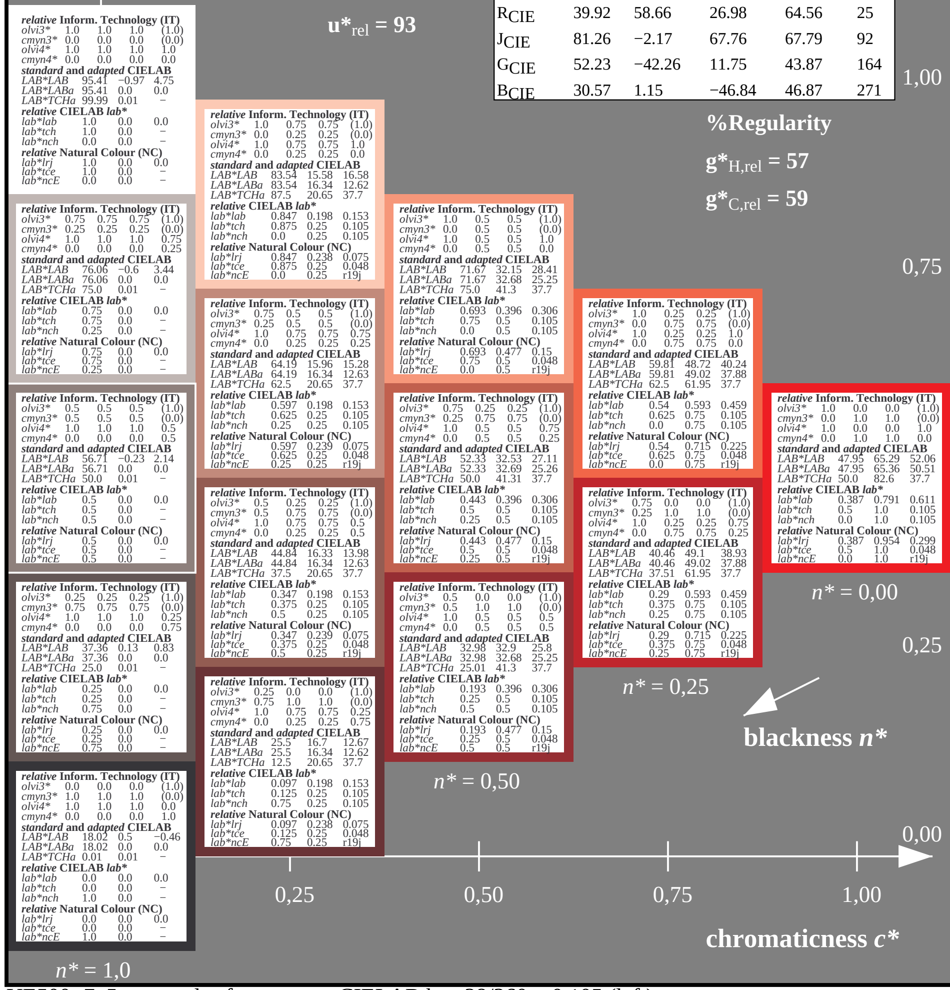
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

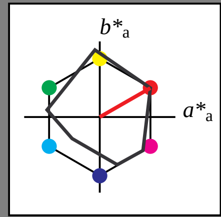
$g^*_{C,rel}$ = 59



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
rgb*Ma: 1.0 0.0 0.0

triangle lightness *t*



%Gamut

u^*_{rel} = 91

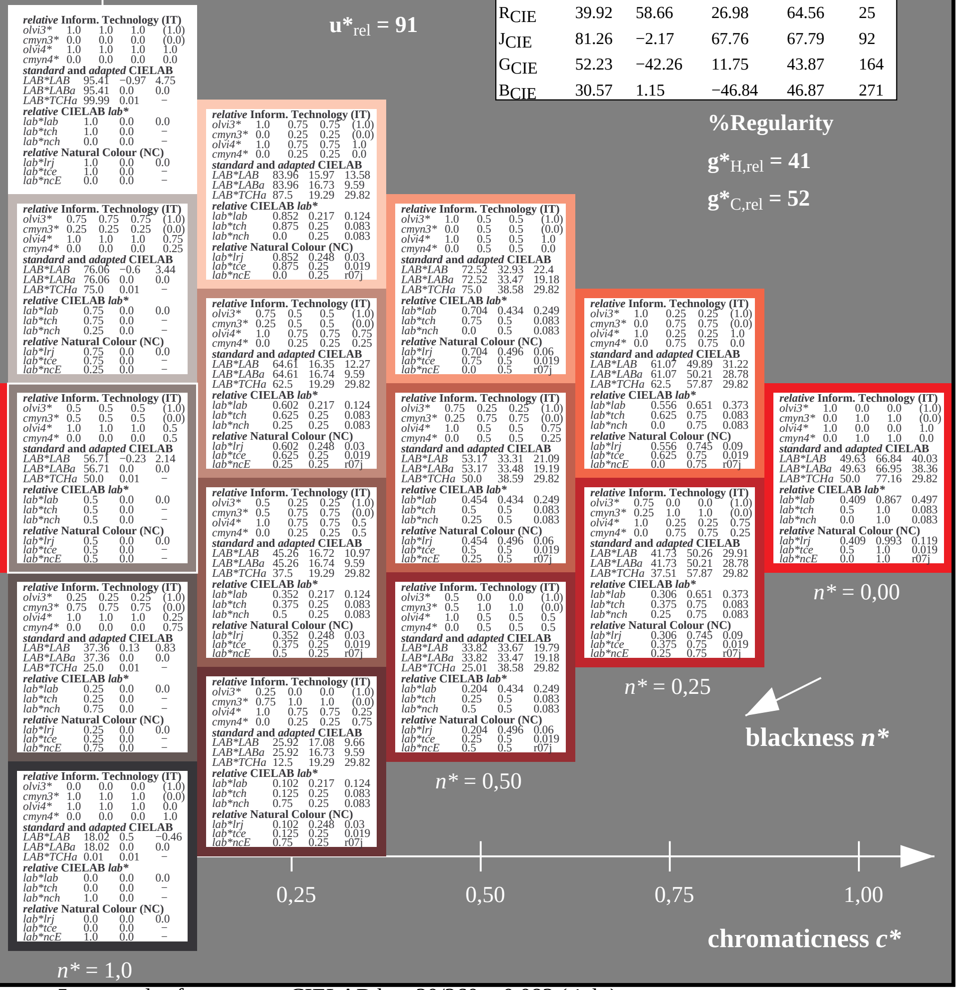
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



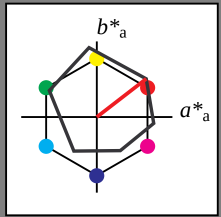
UE500−7, 5 step scales for constant CIELAB hue 38/360 = 0.105 (left)

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

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 38/360 = 0.105$
lab*tch* and *lab*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

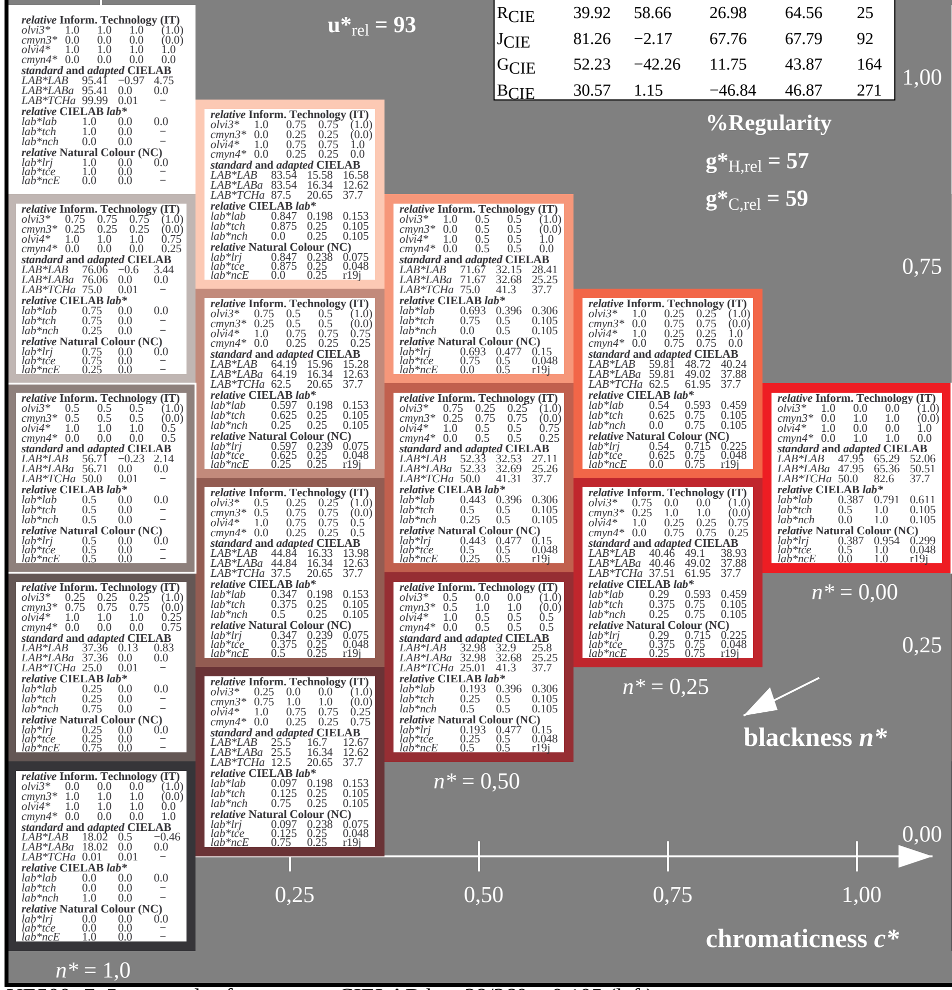
u^*_{rel} = 93

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

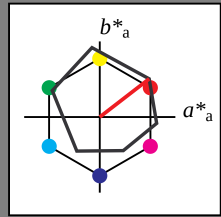
$g^*_{C,rel}$ = 59



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 38/360 = 0.105$
lab*tch* and *lab*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

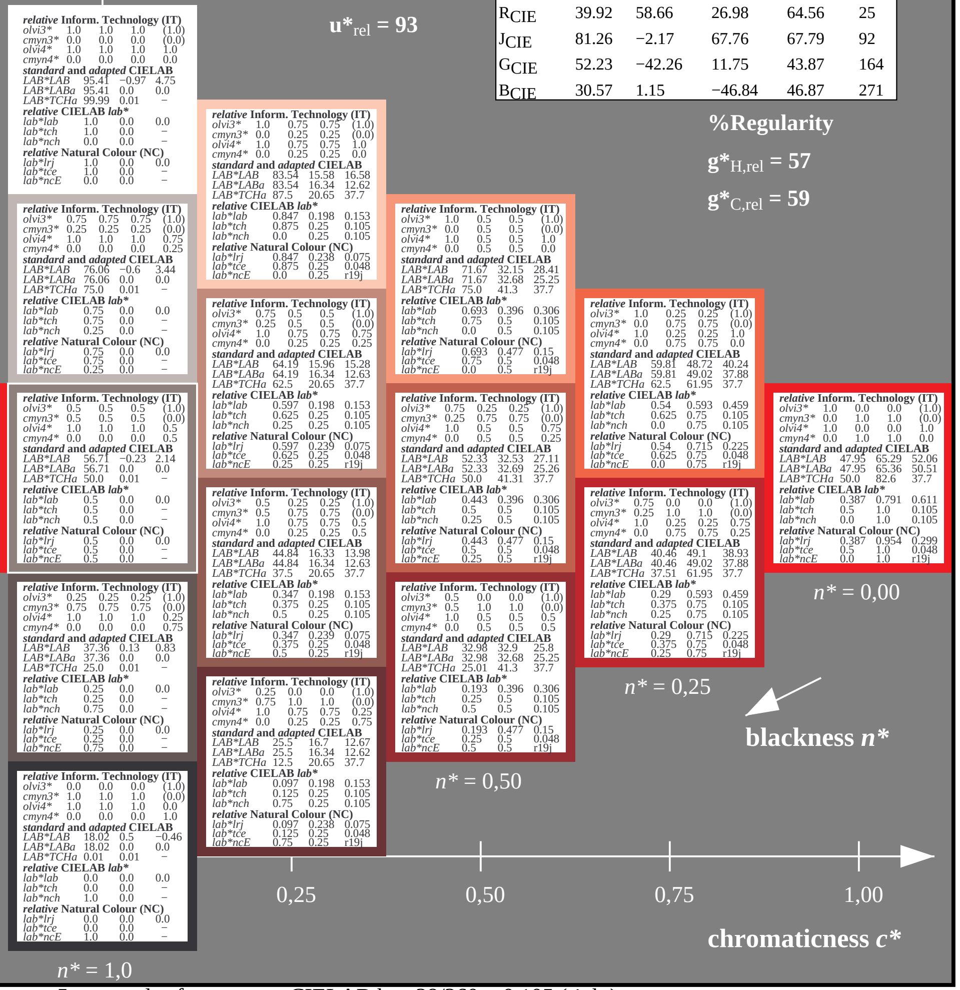
u^*_{rel} = 93

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



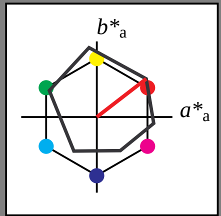
UE500−7, 5 step scales for constant CIELAB hue 38/360 = 0.105 (left)

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

Input: Colorimetric Reflective System TRS18
for hue *h = *lab*h* = 38/360 = 0.105**
lab*tch* and *lab*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness *t**



%Gamut

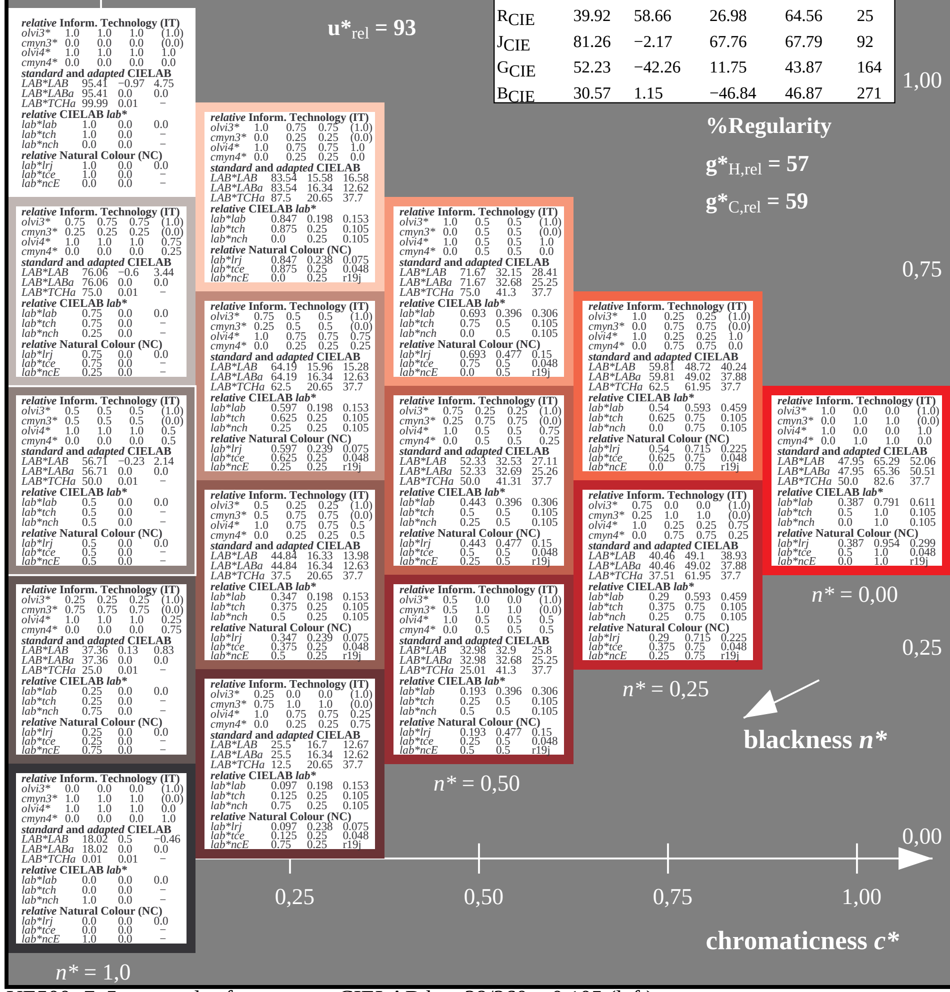
u^*_{rel} = 93

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

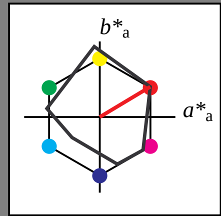
$g^*_{C,rel}$ = 59



Output: Colorimetric Reflective System MRS18a
for hue *h = *lab*h* = 31/360 = 0.086**
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 78 31
rgb*Ma: 1.0 0.0 0.0

triangle lightness *t**



%Gamut

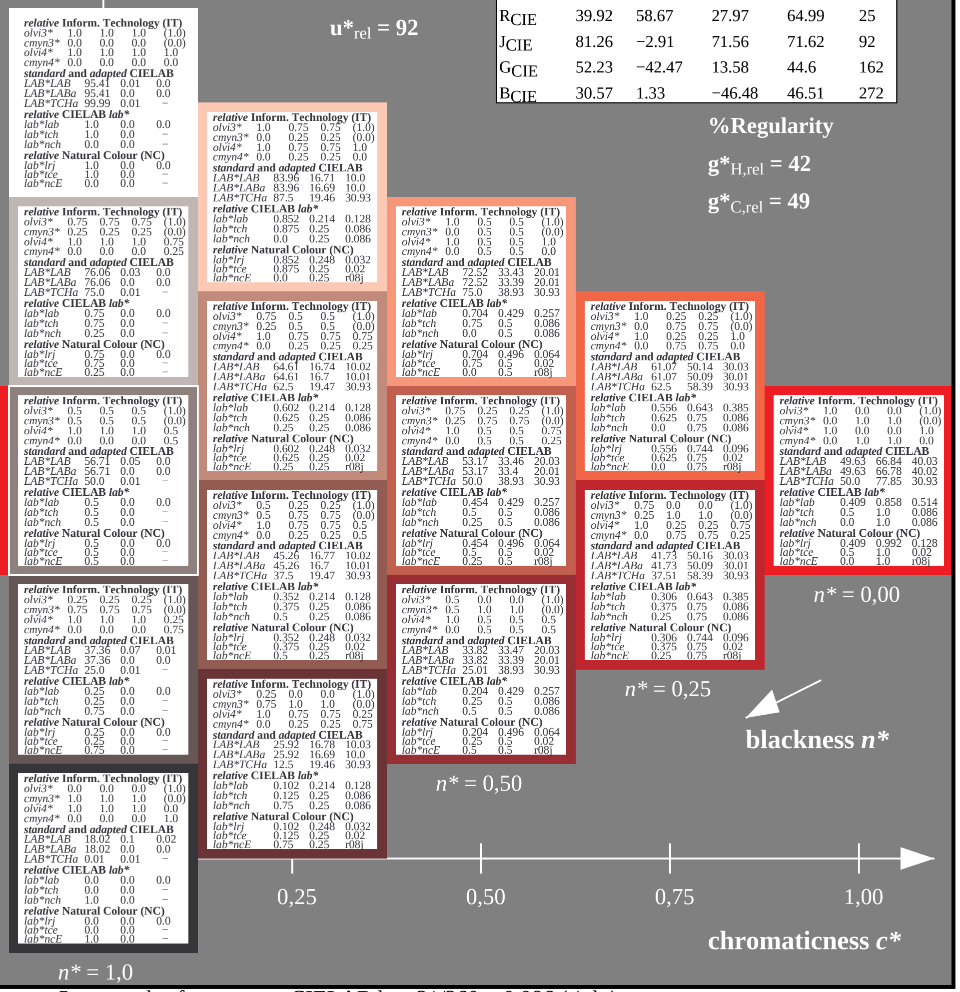
u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



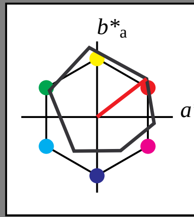
UE500−7, 5 step scales for constant CIELAB hue 38/360 = 0.105 (left)

5 step scales for constant CIELAB hue 31/360 = 0.086 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 38/360 = 0.105$
lab^*tch and lab^*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

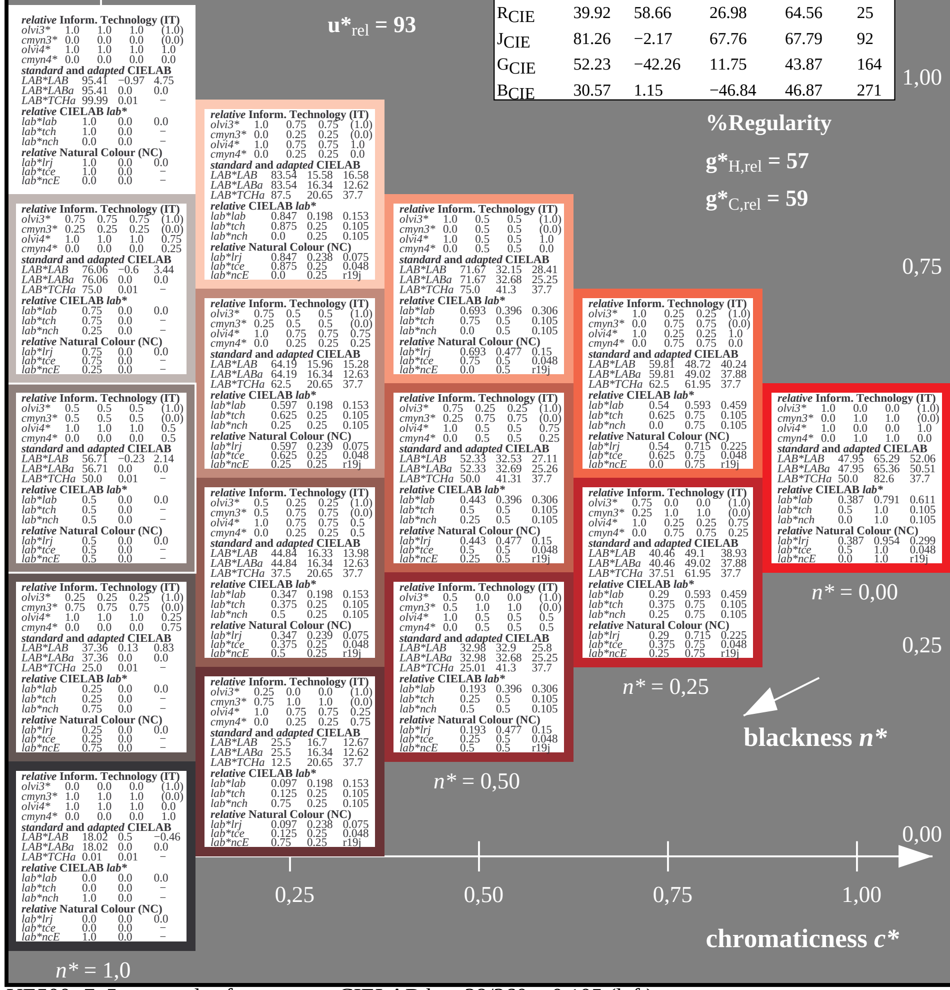
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

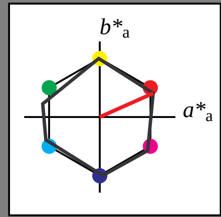
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 24/360 = 0.067$
lab^*tch and lab^*nch

D65: hue R
LCH*Ma: 57 77 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

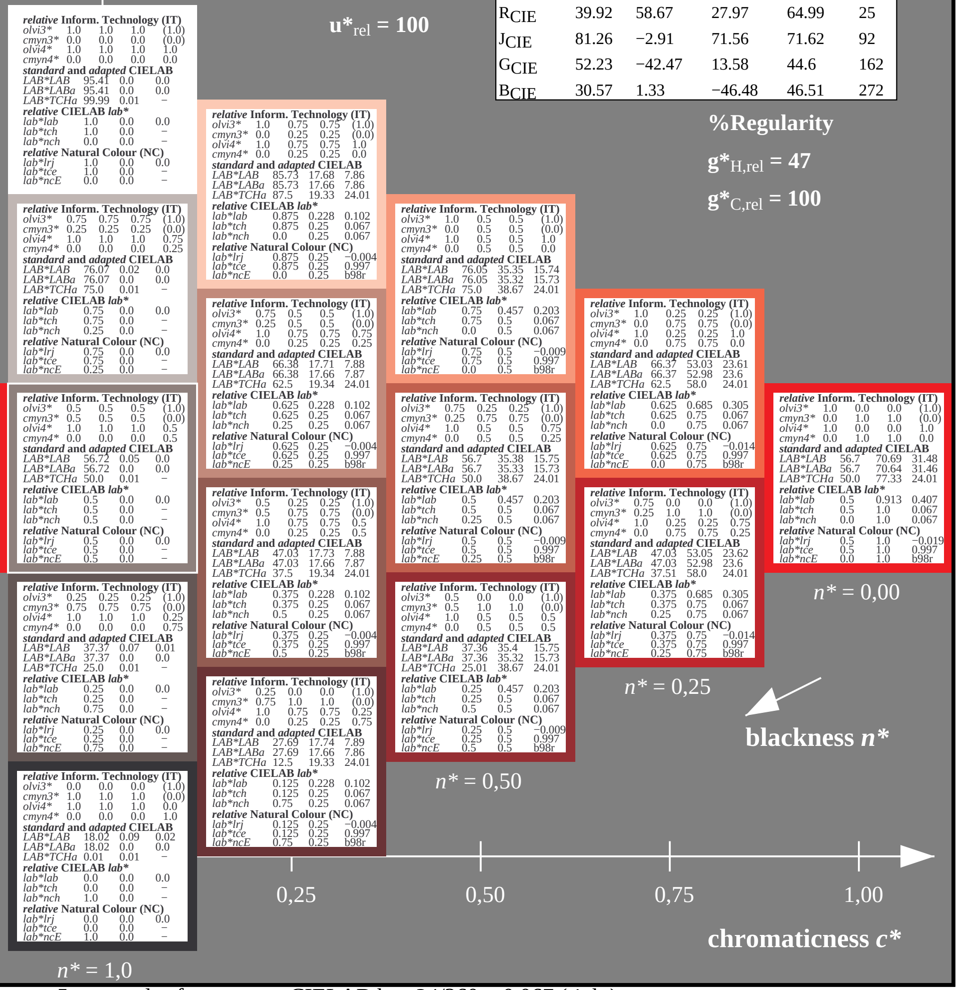
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



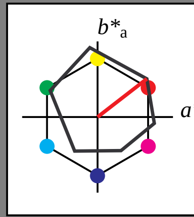
UE500−7, 5 step scales for constant CIELAB hue 38/360 = 0.105 (left)

5 step scales for constant CIELAB hue 24/360 = 0.067 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 38/360 = 0.105$
*lab*tch and lab*nch*

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

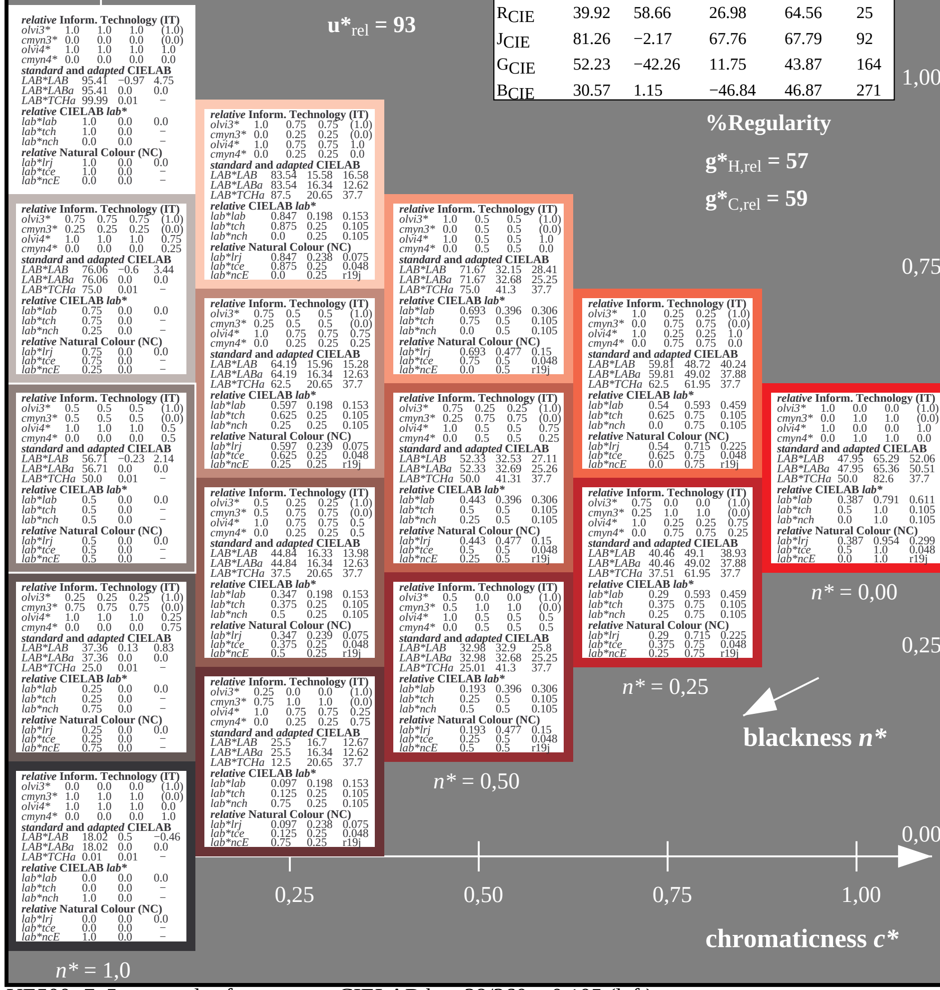
triangle lightness t^*



%Gamut
u^*_{rel} = 93

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

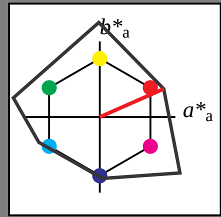
%Regularity
$g^*_{H,rel}$ = 57
$g^*_{C,rel}$ = 59



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 24/360 = 0.066$
*lab*tch and lab*nch*

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

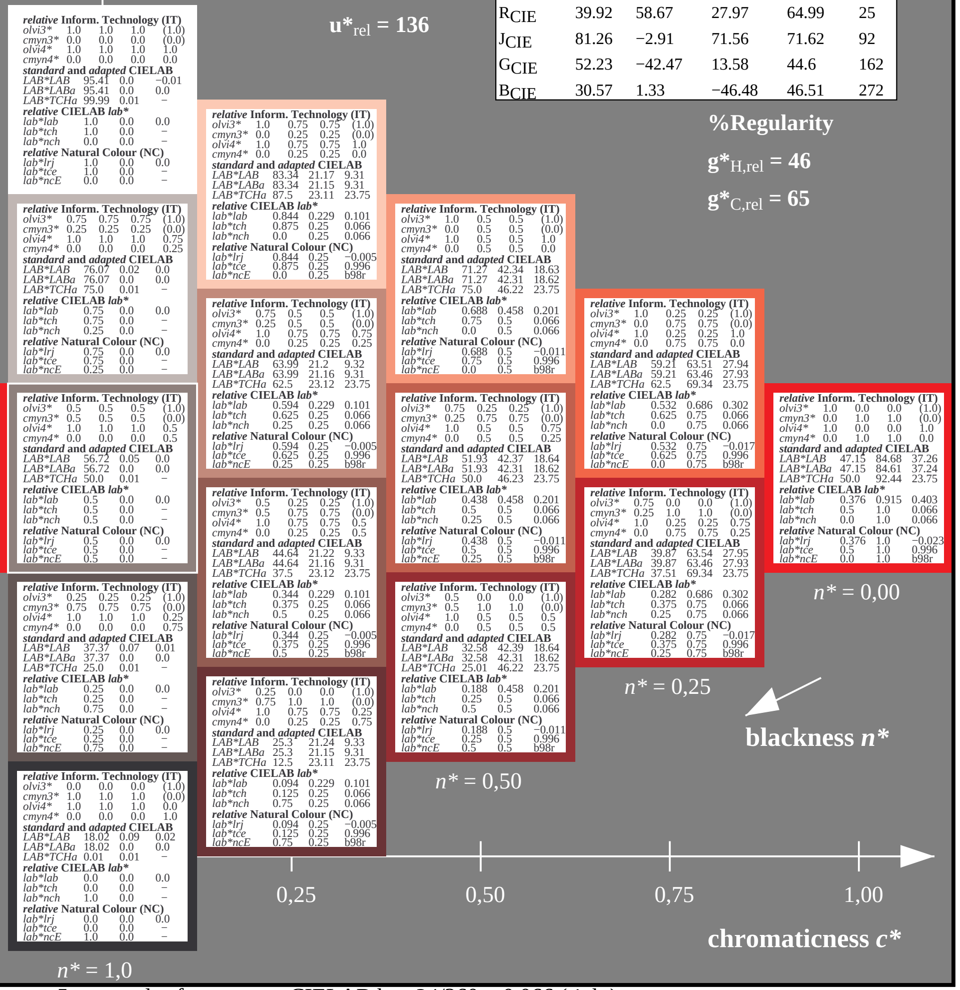
triangle lightness t^*



%Gamut
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65

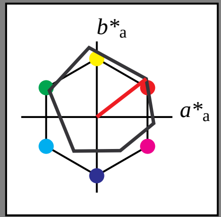


UE500−7, 5 step scales for constant CIELAB hue 38/360 = 0.105 (left)
5 step scales for constant CIELAB hue 24/360 = 0.066 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 38/360 = 0.105$
lab^*tch and lab^*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*

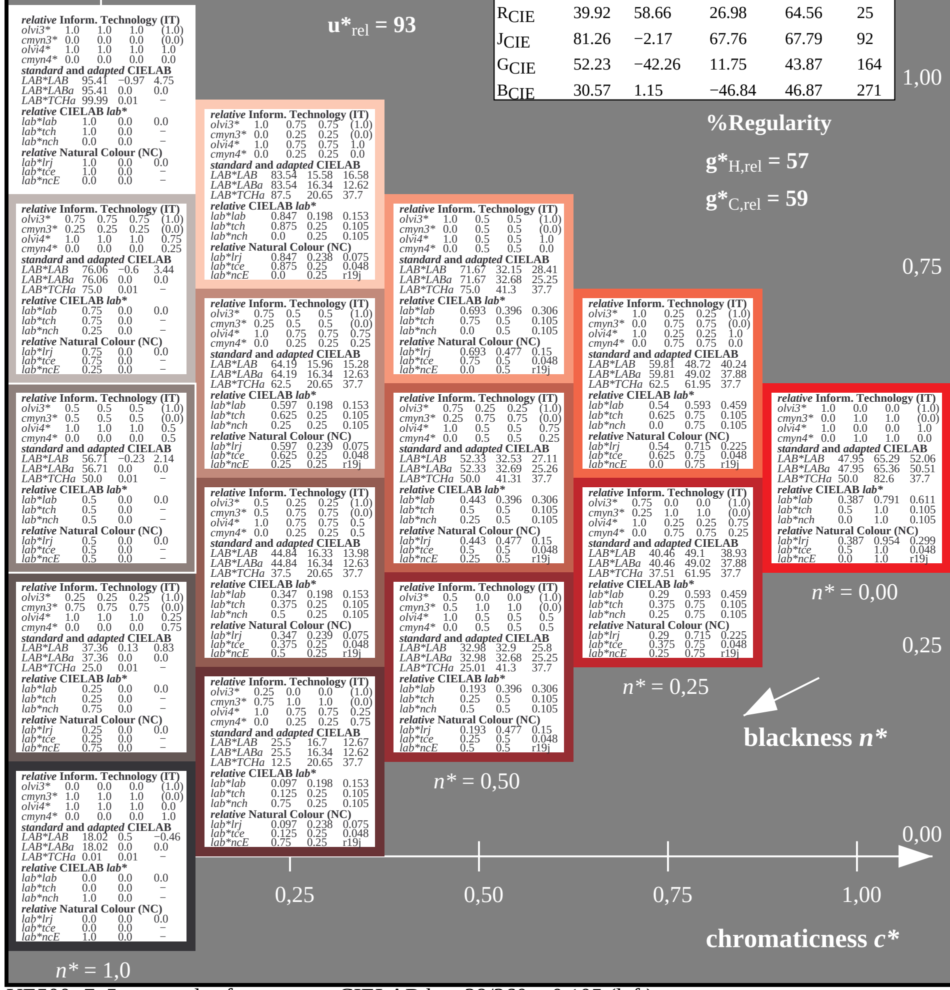


%Gamut
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

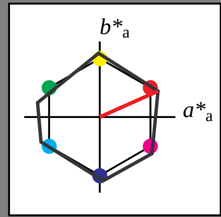
%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 24/360 = 0.067$
lab^*tch and lab^*nch

D65: hue R
LCH*Ma: 53 84 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*

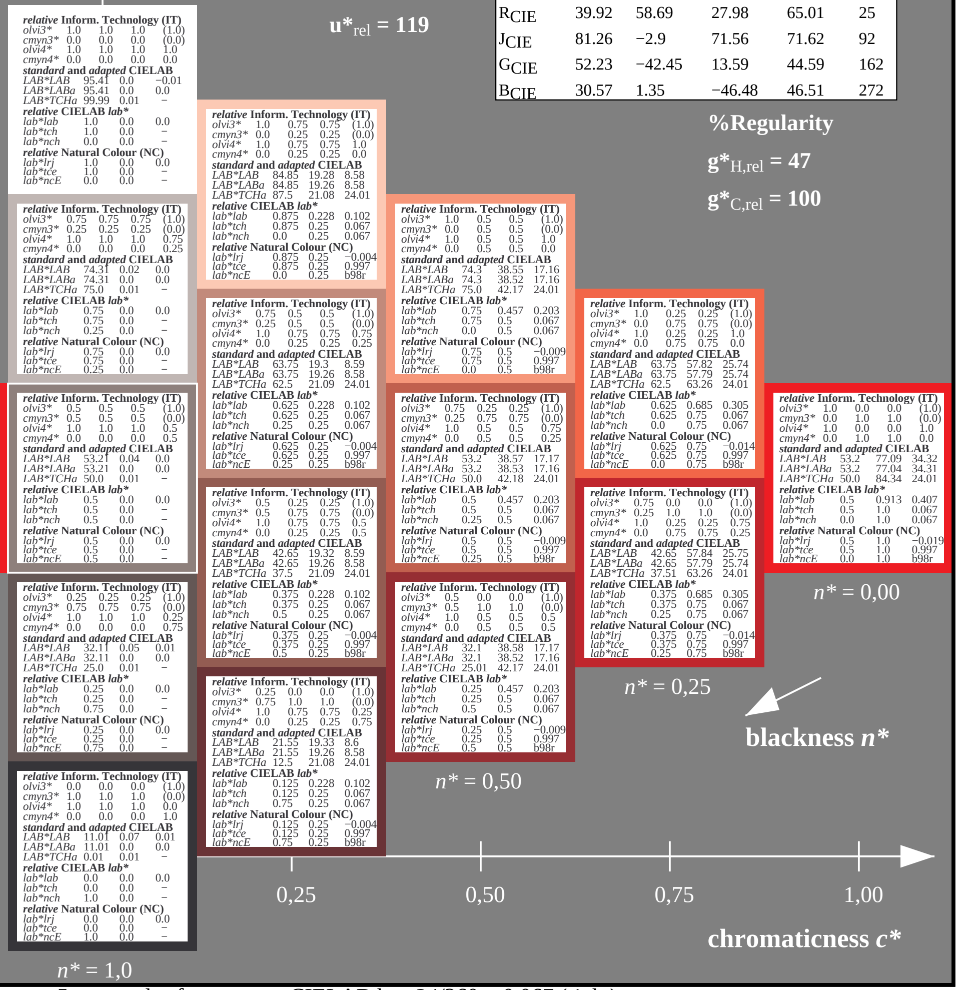


%Gamut
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



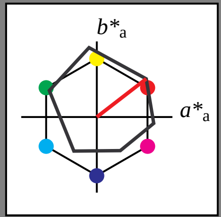
UE500−7, 5 step scales for constant CIELAB hue 38/360 = 0.105 (left)

5 step scales for constant CIELAB hue 24/360 = 0.067 (right)

Input: Colorimetric Reflective System TRS18
for hue *h = *lab*h* = 38/360 = 0.105**
lab*tch* and *lab*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness *t**



%Gamut

u^*_{rel} = 93

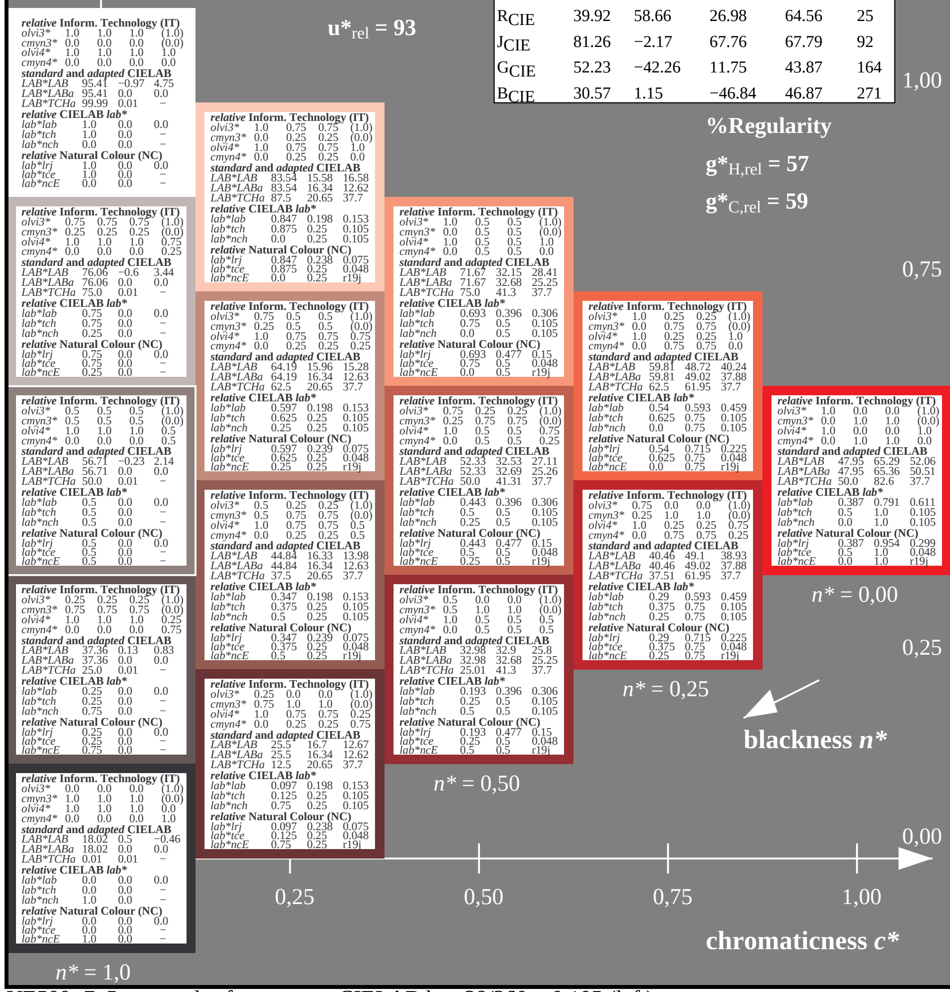
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

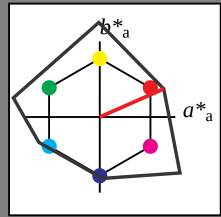
$g^*_{C,rel}$ = 59



Output: Colorimetric Reflective System NCS11
for hue *h = *lab*h* = 24/360 = 0.066**
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness *t**



%Gamut

u^*_{rel} = 149

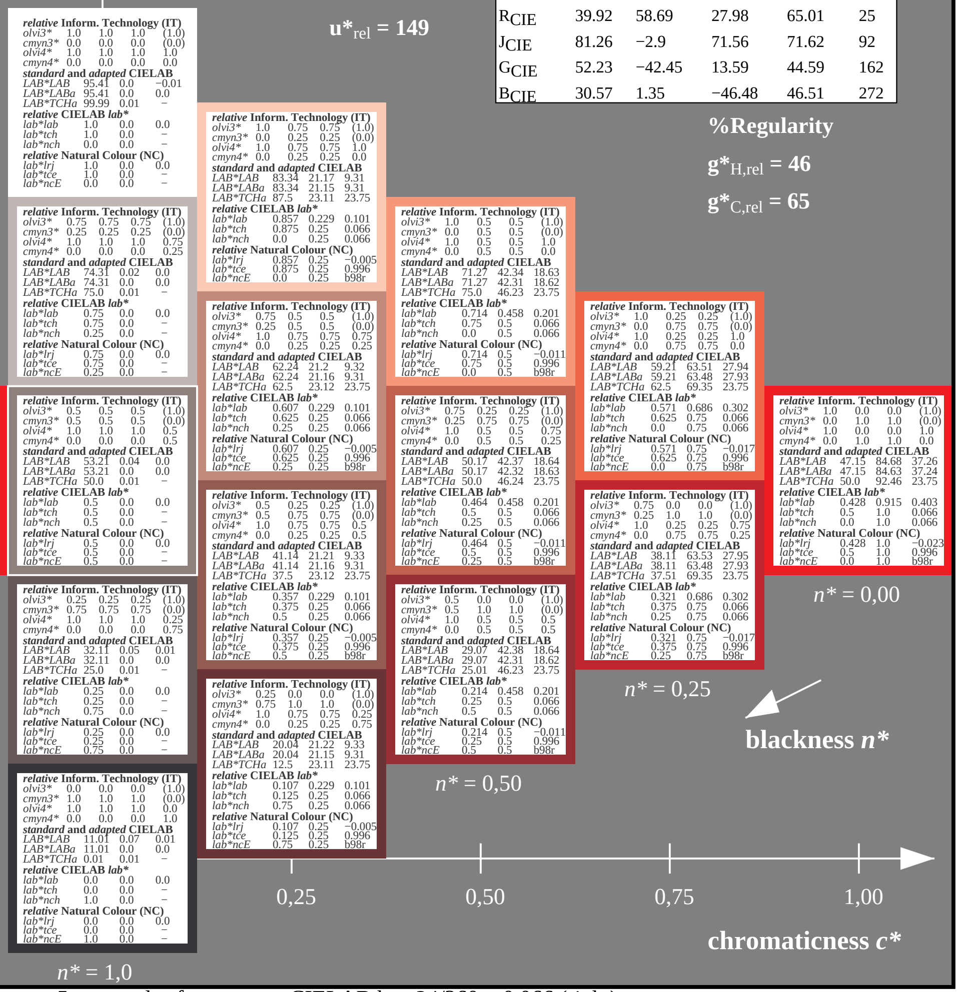
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



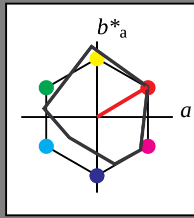
UE500−7, 5 step scales for constant CIELAB hue 38/360 = 0.105 (left)

5 step scales for constant CIELAB hue 24/360 = 0.066 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 31/360 = 0.086$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 78 31
rgb*Ma: 1.0 0.0 0.0

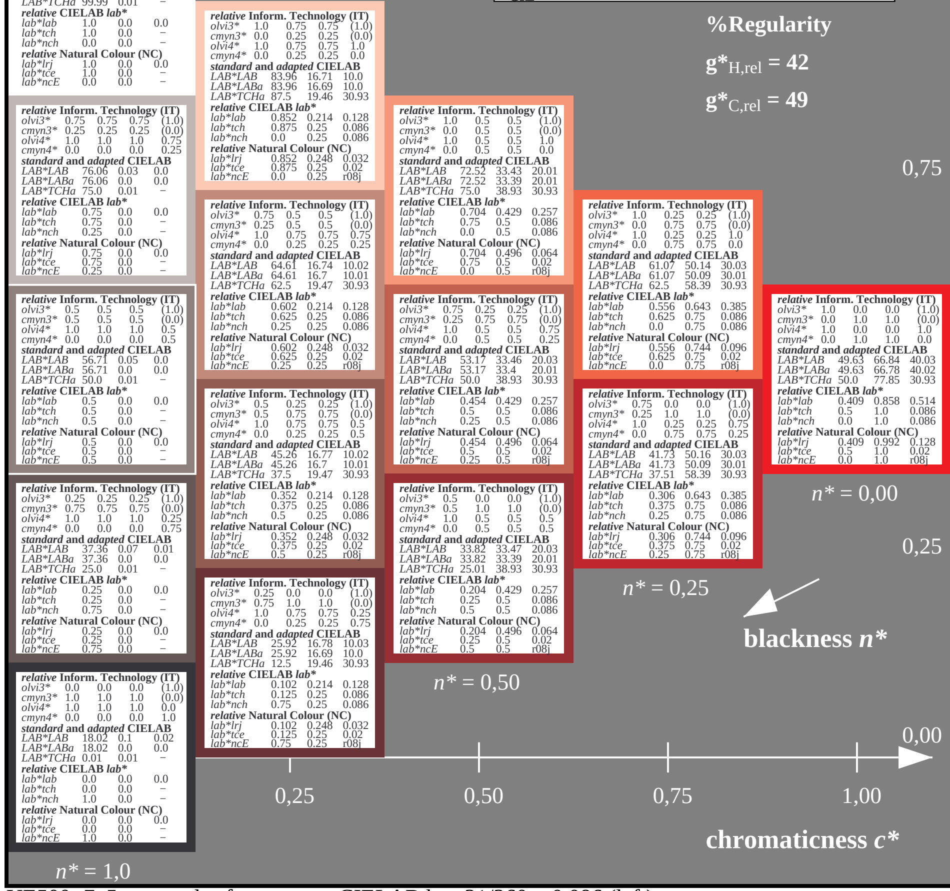
triangle lightness t^*



%Gamut

$u^*_{rel} = 92$

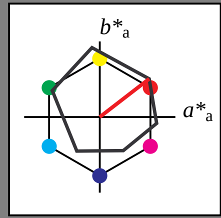
MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272



Output: 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
rgb*Ma: 1.0 0.0 0.0

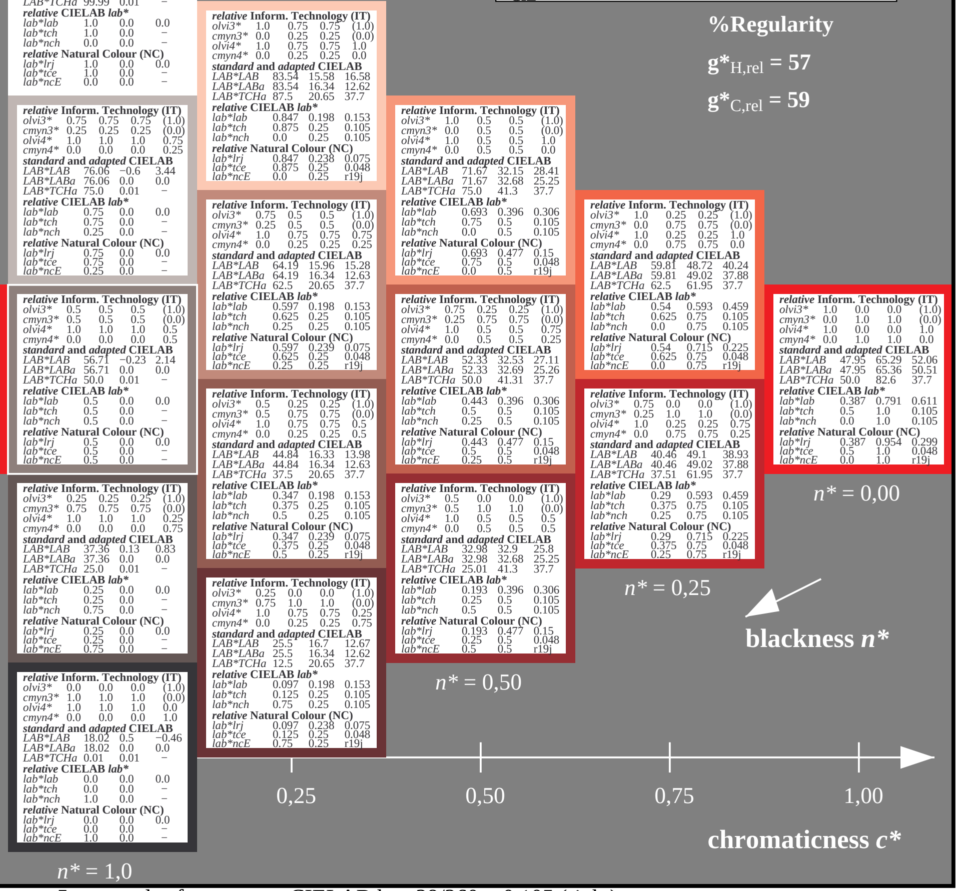
triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



UE500−7, 5 step scales for constant CIELAB hue 31/360 = 0.086 (left)   5 step scales for constant CIELAB hue 38/360 = 0.105 (right)

Input: Colorimetric Reflective System MRS18a

for hue $h^* = lab^*h = 31/360 = 0.086$

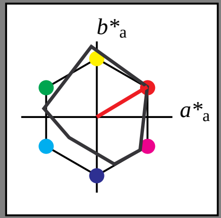
*lab*tch and lab*nch*

D65: hue R

LCH*Ma: 50 78 31

rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*

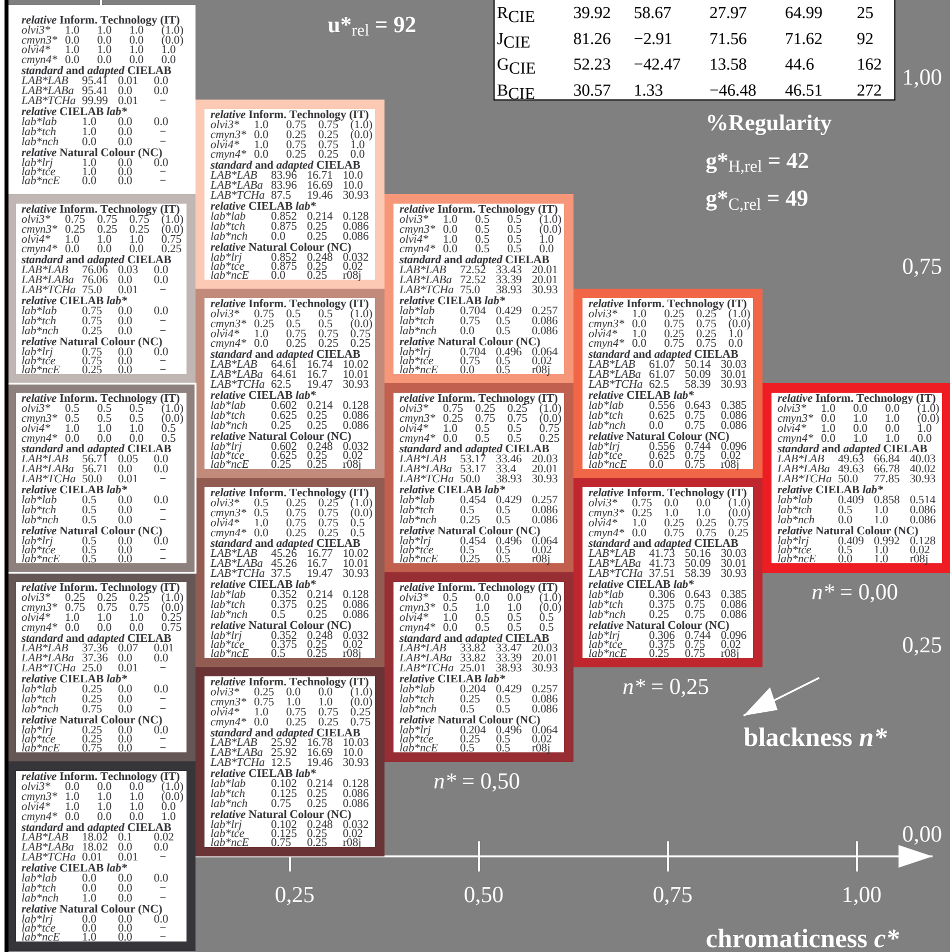


%Gamut

$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272



Output: Colorimetric Reflective System MRS18

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

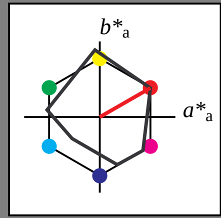
*lab*tch and lab*nch*

D65: hue R

LCH*Ma: 50 77 30

rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*

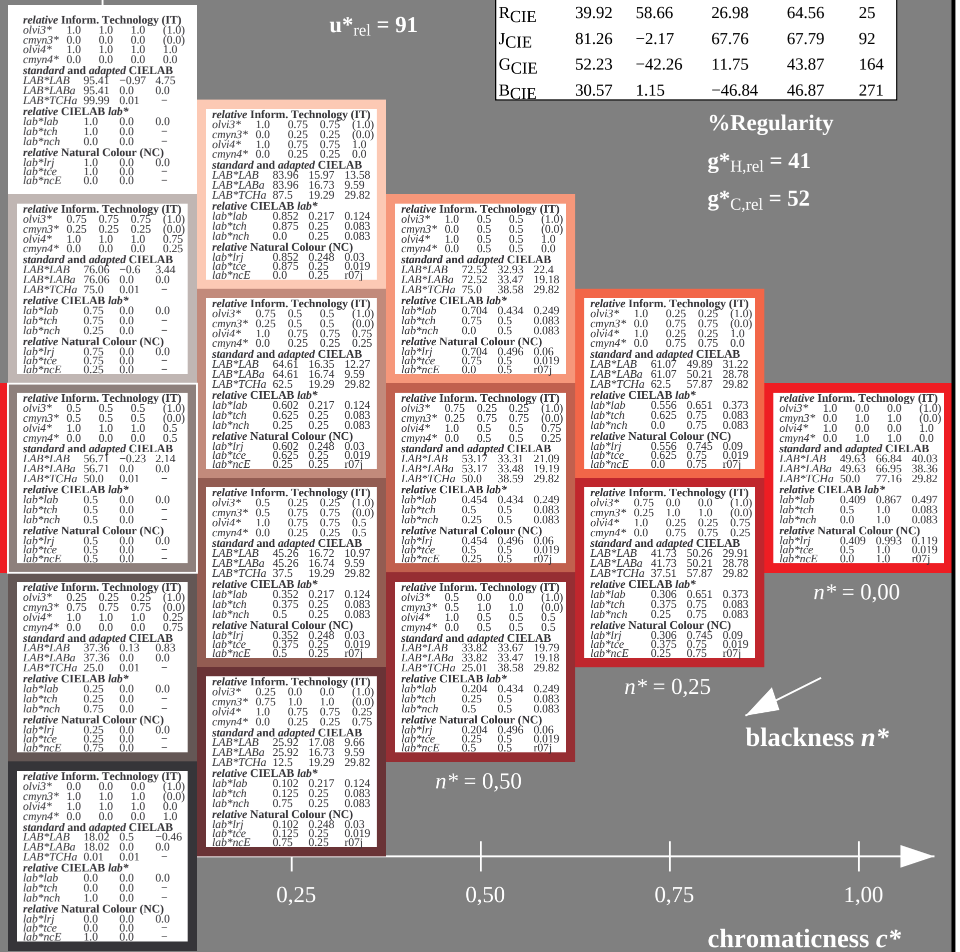


%Gamut

$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



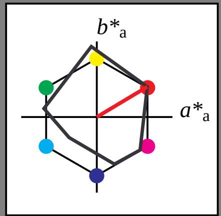
UE500−7, 5 step scales for constant CIELAB hue 31/360 = 0.086 (left)

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

Input: Colorimetric Reflective System MRS18a
for hue *h** = *lab*h* = *31/360* = *0.086*
*lab*tch* and *lab*nch*

D65: hue R
LCH*Ma: 50 78 31
rgb*Ma: 1.0 0.0 0.0

triangle lightness *t*



%Gamut

u*rel = 92

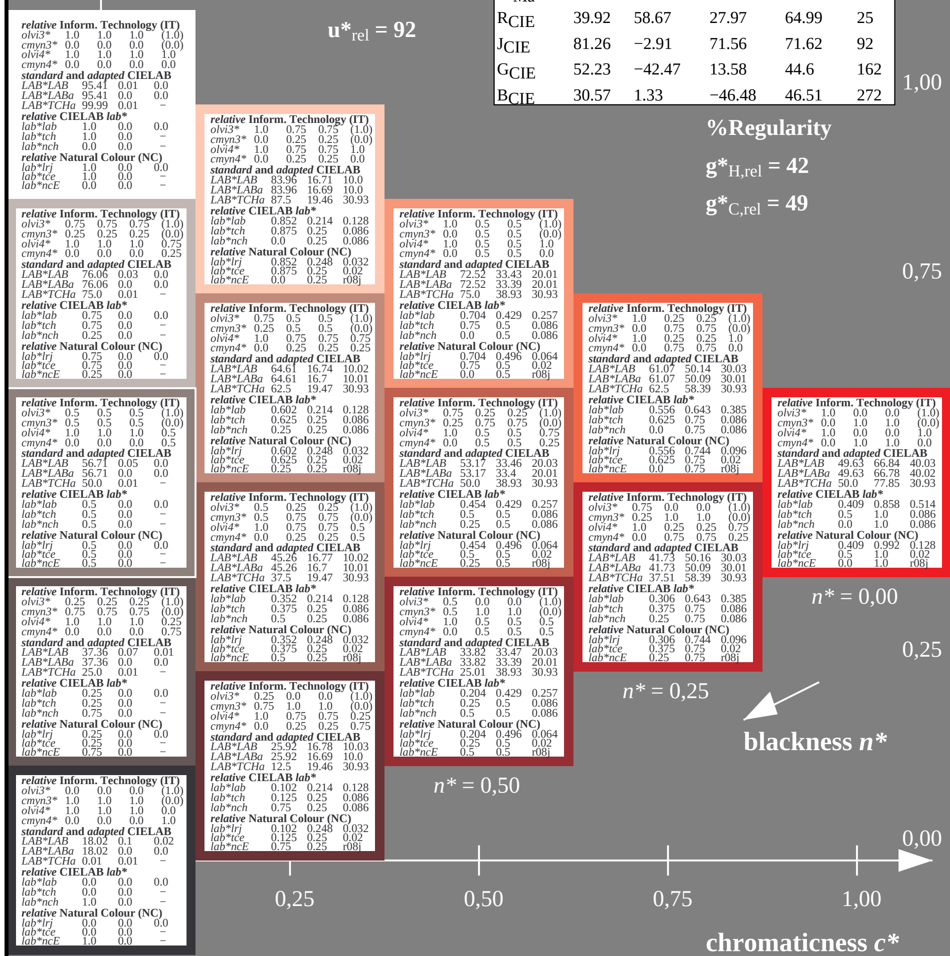
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

g*H,rel = 42

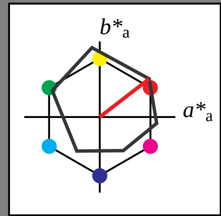
g*C,rel = 49



Output: Colorimetric Reflective System TRS18
for hue *h** = *lab*h* = *38/360* = *0.105*
*lab*tch* and *lab*nch*

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness *t*



%Gamut

u*rel = 93

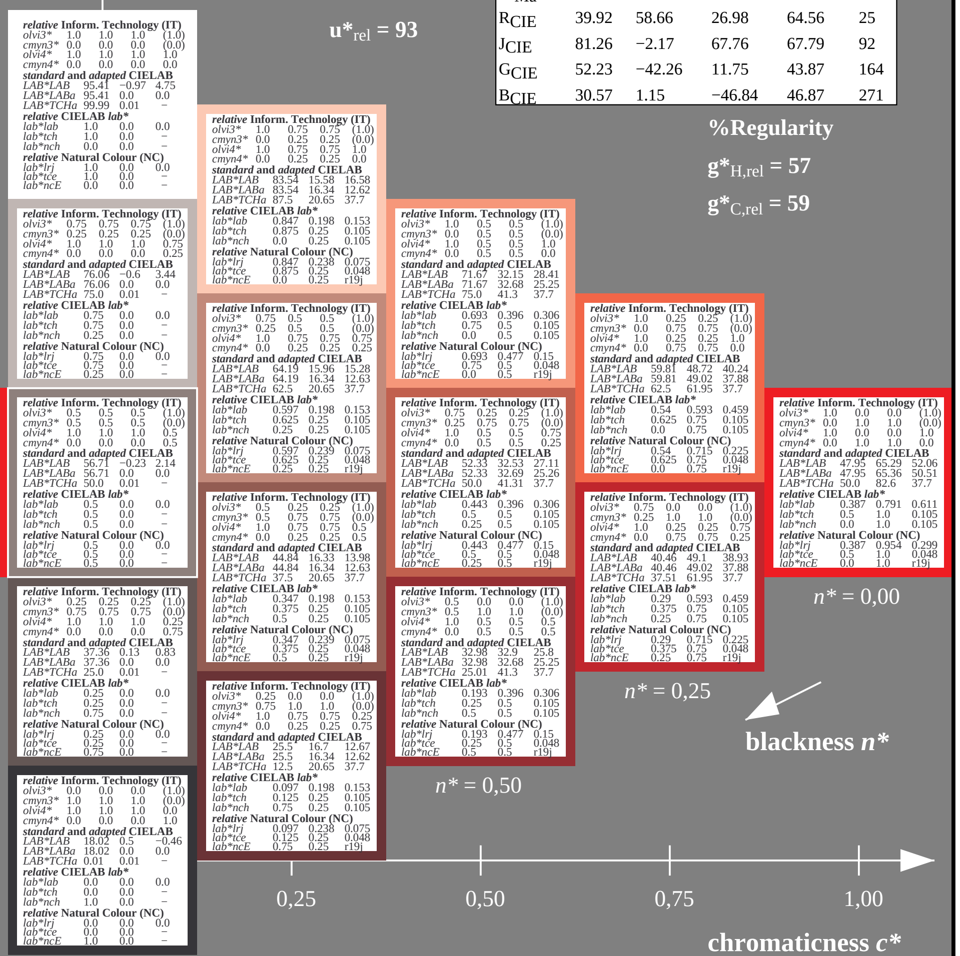
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

g*H,rel = 57

g*C,rel = 59



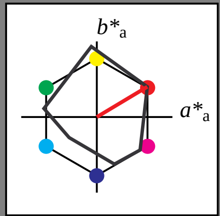
UE500−7, 5 step scales for constant CIELAB hue 31/360 = 0.086 (left)

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

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 31/360 = 0.086$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 78 31
rgb*Ma: 1.0 0.0 0.0

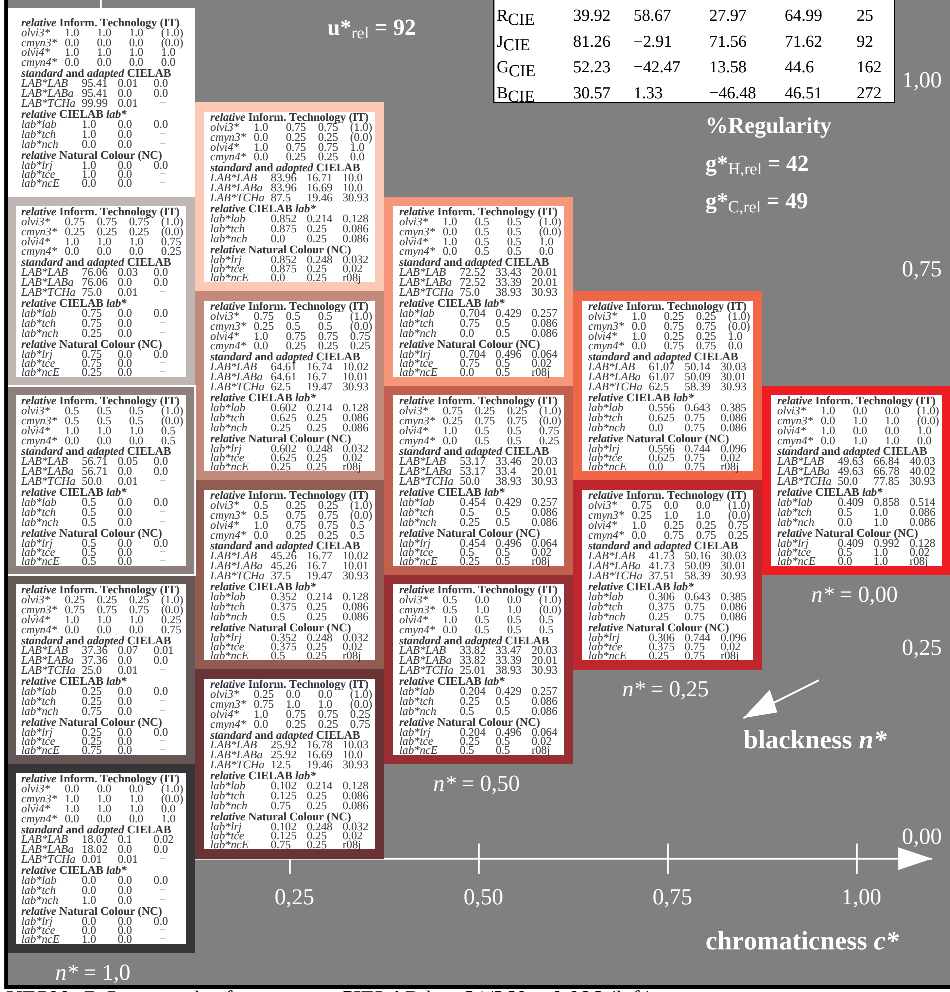
triangle lightness t^*



%Gamut
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$

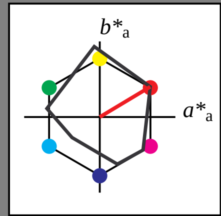


UE500−7, 5 step scales for constant CIELAB hue 31/360 = 0.086 (left)

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 31/360 = 0.086$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 78 31
rgb*Ma: 1.0 0.0 0.0

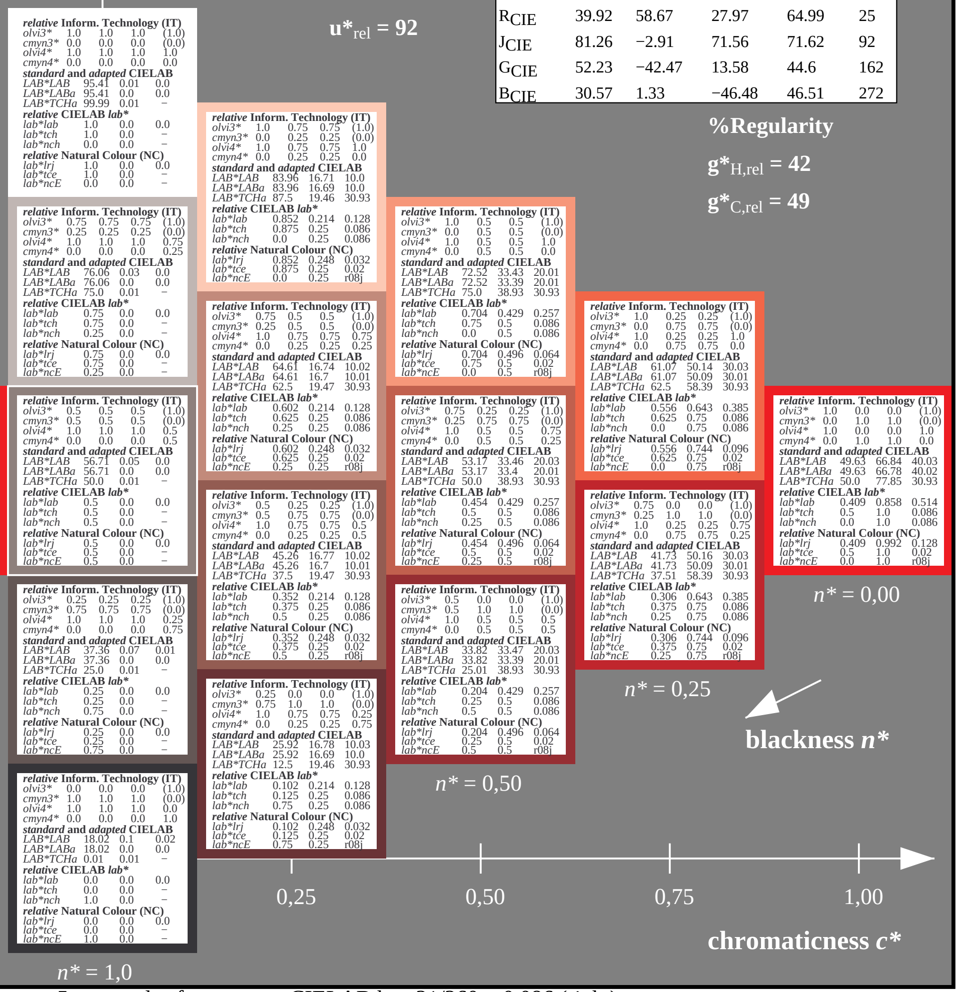
triangle lightness t^*



%Gamut
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$

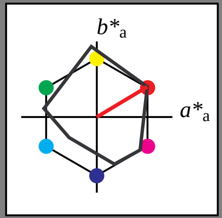


5 step scales for constant CIELAB hue 31/360 = 0.086 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 31/360 = 0.086$
*lab*tch and lab*nch*

D65: hue R
LCH*Ma: 50 78 31
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

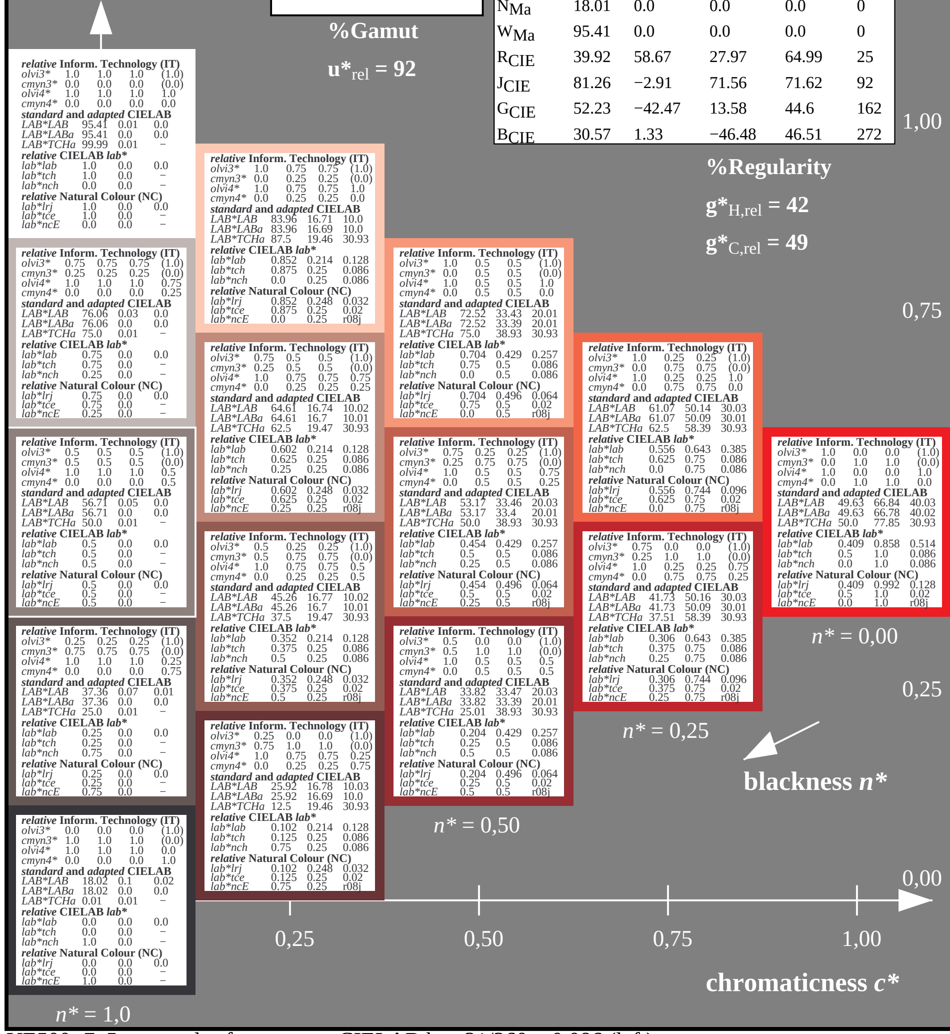
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

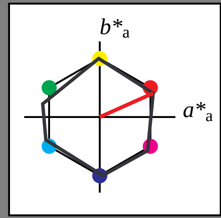
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 24/360 = 0.067$
*lab*tch and lab*nch*

D65: hue R
LCH*Ma: 57 77 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

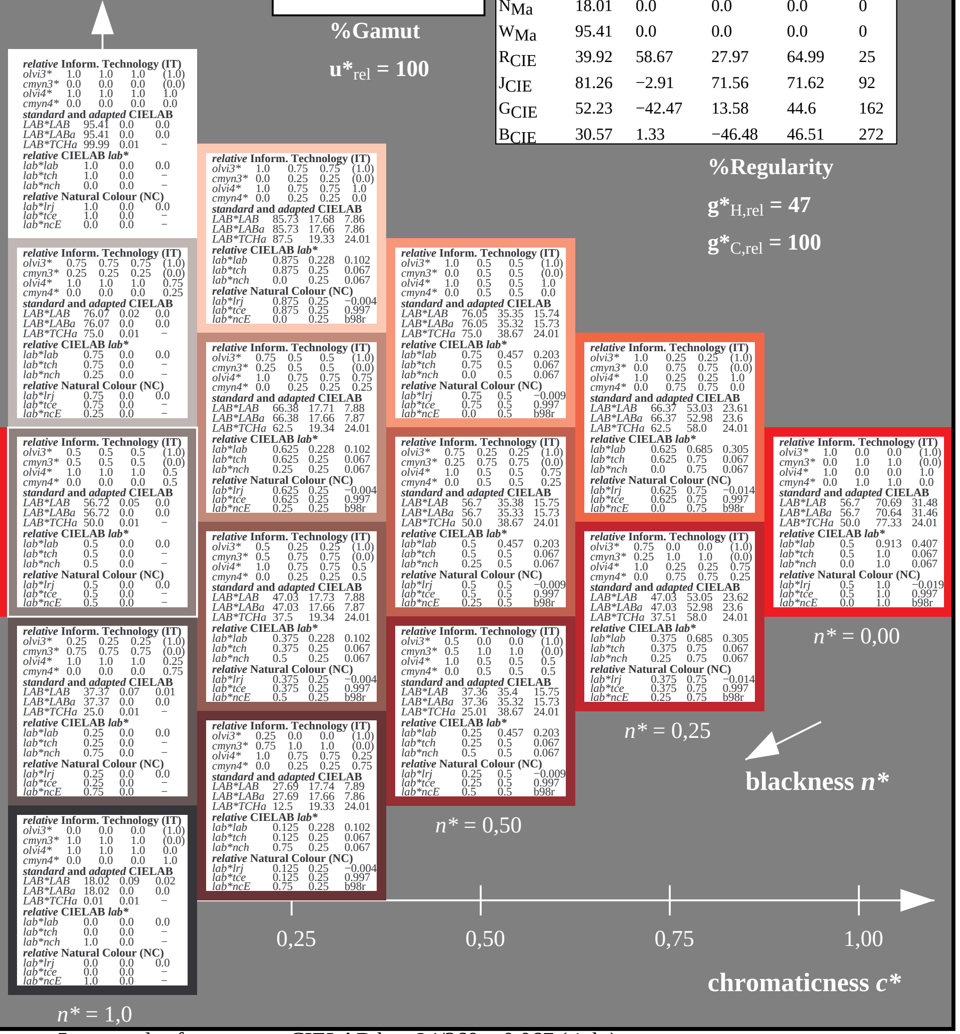
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



UE500−7, 5 step scales for constant CIELAB hue 31/360 = 0.086 (left)

5 step scales for constant CIELAB hue 24/360 = 0.067 (right)

Input: Colorimetric Reflective System MRS18a

for hue $h^* = lab^*h = 31/360 = 0.086$

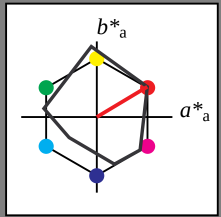
lab*tch* and *lab*nch

D65: hue R

LCH*Ma: 50 78 31

rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

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	0.01	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**	0.75	0.75	0.75	(1.0)
*cmyn3**	0.25	0.25	0.25	(0.0)
*olvi4**	1.0	1.0	1.0	0.75
*cmyn4**	0.0	0.0	0.0	0.25
***standard* and *adapted* CIELAB**				
*LAB*LAB*	76.06	0.03	0.0	
*LAB*LABa*	76.06	0.0	0.0	
*LAB*TCHa*	75.0	0.01	–	
relative* CIELAB *lab*				
*lab*lab*	0.75	0.0	0.0	
*lab*tch*	0.75	0.0	–	
*lab*nch*	0.25	0.0	–	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.75	0.0	0.0	
*lab*tce*	0.75	0.0	–	
*lab*ncE*	0.25	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	0.05	0.0	
*LAB*LABa*	56.71	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**	0.25	0.25	0.25	(1.0)
*cmyn3**	0.75	0.75	0.75	(0.0)
*olvi4**	1.0	1.0	1.0	0.25
*cmyn4**	0.0	0.0	0.0	0.75
***standard* and *adapted* CIELAB**				
*LAB*LAB*	37.36	0.07	0.01	
*LAB*LABa*	37.36	0.0	0.0	
*LAB*TCHa*	25.0	0.01	–	
relative* CIELAB *lab*				
*lab*lab*	0.25	0.0	0.0	
*lab*tch*	0.25	0.0	–	
*lab*nch*	0.75	0.0	–	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.25	0.0	0.0	
*lab*tce*	0.25	0.0	–	
*lab*ncE*	0.75	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	0.1	0.02	
*LAB*LABa*	18.02	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	–	

*n** = 1,0

relative Inform. Technology (IT)				
*olvi3**	1.0	0.75	0.75	(1.0)
*cmyn3**	0.0	0.25	0.25	(0.0)
*olvi4**	1.0	0.75	0.75	1.0
*cmyn4**	0.0	0.25	0.25	0.0
***standard* and *adapted* CIELAB**				
*LAB*LAB*	83.96	16.71	10.0	
*LAB*LABa*	83.96	16.69	10.0	
*LAB*TCHa*	87.5	19.46	30.93	
relative* CIELAB *lab*				
*lab*lab*	0.852	0.214	0.128	
*lab*tch*	0.875	0.25	0.086	
*lab*nch*	0.0	0.25	0.086	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.852	0.248	0.032	
*lab*tce*	0.875	0.25	0.02	
*lab*ncE*	0.0	0.25	r08j	

relative Inform. Technology (IT)				
*olvi3**	0.75	0.5	0.5	(1.0)
*cmyn3**	0.25	0.5	0.5	(0.0)
*olvi4**	1.0	0.75	0.75	0.75
*cmyn4**	0.0	0.25	0.25	0.25
***standard* and *adapted* CIELAB**				
*LAB*LAB*	64.61	16.74	10.02	
*LAB*LABa*	64.61	16.7	10.01	
*LAB*TCHa*	62.5	19.47	30.93	
relative* CIELAB *lab*				
*lab*lab*	0.602	0.214	0.128	
*lab*tch*	0.625	0.25	0.086	
*lab*nch*	0.25	0.25	0.086	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.602	0.248	0.032	
*lab*tce*	0.625	0.25	0.02	
*lab*ncE*	0.25	0.25	r08j	

relative Inform. Technology (IT)				
*olvi3**	0.5	0.25	0.25	(1.0)
*cmyn3**	0.5	0.75	0.75	(0.0)
*olvi4**	1.0	0.75	0.75	0.5
*cmyn4**	0.0	0.25	0.25	0.5
***standard* and *adapted* CIELAB**				
*LAB*LAB*	45.26	16.77	10.02	
*LAB*LABa*	45.26	16.7	10.01	
*LAB*TCHa*	37.5	19.47	30.93	
relative* CIELAB *lab*				
*lab*lab*	0.352	0.214	0.128	
*lab*tch*	0.375	0.25	0.086	
*lab*nch*	0.5	0.25	0.086	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.352	0.248	0.032	
*lab*tce*	0.375	0.25	0.02	
*lab*ncE*	0.5	0.25	r08j	

relative Inform. Technology (IT)				
*olvi3**	0.25	0.0	0.0	(1.0)
*cmyn3**	0.75	1.0	1.0	(0.0)
*olvi4**	1.0	0.75	0.75	0.25
*cmyn4**	0.0	0.25	0.25	0.75
***standard* and *adapted* CIELAB**				
*LAB*LAB*	25.92	16.78	10.03	
*LAB*LABa*	25.92	16.69	10.0	
*LAB*TCHa*	12.5	19.46	30.93	
relative* CIELAB *lab*				
*lab*lab*	0.102	0.214	0.128	
*lab*tch*	0.125	0.25	0.086	
*lab*nch*	0.75	0.25	0.086	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.102	0.248	0.032	
*lab*tce*	0.125	0.25	0.02	
*lab*ncE*	0.75	0.25	r08j	

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*	72.52	33.43	20.01	
*LAB*LABa*	72.52	33.39	20.01	
*LAB*TCHa*	75.0	38.93	30.93	
relative* CIELAB *lab*				
*lab*lab*	0.704	0.429	0.257	
*lab*tch*	0.75	0.5	0.086	
*lab*nch*	0.0	0.5	0.086	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.704	0.496	0.064	
*lab*tce*	0.75	0.5	0.02	
*lab*ncE*	0.0	0.5	r08j	

relative Inform. Technology (IT)				
*olvi3**	0.75	0.25	0.25	(1.0)
*cmyn3**	0.25	0.75	0.75	(0.0)
*olvi4**	1.0	0.5	0.5	0.75
*cmyn4**	0.0	0.5	0.5	0.25
***standard* and *adapted* CIELAB**				
*LAB*LAB*	53.17	33.46	20.03	
*LAB*LABa*	53.17	33.4	20.01	
*LAB*TCHa*	50.0	38.93	30.93	
relative* CIELAB *lab*				
*lab*lab*	0.454	0.429	0.257	
*lab*tch*	0.5	0.5	0.086	
*lab*nch*	0.25	0.5	0.086	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.454	0.496	0.064	
*lab*tce*	0.5	0.5	0.02	
*lab*ncE*	0.25	0.5	r08j	

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*	33.82	33.47	20.03	
*LAB*LABa*	33.82	33.39	20.01	
*LAB*TCHa*	25.01	38.93	30.93	
relative* CIELAB *lab*				
*lab*lab*	0.204	0.429	0.257	
*lab*tch*	0.25	0.5	0.086	
*lab*nch*	0.5	0.5	0.086	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.204	0.496	0.064	
*lab*tce*	0.25	0.5	0.02	
*lab*ncE*	0.5	0.5	r08j	

*n** = 0,50

relative Inform. Technology (IT)				
*olvi3**	1.0	0.25	0.25	(1.0)
*cmyn3**	0.0	0.75	0.75	(0.0)
*olvi4**	1.0	0.25	0.25	1.0
*cmyn4**	0.0	0.75	0.75	0.0
***standard* and *adapted* CIELAB**				
*LAB*LAB*	61.07	50.14	30.03	
*LAB*LABa*	61.07	50.09	30.01	
*LAB*TCHa*	62.5	58.39	30.93	
relative* CIELAB *lab*				
*lab*lab*	0.556	0.643	0.385	
*lab*tch*	0.625	0.75	0.086	
*lab*nch*	0.0	0.75	0.086	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.556	0.744	0.096	
*lab*tce*	0.625	0.75	0.02	
*lab*ncE*	0.0	0.75	r08j	

relative Inform. Technology (IT)				
*olvi3**	0.75	0.0	0.0	(1.0)
*cmyn3**	0.25	1.0	1.0	(0.0)
*olvi4**	1.0	0.25	0.25	0.75
*cmyn4**	0.0	0.75	0.75	0.25
***standard* and *adapted* CIELAB**				
*LAB*LAB*	41.73	50.16	30.03	
*LAB*LABa*	41.73	50.09	30.01	
*LAB*TCHa*	37.51	58.39	30.93	
relative* CIELAB *lab*				
*lab*lab*	0.306	0.643	0.385	
*lab*tch*	0.375	0.75	0.086	
*lab*nch*	0.25	0.75	0.086	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.306	0.744	0.096	
*lab*tce*	0.375	0.75	0.02	
*lab*ncE*	0.25	0.75	r08j	

*n** = 0,25

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*	49.63	66.84	40.03	
*LAB*LABa*	49.63	66.78	40.02	
*LAB*TCHa*	50.0	77.85	30.93	
relative* CIELAB *lab*				
*lab*lab*	0.409	0.858	0.514	
*lab*tch*	0.5	1.0	0.086	
*lab*nch*	0.0	1.0	0.086	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.409	0.992	0.128	
*lab*tce*	0.5	1.0	0.02	
*lab*ncE*	0.0	1.0	r08j	

*n** = 0,00

1,00 0,75 0,25 0,00

0,25 0,50 0,75 1,00

blackness n^*

chromaticness c^*

Output: Colorimetric Reflective System NCS18

for hue $h^* = lab^*h = 24/360 = 0.066$

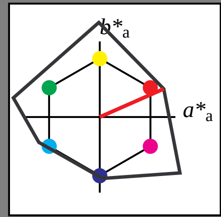
lab*tch* and *lab*nch

D65: hue R

LCH*Ma: 47 92 24

rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

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	−0.01	
*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**	0.75	0.75	0.75	(1.0)
*cmyn3**	0.25	0.25	0.25	(0.0)
*olvi4**	1.0	1.0	1.0	0.75
*cmyn4**	0.0	0.0	0.0	0.25
***standard* and *adapted* CIELAB**				
*LAB*LAB*	76.07	0.02	0.0	
*LAB*LABa*	76.07	0.0	0.0	
*LAB*TCHa*	75.0	0.01	–	
relative* CIELAB *lab*				
*lab*lab*	0.75	0.0	0.0	
*lab*tch*	0.75	0.0	–	
*lab*nch*	0.25	0.0	–	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.75	0.0	0.0	
*lab*tce*	0.75	0.0	–	
*lab*ncE*	0.25	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*	56.72	0.05	0.0	
*LAB*LABa*	56.72	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**	0.25	0.25	0.25	(1.0)
*cmyn3**	0.75	0.75	0.75	(0.0)
*olvi4**	1.0	1.0	1.0	0.25
*cmyn4**	0.0	0.0	0.0	0.75
***standard* and *adapted* CIELAB**				
*LAB*LAB*	37.37	0.07	0.01	
*LAB*LABa*	37.37	0.0	0.0	
*LAB*TCHa*	25.0	0.01	–	
relative* CIELAB *lab*				
*lab*lab*	0.25	0.0	0.0	
*lab*tch*	0.25	0.0	–	
*lab*nch*	0.75	0.0	–	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.25	0.0	0.0	
*lab*tce*	0.25	0.0	–	
*lab*ncE*	0.75	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	0.09	0.02	
*LAB*LABa*	18.02	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	–	

*n** = 1,0

relative Inform. Technology (IT)				
*olvi3**	1.0	0.75	0.75	(1.0)
*cmyn3**	0.0	0.25	0.25	(0.0)
*olvi4**	1.0	0.75	0.75	1.0
*cmyn4**	0.0	0.25	0.25	0.0
***standard* and *adapted* CIELAB**				
*LAB*LAB*	83.34	21.17	9.31	
*LAB*LABa*	83.34	21.15	9.31	
*LAB*TCHa*	87.5	23.11	23.75	
relative* CIELAB *lab*				
*lab*lab*	0.844	0.229	0.101	
*lab*tch*	0.875	0.25	0.066	
*lab*nch*	0.0	0.25	0.066	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.844	0.25	−0.005	
*lab*tce*	0.875	0.25	0.996	
*lab*ncE*	0.0	0.25	b98r	

relative Inform. Technology (IT)				
*olvi3**	0.75	0.5	0.5	(1.0)
*cmyn3**	0.25	0.5	0.5	(0.0)
*olvi4**	1.0	0.75	0.75	0.75
*cmyn4**	0.0	0.25	0.25	0.25
***standard* and *adapted* CIELAB**				
*LAB*LAB*	63.99	21.2	9.32	
*LAB*LABa*	63.99	21.16	9.31	
*LAB*TCHa*	62.5	23.12	23.75	
relative* CIELAB *lab*				
*lab*lab*	0.594	0.229	0.101	
*lab*tch*	0.625	0.25	0.066	
*lab*nch*	0.25	0.25	0.066	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.594	0.25	−0.005	
*lab*tce*	0.625	0.25	0.996	
*lab*ncE*	0.25	0.25	b98r	

relative Inform. Technology (IT)				
*olvi3**	0.5	0.25	0.25	(1.0)
*cmyn3**	0.5	0.75	0.75	(0.0)
*olvi4**	1.0	0.75	0.75	0.5
*cmyn4**	0.0	0.25	0.25	0.5
***standard* and *adapted* CIELAB**				
*LAB*LAB*	44.64	21.22	9.33	
*LAB*LABa*	44.64	21.16	9.31	
*LAB*TCHa*	37.5	23.12	23.75	
relative* CIELAB *lab*				
*lab*lab*	0.344	0.229	0.101	
*lab*tch*	0.375	0.25	0.066	
*lab*nch*	0.5	0.25	0.066	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.344	0.25	−0.005	
*lab*tce*	0.375	0.25	0.996	
*lab*ncE*	0.5	0.25	b98r	

relative Inform. Technology (IT)				
*olvi3**	0.25	0.0	0.0	(1.0)
*cmyn3**	0.75	1.0	1.0	(0.0)
*olvi4**	1.0	0.75	0.75	0.25
*cmyn4**	0.0	0.25	0.25	0.75
***standard* and *adapted* CIELAB**				
*LAB*LAB*	25.3	21.24	9.33	
*LAB*LABa*	25.3	21.15	9.31	
*LAB*TCHa*	12.5	23.11	23.75	
relative* CIELAB *lab*				
*lab*lab*	0.094	0.229	0.101	
*lab*tch*	0.125	0.25	0.066	
*lab*nch*	0.75	0.25	0.066	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.094	0.25	−0.005	
*lab*tce*	0.125	0.25	0.996	
*lab*ncE*	0.75	0.25	b98r	

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*	71.27	42.34	18.63	
*LAB*LABa*	71.27	42.31	18.62	
*LAB*TCHa*	75.0	46.22	23.75	
relative* CIELAB *lab*				
*lab*lab*	0.688	0.458	0.201	
*lab*tch*	0.75	0.5	0.066	
*lab*nch*	0.0	0.5	0.066	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.688	0.5	−0.011	
*lab*tce*	0.75	0.5	0.996	
*lab*ncE*	0.0	0.5	b98r	

relative Inform. Technology (IT)				
*olvi3**	0.75	0.25	0.25	(1.0)
*cmyn3**	0.25	0.75	0.75	(0.0)
*olvi4**	1.0	0.5	0.5	0.75
*cmyn4**	0.0	0.5	0.5	0.25
***standard* and *adapted* CIELAB**				
*LAB*LAB*	51.93	42.37	18.64	
*LAB*LABa*	51.93	42.31	18.62	
*LAB*TCHa*	50.0	46.23	23.75	
relative* CIELAB *lab*				
*lab*lab*	0.438	0.458	0.201	
*lab*tch*	0.5	0.5	0.066	
*lab*nch*	0.25	0.5	0.066	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.438	0.5	−0.011	
*lab*tce*	0.5	0.5	0.996	
*lab*ncE*	0.25	0.5	b98r	

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*	32.58	42.39	18.64	
*LAB*LABa*	32.58	42.31	18.62	
*LAB*TCHa*	25.01	46.22	23.75	
relative* CIELAB *lab*				
*lab*lab*	0.188	0.458	0.201	
*lab*tch*	0.25	0.5	0.066	
*lab*nch*	0.5	0.5	0.066	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.188	0.5	−0.011	
*lab*tce*	0.25	0.5	0.996	
*lab*ncE*	0.5	0.5	b98r	

*n** = 0,50

relative Inform. Technology (IT)				
*olvi3**	1.0	0.25	0.25	(1.0)
*cmyn3**	0.0	0.75	0.75	(0.0)
*olvi4**	1.0	0.25	0.25	1.0
*cmyn4**	0.0	0.75	0.75	0.0
***standard* and *adapted* CIELAB**				
*LAB*LAB*	59.21	63.51	27.94	
*LAB*LABa*	59.21	63.46	27.93	
*LAB*TCHa*	62.5	69.34	23.75	
relative* CIELAB *lab*				
*lab*lab*	0.532	0.686	0.302	
*lab*tch*	0.625	0.75	0.066	
*lab*nch*	0.0	0.75	0.066	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.532	0.75	−0.017	
*lab*tce*	0.625	0.75	0.996	
*lab*ncE*	0.0	0.75	b98r	

relative Inform. Technology (IT)				
*olvi3**	0.75	0.0	0.0	(1.0)
*cmyn3**	0.25	1.0	1.0	(0.0)
*olvi4**	1.0	0.25	0.25	0.75
*cmyn4**	0.0	0.75	0.75	0.25
***standard* and *adapted* CIELAB**				
*LAB*LAB*	39.87	63.54	27.95	
*LAB*LABa*	39.87	63.46	27.93	
*LAB*TCHa*	37.51	69.34	23.75	
relative* CIELAB *lab*				
*lab*lab*	0.282	0.686	0.302	
*lab*tch*	0.375	0.75	0.066	
*lab*nch*	0.25	0.75	0.066	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.282	0.75	−0.017	
*lab*tce*	0.375	0.75	0.996	
*lab*ncE*	0.25	0.75	b98r	

*n** = 0,25

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*	47.15	84.68	37.26	
*LAB*LABa*	47.15	84.61	37.24	
*LAB*TCHa*	50.0	92.44	23.75	
relative* CIELAB *lab*				
*lab*lab*	0.376	0.915	0.403	
*lab*tch*	0.5	1.0	0.066	
*lab*nch*	0.0	1.0	0.066	
***relative* Natural Colour (NC)**				
*lab*lrj*	0.376	1.0	−0.023	
*lab*tce*	0.5	1.0	0.996	
*lab*ncE*	0.0	1.0	b98r	

*n** = 0,00

0,25 0,50 0,75 1,00

blackness n^*

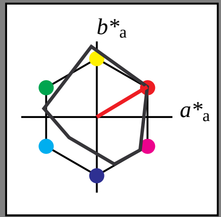
chromaticness c^*

UE500−7, 5 step scales for constant CIELAB hue 31/360 = 0.086 (left)

5 step scales for constant CIELAB hue 24/360 = 0.066 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 31/360 = 0.086$
lab*tch and lab*nch

D65: hue R
LCH*Ma: 50 78 31
rgb*Ma: 1.0 0.0 0.0
triangle lightness t*

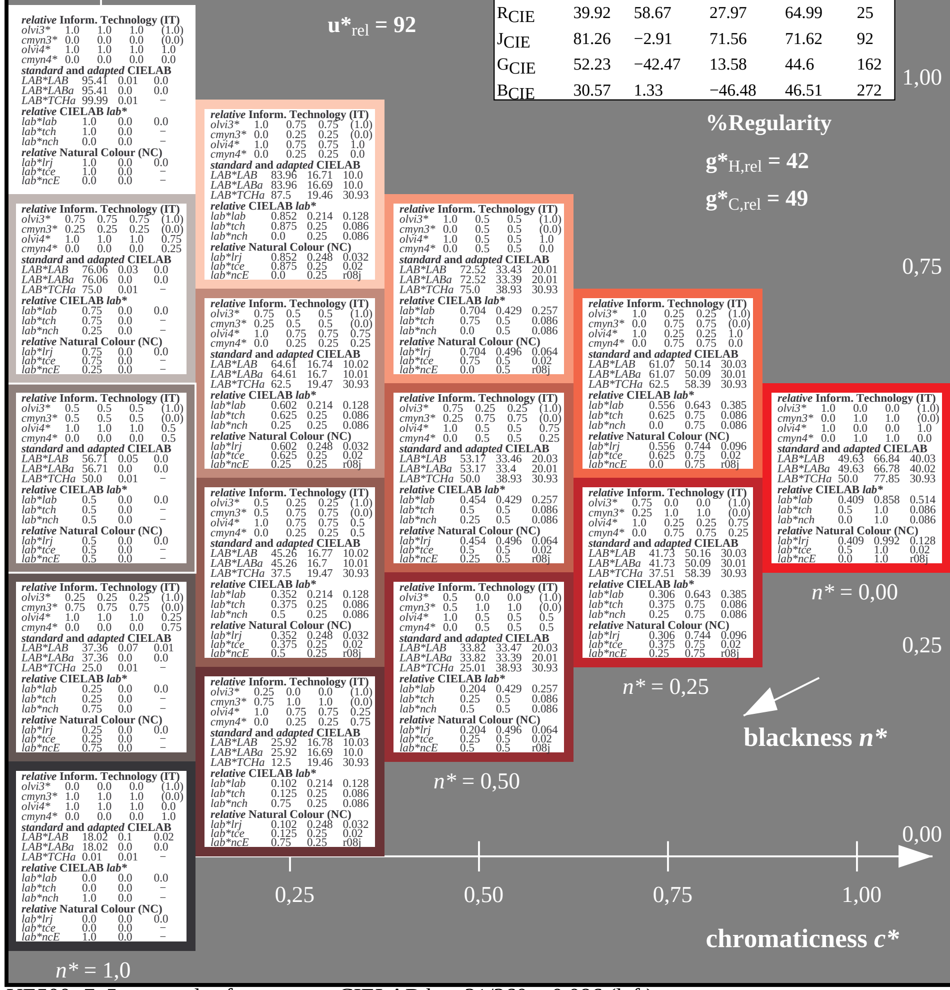


%Gamut
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data

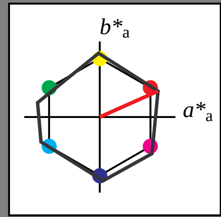
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch and lab*nch

D65: hue R
LCH*Ma: 53 84 24
rgb*Ma: 1.0 0.0 0.0
triangle lightness t*

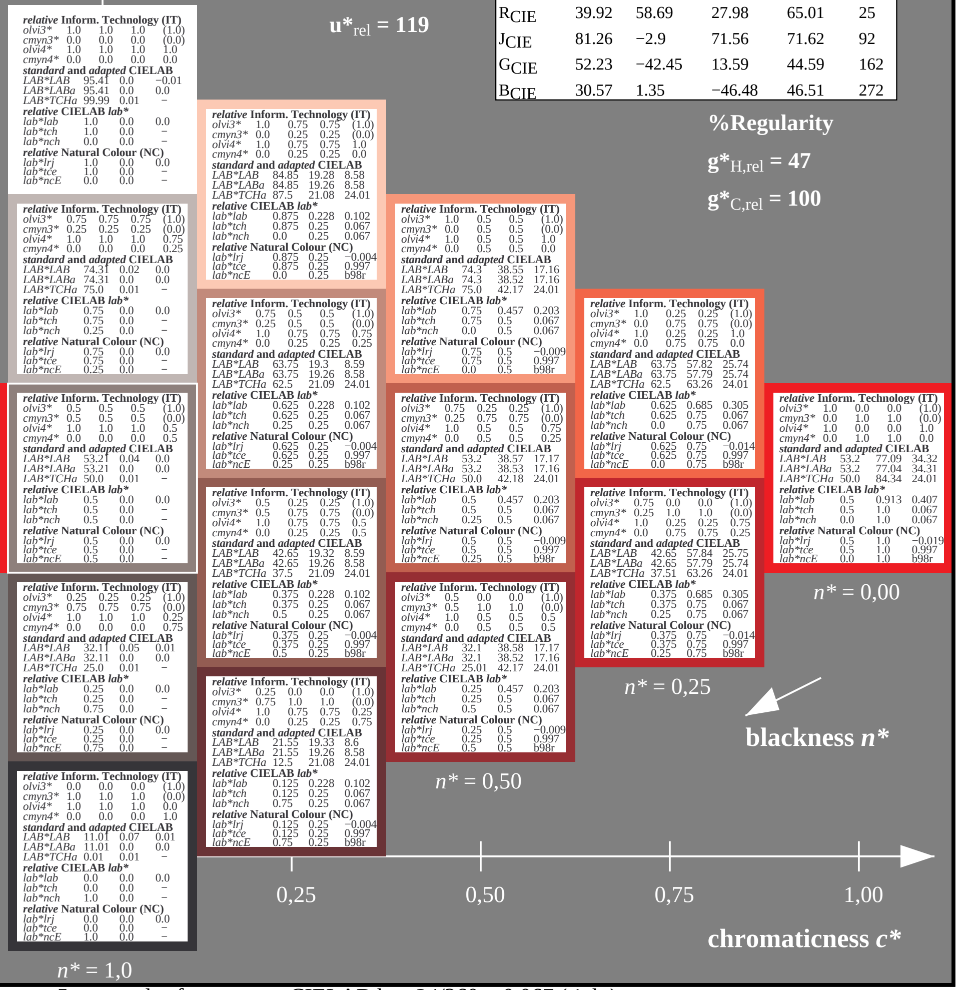


%Gamut
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



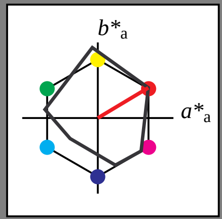
UE500−7, 5 step scales for constant CIELAB hue 31/360 = 0.086 (left)

5 step scales for constant CIELAB hue 24/360 = 0.067 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 31/360 = 0.086$
*lab*tch and lab*nch*

D65: hue R
LCH*Ma: 50 78 31
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 92$

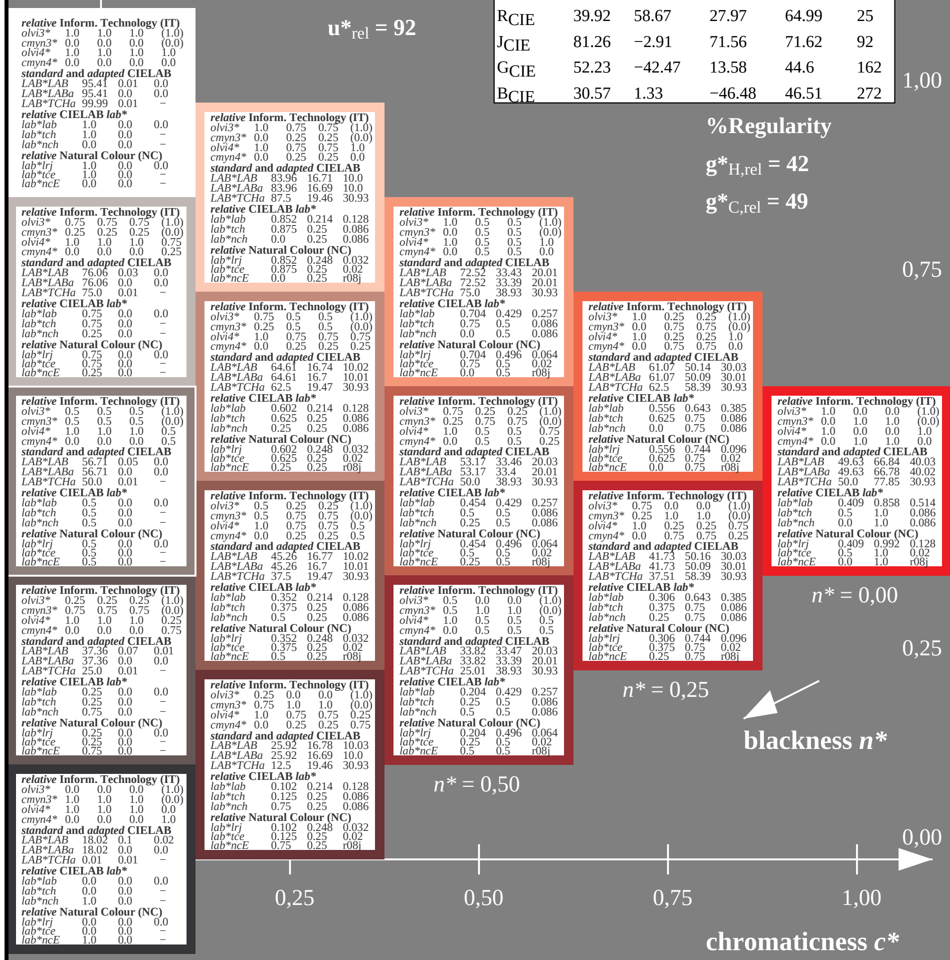
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

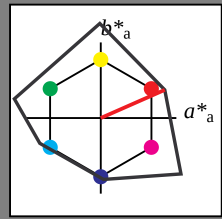
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 24/360 = 0.066$
*lab*tch and lab*nch*

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 149$

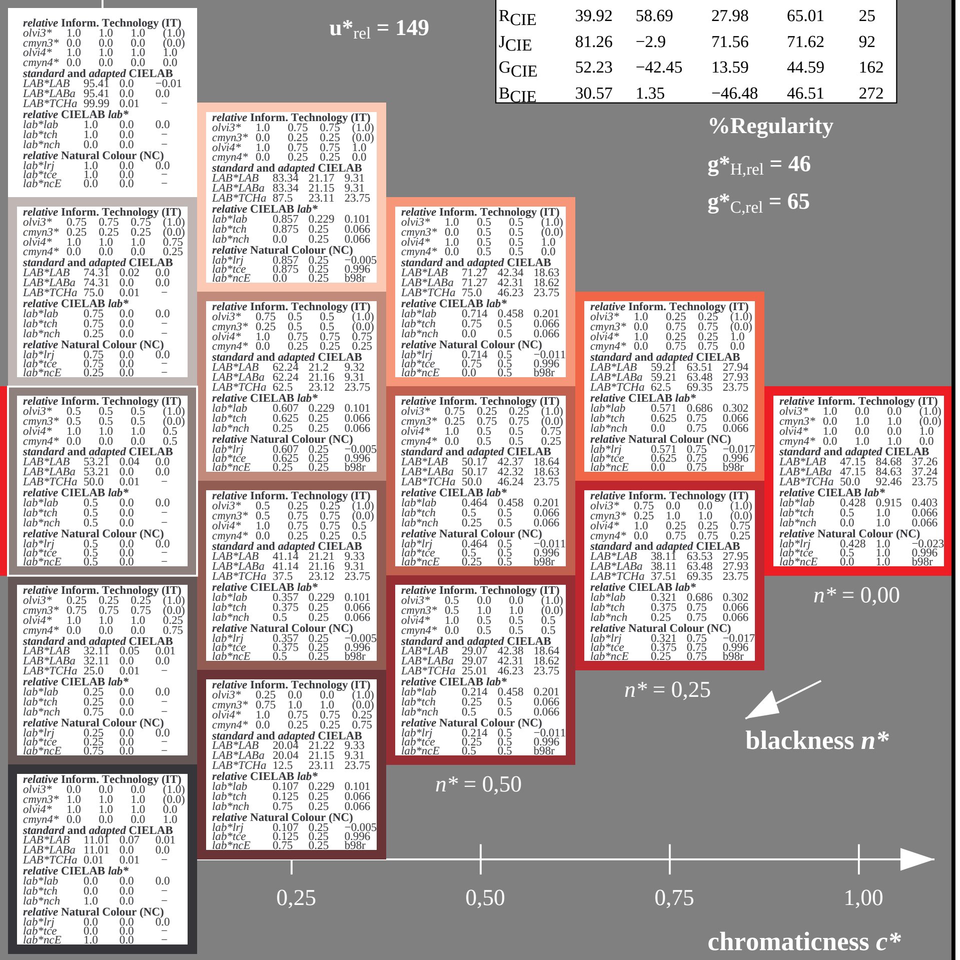
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

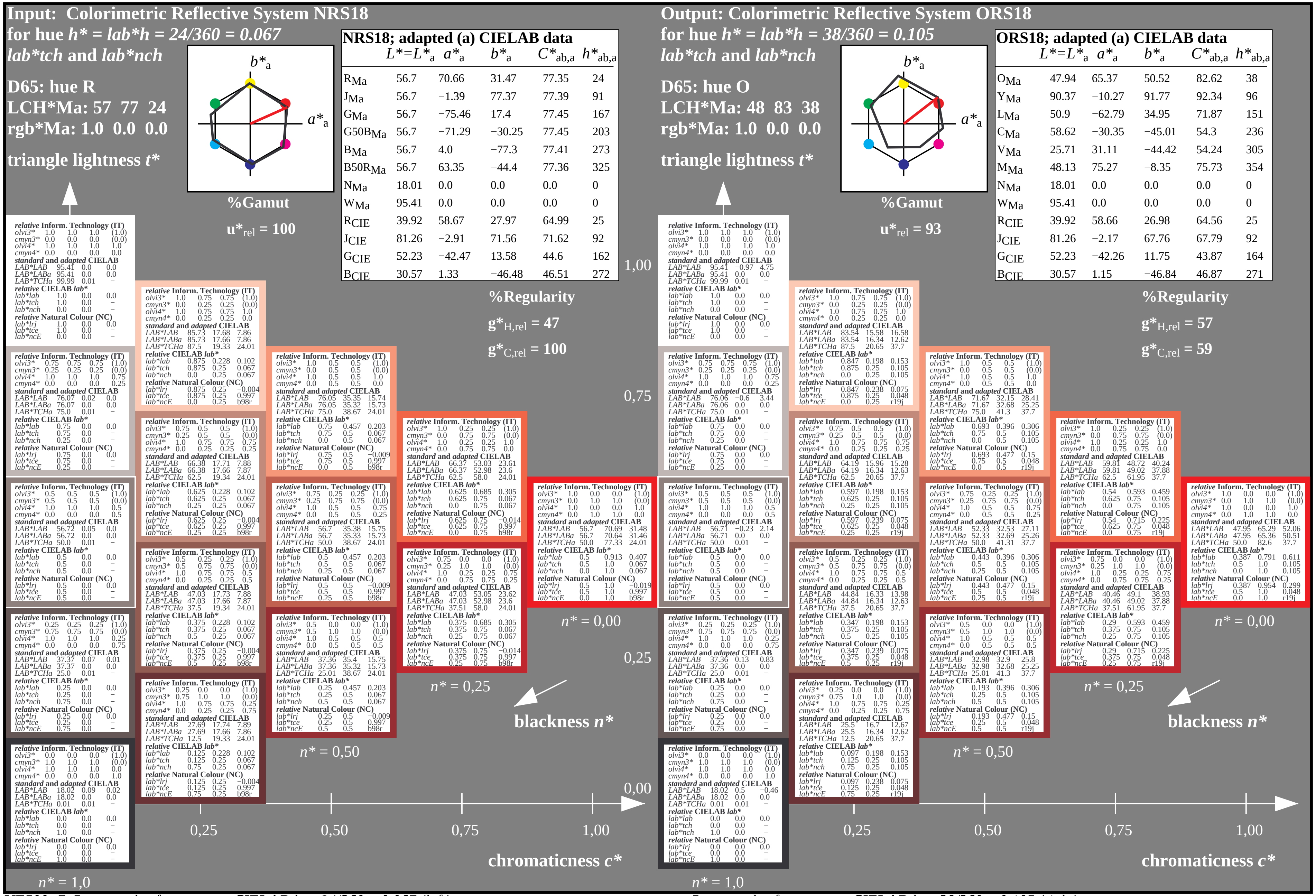
$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



UE500−7, 5 step scales for constant CIELAB hue 31/360 = 0.086 (left)

5 step scales for constant CIELAB hue 24/360 = 0.066 (right)



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

UE500−7, 5 step scales for constant CIELAB hue 24/360 = 0.067 (left)
5 step scales for constant CIELAB hue 38/360 = 0.105 (right)

Input: Colorimetric Reflective System NRS18

for hue $h^* = lab^*h = 24/360 = 0.067$

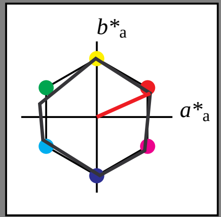
*lab*tch* and *lab*nch*

D65: hue R

LCH*Ma: 57 77 24

rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 100$

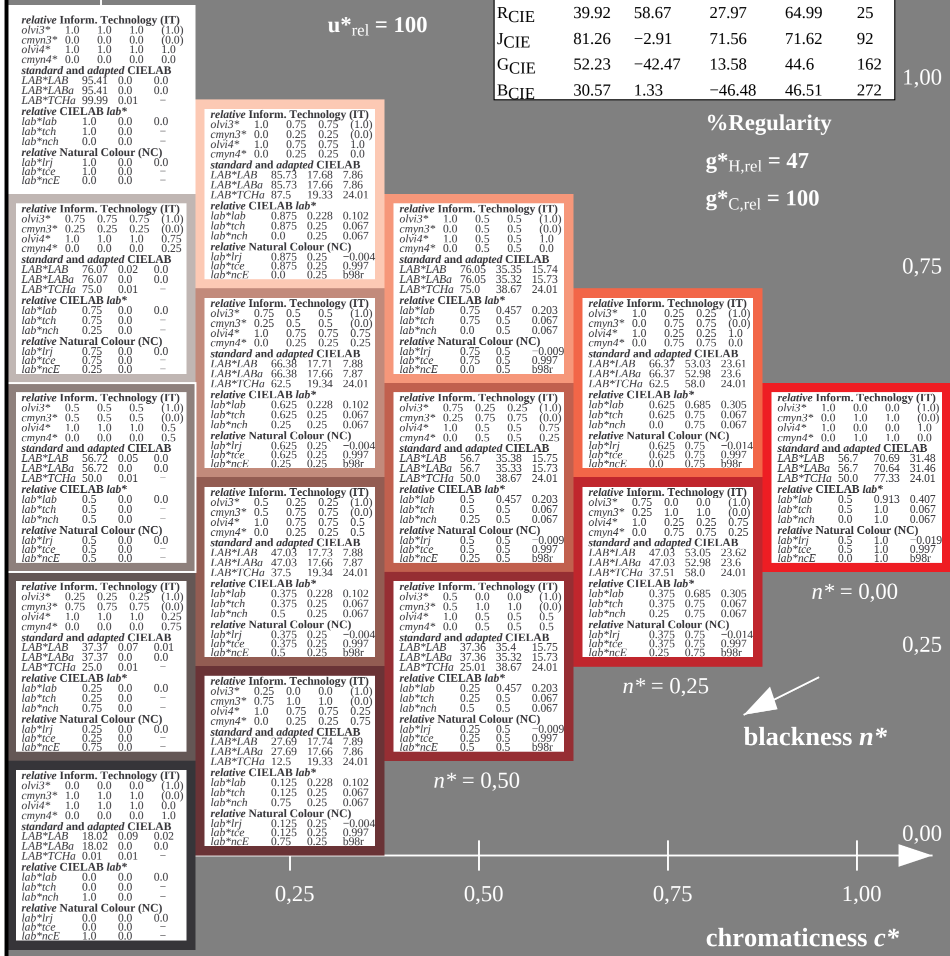
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System MRS18

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

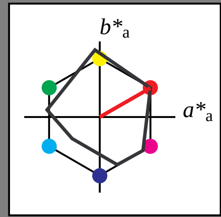
*lab*tch* and *lab*nch*

D65: hue R

LCH*Ma: 50 77 30

rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 91$

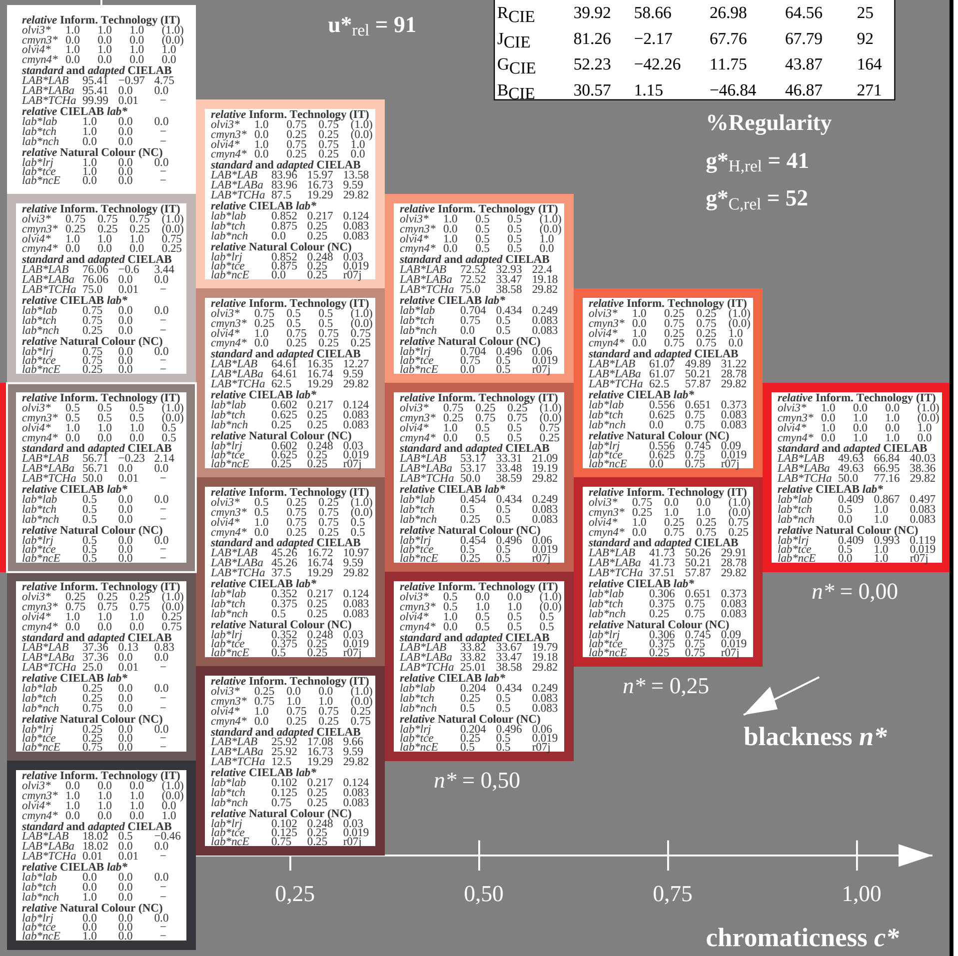
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

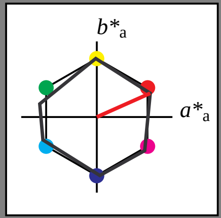


UE500−7, 5 step scales for constant CIELAB hue 24/360 = 0.067 (left)

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

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 24/360 = 0.067$
*lab*tch and lab*nch*

D65: hue R
LCH*Ma: 57 77 24
rgb*Ma: 1.0 0.0 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$

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* 0.75 0.75 0.75 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 1.0 1.0 1.0 0.75
cmyn4* 0.0 0.0 0.0 0.25
standard and adapted CIELAB
LAB*LAB 76.07 0.02 0.0
LAB*LABa 76.07 0.0 0.0
LAB*TCHa 75.0 0.01 –
relative CIELAB lab*
lab*lab 0.75 0.0 0.0
lab*tch 0.75 0.0 –
lab*nch 0.25 0.0 –
relative Natural Colour (NC)
lab*lrj 0.75 0.0 0.0
lab*tce 0.75 0.0 –
lab*ncE 0.25 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 56.72 0.05 0.0
LAB*LABa 56.72 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* 0.25 0.25 0.25 (1.0)
cmyn3* 0.75 0.75 0.75 (0.0)
olvi4* 1.0 1.0 1.0 0.25
cmyn4* 0.0 0.0 0.0 0.75
standard and adapted CIELAB
LAB*LAB 37.37 0.07 0.01
LAB*LABa 37.37 0.0 0.0
LAB*TCHa 25.0 0.01 –
relative CIELAB lab*
lab*lab 0.25 0.0 0.0
lab*tch 0.25 0.0 –
lab*nch 0.75 0.0 –
relative Natural Colour (NC)
lab*lrj 0.25 0.0 0.0
lab*tce 0.25 0.0 –
lab*ncE 0.75 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 0.09 0.02
LAB*LABa 18.02 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 0.75 0.75 (1.0)
cmyn3* 0.0 0.25 0.25 (0.0)
olvi4* 1.0 0.75 0.75 1.0
cmyn4* 0.0 0.25 0.25 0.0
standard and adapted CIELAB
LAB*LAB 85.73 17.68 7.86
LAB*LABa 85.73 17.66 7.86
LAB*TCHa 87.5 19.33 24.01
relative CIELAB lab*
lab*lab 0.875 0.228 0.102
lab*tch 0.875 0.25 0.067
lab*nch 0.0 0.25 0.067
relative Natural Colour (NC)
lab*lrj 0.875 0.25 −0.004
lab*tce 0.875 0.25 0.997
lab*ncE 0.0 0.25 b98r

relative Inform. Technology (IT)
olvi3* 0.75 0.5 0.5 (1.0)
cmyn3* 0.25 0.5 0.5 (0.0)
olvi4* 1.0 0.75 0.75 0.75
cmyn4* 0.0 0.25 0.25 0.25
standard and adapted CIELAB
LAB*LAB 66.38 17.71 7.88
LAB*LABa 66.38 17.66 7.87
LAB*TCHa 62.5 19.34 24.01
relative CIELAB lab*
lab*lab 0.625 0.228 0.102
lab*tch 0.625 0.25 0.067
lab*nch 0.25 0.25 0.067
relative Natural Colour (NC)
lab*lrj 0.625 0.25 −0.004
lab*tce 0.625 0.25 0.997
lab*ncE 0.25 0.25 b98r

relative Inform. Technology (IT)
olvi3* 0.5 0.25 0.25 (1.0)
cmyn3* 0.5 0.75 0.75 (0.0)
olvi4* 1.0 0.75 0.75 0.5
cmyn4* 0.0 0.25 0.25 0.5
standard and adapted CIELAB
LAB*LAB 47.03 17.73 7.88
LAB*LABa 47.03 17.66 7.87
LAB*TCHa 37.5 19.34 24.01
relative CIELAB lab*
lab*lab 0.375 0.228 0.102
lab*tch 0.375 0.25 0.067
lab*nch 0.5 0.25 0.067
relative Natural Colour (NC)
lab*lrj 0.375 0.25 −0.004
lab*tce 0.375 0.25 0.997
lab*ncE 0.5 0.25 b98r

relative Inform. Technology (IT)
olvi3* 0.25 0.0 0.0 (1.0)
cmyn3* 0.75 1.0 1.0 (0.0)
olvi4* 1.0 0.75 0.75 0.25
cmyn4* 0.0 0.25 0.25 0.75
standard and adapted CIELAB
LAB*LAB 27.69 17.74 7.89
LAB*LABa 27.69 17.66 7.86
LAB*TCHa 12.5 19.33 24.01
relative CIELAB lab*
lab*lab 0.125 0.228 0.102
lab*tch 0.125 0.25 0.067
lab*nch 0.75 0.25 0.067
relative Natural Colour (NC)
lab*lrj 0.125 0.25 −0.004
lab*tce 0.125 0.25 0.997
lab*ncE 0.75 0.25 b98r

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 76.05 35.35 15.74
LAB*LABa 76.05 35.32 15.73
LAB*TCHa 75.0 38.67 24.01
relative CIELAB lab*
lab*lab 0.75 0.457 0.203
lab*tch 0.75 0.5 0.067
lab*nch 0.0 0.5 0.067
relative Natural Colour (NC)
lab*lrj 0.75 0.5 −0.009
lab*tce 0.75 0.5 0.997
lab*ncE 0.0 0.5 b98r

relative Inform. Technology (IT)
olvi3* 0.75 0.25 0.25 (1.0)
cmyn3* 0.25 0.75 0.75 (0.0)
olvi4* 1.0 0.5 0.5 0.75
cmyn4* 0.0 0.5 0.5 0.25
standard and adapted CIELAB
LAB*LAB 56.7 35.38 15.75
LAB*LABa 56.7 35.33 15.73
LAB*TCHa 50.0 38.67 24.01
relative CIELAB lab*
lab*lab 0.5 0.457 0.203
lab*tch 0.5 0.5 0.067
lab*nch 0.25 0.5 0.067
relative Natural Colour (NC)
lab*lrj 0.5 0.5 −0.009
lab*tce 0.5 0.5 0.997
lab*ncE 0.25 0.5 b98r

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 37.36 35.4 15.75
LAB*LABa 37.36 35.32 15.73
LAB*TCHa 25.01 38.67 24.01
relative CIELAB lab*
lab*lab 0.25 0.457 0.203
lab*tch 0.25 0.5 0.067
lab*nch 0.5 0.5 0.067
relative Natural Colour (NC)
lab*lrj 0.25 0.5 −0.009
lab*tce 0.25 0.5 0.997
lab*ncE 0.5 0.5 b98r

relative Inform. Technology (IT)
olvi3* 1.0 0.25 0.25 (1.0)
cmyn3* 0.0 0.75 0.75 (0.0)
olvi4* 1.0 0.25 0.25 1.0
cmyn4* 0.0 0.75 0.75 0.0
standard and adapted CIELAB
LAB*LAB 66.37 53.03 23.61
LAB*LABa 66.37 52.98 23.6
LAB*TCHa 62.5 58.0 24.01
relative CIELAB lab*
lab*lab 0.625 0.685 0.305
lab*tch 0.625 0.75 0.067
lab*nch 0.0 0.75 0.067
relative Natural Colour (NC)
lab*lrj 0.625 0.75 −0.014
lab*tce 0.625 0.75 0.997
lab*ncE 0.0 0.75 b98r

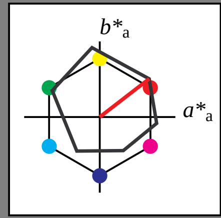
relative Inform. Technology (IT)
olvi3* 0.75 0.0 0.0 (1.0)
cmyn3* 0.25 1.0 1.0 (0.0)
olvi4* 1.0 0.25 0.25 0.75
cmyn4* 0.0 0.75 0.75 0.25
standard and adapted CIELAB
LAB*LAB 47.03 53.05 23.62
LAB*LABa 47.03 52.98 23.6
LAB*TCHa 37.51 58.0 24.01
relative CIELAB lab*
lab*lab 0.375 0.685 0.305
lab*tch 0.375 0.75 0.067
lab*nch 0.25 0.75 0.067
relative Natural Colour (NC)
lab*lrj 0.375 0.75 −0.014
lab*tce 0.375 0.75 0.997
lab*ncE 0.25 0.75 b98r

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 56.7 70.69 31.48
LAB*LABa 56.7 70.64 31.46
LAB*TCHa 50.0 77.33 24.01
relative CIELAB lab*
lab*lab 0.5 0.913 0.407
lab*tch 0.5 1.0 0.067
lab*nch 0.0 1.0 0.067
relative Natural Colour (NC)
lab*lrj 0.5 1.0 −0.019
lab*tce 0.5 1.0 0.997
lab*ncE 0.0 1.0 b98r

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

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 38/360 = 0.105$
*lab*tch and lab*nch*

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$

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*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* 0.75 0.75 0.75 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 1.0 1.0 1.0 0.75
cmyn4* 0.0 0.0 0.0 0.25
standard and adapted CIELAB
LAB*LAB 76.06 −0.6 3.44
LAB*LABa 76.06 0.0 0.0
LAB*TCHa 75.0 0.01 –
relative CIELAB lab*
lab*lab 0.75 0.0 0.0
lab*tch 0.75 0.0 –
lab*nch 0.25 0.0 –
relative Natural Colour (NC)
lab*lrj 0.75 0.0 0.0
lab*tce 0.75 0.0 –
lab*ncE 0.25 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*LABa 56.71 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* 0.25 0.25 0.25 (1.0)
cmyn3* 0.75 0.75 0.75 (0.0)
olvi4* 1.0 1.0 1.0 0.25
cmyn4* 0.0 0.0 0.0 0.75
standard and adapted CIELAB
LAB*LAB 37.36 0.13 0.83
LAB*LABa 37.36 0.0 0.0
LAB*TCHa 25.0 0.01 –
relative CIELAB lab*
lab*lab 0.25 0.0 0.0
lab*tch 0.25 0.0 –
lab*nch 0.75 0.0 –
relative Natural Colour (NC)
lab*lrj 0.25 0.0 0.0
lab*tce 0.25 0.0 –
lab*ncE 0.75 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*LABa 18.02 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 0.75 0.75 (1.0)
cmyn3* 0.0 0.25 0.25 (0.0)
olvi4* 1.0 0.75 0.75 1.0
cmyn4* 0.0 0.25 0.25 0.0
standard and adapted CIELAB
LAB*LAB 83.54 15.58 16.58
LAB*LABa 83.54 16.34 12.62
LAB*TCHa 87.5 20.65 37.7
relative CIELAB lab*
lab*lab 0.847 0.198 0.153
lab*tch 0.875 0.25 0.105
lab*nch 0.0 0.25 0.105
relative Natural Colour (NC)
lab*lrj 0.847 0.238 0.075
lab*tce 0.875 0.25 0.048
lab*ncE 0.0 0.25 r19j

relative Inform. Technology (IT)
olvi3* 0.75 0.5 0.5 (1.0)
cmyn3* 0.25 0.5 0.5 (0.0)
olvi4* 1.0 0.75 0.75 0.75
cmyn4* 0.0 0.25 0.25 0.25
standard and adapted CIELAB
LAB*LAB 64.19 15.96 15.28
LAB*LABa 64.19 16.34 12.63
LAB*TCHa 62.5 20.65 37.7
relative CIELAB lab*
lab*lab 0.597 0.198 0.153
lab*tch 0.625 0.25 0.105
lab*nch 0.25 0.25 0.105
relative Natural Colour (NC)
lab*lrj 0.597 0.239 0.075
lab*tce 0.625 0.25 0.048
lab*ncE 0.25 0.25 r19j

relative Inform. Technology (IT)
olvi3* 0.5 0.25 0.25 (1.0)
cmyn3* 0.5 0.75 0.75 (0.0)
olvi4* 1.0 0.75 0.75 0.5
cmyn4* 0.0 0.25 0.25 0.5
standard and adapted CIELAB
LAB*LAB 44.84 16.33 13.98
LAB*LABa 44.84 16.34 12.63
LAB*TCHa 37.5 20.65 37.7
relative CIELAB lab*
lab*lab 0.347 0.198 0.153
lab*tch 0.375 0.25 0.105
lab*nch 0.5 0.25 0.105
relative Natural Colour (NC)
lab*lrj 0.347 0.239 0.075
lab*tce 0.375 0.25 0.048
lab*ncE 0.5 0.25 r19j

relative Inform. Technology (IT)
olvi3* 0.25 0.0 0.0 (1.0)
cmyn3* 0.75 1.0 1.0 (0.0)
olvi4* 1.0 0.75 0.75 0.25
cmyn4* 0.0 0.25 0.25 0.75
standard and adapted CIELAB
LAB*LAB 25.5 16.7 12.67
LAB*LABa 25.5 16.34 12.62
LAB*TCHa 12.5 20.65 37.7
relative CIELAB lab*
lab*lab 0.097 0.198 0.153
lab*tch 0.125 0.25 0.105
lab*nch 0.75 0.25 0.105
relative Natural Colour (NC)
lab*lrj 0.097 0.238 0.075
lab*tce 0.125 0.25 0.048
lab*ncE 0.75 0.25 r19j

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 71.67 32.15 28.41
LAB*LABa 71.67 32.68 25.25
LAB*TCHa 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*tce 0.75 0.5 0.048
lab*ncE 0.0 0.5 r19j

relative Inform. Technology (IT)
olvi3* 0.75 0.25 0.25 (1.0)
cmyn3* 0.25 0.75 0.75 (0.0)
olvi4* 1.0 0.5 0.5 0.75
cmyn4* 0.0 0.5 0.5 0.25
standard and adapted CIELAB
LAB*LAB 52.33 32.53 27.11
LAB*LABa 52.33 32.69 25.26
LAB*TCHa 50.0 41.31 37.7
relative CIELAB lab*
lab*lab 0.443 0.396 0.306
lab*tch 0.5 0.5 0.105
lab*nch 0.25 0.5 0.105
relative Natural Colour (NC)
lab*lrj 0.443 0.477 0.15
lab*tce 0.5 0.5 0.048
lab*ncE 0.25 0.5 r19j

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 32.98 32.9 25.8
LAB*LABa 32.98 32.68 25.25
LAB*TCHa 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 0.5 0.5 0.105
relative Natural Colour (NC)
lab*lrj 0.193 0.477 0.15
lab*tce 0.25 0.5 0.048
lab*ncE 0.5 0.5 r19j

relative Inform. Technology (IT)
olvi3* 1.0 0.25 0.25 (1.0)
cmyn3* 0.0 0.75 0.75 (0.0)
olvi4* 1.0 0.25 0.25 1.0
cmyn4* 0.0 0.75 0.75 0.0
standard and adapted CIELAB
LAB*LAB 59.81 48.72 40.24
LAB*LABa 59.81 49.02 37.88
LAB*TCHa 62.5 61.95 37.7
relative CIELAB lab*
lab*lab 0.54 0.593 0.459
lab*tch 0.625 0.75 0.105
lab*nch 0.0 0.75 0.105
relative Natural Colour (NC)
lab*lrj 0.54 0.715 0.225
lab*tce 0.625 0.75 0.048
lab*ncE 0.0 0.75 r19j

relative Inform. Technology (IT)
olvi3* 0.75 0.0 0.0 (1.0)
cmyn3* 0.25 1.0 1.0 (0.0)
olvi4* 1.0 0.25 0.25 0.75
cmyn4* 0.0 0.75 0.75 0.25
standard and adapted CIELAB
LAB*LAB 40.46 49.1 38.93
LAB*LABa 40.46 49.02 37.88
LAB*TCHa 37.51 61.95 37.7
relative CIELAB lab*
lab*lab 0.29 0.593 0.459
lab*tch 0.375 0.75 0.105
lab*nch 0.25 0.75 0.105
relative Natural Colour (NC)
lab*lrj 0.29 0.715 0.225
lab*tce 0.375 0.75 0.048
lab*ncE 0.25 0.75 r19j

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 47.95 65.29 52.06
LAB*LABa 47.95 65.36 50.51
LAB*TCHa 50.0 82.6 37.7
relative CIELAB lab*
lab*lab 0.387 0.791 0.611
lab*tch 0.5 1.0 0.105
lab*nch 0.0 1.0 0.105
relative Natural Colour (NC)
lab*lrj 0.387 0.954 0.299
lab*tce 0.5 1.0 0.048
lab*ncE 0.0 1.0 r19j

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

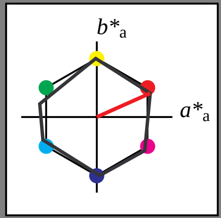
UE500−7, 5 step scales for constant CIELAB hue 24/360 = 0.067 (left)

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

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 57 77 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 100

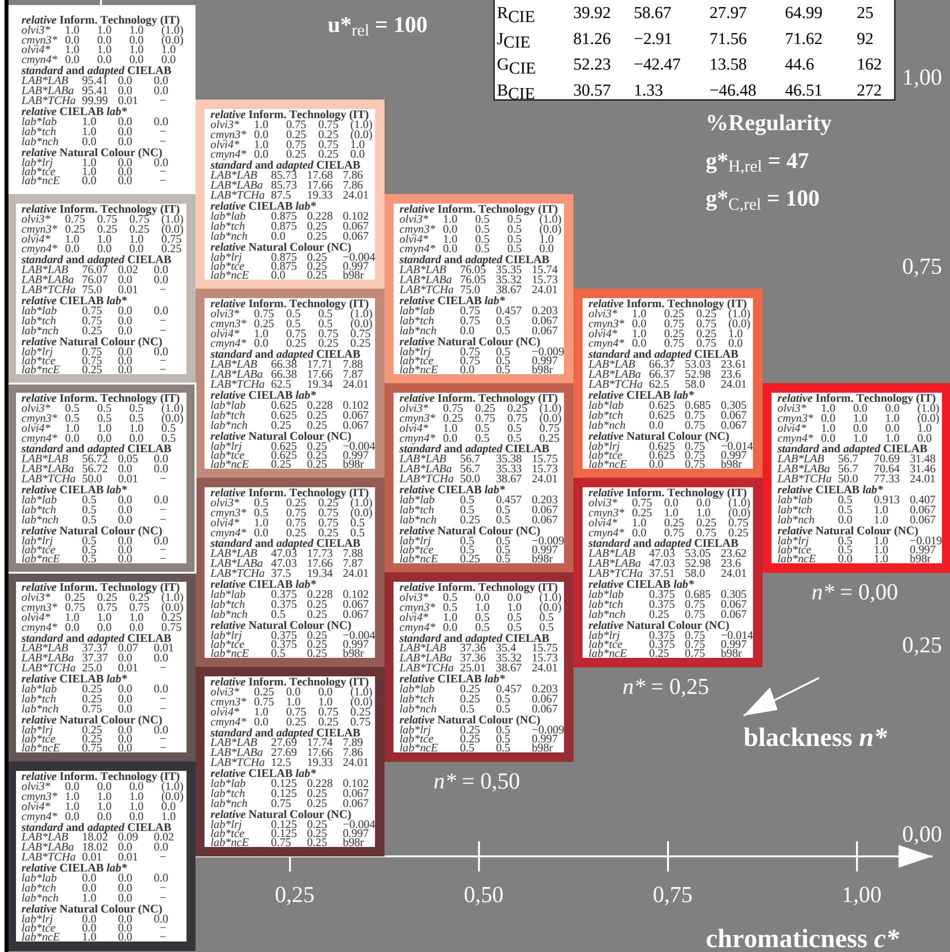
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

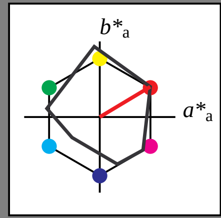
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 31/360 = 0.086$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 78 31
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 92

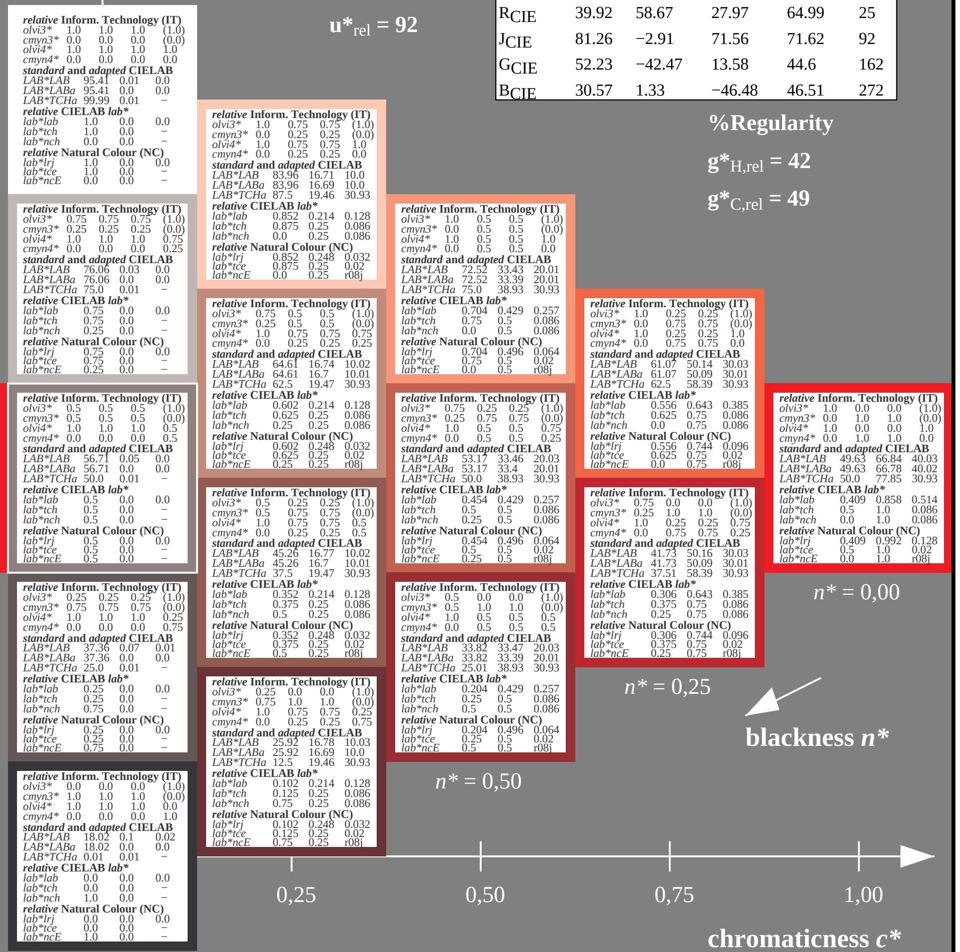
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



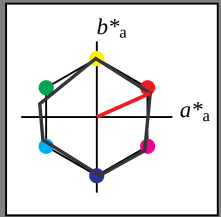
UE500−7, 5 step scales for constant CIELAB hue 24/360 = 0.067 (left)

5 step scales for constant CIELAB hue 31/360 = 0.086 (right)

Input: Colorimetric Reflective System NRS18
for hue *h** = *lab*h* = 24/360 = 0.067
*lab*tch* and *lab*nch*

D65: hue R
LCH*Ma: 57 77 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness *t*



%Gamut

u*rel = 100

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

g*H,rel = 47

g*C,rel = 100

1,00
0,75
0,25
0,00

*n** = 0,00
*n** = 0,25
*n** = 0,50
*n** = 1,0

blackness *n*

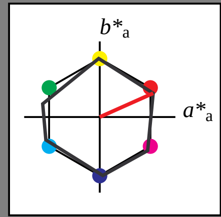
0,25 0,50 0,75 1,00

chromaticness *c*

Output: Colorimetric Reflective System NRS18
for hue *h** = *lab*h* = 24/360 = 0.067
*lab*tch* and *lab*nch*

D65: hue R
LCH*Ma: 57 77 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness *t*



%Gamut

u*rel = 100

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

g*H,rel = 47

g*C,rel = 100

*n** = 0,00
*n** = 0,25
*n** = 0,50
*n** = 1,0

blackness *n*

0,25 0,50 0,75 1,00

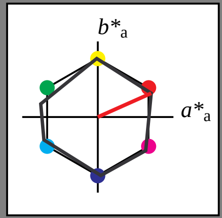
chromaticness *c*

UE500−7, 5 step scales for constant CIELAB hue 24/360 = 0.067 (left)

5 step scales for constant CIELAB hue 24/360 = 0.067 (right)

Input: Colorimetric Reflective System NRS18
for hue *h* = lab*h = 24/360 = 0.067*
*lab*tch and lab*nch*

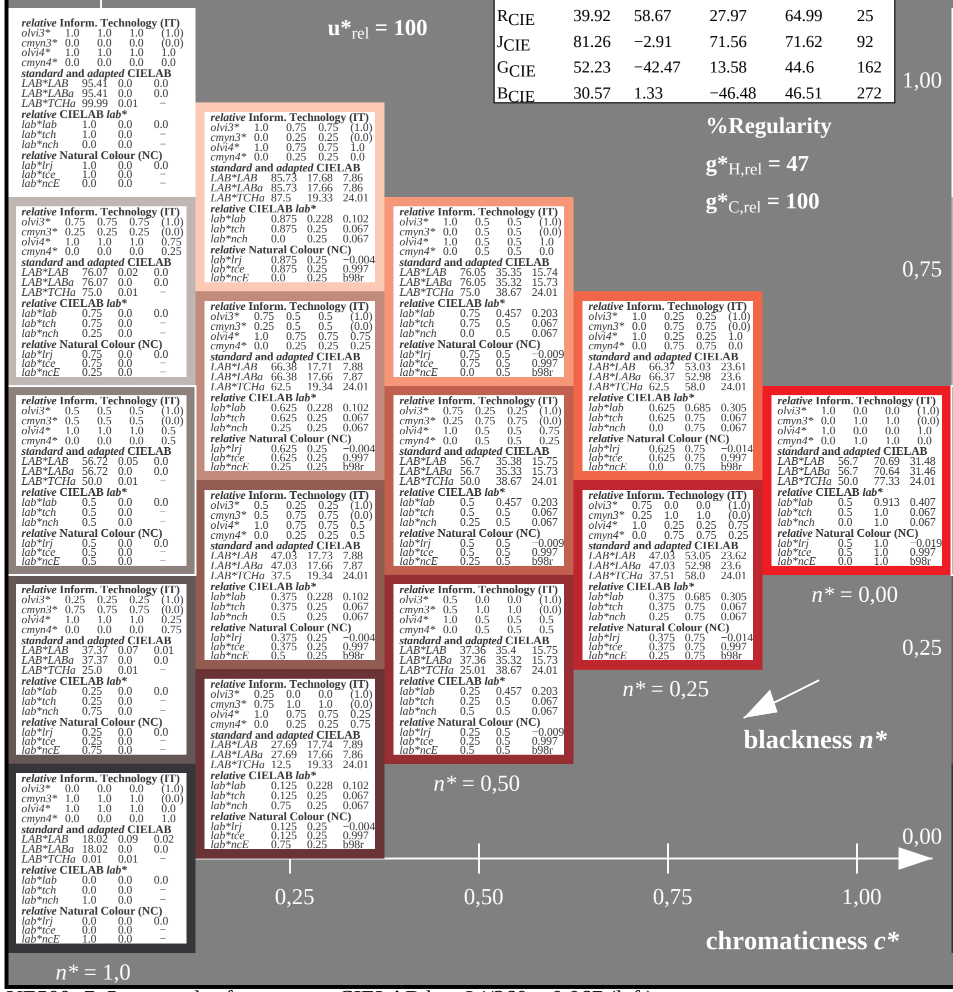
D65: hue R
LCH*Ma: 57 77 24
rgb*Ma: 1.0 0.0 0.0
triangle lightness *t*



%Gamut
u^*_{rel} = 100

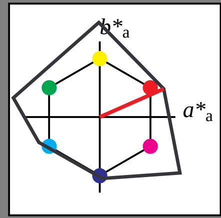
NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NCS18
for hue *h* = lab*h = 24/360 = 0.066*
*lab*tch and lab*nch*

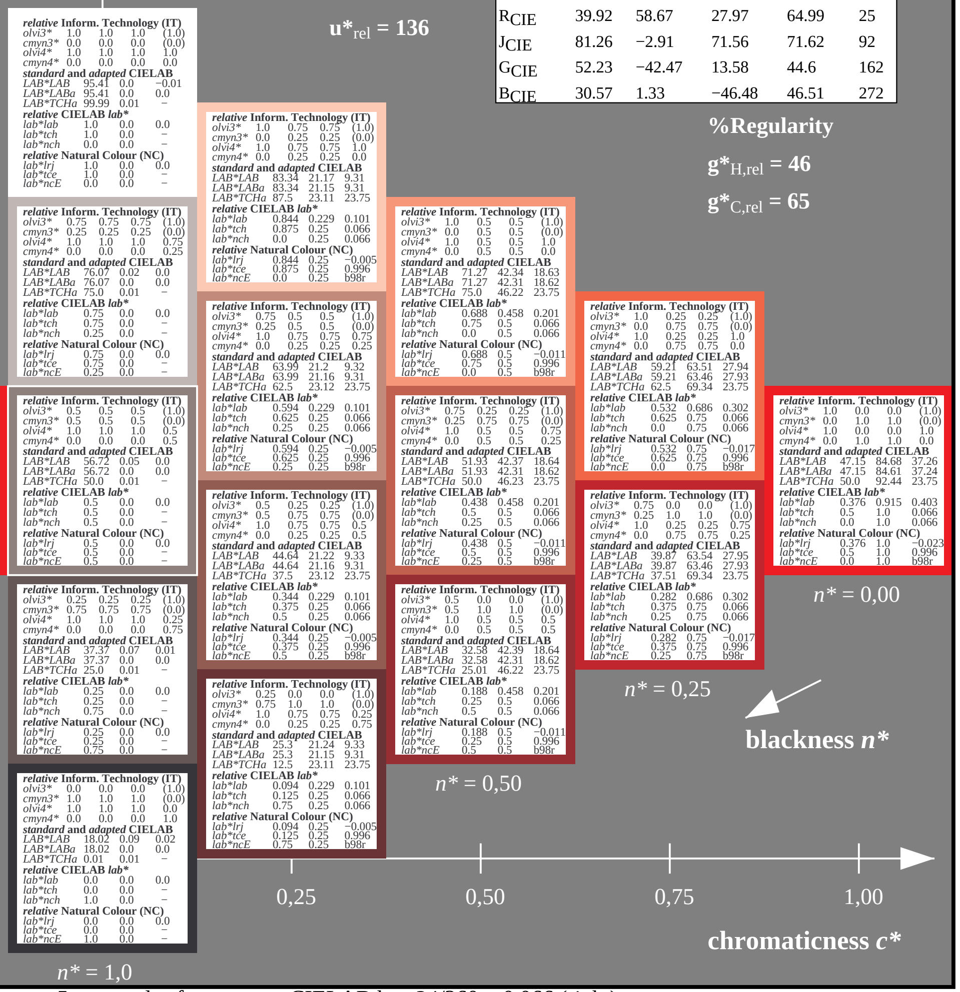
D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0
triangle lightness *t*



%Gamut
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65

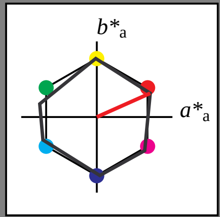


UE500−7, 5 step scales for constant CIELAB hue 24/360 = 0.067 (left)
5 step scales for constant CIELAB hue 24/360 = 0.066 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 57 77 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*

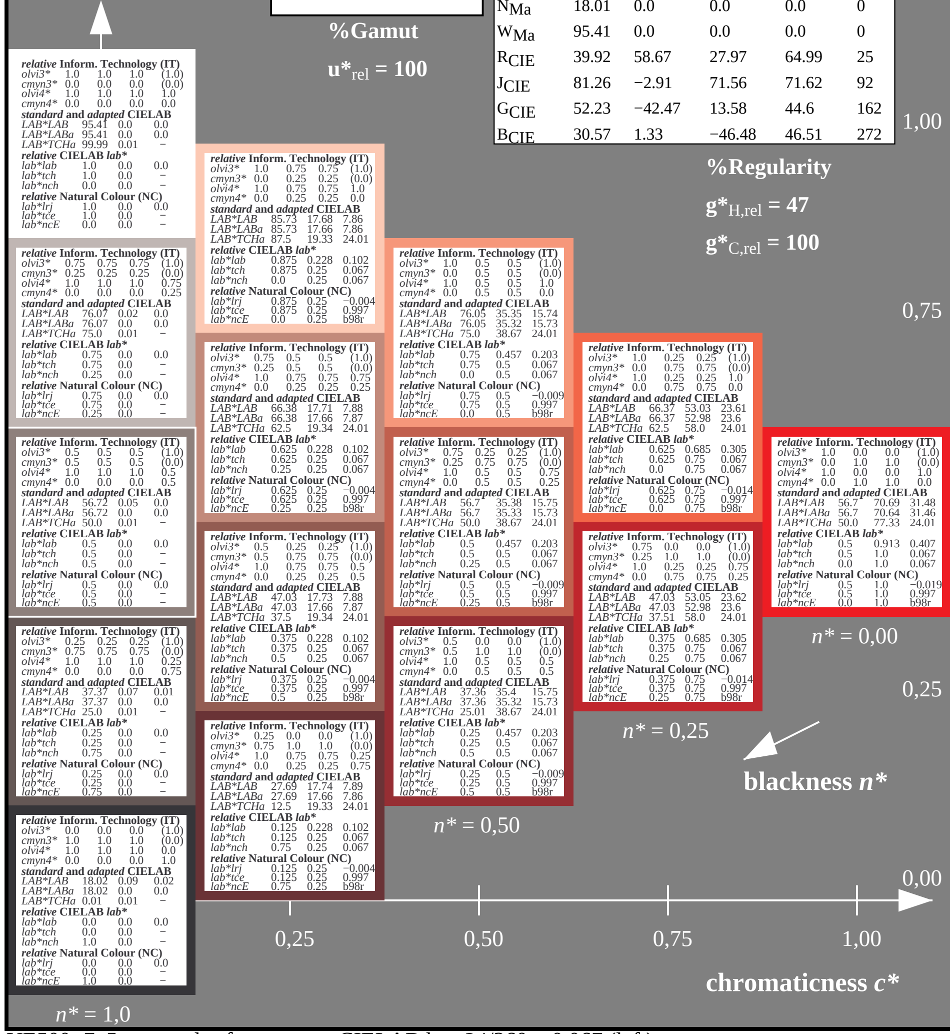


NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut
$u^*_{rel} = 100$

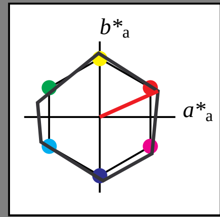
%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 53 84 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*

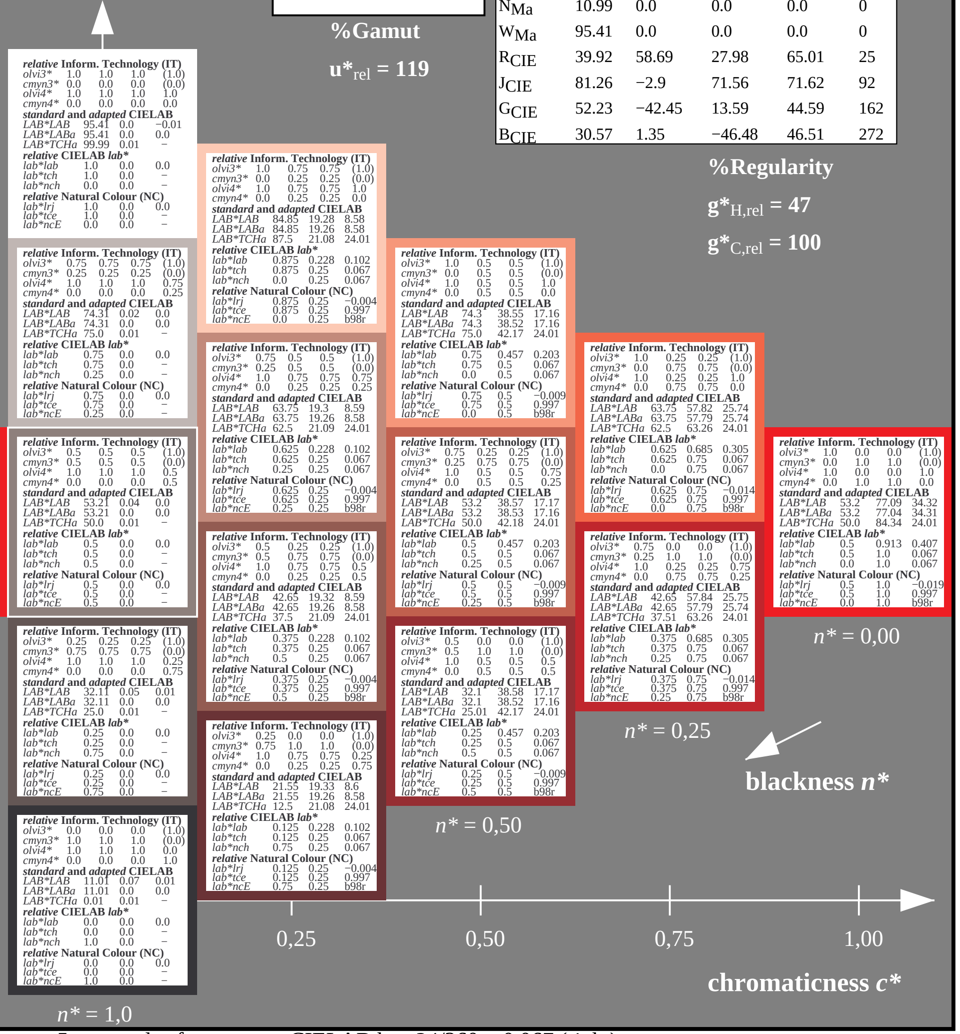


NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut
$u^*_{rel} = 119$

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



UE500−7, 5 step scales for constant CIELAB hue 24/360 = 0.067 (left)

5 step scales for constant CIELAB hue 24/360 = 0.067 (right)

Input: Colorimetric Reflective System NRS18

for hue $h^* = lab^*h = 24/360 = 0.067$

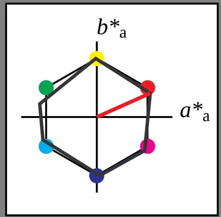
lab*tch and lab*nch

D65: hue R

LCH*Ma: 57 77 24

rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

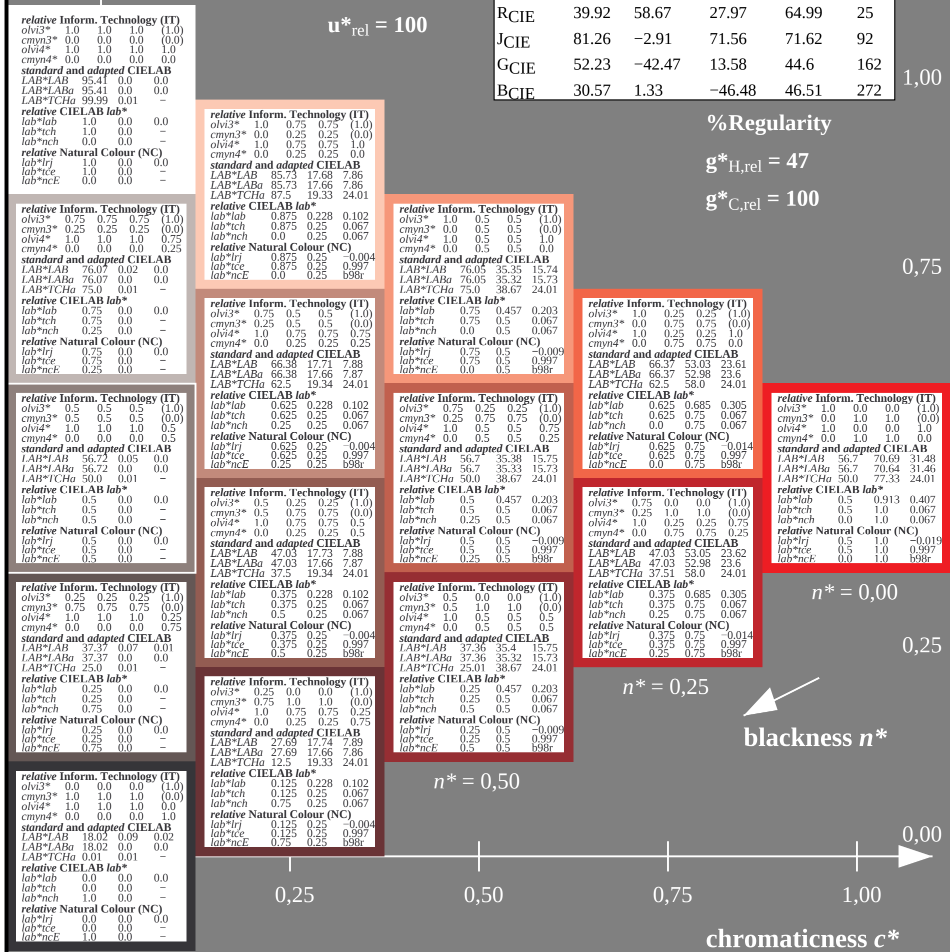
u^*_{rel} = 100

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 24/360 = 0.066$

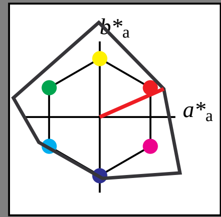
lab*tch and lab*nch

D65: hue R

LCH*Ma: 47 92 24

rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

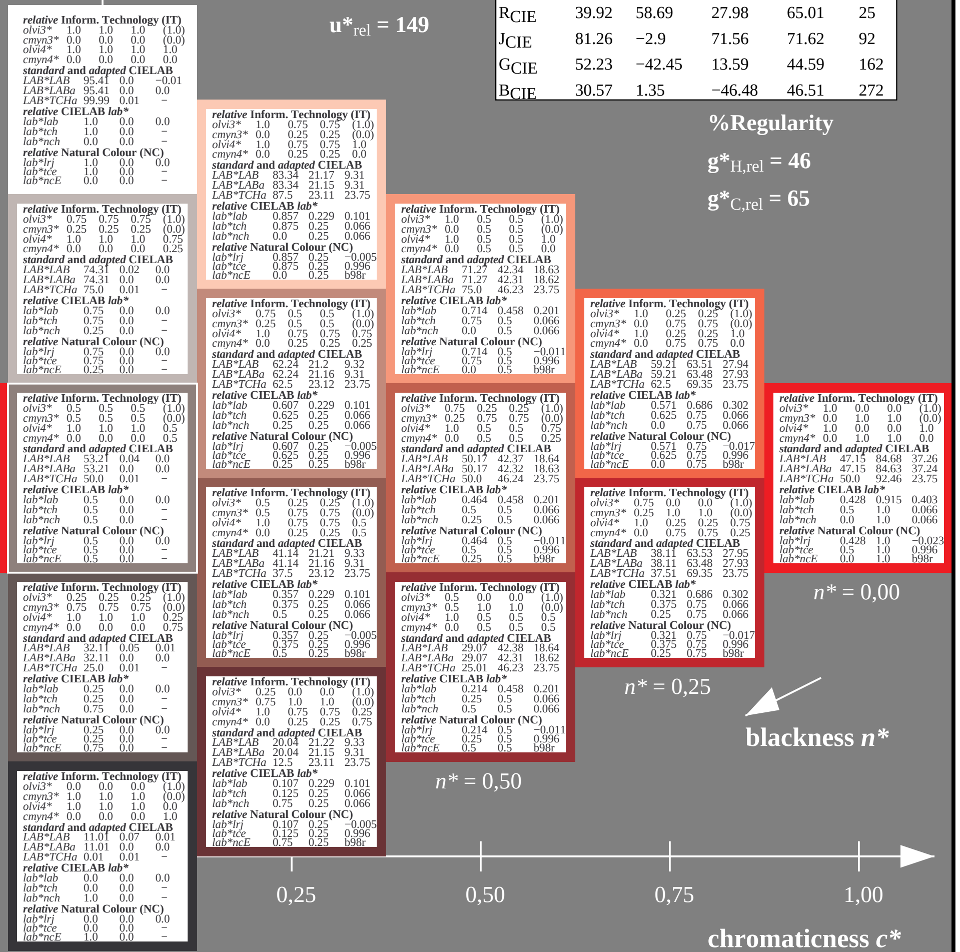
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



UE500−7, 5 step scales for constant CIELAB hue 24/360 = 0.067 (left)

5 step scales for constant CIELAB hue 24/360 = 0.066 (right)

Input: Colorimetric Reflective System NCS18

for hue $h^* = lab^*h = 24/360 = 0.066$

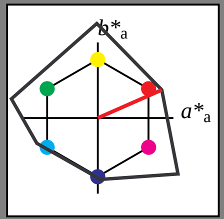
*lab*tch and lab*nch*

D65: hue R

LCH*Ma: 47 92 24

rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 136$

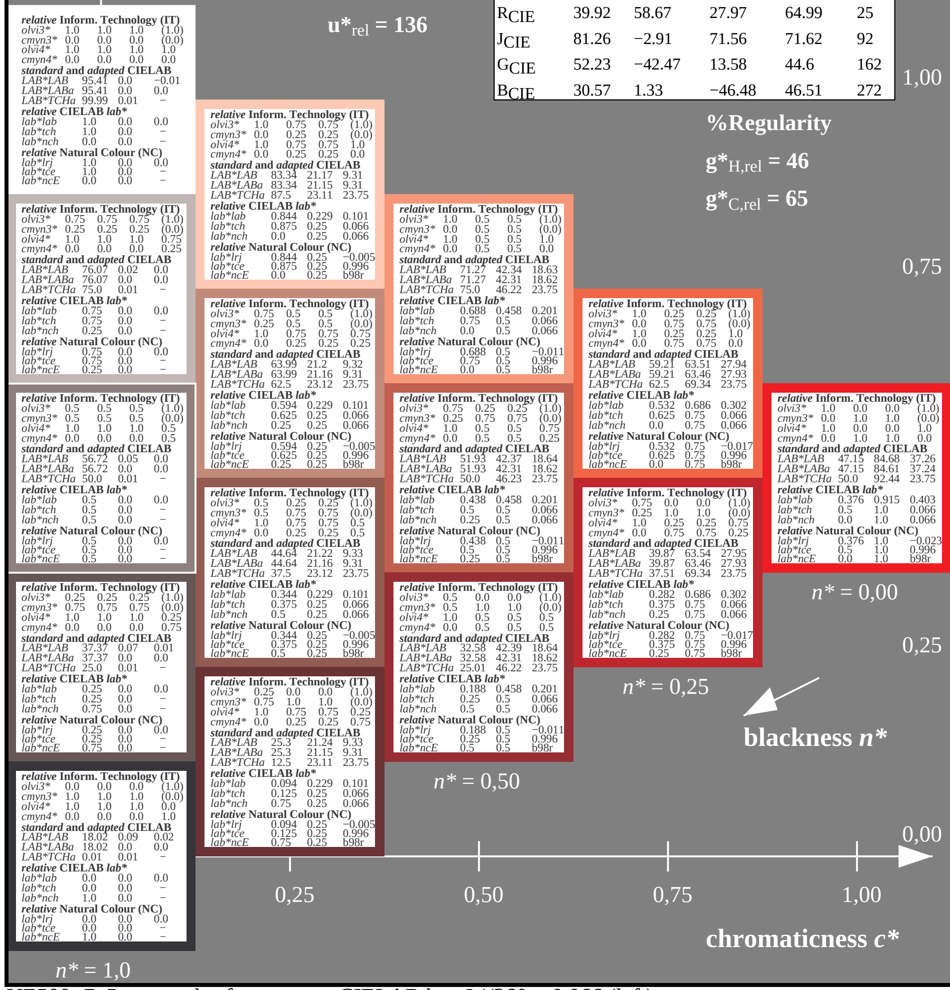
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System ORS18

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

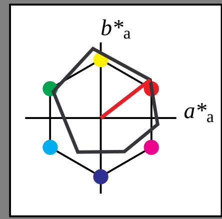
*lab*tch and lab*nch*

D65: hue O

LCH*Ma: 48 83 38

rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

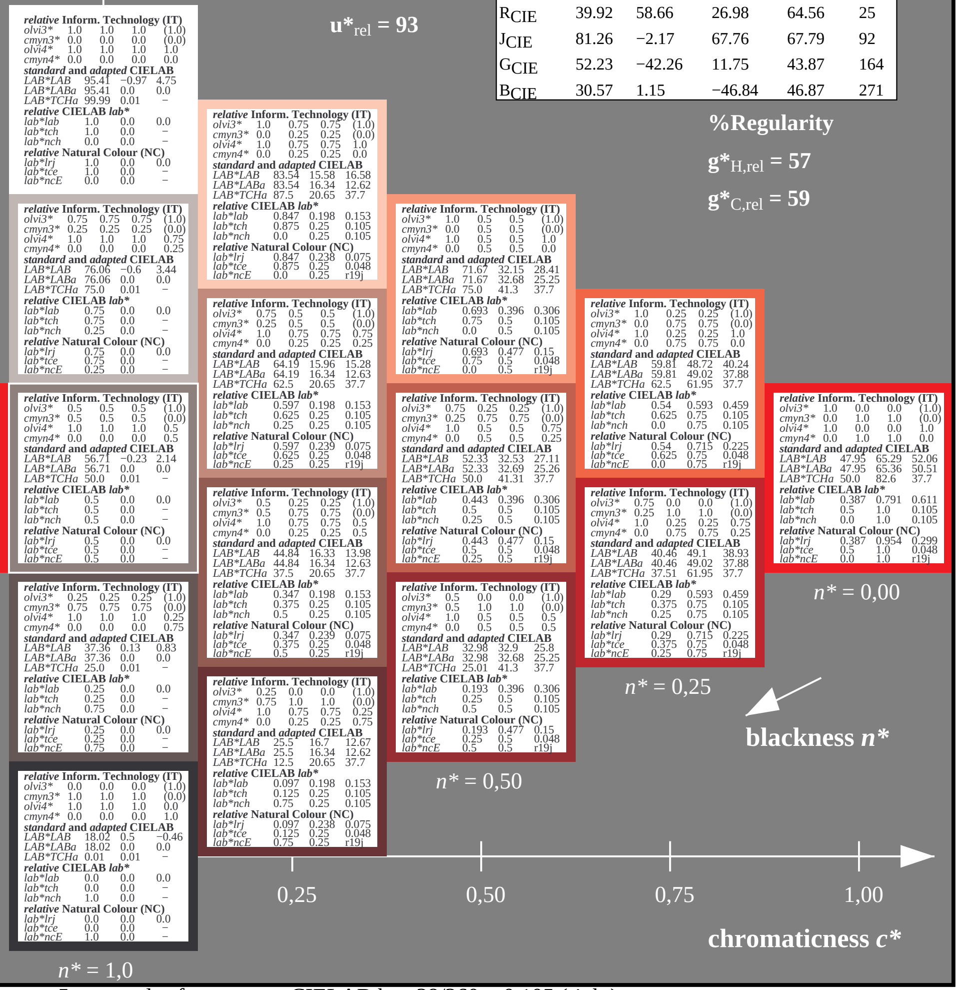
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



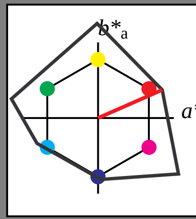
UE500−7, 5 step scales for constant CIELAB hue 24/360 = 0.066 (left)

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

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 24/360 = 0.066$
*lab*tch and lab*nch*

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness *t**



%Gamut

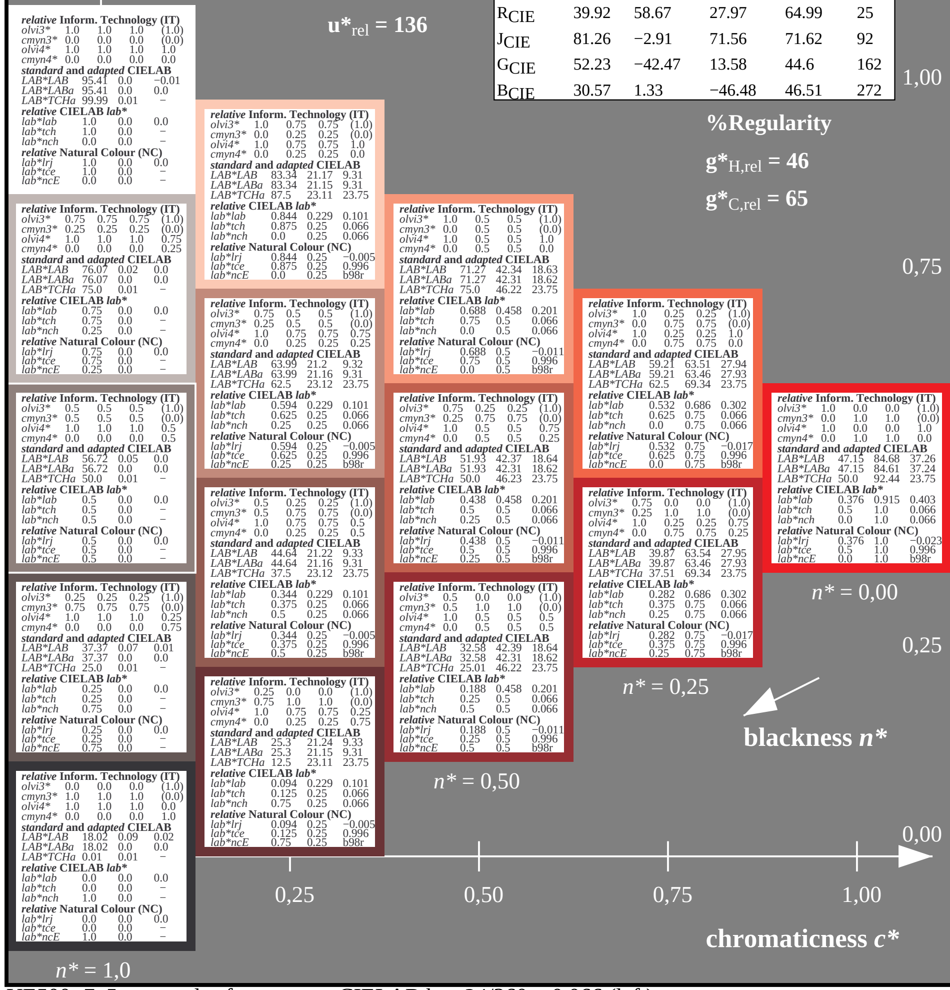
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

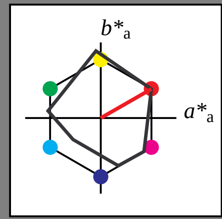
$g^*_{C,rel} = 65$



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
rgb*Ma: 1.0 0.0 0.0

triangle lightness *t**



%Gamut

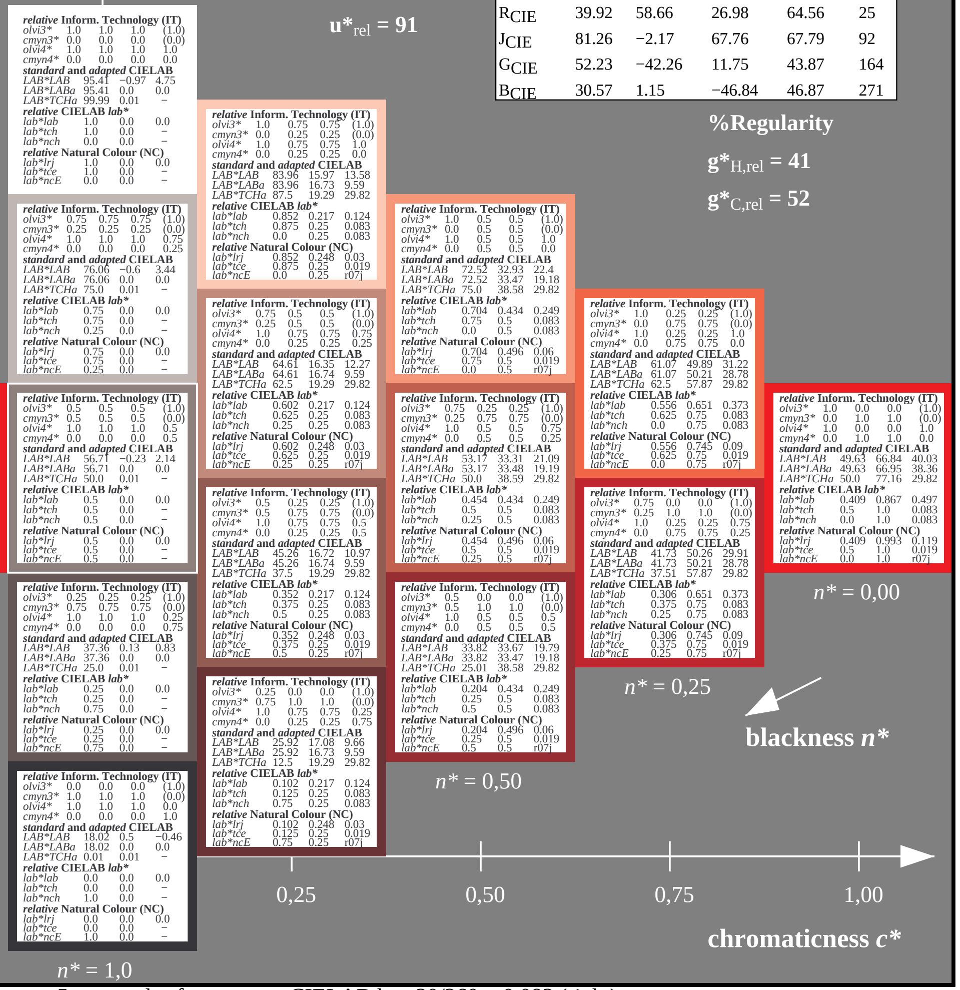
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



UE500−7, 5 step scales for constant CIELAB hue 24/360 = 0.066 (left)

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

Input: Colorimetric Reflective System NCS18

for hue $h^* = lab^*h = 24/360 = 0.066$

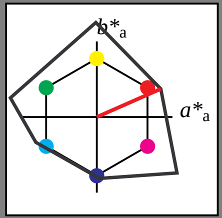
lab*tch and lab*nch

D65: hue R

LCH*Ma: 47 92 24

rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

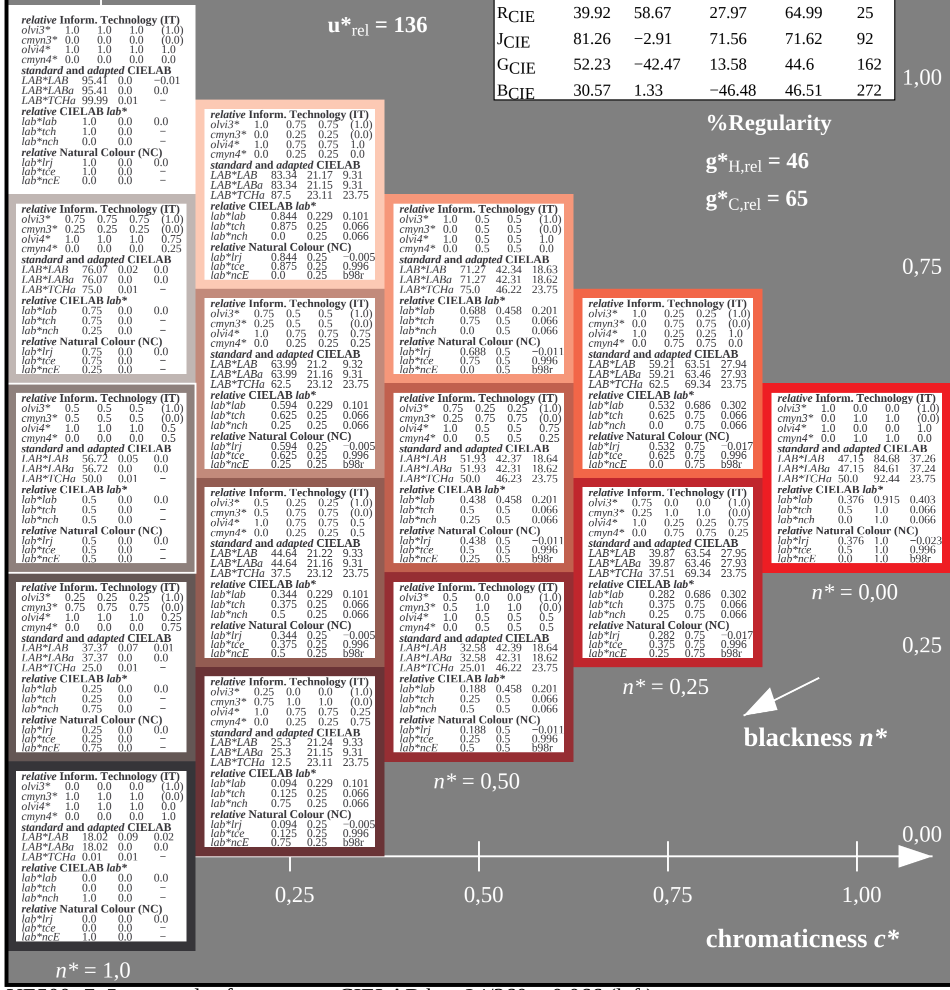
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System TRS18

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

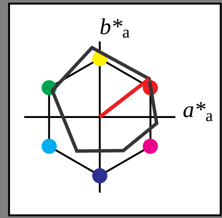
lab*tch and lab*nch

D65: hue O

LCH*Ma: 48 83 38

rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

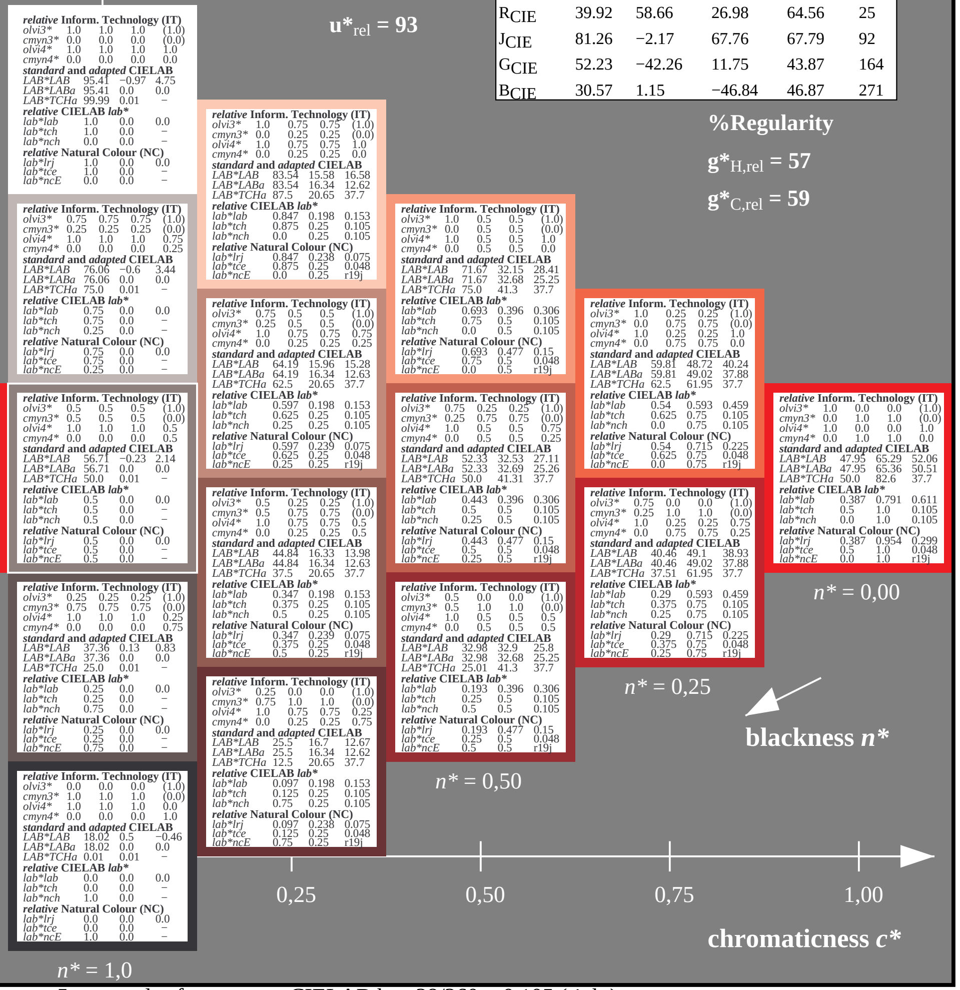
u^*_{rel} = 93

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



UE500−7, 5 step scales for constant CIELAB hue 24/360 = 0.066 (left)

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

Input: Colorimetric Reflective System NCS18

for hue $h^* = lab^*h = 24/360 = 0.066$

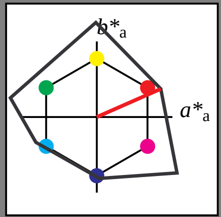
*lab*tch and lab*nch*

D65: hue R

LCH*Ma: 47 92 24

rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

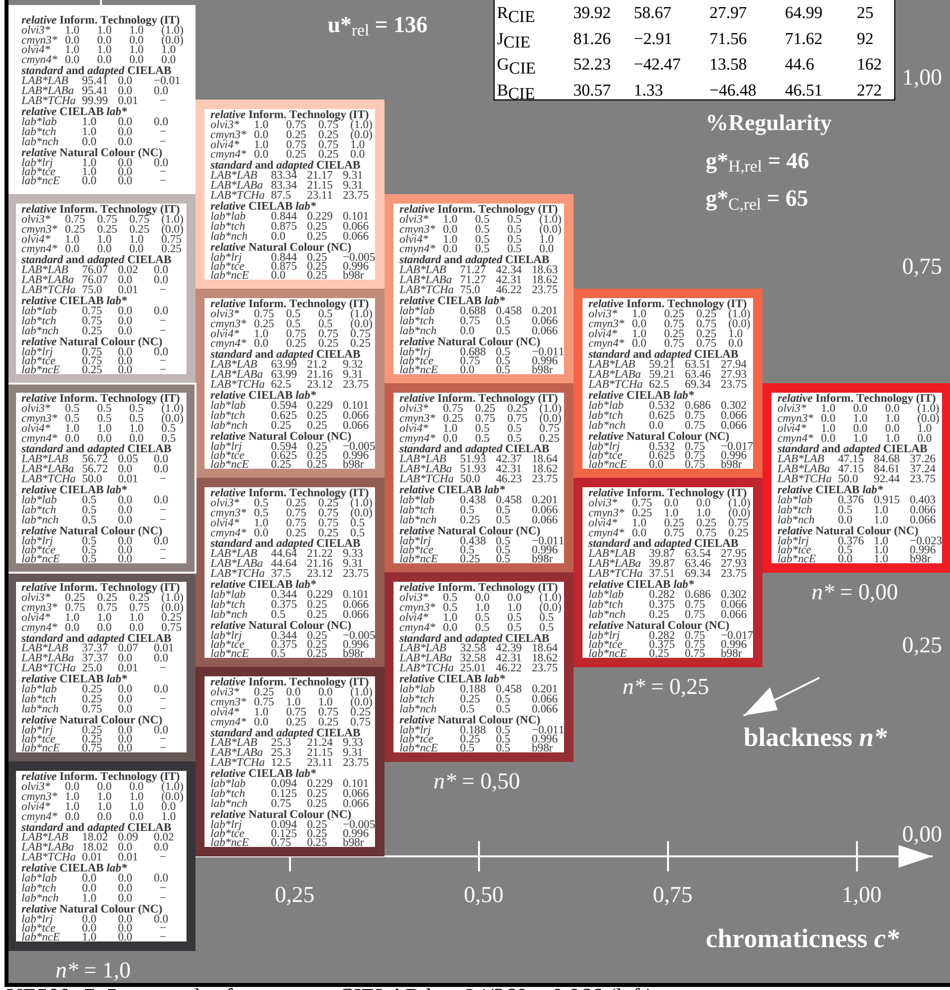
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System MRS18a

for hue $h^* = lab^*h = 31/360 = 0.086$

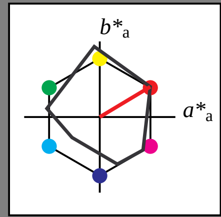
*lab*tch and lab*nch*

D65: hue R

LCH*Ma: 50 78 31

rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

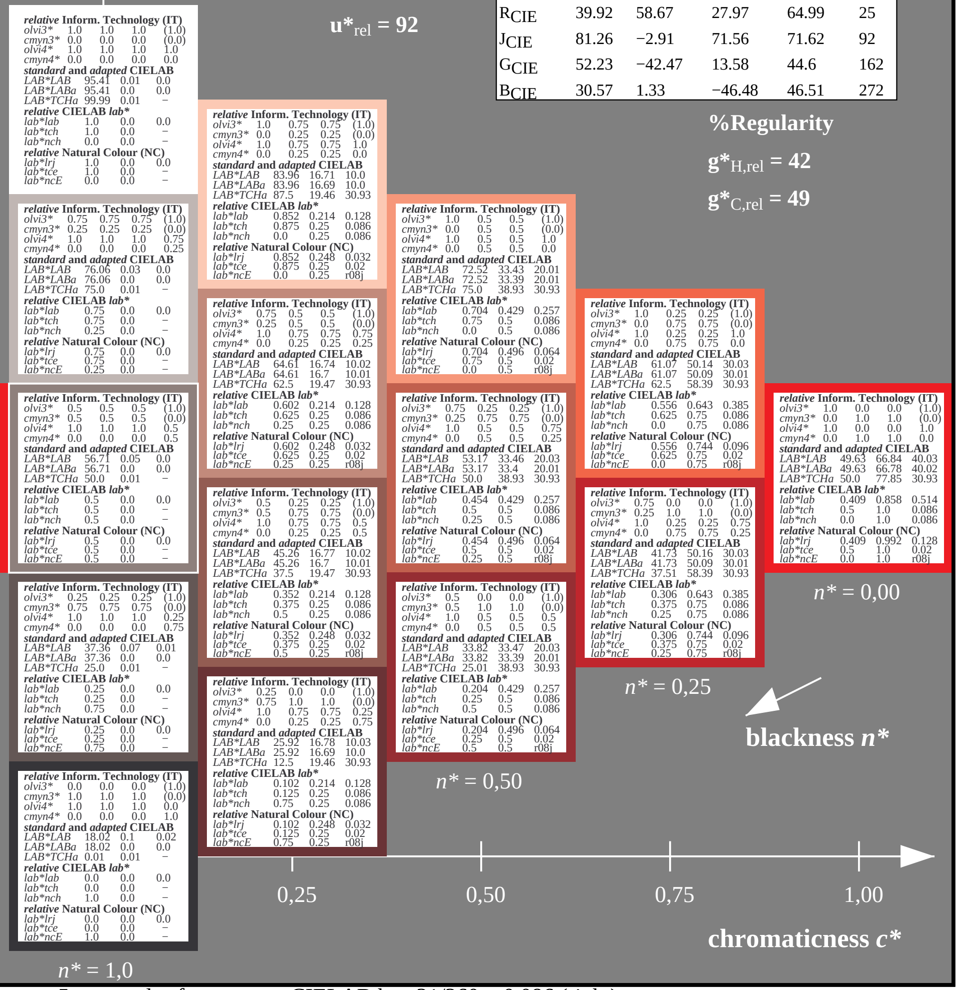
u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



UE500−7, 5 step scales for constant CIELAB hue 24/360 = 0.066 (left) 5 step scales for constant CIELAB hue 31/360 = 0.086 (right)

Input: Colorimetric Reflective System NCS18

for hue $h^* = lab^*h = 24/360 = 0.066$

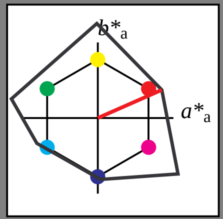
*lab*tch and lab*nch*

D65: hue R

LCH*Ma: 47 92 24

rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

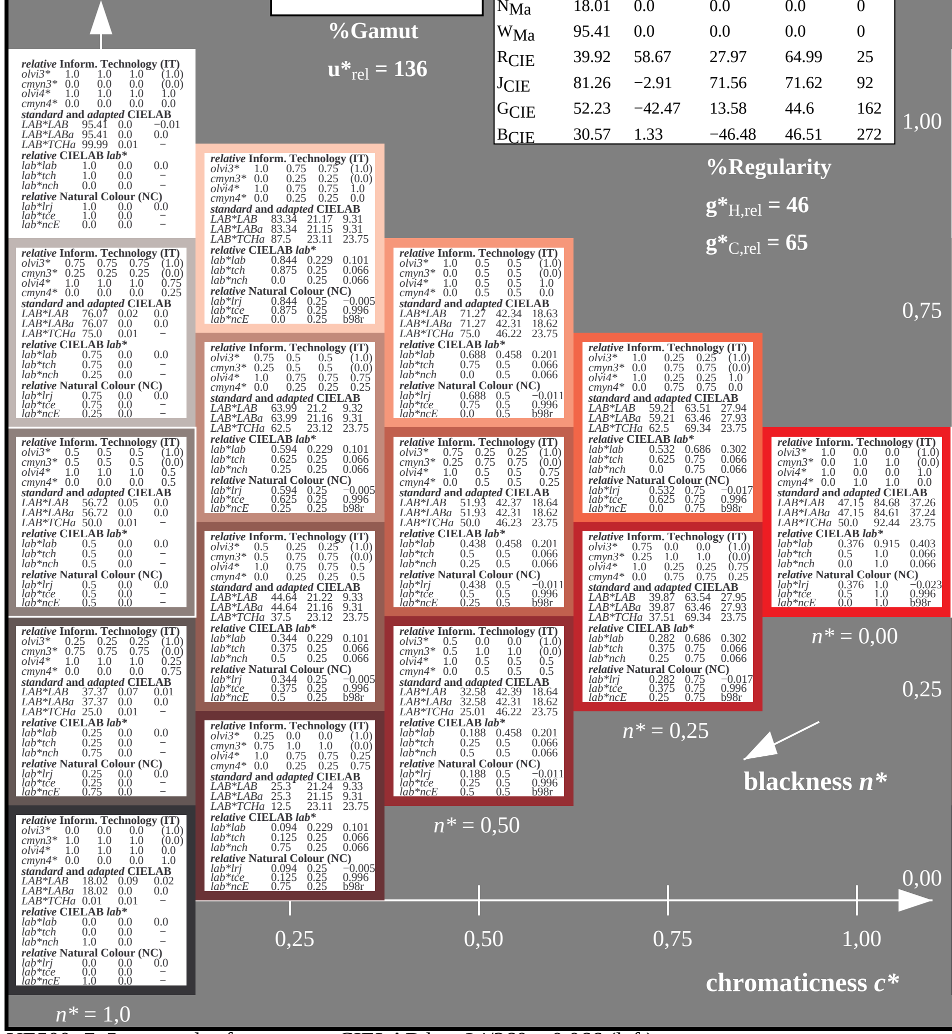
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NRS18

for hue $h^* = lab^*h = 24/360 = 0.067$

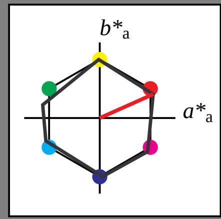
*lab*tch and lab*nch*

D65: hue R

LCH*Ma: 57 77 24

rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

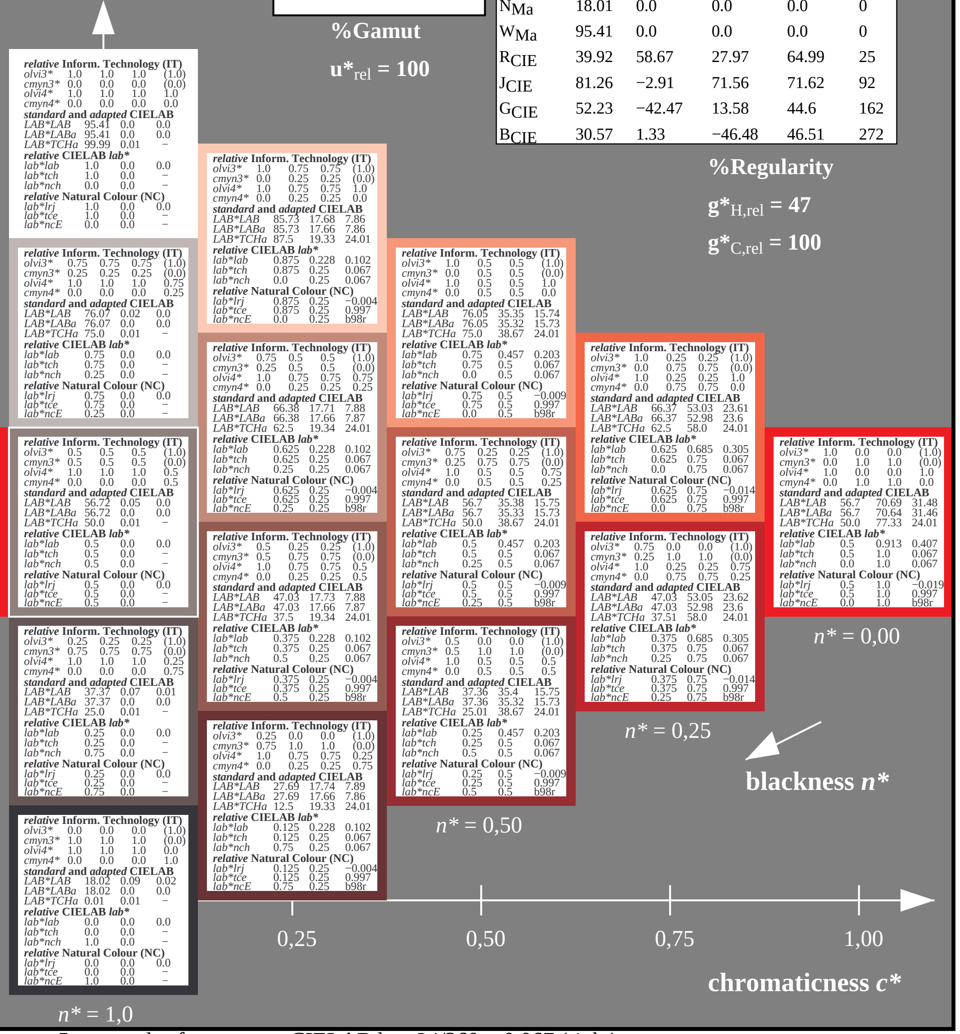
u^*_{rel} = 100

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



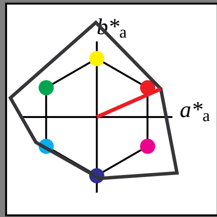
UE500−7, 5 step scales for constant CIELAB hue 24/360 = 0.066 (left)

5 step scales for constant CIELAB hue 24/360 = 0.067 (right)

Input: Colorimetric Reflective System NCS18
for hue *h** = *lab*h* = 24/360 = 0.066
*lab*tch* and *lab*nch*

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness *t**



%Gamut

u^*_{rel} = 136

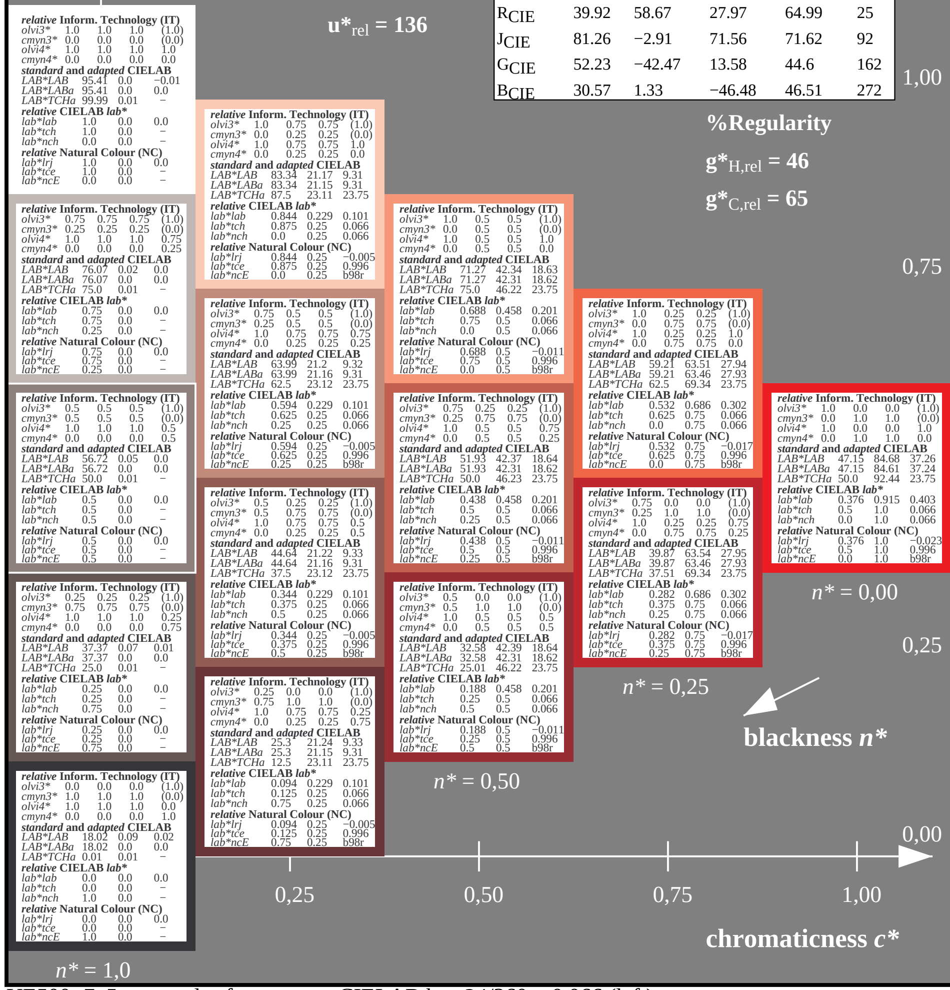
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

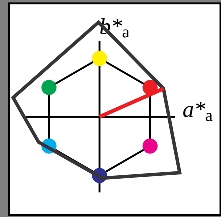
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NCS18
for hue *h** = *lab*h* = 24/360 = 0.066
*lab*tch* and *lab*nch*

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness *t**



%Gamut

u^*_{rel} = 136

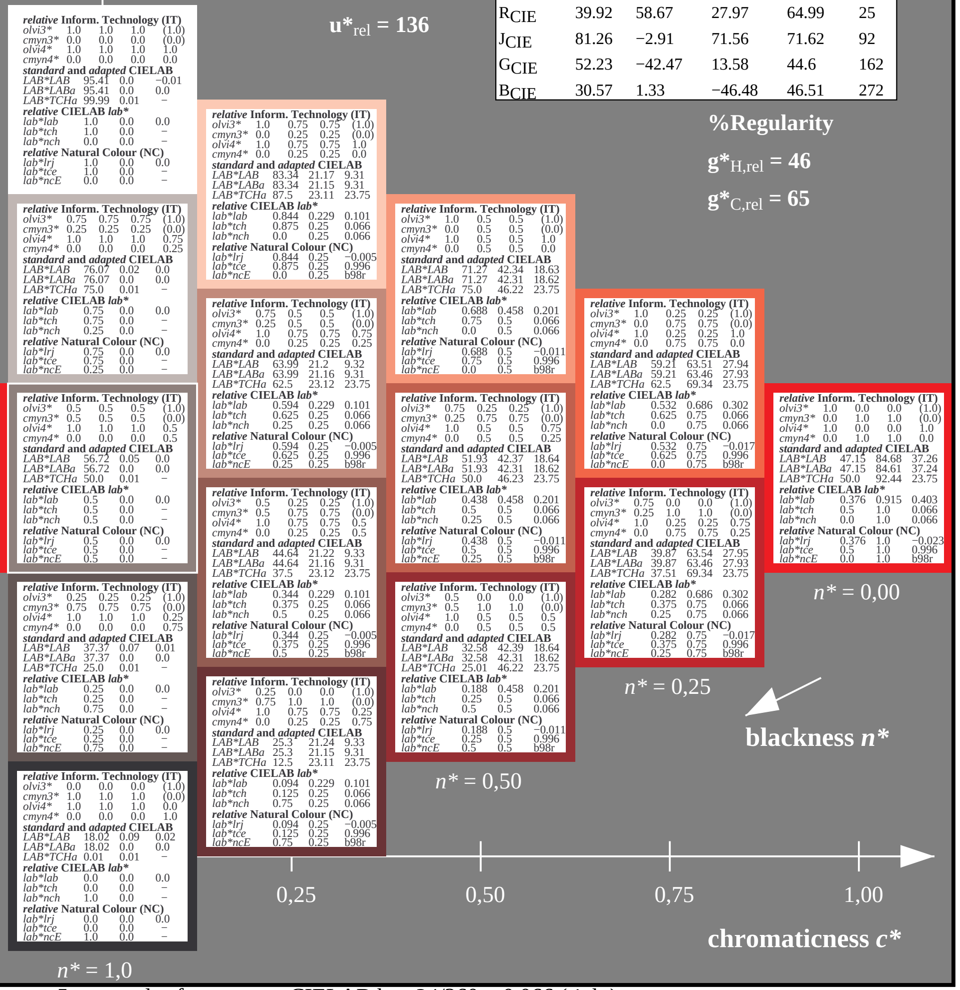
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



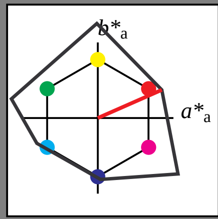
UE500−7, 5 step scales for constant CIELAB hue 24/360 = 0.066 (left)

5 step scales for constant CIELAB hue 24/360 = 0.066 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 24/360 = 0.066$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

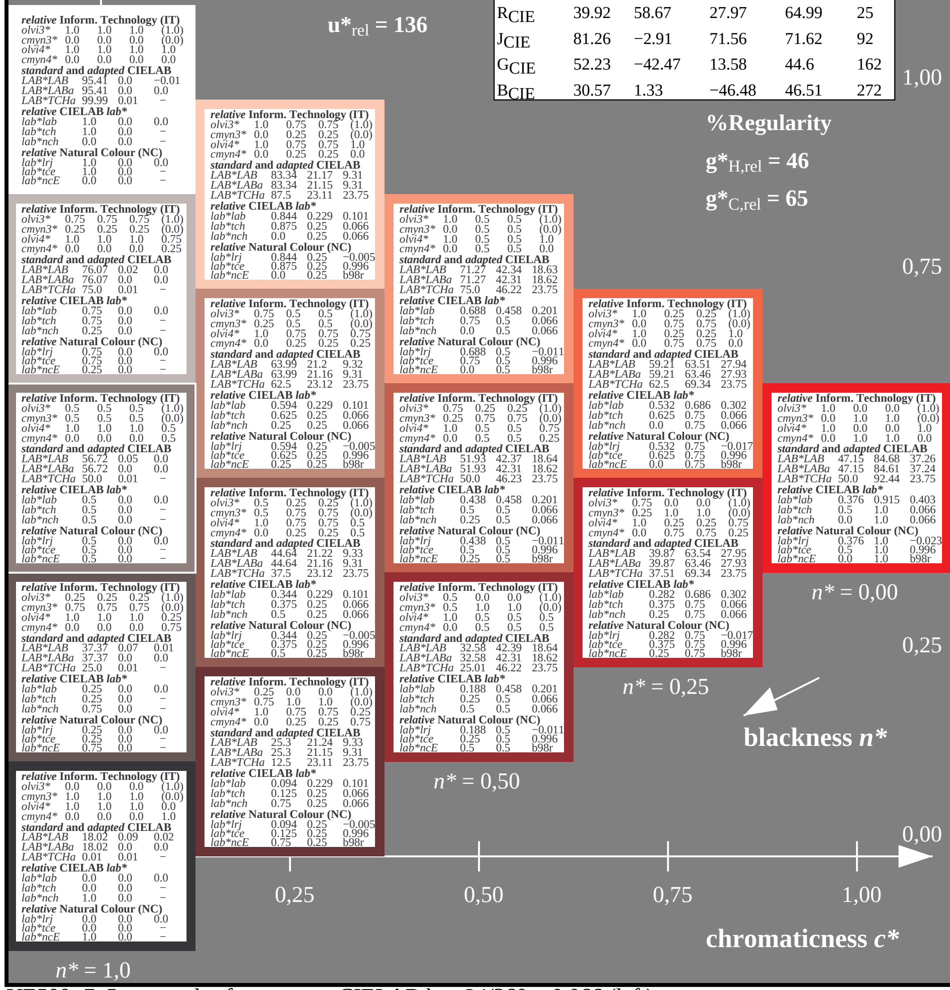
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

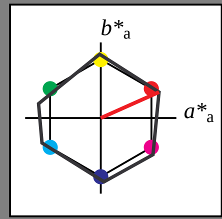
$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 53 84 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

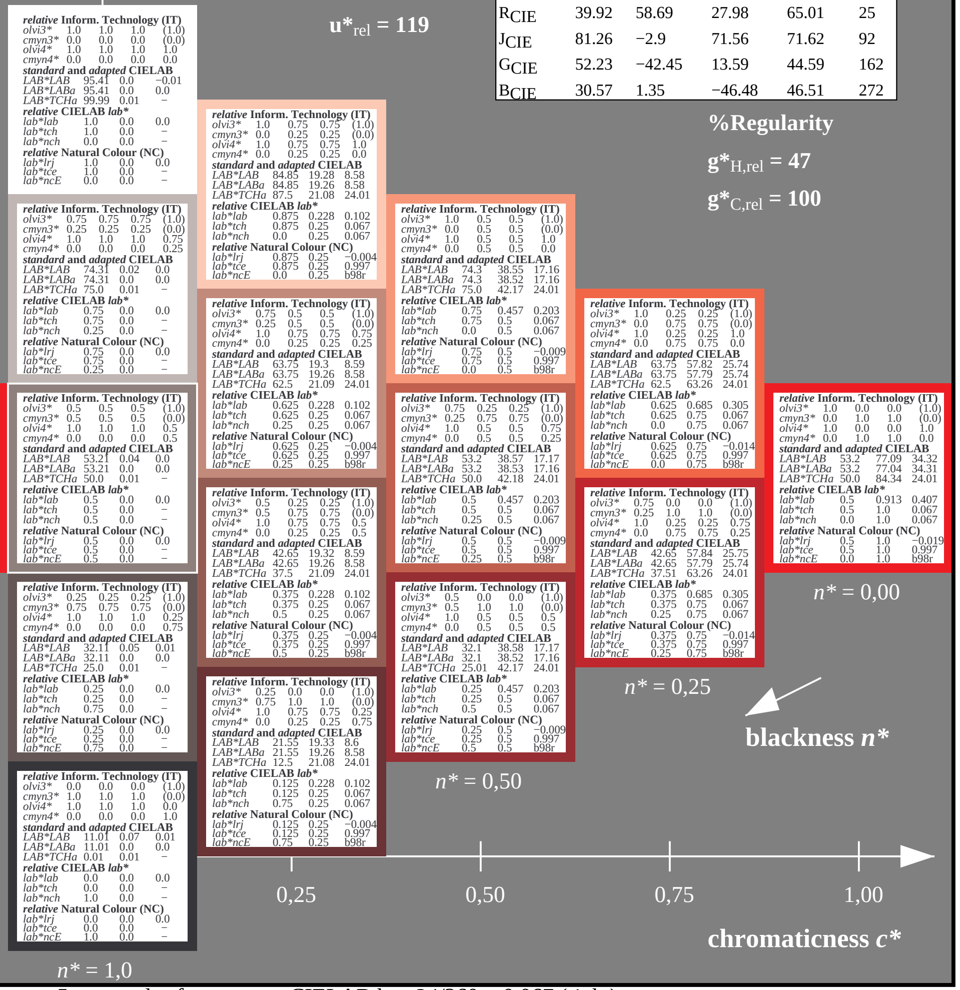
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



UE500−7, 5 step scales for constant CIELAB hue 24/360 = 0.066 (left)

5 step scales for constant CIELAB hue 24/360 = 0.067 (right)

Input: Colorimetric Reflective System NCS18

for hue $h^* = lab^*h = 24/360 = 0.066$

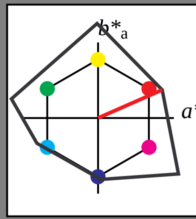
*lab*tch and lab*nch*

D65: hue R

LCH*Ma: 47 92 24

rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

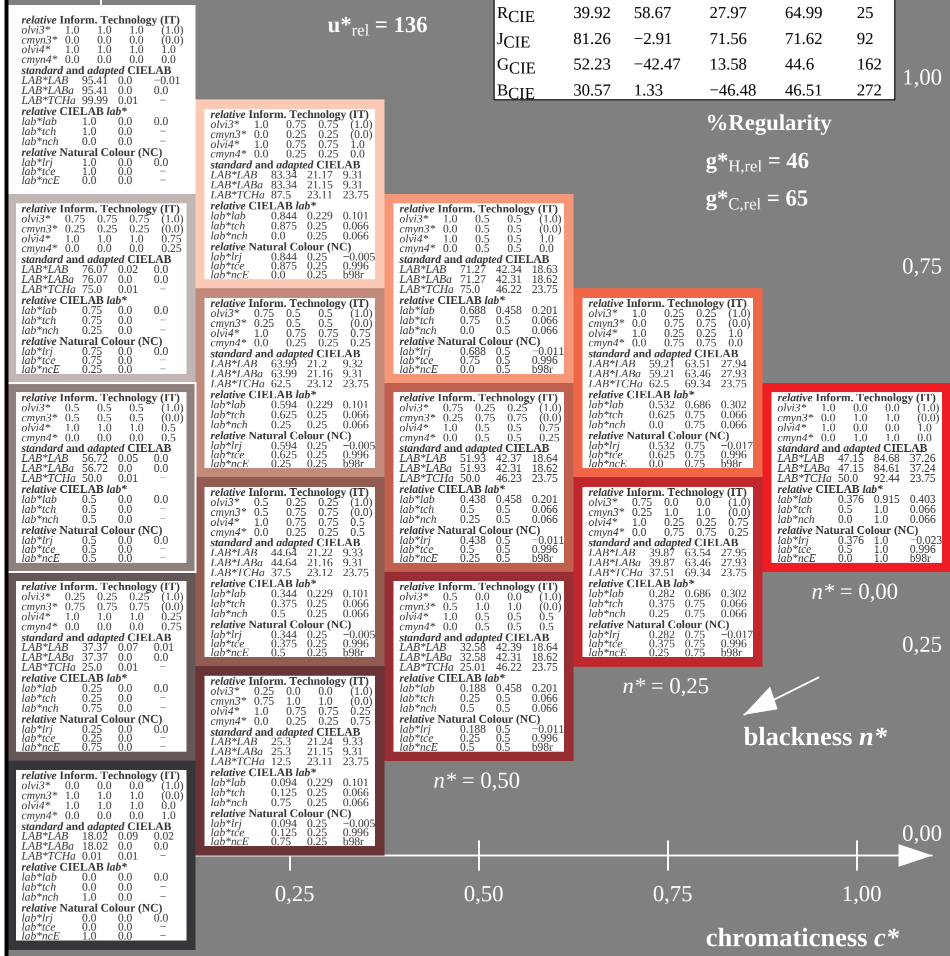
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 24/360 = 0.066$

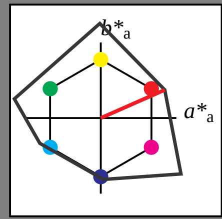
*lab*tch and lab*nch*

D65: hue R

LCH*Ma: 47 92 24

rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

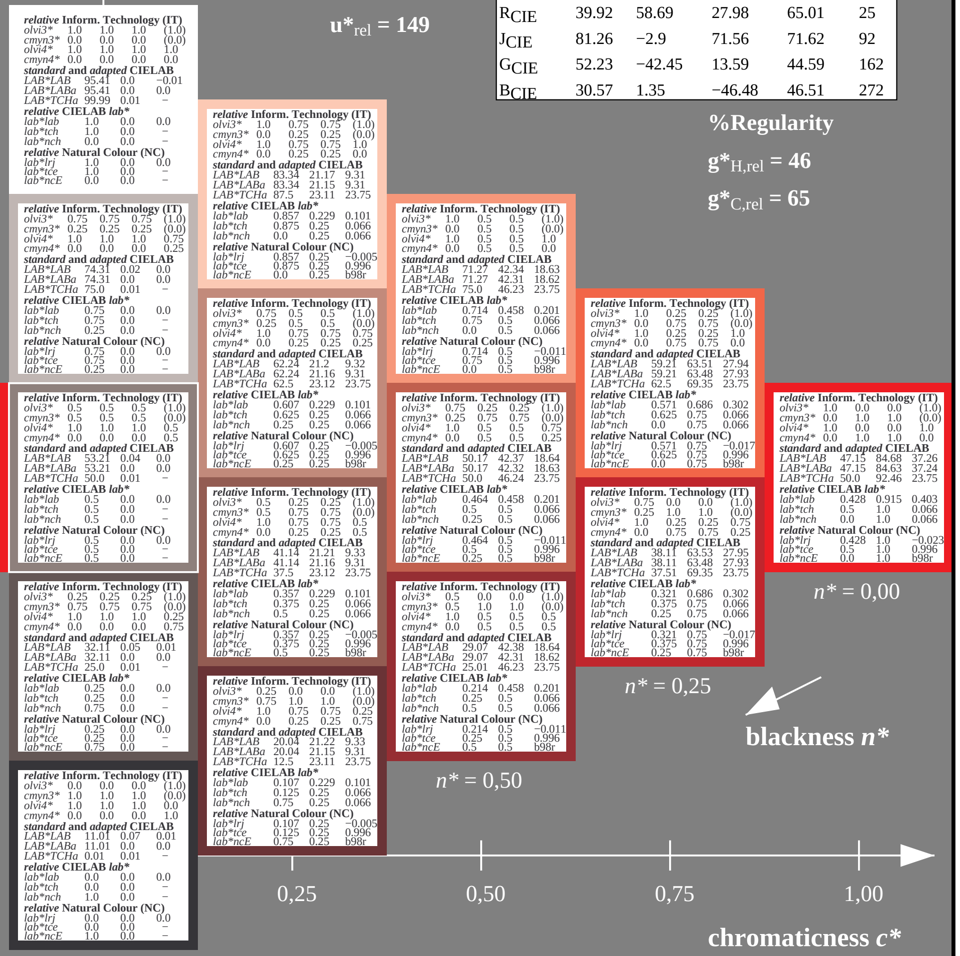
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



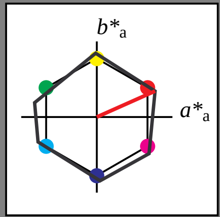
UE500−7, 5 step scales for constant CIELAB hue 24/360 = 0.066 (left)

5 step scales for constant CIELAB hue 24/360 = 0.066 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 53 84 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 119

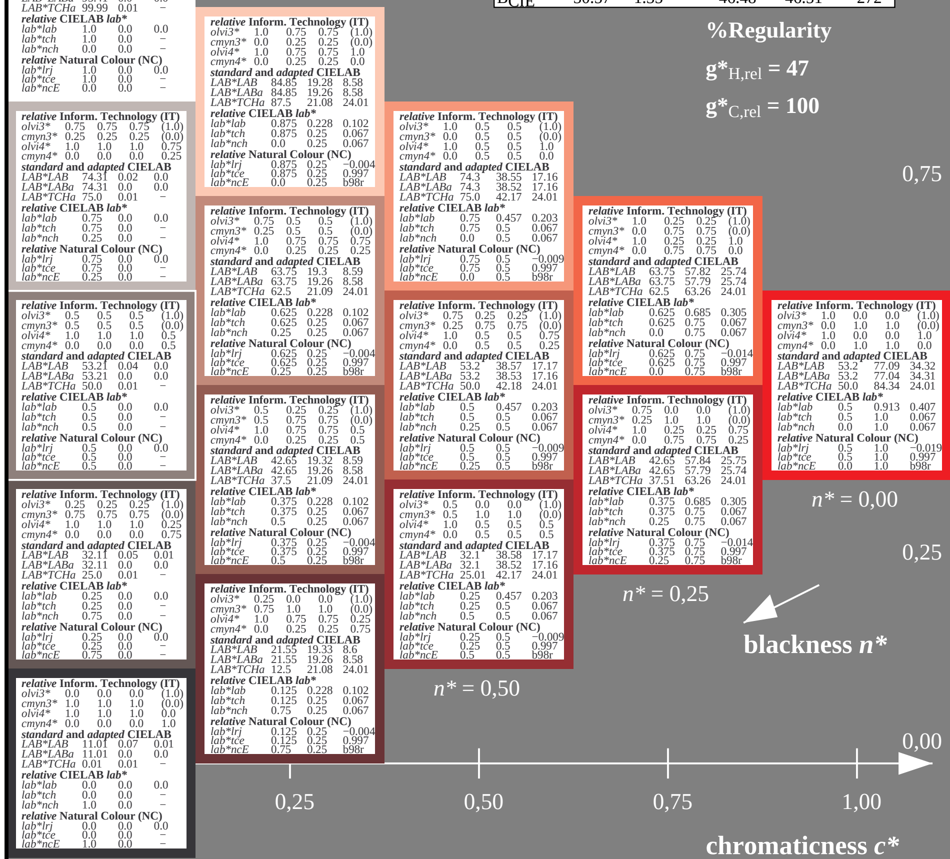
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

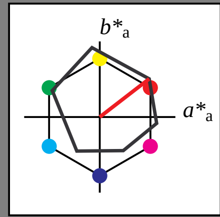
$g^*_{C,rel}$ = 100



Output: 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
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 93

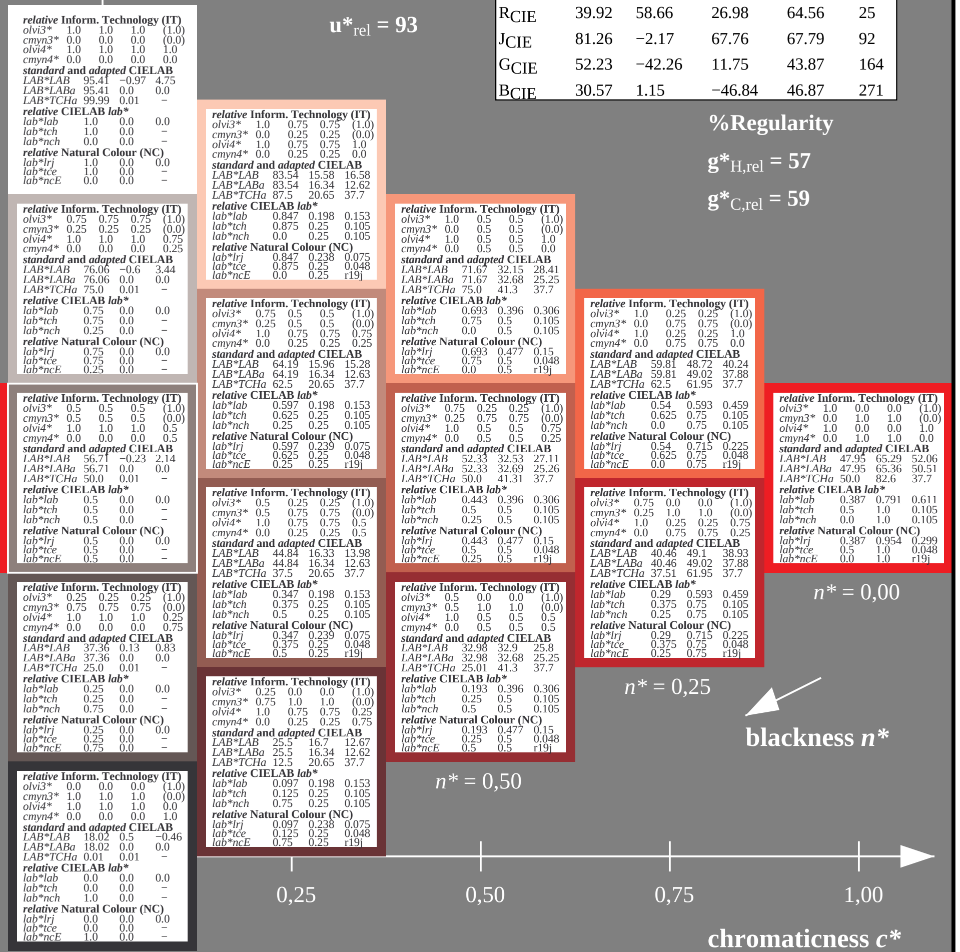
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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

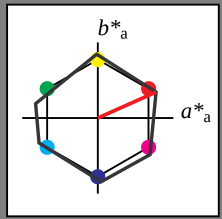


UE500−7, 5 step scales for constant CIELAB hue 24/360 = 0.067 (left)

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

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 24/360 = 0.067$
*lab*tch and lab*nch*

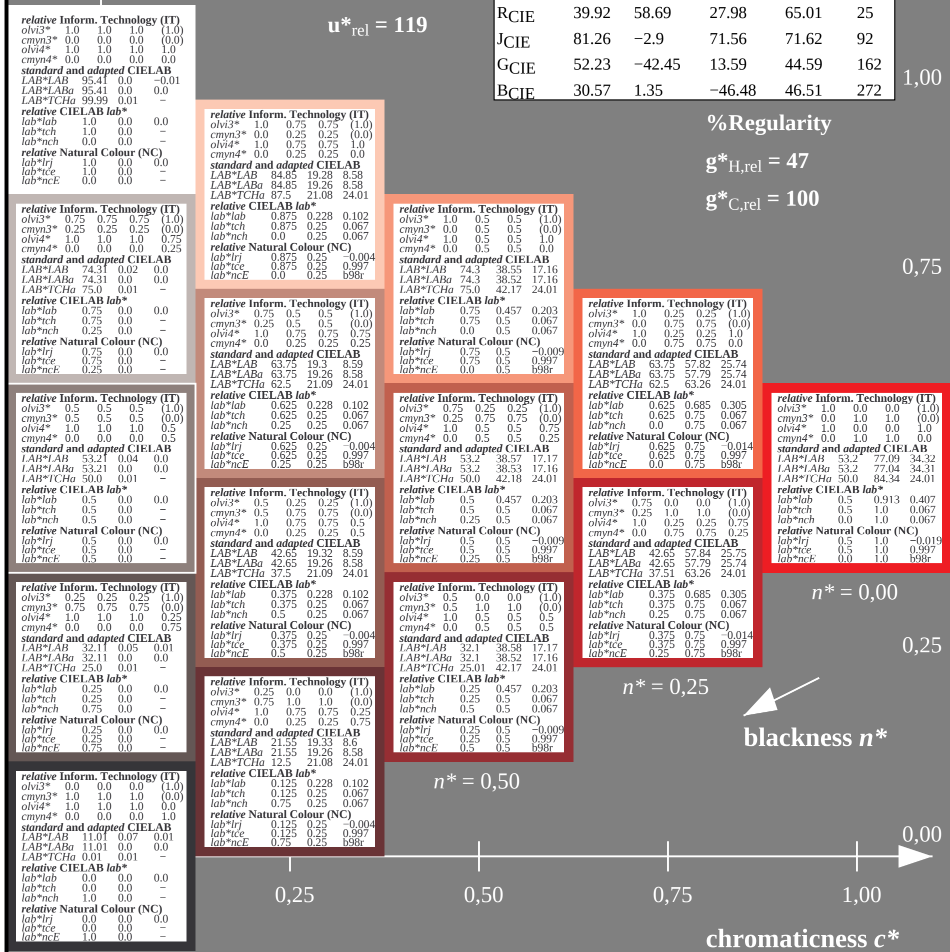
D65: hue R
LCH*Ma: 53 84 24
rgb*Ma: 1.0 0.0 0.0
triangle lightness *t**



%Gamut
$u^*_{rel} = 119$

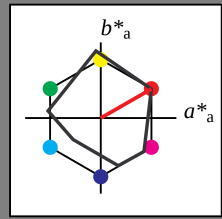
NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 30/360 = 0.083$
*lab*tch and lab*nch*

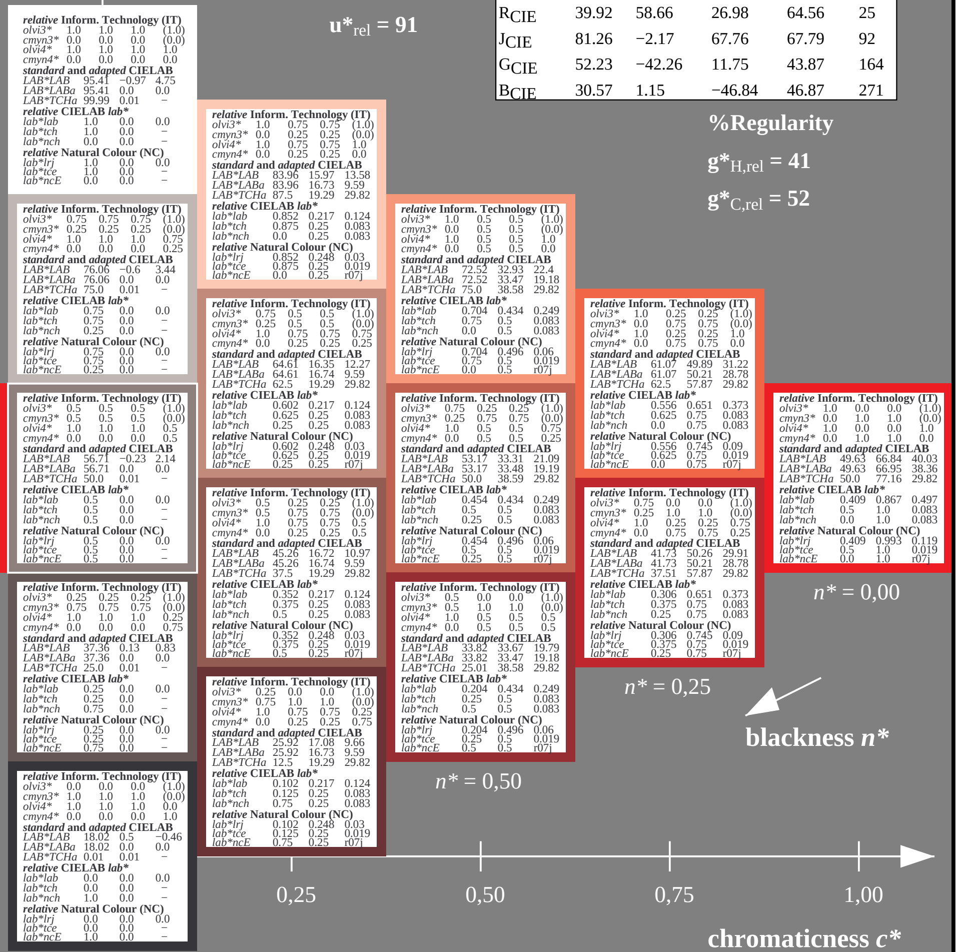
D65: hue R
LCH*Ma: 50 77 30
rgb*Ma: 1.0 0.0 0.0
triangle lightness *t**



%Gamut
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

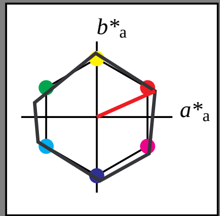
%Regularity
$g^*_{H,rel} = 41$
$g^*_{C,rel} = 52$



UE500−7, 5 step scales for constant CIELAB hue 24/360 = 0.067 (left)
5 step scales for constant CIELAB hue 30/360 = 0.083 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 24/360 = 0.067$
*lab*tch and lab*nch*

D65: hue R
LCH*Ma: 53 84 24
rgb*Ma: 1.0 0.0 0.0
triangle lightness t^*

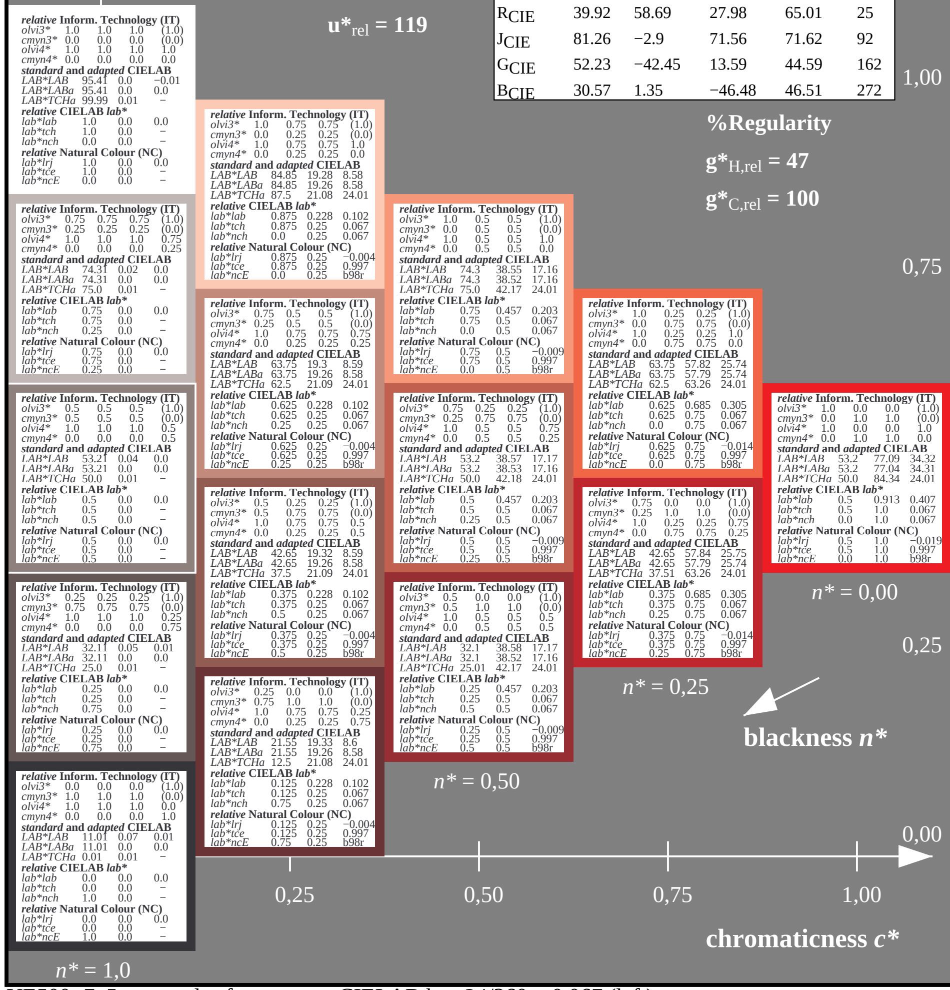


%Gamut
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data

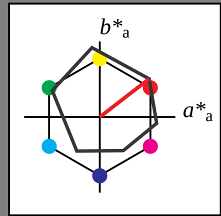
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 38/360 = 0.105$
*lab*tch and lab*nch*

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0
triangle lightness t^*

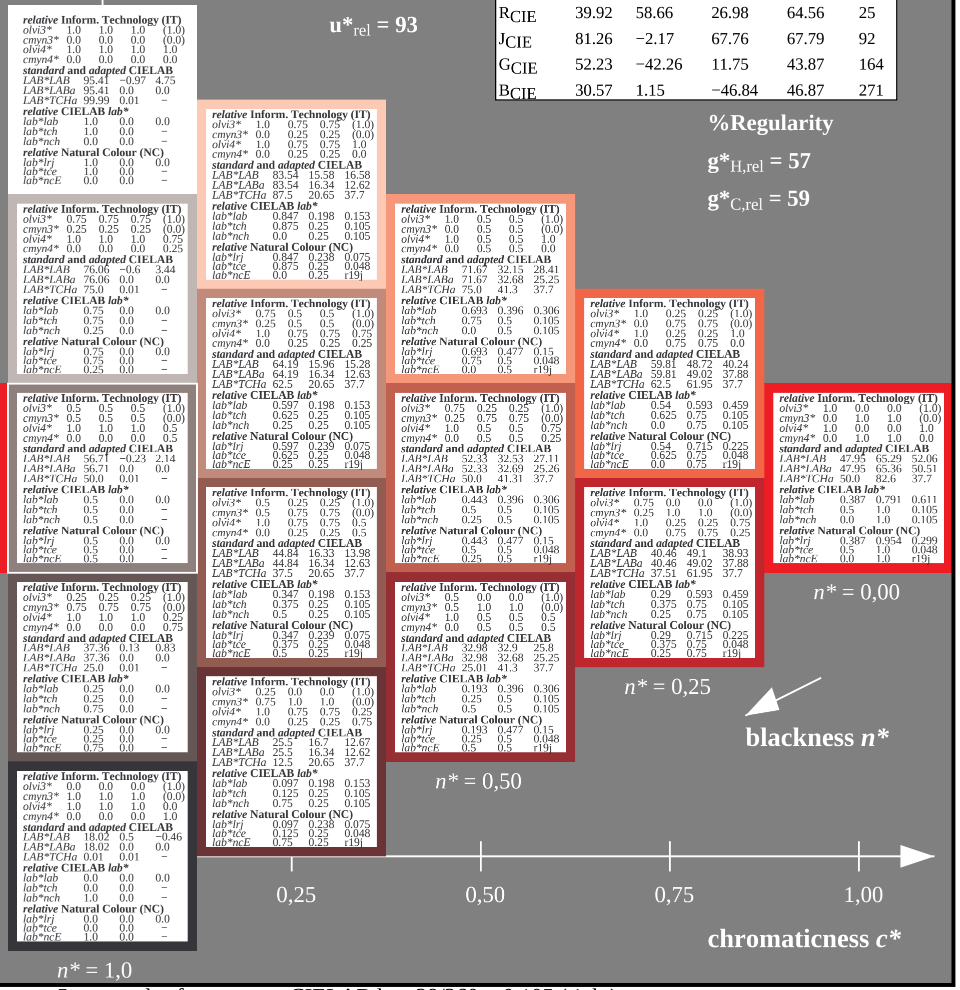


%Gamut
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



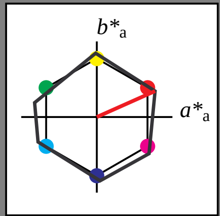
UE500−7, 5 step scales for constant CIELAB hue 24/360 = 0.067 (left)

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

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 53 84 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 119$

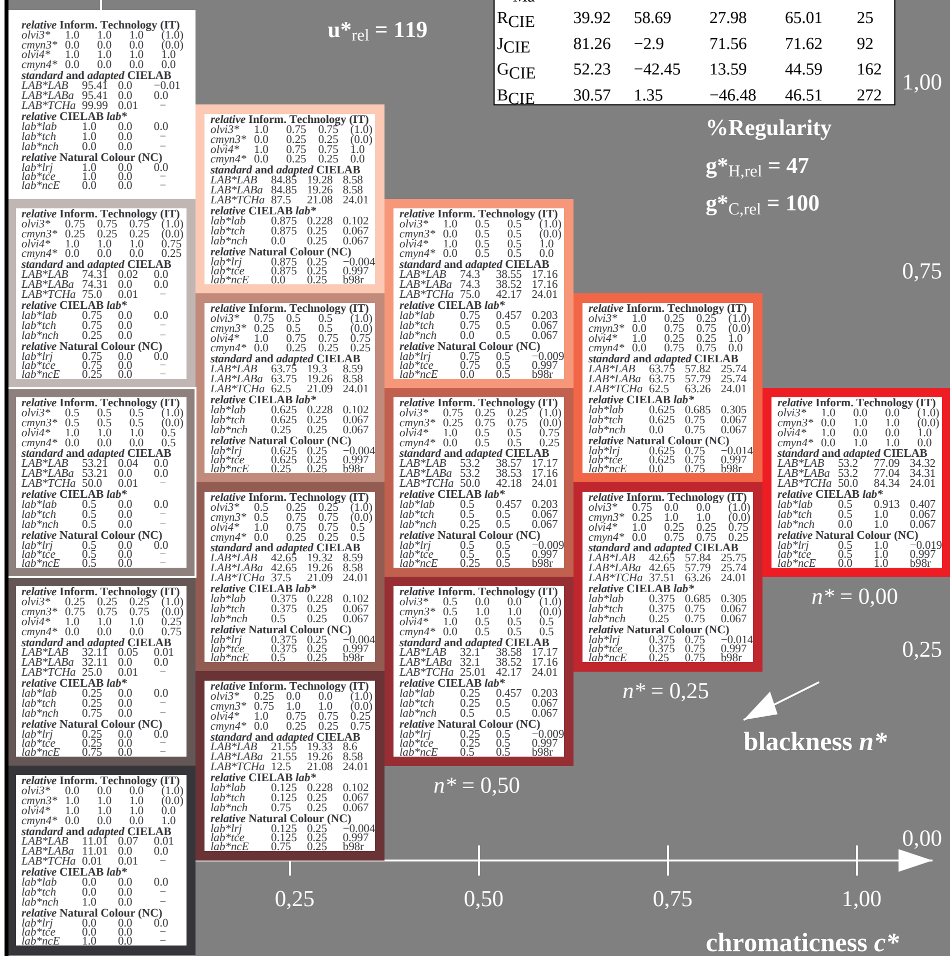
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

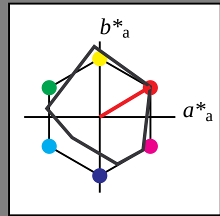
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 31/360 = 0.086$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 78 31
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 92$

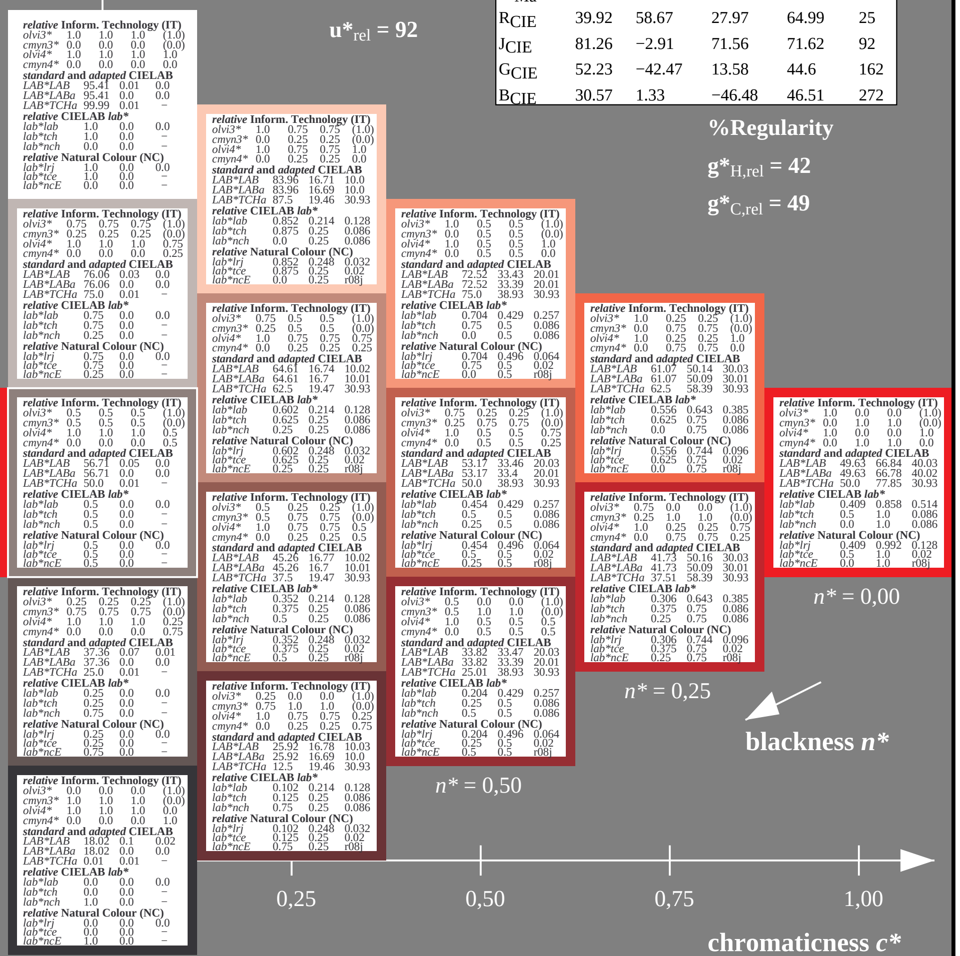
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

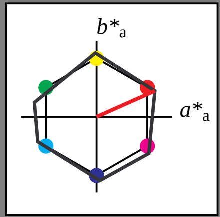


UE500−7, 5 step scales for constant CIELAB hue 24/360 = 0.067 (left)

5 step scales for constant CIELAB hue 31/360 = 0.086 (right)

Input: Colorimetric Reflective System NRS11
for hue *h* = lab*h = 24/360 = 0.067*
lab*tch and lab*nch

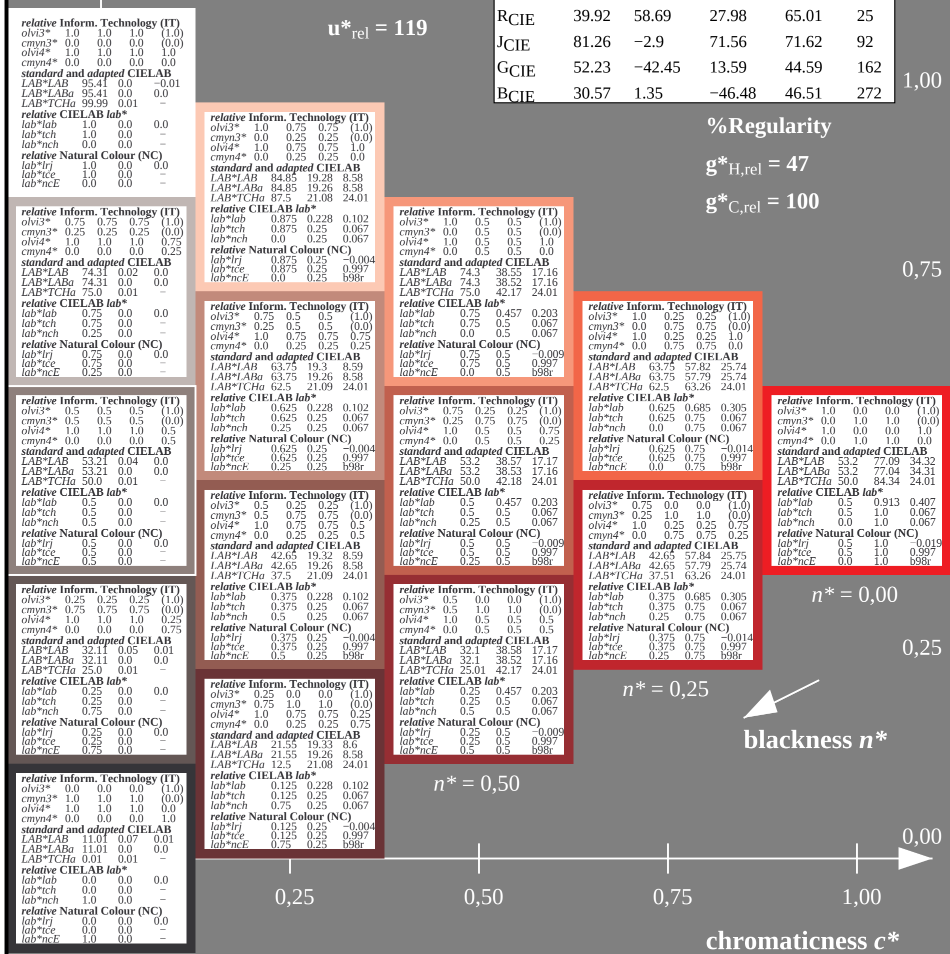
D65: hue R
LCH*Ma: 53 84 24
rgb*Ma: 1.0 0.0 0.0
triangle lightness *t**



%Gamut
u*rel = 119

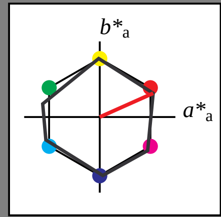
NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
g*H,rel = 47
g*C,rel = 100



Output: Colorimetric Reflective System NRS18
for hue *h* = lab*h = 24/360 = 0.067*
lab*tch and lab*nch

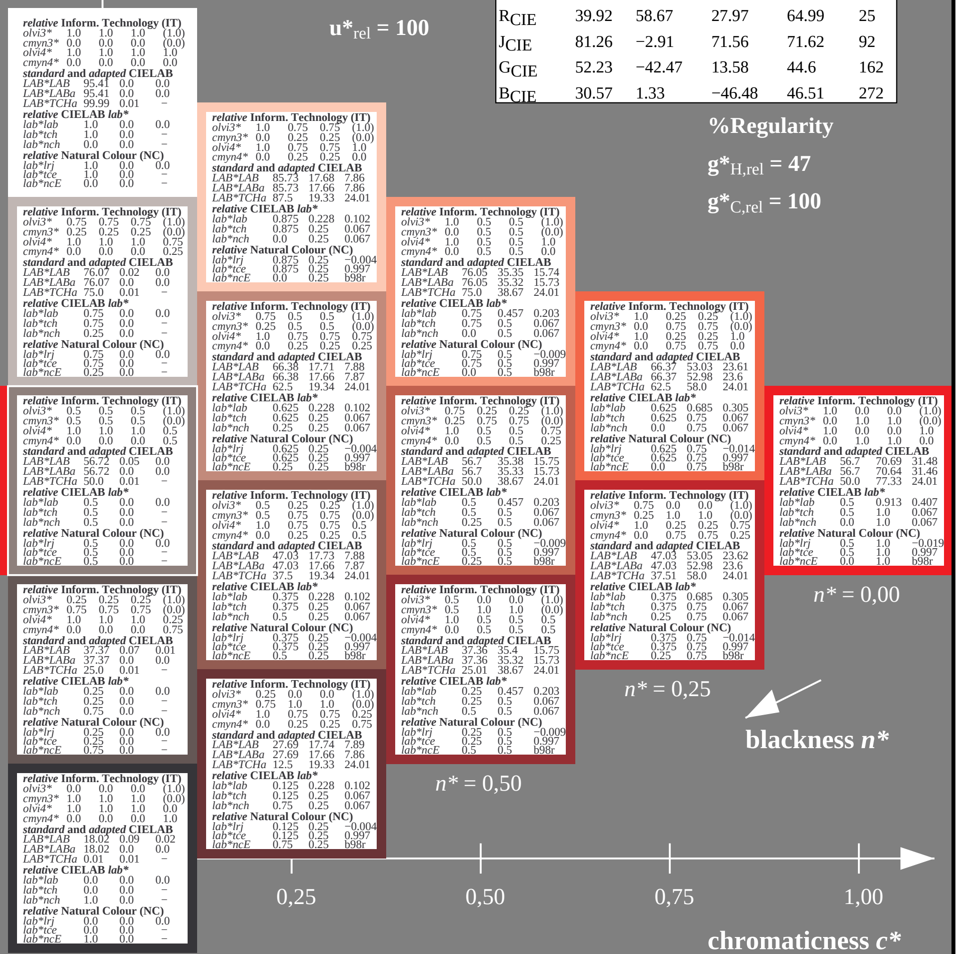
D65: hue R
LCH*Ma: 57 77 24
rgb*Ma: 1.0 0.0 0.0
triangle lightness *t**



%Gamut
u*rel = 100

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
g*H,rel = 47
g*C,rel = 100



UE500−7, 5 step scales for constant CIELAB hue 24/360 = 0.067 (left)

5 step scales for constant CIELAB hue 24/360 = 0.067 (right)

Input: Colorimetric Reflective System NRS11

for hue $h^* = lab^*h = 24/360 = 0.067$

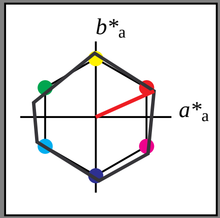
*lab*tch and lab*nch*

D65: hue R

LCH*Ma: 53 84 24

rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 119$

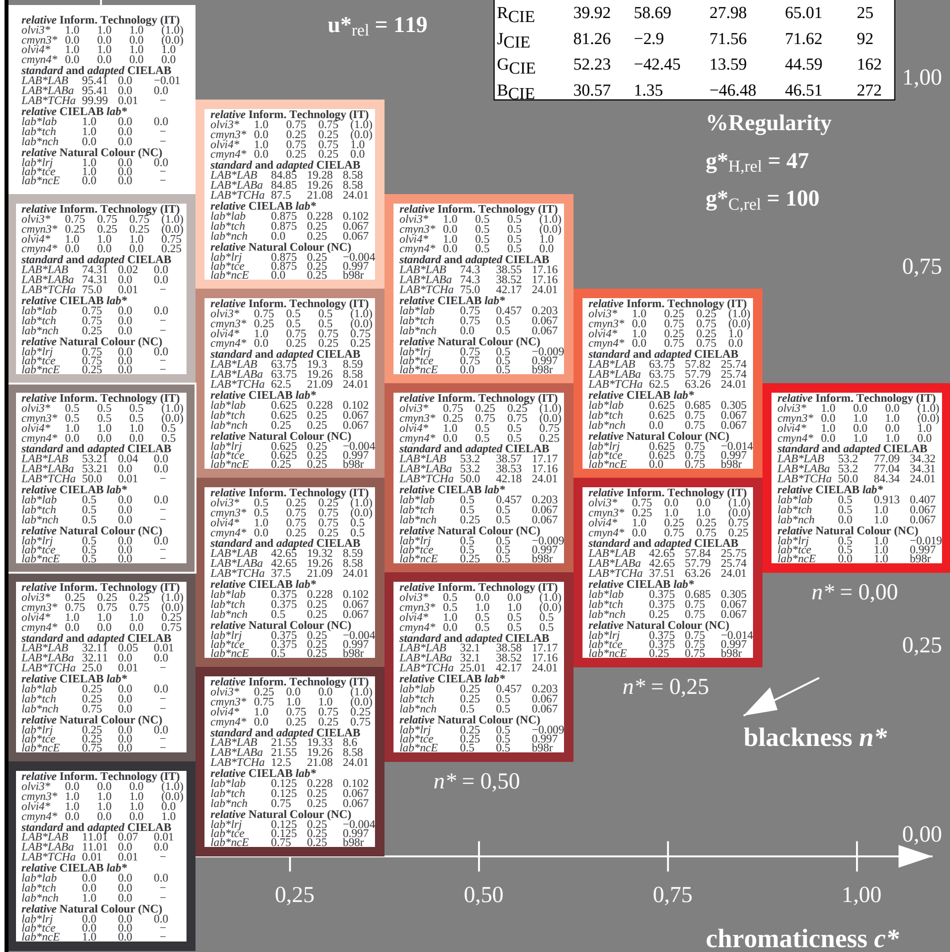
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System NCS18

for hue $h^* = lab^*h = 24/360 = 0.066$

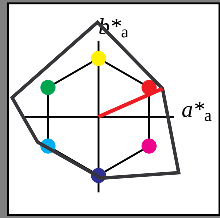
*lab*tch and lab*nch*

D65: hue R

LCH*Ma: 47 92 24

rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 136$

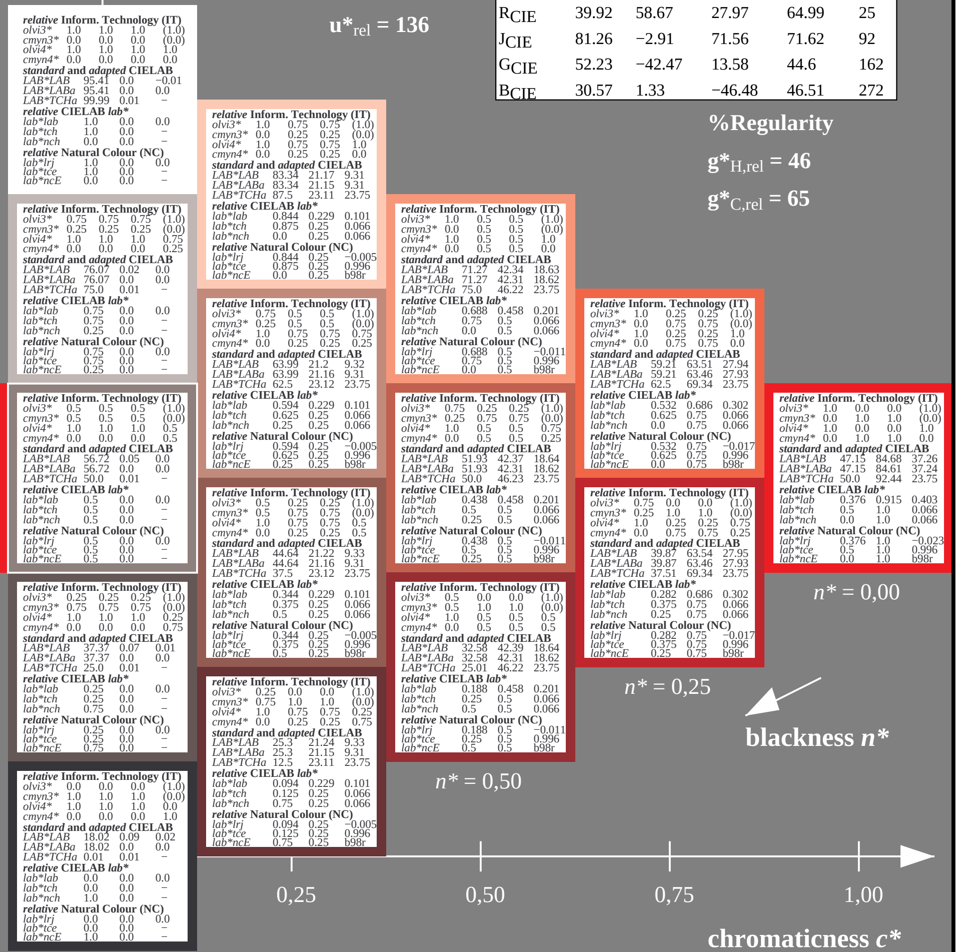
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



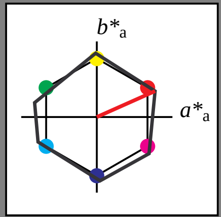
UE500−7, 5 step scales for constant CIELAB hue 24/360 = 0.067 (left)

5 step scales for constant CIELAB hue 24/360 = 0.066 (right)

Input: Colorimetric Reflective System NRS11
for hue *h* = lab*h = 24/360 = 0.067*
lab*tch and lab*nch

D65: hue R
LCH*Ma: 53 84 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness *t**



%Gamut

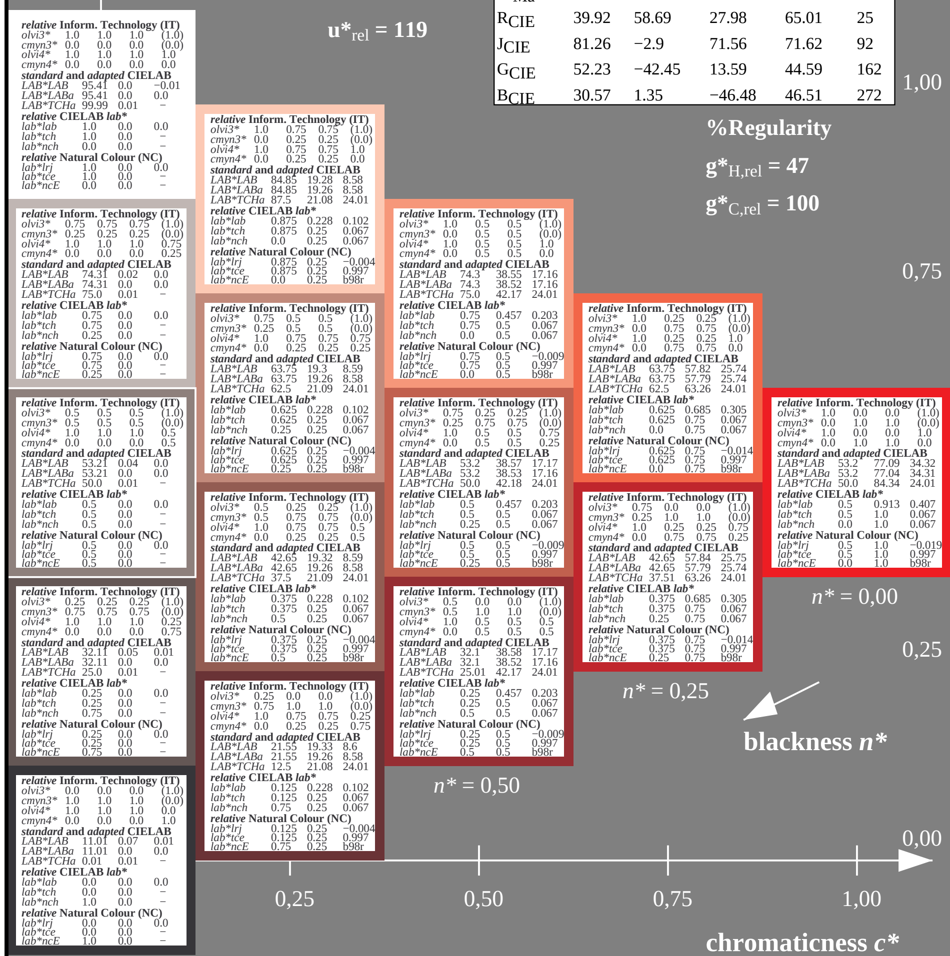
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

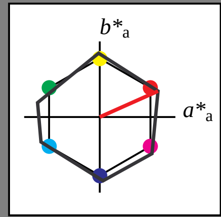
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NRS11
for hue *h* = lab*h = 24/360 = 0.067*
lab*tch and lab*nch

D65: hue R
LCH*Ma: 53 84 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness *t**



%Gamut

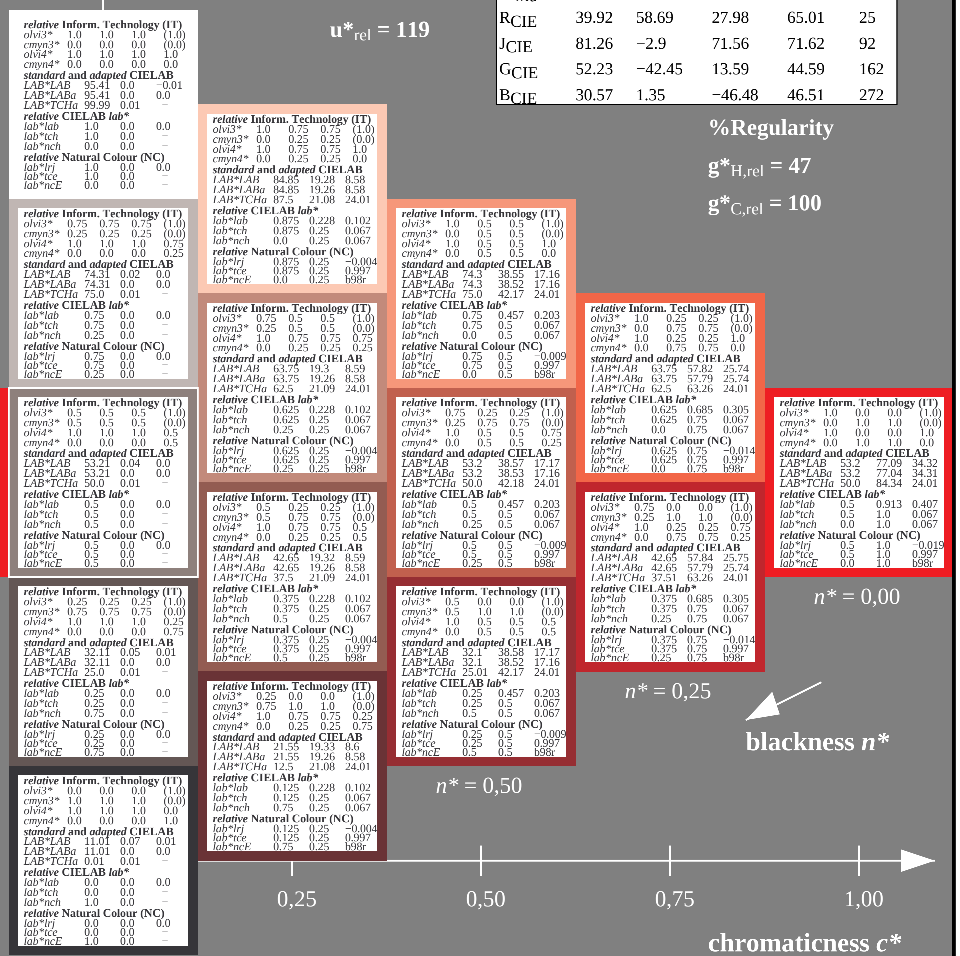
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



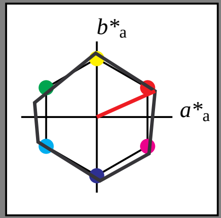
UE500−7, 5 step scales for constant CIELAB hue 24/360 = 0.067 (left)

5 step scales for constant CIELAB hue 24/360 = 0.067 (right)

Input: Colorimetric Reflective System NRS11
for hue *h* = lab*h = 24/360 = 0.067*
*lab*tch and lab*nch*

D65: hue R
LCH*Ma: 53 84 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness *t*

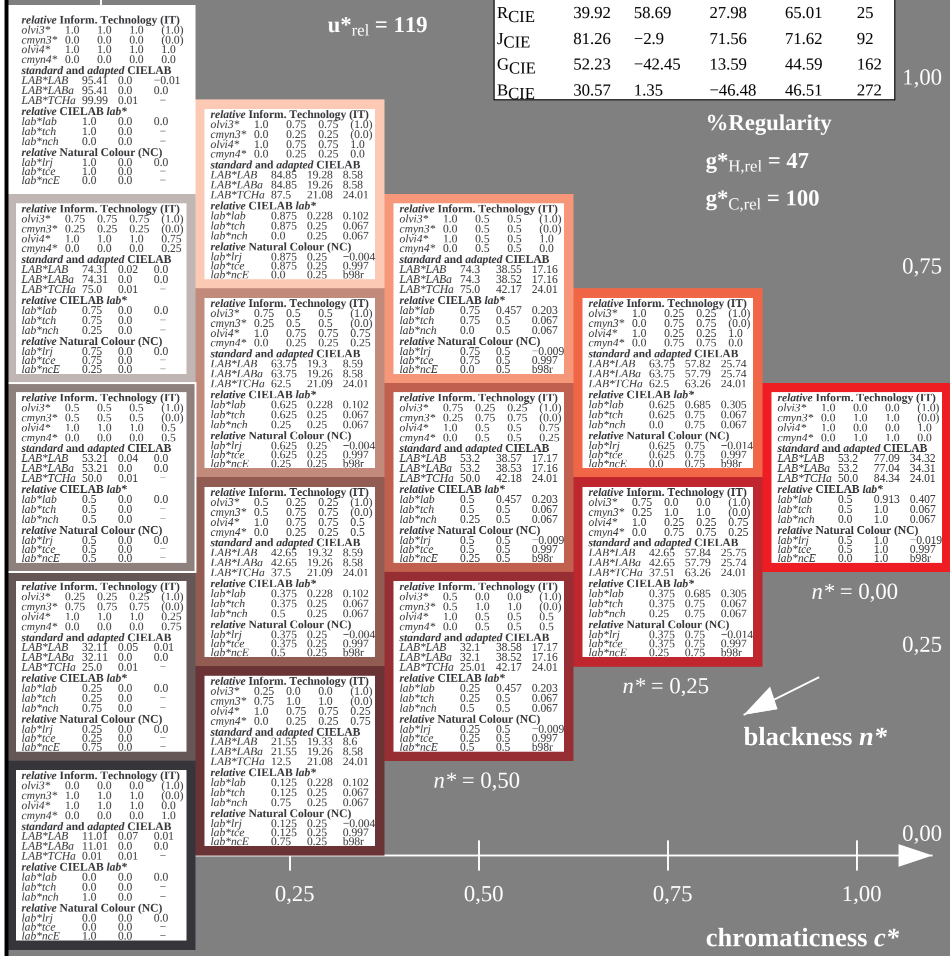


%Gamut
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

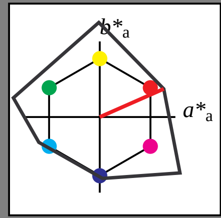
%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NCS11
for hue *h* = lab*h = 24/360 = 0.066*
*lab*tch and lab*nch*

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness *t*

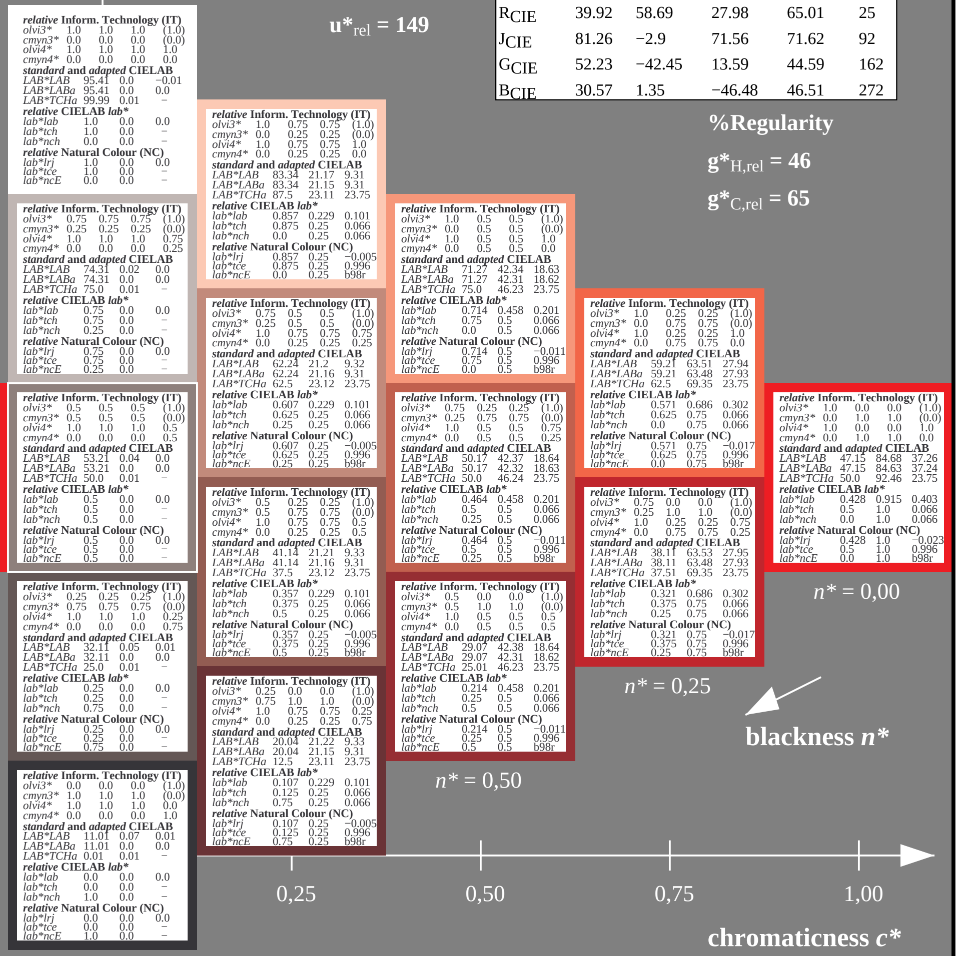


%Gamut
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



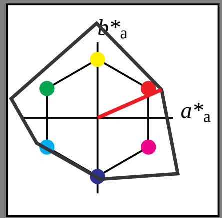
UE500−7, 5 step scales for constant CIELAB hue 24/360 = 0.067 (left)

5 step scales for constant CIELAB hue 24/360 = 0.066 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 24/360 = 0.066$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 149

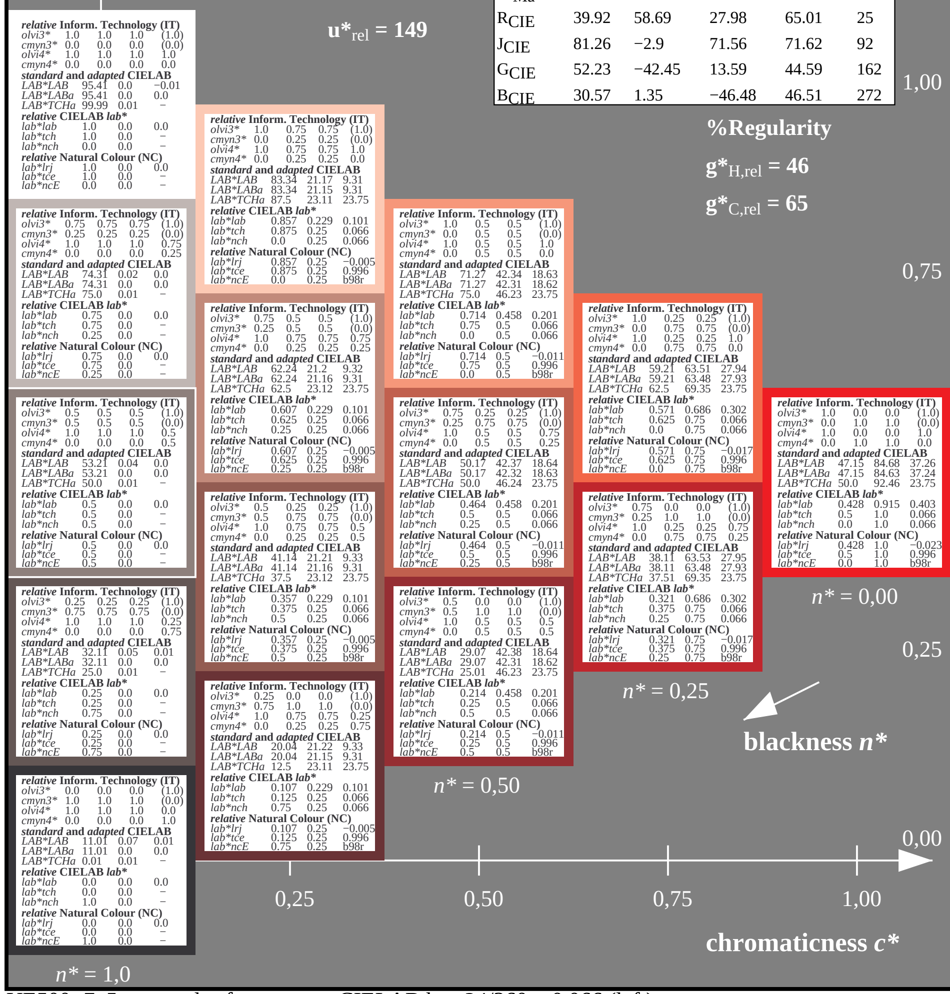
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

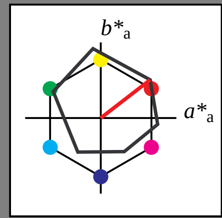
$g^*_{C,rel}$ = 65



Output: 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
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 93

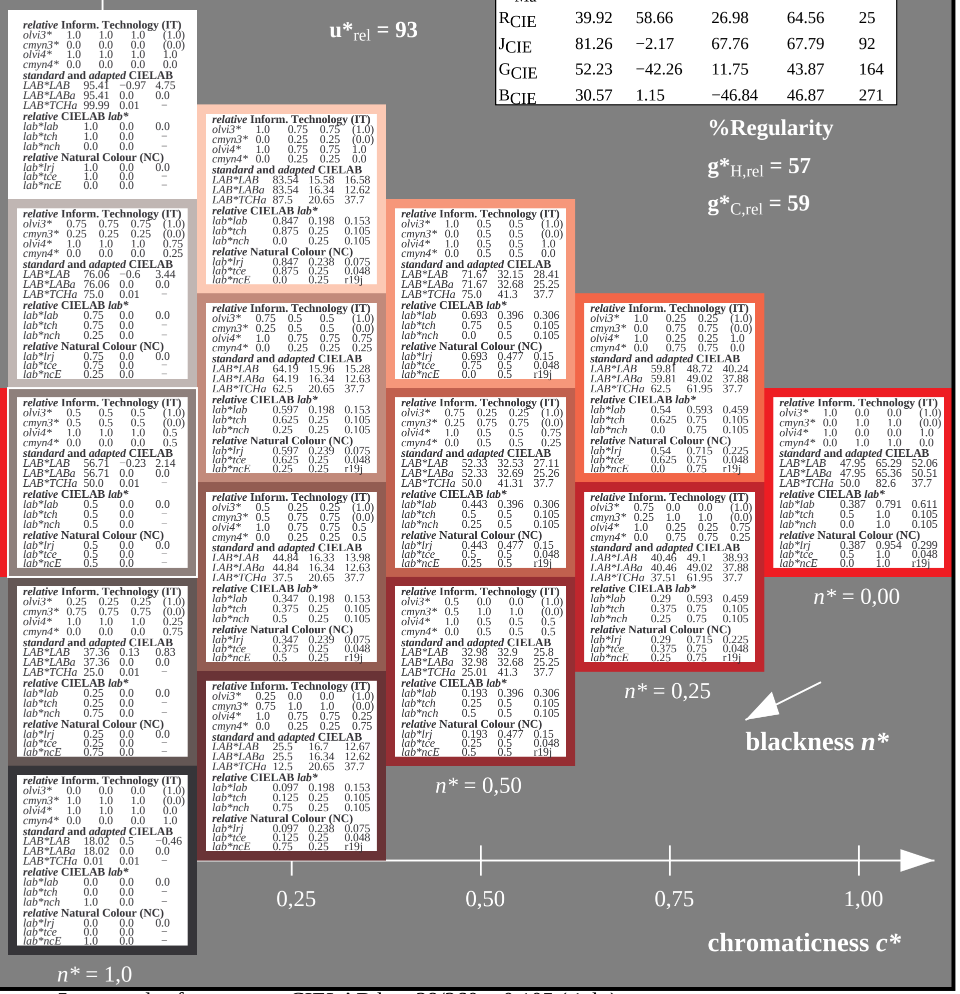
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



UE500−7, 5 step scales for constant CIELAB hue 24/360 = 0.066 (left)

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

Input: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 24/360 = 0.066$

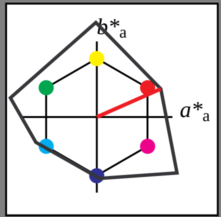
lab^*tch and lab^*nch

D65: hue R

LCH*Ma: 47 92 24

rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 149

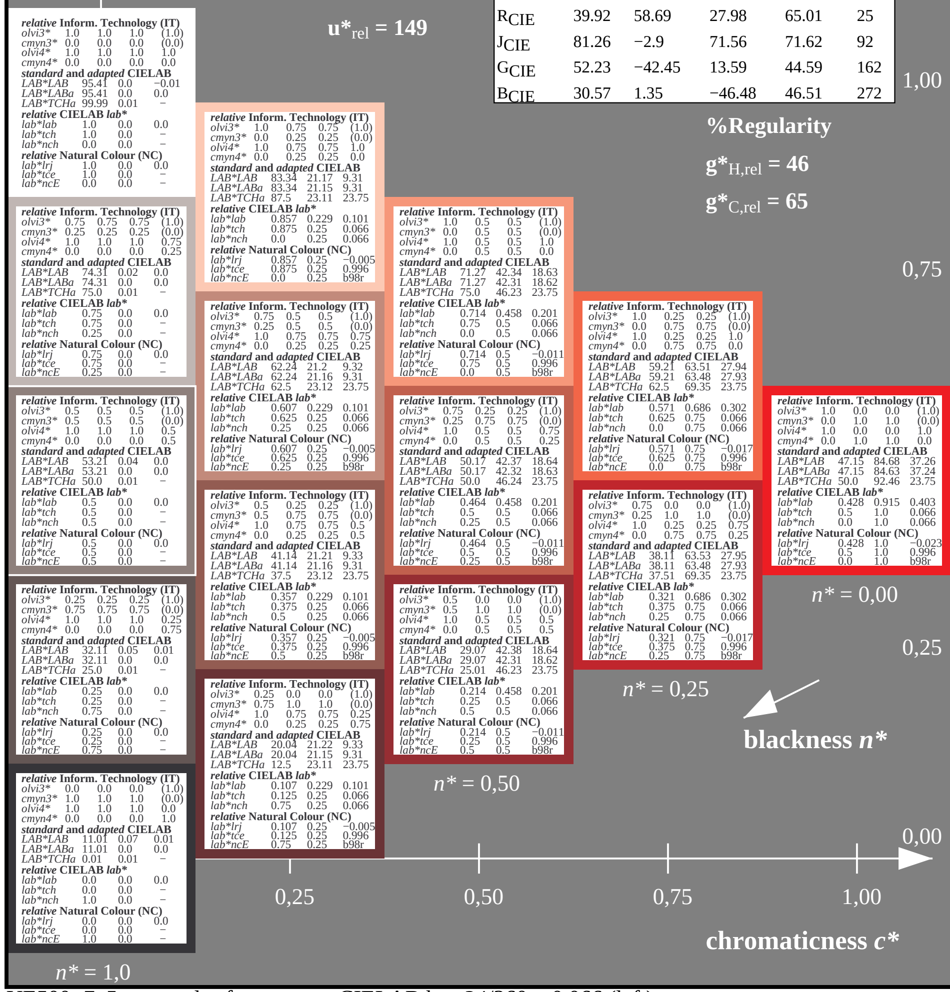
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System MRS18

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

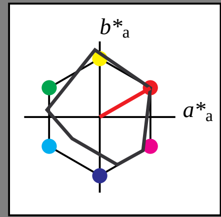
lab^*tch and lab^*nch

D65: hue R

LCH*Ma: 50 77 30

rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 91

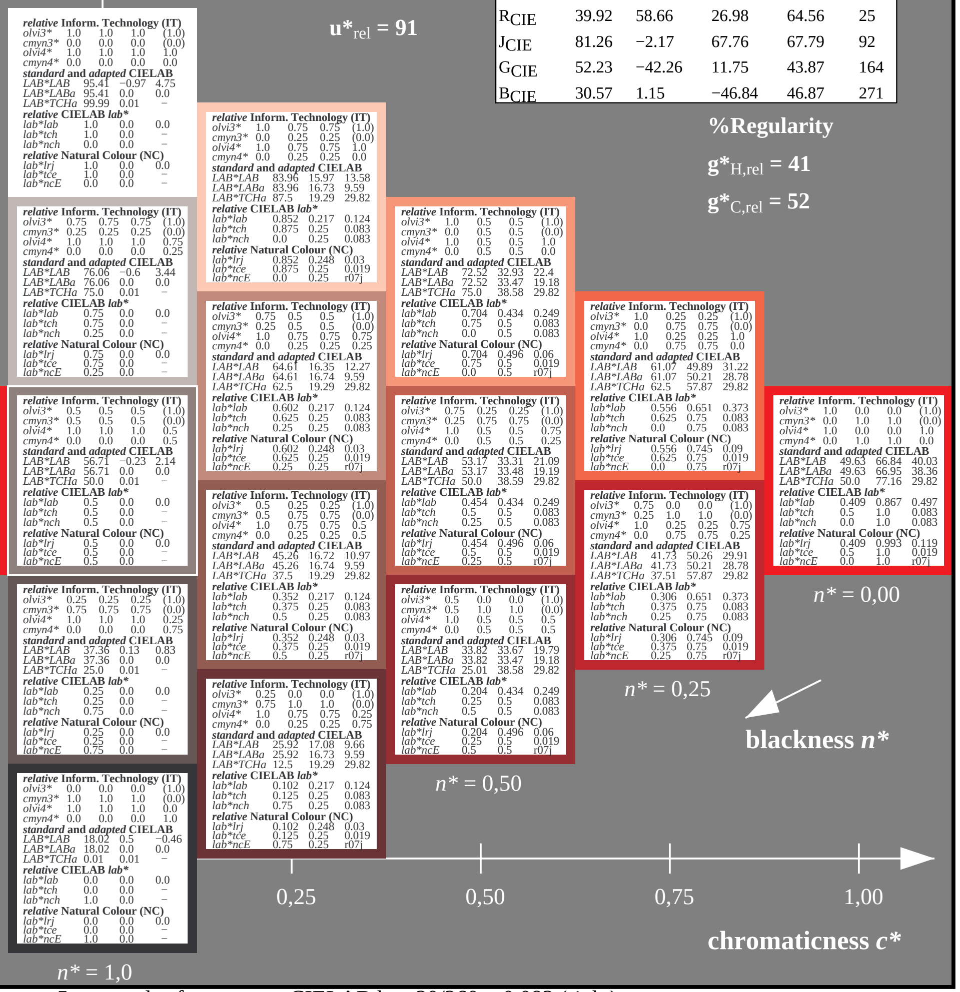
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



UE500−7, 5 step scales for constant CIELAB hue 24/360 = 0.066 (left)

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

Input: Colorimetric Reflective System NCS11

for hue *h = *lab*h* = 24/360 = 0.066**

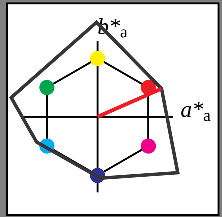
lab*tch* and *lab*nch

D65: hue R

LCH*Ma: 47 92 24

rgb*Ma: 1.0 0.0 0.0

triangle lightness *t**



%Gamut

u^*_{rel} = 149

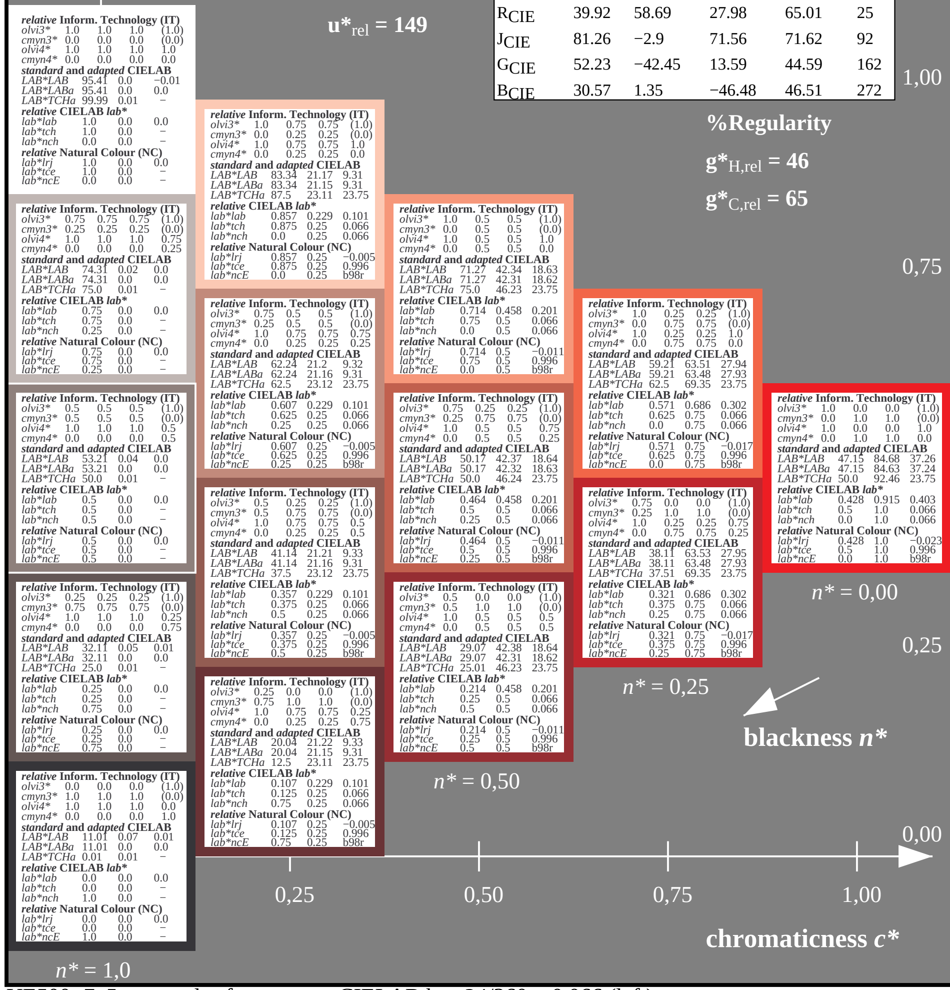
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System TRS18

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

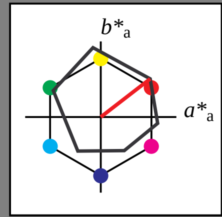
lab*tch* and *lab*nch

D65: hue O

LCH*Ma: 48 83 38

rgb*Ma: 1.0 0.0 0.0

triangle lightness *t**



%Gamut

u^*_{rel} = 93

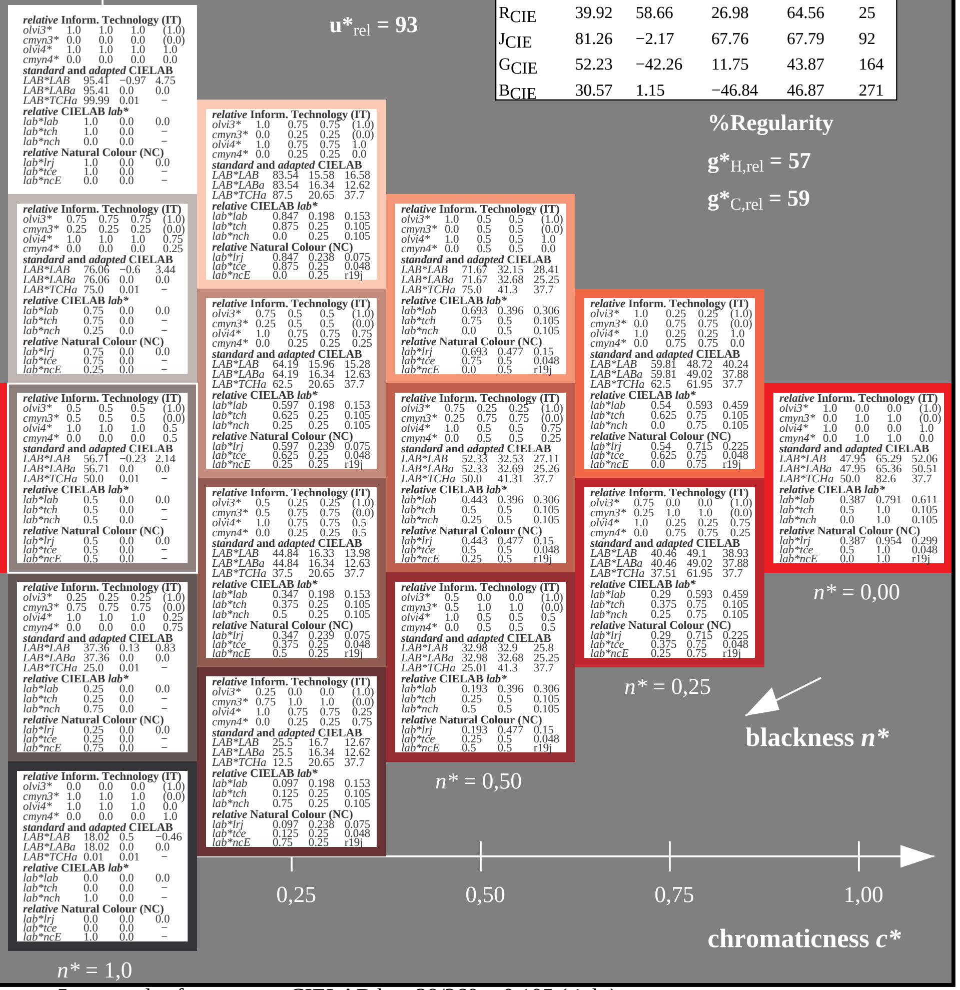
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



UE500−7, 5 step scales for constant CIELAB hue 24/360 = 0.066 (left)

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

Input: Colorimetric Reflective System NCS11

for hue *h* = lab*h = 24/360 = 0.066*

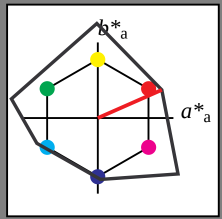
*lab*tch and lab*nch*

D65: hue R

LCH*Ma: 47 92 24

rgb*Ma: 1.0 0.0 0.0

triangle lightness *t*



%Gamut

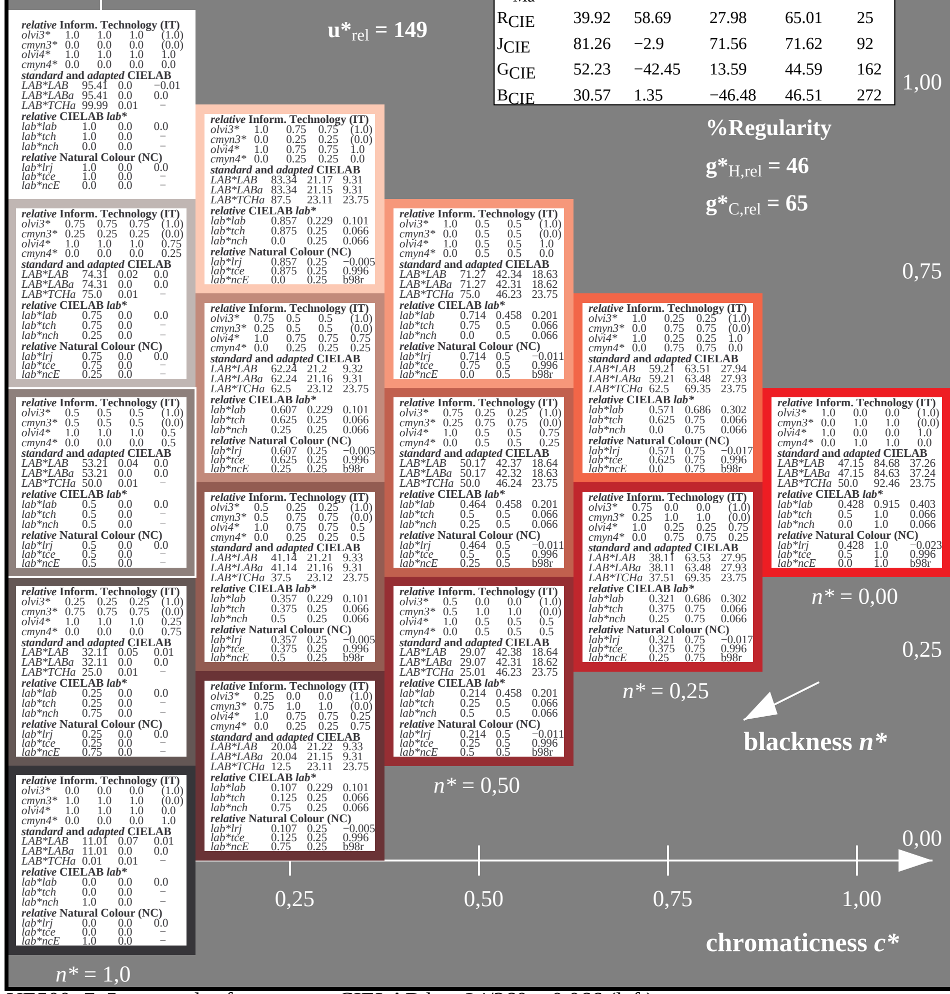
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System MRS18a

for hue *h* = lab*h = 31/360 = 0.086*

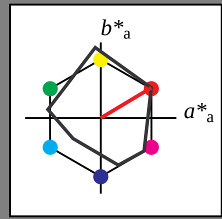
*lab*tch and lab*nch*

D65: hue R

LCH*Ma: 50 78 31

rgb*Ma: 1.0 0.0 0.0

triangle lightness *t*



%Gamut

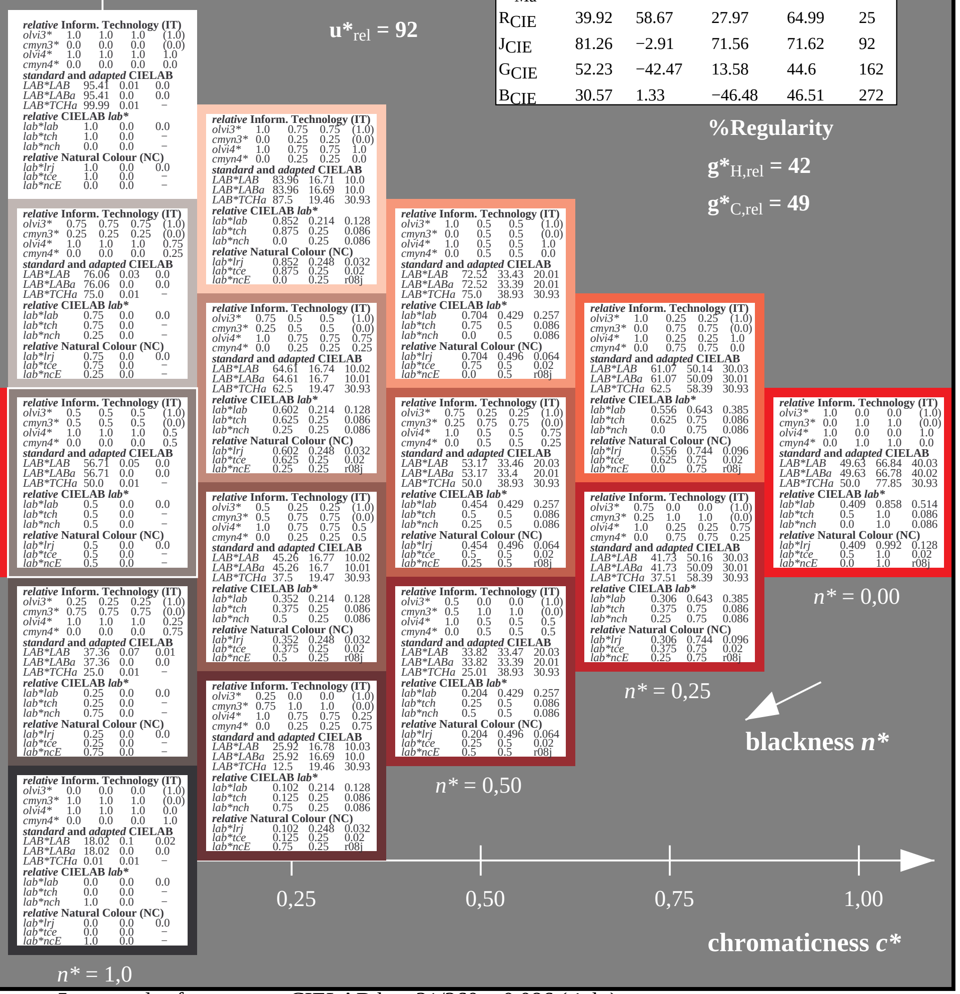
u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



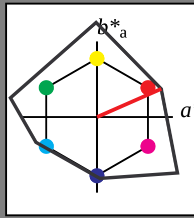
UE500−7, 5 step scales for constant CIELAB hue 24/360 = 0.066 (left)

5 step scales for constant CIELAB hue 31/360 = 0.086 (right)

Input: Colorimetric Reflective System NCS11
for hue h* = lab*h = 24/360 = 0.066
lab*tch and lab*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness *t**



%Gamut

u*rel = 149

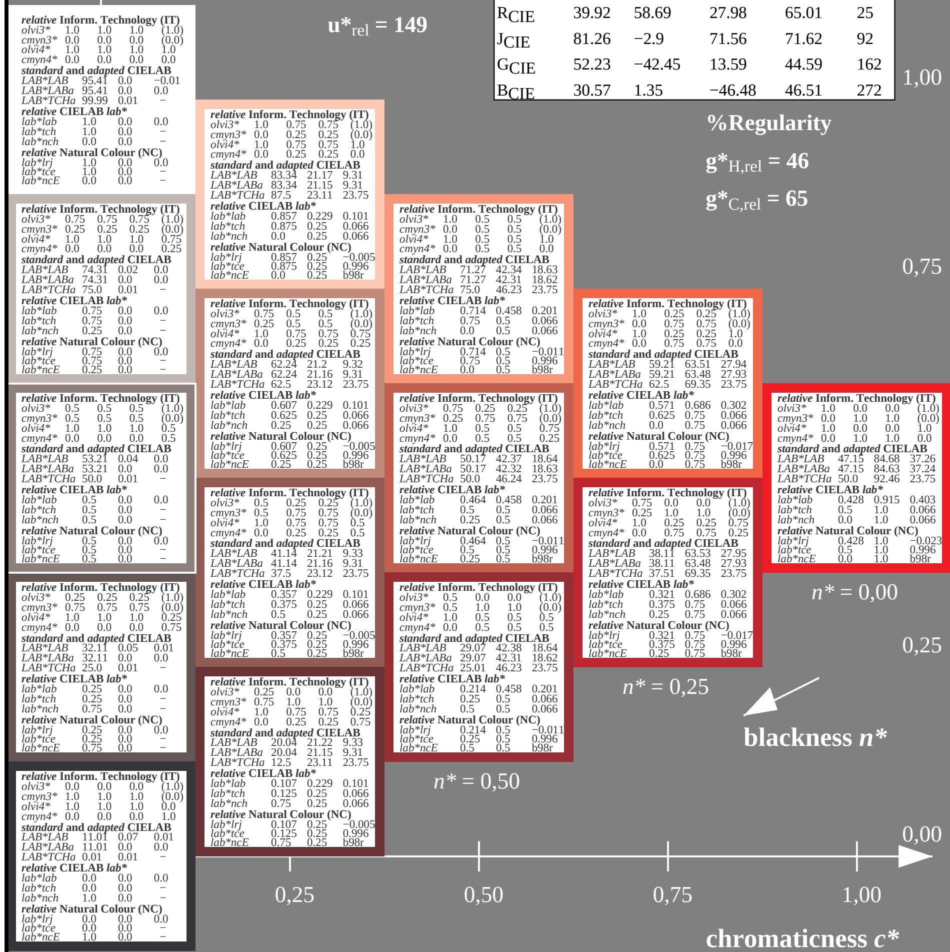
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

g*H,rel = 46

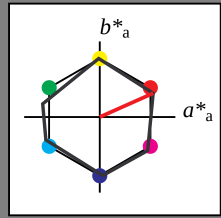
g*C,rel = 65



Output: Colorimetric Reflective System NRS18
for hue h* = lab*h = 24/360 = 0.067
lab*tch and lab*nch

D65: hue R
LCH*Ma: 57 77 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness *t**



%Gamut

u*rel = 100

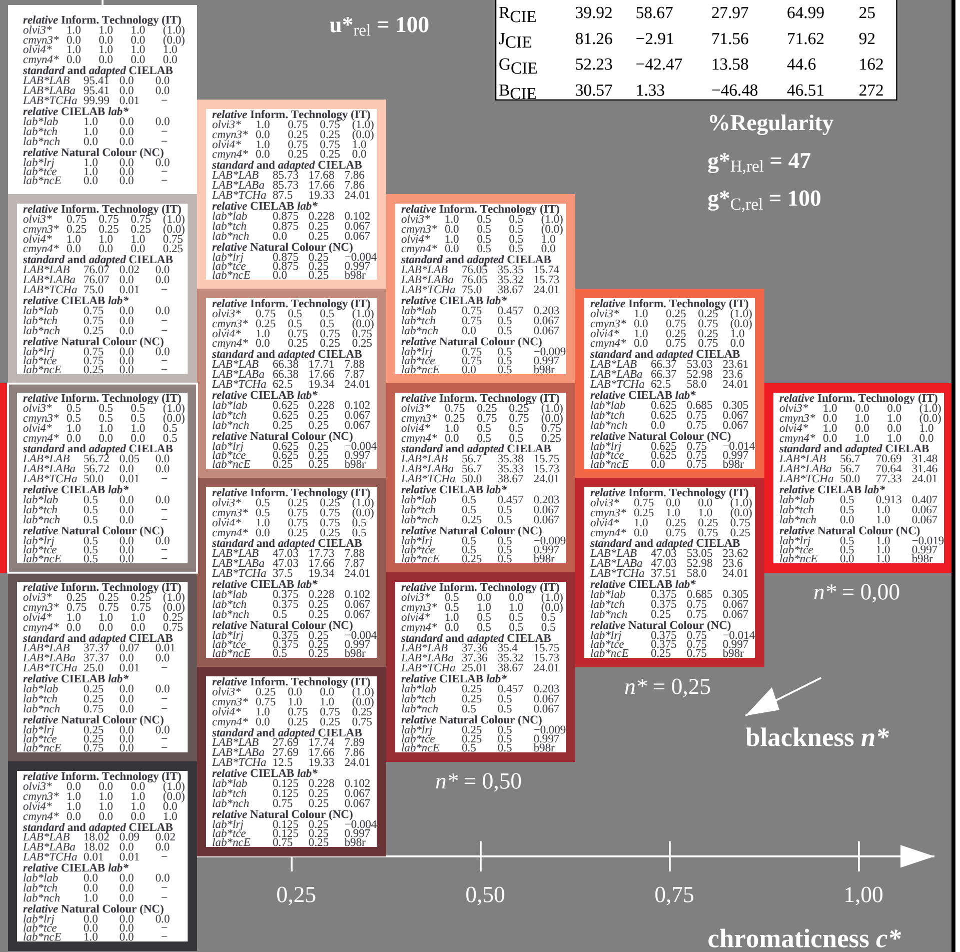
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

g*H,rel = 47

g*C,rel = 100



UE500−7, 5 step scales for constant CIELAB hue 24/360 = 0.066 (left)

5 step scales for constant CIELAB hue 24/360 = 0.067 (right)

Input: Colorimetric Reflective System NCS11

for hue *h** = *lab*h* = 24/360 = 0.066

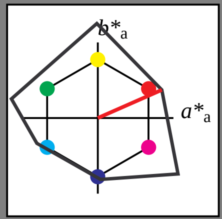
*lab*tch* and *lab*nch*

D65: hue R

LCH*Ma: 47 92 24

rgb*Ma: 1.0 0.0 0.0

triangle lightness *t*



%Gamut

u^*_{rel} = 149

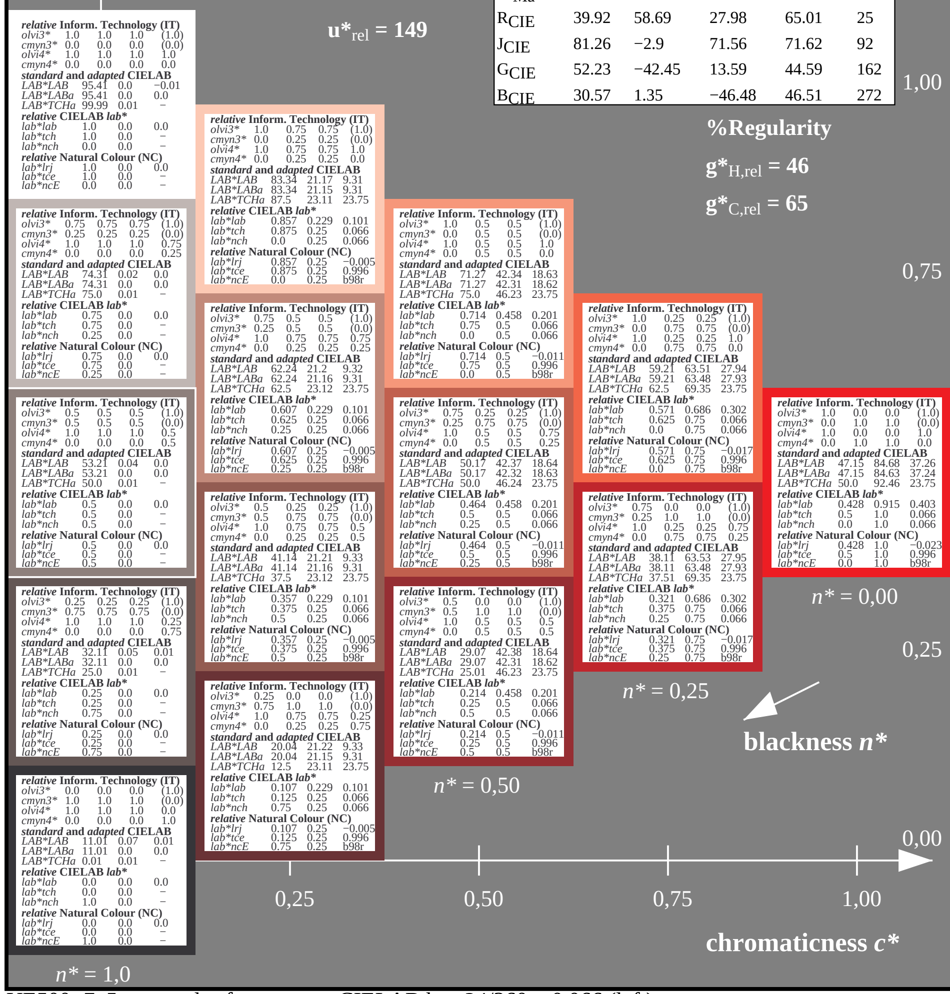
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NCS18

for hue *h** = *lab*h* = 24/360 = 0.066

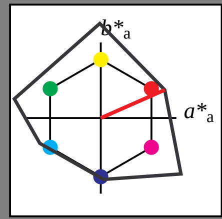
*lab*tch* and *lab*nch*

D65: hue R

LCH*Ma: 47 92 24

rgb*Ma: 1.0 0.0 0.0

triangle lightness *t*



%Gamut

u^*_{rel} = 136

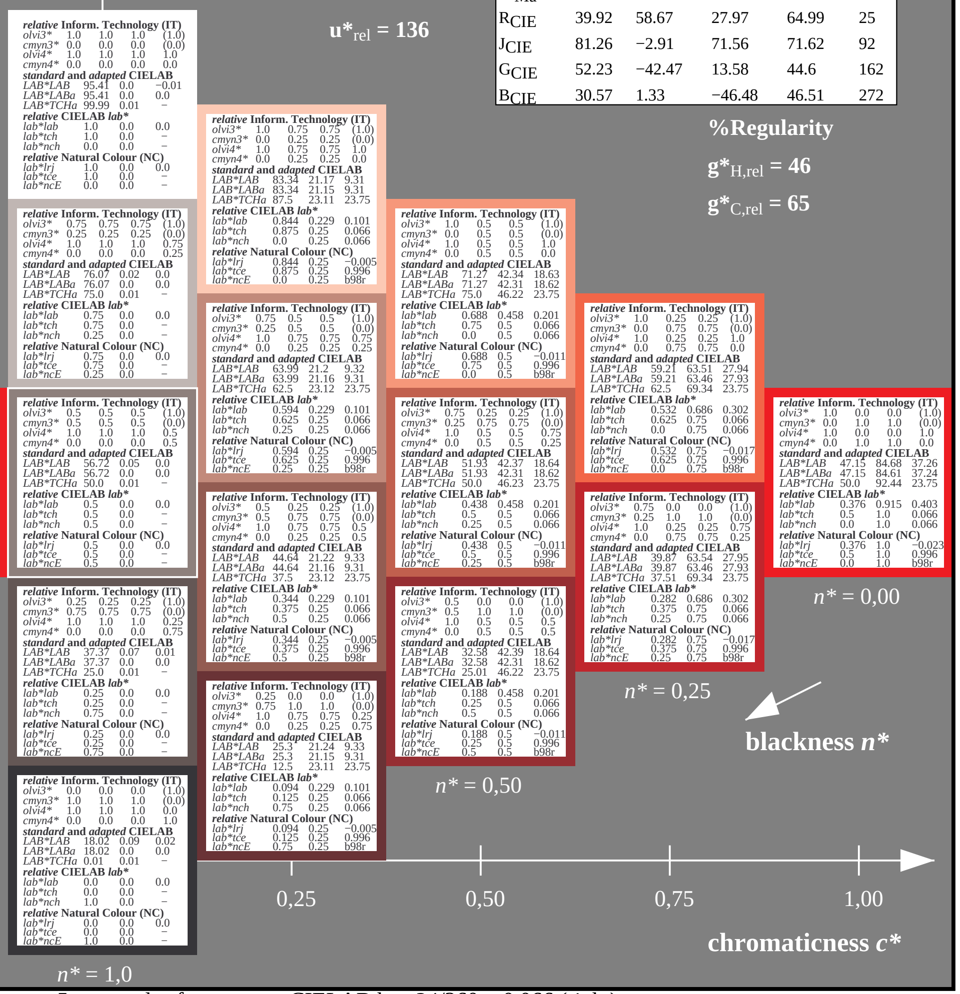
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



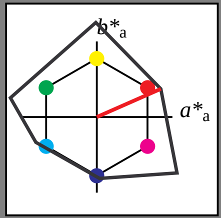
UE500−7, 5 step scales for constant CIELAB hue 24/360 = 0.066 (left)

5 step scales for constant CIELAB hue 24/360 = 0.066 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 24/360 = 0.066$
lab^*tch and lab^*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 149$

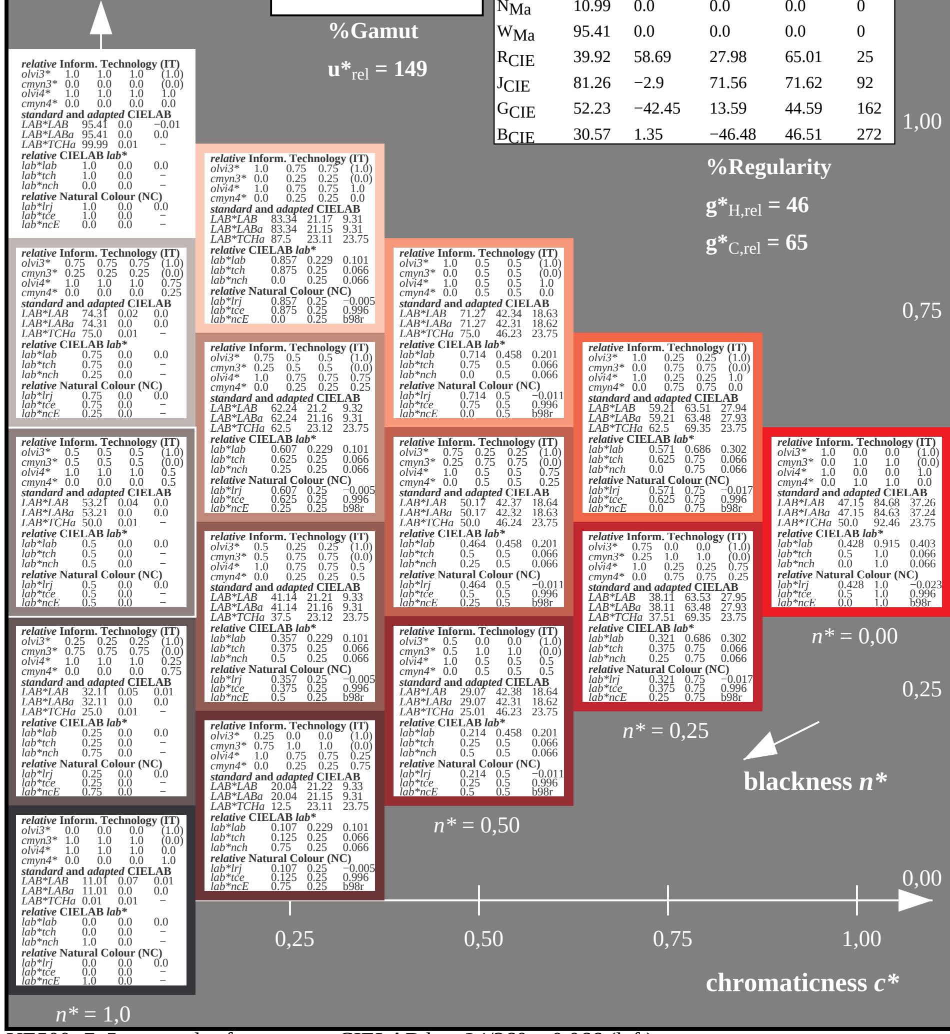
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

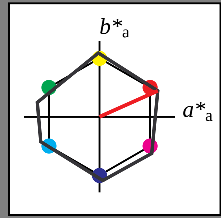
$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 24/360 = 0.067$
lab^*tch and lab^*nch

D65: hue R
LCH*Ma: 53 84 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 119$

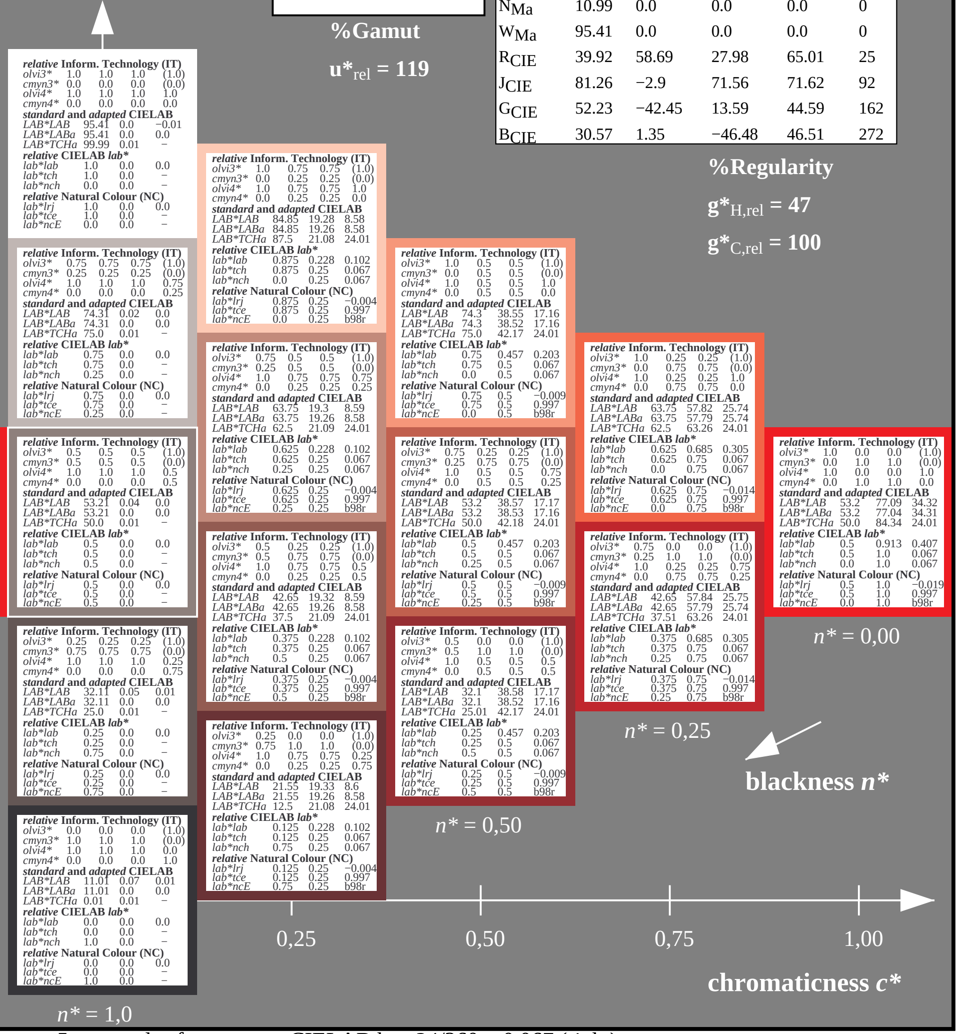
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



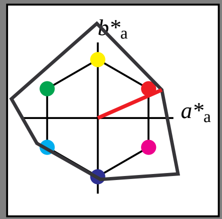
UE500−7, 5 step scales for constant CIELAB hue 24/360 = 0.066 (left)

5 step scales for constant CIELAB hue 24/360 = 0.067 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 24/360 = 0.066$
*lab*tch and lab*nch*

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 149$

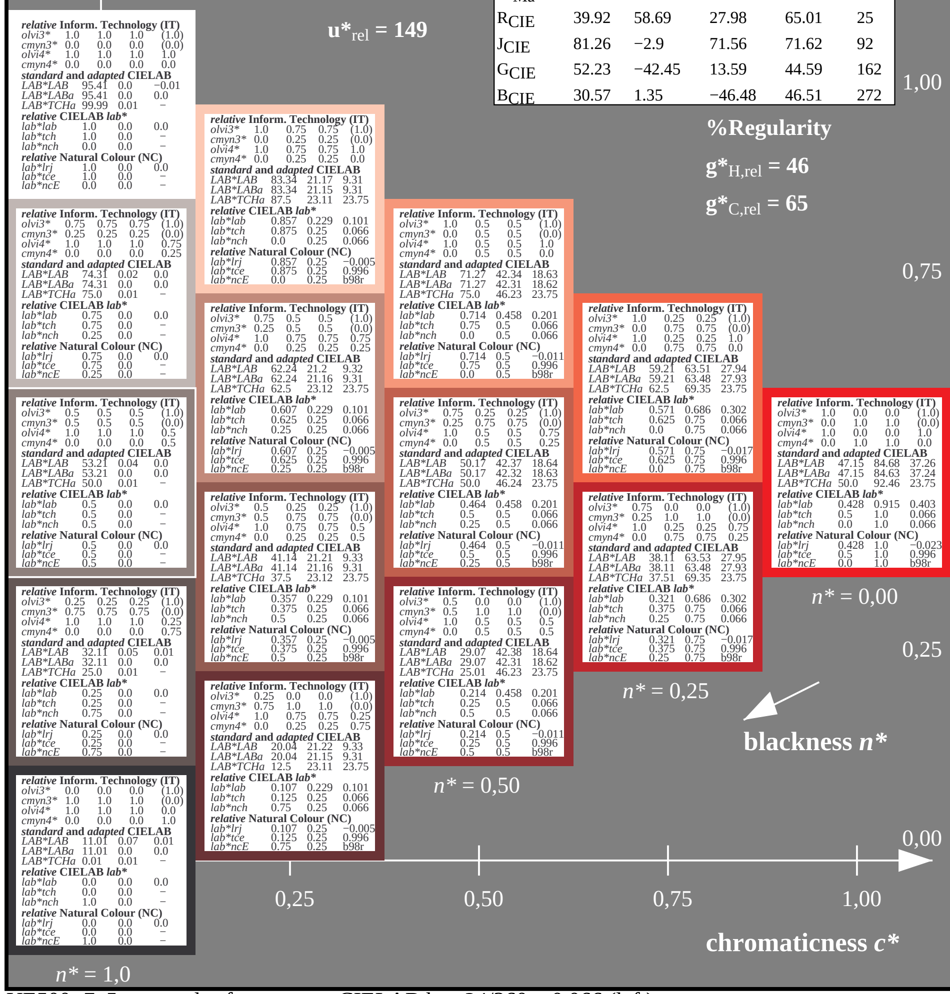
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

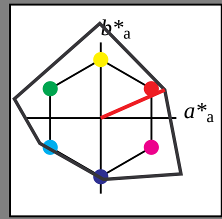
$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 24/360 = 0.066$
*lab*tch and lab*nch*

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 149$

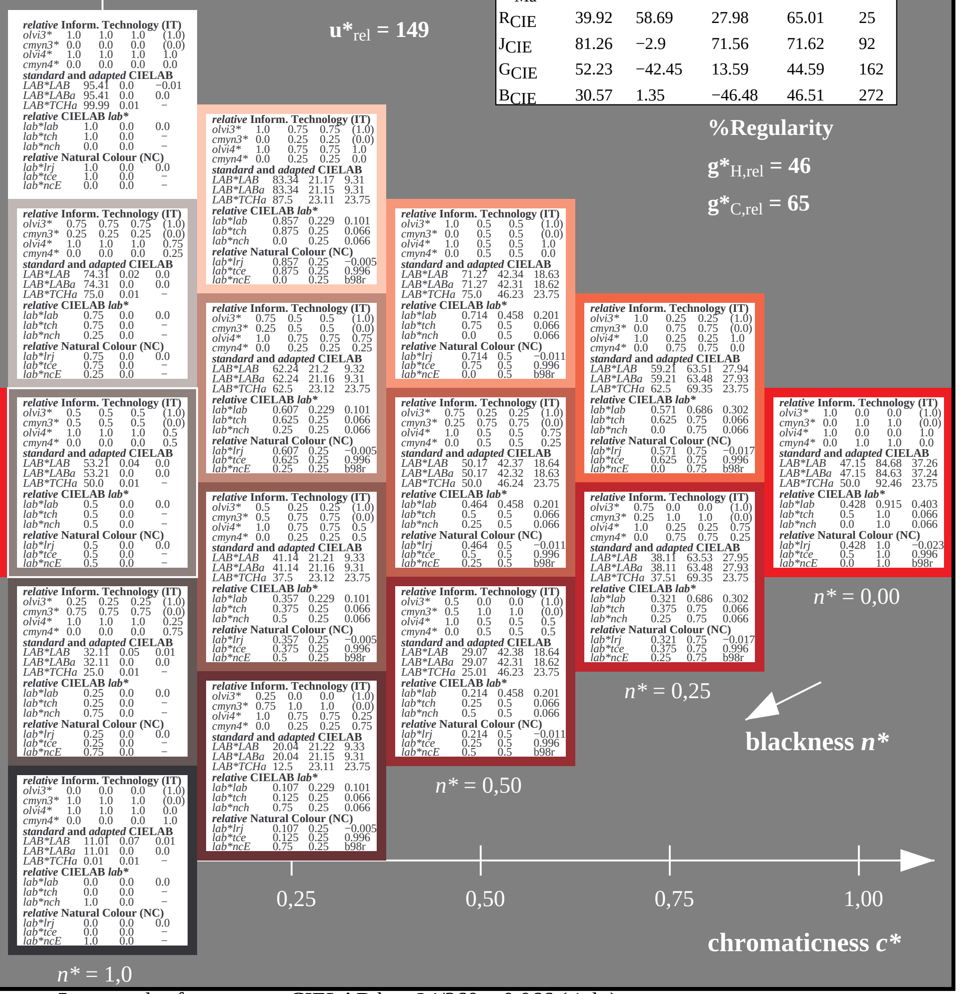
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



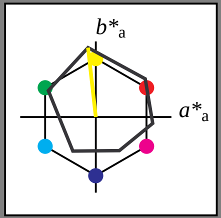
UE500−7, 5 step scales for constant CIELAB hue 24/360 = 0.066 (left)

5 step scales for constant CIELAB hue 24/360 = 0.066 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 96/360 = 0.268$
*lab*tch and lab*nch*

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

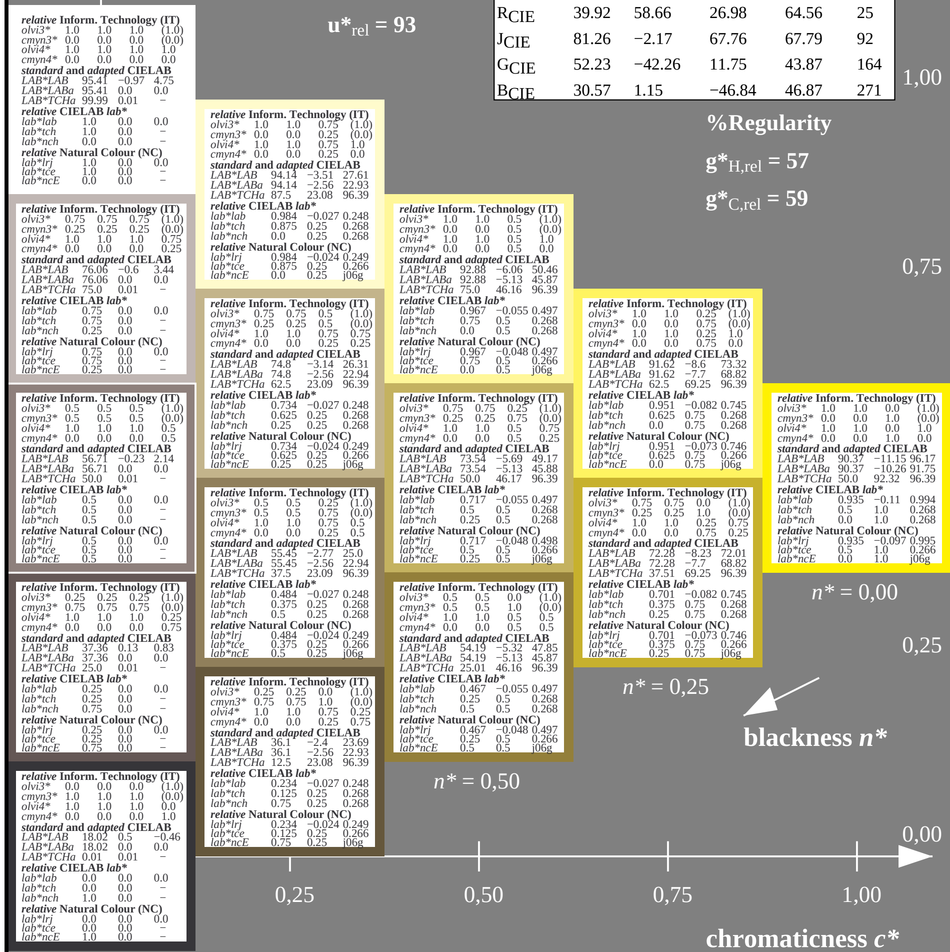
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

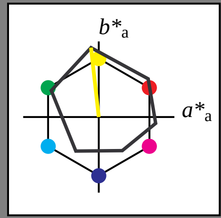
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 96/360 = 0.268$
*lab*tch and lab*nch*

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

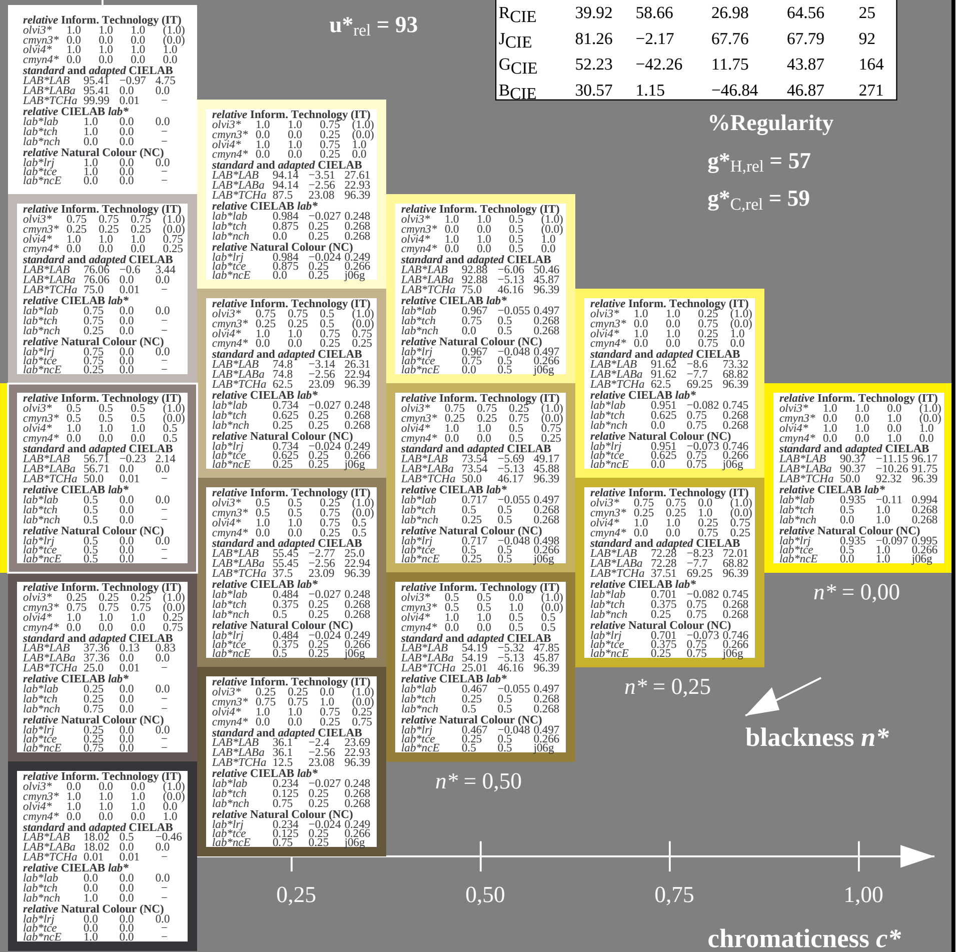
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



UE500−7, 5 step scales for constant CIELAB hue 96/360 = 0.268 (left)

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

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 96/360 = 0.268$

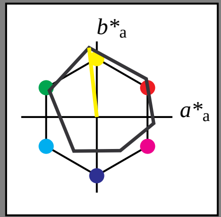
lab*tch and lab*nch

D65: hue Y

LCH*Ma: 90 92 96

rgb*Ma: 1.0 1.0 0.0

triangle lightness *t*



%Gamut

$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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

1,00

0,75

0,50

0,25

0,00

relative Inform. Technology (IT)
olvi3* 1.0 1.0 1.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 1.0 1.0 1.0
cmyn4* 0.0 0.0 0.0 0.0
standard and adapted CIELAB
LAB*LAB 95.41 −0.97 4.75
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* 1.0 1.0 0.75 (1.0)
cmyn3* 0.0 0.0 0.25 (0.0)
olvi4* 1.0 1.0 0.75 1.0
cmyn4* 0.0 0.0 0.25 0.0
standard and adapted CIELAB
LAB*LAB 94.14 −3.51 27.61
LAB*LABa 94.14 −2.56 22.93
LAB*TCHa 87.5 23.08 96.39
relative CIELAB lab*
lab*lab 0.984 −0.027 0.248
lab*tch 0.875 0.25 0.268
lab*nch 0.0 0.25 0.268
relative Natural Colour (NC)
lab*lrj 0.984 −0.024 0.249
lab*tce 0.875 0.25 0.266
lab*ncE 0.0 0.25 j06g

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.75 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 1.0 1.0 1.0 0.75
cmyn4* 0.0 0.0 0.0 0.25
standard and adapted CIELAB
LAB*LAB 76.06 −0.6 3.44
LAB*LABa 76.06 0.0 0.0
LAB*TCHa 75.0 0.01 −
relative CIELAB lab*
lab*lab 0.75 0.0 0.0
lab*tch 0.75 0.0 −
lab*nch 0.25 0.0 −
relative Natural Colour (NC)
lab*lrj 0.75 0.0 0.0
lab*tce 0.75 0.0 −
lab*ncE 0.25 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 92.88 −6.06 50.46
LAB*LABa 92.88 −5.13 45.87
LAB*TCHa 75.0 46.16 96.39
relative CIELAB lab*
lab*lab 0.967 −0.055 0.497
lab*tch 0.75 0.5 0.268
lab*nch 0.0 0.5 0.268
relative Natural Colour (NC)
lab*lrj 0.967 −0.048 0.497
lab*tce 0.75 0.5 0.266
lab*ncE 0.0 0.5 j06g

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.5 (1.0)
cmyn3* 0.25 0.25 0.5 (0.0)
olvi4* 1.0 1.0 0.75 0.75
cmyn4* 0.0 0.0 0.25 0.25
standard and adapted CIELAB
LAB*LAB 74.8 −3.14 26.31
LAB*LABa 74.8 −2.56 22.94
LAB*TCHa 62.5 23.09 96.39
relative CIELAB lab*
lab*lab 0.734 −0.027 0.248
lab*tch 0.625 0.25 0.268
lab*nch 0.25 0.25 0.268
relative Natural Colour (NC)
lab*lrj 0.734 −0.024 0.249
lab*tce 0.625 0.25 0.266
lab*ncE 0.25 0.25 j06g

relative Inform. Technology (IT)
olvi3* 1.0 1.0 0.25 (1.0)
cmyn3* 0.0 0.0 0.75 (0.0)
olvi4* 1.0 1.0 0.25 1.0
cmyn4* 0.0 0.0 0.75 0.0
standard and adapted CIELAB
LAB*LAB 91.62 −8.6 73.32
LAB*LABa 91.62 −7.7 68.82
LAB*TCHa 62.5 69.25 96.39
relative CIELAB lab*
lab*lab 0.951 −0.082 0.745
lab*tch 0.625 0.75 0.268
lab*nch 0.0 0.75 0.268
relative Natural Colour (NC)
lab*lrj 0.951 −0.073 0.746
lab*tce 0.625 0.75 0.266
lab*ncE 0.0 0.75 j06g

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*LABa 56.71 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* 0.75 0.75 0.25 (1.0)
cmyn3* 0.25 0.25 0.75 (0.0)
olvi4* 1.0 1.0 0.5 0.75
cmyn4* 0.0 0.0 0.5 0.25
standard and adapted CIELAB
LAB*LAB 73.54 −5.69 49.17
LAB*LABa 73.54 −5.13 45.88
LAB*TCHa 50.0 46.17 96.39
relative CIELAB lab*
lab*lab 0.717 −0.055 0.497
lab*tch 0.5 0.5 0.268
lab*nch 0.25 0.5 0.268
relative Natural Colour (NC)
lab*lrj 0.717 −0.048 0.498
lab*tce 0.5 0.5 0.266
lab*ncE 0.25 0.5 j06g

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 1.0 0.0
standard and adapted CIELAB
LAB*LAB 90.37 −11.15 96.17
LAB*LABa 90.37 −10.26 91.75
LAB*TCHa 50.0 92.32 96.39
relative CIELAB lab*
lab*lab 0.935 −0.11 0.994
lab*tch 0.5 1.0 0.268
lab*nch 0.0 1.0 0.268
relative Natural Colour (NC)
lab*lrj 0.935 −0.097 0.995
lab*tce 0.5 1.0 0.266
lab*ncE 0.0 1.0 j06g

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.25 (1.0)
cmyn3* 0.5 0.5 0.75 (0.0)
olvi4* 1.0 1.0 0.75 0.5
cmyn4* 0.0 0.0 0.25 0.5
standard and adapted CIELAB
LAB*LAB 55.45 −2.77 25.0
LAB*LABa 55.45 −2.56 22.94
LAB*TCHa 37.5 23.09 96.39
relative CIELAB lab*
lab*lab 0.484 −0.027 0.248
lab*tch 0.375 0.25 0.268
lab*nch 0.5 0.25 0.268
relative Natural Colour (NC)
lab*lrj 0.484 −0.024 0.249
lab*tce 0.375 0.25 0.266
lab*ncE 0.5 0.25 j06g

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.0 (1.0)
cmyn3* 0.25 0.25 1.0 (0.0)
olvi4* 1.0 1.0 0.25 0.75
cmyn4* 0.0 0.0 0.75 0.25
standard and adapted CIELAB
LAB*LAB 72.28 −8.23 72.01
LAB*LABa 72.28 −7.7 68.82
LAB*TCHa 37.51 69.25 96.39
relative CIELAB lab*
lab*lab 0.701 −0.082 0.745
lab*tch 0.375 0.75 0.268
lab*nch 0.25 0.75 0.268
relative Natural Colour (NC)
lab*lrj 0.701 −0.073 0.746
lab*tce 0.375 0.75 0.266
lab*ncE 0.25 0.75 j06g

*n** = 0,00

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.25 (1.0)
cmyn3* 0.75 0.75 0.75 (0.0)
olvi4* 1.0 1.0 1.0 0.25
cmyn4* 0.0 0.0 0.0 0.75
standard and adapted CIELAB
LAB*LAB 37.36 0.13 0.83
LAB*LABa 37.36 0.0 0.0
LAB*TCHa 25.0 0.01 −
relative CIELAB lab*
lab*lab 0.25 0.0 0.0
lab*tch 0.25 0.0 −
lab*nch 0.75 0.0 −
relative Natural Colour (NC)
lab*lrj 0.25 0.0 0.0
lab*tce 0.25 0.0 −
lab*ncE 0.75 0.0 −

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 54.19 −5.32 47.85
LAB*LABa 54.19 −5.13 45.87
LAB*TCHa 25.01 46.16 96.39
relative CIELAB lab*
lab*lab 0.467 −0.055 0.497
lab*tch 0.25 0.5 0.268
lab*nch 0.5 0.5 0.268
relative Natural Colour (NC)
lab*lrj 0.467 −0.048 0.497
lab*tce 0.25 0.5 0.266
lab*ncE 0.5 0.5 j06g

*n** = 0,25

blackness *n*

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.0 (1.0)
cmyn3* 0.75 0.75 1.0 (0.0)
olvi4* 1.0 1.0 0.75 0.25
cmyn4* 0.0 0.0 0.25 0.75
standard and adapted CIELAB
LAB*LAB 36.1 −2.4 23.69
LAB*LABa 36.1 −2.56 22.93
LAB*TCHa 12.5 23.08 96.39
relative CIELAB lab*
lab*lab 0.234 −0.027 0.248
lab*tch 0.125 0.25 0.268
lab*nch 0.75 0.25 0.268
relative Natural Colour (NC)
lab*lrj 0.234 −0.024 0.249
lab*tce 0.125 0.25 0.266
lab*ncE 0.75 0.25 j06g

*n** = 0,50

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*LABa 18.02 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 −

0,25 0,50 0,75 1,00

chromaticness *c*

*n** = 1,0

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 94/360 = 0.261$

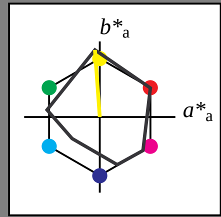
lab*tch and lab*nch

D65: hue J

LCH*Ma: 91 89 94

rgb*Ma: 1.0 1.0 0.0

triangle lightness *t*



%Gamut

$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

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*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* 1.0 1.0 0.75 (1.0)
cmyn3* 0.0 0.0 0.25 (0.0)
olvi4* 1.0 1.0 0.75 1.0
cmyn4* 0.0 0.0 0.25 0.0
standard and adapted CIELAB
LAB*LAB 94.22 −2.54 26.86
LAB*LABa 94.22 −1.58 22.18
LAB*TCHa 87.5 22.24 94.1
relative CIELAB lab*
lab*lab 0.985 −0.017 0.249
lab*tch 0.875 0.25 0.261
lab*nch 0.0 0.25 0.261
relative Natural Colour (NC)
lab*lrj 0.985 −0.011 0.25
lab*tce 0.875 0.25 0.258
lab*ncE 0.0 0.25 j03g

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.75 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 1.0 1.0 1.0 0.75
cmyn4* 0.0 0.0 0.0 0.25
standard and adapted CIELAB
LAB*LAB 76.06 −0.6 3.44
LAB*LABa 76.06 0.0 0.0
LAB*TCHa 75.0 0.01 −
relative CIELAB lab*
lab*lab 0.75 0.0 0.0
lab*tch 0.75 0.0 −
lab*nch 0.25 0.0 −
relative Natural Colour (NC)
lab*lrj 0.75 0.0 0.0
lab*tce 0.75 0.0 −
lab*ncE 0.25 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 93.05 −4.11 48.97
LAB*LABa 93.05 −3.17 44.37
LAB*TCHa 75.0 44.48 94.1
relative CIELAB lab*
lab*lab 0.969 −0.035 0.499
lab*tch 0.75 0.5 0.261
lab*nch 0.0 0.5 0.261
relative Natural Colour (NC)
lab*lrj 0.969 −0.023 0.499
lab*tce 0.75 0.5 0.258
lab*ncE 0.0 0.5 j03g

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.5 (1.0)
cmyn3* 0.25 0.25 0.5 (0.0)
olvi4* 1.0 1.0 0.75 0.75
cmyn4* 0.0 0.0 0.25 0.25
standard and adapted CIELAB
LAB*LAB 74.88 −2.17 25.56
LAB*LABa 74.88 −1.58 22.19
LAB*TCHa 62.5 22.24 94.1
relative CIELAB lab*
lab*lab 0.735 −0.017 0.249
lab*tch 0.625 0.25 0.261
lab*nch 0.25 0.25 0.261
relative Natural Colour (NC)
lab*lrj 0.735 −0.011 0.25
lab*tce 0.625 0.25 0.258
lab*ncE 0.25 0.25 j03g

relative Inform. Technology (IT)
olvi3* 1.0 1.0 0.25 (1.0)
cmyn3* 0.0 0.0 0.75 (0.0)
olvi4* 1.0 1.0 0.25 1.0
cmyn4* 0.0 0.0 0.75 0.0
standard and adapted CIELAB
LAB*LAB 91.87 −5.68 71.07
LAB*LABa 91.87 −4.77 66.55
LAB*TCHa 62.5 66.73 94.1
relative CIELAB lab*
lab*lab 0.954 −0.053 0.748
lab*tch 0.625 0.75 0.261
lab*nch 0.0 0.75 0.261
relative Natural Colour (NC)
lab*lrj 0.954 −0.036 0.749
lab*tce 0.625 0.75 0.258
lab*ncE 0.0 0.75 j03g

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*LABa 56.71 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* 0.75 0.75 0.25 (1.0)
cmyn3* 0.25 0.25 0.75 (0.0)
olvi4* 1.0 1.0 0.5 0.75
cmyn4* 0.0 0.0 0.5 0.25
standard and adapted CIELAB
LAB*LAB 73.7 −3.74 47.67
LAB*LABa 73.7 −3.17 44.38
LAB*TCHa 50.0 44.49 94.1
relative CIELAB lab*
lab*lab 0.72 −0.035 0.499
lab*tch 0.5 0.5 0.261
lab*nch 0.25 0.5 0.261
relative Natural Colour (NC)
lab*lrj 0.72 −0.023 0.499
lab*tce 0.5 0.5 0.258
lab*ncE 0.25 0.5 j03g

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 1.0 0.0
standard and adapted CIELAB
LAB*LAB 90.69 −7.25 93.17
LAB*LABa 90.69 −6.36 88.73
LAB*TCHa 50.0 88.96 94.1
relative CIELAB lab*
lab*lab 0.939 −0.071 0.997
lab*tch 0.5 1.0 0.261
lab*nch 0.0 1.0 0.261
relative Natural Colour (NC)
lab*lrj 0.939 −0.048 0.999
lab*tce 0.5 1.0 0.258
lab*ncE 0.0 1.0 j03g

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.25 (1.0)
cmyn3* 0.5 0.5 0.75 (0.0)
olvi4* 1.0 1.0 0.75 0.5
cmyn4* 0.0 0.0 0.25 0.5
standard and adapted CIELAB
LAB*LAB 55.53 −1.8 24.26
LAB*LABa 55.53 −1.58 22.19
LAB*TCHa 37.5 22.24 94.1
relative CIELAB lab*
lab*lab 0.485 −0.017 0.249
lab*tch 0.375 0.25 0.261
lab*nch 0.5 0.25 0.261
relative Natural Colour (NC)
lab*lrj 0.485 −0.011 0.25
lab*tce 0.375 0.25 0.258
lab*ncE 0.5 0.25 j03g

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.0 (1.0)
cmyn3* 0.25 0.25 1.0 (0.0)
olvi4* 1.0 1.0 0.25 0.75
cmyn4* 0.0 0.0 0.75 0.25
standard and adapted CIELAB
LAB*LAB 72.53 −5.31 69.77
LAB*LABa 72.53 −4.77 66.55
LAB*TCHa 37.51 66.73 94.1
relative CIELAB lab*
lab*lab 0.704 −0.053 0.748
lab*tch 0.375 0.75 0.261
lab*nch 0.25 0.75 0.261
relative Natural Colour (NC)
lab*lrj 0.704 −0.036 0.749
lab*tce 0.375 0.75 0.258
lab*ncE 0.25 0.75 j03g

*n** = 0,00

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.25 (1.0)
cmyn3* 0.75 0.75 0.75 (0.0)
olvi4* 1.0 1.0 1.0 0.25
cmyn4* 0.0 0.0 0.0 0.75
standard and adapted CIELAB
LAB*LAB 37.36 0.13 0.83
LAB*LABa 37.36 0.0 0.0
LAB*TCHa 25.0 0.01 −
relative CIELAB lab*
lab*lab 0.25 0.0 0.0
lab*tch 0.25 0.0 −
lab*nch 0.75 0.0 −
relative Natural Colour (NC)
lab*lrj 0.25 0.0 0.0
lab*tce 0.25 0.0 −
lab*ncE 0.75 0.0 −

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 54.35 −3.37 46.36
LAB*LABa 54.35 −3.17 44.37
LAB*TCHa 25.01 44.48 94.1
relative CIELAB lab*
lab*lab 0.47 −0.035 0.499
lab*tch 0.25 0.5 0.261
lab*nch 0.5 0.5 0.261
relative Natural Colour (NC)
lab*lrj 0.47 −0.023 0.499
lab*tce 0.25 0.5 0.258
lab*ncE 0.5 0.5 j03g

*n** = 0,25

blackness *n*

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.0 (1.0)
cmyn3* 0.75 0.75 1.0 (0.0)
olvi4* 1.0 1.0 0.75 0.25
cmyn4* 0.0 0.0 0.25 0.75
standard and adapted CIELAB
LAB*LAB 36.18 −1.43 22.94
LAB*LABa 36.18 −1.58 22.18
LAB*TCHa 12.5 22.24 94.1
relative CIELAB lab*
lab*lab 0.235 −0.017 0.249
lab*tch 0.125 0.25 0.261
lab*nch 0.75 0.25 0.261
relative Natural Colour (NC)
lab*lrj 0.235 −0.011 0.25
lab*tce 0.125 0.25 0.258
lab*ncE 0.75 0.25 j03g

*n** = 0,50

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*LABa 18.02 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 −

0,25 0,50 0,75 1,00

chromaticness *c*

*n** = 1,0

UE500−7, 5 step scales for constant CIELAB hue 96/360 = 0.268 (left)

5 step scales for constant CIELAB hue 94/360 = 0.261 (right)

Input: Colorimetric Reflective System ORS18

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

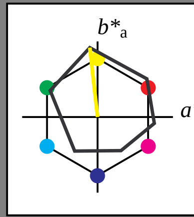
*lab*tch* and *lab*nch*

D65: hue Y

LCH*Ma: 90 92 96

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

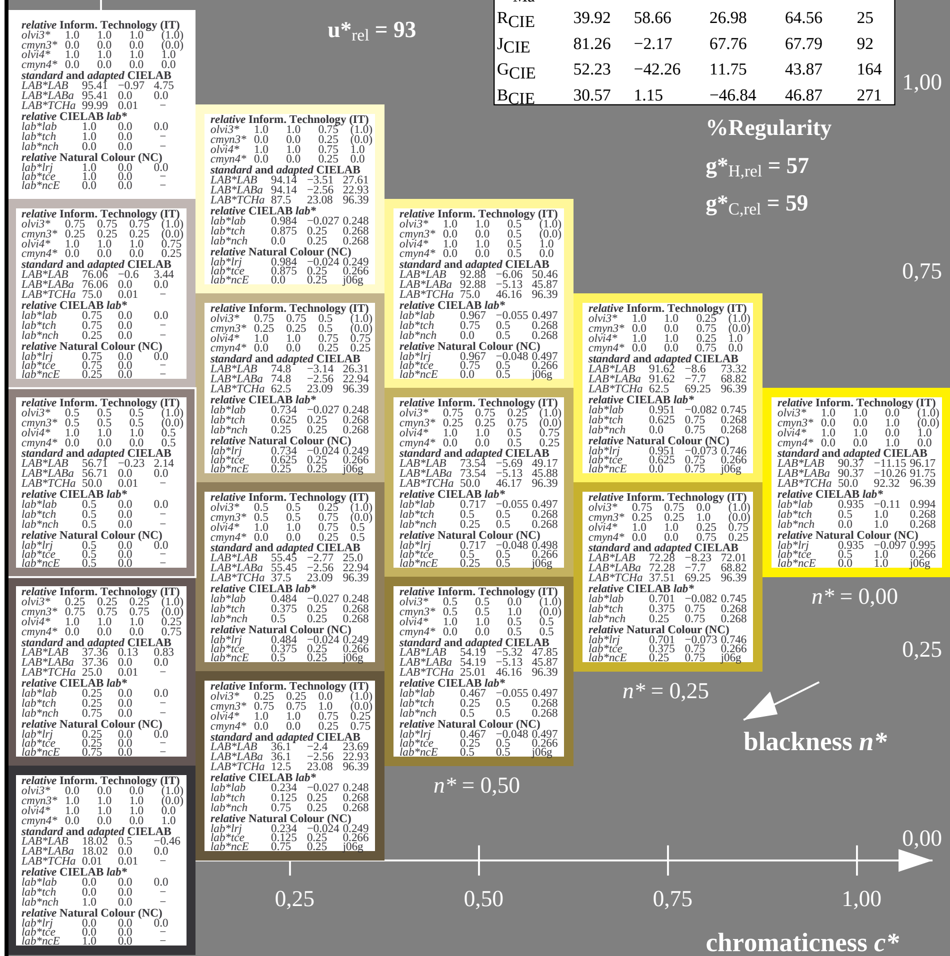
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



Output: Colorimetric Reflective System TRS18

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

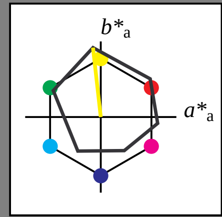
*lab*tch* and *lab*nch*

D65: hue Y

LCH*Ma: 90 92 96

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

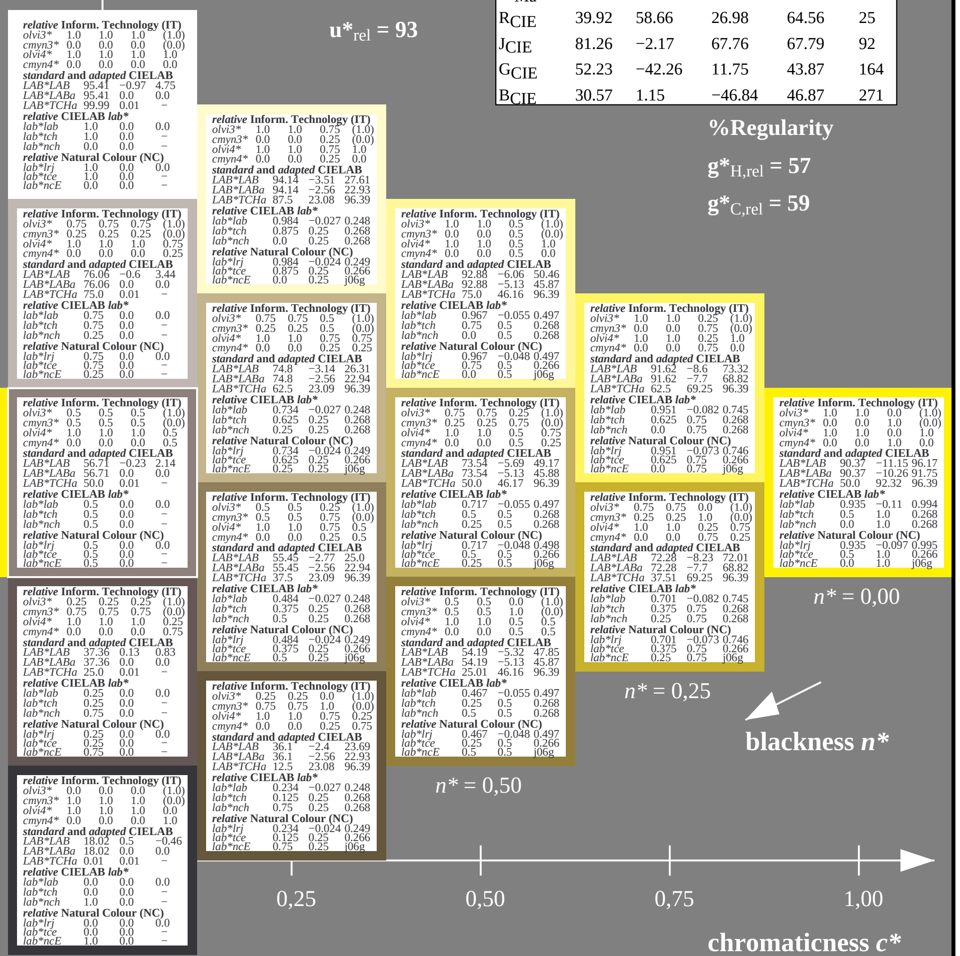
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



UE500−7, 5 step scales for constant CIELAB hue 96/360 = 0.268 (left)

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

Input: Colorimetric Reflective System ORS18

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

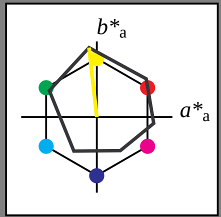
*lab*tch and lab*nch*

D65: hue Y

LCH*Ma: 90 92 96

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

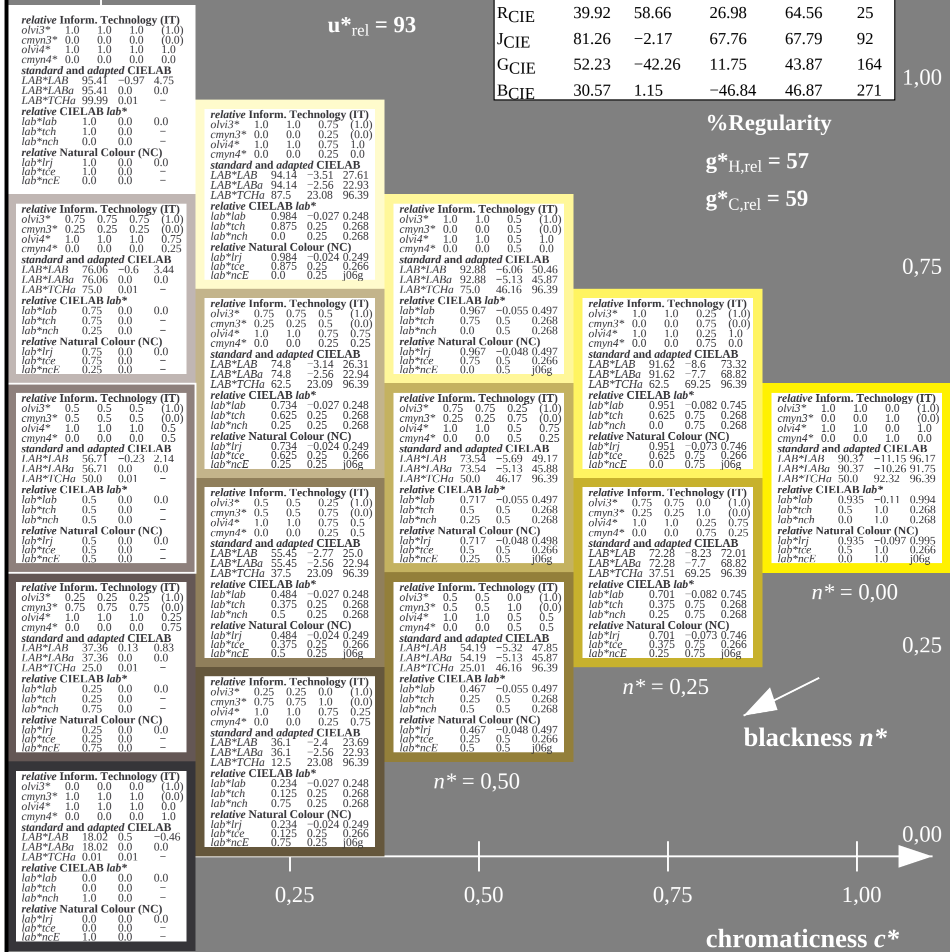
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



Output: Colorimetric Reflective System MRS18a

for hue $h^* = lab^*h = 94/360 = 0.262$

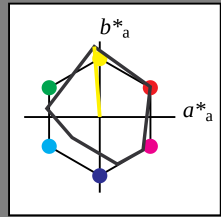
*lab*tch and lab*nch*

D65: hue J

LCH*Ma: 91 93 94

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 92$

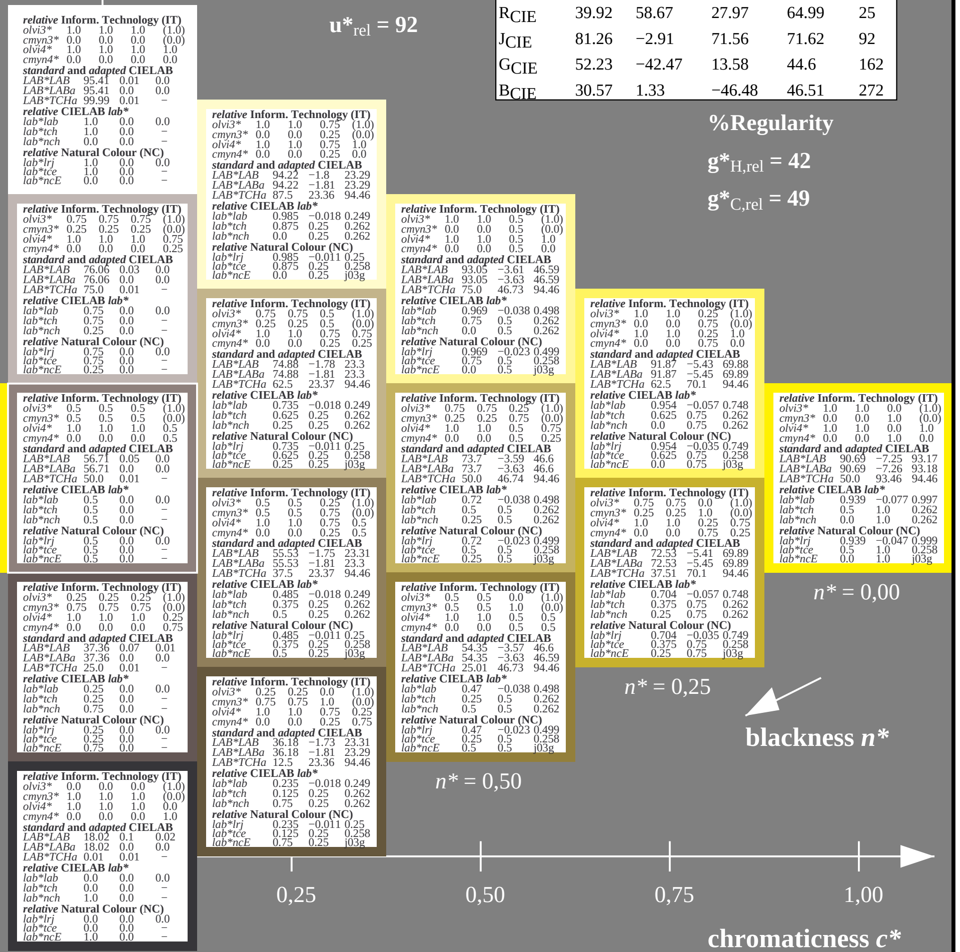
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



UE500−7, 5 step scales for constant CIELAB hue 96/360 = 0.268 (left)

5 step scales for constant CIELAB hue 94/360 = 0.262 (right)

Input: Colorimetric Reflective System ORS18

for hue *h = *lab*h* = 96/360 = 0.268**

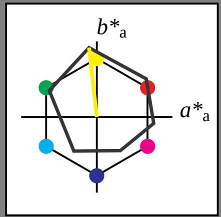
lab*tch* and *lab*nch

D65: hue Y

LCH*Ma: 90 92 96

rgb*Ma: 1.0 1.0 0.0

triangle lightness *t**



%Gamut

u*rel = 93

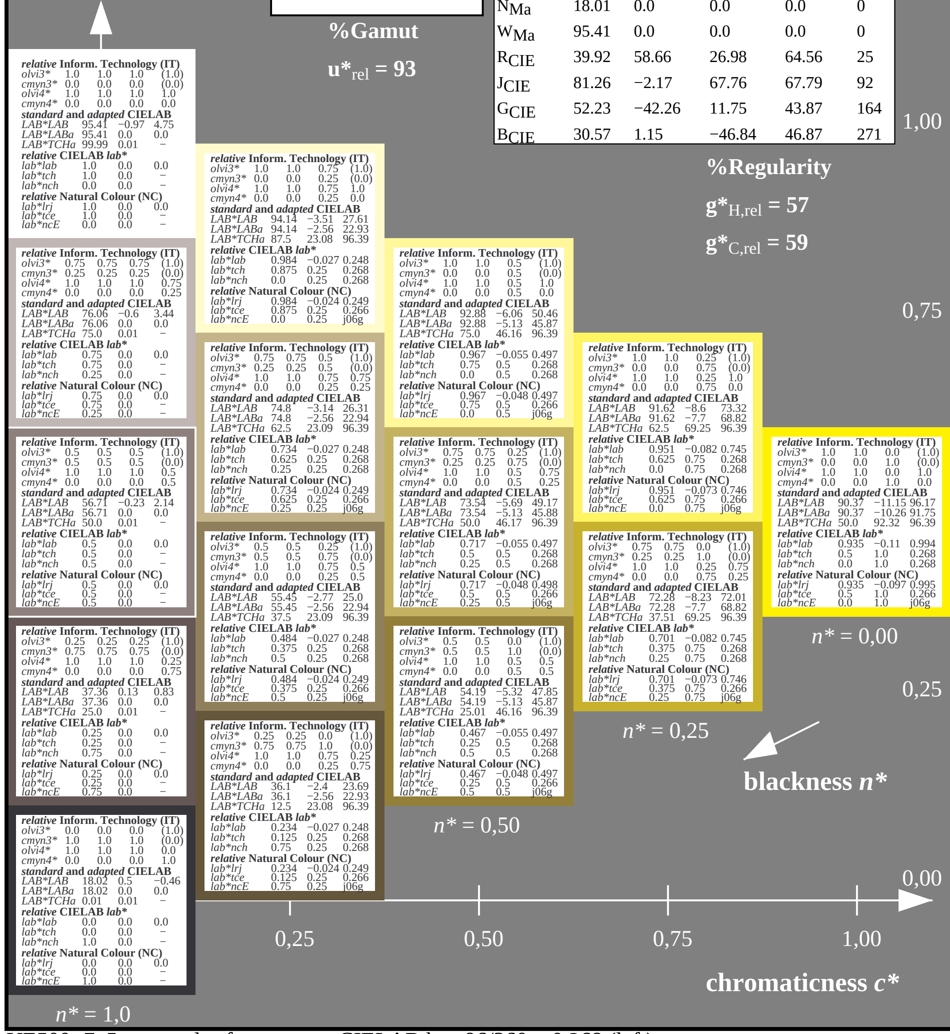
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

g*H,rel = 57

g*C,rel = 59



Output: Colorimetric Reflective System NRS18

for hue *h = *lab*h* = 91/360 = 0.253**

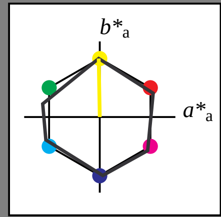
lab*tch* and *lab*nch

D65: hue J

LCH*Ma: 57 77 91

rgb*Ma: 1.0 1.0 0.0

triangle lightness *t**



%Gamut

u*rel = 100

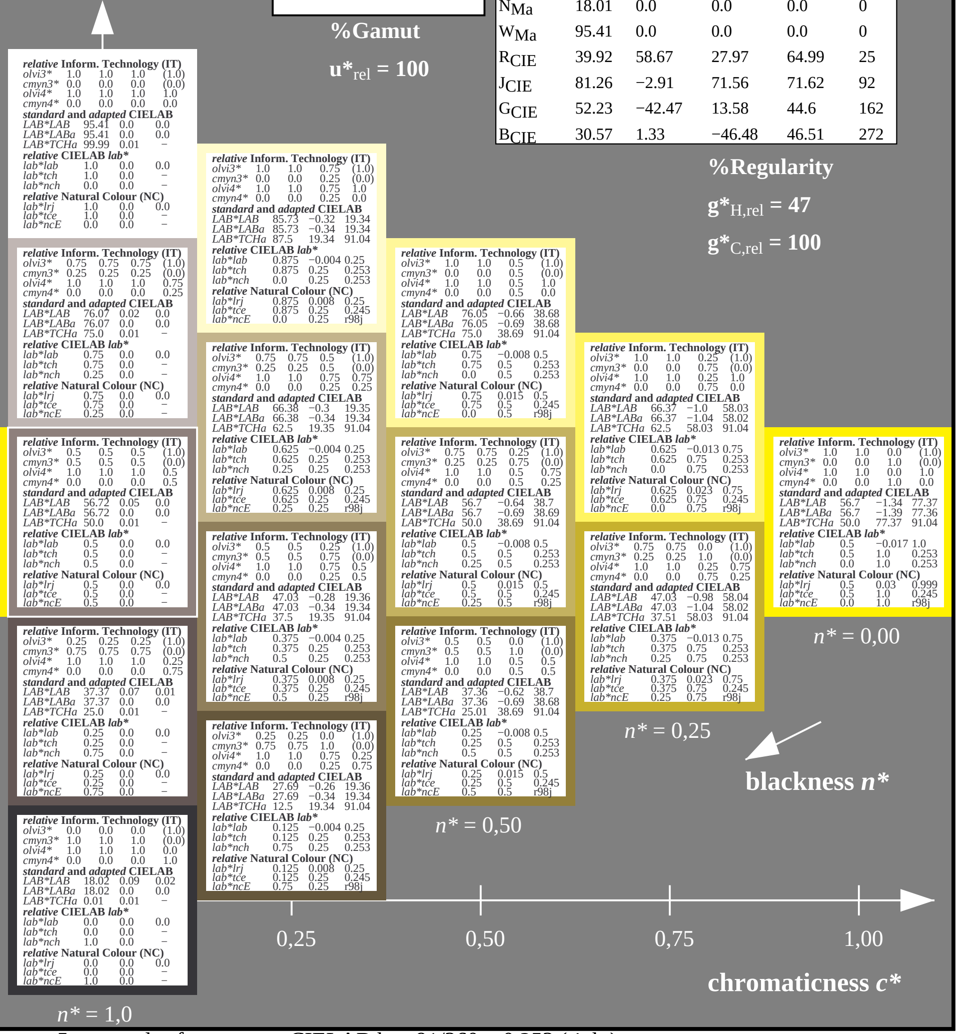
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

g*H,rel = 47

g*C,rel = 100



UE500−7, 5 step scales for constant CIELAB hue 96/360 = 0.268 (left)

5 step scales for constant CIELAB hue 91/360 = 0.253 (right)

Input: Colorimetric Reflective System ORS18

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

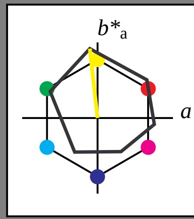
lab*tch* and *lab*nch

D65: hue Y

LCH*Ma: 90 92 96

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

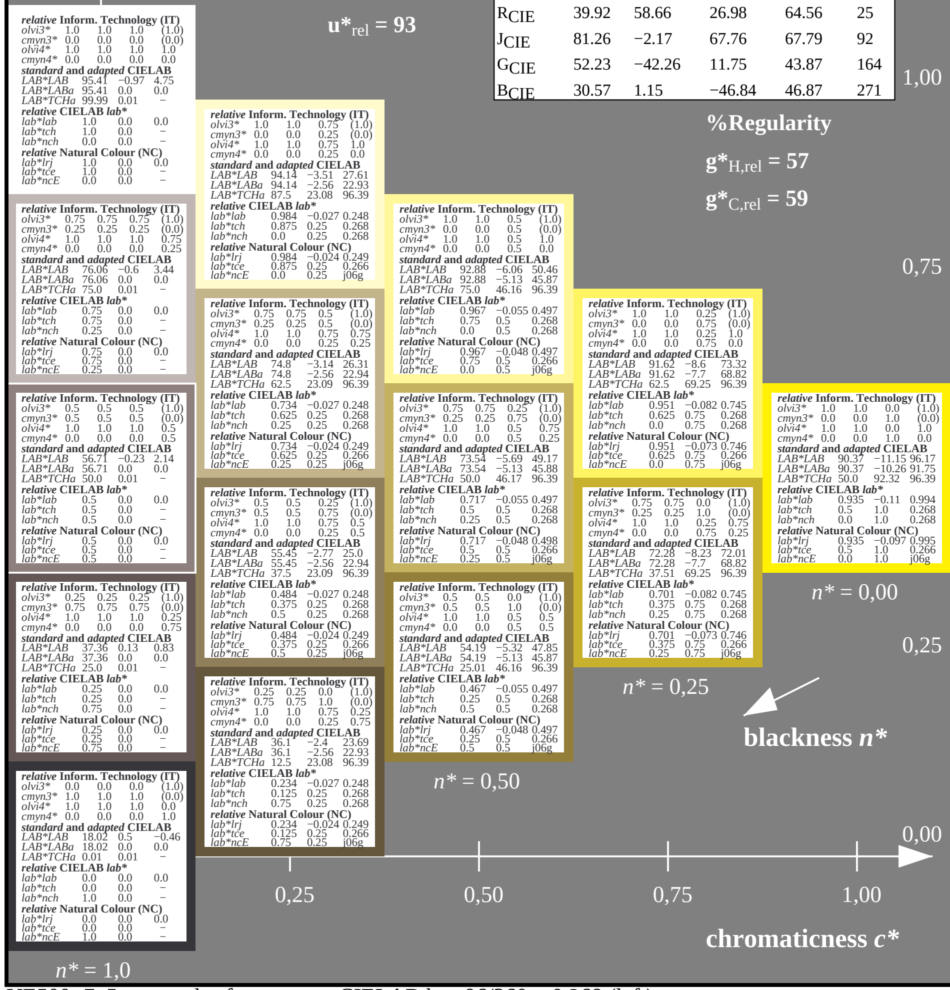
$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



Output: Colorimetric Reflective System NCS18

for hue $h^* = lab^*h = 91/360 = 0.252$

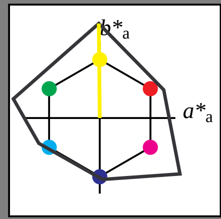
lab*tch* and *lab*nch

D65: hue J

LCH*Ma: 91 125 91

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

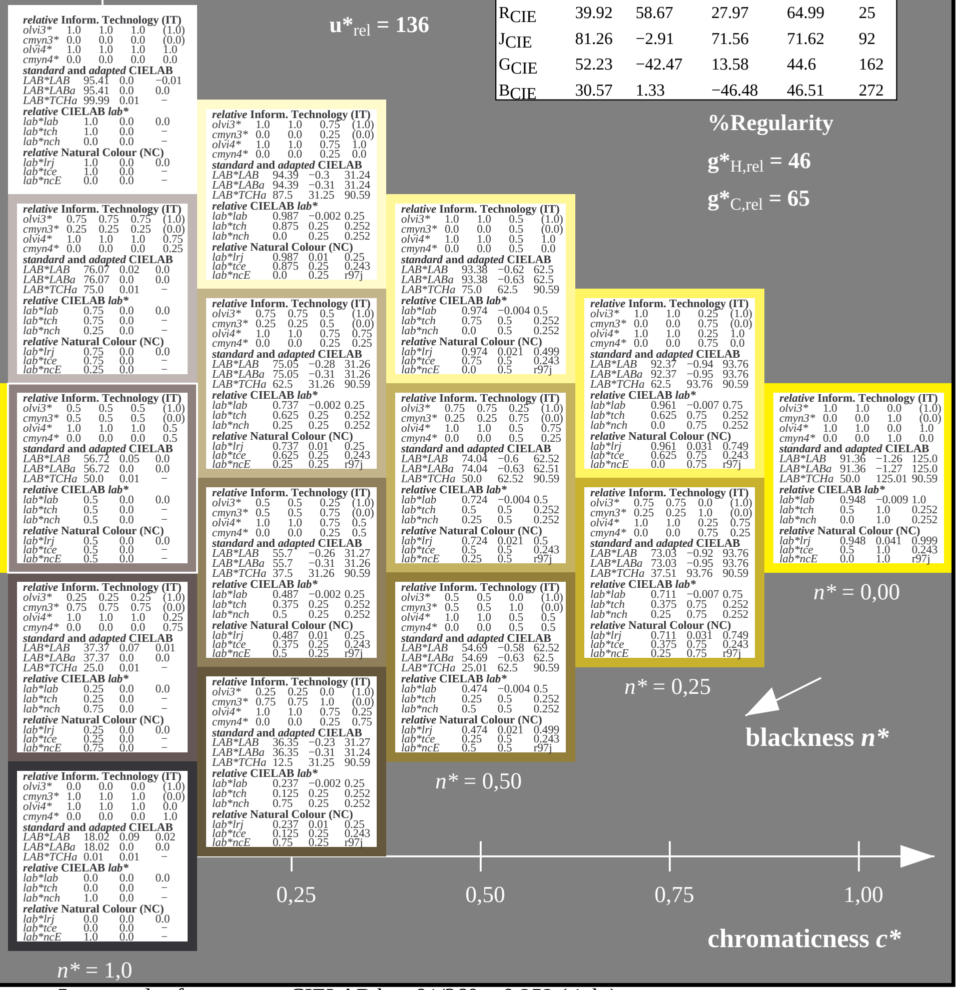
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



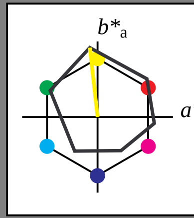
UE500−7, 5 step scales for constant CIELAB hue 96/360 = 0.268 (left)

5 step scales for constant CIELAB hue 91/360 = 0.252 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 96/360 = 0.268$
*lab*tch and lab*nch*

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*

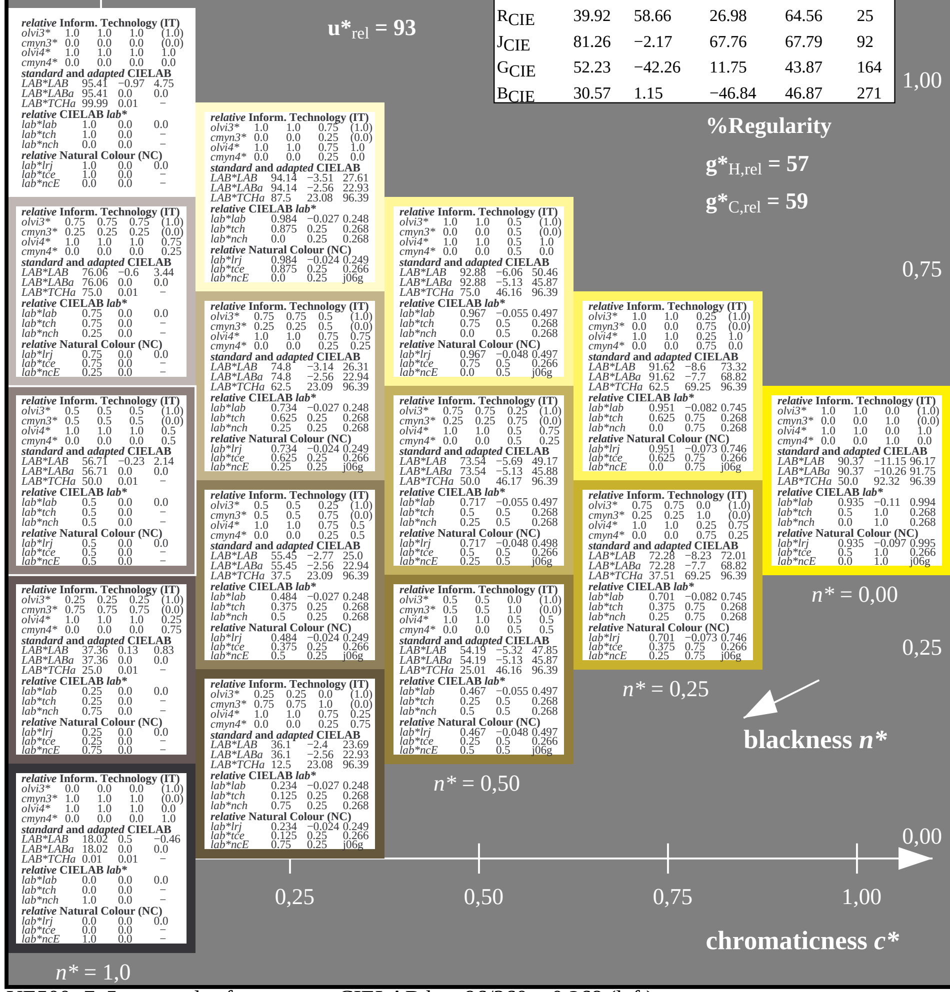


%Gamut

$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data

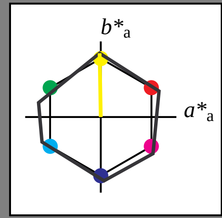
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 91/360 = 0.253$
*lab*tch and lab*nch*

D65: hue J
LCH*Ma: 53 84 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*

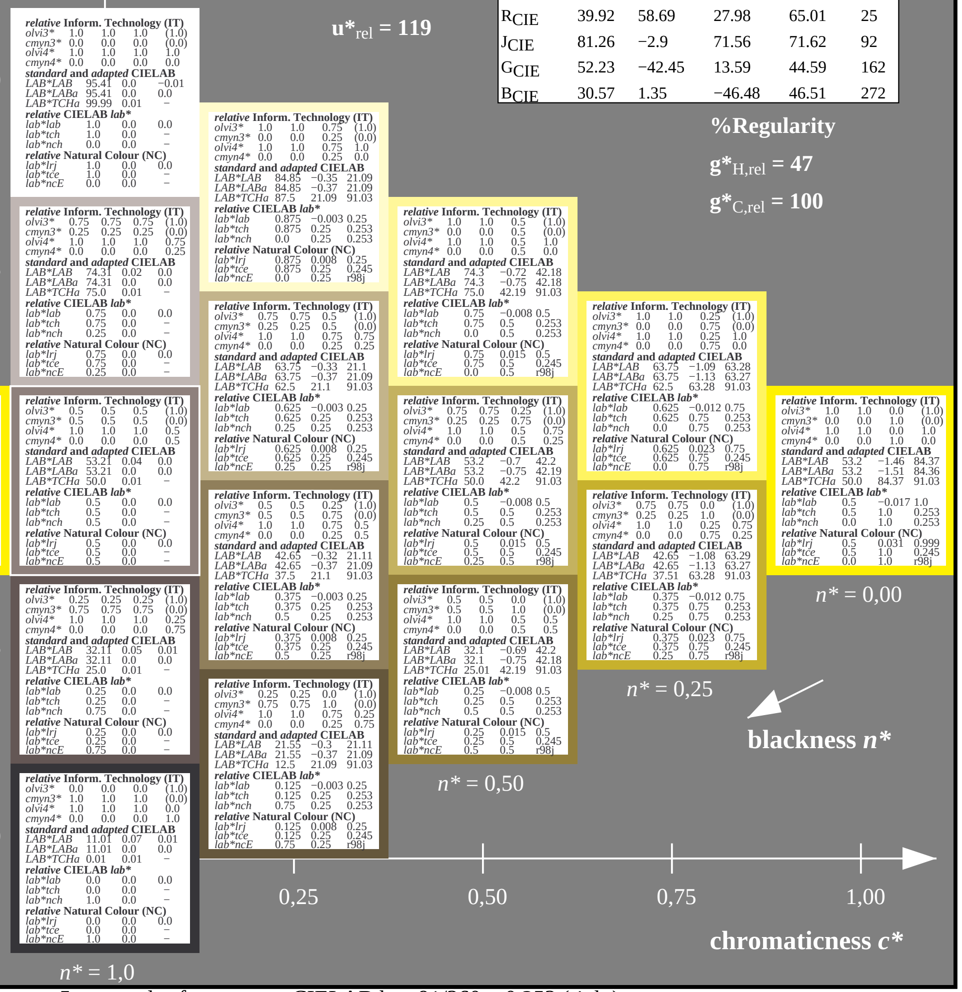


%Gamut

$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

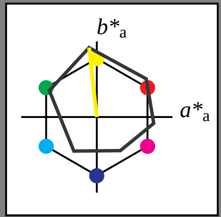


UE500−7, 5 step scales for constant CIELAB hue 96/360 = 0.268 (left)

5 step scales for constant CIELAB hue 91/360 = 0.253 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch and lab*nch

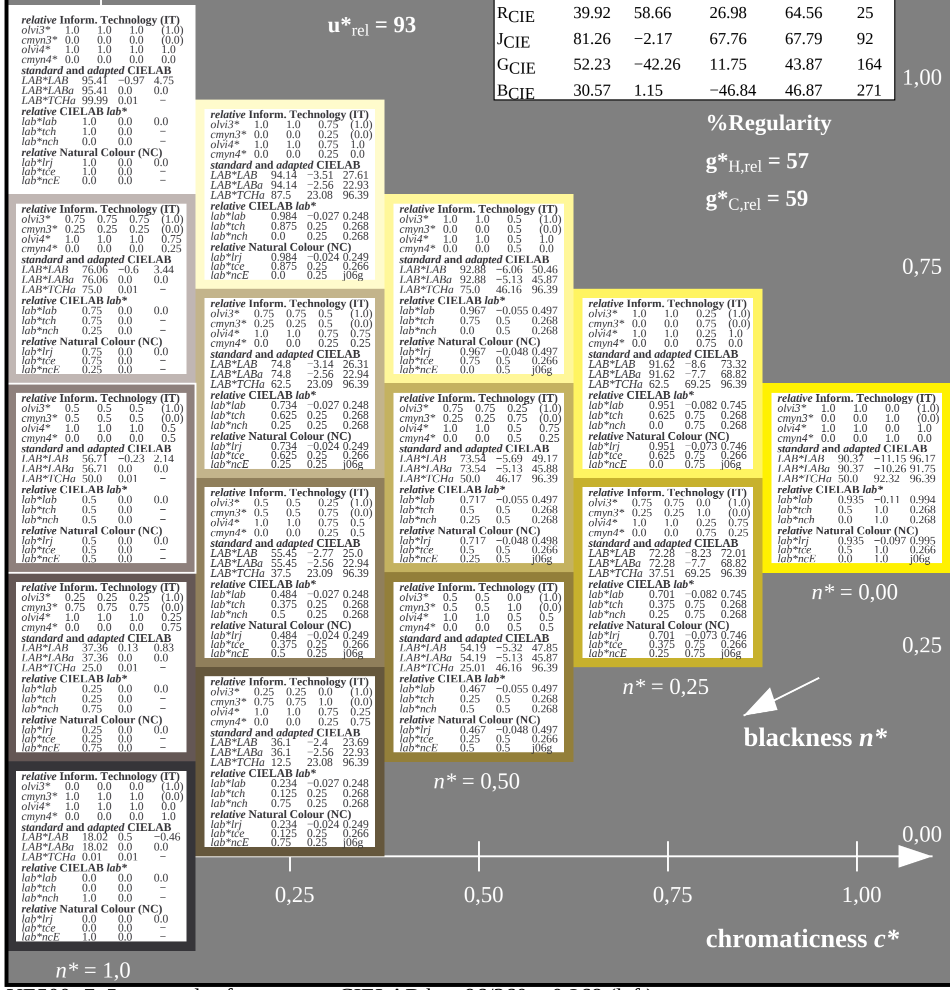
D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0
triangle lightness t^*



%Gamut
u^*_{rel} = 93

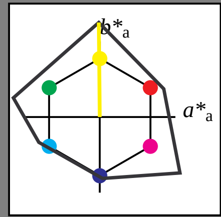
ORS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel}$ = 57
$g^*_{C,rel}$ = 59



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch and lab*nch

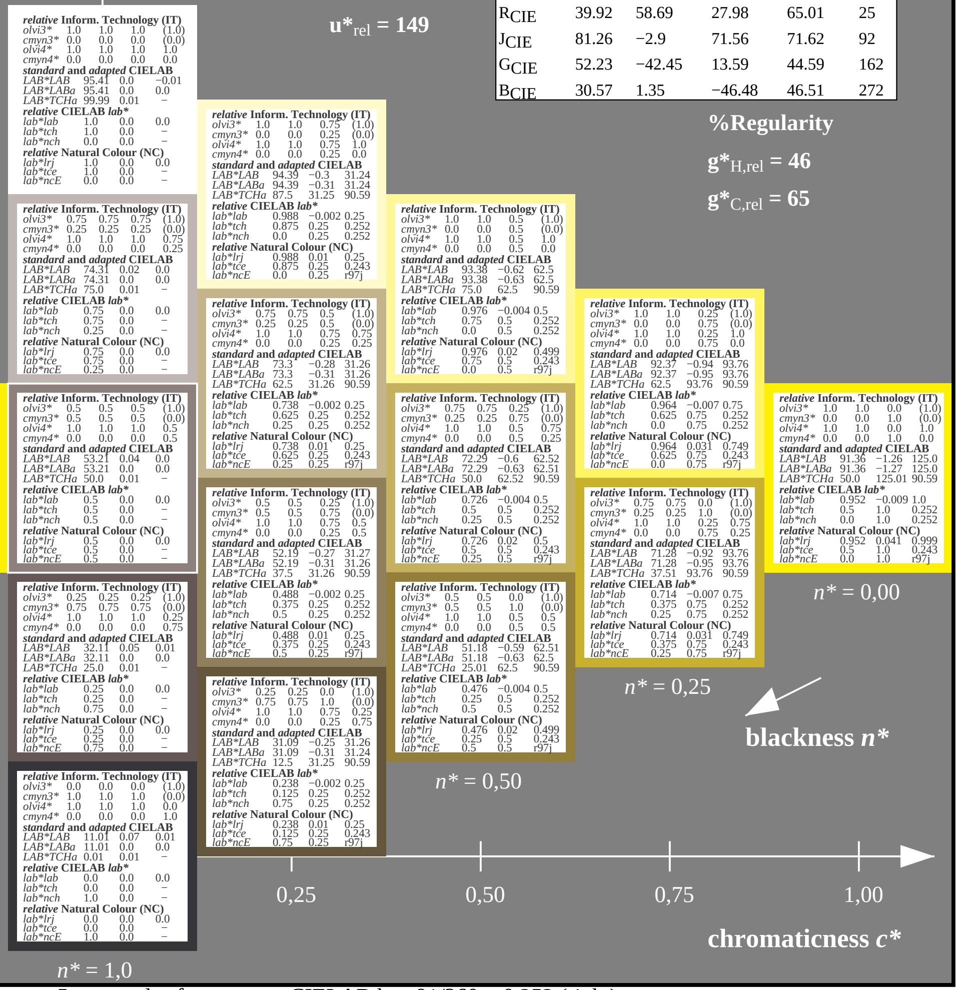
D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0
triangle lightness t^*



%Gamut
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



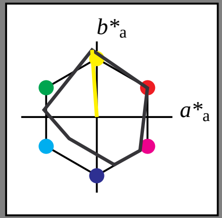
UE500−7, 5 step scales for constant CIELAB hue 96/360 = 0.268 (left)

5 step scales for constant CIELAB hue 91/360 = 0.252 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 94/360 = 0.261$
lab^*tch and lab^*nch

D65: hue J
LCH*Ma: 91 89 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 91$

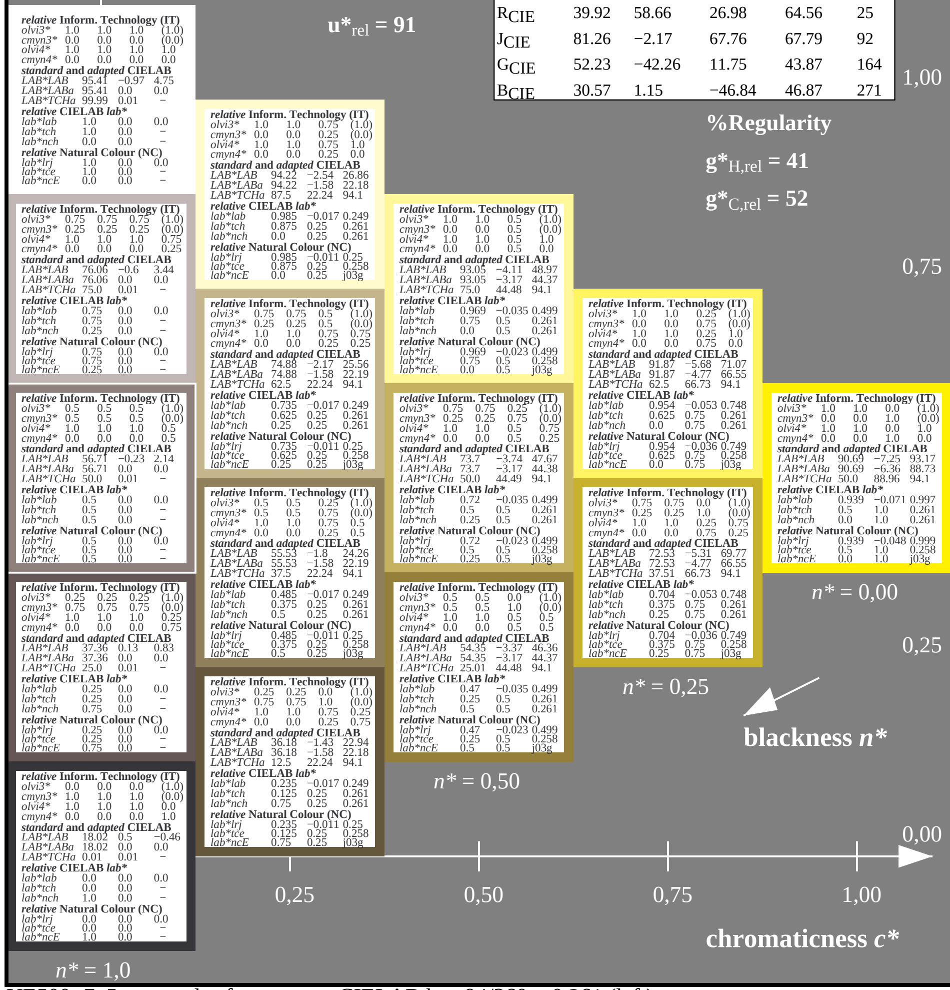
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

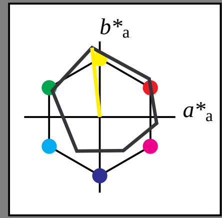
$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab^*tch and lab^*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

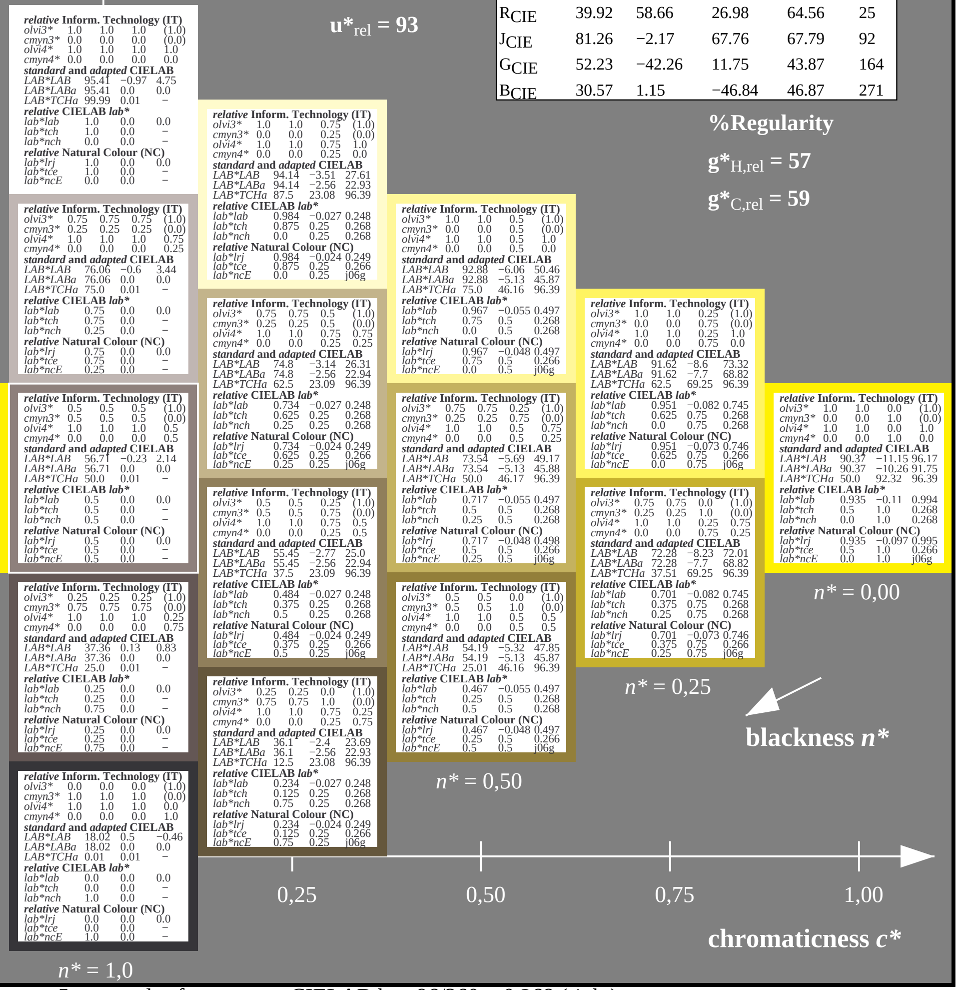
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



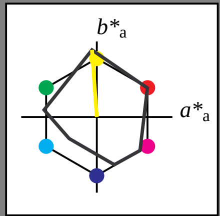
UE500−7, 5 step scales for constant CIELAB hue 94/360 = 0.261 (left)

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

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 94/360 = 0.261$
*lab*tch* and *lab*nch*

D65: hue J
LCH*Ma: 91 89 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

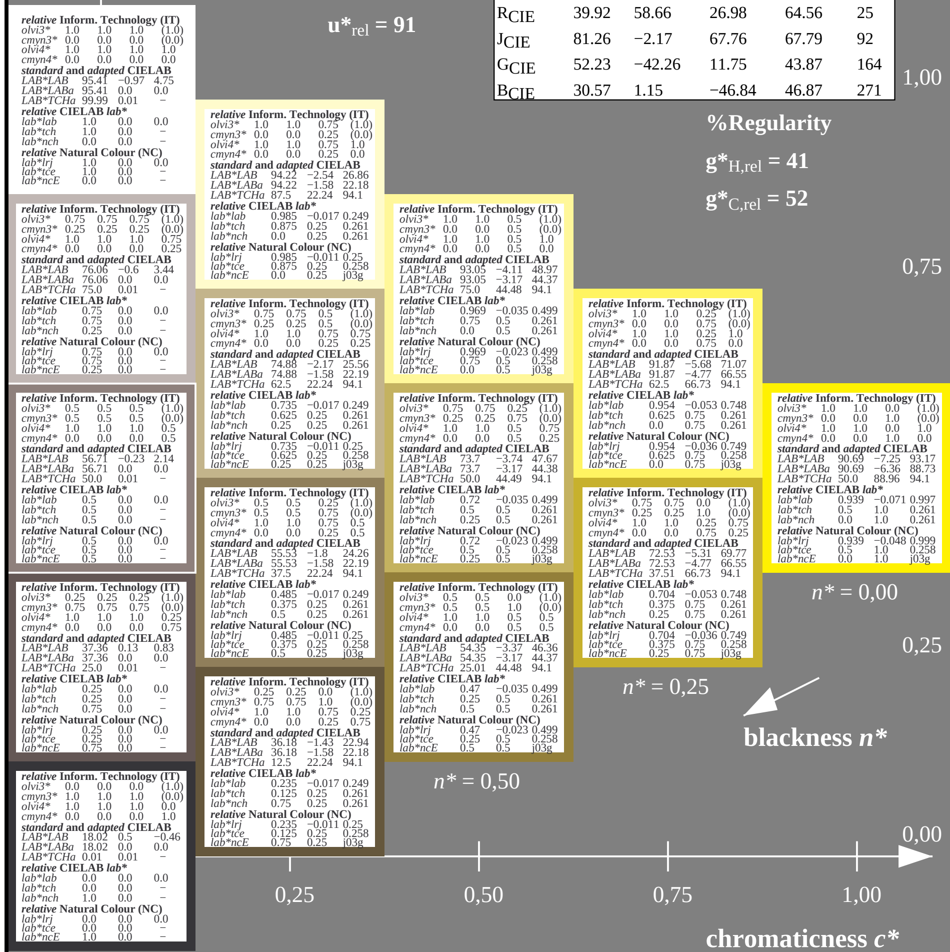
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

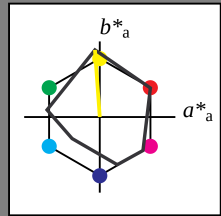
$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 94/360 = 0.261$
*lab*tch* and *lab*nch*

D65: hue J
LCH*Ma: 91 89 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

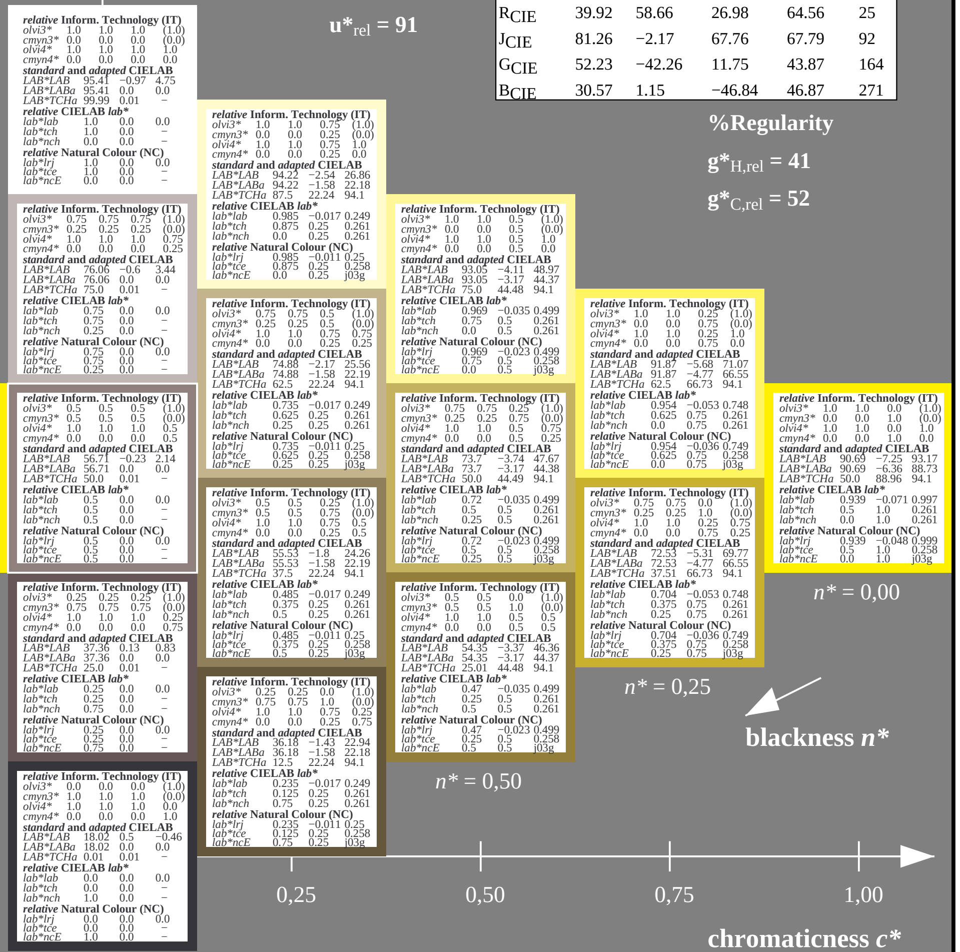
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



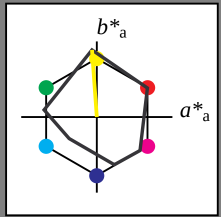
UE500−7, 5 step scales for constant CIELAB hue 94/360 = 0.261 (left)

5 step scales for constant CIELAB hue 94/360 = 0.261 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 94/360 = 0.261$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 89 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness *t**



%Gamut

$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

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*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* 1.0 1.0 0.75 (1.0)
cmyn3* 0.0 0.0 0.25 (0.0)
olvi4* 1.0 1.0 0.75 1.0
cmyn4* 0.0 0.0 0.25 0.0
standard and adapted CIELAB
LAB*LAB 94.22 −2.54 26.86
LAB*LABa 94.22 −1.58 22.18
LAB*TCHa 87.5 22.24 94.1
relative CIELAB *lab**
lab*lab 0.985 −0.017 0.249
lab*tch 0.875 0.25 0.261
lab*nch 0.0 0.25 0.261
relative Natural Colour (NC)
lab*lrj 0.985 −0.011 0.25
lab*tce 0.875 0.25 0.258
lab*ncE 0.0 0.25 j03g

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.75 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 1.0 1.0 1.0 0.75
cmyn4* 0.0 0.0 0.0 0.25
standard and adapted CIELAB
LAB*LAB 76.06 −0.6 3.44
LAB*LABa 76.06 0.0 0.0
LAB*TCHa 75.0 0.01 −
relative CIELAB *lab**
lab*lab 0.75 0.0 0.0
lab*tch 0.75 0.0 −
lab*nch 0.25 0.0 −
relative Natural Colour (NC)
lab*lrj 0.75 0.0 0.0
lab*tce 0.75 0.0 −
lab*ncE 0.25 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 93.05 −4.11 48.97
LAB*LABa 93.05 −3.17 44.37
LAB*TCHa 75.0 44.48 94.1
relative CIELAB *lab**
lab*lab 0.969 −0.035 0.499
lab*tch 0.75 0.5 0.261
lab*nch 0.0 0.5 0.261
relative Natural Colour (NC)
lab*lrj 0.969 −0.023 0.499
lab*tce 0.75 0.5 0.258
lab*ncE 0.0 0.5 j03g

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.5 (1.0)
cmyn3* 0.25 0.25 0.5 (0.0)
olvi4* 1.0 1.0 0.75 0.75
cmyn4* 0.0 0.0 0.25 0.25
standard and adapted CIELAB
LAB*LAB 74.88 −2.17 25.56
LAB*LABa 74.88 −1.58 22.19
LAB*TCHa 62.5 22.24 94.1
relative CIELAB *lab**
lab*lab 0.735 −0.017 0.249
lab*tch 0.625 0.25 0.261
lab*nch 0.25 0.25 0.261
relative Natural Colour (NC)
lab*lrj 0.735 −0.011 0.25
lab*tce 0.625 0.25 0.258
lab*ncE 0.25 0.25 j03g

relative Inform. Technology (IT)
olvi3* 1.0 1.0 0.25 (1.0)
cmyn3* 0.0 0.0 0.75 (0.0)
olvi4* 1.0 1.0 0.25 1.0
cmyn4* 0.0 0.0 0.75 0.0
standard and adapted CIELAB
LAB*LAB 91.87 −5.68 71.07
LAB*LABa 91.87 −4.77 66.55
LAB*TCHa 62.5 66.73 94.1
relative CIELAB *lab**
lab*lab 0.954 −0.053 0.748
lab*tch 0.625 0.75 0.261
lab*nch 0.0 0.75 0.261
relative Natural Colour (NC)
lab*lrj 0.954 −0.036 0.749
lab*tce 0.625 0.75 0.258
lab*ncE 0.0 0.75 j03g

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*LABa 56.71 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* 0.75 0.75 0.25 (1.0)
cmyn3* 0.25 0.25 0.75 (0.0)
olvi4* 1.0 1.0 0.5 0.75
cmyn4* 0.0 0.0 0.5 0.25
standard and adapted CIELAB
LAB*LAB 73.7 −3.74 47.67
LAB*LABa 73.7 −3.17 44.38
LAB*TCHa 50.0 44.49 94.1
relative CIELAB *lab**
lab*lab 0.72 −0.035 0.499
lab*tch 0.5 0.5 0.261
lab*nch 0.25 0.5 0.261
relative Natural Colour (NC)
lab*lrj 0.72 −0.023 0.499
lab*tce 0.5 0.5 0.258
lab*ncE 0.25 0.5 j03g

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 1.0 0.0
standard and adapted CIELAB
LAB*LAB 90.69 −7.25 93.17
LAB*LABa 90.69 −6.36 88.73
LAB*TCHa 50.0 88.96 94.1
relative CIELAB *lab**
lab*lab 0.939 −0.071 0.997
lab*tch 0.5 1.0 0.261
lab*nch 0.0 1.0 0.261
relative Natural Colour (NC)
lab*lrj 0.939 −0.048 0.999
lab*tce 0.5 1.0 0.258
lab*ncE 0.0 1.0 j03g

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.25 (1.0)
cmyn3* 0.5 0.5 0.75 (0.0)
olvi4* 1.0 1.0 0.75 0.5
cmyn4* 0.0 0.0 0.25 0.5
standard and adapted CIELAB
LAB*LAB 55.53 −1.8 24.26
LAB*LABa 55.53 −1.58 22.19
LAB*TCHa 37.5 22.24 94.1
relative CIELAB *lab**
lab*lab 0.485 −0.017 0.249
lab*tch 0.375 0.25 0.261
lab*nch 0.5 0.25 0.261
relative Natural Colour (NC)
lab*lrj 0.485 −0.011 0.25
lab*tce 0.375 0.25 0.258
lab*ncE 0.5 0.25 j03g

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.0 (1.0)
cmyn3* 0.25 0.25 1.0 (0.0)
olvi4* 1.0 1.0 0.25 0.75
cmyn4* 0.0 0.0 0.75 0.25
standard and adapted CIELAB
LAB*LAB 72.53 −5.31 69.77
LAB*LABa 72.53 −4.77 66.55
LAB*TCHa 37.51 66.73 94.1
relative CIELAB *lab**
lab*lab 0.704 −0.053 0.748
lab*tch 0.375 0.75 0.261
lab*nch 0.25 0.75 0.261
relative Natural Colour (NC)
lab*lrj 0.704 −0.036 0.749
lab*tce 0.375 0.75 0.258
lab*ncE 0.25 0.75 j03g

$n^* = 0{,}00$

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.25 (1.0)
cmyn3* 0.75 0.75 0.75 (0.0)
olvi4* 1.0 1.0 1.0 0.25
cmyn4* 0.0 0.0 0.0 0.75
standard and adapted CIELAB
LAB*LAB 37.36 0.13 0.83
LAB*LABa 37.36 0.0 0.0
LAB*TCHa 25.0 0.01 −
relative CIELAB *lab**
lab*lab 0.25 0.0 0.0
lab*tch 0.25 0.0 −
lab*nch 0.75 0.0 −
relative Natural Colour (NC)
lab*lrj 0.25 0.0 0.0
lab*tce 0.25 0.0 −
lab*ncE 0.75 0.0 −

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 54.35 −3.37 46.36
LAB*LABa 54.35 −3.17 44.37
LAB*TCHa 25.01 44.48 94.1
relative CIELAB *lab**
lab*lab 0.47 −0.035 0.499
lab*tch 0.25 0.5 0.261
lab*nch 0.5 0.5 0.261
relative Natural Colour (NC)
lab*lrj 0.47 −0.023 0.499
lab*tce 0.25 0.5 0.258
lab*ncE 0.5 0.5 j03g

$n^* = 0{,}25$

blackness n^*

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.0 (1.0)
cmyn3* 0.75 0.75 1.0 (0.0)
olvi4* 1.0 1.0 0.75 0.25
cmyn4* 0.0 0.0 0.25 0.75
standard and adapted CIELAB
LAB*LAB 36.18 −1.43 22.94
LAB*LABa 36.18 −1.58 22.18
LAB*TCHa 12.5 22.24 94.1
relative CIELAB *lab**
lab*lab 0.235 −0.017 0.249
lab*tch 0.125 0.25 0.261
lab*nch 0.75 0.25 0.261
relative Natural Colour (NC)
lab*lrj 0.235 −0.011 0.25
lab*tce 0.125 0.25 0.258
lab*ncE 0.75 0.25 j03g

$n^* = 0{,}50$

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*LABa 18.02 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 −

1,00
0,75
0,25
0,00

0,25 0,50 0,75 1,00

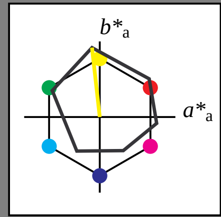
chromaticness c^*

$n^* = 1{,}0$

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness *t**



%Gamut

$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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

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*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* 1.0 1.0 0.75 (1.0)
cmyn3* 0.0 0.0 0.25 (0.0)
olvi4* 1.0 1.0 0.75 1.0
cmyn4* 0.0 0.0 0.25 0.0
standard and adapted CIELAB
LAB*LAB 94.14 −3.51 27.61
LAB*LABa 94.14 −2.56 22.93
LAB*TCHa 87.5 23.08 96.39
relative CIELAB *lab**
lab*lab 0.984 −0.027 0.248
lab*tch 0.875 0.25 0.268
lab*nch 0.0 0.25 0.268
relative Natural Colour (NC)
lab*lrj 0.984 −0.024 0.249
lab*tce 0.875 0.25 0.266
lab*ncE 0.0 0.25 j06g

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.75 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 1.0 1.0 1.0 0.75
cmyn4* 0.0 0.0 0.0 0.25
standard and adapted CIELAB
LAB*LAB 76.06 −0.6 3.44
LAB*LABa 76.06 0.0 0.0
LAB*TCHa 75.0 0.01 −
relative CIELAB *lab**
lab*lab 0.75 0.0 0.0
lab*tch 0.75 0.0 −
lab*nch 0.25 0.0 −
relative Natural Colour (NC)
lab*lrj 0.75 0.0 0.0
lab*tce 0.75 0.0 −
lab*ncE 0.25 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 92.88 −6.06 50.46
LAB*LABa 92.88 −5.13 45.87
LAB*TCHa 75.0 46.16 96.39
relative CIELAB *lab**
lab*lab 0.967 −0.055 0.497
lab*tch 0.75 0.5 0.268
lab*nch 0.0 0.5 0.268
relative Natural Colour (NC)
lab*lrj 0.967 −0.048 0.497
lab*tce 0.75 0.5 0.266
lab*ncE 0.0 0.5 j06g

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.5 (1.0)
cmyn3* 0.25 0.25 0.5 (0.0)
olvi4* 1.0 1.0 0.75 0.75
cmyn4* 0.0 0.0 0.25 0.25
standard and adapted CIELAB
LAB*LAB 74.8 −3.14 26.31
LAB*LABa 74.8 −2.56 22.94
LAB*TCHa 62.5 23.09 96.39
relative CIELAB *lab**
lab*lab 0.734 −0.027 0.248
lab*tch 0.625 0.25 0.268
lab*nch 0.25 0.25 0.268
relative Natural Colour (NC)
lab*lrj 0.734 −0.024 0.249
lab*tce 0.625 0.25 0.266
lab*ncE 0.25 0.25 j06g

relative Inform. Technology (IT)
olvi3* 1.0 1.0 0.25 (1.0)
cmyn3* 0.0 0.0 0.75 (0.0)
olvi4* 1.0 1.0 0.25 1.0
cmyn4* 0.0 0.0 0.75 0.0
standard and adapted CIELAB
LAB*LAB 91.62 −8.6 73.32
LAB*LABa 91.62 −7.7 68.82
LAB*TCHa 62.5 69.25 96.39
relative CIELAB *lab**
lab*lab 0.951 −0.082 0.745
lab*tch 0.625 0.75 0.268
lab*nch 0.0 0.75 0.268
relative Natural Colour (NC)
lab*lrj 0.951 −0.073 0.746
lab*tce 0.625 0.75 0.266
lab*ncE 0.0 0.75 j06g

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*LABa 56.71 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* 0.75 0.75 0.25 (1.0)
cmyn3* 0.25 0.25 0.75 (0.0)
olvi4* 1.0 1.0 0.5 0.75
cmyn4* 0.0 0.0 0.5 0.25
standard and adapted CIELAB
LAB*LAB 73.54 −5.69 49.17
LAB*LABa 73.54 −5.13 45.88
LAB*TCHa 50.0 46.17 96.39
relative CIELAB *lab**
lab*lab 0.717 −0.055 0.497
lab*tch 0.5 0.5 0.268
lab*nch 0.25 0.5 0.268
relative Natural Colour (NC)
lab*lrj 0.717 −0.048 0.498
lab*tce 0.5 0.5 0.266
lab*ncE 0.25 0.5 j06g

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 1.0 0.0
standard and adapted CIELAB
LAB*LAB 90.37 −11.15 96.17
LAB*LABa 90.37 −10.26 91.75
LAB*TCHa 50.0 92.32 96.39
relative CIELAB *lab**
lab*lab 0.935 −0.11 0.994
lab*tch 0.5 1.0 0.268
lab*nch 0.0 1.0 0.268
relative Natural Colour (NC)
lab*lrj 0.935 −0.097 0.995
lab*tce 0.5 1.0 0.266
lab*ncE 0.0 1.0 j06g

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.25 (1.0)
cmyn3* 0.5 0.5 0.75 (0.0)
olvi4* 1.0 1.0 0.75 0.5
cmyn4* 0.0 0.0 0.25 0.5
standard and adapted CIELAB
LAB*LAB 55.45 −2.77 25.0
LAB*LABa 55.45 −2.56 22.94
LAB*TCHa 37.5 23.09 96.39
relative CIELAB *lab**
lab*lab 0.484 −0.027 0.248
lab*tch 0.375 0.25 0.268
lab*nch 0.5 0.25 0.268
relative Natural Colour (NC)
lab*lrj 0.484 −0.024 0.249
lab*tce 0.375 0.25 0.266
lab*ncE 0.5 0.25 j06g

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.0 (1.0)
cmyn3* 0.25 0.25 1.0 (0.0)
olvi4* 1.0 1.0 0.25 0.75
cmyn4* 0.0 0.0 0.75 0.25
standard and adapted CIELAB
LAB*LAB 72.28 −8.23 72.01
LAB*LABa 72.28 −7.7 68.82
LAB*TCHa 37.51 69.25 96.39
relative CIELAB *lab**
lab*lab 0.701 −0.082 0.745
lab*tch 0.375 0.75 0.268
lab*nch 0.25 0.75 0.268
relative Natural Colour (NC)
lab*lrj 0.701 −0.073 0.746
lab*tce 0.375 0.75 0.266
lab*ncE 0.25 0.75 j06g

$n^* = 0{,}00$

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.25 (1.0)
cmyn3* 0.75 0.75 0.75 (0.0)
olvi4* 1.0 1.0 1.0 0.25
cmyn4* 0.0 0.0 0.0 0.75
standard and adapted CIELAB
LAB*LAB 37.36 0.13 0.83
LAB*LABa 37.36 0.0 0.0
LAB*TCHa 25.0 0.01 −
relative CIELAB *lab**
lab*lab 0.25 0.0 0.0
lab*tch 0.25 0.0 −
lab*nch 0.75 0.0 −
relative Natural Colour (NC)
lab*lrj 0.25 0.0 0.0
lab*tce 0.25 0.0 −
lab*ncE 0.75 0.0 −

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 54.19 −5.32 47.85
LAB*LABa 54.19 −5.13 45.87
LAB*TCHa 25.01 46.16 96.39
relative CIELAB *lab**
lab*lab 0.467 −0.055 0.497
lab*tch 0.25 0.5 0.268
lab*nch 0.5 0.5 0.268
relative Natural Colour (NC)
lab*lrj 0.467 −0.048 0.497
lab*tce 0.25 0.5 0.266
lab*ncE 0.5 0.5 j06g

$n^* = 0{,}25$

blackness n^*

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.0 (1.0)
cmyn3* 0.75 0.75 1.0 (0.0)
olvi4* 1.0 1.0 0.75 0.25
cmyn4* 0.0 0.0 0.25 0.75
standard and adapted CIELAB
LAB*LAB 36.1 −2.4 23.69
LAB*LABa 36.1 −2.56 22.93
LAB*TCHa 12.5 23.08 96.39
relative CIELAB *lab**
lab*lab 0.234 −0.027 0.248
lab*tch 0.125 0.25 0.268
lab*nch 0.75 0.25 0.268
relative Natural Colour (NC)
lab*lrj 0.234 −0.024 0.249
lab*tce 0.125 0.25 0.266
lab*ncE 0.75 0.25 j06g

$n^* = 0{,}50$

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*LABa 18.02 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 −

0,25 0,50 0,75 1,00

chromaticness c^*

$n^* = 1{,}0$

UE500−7, 5 step scales for constant CIELAB hue 94/360 = 0.261 (left)

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

Input: Colorimetric Reflective System MRS18

for hue $h^* = lab^*h = 94/360 = 0.261$

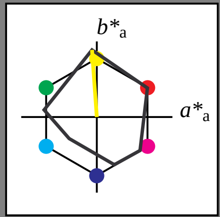
lab^*tch and lab^*nch

D65: hue J

LCH*Ma: 91 89 94

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 91$

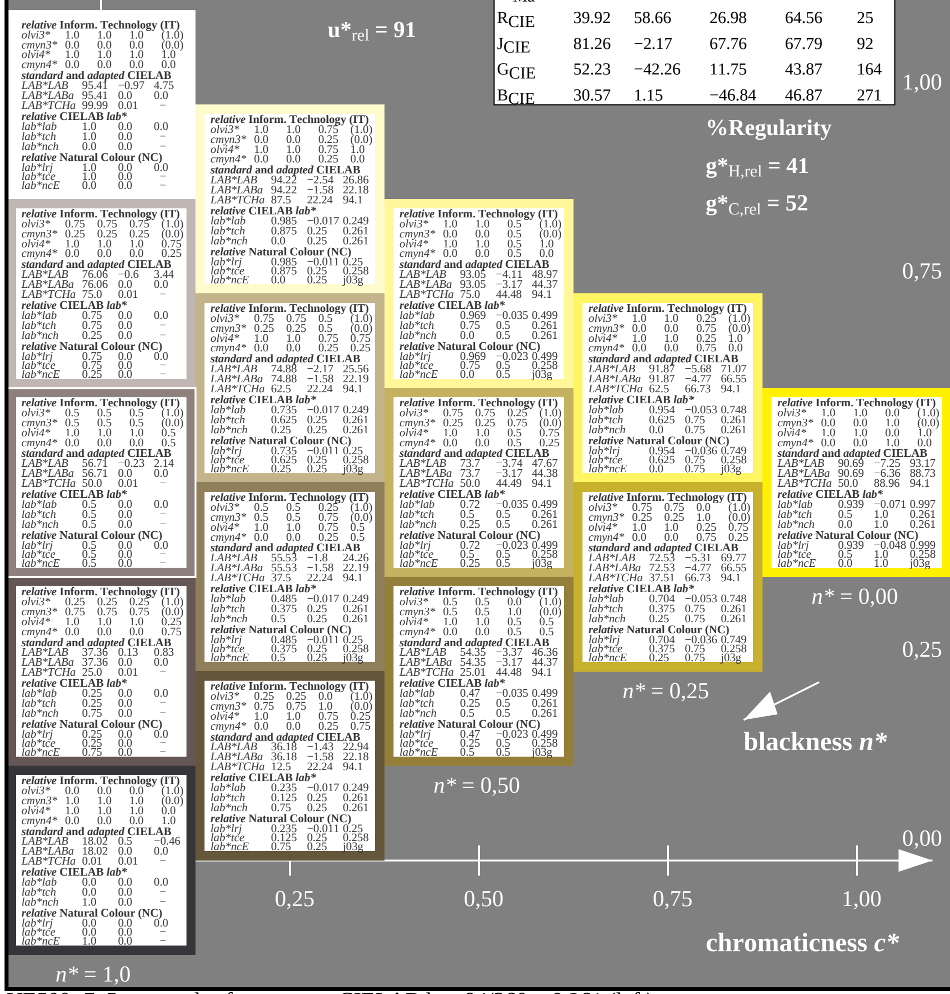
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System MRS18a

for hue $h^* = lab^*h = 94/360 = 0.262$

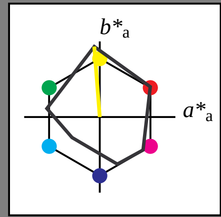
lab^*tch and lab^*nch

D65: hue J

LCH*Ma: 91 93 94

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 92$

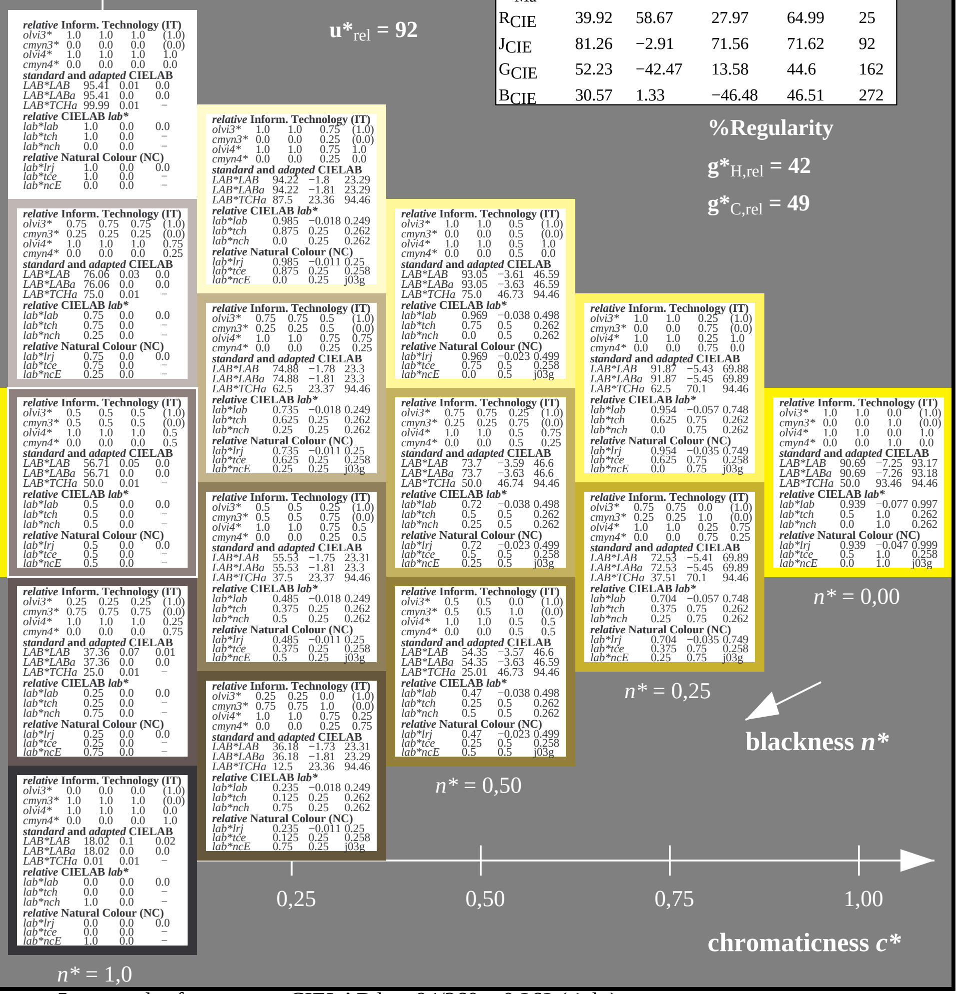
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



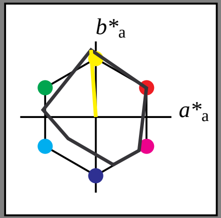
UE500−7, 5 step scales for constant CIELAB hue 94/360 = 0.261 (left)

5 step scales for constant CIELAB hue 94/360 = 0.262 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 94/360 = 0.261$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 89 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 91

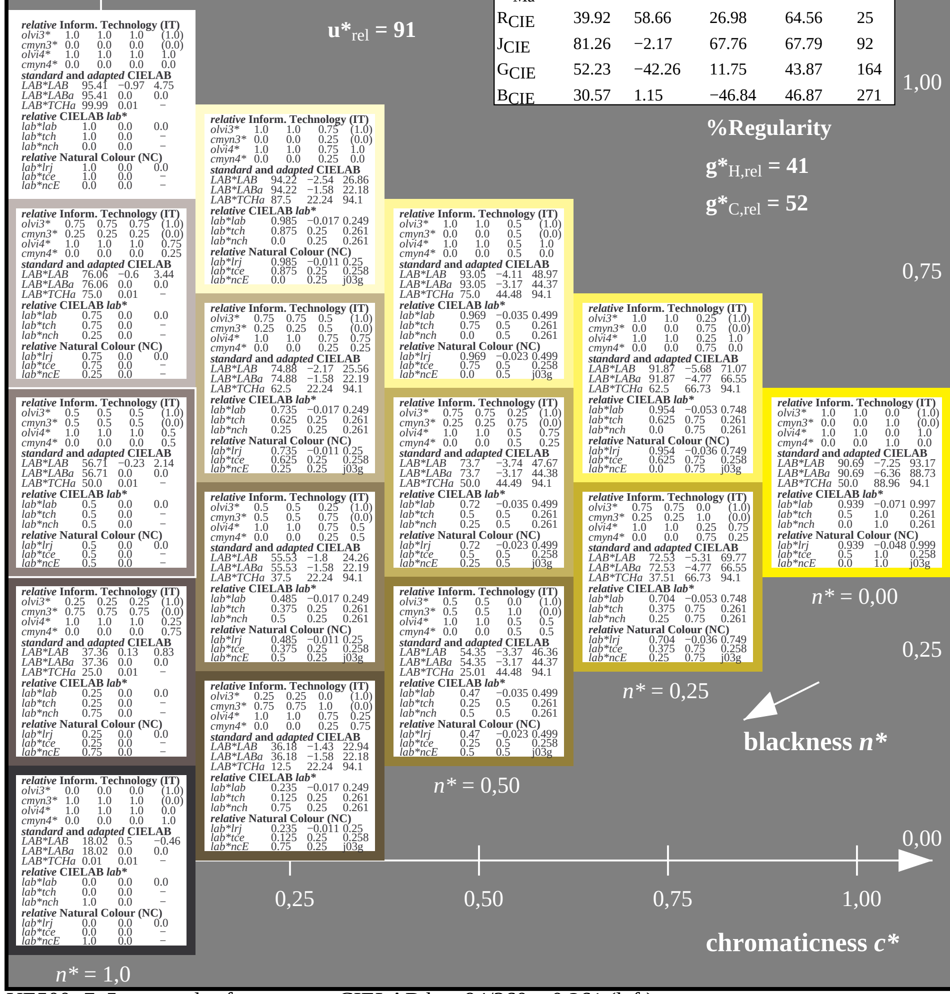
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

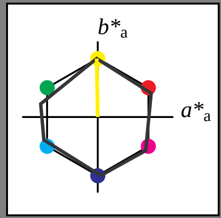
$g^*_{C,rel}$ = 52



Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 77 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 100

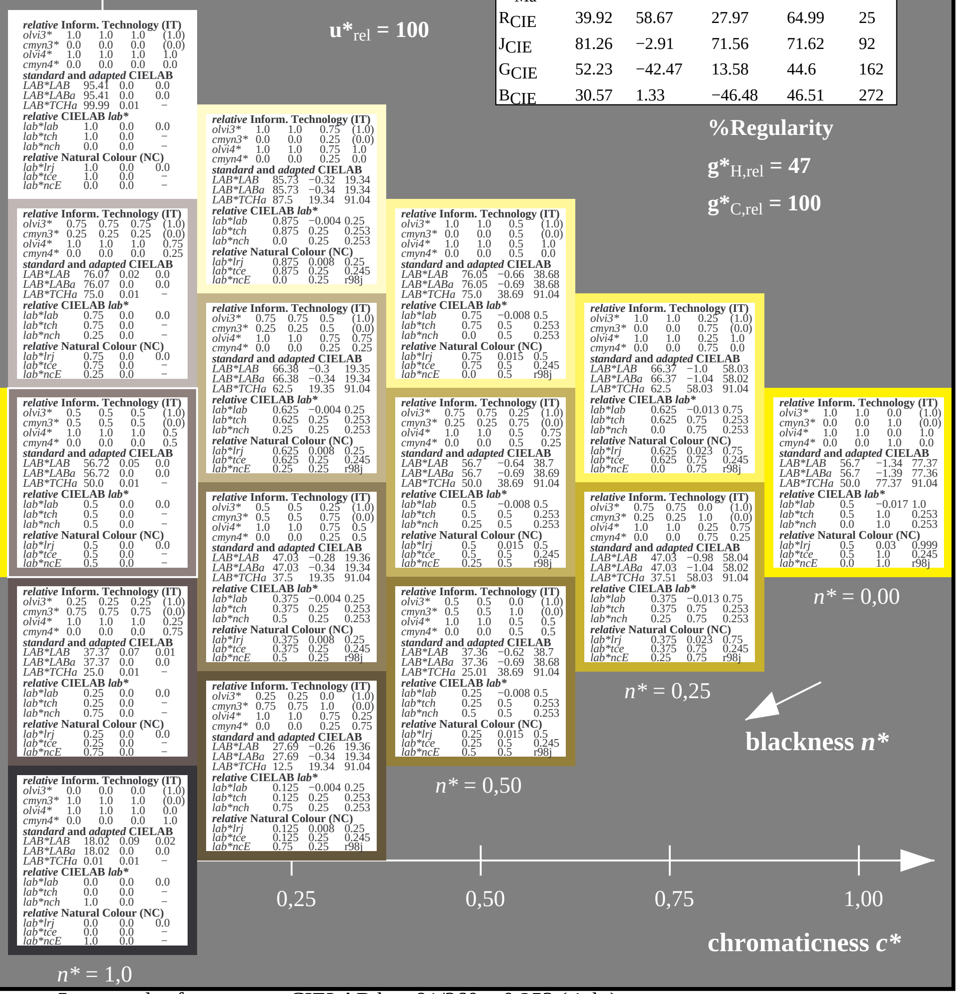
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

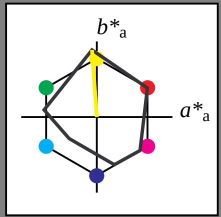


UE500−7, 5 step scales for constant CIELAB hue 94/360 = 0.261 (left)

5 step scales for constant CIELAB hue 91/360 = 0.253 (right)

Input: Colorimetric Reflective System MRS18
for hue *h** = *lab*h* = *94/360 = 0.261*
*lab*tch* and *lab*nch*

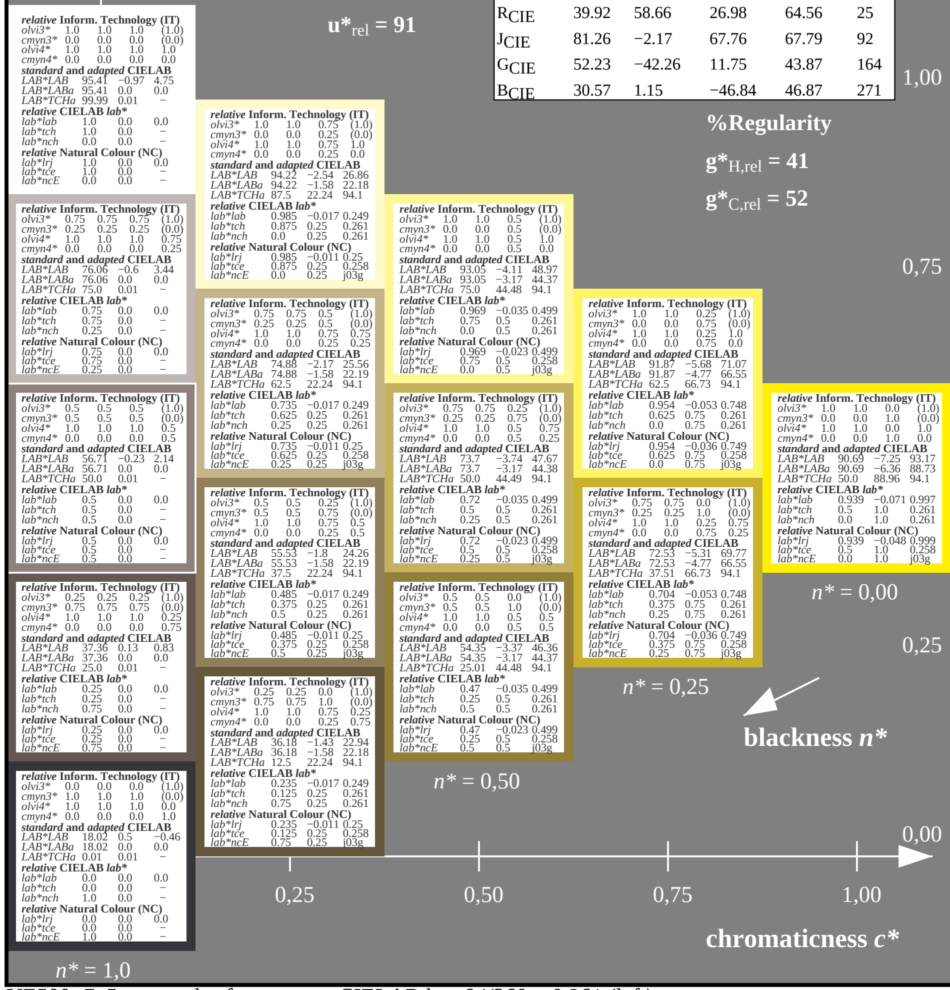
D65: hue J
LCH*Ma: 91 89 94
rgb*Ma: 1.0 1.0 0.0
triangle lightness *t*



%Gamut
u*$_{rel}$ = 91

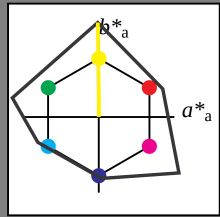
MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
g*$_{H,rel}$ = 41
g*$_{C,rel}$ = 52



Output: Colorimetric Reflective System NCS18
for hue *h** = *lab*h* = *91/360 = 0.252*
*lab*tch* and *lab*nch*

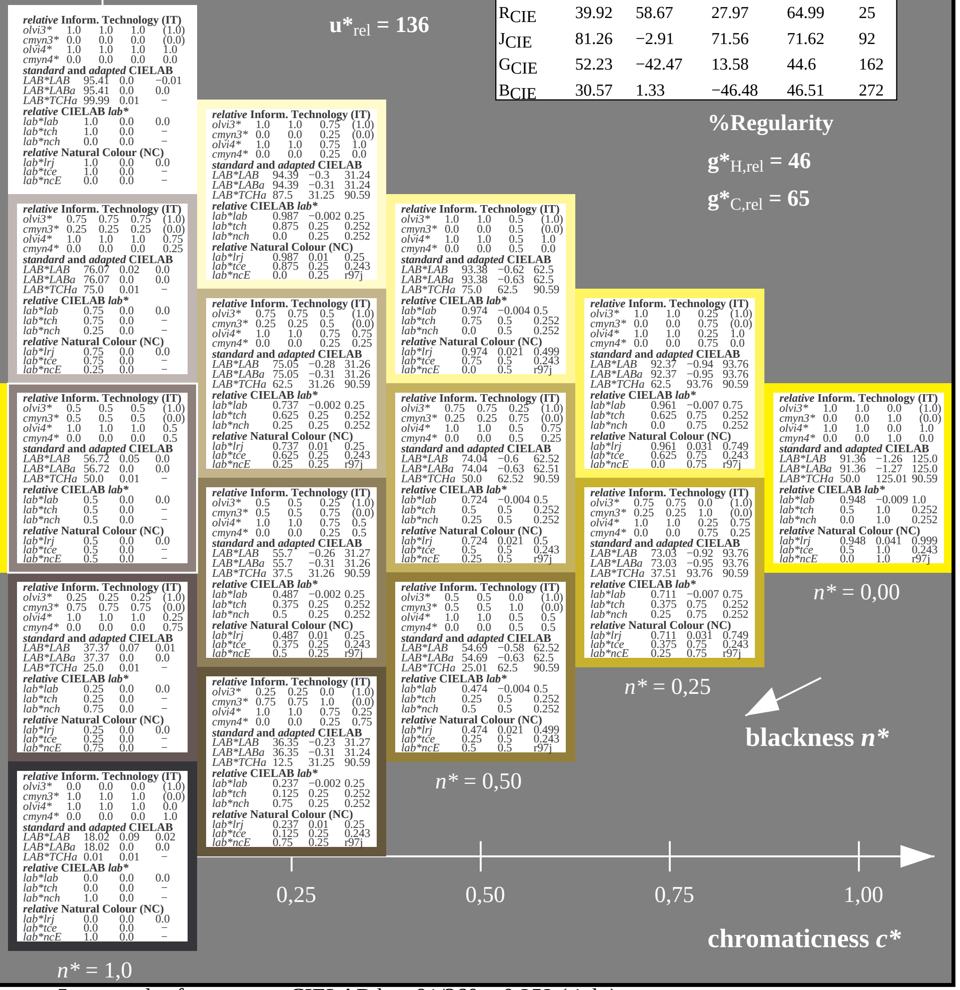
D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0
triangle lightness *t*



%Gamut
u*$_{rel}$ = 136

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
g*$_{H,rel}$ = 46
g*$_{C,rel}$ = 65

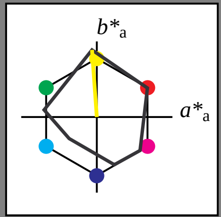


UE500−7, 5 step scales for constant CIELAB hue 94/360 = 0.261 (left)

5 step scales for constant CIELAB hue 91/360 = 0.252 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 94/360 = 0.261$
*lab*tch and lab*nch*

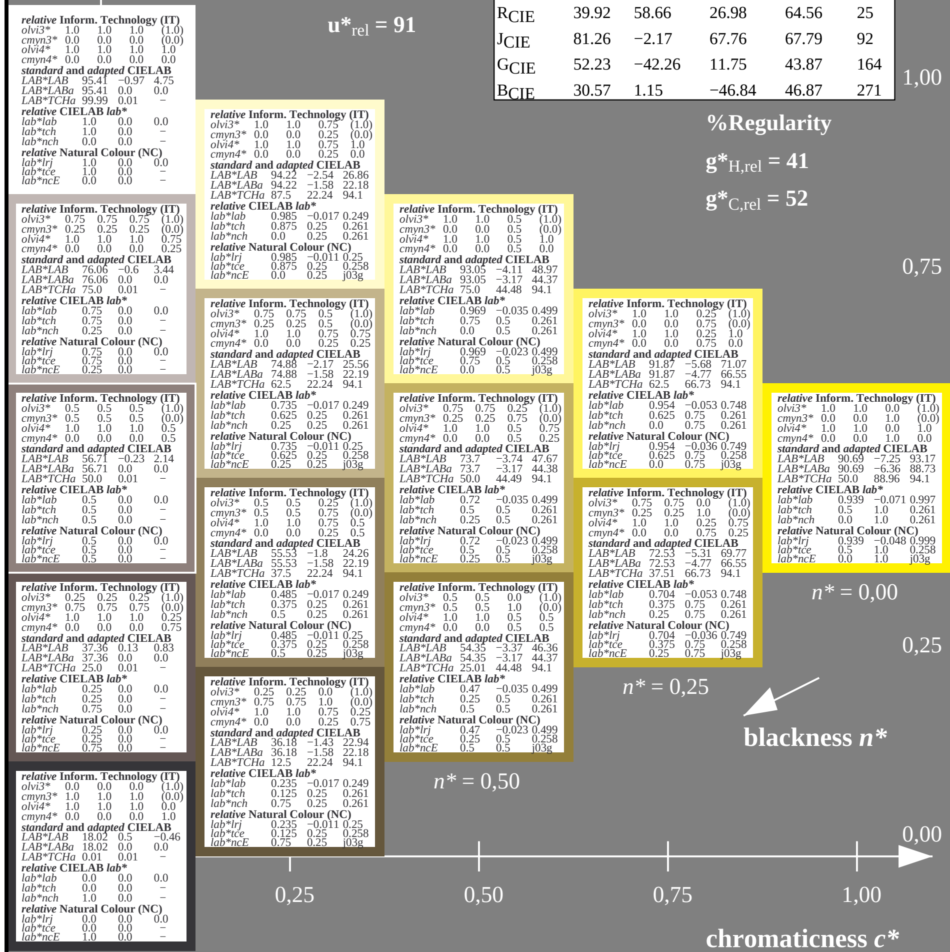
D65: hue J
LCH*Ma: 91 89 94
rgb*Ma: 1.0 1.0 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 91$

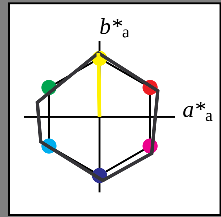
MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 41$
$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 91/360 = 0.253$
*lab*tch and lab*nch*

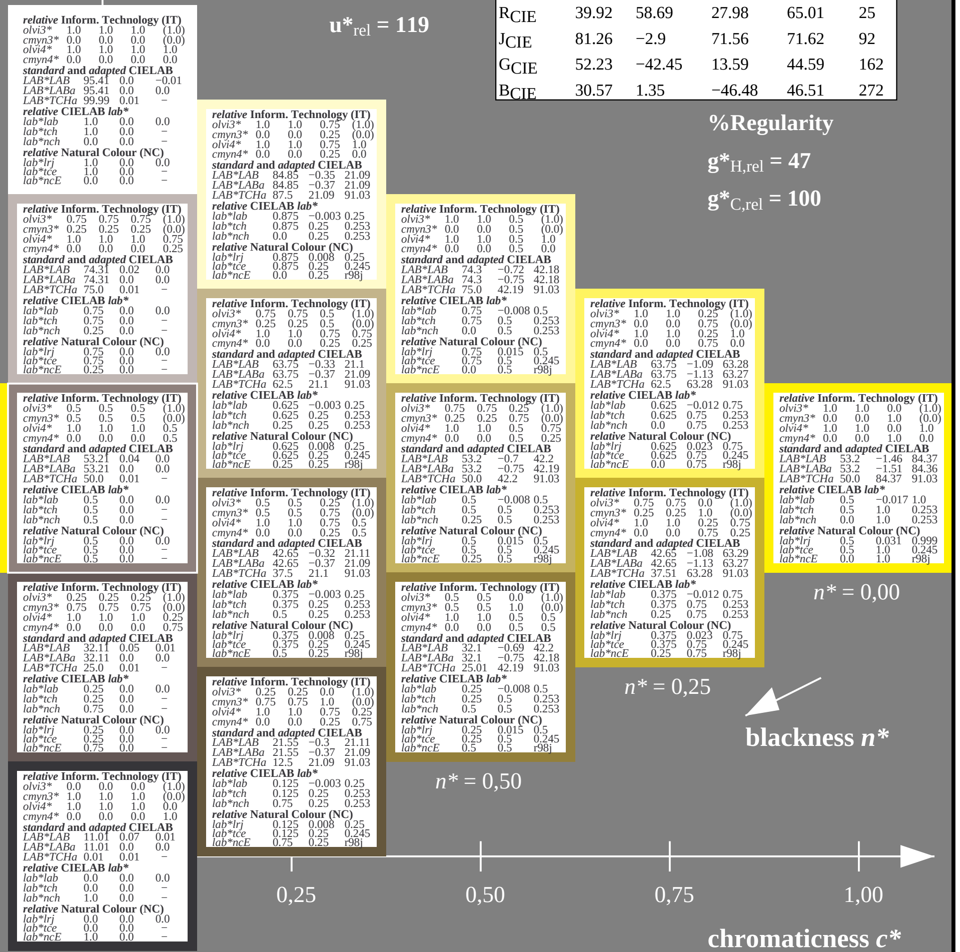
D65: hue J
LCH*Ma: 53 84 91
rgb*Ma: 1.0 1.0 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



UE500−7, 5 step scales for constant CIELAB hue 94/360 = 0.261 (left)

5 step scales for constant CIELAB hue 91/360 = 0.253 (right)

Input: Colorimetric Reflective System MRS18

for hue $h^* = lab^*h = 94/360 = 0.261$

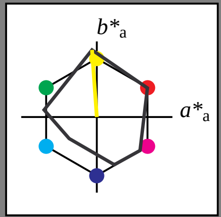
*lab*tch and lab*nch*

D65: hue J

LCH*Ma: 91 89 94

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

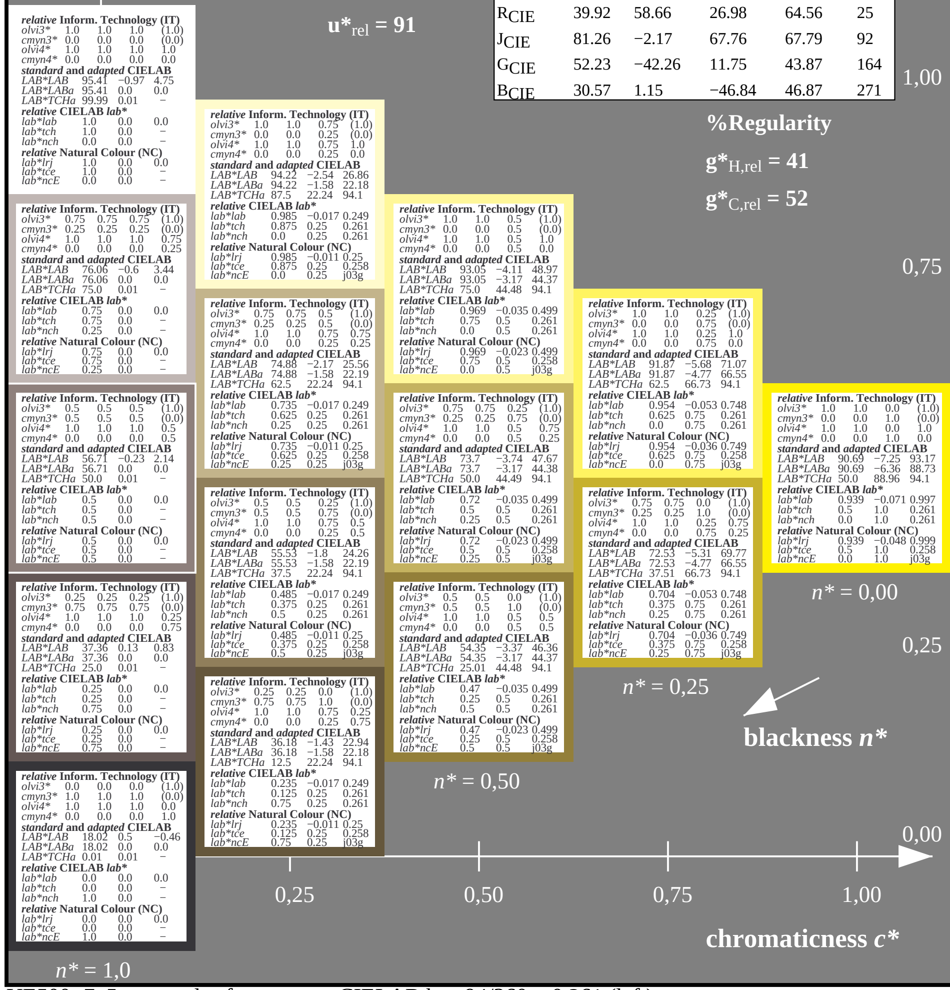
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 91/360 = 0.252$

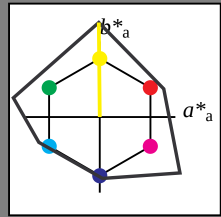
*lab*tch and lab*nch*

D65: hue J

LCH*Ma: 91 125 91

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

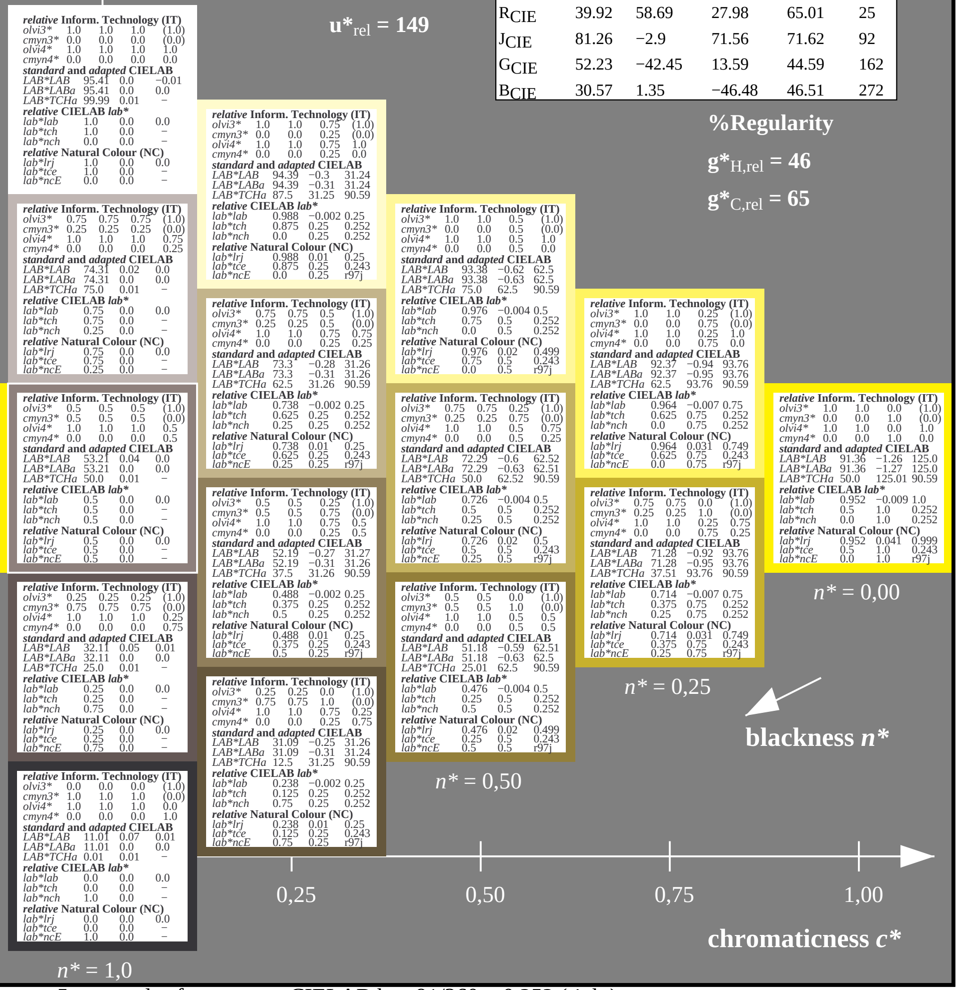
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



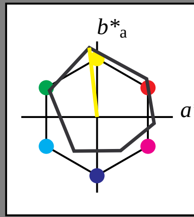
UE500−7, 5 step scales for constant CIELAB hue 94/360 = 0.261 (left)

5 step scales for constant CIELAB hue 91/360 = 0.252 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

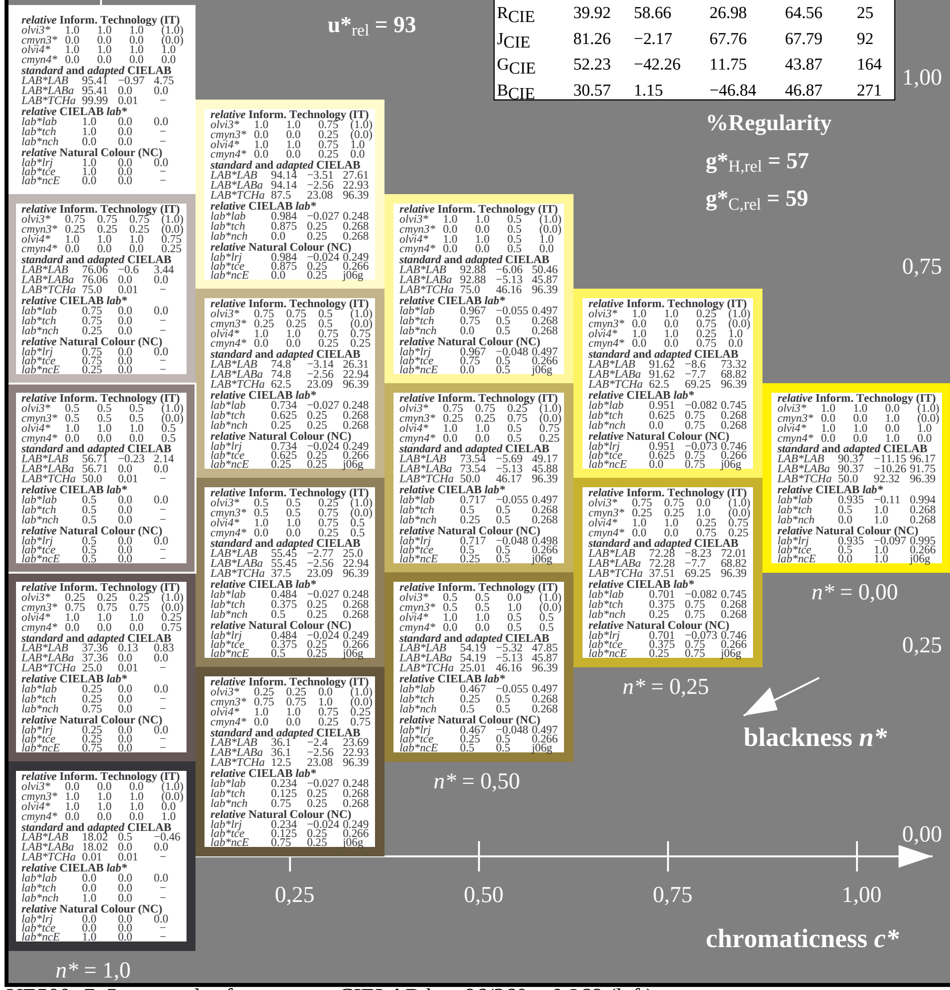
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

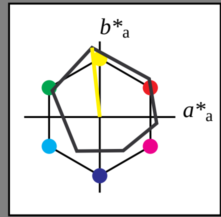
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

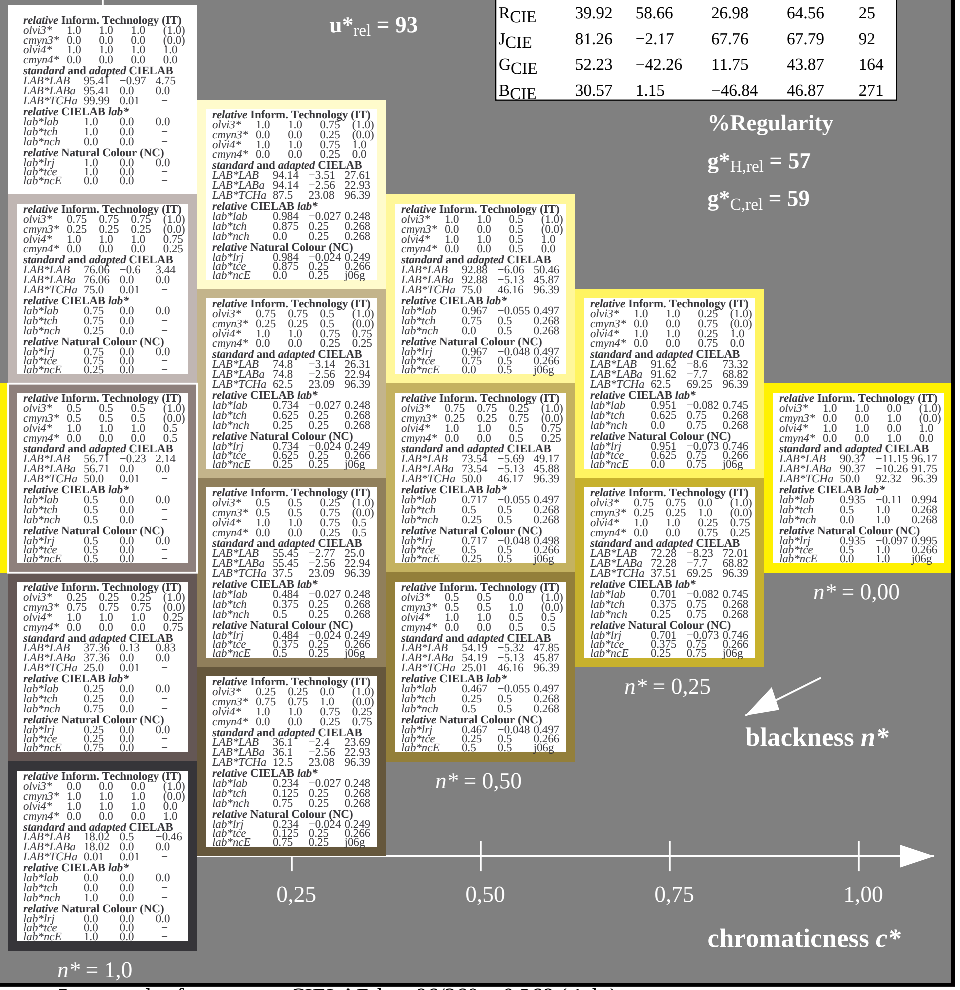
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



UE500−7, 5 step scales for constant CIELAB hue 96/360 = 0.268 (left)

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

Input: Colorimetric Reflective System TRS18

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

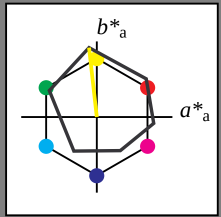
lab*tch* and *lab*nch

D65: hue Y

LCH*Ma: 90 92 96

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 93

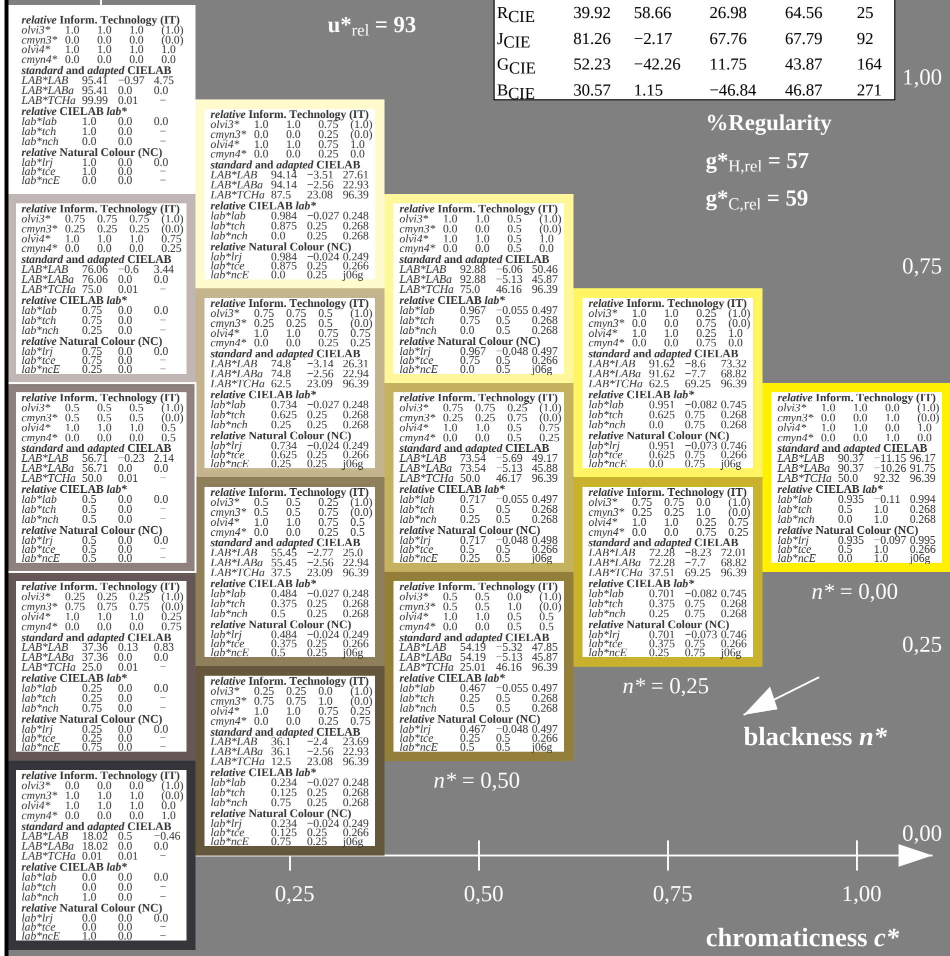
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



Output: Colorimetric Reflective System MRS18

for hue $h^* = lab^*h = 94/360 = 0.261$

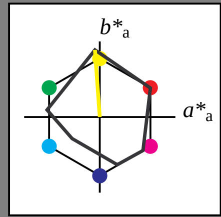
lab*tch* and *lab*nch

D65: hue J

LCH*Ma: 91 89 94

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 91

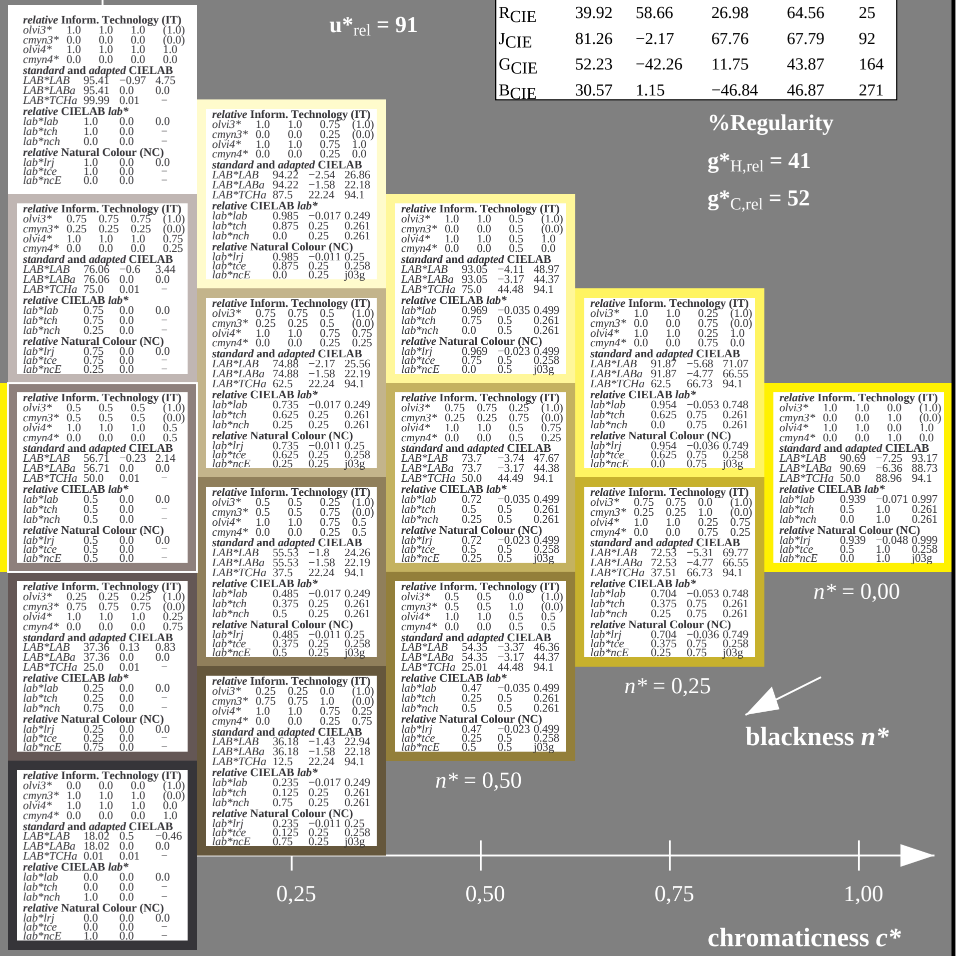
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



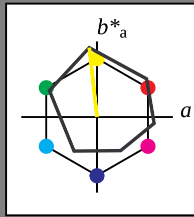
UE500−7, 5 step scales for constant CIELAB hue 96/360 = 0.268 (left)

5 step scales for constant CIELAB hue 94/360 = 0.261 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

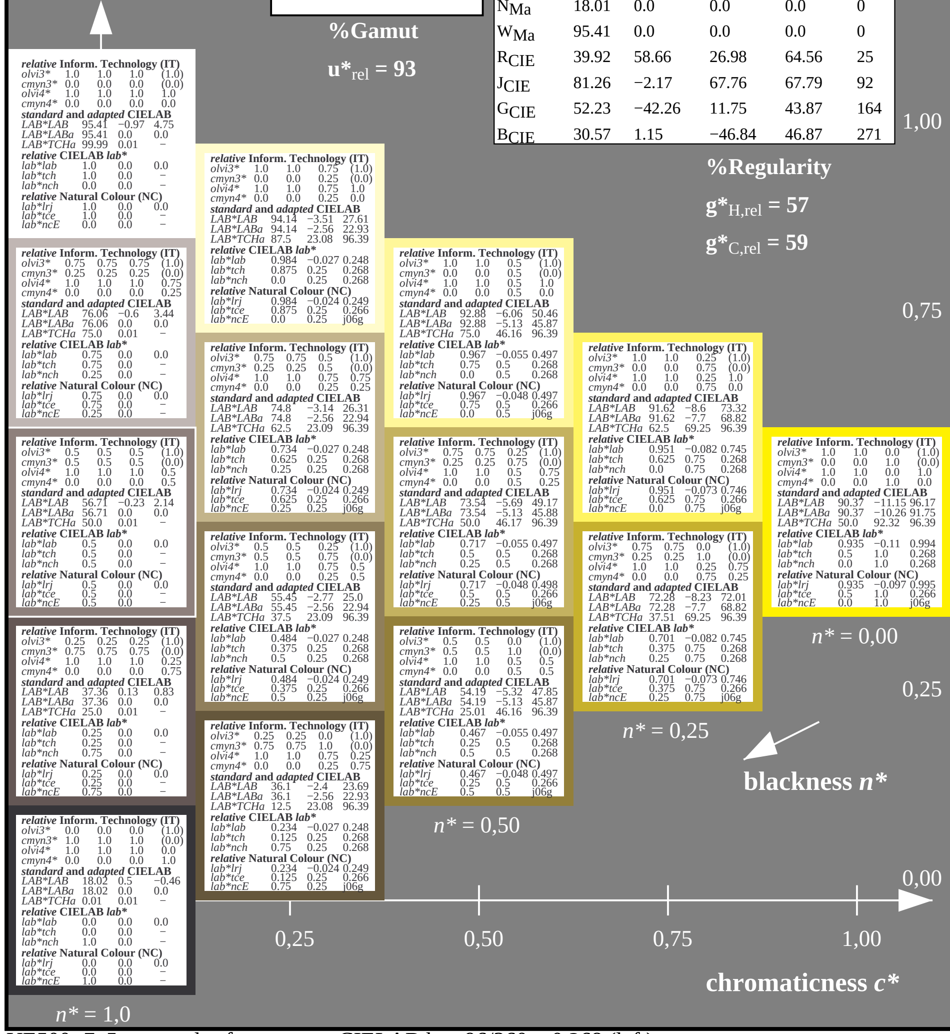
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

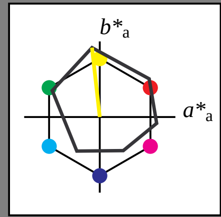
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

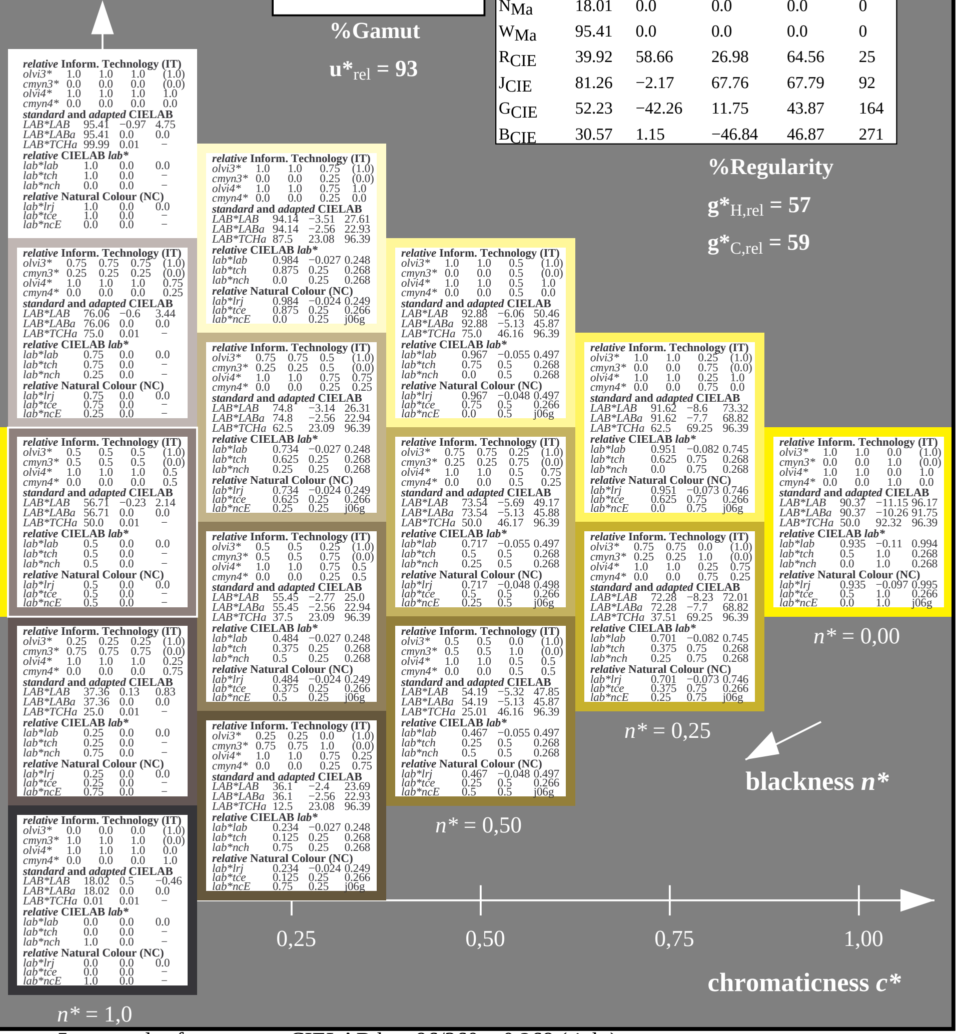
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



UE500−7, 5 step scales for constant CIELAB hue 96/360 = 0.268 (left)

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

Input: Colorimetric Reflective System TRS18

for hue *h = *lab*h* = 96/360 = 0.268**

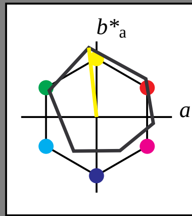
lab*tch* and *lab*nch

D65: hue Y

LCH*Ma: 90 92 96

rgb*Ma: 1.0 1.0 0.0

triangle lightness *t*



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

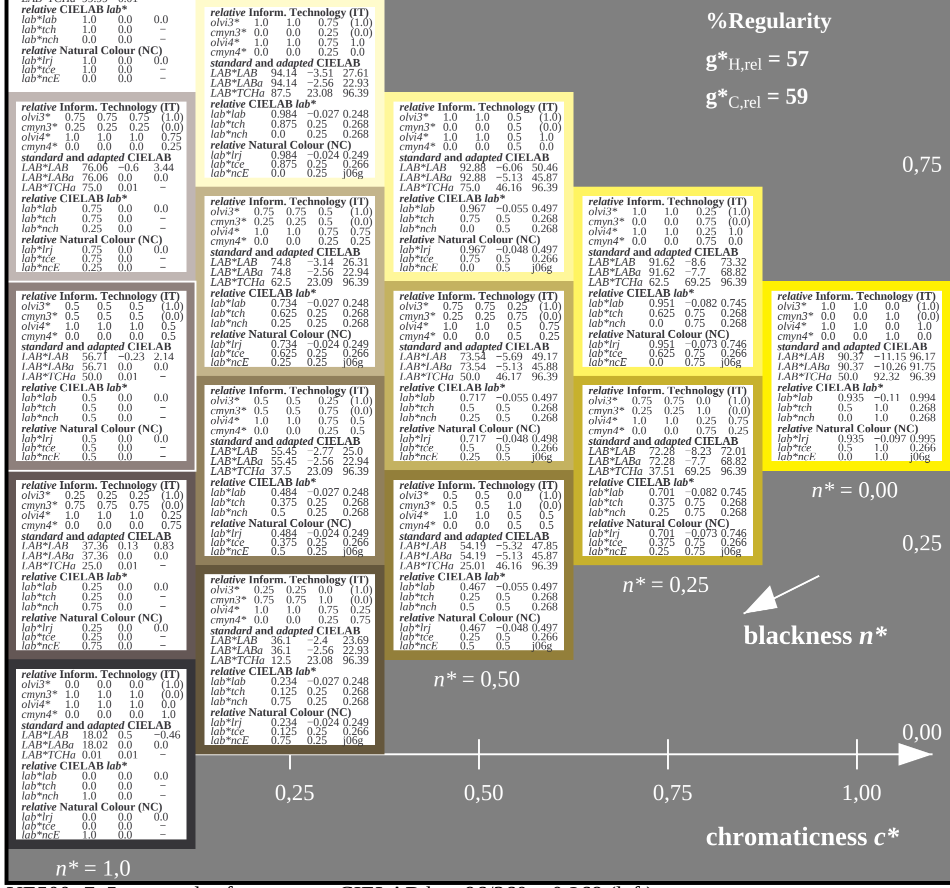
%Gamut

u^*_{rel} = 93

%Regularity

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

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



Output: Colorimetric Reflective System MRS18a

for hue *h = *lab*h* = 94/360 = 0.262**

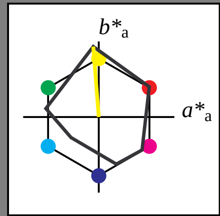
lab*tch* and *lab*nch

D65: hue J

LCH*Ma: 91 93 94

rgb*Ma: 1.0 1.0 0.0

triangle lightness *t*



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

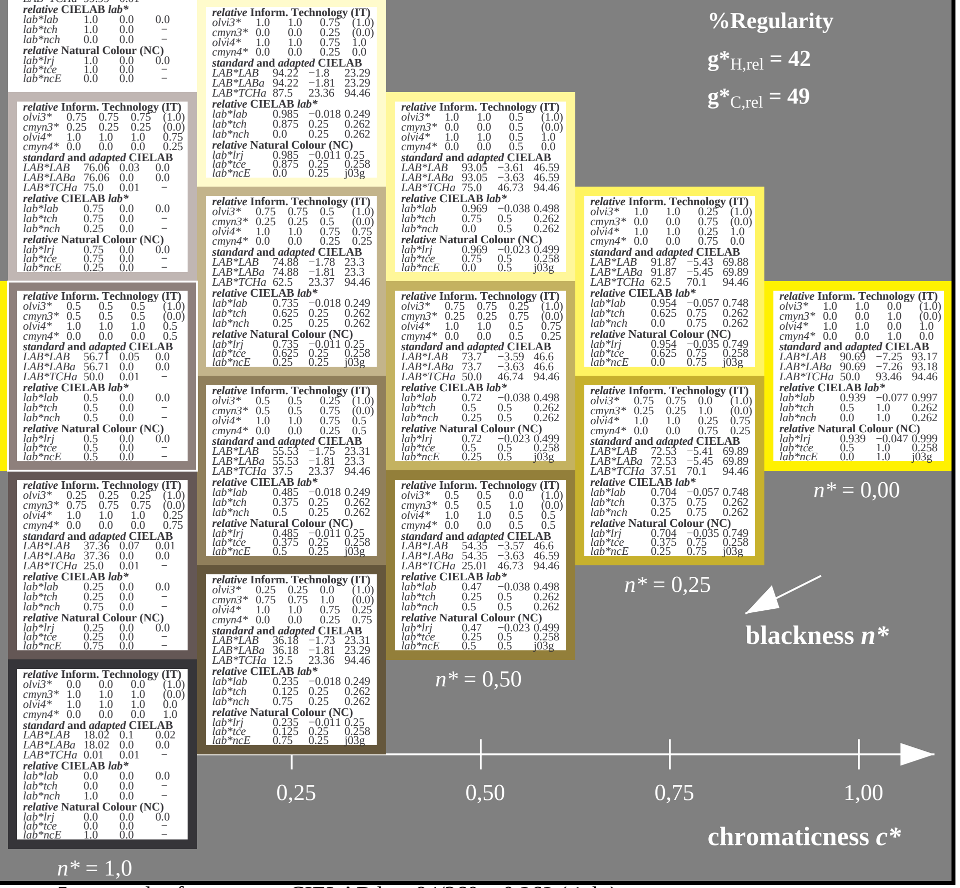
%Gamut

u^*_{rel} = 92

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

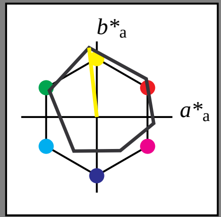


UE500−7, 5 step scales for constant CIELAB hue 96/360 = 0.268 (left)

5 step scales for constant CIELAB hue 94/360 = 0.262 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

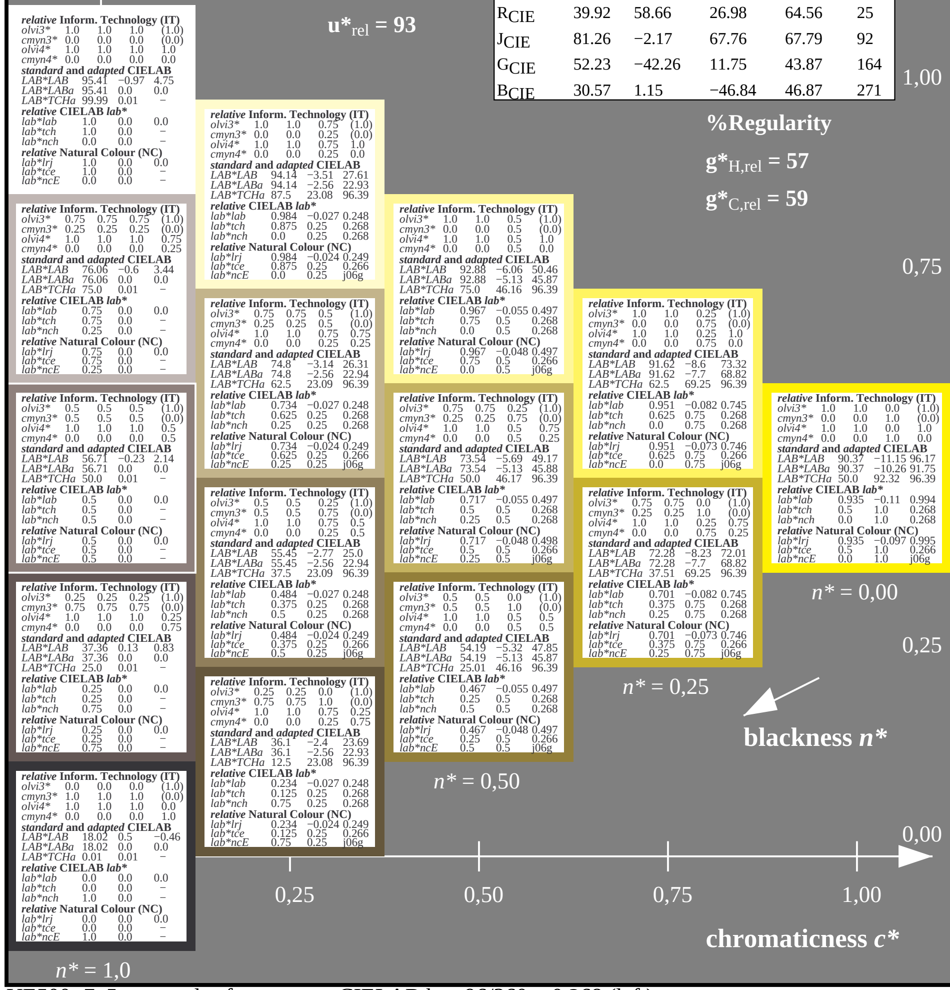
D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 93$

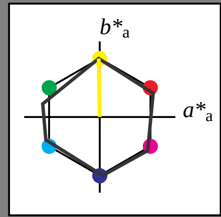
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

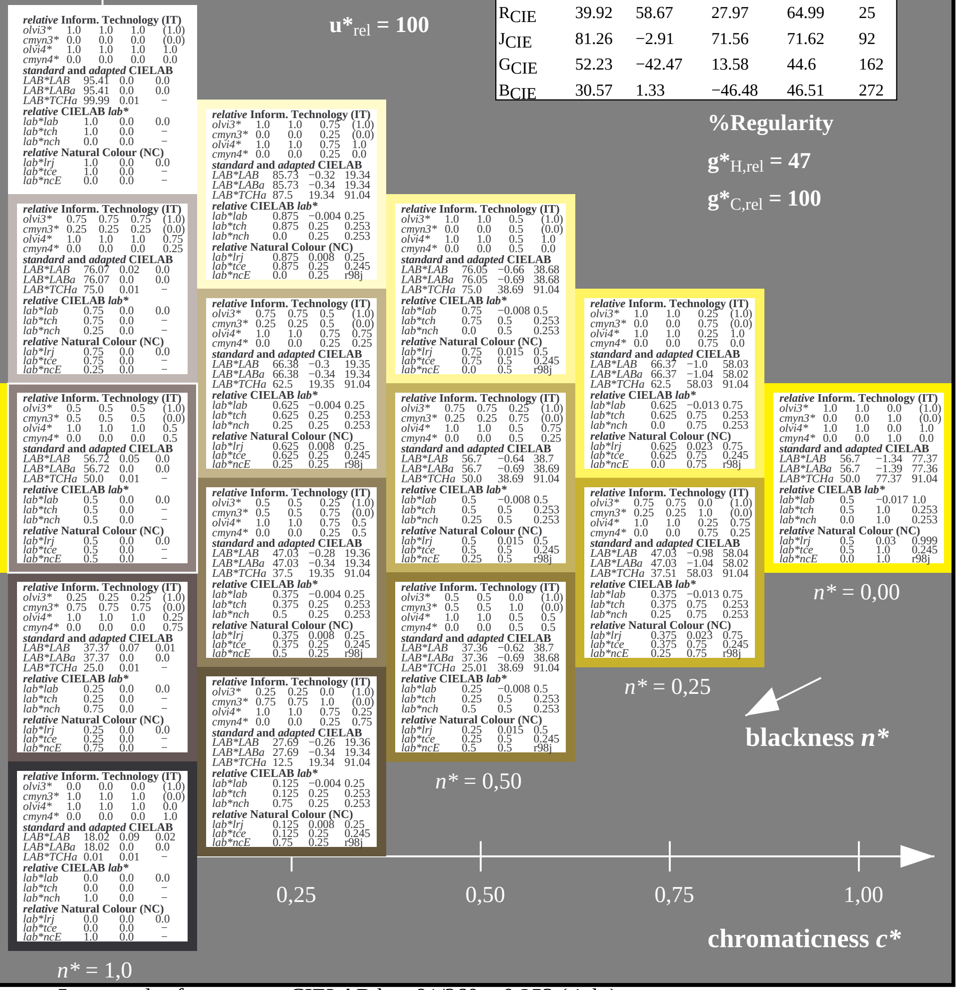
D65: hue J
LCH*Ma: 57 77 91
rgb*Ma: 1.0 1.0 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272



UE500−7, 5 step scales for constant CIELAB hue 96/360 = 0.268 (left)

5 step scales for constant CIELAB hue 91/360 = 0.253 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 96/360 = 0.268$

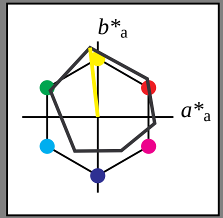
*lab*tch and lab*nch*

D65: hue Y

LCH*Ma: 90 92 96

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

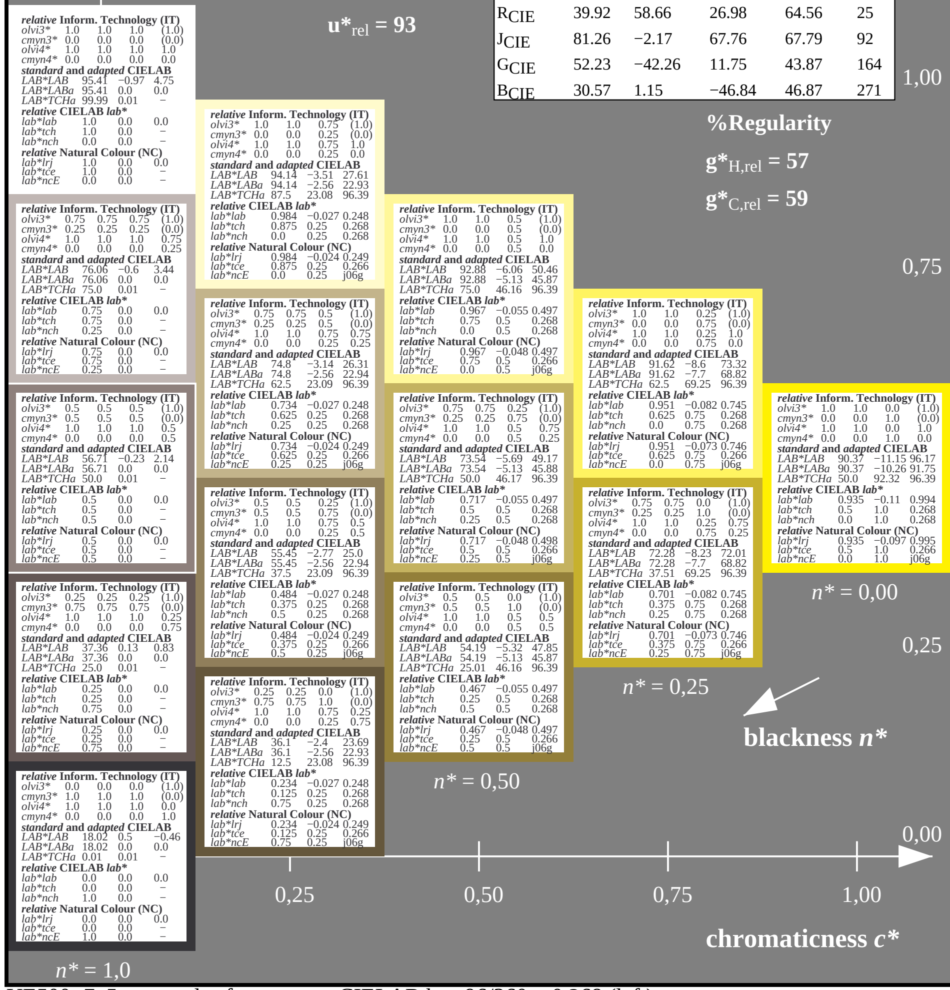
%Gamut

u^*_{rel} = 93

%Regularity

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

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



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 91/360 = 0.252$

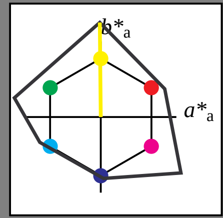
*lab*tch and lab*nch*

D65: hue J

LCH*Ma: 91 125 91

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

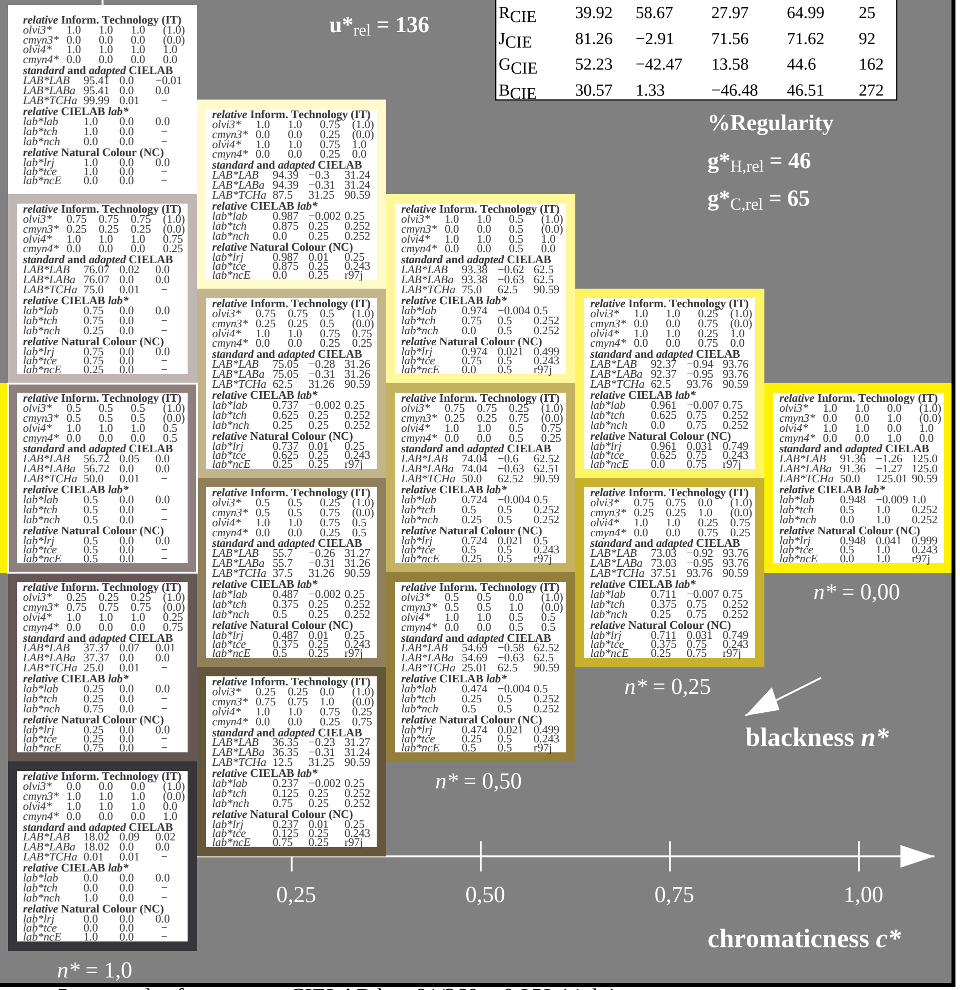
%Gamut

u^*_{rel} = 136

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

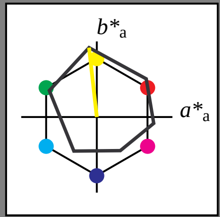


UE500−7, 5 step scales for constant CIELAB hue 96/360 = 0.268 (left)

5 step scales for constant CIELAB hue 91/360 = 0.252 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 96/360 = 0.268$
*lab*tch* and *lab*nch*

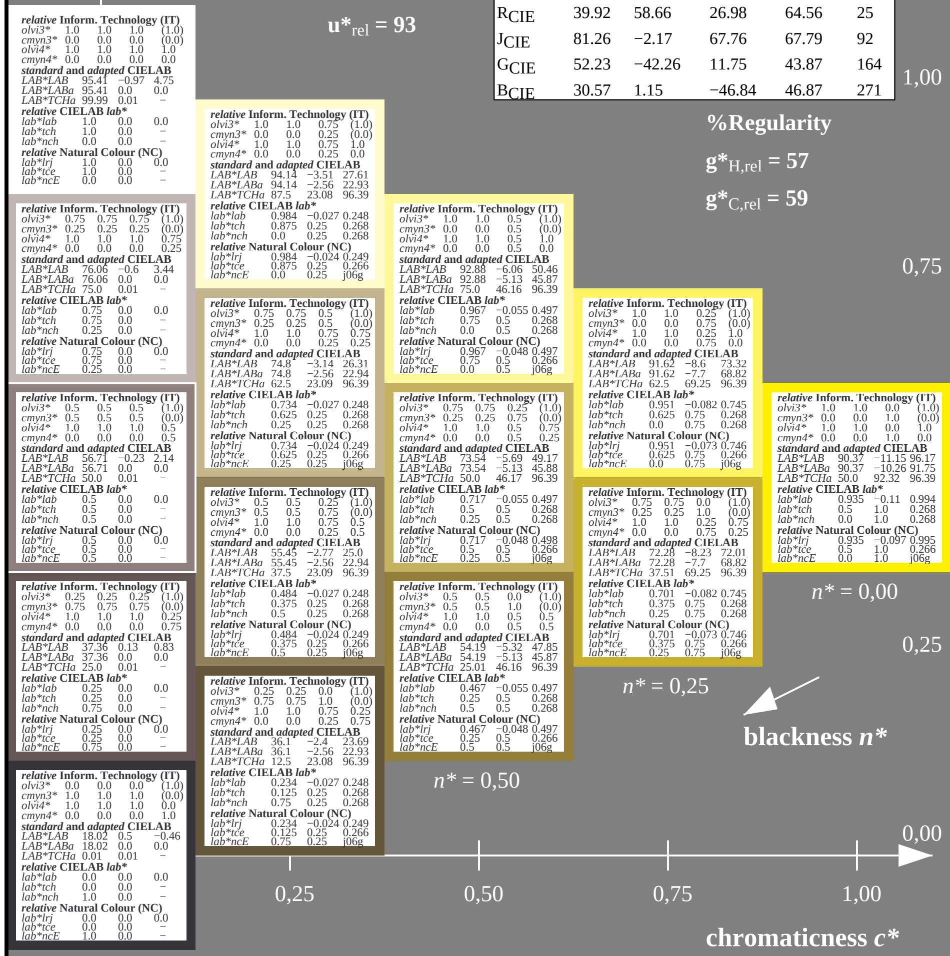
D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 93$

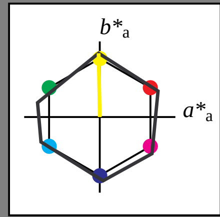
TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 91/360 = 0.253$
*lab*tch* and *lab*nch*

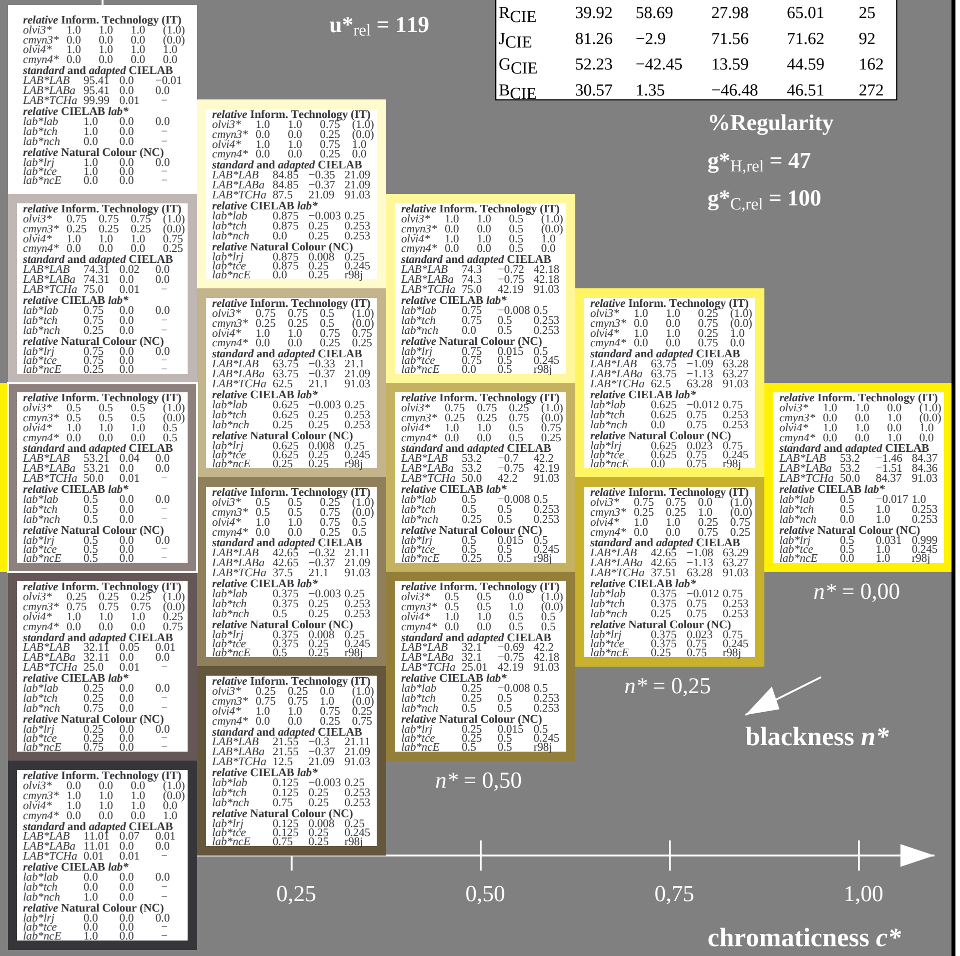
D65: hue J
LCH*Ma: 53 84 91
rgb*Ma: 1.0 1.0 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$

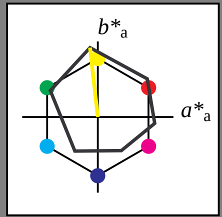


UE500−7, 5 step scales for constant CIELAB hue 96/360 = 0.268 (left)

5 step scales for constant CIELAB hue 91/360 = 0.253 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 96/360 = 0.268$
*lab*tch and lab*nch*

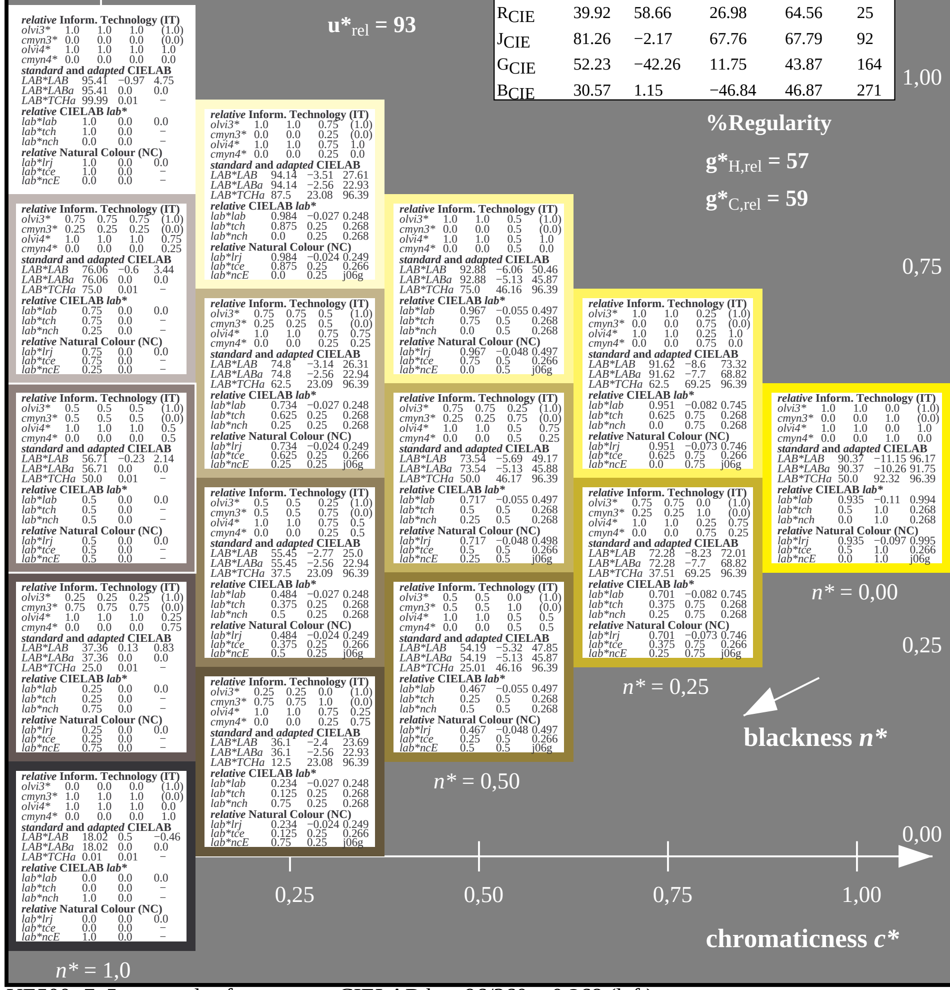
D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 93$

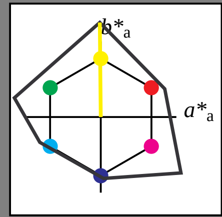
TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 91/360 = 0.252$
*lab*tch and lab*nch*

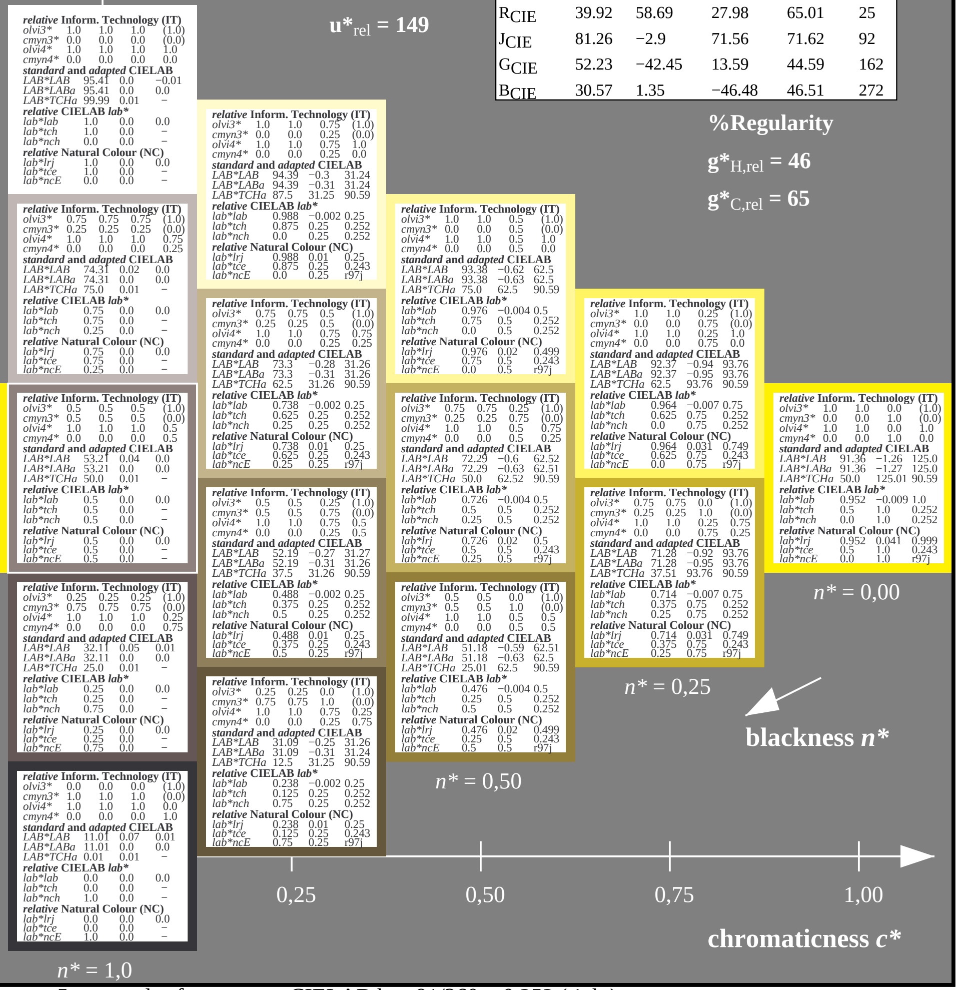
D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



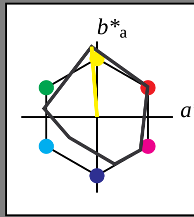
UE500−7, 5 step scales for constant CIELAB hue 96/360 = 0.268 (left)

5 step scales for constant CIELAB hue 91/360 = 0.252 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 94/360 = 0.262$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 93 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 92$

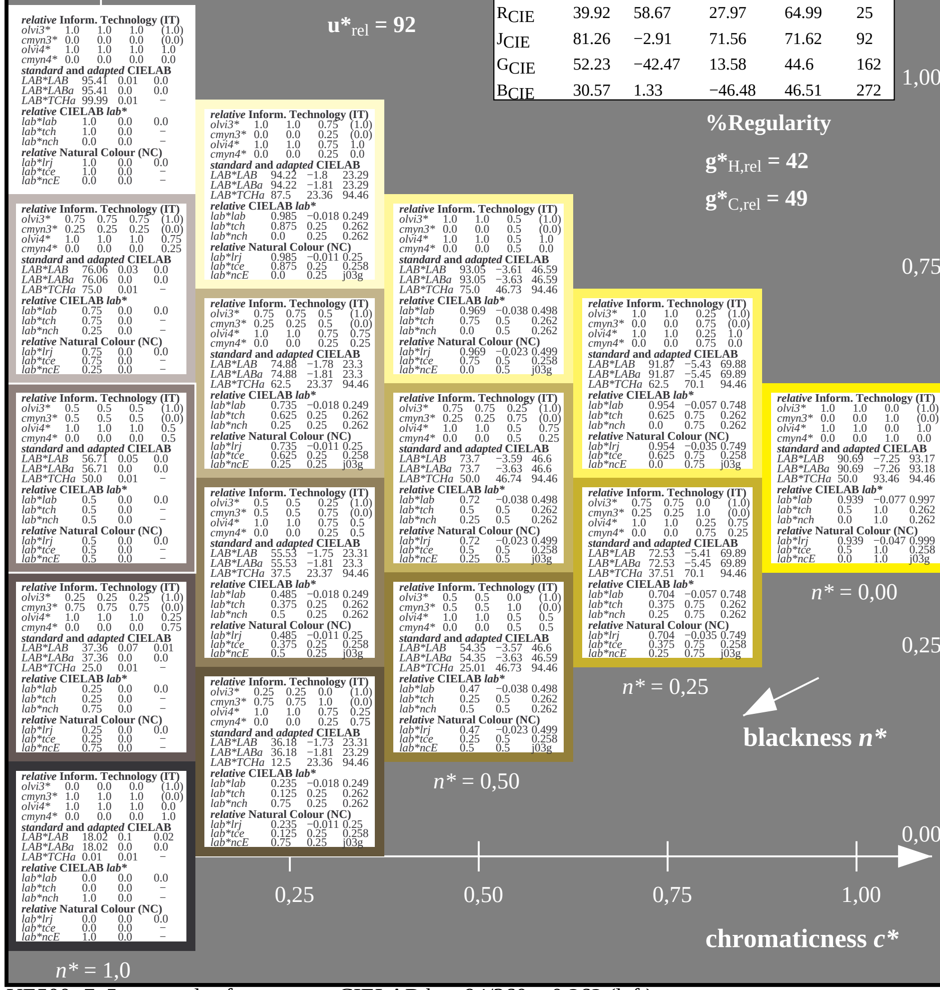
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

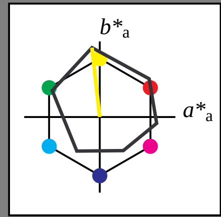
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

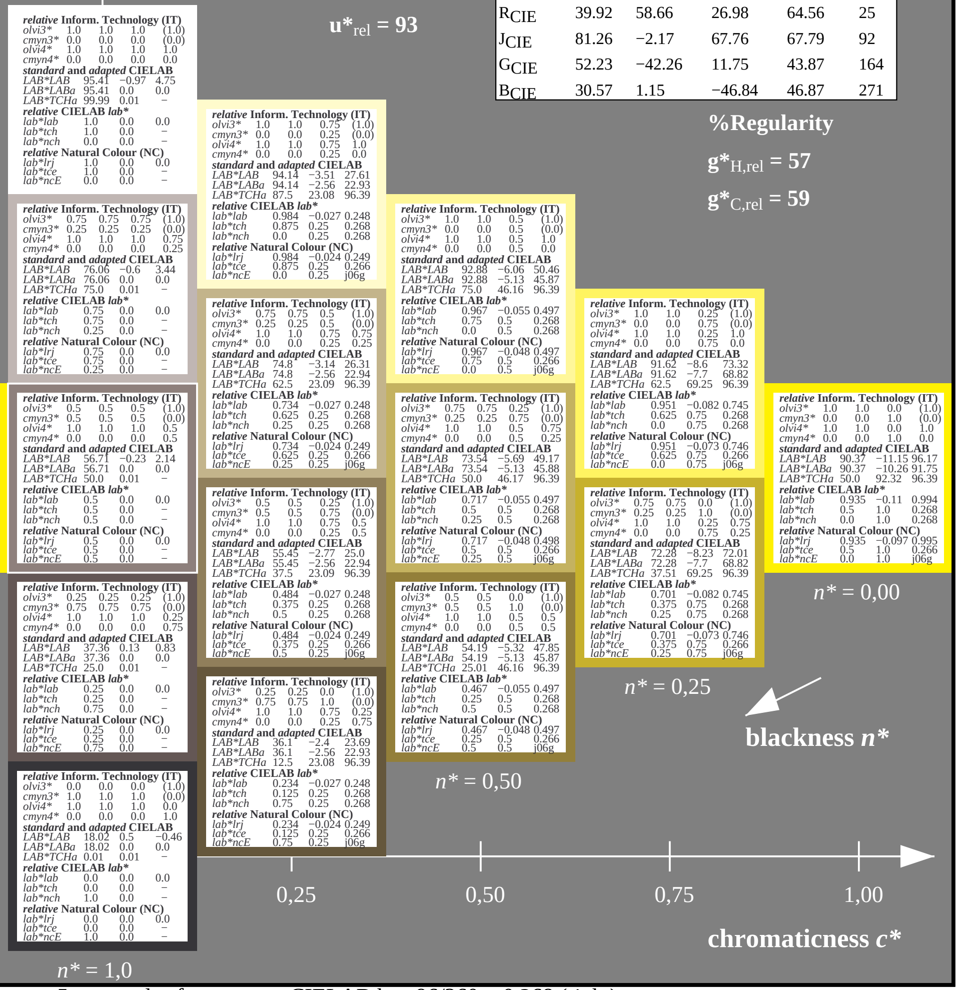
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



UE500−7, 5 step scales for constant CIELAB hue 94/360 = 0.262 (left)

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

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 94/360 = 0.262$

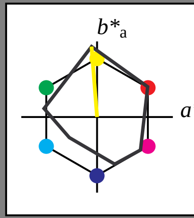
*lab*tch* and *lab*nch*

D65: hue J

LCH*Ma: 91 93 94

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 92$

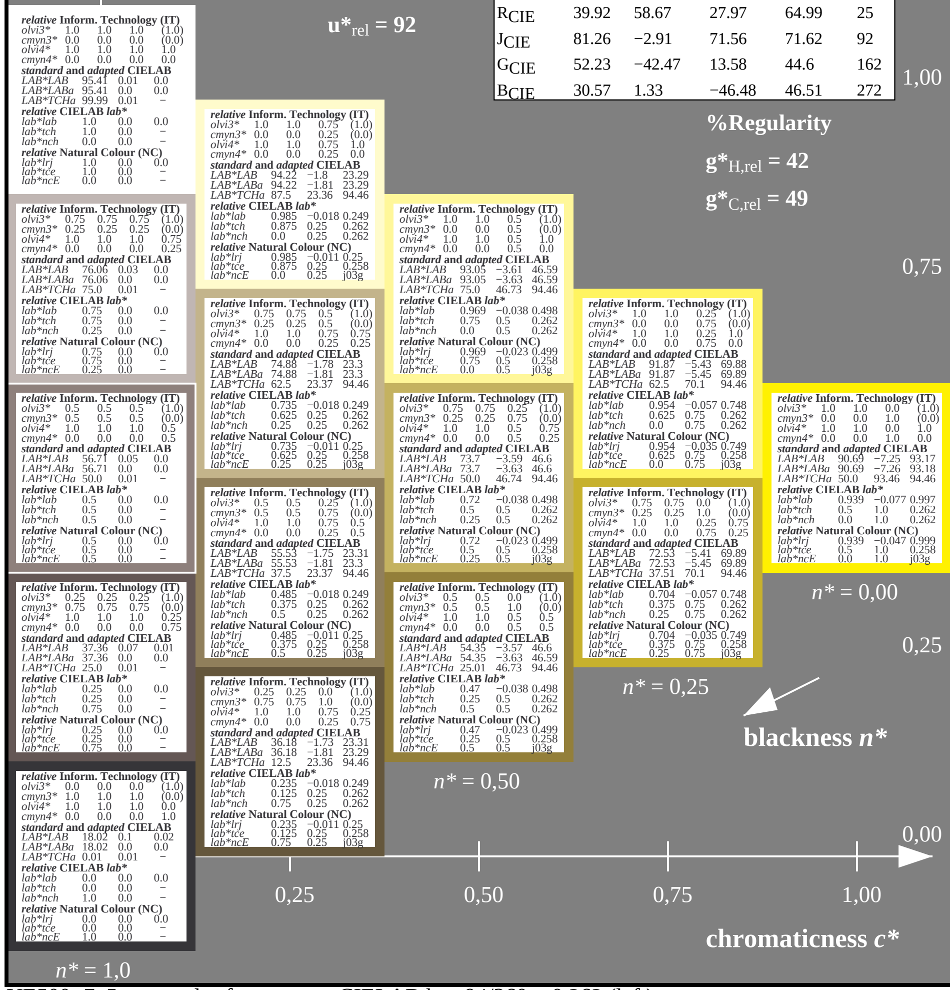
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 94/360 = 0.261$

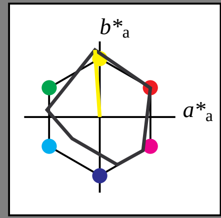
*lab*tch* and *lab*nch*

D65: hue J

LCH*Ma: 91 89 94

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 91$

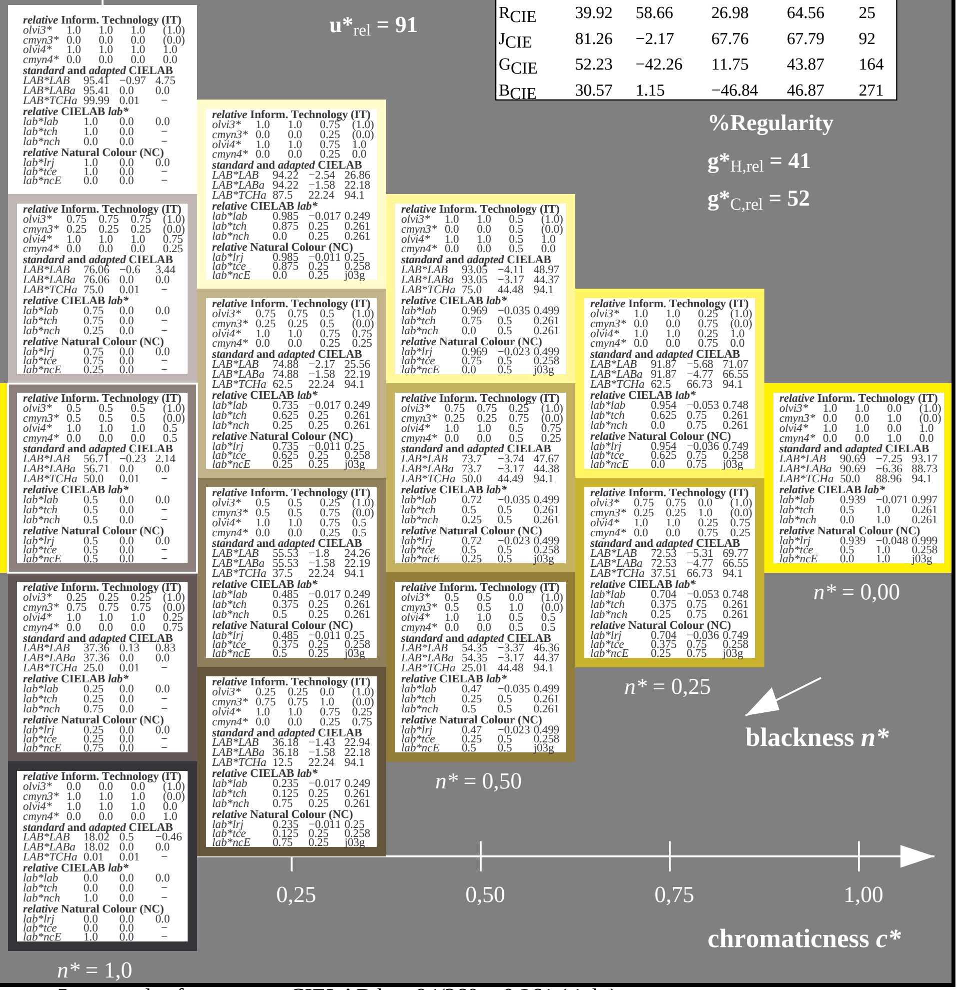
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



UE500−7, 5 step scales for constant CIELAB hue 94/360 = 0.262 (left)

5 step scales for constant CIELAB hue 94/360 = 0.261 (right)

Input: Colorimetric Reflective System MRS18a

for hue $h^* = lab^*h = 94/360 = 0.262$

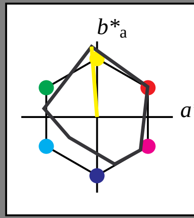
*lab*tch and lab*nch*

D65: hue J

LCH*Ma: 91 93 94

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 92$

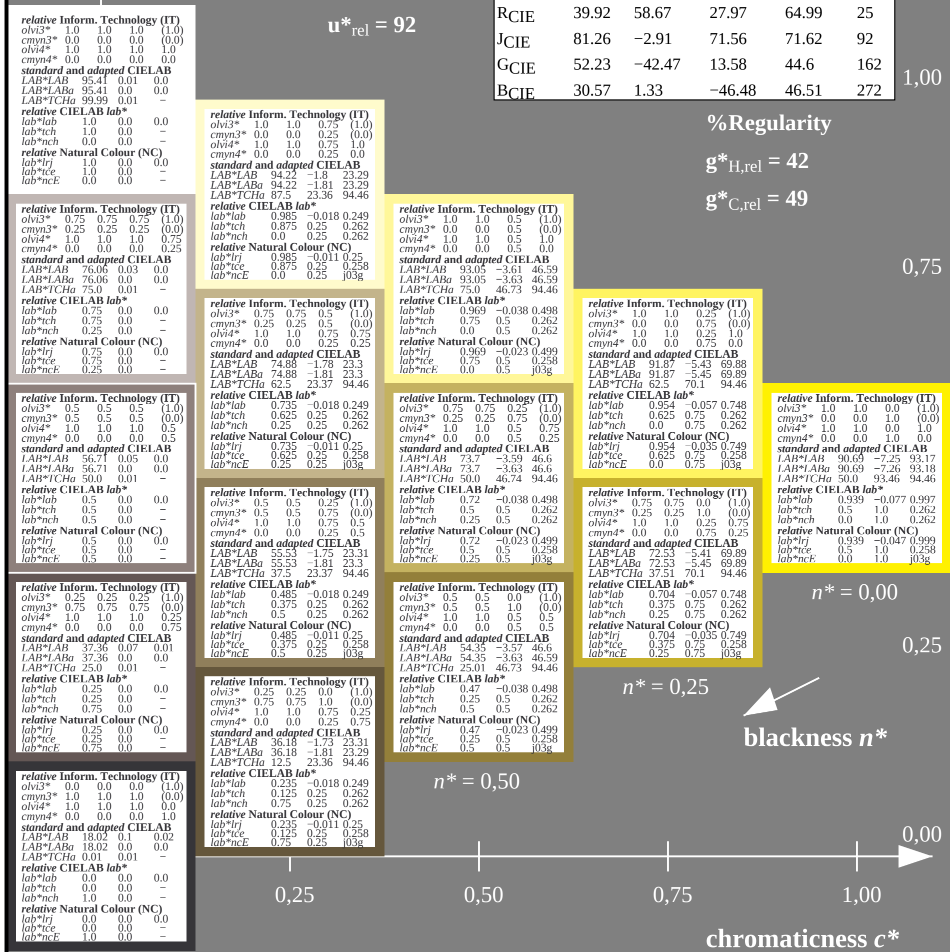
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System TRS18

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

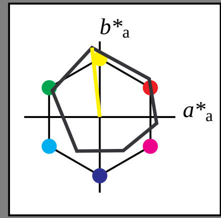
*lab*tch and lab*nch*

D65: hue Y

LCH*Ma: 90 92 96

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

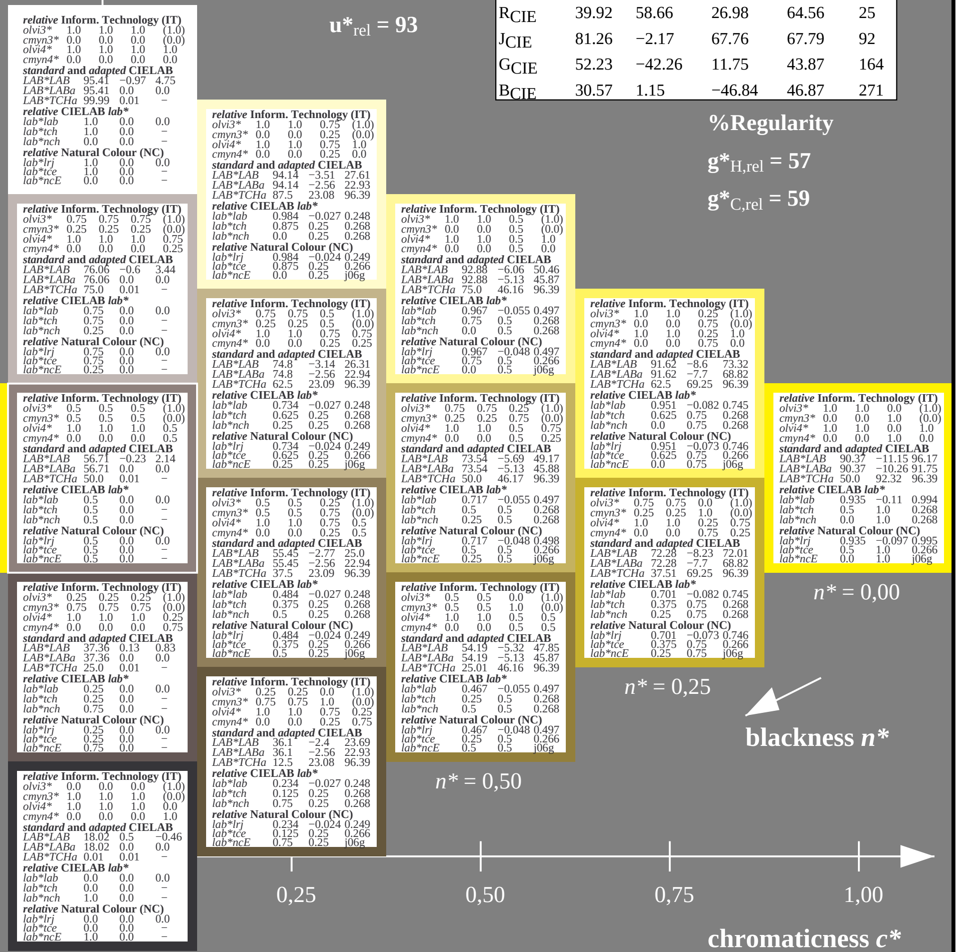
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



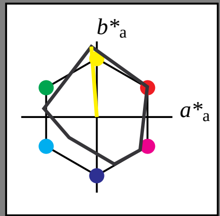
UE500−7, 5 step scales for constant CIELAB hue 94/360 = 0.262 (left)

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

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 94/360 = 0.262$
lab^*tch and lab^*nch

D65: hue J
LCH*Ma: 91 93 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 92$

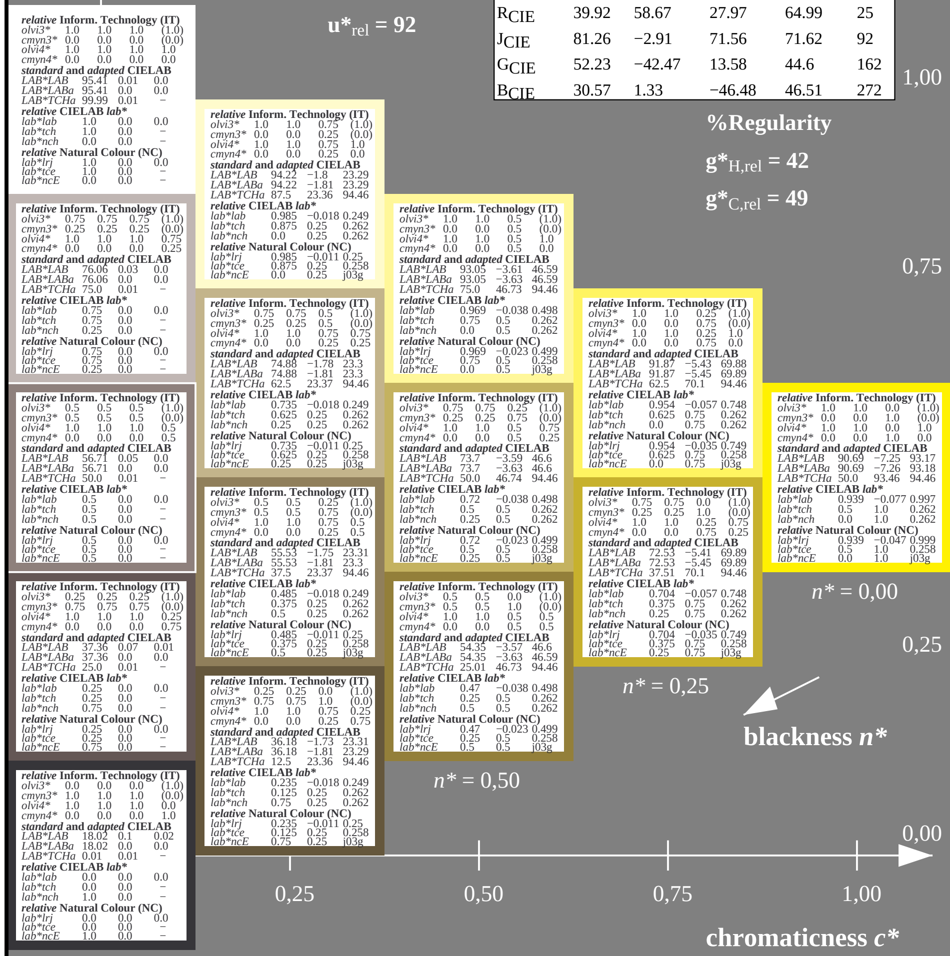
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

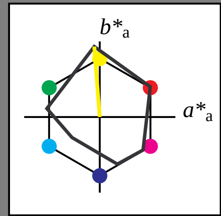
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 94/360 = 0.262$
lab^*tch and lab^*nch

D65: hue J
LCH*Ma: 91 93 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 92$

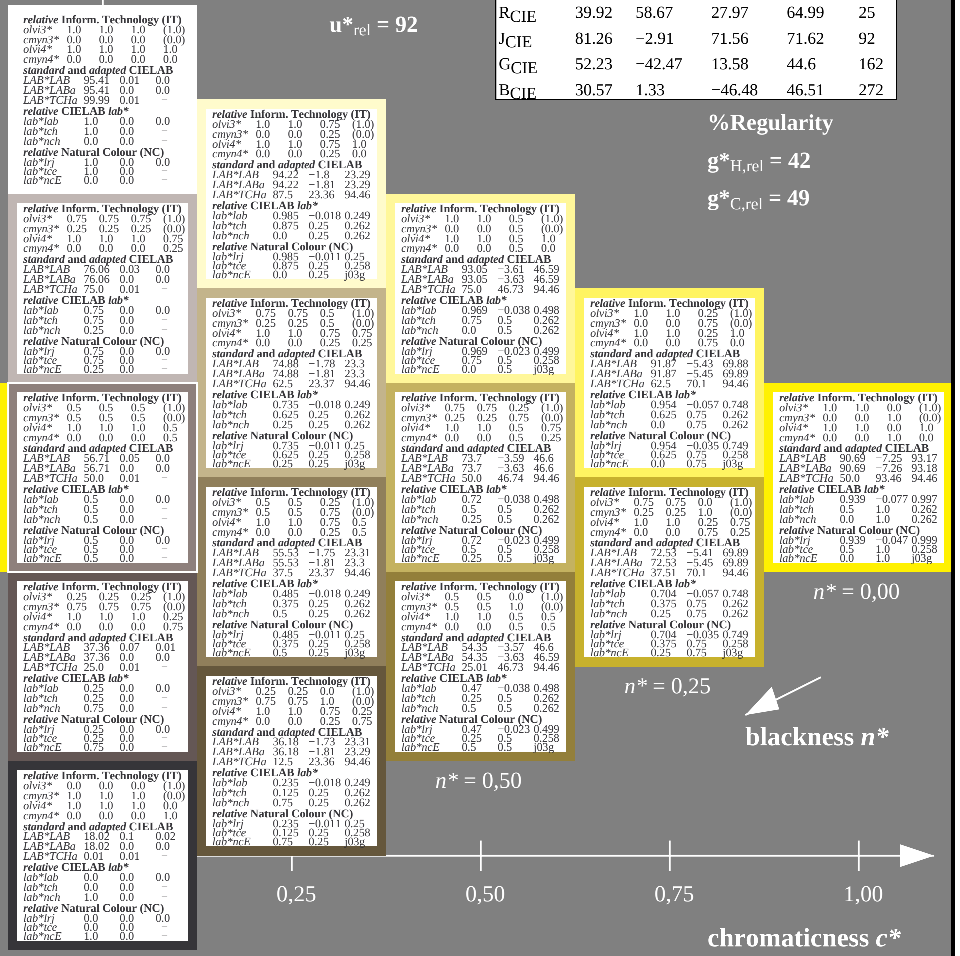
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

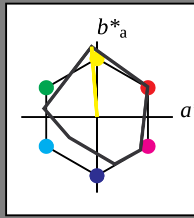


UE500−7, 5 step scales for constant CIELAB hue 94/360 = 0.262 (left)

5 step scales for constant CIELAB hue 94/360 = 0.262 (right)

Input: Colorimetric Reflective System MRS18a
for hue *h** = *lab*h* = *94/360 = 0.262*
*lab*tch* and *lab*nch*

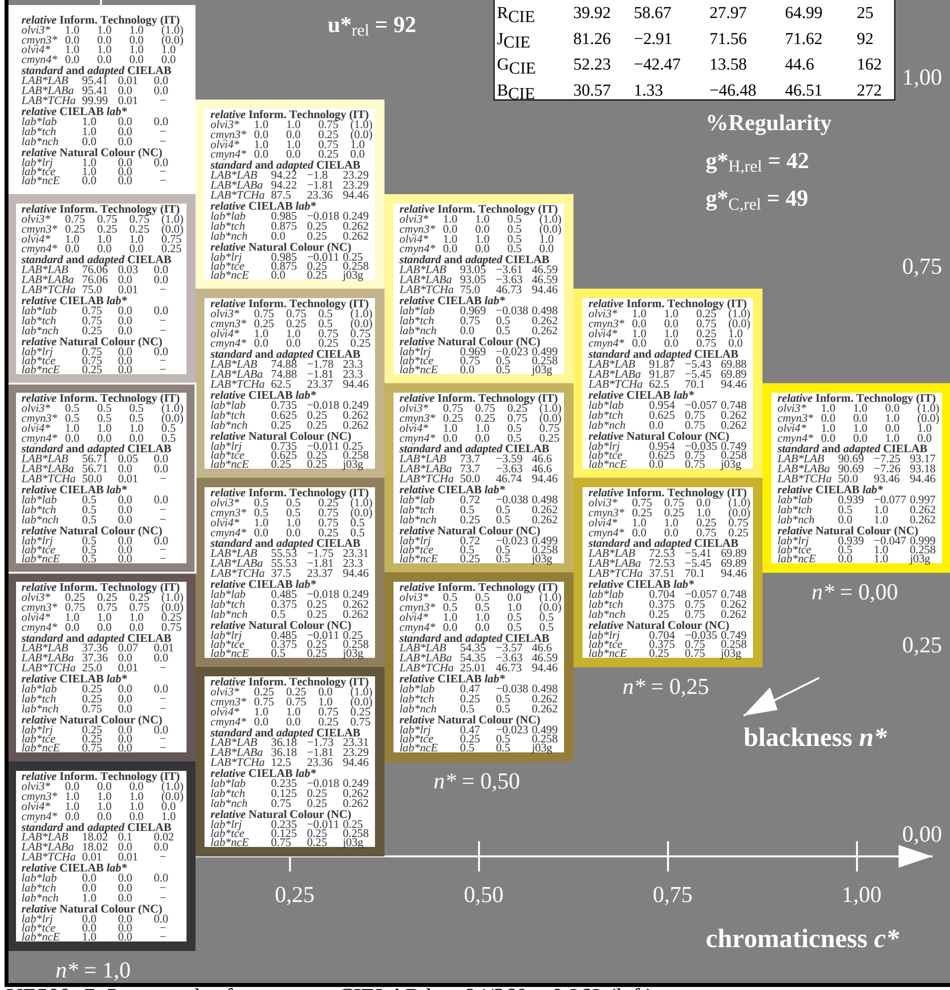
D65: hue J
LCH*Ma: 91 93 94
rgb*Ma: 1.0 1.0 0.0
triangle lightness *t*



%Gamut
u^*_{rel} = 92

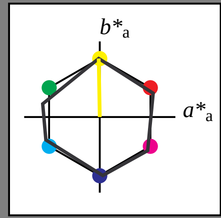
MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 42
$g^*_{C,rel}$ = 49



Output: Colorimetric Reflective System NRS18
for hue *h** = *lab*h* = *91/360 = 0.253*
*lab*tch* and *lab*nch*

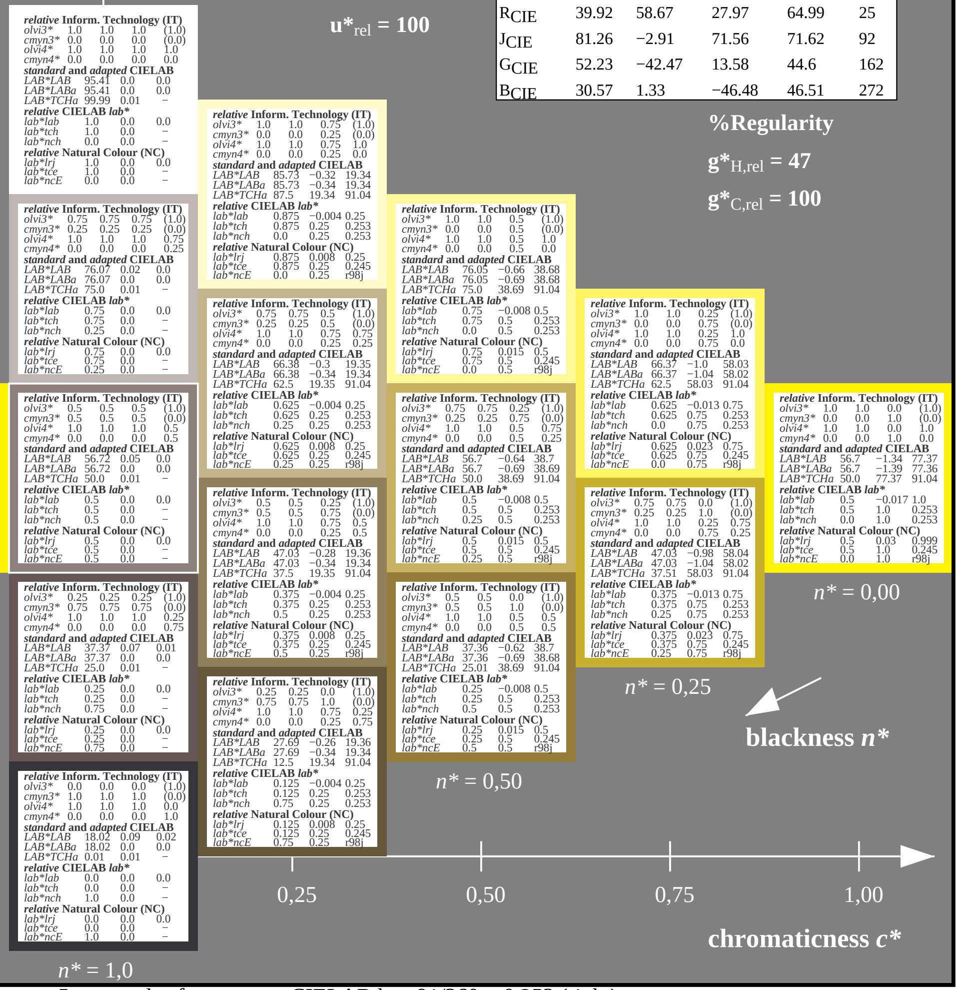
D65: hue J
LCH*Ma: 57 77 91
rgb*Ma: 1.0 1.0 0.0
triangle lightness *t*



%Gamut
u^*_{rel} = 100

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100



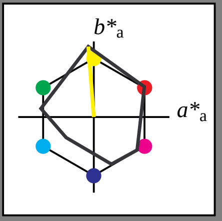
UE500−7, 5 step scales for constant CIELAB hue 94/360 = 0.262 (left)

5 step scales for constant CIELAB hue 91/360 = 0.253 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 94/360 = 0.262$
lab*tch and lab*nch

D65: hue J
LCH*Ma: 91 93 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

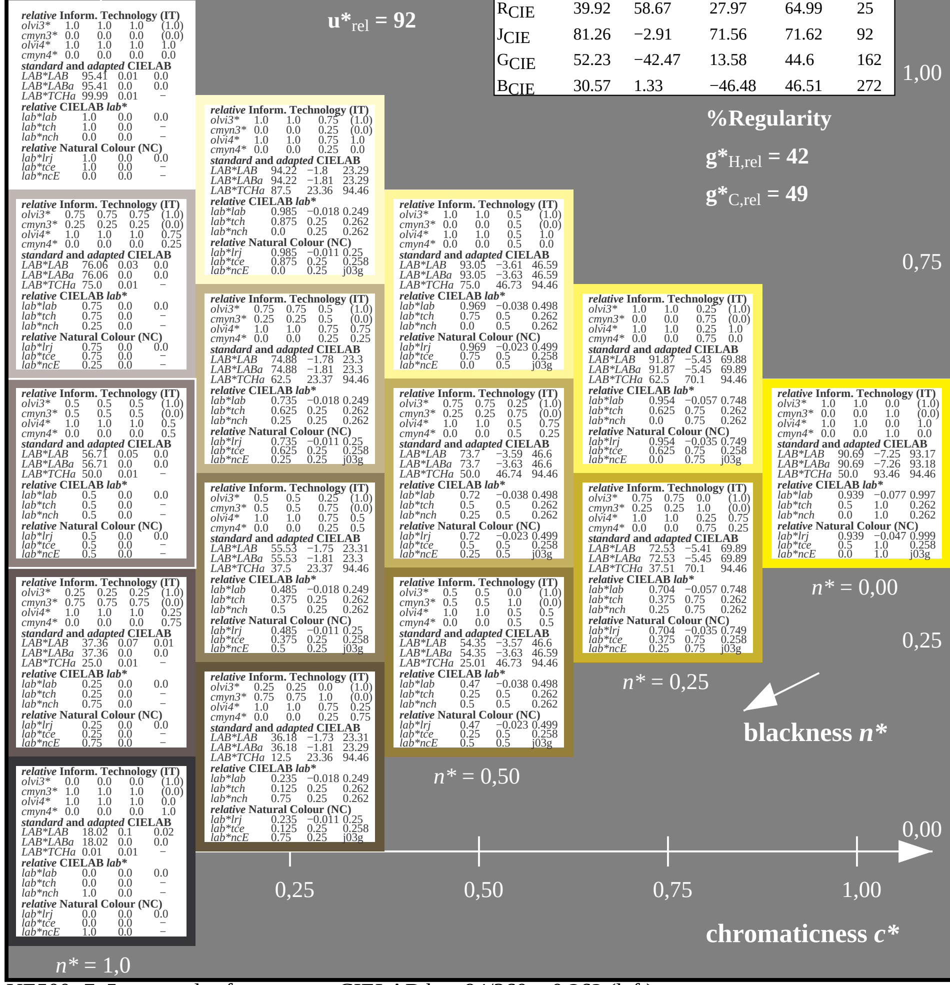
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

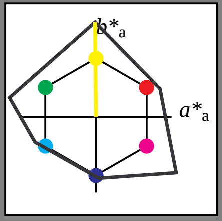
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch and lab*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

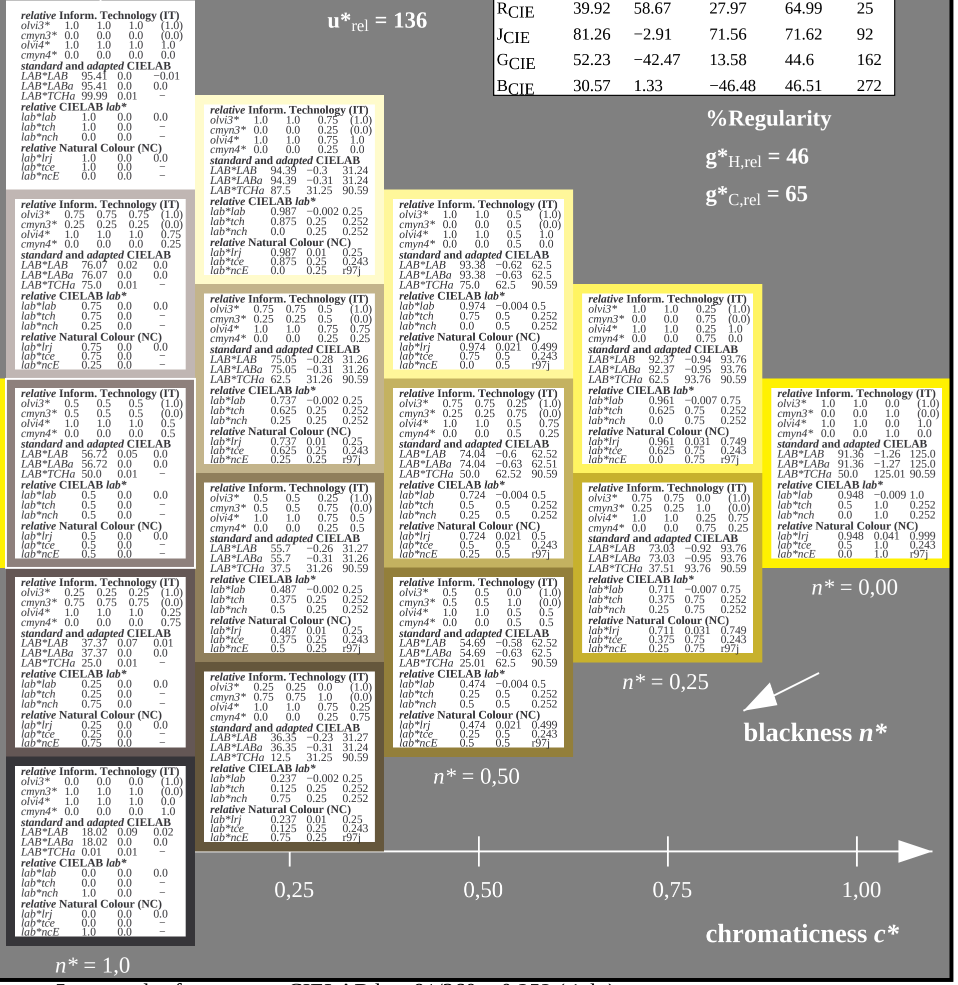
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



UE500−7, 5 step scales for constant CIELAB hue 94/360 = 0.262 (left)

5 step scales for constant CIELAB hue 91/360 = 0.252 (right)

Input: Colorimetric Reflective System MRS18a

for hue $h^* = lab^*h = 94/360 = 0.262$

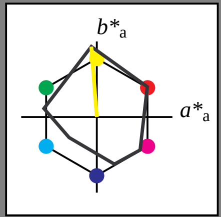
*lab*tch and lab*nch*

D65: hue J

LCH*Ma: 91 93 94

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 92$

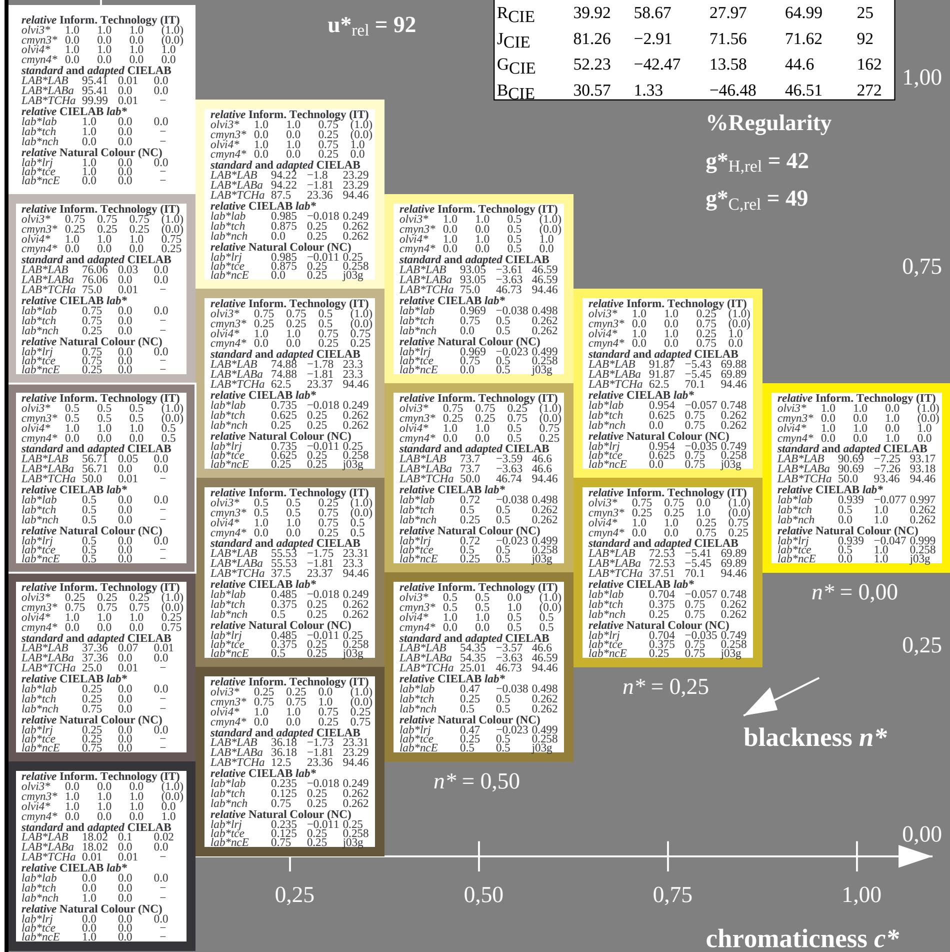
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System NRS11

for hue $h^* = lab^*h = 91/360 = 0.253$

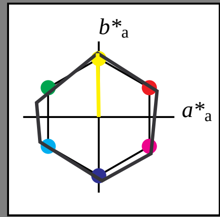
*lab*tch and lab*nch*

D65: hue J

LCH*Ma: 53 84 91

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 119$

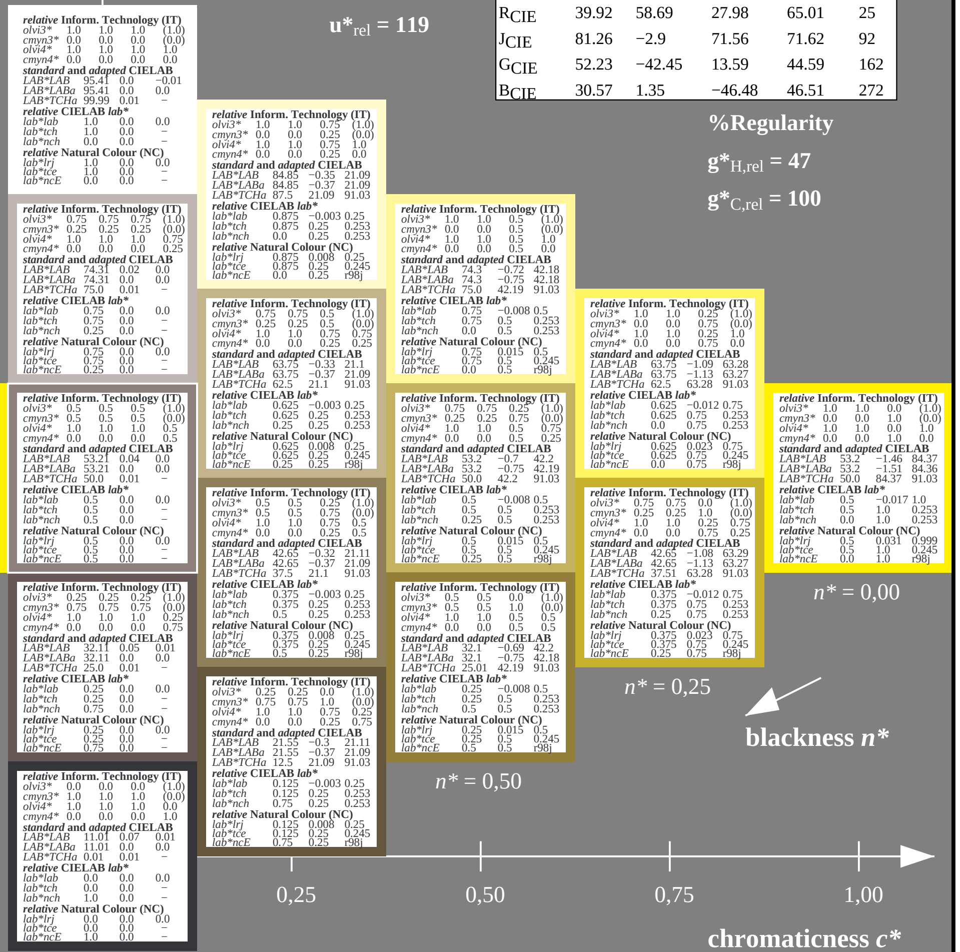
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

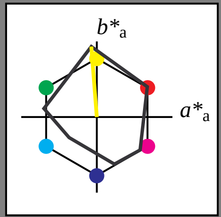


UE500−7, 5 step scales for constant CIELAB hue 94/360 = 0.262 (left)

5 step scales for constant CIELAB hue 91/360 = 0.253 (right)

Input: Colorimetric Reflective System MRS18a
for hue *h** = *lab*h* = *94/360 = 0.262*
*lab*tch* and *lab*nch*

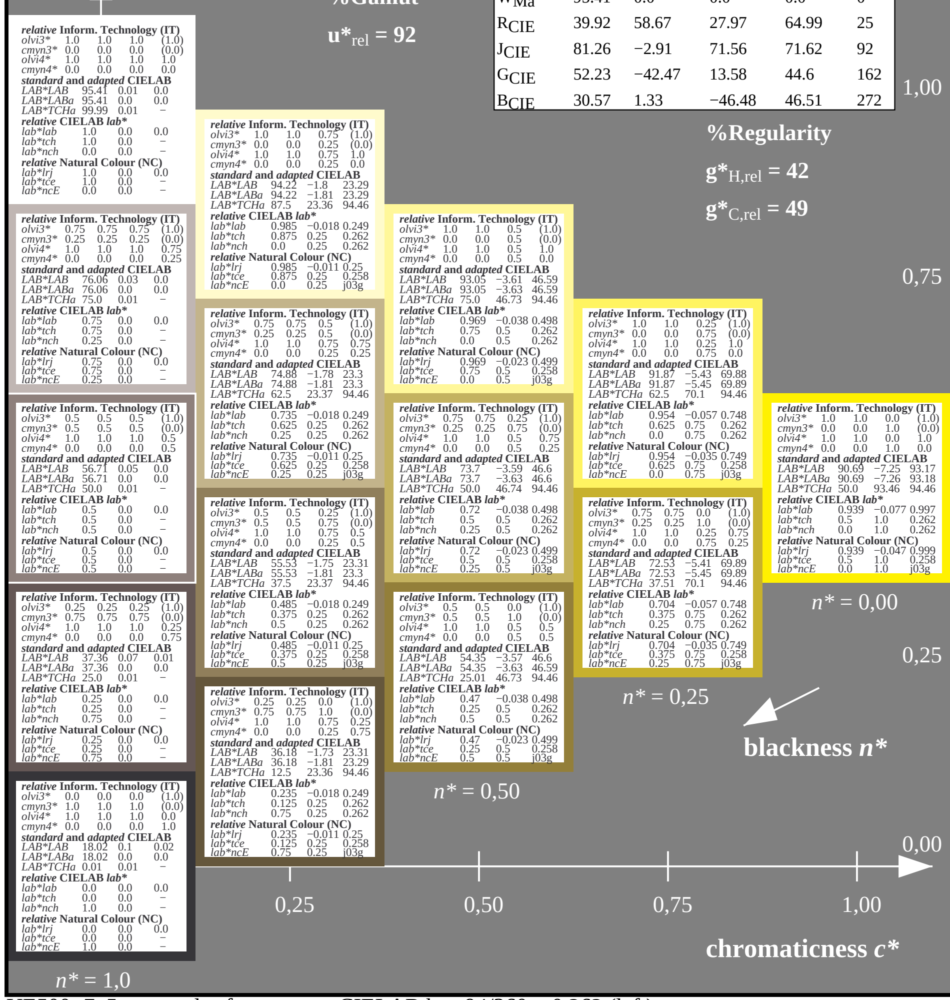
D65: hue J
LCH*Ma: 91 93 94
rgb*Ma: 1.0 1.0 0.0
triangle lightness *t**



%Gamut
u^*_{rel} = 92

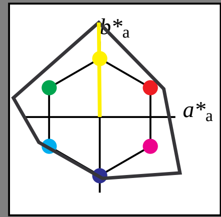
MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 42
$g^*_{C,rel}$ = 49



Output: Colorimetric Reflective System NCS11
for hue *h** = *lab*h* = *91/360 = 0.252*
*lab*tch* and *lab*nch*

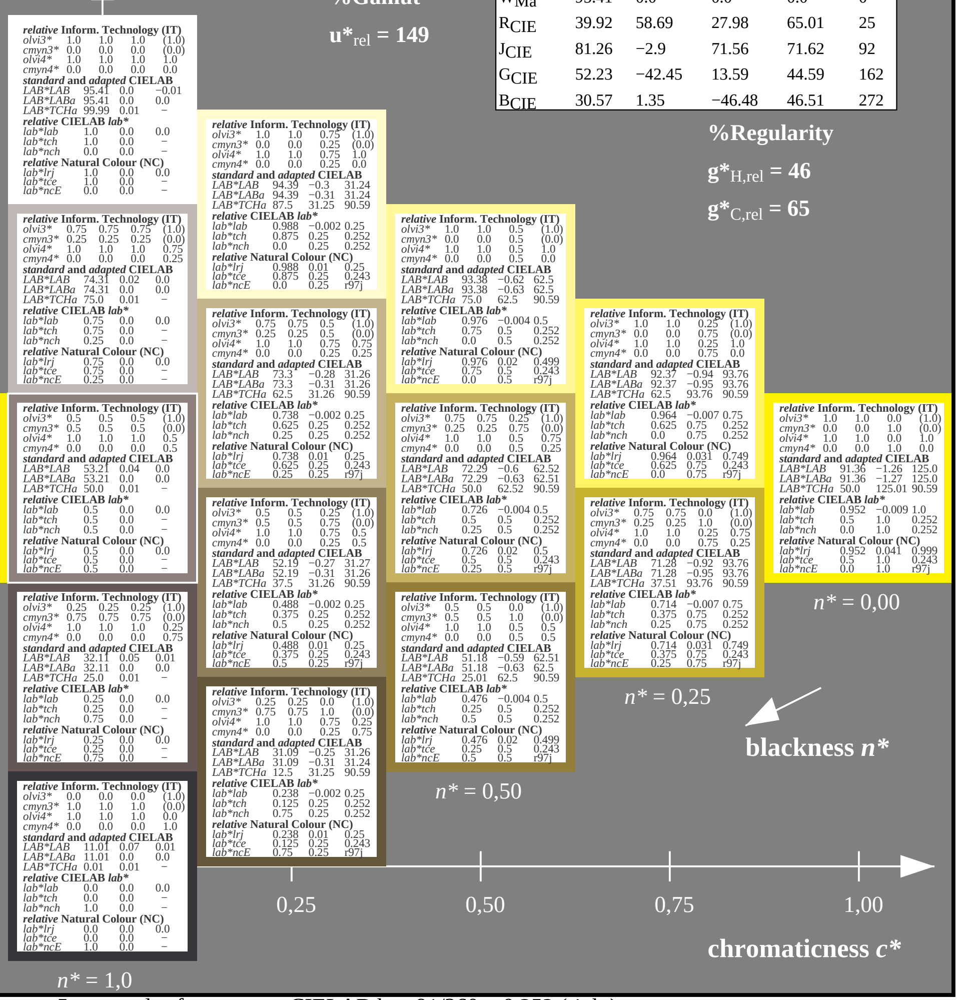
D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0
triangle lightness *t**



%Gamut
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



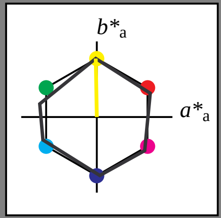
UE500−7, 5 step scales for constant CIELAB hue 94/360 = 0.262 (left)

5 step scales for constant CIELAB hue 91/360 = 0.252 (right)

Input: Colorimetric Reflective System NRS18
for hue *h** = *lab*h* = *91/360* = *0.253*
*lab*tch* and *lab*nch*

D65: hue J
LCH*Ma: 57 77 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness *t*

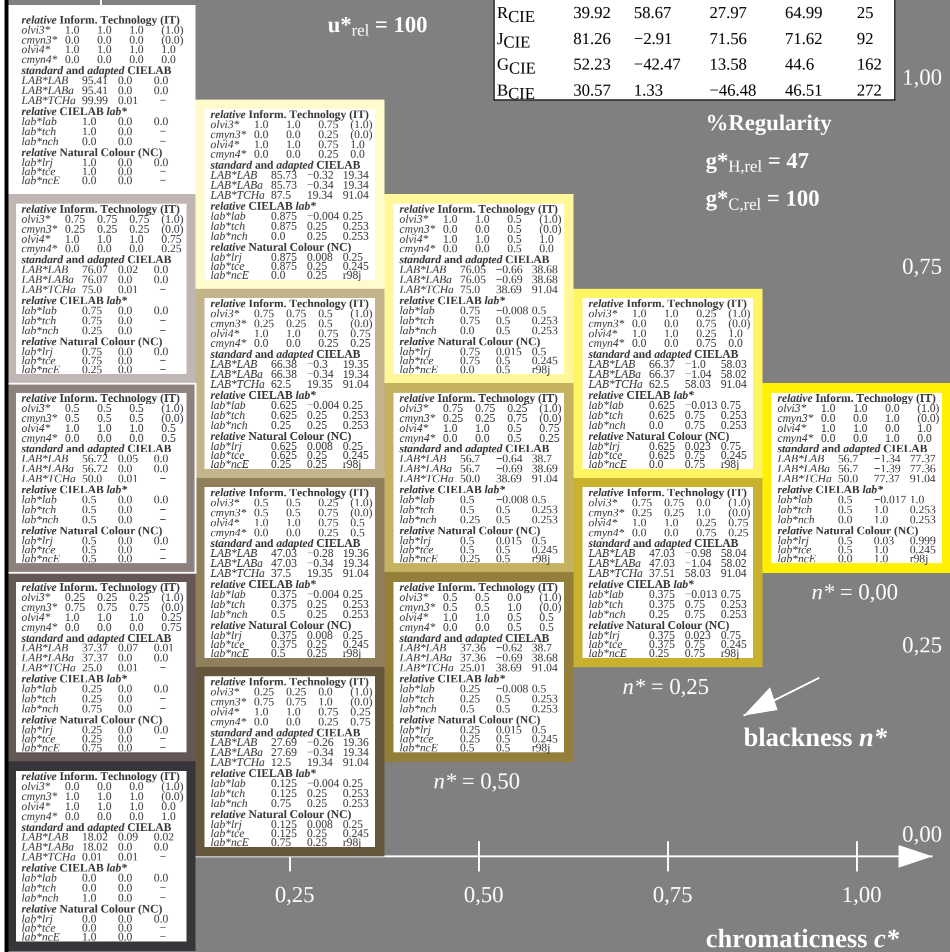


%Gamut
u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

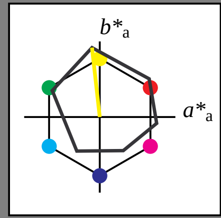
%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System ORS18
for hue *h** = *lab*h* = *96/360* = *0.268*
*lab*tch* and *lab*nch*

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness *t*

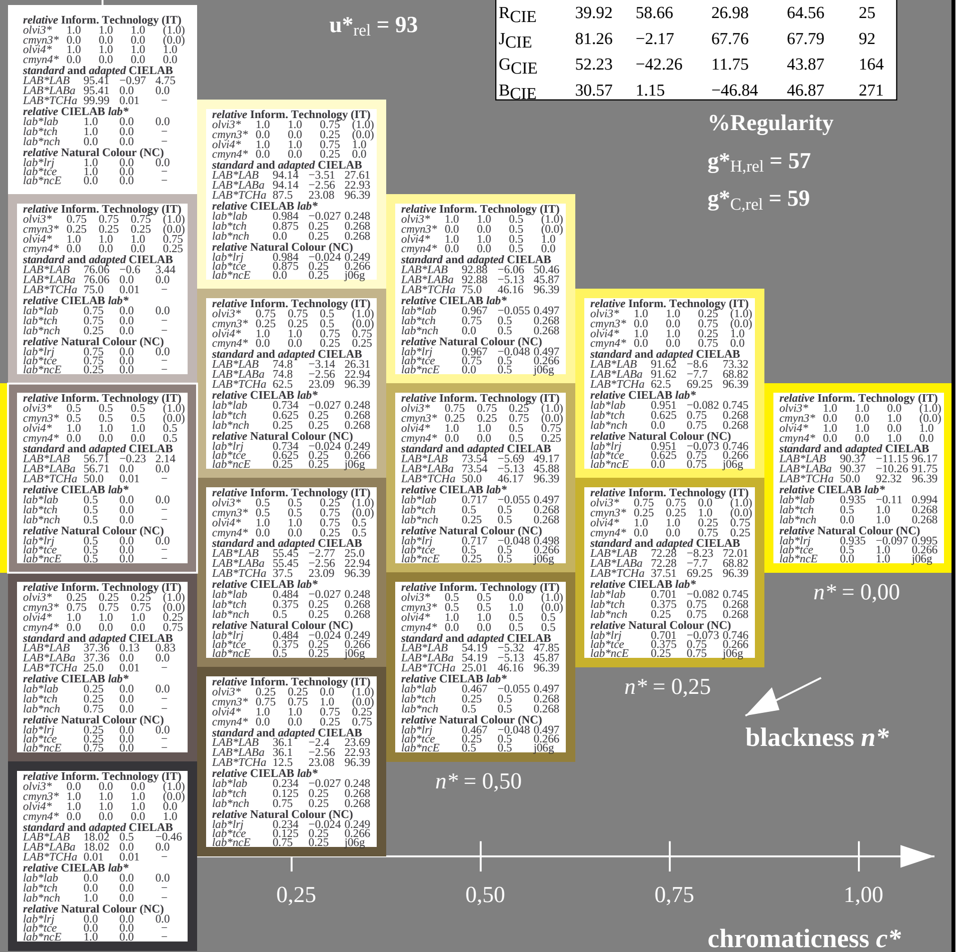


%Gamut
u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel}$ = 57
$g^*_{C,rel}$ = 59



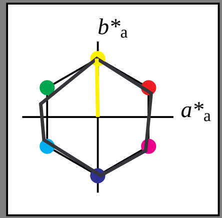
UE500−7, 5 step scales for constant CIELAB hue 91/360 = 0.253 (left)

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

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 77 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*

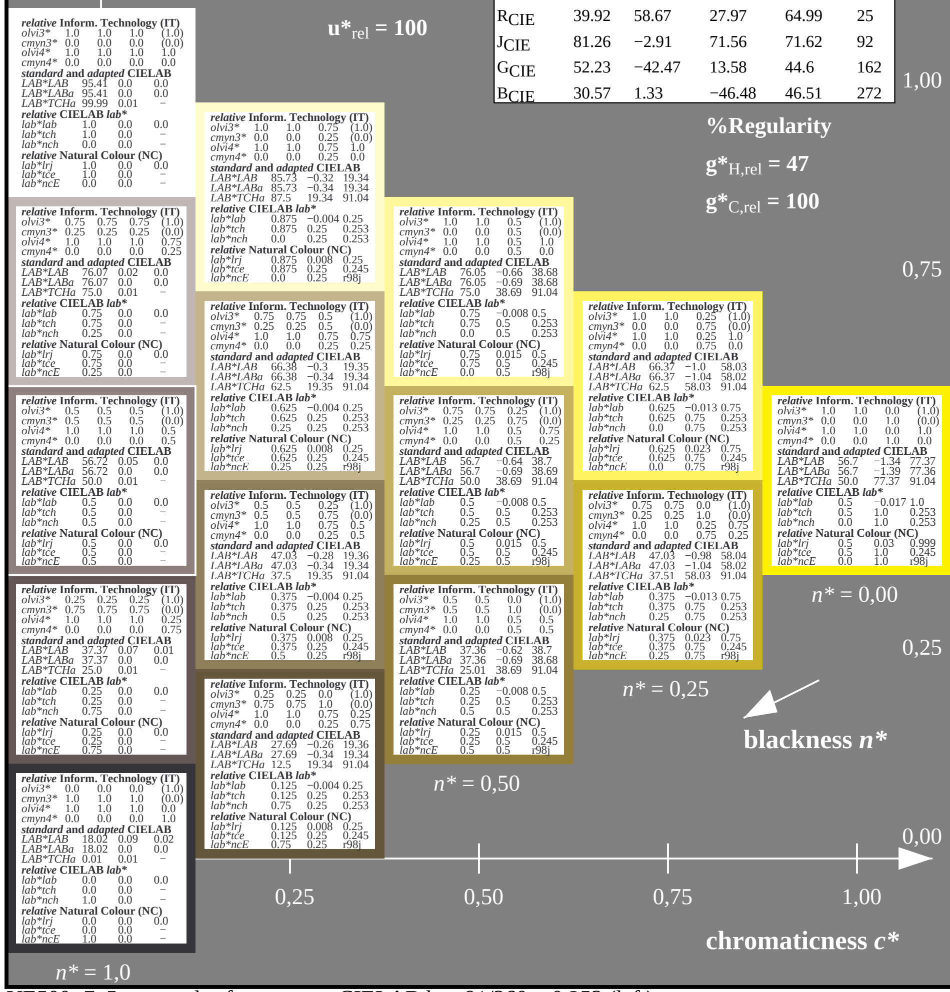


%Gamut
u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

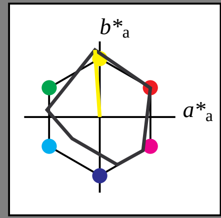
%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 94/360 = 0.261$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 89 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*

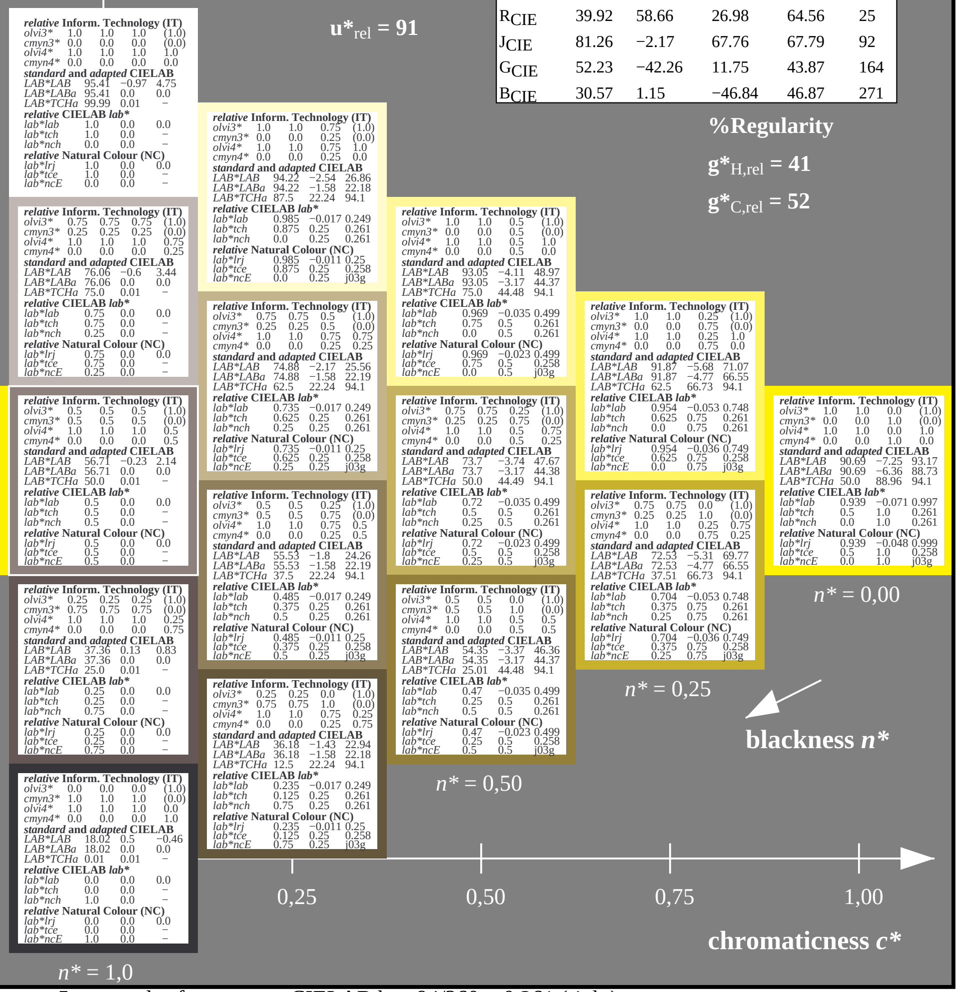


%Gamut
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel}$ = 41
$g^*_{C,rel}$ = 52

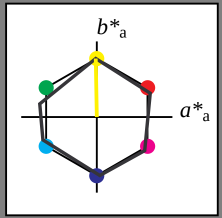


UE500−7, 5 step scales for constant CIELAB hue 91/360 = 0.253 (left)

5 step scales for constant CIELAB hue 94/360 = 0.261 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 91/360 = 0.253$
*lab*tch and lab*nch*

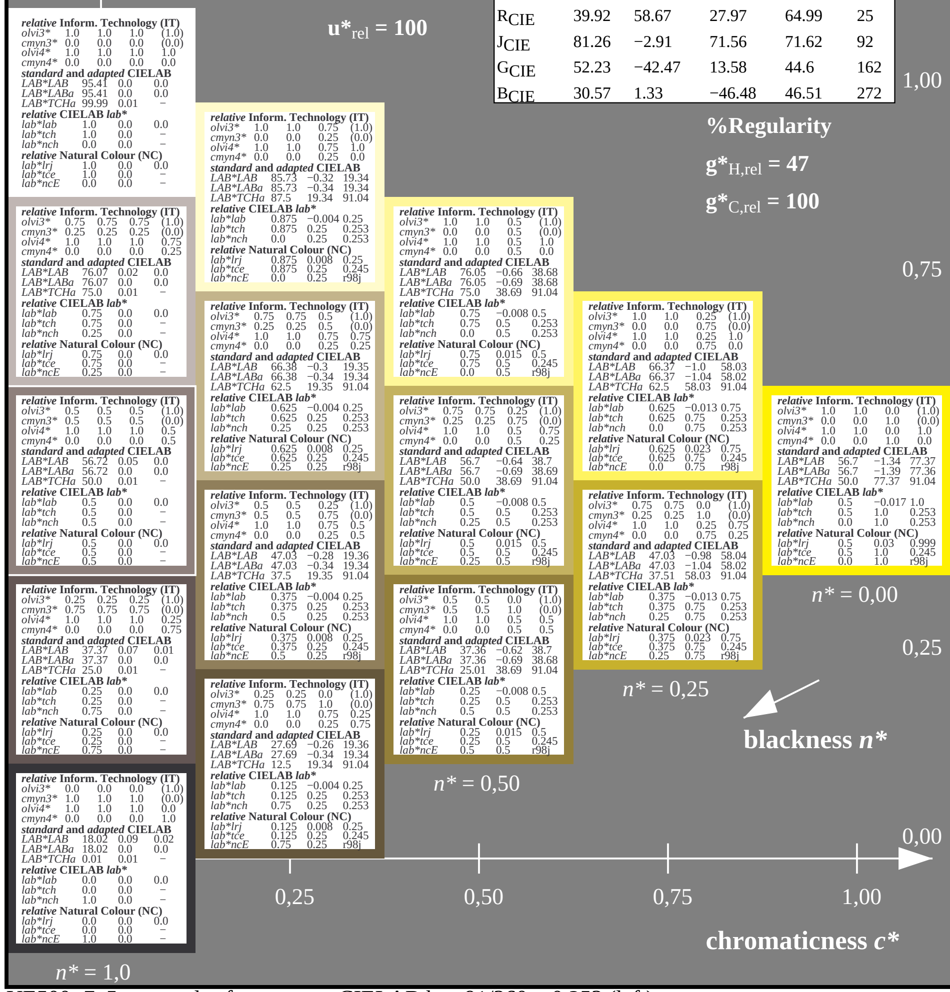
D65: hue J
LCH*Ma: 57 77 91
rgb*Ma: 1.0 1.0 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 100$

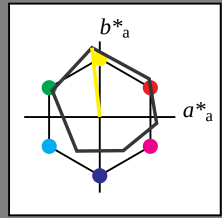
NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 96/360 = 0.268$
*lab*tch and lab*nch*

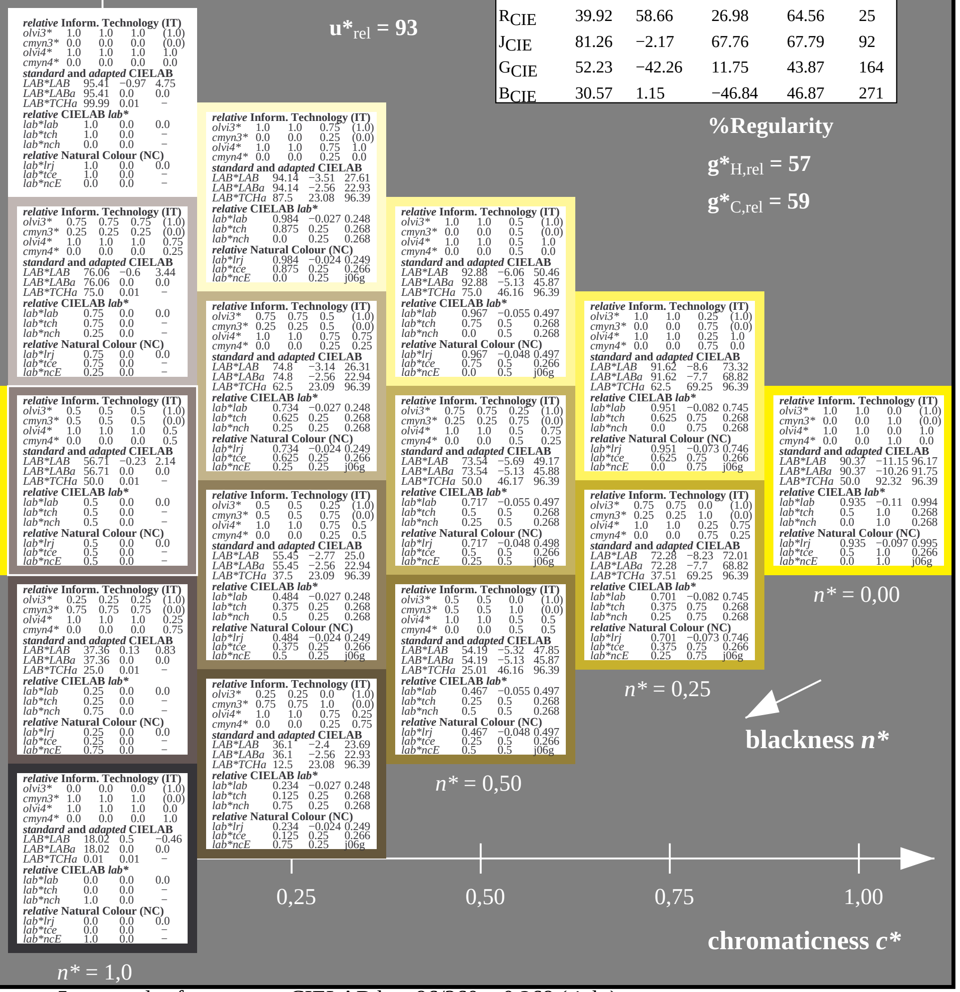
D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



UE500−7, 5 step scales for constant CIELAB hue 91/360 = 0.253 (left)

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

Input: Colorimetric Reflective System NRS18

for hue *h* = lab*h = 91/360 = 0.253*

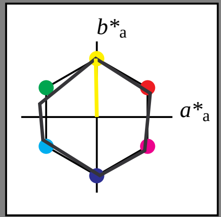
*lab*tch* and *lab*nch*

D65: hue J

LCH*Ma: 57 77 91

rgb*Ma: 1.0 1.0 0.0

triangle lightness *t*

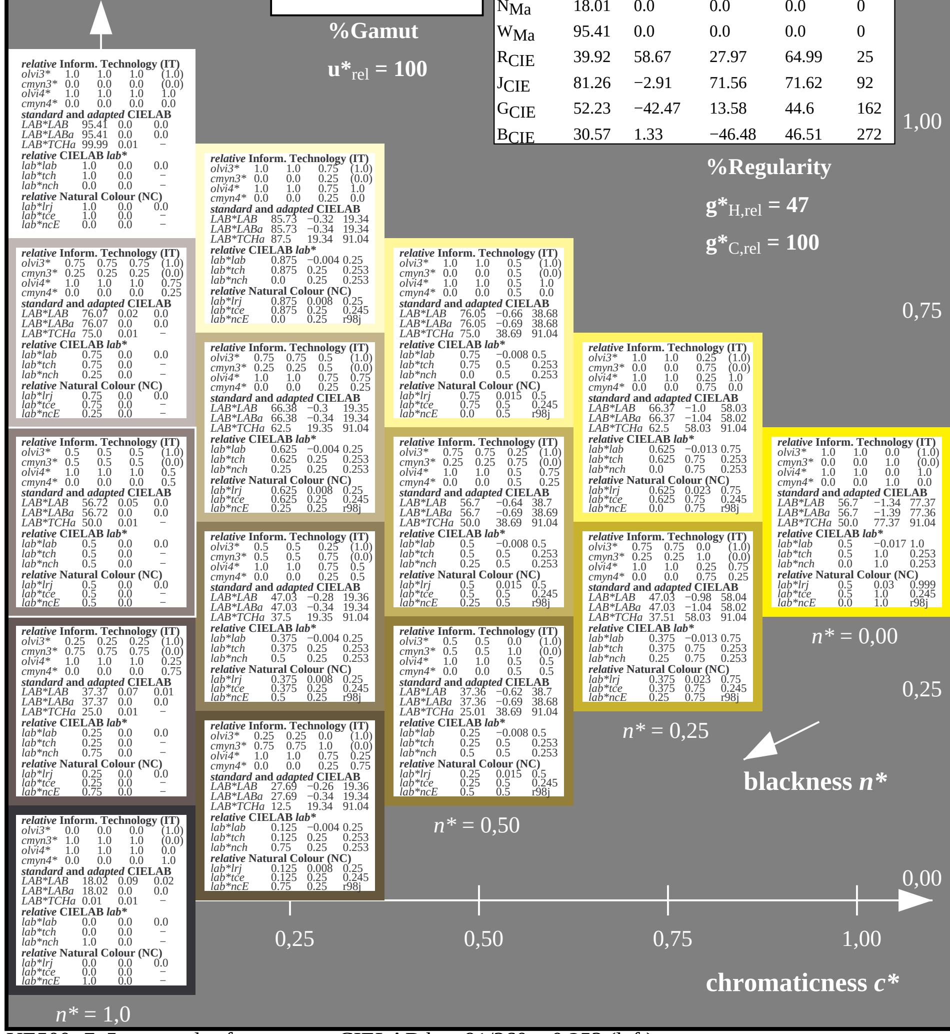


%Gamut

$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272



Output: Colorimetric Reflective System MRS18a

for hue *h* = lab*h = 94/360 = 0.262*

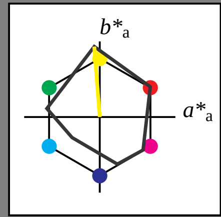
*lab*tch* and *lab*nch*

D65: hue J

LCH*Ma: 91 93 94

rgb*Ma: 1.0 1.0 0.0

triangle lightness *t*

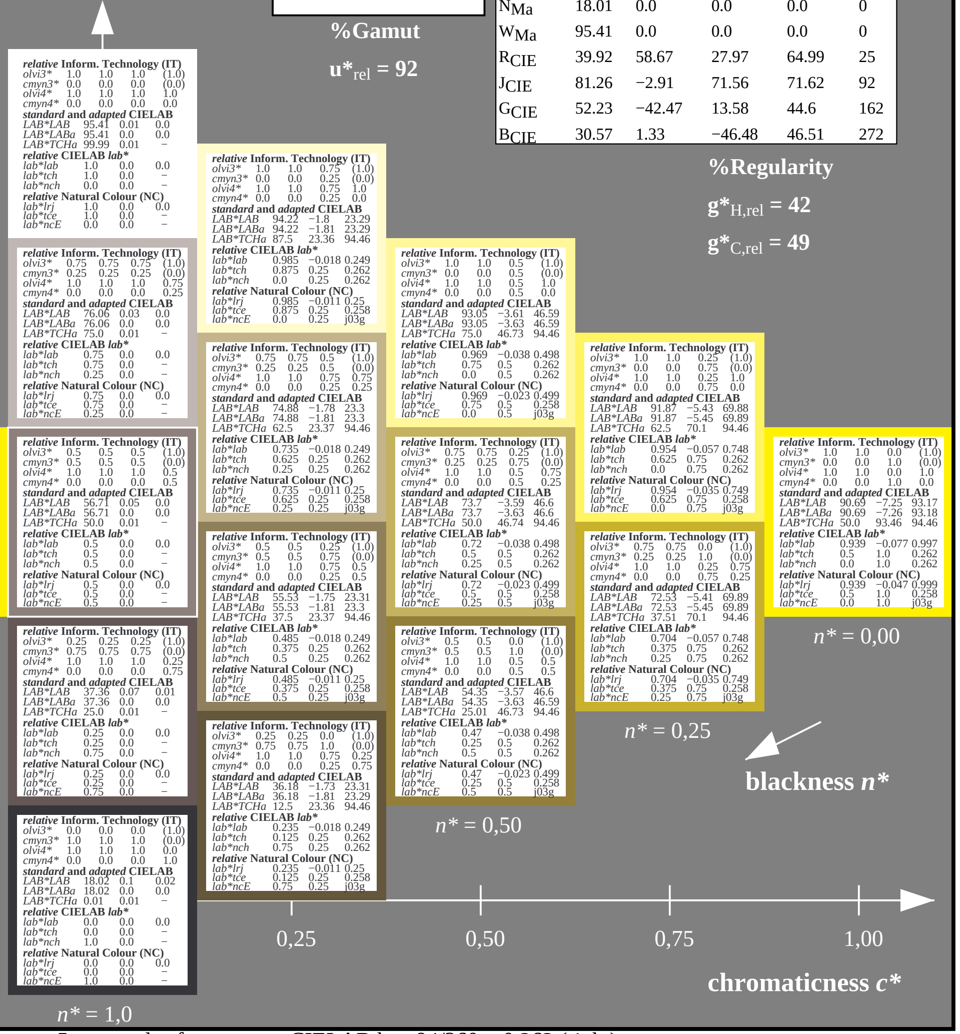


%Gamut

$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272



UE500−7, 5 step scales for constant CIELAB hue 91/360 = 0.253 (left)

5 step scales for constant CIELAB hue 94/360 = 0.262 (right)

Input: Colorimetric Reflective System NRS18

for hue $h^* = lab^*h = 91/360 = 0.253$

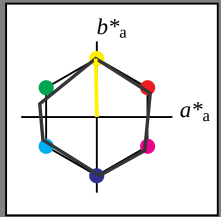
lab^*tch and lab^*nch

D65: hue J

LCH*Ma: 57 77 91

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

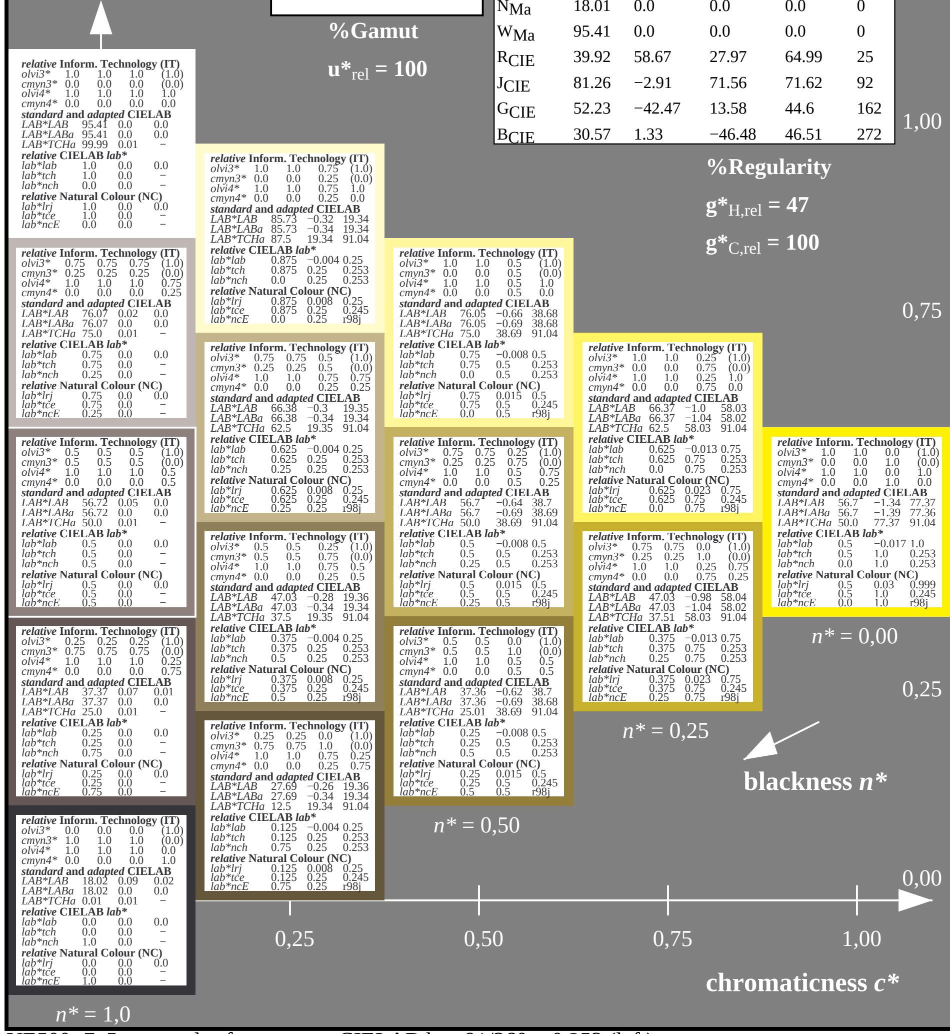
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System NRS18

for hue $h^* = lab^*h = 91/360 = 0.253$

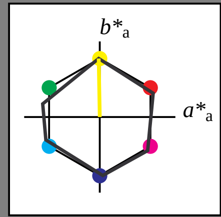
lab^*tch and lab^*nch

D65: hue J

LCH*Ma: 57 77 91

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

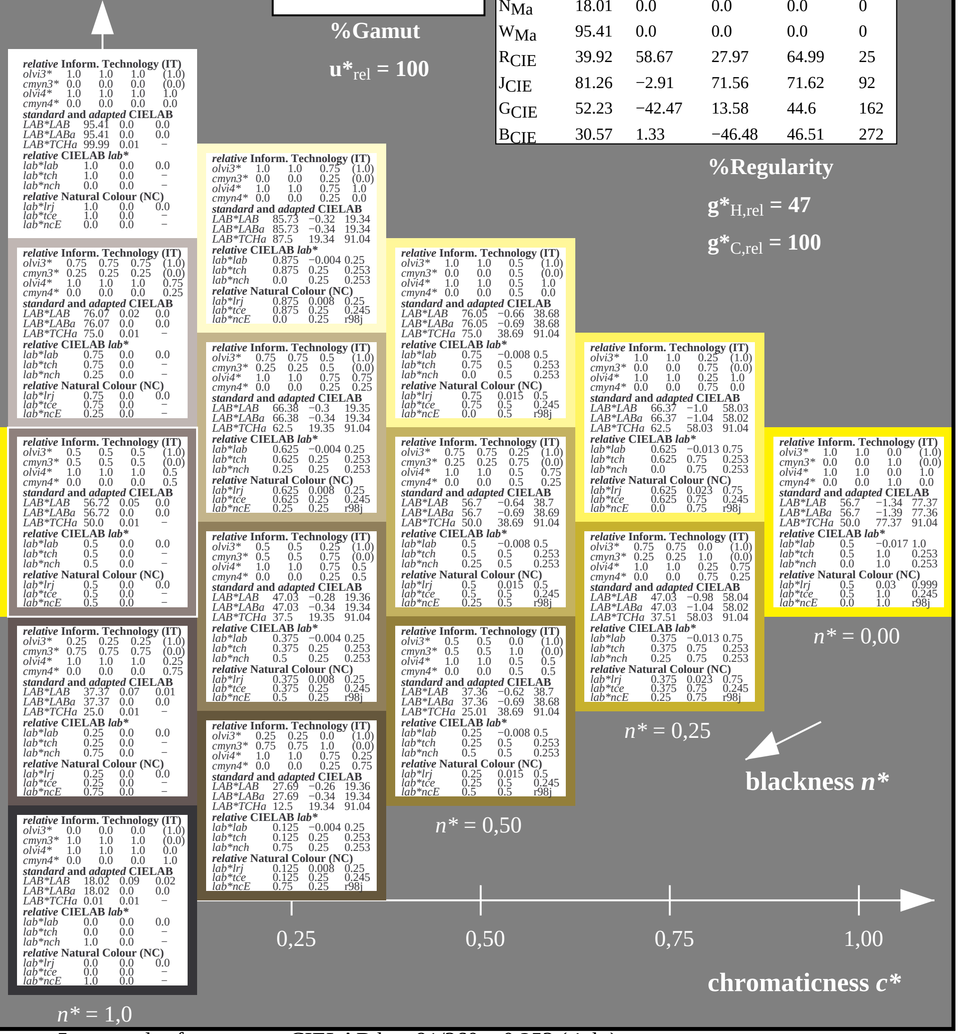
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



UE500−7, 5 step scales for constant CIELAB hue 91/360 = 0.253 (left)

5 step scales for constant CIELAB hue 91/360 = 0.253 (right)

Input: Colorimetric Reflective System NRS18

for hue $h^* = lab^*h = 91/360 = 0.253$

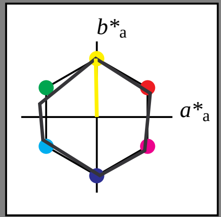
lab*tch and lab*nch

D65: hue J

LCH*Ma: 57 77 91

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

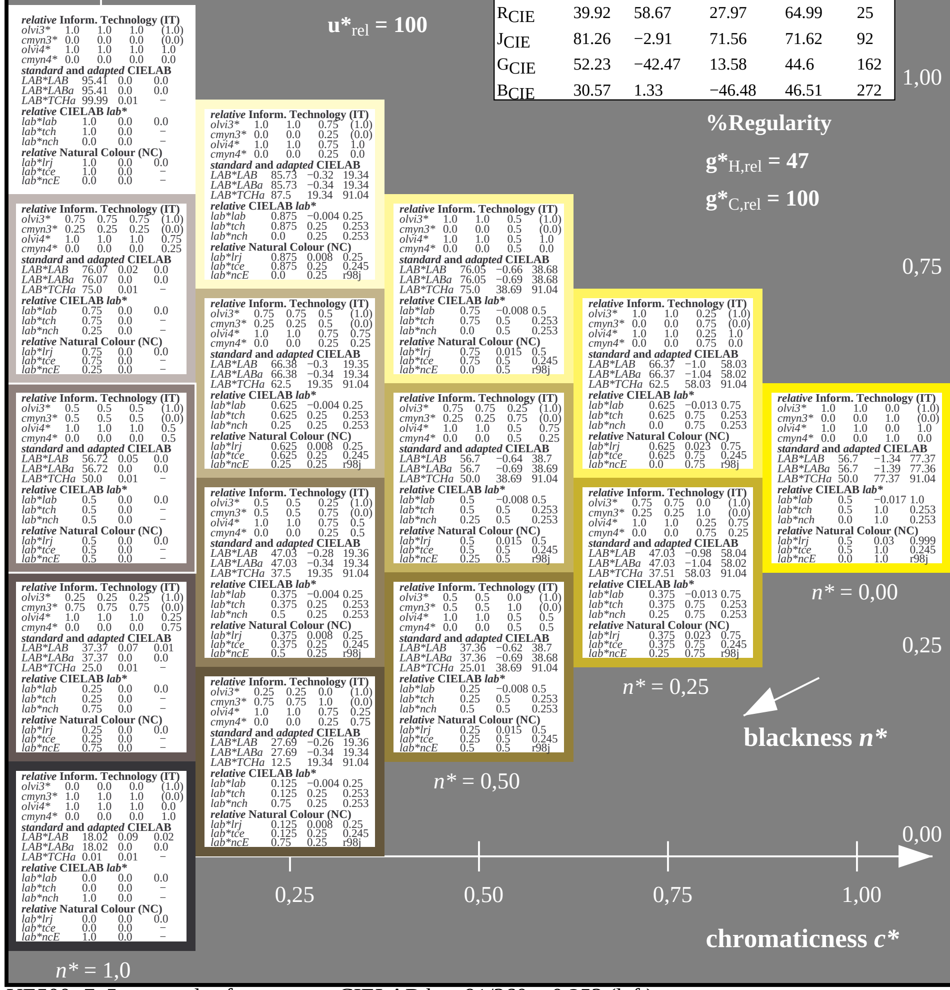
u^*_{rel} = 100

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NCS18

for hue $h^* = lab^*h = 91/360 = 0.252$

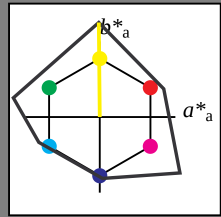
lab*tch and lab*nch

D65: hue J

LCH*Ma: 91 125 91

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

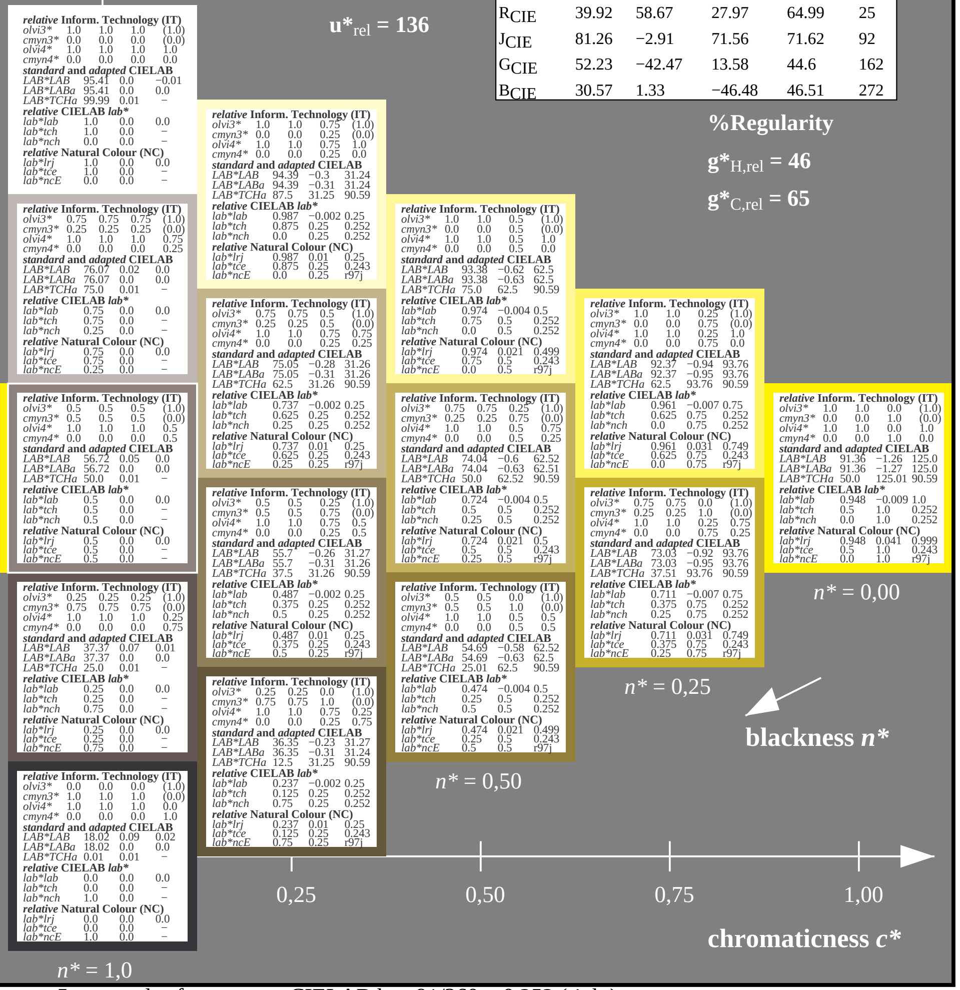
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



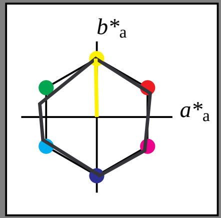
UE500−7, 5 step scales for constant CIELAB hue 91/360 = 0.253 (left)

5 step scales for constant CIELAB hue 91/360 = 0.252 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 77 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*

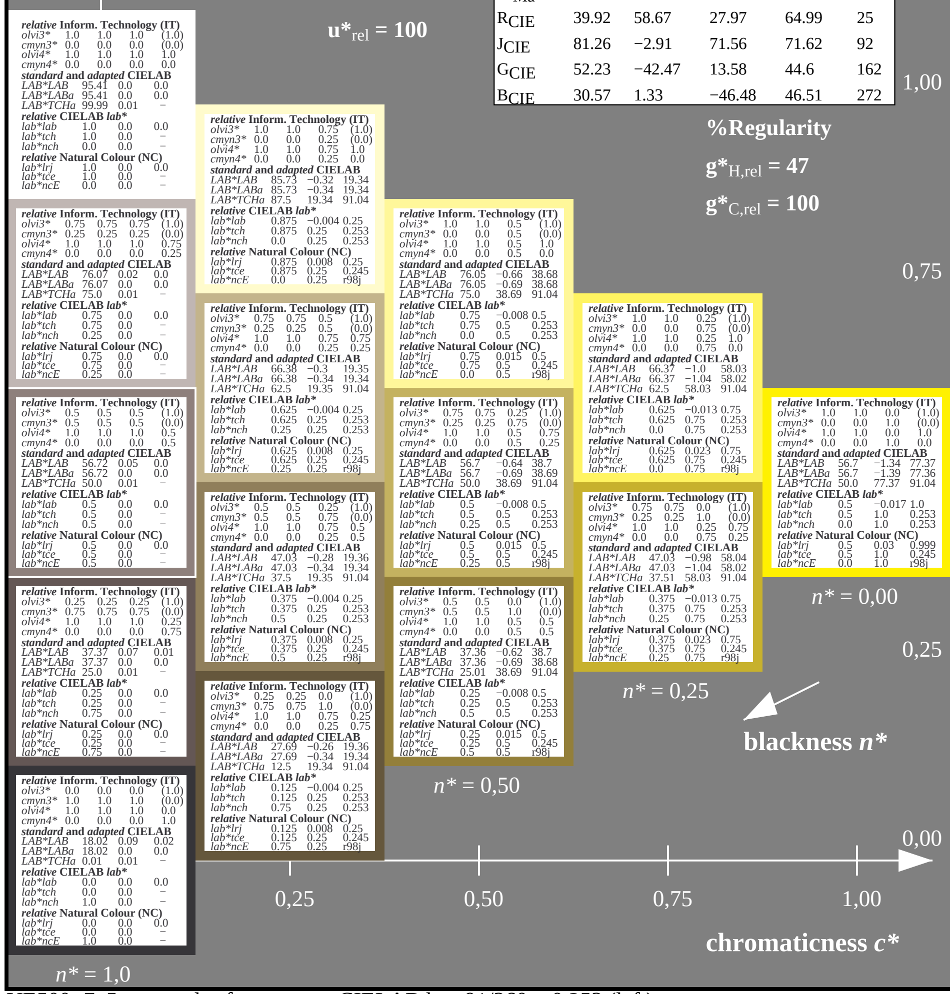


%Gamut
u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

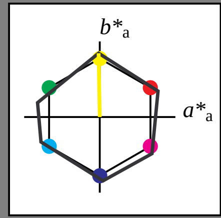
%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 84 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*

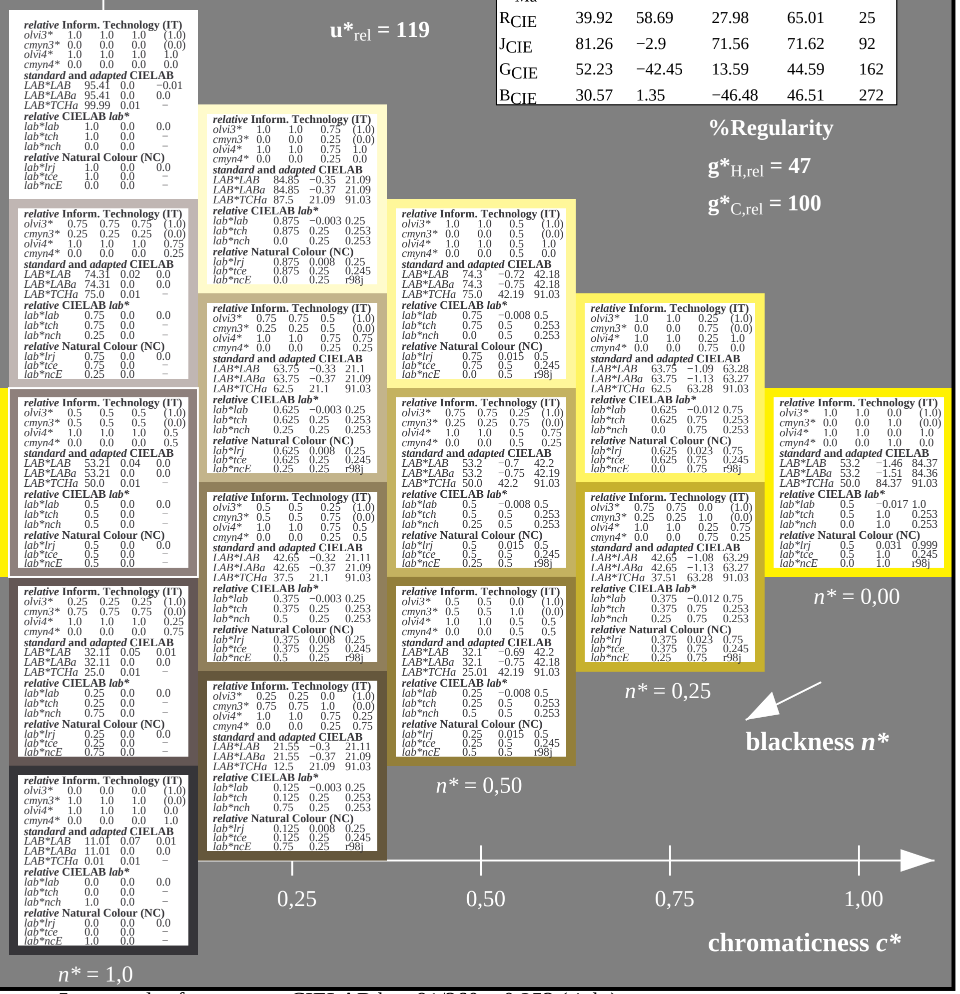


%Gamut
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100

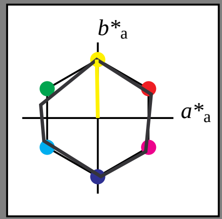


UE500−7, 5 step scales for constant CIELAB hue 91/360 = 0.253 (left)

5 step scales for constant CIELAB hue 91/360 = 0.253 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 91/360 = 0.253$
*lab*tch and lab*nch*

D65: hue J
LCH*Ma: 57 77 91
rgb*Ma: 1.0 1.0 0.0
triangle lightness t^*

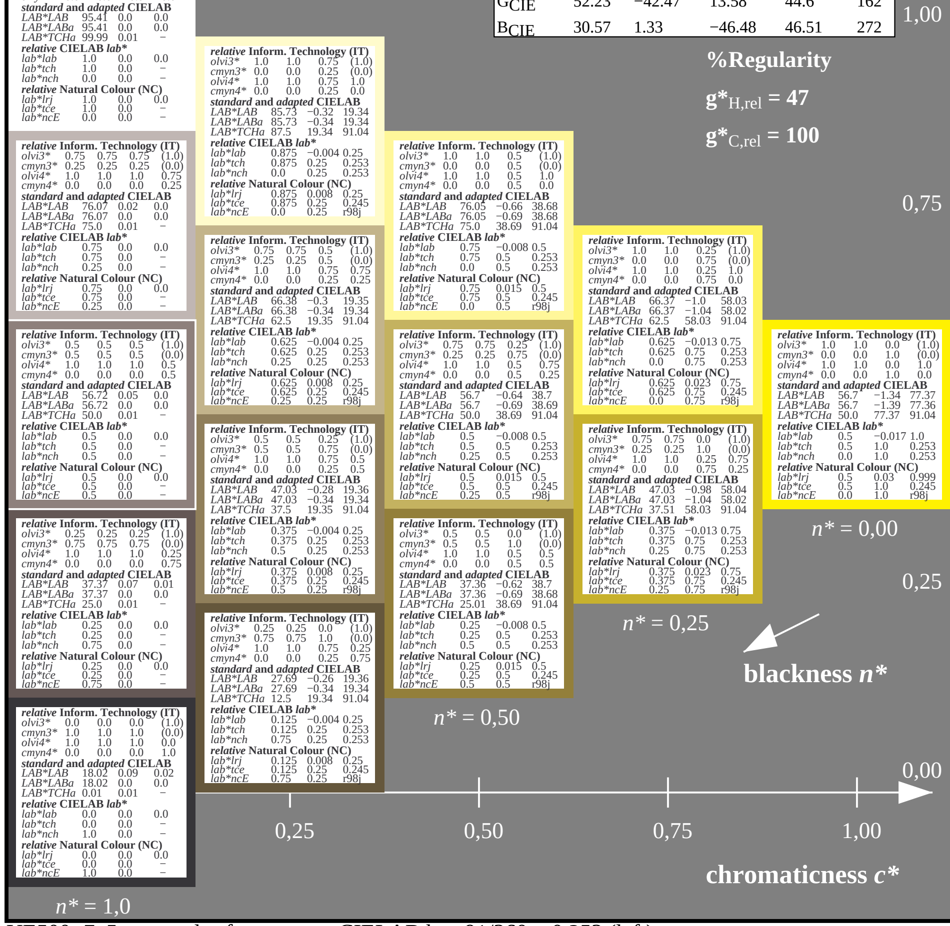


%Gamut
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data

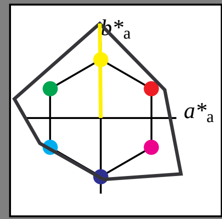
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 91/360 = 0.252$
*lab*tch and lab*nch*

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0
triangle lightness t^*

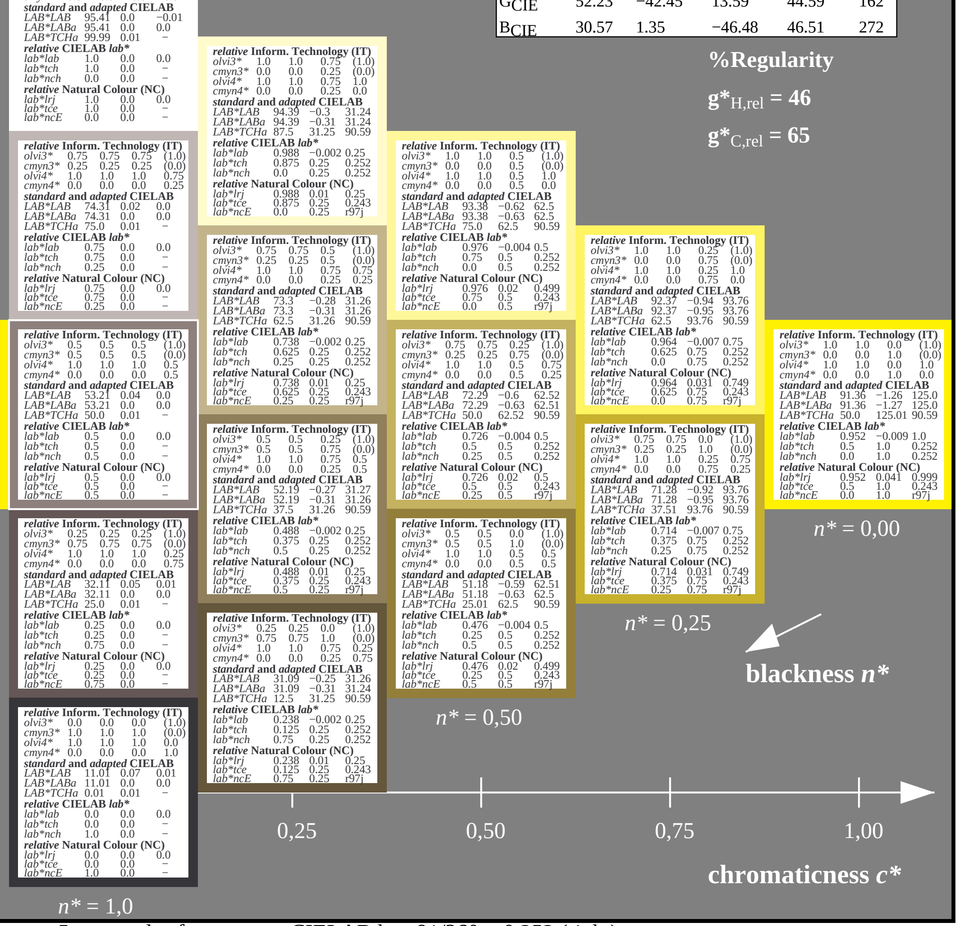


%Gamut
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



UE500−7, 5 step scales for constant CIELAB hue 91/360 = 0.253 (left)   5 step scales for constant CIELAB hue 91/360 = 0.252 (right)

Input: Colorimetric Reflective System NCS18

for hue *h = *lab*h* = 91/360 = 0.252**

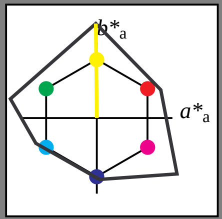
lab*tch* and *lab*nch

D65: hue J

LCH*Ma: 91 125 91

rgb*Ma: 1.0 1.0 0.0

triangle lightness *t*



%Gamut

u^*_{rel} = 136

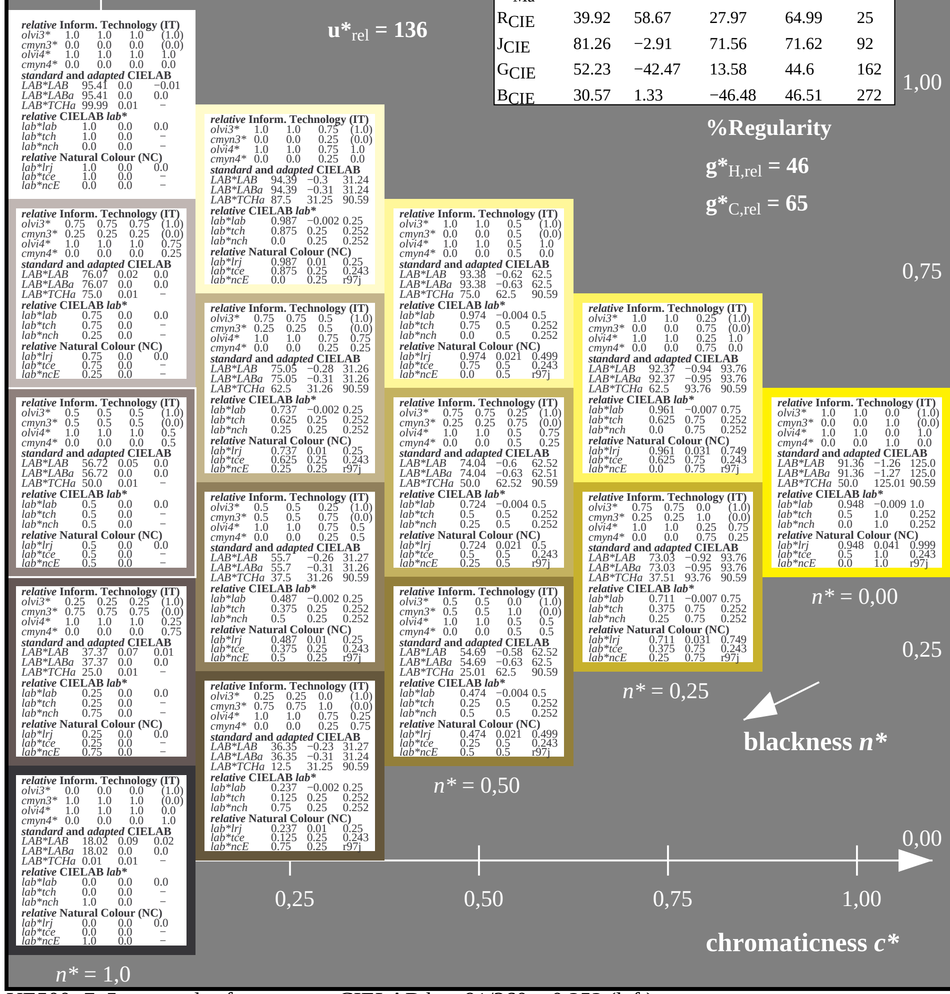
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System ORS18

for hue *h = *lab*h* = 96/360 = 0.268**

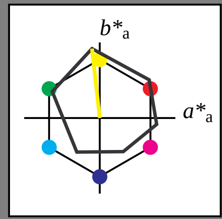
lab*tch* and *lab*nch

D65: hue Y

LCH*Ma: 90 92 96

rgb*Ma: 1.0 1.0 0.0

triangle lightness *t*



%Gamut

u^*_{rel} = 93

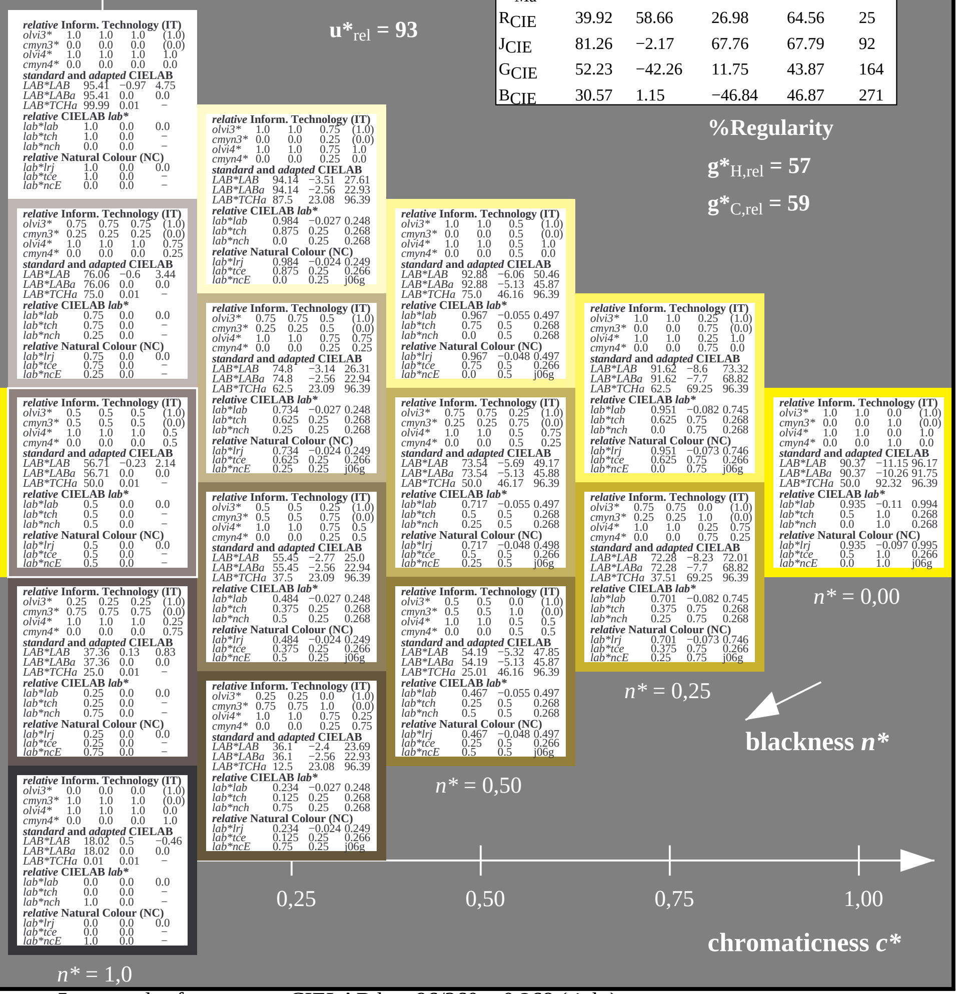
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



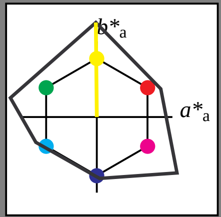
UE500−7, 5 step scales for constant CIELAB hue 91/360 = 0.252 (left)

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

Input: Colorimetric Reflective System NCS18
for hue *h** = *lab*h* = *91/360 = 0.252*
*lab*tch* and *lab*nch*

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness *t**



%Gamut

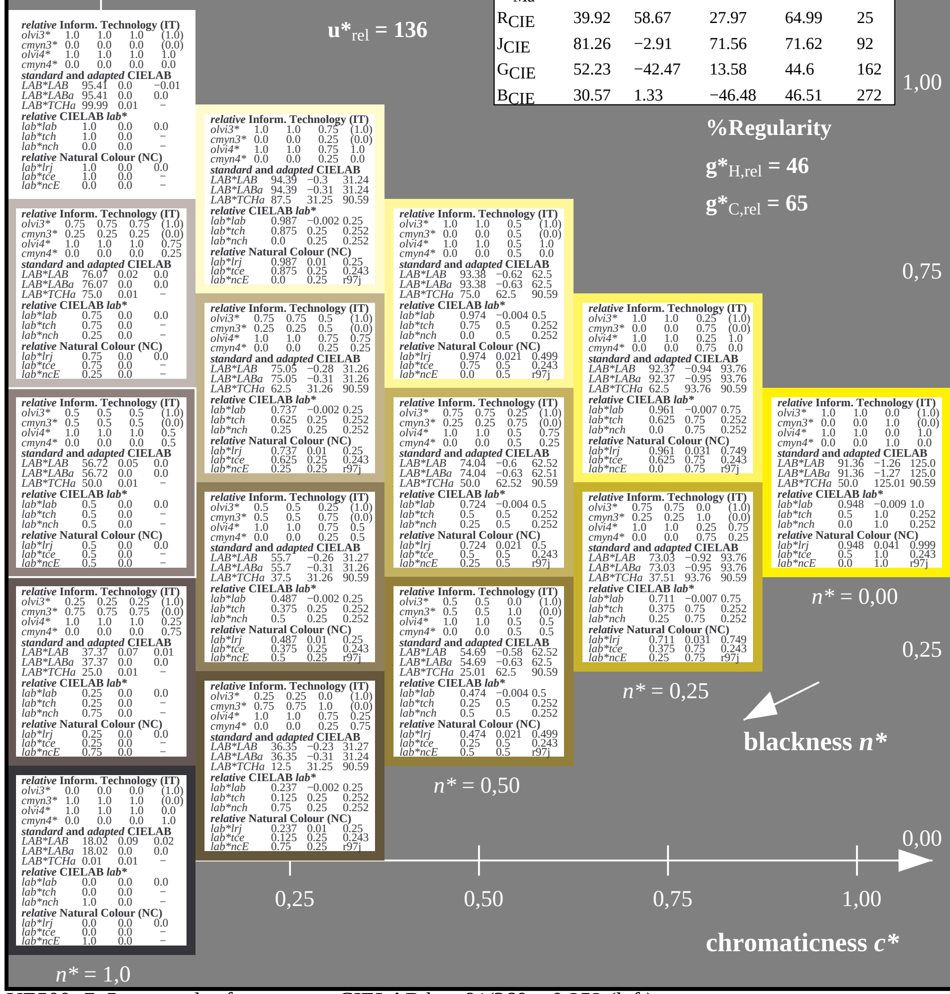
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

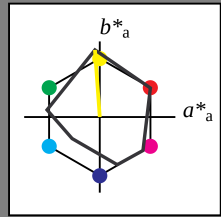
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System MRS18
for hue *h** = *lab*h* = *94/360 = 0.261*
*lab*tch* and *lab*nch*

D65: hue J
LCH*Ma: 91 89 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness *t**



%Gamut

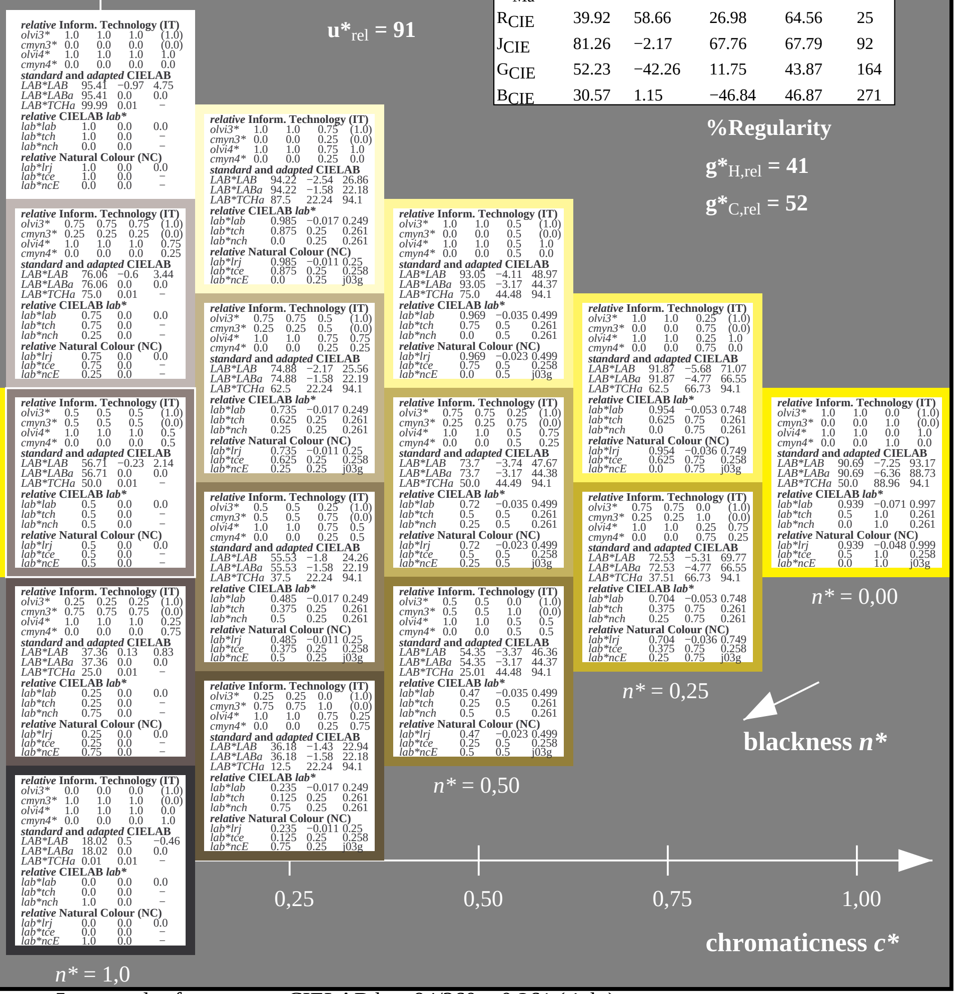
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



UE500−7, 5 step scales for constant CIELAB hue 91/360 = 0.252 (left)

5 step scales for constant CIELAB hue 94/360 = 0.261 (right)

Input: Colorimetric Reflective System NCS18

for hue $h^* = lab^*h = 91/360 = 0.252$

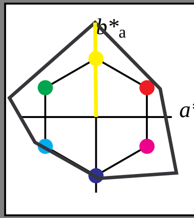
*lab*tch* and *lab*nch*

D65: hue J

LCH*Ma: 91 125 91

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

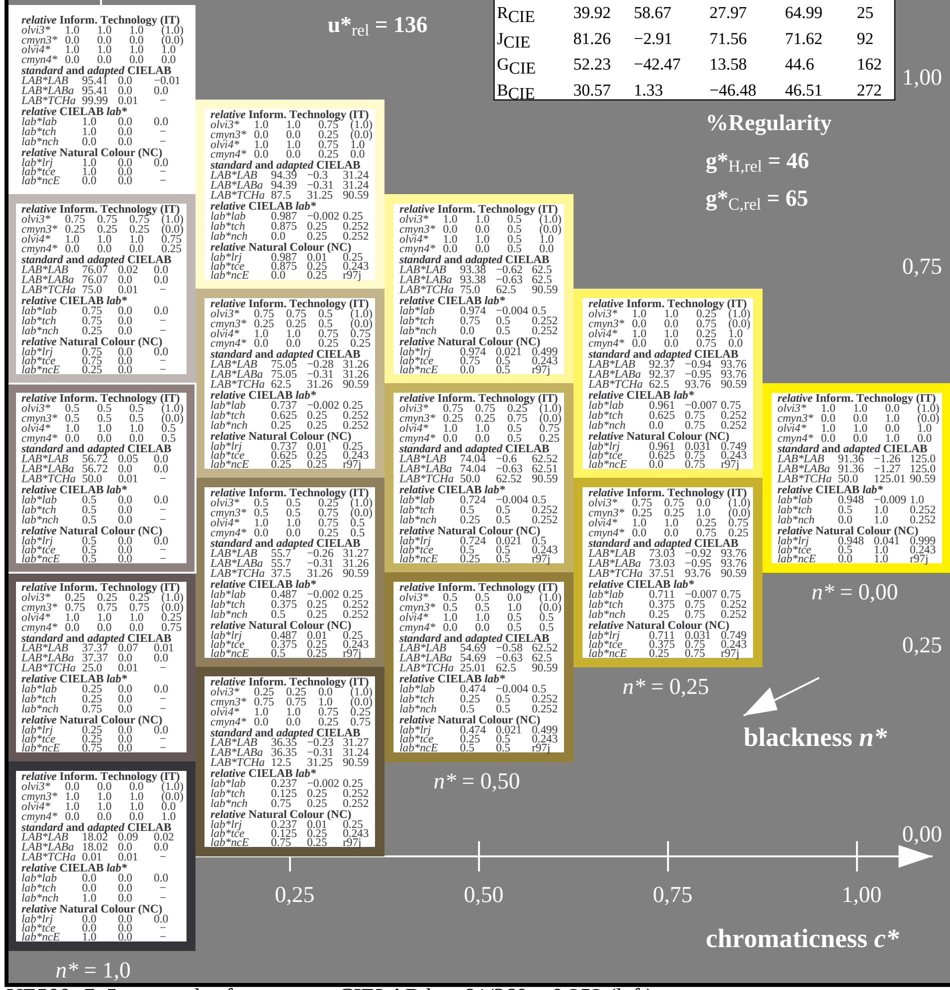
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System TRS18

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

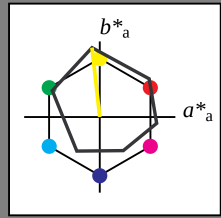
*lab*tch* and *lab*nch*

D65: hue Y

LCH*Ma: 90 92 96

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

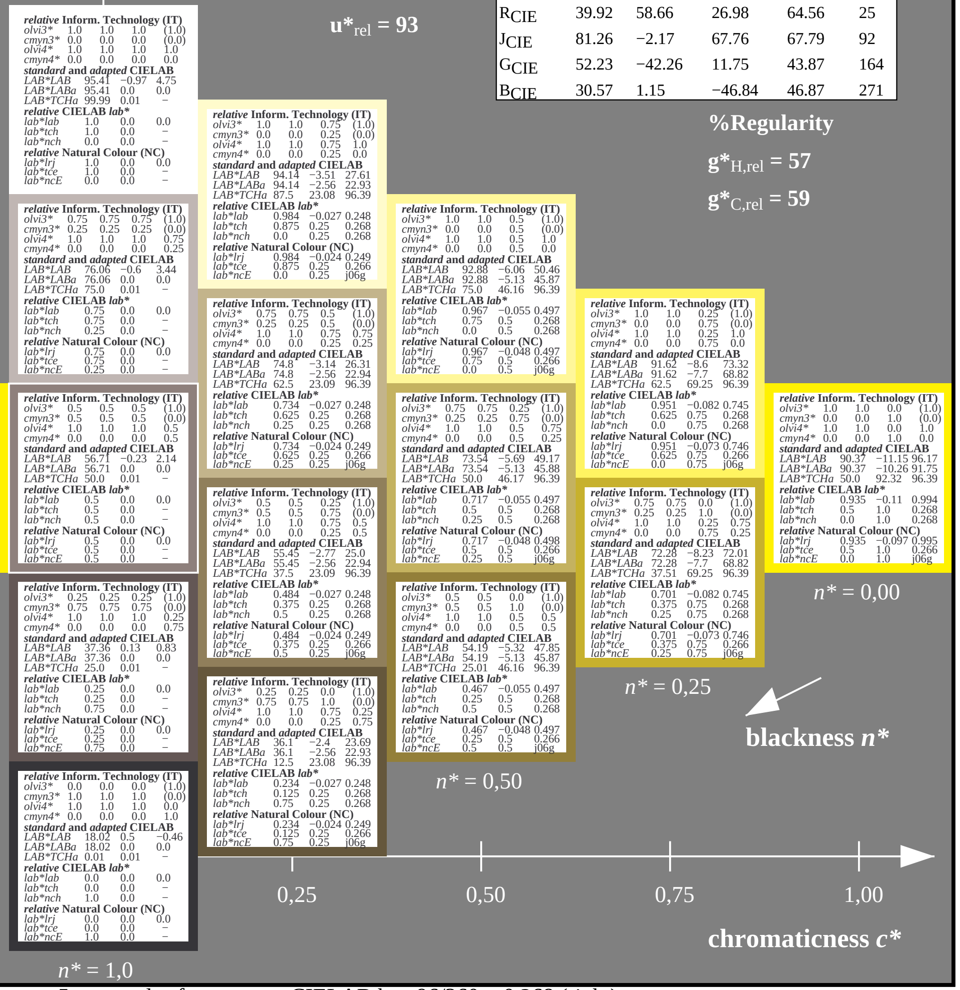
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



UE500−7, 5 step scales for constant CIELAB hue 91/360 = 0.252 (left) 5 step scales for constant CIELAB hue 96/360 = 0.268 (right)

Input: Colorimetric Reflective System NCS18

for hue $h^* = lab^*h = 91/360 = 0.252$

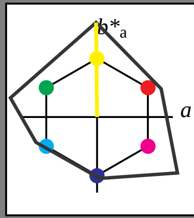
lab*tch and lab*nch

D65: hue J

LCH*Ma: 91 125 91

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System MRS18a

for hue $h^* = lab^*h = 94/360 = 0.262$

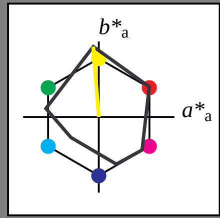
lab*tch and lab*nch

D65: hue J

LCH*Ma: 91 93 94

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

UE500−7, 5 step scales for constant CIELAB hue 91/360 = 0.252 (left)

5 step scales for constant CIELAB hue 94/360 = 0.262 (right)

Input: Colorimetric Reflective System NCS18

for hue $h^* = lab^*h = 91/360 = 0.252$

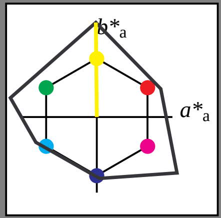
*lab*tch and lab*nch*

D65: hue J

LCH*Ma: 91 125 91

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

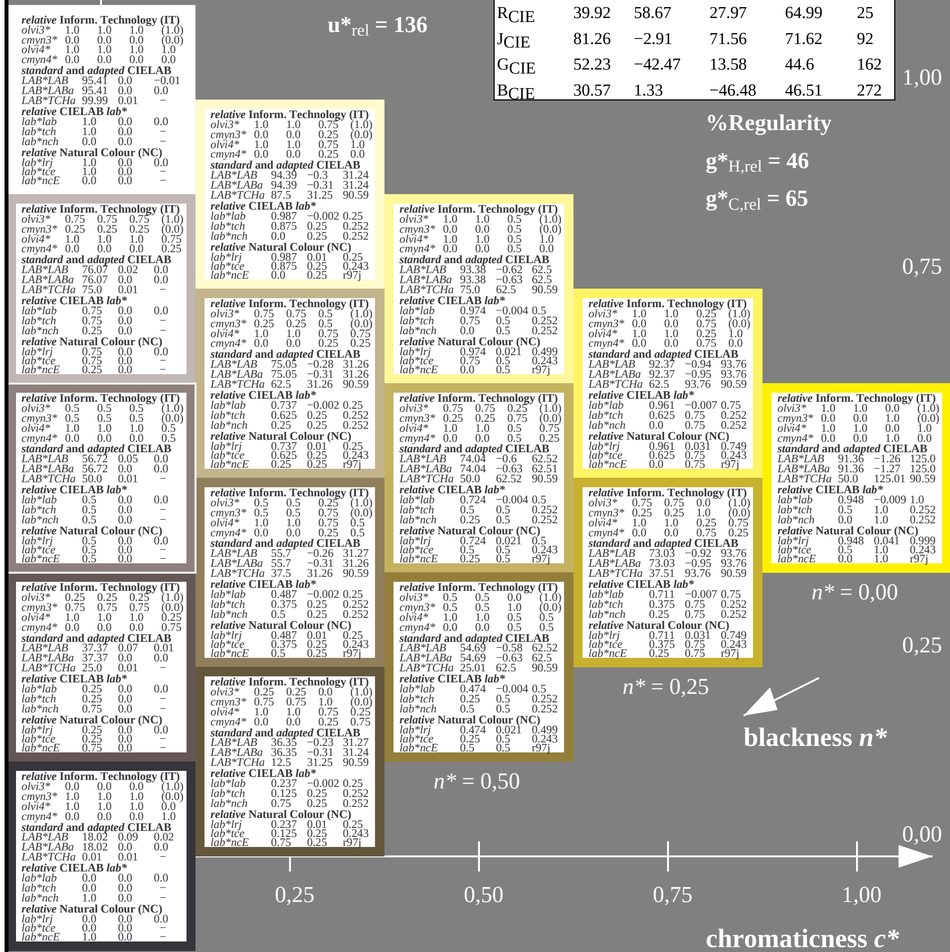
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System NRS18

for hue $h^* = lab^*h = 91/360 = 0.253$

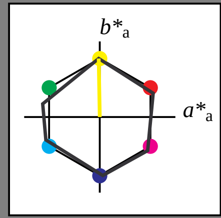
*lab*tch and lab*nch*

D65: hue J

LCH*Ma: 57 77 91

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

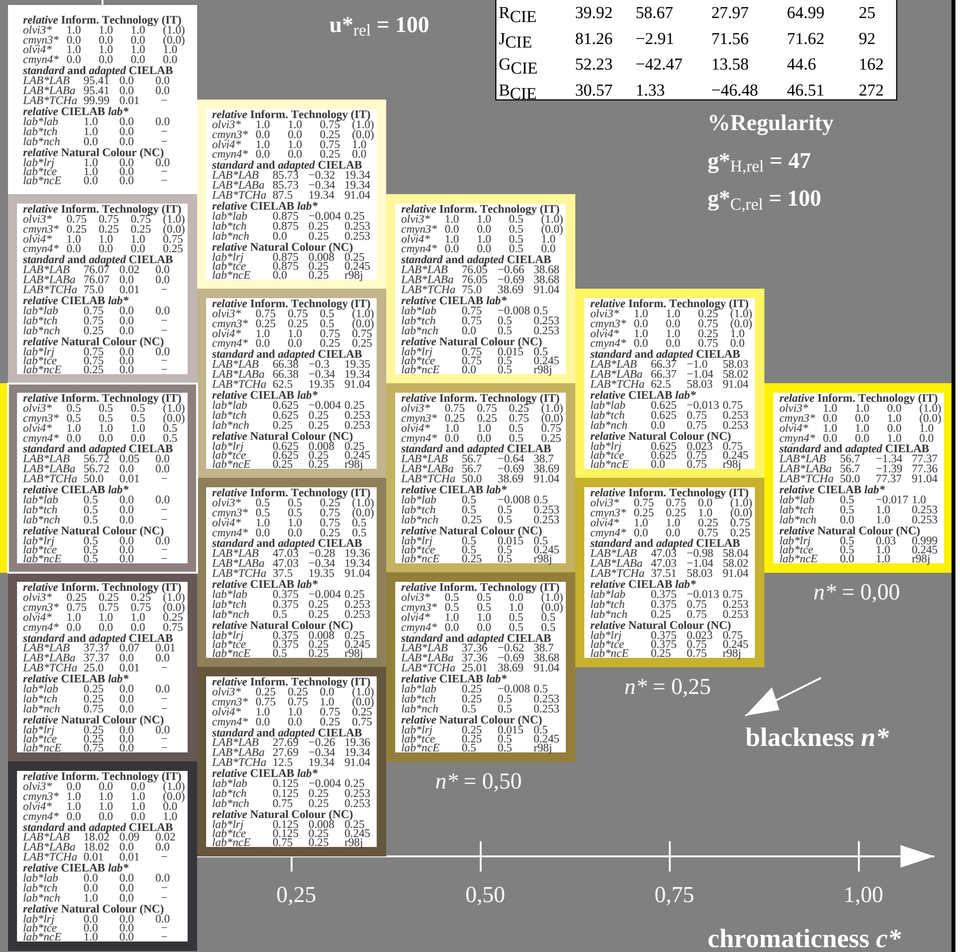
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



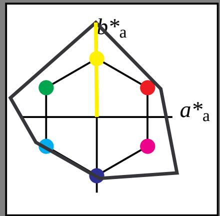
UE500−7, 5 step scales for constant CIELAB hue 91/360 = 0.252 (left)

5 step scales for constant CIELAB hue 91/360 = 0.253 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

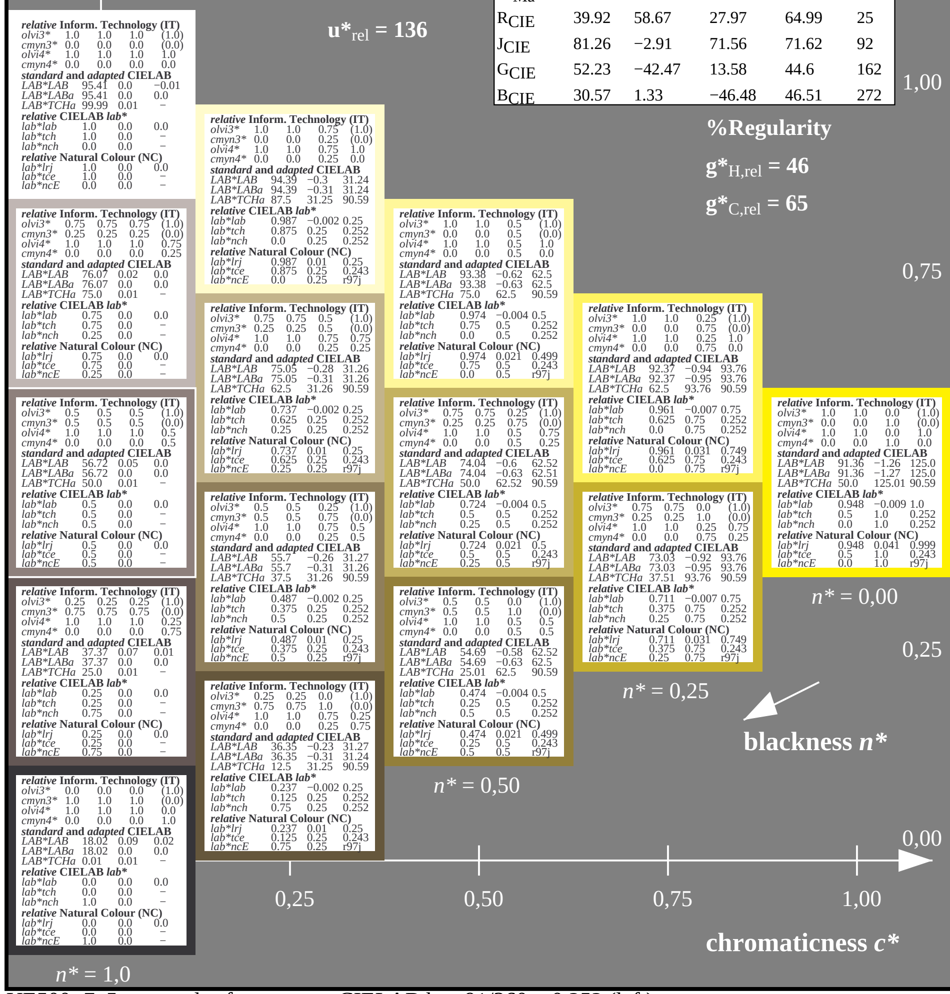
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

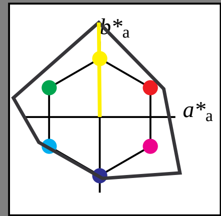
$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

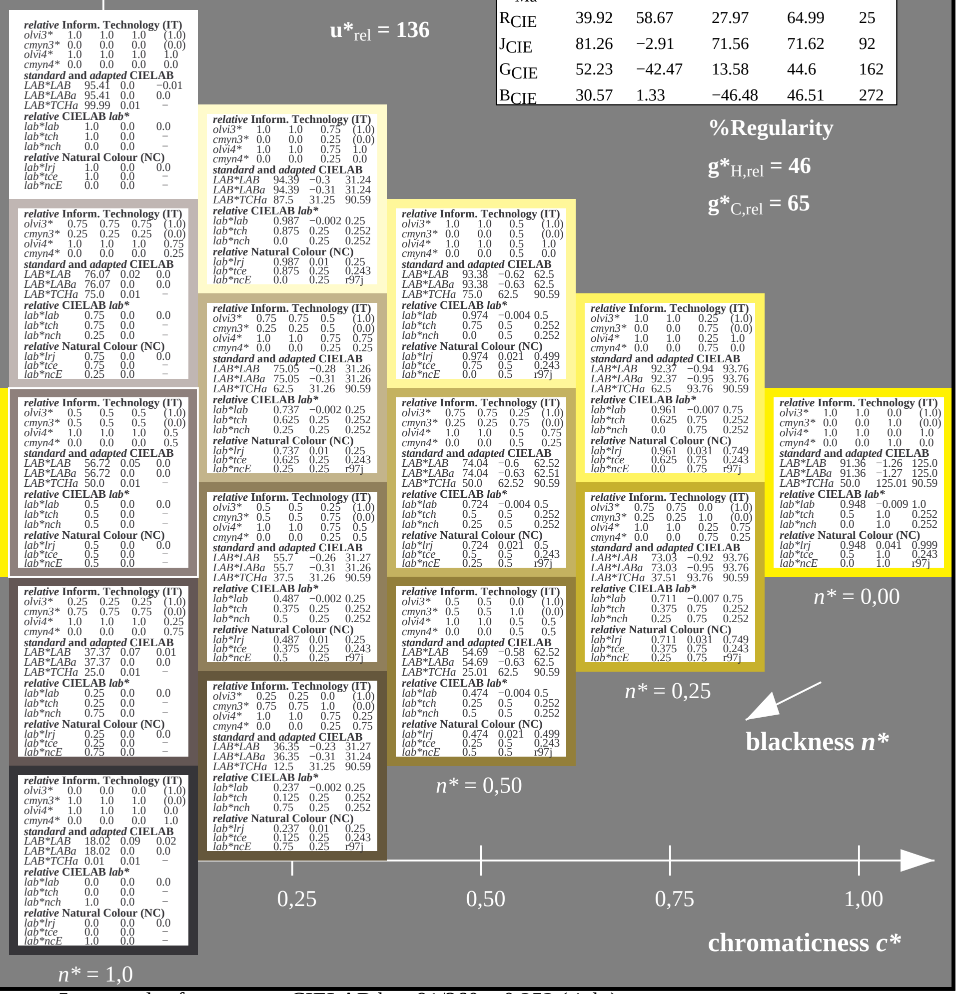
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



UE500−7, 5 step scales for constant CIELAB hue 91/360 = 0.252 (left)

5 step scales for constant CIELAB hue 91/360 = 0.252 (right)

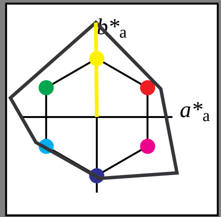
Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 91/360 = 0.252$
*lab*tch and lab*nch*

D65: hue J

LCH*Ma: 91 125 91

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 136

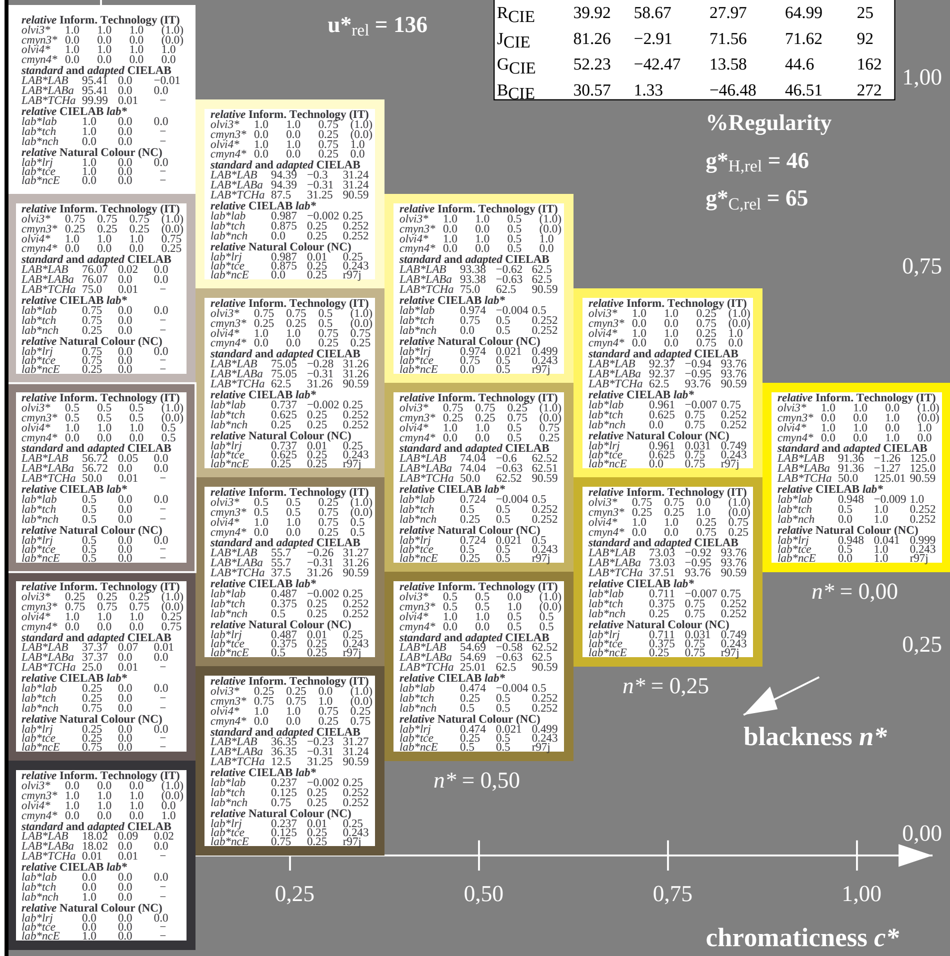
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



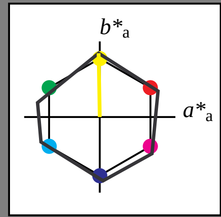
Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 91/360 = 0.253$
*lab*tch and lab*nch*

D65: hue J

LCH*Ma: 53 84 91

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 119

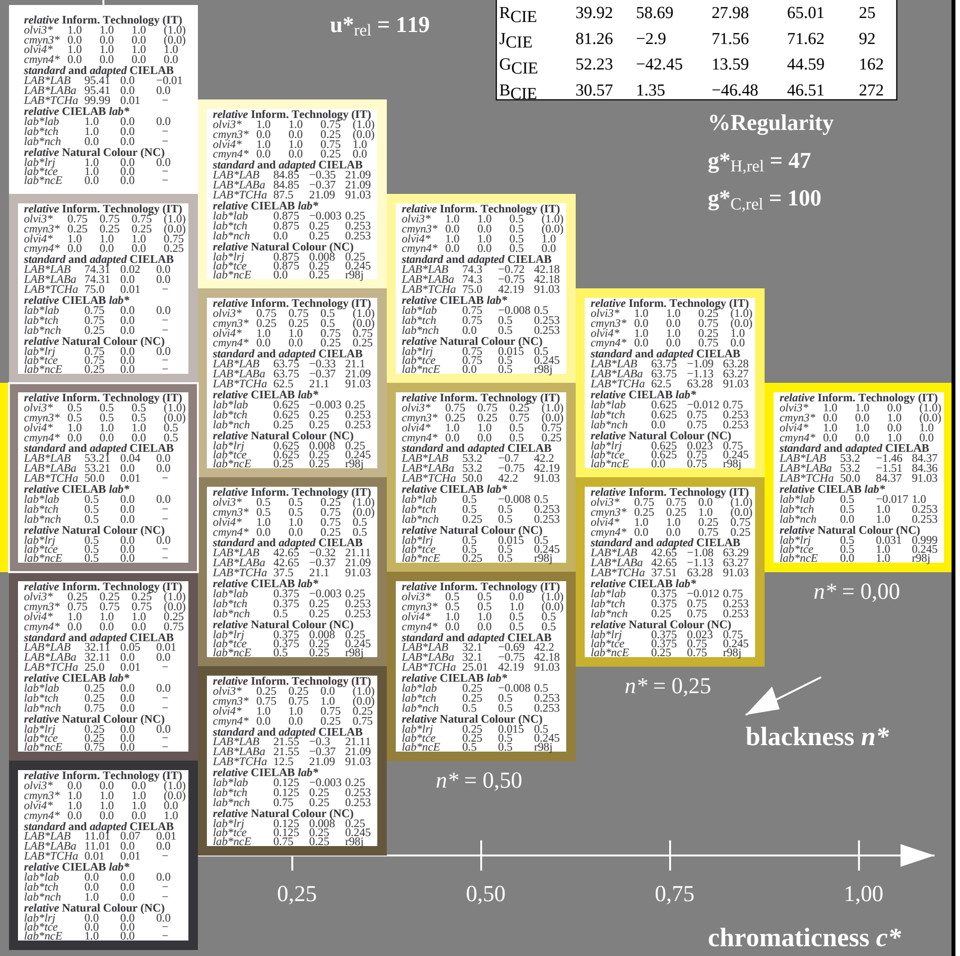
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



UE500−7, 5 step scales for constant CIELAB hue 91/360 = 0.252 (left)

5 step scales for constant CIELAB hue 91/360 = 0.253 (right)

Input: Colorimetric Reflective System NCS18

for hue *h* = lab*h = 91/360 = 0.252*

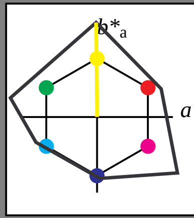
*lab*tch and lab*nch*

D65: hue J

LCH*Ma: 91 125 91

rgb*Ma: 1.0 1.0 0.0

triangle lightness *t*



%Gamut

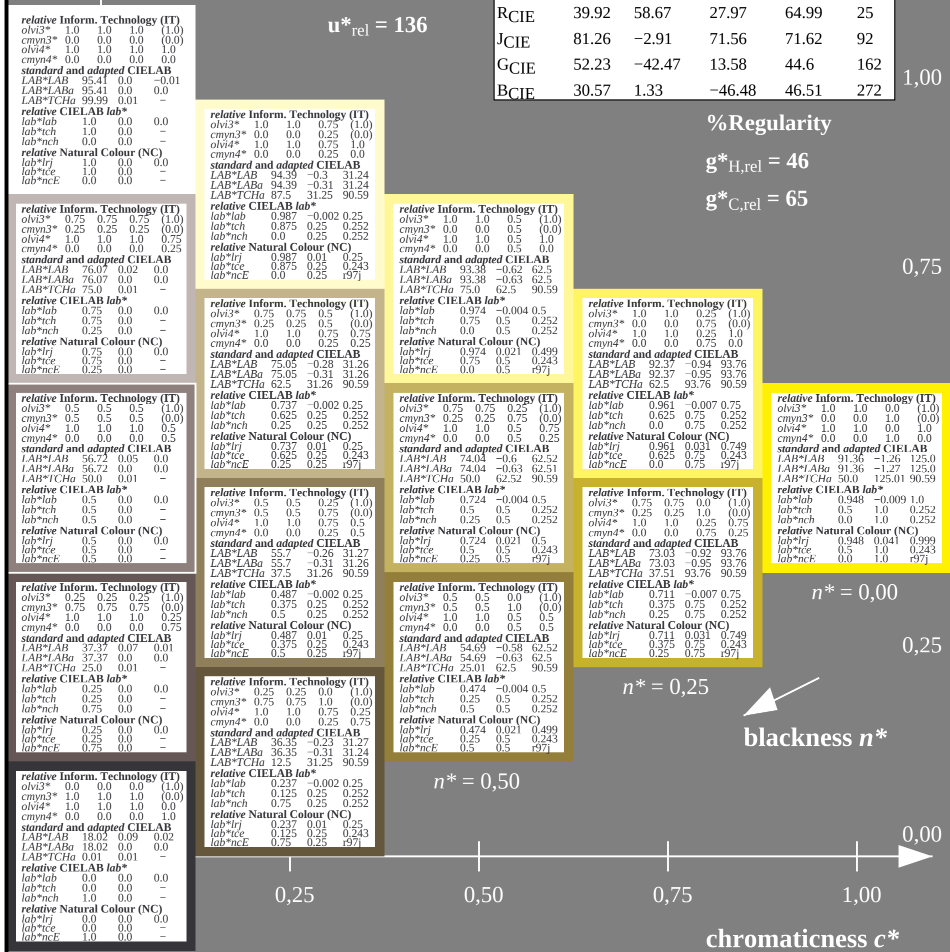
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NCS11

for hue *h* = lab*h = 91/360 = 0.252*

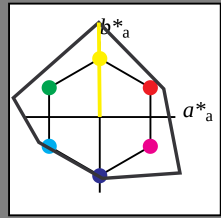
*lab*tch and lab*nch*

D65: hue J

LCH*Ma: 91 125 91

rgb*Ma: 1.0 1.0 0.0

triangle lightness *t*



%Gamut

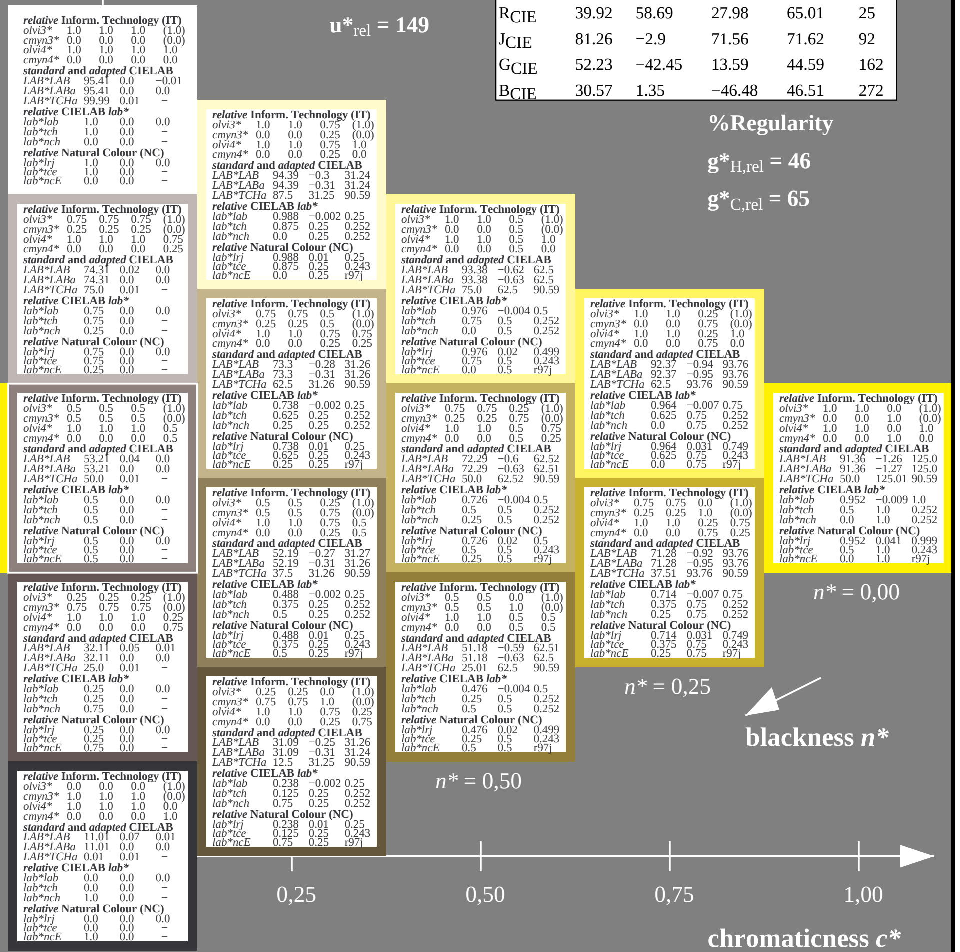
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



UE500−7, 5 step scales for constant CIELAB hue 91/360 = 0.252 (left)

5 step scales for constant CIELAB hue 91/360 = 0.252 (right)

Input: Colorimetric Reflective System NRS11

for hue $h^* = lab^*h = 91/360 = 0.253$

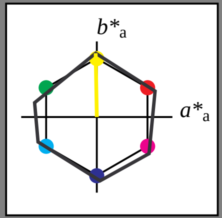
lab*tch* and *lab*nch

D65: hue J

LCH*Ma: 53 84 91

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 119

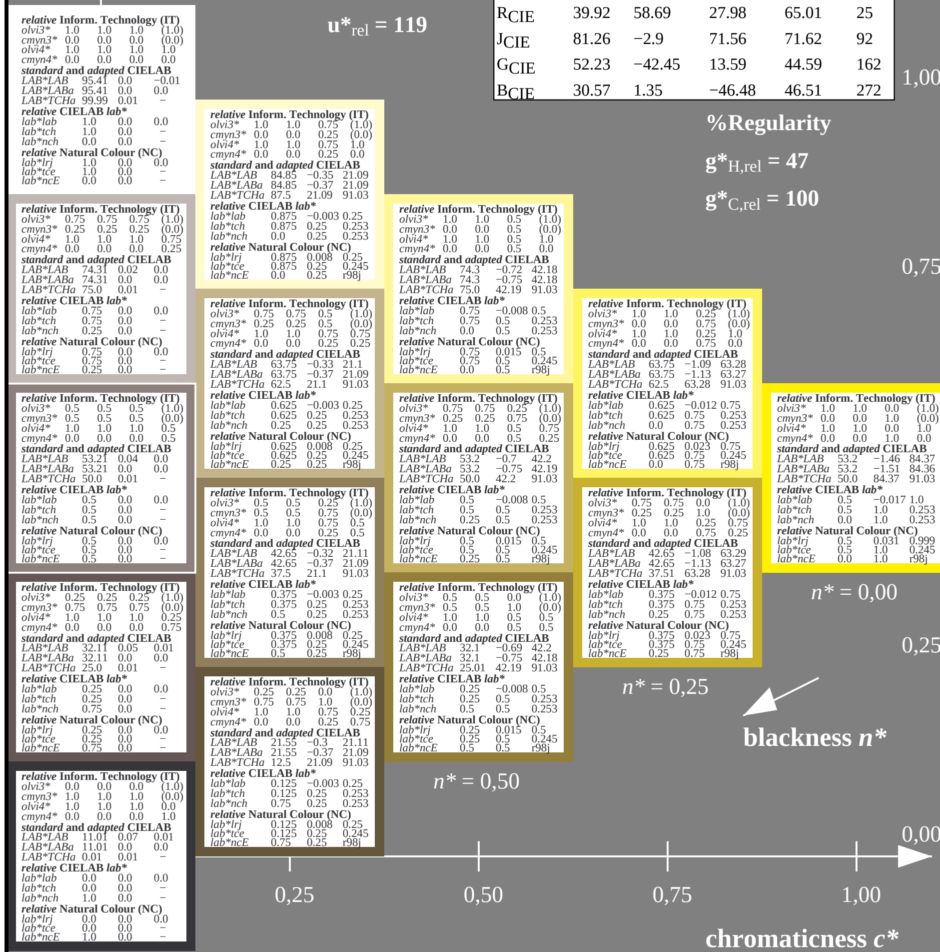
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System ORS18

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

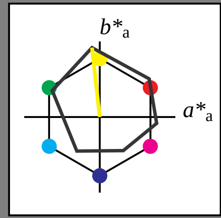
lab*tch* and *lab*nch

D65: hue Y

LCH*Ma: 90 92 96

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 93

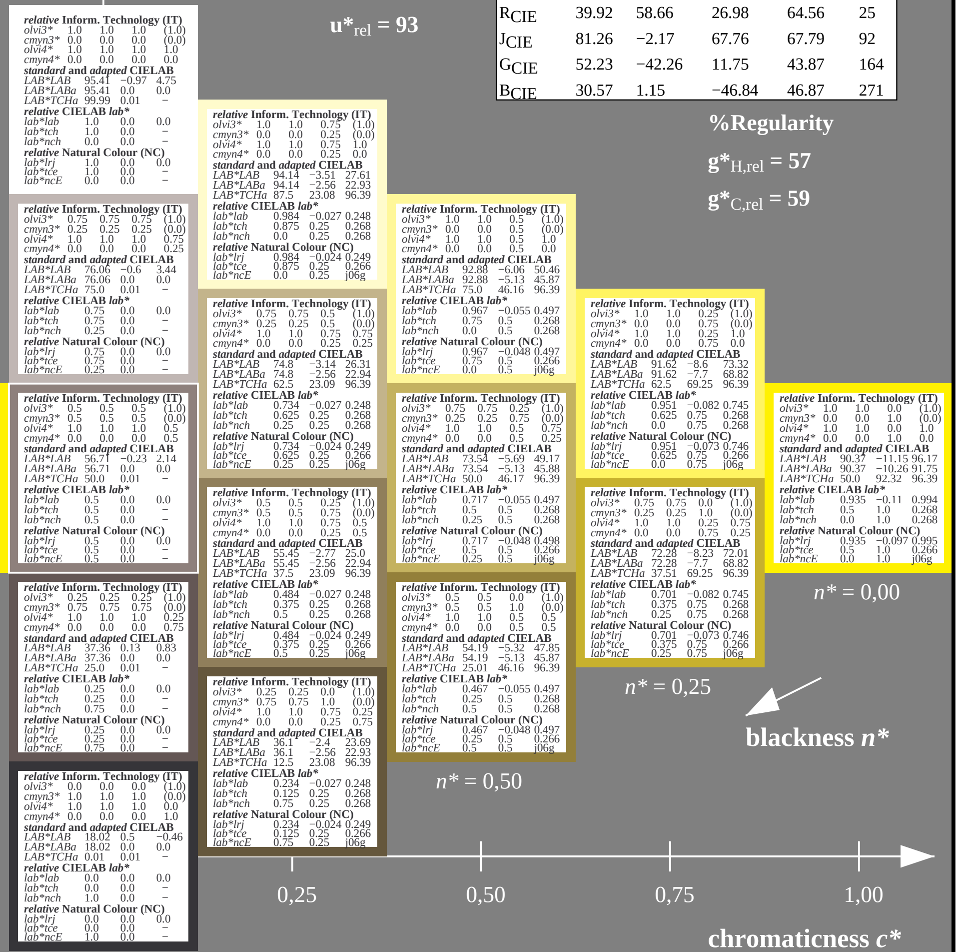
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



UE500−7, 5 step scales for constant CIELAB hue 91/360 = 0.253 (left)

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

Input: Colorimetric Reflective System NRS11

for hue $h^* = lab^*h = 91/360 = 0.253$

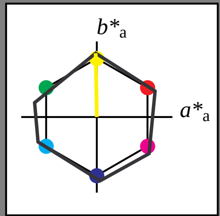
*lab*tch* and *lab*nch*

D65: hue J

LCH*Ma: 53 84 91

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 119$

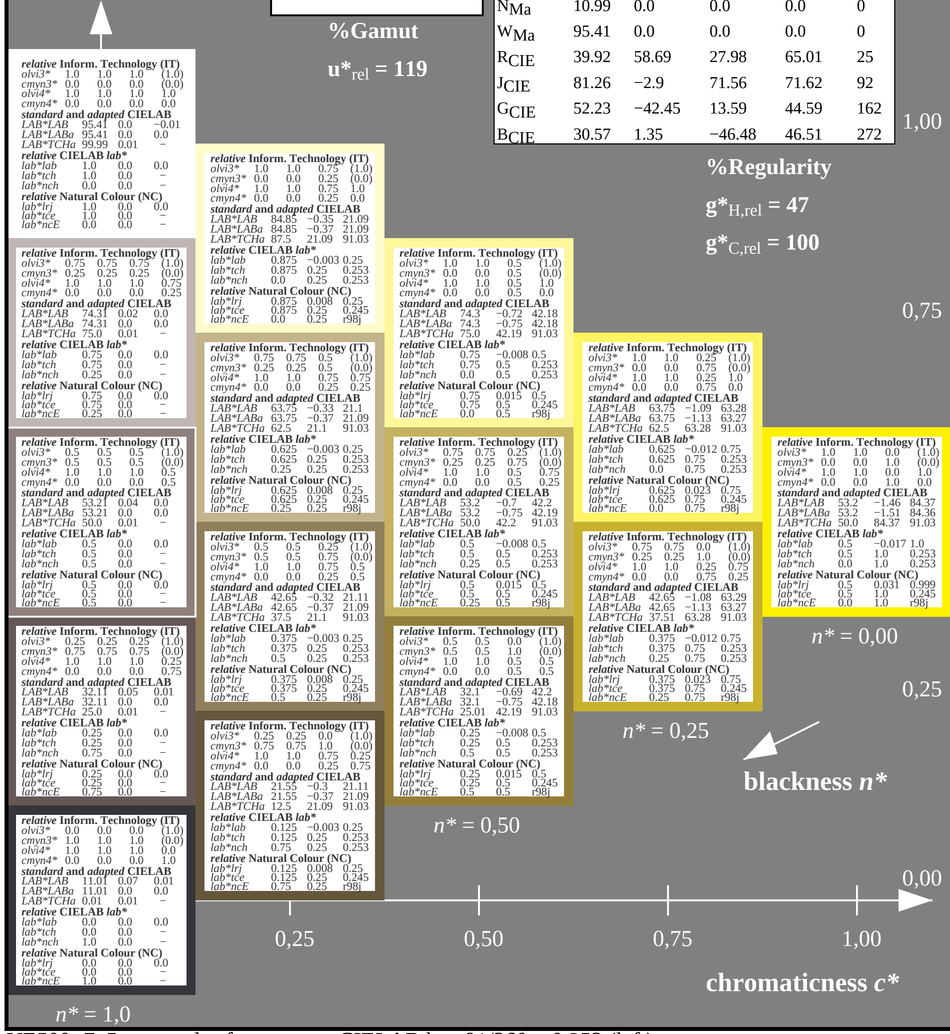
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System MRS18

for hue $h^* = lab^*h = 94/360 = 0.261$

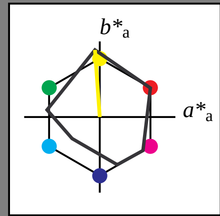
*lab*tch* and *lab*nch*

D65: hue J

LCH*Ma: 91 89 94

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 91$

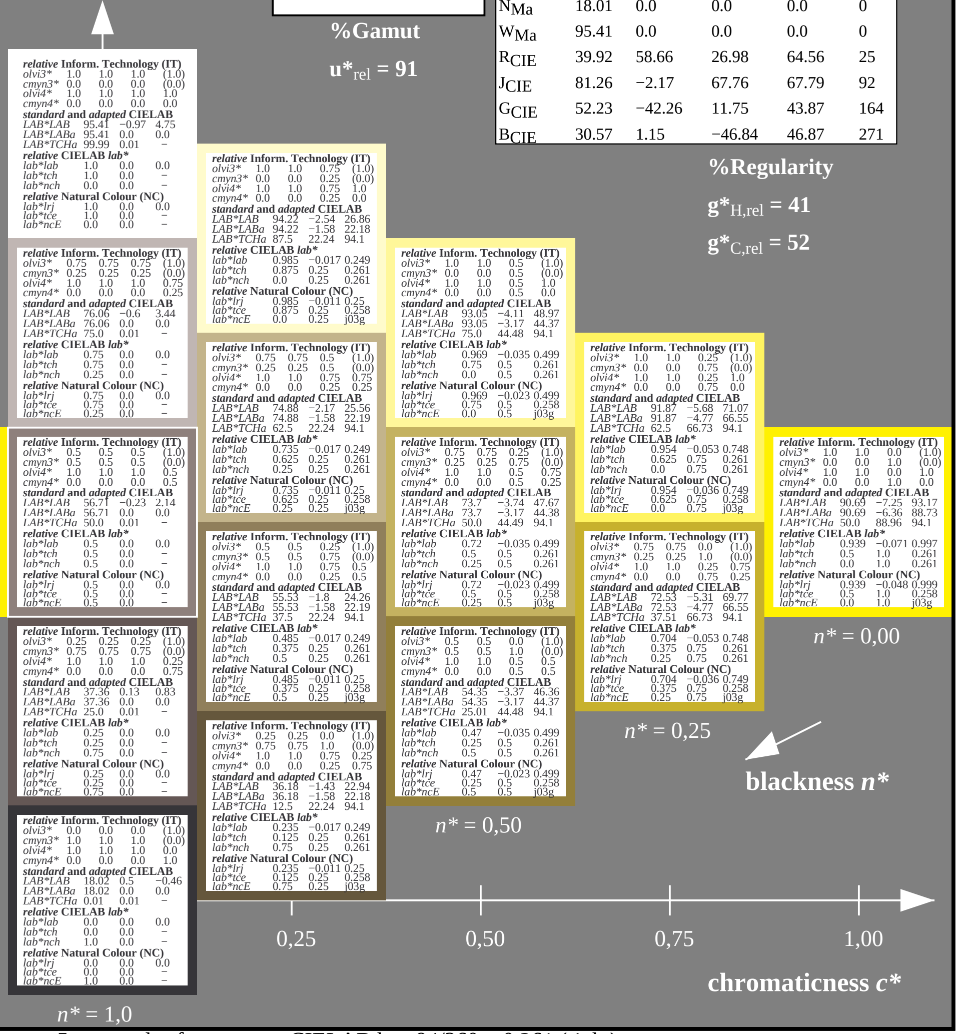
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



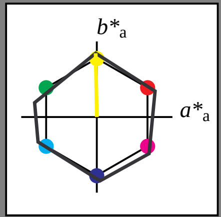
UE500−7, 5 step scales for constant CIELAB hue 91/360 = 0.253 (left)

5 step scales for constant CIELAB hue 94/360 = 0.261 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 84 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 119

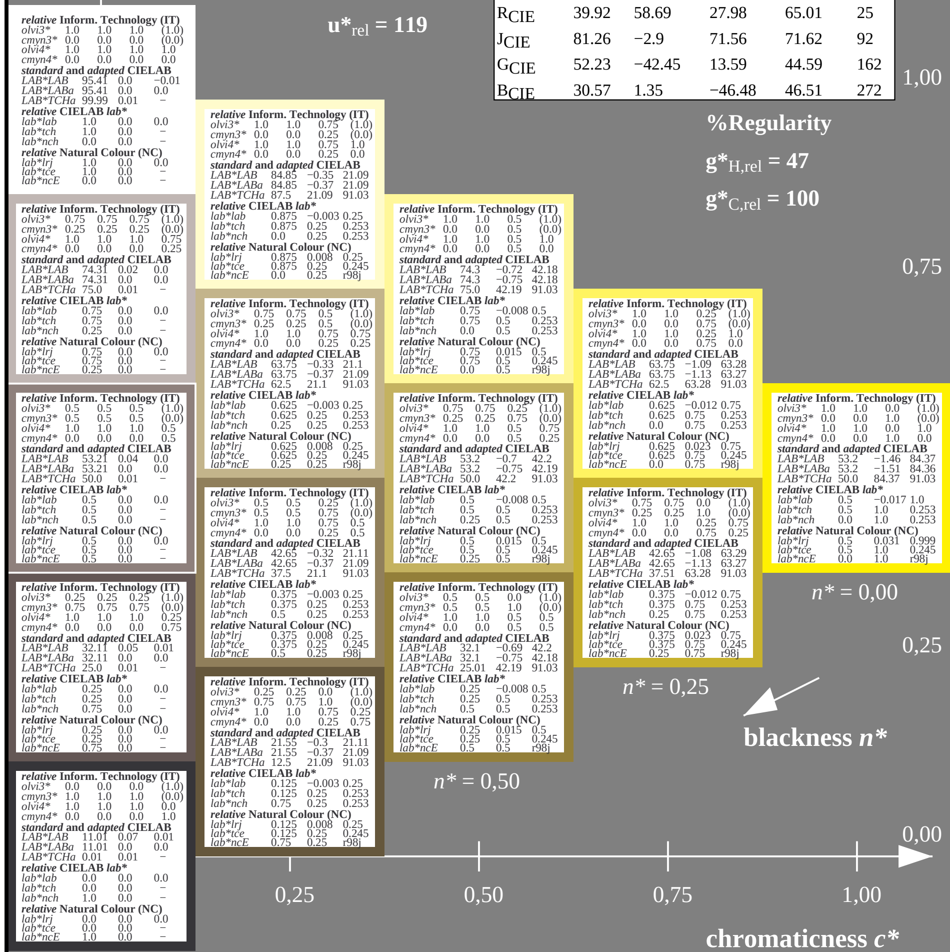
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

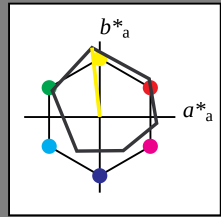
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 93

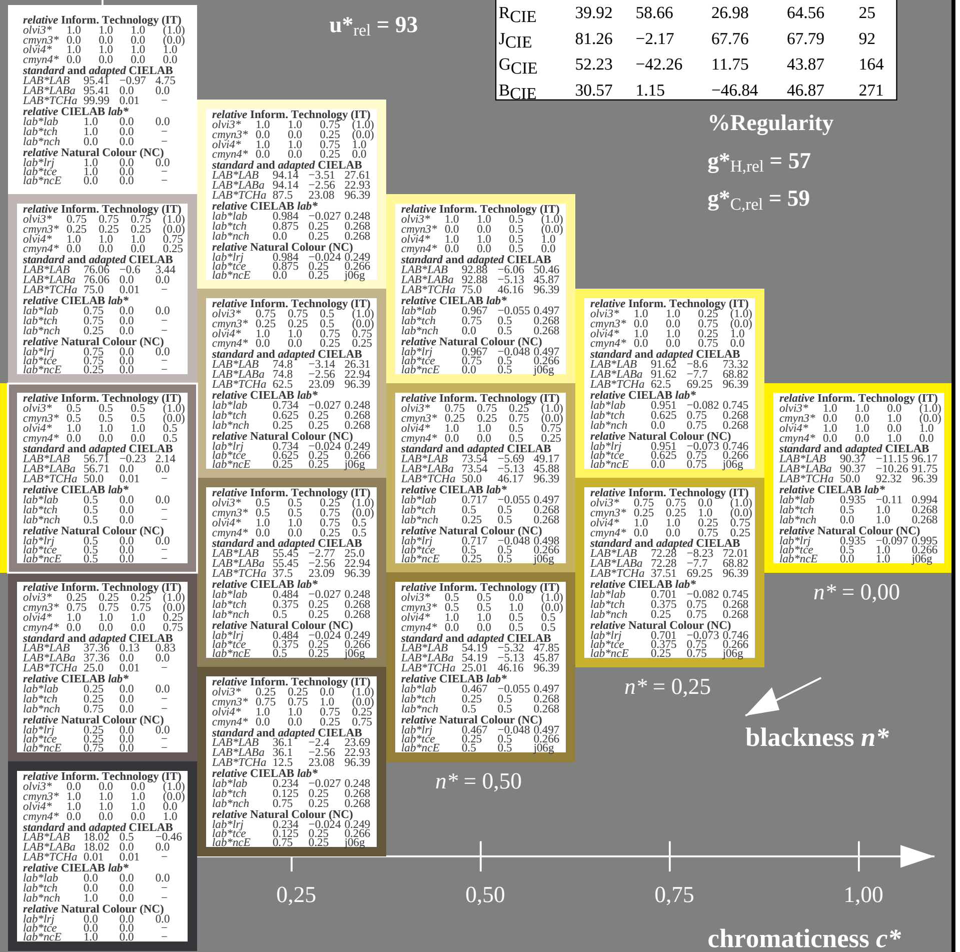
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



UE500−7, 5 step scales for constant CIELAB hue 91/360 = 0.253 (left)   5 step scales for constant CIELAB hue 96/360 = 0.268 (right)

Input: Colorimetric Reflective System NRS11

for hue $h^* = lab^*h = 91/360 = 0.253$

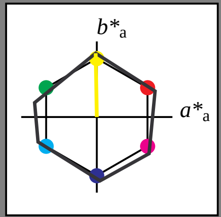
lab*tch and lab*nch

D65: hue J

LCH*Ma: 53 84 91

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 119

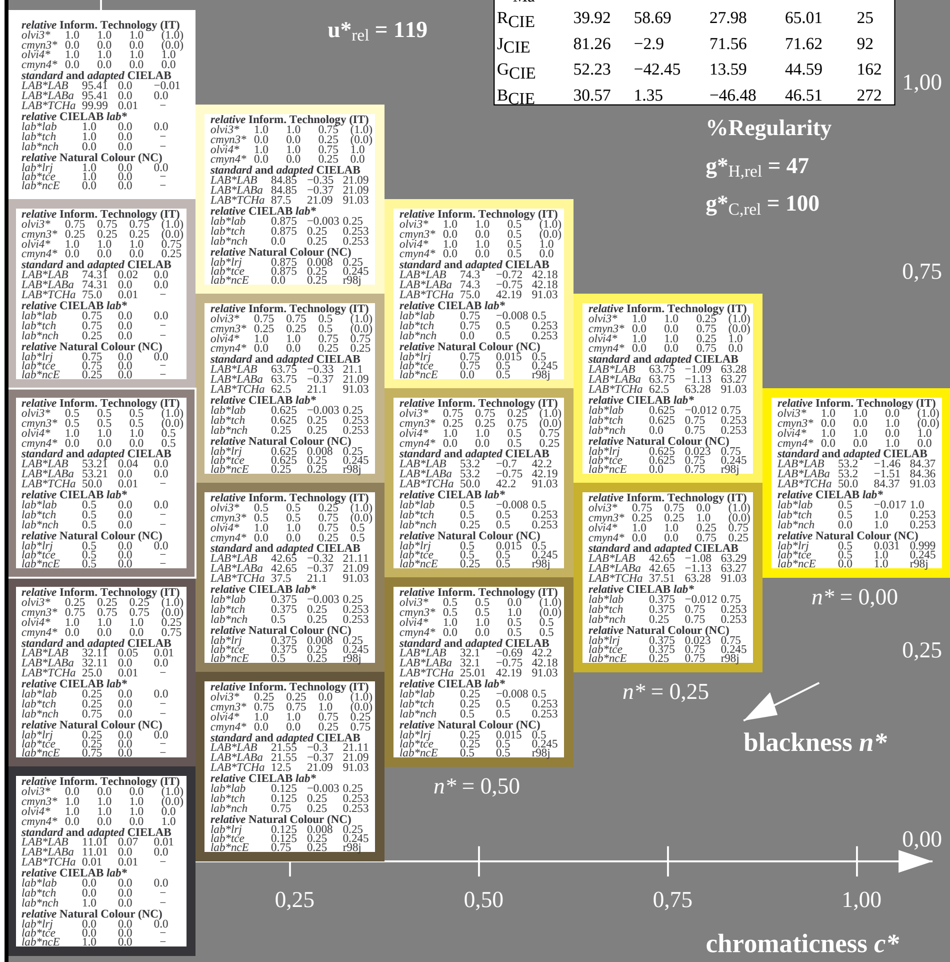
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System MRS18a

for hue $h^* = lab^*h = 94/360 = 0.262$

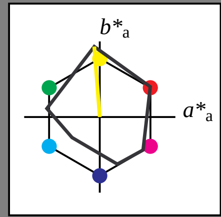
lab*tch and lab*nch

D65: hue J

LCH*Ma: 91 93 94

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 92

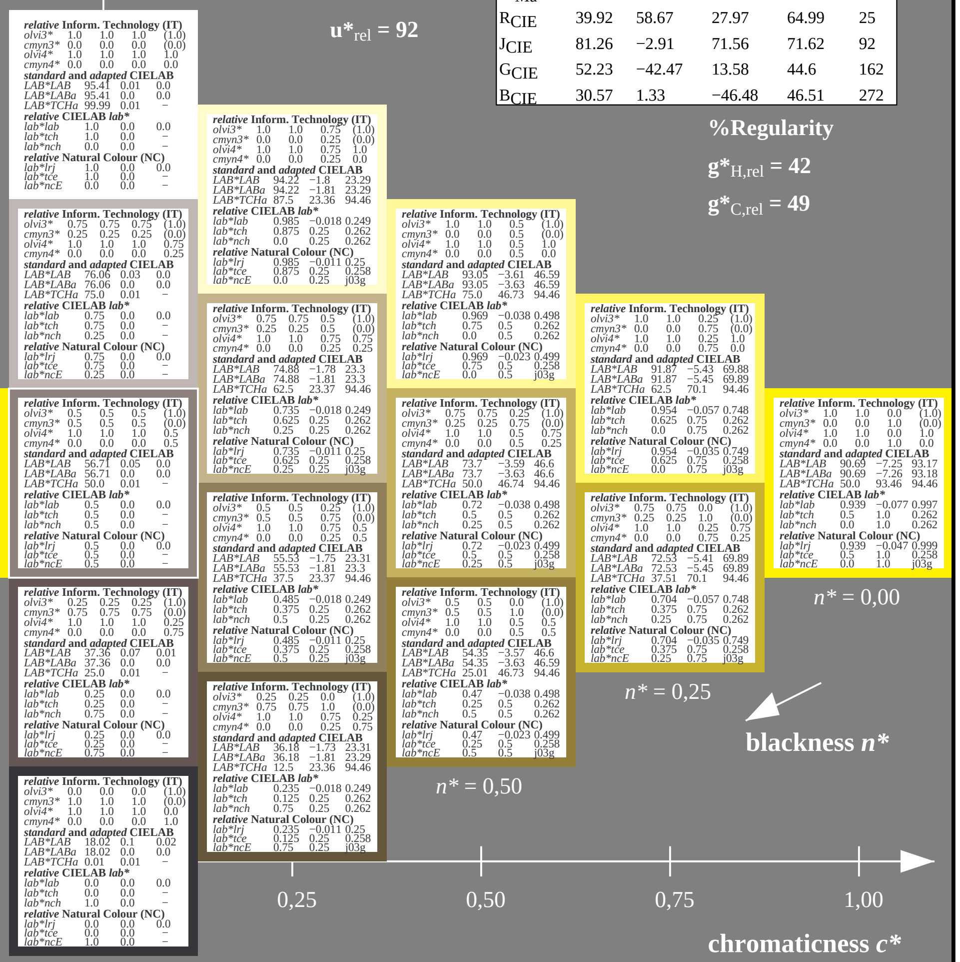
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

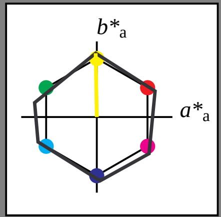


UE500−7, 5 step scales for constant CIELAB hue 91/360 = 0.253 (left)

5 step scales for constant CIELAB hue 94/360 = 0.262 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 91/360 = 0.253$
*lab*tch and lab*nch*

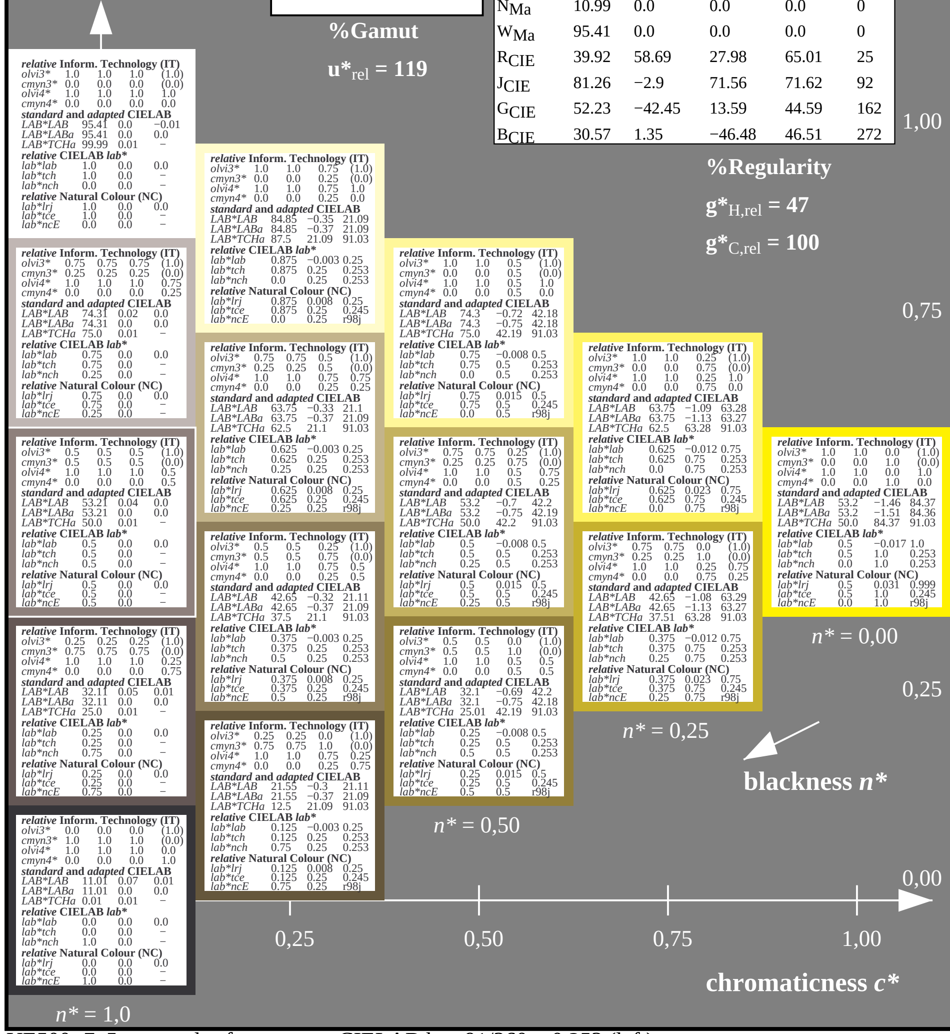
D65: hue J
LCH*Ma: 53 84 91
rgb*Ma: 1.0 1.0 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 119$

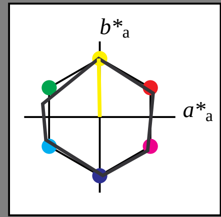
NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 91/360 = 0.253$
*lab*tch and lab*nch*

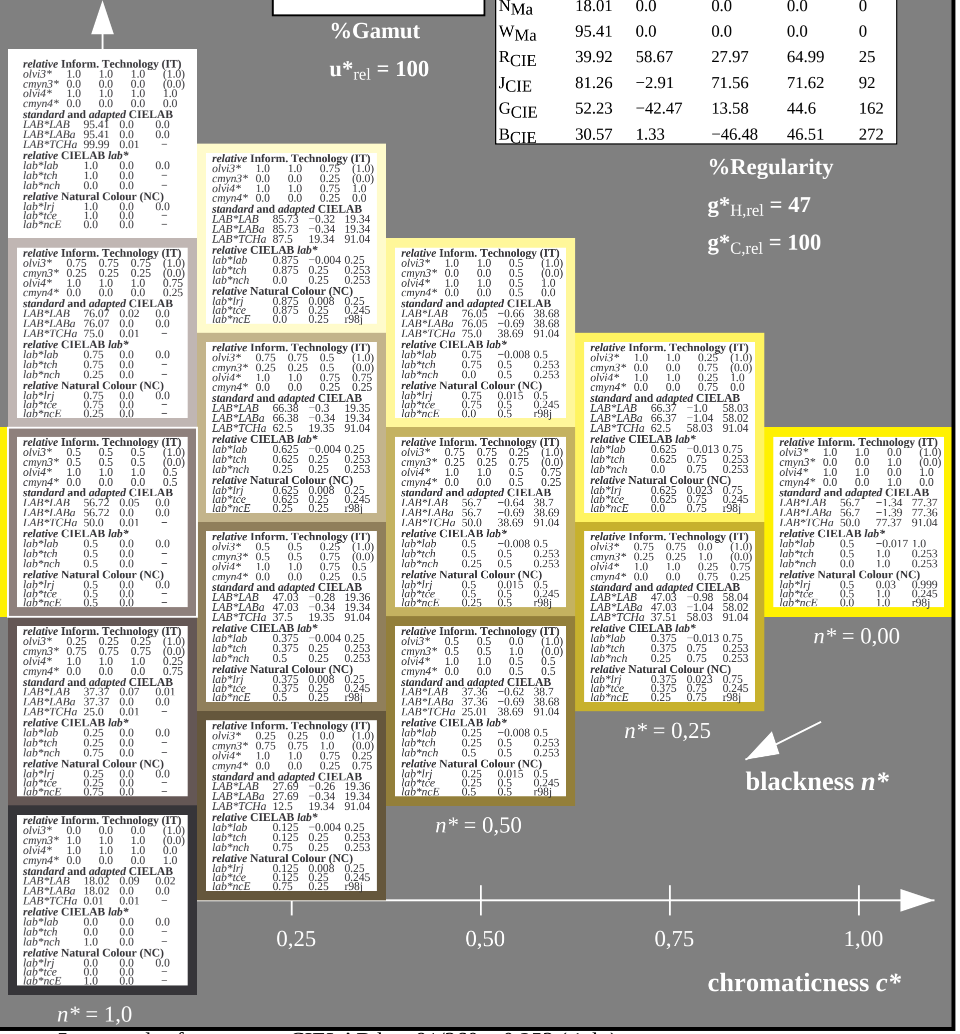
D65: hue J
LCH*Ma: 57 77 91
rgb*Ma: 1.0 1.0 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



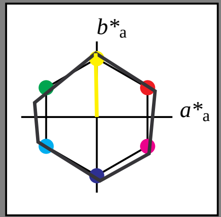
UE500−7, 5 step scales for constant CIELAB hue 91/360 = 0.253 (left)

5 step scales for constant CIELAB hue 91/360 = 0.253 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 84 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 119

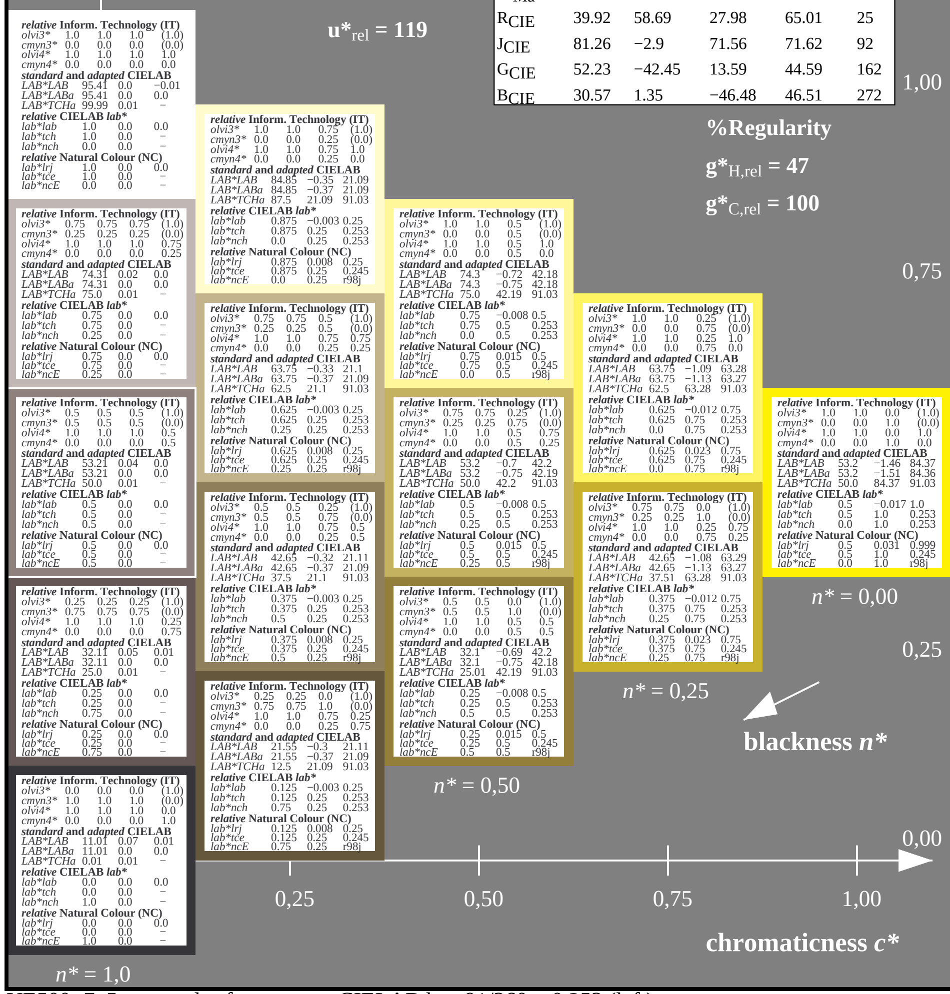
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

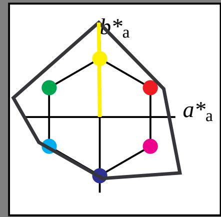
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 136

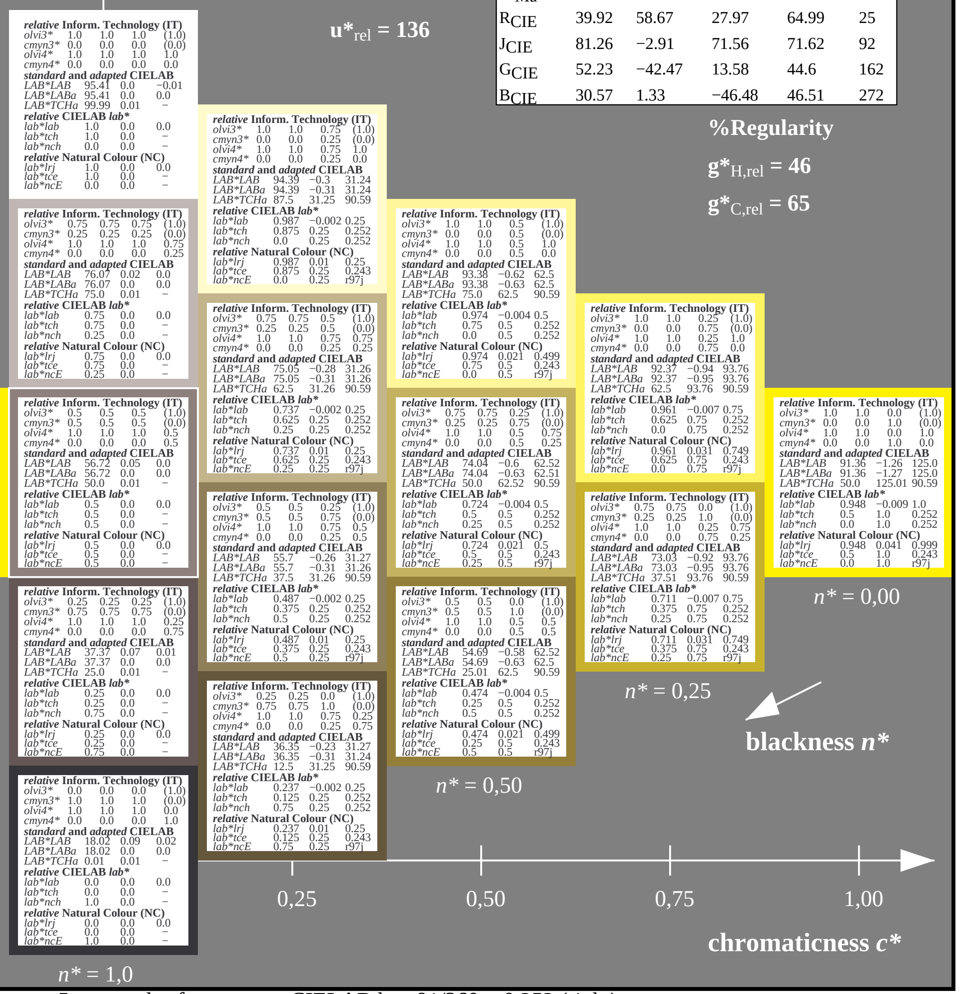
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



UE500−7, 5 step scales for constant CIELAB hue 91/360 = 0.253 (left)

5 step scales for constant CIELAB hue 91/360 = 0.252 (right)

Input: Colorimetric Reflective System NRS11

for hue $h^* = lab^*h = 91/360 = 0.253$

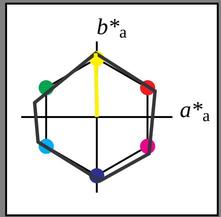
lab*tch and lab*nch

D65: hue J

LCH*Ma: 53 84 91

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

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 −0.01
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* 1.0 1.0 0.75 (1.0)
cmyn3* 0.0 0.0 0.25 (0.0)
olvi4* 1.0 1.0 0.75 1.0
cmyn4* 0.0 0.0 0.25 0.0
standard and adapted CIELAB
LAB*LAB 84.85 −0.35 21.09
LAB*LABa 84.85 −0.37 21.09
LAB*TCHa 87.5 21.09 91.03
relative CIELAB lab*
lab*lab 0.875 −0.003 0.25
lab*tch 0.875 0.25 0.253
lab*nch 0.0 0.25 0.253
relative Natural Colour (NC)
lab*lrj 0.875 0.008 0.25
lab*tce 0.875 0.25 0.245
lab*ncE 0.0 0.25 r98j

1,00

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.75 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 1.0 1.0 1.0 0.75
cmyn4* 0.0 0.0 0.0 0.25
standard and adapted CIELAB
LAB*LAB 74.31 0.02 0.0
LAB*LABa 74.31 0.0 0.0
LAB*TCHa 75.0 0.01 –
relative CIELAB lab*
lab*lab 0.75 0.0 0.0
lab*tch 0.75 0.0 –
lab*nch 0.25 0.0 –
relative Natural Colour (NC)
lab*lrj 0.75 0.0 0.0
lab*tce 0.75 0.0 –
lab*ncE 0.25 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 74.3 −0.72 42.18
LAB*LABa 74.3 −0.75 42.18
LAB*TCHa 75.0 42.19 91.03
relative CIELAB lab*
lab*lab 0.75 −0.008 0.5
lab*tch 0.75 0.5 0.253
lab*nch 0.0 0.5 0.253
relative Natural Colour (NC)
lab*lrj 0.75 0.015 0.5
lab*tce 0.75 0.5 0.245
lab*ncE 0.0 0.5 r98j

0,75

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.5 (1.0)
cmyn3* 0.25 0.25 0.5 (0.0)
olvi4* 1.0 1.0 0.75 0.75
cmyn4* 0.0 0.0 0.25 0.25
standard and adapted CIELAB
LAB*LAB 63.75 −0.33 21.1
LAB*LABa 63.75 −0.37 21.09
LAB*TCHa 62.5 21.1 91.03
relative CIELAB lab*
lab*lab 0.625 −0.003 0.25
lab*tch 0.625 0.25 0.253
lab*nch 0.25 0.25 0.253
relative Natural Colour (NC)
lab*lrj 0.625 0.008 0.25
lab*tce 0.625 0.25 0.245
lab*ncE 0.25 0.25 r98j

relative Inform. Technology (IT)
olvi3* 1.0 1.0 0.25 (1.0)
cmyn3* 0.0 0.0 0.75 (0.0)
olvi4* 1.0 1.0 0.25 1.0
cmyn4* 0.0 0.0 0.75 0.0
standard and adapted CIELAB
LAB*LAB 63.75 −1.09 63.28
LAB*LABa 63.75 −1.13 63.27
LAB*TCHa 62.5 63.28 91.03
relative CIELAB lab*
lab*lab 0.625 −0.012 0.75
lab*tch 0.625 0.75 0.253
lab*nch 0.0 0.75 0.253
relative Natural Colour (NC)
lab*lrj 0.625 0.023 0.75
lab*tce 0.625 0.75 0.245
lab*ncE 0.0 0.75 r98j

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 53.21 0.04 0.0
LAB*LABa 53.21 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* 0.75 0.75 0.25 (1.0)
cmyn3* 0.25 0.25 0.75 (0.0)
olvi4* 1.0 1.0 0.5 0.75
cmyn4* 0.0 0.0 0.5 0.25
standard and adapted CIELAB
LAB*LAB 53.2 −0.7 42.2
LAB*LABa 53.2 −0.75 42.19
LAB*TCHa 50.0 42.2 91.03
relative CIELAB lab*
lab*lab 0.5 −0.008 0.5
lab*tch 0.5 0.5 0.253
lab*nch 0.25 0.5 0.253
relative Natural Colour (NC)
lab*lrj 0.5 0.015 0.5
lab*tce 0.5 0.5 0.245
lab*ncE 0.25 0.5 r98j

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 1.0 0.0
standard and adapted CIELAB
LAB*LAB 53.2 −1.46 84.37
LAB*LABa 53.2 −1.51 84.36
LAB*TCHa 50.0 84.37 91.03
relative CIELAB lab*
lab*lab 0.5 −0.017 1.0
lab*tch 0.5 1.0 0.253
lab*nch 0.0 1.0 0.253
relative Natural Colour (NC)
lab*lrj 0.5 0.031 0.999
lab*tce 0.5 1.0 0.245
lab*ncE 0.0 1.0 r98j

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.25 (1.0)
cmyn3* 0.5 0.5 0.75 (0.0)
olvi4* 1.0 1.0 0.75 0.5
cmyn4* 0.0 0.0 0.25 0.5
standard and adapted CIELAB
LAB*LAB 42.65 −0.32 21.11
LAB*LABa 42.65 −0.37 21.09
LAB*TCHa 37.5 21.1 91.03
relative CIELAB lab*
lab*lab 0.375 −0.003 0.25
lab*tch 0.375 0.25 0.253
lab*nch 0.5 0.25 0.253
relative Natural Colour (NC)
lab*lrj 0.375 0.008 0.25
lab*tce 0.375 0.25 0.245
lab*ncE 0.5 0.25 r98j

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.0 (1.0)
cmyn3* 0.25 0.25 1.0 (0.0)
olvi4* 1.0 1.0 0.25 0.75
cmyn4* 0.0 0.0 0.75 0.25
standard and adapted CIELAB
LAB*LAB 42.65 −1.08 63.29
LAB*LABa 42.65 −1.13 63.27
LAB*TCHa 37.51 63.28 91.03
relative CIELAB lab*
lab*lab 0.375 −0.012 0.75
lab*tch 0.375 0.75 0.253
lab*nch 0.25 0.75 0.253
relative Natural Colour (NC)
lab*lrj 0.375 0.023 0.75
lab*tce 0.375 0.75 0.245
lab*ncE 0.25 0.75 r98j

n^* = 0,00

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.25 (1.0)
cmyn3* 0.75 0.75 0.75 (0.0)
olvi4* 1.0 1.0 1.0 0.25
cmyn4* 0.0 0.0 0.0 0.75
standard and adapted CIELAB
LAB*LAB 32.11 0.05 0.01
LAB*LABa 32.11 0.0 0.0
LAB*TCHa 25.0 0.01 –
relative CIELAB lab*
lab*lab 0.25 0.0 0.0
lab*tch 0.25 0.0 –
lab*nch 0.75 0.0 –
relative Natural Colour (NC)
lab*lrj 0.25 0.0 0.0
lab*tce 0.25 0.0 –
lab*ncE 0.75 0.0 –

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 32.1 −0.69 42.2
LAB*LABa 32.1 −0.75 42.18
LAB*TCHa 25.01 42.19 91.03
relative CIELAB lab*
lab*lab 0.25 −0.008 0.5
lab*tch 0.25 0.5 0.253
lab*nch 0.5 0.5 0.253
relative Natural Colour (NC)
lab*lrj 0.25 0.015 0.5
lab*tce 0.25 0.5 0.245
lab*ncE 0.5 0.5 r98j

0,25

n^* = 0,25

blackness n^*

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.0 (1.0)
cmyn3* 0.75 0.75 1.0 (0.0)
olvi4* 1.0 1.0 0.75 0.25
cmyn4* 0.0 0.0 0.25 0.75
standard and adapted CIELAB
LAB*LAB 21.55 −0.3 21.11
LAB*LABa 21.55 −0.37 21.09
LAB*TCHa 12.5 21.09 91.03
relative CIELAB lab*
lab*lab 0.125 −0.003 0.25
lab*tch 0.125 0.25 0.253
lab*nch 0.75 0.25 0.253
relative Natural Colour (NC)
lab*lrj 0.125 0.008 0.25
lab*tce 0.125 0.25 0.245
lab*ncE 0.75 0.25 r98j

n^* = 0,50

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 11.01 0.07 0.01
LAB*LABa 11.01 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 –

0,00

0,25 0,50 0,75 1,00

chromaticness c^*

n^* = 1,0

Output: Colorimetric Reflective System NRS11

for hue $h^* = lab^*h = 91/360 = 0.253$

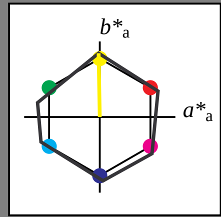
lab*tch and lab*nch

D65: hue J

LCH*Ma: 53 84 91

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

n^* = 0,00

n^* = 0,25

blackness n^*

n^* = 0,50

0,25 0,50 0,75 1,00

chromaticness c^*

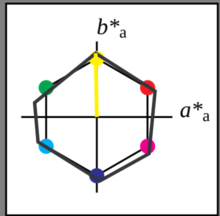
n^* = 1,0

UE500−7, 5 step scales for constant CIELAB hue 91/360 = 0.253 (left)

5 step scales for constant CIELAB hue 91/360 = 0.253 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 91/360 = 0.253$
*lab*tch and lab*nch*

D65: hue J
LCH*Ma: 53 84 91
rgb*Ma: 1.0 1.0 0.0
triangle lightness t^*

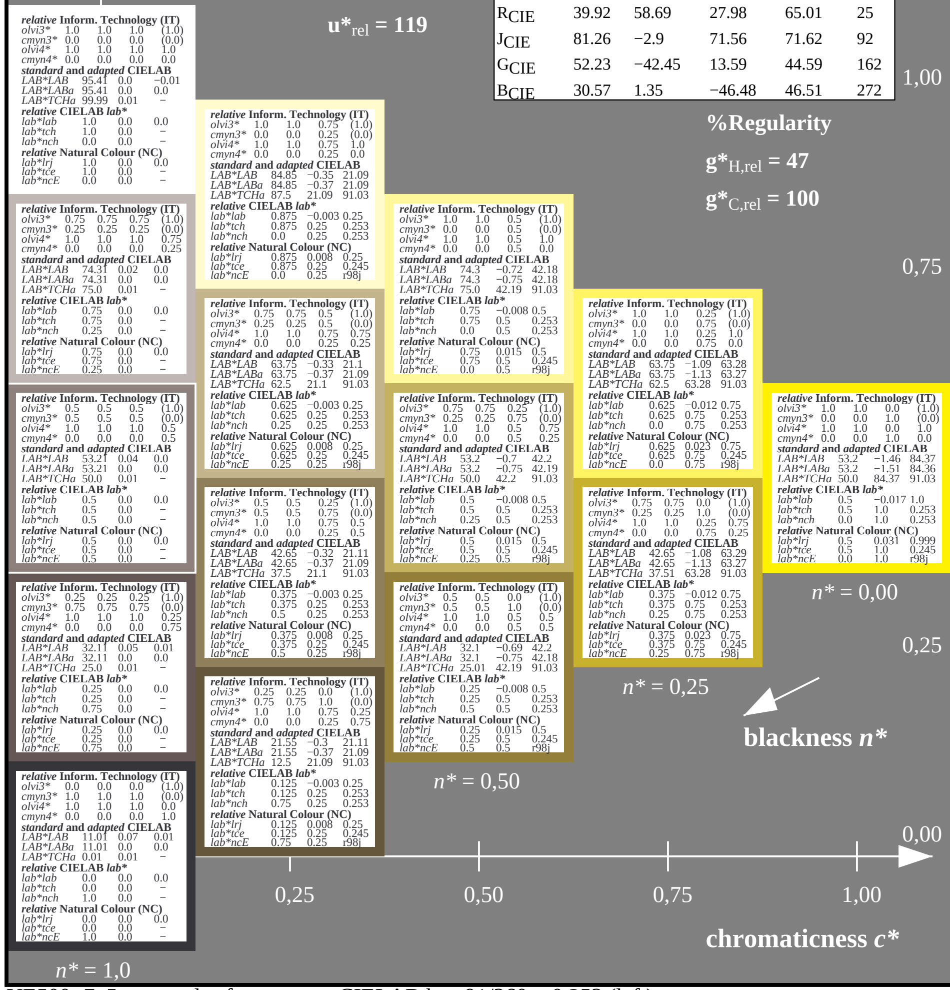


%Gamut
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data

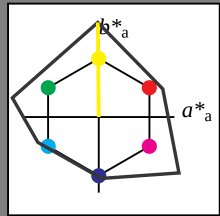
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 91/360 = 0.252$
*lab*tch and lab*nch*

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0
triangle lightness t^*

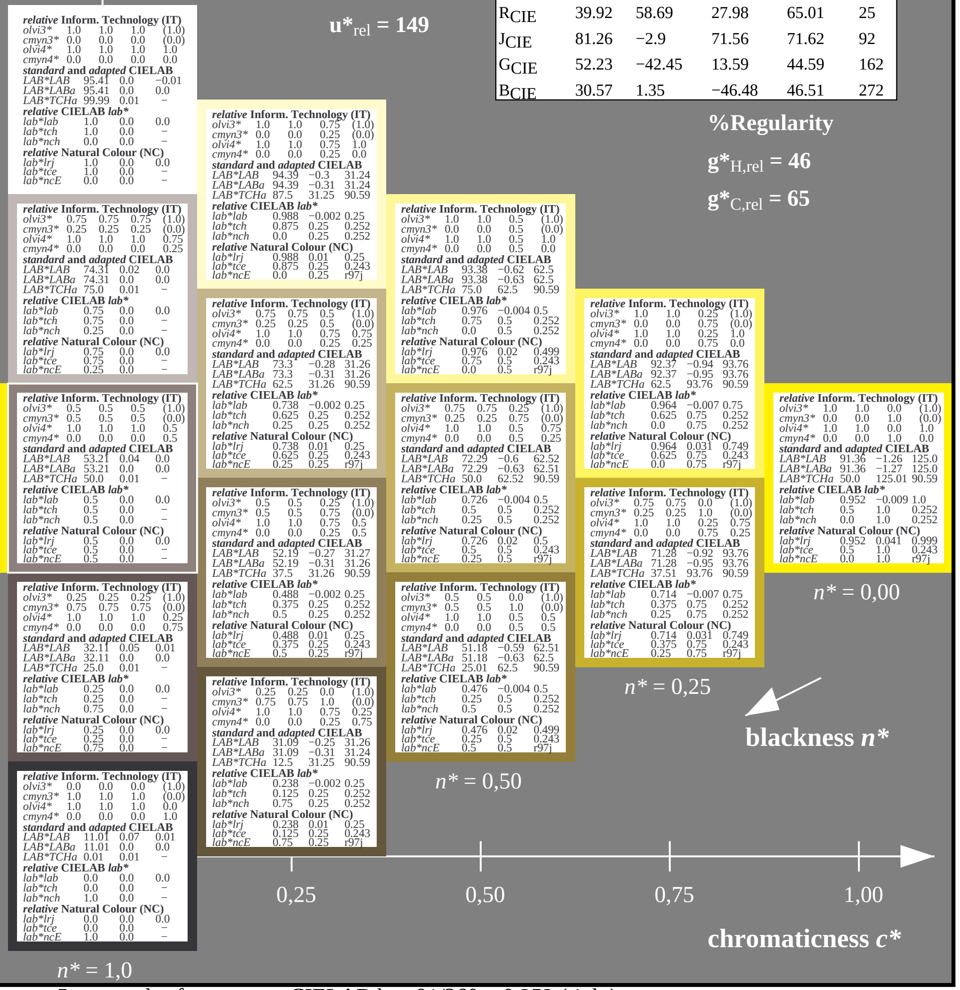


%Gamut
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



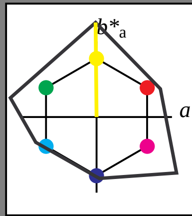
UE500−7, 5 step scales for constant CIELAB hue 91/360 = 0.253 (left)

5 step scales for constant CIELAB hue 91/360 = 0.252 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 149

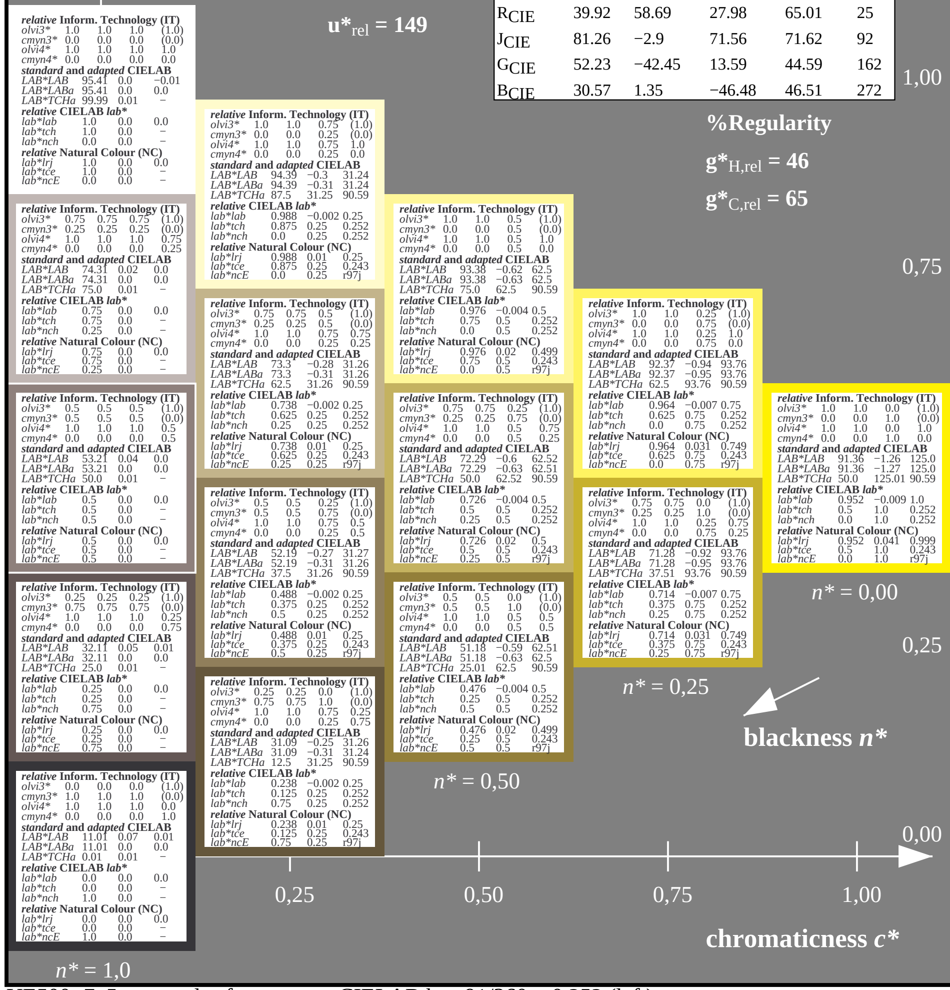
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

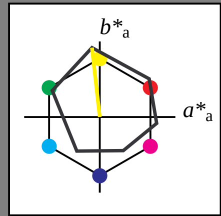
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 93

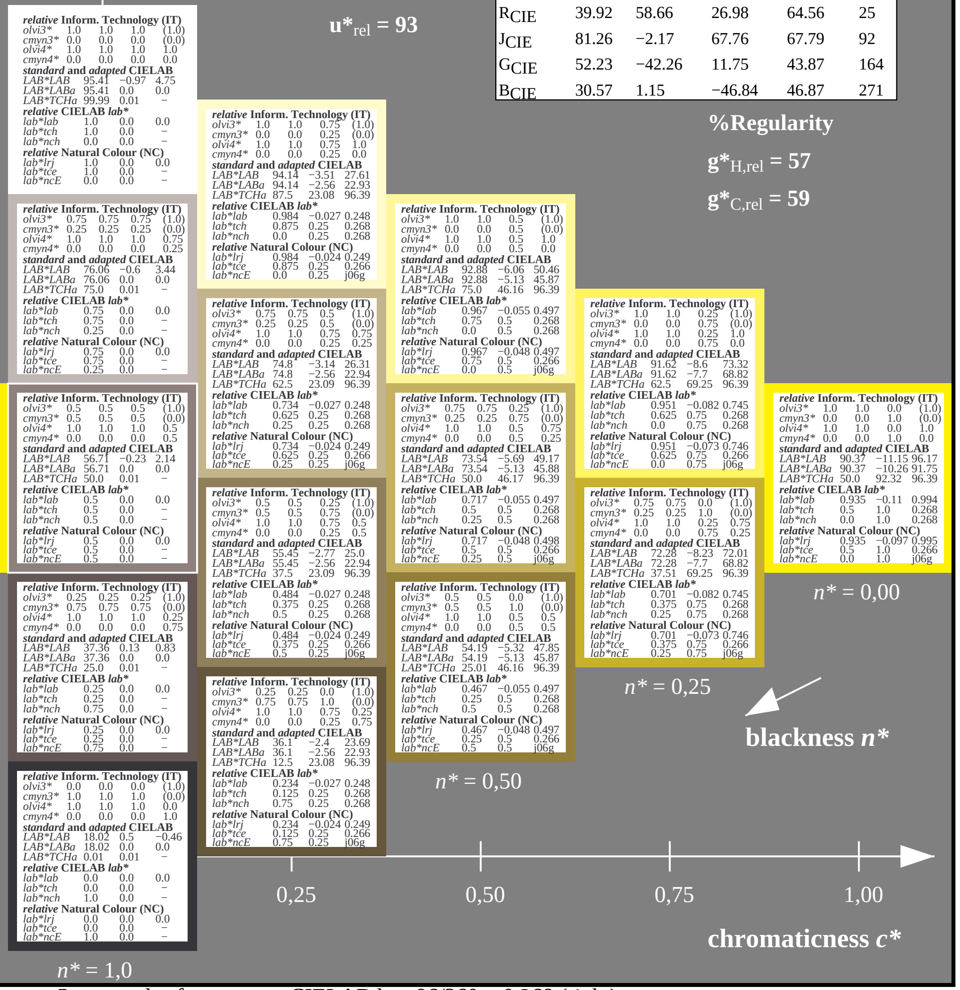
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



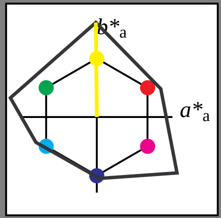
UE500−7, 5 step scales for constant CIELAB hue 91/360 = 0.252 (left)

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

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 91/360 = 0.252$
lab^*tch and lab^*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

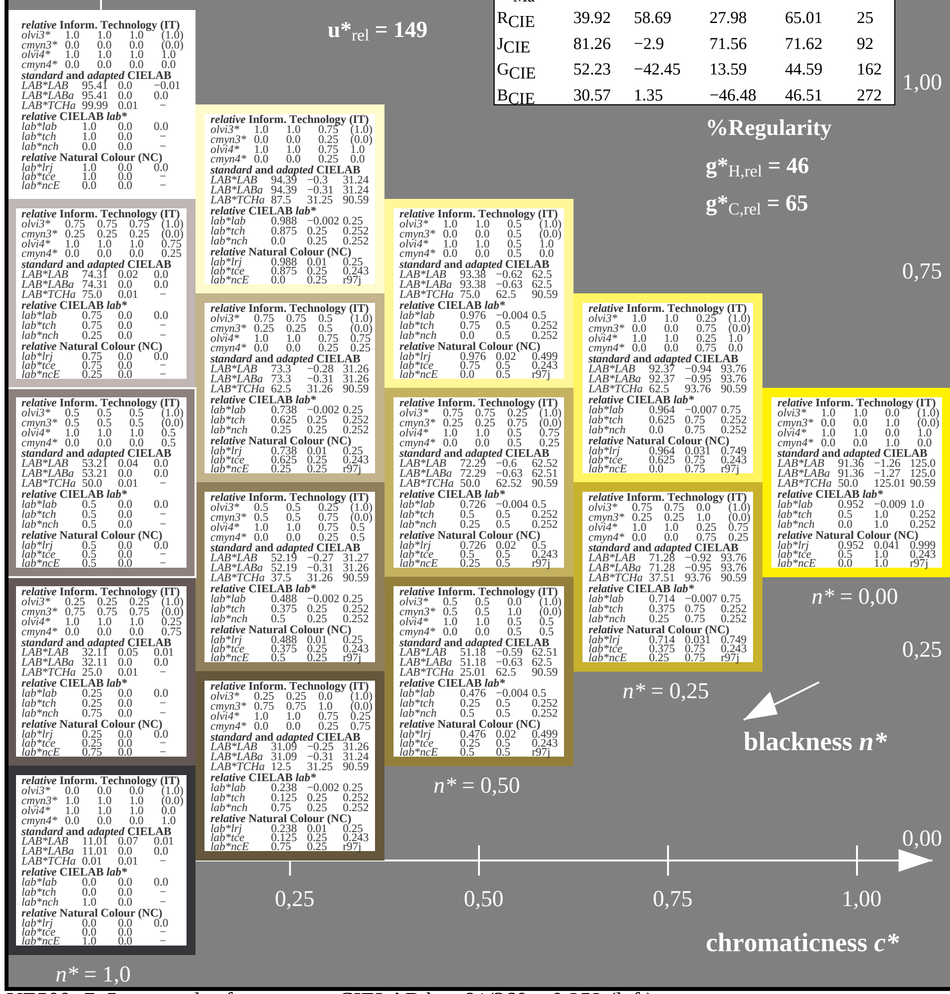
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

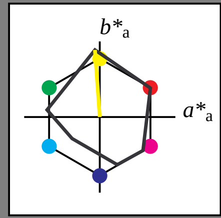
$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 94/360 = 0.261$
lab^*tch and lab^*nch

D65: hue J
LCH*Ma: 91 89 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

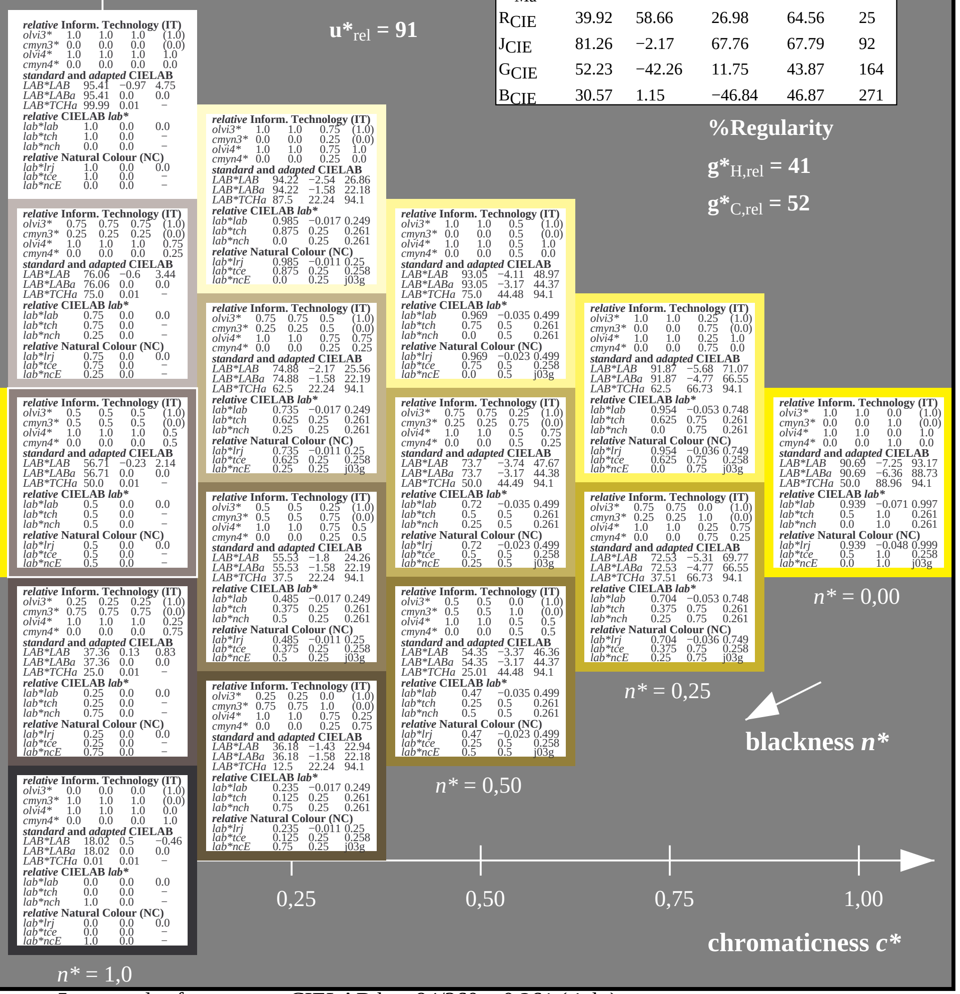
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



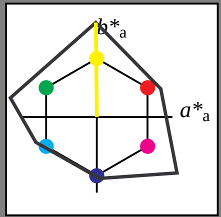
UE500−7, 5 step scales for constant CIELAB hue 91/360 = 0.252 (left)

5 step scales for constant CIELAB hue 94/360 = 0.261 (right)

Input: Colorimetric Reflective System NCS11
for hue *h** = *lab*h* = *91/360 = 0.252*
*lab*tch* and *lab*nch*

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness *t*



%Gamut

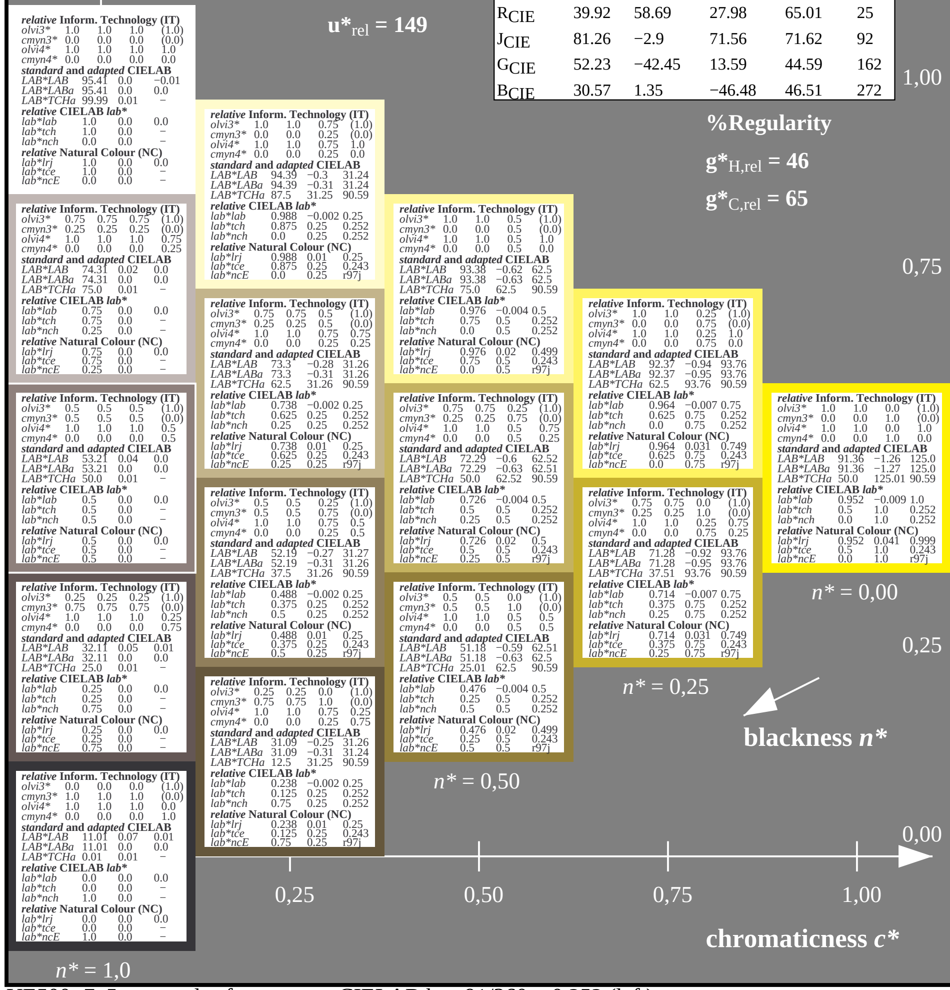
u*rel = 149

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

g*H,rel = 46

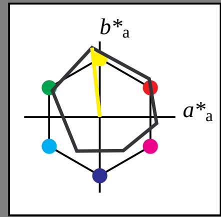
g*C,rel = 65



Output: Colorimetric Reflective System TRS18
for hue *h** = *lab*h* = *96/360 = 0.268*
*lab*tch* and *lab*nch*

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness *t*



%Gamut

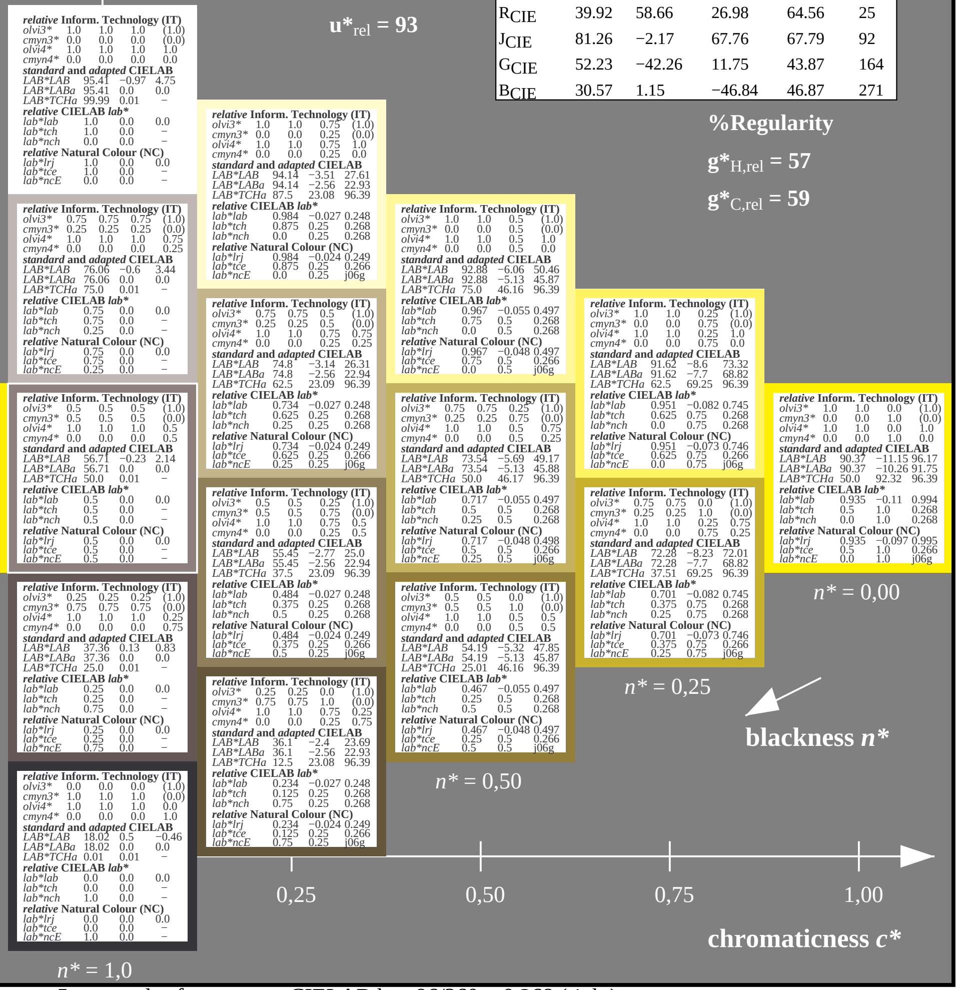
u*rel = 93

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

g*H,rel = 57

g*C,rel = 59



UE500−7, 5 step scales for constant CIELAB hue 91/360 = 0.252 (left)

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

Input: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 91/360 = 0.252$

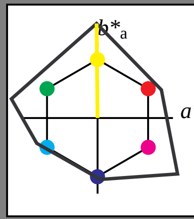
lab*tch and lab*nch

D65: hue J

LCH*Ma: 91 125 91

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 149

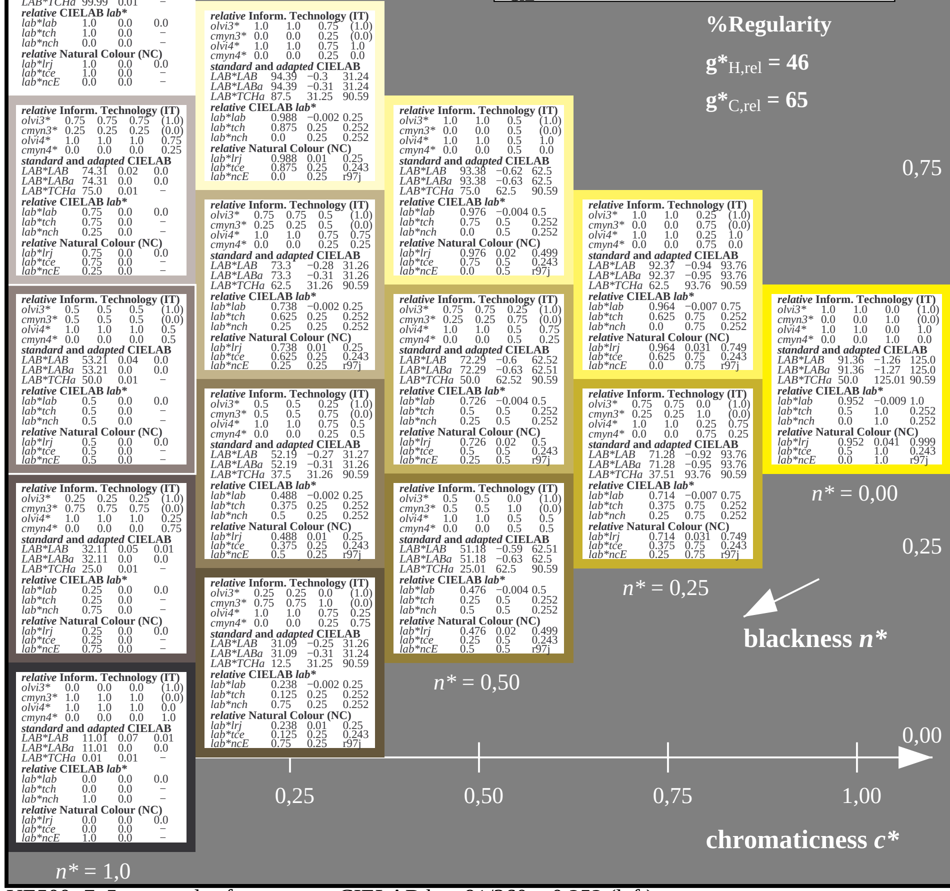
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System MRS18a

for hue $h^* = lab^*h = 94/360 = 0.262$

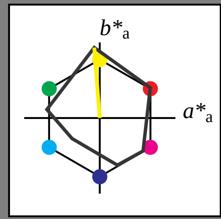
lab*tch and lab*nch

D65: hue J

LCH*Ma: 91 93 94

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 92

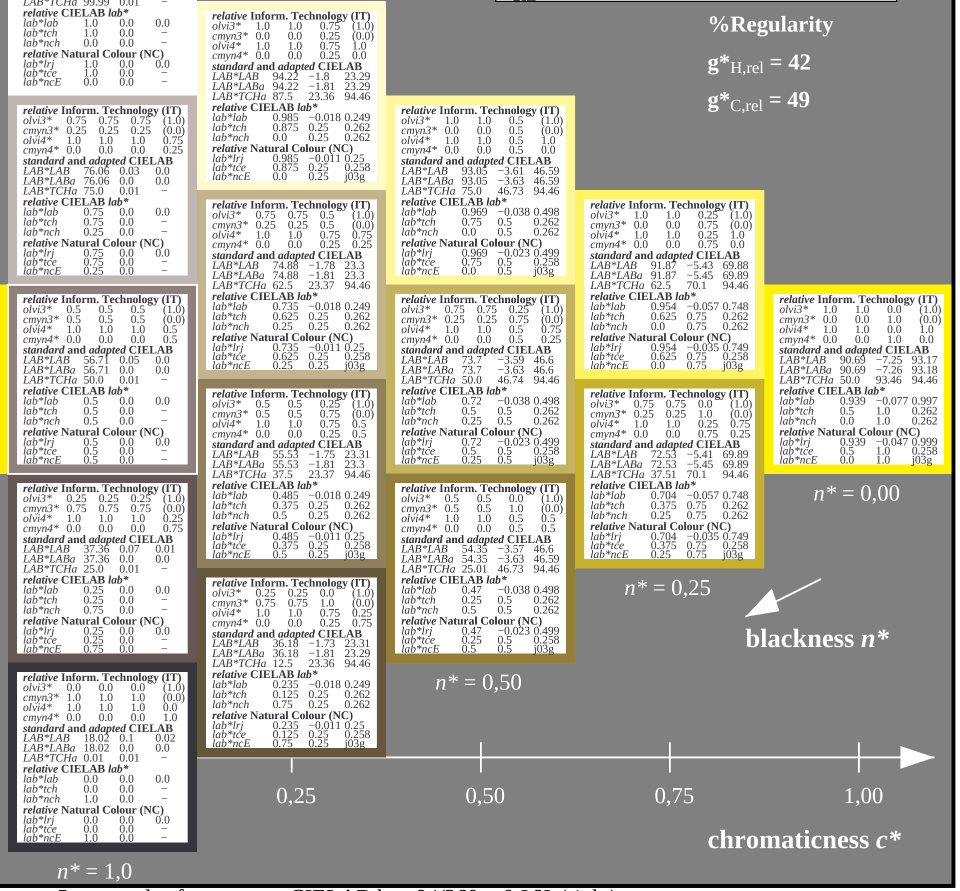
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



UE500−7, 5 step scales for constant CIELAB hue 91/360 = 0.252 (left)

5 step scales for constant CIELAB hue 94/360 = 0.262 (right)

Input: Colorimetric Reflective System NCS11

for hue *h = *lab*h* = 91/360 = 0.252**

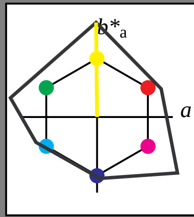
lab*tch* and *lab*nch

D65: hue J

LCH*Ma: 91 125 91

rgb*Ma: 1.0 1.0 0.0

triangle lightness *t**



%Gamut

u^*_{rel} = 149

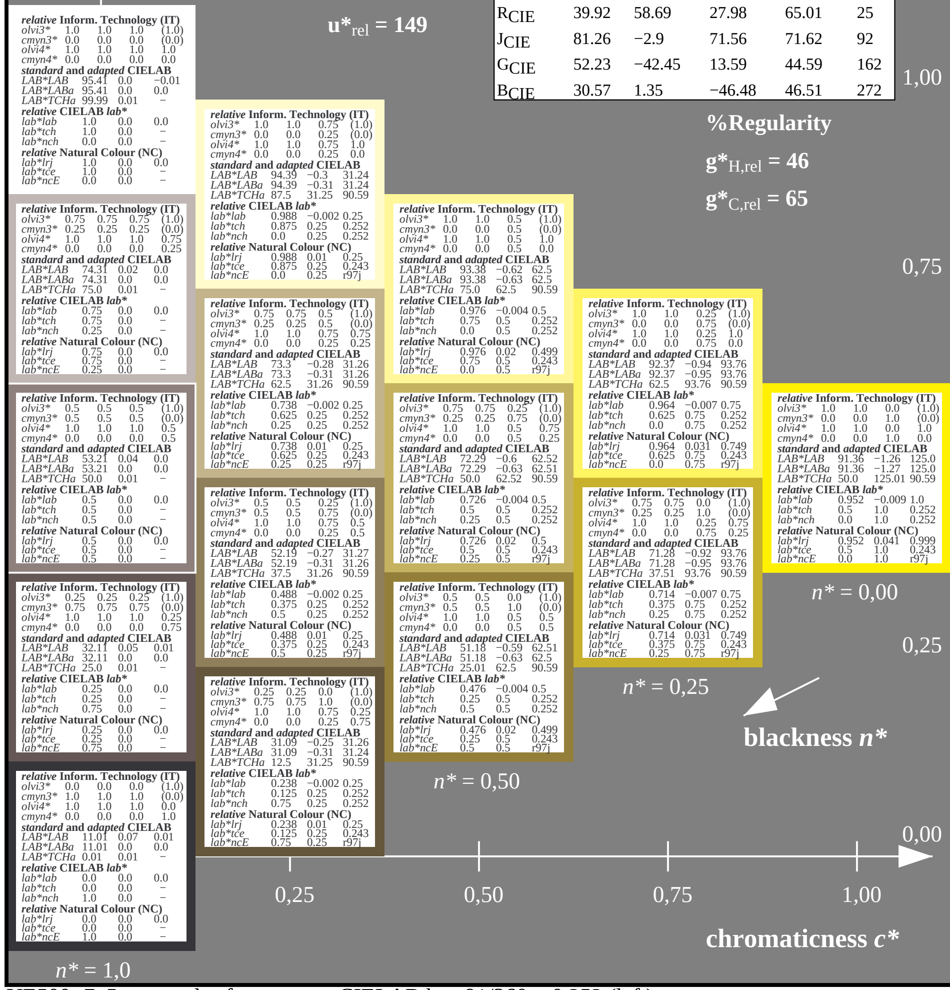
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NRS18

for hue *h = *lab*h* = 91/360 = 0.253**

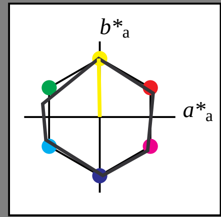
lab*tch* and *lab*nch

D65: hue J

LCH*Ma: 57 77 91

rgb*Ma: 1.0 1.0 0.0

triangle lightness *t**



%Gamut

u^*_{rel} = 100

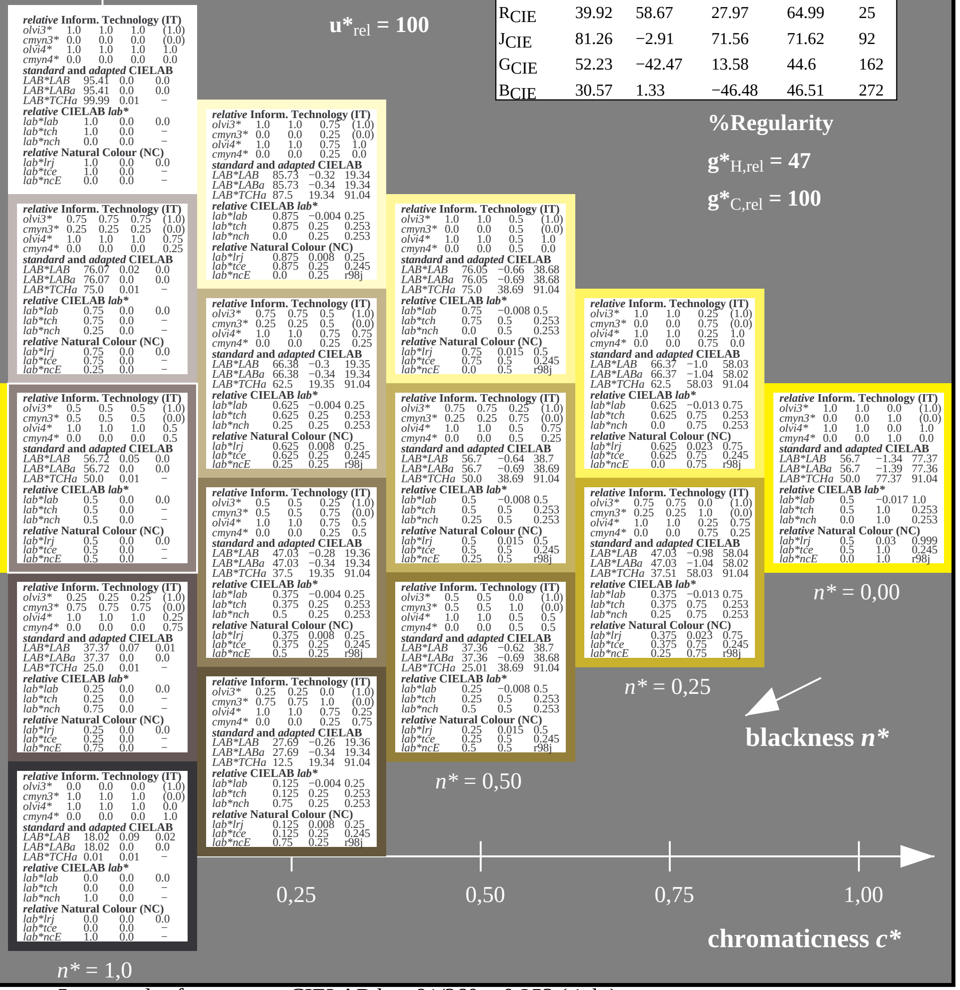
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



UE500−7, 5 step scales for constant CIELAB hue 91/360 = 0.252 (left)

5 step scales for constant CIELAB hue 91/360 = 0.253 (right)

Input: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 91/360 = 0.252$

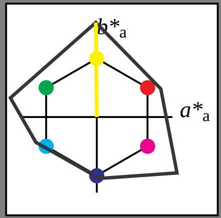
*lab*tch and lab*nch*

D65: hue J

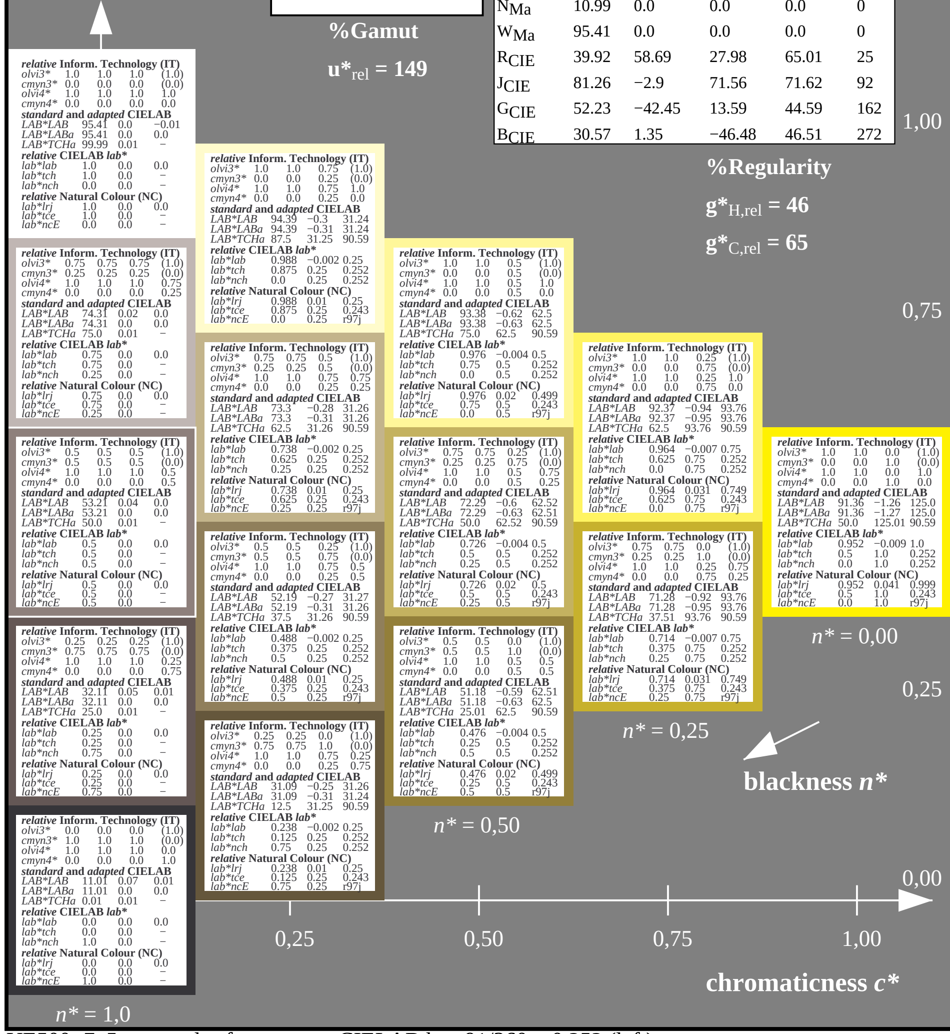
LCH*Ma: 91 125 91

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272



Output: Colorimetric Reflective System NCS18

for hue $h^* = lab^*h = 91/360 = 0.252$

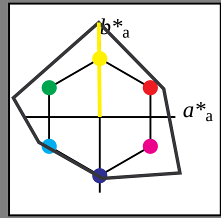
*lab*tch and lab*nch*

D65: hue J

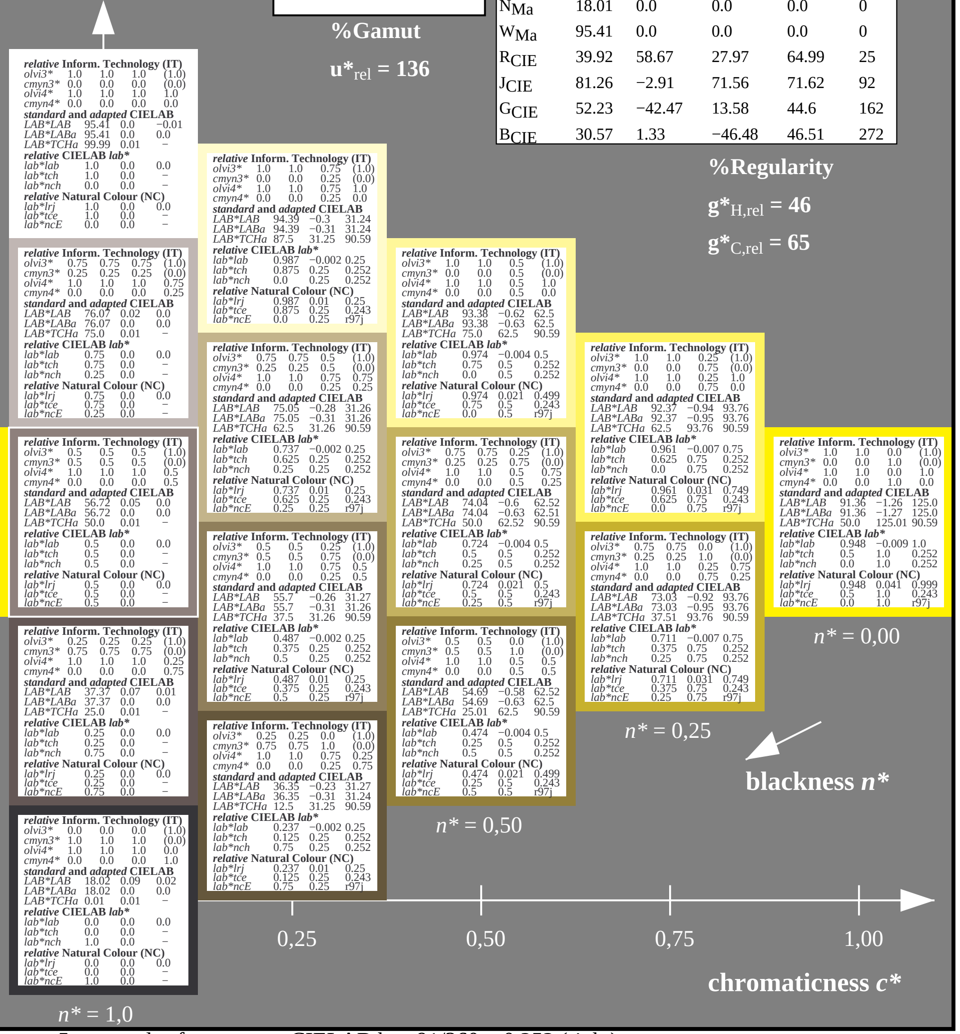
LCH*Ma: 91 125 91

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272



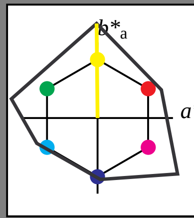
UE500−7, 5 step scales for constant CIELAB hue 91/360 = 0.252 (left)

5 step scales for constant CIELAB hue 91/360 = 0.252 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

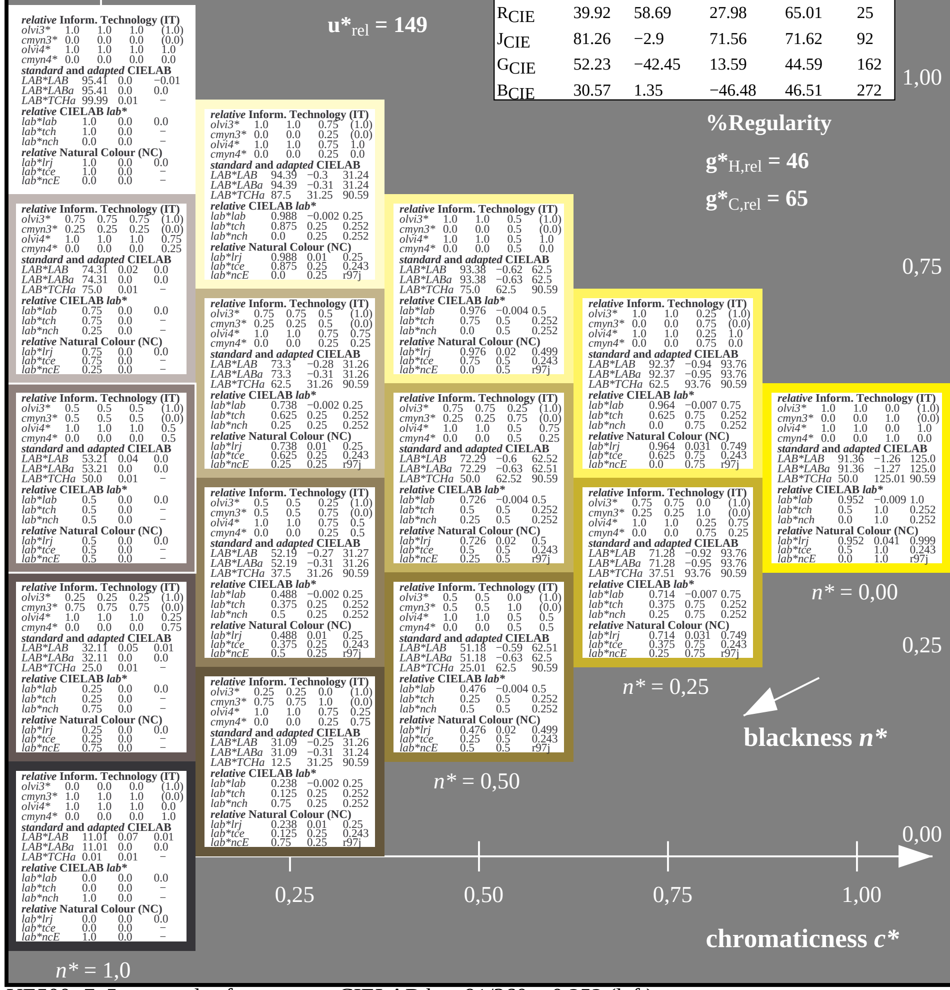
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

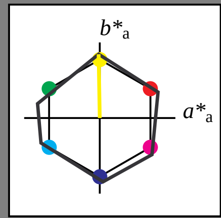
$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 84 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

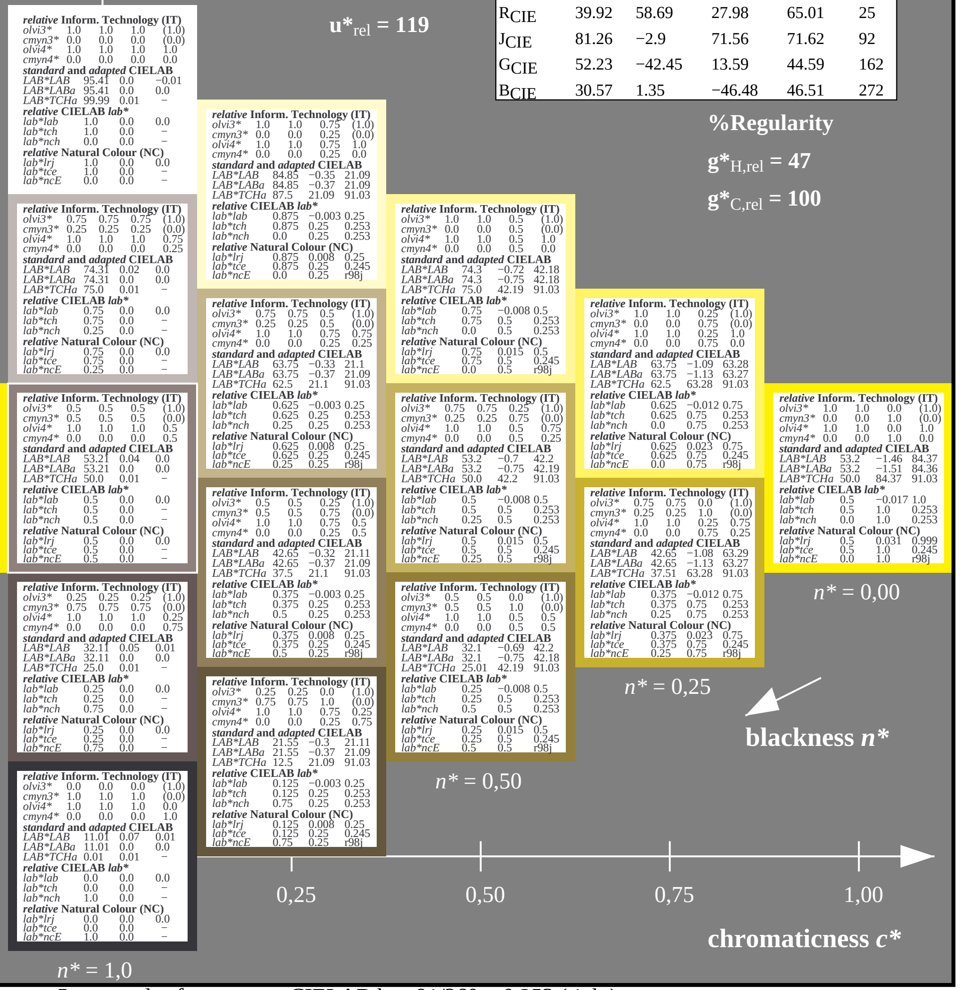
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

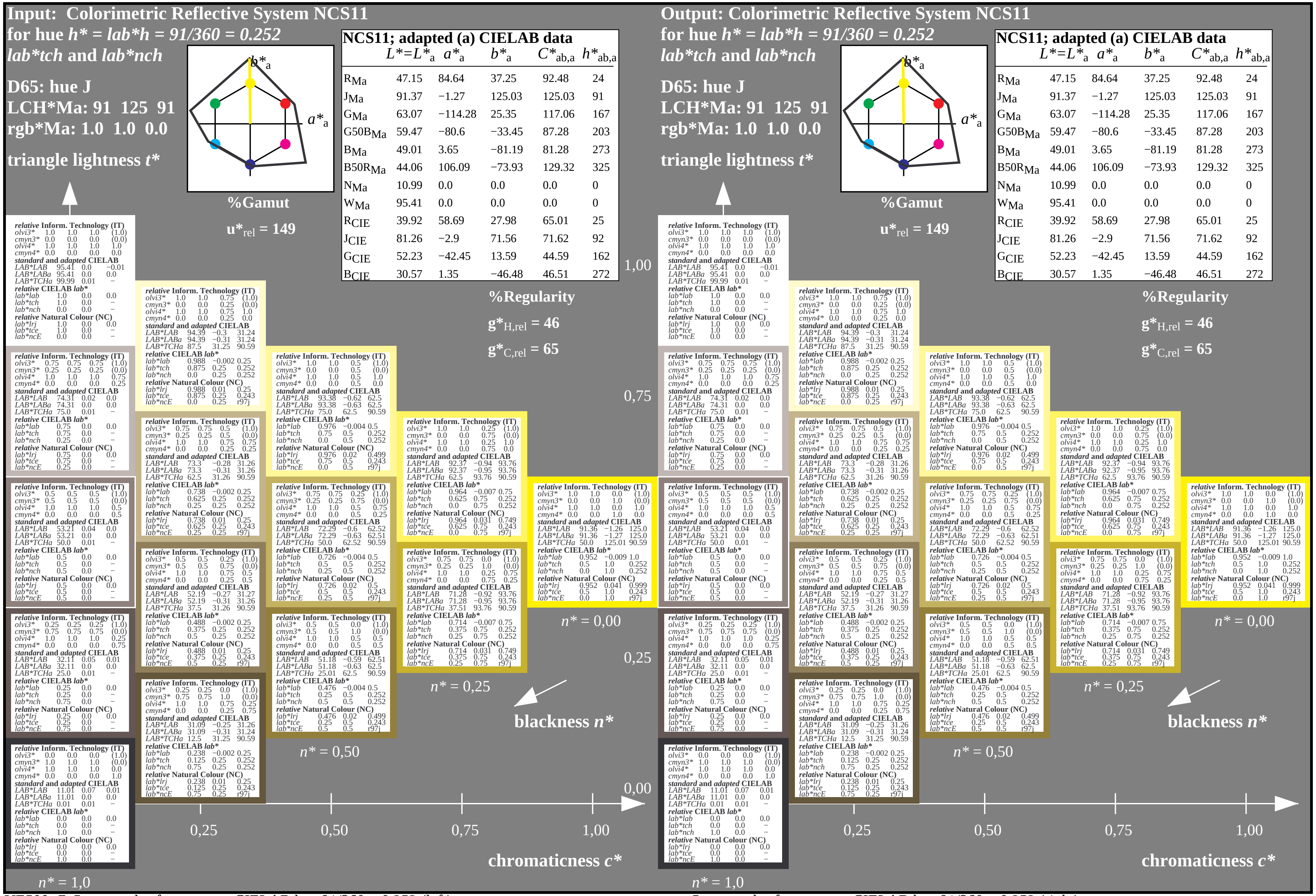
$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



UE500−7, 5 step scales for constant CIELAB hue 91/360 = 0.252 (left)

5 step scales for constant CIELAB hue 91/360 = 0.253 (right)



NCS11; adapted (a) CIELAB data

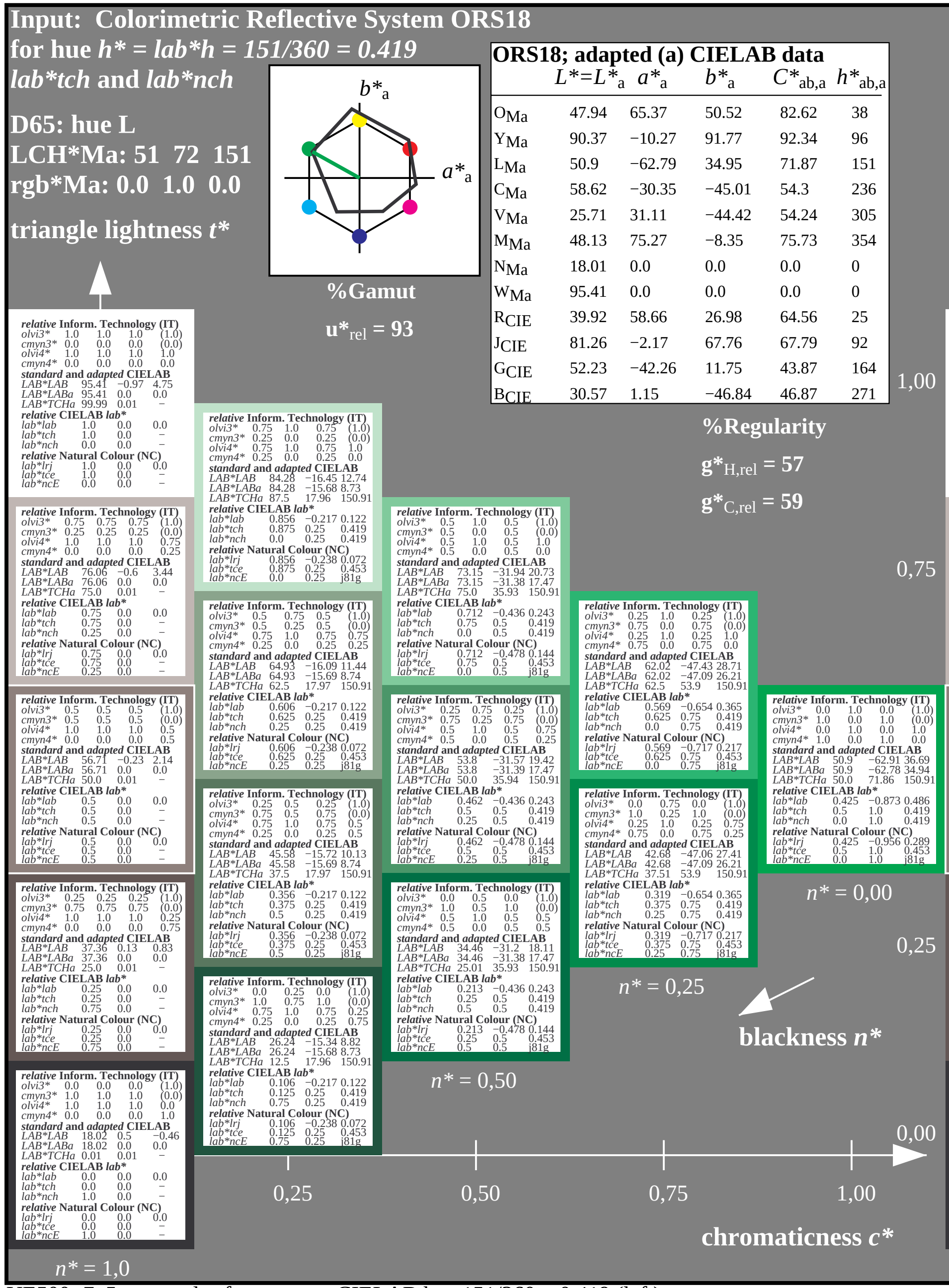
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

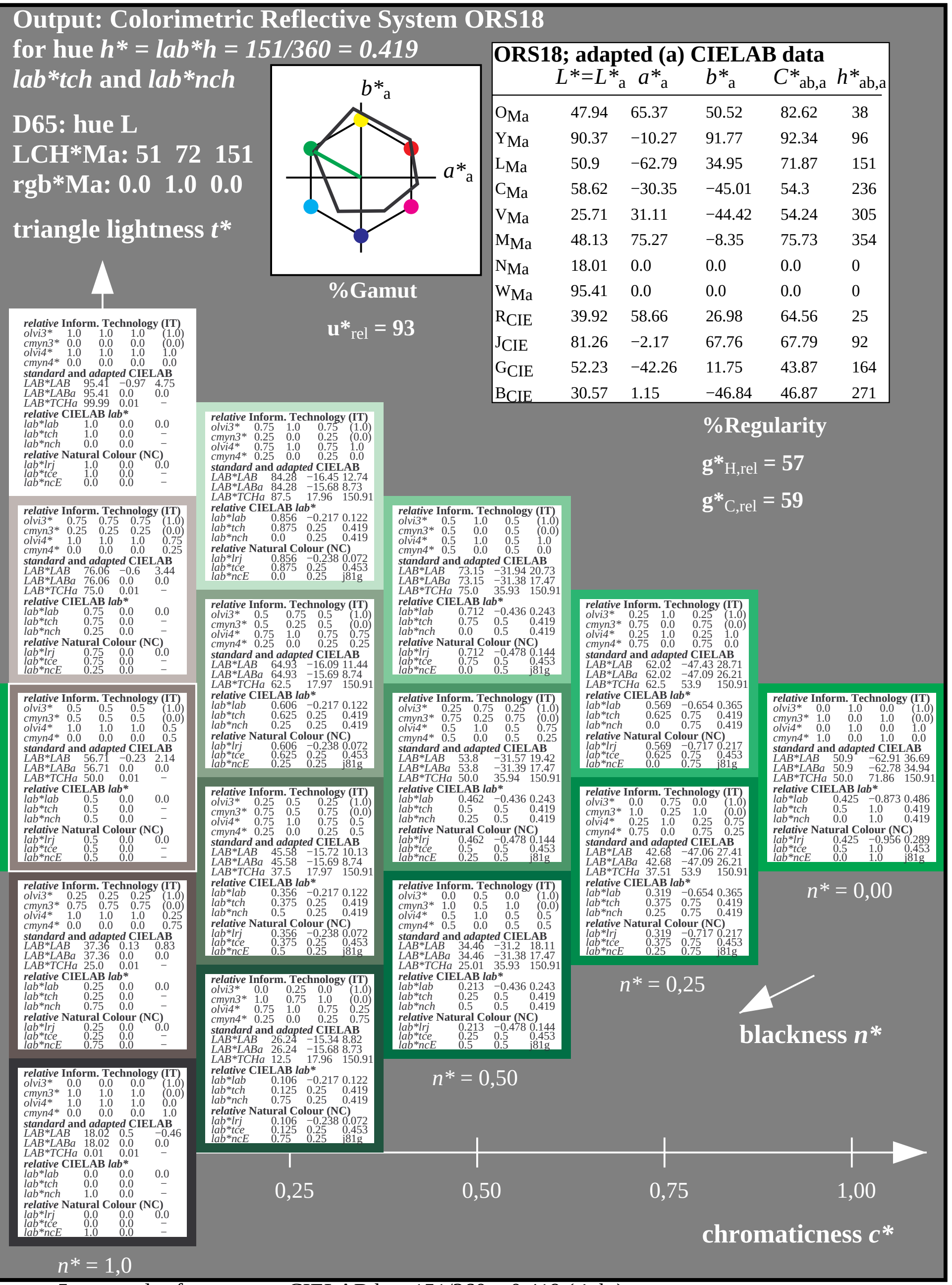
UE500−7, 5 step scales for constant CIELAB hue 91/360 = 0.252 (left)

5 step scales for constant CIELAB hue 91/360 = 0.252 (right)



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

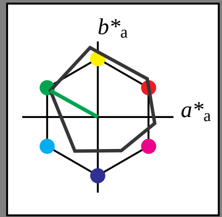


UE500−7, 5 step scales for constant CIELAB hue 151/360 = 0.419 (left)

5 step scales for constant CIELAB hue 151/360 = 0.419 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 151/360 = 0.419$
*lab*tch* and *lab*nch*

D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 93$

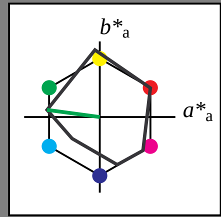
ORS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$

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

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 172/360 = 0.479$
*lab*tch* and *lab*nch*

D65: hue G
LCH*Ma: 52 70 172
rgb*Ma: 0.0 1.0 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 41$
$g^*_{C,rel} = 52$

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

UE500−7, 5 step scales for constant CIELAB hue 151/360 = 0.419 (left)
5 step scales for constant CIELAB hue 172/360 = 0.479 (right)

Input: Colorimetric Reflective System ORS18

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

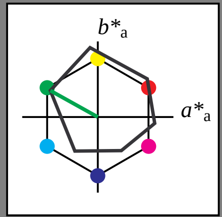
*lab*tch* and *lab*nch*

D65: hue L

LCH*Ma: 51 72 151

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

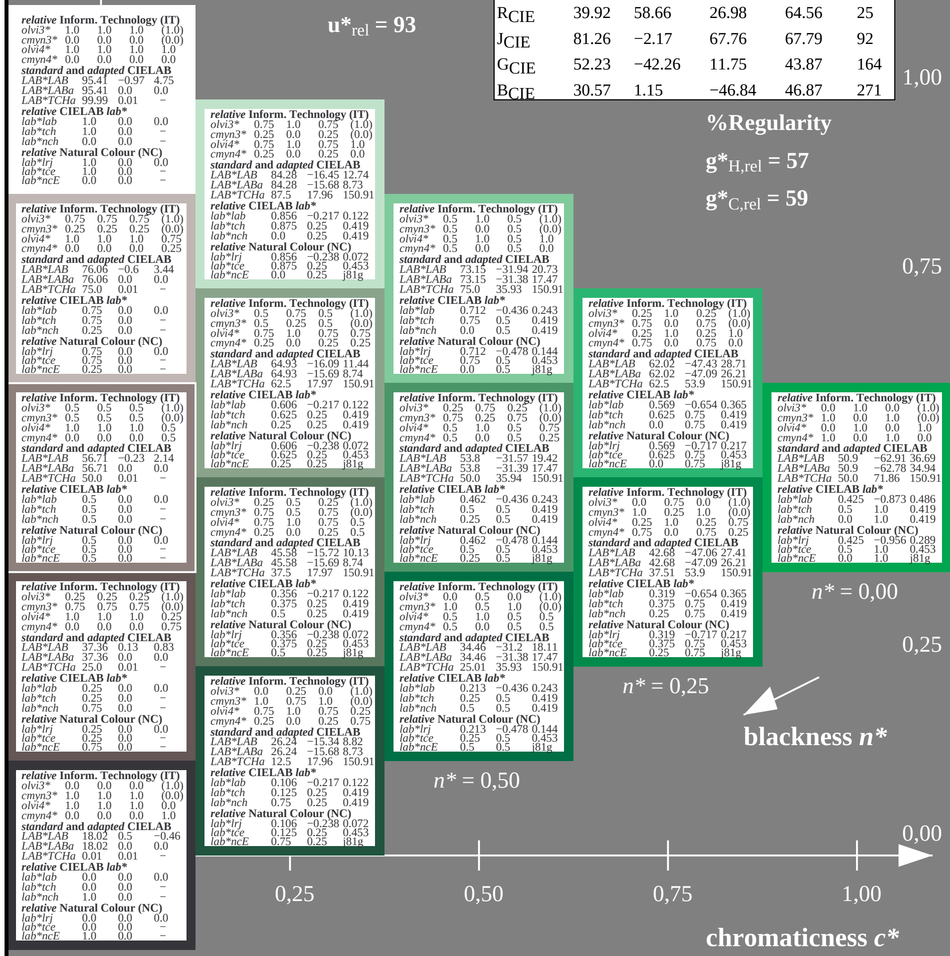
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



Output: Colorimetric Reflective System TRS18

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

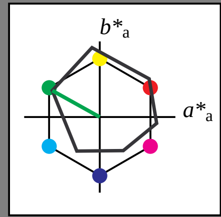
*lab*tch* and *lab*nch*

D65: hue L

LCH*Ma: 51 72 151

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

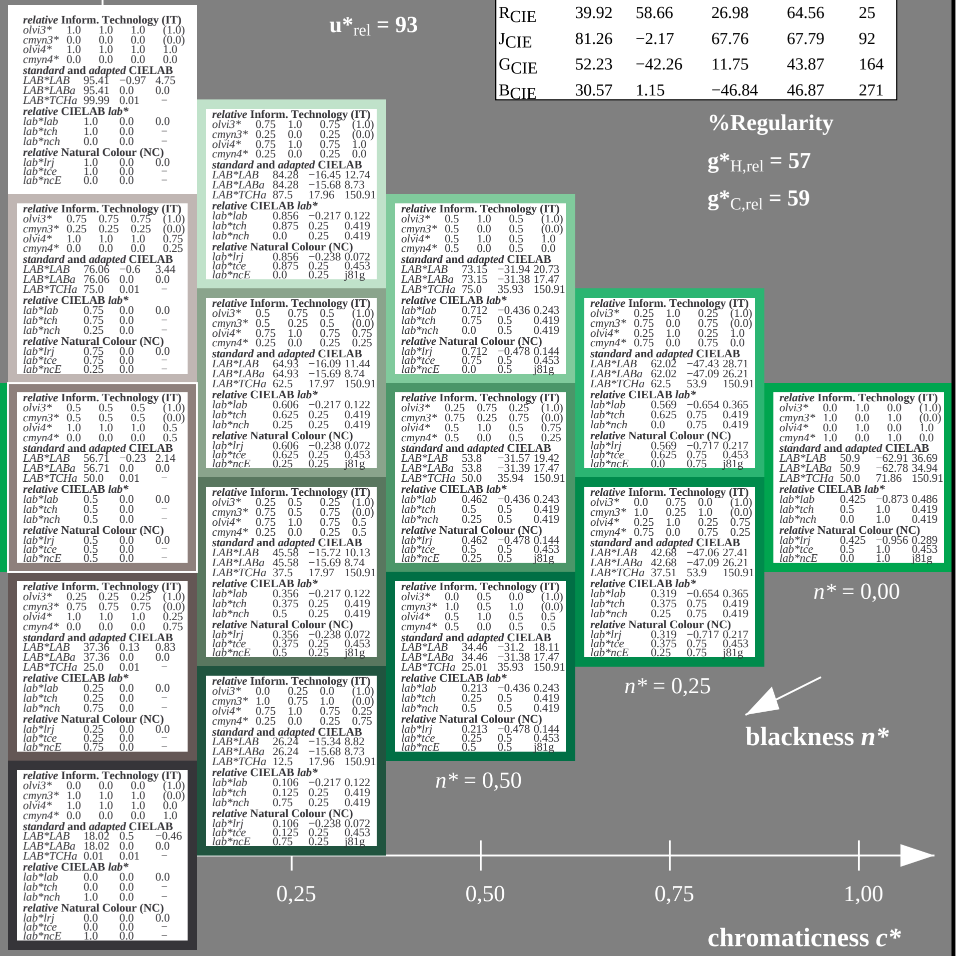
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



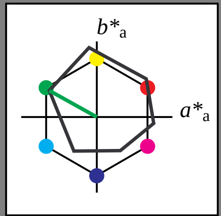
UE500−7, 5 step scales for constant CIELAB hue 151/360 = 0.419 (left)

5 step scales for constant CIELAB hue 151/360 = 0.419 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 151/360 = 0.419$
lab*tch and lab*nch

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

triangle lightness t^*

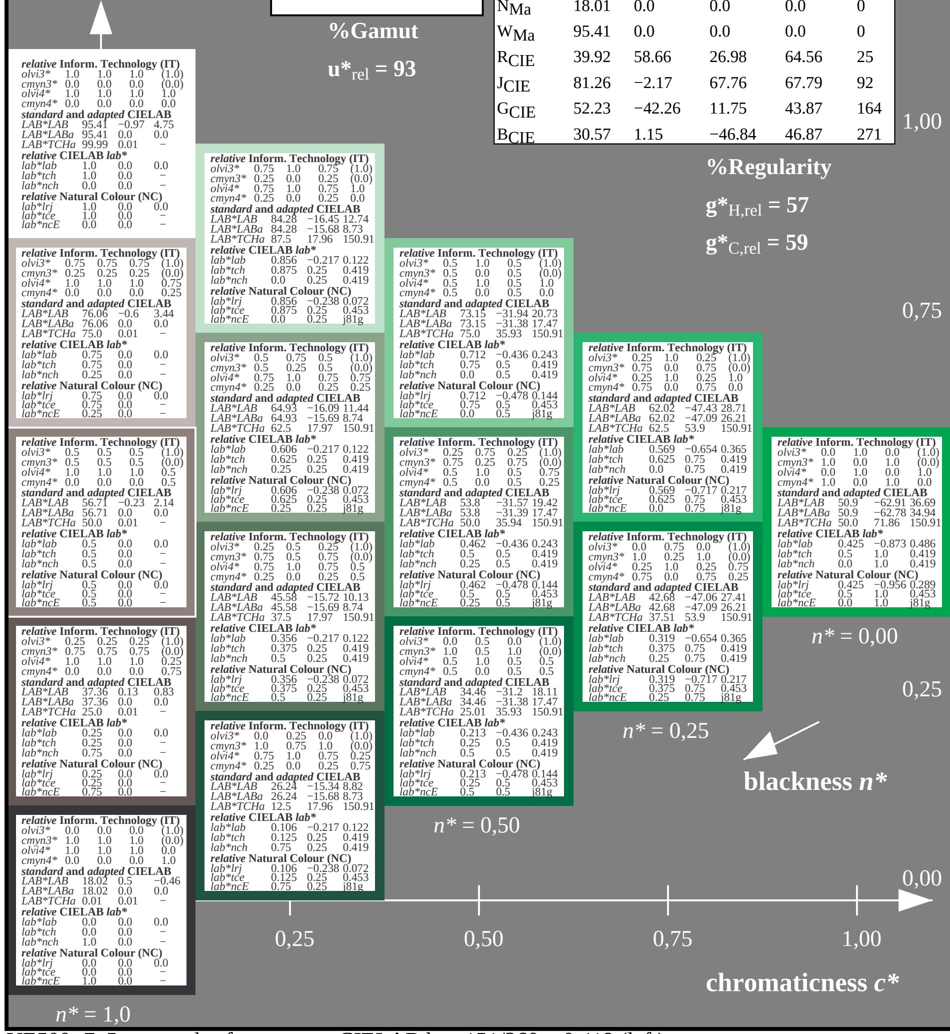


ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut
$u^*_{rel} = 93$

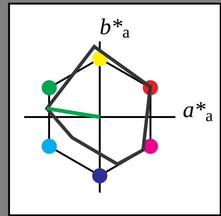
%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 171/360 = 0.475$
lab*tch and lab*nch

D65: hue G
LCH*Ma: 52 71 171
rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*

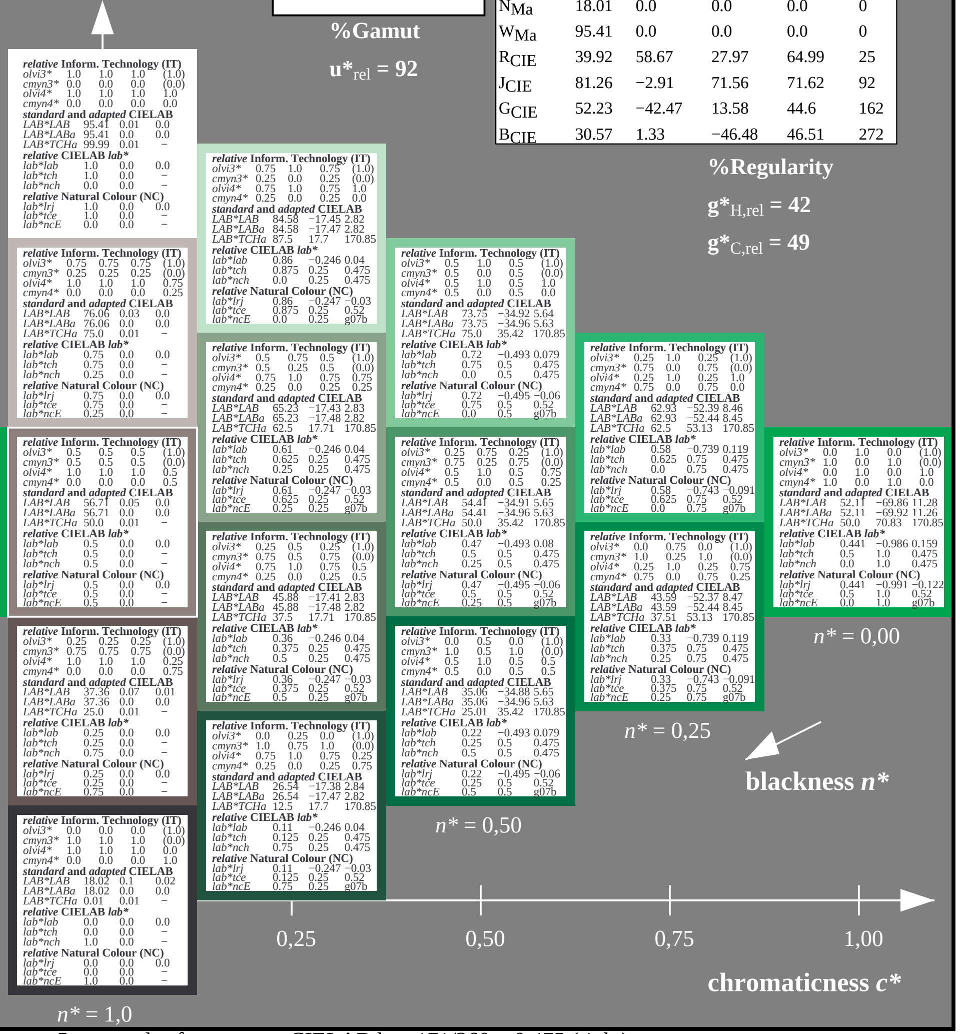


MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut
$u^*_{rel} = 92$

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$

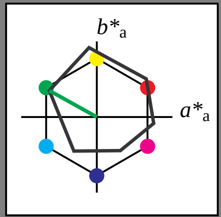


UE500−7, 5 step scales for constant CIELAB hue 151/360 = 0.419 (left)

5 step scales for constant CIELAB hue 171/360 = 0.475 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h$ = 151/360 = 0.419
lab*tch* and *lab*nch

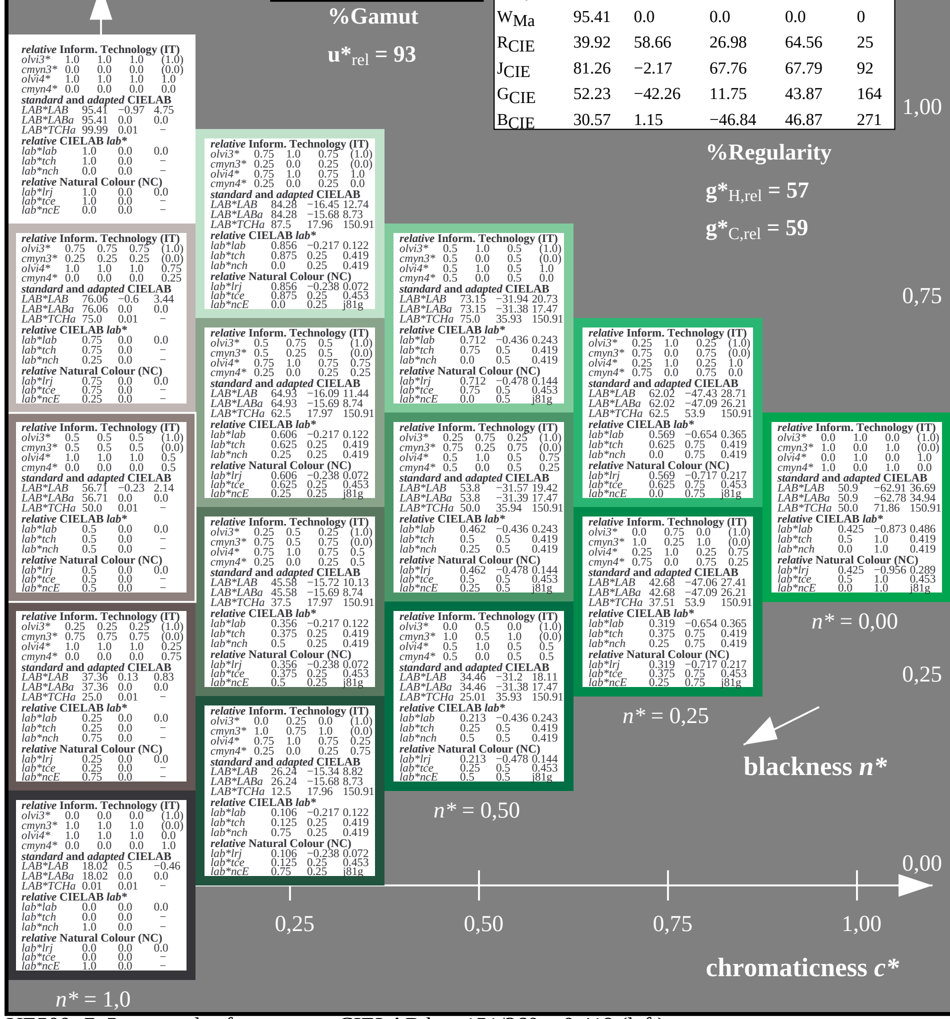
D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0
triangle lightness t^*



%Gamut
u^*_{rel} = 93

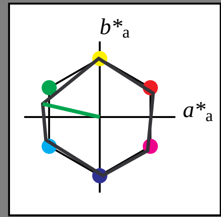
ORS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel}$ = 57
$g^*_{C,rel}$ = 59



Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h$ = 167/360 = 0.464
lab*tch* and *lab*nch

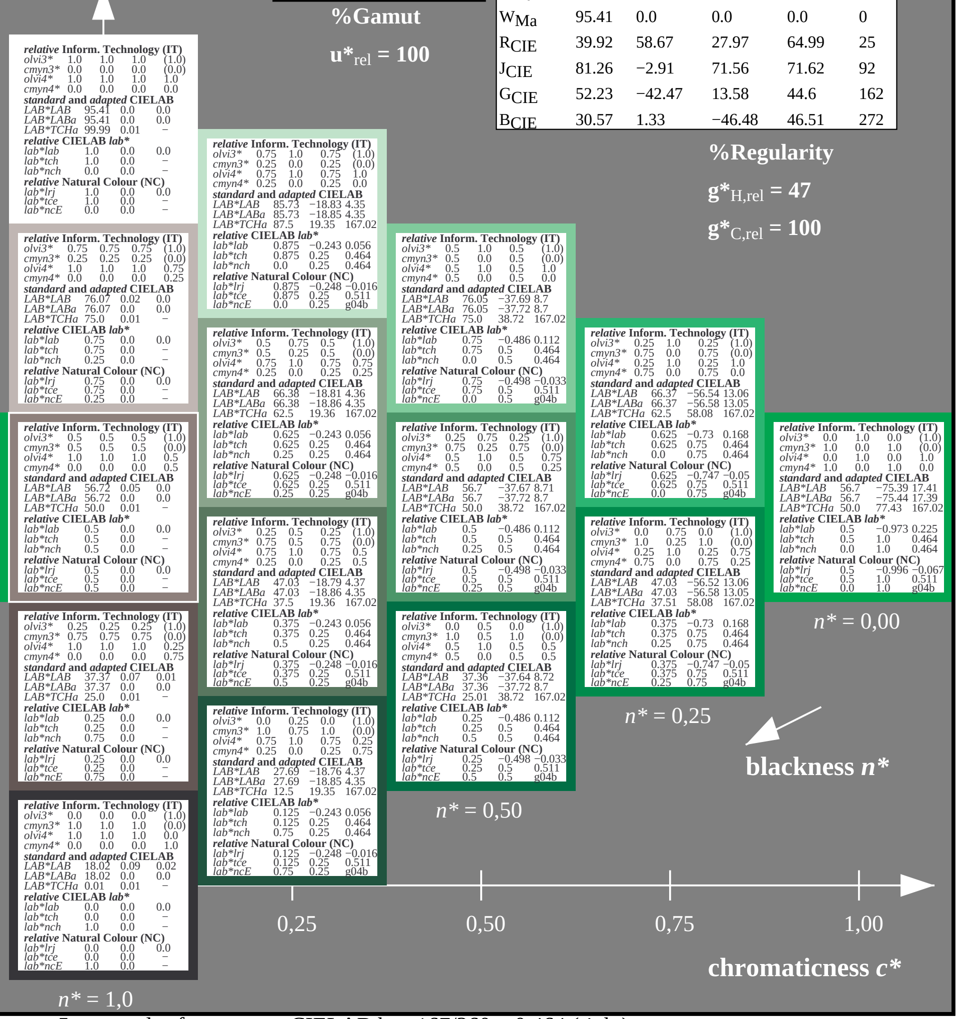
D65: hue G
LCH*Ma: 57 77 167
rgb*Ma: 0.0 1.0 0.0
triangle lightness t^*



%Gamut
u^*_{rel} = 100

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

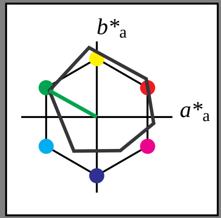
%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100



UE500−7, 5 step scales for constant CIELAB hue 151/360 = 0.419 (left)

5 step scales for constant CIELAB hue 167/360 = 0.464 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 151/360 = 0.419$
*lab*tch and lab*nch*



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

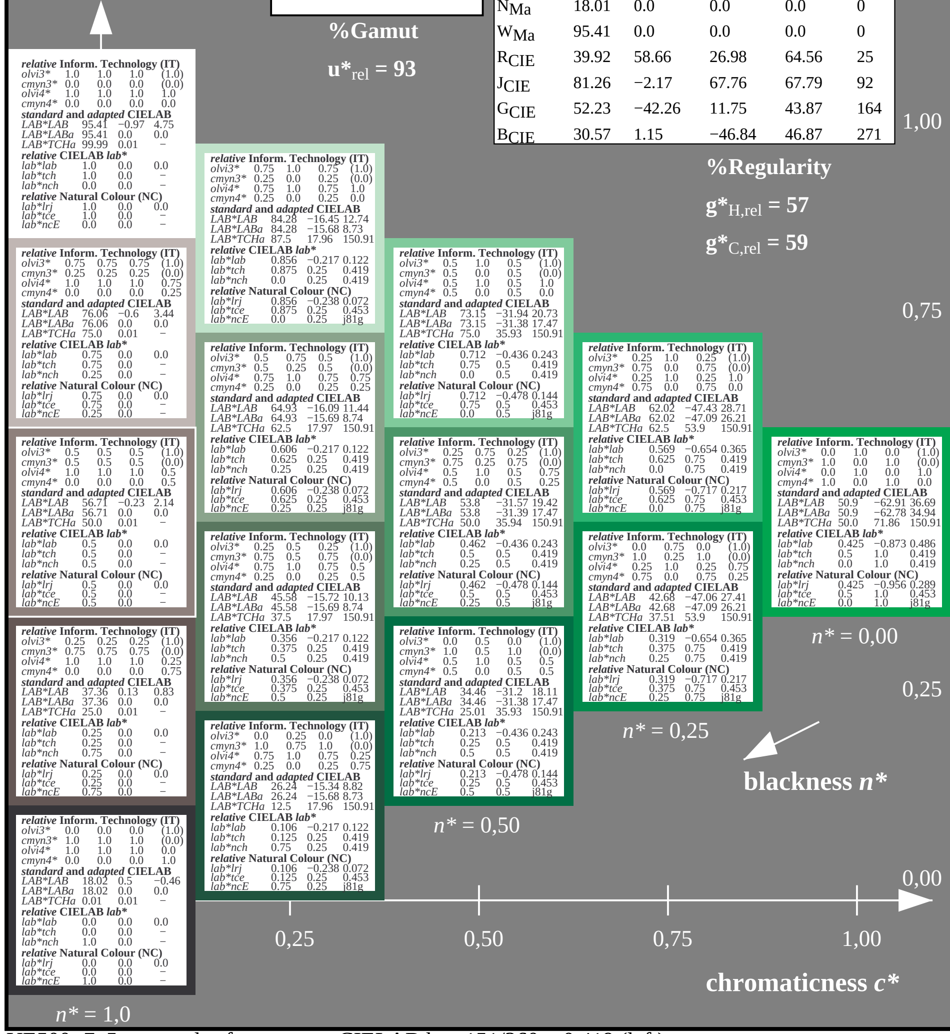
triangle lightness t^*

%Gamut
$u^*_{rel} = 93$

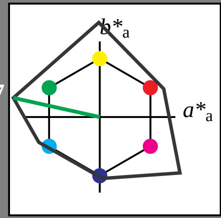
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 167/360 = 0.465$
*lab*tch and lab*nch*



D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0

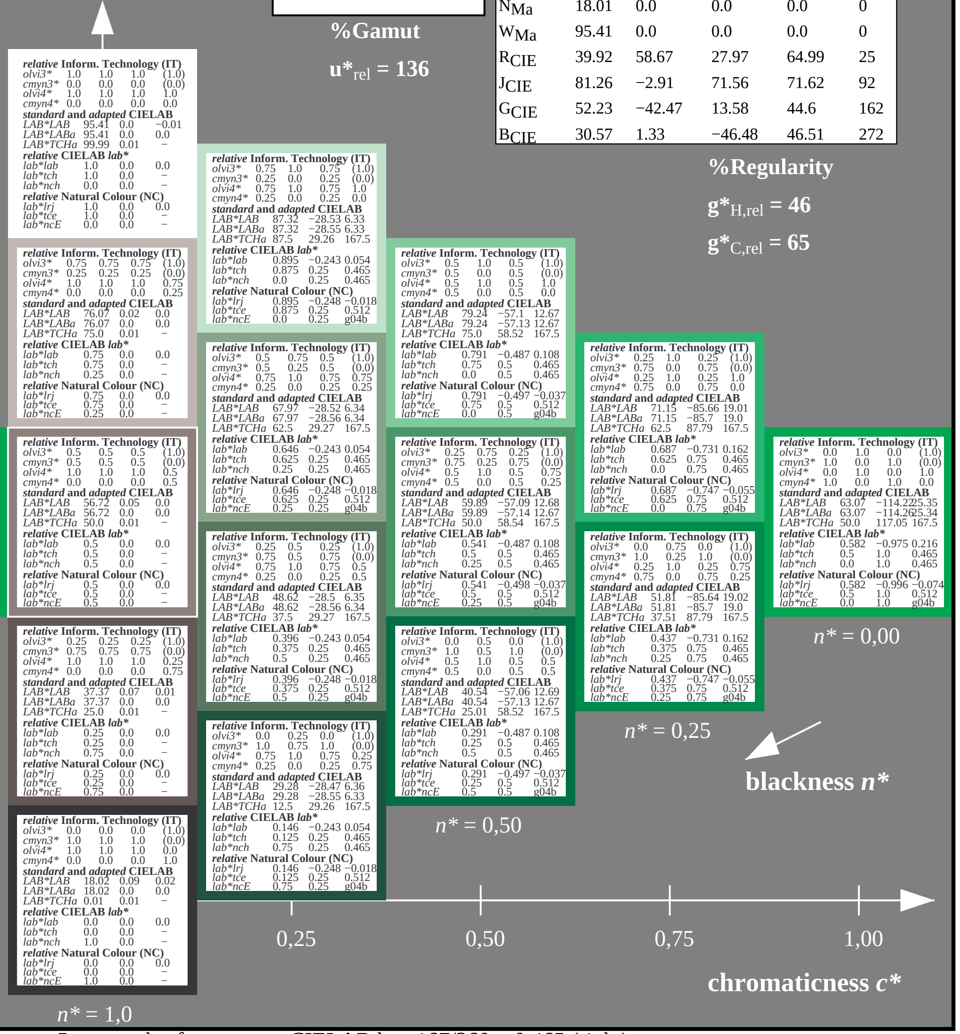
triangle lightness t^*

%Gamut
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

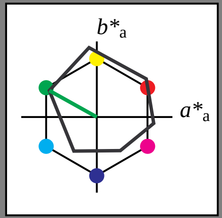
%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



UE500−7, 5 step scales for constant CIELAB hue 151/360 = 0.419 (left) 5 step scales for constant CIELAB hue 167/360 = 0.465 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 151/360 = 0.419$
lab*tch* and *lab*nch

D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0
triangle lightness t^*

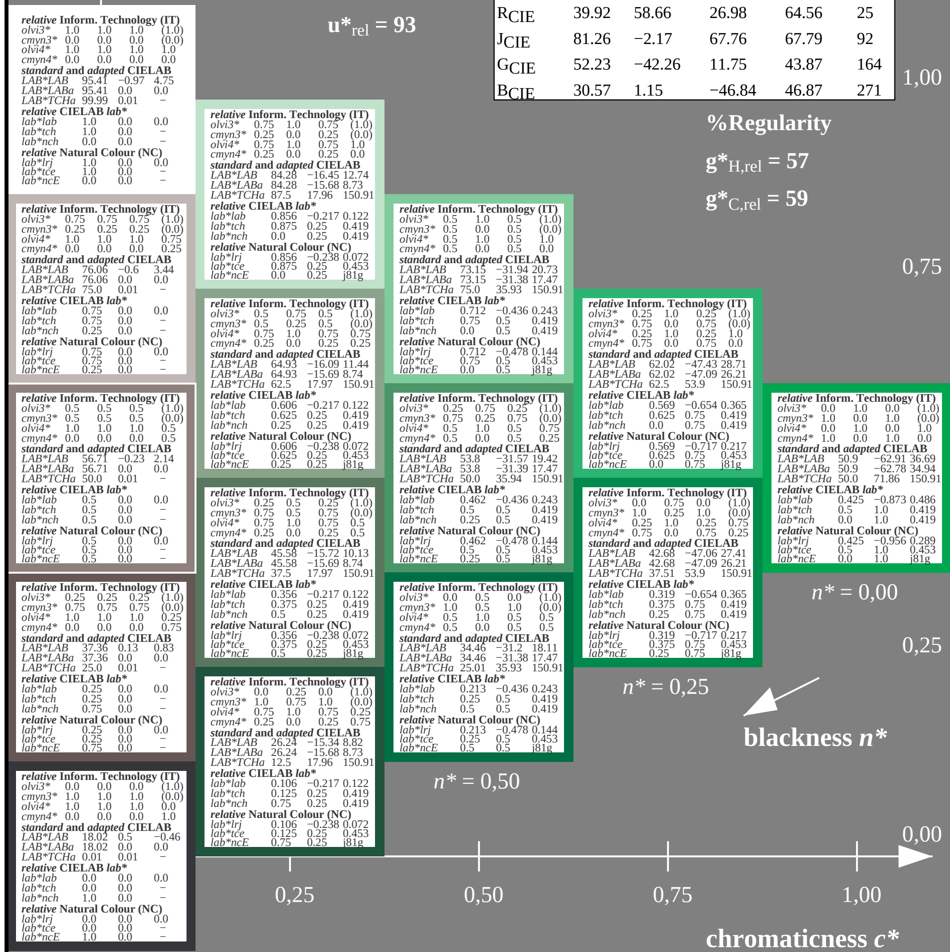


%Gamut
u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

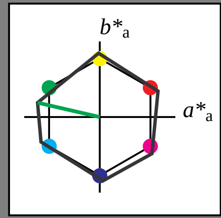
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel}$ = 57
$g^*_{C,rel}$ = 59



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 167/360 = 0.464$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 84 167
rgb*Ma: 0.0 1.0 0.0
triangle lightness t^*

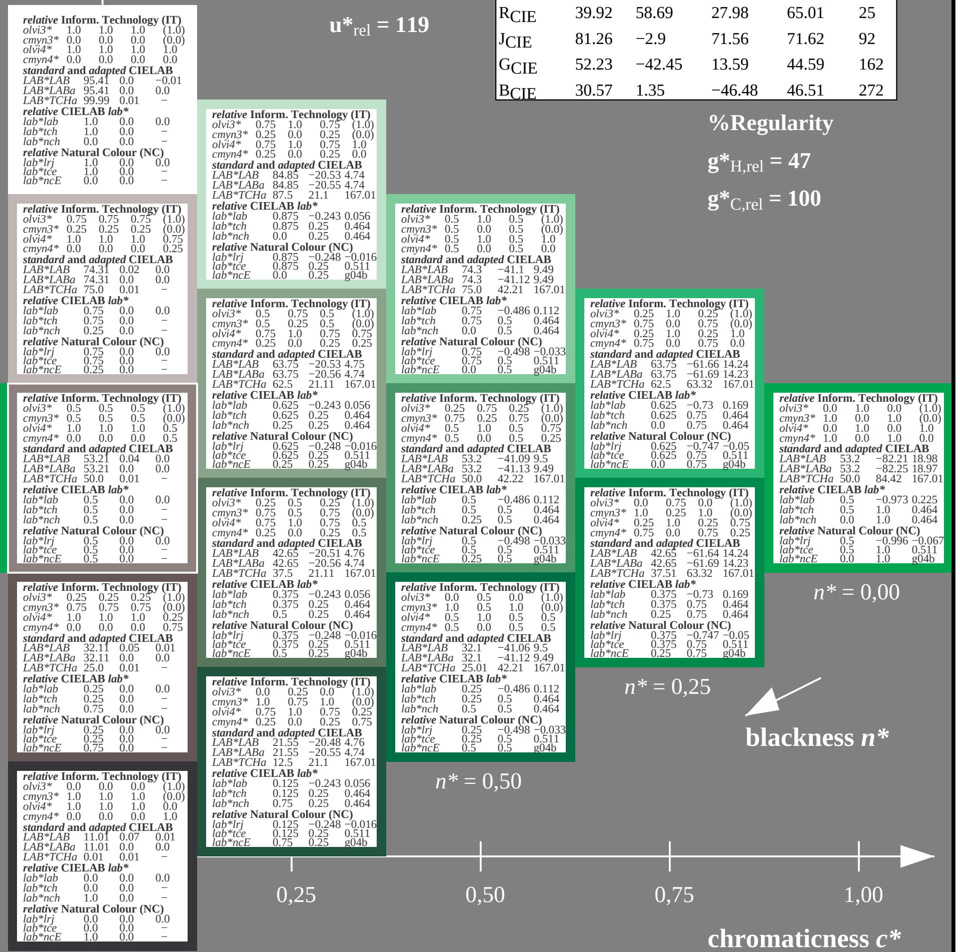


%Gamut
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100



UE500−7, 5 step scales for constant CIELAB hue 151/360 = 0.419 (left)   5 step scales for constant CIELAB hue 167/360 = 0.464 (right)

Input: Colorimetric Reflective System ORS18

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

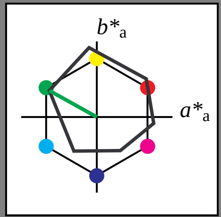
lab*tch* and *lab*nch

D65: hue L

LCH*Ma: 51 72 151

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 93

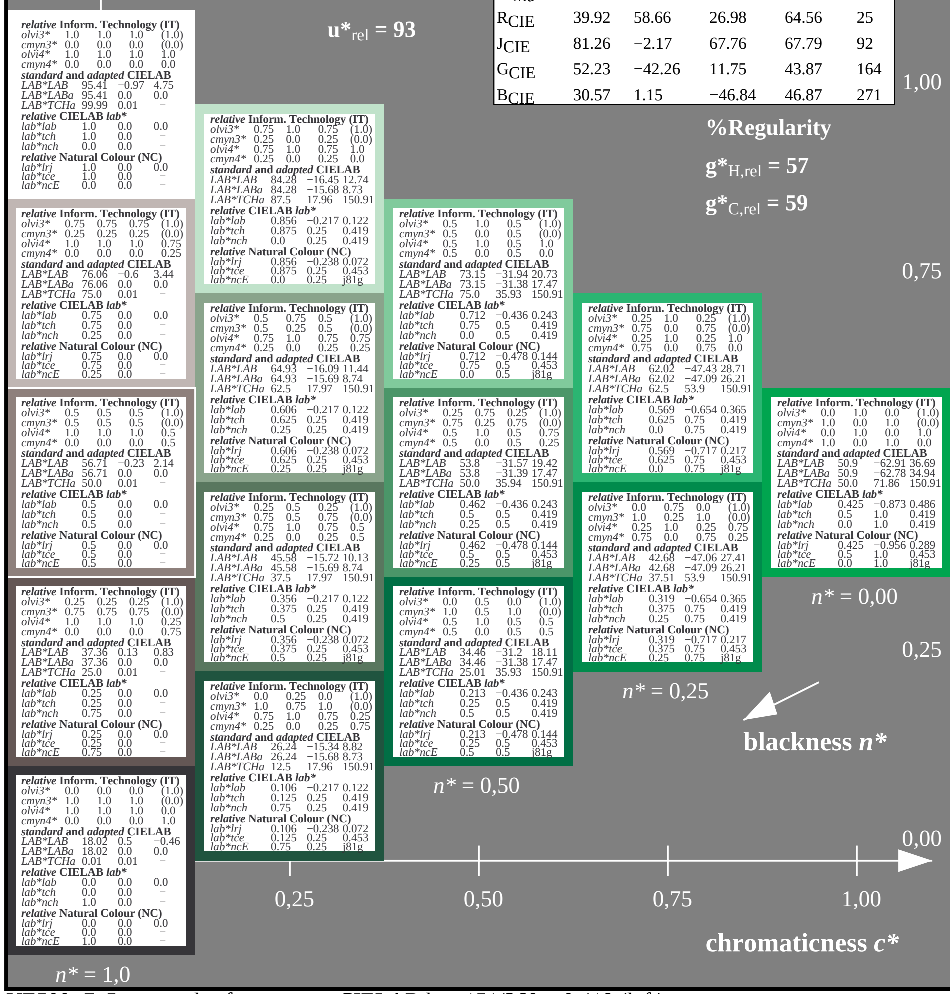
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



Output: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 167/360 = 0.465$

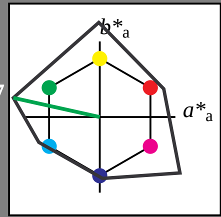
lab*tch* and *lab*nch

D65: hue G

LCH*Ma: 63 117 167

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 149

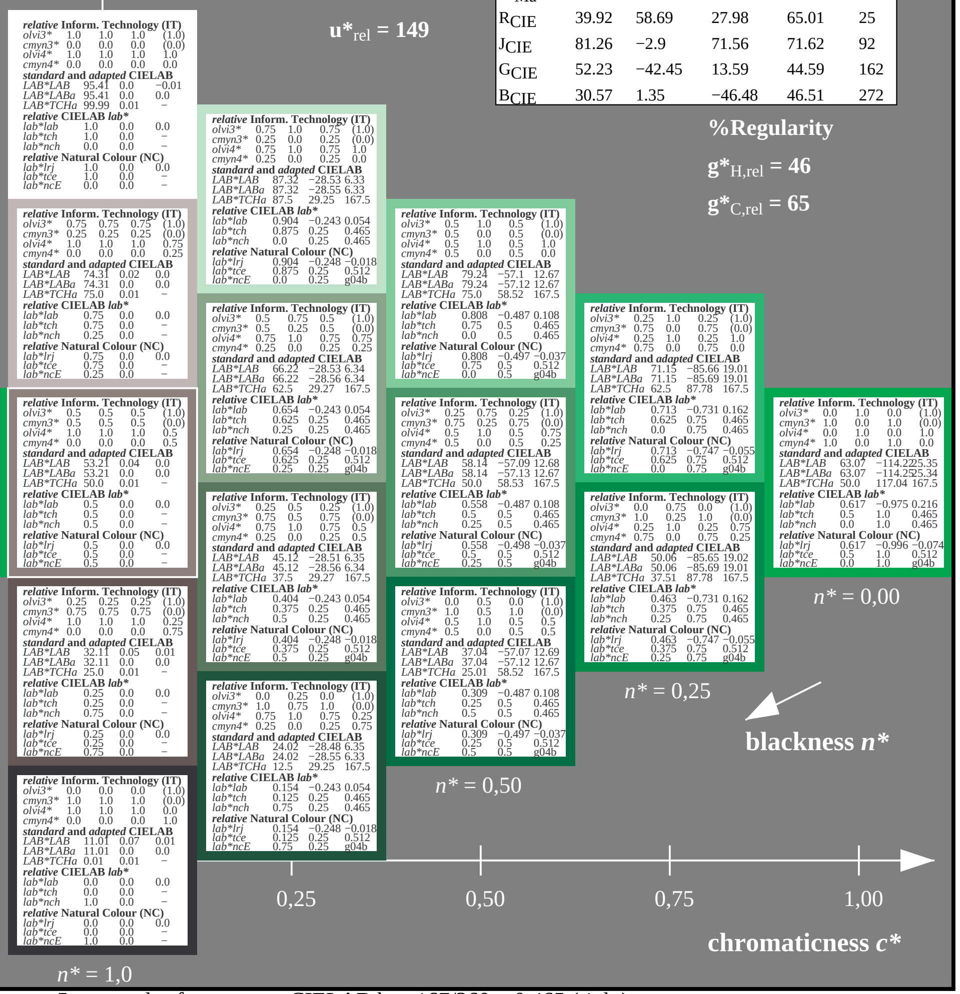
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



UE500−7, 5 step scales for constant CIELAB hue 151/360 = 0.419 (left)

5 step scales for constant CIELAB hue 167/360 = 0.465 (right)

Input: Colorimetric Reflective System MRS18

for hue $h^* = lab^*h = 172/360 = 0.479$

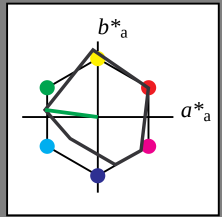
*lab*tch* and *lab*nch*

D65: hue G

LCH*Ma: 52 70 172

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 91$

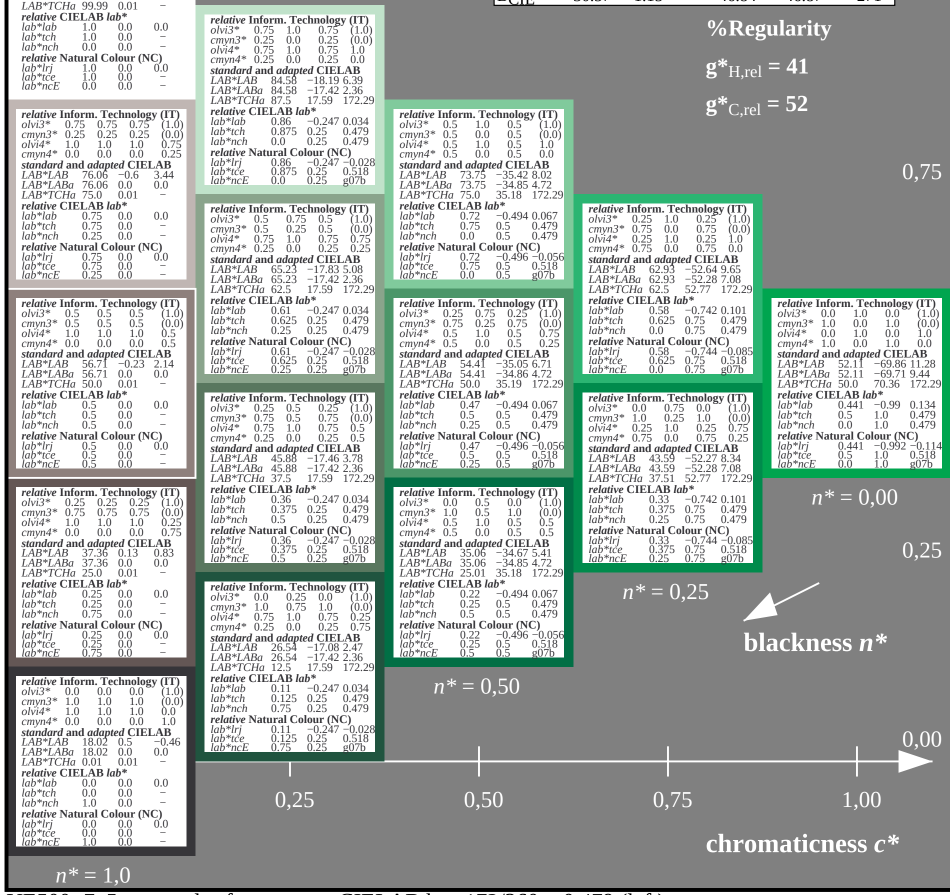
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System ORS18

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

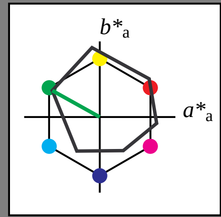
*lab*tch* and *lab*nch*

D65: hue L

LCH*Ma: 51 72 151

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

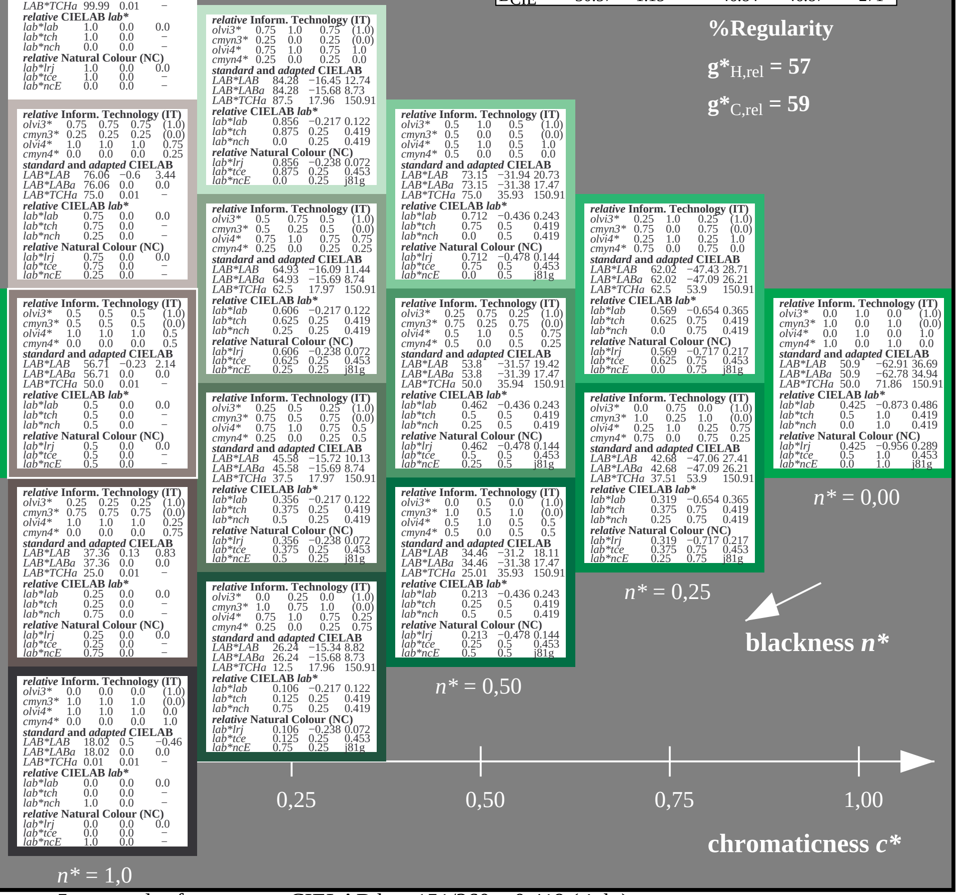
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



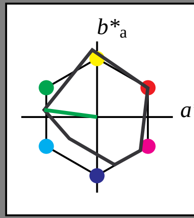
UE500−7, 5 step scales for constant CIELAB hue 172/360 = 0.479 (left)

5 step scales for constant CIELAB hue 151/360 = 0.419 (right)

Input: Colorimetric Reflective System MRS18
for hue *h = *lab*h* = 172/360 = 0.479**
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 70 172
rgb*Ma: 0.0 1.0 0.0

triangle lightness *t**



%Gamut

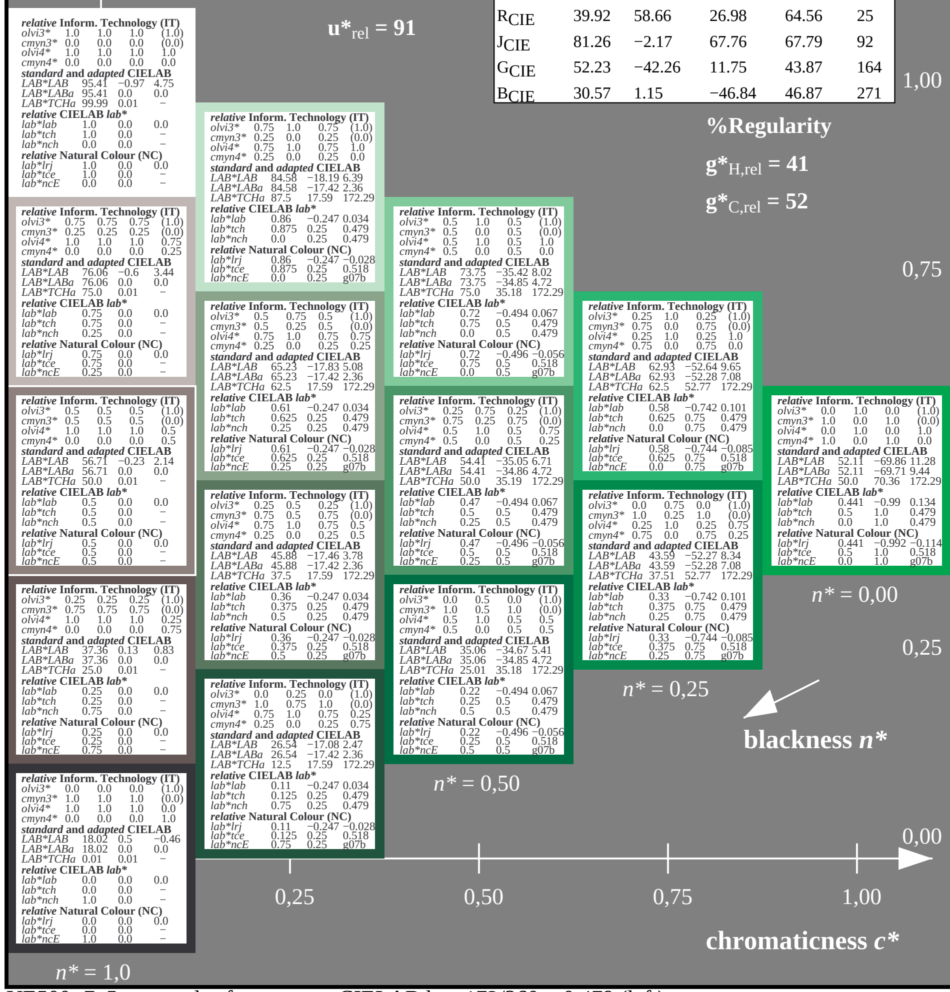
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

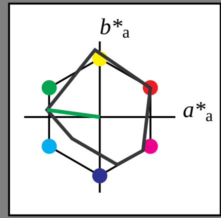
$g^*_{C,rel}$ = 52



Output: Colorimetric Reflective System MRS18
for hue *h = *lab*h* = 172/360 = 0.479**
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 70 172
rgb*Ma: 0.0 1.0 0.0

triangle lightness *t**



%Gamut

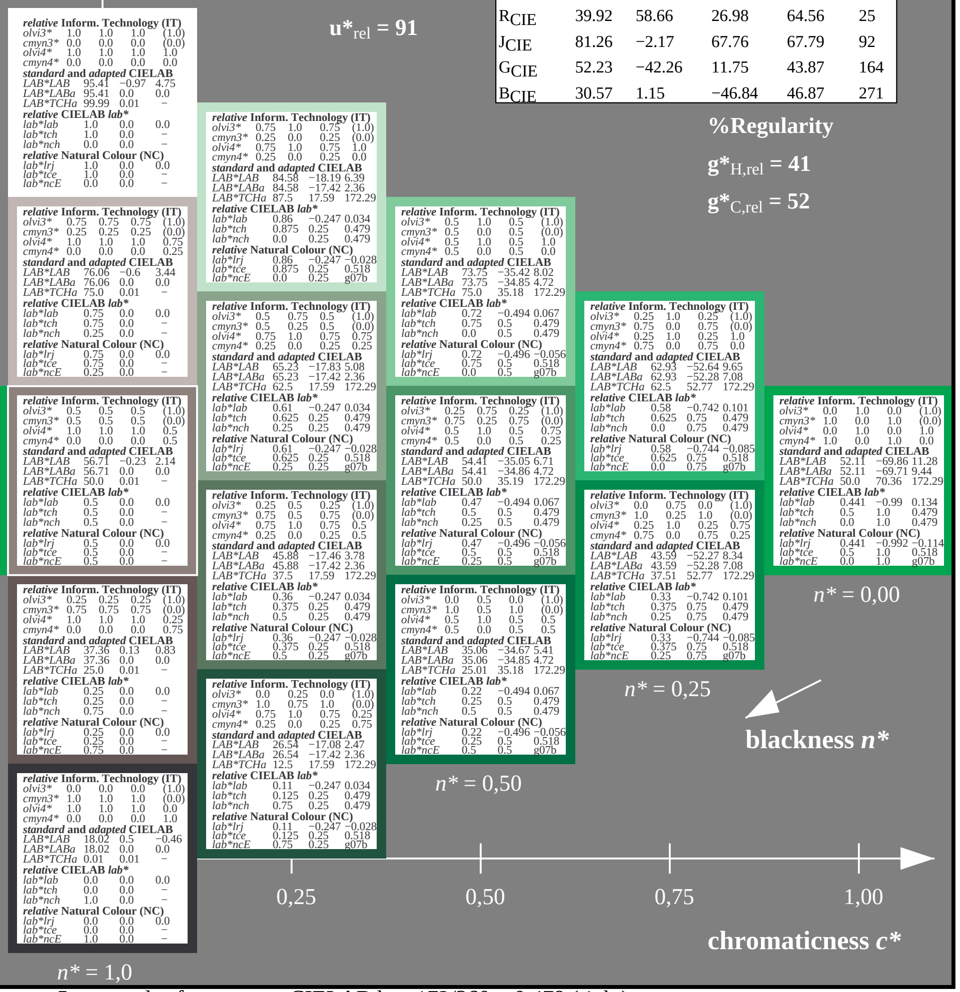
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



UE500−7, 5 step scales for constant CIELAB hue 172/360 = 0.479 (left)

5 step scales for constant CIELAB hue 172/360 = 0.479 (right)

Input: Colorimetric Reflective System MRS18

for hue $h^* = lab^*h = 172/360 = 0.479$

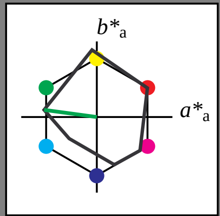
*lab*tch* and *lab*nch*

D65: hue G

LCH*Ma: 52 70 172

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

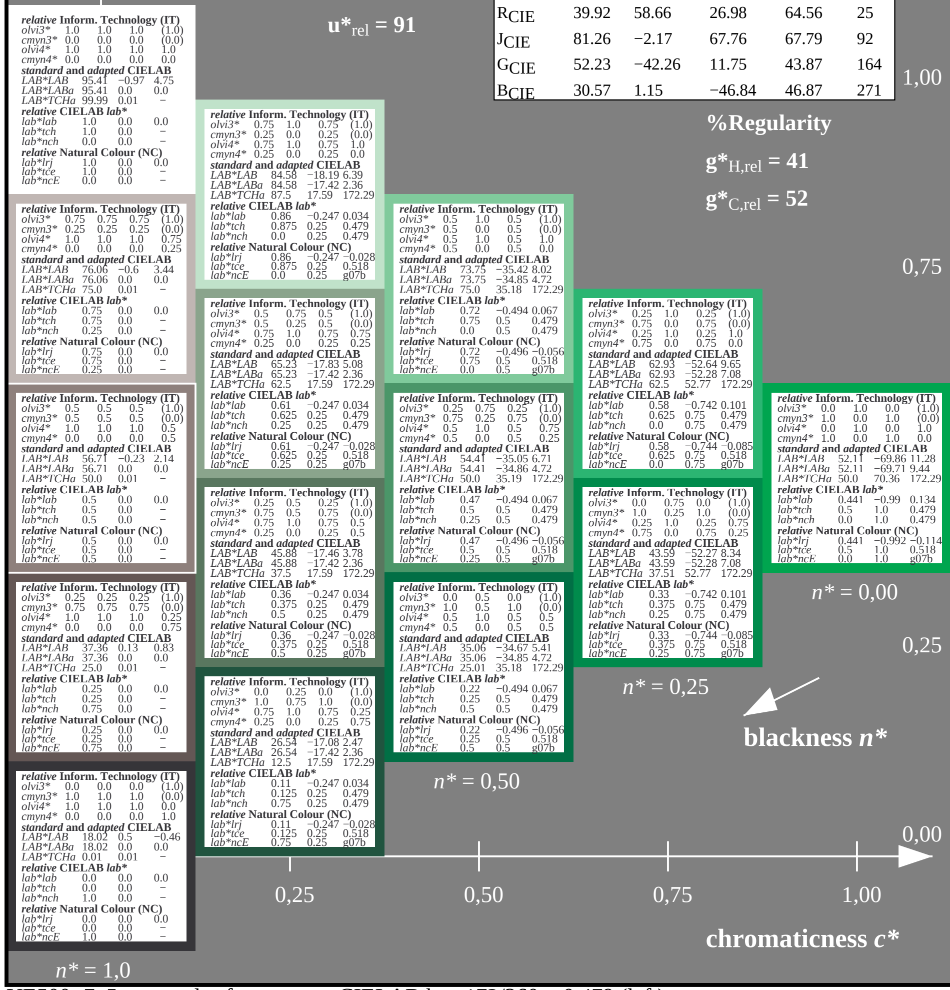
%Gamut

$u^*_{rel} = 91$

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System TRS18

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

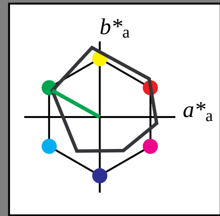
*lab*tch* and *lab*nch*

D65: hue L

LCH*Ma: 51 72 151

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

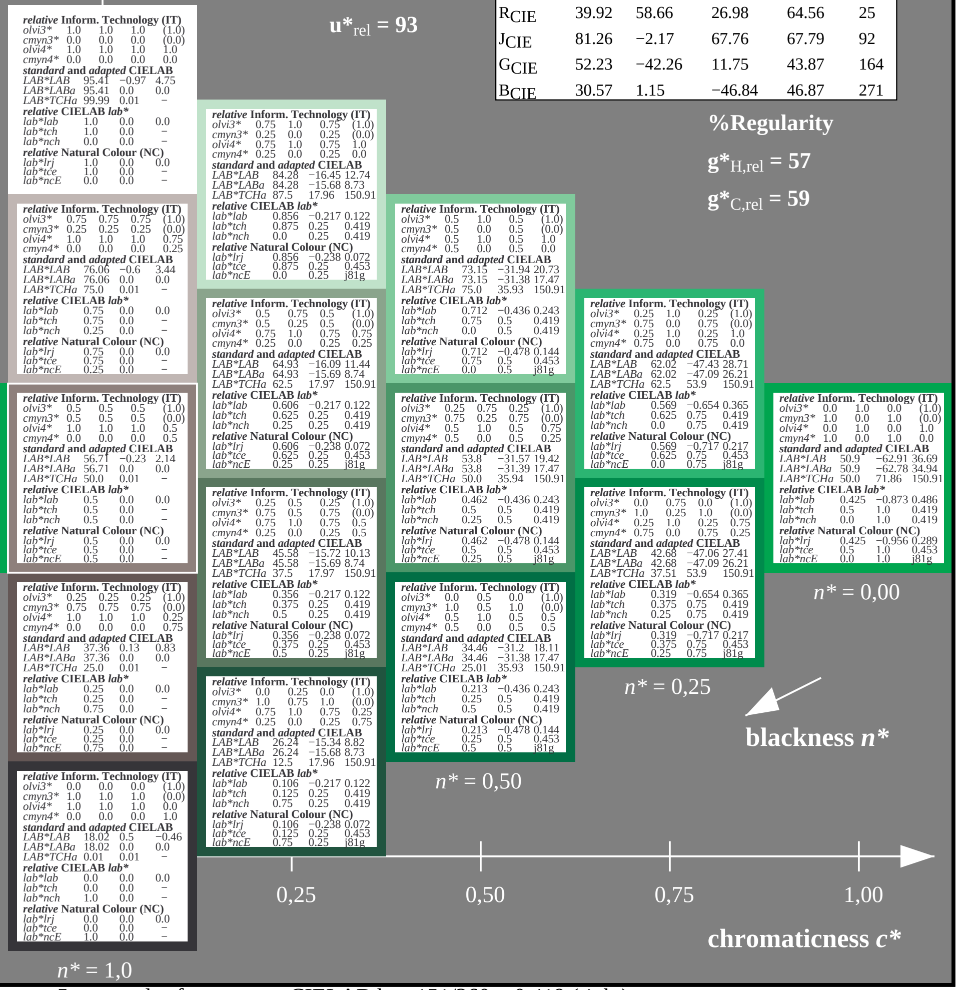
%Gamut

$u^*_{rel} = 93$

%Regularity

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

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



UE500−7, 5 step scales for constant CIELAB hue 172/360 = 0.479 (left)

5 step scales for constant CIELAB hue 151/360 = 0.419 (right)

Input: Colorimetric Reflective System MRS18

for hue $h^* = lab^*h = 172/360 = 0.479$

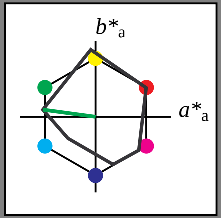
*lab*tch and lab*nch*

D65: hue G

LCH*Ma: 52 70 172

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

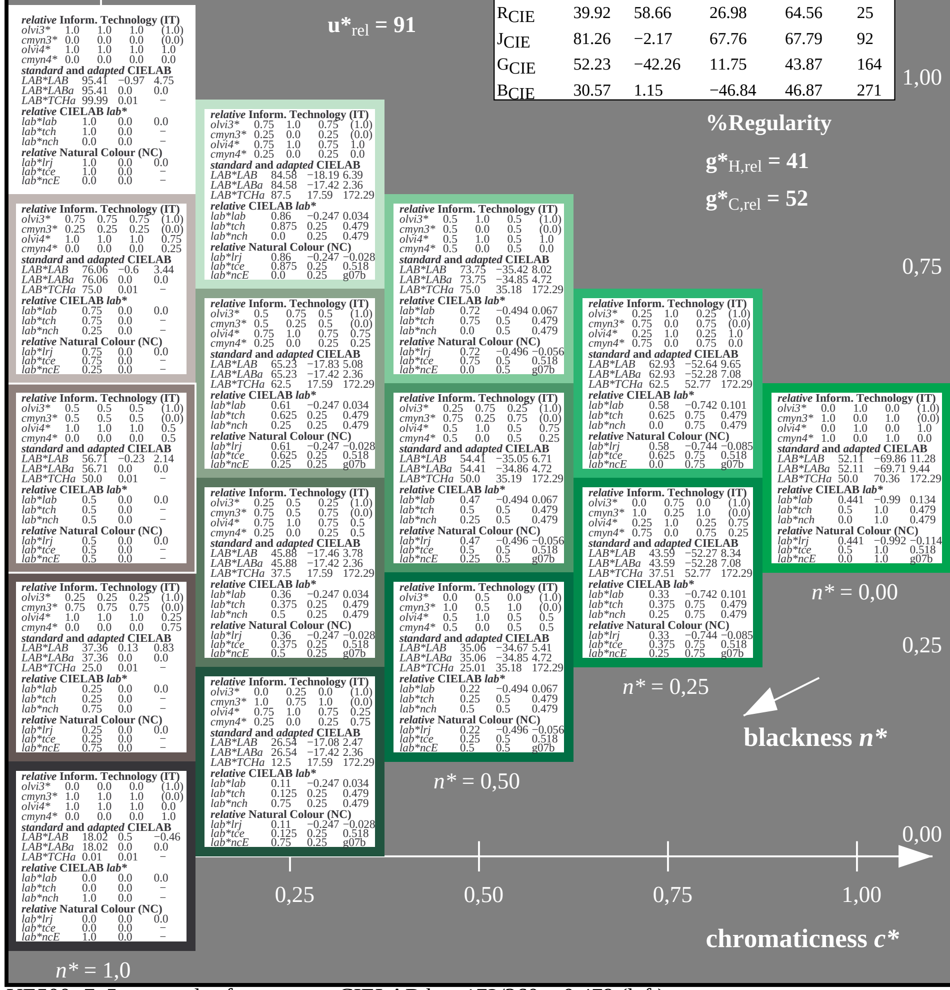
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System MRS18a

for hue $h^* = lab^*h = 171/360 = 0.475$

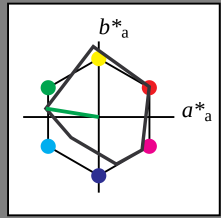
*lab*tch and lab*nch*

D65: hue G

LCH*Ma: 52 71 171

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

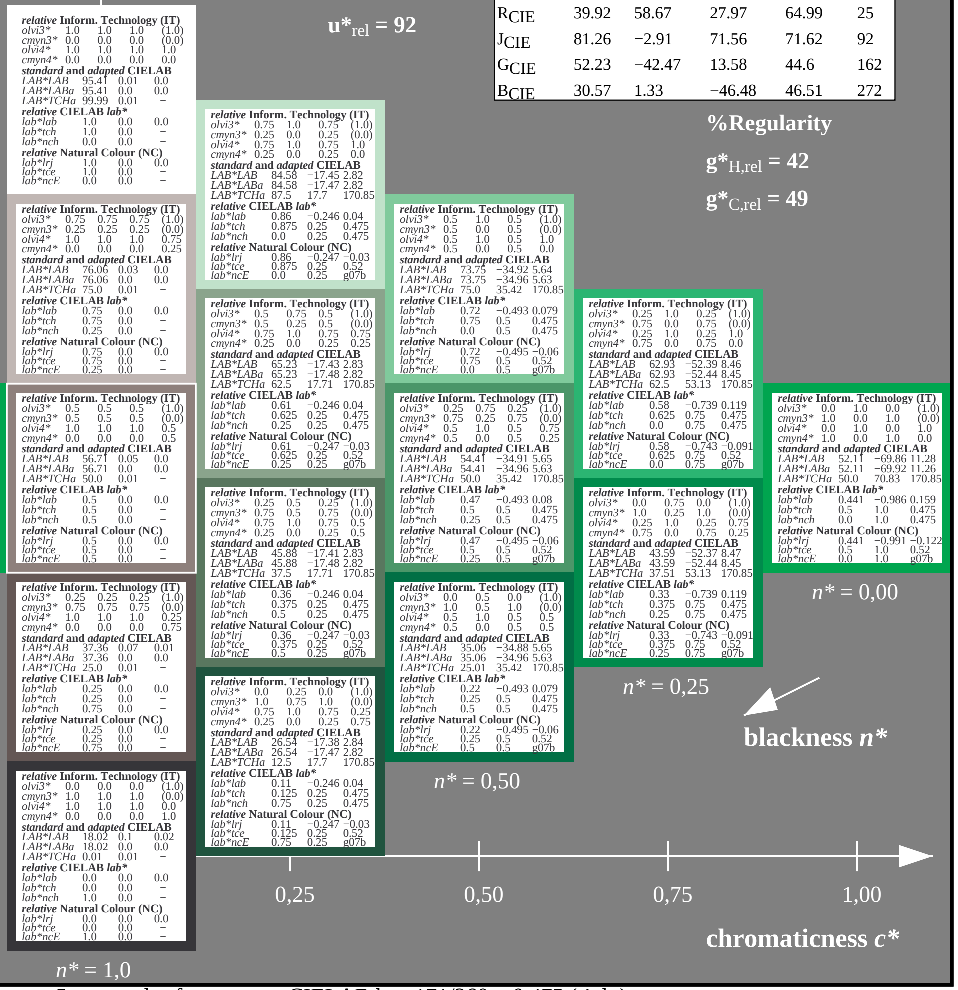
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

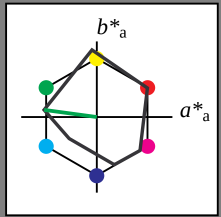


UE500−7, 5 step scales for constant CIELAB hue 172/360 = 0.479 (left)

5 step scales for constant CIELAB hue 171/360 = 0.475 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 172/360 = 0.479$
*lab*tch* and *lab*nch*

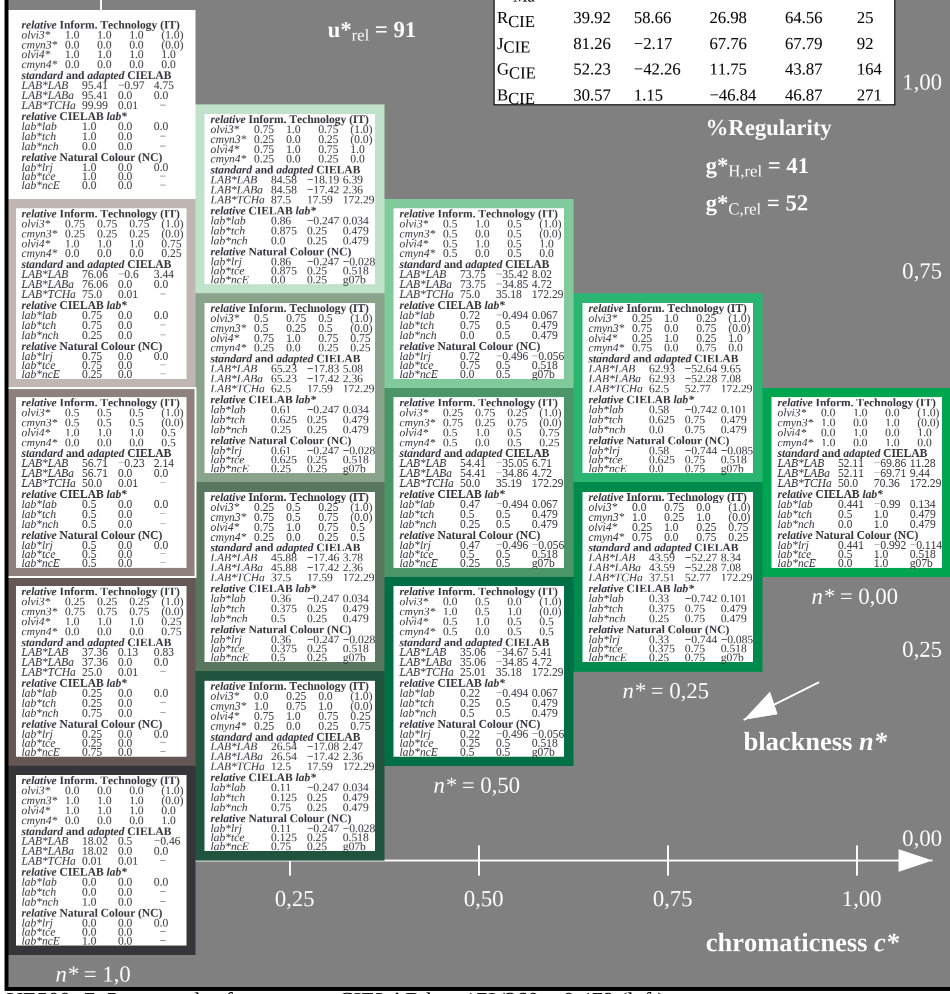
D65: hue G
LCH*Ma: 52 70 172
rgb*Ma: 0.0 1.0 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 91$

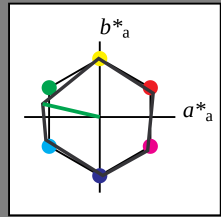
MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 41$
$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 167/360 = 0.464$
*lab*tch* and *lab*nch*

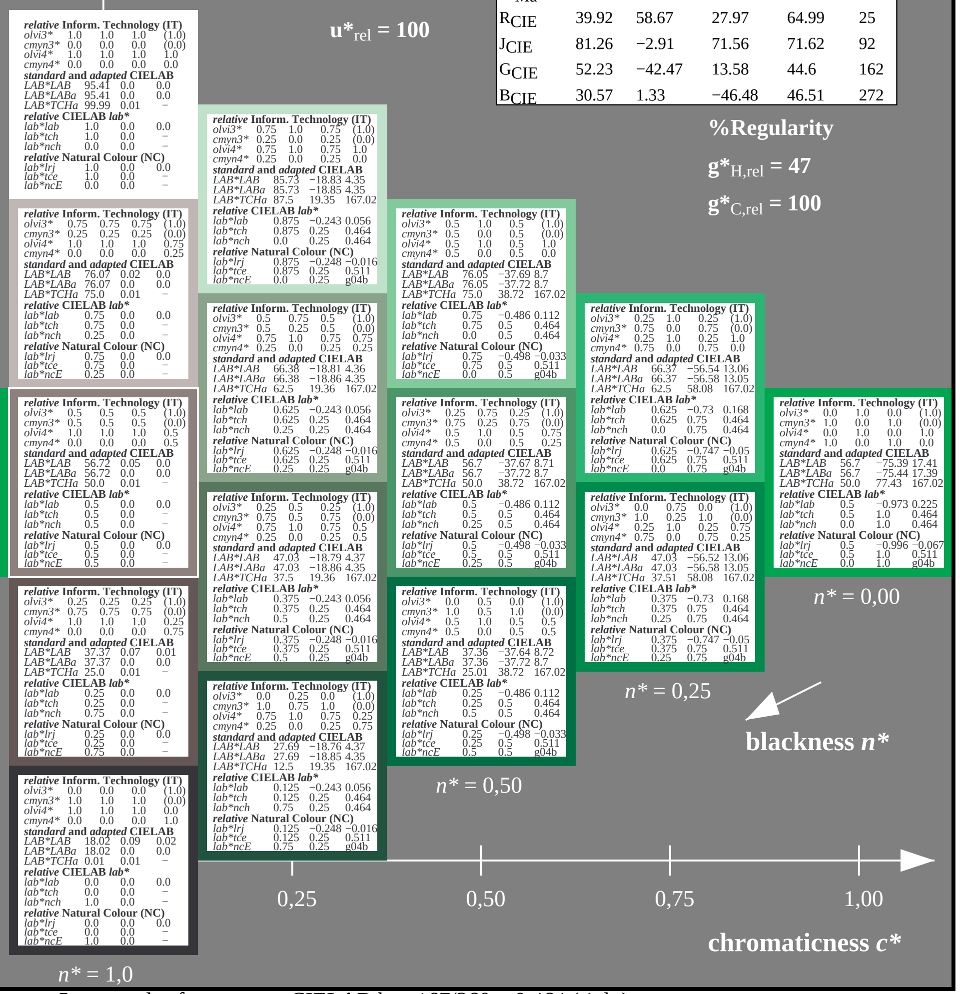
D65: hue G
LCH*Ma: 57 77 167
rgb*Ma: 0.0 1.0 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



UE500−7, 5 step scales for constant CIELAB hue 172/360 = 0.479 (left) 5 step scales for constant CIELAB hue 167/360 = 0.464 (right)

Input: Colorimetric Reflective System MRS18

for hue $h^* = lab^*h = 172/360 = 0.479$

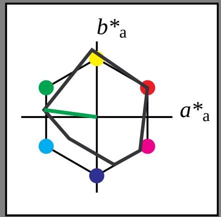
*lab*tch and lab*nch*

D65: hue G

LCH*Ma: 52 70 172

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

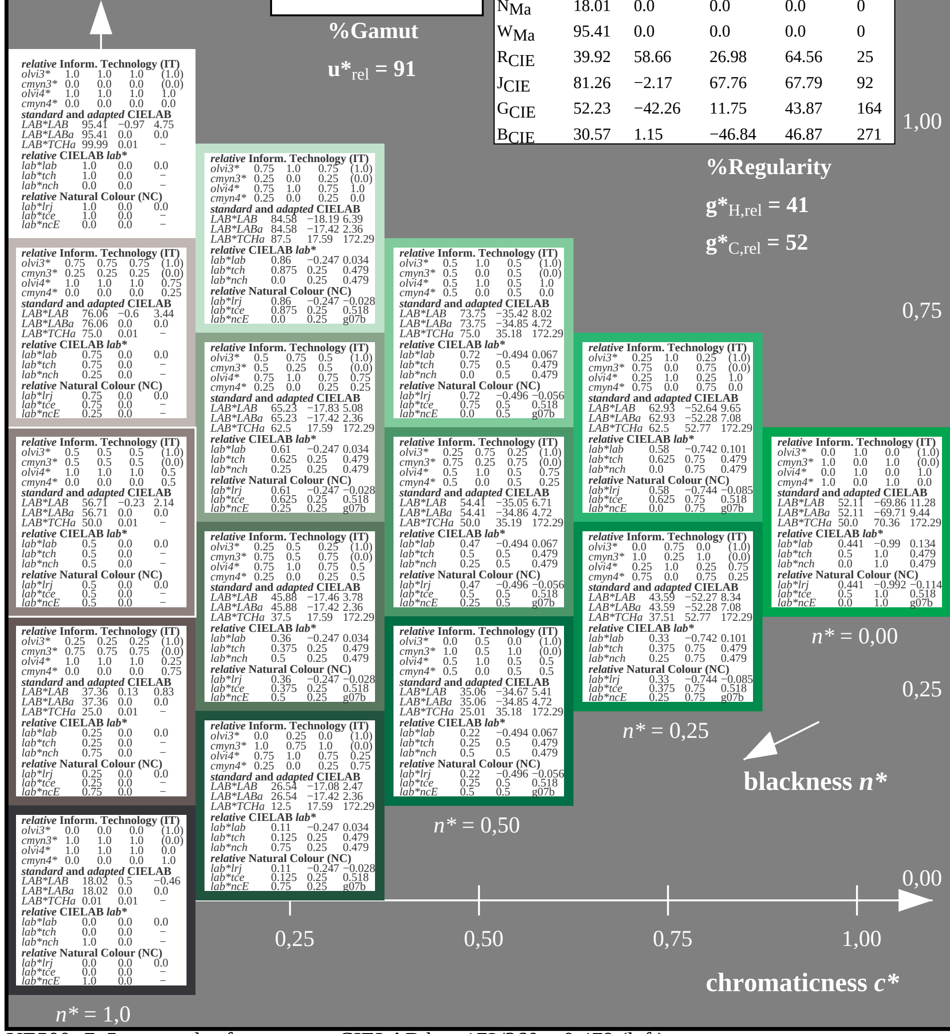
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System NCS18

for hue $h^* = lab^*h = 167/360 = 0.465$

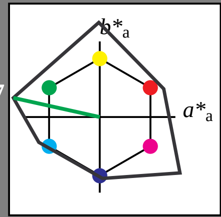
*lab*tch and lab*nch*

D65: hue G

LCH*Ma: 63 117 167

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

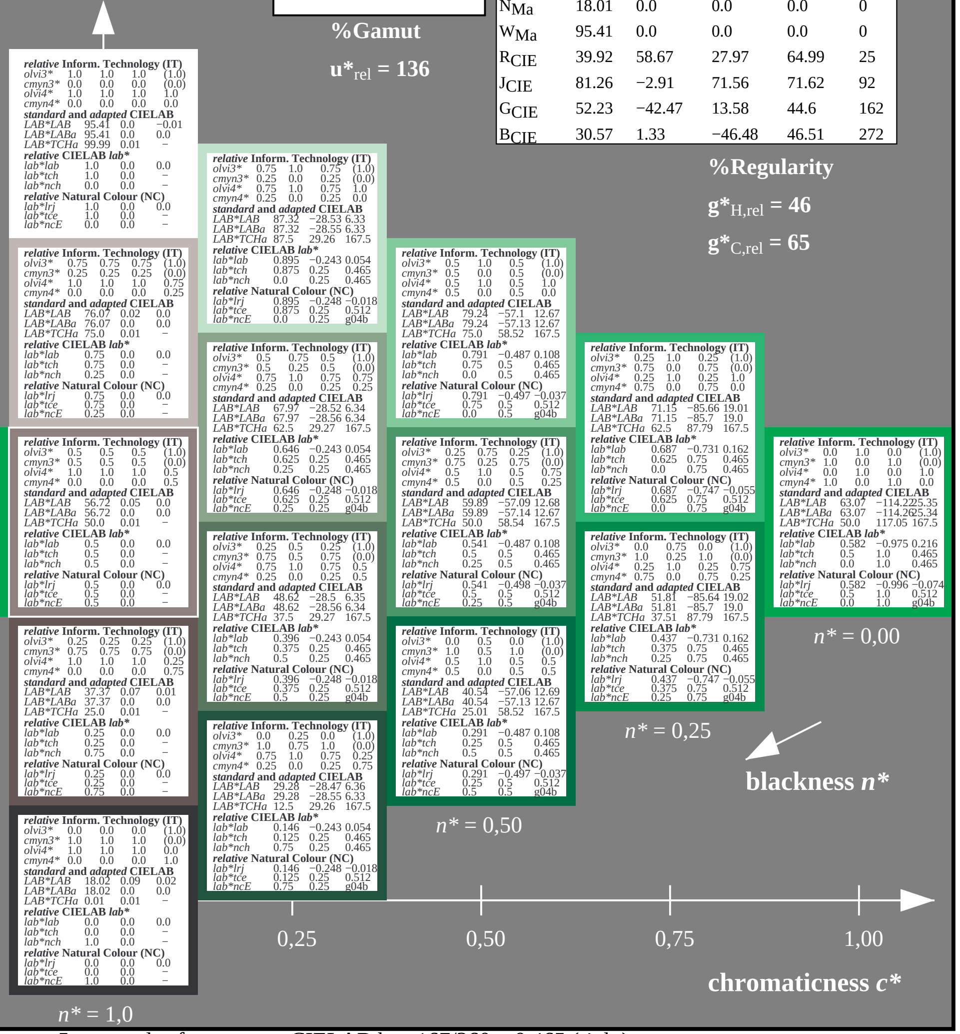
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$

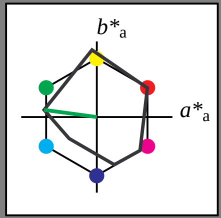


UE500−7, 5 step scales for constant CIELAB hue 172/360 = 0.479 (left)

5 step scales for constant CIELAB hue 167/360 = 0.465 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 172/360 = 0.479$
*lab*tch and lab*nch*

D65: hue G
LCH*Ma: 52 70 172
rgb*Ma: 0.0 1.0 0.0
triangle lightness t^*

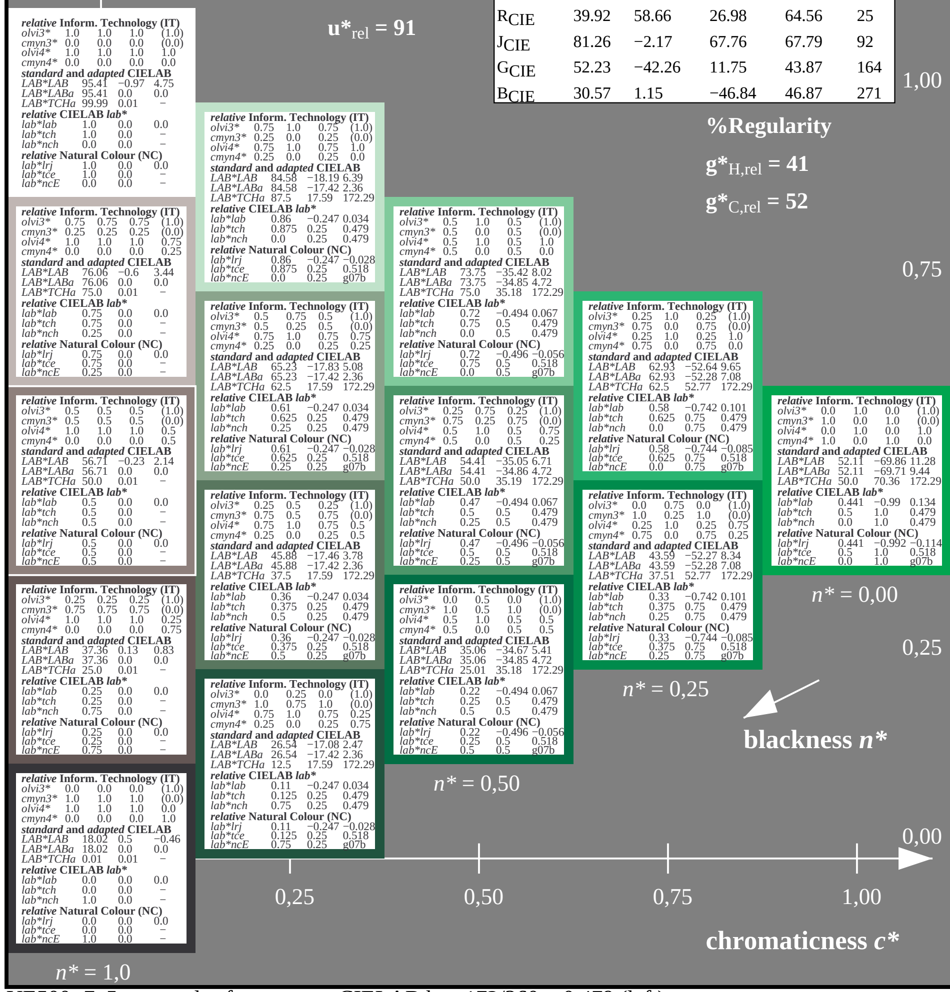


%Gamut
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data

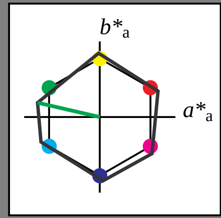
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 41$
$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 167/360 = 0.464$
*lab*tch and lab*nch*

D65: hue G
LCH*Ma: 53 84 167
rgb*Ma: 0.0 1.0 0.0
triangle lightness t^*

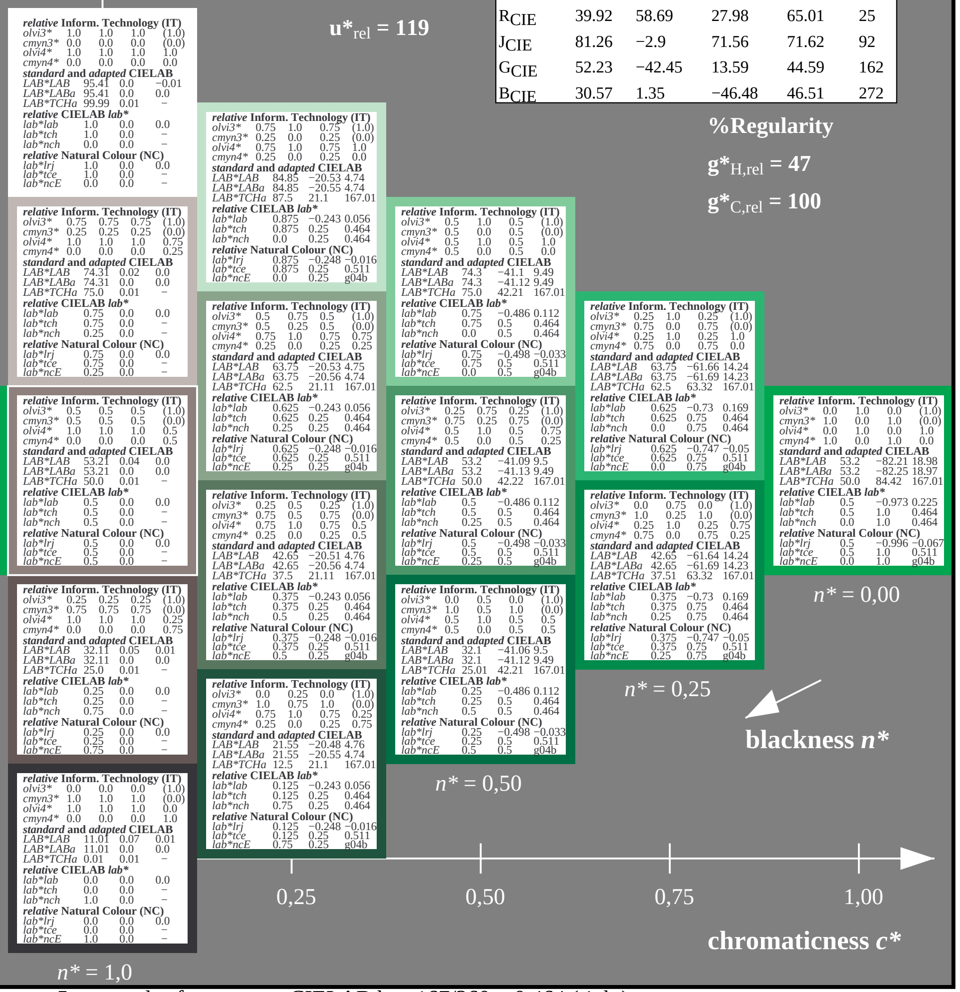


%Gamut
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$

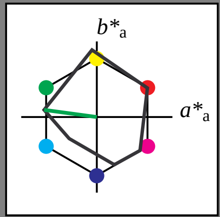


UE500−7, 5 step scales for constant CIELAB hue 172/360 = 0.479 (left)

5 step scales for constant CIELAB hue 167/360 = 0.464 (right)

Input: Colorimetric Reflective System MRS18
for hue *h* = lab*h = 172/360 = 0.479*
*lab*tch and lab*nch*

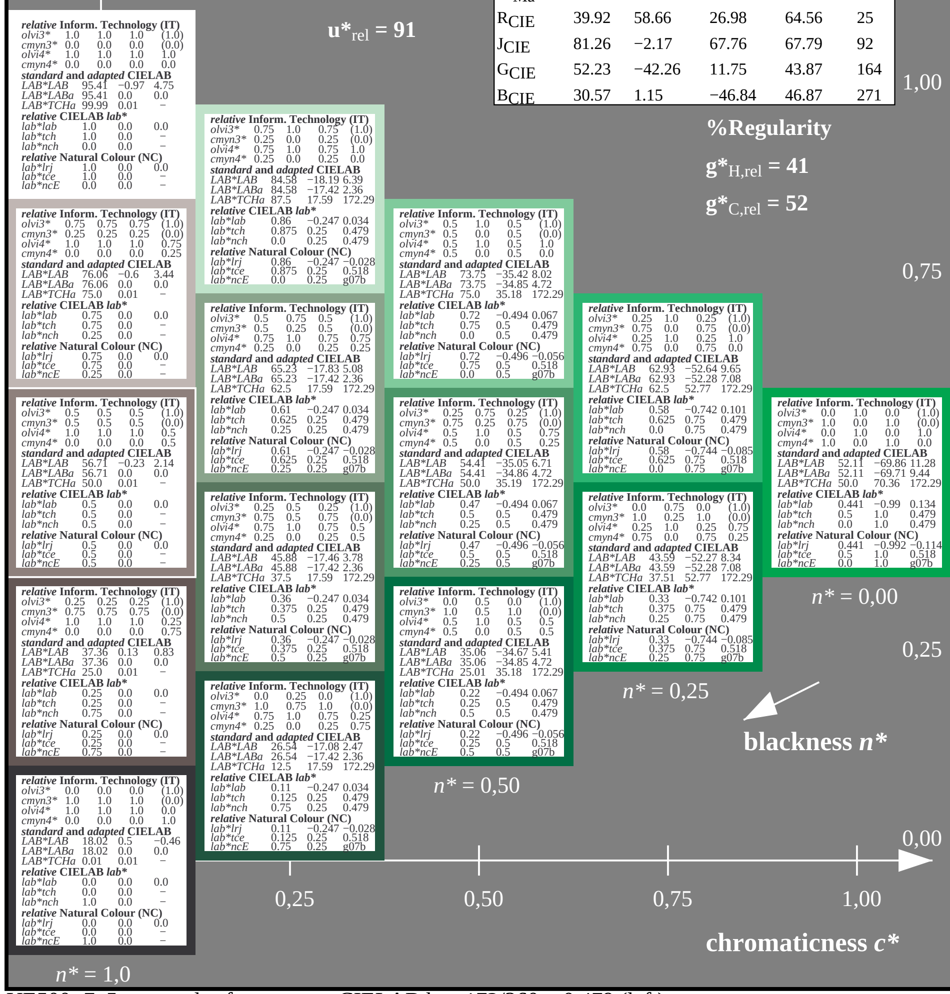
D65: hue G
LCH*Ma: 52 70 172
rgb*Ma: 0.0 1.0 0.0
triangle lightness *t*



%Gamut
u^*_{rel} = 91

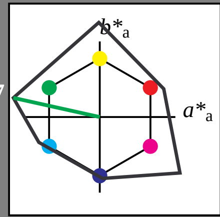
MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel}$ = 41
$g^*_{C,rel}$ = 52



Output: Colorimetric Reflective System NCS11
for hue *h* = lab*h = 167/360 = 0.465*
*lab*tch and lab*nch*

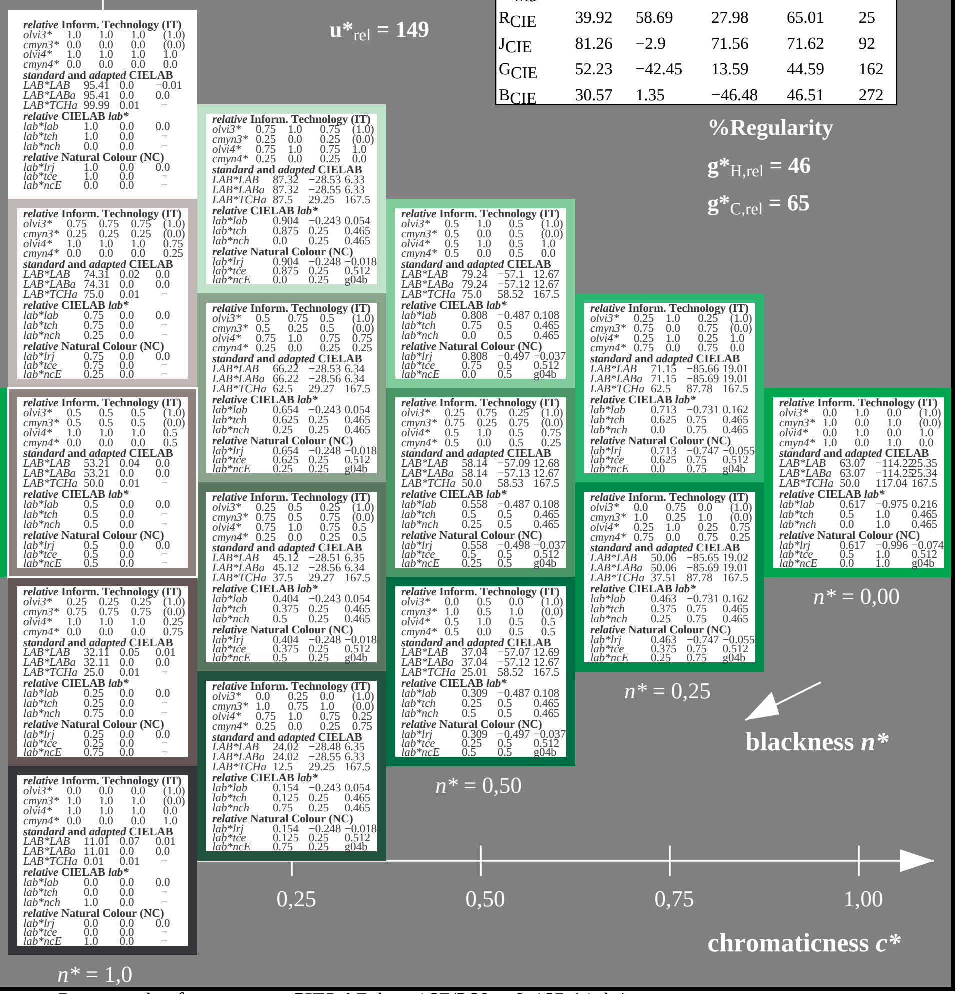
D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0
triangle lightness *t*



%Gamut
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



UE500−7, 5 step scales for constant CIELAB hue 172/360 = 0.479 (left)

5 step scales for constant CIELAB hue 167/360 = 0.465 (right)

Input: Colorimetric Reflective System TRS18

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

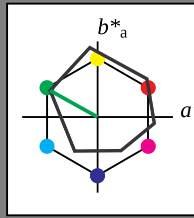
lab*tch* and *lab*nch

D65: hue L

LCH*Ma: 51 72 151

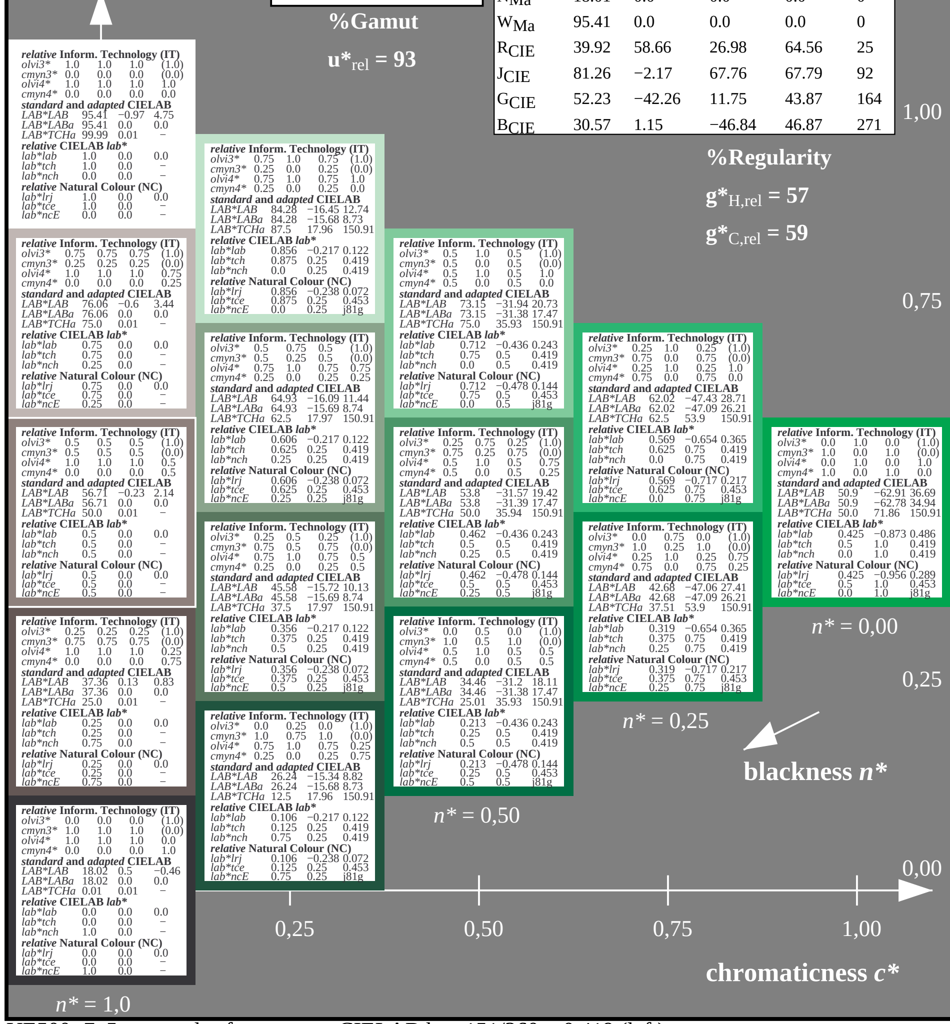
rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



Output: Colorimetric Reflective System ORS18

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

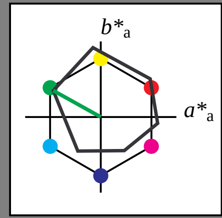
lab*tch* and *lab*nch

D65: hue L

LCH*Ma: 51 72 151

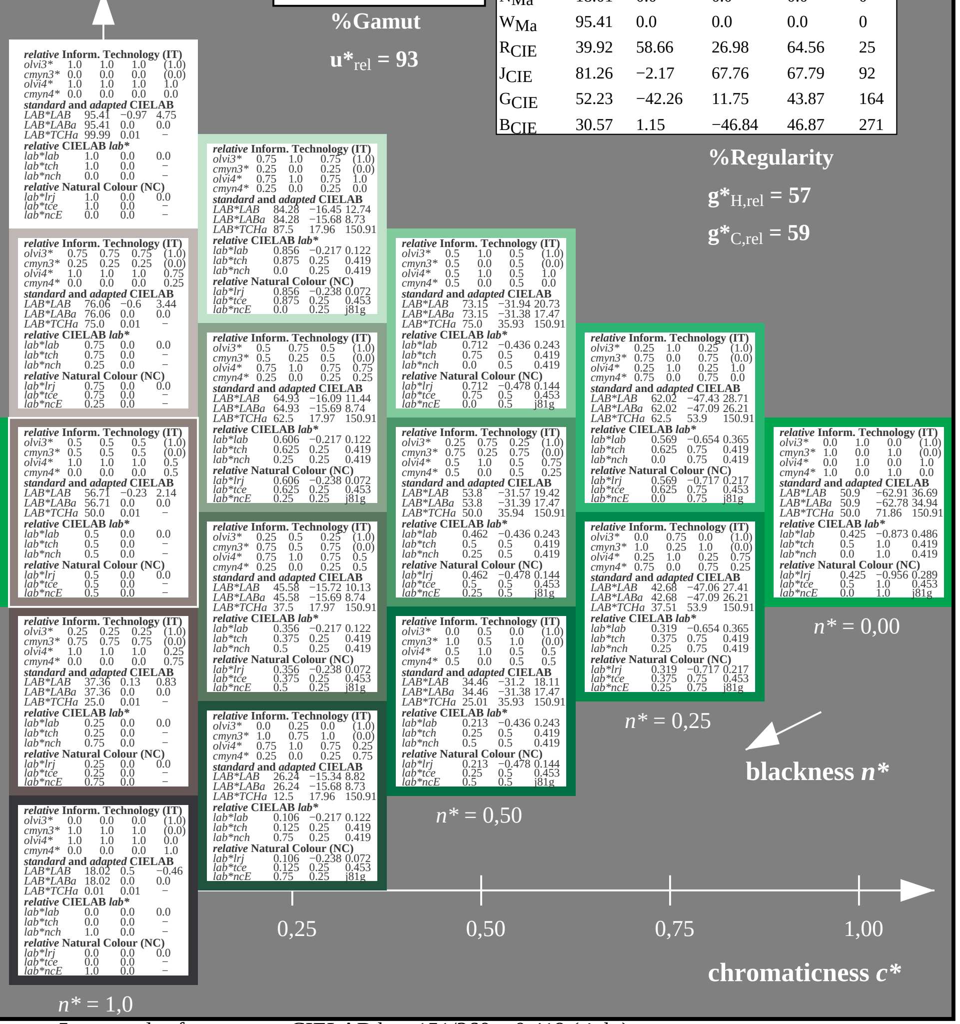
rgb*Ma: 0.0 1.0 0.0

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	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



UE500−7, 5 step scales for constant CIELAB hue 151/360 = 0.419 (left)

5 step scales for constant CIELAB hue 151/360 = 0.419 (right)

Input: Colorimetric Reflective System TRS18

for hue *h = *lab*h* = 151/360 = 0.419**

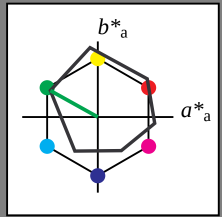
lab*tch* and *lab*nch

D65: hue L

LCH*Ma: 51 72 151

rgb*Ma: 0.0 1.0 0.0

triangle lightness *t**



%Gamut

u^*_{rel} = 93

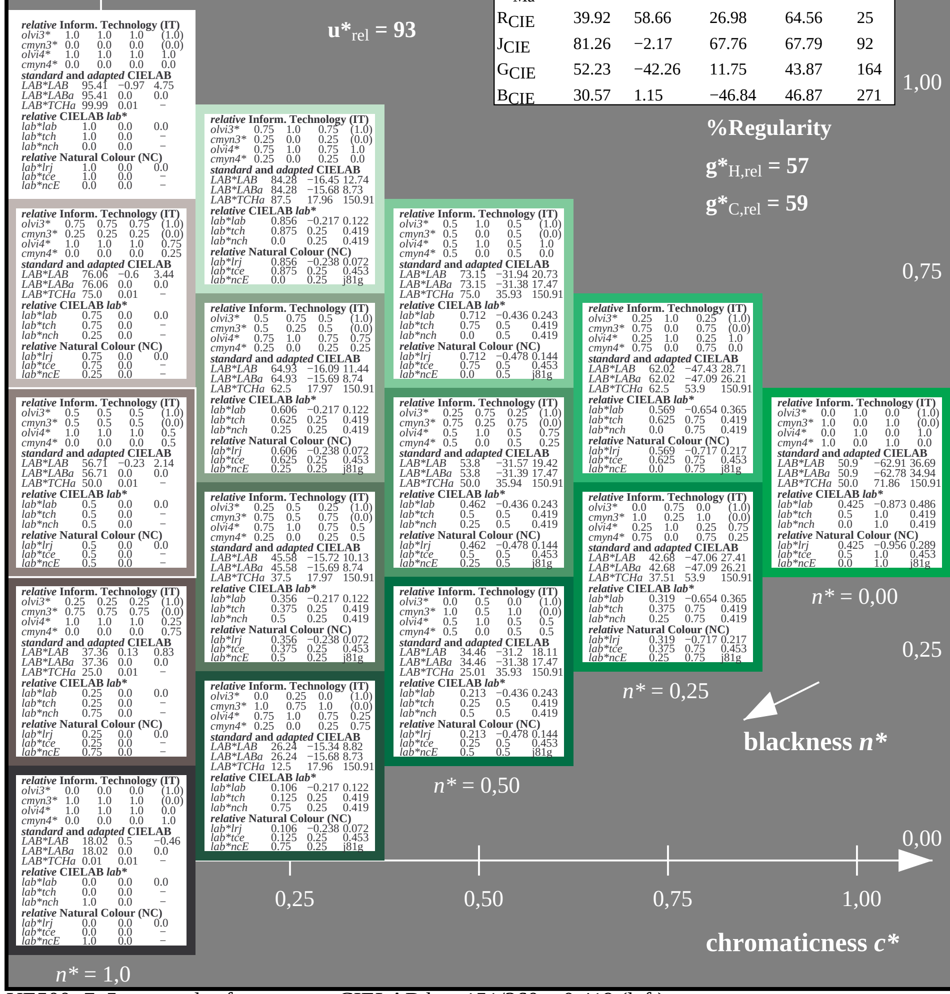
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



Output: Colorimetric Reflective System MRS18

for hue *h = *lab*h* = 172/360 = 0.479**

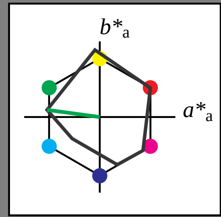
lab*tch* and *lab*nch

D65: hue G

LCH*Ma: 52 70 172

rgb*Ma: 0.0 1.0 0.0

triangle lightness *t**



%Gamut

u^*_{rel} = 91

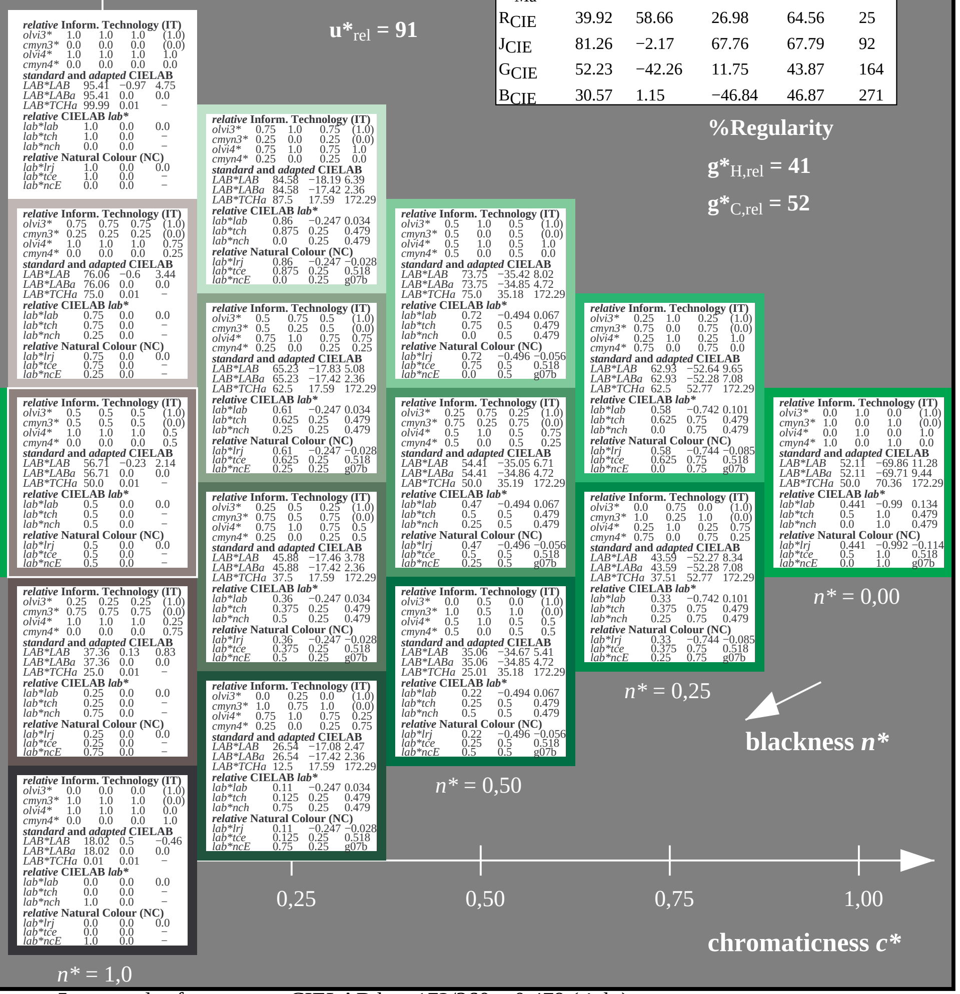
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



UE500−7, 5 step scales for constant CIELAB hue 151/360 = 0.419 (left)

5 step scales for constant CIELAB hue 172/360 = 0.479 (right)

Input: Colorimetric Reflective System TRS18

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

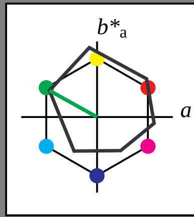
lab*tch* and *lab*nch

D65: hue L

LCH*Ma: 51 72 151

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

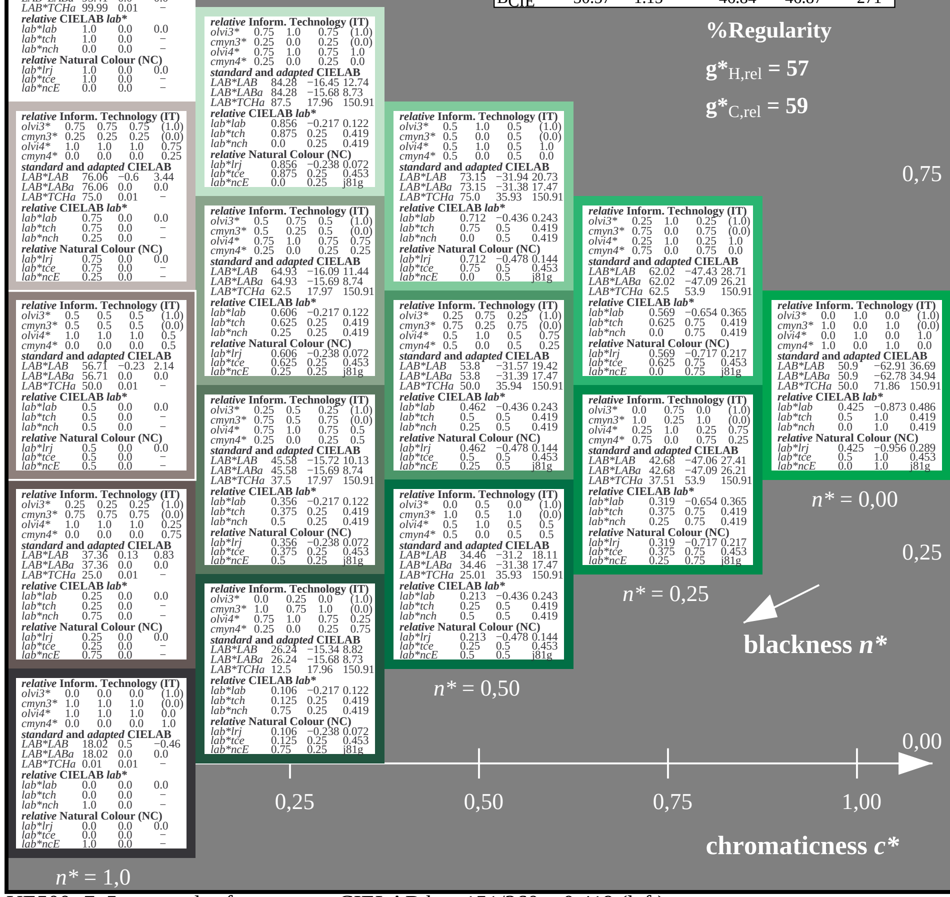
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



Output: Colorimetric Reflective System TRS18

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

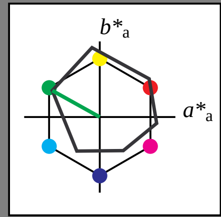
lab*tch* and *lab*nch

D65: hue L

LCH*Ma: 51 72 151

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

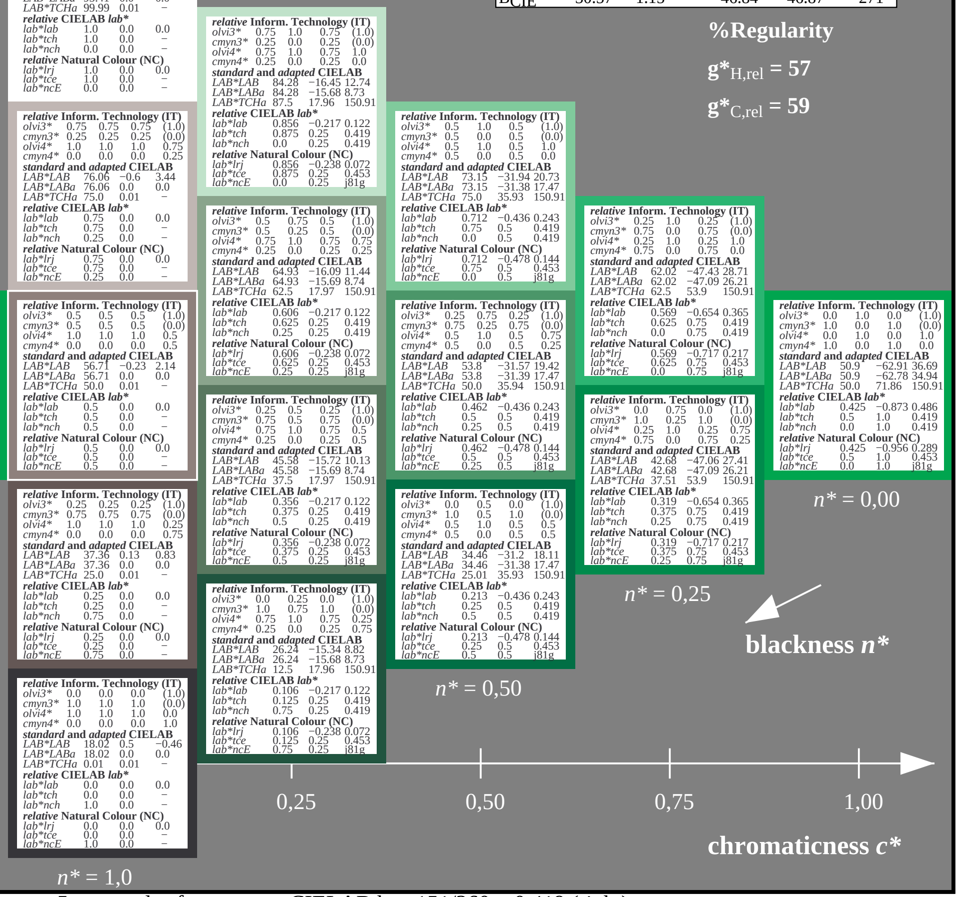
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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

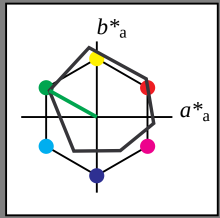


UE500−7, 5 step scales for constant CIELAB hue 151/360 = 0.419 (left)

5 step scales for constant CIELAB hue 151/360 = 0.419 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 151/360 = 0.419$
*lab*tch and lab*nch*

D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0
triangle lightness t^*

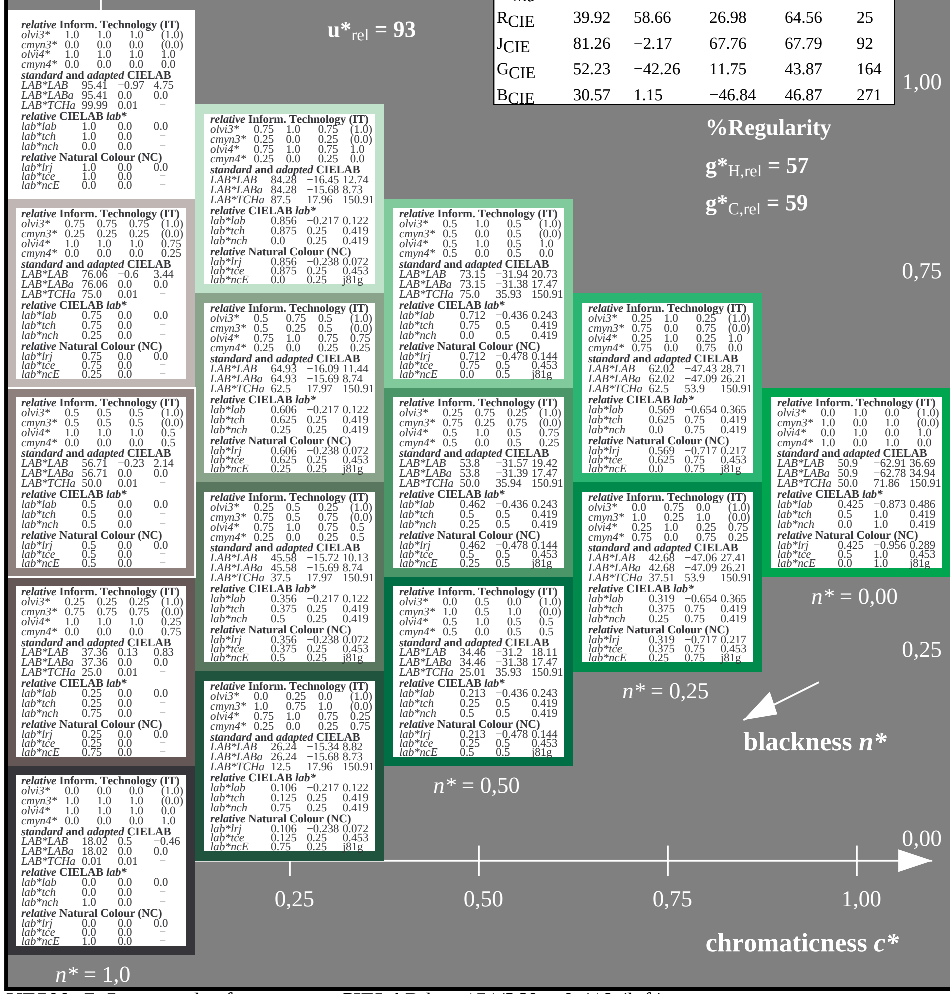


%Gamut
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data

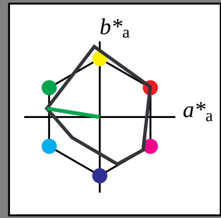
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 171/360 = 0.475$
*lab*tch and lab*nch*

D65: hue G
LCH*Ma: 52 71 171
rgb*Ma: 0.0 1.0 0.0
triangle lightness t^*

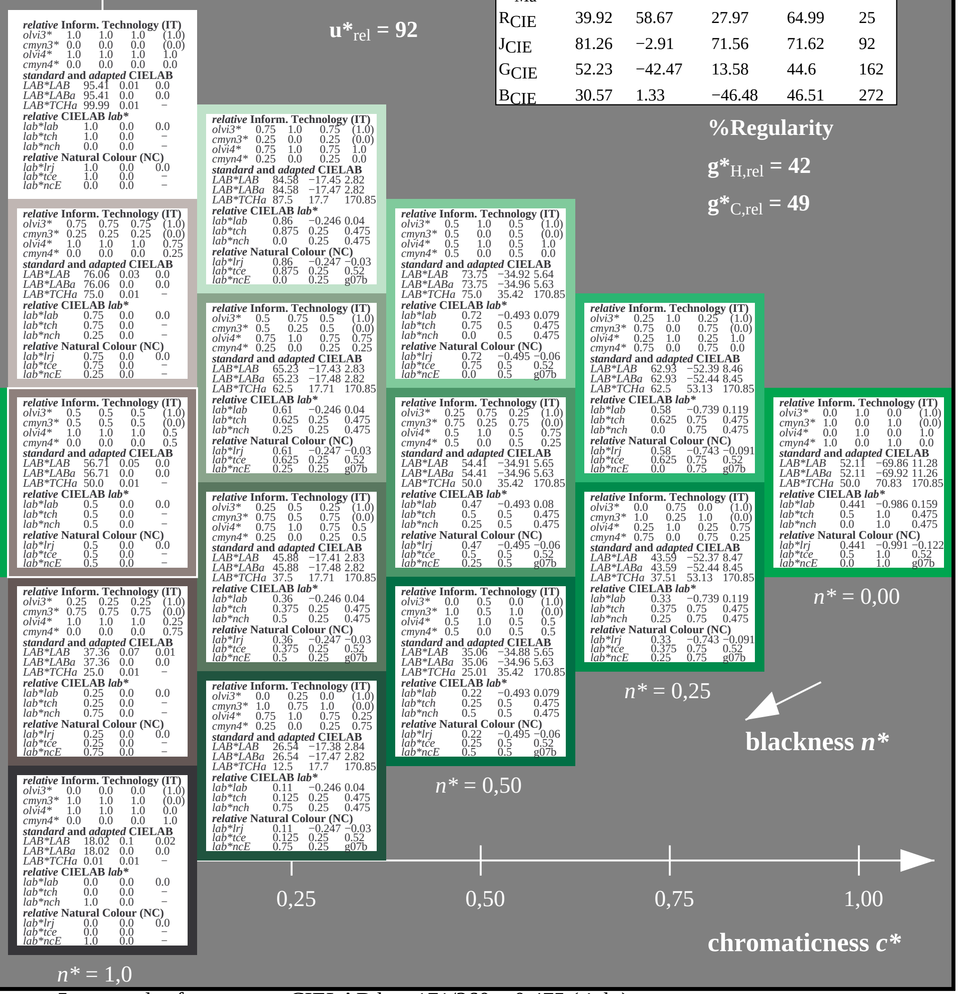


%Gamut
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$

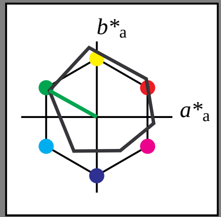


UE500−7, 5 step scales for constant CIELAB hue 151/360 = 0.419 (left)

5 step scales for constant CIELAB hue 171/360 = 0.475 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 151/360 = 0.419$
lab^*tch and lab^*nch

D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0
triangle lightness t^*

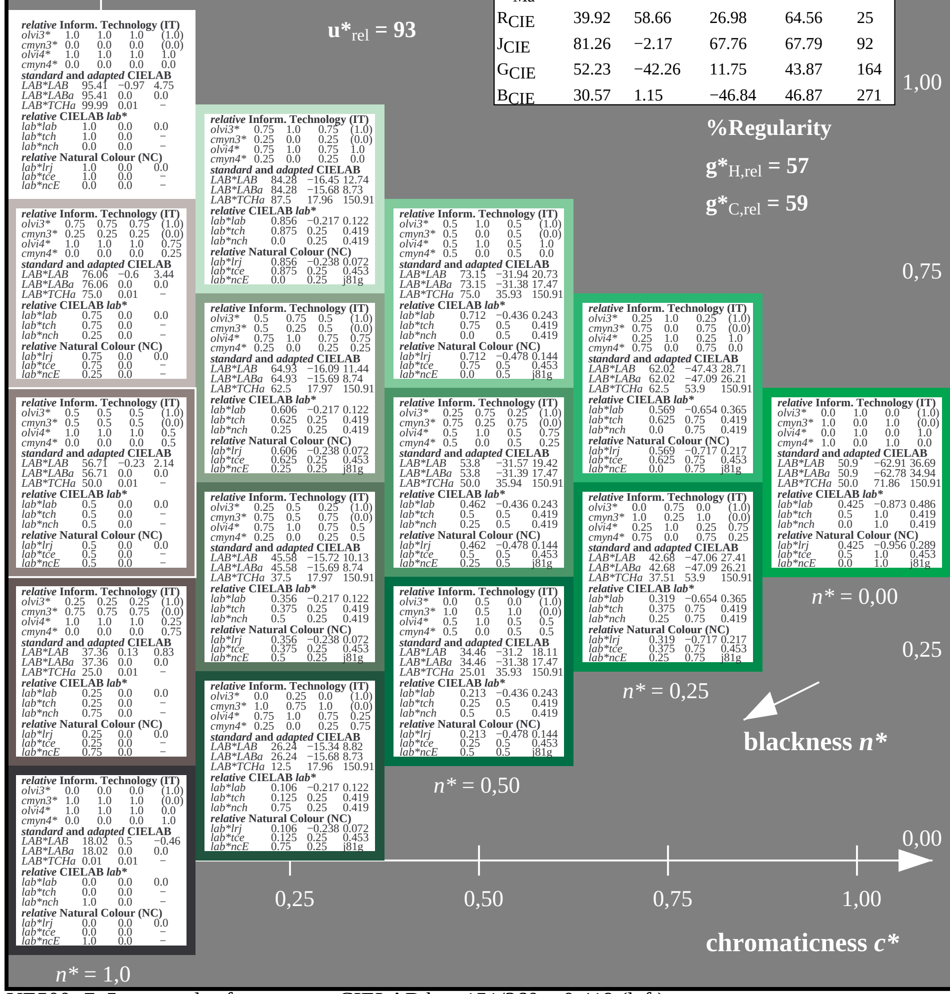


%Gamut
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data

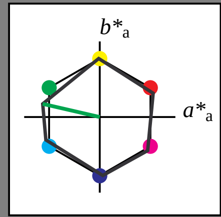
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 167/360 = 0.464$
lab^*tch and lab^*nch

D65: hue G
LCH*Ma: 57 77 167
rgb*Ma: 0.0 1.0 0.0
triangle lightness t^*

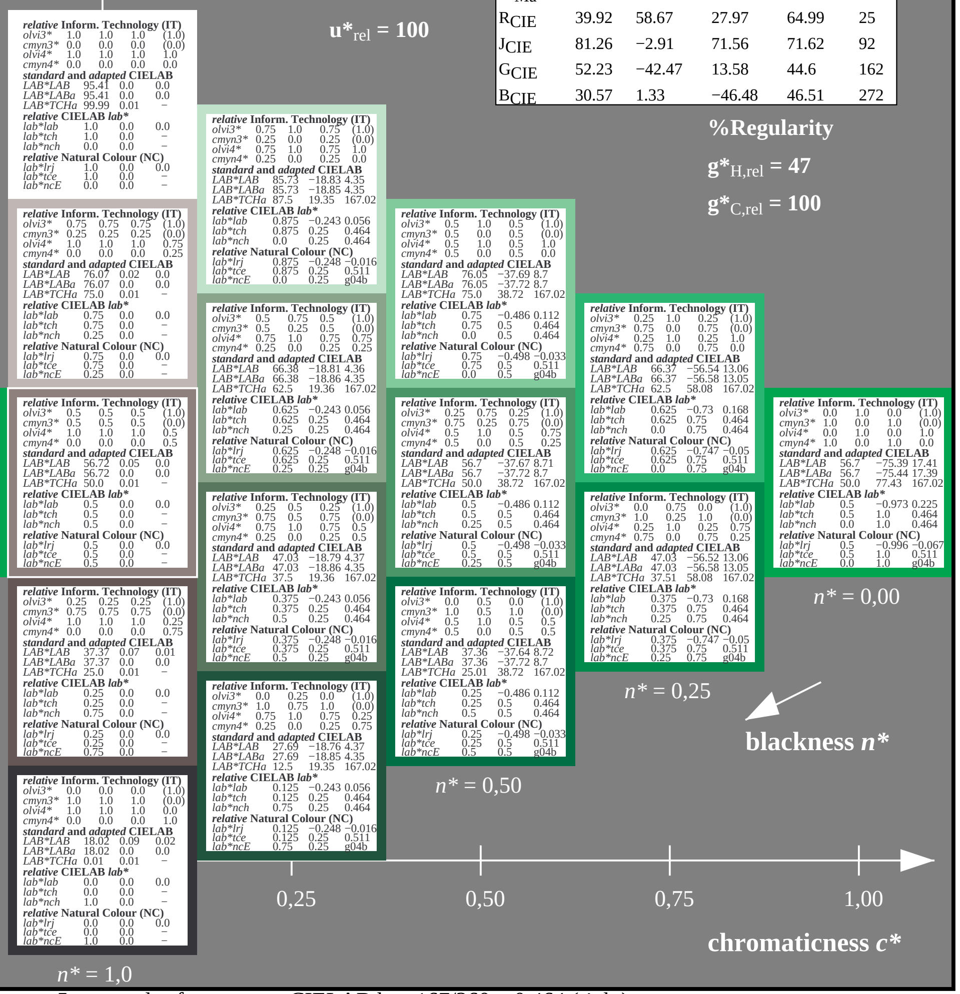


%Gamut
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



UE500−7, 5 step scales for constant CIELAB hue 151/360 = 0.419 (left)

5 step scales for constant CIELAB hue 167/360 = 0.464 (right)

Input: Colorimetric Reflective System TRS18

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

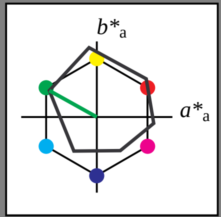
*lab*tch and lab*nch*

D65: hue L

LCH*Ma: 51 72 151

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

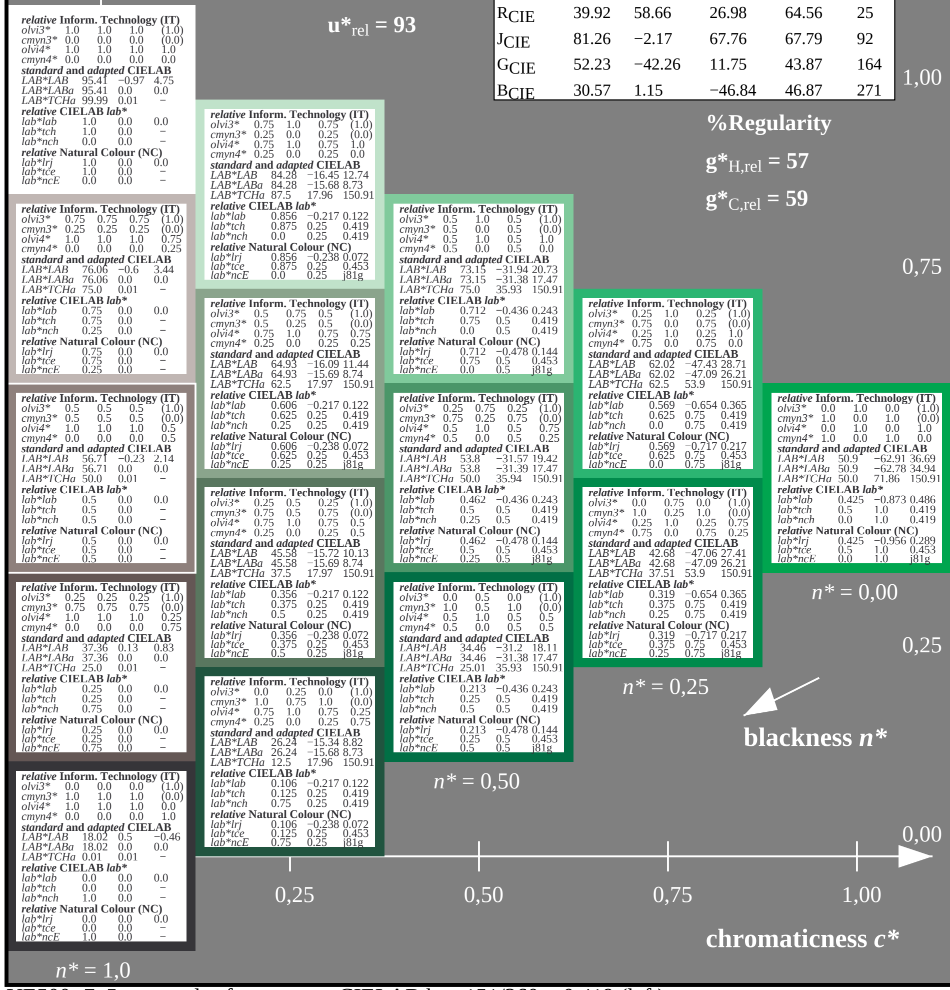
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



Output: Colorimetric Reflective System NCS18

for hue $h^* = lab^*h = 167/360 = 0.465$

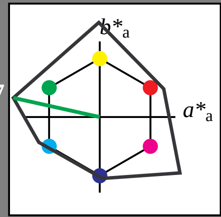
*lab*tch and lab*nch*

D65: hue G

LCH*Ma: 63 117 167

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

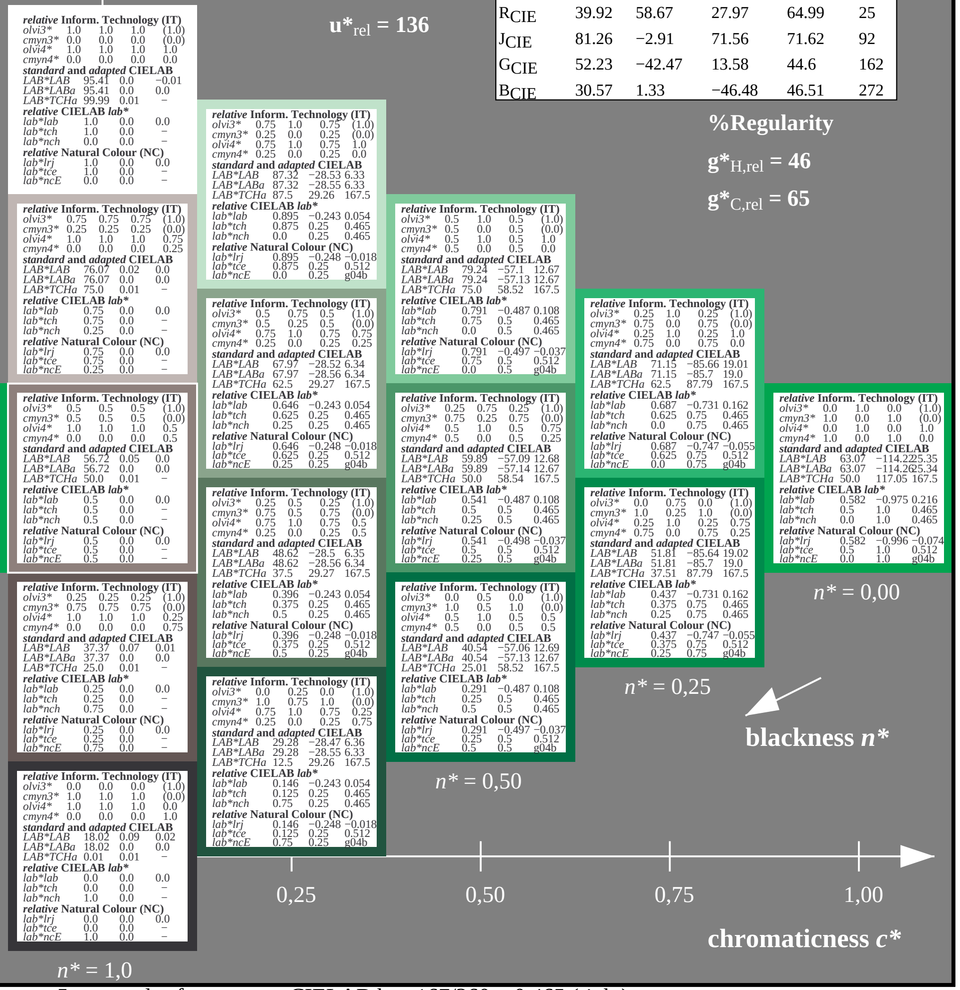
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$

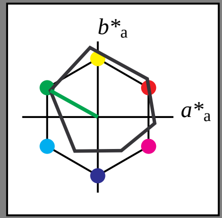


UE500−7, 5 step scales for constant CIELAB hue 151/360 = 0.419 (left)

5 step scales for constant CIELAB hue 167/360 = 0.465 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 151/360 = 0.419$
lab*tch* and *lab*nch

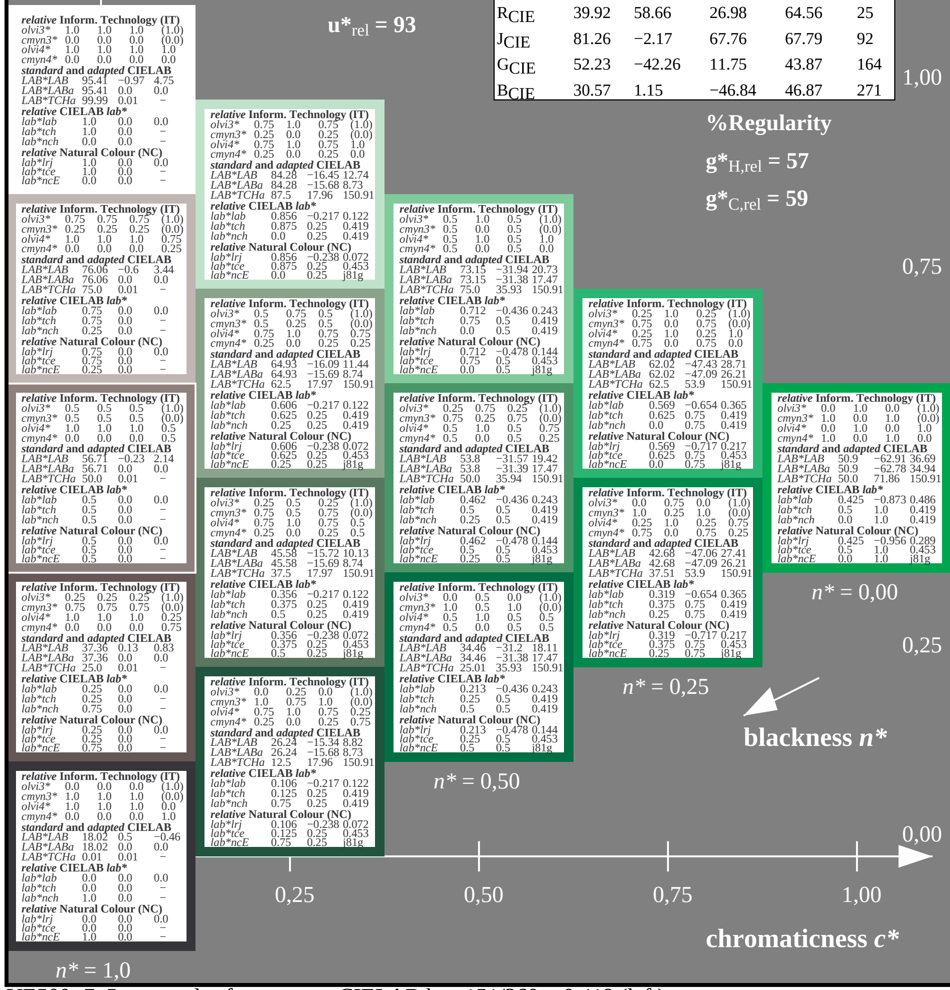
D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 93$

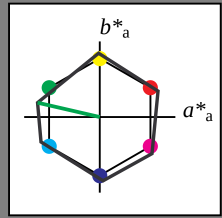
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 167/360 = 0.464$
lab*tch* and *lab*nch

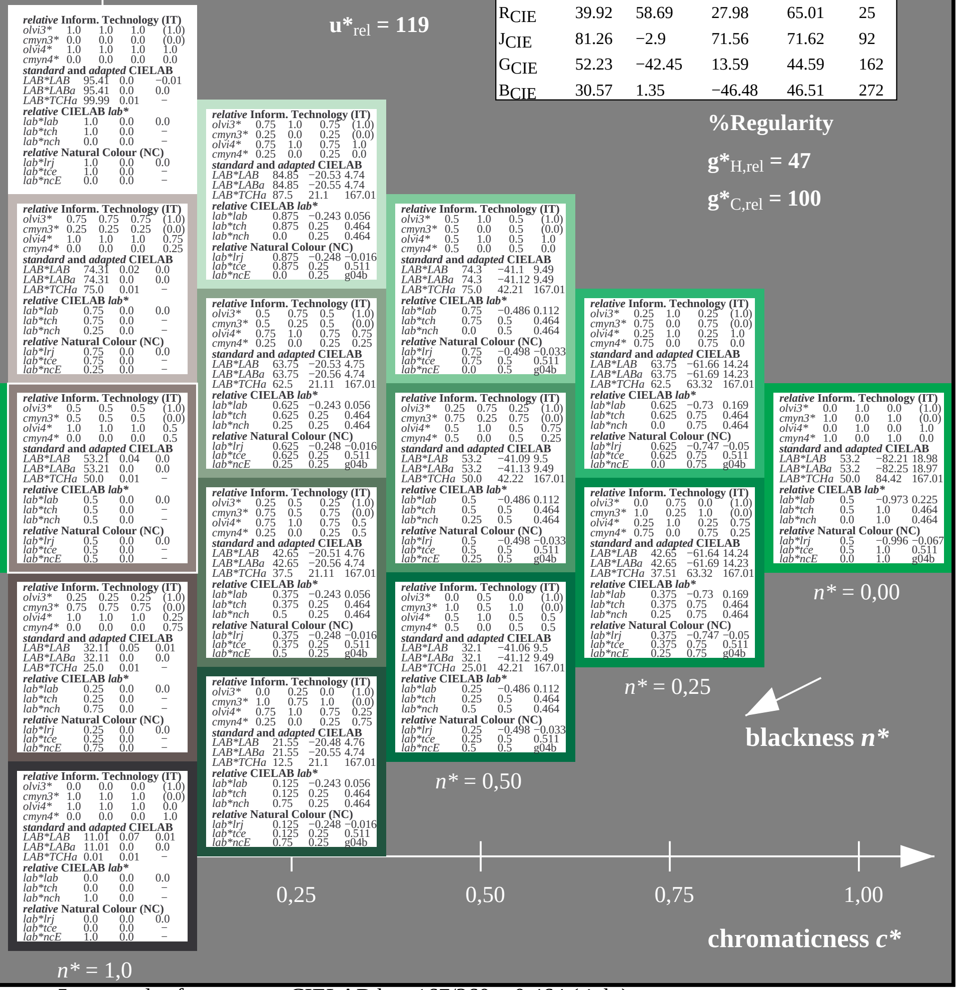
D65: hue G
LCH*Ma: 53 84 167
rgb*Ma: 0.0 1.0 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272



UE500−7, 5 step scales for constant CIELAB hue 151/360 = 0.419 (left)

5 step scales for constant CIELAB hue 167/360 = 0.464 (right)

Input: Colorimetric Reflective System TRS18
for hue *h** = *lab*h* = 151/360 = 0.419

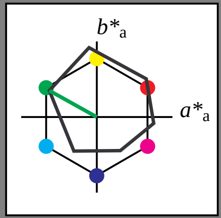
*lab*tch* and *lab*nch*

D65: hue L

LCH*Ma: 51 72 151

rgb*Ma: 0.0 1.0 0.0

triangle lightness *t**



%Gamut

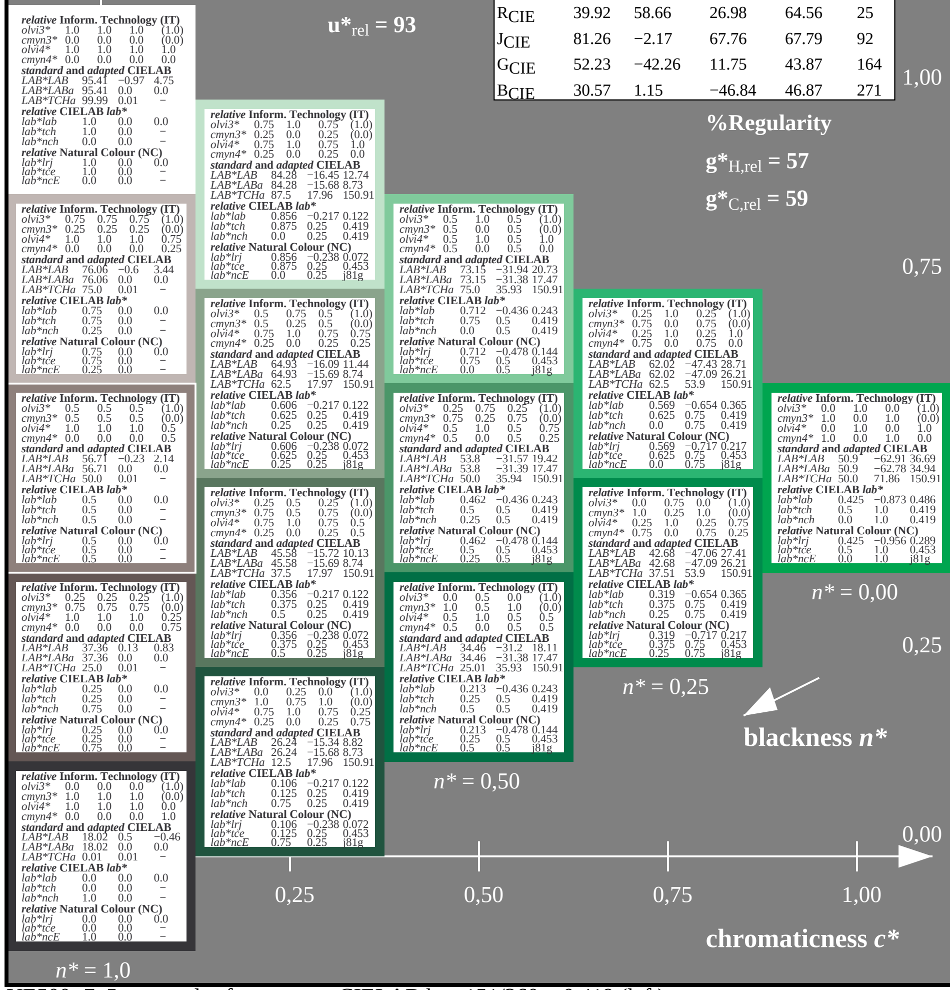
u^*_{rel} = 93

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



Output: Colorimetric Reflective System NCS11
for hue *h** = *lab*h* = 167/360 = 0.465

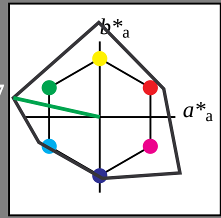
*lab*tch* and *lab*nch*

D65: hue G

LCH*Ma: 63 117 167

rgb*Ma: 0.0 1.0 0.0

triangle lightness *t**



%Gamut

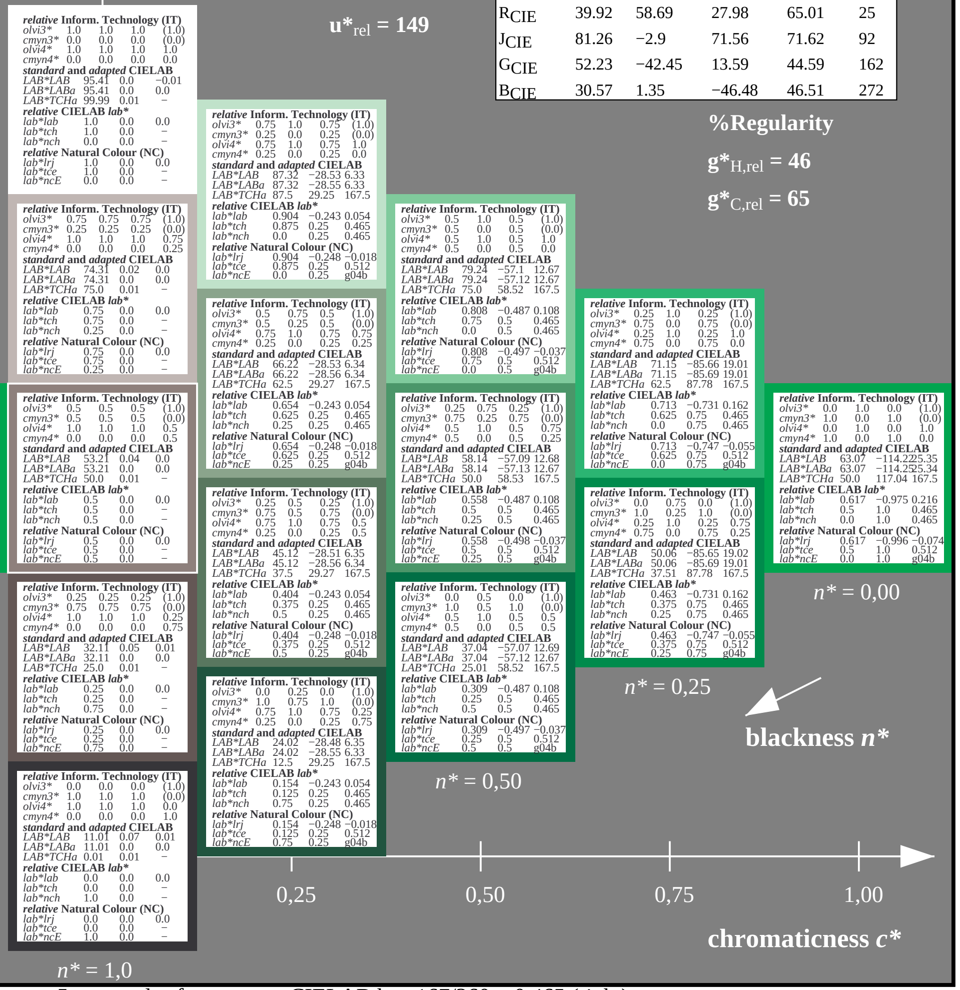
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



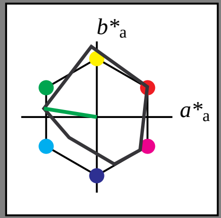
UE500−7, 5 step scales for constant CIELAB hue 151/360 = 0.419 (left)

5 step scales for constant CIELAB hue 167/360 = 0.465 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 171/360 = 0.475$
*lab*tch and lab*nch*

D65: hue G
LCH*Ma: 52 71 171
rgb*Ma: 0.0 1.0 0.0

triangle lightness *t**

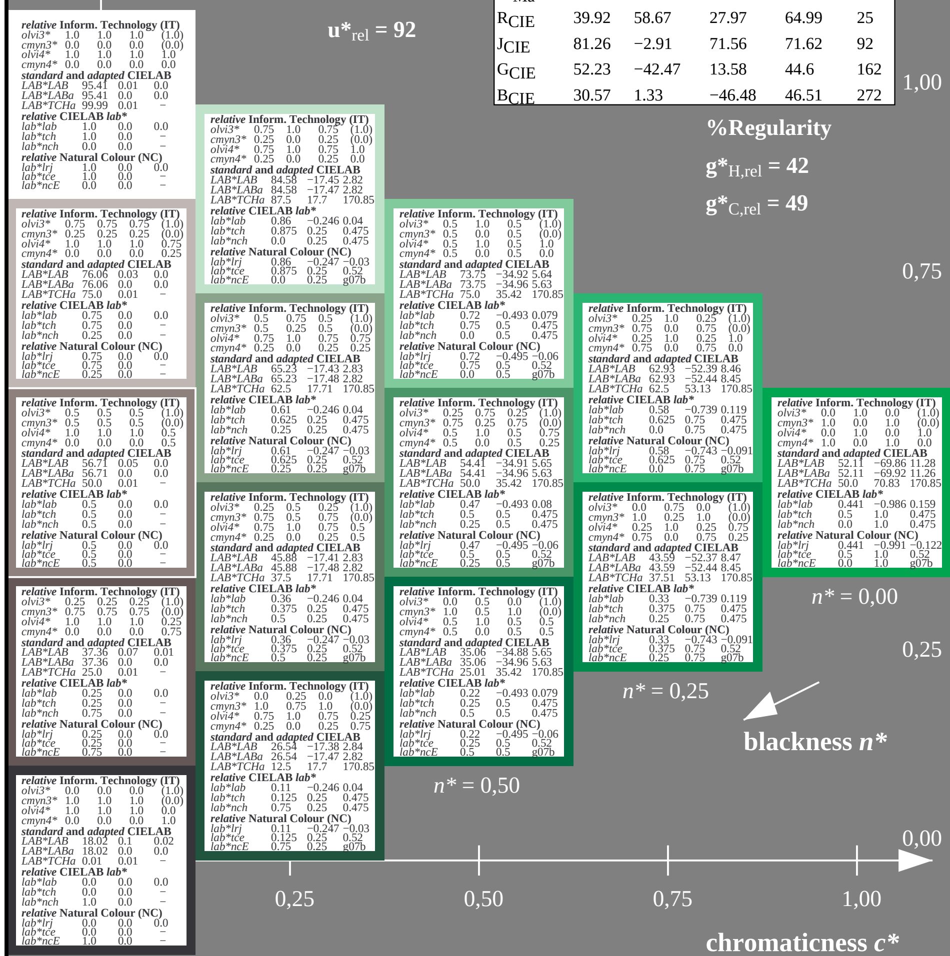


%Gamut
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

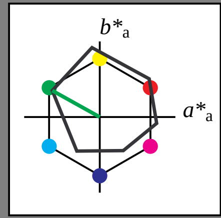
%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 151/360 = 0.419$
*lab*tch and lab*nch*

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

triangle lightness *t**

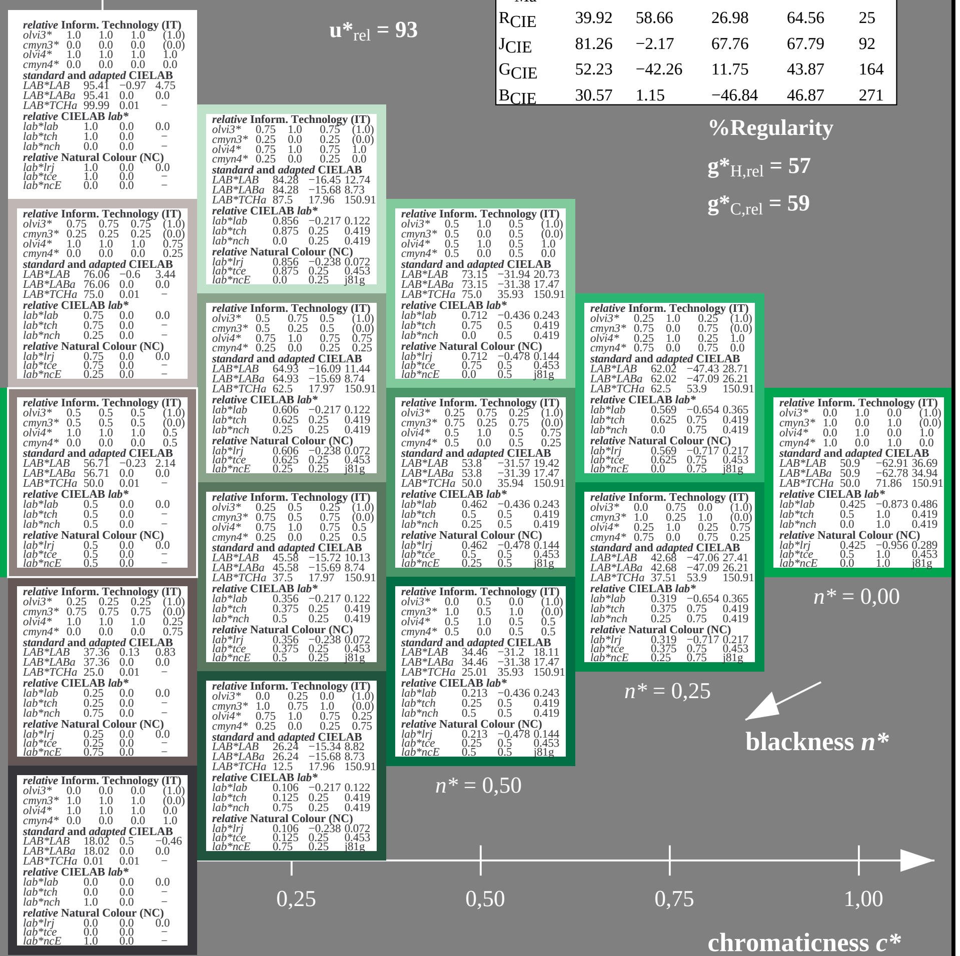


%Gamut
$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$

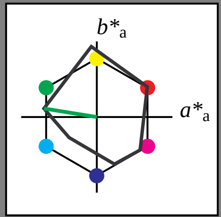


UE500−7, 5 step scales for constant CIELAB hue 171/360 = 0.475 (left)

5 step scales for constant CIELAB hue 151/360 = 0.419 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 171/360 = 0.475$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 71 171
rgb*Ma: 0.0 1.0 0.0
triangle lightness t^*

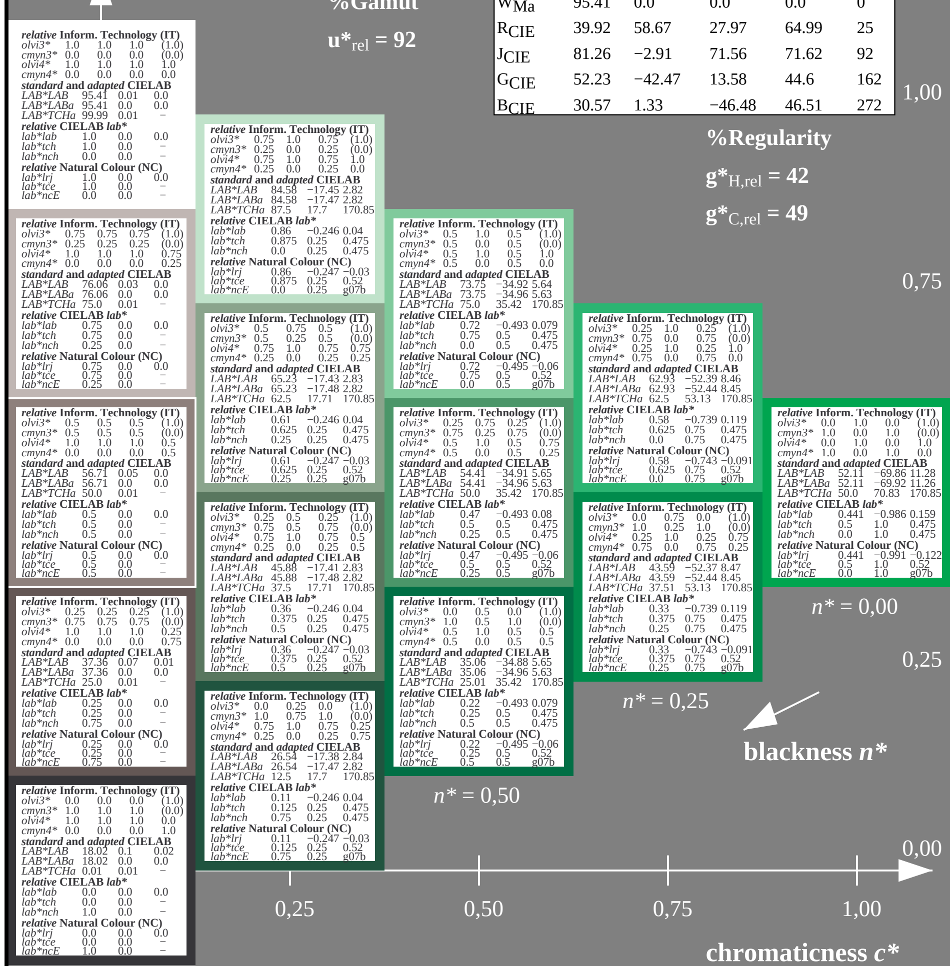


%Gamut
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data

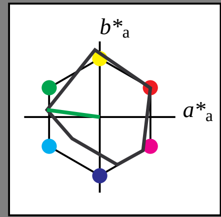
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 172/360 = 0.479$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 70 172
rgb*Ma: 0.0 1.0 0.0
triangle lightness t^*

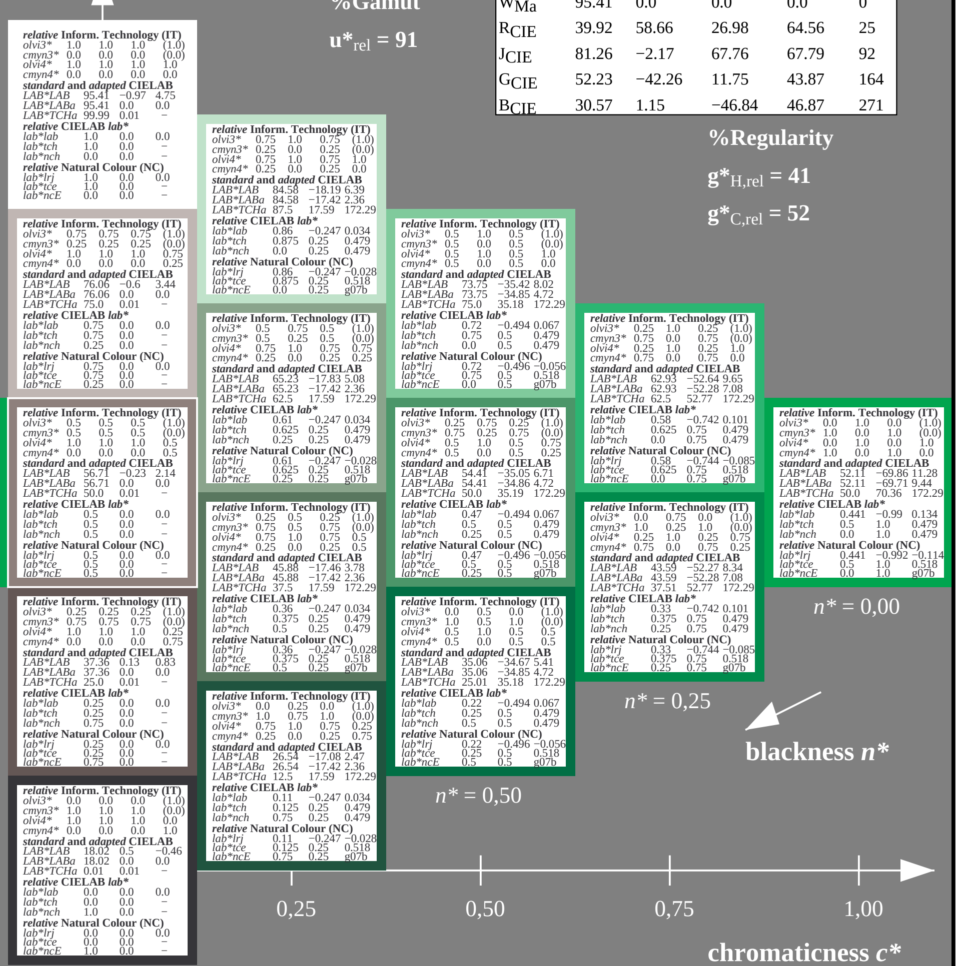


%Gamut
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 41$
$g^*_{C,rel} = 52$



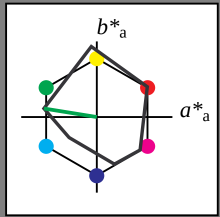
UE500−7, 5 step scales for constant CIELAB hue 171/360 = 0.475 (left)

5 step scales for constant CIELAB hue 172/360 = 0.479 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 171/360 = 0.475$
lab*tch and lab*nch

D65: hue G
LCH*Ma: 52 71 171
rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*

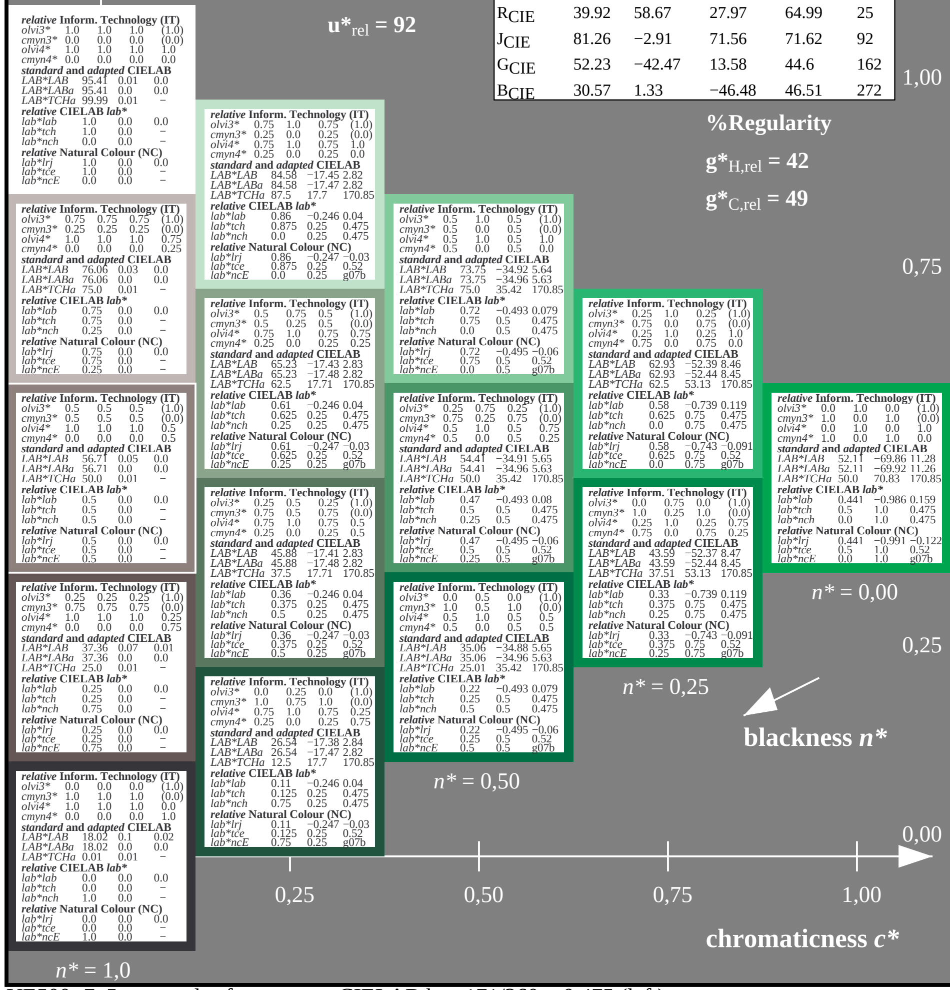


%Gamut
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

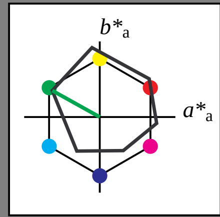
%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 151/360 = 0.419$
lab*tch and lab*nch

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

triangle lightness t^*

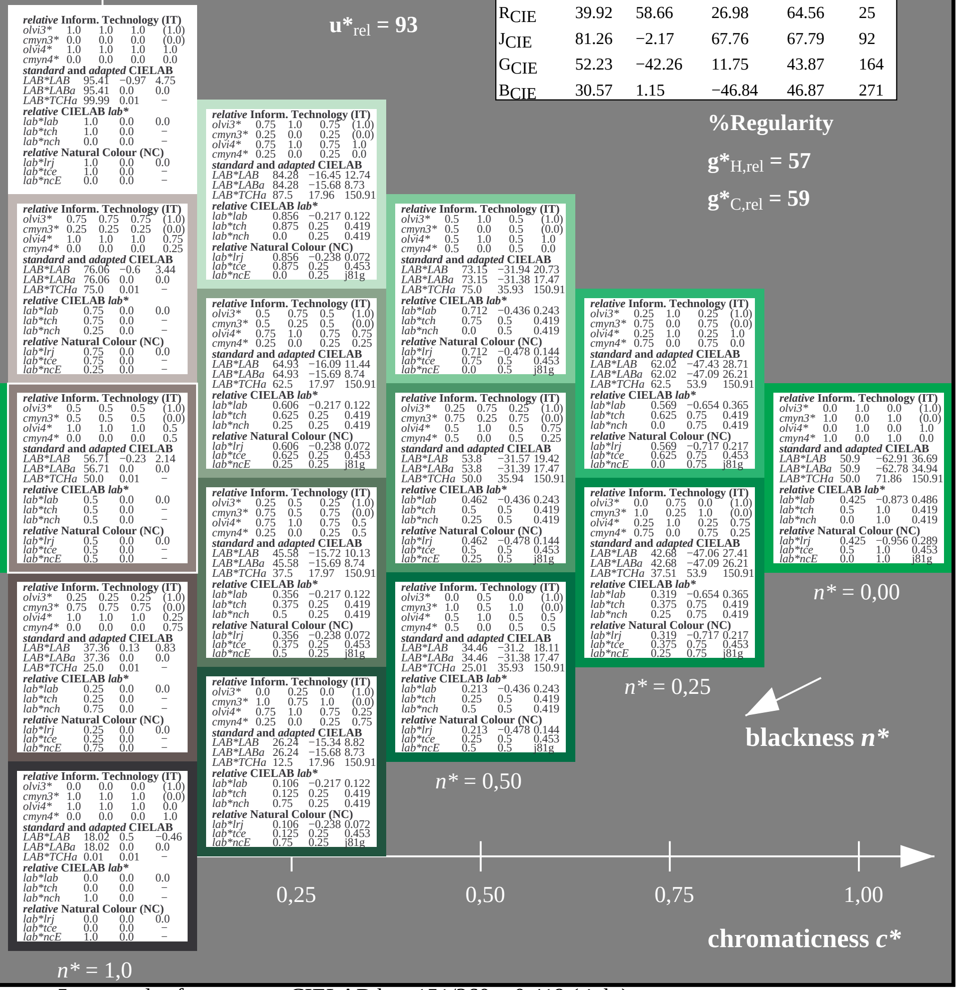


%Gamut
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



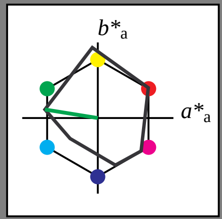
UE500−7, 5 step scales for constant CIELAB hue 171/360 = 0.475 (left)

5 step scales for constant CIELAB hue 151/360 = 0.419 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 171/360 = 0.475$
lab^*tch and lab^*nch

D65: hue G
LCH*Ma: 52 71 171
rgb*Ma: 0.0 1.0 0.0

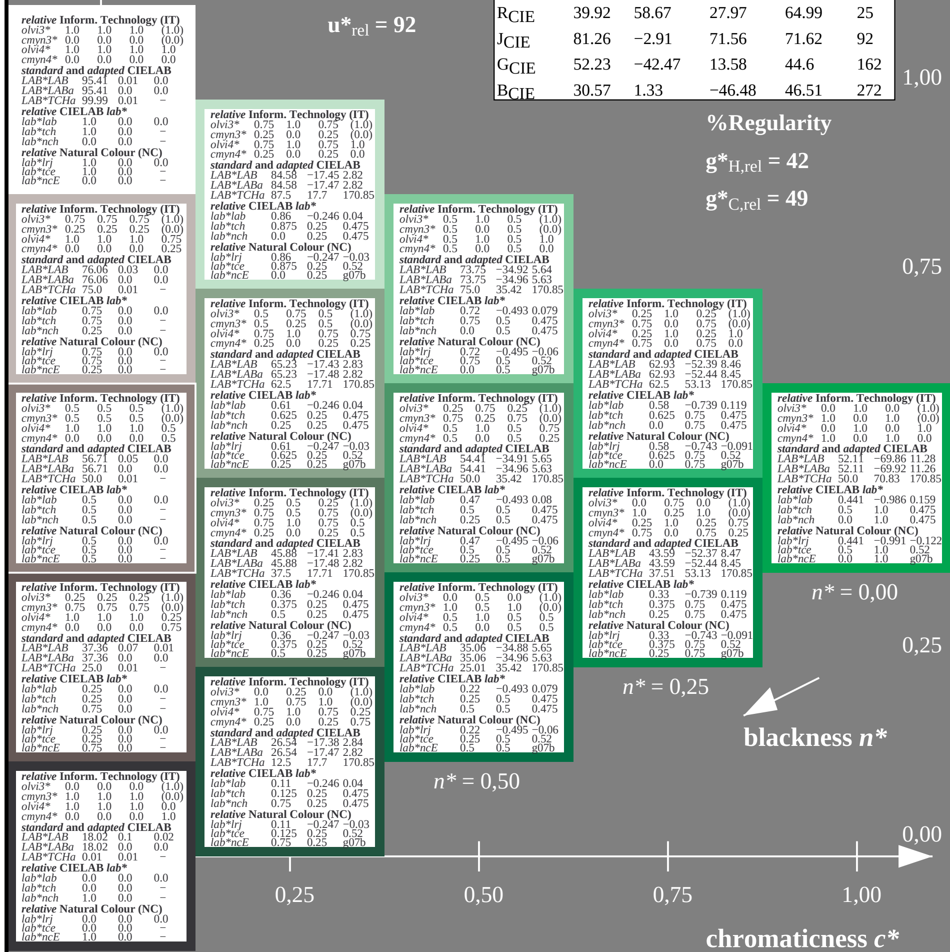
triangle lightness t^*



%Gamut
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

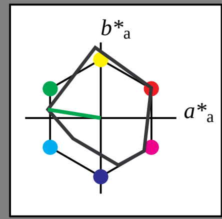
%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 171/360 = 0.475$
lab^*tch and lab^*nch

D65: hue G
LCH*Ma: 52 71 171
rgb*Ma: 0.0 1.0 0.0

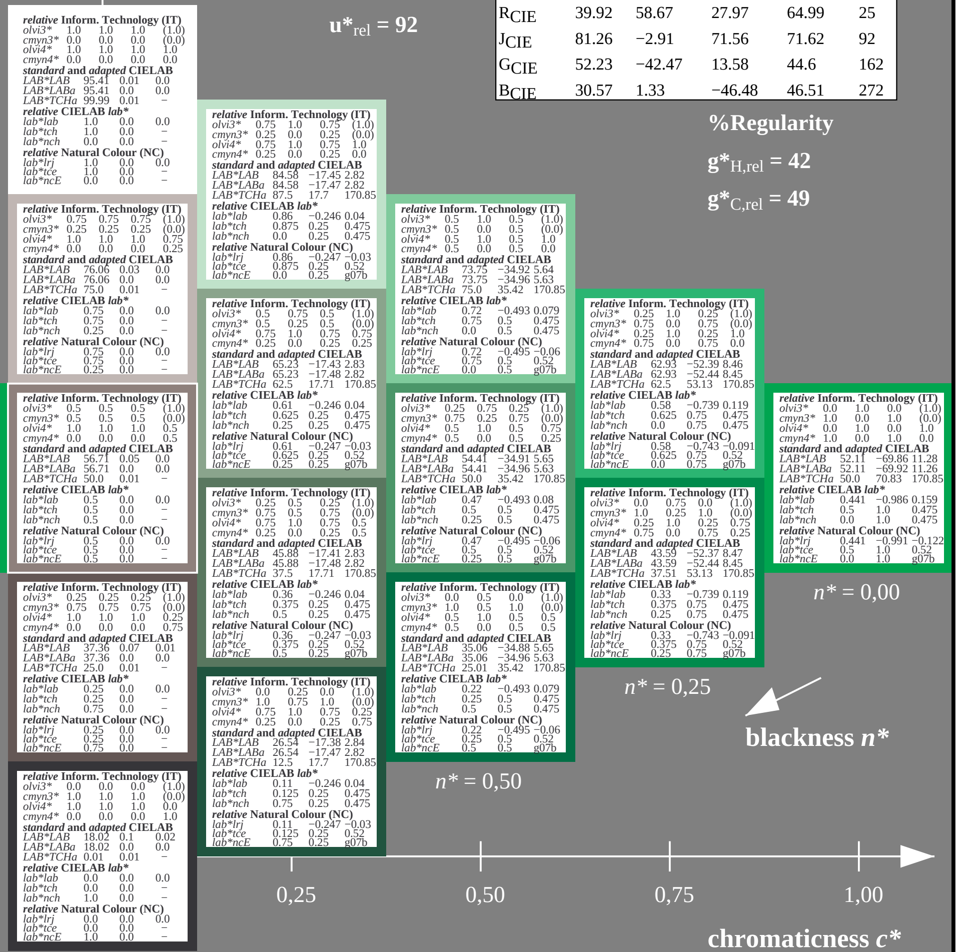
triangle lightness t^*



%Gamut
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$



UE500−7, 5 step scales for constant CIELAB hue 171/360 = 0.475 (left)

5 step scales for constant CIELAB hue 171/360 = 0.475 (right)

Input: Colorimetric Reflective System MRS18a

for hue h = lab*h = 171/360 = 0.475*

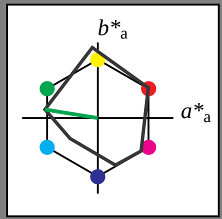
*lab*tch and lab*nch*

D65: hue G

LCH*Ma: 52 71 171

rgb*Ma: 0.0 1.0 0.0

triangle lightness t*

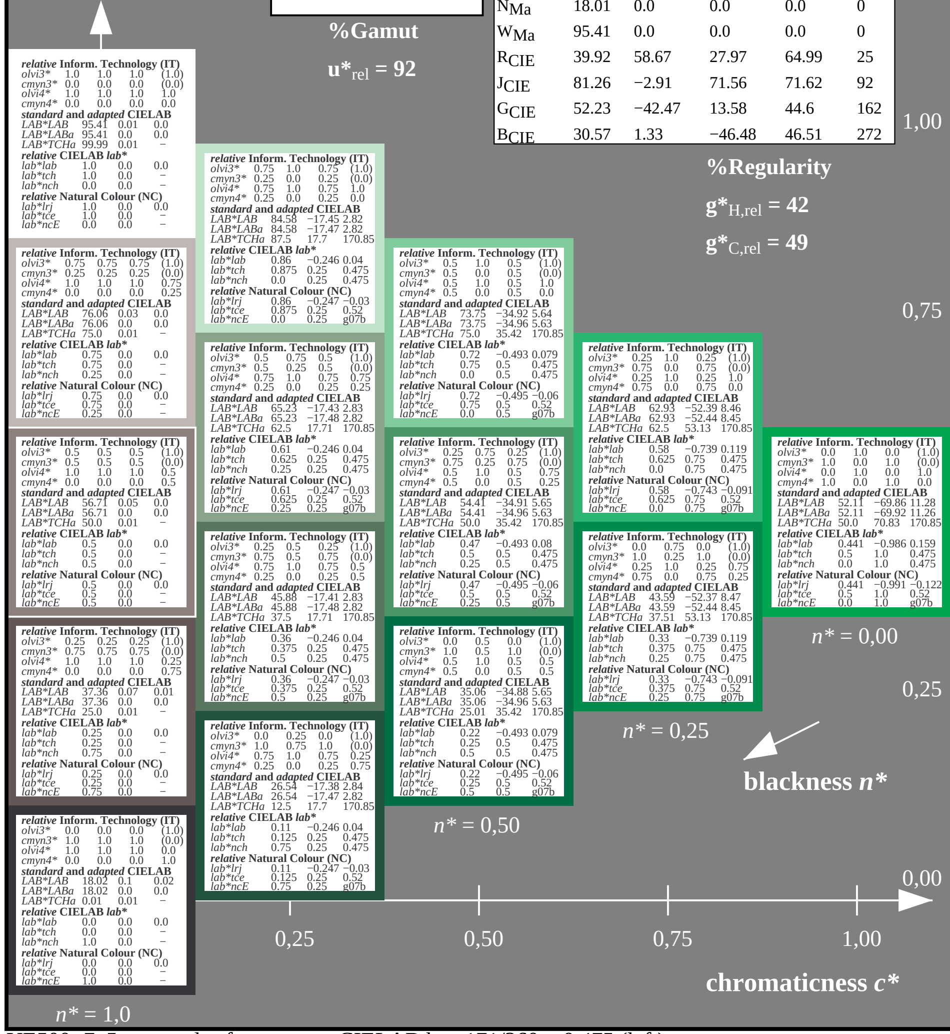


%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272



Output: Colorimetric Reflective System NRS18

for hue h = lab*h = 167/360 = 0.464*

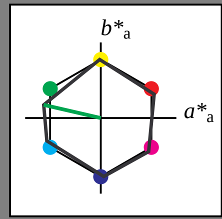
*lab*tch and lab*nch*

D65: hue G

LCH*Ma: 57 77 167

rgb*Ma: 0.0 1.0 0.0

triangle lightness t*

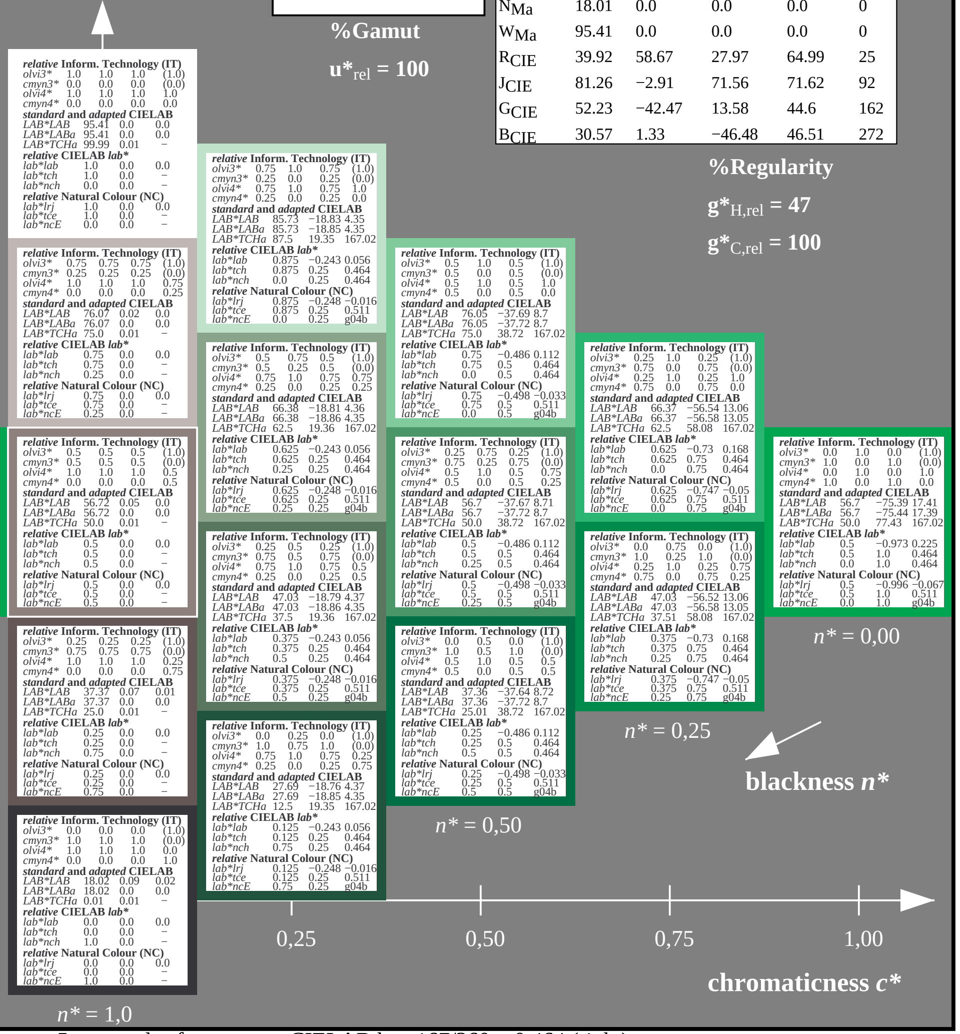


%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272



UE500−7, 5 step scales for constant CIELAB hue 171/360 = 0.475 (left)

5 step scales for constant CIELAB hue 167/360 = 0.464 (right)

Input: Colorimetric Reflective System MRS18a

for hue $h^* = lab^*h = 171/360 = 0.475$

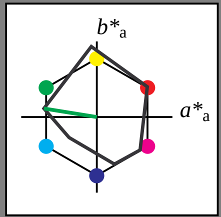
*lab*tch and lab*nch*

D65: hue G

LCH*Ma: 52 71 171

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

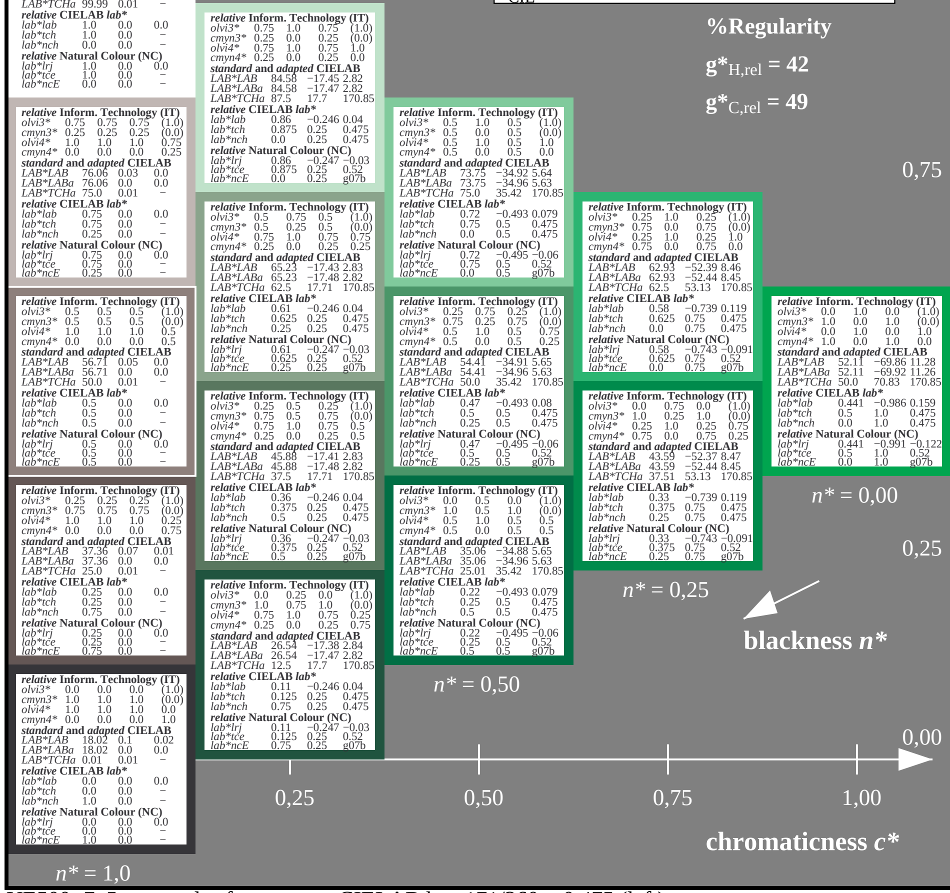
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System NCS18

for hue $h^* = lab^*h = 167/360 = 0.465$

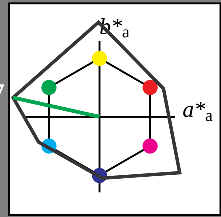
*lab*tch and lab*nch*

D65: hue G

LCH*Ma: 63 117 167

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

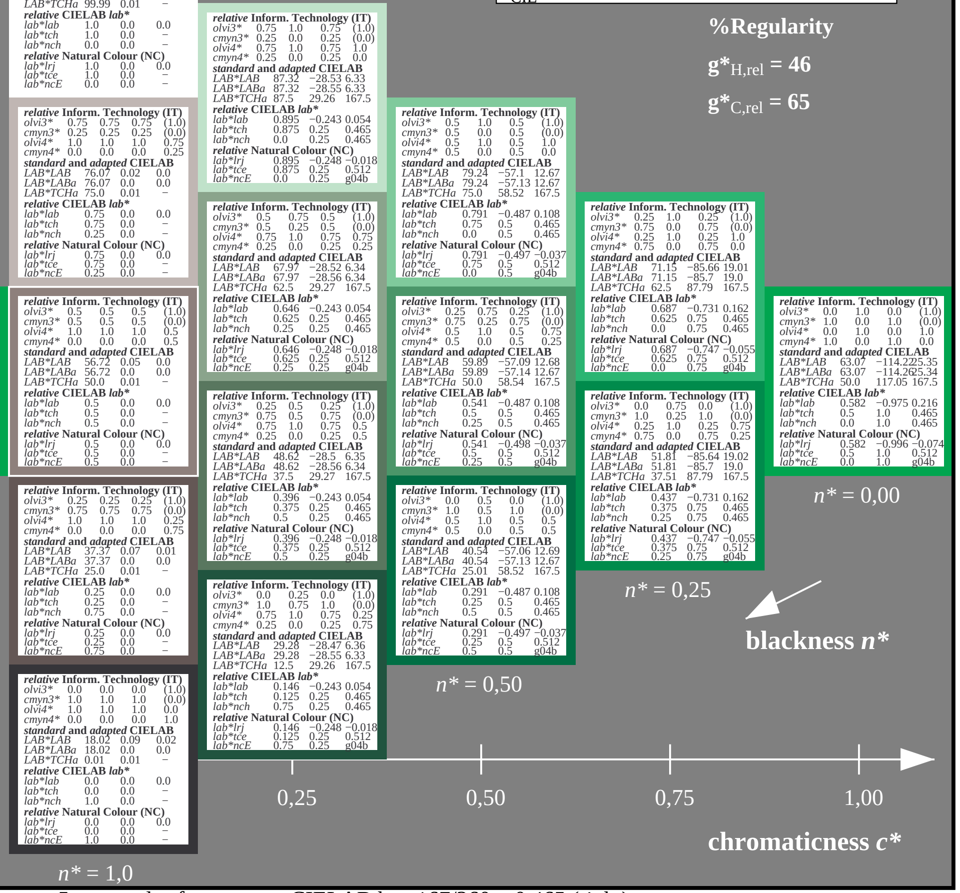
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



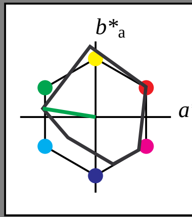
UE500−7, 5 step scales for constant CIELAB hue 171/360 = 0.475 (left)

5 step scales for constant CIELAB hue 167/360 = 0.465 (right)

Input: Colorimetric Reflective System MRS18a
for hue *h = *lab*h* = 171/360 = 0.475**
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 71 171
rgb*Ma: 0.0 1.0 0.0

triangle lightness *t*



%Gamut

u^*_{rel} = 92

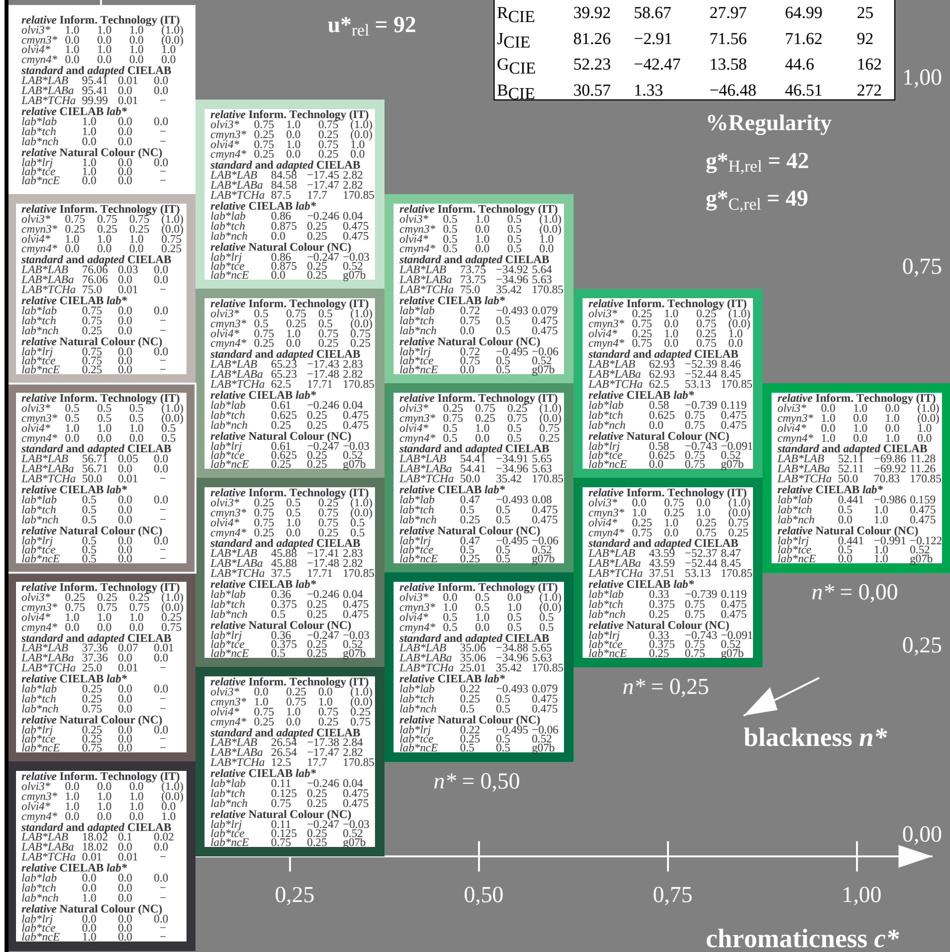
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

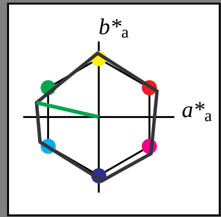
$g^*_{C,rel}$ = 49



Output: Colorimetric Reflective System NRS11
for hue *h = *lab*h* = 167/360 = 0.464**
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 84 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness *t*



%Gamut

u^*_{rel} = 119

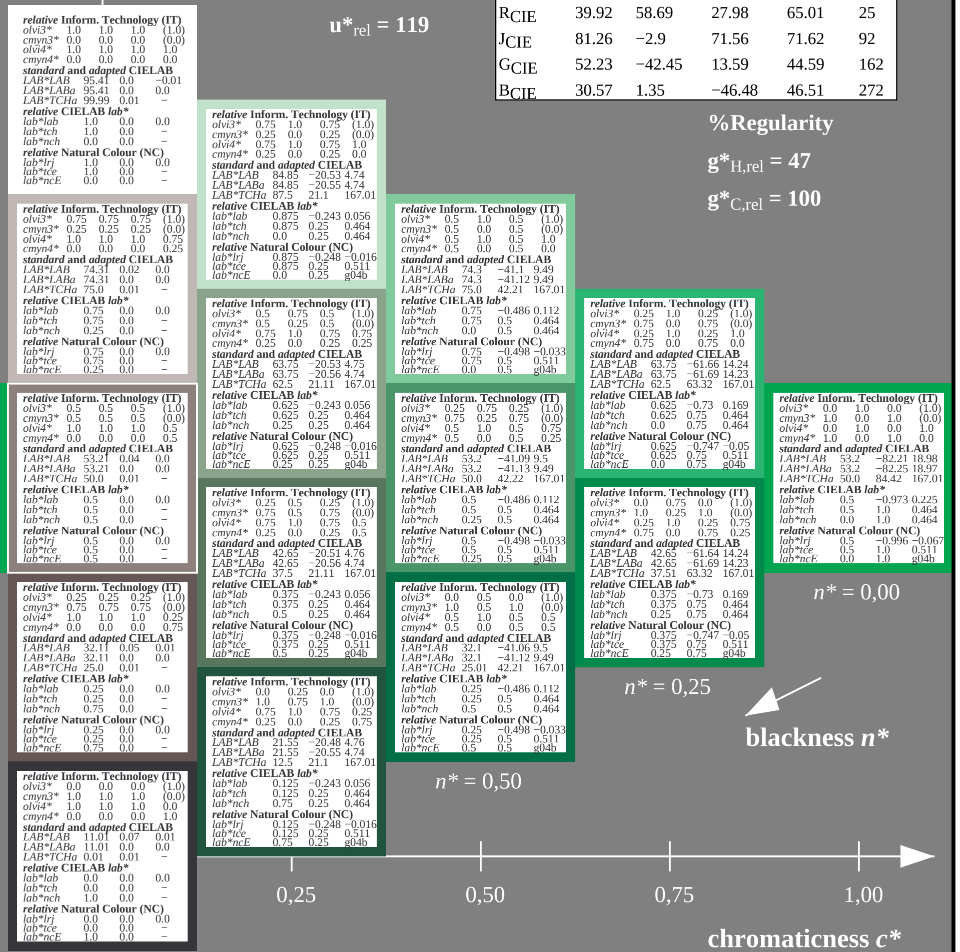
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

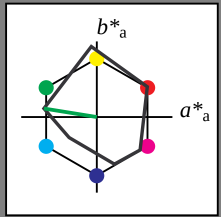
$g^*_{C,rel}$ = 100



UE500−7, 5 step scales for constant CIELAB hue 171/360 = 0.475 (left) 5 step scales for constant CIELAB hue 167/360 = 0.464 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 171/360 = 0.475$
lab*tch and lab*nch

D65: hue G
LCH*Ma: 52 71 171
rgb*Ma: 0.0 1.0 0.0
triangle lightness t^*

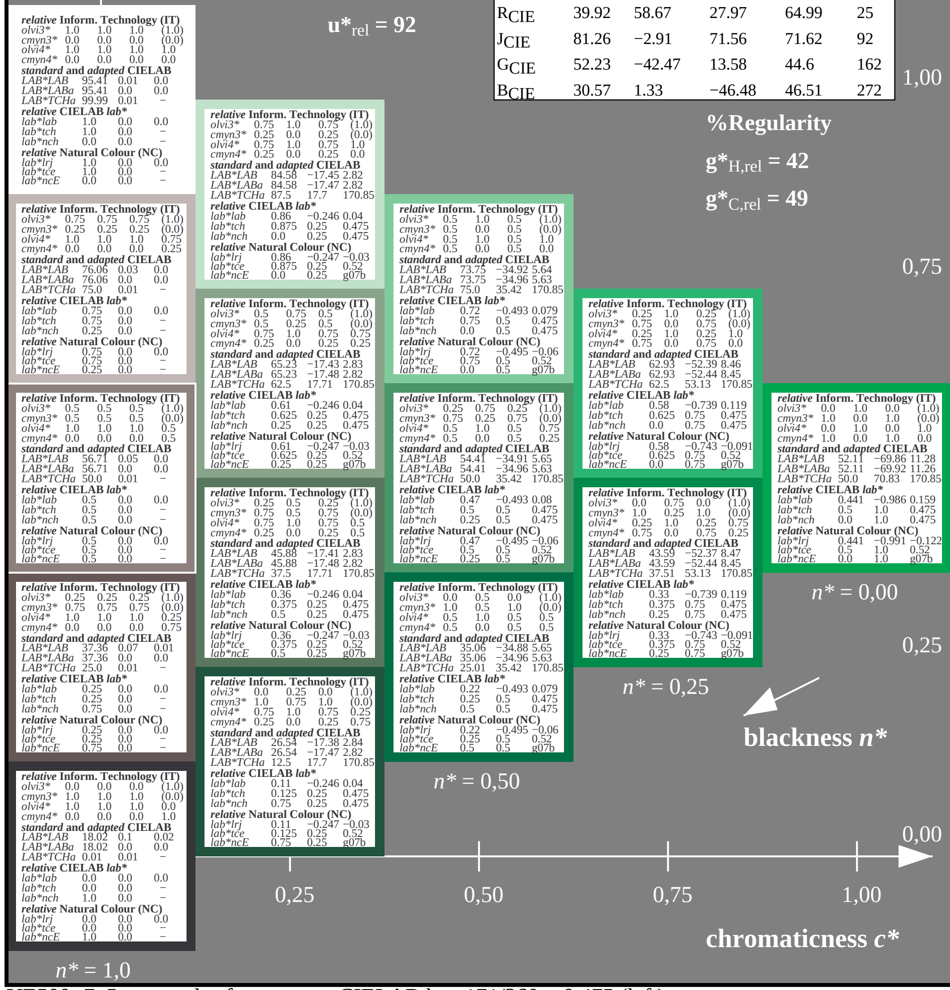


%Gamut
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data

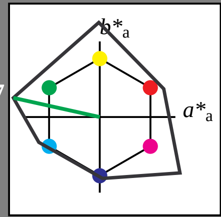
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 167/360 = 0.465$
lab*tch and lab*nch

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0
triangle lightness t^*

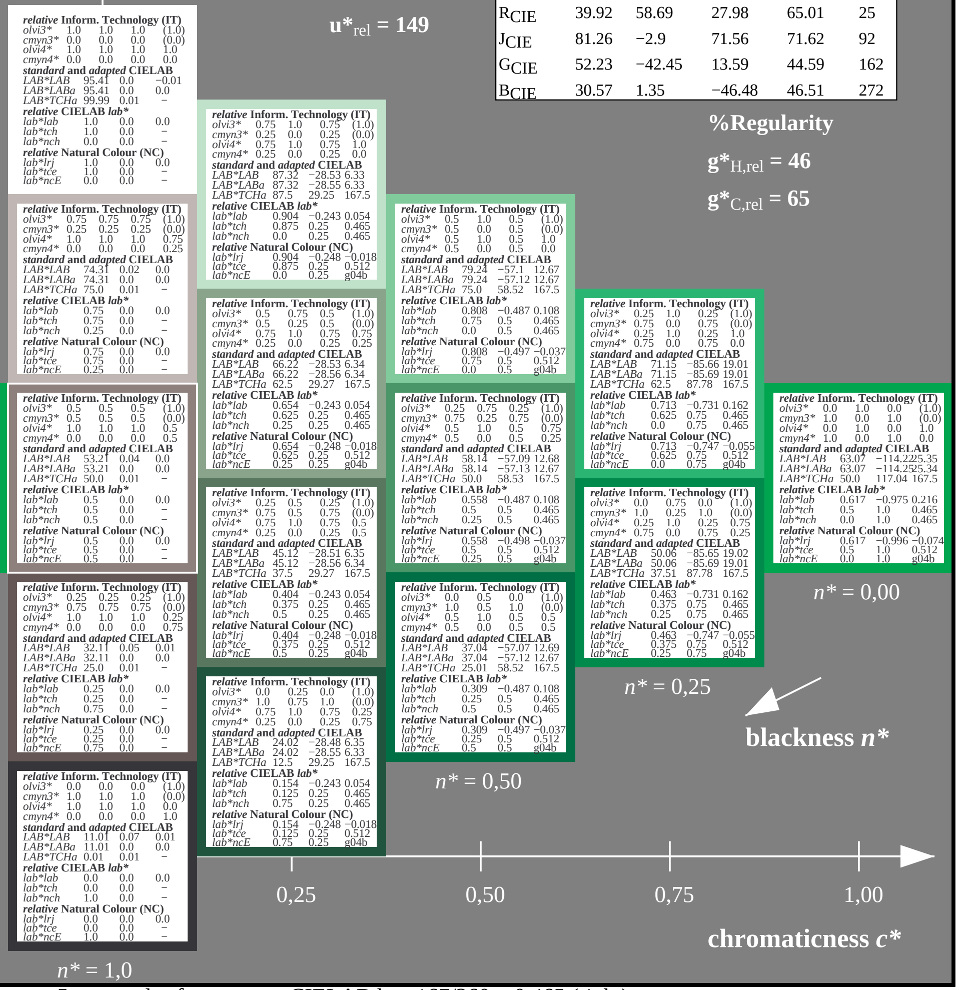


%Gamut
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



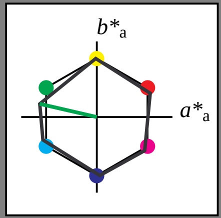
UE500−7, 5 step scales for constant CIELAB hue 171/360 = 0.475 (left)

5 step scales for constant CIELAB hue 167/360 = 0.465 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 167/360 = 0.464$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 77 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

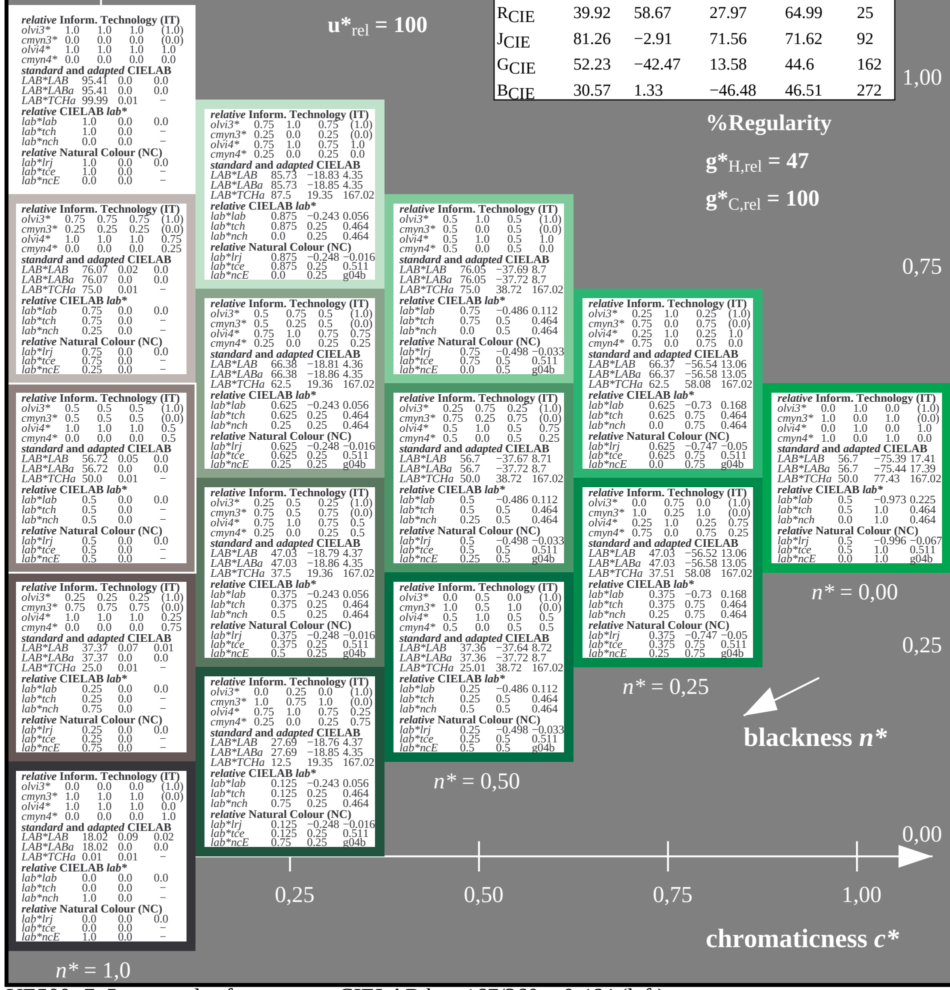
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

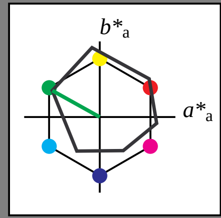
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 151/360 = 0.419$
lab*tch* and *lab*nch

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

triangle lightness t^*



%Gamut

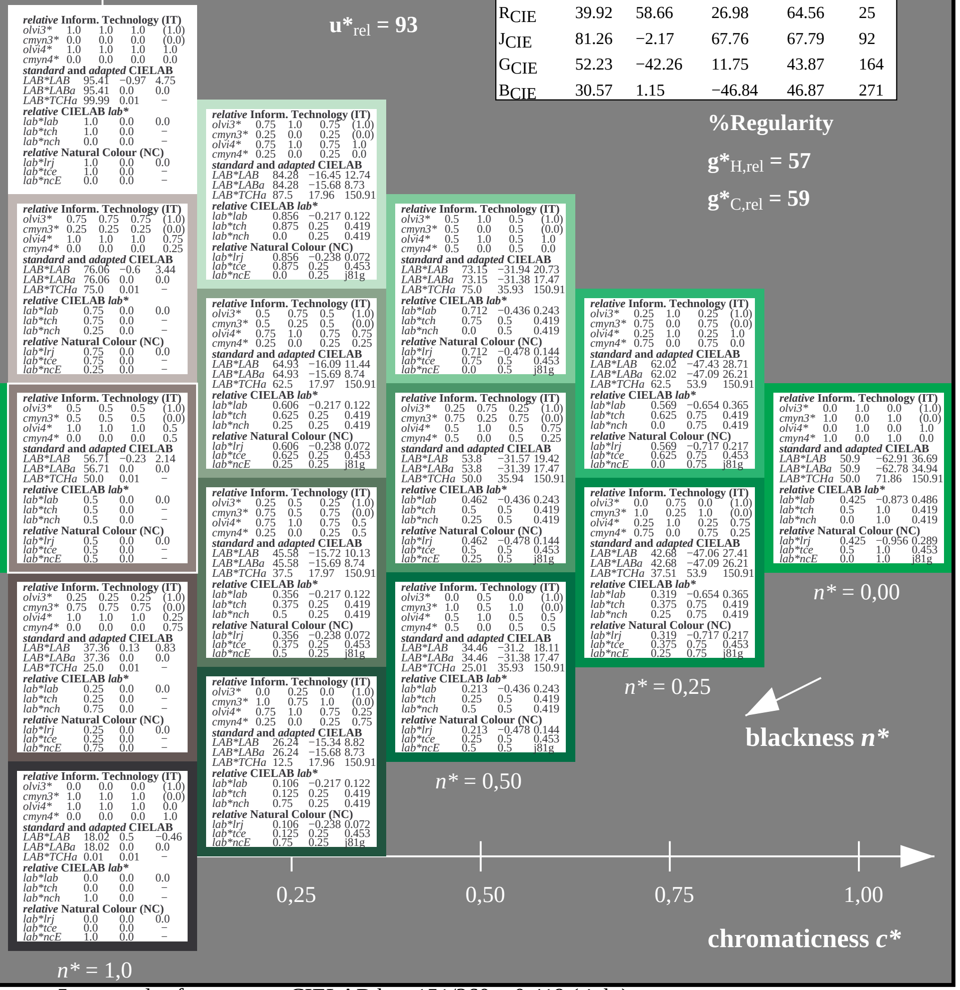
$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



UE500−7, 5 step scales for constant CIELAB hue 167/360 = 0.464 (left)

5 step scales for constant CIELAB hue 151/360 = 0.419 (right)

Input: Colorimetric Reflective System NRS18

for hue $h^* = lab^*h = 167/360 = 0.464$

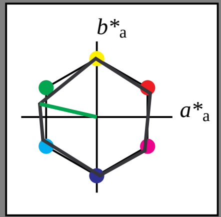
*lab*tch* and *lab*nch*

D65: hue G

LCH*Ma: 57 77 167

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 100$

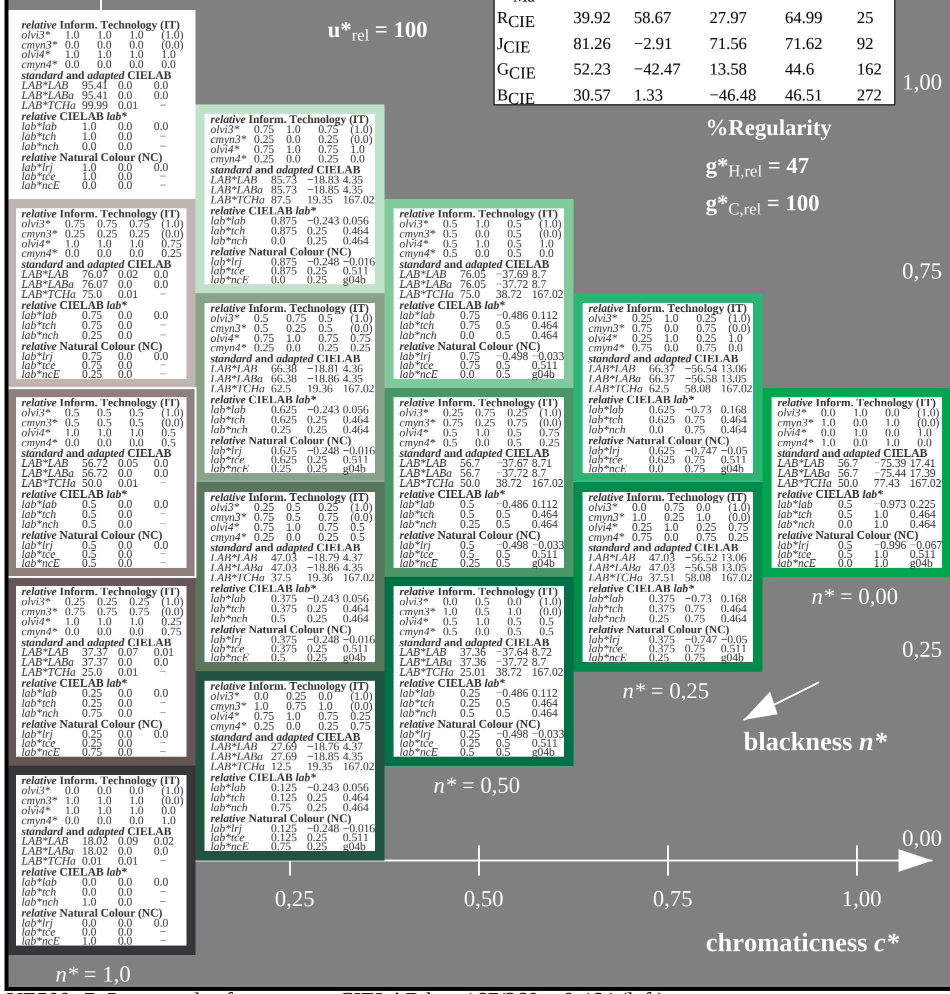
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System MRS18

for hue $h^* = lab^*h = 172/360 = 0.479$

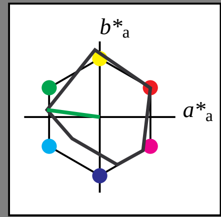
*lab*tch* and *lab*nch*

D65: hue G

LCH*Ma: 52 70 172

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 91$

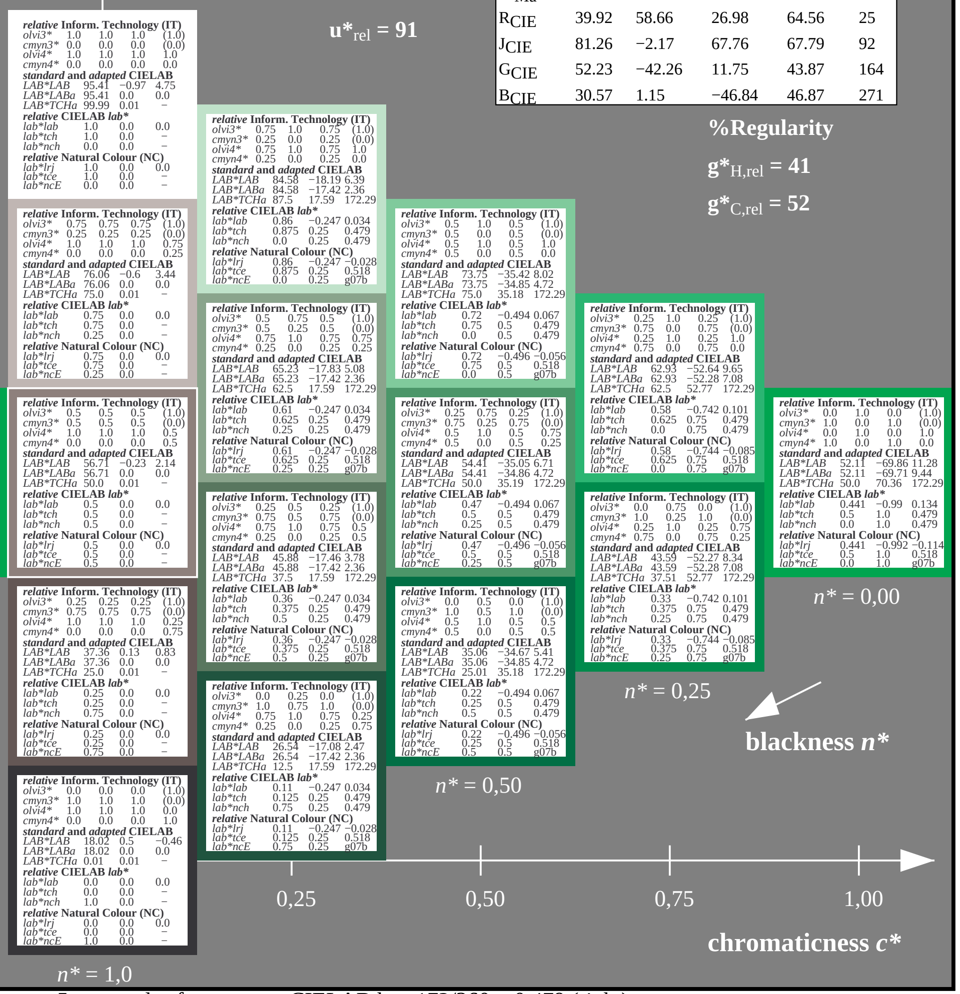
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



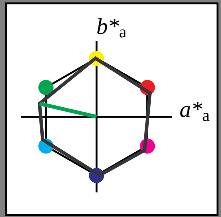
UE500−7, 5 step scales for constant CIELAB hue 167/360 = 0.464 (left)

5 step scales for constant CIELAB hue 172/360 = 0.479 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 167/360 = 0.464$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 77 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*

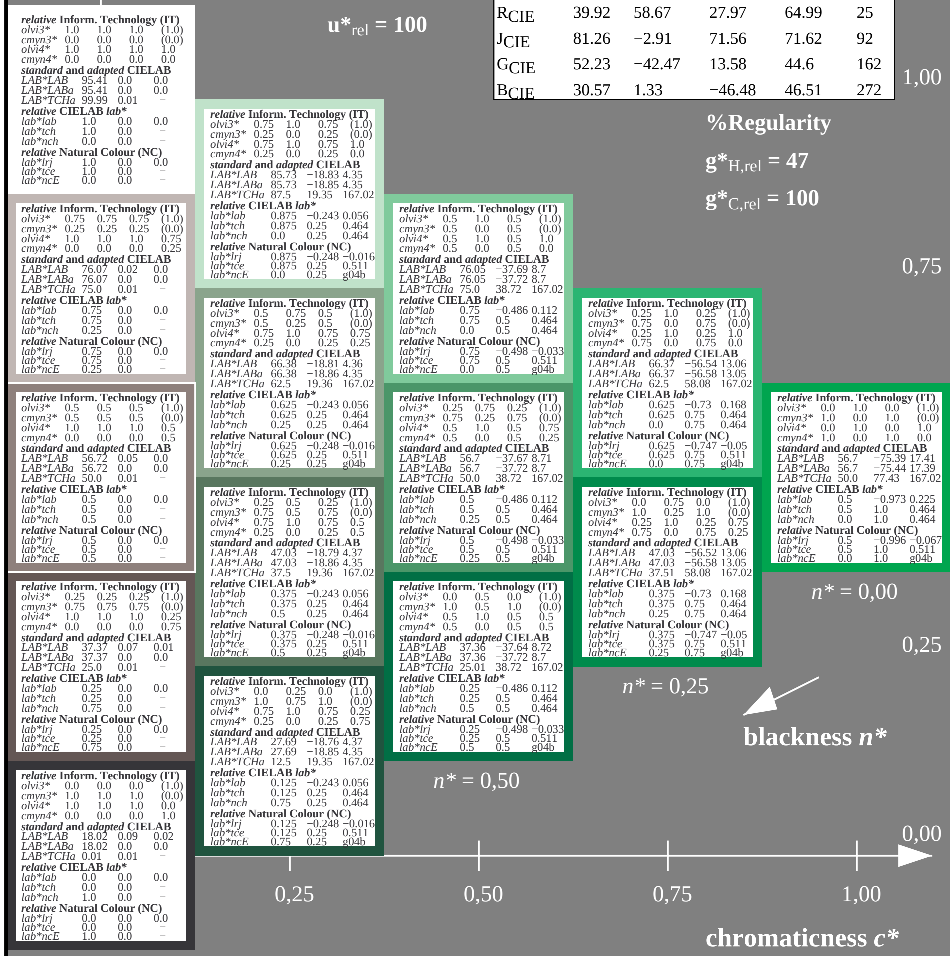


%Gamut
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

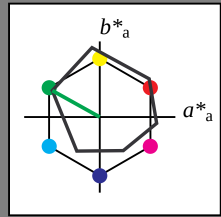
%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 151/360 = 0.419$
lab*tch* and *lab*nch

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

triangle lightness t^*

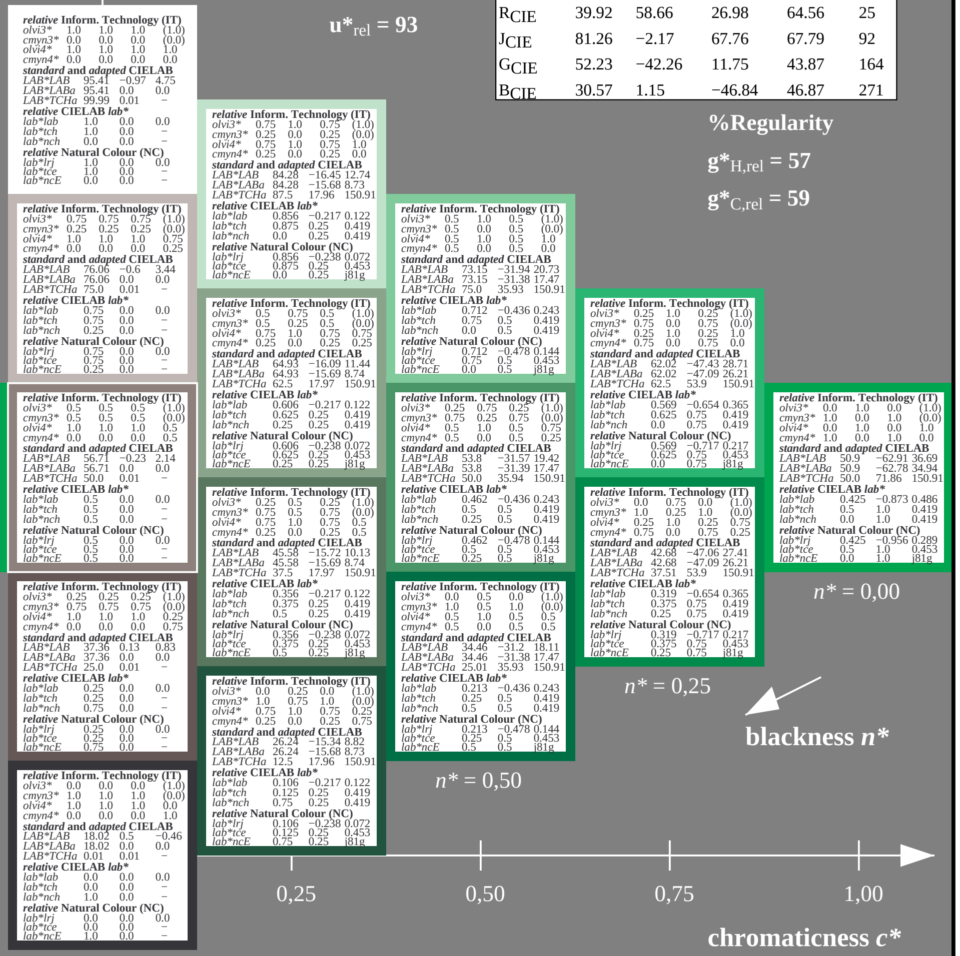


%Gamut
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



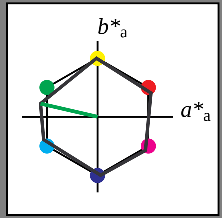
UE500−7, 5 step scales for constant CIELAB hue 167/360 = 0.464 (left)

5 step scales for constant CIELAB hue 151/360 = 0.419 (right)

Input: Colorimetric Reflective System NRS18
for hue *h = *lab*h* = 167/360 = 0.464**
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 77 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness *t*



%Gamut

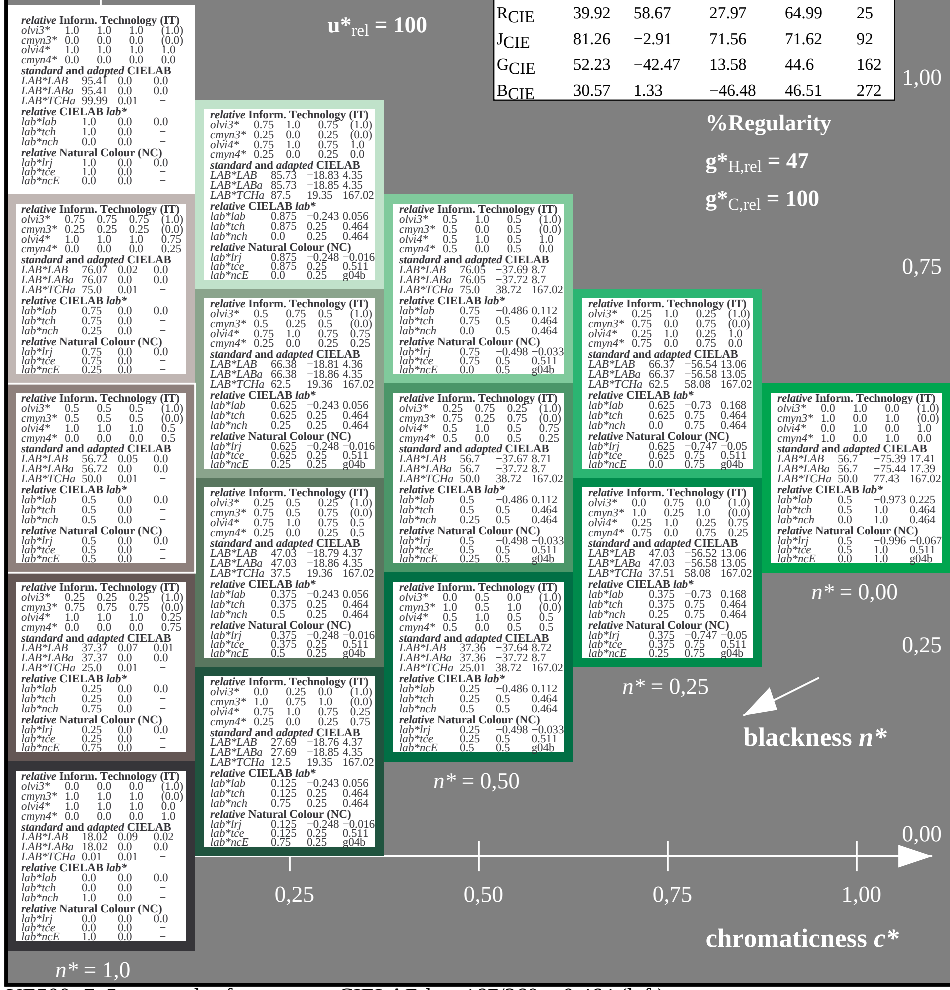
u^*_{rel} = 100

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

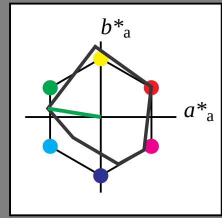
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System MRS18a
for hue *h = *lab*h* = 171/360 = 0.475**
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 71 171
rgb*Ma: 0.0 1.0 0.0

triangle lightness *t*



%Gamut

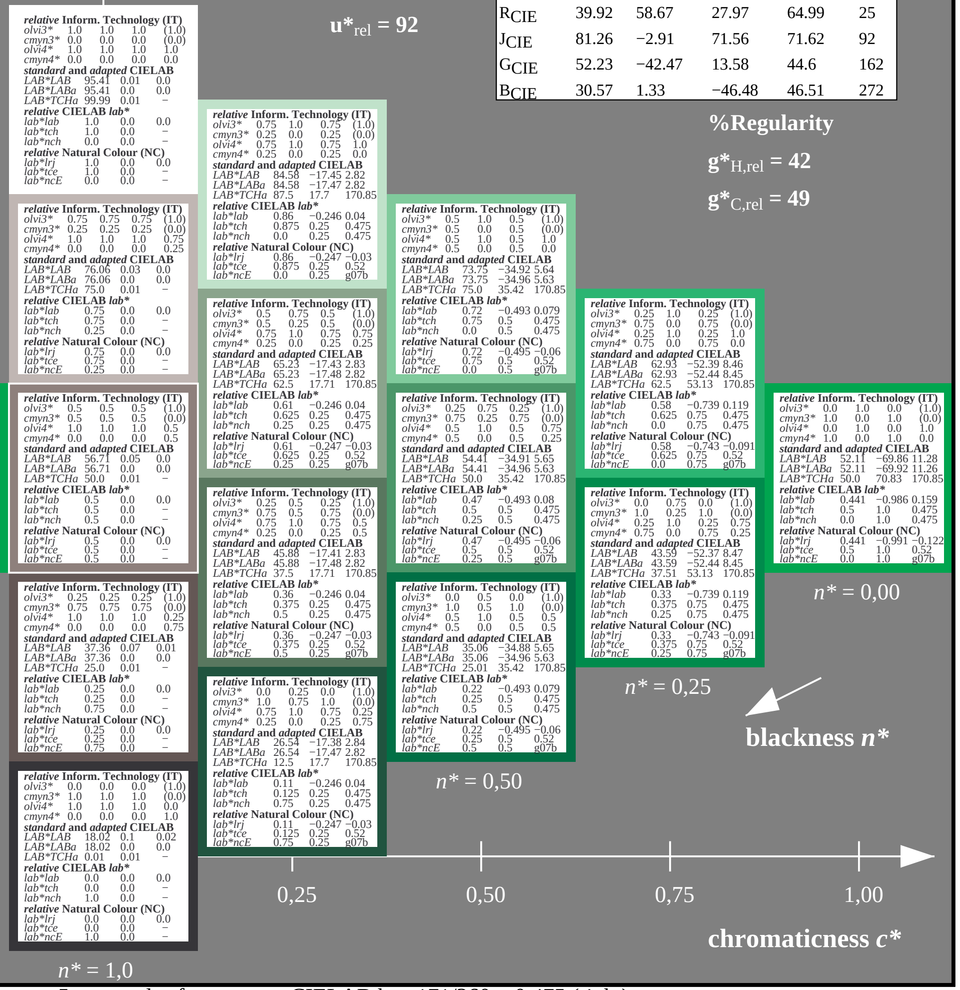
u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



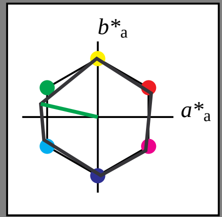
UE500−7, 5 step scales for constant CIELAB hue 167/360 = 0.464 (left)

5 step scales for constant CIELAB hue 171/360 = 0.475 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 167/360 = 0.464$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 77 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*

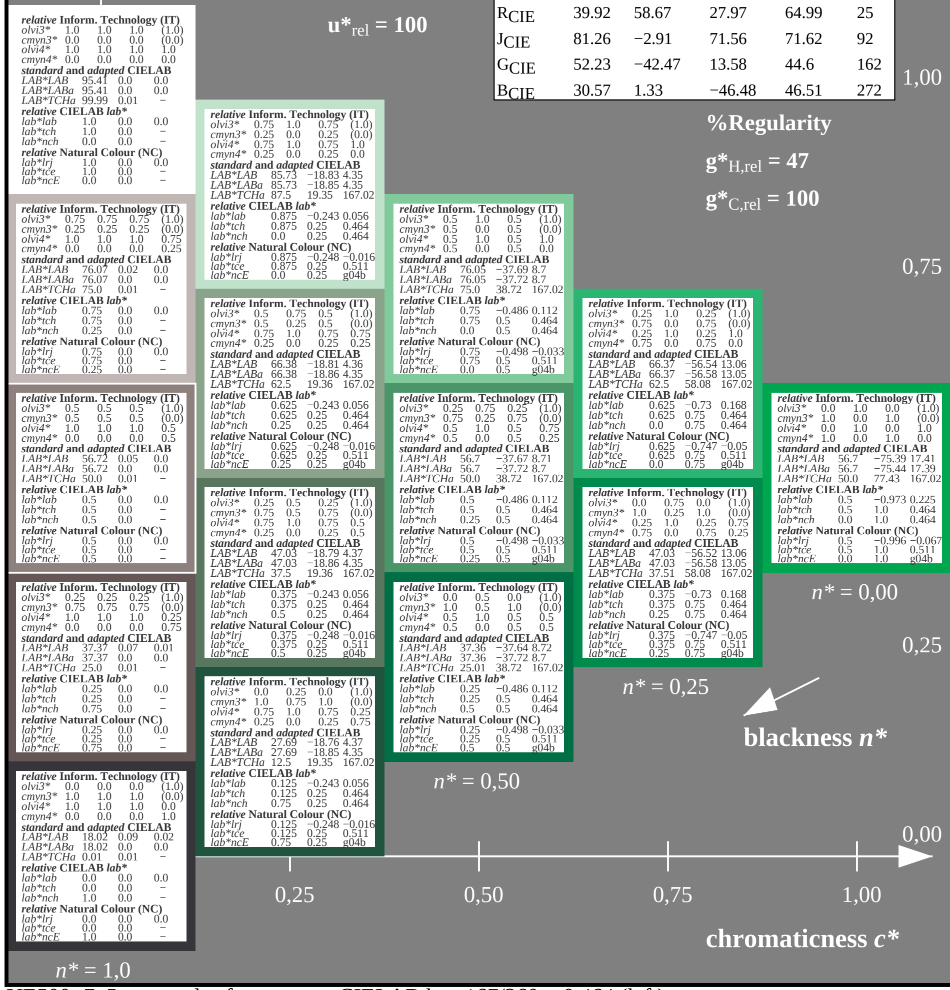


%Gamut
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

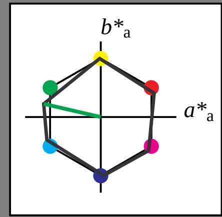
%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 167/360 = 0.464$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 77 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*

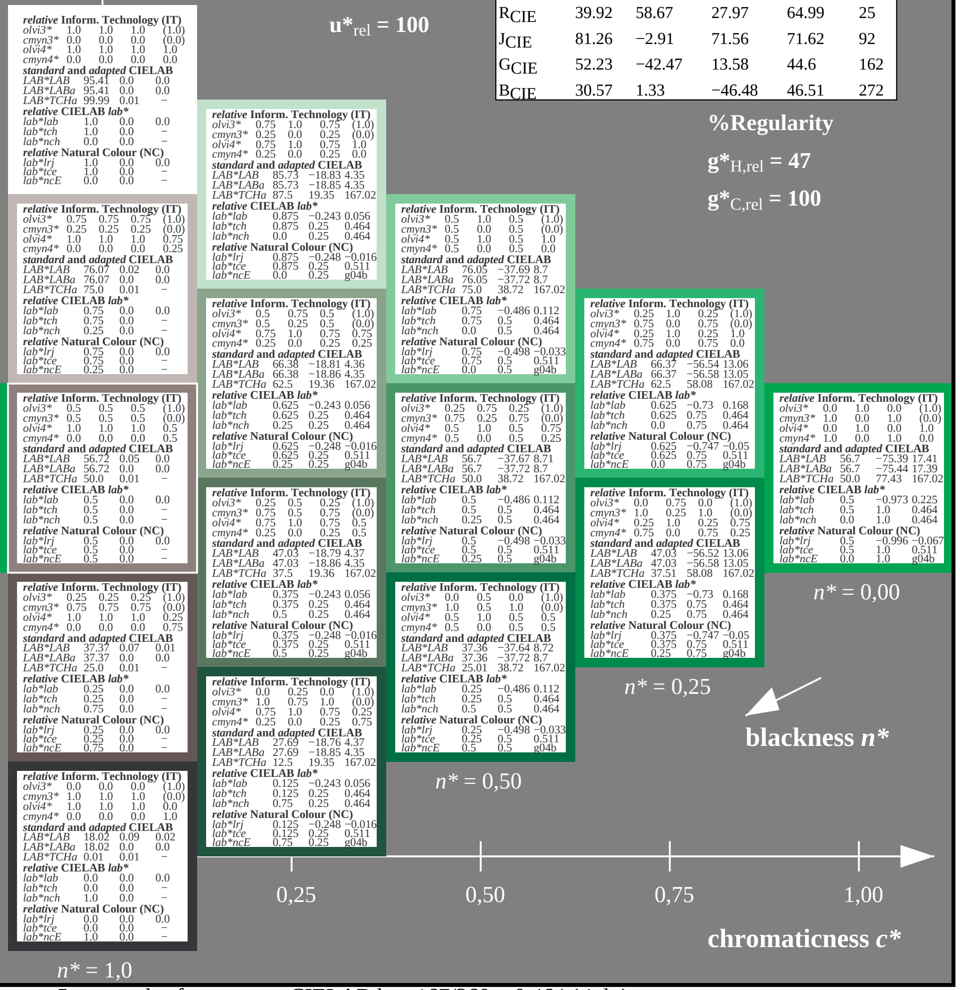


%Gamut
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$

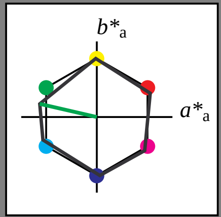


UE500−7, 5 step scales for constant CIELAB hue 167/360 = 0.464 (left)

5 step scales for constant CIELAB hue 167/360 = 0.464 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 167/360 = 0.464$
*lab*tch and lab*nch*

D65: hue G
LCH*Ma: 57 77 167
rgb*Ma: 0.0 1.0 0.0
triangle lightness t^*

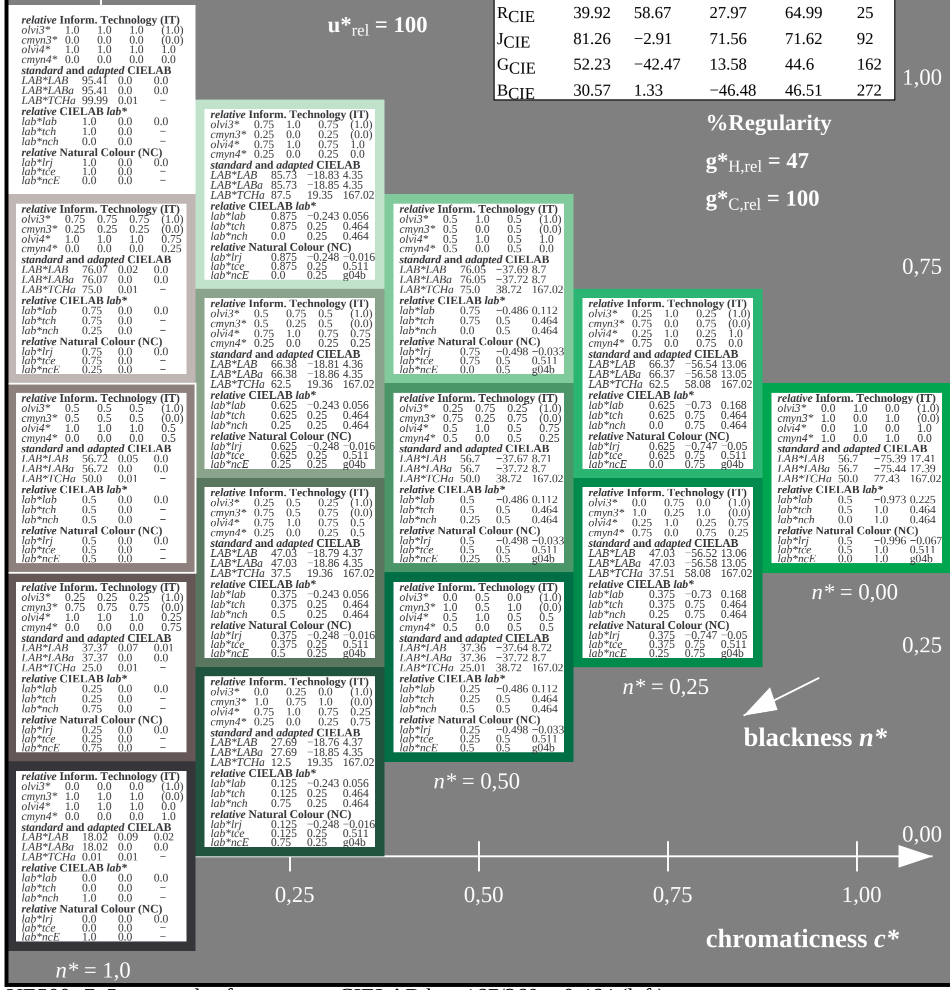


%Gamut
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data

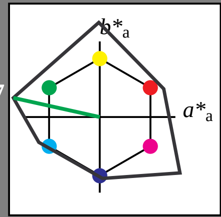
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 167/360 = 0.465$
*lab*tch and lab*nch*

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0
triangle lightness t^*

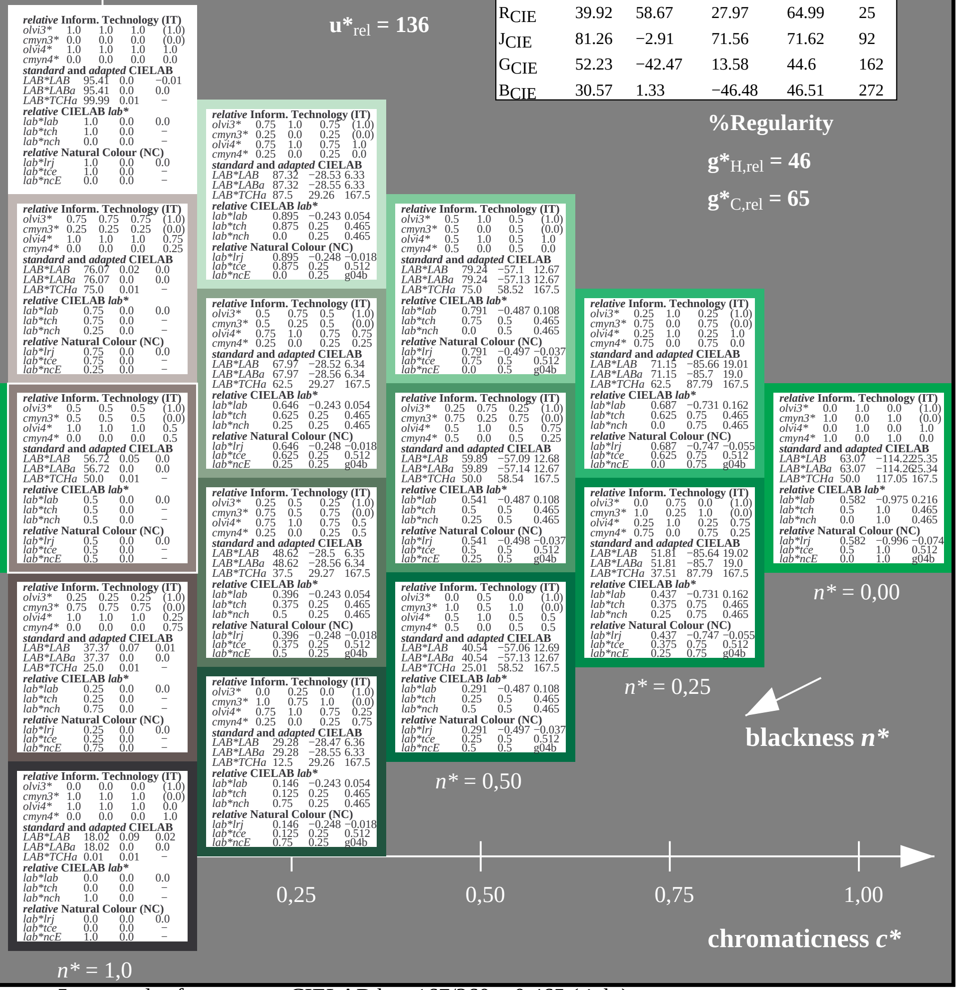


%Gamut
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



UE500−7, 5 step scales for constant CIELAB hue 167/360 = 0.464 (left)

5 step scales for constant CIELAB hue 167/360 = 0.465 (right)

Input: Colorimetric Reflective System NRS18

for hue $h^* = lab^*h = 167/360 = 0.464$

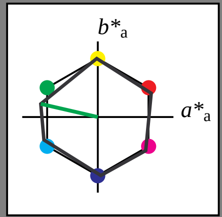
*lab*tch* and *lab*nch*

D65: hue G

LCH*Ma: 57 77 167

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 100$

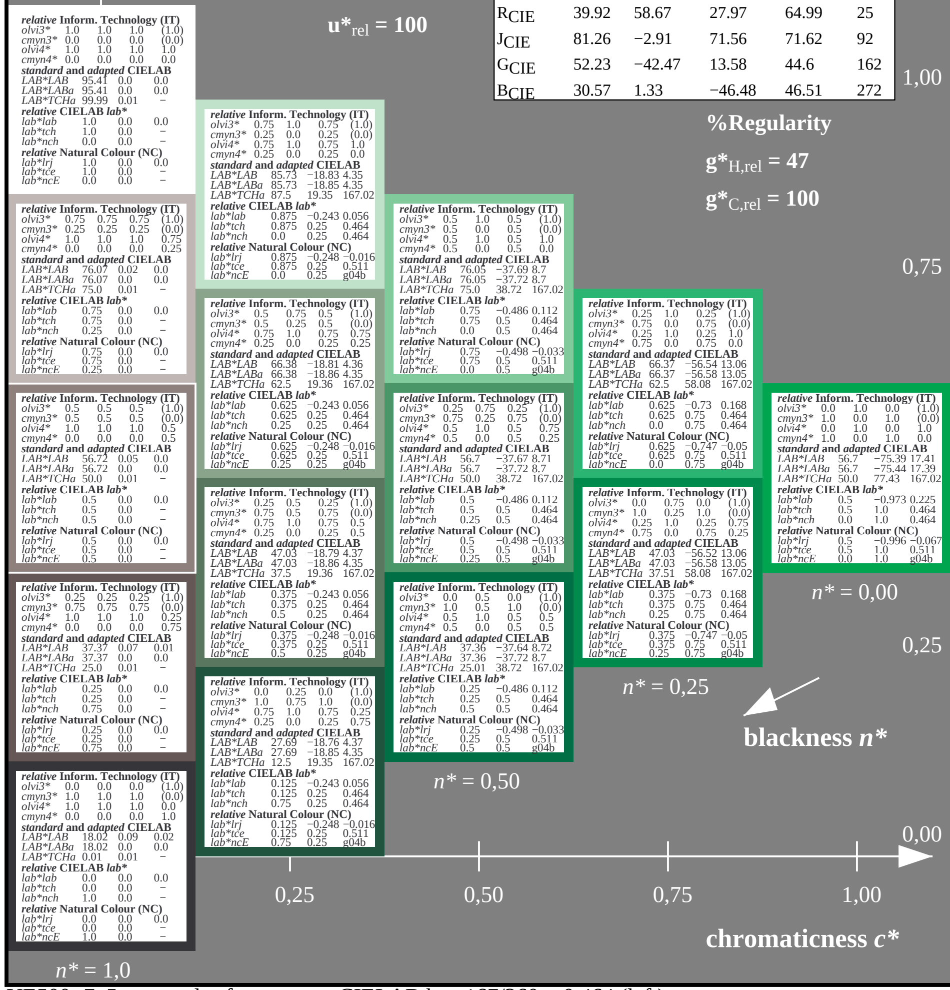
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System NRS11

for hue $h^* = lab^*h = 167/360 = 0.464$

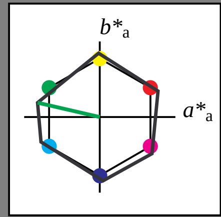
*lab*tch* and *lab*nch*

D65: hue G

LCH*Ma: 53 84 167

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 119$

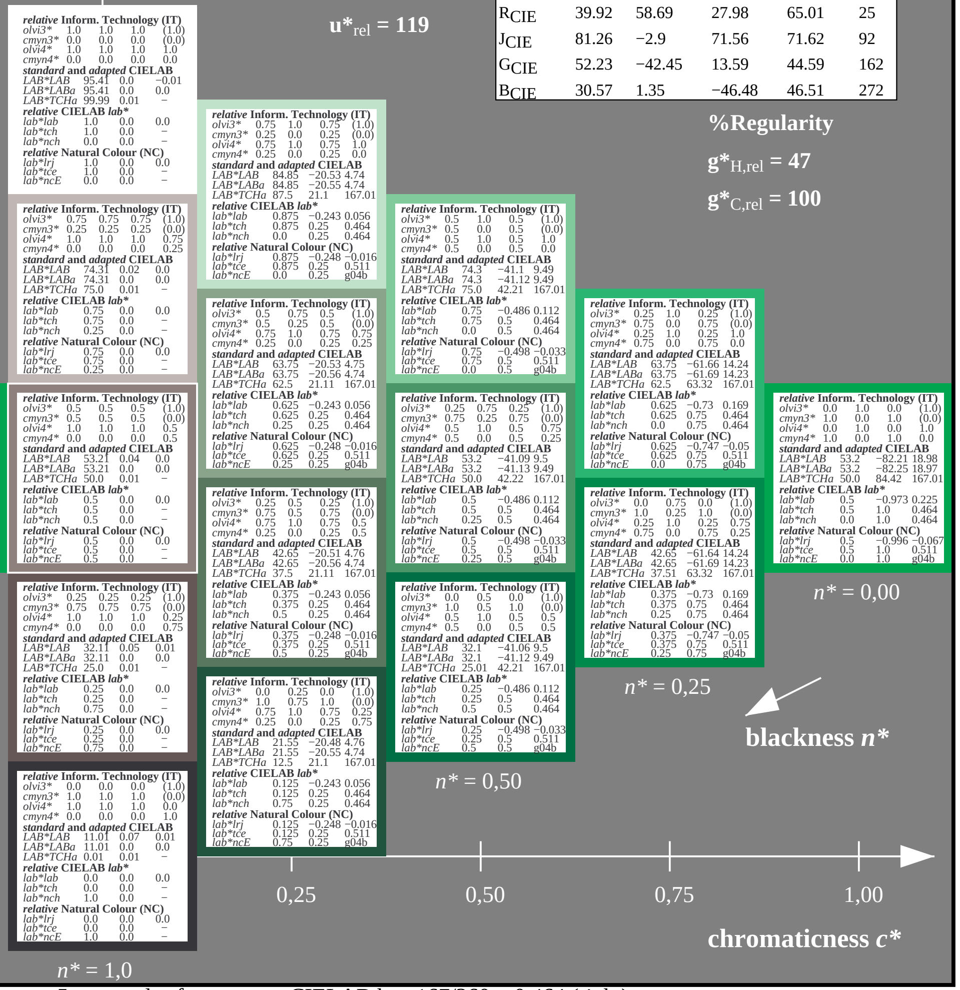
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



UE500−7, 5 step scales for constant CIELAB hue 167/360 = 0.464 (left)

5 step scales for constant CIELAB hue 167/360 = 0.464 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 167/360 = 0.464$

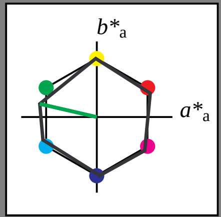
*lab*tch* and *lab*nch*

D65: hue G

LCH*Ma: 57 77 167

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

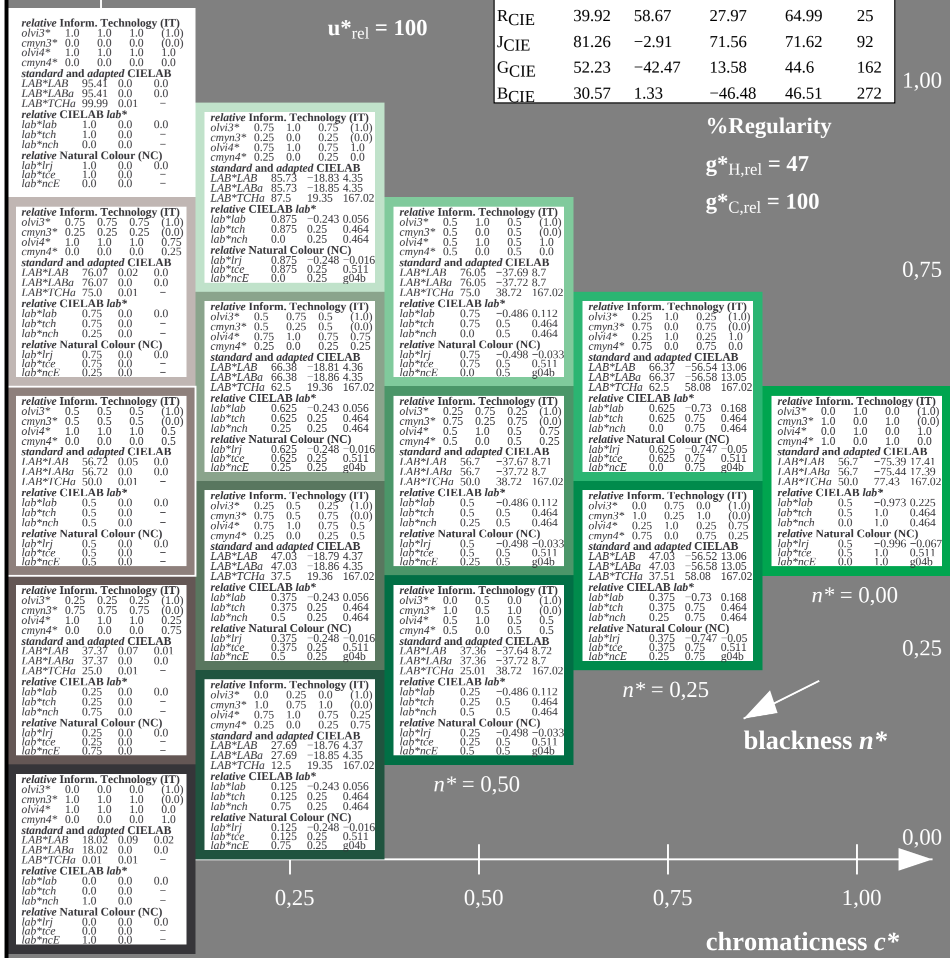
u^*_{rel} = 100

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 167/360 = 0.465$

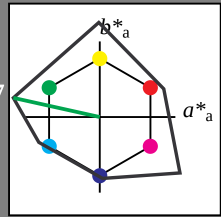
*lab*tch* and *lab*nch*

D65: hue G

LCH*Ma: 63 117 167

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

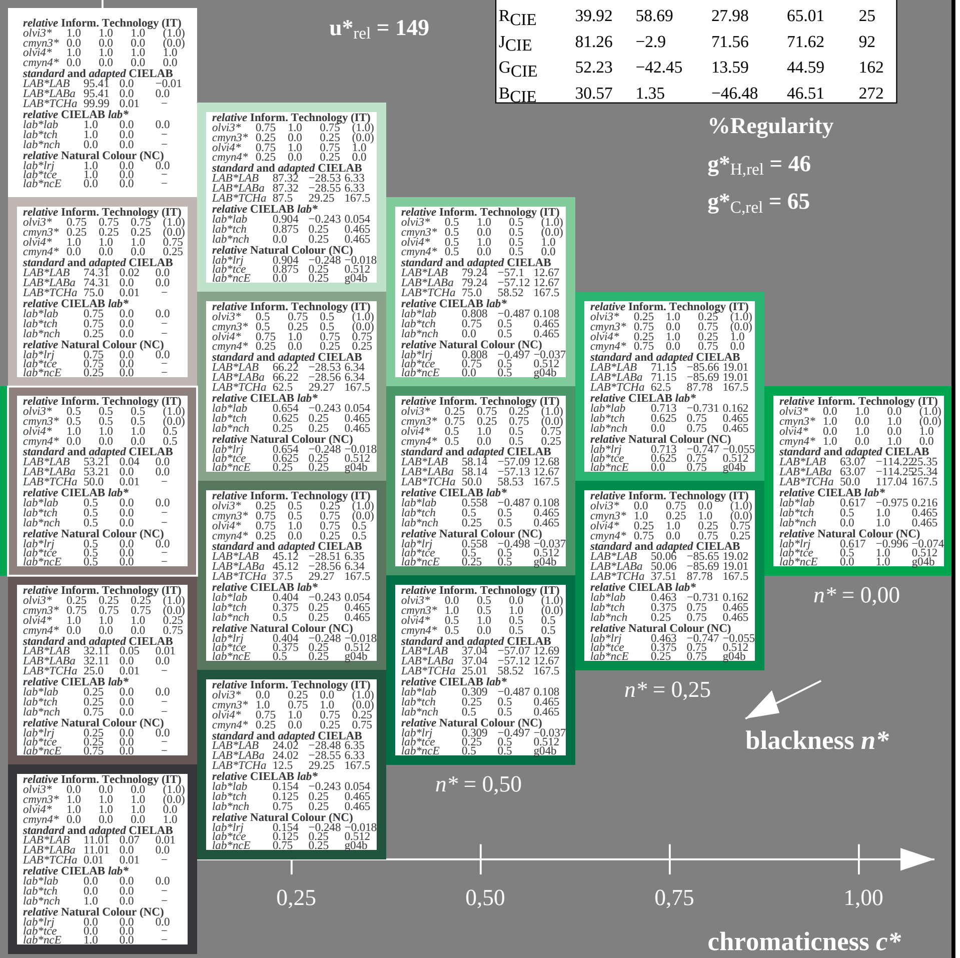
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



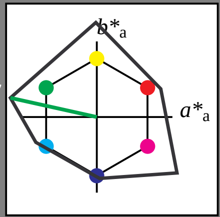
UE500−7, 5 step scales for constant CIELAB hue 167/360 = 0.464 (left)

5 step scales for constant CIELAB hue 167/360 = 0.465 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 167/360 = 0.465$
*lab*tch and lab*nch*

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0

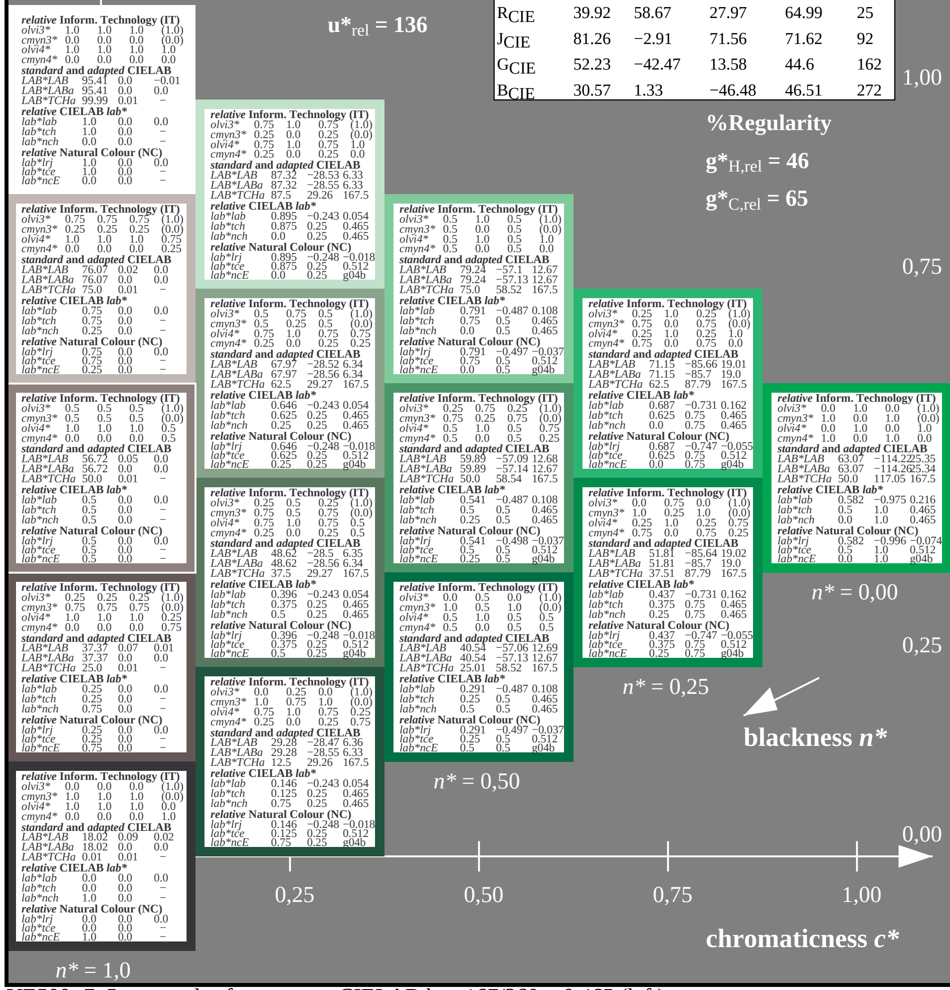
triangle lightness t^*



NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut
$u^*_{rel} = 136$

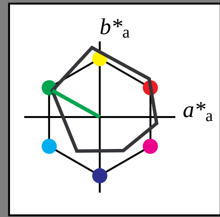
%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 151/360 = 0.419$
*lab*tch and lab*nch*

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

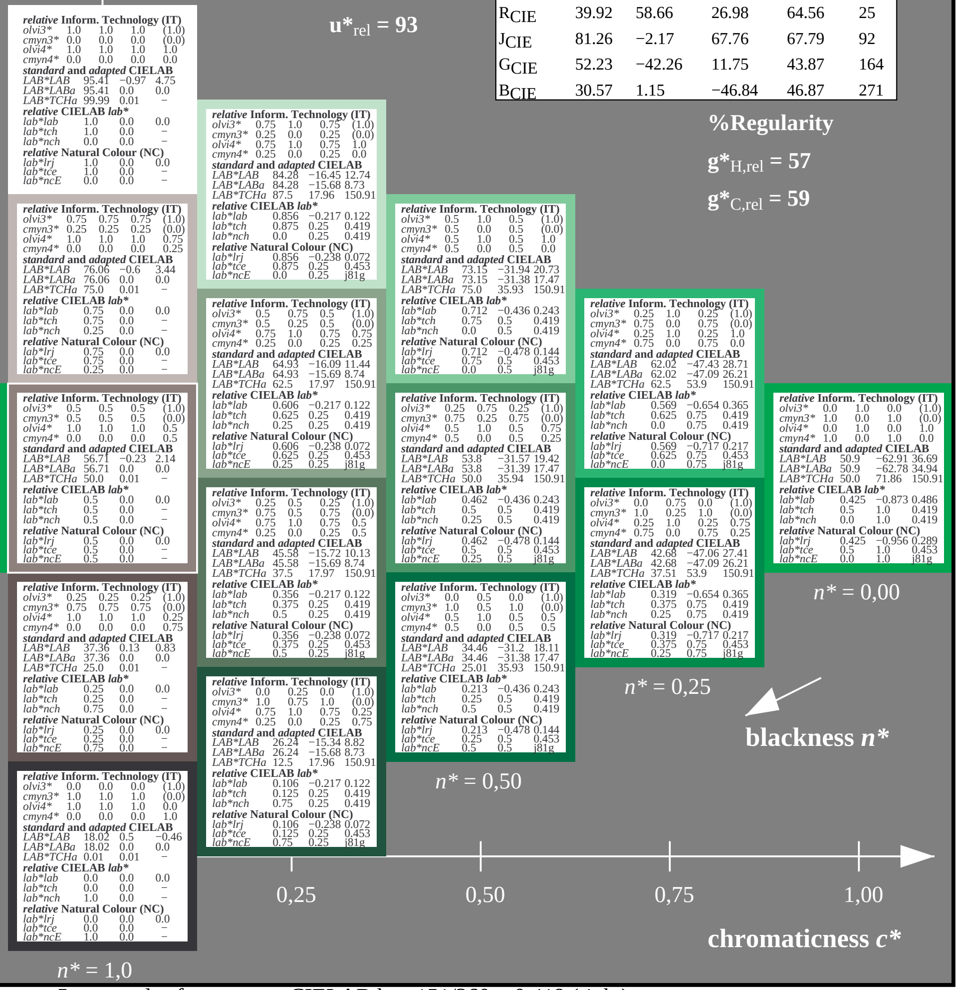
triangle lightness t^*



ORS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut
$u^*_{rel} = 93$

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



UE500−7, 5 step scales for constant CIELAB hue 167/360 = 0.465 (left)

5 step scales for constant CIELAB hue 151/360 = 0.419 (right)

Input: Colorimetric Reflective System NCS18

for hue $h^* = lab^*h = 167/360 = 0.465$

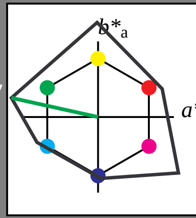
lab*tch and lab*nch

D65: hue G

LCH*Ma: 63 117 167

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 136

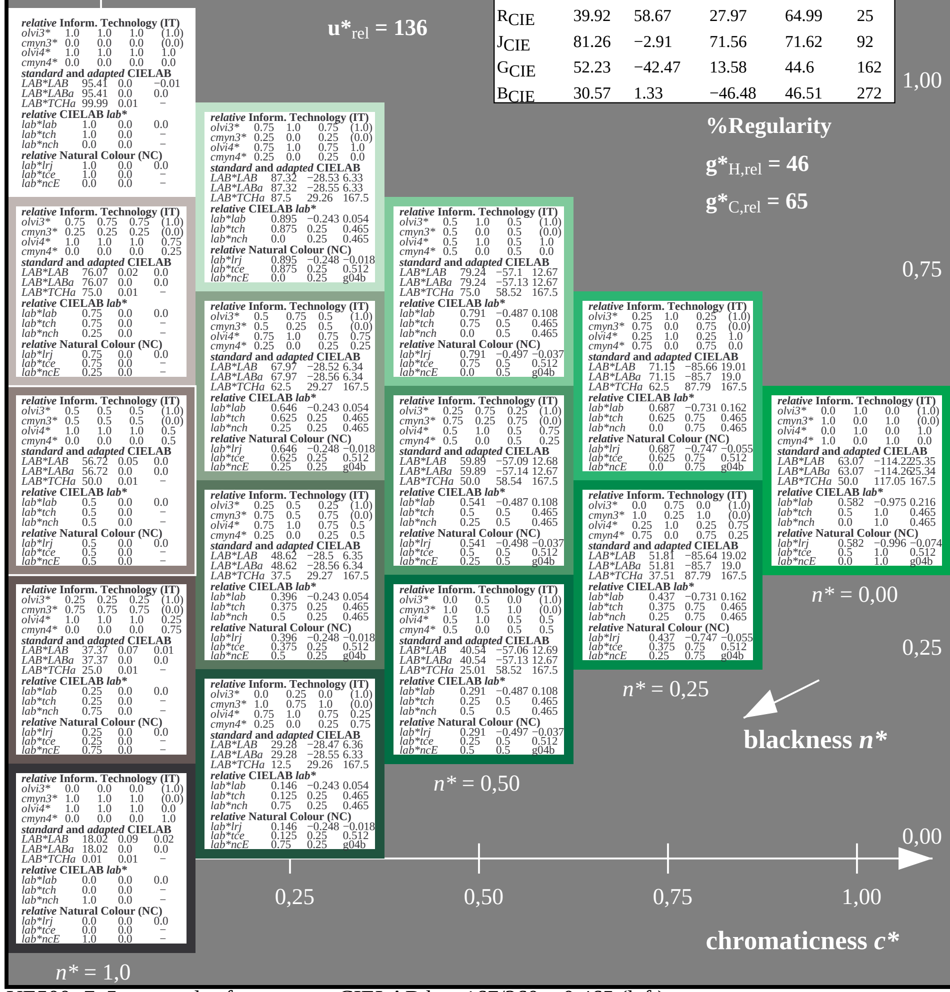
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System MRS18

for hue $h^* = lab^*h = 172/360 = 0.479$

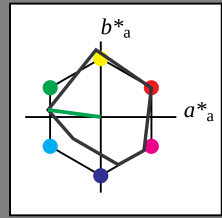
lab*tch and lab*nch

D65: hue G

LCH*Ma: 52 70 172

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 91

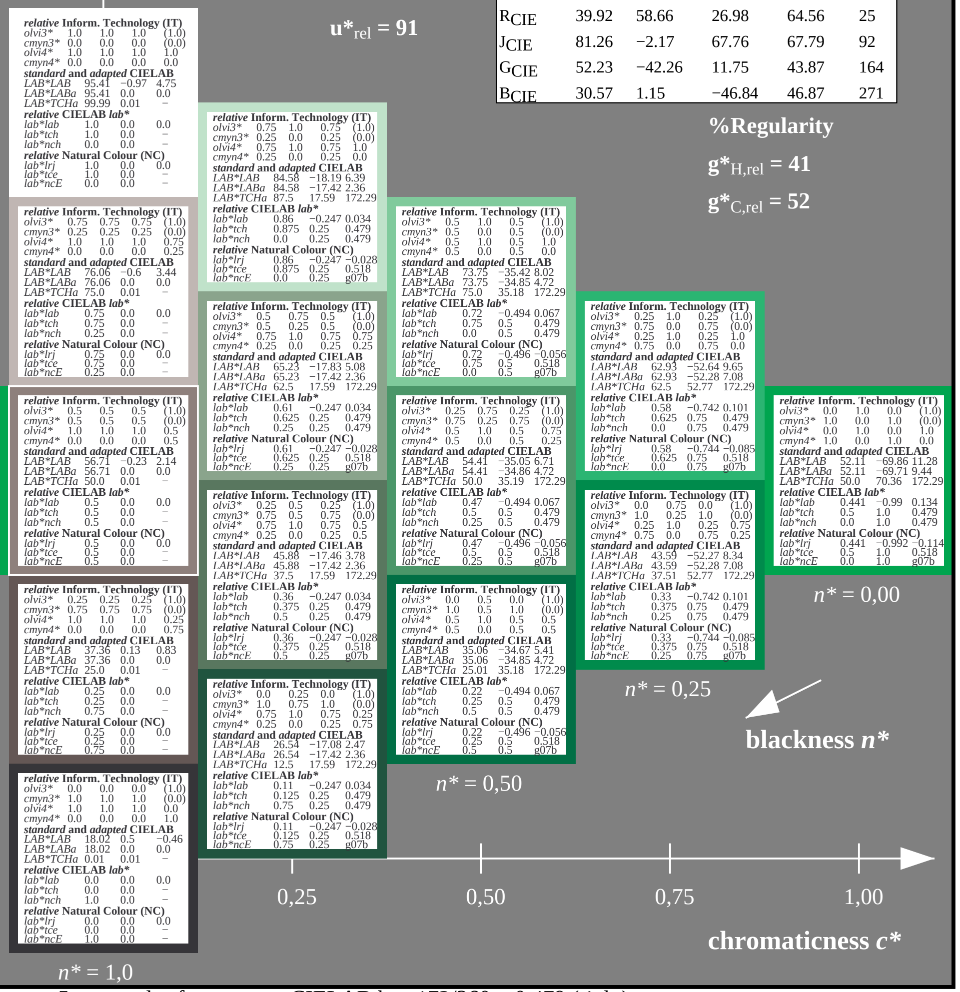
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



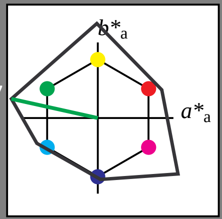
UE500−7, 5 step scales for constant CIELAB hue 167/360 = 0.465 (left)

5 step scales for constant CIELAB hue 172/360 = 0.479 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 167/360 = 0.465$
*lab*tch* and *lab*nch*

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0

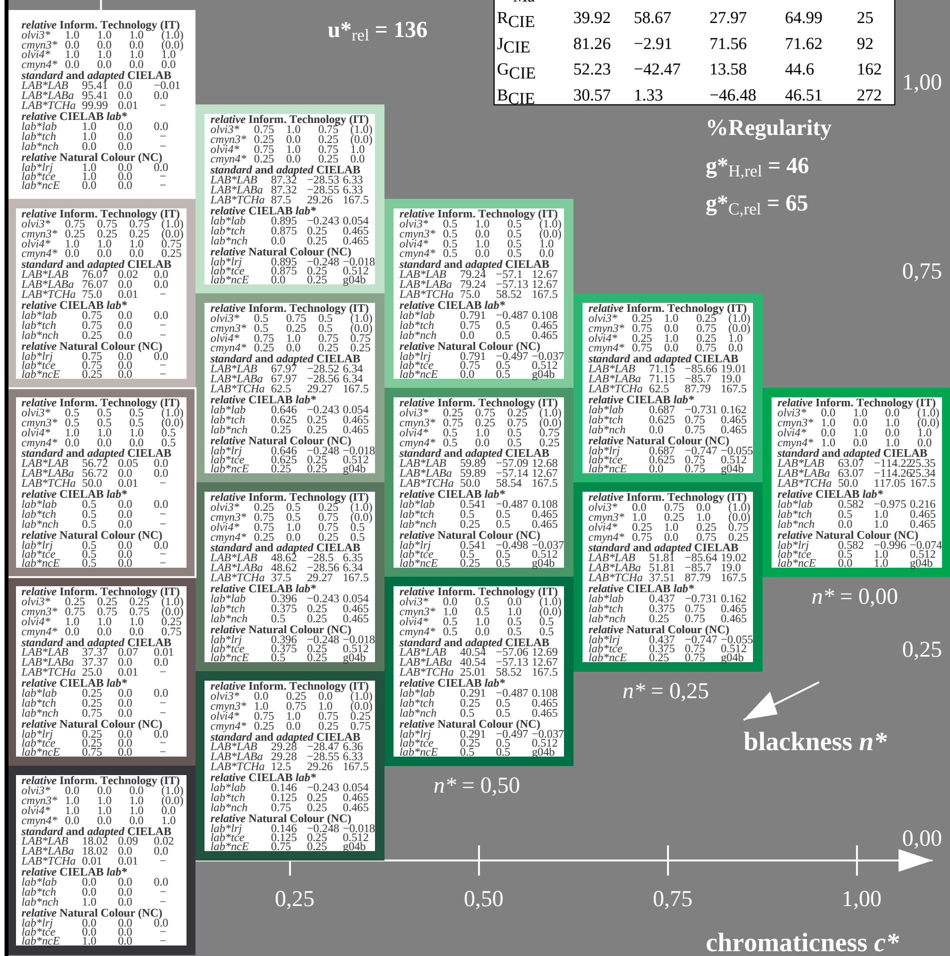
triangle lightness t^*



%Gamut
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

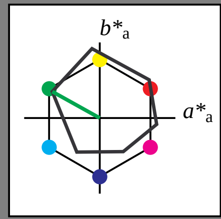
%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 151/360 = 0.419$
*lab*tch* and *lab*nch*

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

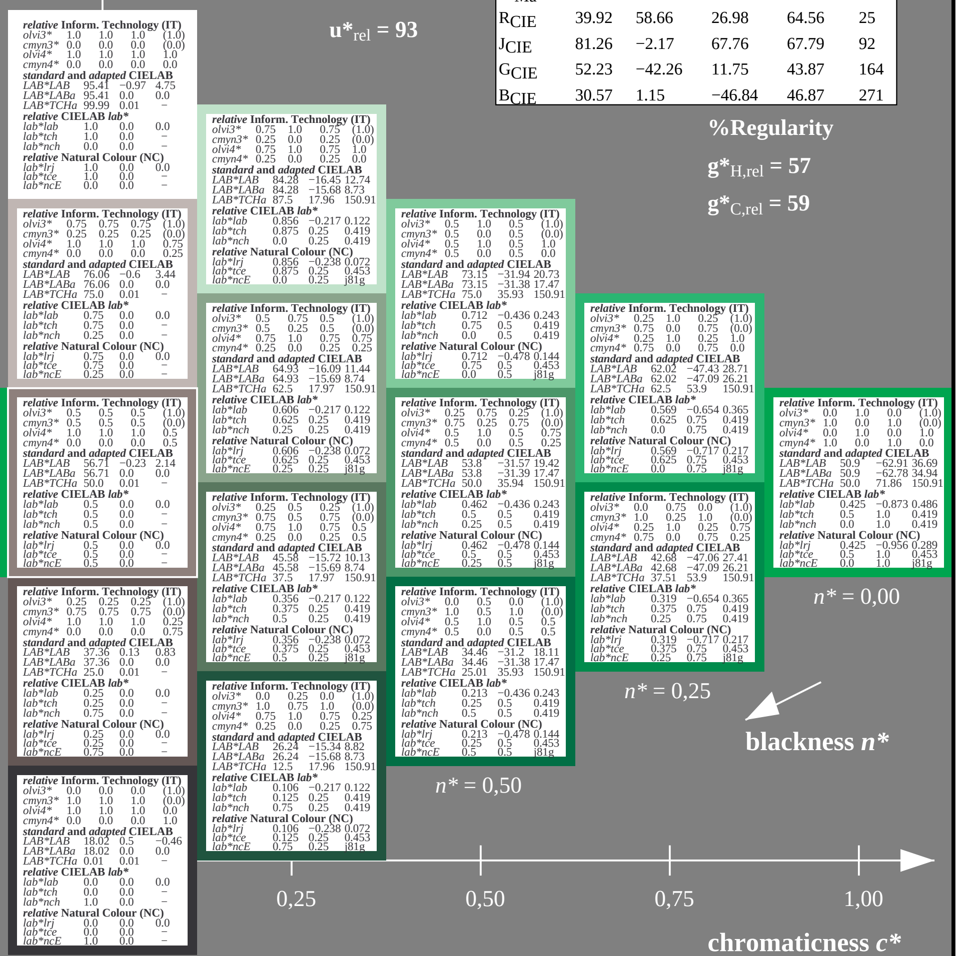
triangle lightness t^*



%Gamut
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



UE500−7, 5 step scales for constant CIELAB hue 167/360 = 0.465 (left)
5 step scales for constant CIELAB hue 151/360 = 0.419 (right)

Input: Colorimetric Reflective System NCS18

for hue $h^* = lab^*h = 167/360 = 0.465$

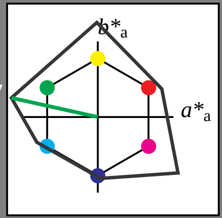
*lab*tch and lab*nch*

D65: hue G

LCH*Ma: 63 117 167

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 136$

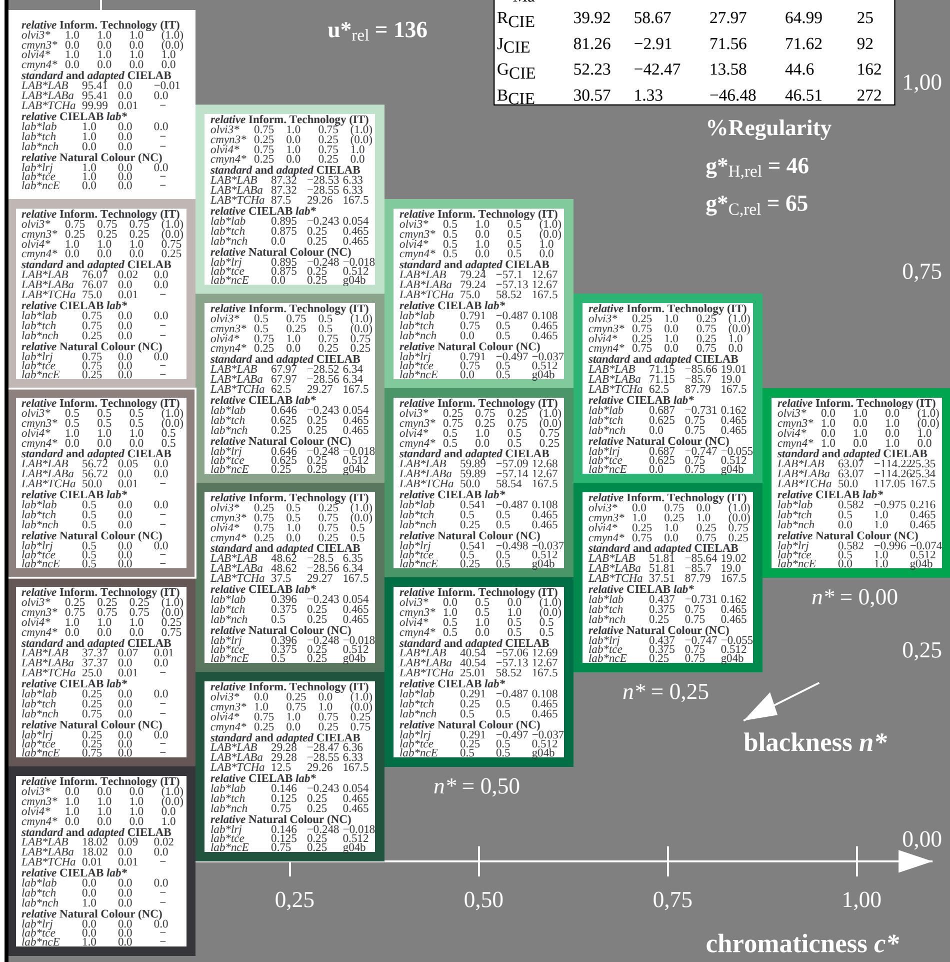
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System MRS18a

for hue $h^* = lab^*h = 171/360 = 0.475$

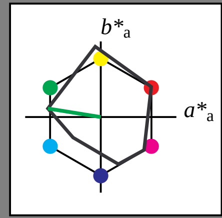
*lab*tch and lab*nch*

D65: hue G

LCH*Ma: 52 71 171

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 92$

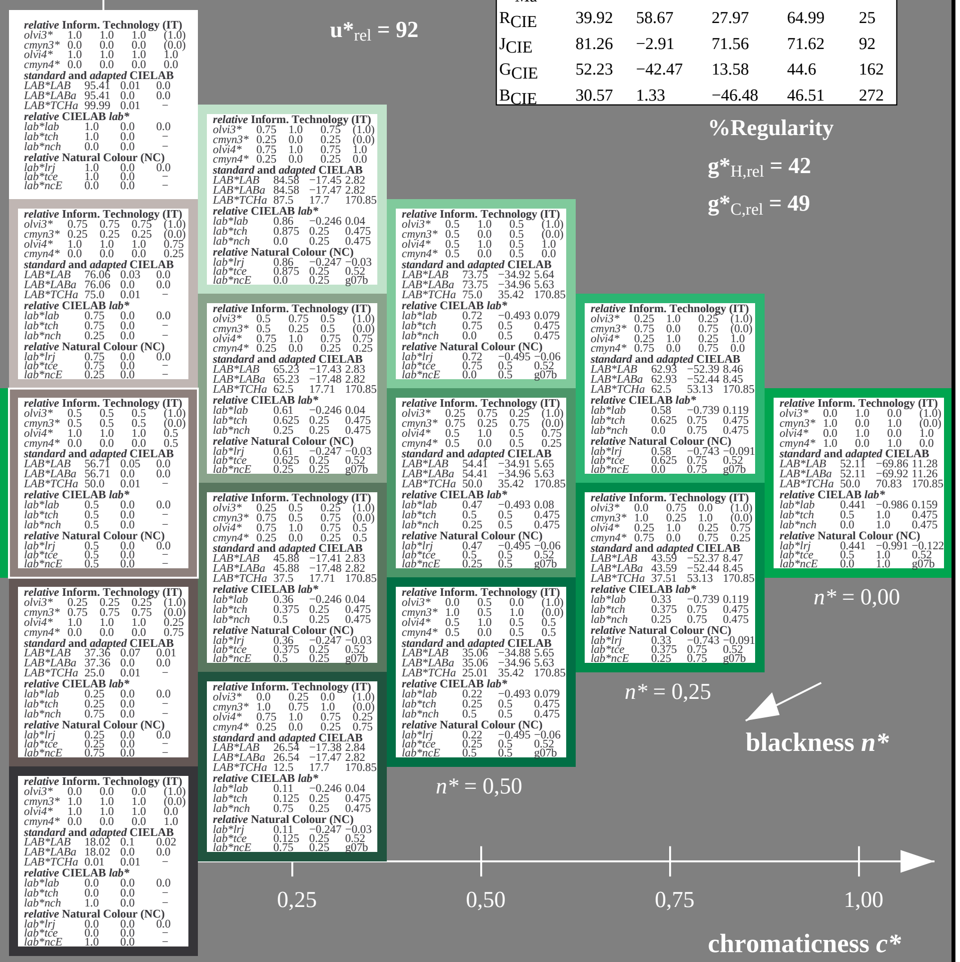
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



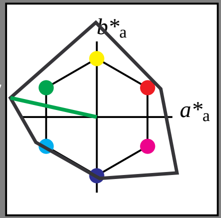
UE500−7, 5 step scales for constant CIELAB hue 167/360 = 0.465 (left)

5 step scales for constant CIELAB hue 171/360 = 0.475 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 167/360 = 0.465$
*lab*tch and lab*nch*

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*

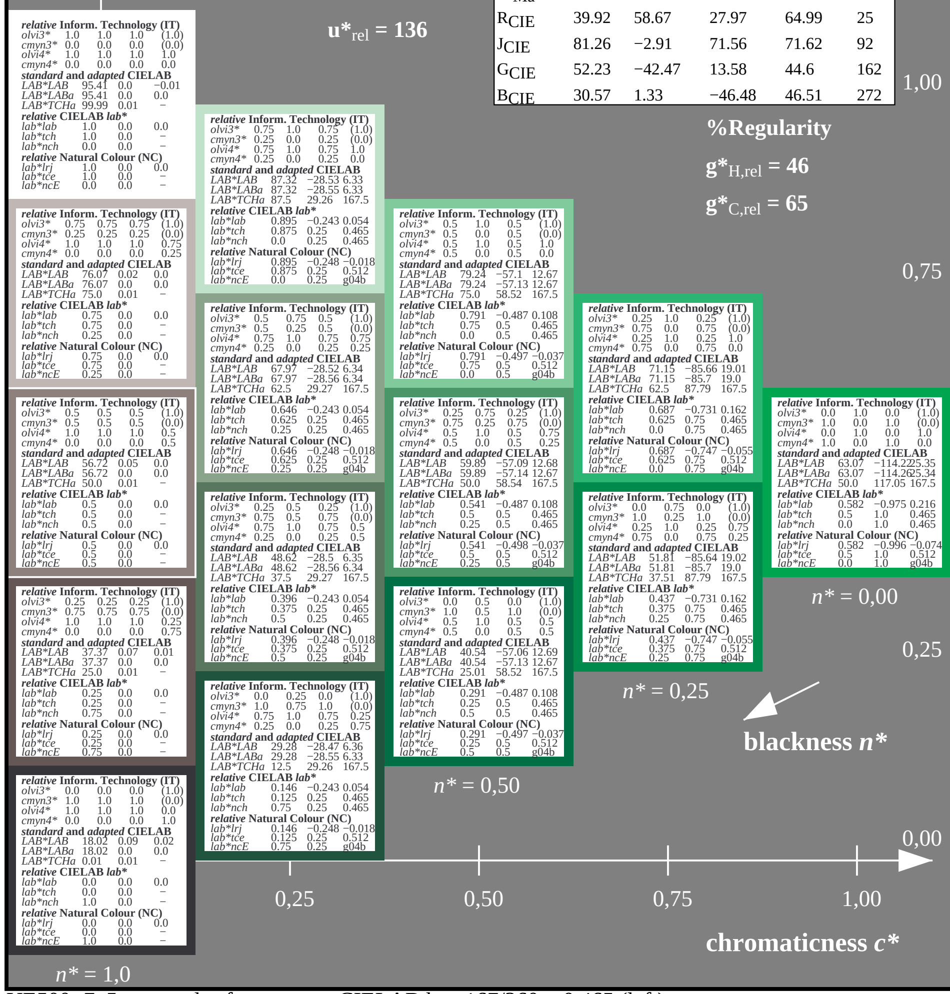


%Gamut
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

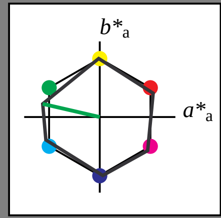
%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 167/360 = 0.464$
*lab*tch and lab*nch*

D65: hue G
LCH*Ma: 57 77 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*

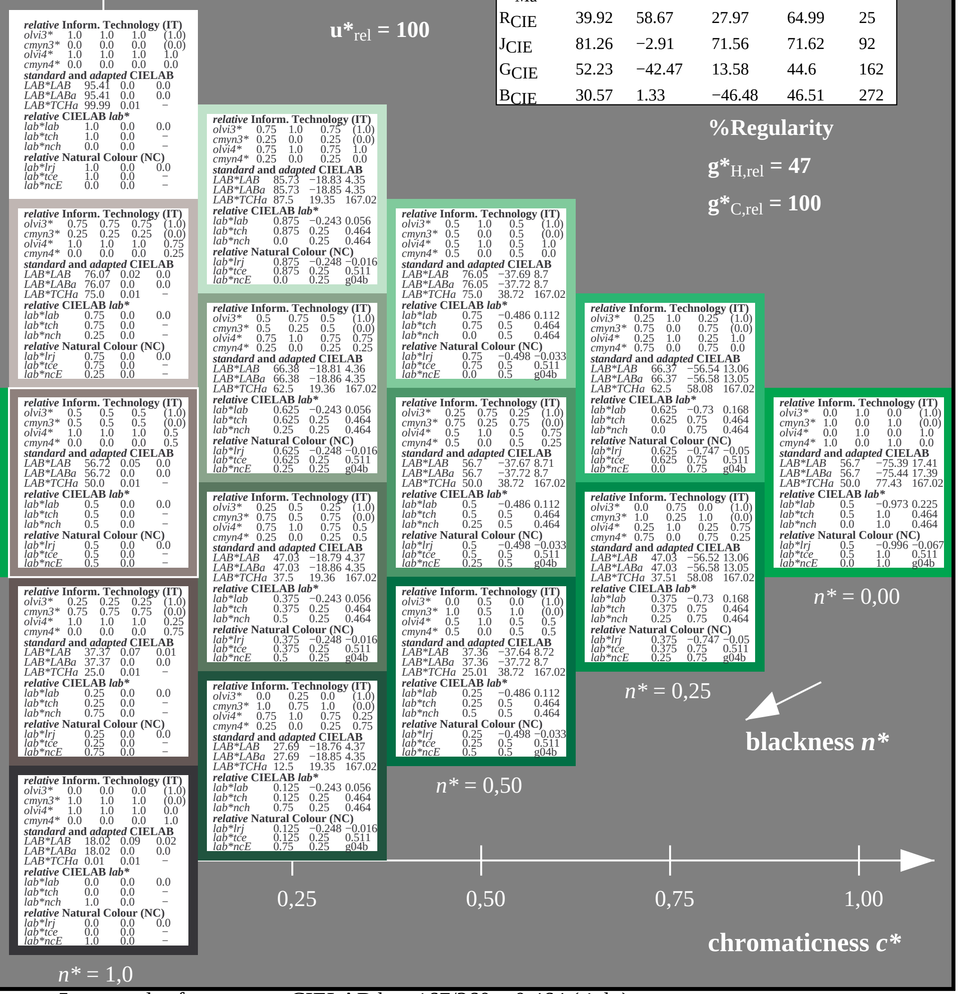


%Gamut
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$

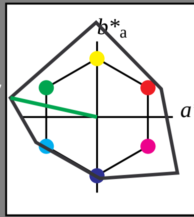


UE500−7, 5 step scales for constant CIELAB hue 167/360 = 0.465 (left)

5 step scales for constant CIELAB hue 167/360 = 0.464 (right)

Input: Colorimetric Reflective System NCS18
for hue *h* = lab*h = 167/360 = 0.465*
*lab*tch and lab*nch*

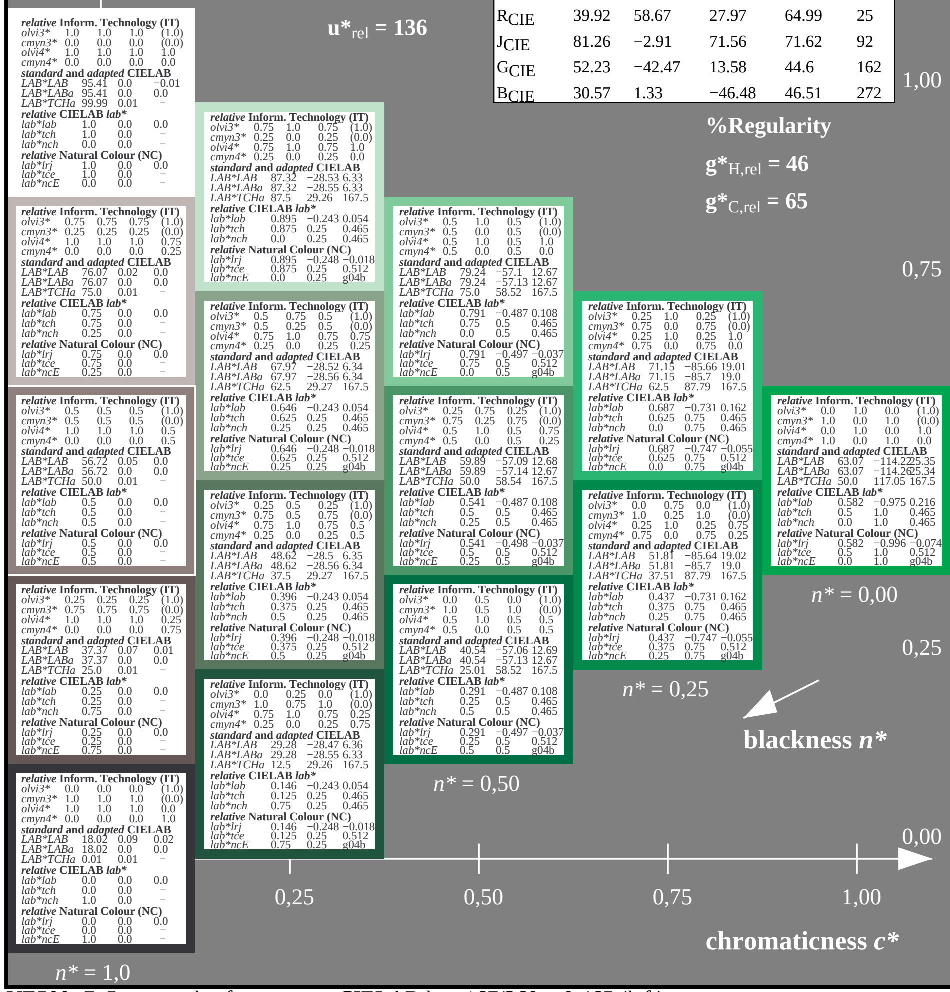
D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0
triangle lightness *t**



%Gamut
u^*_{rel} = 136

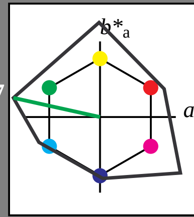
NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NCS18
for hue *h* = lab*h = 167/360 = 0.465*
*lab*tch and lab*nch*

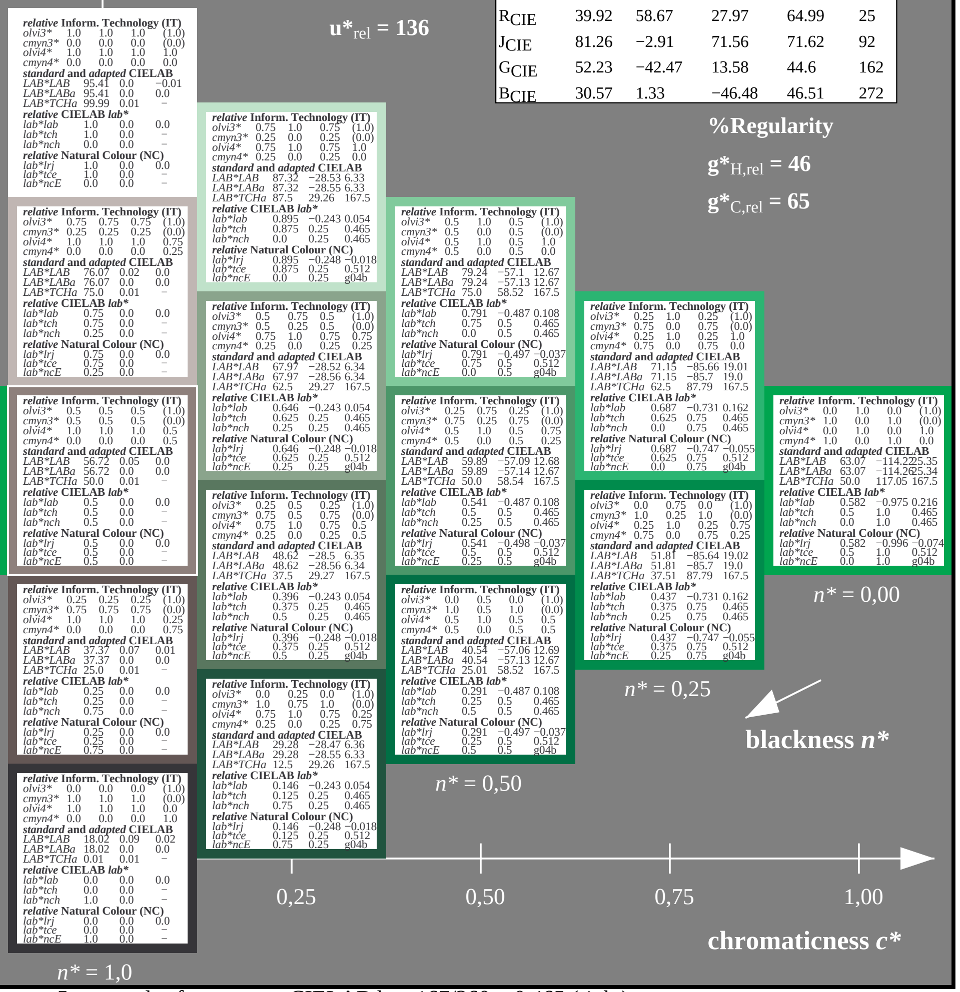
D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0
triangle lightness *t**



%Gamut
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65

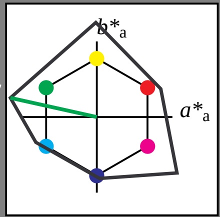


UE500−7, 5 step scales for constant CIELAB hue 167/360 = 0.465 (left)

5 step scales for constant CIELAB hue 167/360 = 0.465 (right)

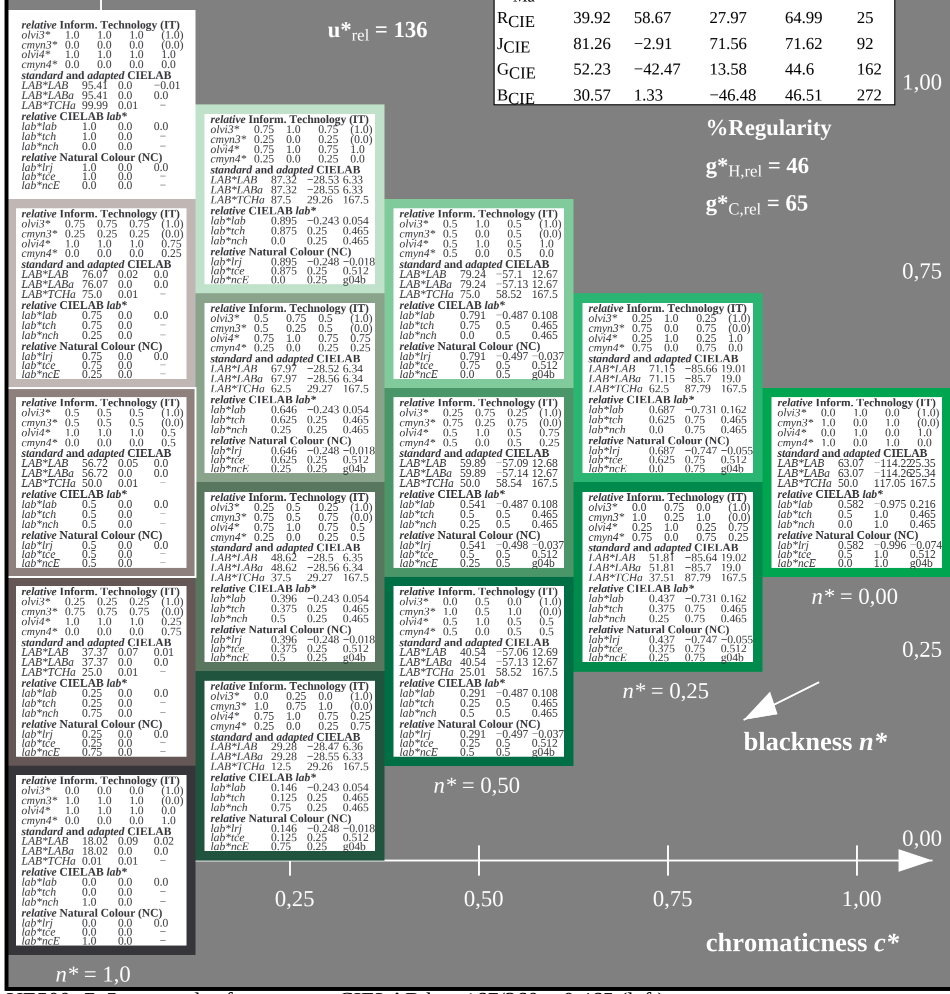
Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 167/360 = 0.465$
*lab*tch and lab*nch*

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0
triangle lightness t^*



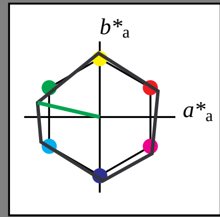
%Gamut
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272



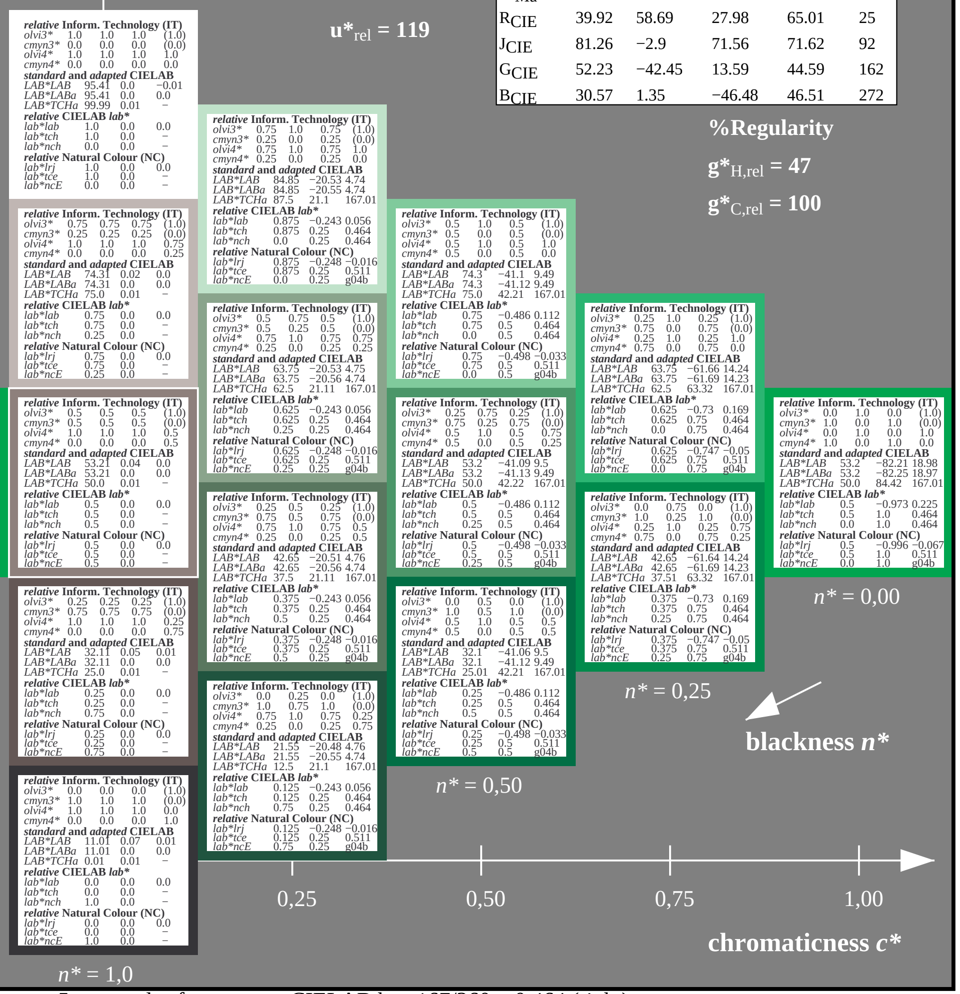
Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 167/360 = 0.464$
*lab*tch and lab*nch*

D65: hue G
LCH*Ma: 53 84 167
rgb*Ma: 0.0 1.0 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272



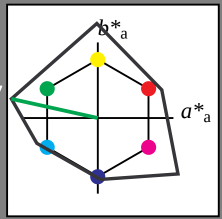
UE500−7, 5 step scales for constant CIELAB hue 167/360 = 0.465 (left)

5 step scales for constant CIELAB hue 167/360 = 0.464 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 167/360 = 0.465$
*lab*tch* and *lab*nch*

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*

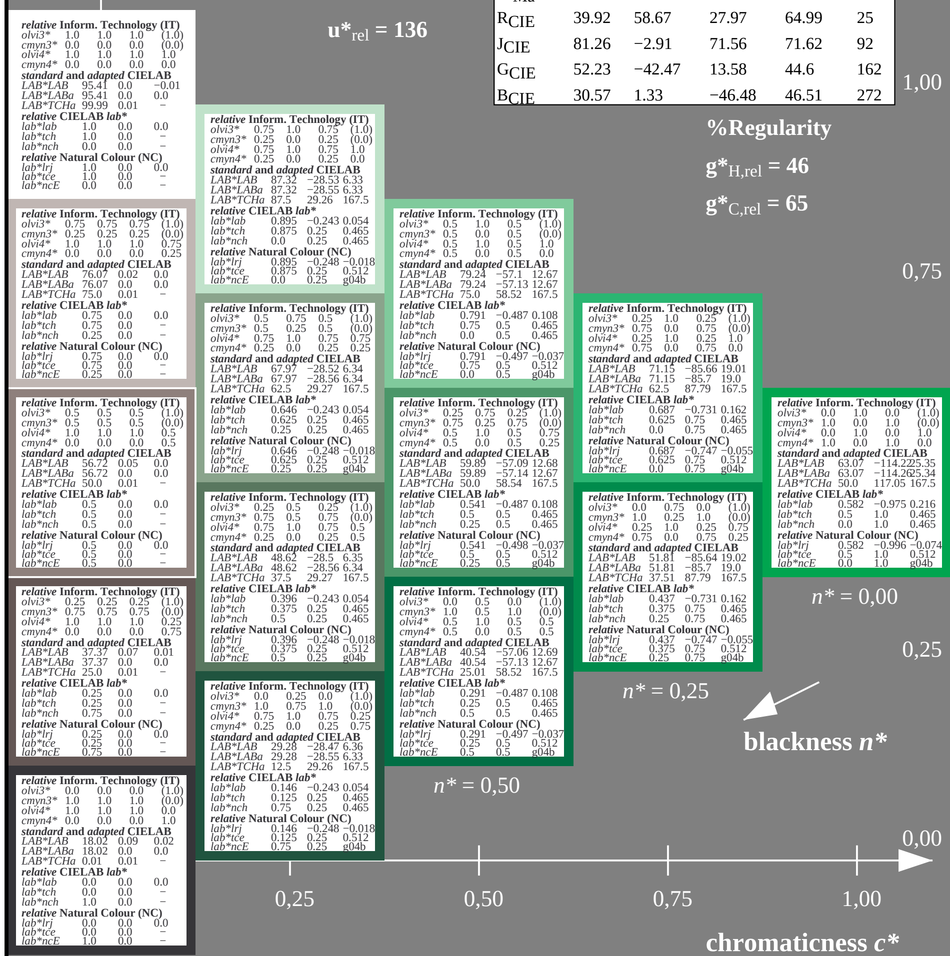


%Gamut
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

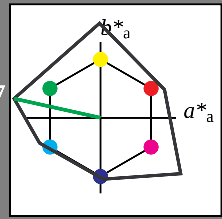
%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 167/360 = 0.465$
*lab*tch* and *lab*nch*

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*

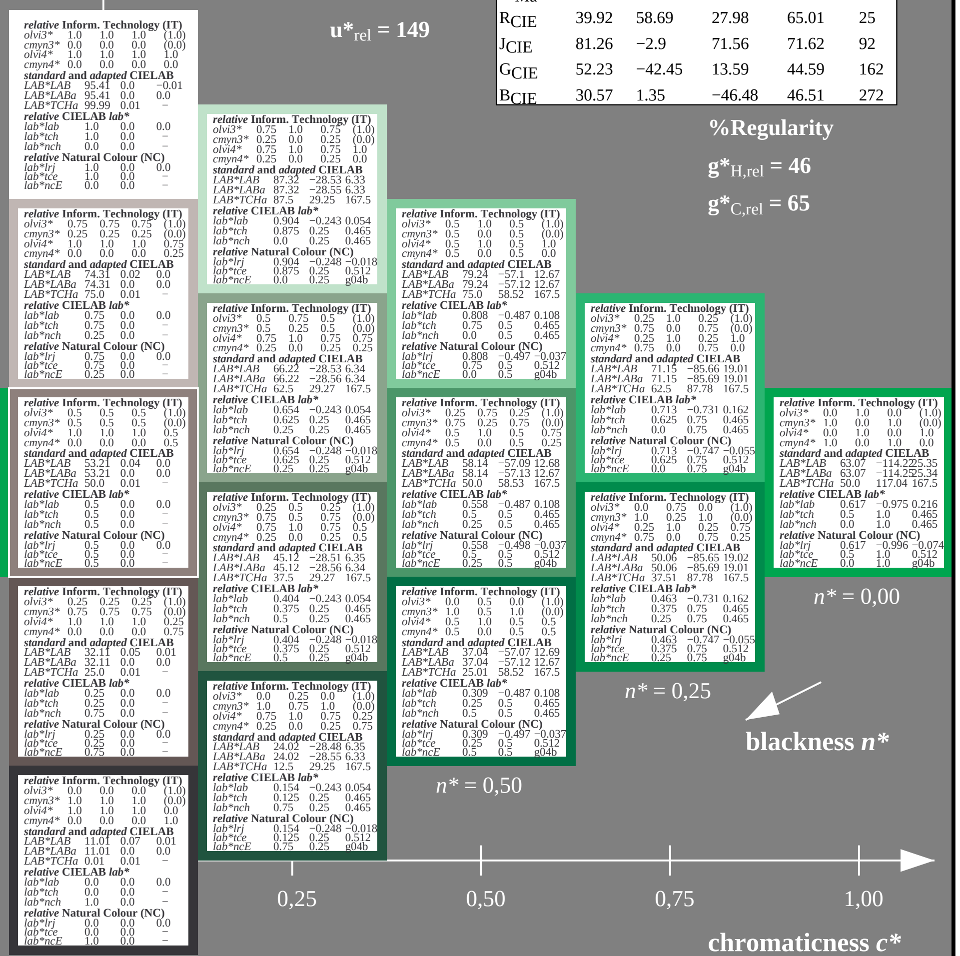


%Gamut
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



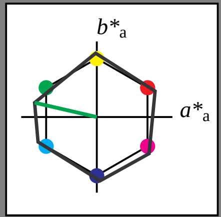
UE500−7, 5 step scales for constant CIELAB hue 167/360 = 0.465 (left)

5 step scales for constant CIELAB hue 167/360 = 0.465 (right)

Input: Colorimetric Reflective System NRS11
for hue *h = *lab*h* = 167/360 = 0.464**
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 84 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness *t*

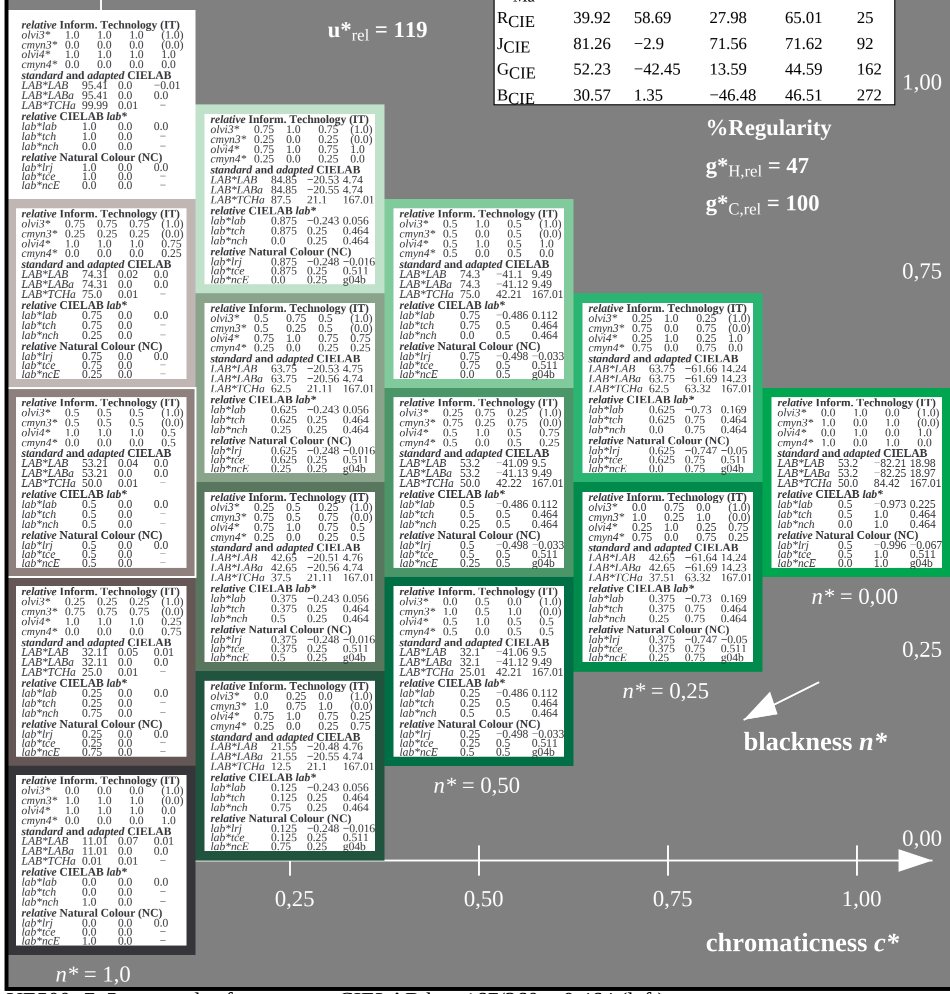


%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

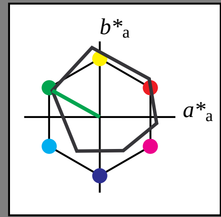
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272



Output: Colorimetric Reflective System ORS18
for hue *h = *lab*h* = 151/360 = 0.419**
lab*tch* and *lab*nch

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

triangle lightness *t*

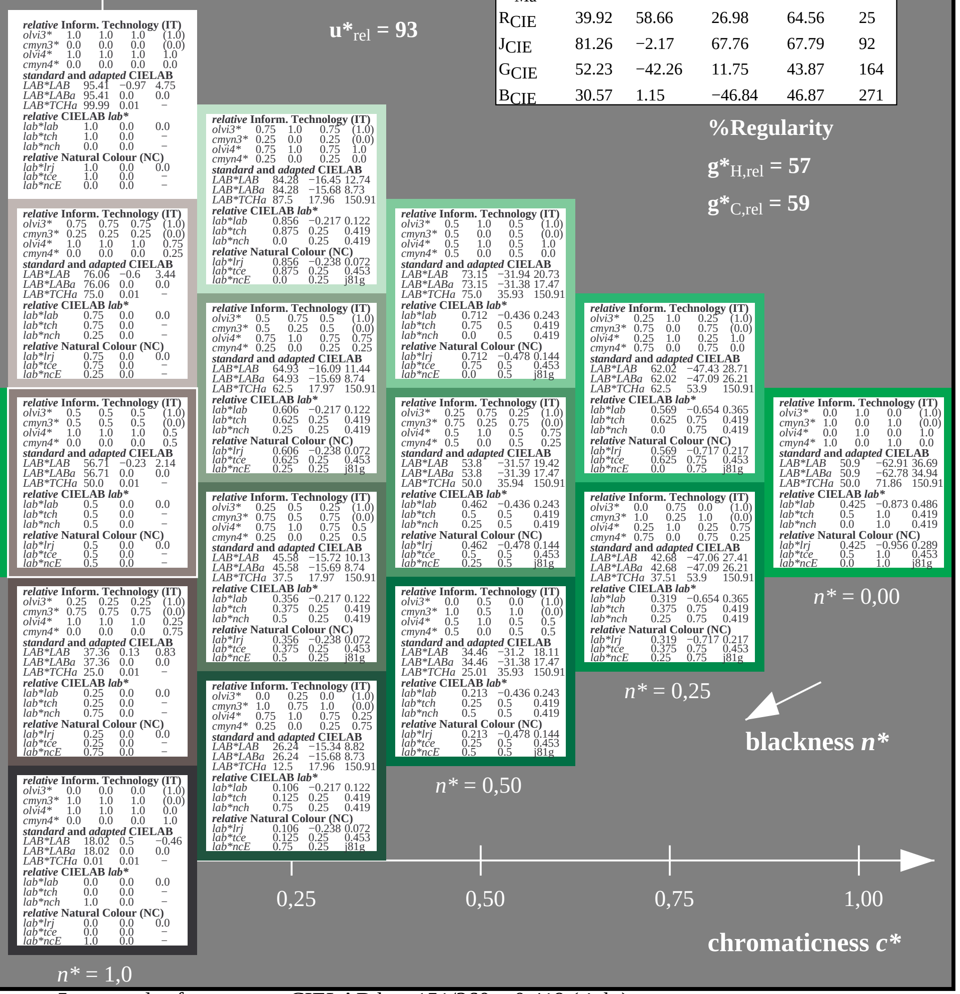


%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



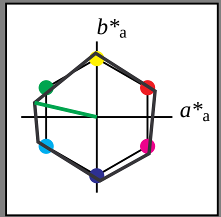
UE500−7, 5 step scales for constant CIELAB hue 167/360 = 0.464 (left)

5 step scales for constant CIELAB hue 151/360 = 0.419 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 167/360 = 0.464$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 84 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*

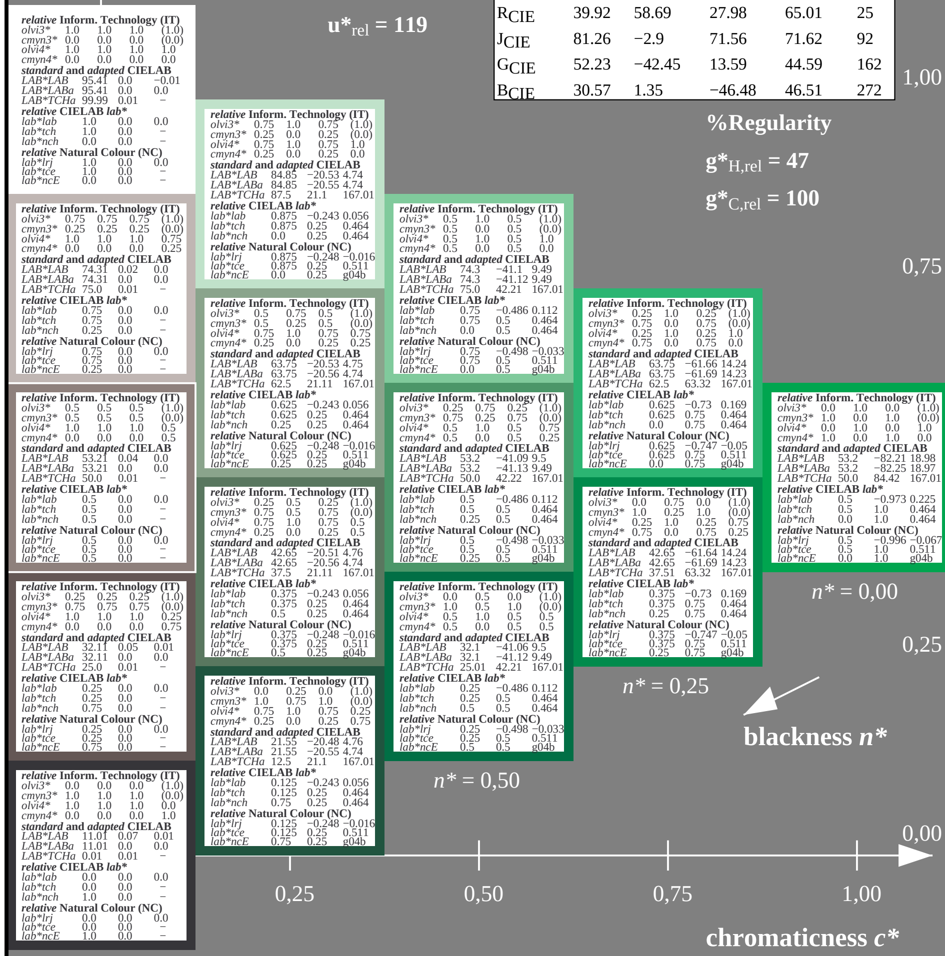


%Gamut
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

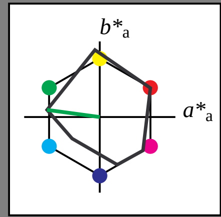
%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 172/360 = 0.479$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 70 172
rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*

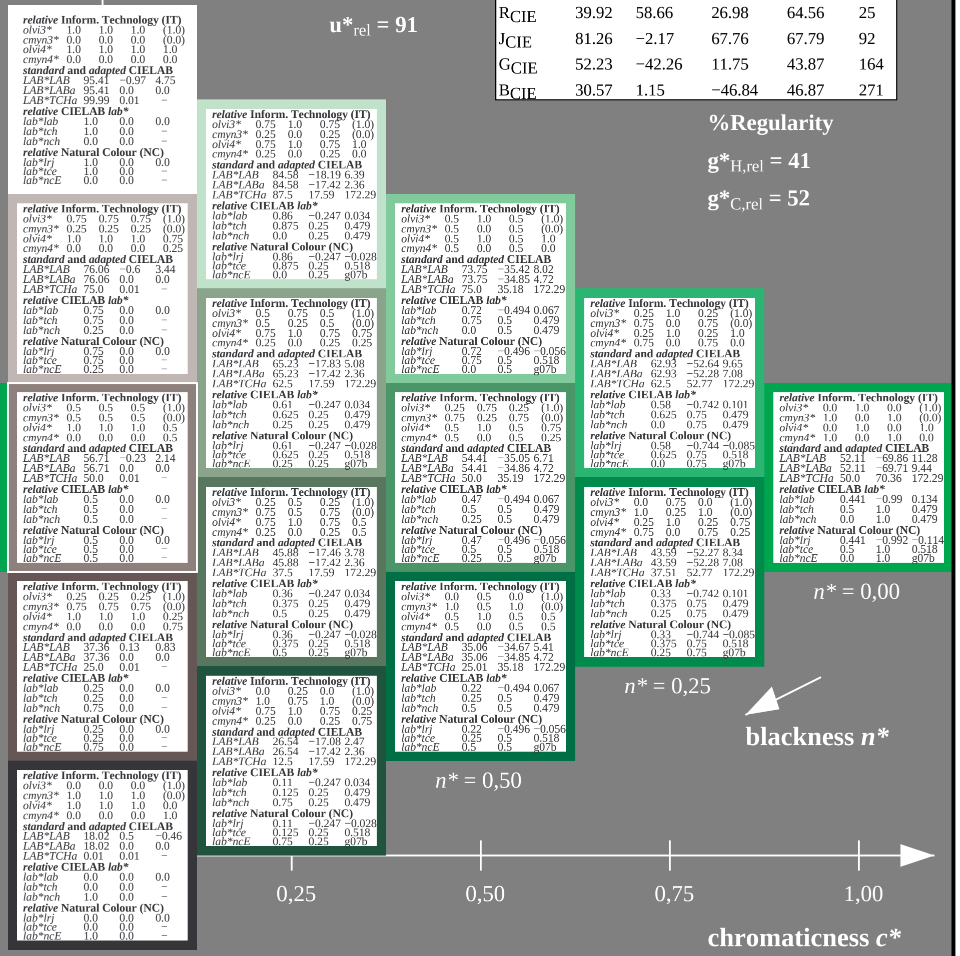


%Gamut
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel}$ = 41
$g^*_{C,rel}$ = 52



UE500−7, 5 step scales for constant CIELAB hue 167/360 = 0.464 (left)

5 step scales for constant CIELAB hue 172/360 = 0.479 (right)

Input: Colorimetric Reflective System NRS11

for hue $h^* = lab^*h = 167/360 = 0.464$

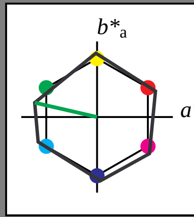
*lab*tch and lab*nch*

D65: hue G

LCH*Ma: 53 84 167

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

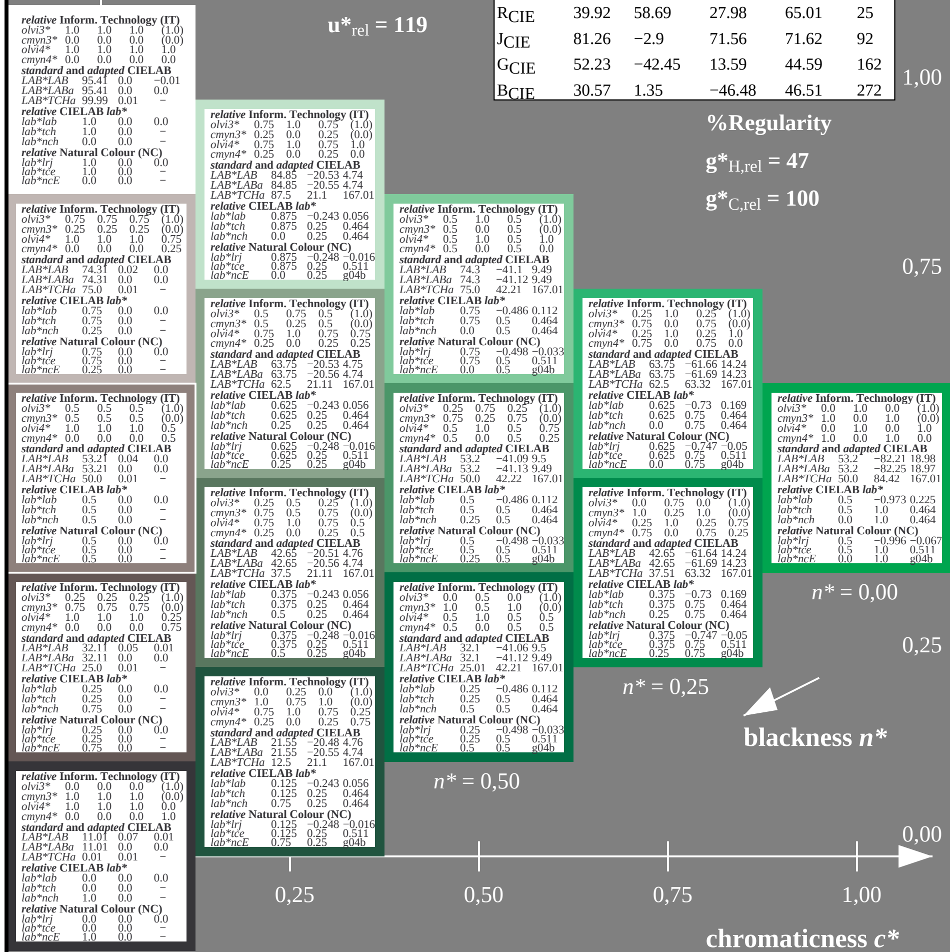
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System TRS18

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

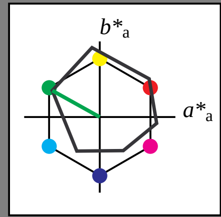
*lab*tch and lab*nch*

D65: hue L

LCH*Ma: 51 72 151

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

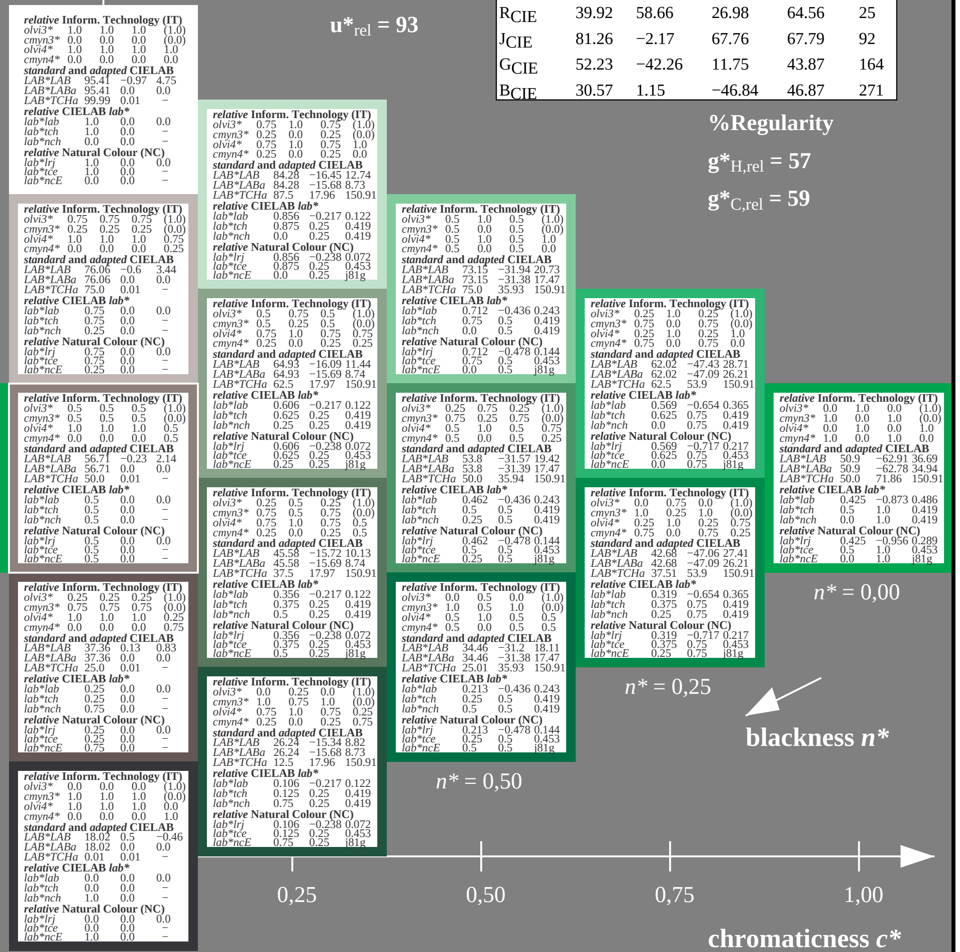
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



UE500−7, 5 step scales for constant CIELAB hue 167/360 = 0.464 (left)

5 step scales for constant CIELAB hue 151/360 = 0.419 (right)

Input: Colorimetric Reflective System NRS11

for hue $h^* = lab^*h = 167/360 = 0.464$

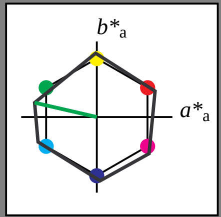
*lab*tch and lab*nch*

D65: hue G

LCH*Ma: 53 84 167

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 119

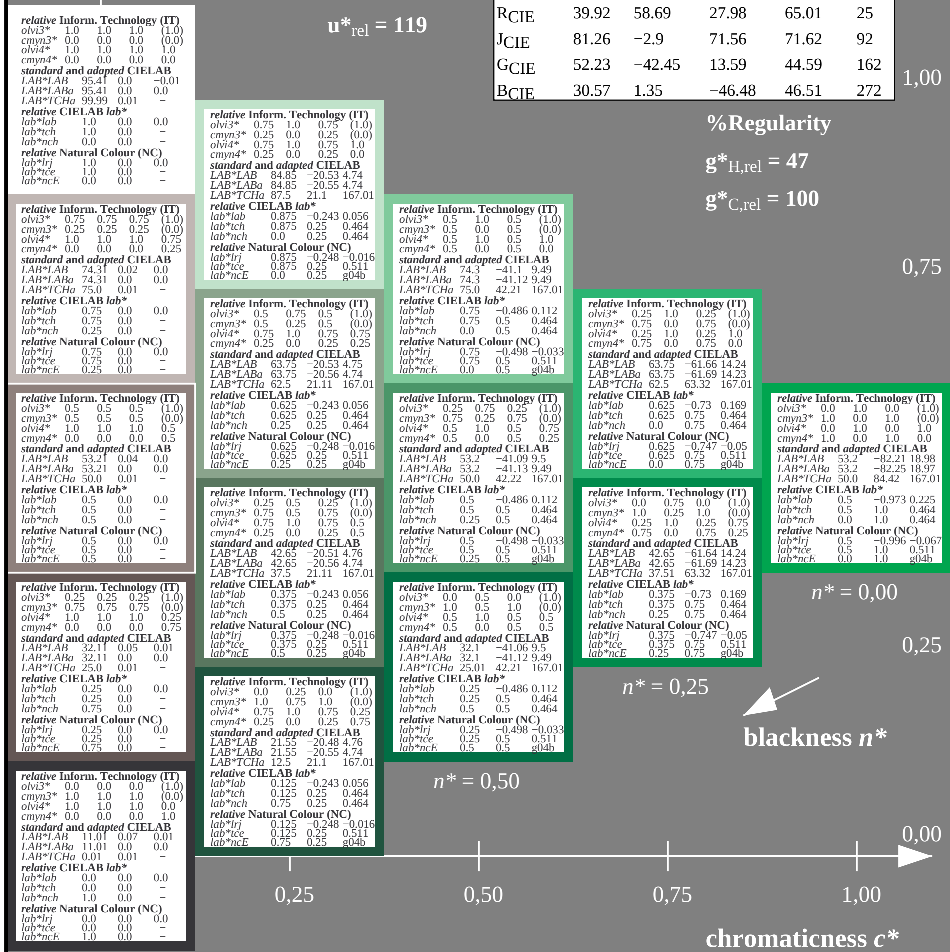
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System MRS18a

for hue $h^* = lab^*h = 171/360 = 0.475$

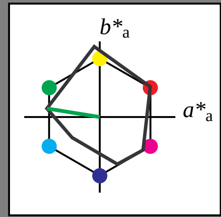
*lab*tch and lab*nch*

D65: hue G

LCH*Ma: 52 71 171

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 92

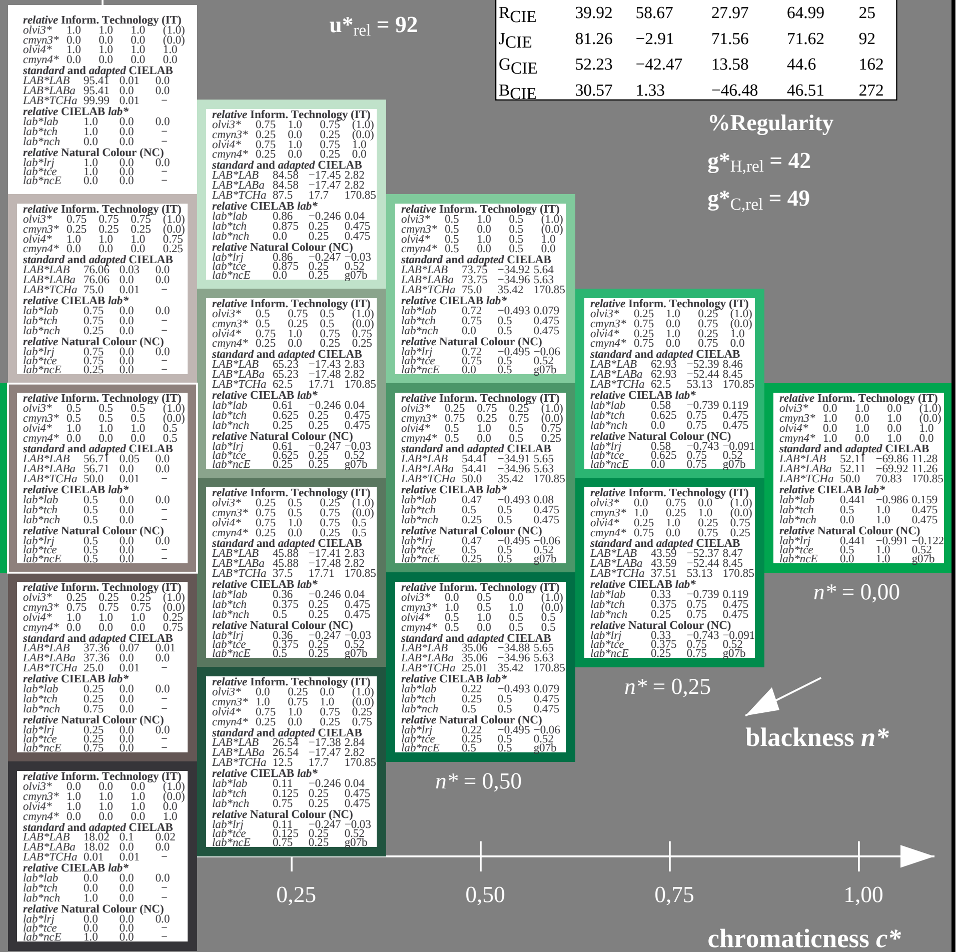
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



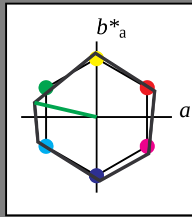
UE500−7, 5 step scales for constant CIELAB hue 167/360 = 0.464 (left)

5 step scales for constant CIELAB hue 171/360 = 0.475 (right)

Input: Colorimetric Reflective System NRS11
for hue h^* = lab^*h = 167/360 = 0.464
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 84 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*

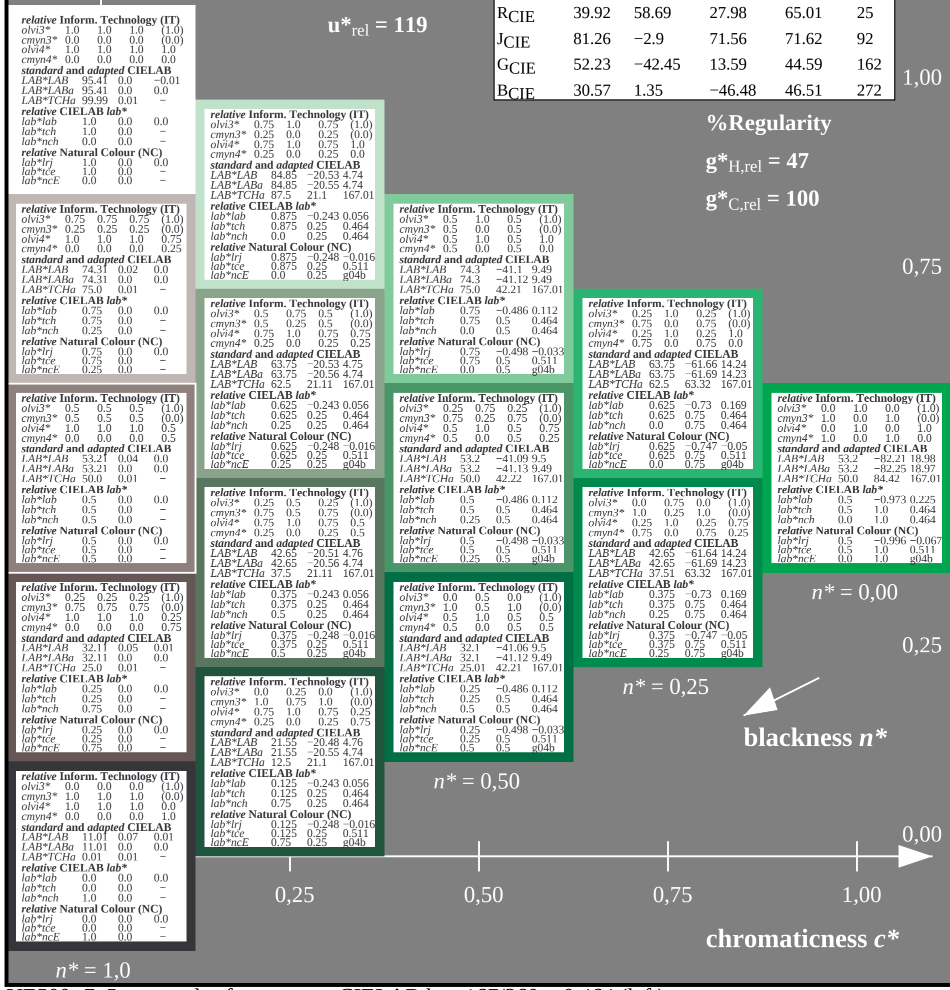


%Gamut
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

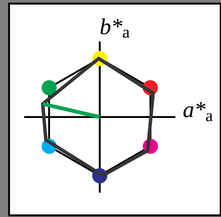
%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NRS18
for hue h^* = lab^*h = 167/360 = 0.464
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 77 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*

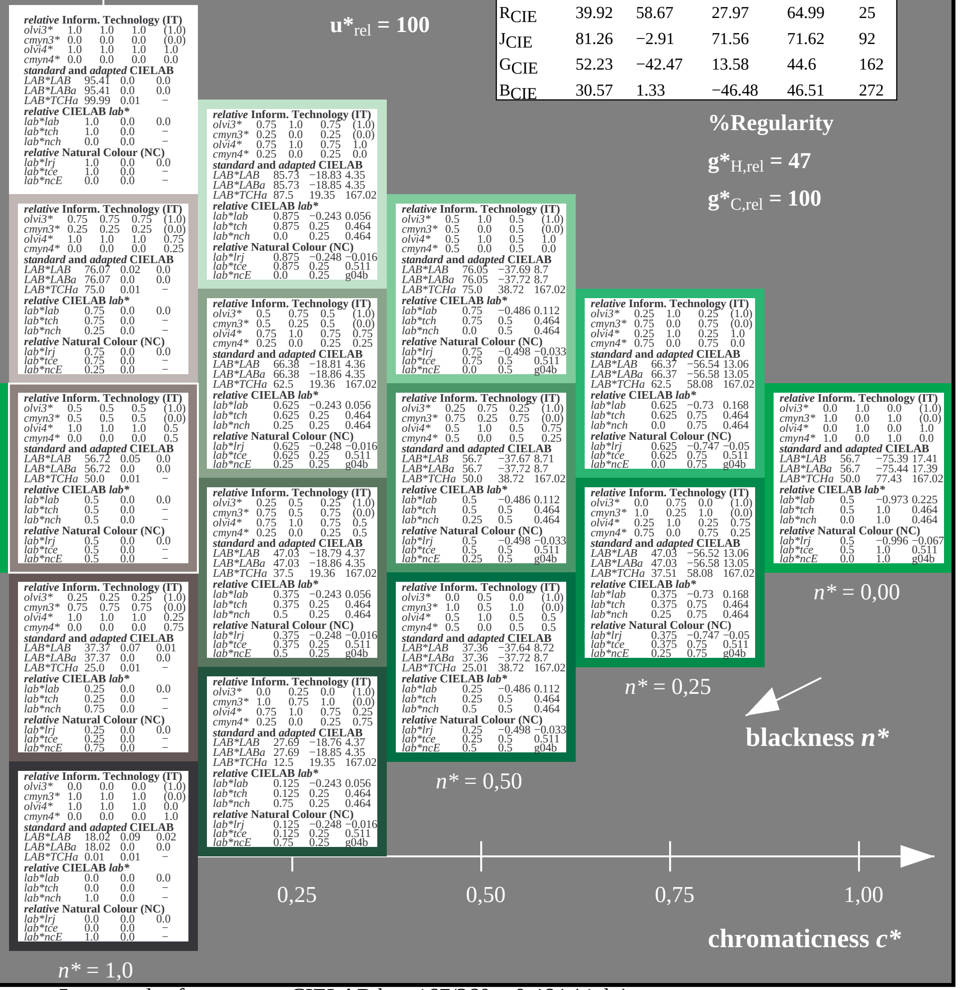


%Gamut
u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100



UE500−7, 5 step scales for constant CIELAB hue 167/360 = 0.464 (left)

5 step scales for constant CIELAB hue 167/360 = 0.464 (right)

Input: Colorimetric Reflective System NRS11

for hue $h^* = lab^*h = 167/360 = 0.464$

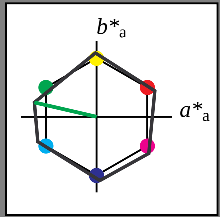
lab^*tch and lab^*nch

D65: hue G

LCH*Ma: 53 84 167

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 119$

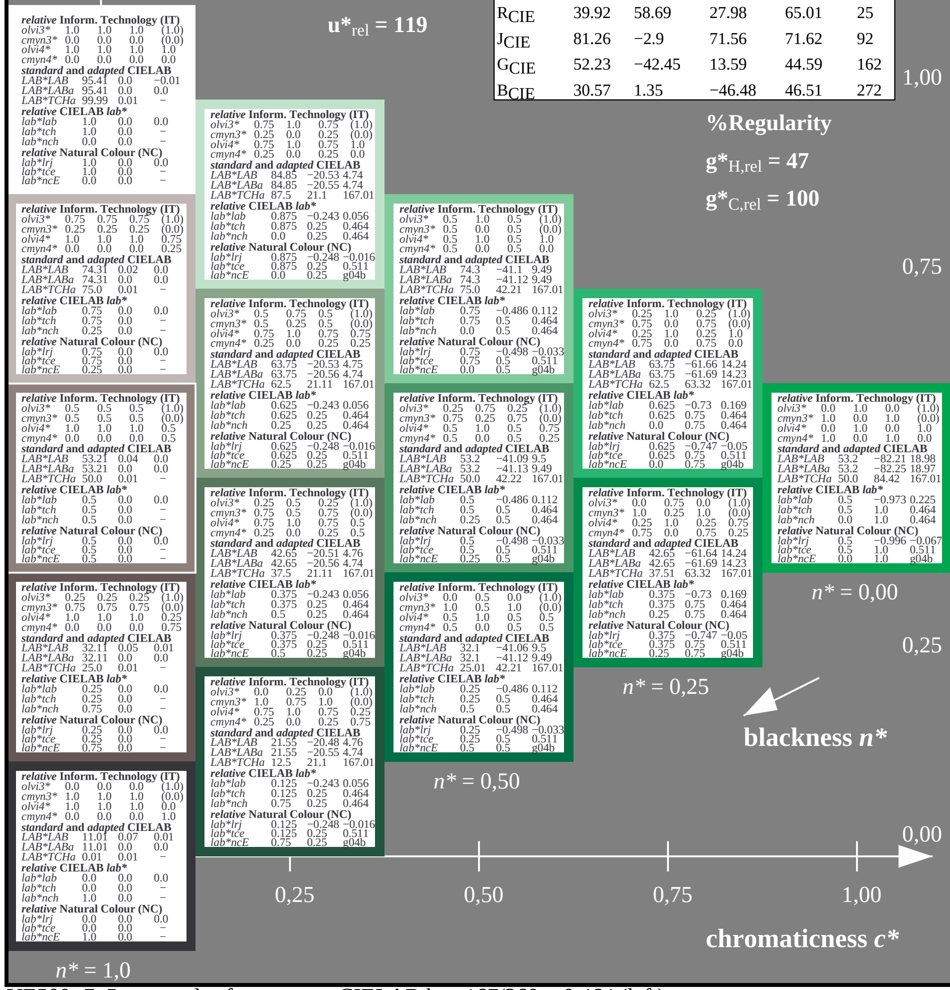
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System NCS18

for hue $h^* = lab^*h = 167/360 = 0.465$

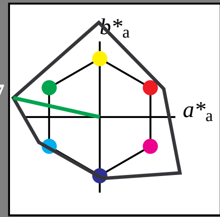
lab^*tch and lab^*nch

D65: hue G

LCH*Ma: 63 117 167

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 136$

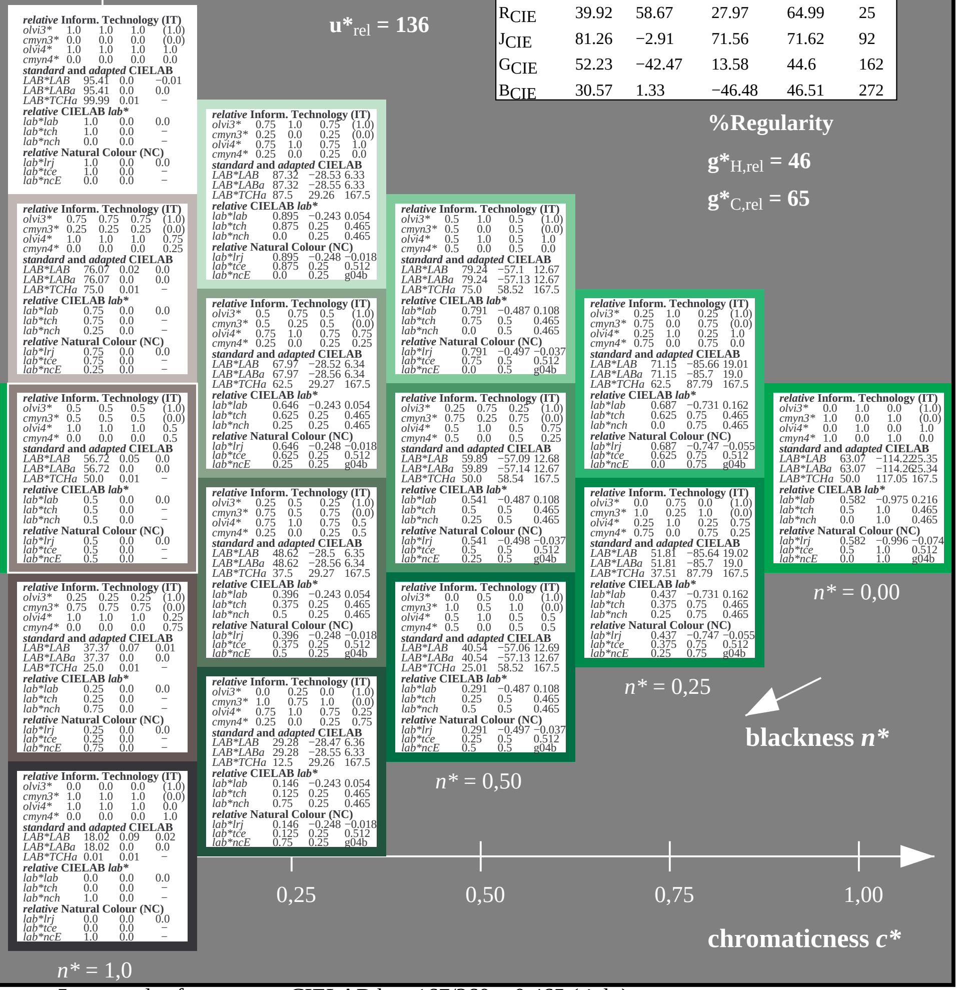
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



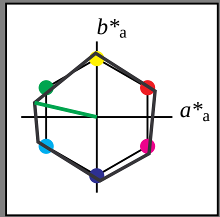
UE500−7, 5 step scales for constant CIELAB hue 167/360 = 0.464 (left)

5 step scales for constant CIELAB hue 167/360 = 0.465 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 167/360 = 0.464$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 84 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*

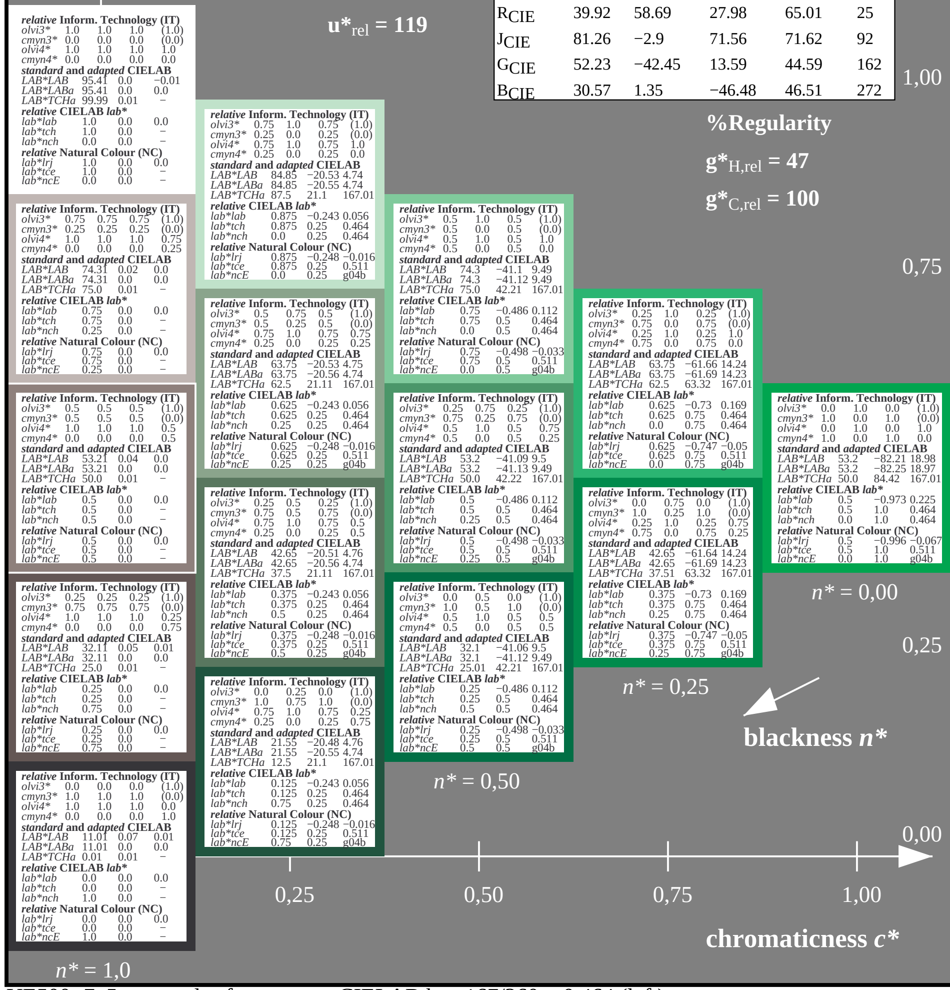


%Gamut
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

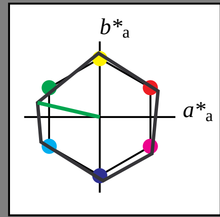
%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 167/360 = 0.464$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 84 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*

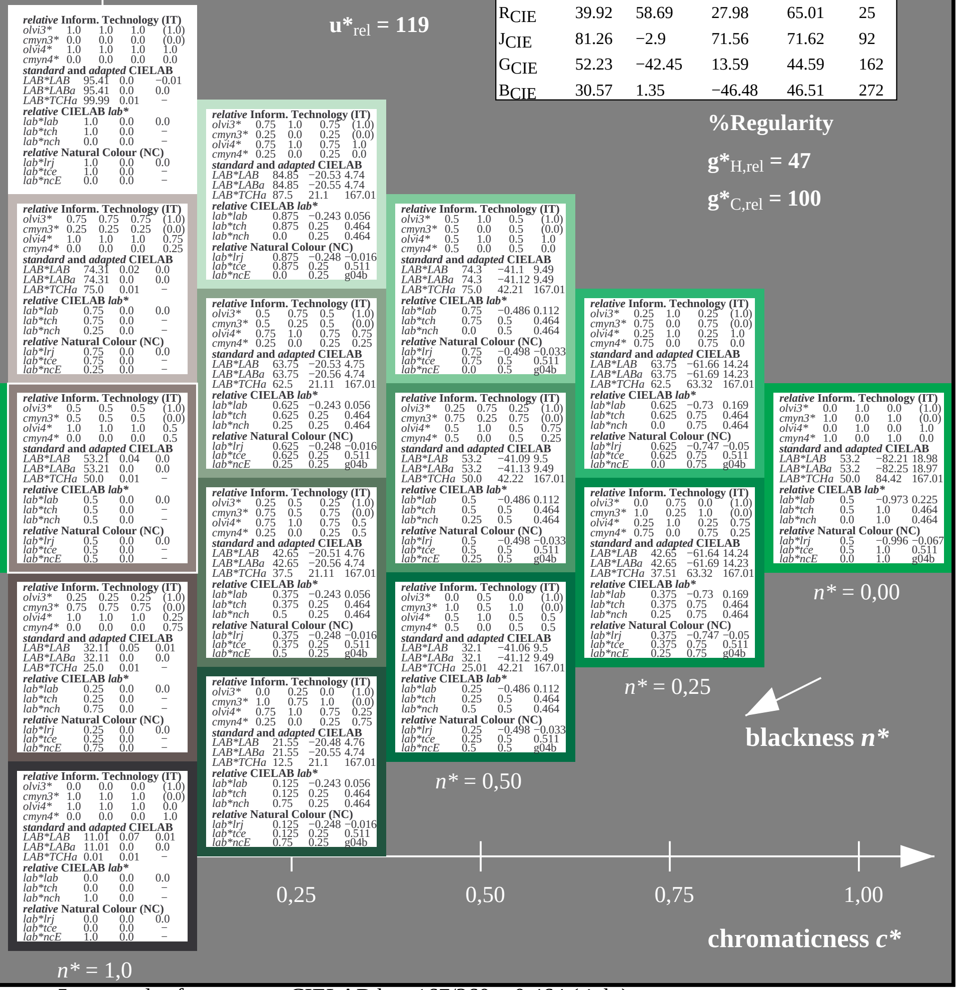


%Gamut
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



UE500−7, 5 step scales for constant CIELAB hue 167/360 = 0.464 (left)

5 step scales for constant CIELAB hue 167/360 = 0.464 (right)

Input: Colorimetric Reflective System NRS11

for hue $h^* = lab^*h = 167/360 = 0.464$

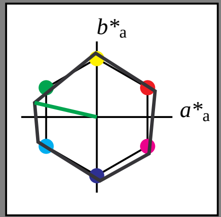
*lab*tch and lab*nch*

D65: hue G

LCH*Ma: 53 84 167

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 119$

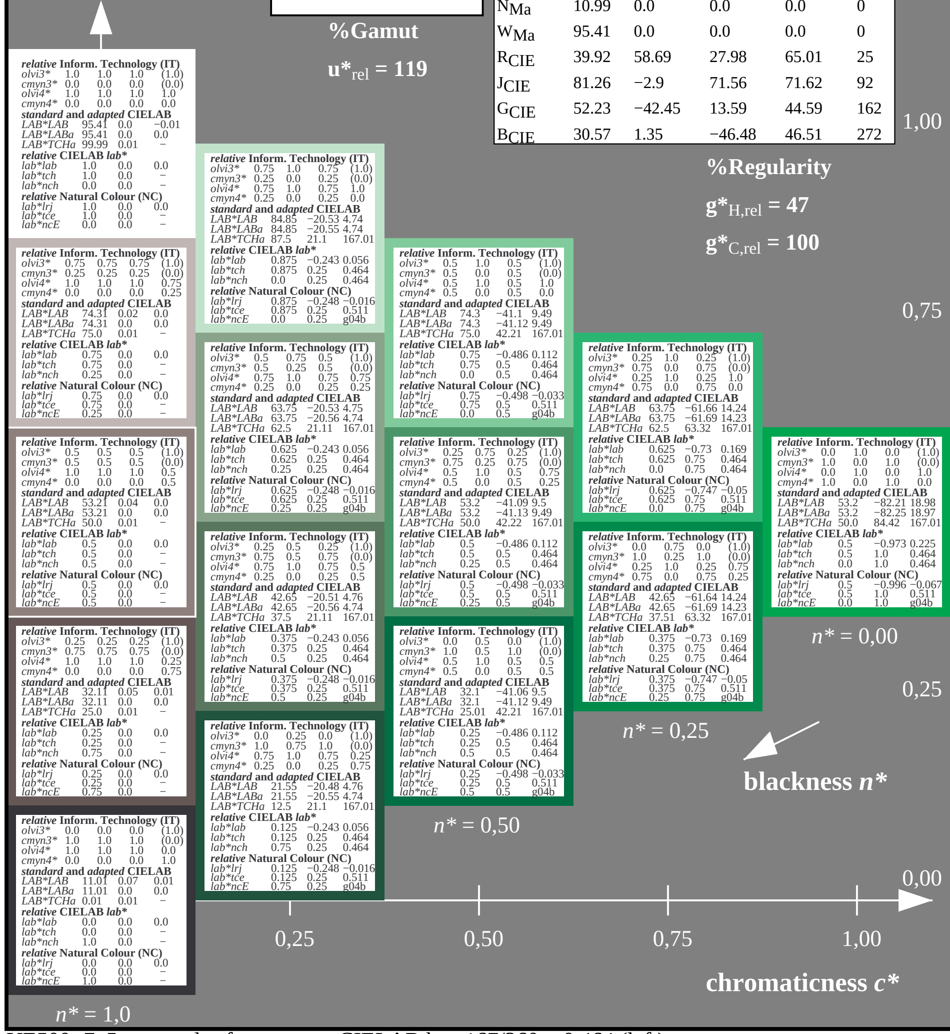
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 167/360 = 0.465$

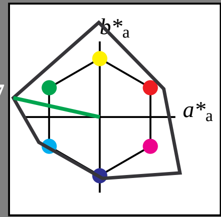
*lab*tch and lab*nch*

D65: hue G

LCH*Ma: 63 117 167

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 149$

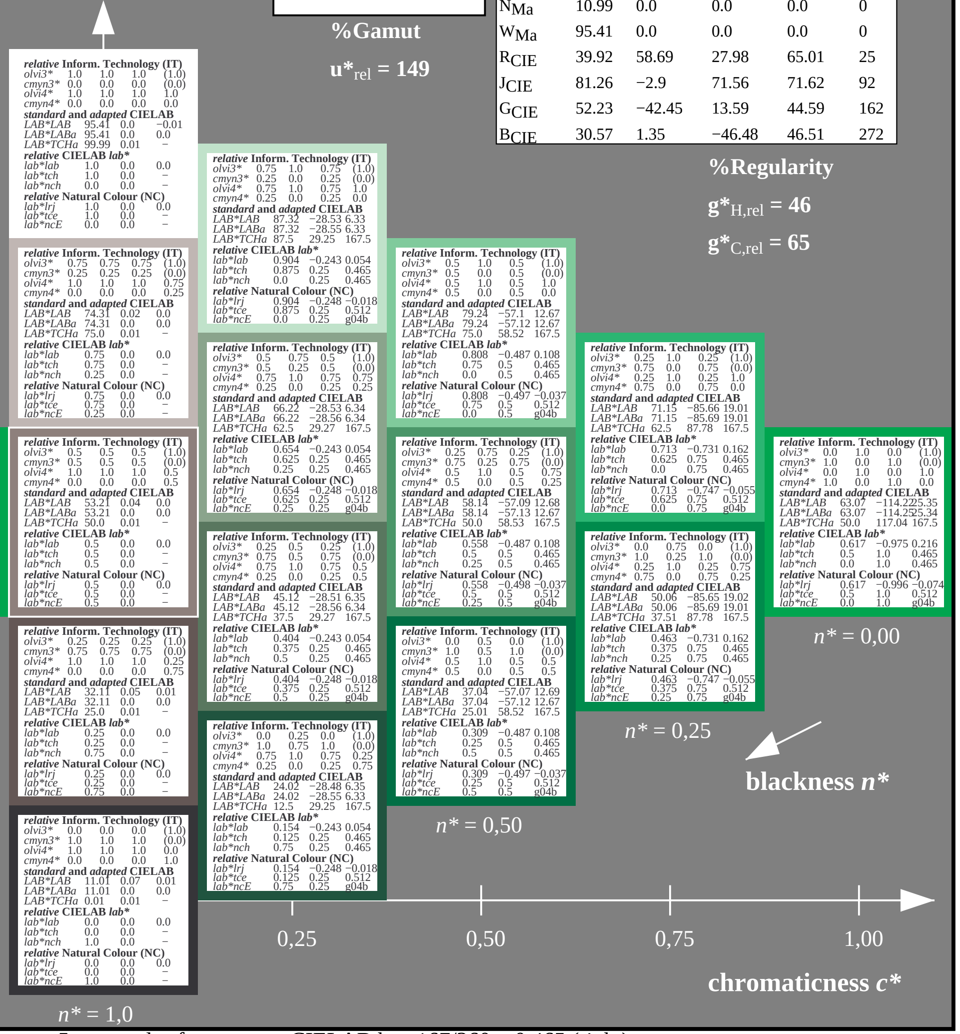
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$

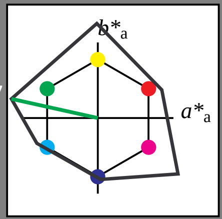


UE500−7, 5 step scales for constant CIELAB hue 167/360 = 0.464 (left)

5 step scales for constant CIELAB hue 167/360 = 0.465 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 167/360 = 0.465$
lab*tch and lab*nch

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0
triangle lightness *t**

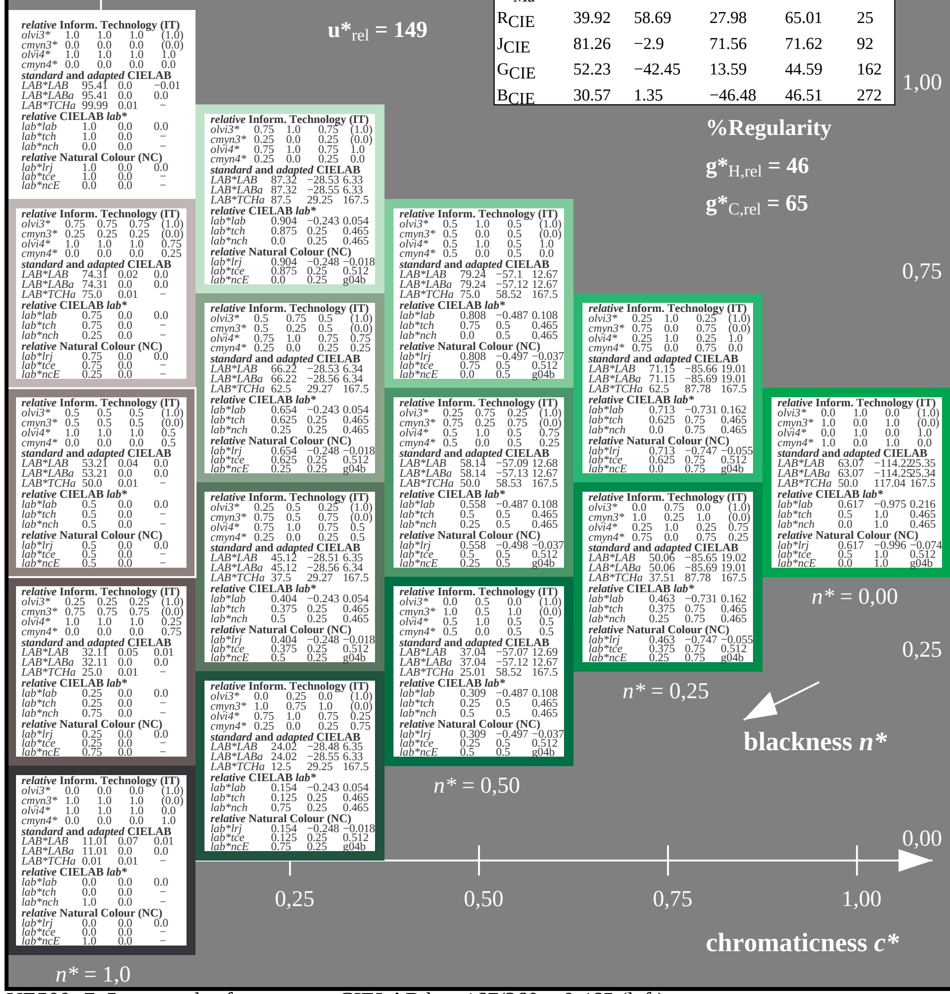


%Gamut
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

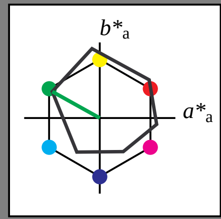
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 151/360 = 0.419$
lab*tch and lab*nch

D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0
triangle lightness *t**

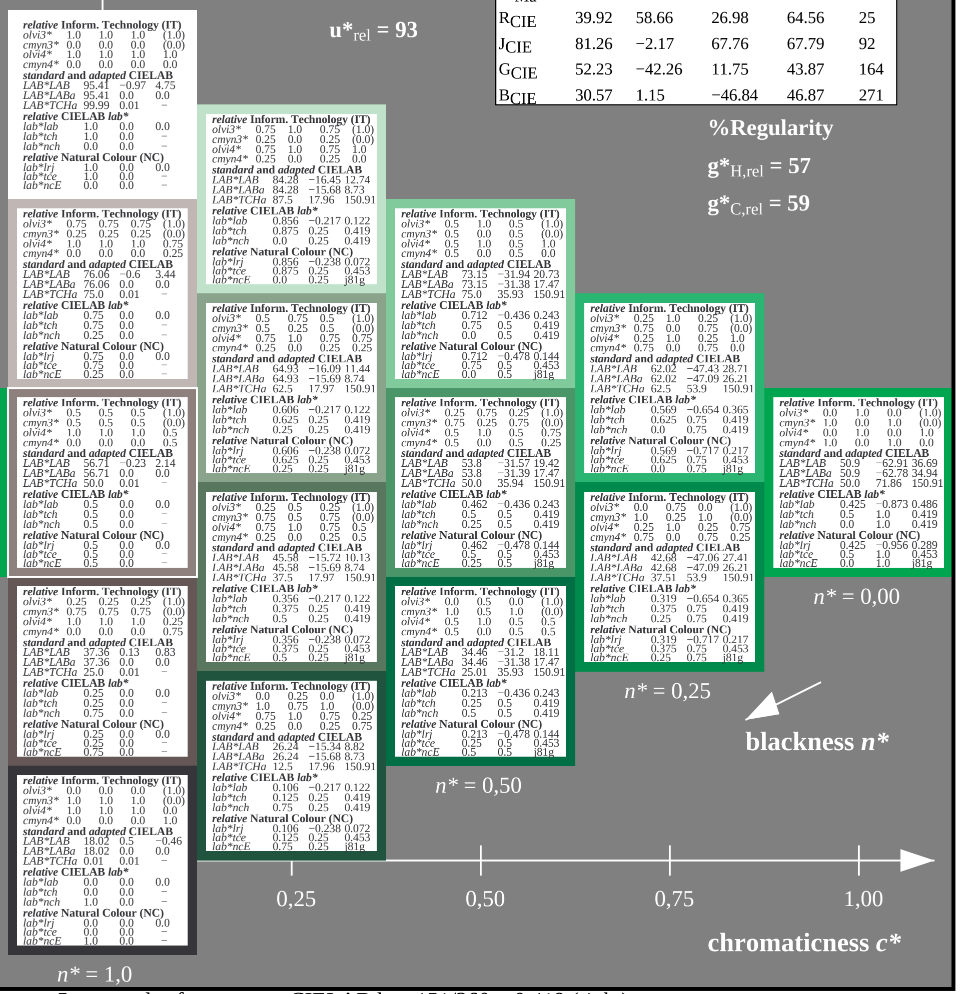


%Gamut
u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel}$ = 57
$g^*_{C,rel}$ = 59



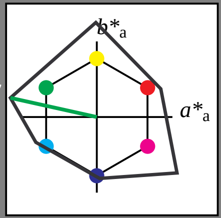
UE500−7, 5 step scales for constant CIELAB hue 167/360 = 0.465 (left)

5 step scales for constant CIELAB hue 151/360 = 0.419 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 167/360 = 0.465$
lab^*tch and lab^*nch

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*

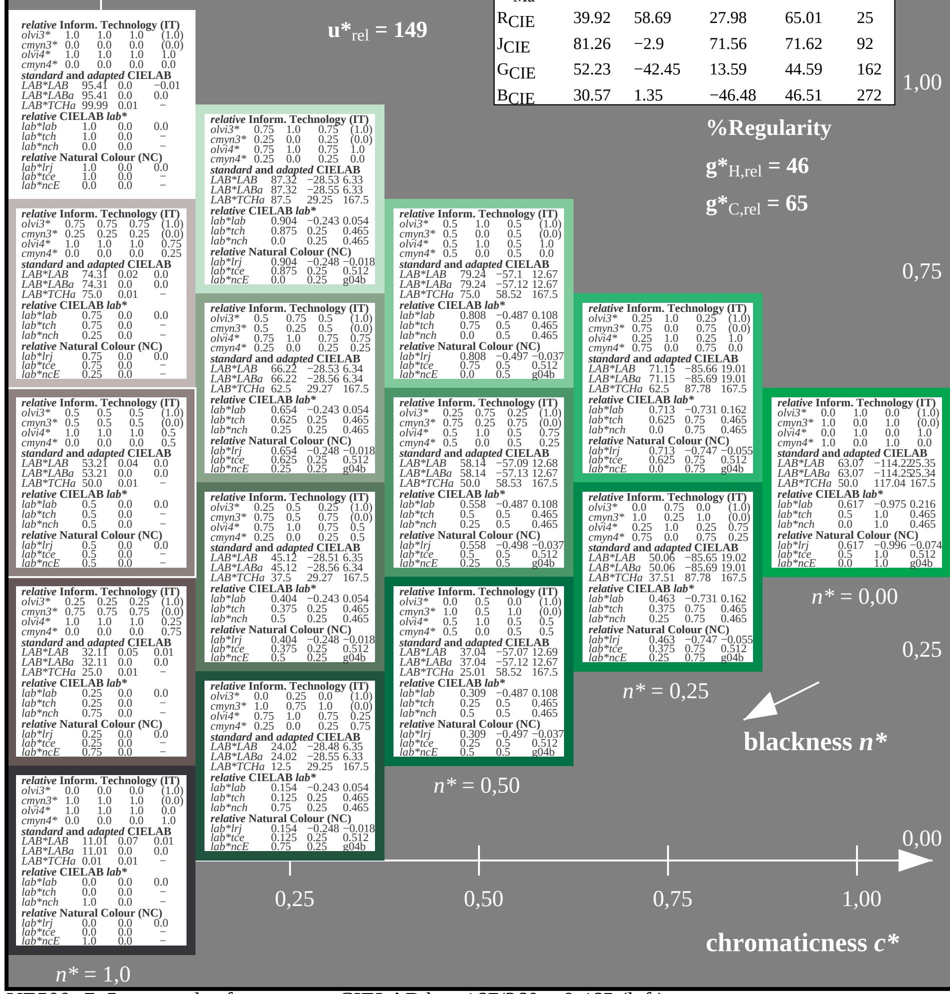


%Gamut
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

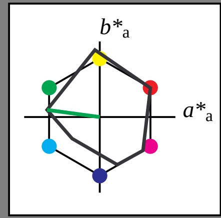
%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 172/360 = 0.479$
lab^*tch and lab^*nch

D65: hue G
LCH*Ma: 52 70 172
rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*

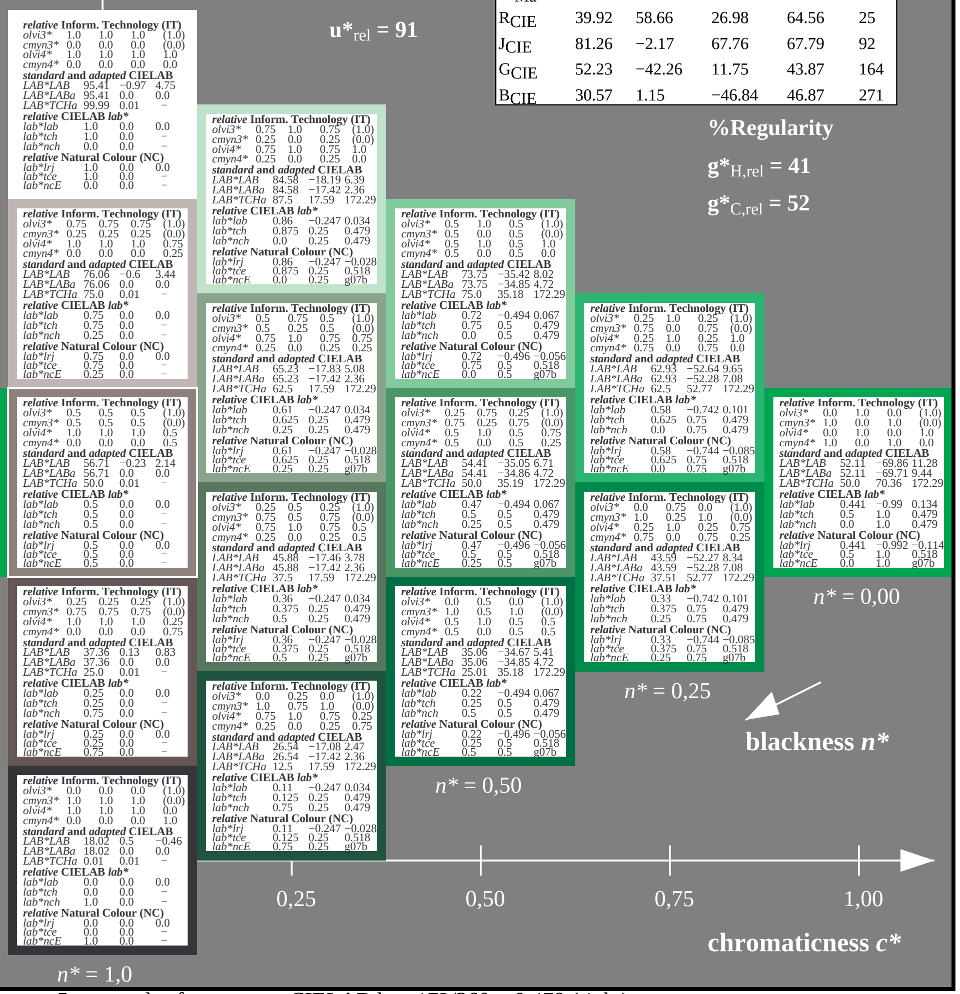


%Gamut
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 41$
$g^*_{C,rel} = 52$



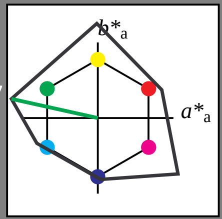
UE500−7, 5 step scales for constant CIELAB hue 167/360 = 0.465 (left)

5 step scales for constant CIELAB hue 172/360 = 0.479 (right)

Input: Colorimetric Reflective System NCS11
for hue *h = *lab*h* = 167/360 = 0.465**
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness *t**



%Gamut

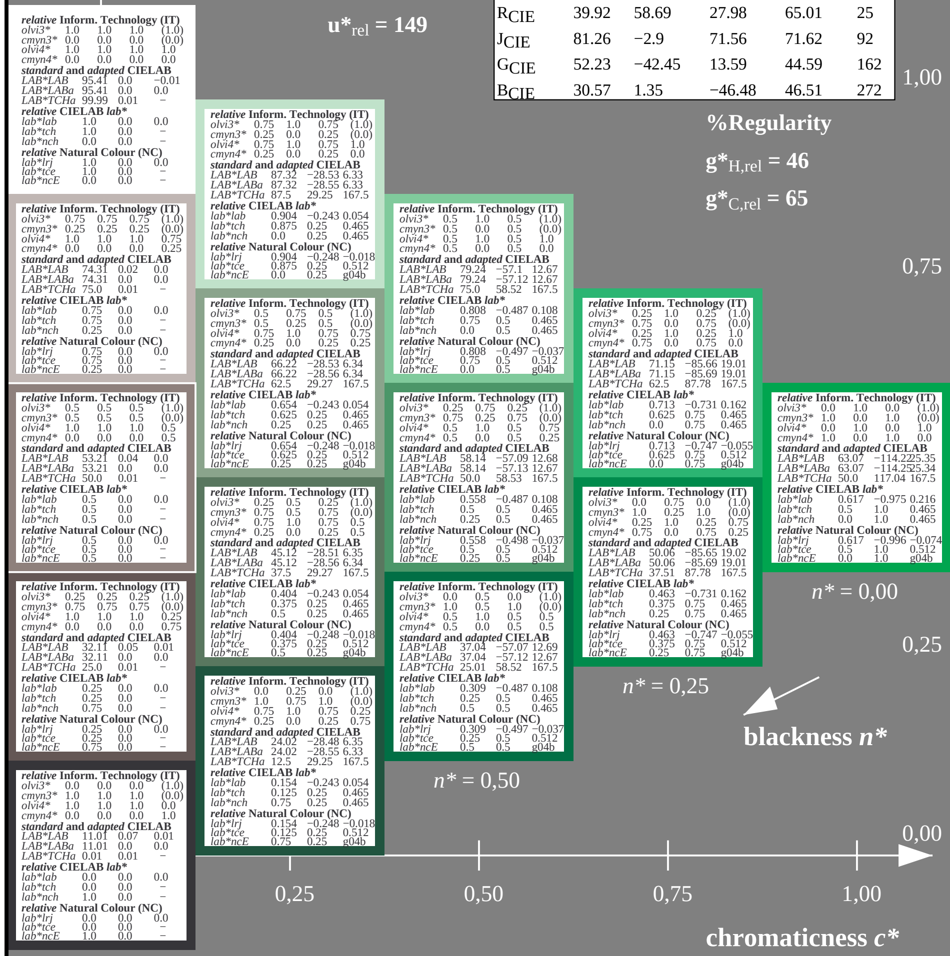
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

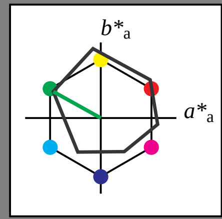
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System TRS18
for hue *h = *lab*h* = 151/360 = 0.419**
lab*tch* and *lab*nch

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

triangle lightness *t**



%Gamut

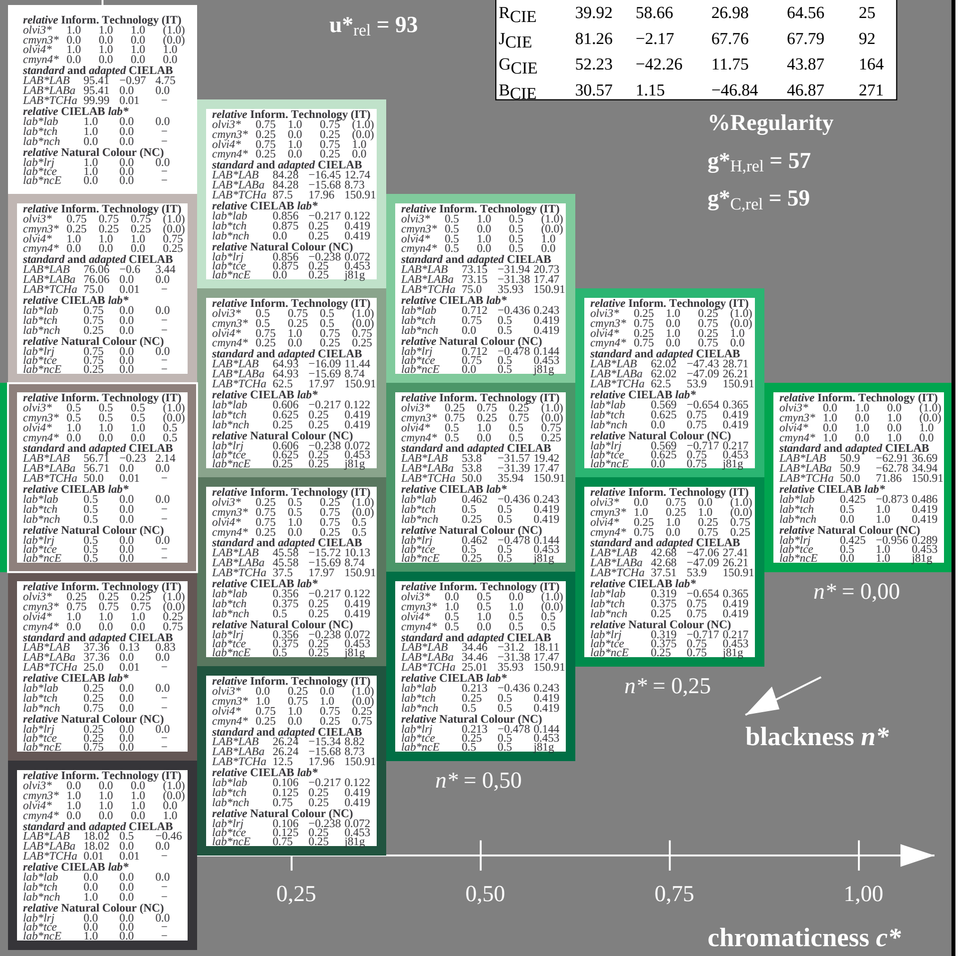
u^*_{rel} = 93

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



UE500−7, 5 step scales for constant CIELAB hue 167/360 = 0.465 (left)

5 step scales for constant CIELAB hue 151/360 = 0.419 (right)

Input: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 167/360 = 0.465$

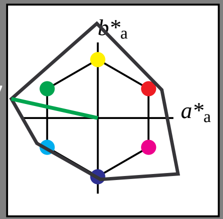
lab*tch and lab*nch

D65: hue G

LCH*Ma: 63 117 167

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

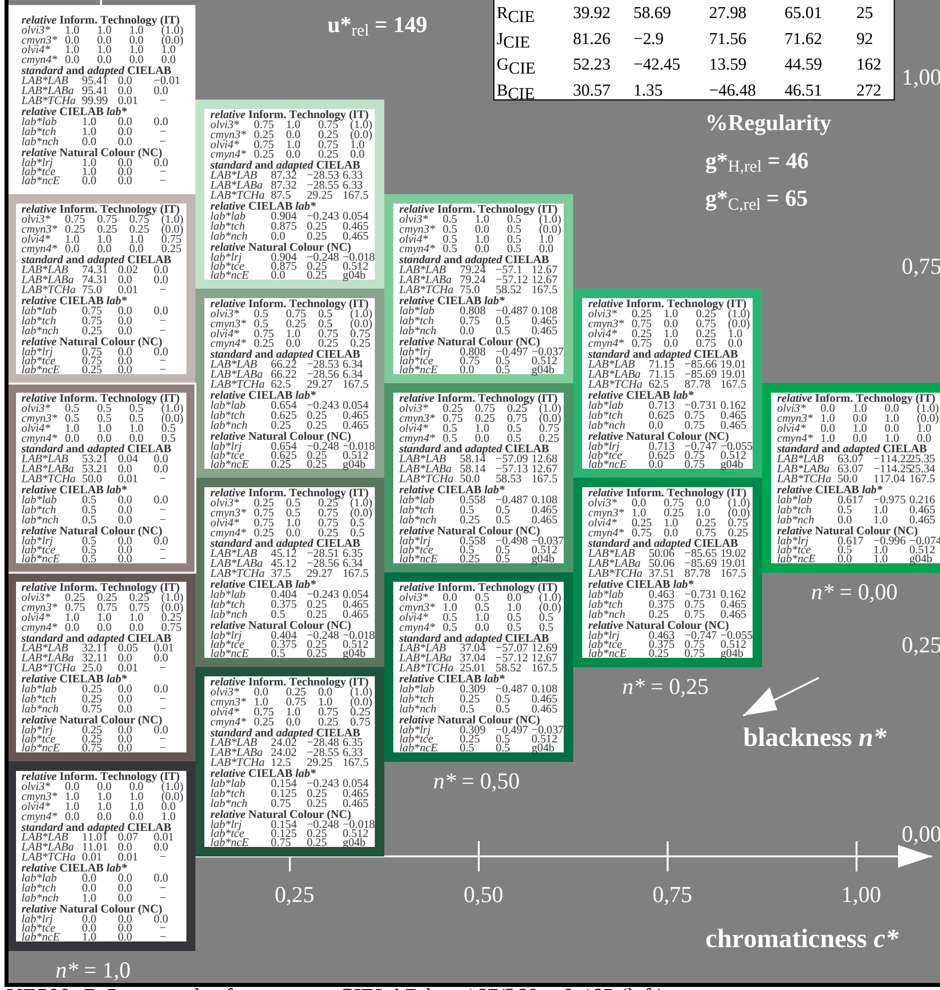
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System MRS18a

for hue $h^* = lab^*h = 171/360 = 0.475$

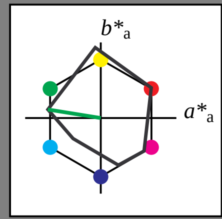
lab*tch and lab*nch

D65: hue G

LCH*Ma: 52 71 171

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

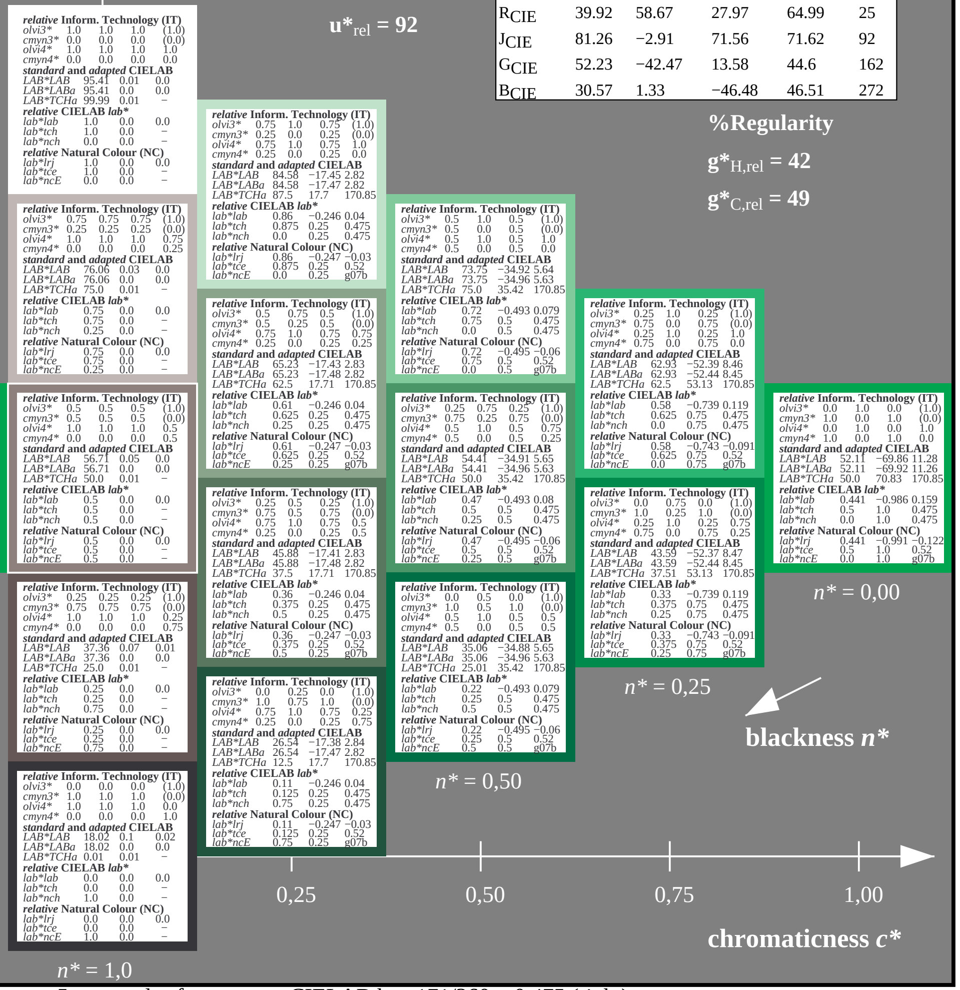
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

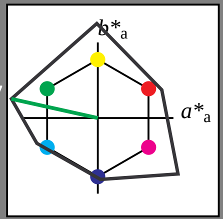


UE500−7, 5 step scales for constant CIELAB hue 167/360 = 0.465 (left)

5 step scales for constant CIELAB hue 171/360 = 0.475 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 167/360 = 0.465$
lab^*tch and lab^*nch

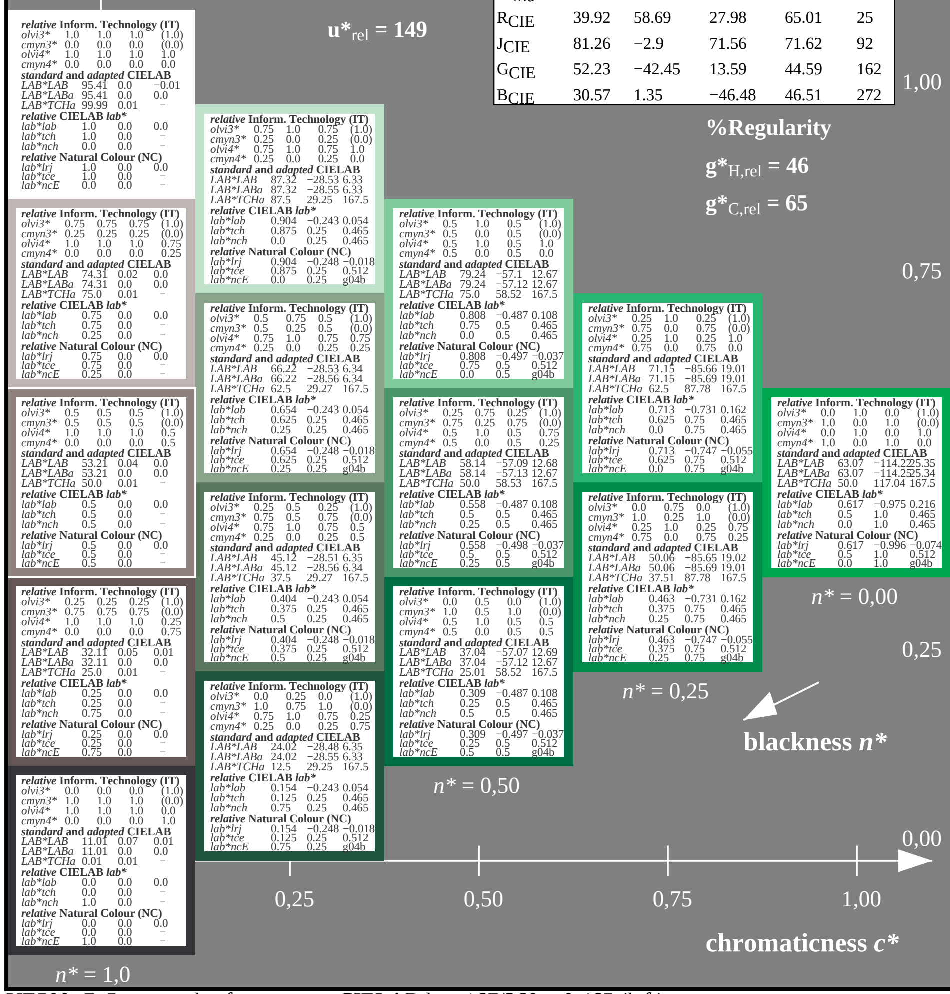
D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 149$

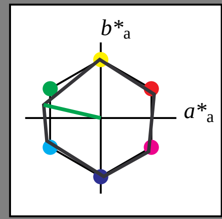
NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 167/360 = 0.464$
lab^*tch and lab^*nch

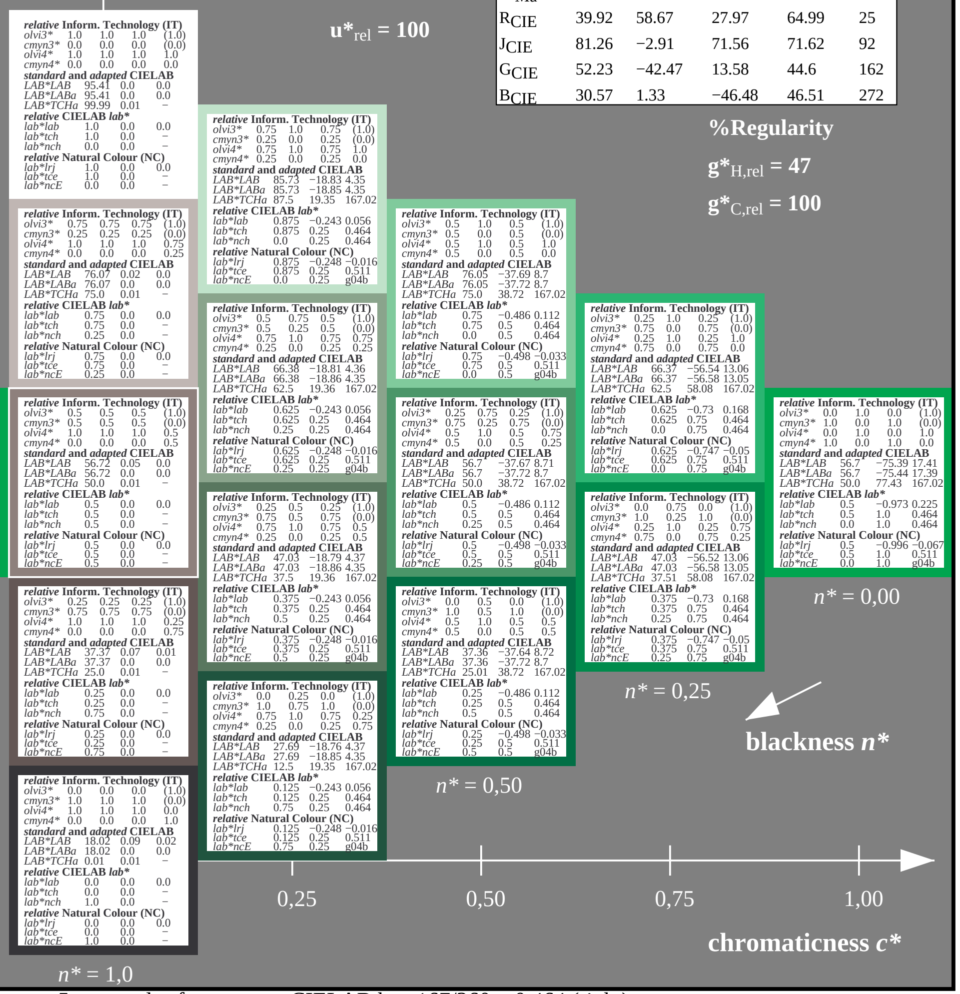
D65: hue G
LCH*Ma: 57 77 167
rgb*Ma: 0.0 1.0 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



UE500−7, 5 step scales for constant CIELAB hue 167/360 = 0.465 (left)

5 step scales for constant CIELAB hue 167/360 = 0.464 (right)

Input: Colorimetric Reflective System NCS11

for hue *h** = *lab*h* = 167/360 = 0.465

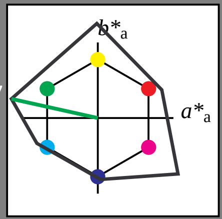
*lab*tch* and *lab*nch*

D65: hue G

LCH*Ma: 63 117 167

rgb*Ma: 0.0 1.0 0.0

triangle lightness *t**



%Gamut

u*rel = 149

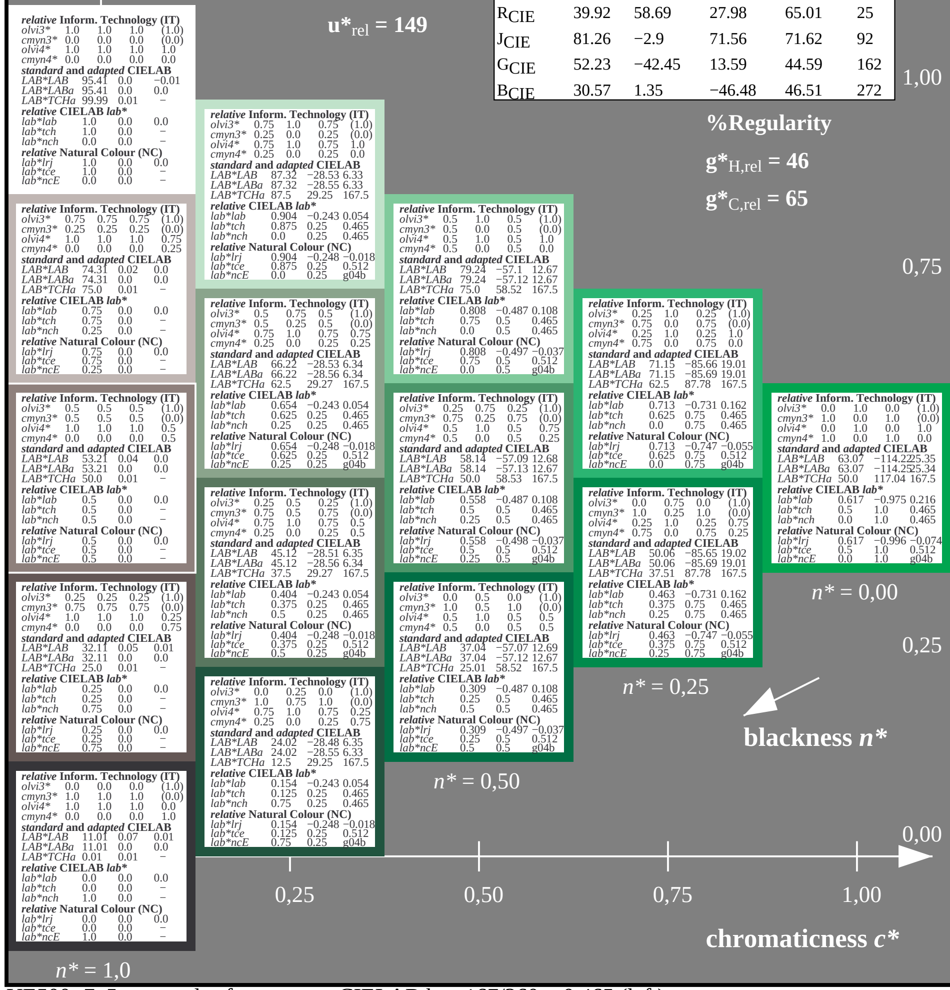
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

g*H,rel = 46

g*C,rel = 65



Output: Colorimetric Reflective System NCS18

for hue *h** = *lab*h* = 167/360 = 0.465

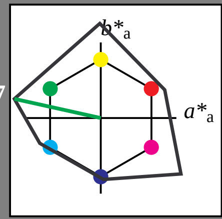
*lab*tch* and *lab*nch*

D65: hue G

LCH*Ma: 63 117 167

rgb*Ma: 0.0 1.0 0.0

triangle lightness *t**



%Gamut

u*rel = 136

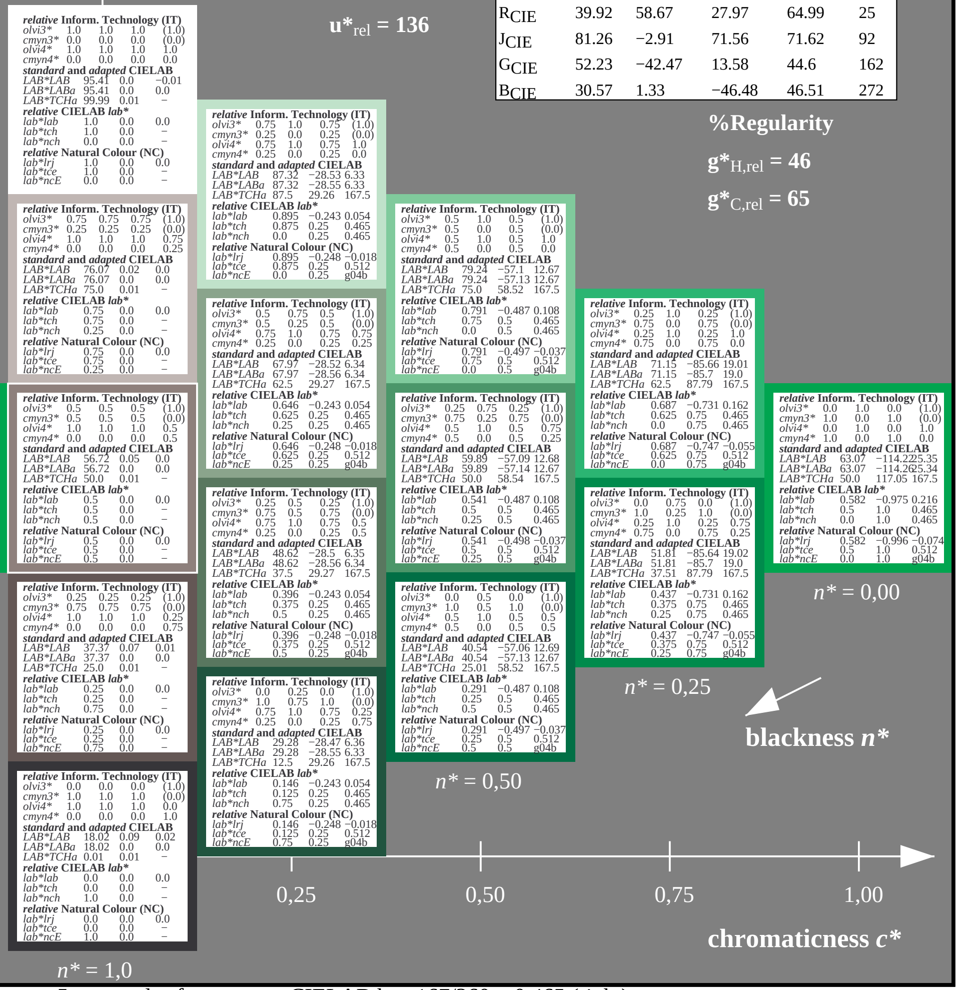
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

g*H,rel = 46

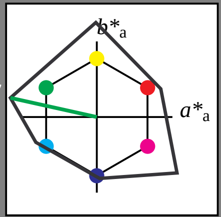
g*C,rel = 65



UE500−7, 5 step scales for constant CIELAB hue 167/360 = 0.465 (left)

5 step scales for constant CIELAB hue 167/360 = 0.465 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 167/360 = 0.465$
*lab*tch and lab*nch*



D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0
triangle lightness t^*

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut
u^*_{rel} = 149

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65

1,00
0,75
0,25
0,00

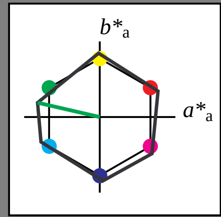
n^* = 0,00
n^* = 0,25
n^* = 0,50
n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 167/360 = 0.464$
*lab*tch and lab*nch*



D65: hue G
LCH*Ma: 53 84 167
rgb*Ma: 0.0 1.0 0.0
triangle lightness t^*

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut
u^*_{rel} = 119

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100

n^* = 0,00
n^* = 0,25
n^* = 0,50
n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

UE500−7, 5 step scales for constant CIELAB hue 167/360 = 0.465 (left)

5 step scales for constant CIELAB hue 167/360 = 0.464 (right)

Input: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 167/360 = 0.465$

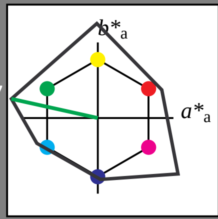
lab*tch and lab*nch

D65: hue G

LCH*Ma: 63 117 167

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

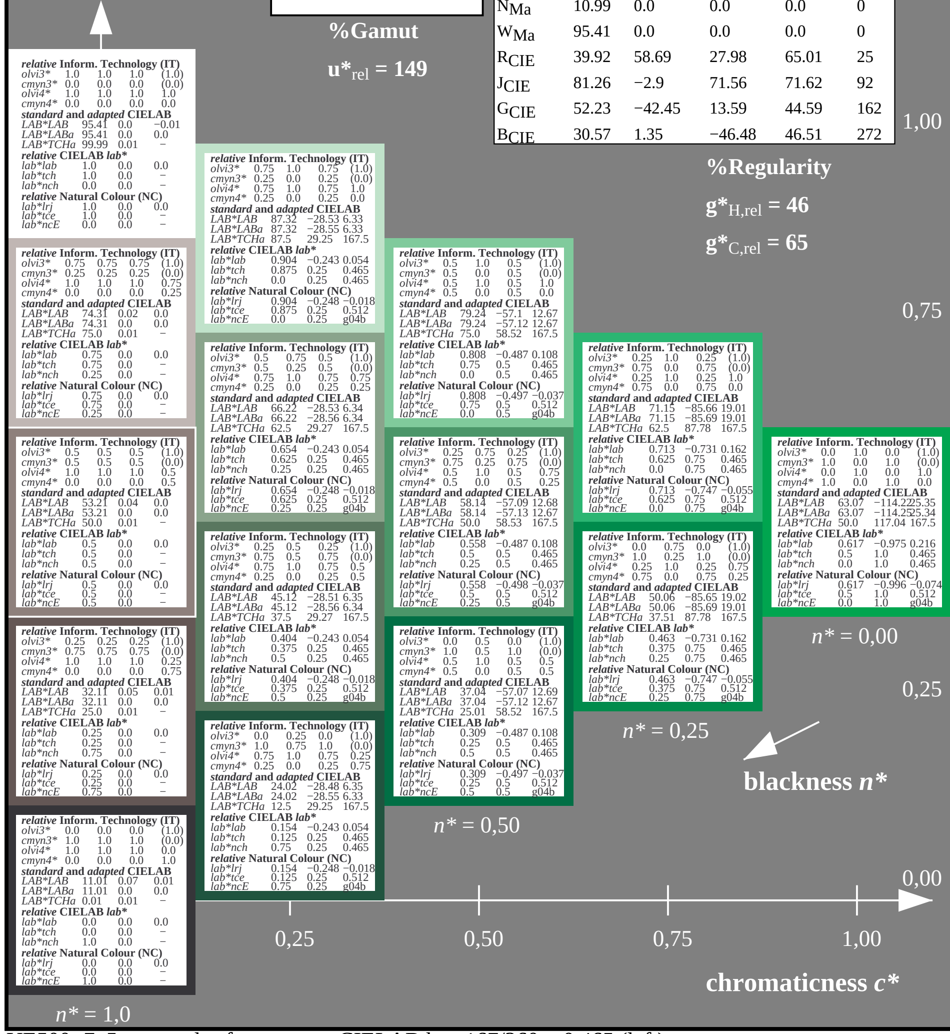
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 167/360 = 0.465$

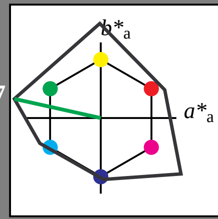
lab*tch and lab*nch

D65: hue G

LCH*Ma: 63 117 167

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



%Gamut

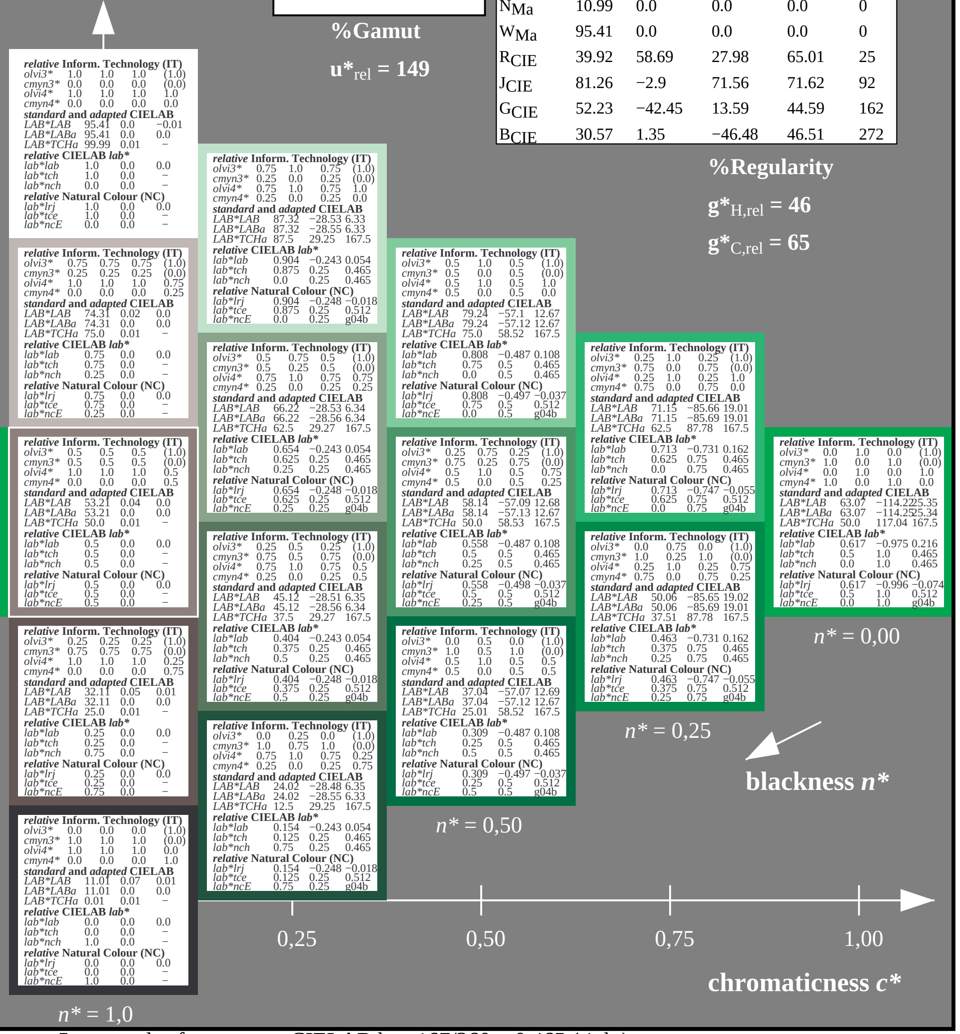
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



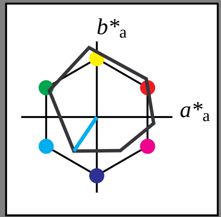
UE500−7, 5 step scales for constant CIELAB hue 167/360 = 0.465 (left)

5 step scales for constant CIELAB hue 167/360 = 0.465 (right)

Input: Colorimetric Reflective System ORS18
for hue *h = *lab*h* = 236/360 = 0.656**
lab*tch* and *lab*nch

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

triangle lightness *t*



%Gamut

$u^*_{rel} = 93$

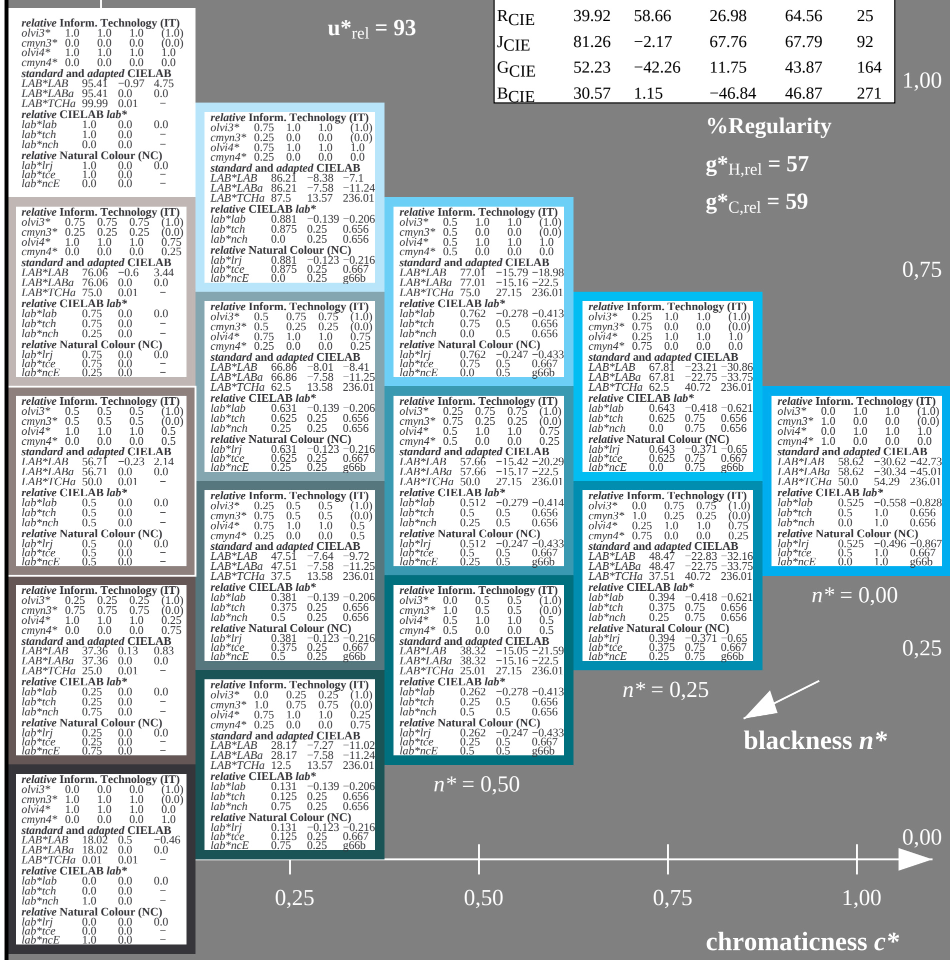
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

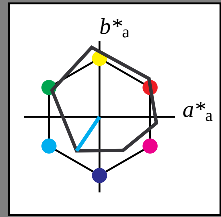
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System ORS18
for hue *h = *lab*h* = 236/360 = 0.656**
lab*tch* and *lab*nch

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

triangle lightness *t*



%Gamut

$u^*_{rel} = 93$

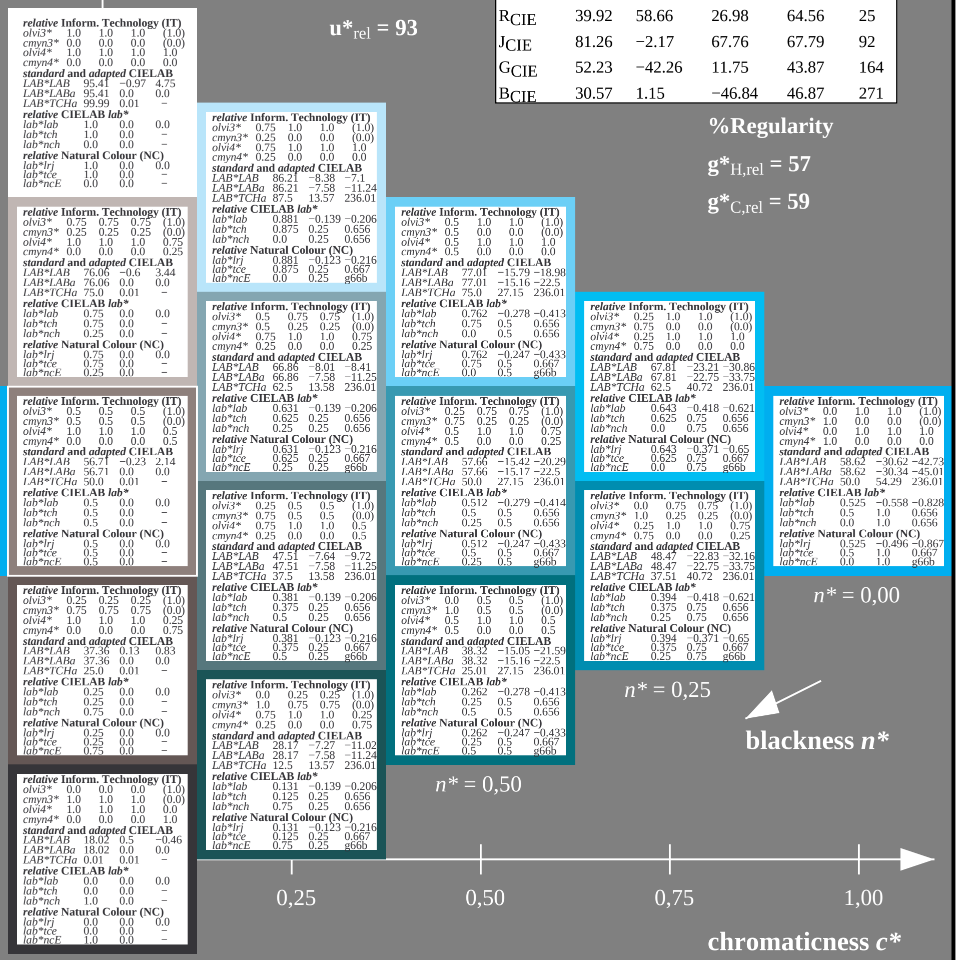
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



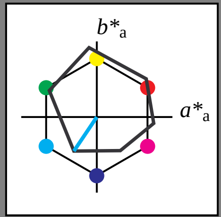
UE500−7, 5 step scales for constant CIELAB hue 236/360 = 0.656 (left)

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

Input: Colorimetric Reflective System ORS18
for hue *h = *lab*h* = 236/360 = 0.656**
lab*tch* and *lab*nch

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

triangle lightness *t*

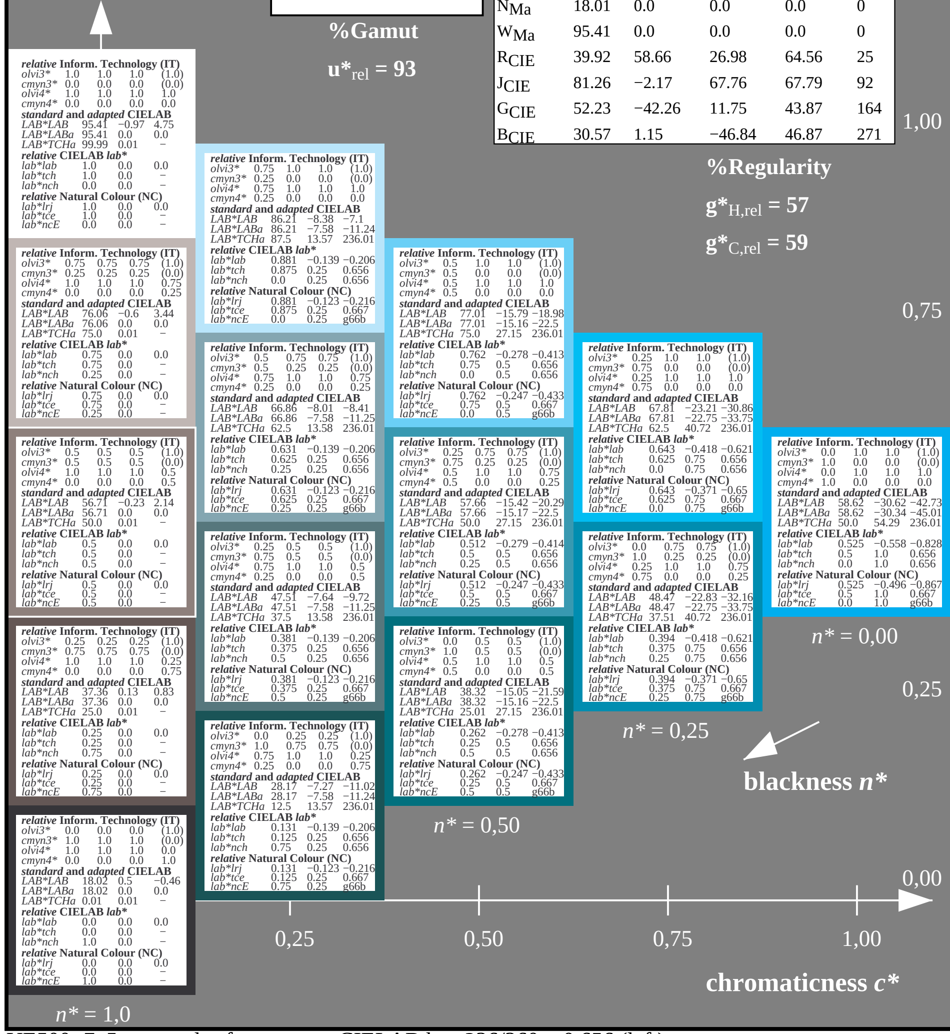


%Gamut
u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

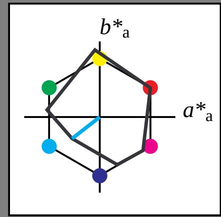
%Regularity
$g^*_{H,rel}$ = 57
$g^*_{C,rel}$ = 59



Output: Colorimetric Reflective System MRS18
for hue *h = *lab*h* = 218/360 = 0.605**
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 218
rgb*Ma: 0.0 1.0 1.0

triangle lightness *t*

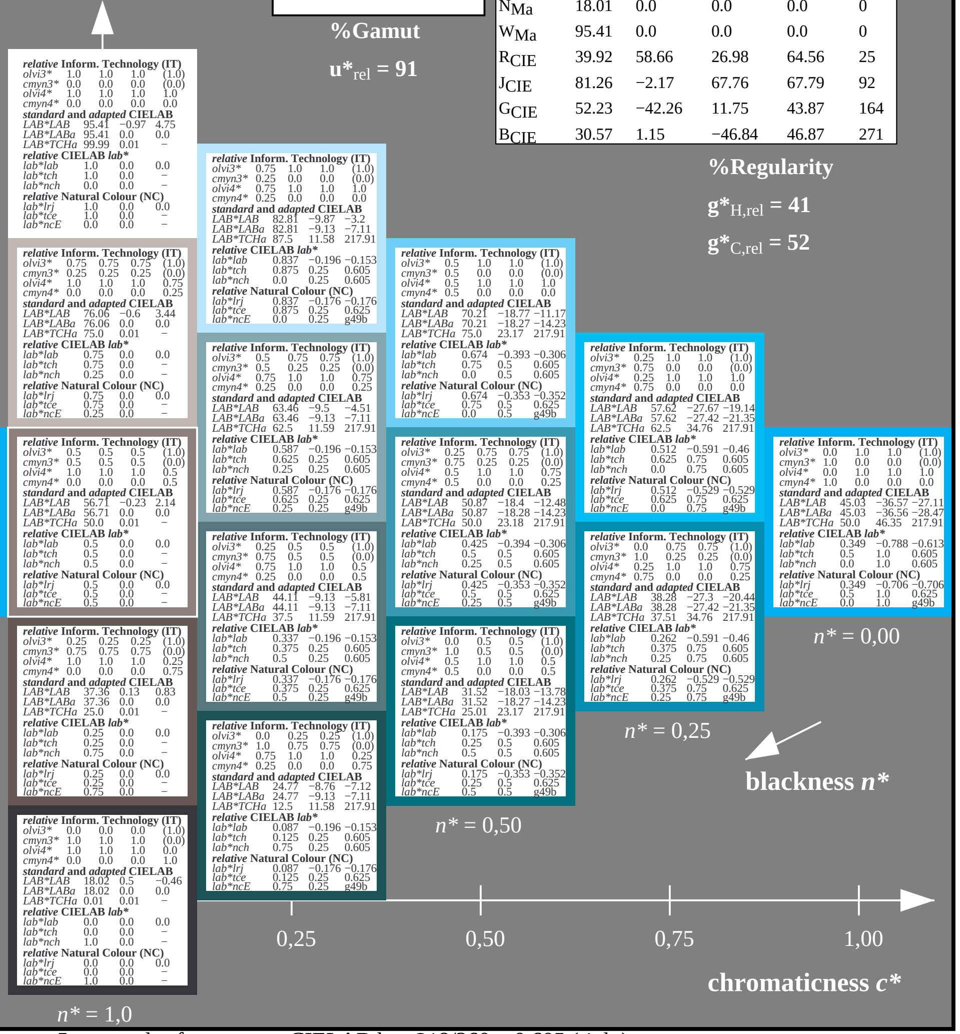


%Gamut
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel}$ = 41
$g^*_{C,rel}$ = 52



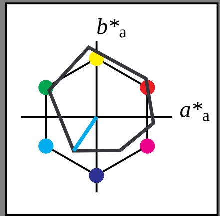
UE500−7, 5 step scales for constant CIELAB hue 236/360 = 0.656 (left)

5 step scales for constant CIELAB hue 218/360 = 0.605 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 236/360 = 0.656$
*lab*tch* and *lab*nch*

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

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

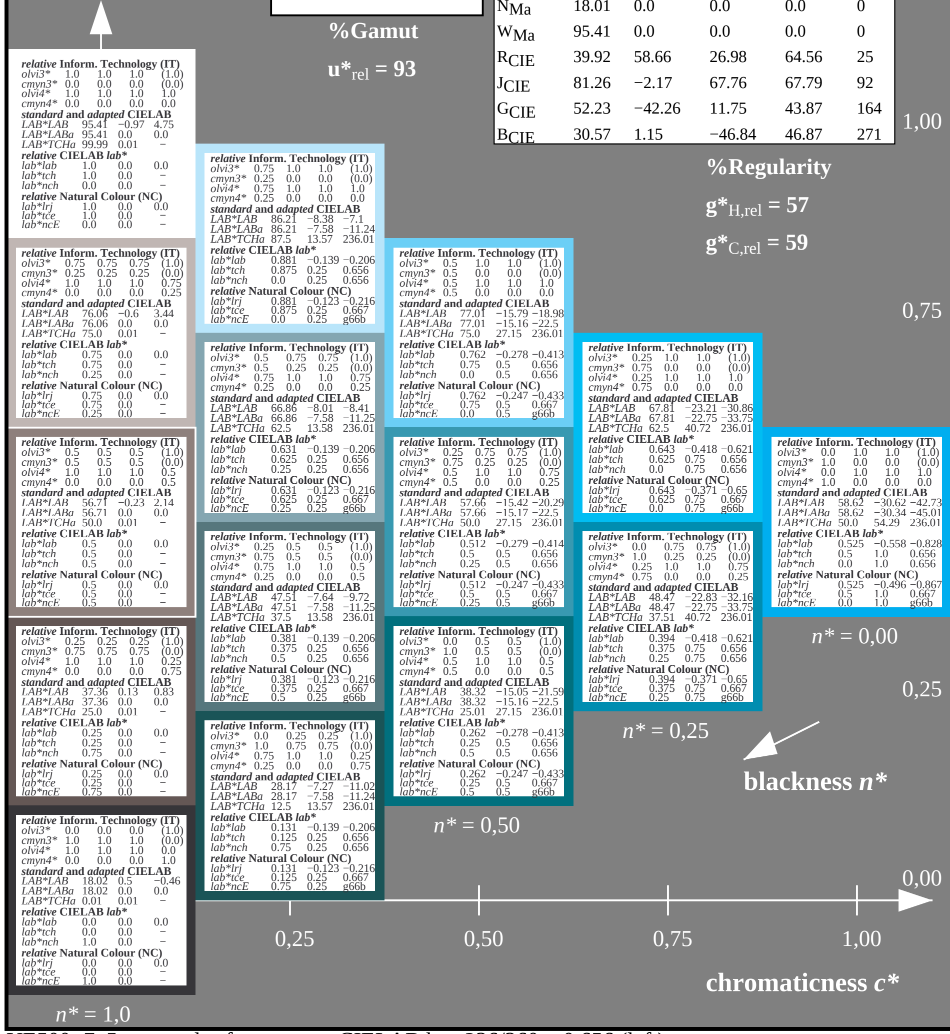
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

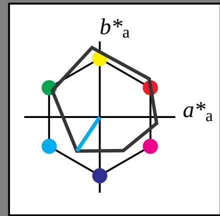
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 236/360 = 0.656$
*lab*tch* and *lab*nch*

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

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

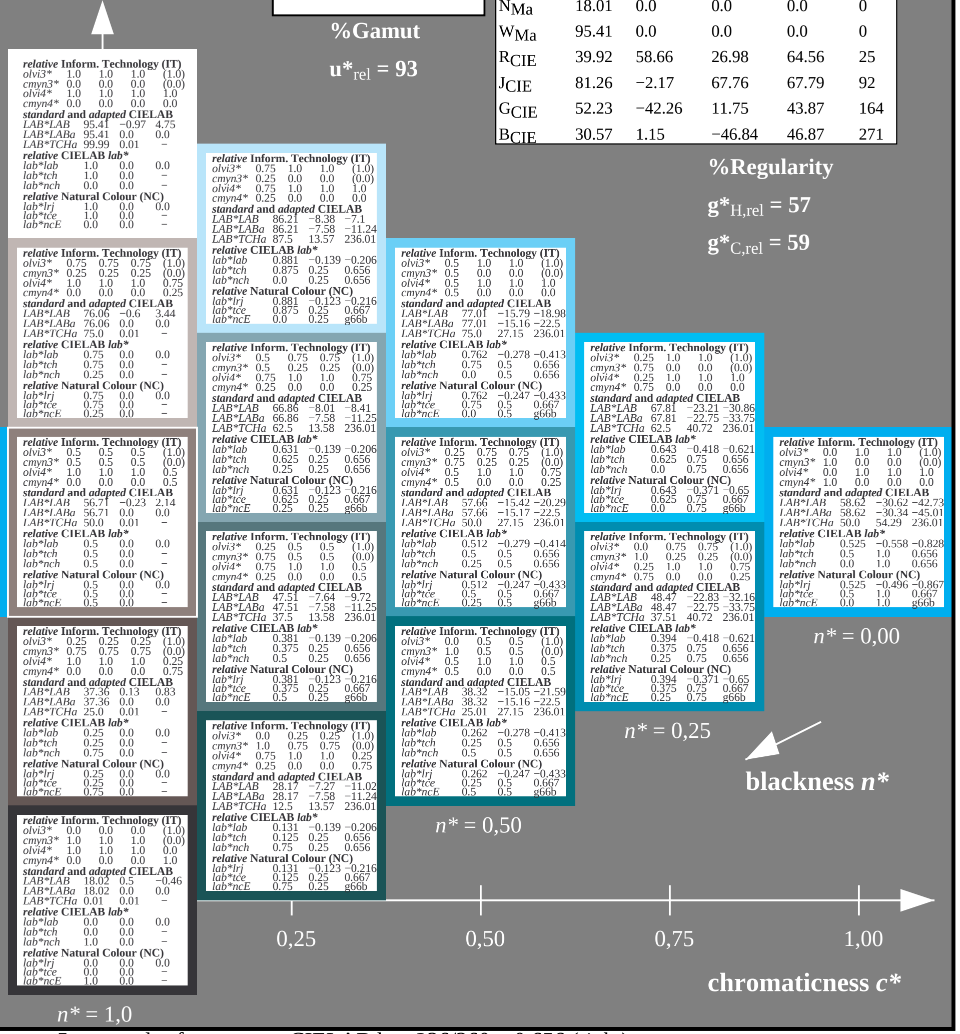
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



UE500−7, 5 step scales for constant CIELAB hue 236/360 = 0.656 (left)

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

Input: Colorimetric Reflective System ORS18

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

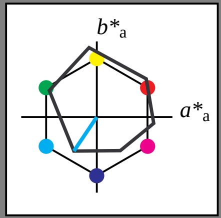
lab^*tch and lab^*nch

D65: hue C

LCH*Ma: 59 54 236

rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

u^*_{rel} = 93

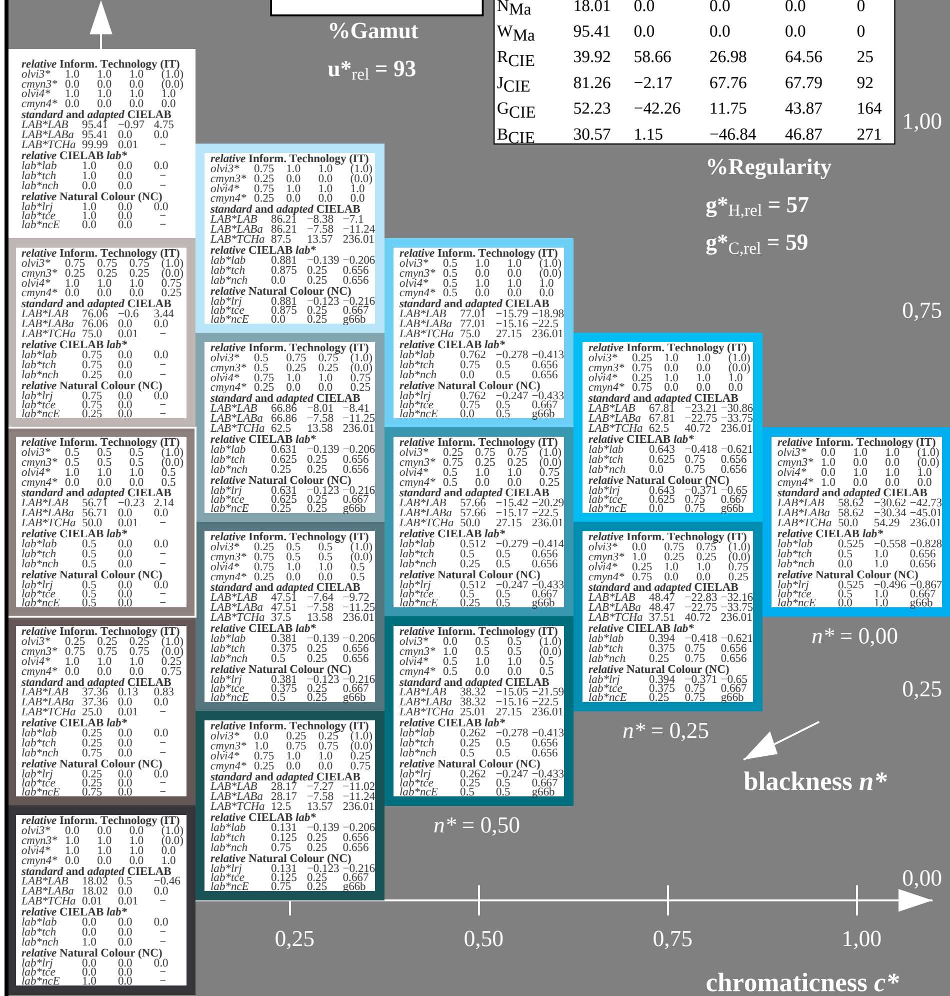
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



Output: Colorimetric Reflective System MRS18a

for hue $h^* = lab^*h = 217/360 = 0.601$

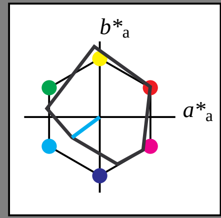
lab^*tch and lab^*nch

D65: hue G50B

LCH*Ma: 45 46 217

rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

u^*_{rel} = 92

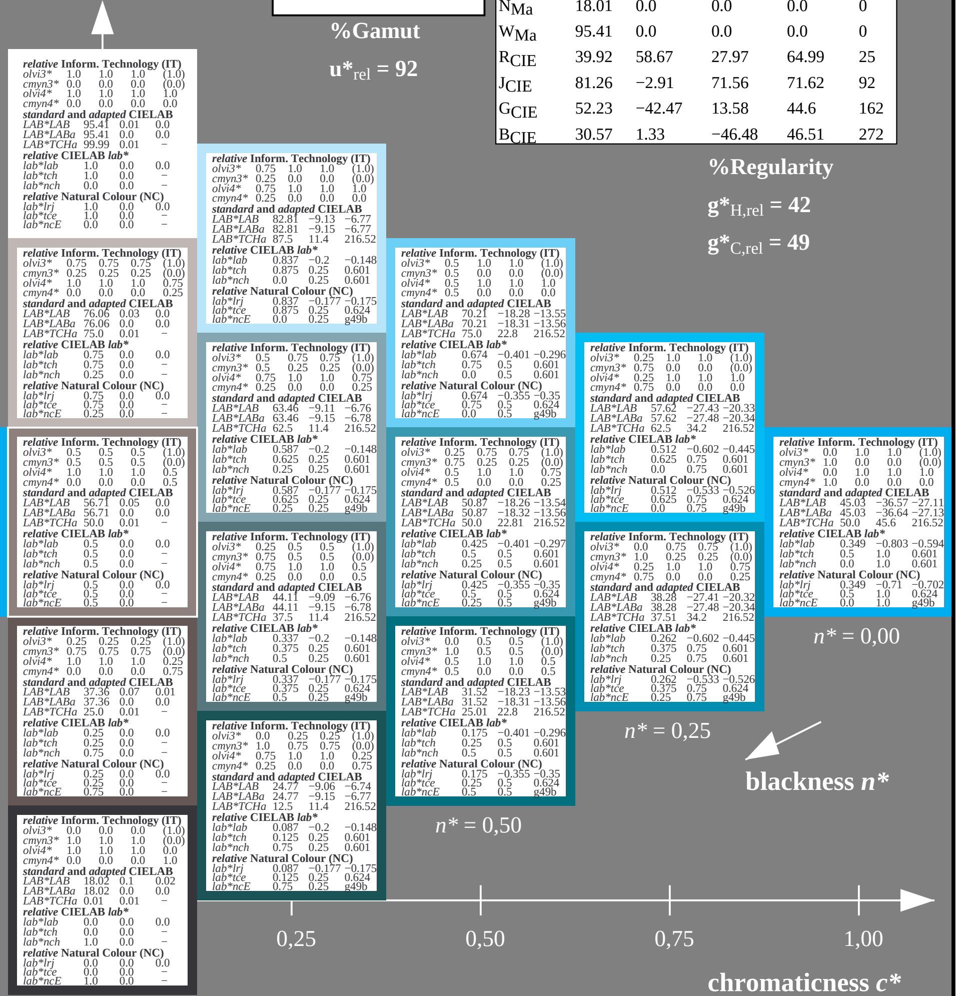
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



UE500−7, 5 step scales for constant CIELAB hue 236/360 = 0.656 (left)

5 step scales for constant CIELAB hue 217/360 = 0.601 (right)

Input: Colorimetric Reflective System ORS18

for hue *h** = *lab*h* = 236/360 = 0.656

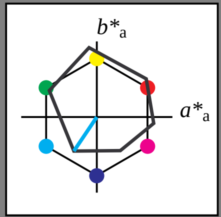
*lab*tch* and *lab*nch*

D65: hue C

LCH*Ma: 59 54 236

rgb*Ma: 0.0 1.0 1.0

triangle lightness *t**



%Gamut

u^*_{rel} = 93

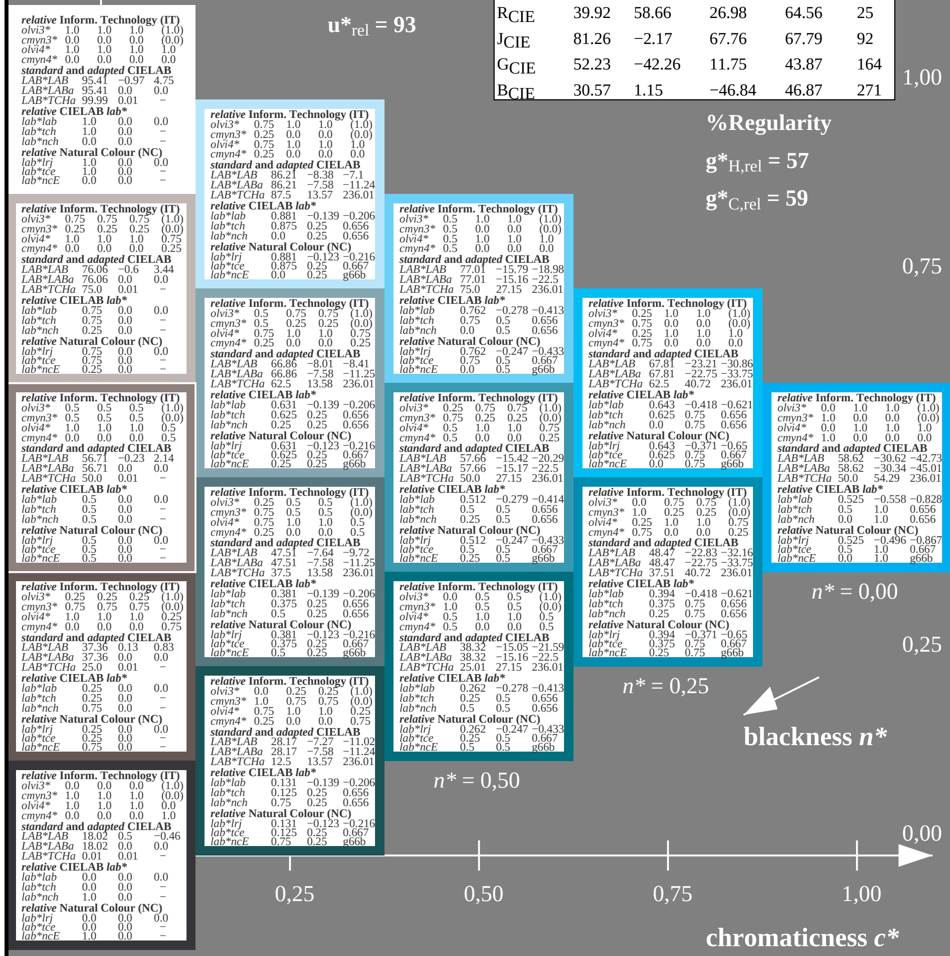
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



Output: Colorimetric Reflective System NRS18

for hue *h** = *lab*h* = 203/360 = 0.564

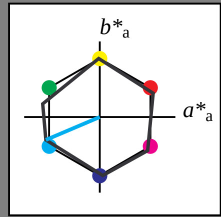
*lab*tch* and *lab*nch*

D65: hue G50B

LCH*Ma: 57 77 203

rgb*Ma: 0.0 1.0 1.0

triangle lightness *t**



%Gamut

u^*_{rel} = 100

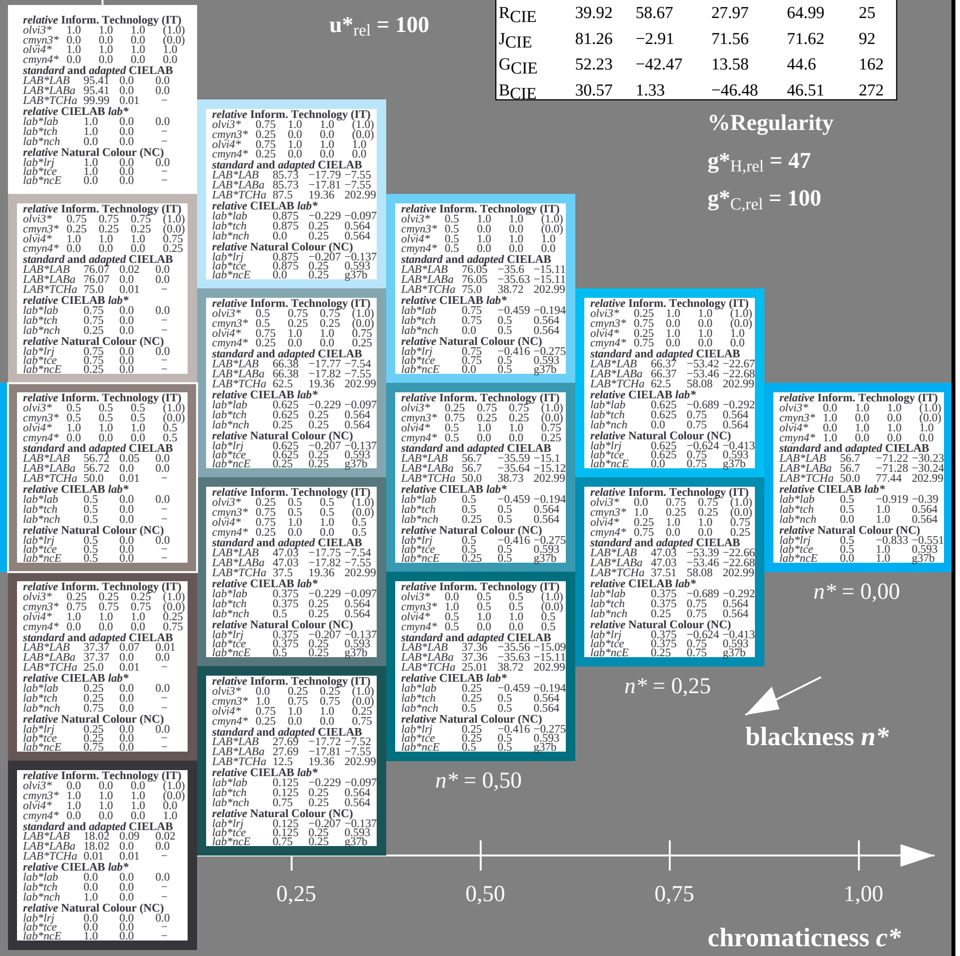
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



UE500−7, 5 step scales for constant CIELAB hue 236/360 = 0.656 (left)

5 step scales for constant CIELAB hue 203/360 = 0.564 (right)

Input: Colorimetric Reflective System ORS18

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

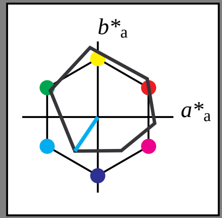
lab*tch and lab*nch

D65: hue C

LCH*Ma: 59 54 236

rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

u^*_{rel} = 93

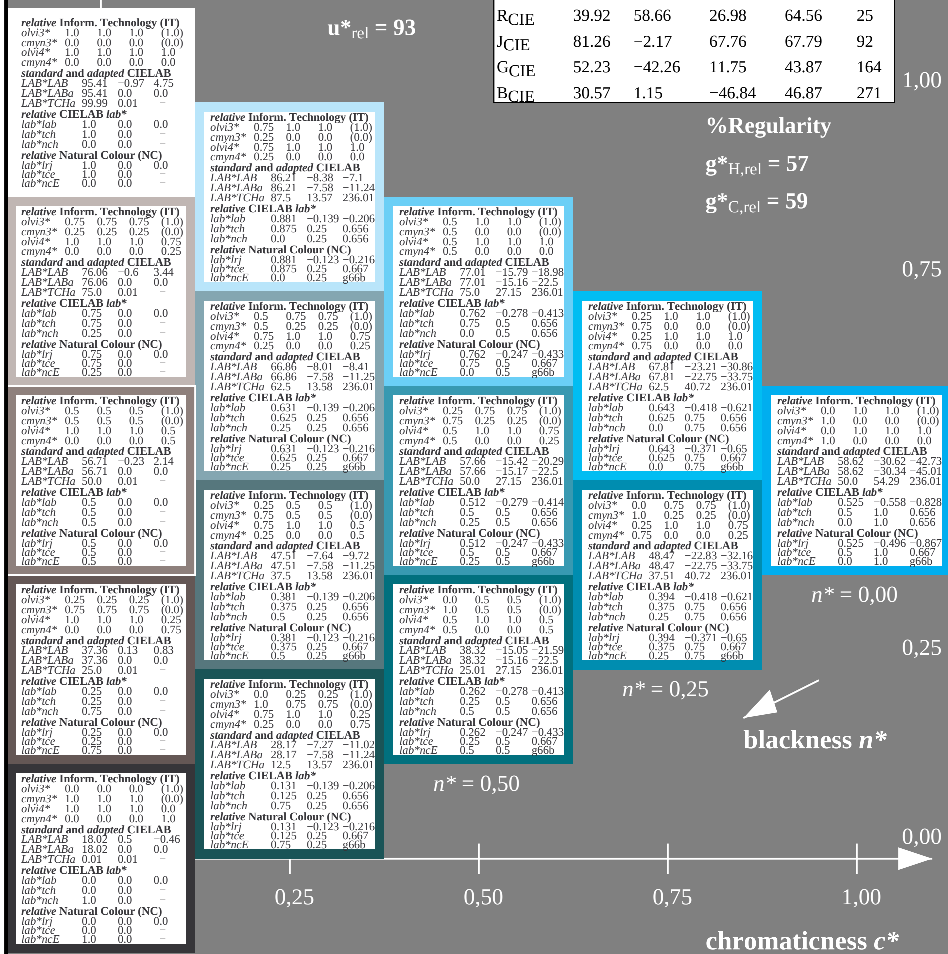
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



Output: Colorimetric Reflective System NCS18

for hue $h^* = lab^*h = 203/360 = 0.563$

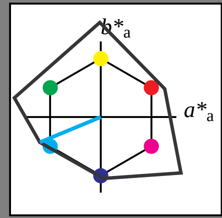
lab*tch and lab*nch

D65: hue G50B

LCH*Ma: 59 87 203

rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

u^*_{rel} = 136

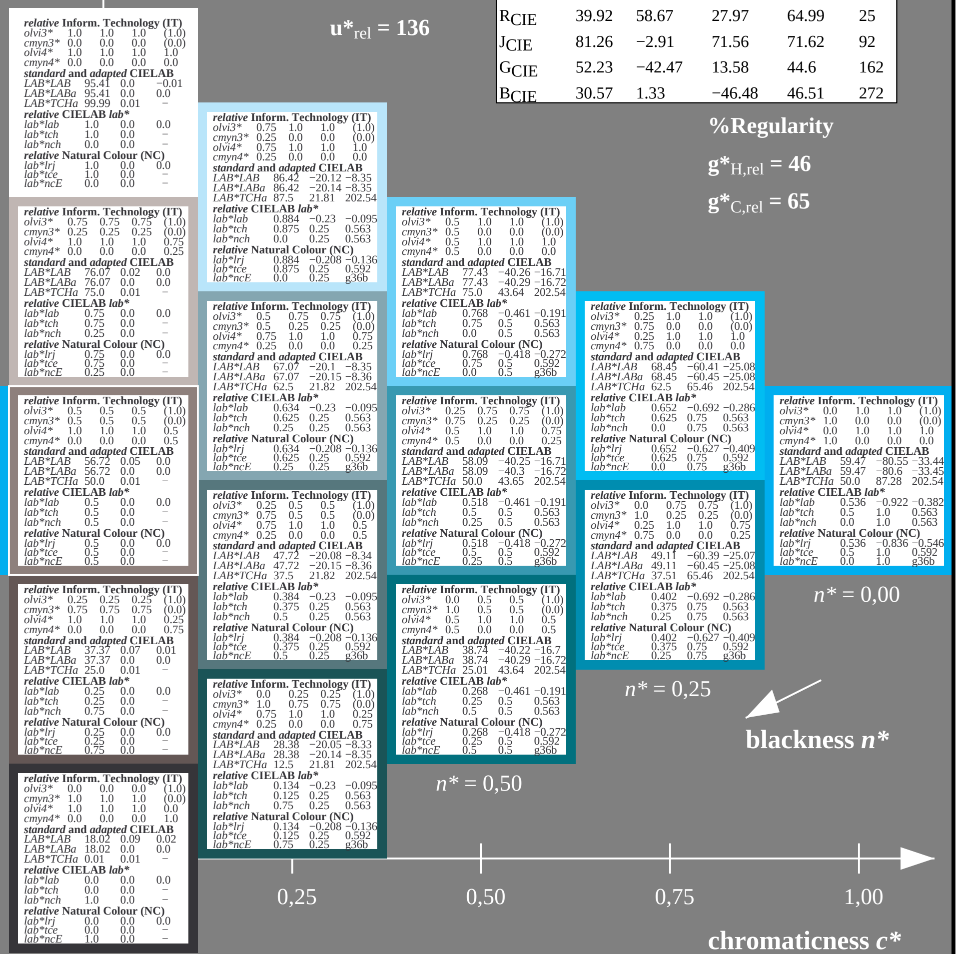
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



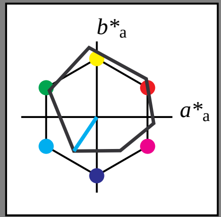
UE500−7, 5 step scales for constant CIELAB hue 236/360 = 0.656 (left)

5 step scales for constant CIELAB hue 203/360 = 0.563 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 236/360 = 0.656$
lab*tch* and *lab*nch

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

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

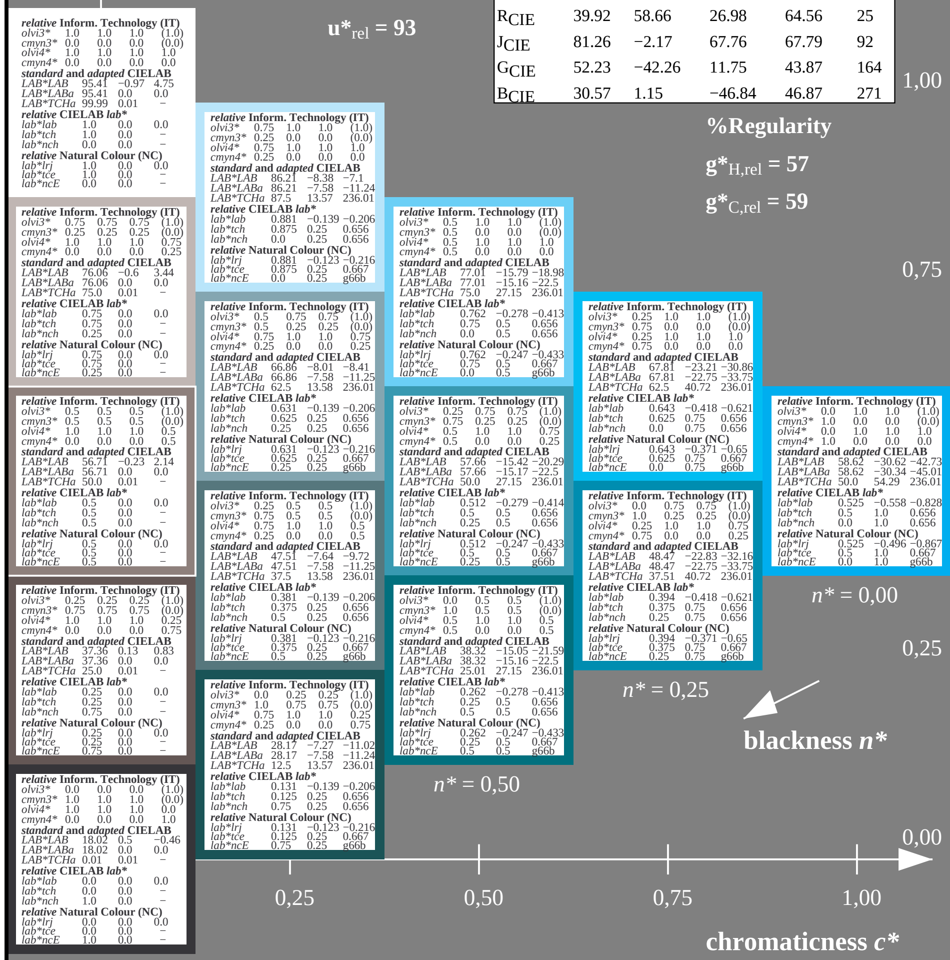
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

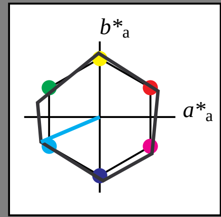
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 203/360 = 0.564$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 53 84 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 119$

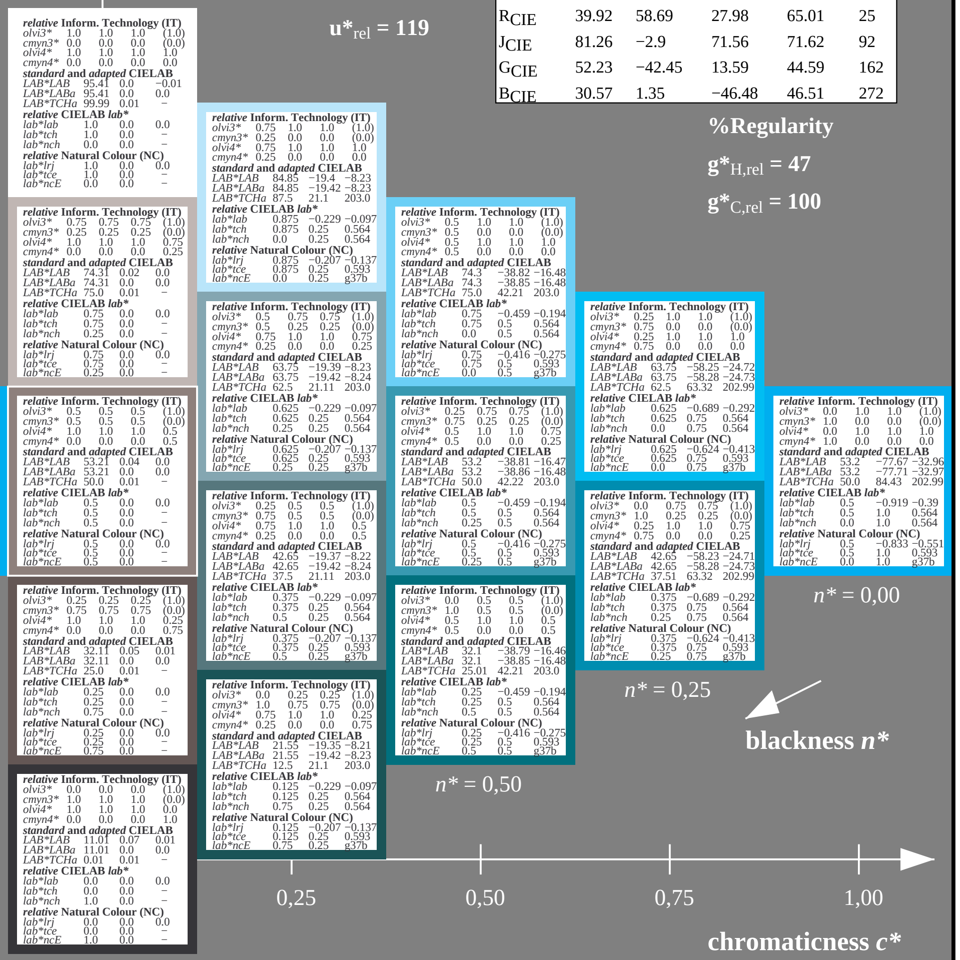
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



UE500−7, 5 step scales for constant CIELAB hue 236/360 = 0.656 (left)

5 step scales for constant CIELAB hue 203/360 = 0.564 (right)

Input: Colorimetric Reflective System ORS18

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

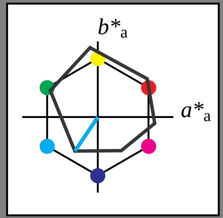
*lab*tch and lab*nch*

D65: hue C

LCH*Ma: 59 54 236

rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

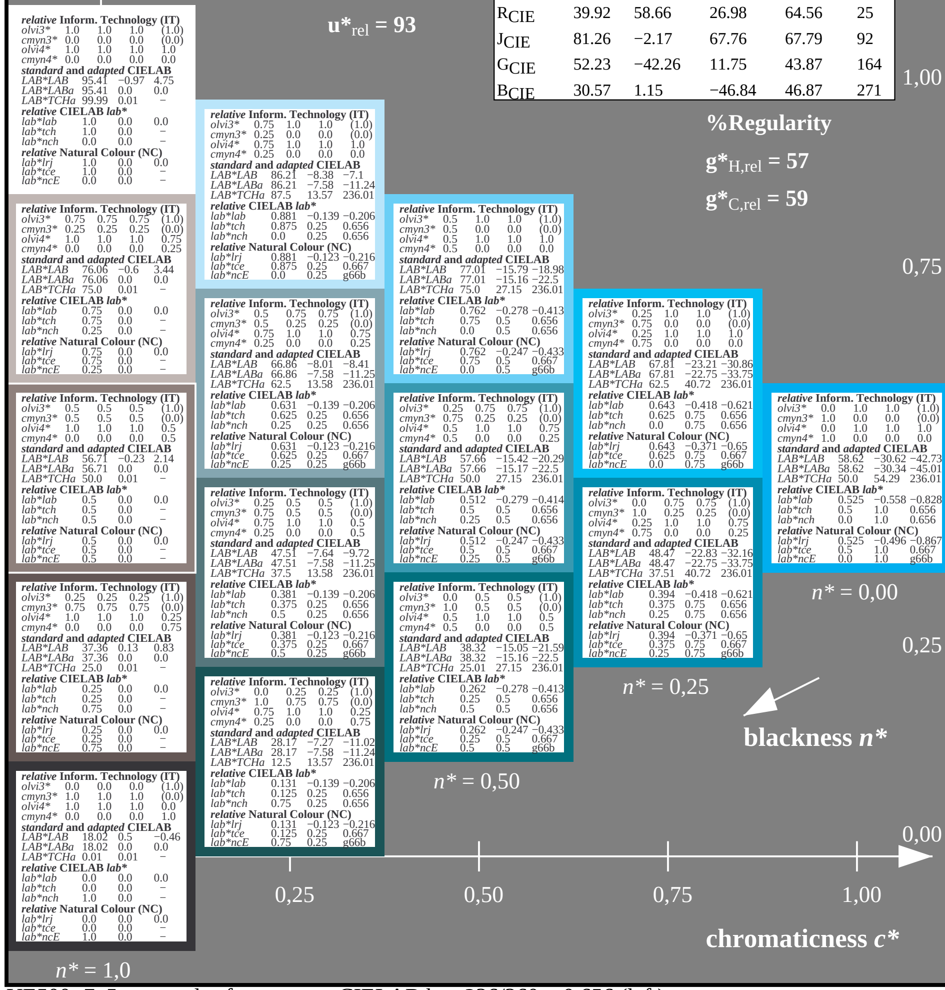
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



Output: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 203/360 = 0.563$

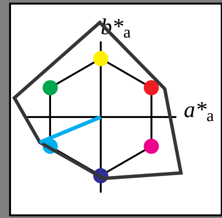
*lab*tch and lab*nch*

D65: hue G50B

LCH*Ma: 59 87 203

rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 149$

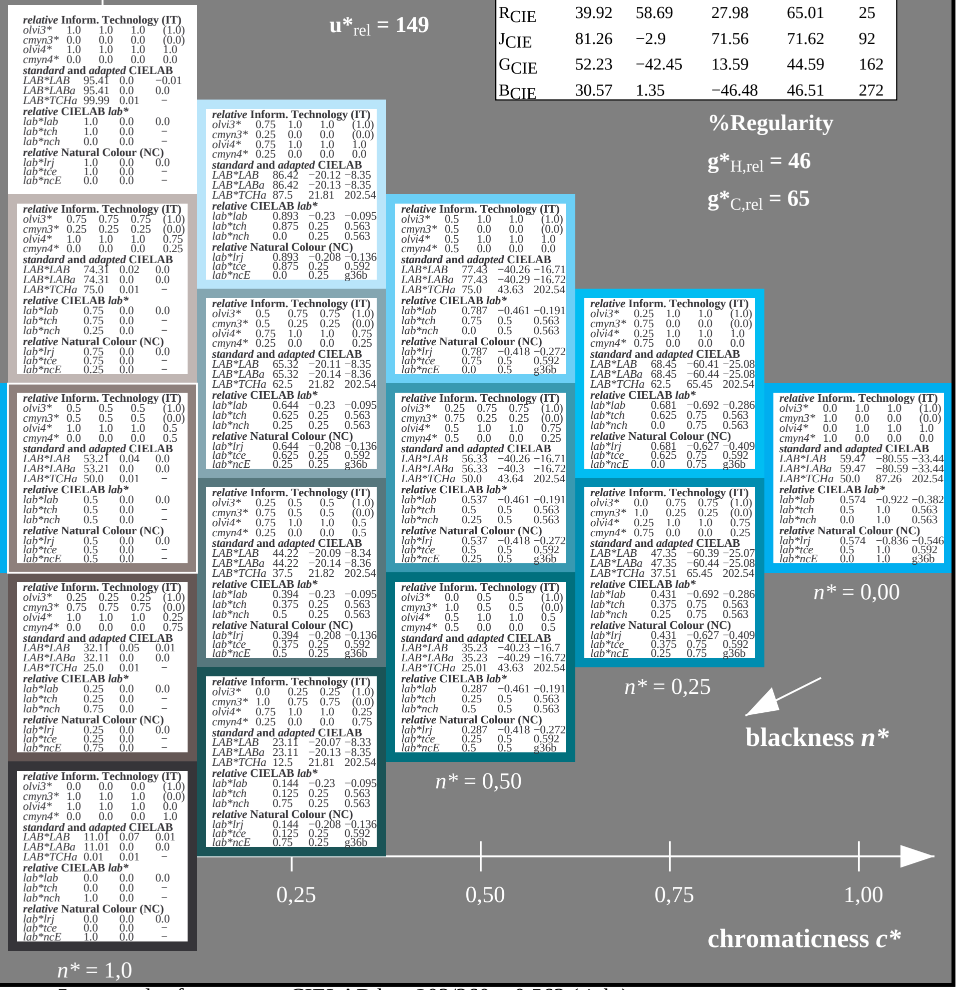
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



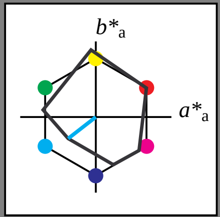
UE500−7, 5 step scales for constant CIELAB hue 236/360 = 0.656 (left)

5 step scales for constant CIELAB hue 203/360 = 0.563 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 218/360 = 0.605$
lab*tch and lab*nch

D65: hue G50B
LCH*Ma: 45 46 218
rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 91$

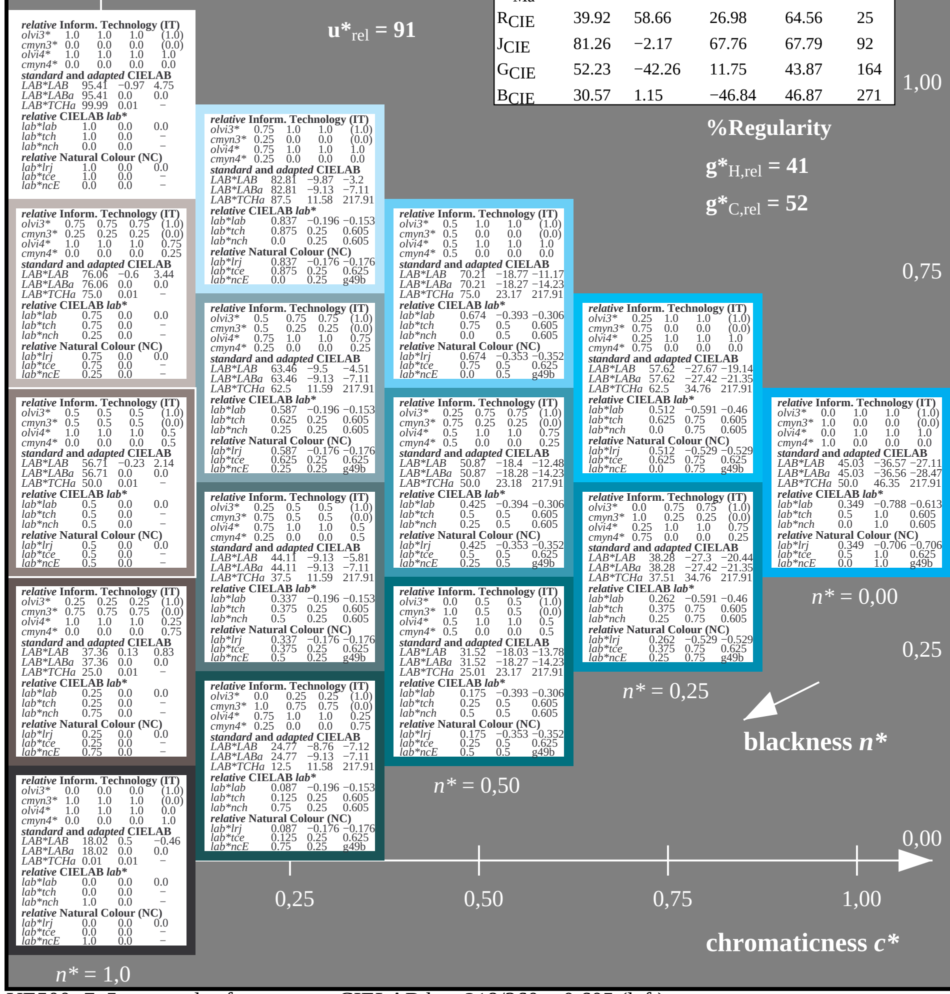
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

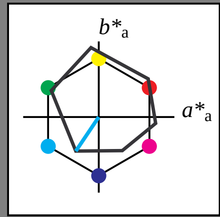
$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 236/360 = 0.656$
lab*tch and lab*nch

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

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

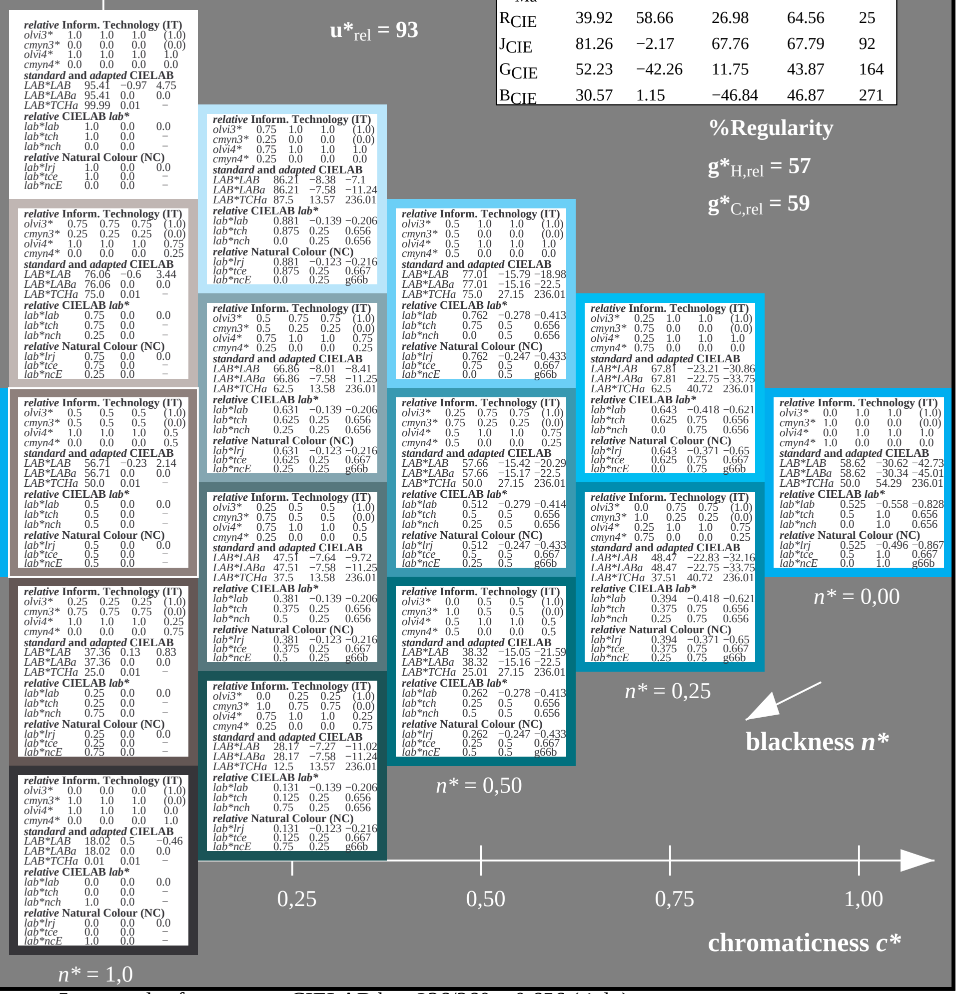
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



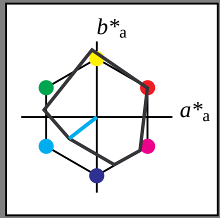
UE500−7, 5 step scales for constant CIELAB hue 218/360 = 0.605 (left)

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

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 218/360 = 0.605$
*lab*tch* and *lab*nch*

D65: hue G50B
LCH*Ma: 45 46 218
rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

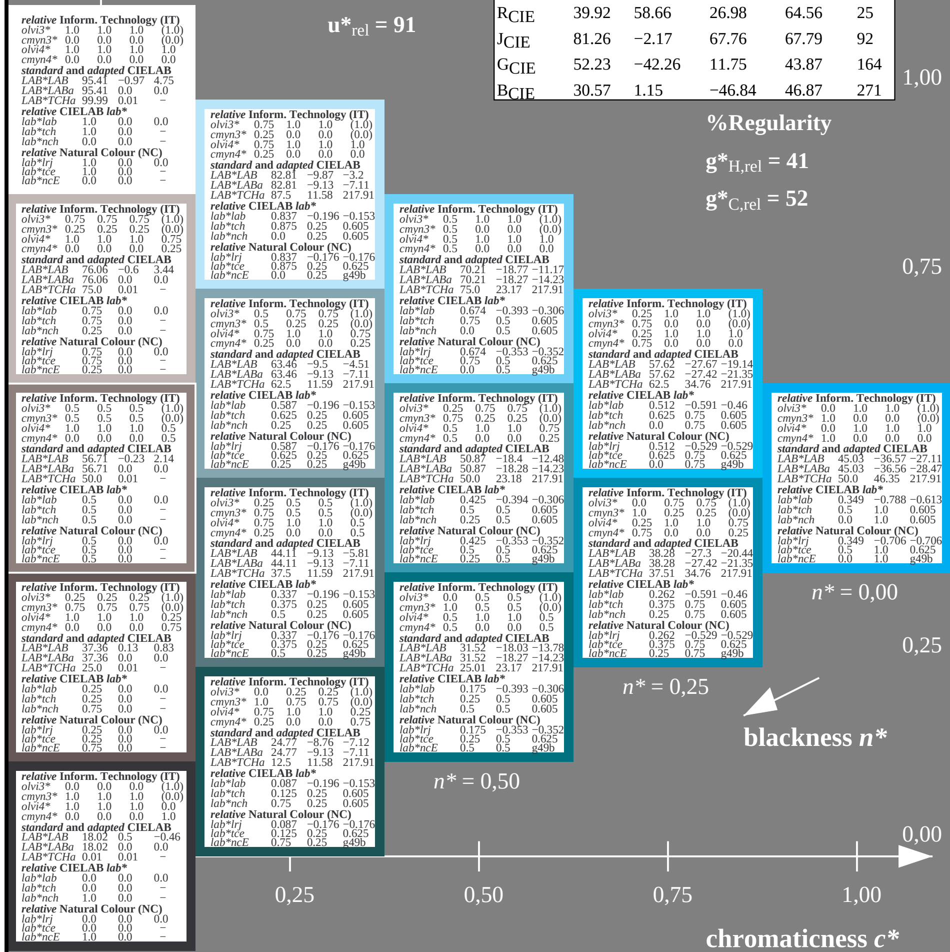
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

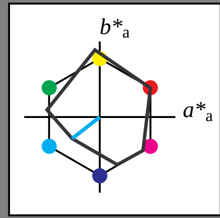
$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 218/360 = 0.605$
*lab*tch* and *lab*nch*

D65: hue G50B
LCH*Ma: 45 46 218
rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

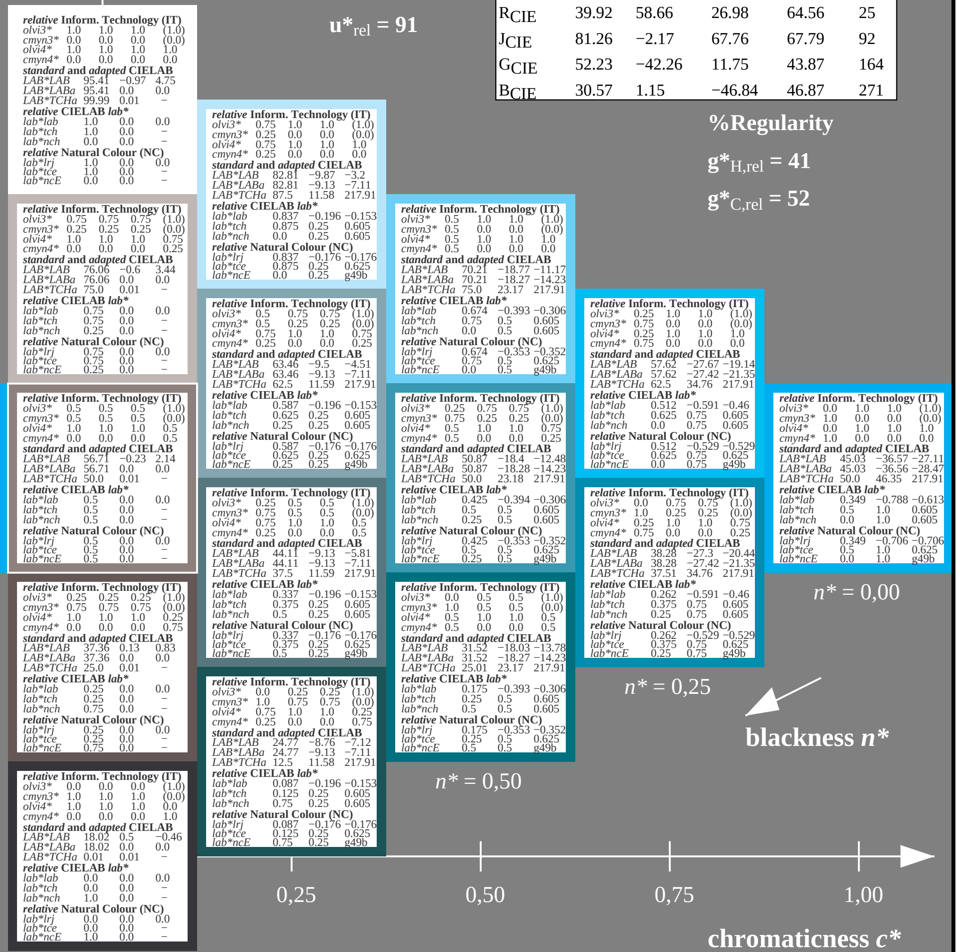
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



UE500−7, 5 step scales for constant CIELAB hue 218/360 = 0.605 (left)

5 step scales for constant CIELAB hue 218/360 = 0.605 (right)

Input: Colorimetric Reflective System MRS18

for hue $h^* = lab^*h = 218/360 = 0.605$

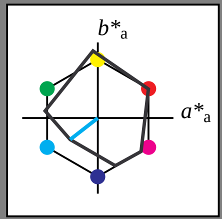
*lab*tch and lab*nch*

D65: hue G50B

LCH*Ma: 45 46 218

rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 91$

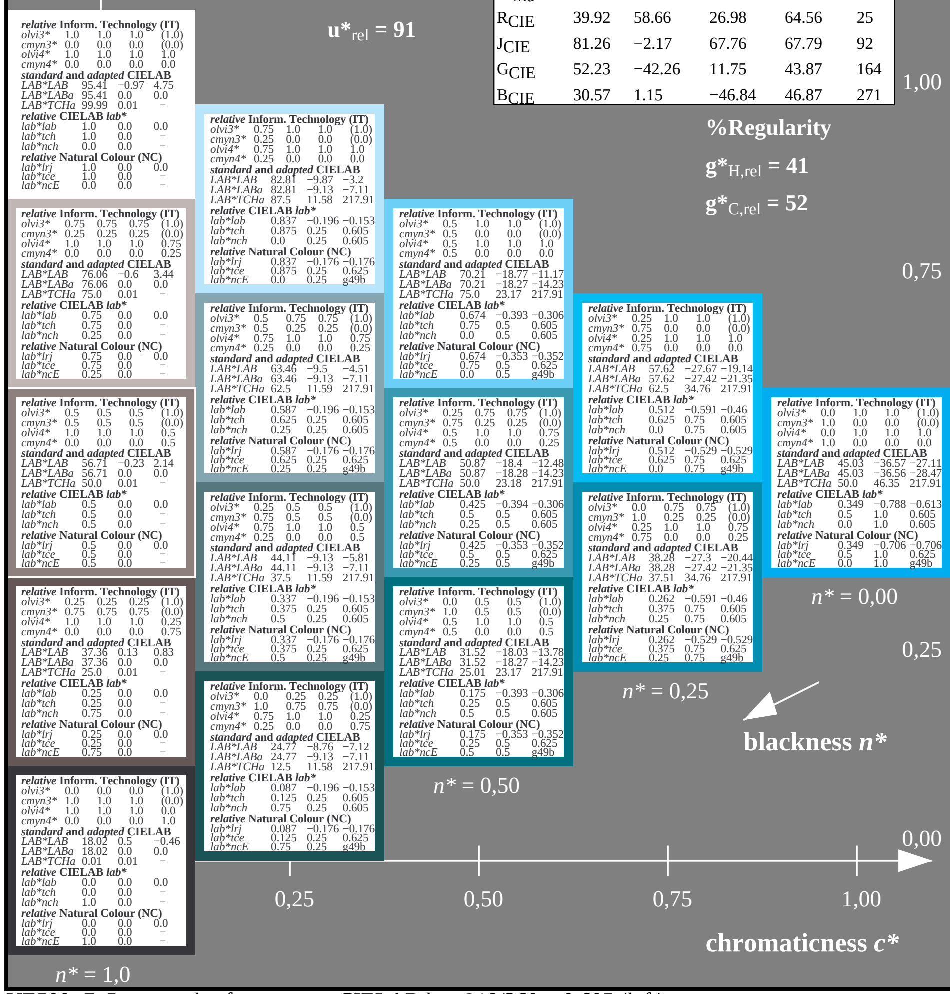
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System TRS18

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

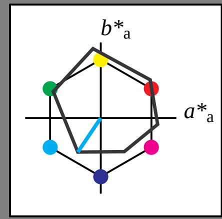
*lab*tch and lab*nch*

D65: hue C

LCH*Ma: 59 54 236

rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

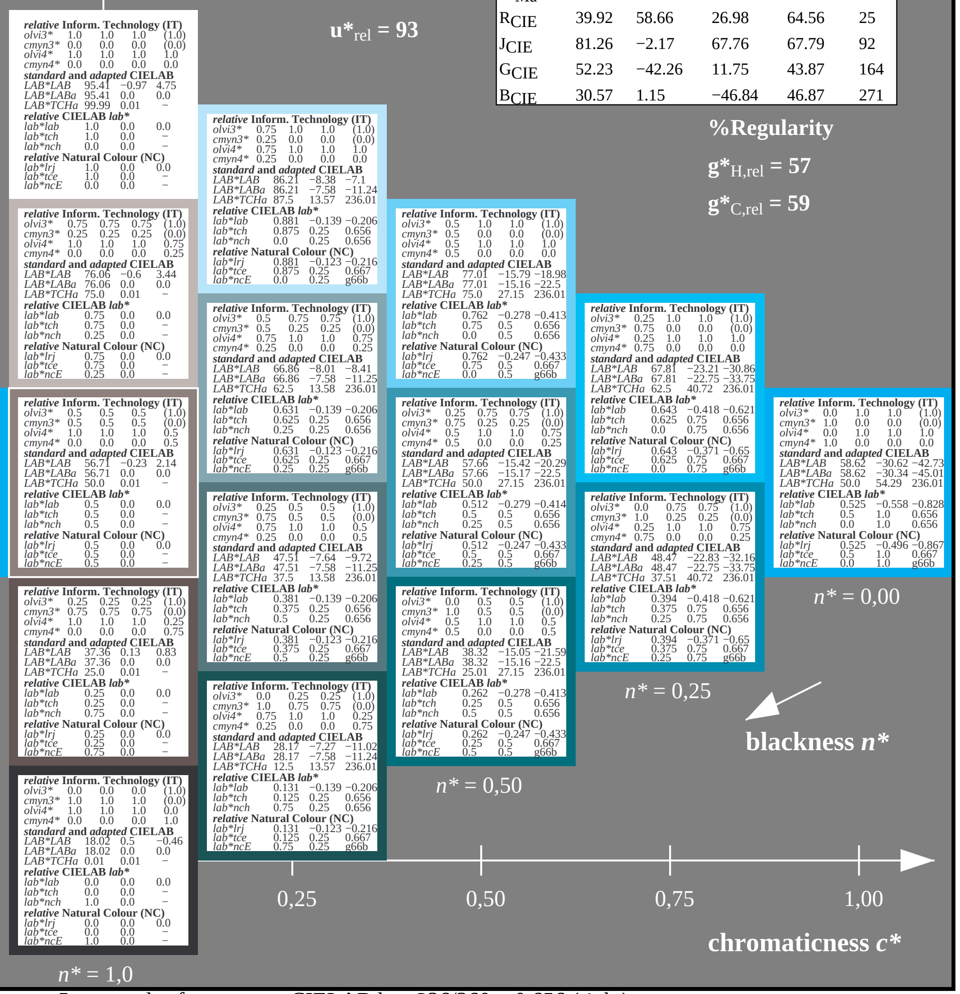
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



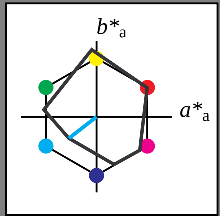
UE500−7, 5 step scales for constant CIELAB hue 218/360 = 0.605 (left)

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

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 218/360 = 0.605$
*lab*tch and lab*nch*

D65: hue G50B
LCH*Ma: 45 46 218
rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*

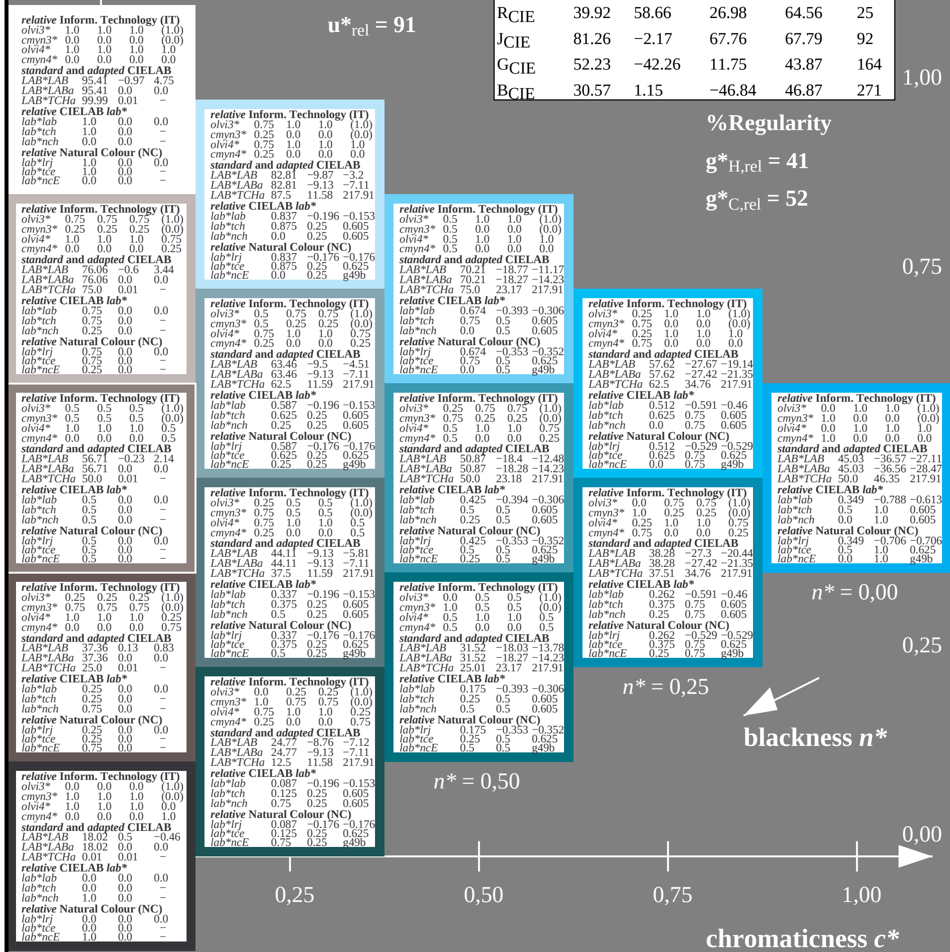


%Gamut
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

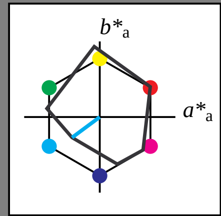
%Regularity
$g^*_{H,rel} = 41$
$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 217/360 = 0.601$
*lab*tch and lab*nch*

D65: hue G50B
LCH*Ma: 45 46 217
rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*

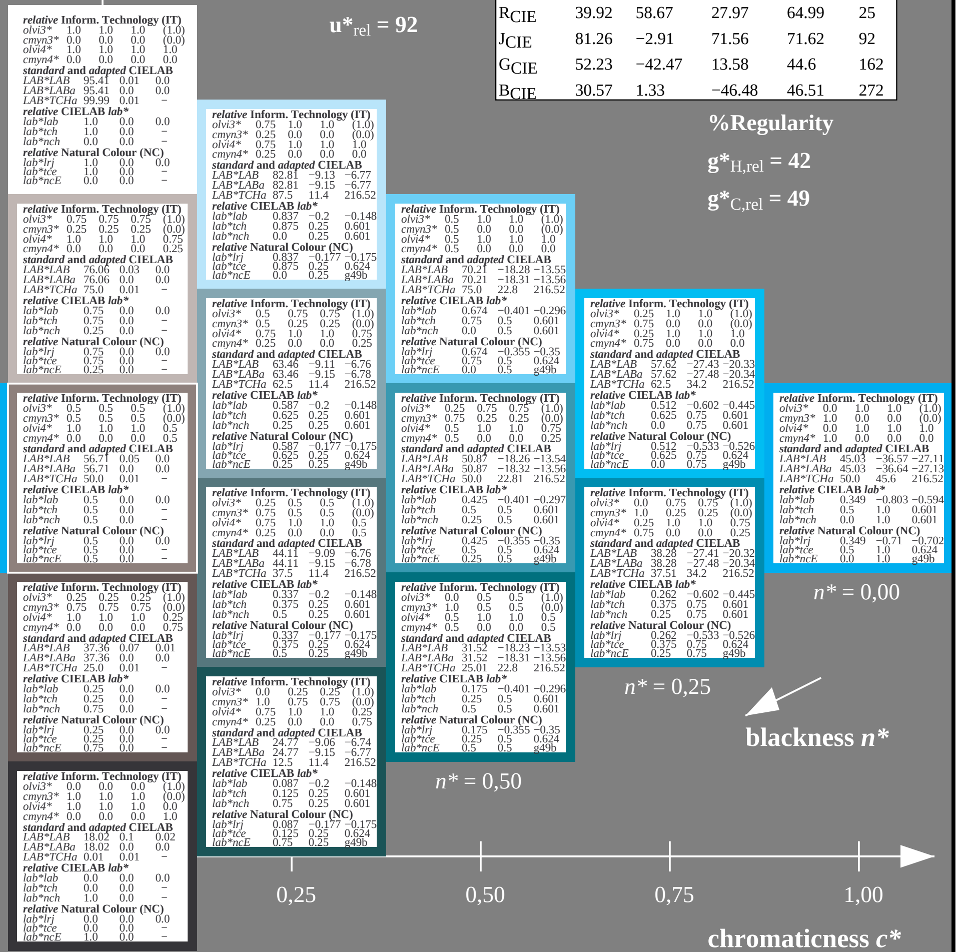


%Gamut
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$



UE500−7, 5 step scales for constant CIELAB hue 218/360 = 0.605 (left)   5 step scales for constant CIELAB hue 217/360 = 0.601 (right)

Input: Colorimetric Reflective System MRS18

for hue $h^* = lab^*h = 218/360 = 0.605$

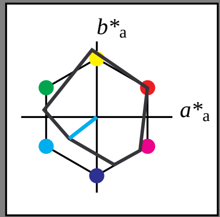
lab*tch* and *lab*nch

D65: hue G50B

LCH*Ma: 45 46 218

rgb*Ma: 0.0 1.0 1.0

triangle lightness *t**



%Gamut

u^*_{rel} = 91

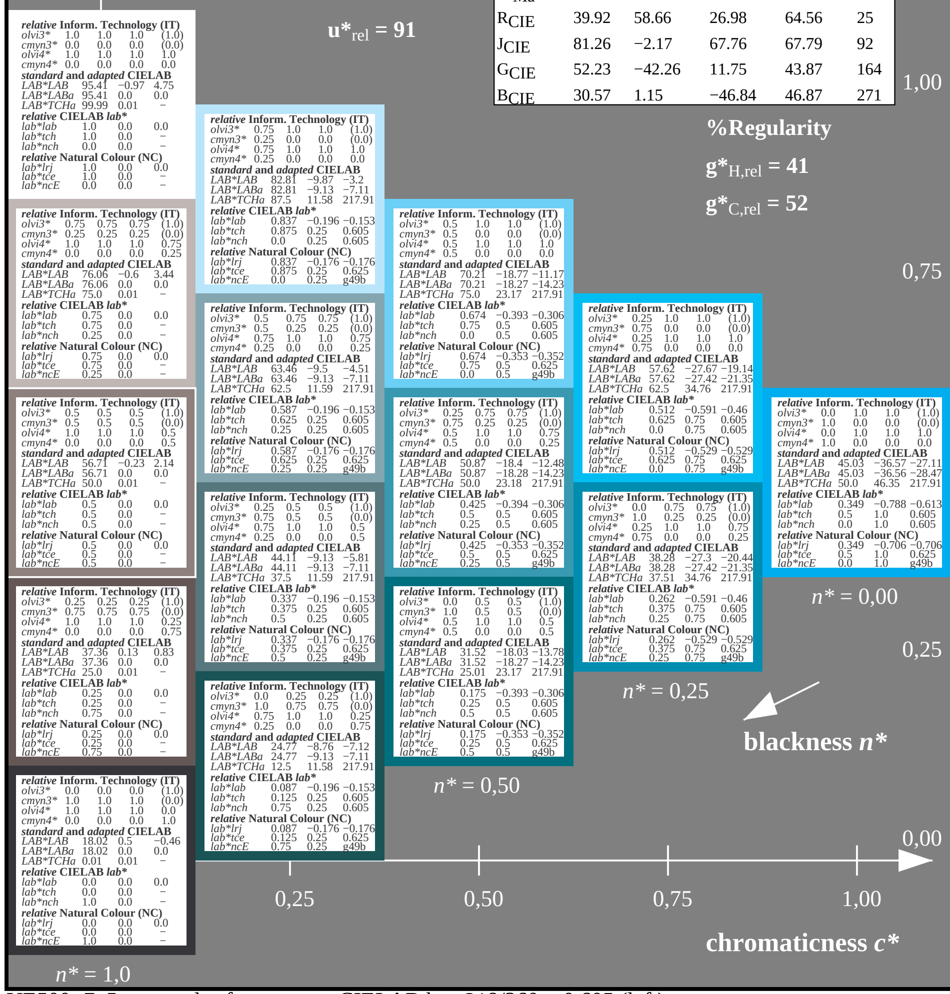
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



Output: Colorimetric Reflective System NRS18

for hue $h^* = lab^*h = 203/360 = 0.564$

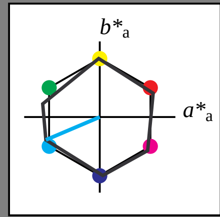
lab*tch* and *lab*nch

D65: hue G50B

LCH*Ma: 57 77 203

rgb*Ma: 0.0 1.0 1.0

triangle lightness *t**



%Gamut

u^*_{rel} = 100

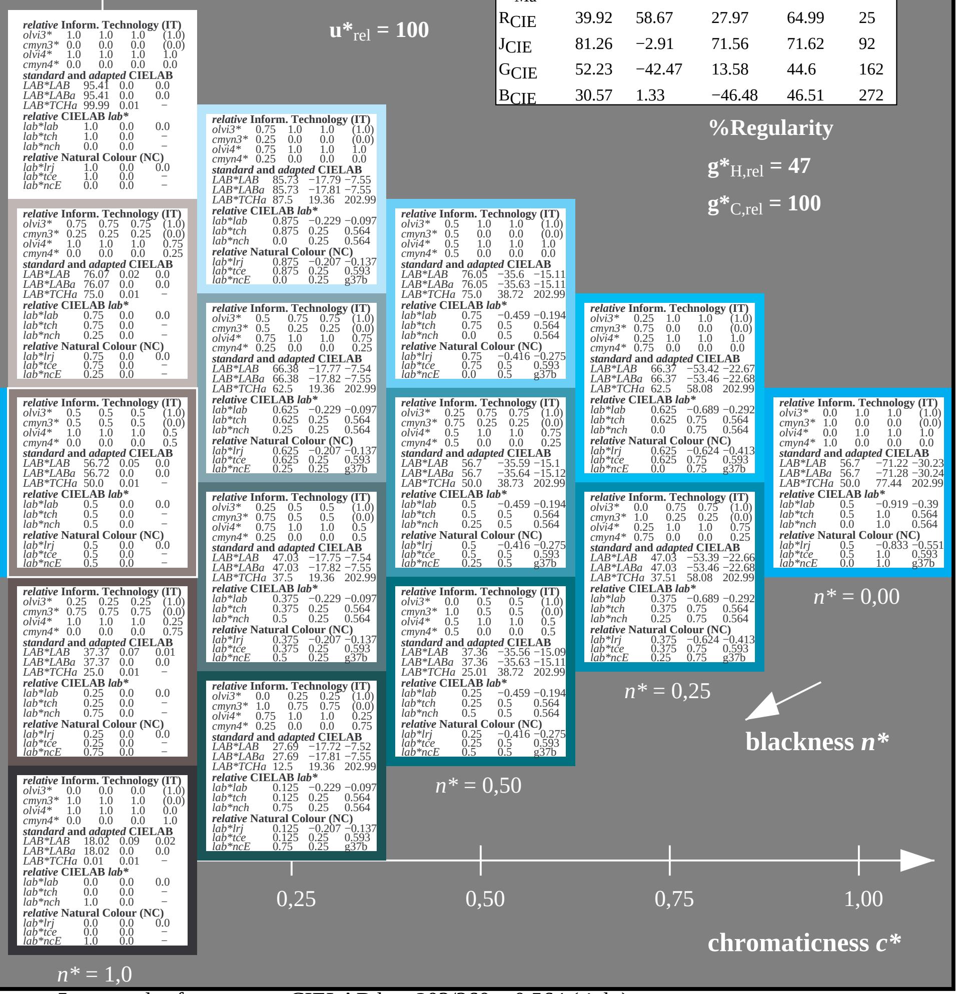
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

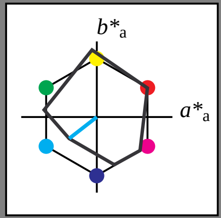


UE500−7, 5 step scales for constant CIELAB hue 218/360 = 0.605 (left)

5 step scales for constant CIELAB hue 203/360 = 0.564 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 218/360 = 0.605$
*lab*tch and lab*nch*

D65: hue G50B
LCH*Ma: 45 46 218
rgb*Ma: 0.0 1.0 1.0
triangle lightness t^*

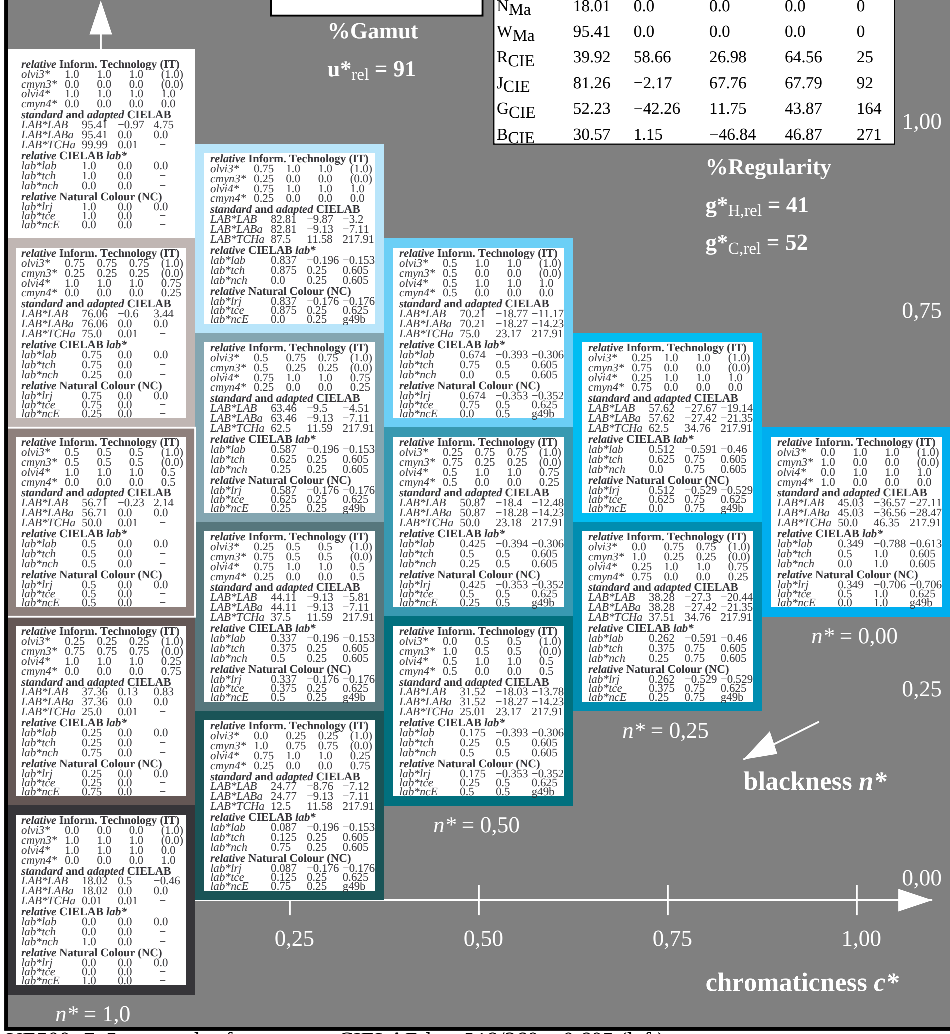


%Gamut
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data

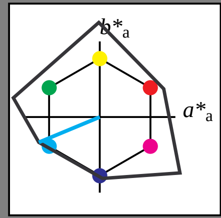
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 41$
$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 203/360 = 0.563$
*lab*tch and lab*nch*

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0
triangle lightness t^*

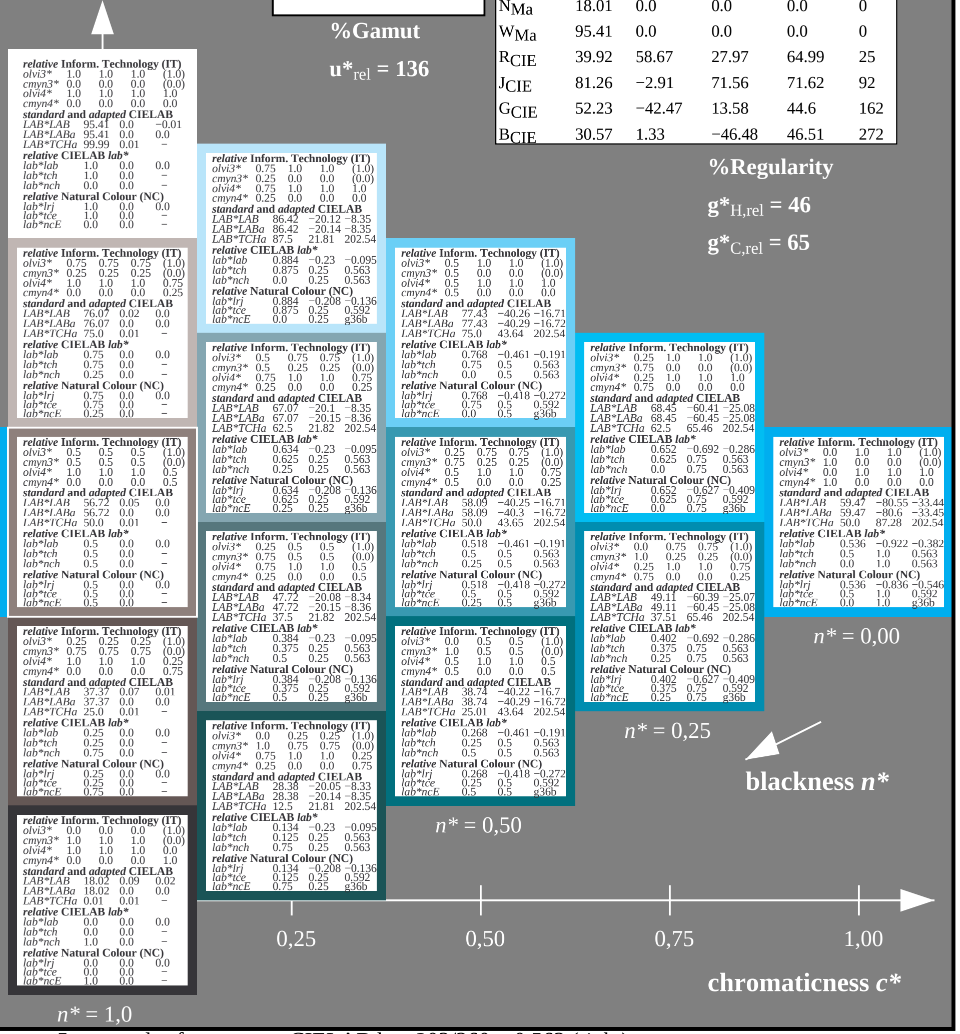


%Gamut
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$

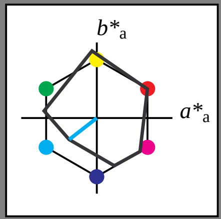


UE500−7, 5 step scales for constant CIELAB hue 218/360 = 0.605 (left)   5 step scales for constant CIELAB hue 203/360 = 0.563 (right)

Input: Colorimetric Reflective System MRS18
for hue *h = *lab*h* = 218/360 = 0.605**
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 218
rgb*Ma: 0.0 1.0 1.0

triangle lightness *t**



%Gamut

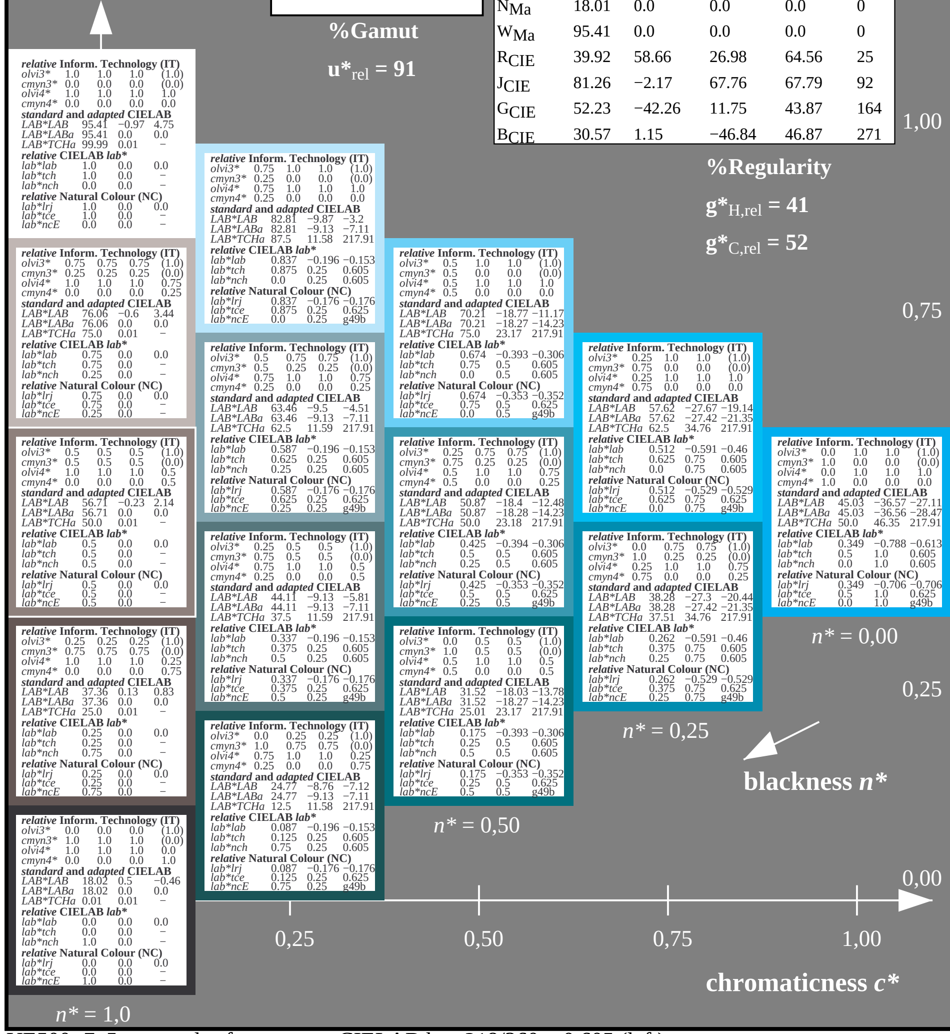
u*rel = 91

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

g*H,rel = 41

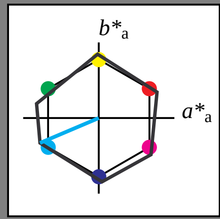
g*C,rel = 52



Output: Colorimetric Reflective System NRS11
for hue *h = *lab*h* = 203/360 = 0.564**
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 53 84 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness *t**



%Gamut

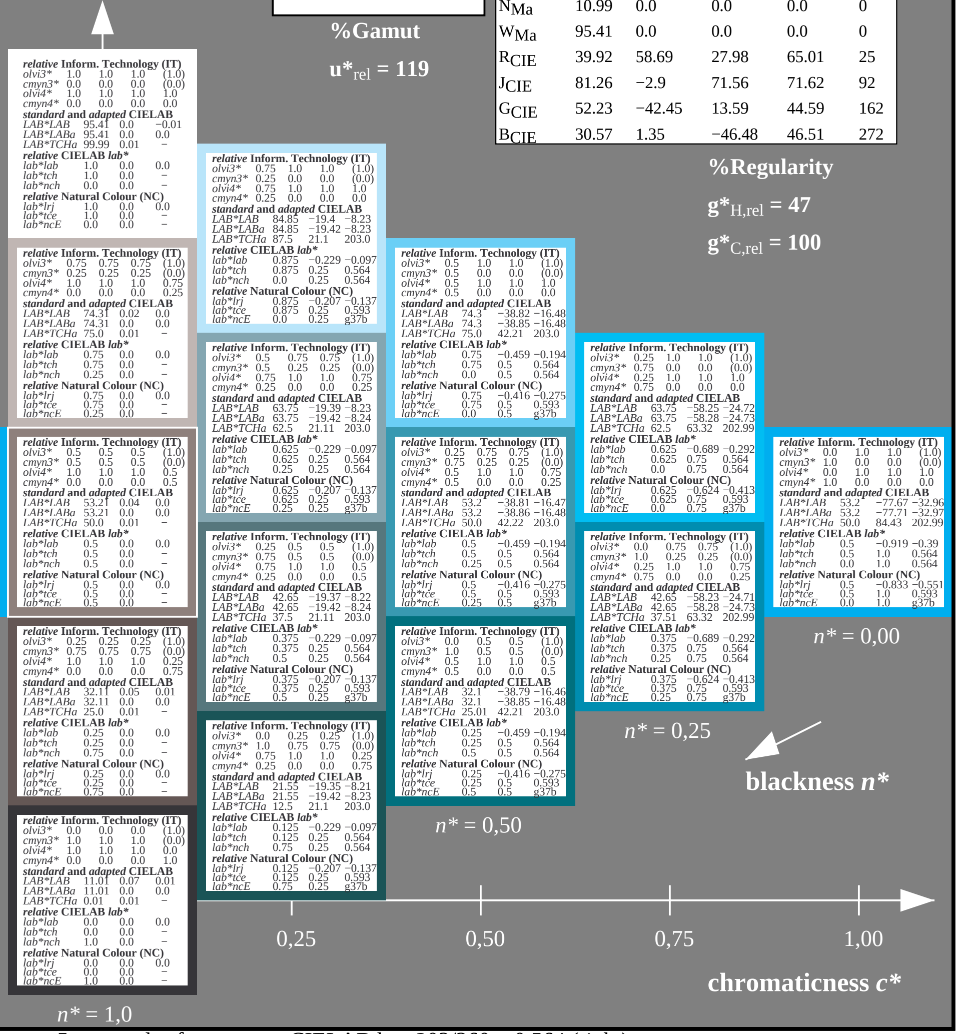
u*rel = 119

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

g*H,rel = 47

g*C,rel = 100



UE500−7, 5 step scales for constant CIELAB hue 218/360 = 0.605 (left)

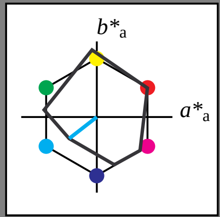
5 step scales for constant CIELAB hue 203/360 = 0.564 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 218/360 = 0.605$

*lab*tch and lab*nch*

D65: hue G50B
LCH*Ma: 45 46 218
rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 91$

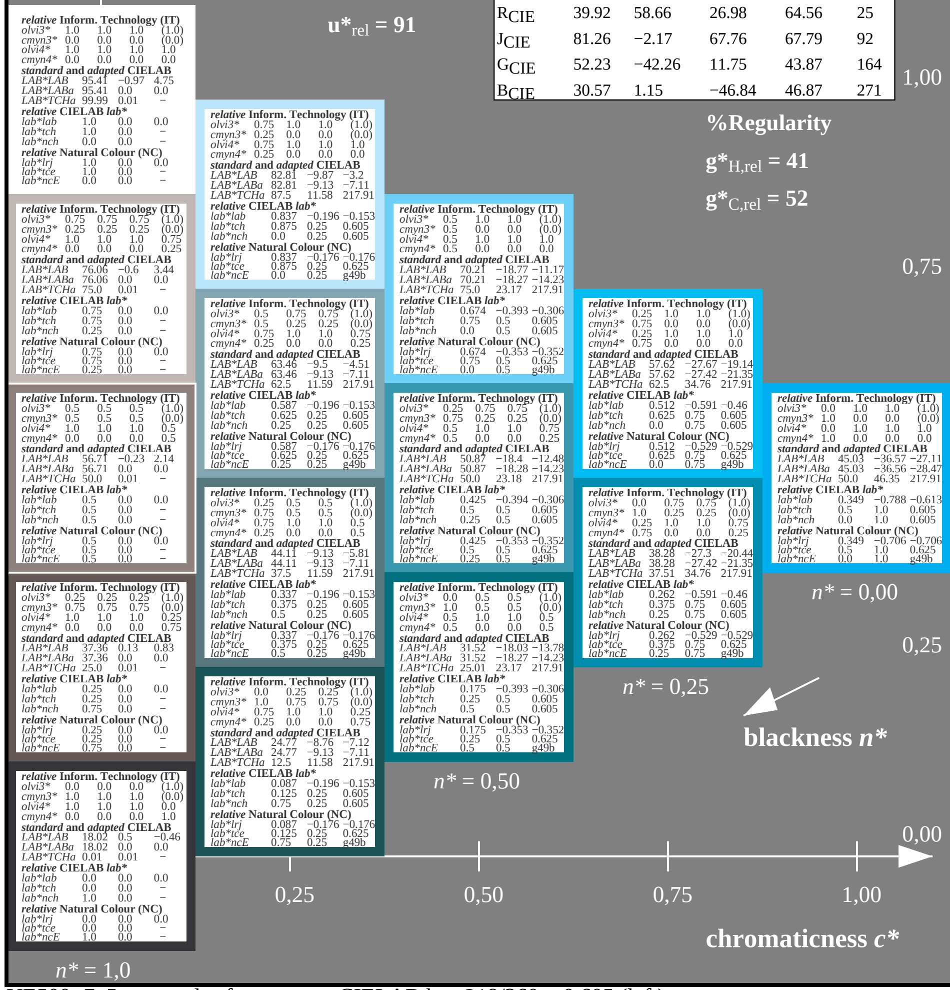
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

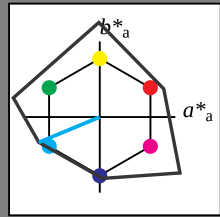


Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 203/360 = 0.563$

*lab*tch and lab*nch*

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 149$

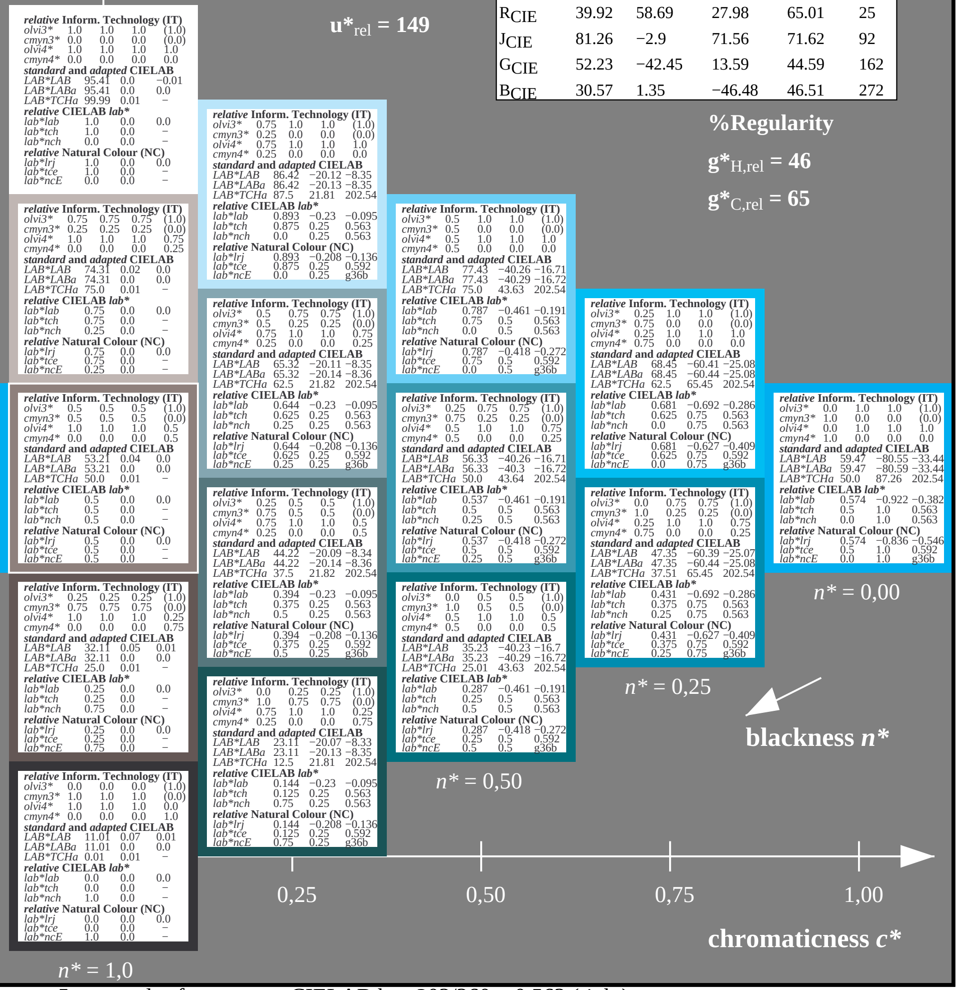
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$

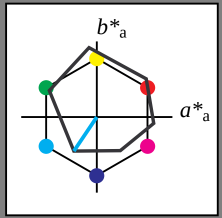


UE500−7, 5 step scales for constant CIELAB hue 218/360 = 0.605 (left)

5 step scales for constant CIELAB hue 203/360 = 0.563 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 236/360 = 0.656$
*lab*tch* and *lab*nch*

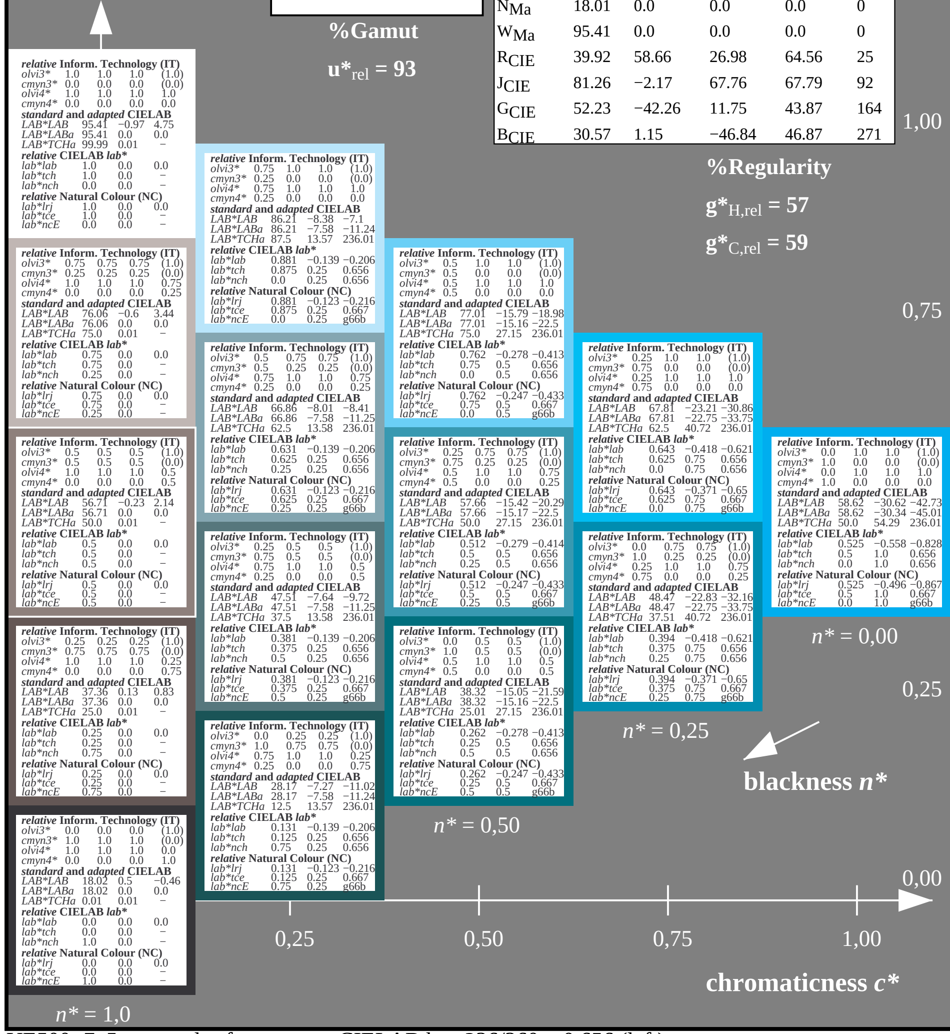
D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 93$

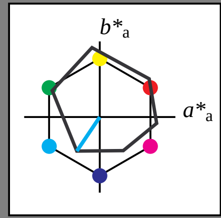
TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 236/360 = 0.656$
*lab*tch* and *lab*nch*

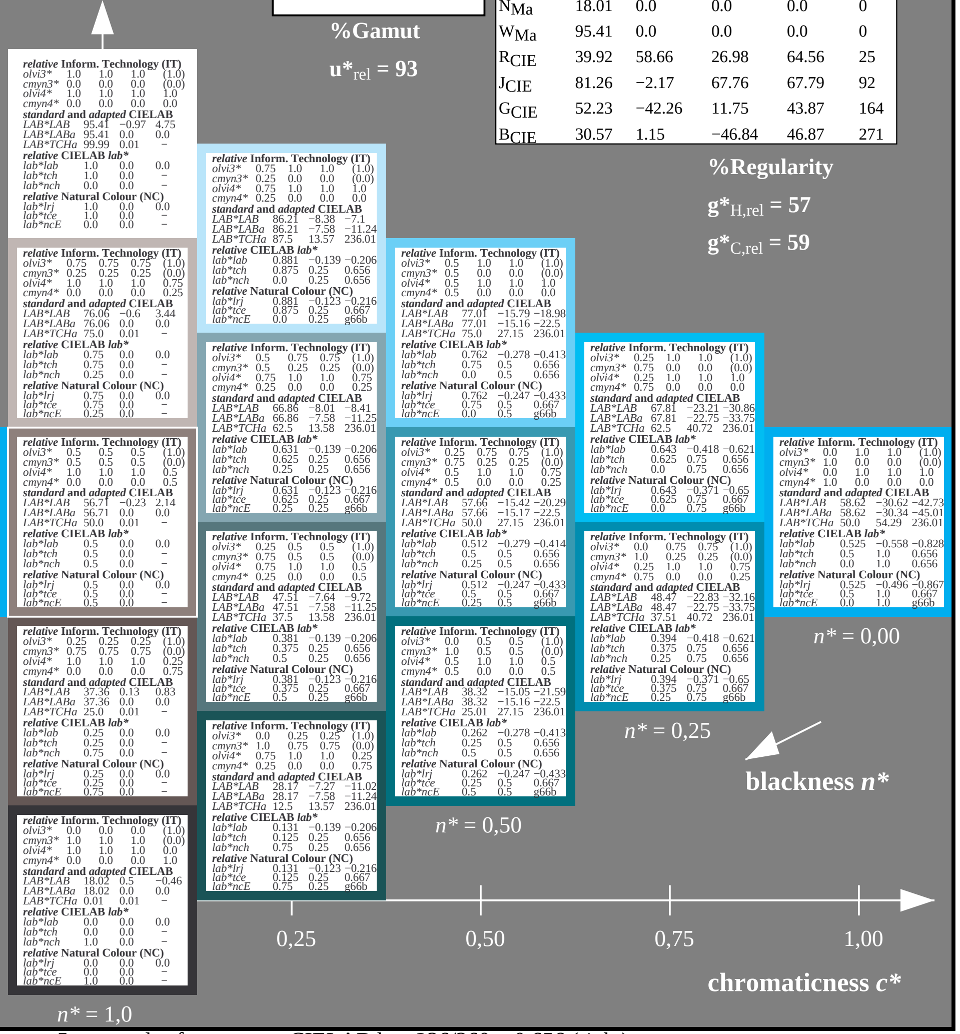
D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



UE500−7, 5 step scales for constant CIELAB hue 236/360 = 0.656 (left)

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

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 236/360 = 0.656$

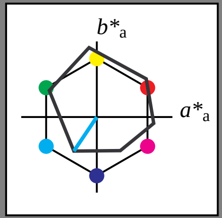
*lab*tch and lab*nch*

D65: hue C

LCH*Ma: 59 54 236

rgb*Ma: 0.0 1.0 1.0

triangle lightness t*



%Gamut

$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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

1,00 0,75 0,25 0,00

$n^* = 0,00$ $n^* = 0,25$ $n^* = 0,50$ $n^* = 1,0$

blackness n*

0,25 0,50 0,75 1,00

chromaticness c*

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 218/360 = 0.605$

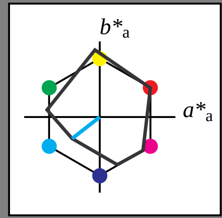
*lab*tch and lab*nch*

D65: hue G50B

LCH*Ma: 45 46 218

rgb*Ma: 0.0 1.0 1.0

triangle lightness t*



%Gamut

$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

$n^* = 0,00$ $n^* = 0,25$ $n^* = 0,50$ $n^* = 1,0$

blackness n*

0,25 0,50 0,75 1,00

chromaticness c*

UE500−7, 5 step scales for constant CIELAB hue 236/360 = 0.656 (left)

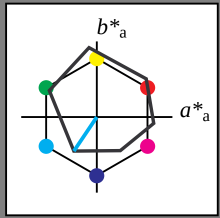
5 step scales for constant CIELAB hue 218/360 = 0.605 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 236/360 = 0.656$

lab*tch and lab*nch

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

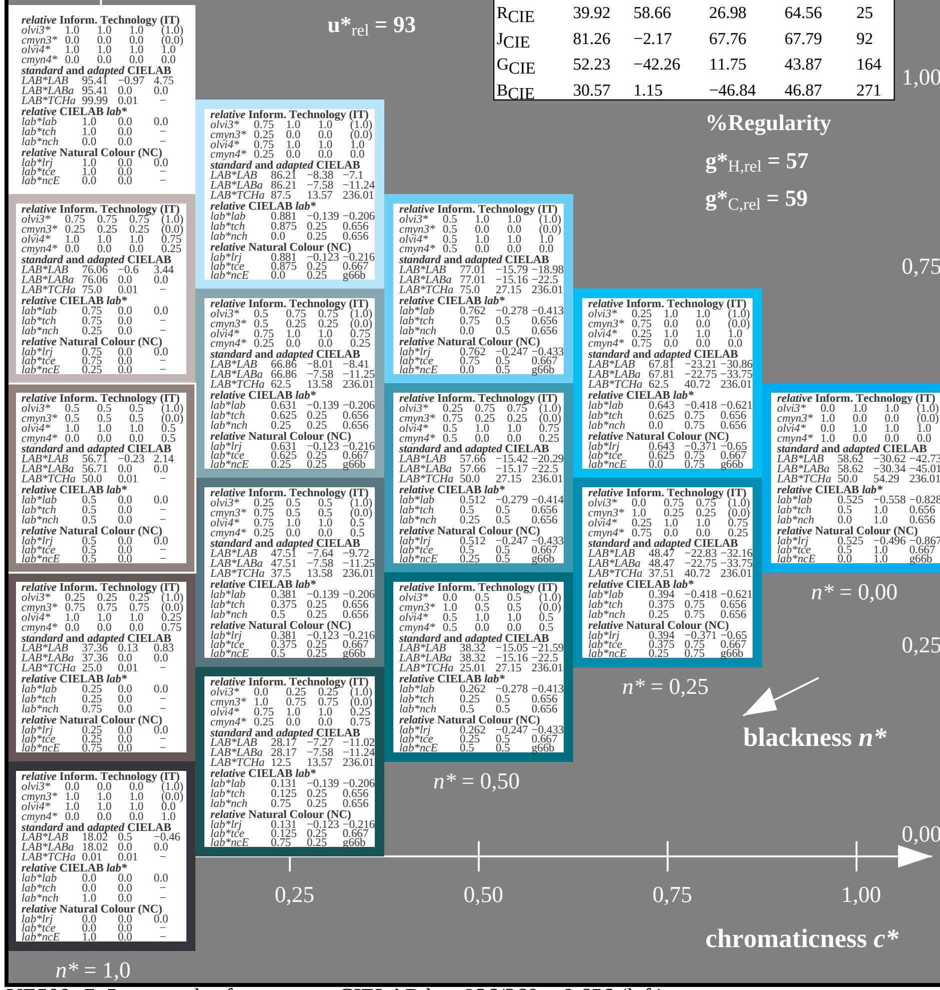
triangle lightness t^*



%Gamut
u^*_{rel} = 93

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel}$ = 57
$g^*_{C,rel}$ = 59

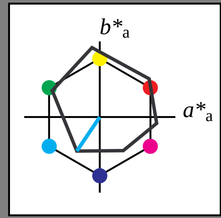


Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 236/360 = 0.656$

lab*tch and lab*nch

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

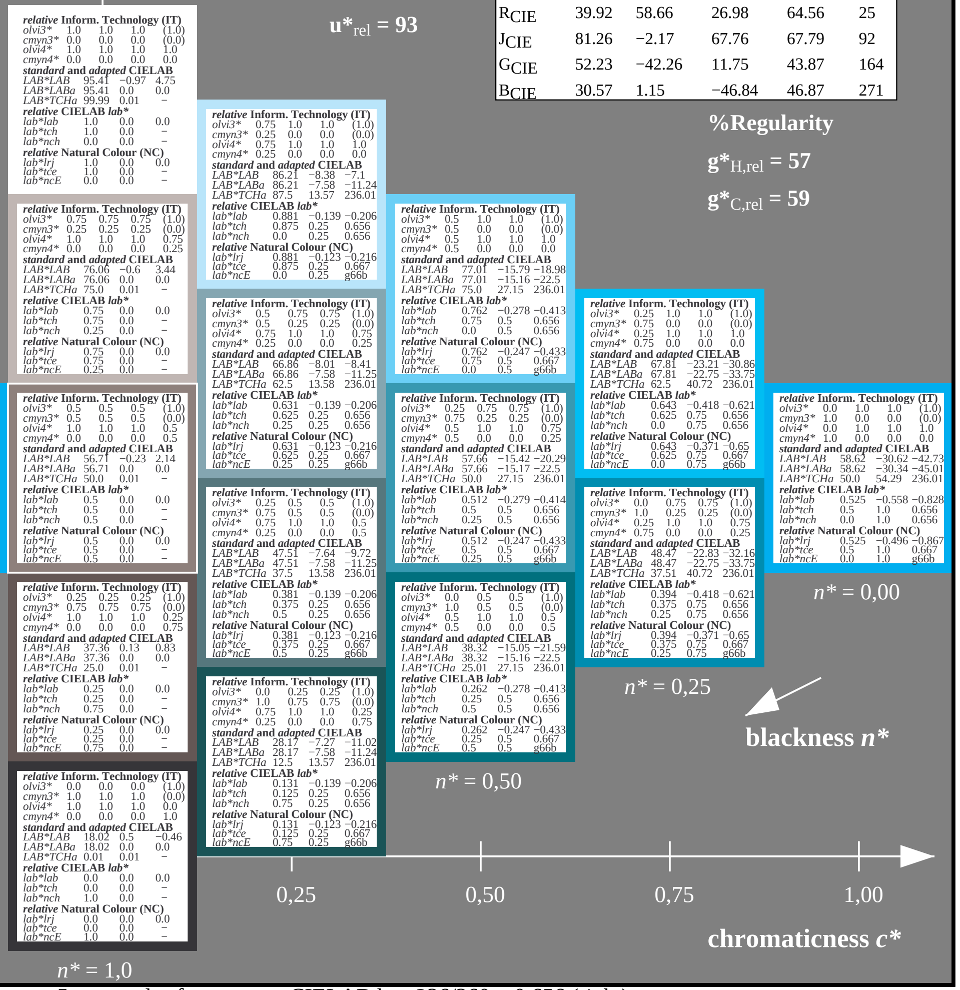
triangle lightness t^*



%Gamut
u^*_{rel} = 93

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel}$ = 57
$g^*_{C,rel}$ = 59

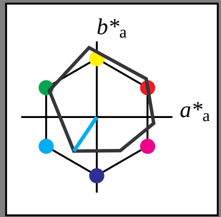


UE500−7, 5 step scales for constant CIELAB hue 236/360 = 0.656 (left)

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

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 236/360 = 0.656$
lab^*tch and lab^*nch

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0
triangle lightness t^*

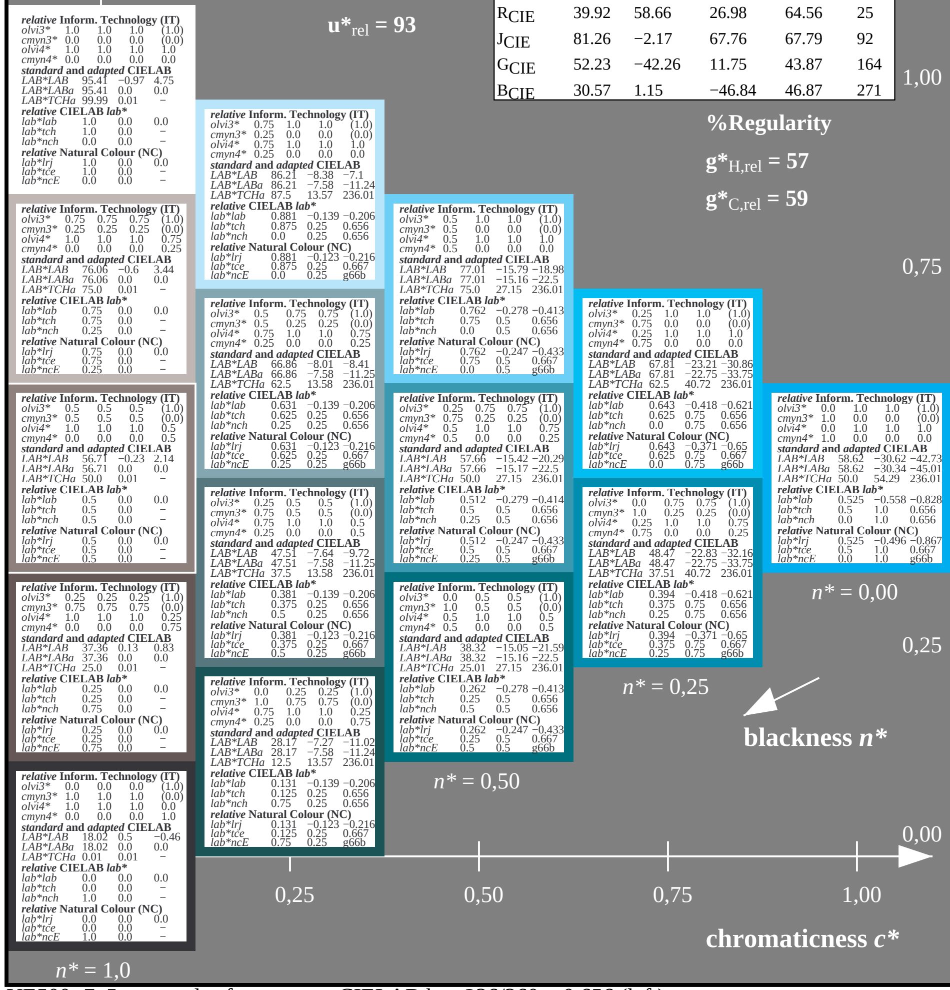


%Gamut
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data

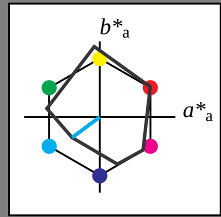
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 217/360 = 0.601$
lab^*tch and lab^*nch

D65: hue G50B
LCH*Ma: 45 46 217
rgb*Ma: 0.0 1.0 1.0
triangle lightness t^*

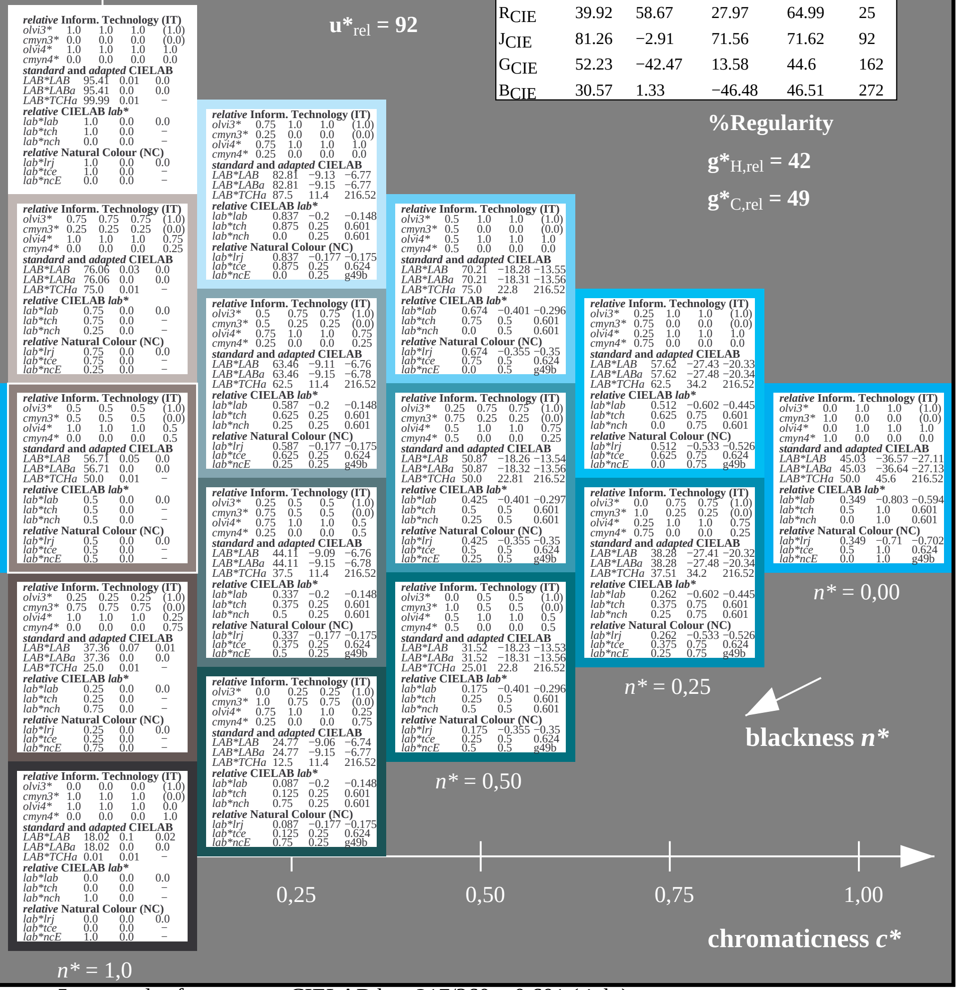


%Gamut
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$

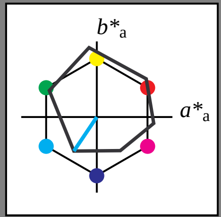


UE500−7, 5 step scales for constant CIELAB hue 236/360 = 0.656 (left)

5 step scales for constant CIELAB hue 217/360 = 0.601 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 236/360 = 0.656$
lab*tch* and *lab*nch

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0
triangle lightness t^*

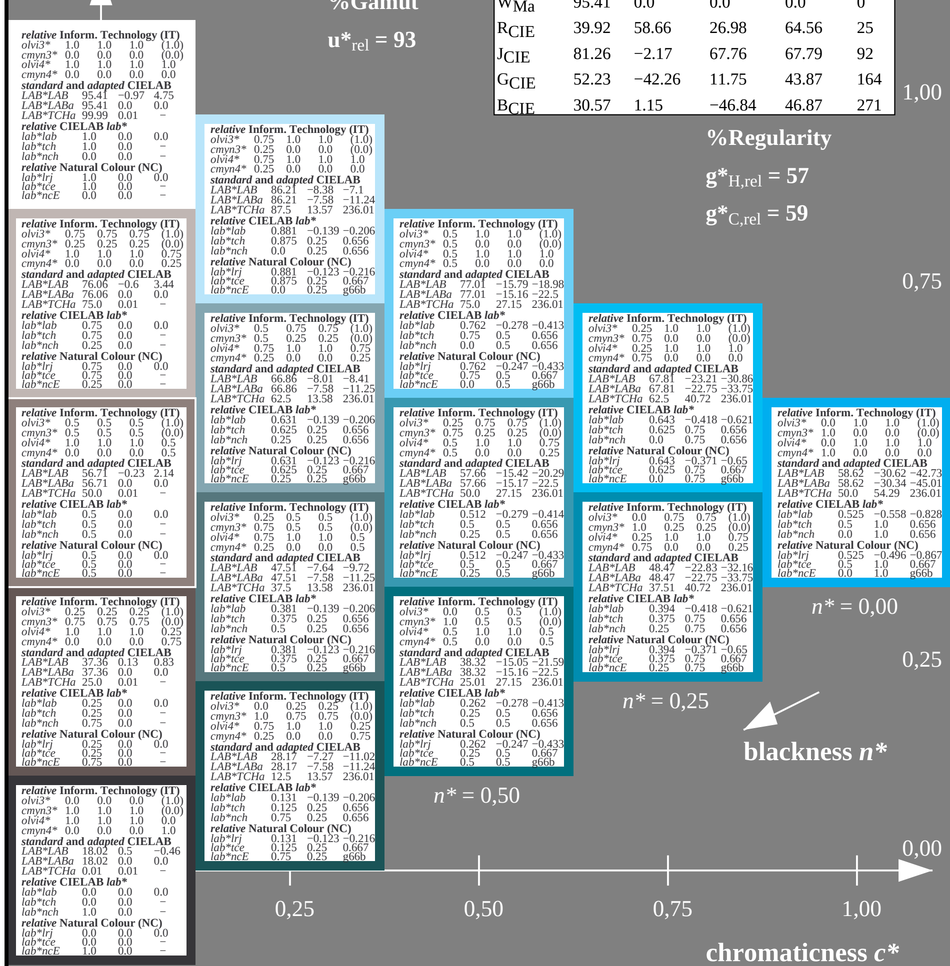


%Gamut
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data

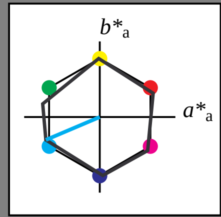
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 203/360 = 0.564$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 57 77 203
rgb*Ma: 0.0 1.0 1.0
triangle lightness t^*

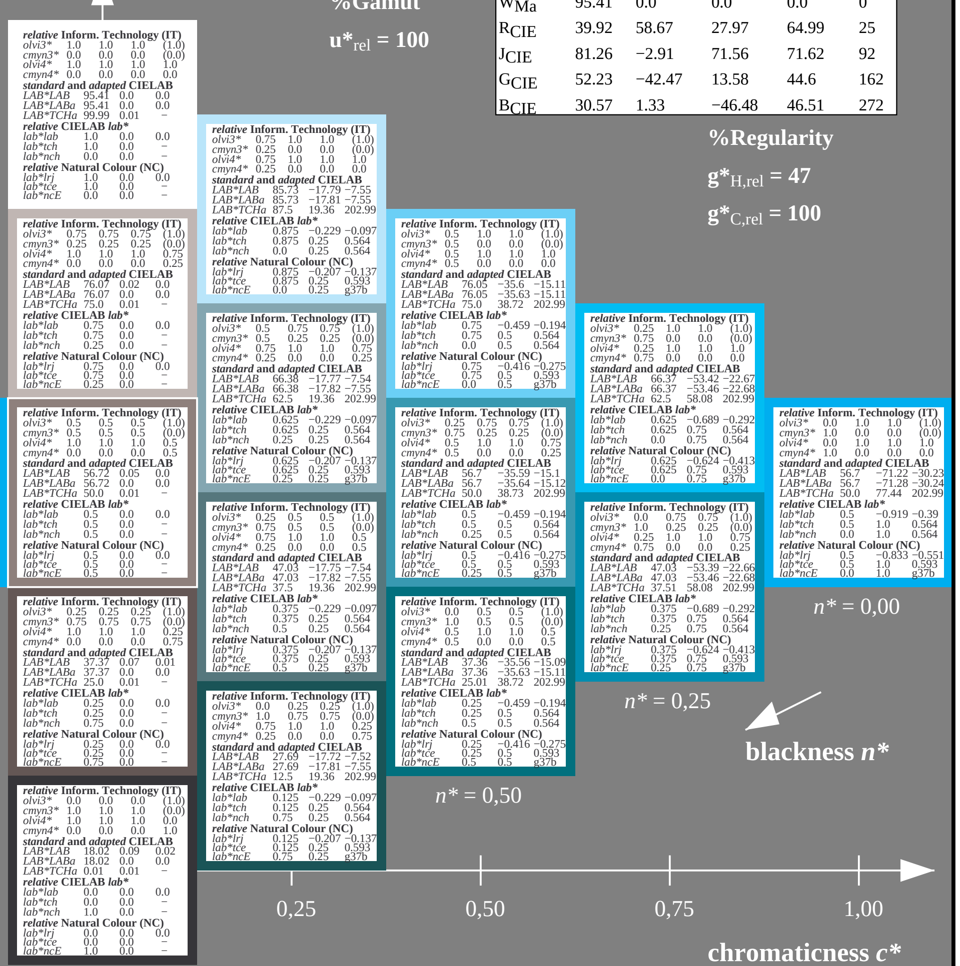


%Gamut
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$

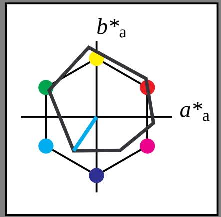


UE500−7, 5 step scales for constant CIELAB hue 236/360 = 0.656 (left)

5 step scales for constant CIELAB hue 203/360 = 0.564 (right)

Input: Colorimetric Reflective System TRS18
for hue *h** = *lab*h* = 236/360 = 0.656
*lab*tch* and *lab*nch*

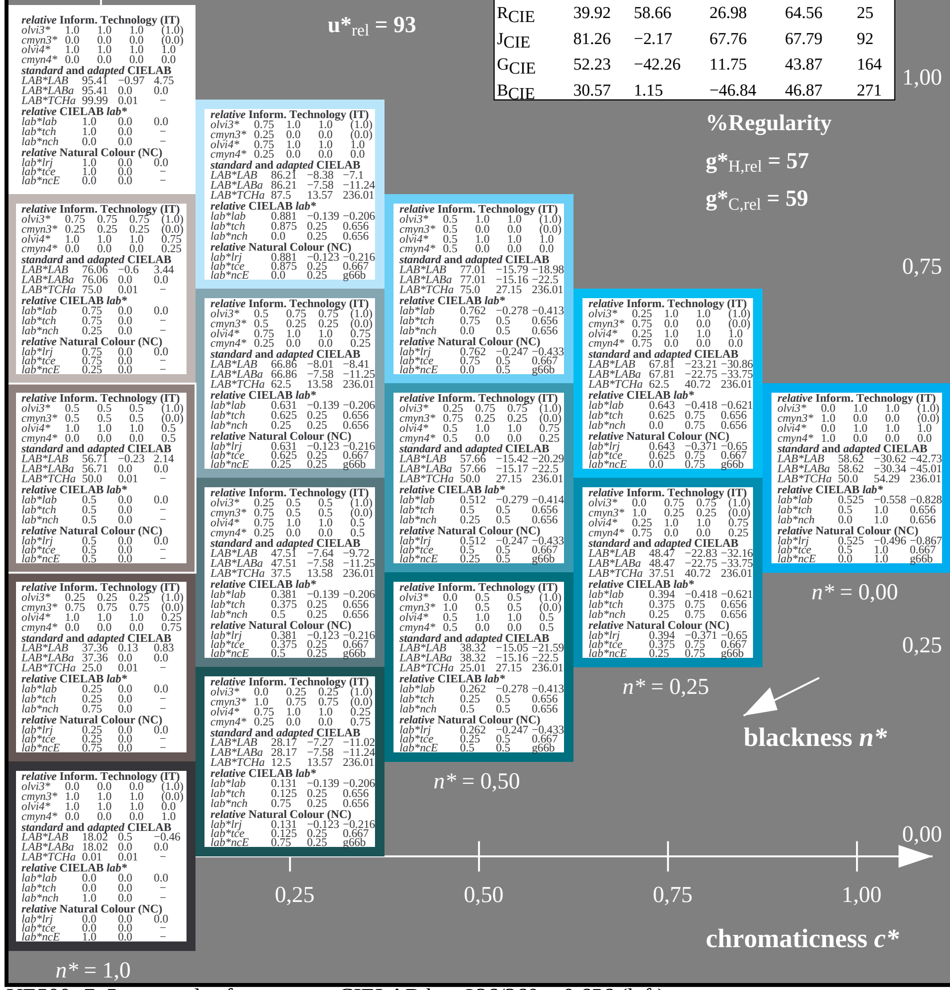
D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0
triangle lightness *t**



%Gamut
u*rel = 93

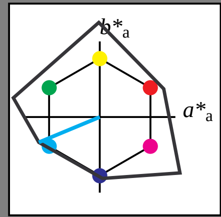
TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
g*H,rel = 57
g*C,rel = 59



Output: Colorimetric Reflective System NCS18
for hue *h** = *lab*h* = 203/360 = 0.563
*lab*tch* and *lab*nch*

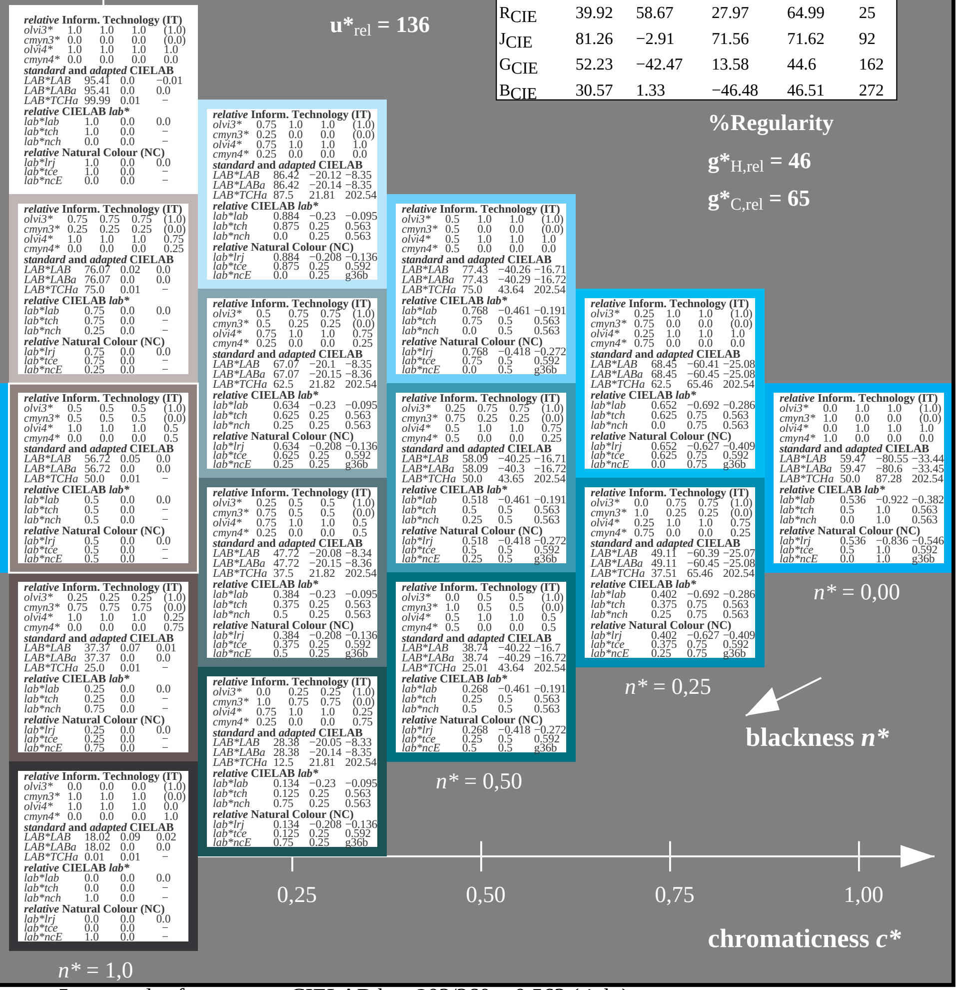
D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0
triangle lightness *t**



%Gamut
u*rel = 136

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
g*H,rel = 46
g*C,rel = 65



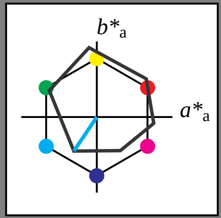
UE500−7, 5 step scales for constant CIELAB hue 236/360 = 0.656 (left)

5 step scales for constant CIELAB hue 203/360 = 0.563 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 236/360 = 0.656$
lab*tch* and *lab*nch

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

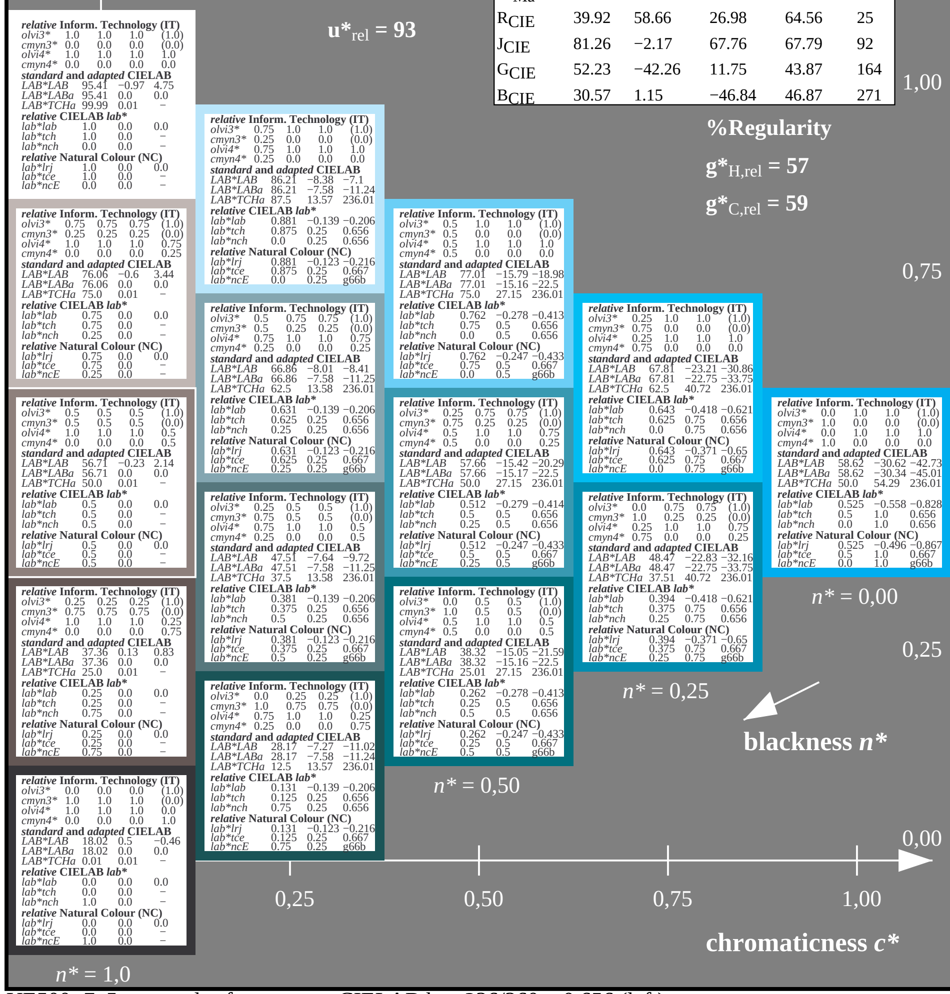
triangle lightness t^*



%Gamut
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

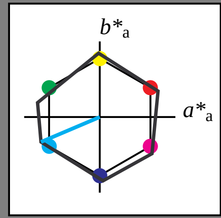
%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 203/360 = 0.564$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 53 84 203
rgb*Ma: 0.0 1.0 1.0

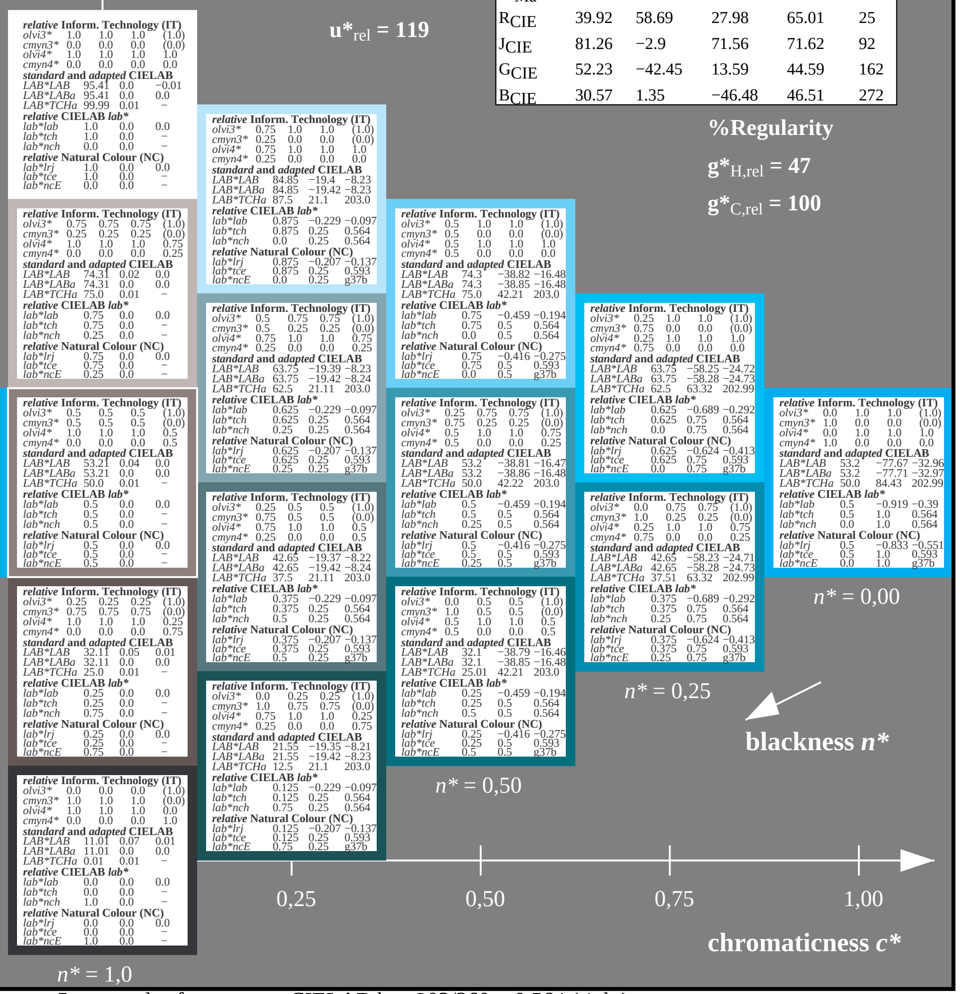
triangle lightness t^*



%Gamut
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



UE500−7, 5 step scales for constant CIELAB hue 236/360 = 0.656 (left)

5 step scales for constant CIELAB hue 203/360 = 0.564 (right)

Input: Colorimetric Reflective System TRS18

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

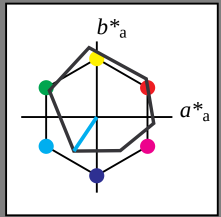
*lab*tch* and *lab*nch*

D65: hue C

LCH*Ma: 59 54 236

rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

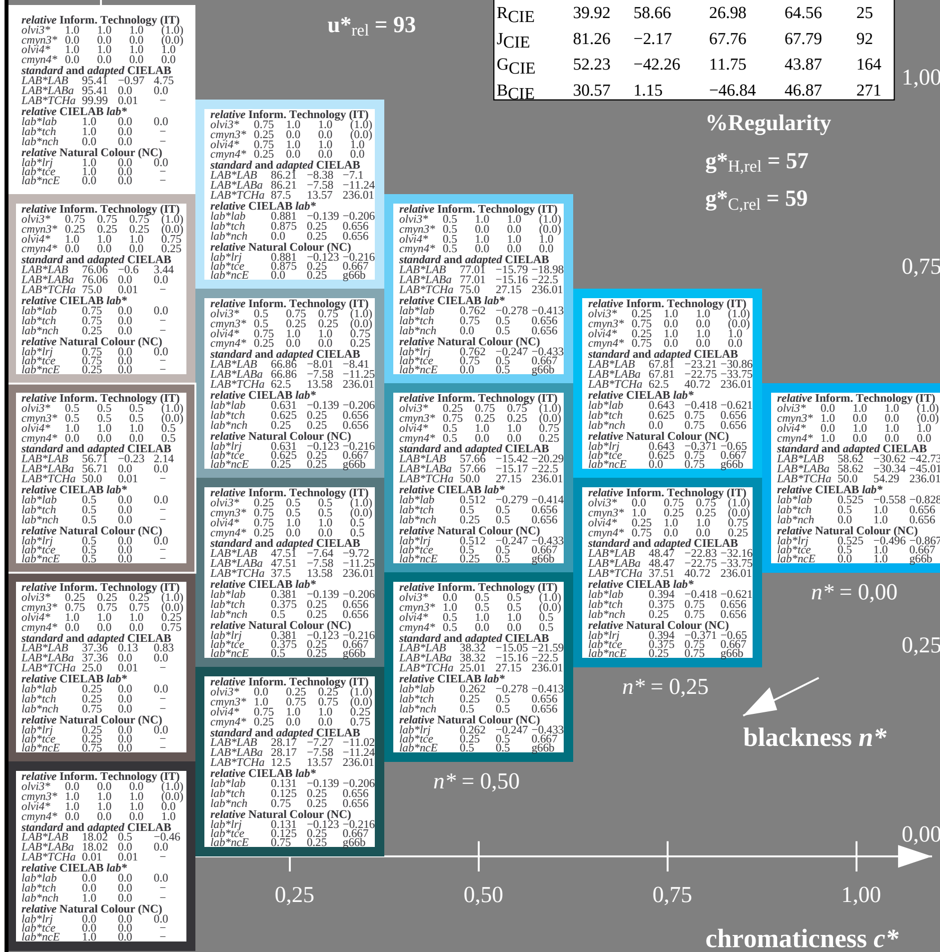
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



Output: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 203/360 = 0.563$

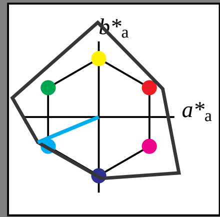
*lab*tch* and *lab*nch*

D65: hue G50B

LCH*Ma: 59 87 203

rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

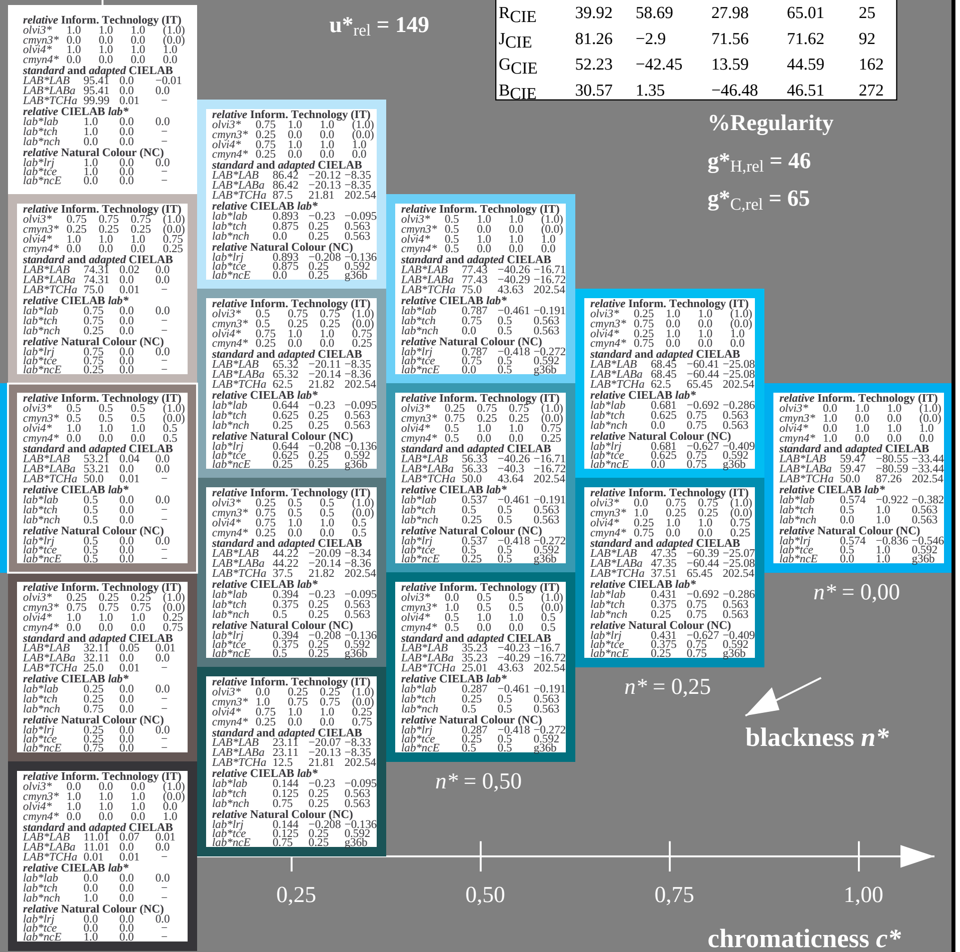
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$

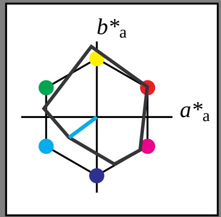


UE500−7, 5 step scales for constant CIELAB hue 236/360 = 0.656 (left)

5 step scales for constant CIELAB hue 203/360 = 0.563 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 217/360 = 0.601$
*lab*tch and lab*nch*

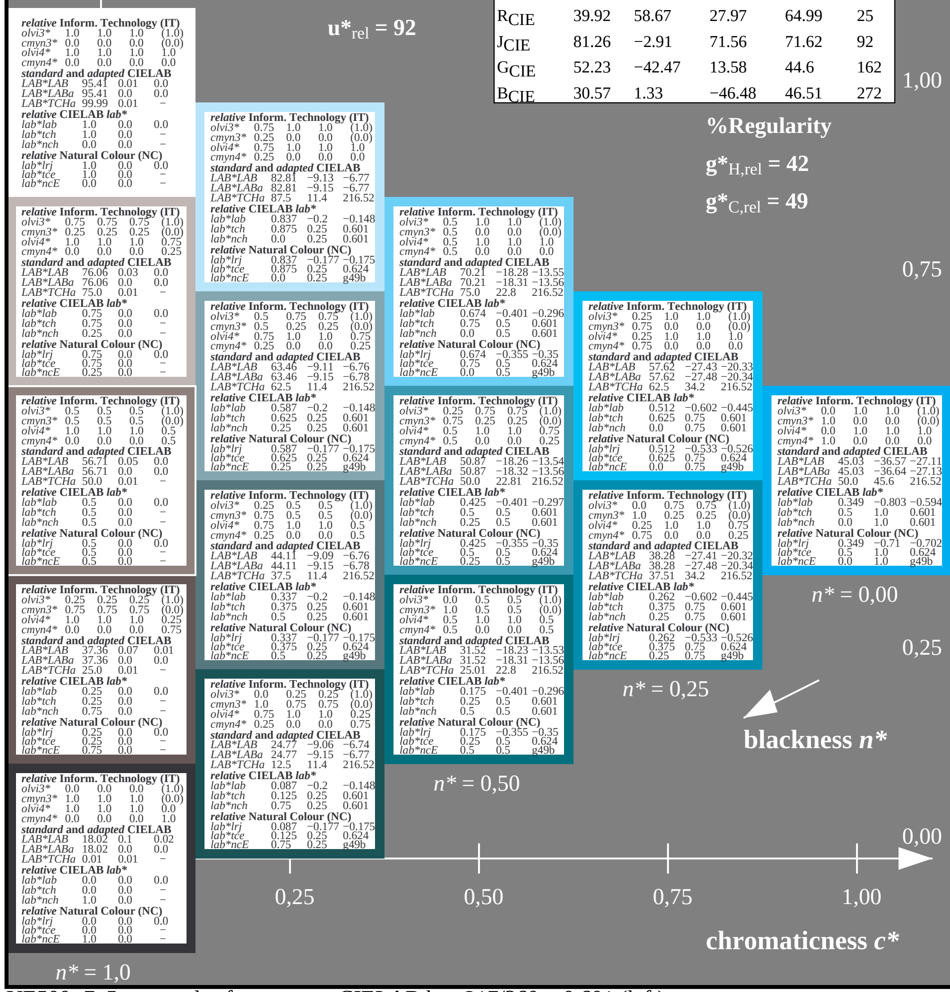
D65: hue G50B
LCH*Ma: 45 46 217
rgb*Ma: 0.0 1.0 1.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 92$

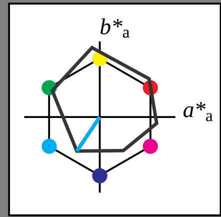
MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 236/360 = 0.656$
*lab*tch and lab*nch*

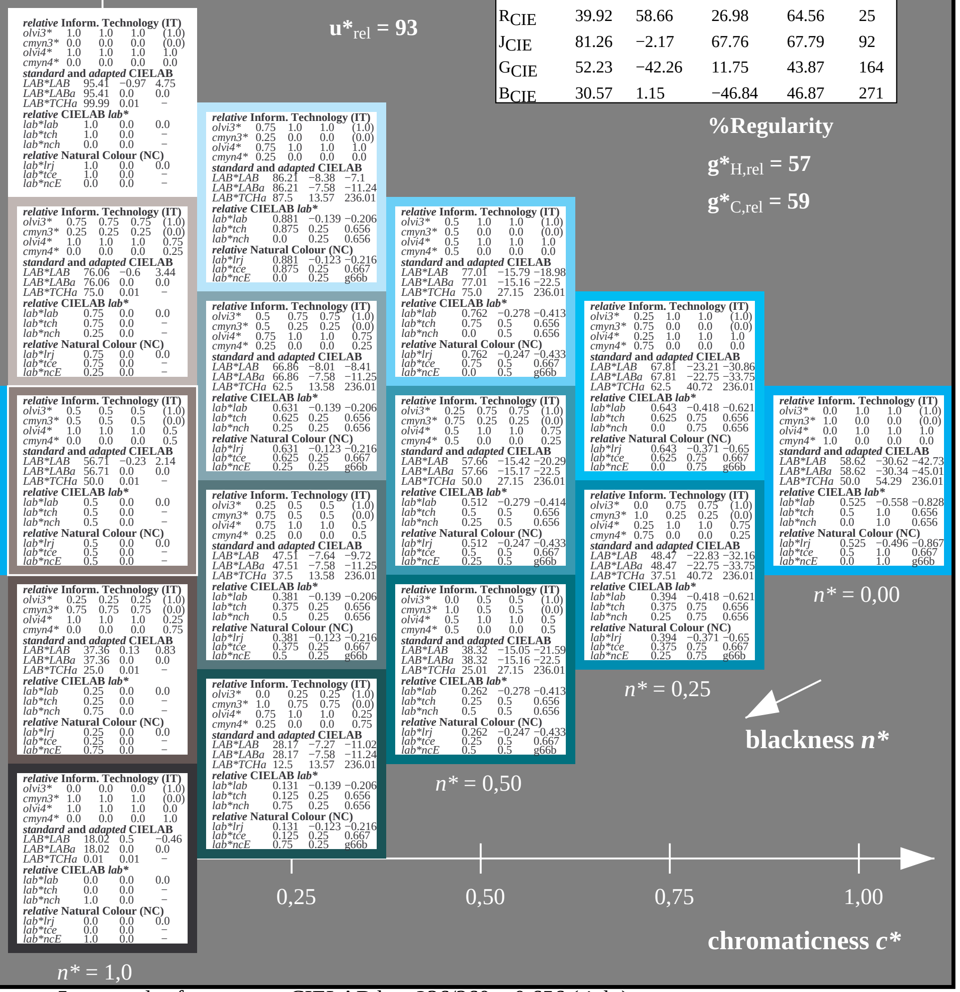
D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



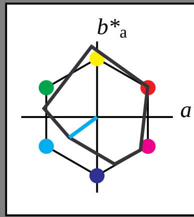
UE500−7, 5 step scales for constant CIELAB hue 217/360 = 0.601 (left)

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

Input: Colorimetric Reflective System MRS18a
for hue *h = *lab*h* = 217/360 = 0.601**
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 217
rgb*Ma: 0.0 1.0 1.0

triangle lightness *t*



%Gamut

u^*_{rel} = 92

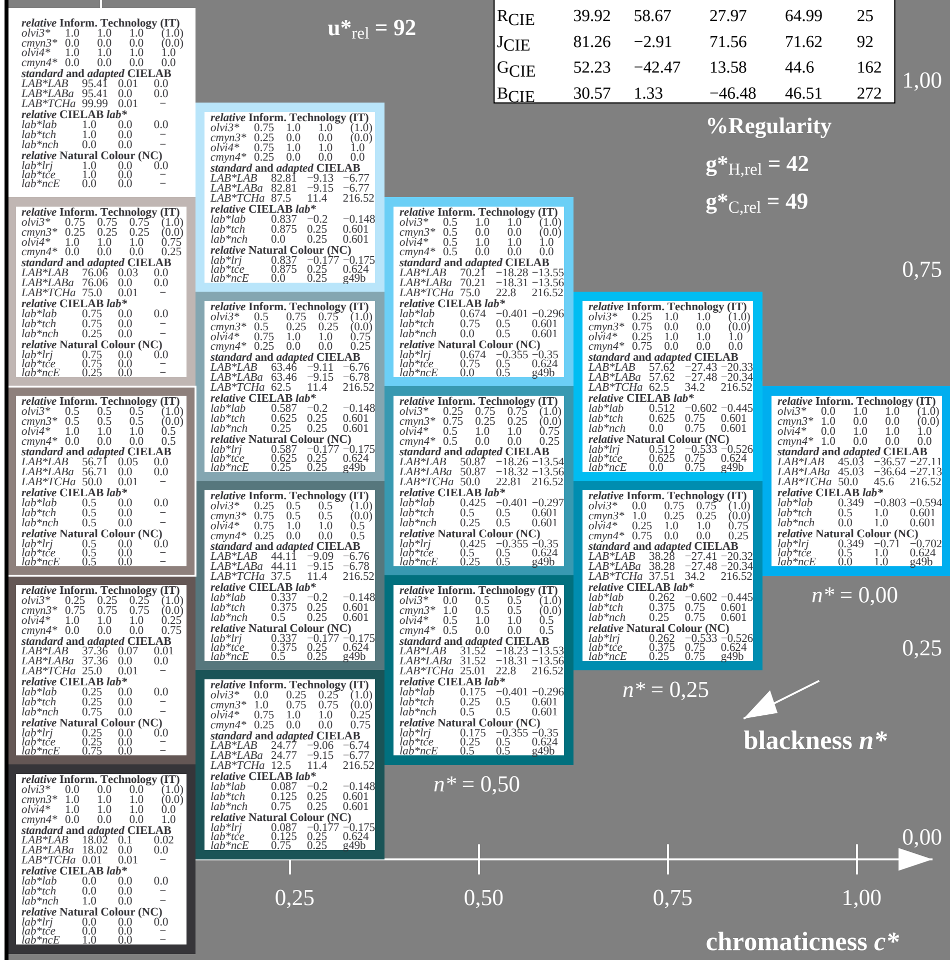
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

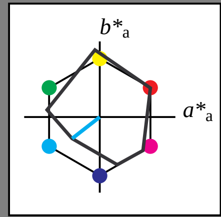
$g^*_{C,rel}$ = 49



Output: Colorimetric Reflective System MRS18
for hue *h = *lab*h* = 218/360 = 0.605**
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 218
rgb*Ma: 0.0 1.0 1.0

triangle lightness *t*



%Gamut

u^*_{rel} = 91

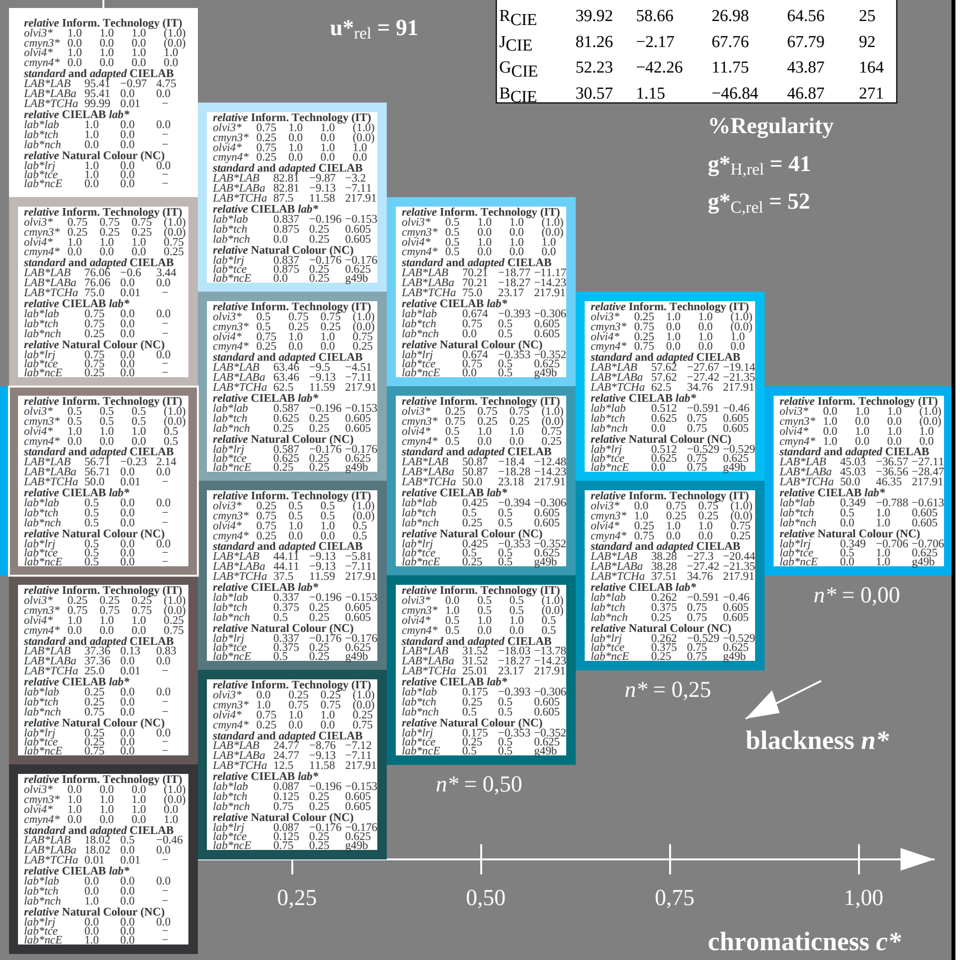
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

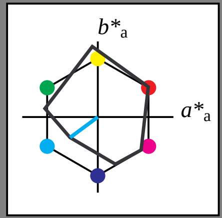
$g^*_{C,rel}$ = 52



UE500−7, 5 step scales for constant CIELAB hue 217/360 = 0.601 (left) 5 step scales for constant CIELAB hue 218/360 = 0.605 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 217/360 = 0.601$
*lab*tch and lab*nch*

D65: hue G50B
LCH*Ma: 45 46 217
rgb*Ma: 0.0 1.0 1.0
triangle lightness t*

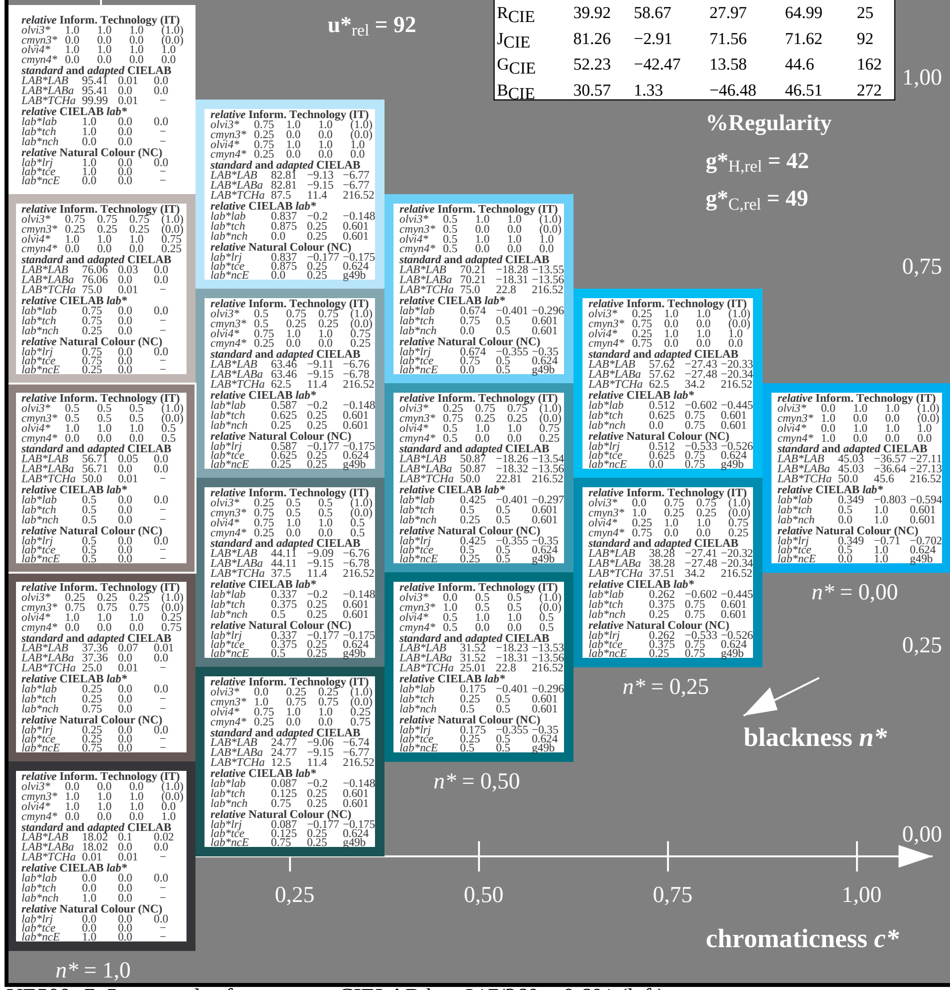


%Gamut
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data

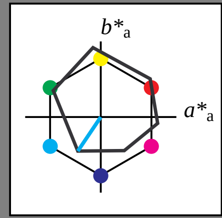
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 236/360 = 0.656$
*lab*tch and lab*nch*

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0
triangle lightness t*

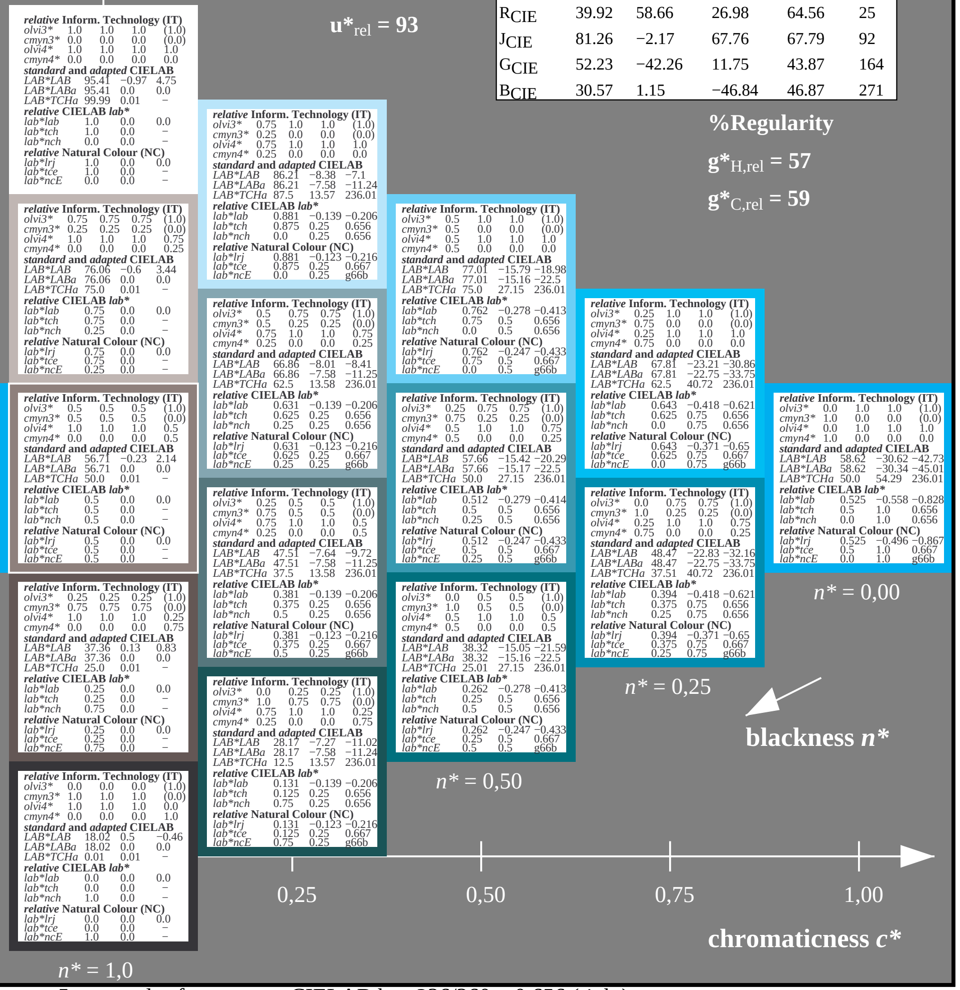


%Gamut
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$

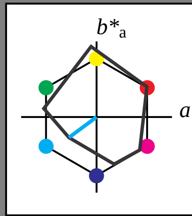


UE500−7, 5 step scales for constant CIELAB hue 217/360 = 0.601 (left)   5 step scales for constant CIELAB hue 236/360 = 0.656 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 217/360 = 0.601$
*lab*tch and lab*nch*

D65: hue G50B
LCH*Ma: 45 46 217
rgb*Ma: 0.0 1.0 1.0

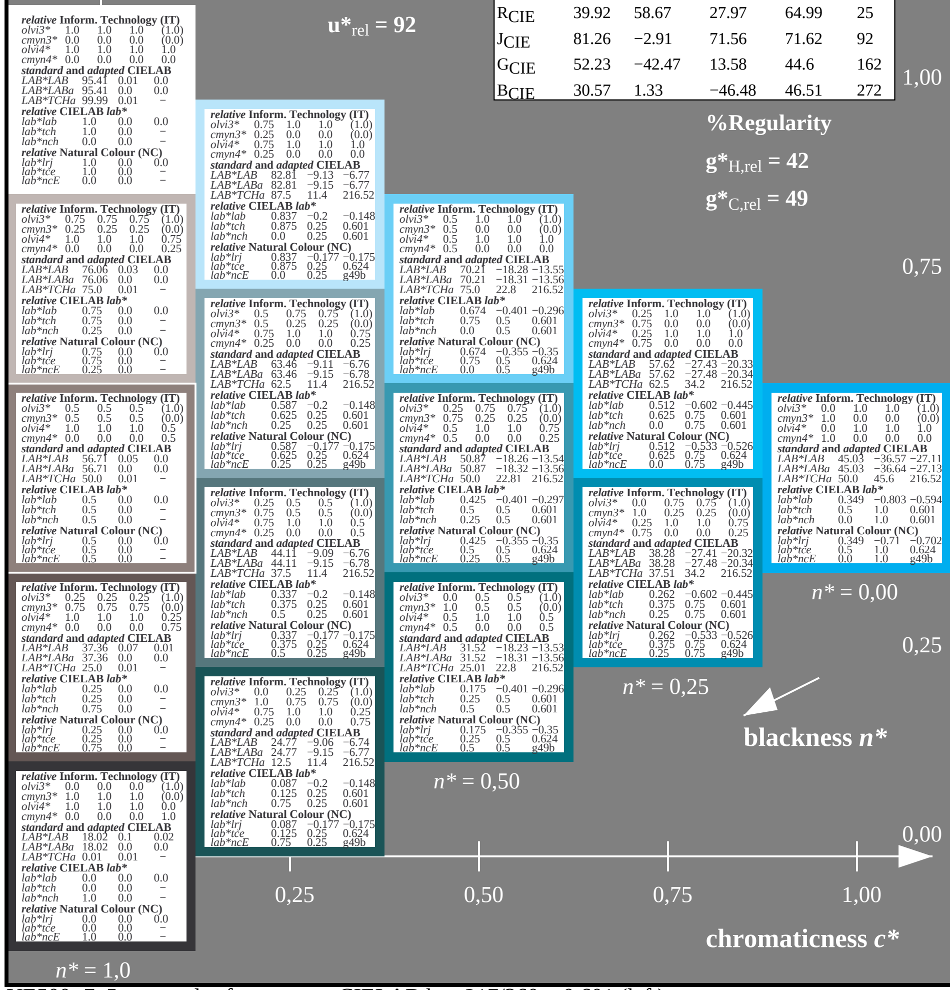
triangle lightness t^*



%Gamut
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

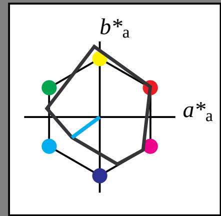
%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 217/360 = 0.601$
*lab*tch and lab*nch*

D65: hue G50B
LCH*Ma: 45 46 217
rgb*Ma: 0.0 1.0 1.0

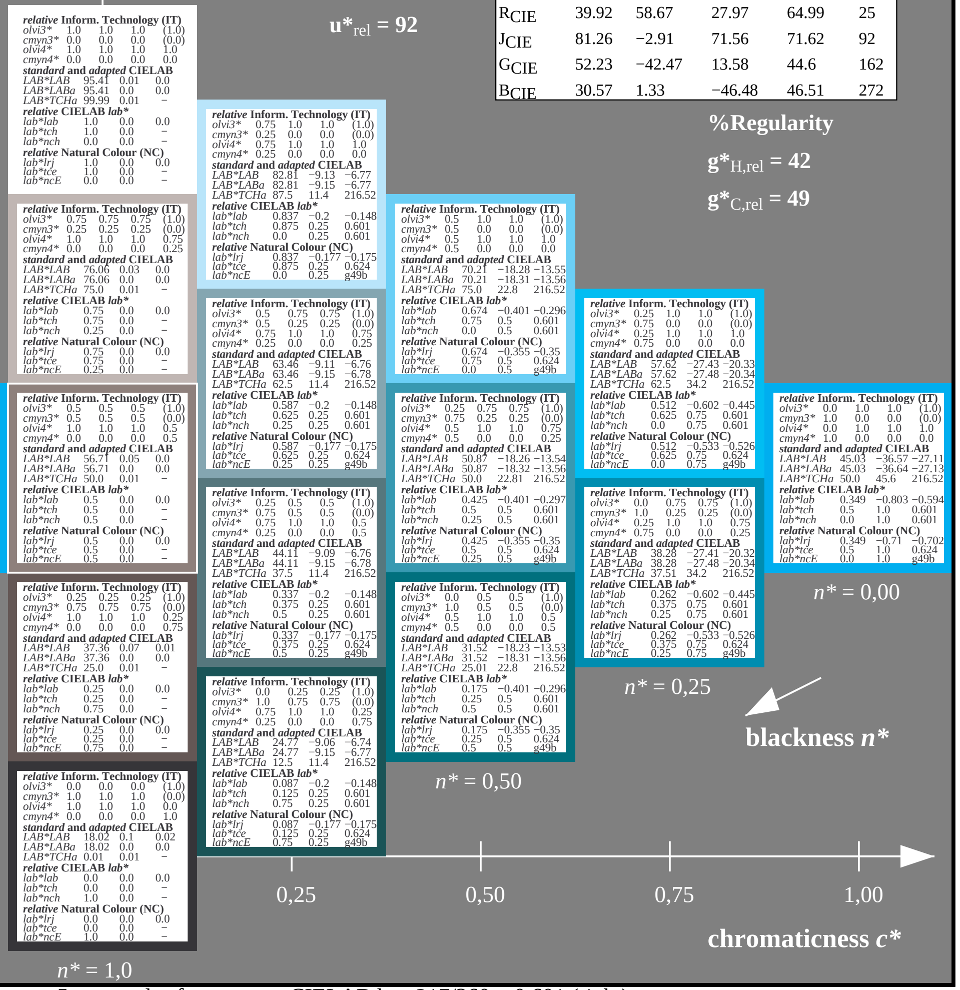
triangle lightness t^*



%Gamut
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$



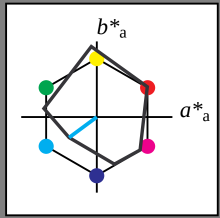
UE500−7, 5 step scales for constant CIELAB hue 217/360 = 0.601 (left)

5 step scales for constant CIELAB hue 217/360 = 0.601 (right)

Input: Colorimetric Reflective System MRS18a
for hue *h* = lab*h* = 217/360 = 0.601
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 217
rgb*Ma: 0.0 1.0 1.0

triangle lightness *t*



%Gamut

u^*_{rel} = 92

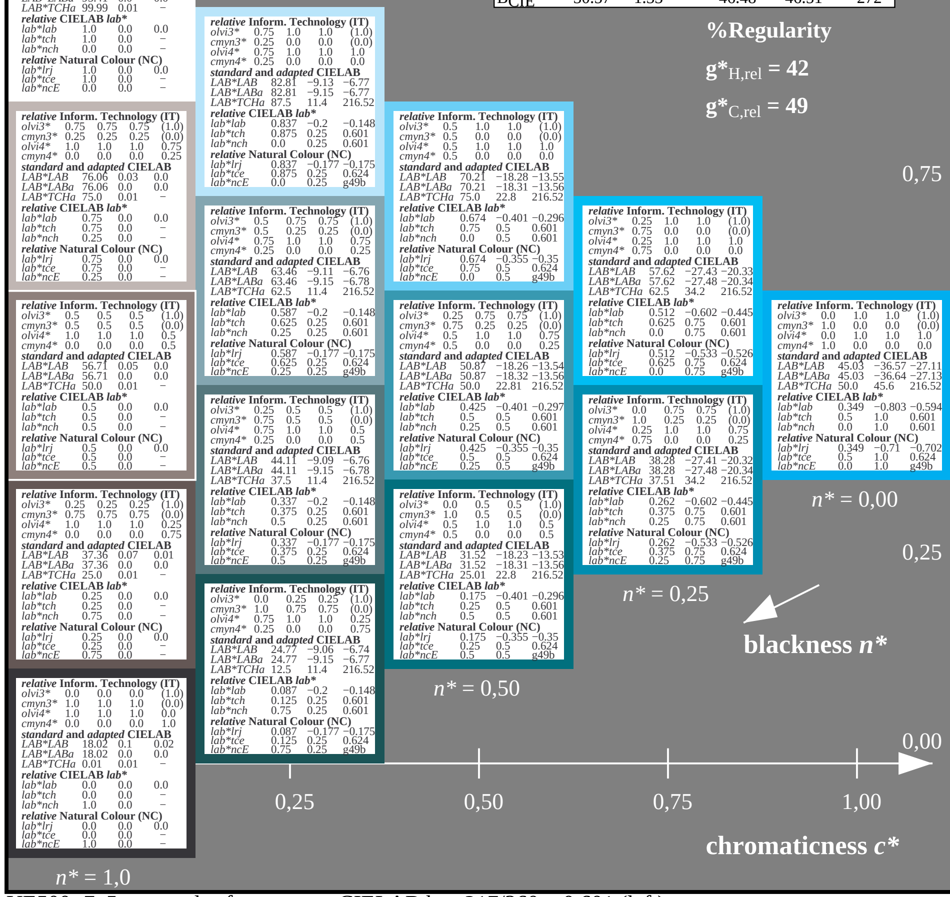
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

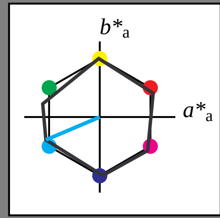
$g^*_{C,rel}$ = 49



Output: Colorimetric Reflective System NRS18
for hue *h* = lab*h* = 203/360 = 0.564
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 57 77 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness *t*



%Gamut

u^*_{rel} = 100

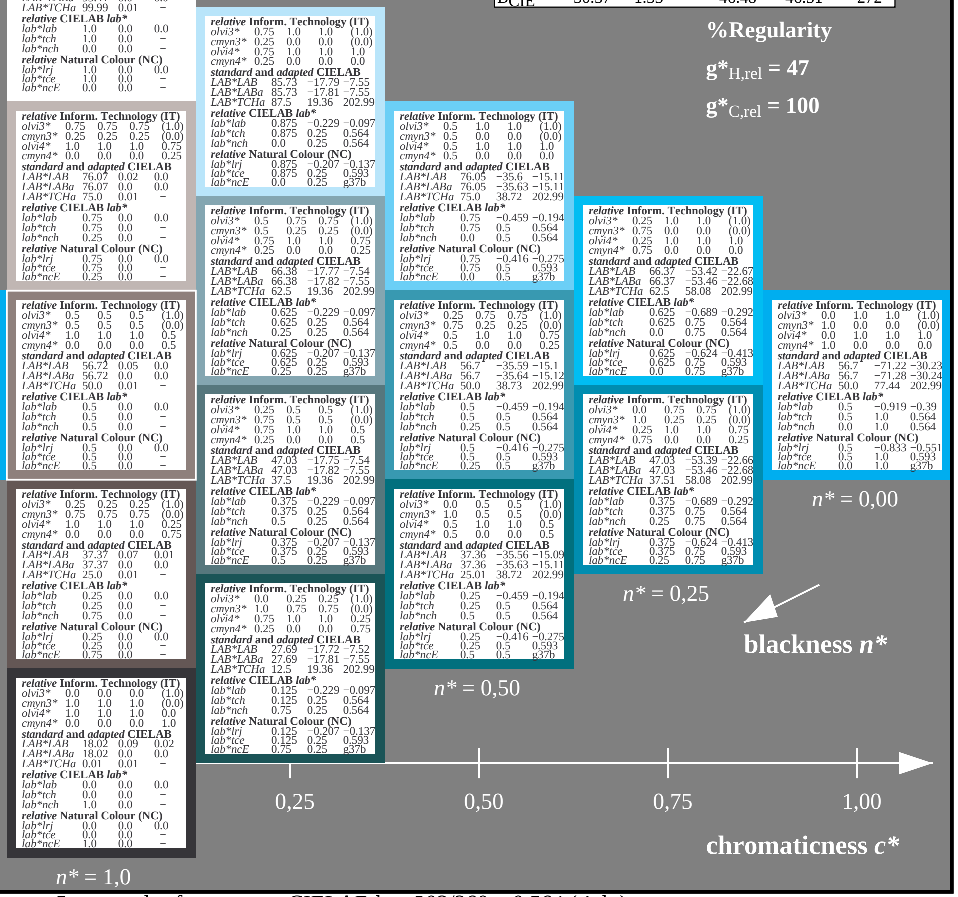
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



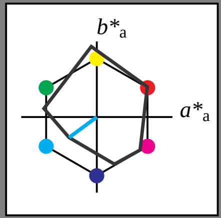
UE500−7, 5 step scales for constant CIELAB hue 217/360 = 0.601 (left)

5 step scales for constant CIELAB hue 203/360 = 0.564 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 217/360 = 0.601$
lab^*tch and lab^*nch

D65: hue G50B
LCH*Ma: 45 46 217
rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 92$

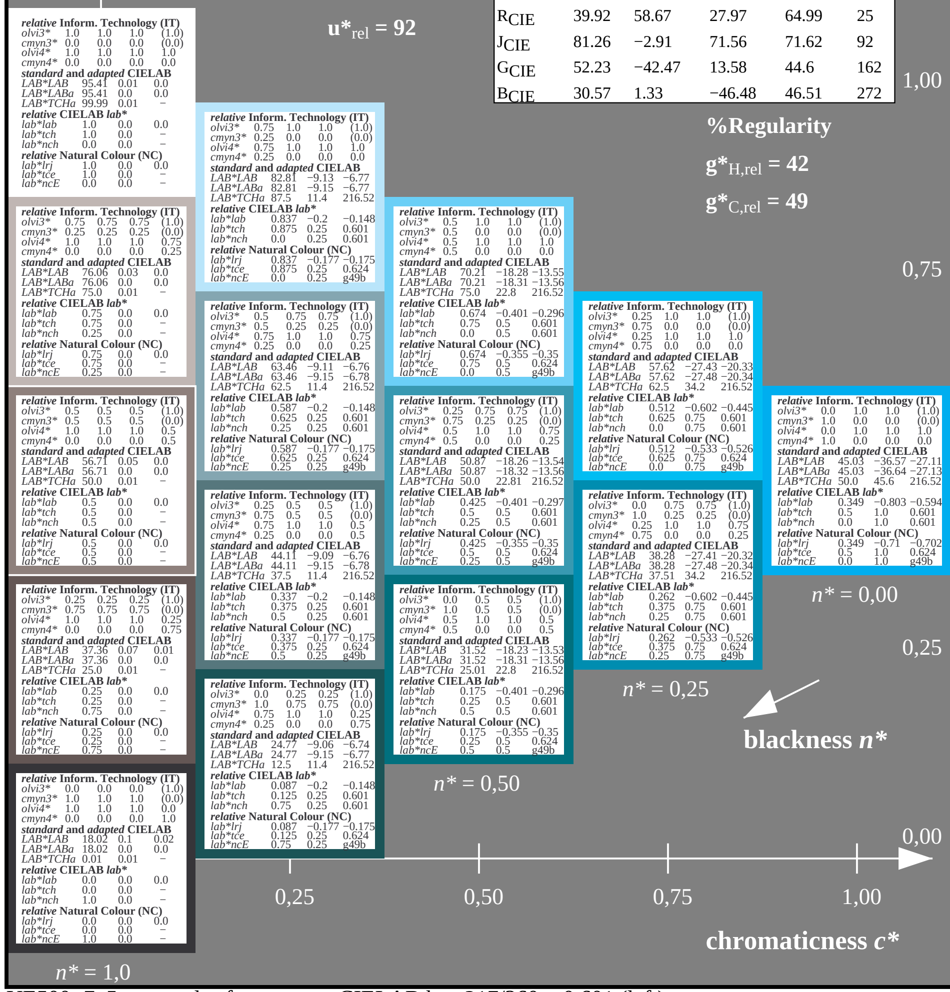
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

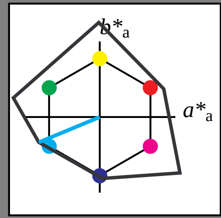
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 203/360 = 0.563$
lab^*tch and lab^*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 136$

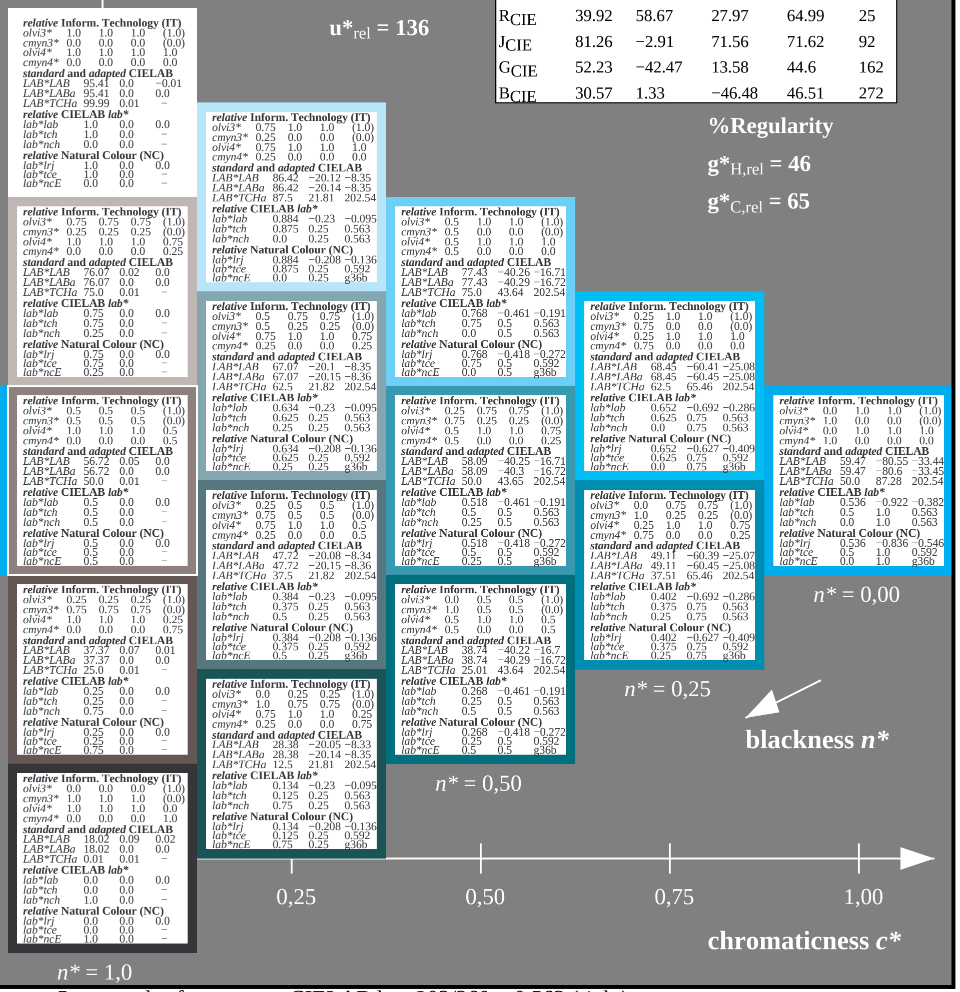
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



UE500−7, 5 step scales for constant CIELAB hue 217/360 = 0.601 (left)

5 step scales for constant CIELAB hue 203/360 = 0.563 (right)

Input: Colorimetric Reflective System MRS18a

for hue $h^* = lab^*h = 217/360 = 0.601$

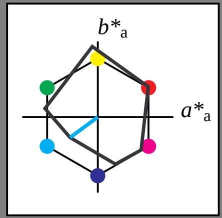
*lab*tch and lab*nch*

D65: hue G50B

LCH*Ma: 45 46 217

rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

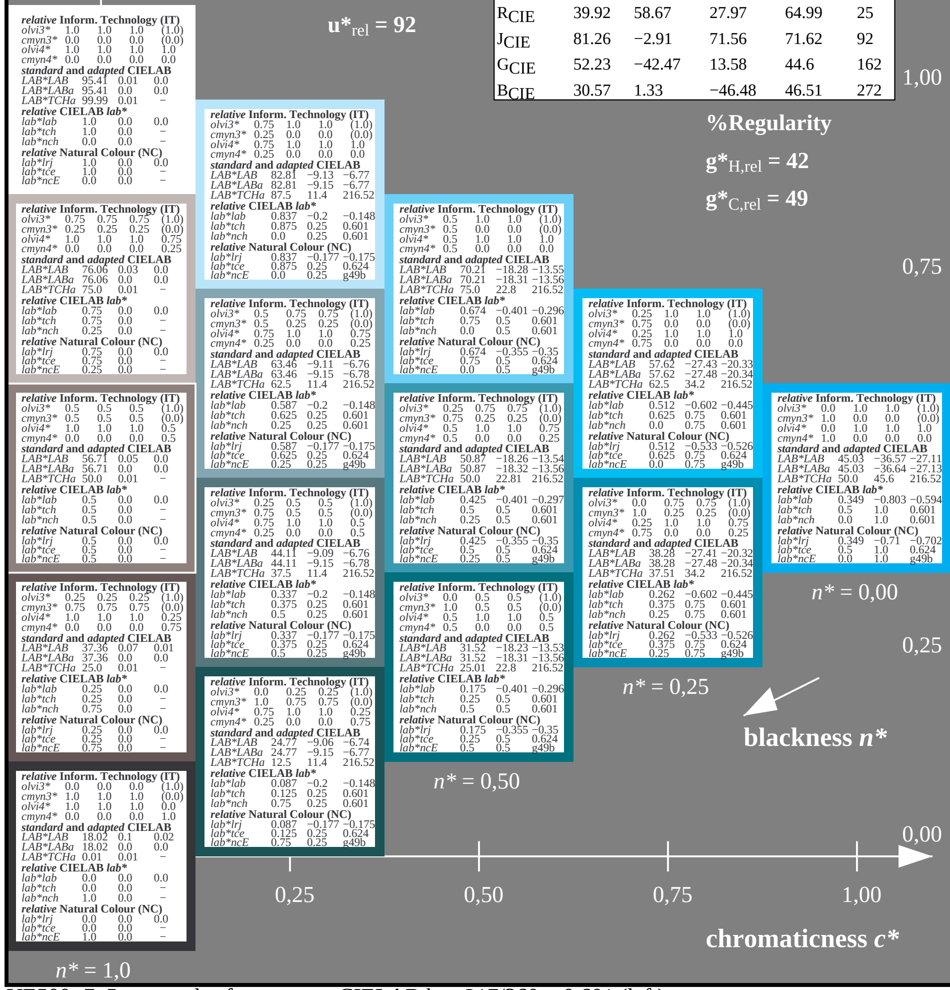
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System NRS11

for hue $h^* = lab^*h = 203/360 = 0.564$

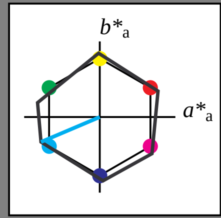
*lab*tch and lab*nch*

D65: hue G50B

LCH*Ma: 53 84 203

rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

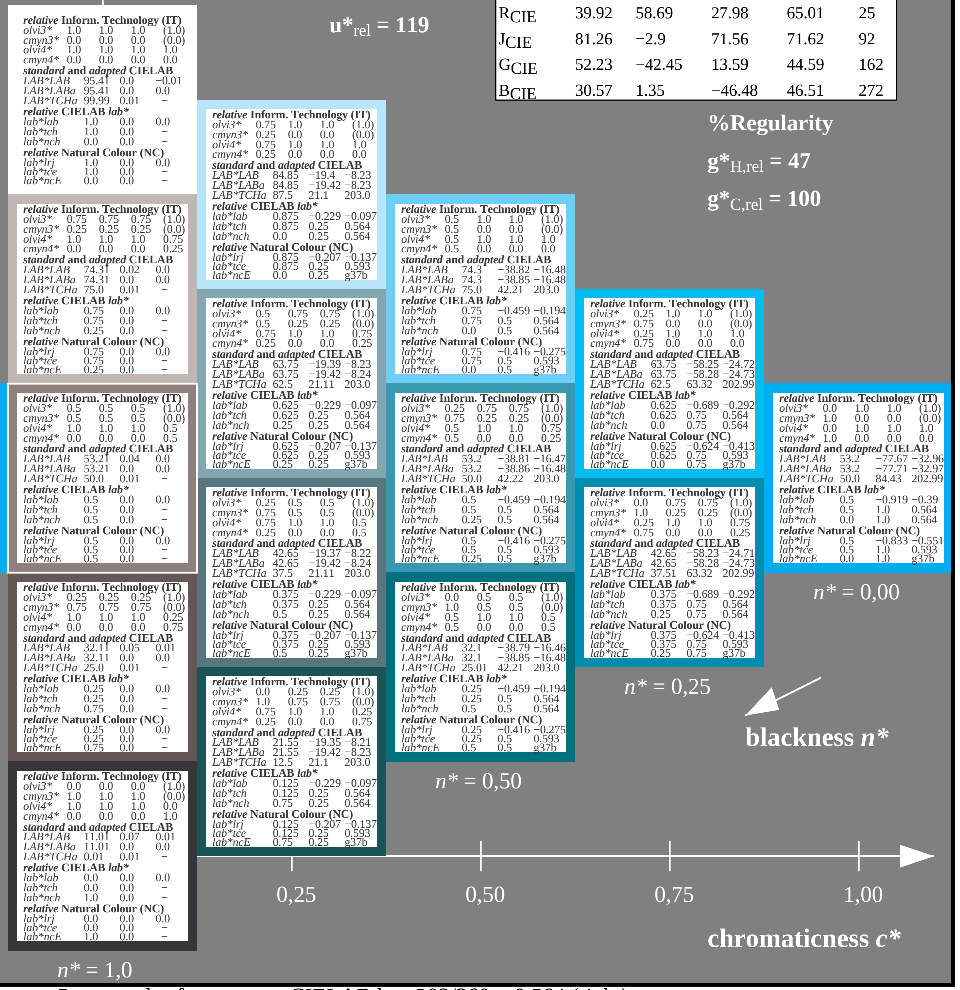
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



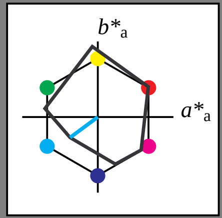
UE500−7, 5 step scales for constant CIELAB hue 217/360 = 0.601 (left)

5 step scales for constant CIELAB hue 203/360 = 0.564 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 217/360 = 0.601$
lab^*tch and lab^*nch

D65: hue G50B
LCH*Ma: 45 46 217
rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

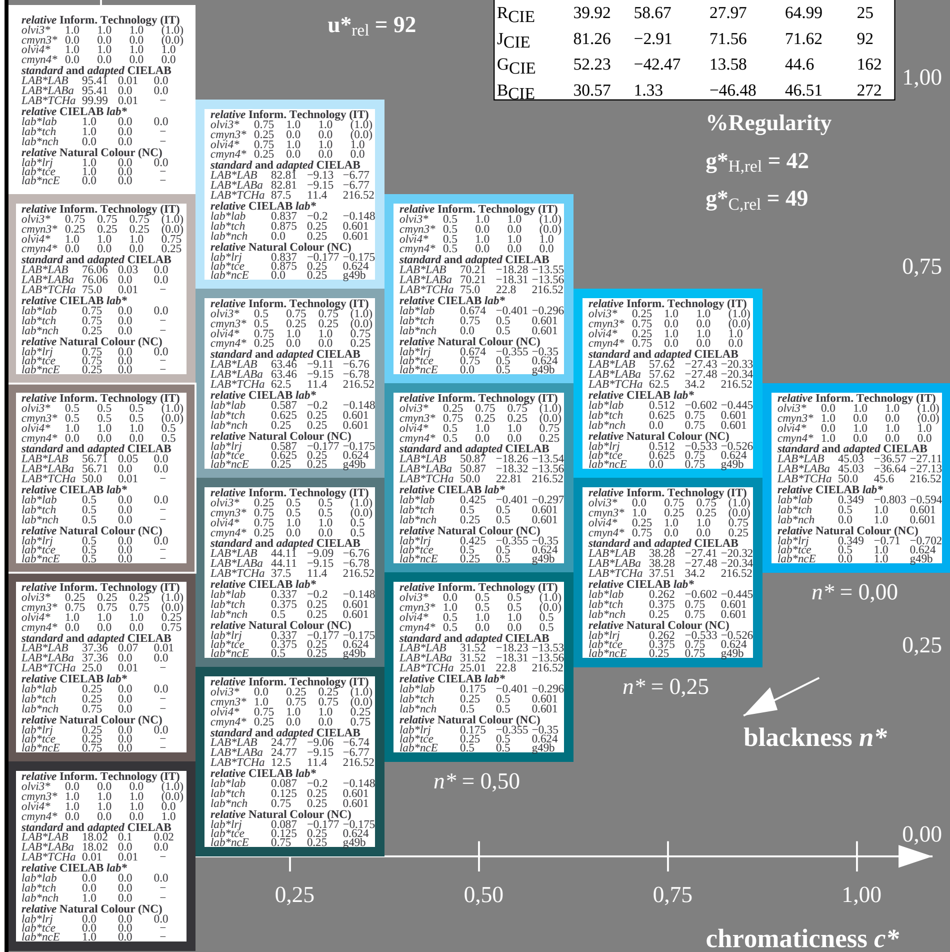
u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

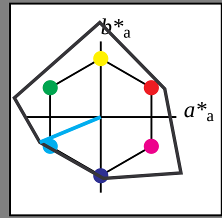
$g^*_{C,rel}$ = 49



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 203/360 = 0.563$
lab^*tch and lab^*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

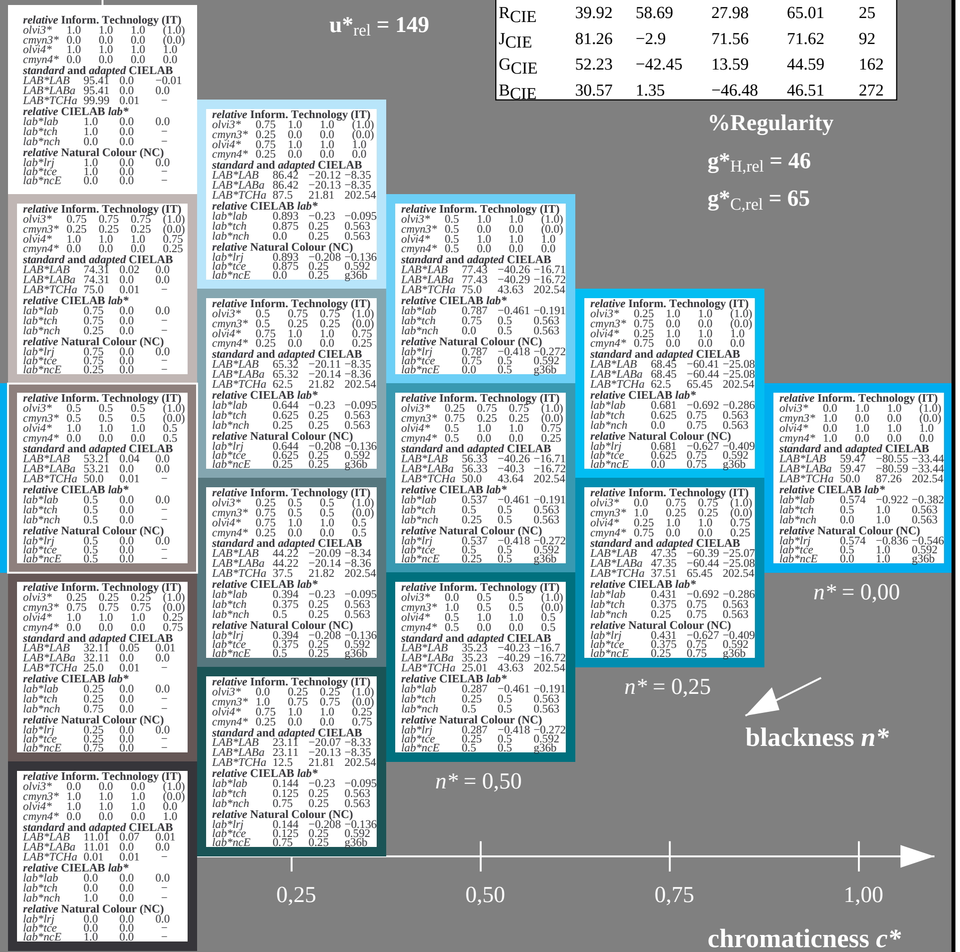
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



UE500−7, 5 step scales for constant CIELAB hue 217/360 = 0.601 (left)

5 step scales for constant CIELAB hue 203/360 = 0.563 (right)

Input: Colorimetric Reflective System NRS18

for hue $h^* = lab^*h = 203/360 = 0.564$

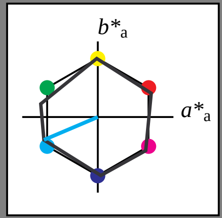
*lab*tch and lab*nch*

D65: hue G50B

LCH*Ma: 57 77 203

rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*

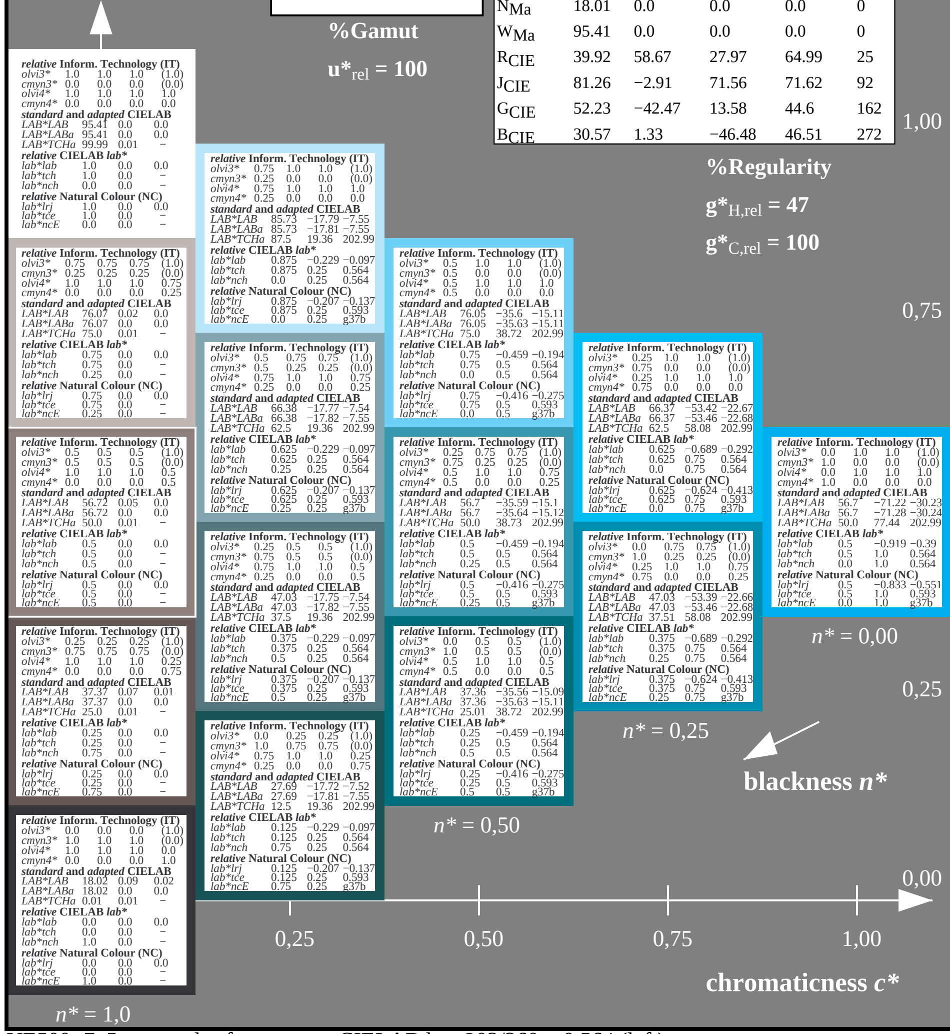


%Gamut

$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272



Output: Colorimetric Reflective System ORS18

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

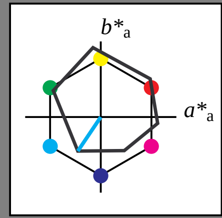
*lab*tch and lab*nch*

D65: hue C

LCH*Ma: 59 54 236

rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*

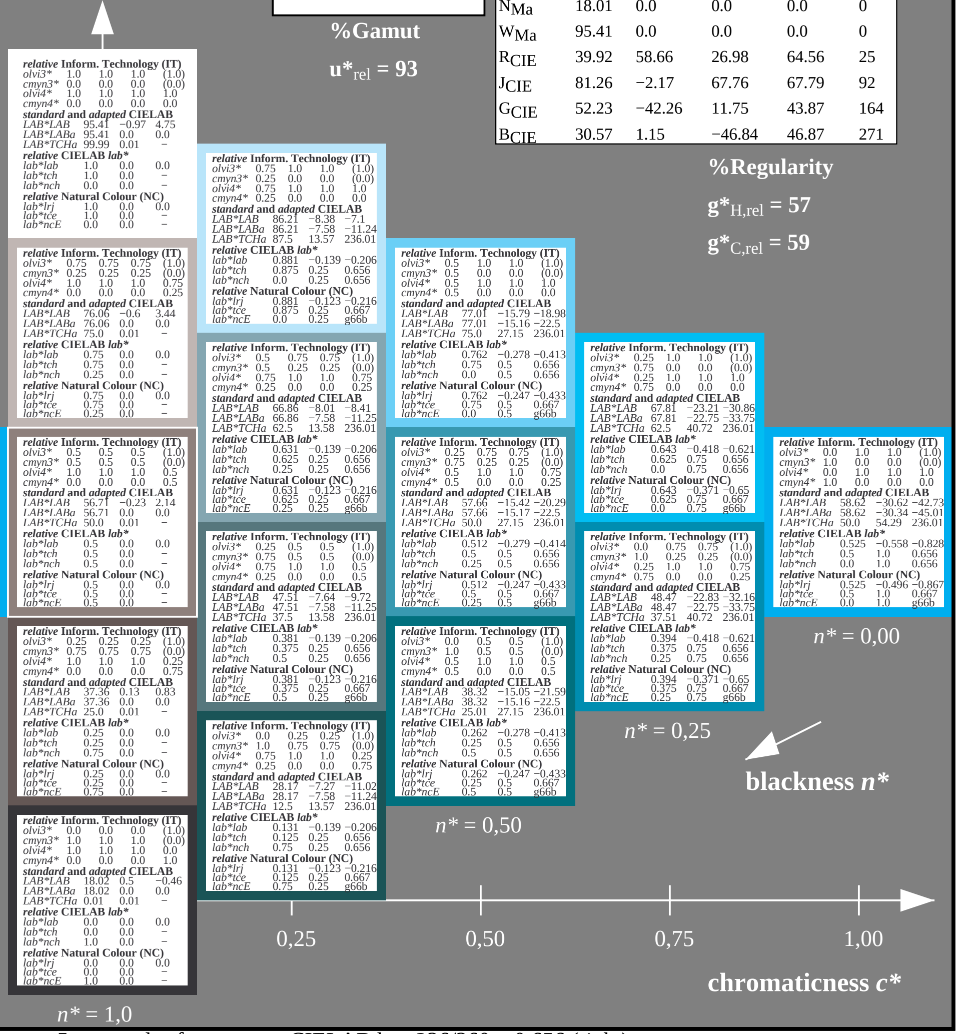


%Gamut

$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



UE500−7, 5 step scales for constant CIELAB hue 203/360 = 0.564 (left)

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

Input: Colorimetric Reflective System NRS18

for hue $h^* = lab^*h = 203/360 = 0.564$

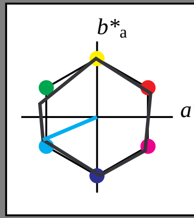
*lab*tch* and *lab*nch*

D65: hue G50B

LCH*Ma: 57 77 203

rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 100$

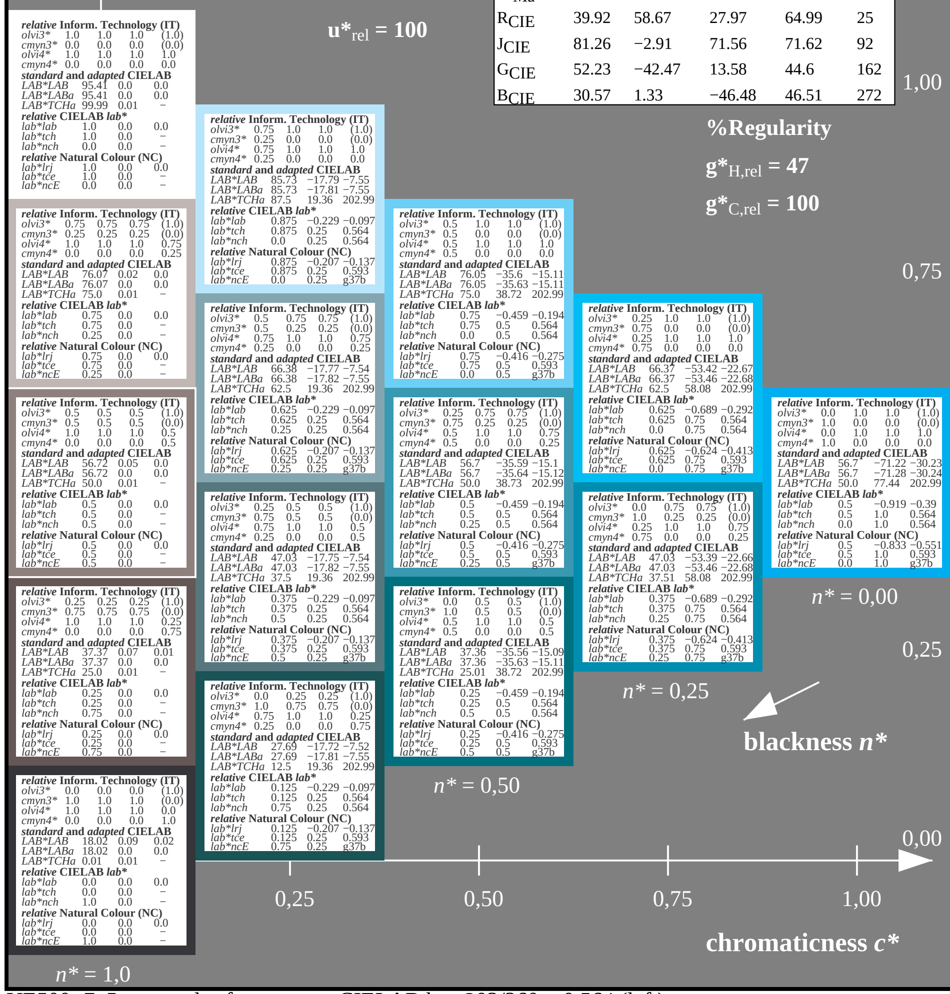
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System MRS18

for hue $h^* = lab^*h = 218/360 = 0.605$

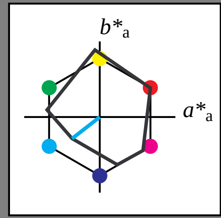
*lab*tch* and *lab*nch*

D65: hue G50B

LCH*Ma: 45 46 218

rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 91$

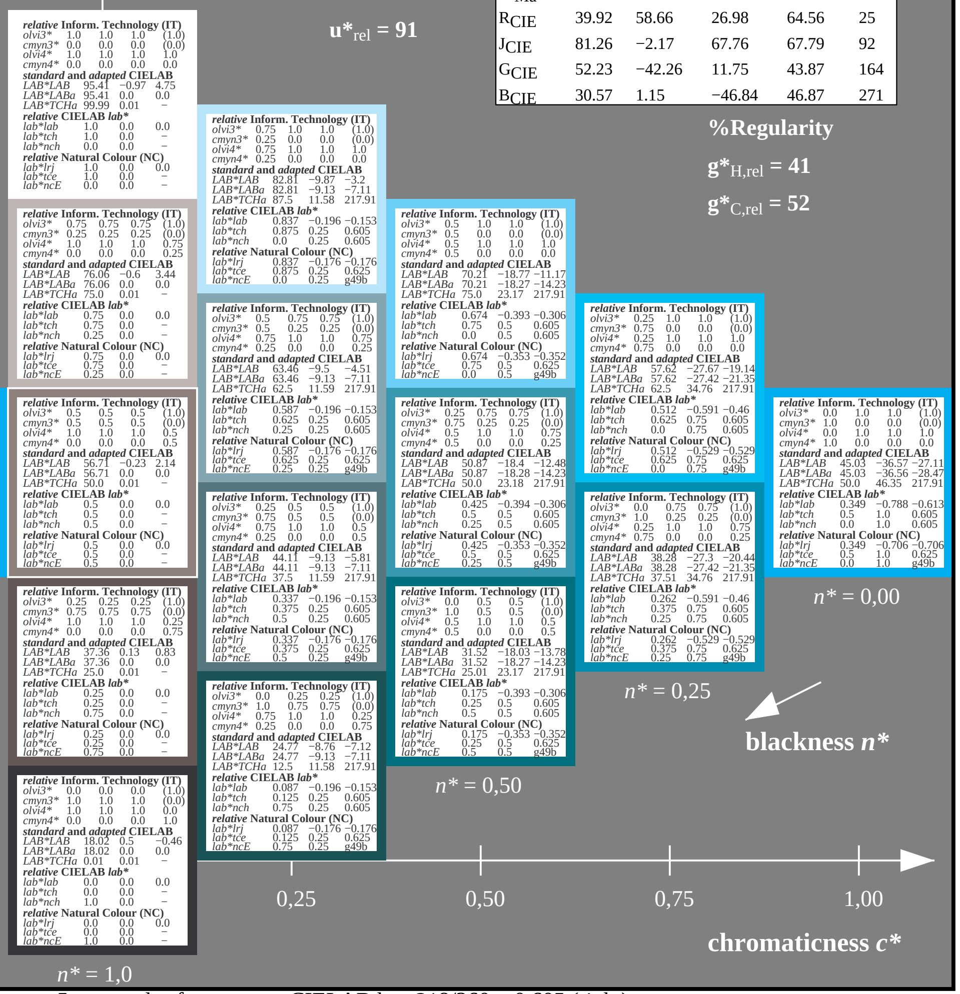
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



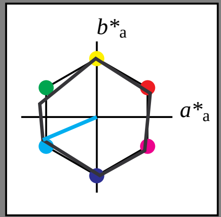
UE500−7, 5 step scales for constant CIELAB hue 203/360 = 0.564 (left)

5 step scales for constant CIELAB hue 218/360 = 0.605 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 203/360 = 0.564$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 57 77 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

u^*_{rel} = 100

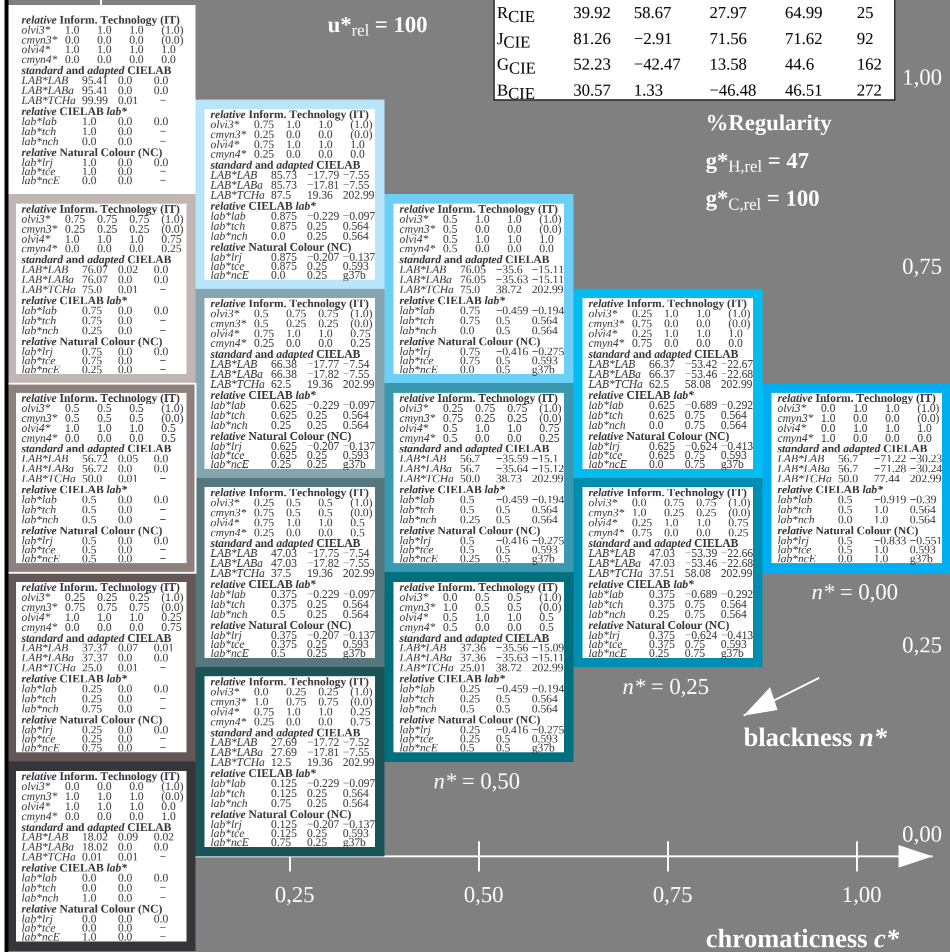
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

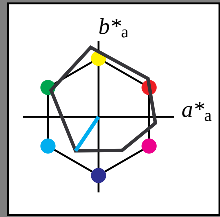
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 236/360 = 0.656$
lab*tch* and *lab*nch

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

triangle lightness t^*



%Gamut

u^*_{rel} = 93

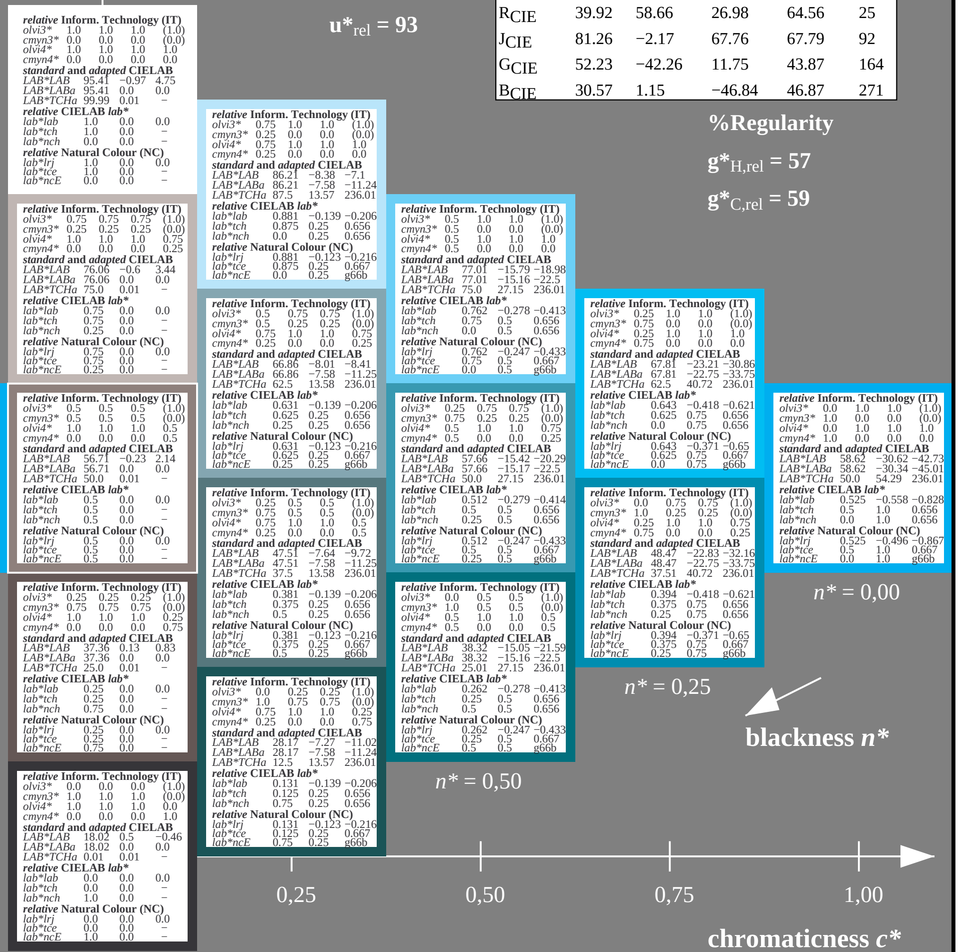
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



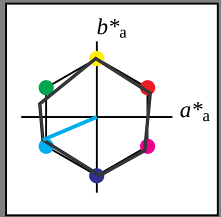
UE500−7, 5 step scales for constant CIELAB hue 203/360 = 0.564 (left)

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

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 203/360 = 0.564$
*lab*tch* and *lab*nch*

D65: hue G50B
LCH*Ma: 57 77 203
rgb*Ma: 0.0 1.0 1.0

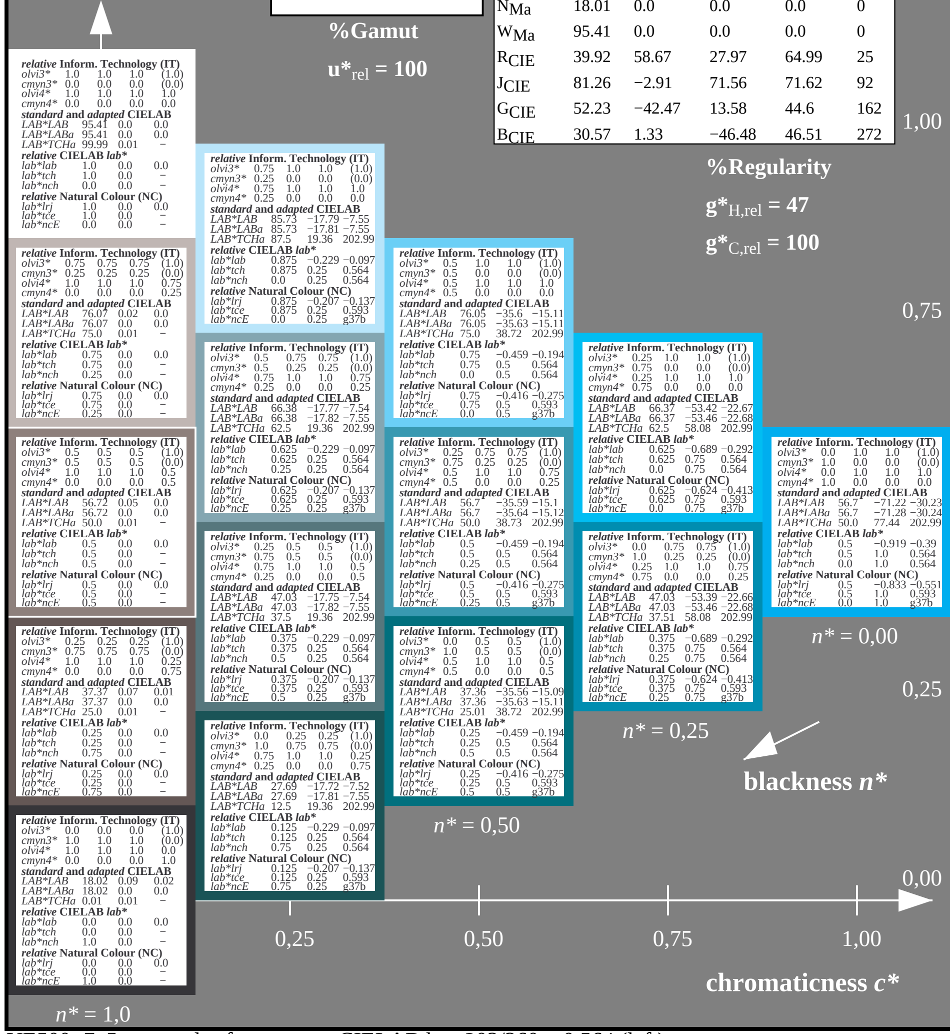
triangle lightness t^*



%Gamut
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

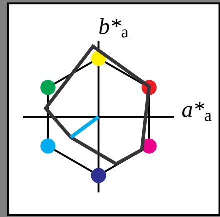
%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 217/360 = 0.601$
*lab*tch* and *lab*nch*

D65: hue G50B
LCH*Ma: 45 46 217
rgb*Ma: 0.0 1.0 1.0

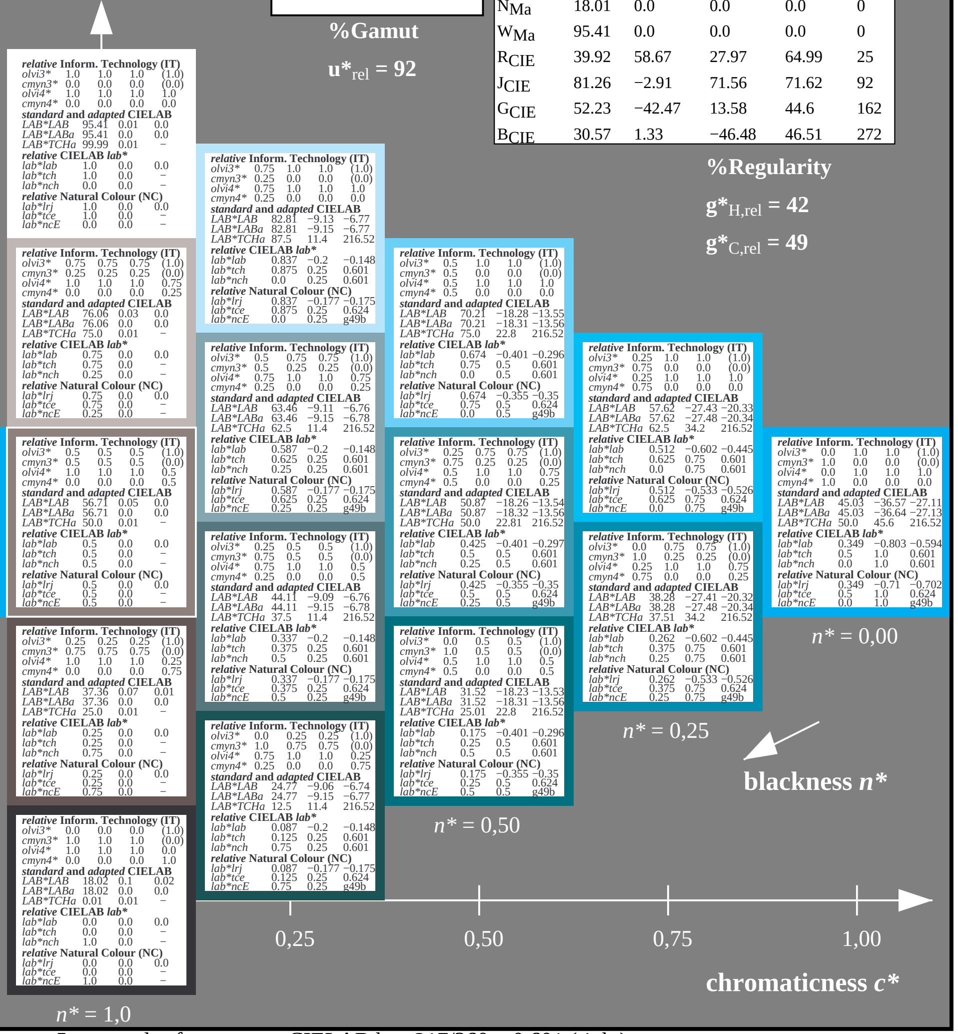
triangle lightness t^*



%Gamut
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$



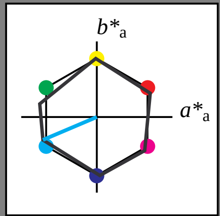
UE500−7, 5 step scales for constant CIELAB hue 203/360 = 0.564 (left)

5 step scales for constant CIELAB hue 217/360 = 0.601 (right)

Input: Colorimetric Reflective System NRS18
for hue *h = *lab*h* = 203/360 = 0.564**
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 57 77 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness *t**



%Gamut

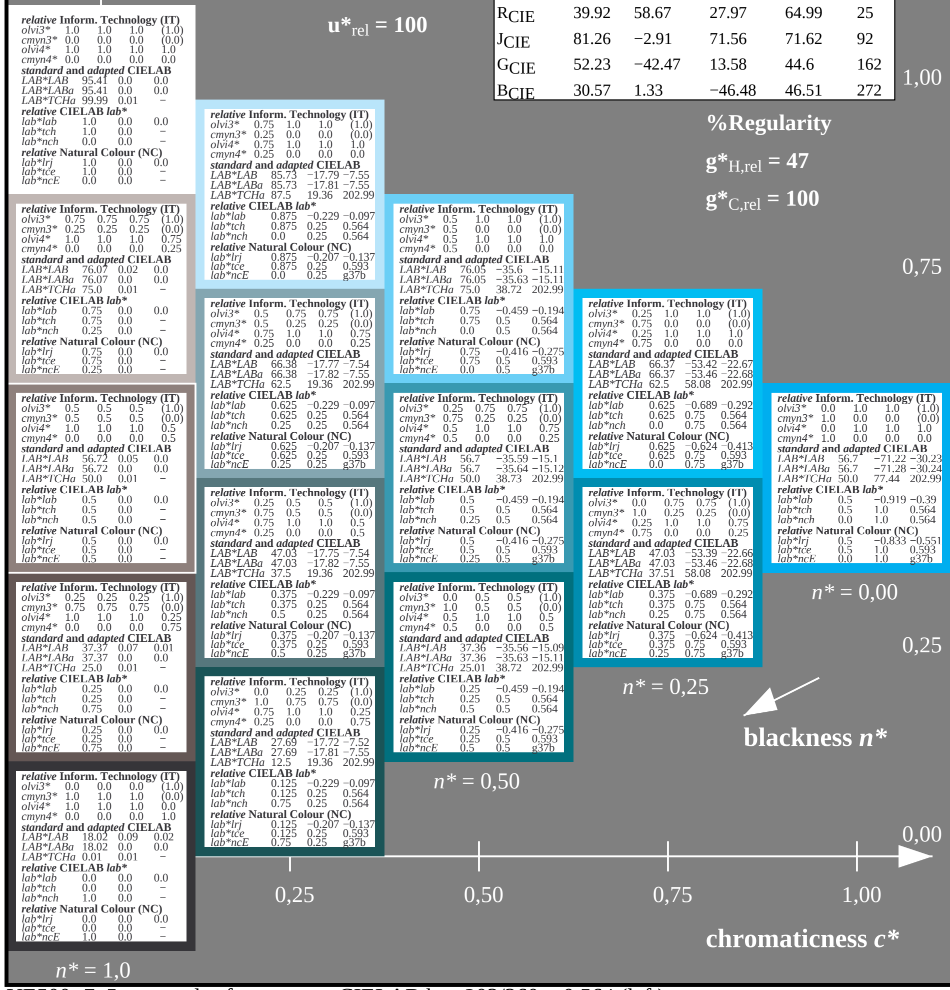
u*rel = 100

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

g*H,rel = 47

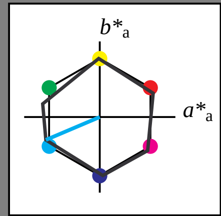
g*C,rel = 100



Output: Colorimetric Reflective System NRS18
for hue *h = *lab*h* = 203/360 = 0.564**
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 57 77 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness *t**



%Gamut

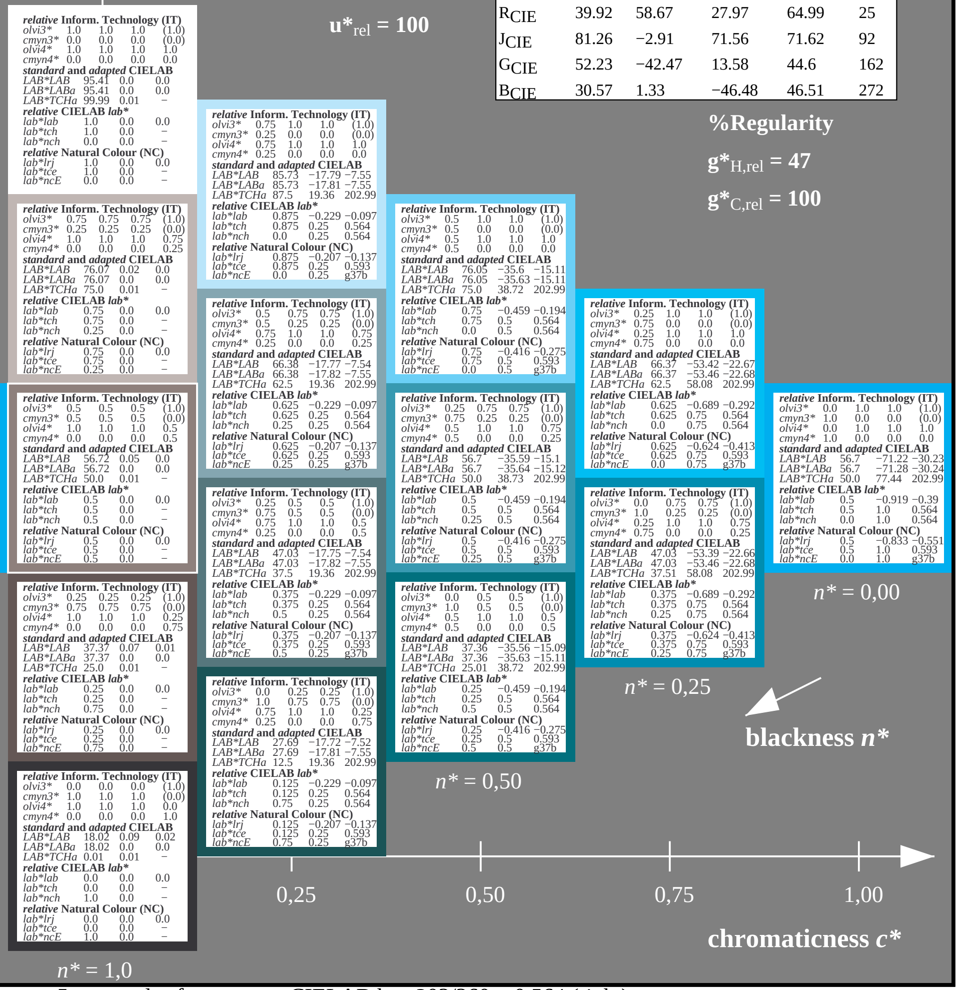
u*rel = 100

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

g*H,rel = 47

g*C,rel = 100



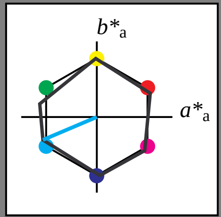
UE500−7, 5 step scales for constant CIELAB hue 203/360 = 0.564 (left)

5 step scales for constant CIELAB hue 203/360 = 0.564 (right)

Input: Colorimetric Reflective System NRS18
for hue *h = *lab*h* = 203/360 = 0.564**
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 57 77 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness *t*



%Gamut

u^*_{rel} = 100

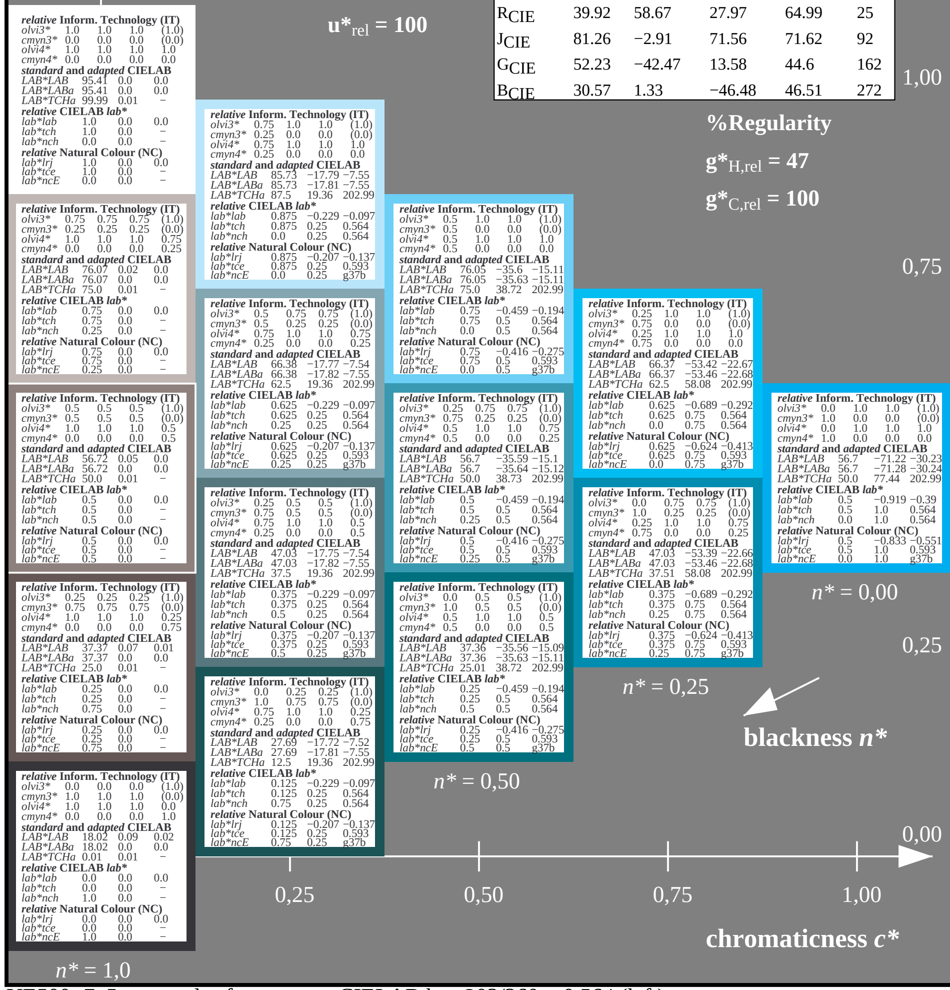
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

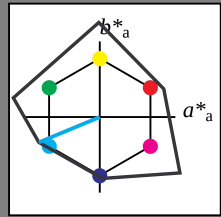
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NCS18
for hue *h = *lab*h* = 203/360 = 0.563**
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness *t*



%Gamut

u^*_{rel} = 136

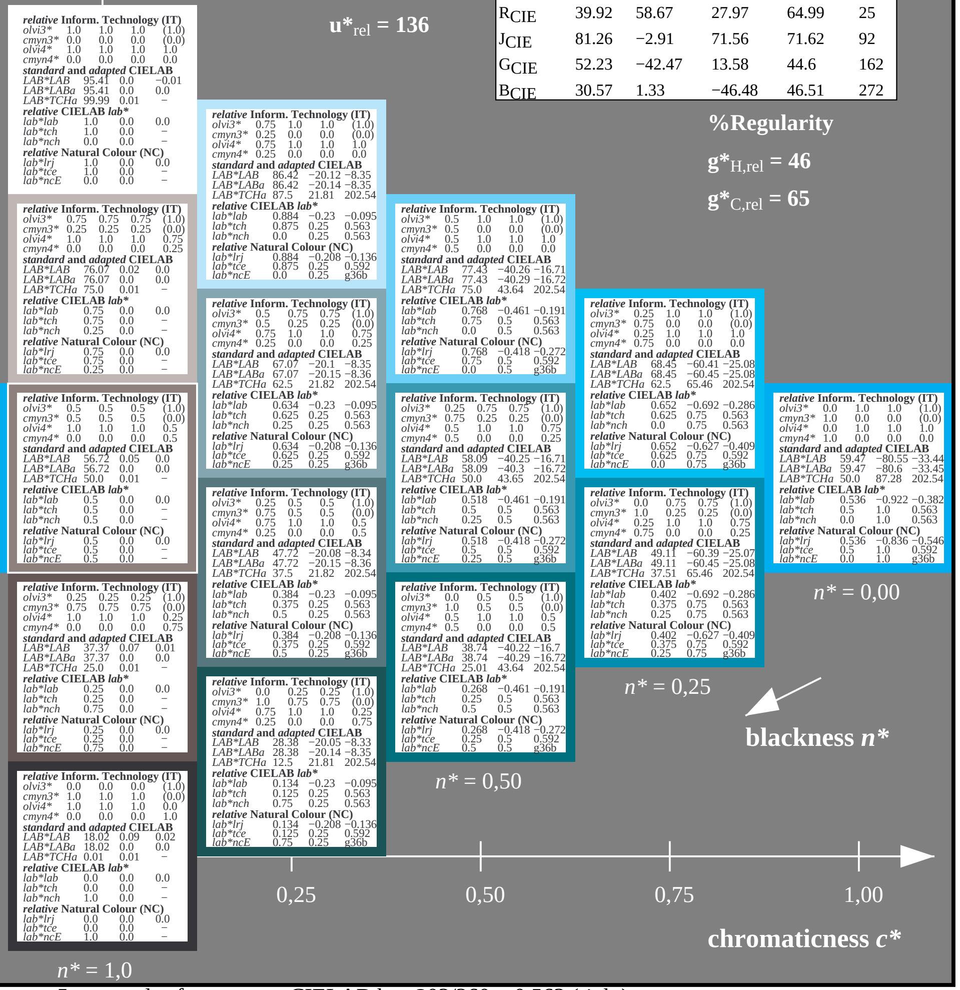
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



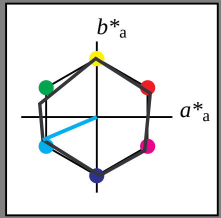
UE500−7, 5 step scales for constant CIELAB hue 203/360 = 0.564 (left)

5 step scales for constant CIELAB hue 203/360 = 0.563 (right)

Input: Colorimetric Reflective System NRS18
for hue *h = *lab*h* = 203/360 = 0.564**
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 57 77 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness *t*



%Gamut

u*rel = 100

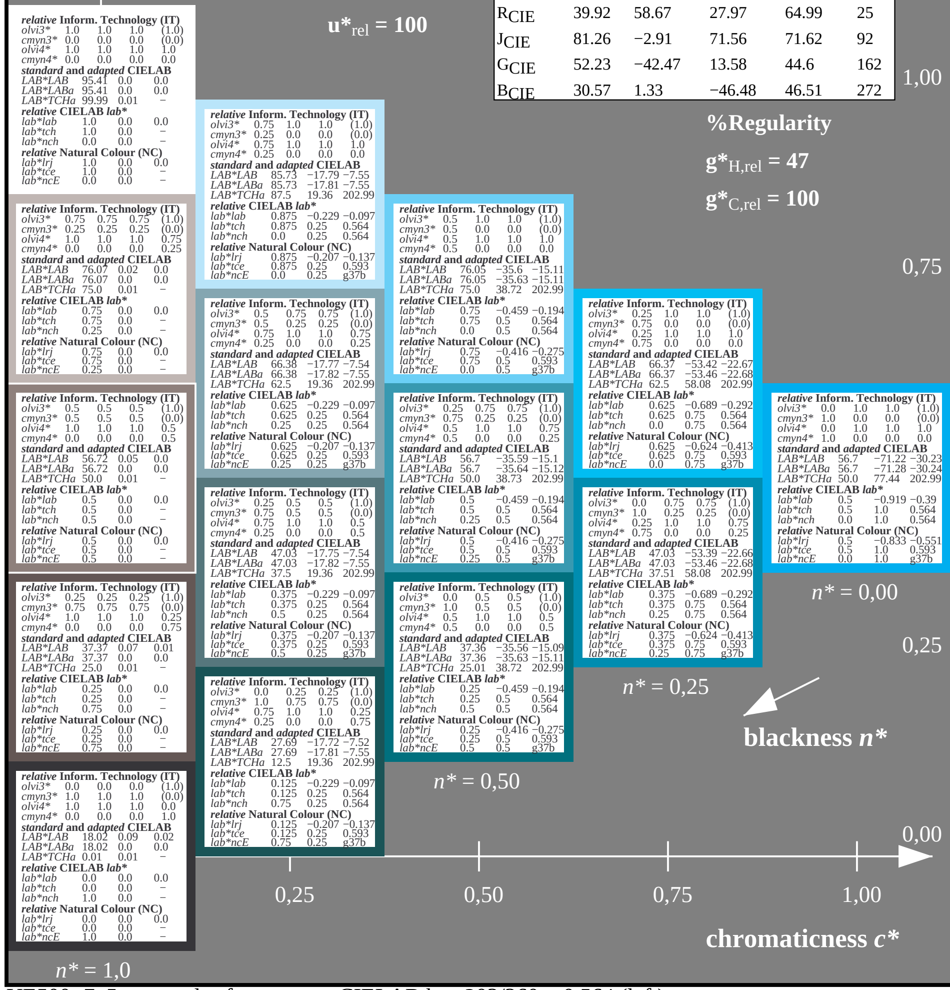
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

g*H,rel = 47

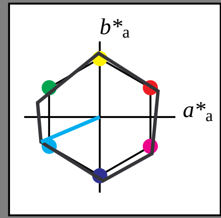
g*C,rel = 100



Output: Colorimetric Reflective System NRS11
for hue *h = *lab*h* = 203/360 = 0.564**
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 53 84 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness *t*



%Gamut

u*rel = 119

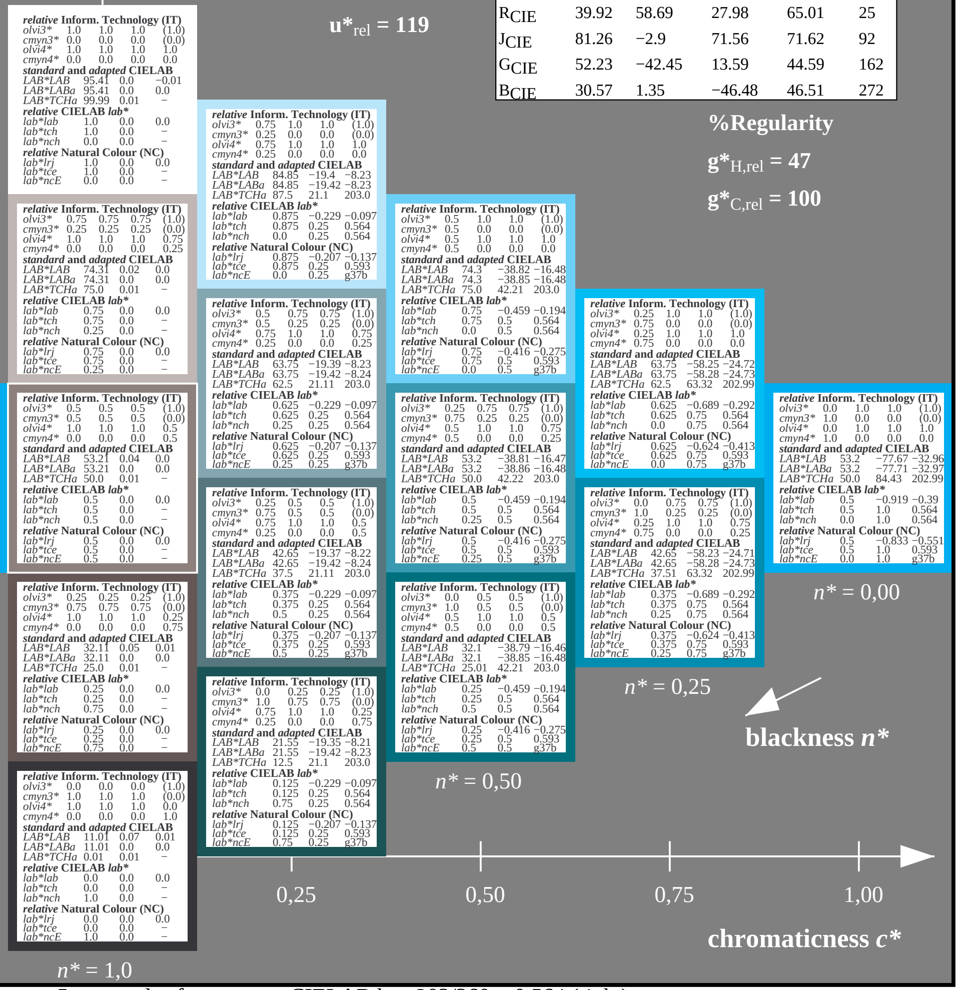
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

g*H,rel = 47

g*C,rel = 100



UE500−7, 5 step scales for constant CIELAB hue 203/360 = 0.564 (left)

5 step scales for constant CIELAB hue 203/360 = 0.564 (right)

Input: Colorimetric Reflective System NRS18

for hue $h^* = lab^*h = 203/360 = 0.564$

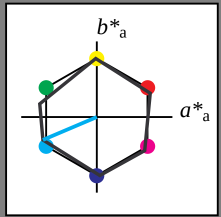
*lab*tch and lab*nch*

D65: hue G50B

LCH*Ma: 57 77 203

rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 100$

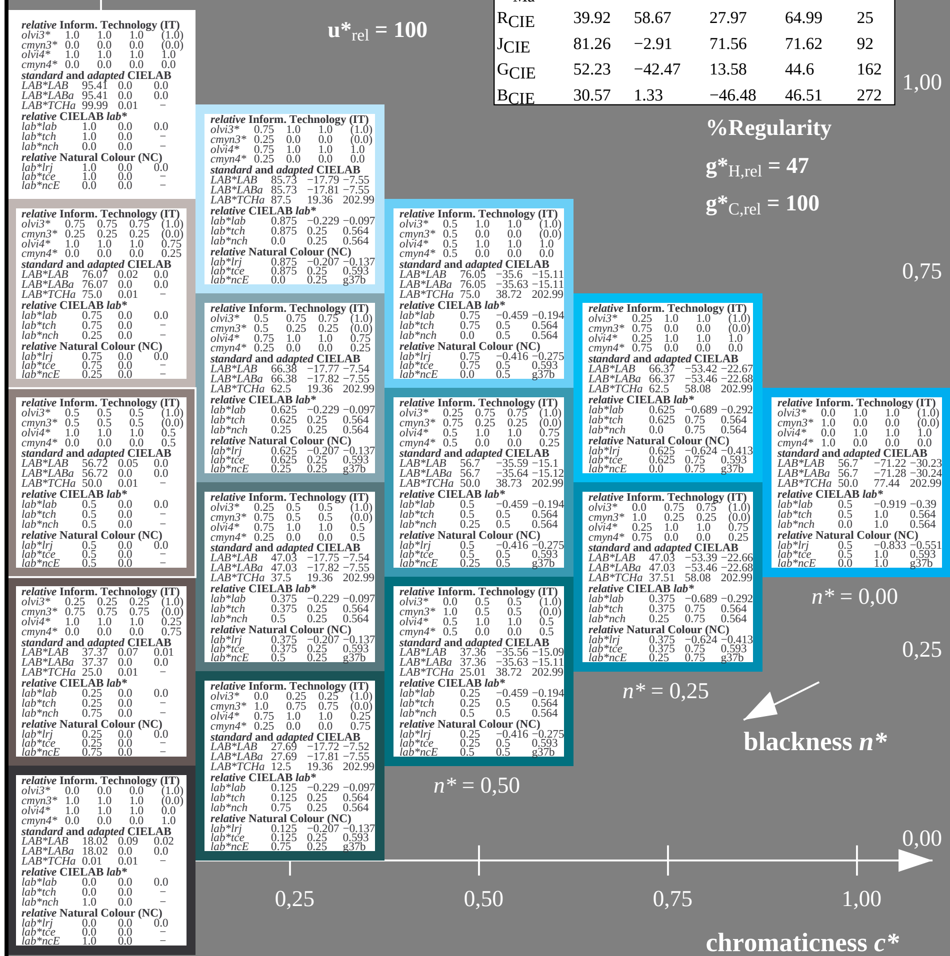
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 203/360 = 0.563$

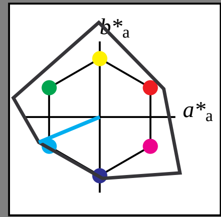
*lab*tch and lab*nch*

D65: hue G50B

LCH*Ma: 59 87 203

rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 149$

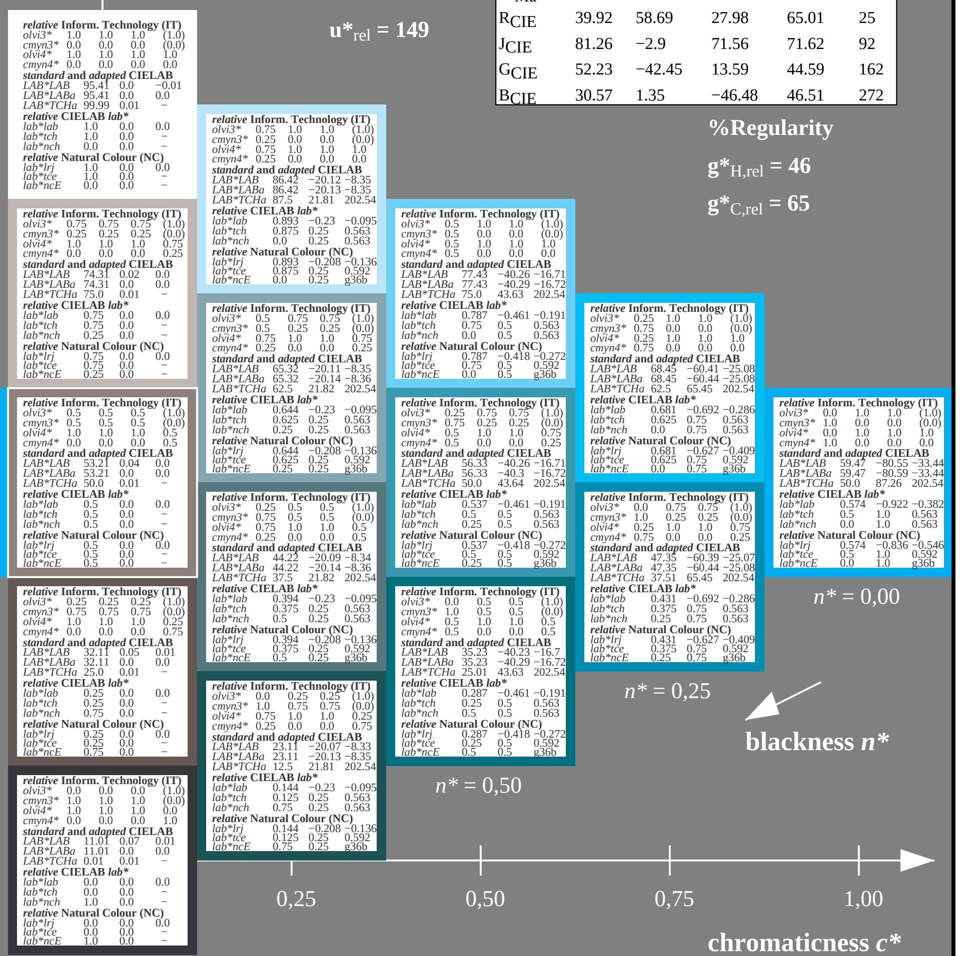
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$

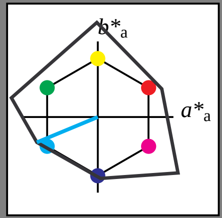


UE500−7, 5 step scales for constant CIELAB hue 203/360 = 0.564 (left)

5 step scales for constant CIELAB hue 203/360 = 0.563 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 203/360 = 0.563$
lab*tch* and *lab*nch

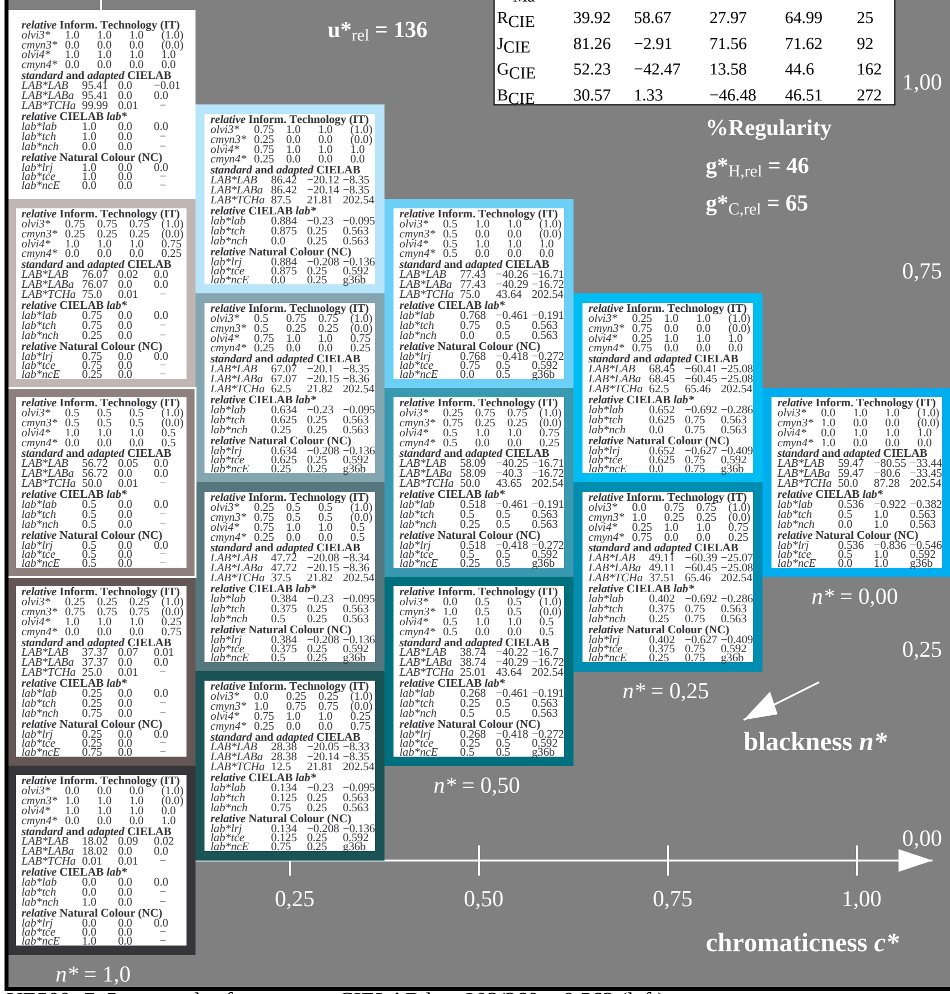
D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 136$

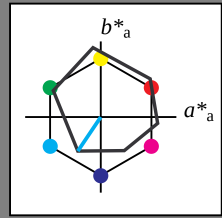
NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 236/360 = 0.656$
lab*tch* and *lab*nch

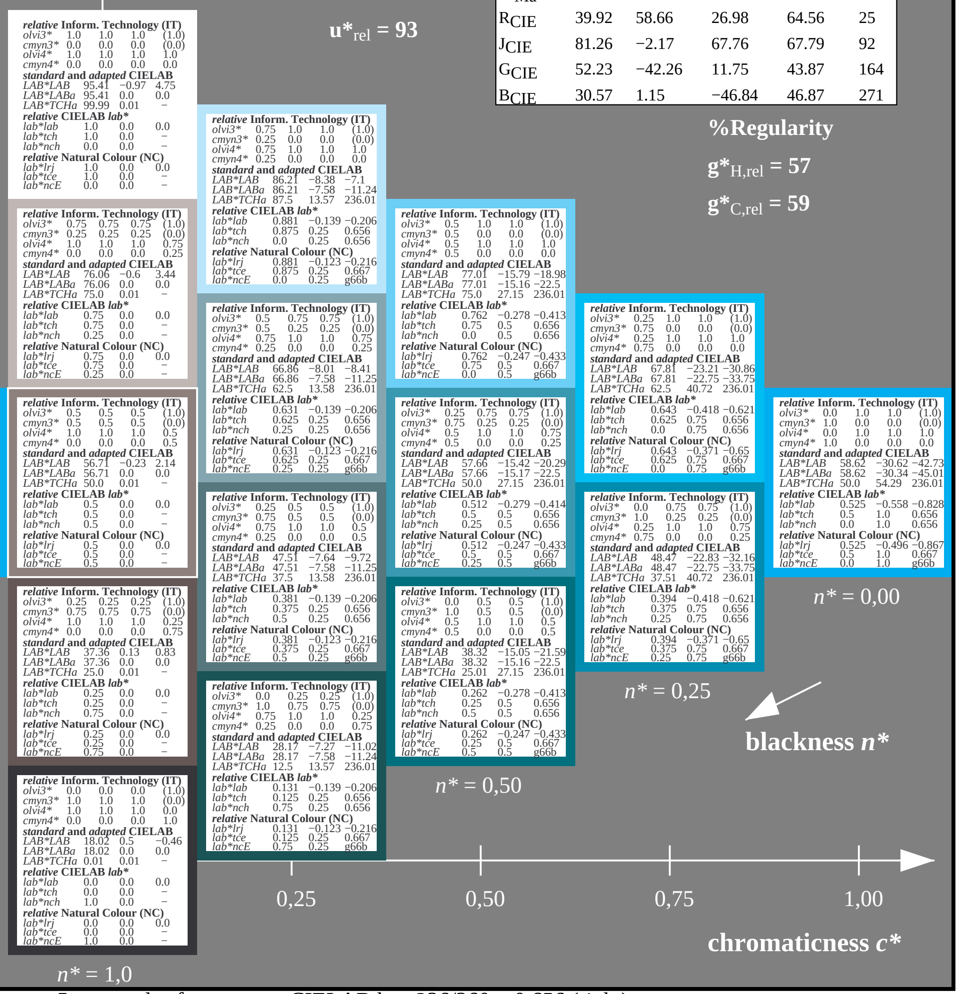
D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



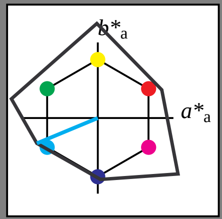
UE500−7, 5 step scales for constant CIELAB hue 203/360 = 0.563 (left)

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

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 203/360 = 0.563$
lab*tch and lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*

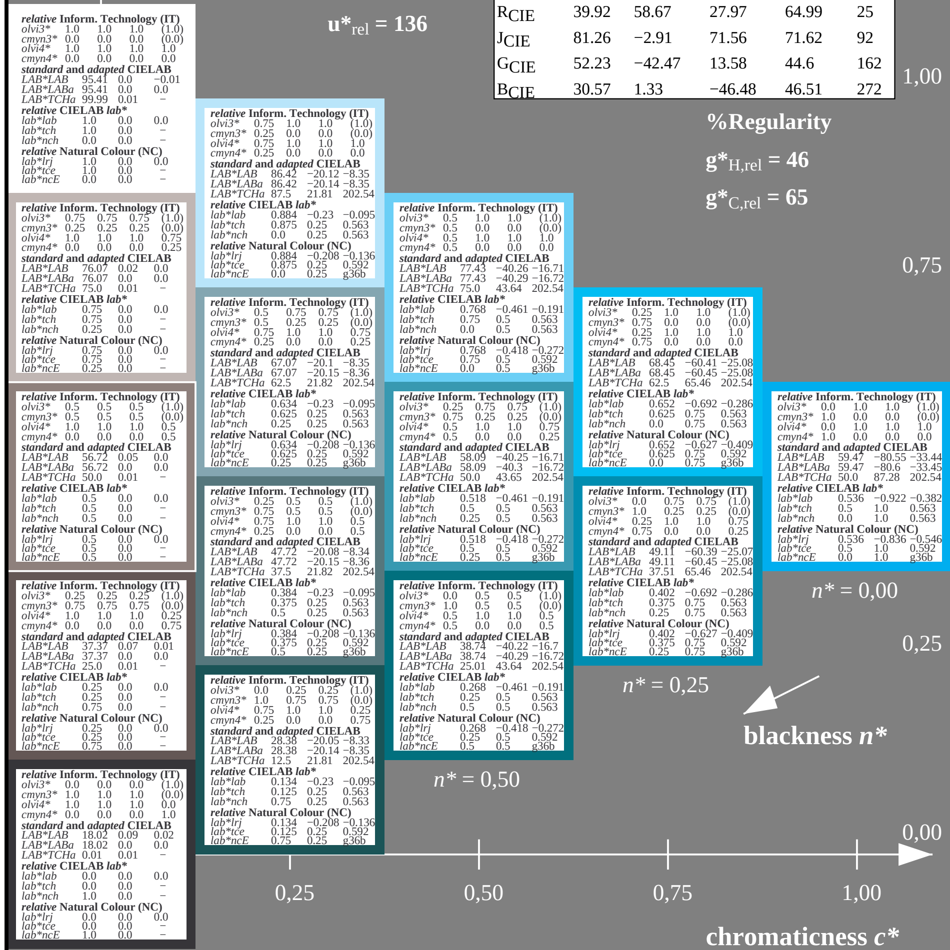


%Gamut
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

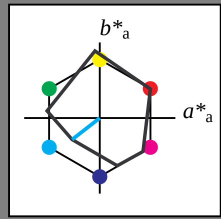
%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 218/360 = 0.605$
lab*tch and lab*nch

D65: hue G50B
LCH*Ma: 45 46 218
rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*

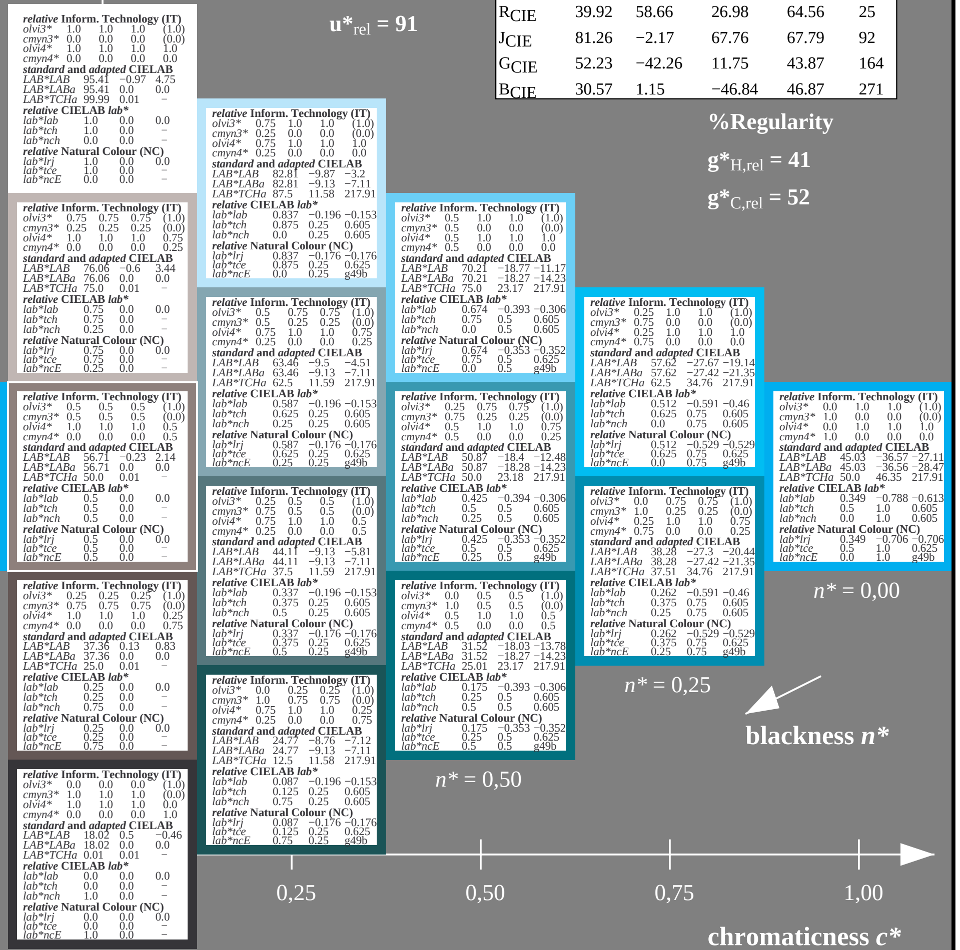


%Gamut
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel}$ = 41
$g^*_{C,rel}$ = 52



UE500−7, 5 step scales for constant CIELAB hue 203/360 = 0.563 (left)   5 step scales for constant CIELAB hue 218/360 = 0.605 (right)

Input: Colorimetric Reflective System NCS18

for hue $h^* = lab^*h = 203/360 = 0.563$

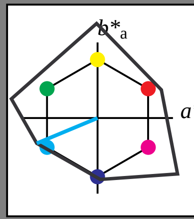
lab*tch* and *lab*nch

D65: hue G50B

LCH*Ma: 59 87 203

rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Left chart, $c^* = 0$ (lightness 1.00, 0.75, 0.50, 0.25, 0.00)

relative Inform. Technology (IT)				
olvi3*	1.0	1.0	1.0	(1.0)
cmyn3*	0.0	0.0	0.0	(0.0)
olvi4*	1.0	1.0	1.0	1.0
cmyn4*	0.0	0.0	0.0	0.0
standard and adapted CIELAB				
LAB*LAB	95.41	0.0	−0.01	
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*	0.75	0.75	0.75	(1.0)
cmyn3*	0.25	0.25	0.25	(0.0)
olvi4*	1.0	1.0	1.0	0.75
cmyn4*	0.0	0.0	0.0	0.25
standard and adapted CIELAB				
LAB*LAB	76.07	0.02	0.0	
LAB*LABa	76.07	0.0	0.0	
LAB*TCHa	75.0	0.01	–	
relative CIELAB lab*				
lab*lab	0.75	0.0	0.0	
lab*tch	0.75	0.0	–	
lab*nch	0.25	0.0	–	
relative Natural Colour (NC)				
lab*lrj	0.75	0.0	0.0	
lab*tce	0.75	0.0	–	
lab*ncE	0.25	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	56.72	0.05	0.0	
LAB*LABa	56.72	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*	0.25	0.25	0.25	(1.0)
cmyn3*	0.75	0.75	0.75	(0.0)
olvi4*	1.0	1.0	1.0	0.25
cmyn4*	0.0	0.0	0.0	0.75
standard and adapted CIELAB				
LAB*LAB	37.37	0.07	0.01	
LAB*LABa	37.37	0.0	0.0	
LAB*TCHa	25.0	0.01	–	
relative CIELAB lab*				
lab*lab	0.25	0.0	0.0	
lab*tch	0.25	0.0	–	
lab*nch	0.75	0.0	–	
relative Natural Colour (NC)				
lab*lrj	0.25	0.0	0.0	
lab*tce	0.25	0.0	–	
lab*ncE	0.75	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	0.09	0.02	
LAB*LABa	18.02	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	–	

Left chart, $c^* = 0.25$

relative Inform. Technology (IT)				
olvi3*	0.75	1.0	1.0	(1.0)
cmyn3*	0.25	0.0	0.0	(0.0)
olvi4*	0.75	1.0	1.0	1.0
cmyn4*	0.25	0.0	0.0	0.0
standard and adapted CIELAB				
LAB*LAB	86.42	−20.12	−8.35	
LAB*LABa	86.42	−20.14	−8.35	
LAB*TCHa	87.5	21.82	202.54	
relative CIELAB lab*				
lab*lab	0.884	−0.23	−0.095	
lab*tch	0.875	0.25	0.563	
lab*nch	0.0	0.25	0.563	
relative Natural Colour (NC)				
lab*lrj	0.884	−0.208	−0.136	
lab*tce	0.875	0.25	0.592	
lab*ncE	0.0	0.25	g36b	

relative Inform. Technology (IT)				
olvi3*	0.5	0.75	0.75	(1.0)
cmyn3*	0.5	0.25	0.25	(0.0)
olvi4*	0.75	1.0	1.0	0.75
cmyn4*	0.25	0.0	0.0	0.25
standard and adapted CIELAB				
LAB*LAB	67.07	−20.1	−8.35	
LAB*LABa	67.07	−20.15	−8.36	
LAB*TCHa	62.5	21.82	202.54	
relative CIELAB lab*				
lab*lab	0.634	−0.23	−0.095	
lab*tch	0.625	0.25	0.563	
lab*nch	0.25	0.25	0.563	
relative Natural Colour (NC)				
lab*lrj	0.634	−0.208	−0.136	
lab*tce	0.625	0.25	0.592	
lab*ncE	0.25	0.25	g36b	

relative Inform. Technology (IT)				
olvi3*	0.25	0.5	0.5	(1.0)
cmyn3*	0.75	0.5	0.5	(0.0)
olvi4*	0.75	1.0	1.0	0.5
cmyn4*	0.25	0.0	0.0	0.5
standard and adapted CIELAB				
LAB*LAB	47.72	−20.08	−8.34	
LAB*LABa	47.72	−20.15	−8.36	
LAB*TCHa	37.5	21.82	202.54	
relative CIELAB lab*				
lab*lab	0.384	−0.23	−0.095	
lab*tch	0.375	0.25	0.563	
lab*nch	0.5	0.25	0.563	
relative Natural Colour (NC)				
lab*lrj	0.384	−0.208	−0.136	
lab*tce	0.375	0.25	0.592	
lab*ncE	0.5	0.25	g36b	

relative Inform. Technology (IT)				
olvi3*	0.0	0.25	0.25	(1.0)
cmyn3*	1.0	0.75	0.75	(0.0)
olvi4*	0.75	1.0	1.0	0.25
cmyn4*	0.25	0.0	0.0	0.75
standard and adapted CIELAB				
LAB*LAB	28.38	−20.05	−8.33	
LAB*LABa	28.38	−20.14	−8.35	
LAB*TCHa	12.5	21.81	202.54	
relative CIELAB lab*				
lab*lab	0.134	−0.23	−0.095	
lab*tch	0.125	0.25	0.563	
lab*nch	0.75	0.25	0.563	
relative Natural Colour (NC)				
lab*lrj	0.134	−0.208	−0.136	
lab*tce	0.125	0.25	0.592	
lab*ncE	0.75	0.25	g36b	

Left chart, $c^* = 0.50$

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	77.43	−40.26	−16.71	
LAB*LABa	77.43	−40.29	−16.72	
LAB*TCHa	75.0	43.64	202.54	
relative CIELAB lab*				
lab*lab	0.768	−0.461	−0.191	
lab*tch	0.75	0.5	0.563	
lab*nch	0.0	0.5	0.563	
relative Natural Colour (NC)				
lab*lrj	0.768	−0.418	−0.272	
lab*tce	0.75	0.5	0.592	
lab*ncE	0.0	0.5	g36b	

relative Inform. Technology (IT)				
olvi3*	0.25	0.75	0.75	(1.0)
cmyn3*	0.75	0.25	0.25	(0.0)
olvi4*	0.5	1.0	1.0	0.75
cmyn4*	0.5	0.0	0.0	0.25
standard and adapted CIELAB				
LAB*LAB	58.09	−40.25	−16.71	
LAB*LABa	58.09	−40.3	−16.72	
LAB*TCHa	50.0	43.65	202.54	
relative CIELAB lab*				
lab*lab	0.518	−0.461	−0.191	
lab*tch	0.5	0.5	0.563	
lab*nch	0.25	0.5	0.563	
relative Natural Colour (NC)				
lab*lrj	0.518	−0.418	−0.272	
lab*tce	0.5	0.5	0.592	
lab*ncE	0.25	0.5	g36b	

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	38.74	−40.22	−16.7	
LAB*LABa	38.74	−40.29	−16.72	
LAB*TCHa	25.01	43.64	202.54	
relative CIELAB lab*				
lab*lab	0.268	−0.461	−0.191	
lab*tch	0.25	0.5	0.563	
lab*nch	0.5	0.5	0.563	
relative Natural Colour (NC)				
lab*lrj	0.268	−0.418	−0.272	
lab*tce	0.25	0.5	0.592	
lab*ncE	0.5	0.5	g36b	

Left chart, $c^* = 0.75$

relative Inform. Technology (IT)				
olvi3*	0.25	1.0	1.0	(1.0)
cmyn3*	0.75	0.0	0.0	(0.0)
olvi4*	0.25	1.0	1.0	1.0
cmyn4*	0.75	0.0	0.0	0.0
standard and adapted CIELAB				
LAB*LAB	68.45	−60.41	−25.08	
LAB*LABa	68.45	−60.45	−25.08	
LAB*TCHa	62.5	65.46	202.54	
relative CIELAB lab*				
lab*lab	0.652	−0.692	−0.286	
lab*tch	0.625	0.75	0.563	
lab*nch	0.0	0.75	0.563	
relative Natural Colour (NC)				
lab*lrj	0.652	−0.627	−0.409	
lab*tce	0.625	0.75	0.592	
lab*ncE	0.0	0.75	g36b	

relative Inform. Technology (IT)				
olvi3*	0.0	0.75	0.75	(1.0)
cmyn3*	1.0	0.25	0.25	(0.0)
olvi4*	0.25	1.0	1.0	0.75
cmyn4*	0.75	0.0	0.0	0.25
standard and adapted CIELAB				
LAB*LAB	49.11	−60.39	−25.07	
LAB*LABa	49.11	−60.45	−25.08	
LAB*TCHa	37.51	65.46	202.54	
relative CIELAB lab*				
lab*lab	0.402	−0.692	−0.286	
lab*tch	0.375	0.75	0.563	
lab*nch	0.25	0.75	0.563	
relative Natural Colour (NC)				
lab*lrj	0.402	−0.627	−0.409	
lab*tce	0.375	0.75	0.592	
lab*ncE	0.25	0.75	g36b	

Left chart, $c^* = 1.00$

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	59.47	−80.55	−33.44	
LAB*LABa	59.47	−80.6	−33.45	
LAB*TCHa	50.0	87.28	202.54	
relative CIELAB lab*				
lab*lab	0.536	−0.922	−0.382	
lab*tch	0.5	1.0	0.563	
lab*nch	0.0	1.0	0.563	
relative Natural Colour (NC)				
lab*lrj	0.536	−0.833	−0.546	
lab*tce	0.5	1.0	0.592	
lab*ncE	0.0	1.0	g36b	

1,00 0,75 0,25 0,00

n^* = 0,00 n^* = 0,25 n^* = 0,50 n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System TRS18

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

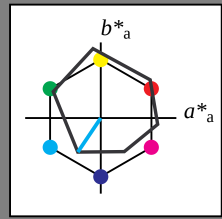
lab*tch* and *lab*nch

D65: hue C

LCH*Ma: 59 54 236

rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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

Right chart, $c^* = 0$ (lightness 1.00, 0.75, 0.50, 0.25, 0.00)

relative Inform. Technology (IT)				
olvi3*	1.0	1.0	1.0	(1.0)
cmyn3*	0.0	0.0	0.0	(0.0)
olvi4*	1.0	1.0	1.0	1.0
cmyn4*	0.0	0.0	0.0	0.0
standard and adapted CIELAB				
LAB*LAB	95.41	−0.97	4.75	
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*	0.75	0.75	0.75	(1.0)
cmyn3*	0.25	0.25	0.25	(0.0)
olvi4*	1.0	1.0	1.0	0.75
cmyn4*	0.0	0.0	0.0	0.25
standard and adapted CIELAB				
LAB*LAB	76.06	−0.6	3.44	
LAB*LABa	76.06	0.0	0.0	
LAB*TCHa	75.0	0.01	–	
relative CIELAB lab*				
lab*lab	0.75	0.0	0.0	
lab*tch	0.75	0.0	–	
lab*nch	0.25	0.0	–	
relative Natural Colour (NC)				
lab*lrj	0.75	0.0	0.0	
lab*tce	0.75	0.0	–	
lab*ncE	0.25	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*LABa	56.71	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*	0.25	0.25	0.25	(1.0)
cmyn3*	0.75	0.75	0.75	(0.0)
olvi4*	1.0	1.0	1.0	0.25
cmyn4*	0.0	0.0	0.0	0.75
standard and adapted CIELAB				
LAB*LAB	37.36	0.13	0.83	
LAB*LABa	37.36	0.0	0.0	
LAB*TCHa	25.0	0.01	–	
relative CIELAB lab*				
lab*lab	0.25	0.0	0.0	
lab*tch	0.25	0.0	–	
lab*nch	0.75	0.0	–	
relative Natural Colour (NC)				
lab*lrj	0.25	0.0	0.0	
lab*tce	0.25	0.0	–	
lab*ncE	0.75	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*LABa	18.02	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	–	

Right chart, $c^* = 0.25$

relative Inform. Technology (IT)				
olvi3*	0.75	1.0	1.0	(1.0)
cmyn3*	0.25	0.0	0.0	(0.0)
olvi4*	0.75	1.0	1.0	1.0
cmyn4*	0.25	0.0	0.0	0.0
standard and adapted CIELAB				
LAB*LAB	86.21	−8.38	−7.1	
LAB*LABa	86.21	−7.58	−11.24	
LAB*TCHa	87.5	13.57	236.01	
relative CIELAB lab*				
lab*lab	0.881	−0.139	−0.206	
lab*tch	0.875	0.25	0.656	
lab*nch	0.0	0.25	0.656	
relative Natural Colour (NC)				
lab*lrj	0.881	−0.123	−0.216	
lab*tce	0.875	0.25	0.667	
lab*ncE	0.0	0.25	g66b	

relative Inform. Technology (IT)				
olvi3*	0.5	0.75	0.75	(1.0)
cmyn3*	0.5	0.25	0.25	(0.0)
olvi4*	0.75	1.0	1.0	0.75
cmyn4*	0.25	0.0	0.0	0.25
standard and adapted CIELAB				
LAB*LAB	66.86	−8.01	−8.41	
LAB*LABa	66.86	−7.58	−11.25	
LAB*TCHa	62.5	13.58	236.01	
relative CIELAB lab*				
lab*lab	0.631	−0.139	−0.206	
lab*tch	0.625	0.25	0.656	
lab*nch	0.25	0.25	0.656	
relative Natural Colour (NC)				
lab*lrj	0.631	−0.123	−0.216	
lab*tce	0.625	0.25	0.667	
lab*ncE	0.25	0.25	g66b	

relative Inform. Technology (IT)				
olvi3*	0.25	0.5	0.5	(1.0)
cmyn3*	0.75	0.5	0.5	(0.0)
olvi4*	0.75	1.0	1.0	0.5
cmyn4*	0.25	0.0	0.0	0.5
standard and adapted CIELAB				
LAB*LAB	47.51	−7.64	−9.72	
LAB*LABa	47.51	−7.58	−11.25	
LAB*TCHa	37.5	13.58	236.01	
relative CIELAB lab*				
lab*lab	0.381	−0.139	−0.206	
lab*tch	0.375	0.25	0.656	
lab*nch	0.5	0.25	0.656	
relative Natural Colour (NC)				
lab*lrj	0.381	−0.123	−0.216	
lab*tce	0.375	0.25	0.667	
lab*ncE	0.5	0.25	g66b	

relative Inform. Technology (IT)				
olvi3*	0.0	0.25	0.25	(1.0)
cmyn3*	1.0	0.75	0.75	(0.0)
olvi4*	0.75	1.0	1.0	0.25
cmyn4*	0.25	0.0	0.0	0.75
standard and adapted CIELAB				
LAB*LAB	28.17	−7.27	−11.02	
LAB*LABa	28.17	−7.58	−11.24	
LAB*TCHa	12.5	13.57	236.01	
relative CIELAB lab*				
lab*lab	0.131	−0.139	−0.206	
lab*tch	0.125	0.25	0.656	
lab*nch	0.75	0.25	0.656	
relative Natural Colour (NC)				
lab*lrj	0.131	−0.123	−0.216	
lab*tce	0.125	0.25	0.667	
lab*ncE	0.75	0.25	g66b	

Right chart, $c^* = 0.50$

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	77.01	−15.79	−18.98	
LAB*LABa	77.01	−15.16	−22.5	
LAB*TCHa	75.0	27.15	236.01	
relative CIELAB lab*				
lab*lab	0.762	−0.278	−0.413	
lab*tch	0.75	0.5	0.656	
lab*nch	0.0	0.5	0.656	
relative Natural Colour (NC)				
lab*lrj	0.762	−0.247	−0.433	
lab*tce	0.75	0.5	0.667	
lab*ncE	0.0	0.5	g66b	

relative Inform. Technology (IT)				
olvi3*	0.25	0.75	0.75	(1.0)
cmyn3*	0.75	0.25	0.25	(0.0)
olvi4*	0.5	1.0	1.0	0.75
cmyn4*	0.5	0.0	0.0	0.25
standard and adapted CIELAB				
LAB*LAB	57.66	−15.42	−20.29	
LAB*LABa	57.66	−15.17	−22.5	
LAB*TCHa	50.0	27.15	236.01	
relative CIELAB lab*				
lab*lab	0.512	−0.279	−0.414	
lab*tch	0.5	0.5	0.656	
lab*nch	0.25	0.5	0.656	
relative Natural Colour (NC)				
lab*lrj	0.512	−0.247	−0.433	
lab*tce	0.5	0.5	0.667	
lab*ncE	0.25	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	38.32	−15.05	−21.59	
LAB*LABa	38.32	−15.16	−22.5	
LAB*TCHa	25.01	27.15	236.01	
relative CIELAB lab*				
lab*lab	0.262	−0.278	−0.413	
lab*tch	0.25	0.5	0.656	
lab*nch	0.5	0.5	0.656	
relative Natural Colour (NC)				
lab*lrj	0.262	−0.247	−0.433	
lab*tce	0.25	0.5	0.667	
lab*ncE	0.5	0.5	g66b	

Right chart, $c^* = 0.75$

relative Inform. Technology (IT)				
olvi3*	0.25	1.0	1.0	(1.0)
cmyn3*	0.75	0.0	0.0	(0.0)
olvi4*	0.25	1.0	1.0	1.0
cmyn4*	0.75	0.0	0.0	0.0
standard and adapted CIELAB				
LAB*LAB	67.81	−23.21	−30.86	
LAB*LABa	67.81	−22.75	−33.75	
LAB*TCHa	62.5	40.72	236.01	
relative CIELAB lab*				
lab*lab	0.643	−0.418	−0.621	
lab*tch	0.625	0.75	0.656	
lab*nch	0.0	0.75	0.656	
relative Natural Colour (NC)				
lab*lrj	0.643	−0.371	−0.65	
lab*tce	0.625	0.75	0.667	
lab*ncE	0.0	0.75	g66b	

relative Inform. Technology (IT)				
olvi3*	0.0	0.75	0.75	(1.0)
cmyn3*	1.0	0.25	0.25	(0.0)
olvi4*	0.25	1.0	1.0	0.75
cmyn4*	0.75	0.0	0.0	0.25
standard and adapted CIELAB				
LAB*LAB	48.47	−22.83	−32.16	
LAB*LABa	48.47	−22.75	−33.75	
LAB*TCHa	37.51	40.72	236.01	
relative CIELAB lab*				
lab*lab	0.394	−0.418	−0.621	
lab*tch	0.375	0.75	0.656	
lab*nch	0.25	0.75	0.656	
relative Natural Colour (NC)				
lab*lrj	0.394	−0.371	−0.65	
lab*tce	0.375	0.75	0.667	
lab*ncE	0.25	0.75	g66b	

Right chart, $c^* = 1.00$

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	58.62	−30.62	−42.73	
LAB*LABa	58.62	−30.34	−45.01	
LAB*TCHa	50.0	54.29	236.01	
relative CIELAB lab*				
lab*lab	0.525	−0.558	−0.828	
lab*tch	0.5	1.0	0.656	
lab*nch	0.0	1.0	0.656	
relative Natural Colour (NC)				
lab*lrj	0.525	−0.496	−0.867	
lab*tce	0.5	1.0	0.667	
lab*ncE	0.0	1.0	g66b	

n^* = 0,00 n^* = 0,25 n^* = 0,50 n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

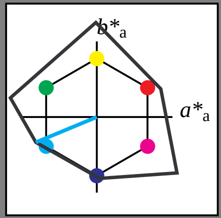
chromaticness c^*

UE500−7, 5 step scales for constant CIELAB hue 203/360 = 0.563 (left)

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

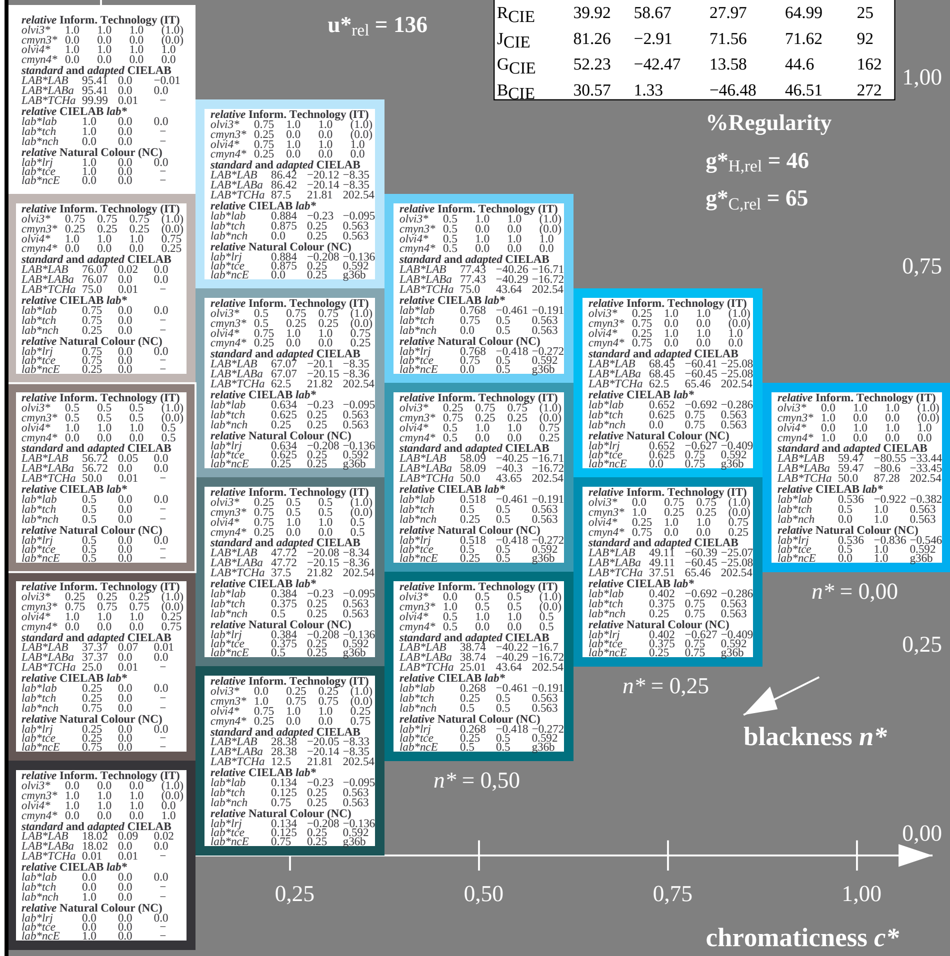
Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 203/360 = 0.563$
lab*tch and lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0
triangle lightness t^*



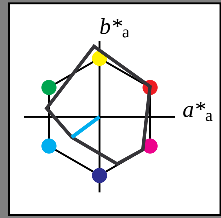
%Gamut
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272



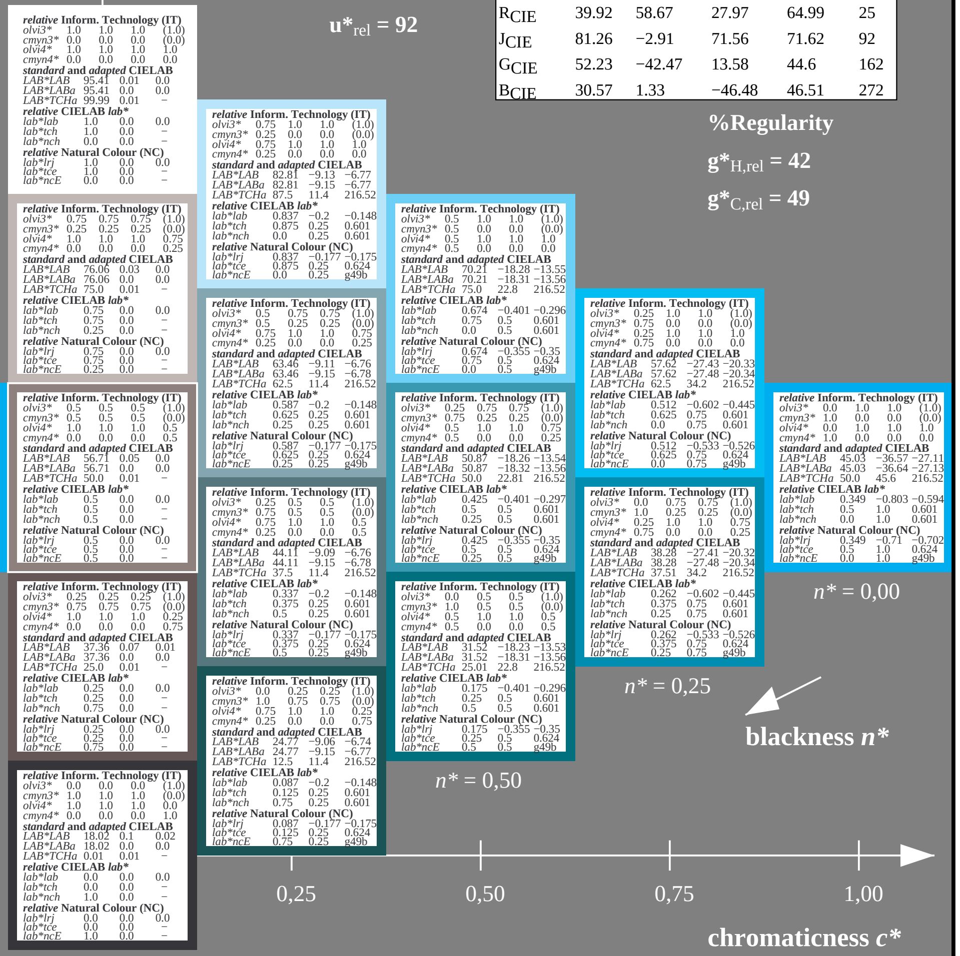
Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 217/360 = 0.601$
lab*tch and lab*nch

D65: hue G50B
LCH*Ma: 45 46 217
rgb*Ma: 0.0 1.0 1.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272



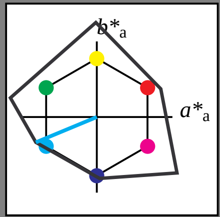
UE500−7, 5 step scales for constant CIELAB hue 203/360 = 0.563 (left)

5 step scales for constant CIELAB hue 217/360 = 0.601 (right)

Input: Colorimetric Reflective System NCS18
for hue *h** = *lab*h* = 203/360 = 0.563
*lab*tch* and *lab*nch*

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness *t*



%Gamut

$u^*_{rel} = 136$

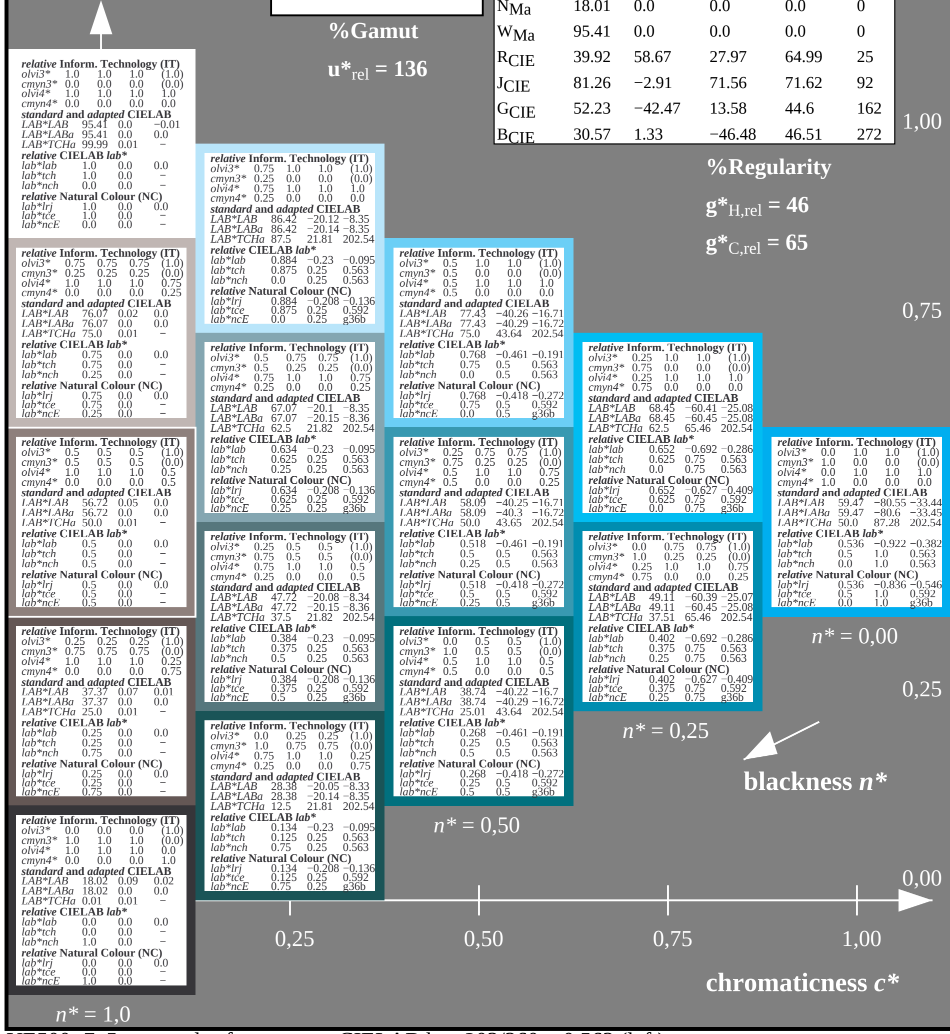
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

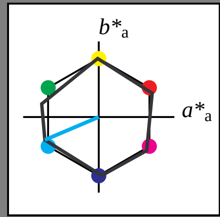
$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System NRS18
for hue *h** = *lab*h* = 203/360 = 0.564
*lab*tch* and *lab*nch*

D65: hue G50B
LCH*Ma: 57 77 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness *t*



%Gamut

$u^*_{rel} = 100$

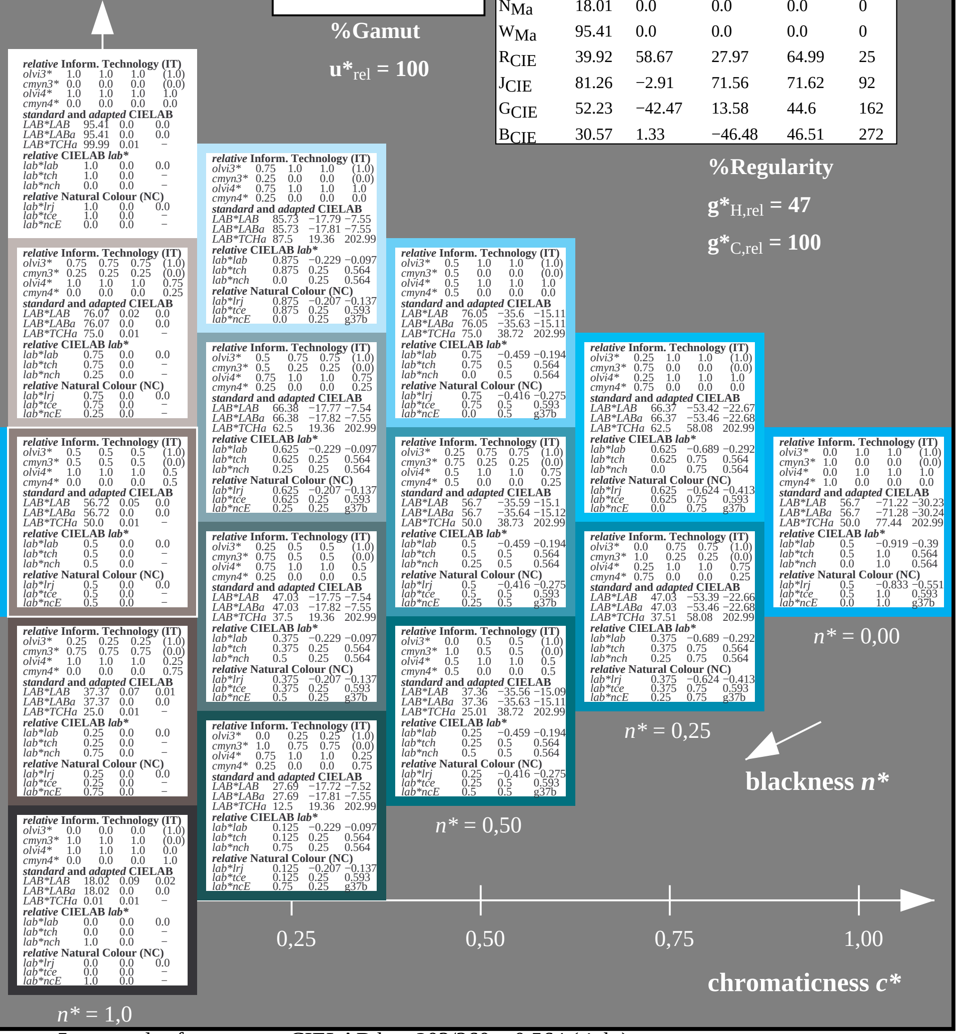
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



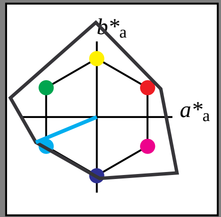
UE500−7, 5 step scales for constant CIELAB hue 203/360 = 0.563 (left)

5 step scales for constant CIELAB hue 203/360 = 0.564 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 203/360 = 0.563$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*

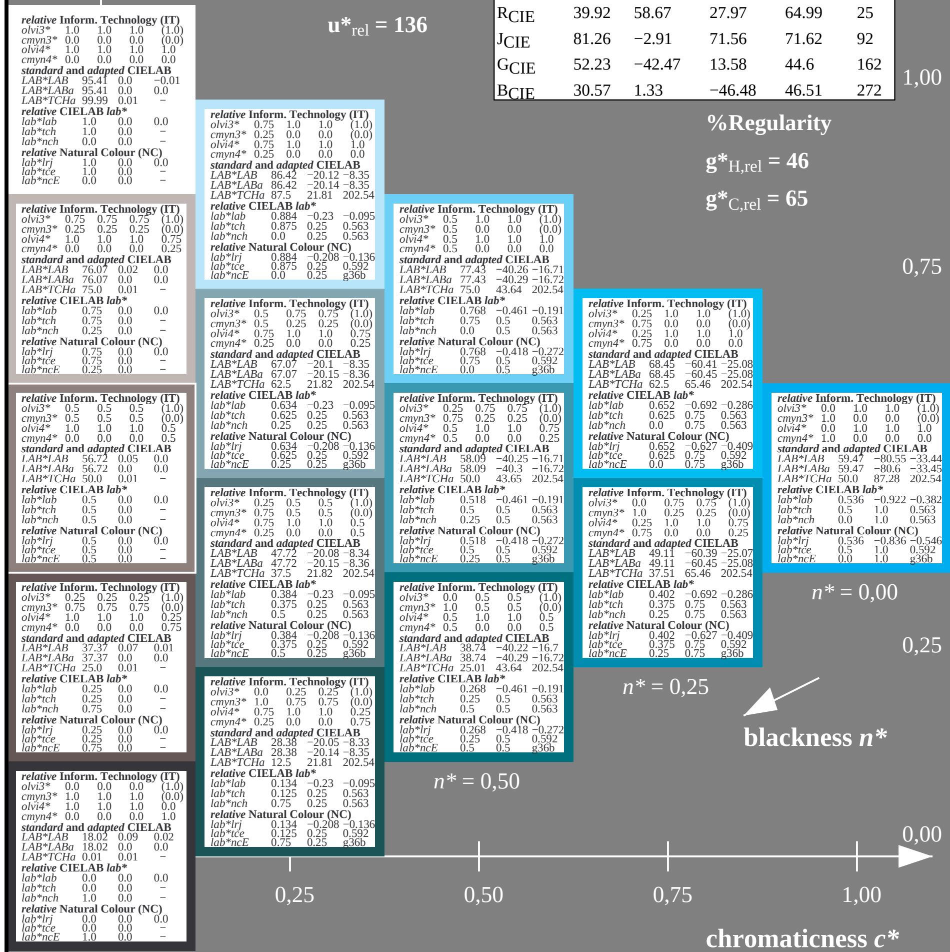


%Gamut
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

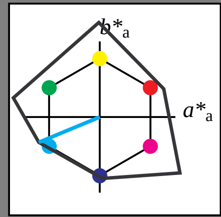
%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 203/360 = 0.563$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*

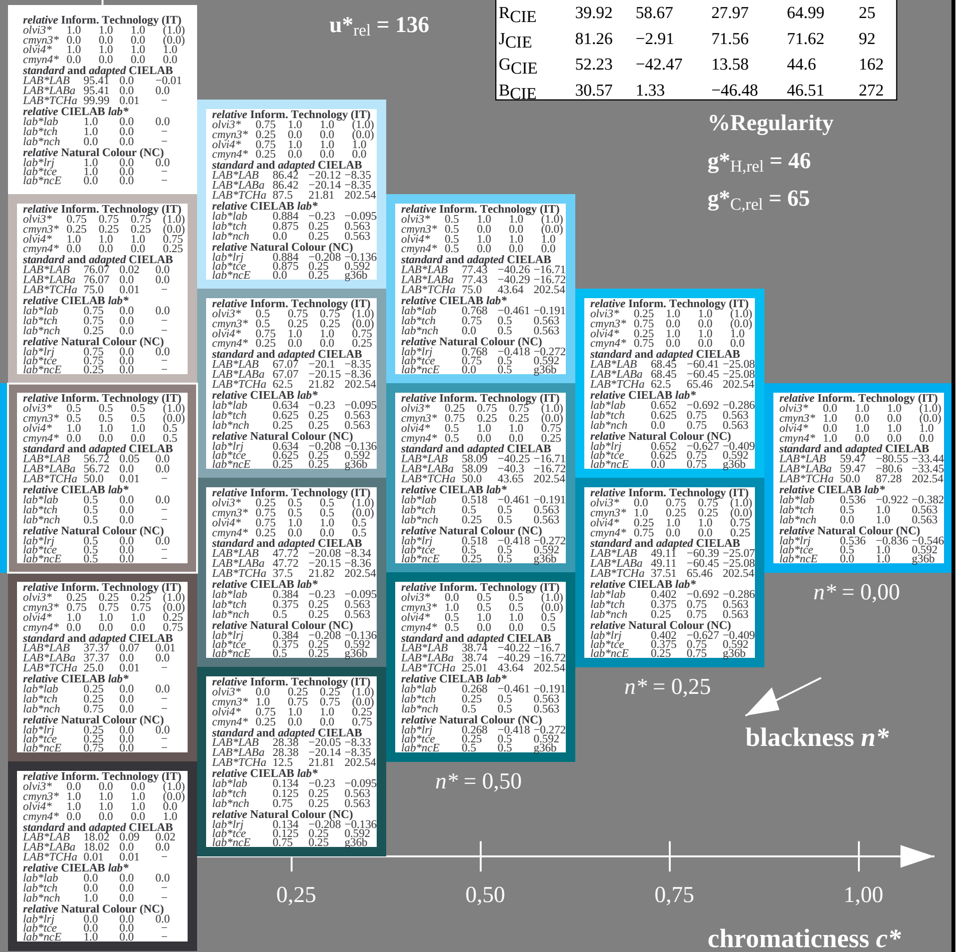


%Gamut
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



UE500−7, 5 step scales for constant CIELAB hue 203/360 = 0.563 (left)

5 step scales for constant CIELAB hue 203/360 = 0.563 (right)

Input: Colorimetric Reflective System NCS18
for hue $h* = lab*h = 203/360 = 0.563$

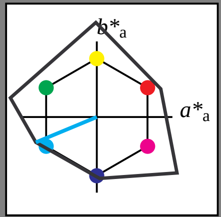
*lab*tch and lab*nch*

D65: hue G50B

LCH*Ma: 59 87 203

rgb*Ma: 0.0 1.0 1.0

triangle lightness $t*$



%Gamut

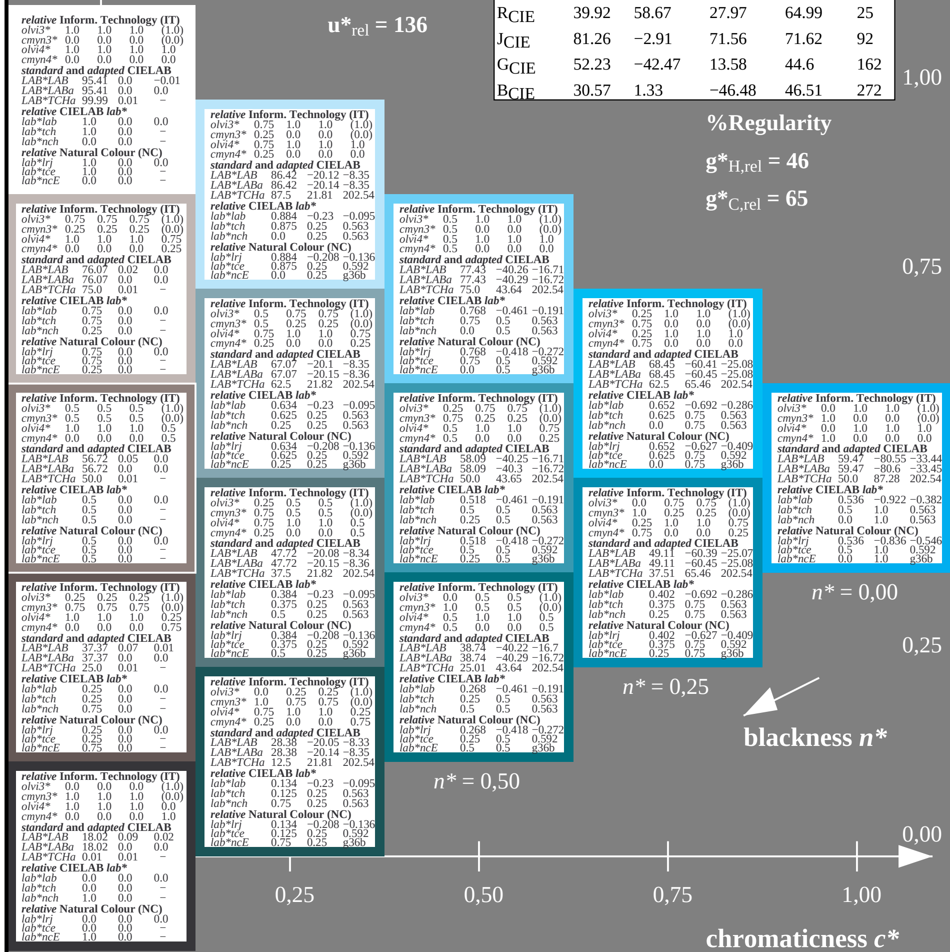
$u*_{rel} = 136$

NCS18; adapted (a) CIELAB data	$L*=L*_a$	$a*_a$	$b*_a$	$C*_{ab,a}$	$h*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g*_{H,rel} = 46$

$g*_{C,rel} = 65$



Output: Colorimetric Reflective System NRS11
for hue $h* = lab*h = 203/360 = 0.564$

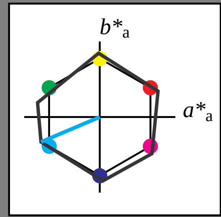
*lab*tch and lab*nch*

D65: hue G50B

LCH*Ma: 53 84 203

rgb*Ma: 0.0 1.0 1.0

triangle lightness $t*$



%Gamut

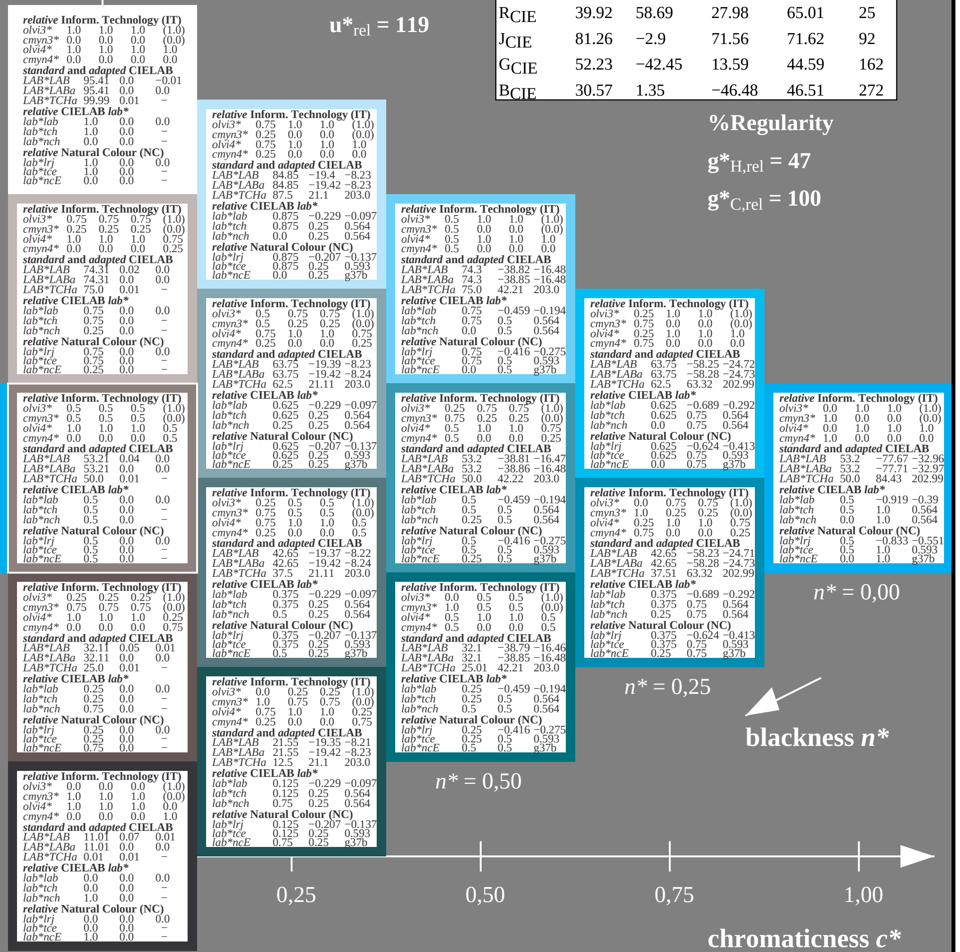
$u*_{rel} = 119$

NRS11; adapted (a) CIELAB data	$L*=L*_a$	$a*_a$	$b*_a$	$C*_{ab,a}$	$h*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g*_{H,rel} = 47$

$g*_{C,rel} = 100$



UE500−7, 5 step scales for constant CIELAB hue 203/360 = 0.563 (left)

5 step scales for constant CIELAB hue 203/360 = 0.564 (right)

Input: Colorimetric Reflective System NCS18

for hue $h^* = lab^*h = 203/360 = 0.563$

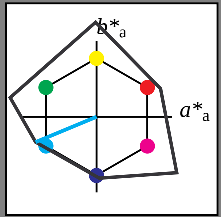
lab^*tch and lab^*nch

D65: hue G50B

LCH*Ma: 59 87 203

rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

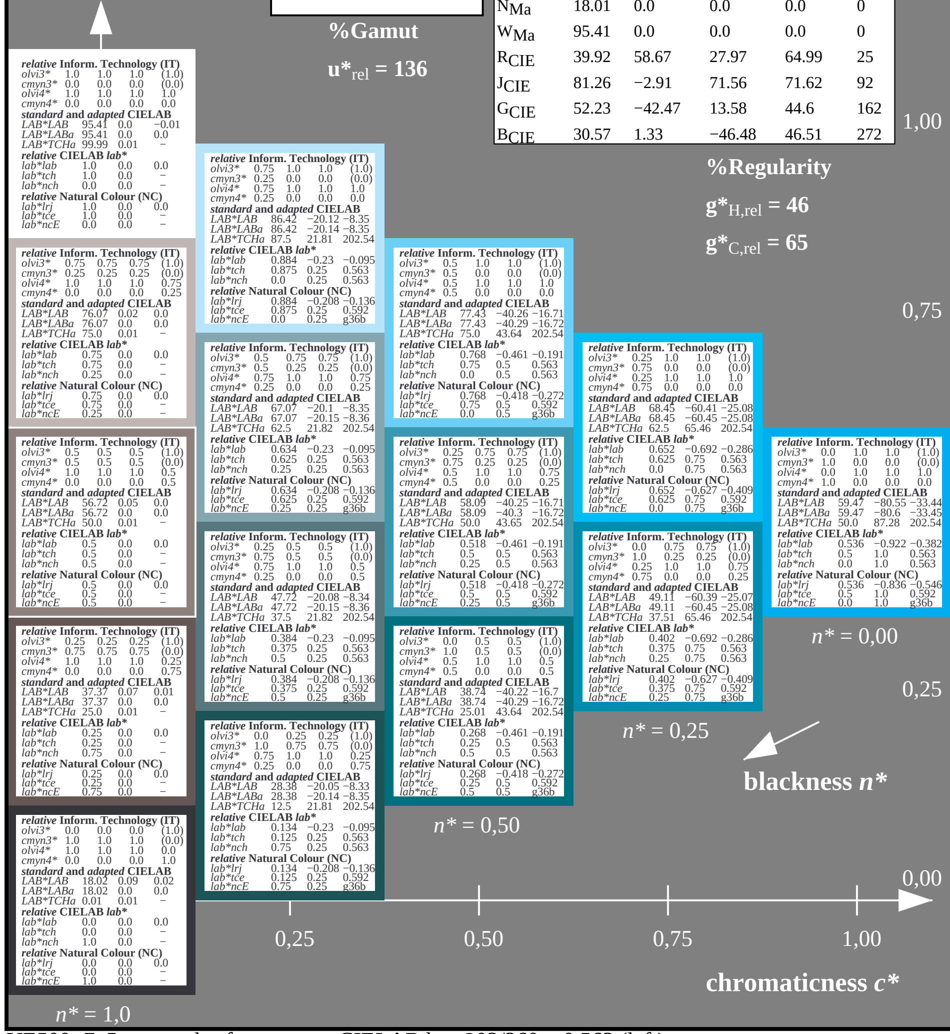
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 203/360 = 0.563$

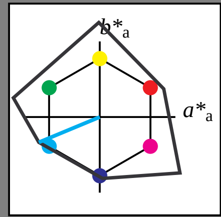
lab^*tch and lab^*nch

D65: hue G50B

LCH*Ma: 59 87 203

rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

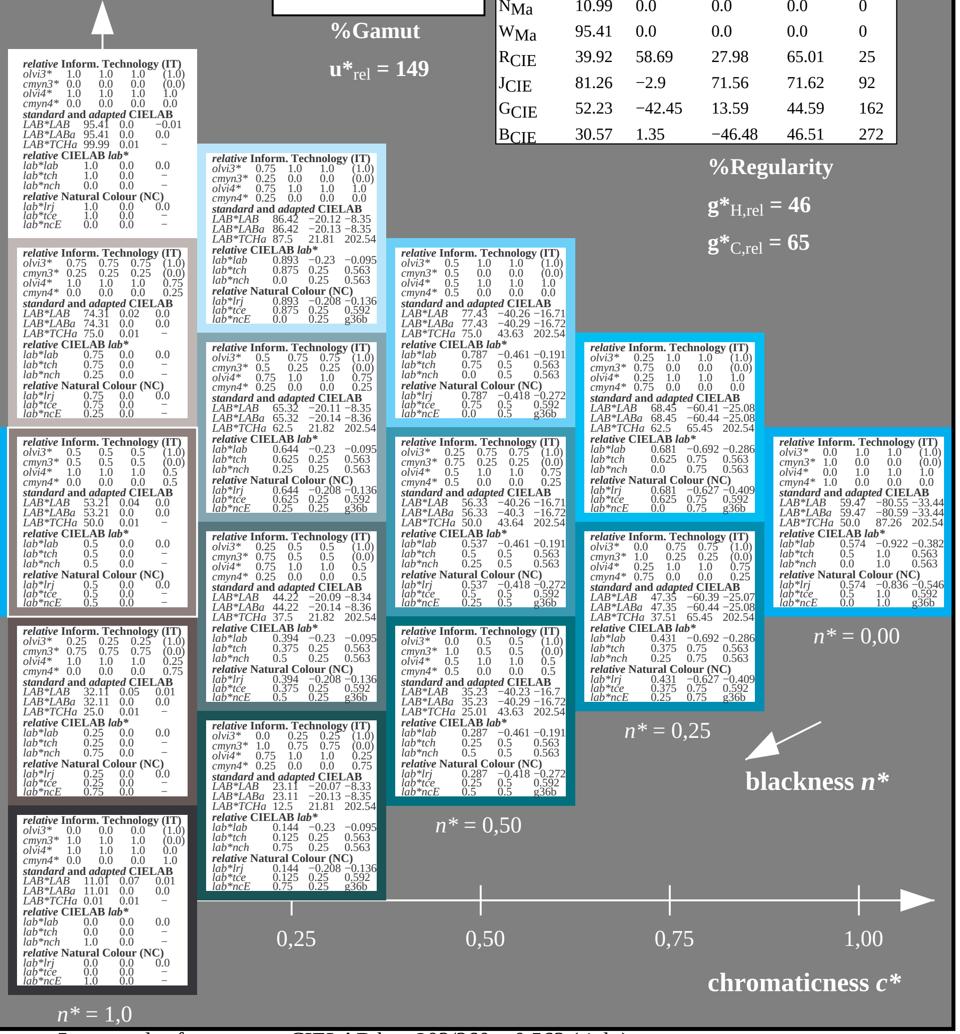
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

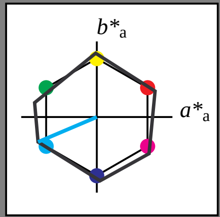


UE500−7, 5 step scales for constant CIELAB hue 203/360 = 0.563 (left)

5 step scales for constant CIELAB hue 203/360 = 0.563 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 203/360 = 0.564$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 53 84 203
rgb*Ma: 0.0 1.0 1.0
triangle lightness t^*

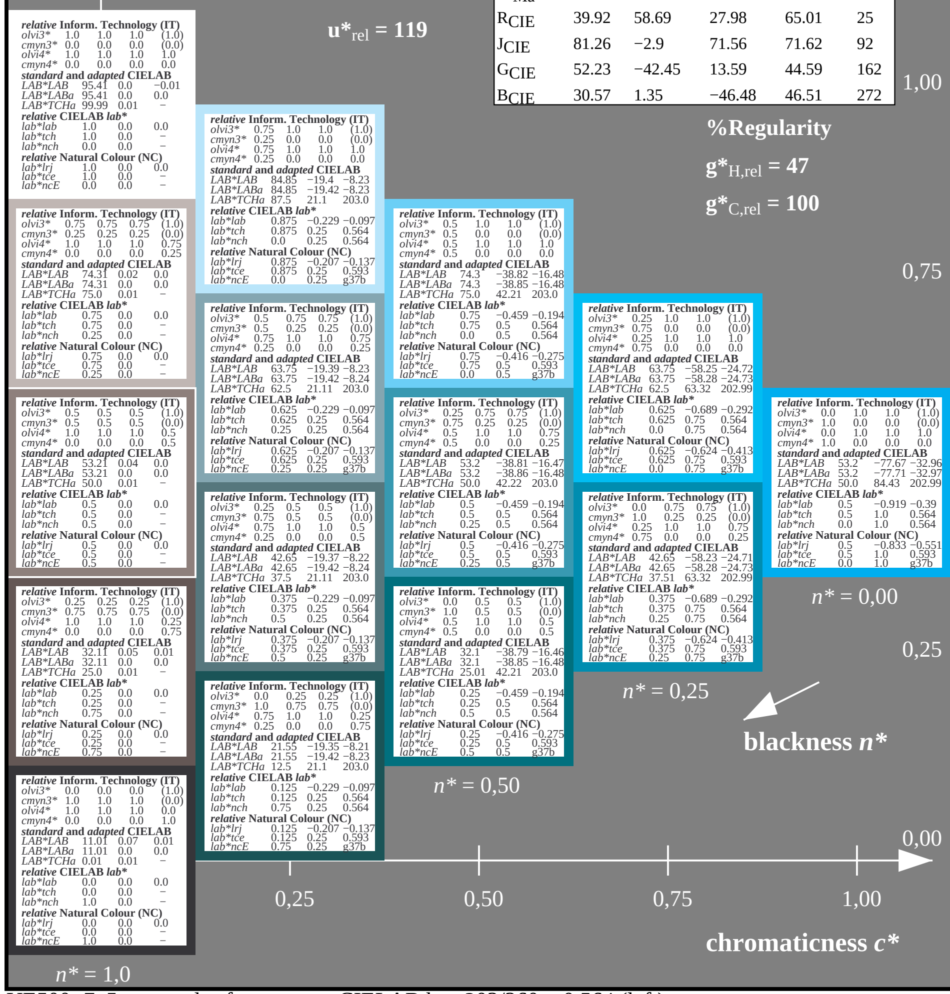


%Gamut
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

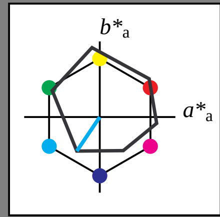
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 236/360 = 0.656$
lab*tch* and *lab*nch

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0
triangle lightness t^*

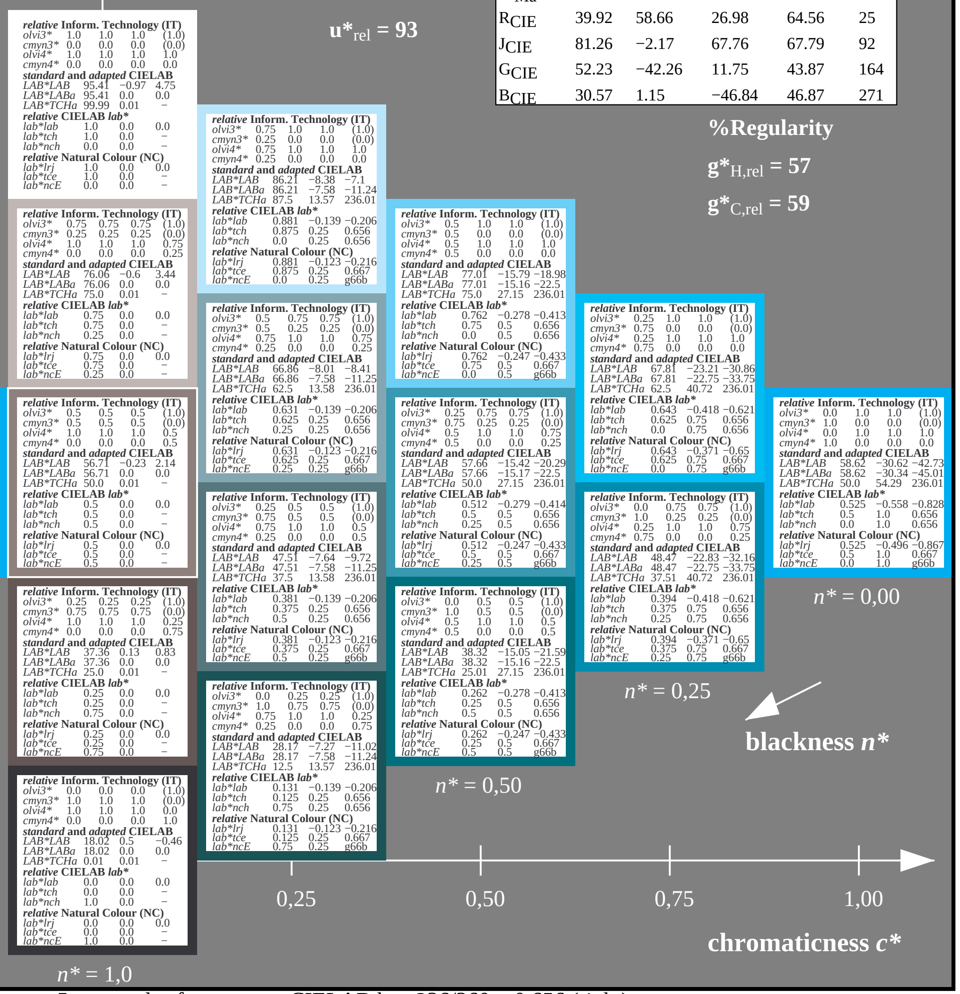


%Gamut
u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel}$ = 57
$g^*_{C,rel}$ = 59

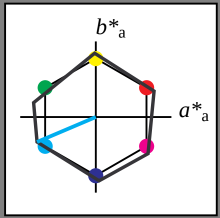


UE500−7, 5 step scales for constant CIELAB hue 203/360 = 0.564 (left)

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

Input: Colorimetric Reflective System NRS11
for hue *h** = *lab*h* = *203/360* = *0.564*
*lab*tch* and *lab*nch*

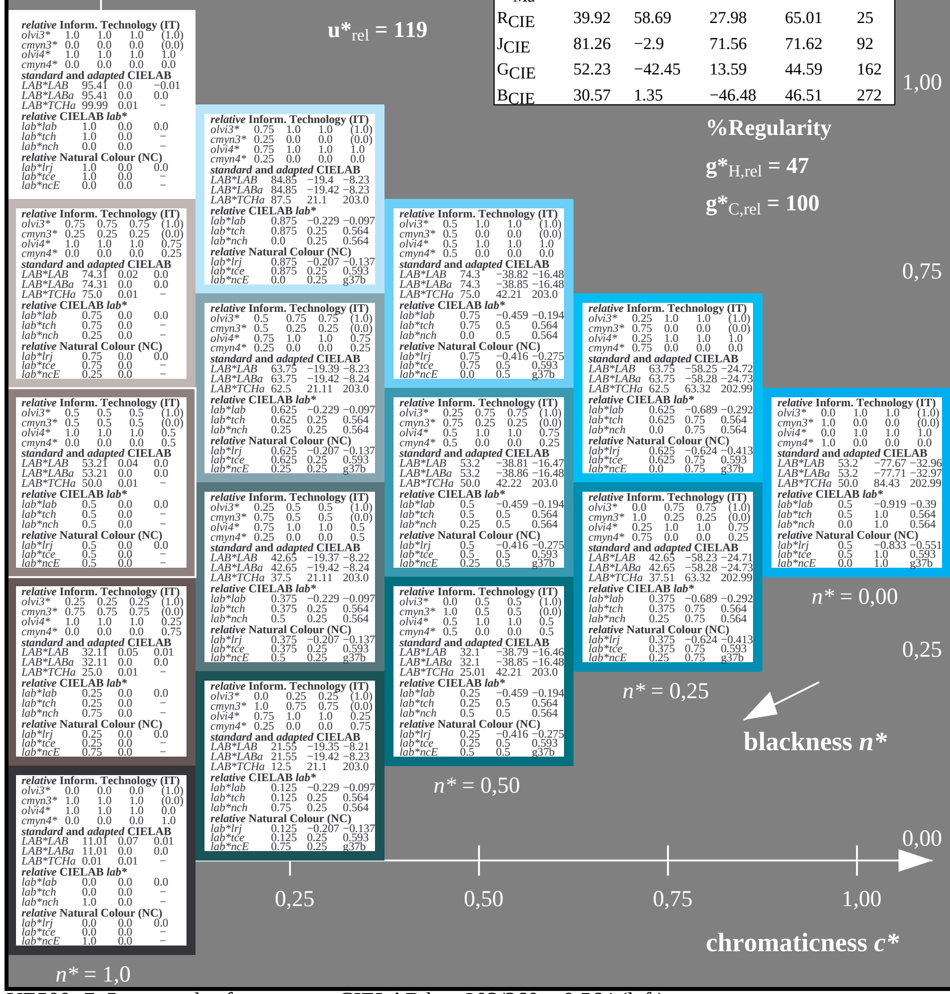
D65: hue G50B
LCH*Ma: 53 84 203
rgb*Ma: 0.0 1.0 1.0
triangle lightness *t**



%Gamut
u*rel = 119

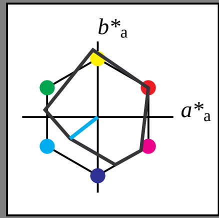
NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
g*H,rel = 47
g*C,rel = 100



Output: Colorimetric Reflective System MRS18
for hue *h** = *lab*h* = *218/360* = *0.605*
*lab*tch* and *lab*nch*

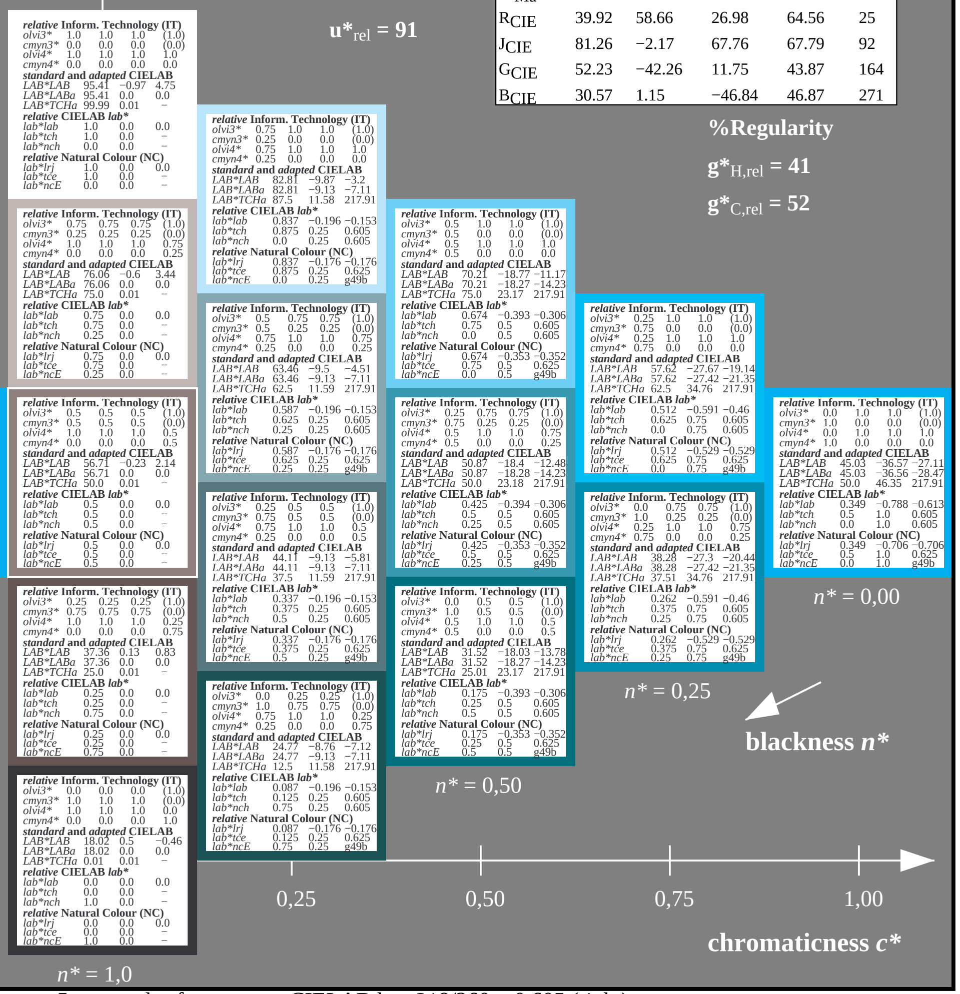
D65: hue G50B
LCH*Ma: 45 46 218
rgb*Ma: 0.0 1.0 1.0
triangle lightness *t**



%Gamut
u*rel = 91

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
g*H,rel = 41
g*C,rel = 52

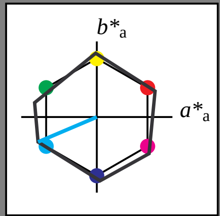


UE500−7, 5 step scales for constant CIELAB hue 203/360 = 0.564 (left)

5 step scales for constant CIELAB hue 218/360 = 0.605 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 203/360 = 0.564$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 53 84 203
rgb*Ma: 0.0 1.0 1.0
triangle lightness t^*

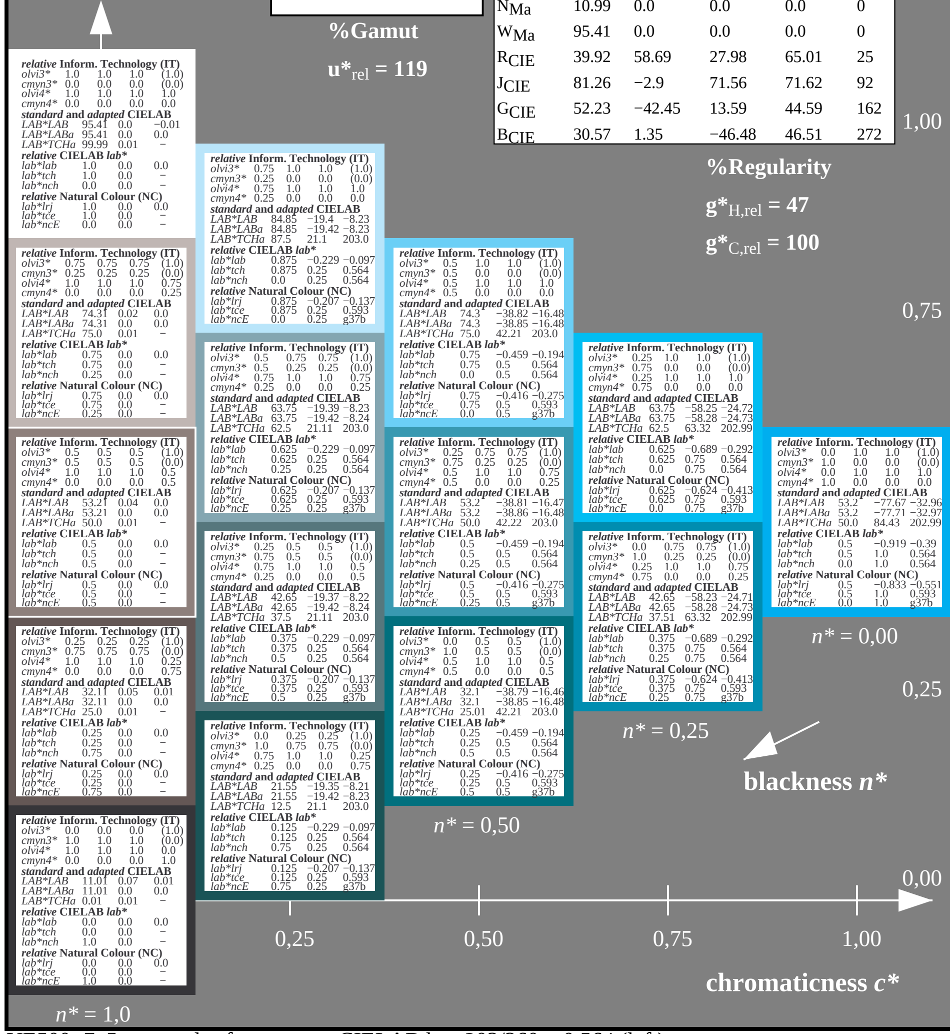


%Gamut
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data

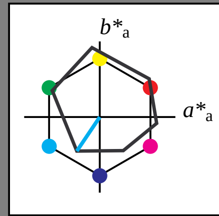
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 236/360 = 0.656$
lab*tch* and *lab*nch

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0
triangle lightness t^*

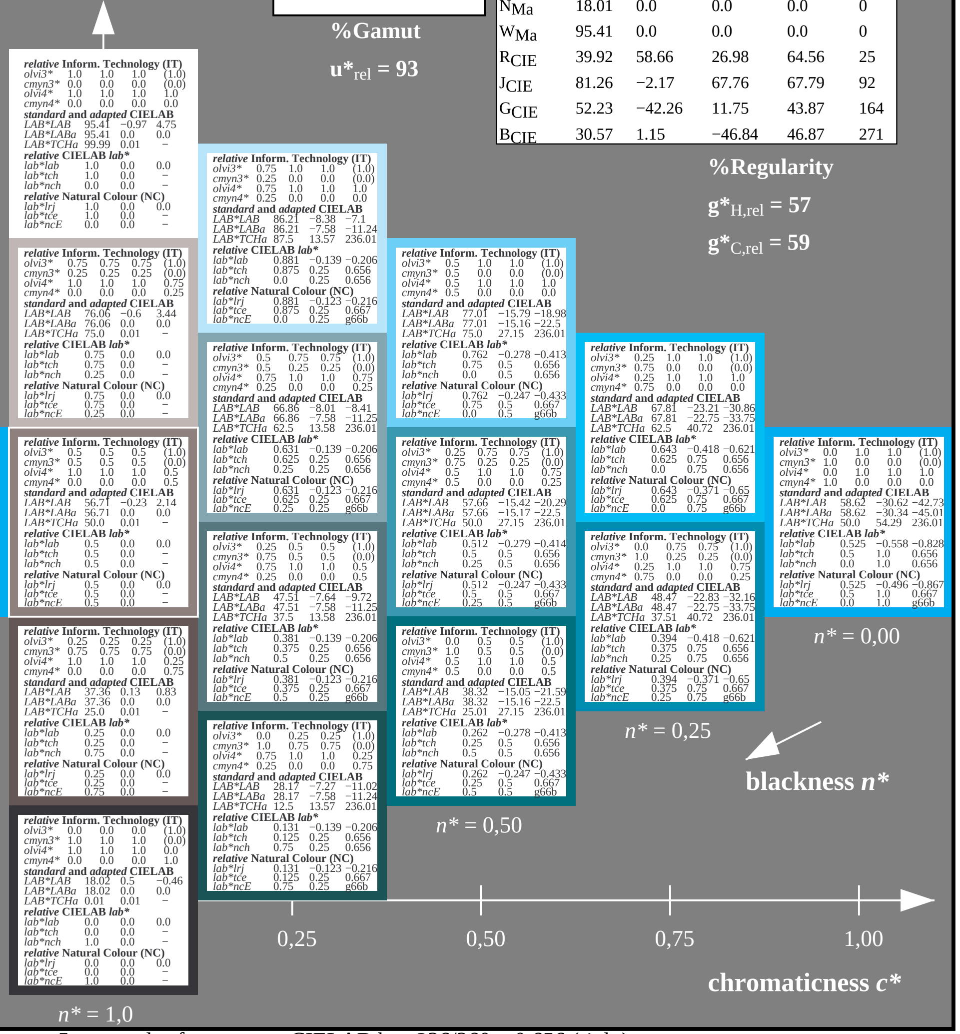


%Gamut
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



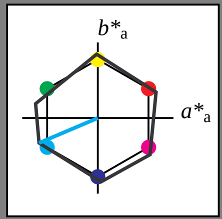
UE500−7, 5 step scales for constant CIELAB hue 203/360 = 0.564 (left)

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

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 203/360 = 0.564$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 53 84 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*

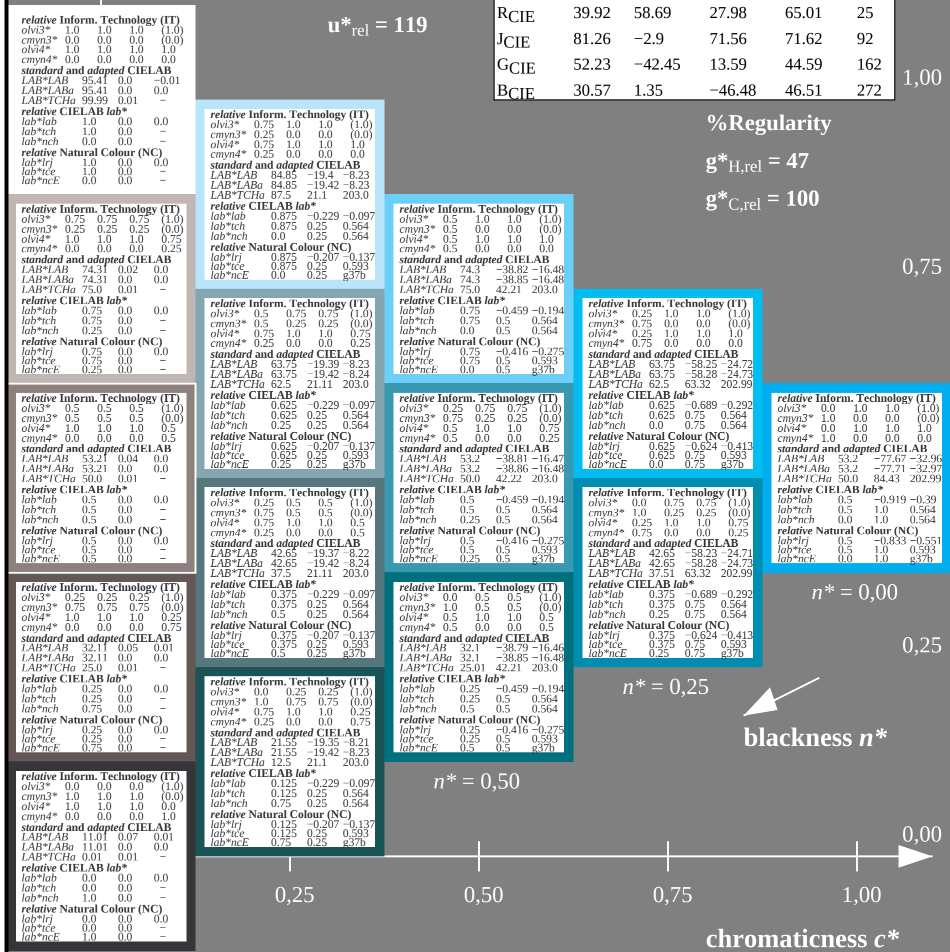


%Gamut
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

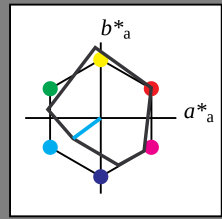
%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 217/360 = 0.601$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 217
rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*

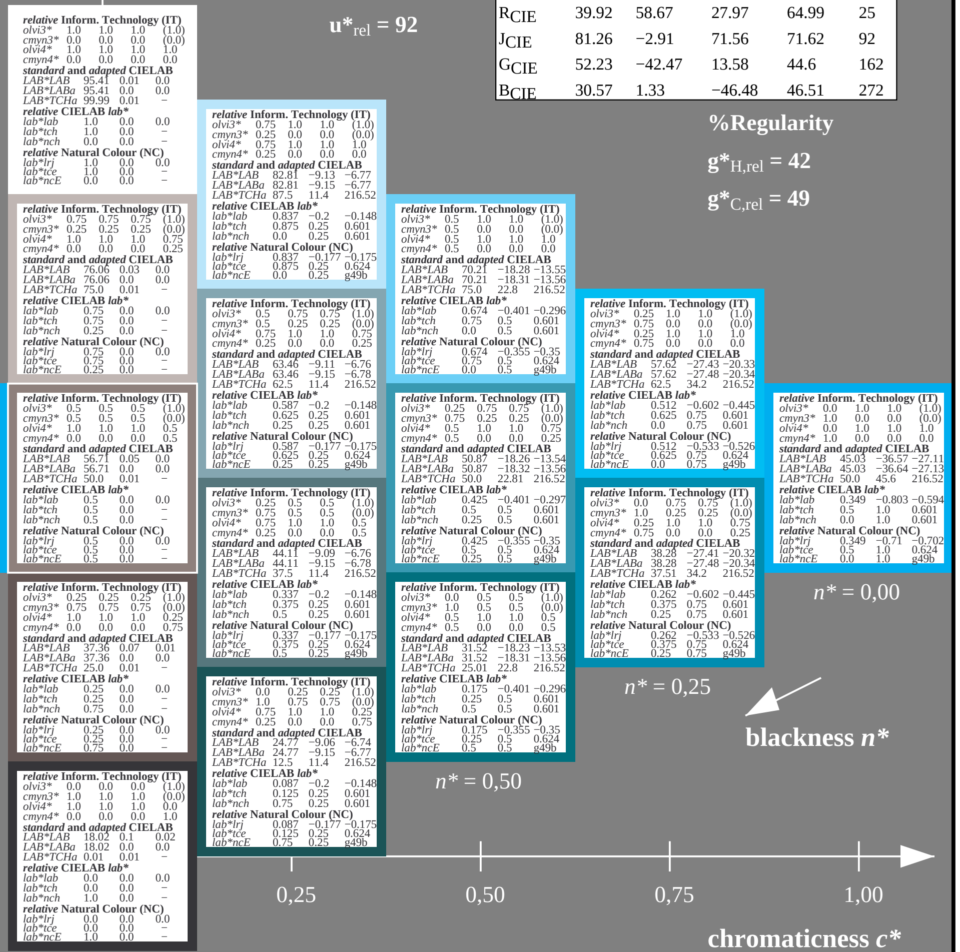


%Gamut
u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 42
$g^*_{C,rel}$ = 49



UE500−7, 5 step scales for constant CIELAB hue 203/360 = 0.564 (left)

5 step scales for constant CIELAB hue 217/360 = 0.601 (right)

Input: Colorimetric Reflective System NRS11

for hue *h** = *lab*h* = *203/360* = *0.564*

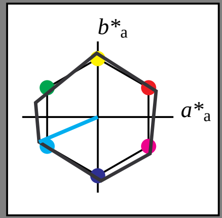
*lab*tch* and *lab*nch*

D65: hue G50B

LCH*Ma: 53 84 203

rgb*Ma: 0.0 1.0 1.0

triangle lightness *t*



%Gamut

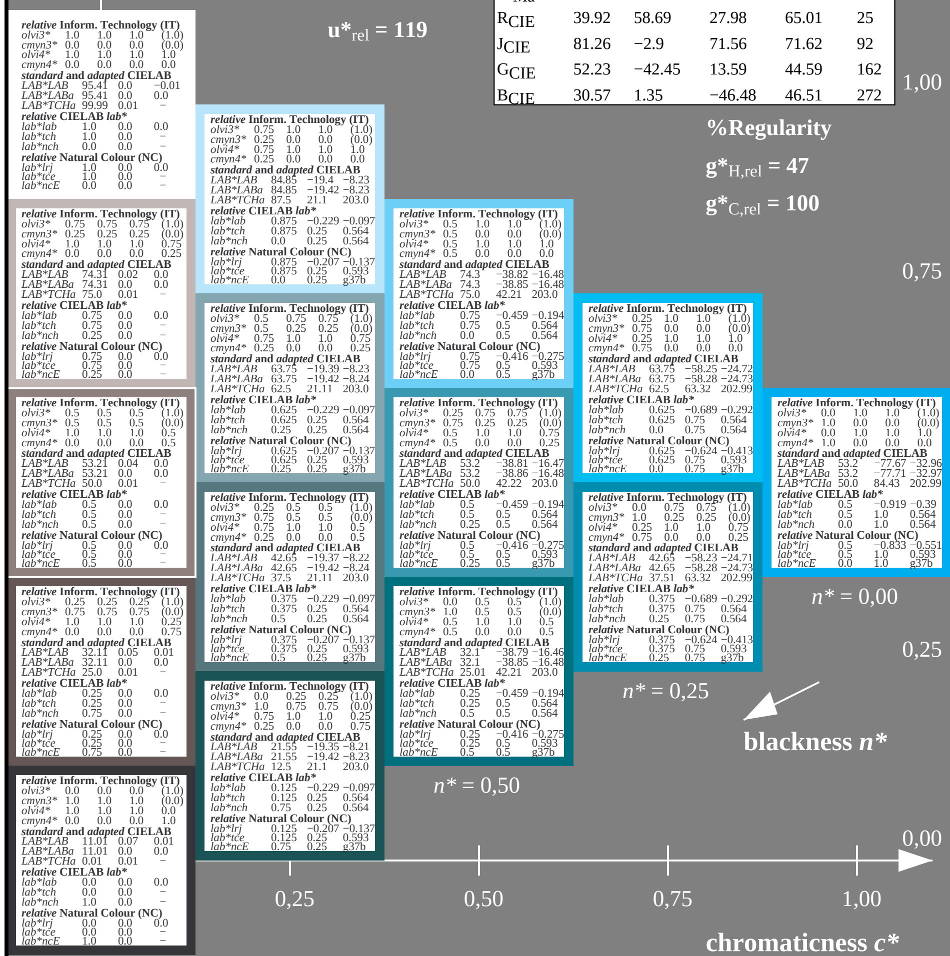
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NRS18

for hue *h** = *lab*h* = *203/360* = *0.564*

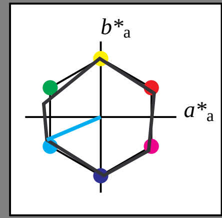
*lab*tch* and *lab*nch*

D65: hue G50B

LCH*Ma: 57 77 203

rgb*Ma: 0.0 1.0 1.0

triangle lightness *t*



%Gamut

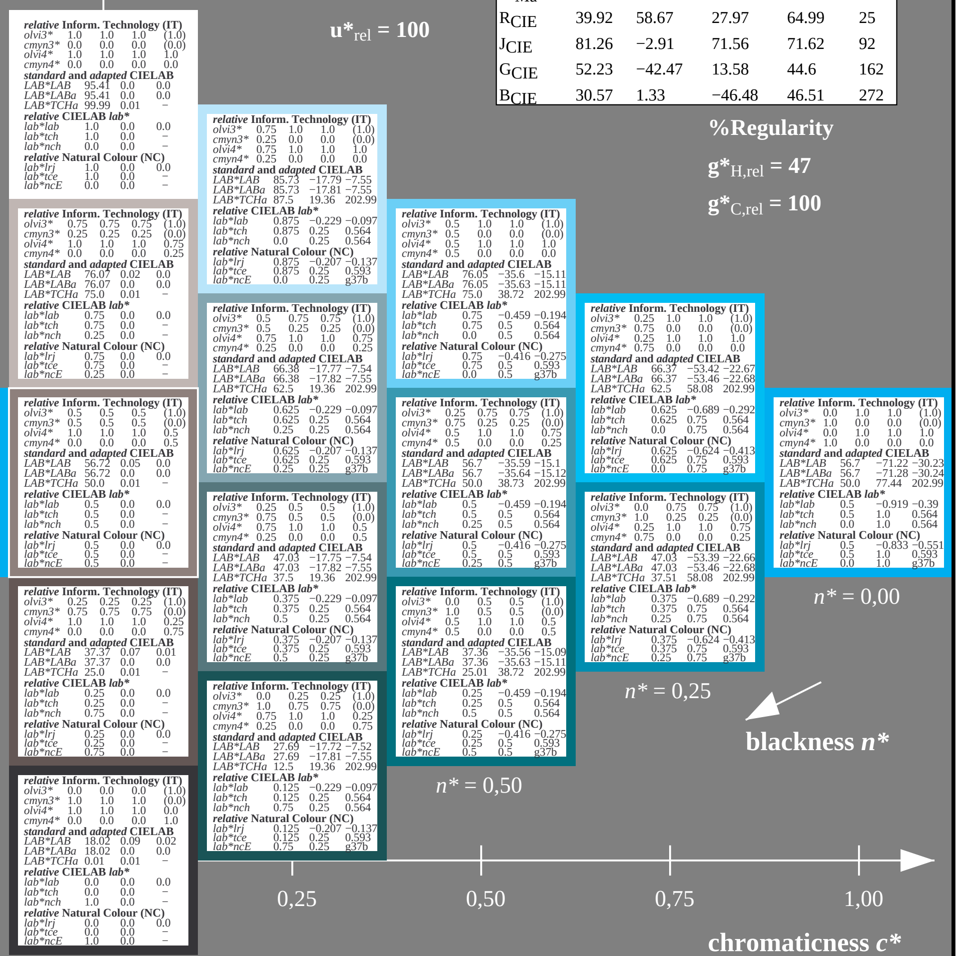
u^*_{rel} = 100

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



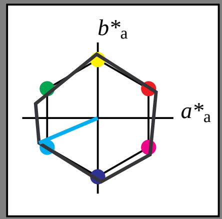
UE500−7, 5 step scales for constant CIELAB hue 203/360 = 0.564 (left)

5 step scales for constant CIELAB hue 203/360 = 0.564 (right)

Input: Colorimetric Reflective System NRS11
for hue *h* = lab*h = 203/360 = 0.564*
*lab*tch and lab*nch*

D65: hue G50B
LCH*Ma: 53 84 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness *t**

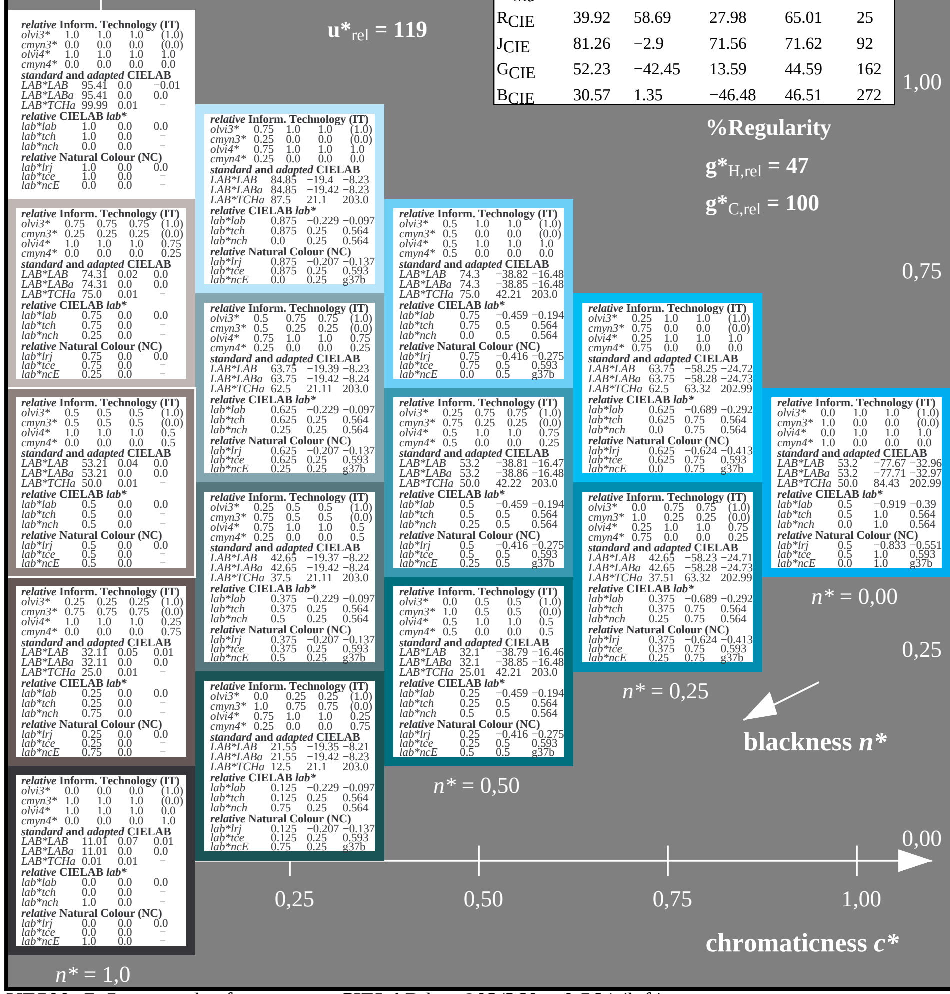


%Gamut
u*rel = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

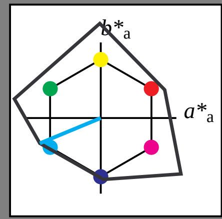
%Regularity
g*H,rel = 47
g*C,rel = 100



Output: Colorimetric Reflective System NCS18
for hue *h* = lab*h = 203/360 = 0.563*
*lab*tch and lab*nch*

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness *t**

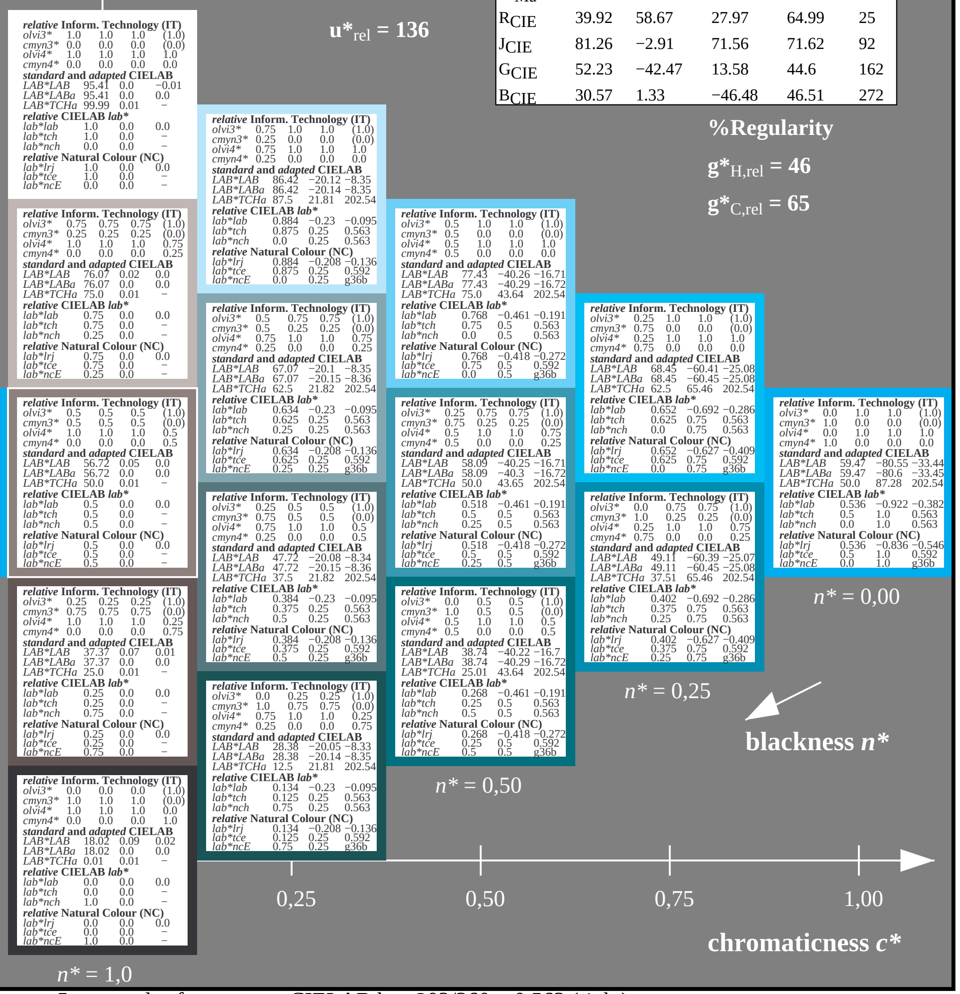


%Gamut
u*rel = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
g*H,rel = 46
g*C,rel = 65



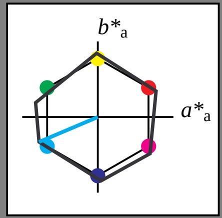
UE500−7, 5 step scales for constant CIELAB hue 203/360 = 0.564 (left)

5 step scales for constant CIELAB hue 203/360 = 0.563 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 203/360 = 0.564$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 53 84 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*

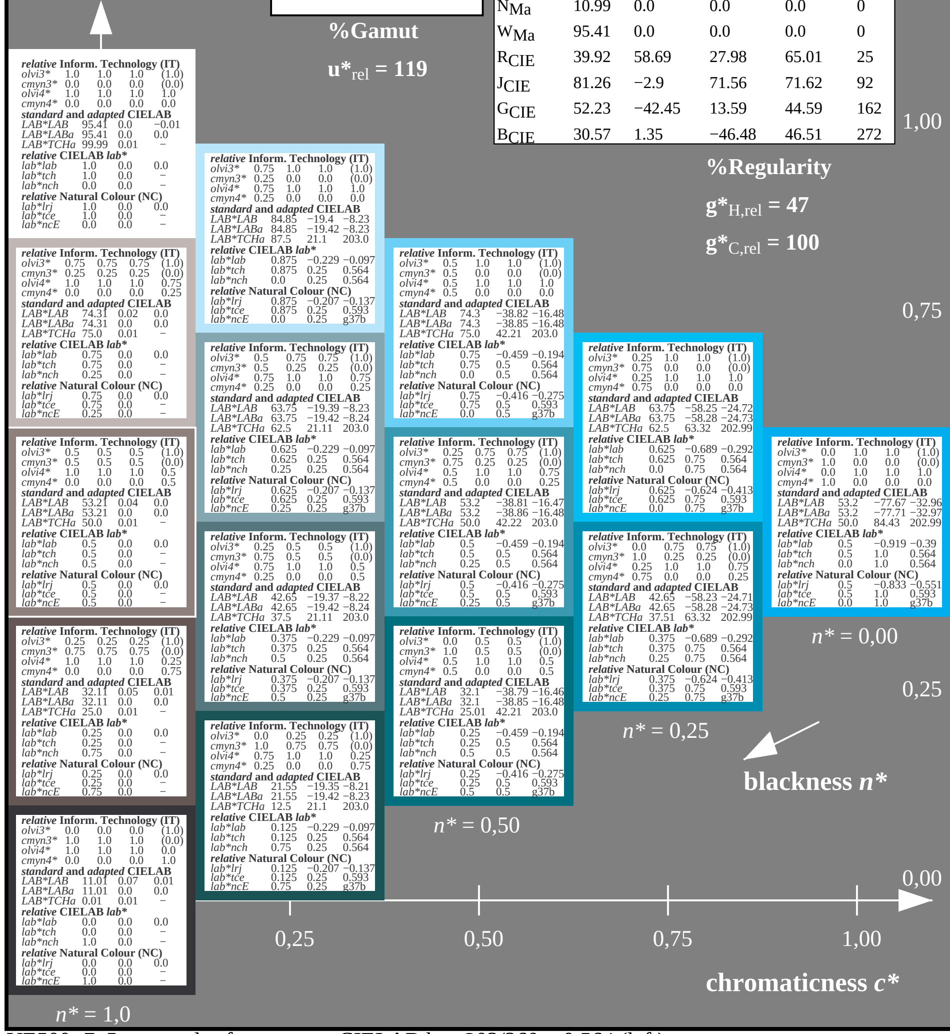


%Gamut
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

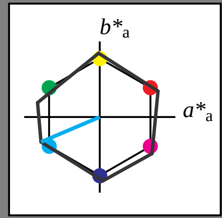
%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 203/360 = 0.564$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 53 84 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*

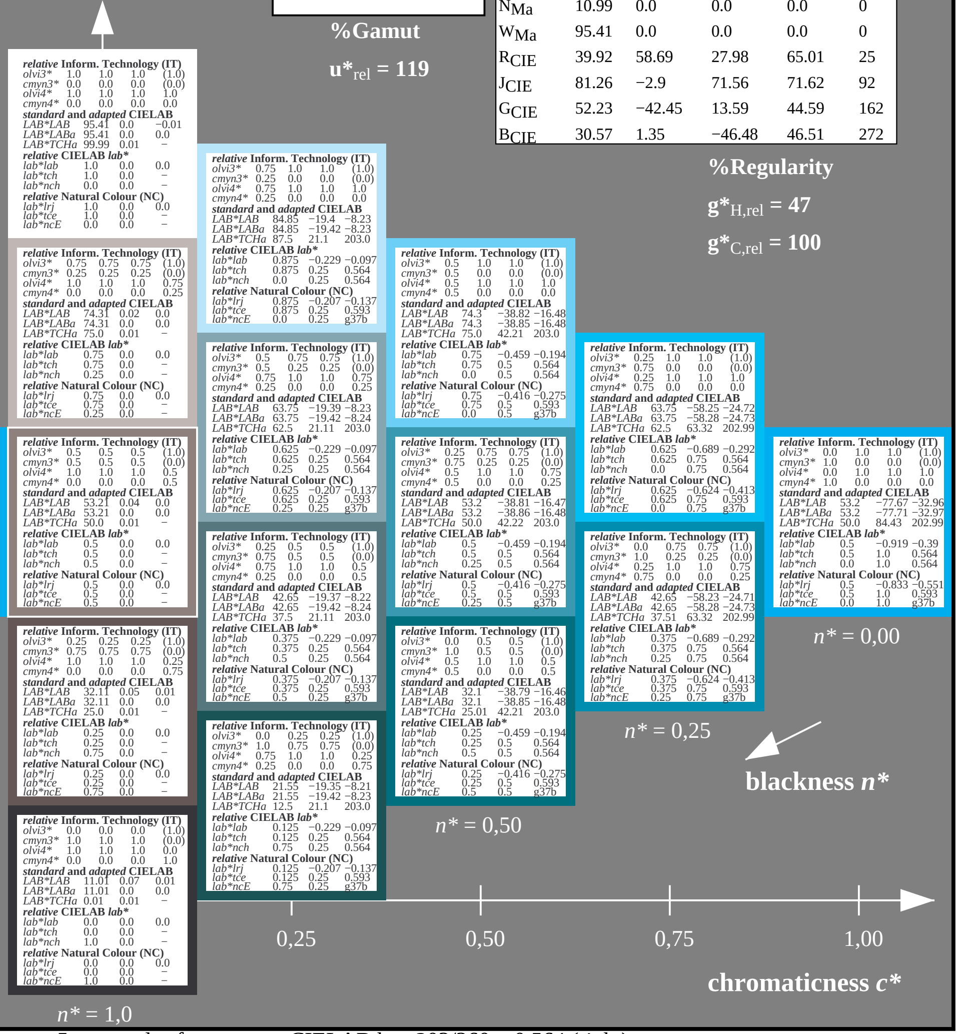


%Gamut
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



UE500−7, 5 step scales for constant CIELAB hue 203/360 = 0.564 (left)

5 step scales for constant CIELAB hue 203/360 = 0.564 (right)

Input: Colorimetric Reflective System NRS11

for hue $h^* = lab^*h = 203/360 = 0.564$

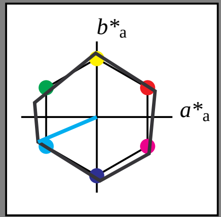
*lab*tch* and *lab*nch*

D65: hue G50B

LCH*Ma: 53 84 203

rgb*Ma: 0.0 1.0 1.0

triangle lightness *t**



%Gamut

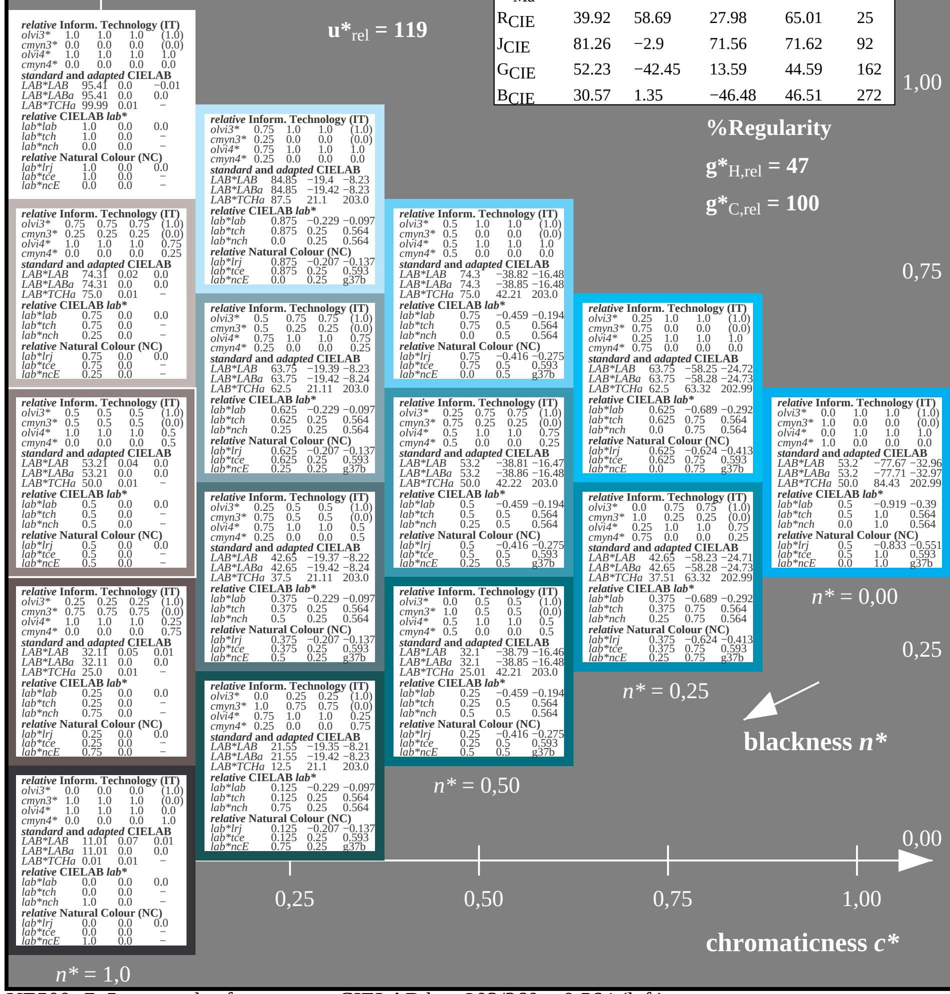
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 203/360 = 0.563$

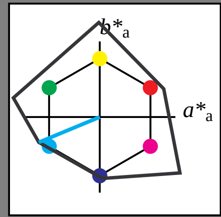
*lab*tch* and *lab*nch*

D65: hue G50B

LCH*Ma: 59 87 203

rgb*Ma: 0.0 1.0 1.0

triangle lightness *t**



%Gamut

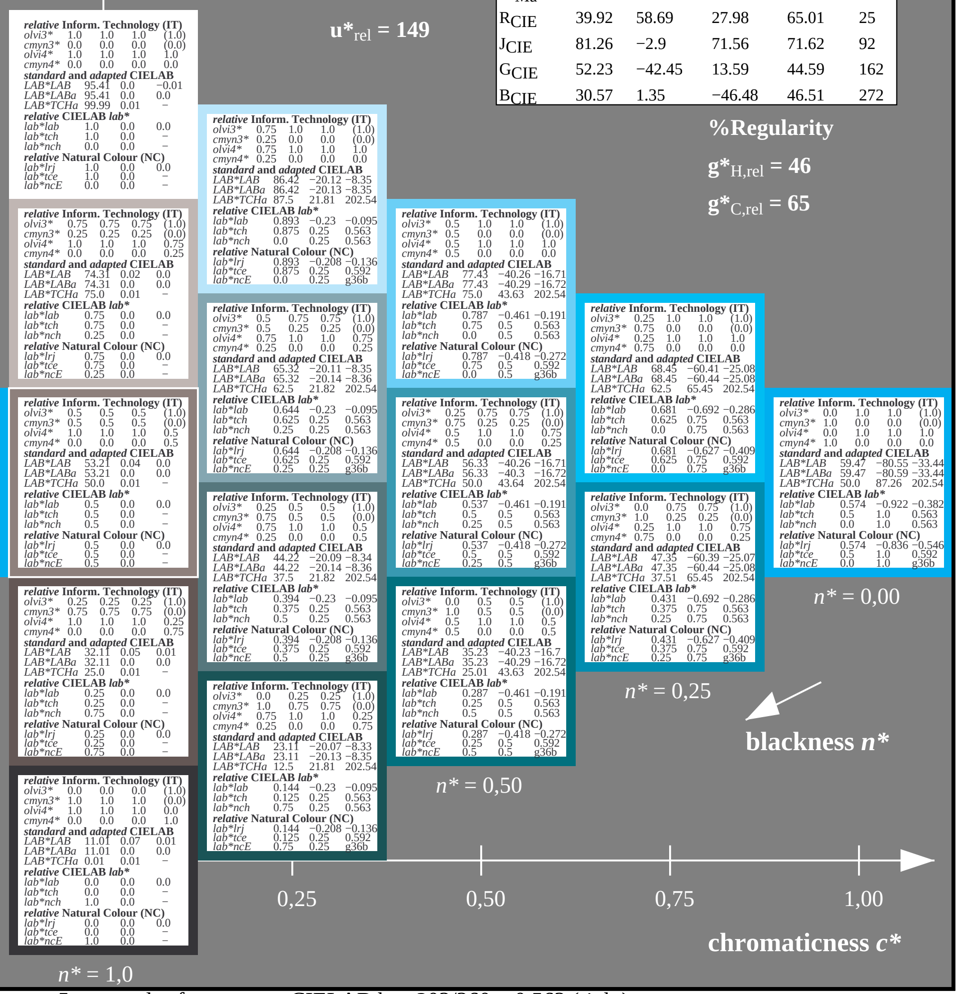
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



UE500−7, 5 step scales for constant CIELAB hue 203/360 = 0.564 (left)

5 step scales for constant CIELAB hue 203/360 = 0.563 (right)

Input: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 203/360 = 0.563$

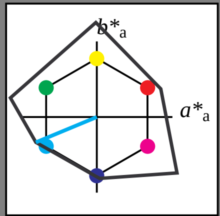
lab*tch* and *lab*nch

D65: hue G50B

LCH*Ma: 59 87 203

rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

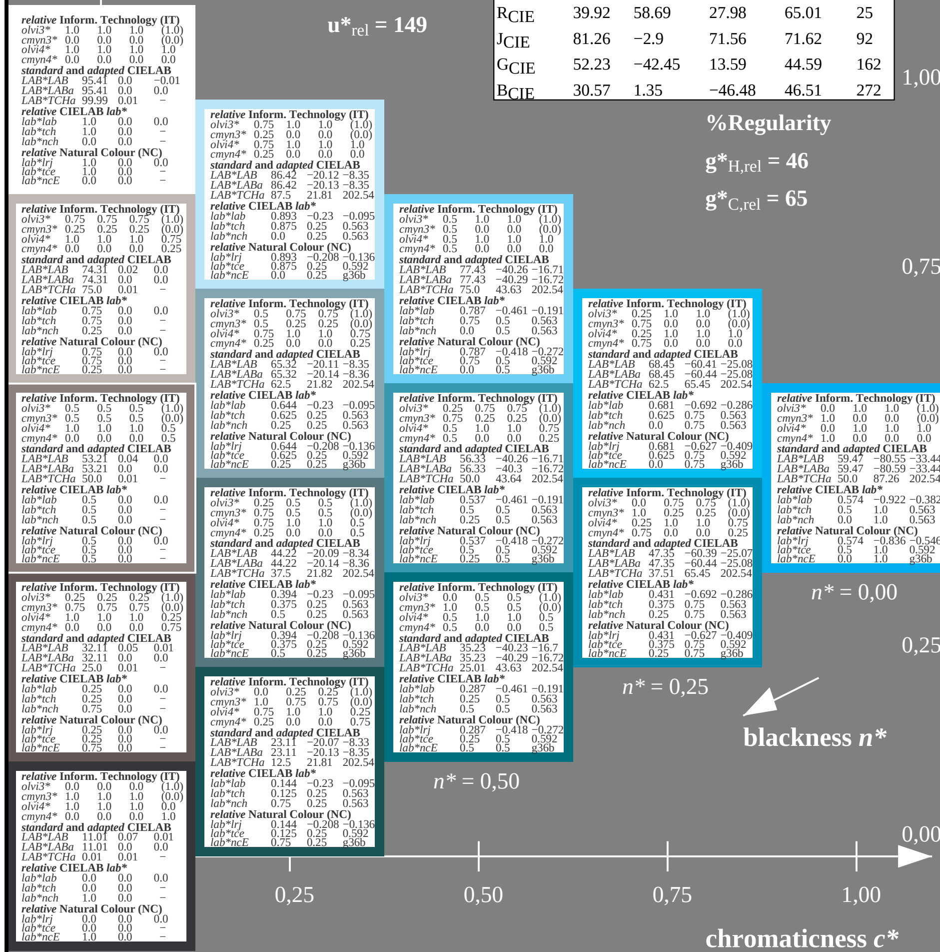
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System ORS18

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

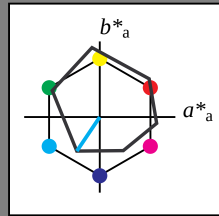
lab*tch* and *lab*nch

D65: hue C

LCH*Ma: 59 54 236

rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

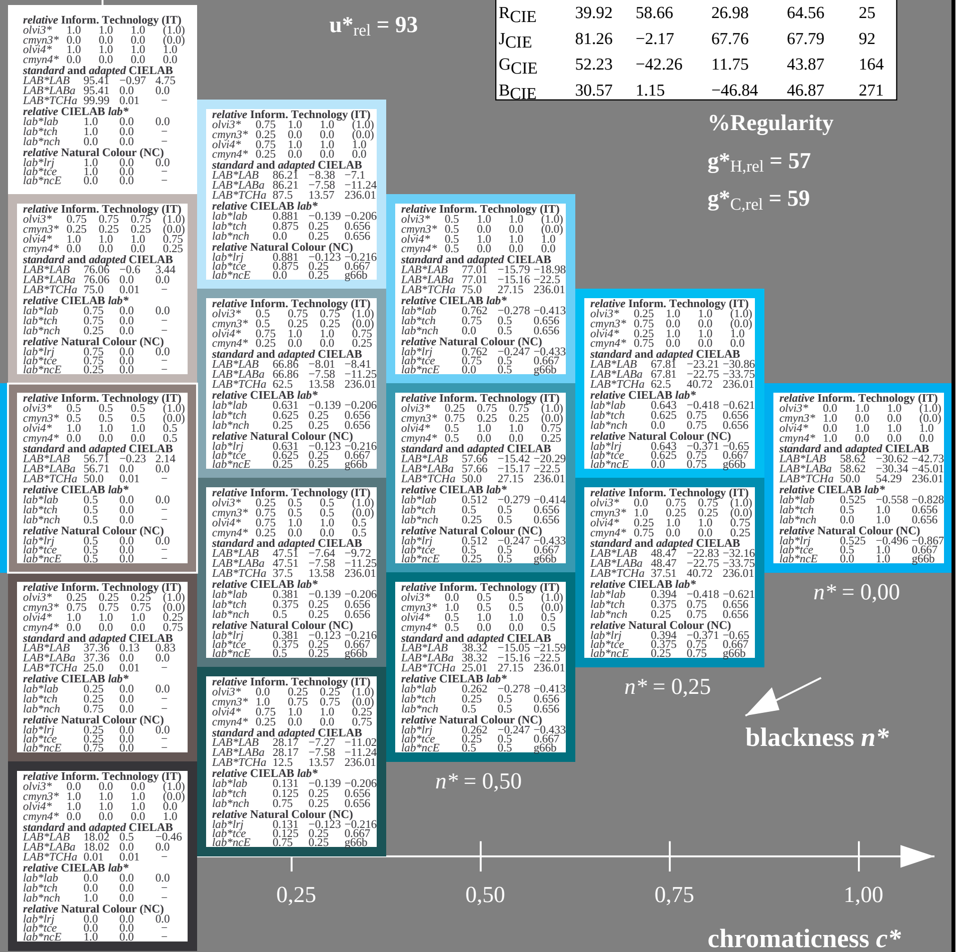
u^*_{rel} = 93

ORS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



UE500−7, 5 step scales for constant CIELAB hue 203/360 = 0.563 (left)

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

Input: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 203/360 = 0.563$

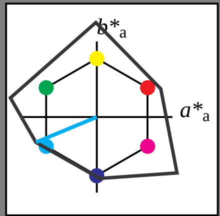
lab*tch and lab*nch

D65: hue G50B

LCH*Ma: 59 87 203

rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

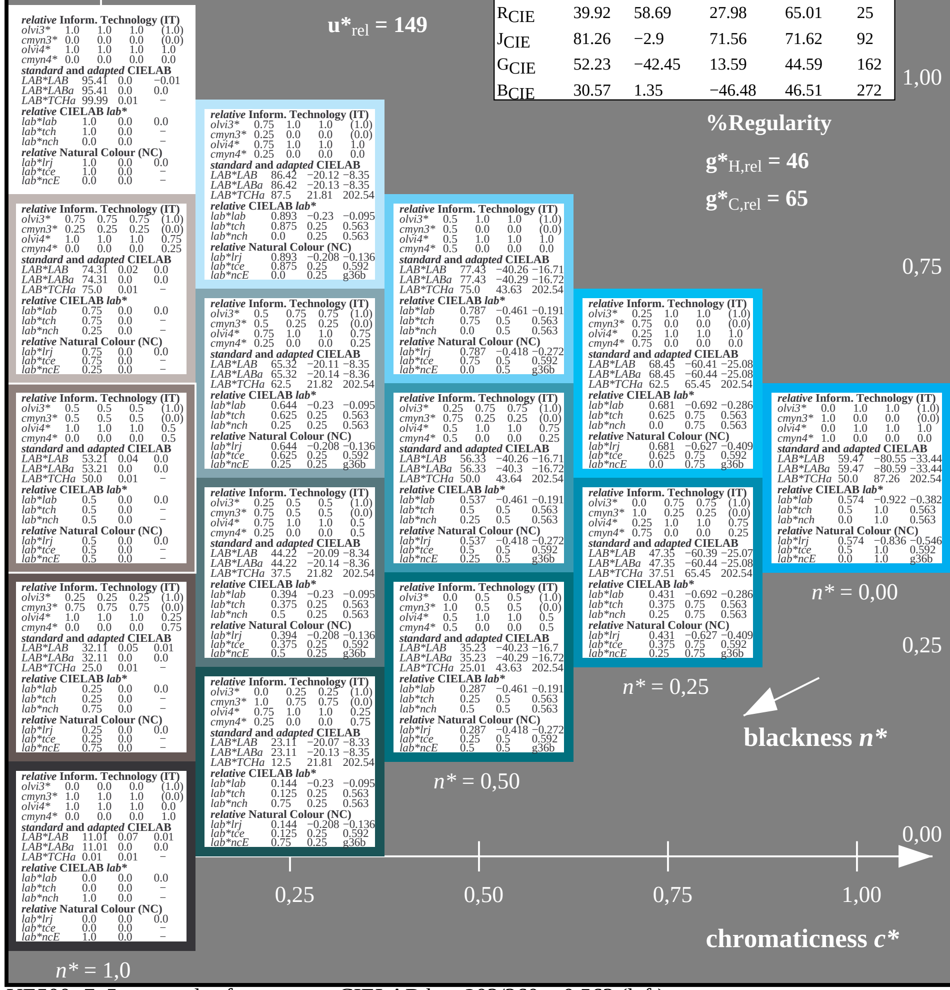
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System MRS18

for hue $h^* = lab^*h = 218/360 = 0.605$

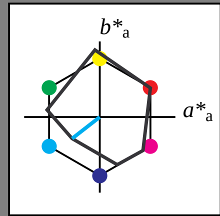
lab*tch and lab*nch

D65: hue G50B

LCH*Ma: 45 46 218

rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

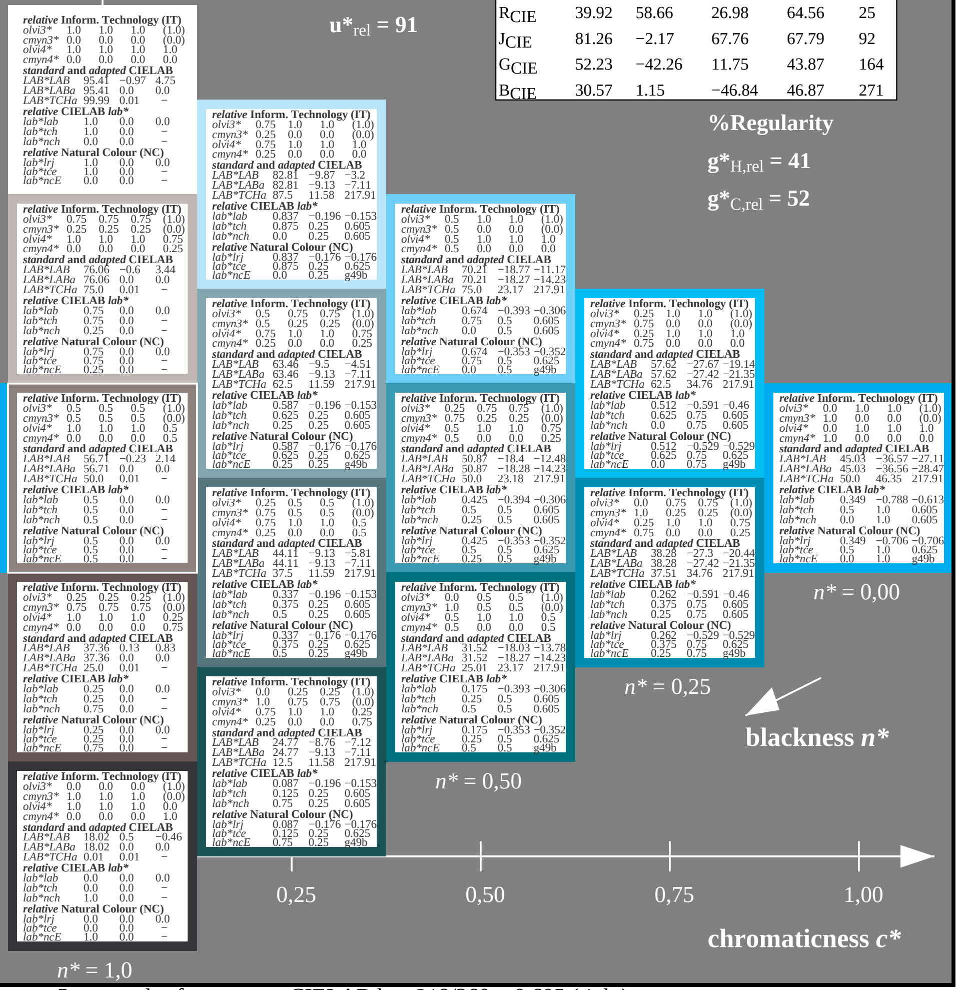
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

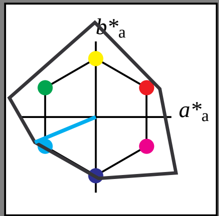


UE500−7, 5 step scales for constant CIELAB hue 203/360 = 0.563 (left)

5 step scales for constant CIELAB hue 218/360 = 0.605 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 203/360 = 0.563$
*lab*tch and lab*nch*

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0
triangle lightness t^*

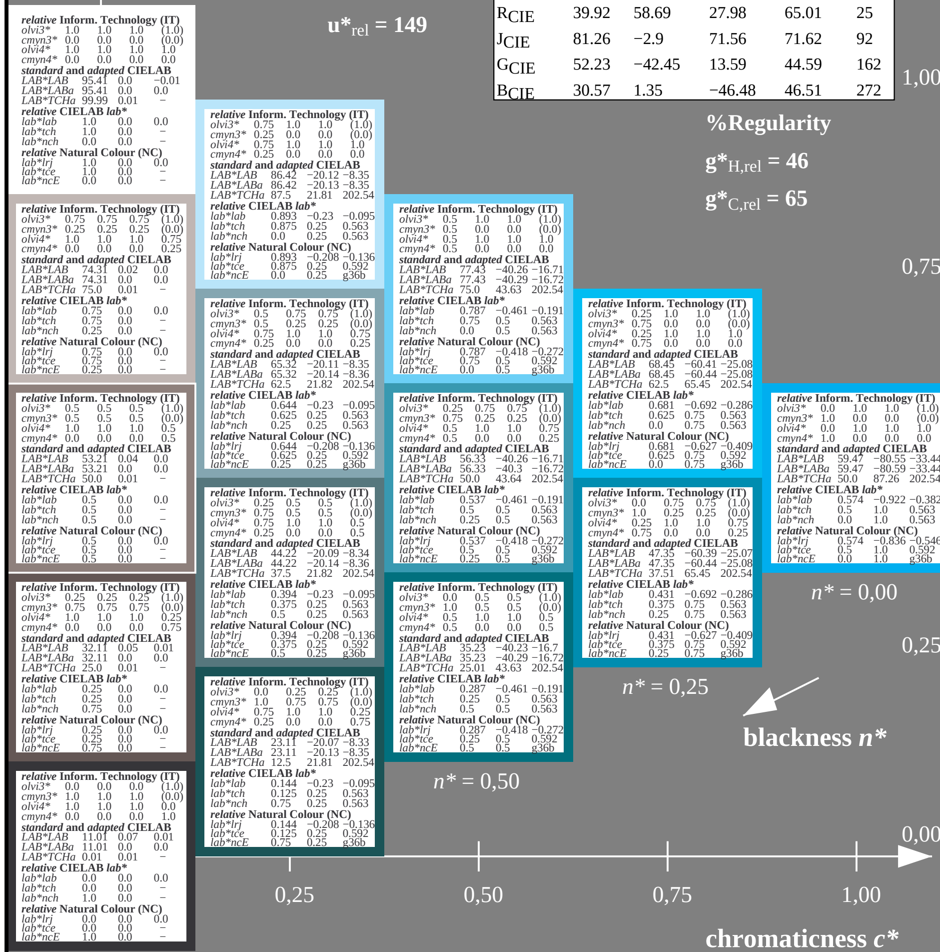


%Gamut
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data

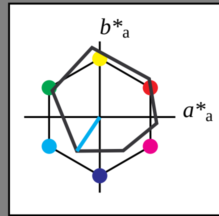
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 236/360 = 0.656$
*lab*tch and lab*nch*

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0
triangle lightness t^*

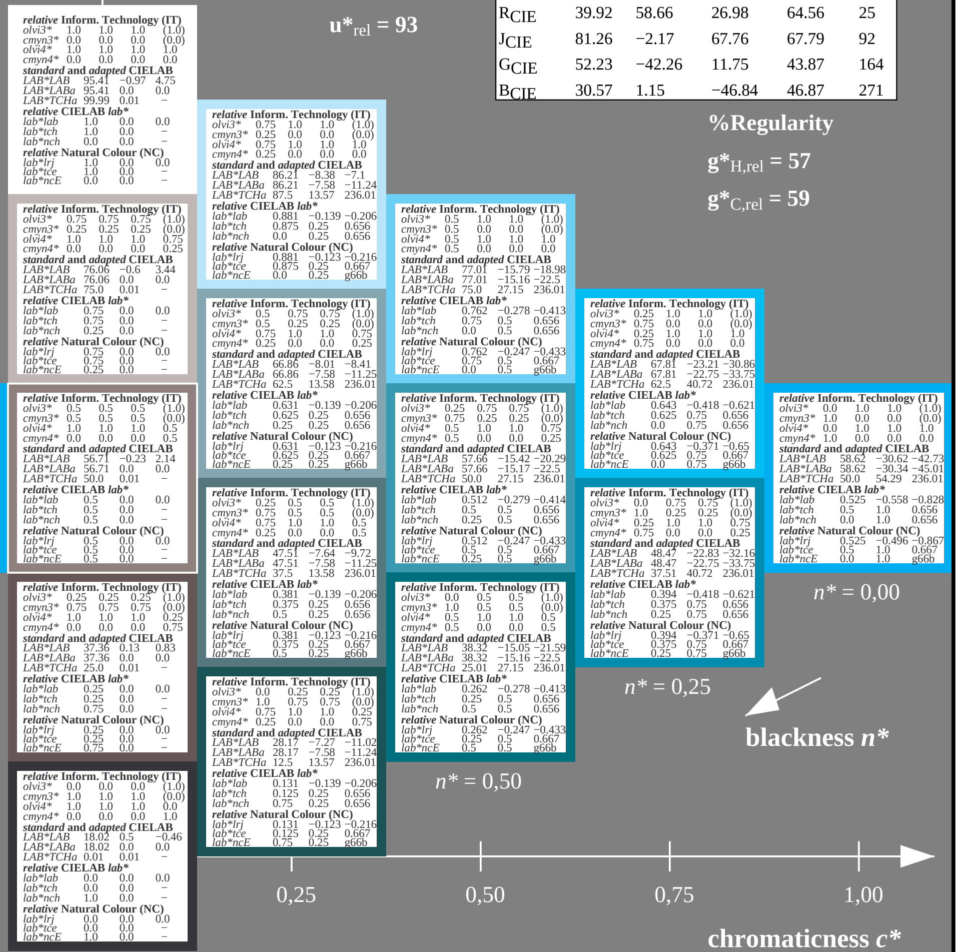


%Gamut
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



UE500−7, 5 step scales for constant CIELAB hue 203/360 = 0.563 (left)

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

Input: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 203/360 = 0.563$

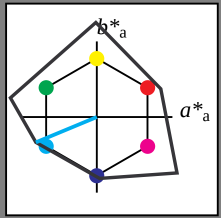
*lab*tch and lab*nch*

D65: hue G50B

LCH*Ma: 59 87 203

rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

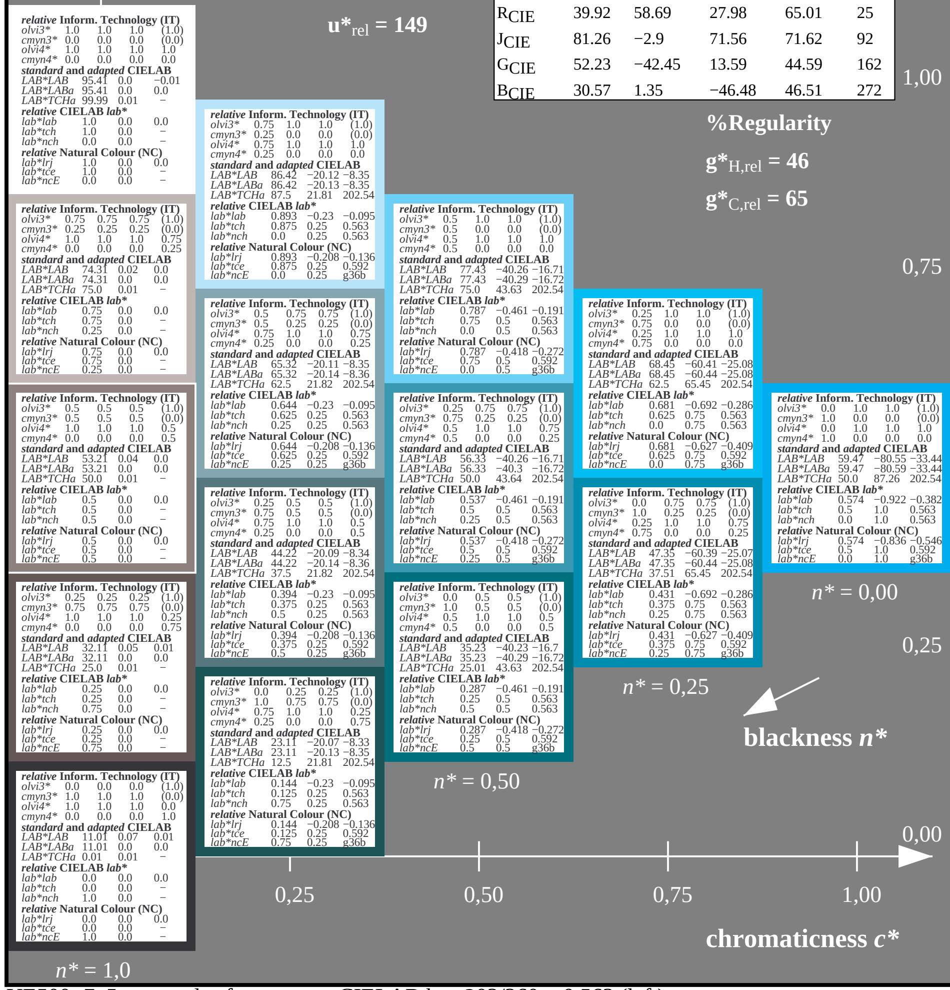
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System MRS18a

for hue $h^* = lab^*h = 217/360 = 0.601$

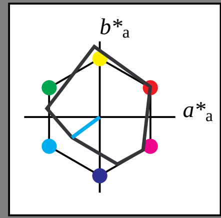
*lab*tch and lab*nch*

D65: hue G50B

LCH*Ma: 45 46 217

rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

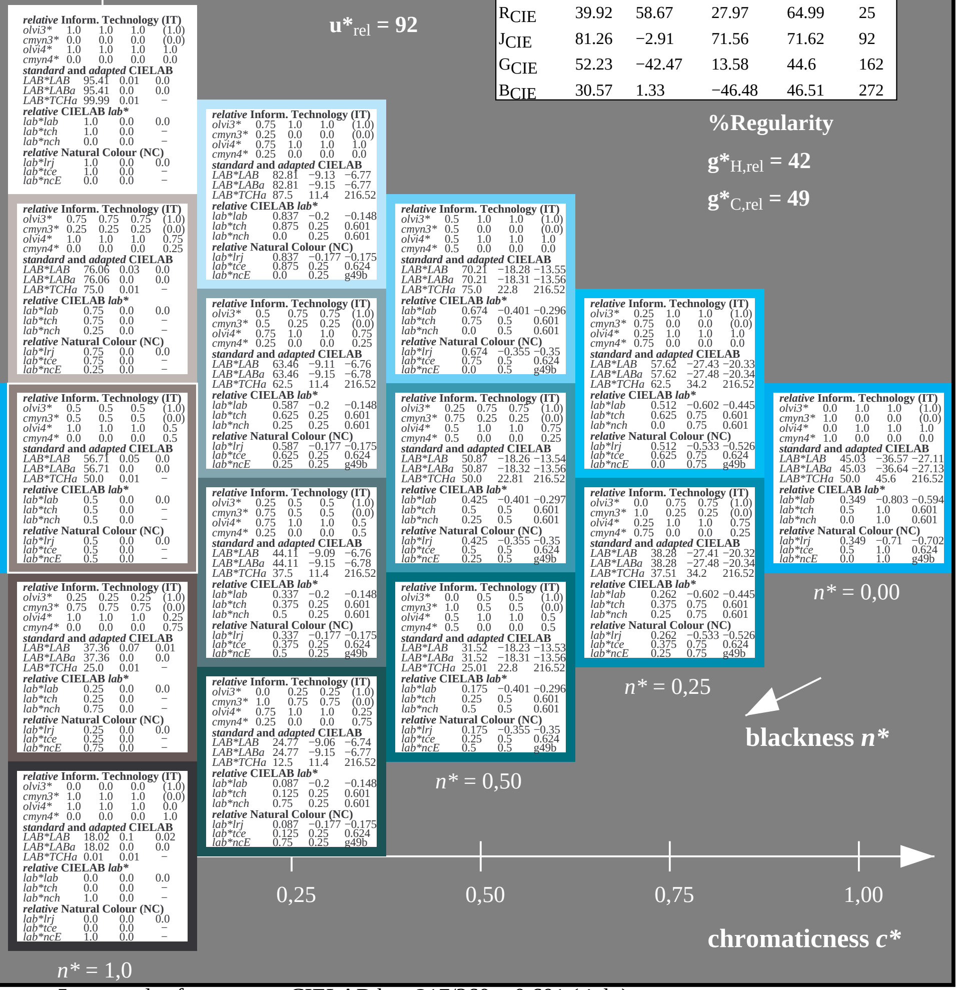
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



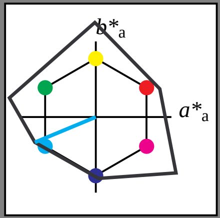
UE500−7, 5 step scales for constant CIELAB hue 203/360 = 0.563 (left)

5 step scales for constant CIELAB hue 217/360 = 0.601 (right)

Input: Colorimetric Reflective System NCS11
for hue *h = *lab*h* = 203/360 = 0.563**
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness *t*



%Gamut

u^*_{rel} = 149

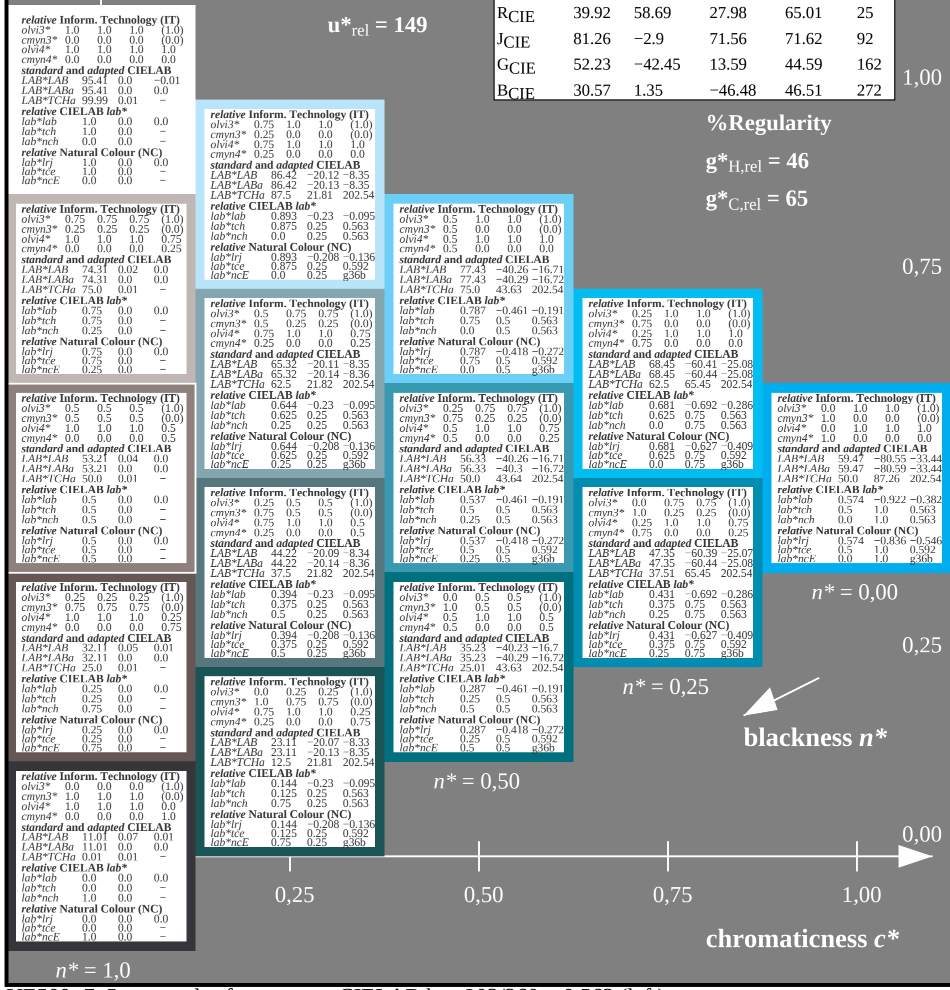
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

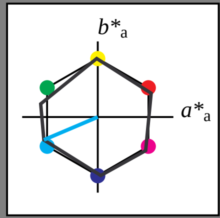
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NRS18
for hue *h = *lab*h* = 203/360 = 0.564**
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 57 77 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness *t*



%Gamut

u^*_{rel} = 100

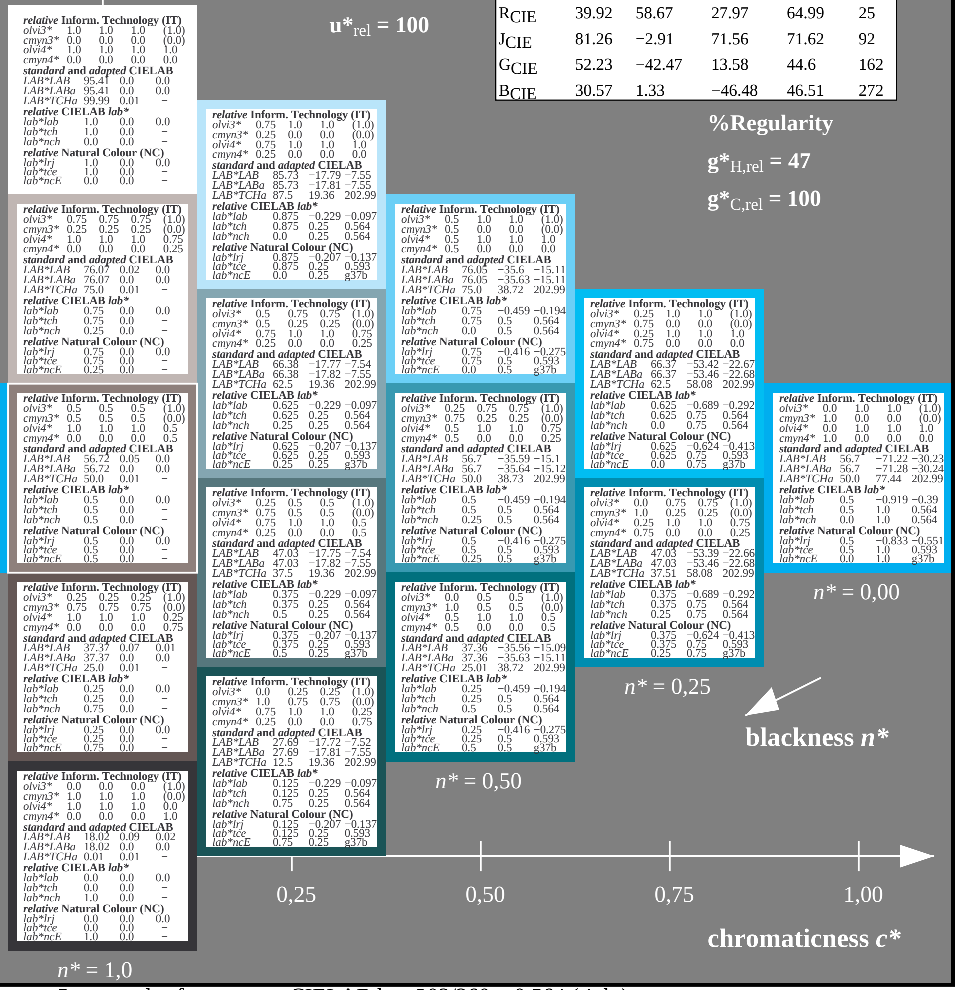
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



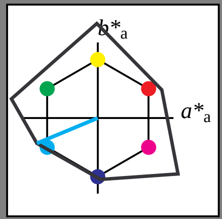
UE500−7, 5 step scales for constant CIELAB hue 203/360 = 0.563 (left)

5 step scales for constant CIELAB hue 203/360 = 0.564 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 203/360 = 0.563$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

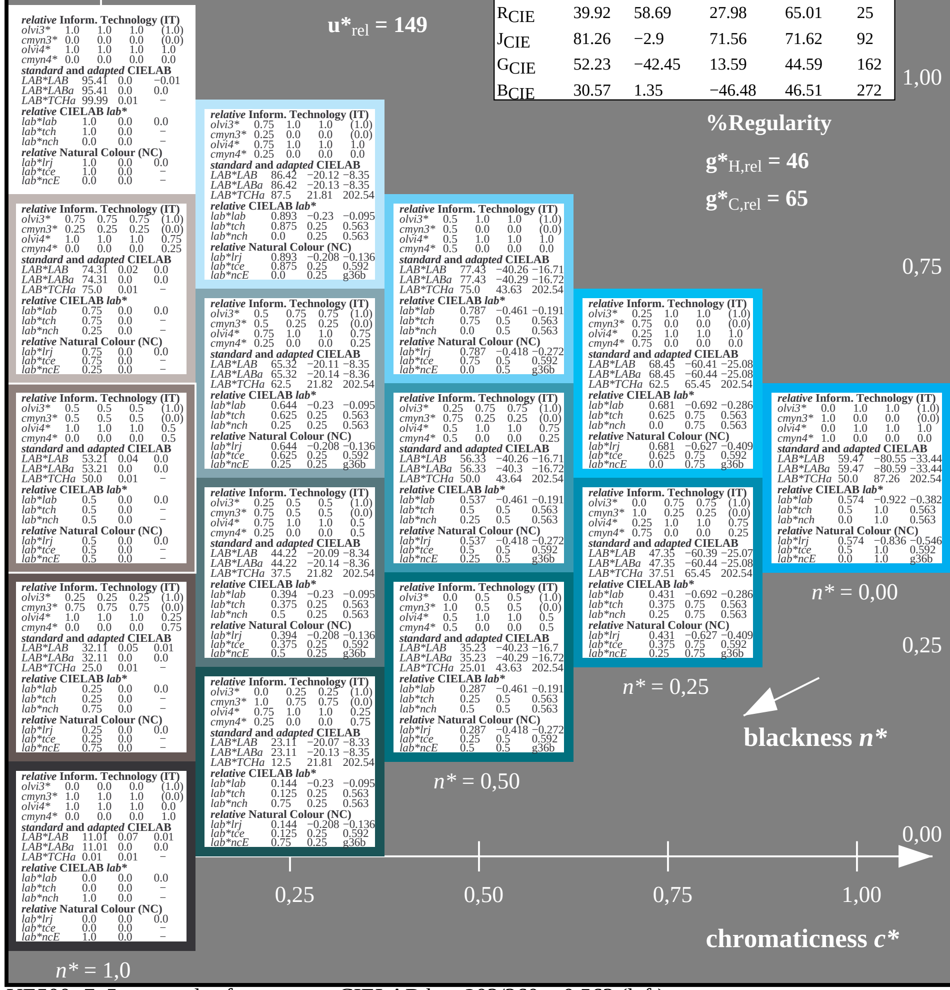
triangle lightness t^*



%Gamut
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

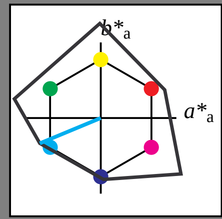
%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 203/360 = 0.563$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

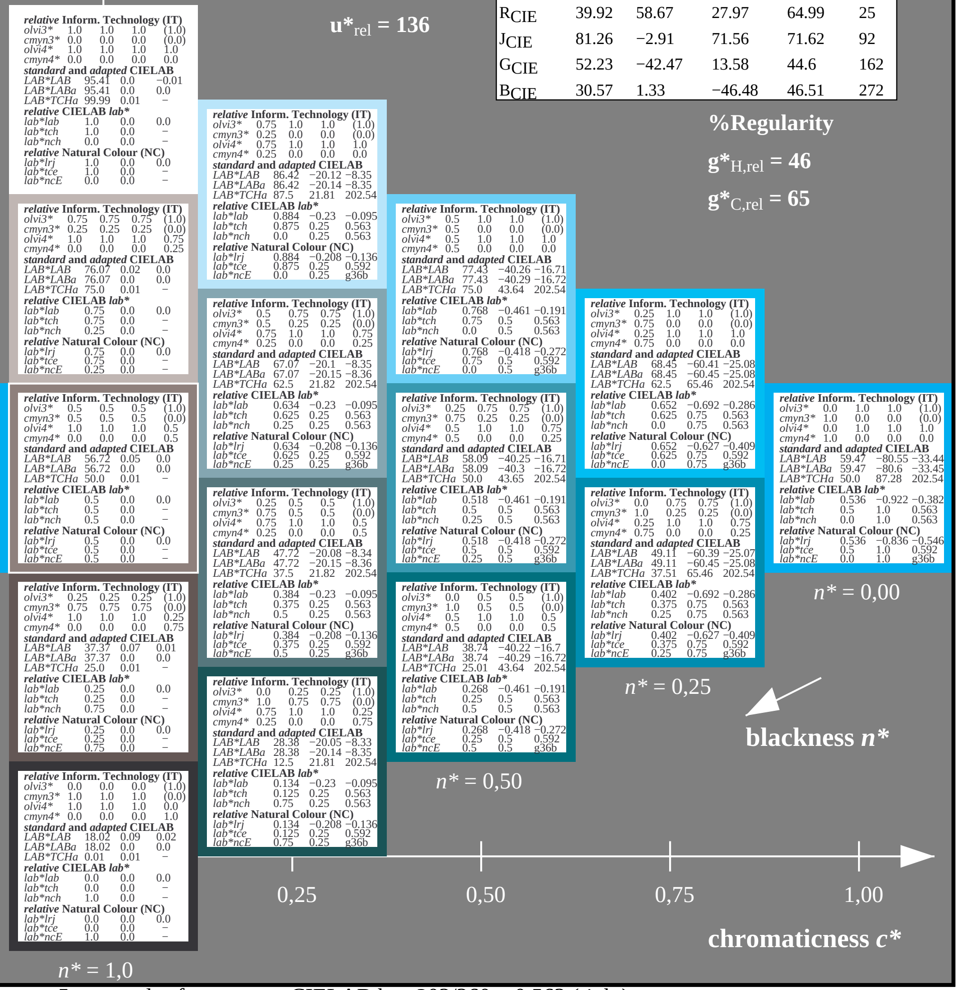
triangle lightness t^*



%Gamut
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



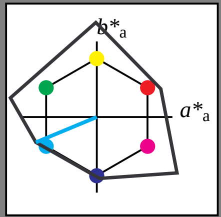
UE500−7, 5 step scales for constant CIELAB hue 203/360 = 0.563 (left)

5 step scales for constant CIELAB hue 203/360 = 0.563 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 203/360 = 0.563$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*

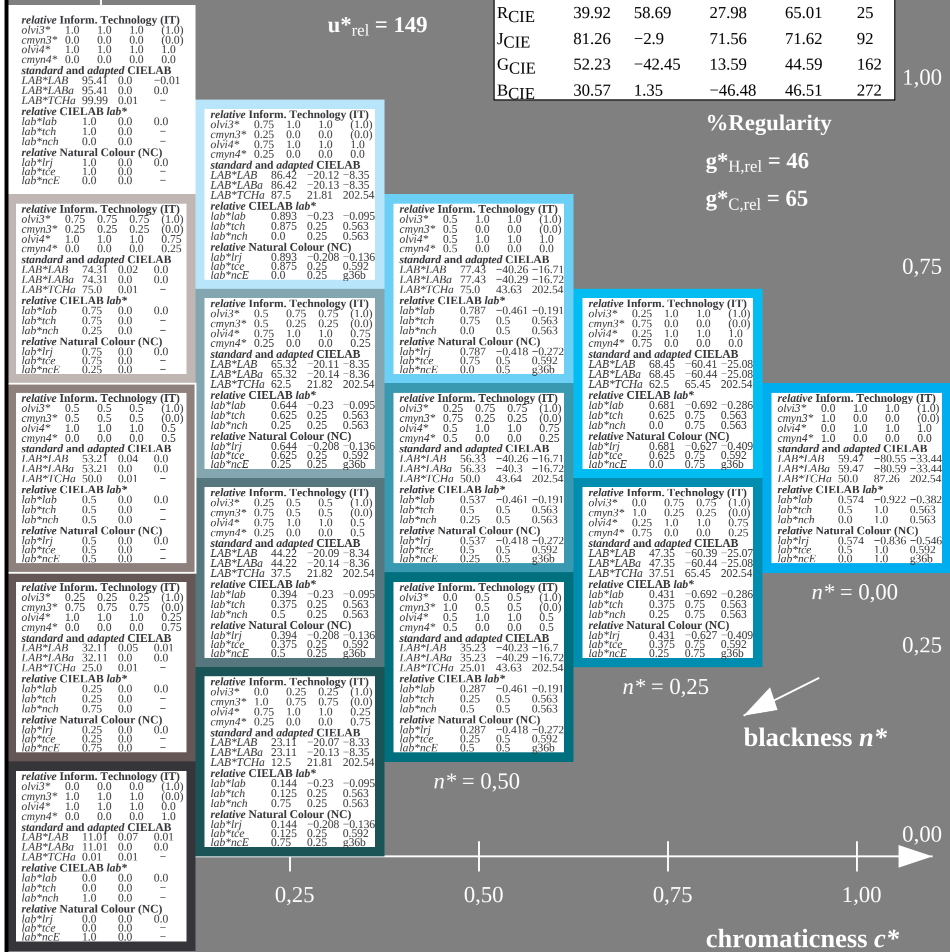


%Gamut
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

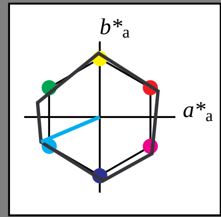
%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 203/360 = 0.564$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 53 84 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness t^*

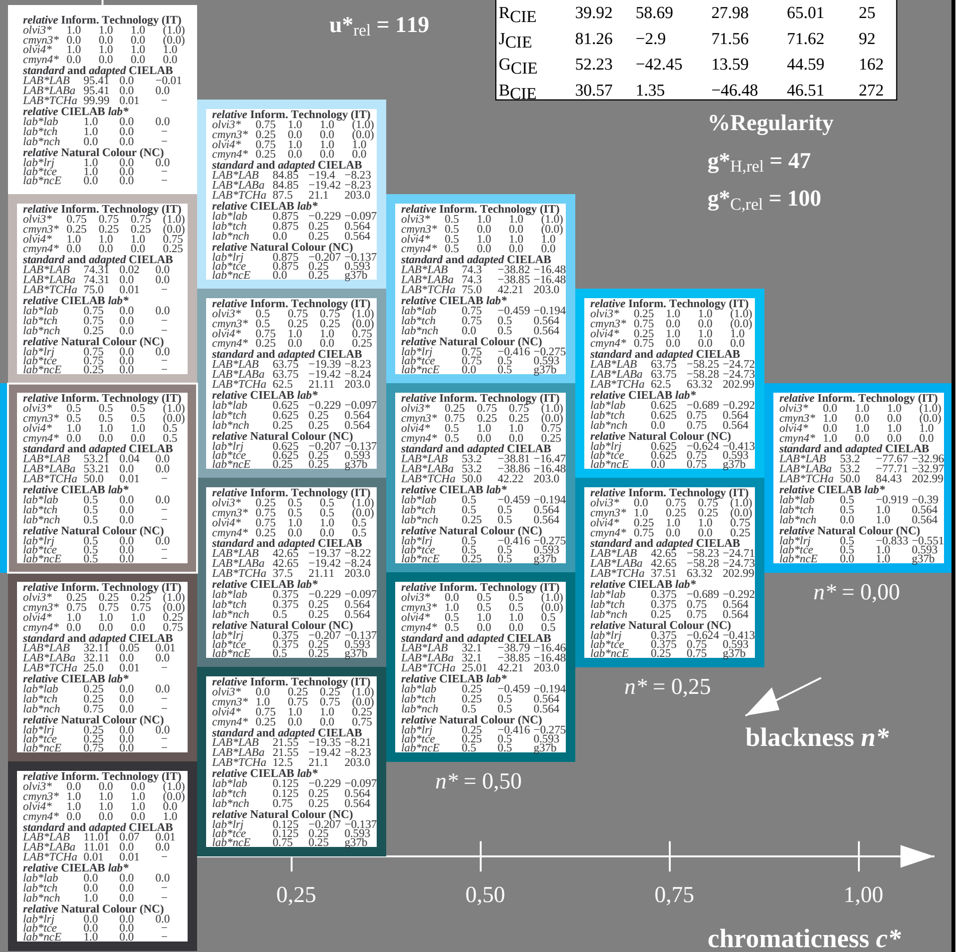


%Gamut
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100



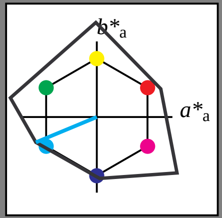
UE500−7, 5 step scales for constant CIELAB hue 203/360 = 0.563 (left)

5 step scales for constant CIELAB hue 203/360 = 0.564 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 203/360 = 0.563$
*lab*tch and lab*nch*

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

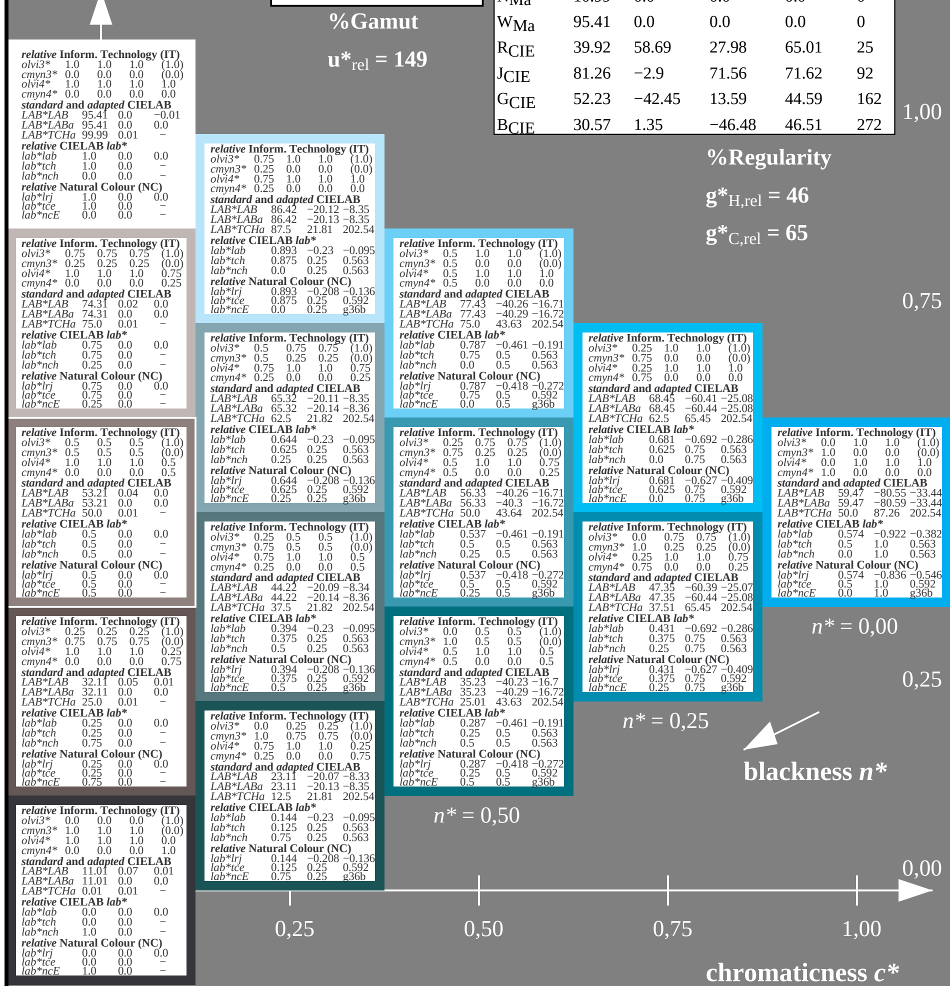
triangle lightness t^*



%Gamut
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

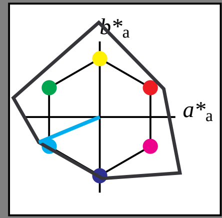
%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 203/360 = 0.563$
*lab*tch and lab*nch*

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

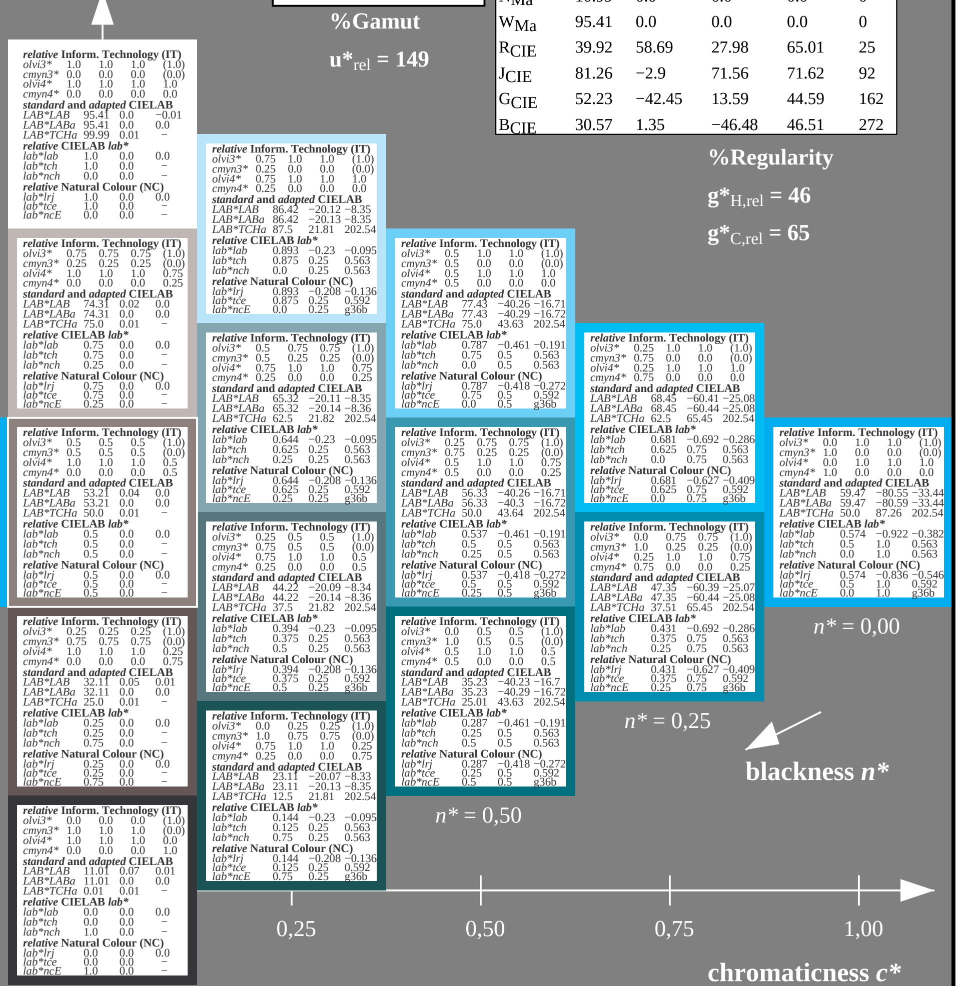
triangle lightness t^*



%Gamut
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



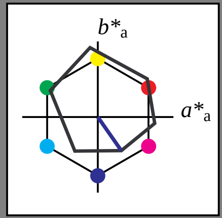
UE500−7, 5 step scales for constant CIELAB hue 203/360 = 0.563 (left)

5 step scales for constant CIELAB hue 203/360 = 0.563 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*

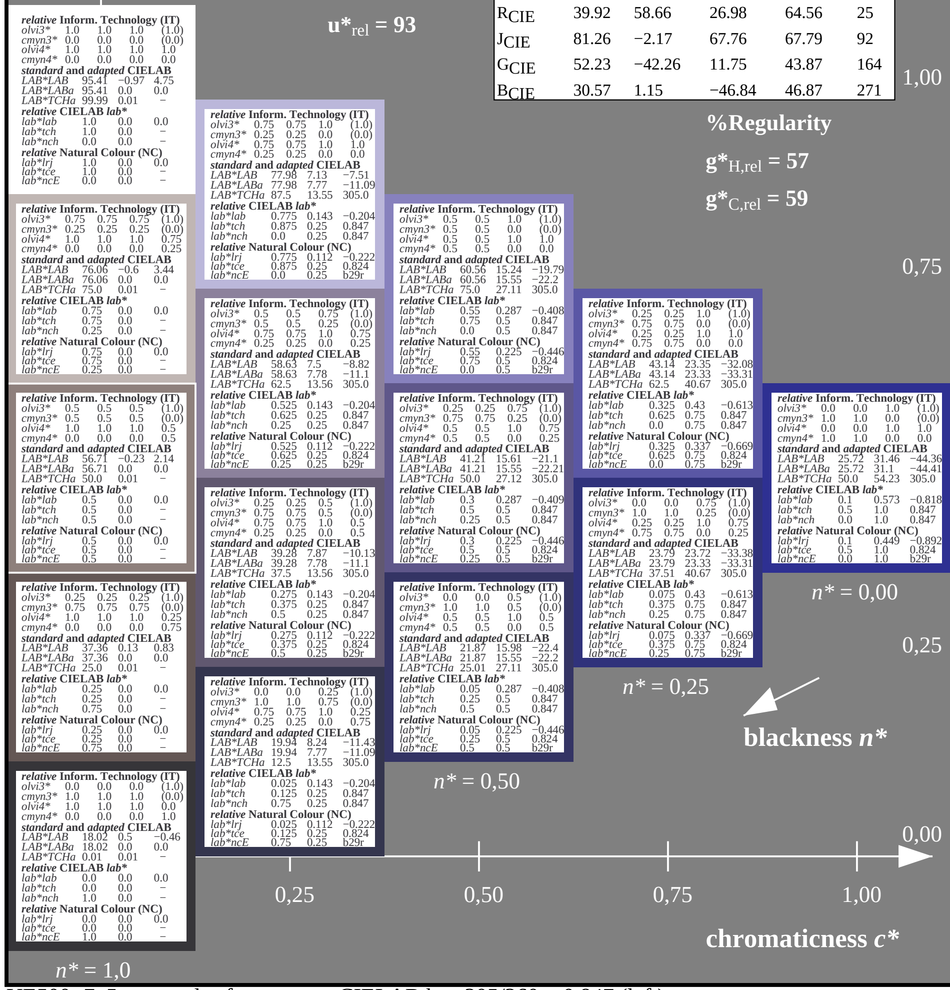


%Gamut
$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

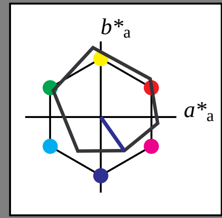
%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*

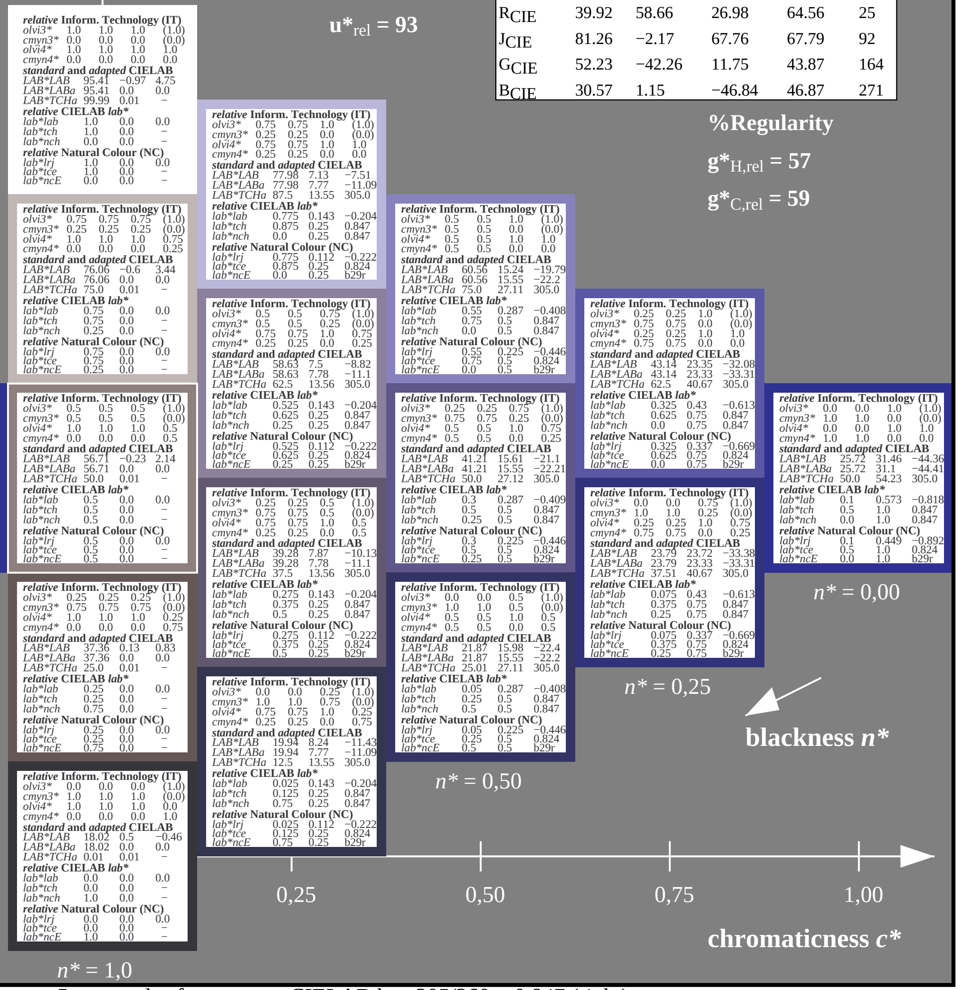


%Gamut
$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$

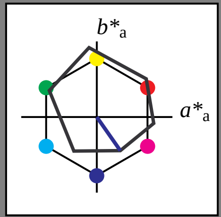


UE500−7, 5 step scales for constant CIELAB hue 305/360 = 0.847 (left)

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

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab^*tch and lab^*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0
triangle lightness t^*

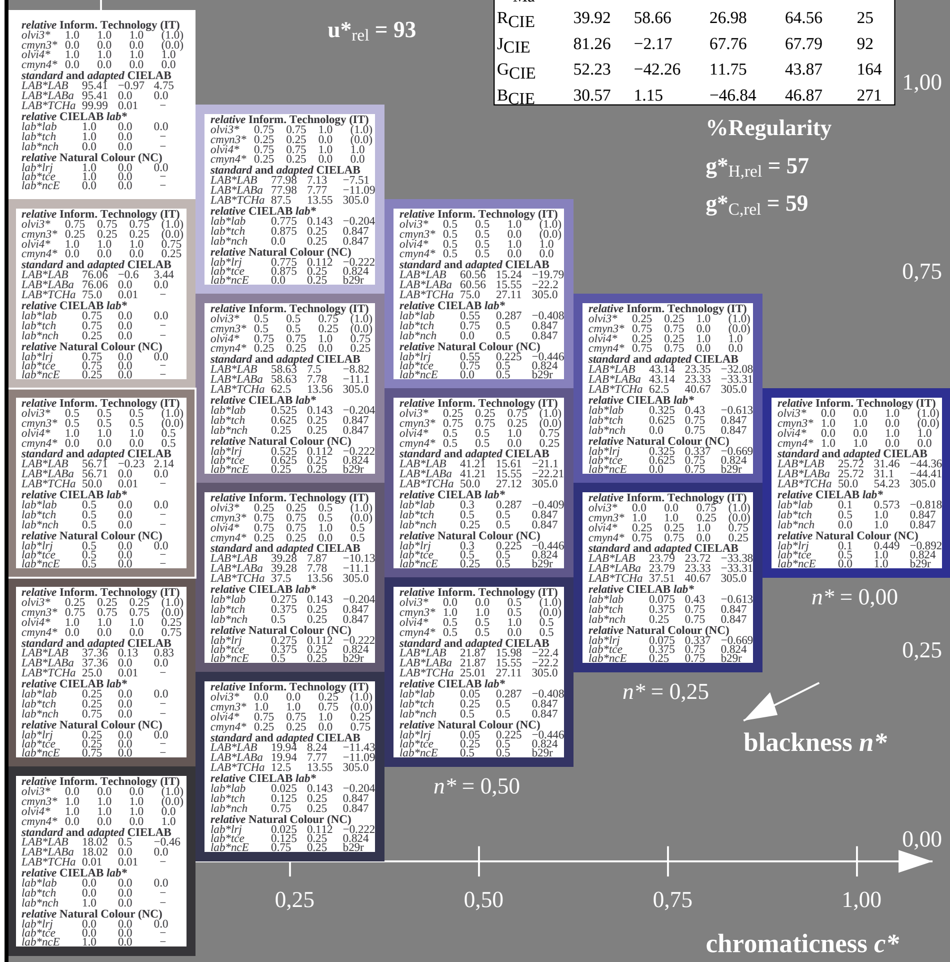


%Gamut
$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data

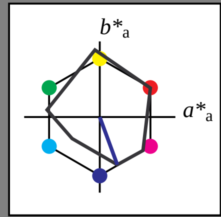
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 290/360 = 0.806$
lab^*tch and lab^*nch

D65: hue B
LCH*Ma: 37 67 290
rgb*Ma: 0.0 0.0 1.0
triangle lightness t^*

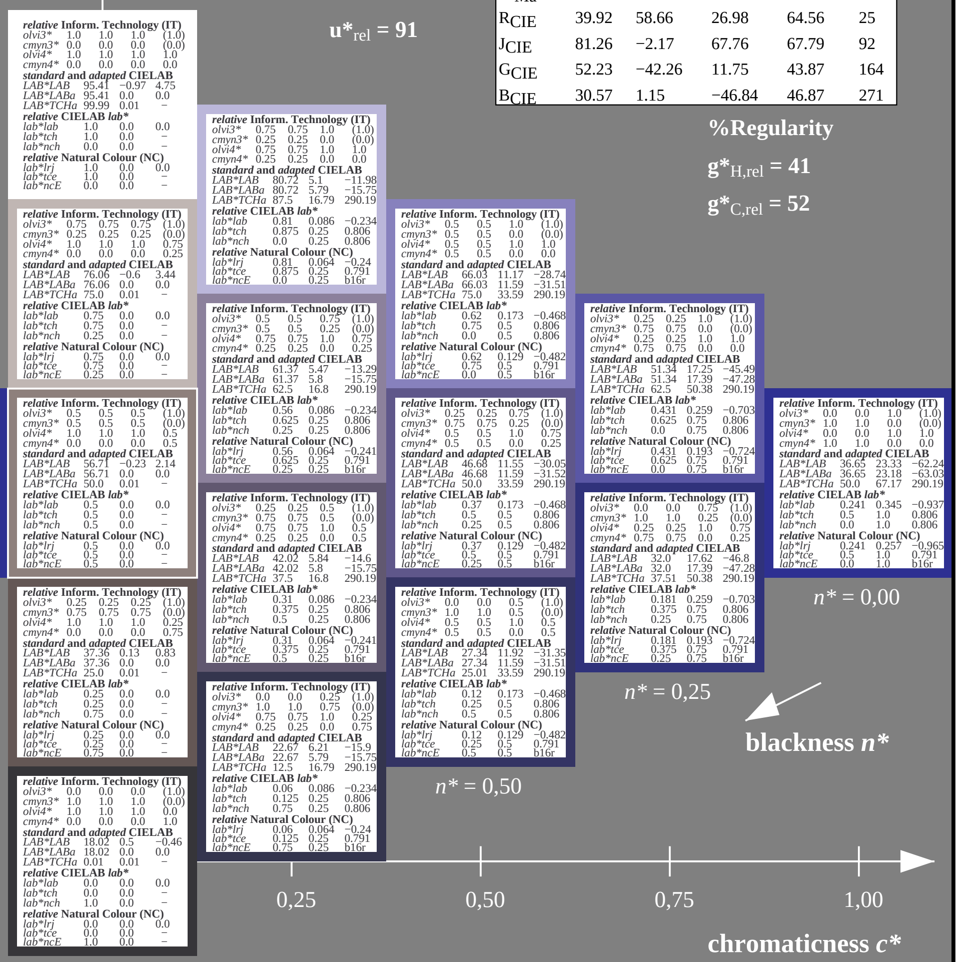


%Gamut
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

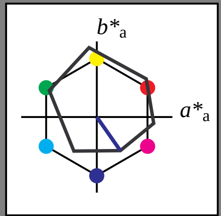
%Regularity
$g^*_{H,rel} = 41$
$g^*_{C,rel} = 52$



UE500−7, 5 step scales for constant CIELAB hue 305/360 = 0.847 (left)

5 step scales for constant CIELAB hue 290/360 = 0.806 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 305/360 = 0.847$
*lab*tch and lab*nch*

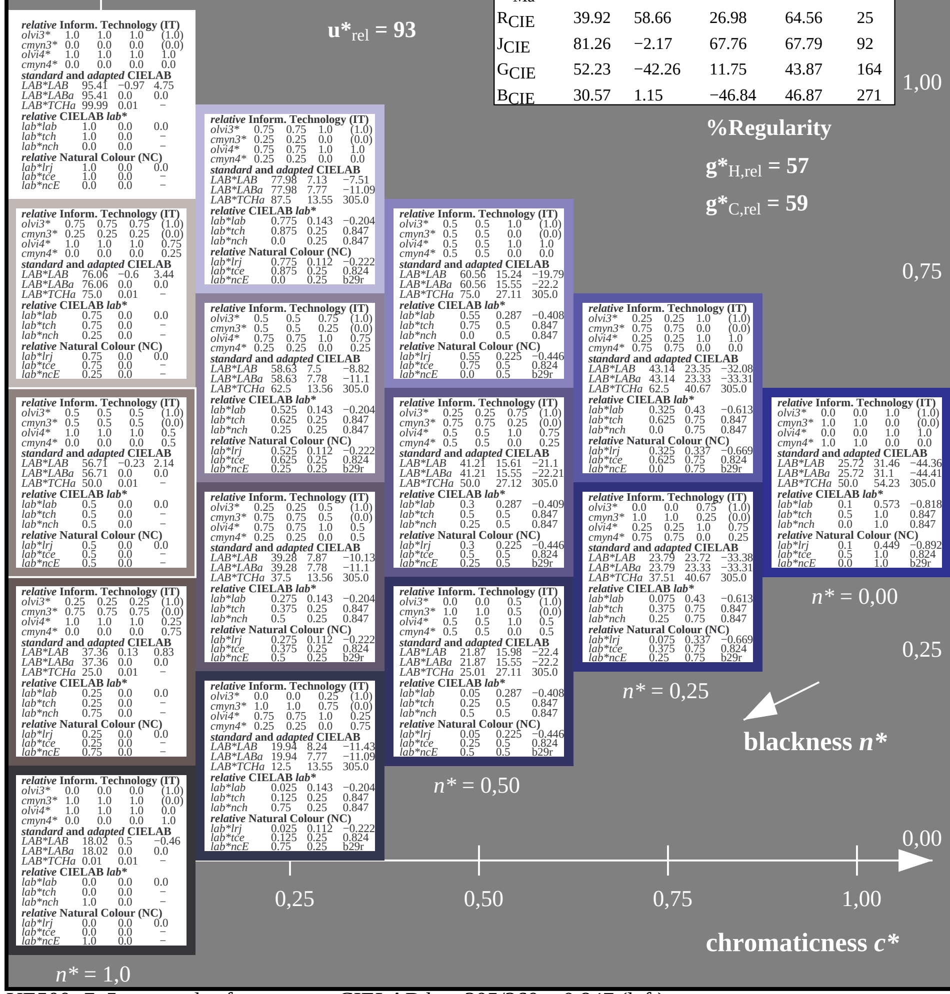


D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0
triangle lightness t^*

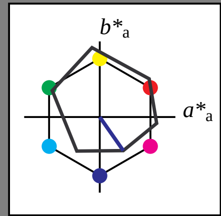
%Gamut
$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 305/360 = 0.847$
*lab*tch and lab*nch*

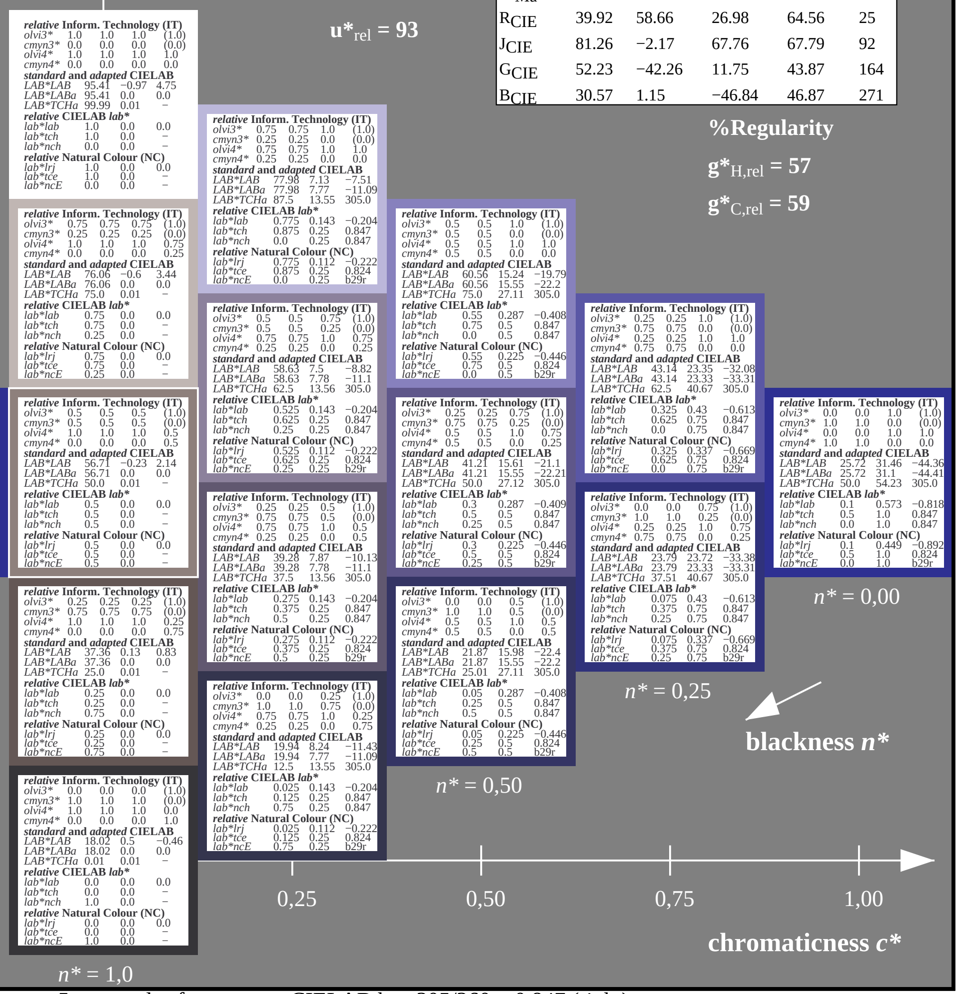


D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0
triangle lightness t^*

%Gamut
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



UE500−7, 5 step scales for constant CIELAB hue 305/360 = 0.847 (left)

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

Input: Colorimetric Reflective System ORS18

for hue *h = *lab*h* = 305/360 = 0.847**

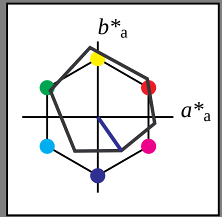
lab*tch* and *lab*nch

D65: hue V

LCH*Ma: 26 54 305

rgb*Ma: 0.0 0.0 1.0

triangle lightness *t**



%Gamut

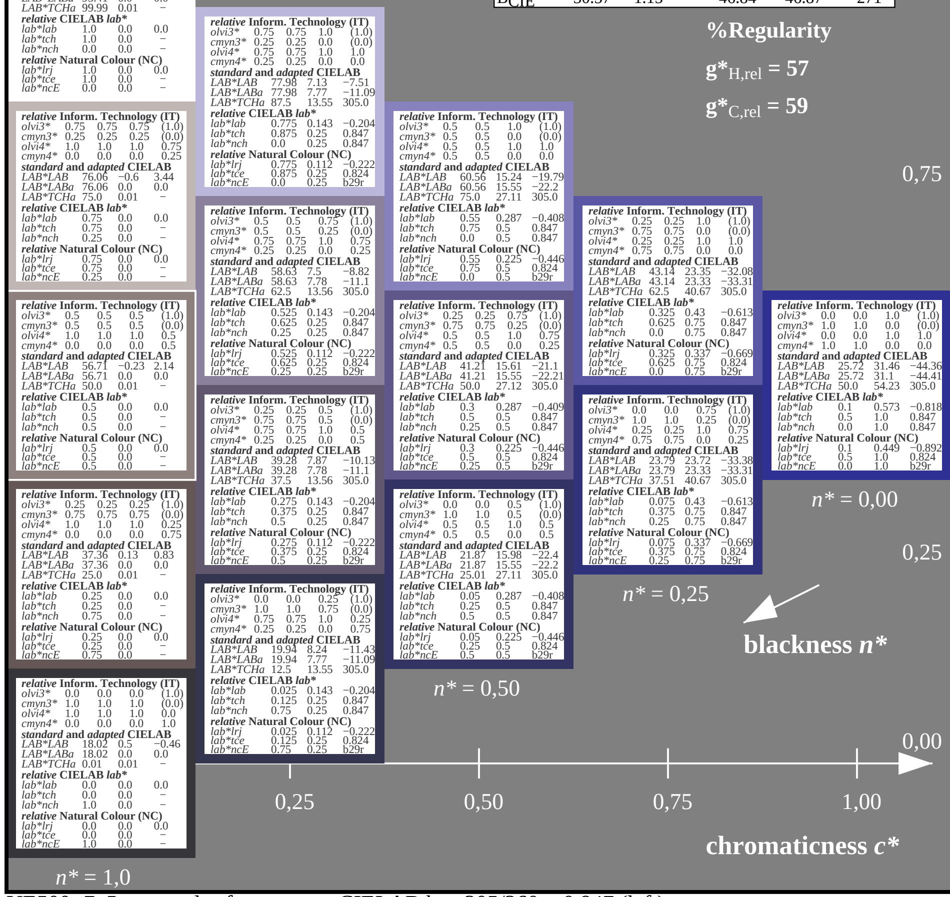
u^*_{rel} = 93

ORS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



Output: Colorimetric Reflective System MRS18a

for hue *h = *lab*h* = 290/360 = 0.807**

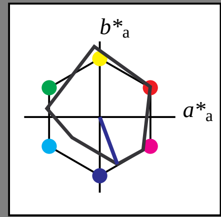
lab*tch* and *lab*nch

D65: hue B

LCH*Ma: 37 66 290

rgb*Ma: 0.0 0.0 1.0

triangle lightness *t**



%Gamut

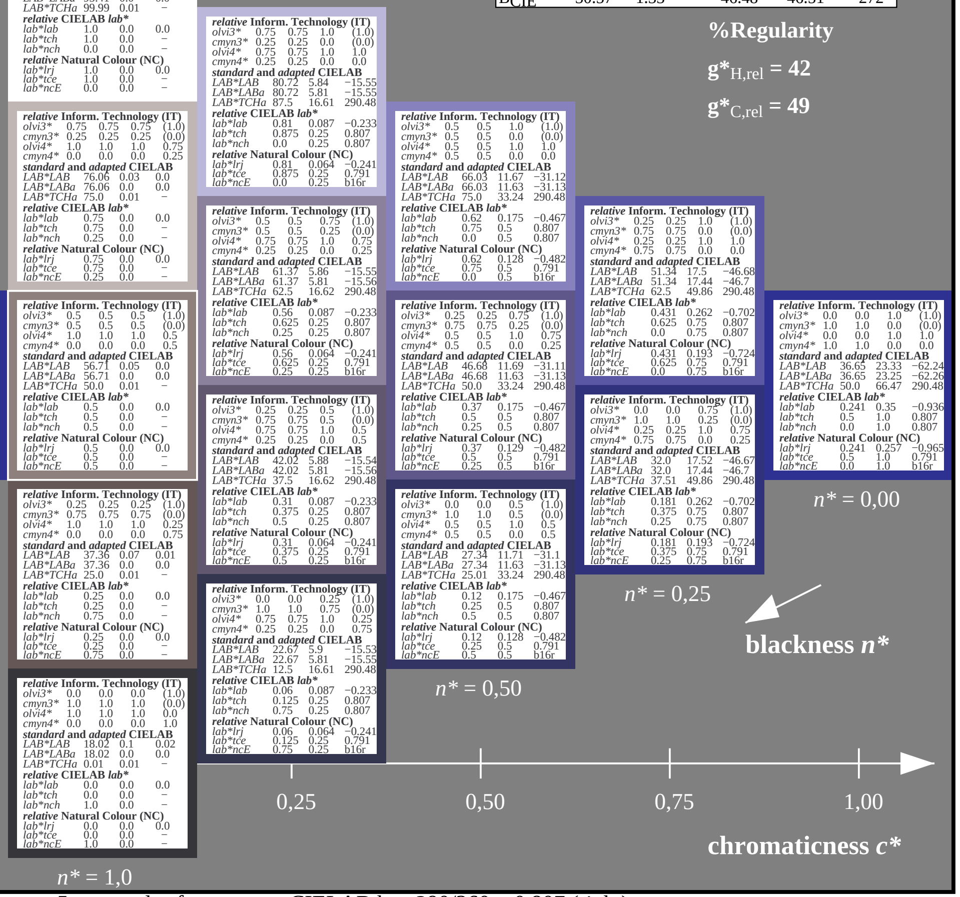
u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



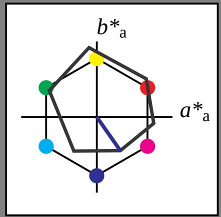
UE500−7, 5 step scales for constant CIELAB hue 305/360 = 0.847 (left)

5 step scales for constant CIELAB hue 290/360 = 0.807 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab^*tch and lab^*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

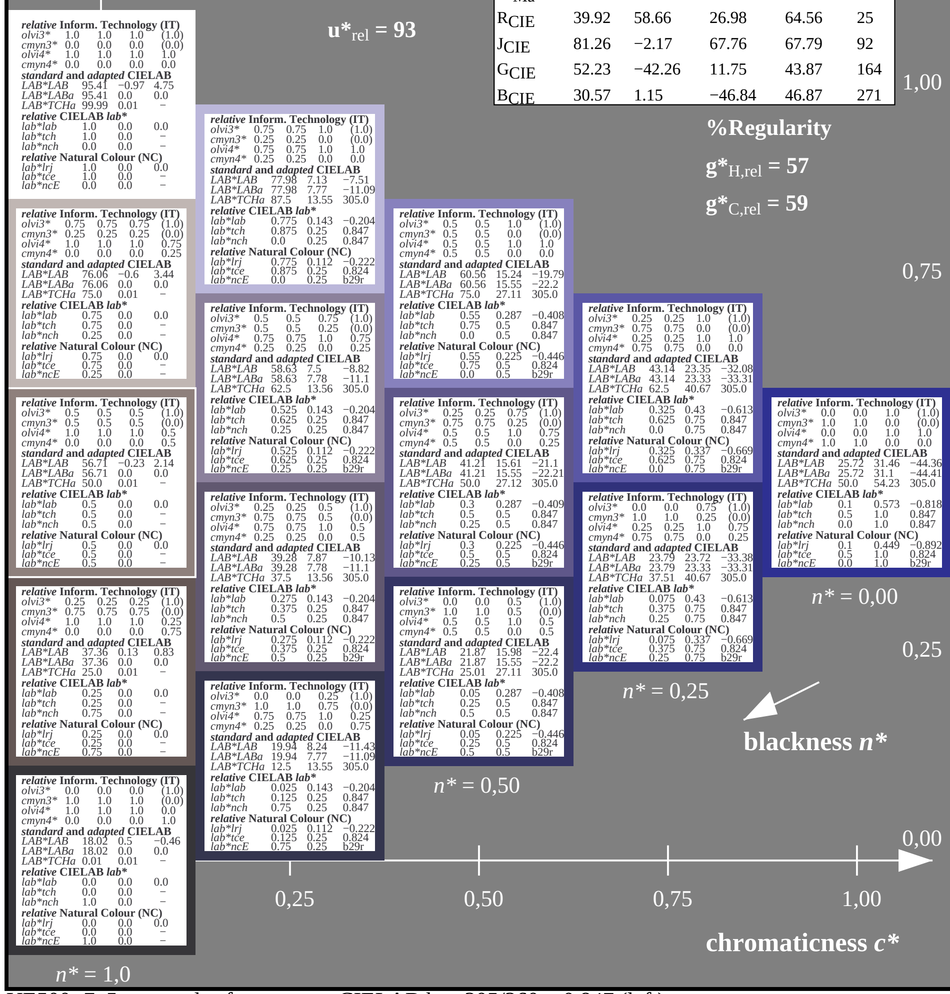
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

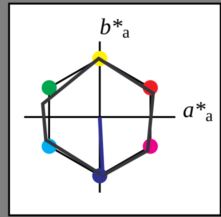
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 273/360 = 0.758$
lab^*tch and lab^*nch

D65: hue B
LCH*Ma: 57 77 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 100$

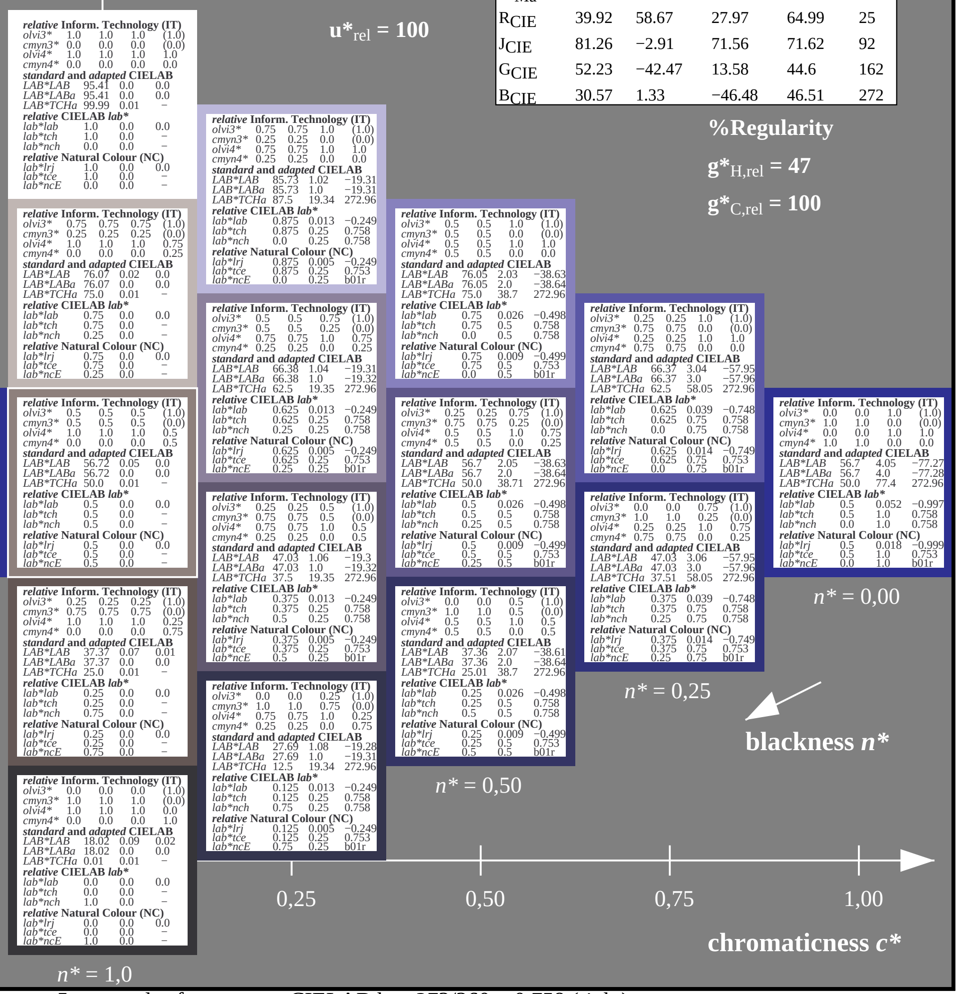
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



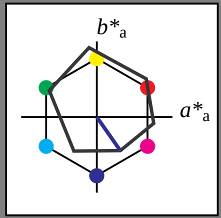
UE500−7, 5 step scales for constant CIELAB hue 305/360 = 0.847 (left)

5 step scales for constant CIELAB hue 273/360 = 0.758 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab*tch and lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

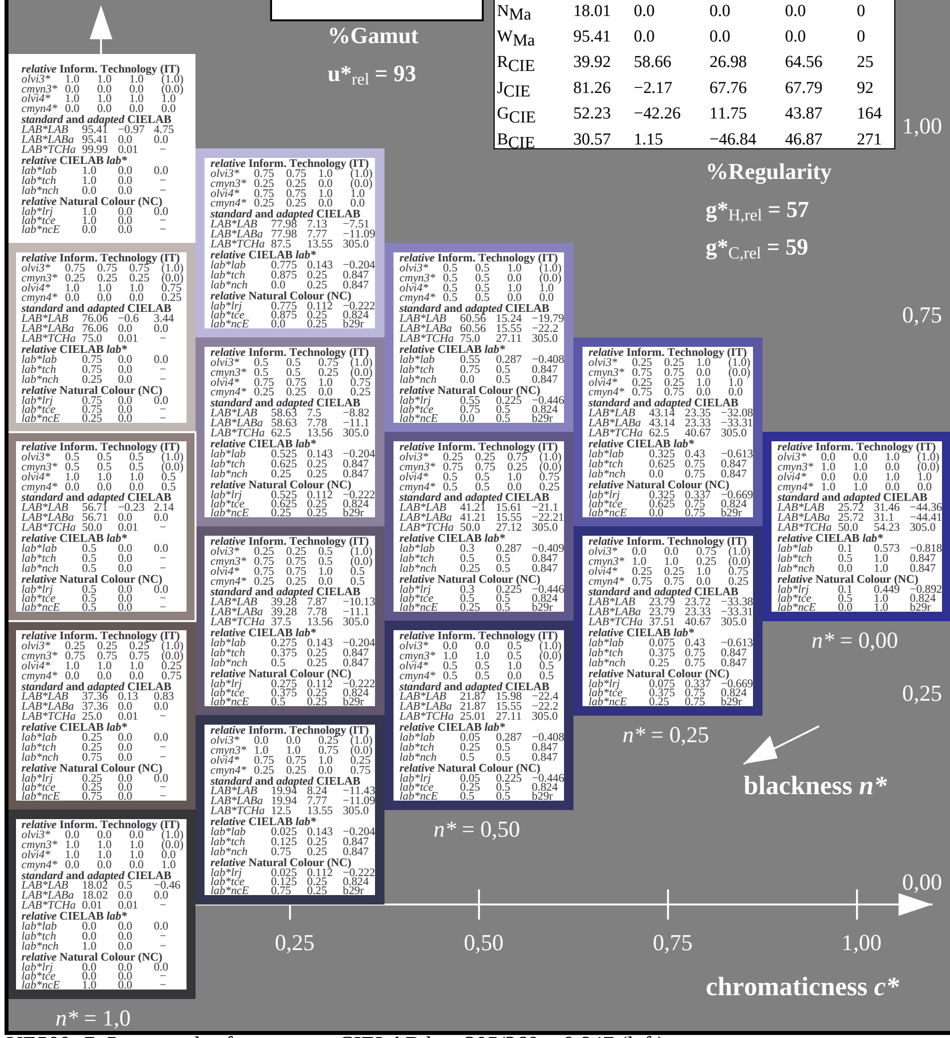
triangle lightness t^*



%Gamut
u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

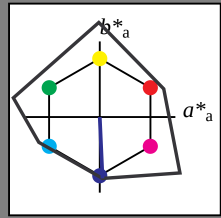
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch and lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

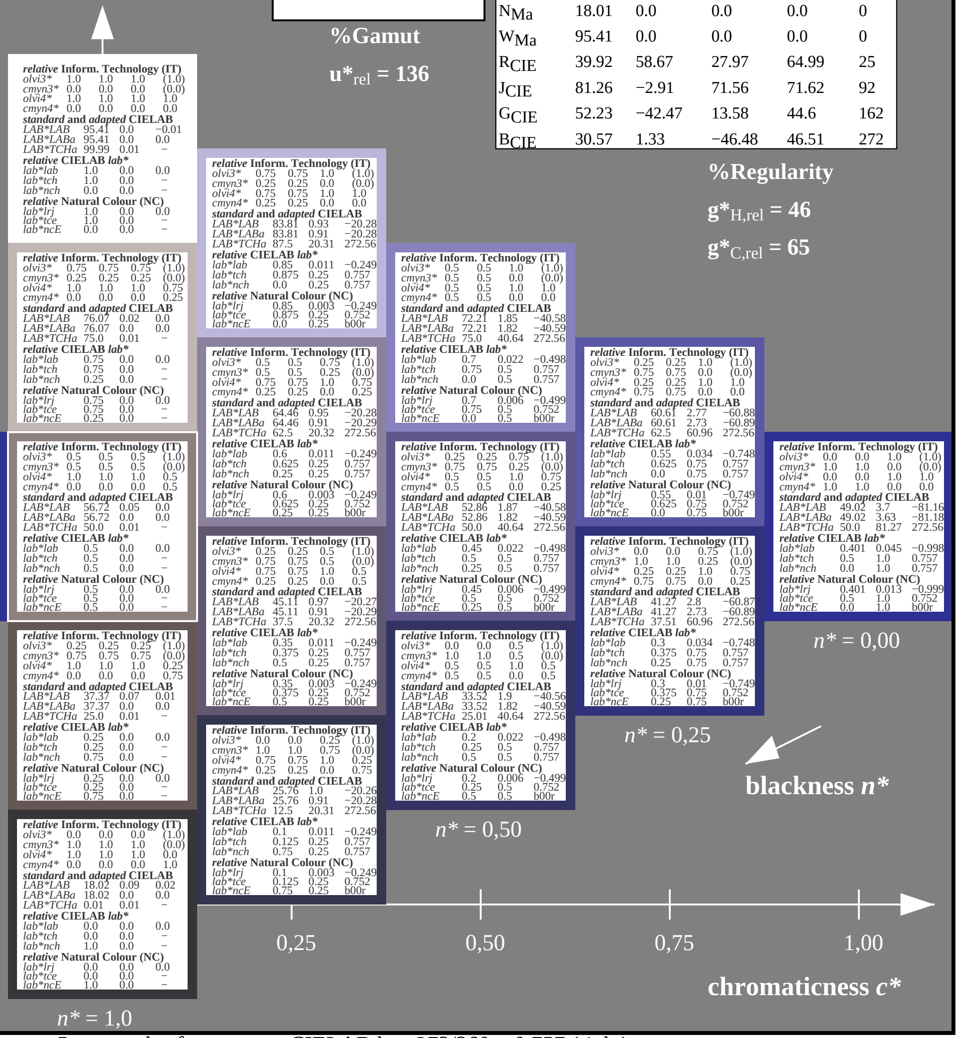
triangle lightness t^*



%Gamut
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272



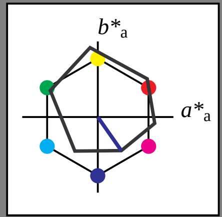
UE500−7, 5 step scales for constant CIELAB hue 305/360 = 0.847 (left)

5 step scales for constant CIELAB hue 273/360 = 0.757 (right)

Input: Colorimetric Reflective System ORS18
for hue *h = *lab*h* = 305/360 = 0.847**
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness *t**



%Gamut

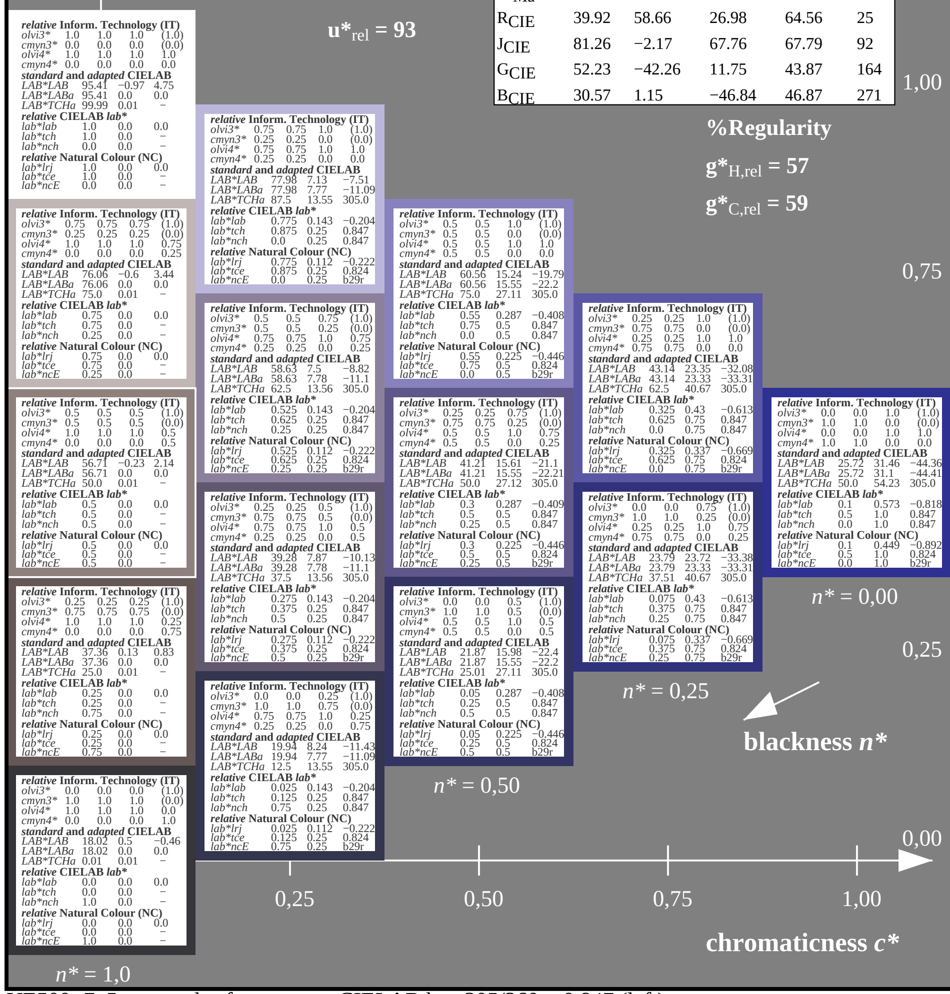
u^*_{rel} = 93

ORS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

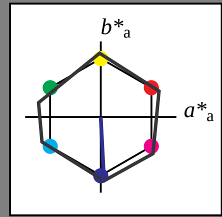
$g^*_{C,rel}$ = 59



Output: Colorimetric Reflective System NRS11
for hue *h = *lab*h* = 273/360 = 0.758**
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 84 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness *t**



%Gamut

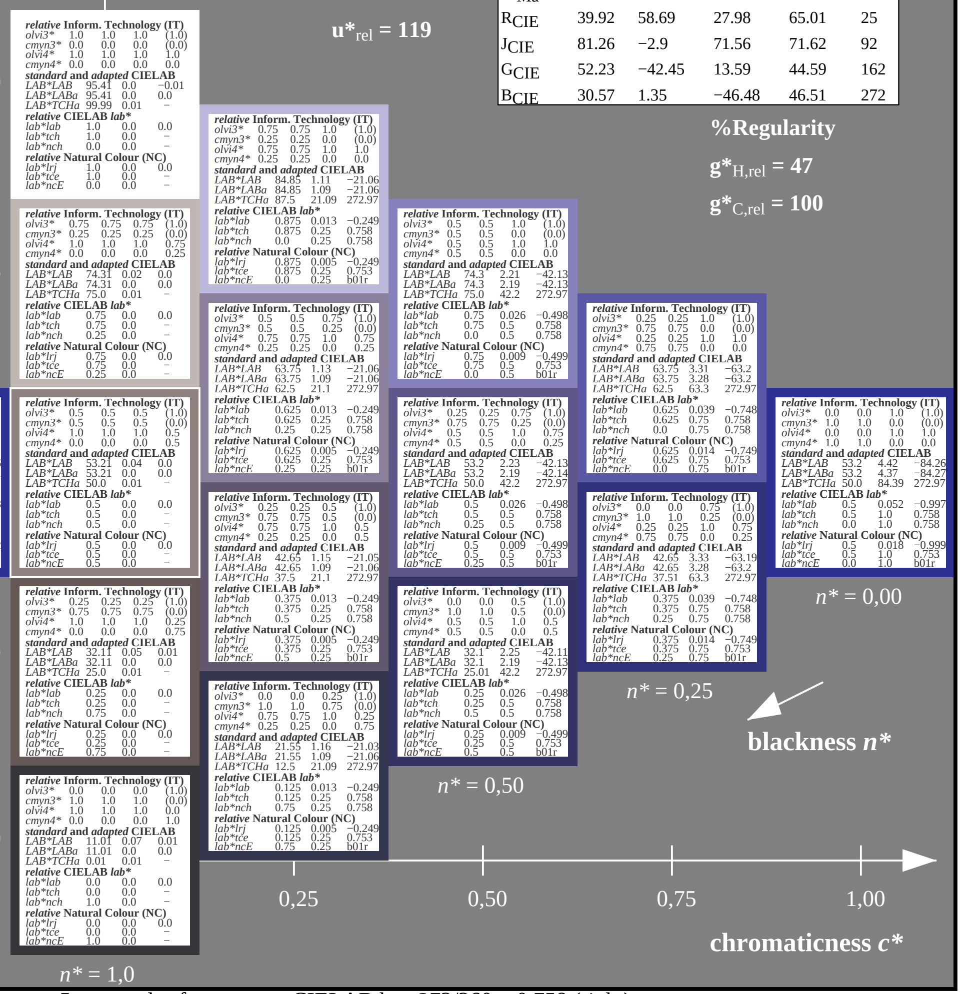
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



UE500−7, 5 step scales for constant CIELAB hue 305/360 = 0.847 (left)

5 step scales for constant CIELAB hue 273/360 = 0.758 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 305/360 = 0.847$

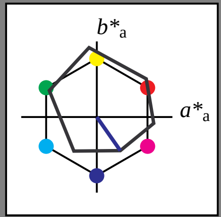
*lab*tch and lab*nch*

D65: hue V

LCH*Ma: 26 54 305

rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

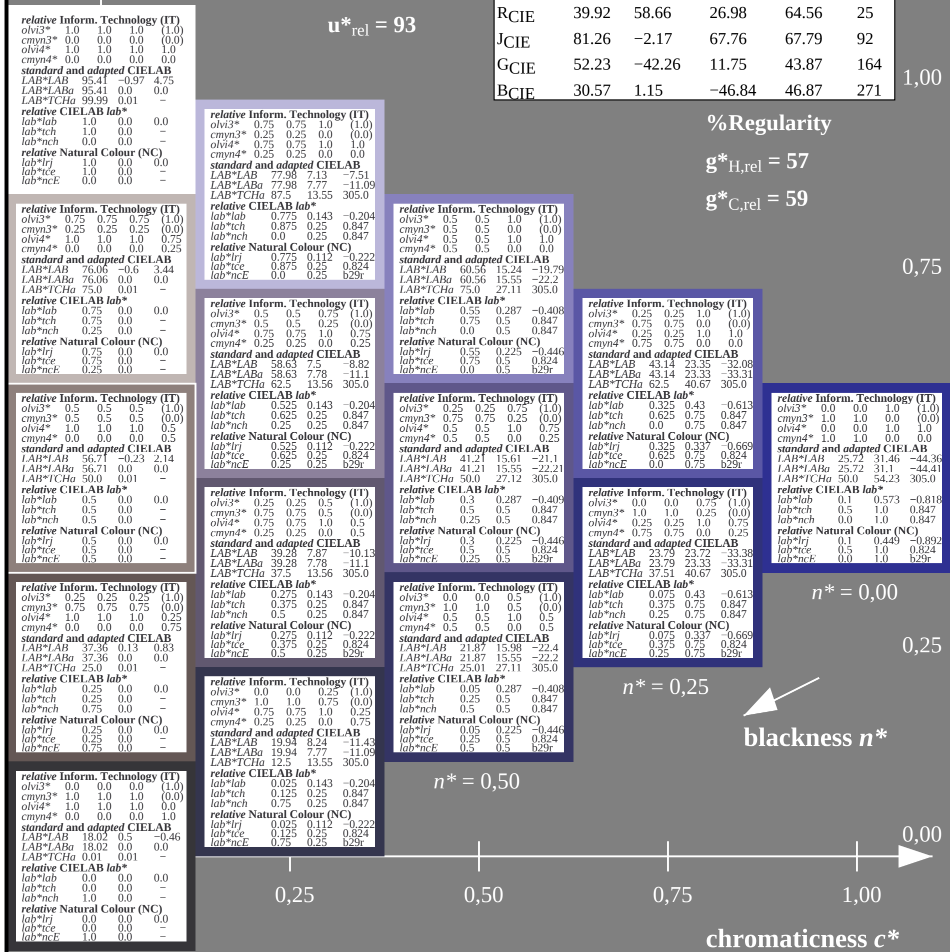
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 273/360 = 0.757$

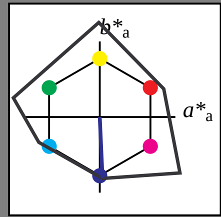
*lab*tch and lab*nch*

D65: hue B

LCH*Ma: 49 81 273

rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 149$

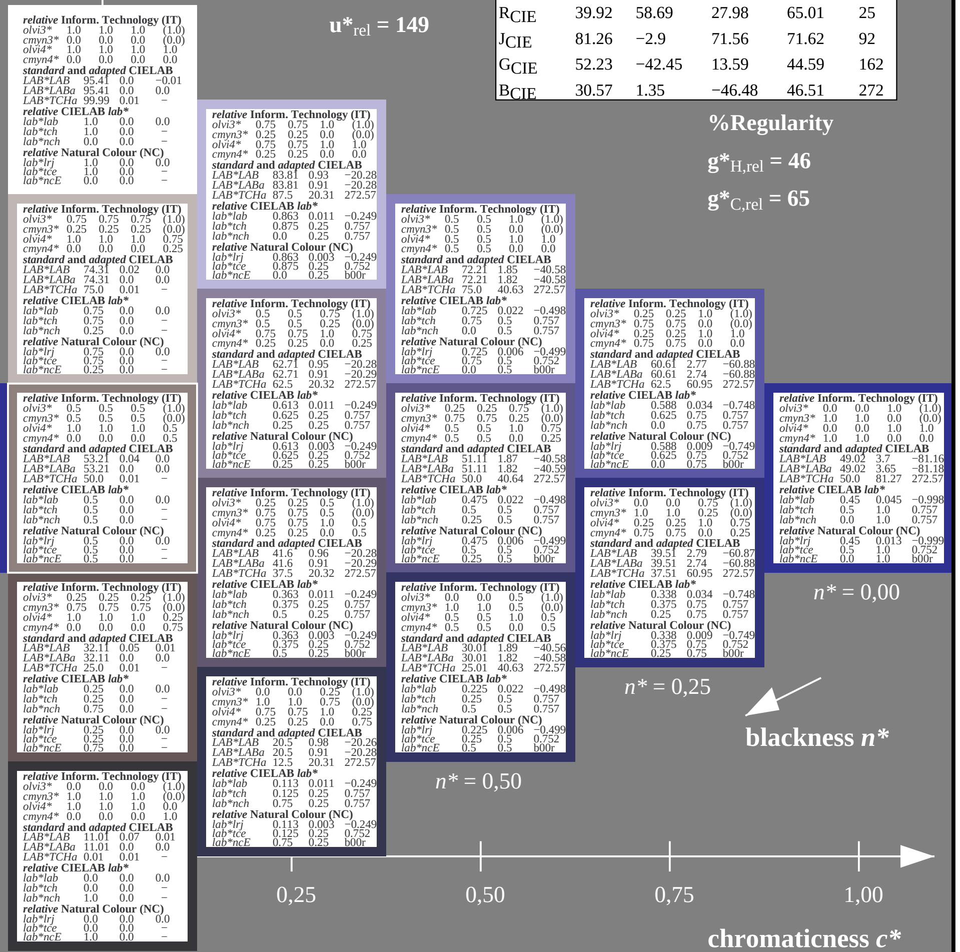
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



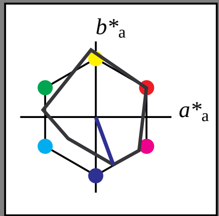
UE500−7, 5 step scales for constant CIELAB hue 305/360 = 0.847 (left)

5 step scales for constant CIELAB hue 273/360 = 0.757 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h$ = 290/360 = 0.806
lab^*tch and lab^*nch

D65: hue B
LCH*Ma: 37 67 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

u^*_{rel} = 91

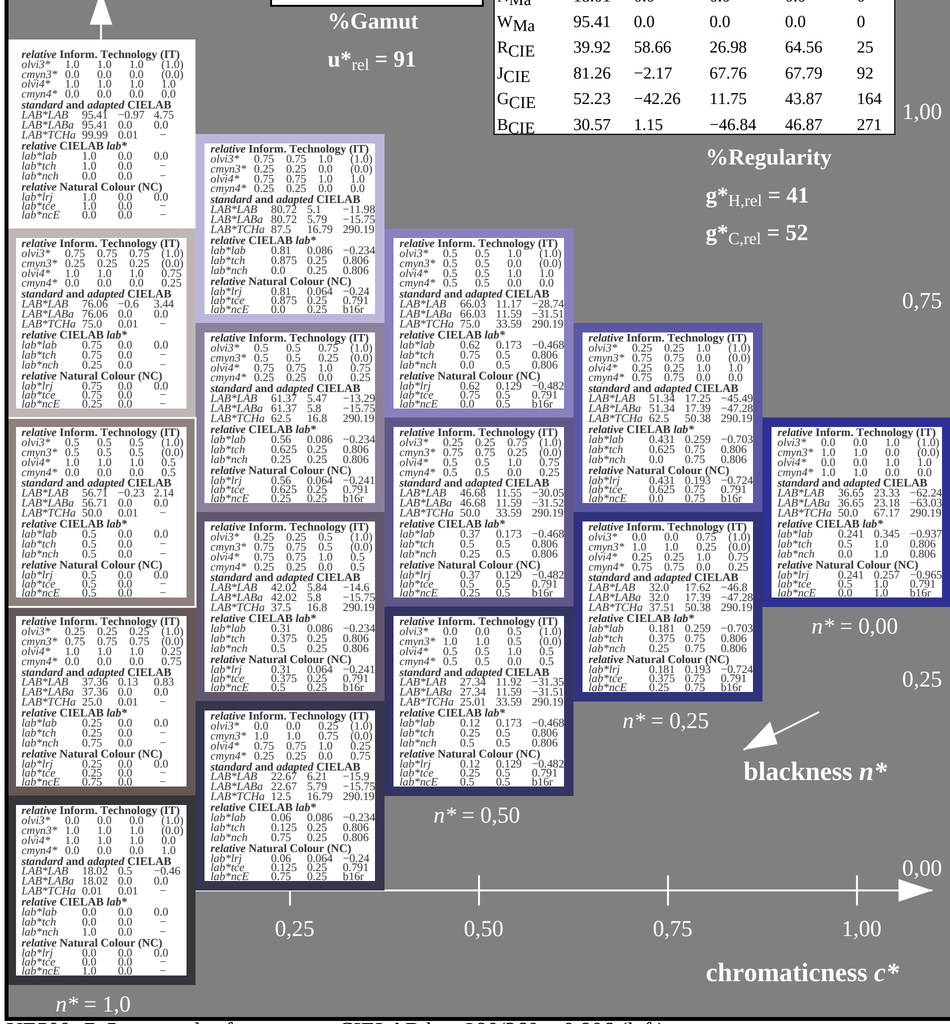
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

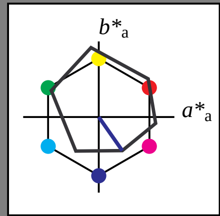
$g^*_{C,rel}$ = 52



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h$ = 305/360 = 0.847
lab^*tch and lab^*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

u^*_{rel} = 93

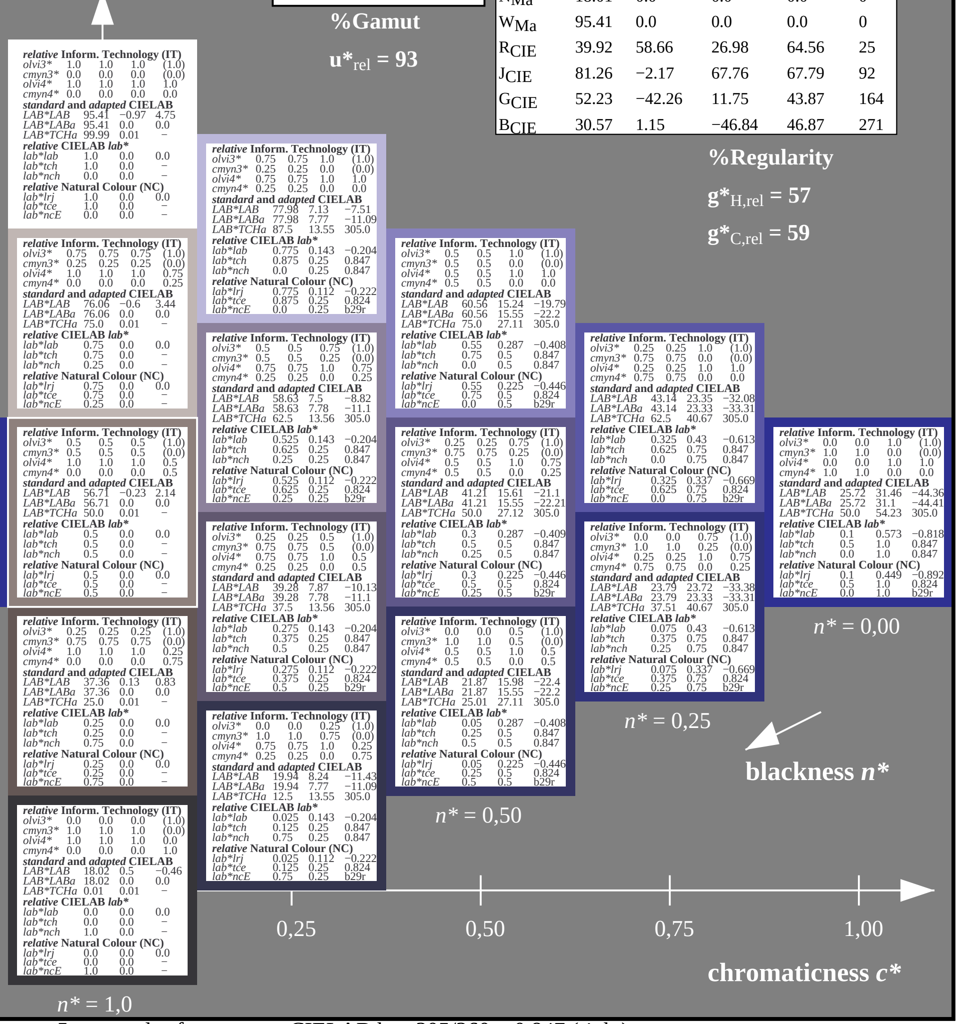
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



UE500−7, 5 step scales for constant CIELAB hue 290/360 = 0.806 (left)

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

Input: Colorimetric Reflective System MRS18

for hue $h^* = lab^*h = 290/360 = 0.806$

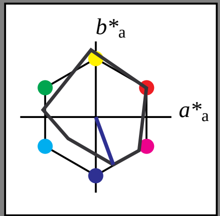
*lab*tch and lab*nch*

D65: hue B

LCH*Ma: 37 67 290

rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

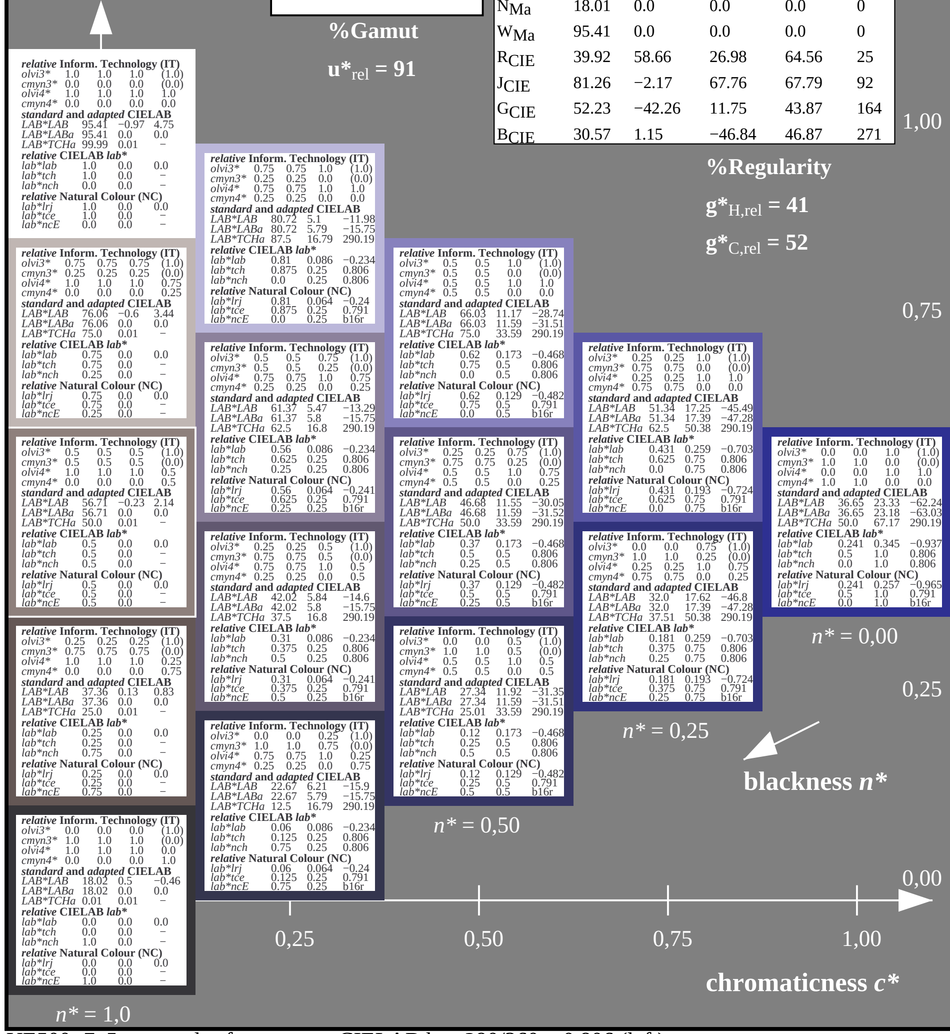
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System MRS18

for hue $h^* = lab^*h = 290/360 = 0.806$

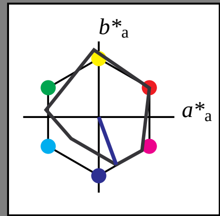
*lab*tch and lab*nch*

D65: hue B

LCH*Ma: 37 67 290

rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

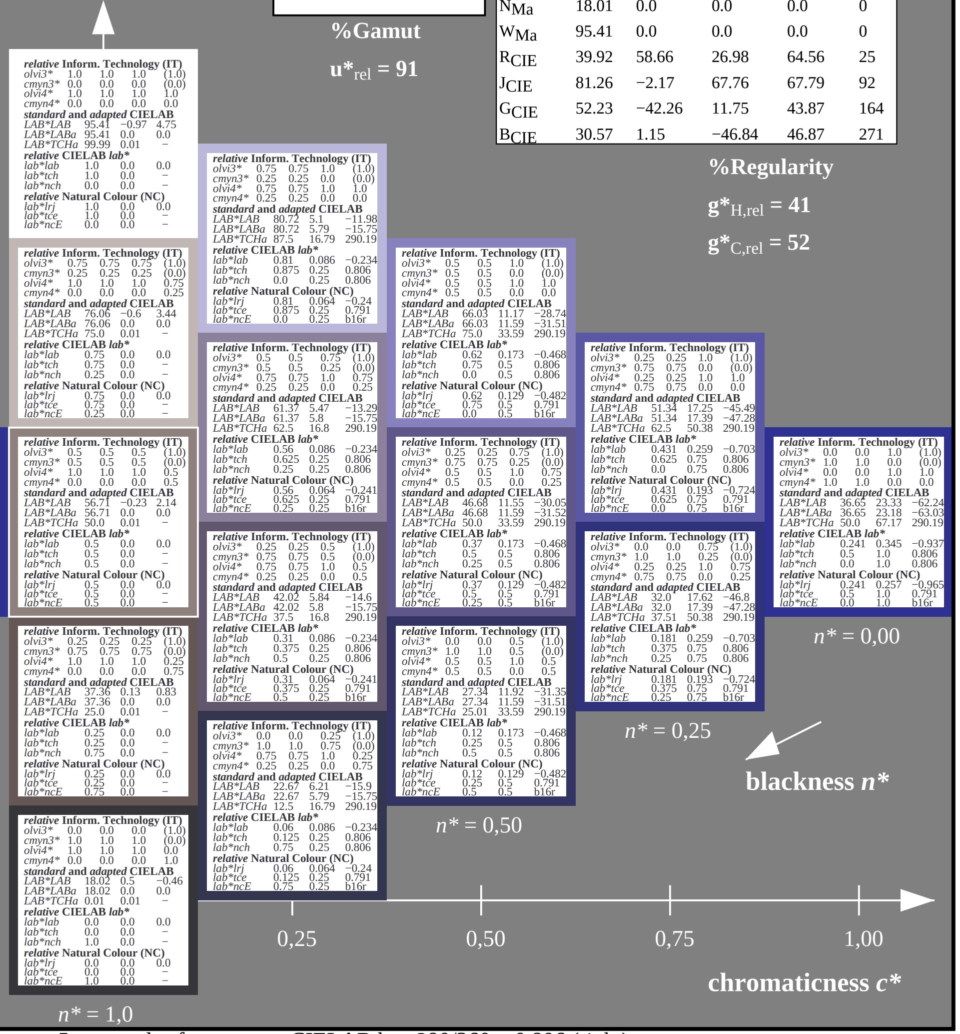
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

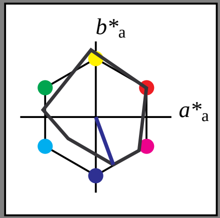


UE500−7, 5 step scales for constant CIELAB hue 290/360 = 0.806 (left)

5 step scales for constant CIELAB hue 290/360 = 0.806 (right)

Input: Colorimetric Reflective System MRS18
for hue *h = *lab*h* = 290/360 = 0.806**
lab*tch* and *lab*nch

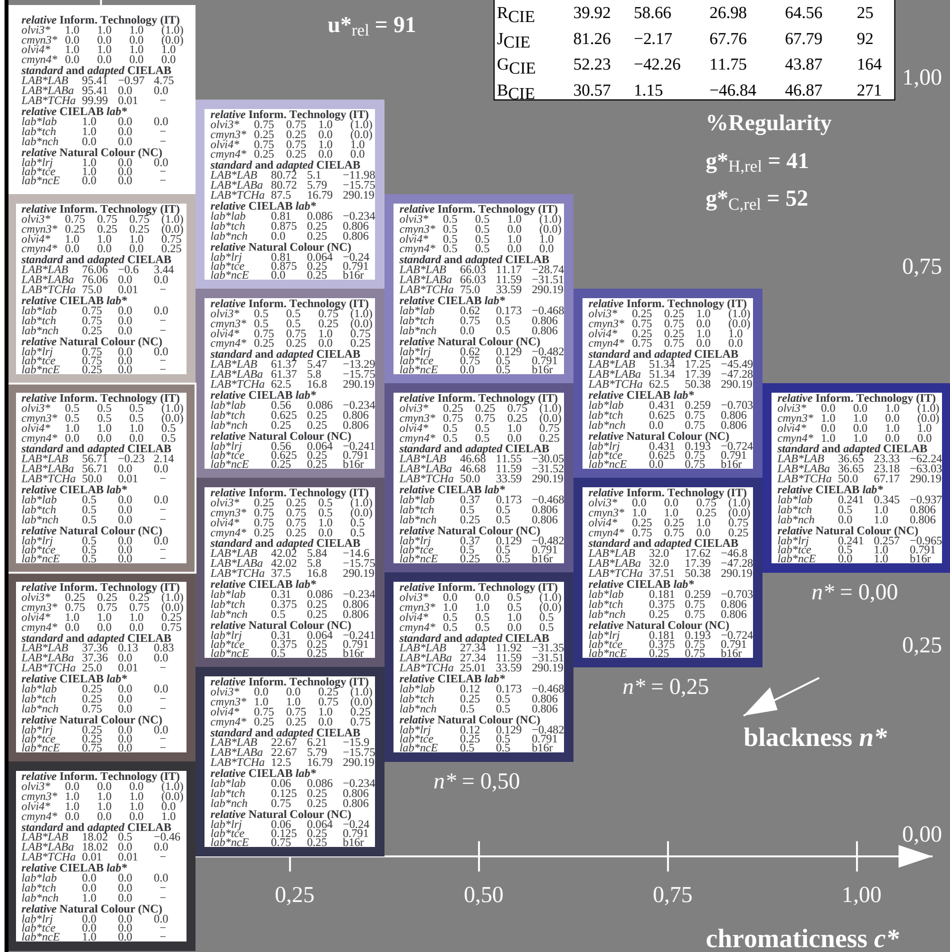
D65: hue B
LCH*Ma: 37 67 290
rgb*Ma: 0.0 0.0 1.0
triangle lightness *t**



%Gamut
u*rel = 91

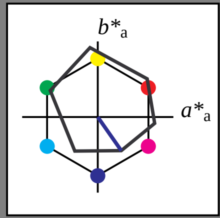
MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
g*H,rel = 41
g*C,rel = 52



Output: Colorimetric Reflective System TRS18
for hue *h = *lab*h* = 305/360 = 0.847**
lab*tch* and *lab*nch

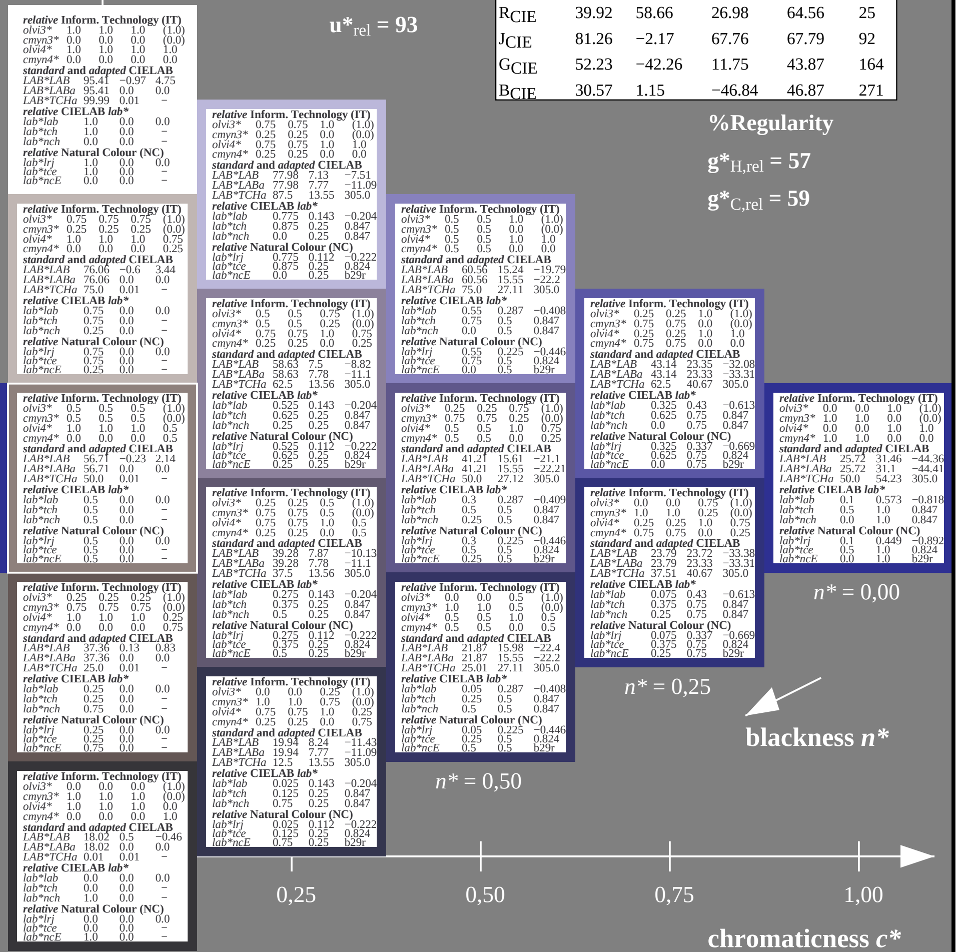
D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0
triangle lightness *t**



%Gamut
u*rel = 93

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
g*H,rel = 57
g*C,rel = 59

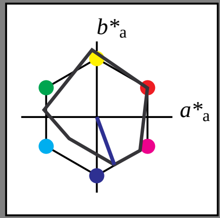


UE500−7, 5 step scales for constant CIELAB hue 290/360 = 0.806 (left)

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

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 290/360 = 0.806$
*lab*tch* and *lab*nch*

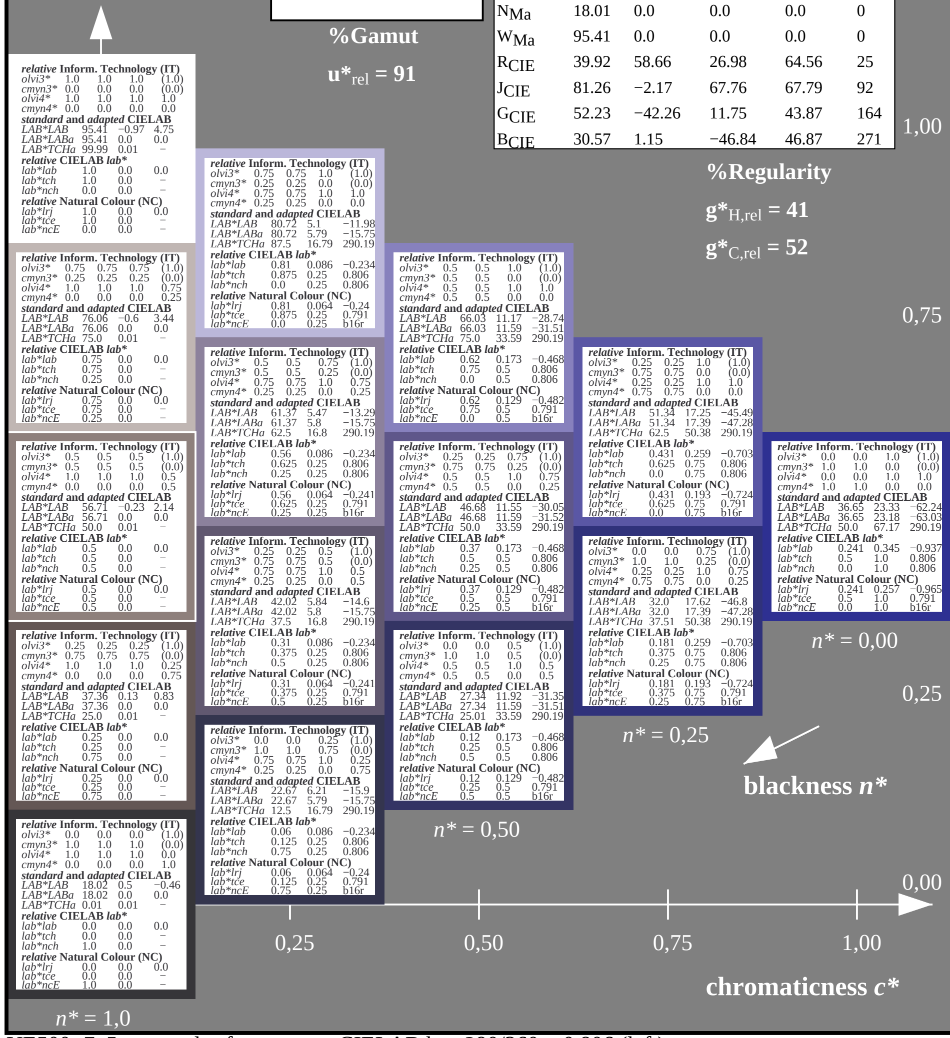
D65: hue B
LCH*Ma: 37 67 290
rgb*Ma: 0.0 0.0 1.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 91$

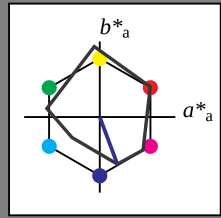
MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 41$
$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 290/360 = 0.807$
*lab*tch* and *lab*nch*

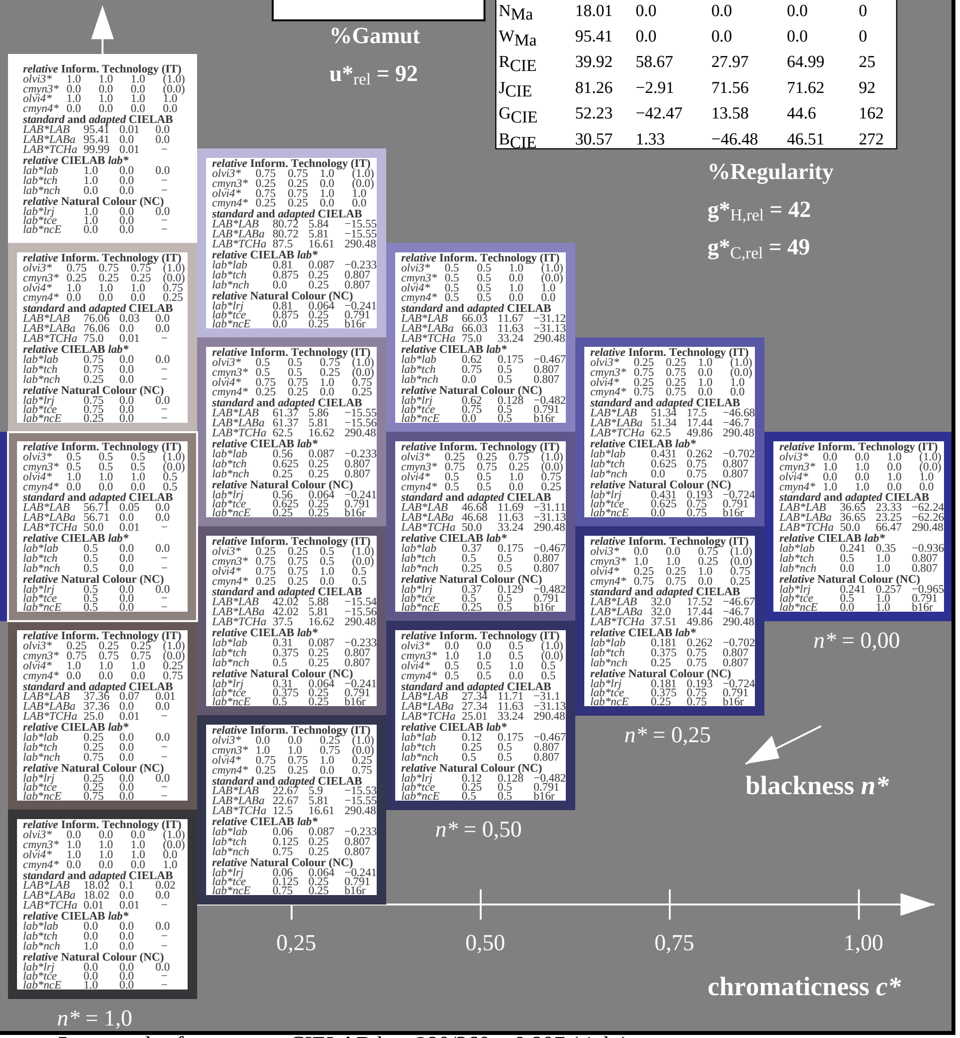
D65: hue B
LCH*Ma: 37 66 290
rgb*Ma: 0.0 0.0 1.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$



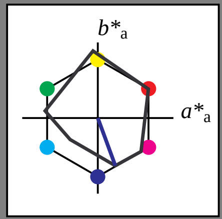
UE500−7, 5 step scales for constant CIELAB hue 290/360 = 0.806 (left)

5 step scales for constant CIELAB hue 290/360 = 0.807 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 290/360 = 0.806$
*lab*tch and lab*nch*

D65: hue B
LCH*Ma: 37 67 290
rgb*Ma: 0.0 0.0 1.0

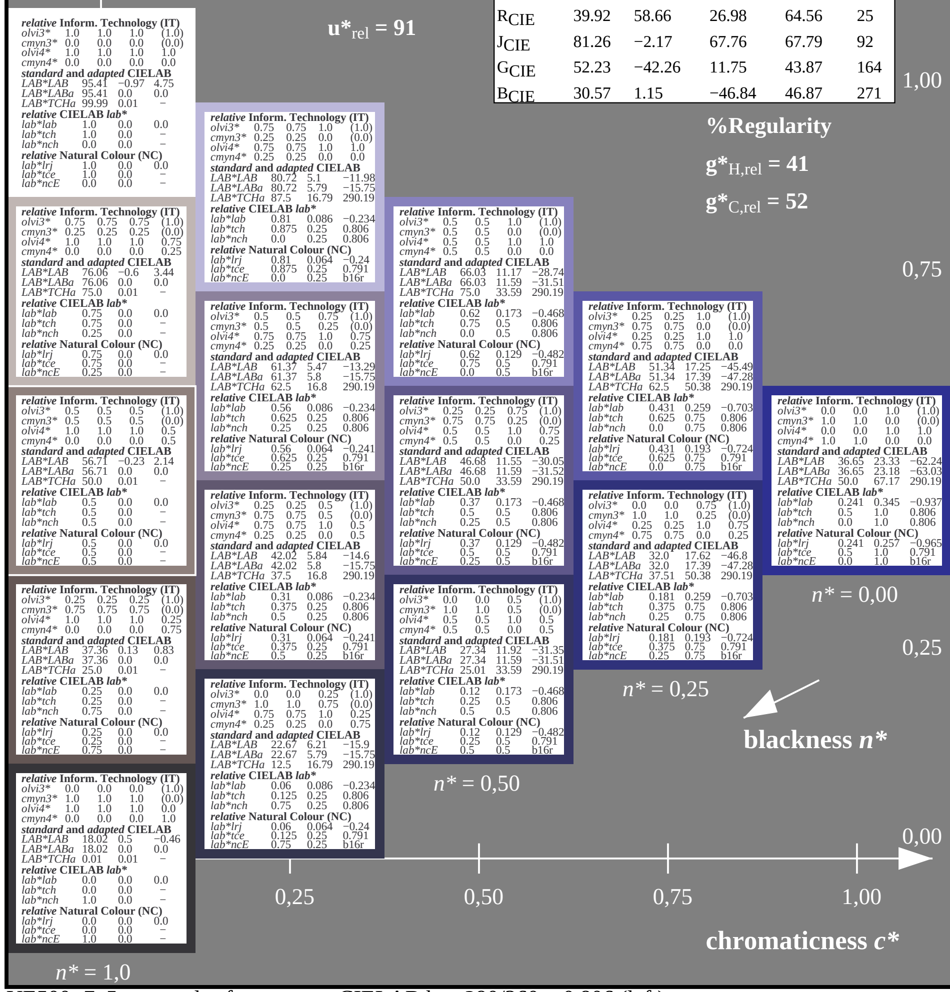
triangle lightness t^*



%Gamut
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

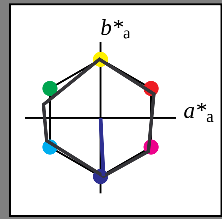
%Regularity
$g^*_{H,rel} = 41$
$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 273/360 = 0.758$
*lab*tch and lab*nch*

D65: hue B
LCH*Ma: 57 77 273
rgb*Ma: 0.0 0.0 1.0

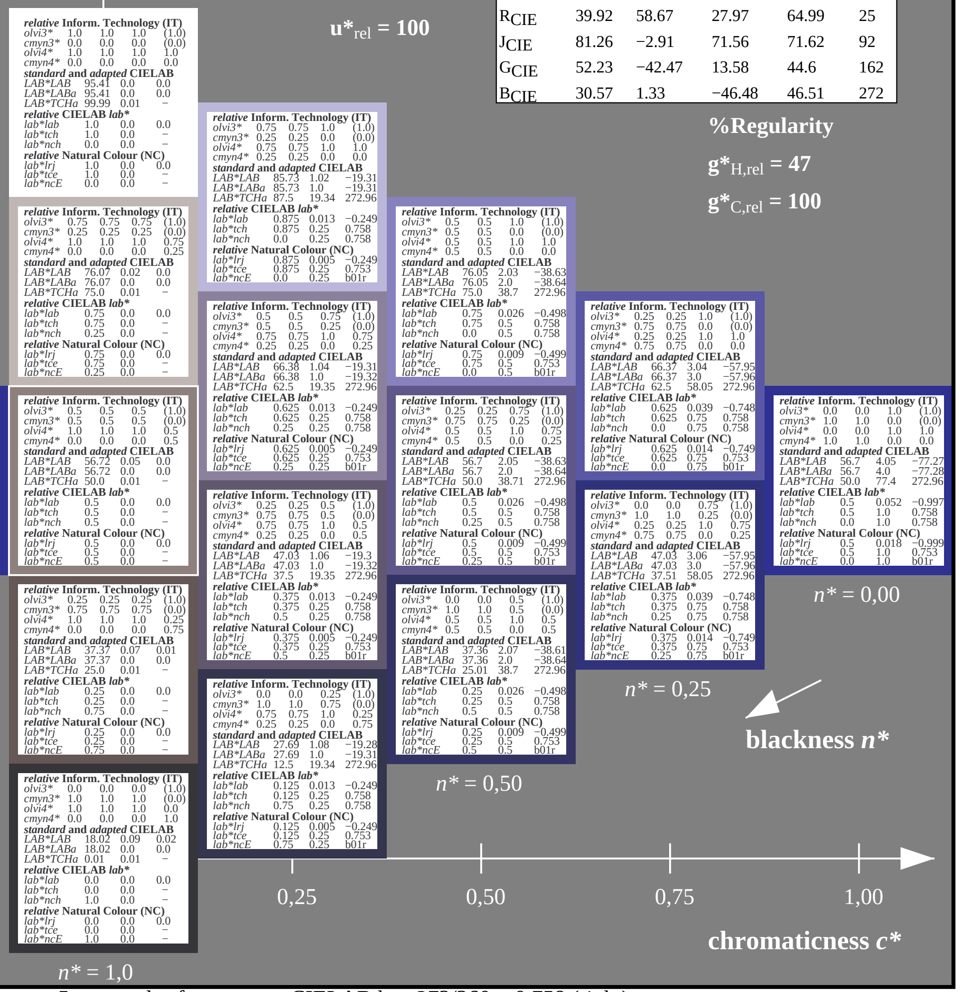
triangle lightness t^*



%Gamut
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



UE500−7, 5 step scales for constant CIELAB hue 290/360 = 0.806 (left)   5 step scales for constant CIELAB hue 273/360 = 0.758 (right)

Input: Colorimetric Reflective System MRS18

for hue $h^* = lab^*h = 290/360 = 0.806$

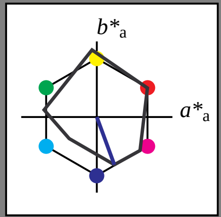
*lab*tch and lab*nch*

D65: hue B

LCH*Ma: 37 67 290

rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 91$

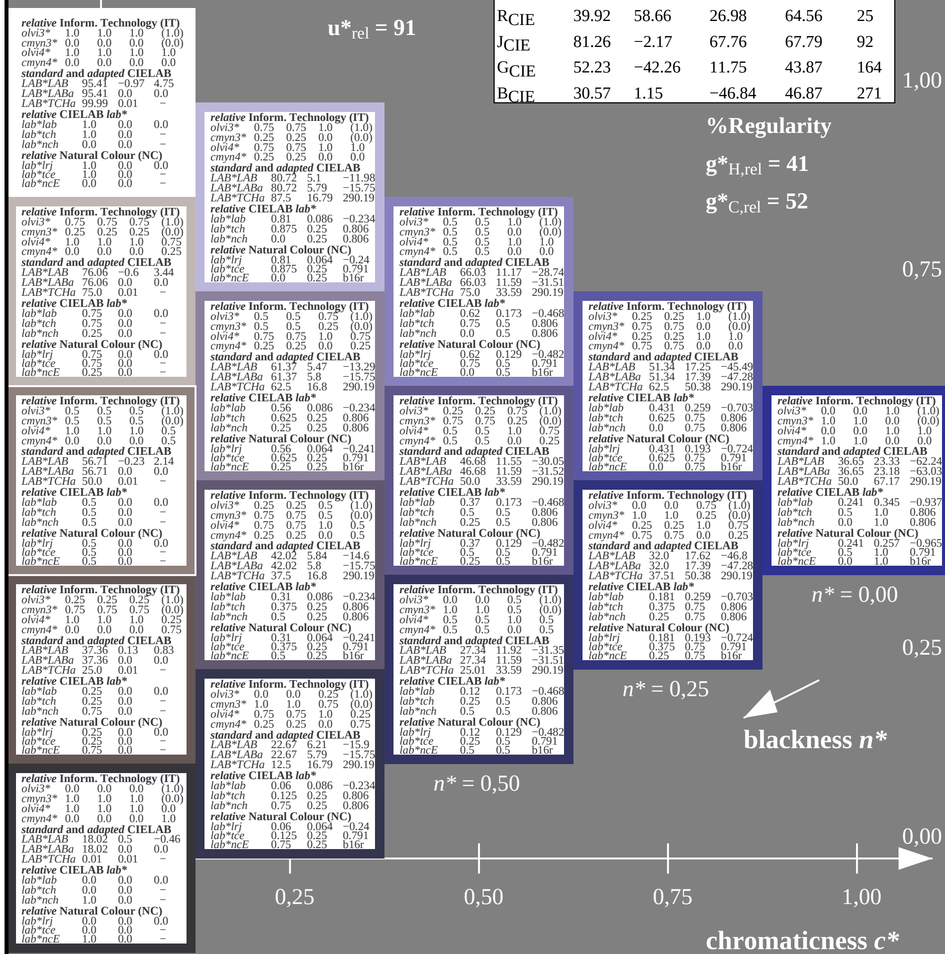
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System NCS18

for hue $h^* = lab^*h = 273/360 = 0.757$

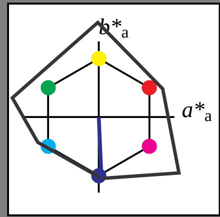
*lab*tch and lab*nch*

D65: hue B

LCH*Ma: 49 81 273

rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 136$

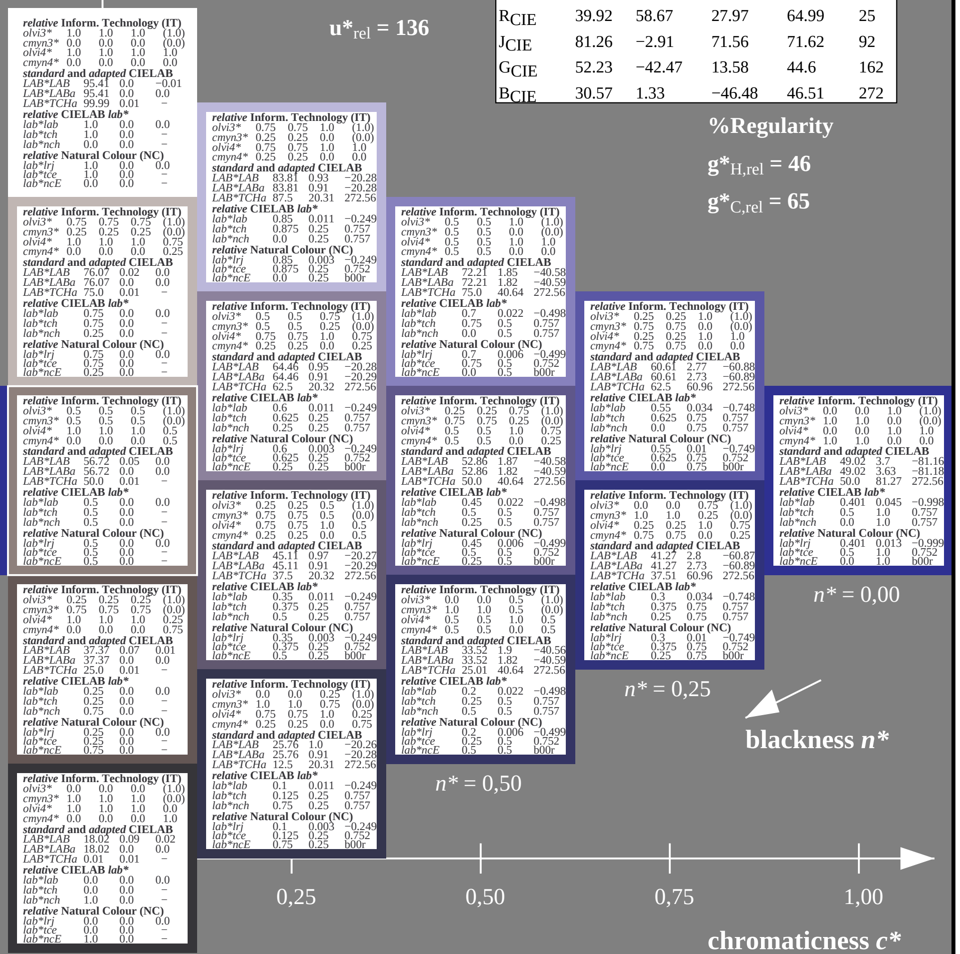
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



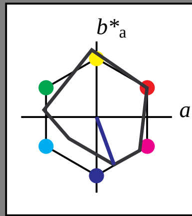
UE500−7, 5 step scales for constant CIELAB hue 290/360 = 0.806 (left)

5 step scales for constant CIELAB hue 273/360 = 0.757 (right)

Input: Colorimetric Reflective System MRS18
for hue *h = *lab*h* = 290/360 = 0.806**
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 67 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness *t**



%Gamut

u^*_{rel} = 91

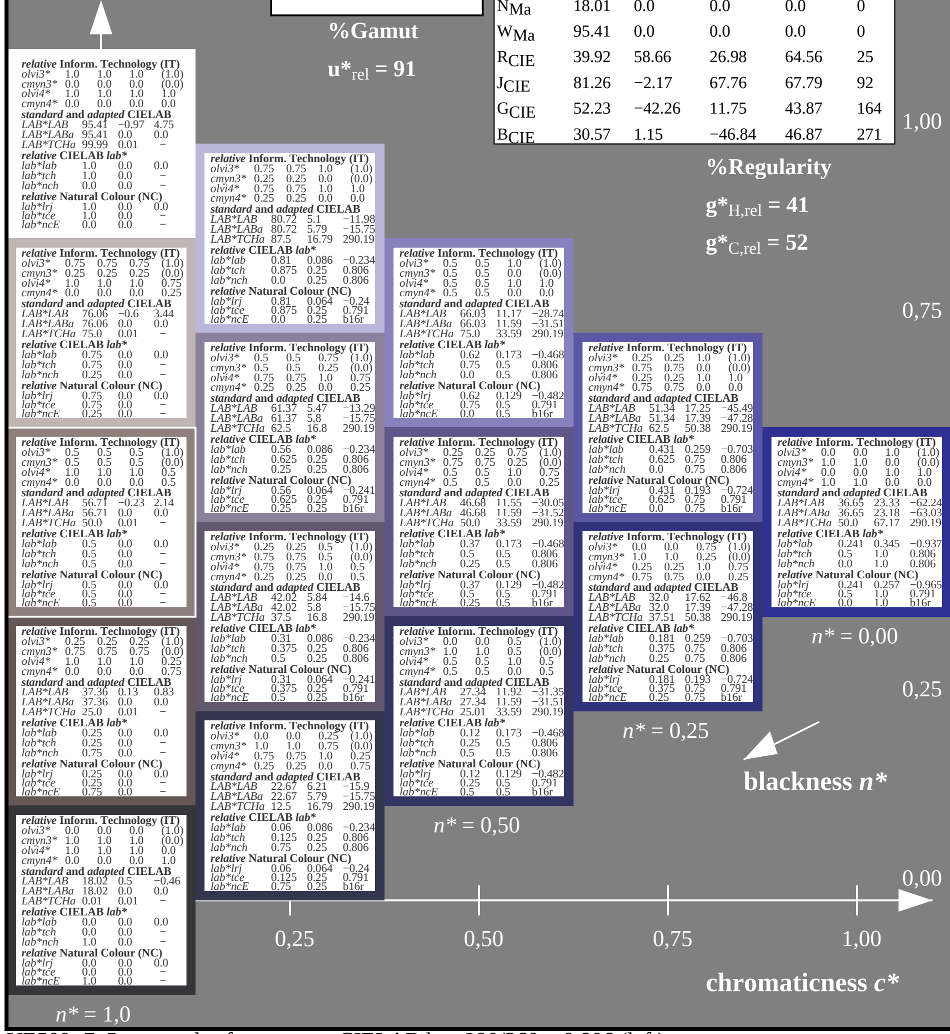
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

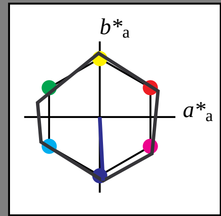
$g^*_{C,rel}$ = 52



Output: Colorimetric Reflective System NRS11
for hue *h = *lab*h* = 273/360 = 0.758**
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 84 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness *t**



%Gamut

u^*_{rel} = 119

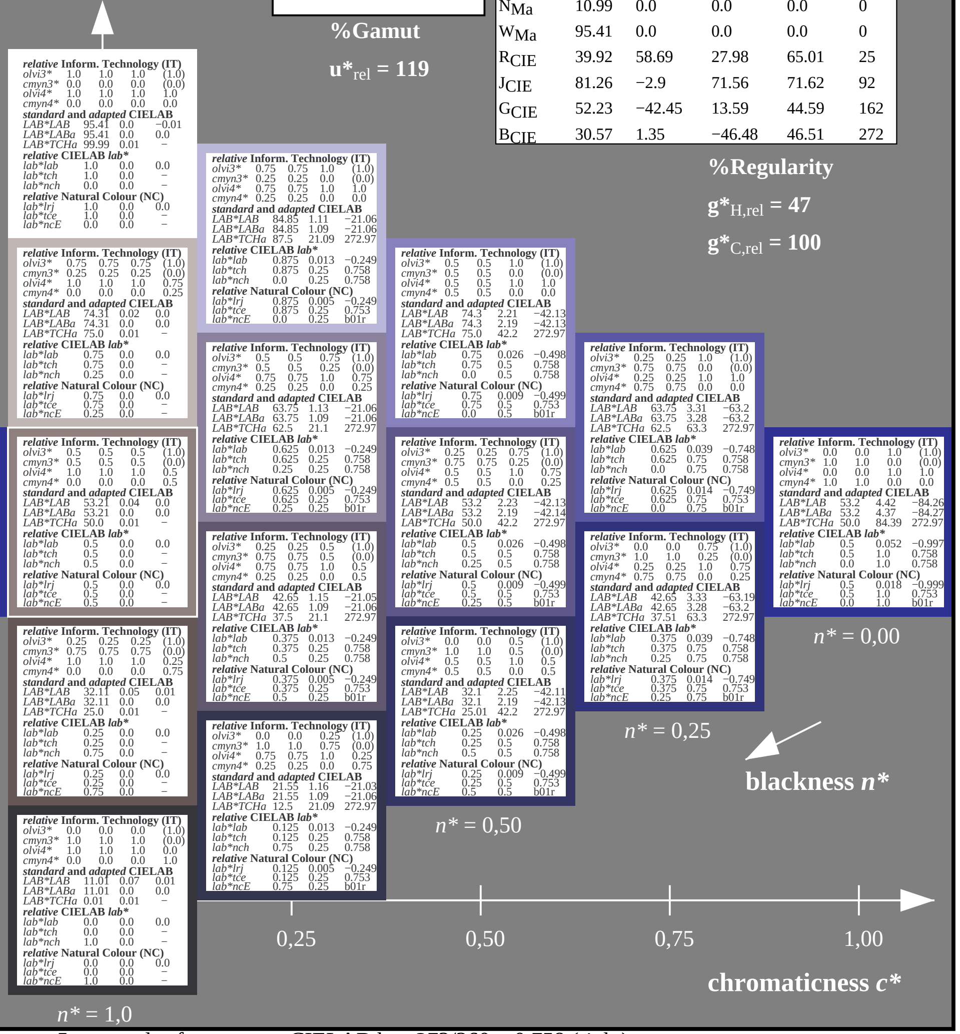
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



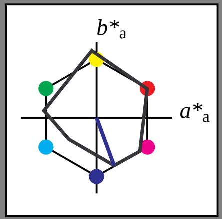
UE500−7, 5 step scales for constant CIELAB hue 290/360 = 0.806 (left)

5 step scales for constant CIELAB hue 273/360 = 0.758 (right)

Input: Colorimetric Reflective System MRS18
for hue *h = *lab*h* = 290/360 = 0.806**
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 67 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness *t*



%Gamut

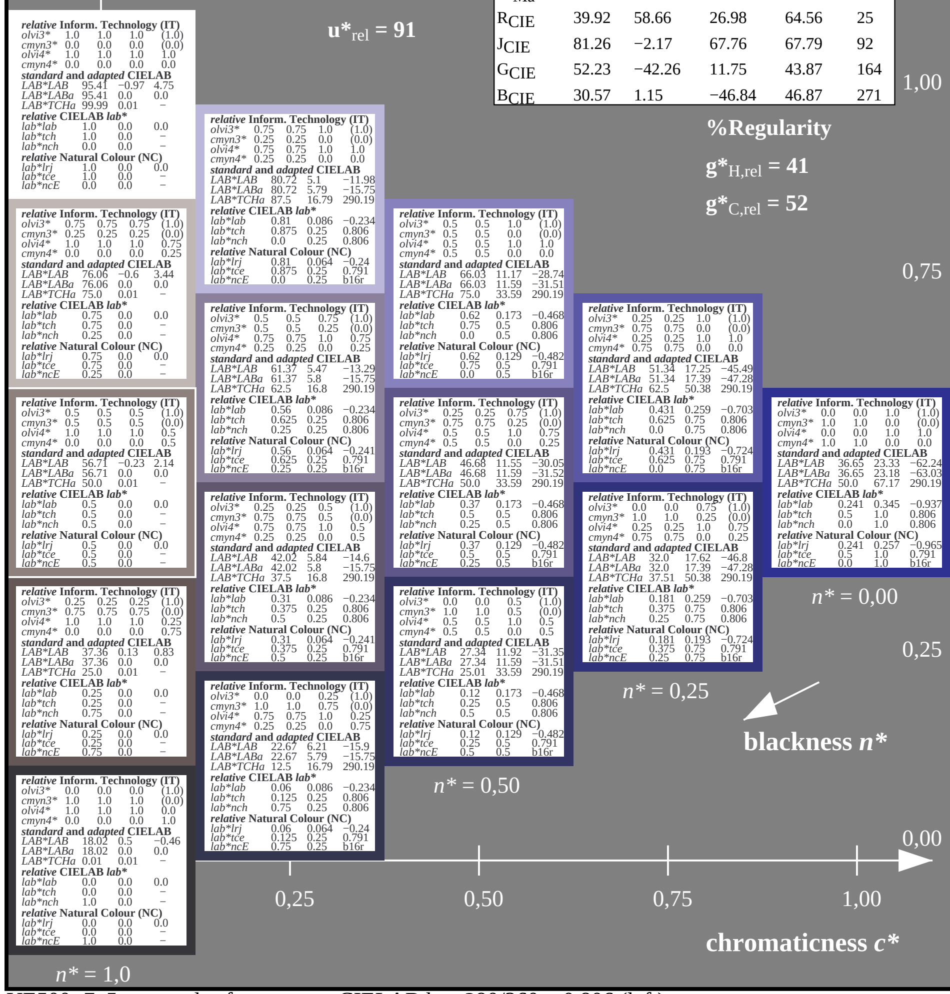
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

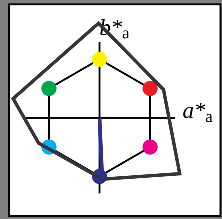
$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System NCS11
for hue *h = *lab*h* = 273/360 = 0.757**
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness *t*



%Gamut

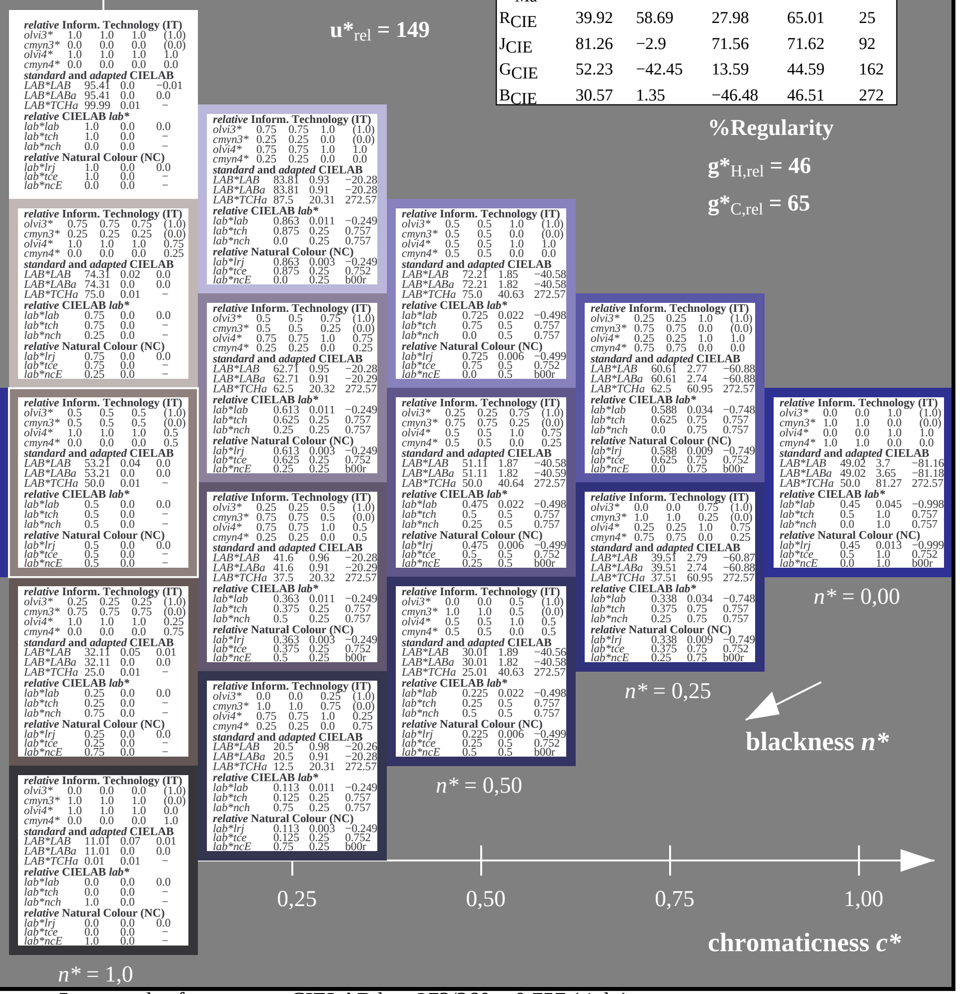
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



UE500−7, 5 step scales for constant CIELAB hue 290/360 = 0.806 (left) 5 step scales for constant CIELAB hue 273/360 = 0.757 (right)

Input: Colorimetric Reflective System TRS18

for hue $h^* = lab^*h = 305/360 = 0.847$

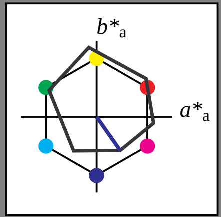
*lab*tch* and *lab*nch*

D65: hue V

LCH*Ma: 26 54 305

rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

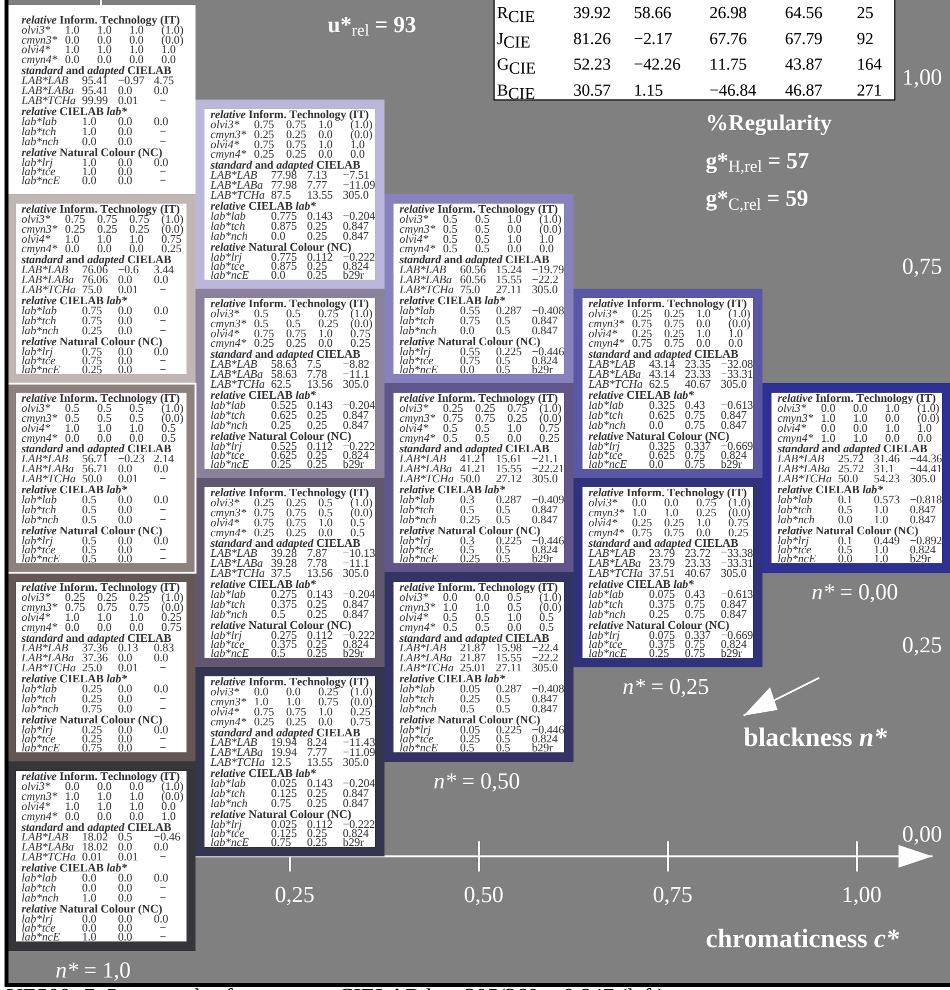
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



UE500−7, 5 step scales for constant CIELAB hue 305/360 = 0.847 (left)

Output: Colorimetric Reflective System ORS18

for hue $h^* = lab^*h = 305/360 = 0.847$

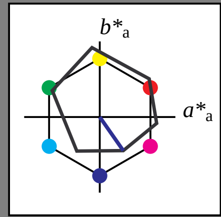
*lab*tch* and *lab*nch*

D65: hue V

LCH*Ma: 26 54 305

rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

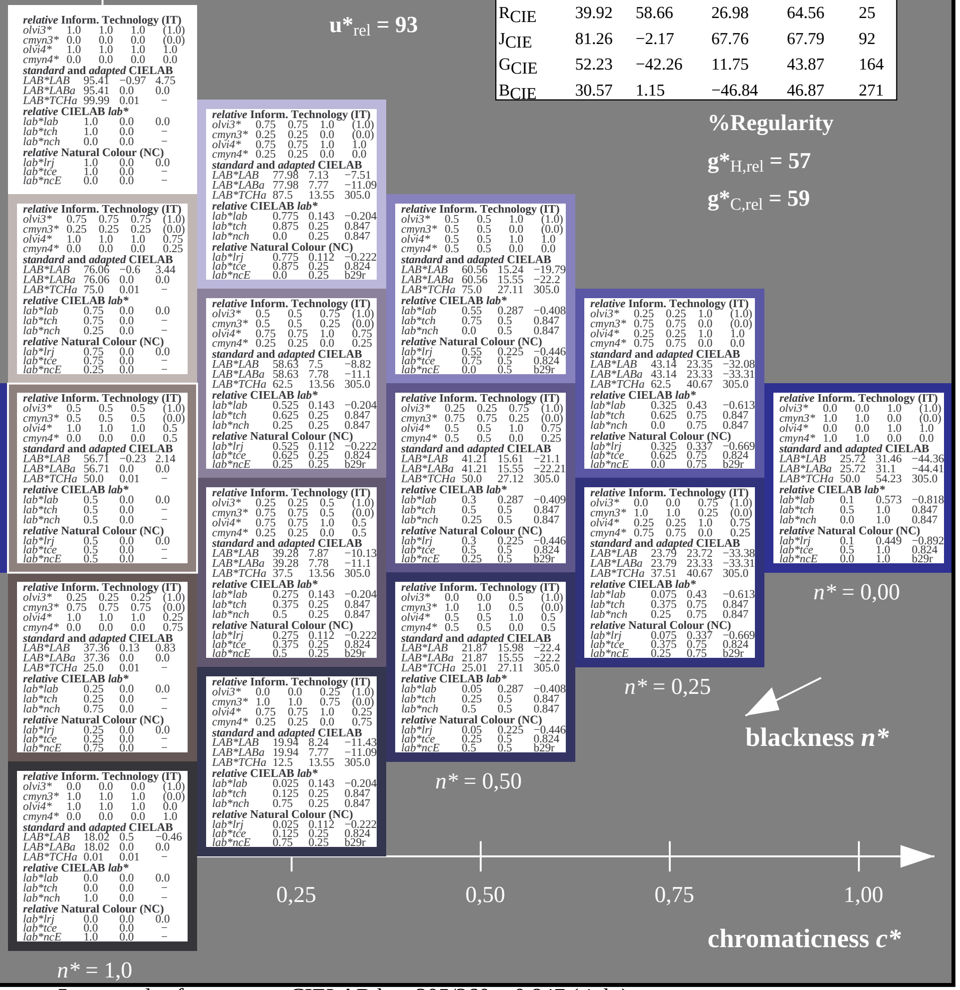
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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

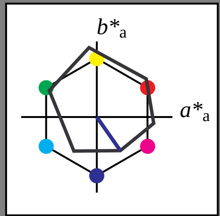


5 step scales for constant CIELAB hue 305/360 = 0.847 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

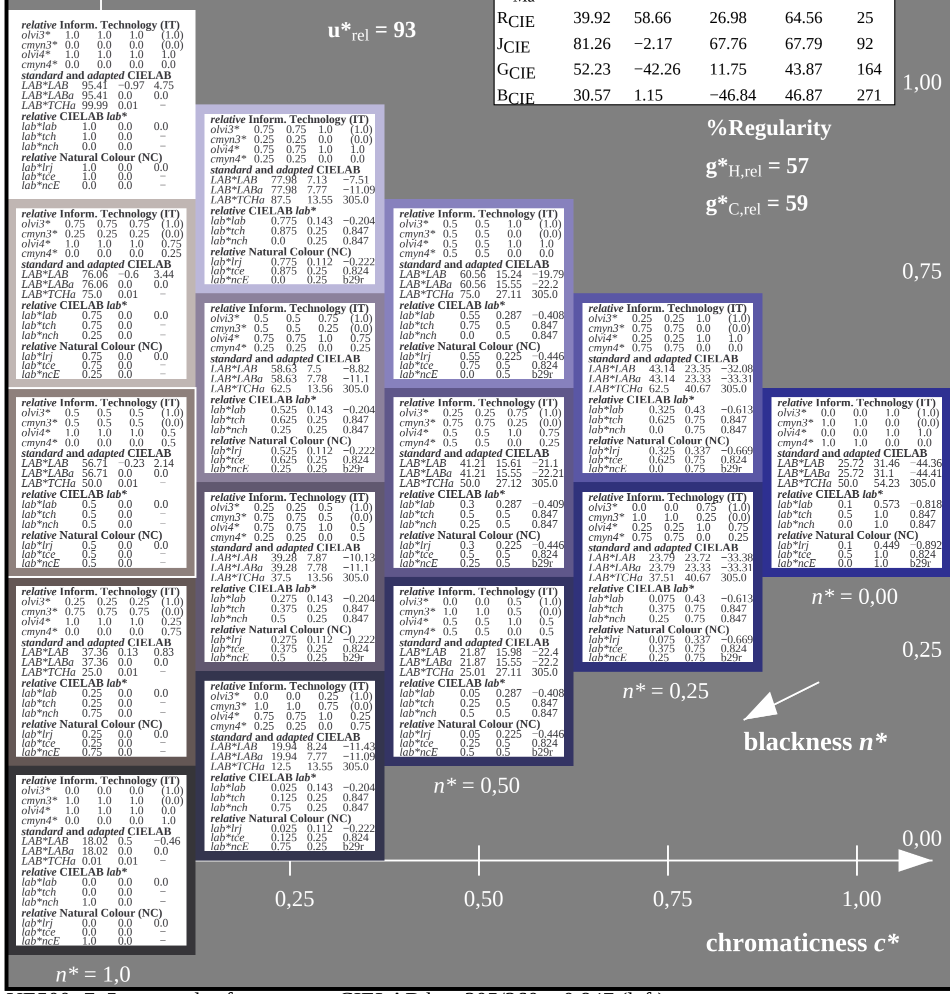
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

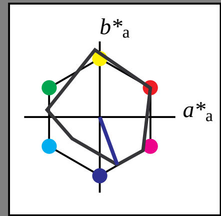
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 290/360 = 0.806$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 67 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 91$

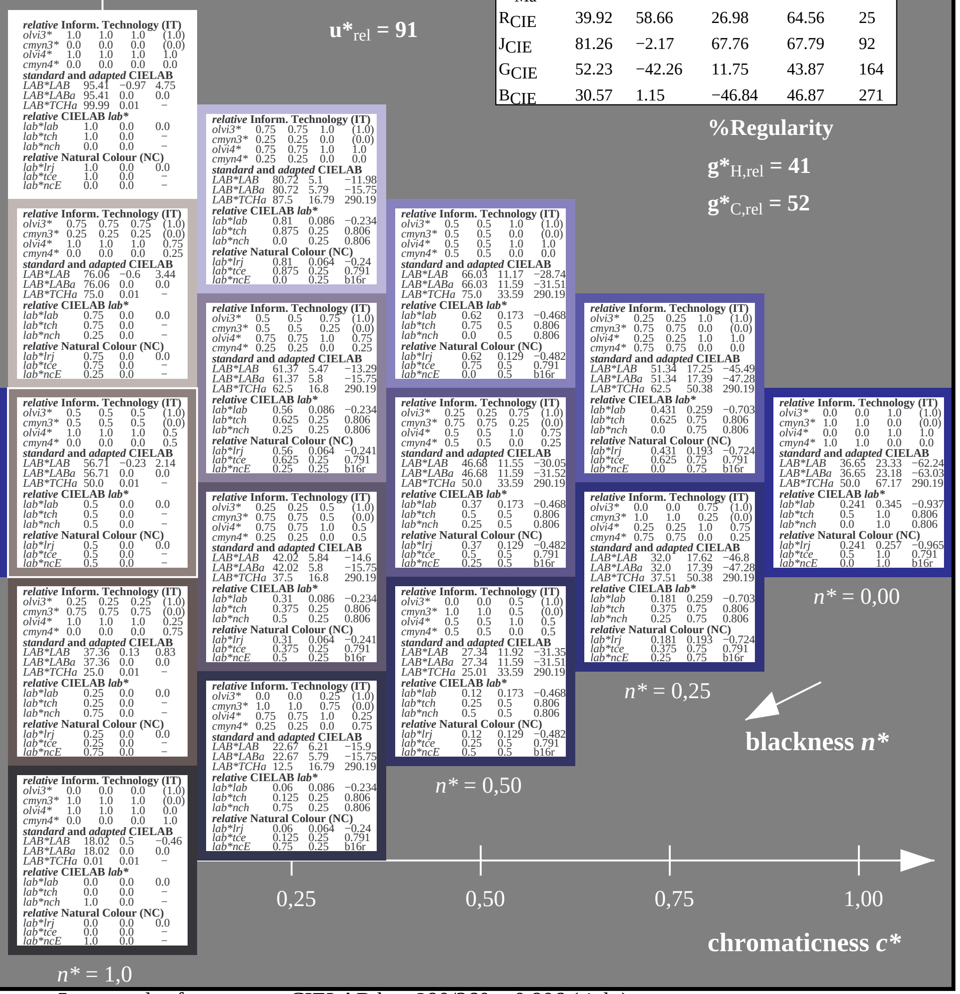
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



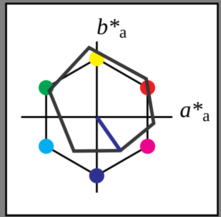
UE500−7, 5 step scales for constant CIELAB hue 305/360 = 0.847 (left)

5 step scales for constant CIELAB hue 290/360 = 0.806 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

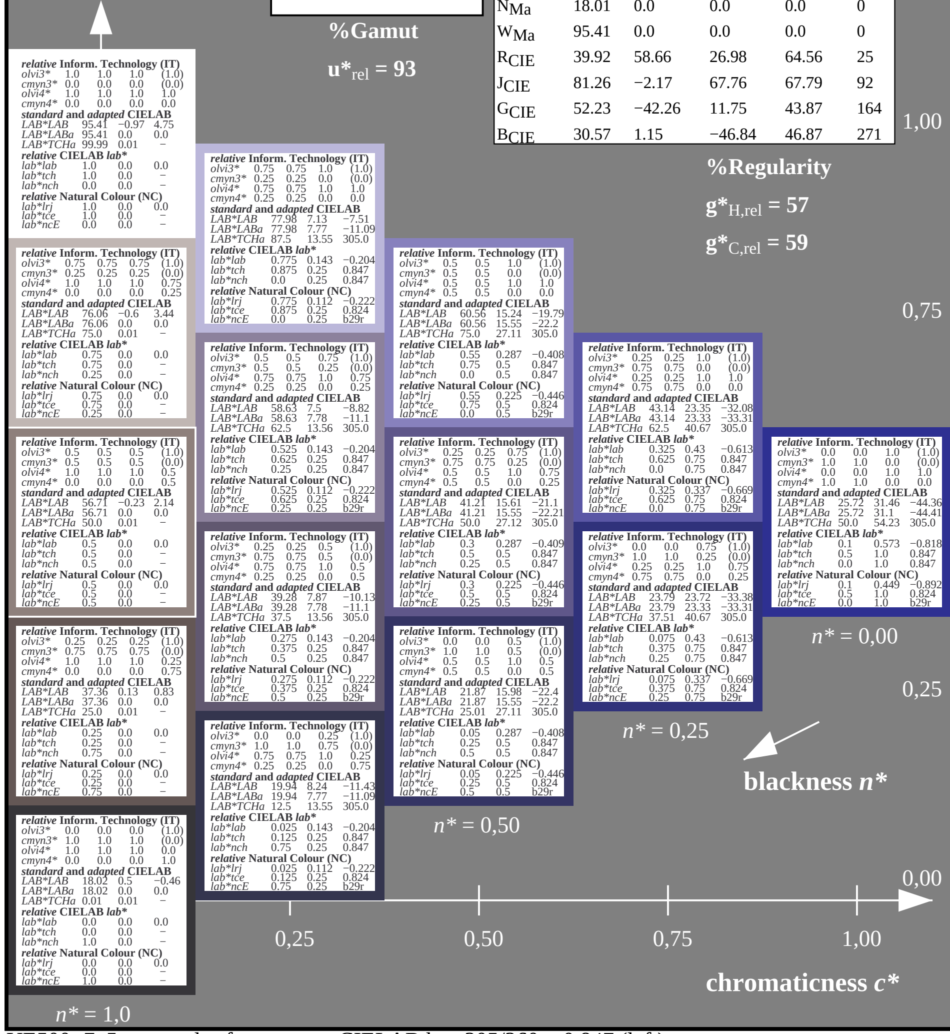
u^*_{rel} = 93

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

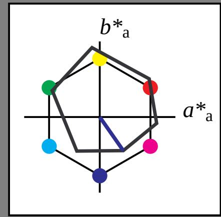
$g^*_{C,rel}$ = 59



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

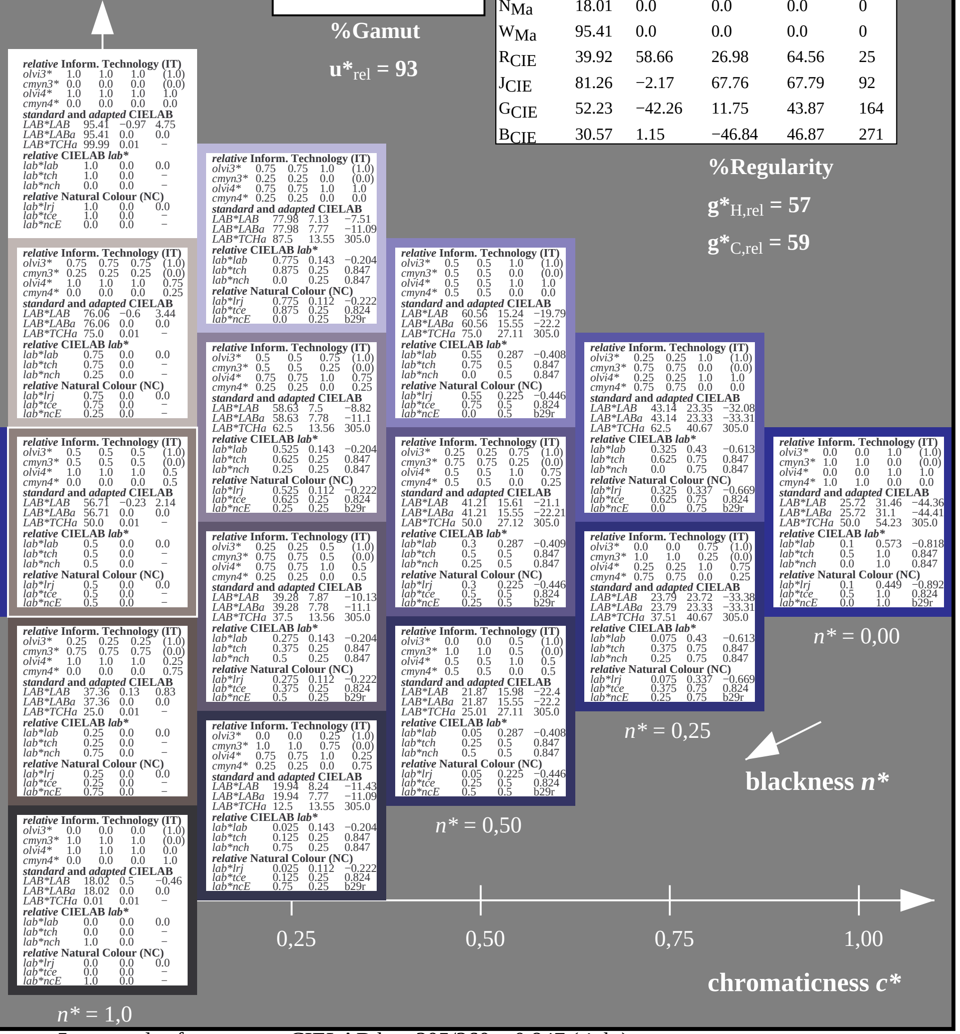
u^*_{rel} = 93

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



UE500−7, 5 step scales for constant CIELAB hue 305/360 = 0.847 (left)

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

Input: Colorimetric Reflective System TRS18

for hue $h^* = lab^*h = 305/360 = 0.847$

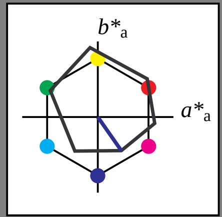
*lab*tch and lab*nch*

D65: hue V

LCH*Ma: 26 54 305

rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

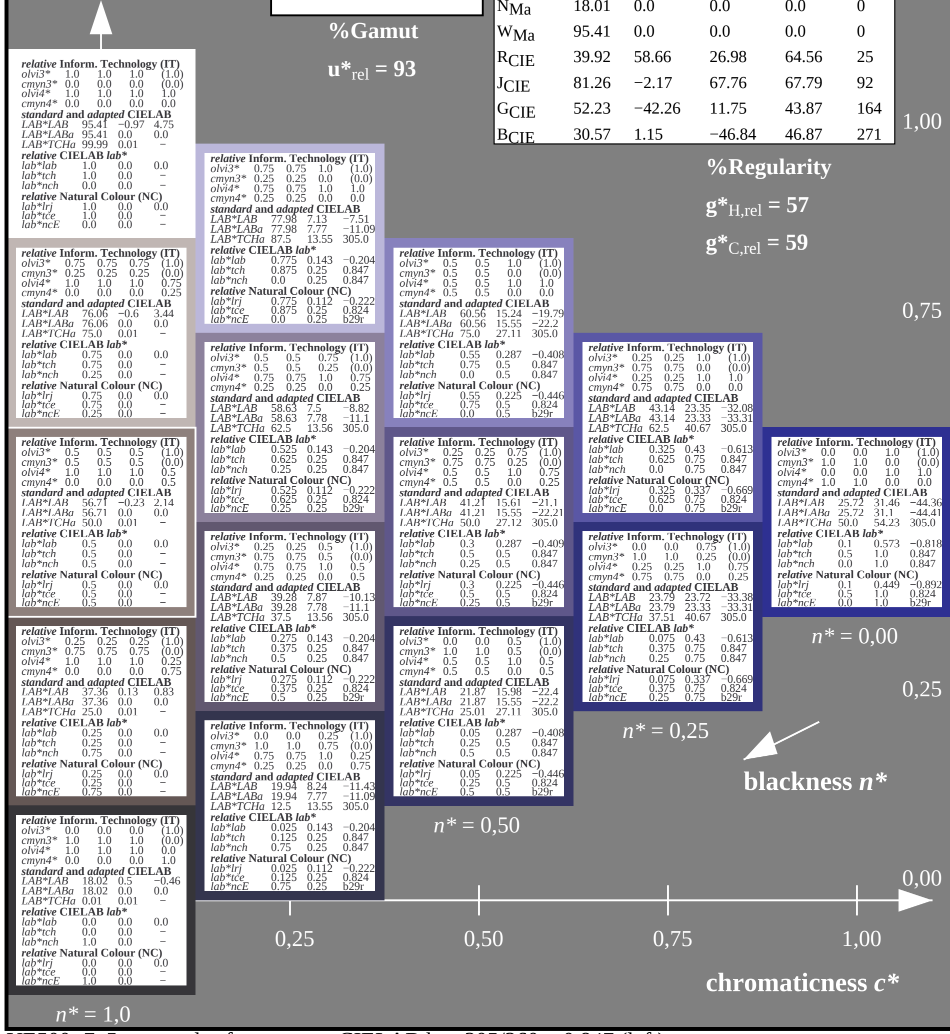
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



Output: Colorimetric Reflective System MRS18a

for hue $h^* = lab^*h = 290/360 = 0.807$

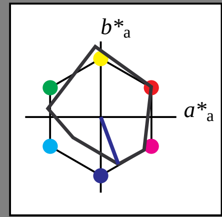
*lab*tch and lab*nch*

D65: hue B

LCH*Ma: 37 66 290

rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

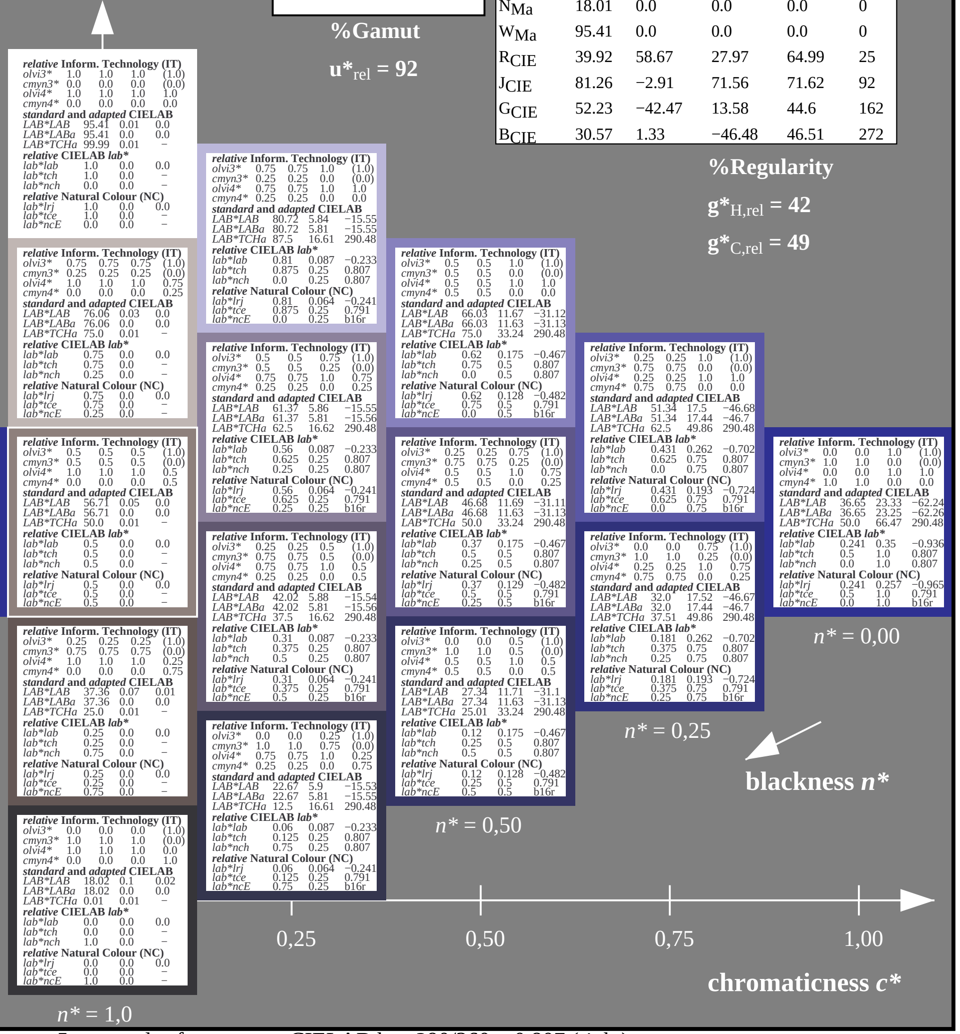
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

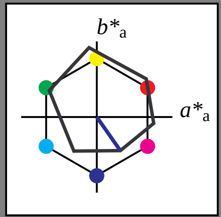


UE500−7, 5 step scales for constant CIELAB hue 305/360 = 0.847 (left)

5 step scales for constant CIELAB hue 290/360 = 0.807 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 305/360 = 0.847$
*lab*tch and lab*nch*

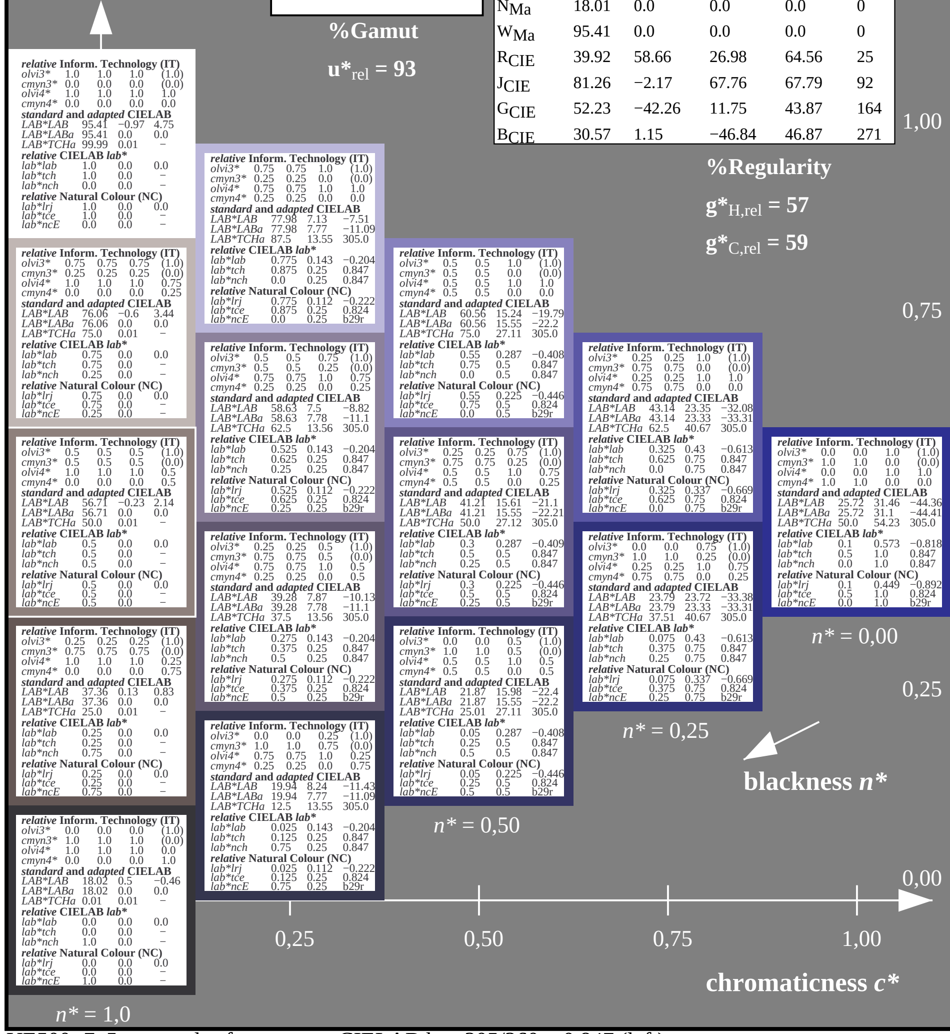
D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0
triangle lightness t*



%Gamut
$u^*_{rel} = 93$

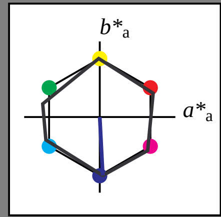
TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 273/360 = 0.758$
*lab*tch and lab*nch*

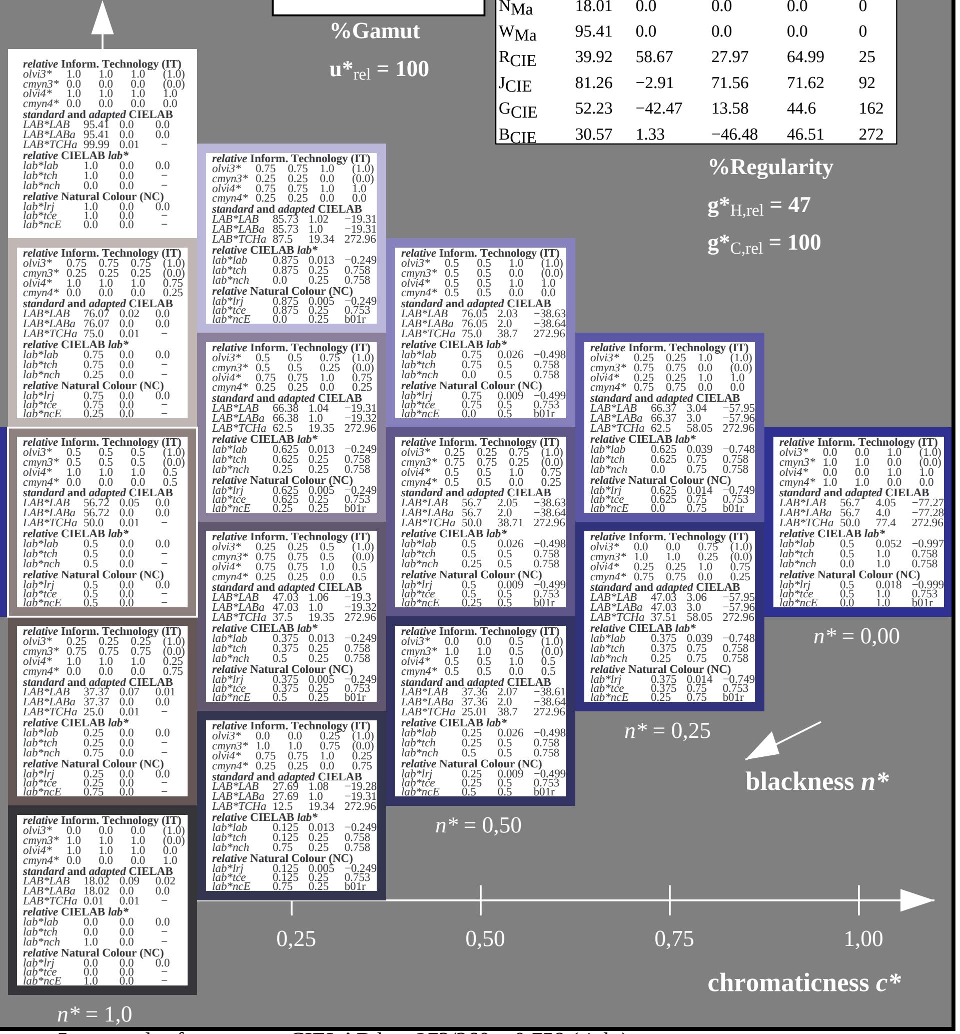
D65: hue B
LCH*Ma: 57 77 273
rgb*Ma: 0.0 0.0 1.0
triangle lightness t*



%Gamut
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



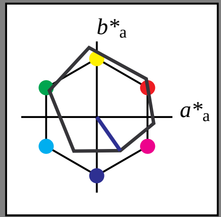
UE500−7, 5 step scales for constant CIELAB hue 305/360 = 0.847 (left)

5 step scales for constant CIELAB hue 273/360 = 0.758 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*

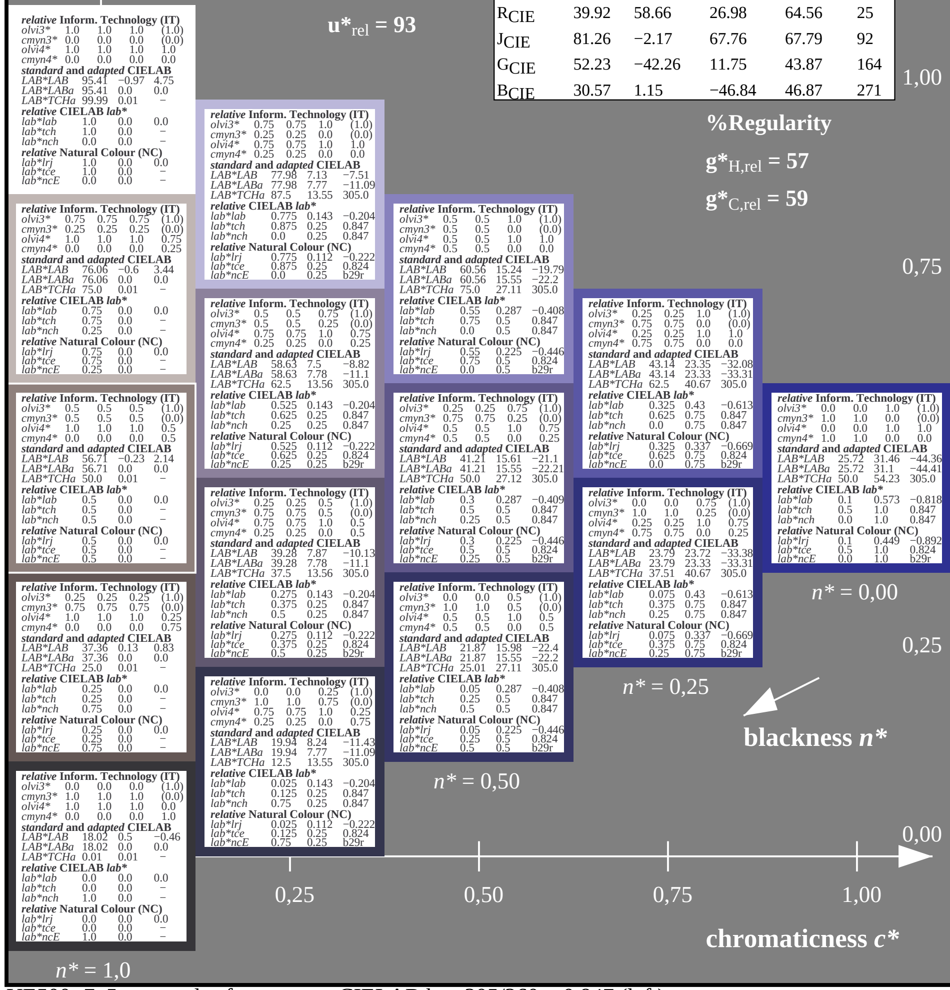


%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

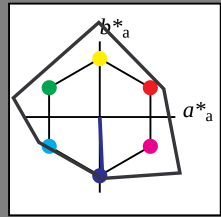
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*

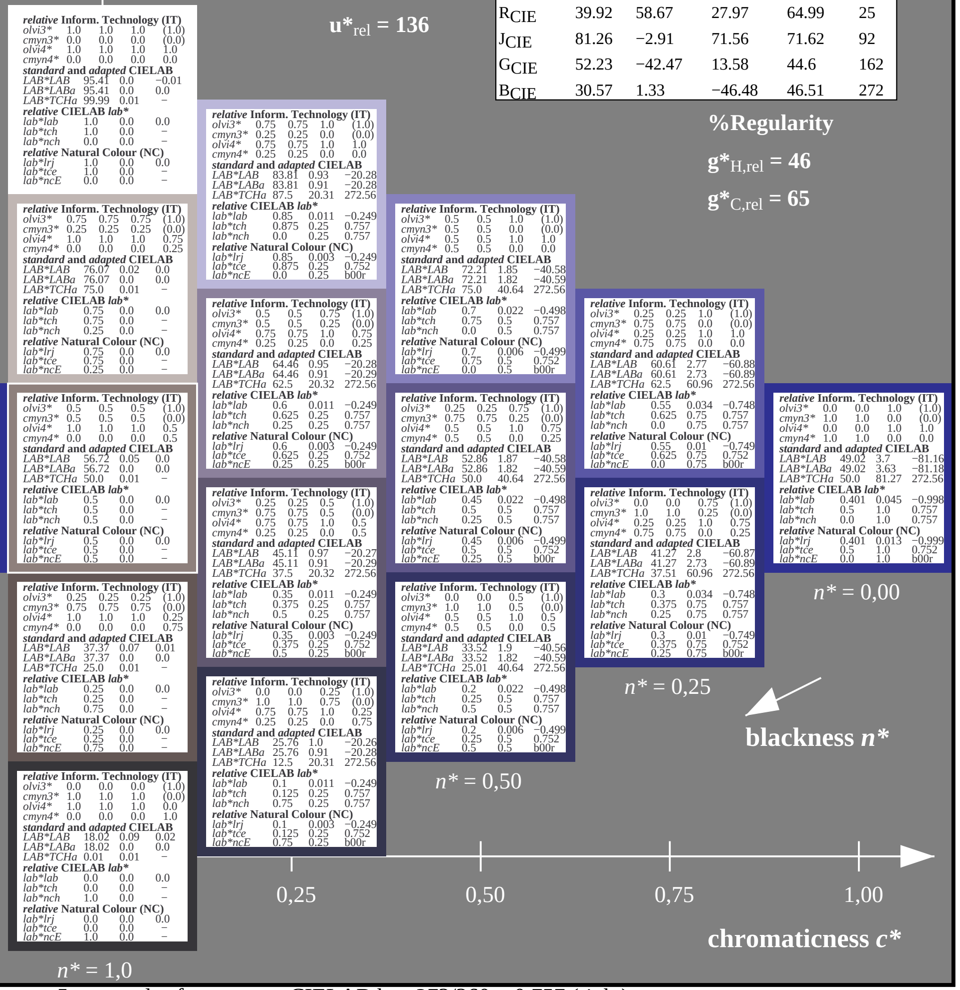


%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

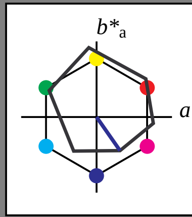


UE500−7, 5 step scales for constant CIELAB hue 305/360 = 0.847 (left)

5 step scales for constant CIELAB hue 273/360 = 0.757 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab*tch and lab*nch

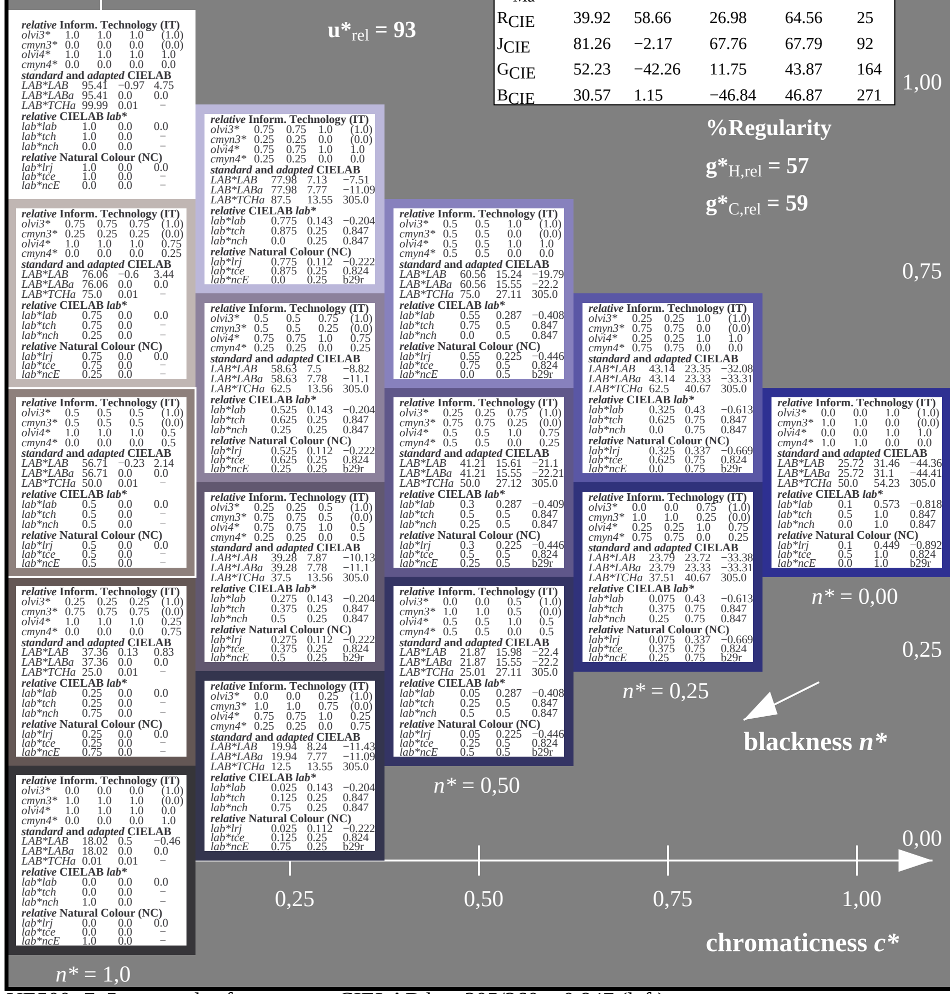
D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 93$

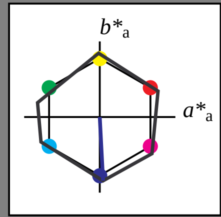
TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 273/360 = 0.758$
lab*tch and lab*nch

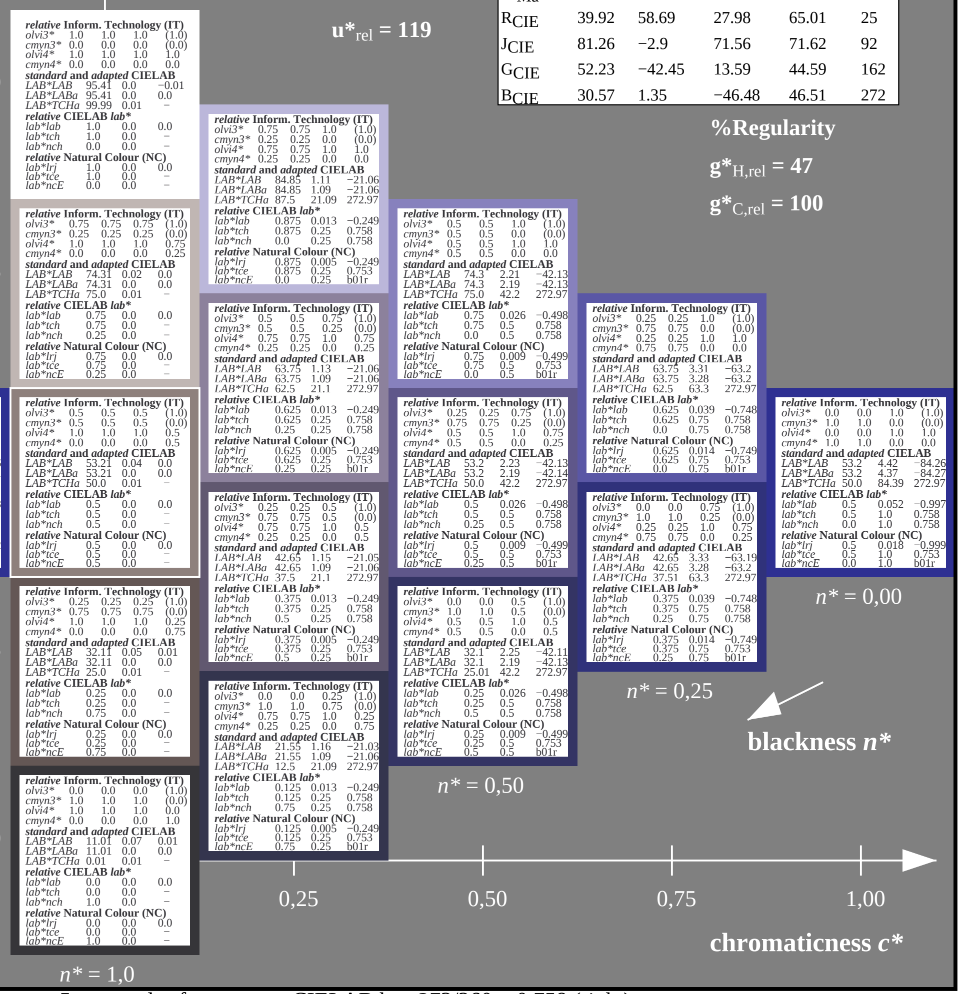
D65: hue B
LCH*Ma: 53 84 273
rgb*Ma: 0.0 0.0 1.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



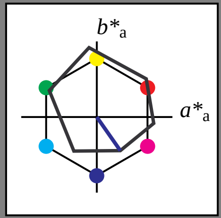
UE500−7, 5 step scales for constant CIELAB hue 305/360 = 0.847 (left)

5 step scales for constant CIELAB hue 273/360 = 0.758 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

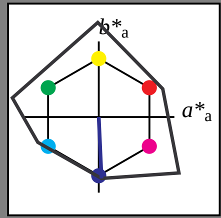
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

UE500−7, 5 step scales for constant CIELAB hue 305/360 = 0.847 (left)

5 step scales for constant CIELAB hue 273/360 = 0.757 (right)

Input: Colorimetric Reflective System MRS18a

for hue $h^* = lab^*h = 290/360 = 0.807$

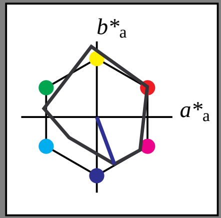
*lab*tch and lab*nch*

D65: hue B

LCH*Ma: 37 66 290

rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

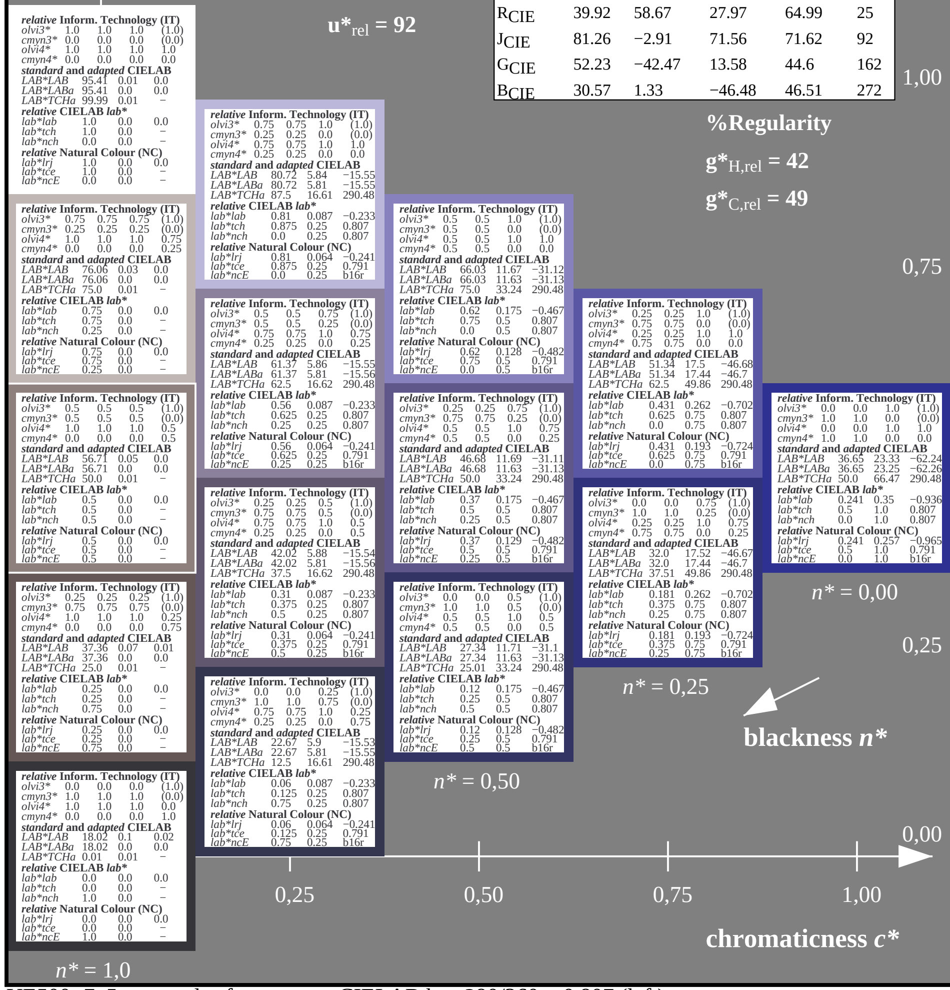
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System ORS18

for hue $h^* = lab^*h = 305/360 = 0.847$

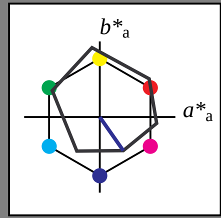
*lab*tch and lab*nch*

D65: hue V

LCH*Ma: 26 54 305

rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

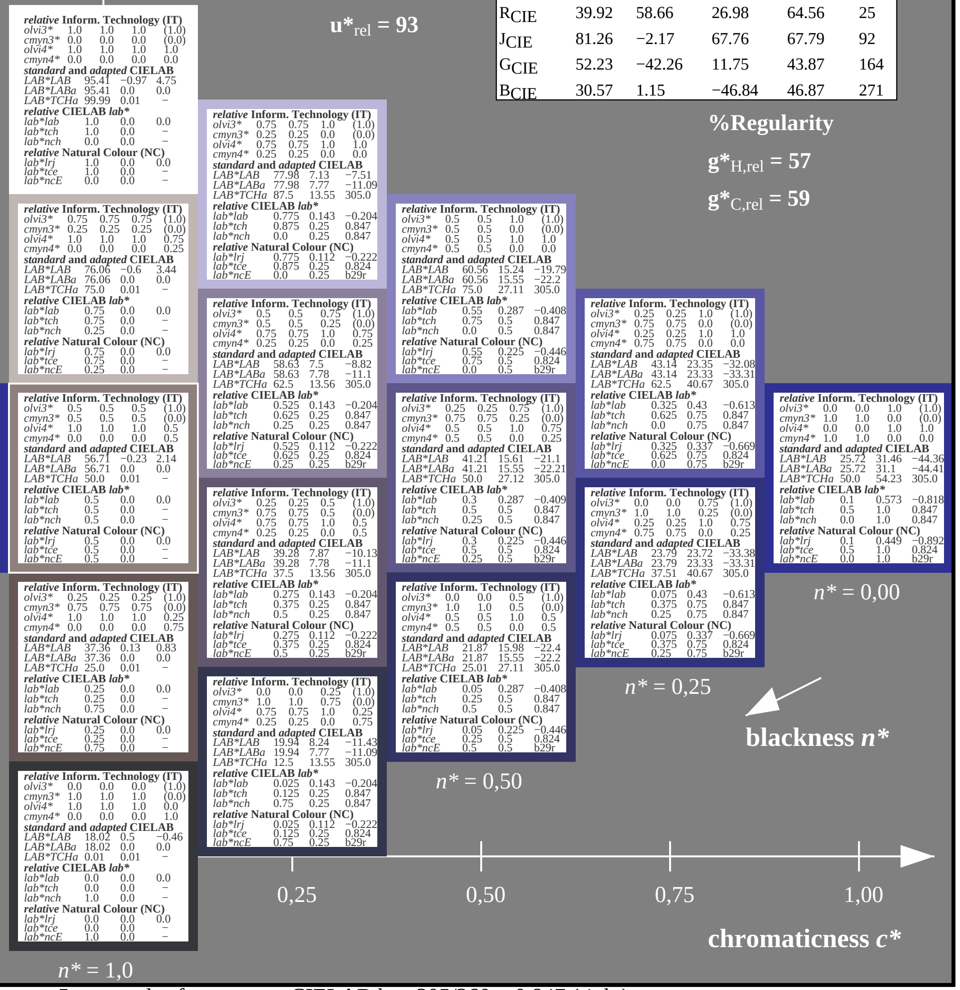
$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



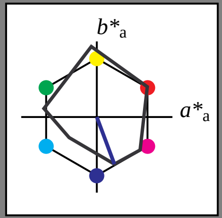
UE500−7, 5 step scales for constant CIELAB hue 290/360 = 0.807 (left)

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

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 290/360 = 0.807$
*lab*tch and lab*nch*

D65: hue B
LCH*Ma: 37 66 290
rgb*Ma: 0.0 0.0 1.0

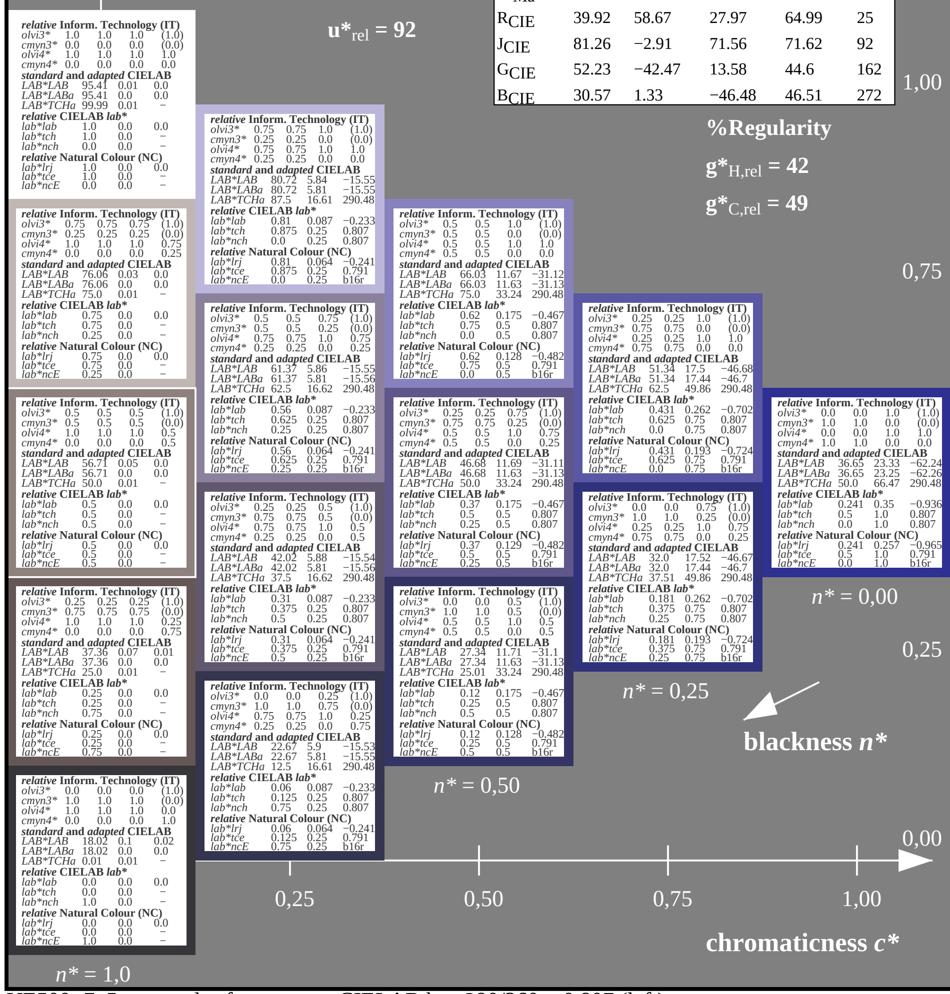
triangle lightness t^*



%Gamut
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

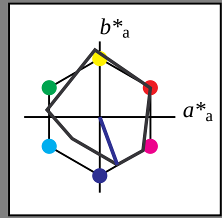
%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 290/360 = 0.806$
*lab*tch and lab*nch*

D65: hue B
LCH*Ma: 37 67 290
rgb*Ma: 0.0 0.0 1.0

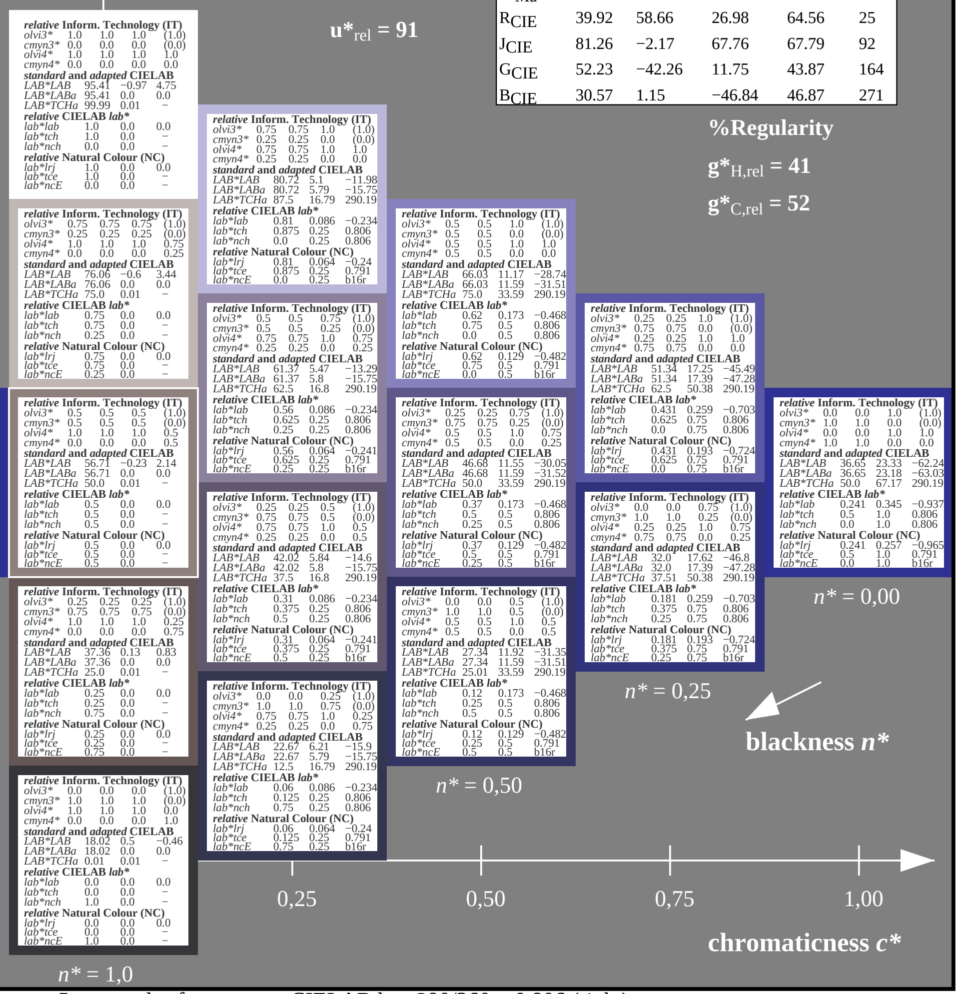
triangle lightness t^*



%Gamut
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 41$
$g^*_{C,rel} = 52$

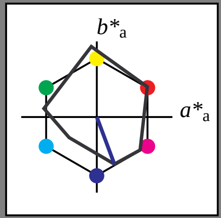


UE500−7, 5 step scales for constant CIELAB hue 290/360 = 0.807 (left)

5 step scales for constant CIELAB hue 290/360 = 0.806 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 290/360 = 0.807$
lab*tch and lab*nch

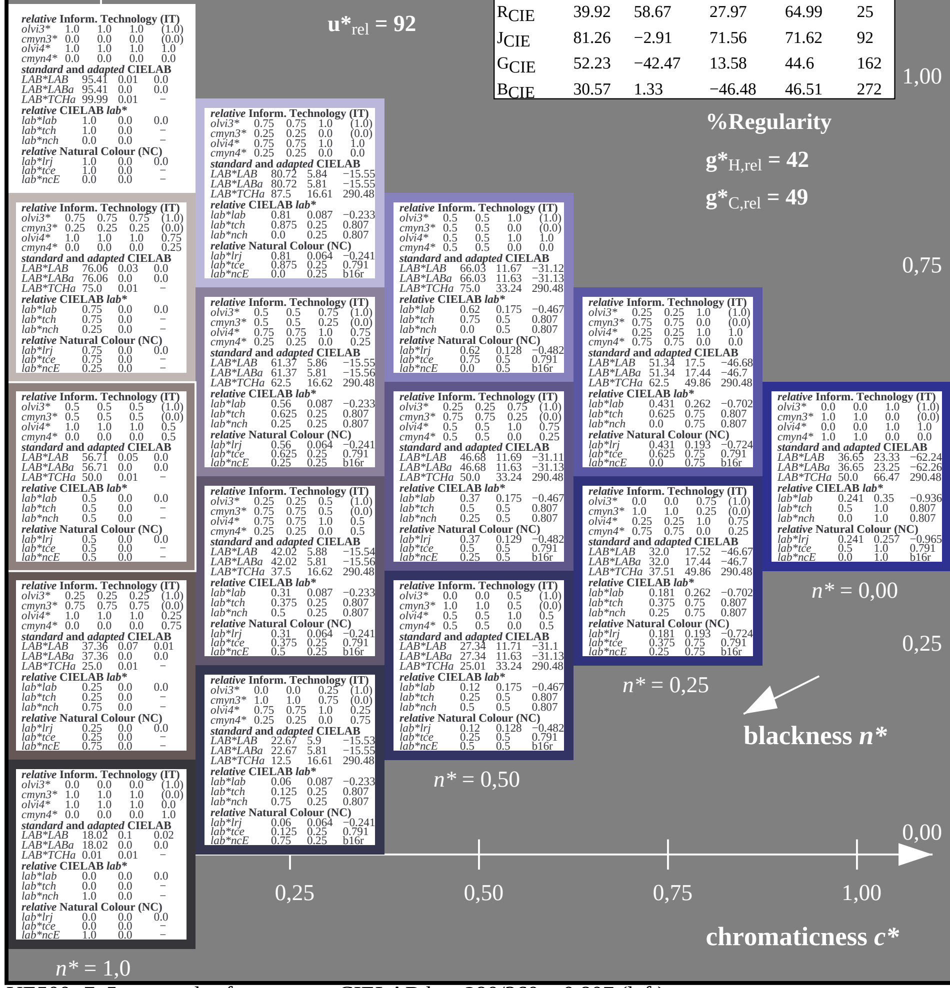
D65: hue B
LCH*Ma: 37 66 290
rgb*Ma: 0.0 0.0 1.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 92$

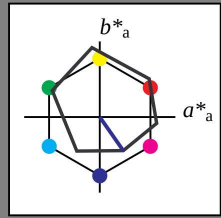
MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab*tch and lab*nch

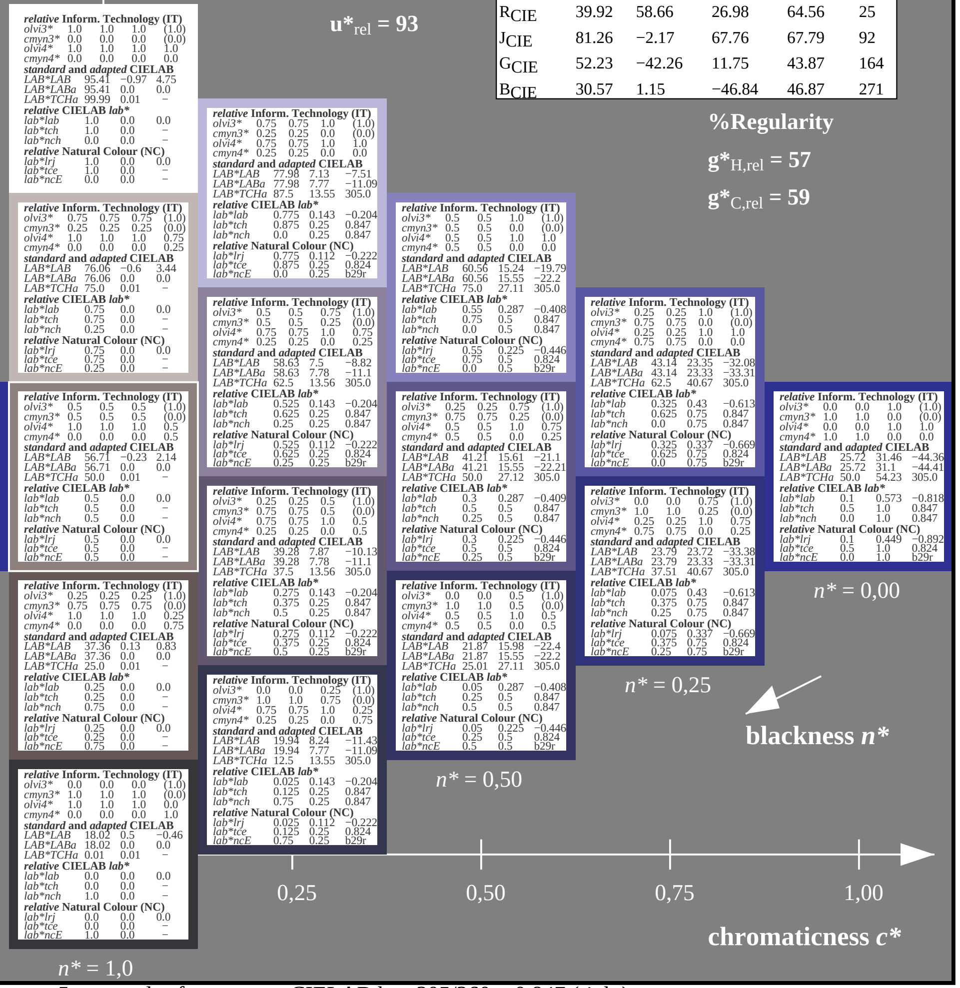
D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



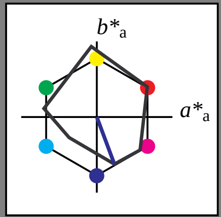
UE500−7, 5 step scales for constant CIELAB hue 290/360 = 0.807 (left)

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

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 290/360 = 0.807$
lab^*tch and lab^*nch

D65: hue B
LCH*Ma: 37 66 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 92$

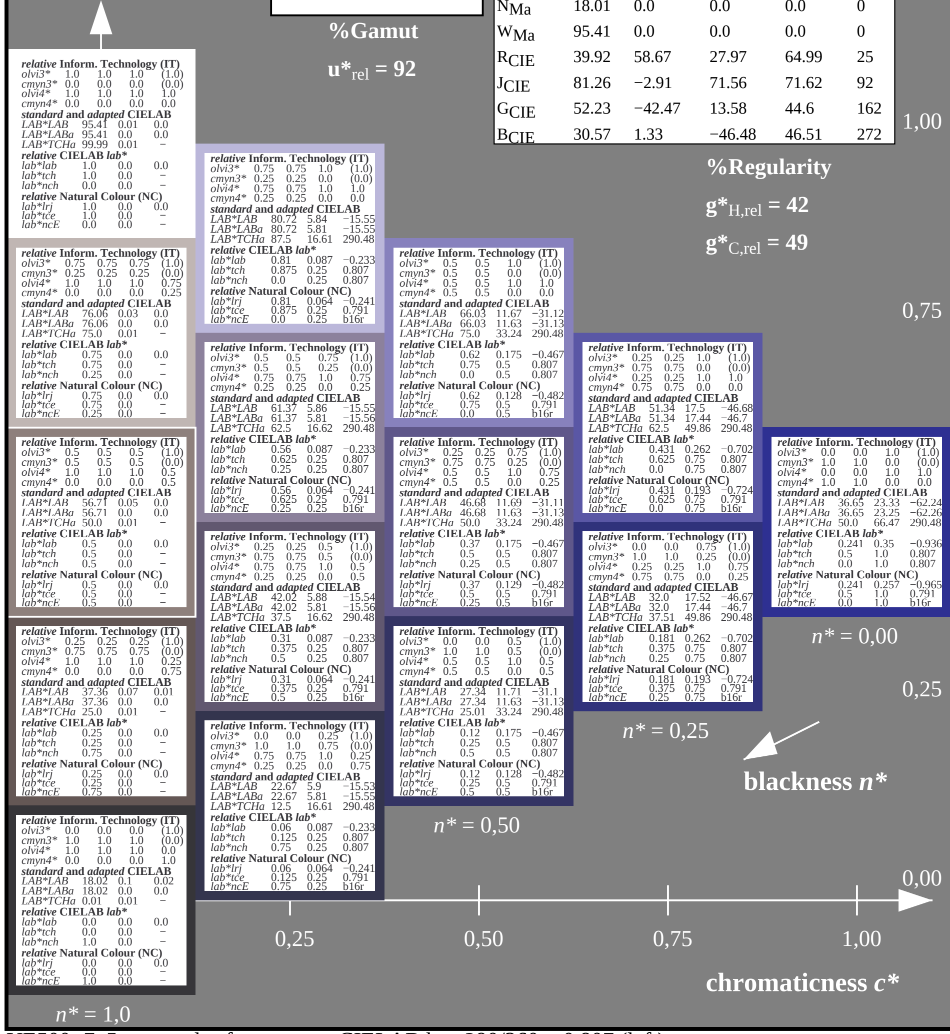
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

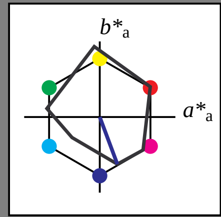
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 290/360 = 0.807$
lab^*tch and lab^*nch

D65: hue B
LCH*Ma: 37 66 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 92$

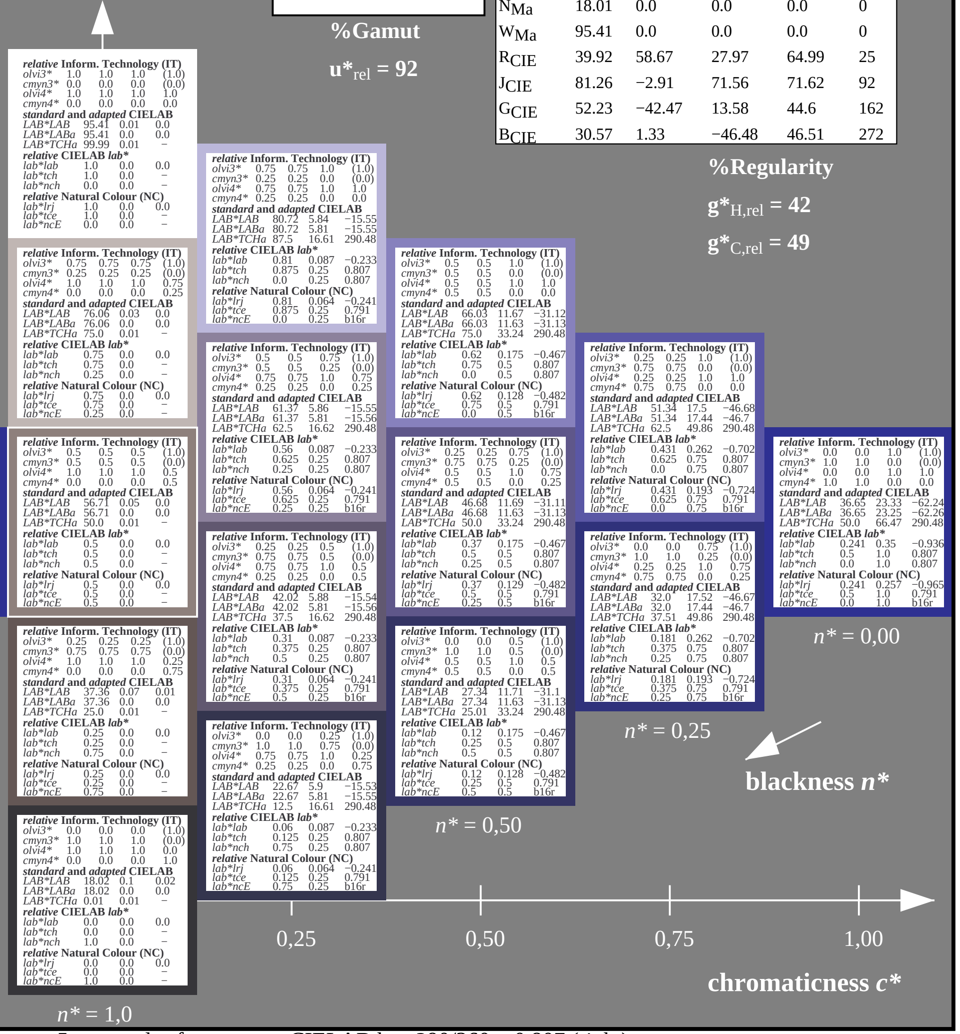
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



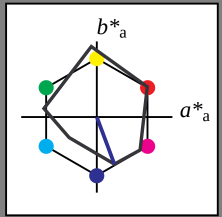
UE500−7, 5 step scales for constant CIELAB hue 290/360 = 0.807 (left)

5 step scales for constant CIELAB hue 290/360 = 0.807 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 290/360 = 0.807$
lab*tch* and *lab*nch

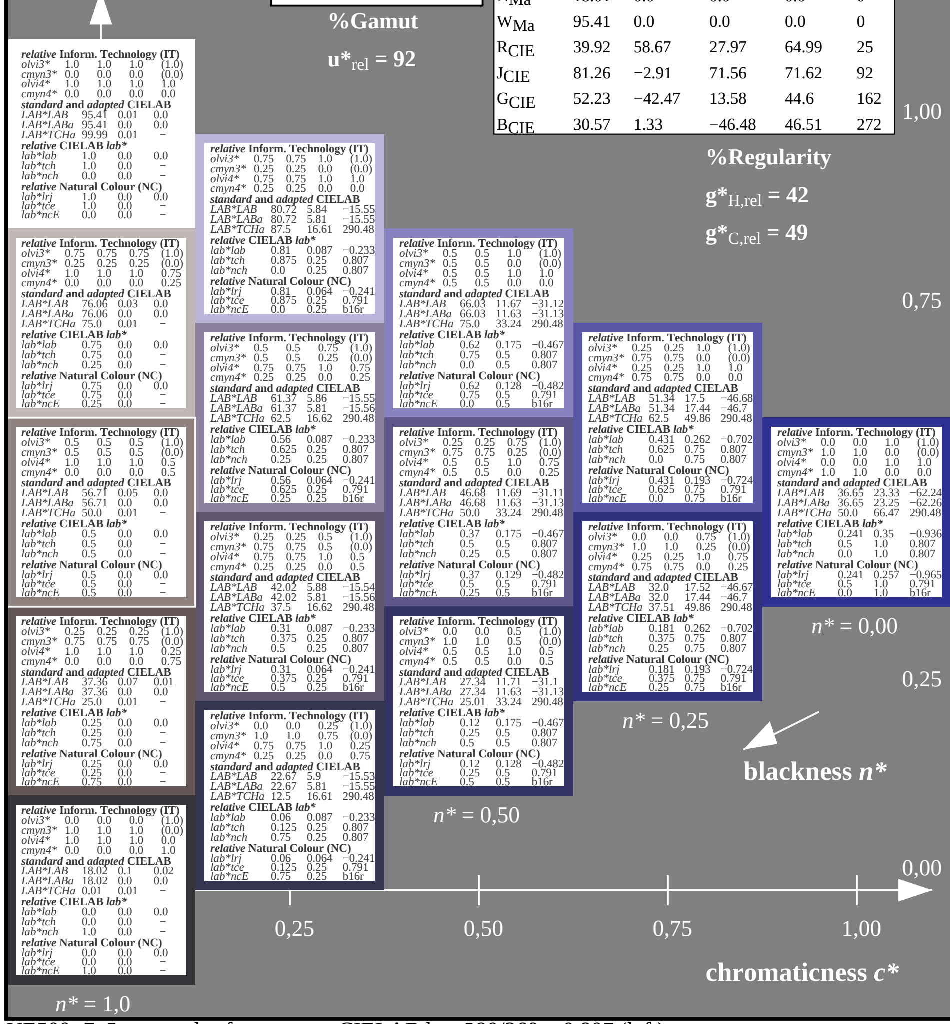
D65: hue B
LCH*Ma: 37 66 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



MRS18a; adapted (a) CIELAB data

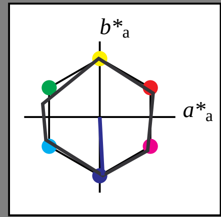
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272



Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 273/360 = 0.758$
lab*tch* and *lab*nch

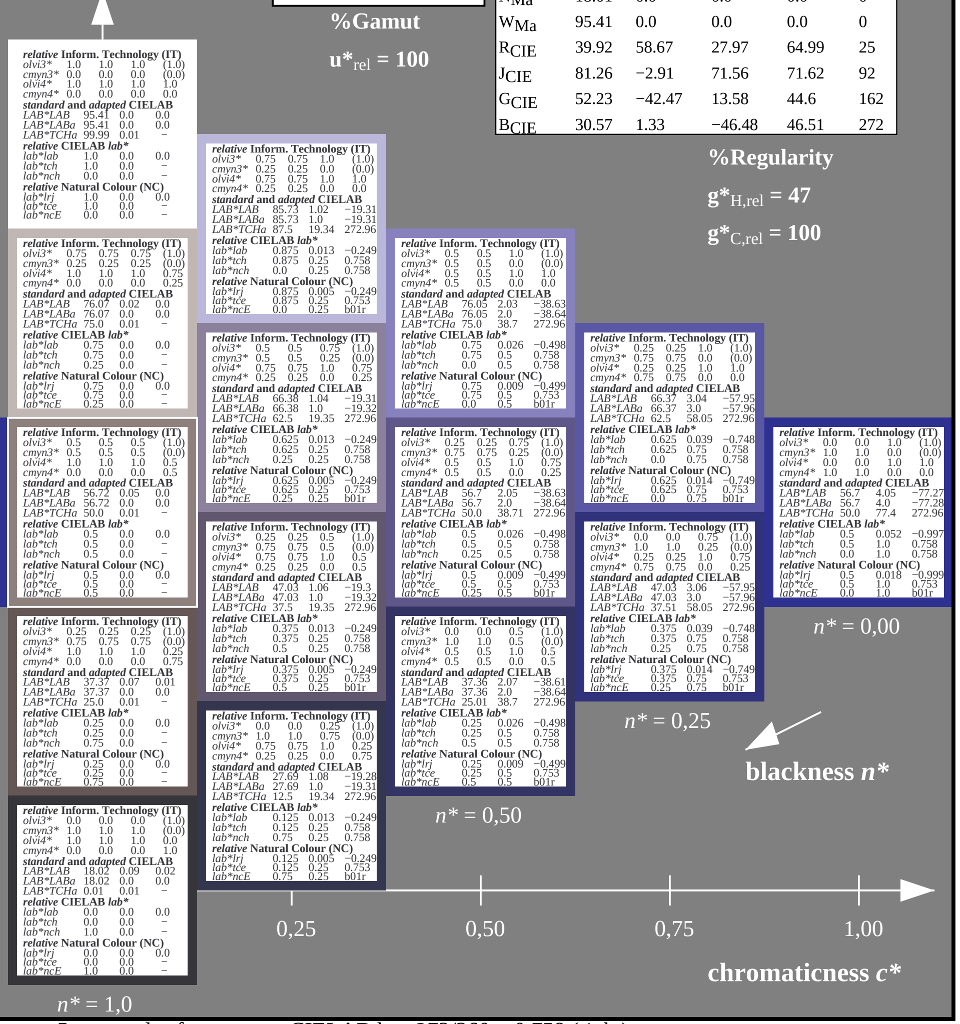
D65: hue B
LCH*Ma: 57 77 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

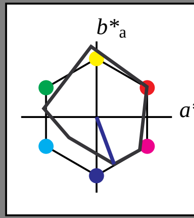


UE500−7, 5 step scales for constant CIELAB hue 290/360 = 0.807 (left)

5 step scales for constant CIELAB hue 273/360 = 0.758 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 290/360 = 0.807$
lab*tch and lab*nch

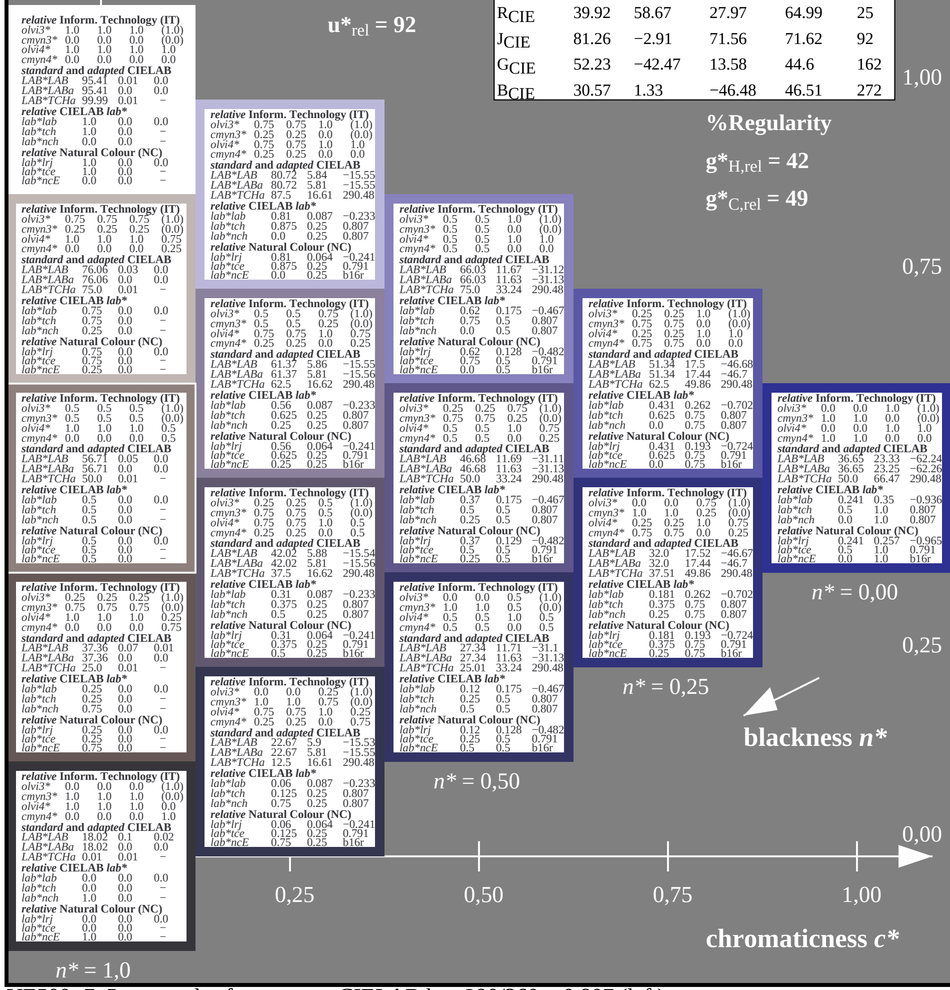
D65: hue B
LCH*Ma: 37 66 290
rgb*Ma: 0.0 0.0 1.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 92$

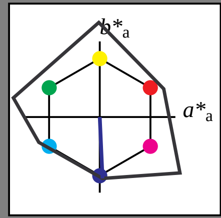
MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch and lab*nch

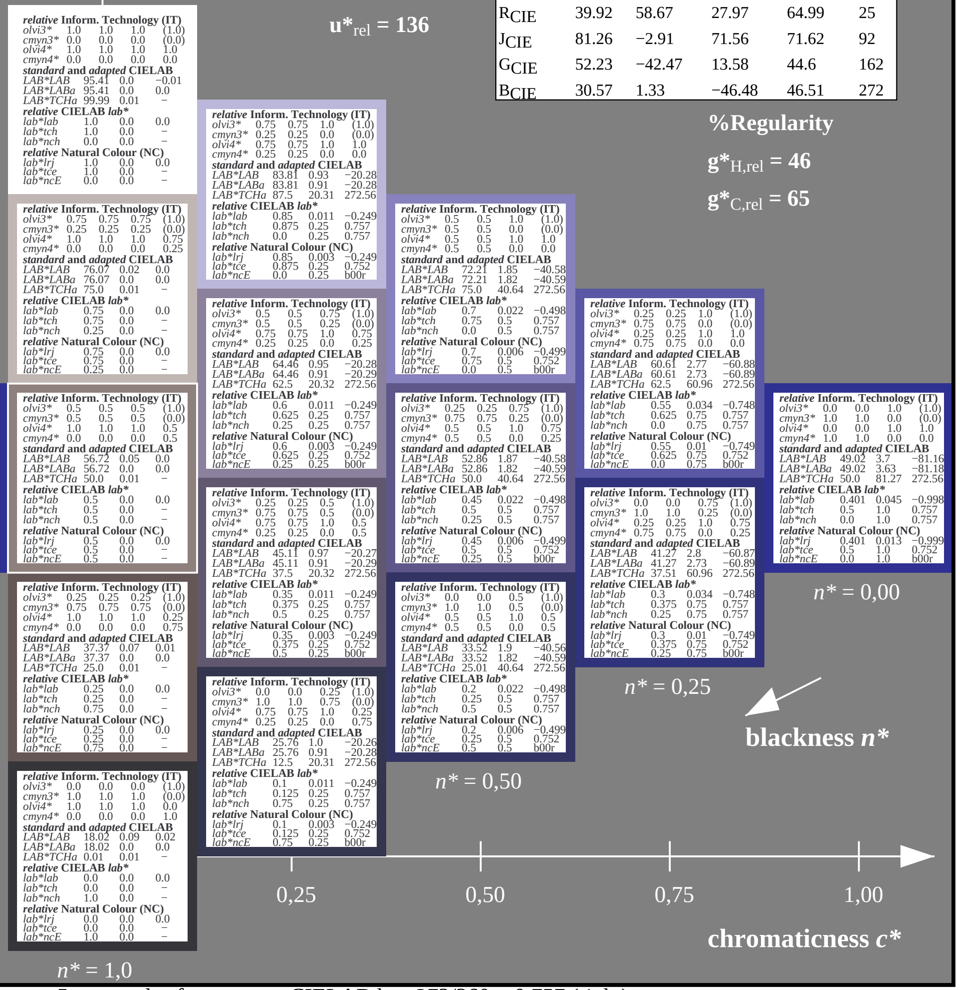
D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$

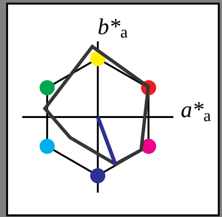


UE500−7, 5 step scales for constant CIELAB hue 290/360 = 0.807 (left)

5 step scales for constant CIELAB hue 273/360 = 0.757 (right)

Input: Colorimetric Reflective System MRS18a
for hue *h = *lab*h* = 290/360 = 0.807**
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 66 290
rgb*Ma: 0.0 0.0 1.0
triangle lightness *t**

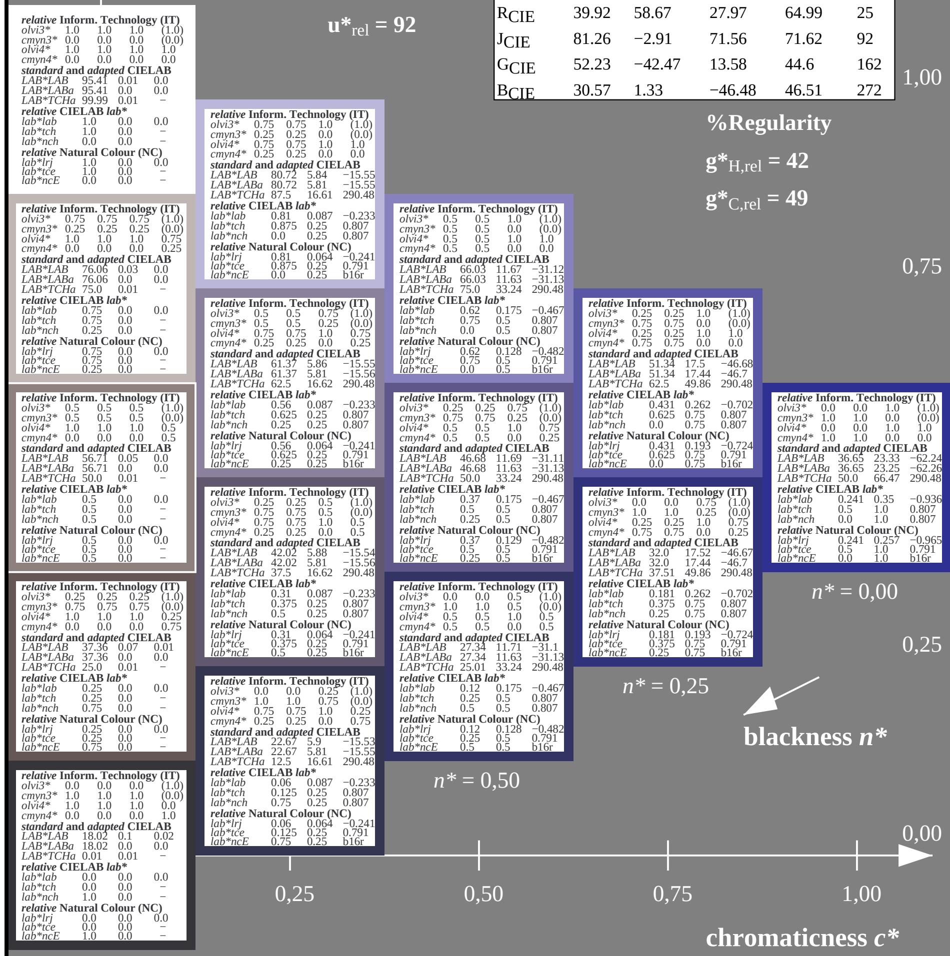


%Gamut
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data

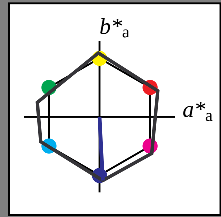
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System NRS11
for hue *h = *lab*h* = 273/360 = 0.758**
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 84 273
rgb*Ma: 0.0 0.0 1.0
triangle lightness *t**

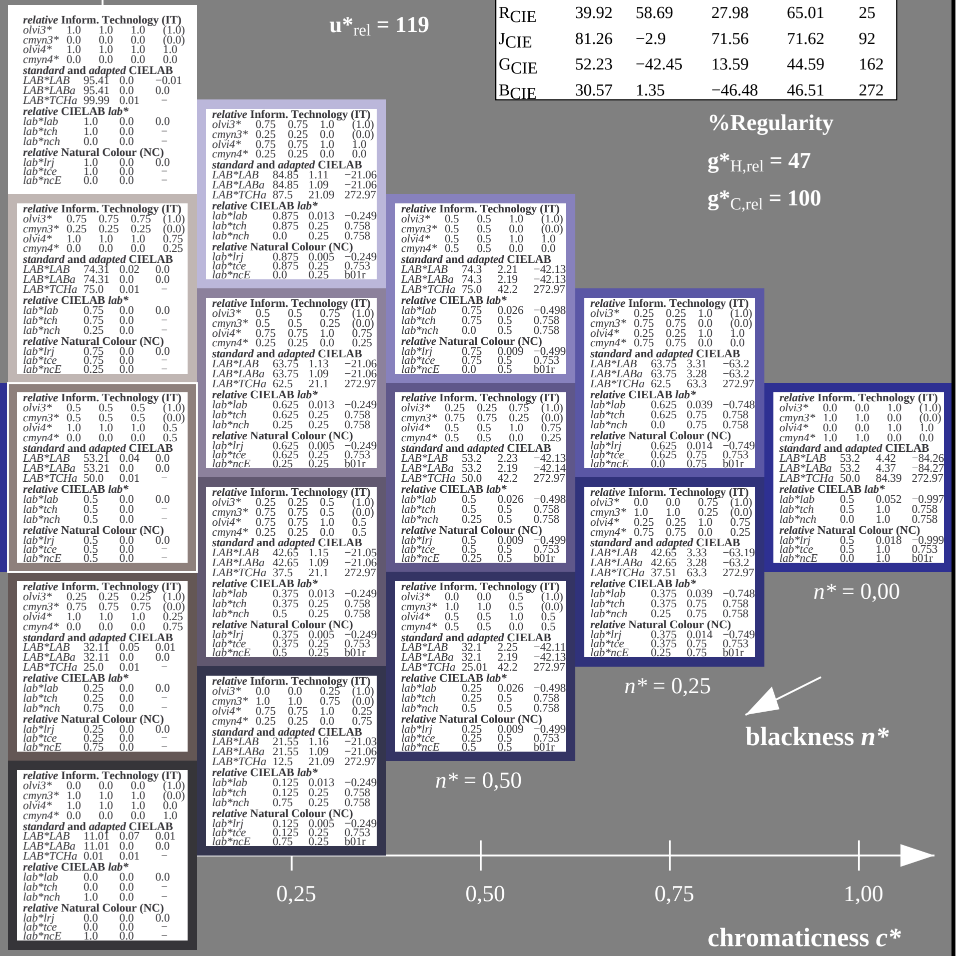


%Gamut
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



UE500−7, 5 step scales for constant CIELAB hue 290/360 = 0.807 (left)

5 step scales for constant CIELAB hue 273/360 = 0.758 (right)

Input: Colorimetric Reflective System MRS18a

for hue $h^* = lab^*h = 290/360 = 0.807$

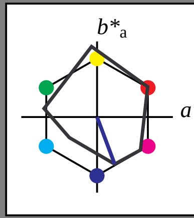
*lab*tch and lab*nch*

D65: hue B

LCH*Ma: 37 66 290

rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 92$

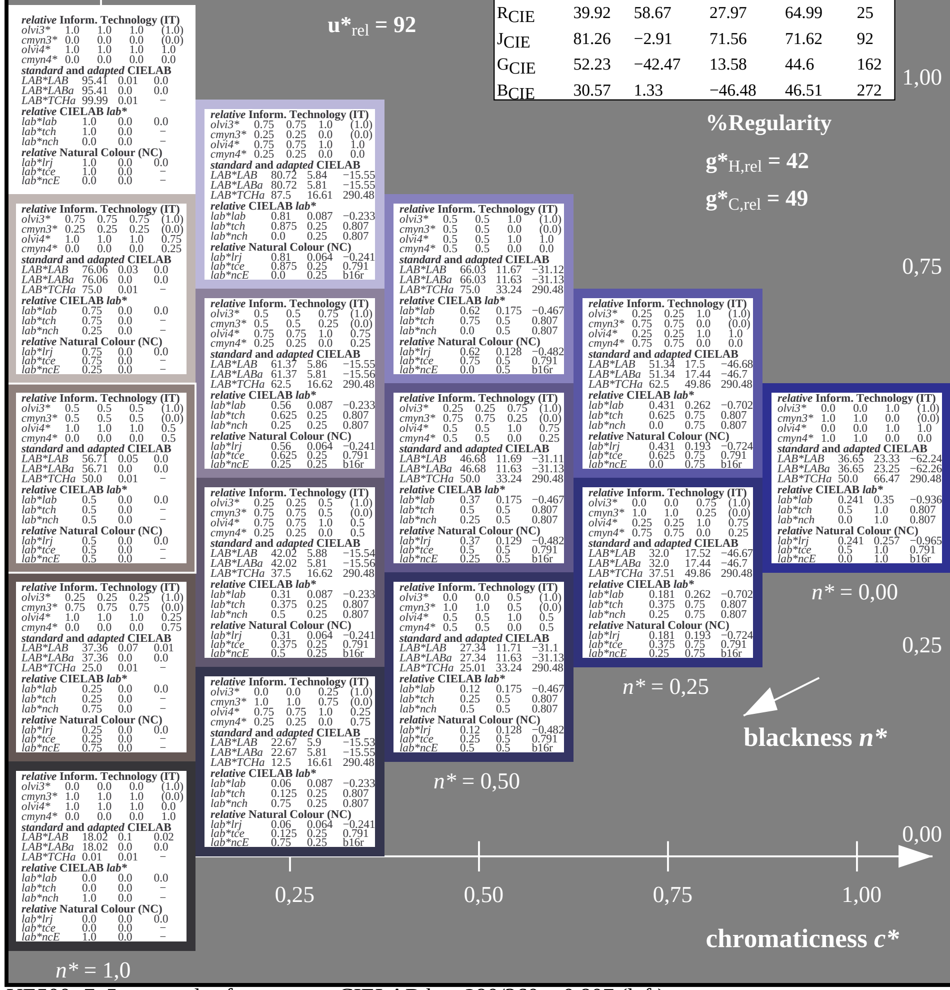
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 273/360 = 0.757$

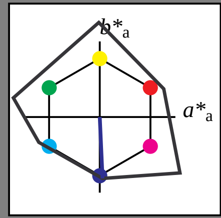
*lab*tch and lab*nch*

D65: hue B

LCH*Ma: 49 81 273

rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 149$

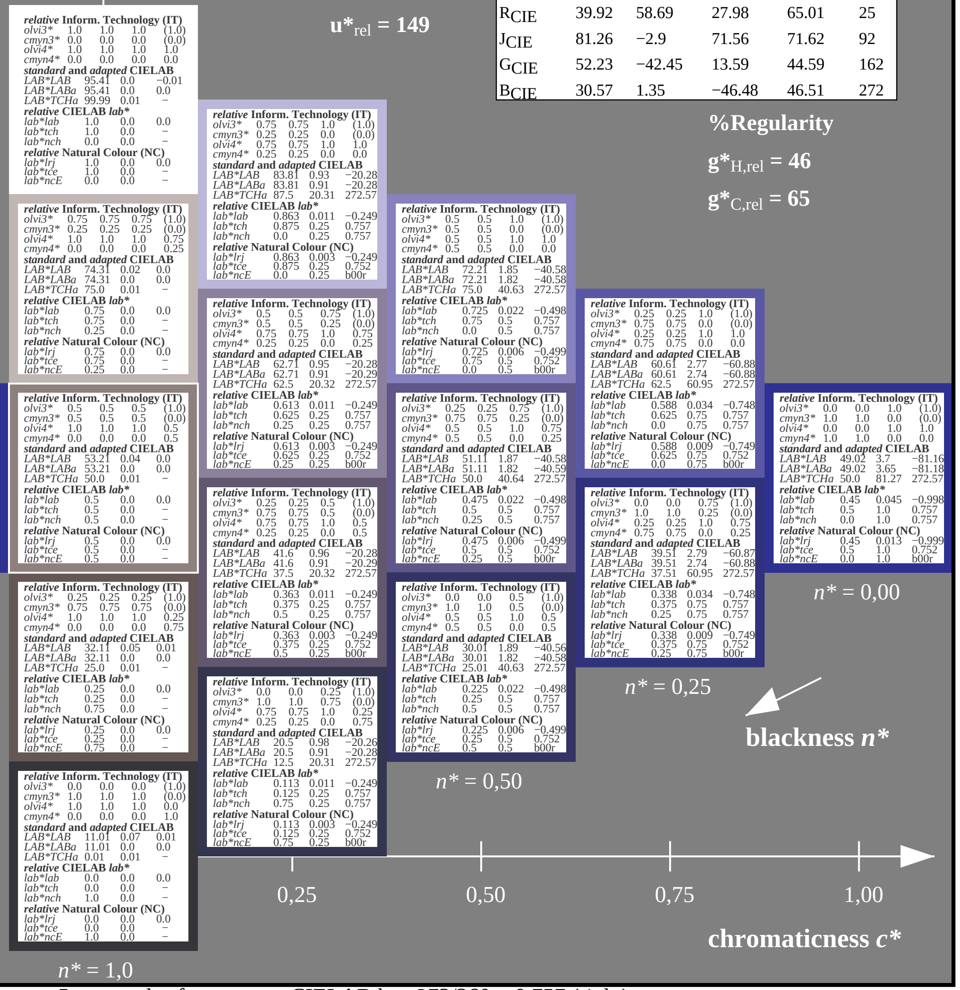
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



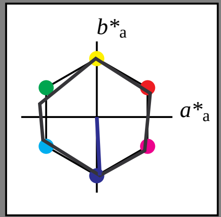
UE500−7, 5 step scales for constant CIELAB hue 290/360 = 0.807 (left)

5 step scales for constant CIELAB hue 273/360 = 0.757 (right)

Input: Colorimetric Reflective System NRS18
for hue *h = *lab*h* = 273/360 = 0.758**
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 77 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness *t*



%Gamut

u^*_{rel} = 100

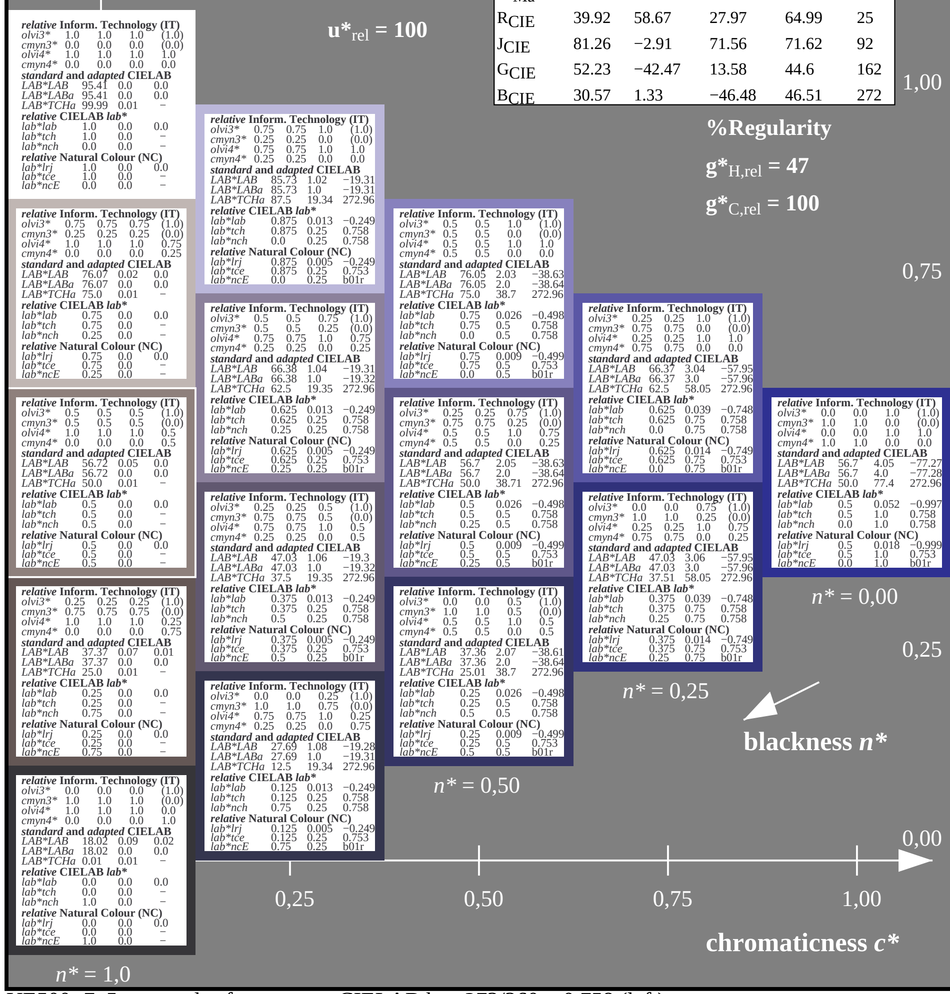
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

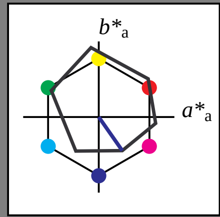
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System ORS18
for hue *h = *lab*h* = 305/360 = 0.847**
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness *t*



%Gamut

u^*_{rel} = 93

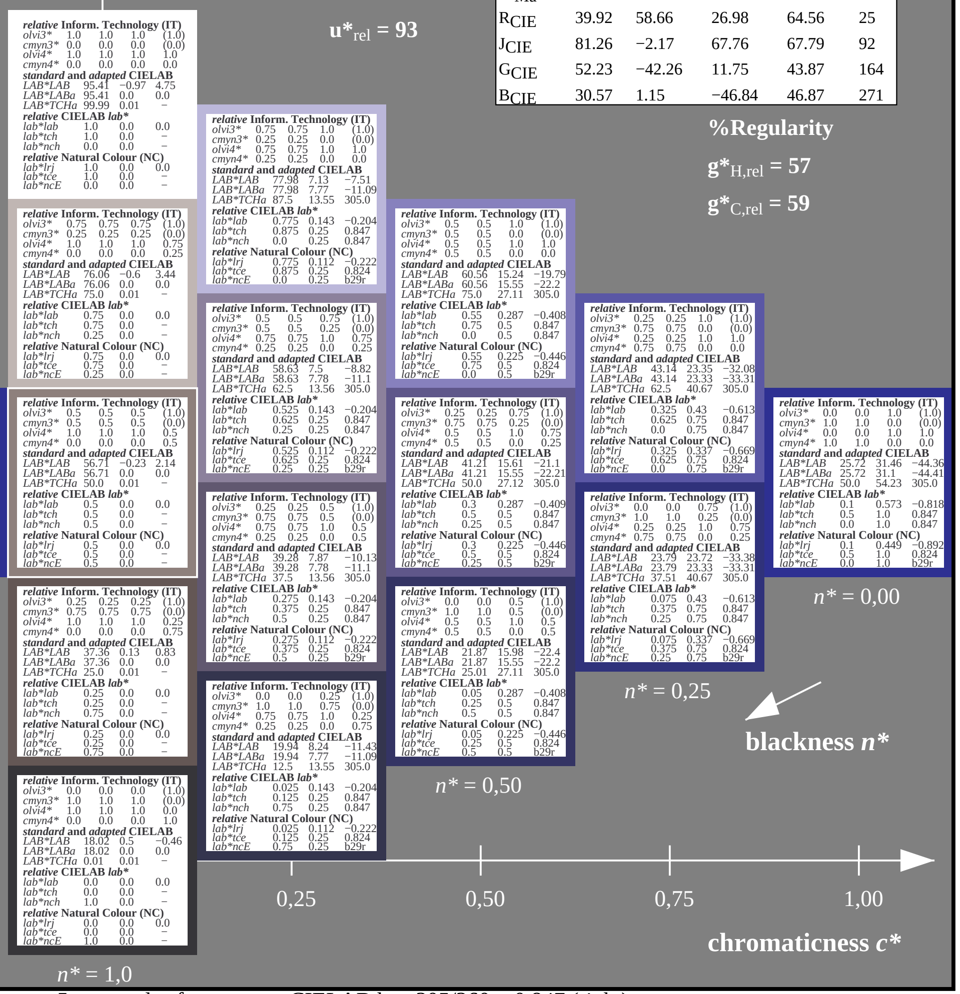
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

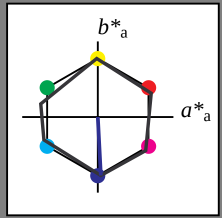
$g^*_{C,rel}$ = 59



UE500−7, 5 step scales for constant CIELAB hue 273/360 = 0.758 (left) 5 step scales for constant CIELAB hue 305/360 = 0.847 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 273/360 = 0.758$
lab^*tch and lab^*nch

D65: hue B
LCH*Ma: 57 77 273
rgb*Ma: 0.0 0.0 1.0
triangle lightness t^*

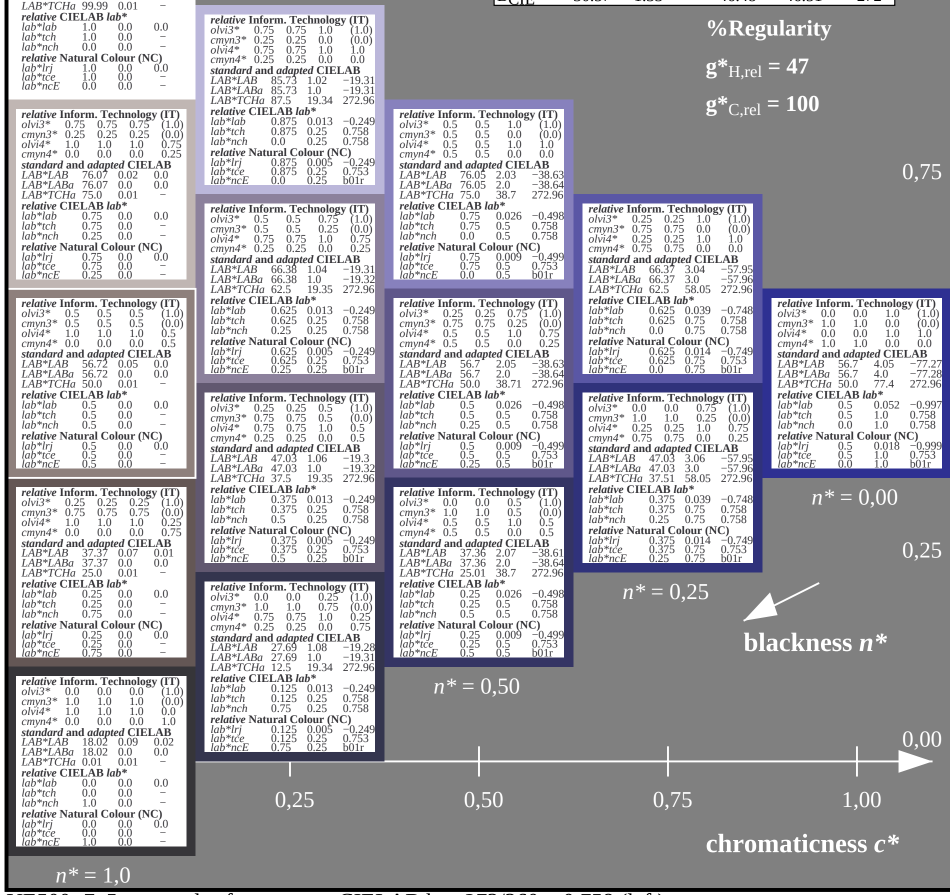


%Gamut
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data

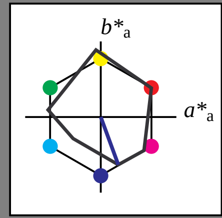
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 290/360 = 0.806$
lab^*tch and lab^*nch

D65: hue B
LCH*Ma: 37 67 290
rgb*Ma: 0.0 0.0 1.0
triangle lightness t^*

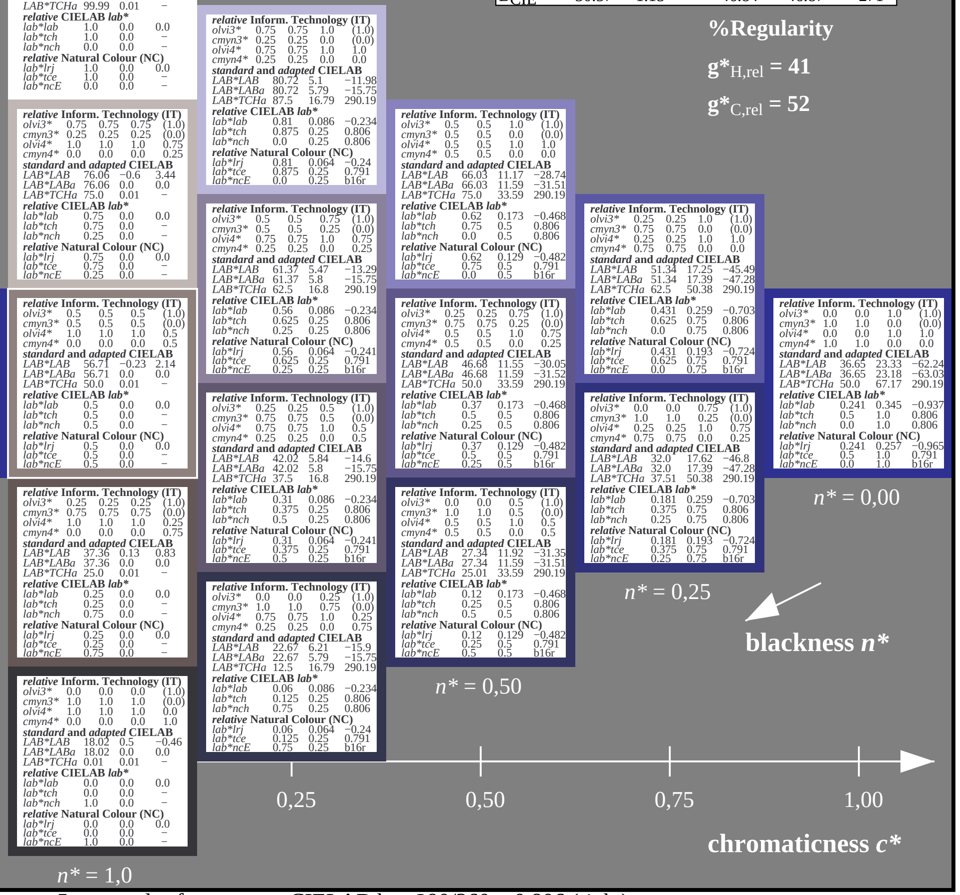


%Gamut
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

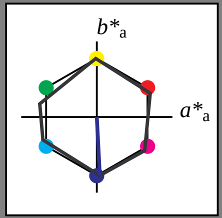
%Regularity
$g^*_{H,rel} = 41$
$g^*_{C,rel} = 52$



UE500−7, 5 step scales for constant CIELAB hue 273/360 = 0.758 (left) 5 step scales for constant CIELAB hue 290/360 = 0.806 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 273/360 = 0.758$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 77 273
rgb*Ma: 0.0 0.0 1.0
triangle lightness t^*

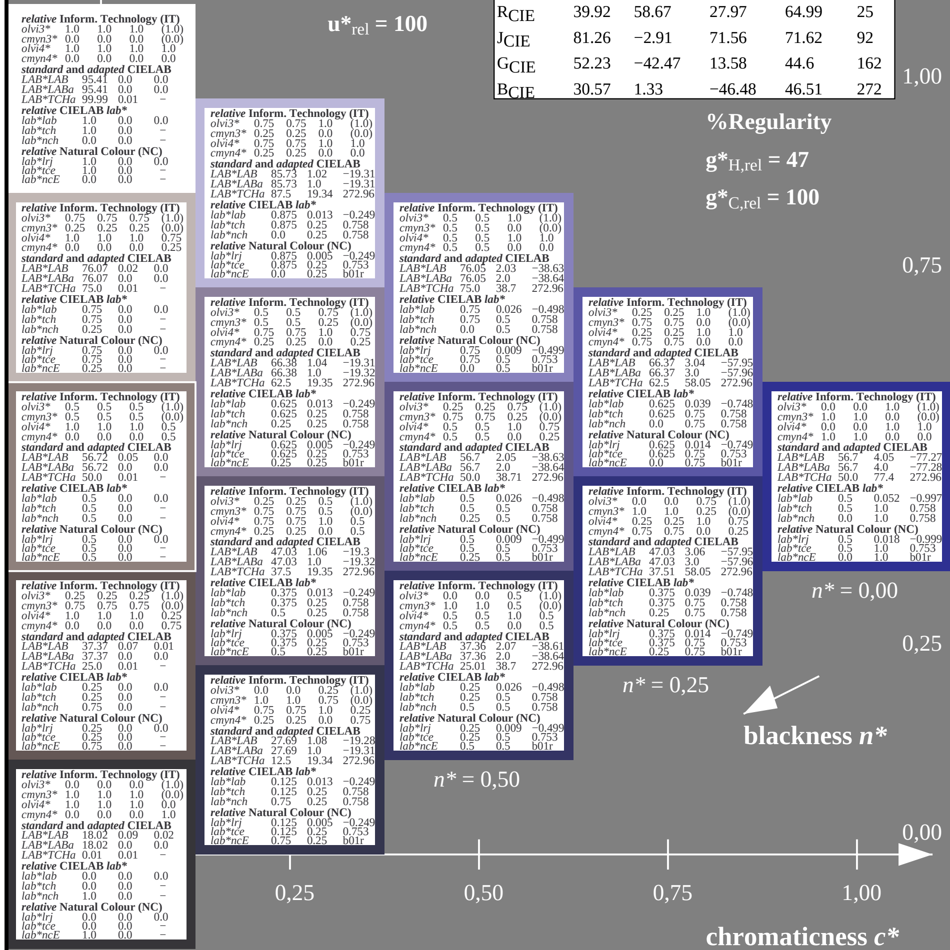


%Gamut
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data

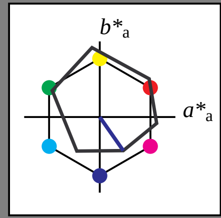
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0
triangle lightness t^*

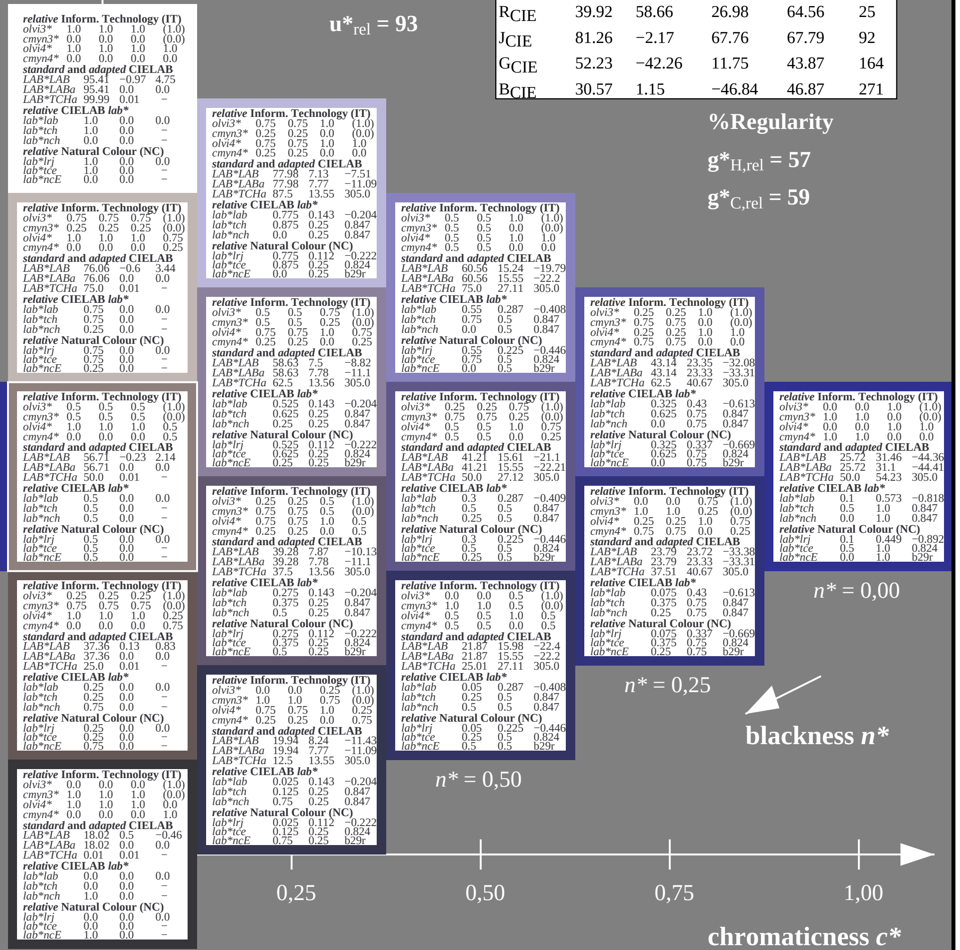


%Gamut
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



UE500−7, 5 step scales for constant CIELAB hue 273/360 = 0.758 (left)

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

Input: Colorimetric Reflective System NRS18

for hue *h* = lab*h = 273/360 = 0.758*

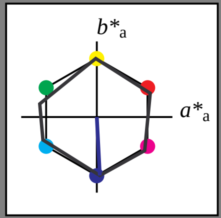
*lab*tch* and *lab*nch*

D65: hue B

LCH*Ma: 57 77 273

rgb*Ma: 0.0 0.0 1.0

triangle lightness *t*



%Gamut

u^*_{rel} = 100

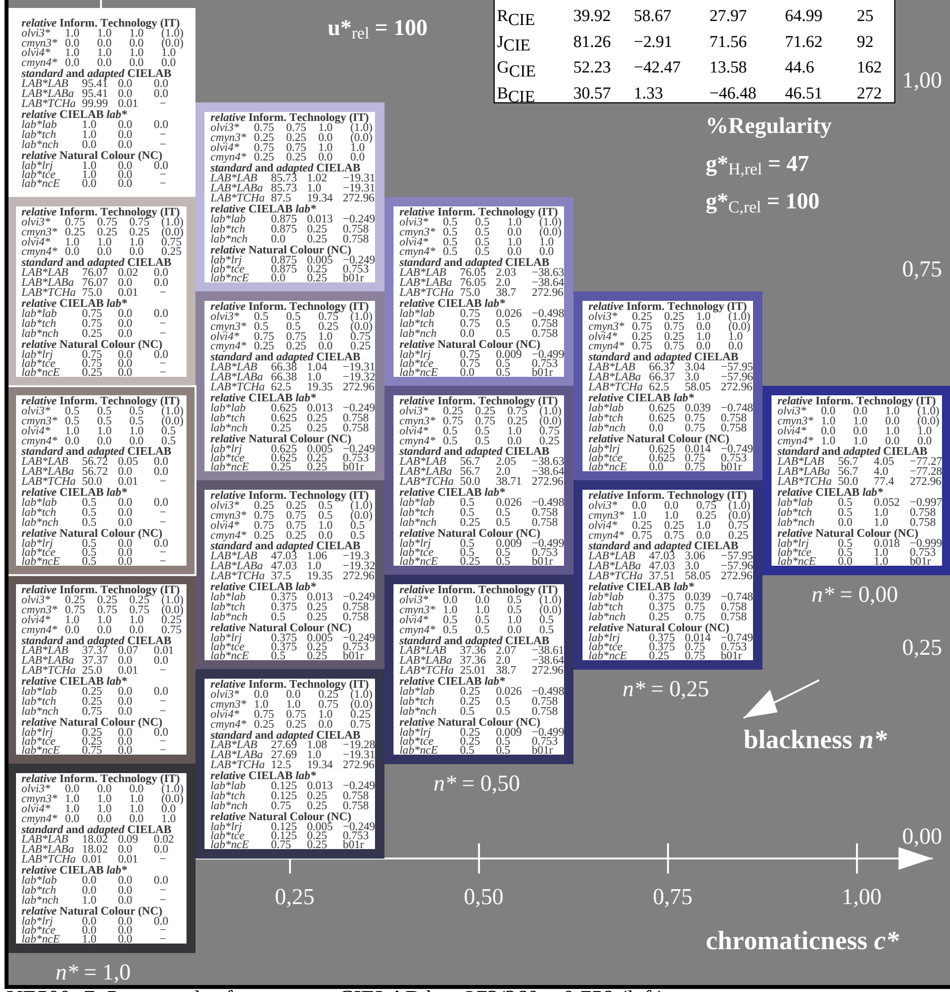
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System MRS18a

for hue *h* = lab*h = 290/360 = 0.807*

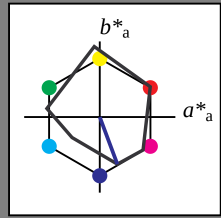
*lab*tch* and *lab*nch*

D65: hue B

LCH*Ma: 37 66 290

rgb*Ma: 0.0 0.0 1.0

triangle lightness *t*



%Gamut

u^*_{rel} = 92

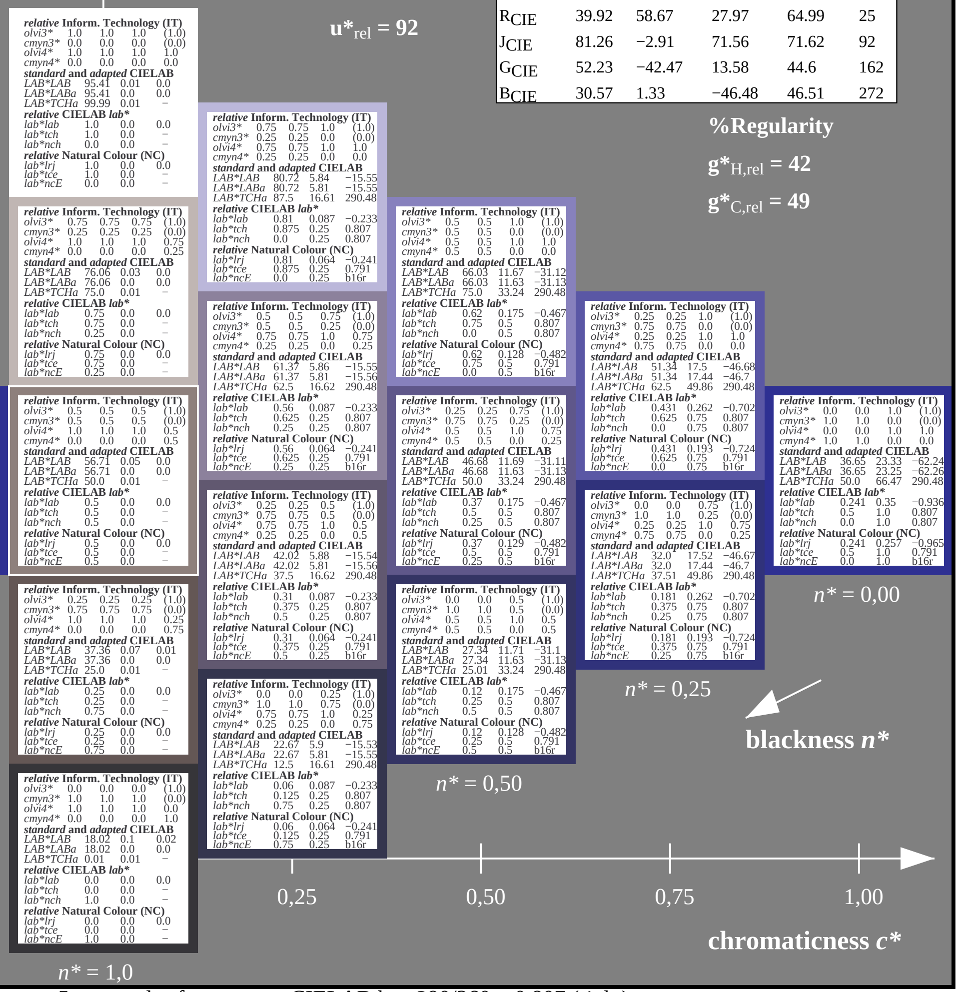
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



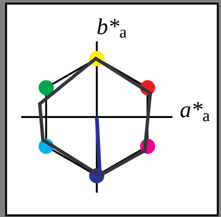
UE500−7, 5 step scales for constant CIELAB hue 273/360 = 0.758 (left)

5 step scales for constant CIELAB hue 290/360 = 0.807 (right)

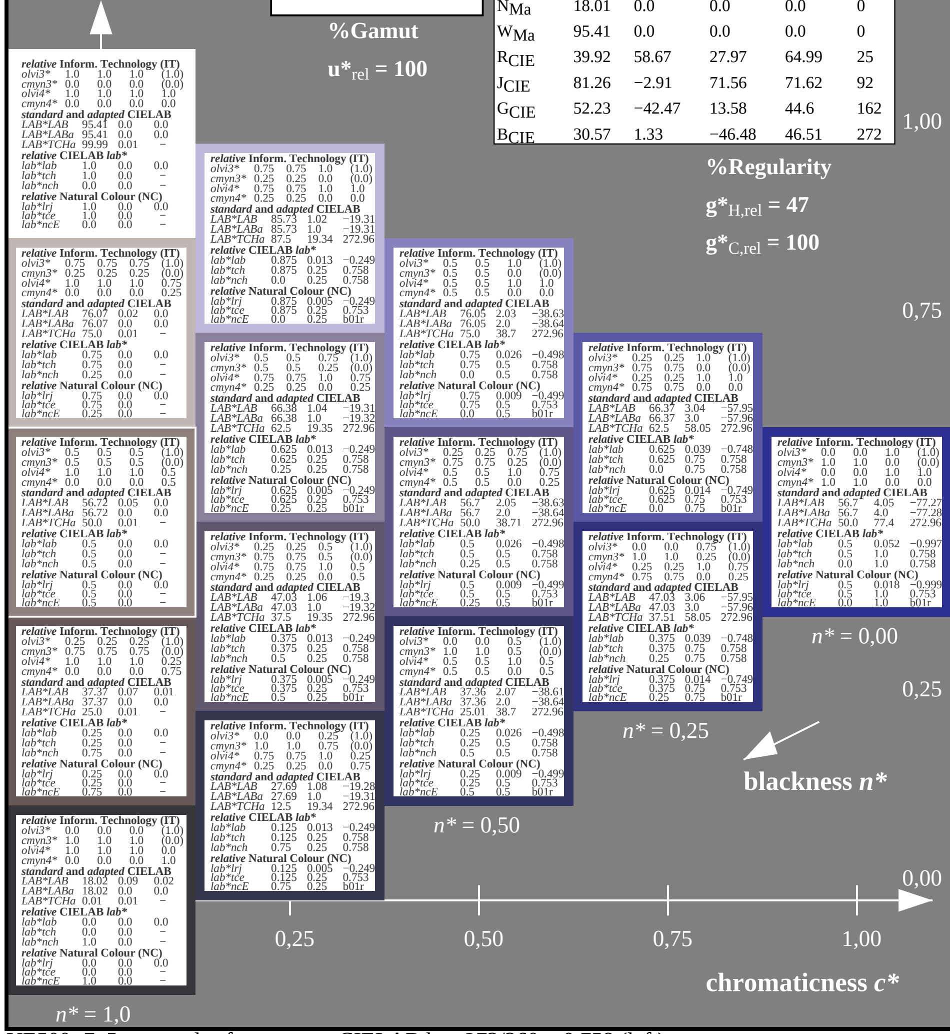
Input: Colorimetric Reflective System NRS18
for hue *h = *lab*h* = 273/360 = 0.758**
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 77 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness *t**



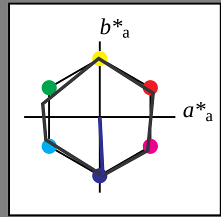
NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272



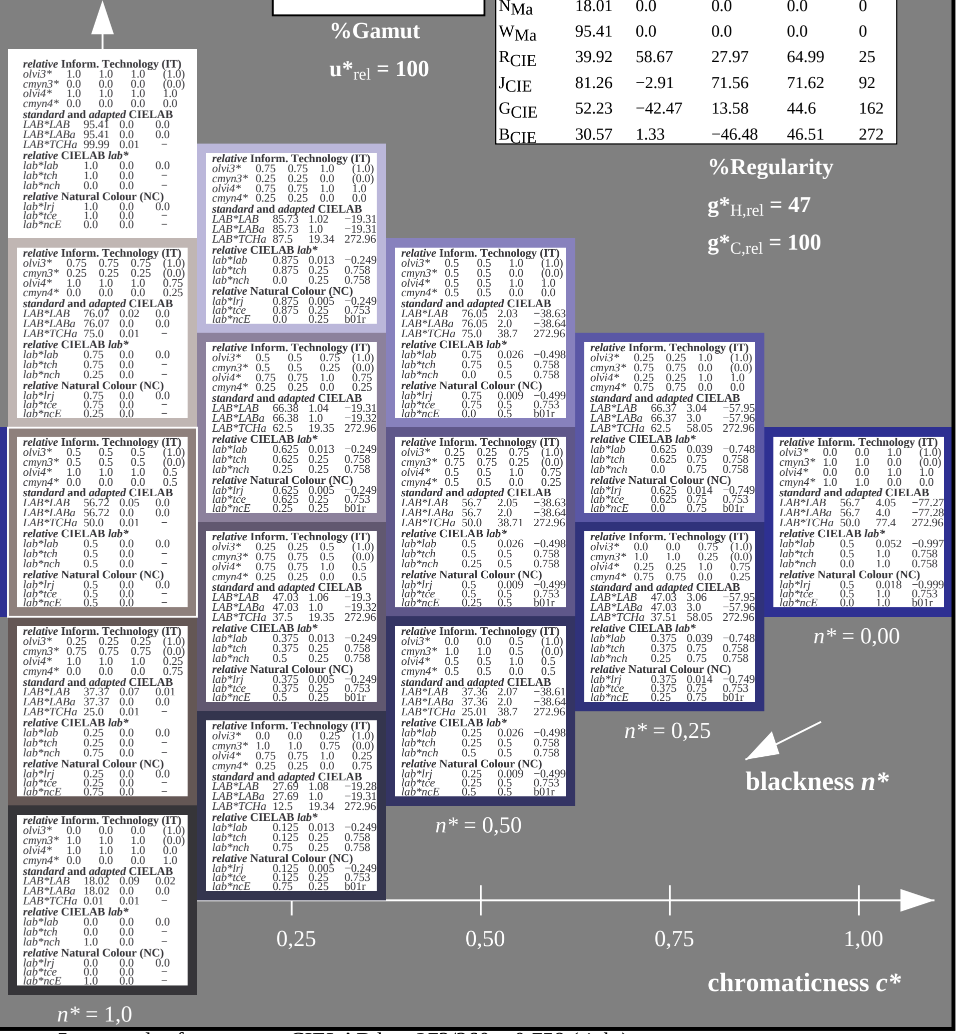
Output: Colorimetric Reflective System NRS18
for hue *h = *lab*h* = 273/360 = 0.758**
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 77 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness *t**



NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272



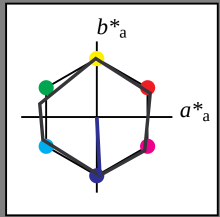
UE500−7, 5 step scales for constant CIELAB hue 273/360 = 0.758 (left)

5 step scales for constant CIELAB hue 273/360 = 0.758 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 273/360 = 0.758$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 77 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*

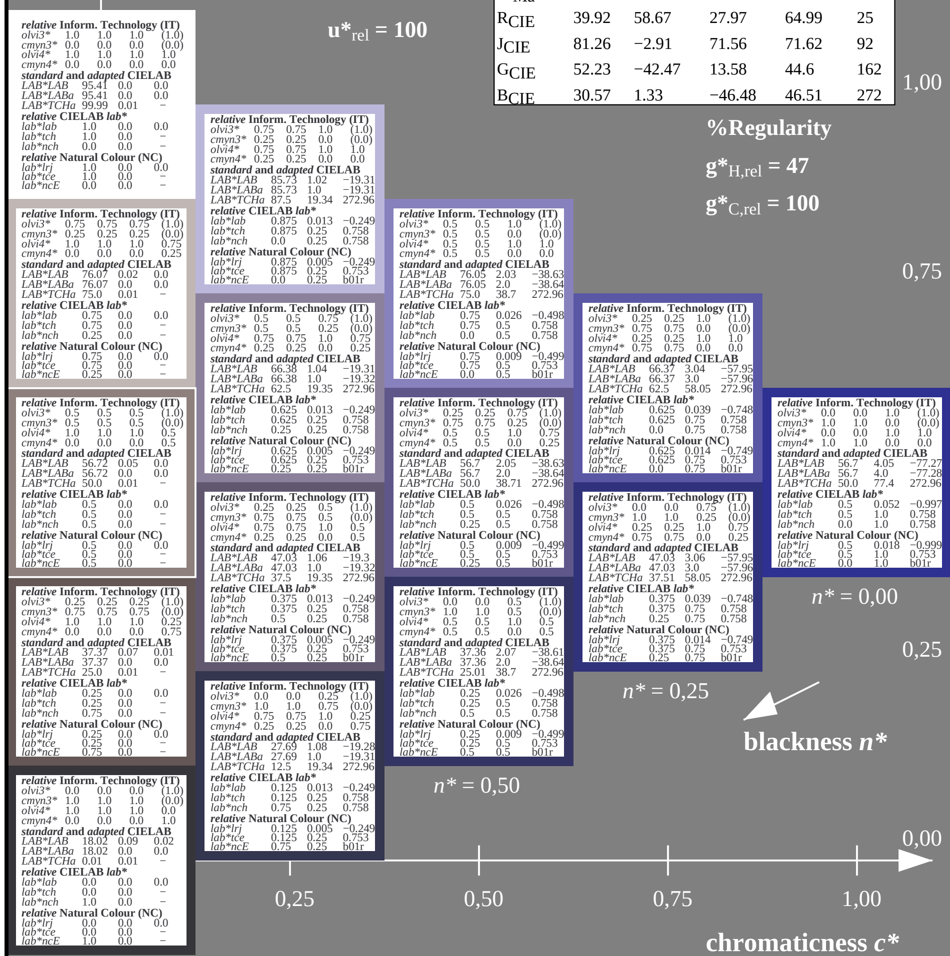


%Gamut
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

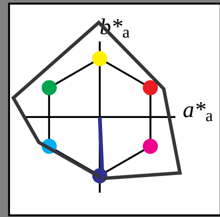
%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*

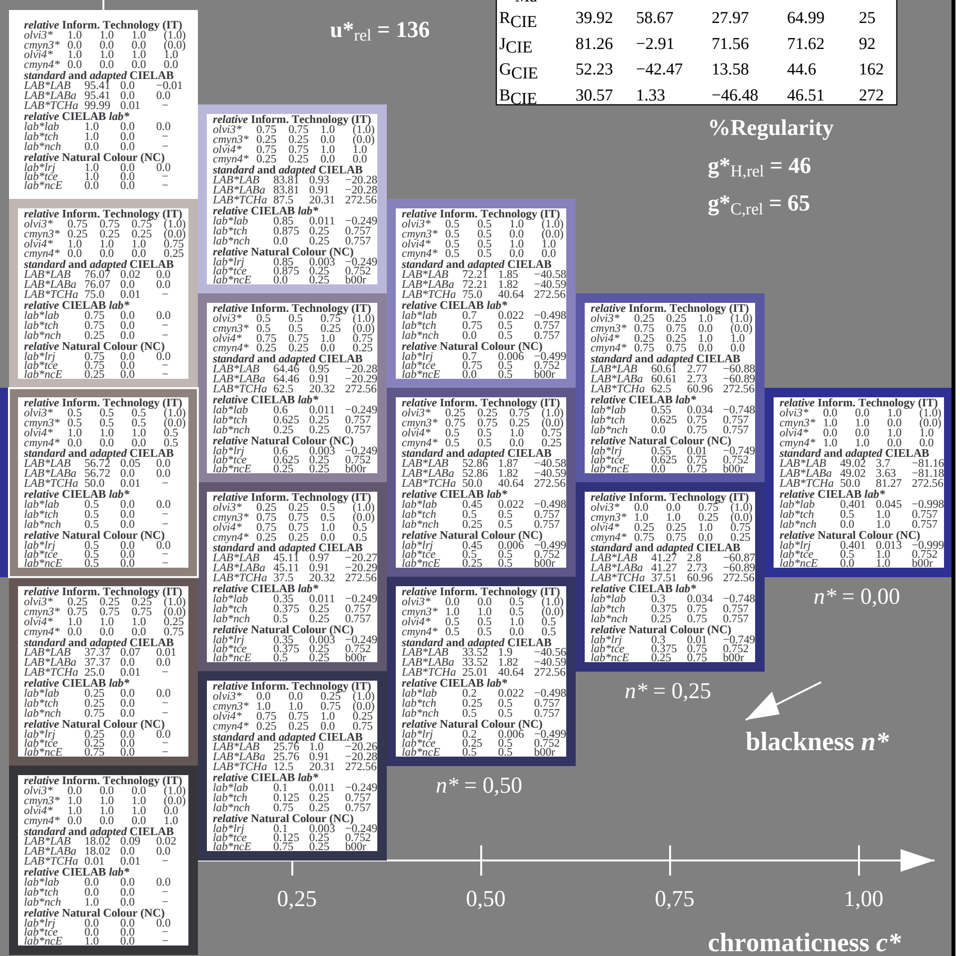


%Gamut
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



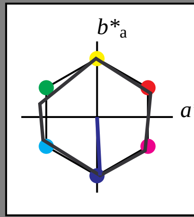
UE500−7, 5 step scales for constant CIELAB hue 273/360 = 0.758 (left)

5 step scales for constant CIELAB hue 273/360 = 0.757 (right)

Input: Colorimetric Reflective System NRS18
for hue *h = *lab*h* = 273/360 = 0.758**
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 77 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness *t**



%Gamut

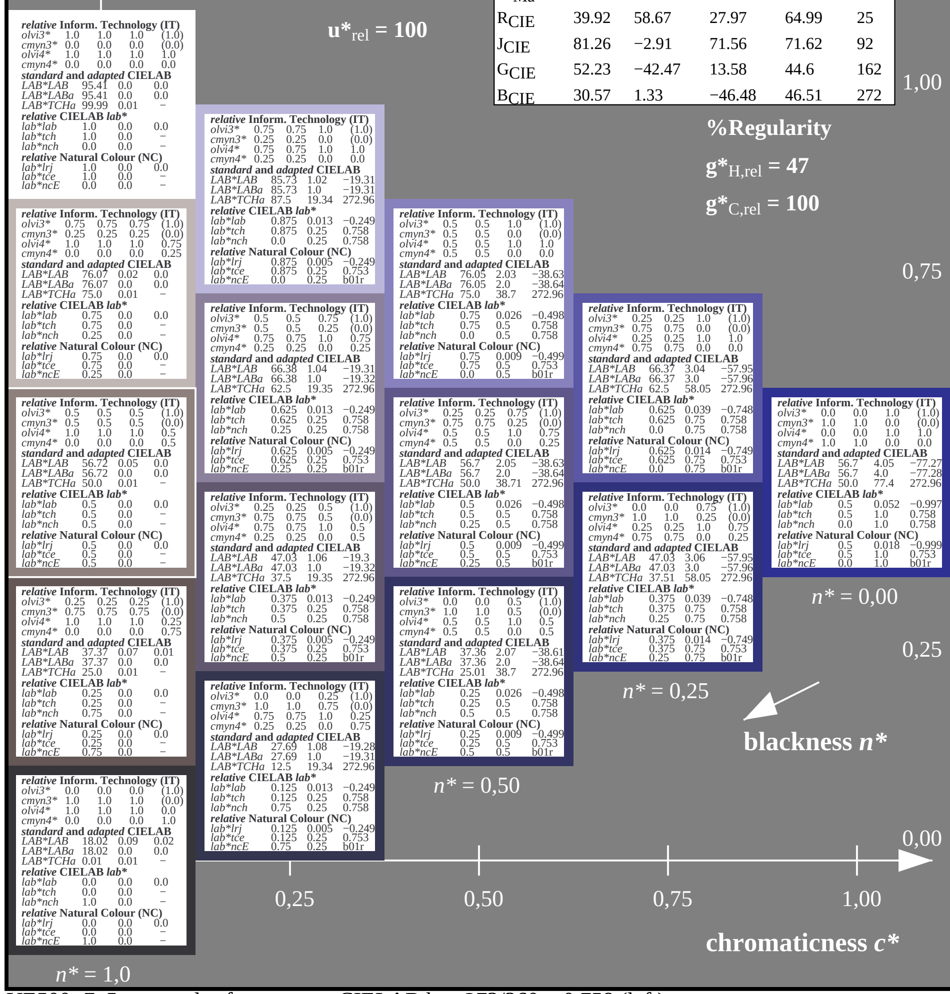
u^*_{rel} = 100

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

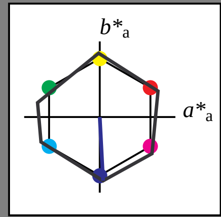
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NRS11
for hue *h = *lab*h* = 273/360 = 0.758**
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 84 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness *t**



%Gamut

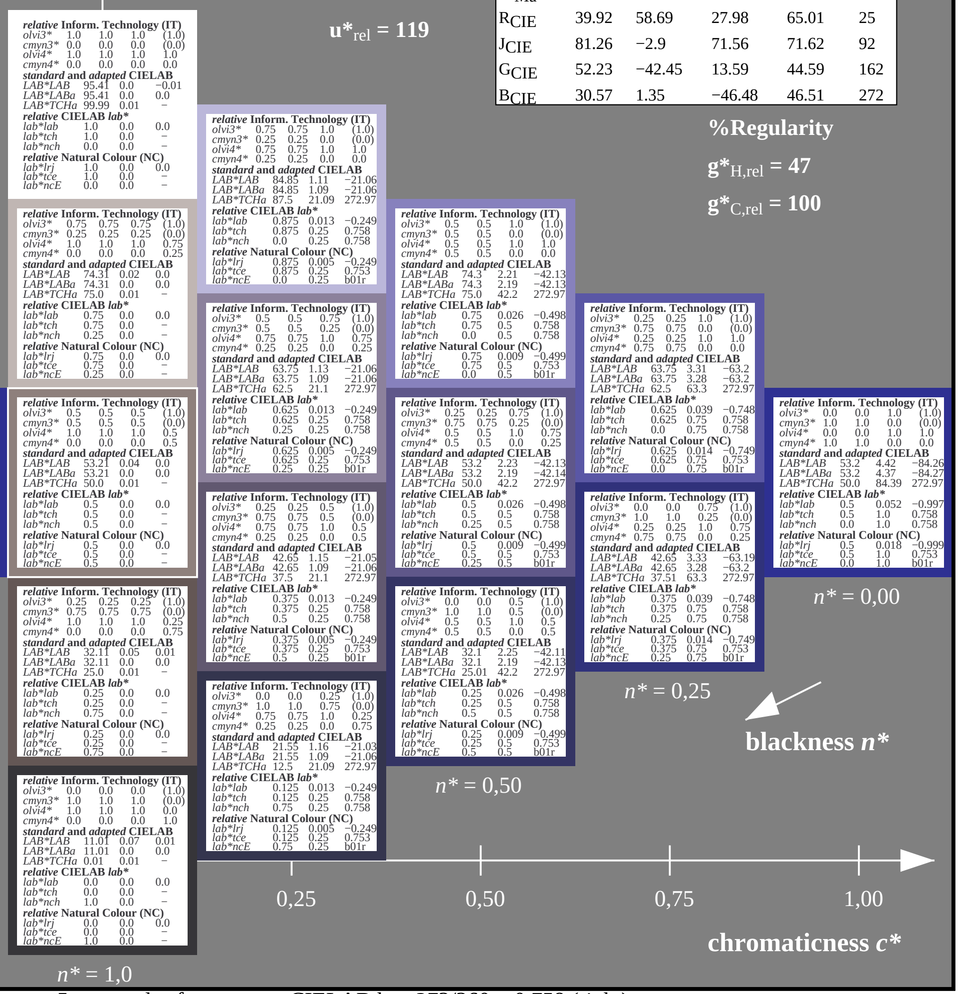
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



UE500−7, 5 step scales for constant CIELAB hue 273/360 = 0.758 (left)

5 step scales for constant CIELAB hue 273/360 = 0.758 (right)

Input: Colorimetric Reflective System NRS18

for hue *h** = *lab*h* = *273/360* = *0.758*

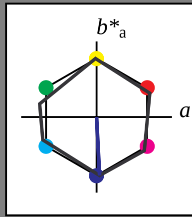
*lab*tch* and *lab*nch*

D65: hue B

LCH*Ma: 57 77 273

rgb*Ma: 0.0 0.0 1.0

triangle lightness *t**

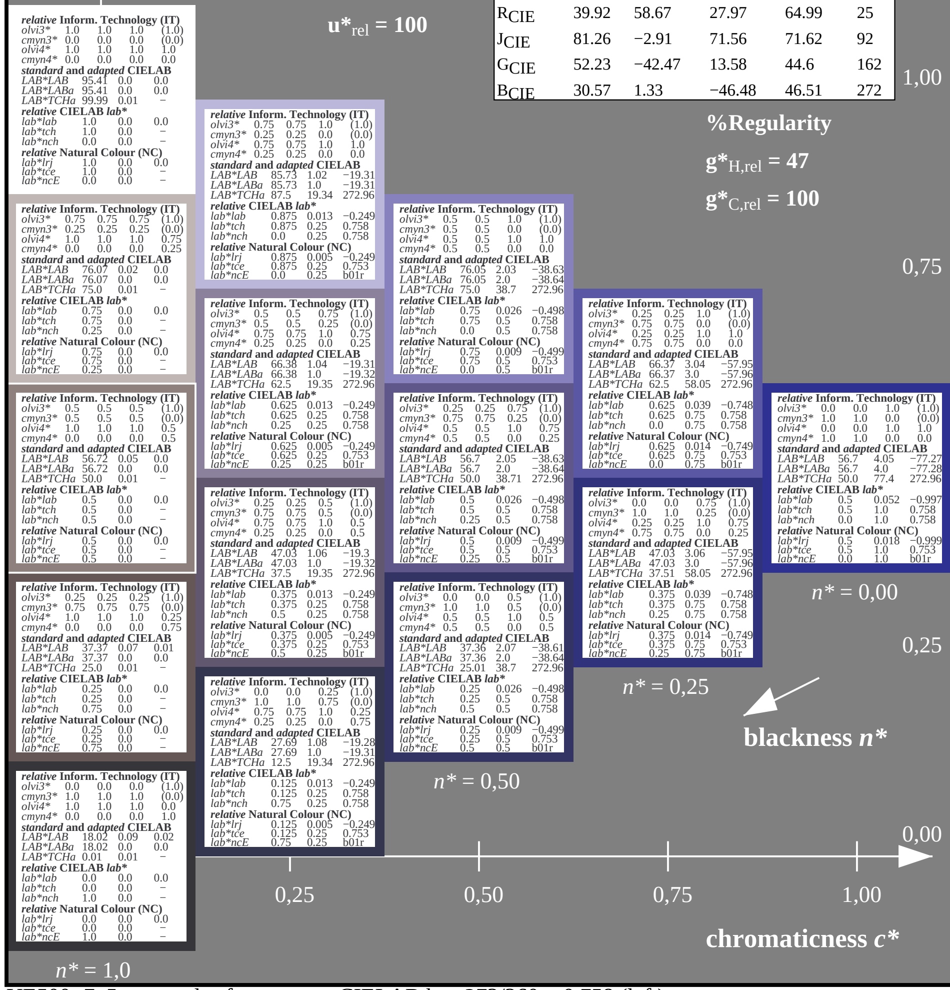


%Gamut

$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272



Output: Colorimetric Reflective System NCS11

for hue *h** = *lab*h* = *273/360* = *0.757*

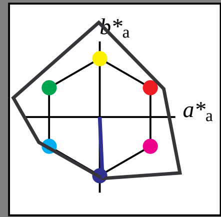
*lab*tch* and *lab*nch*

D65: hue B

LCH*Ma: 49 81 273

rgb*Ma: 0.0 0.0 1.0

triangle lightness *t**

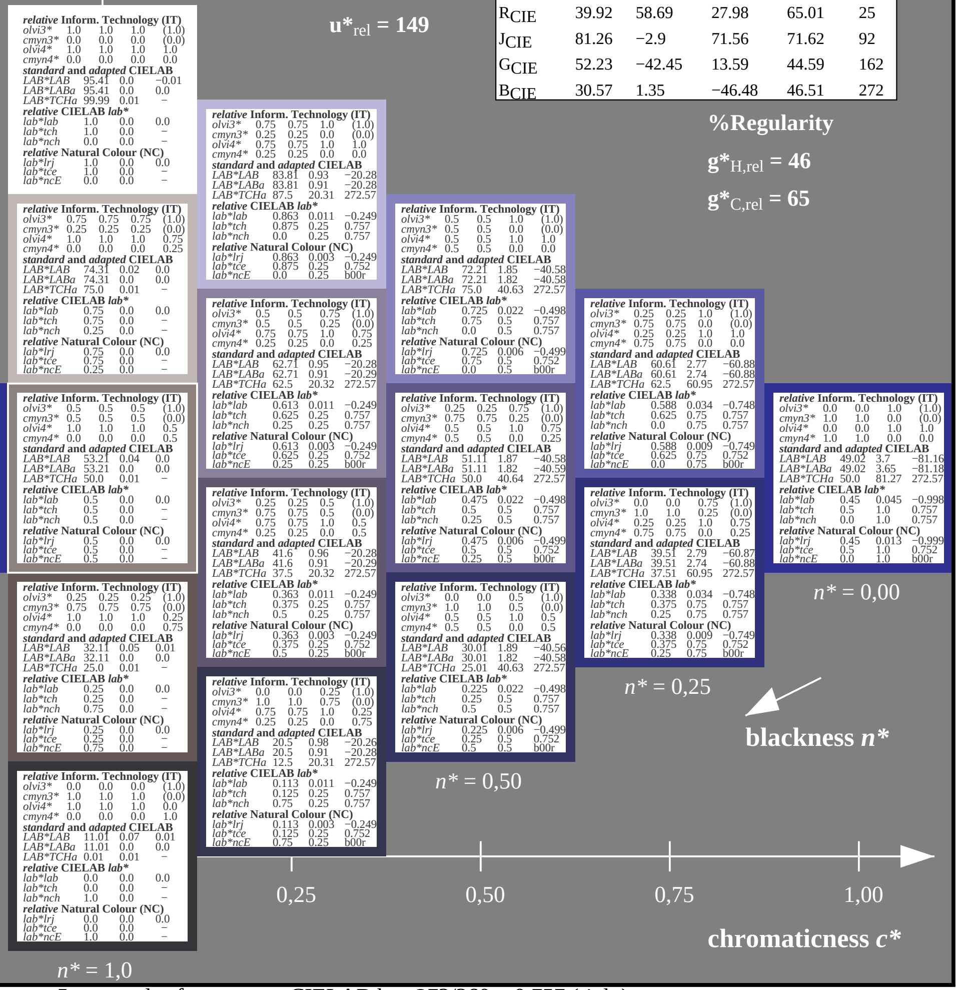


%Gamut

$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272



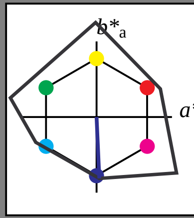
UE500−7, 5 step scales for constant CIELAB hue 273/360 = 0.758 (left)

5 step scales for constant CIELAB hue 273/360 = 0.757 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 273/360 = 0.757$
*lab*tch and lab*nch*

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

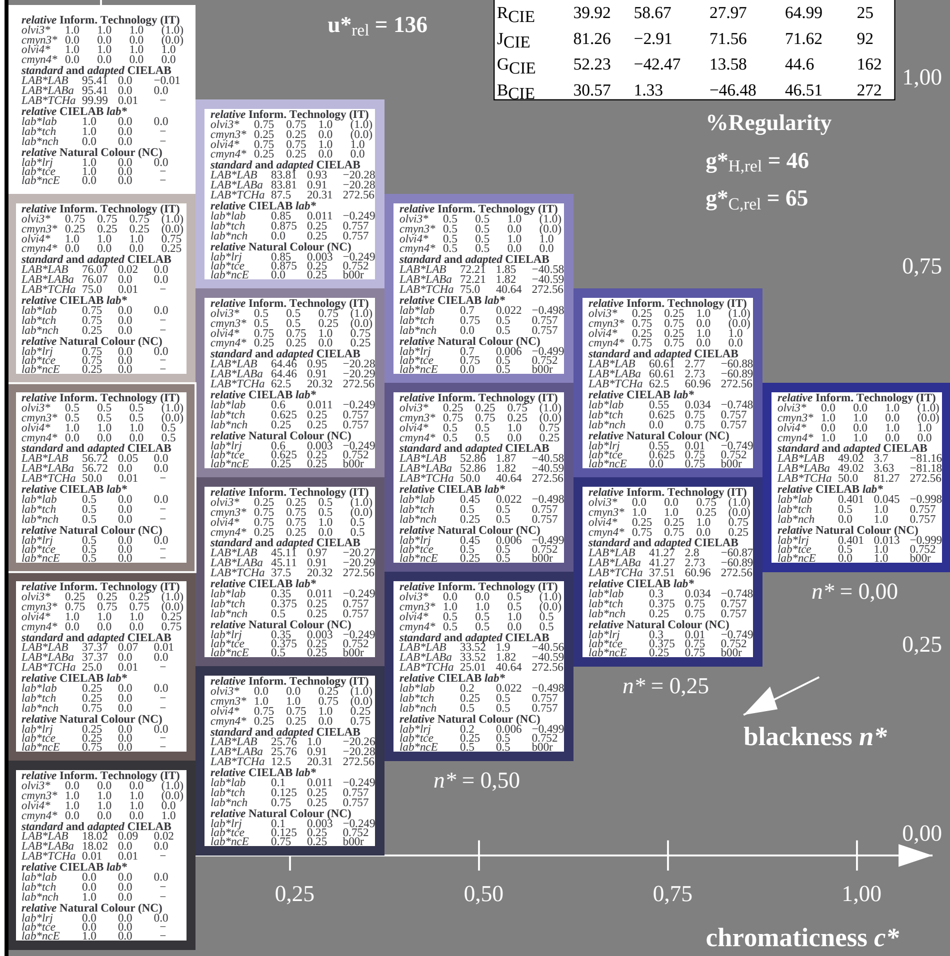
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

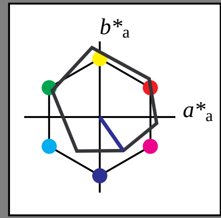
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 305/360 = 0.847$
*lab*tch and lab*nch*

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

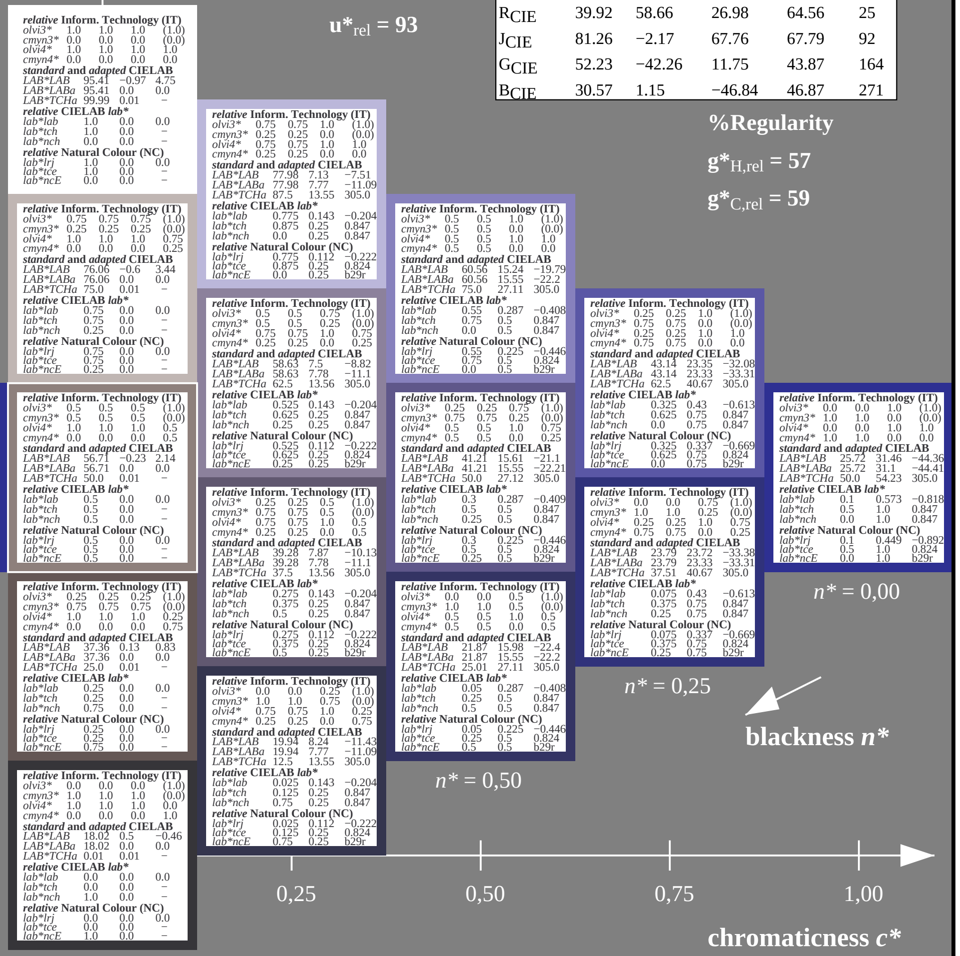
u^*_{rel} = 93

ORS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



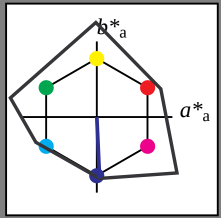
UE500−7, 5 step scales for constant CIELAB hue 273/360 = 0.757 (left)

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

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 273/360 = 0.757$
*lab*tch and lab*nch*

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

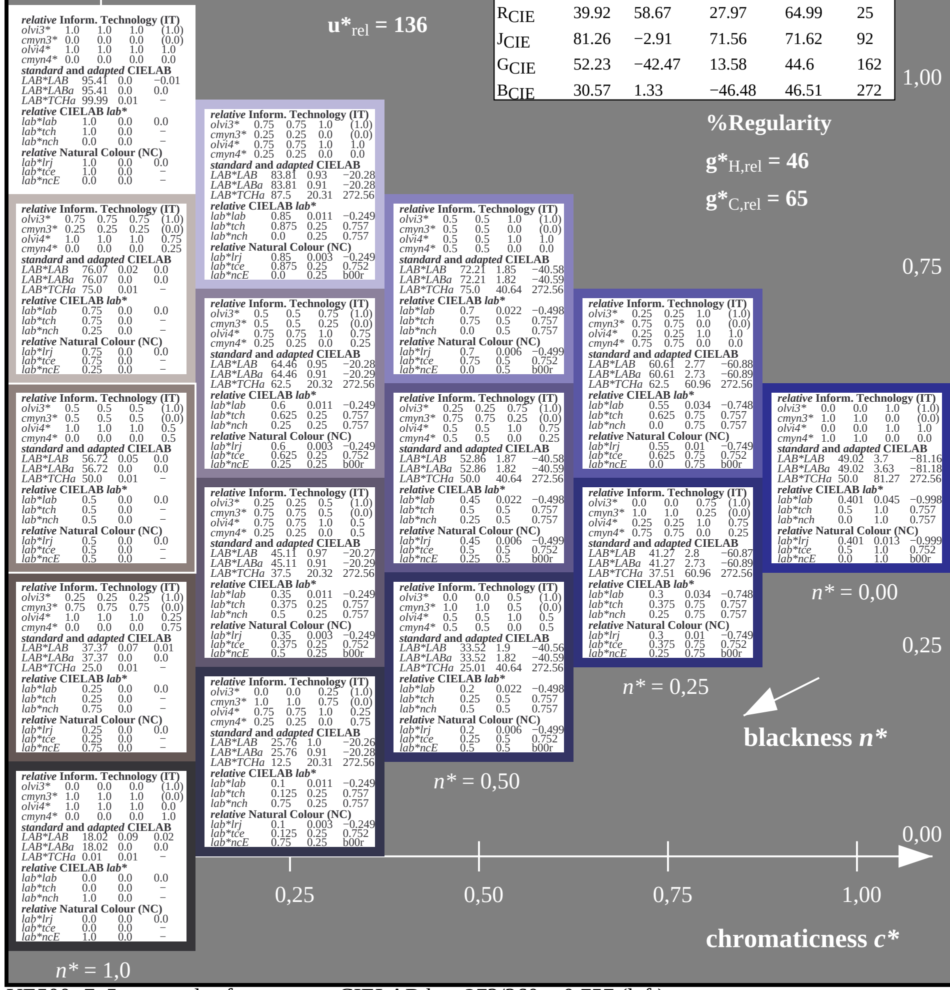
triangle lightness t^*



%Gamut
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

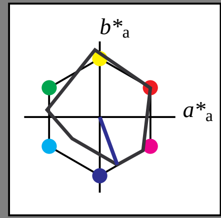
%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 290/360 = 0.806$
*lab*tch and lab*nch*

D65: hue B
LCH*Ma: 37 67 290
rgb*Ma: 0.0 0.0 1.0

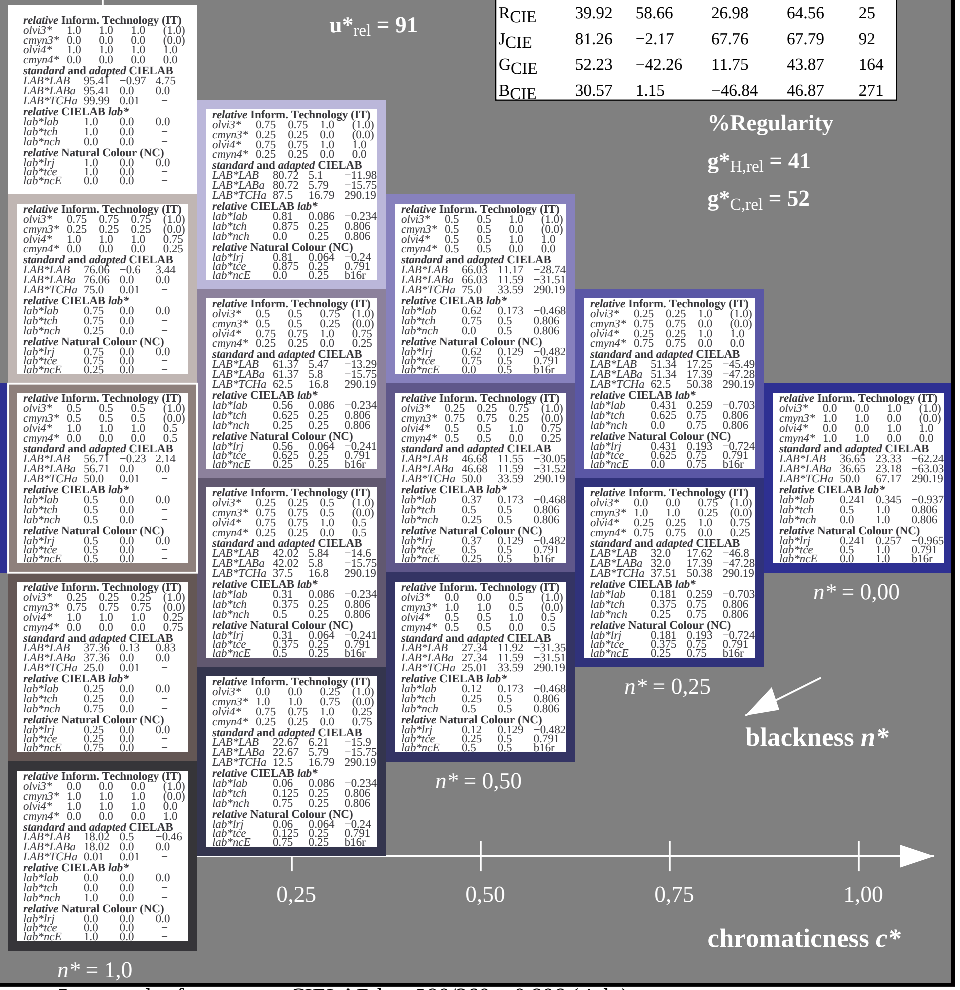
triangle lightness t^*



%Gamut
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel}$ = 41
$g^*_{C,rel}$ = 52



UE500−7, 5 step scales for constant CIELAB hue 273/360 = 0.757 (left)

5 step scales for constant CIELAB hue 290/360 = 0.806 (right)

Input: Colorimetric Reflective System NCS18

for hue $h^* = lab^*h = 273/360 = 0.757$

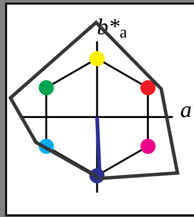
lab*tch* and *lab*nch

D65: hue B

LCH*Ma: 49 81 273

rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00 0,75 0,25 0,00

n^* = 1,0 n^* = 0,50 n^* = 0,25 n^* = 0,00

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System TRS18

for hue $h^* = lab^*h = 305/360 = 0.847$

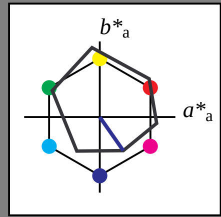
lab*tch* and *lab*nch

D65: hue V

LCH*Ma: 26 54 305

rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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

n^* = 1,0 n^* = 0,50 n^* = 0,25 n^* = 0,00

blackness n^*

0,25 0,50 0,75 1,00

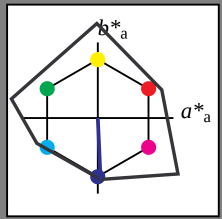
chromaticness c^*

UE500−7, 5 step scales for constant CIELAB hue 273/360 = 0.757 (left) 5 step scales for constant CIELAB hue 305/360 = 0.847 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*

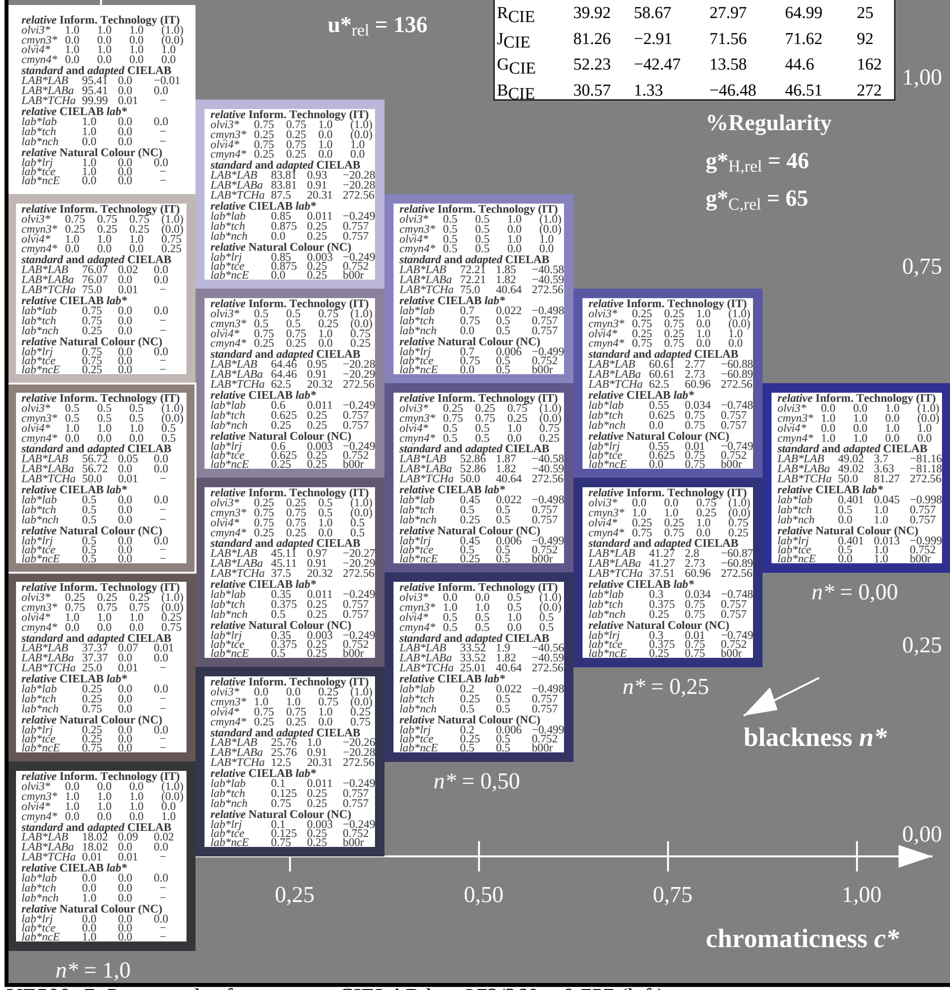


%Gamut
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

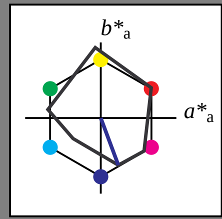
%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 290/360 = 0.807$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 66 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*

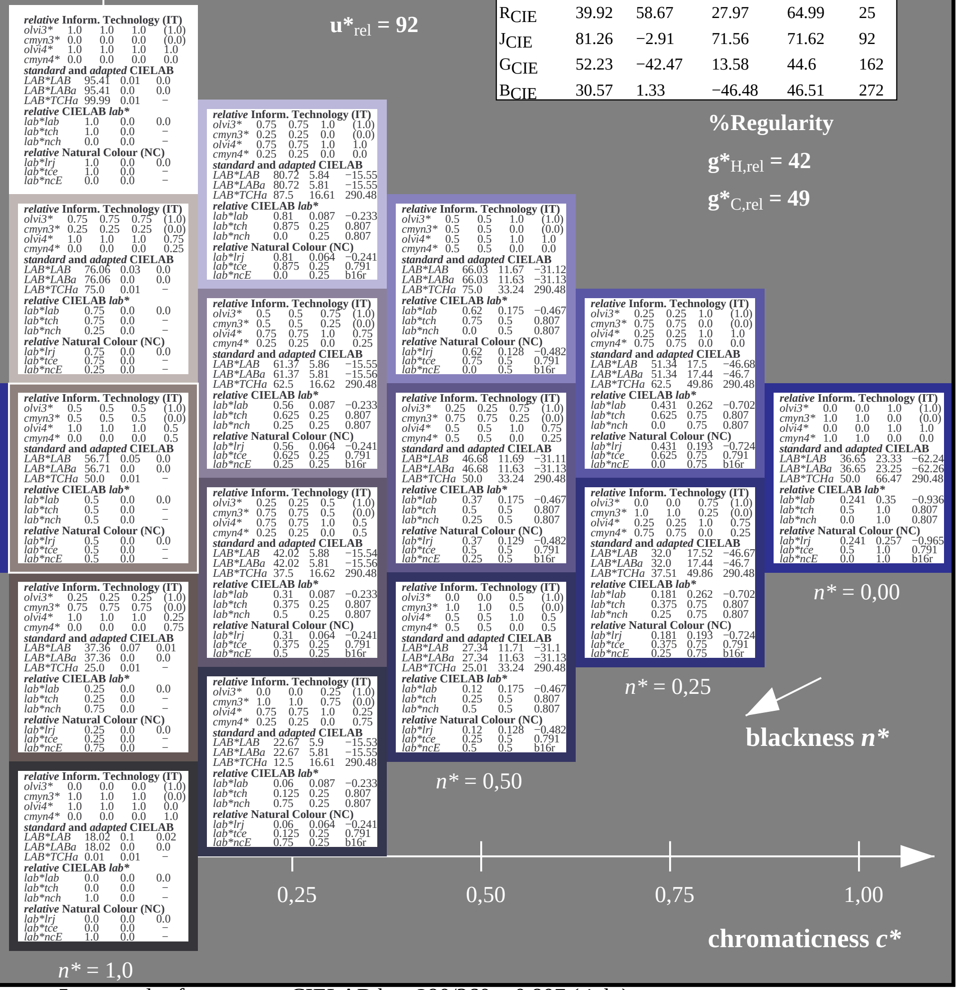


%Gamut
u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 42
$g^*_{C,rel}$ = 49

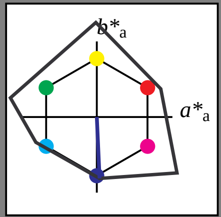


UE500−7, 5 step scales for constant CIELAB hue 273/360 = 0.757 (left)   5 step scales for constant CIELAB hue 290/360 = 0.807 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 273/360 = 0.757$
lab^*tch and lab^*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

u^*_{rel} = 136

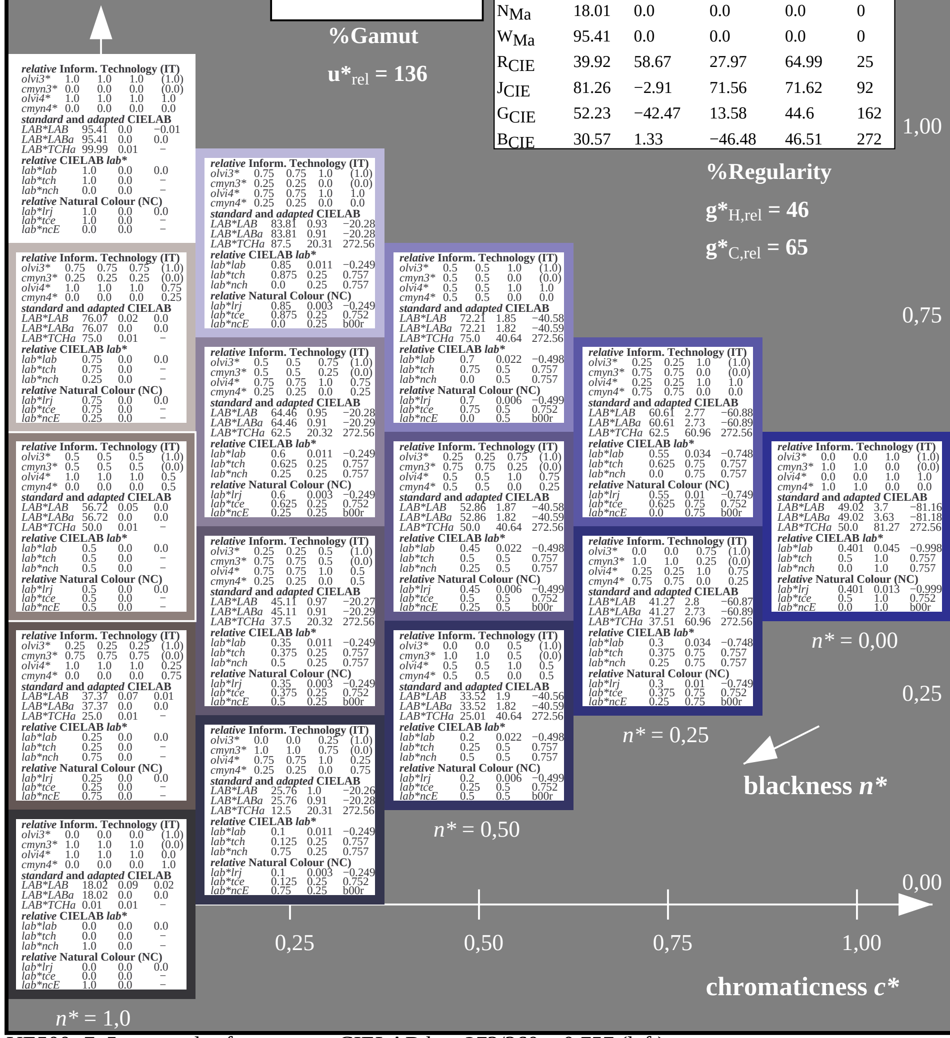
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

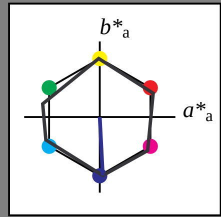
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 273/360 = 0.758$
lab^*tch and lab^*nch

D65: hue B
LCH*Ma: 57 77 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

u^*_{rel} = 100

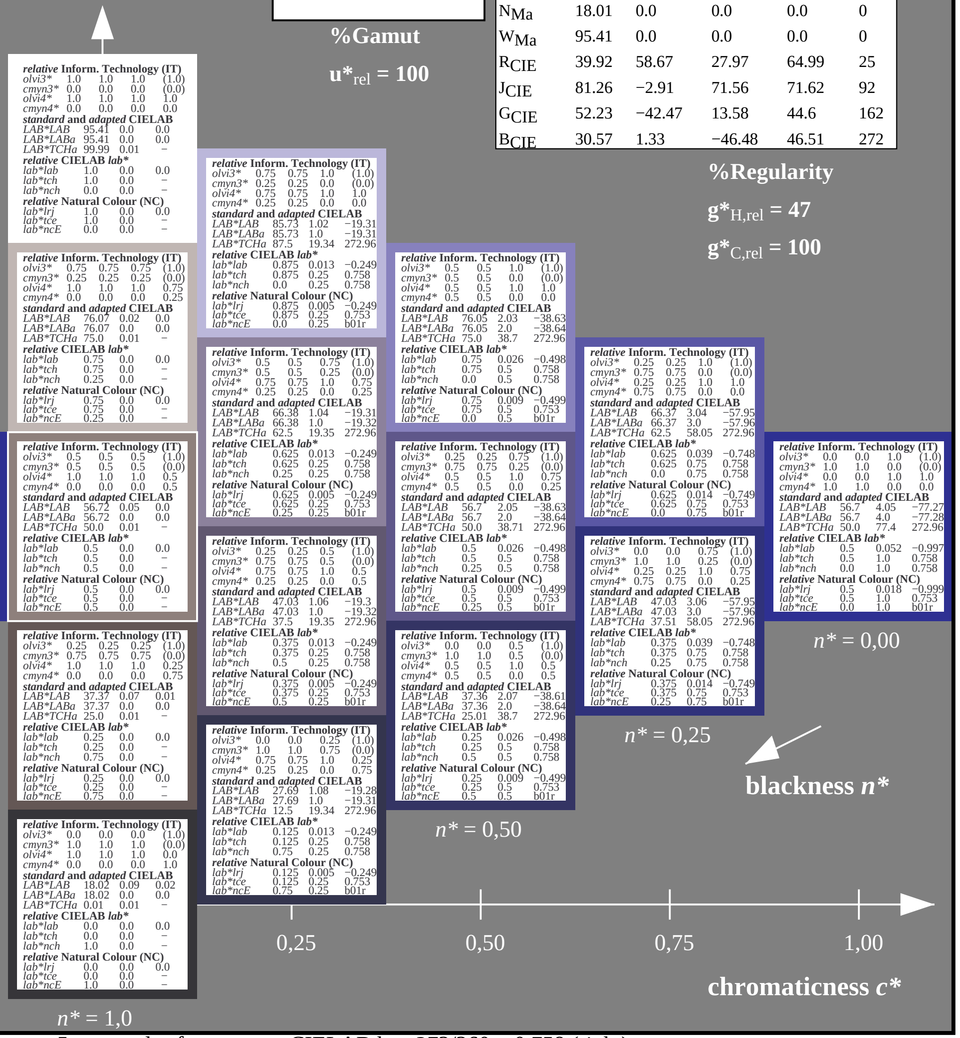
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



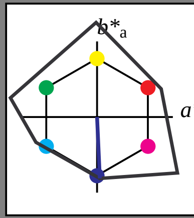
UE500−7, 5 step scales for constant CIELAB hue 273/360 = 0.757 (left)

5 step scales for constant CIELAB hue 273/360 = 0.758 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

u^*_{rel} = 136

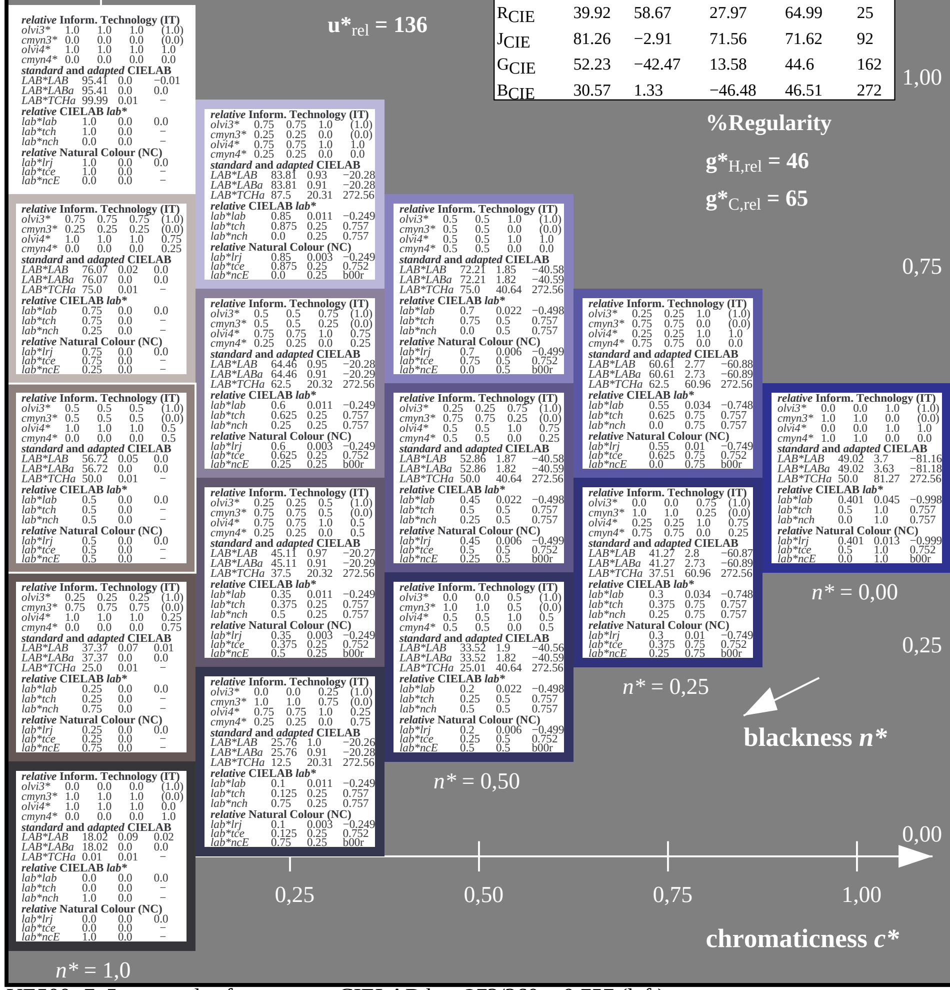
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

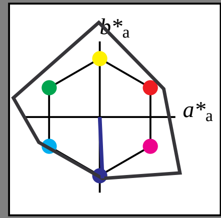
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

u^*_{rel} = 136

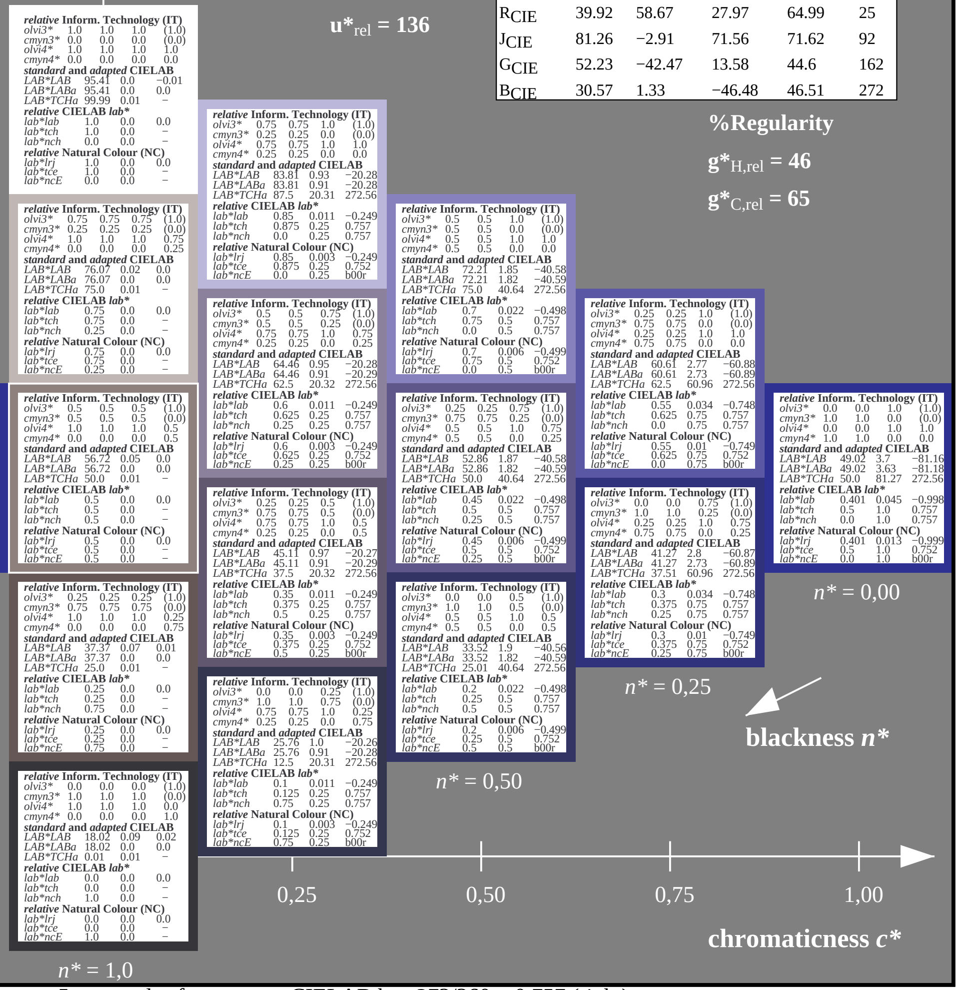
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

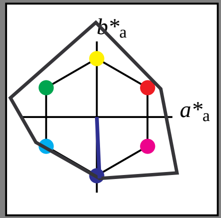


UE500−7, 5 step scales for constant CIELAB hue 273/360 = 0.757 (left)

5 step scales for constant CIELAB hue 273/360 = 0.757 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 273/360 = 0.757$
*lab*tch* and *lab*nch*

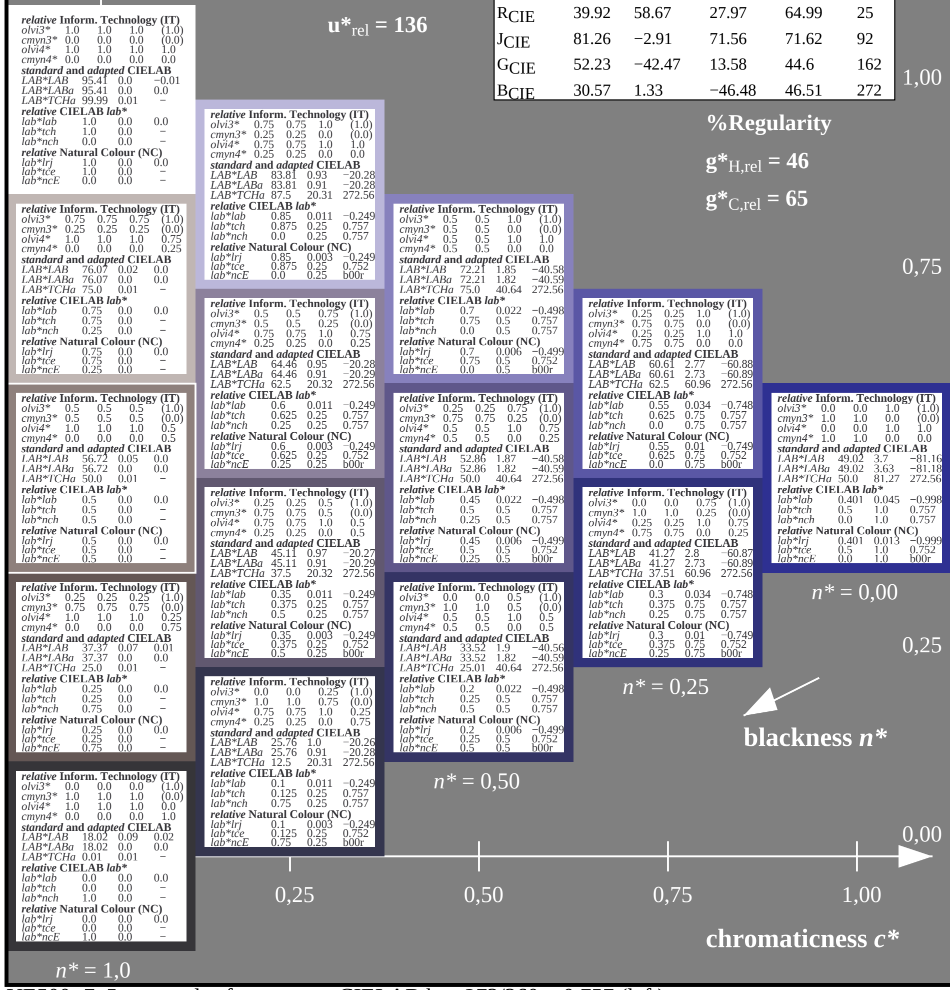
D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0
triangle lightness t^*



%Gamut
u^*_{rel} = 136

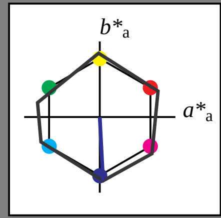
NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 273/360 = 0.758$
*lab*tch* and *lab*nch*

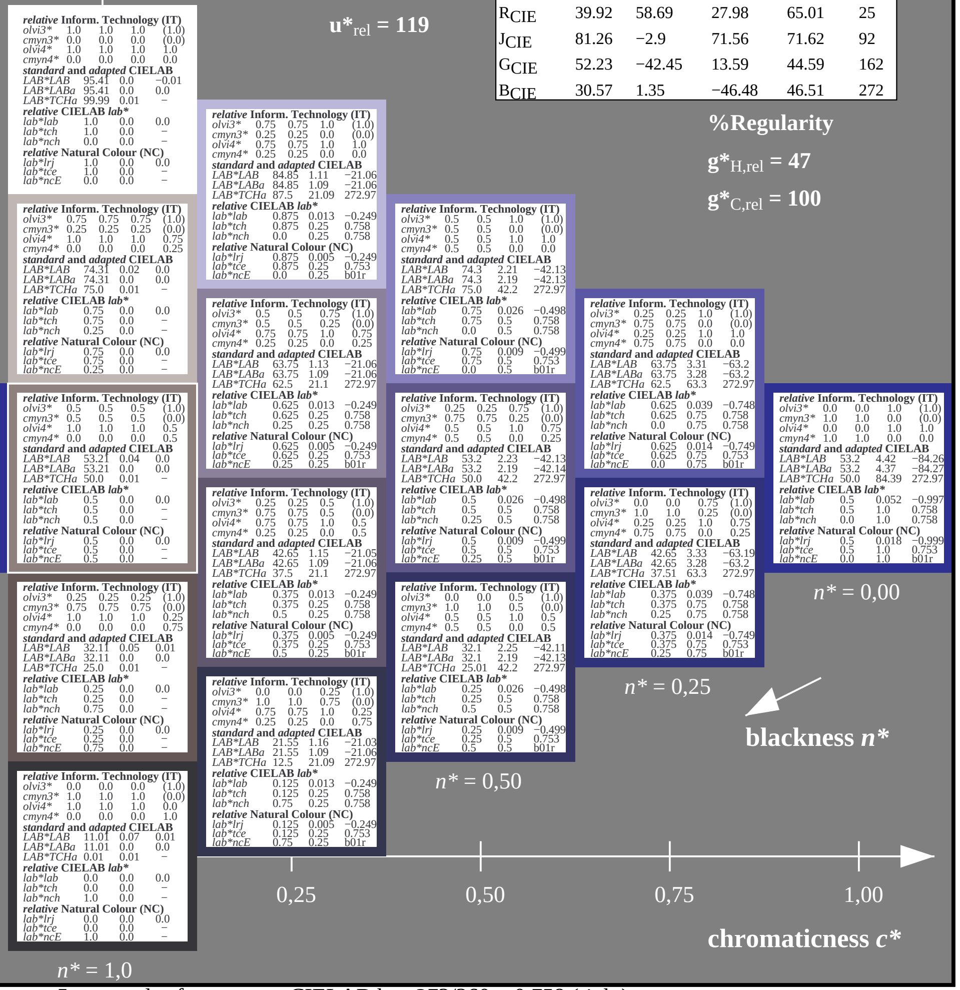
D65: hue B
LCH*Ma: 53 84 273
rgb*Ma: 0.0 0.0 1.0
triangle lightness t^*



%Gamut
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100



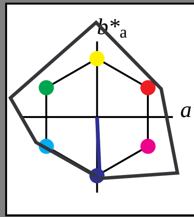
UE500−7, 5 step scales for constant CIELAB hue 273/360 = 0.757 (left)

5 step scales for constant CIELAB hue 273/360 = 0.758 (right)

Input: Colorimetric Reflective System NCS18
for hue *h* = lab*h* = 273/360 = 0.757
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness *t**



%Gamut

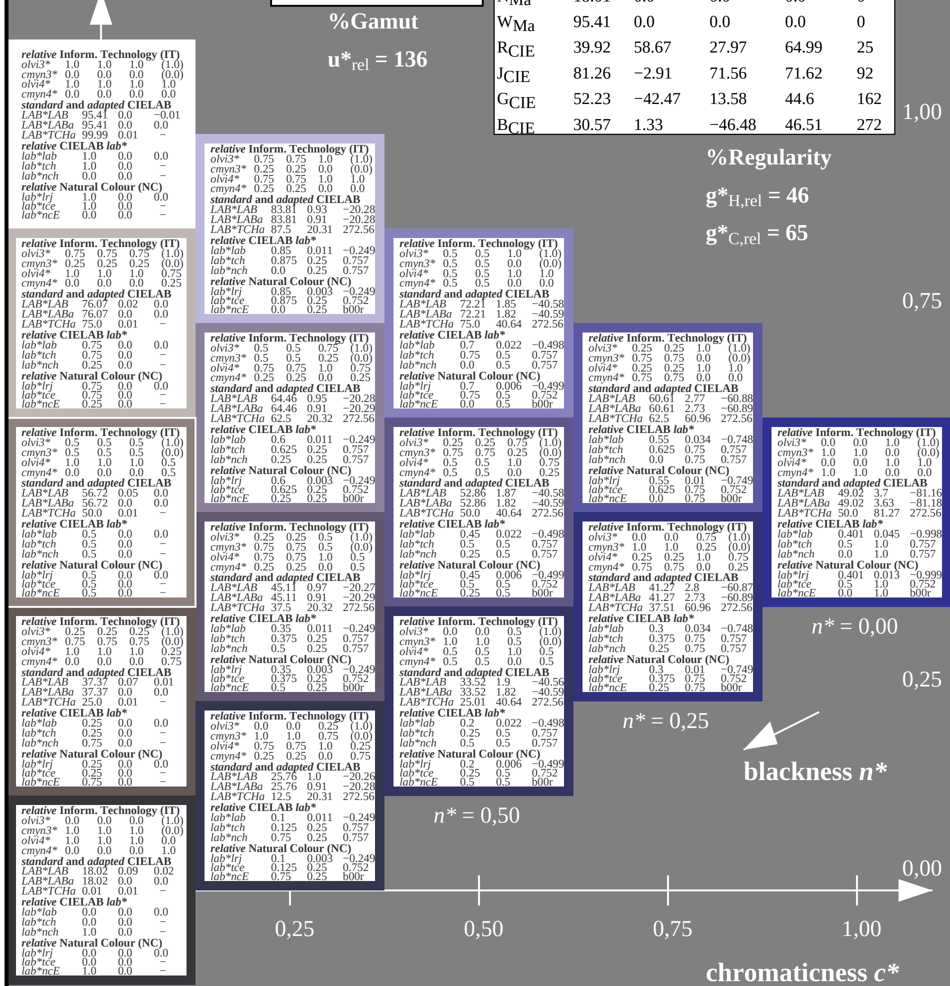
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

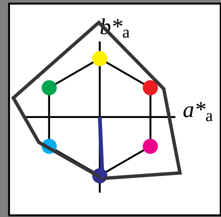
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NCS11
for hue *h* = lab*h* = 273/360 = 0.757
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness *t**



%Gamut

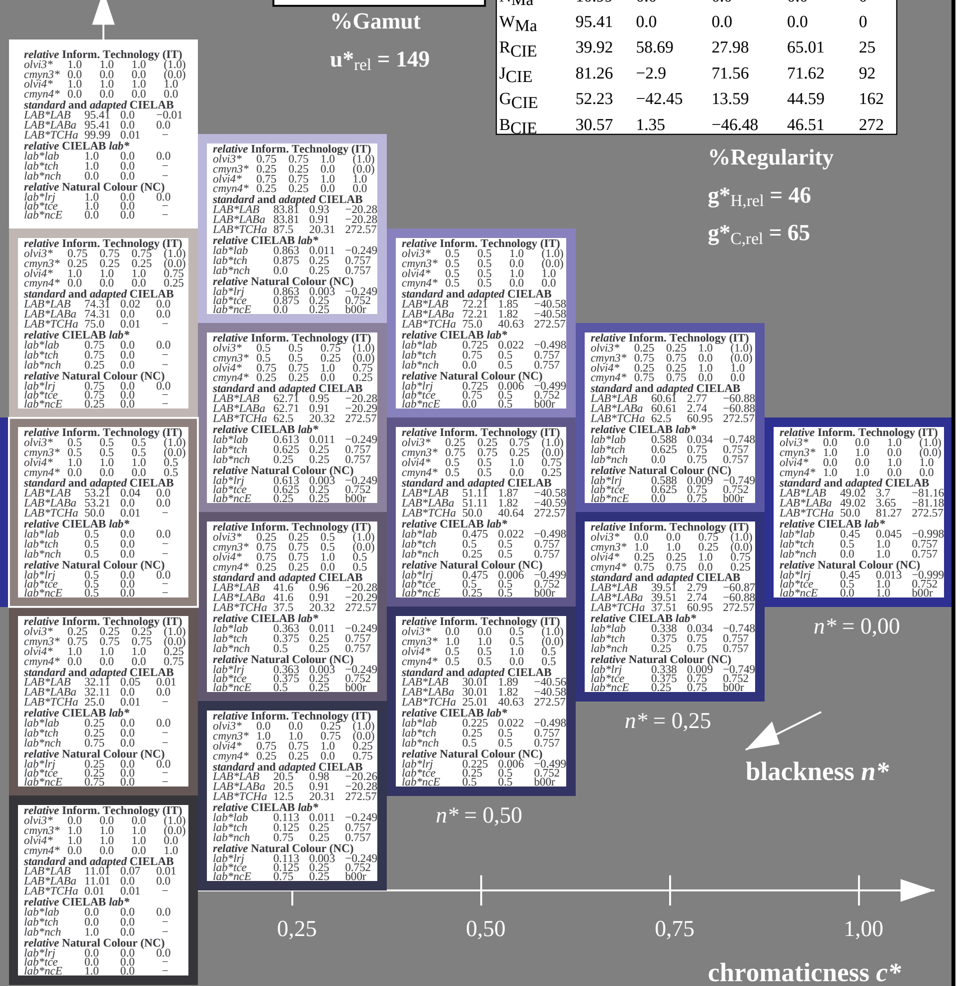
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



UE500−7, 5 step scales for constant CIELAB hue 273/360 = 0.757 (left)

5 step scales for constant CIELAB hue 273/360 = 0.757 (right)

Input: Colorimetric Reflective System NRS11

for hue $h^* = lab^*h = 273/360 = 0.758$

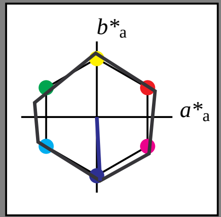
*lab*tch* and *lab*nch*

D65: hue B

LCH*Ma: 53 84 273

rgb*Ma: 0.0 0.0 1.0

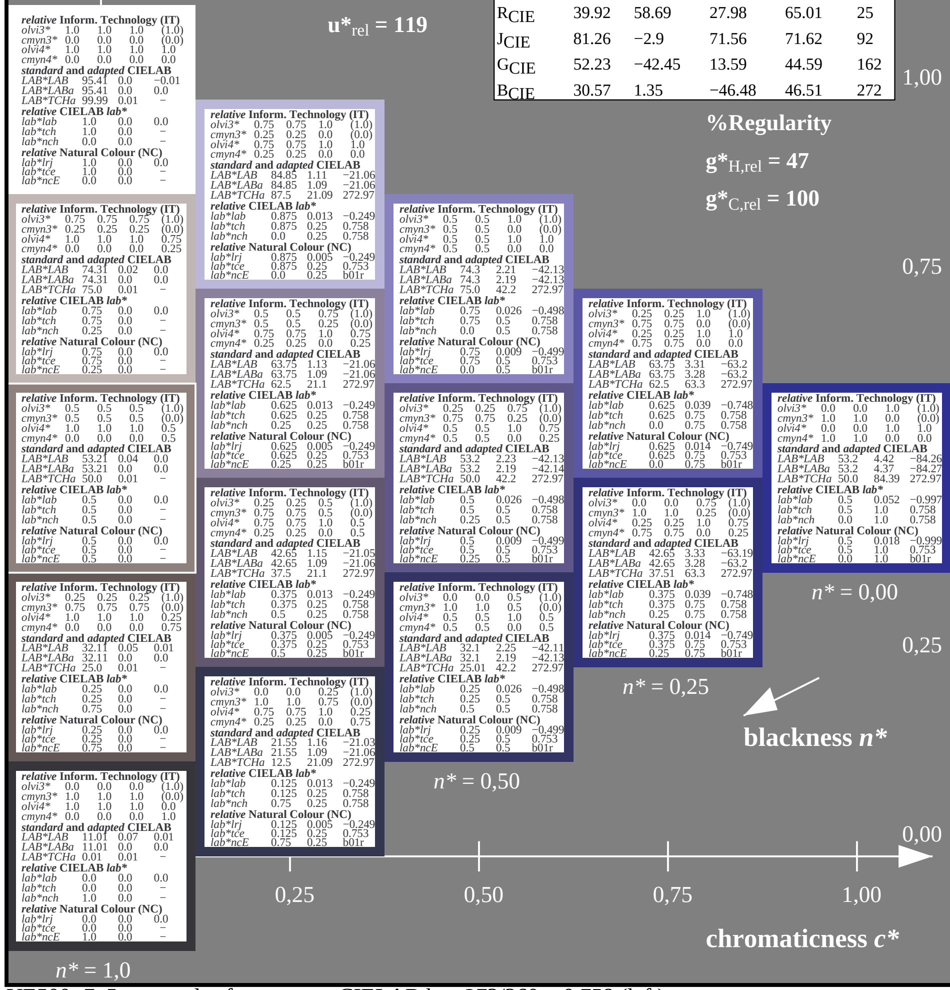
triangle lightness t^*



%Gamut

$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272



Output: Colorimetric Reflective System ORS18

for hue $h^* = lab^*h = 305/360 = 0.847$

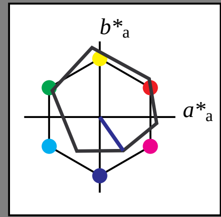
*lab*tch* and *lab*nch*

D65: hue V

LCH*Ma: 26 54 305

rgb*Ma: 0.0 0.0 1.0

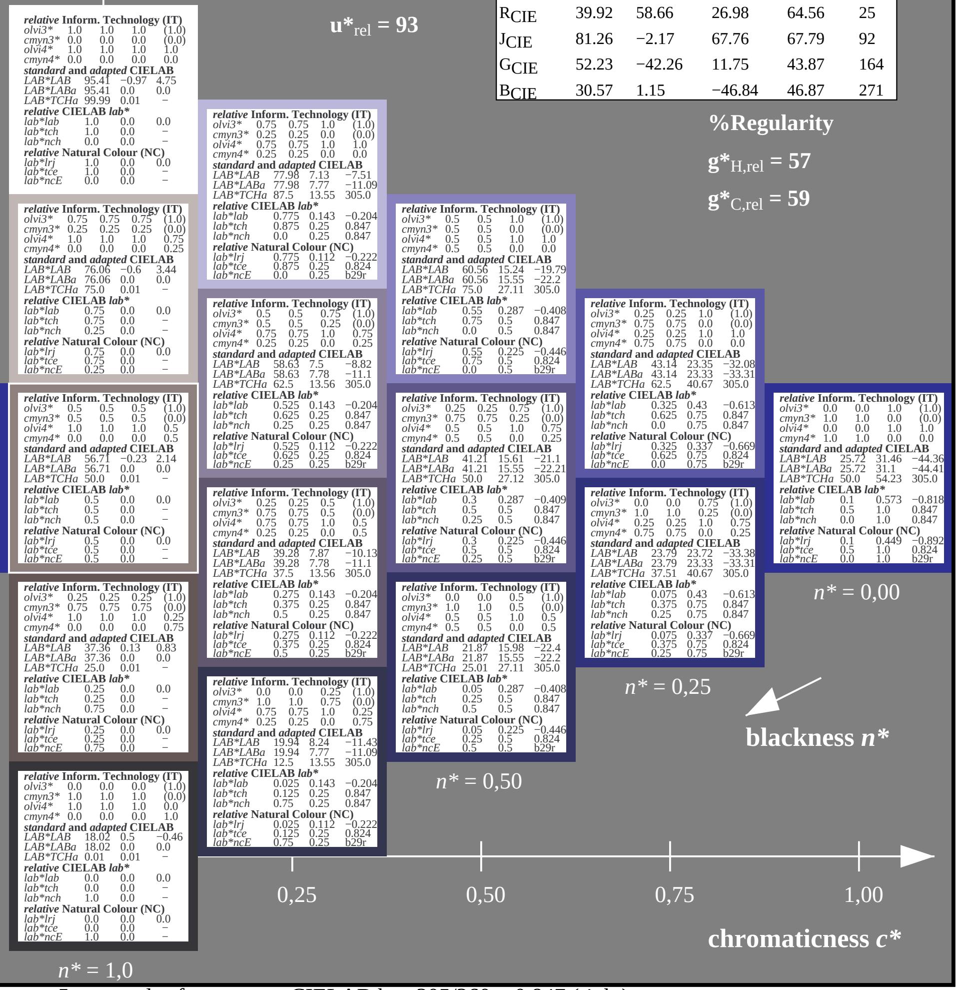
triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

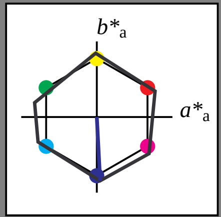


UE500−7, 5 step scales for constant CIELAB hue 273/360 = 0.758 (left)

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

Input: Colorimetric Reflective System NRS11
for hue *h = *lab*h* = 273/360 = 0.758**
lab*tch and lab*nch

D65: hue B
LCH*Ma: 53 84 273
rgb*Ma: 0.0 0.0 1.0
triangle lightness *t**

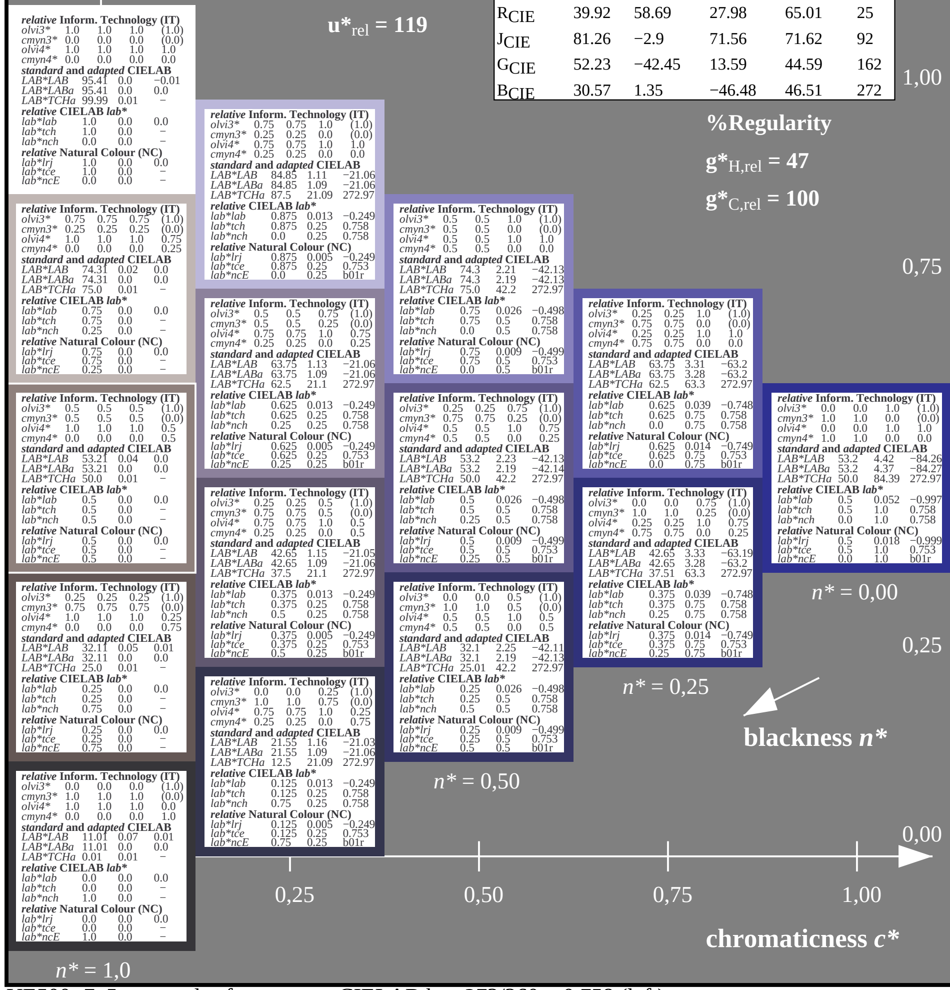


%Gamut
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data

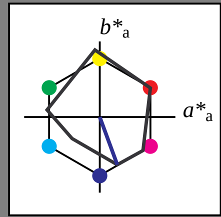
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System MRS18
for hue *h = *lab*h* = 290/360 = 0.806**
lab*tch and lab*nch

D65: hue B
LCH*Ma: 37 67 290
rgb*Ma: 0.0 0.0 1.0
triangle lightness *t**

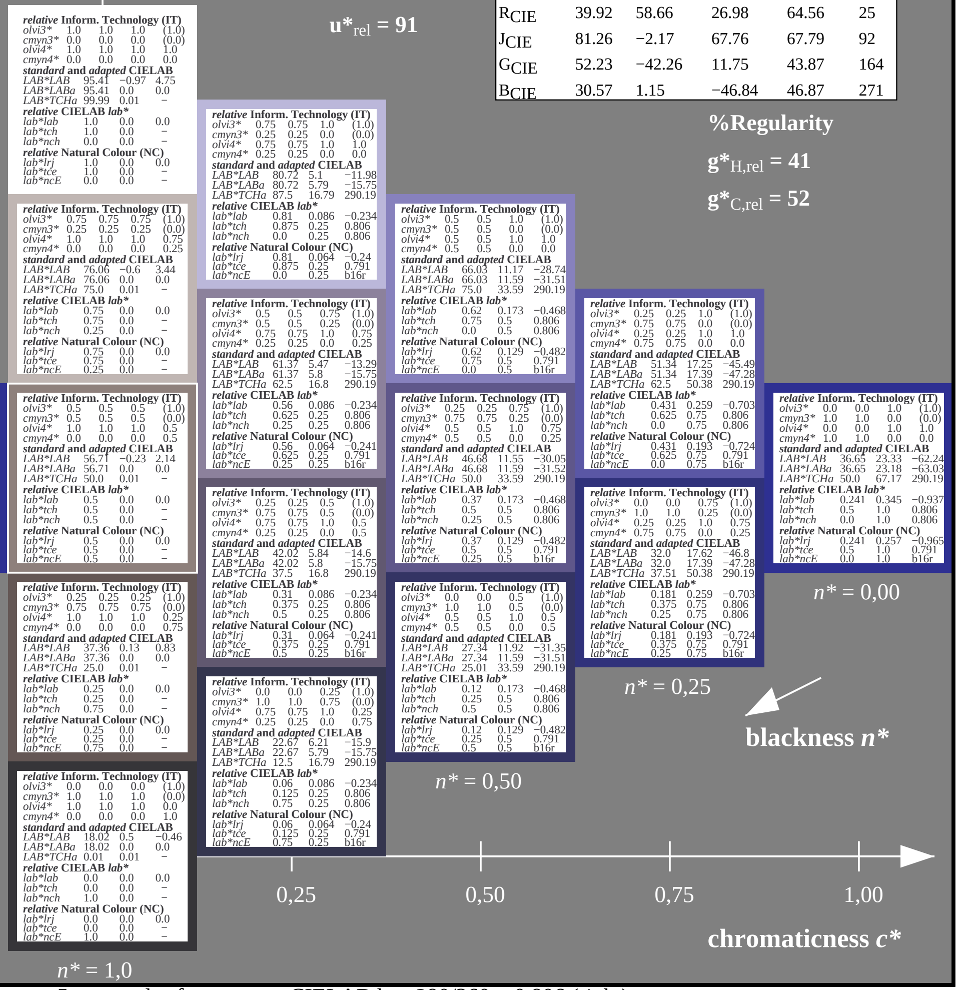


%Gamut
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 41$
$g^*_{C,rel} = 52$



UE500−7, 5 step scales for constant CIELAB hue 273/360 = 0.758 (left)

5 step scales for constant CIELAB hue 290/360 = 0.806 (right)

Input: Colorimetric Reflective System NRS11

for hue $h^* = lab^*h = 273/360 = 0.758$

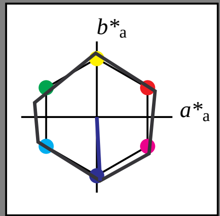
*lab*tch* and *lab*nch*

D65: hue B

LCH*Ma: 53 84 273

rgb*Ma: 0.0 0.0 1.0

triangle lightness *t**



%Gamut

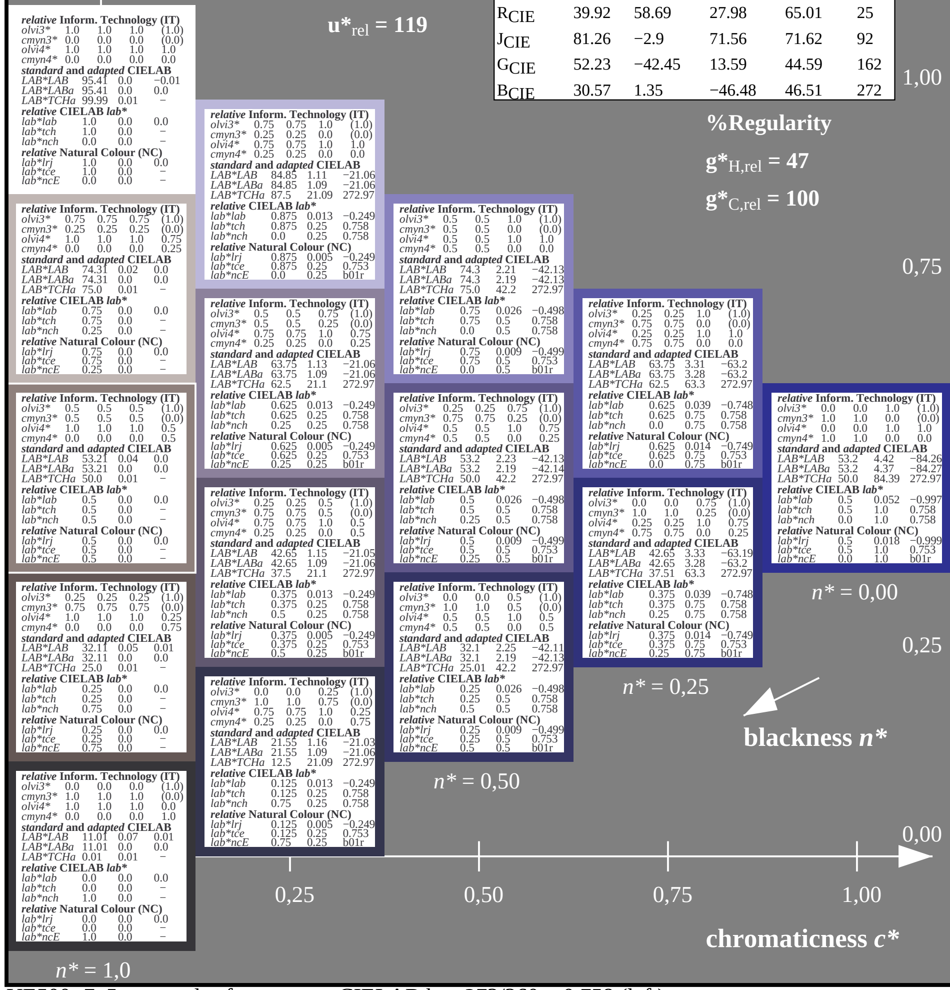
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System TRS18

for hue $h^* = lab^*h = 305/360 = 0.847$

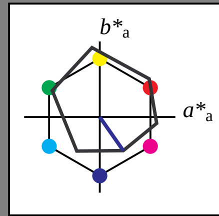
*lab*tch* and *lab*nch*

D65: hue V

LCH*Ma: 26 54 305

rgb*Ma: 0.0 0.0 1.0

triangle lightness *t**



%Gamut

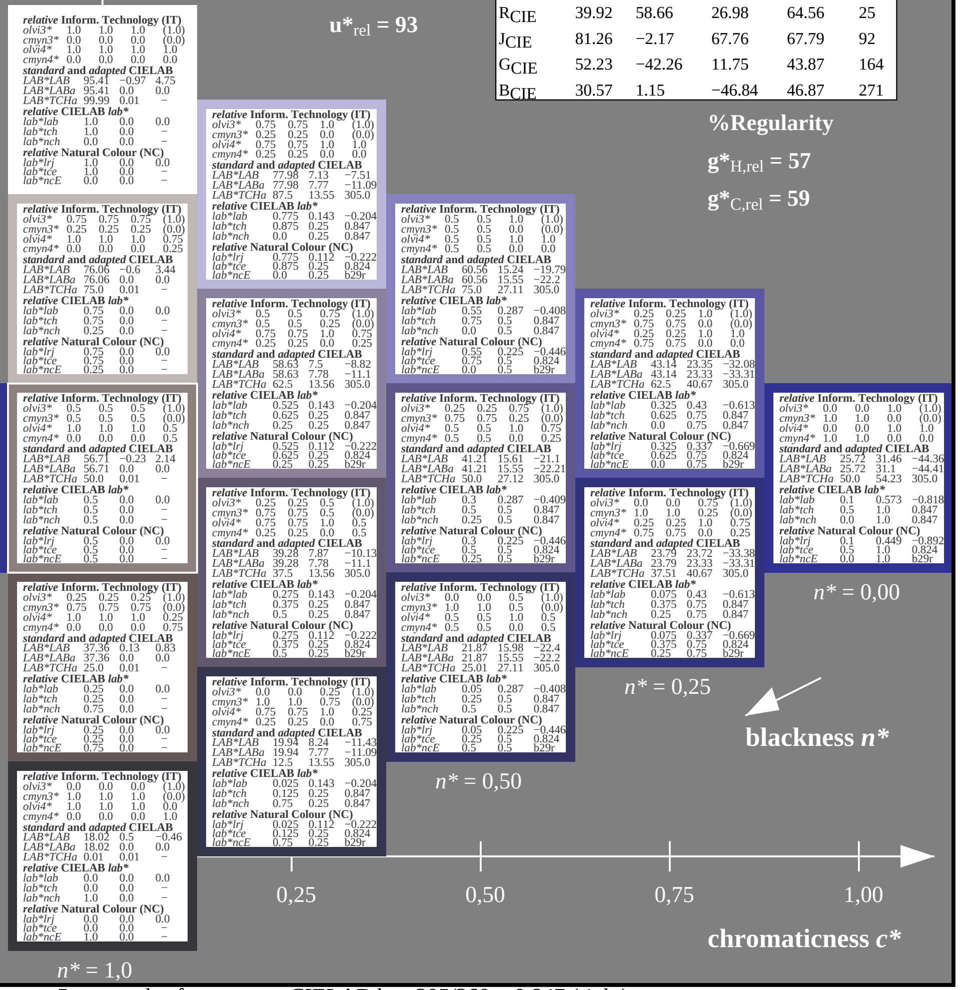
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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

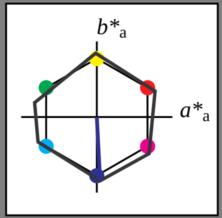


UE500−7, 5 step scales for constant CIELAB hue 273/360 = 0.758 (left)

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

Input: Colorimetric Reflective System NRS11
for hue *h = *lab*h* = 273/360 = 0.758**
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 84 273
rgb*Ma: 0.0 0.0 1.0
triangle lightness *t**

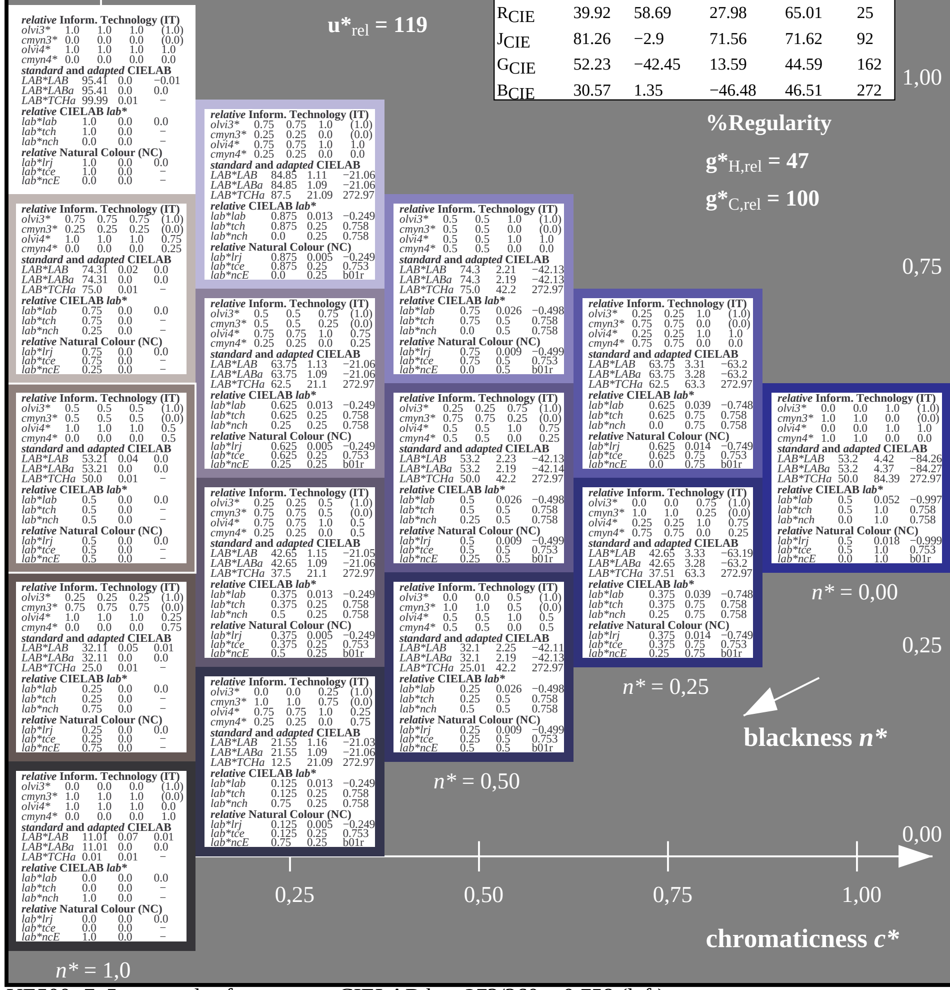


%Gamut
u*rel = 119

NRS11; adapted (a) CIELAB data

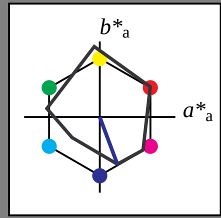
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
g*H,rel = 47
g*C,rel = 100



Output: Colorimetric Reflective System MRS18a
for hue *h = *lab*h* = 290/360 = 0.807**
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 66 290
rgb*Ma: 0.0 0.0 1.0
triangle lightness *t**

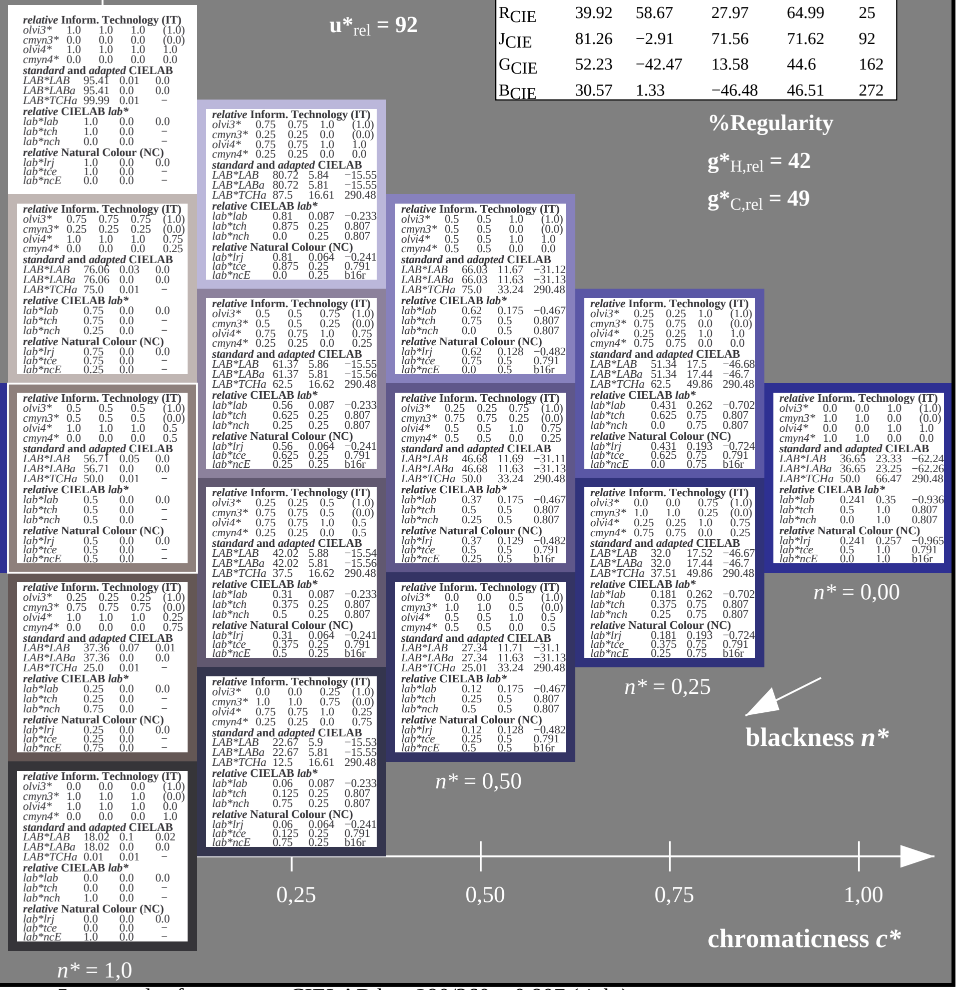


%Gamut
u*rel = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
g*H,rel = 42
g*C,rel = 49



UE500−7, 5 step scales for constant CIELAB hue 273/360 = 0.758 (left)

5 step scales for constant CIELAB hue 290/360 = 0.807 (right)

Input: Colorimetric Reflective System NRS11

for hue *h* = lab*h* = 273/360 = 0.758

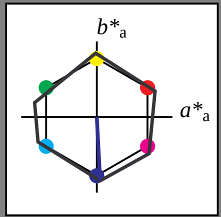
*lab*tch and lab*nch*

D65: hue B

LCH*Ma: 53 84 273

rgb*Ma: 0.0 0.0 1.0

triangle lightness *t*



%Gamut

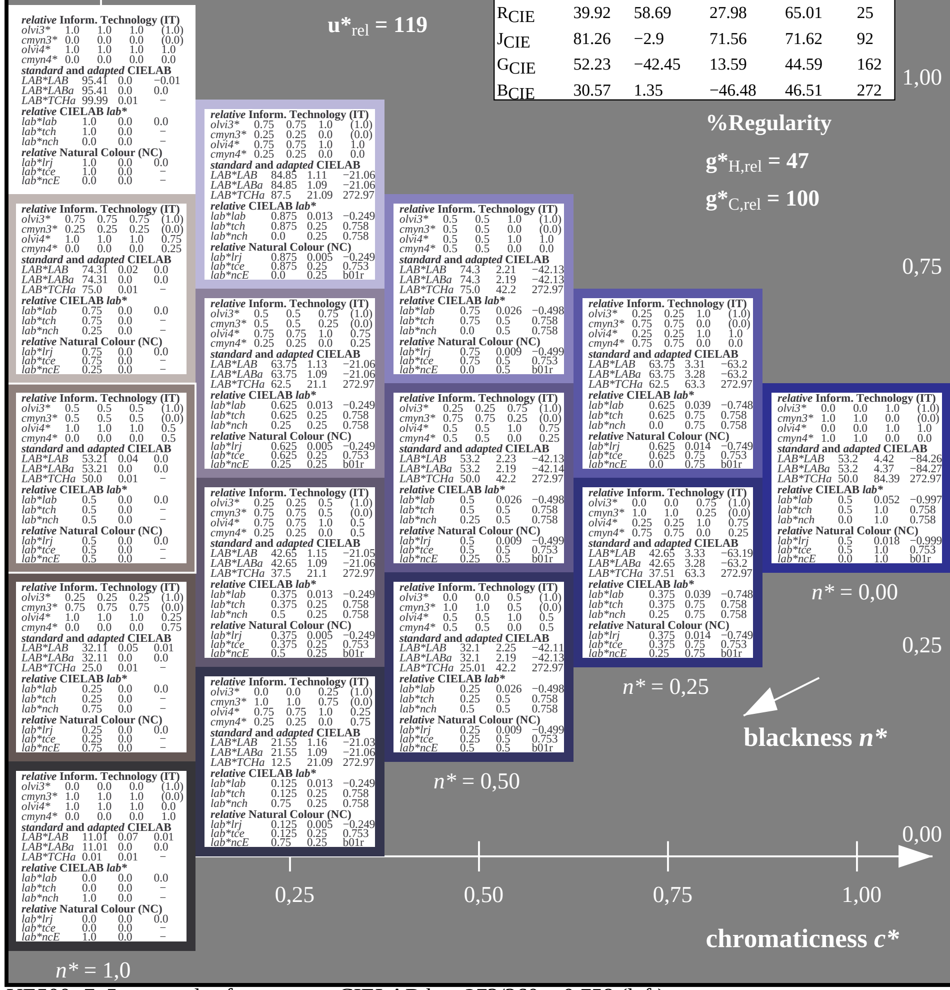
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System NRS18

for hue *h* = lab*h* = 273/360 = 0.758

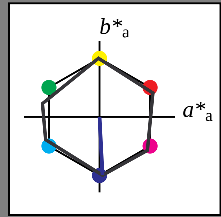
*lab*tch and lab*nch*

D65: hue B

LCH*Ma: 57 77 273

rgb*Ma: 0.0 0.0 1.0

triangle lightness *t*



%Gamut

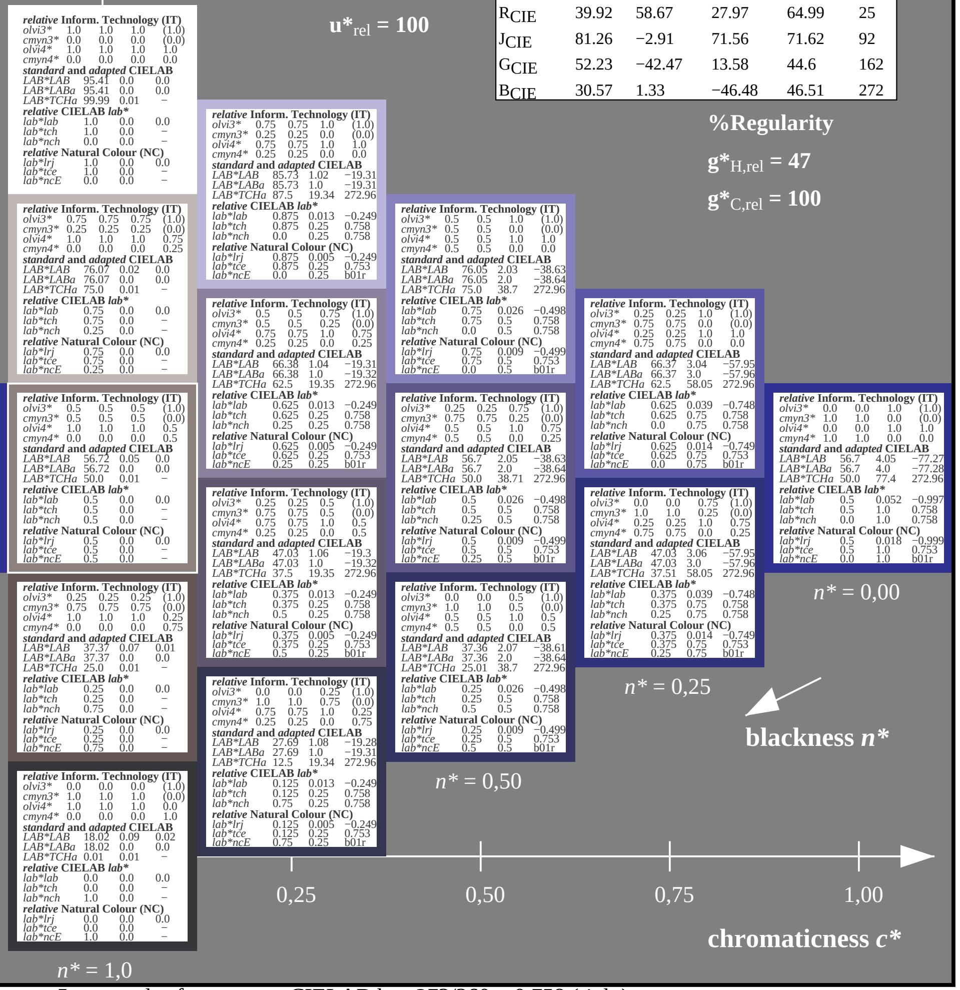
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



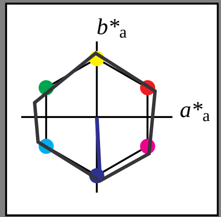
UE500−7, 5 step scales for constant CIELAB hue 273/360 = 0.758 (left)

5 step scales for constant CIELAB hue 273/360 = 0.758 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 273/360 = 0.758$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 84 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*

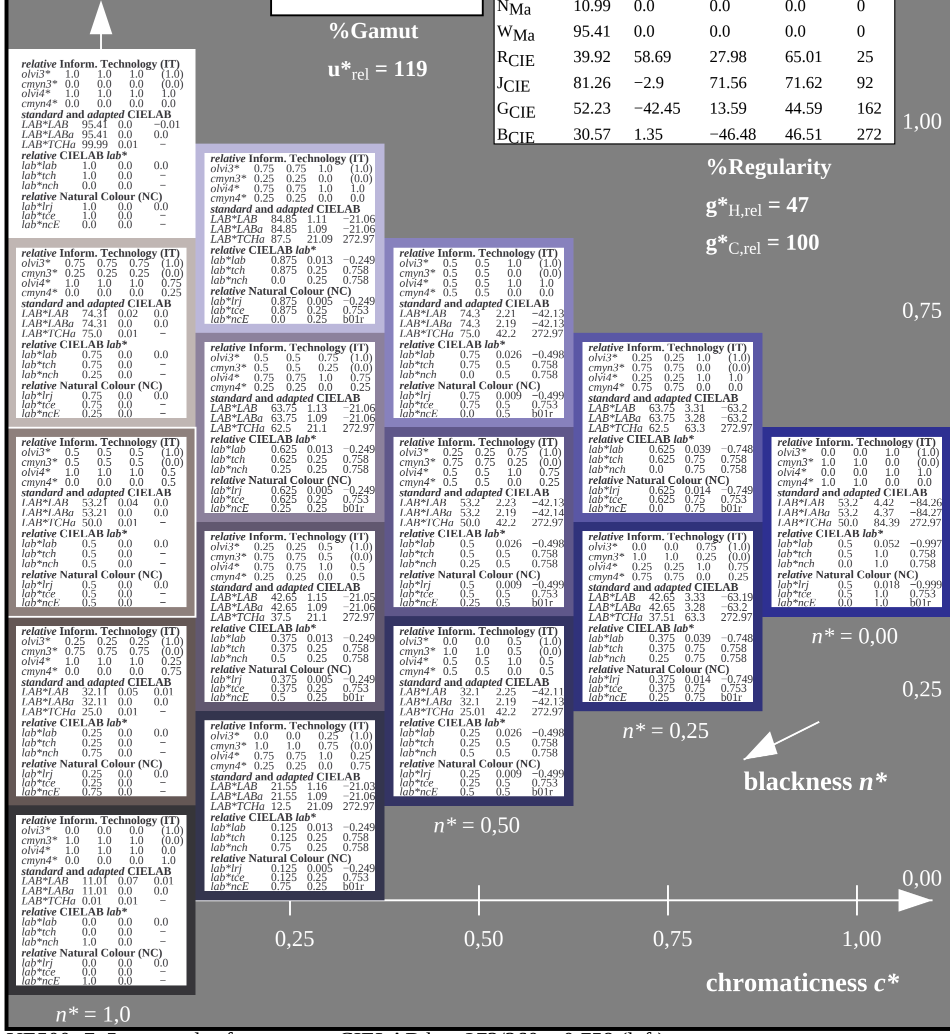


%Gamut
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

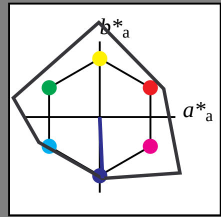
%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*

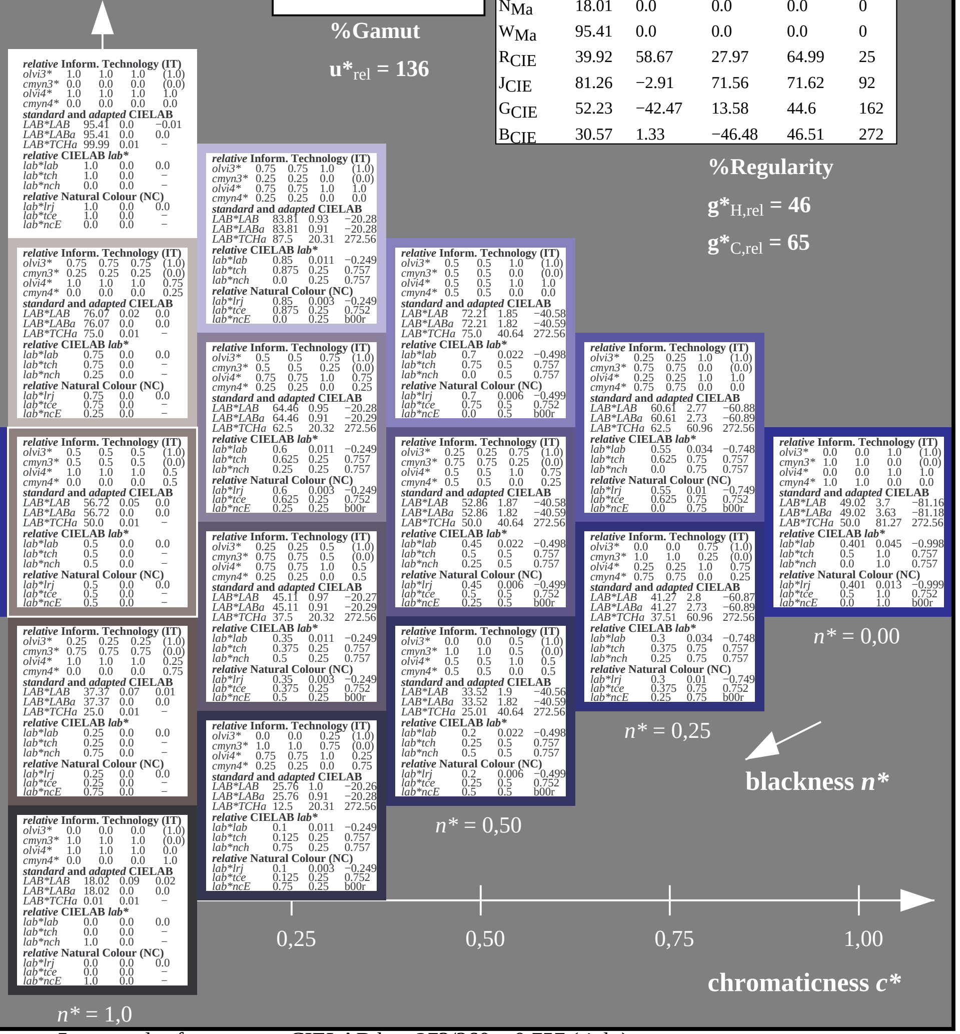


%Gamut
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$

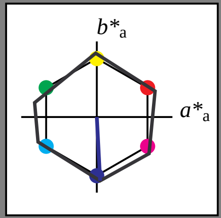


UE500−7, 5 step scales for constant CIELAB hue 273/360 = 0.758 (left)   5 step scales for constant CIELAB hue 273/360 = 0.757 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 273/360 = 0.758$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 84 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*

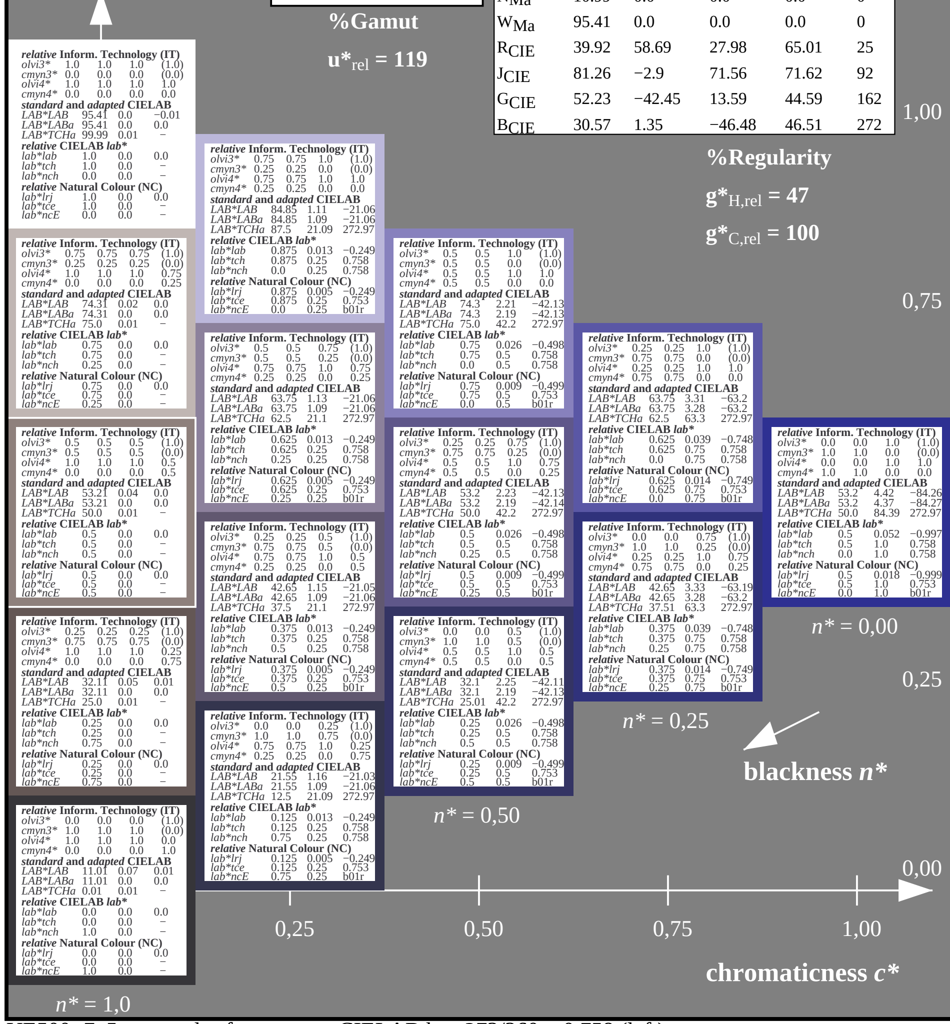


%Gamut
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

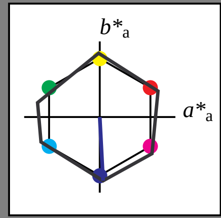
%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 273/360 = 0.758$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 84 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*

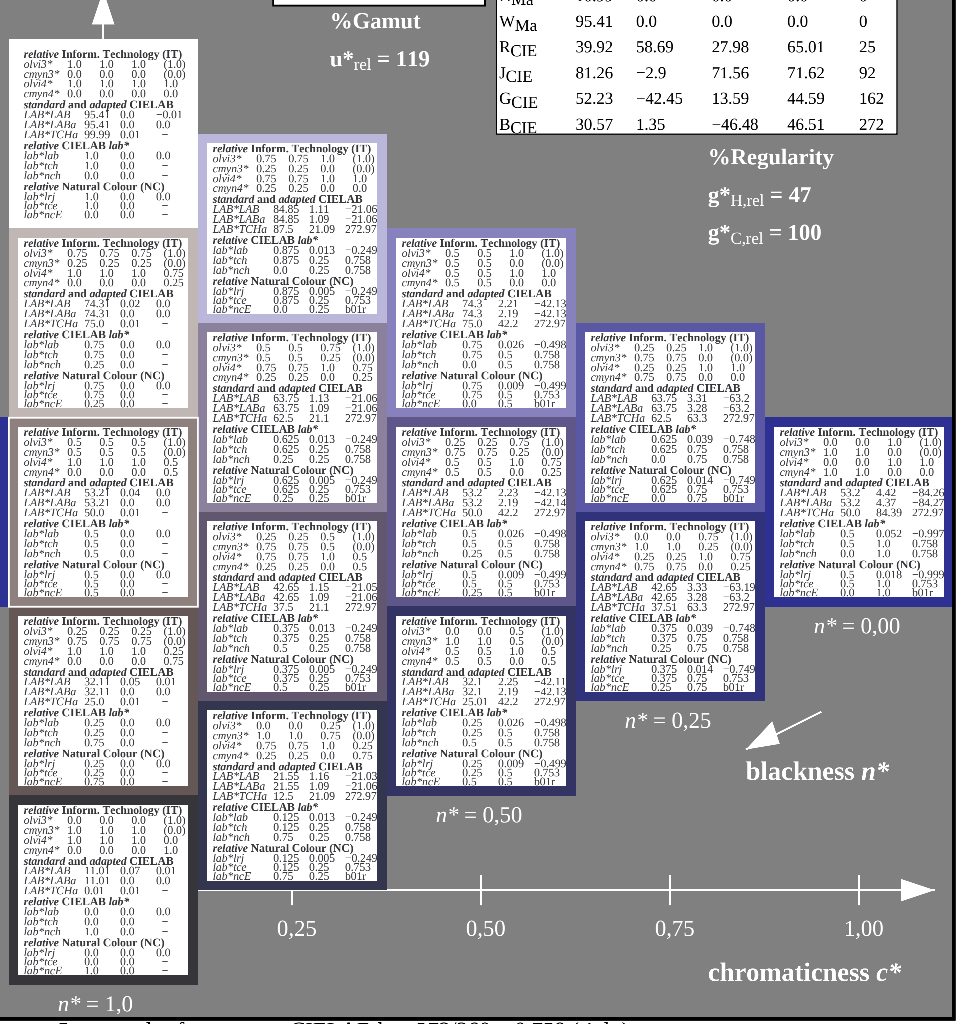


%Gamut
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



UE500−7, 5 step scales for constant CIELAB hue 273/360 = 0.758 (left)

5 step scales for constant CIELAB hue 273/360 = 0.758 (right)

Input: Colorimetric Reflective System NRS11

for hue $h^* = lab^*h = 273/360 = 0.758$

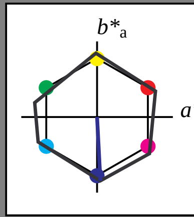
*lab*tch and lab*nch*

D65: hue B

LCH*Ma: 53 84 273

rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 119$

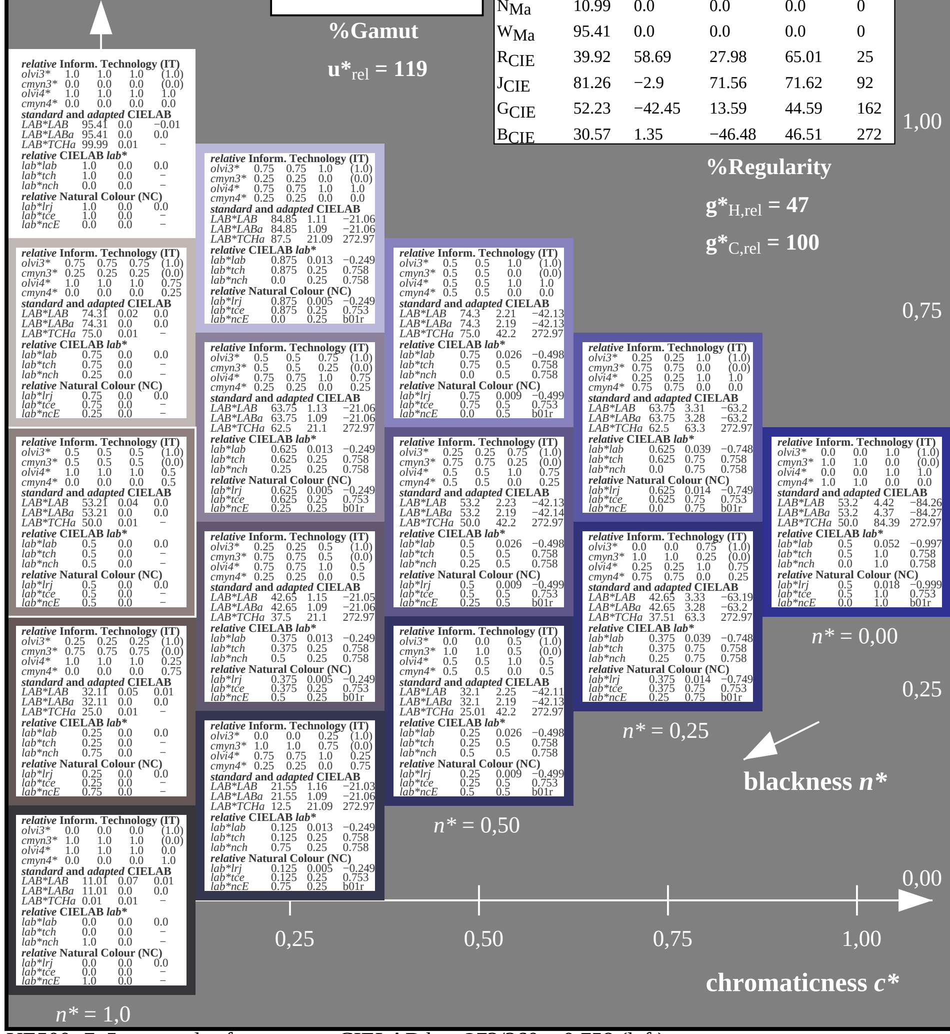
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 273/360 = 0.757$

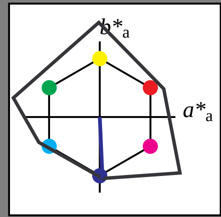
*lab*tch and lab*nch*

D65: hue B

LCH*Ma: 49 81 273

rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 149$

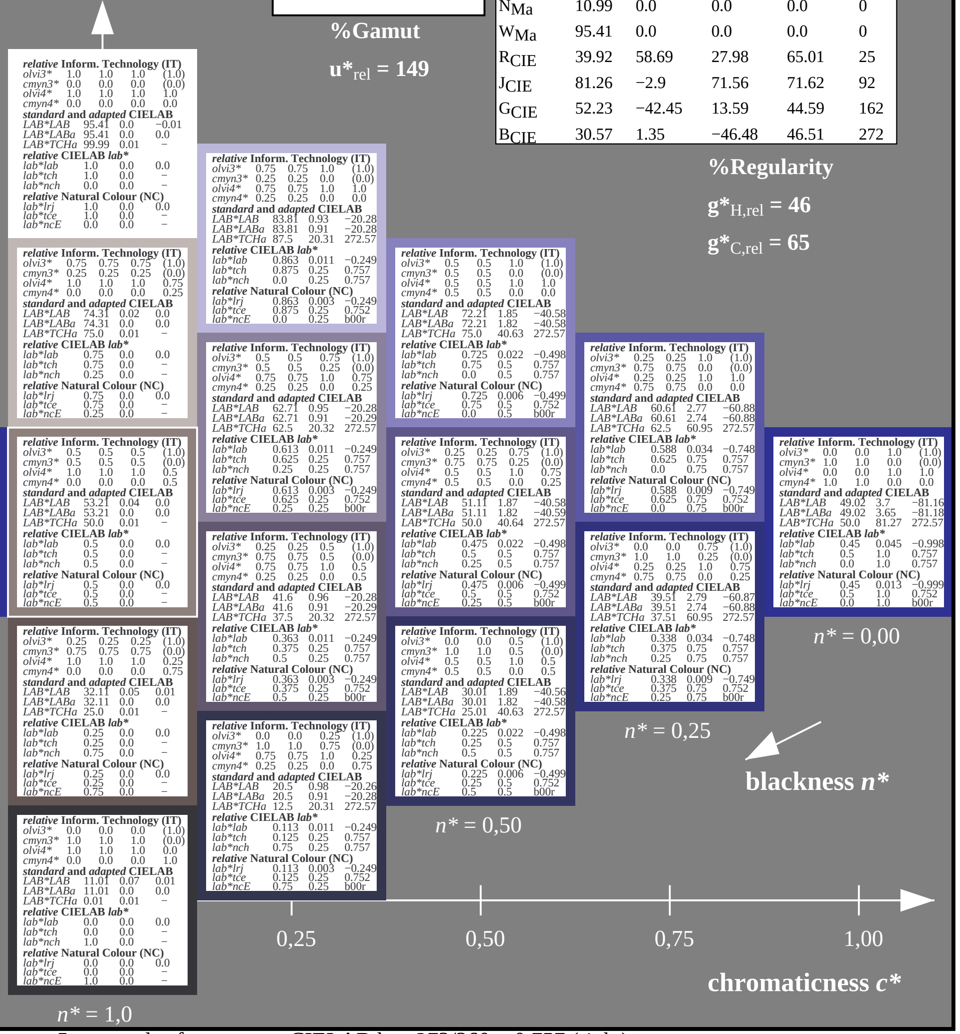
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



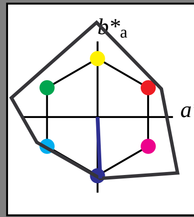
UE500−7, 5 step scales for constant CIELAB hue 273/360 = 0.758 (left)

5 step scales for constant CIELAB hue 273/360 = 0.757 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 273/360 = 0.757$
lab^*tch and lab^*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

u^*_{rel} = 149

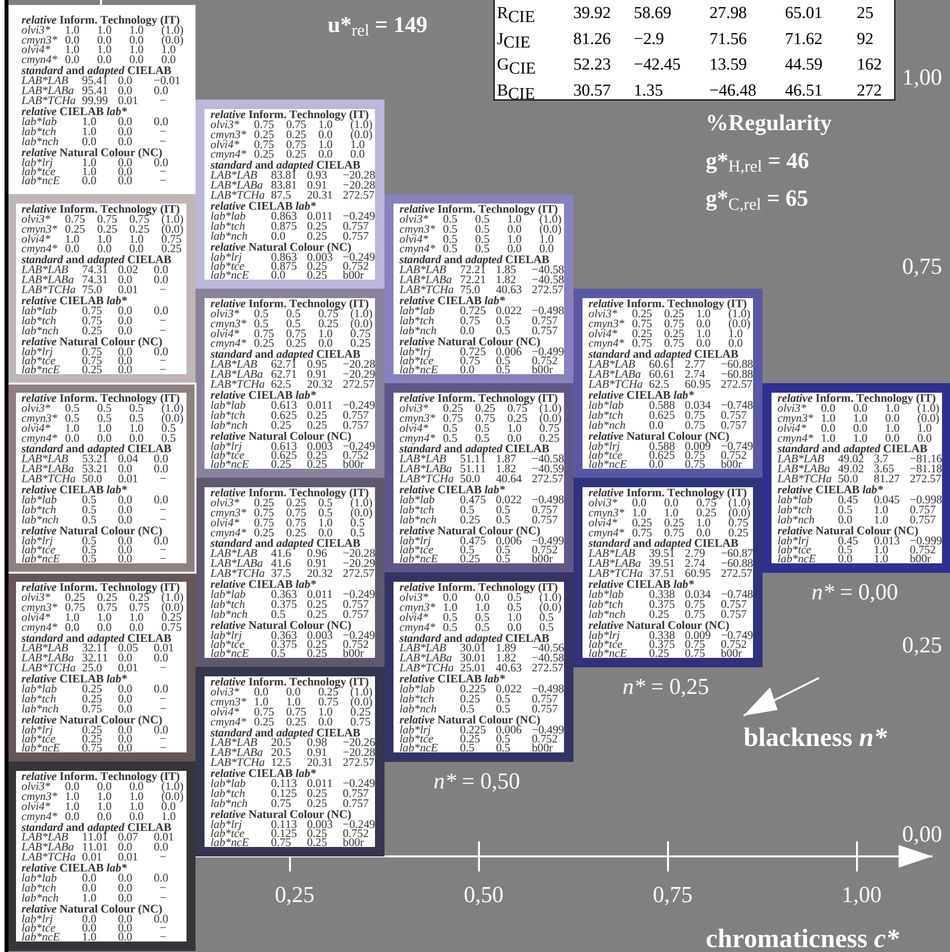
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

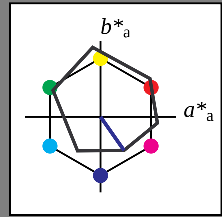
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab^*tch and lab^*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

u^*_{rel} = 93

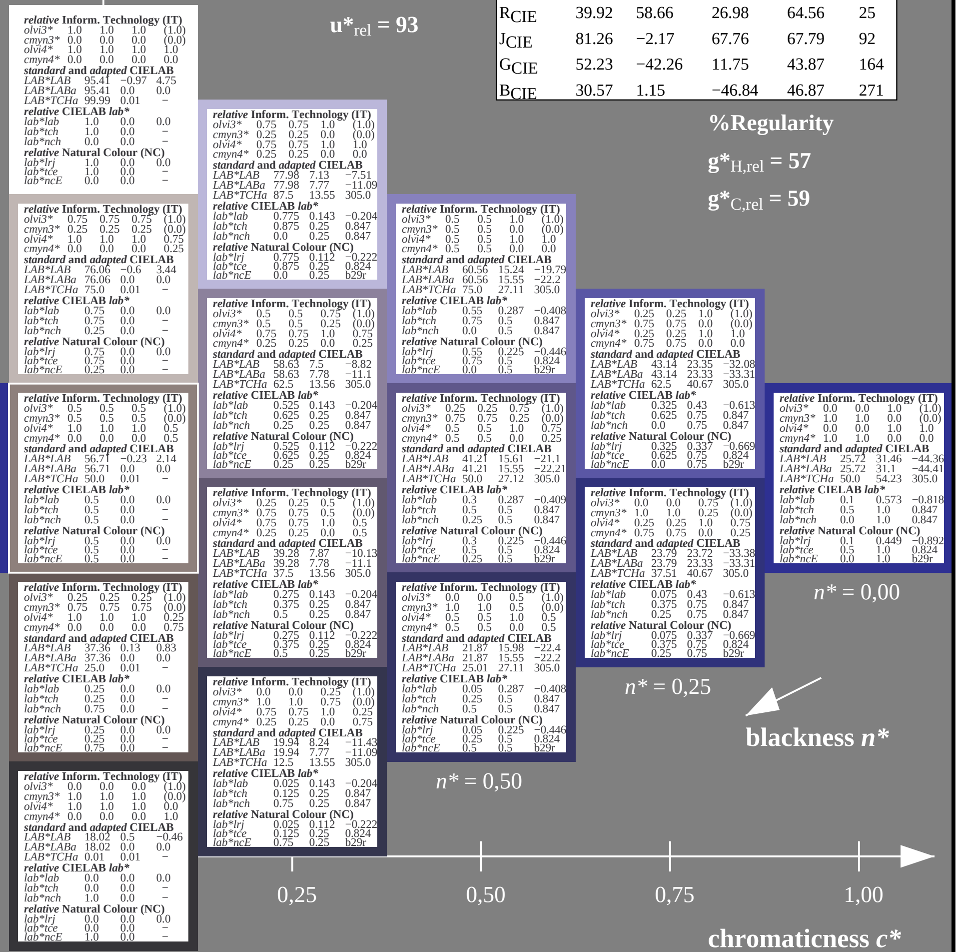
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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

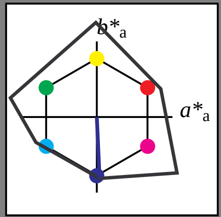


UE500−7, 5 step scales for constant CIELAB hue 273/360 = 0.757 (left)

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

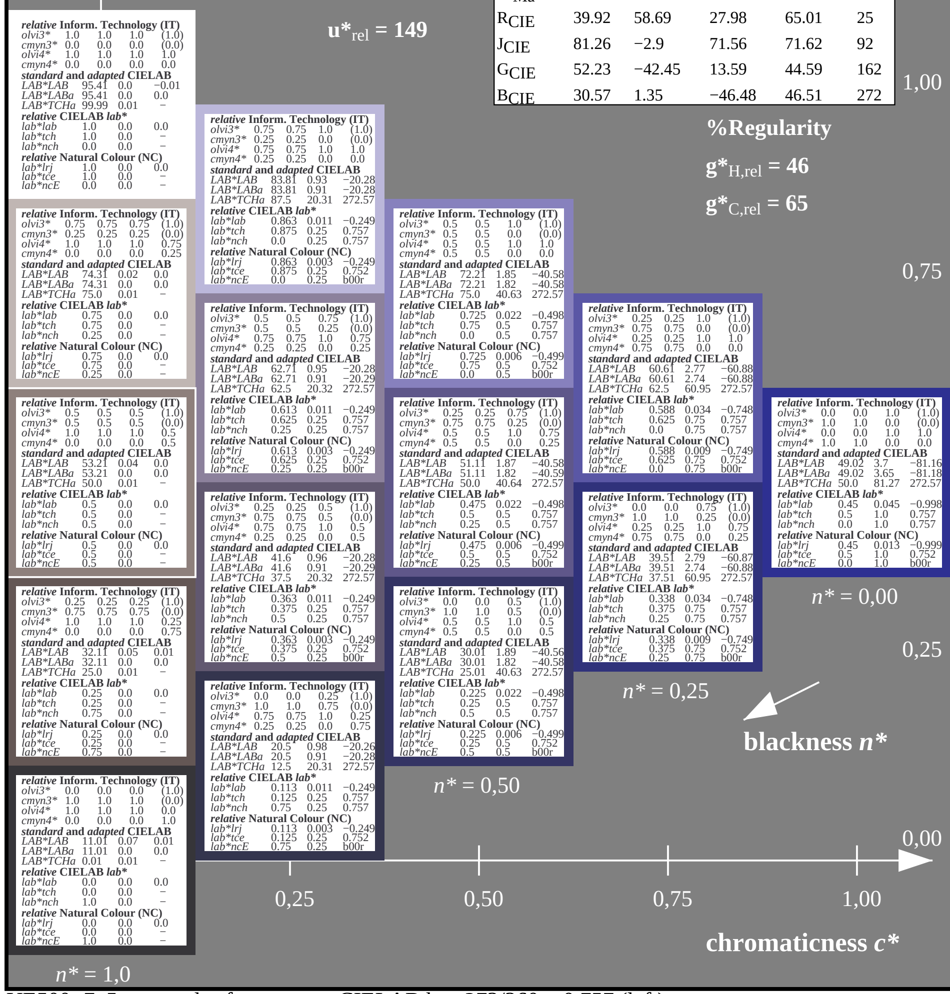
Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 273/360 = 0.757$
*lab*tch and lab*nch*

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0
triangle lightness t^*



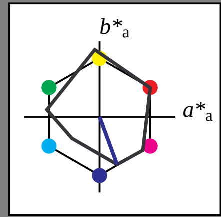
%Gamut
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272



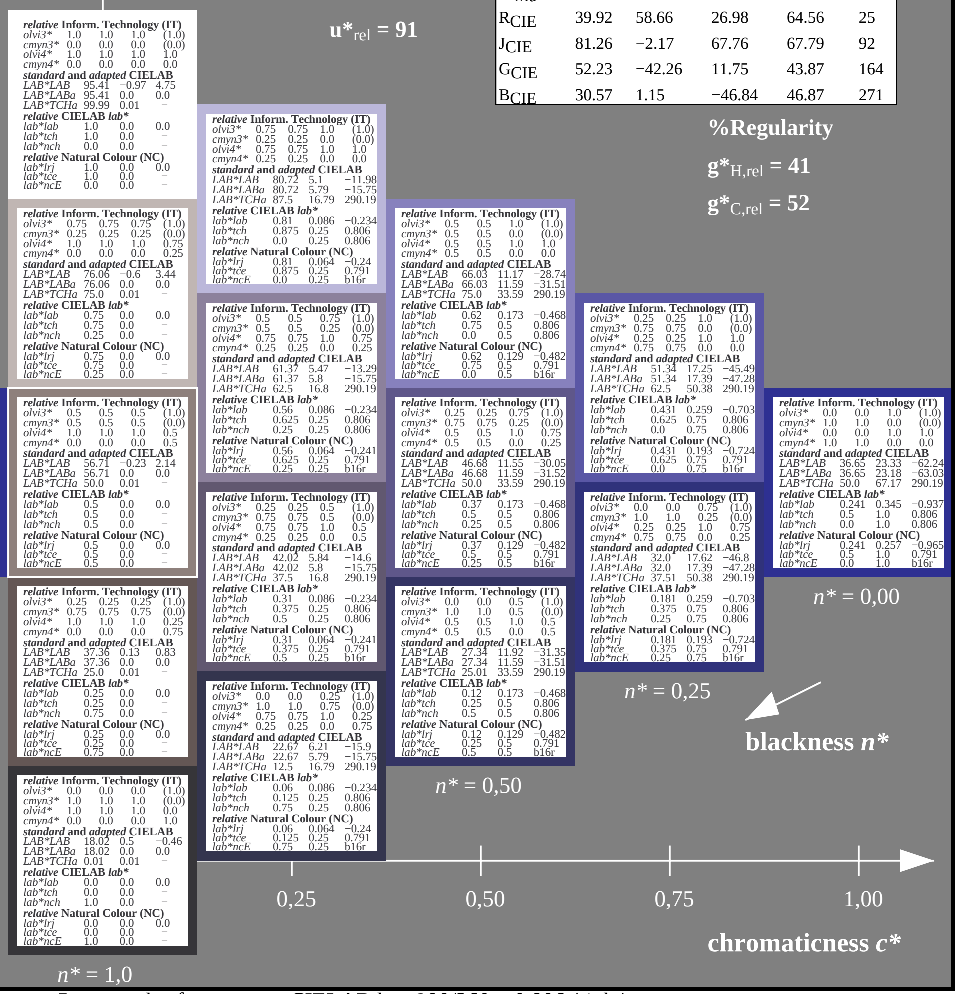
Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 290/360 = 0.806$
*lab*tch and lab*nch*

D65: hue B
LCH*Ma: 37 67 290
rgb*Ma: 0.0 0.0 1.0
triangle lightness t^*



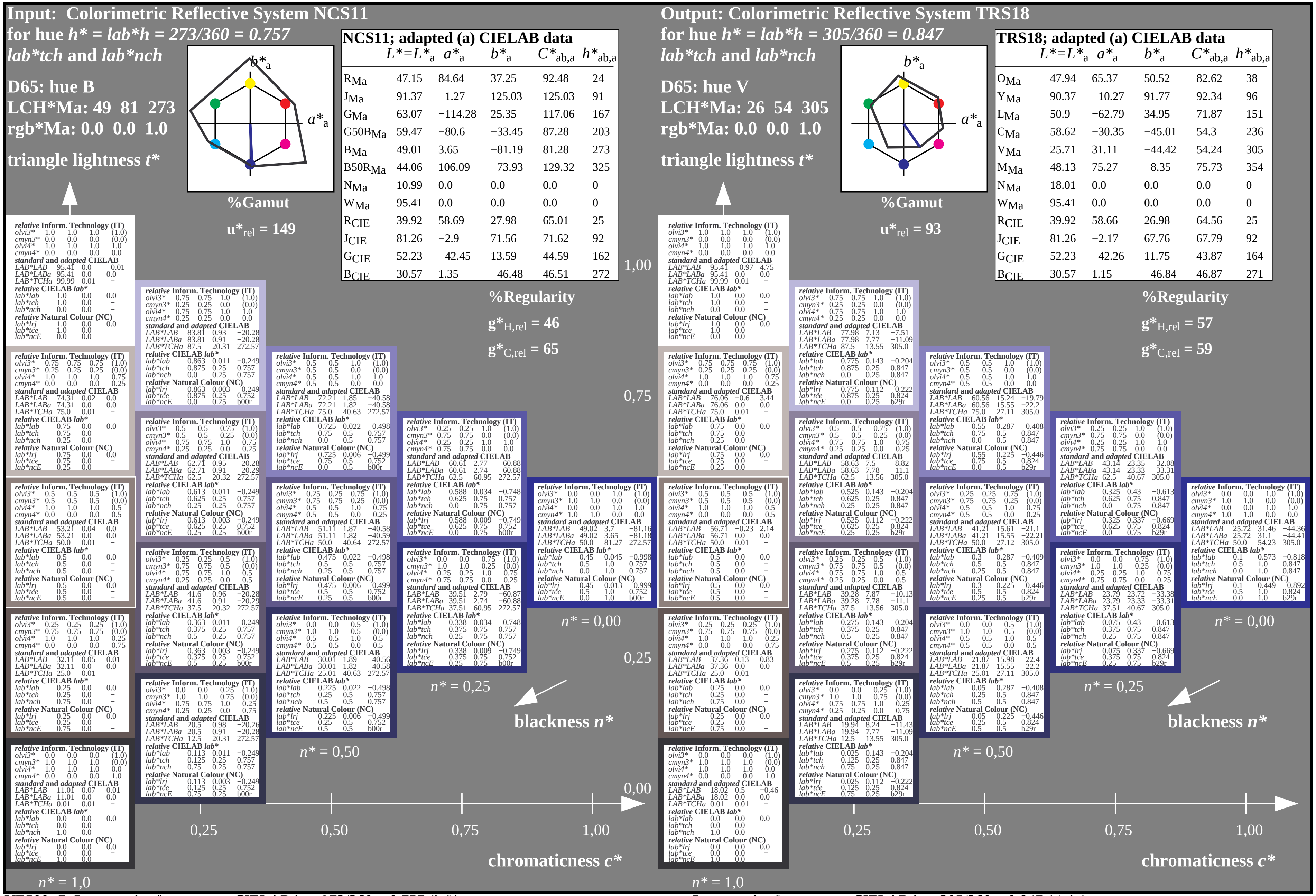
%Gamut
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



UE500−7, 5 step scales for constant CIELAB hue 273/360 = 0.757 (left)

5 step scales for constant CIELAB hue 290/360 = 0.806 (right)



NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

UE500−7, 5 step scales for constant CIELAB hue 273/360 = 0.757 (left)   5 step scales for constant CIELAB hue 305/360 = 0.847 (right)

Input: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 273/360 = 0.757$

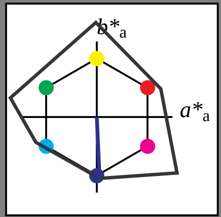
*lab*tch and lab*nch*

D65: hue B

LCH*Ma: 49 81 273

rgb*Ma: 0.0 0.0 1.0

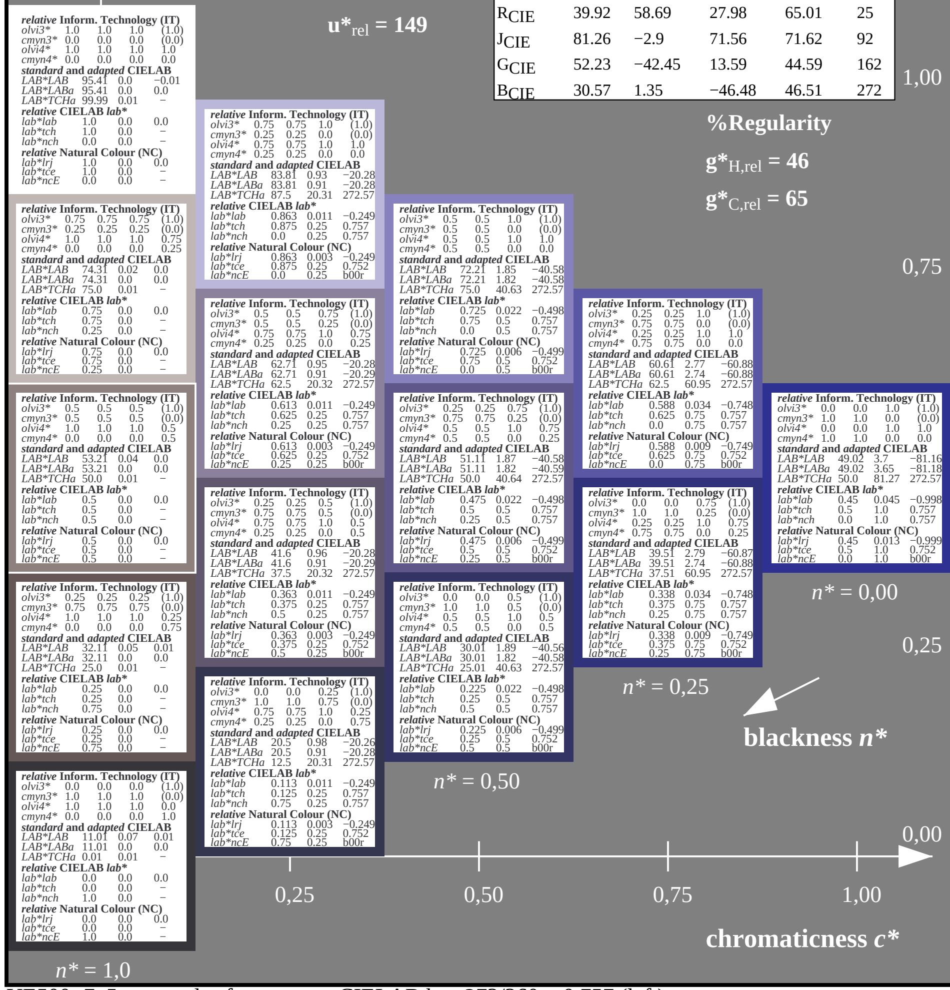
triangle lightness t^*



%Gamut

$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272



Output: Colorimetric Reflective System MRS18a

for hue $h^* = lab^*h = 290/360 = 0.807$

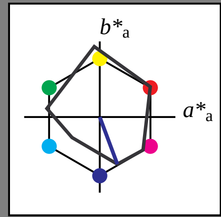
*lab*tch and lab*nch*

D65: hue B

LCH*Ma: 37 66 290

rgb*Ma: 0.0 0.0 1.0

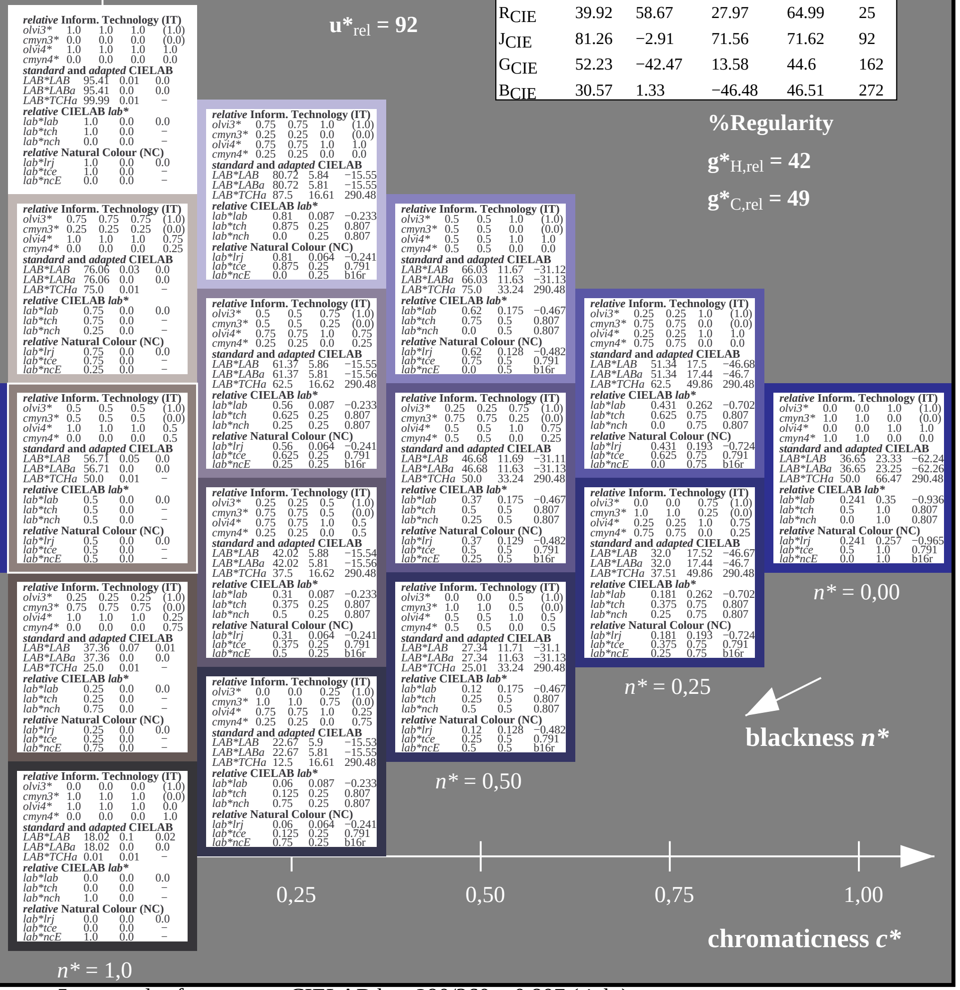
triangle lightness t^*



%Gamut

$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272



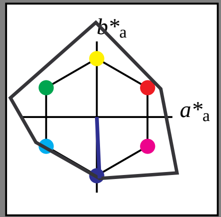
UE500−7, 5 step scales for constant CIELAB hue 273/360 = 0.757 (left)

5 step scales for constant CIELAB hue 290/360 = 0.807 (right)

Input: Colorimetric Reflective System NCS11
for hue h^* = lab^*h = 273/360 = 0.757
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

u^*_{rel} = 149

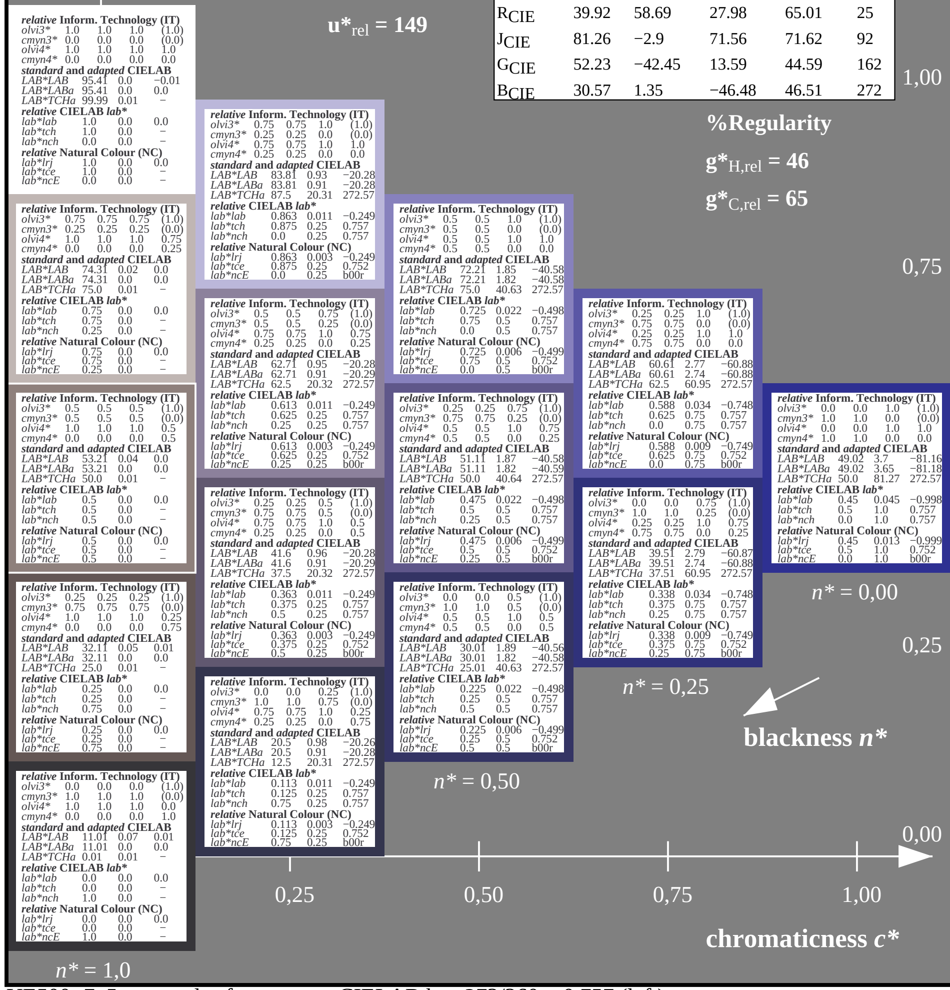
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

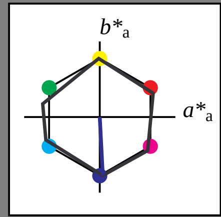
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NRS18
for hue h^* = lab^*h = 273/360 = 0.758
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 77 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

u^*_{rel} = 100

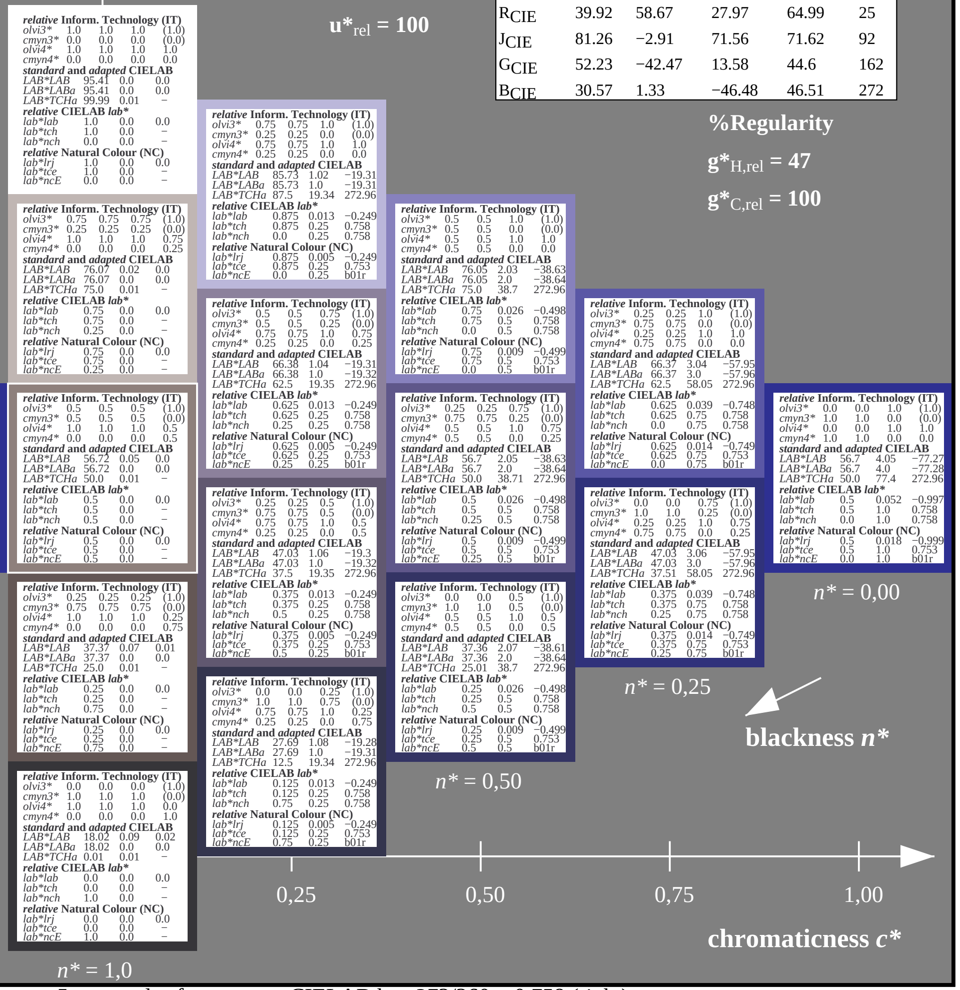
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



UE500−7, 5 step scales for constant CIELAB hue 273/360 = 0.757 (left)

5 step scales for constant CIELAB hue 273/360 = 0.758 (right)

Input: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 273/360 = 0.757$

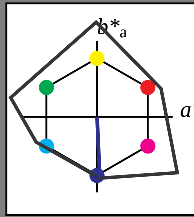
*lab*tch and lab*nch*

D65: hue B

LCH*Ma: 49 81 273

rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

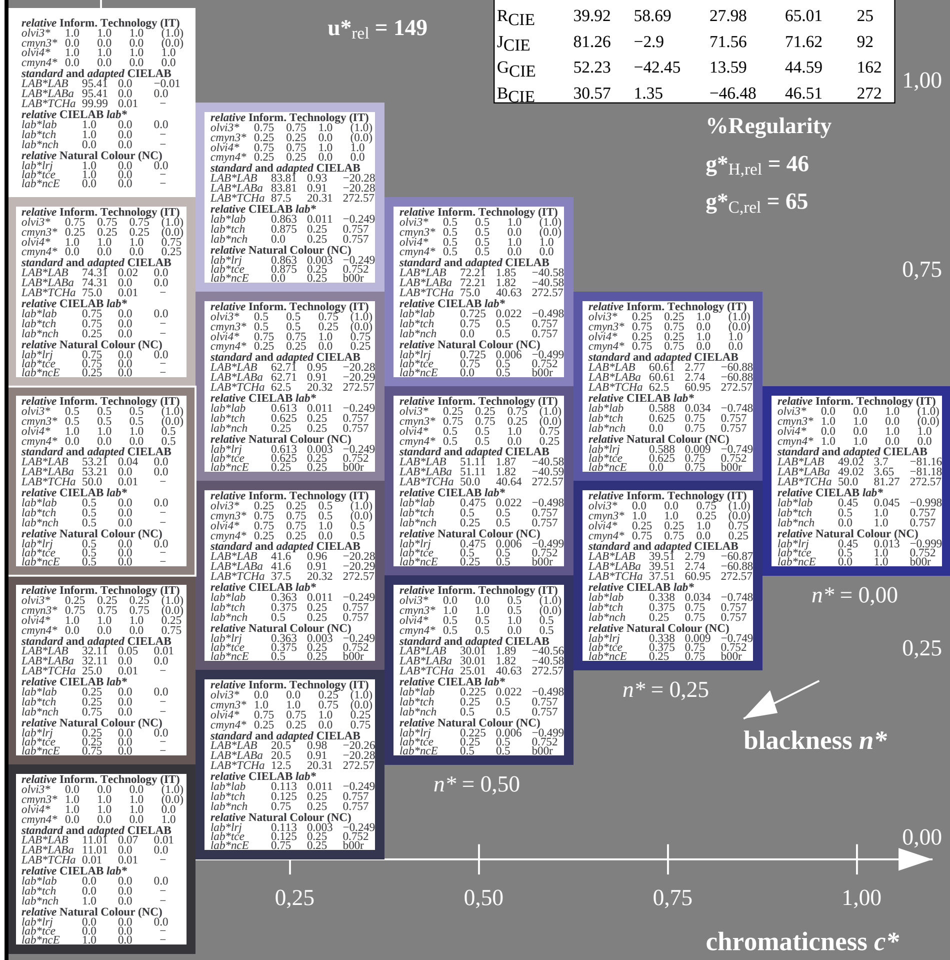
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System NCS18

for hue $h^* = lab^*h = 273/360 = 0.757$

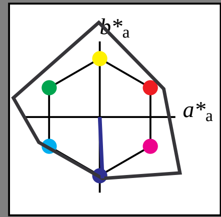
*lab*tch and lab*nch*

D65: hue B

LCH*Ma: 49 81 273

rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

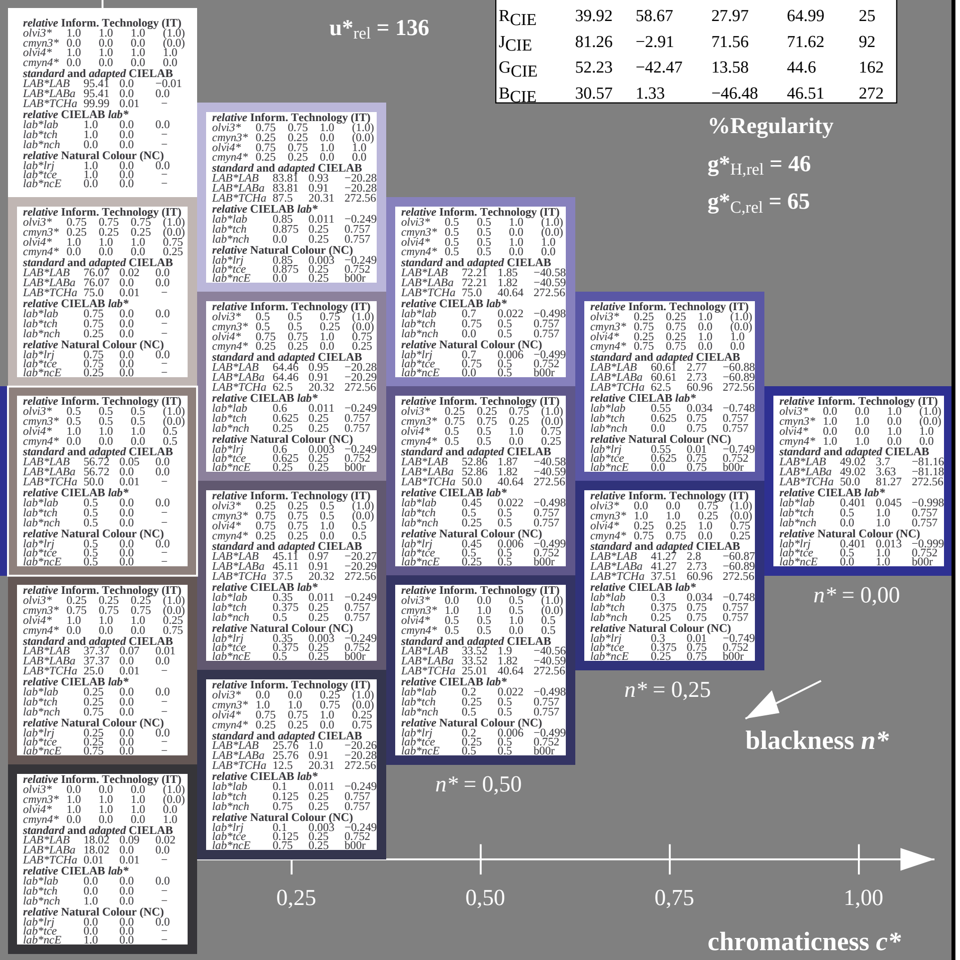
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



UE500−7, 5 step scales for constant CIELAB hue 273/360 = 0.757 (left)

5 step scales for constant CIELAB hue 273/360 = 0.757 (right)

Input: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 273/360 = 0.757$

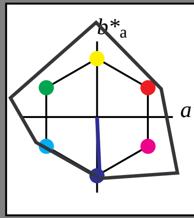
*lab*tch and lab*nch*

D65: hue B

LCH*Ma: 49 81 273

rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

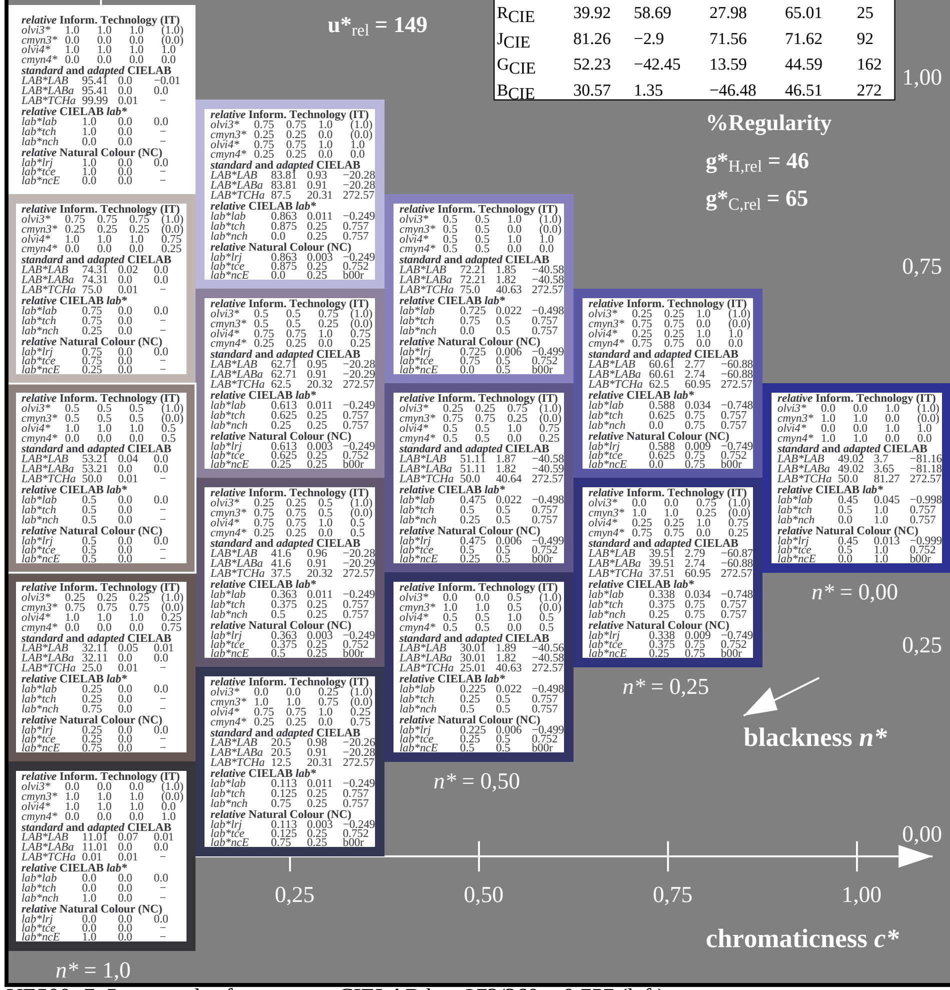
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System NRS11

for hue $h^* = lab^*h = 273/360 = 0.758$

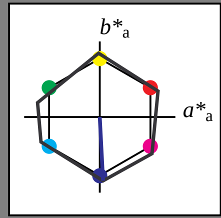
*lab*tch and lab*nch*

D65: hue B

LCH*Ma: 53 84 273

rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

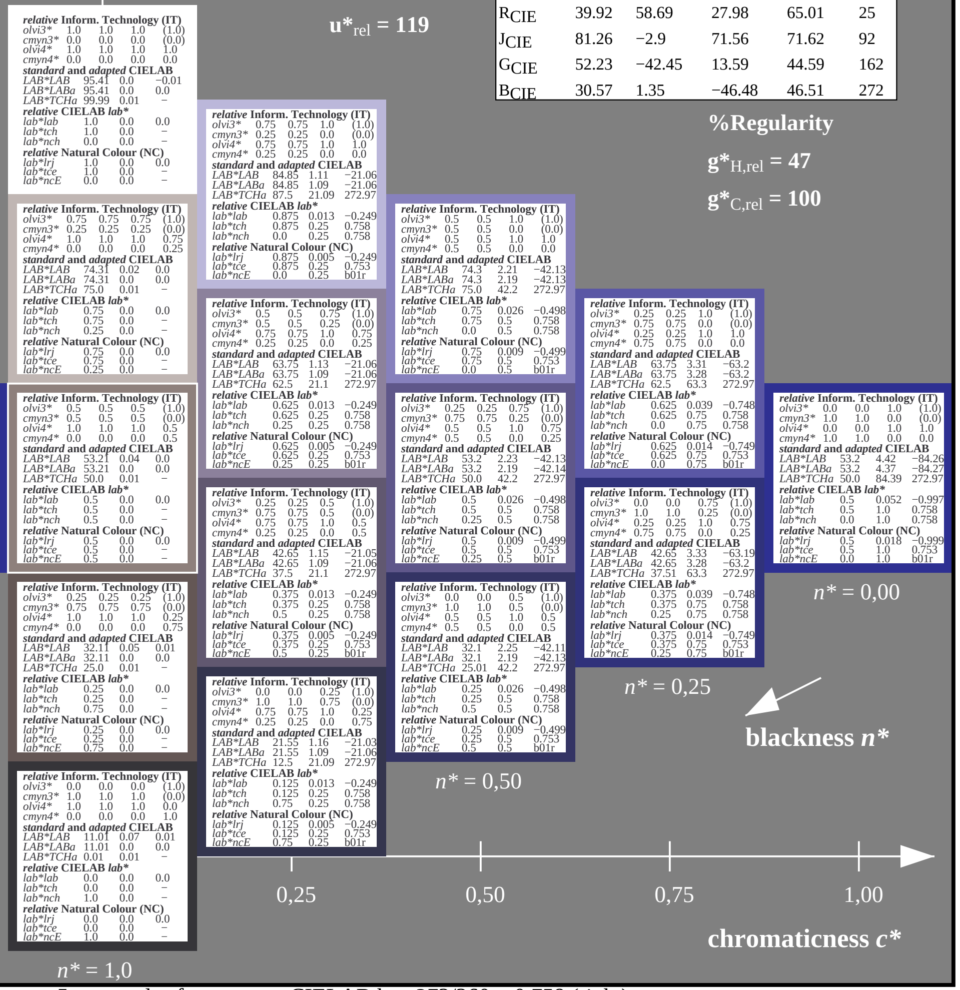
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



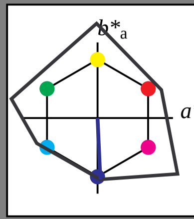
UE500−7, 5 step scales for constant CIELAB hue 273/360 = 0.757 (left)

5 step scales for constant CIELAB hue 273/360 = 0.758 (right)

Input: Colorimetric Reflective System NCS11
for hue *h** = *lab*h* = 273/360 = 0.757
*lab*tch* and *lab*nch*

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness *t**



%Gamut

u*rel = 149

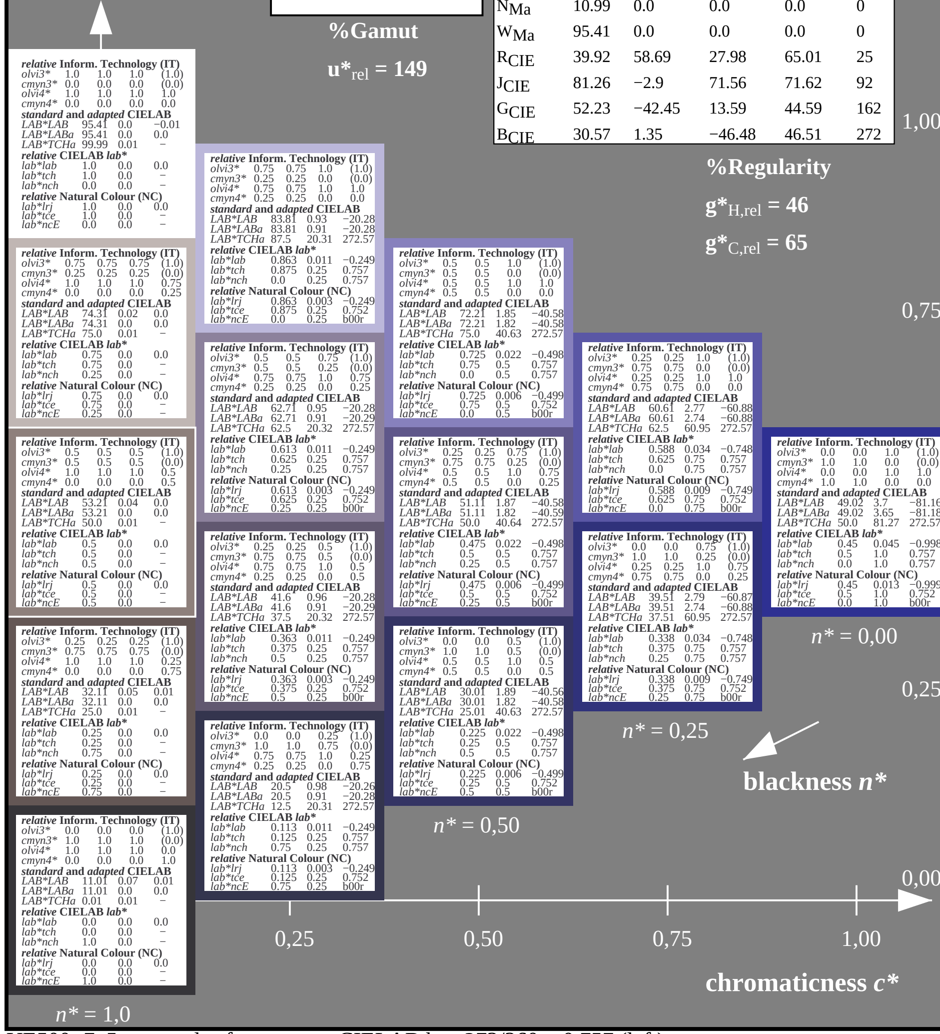
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

g*H,rel = 46

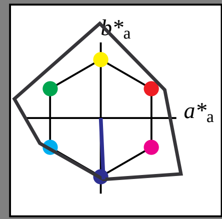
g*C,rel = 65



Output: Colorimetric Reflective System NCS11
for hue *h** = *lab*h* = 273/360 = 0.757
*lab*tch* and *lab*nch*

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness *t**



%Gamut

u*rel = 149

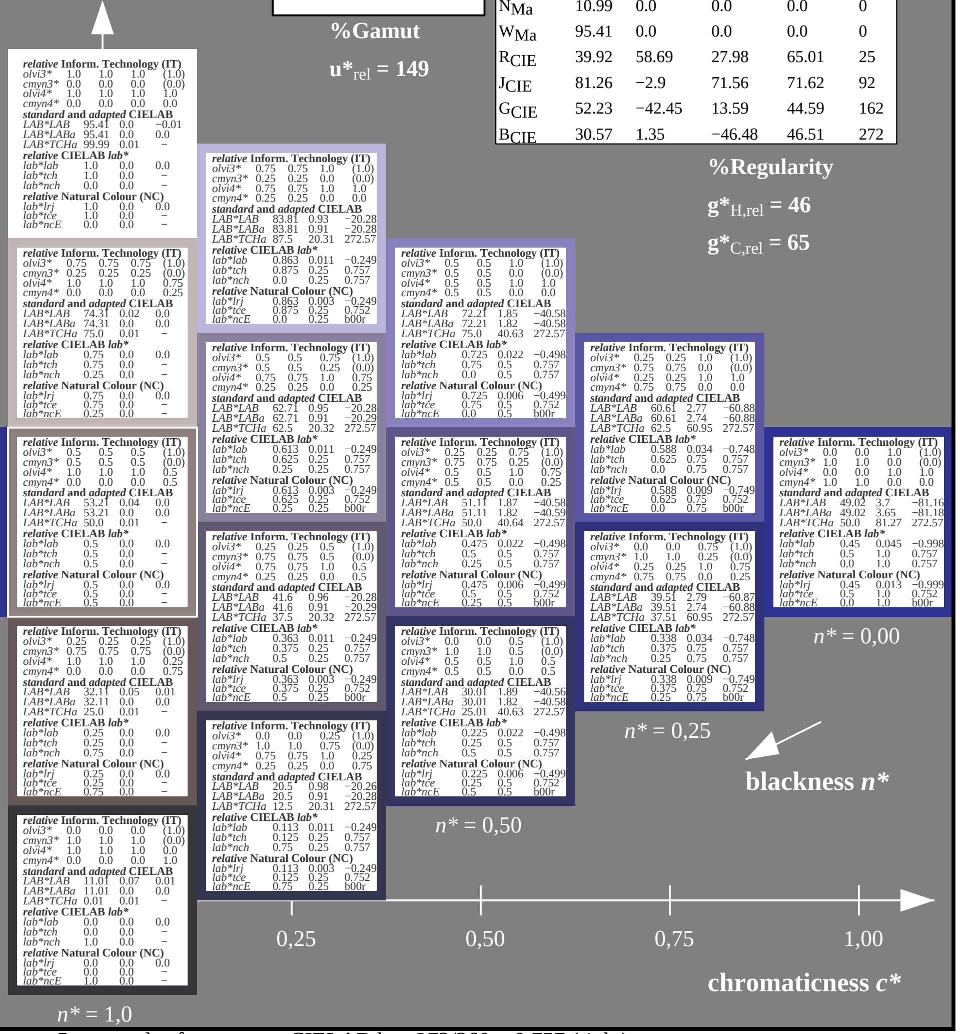
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

g*H,rel = 46

g*C,rel = 65



UE500−7, 5 step scales for constant CIELAB hue 273/360 = 0.757 (left)

5 step scales for constant CIELAB hue 273/360 = 0.757 (right)

Input: Colorimetric Reflective System ORS18

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

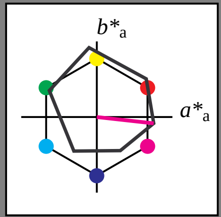
lab*tch* and *lab*nch

D65: hue M

LCH*Ma: 48 76 354

rgb*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	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

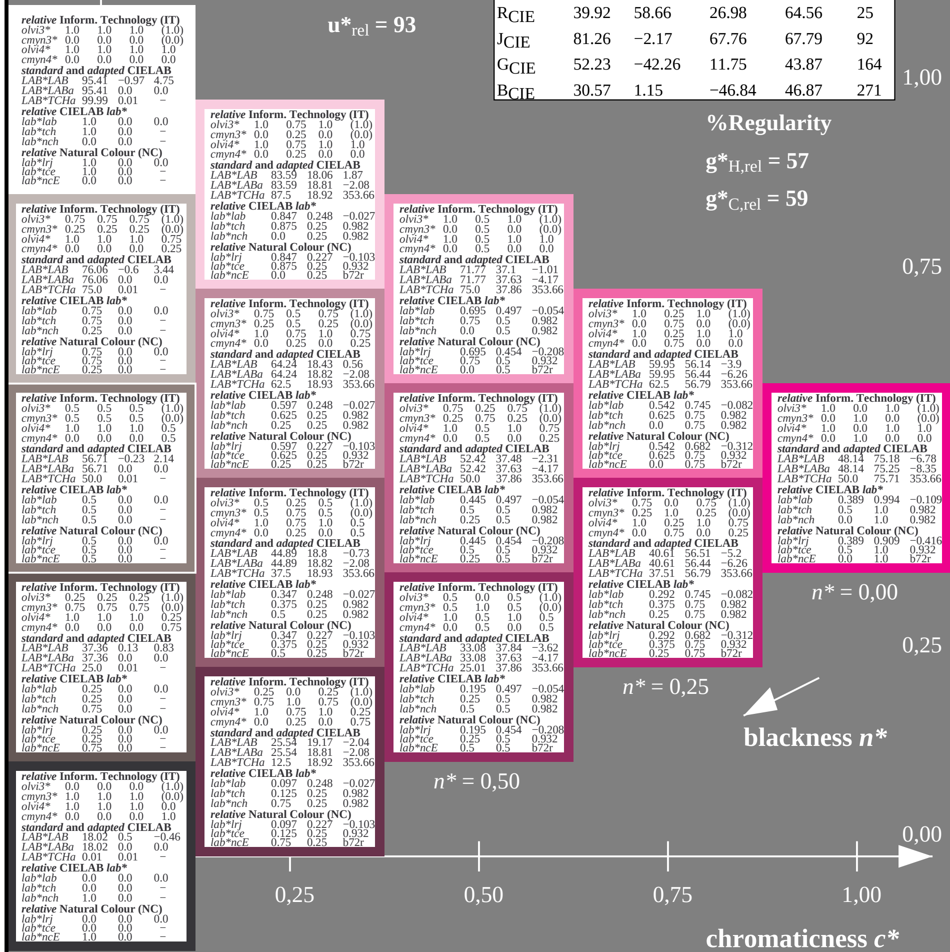
%Gamut

$u^*_{rel} = 93$

%Regularity

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

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



Output: Colorimetric Reflective System ORS18

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

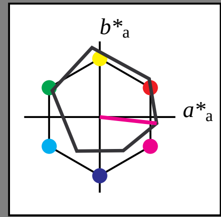
lab*tch* and *lab*nch

D65: hue M

LCH*Ma: 48 76 354

rgb*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	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

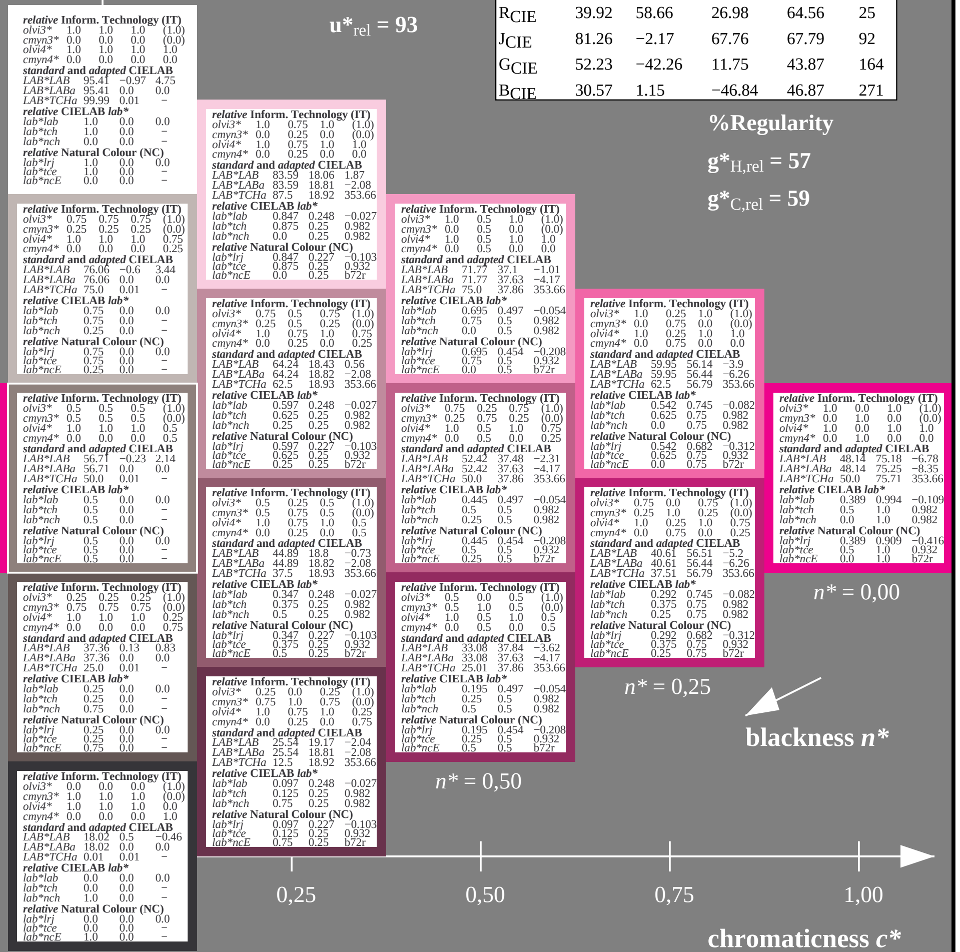
%Gamut

$u^*_{rel} = 93$

%Regularity

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

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



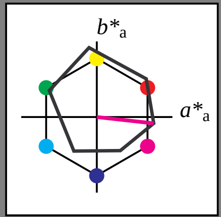
UE500−7, 5 step scales for constant CIELAB hue 354/360 = 0.982 (left)

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

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 354/360 = 0.982$
lab*tch and lab*nch

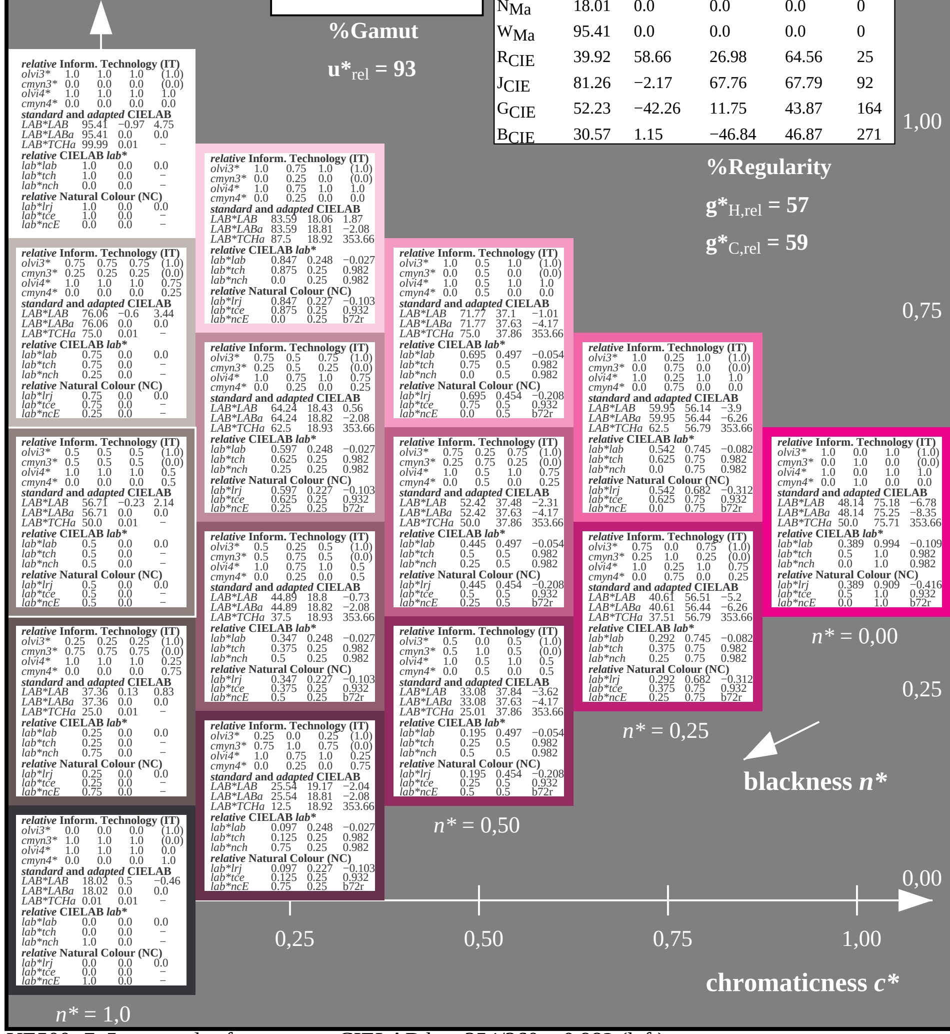
D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut
$u^*_{rel} = 93$

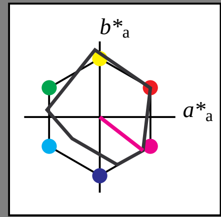
ORS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 322/360 = 0.895$
lab*tch and lab*nch

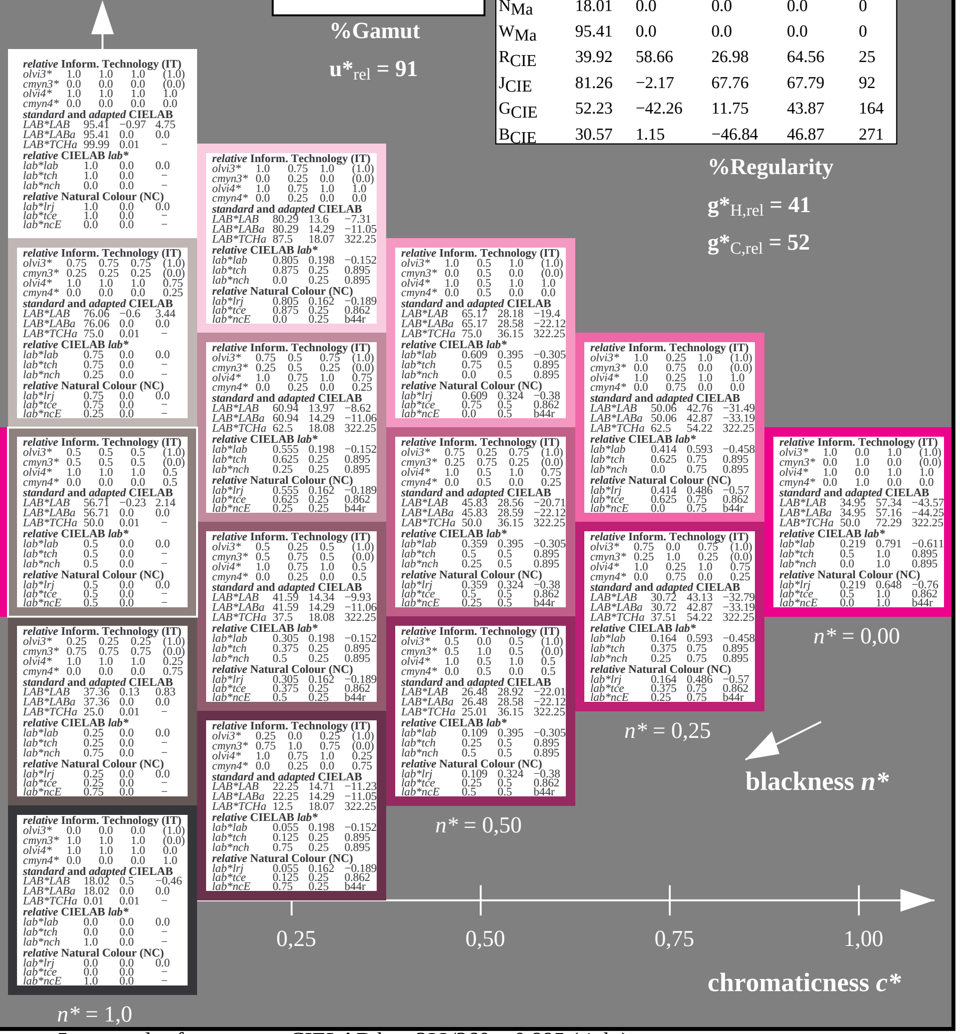
D65: hue B50R
LCH*Ma: 35 72 322
rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



UE500−7, 5 step scales for constant CIELAB hue 354/360 = 0.982 (left)

5 step scales for constant CIELAB hue 322/360 = 0.895 (right)

Input: Colorimetric Reflective System ORS18

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

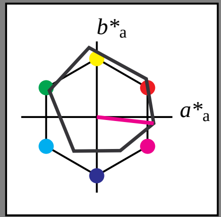
lab*tch and lab*nch

D65: hue M

LCH*Ma: 48 76 354

rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

u^*_{rel} = 93

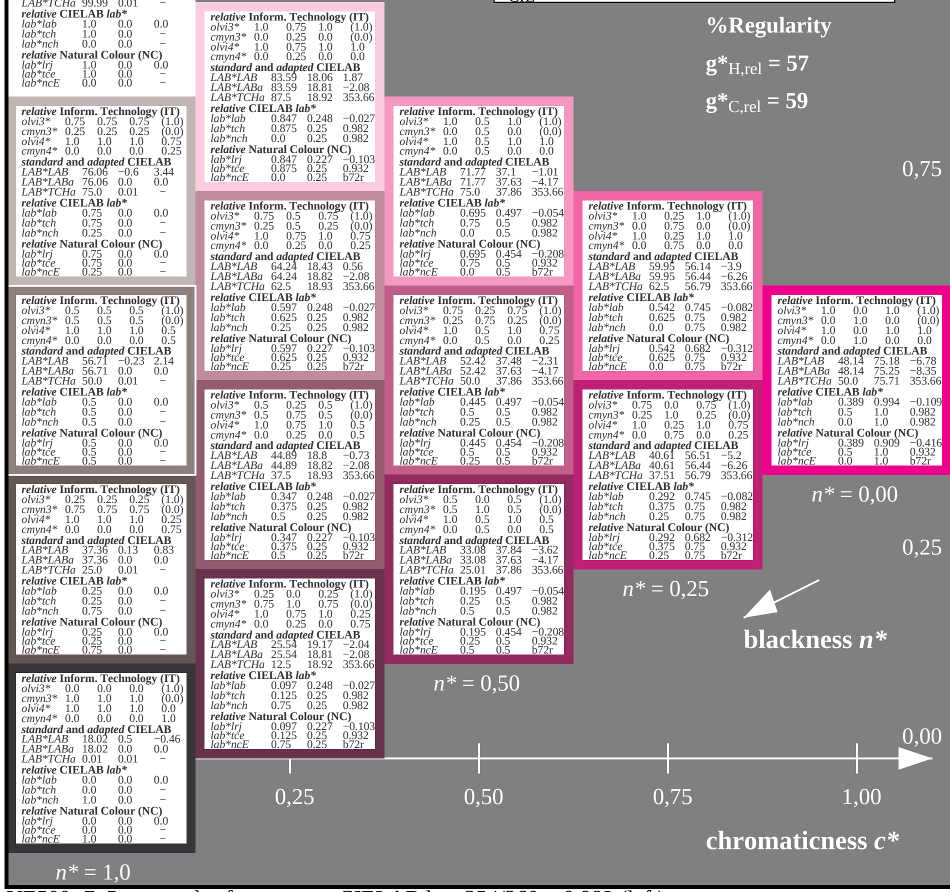
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



Output: Colorimetric Reflective System TRS18

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

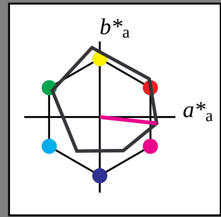
lab*tch and lab*nch

D65: hue M

LCH*Ma: 48 76 354

rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

u^*_{rel} = 93

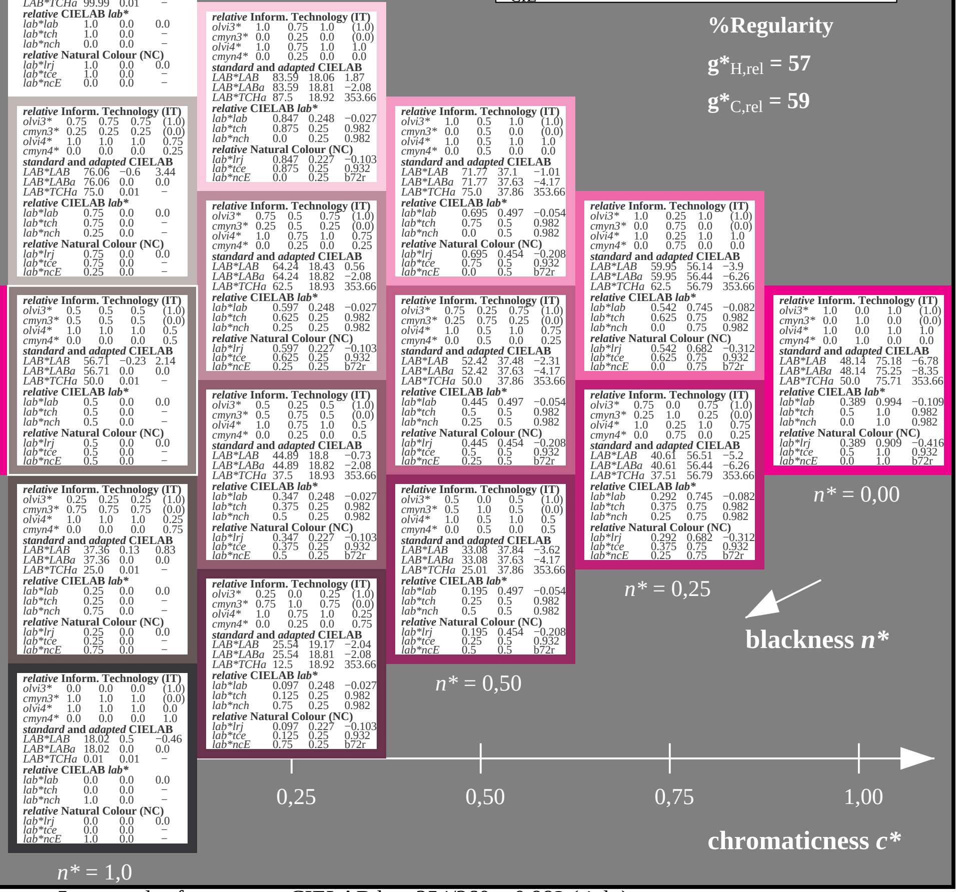
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



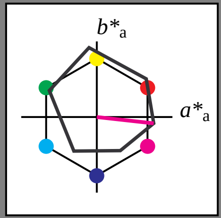
UE500−7, 5 step scales for constant CIELAB hue 354/360 = 0.982 (left)

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

Input: Colorimetric Reflective System ORS18
for hue *h** = *lab*h* = 354/360 = 0.982
*lab*tch* and *lab*nch*

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness *t**

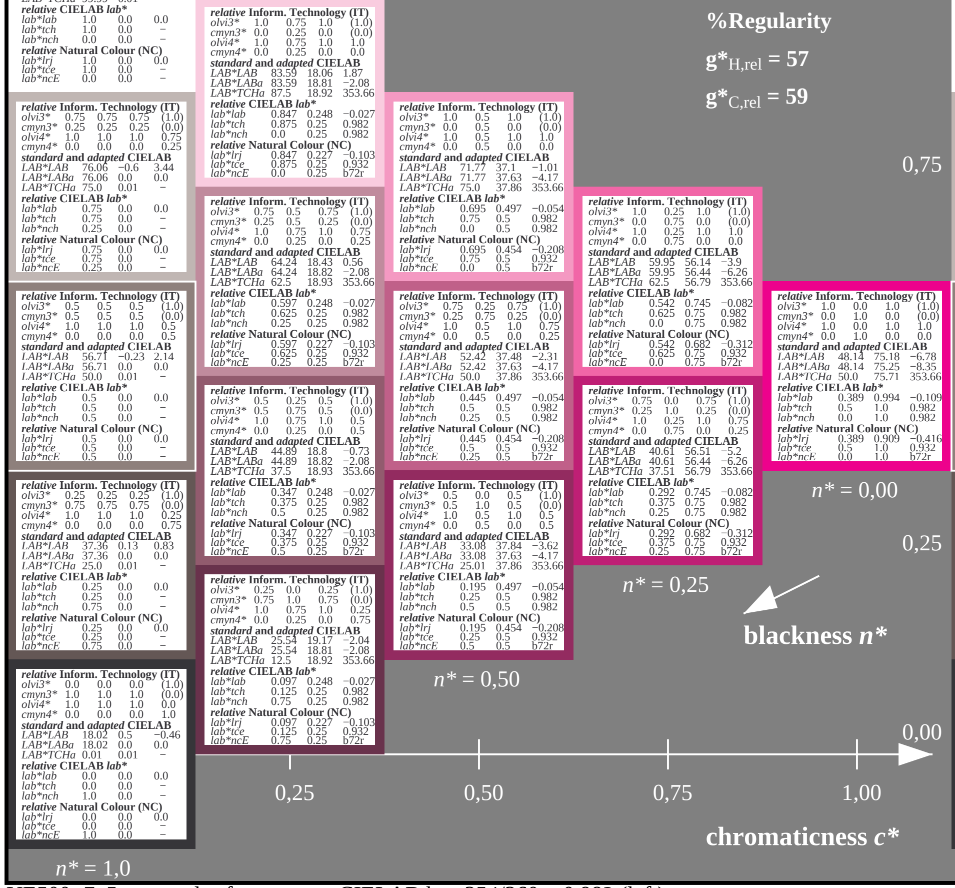


%Gamut
u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

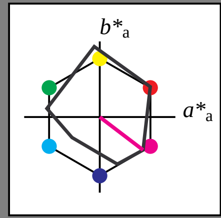
%Regularity
$g^*_{H,rel}$ = 57
$g^*_{C,rel}$ = 59



Output: Colorimetric Reflective System MRS18a
for hue *h** = *lab*h* = 323/360 = 0.896
*lab*tch* and *lab*nch*

D65: hue B50R
LCH*Ma: 35 72 323
rgb*Ma: 1.0 0.0 1.0

triangle lightness *t**

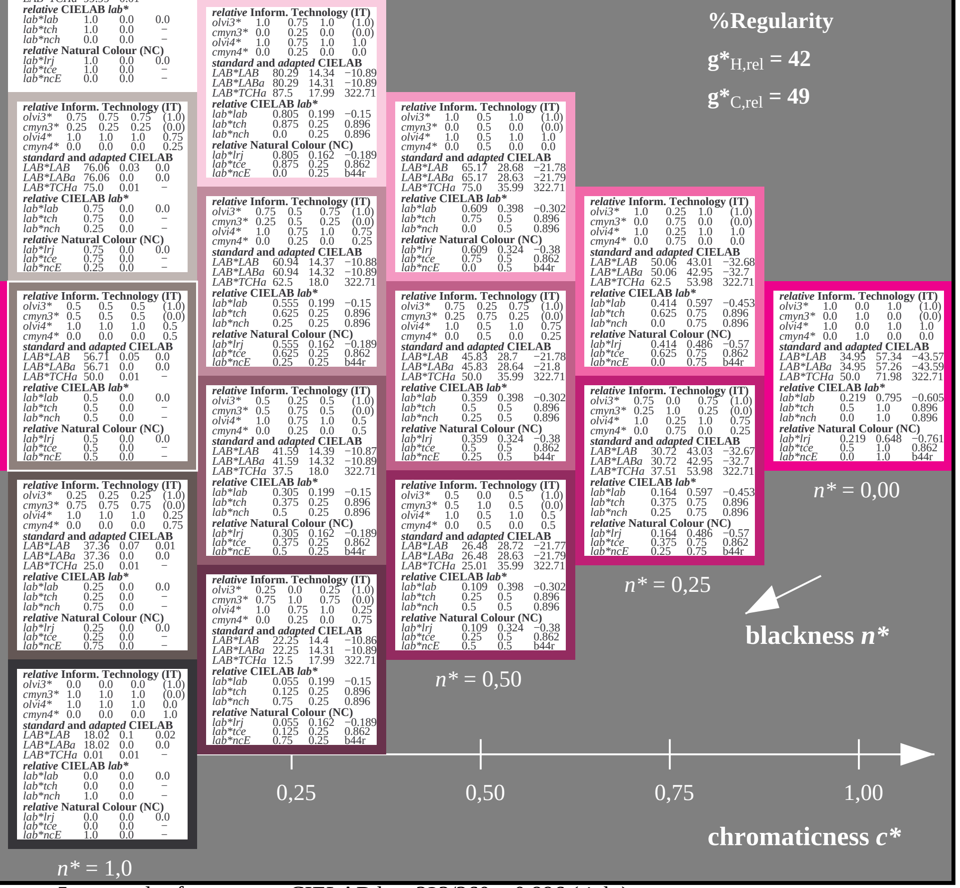


%Gamut
u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 42
$g^*_{C,rel}$ = 49



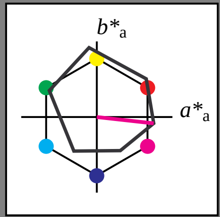
UE500−7, 5 step scales for constant CIELAB hue 354/360 = 0.982 (left)

5 step scales for constant CIELAB hue 323/360 = 0.896 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 354/360 = 0.982$
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*

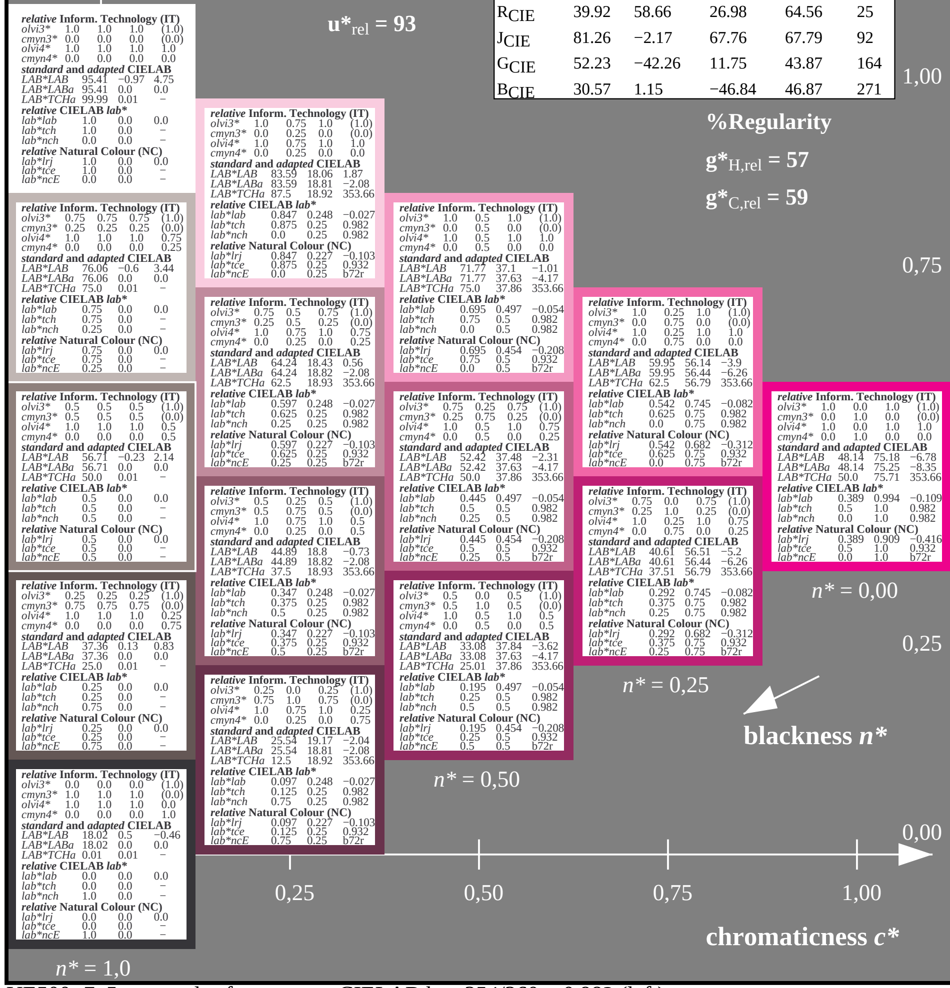


%Gamut
$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

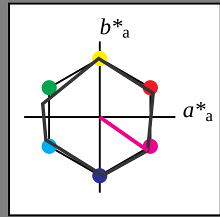
%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 57 77 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*

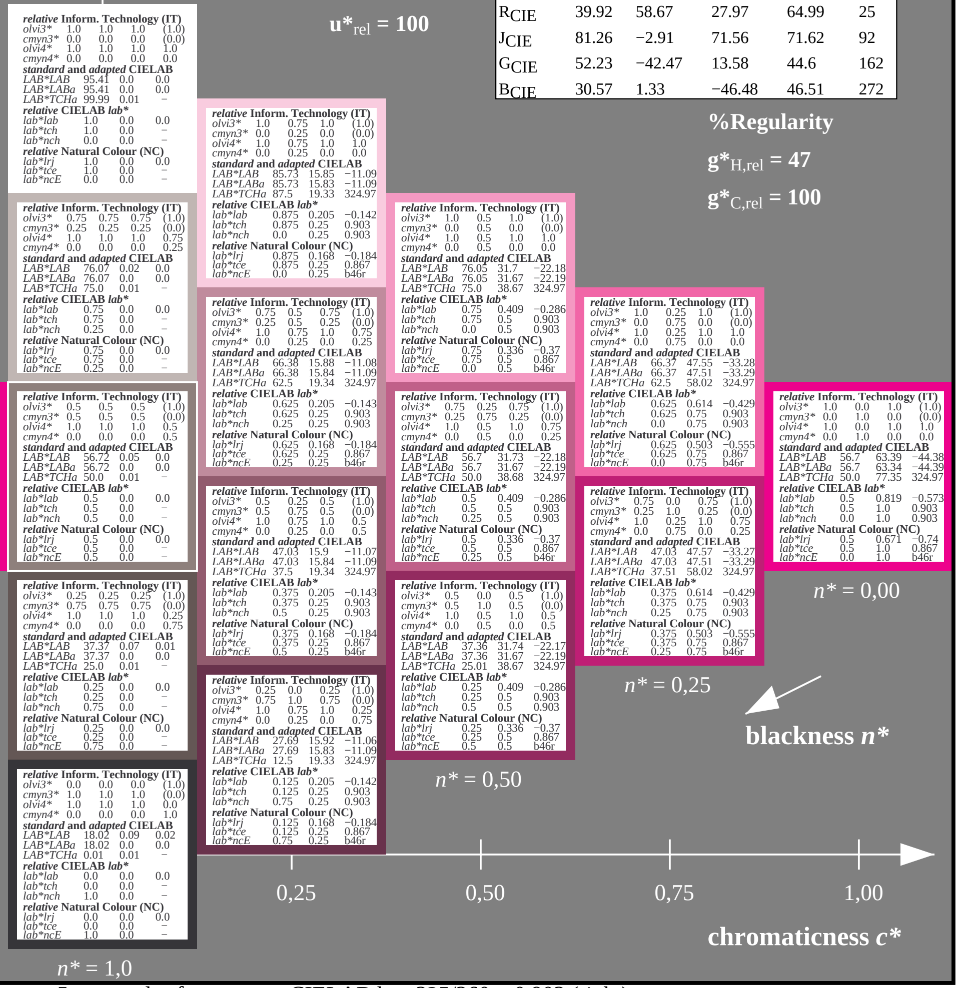


%Gamut
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$

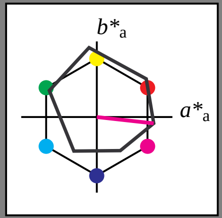


UE500−7, 5 step scales for constant CIELAB hue 354/360 = 0.982 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 354/360 = 0.982$
*lab*tch and lab*nch*

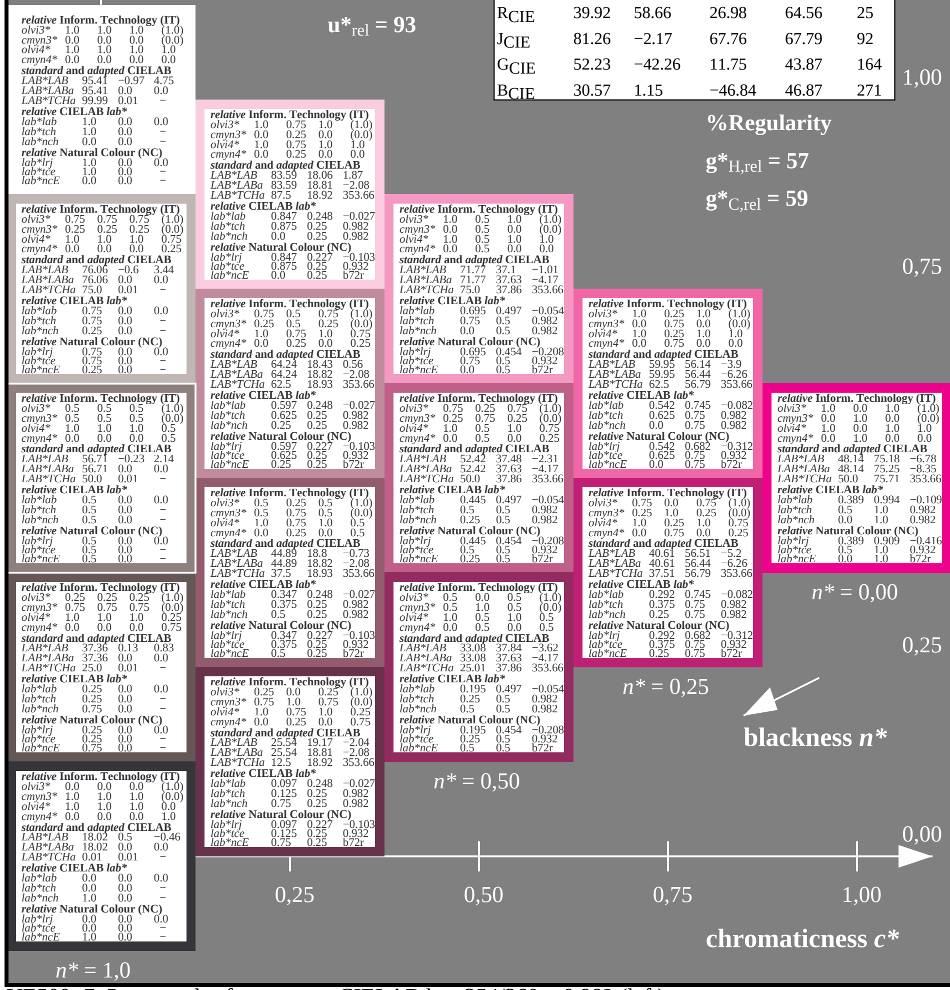
D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 93$

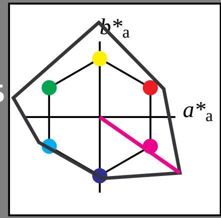
ORS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 325/360 = 0.903$
*lab*tch and lab*nch*

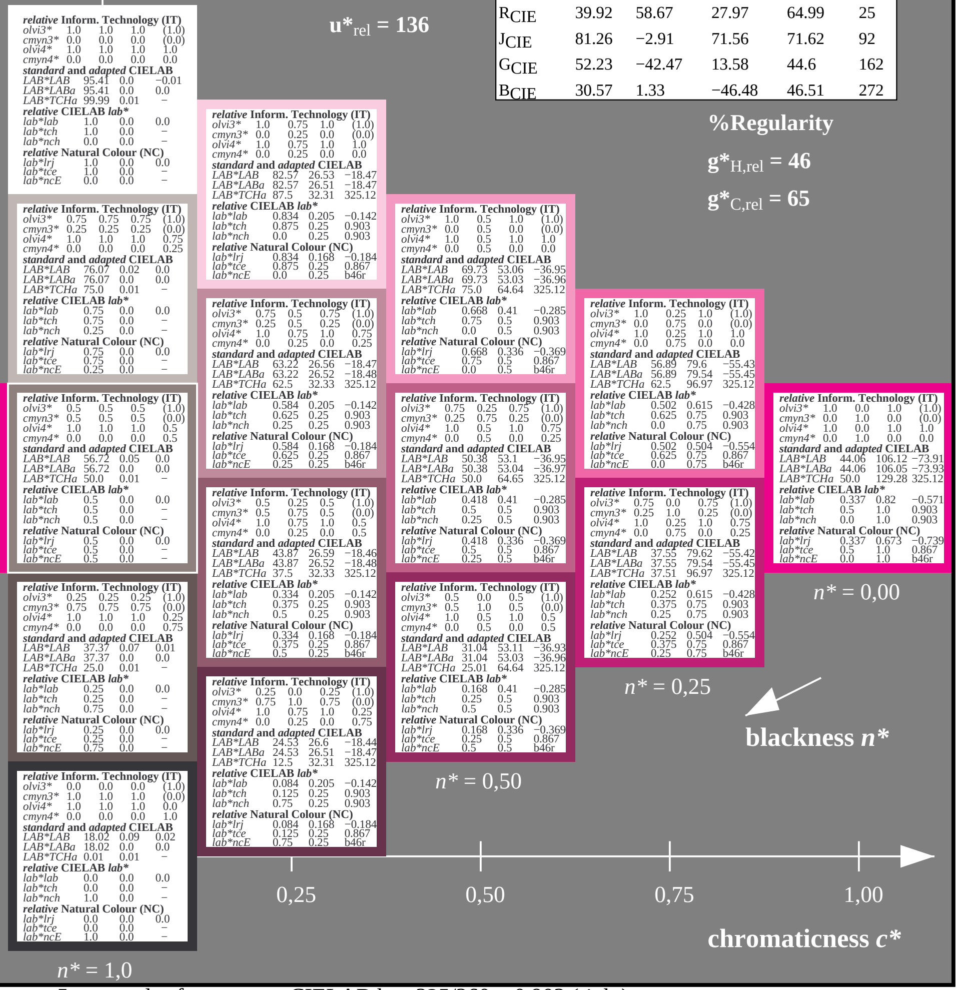
D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



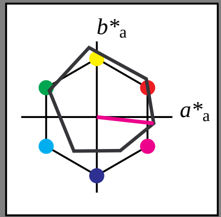
UE500−7, 5 step scales for constant CIELAB hue 354/360 = 0.982 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 354/360 = 0.982$
lab^*tch and lab^*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

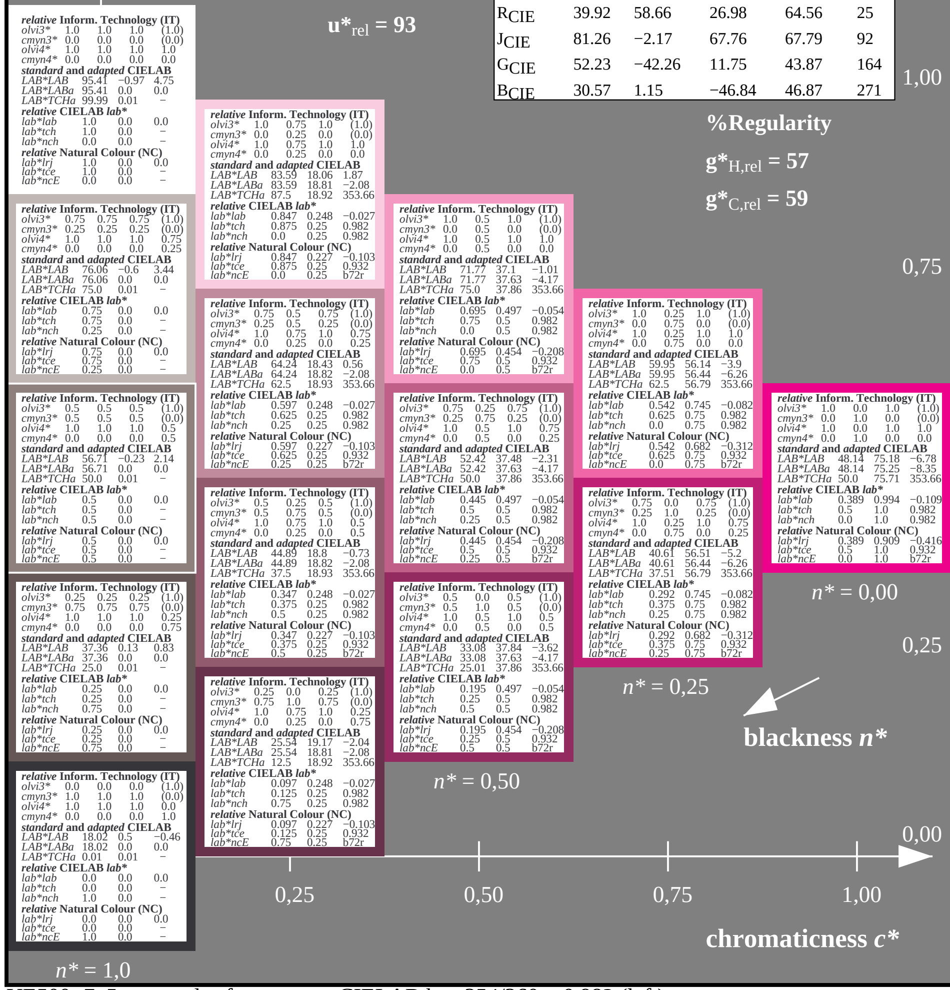
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

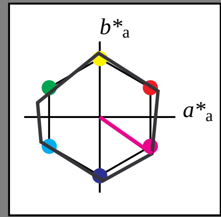
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 325/360 = 0.903$
lab^*tch and lab^*nch

D65: hue B50R
LCH*Ma: 53 84 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 119$

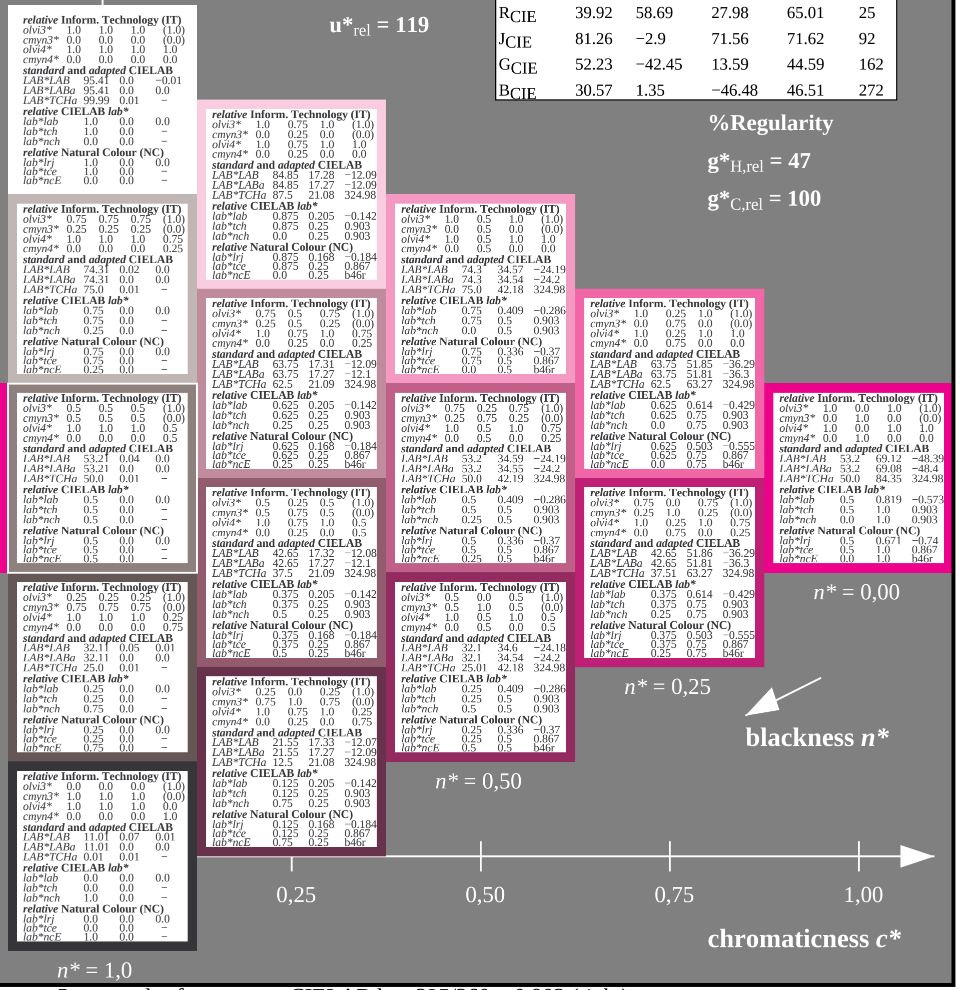
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



UE500−7, 5 step scales for constant CIELAB hue 354/360 = 0.982 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System ORS18

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

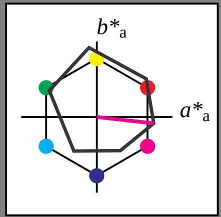
lab*tch* and *lab*nch

D65: hue M

LCH*Ma: 48 76 354

rgb*Ma: 1.0 0.0 1.0

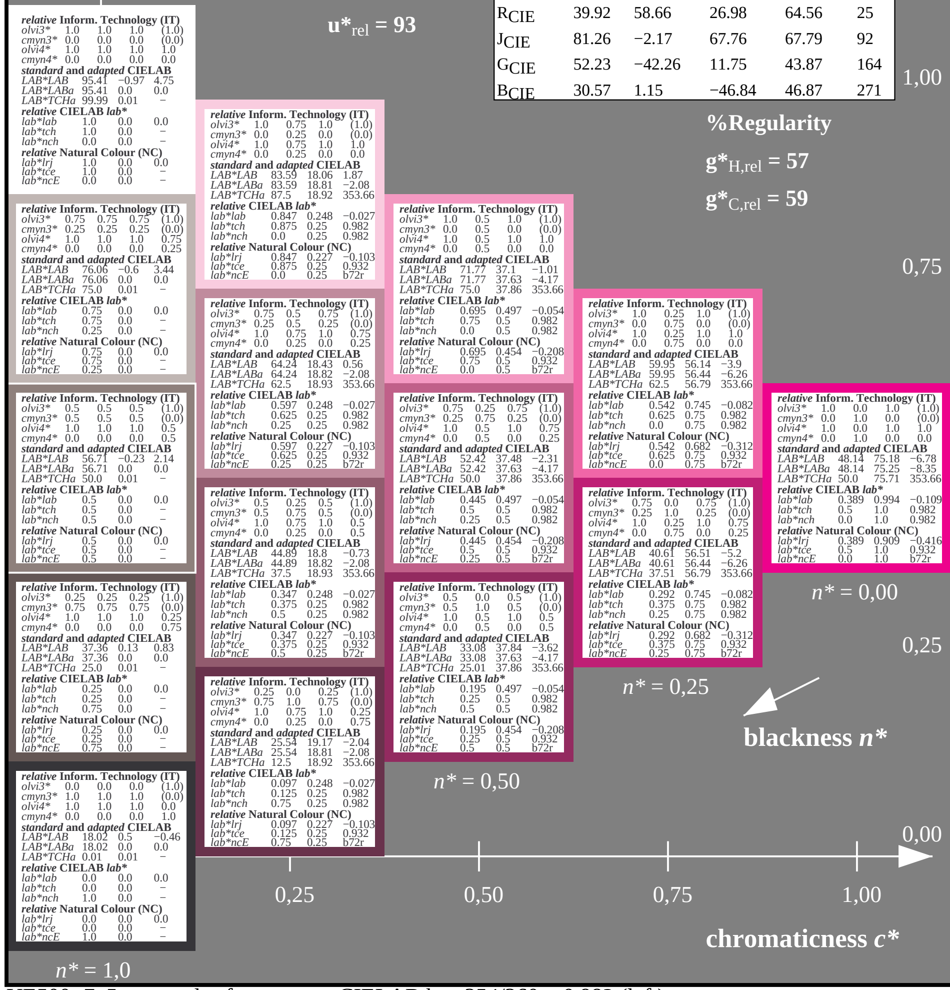
triangle lightness t^*



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



Output: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 325/360 = 0.903$

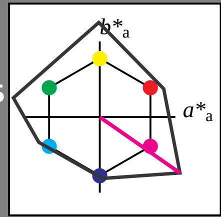
lab*tch* and *lab*nch

D65: hue B50R

LCH*Ma: 44 129 325

rgb*Ma: 1.0 0.0 1.0

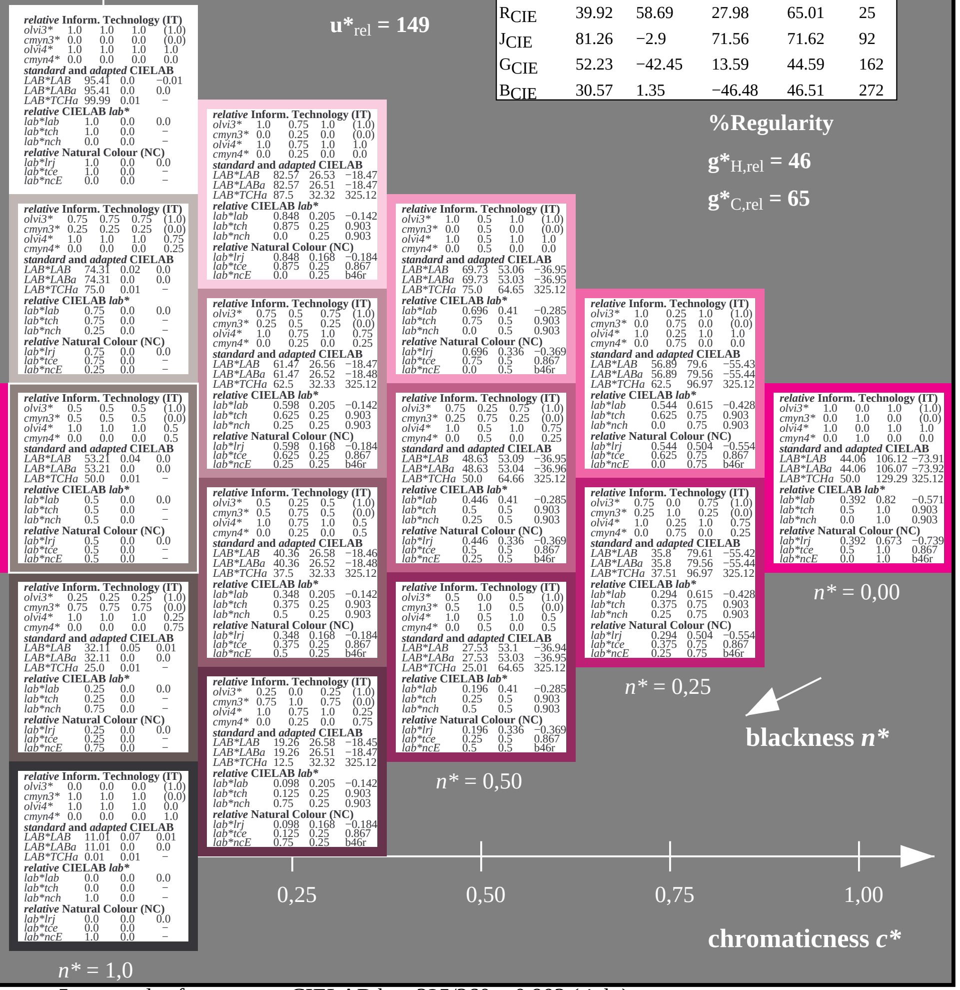
triangle lightness t^*



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272



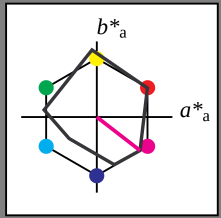
UE500−7, 5 step scales for constant CIELAB hue 354/360 = 0.982 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 322/360 = 0.895$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 322
rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 91$

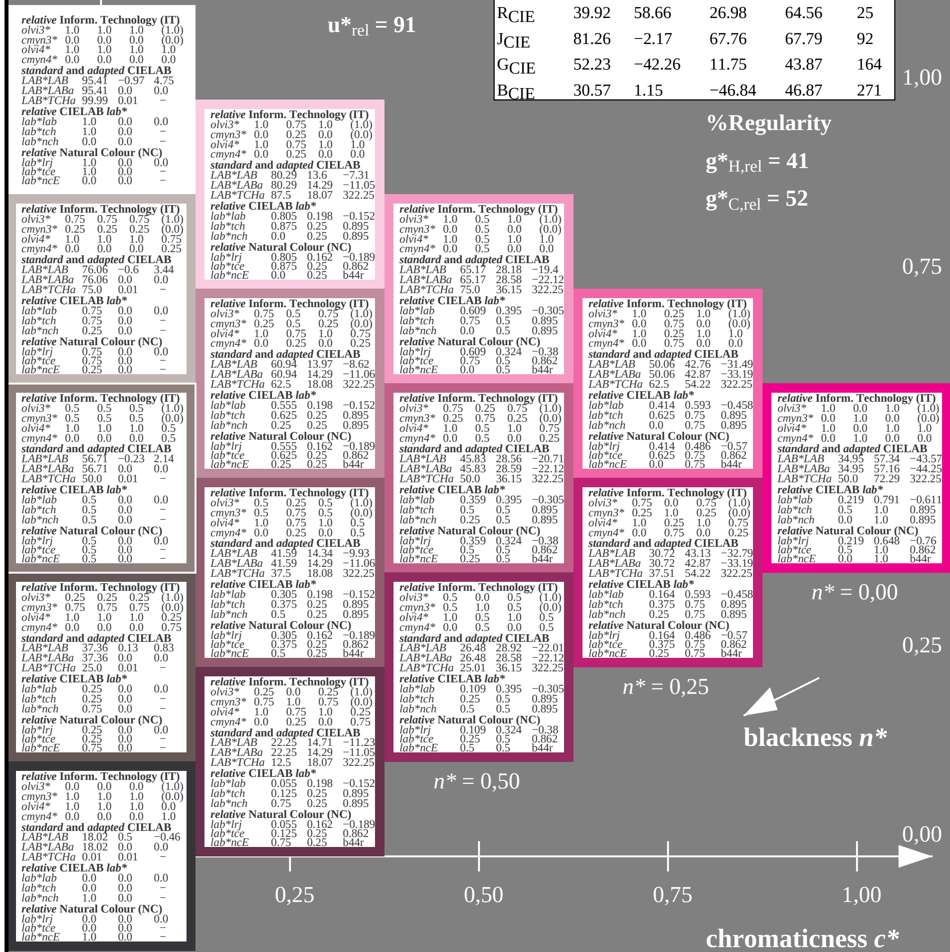
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

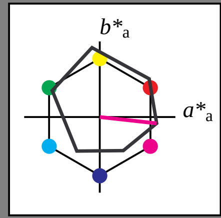
$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 354/360 = 0.982$
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

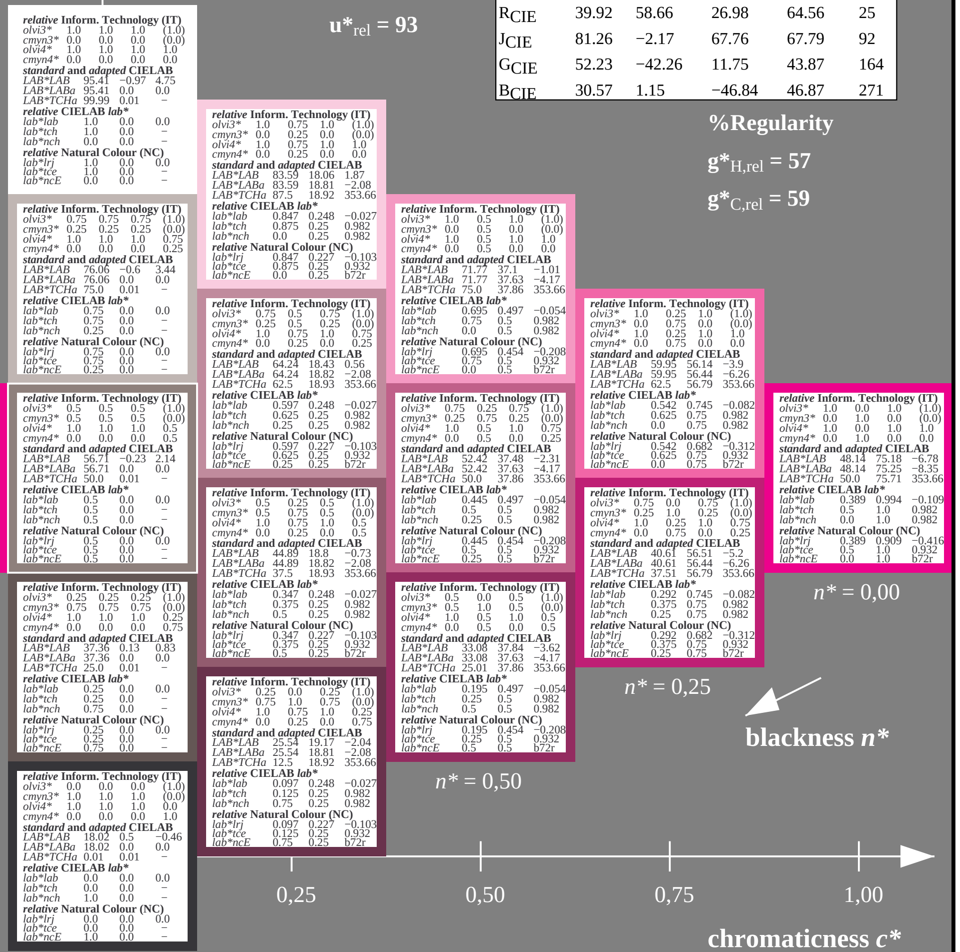
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



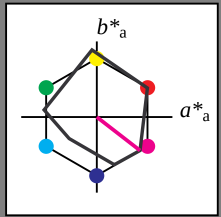
UE500−7, 5 step scales for constant CIELAB hue 322/360 = 0.895 (left)

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

Input: Colorimetric Reflective System MRS18
for hue *h = *lab*h* = 322/360 = 0.895**
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 322
rgb*Ma: 1.0 0.0 1.0

triangle lightness *t*



%Gamut

$u^*_{rel} = 91$

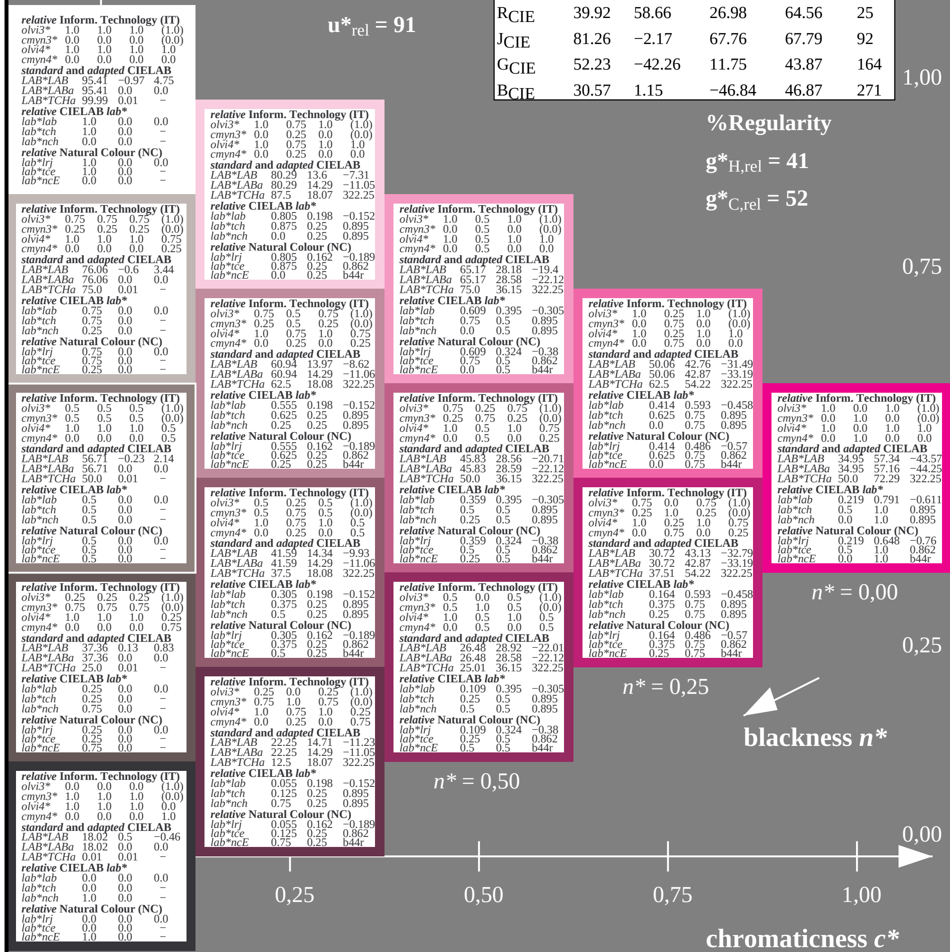
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

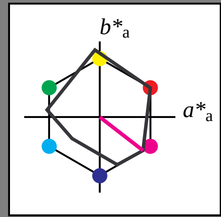
$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System MRS18
for hue *h = *lab*h* = 322/360 = 0.895**
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 322
rgb*Ma: 1.0 0.0 1.0

triangle lightness *t*



%Gamut

$u^*_{rel} = 91$

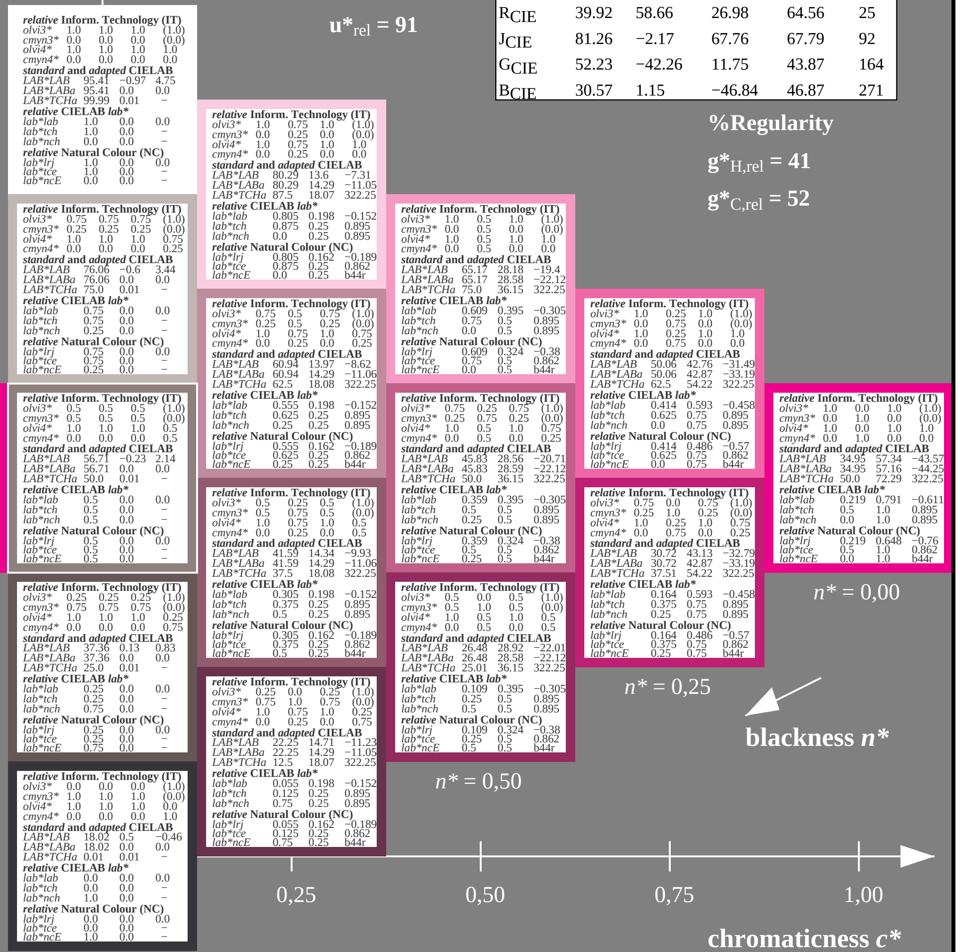
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

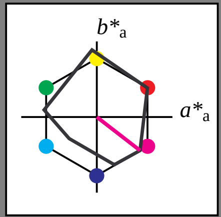


UE500−7, 5 step scales for constant CIELAB hue 322/360 = 0.895 (left)

5 step scales for constant CIELAB hue 322/360 = 0.895 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h$ = 322/360 = 0.895
lab*tch and lab*nch

D65: hue B50R
LCH*Ma: 35 72 322
rgb*Ma: 1.0 0.0 1.0
triangle lightness *t**

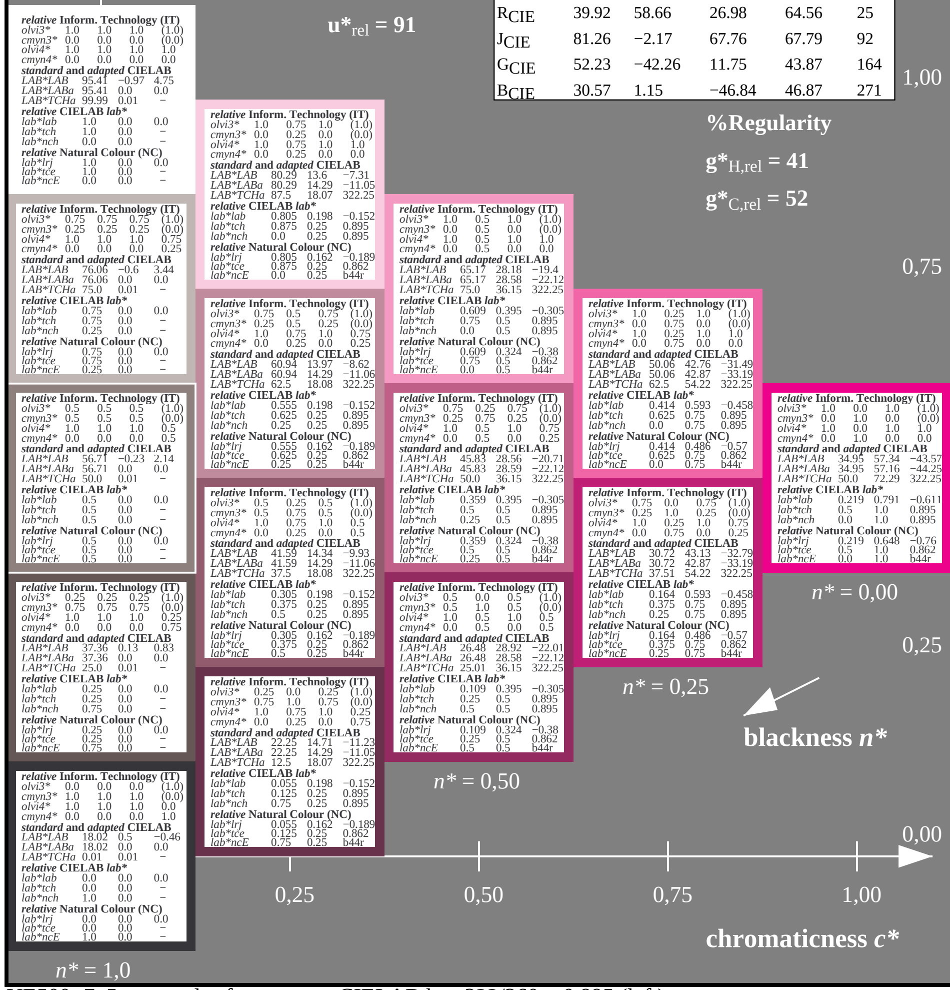


%Gamut
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

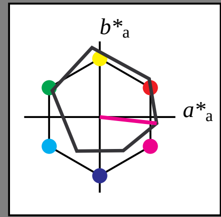
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel}$ = 41
$g^*_{C,rel}$ = 52



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h$ = 354/360 = 0.982
lab*tch and lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0
triangle lightness *t**

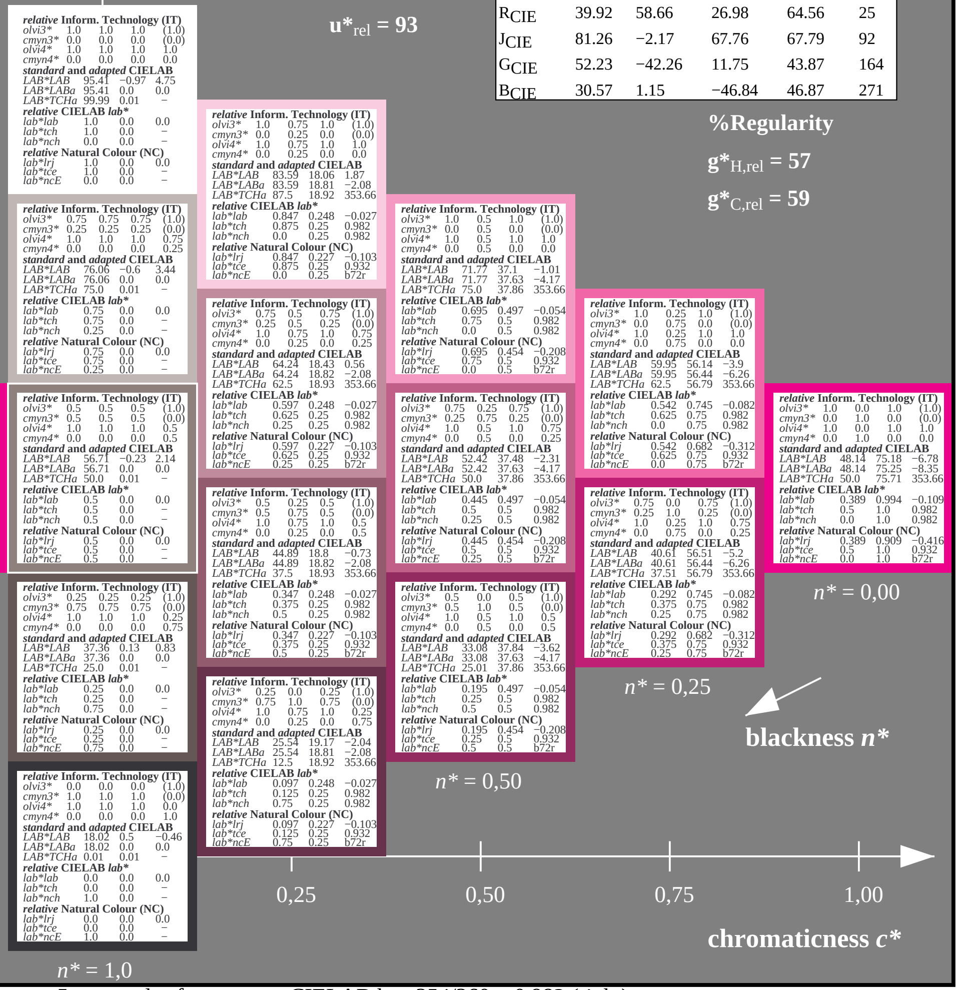


%Gamut
u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel}$ = 57
$g^*_{C,rel}$ = 59



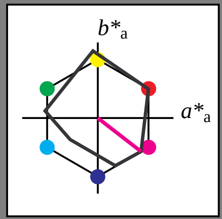
UE500−7, 5 step scales for constant CIELAB hue 322/360 = 0.895 (left)

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

Input: Colorimetric Reflective System MRS18
for hue *h** = *lab*h* = 322/360 = 0.895
*lab*tch* and *lab*nch*

D65: hue B50R
LCH*Ma: 35 72 322
rgb*Ma: 1.0 0.0 1.0

triangle lightness *t*

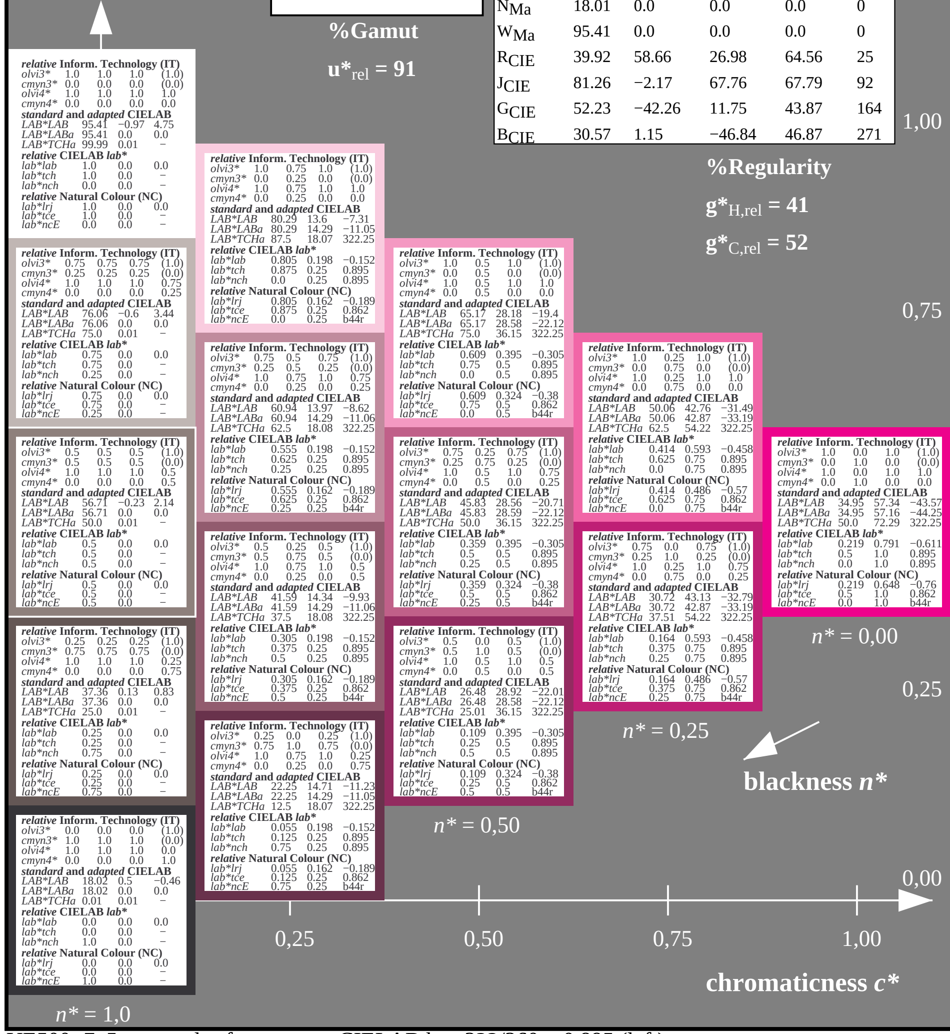


%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

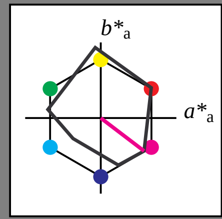
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



Output: Colorimetric Reflective System MRS18a
for hue *h** = *lab*h* = 323/360 = 0.896
*lab*tch* and *lab*nch*

D65: hue B50R
LCH*Ma: 35 72 323
rgb*Ma: 1.0 0.0 1.0

triangle lightness *t*

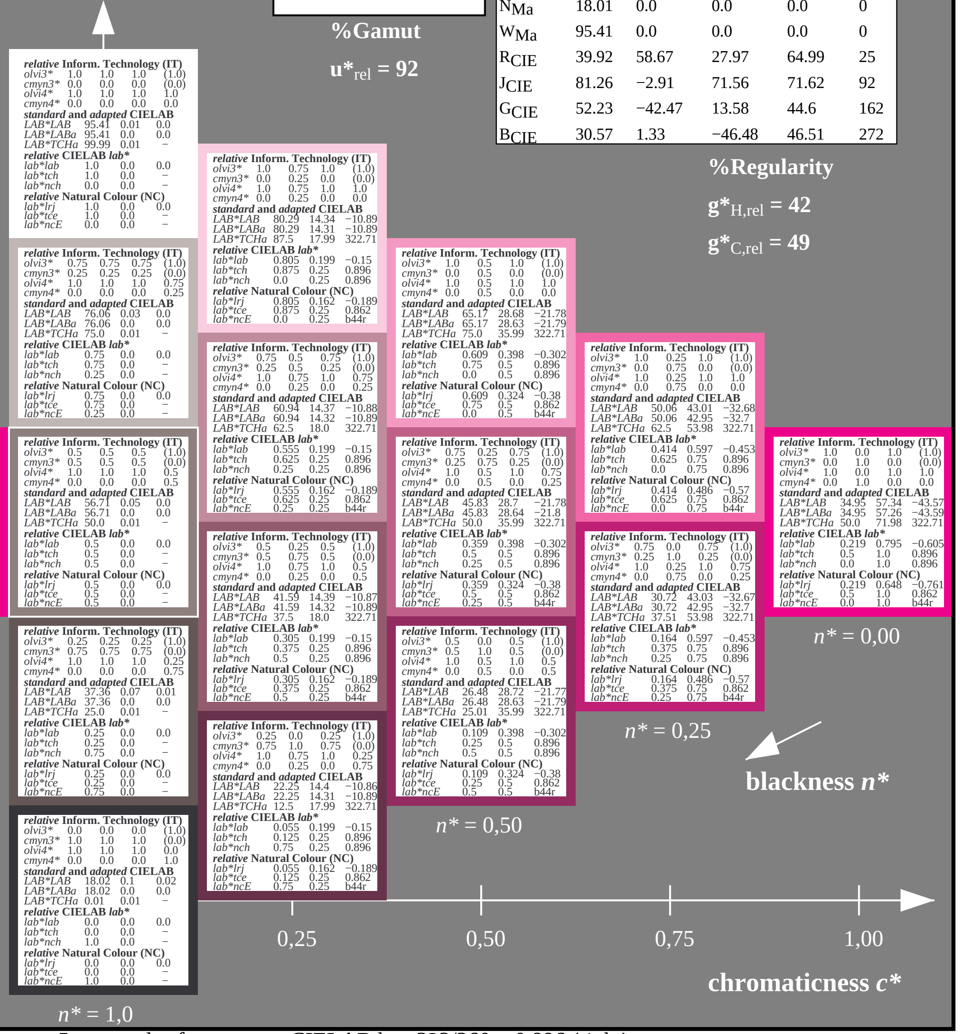


%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272



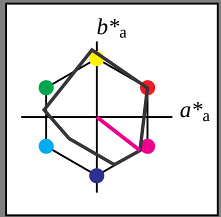
UE500−7, 5 step scales for constant CIELAB hue 322/360 = 0.895 (left)

5 step scales for constant CIELAB hue 323/360 = 0.896 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 322/360 = 0.895$
*lab*tch and lab*nch*

D65: hue B50R
LCH*Ma: 35 72 322
rgb*Ma: 1.0 0.0 1.0

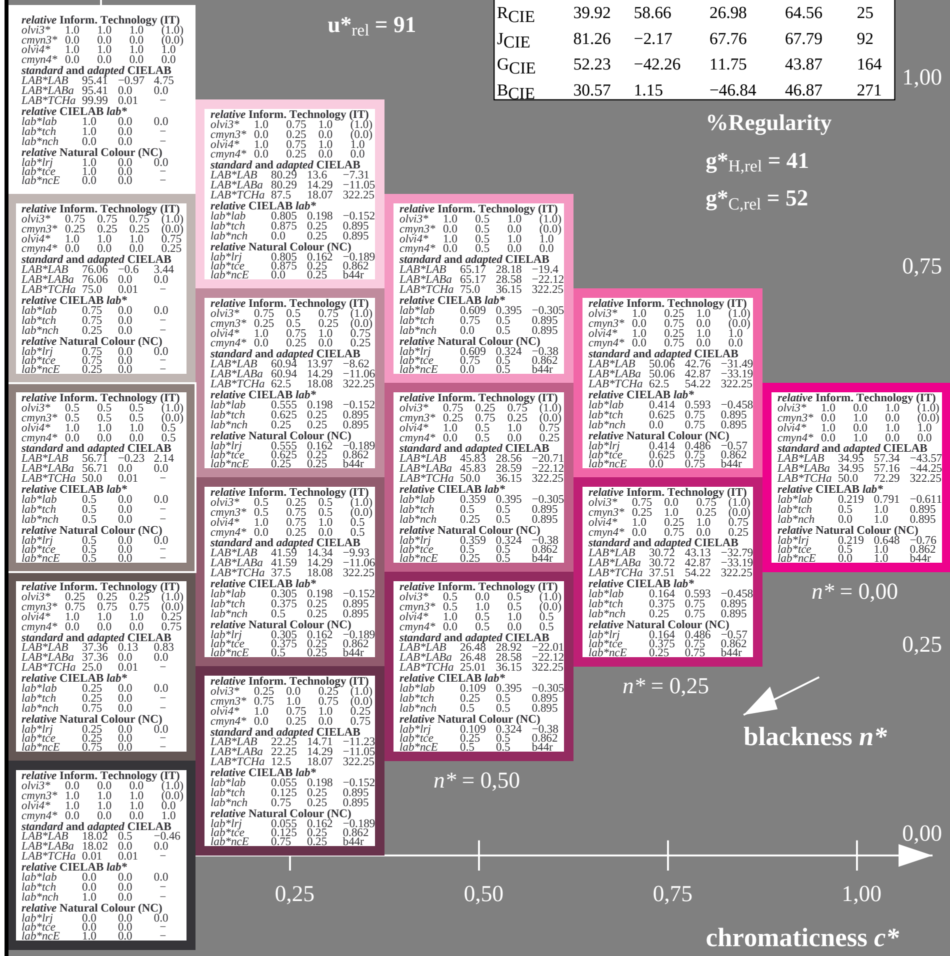
triangle lightness t^*



%Gamut
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

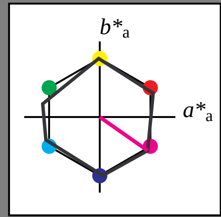
%Regularity
$g^*_{H,rel} = 41$
$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 325/360 = 0.903$
*lab*tch and lab*nch*

D65: hue B50R
LCH*Ma: 57 77 325
rgb*Ma: 1.0 0.0 1.0

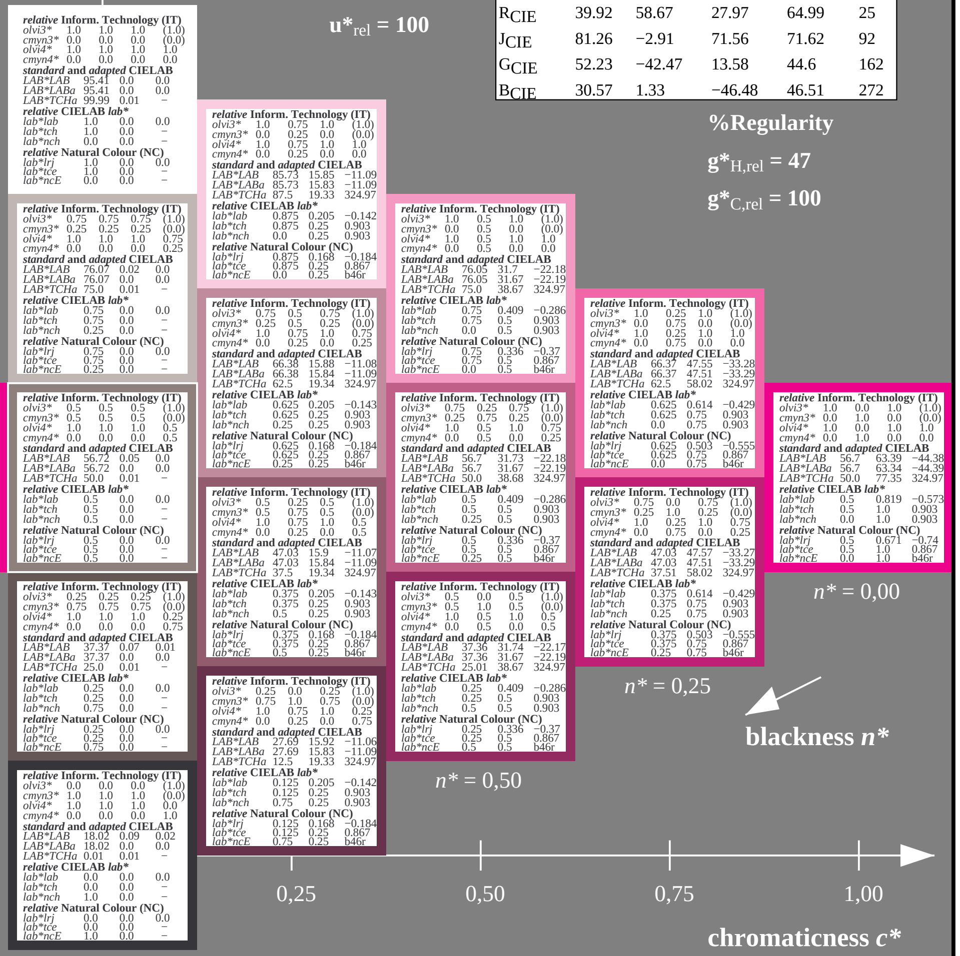
triangle lightness t^*



%Gamut
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



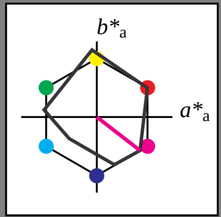
UE500−7, 5 step scales for constant CIELAB hue 322/360 = 0.895 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System MRS18
for hue *h** = *lab*h* = *322/360 = 0.895*
*lab*tch* and *lab*nch*

D65: hue B50R
LCH*Ma: 35 72 322
rgb*Ma: 1.0 0.0 1.0

triangle lightness *t**

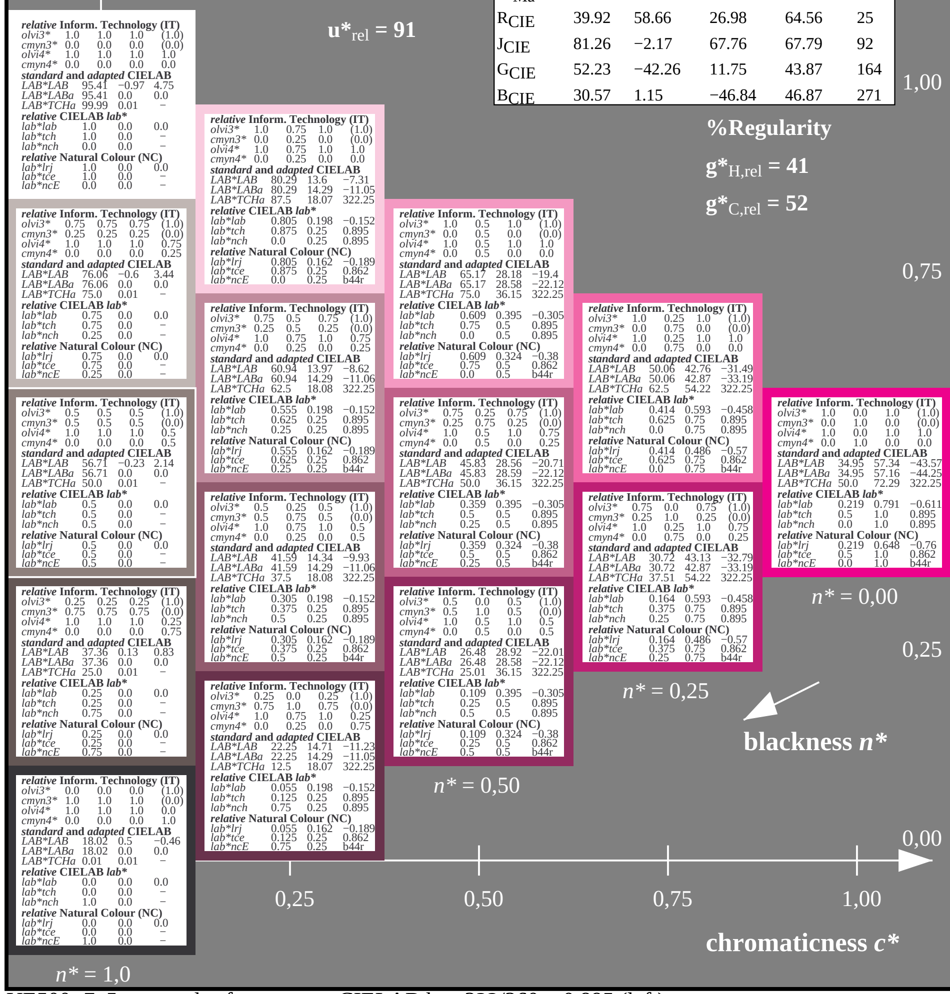


%Gamut
u*rel = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

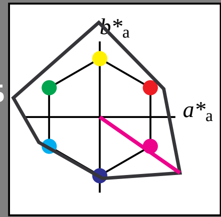
%Regularity
g*H,rel = 41
g*C,rel = 52



Output: Colorimetric Reflective System NCS18
for hue *h** = *lab*h* = *325/360 = 0.903*
*lab*tch* and *lab*nch*

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness *t**

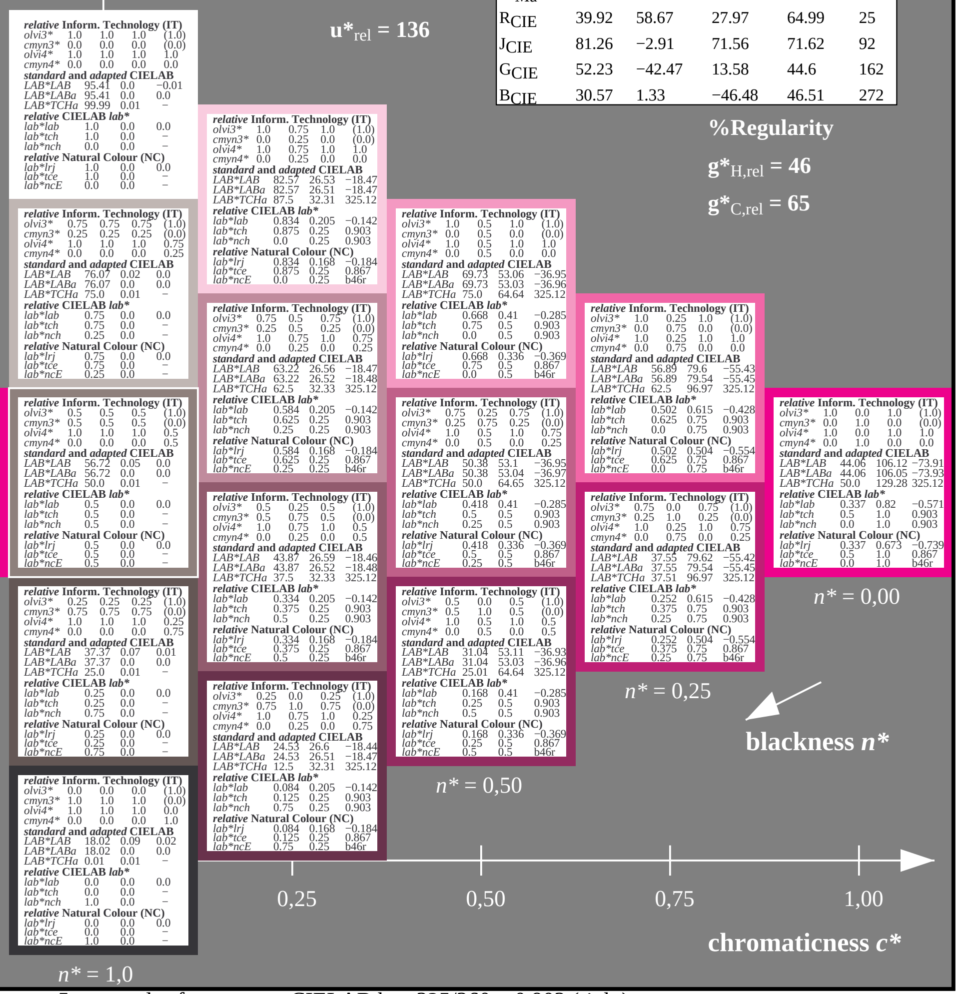


%Gamut
u*rel = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
g*H,rel = 46
g*C,rel = 65



UE500−7, 5 step scales for constant CIELAB hue 322/360 = 0.895 (left) 5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System MRS18

for hue *h** = *lab*h* = 322/360 = 0.895

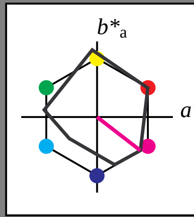
*lab*tch* and *lab*nch*

D65: hue B50R

LCH*Ma: 35 72 322

rgb*Ma: 1.0 0.0 1.0

triangle lightness *t**



%Gamut

u^*_{rel} = 91

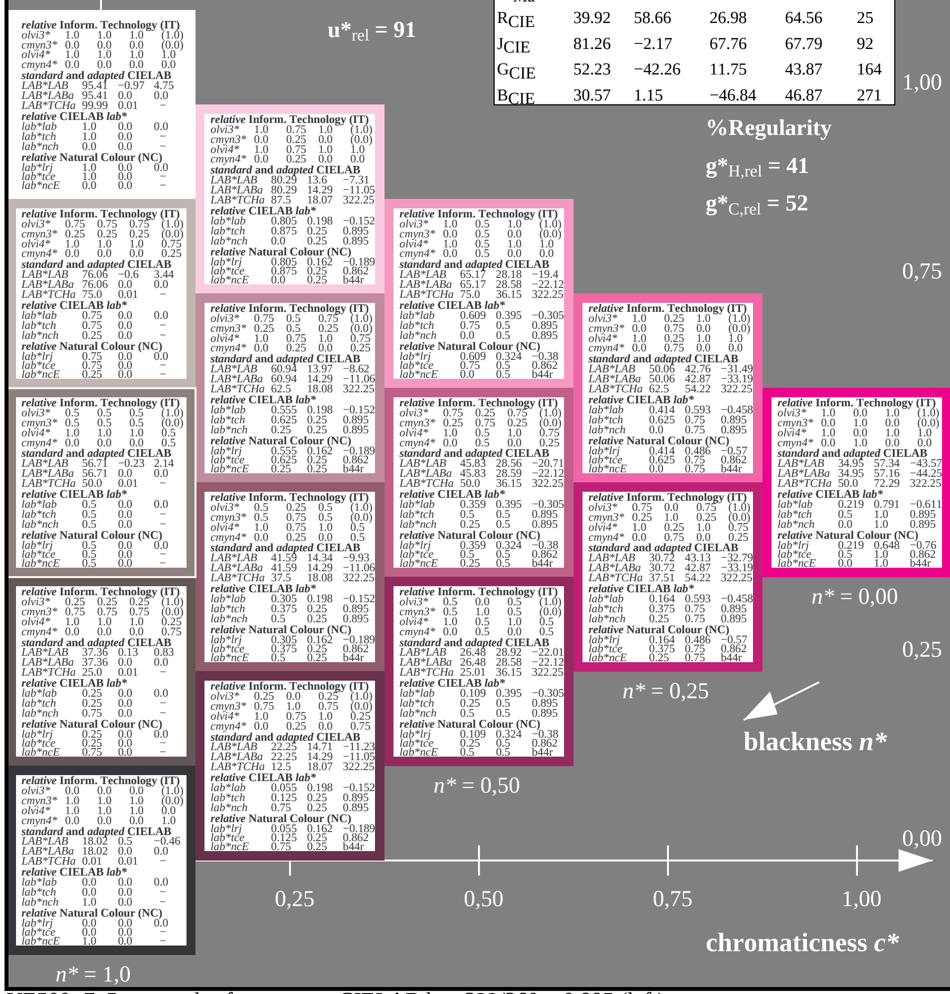
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



Output: Colorimetric Reflective System NRS11

for hue *h** = *lab*h* = 325/360 = 0.903

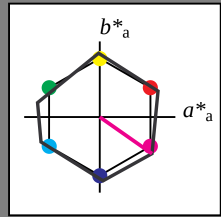
*lab*tch* and *lab*nch*

D65: hue B50R

LCH*Ma: 53 84 325

rgb*Ma: 1.0 0.0 1.0

triangle lightness *t**



%Gamut

u^*_{rel} = 119

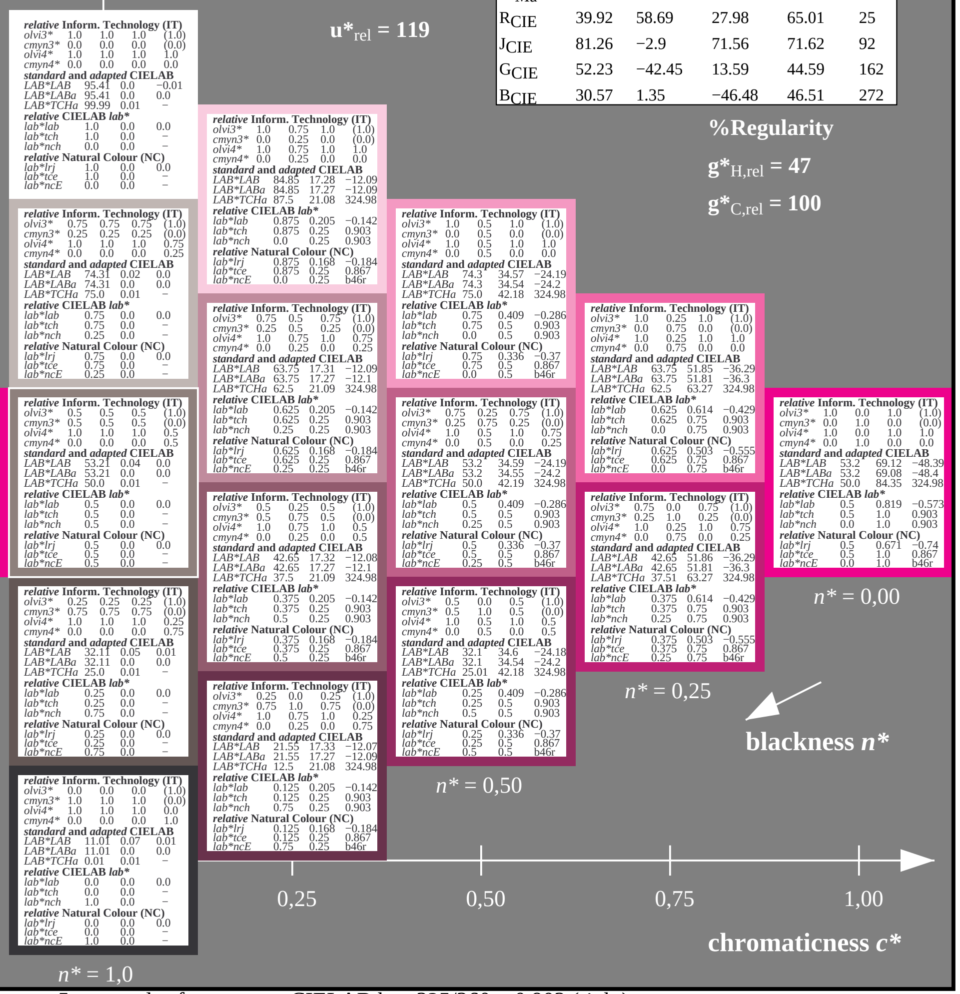
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



UE500−7, 5 step scales for constant CIELAB hue 322/360 = 0.895 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System MRS18

for hue $h^* = lab^*h = 322/360 = 0.895$

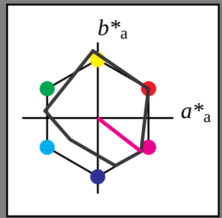
*lab*tch* and *lab*nch*

D65: hue B50R

LCH*Ma: 35 72 322

rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

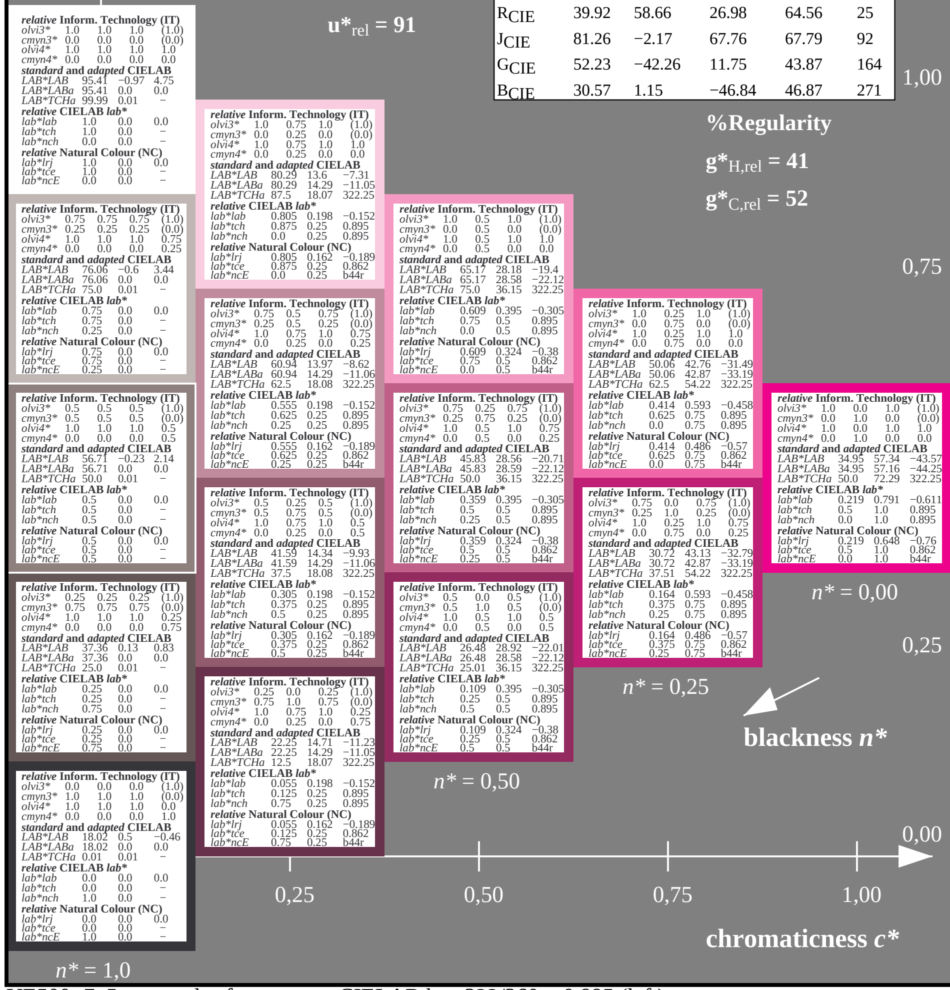
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 325/360 = 0.903$

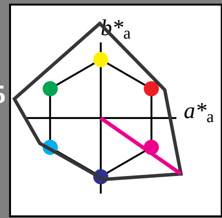
*lab*tch* and *lab*nch*

D65: hue B50R

LCH*Ma: 44 129 325

rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

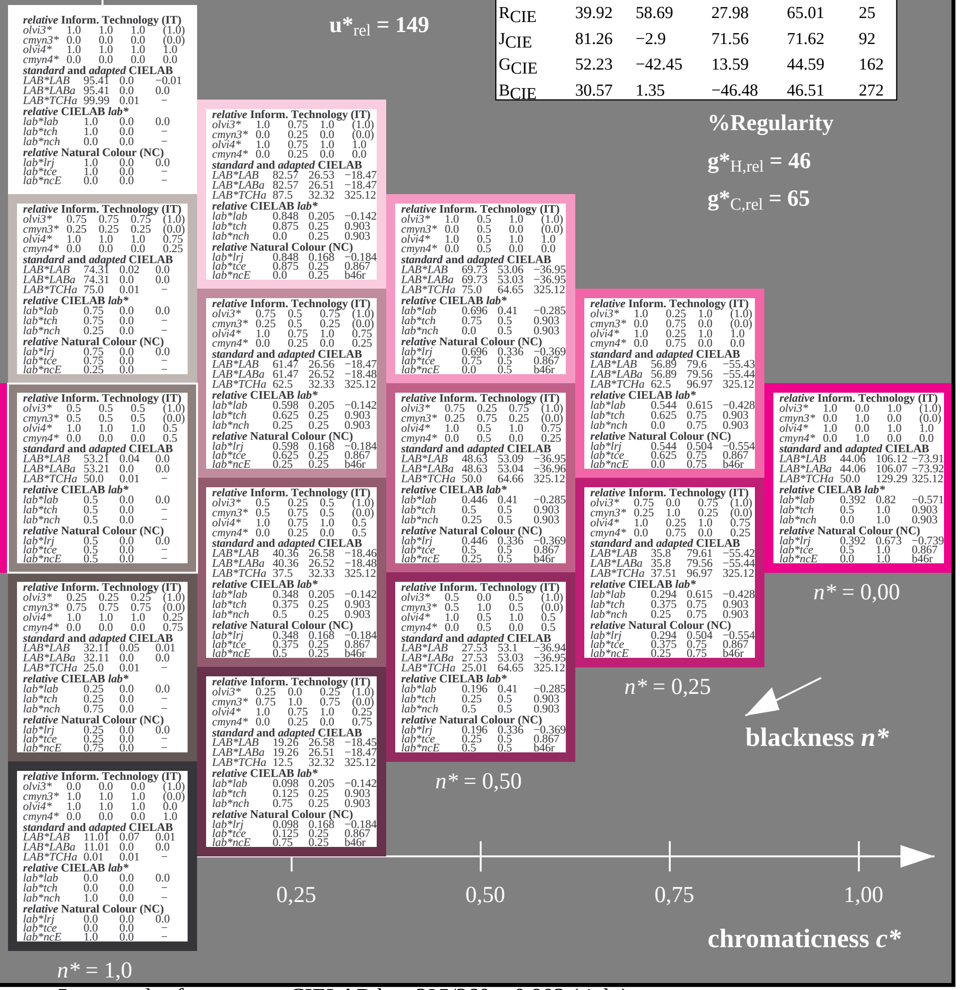
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



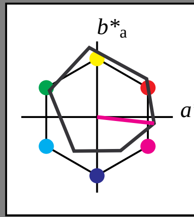
UE500−7, 5 step scales for constant CIELAB hue 322/360 = 0.895 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 354/360 = 0.982$
*lab*tch* and *lab*nch*

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

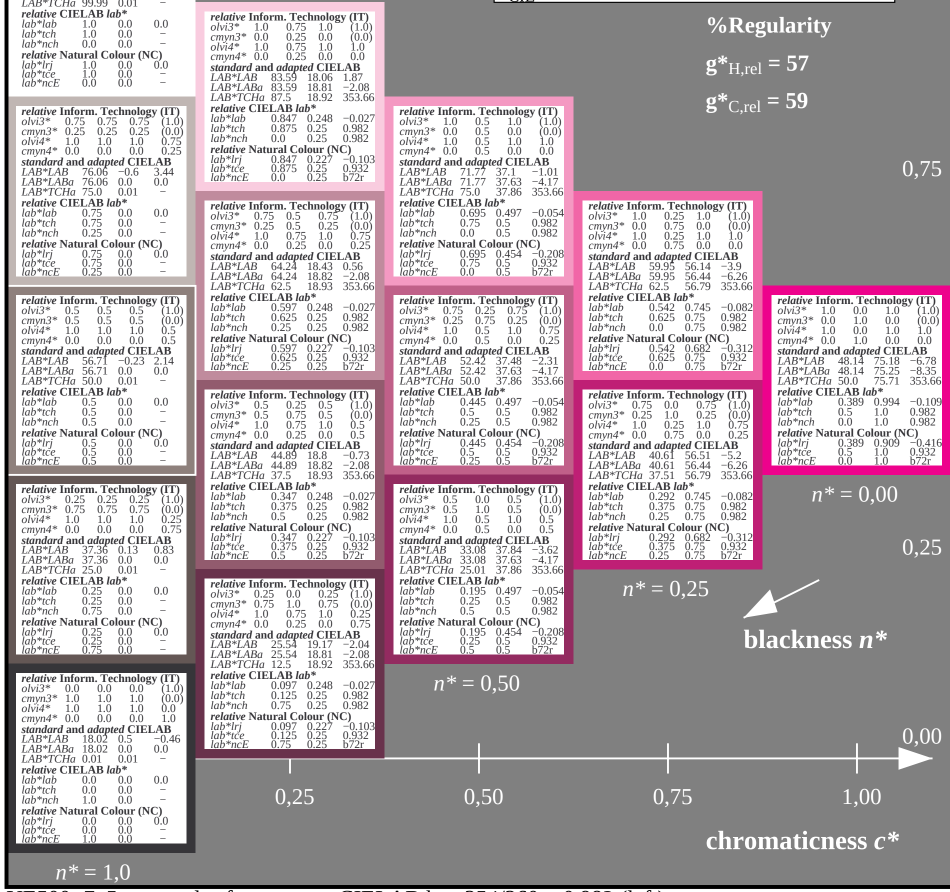
triangle lightness t^*



%Gamut
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

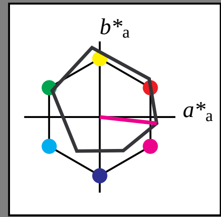
%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 354/360 = 0.982$
*lab*tch* and *lab*nch*

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

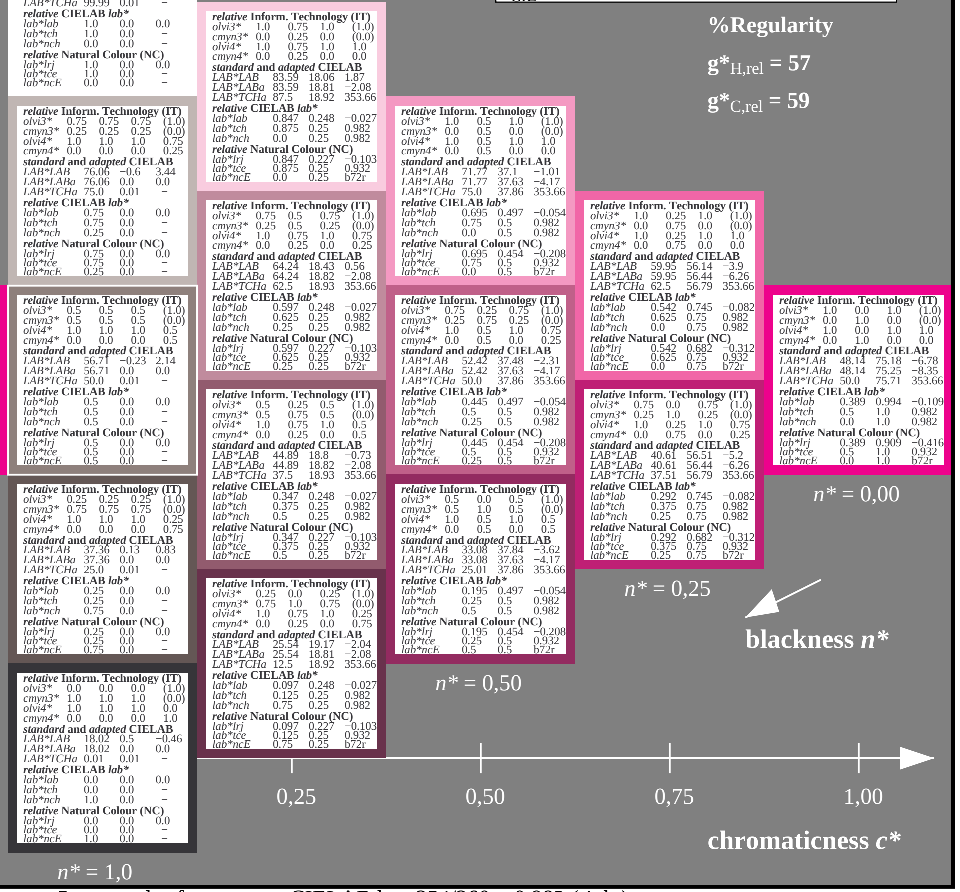
triangle lightness t^*



%Gamut
$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



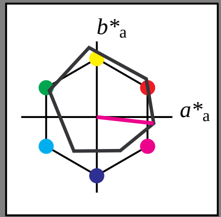
UE500−7, 5 step scales for constant CIELAB hue 354/360 = 0.982 (left)

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

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 354/360 = 0.982$
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

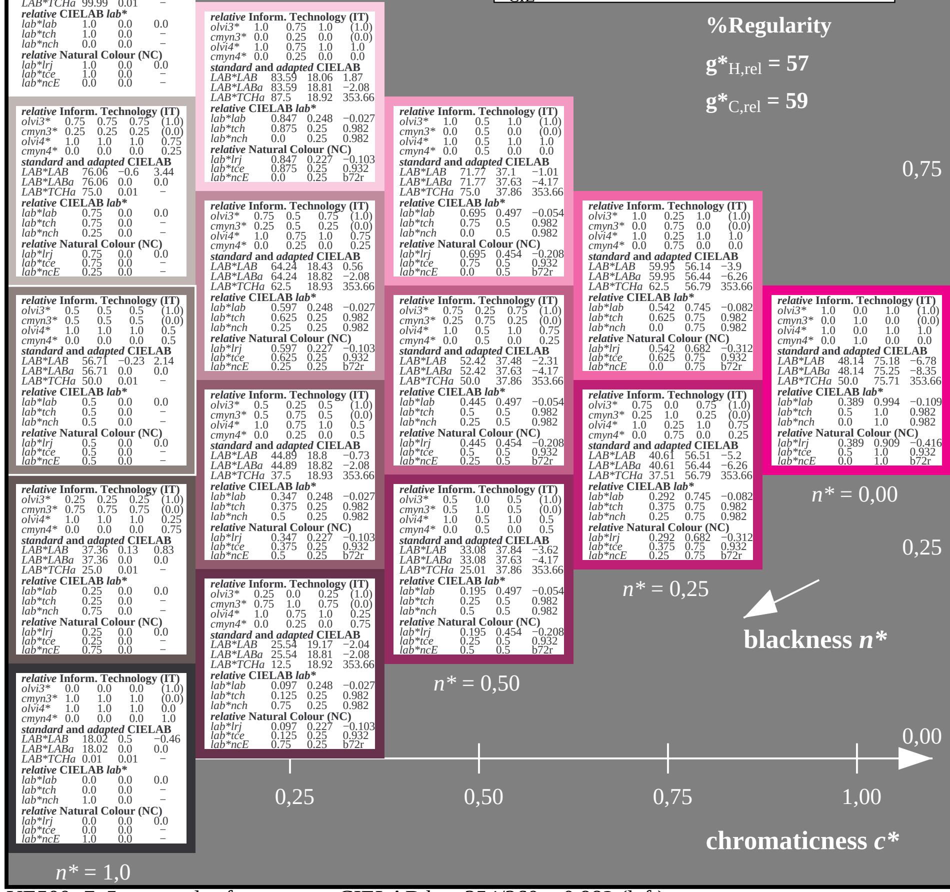
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

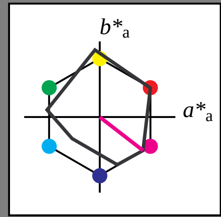
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 322/360 = 0.895$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 322
rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 91$

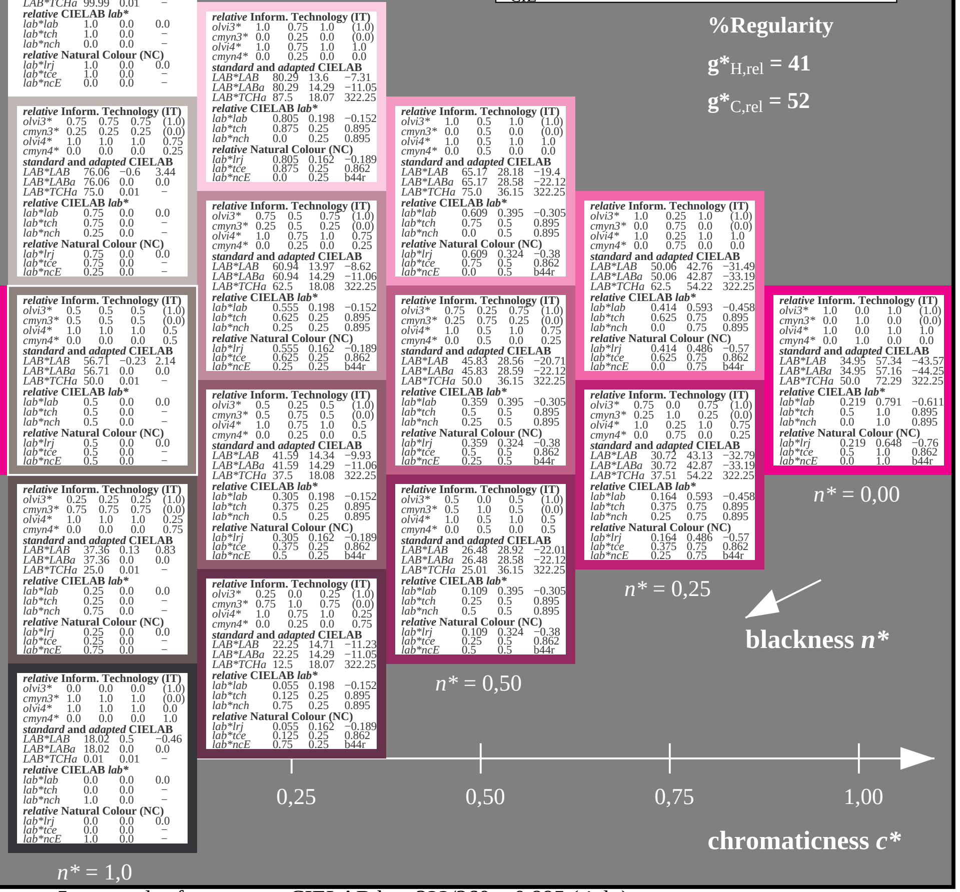
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

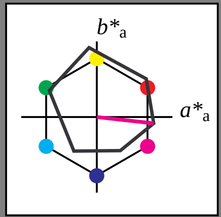


UE500−7, 5 step scales for constant CIELAB hue 354/360 = 0.982 (left)   5 step scales for constant CIELAB hue 322/360 = 0.895 (right)

Input: Colorimetric Reflective System TRS18
for hue *h = *lab*h* = 354/360 = 0.982**
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness *t*



%Gamut

u^*_{rel} = 93

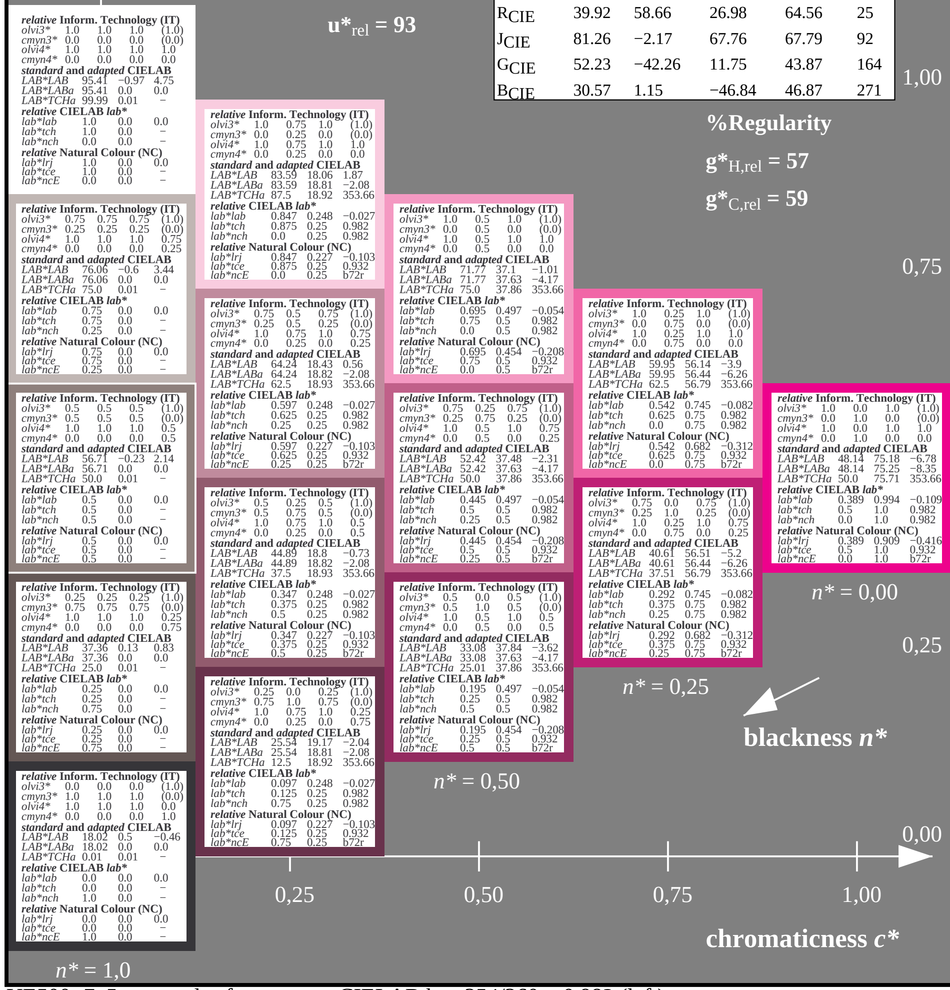
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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

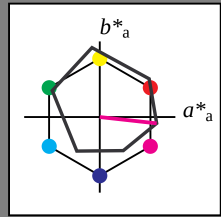


Output: Colorimetric Reflective System TRS18

for hue *h = *lab*h* = 354/360 = 0.982**
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness *t*



%Gamut

u^*_{rel} = 93

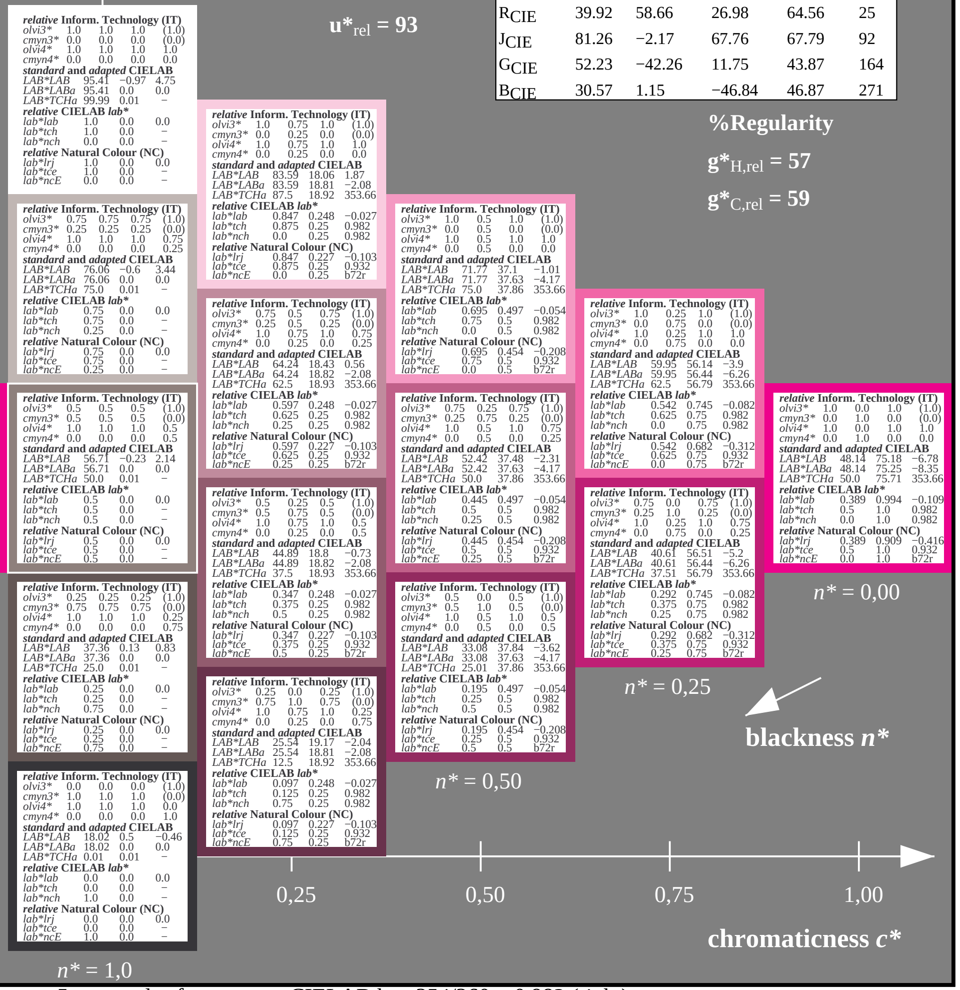
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



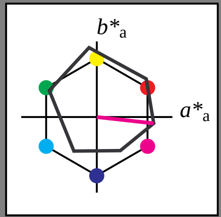
UE500−7, 5 step scales for constant CIELAB hue 354/360 = 0.982 (left)

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

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 354/360 = 0.982$
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

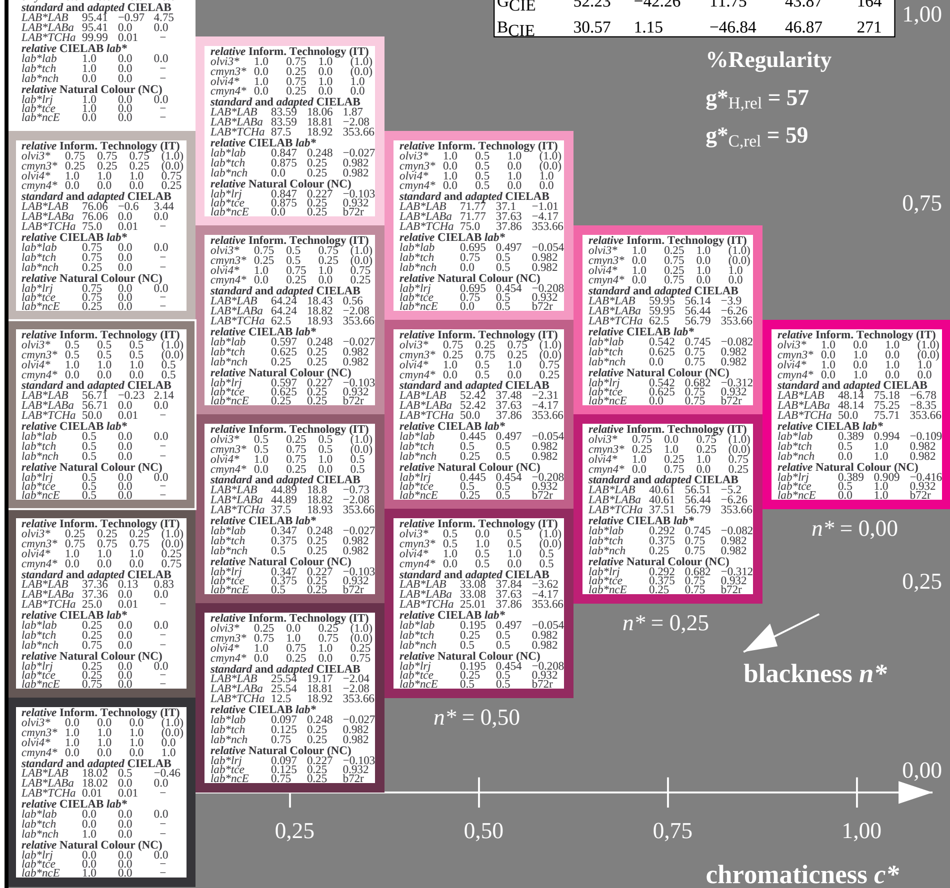
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

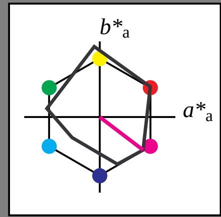
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 323/360 = 0.896$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 323
rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 92$

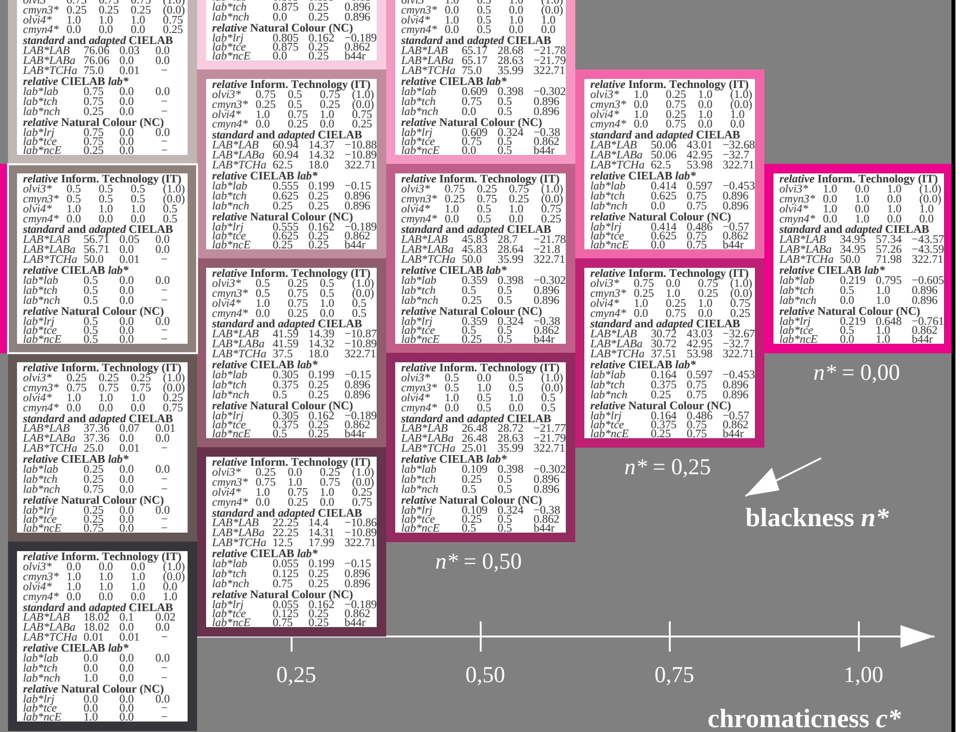
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



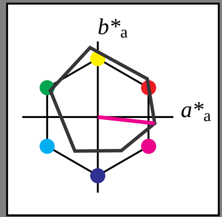
UE500−7, 5 step scales for constant CIELAB hue 354/360 = 0.982 (left)

5 step scales for constant CIELAB hue 323/360 = 0.896 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 354/360 = 0.982$
*lab*tch and lab*nch*

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$

1,00 0,75 0,25 0,00

$n^* = 0,00$ $n^* = 0,25$ $n^* = 0,50$ $n^* = 1,0$

blackness n^*

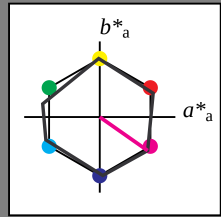
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 325/360 = 0.903$
*lab*tch and lab*nch*

D65: hue B50R
LCH*Ma: 57 77 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$

$n^* = 0,00$ $n^* = 0,25$ $n^* = 0,50$ $n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

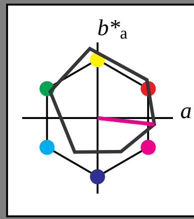
UE500−7, 5 step scales for constant CIELAB hue 354/360 = 0.982 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 354/360 = 0.982$
*lab*tch and lab*nch*

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

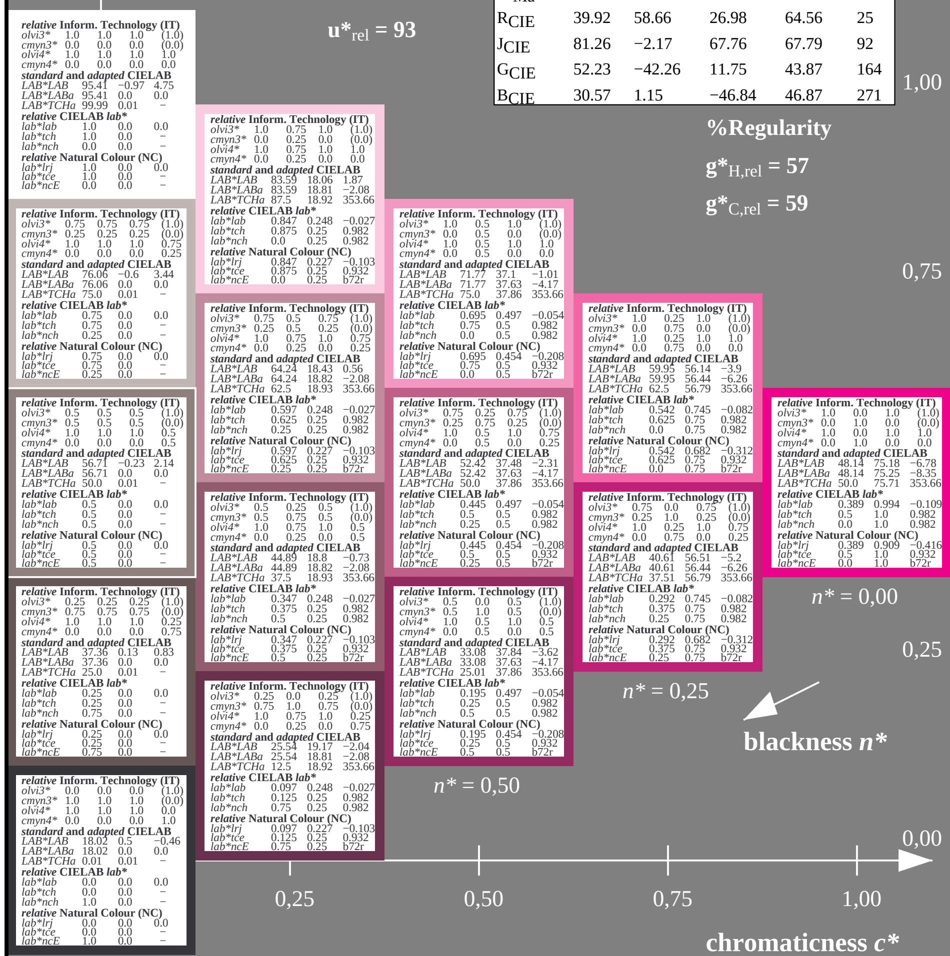
triangle lightness t^*



%Gamut
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

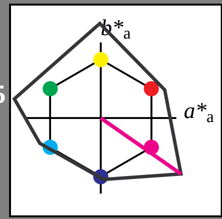
%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 325/360 = 0.903$
*lab*tch and lab*nch*

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

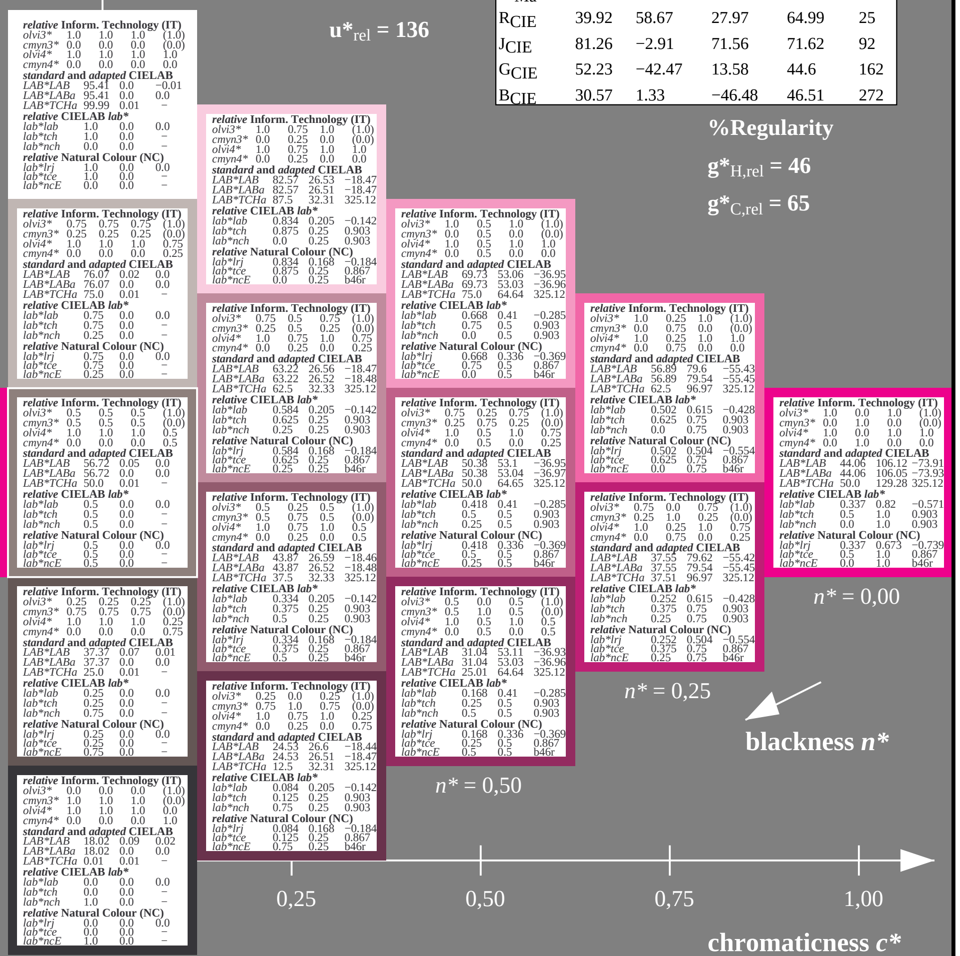
triangle lightness t^*



%Gamut
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



UE500−7, 5 step scales for constant CIELAB hue 354/360 = 0.982 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System TRS18

for hue *h** = *lab*h* = 354/360 = 0.982

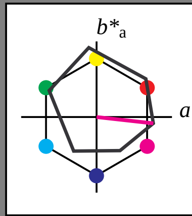
*lab*tch* and *lab*nch*

D65: hue M

LCH*Ma: 48 76 354

rgb*Ma: 1.0 0.0 1.0

triangle lightness *t*



%Gamut

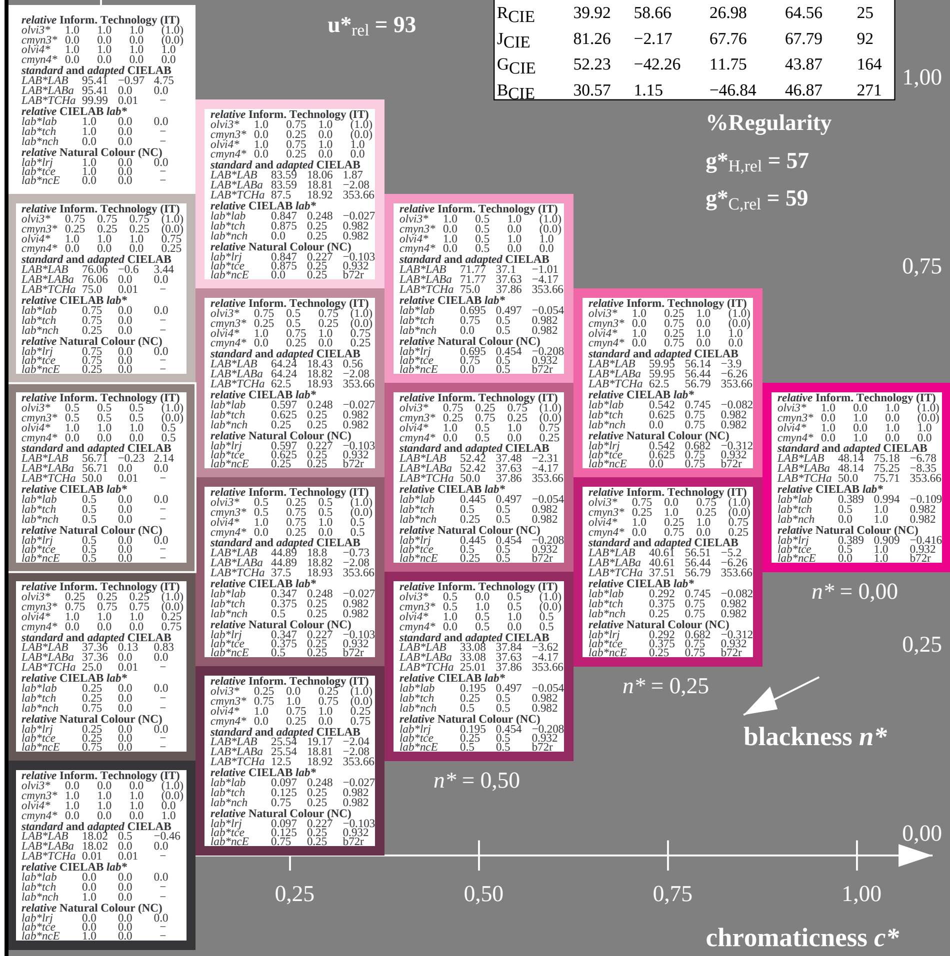
u^*_{rel} = 93

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



Output: Colorimetric Reflective System NRS11

for hue *h** = *lab*h* = 325/360 = 0.903

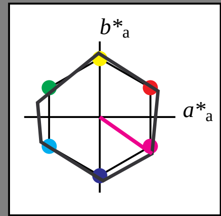
*lab*tch* and *lab*nch*

D65: hue B50R

LCH*Ma: 53 84 325

rgb*Ma: 1.0 0.0 1.0

triangle lightness *t*



%Gamut

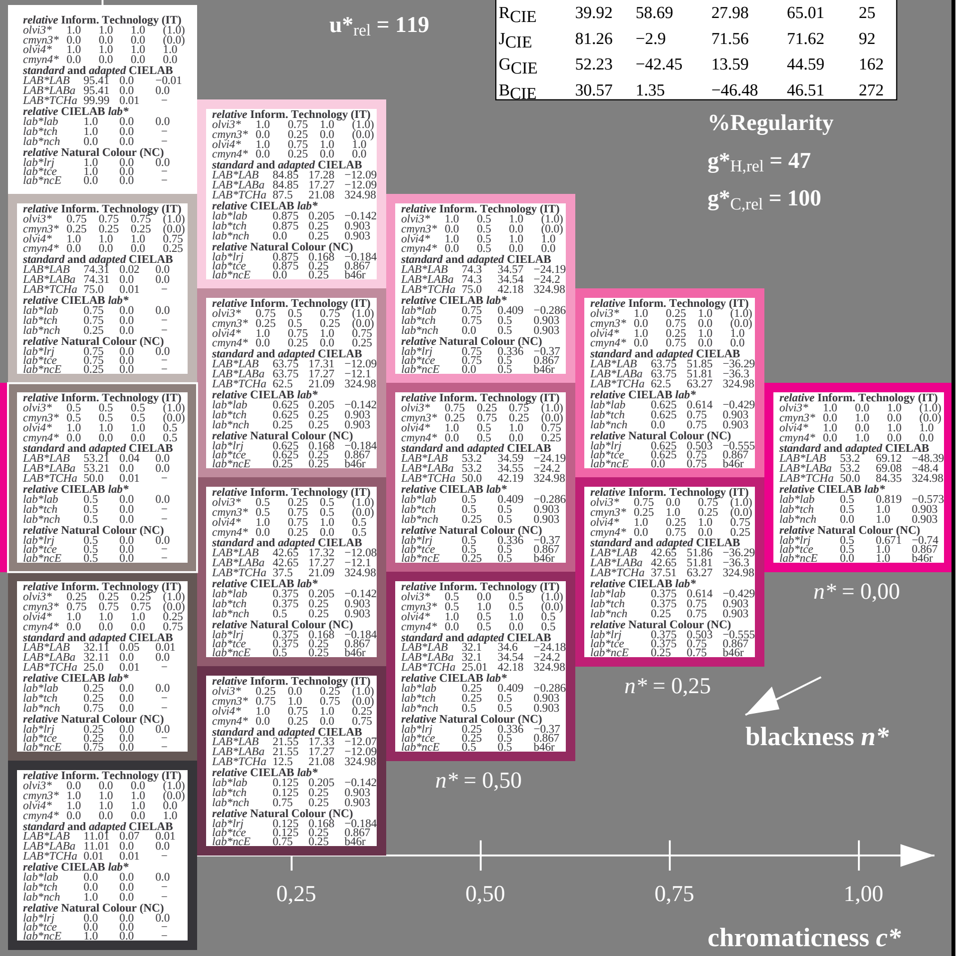
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

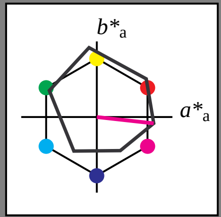


UE500−7, 5 step scales for constant CIELAB hue 354/360 = 0.982 (left) 5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 354/360 = 0.982$
lab*tch and lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

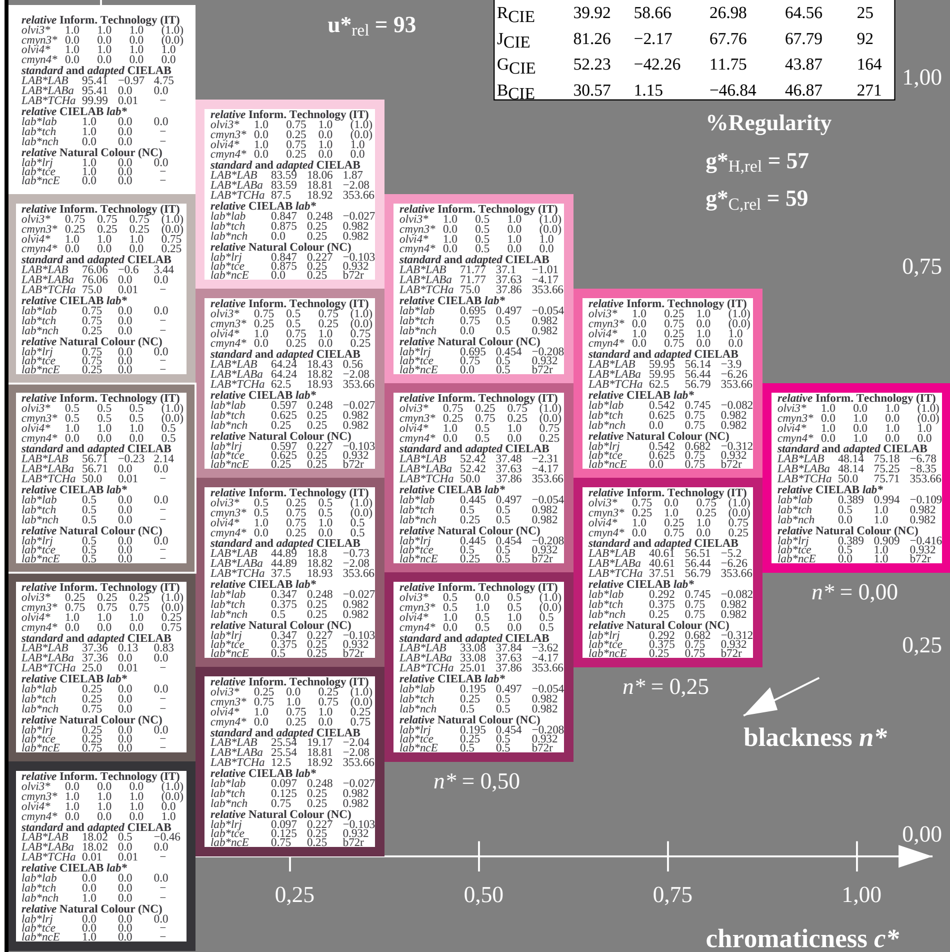
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

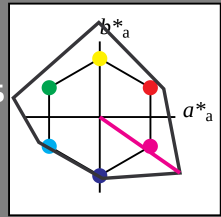
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch and lab*nch

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 149$

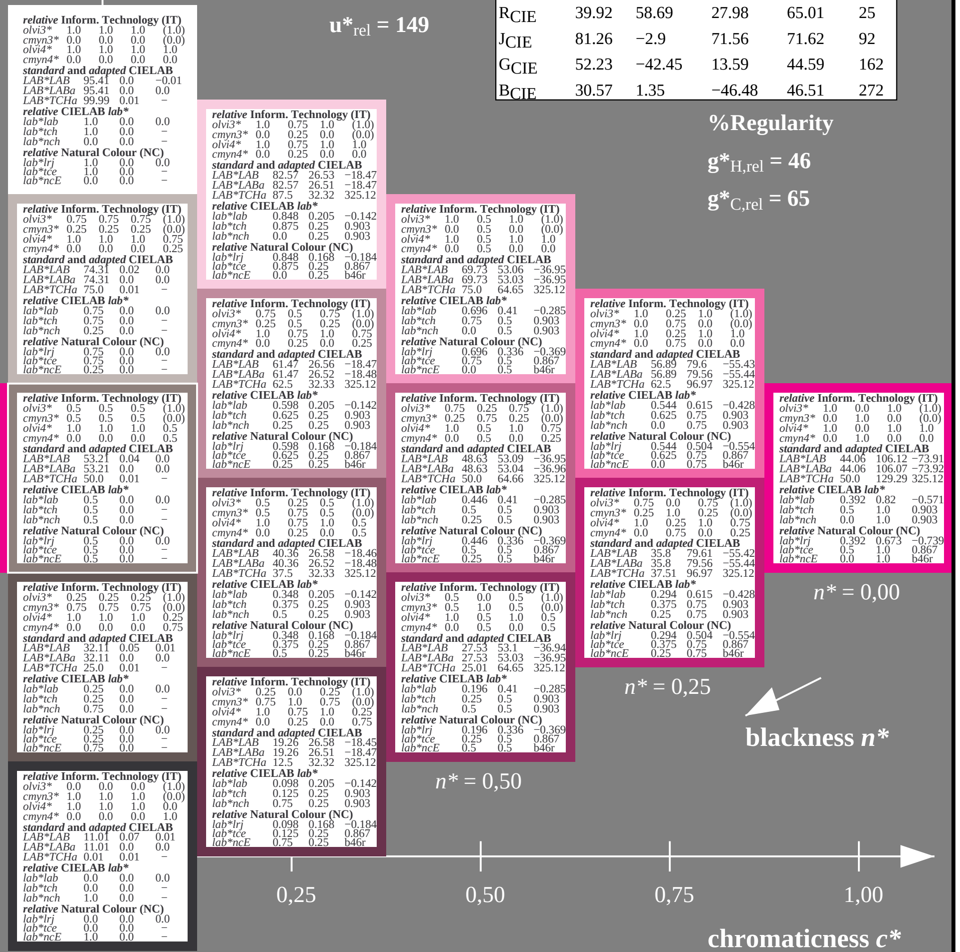
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



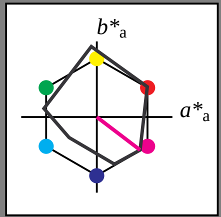
UE500−7, 5 step scales for constant CIELAB hue 354/360 = 0.982 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h$ = 323/360 = 0.896
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 323
rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

1,00

0,75

0,25

0,00

relative Inform. Technology (IT)
*olvi3** 1.0 1.0 1.0 (1.0)
*cmyn3** 0.0 0.0 0.0 (0.0)
*olvi4** 1.0 1.0 1.0 1.0
*cmyn4** 0.0 0.0 0.0 0.0
standard and adapted CIELAB
*LAB*LAB* 95.41 0.01 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** 0.75 0.75 0.75 (1.0)
*cmyn3** 0.25 0.25 0.25 (0.0)
*olvi4** 1.0 1.0 1.0 0.75
*cmyn4** 0.0 0.0 0.0 0.25
standard and adapted CIELAB
*LAB*LAB* 76.06 0.03 0.0
*LAB*LABa* 76.06 0.0 0.0
*LAB*TCHa* 75.0 0.01 –
relative CIELAB *lab**
*lab*lab* 0.75 0.0 0.0
*lab*tch* 0.75 0.0 –
*lab*nch* 0.25 0.0 –
relative Natural Colour (NC)
*lab*lrj* 0.75 0.0 0.0
*lab*tce* 0.75 0.0 –
*lab*ncE* 0.25 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 0.05 0.0
*LAB*LABa* 56.71 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** 0.25 0.25 0.25 (1.0)
*cmyn3** 0.75 0.75 0.75 (0.0)
*olvi4** 1.0 1.0 1.0 0.25
*cmyn4** 0.0 0.0 0.0 0.75
standard and adapted CIELAB
*LAB*LAB* 37.36 0.07 0.01
*LAB*LABa* 37.36 0.0 0.0
*LAB*TCHa* 25.0 0.01 –
relative CIELAB *lab**
*lab*lab* 0.25 0.0 0.0
*lab*tch* 0.25 0.0 –
*lab*nch* 0.75 0.0 –
relative Natural Colour (NC)
*lab*lrj* 0.25 0.0 0.0
*lab*tce* 0.25 0.0 –
*lab*ncE* 0.75 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 0.1 0.02
*LAB*LABa* 18.02 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 0.75 1.0 (1.0)
*cmyn3** 0.0 0.25 0.0 (0.0)
*olvi4** 1.0 0.75 1.0 1.0
*cmyn4** 0.0 0.25 0.0 0.0
standard and adapted CIELAB
*LAB*LAB* 80.29 14.34 −10.89
*LAB*LABa* 80.29 14.31 −10.89
*LAB*TCHa* 87.5 17.99 322.71
relative CIELAB *lab**
*lab*lab* 0.805 0.199 −0.15
*lab*tch* 0.875 0.25 0.896
*lab*nch* 0.0 0.25 0.896
relative Natural Colour (NC)
*lab*lrj* 0.805 0.162 −0.189
*lab*tce* 0.875 0.25 0.862
*lab*ncE* 0.0 0.25 b44r

relative Inform. Technology (IT)
*olvi3** 0.75 0.5 0.75 (1.0)
*cmyn3** 0.25 0.5 0.25 (0.0)
*olvi4** 1.0 0.75 1.0 0.75
*cmyn4** 0.0 0.25 0.0 0.25
standard and adapted CIELAB
*LAB*LAB* 60.94 14.37 −10.88
*LAB*LABa* 60.94 14.32 −10.89
*LAB*TCHa* 62.5 18.0 322.71
relative CIELAB *lab**
*lab*lab* 0.555 0.199 −0.15
*lab*tch* 0.625 0.25 0.896
*lab*nch* 0.25 0.25 0.896
relative Natural Colour (NC)
*lab*lrj* 0.555 0.162 −0.189
*lab*tce* 0.625 0.25 0.862
*lab*ncE* 0.25 0.25 b44r

relative Inform. Technology (IT)
*olvi3** 0.5 0.25 0.5 (1.0)
*cmyn3** 0.5 0.75 0.5 (0.0)
*olvi4** 1.0 0.75 1.0 0.5
*cmyn4** 0.0 0.25 0.0 0.5
standard and adapted CIELAB
*LAB*LAB* 41.59 14.39 −10.87
*LAB*LABa* 41.59 14.32 −10.89
*LAB*TCHa* 37.5 18.0 322.71
relative CIELAB *lab**
*lab*lab* 0.305 0.199 −0.15
*lab*tch* 0.375 0.25 0.896
*lab*nch* 0.5 0.25 0.896
relative Natural Colour (NC)
*lab*lrj* 0.305 0.162 −0.189
*lab*tce* 0.375 0.25 0.862
*lab*ncE* 0.5 0.25 b44r

relative Inform. Technology (IT)
*olvi3** 0.25 0.0 0.25 (1.0)
*cmyn3** 0.75 1.0 0.75 (0.0)
*olvi4** 1.0 0.75 1.0 0.25
*cmyn4** 0.0 0.25 0.0 0.75
standard and adapted CIELAB
*LAB*LAB* 22.25 14.4 −10.86
*LAB*LABa* 22.25 14.31 −10.89
*LAB*TCHa* 12.5 17.99 322.71
relative CIELAB *lab**
*lab*lab* 0.055 0.199 −0.15
*lab*tch* 0.125 0.25 0.896
*lab*nch* 0.75 0.25 0.896
relative Natural Colour (NC)
*lab*lrj* 0.055 0.162 −0.189
*lab*tce* 0.125 0.25 0.862
*lab*ncE* 0.75 0.25 b44r

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* 65.17 28.68 −21.78
*LAB*LABa* 65.17 28.63 −21.79
*LAB*TCHa* 75.0 35.99 322.71
relative CIELAB *lab**
*lab*lab* 0.609 0.398 −0.302
*lab*tch* 0.75 0.5 0.896
*lab*nch* 0.0 0.5 0.896
relative Natural Colour (NC)
*lab*lrj* 0.609 0.324 −0.38
*lab*tce* 0.75 0.5 0.862
*lab*ncE* 0.0 0.5 b44r

relative Inform. Technology (IT)
*olvi3** 0.75 0.25 0.75 (1.0)
*cmyn3** 0.25 0.75 0.25 (0.0)
*olvi4** 1.0 0.5 1.0 0.75
*cmyn4** 0.0 0.5 0.0 0.25
standard and adapted CIELAB
*LAB*LAB* 45.83 28.7 −21.78
*LAB*LABa* 45.83 28.64 −21.8
*LAB*TCHa* 50.0 35.99 322.71
relative CIELAB *lab**
*lab*lab* 0.359 0.398 −0.302
*lab*tch* 0.5 0.5 0.896
*lab*nch* 0.25 0.5 0.896
relative Natural Colour (NC)
*lab*lrj* 0.359 0.324 −0.38
*lab*tce* 0.5 0.5 0.862
*lab*ncE* 0.25 0.5 b44r

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* 26.48 28.72 −21.77
*LAB*LABa* 26.48 28.63 −21.79
*LAB*TCHa* 25.01 35.99 322.71
relative CIELAB *lab**
*lab*lab* 0.109 0.398 −0.302
*lab*tch* 0.25 0.5 0.896
*lab*nch* 0.5 0.5 0.896
relative Natural Colour (NC)
*lab*lrj* 0.109 0.324 −0.38
*lab*tce* 0.25 0.5 0.862
*lab*ncE* 0.5 0.5 b44r

relative Inform. Technology (IT)
*olvi3** 1.0 0.25 1.0 (1.0)
*cmyn3** 0.0 0.75 0.0 (0.0)
*olvi4** 1.0 0.25 1.0 1.0
*cmyn4** 0.0 0.75 0.0 0.0
standard and adapted CIELAB
*LAB*LAB* 50.06 43.01 −32.68
*LAB*LABa* 50.06 42.95 −32.7
*LAB*TCHa* 62.5 53.98 322.71
relative CIELAB *lab**
*lab*lab* 0.414 0.597 −0.453
*lab*tch* 0.625 0.75 0.896
*lab*nch* 0.0 0.75 0.896
relative Natural Colour (NC)
*lab*lrj* 0.414 0.486 −0.57
*lab*tce* 0.625 0.75 0.862
*lab*ncE* 0.0 0.75 b44r

relative Inform. Technology (IT)
*olvi3** 0.75 0.0 0.75 (1.0)
*cmyn3** 0.25 1.0 0.25 (0.0)
*olvi4** 1.0 0.25 1.0 0.75
*cmyn4** 0.0 0.75 0.0 0.25
standard and adapted CIELAB
*LAB*LAB* 30.72 43.03 −32.67
*LAB*LABa* 30.72 42.95 −32.7
*LAB*TCHa* 37.51 53.98 322.71
relative CIELAB *lab**
*lab*lab* 0.164 0.597 −0.453
*lab*tch* 0.375 0.75 0.896
*lab*nch* 0.25 0.75 0.896
relative Natural Colour (NC)
*lab*lrj* 0.164 0.486 −0.57
*lab*tce* 0.375 0.75 0.862
*lab*ncE* 0.25 0.75 b44r

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* 34.95 57.34 −43.57
*LAB*LABa* 34.95 57.26 −43.59
*LAB*TCHa* 50.0 71.98 322.71
relative CIELAB *lab**
*lab*lab* 0.219 0.795 −0.605
*lab*tch* 0.5 1.0 0.896
*lab*nch* 0.0 1.0 0.896
relative Natural Colour (NC)
*lab*lrj* 0.219 0.648 −0.761
*lab*tce* 0.5 1.0 0.862
*lab*ncE* 0.0 1.0 b44r

n^* = 0,00

n^* = 0,25

blackness n^*

n^* = 0,50

0,25 0,50 0,75 1,00

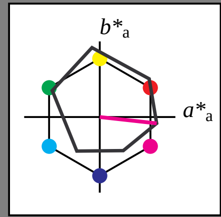
chromaticness c^*

n^* = 1,0

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h$ = 354/360 = 0.982
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

$g^*_{C,rel}$ = 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*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** 0.75 0.75 0.75 (1.0)
*cmyn3** 0.25 0.25 0.25 (0.0)
*olvi4** 1.0 1.0 1.0 0.75
*cmyn4** 0.0 0.0 0.0 0.25
standard and adapted CIELAB
*LAB*LAB* 76.06 −0.6 3.44
*LAB*LABa* 76.06 0.0 0.0
*LAB*TCHa* 75.0 0.01 –
relative CIELAB *lab**
*lab*lab* 0.75 0.0 0.0
*lab*tch* 0.75 0.0 –
*lab*nch* 0.25 0.0 –
relative Natural Colour (NC)
*lab*lrj* 0.75 0.0 0.0
*lab*tce* 0.75 0.0 –
*lab*ncE* 0.25 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*LABa* 56.71 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** 0.25 0.25 0.25 (1.0)
*cmyn3** 0.75 0.75 0.75 (0.0)
*olvi4** 1.0 1.0 1.0 0.25
*cmyn4** 0.0 0.0 0.0 0.75
standard and adapted CIELAB
*LAB*LAB* 37.36 0.13 0.83
*LAB*LABa* 37.36 0.0 0.0
*LAB*TCHa* 25.0 0.01 –
relative CIELAB *lab**
*lab*lab* 0.25 0.0 0.0
*lab*tch* 0.25 0.0 –
*lab*nch* 0.75 0.0 –
relative Natural Colour (NC)
*lab*lrj* 0.25 0.0 0.0
*lab*tce* 0.25 0.0 –
*lab*ncE* 0.75 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*LABa* 18.02 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 0.75 1.0 (1.0)
*cmyn3** 0.0 0.25 0.0 (0.0)
*olvi4** 1.0 0.75 1.0 1.0
*cmyn4** 0.0 0.25 0.0 0.0
standard and adapted CIELAB
*LAB*LAB* 83.59 18.06 1.87
*LAB*LABa* 83.59 18.81 −2.08
*LAB*TCHa* 87.5 18.92 353.66
relative CIELAB *lab**
*lab*lab* 0.847 0.248 −0.027
*lab*tch* 0.875 0.25 0.982
*lab*nch* 0.0 0.25 0.982
relative Natural Colour (NC)
*lab*lrj* 0.847 0.227 −0.103
*lab*tce* 0.875 0.25 0.932
*lab*ncE* 0.0 0.25 b72r

relative Inform. Technology (IT)
*olvi3** 0.75 0.5 0.75 (1.0)
*cmyn3** 0.25 0.5 0.25 (0.0)
*olvi4** 1.0 0.75 1.0 0.75
*cmyn4** 0.0 0.25 0.0 0.25
standard and adapted CIELAB
*LAB*LAB* 64.24 18.43 0.56
*LAB*LABa* 64.24 18.82 −2.08
*LAB*TCHa* 62.5 18.93 353.66
relative CIELAB *lab**
*lab*lab* 0.597 0.248 −0.027
*lab*tch* 0.625 0.25 0.982
*lab*nch* 0.25 0.25 0.982
relative Natural Colour (NC)
*lab*lrj* 0.597 0.227 −0.103
*lab*tce* 0.625 0.25 0.932
*lab*ncE* 0.25 0.25 b72r

relative Inform. Technology (IT)
*olvi3** 0.5 0.25 0.5 (1.0)
*cmyn3** 0.5 0.75 0.5 (0.0)
*olvi4** 1.0 0.75 1.0 0.5
*cmyn4** 0.0 0.25 0.0 0.5
standard and adapted CIELAB
*LAB*LAB* 44.89 18.8 −0.73
*LAB*LABa* 44.89 18.82 −2.08
*LAB*TCHa* 37.5 18.93 353.66
relative CIELAB *lab**
*lab*lab* 0.347 0.248 −0.027
*lab*tch* 0.375 0.25 0.982
*lab*nch* 0.5 0.25 0.982
relative Natural Colour (NC)
*lab*lrj* 0.347 0.227 −0.103
*lab*tce* 0.375 0.25 0.932
*lab*ncE* 0.5 0.25 b72r

relative Inform. Technology (IT)
*olvi3** 0.25 0.0 0.25 (1.0)
*cmyn3** 0.75 1.0 0.75 (0.0)
*olvi4** 1.0 0.75 1.0 0.25
*cmyn4** 0.0 0.25 0.0 0.75
standard and adapted CIELAB
*LAB*LAB* 25.54 19.17 −2.04
*LAB*LABa* 25.54 18.81 −2.08
*LAB*TCHa* 12.5 18.92 353.66
relative CIELAB *lab**
*lab*lab* 0.097 0.248 −0.027
*lab*tch* 0.125 0.25 0.982
*lab*nch* 0.75 0.25 0.982
relative Natural Colour (NC)
*lab*lrj* 0.097 0.227 −0.103
*lab*tce* 0.125 0.25 0.932
*lab*ncE* 0.75 0.25 b72r

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* 71.77 37.1 −1.01
*LAB*LABa* 71.77 37.63 −4.17
*LAB*TCHa* 75.0 37.86 353.66
relative CIELAB *lab**
*lab*lab* 0.695 0.497 −0.054
*lab*tch* 0.75 0.5 0.982
*lab*nch* 0.0 0.5 0.982
relative Natural Colour (NC)
*lab*lrj* 0.695 0.454 −0.208
*lab*tce* 0.75 0.5 0.932
*lab*ncE* 0.0 0.5 b72r

relative Inform. Technology (IT)
*olvi3** 0.75 0.25 0.75 (1.0)
*cmyn3** 0.25 0.75 0.25 (0.0)
*olvi4** 1.0 0.5 1.0 0.75
*cmyn4** 0.0 0.5 0.0 0.25
standard and adapted CIELAB
*LAB*LAB* 52.42 37.48 −2.31
*LAB*LABa* 52.42 37.63 −4.17
*LAB*TCHa* 50.0 37.86 353.66
relative CIELAB *lab**
*lab*lab* 0.445 0.497 −0.054
*lab*tch* 0.5 0.5 0.982
*lab*nch* 0.25 0.5 0.982
relative Natural Colour (NC)
*lab*lrj* 0.445 0.454 −0.208
*lab*tce* 0.5 0.5 0.932
*lab*ncE* 0.25 0.5 b72r

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* 33.08 37.84 −3.62
*LAB*LABa* 33.08 37.63 −4.17
*LAB*TCHa* 25.01 37.86 353.66
relative CIELAB *lab**
*lab*lab* 0.195 0.497 −0.054
*lab*tch* 0.25 0.5 0.982
*lab*nch* 0.5 0.5 0.982
relative Natural Colour (NC)
*lab*lrj* 0.195 0.454 −0.208
*lab*tce* 0.25 0.5 0.932
*lab*ncE* 0.5 0.5 b72r

relative Inform. Technology (IT)
*olvi3** 1.0 0.25 1.0 (1.0)
*cmyn3** 0.0 0.75 0.0 (0.0)
*olvi4** 1.0 0.25 1.0 1.0
*cmyn4** 0.0 0.75 0.0 0.0
standard and adapted CIELAB
*LAB*LAB* 59.95 56.14 −3.9
*LAB*LABa* 59.95 56.44 −6.26
*LAB*TCHa* 62.5 56.79 353.66
relative CIELAB *lab**
*lab*lab* 0.542 0.745 −0.082
*lab*tch* 0.625 0.75 0.982
*lab*nch* 0.0 0.75 0.982
relative Natural Colour (NC)
*lab*lrj* 0.542 0.682 −0.312
*lab*tce* 0.625 0.75 0.932
*lab*ncE* 0.0 0.75 b72r

relative Inform. Technology (IT)
*olvi3** 0.75 0.0 0.75 (1.0)
*cmyn3** 0.25 1.0 0.25 (0.0)
*olvi4** 1.0 0.25 1.0 0.75
*cmyn4** 0.0 0.75 0.0 0.25
standard and adapted CIELAB
*LAB*LAB* 40.61 56.51 −5.2
*LAB*LABa* 40.61 56.44 −6.26
*LAB*TCHa* 37.51 56.79 353.66
relative CIELAB *lab**
*lab*lab* 0.292 0.745 −0.082
*lab*tch* 0.375 0.75 0.982
*lab*nch* 0.25 0.75 0.982
relative Natural Colour (NC)
*lab*lrj* 0.292 0.682 −0.312
*lab*tce* 0.375 0.75 0.932
*lab*ncE* 0.25 0.75 b72r

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* 48.14 75.18 −6.78
*LAB*LABa* 48.14 75.25 −8.35
*LAB*TCHa* 50.0 75.71 353.66
relative CIELAB *lab**
*lab*lab* 0.389 0.994 −0.109
*lab*tch* 0.5 1.0 0.982
*lab*nch* 0.0 1.0 0.982
relative Natural Colour (NC)
*lab*lrj* 0.389 0.909 −0.416
*lab*tce* 0.5 1.0 0.932
*lab*ncE* 0.0 1.0 b72r

n^* = 0,00

n^* = 0,25

blackness n^*

n^* = 0,50

0,25 0,50 0,75 1,00

chromaticness c^*

n^* = 1,0

UE500−7, 5 step scales for constant CIELAB hue 323/360 = 0.896 (left)

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

Input: Colorimetric Reflective System MRS18a

for hue $h^* = lab^*h = 323/360 = 0.896$

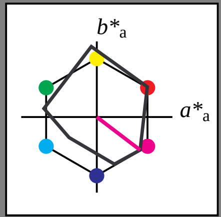
*lab*tch* and *lab*nch*

D65: hue B50R

LCH*Ma: 35 72 323

rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

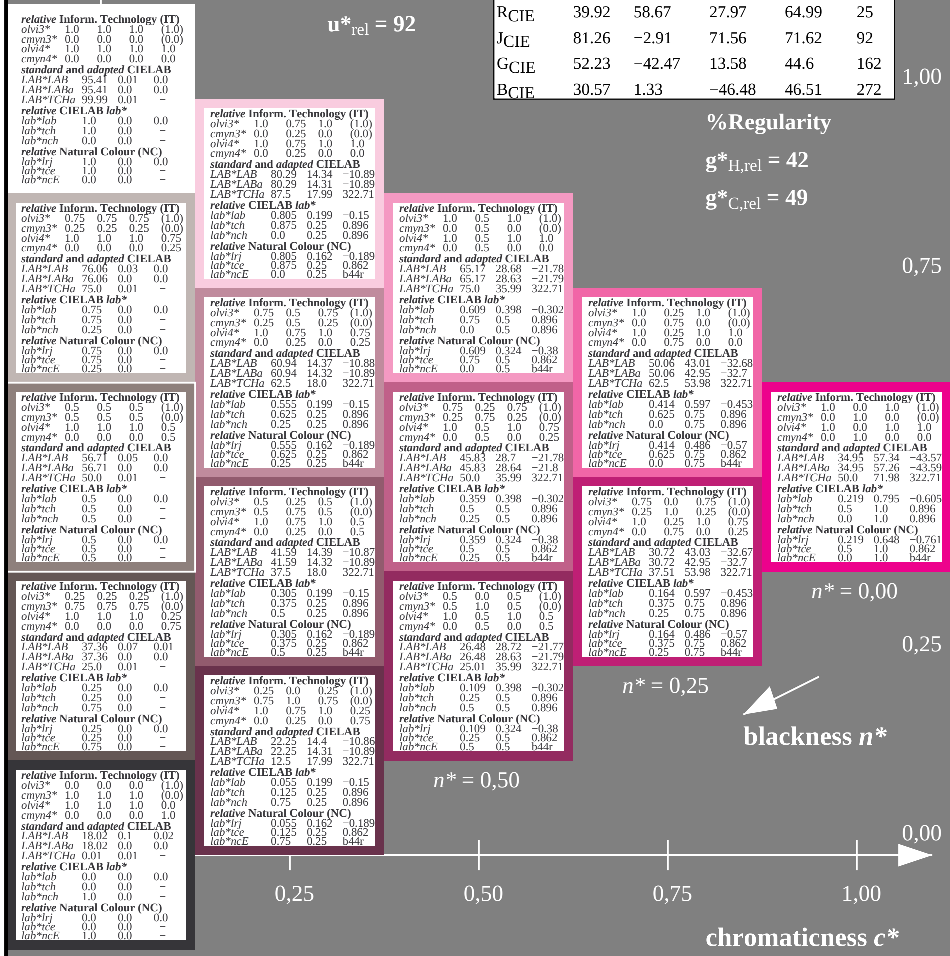
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System MRS18

for hue $h^* = lab^*h = 322/360 = 0.895$

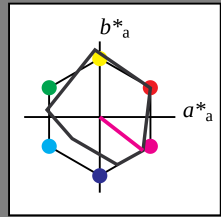
*lab*tch* and *lab*nch*

D65: hue B50R

LCH*Ma: 35 72 322

rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

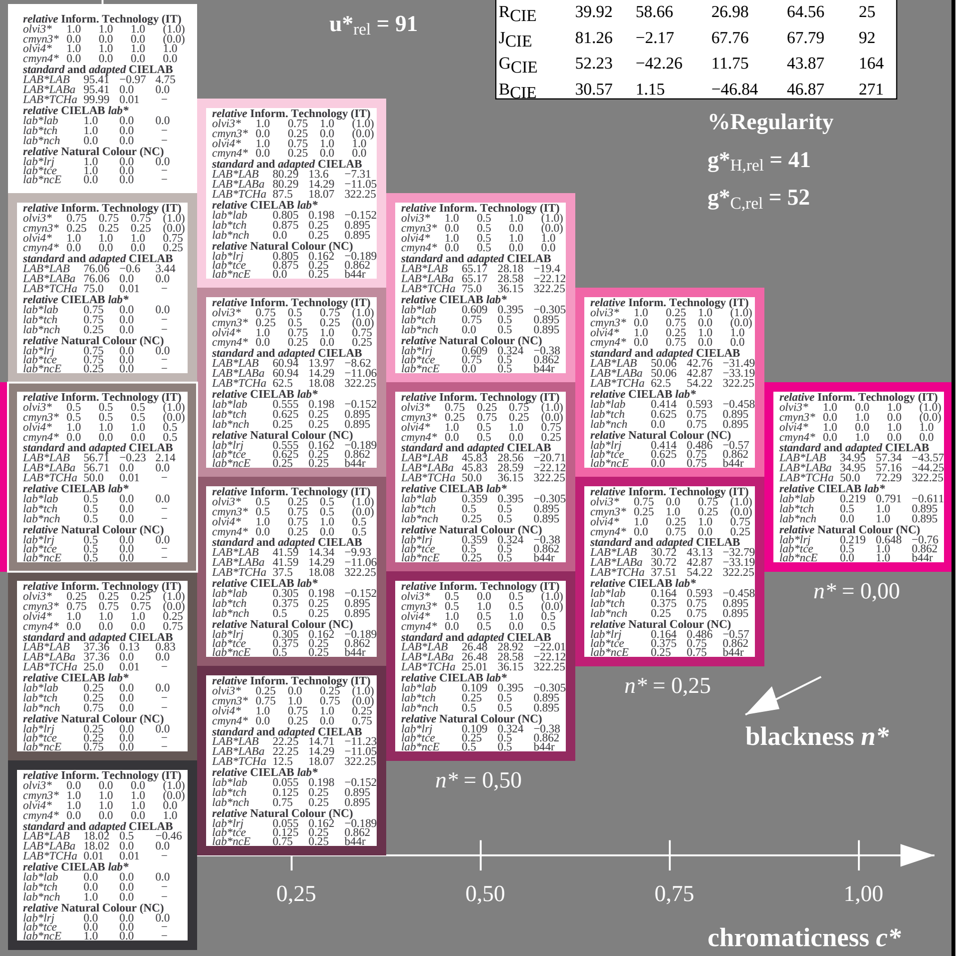
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



UE500−7, 5 step scales for constant CIELAB hue 323/360 = 0.896 (left)

5 step scales for constant CIELAB hue 322/360 = 0.895 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 323/360 = 0.896$

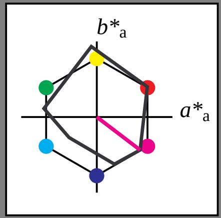
*lab*tch* and *lab*nch*

D65: hue B50R

LCH*Ma: 35 72 323

rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 92$

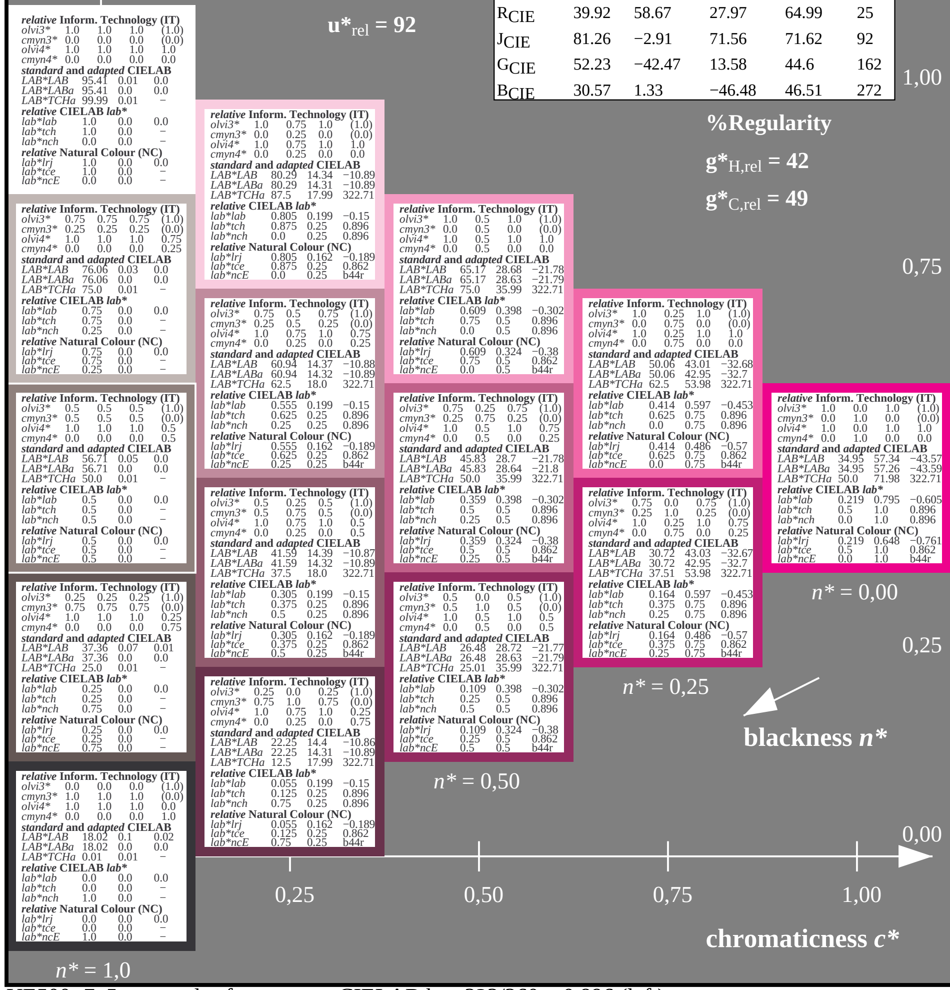
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 354/360 = 0.982$

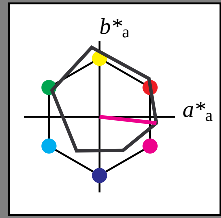
*lab*tch* and *lab*nch*

D65: hue M

LCH*Ma: 48 76 354

rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

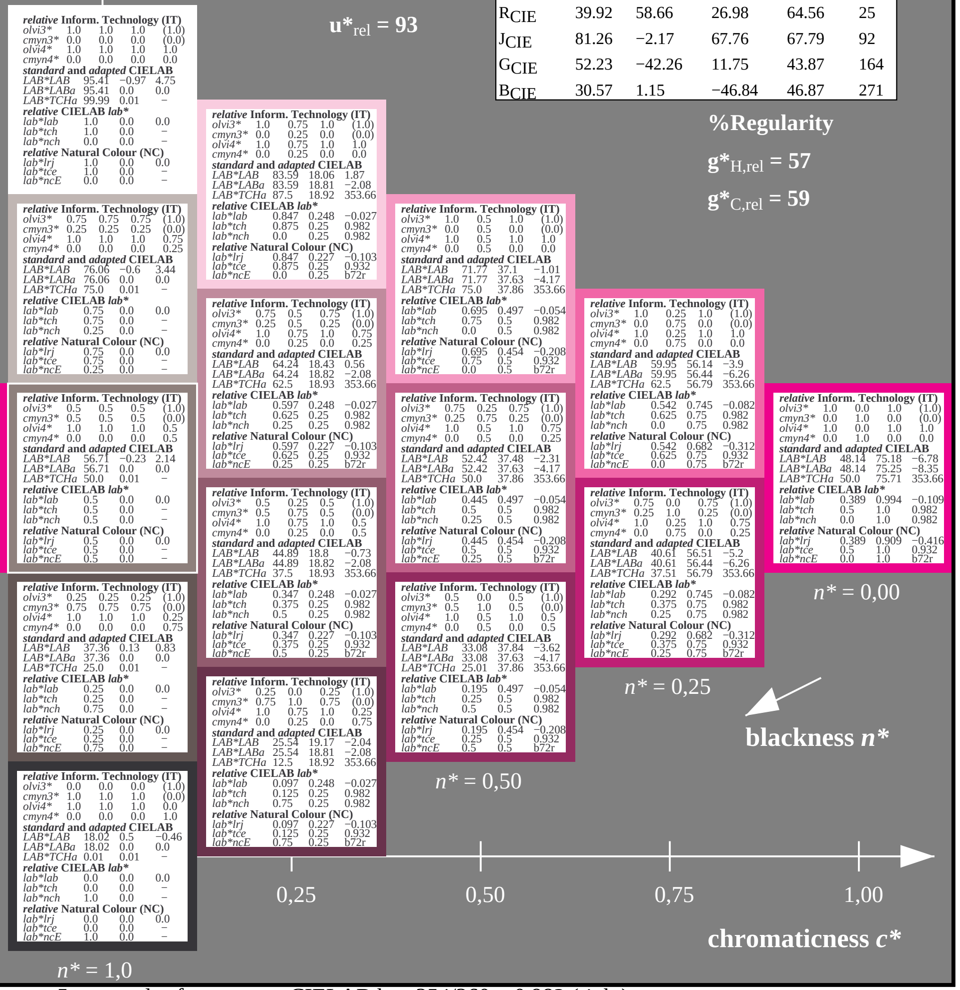
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



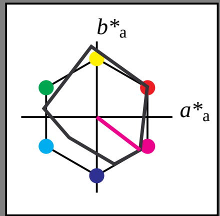
UE500−7, 5 step scales for constant CIELAB hue 323/360 = 0.896 (left)

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

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 323/360 = 0.896$
lab^*tch and lab^*nch

D65: hue B50R
LCH*Ma: 35 72 323
rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 92$

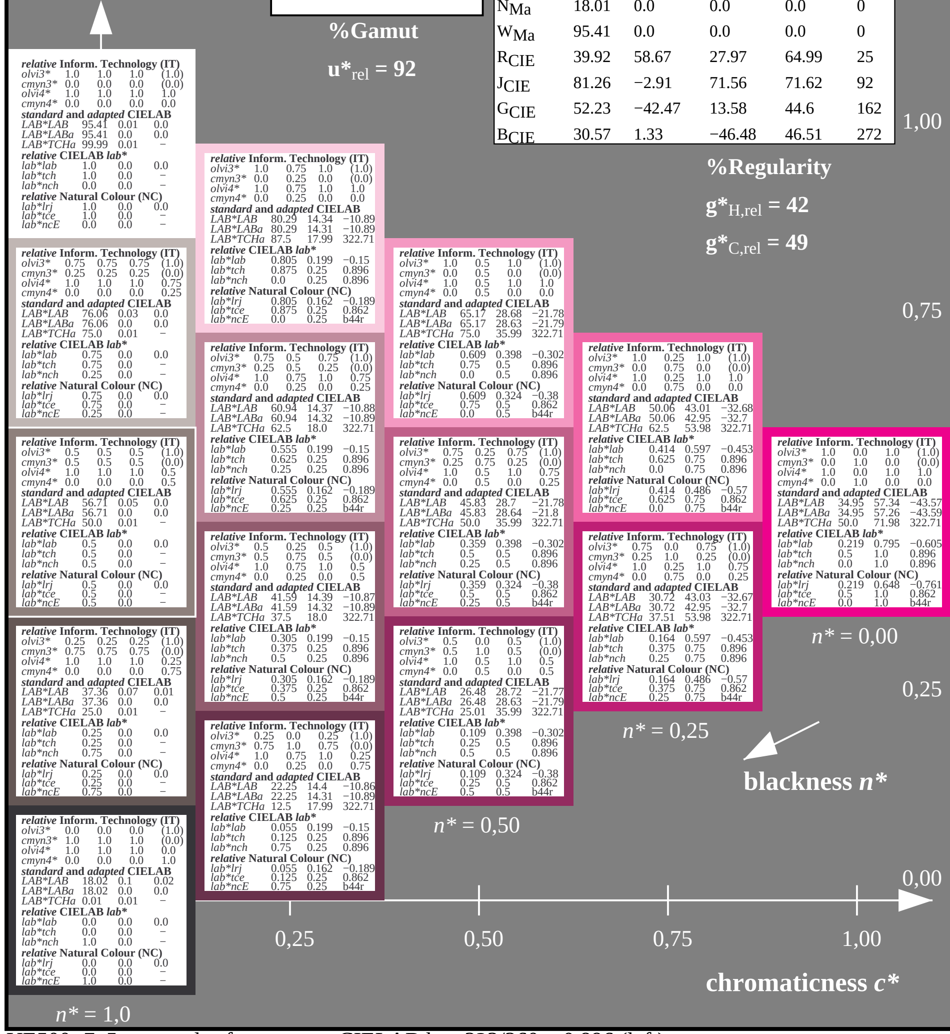
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

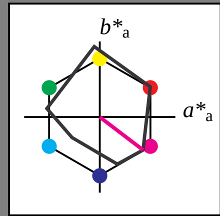
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 323/360 = 0.896$
lab^*tch and lab^*nch

D65: hue B50R
LCH*Ma: 35 72 323
rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 92$

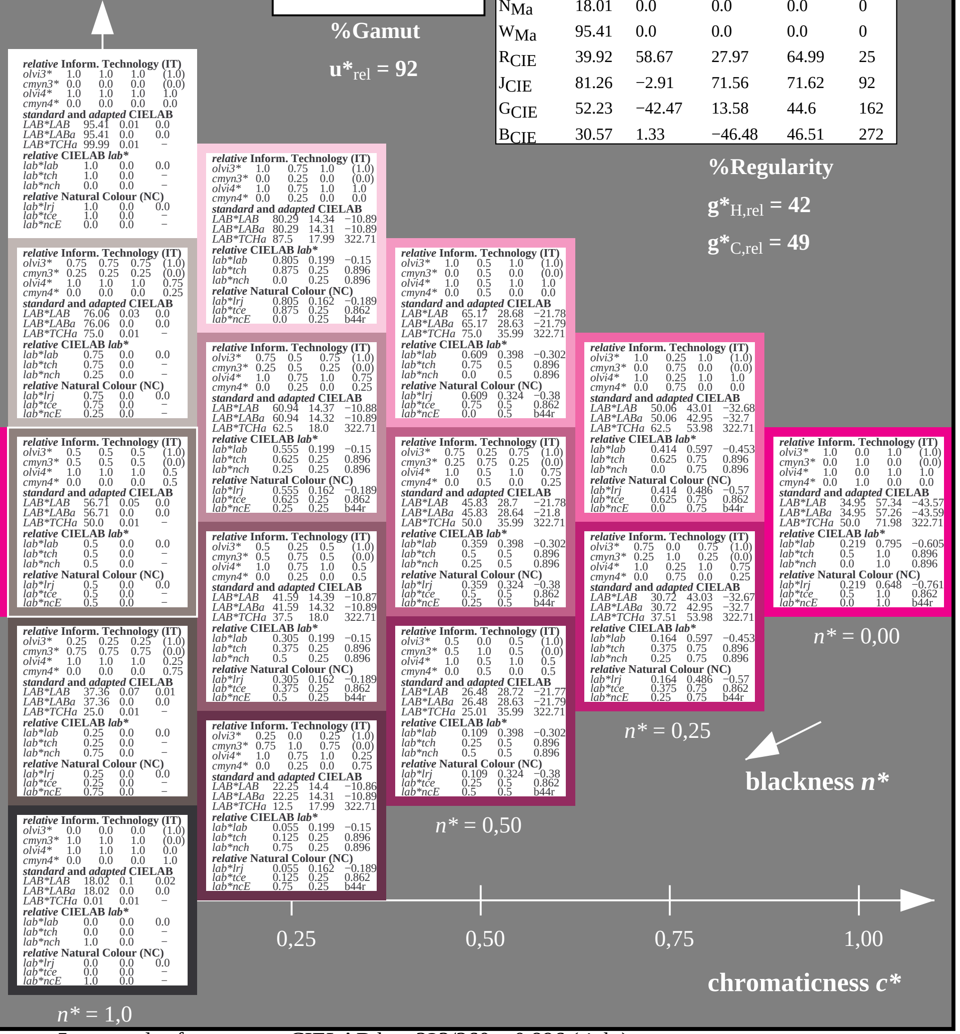
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



UE500−7, 5 step scales for constant CIELAB hue 323/360 = 0.896 (left)

5 step scales for constant CIELAB hue 323/360 = 0.896 (right)

Input: Colorimetric Reflective System MRS18a

for hue $h^* = lab^*h = 323/360 = 0.896$

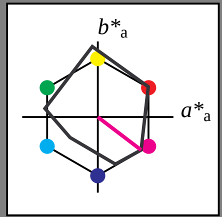
*lab*tch and lab*nch*

D65: hue B50R

LCH*Ma: 35 72 323

rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

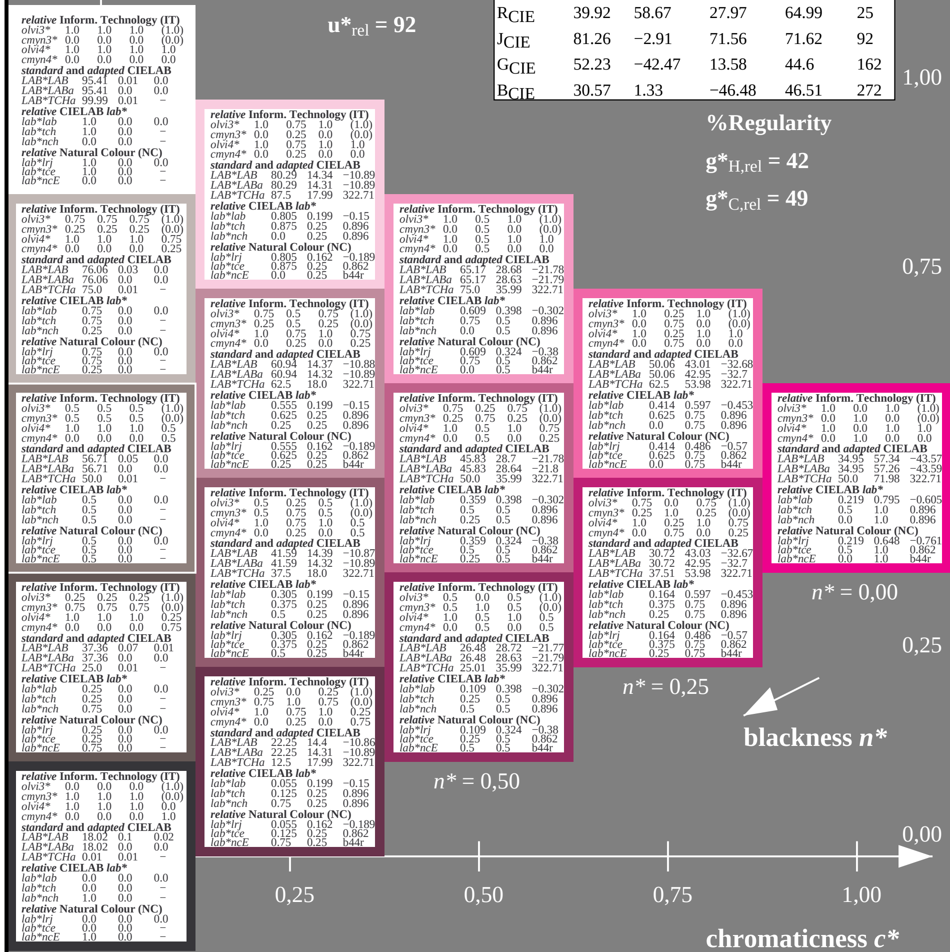
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System NRS18

for hue $h^* = lab^*h = 325/360 = 0.903$

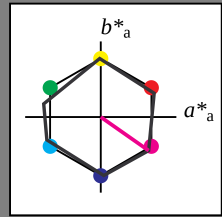
*lab*tch and lab*nch*

D65: hue B50R

LCH*Ma: 57 77 325

rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

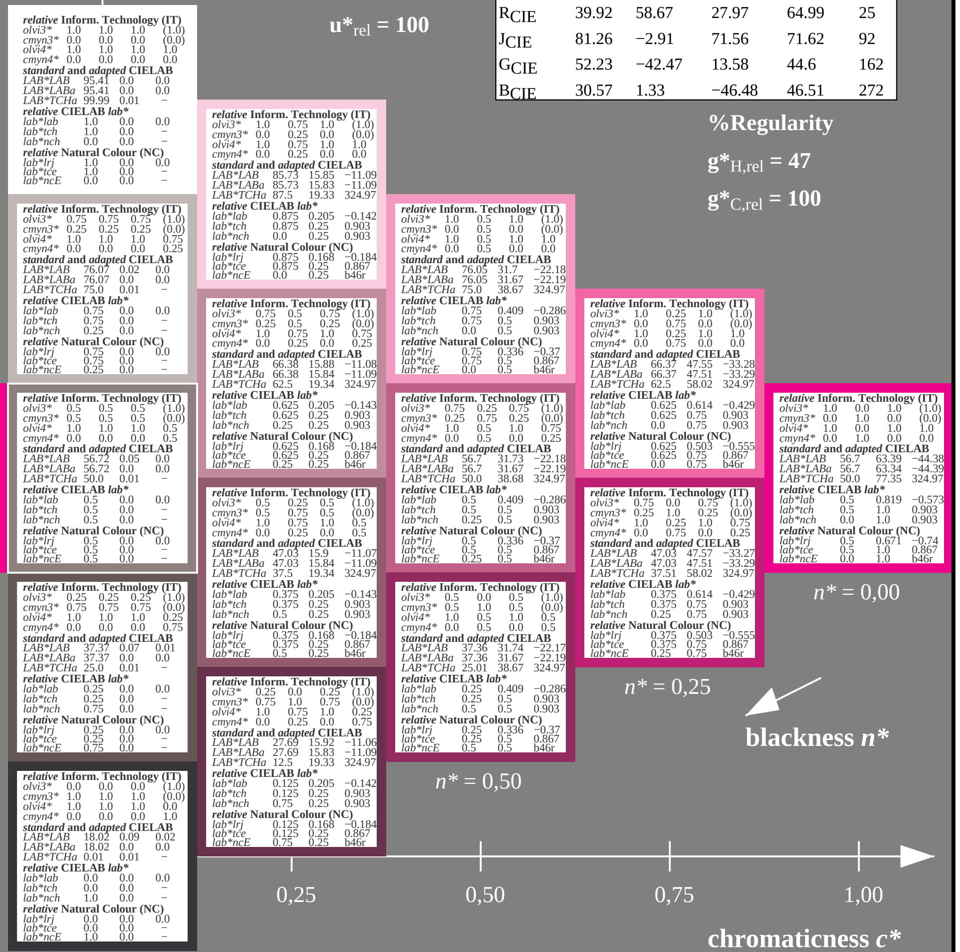
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



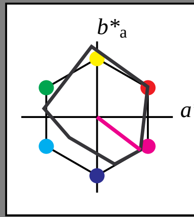
UE500−7, 5 step scales for constant CIELAB hue 323/360 = 0.896 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 323/360 = 0.896$
lab*tch* and *lab*nch

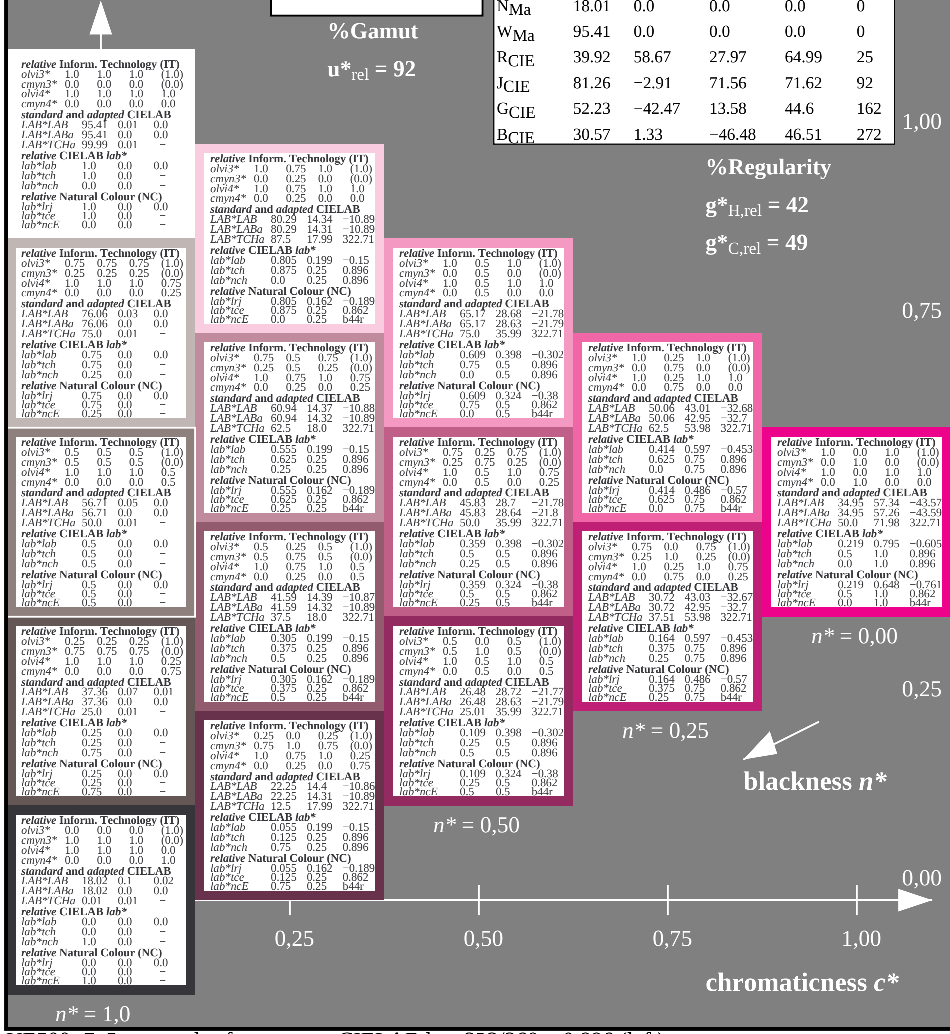
D65: hue B50R
LCH*Ma: 35 72 323
rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



MRS18a; adapted (a) CIELAB data

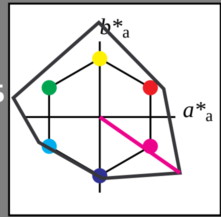
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

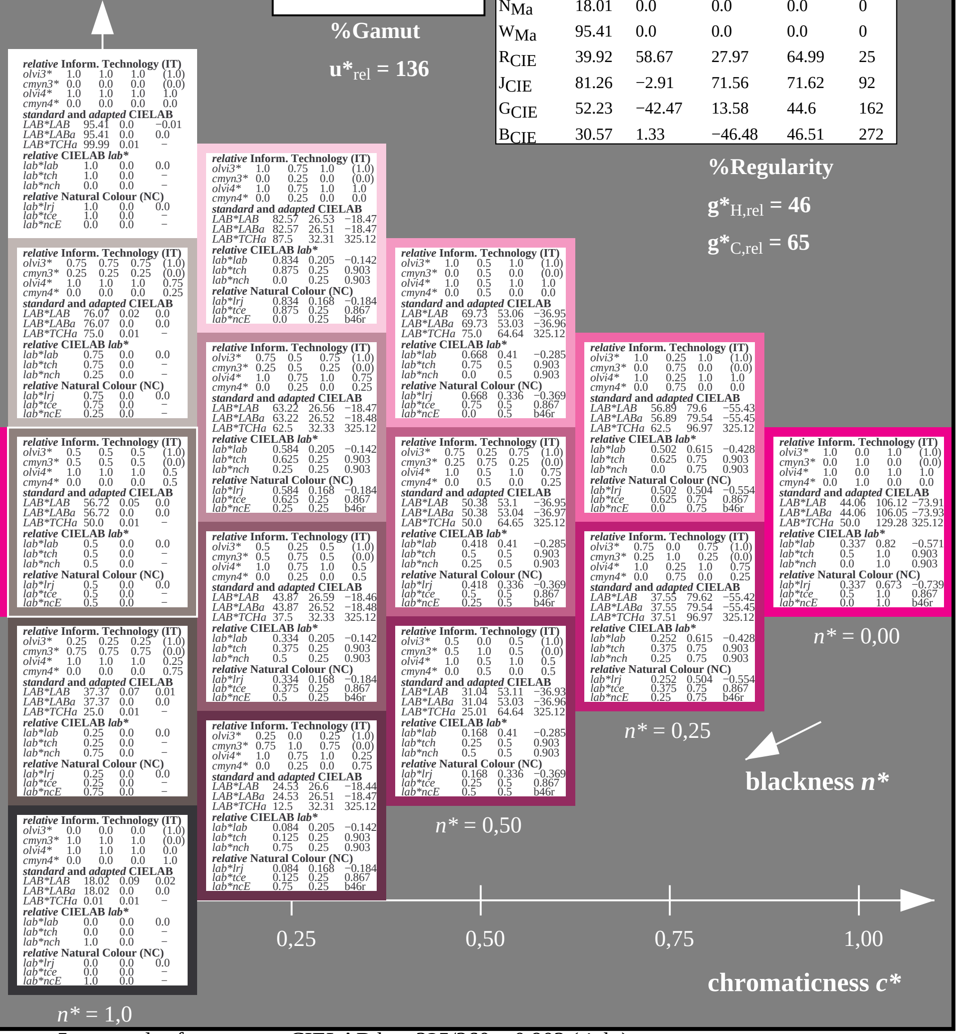
D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272



UE500−7, 5 step scales for constant CIELAB hue 323/360 = 0.896 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System MRS18a

for hue $h^* = lab^*h = 323/360 = 0.896$

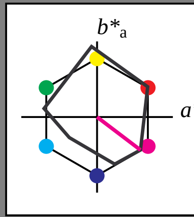
*lab*tch* and *lab*nch*

D65: hue B50R

LCH*Ma: 35 72 323

rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 92$

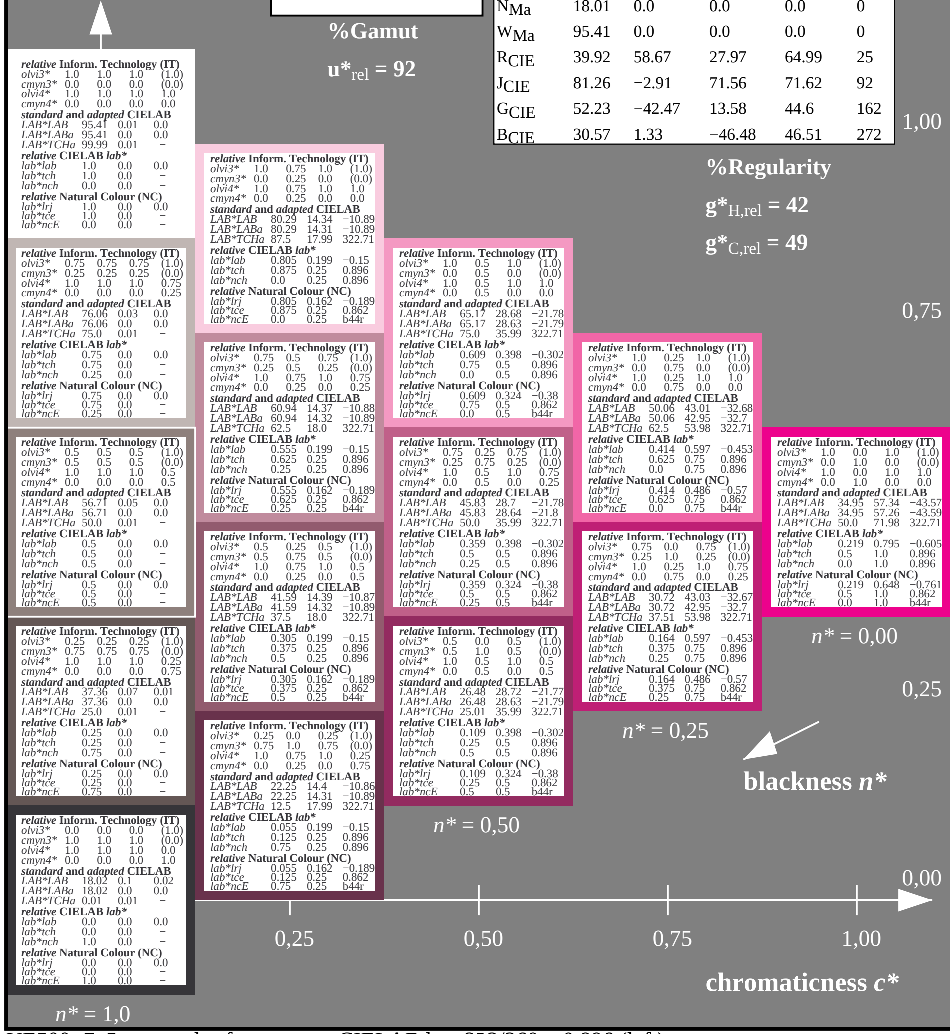
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System NRS11

for hue $h^* = lab^*h = 325/360 = 0.903$

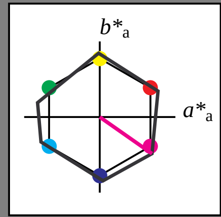
*lab*tch* and *lab*nch*

D65: hue B50R

LCH*Ma: 53 84 325

rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 119$

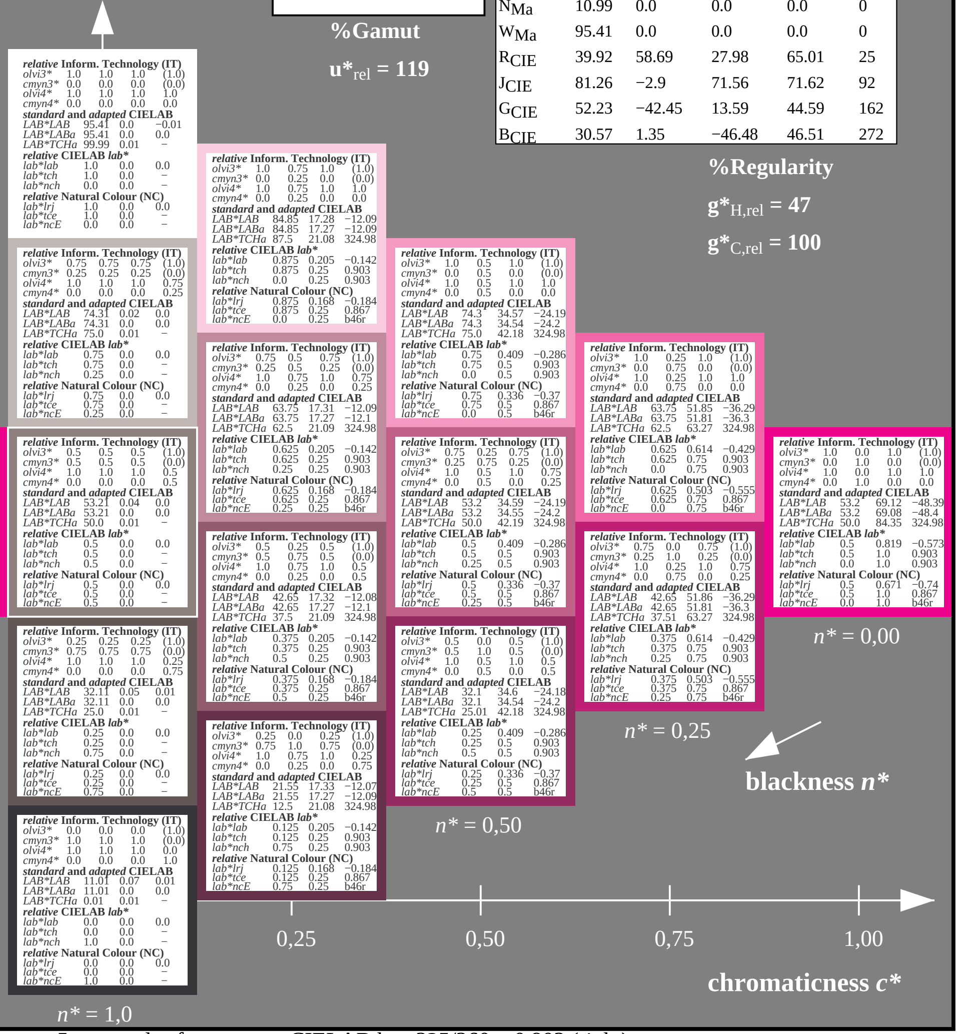
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



UE500−7, 5 step scales for constant CIELAB hue 323/360 = 0.896 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System MRS18a
for hue *h = *lab*h* = 323/360 = 0.896**

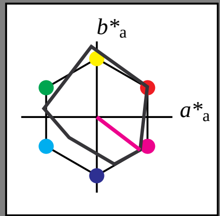
lab*tch* and *lab*nch

D65: hue B50R

LCH*Ma: 35 72 323

rgb*Ma: 1.0 0.0 1.0

triangle lightness *t**



%Gamut

u^*_{rel} = 92

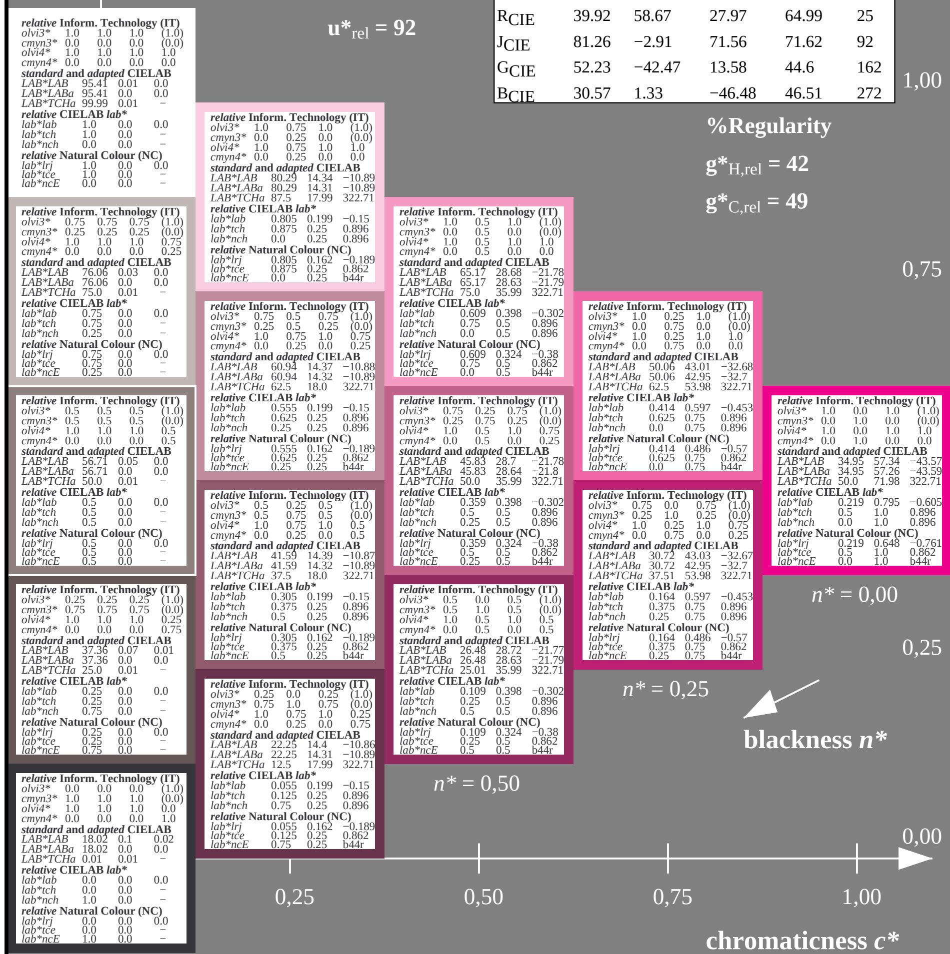
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



Output: Colorimetric Reflective System NCS11
for hue *h = *lab*h* = 325/360 = 0.903**

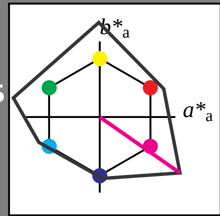
lab*tch* and *lab*nch

D65: hue B50R

LCH*Ma: 44 129 325

rgb*Ma: 1.0 0.0 1.0

triangle lightness *t**



%Gamut

u^*_{rel} = 149

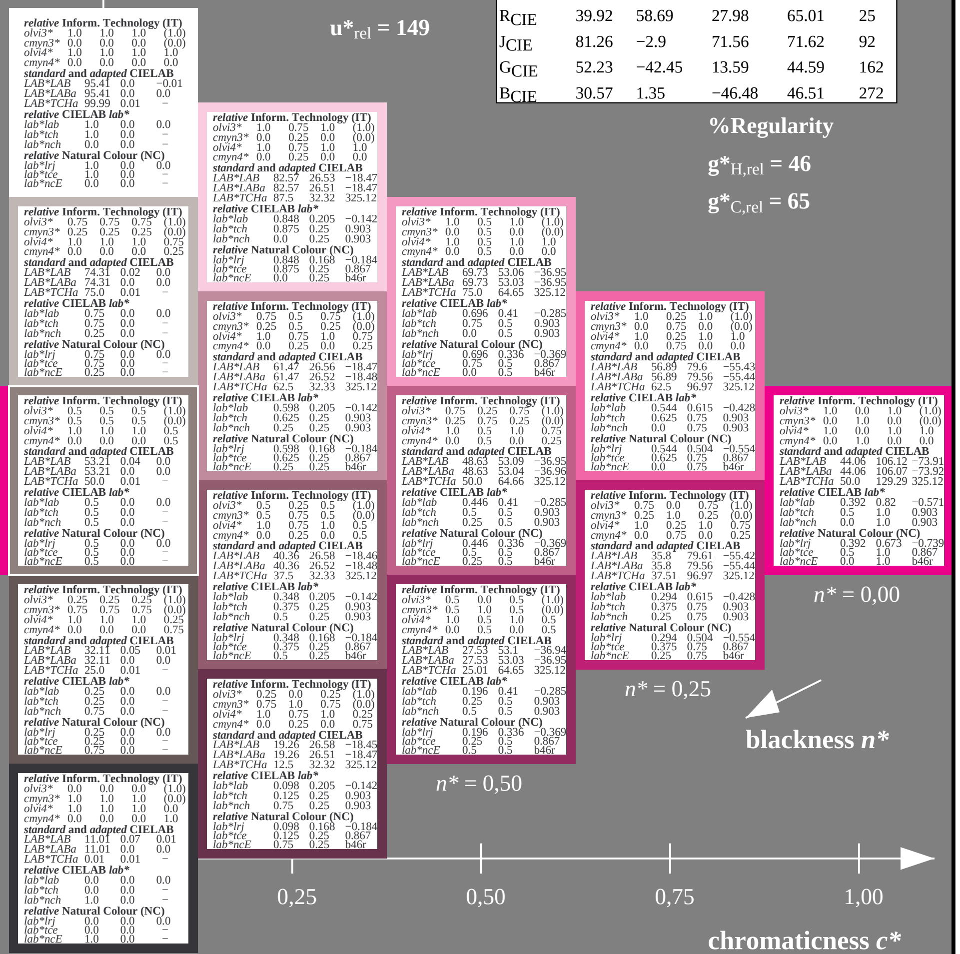
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



UE500−7, 5 step scales for constant CIELAB hue 323/360 = 0.896 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System NRS18

for hue $h^* = lab^*h = 325/360 = 0.903$

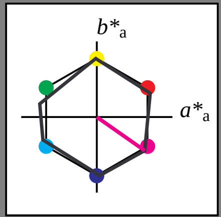
*lab*tch* and *lab*nch*

D65: hue B50R

LCH*Ma: 57 77 325

rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 100$

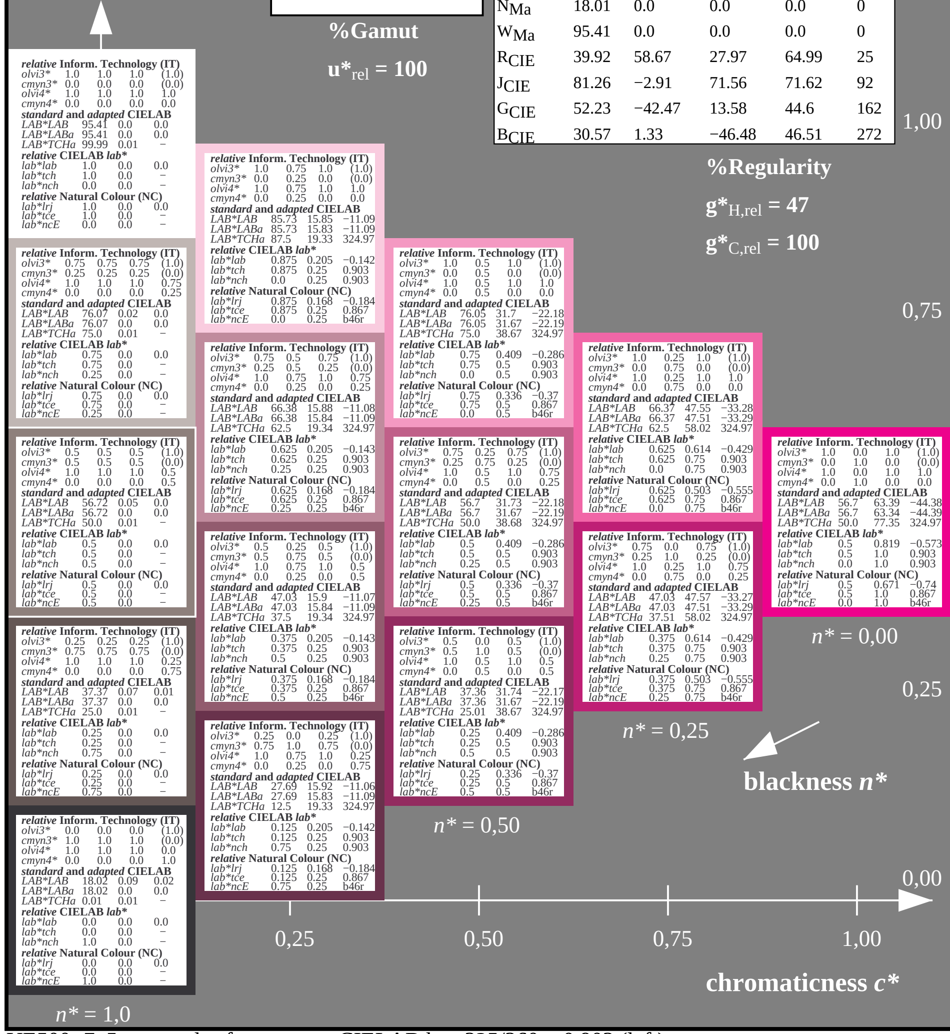
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System ORS18

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

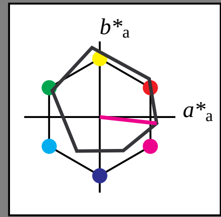
*lab*tch* and *lab*nch*

D65: hue M

LCH*Ma: 48 76 354

rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

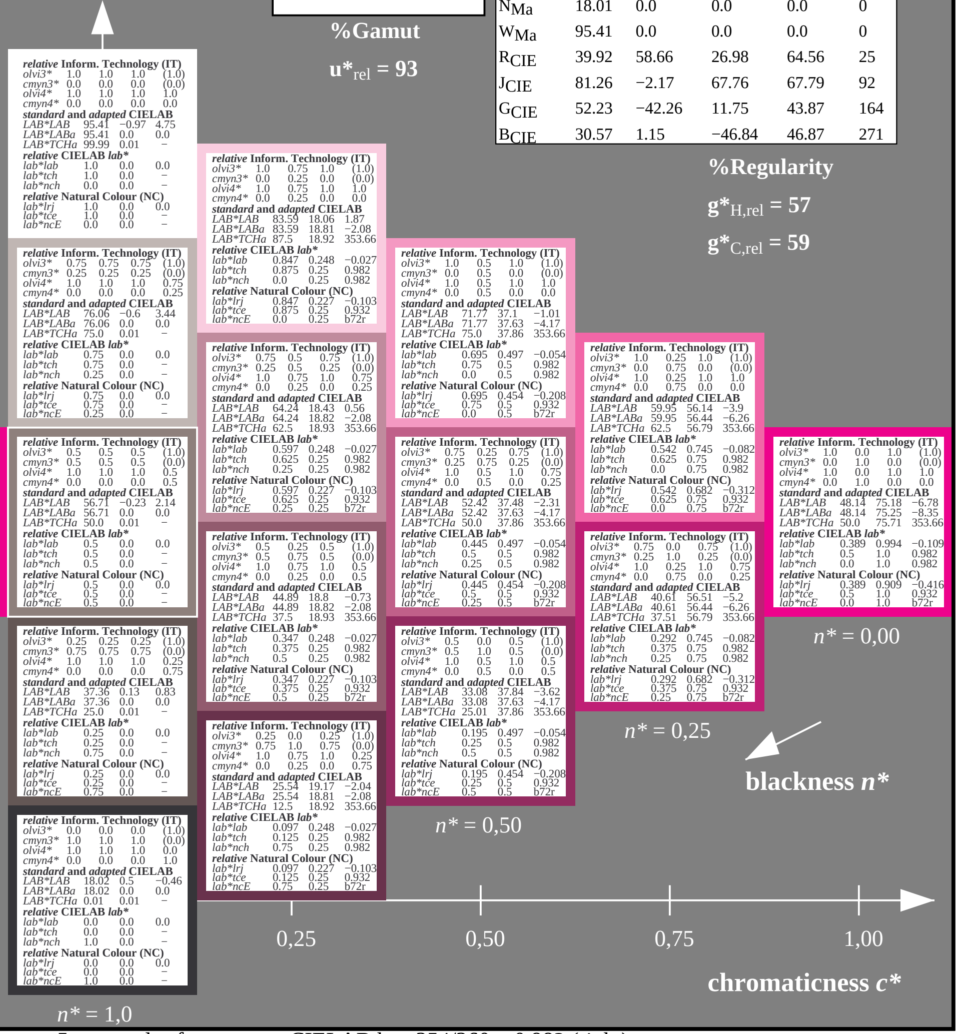
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



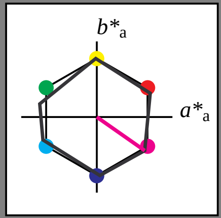
UE500−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

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

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 325/360 = 0.903$
*lab*tch and lab*nch*

D65: hue B50R
LCH*Ma: 57 77 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 100$

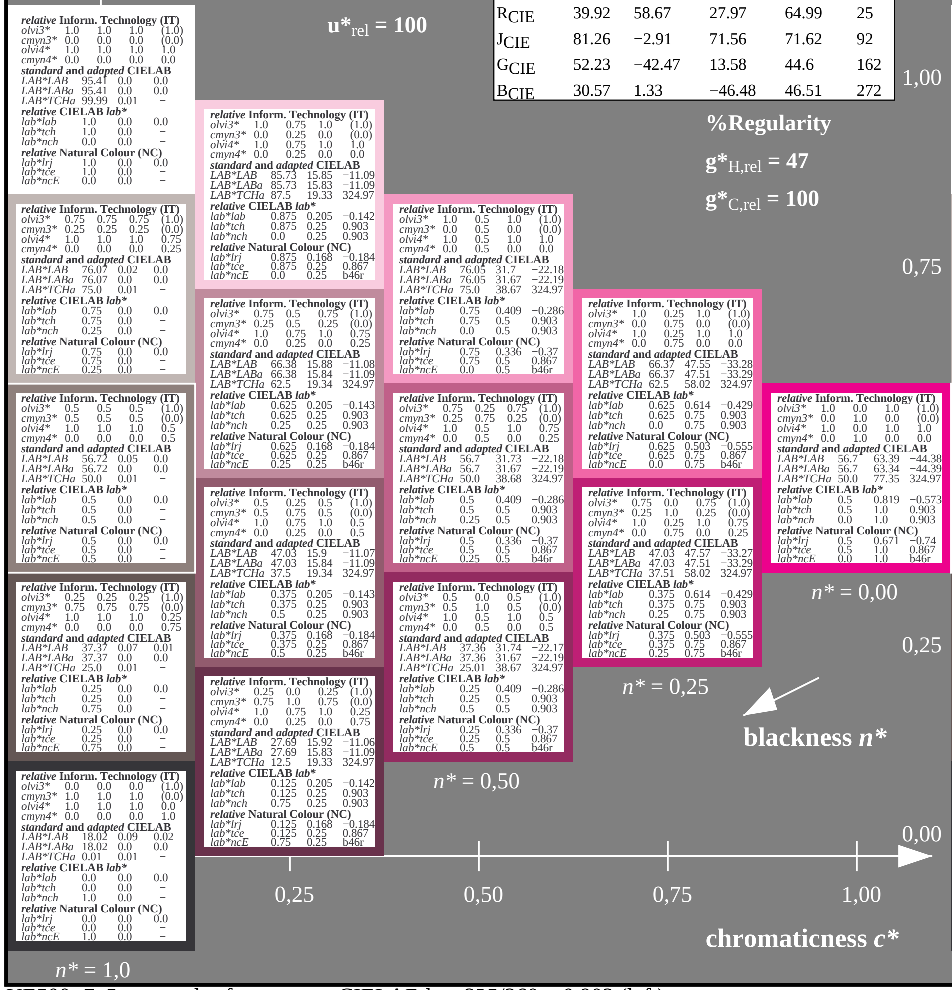
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

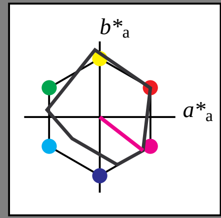
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 322/360 = 0.895$
*lab*tch and lab*nch*

D65: hue B50R
LCH*Ma: 35 72 322
rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 91$

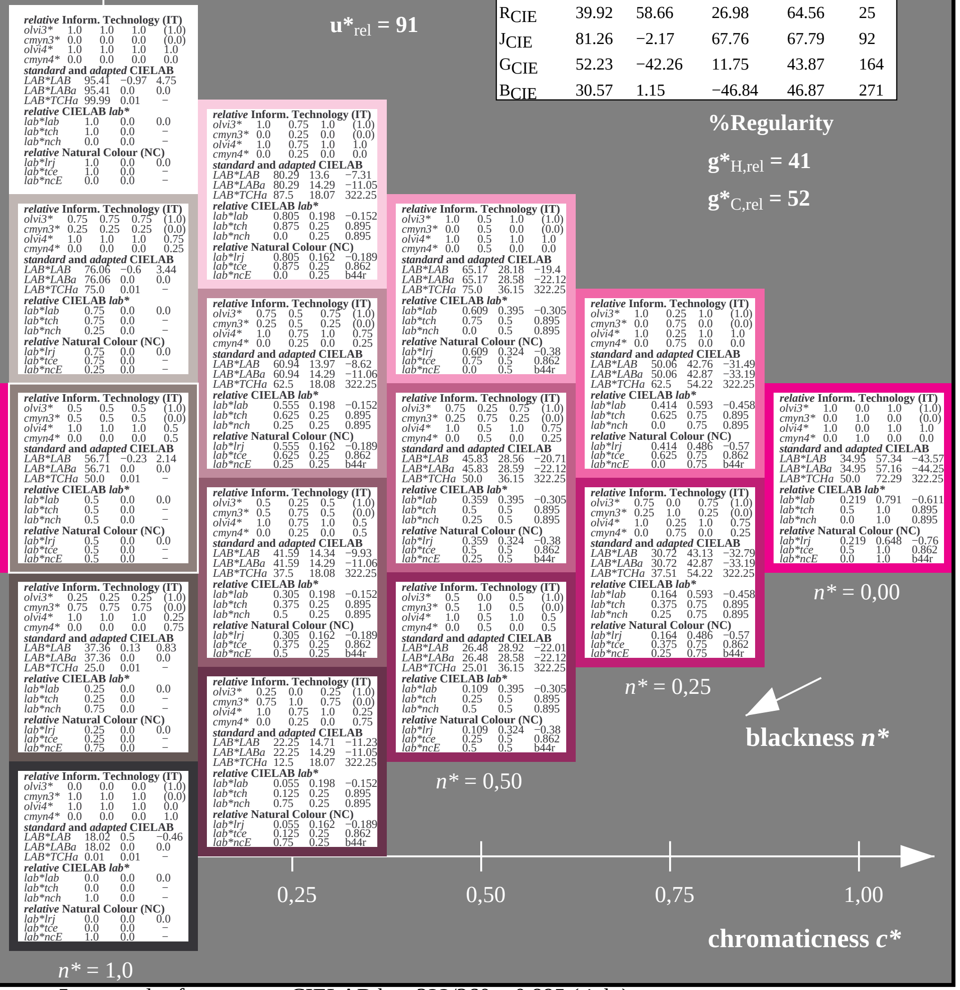
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



UE500−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 322/360 = 0.895 (right)

Input: Colorimetric Reflective System NRS18

for hue $h^* = lab^*h = 325/360 = 0.903$

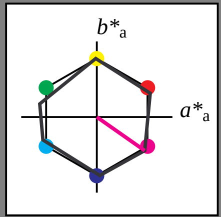
*lab*tch* and *lab*nch*

D65: hue B50R

LCH*Ma: 57 77 325

rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 100$

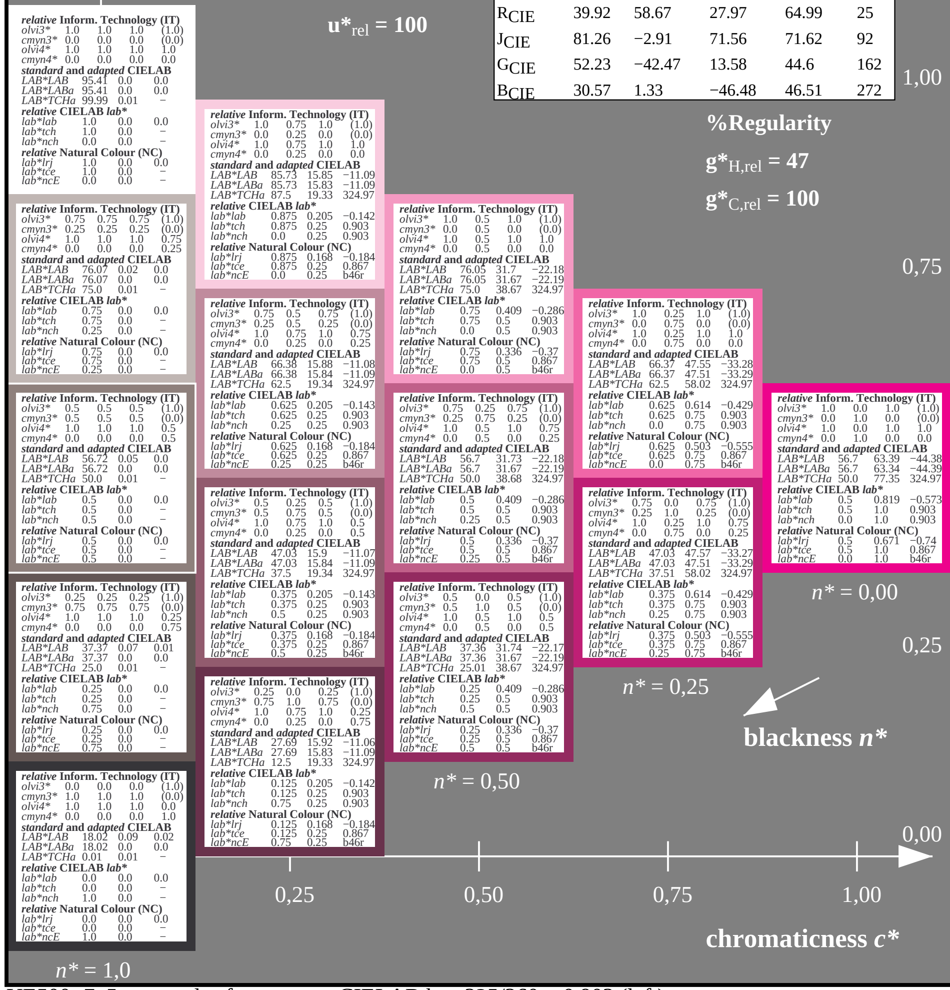
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System TRS18

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

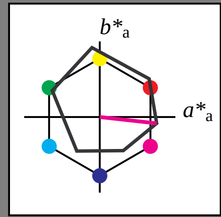
*lab*tch* and *lab*nch*

D65: hue M

LCH*Ma: 48 76 354

rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

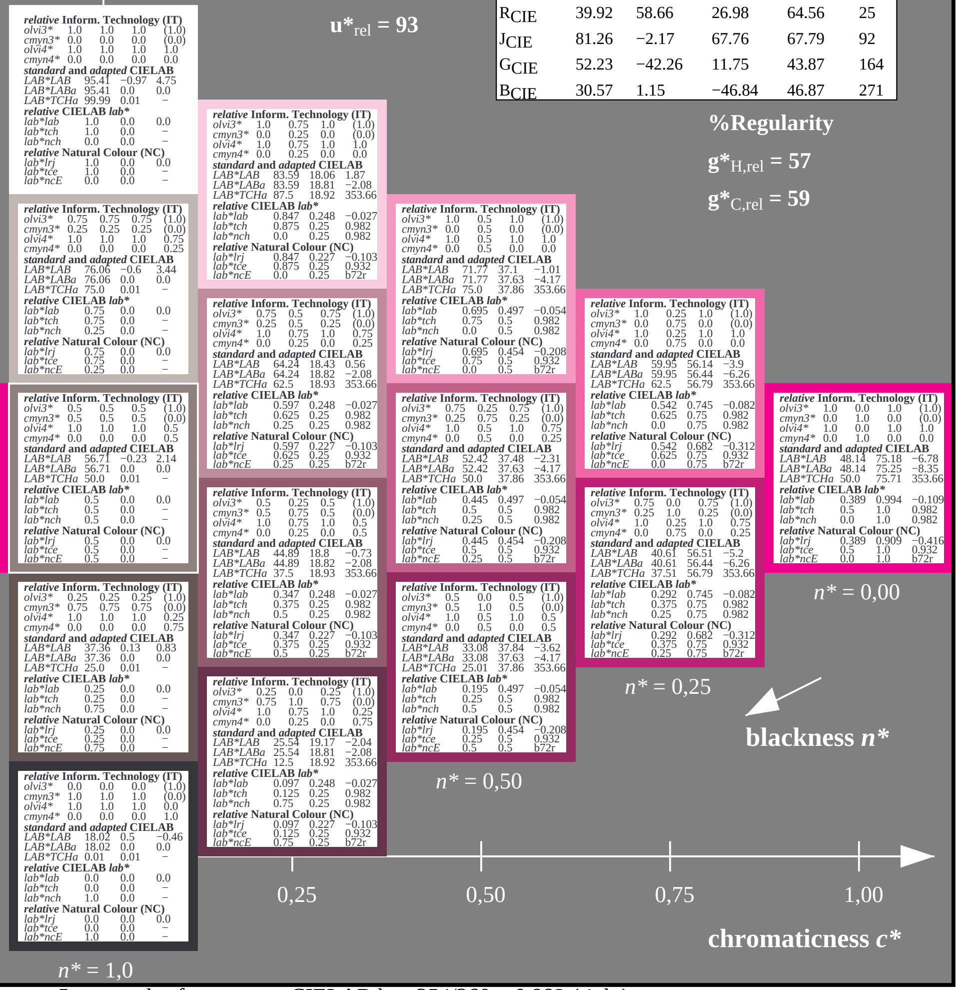
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



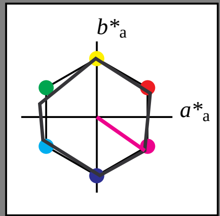
UE500−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

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

Input: Colorimetric Reflective System NRS18
for hue *h* = lab*h* = 325/360 = 0.903
*lab*tch* and *lab*nch*

D65: hue B50R
LCH*Ma: 57 77 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness *t*



%Gamut

u^*_{rel} = 100

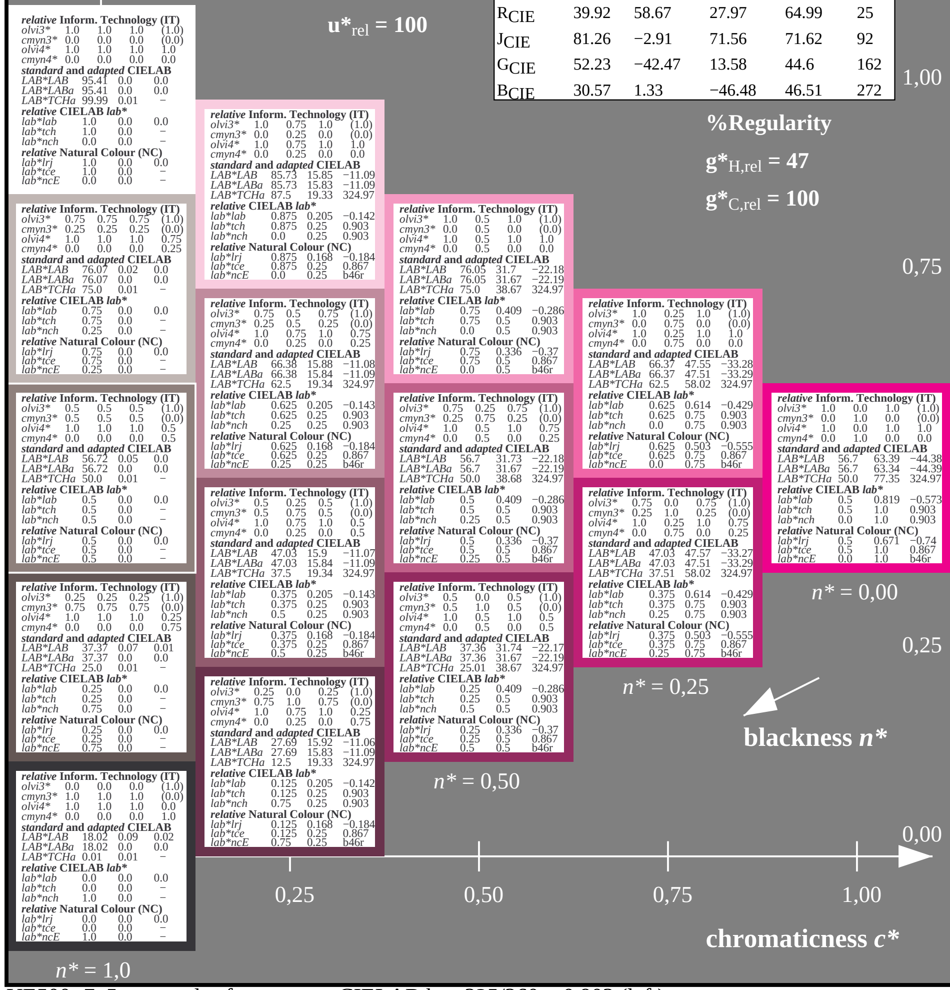
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

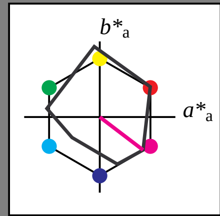
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System MRS18a
for hue *h* = lab*h* = 323/360 = 0.896
*lab*tch* and *lab*nch*

D65: hue B50R
LCH*Ma: 35 72 323
rgb*Ma: 1.0 0.0 1.0

triangle lightness *t*



%Gamut

u^*_{rel} = 92

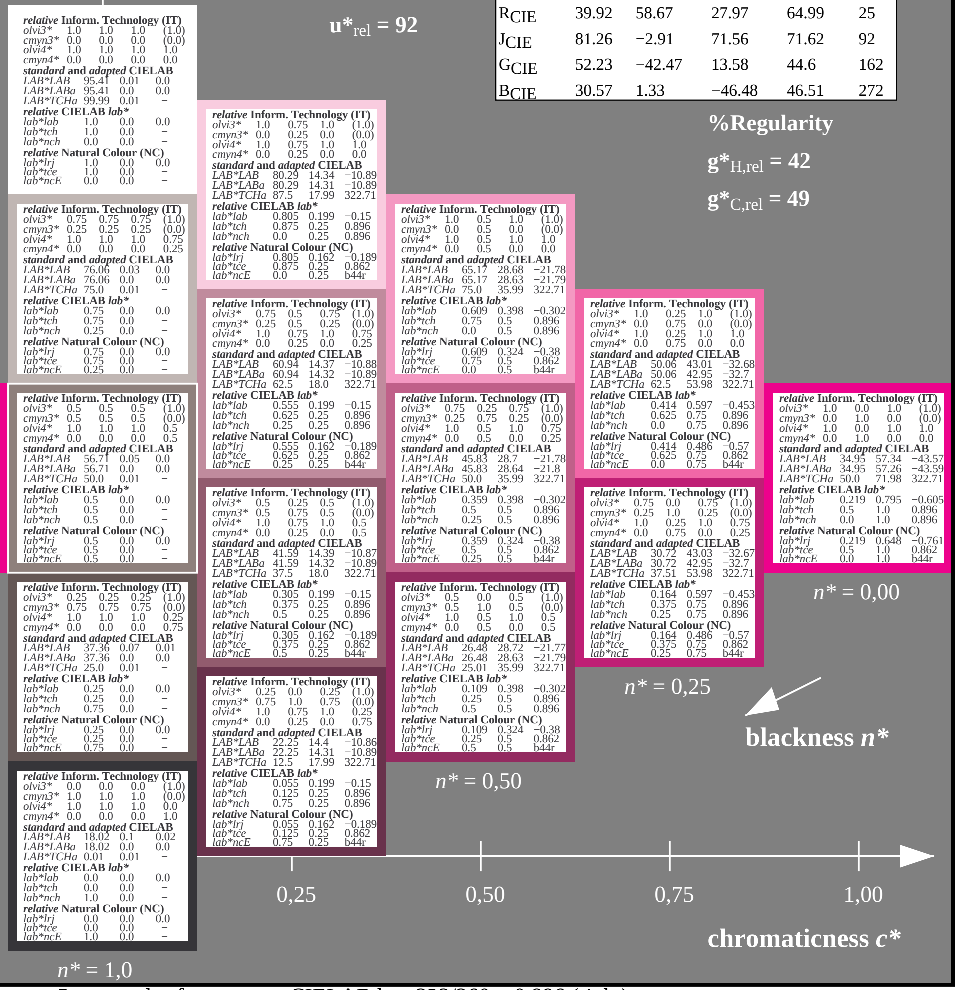
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



UE500−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

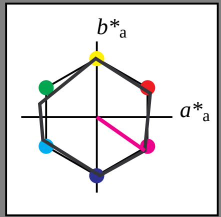
5 step scales for constant CIELAB hue 323/360 = 0.896 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 325/360 = 0.903$

*lab*tch* and *lab*nch*

D65: hue B50R
LCH*Ma: 57 77 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness *t**



%Gamut

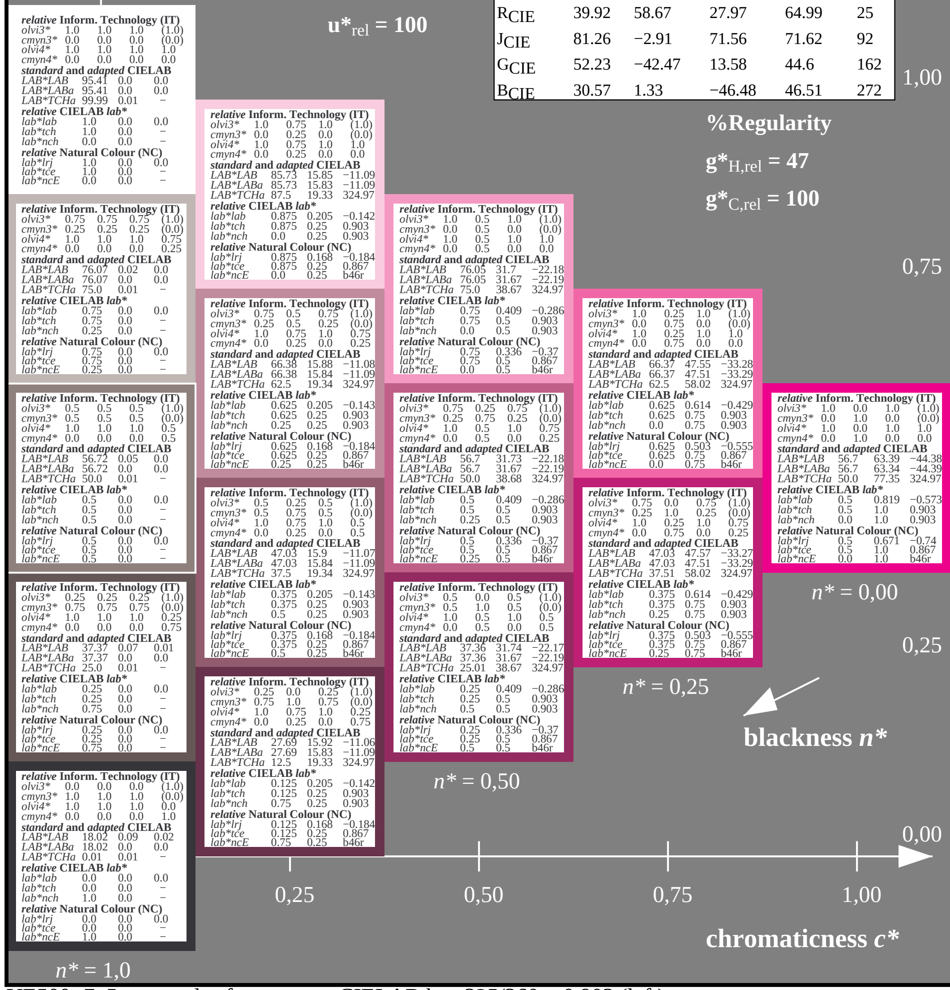
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

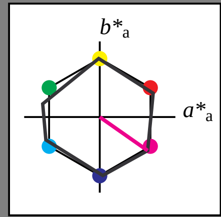


Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 325/360 = 0.903$

*lab*tch* and *lab*nch*

D65: hue B50R
LCH*Ma: 57 77 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness *t**



%Gamut

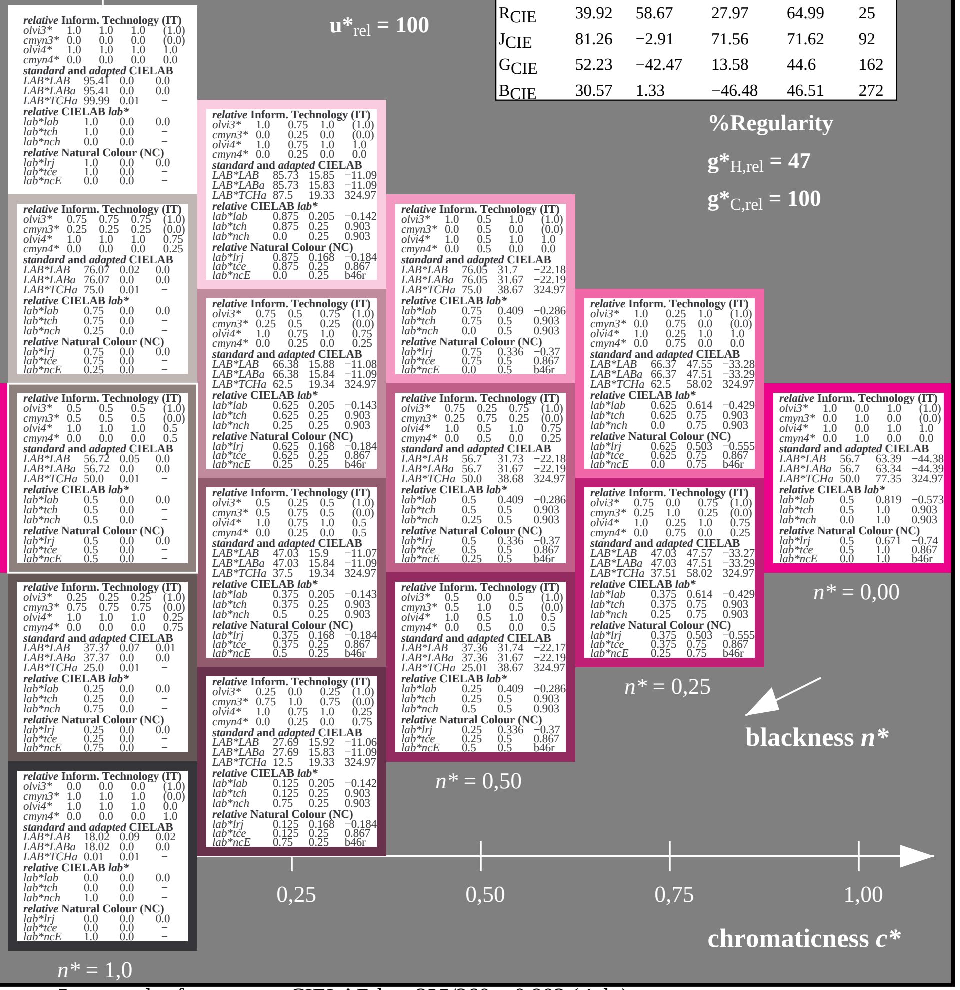
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



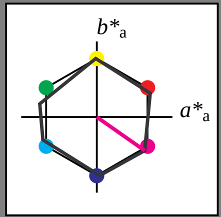
UE500−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System NRS18
for hue *h** = *lab*h* = 325/360 = 0.903
*lab*tch* and *lab*nch*

D65: hue B50R
LCH*Ma: 57 77 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness *t*



%Gamut

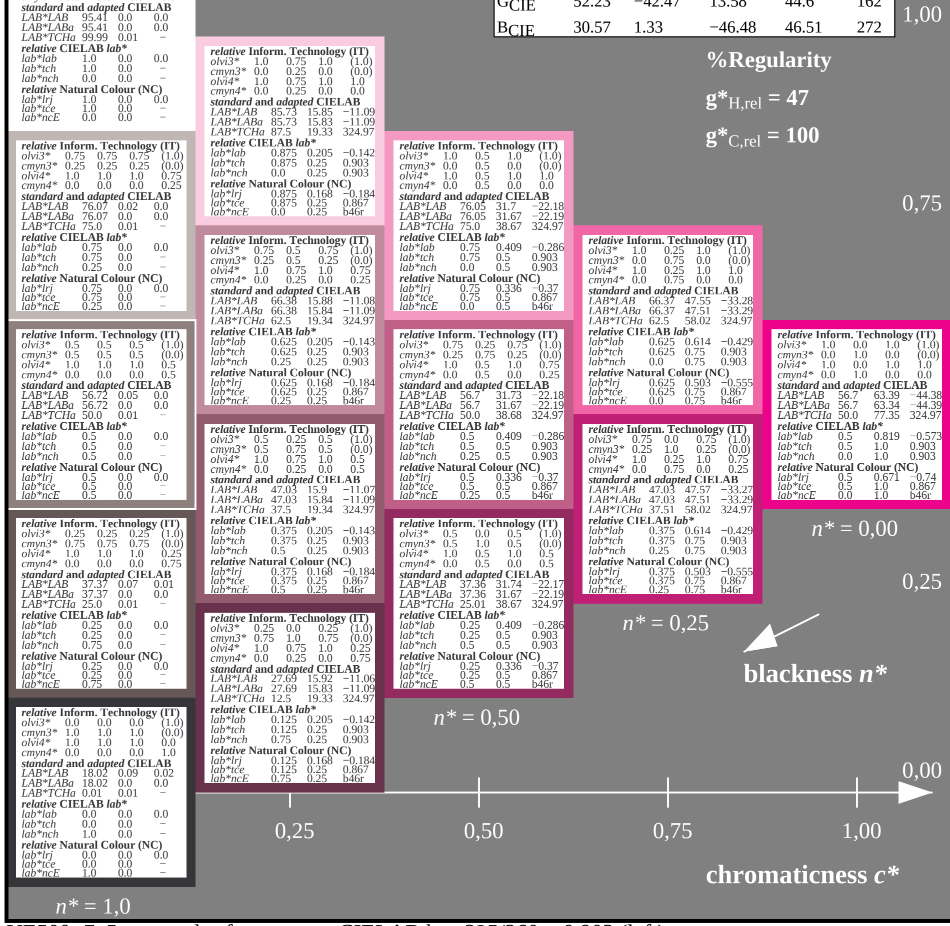
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

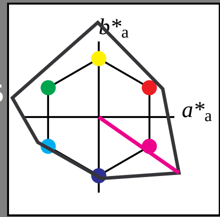
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System NCS18
for hue *h** = *lab*h* = 325/360 = 0.903
*lab*tch* and *lab*nch*

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness *t*



%Gamut

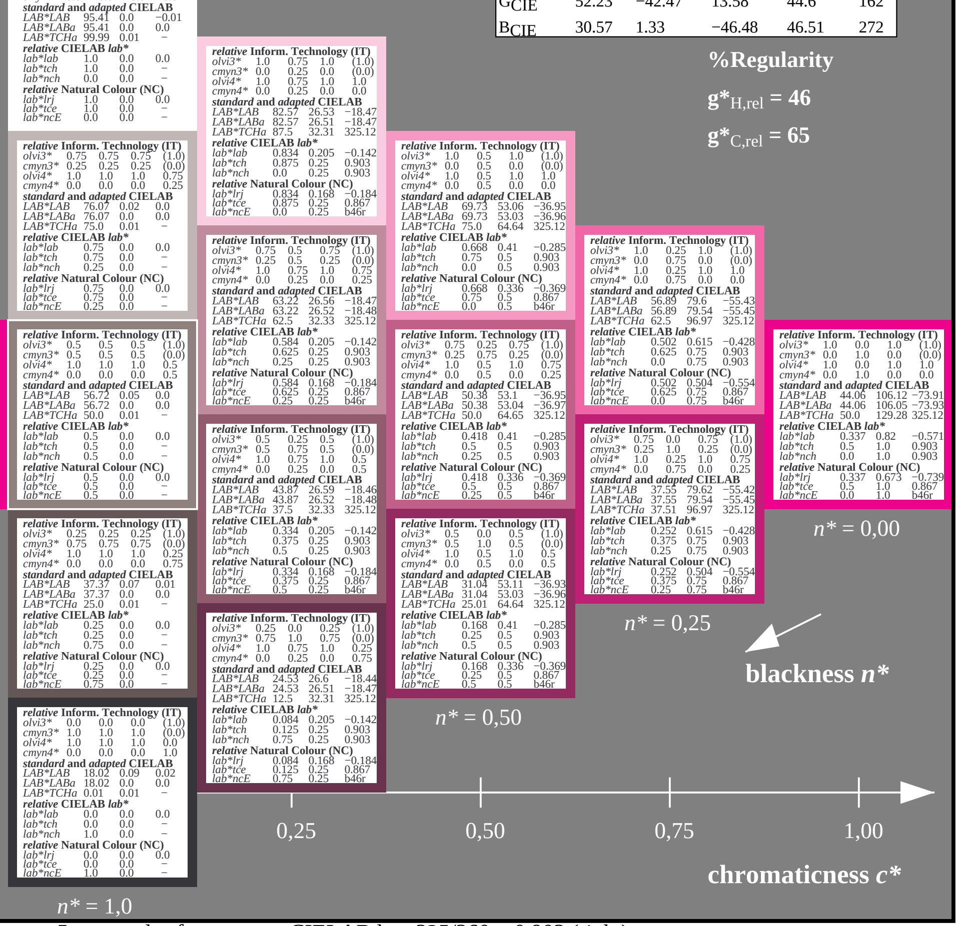
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



UE500−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System NRS18

for hue *h* = lab*h = 325/360 = 0.903*

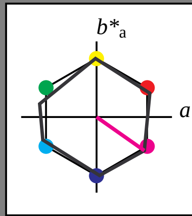
*lab*tch and lab*nch*

D65: hue B50R

LCH*Ma: 57 77 325

rgb*Ma: 1.0 0.0 1.0

triangle lightness *t*



%Gamut

u*rel = 100

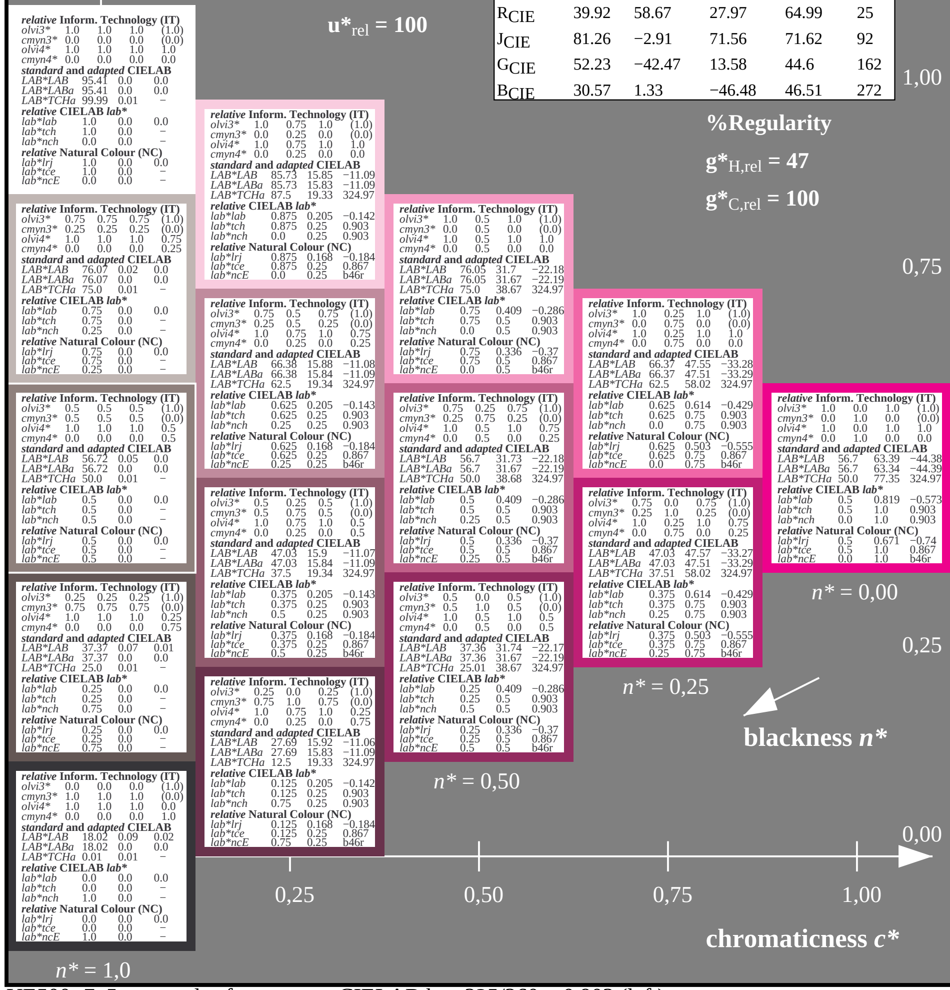
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NRS11

for hue *h* = lab*h = 325/360 = 0.903*

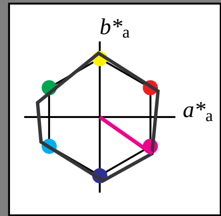
*lab*tch and lab*nch*

D65: hue B50R

LCH*Ma: 53 84 325

rgb*Ma: 1.0 0.0 1.0

triangle lightness *t*



%Gamut

u*rel = 119

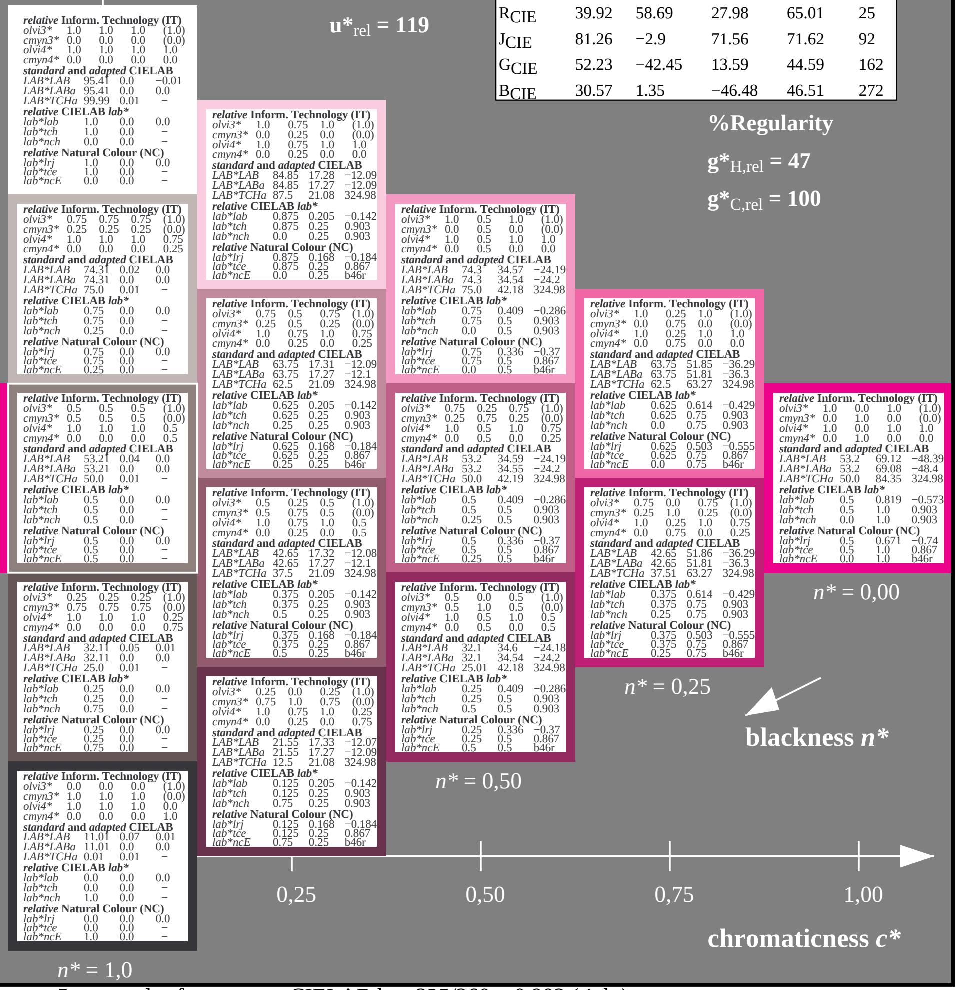
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



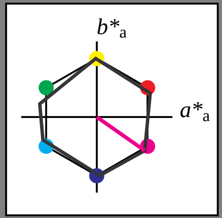
UE500−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 325/360 = 0.903$
*lab*tch and lab*nch*

D65: hue B50R
LCH*Ma: 57 77 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 100$

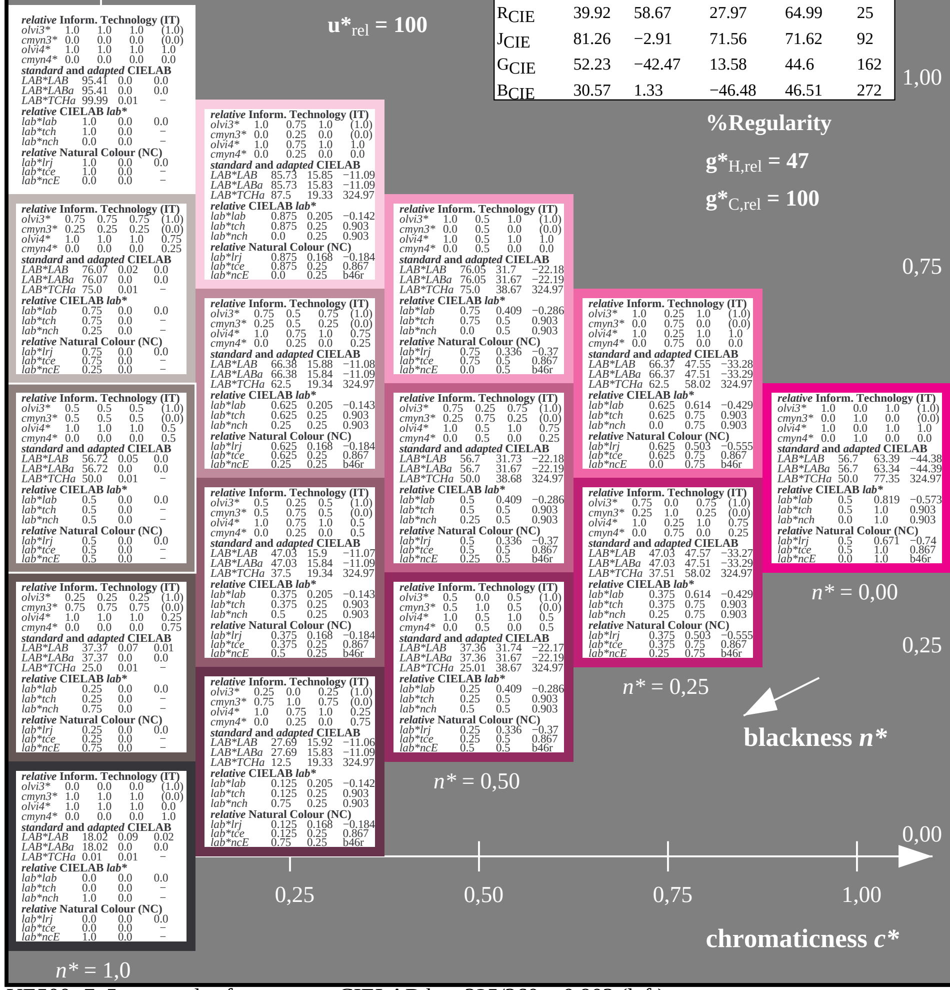
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

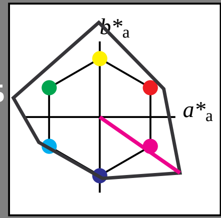
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 325/360 = 0.903$
*lab*tch and lab*nch*

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 149$

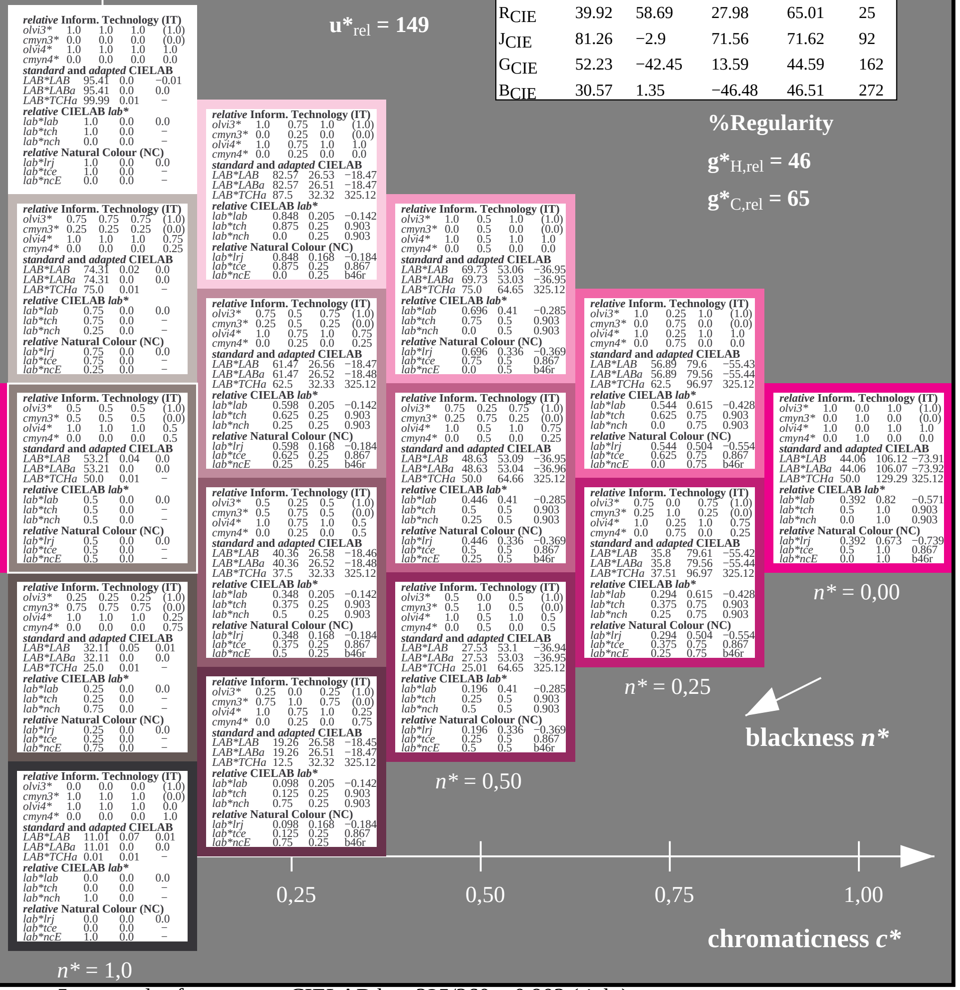
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



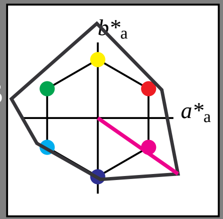
UE500−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 325/360 = 0.903$
lab^*tch and lab^*nch

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

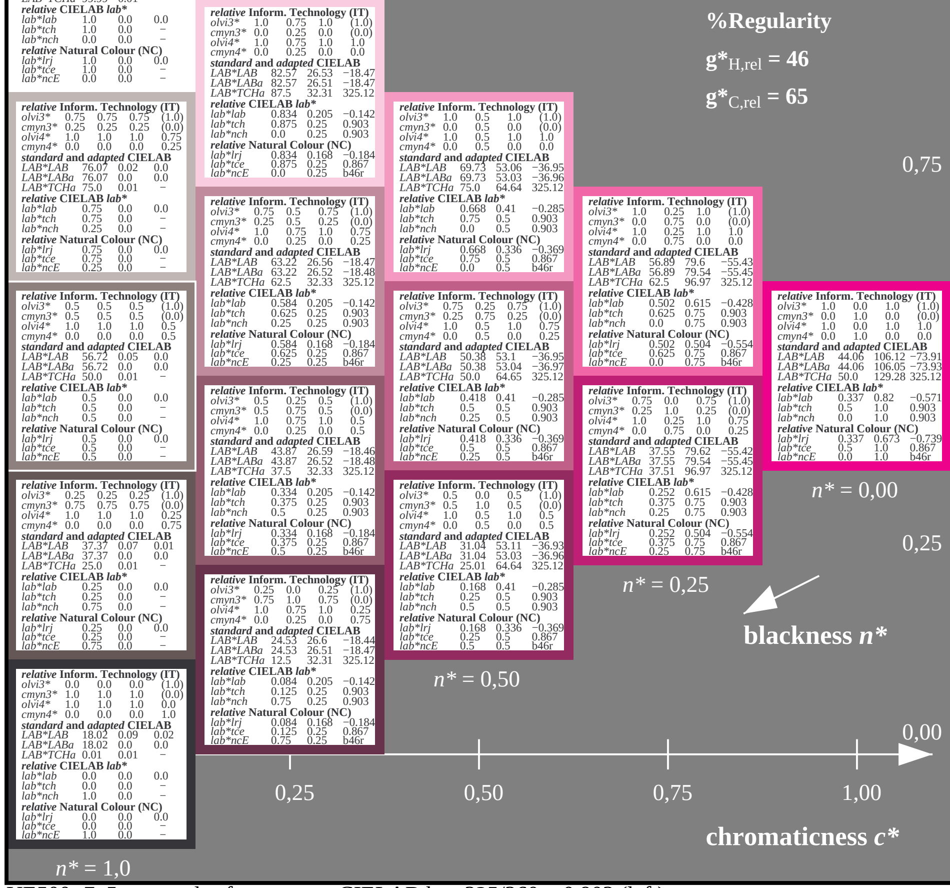
triangle lightness t^*



%Gamut
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

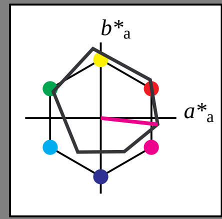
%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 354/360 = 0.982$
lab^*tch and lab^*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

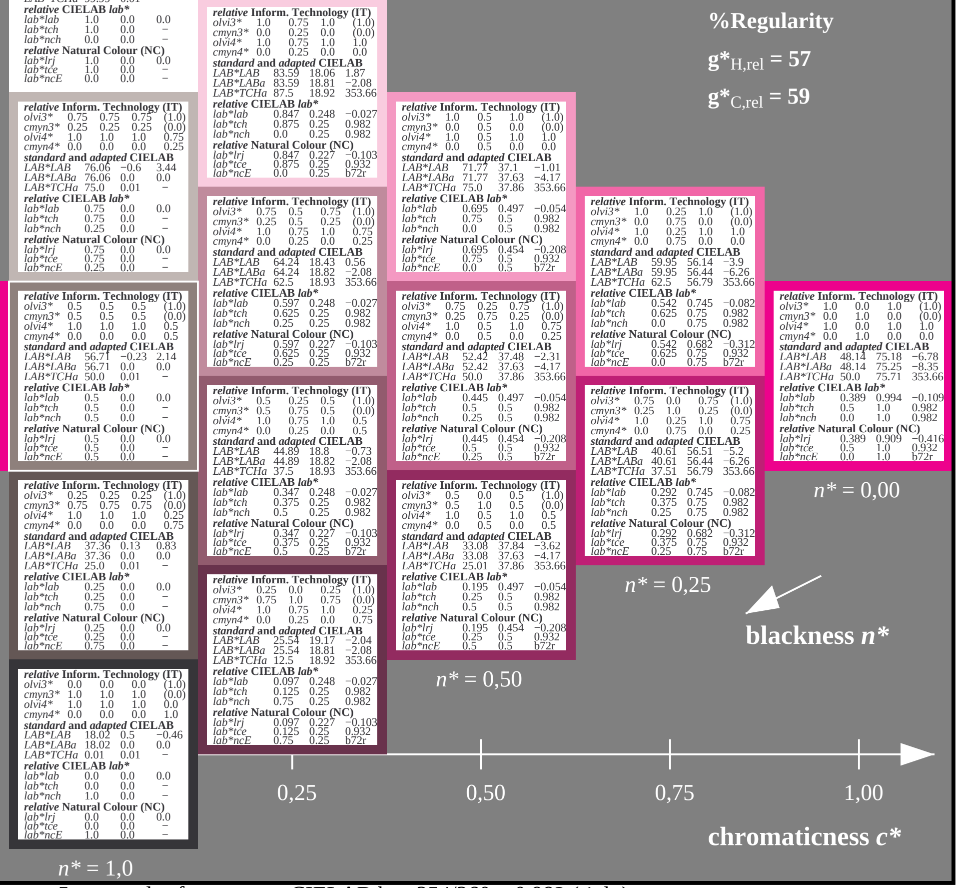
triangle lightness t^*



%Gamut
$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



UE500−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left) 5 step scales for constant CIELAB hue 354/360 = 0.982 (right)

Input: Colorimetric Reflective System NCS18

for hue $h^* = lab^*h = 325/360 = 0.903$

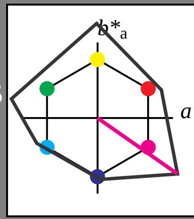
*lab*tch and lab*nch*

D65: hue B50R

LCH*Ma: 44 129 325

rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$

1,00 0,75 0,50 0,25 0,00

relative Inform. Technology
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 −0.01
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
lab*lrj 1.0 0.0 0.0
lab*tce 1.0 0.0 –
lab*ncE 0.0 0.0 –

relative Inform. Technology
olvi3* 0.75 0.75 0.75 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 1.0 1.0 1.0 0.75
cmyn4* 0.0 0.0 0.0 0.25
standard and adapted CIELAB
LAB*LAB 76.07 0.02 0.0
LAB*LABa 76.07 0.0 0.0
LAB*TCHa 75.0 0.01 –
relative CIELAB lab*
lab*lab 0.75 0.0 0.0
lab*tch 0.75 0.0 –
lab*nch 0.25 0.0 –
relative Natural Colour
lab*lrj 0.75 0.0 0.0
lab*tce 0.75 0.0 –
lab*ncE 0.25 0.0 –

relative Inform. Technology
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 56.72 0.05 0.0
LAB*LABa 56.72 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
lab*lrj 0.5 0.0 0.0
lab*tce 0.5 0.0 –
lab*ncE 0.5 0.0 –

relative Inform. Technology
olvi3* 0.25 0.25 0.25 (1.0)
cmyn3* 0.75 0.75 0.75 (0.0)
olvi4* 1.0 1.0 1.0 0.25
cmyn4* 0.0 0.0 0.0 0.75
standard and adapted CIELAB
LAB*LAB 37.37 0.07 0.01
LAB*LABa 37.37 0.0 0.0
LAB*TCHa 25.0 0.01 –
relative CIELAB lab*
lab*lab 0.25 0.0 0.0
lab*tch 0.25 0.0 –
lab*nch 0.75 0.0 –
relative Natural Colour
lab*lrj 0.25 0.0 0.0
lab*tce 0.25 0.0 –
lab*ncE 0.75 0.0 –

relative Inform. Technology
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 0.09 0.02
LAB*LABa 18.02 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
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 –
lab*ncE 1.0 0.0 –

relative Inform. Technology
olvi3* 1.0 0.75 1.0 (1.0)
cmyn3* 0.0 0.25 0.0 (0.0)
olvi4* 1.0 0.75 1.0 1.0
cmyn4* 0.0 0.25 0.0 0.0
standard and adapted CIELAB
LAB*LAB 82.57 26.53 −18.47
LAB*LABa 82.57 26.51 −18.47
LAB*TCHa 87.5 32.31 325.12
relative CIELAB lab*
lab*lab 0.834 0.205 −0.142
lab*tch 0.875 0.25 0.903
lab*nch 0.0 0.25 0.903
relative Natural Colour
lab*lrj 0.834 0.168 −0.184
lab*tce 0.875 0.25 0.867
lab*ncE 0.0 0.25 b46r

relative Inform. Technology
olvi3* 0.75 0.5 0.75 (1.0)
cmyn3* 0.25 0.5 0.25 (0.0)
olvi4* 1.0 0.75 1.0 0.75
cmyn4* 0.0 0.25 0.0 0.25
standard and adapted CIELAB
LAB*LAB 63.22 26.56 −18.47
LAB*LABa 63.22 26.52 −18.48
LAB*TCHa 62.5 32.33 325.12
relative CIELAB lab*
lab*lab 0.584 0.205 −0.142
lab*tch 0.625 0.25 0.903
lab*nch 0.25 0.25 0.903
relative Natural Colour
lab*lrj 0.584 0.168 −0.184
lab*tce 0.625 0.25 0.867
lab*ncE 0.25 0.25 b46r

relative Inform. Technology
olvi3* 0.5 0.25 0.5 (1.0)
cmyn3* 0.5 0.75 0.5 (0.0)
olvi4* 1.0 0.75 1.0 0.5
cmyn4* 0.0 0.25 0.0 0.5
standard and adapted CIELAB
LAB*LAB 43.87 26.59 −18.46
LAB*LABa 43.87 26.52 −18.48
LAB*TCHa 37.5 32.33 325.12
relative CIELAB lab*
lab*lab 0.334 0.205 −0.142
lab*tch 0.375 0.25 0.903
lab*nch 0.5 0.25 0.903
relative Natural Colour
lab*lrj 0.334 0.168 −0.184
lab*tce 0.375 0.25 0.867
lab*ncE 0.5 0.25 b46r

relative Inform. Technology
olvi3* 0.25 0.0 0.25 (1.0)
cmyn3* 0.75 1.0 0.75 (0.0)
olvi4* 1.0 0.75 1.0 0.25
cmyn4* 0.0 0.25 0.0 0.75
standard and adapted CIELAB
LAB*LAB 24.53 26.6 −18.44
LAB*LABa 24.53 26.51 −18.47
LAB*TCHa 12.5 32.31 325.12
relative CIELAB lab*
lab*lab 0.084 0.205 −0.142
lab*tch 0.125 0.25 0.903
lab*nch 0.75 0.25 0.903
relative Natural Colour
lab*lrj 0.084 0.168 −0.184
lab*tce 0.125 0.25 0.867
lab*ncE 0.75 0.25 b46r

relative Inform. Technology
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 69.73 53.06 −36.95
LAB*LABa 69.73 53.03 −36.96
LAB*TCHa 75.0 64.64 325.12
relative CIELAB lab*
lab*lab 0.668 0.41 −0.285
lab*tch 0.75 0.5 0.903
lab*nch 0.0 0.5 0.903
relative Natural Colour
lab*lrj 0.668 0.336 −0.369
lab*tce 0.75 0.5 0.867
lab*ncE 0.0 0.5 b46r

relative Inform. Technology
olvi3* 0.75 0.25 0.75 (1.0)
cmyn3* 0.25 0.75 0.25 (0.0)
olvi4* 1.0 0.5 1.0 0.75
cmyn4* 0.0 0.5 0.0 0.25
standard and adapted CIELAB
LAB*LAB 50.38 53.1 −36.95
LAB*LABa 50.38 53.04 −36.97
LAB*TCHa 50.0 64.65 325.12
relative CIELAB lab*
lab*lab 0.418 0.41 −0.285
lab*tch 0.5 0.5 0.903
lab*nch 0.25 0.5 0.903
relative Natural Colour
lab*lrj 0.418 0.336 −0.369
lab*tce 0.5 0.5 0.867
lab*ncE 0.25 0.5 b46r

relative Inform. Technology
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 31.04 53.11 −36.93
LAB*LABa 31.04 53.03 −36.96
LAB*TCHa 25.01 64.64 325.12
relative CIELAB lab*
lab*lab 0.168 0.41 −0.285
lab*tch 0.25 0.5 0.903
lab*nch 0.5 0.5 0.903
relative Natural Colour
lab*lrj 0.168 0.336 −0.369
lab*tce 0.25 0.5 0.867
lab*ncE 0.5 0.5 b46r

relative Inform. Technology
olvi3* 1.0 0.25 1.0 (1.0)
cmyn3* 0.0 0.75 0.0 (0.0)
olvi4* 1.0 0.25 1.0 1.0
cmyn4* 0.0 0.75 0.0 0.0
standard and adapted CIELAB
LAB*LAB 56.89 79.6 −55.43
LAB*LABa 56.89 79.54 −55.45
LAB*TCHa 62.5 96.97 325.12
relative CIELAB lab*
lab*lab 0.502 0.615 −0.428
lab*tch 0.625 0.75 0.903
lab*nch 0.0 0.75 0.903
relative Natural Colour
lab*lrj 0.502 0.504 −0.554
lab*tce 0.625 0.75 0.867
lab*ncE 0.0 0.75 b46r

relative Inform. Technology
olvi3* 0.75 0.0 0.75 (1.0)
cmyn3* 0.25 1.0 0.25 (0.0)
olvi4* 1.0 0.25 1.0 0.75
cmyn4* 0.0 0.75 0.0 0.25
standard and adapted CIELAB
LAB*LAB 37.55 79.62 −55.42
LAB*LABa 37.55 79.54 −55.45
LAB*TCHa 37.51 96.97 325.12
relative CIELAB lab*
lab*lab 0.252 0.615 −0.428
lab*tch 0.375 0.75 0.903
lab*nch 0.25 0.75 0.903
relative Natural Colour
lab*lrj 0.252 0.504 −0.554
lab*tce 0.375 0.75 0.867
lab*ncE 0.25 0.75 b46r

relative Inform. Technology
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 44.06 106.12 −73.91
LAB*LABa 44.06 106.05 −73.93
LAB*TCHa 50.0 129.28 325.12
relative CIELAB lab*
lab*lab 0.337 0.82 −0.571
lab*tch 0.5 1.0 0.903
lab*nch 0.0 1.0 0.903
relative Natural Colour
lab*lrj 0.337 0.673 −0.739
lab*tce 0.5 1.0 0.867
lab*ncE 0.0 1.0 b46r

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

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System MRS18

for hue $h^* = lab^*h = 322/360 = 0.895$

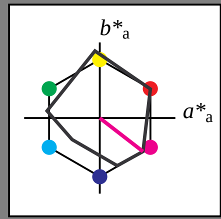
*lab*tch and lab*nch*

D65: hue B50R

LCH*Ma: 35 72 322

rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

relative Inform. Technology
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*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
lab*lrj 1.0 0.0 0.0
lab*tce 1.0 0.0 –
lab*ncE 0.0 0.0 –

relative Inform. Technology
olvi3* 0.75 0.75 0.75 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 1.0 1.0 1.0 0.75
cmyn4* 0.0 0.0 0.0 0.25
standard and adapted CIELAB
LAB*LAB 76.06 −0.6 3.44
LAB*LABa 76.06 0.0 0.0
LAB*TCHa 75.0 0.01 –
relative CIELAB lab*
lab*lab 0.75 0.0 0.0
lab*tch 0.75 0.0 –
lab*nch 0.25 0.0 –
relative Natural Colour
lab*lrj 0.75 0.0 0.0
lab*tce 0.75 0.0 –
lab*ncE 0.25 0.0 –

relative Inform. Technology
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*LABa 56.71 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
lab*lrj 0.5 0.0 0.0
lab*tce 0.5 0.0 –
lab*ncE 0.5 0.0 –

relative Inform. Technology
olvi3* 0.25 0.25 0.25 (1.0)
cmyn3* 0.75 0.75 0.75 (0.0)
olvi4* 1.0 1.0 1.0 0.25
cmyn4* 0.0 0.0 0.0 0.75
standard and adapted CIELAB
LAB*LAB 37.36 0.13 0.83
LAB*LABa 37.36 0.0 0.0
LAB*TCHa 25.0 0.01 –
relative CIELAB lab*
lab*lab 0.25 0.0 0.0
lab*tch 0.25 0.0 –
lab*nch 0.75 0.0 –
relative Natural Colour
lab*lrj 0.25 0.0 0.0
lab*tce 0.25 0.0 –
lab*ncE 0.75 0.0 –

relative Inform. Technology
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*LABa 18.02 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
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 –
lab*ncE 1.0 0.0 –

relative Inform. Technology
olvi3* 1.0 0.75 1.0 (1.0)
cmyn3* 0.0 0.25 0.0 (0.0)
olvi4* 1.0 0.75 1.0 1.0
cmyn4* 0.0 0.25 0.0 0.0
standard and adapted CIELAB
LAB*LAB 80.29 13.6 −7.31
LAB*LABa 80.29 14.29 −11.05
LAB*TCHa 87.5 18.07 322.25
relative CIELAB lab*
lab*lab 0.805 0.198 −0.152
lab*tch 0.875 0.25 0.895
lab*nch 0.0 0.25 0.895
relative Natural Colour
lab*lrj 0.805 0.162 −0.189
lab*tce 0.875 0.25 0.862
lab*ncE 0.0 0.25 b44r

relative Inform. Technology
olvi3* 0.75 0.5 0.75 (1.0)
cmyn3* 0.25 0.5 0.25 (0.0)
olvi4* 1.0 0.75 1.0 0.75
cmyn4* 0.0 0.25 0.0 0.25
standard and adapted CIELAB
LAB*LAB 60.94 13.97 −8.62
LAB*LABa 60.94 14.29 −11.06
LAB*TCHa 62.5 18.08 322.25
relative CIELAB lab*
lab*lab 0.555 0.198 −0.152
lab*tch 0.625 0.25 0.895
lab*nch 0.25 0.25 0.895
relative Natural Colour
lab*lrj 0.555 0.162 −0.189
lab*tce 0.625 0.25 0.862
lab*ncE 0.25 0.25 b44r

relative Inform. Technology
olvi3* 0.5 0.25 0.5 (1.0)
cmyn3* 0.5 0.75 0.5 (0.0)
olvi4* 1.0 0.75 1.0 0.5
cmyn4* 0.0 0.25 0.0 0.5
standard and adapted CIELAB
LAB*LAB 41.59 14.34 −9.93
LAB*LABa 41.59 14.29 −11.06
LAB*TCHa 37.5 18.08 322.25
relative CIELAB lab*
lab*lab 0.305 0.198 −0.152
lab*tch 0.375 0.25 0.895
lab*nch 0.5 0.25 0.895
relative Natural Colour
lab*lrj 0.305 0.162 −0.189
lab*tce 0.375 0.25 0.862
lab*ncE 0.5 0.25 b44r

relative Inform. Technology
olvi3* 0.25 0.0 0.25 (1.0)
cmyn3* 0.75 1.0 0.75 (0.0)
olvi4* 1.0 0.75 1.0 0.25
cmyn4* 0.0 0.25 0.0 0.75
standard and adapted CIELAB
LAB*LAB 22.25 14.71 −11.23
LAB*LABa 22.25 14.29 −11.05
LAB*TCHa 12.5 18.07 322.25
relative CIELAB lab*
lab*lab 0.055 0.198 −0.152
lab*tch 0.125 0.25 0.895
lab*nch 0.75 0.25 0.895
relative Natural Colour
lab*lrj 0.055 0.162 −0.189
lab*tce 0.125 0.25 0.862
lab*ncE 0.75 0.25 b44r

relative Inform. Technology
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 65.17 28.18 −19.4
LAB*LABa 65.17 28.58 −22.12
LAB*TCHa 75.0 36.15 322.25
relative CIELAB lab*
lab*lab 0.609 0.395 −0.305
lab*tch 0.75 0.5 0.895
lab*nch 0.0 0.5 0.895
relative Natural Colour
lab*lrj 0.609 0.324 −0.38
lab*tce 0.75 0.5 0.862
lab*ncE 0.0 0.5 b44r

relative Inform. Technology
olvi3* 0.75 0.25 0.75 (1.0)
cmyn3* 0.25 0.75 0.25 (0.0)
olvi4* 1.0 0.5 1.0 0.75
cmyn4* 0.0 0.5 0.0 0.25
standard and adapted CIELAB
LAB*LAB 45.83 28.56 −20.71
LAB*LABa 45.83 28.59 −22.12
LAB*TCHa 50.0 36.15 322.25
relative CIELAB lab*
lab*lab 0.359 0.395 −0.305
lab*tch 0.5 0.5 0.895
lab*nch 0.25 0.5 0.895
relative Natural Colour
lab*lrj 0.359 0.324 −0.38
lab*tce 0.5 0.5 0.862
lab*ncE 0.25 0.5 b44r

relative Inform. Technology
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 26.48 28.92 −22.01
LAB*LABa 26.48 28.58 −22.12
LAB*TCHa 25.01 36.15 322.25
relative CIELAB lab*
lab*lab 0.109 0.395 −0.305
lab*tch 0.25 0.5 0.895
lab*nch 0.5 0.5 0.895
relative Natural Colour
lab*lrj 0.109 0.324 −0.38
lab*tce 0.25 0.5 0.862
lab*ncE 0.5 0.5 b44r

relative Inform. Technology
olvi3* 1.0 0.25 1.0 (1.0)
cmyn3* 0.0 0.75 0.0 (0.0)
olvi4* 1.0 0.25 1.0 1.0
cmyn4* 0.0 0.75 0.0 0.0
standard and adapted CIELAB
LAB*LAB 50.06 42.76 −31.49
LAB*LABa 50.06 42.87 −33.19
LAB*TCHa 62.5 54.22 322.25
relative CIELAB lab*
lab*lab 0.414 0.593 −0.458
lab*tch 0.625 0.75 0.895
lab*nch 0.0 0.75 0.895
relative Natural Colour
lab*lrj 0.414 0.486 −0.57
lab*tce 0.625 0.75 0.862
lab*ncE 0.0 0.75 b44r

relative Inform. Technology
olvi3* 0.75 0.0 0.75 (1.0)
cmyn3* 0.25 1.0 0.25 (0.0)
olvi4* 1.0 0.25 1.0 0.75
cmyn4* 0.0 0.75 0.0 0.25
standard and adapted CIELAB
LAB*LAB 30.72 43.13 −32.79
LAB*LABa 30.72 42.87 −33.19
LAB*TCHa 37.51 54.22 322.25
relative CIELAB lab*
lab*lab 0.164 0.593 −0.458
lab*tch 0.375 0.75 0.895
lab*nch 0.25 0.75 0.895
relative Natural Colour
lab*lrj 0.164 0.486 −0.57
lab*tce 0.375 0.75 0.862
lab*ncE 0.25 0.75 b44r

relative Inform. Technology
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 34.95 57.34 −43.57
LAB*LABa 34.95 57.16 −44.25
LAB*TCHa 50.0 72.29 322.25
relative CIELAB lab*
lab*lab 0.219 0.791 −0.611
lab*tch 0.5 1.0 0.895
lab*nch 0.0 1.0 0.895
relative Natural Colour
lab*lrj 0.219 0.648 −0.76
lab*tce 0.5 1.0 0.862
lab*ncE 0.0 1.0 b44r

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

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

UE500−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 322/360 = 0.895 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 325/360 = 0.903$

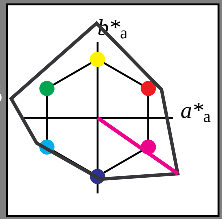
*lab*tch and lab*nch*

D65: hue B50R

LCH*Ma: 44 129 325

rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

u^*_{rel} = 136

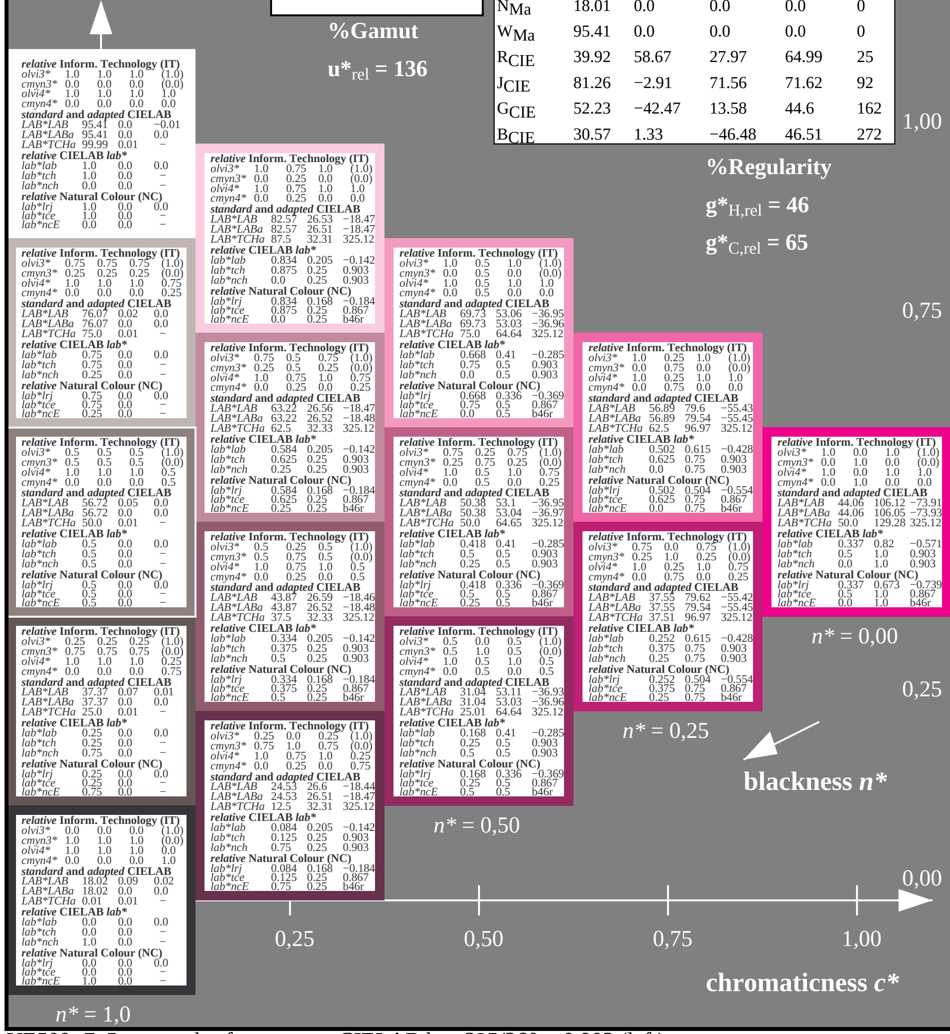
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 354/360 = 0.982$

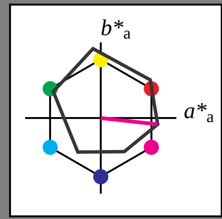
*lab*tch and lab*nch*

D65: hue M

LCH*Ma: 48 76 354

rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

u^*_{rel} = 93

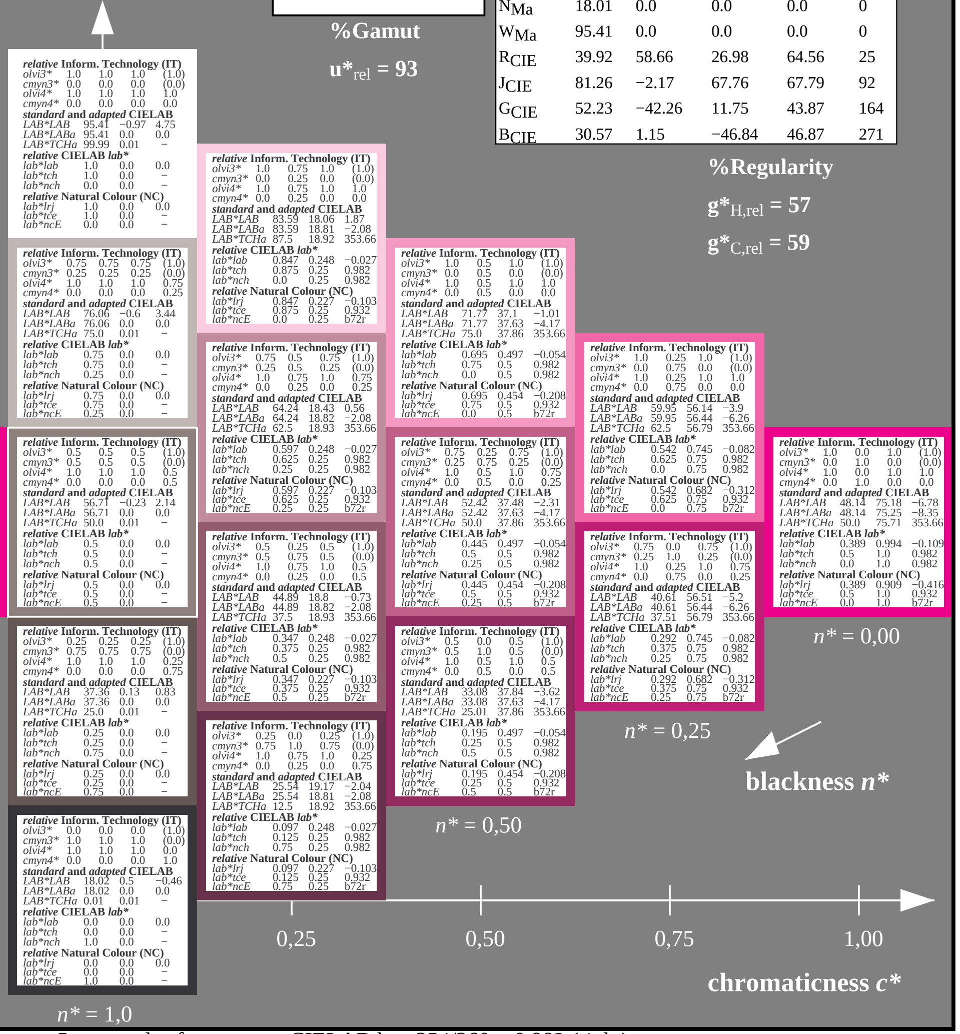
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



UE500−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

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

Input: Colorimetric Reflective System NCS18

for hue $h^* = lab^*h = 325/360 = 0.903$

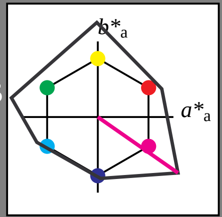
*lab*tch and lab*nch*

D65: hue B50R

LCH*Ma: 44 129 325

rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 136$

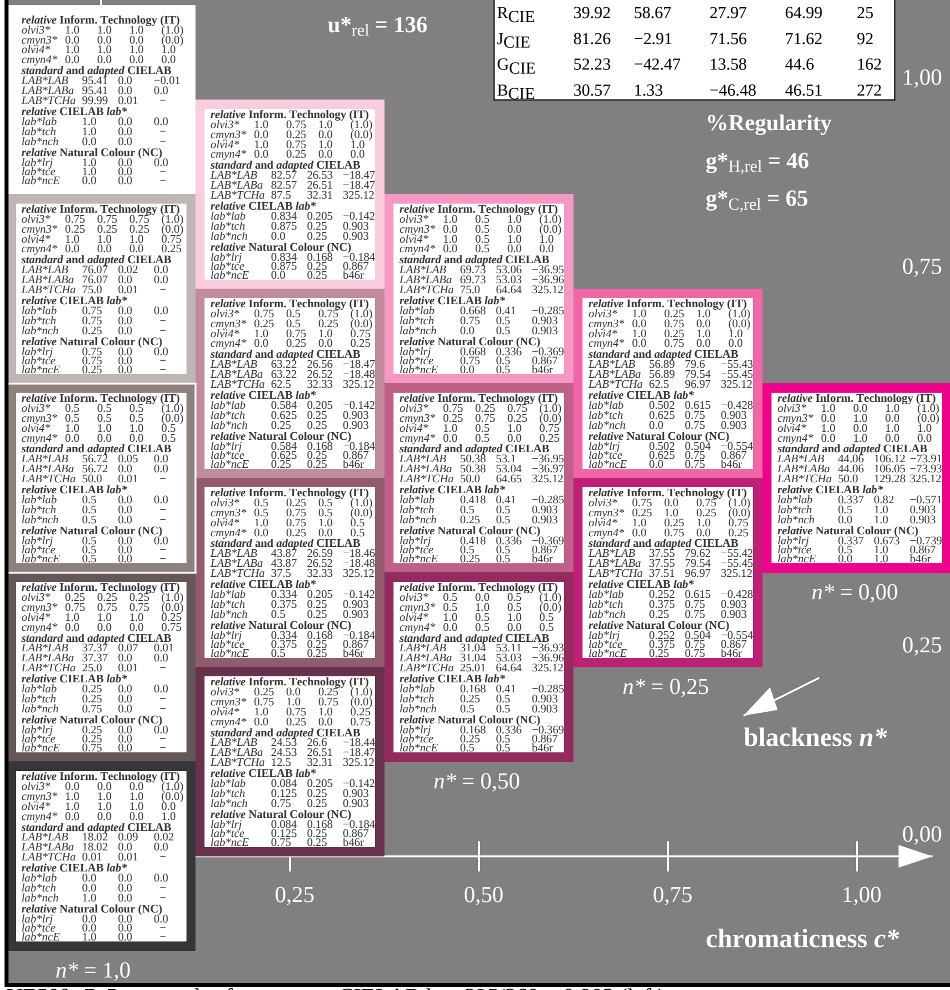
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System MRS18a

for hue $h^* = lab^*h = 323/360 = 0.896$

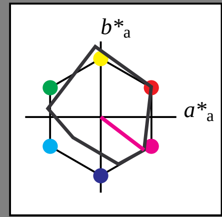
*lab*tch and lab*nch*

D65: hue B50R

LCH*Ma: 35 72 323

rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 92$

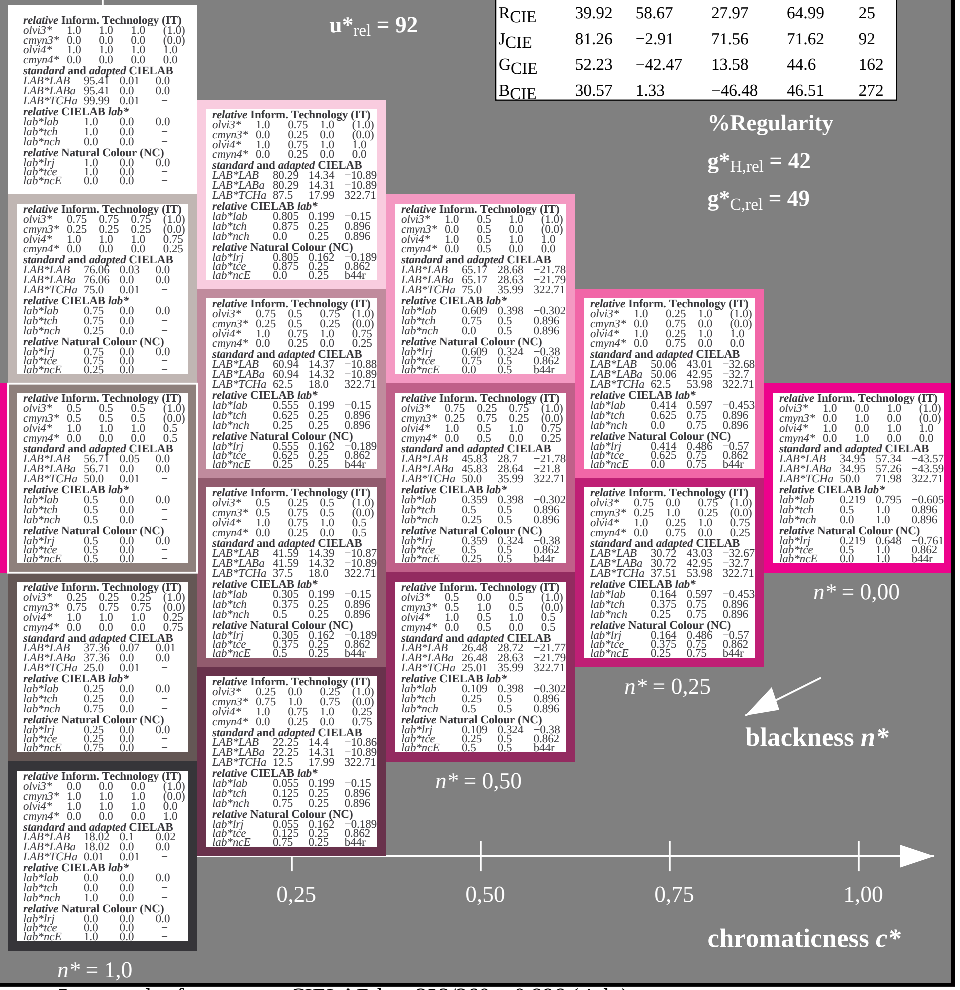
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



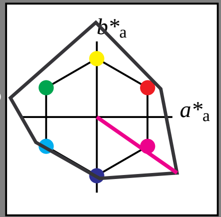
UE500−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 323/360 = 0.896 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 325/360 = 0.903$
*lab*tch* and *lab*nch*

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 136$

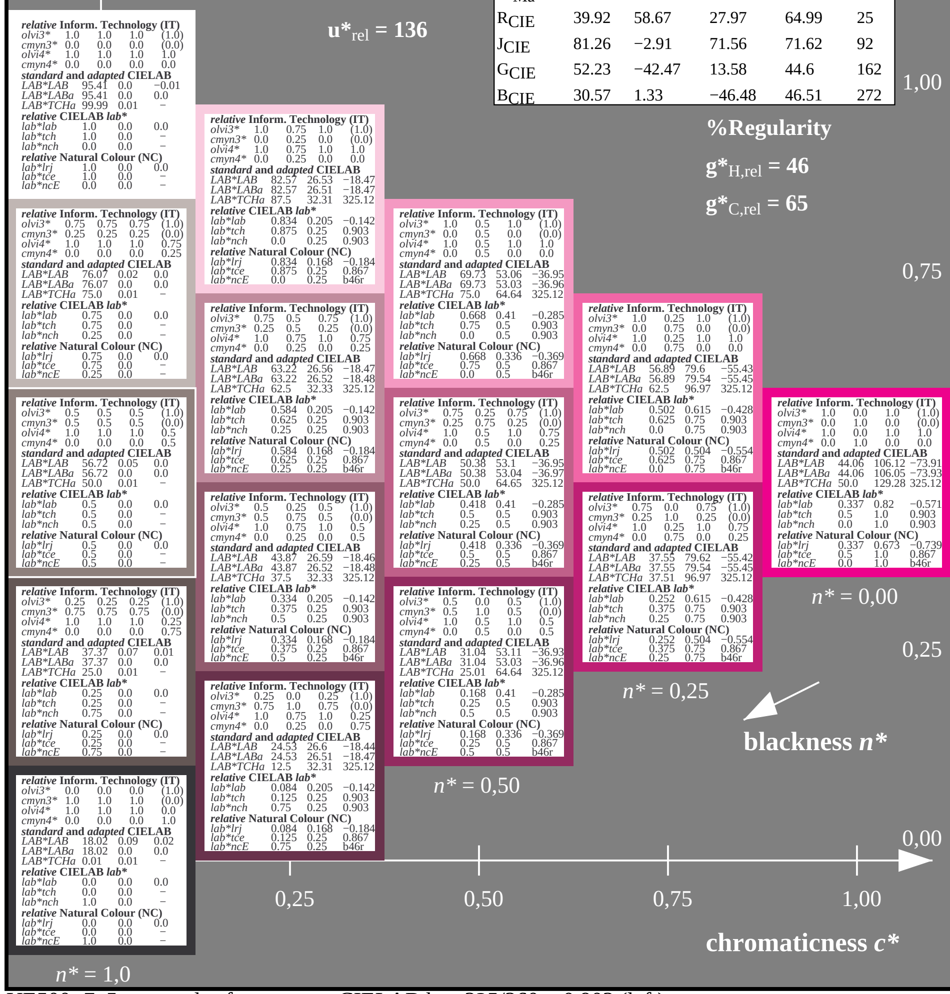
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

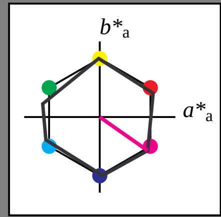
$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 325/360 = 0.903$
*lab*tch* and *lab*nch*

D65: hue B50R
LCH*Ma: 57 77 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 100$

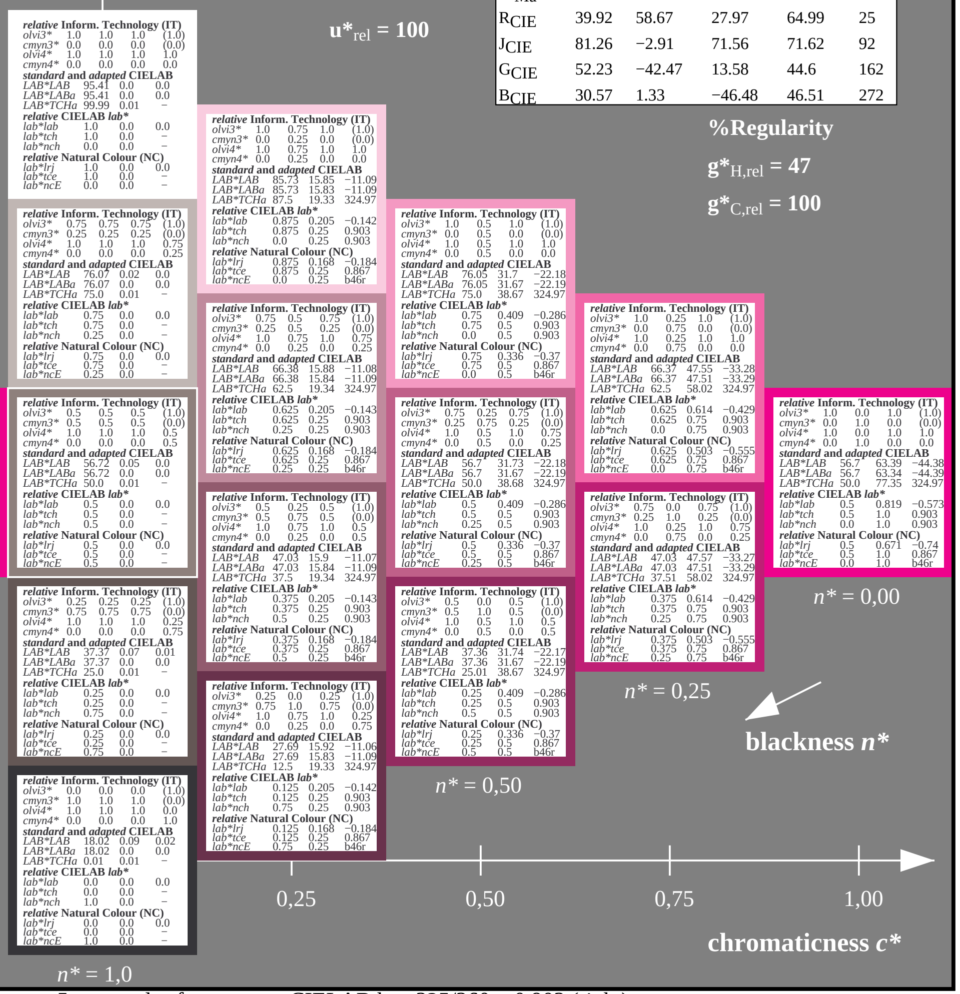
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



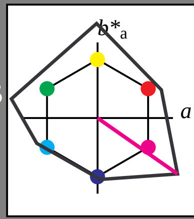
UE500−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System NCS18
for hue *h = *lab*h* = 325/360 = 0.903**
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness *t*



%Gamut

u^*_{rel} = 136

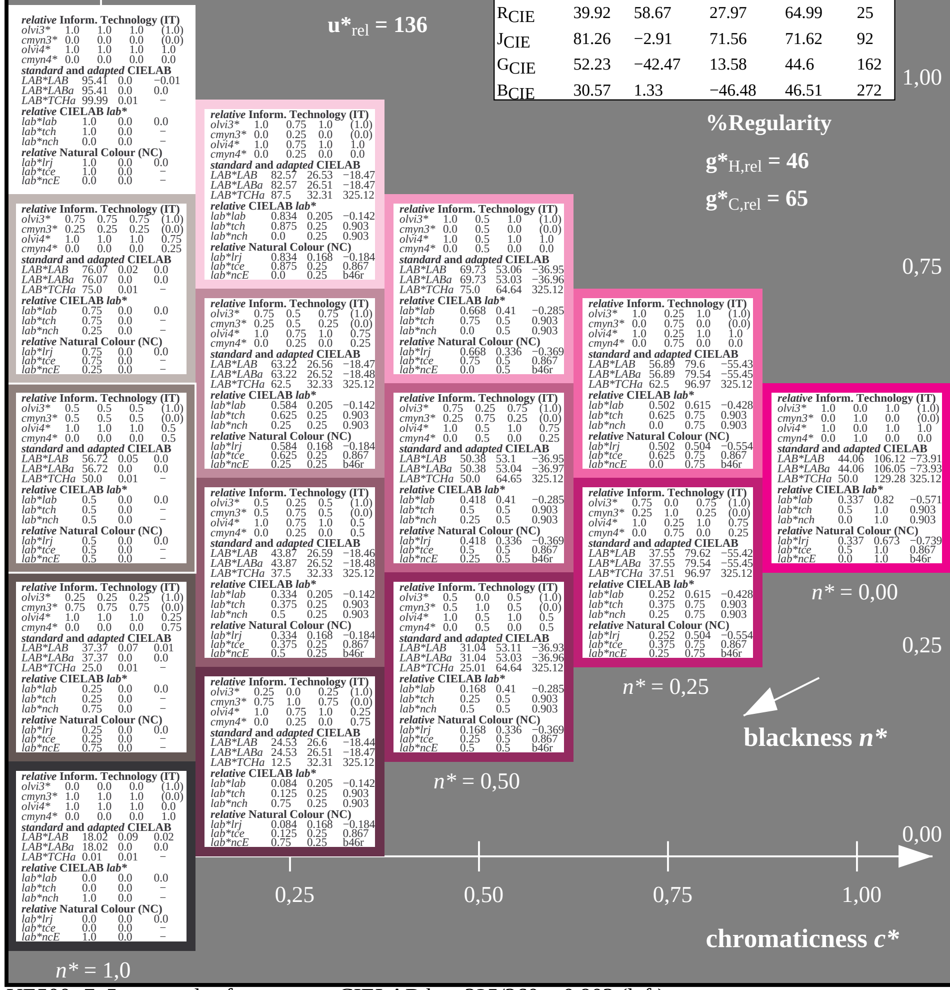
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

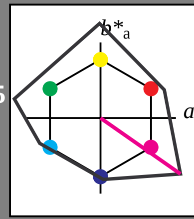
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NCS18
for hue *h = *lab*h* = 325/360 = 0.903**
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness *t*



%Gamut

u^*_{rel} = 136

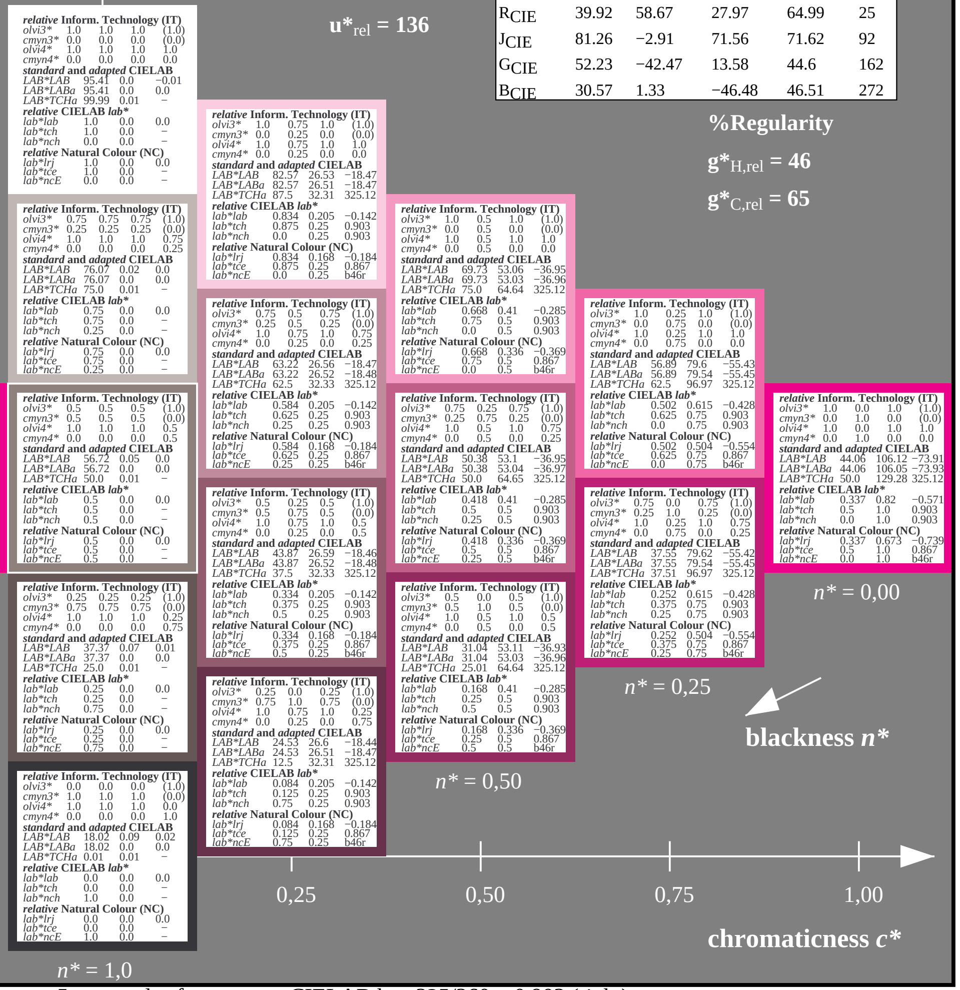
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



UE500−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System NCS18

for hue $h^* = lab^*h = 325/360 = 0.903$

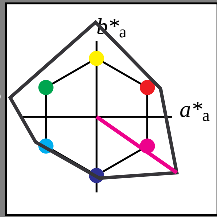
*lab*tch* and *lab*nch*

D65: hue B50R

LCH*Ma: 44 129 325

rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 136$

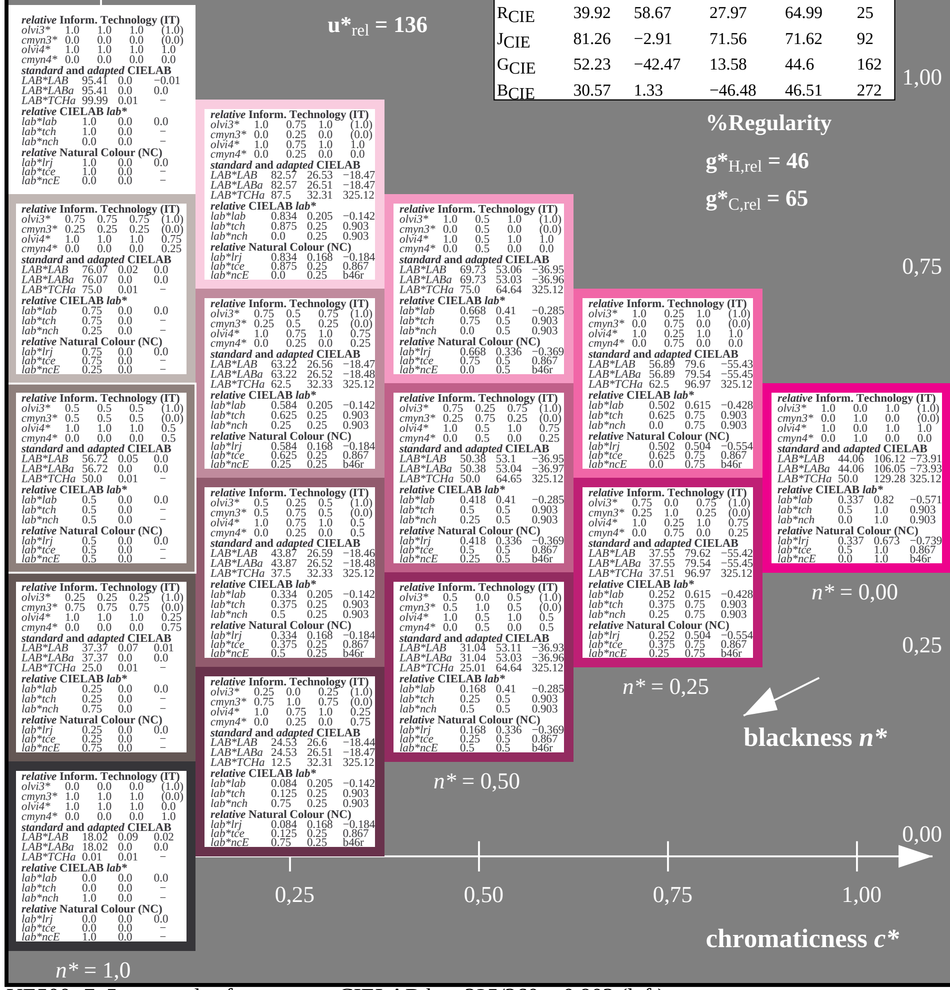
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System NRS11

for hue $h^* = lab^*h = 325/360 = 0.903$

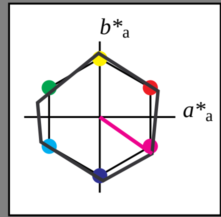
*lab*tch* and *lab*nch*

D65: hue B50R

LCH*Ma: 53 84 325

rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 119$

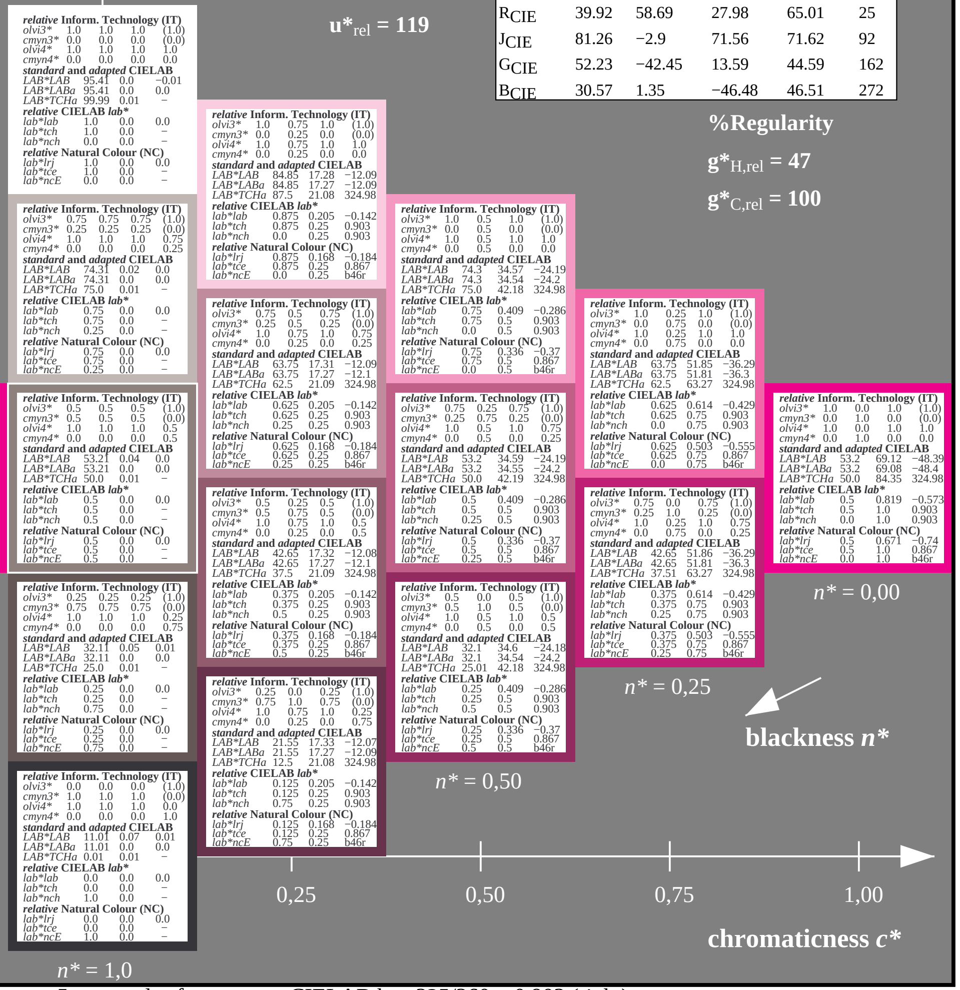
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

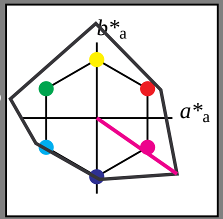
$g^*_{C,rel} = 100$



UE500−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 325/360 = 0.903$
*lab*tch and lab*nch*

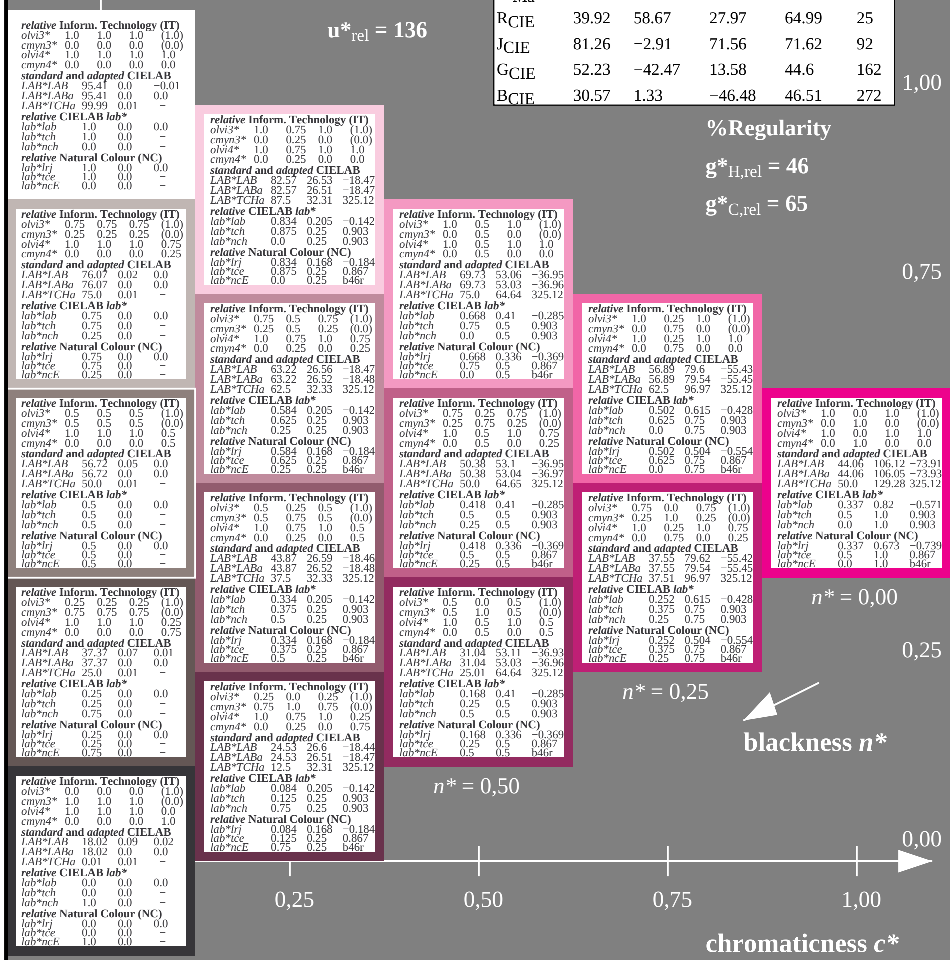


D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0
triangle lightness t^*

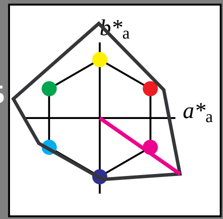
%Gamut
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 325/360 = 0.903$
*lab*tch and lab*nch*

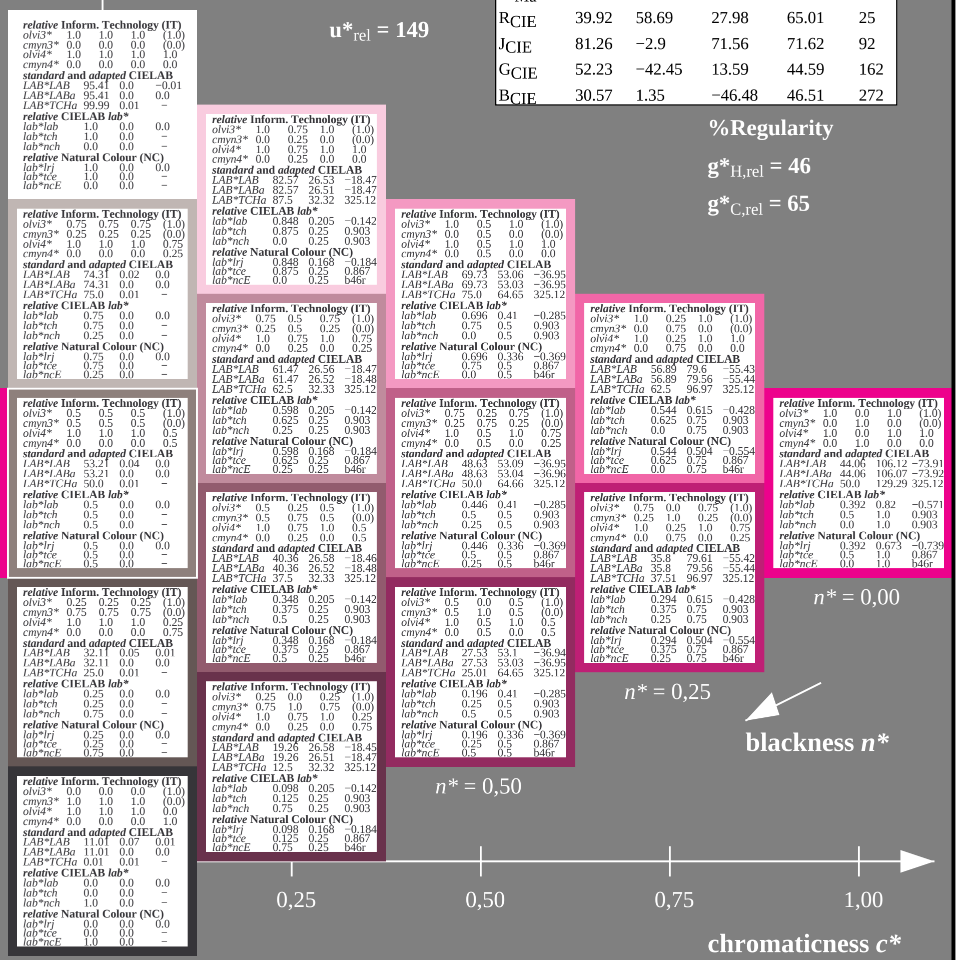


D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0
triangle lightness t^*

%Gamut
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



UE500−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System NRS11

for hue $h^* = lab^*h = 325/360 = 0.903$

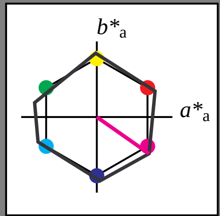
*lab*tch* and *lab*nch*

D65: hue B50R

LCH*Ma: 53 84 325

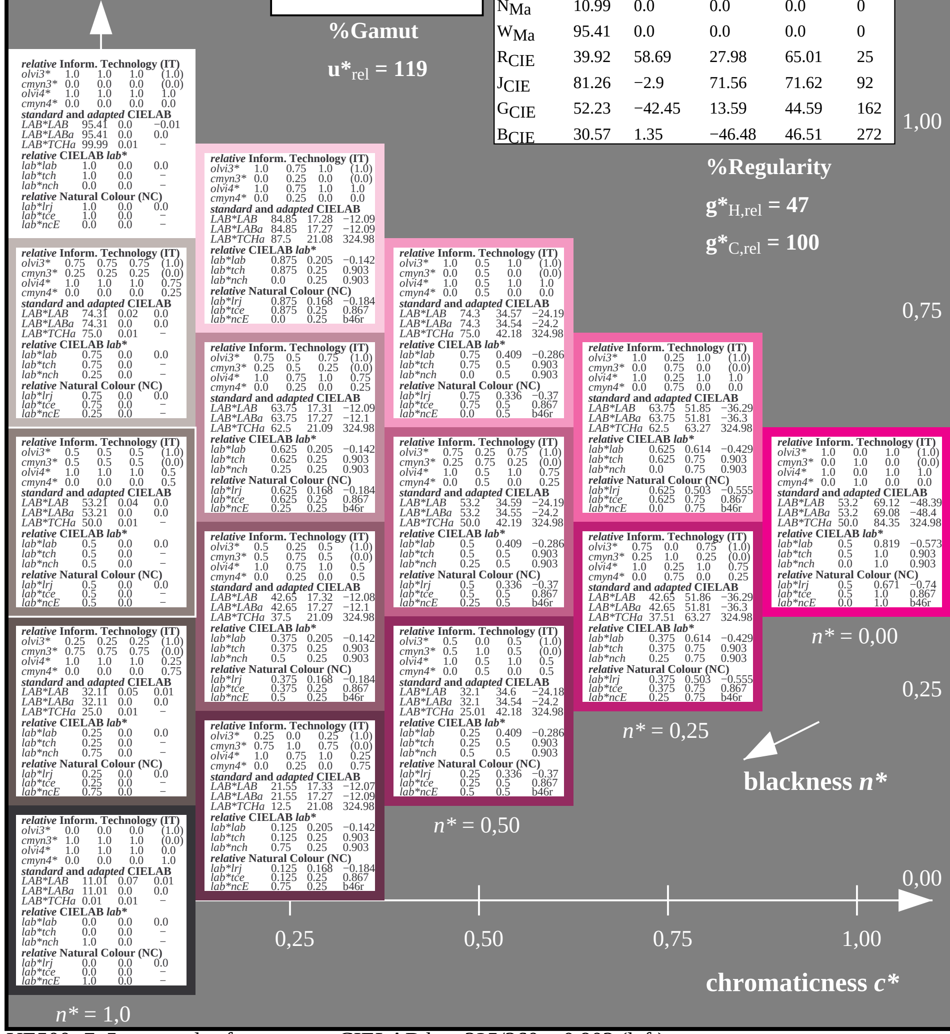
rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272



Output: Colorimetric Reflective System ORS18

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

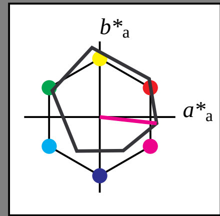
*lab*tch* and *lab*nch*

D65: hue M

LCH*Ma: 48 76 354

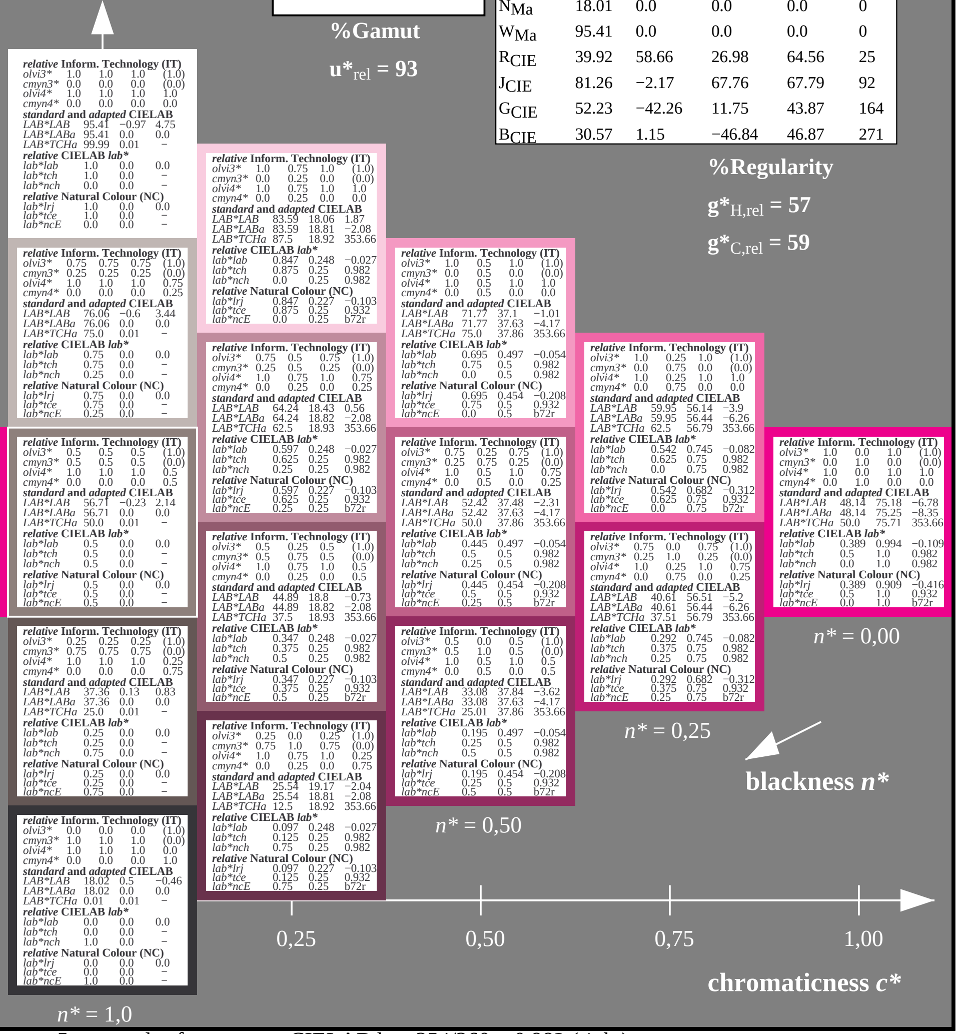
rgb*Ma: 1.0 0.0 1.0

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	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



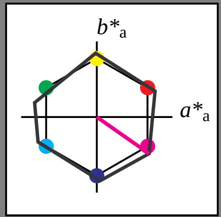
UE500−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

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

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 53 84 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 119$

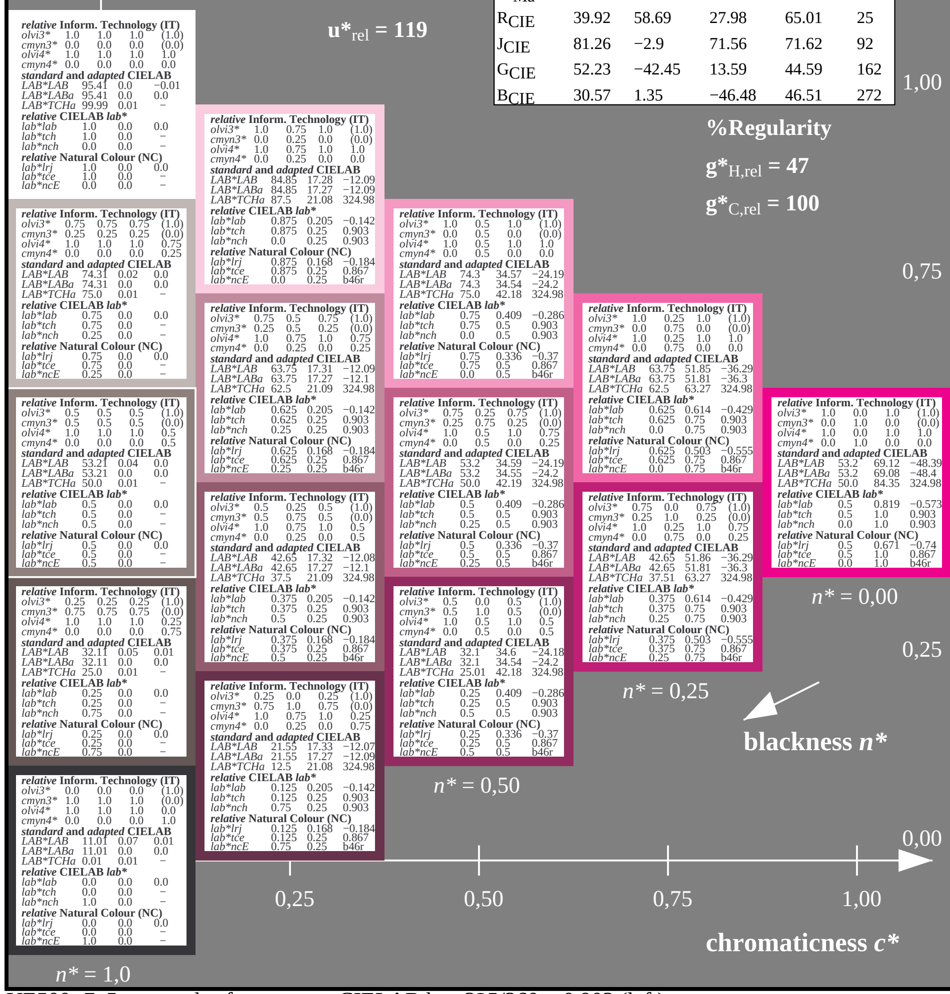
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

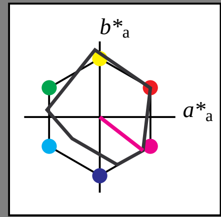
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 322/360 = 0.895$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 322
rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 91$

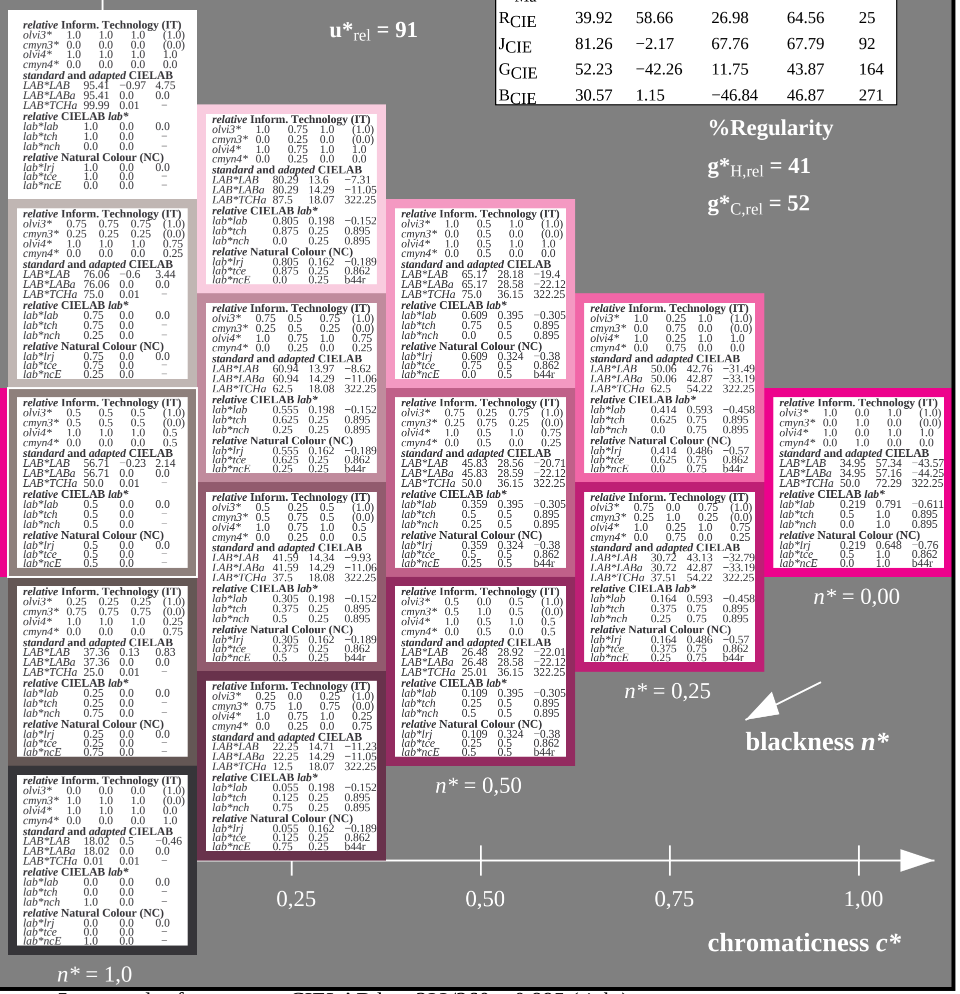
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



UE500−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 322/360 = 0.895 (right)

Input: Colorimetric Reflective System NRS11

for hue $h^* = lab^*h = 325/360 = 0.903$

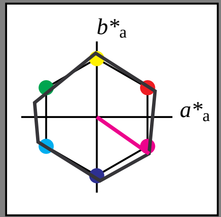
lab*tch* and *lab*nch

D65: hue B50R

LCH*Ma: 53 84 325

rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

1,00 0,75 0,50 0,25 0,00

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

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System TRS18

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

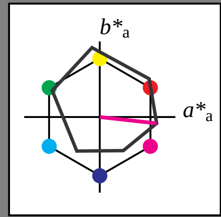
lab*tch* and *lab*nch

D65: hue M

LCH*Ma: 48 76 354

rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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

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

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

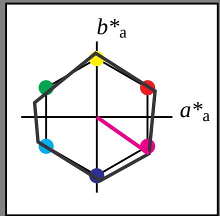
UE500−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

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

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch and lab*nch

D65: hue B50R
LCH*Ma: 53 84 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*

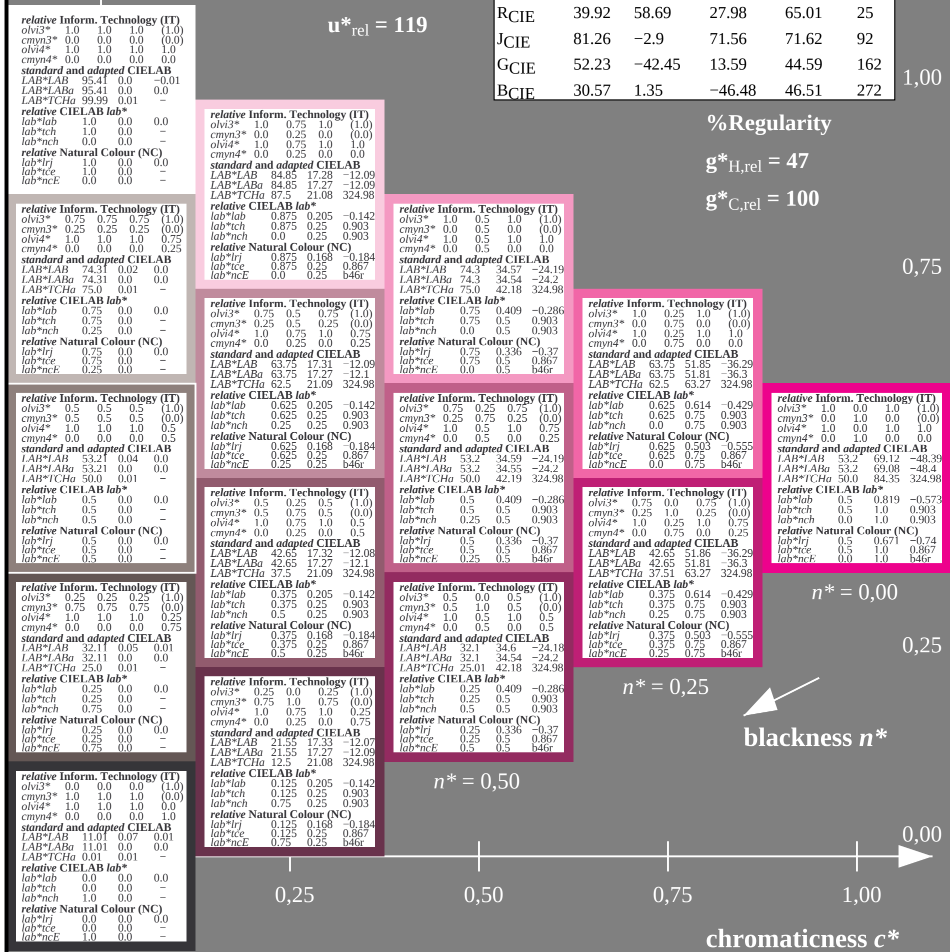


%Gamut
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

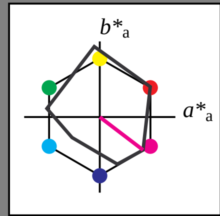
%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 323/360 = 0.896$
lab*tch and lab*nch

D65: hue B50R
LCH*Ma: 35 72 323
rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*

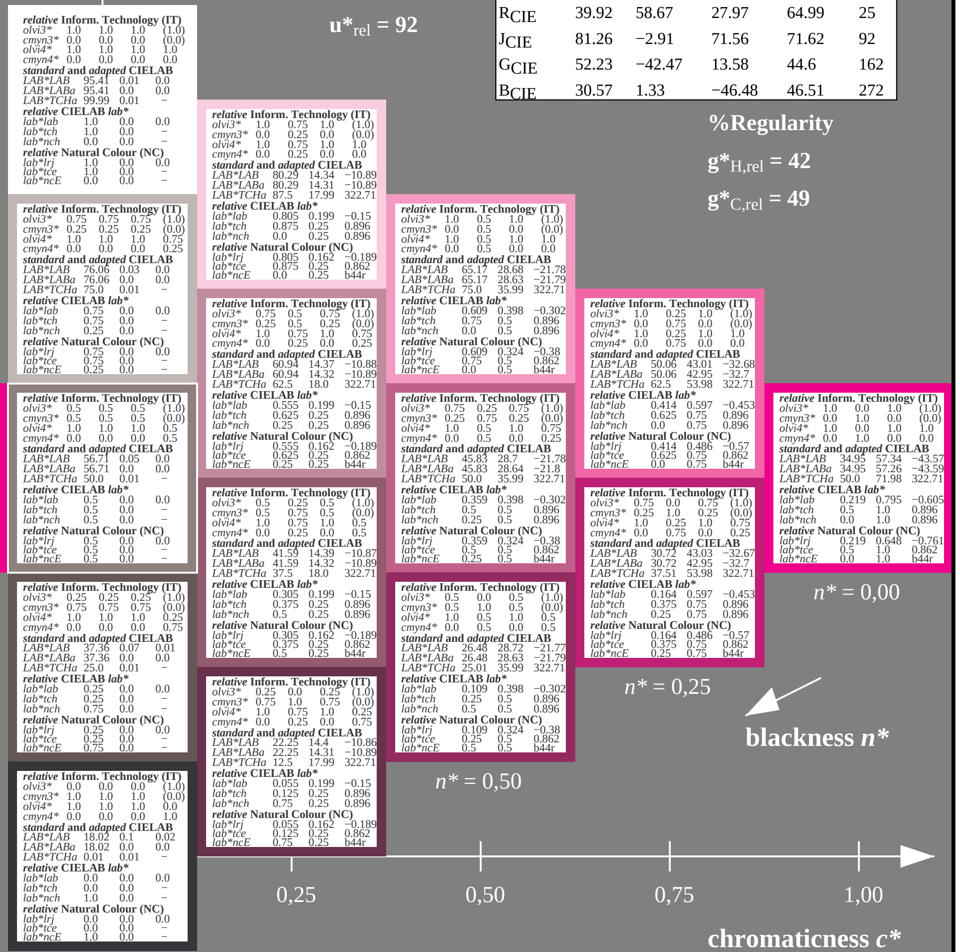


%Gamut
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$



UE500−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 323/360 = 0.896 (right)

Input: Colorimetric Reflective System NRS11

for hue $h^* = lab^*h = 325/360 = 0.903$

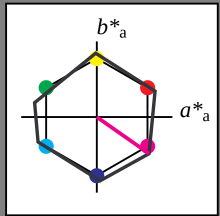
*lab*tch* and *lab*nch*

D65: hue B50R

LCH*Ma: 53 84 325

rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

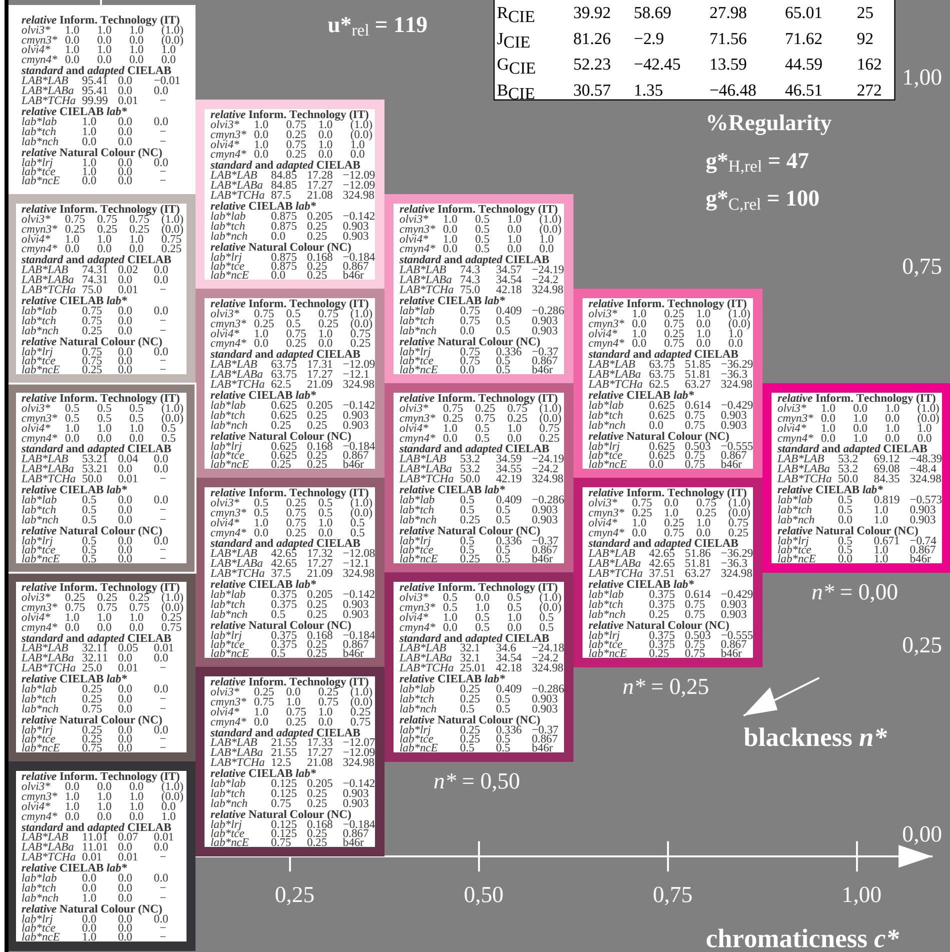
%Gamut

u^*_{rel} = 119

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NRS18

for hue $h^* = lab^*h = 325/360 = 0.903$

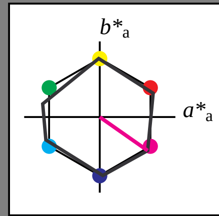
*lab*tch* and *lab*nch*

D65: hue B50R

LCH*Ma: 57 77 325

rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

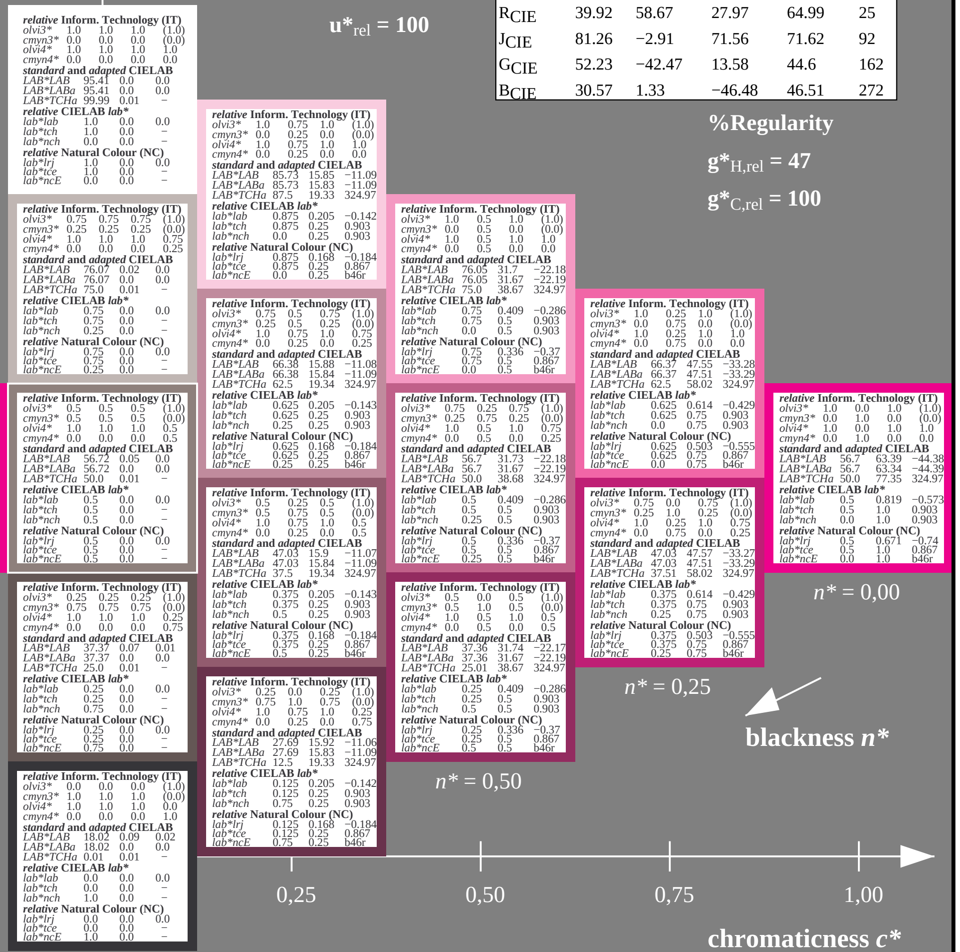
%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

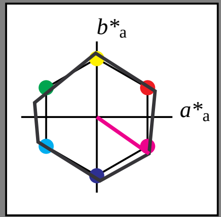


UE500−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 325/360 = 0.903$
*lab*tch and lab*nch*

D65: hue B50R
LCH*Ma: 53 84 325
rgb*Ma: 1.0 0.0 1.0
triangle lightness t*

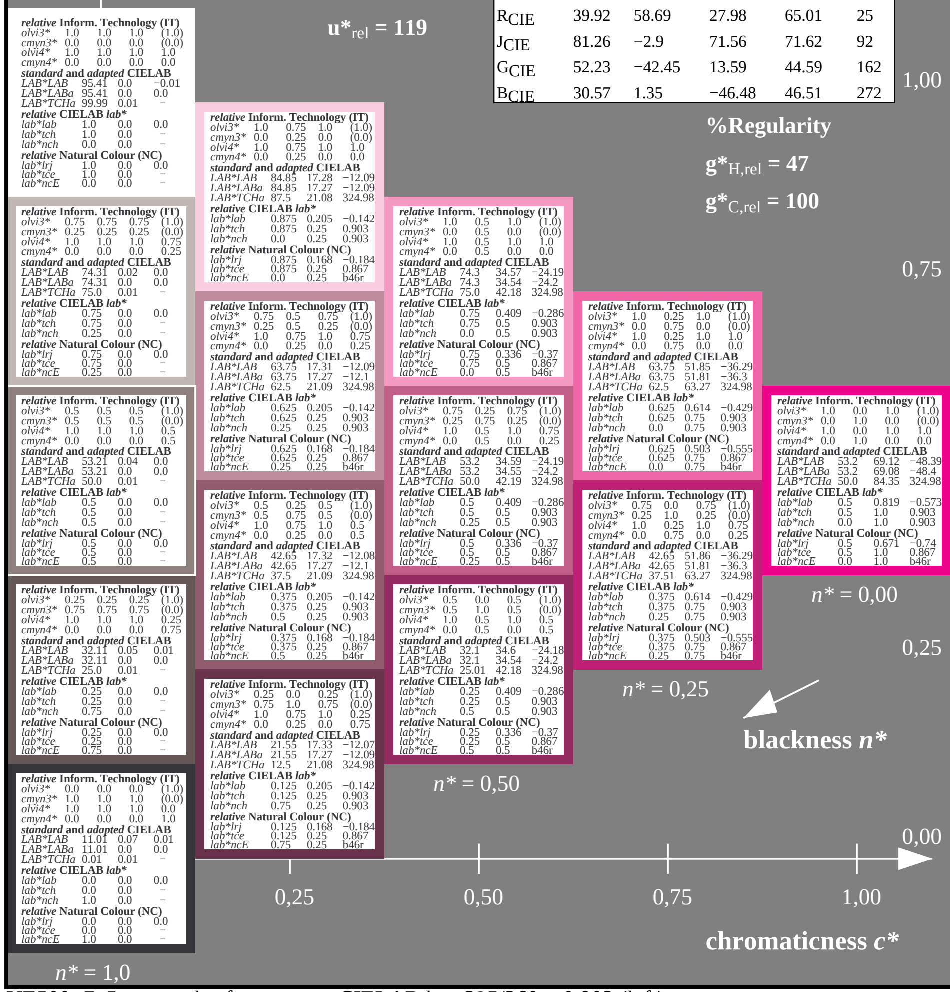


%Gamut
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data

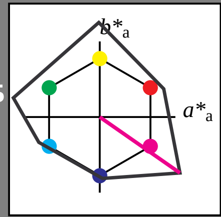
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 325/360 = 0.903$
*lab*tch and lab*nch*

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0
triangle lightness t*

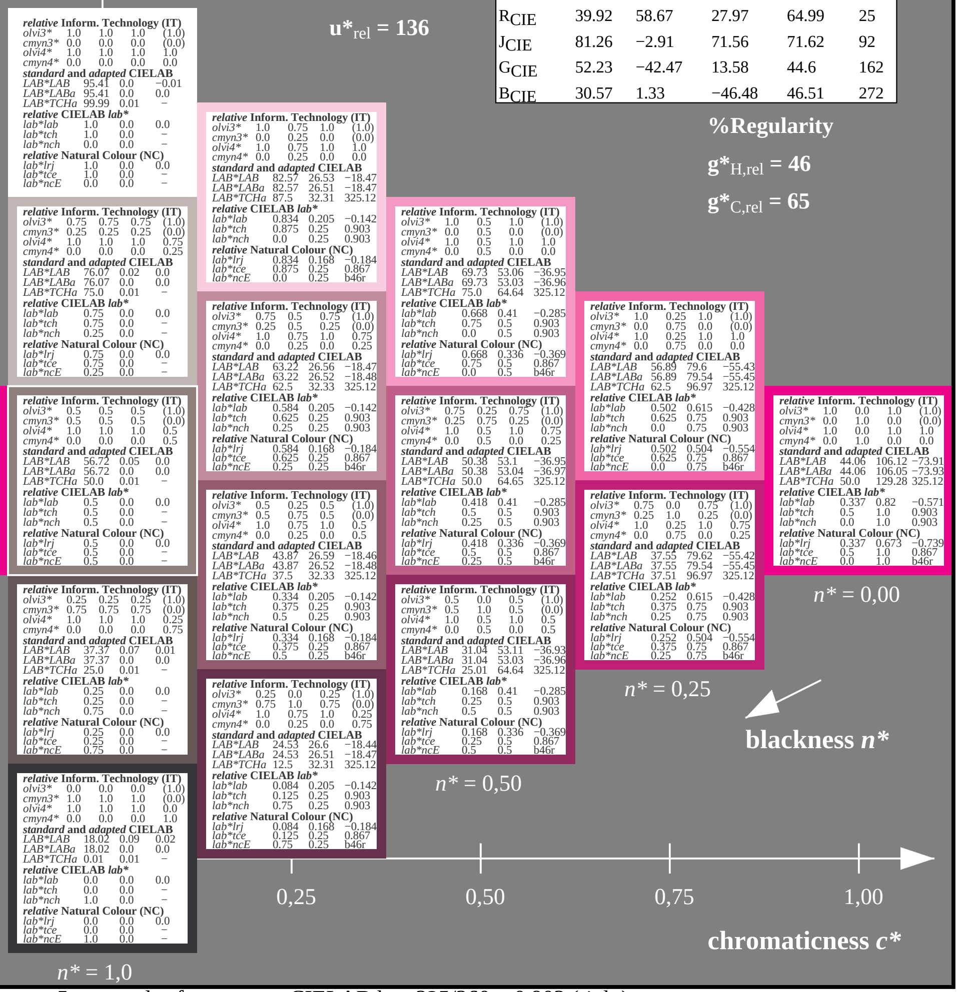


%Gamut
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



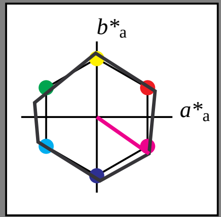
UE500−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System NRS11
for hue *h = *lab*h* = 325/360 = 0.903**
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 53 84 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness *t**



%Gamut

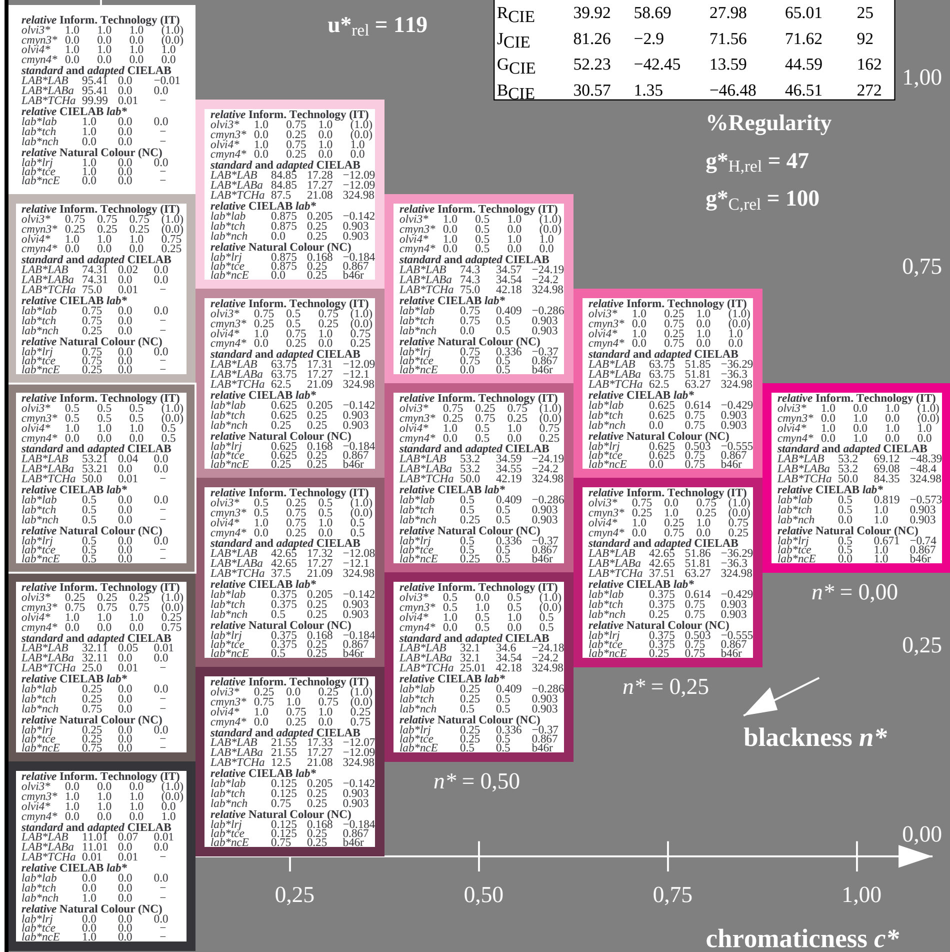
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

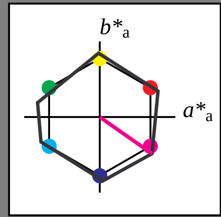
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NRS11
for hue *h = *lab*h* = 325/360 = 0.903**
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 53 84 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness *t**



%Gamut

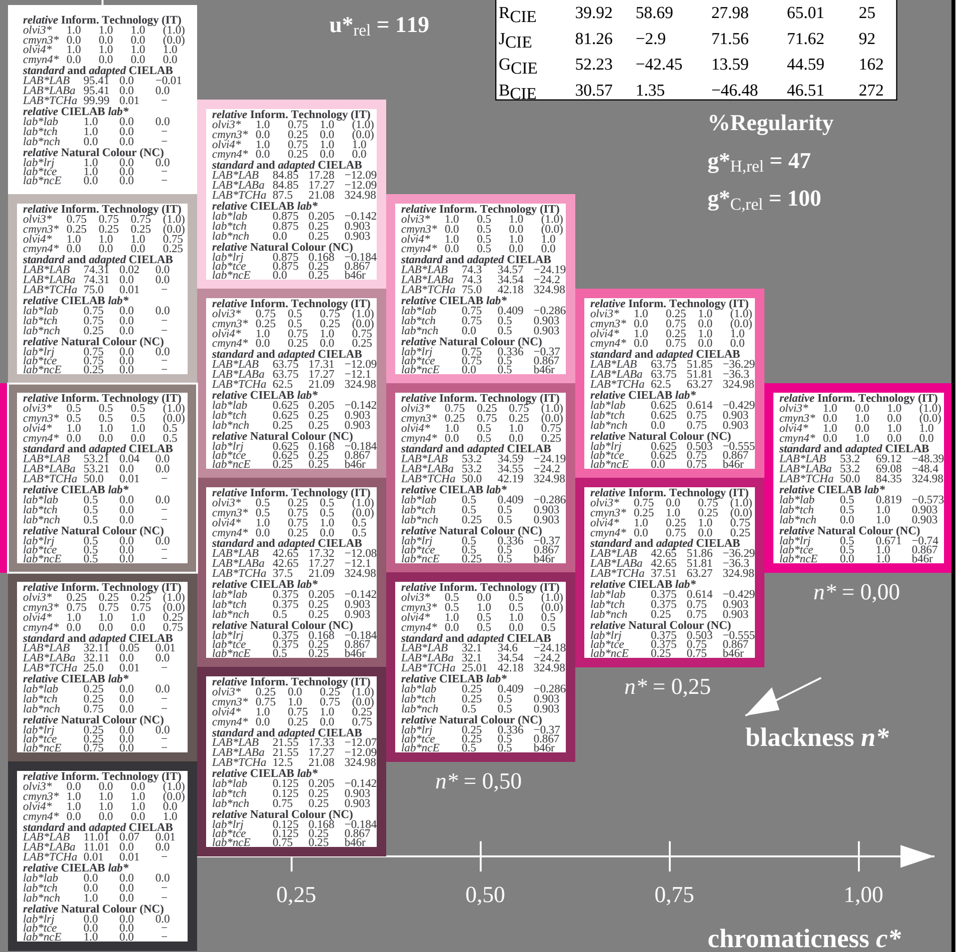
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



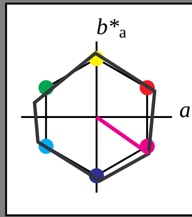
UE500−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System NRS11
for hue *h** = *lab*h* = 325/360 = 0.903
*lab*tch* and *lab*nch*

D65: hue B50R
LCH*Ma: 53 84 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness *t**

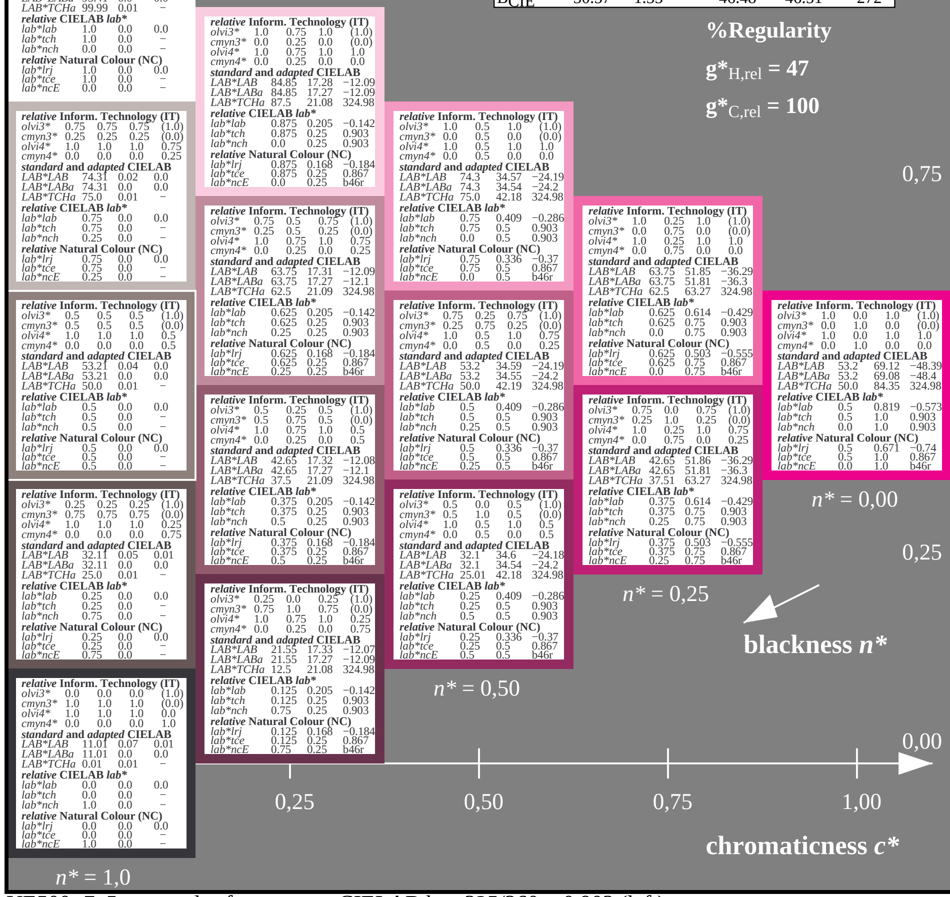


%Gamut
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

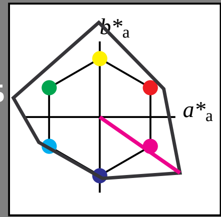
%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NCS11
for hue *h** = *lab*h* = 325/360 = 0.903
*lab*tch* and *lab*nch*

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness *t**

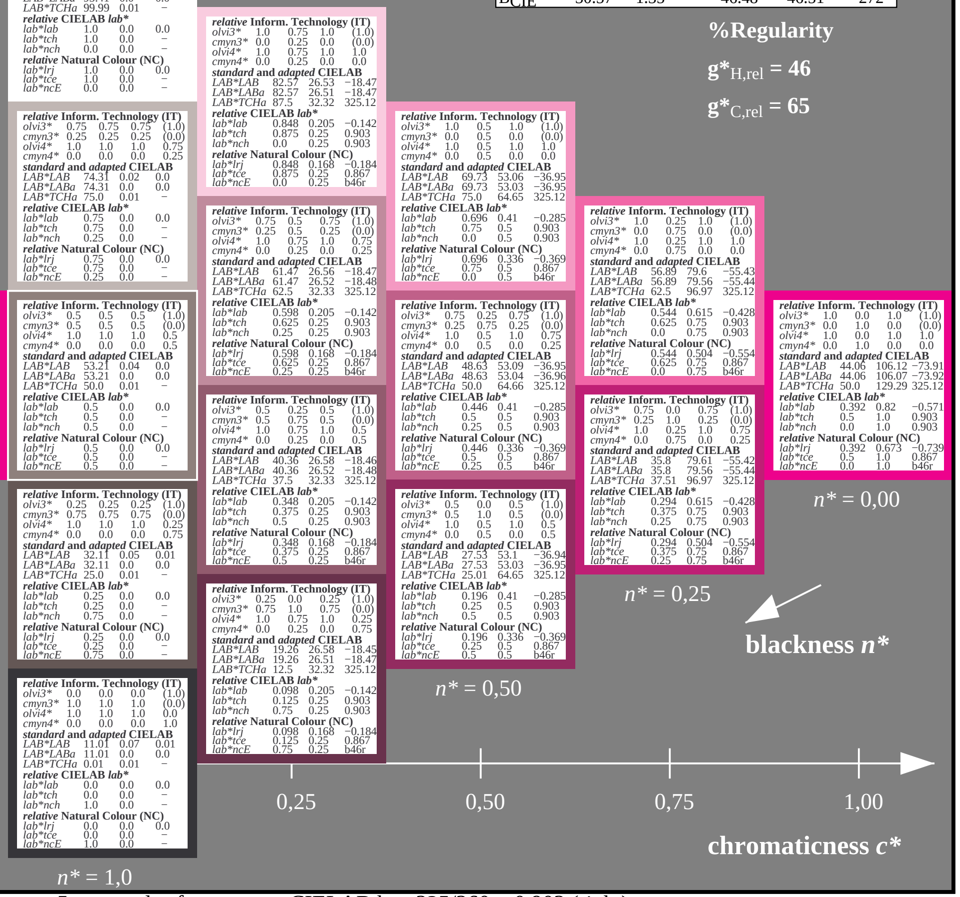


%Gamut
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



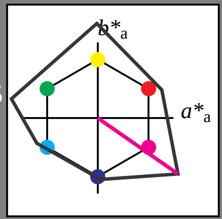
UE500−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 325/360 = 0.903$
*lab*tch* and *lab*nch*

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

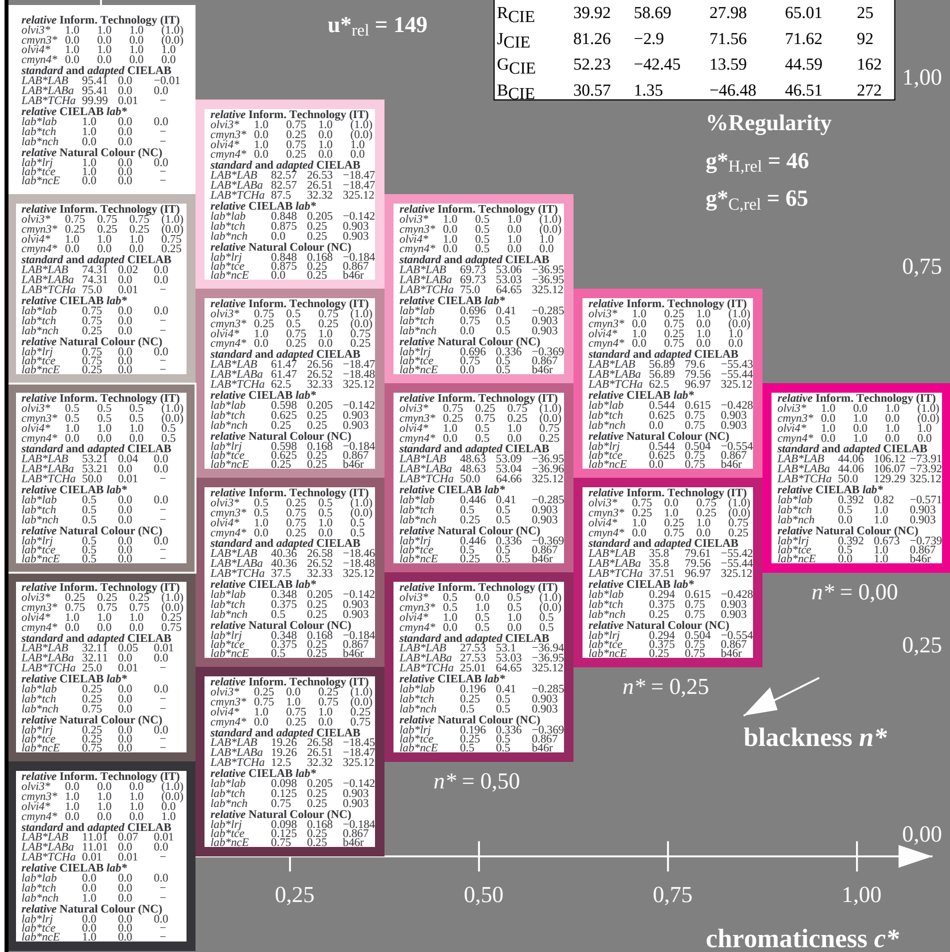
triangle lightness t^*



%Gamut
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

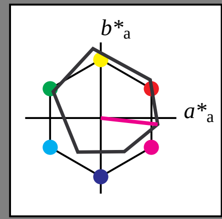
%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 354/360 = 0.982$
*lab*tch* and *lab*nch*

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

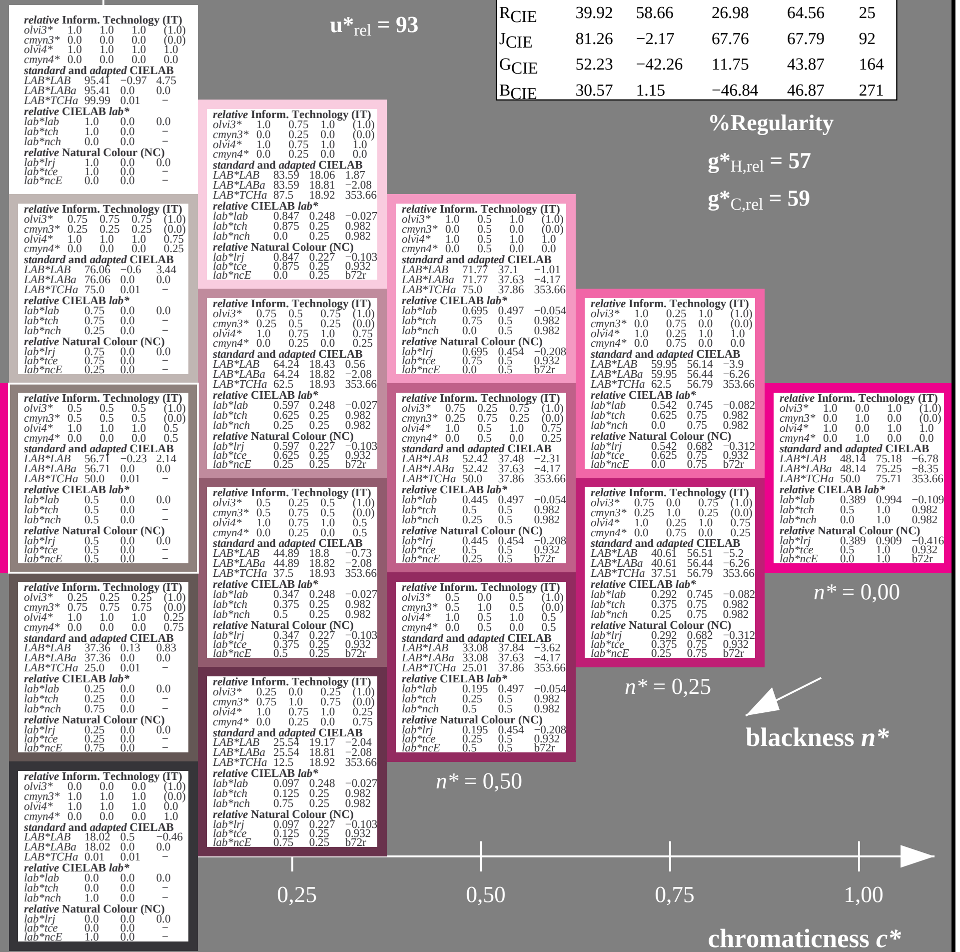
triangle lightness t^*



%Gamut
$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

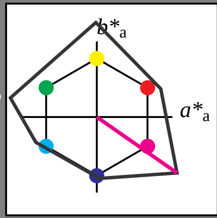
%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



UE500−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)   5 step scales for constant CIELAB hue 354/360 = 0.982 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 325/360 = 0.903$
*lab*tch and lab*nch*

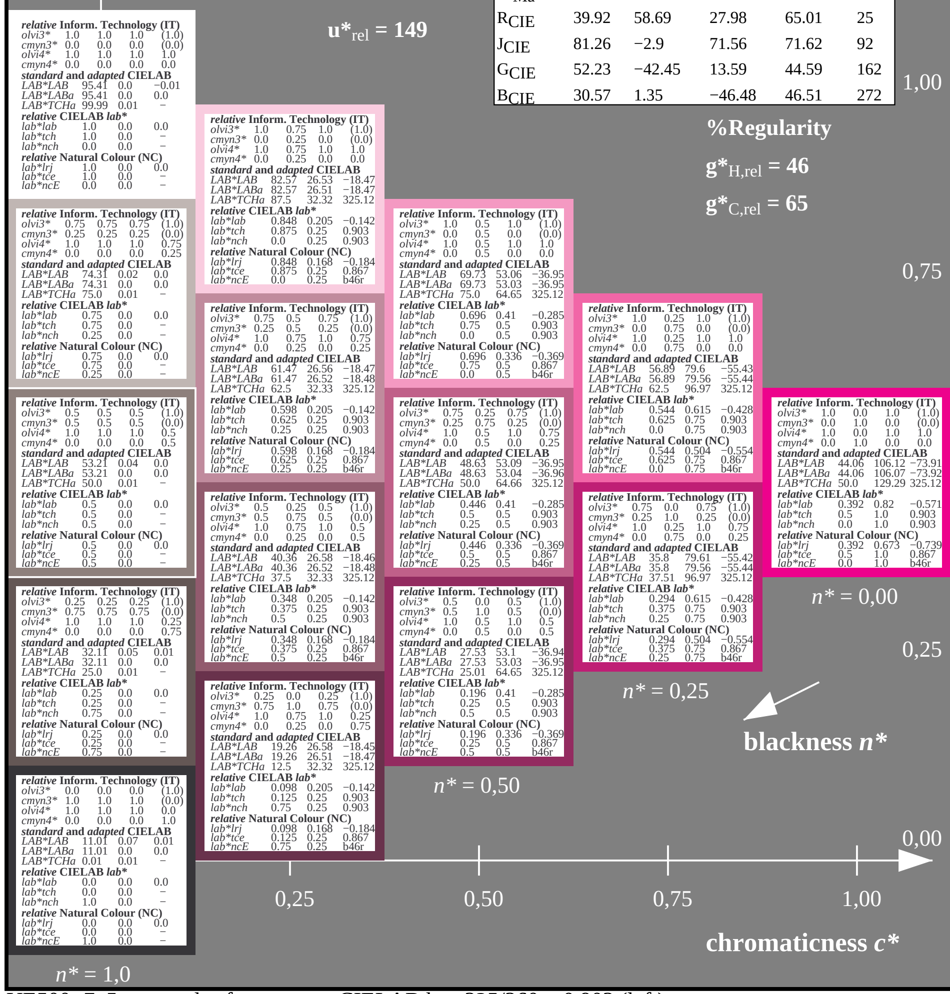
D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 149$

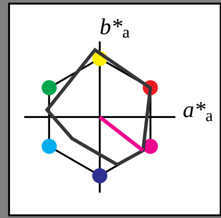
NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 322/360 = 0.895$
*lab*tch and lab*nch*

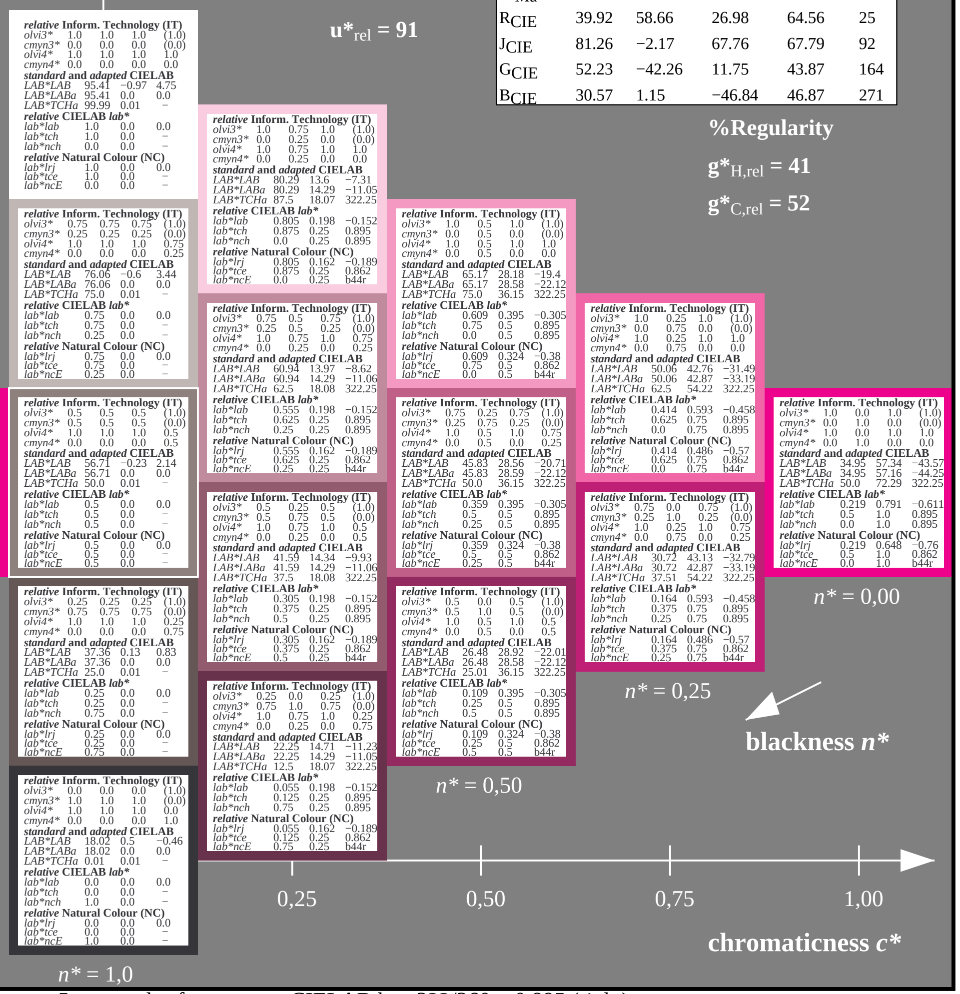
D65: hue B50R
LCH*Ma: 35 72 322
rgb*Ma: 1.0 0.0 1.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

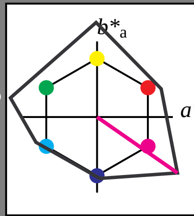
%Regularity
$g^*_{H,rel} = 41$
$g^*_{C,rel} = 52$



UE500−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)   5 step scales for constant CIELAB hue 322/360 = 0.895 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 325/360 = 0.903$
*lab*tch and lab*nch*

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0
triangle lightness t^*

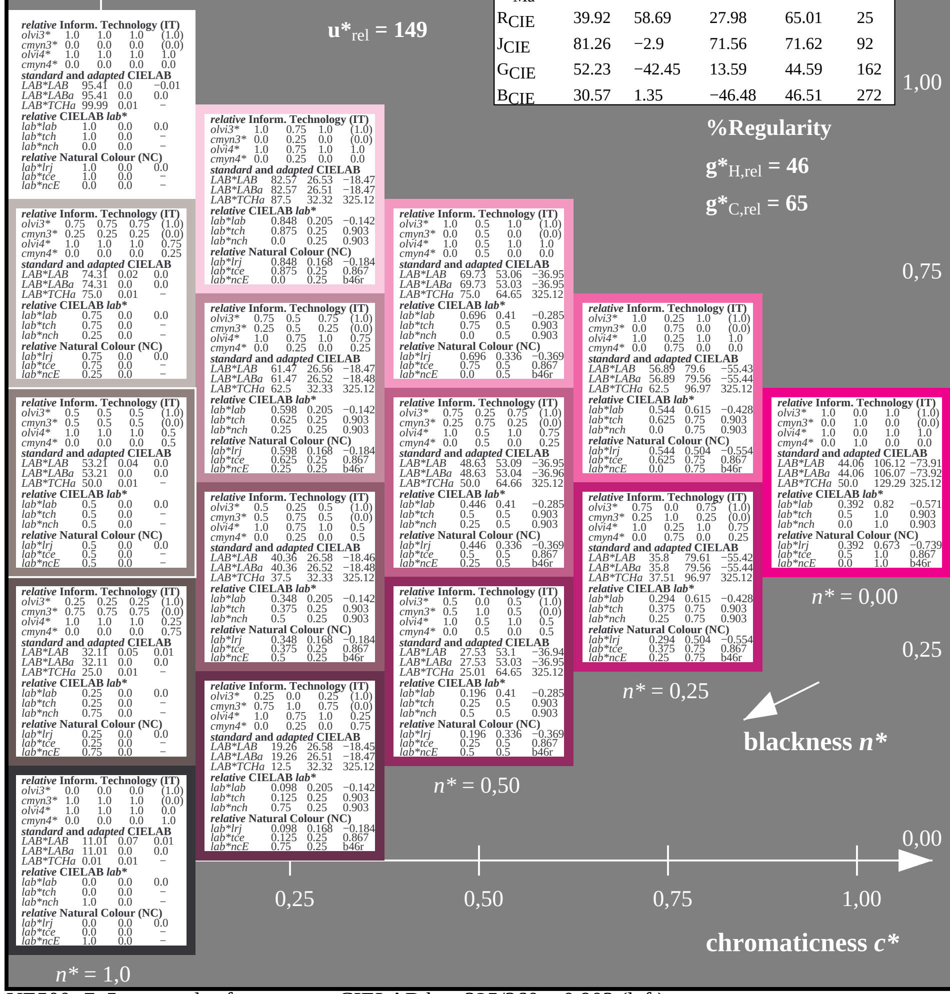


%Gamut
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

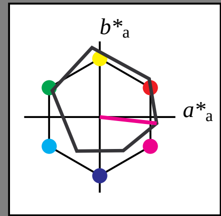
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 354/360 = 0.982$
*lab*tch and lab*nch*

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0
triangle lightness t^*

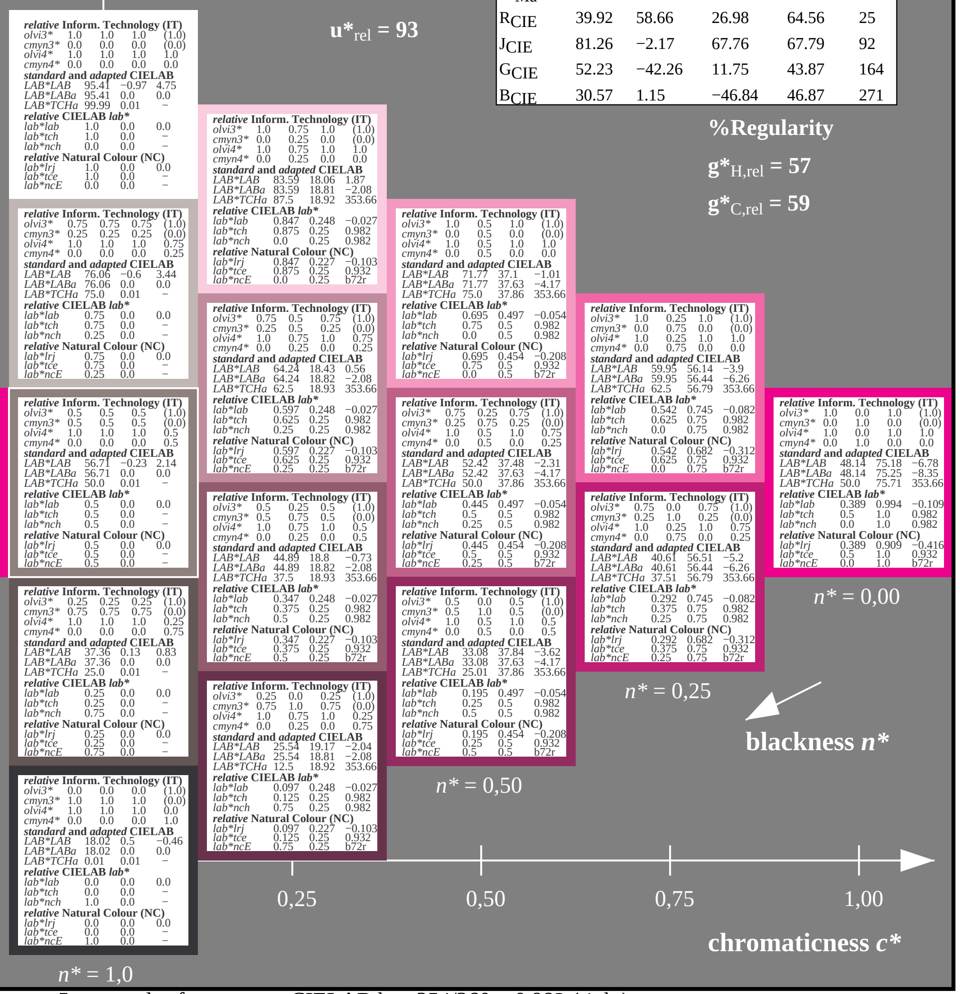


%Gamut
u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel}$ = 57
$g^*_{C,rel}$ = 59

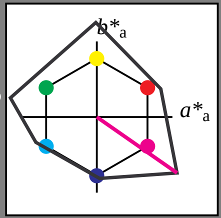


UE500−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)
5 step scales for constant CIELAB hue 354/360 = 0.982 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 325/360 = 0.903$
*lab*tch and lab*nch*

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$

1,00
0,75
0,25
0,00

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

blackness n^*

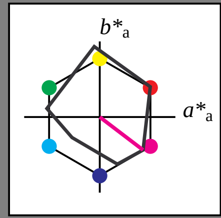
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 323/360 = 0.896$
*lab*tch and lab*nch*

D65: hue B50R
LCH*Ma: 35 72 323
rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$

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

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

UE500−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 323/360 = 0.896 (right)

Input: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 325/360 = 0.903$

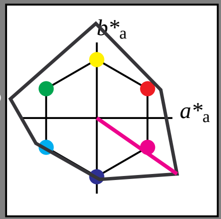
lab*tch* and *lab*nch

D65: hue B50R

LCH*Ma: 44 129 325

rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 149$

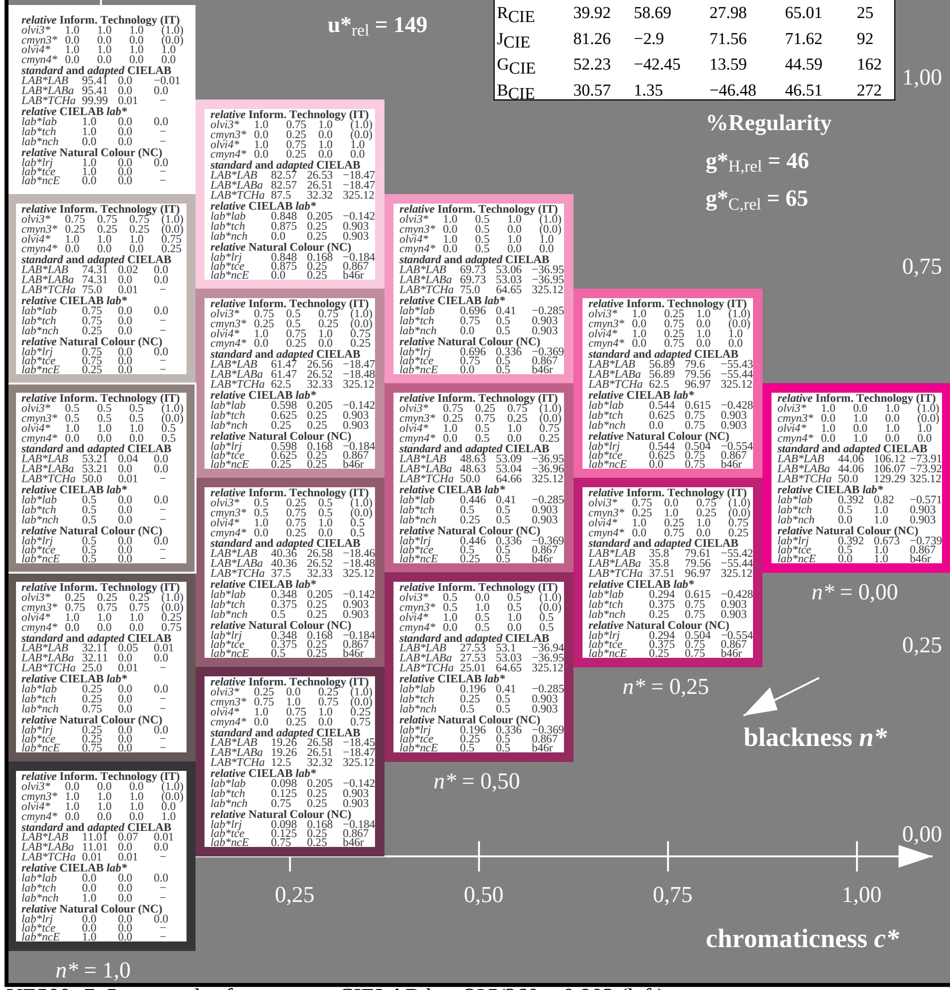
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System NRS18

for hue $h^* = lab^*h = 325/360 = 0.903$

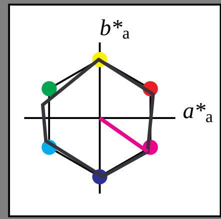
lab*tch* and *lab*nch

D65: hue B50R

LCH*Ma: 57 77 325

rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 100$

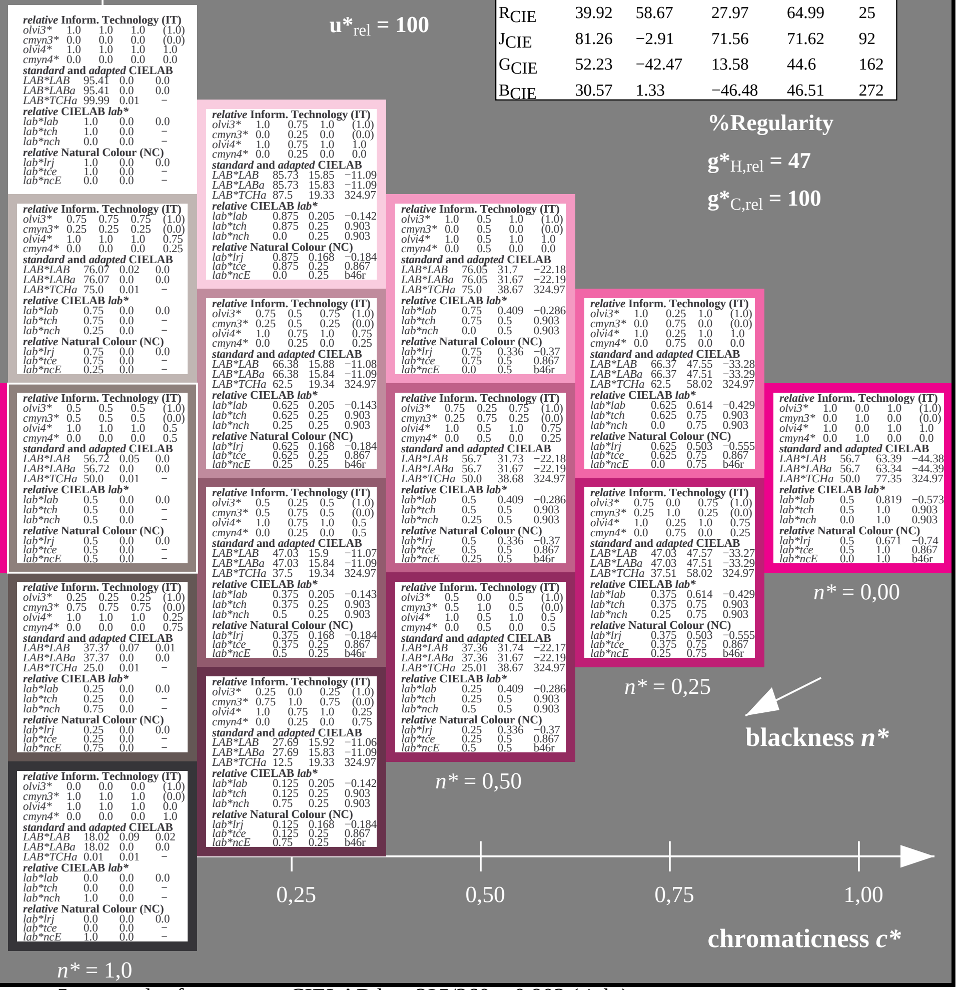
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



UE500−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System NCS11

for hue *h** = *lab*h* = 325/360 = 0.903

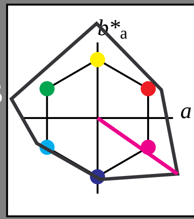
*lab*tch* and *lab*nch*

D65: hue B50R

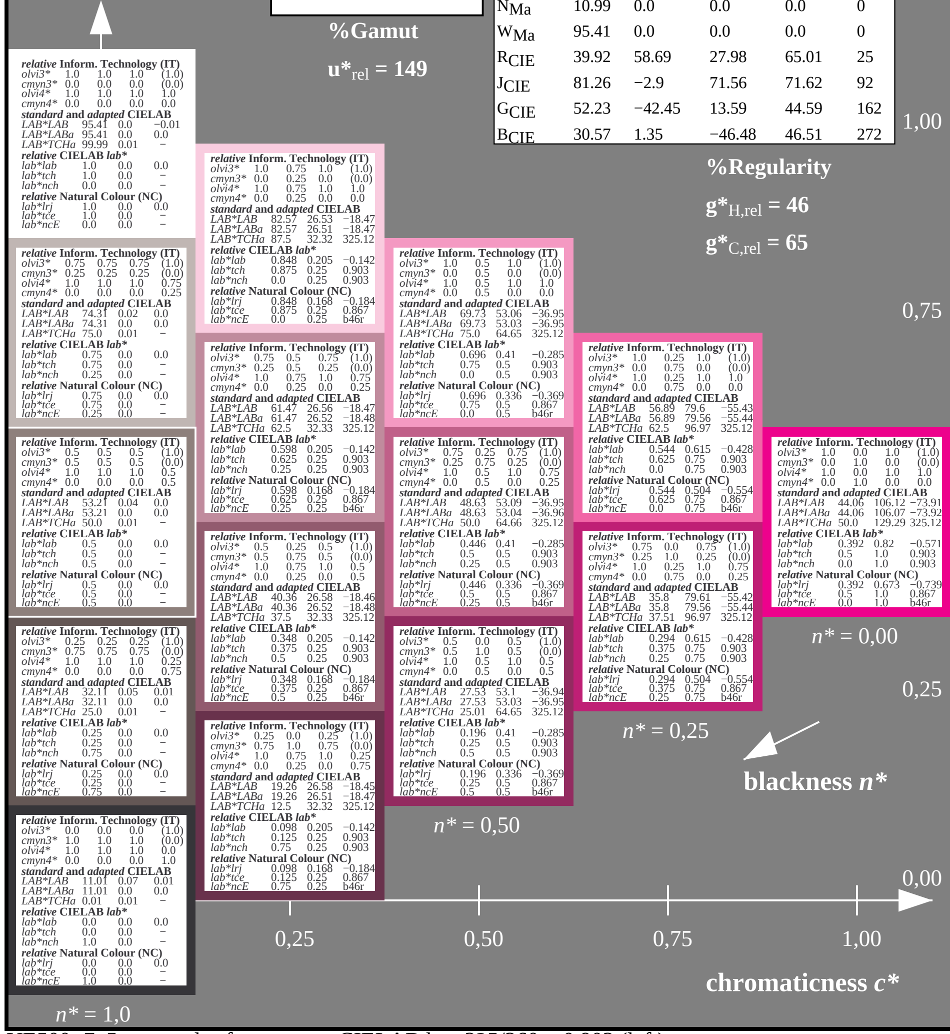
LCH*Ma: 44 129 325

rgb*Ma: 1.0 0.0 1.0

triangle lightness *t**



NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272



Output: Colorimetric Reflective System NCS18

for hue *h** = *lab*h* = 325/360 = 0.903

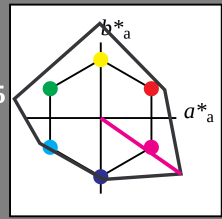
*lab*tch* and *lab*nch*

D65: hue B50R

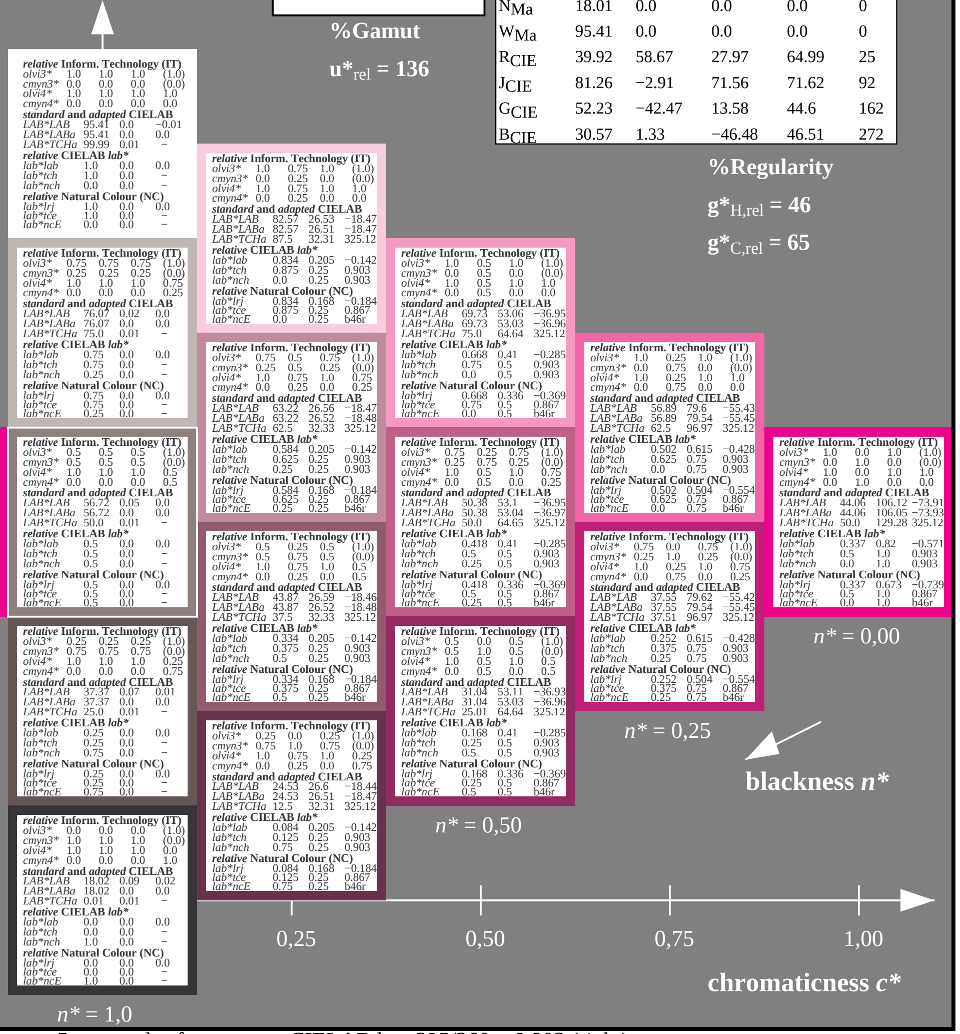
LCH*Ma: 44 129 325

rgb*Ma: 1.0 0.0 1.0

triangle lightness *t**



NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272



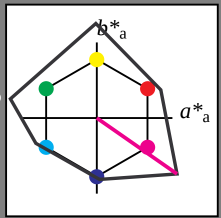
UE500−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch and lab*nch

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00
0,75
0,25
0,00

n^* = 0,00
n^* = 0,25
n^* = 0,50
n^* = 1,0

blackness n^*

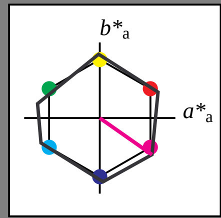
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch and lab*nch

D65: hue B50R
LCH*Ma: 53 84 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

n^* = 0,00
n^* = 0,25
n^* = 0,50
n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

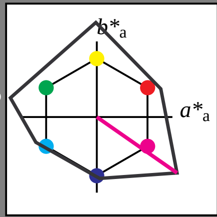
UE500−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System NCS11
for hue *h** = *lab*h* = *325/360 = 0.903*
*lab*tch* and *lab*nch*

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness *t*



%Gamut

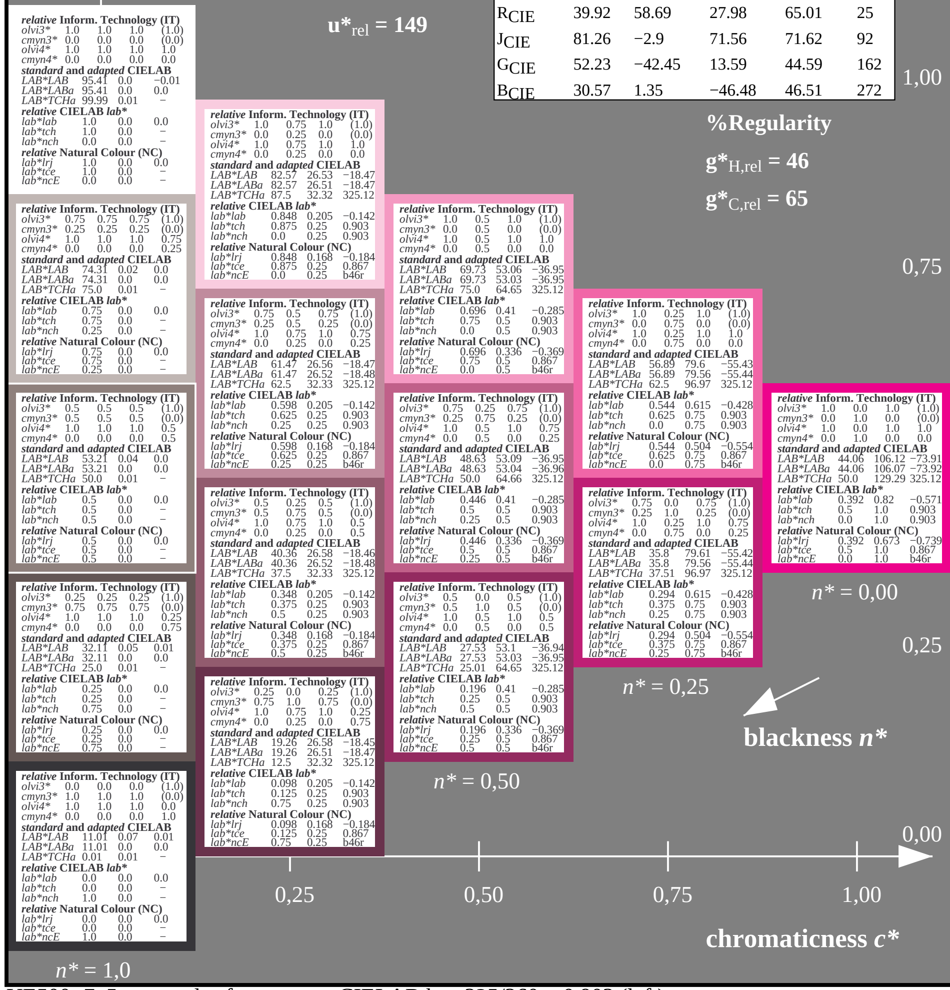
u*rel = 149

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

g*H,rel = 46

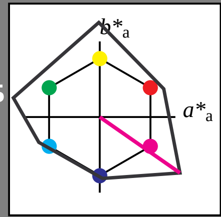
g*C,rel = 65



Output: Colorimetric Reflective System NCS11
for hue *h** = *lab*h* = *325/360 = 0.903*
*lab*tch* and *lab*nch*

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness *t*



%Gamut

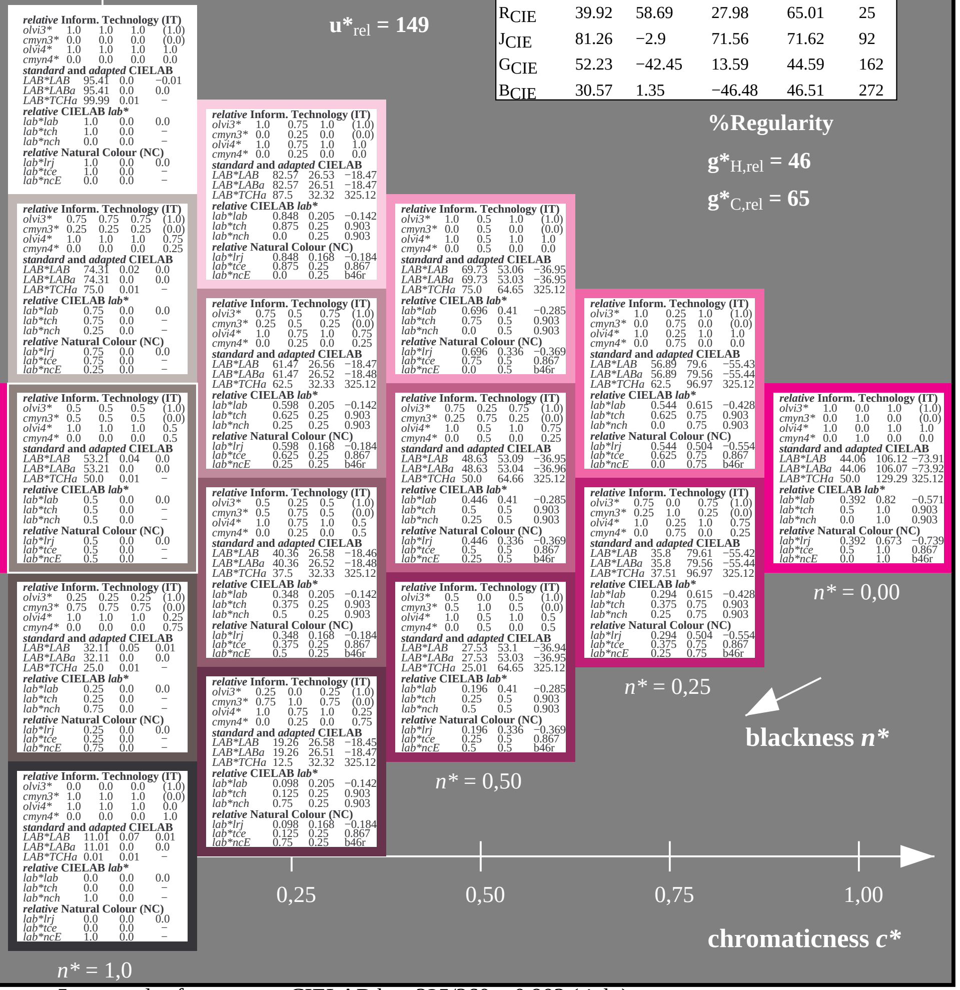
u*rel = 149

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

g*H,rel = 46

g*C,rel = 65



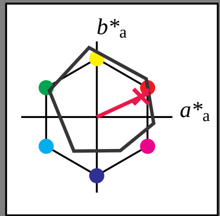
UE500−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System ORS18
for hue *h** = *lab*h* = 25/360 = 0.069
*lab*tch* and *lab*nch*

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness *t**



%Gamut

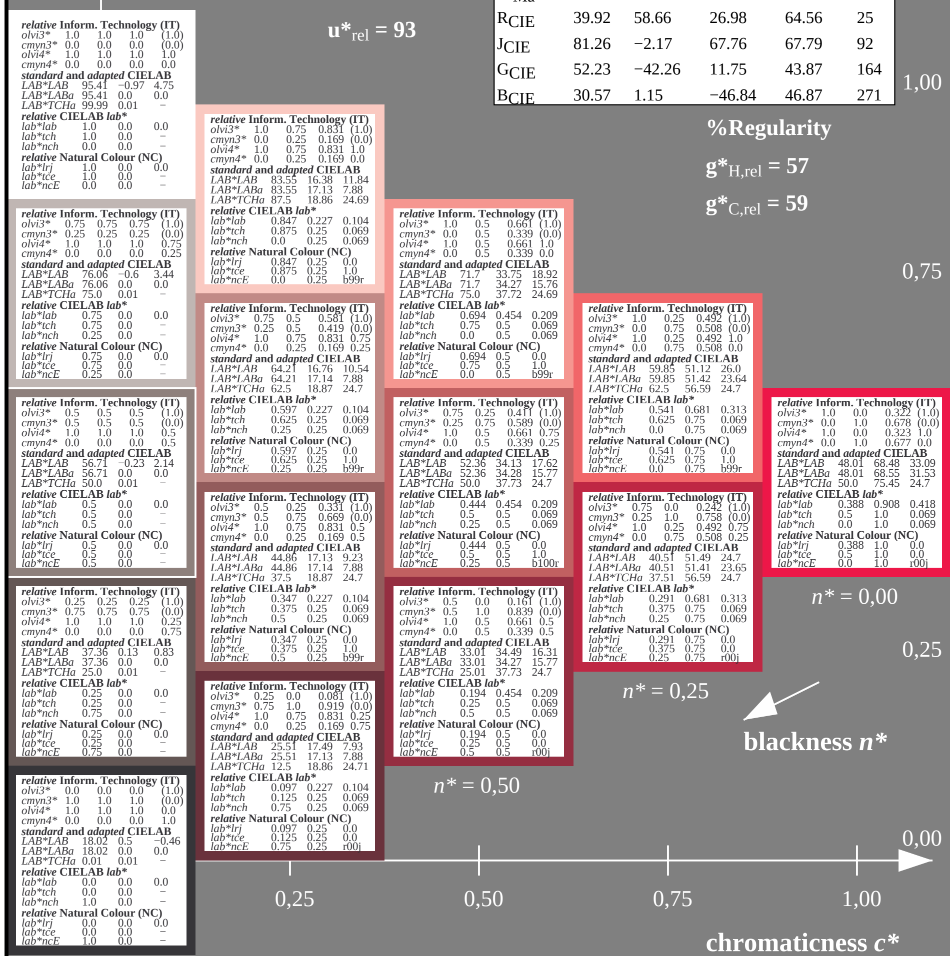
u*rel = 93

ORS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

g*H,rel = 57

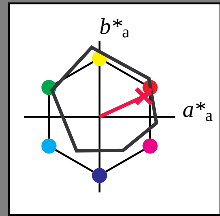
g*C,rel = 59



Output: Colorimetric Reflective System ORS18
for hue *h** = *lab*h* = 25/360 = 0.069
*lab*tch* and *lab*nch*

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness *t**



%Gamut

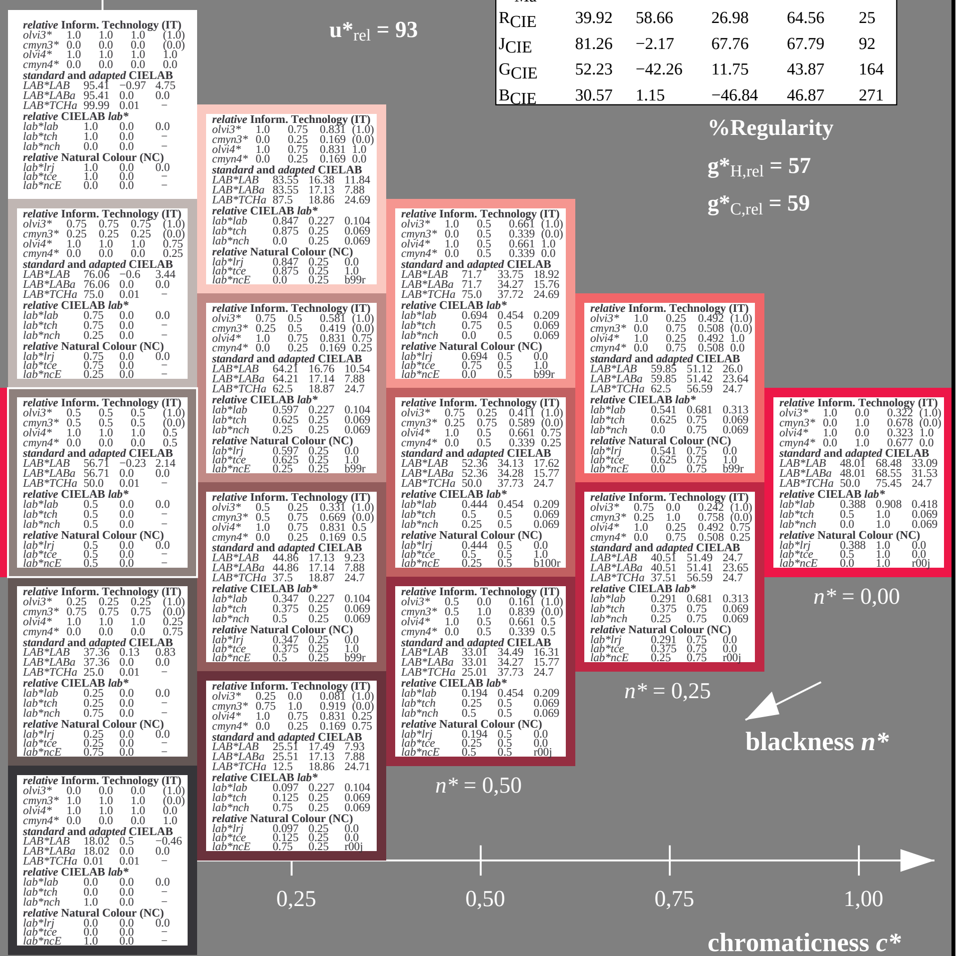
u*rel = 93

ORS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

g*H,rel = 57

g*C,rel = 59

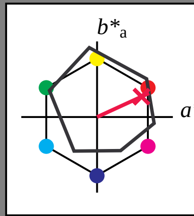


UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

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

Input: Colorimetric Reflective System ORS18
for hue *h** = *lab*h* = 25/360 = 0.069
*lab*tch* and *lab*nch*

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32
triangle lightness *t**



%Gamut

u*rel = 93

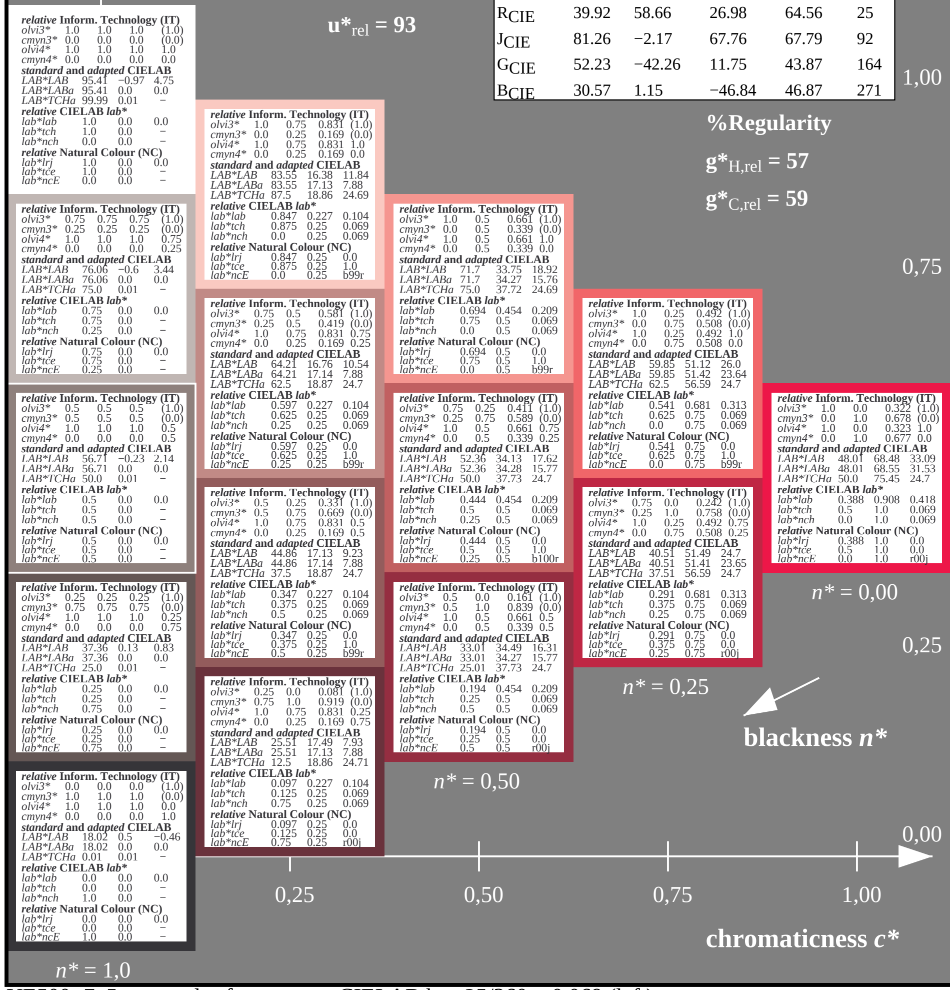
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

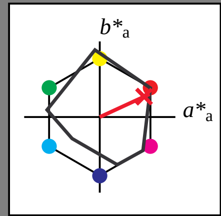
g*H,rel = 57

g*C,rel = 59



Output: Colorimetric Reflective System MRS18
for hue *h** = *lab*h* = 25/360 = 0.069
*lab*tch* and *lab*nch*

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1
triangle lightness *t**



%Gamut

u*rel = 91

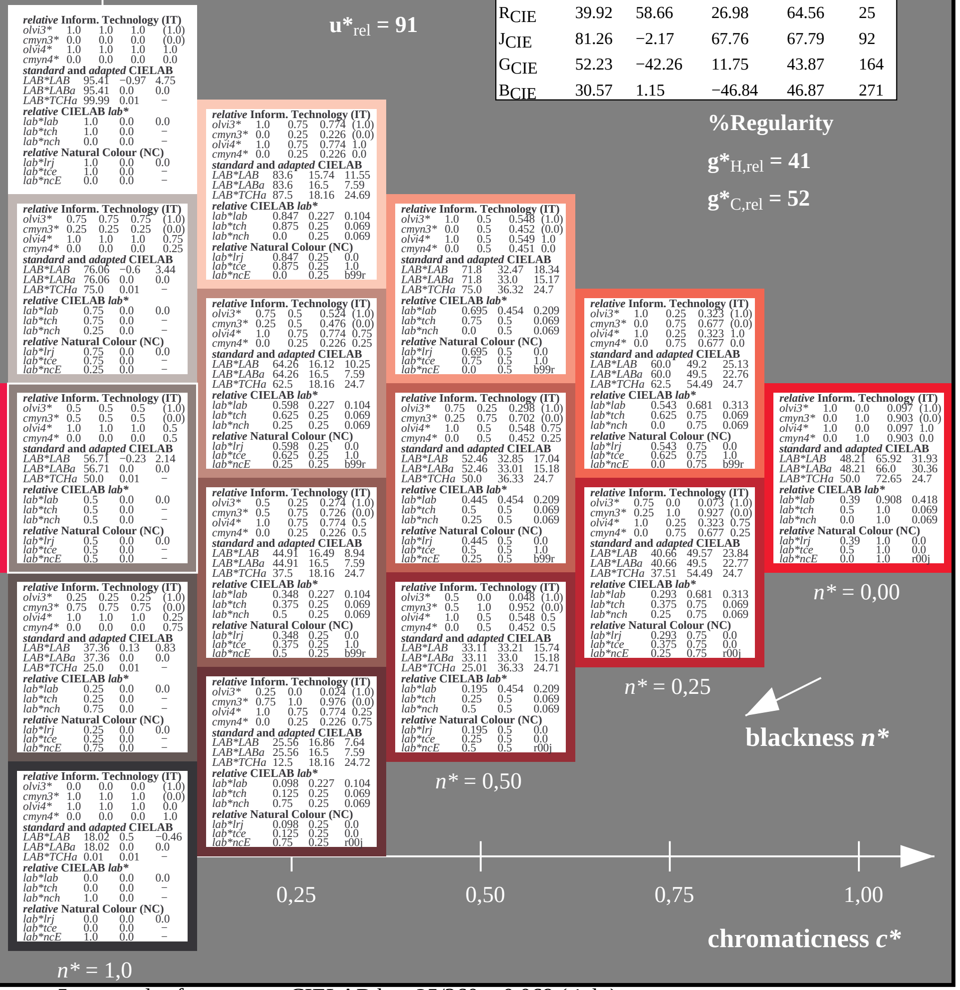
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

g*H,rel = 41

g*C,rel = 52



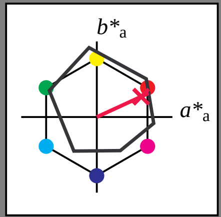
UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

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

Input: Colorimetric Reflective System ORS18
for hue *h* = lab*h = 25/360 = 0.069*
*lab*tch and lab*nch*

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness *t**



%Gamut

u^*_{rel} = 93

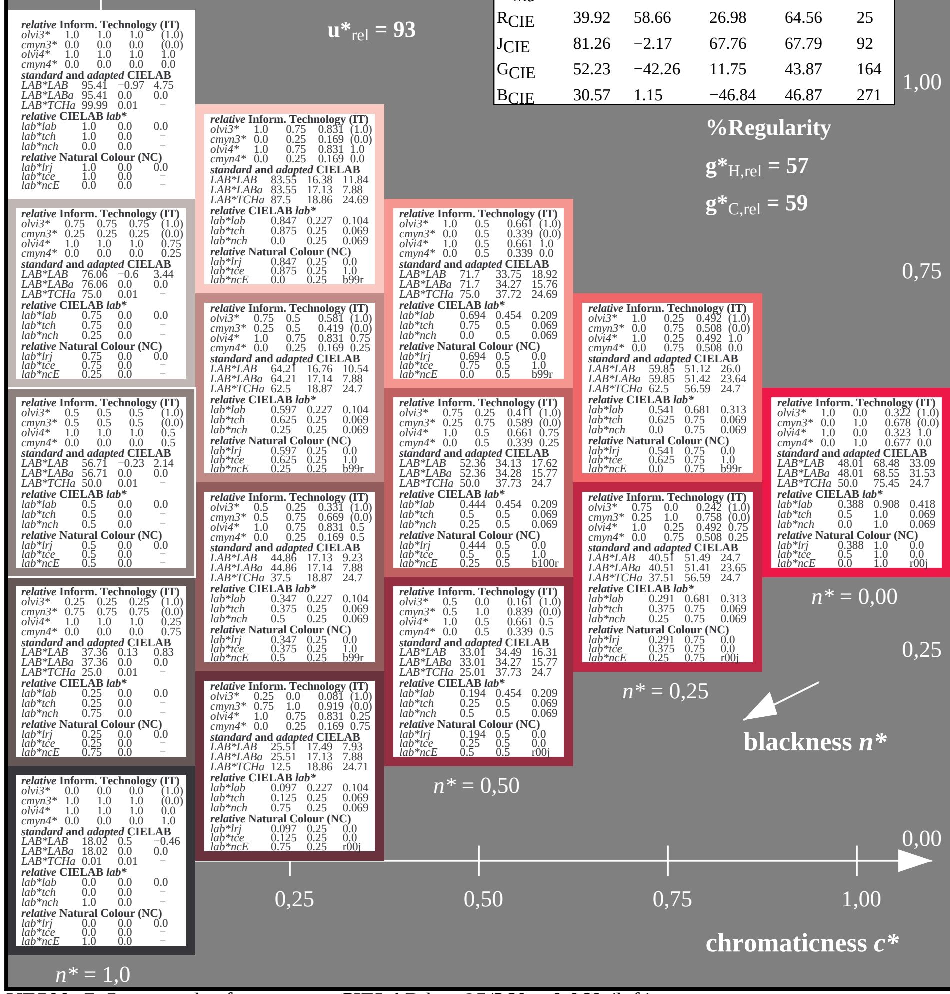
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

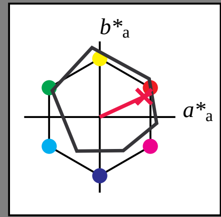
$g^*_{C,rel}$ = 59



Output: Colorimetric Reflective System TRS18
for hue *h* = lab*h = 25/360 = 0.069*
*lab*tch and lab*nch*

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness *t**



%Gamut

u^*_{rel} = 93

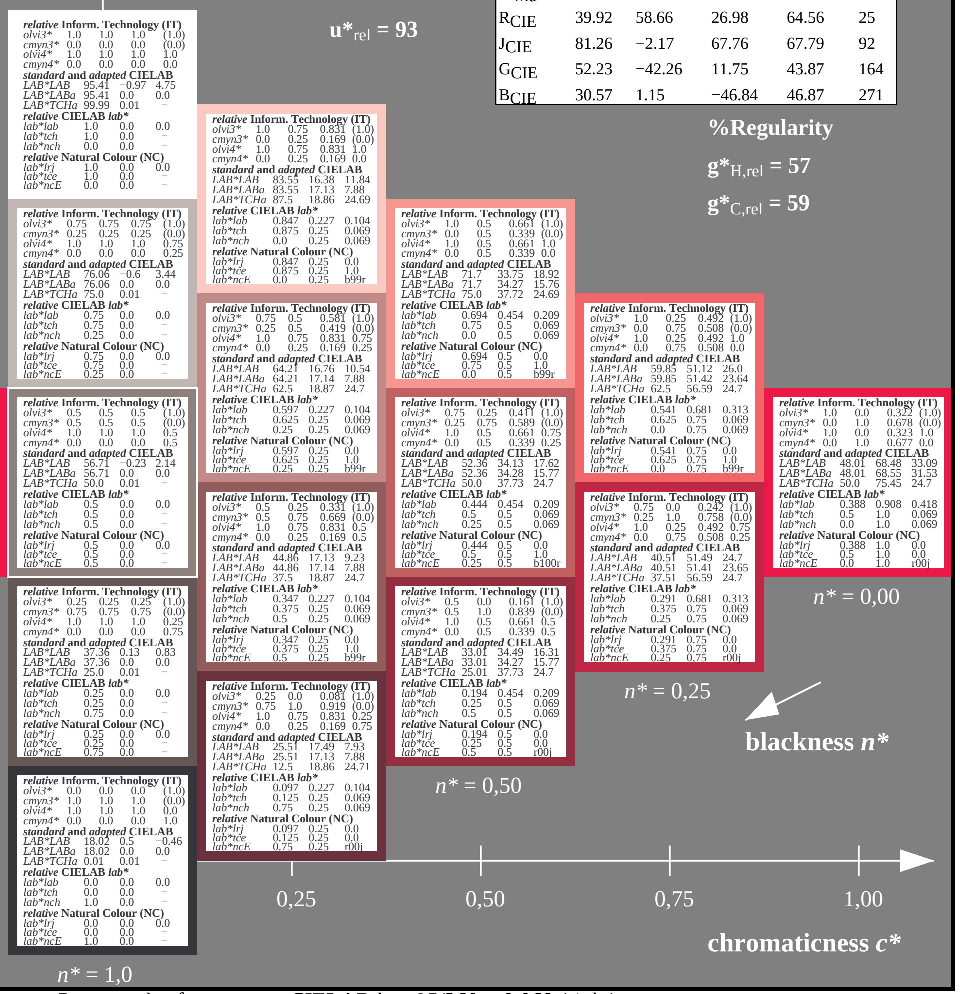
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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

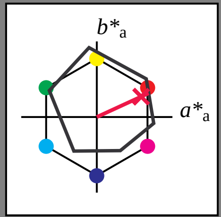


UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

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

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 25/360 = 0.069$
*lab*tch and lab*nch*

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32
triangle lightness t^*

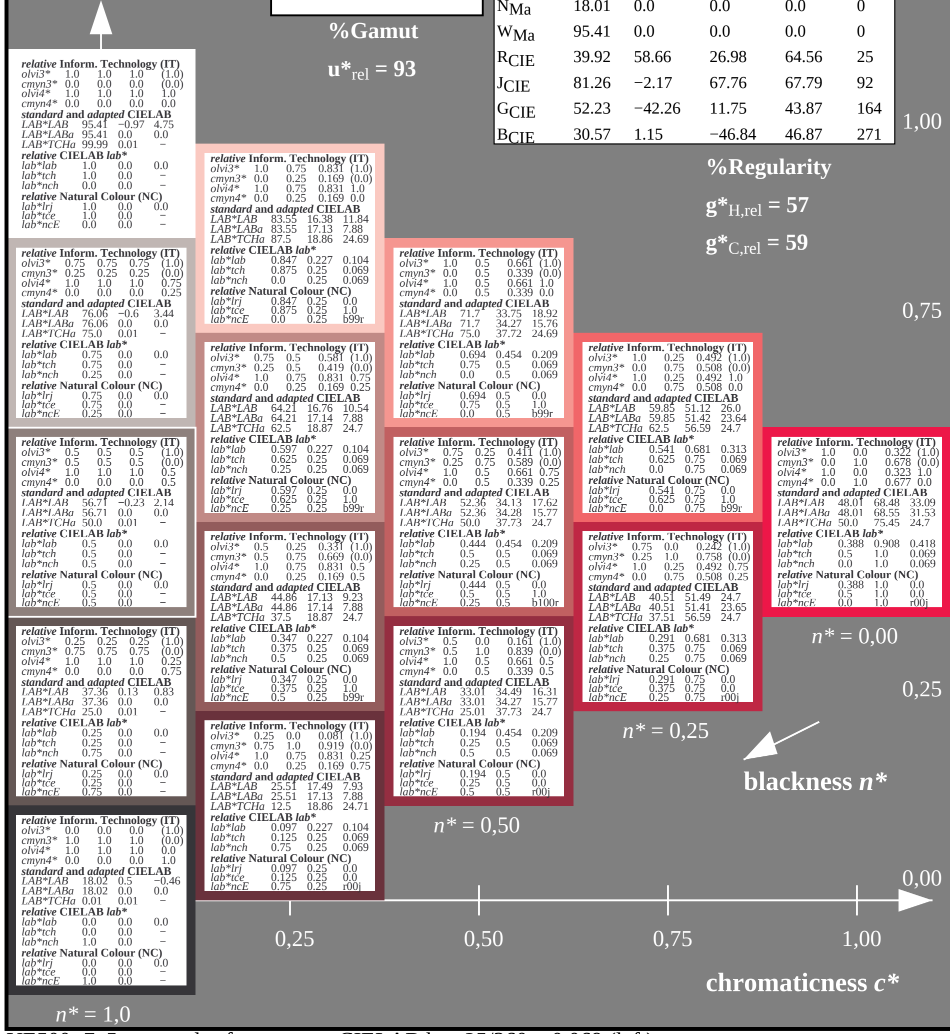


%Gamut
$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data

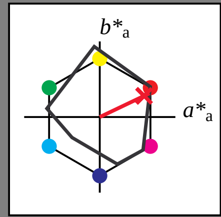
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 25/360 = 0.071$
*lab*tch and lab*nch*

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1
triangle lightness t^*

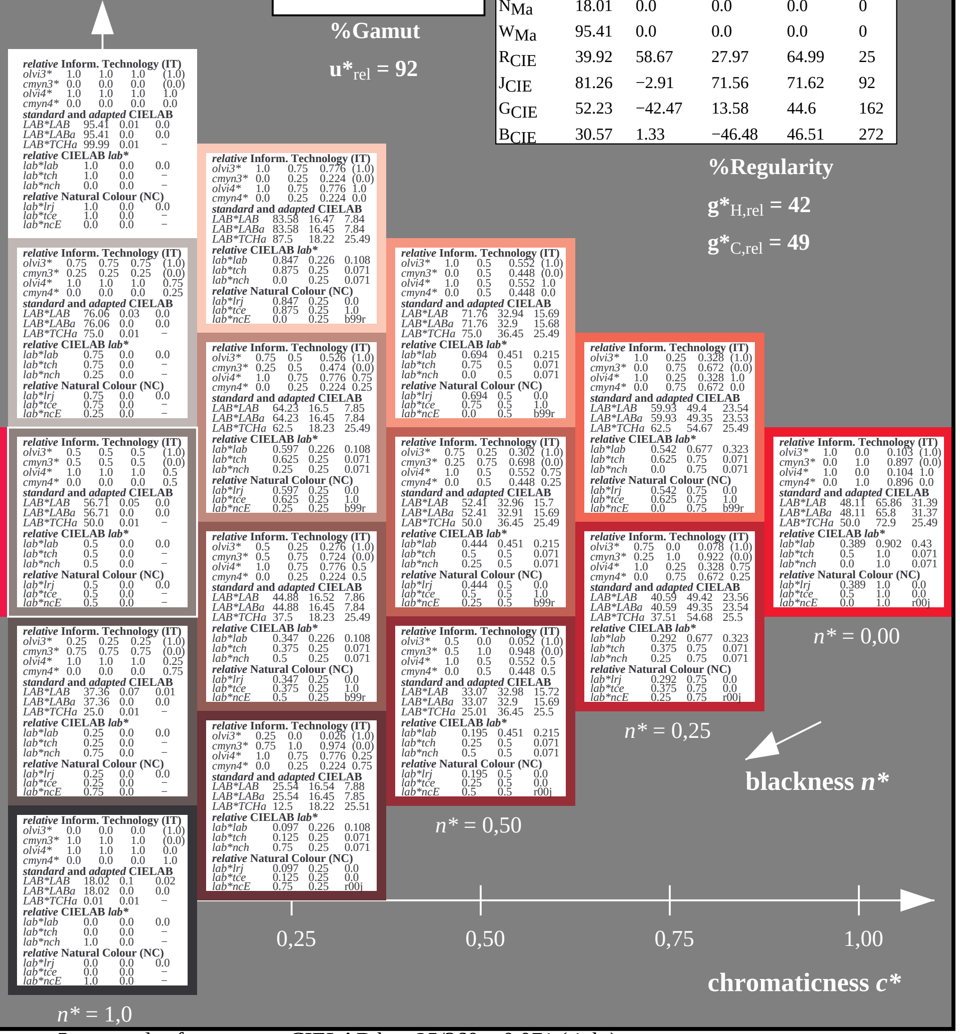


%Gamut
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$



UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

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

Input: Colorimetric Reflective System ORS18

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

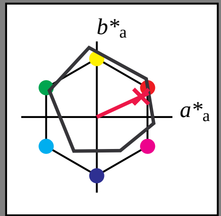
*lab*tch and lab*nch*

D65: hue R

LCH*Ma: 48 75 25

rgb*Ma: 1.0 0.0 0.32

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

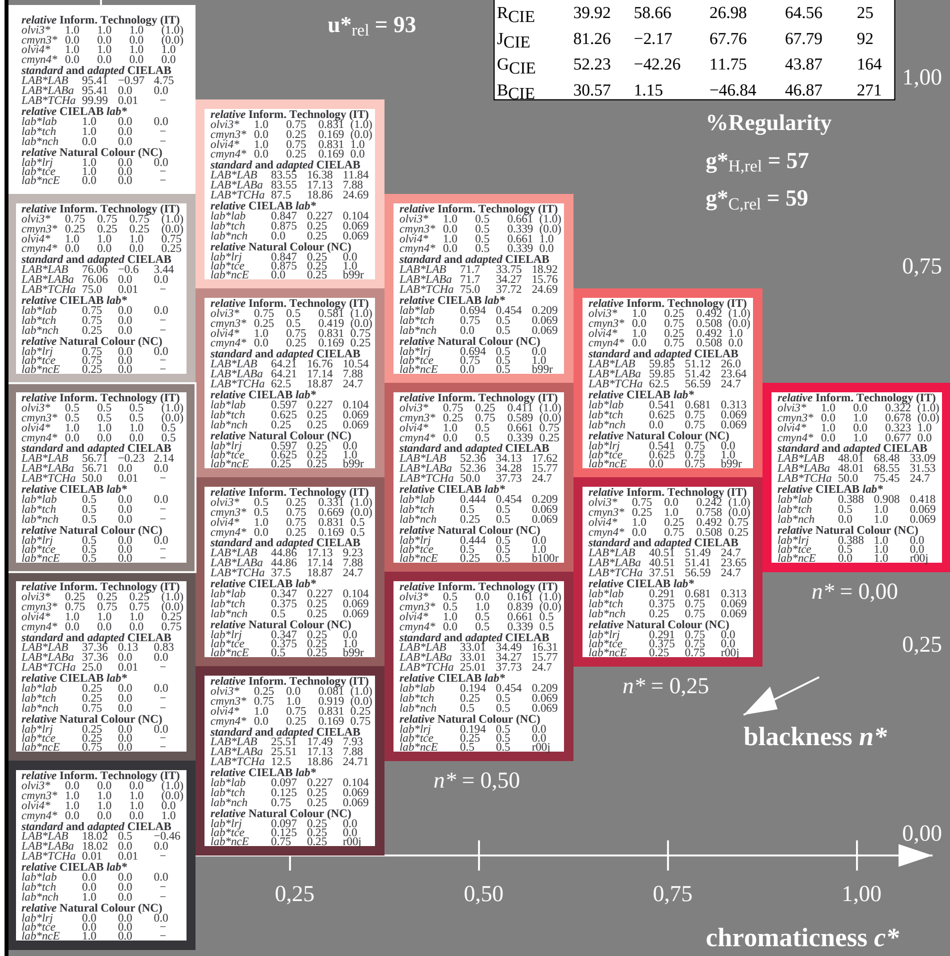
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



Output: Colorimetric Reflective System NRS18

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

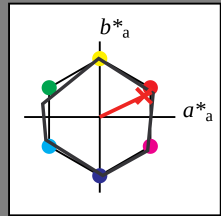
*lab*tch and lab*nch*

D65: hue R

LCH*Ma: 57 76 25

rgb*Ma: 1.0 0.03 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 100$

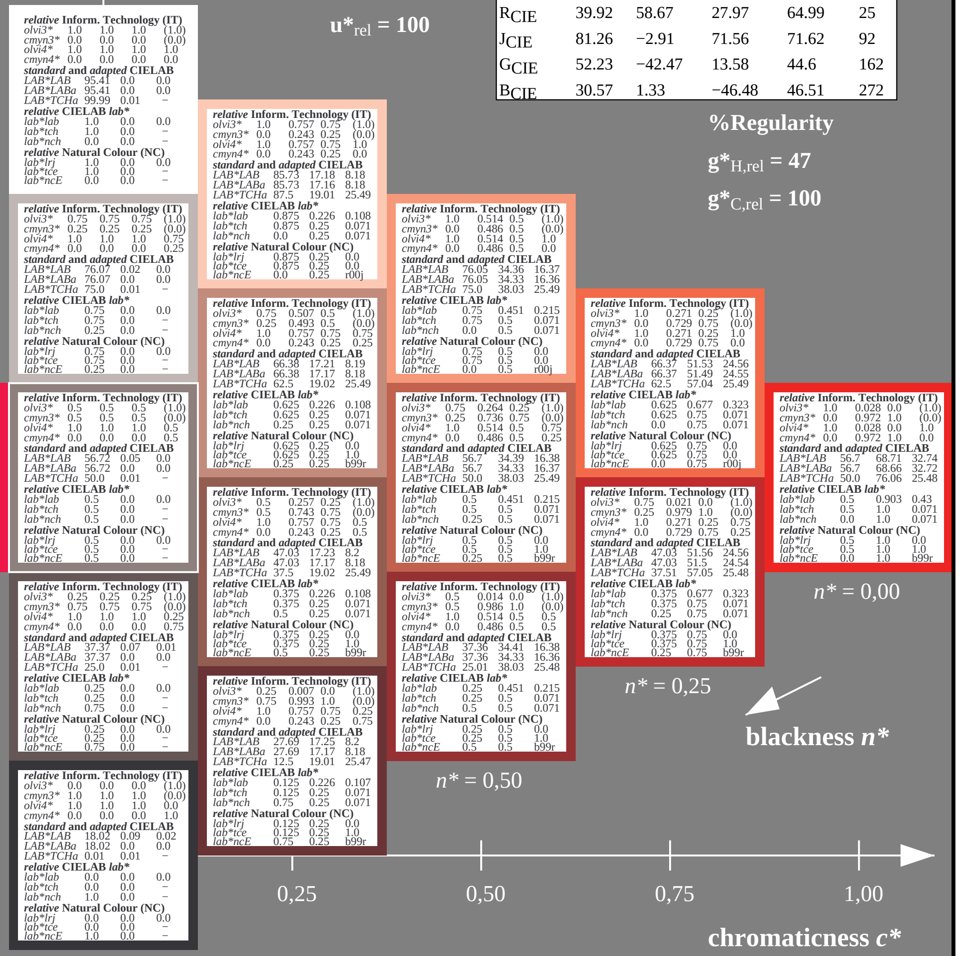
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

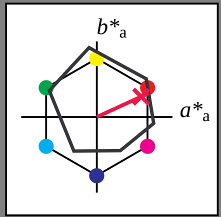


UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

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

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32
triangle lightness t^*

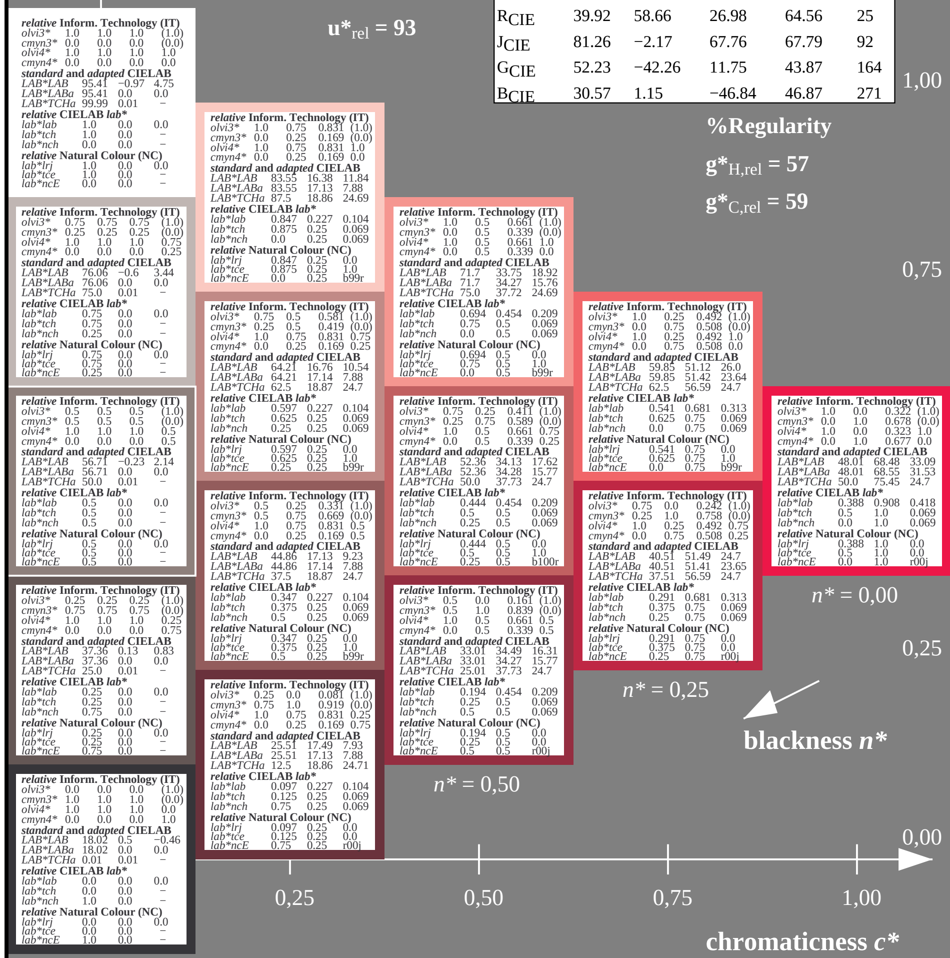


%Gamut
$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data

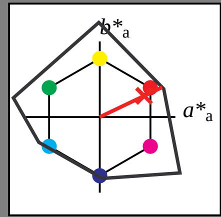
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0
triangle lightness t^*

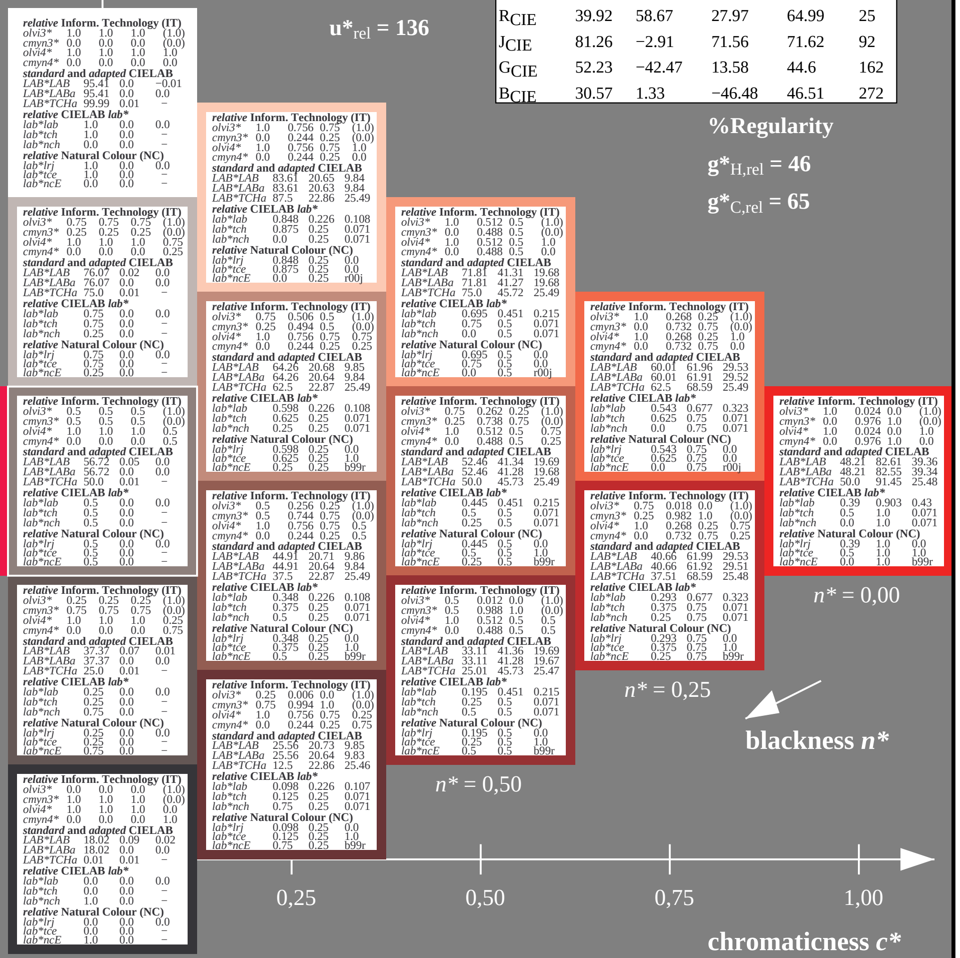


%Gamut
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$

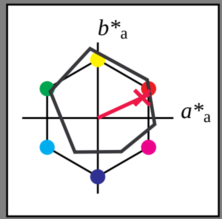


UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

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

Input: Colorimetric Reflective System ORS18
for hue *h = *lab*h* = 25/360 = 0.069**
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32
triangle lightness *t**

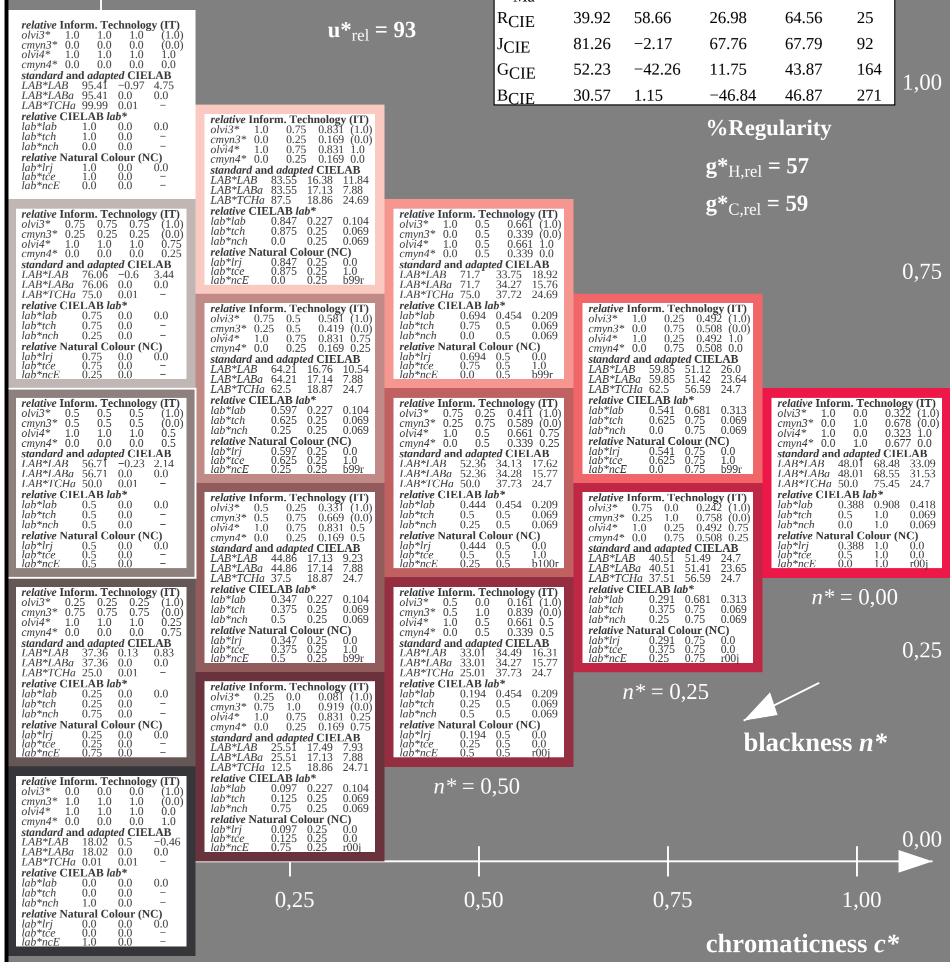


%Gamut
u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

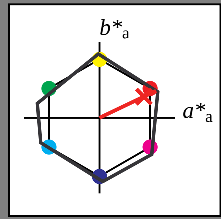
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel}$ = 57
$g^*_{C,rel}$ = 59



Output: Colorimetric Reflective System NRS11
for hue *h = *lab*h* = 25/360 = 0.071**
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 53 83 25
rgb*Ma: 1.0 0.03 0.0
triangle lightness *t**

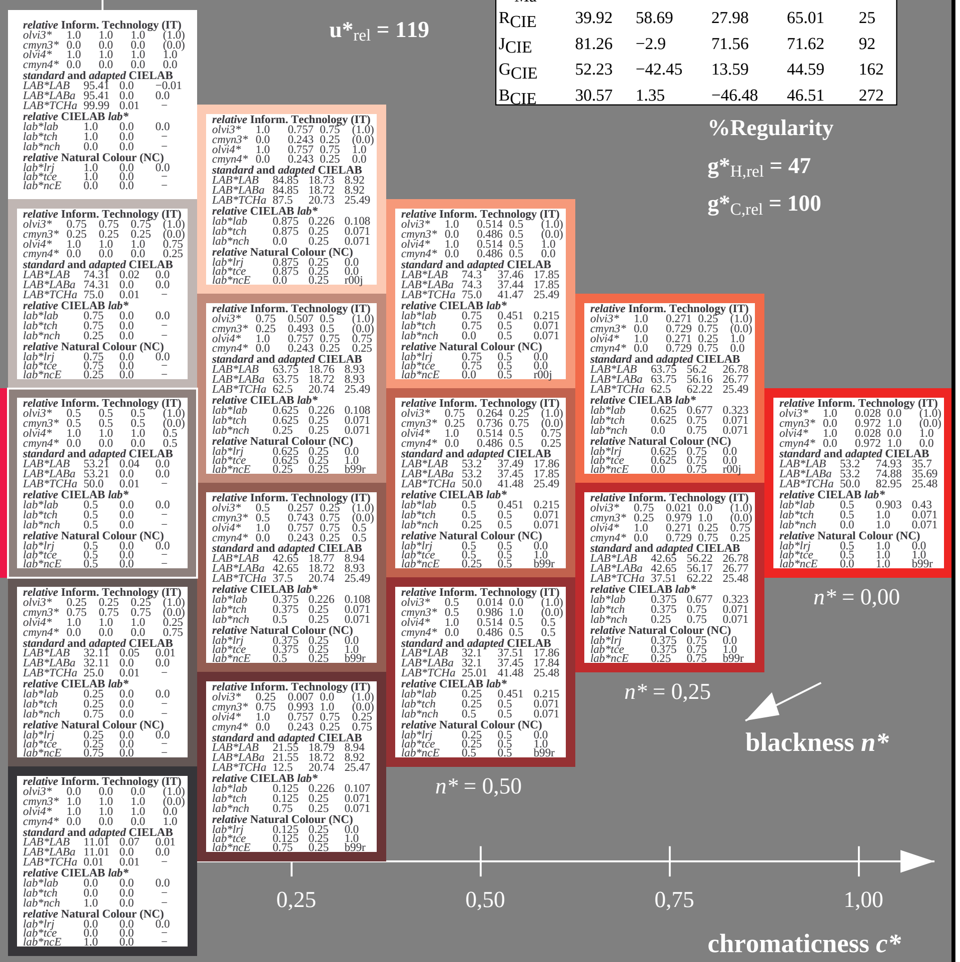


%Gamut
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100

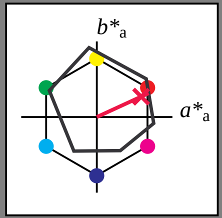


UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

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

Input: Colorimetric Reflective System ORS18
for hue *h* = lab*h = 25/360 = 0.069*
*lab*tch and lab*nch*

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32
triangle lightness *t*

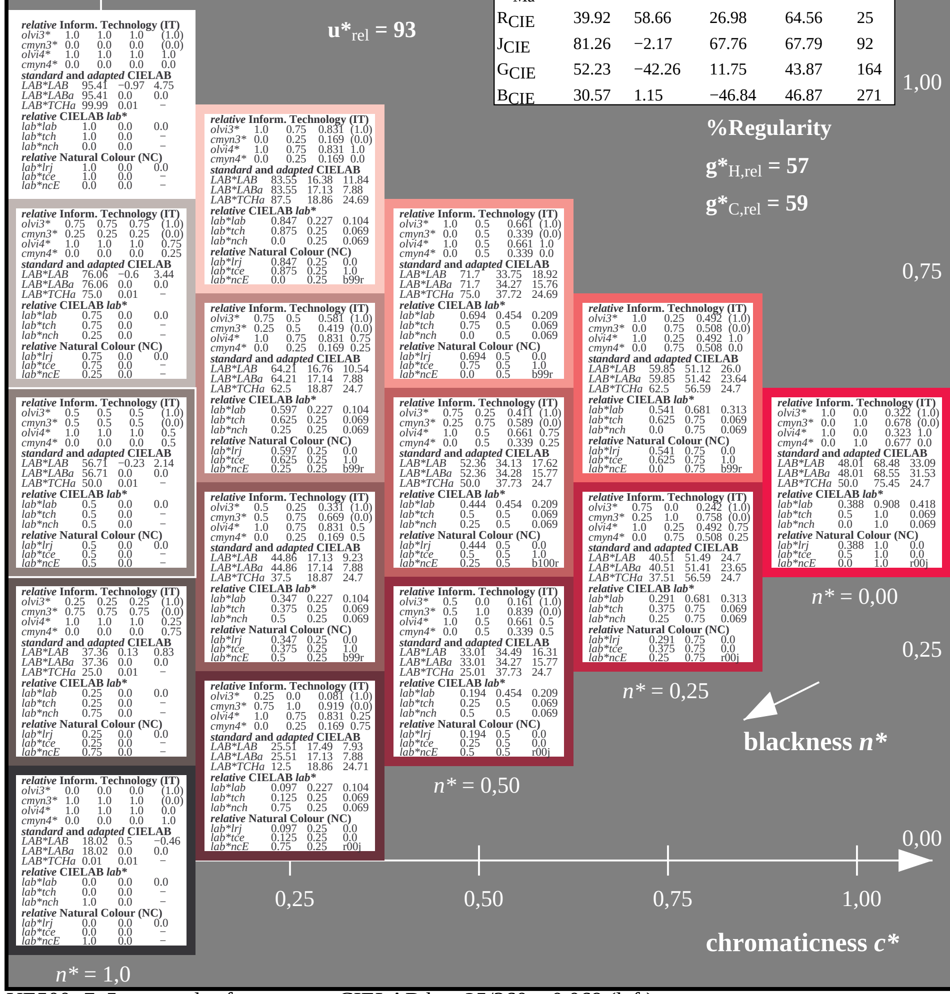


%Gamut
u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

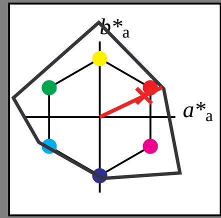
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel}$ = 57
$g^*_{C,rel}$ = 59



Output: Colorimetric Reflective System NCS11
for hue *h* = lab*h = 25/360 = 0.071*
*lab*tch and lab*nch*

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0
triangle lightness *t*

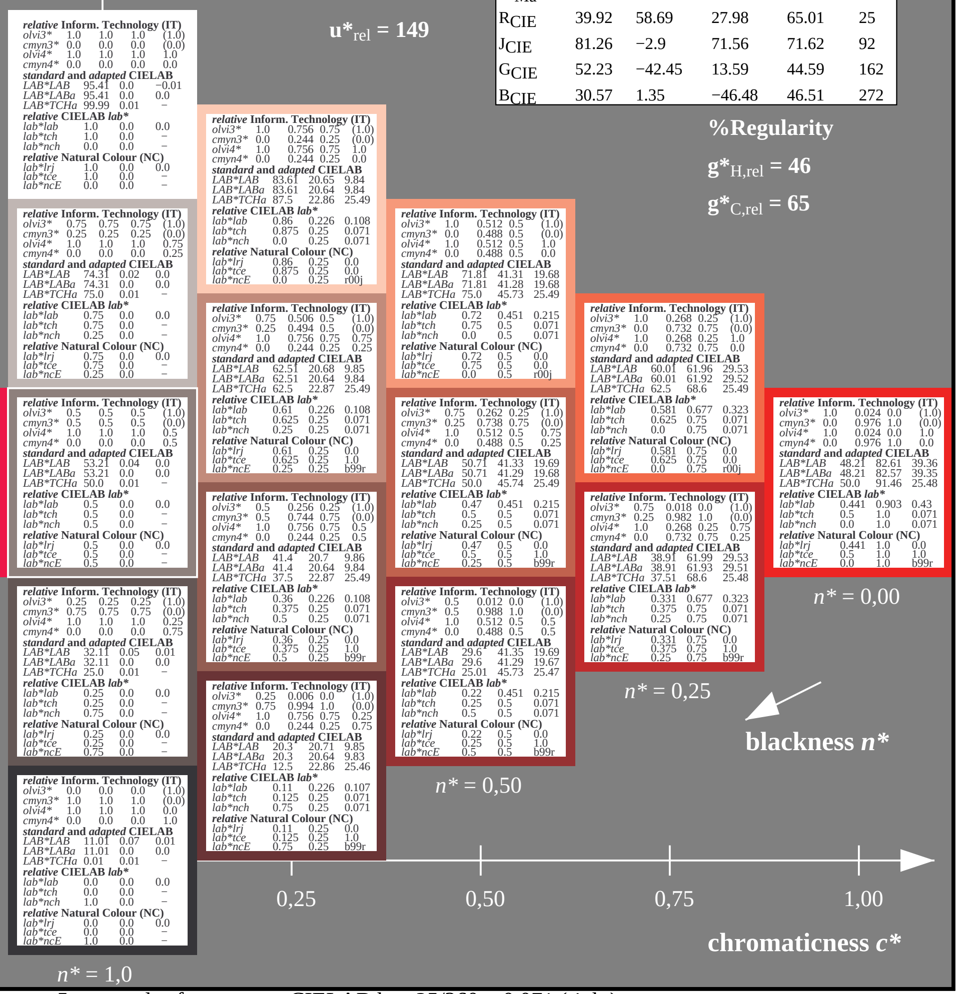


%Gamut
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



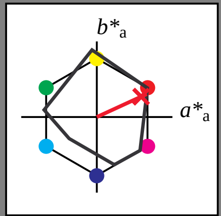
UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

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

Input: Colorimetric Reflective System MRS18
for hue *h = *lab*h* = 25/360 = 0.069**
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness *t**



%Gamut

u*rel = 91

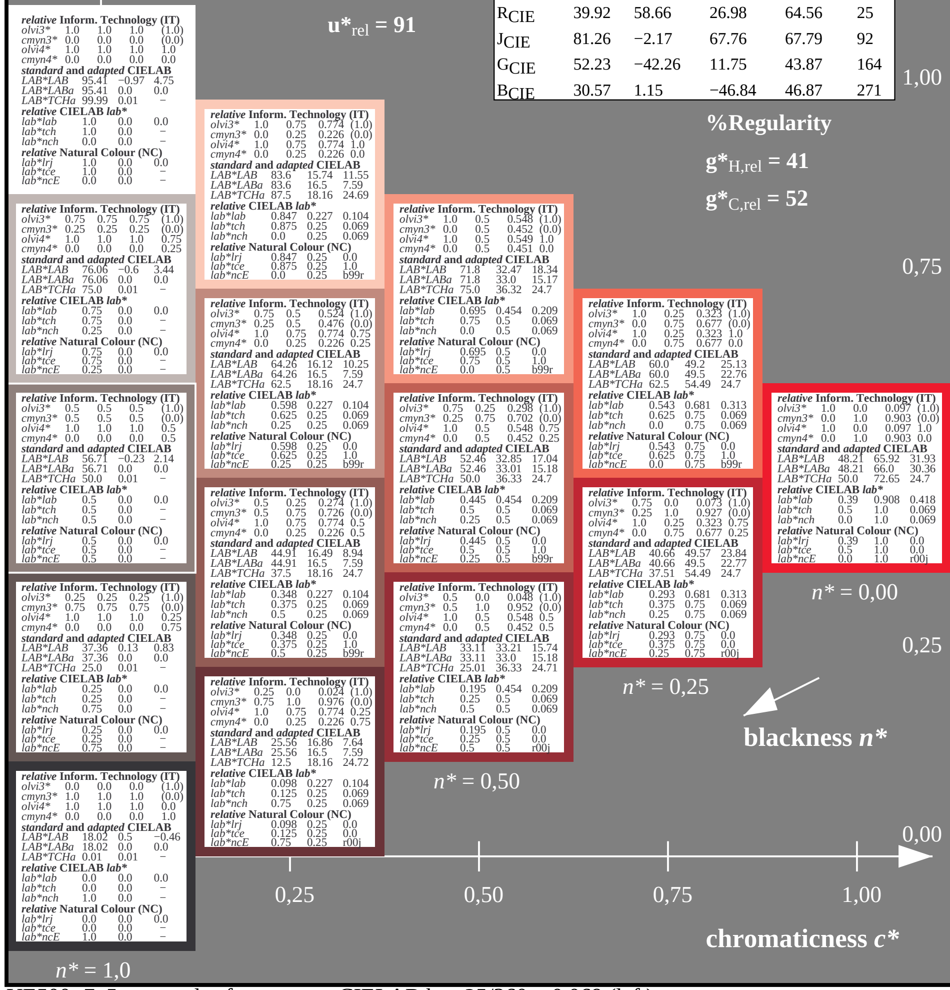
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

g*H,rel = 41

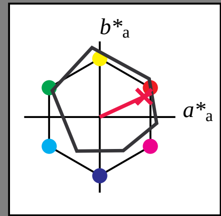
g*C,rel = 52



Output: Colorimetric Reflective System ORS18
for hue *h = *lab*h* = 25/360 = 0.069**
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness *t**



%Gamut

u*rel = 93

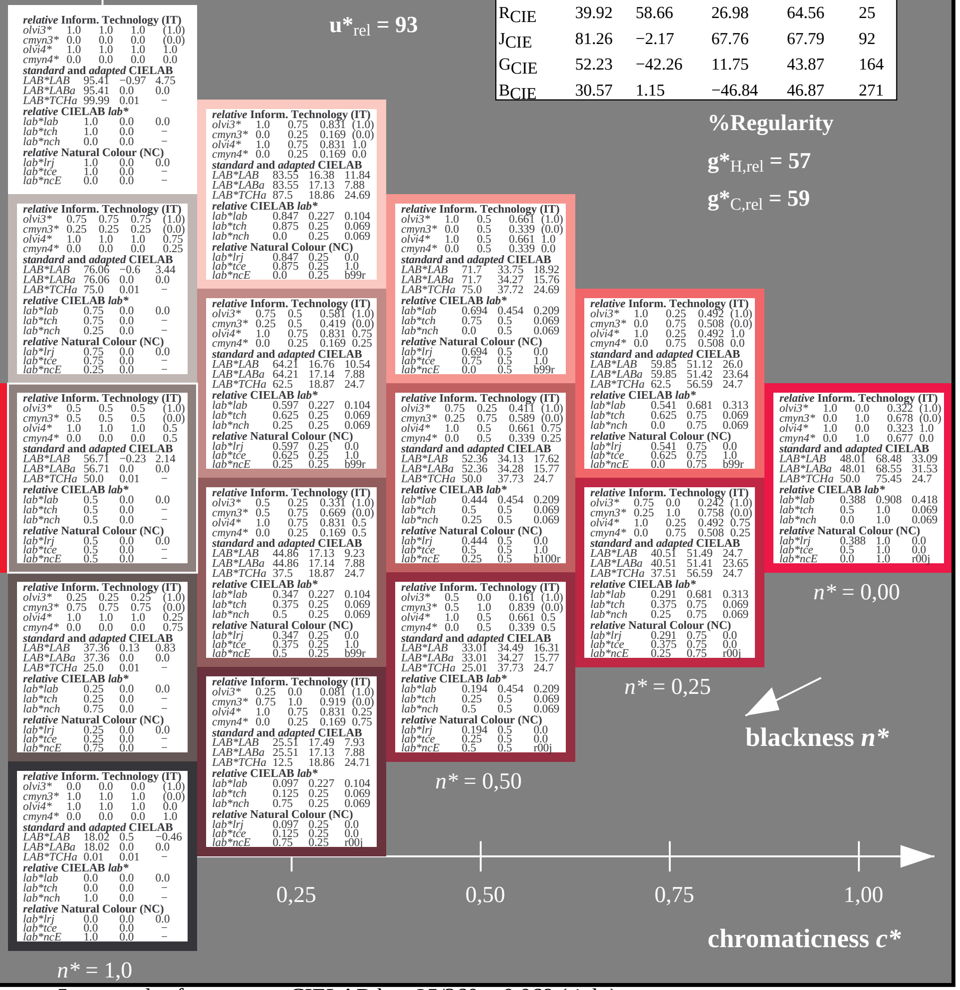
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

g*H,rel = 57

g*C,rel = 59



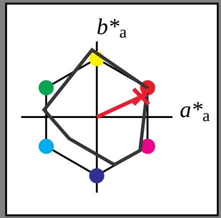
UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

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

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch and lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness t^*



%Gamut

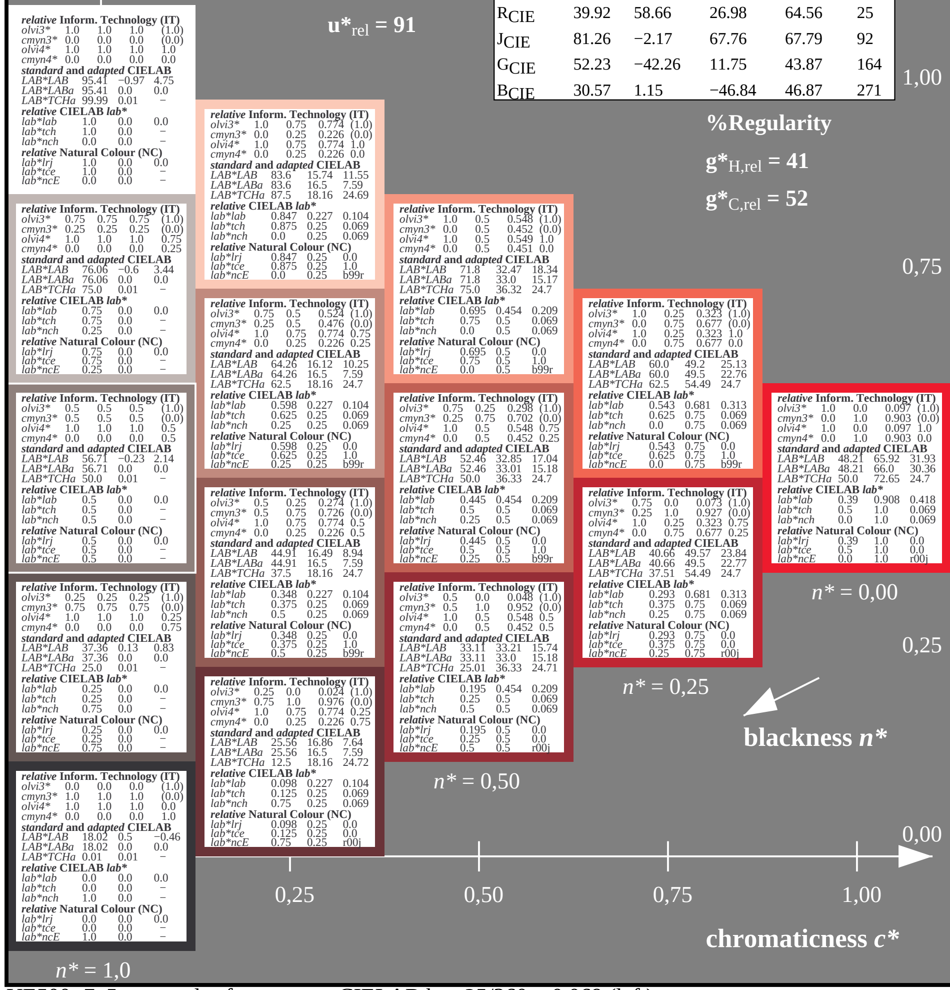
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

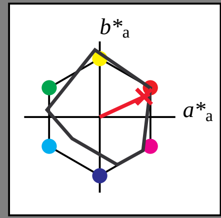


UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch and lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness t^*



%Gamut

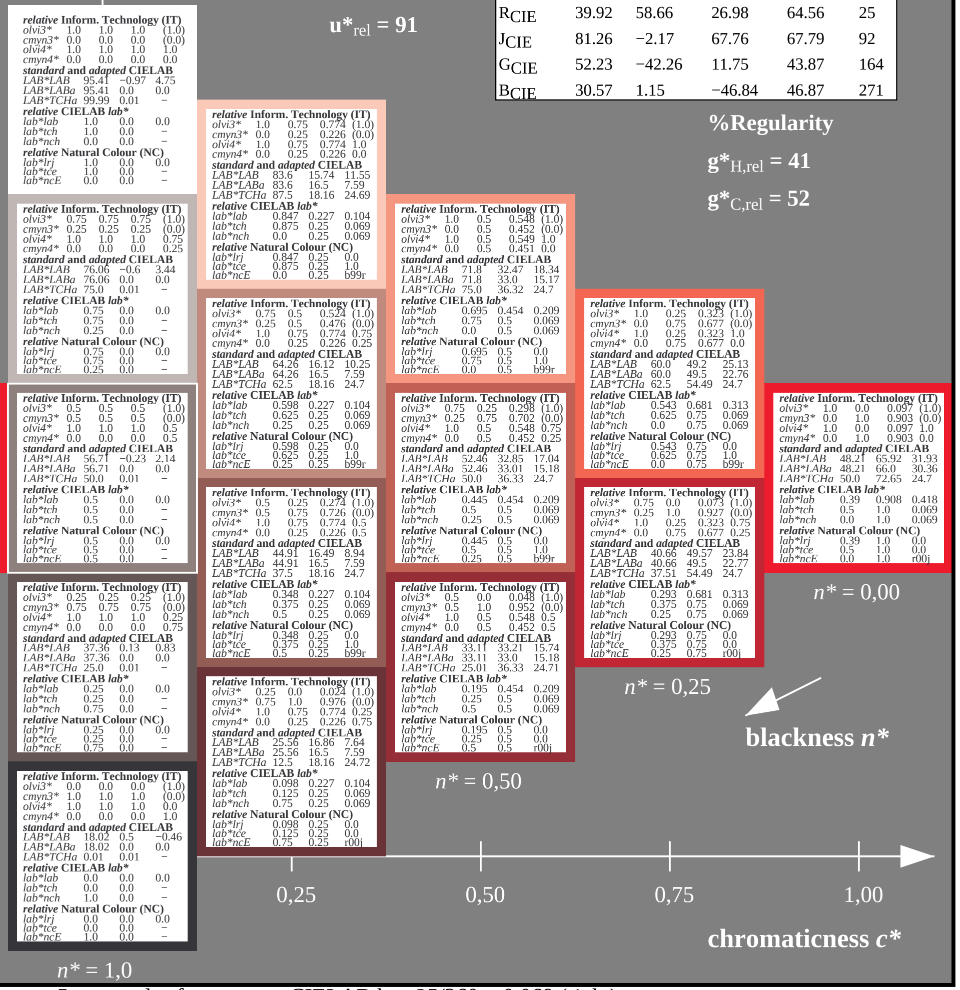
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



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

Input: Colorimetric Reflective System MRS18

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

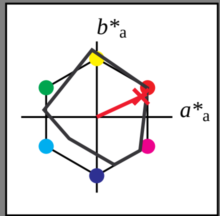
*lab*tch and lab*nch*

D65: hue R

LCH*Ma: 48 73 25

rgb*Ma: 1.0 0.0 0.1

triangle lightness t^*



%Gamut

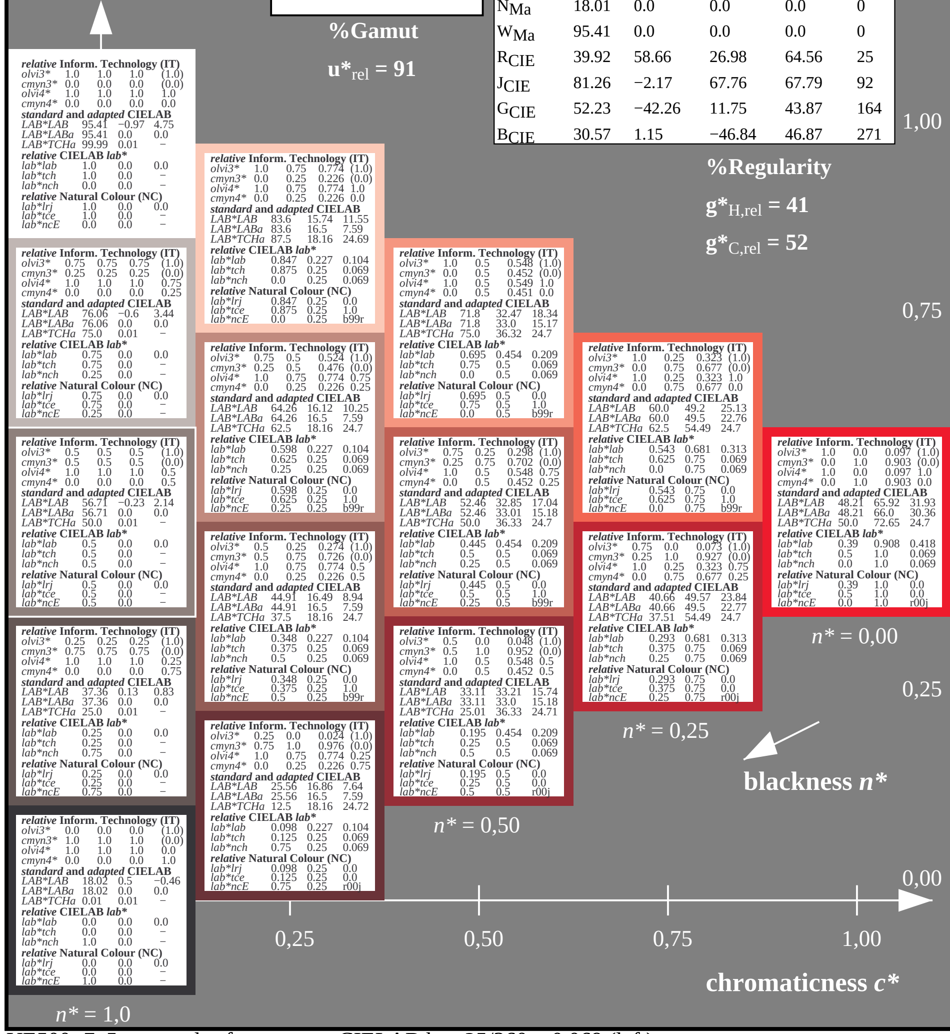
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System TRS18

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

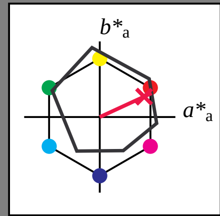
*lab*tch and lab*nch*

D65: hue R

LCH*Ma: 48 75 25

rgb*Ma: 1.0 0.0 0.32

triangle lightness t^*



%Gamut

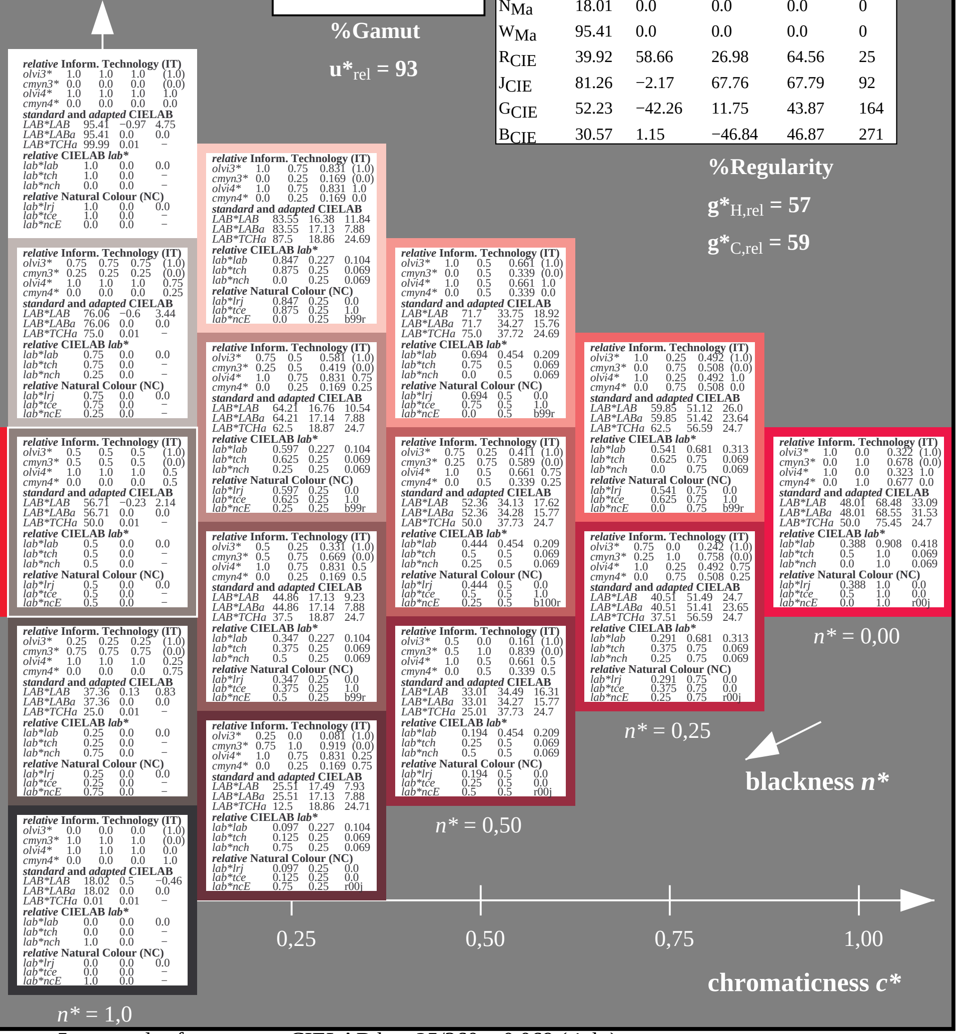
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

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

Input: Colorimetric Reflective System MRS18

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

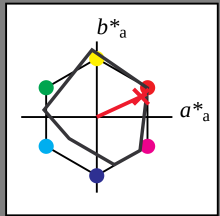
lab*tch* and *lab*nch

D65: hue R

LCH*Ma: 48 73 25

rgb*Ma: 1.0 0.0 0.1

triangle lightness t^*



%Gamut

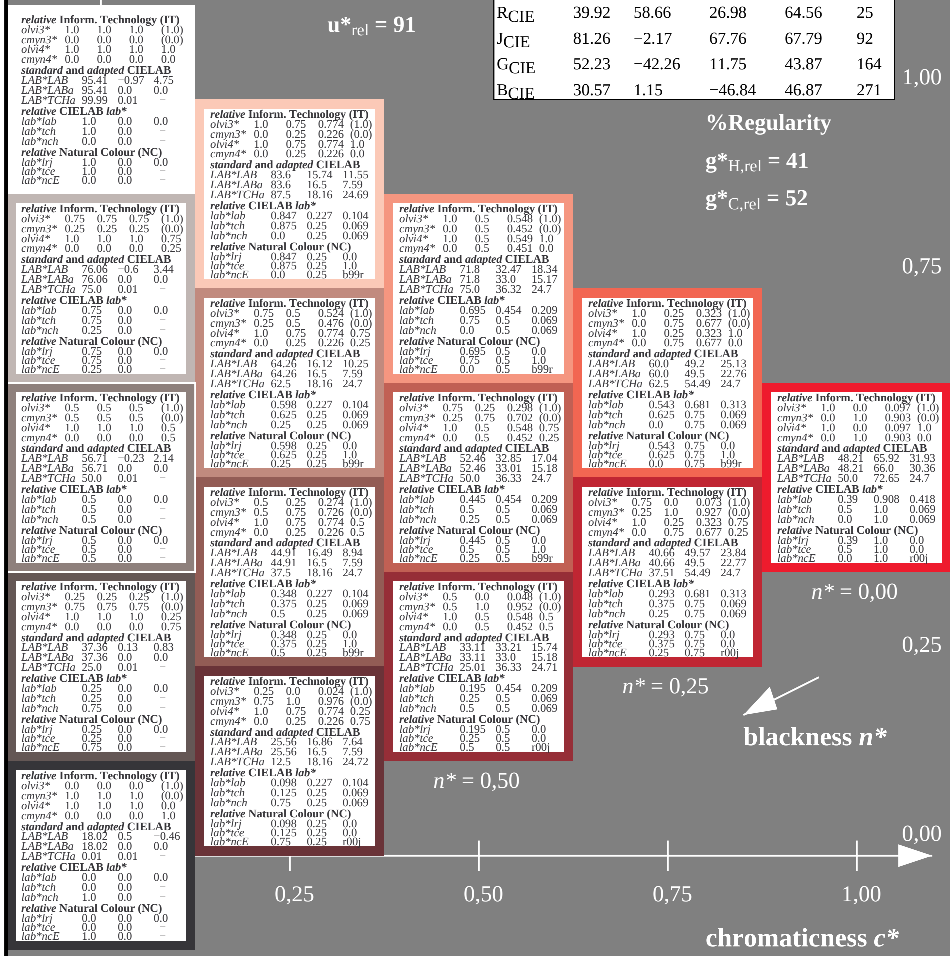
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



Output: Colorimetric Reflective System MRS18a

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

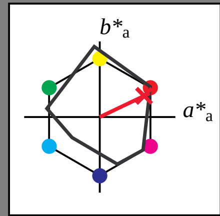
lab*tch* and *lab*nch

D65: hue R

LCH*Ma: 48 73 25

rgb*Ma: 1.0 0.0 0.1

triangle lightness t^*



%Gamut

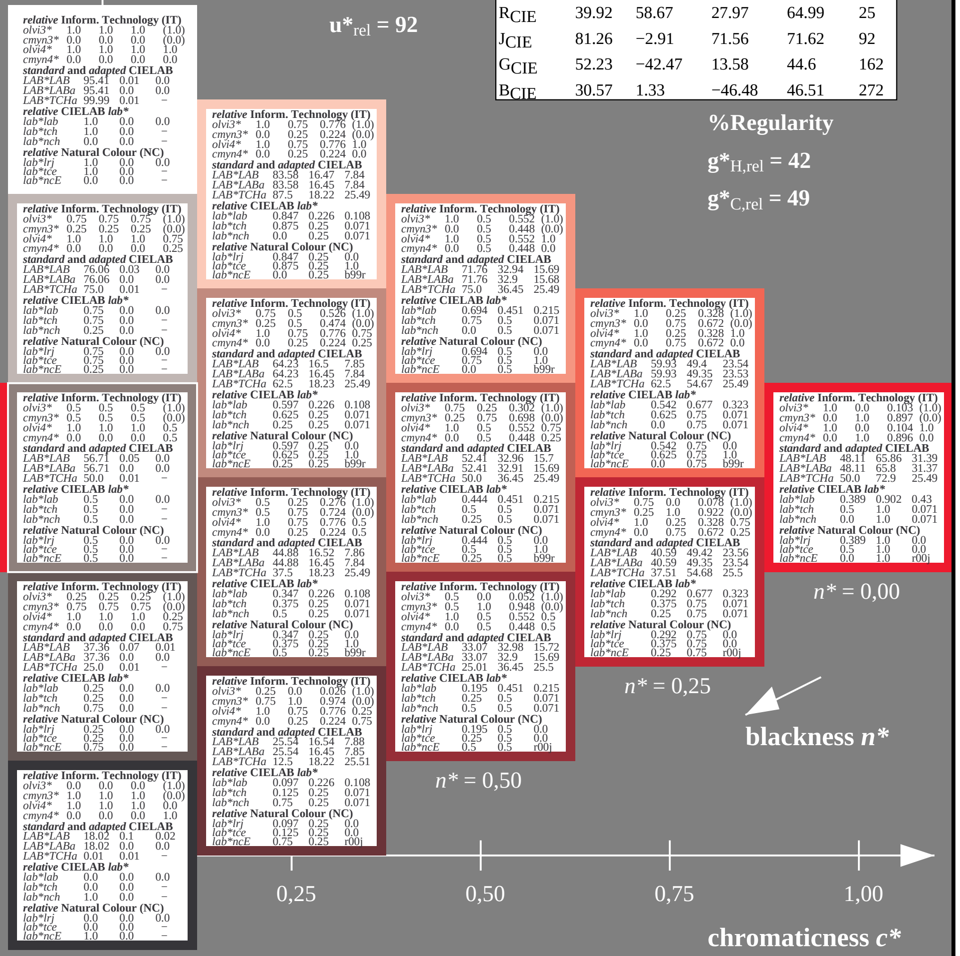
u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

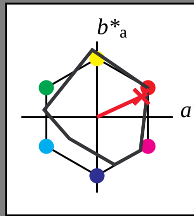


UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

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

Input: Colorimetric Reflective System MRS18
for hue *h = *lab*h* = 25/360 = 0.069**
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1
triangle lightness *t**



%Gamut

u*rel = 91

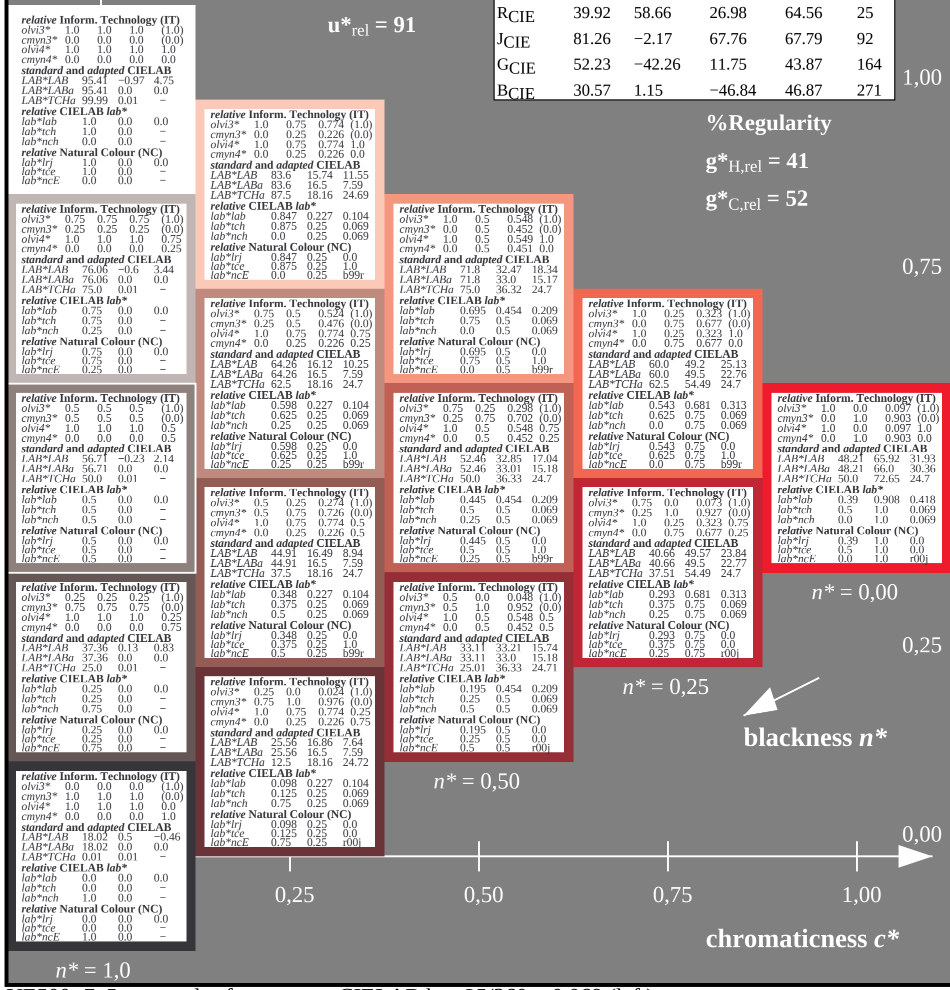
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

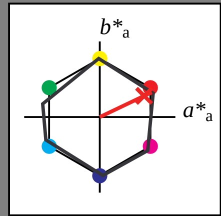
g*H,rel = 41

g*C,rel = 52



Output: Colorimetric Reflective System NRS18
for hue *h = *lab*h* = 25/360 = 0.071**
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 57 76 25
rgb*Ma: 1.0 0.03 0.0
triangle lightness *t**



%Gamut

u*rel = 100

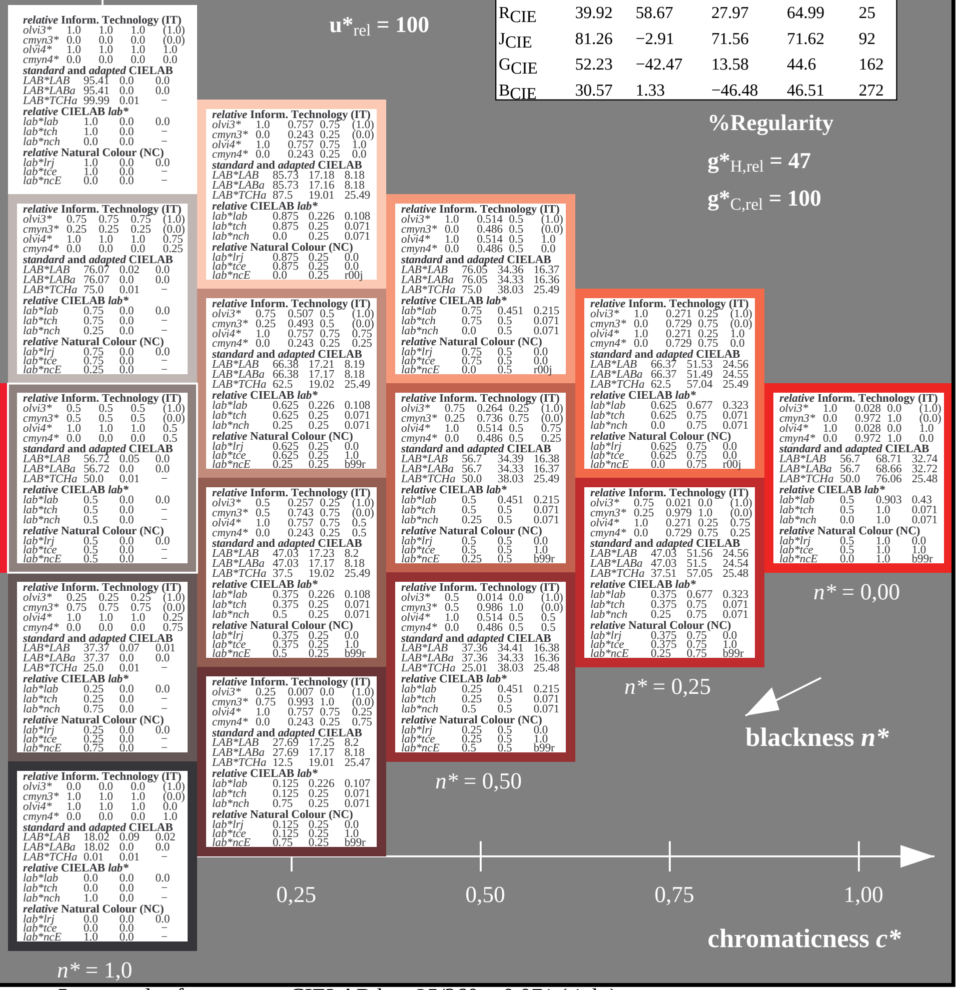
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

g*H,rel = 47

g*C,rel = 100

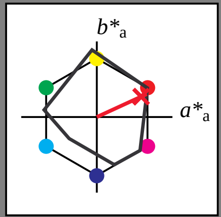


UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

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

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
*lab*tch and lab*nch*

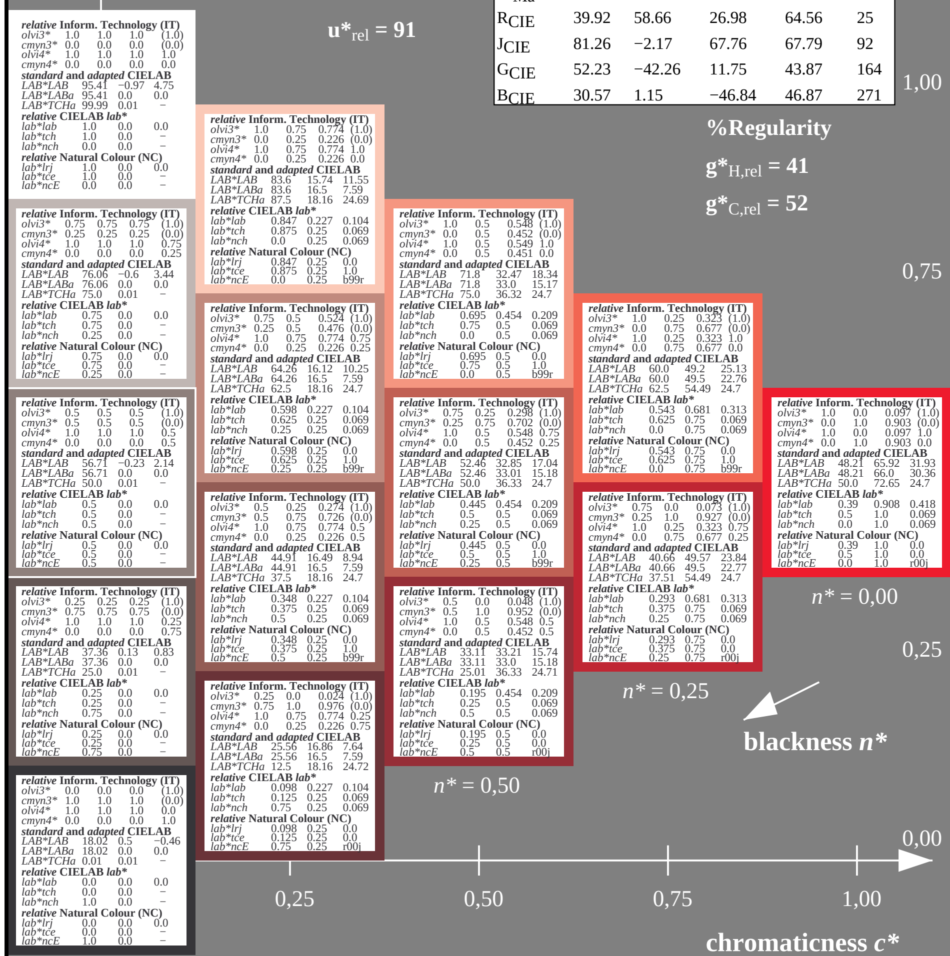
D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1
triangle lightness t^*



%Gamut
$u^*_{rel} = 91$

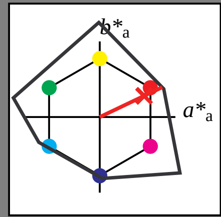
MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 41$
$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 25/360 = 0.071$
*lab*tch and lab*nch*

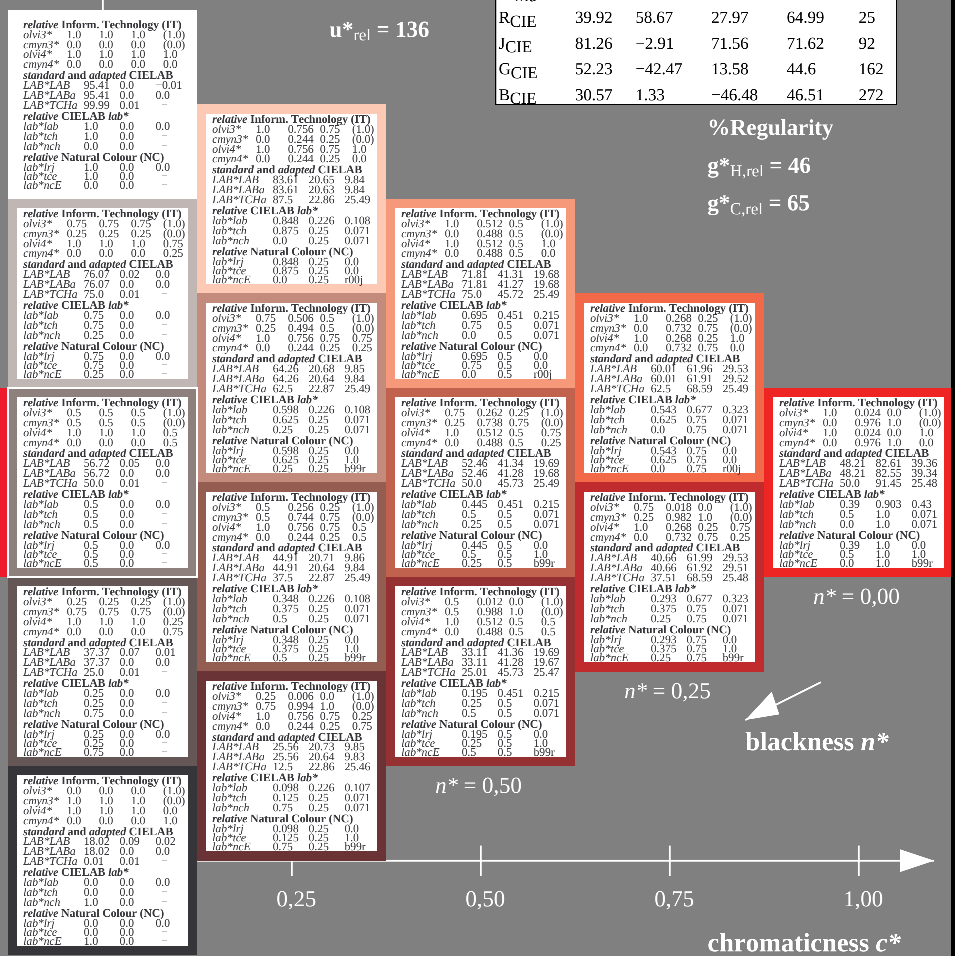
D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



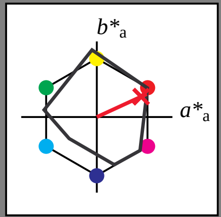
UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

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

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch and lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness t^*



%Gamut

$u^*_{rel} = 91$

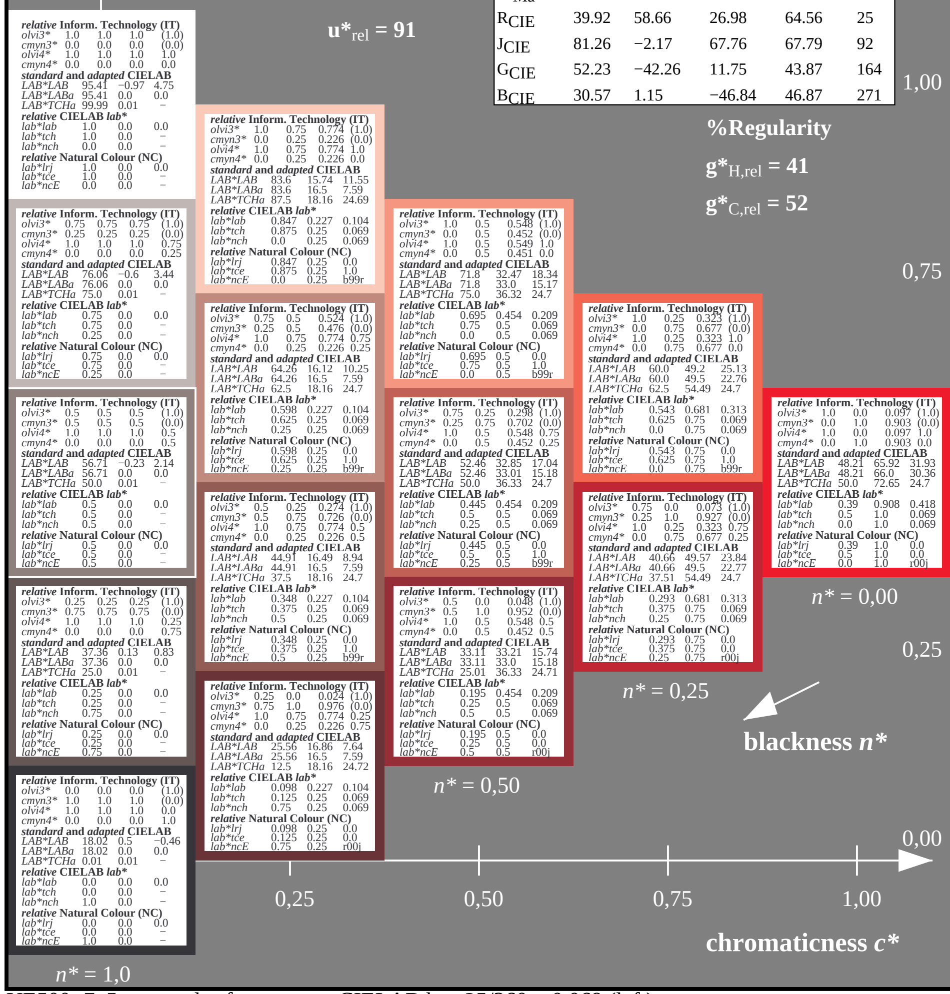
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

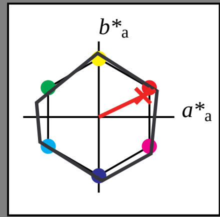
$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch and lab*nch

D65: hue R
LCH*Ma: 53 83 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 119$

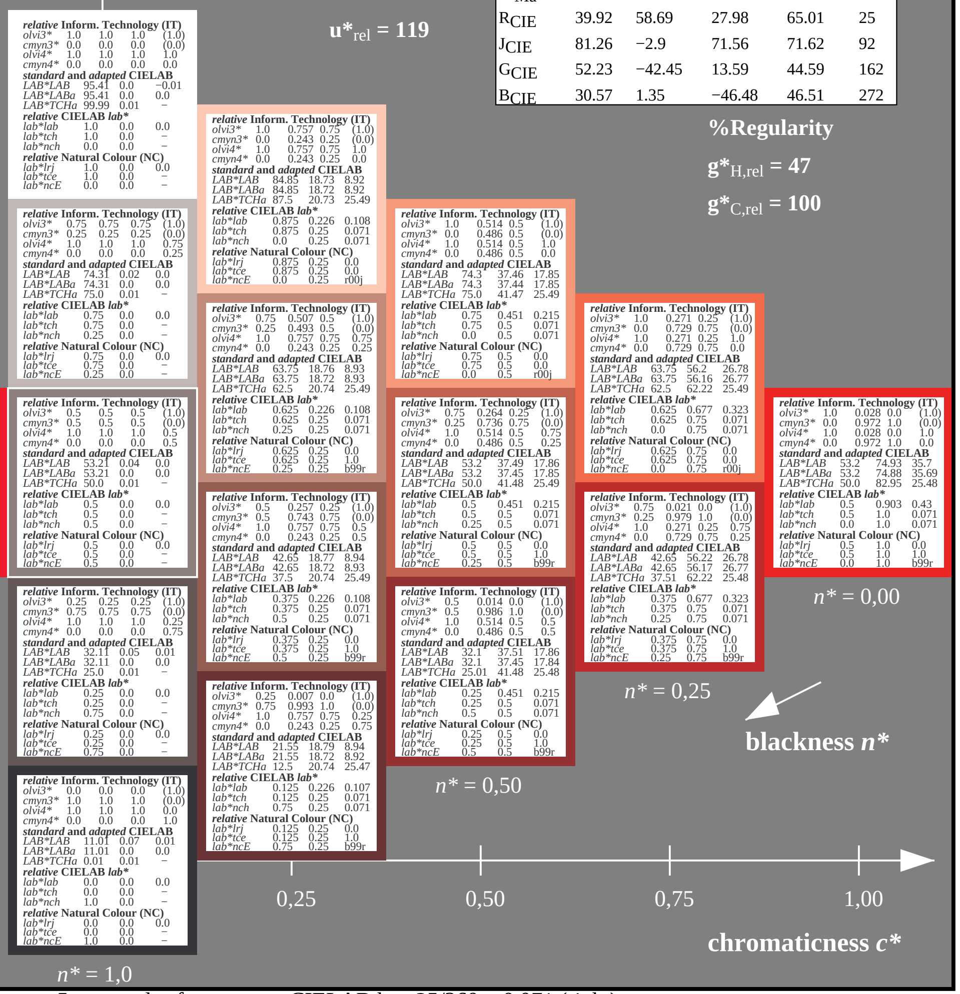
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

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

Input: Colorimetric Reflective System MRS18

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

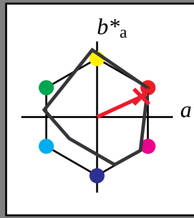
lab*tch and lab*nch

D65: hue R

LCH*Ma: 48 73 25

rgb*Ma: 1.0 0.0 0.1

triangle lightness t^*



%Gamut

$u^*_{rel} = 91$

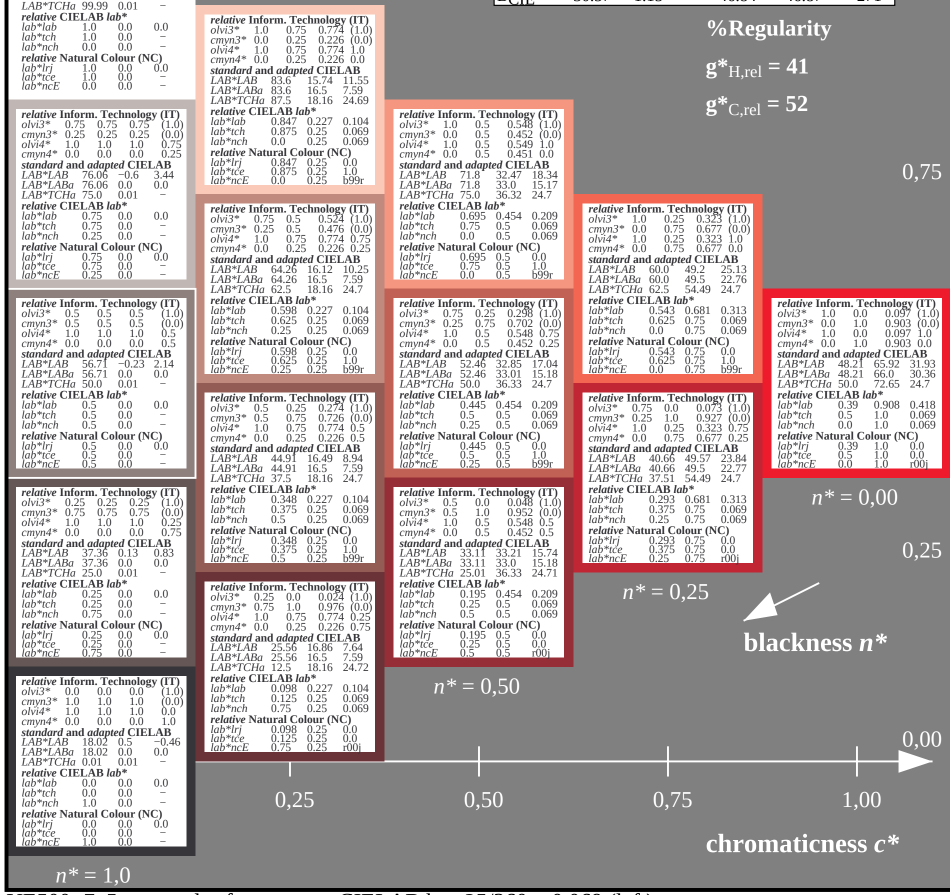
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System NCS11

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

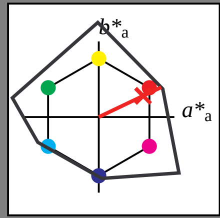
lab*tch and lab*nch

D65: hue R

LCH*Ma: 48 91 25

rgb*Ma: 1.0 0.02 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 149$

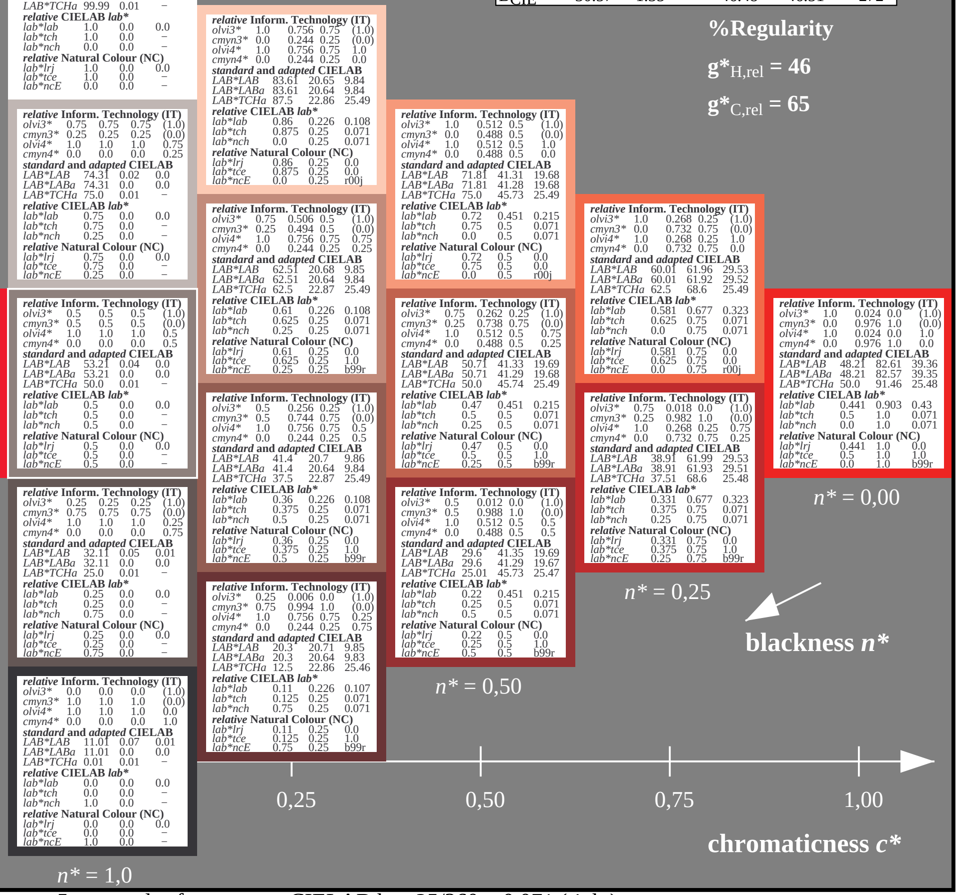
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

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

Input: Colorimetric Reflective System TRS18

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

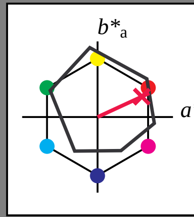
lab*tch* and *lab*nch

D65: hue R

LCH*Ma: 48 75 25

rgb*Ma: 1.0 0.0 0.32

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

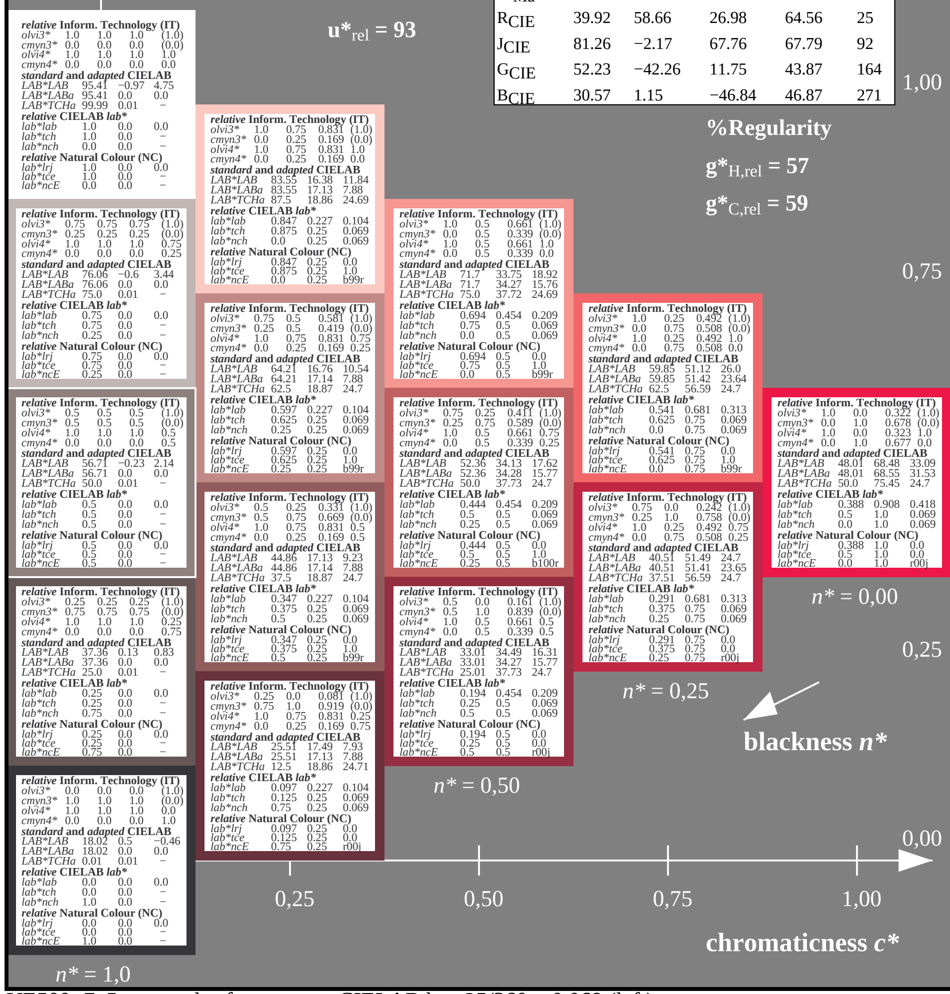
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



Output: Colorimetric Reflective System ORS18

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

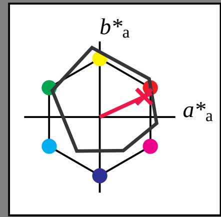
lab*tch* and *lab*nch

D65: hue R

LCH*Ma: 48 75 25

rgb*Ma: 1.0 0.0 0.32

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

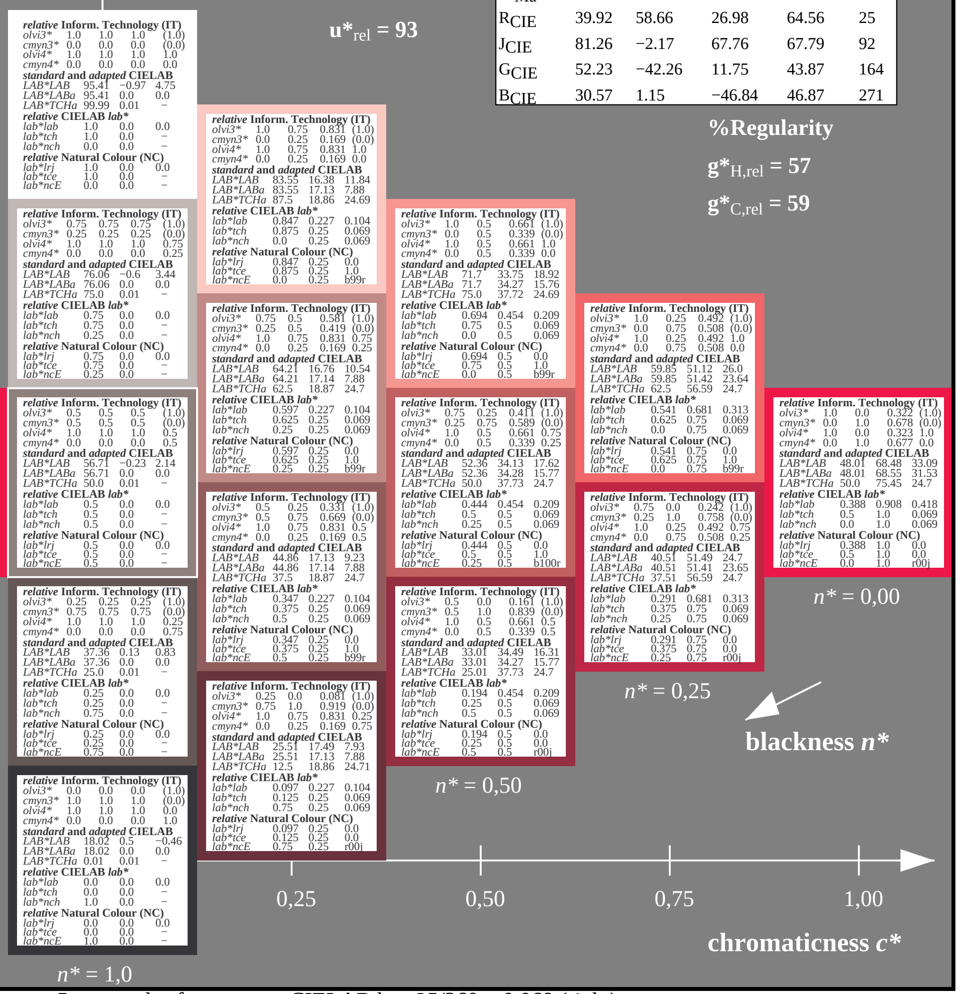
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

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

Input: Colorimetric Reflective System TRS18

for hue h = lab*h = 25/360 = 0.069*

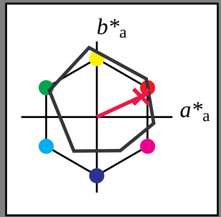
*lab*tch and lab*nch*

D65: hue R

LCH*Ma: 48 75 25

rgb*Ma: 1.0 0.0 0.32

triangle lightness t*



%Gamut

u^*_{rel} = 93

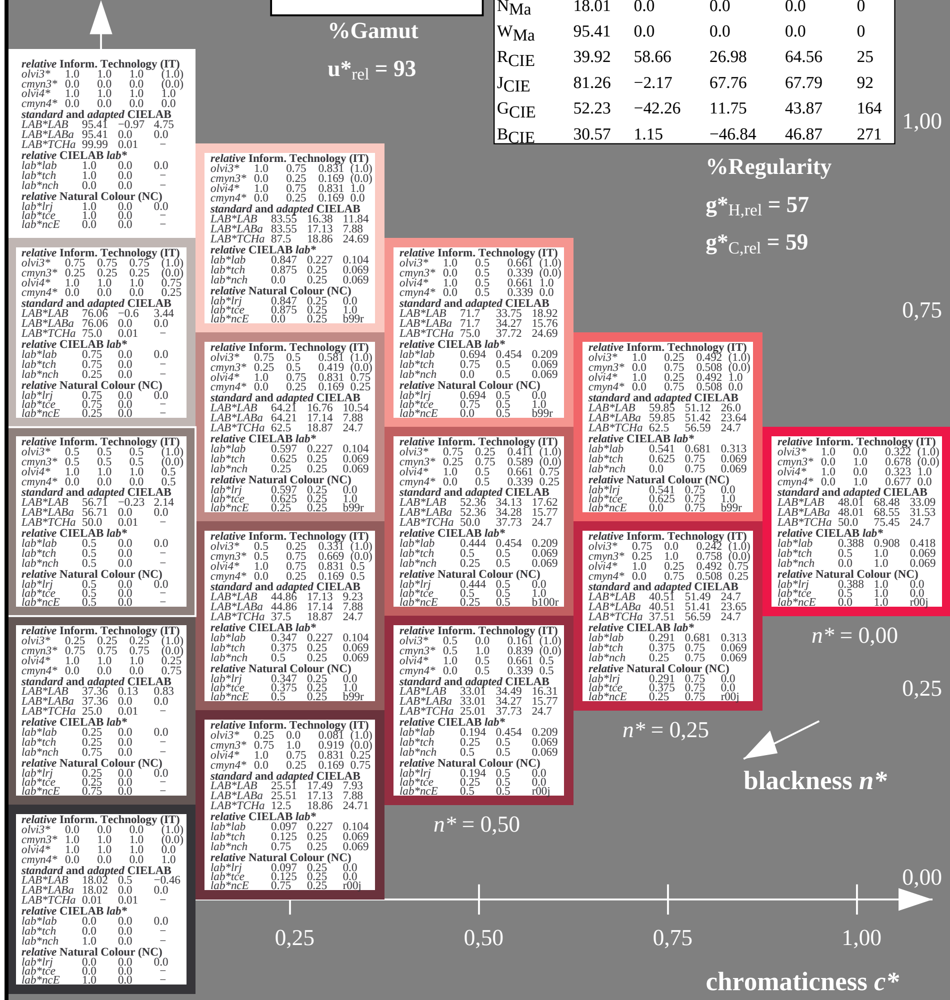
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



Output: Colorimetric Reflective System MRS18

for hue h = lab*h = 25/360 = 0.069*

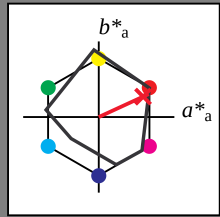
*lab*tch and lab*nch*

D65: hue R

LCH*Ma: 48 73 25

rgb*Ma: 1.0 0.0 0.1

triangle lightness t*



%Gamut

u^*_{rel} = 91

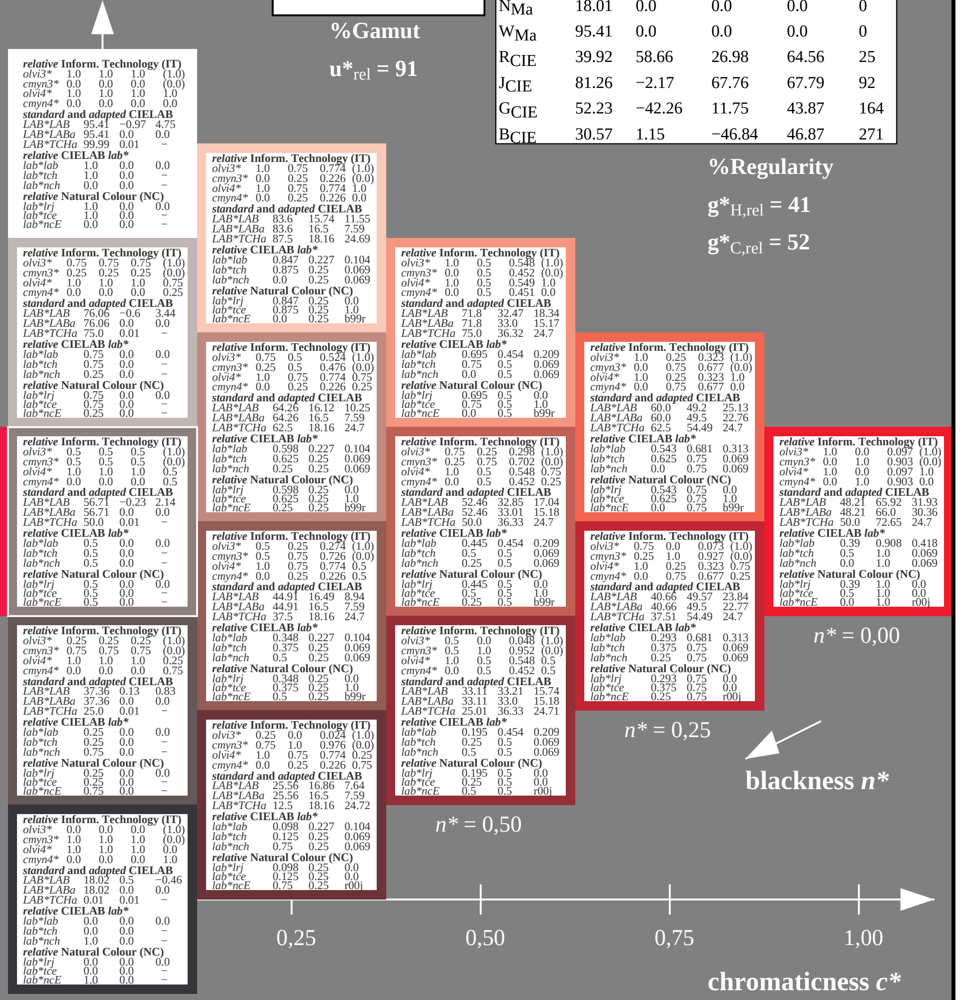
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



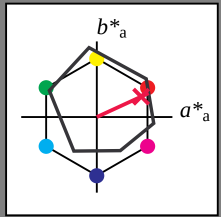
UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

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

Input: Colorimetric Reflective System TRS18
for hue *h = *lab*h* = 25/360 = 0.069**
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness *t*



%Gamut

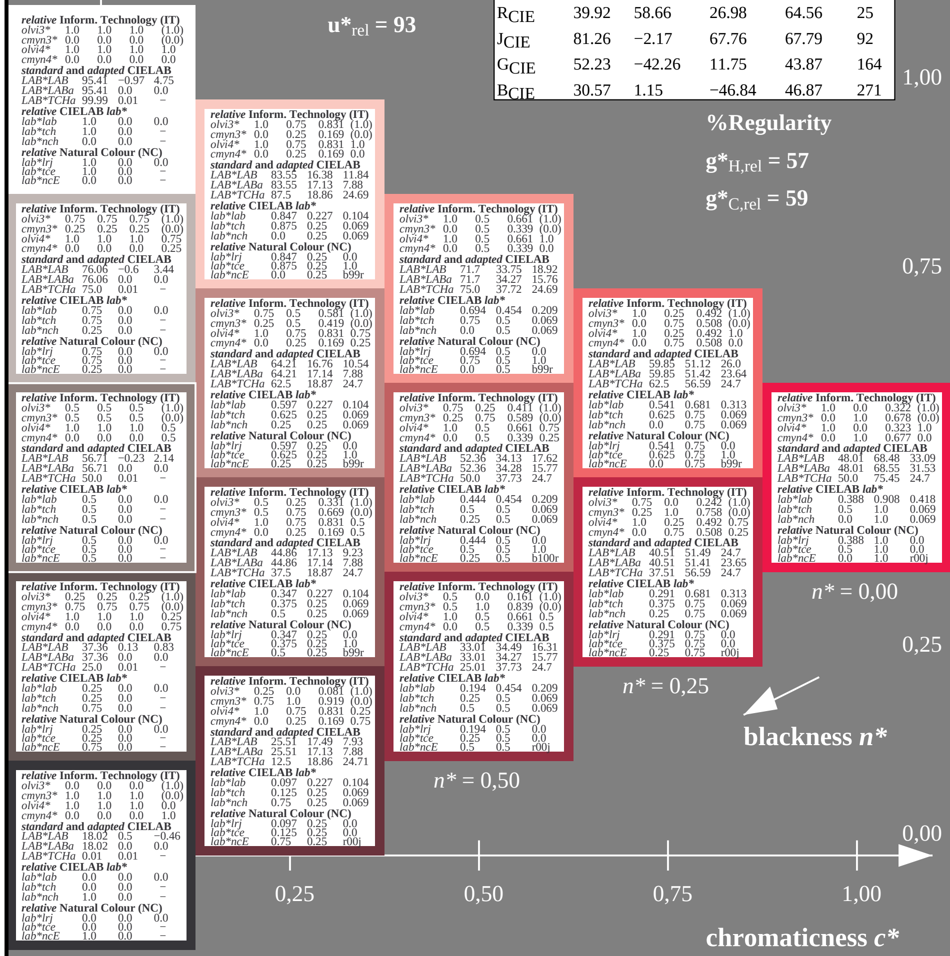
u^*_{rel} = 93

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

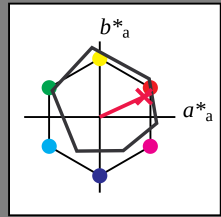
$g^*_{C,rel}$ = 59



Output: Colorimetric Reflective System TRS18
for hue *h = *lab*h* = 25/360 = 0.069**
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness *t*



%Gamut

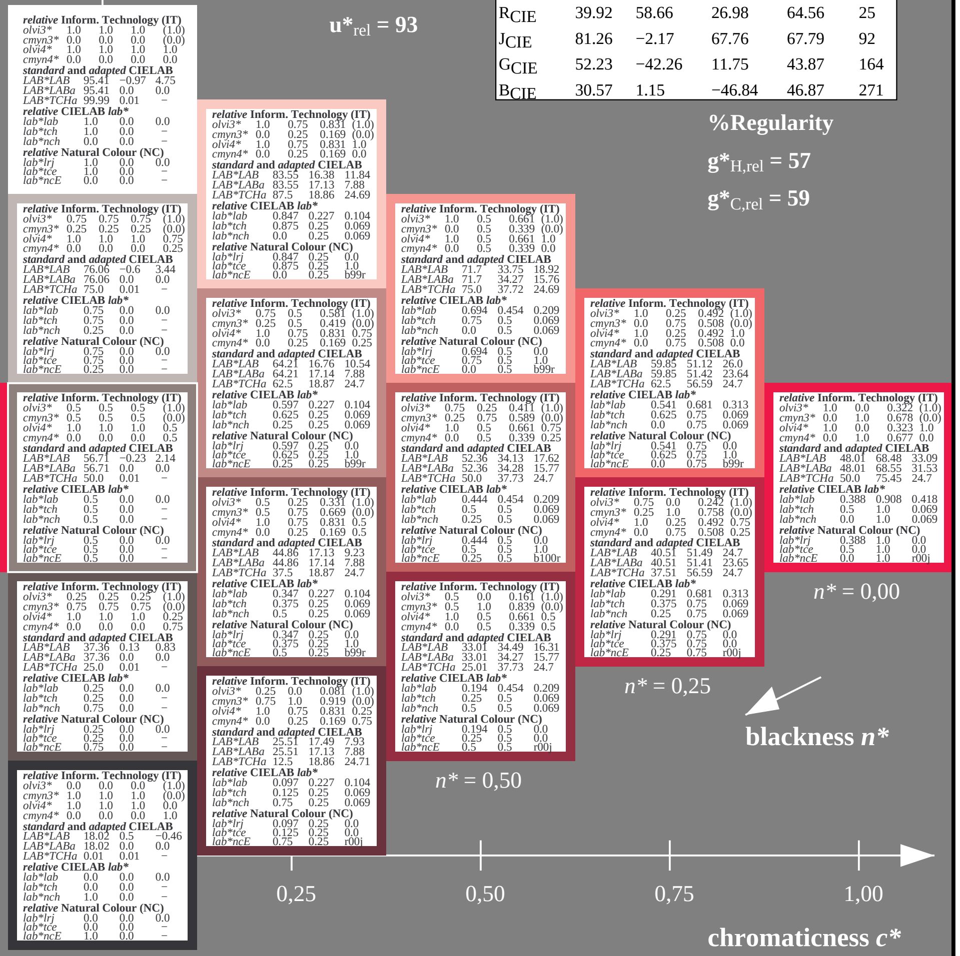
u^*_{rel} = 93

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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

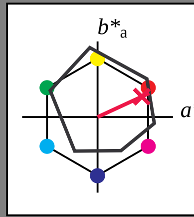


UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

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

Input: Colorimetric Reflective System TRS18
for hue *h** = *lab*h* = 25/360 = 0.069
*lab*tch and lab*nch*

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32
triangle lightness *t**



%Gamut

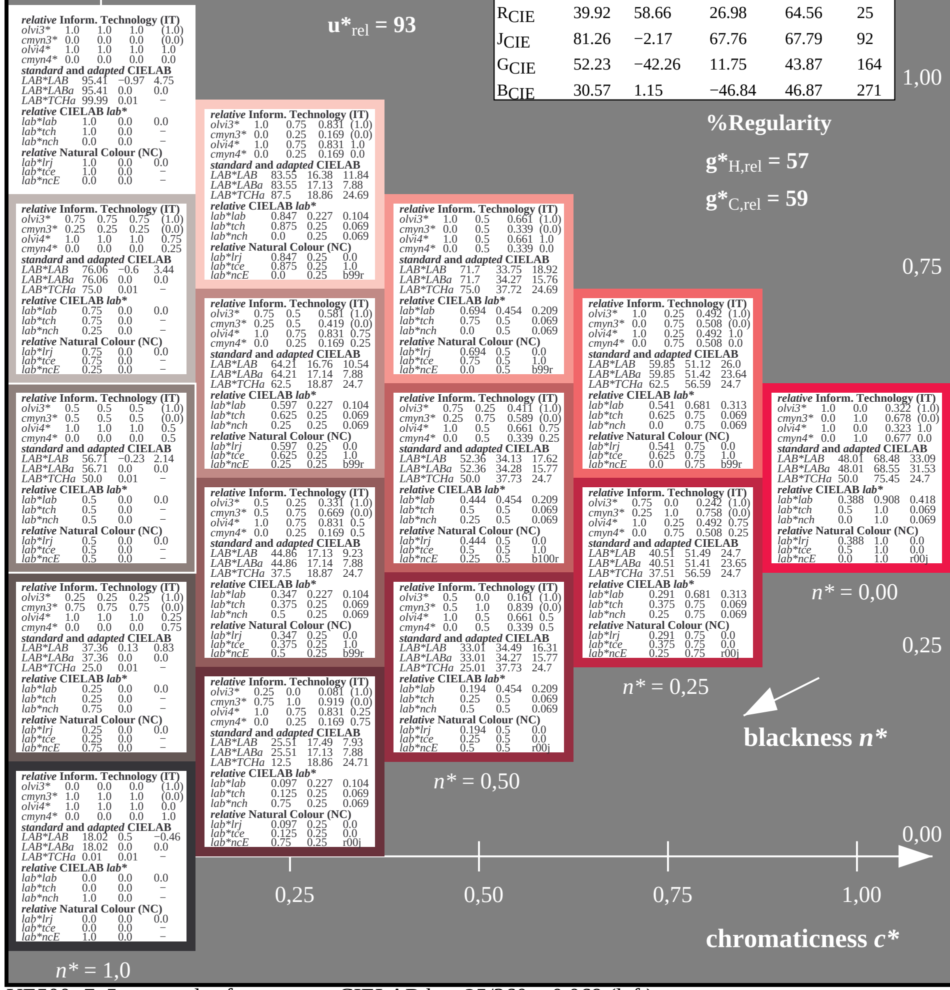
u^*_{rel} = 93

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

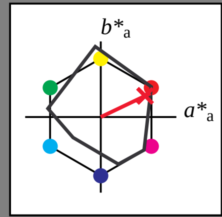
$g^*_{H,rel}$ = 57

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



Output: Colorimetric Reflective System MRS18a
for hue *h** = *lab*h* = 25/360 = 0.071
*lab*tch and lab*nch*

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1
triangle lightness *t**



%Gamut

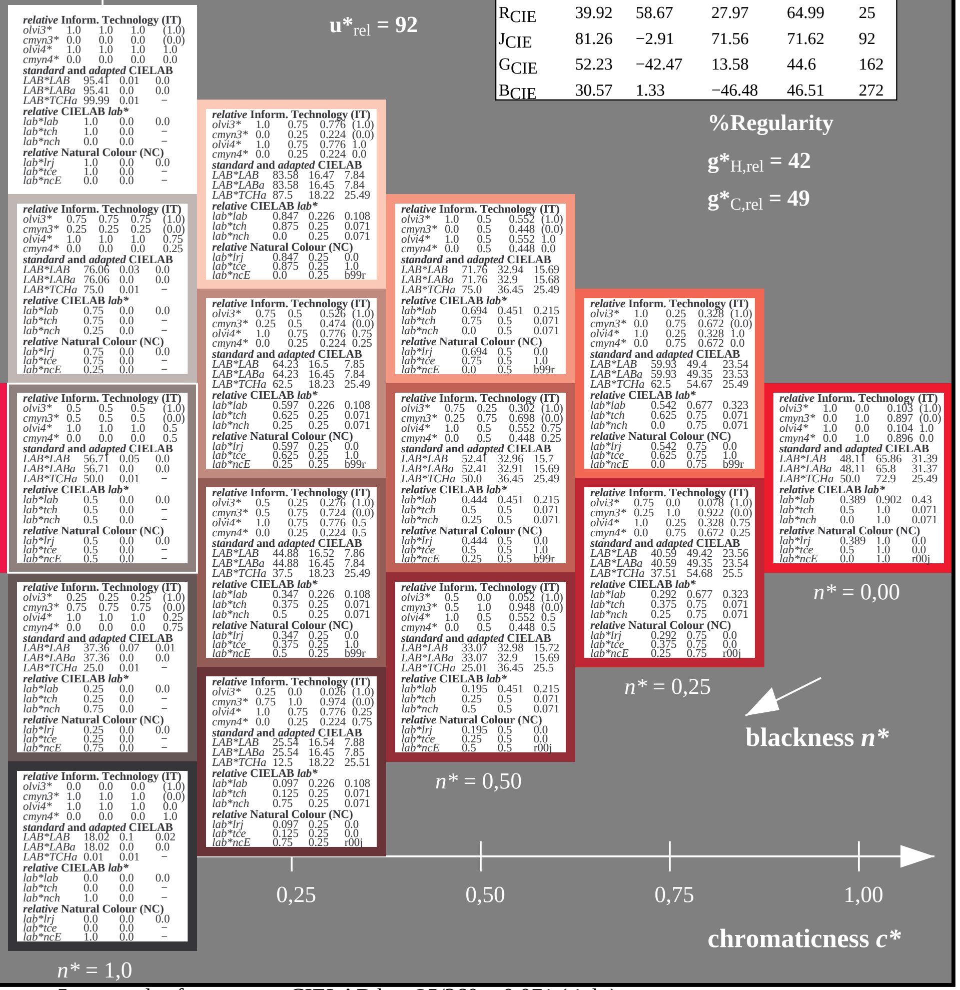
u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

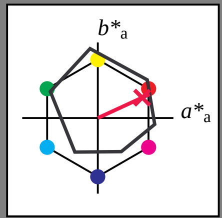


UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

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

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
*lab*tch and lab*nch*

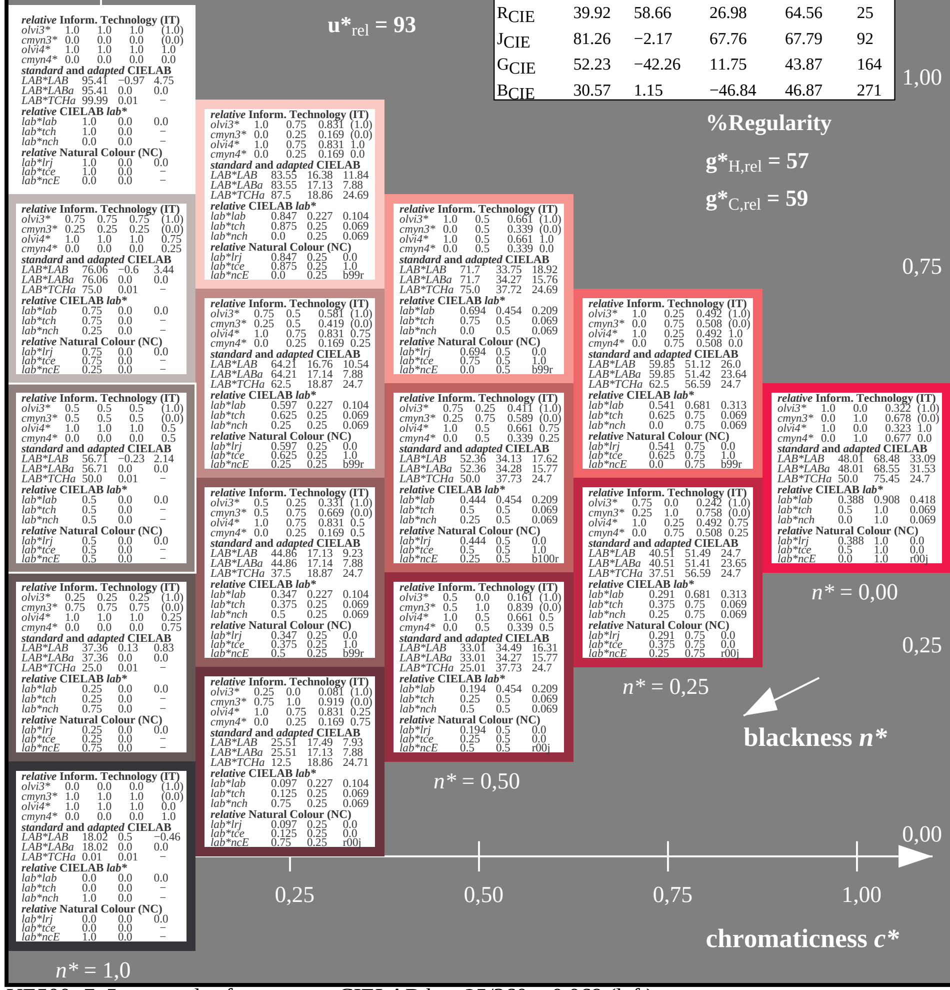
D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32
triangle lightness t^*



%Gamut
$u^*_{rel} = 93$

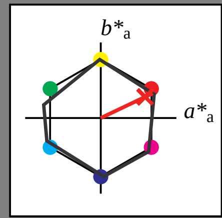
TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 25/360 = 0.071$
*lab*tch and lab*nch*

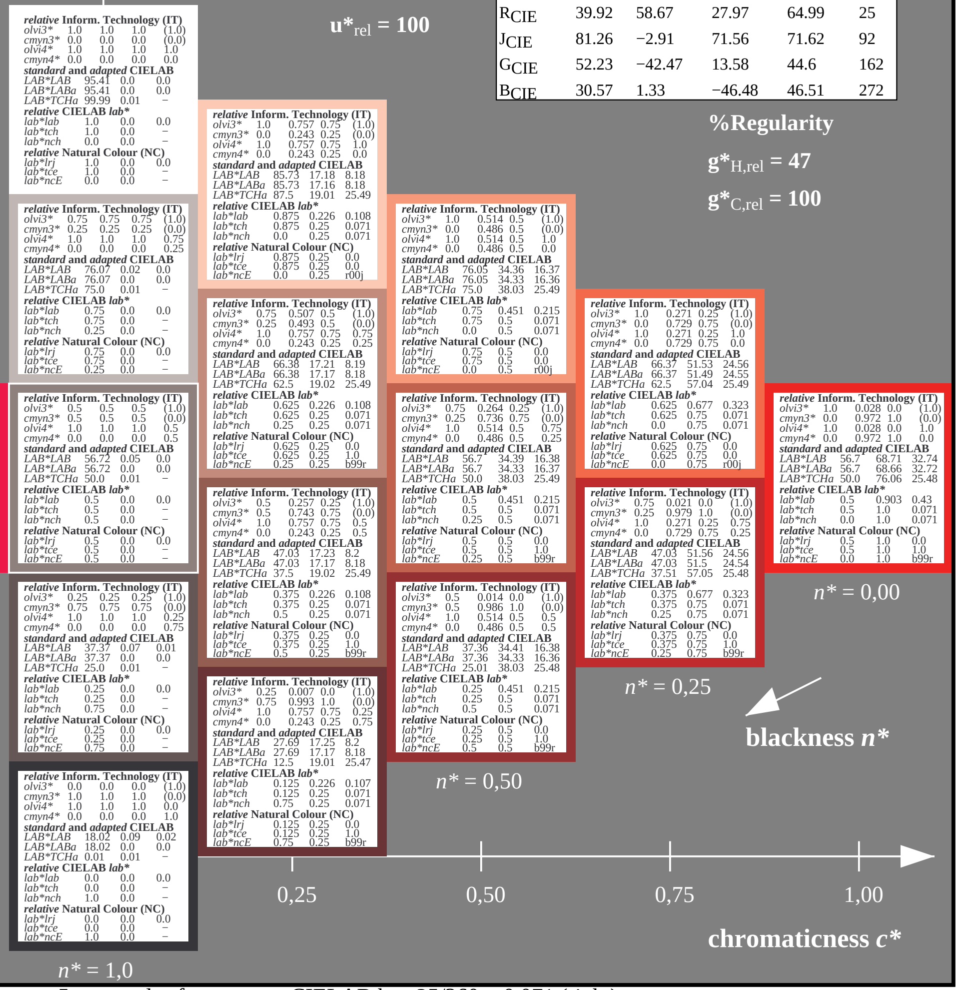
D65: hue R
LCH*Ma: 57 76 25
rgb*Ma: 1.0 0.03 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$

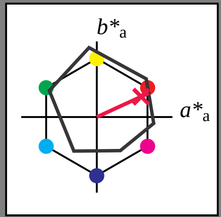


UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

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

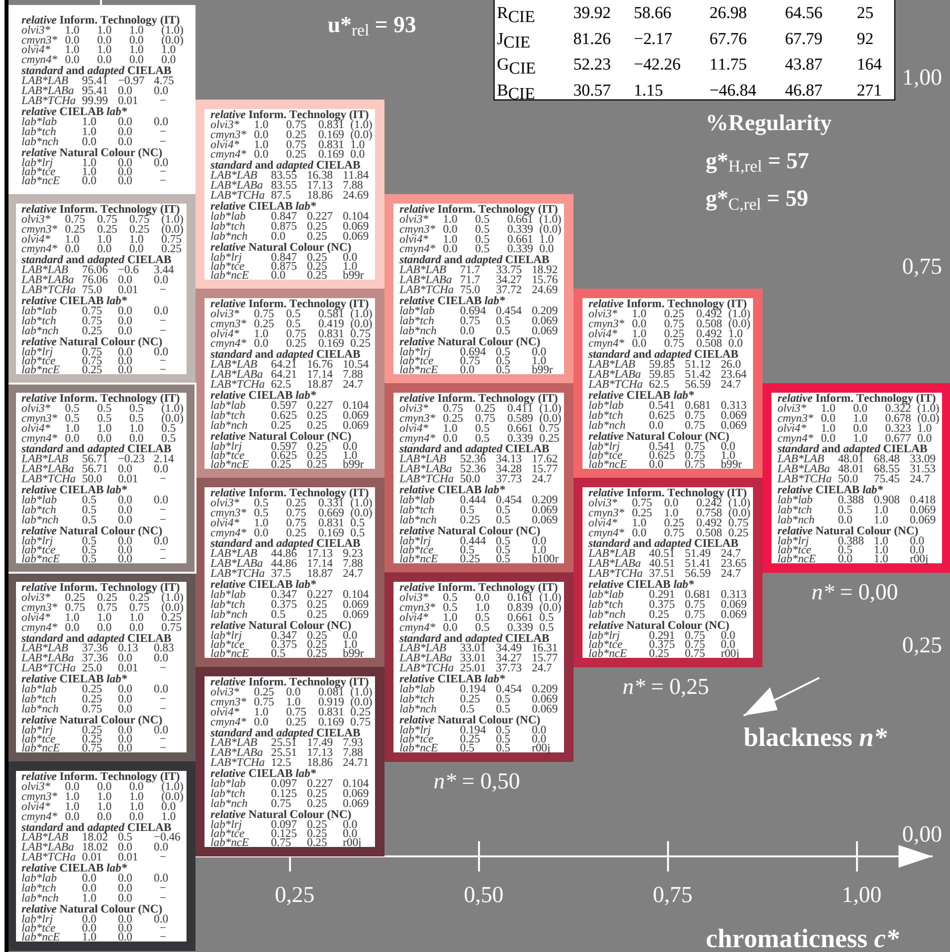
Input: Colorimetric Reflective System TRS18
for hue *h* = lab*h = 25/360 = 0.069*
*lab*tch and lab*nch*

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32
triangle lightness *t**



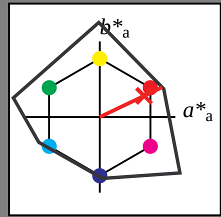
%Gamut
u*rel = 93

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



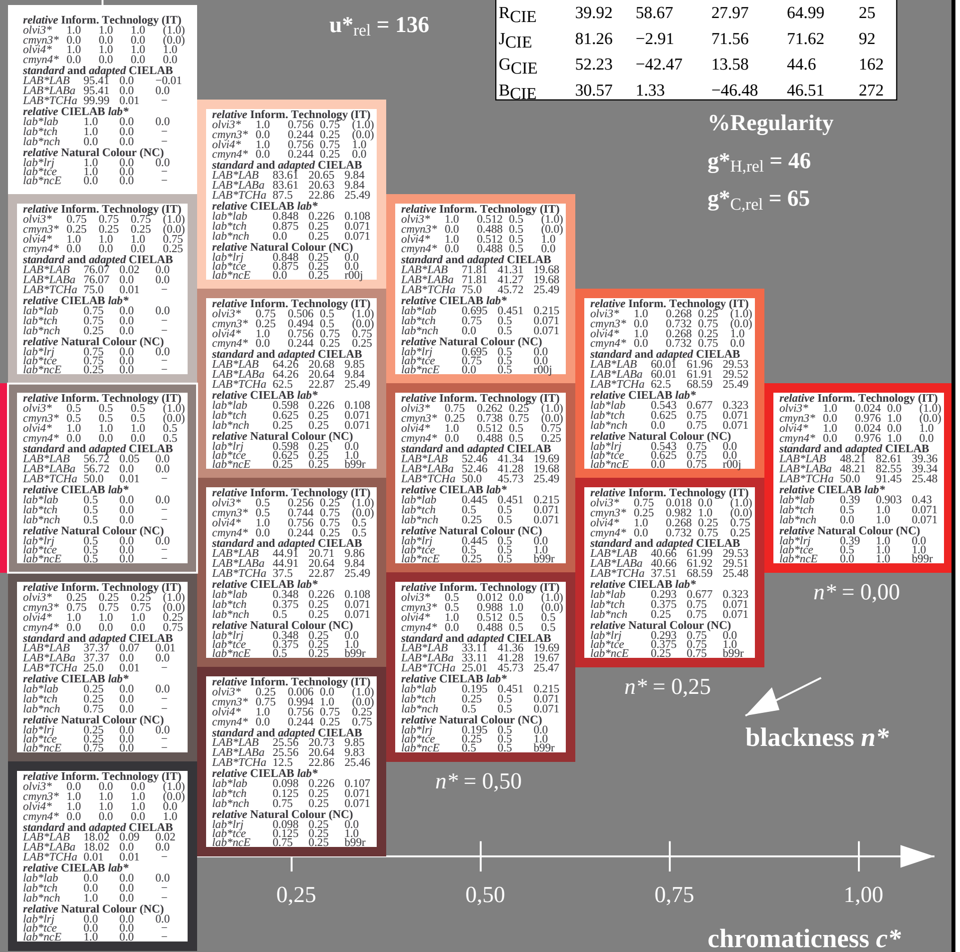
Output: Colorimetric Reflective System NCS18
for hue *h* = lab*h = 25/360 = 0.071*
*lab*tch and lab*nch*

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0
triangle lightness *t**



%Gamut
u*rel = 136

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

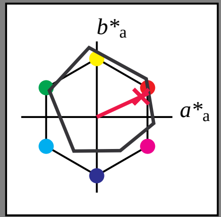


UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

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

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
*lab*tch and lab*nch*

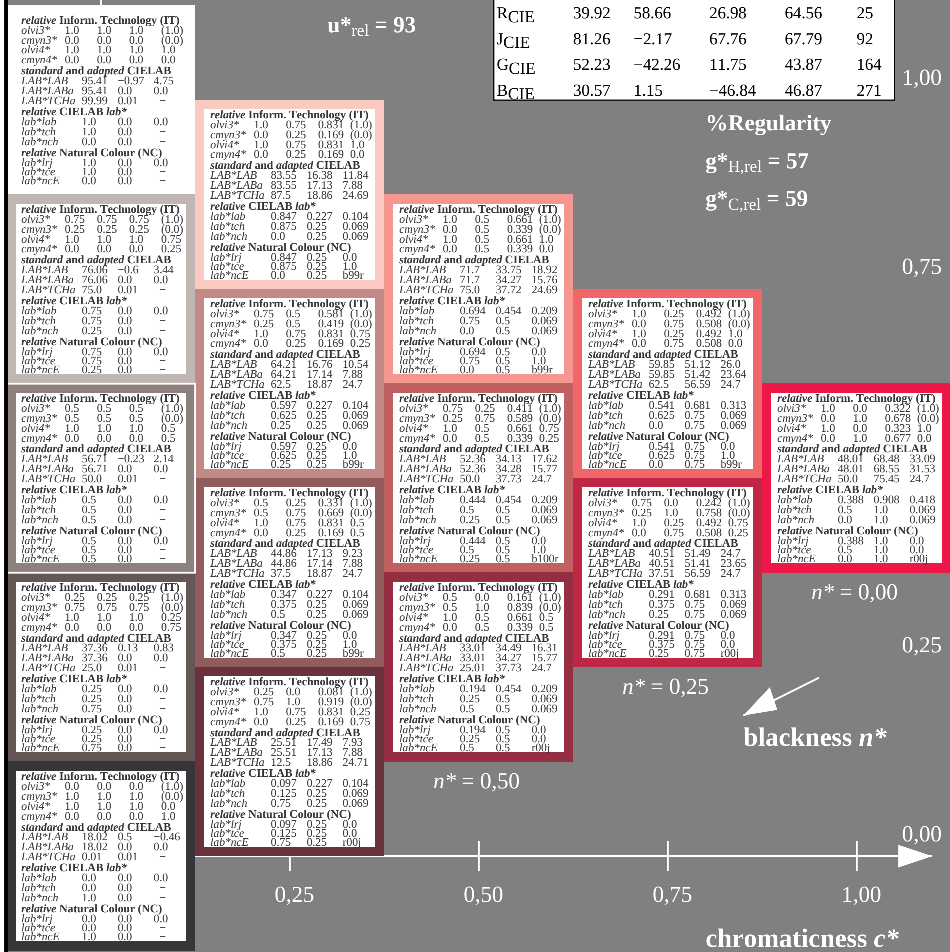
D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32
triangle lightness t^*



%Gamut
$u^*_{rel} = 93$

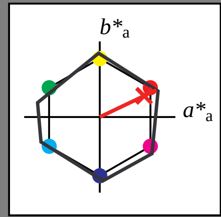
TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 25/360 = 0.071$
*lab*tch and lab*nch*

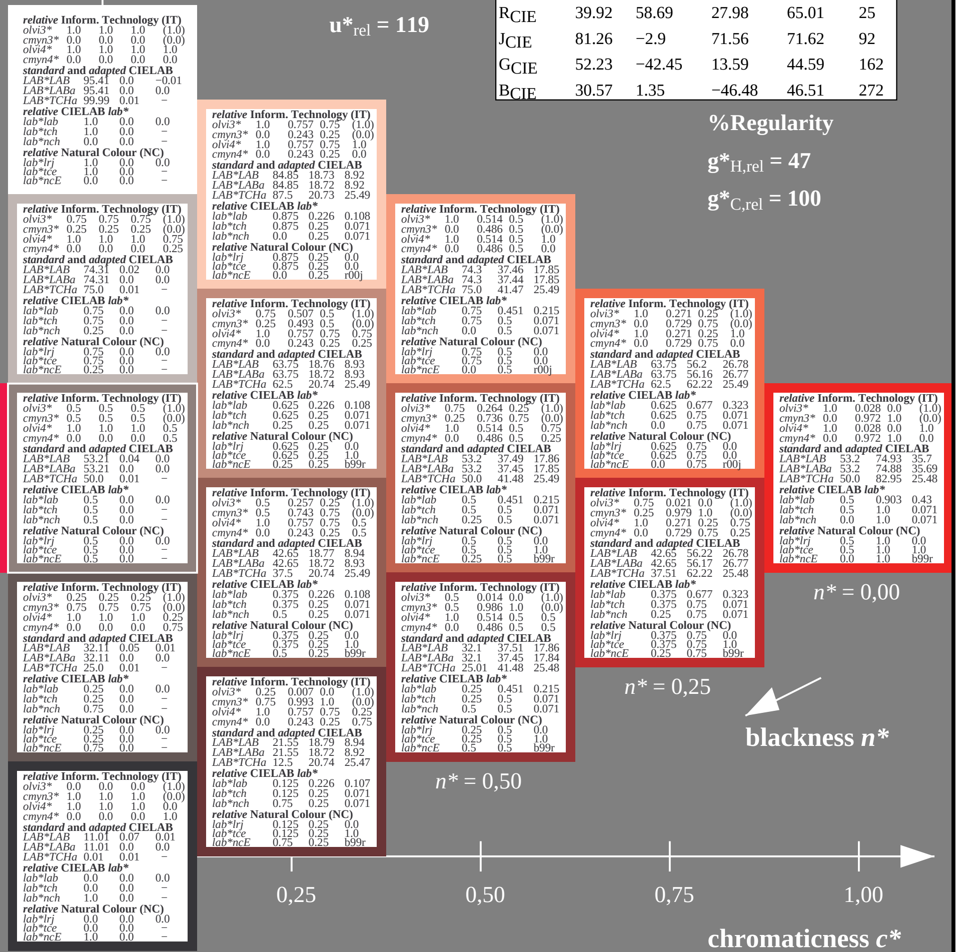
D65: hue R
LCH*Ma: 53 83 25
rgb*Ma: 1.0 0.03 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$

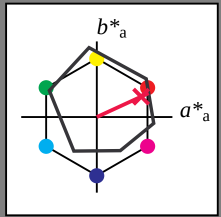


UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)
5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness t^*



%Gamut

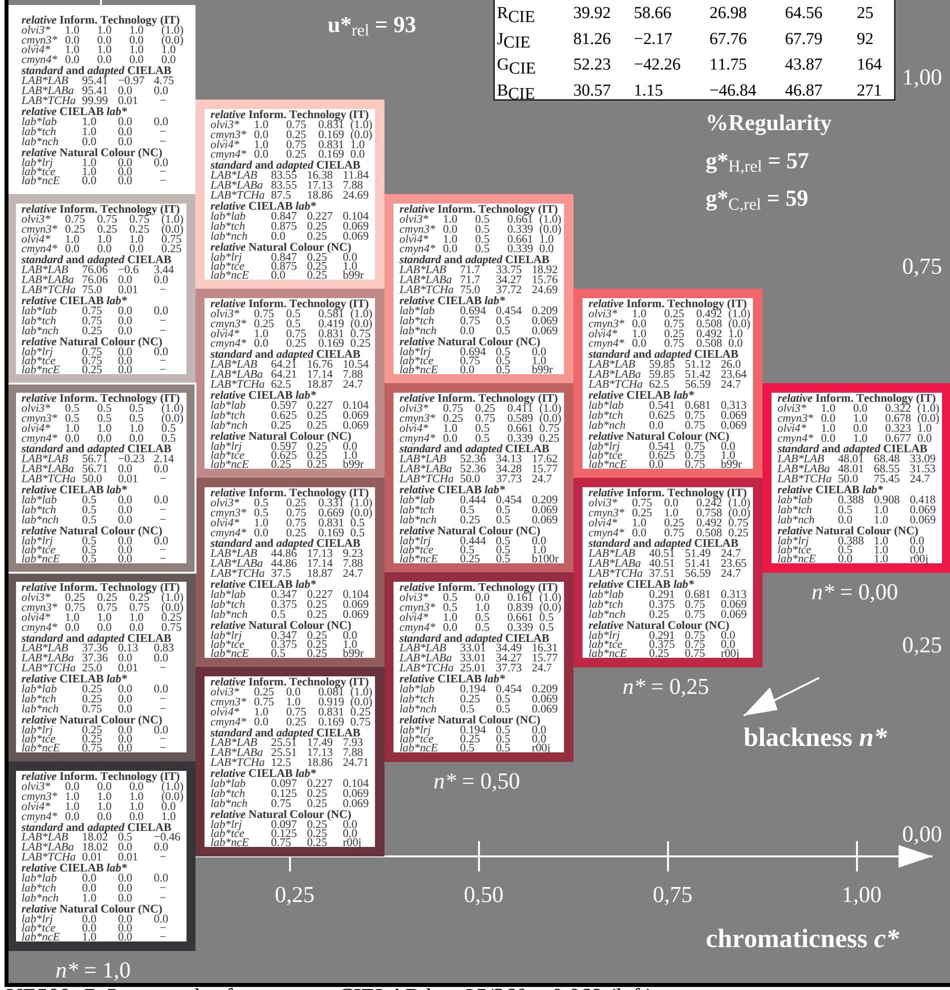
u^*_{rel} = 93

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

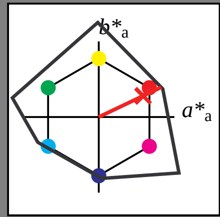
$g^*_{C,rel}$ = 59



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness t^*



%Gamut

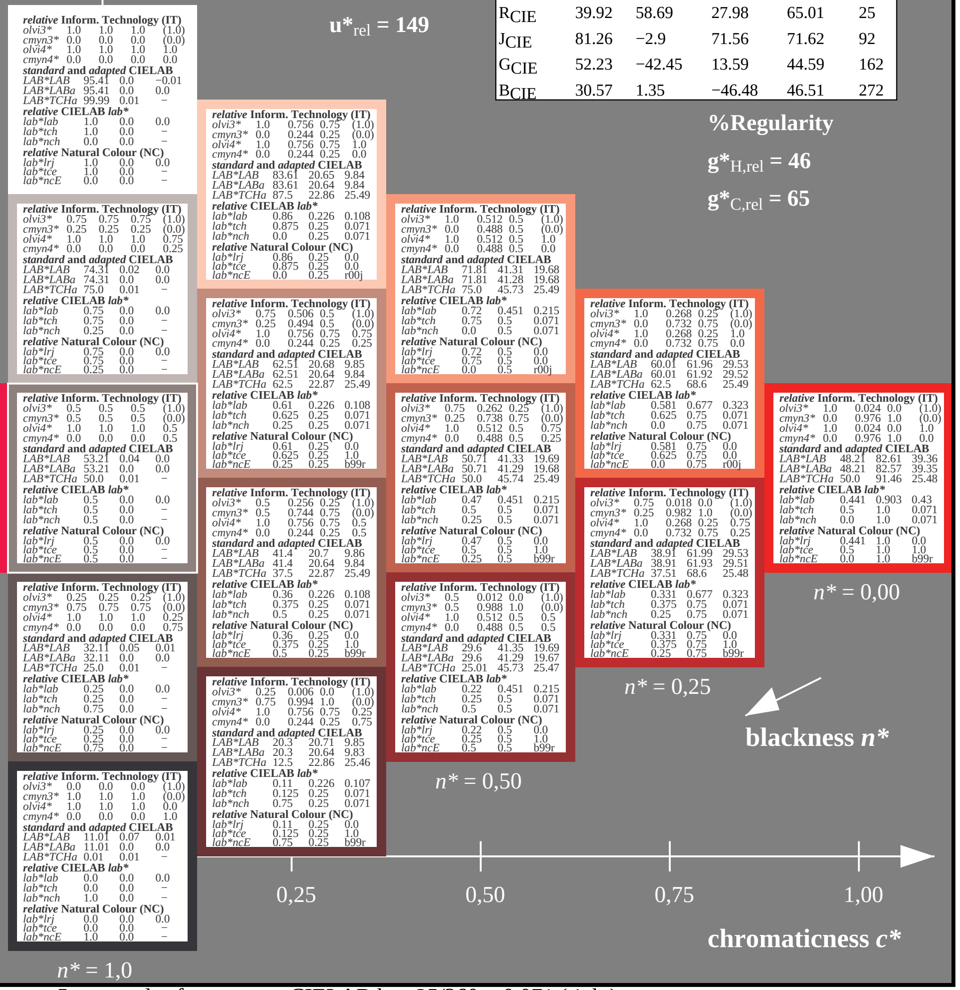
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

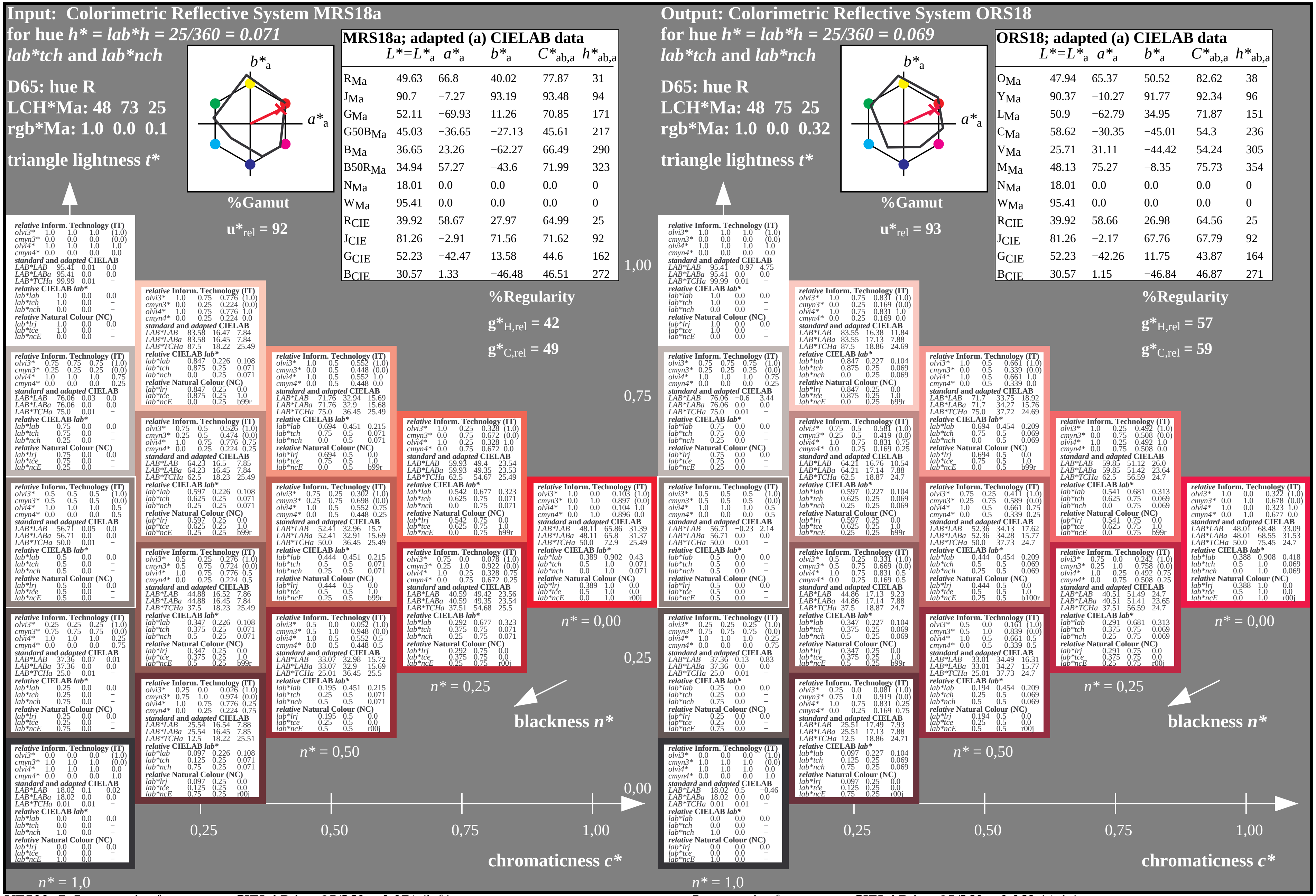
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

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



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

ORS18; adapted (a) CIELAB data

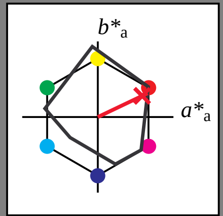
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)　　5 step scales for constant CIELAB hue 25/360 = 0.069 (right)

Input: Colorimetric Reflective System MRS18a
for hue *h = *lab*h* = 25/360 = 0.071**
lab*tch* and *lab*nch

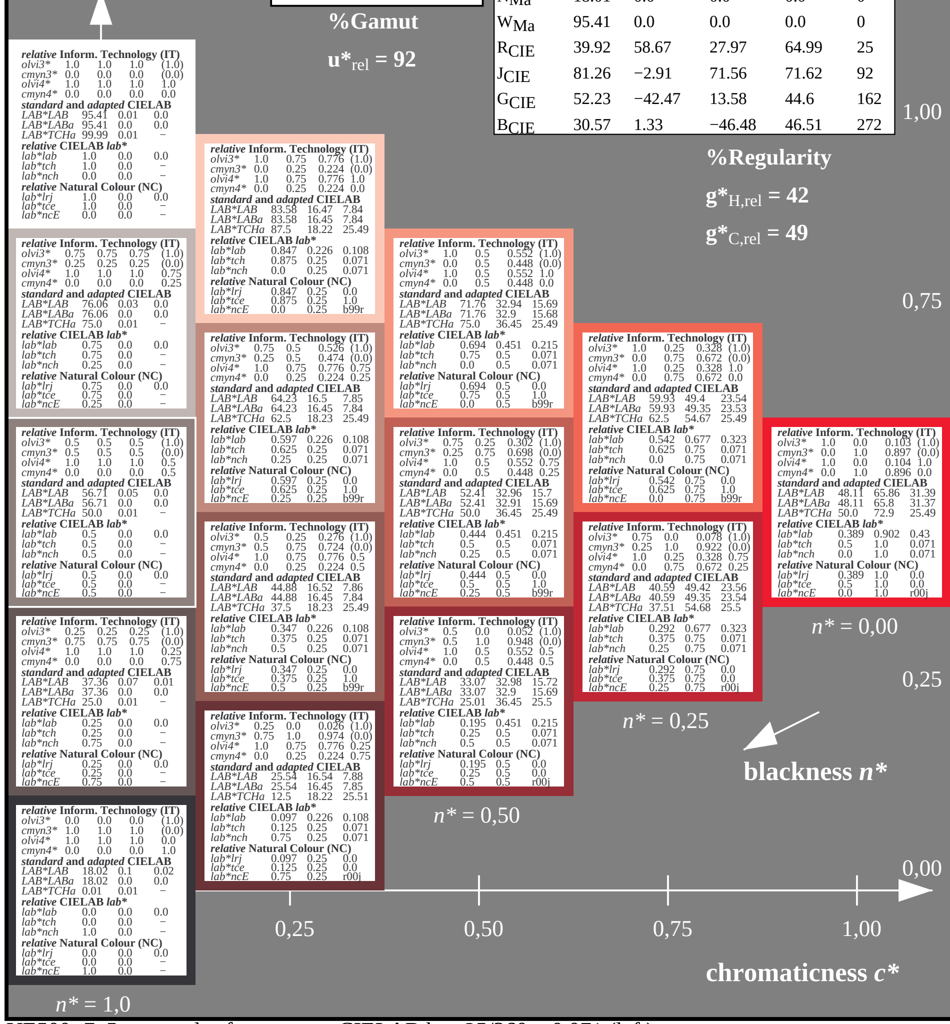
D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness *t*



MRS18a; adapted (a) CIELAB data

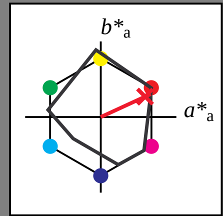
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272



Output: Colorimetric Reflective System MRS18
for hue *h = *lab*h* = 25/360 = 0.069**
lab*tch* and *lab*nch

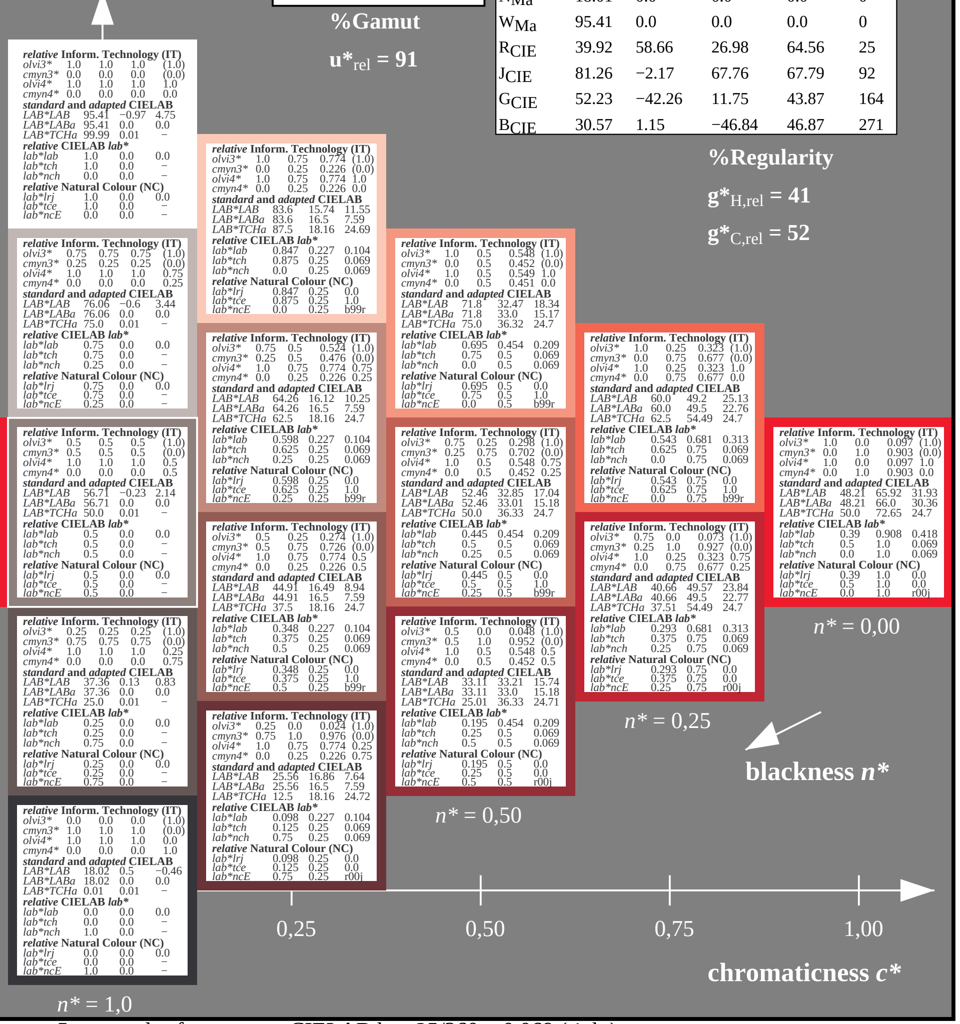
D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness *t*



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



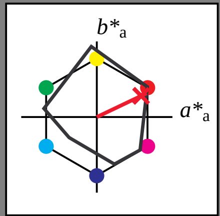
UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness t^*

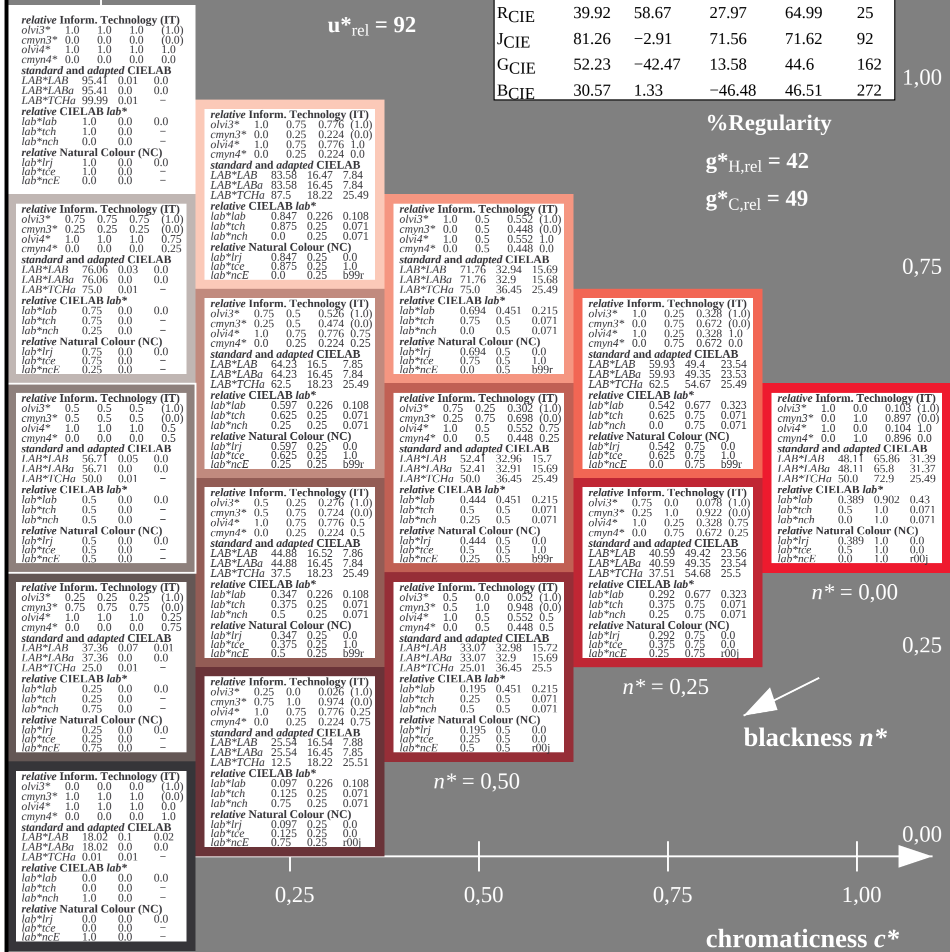


%Gamut
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

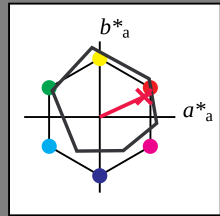
%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness t^*

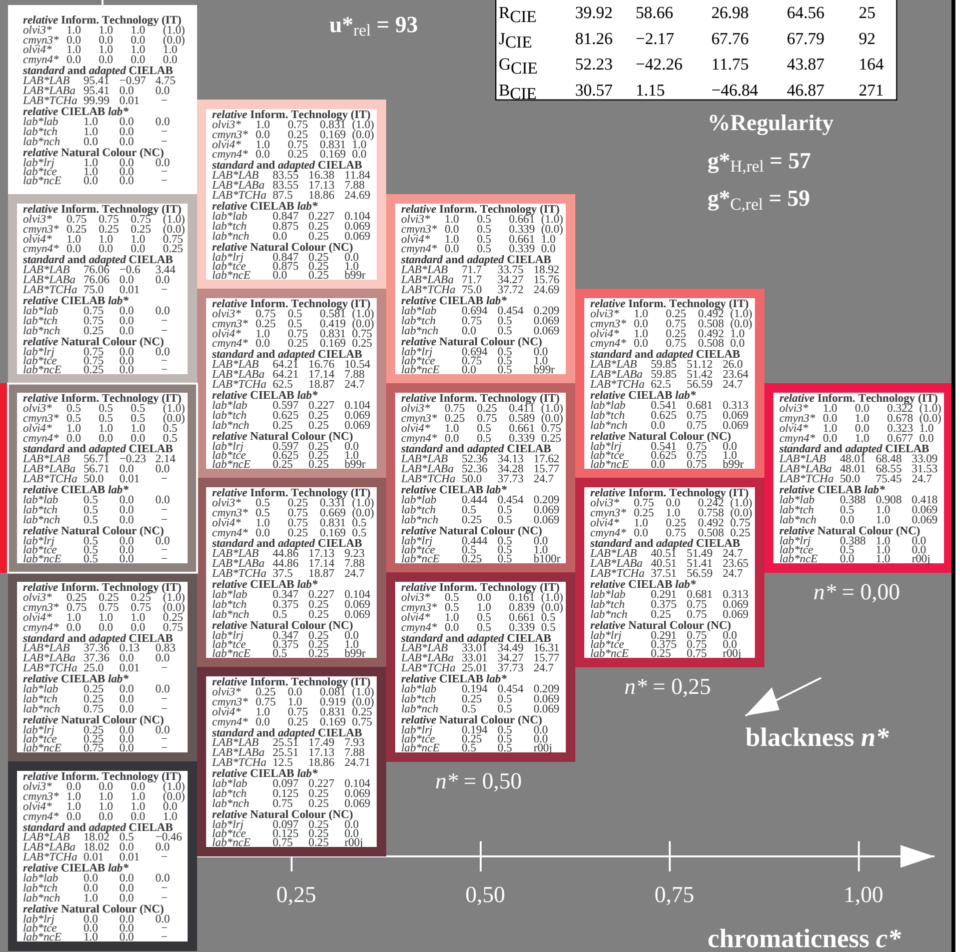


%Gamut
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$

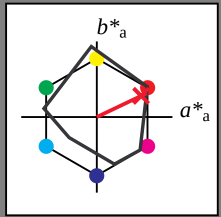


UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 25/360 = 0.071$
lab^*tch and lab^*nch

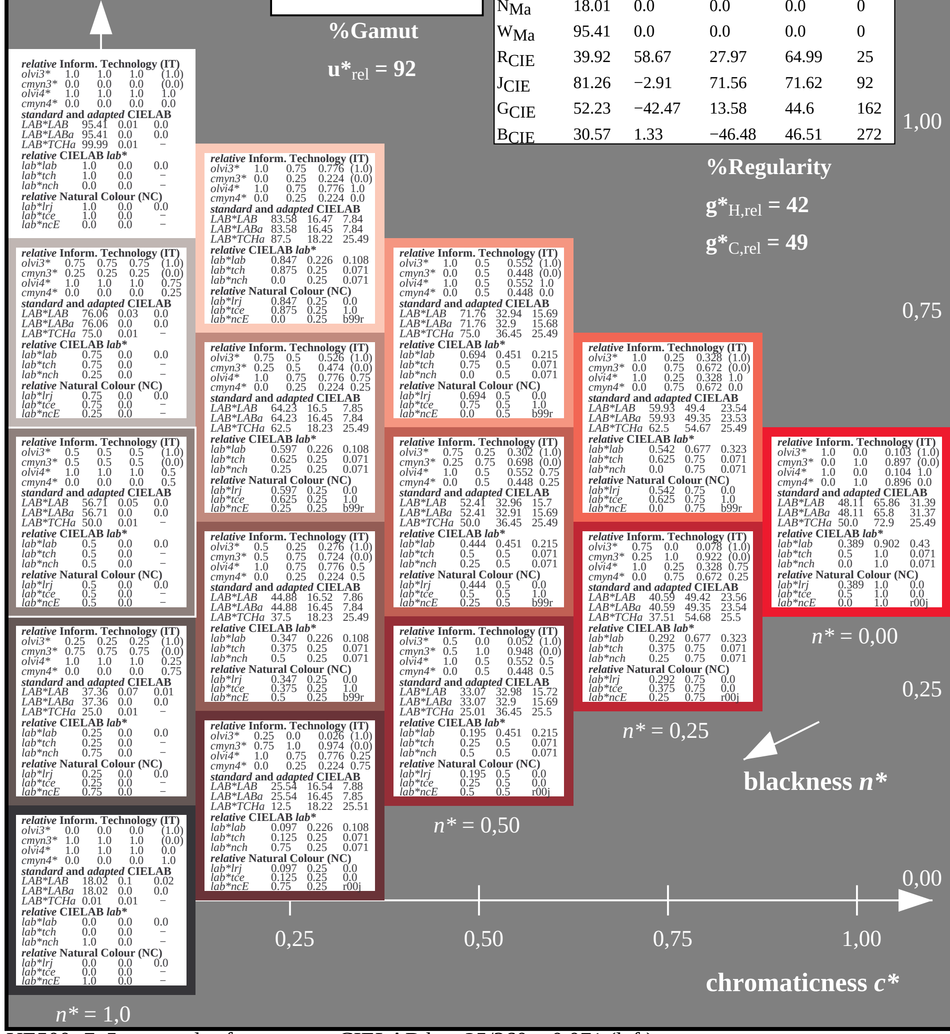
D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1
triangle lightness t^*



%Gamut
$u^*_{rel} = 92$

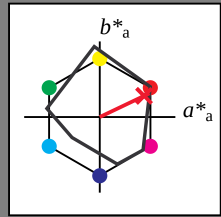
MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 25/360 = 0.071$
lab^*tch and lab^*nch

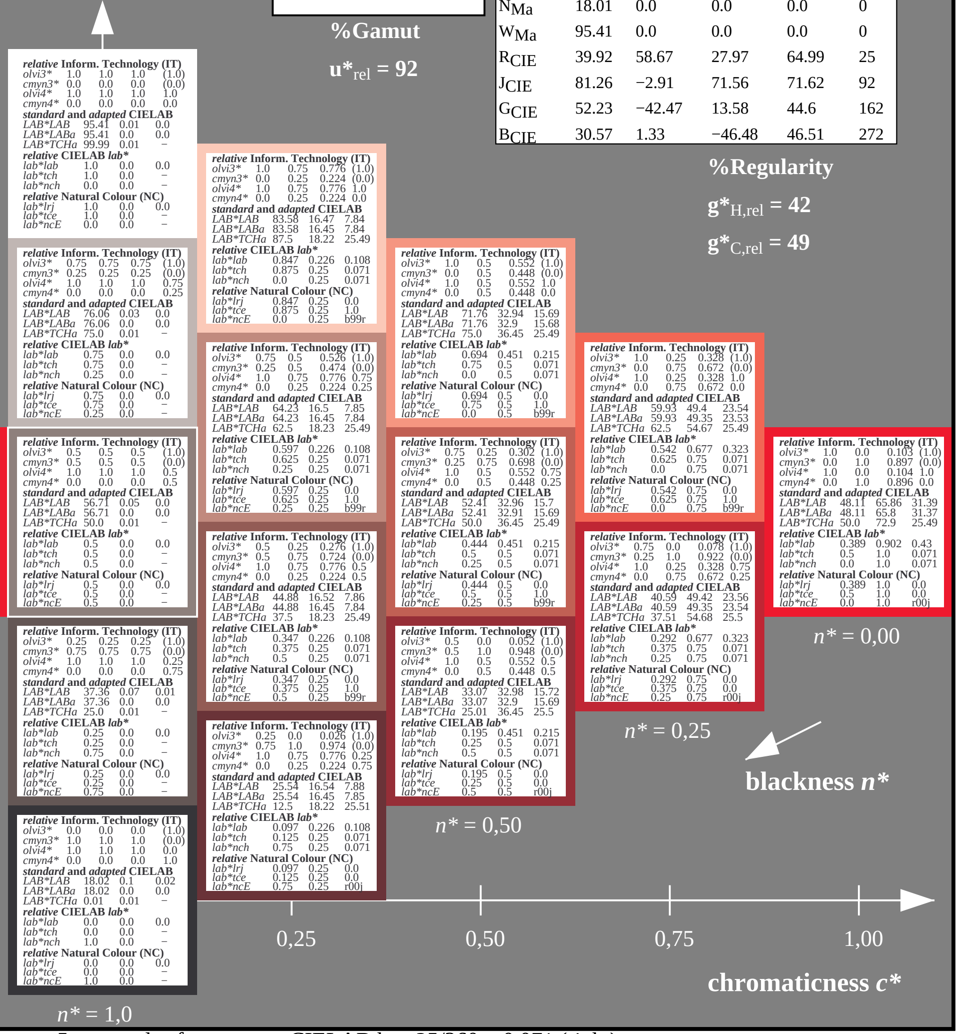
D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1
triangle lightness t^*



%Gamut
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$

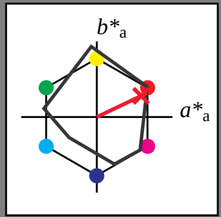


UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

Input: Colorimetric Reflective System MRS18a
for hue *h = *lab*h* = 25/360 = 0.071**
lab*tch* and *lab*nch

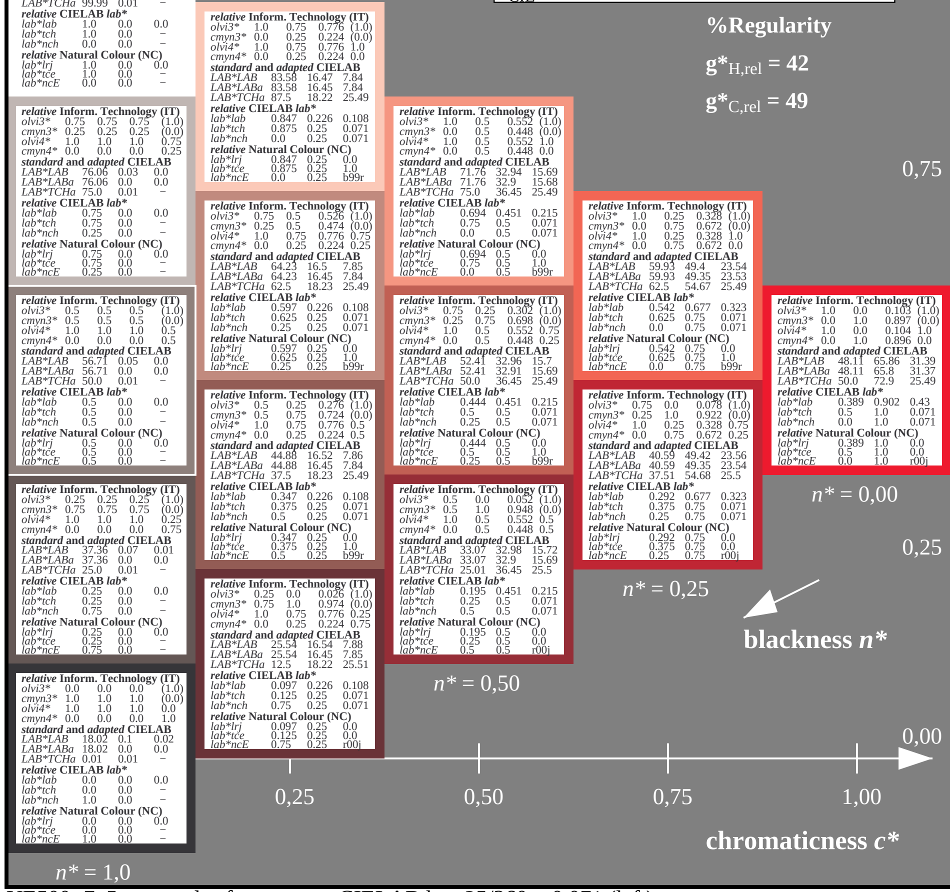
D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1
triangle lightness *t*



%Gamut
u^*_{rel} = 92

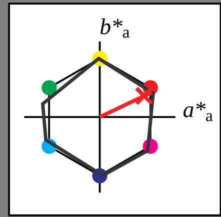
MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 42
$g^*_{C,rel}$ = 49



Output: Colorimetric Reflective System NRS18
for hue *h = *lab*h* = 25/360 = 0.071**
lab*tch* and *lab*nch

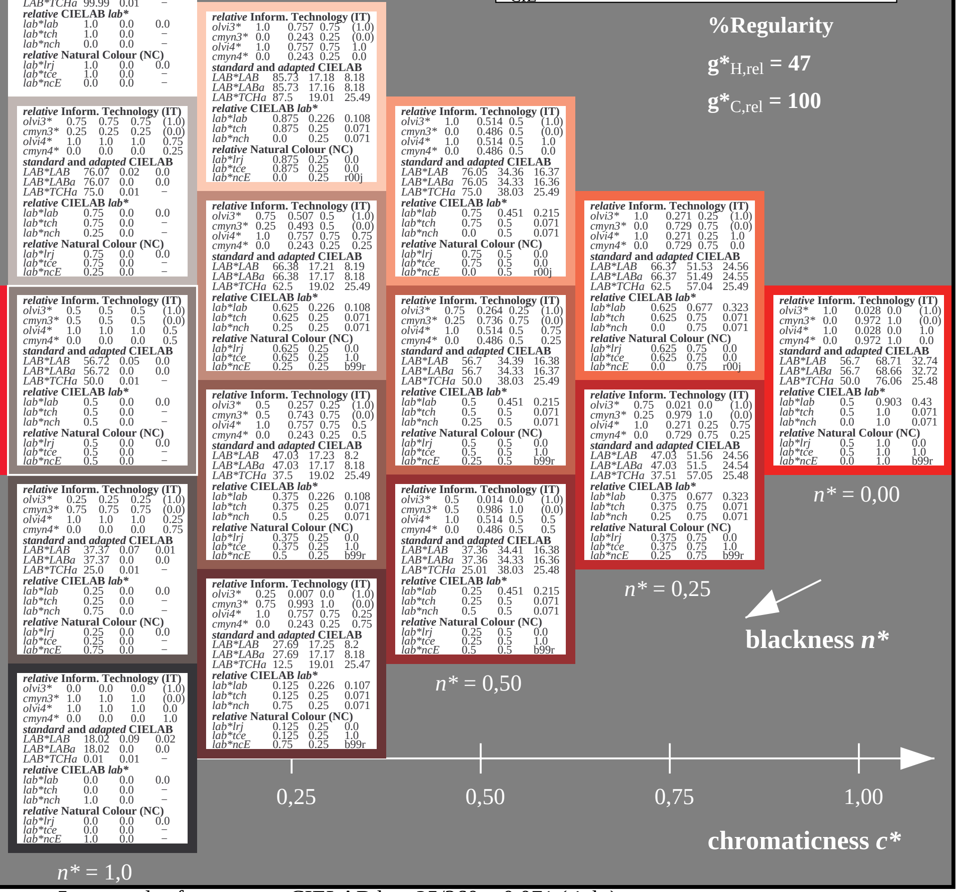
D65: hue R
LCH*Ma: 57 76 25
rgb*Ma: 1.0 0.03 0.0
triangle lightness *t*



%Gamut
u^*_{rel} = 100

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100



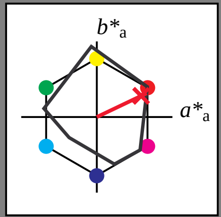
UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness t^*



%Gamut

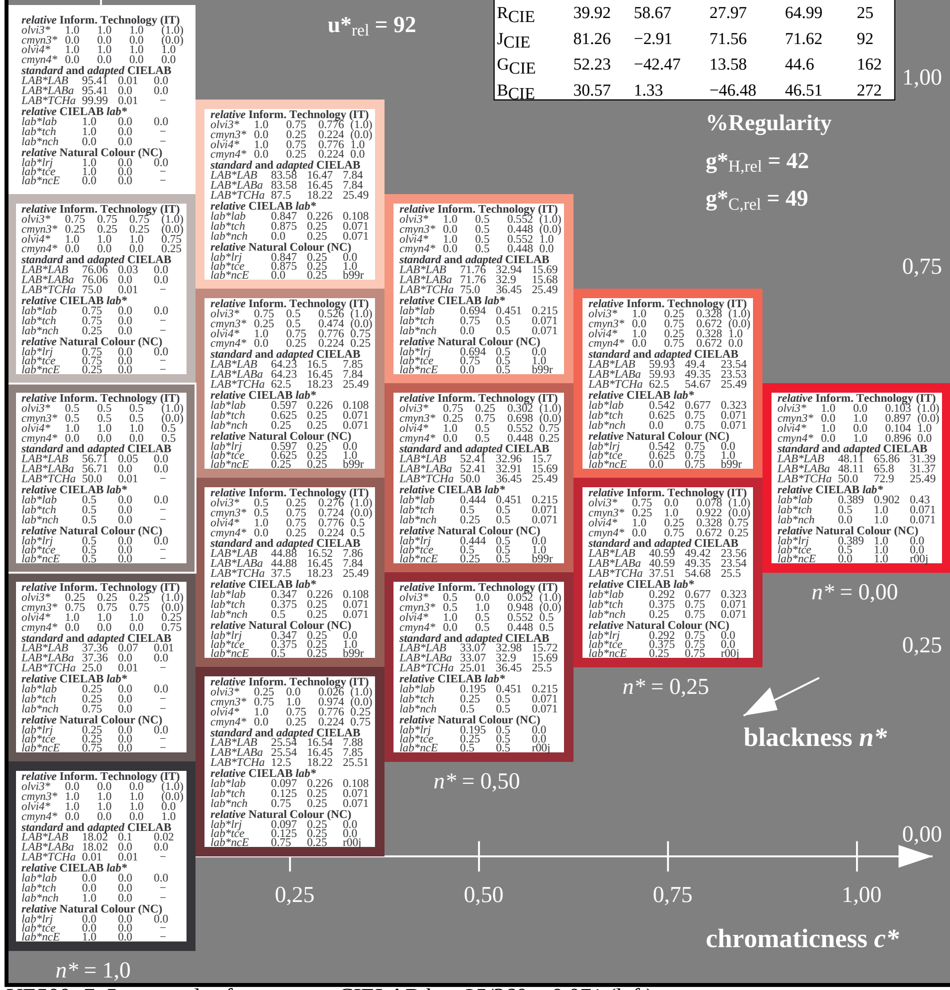
u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

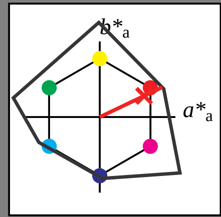
$g^*_{C,rel}$ = 49



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness t^*



%Gamut

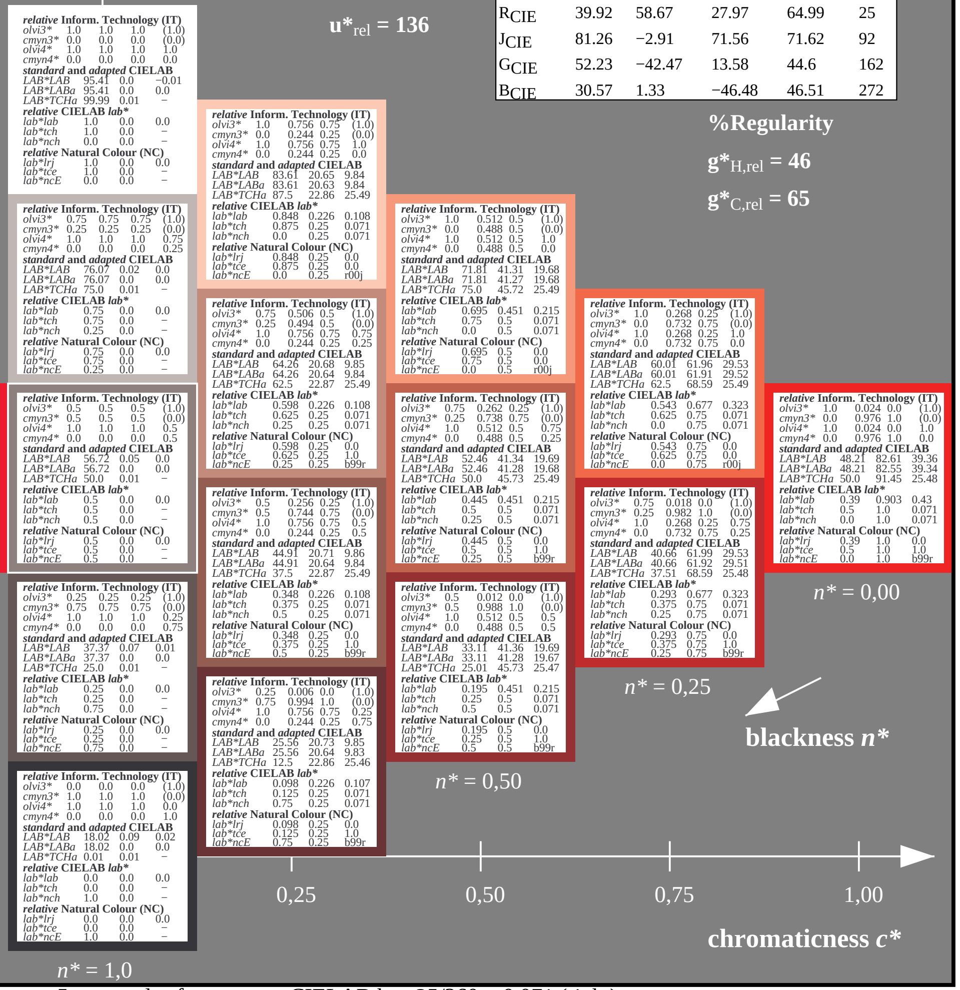
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

Input: Colorimetric Reflective System MRS18a

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

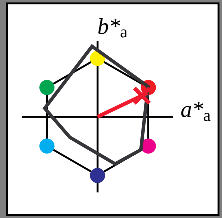
*lab*tch and lab*nch*

D65: hue R

LCH*Ma: 48 73 25

rgb*Ma: 1.0 0.0 0.1

triangle lightness t^*



%Gamut

$u^*_{rel} = 92$

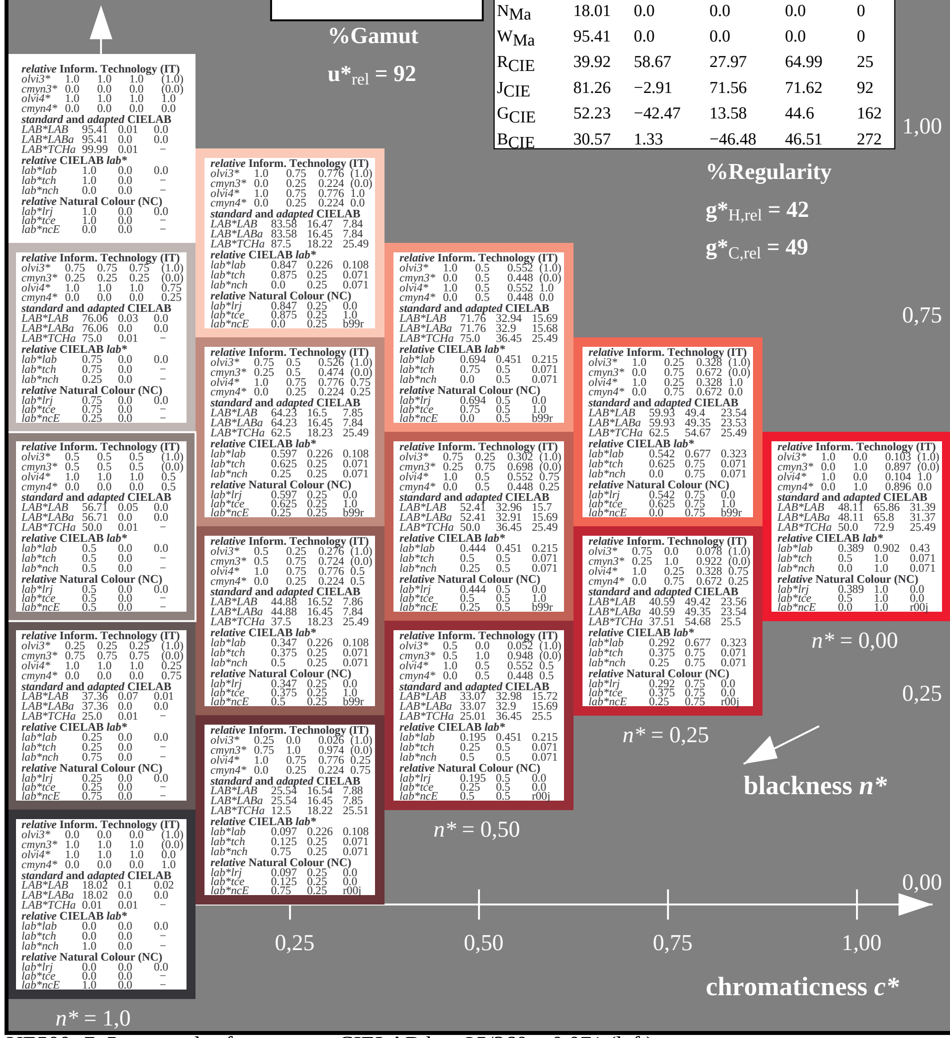
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System NRS11

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

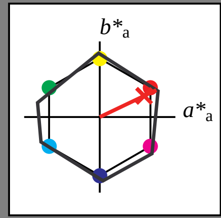
*lab*tch and lab*nch*

D65: hue R

LCH*Ma: 53 83 25

rgb*Ma: 1.0 0.03 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 119$

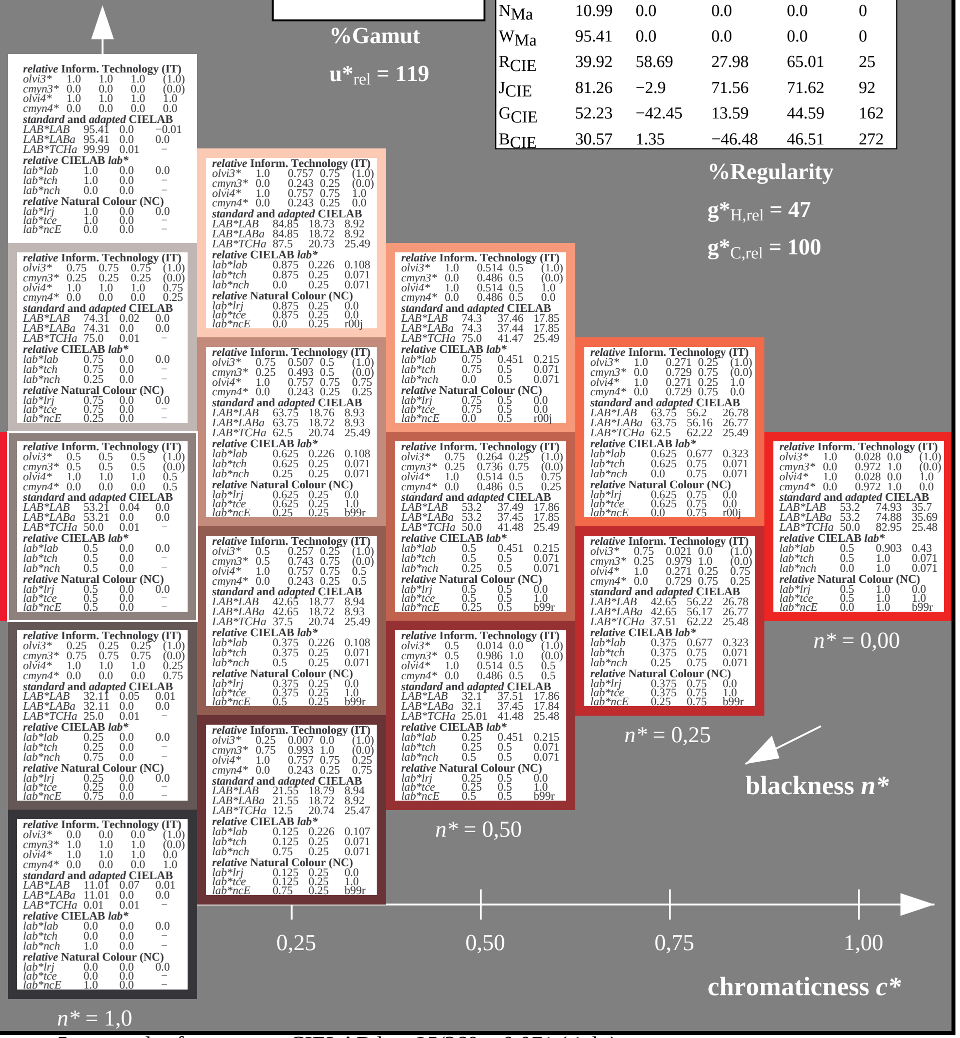
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

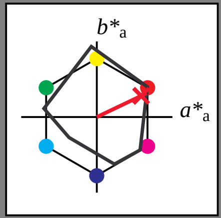


UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 25/360 = 0.071$
*lab*tch and lab*nch*

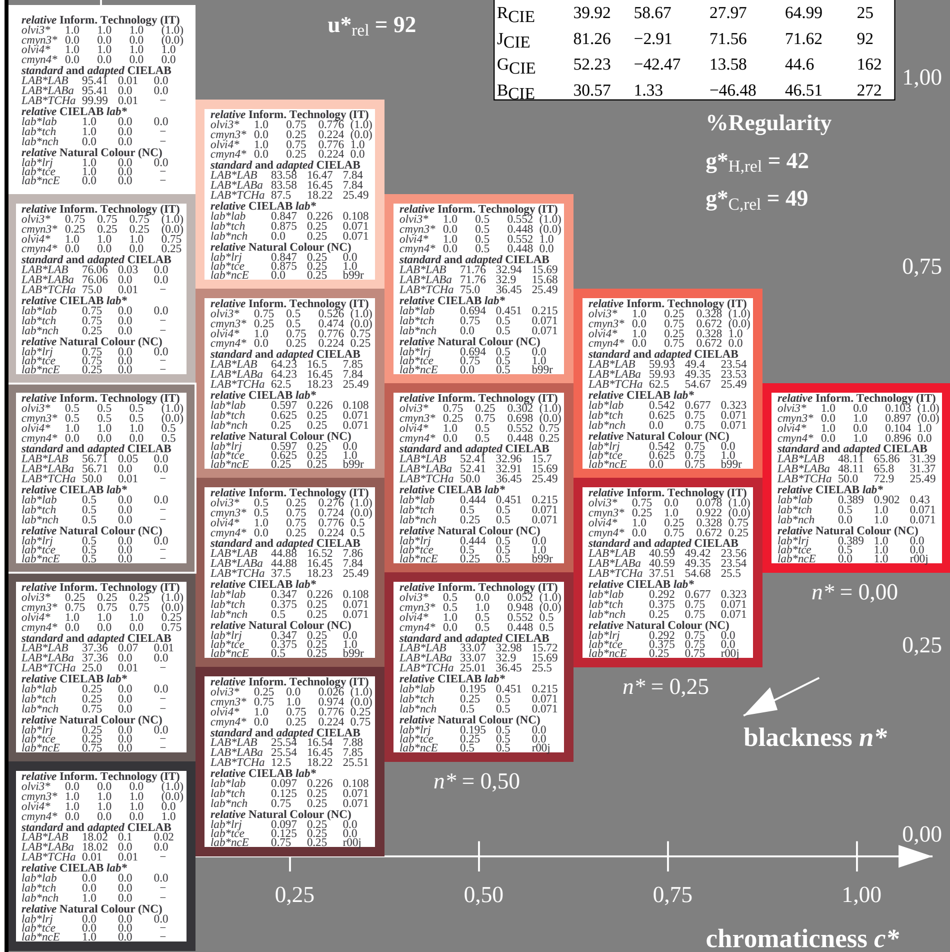
D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1
triangle lightness t^*



%Gamut
$u^*_{rel} = 92$

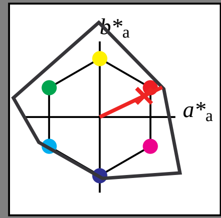
MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 25/360 = 0.071$
*lab*tch and lab*nch*

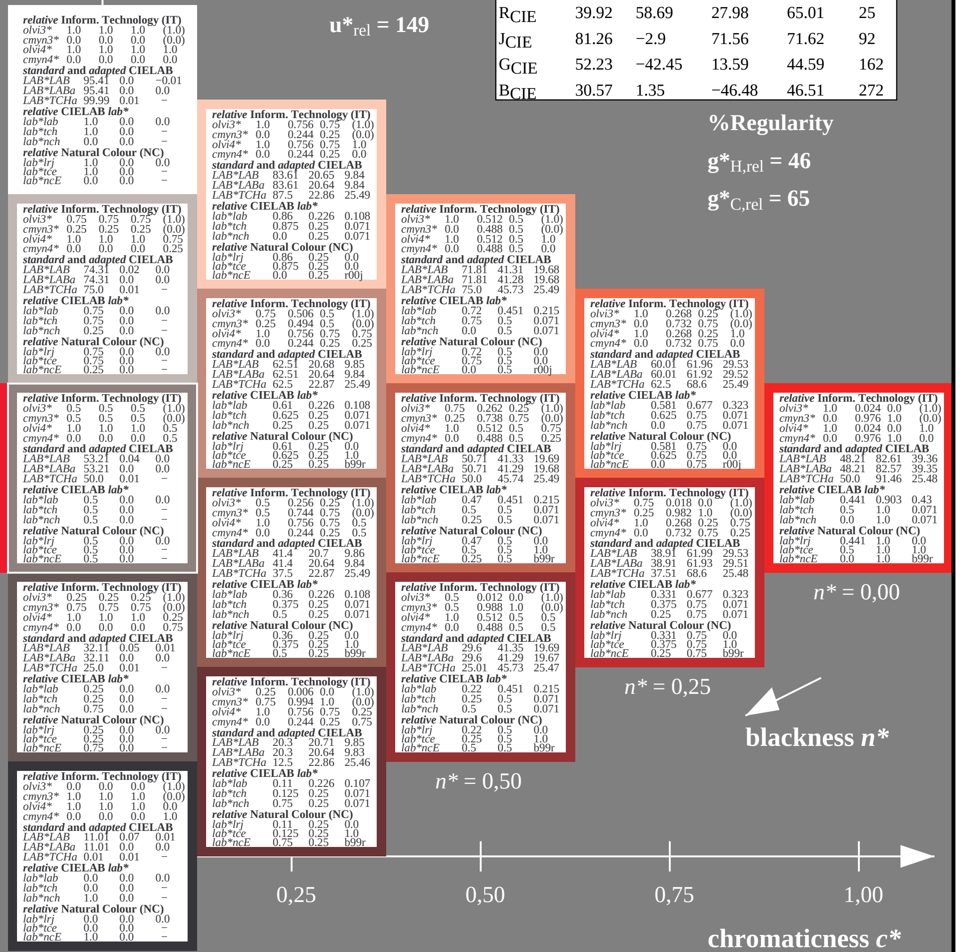
D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

Input: Colorimetric Reflective System NRS18

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

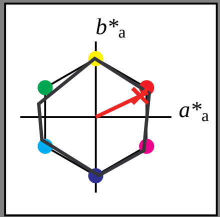
lab*tch* and *lab*nch

D65: hue R

LCH*Ma: 57 76 25

rgb*Ma: 1.0 0.03 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 100

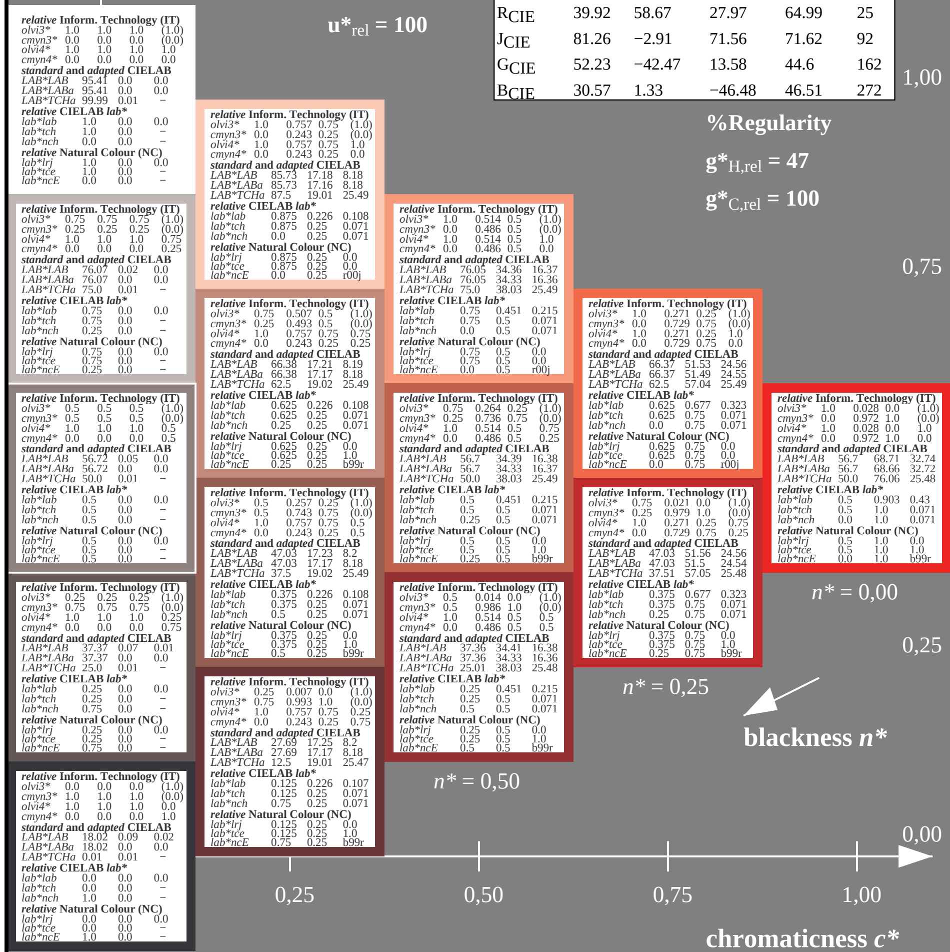
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System ORS18

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

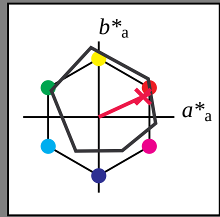
lab*tch* and *lab*nch

D65: hue R

LCH*Ma: 48 75 25

rgb*Ma: 1.0 0.0 0.32

triangle lightness t^*



%Gamut

u^*_{rel} = 93

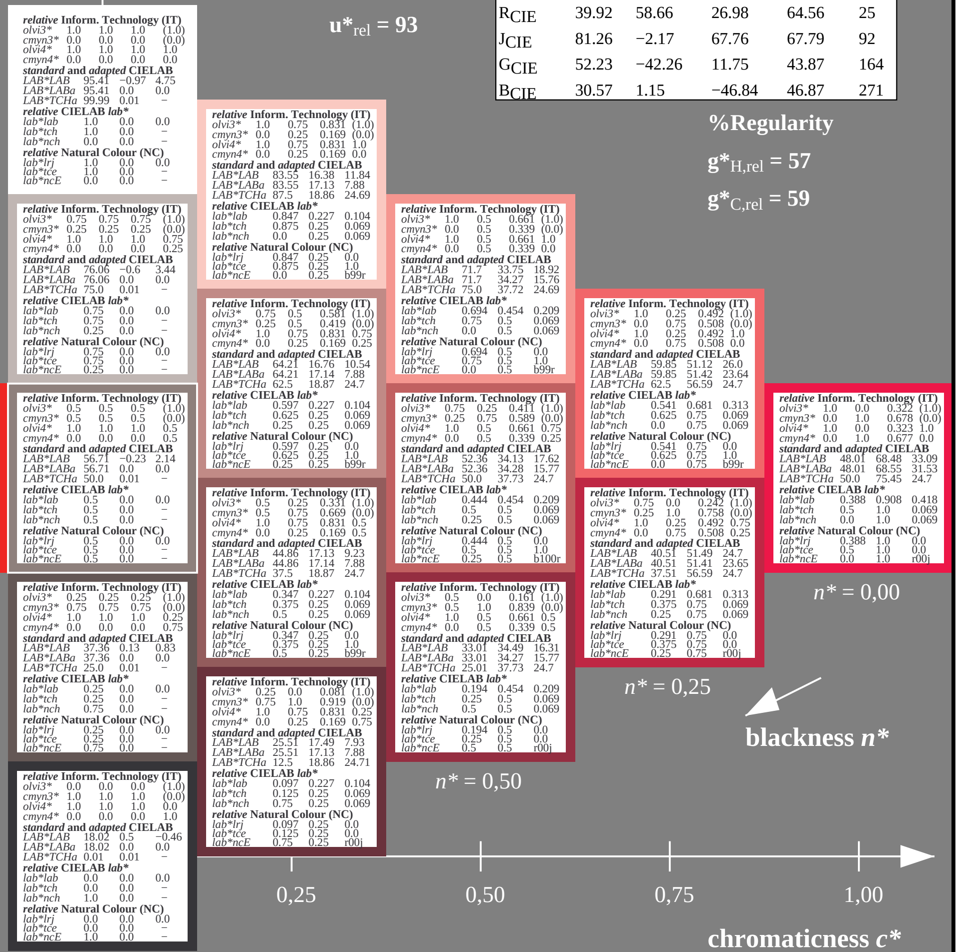
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



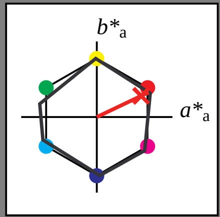
UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 25/360 = 0.071$
*lab*tch and lab*nch*

D65: hue R
LCH*Ma: 57 76 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness t^*



%Gamut

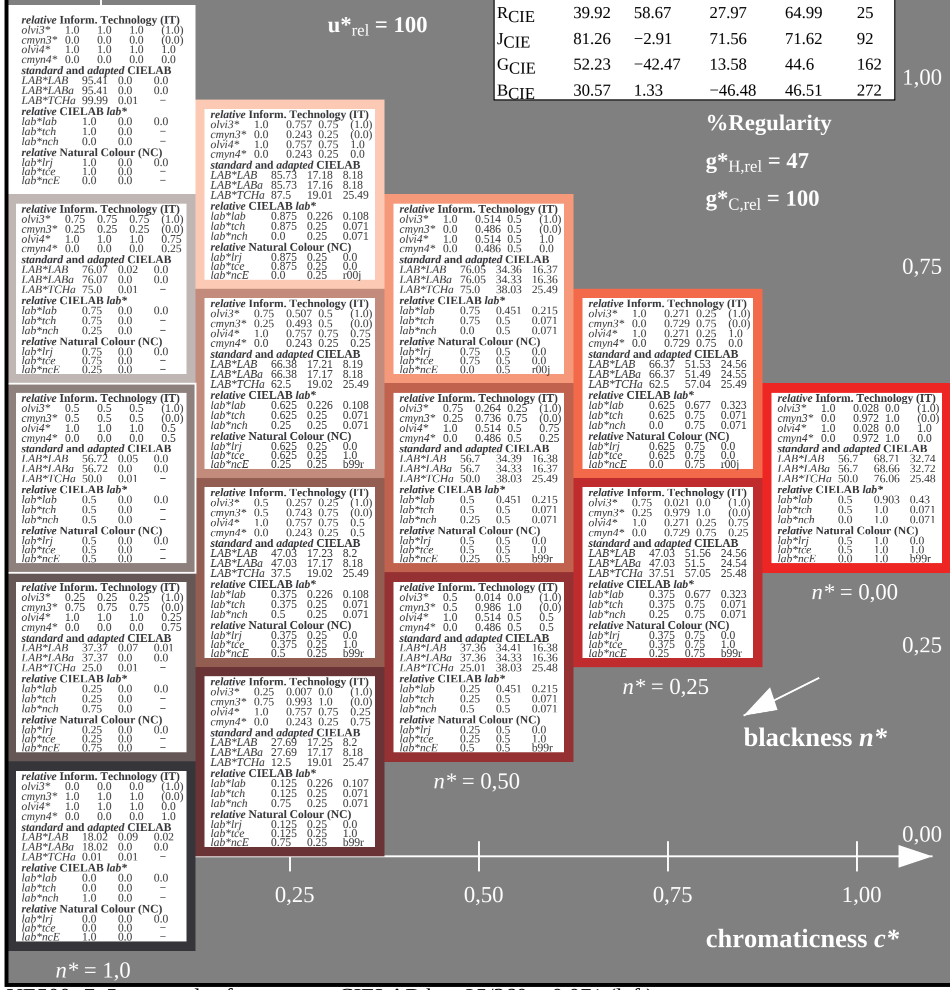
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

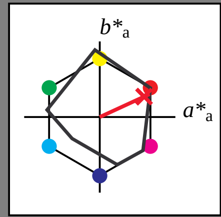
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
*lab*tch and lab*nch*

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness t^*



%Gamut

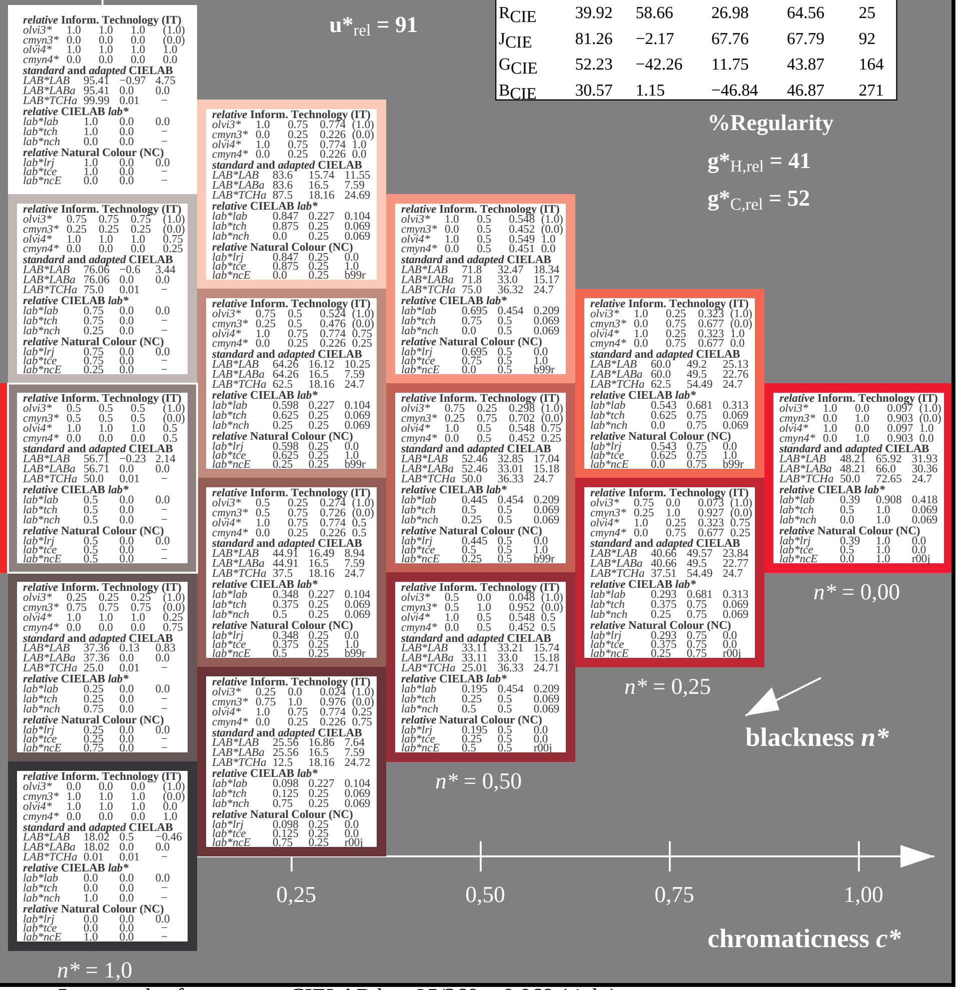
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

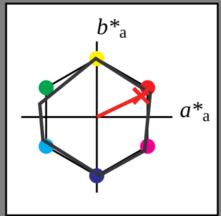


UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 25/360 = 0.071$
*lab*tch and lab*nch*

D65: hue R
LCH*Ma: 57 76 25
rgb*Ma: 1.0 0.03 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$

1,00
0,75
0,25
0,00

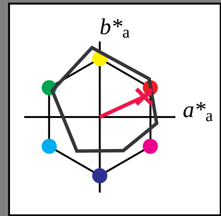
$n^* = 0,00$ $n^* = 0,25$ $n^* = 0,50$ $n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00
chromaticness c^*

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
*lab*tch and lab*nch*

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32
triangle lightness t^*



%Gamut
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$

$n^* = 0,00$ $n^* = 0,25$ $n^* = 0,50$ $n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00
chromaticness c^*

UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

Input: Colorimetric Reflective System NRS18

for hue *h** = *lab*h* = 25/360 = 0.071

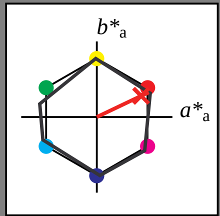
*lab*tch* and *lab*nch*

D65: hue R

LCH*Ma: 57 76 25

rgb*Ma: 1.0 0.03 0.0

triangle lightness *t*



%Gamut

u^*_{rel} = 100

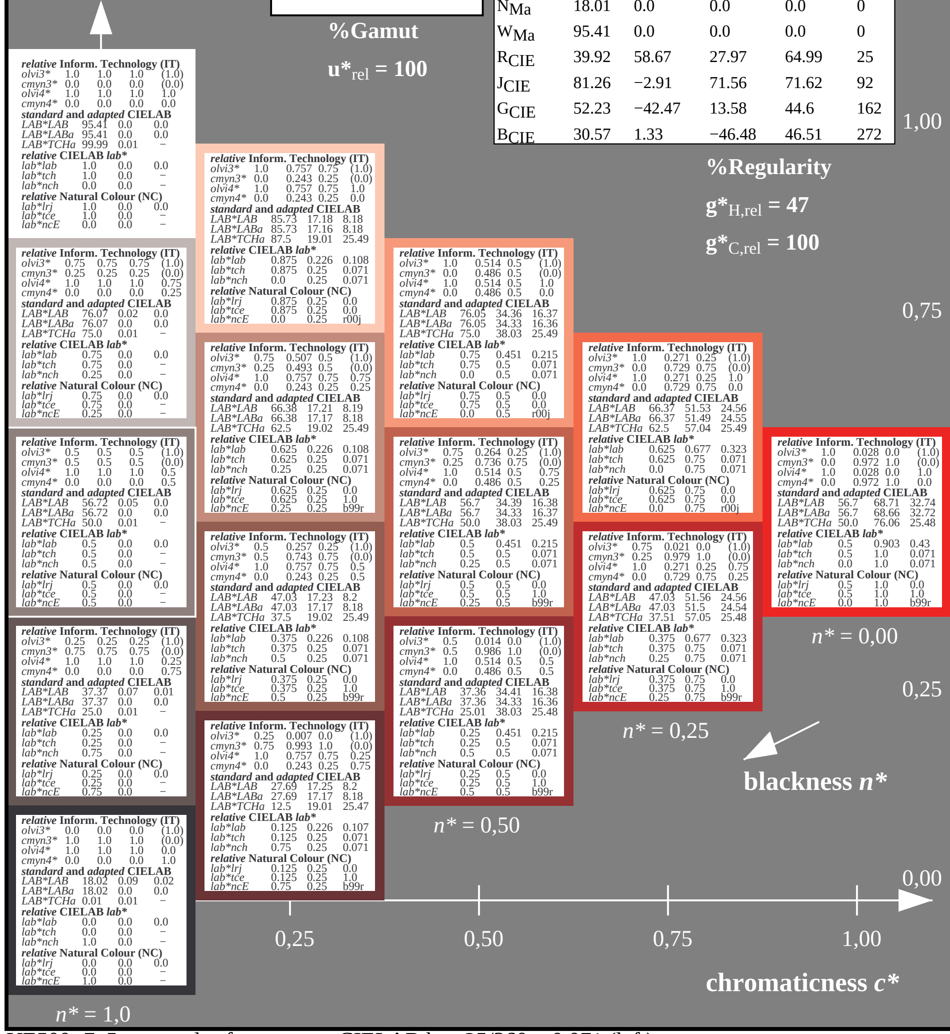
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System MRS18a

for hue *h** = *lab*h* = 25/360 = 0.071

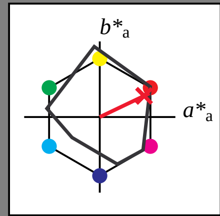
*lab*tch* and *lab*nch*

D65: hue R

LCH*Ma: 48 73 25

rgb*Ma: 1.0 0.0 0.1

triangle lightness *t*



%Gamut

u^*_{rel} = 92

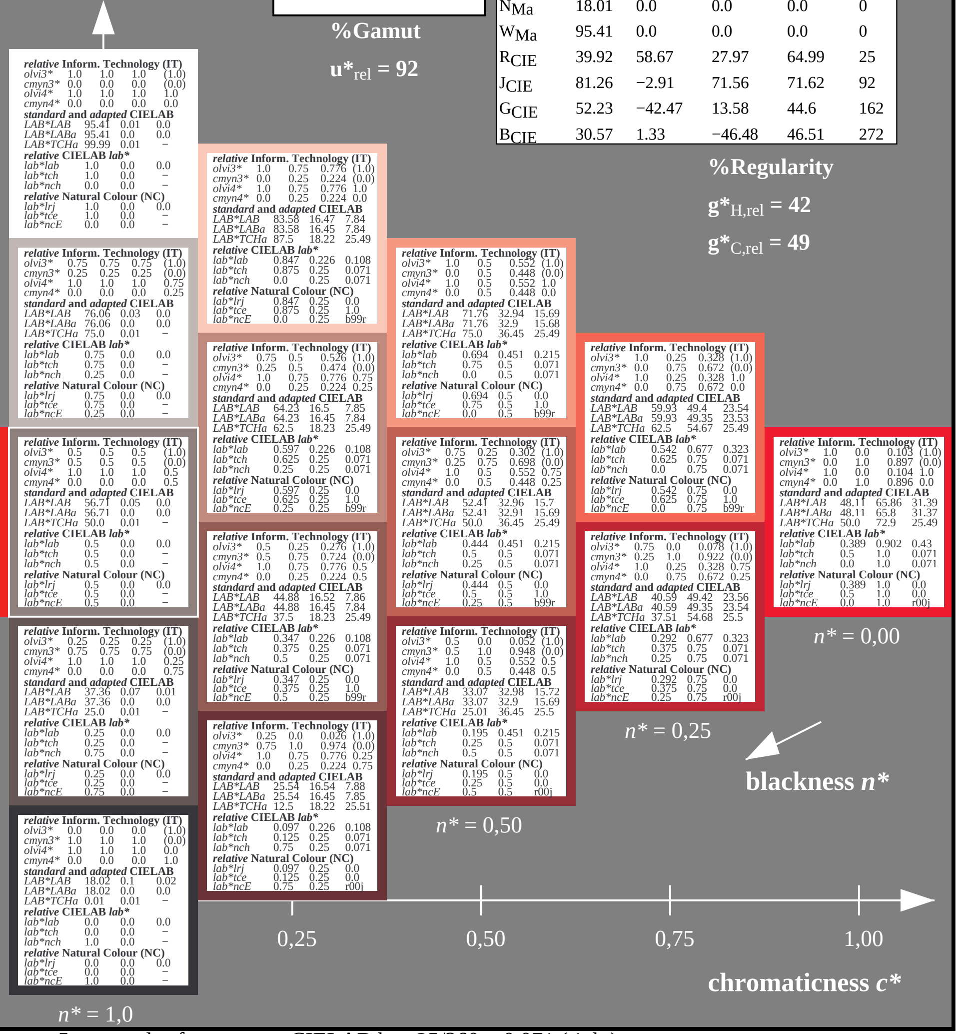
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

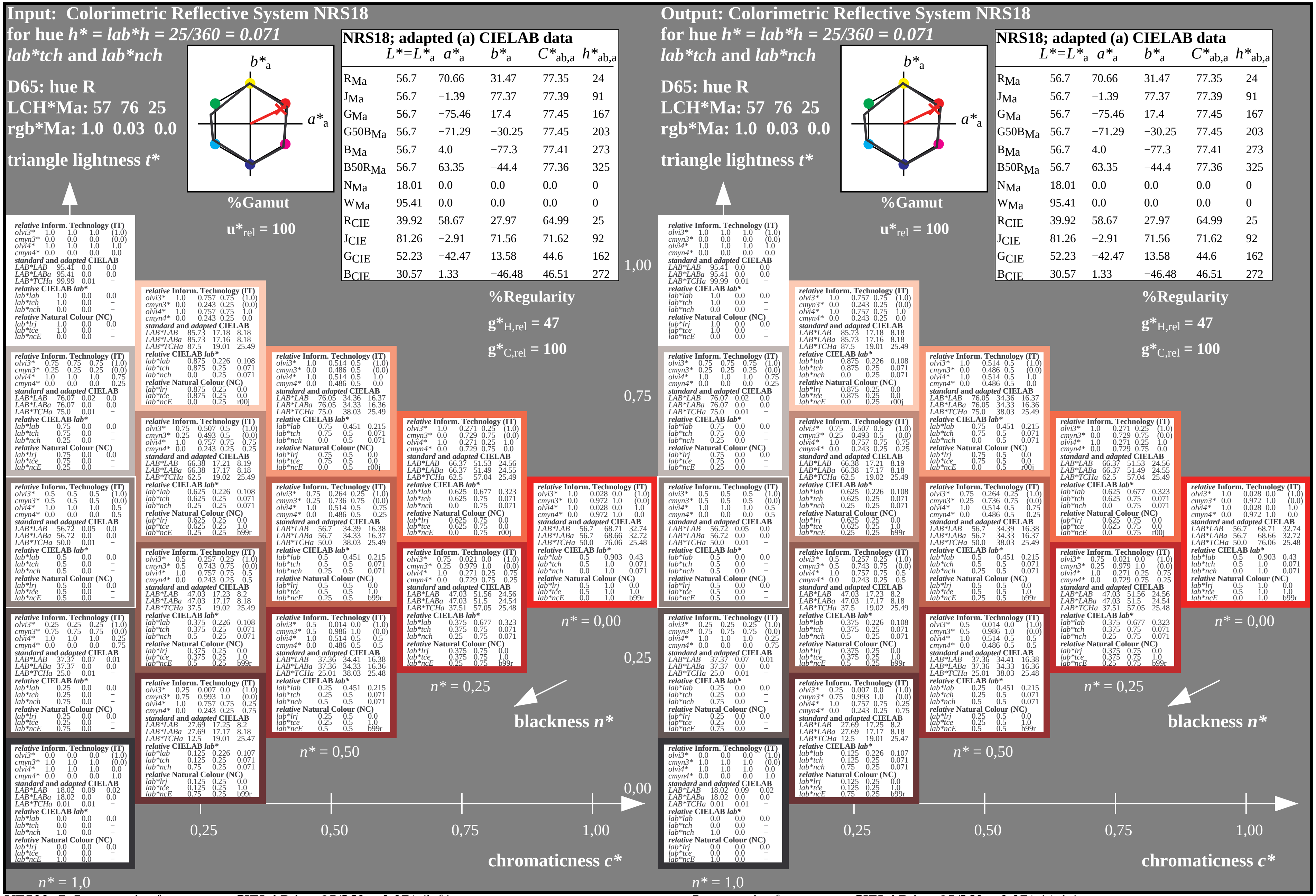


UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 25/360 = 0.071$
*lab*tch* and *lab*nch*

D65: hue R
LCH*Ma: 57 76 25
rgb*Ma: 1.0 0.03 0.0
triangle lightness t^*



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 25/360 = 0.071$
*lab*tch* and *lab*nch*

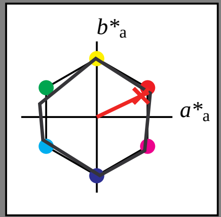
D65: hue R
LCH*Ma: 57 76 25
rgb*Ma: 1.0 0.03 0.0
triangle lightness t^*

UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 25/360 = 0.071$
lab^*tch and lab^*nch

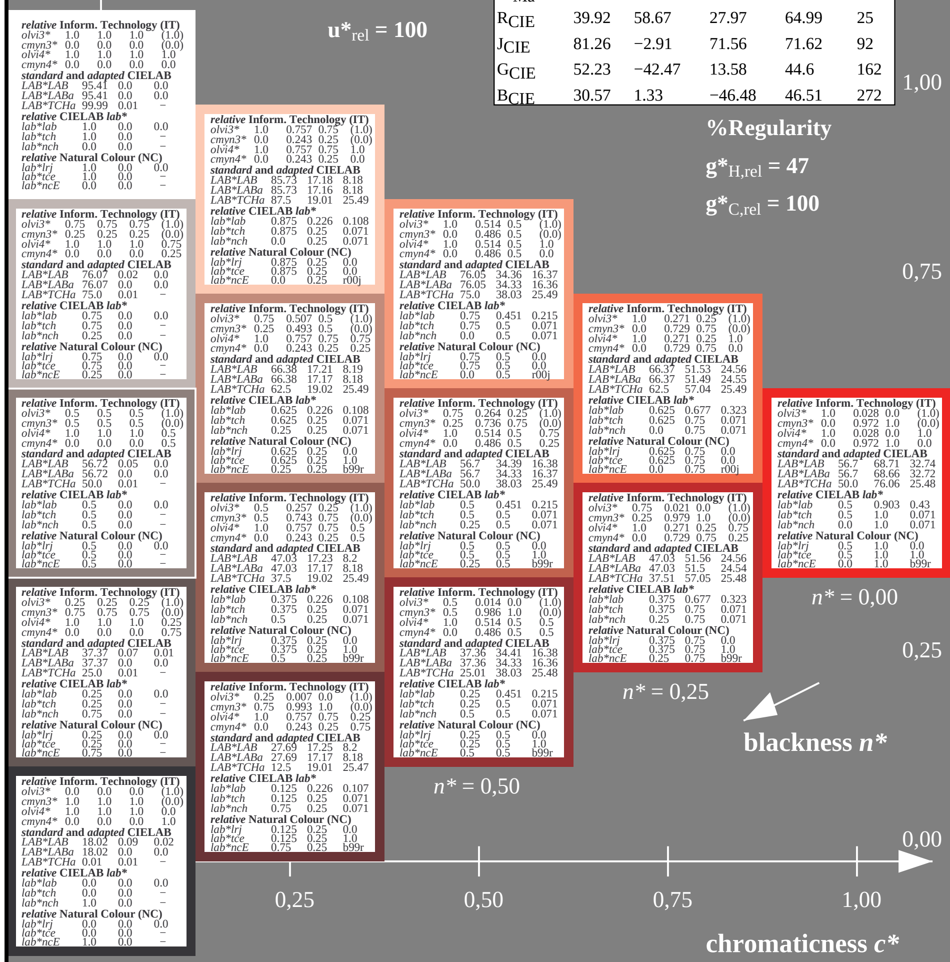
D65: hue R
LCH*Ma: 57 76 25
rgb*Ma: 1.0 0.03 0.0
triangle lightness t^*



%Gamut
u^*_{rel} = 100

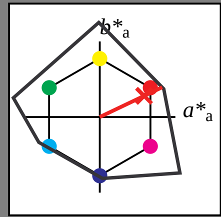
NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 25/360 = 0.071$
lab^*tch and lab^*nch

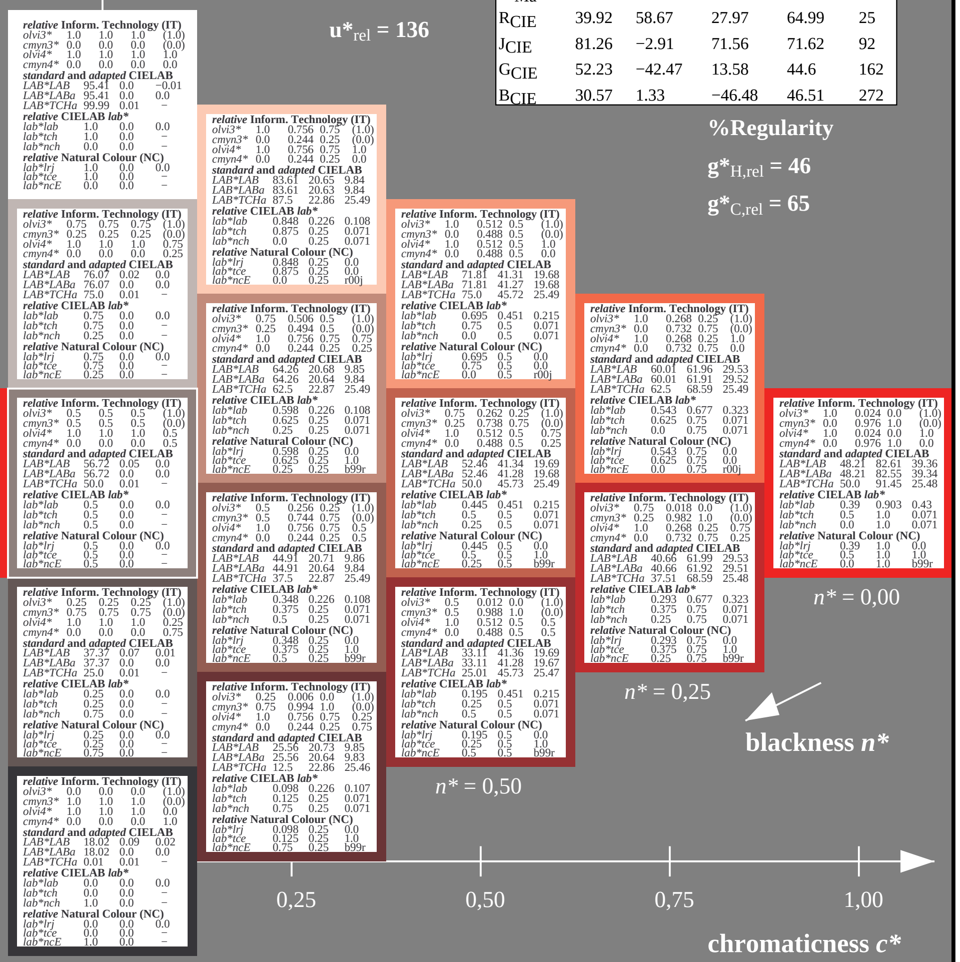
D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0
triangle lightness t^*



%Gamut
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65

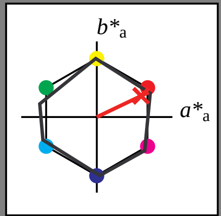


UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 25/360 = 0.071$
*lab*tch and lab*nch*

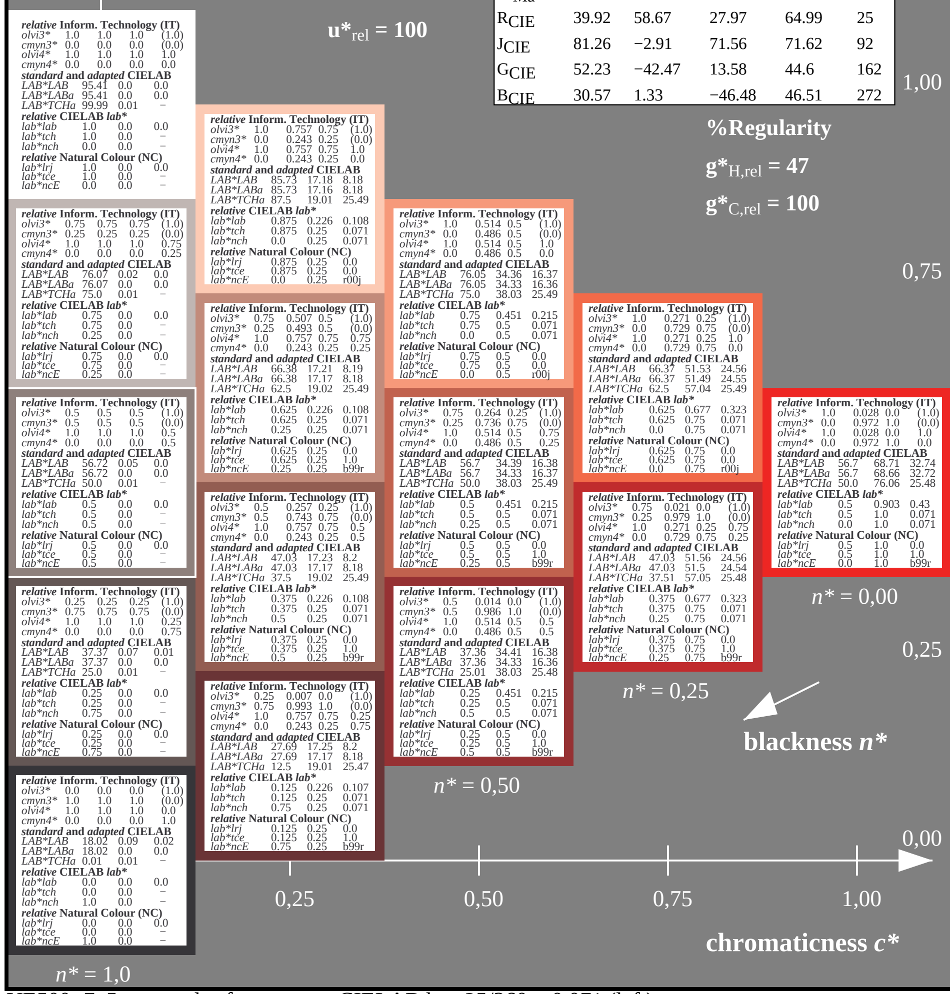
D65: hue R
LCH*Ma: 57 76 25
rgb*Ma: 1.0 0.03 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 100$

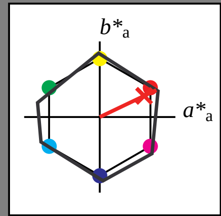
NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 25/360 = 0.071$
*lab*tch and lab*nch*

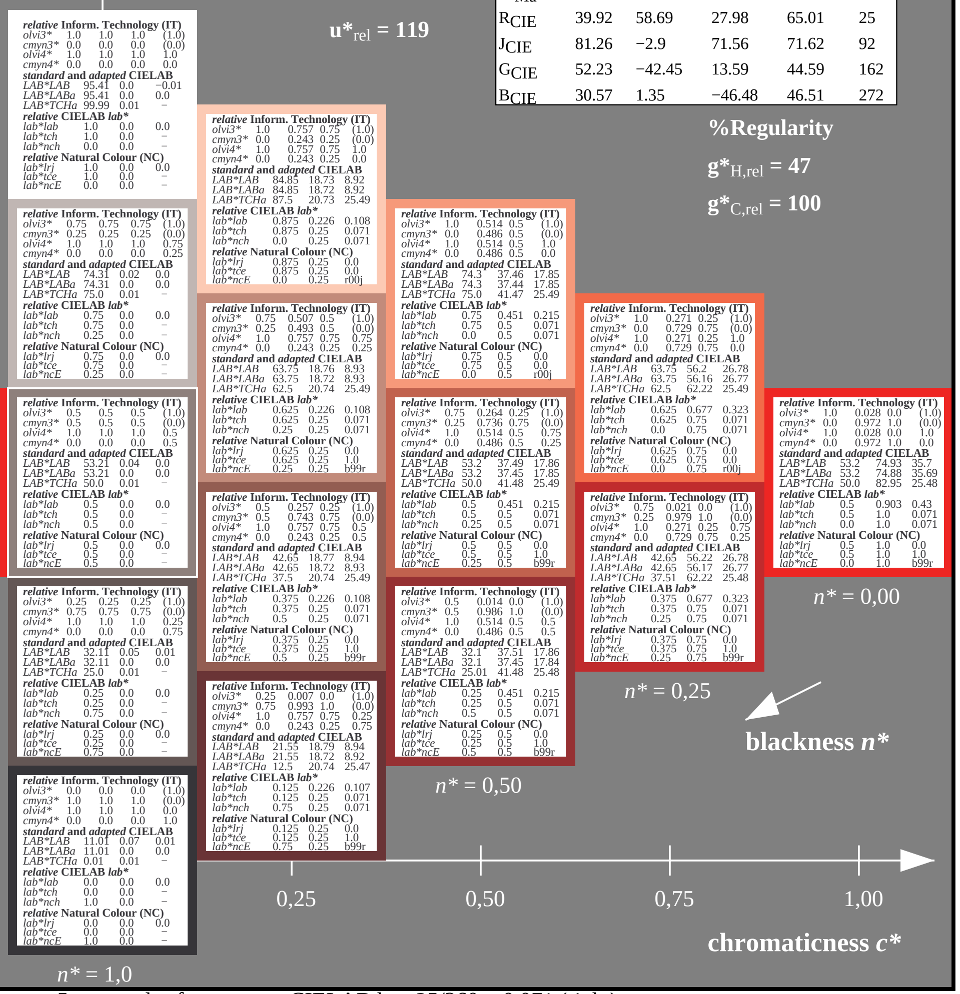
D65: hue R
LCH*Ma: 53 83 25
rgb*Ma: 1.0 0.03 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



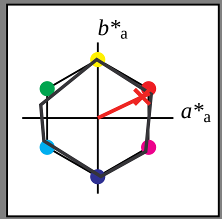
UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

Input: Colorimetric Reflective System NRS18
for hue *h* = lab*h* = 25/360 = 0.071
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 57 76 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness *t*



%Gamut

u^*_{rel} = 100

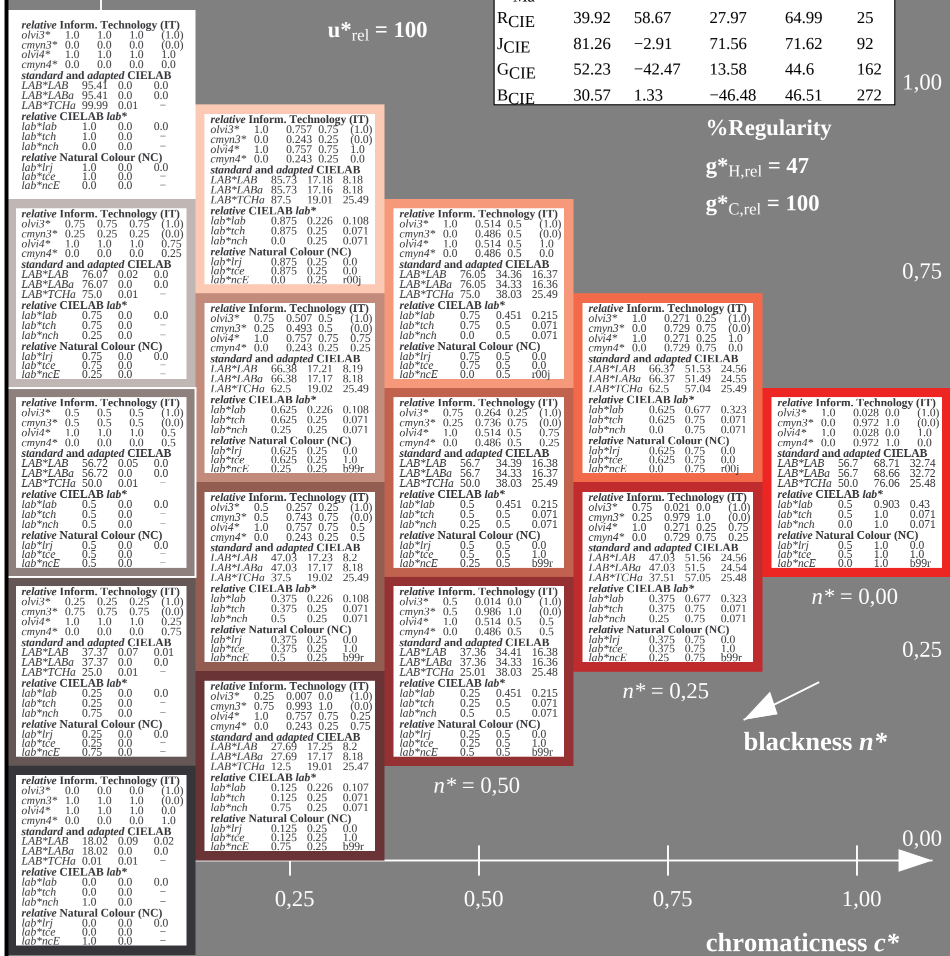
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

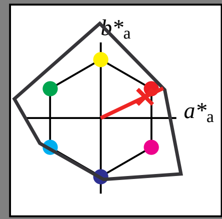
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NCS11
for hue *h* = lab*h* = 25/360 = 0.071
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness *t*



%Gamut

u^*_{rel} = 149

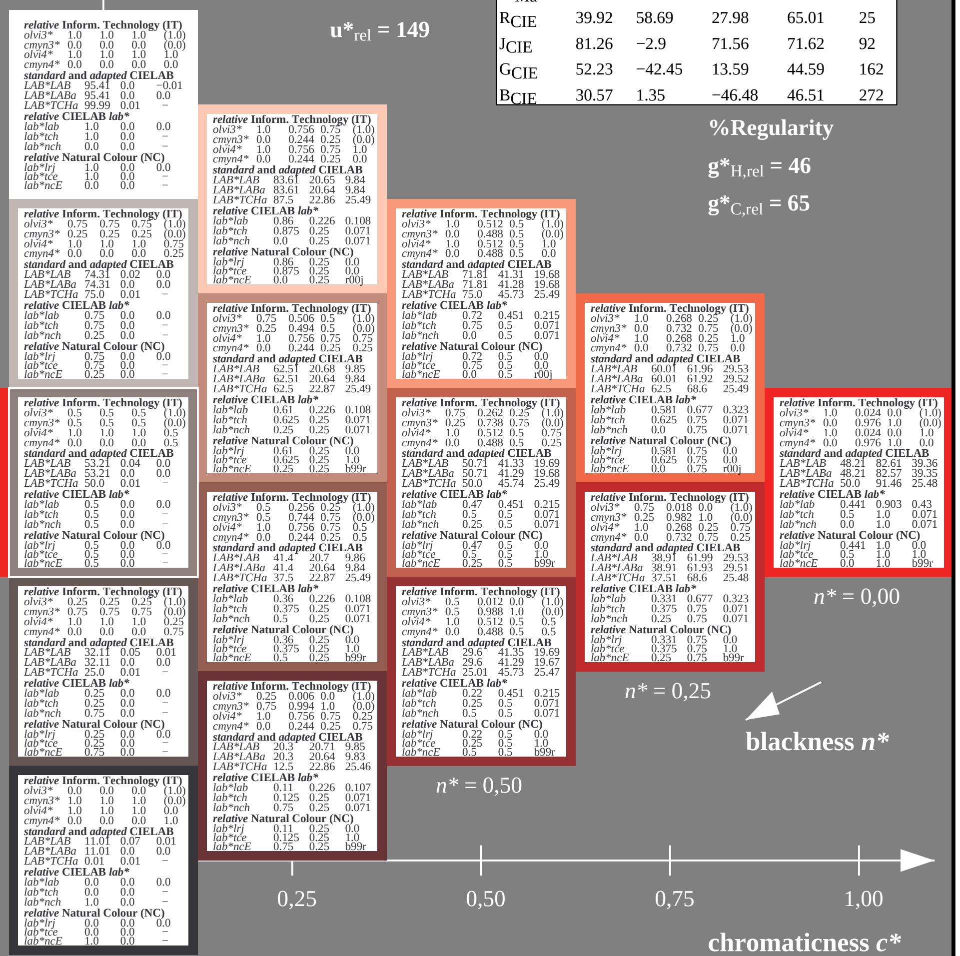
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

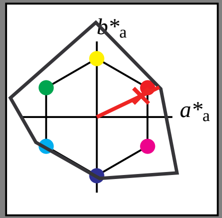


UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 25/360 = 0.071$
*lab*tch* and *lab*nch*

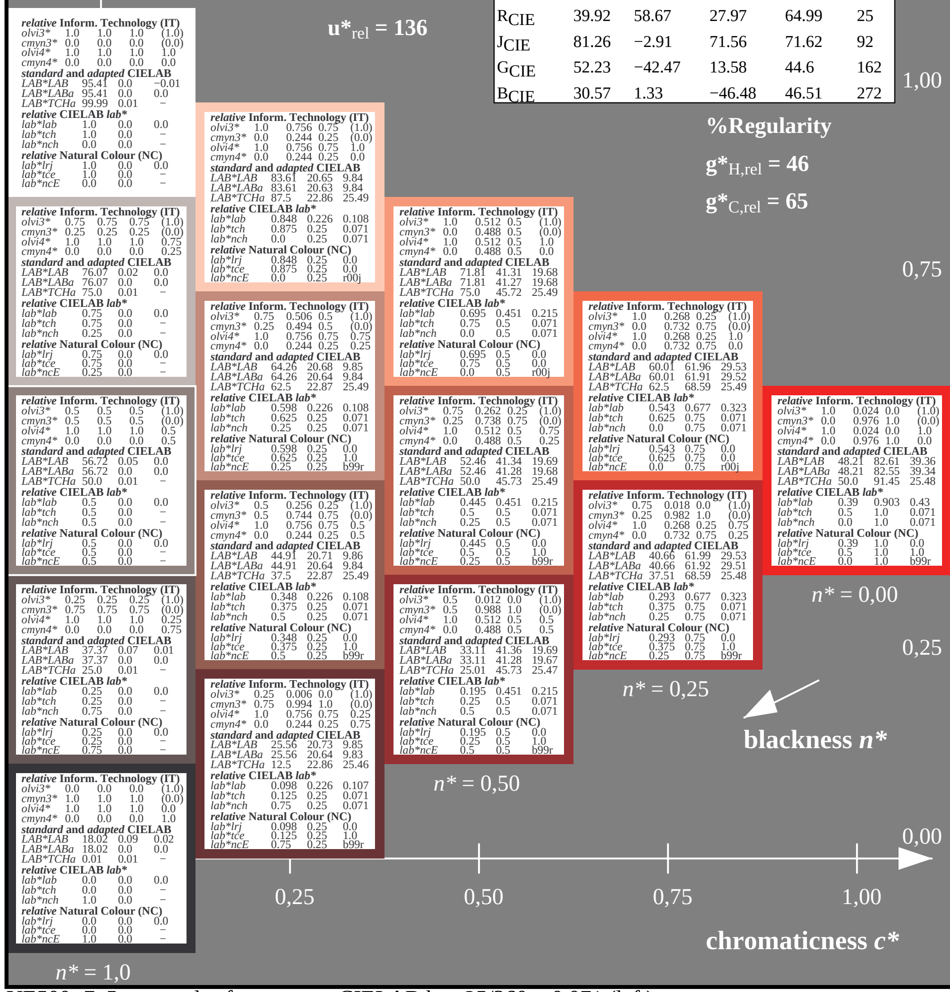
D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 136$

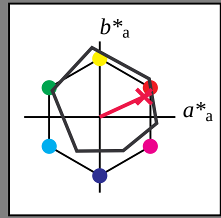
NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 25/360 = 0.069$
*lab*tch* and *lab*nch*

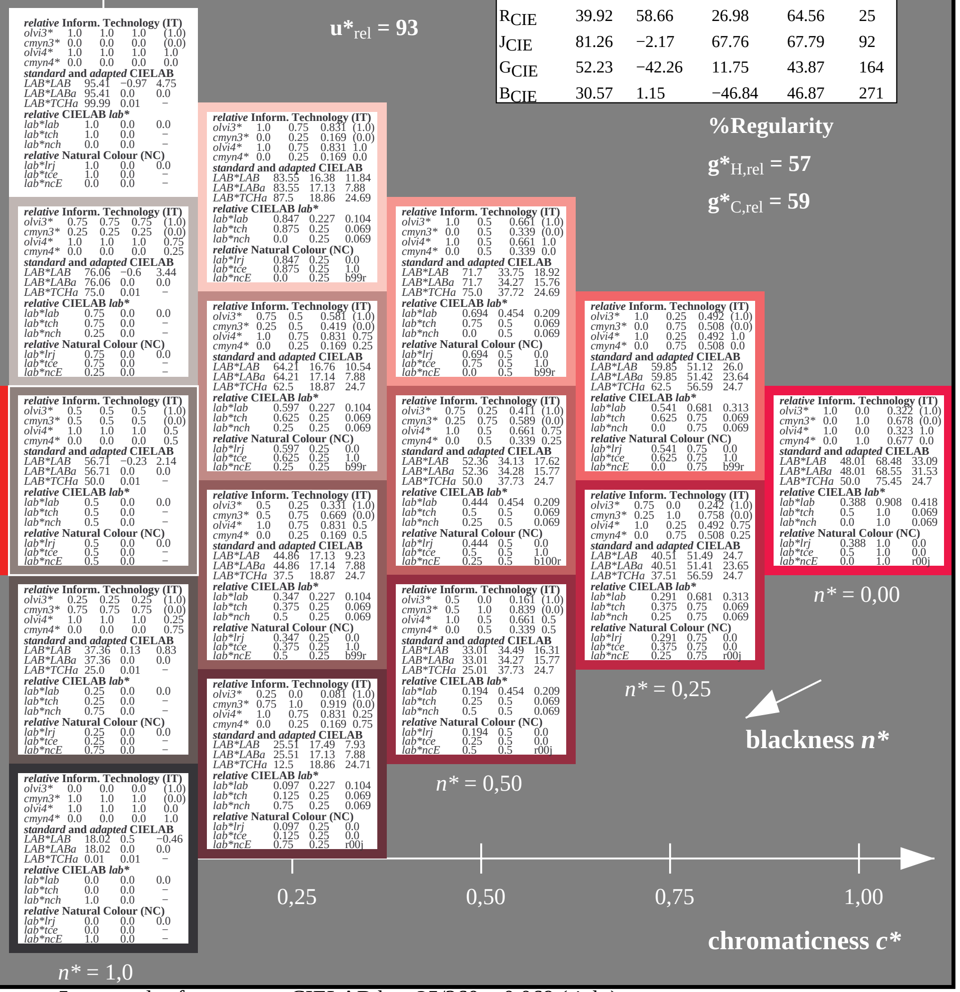
D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32
triangle lightness t^*



%Gamut
$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$

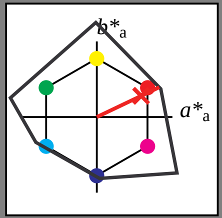


UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 25/360 = 0.071$
*lab*tch and lab*nch*

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0
triangle lightness t^*

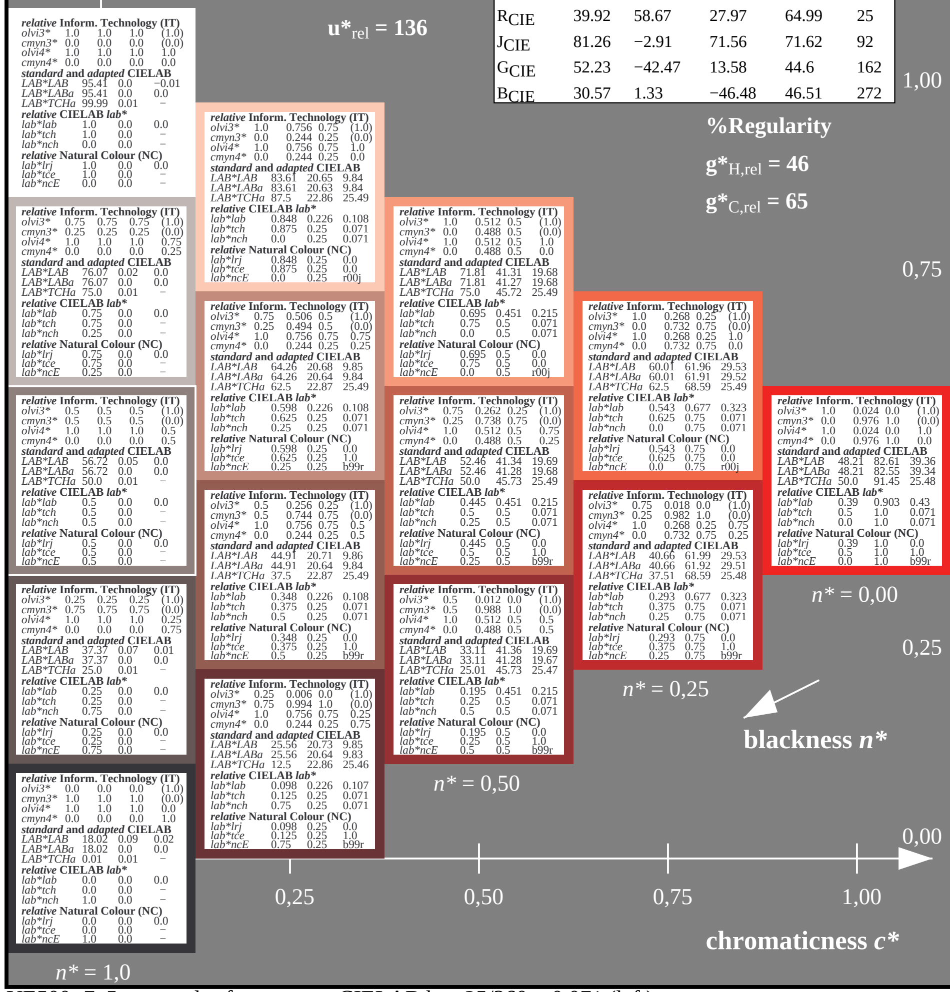


%Gamut
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

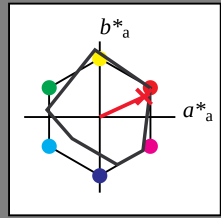
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
*lab*tch and lab*nch*

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1
triangle lightness t^*

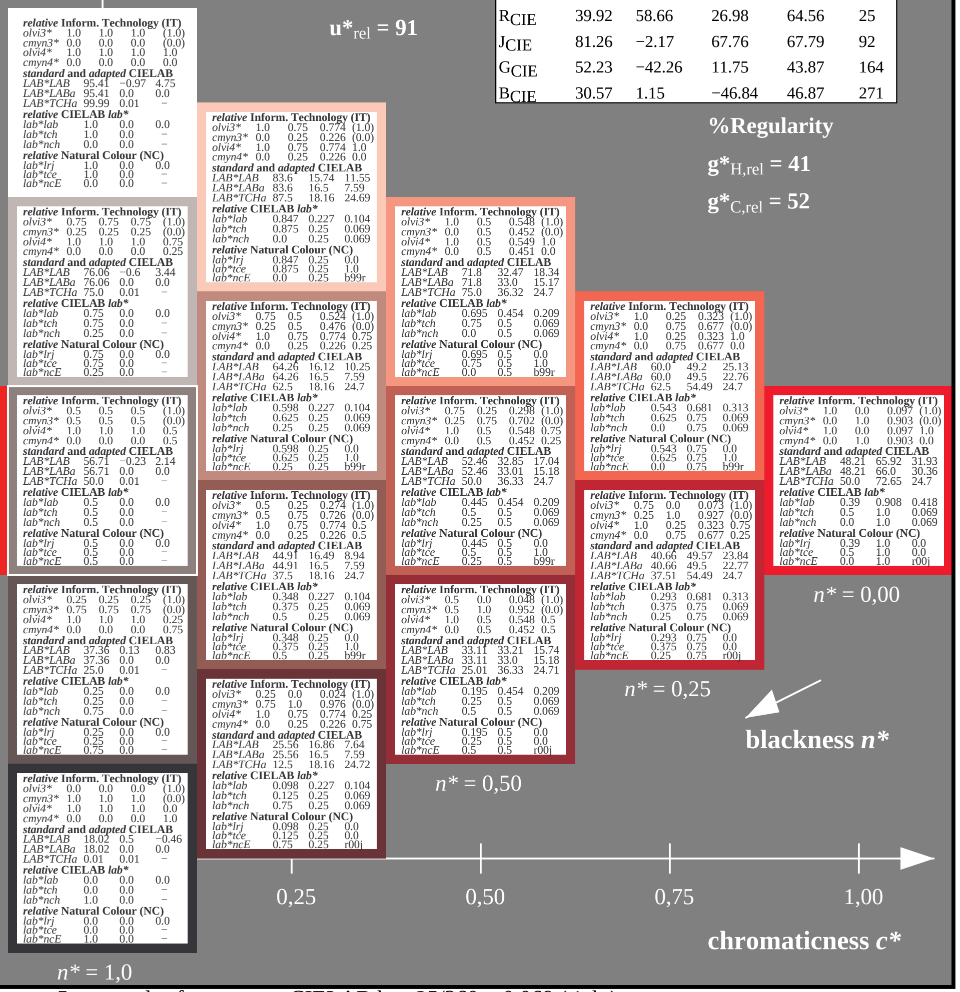


%Gamut
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel}$ = 41
$g^*_{C,rel}$ = 52

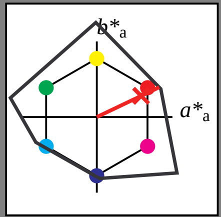


UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

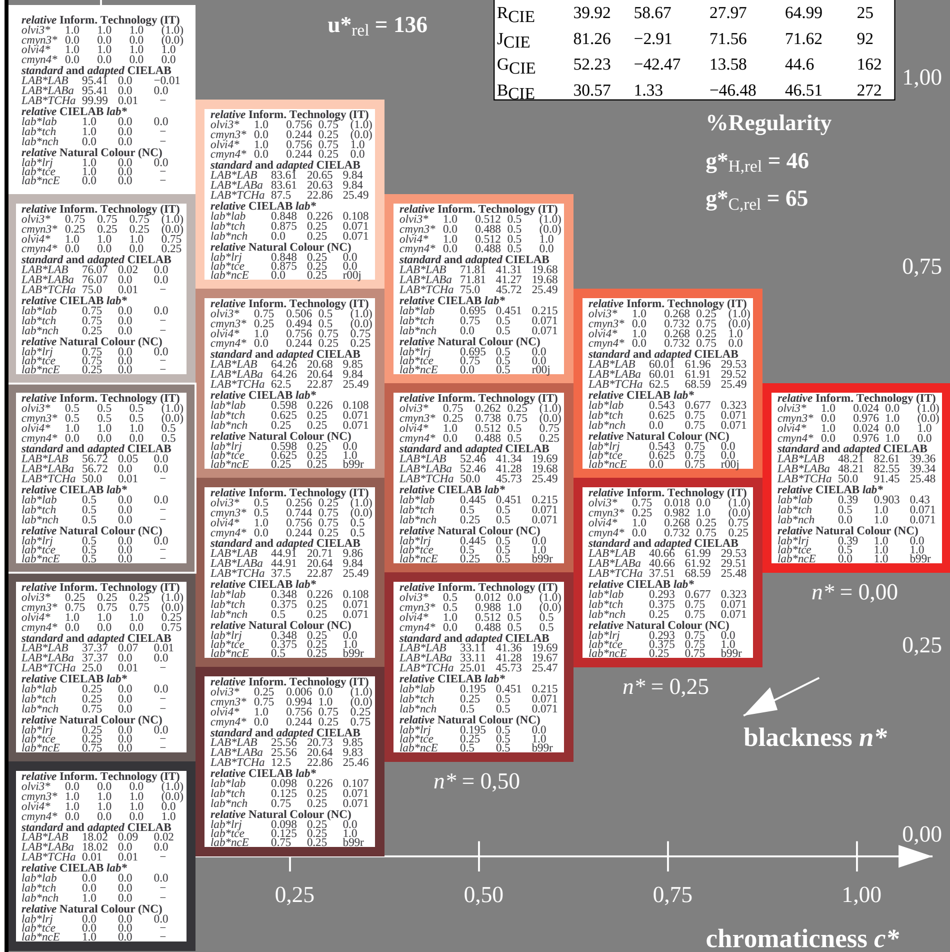
D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0
triangle lightness t^*



%Gamut
u^*_{rel} = 136

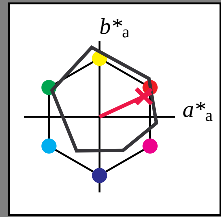
NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

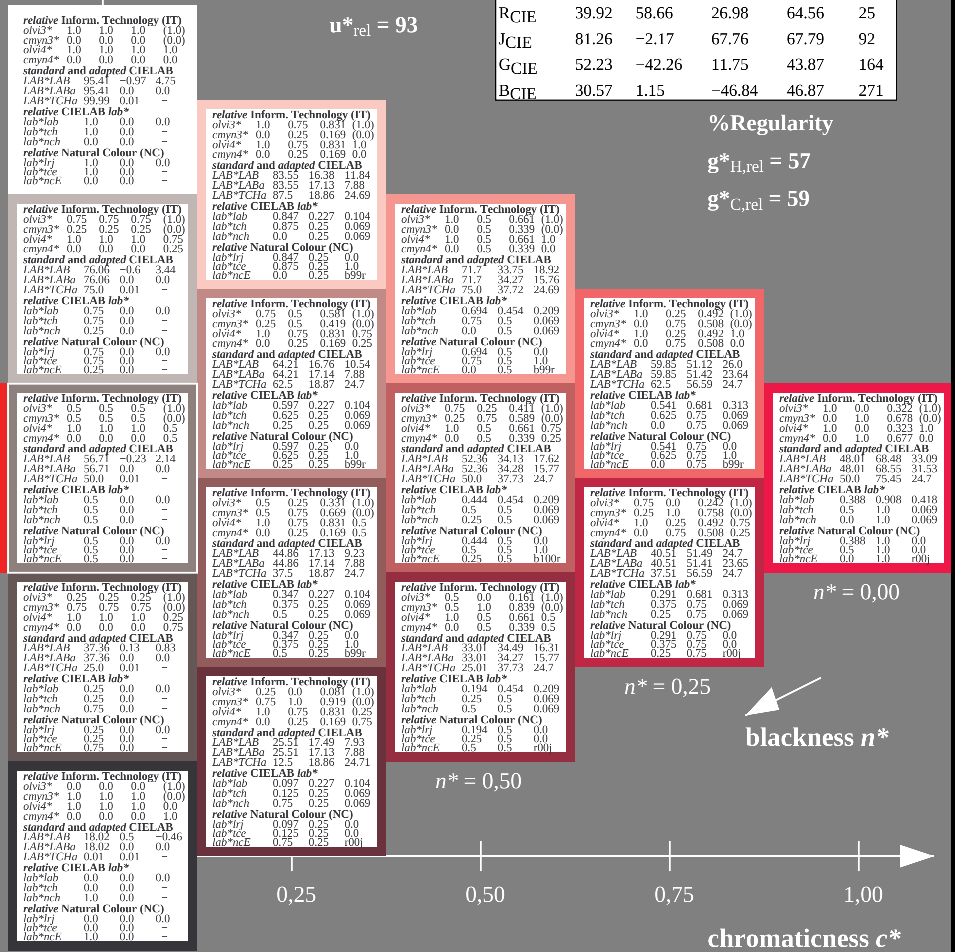
D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32
triangle lightness t^*



%Gamut
u^*_{rel} = 93

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel}$ = 57
$g^*_{C,rel}$ = 59

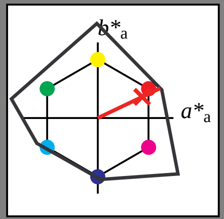


UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 25/360 = 0.071$
*lab*tch and lab*nch*

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0
triangle lightness t^*

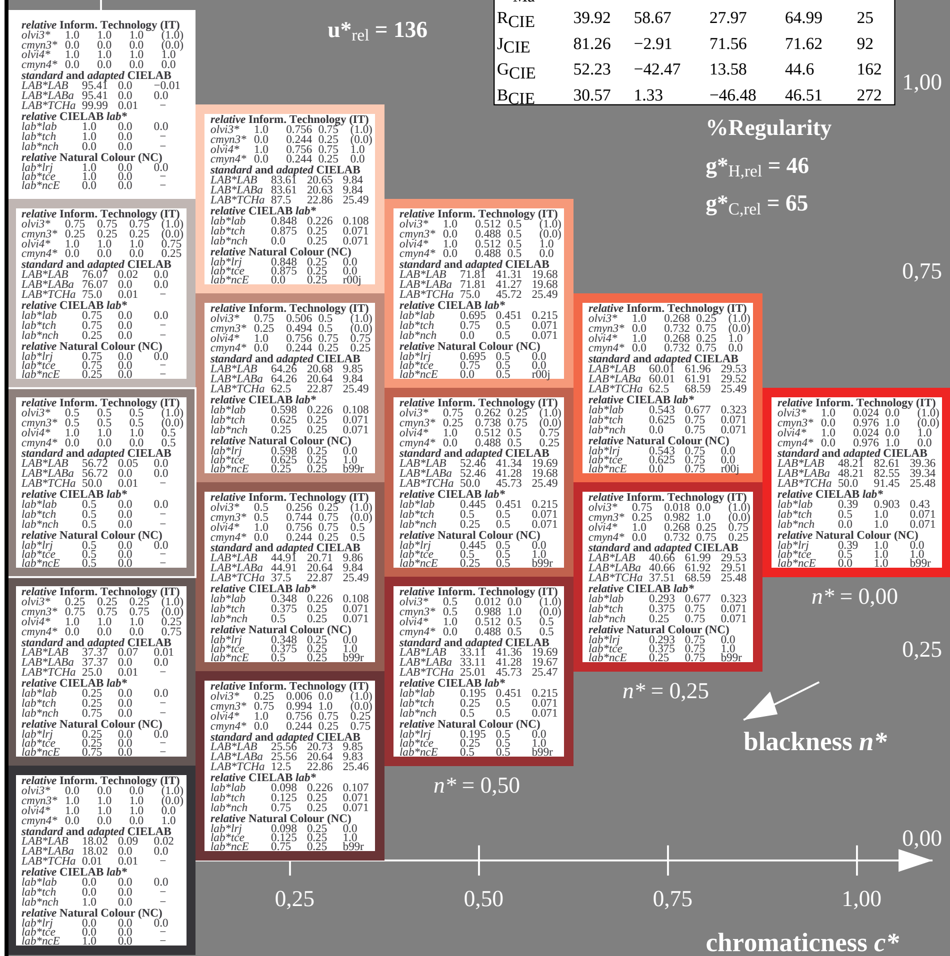


%Gamut
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

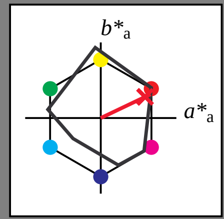
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 25/360 = 0.071$
*lab*tch and lab*nch*

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1
triangle lightness t^*

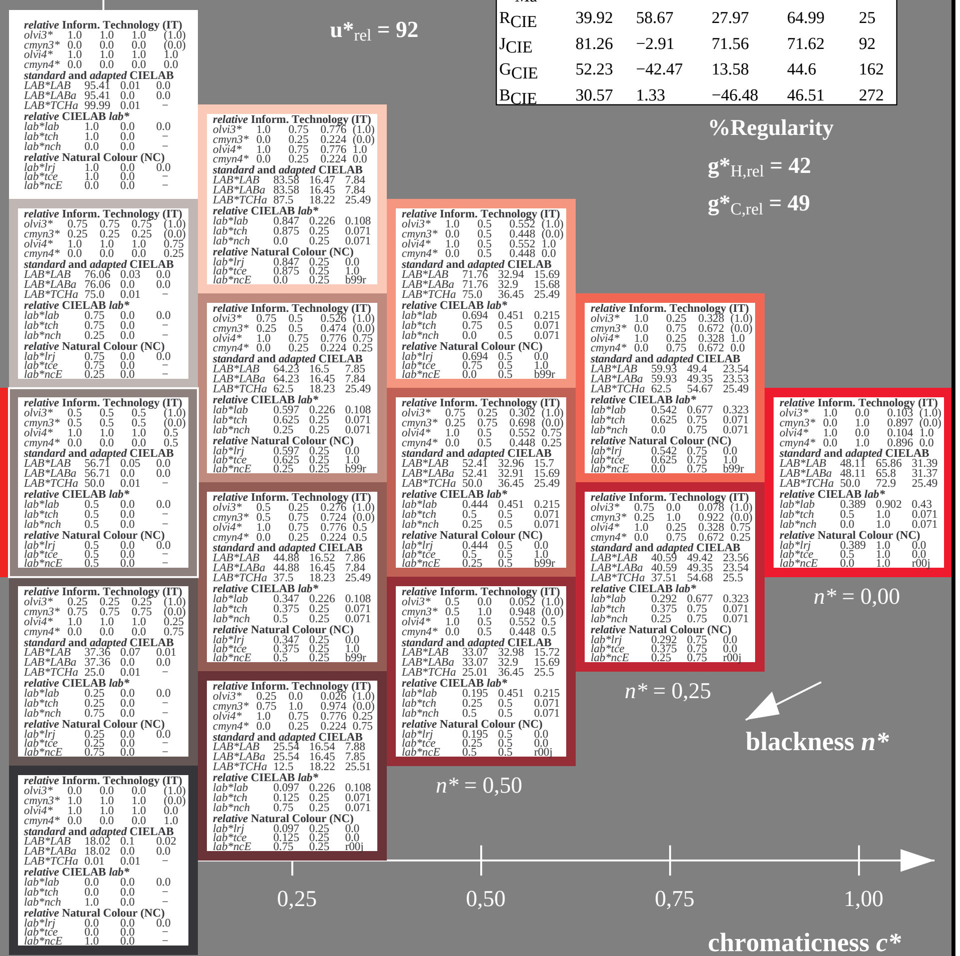


%Gamut
u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 42
$g^*_{C,rel}$ = 49



UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 25/360 = 0.071$

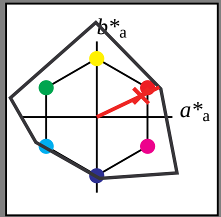
lab*tch and lab*nch

D65: hue R

LCH*Ma: 48 91 25

rgb*Ma: 1.0 0.02 0.0

triangle lightness t^*



%Gamut

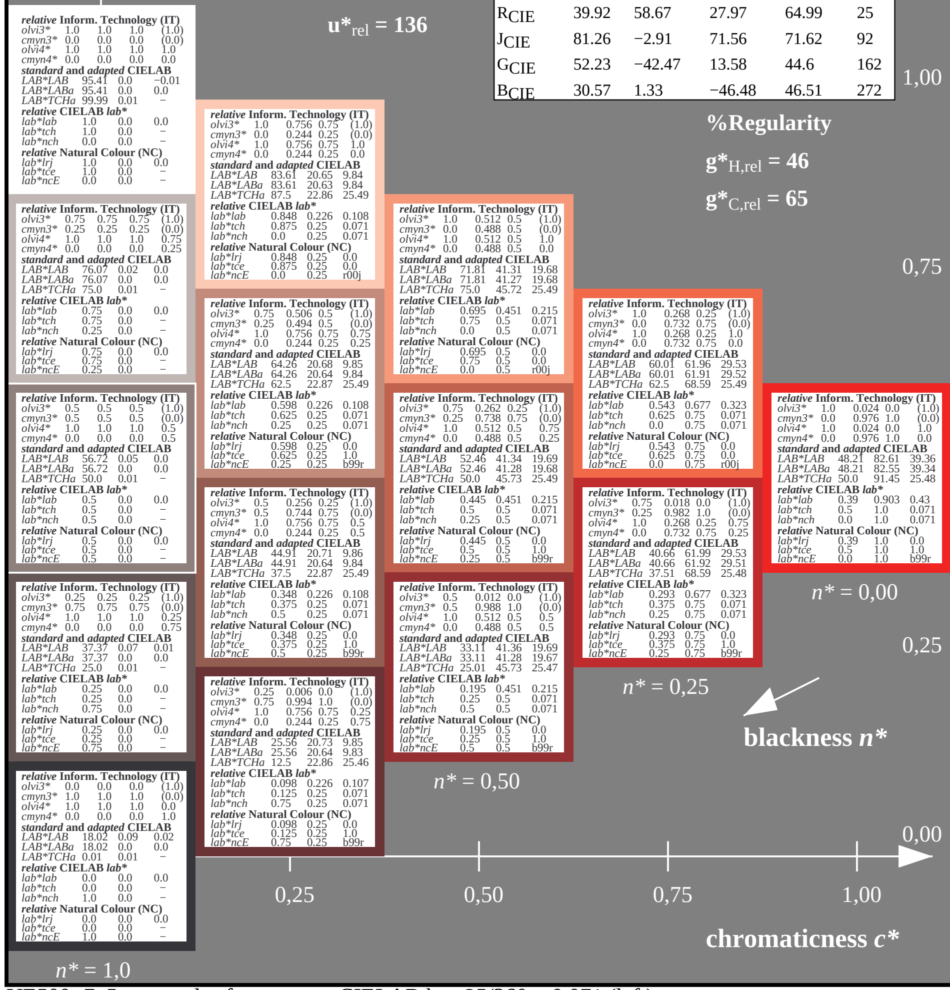
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 25/360 = 0.071$

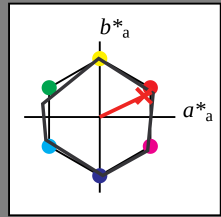
lab*tch and lab*nch

D65: hue R

LCH*Ma: 57 76 25

rgb*Ma: 1.0 0.03 0.0

triangle lightness t^*



%Gamut

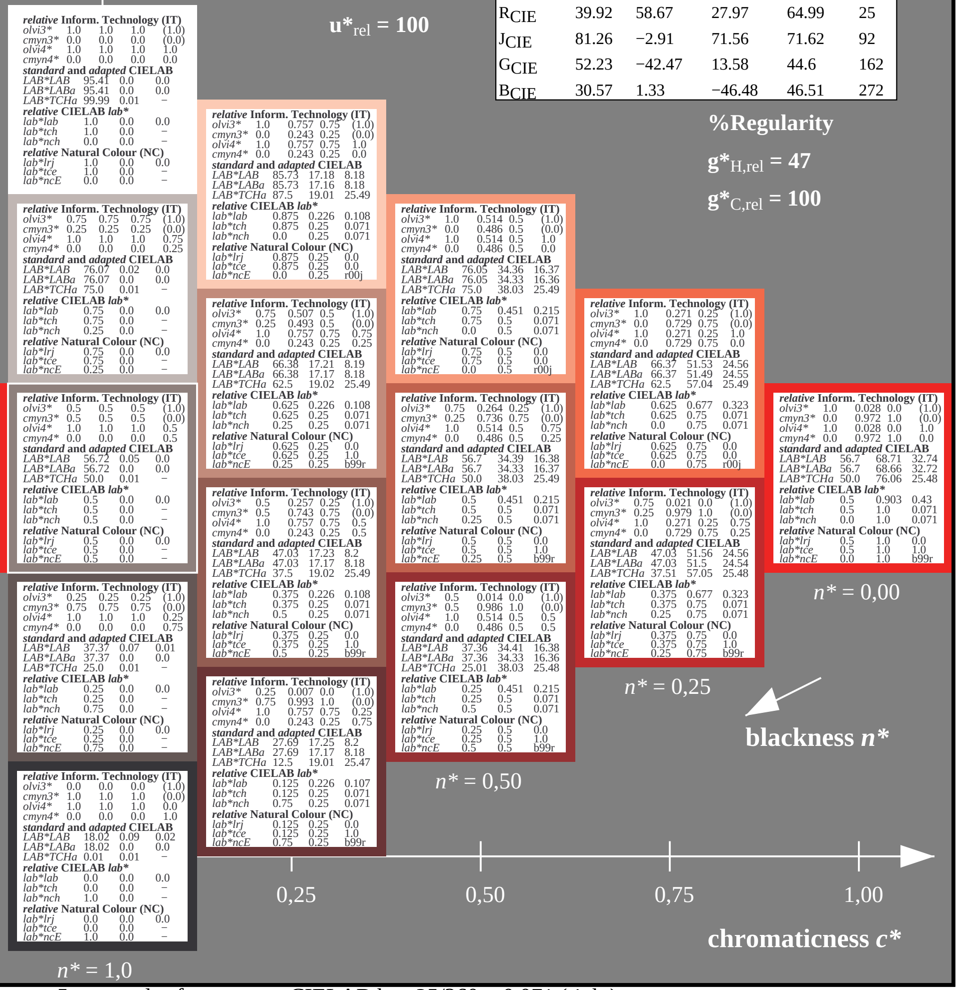
u^*_{rel} = 100

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

Input: Colorimetric Reflective System NCS18

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

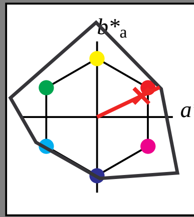
lab^*tch and lab^*nch

D65: hue R

LCH*Ma: 48 91 25

rgb*Ma: 1.0 0.02 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$

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	−0.01	
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*	0.75	0.75	0.75	(1.0)
cmyn3*	0.25	0.25	0.25	(0.0)
olvi4*	1.0	1.0	1.0	0.75
cmyn4*	0.0	0.0	0.0	0.25
standard and *adapted* CIELAB				
LAB*LAB	76.07	0.02	0.0	
LAB*LABa	76.07	0.0	0.0	
LAB*TCHa	75.0	0.01	–	
relative CIELAB *lab**				
lab*lab	0.75	0.0	0.0	
lab*tch	0.75	0.0	–	
lab*nch	0.25	0.0	–	
relative Natural Colour (NC)				
lab*lrj	0.75	0.0	0.0	
lab*tce	0.75	0.0	–	
lab*ncE	0.25	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	56.72	0.05	0.0	
LAB*LABa	56.72	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*	0.25	0.25	0.25	(1.0)
cmyn3*	0.75	0.75	0.75	(0.0)
olvi4*	1.0	1.0	1.0	0.25
cmyn4*	0.0	0.0	0.0	0.75
standard and *adapted* CIELAB				
LAB*LAB	37.37	0.07	0.01	
LAB*LABa	37.37	0.0	0.0	
LAB*TCHa	25.0	0.01	–	
relative CIELAB *lab**				
lab*lab	0.25	0.0	0.0	
lab*tch	0.25	0.0	–	
lab*nch	0.75	0.0	–	
relative Natural Colour (NC)				
lab*lrj	0.25	0.0	0.0	
lab*tce	0.25	0.0	–	
lab*ncE	0.75	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	0.09	0.02	
LAB*LABa	18.02	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	0.756	0.75	(1.0)
cmyn3*	0.0	0.244	0.25	(0.0)
olvi4*	1.0	0.756	0.75	1.0
cmyn4*	0.0	0.244	0.25	0.0
standard and *adapted* CIELAB				
LAB*LAB	83.61	20.65	9.84	
LAB*LABa	83.61	20.63	9.84	
LAB*TCHa	87.5	22.86	25.49	
relative CIELAB *lab**				
lab*lab	0.848	0.226	0.108	
lab*tch	0.875	0.25	0.071	
lab*nch	0.0	0.25	0.071	
relative Natural Colour (NC)				
lab*lrj	0.848	0.25	0.0	
lab*tce	0.875	0.25	0.0	
lab*ncE	0.0	0.25	r00j	

relative Inform. Technology (IT)				
olvi3*	0.75	0.506	0.5	(1.0)
cmyn3*	0.25	0.494	0.5	(0.0)
olvi4*	1.0	0.756	0.75	0.75
cmyn4*	0.0	0.244	0.25	0.25
standard and *adapted* CIELAB				
LAB*LAB	64.26	20.68	9.85	
LAB*LABa	64.26	20.64	9.84	
LAB*TCHa	62.5	22.87	25.49	
relative CIELAB *lab**				
lab*lab	0.598	0.226	0.108	
lab*tch	0.625	0.25	0.071	
lab*nch	0.25	0.25	0.071	
relative Natural Colour (NC)				
lab*lrj	0.598	0.25	0.0	
lab*tce	0.625	0.25	1.0	
lab*ncE	0.25	0.25	b99r	

relative Inform. Technology (IT)				
olvi3*	0.5	0.256	0.25	(1.0)
cmyn3*	0.5	0.744	0.75	(0.0)
olvi4*	1.0	0.756	0.75	0.5
cmyn4*	0.0	0.244	0.25	0.5
standard and *adapted* CIELAB				
LAB*LAB	44.91	20.71	9.86	
LAB*LABa	44.91	20.64	9.84	
LAB*TCHa	37.5	22.87	25.49	
relative CIELAB *lab**				
lab*lab	0.348	0.226	0.108	
lab*tch	0.375	0.25	0.071	
lab*nch	0.5	0.25	0.071	
relative Natural Colour (NC)				
lab*lrj	0.348	0.25	0.0	
lab*tce	0.375	0.25	1.0	
lab*ncE	0.5	0.25	b99r	

relative Inform. Technology (IT)				
olvi3*	0.25	0.006	0.0	(1.0)
cmyn3*	0.75	0.994	1.0	(0.0)
olvi4*	1.0	0.756	0.75	0.25
cmyn4*	0.0	0.244	0.25	0.75
standard and *adapted* CIELAB				
LAB*LAB	25.56	20.73	9.85	
LAB*LABa	25.56	20.64	9.83	
LAB*TCHa	12.5	22.86	25.46	
relative CIELAB *lab**				
lab*lab	0.098	0.226	0.107	
lab*tch	0.125	0.25	0.071	
lab*nch	0.75	0.25	0.071	
relative Natural Colour (NC)				
lab*lrj	0.098	0.25	0.0	
lab*tce	0.125	0.25	1.0	
lab*ncE	0.75	0.25	b99r	

relative Inform. Technology (IT)				
olvi3*	1.0	0.512	0.5	(1.0)
cmyn3*	0.0	0.488	0.5	(0.0)
olvi4*	1.0	0.512	0.5	1.0
cmyn4*	0.0	0.488	0.5	0.0
standard and *adapted* CIELAB				
LAB*LAB	71.81	41.31	19.68	
LAB*LABa	71.81	41.27	19.68	
LAB*TCHa	75.0	45.72	25.49	
relative CIELAB *lab**				
lab*lab	0.695	0.451	0.215	
lab*tch	0.75	0.5	0.071	
lab*nch	0.0	0.5	0.071	
relative Natural Colour (NC)				
lab*lrj	0.695	0.5	0.0	
lab*tce	0.75	0.5	0.0	
lab*ncE	0.0	0.5	r00j	

relative Inform. Technology (IT)				
olvi3*	0.75	0.262	0.25	(1.0)
cmyn3*	0.25	0.738	0.75	(0.0)
olvi4*	1.0	0.512	0.5	0.75
cmyn4*	0.0	0.488	0.5	0.25
standard and *adapted* CIELAB				
LAB*LAB	52.46	41.34	19.69	
LAB*LABa	52.46	41.28	19.68	
LAB*TCHa	50.0	45.73	25.49	
relative CIELAB *lab**				
lab*lab	0.445	0.451	0.215	
lab*tch	0.5	0.5	0.071	
lab*nch	0.25	0.5	0.071	
relative Natural Colour (NC)				
lab*lrj	0.445	0.5	0.0	
lab*tce	0.5	0.5	1.0	
lab*ncE	0.25	0.5	b99r	

relative Inform. Technology (IT)				
olvi3*	0.5	0.012	0.0	(1.0)
cmyn3*	0.5	0.988	1.0	(0.0)
olvi4*	1.0	0.512	0.5	0.5
cmyn4*	0.0	0.488	0.5	0.5
standard and *adapted* CIELAB				
LAB*LAB	33.11	41.36	19.69	
LAB*LABa	33.11	41.28	19.67	
LAB*TCHa	25.01	45.73	25.47	
relative CIELAB *lab**				
lab*lab	0.195	0.451	0.215	
lab*tch	0.25	0.5	0.071	
lab*nch	0.5	0.5	0.071	
relative Natural Colour (NC)				
lab*lrj	0.195	0.5	0.0	
lab*tce	0.25	0.5	1.0	
lab*ncE	0.5	0.5	b99r	

relative Inform. Technology (IT)				
olvi3*	1.0	0.268	0.25	(1.0)
cmyn3*	0.0	0.732	0.75	(0.0)
olvi4*	1.0	0.268	0.25	1.0
cmyn4*	0.0	0.732	0.75	0.0
standard and *adapted* CIELAB				
LAB*LAB	60.01	61.96	29.53	
LAB*LABa	60.01	61.91	29.52	
LAB*TCHa	62.5	68.59	25.49	
relative CIELAB *lab**				
lab*lab	0.543	0.677	0.323	
lab*tch	0.625	0.75	0.071	
lab*nch	0.0	0.75	0.071	
relative Natural Colour (NC)				
lab*lrj	0.543	0.75	0.0	
lab*tce	0.625	0.75	0.0	
lab*ncE	0.0	0.75	r00j	

relative Inform. Technology (IT)				
olvi3*	0.75	0.018	0.0	(1.0)
cmyn3*	0.25	0.982	1.0	(0.0)
olvi4*	1.0	0.268	0.25	0.75
cmyn4*	0.0	0.732	0.75	0.25
standard and *adapted* CIELAB				
LAB*LAB	40.66	61.99	29.53	
LAB*LABa	40.66	61.92	29.51	
LAB*TCHa	37.51	68.59	25.48	
relative CIELAB *lab**				
lab*lab	0.293	0.677	0.323	
lab*tch	0.375	0.75	0.071	
lab*nch	0.25	0.75	0.071	
relative Natural Colour (NC)				
lab*lrj	0.293	0.75	0.0	
lab*tce	0.375	0.75	1.0	
lab*ncE	0.25	0.75	b99r	

relative Inform. Technology (IT)				
olvi3*	1.0	0.024	0.0	(1.0)
cmyn3*	0.0	0.976	1.0	(0.0)
olvi4*	1.0	0.024	0.0	1.0
cmyn4*	0.0	0.976	1.0	0.0
standard and *adapted* CIELAB				
LAB*LAB	48.21	82.61	39.36	
LAB*LABa	48.21	82.55	39.34	
LAB*TCHa	50.0	91.45	25.48	
relative CIELAB *lab**				
lab*lab	0.39	0.903	0.43	
lab*tch	0.5	1.0	0.071	
lab*nch	0.0	1.0	0.071	
relative Natural Colour (NC)				
lab*lrj	0.39	1.0	0.0	
lab*tce	0.5	1.0	0.0	
lab*ncE	0.0	1.0	b99r	

1,00 0,75 0,25 0,00

$n^* = 0,00$ $n^* = 0,25$ $n^* = 0,50$ $n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NCS18

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

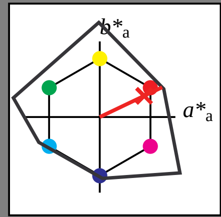
lab^*tch and lab^*nch

D65: hue R

LCH*Ma: 48 91 25

rgb*Ma: 1.0 0.02 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$

$n^* = 0,00$ $n^* = 0,25$ $n^* = 0,50$ $n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

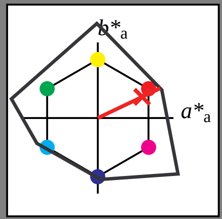
chromaticness c^*

UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 25/360 = 0.071$
*lab*tch and lab*nch*

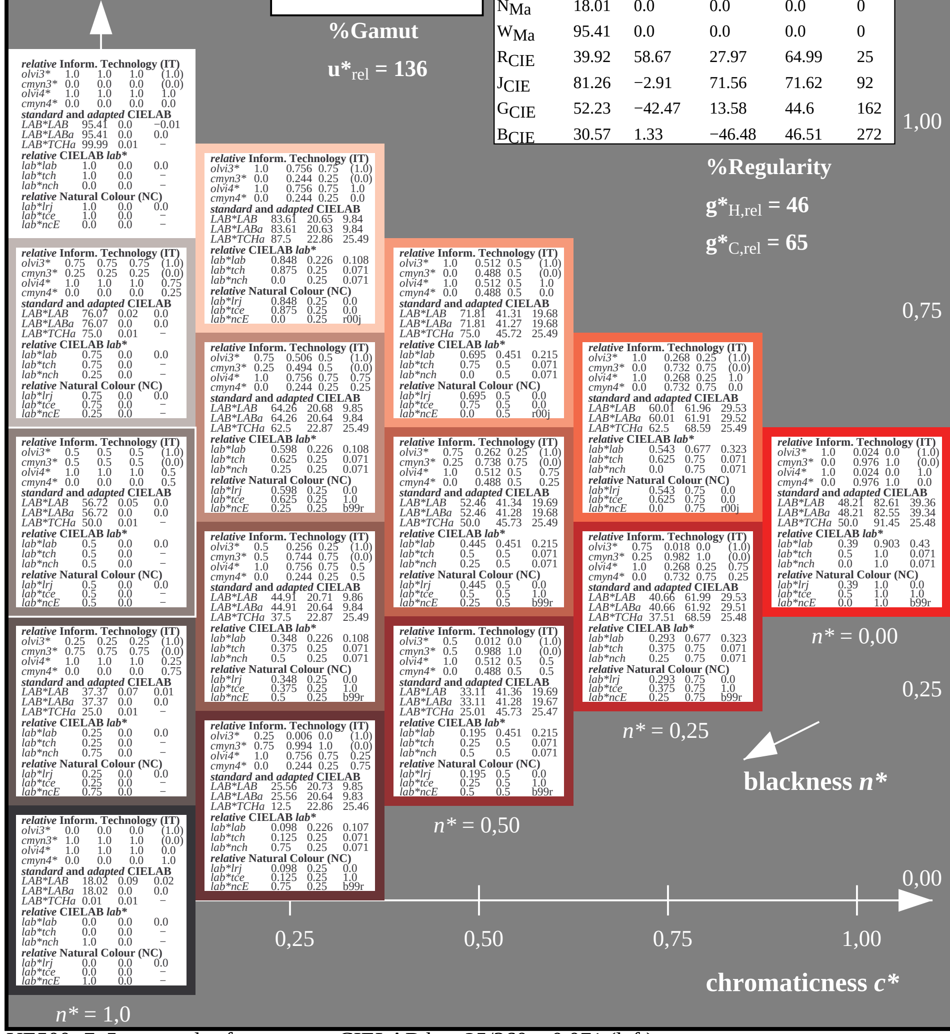
D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 136$

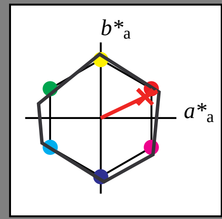
NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 25/360 = 0.071$
*lab*tch and lab*nch*

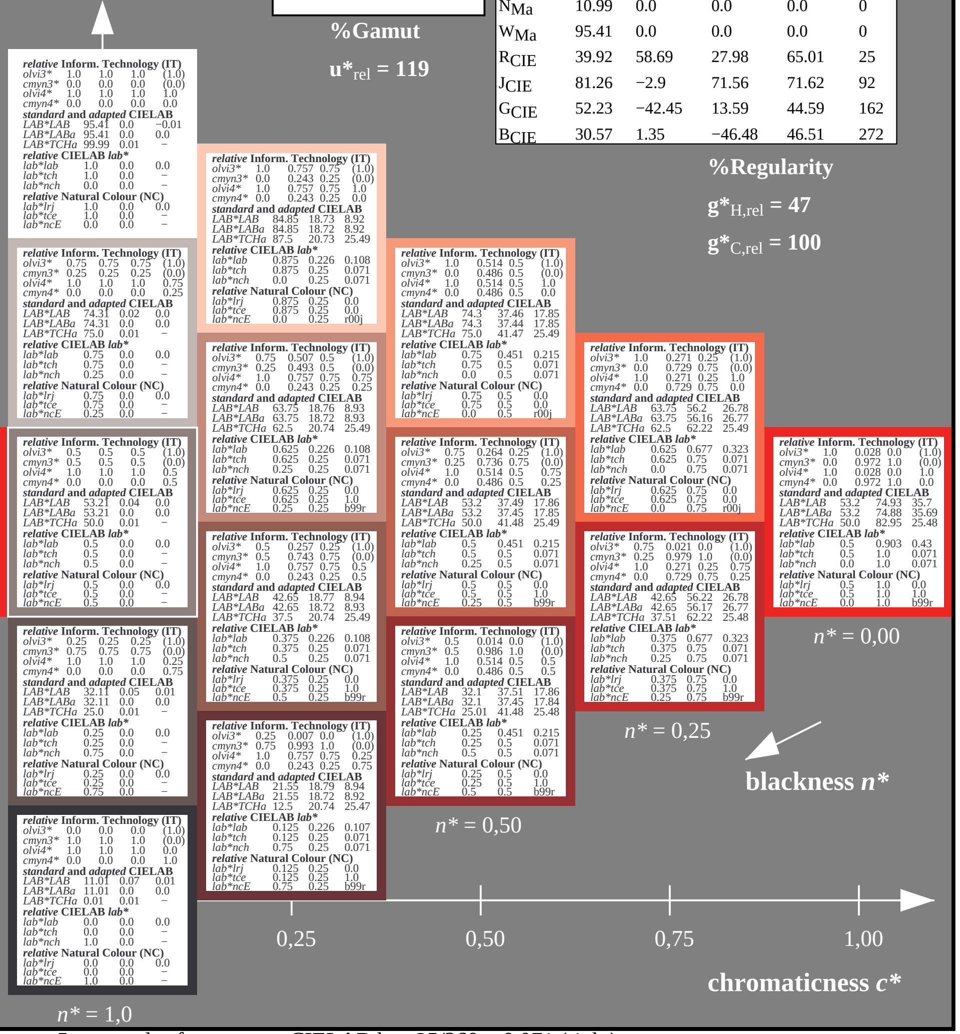
D65: hue R
LCH*Ma: 53 83 25
rgb*Ma: 1.0 0.03 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

Input: Colorimetric Reflective System NCS18

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

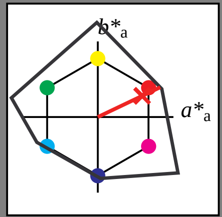
lab*tch and lab*nch

D65: hue R

LCH*Ma: 48 91 25

rgb*Ma: 1.0 0.02 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 136

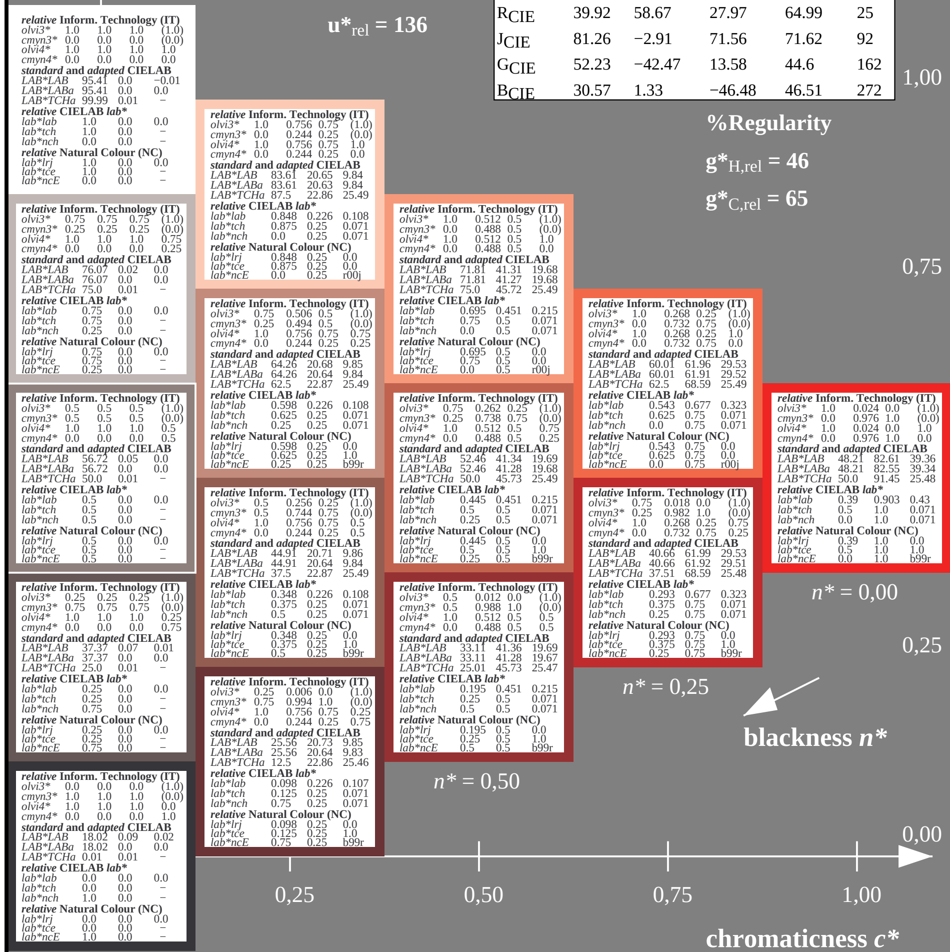
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

Output: Colorimetric Reflective System NCS11

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

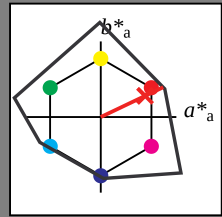
lab*tch and lab*nch

D65: hue R

LCH*Ma: 48 91 25

rgb*Ma: 1.0 0.02 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 149

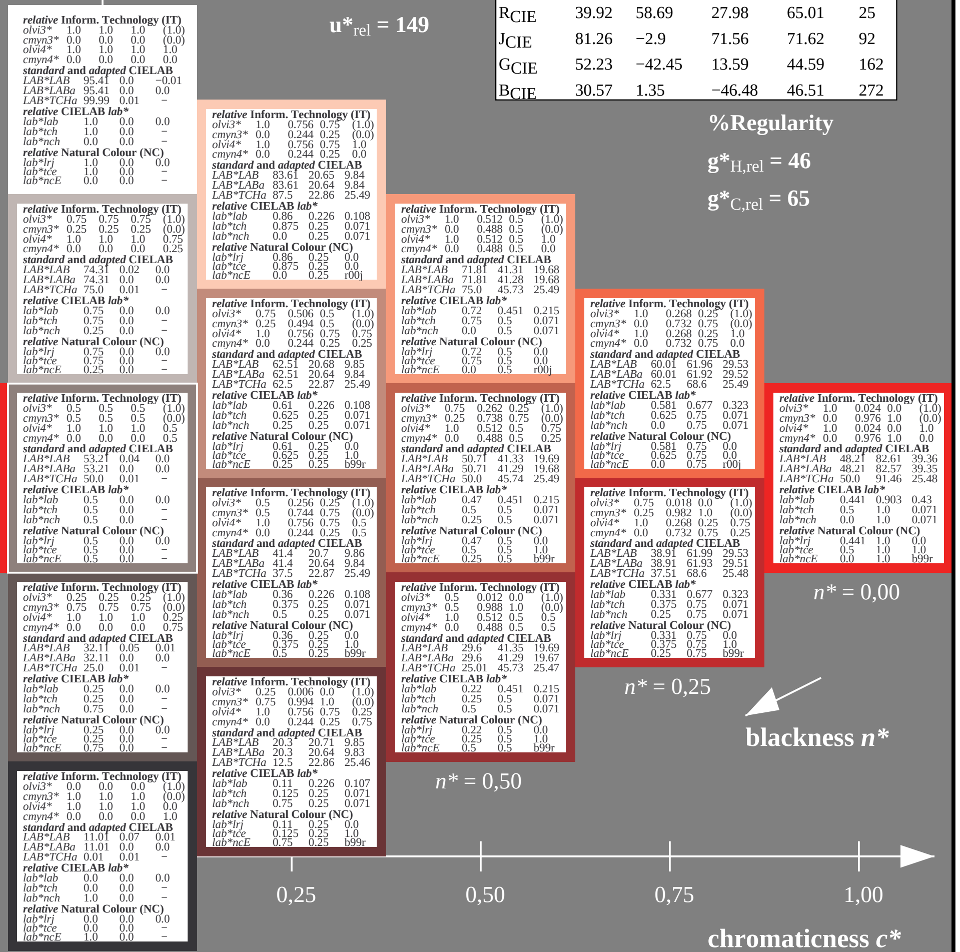
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

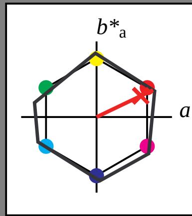


5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 25/360 = 0.071$
*lab*tch and lab*nch*

D65: hue R
LCH*Ma: 53 83 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness t^*



%Gamut

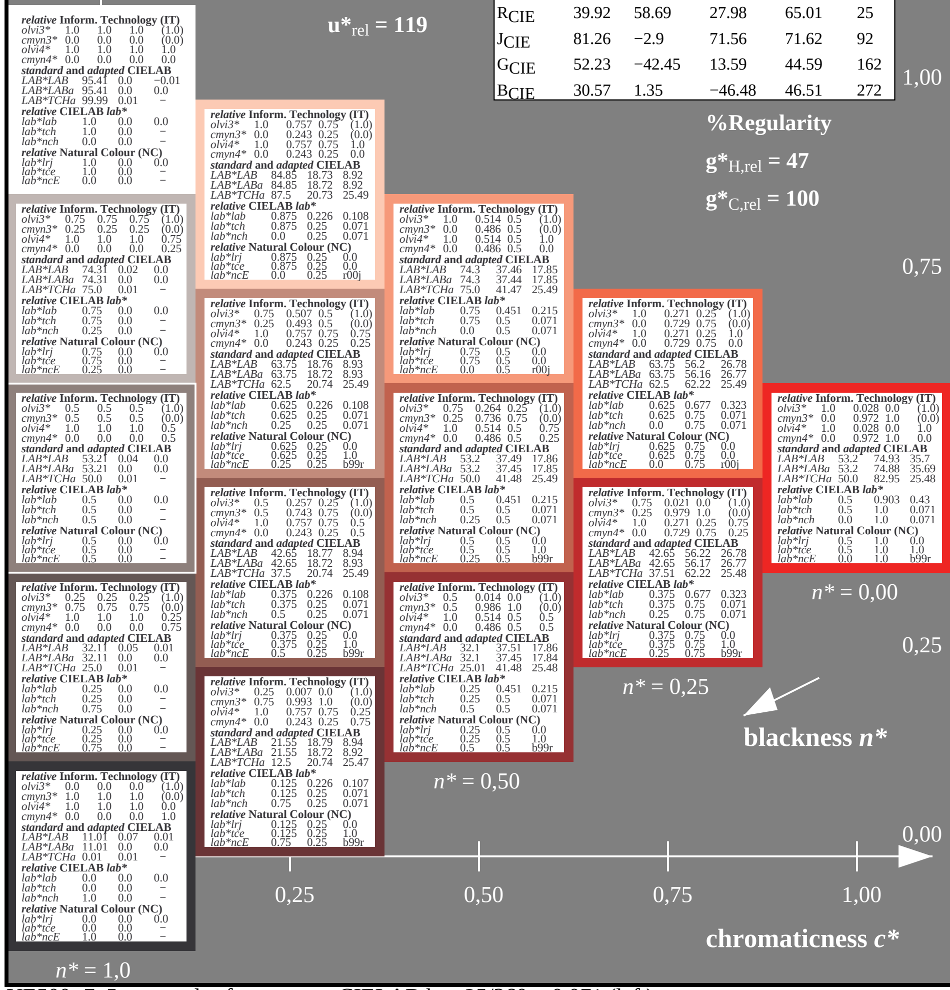
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

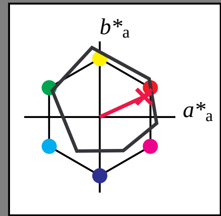
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 25/360 = 0.069$
*lab*tch and lab*nch*

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness t^*



%Gamut

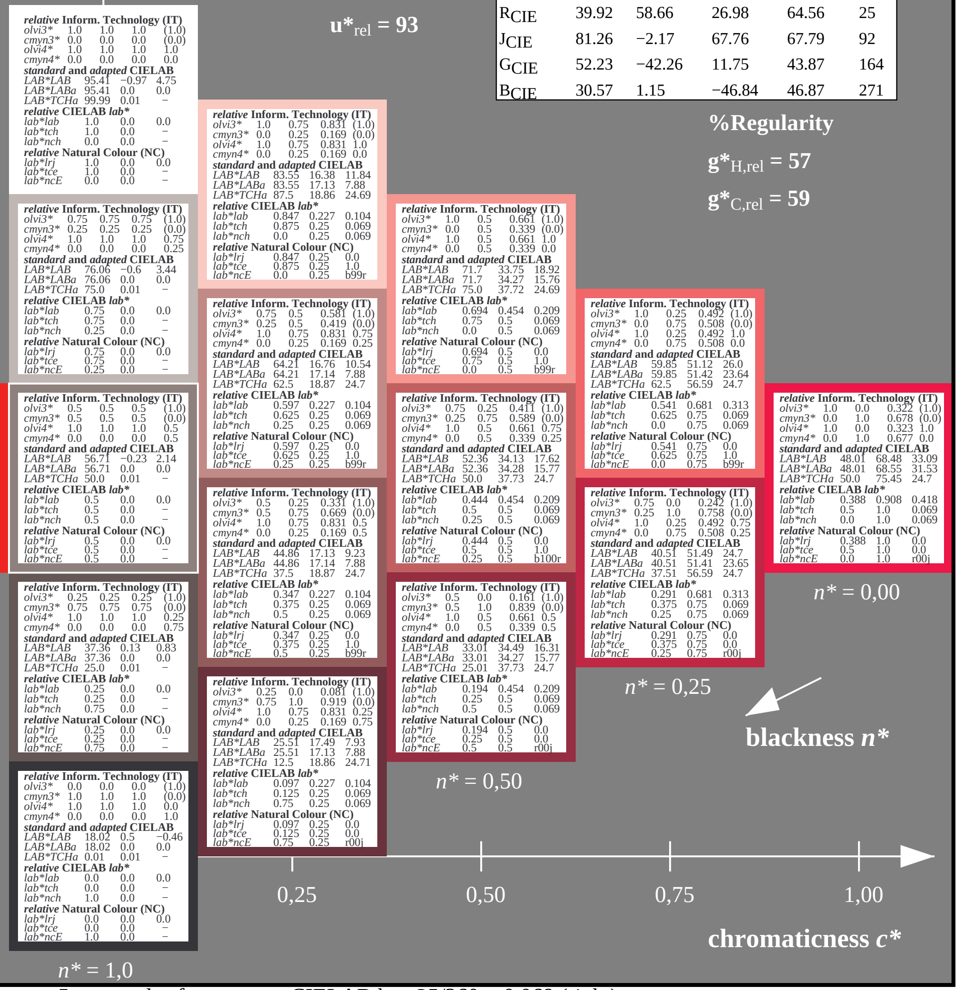
$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

Input: Colorimetric Reflective System NRS11

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

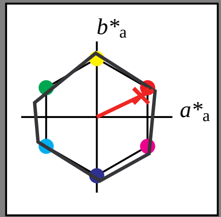
*lab*tch and lab*nch*

D65: hue R

LCH*Ma: 53 83 25

rgb*Ma: 1.0 0.03 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 119$

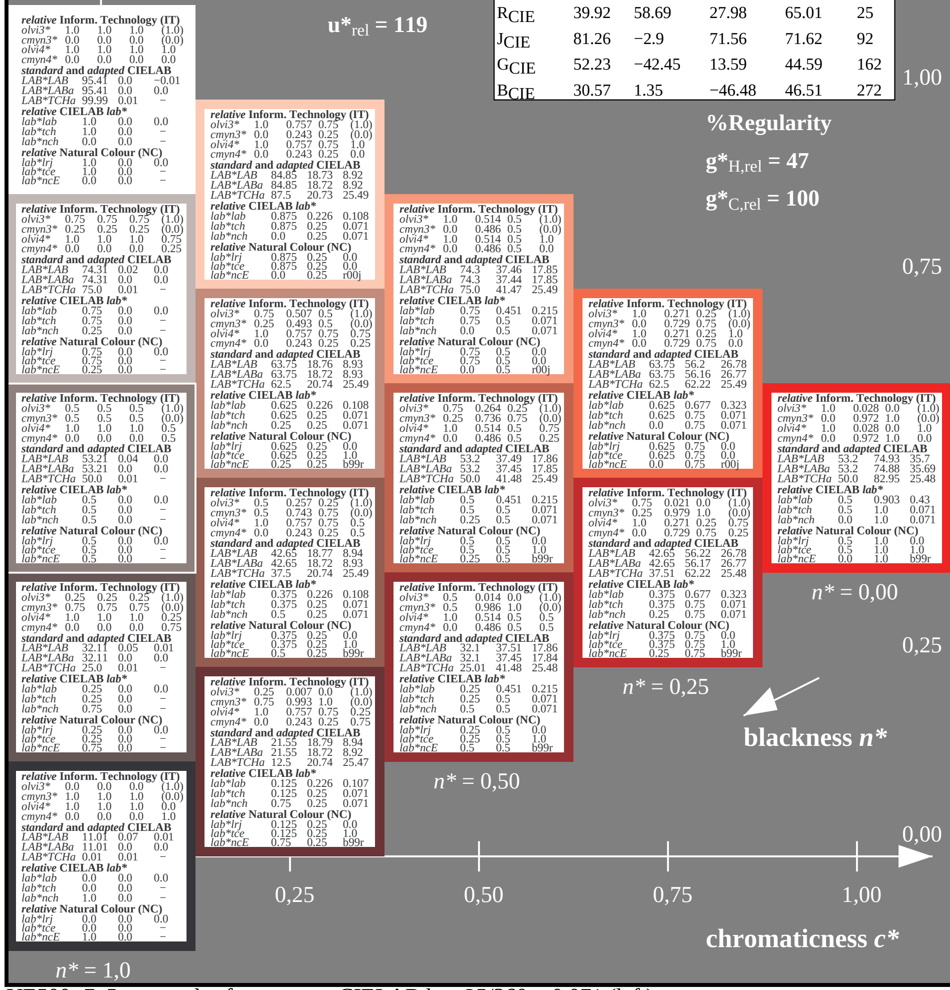
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System MRS18

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

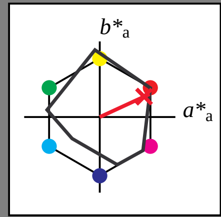
*lab*tch and lab*nch*

D65: hue R

LCH*Ma: 48 73 25

rgb*Ma: 1.0 0.0 0.1

triangle lightness t^*



%Gamut

$u^*_{rel} = 91$

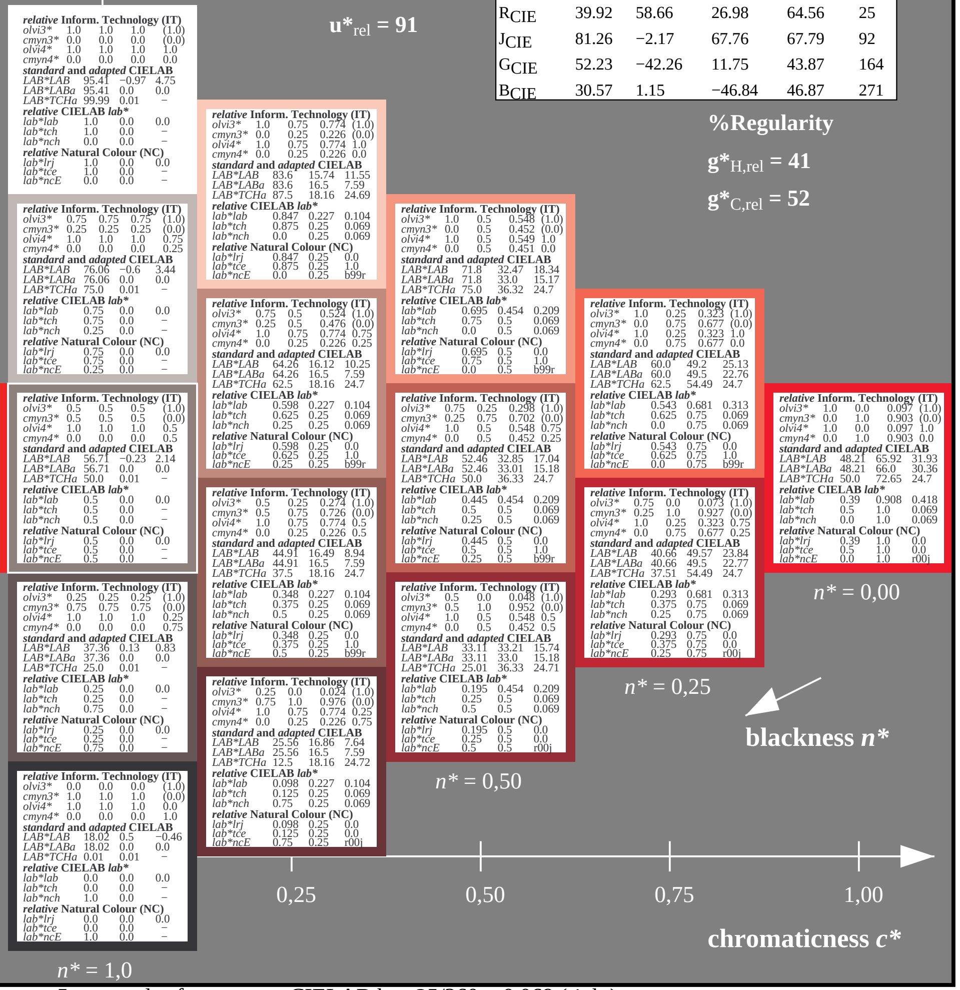
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



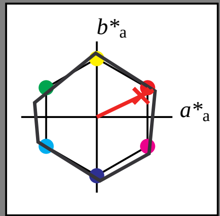
UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 25/360 = 0.071$
lab^*tch and lab^*nch

D65: hue R
LCH*Ma: 53 83 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness t^*



NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

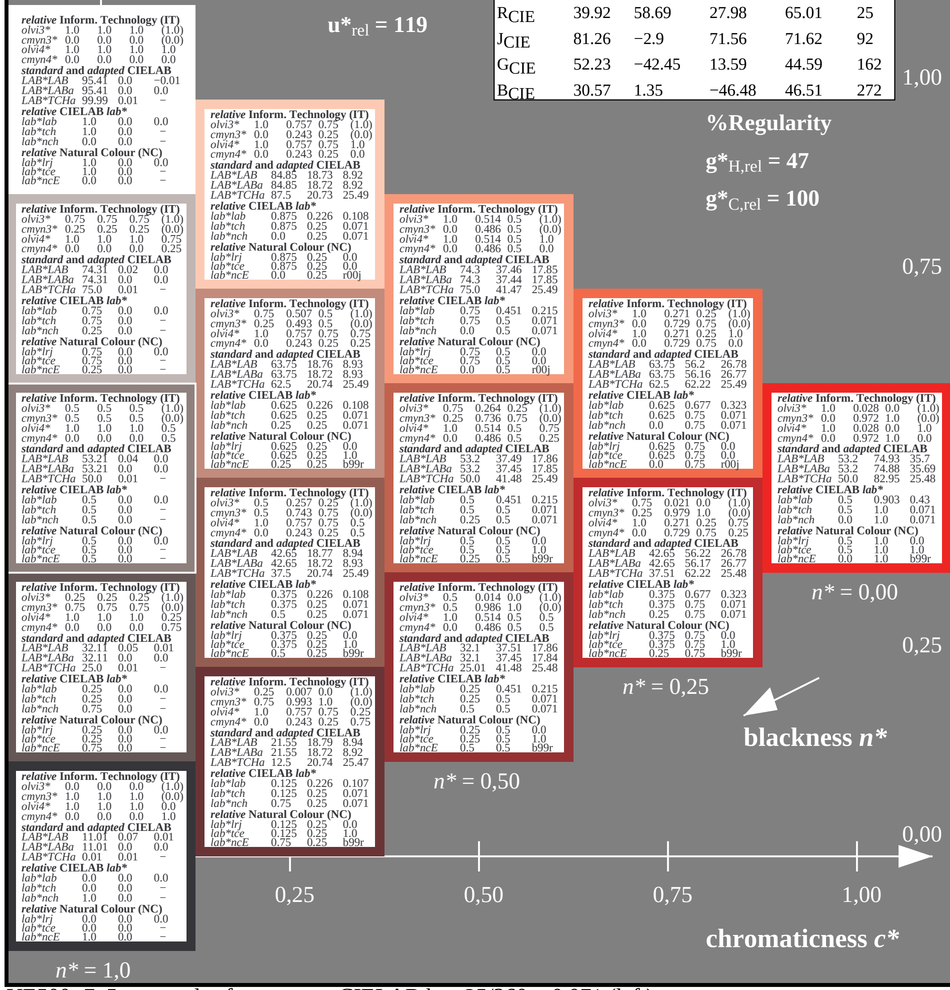
%Gamut

$u^*_{rel} = 119$

%Regularity

$g^*_{H,rel} = 47$

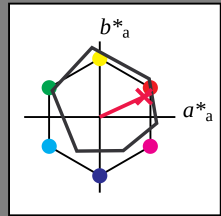
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab^*tch and lab^*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness t^*



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

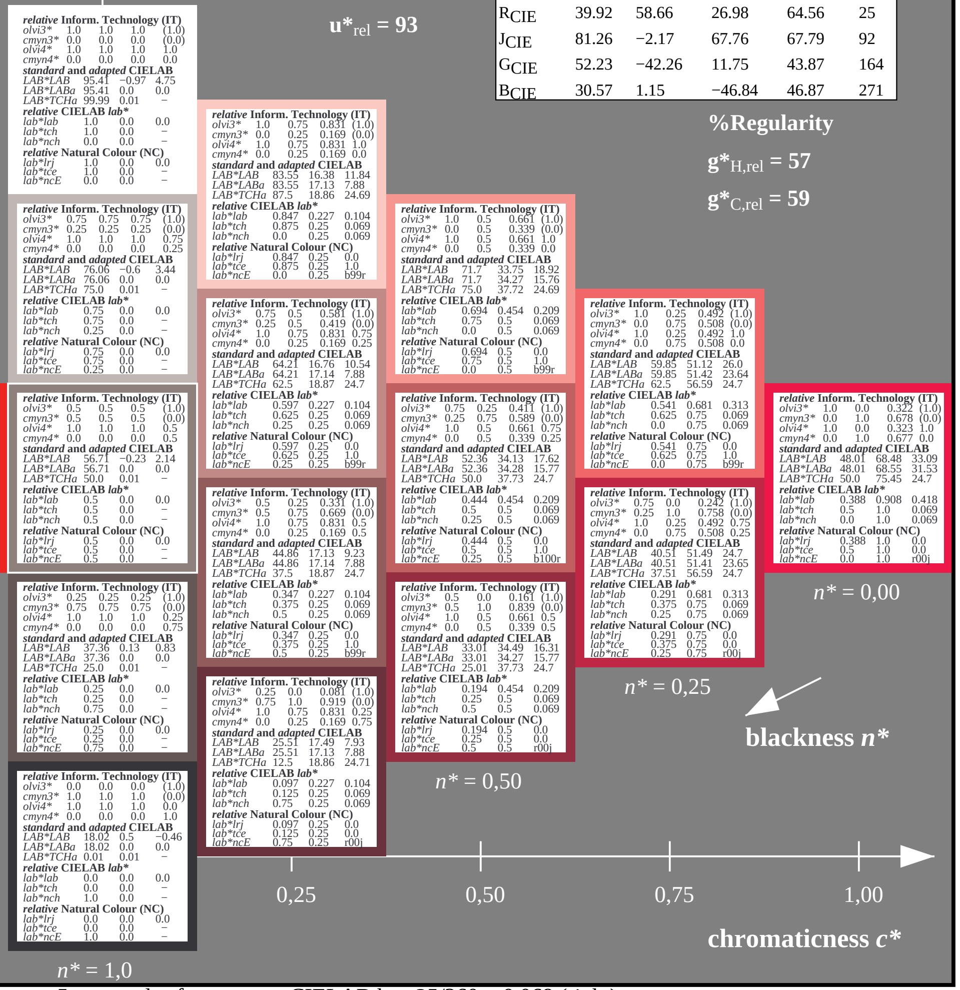
%Gamut

$u^*_{rel} = 93$

%Regularity

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

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

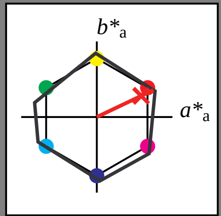


UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 25/360 = 0.071$
lab^*tch and lab^*nch

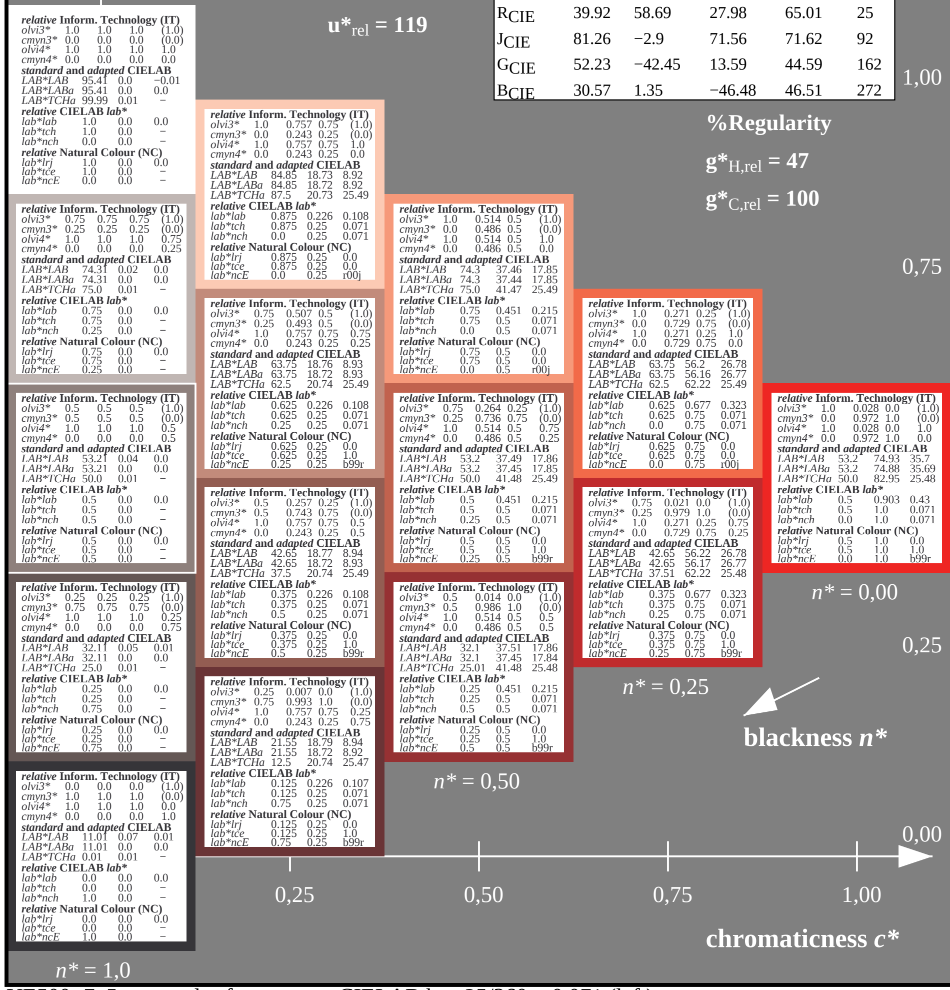
D65: hue R
LCH*Ma: 53 83 25
rgb*Ma: 1.0 0.03 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 119$

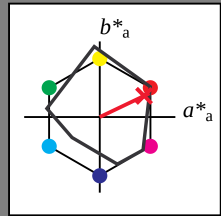
NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 25/360 = 0.071$
lab^*tch and lab^*nch

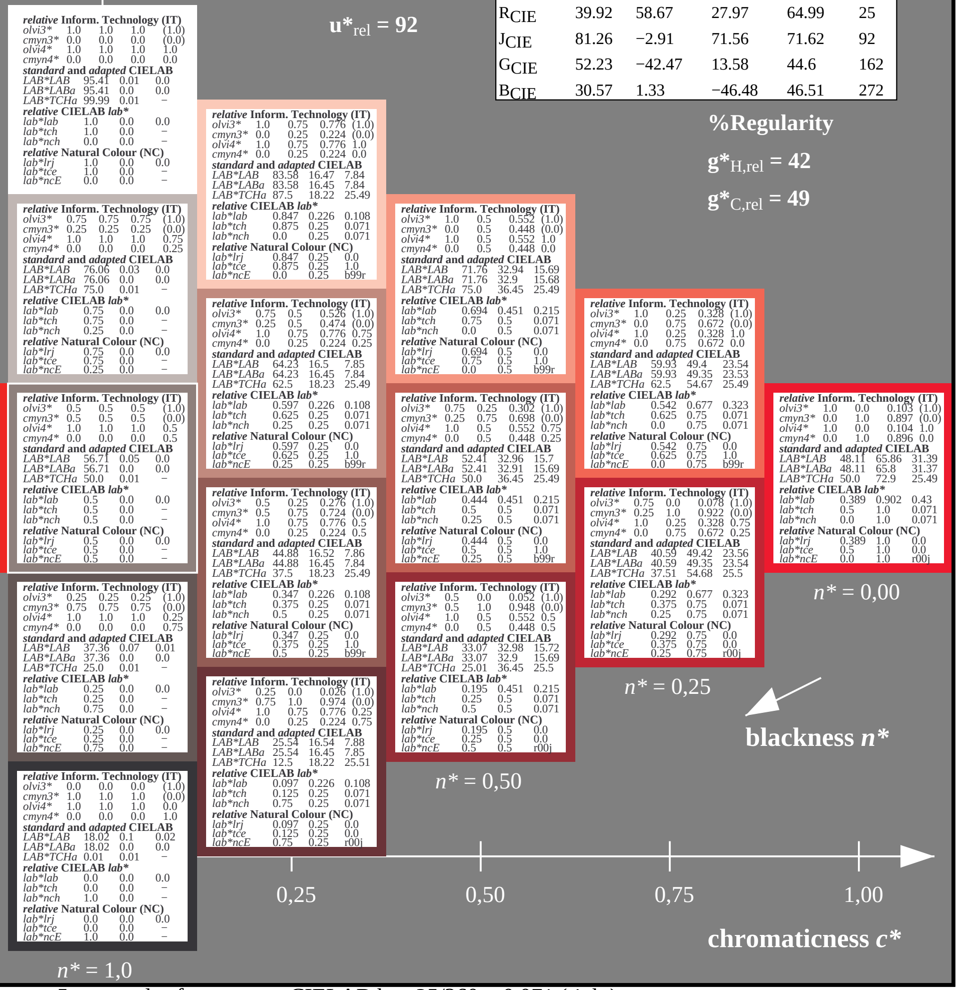
D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1
triangle lightness t^*



%Gamut
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$



UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

Input: Colorimetric Reflective System NRS11

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

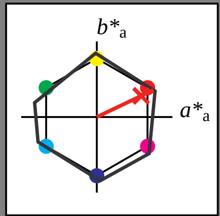
*lab*tch and lab*nch*

D65: hue R

LCH*Ma: 53 83 25

rgb*Ma: 1.0 0.03 0.0

triangle lightness t^*



%Gamut

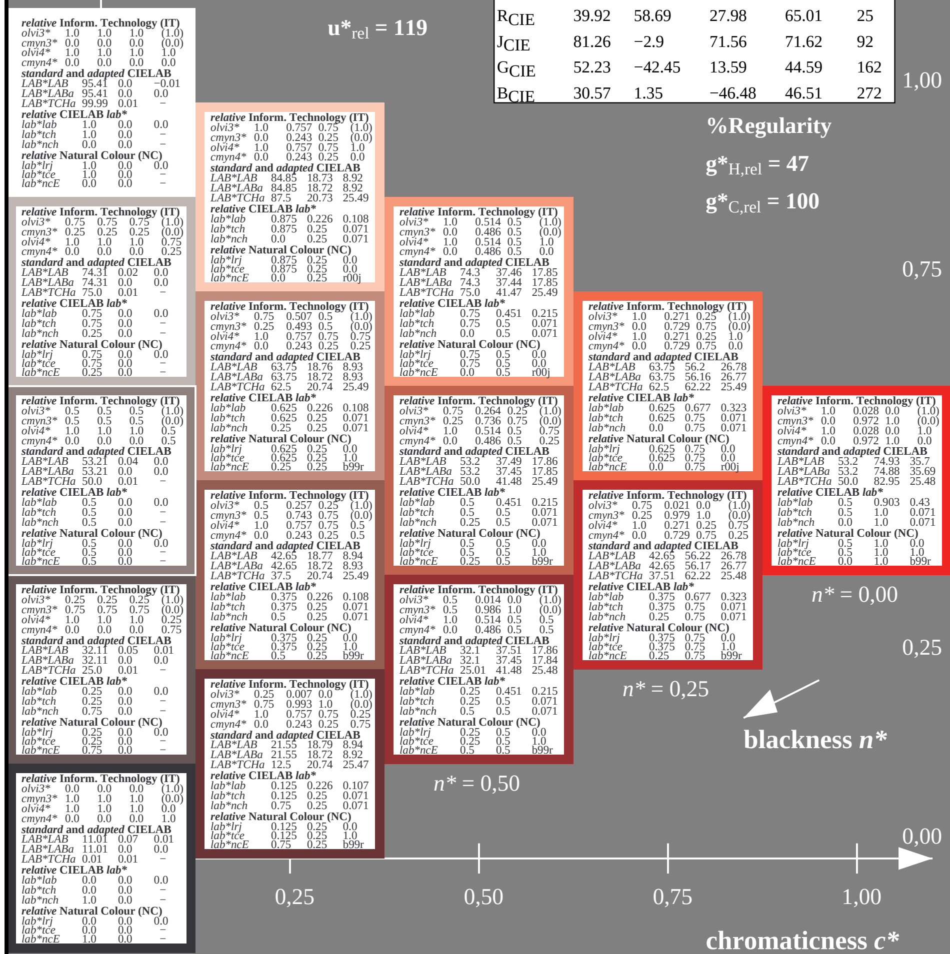
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System NRS18

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

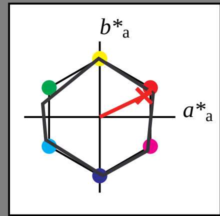
*lab*tch and lab*nch*

D65: hue R

LCH*Ma: 57 76 25

rgb*Ma: 1.0 0.03 0.0

triangle lightness t^*



%Gamut

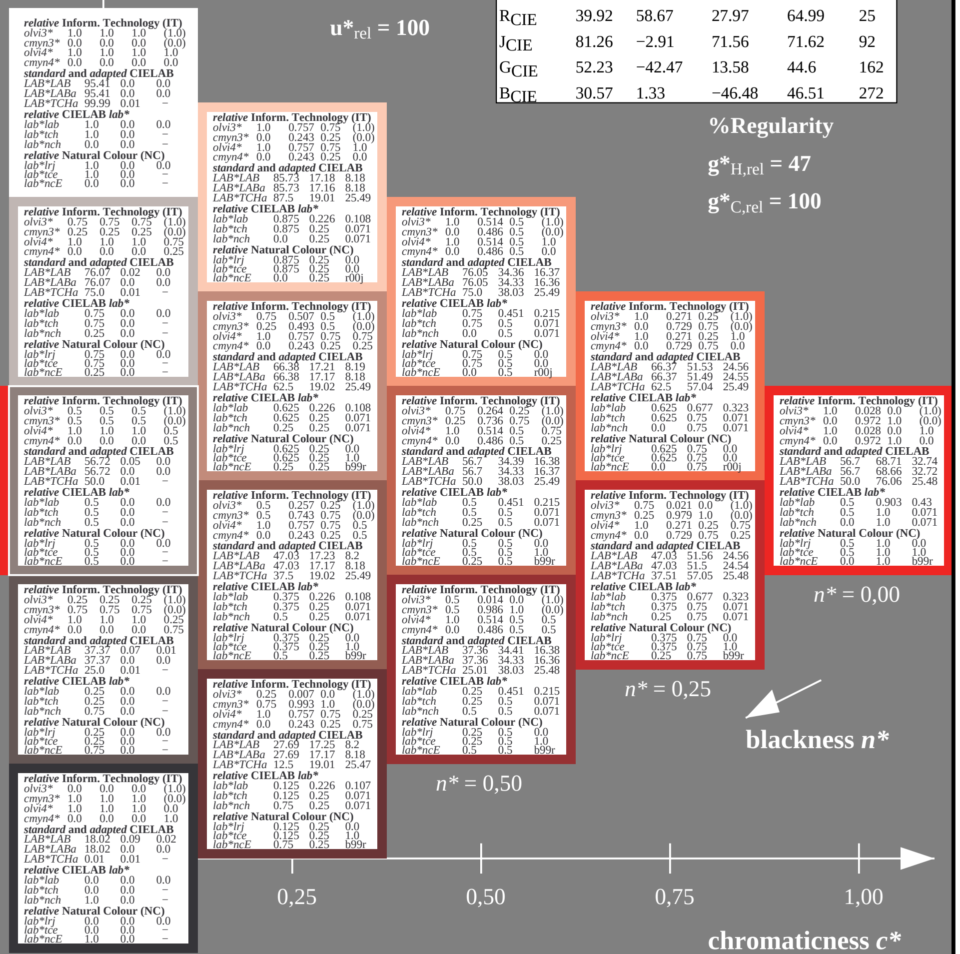
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



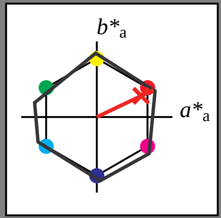
UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 25/360 = 0.071$
*lab*tch and lab*nch*

D65: hue R
LCH*Ma: 53 83 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 119

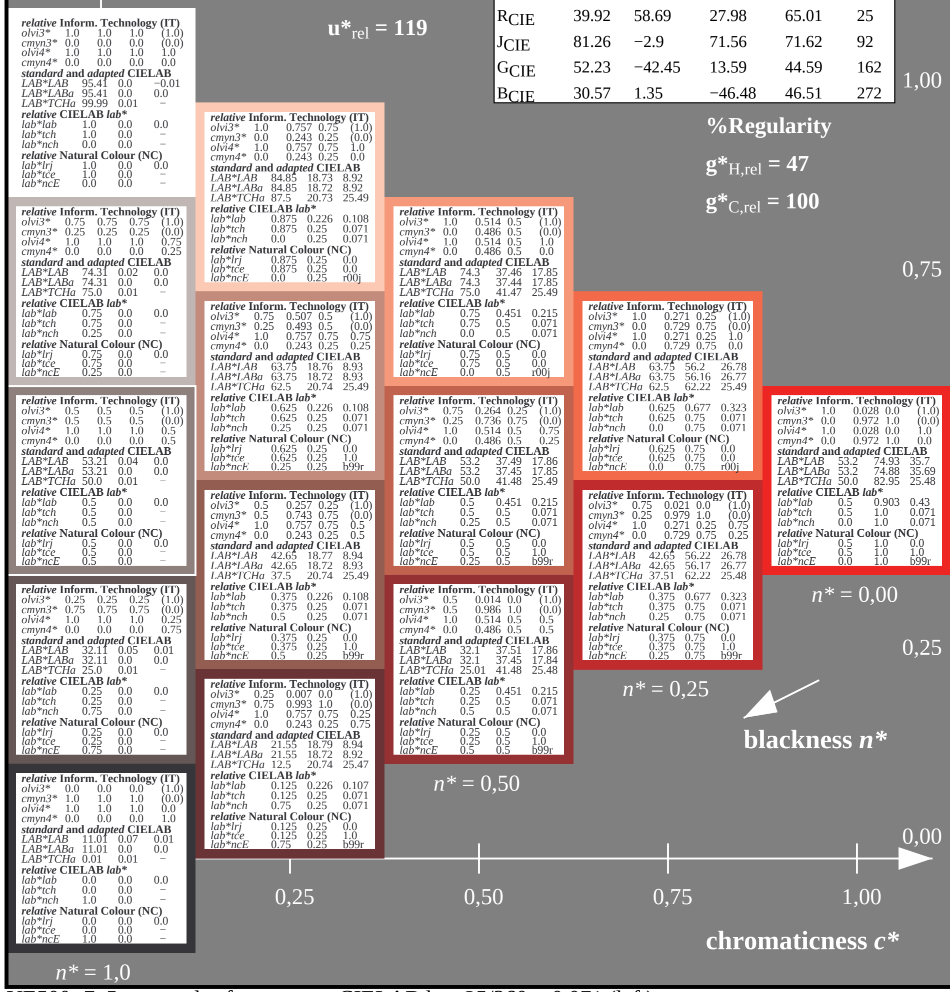
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

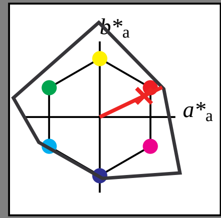
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 25/360 = 0.071$
*lab*tch and lab*nch*

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 136

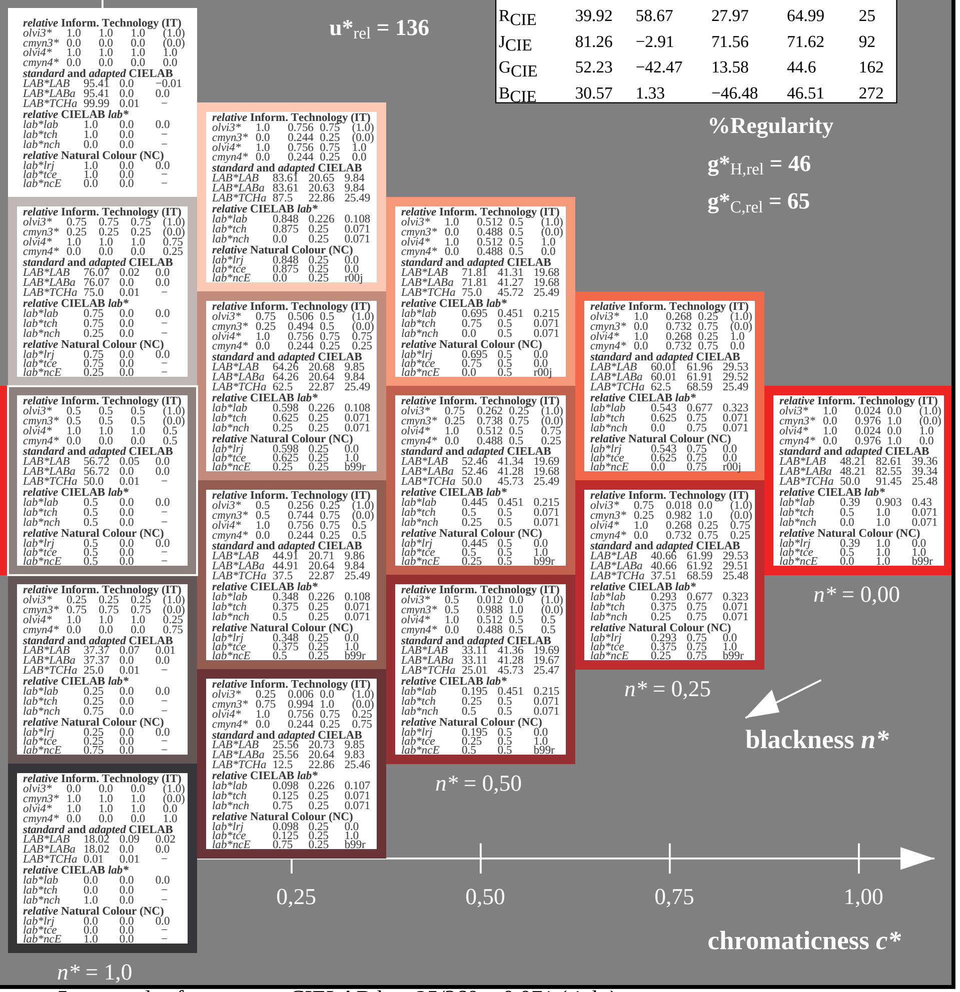
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

Input: Colorimetric Reflective System NRS11

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

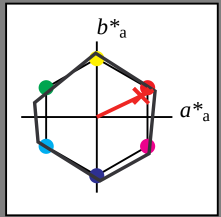
*lab*tch and lab*nch*

D65: hue R

LCH*Ma: 53 83 25

rgb*Ma: 1.0 0.03 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 119

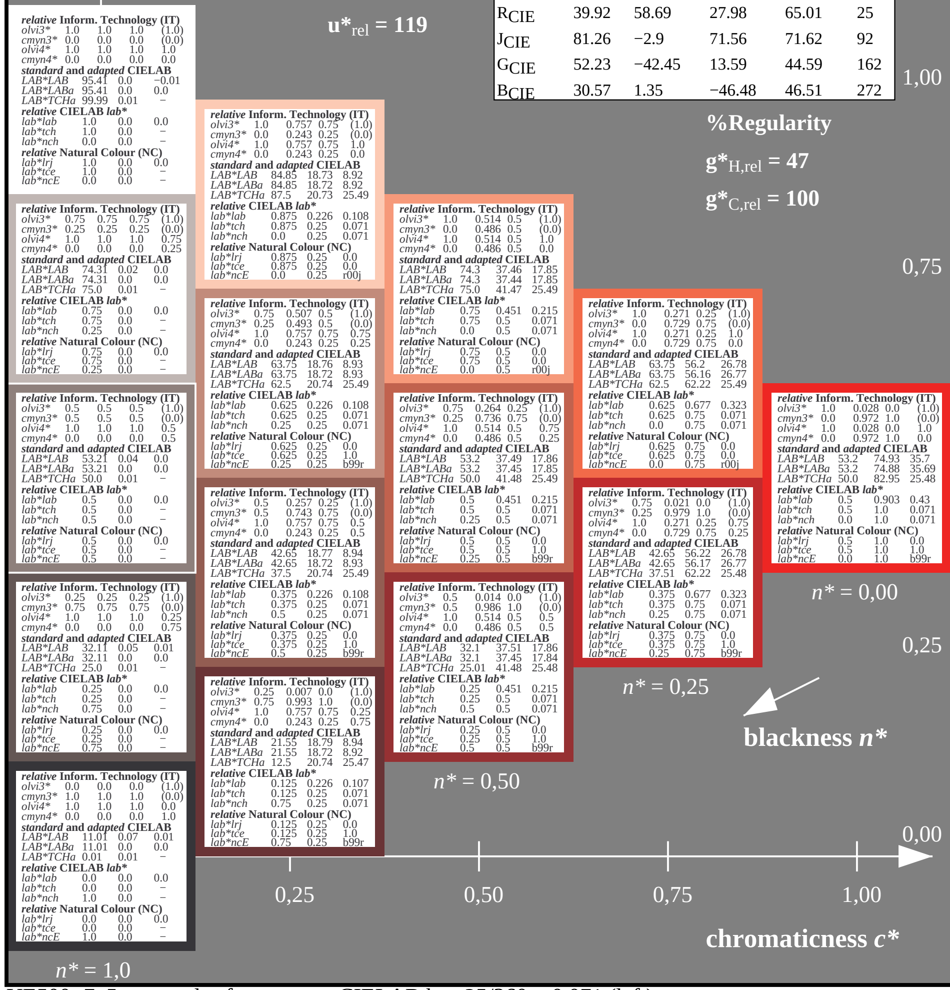
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NRS11

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

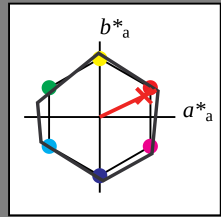
*lab*tch and lab*nch*

D65: hue R

LCH*Ma: 53 83 25

rgb*Ma: 1.0 0.03 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 119

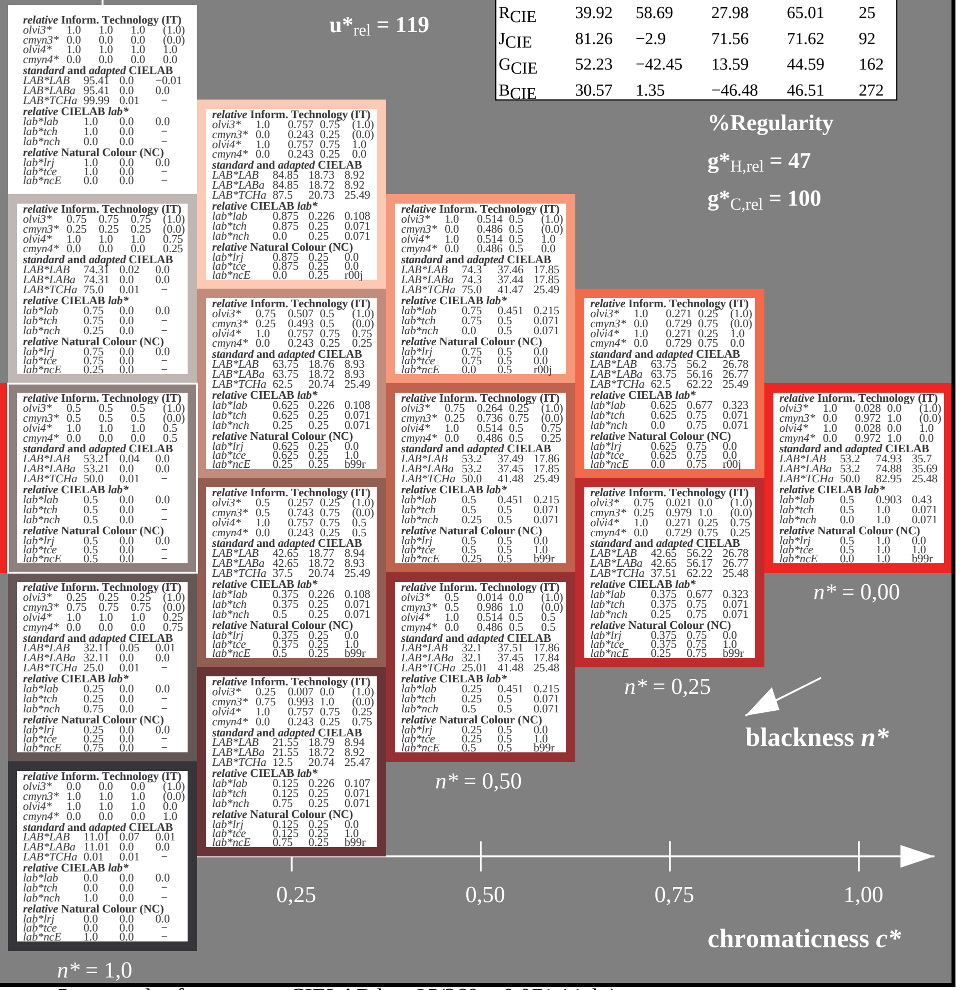
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



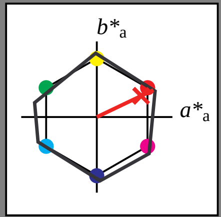
UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 25/360 = 0.071$
lab^*tch and lab^*nch

D65: hue R
LCH*Ma: 53 83 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness t^*



%Gamut

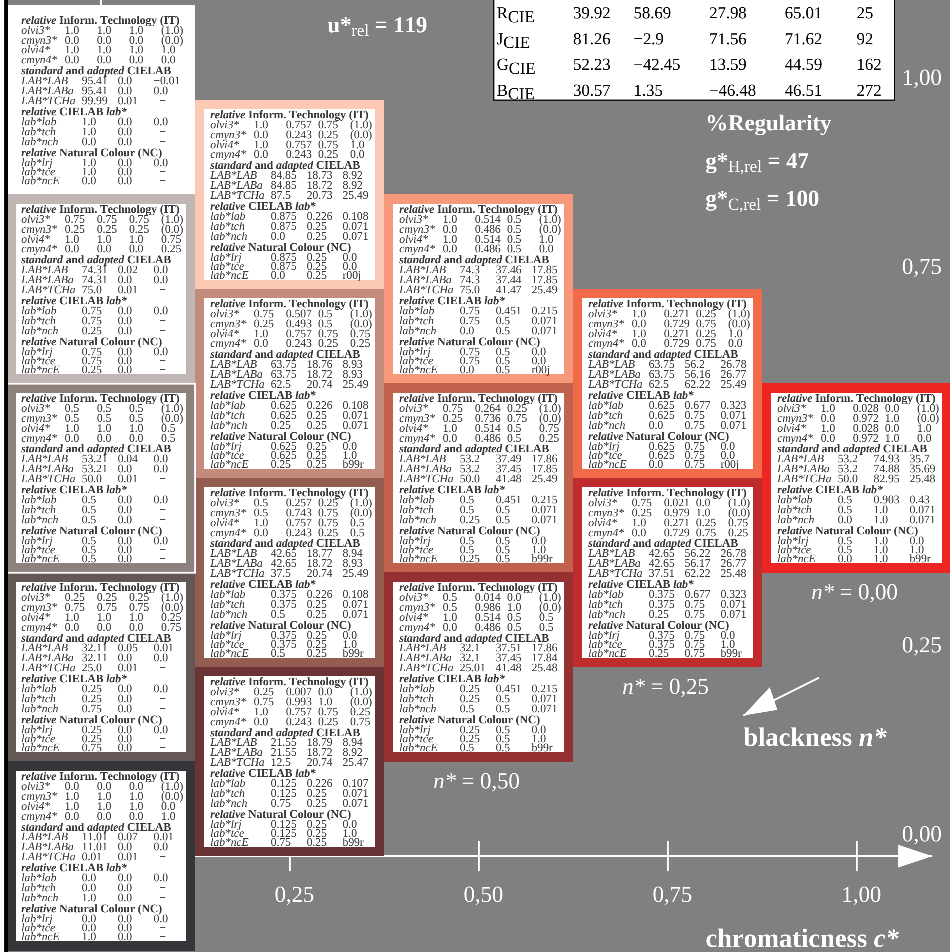
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

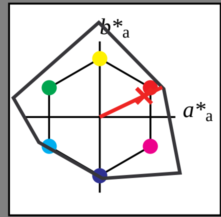
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 25/360 = 0.071$
lab^*tch and lab^*nch

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness t^*



%Gamut

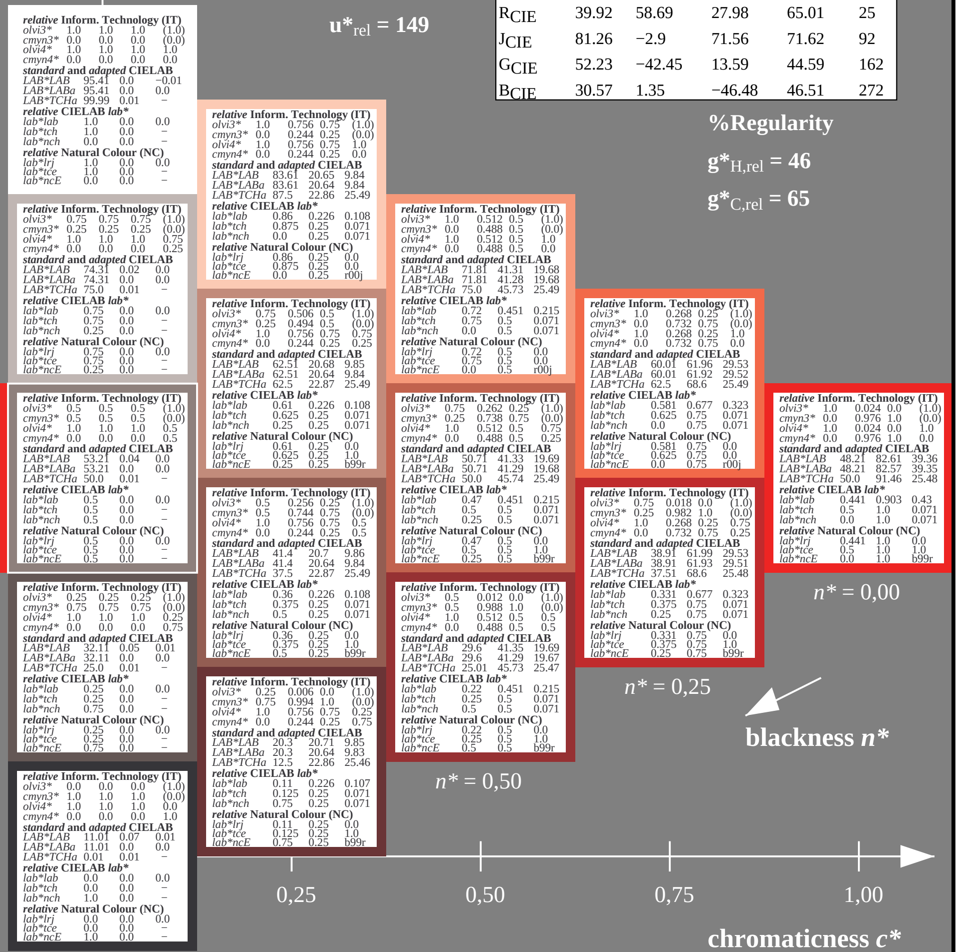
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

Input: Colorimetric Reflective System NCS11

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

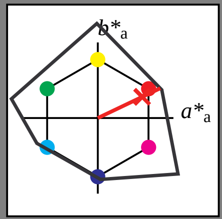
lab*tch and lab*nch

D65: hue R

LCH*Ma: 48 91 25

rgb*Ma: 1.0 0.02 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,50

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

NCS11, c^* = 0.0, t^* = 1.0

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	−0.01	
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	–	

NCS11, c^* = 0.0, t^* = 0.75

relative Inform. Technology (IT)				
olvi3*	0.75	0.75	0.75	(1.0)
cmyn3*	0.25	0.25	0.25	(0.0)
olvi4*	1.0	1.0	1.0	0.75
cmyn4*	0.0	0.0	0.0	0.25
standard and adapted CIELAB				
LAB*LAB	74.31	0.02	0.0	
LAB*LABa	74.31	0.0	0.0	
LAB*TCHa	75.0	0.01	–	
relative CIELAB lab*				
lab*lab	0.75	0.0	0.0	
lab*tch	0.75	0.0	–	
lab*nch	0.25	0.0	–	
relative Natural Colour (NC)				
lab*lrj	0.75	0.0	0.0	
lab*tce	0.75	0.0	–	
lab*ncE	0.25	0.0	–	

NCS11, c^* = 0.0, t^* = 0.5

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	53.21	0.04	0.0	
LAB*LABa	53.21	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	–	

NCS11, c^* = 0.0, t^* = 0.25

relative Inform. Technology (IT)				
olvi3*	0.25	0.25	0.25	(1.0)
cmyn3*	0.75	0.75	0.75	(0.0)
olvi4*	1.0	1.0	1.0	0.25
cmyn4*	0.0	0.0	0.0	0.75
standard and adapted CIELAB				
LAB*LAB	32.11	0.05	0.01	
LAB*LABa	32.11	0.0	0.0	
LAB*TCHa	25.0	0.01	–	
relative CIELAB lab*				
lab*lab	0.25	0.0	0.0	
lab*tch	0.25	0.0	–	
lab*nch	0.75	0.0	–	
relative Natural Colour (NC)				
lab*lrj	0.25	0.0	0.0	
lab*tce	0.25	0.0	–	
lab*ncE	0.75	0.0	–	

NCS11, c^* = 0.0, t^* = 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	11.01	0.07	0.01	
LAB*LABa	11.01	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	–	

NCS11, c^* = 0.25, t^* = 0.875

relative Inform. Technology (IT)				
olvi3*	1.0	0.756	0.75	(1.0)
cmyn3*	0.0	0.244	0.25	(0.0)
olvi4*	1.0	0.756	0.75	1.0
cmyn4*	0.0	0.244	0.25	0.0
standard and adapted CIELAB				
LAB*LAB	83.61	20.65	9.84	
LAB*LABa	83.61	20.64	9.84	
LAB*TCHa	87.5	22.86	25.49	
relative CIELAB lab*				
lab*lab	0.86	0.226	0.108	
lab*tch	0.875	0.25	0.071	
lab*nch	0.0	0.25	0.071	
relative Natural Colour (NC)				
lab*lrj	0.86	0.25	0.0	
lab*tce	0.875	0.25	1.0	
lab*ncE	0.0	0.25	r00j	

NCS11, c^* = 0.25, t^* = 0.625

relative Inform. Technology (IT)				
olvi3*	0.75	0.506	0.5	(1.0)
cmyn3*	0.25	0.494	0.5	(0.0)
olvi4*	1.0	0.756	0.75	0.75
cmyn4*	0.0	0.244	0.25	0.25
standard and adapted CIELAB				
LAB*LAB	62.51	20.68	9.85	
LAB*LABa	62.51	20.64	9.84	
LAB*TCHa	62.5	22.87	25.49	
relative CIELAB lab*				
lab*lab	0.61	0.226	0.108	
lab*tch	0.625	0.25	0.071	
lab*nch	0.25	0.25	0.071	
relative Natural Colour (NC)				
lab*lrj	0.61	0.25	0.0	
lab*tce	0.625	0.25	1.0	
lab*ncE	0.25	0.25	b99r	

NCS11, c^* = 0.25, t^* = 0.375

relative Inform. Technology (IT)				
olvi3*	0.5	0.256	0.25	(1.0)
cmyn3*	0.5	0.744	0.75	(0.0)
olvi4*	1.0	0.756	0.75	0.5
cmyn4*	0.0	0.244	0.25	0.5
standard and adapted CIELAB				
LAB*LAB	41.4	20.7	9.86	
LAB*LABa	41.4	20.64	9.84	
LAB*TCHa	37.5	22.87	25.49	
relative CIELAB lab*				
lab*lab	0.36	0.226	0.108	
lab*tch	0.375	0.25	0.071	
lab*nch	0.5	0.25	0.071	
relative Natural Colour (NC)				
lab*lrj	0.36	0.25	0.0	
lab*tce	0.375	0.25	1.0	
lab*ncE	0.5	0.25	b99r	

NCS11, c^* = 0.25, t^* = 0.125

relative Inform. Technology (IT)				
olvi3*	0.25	0.006	0.0	(1.0)
cmyn3*	0.75	0.994	1.0	(0.0)
olvi4*	1.0	0.756	0.75	0.25
cmyn4*	0.0	0.244	0.25	0.75
standard and adapted CIELAB				
LAB*LAB	20.3	20.71	9.85	
LAB*LABa	20.3	20.64	9.83	
LAB*TCHa	12.5	22.86	25.46	
relative CIELAB lab*				
lab*lab	0.11	0.226	0.107	
lab*tch	0.125	0.25	0.071	
lab*nch	0.75	0.25	0.071	
relative Natural Colour (NC)				
lab*lrj	0.11	0.25	0.0	
lab*tce	0.125	0.25	1.0	
lab*ncE	0.75	0.25	b99r	

NCS11, c^* = 0.5, t^* = 0.75

relative Inform. Technology (IT)				
olvi3*	1.0	0.512	0.5	(1.0)
cmyn3*	0.0	0.488	0.5	(0.0)
olvi4*	1.0	0.512	0.5	1.0
cmyn4*	0.0	0.488	0.5	0.0
standard and adapted CIELAB				
LAB*LAB	71.81	41.31	19.68	
LAB*LABa	71.81	41.28	19.68	
LAB*TCHa	75.0	45.73	25.49	
relative CIELAB lab*				
lab*lab	0.72	0.451	0.215	
lab*tch	0.75	0.5	0.071	
lab*nch	0.0	0.5	0.071	
relative Natural Colour (NC)				
lab*lrj	0.72	0.5	0.0	
lab*tce	0.75	0.5	1.0	
lab*ncE	0.0	0.5	r00j	

NCS11, c^* = 0.5, t^* = 0.5

relative Inform. Technology (IT)				
olvi3*	0.75	0.262	0.25	(1.0)
cmyn3*	0.25	0.738	0.75	(0.0)
olvi4*	1.0	0.512	0.5	0.75
cmyn4*	0.0	0.488	0.5	0.25
standard and adapted CIELAB				
LAB*LAB	50.71	41.33	19.69	
LAB*LABa	50.71	41.29	19.68	
LAB*TCHa	50.0	45.74	25.49	
relative CIELAB lab*				
lab*lab	0.47	0.451	0.215	
lab*tch	0.5	0.5	0.071	
lab*nch	0.25	0.5	0.071	
relative Natural Colour (NC)				
lab*lrj	0.47	0.5	0.0	
lab*tce	0.5	0.5	1.0	
lab*ncE	0.25	0.5	b99r	

NCS11, c^* = 0.5, t^* = 0.25

relative Inform. Technology (IT)				
olvi3*	0.5	0.012	0.0	(1.0)
cmyn3*	0.5	0.988	1.0	(0.0)
olvi4*	1.0	0.512	0.5	0.5
cmyn4*	0.0	0.488	0.5	0.5
standard and adapted CIELAB				
LAB*LAB	29.6	41.35	19.69	
LAB*LABa	29.6	41.29	19.67	
LAB*TCHa	25.01	45.73	25.47	
relative CIELAB lab*				
lab*lab	0.22	0.451	0.215	
lab*tch	0.25	0.5	0.071	
lab*nch	0.5	0.5	0.071	
relative Natural Colour (NC)				
lab*lrj	0.22	0.5	0.0	
lab*tce	0.25	0.5	1.0	
lab*ncE	0.5	0.5	b99r	

NCS11, c^* = 0.75, t^* = 0.625

relative Inform. Technology (IT)				
olvi3*	1.0	0.268	0.25	(1.0)
cmyn3*	0.0	0.732	0.75	(0.0)
olvi4*	1.0	0.268	0.25	1.0
cmyn4*	0.0	0.732	0.75	0.0
standard and adapted CIELAB				
LAB*LAB	60.01	61.96	29.53	
LAB*LABa	60.01	61.92	29.52	
LAB*TCHa	62.5	68.6	25.49	
relative CIELAB lab*				
lab*lab	0.581	0.677	0.323	
lab*tch	0.625	0.75	0.071	
lab*nch	0.0	0.75	0.071	
relative Natural Colour (NC)				
lab*lrj	0.581	0.75	0.0	
lab*tce	0.625	0.75	1.0	
lab*ncE	0.0	0.75	r00j	

NCS11, c^* = 0.75, t^* = 0.375

relative Inform. Technology (IT)				
olvi3*	0.75	0.018	0.0	(1.0)
cmyn3*	0.25	0.982	1.0	(0.0)
olvi4*	1.0	0.268	0.25	0.75
cmyn4*	0.0	0.732	0.75	0.25
standard and adapted CIELAB				
LAB*LAB	38.91	61.99	29.53	
LAB*LABa	38.91	61.93	29.51	
LAB*TCHa	37.51	68.6	25.48	
relative CIELAB lab*				
lab*lab	0.331	0.677	0.323	
lab*tch	0.375	0.75	0.071	
lab*nch	0.25	0.75	0.071	
relative Natural Colour (NC)				
lab*lrj	0.331	0.75	0.0	
lab*tce	0.375	0.75	1.0	
lab*ncE	0.25	0.75	b99r	

NCS11, c^* = 1.0, t^* = 0.5

relative Inform. Technology (IT)				
olvi3*	1.0	0.024	0.0	(1.0)
cmyn3*	0.0	0.976	1.0	(0.0)
olvi4*	1.0	0.024	0.0	1.0
cmyn4*	0.0	0.976	1.0	0.0
standard and adapted CIELAB				
LAB*LAB	48.21	82.61	39.36	
LAB*LABa	48.21	82.57	39.35	
LAB*TCHa	50.0	91.46	25.48	
relative CIELAB lab*				
lab*lab	0.441	0.903	0.43	
lab*tch	0.5	1.0	0.071	
lab*nch	0.0	1.0	0.071	
relative Natural Colour (NC)				
lab*lrj	0.441	1.0	0.0	
lab*tce	0.5	1.0	1.0	
lab*ncE	0.0	1.0	b99r	

Output: Colorimetric Reflective System ORS18

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

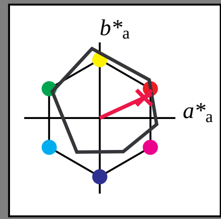
lab*tch and lab*nch

D65: hue R

LCH*Ma: 48 75 25

rgb*Ma: 1.0 0.0 0.32

triangle lightness t^*



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

ORS18, c^* = 0.0, t^* = 1.0

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*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	–	

ORS18, c^* = 0.0, t^* = 0.75

relative Inform. Technology (IT)				
olvi3*	0.75	0.75	0.75	(1.0)
cmyn3*	0.25	0.25	0.25	(0.0)
olvi4*	1.0	1.0	1.0	0.75
cmyn4*	0.0	0.0	0.0	0.25
standard and adapted CIELAB				
LAB*LAB	76.06	−0.6	3.44	
LAB*LABa	76.06	0.0	0.0	
LAB*TCHa	75.0	0.01	–	
relative CIELAB lab*				
lab*lab	0.75	0.0	0.0	
lab*tch	0.75	0.0	–	
lab*nch	0.25	0.0	–	
relative Natural Colour (NC)				
lab*lrj	0.75	0.0	0.0	
lab*tce	0.75	0.0	–	
lab*ncE	0.25	0.0	–	

ORS18, c^* = 0.0, t^* = 0.5

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*LABa	56.71	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	–	

ORS18, c^* = 0.0, t^* = 0.25

relative Inform. Technology (IT)				
olvi3*	0.25	0.25	0.25	(1.0)
cmyn3*	0.75	0.75	0.75	(0.0)
olvi4*	1.0	1.0	1.0	0.25
cmyn4*	0.0	0.0	0.0	0.75
standard and adapted CIELAB				
LAB*LAB	37.36	0.13	0.83	
LAB*LABa	37.36	0.0	0.0	
LAB*TCHa	25.0	0.01	–	
relative CIELAB lab*				
lab*lab	0.25	0.0	0.0	
lab*tch	0.25	0.0	–	
lab*nch	0.75	0.0	–	
relative Natural Colour (NC)				
lab*lrj	0.25	0.0	0.0	
lab*tce	0.25	0.0	–	
lab*ncE	0.75	0.0	–	

ORS18, c^* = 0.0, t^* = 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*LABa	18.02	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	–	

ORS18, c^* = 0.25, t^* = 0.875

relative Inform. Technology (IT)				
olvi3*	1.0	0.75	0.831	(1.0)
cmyn3*	0.0	0.25	0.169	(0.0)
olvi4*	1.0	0.75	0.831	1.0
cmyn4*	0.0	0.25	0.169	0.0
standard and adapted CIELAB				
LAB*LAB	83.55	16.38	11.84	
LAB*LABa	83.55	17.13	7.88	
LAB*TCHa	87.5	18.86	24.69	
relative CIELAB lab*				
lab*lab	0.847	0.227	0.104	
lab*tch	0.875	0.25	0.069	
lab*nch	0.0	0.25	0.069	
relative Natural Colour (NC)				
lab*lrj	0.847	0.25	0.0	
lab*tce	0.875	0.25	1.0	
lab*ncE	0.0	0.25	b99r	

ORS18, c^* = 0.25, t^* = 0.625

relative Inform. Technology (IT)				
olvi3*	0.75	0.5	0.581	(1.0)
cmyn3*	0.25	0.5	0.419	(0.0)
olvi4*	1.0	0.75	0.831	0.75
cmyn4*	0.0	0.25	0.169	0.25
standard and adapted CIELAB				
LAB*LAB	64.21	16.76	10.54	
LAB*LABa	64.21	17.14	7.88	
LAB*TCHa	62.5	18.87	24.7	
relative CIELAB lab*				
lab*lab	0.597	0.227	0.104	
lab*tch	0.625	0.25	0.069	
lab*nch	0.25	0.25	0.069	
relative Natural Colour (NC)				
lab*lrj	0.597	0.25	0.0	
lab*tce	0.625	0.25	1.0	
lab*ncE	0.25	0.25	b99r	

ORS18, c^* = 0.25, t^* = 0.375

relative Inform. Technology (IT)				
olvi3*	0.5	0.25	0.331	(1.0)
cmyn3*	0.5	0.75	0.669	(0.0)
olvi4*	1.0	0.75	0.831	0.5
cmyn4*	0.0	0.25	0.169	0.5
standard and adapted CIELAB				
LAB*LAB	44.86	17.13	9.23	
LAB*LABa	44.86	17.14	7.88	
LAB*TCHa	37.5	18.87	24.7	
relative CIELAB lab*				
lab*lab	0.347	0.227	0.104	
lab*tch	0.375	0.25	0.069	
lab*nch	0.5	0.25	0.069	
relative Natural Colour (NC)				
lab*lrj	0.347	0.25	0.0	
lab*tce	0.375	0.25	1.0	
lab*ncE	0.5	0.25	b99r	

ORS18, c^* = 0.25, t^* = 0.125

relative Inform. Technology (IT)				
olvi3*	0.25	0.0	0.081	(1.0)
cmyn3*	0.75	1.0	0.919	(0.0)
olvi4*	1.0	0.75	0.831	0.25
cmyn4*	0.0	0.25	0.169	0.75
standard and adapted CIELAB				
LAB*LAB	25.51	17.49	7.93	
LAB*LABa	25.51	17.13	7.88	
LAB*TCHa	12.5	18.86	24.71	
relative CIELAB lab*				
lab*lab	0.097	0.227	0.104	
lab*tch	0.125	0.25	0.069	
lab*nch	0.75	0.25	0.069	
relative Natural Colour (NC)				
lab*lrj	0.097	0.25	0.0	
lab*tce	0.125	0.25	1.0	
lab*ncE	0.75	0.25	r00j	

ORS18, c^* = 0.5, t^* = 0.75

relative Inform. Technology (IT)				
olvi3*	1.0	0.5	0.661	(1.0)
cmyn3*	0.0	0.5	0.339	(0.0)
olvi4*	1.0	0.5	0.661	1.0
cmyn4*	0.0	0.5	0.339	0.0
standard and adapted CIELAB				
LAB*LAB	71.7	33.75	18.92	
LAB*LABa	71.7	34.27	15.76	
LAB*TCHa	75.0	37.72	24.69	
relative CIELAB lab*				
lab*lab	0.694	0.454	0.209	
lab*tch	0.75	0.5	0.069	
lab*nch	0.0	0.5	0.069	
relative Natural Colour (NC)				
lab*lrj	0.694	0.5	0.0	
lab*tce	0.75	0.5	1.0	
lab*ncE	0.0	0.5	b99r	

ORS18, c^* = 0.5, t^* = 0.5

relative Inform. Technology (IT)				
olvi3*	0.75	0.25	0.411	(1.0)
cmyn3*	0.25	0.75	0.589	(0.0)
olvi4*	1.0	0.5	0.661	0.75
cmyn4*	0.0	0.5	0.339	0.25
standard and adapted CIELAB				
LAB*LAB	52.36	34.13	17.62	
LAB*LABa	52.36	34.28	15.77	
LAB*TCHa	50.0	37.73	24.7	
relative CIELAB lab*				
lab*lab	0.444	0.454	0.209	
lab*tch	0.5	0.5	0.069	
lab*nch	0.25	0.5	0.069	
relative Natural Colour (NC)				
lab*lrj	0.444	0.5	0.0	
lab*tce	0.5	0.5	1.0	
lab*ncE	0.25	0.5	b100r	

ORS18, c^* = 0.5, t^* = 0.25

relative Inform. Technology (IT)				
olvi3*	0.5	0.0	0.161	(1.0)
cmyn3*	0.5	1.0	0.839	(0.0)
olvi4*	1.0	0.5	0.661	0.5
cmyn4*	0.0	0.5	0.339	0.5
standard and adapted CIELAB				
LAB*LAB	33.01	34.49	16.31	
LAB*LABa	33.01	34.27	15.77	
LAB*TCHa	25.01	37.73	24.7	
relative CIELAB lab*				
lab*lab	0.194	0.454	0.209	
lab*tch	0.25	0.5	0.069	
lab*nch	0.5	0.5	0.069	
relative Natural Colour (NC)				
lab*lrj	0.194	0.5	0.0	
lab*tce	0.25	0.5	1.0	
lab*ncE	0.5	0.5	r00j	

ORS18, c^* = 0.75, t^* = 0.625

relative Inform. Technology (IT)				
olvi3*	1.0	0.25	0.492	(1.0)
cmyn3*	0.0	0.75	0.508	(0.0)
olvi4*	1.0	0.25	0.492	1.0
cmyn4*	0.0	0.75	0.508	0.0
standard and adapted CIELAB				
LAB*LAB	59.85	51.12	26.0	
LAB*LABa	59.85	51.42	23.64	
LAB*TCHa	62.5	56.59	24.7	
relative CIELAB lab*				
lab*lab	0.541	0.681	0.313	
lab*tch	0.625	0.75	0.069	
lab*nch	0.0	0.75	0.069	
relative Natural Colour (NC)				
lab*lrj	0.541	0.75	0.0	
lab*tce	0.625	0.75	1.0	
lab*ncE	0.0	0.75	b99r	

ORS18, c^* = 0.75, t^* = 0.375

relative Inform. Technology (IT)				
olvi3*	0.75	0.0	0.242	(1.0)
cmyn3*	0.25	1.0	0.758	(0.0)
olvi4*	1.0	0.25	0.492	0.75
cmyn4*	0.0	0.75	0.508	0.25
standard and adapted CIELAB				
LAB*LAB	40.51	51.49	24.7	
LAB*LABa	40.51	51.41	23.65	
LAB*TCHa	37.51	56.59	24.7	
relative CIELAB lab*				
lab*lab	0.291	0.681	0.313	
lab*tch	0.375	0.75	0.069	
lab*nch	0.25	0.75	0.069	
relative Natural Colour (NC)				
lab*lrj	0.291	0.75	0.0	
lab*tce	0.375	0.75	1.0	
lab*ncE	0.25	0.75	r00j	

ORS18, c^* = 1.0, t^* = 0.5

relative Inform. Technology (IT)				
olvi3*	1.0	0.0	0.322	(1.0)
cmyn3*	0.0	1.0	0.678	(0.0)
olvi4*	1.0	0.0	0.323	1.0
cmyn4*	0.0	1.0	0.677	0.0
standard and adapted CIELAB				
LAB*LAB	48.01	68.48	33.09	
LAB*LABa	48.01	68.55	31.53	
LAB*TCHa	50.0	75.45	24.7	
relative CIELAB lab*				
lab*lab	0.388	0.908	0.418	
lab*tch	0.5	1.0	0.069	
lab*nch	0.0	1.0	0.069	
relative Natural Colour (NC)				
lab*lrj	0.388	1.0	0.0	
lab*tce	0.5	1.0	1.0	
lab*ncE	0.0	1.0	r00j	

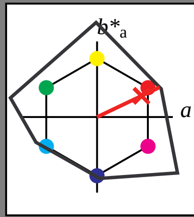
UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

Input: Colorimetric Reflective System NCS11
for hue *h = *lab*h* = 25/360 = 0.071**
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness *t**



%Gamut

u^*_{rel} = 149

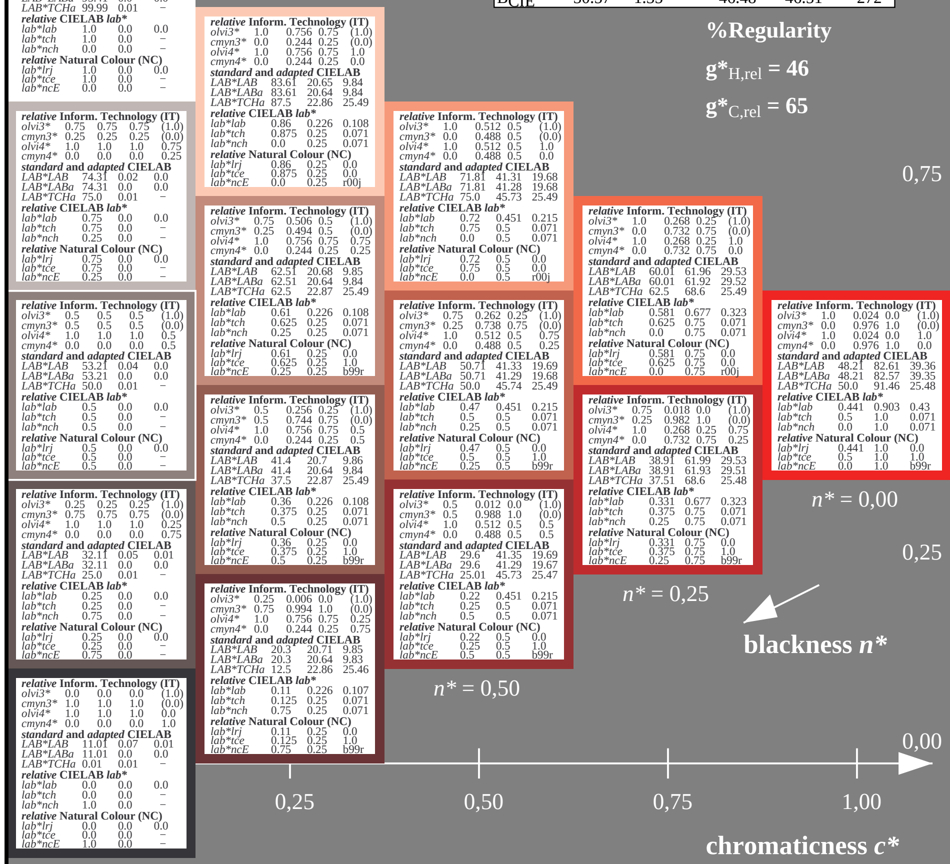
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

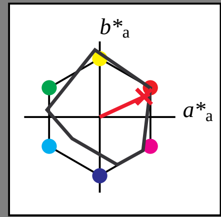
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System MRS18
for hue *h = *lab*h* = 25/360 = 0.069**
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness *t**



%Gamut

u^*_{rel} = 91

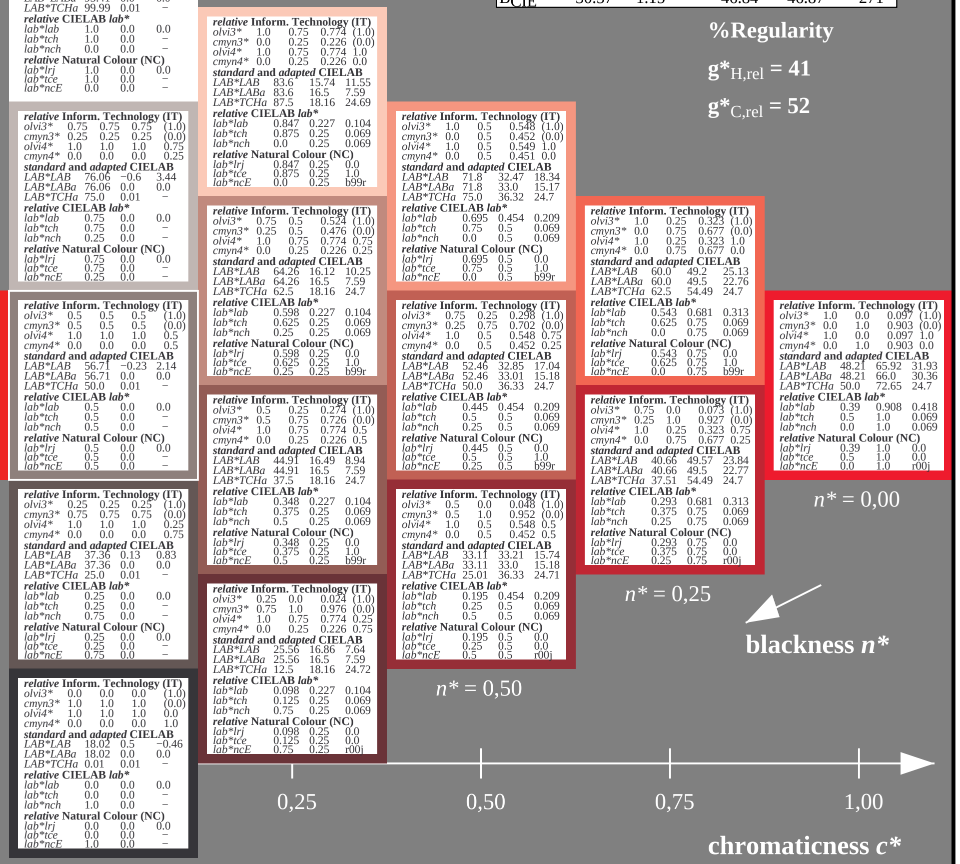
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

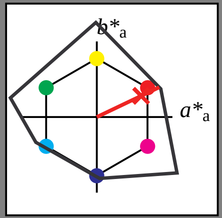


UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 25/360 = 0.071$
*lab*tch* and *lab*nch*

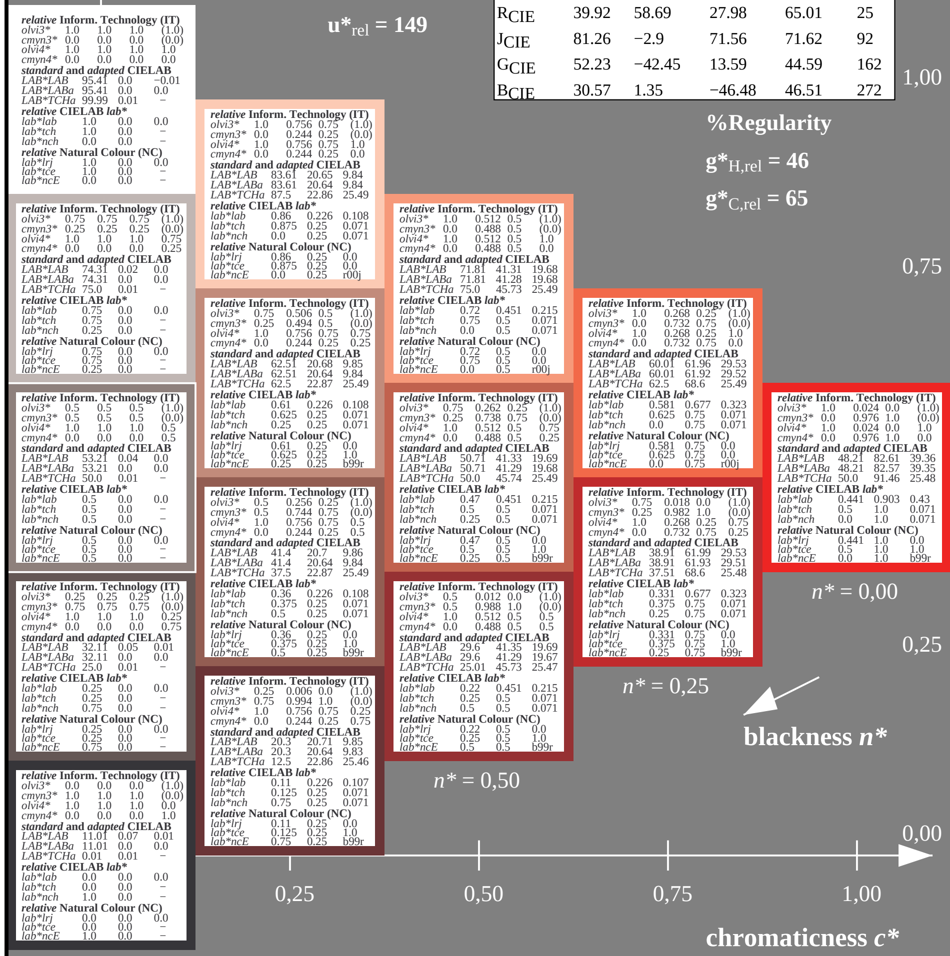
D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0
triangle lightness t^*



NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

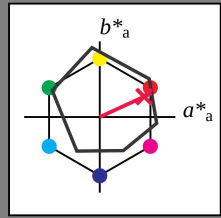
%Gamut
$u^*_{rel} = 149$

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
*lab*tch* and *lab*nch*

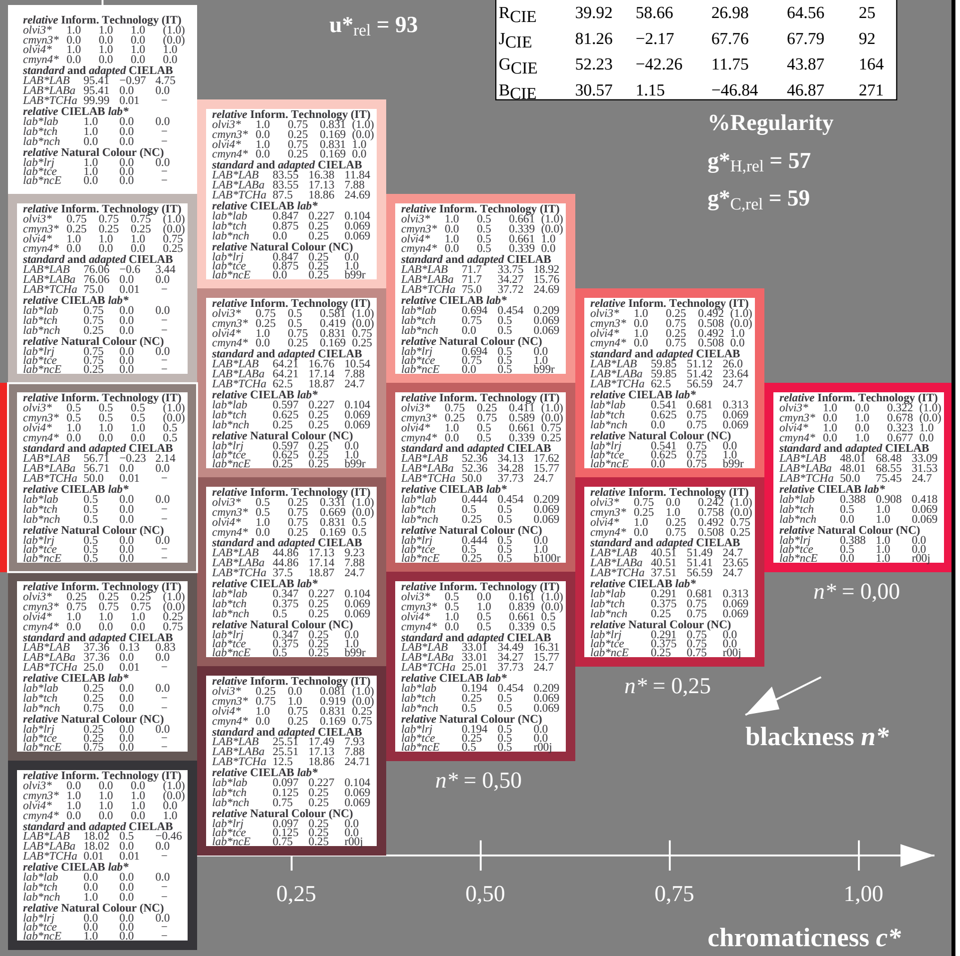
D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32
triangle lightness t^*



TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut
$u^*_{rel} = 93$

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)
5 step scales for constant CIELAB hue 25/360 = 0.069 (right)

Input: Colorimetric Reflective System NCS11

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

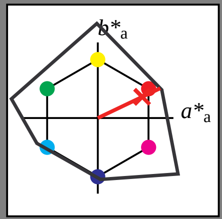
*lab*tch and lab*nch*

D65: hue R

LCH*Ma: 48 91 25

rgb*Ma: 1.0 0.02 0.0

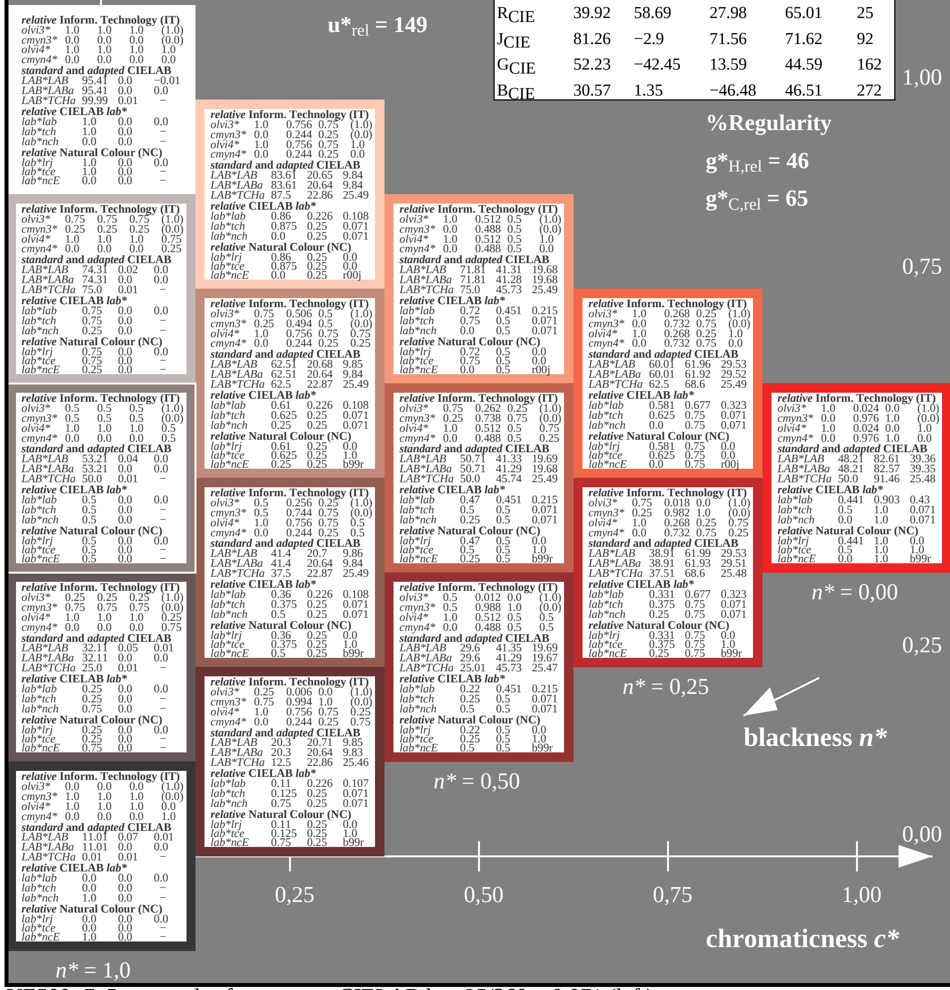
triangle lightness t^*



%Gamut

$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272



Output: Colorimetric Reflective System MRS18a

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

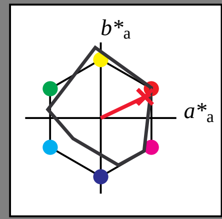
*lab*tch and lab*nch*

D65: hue R

LCH*Ma: 48 73 25

rgb*Ma: 1.0 0.0 0.1

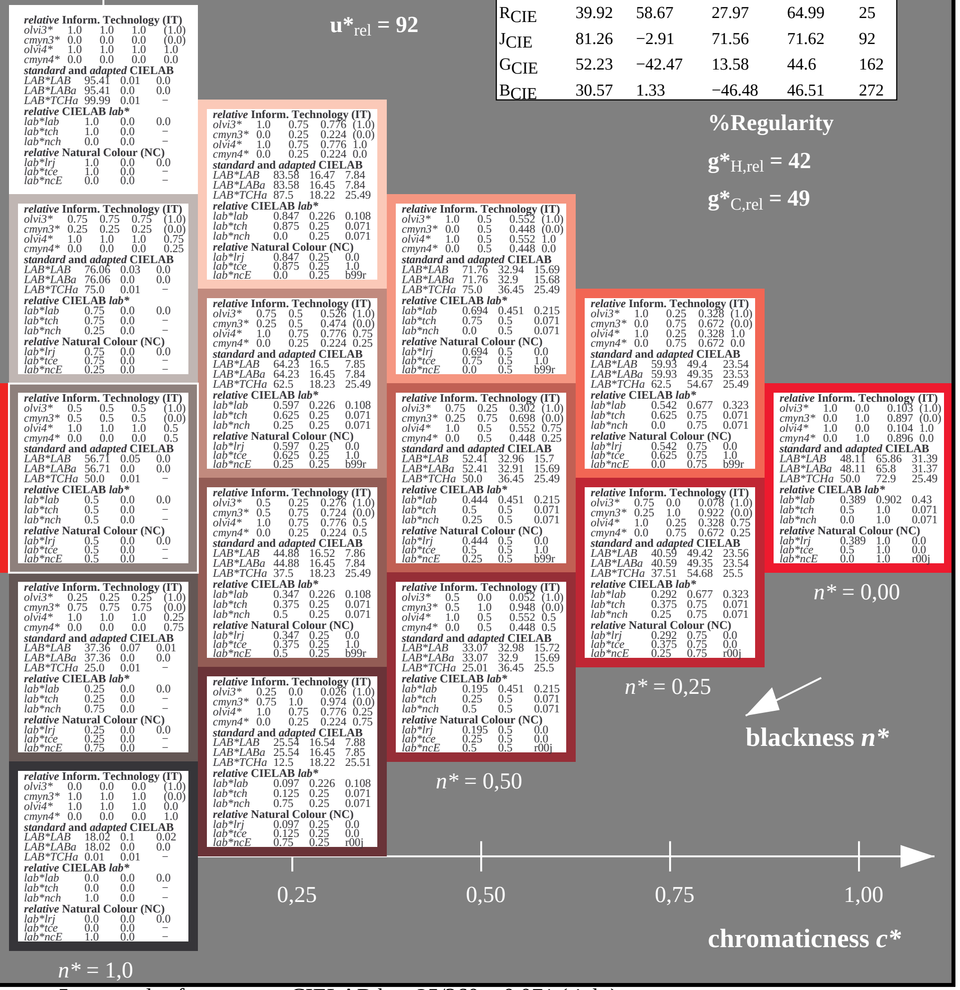
triangle lightness t^*



%Gamut

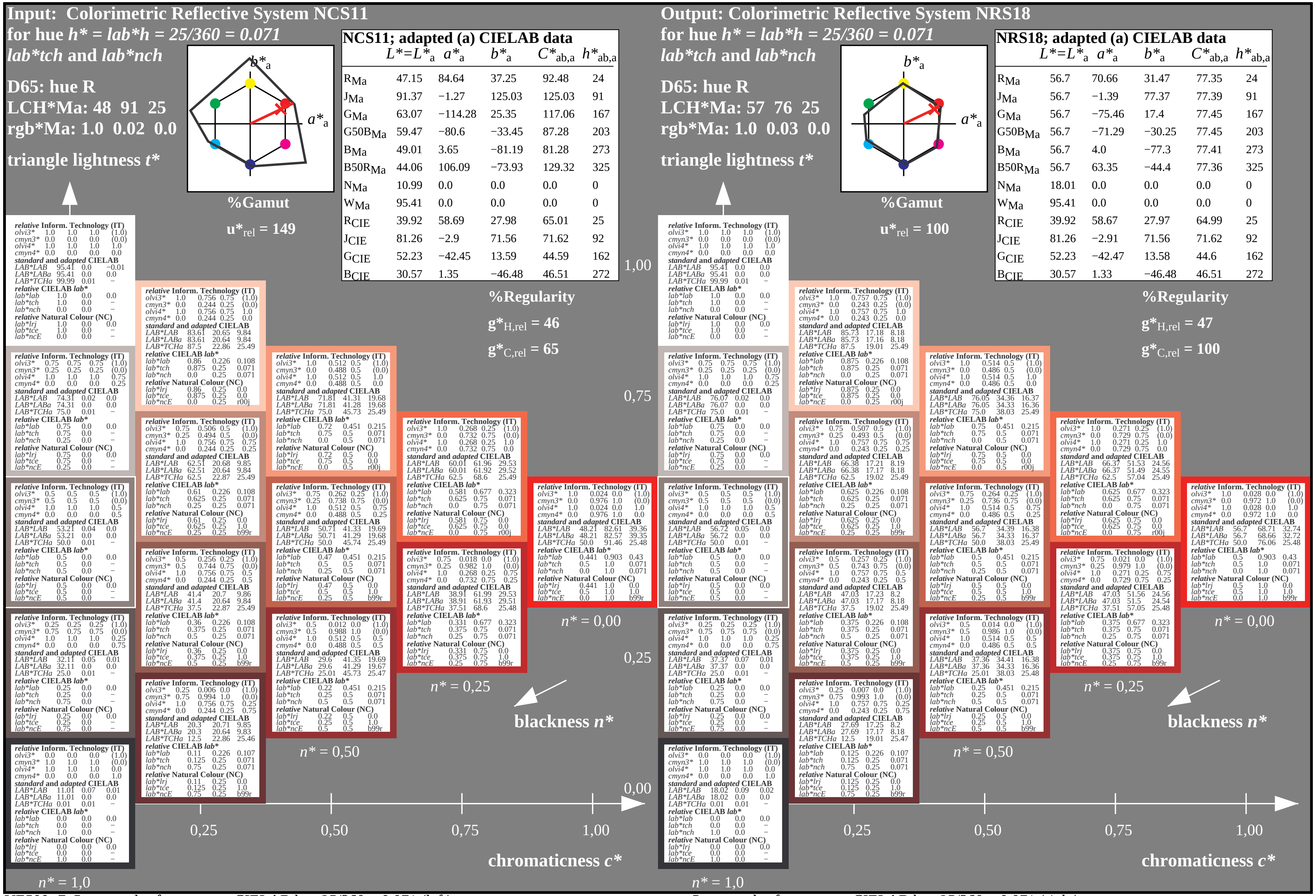
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272



UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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



UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

Input: Colorimetric Reflective System NCS11

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

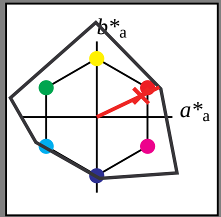
*lab*tch and lab*nch*

D65: hue R

LCH*Ma: 48 91 25

rgb*Ma: 1.0 0.02 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 149

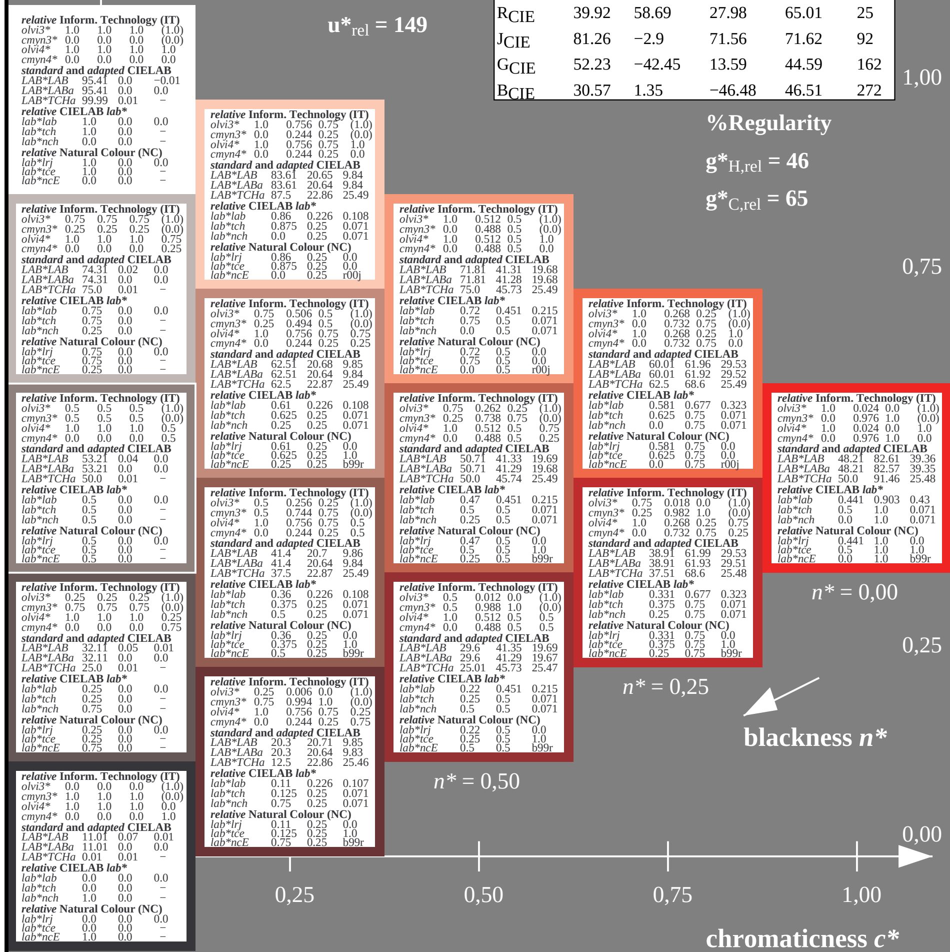
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NCS18

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

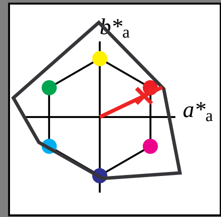
*lab*tch and lab*nch*

D65: hue R

LCH*Ma: 48 91 25

rgb*Ma: 1.0 0.02 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 136

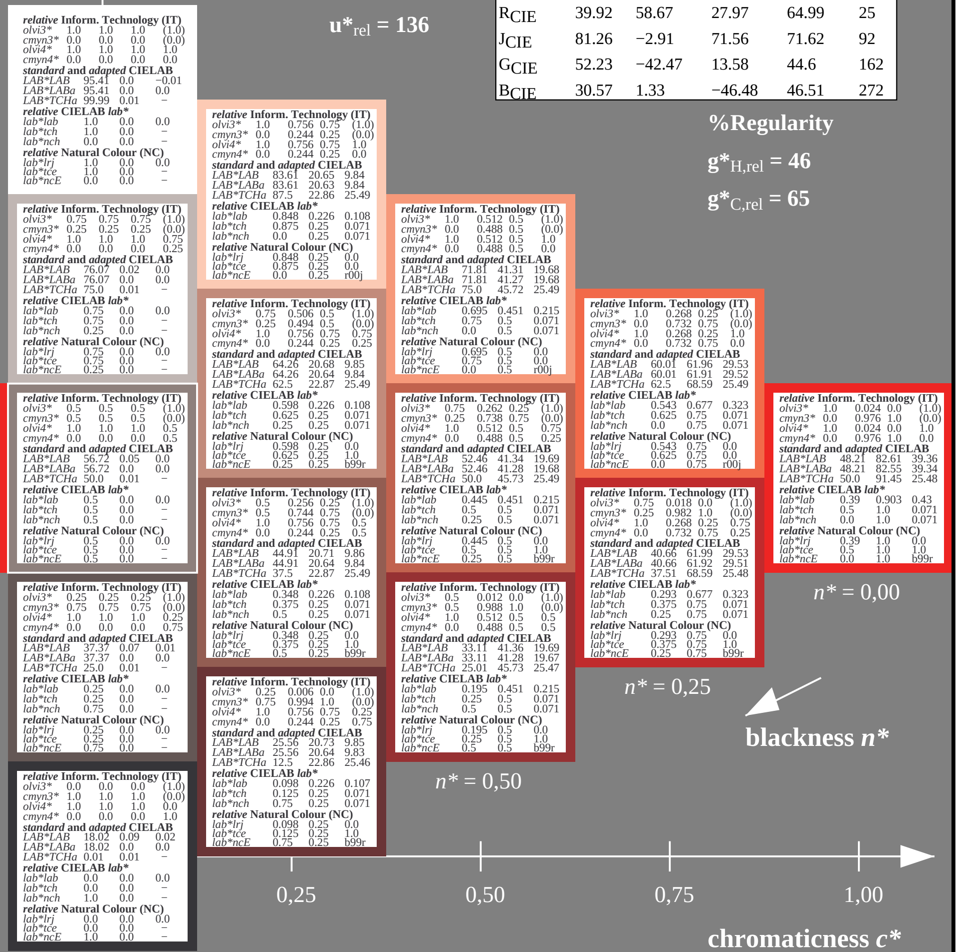
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

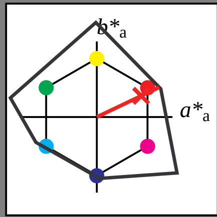


UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 25/360 = 0.071$
*lab*tch and lab*nch*

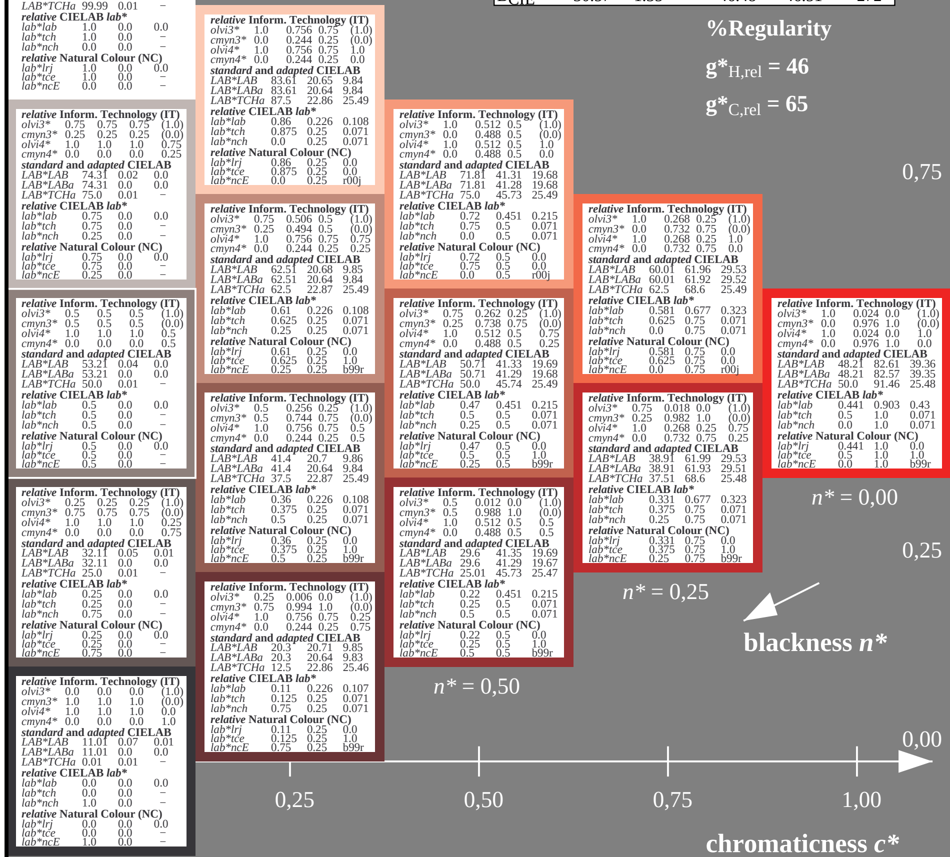
D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0
triangle lightness t^*



%Gamut
u^*_{rel} = 149

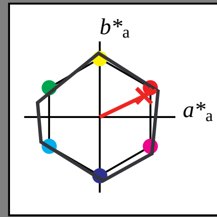
NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 25/360 = 0.071$
*lab*tch and lab*nch*

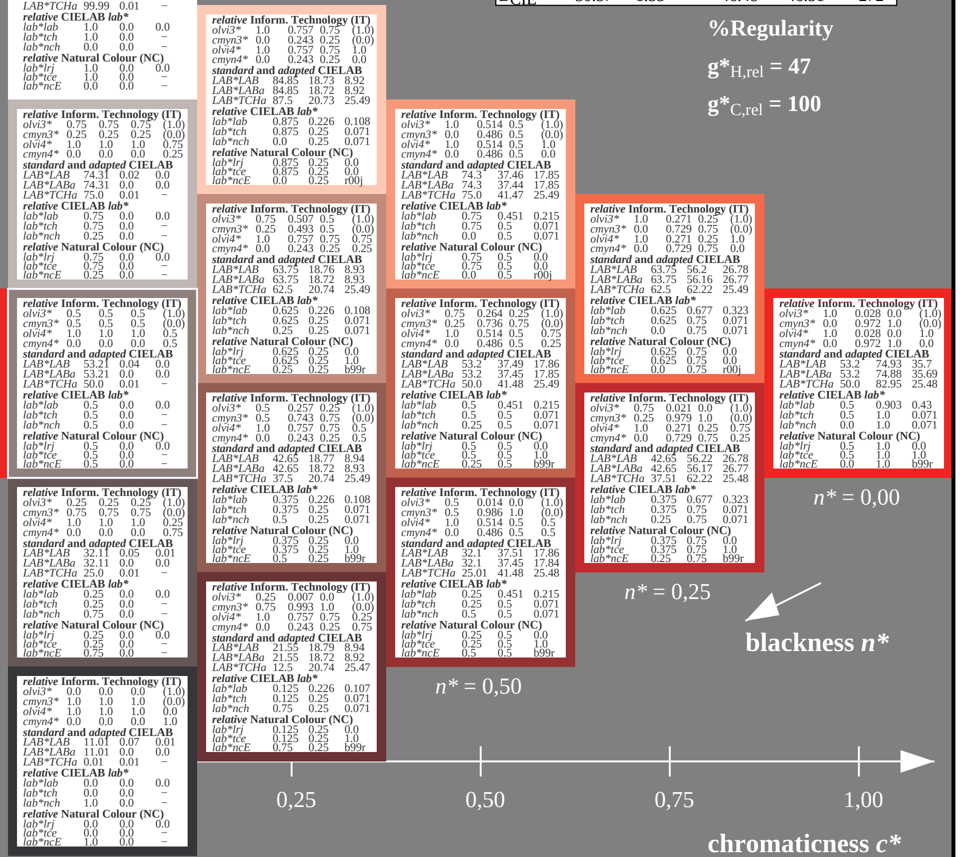
D65: hue R
LCH*Ma: 53 83 25
rgb*Ma: 1.0 0.03 0.0
triangle lightness t^*



%Gamut
u^*_{rel} = 119

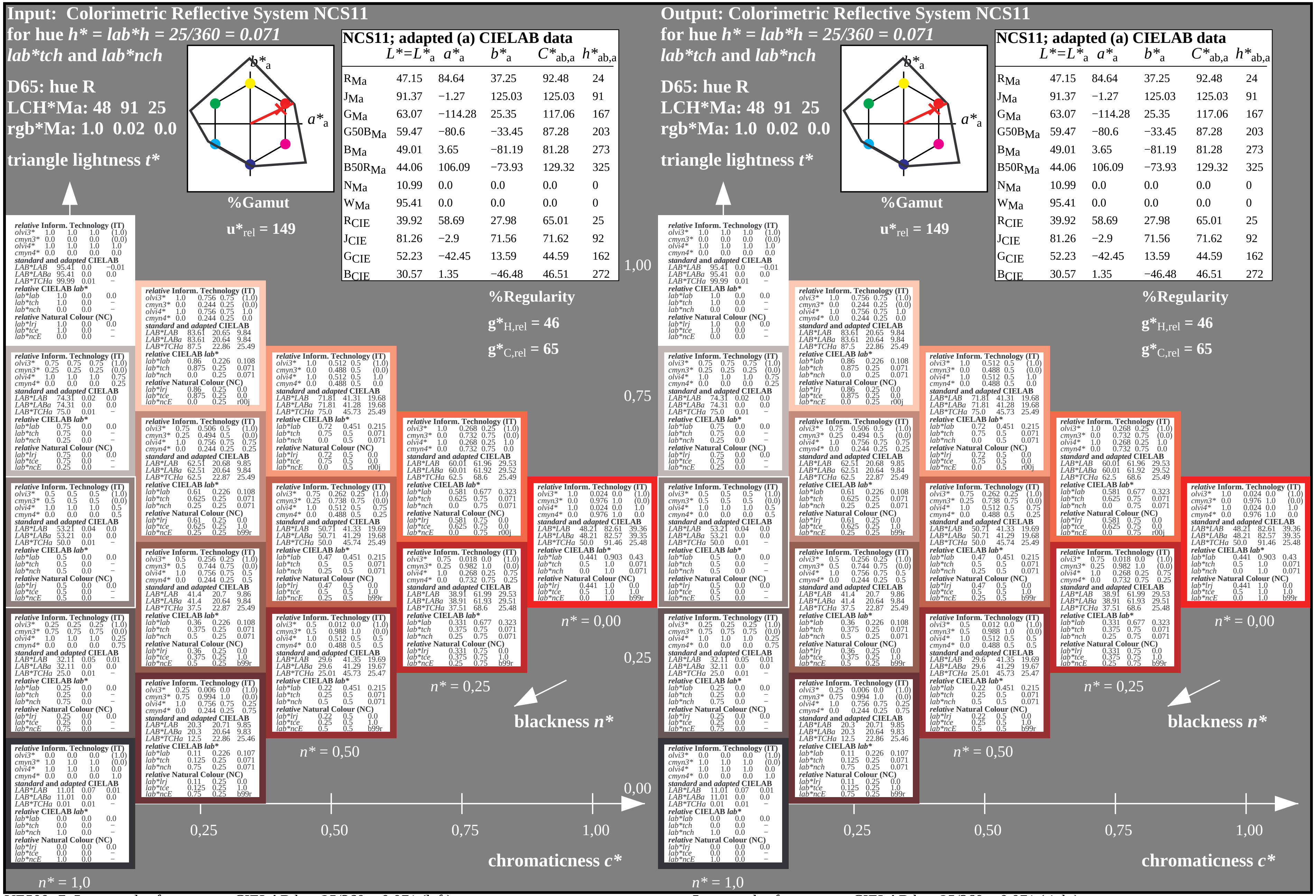
NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100



UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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



NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

UE500−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

Input: Colorimetric Reflective System ORS18

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

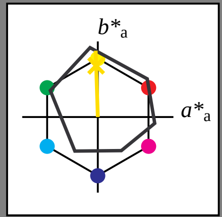
*lab*tch and lab*nch*

D65: hue J

LCH*Ma: 86 88 92

rgb*Ma: 1.0 0.9 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

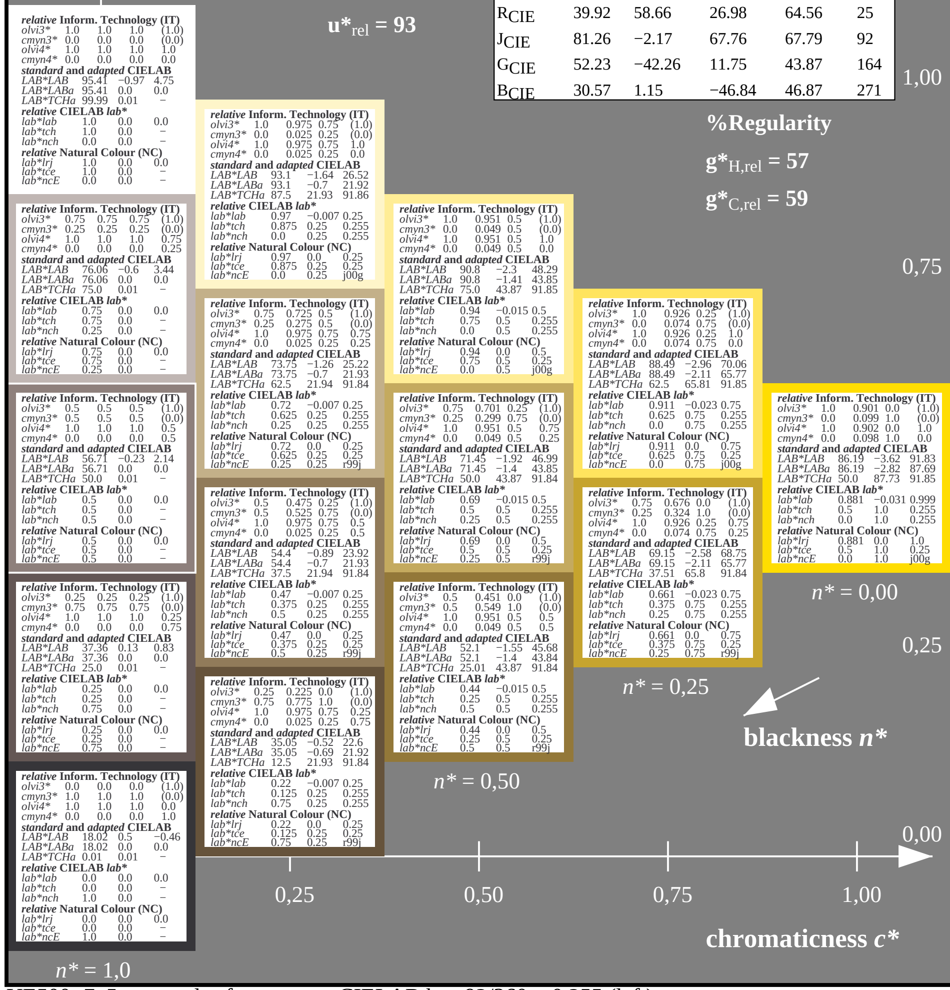
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



Output: Colorimetric Reflective System ORS18

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

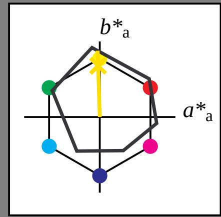
*lab*tch and lab*nch*

D65: hue J

LCH*Ma: 86 88 92

rgb*Ma: 1.0 0.9 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

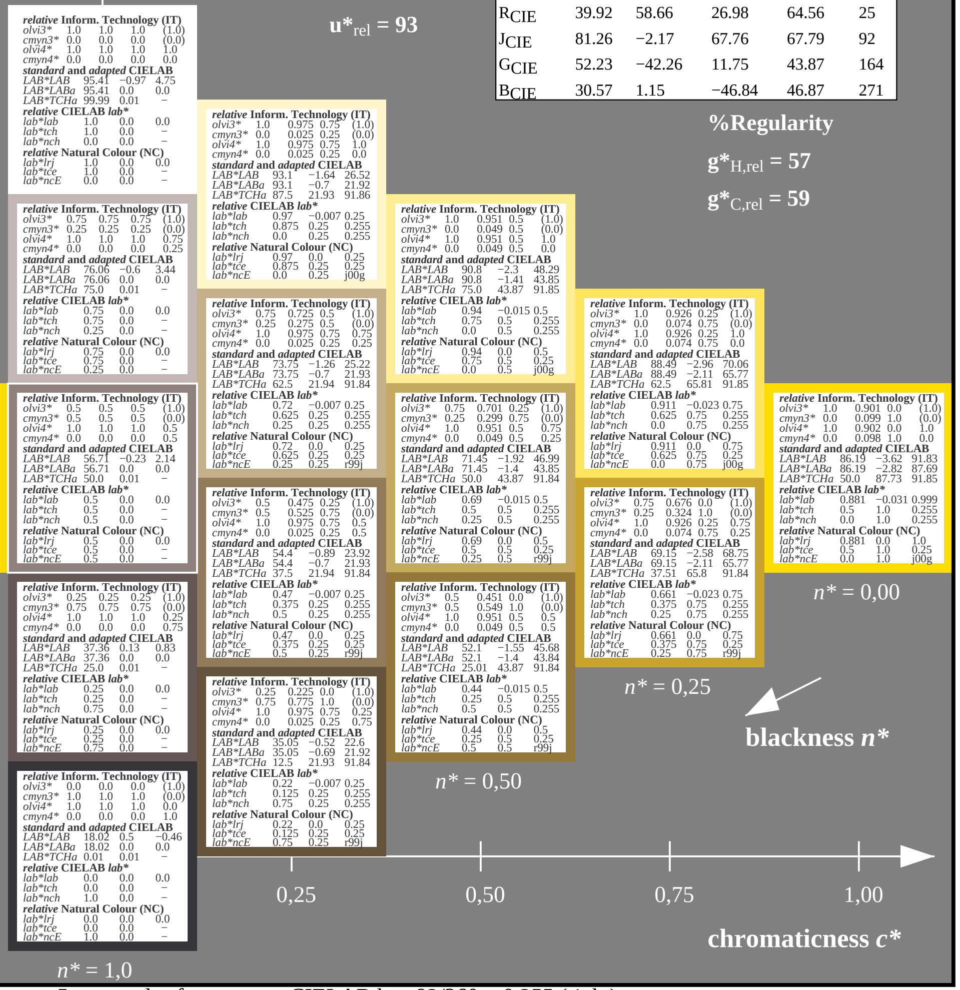
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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

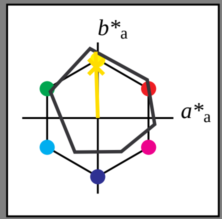


UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

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

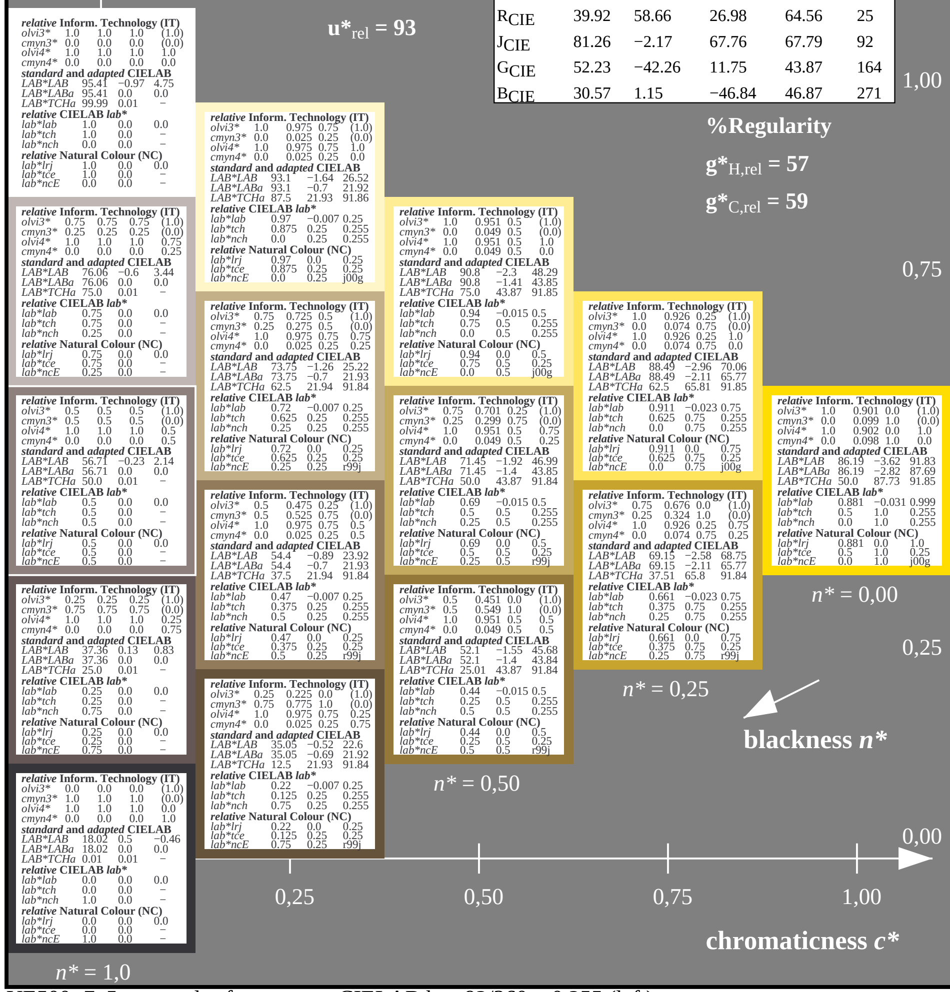
Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 92/360 = 0.255$
*lab*tch and lab*nch*

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0
triangle lightness t^*



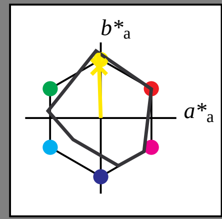
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



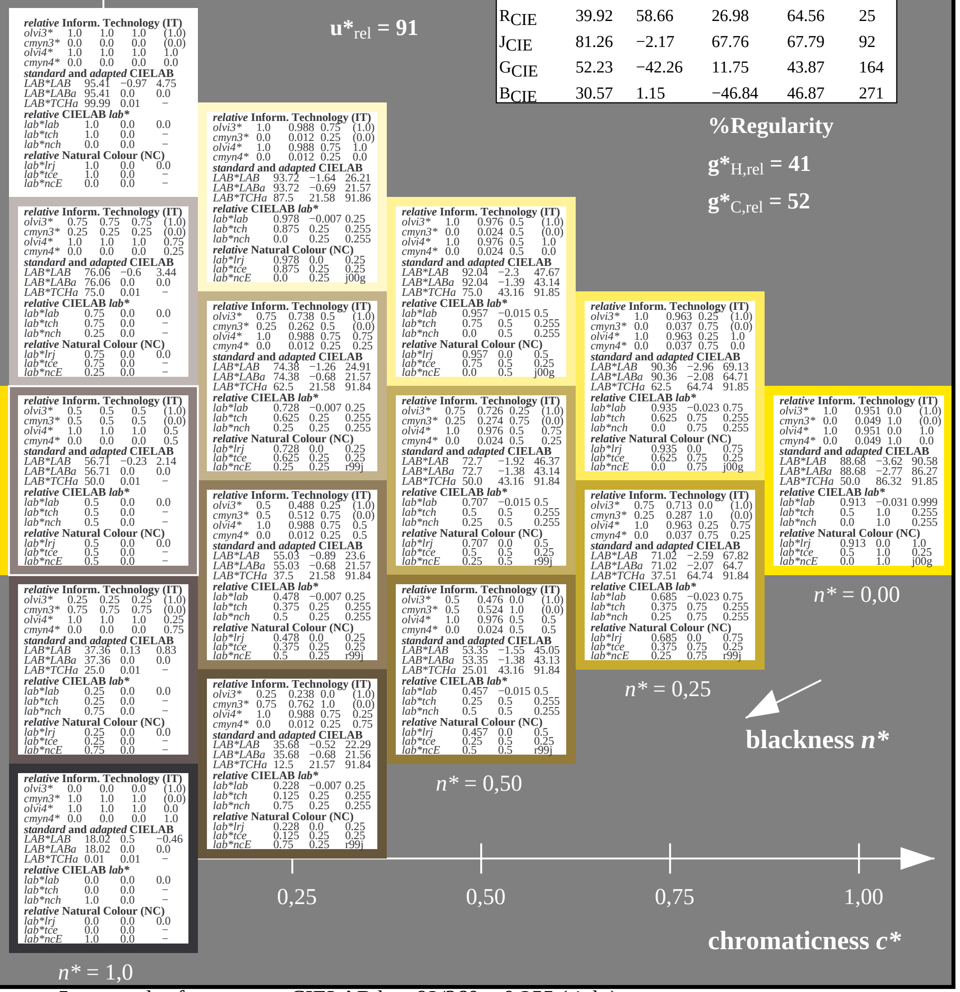
Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
*lab*tch and lab*nch*

D65: hue J
LCH*Ma: 89 86 92
rgb*Ma: 1.0 0.95 0.0
triangle lightness t^*



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



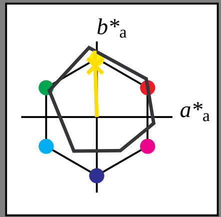
UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

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

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab^*tch and lab^*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

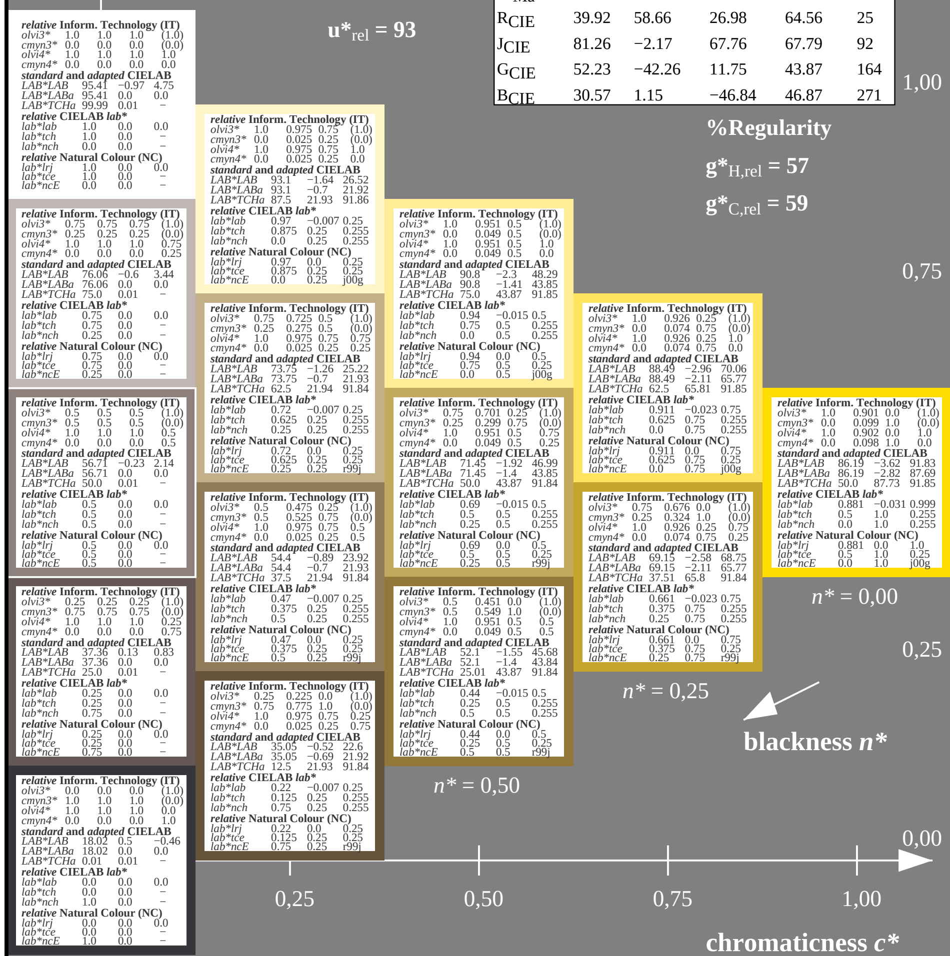
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

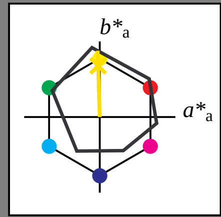
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab^*tch and lab^*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

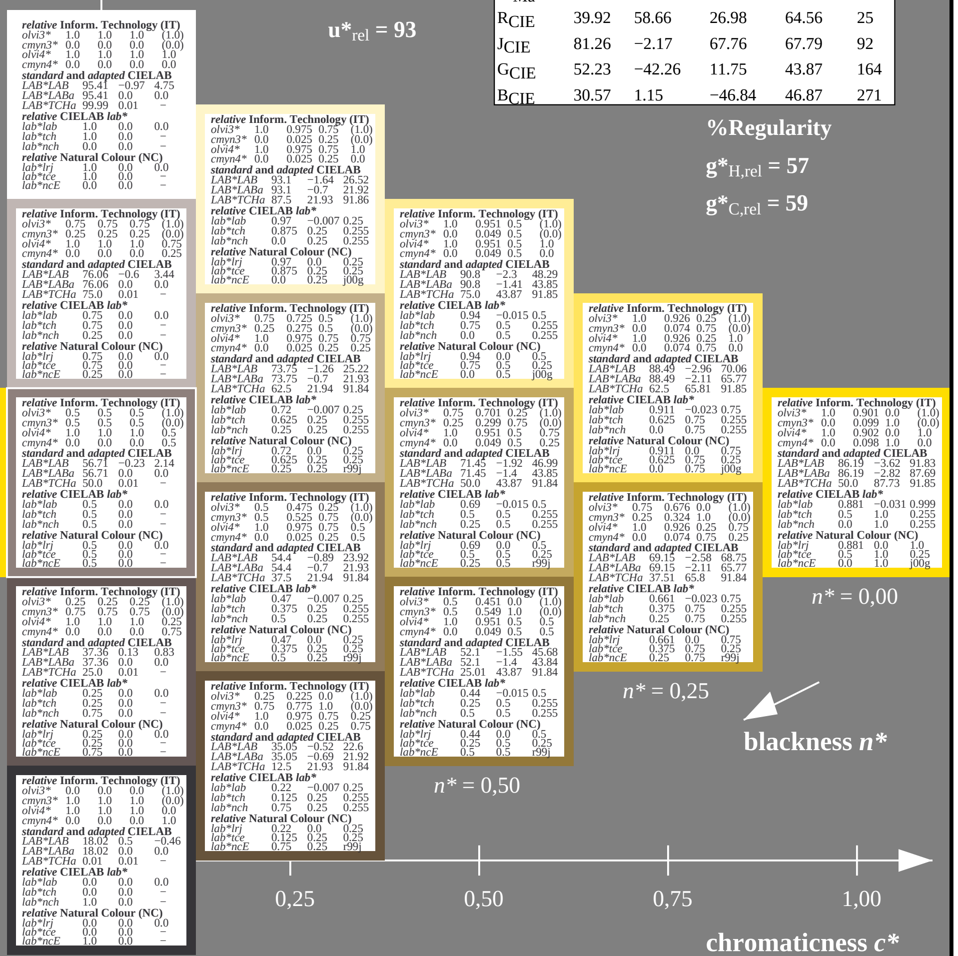
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



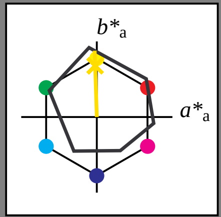
UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

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

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

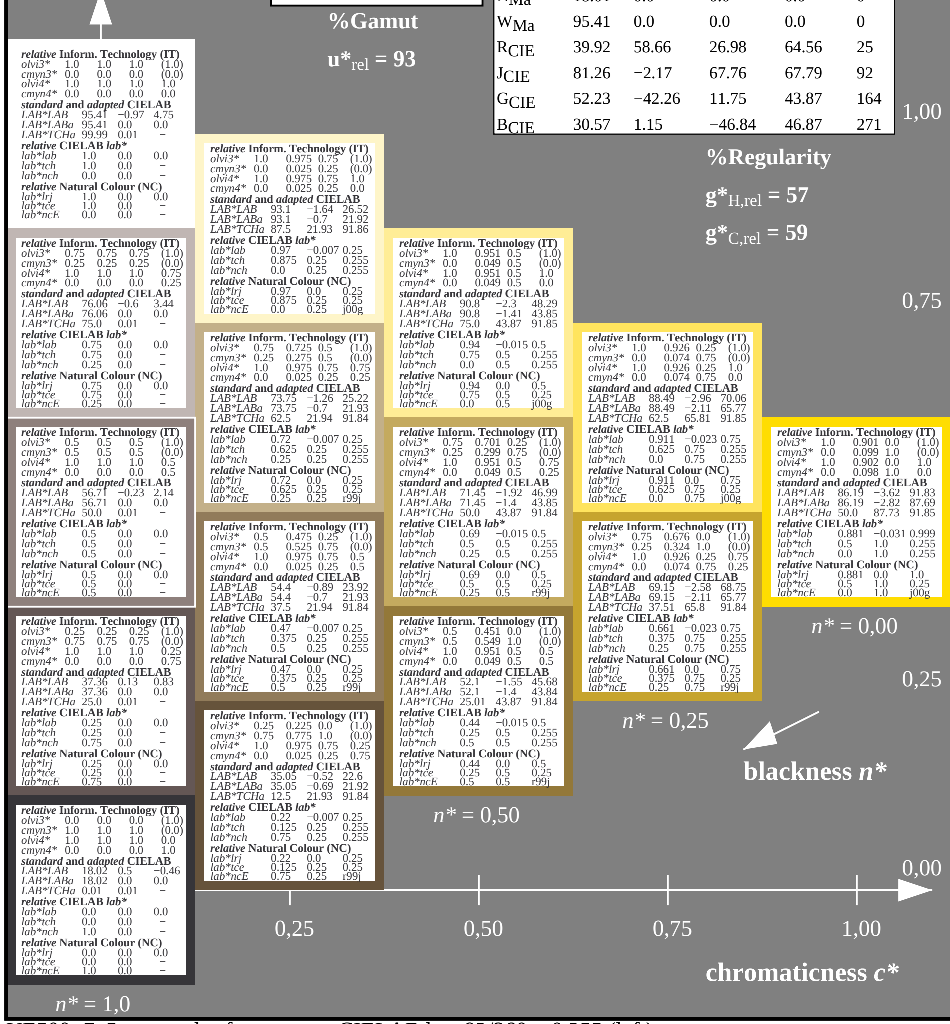
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

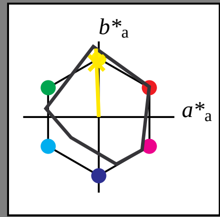
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 91 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 92$

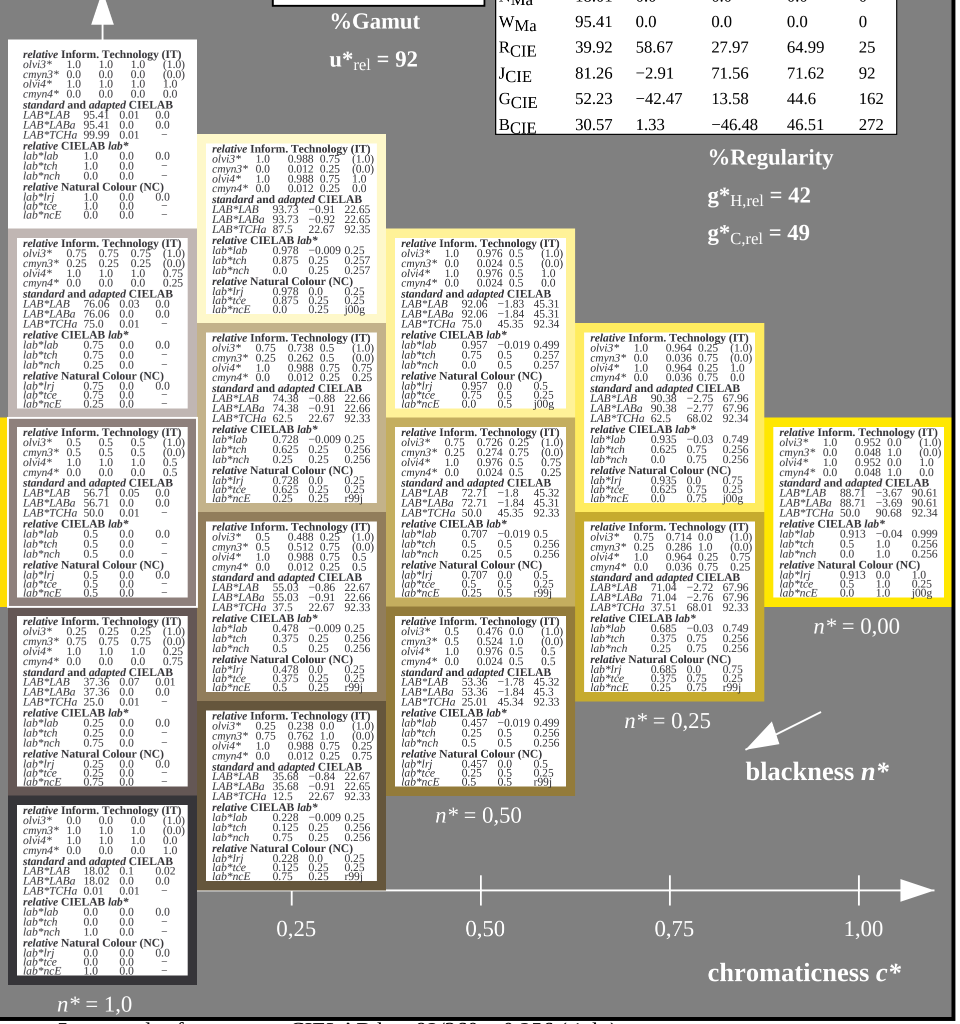
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

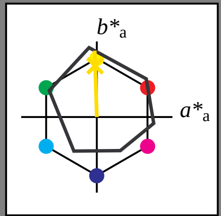


UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

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

Input: Colorimetric Reflective System ORS18
for hue *h** = *lab*h* = 92/360 = 0.255
*lab*tch* and *lab*nch*

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0
triangle lightness *t**

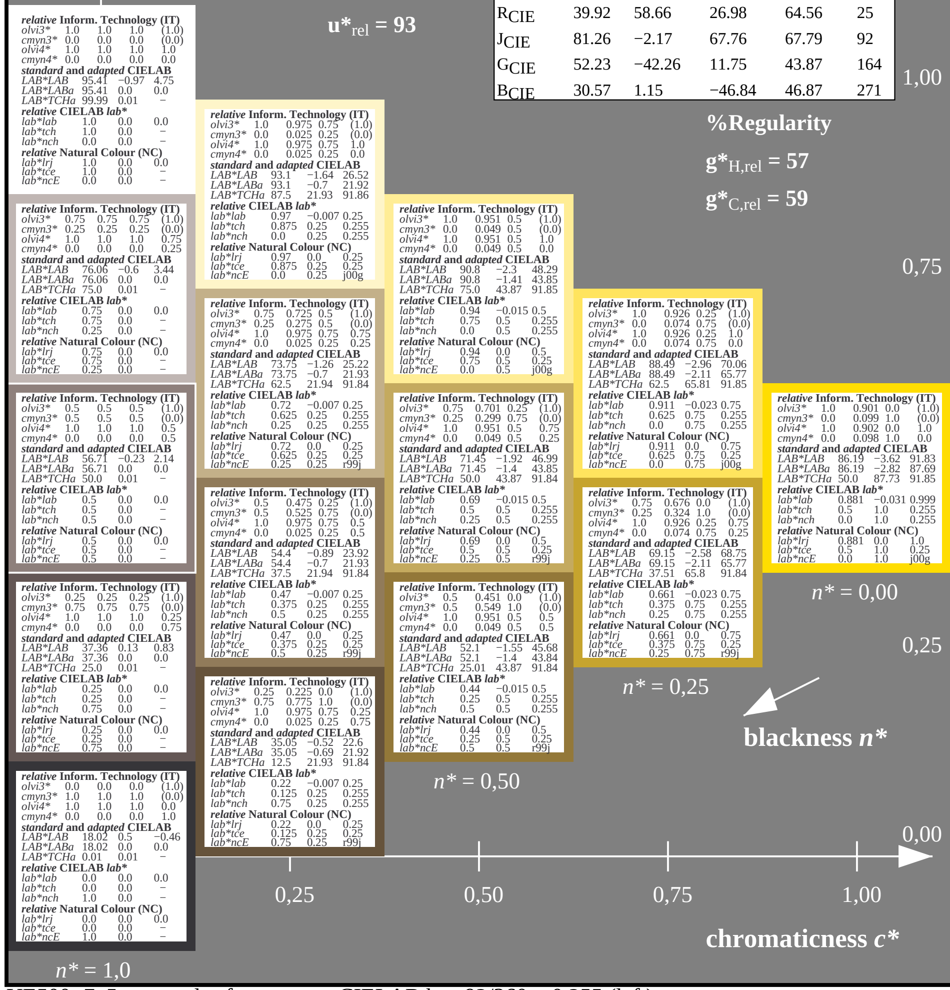


%Gamut
u*rel = 93

ORS18; adapted (a) CIELAB data

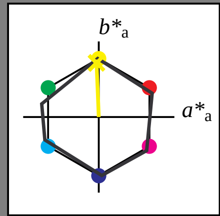
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
g*H,rel = 57
g*C,rel = 59



Output: Colorimetric Reflective System NRS18
for hue *h** = *lab*h* = 92/360 = 0.256
*lab*tch* and *lab*nch*

D65: hue J
LCH*Ma: 57 76 92
rgb*Ma: 0.98 1.0 0.0
triangle lightness *t**

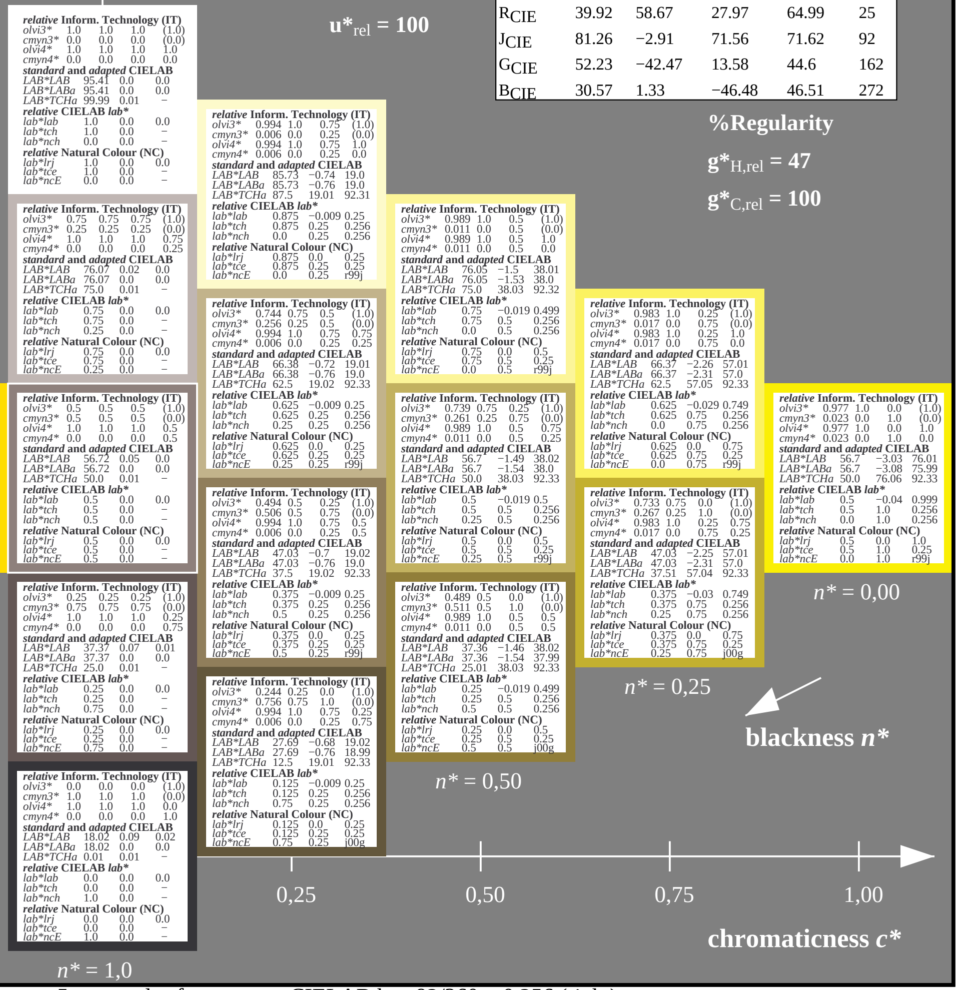


%Gamut
u*rel = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
g*H,rel = 47
g*C,rel = 100



UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

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

Input: Colorimetric Reflective System ORS18

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

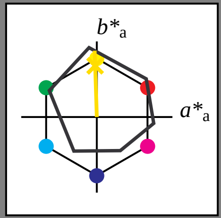
*lab*tch* and *lab*nch*

D65: hue J

LCH*Ma: 86 88 92

rgb*Ma: 1.0 0.9 0.0

triangle lightness t^*

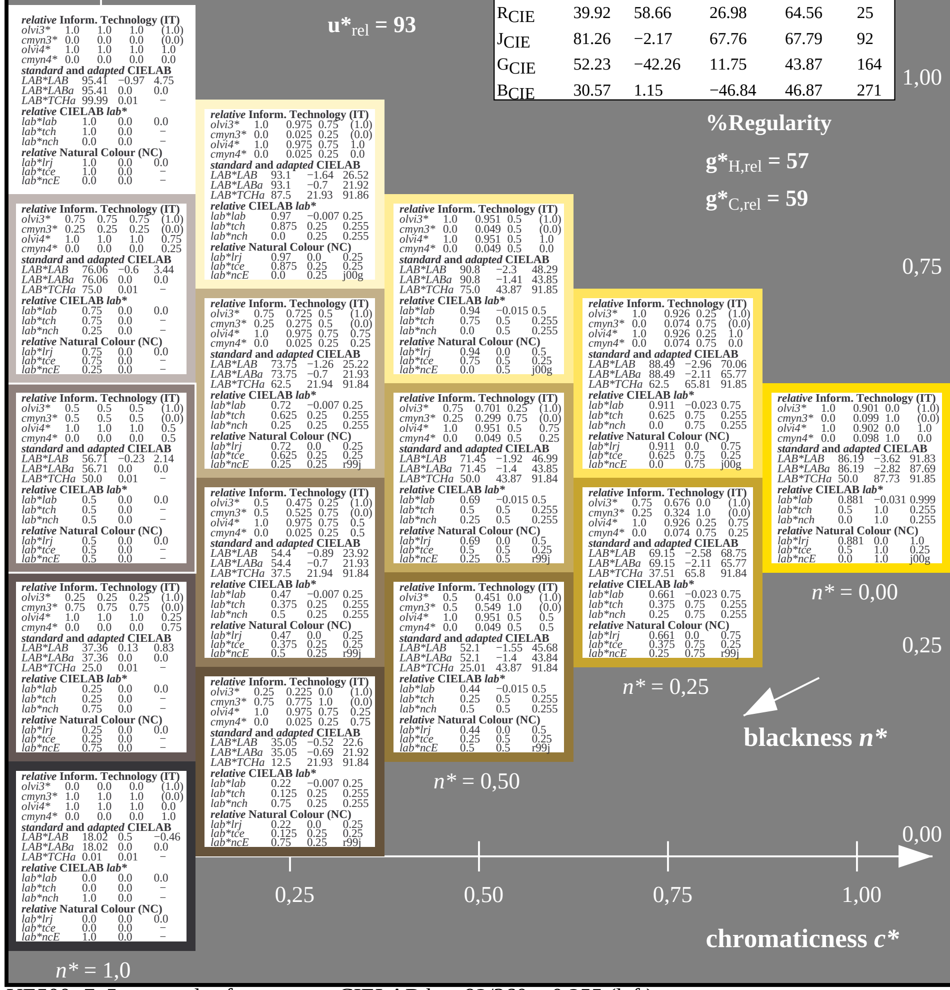


%Gamut

$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



Output: Colorimetric Reflective System NCS18

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

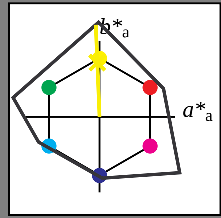
*lab*tch* and *lab*nch*

D65: hue J

LCH*Ma: 90 122 92

rgb*Ma: 0.97 1.0 0.0

triangle lightness t^*

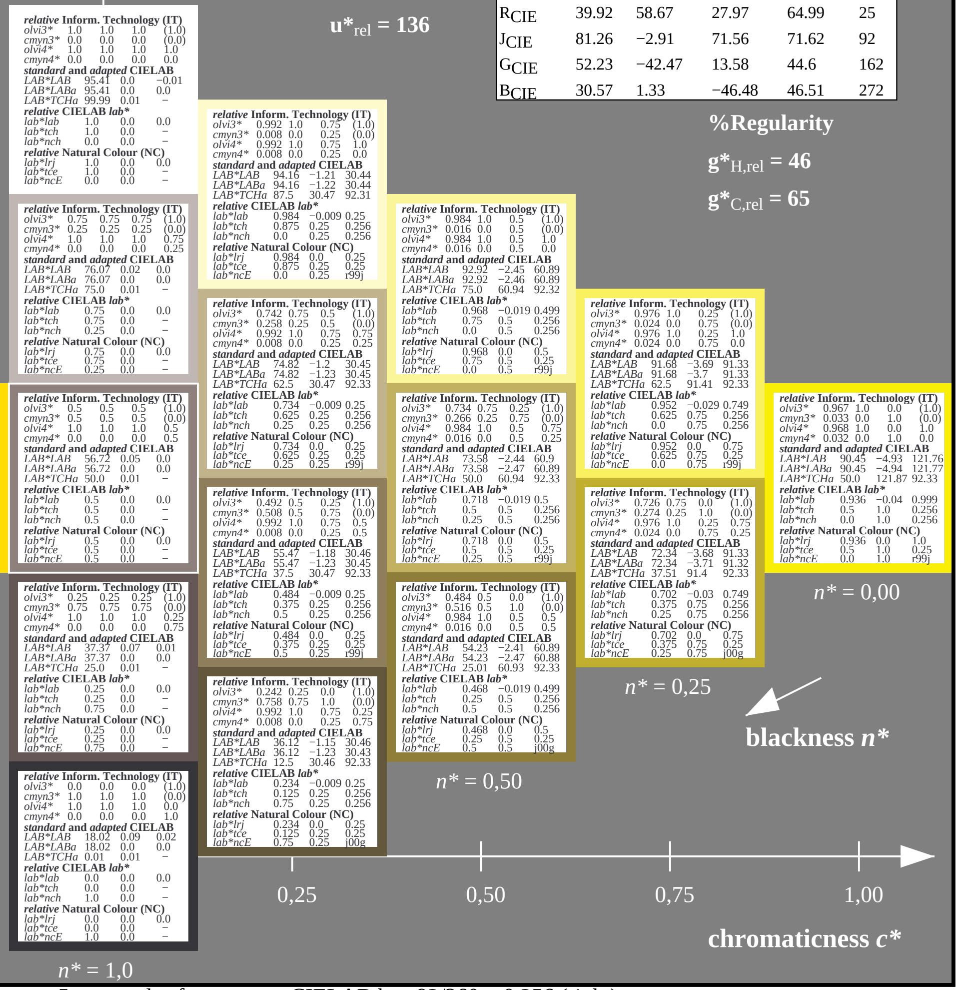


%Gamut

$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272



UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

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

Input: Colorimetric Reflective System ORS18

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

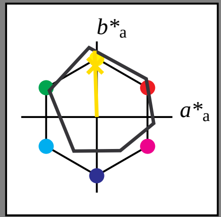
lab*tch and lab*nch

D65: hue J

LCH*Ma: 86 88 92

rgb*Ma: 1.0 0.9 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

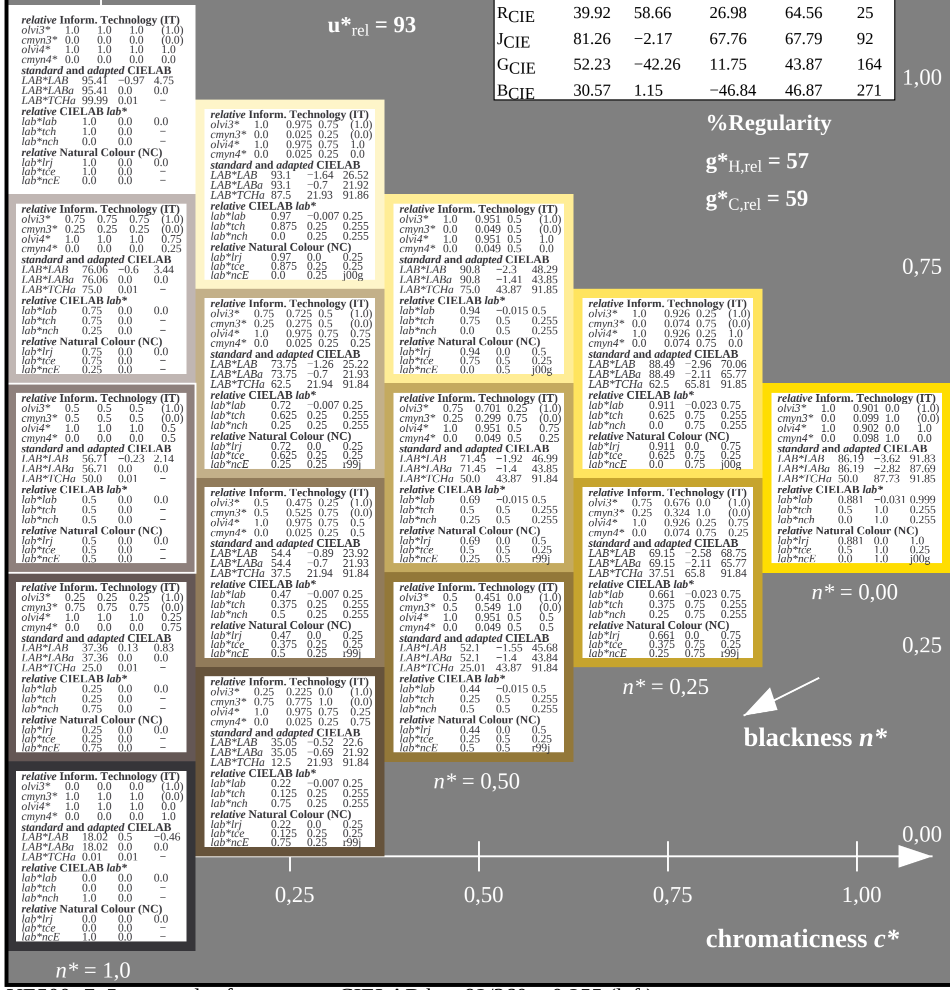
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



Output: Colorimetric Reflective System NRS11

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

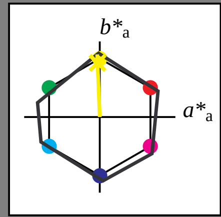
lab*tch and lab*nch

D65: hue J

LCH*Ma: 53 83 92

rgb*Ma: 0.98 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 119$

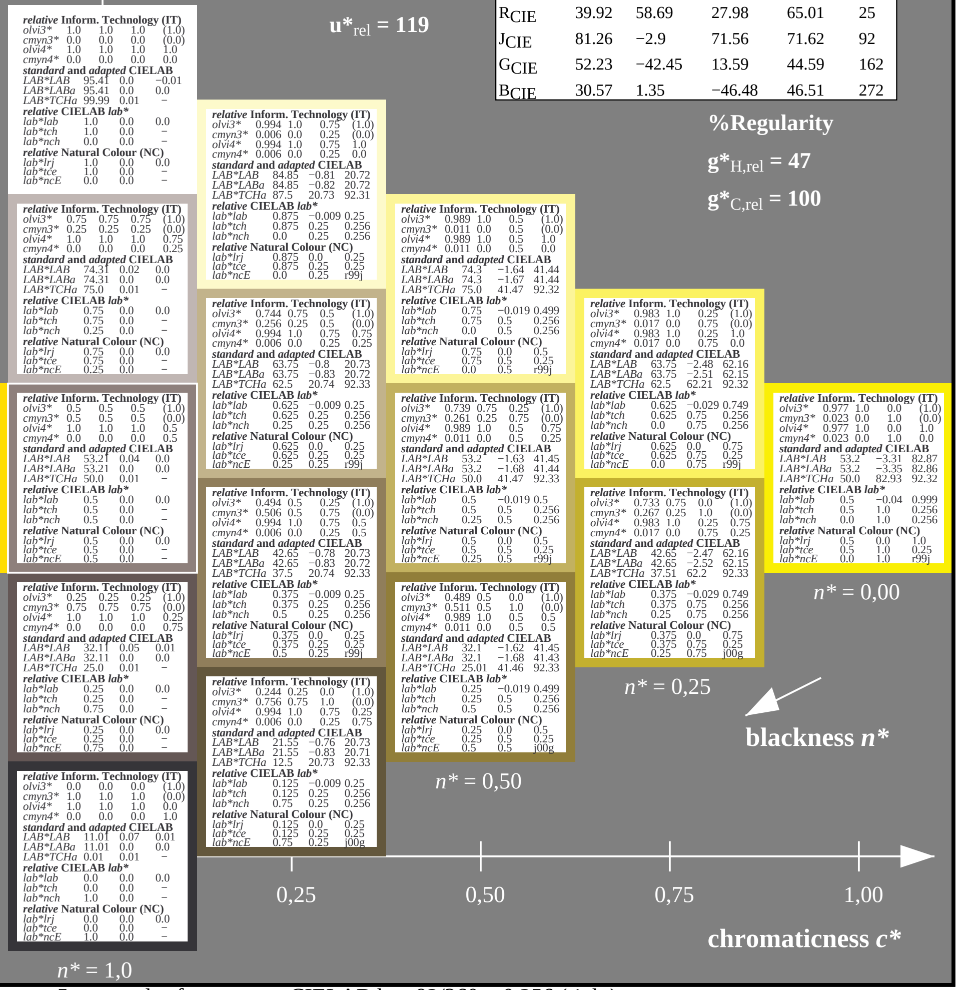
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

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

Input: Colorimetric Reflective System ORS18

for hue *h* = lab*h* = 92/360 = 0.255

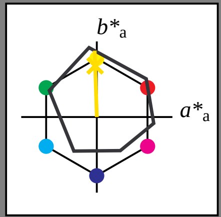
lab*tch* and *lab*nch

D65: hue J

LCH*Ma: 86 88 92

rgb*Ma: 1.0 0.9 0.0

triangle lightness *t*



%Gamut

u^*_{rel} = 93

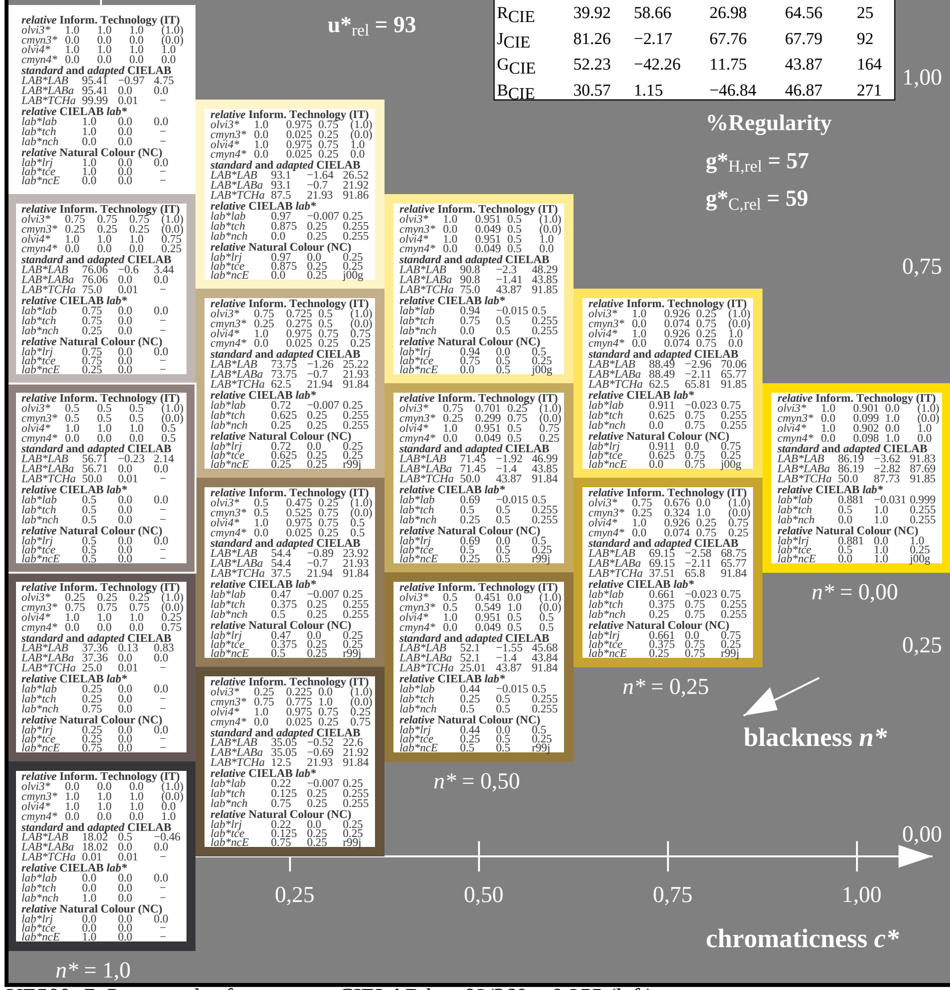
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



Output: Colorimetric Reflective System NCS11

for hue *h* = lab*h* = 92/360 = 0.256

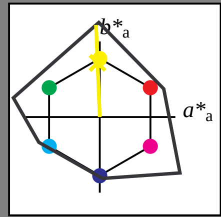
lab*tch* and *lab*nch

D65: hue J

LCH*Ma: 90 122 92

rgb*Ma: 0.97 1.0 0.0

triangle lightness *t*



%Gamut

u^*_{rel} = 149

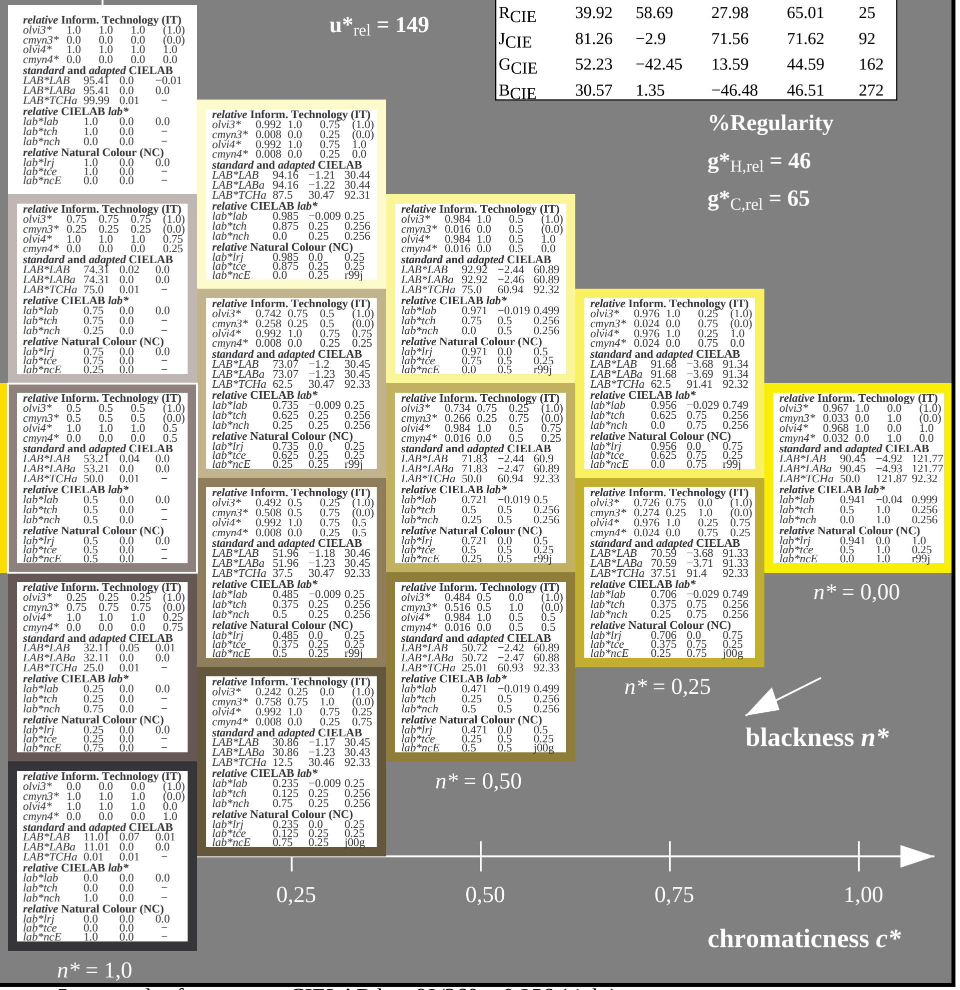
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



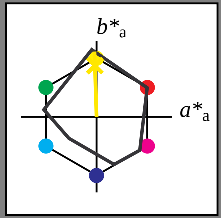
UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

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

Input: Colorimetric Reflective System MRS18
for hue *h = *lab*h* = 92/360 = 0.255**
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 86 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness *t**

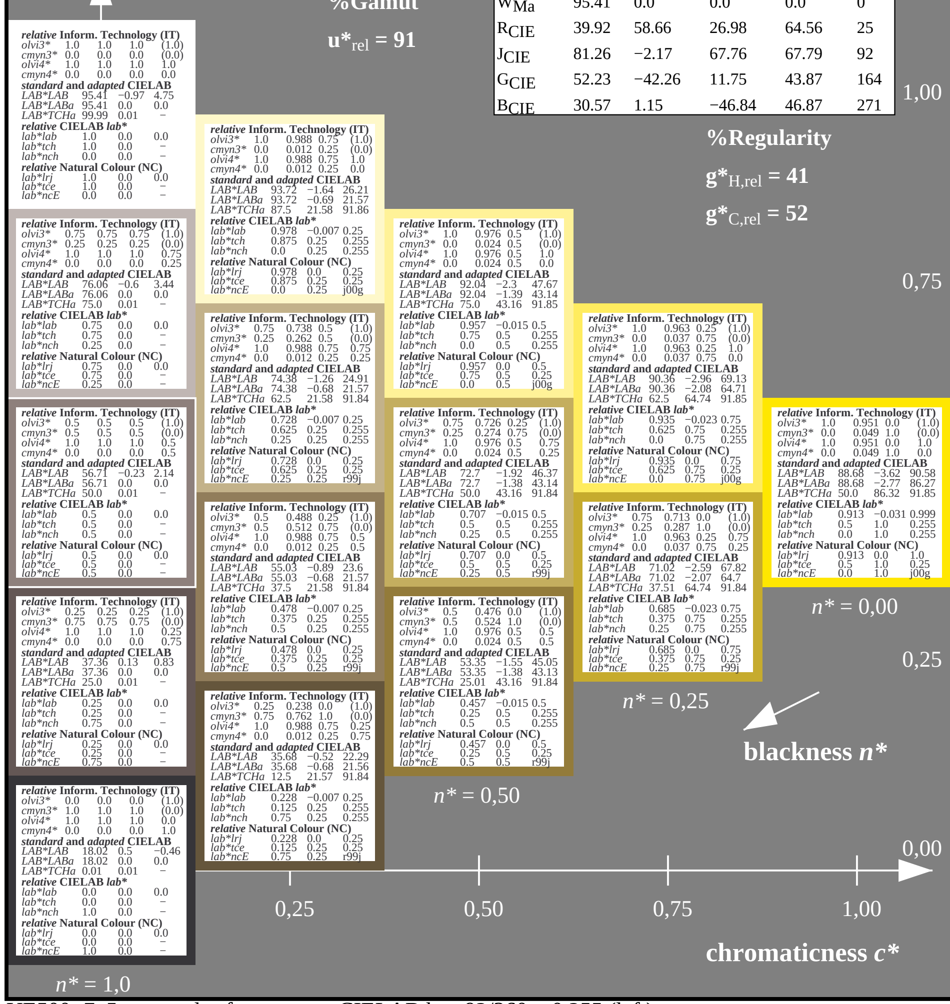


%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

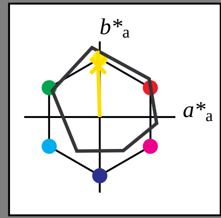
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



Output: Colorimetric Reflective System ORS18
for hue *h = *lab*h* = 92/360 = 0.255**
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness *t**

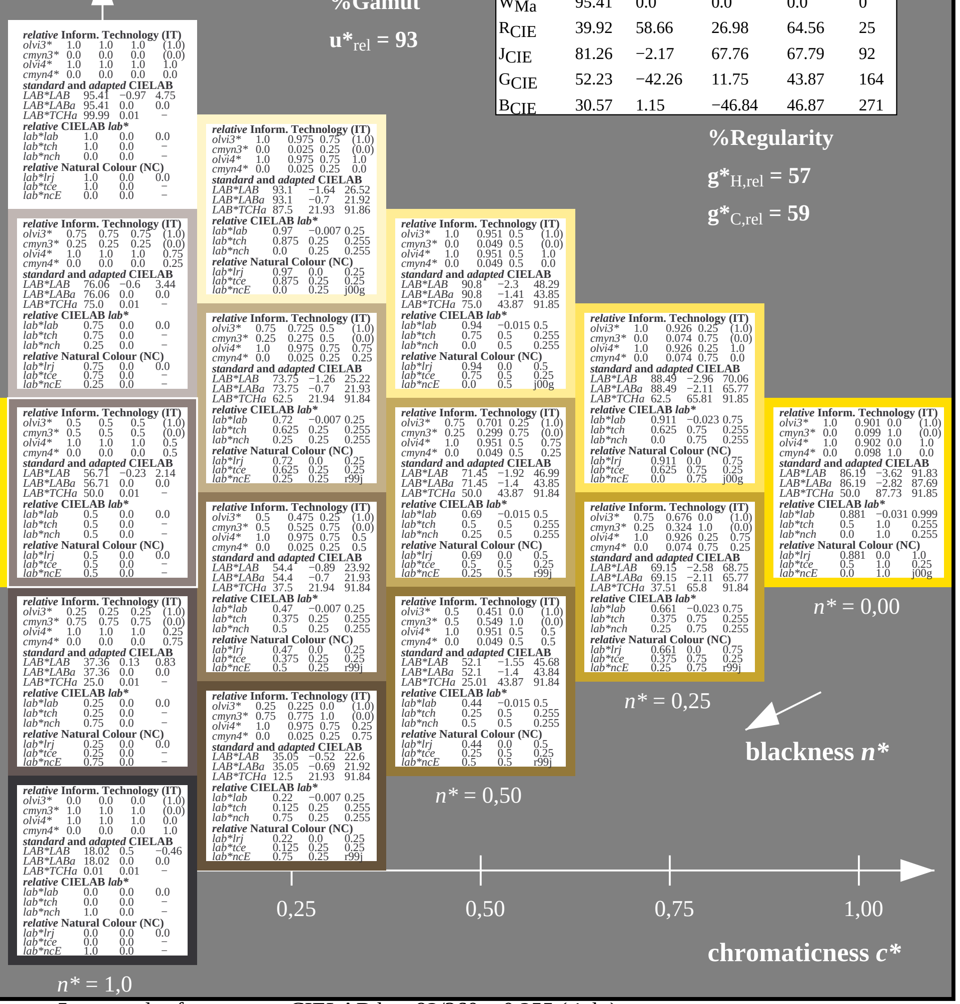


%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

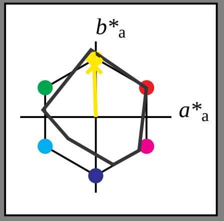


UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

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

Input: Colorimetric Reflective System MRS18
for hue *h = *lab*h* = 92/360 = 0.255**
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 86 92
rgb*Ma: 1.0 0.95 0.0
triangle lightness *t*

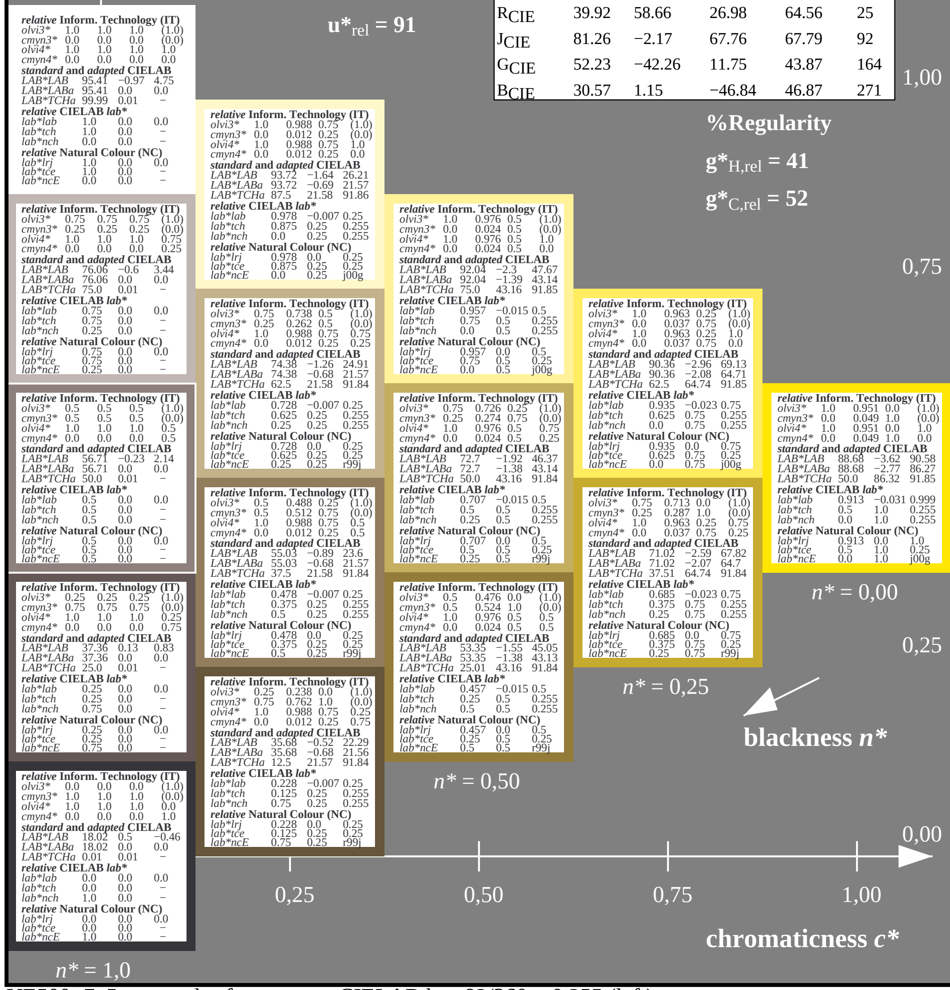


%Gamut
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

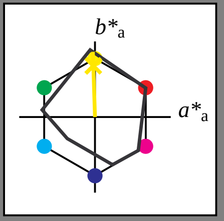
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel}$ = 41
$g^*_{C,rel}$ = 52



Output: Colorimetric Reflective System MRS18
for hue *h = *lab*h* = 92/360 = 0.255**
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 86 92
rgb*Ma: 1.0 0.95 0.0
triangle lightness *t*

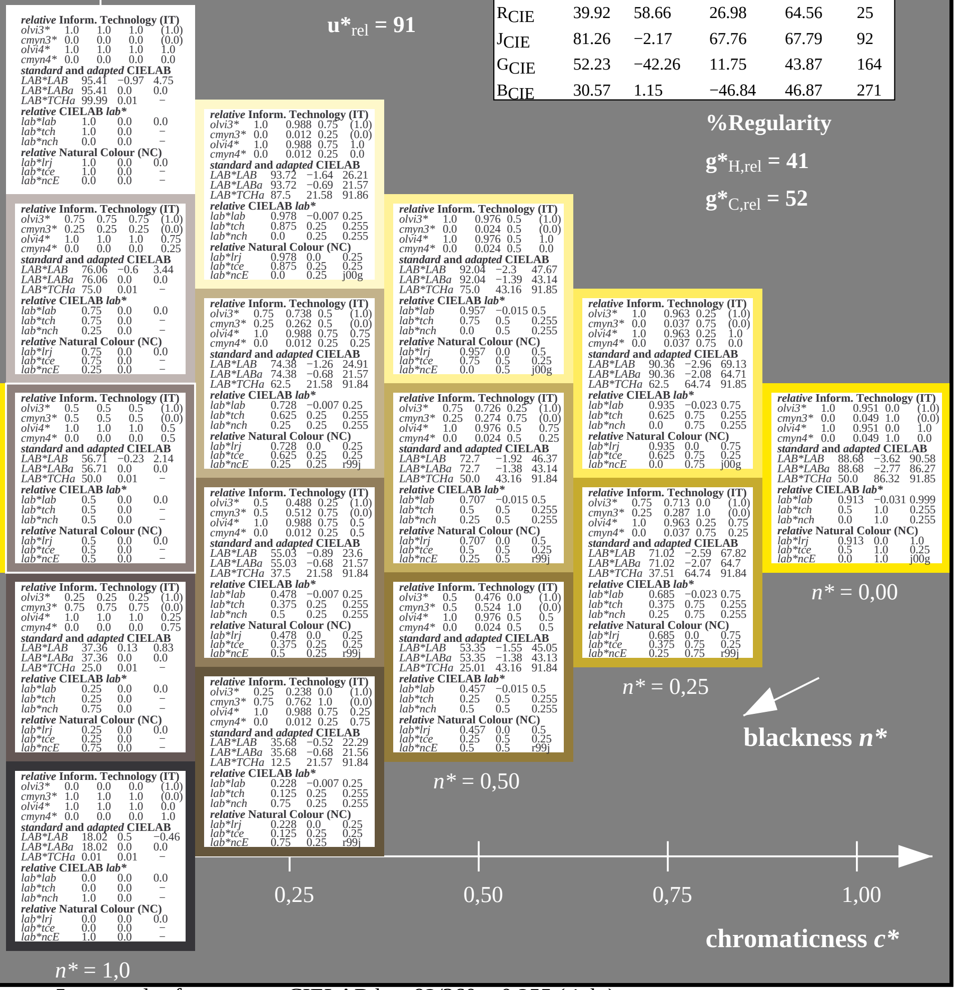


%Gamut
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel}$ = 41
$g^*_{C,rel}$ = 52



UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

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

Input: Colorimetric Reflective System MRS18

for hue *h* = lab*h = 92/360 = 0.255*

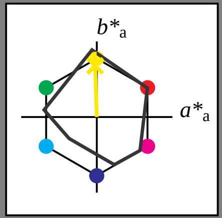
*lab*tch and lab*nch*

D65: hue J

LCH*Ma: 89 86 92

rgb*Ma: 1.0 0.95 0.0

triangle lightness *t*



%Gamut

$u^*_{rel} = 91$

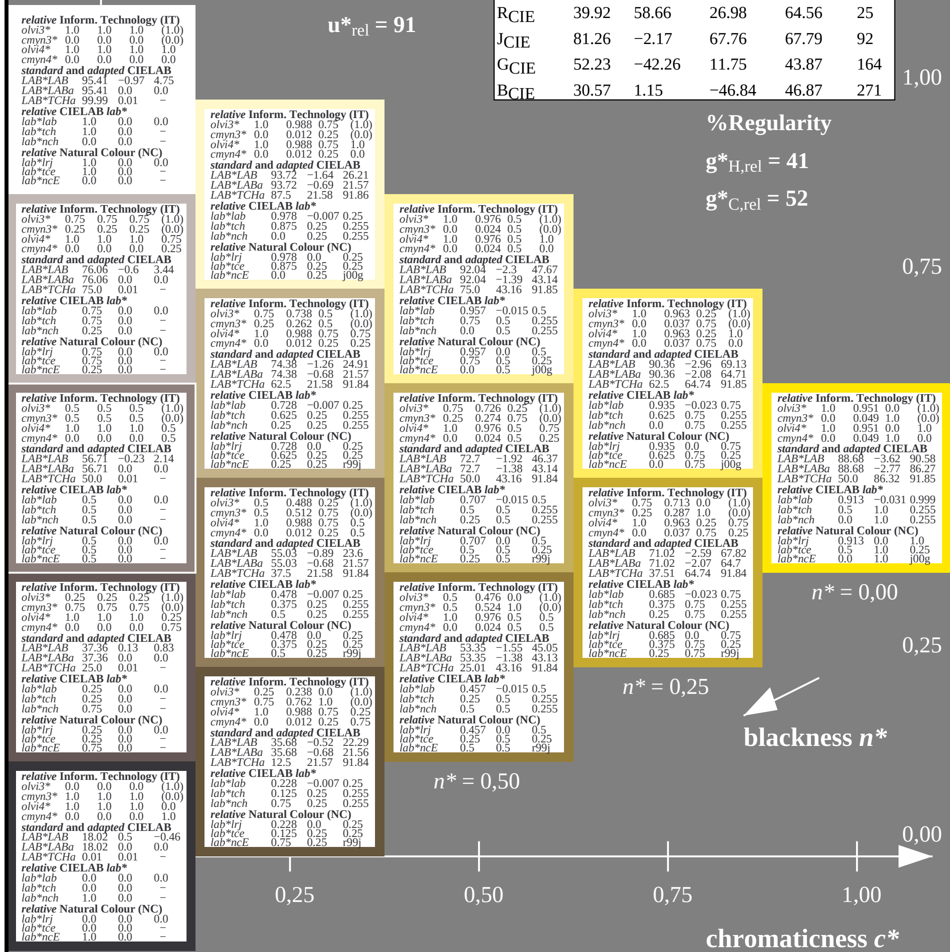
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System TRS18

for hue *h* = lab*h = 92/360 = 0.255*

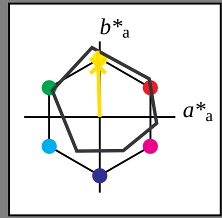
*lab*tch and lab*nch*

D65: hue J

LCH*Ma: 86 88 92

rgb*Ma: 1.0 0.9 0.0

triangle lightness *t*



%Gamut

$u^*_{rel} = 93$

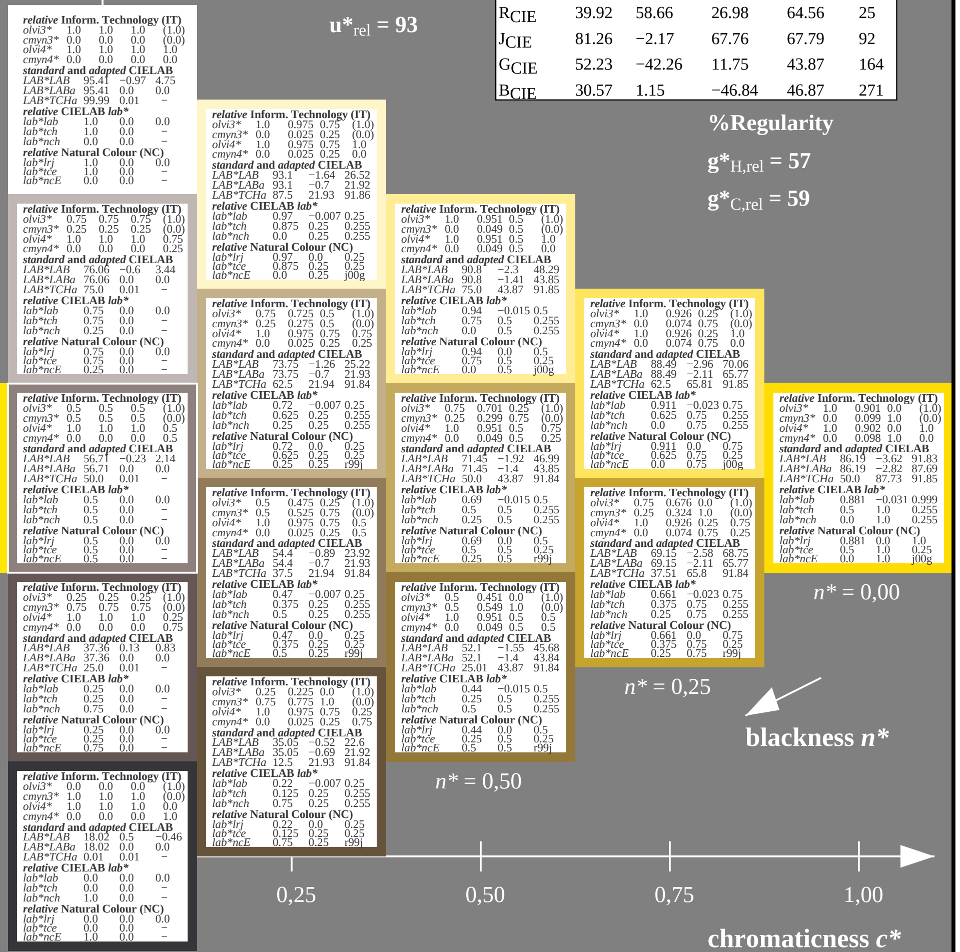
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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

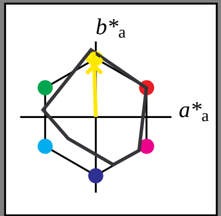


UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

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

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch and lab*nch

D65: hue J
LCH*Ma: 89 86 92
rgb*Ma: 1.0 0.95 0.0
triangle lightness t^*

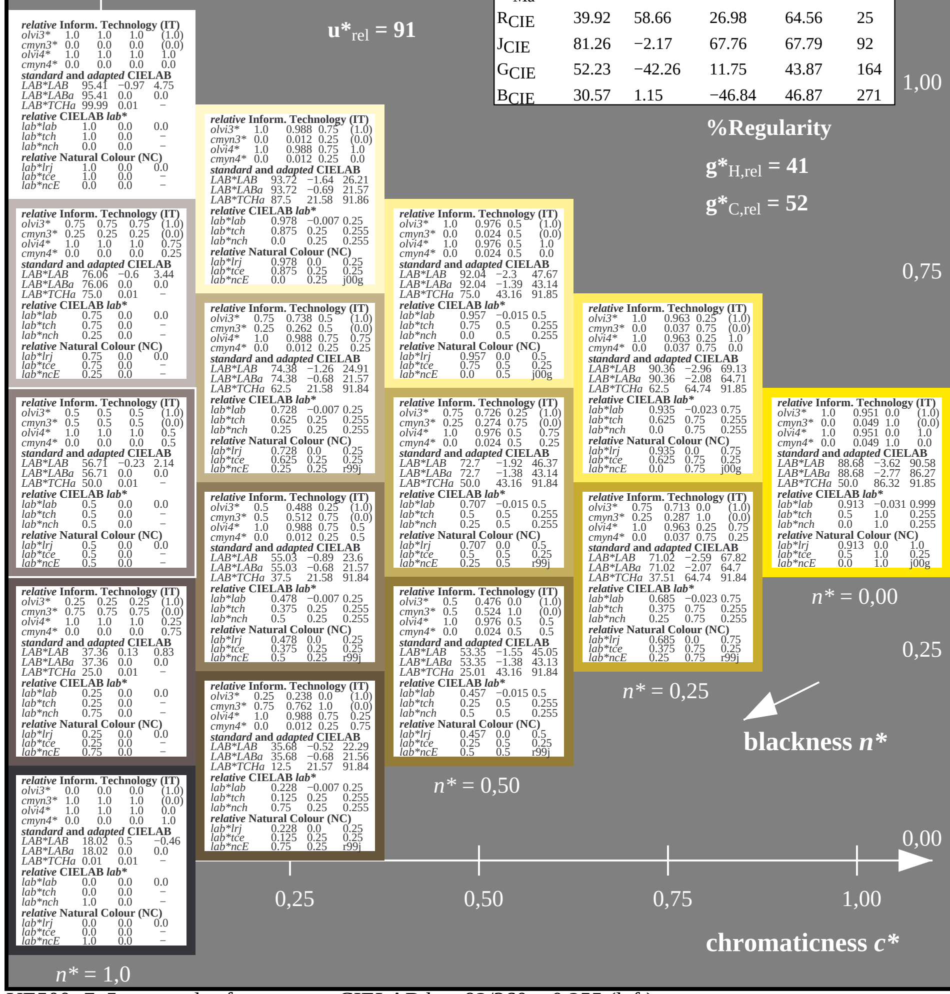


%Gamut
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data

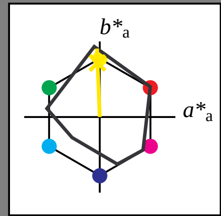
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 41$
$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch and lab*nch

D65: hue J
LCH*Ma: 89 91 92
rgb*Ma: 1.0 0.95 0.0
triangle lightness t^*

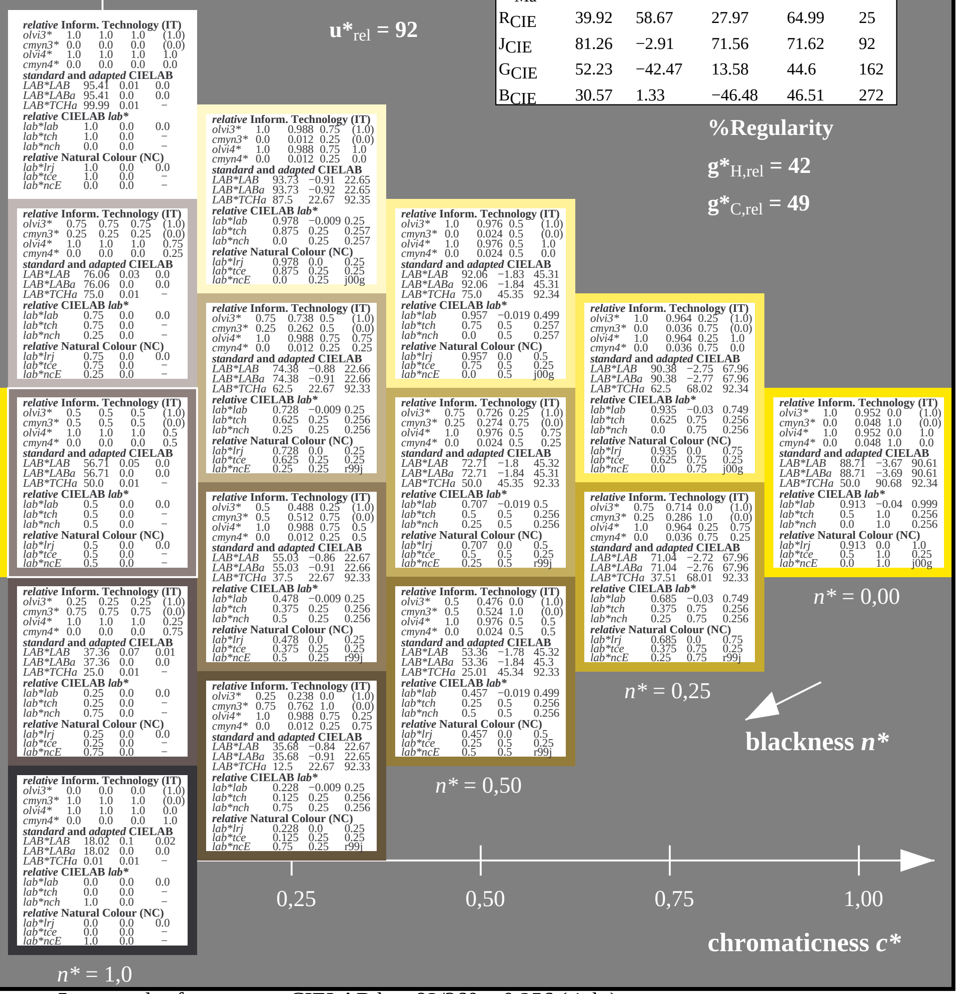


%Gamut
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$



UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

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

Input: Colorimetric Reflective System MRS18

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

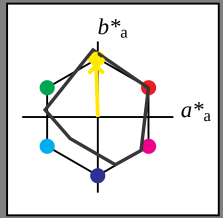
*lab*tch* and *lab*nch*

D65: hue J

LCH*Ma: 89 86 92

rgb*Ma: 1.0 0.95 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 91$

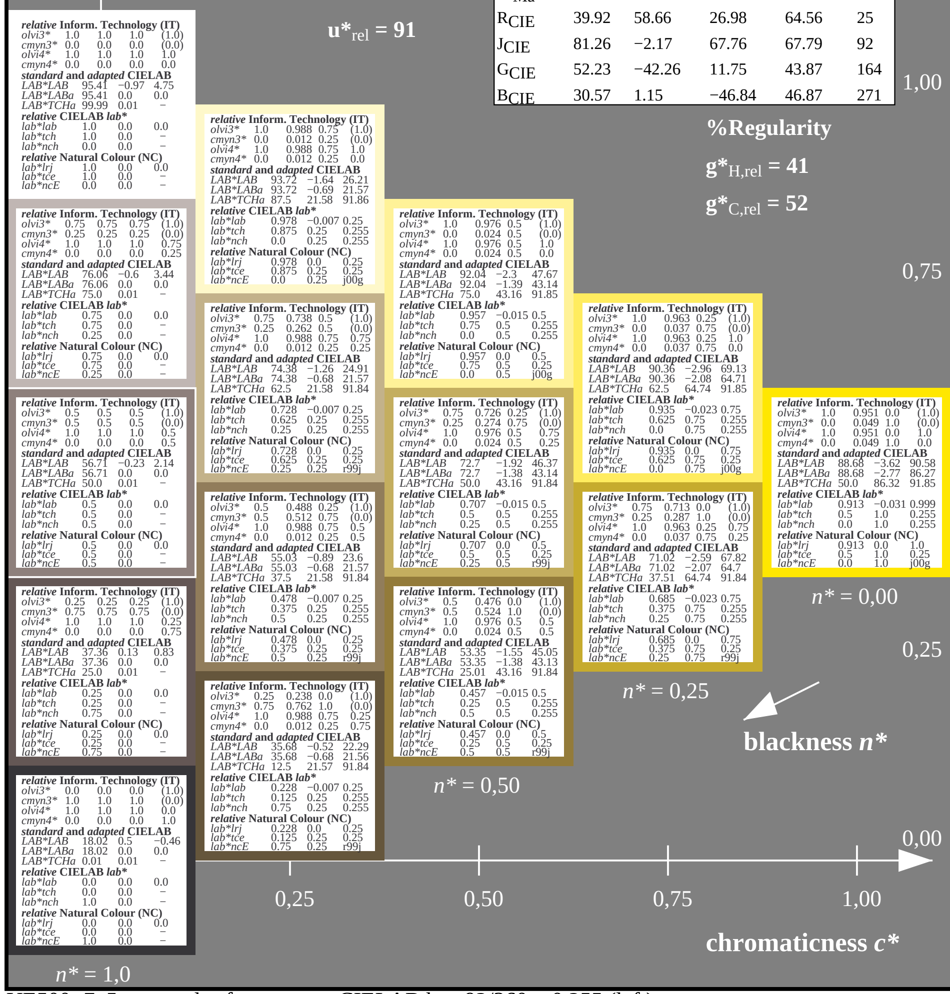
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System NRS18

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

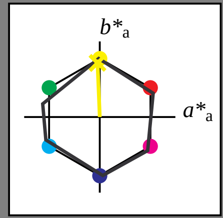
*lab*tch* and *lab*nch*

D65: hue J

LCH*Ma: 57 76 92

rgb*Ma: 0.98 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 100$

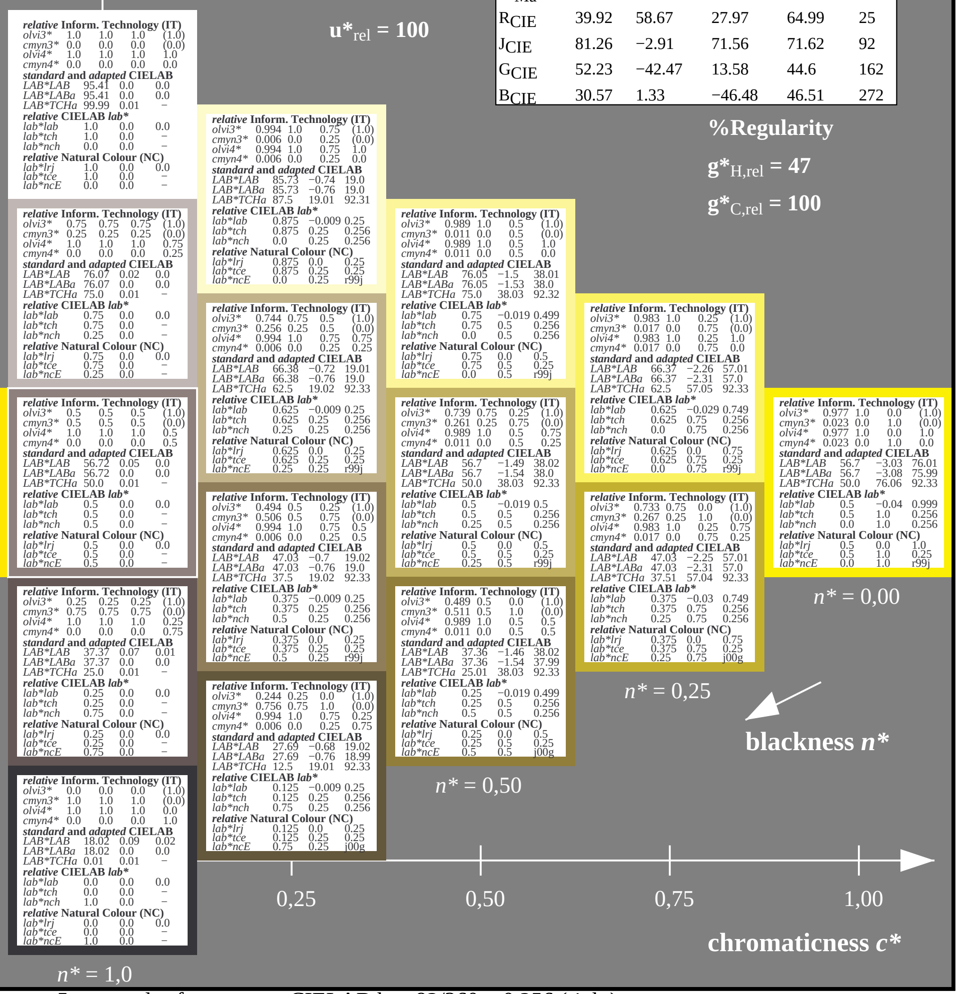
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

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

Input: Colorimetric Reflective System MRS18

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

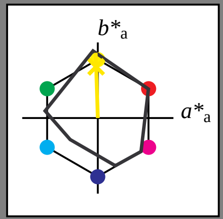
*lab*tch* and *lab*nch*

D65: hue J

LCH*Ma: 89 86 92

rgb*Ma: 1.0 0.95 0.0

triangle lightness t^*



%Gamut

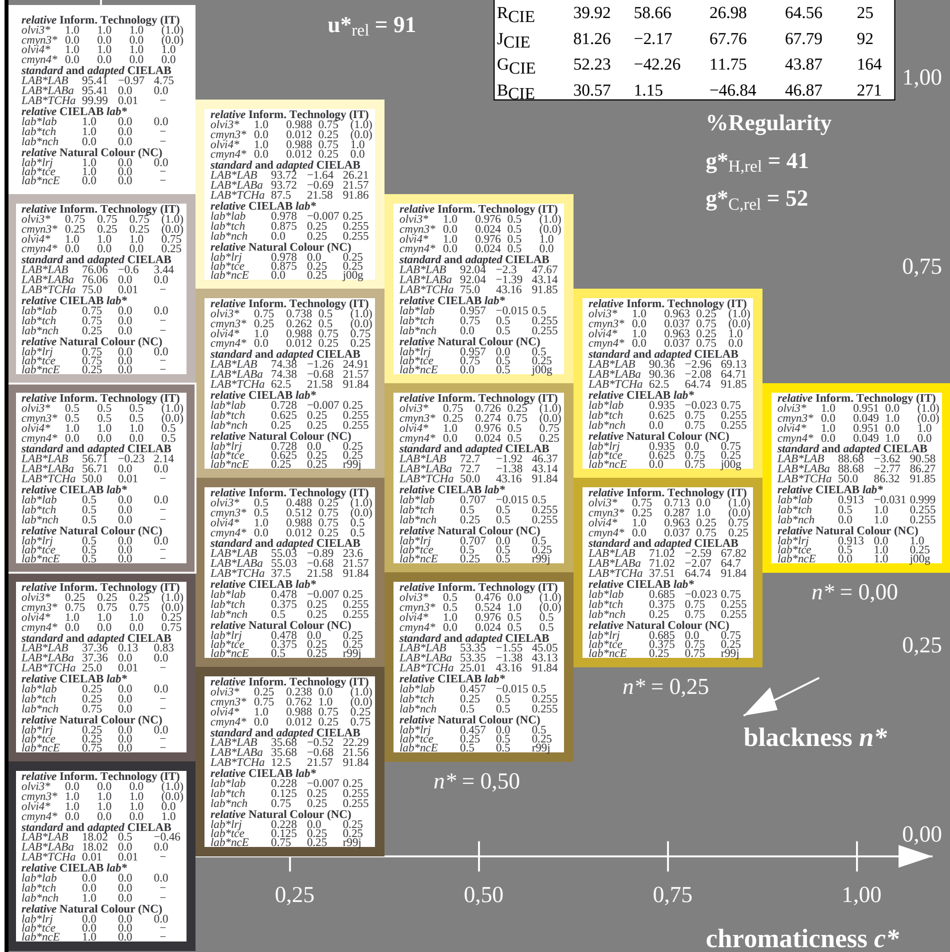
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System NCS18

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

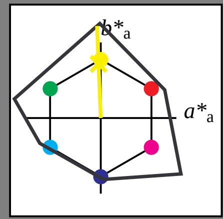
*lab*tch* and *lab*nch*

D65: hue J

LCH*Ma: 90 122 92

rgb*Ma: 0.97 1.0 0.0

triangle lightness t^*



%Gamut

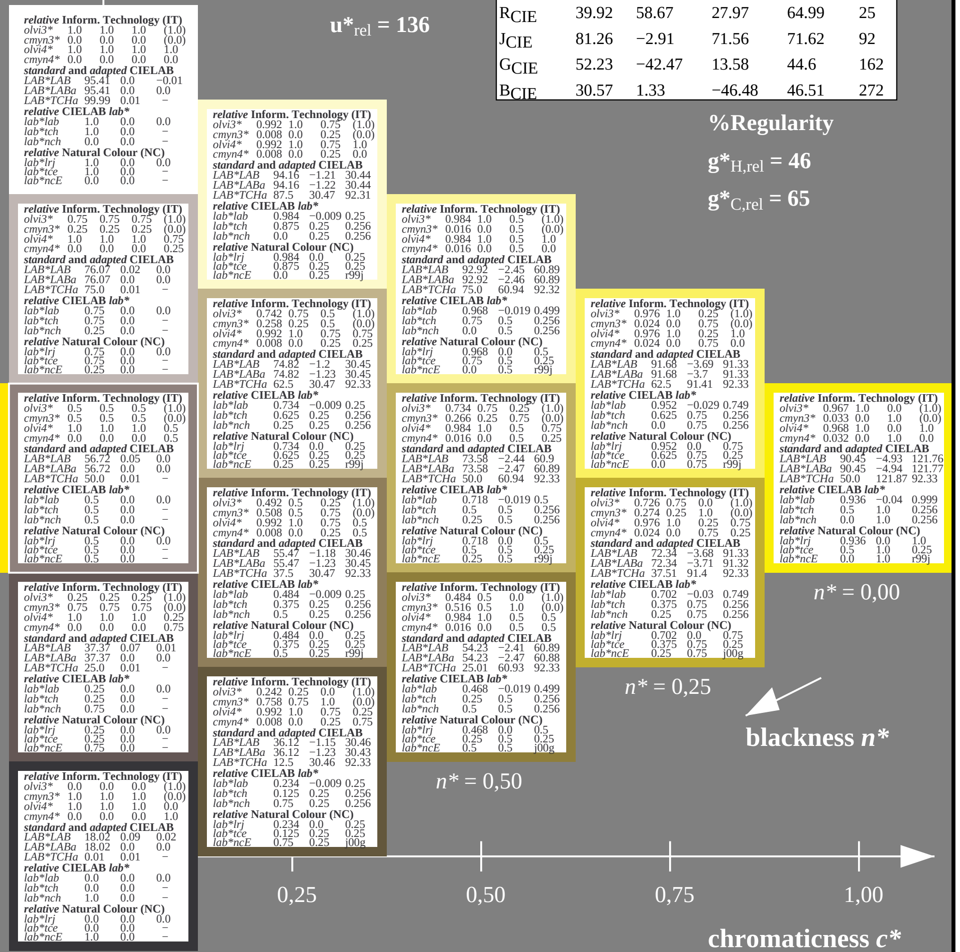
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

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

Input: Colorimetric Reflective System MRS18

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

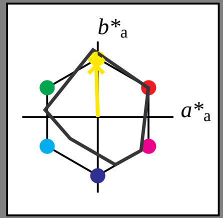
lab*tch and lab*nch

D65: hue J

LCH*Ma: 89 86 92

rgb*Ma: 1.0 0.95 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 91

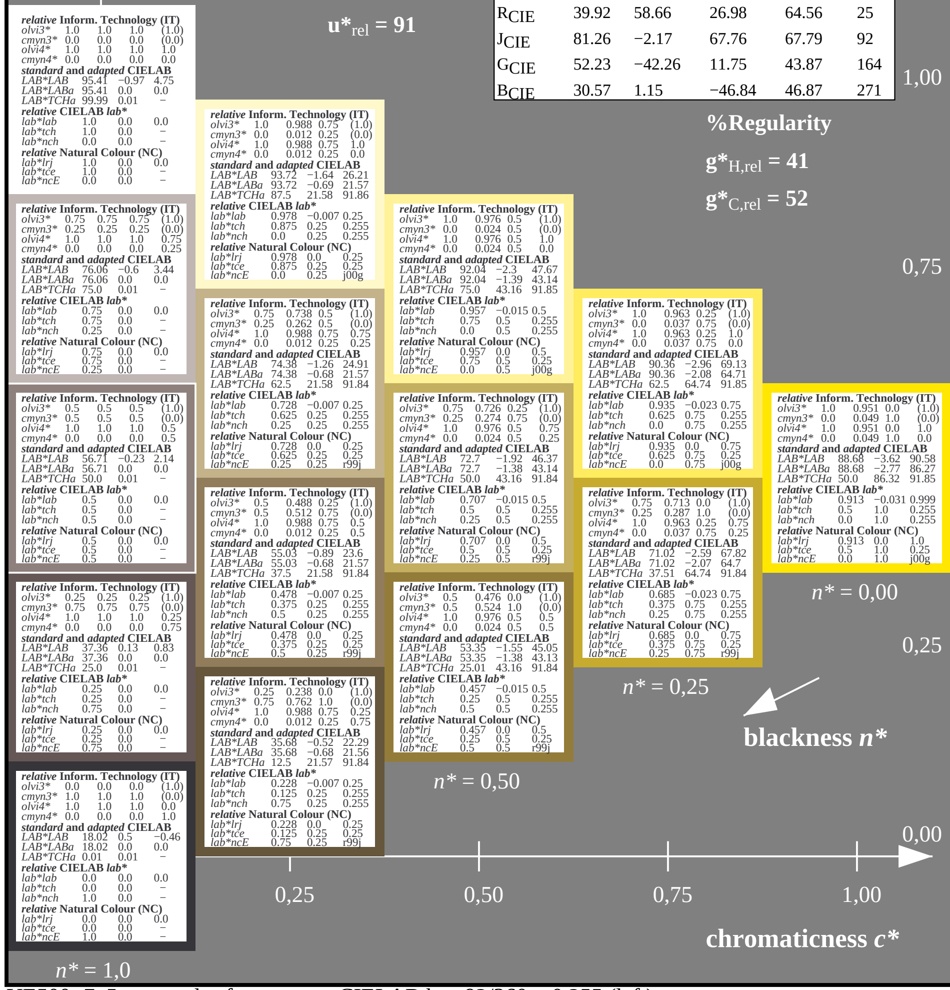
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



Output: Colorimetric Reflective System NRS11

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

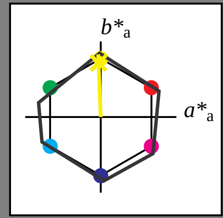
lab*tch and lab*nch

D65: hue J

LCH*Ma: 53 83 92

rgb*Ma: 0.98 1.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 119

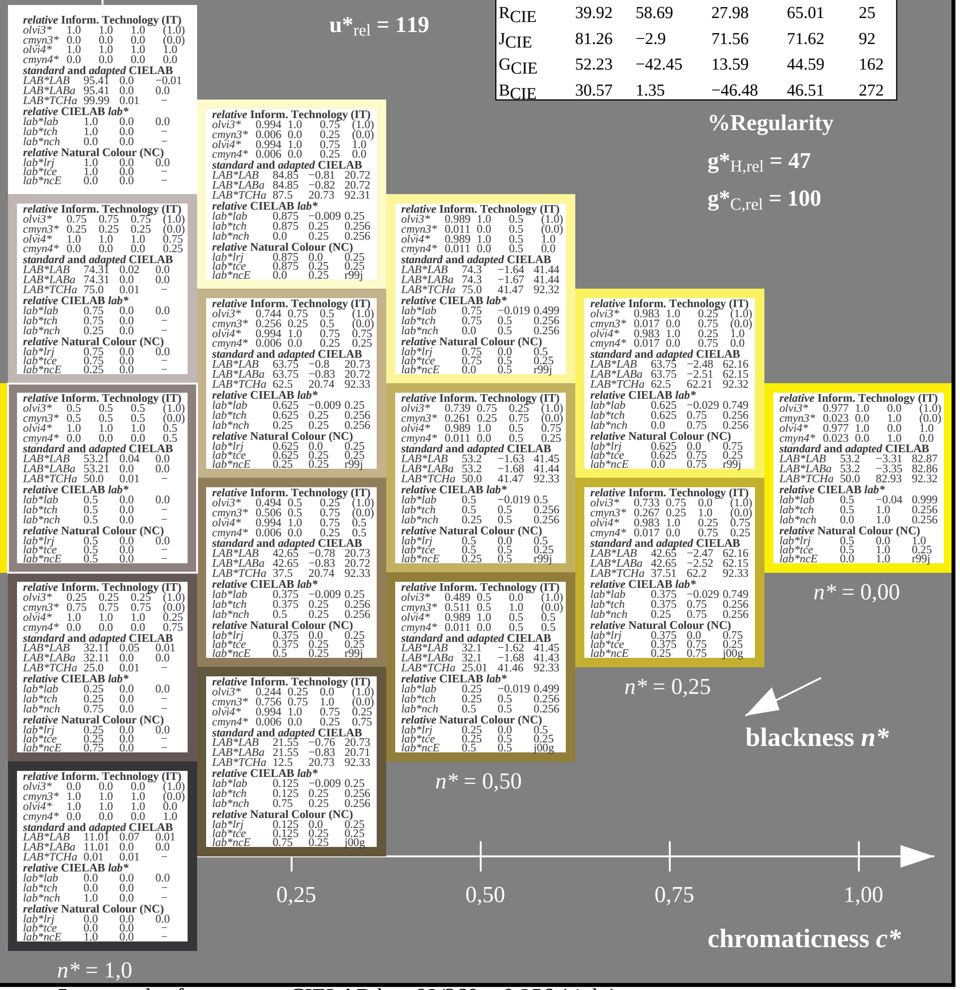
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



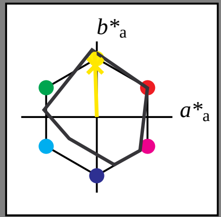
UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

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

Input: Colorimetric Reflective System MRS18
for hue *h = *lab*h* = 92/360 = 0.255**
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 86 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness *t*



%Gamut

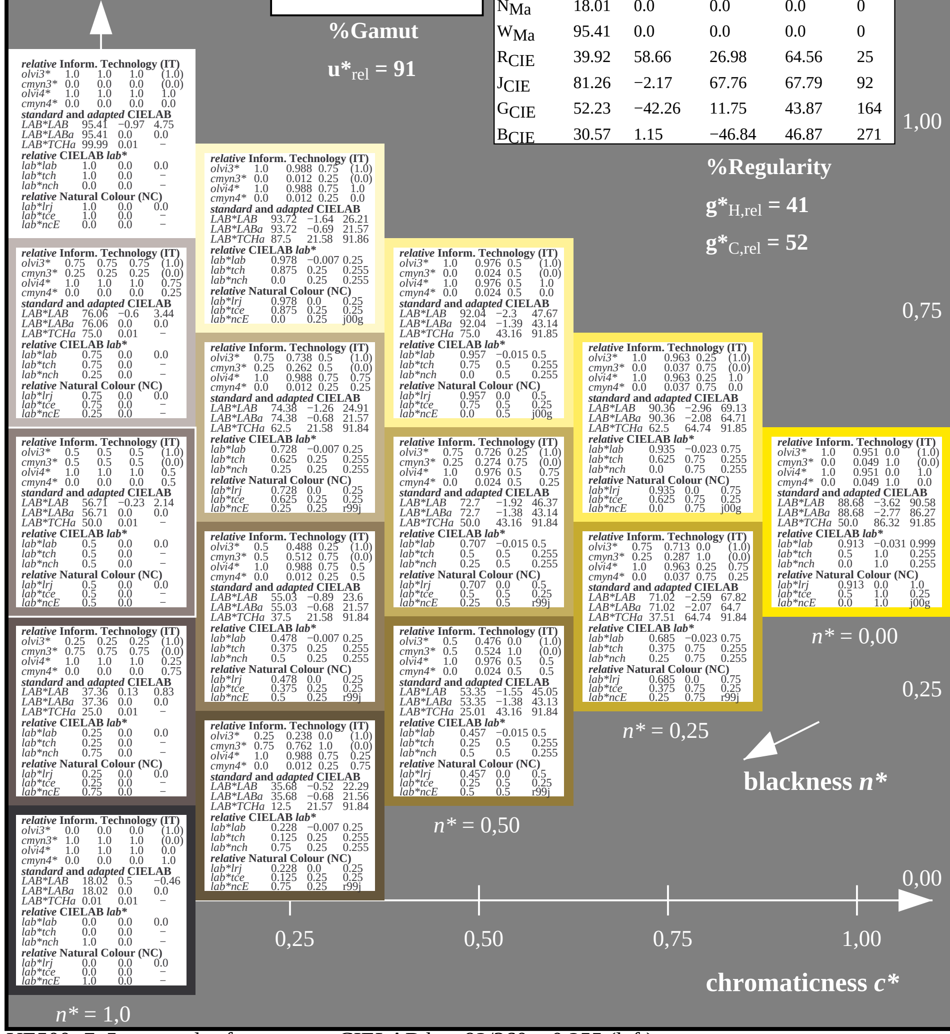
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

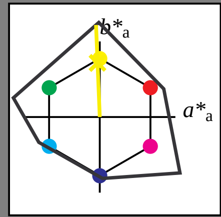
$g^*_{C,rel}$ = 52



Output: Colorimetric Reflective System NCS11
for hue *h = *lab*h* = 92/360 = 0.256**
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness *t*



%Gamut

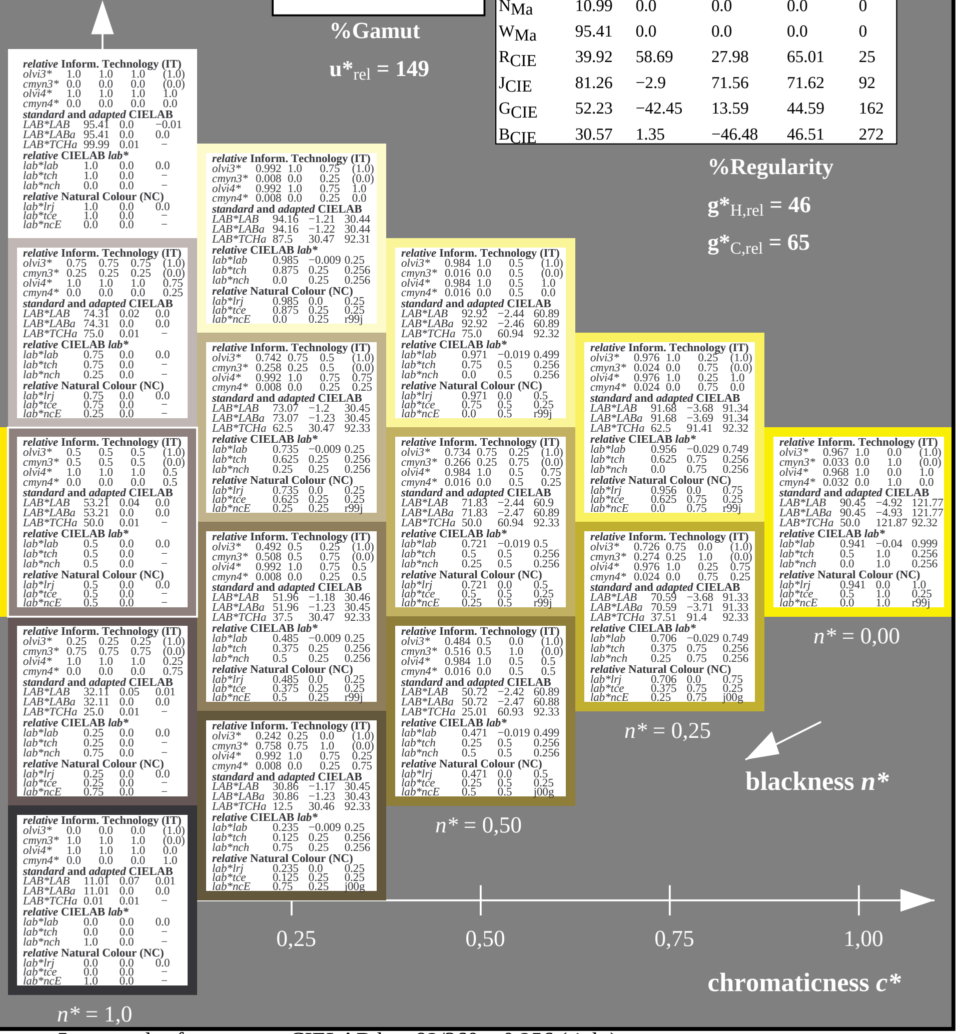
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

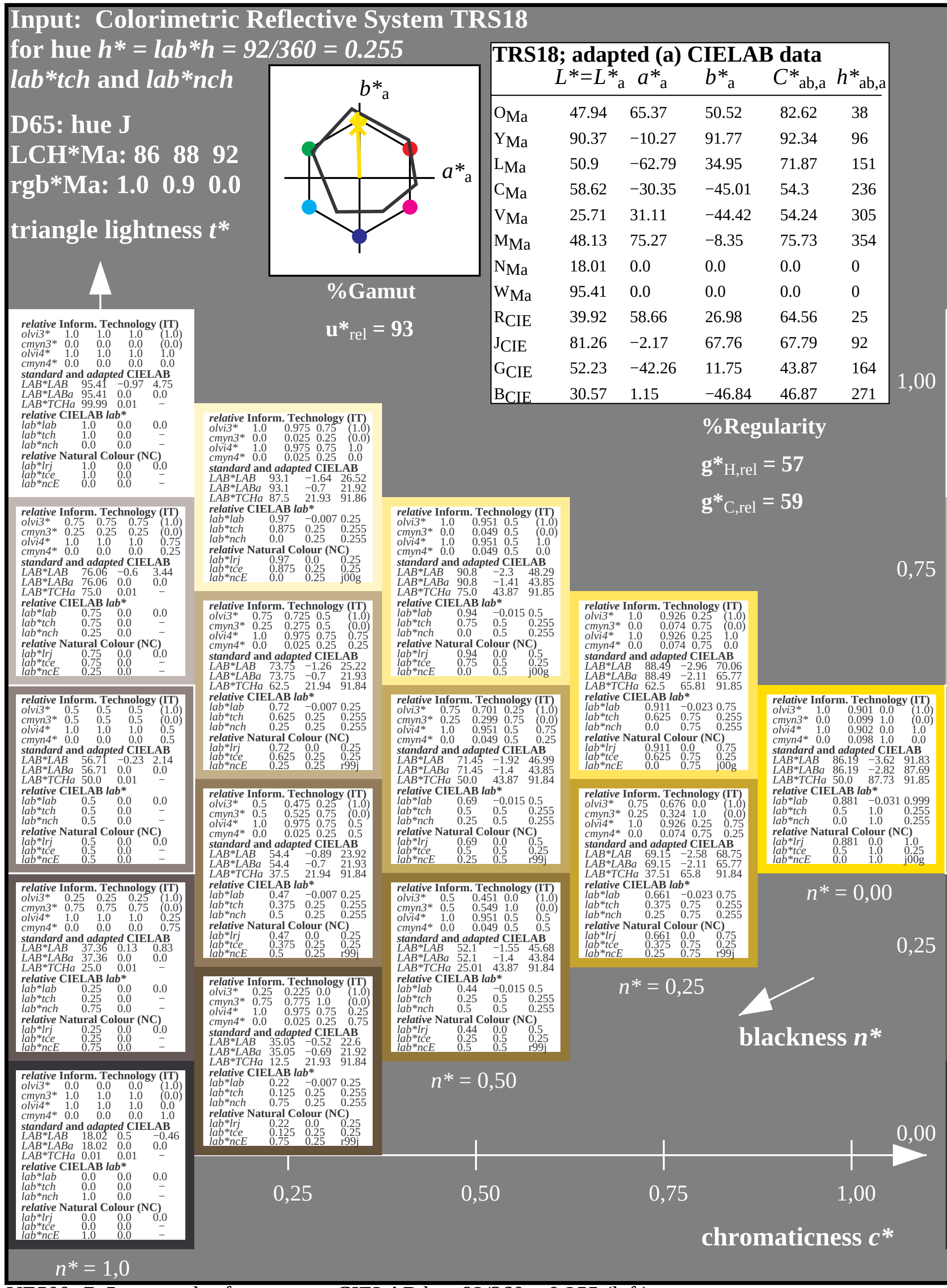
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



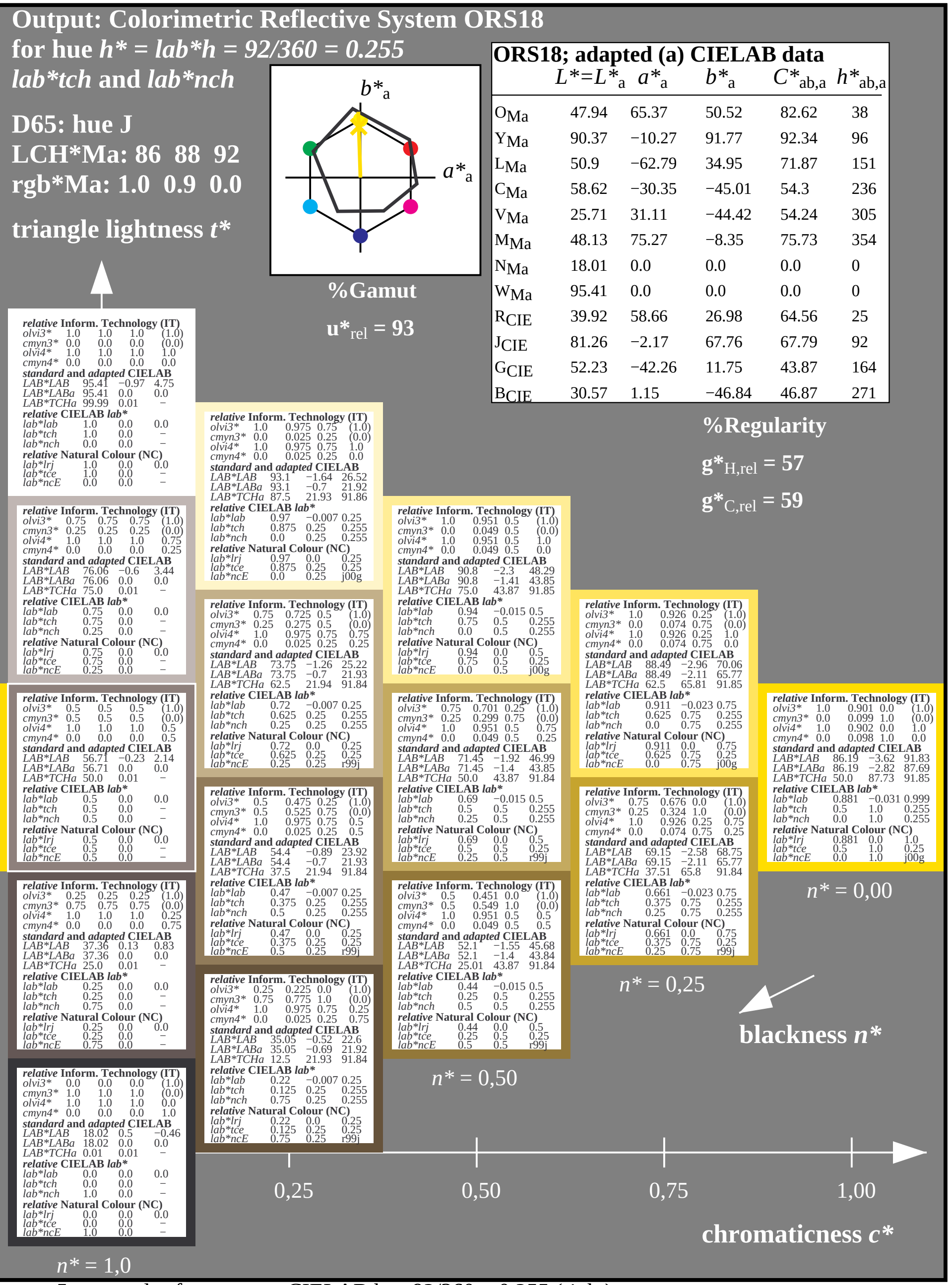
UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

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



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



ORS18; adapted (a) CIELAB data

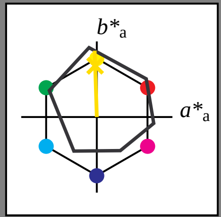
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

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

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
*lab*tch and lab*nch*

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0
triangle lightness t^*

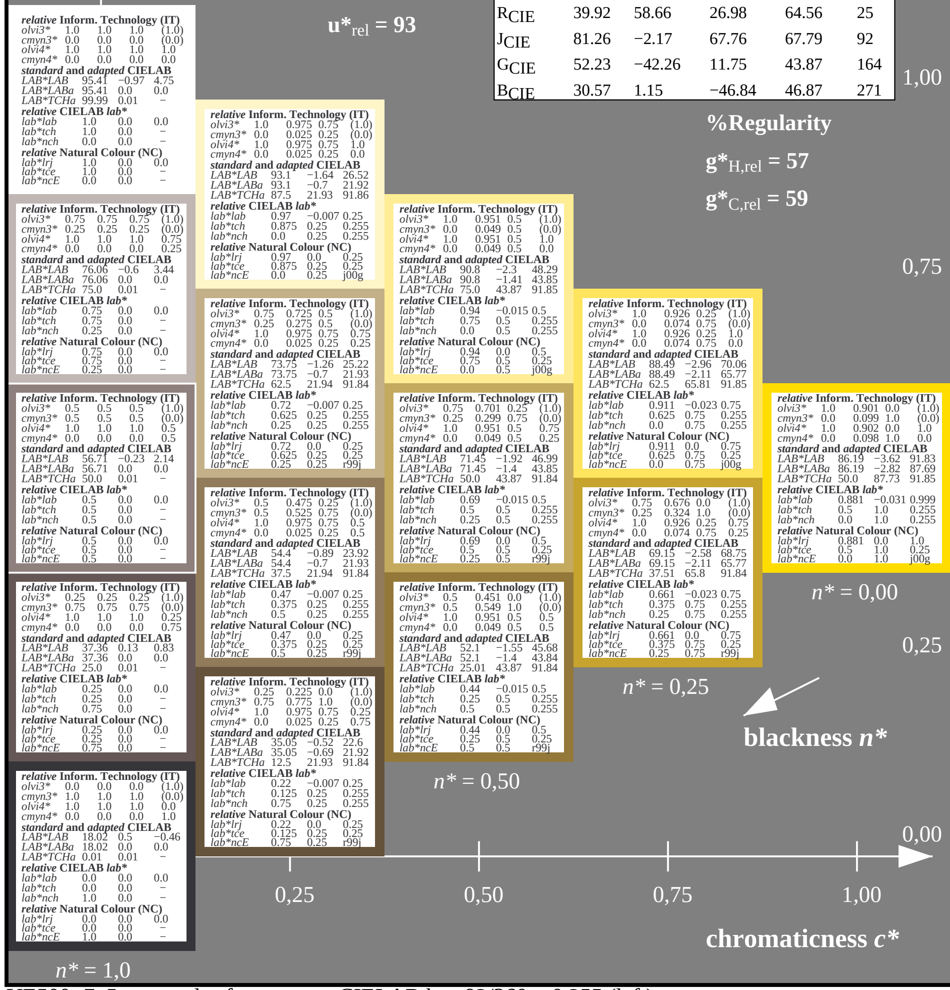


%Gamut
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data

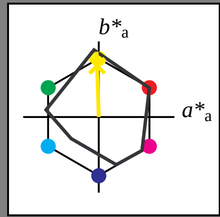
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
*lab*tch and lab*nch*

D65: hue J
LCH*Ma: 89 86 92
rgb*Ma: 1.0 0.95 0.0
triangle lightness t^*

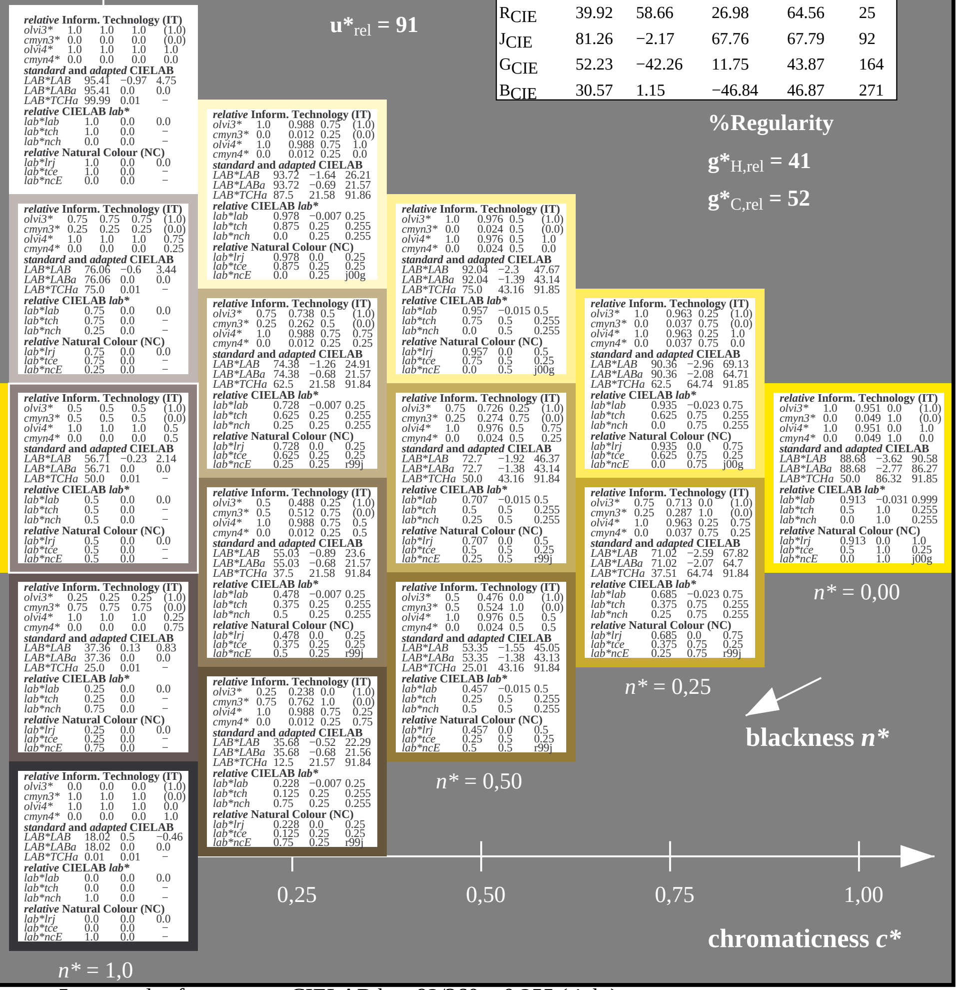


%Gamut
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 41$
$g^*_{C,rel} = 52$



UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

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

Input: Colorimetric Reflective System TRS18

for hue *h** = *lab*h* = 92/360 = 0.255

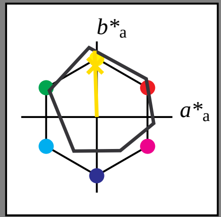
*lab*tch* and *lab*nch*

D65: hue J

LCH*Ma: 86 88 92

rgb*Ma: 1.0 0.9 0.0

triangle lightness *t**



%Gamut

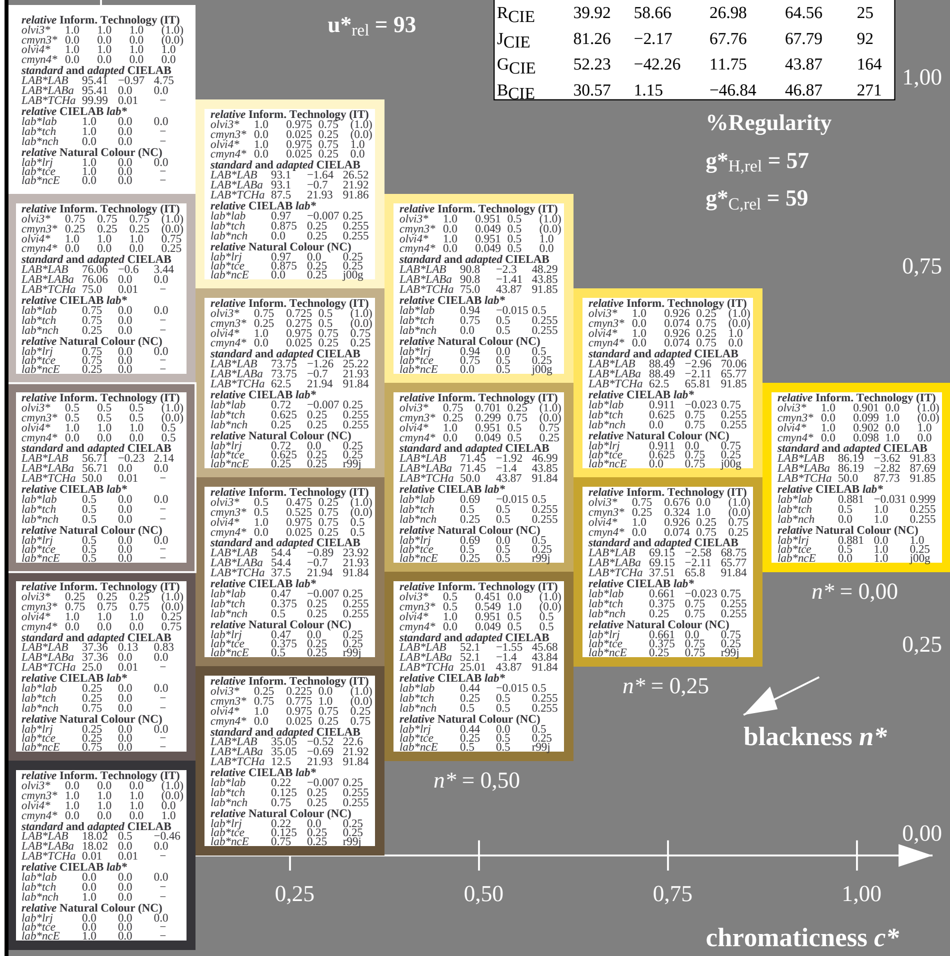
u^*_{rel} = 93

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

Output: Colorimetric Reflective System TRS18

for hue *h** = *lab*h* = 92/360 = 0.255

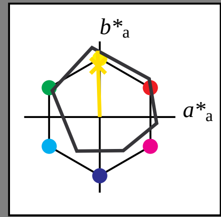
*lab*tch* and *lab*nch*

D65: hue J

LCH*Ma: 86 88 92

rgb*Ma: 1.0 0.9 0.0

triangle lightness *t**



%Gamut

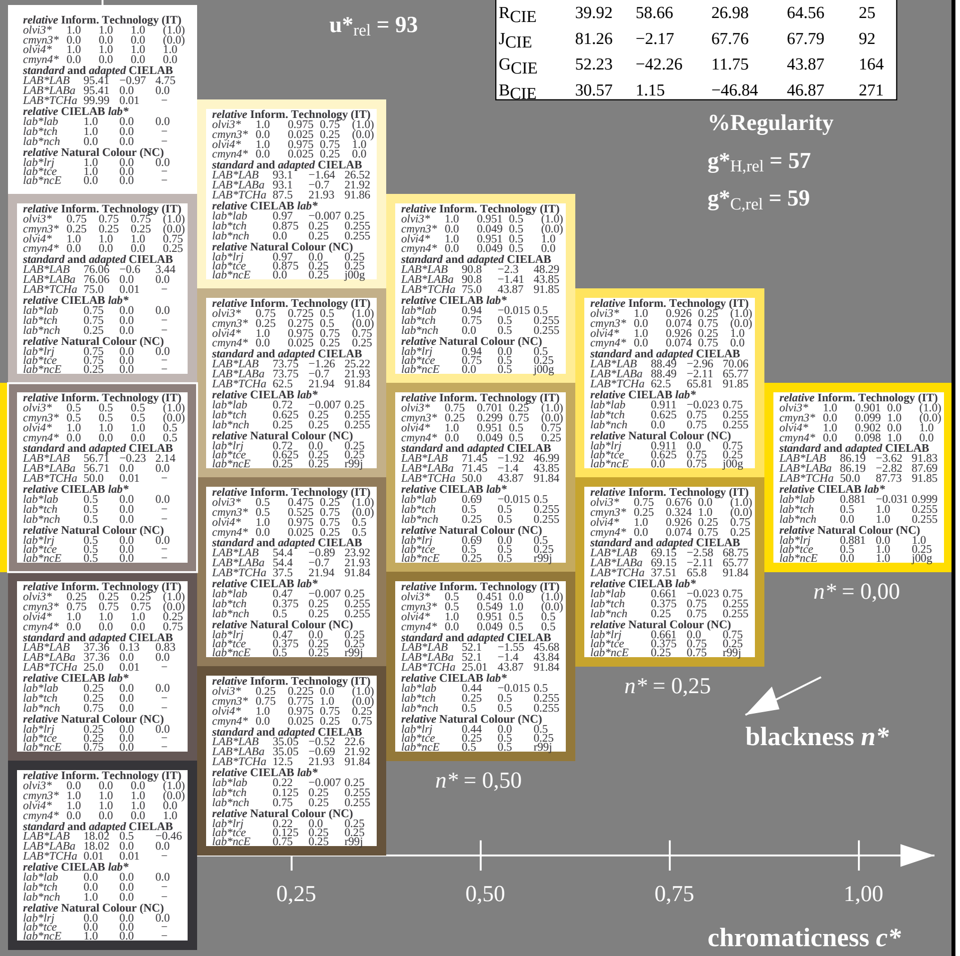
u^*_{rel} = 93

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



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

Input: Colorimetric Reflective System TRS18

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

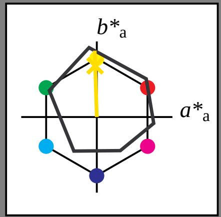
*lab*tch* and *lab*nch*

D65: hue J

LCH*Ma: 86 88 92

rgb*Ma: 1.0 0.9 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

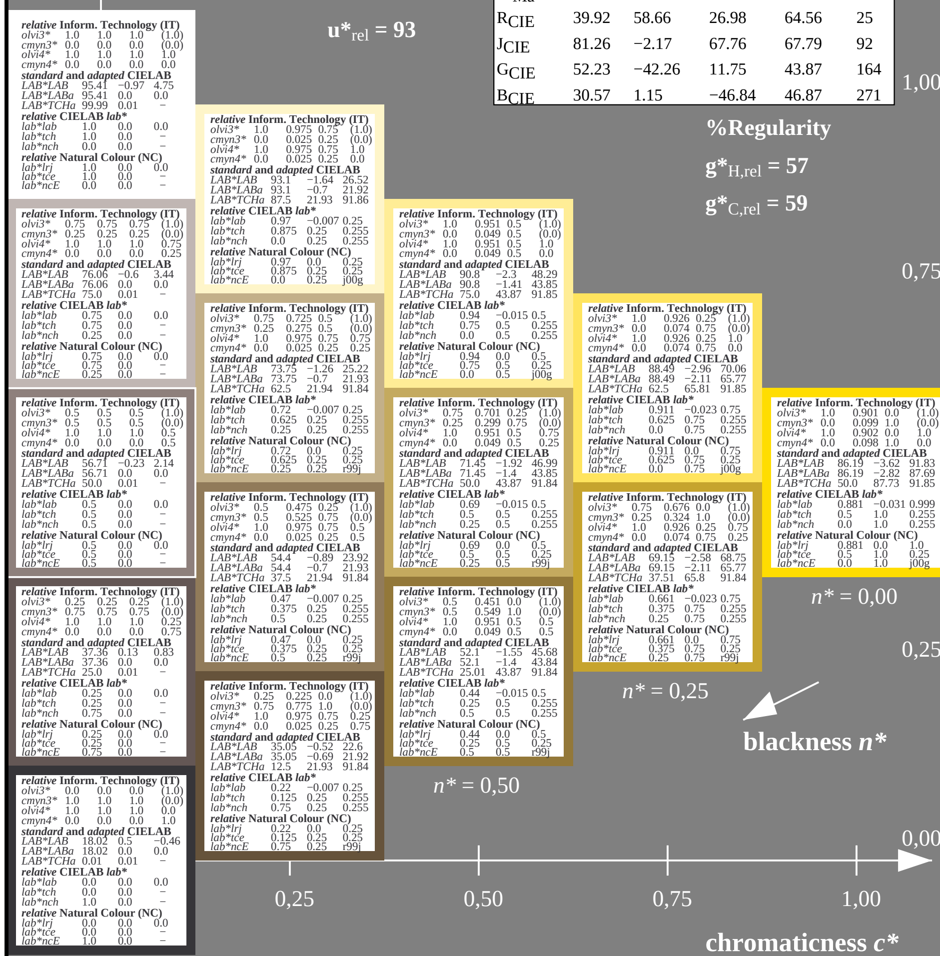
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



Output: Colorimetric Reflective System MRS18a

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

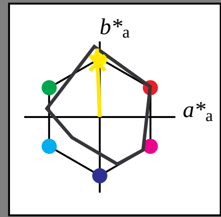
*lab*tch* and *lab*nch*

D65: hue J

LCH*Ma: 89 91 92

rgb*Ma: 1.0 0.95 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 92$

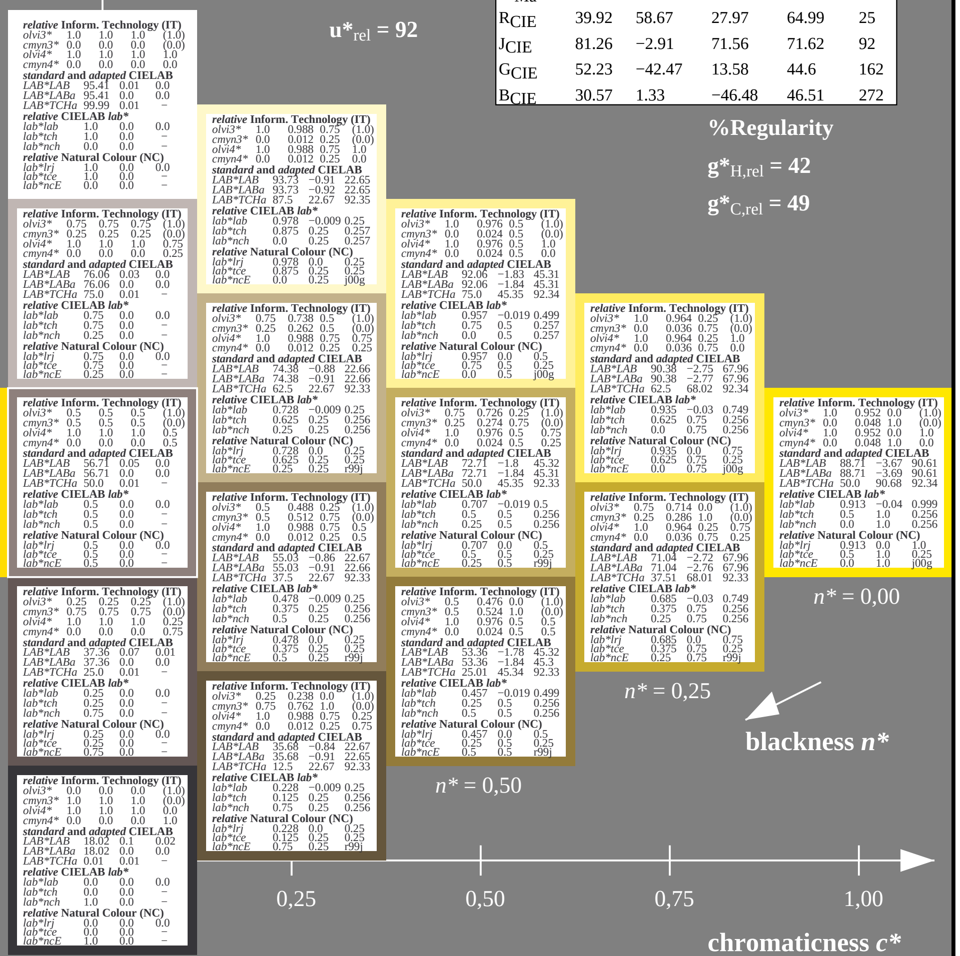
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



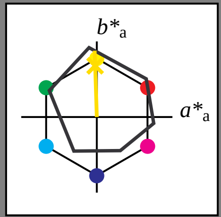
UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

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

Input: Colorimetric Reflective System TRS18
for hue *h = *lab*h* = 92/360 = 0.255**
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness *t**



%Gamut

u^*_{rel} = 93

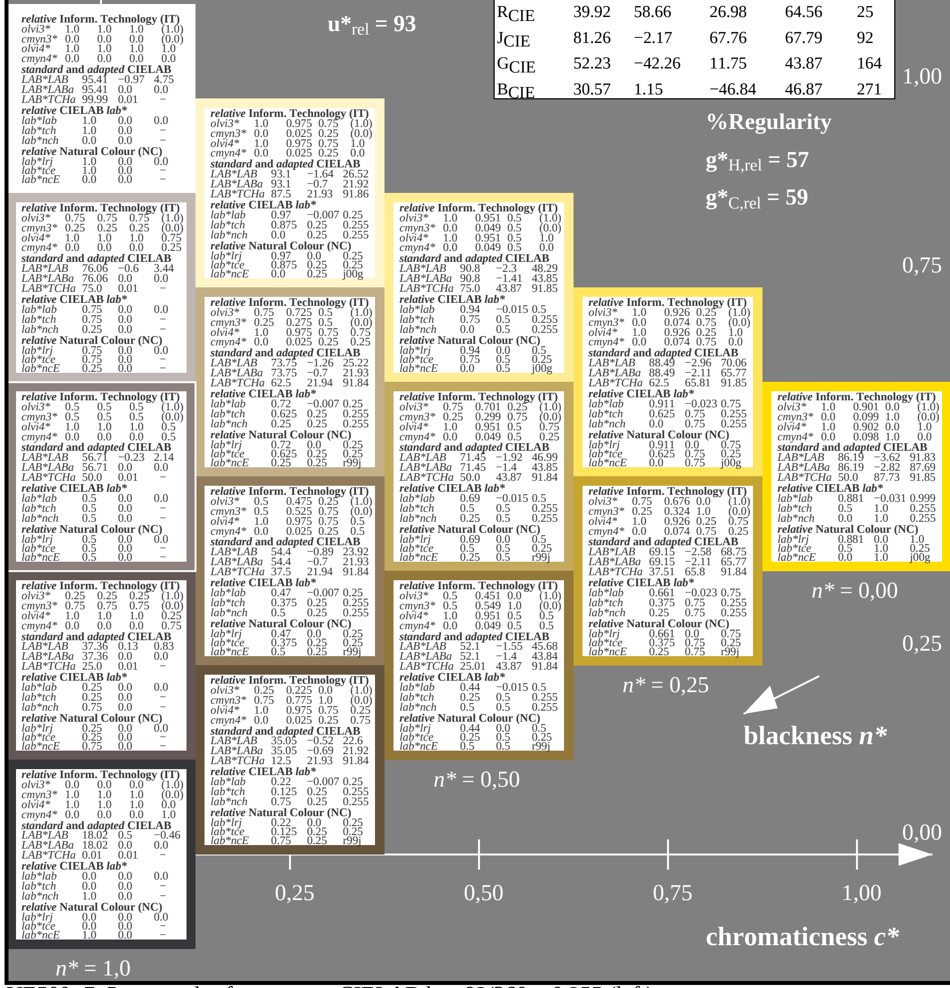
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

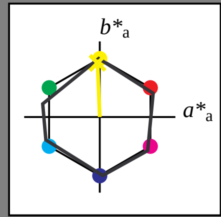
$g^*_{C,rel}$ = 59



Output: Colorimetric Reflective System NRS18
for hue *h = *lab*h* = 92/360 = 0.256**
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 76 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness *t**



%Gamut

u^*_{rel} = 100

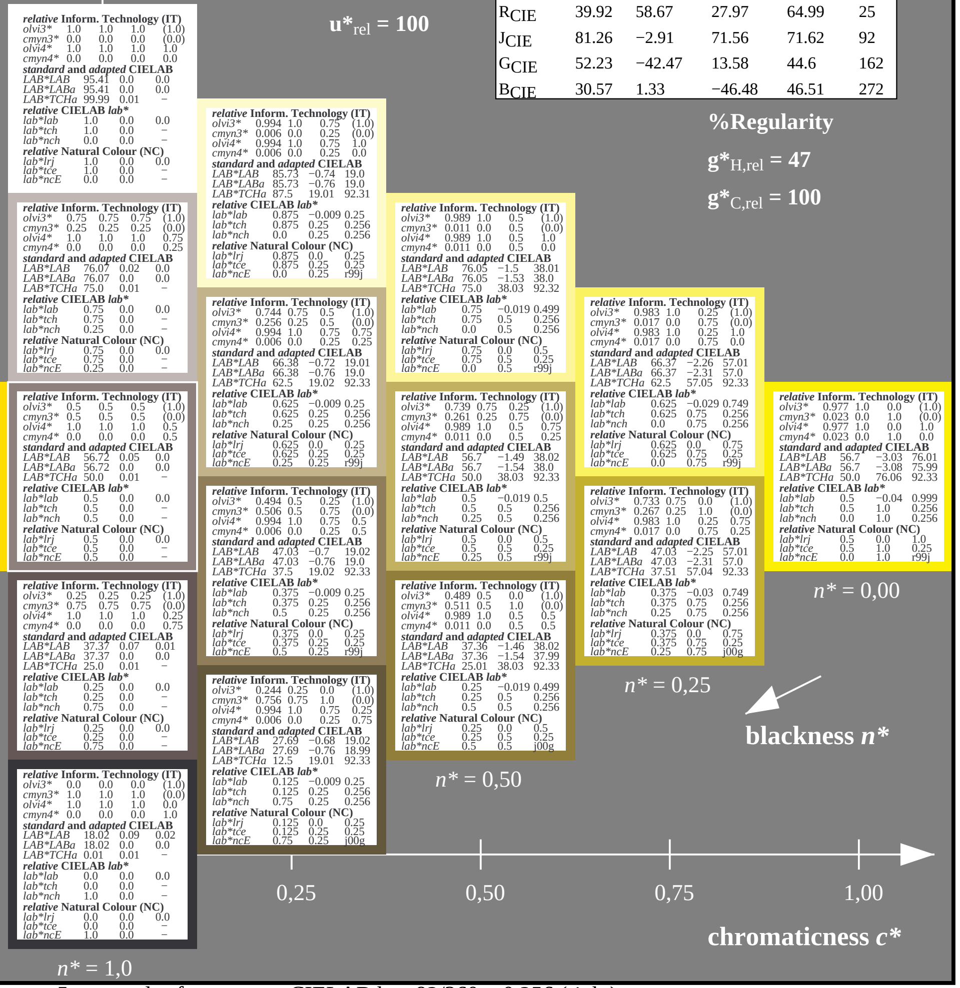
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

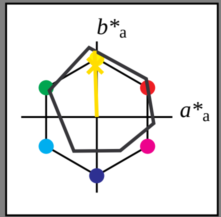


UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

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

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
*lab*tch and lab*nch*

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0
triangle lightness t^*

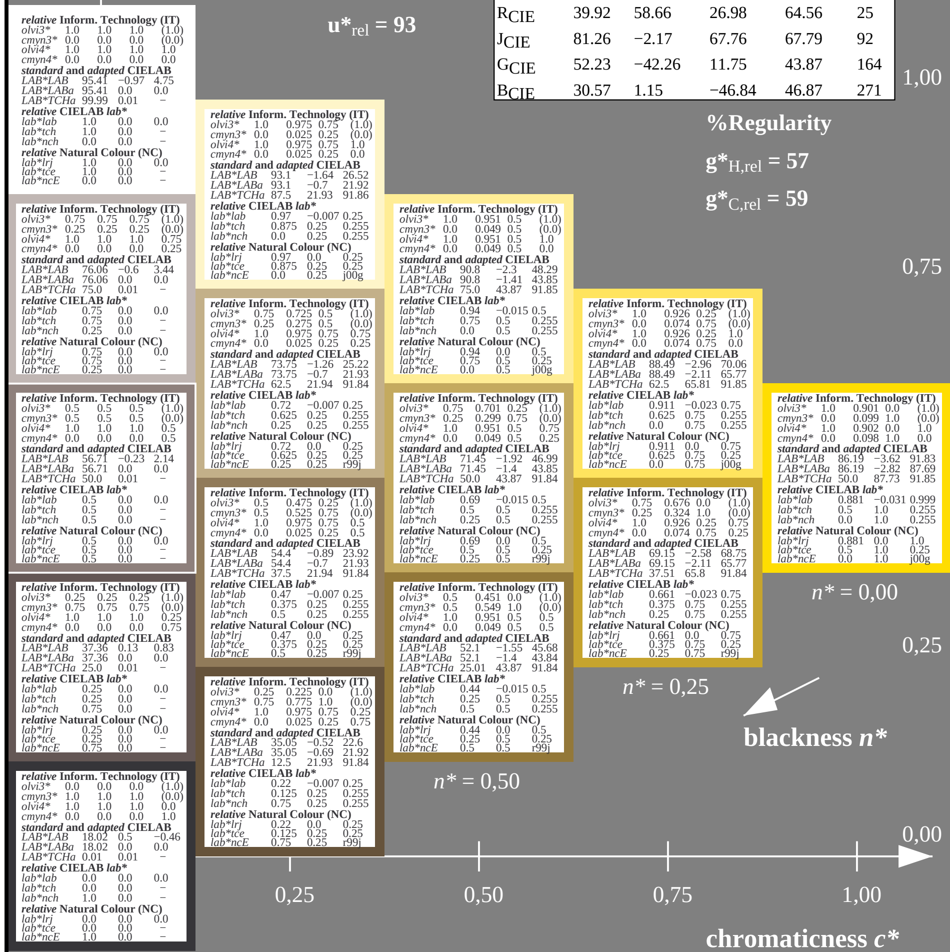


%Gamut
u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

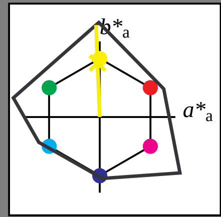
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel}$ = 57
$g^*_{C,rel}$ = 59



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 92/360 = 0.256$
*lab*tch and lab*nch*

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0
triangle lightness t^*

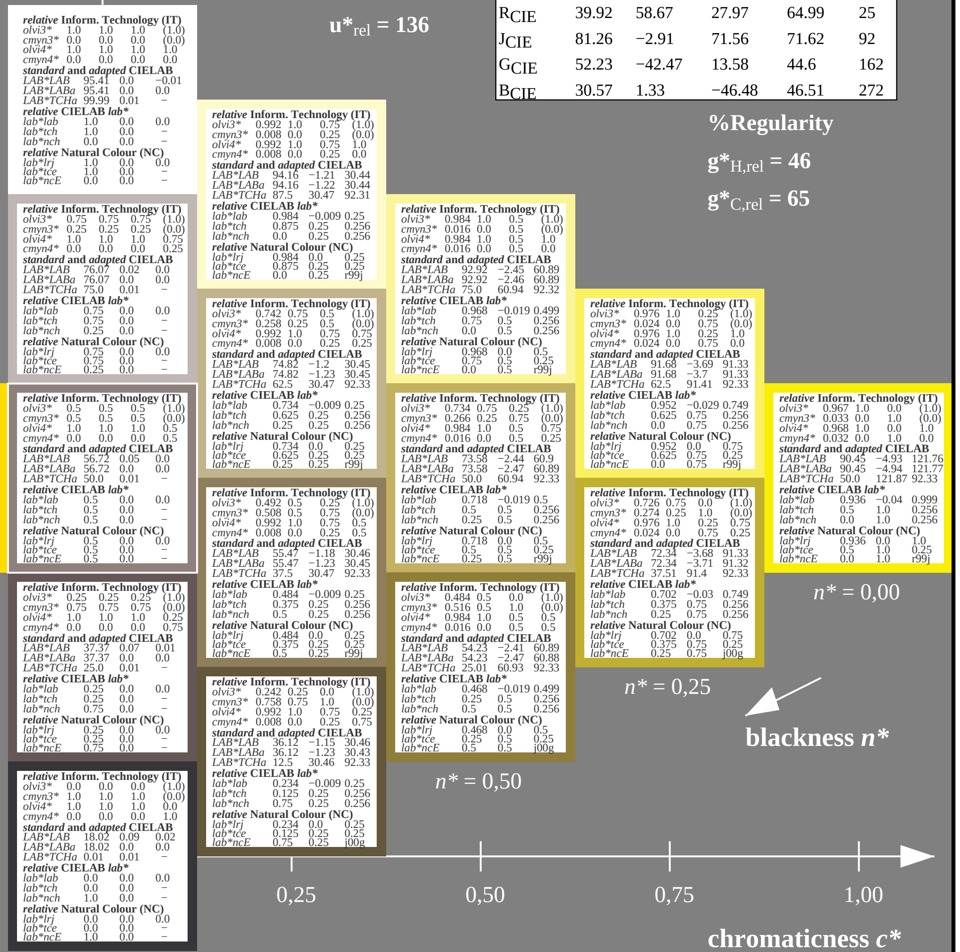


%Gamut
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65

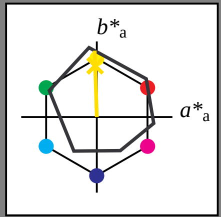


UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

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

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
*lab*tch and lab*nch*

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0
triangle lightness t^*

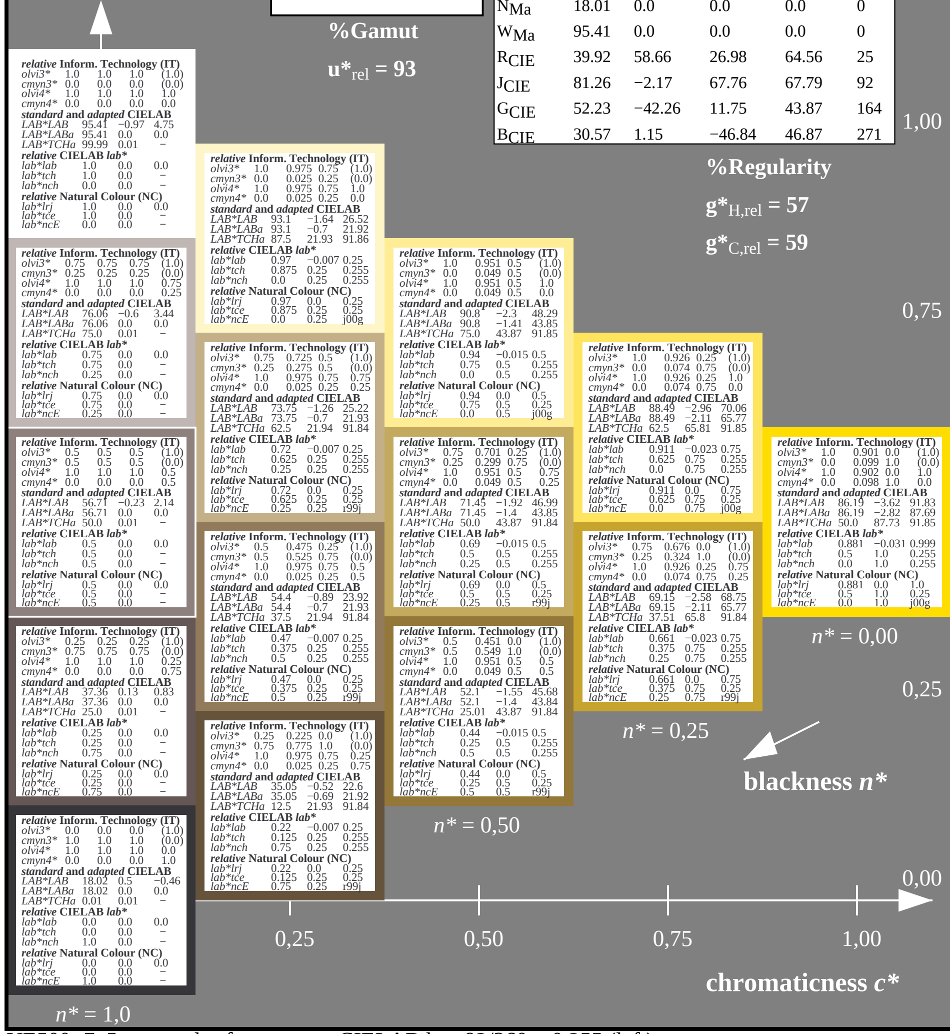


%Gamut
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data

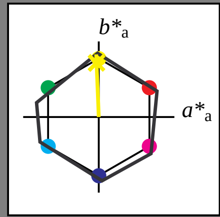
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 92/360 = 0.256$
*lab*tch and lab*nch*

D65: hue J
LCH*Ma: 53 83 92
rgb*Ma: 0.98 1.0 0.0
triangle lightness t^*

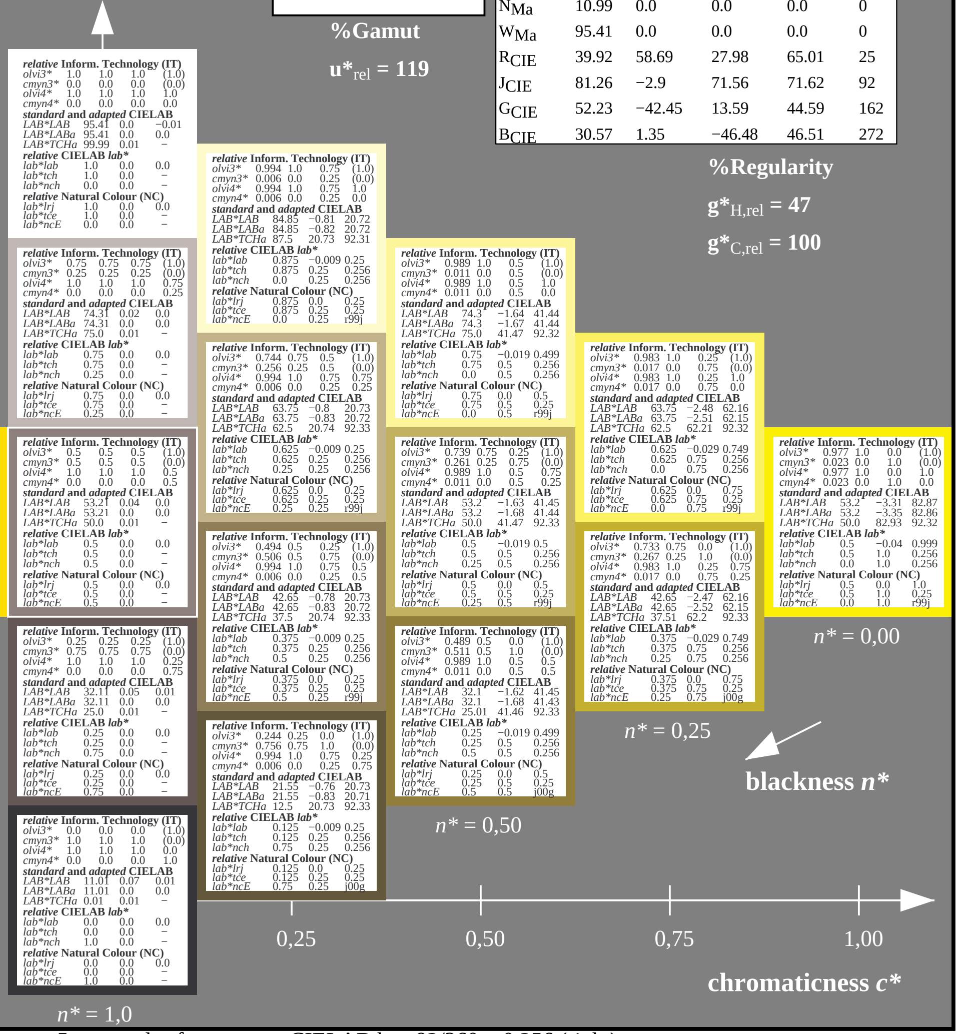


%Gamut
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



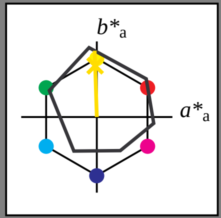
UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

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

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

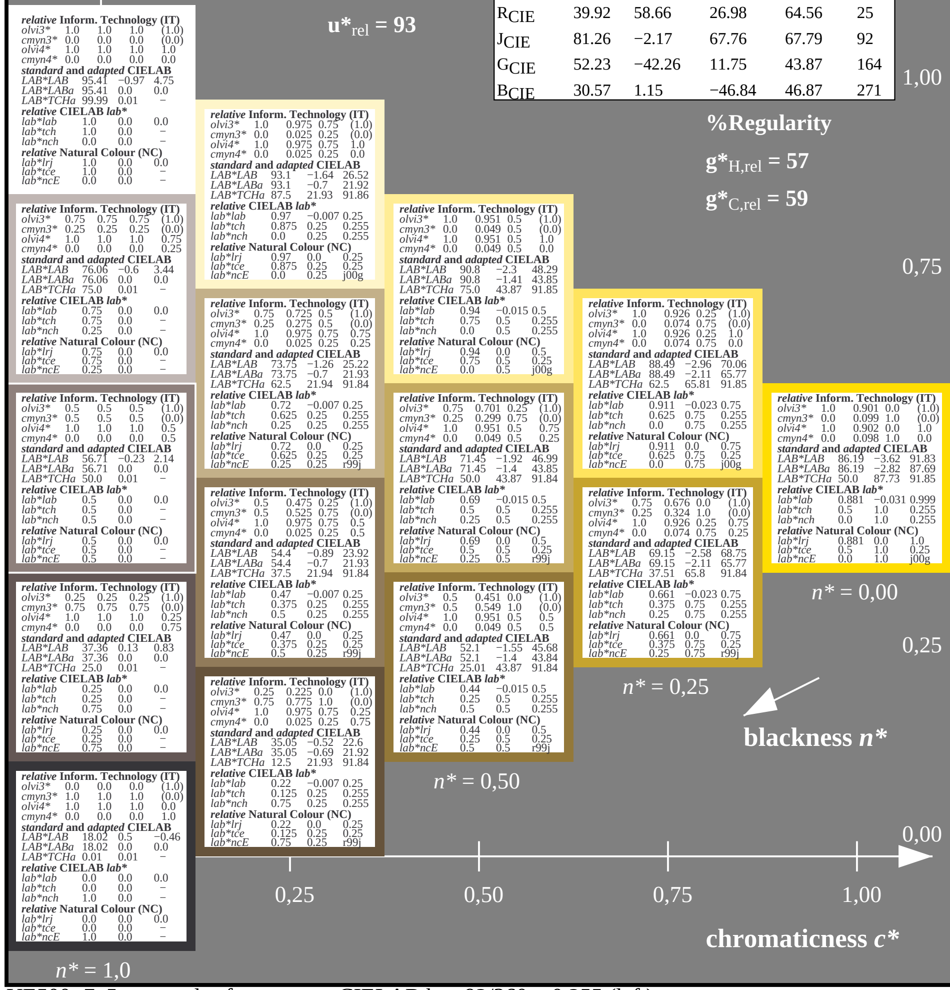
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

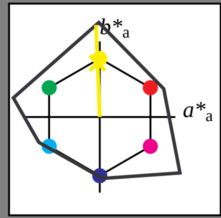
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 149$

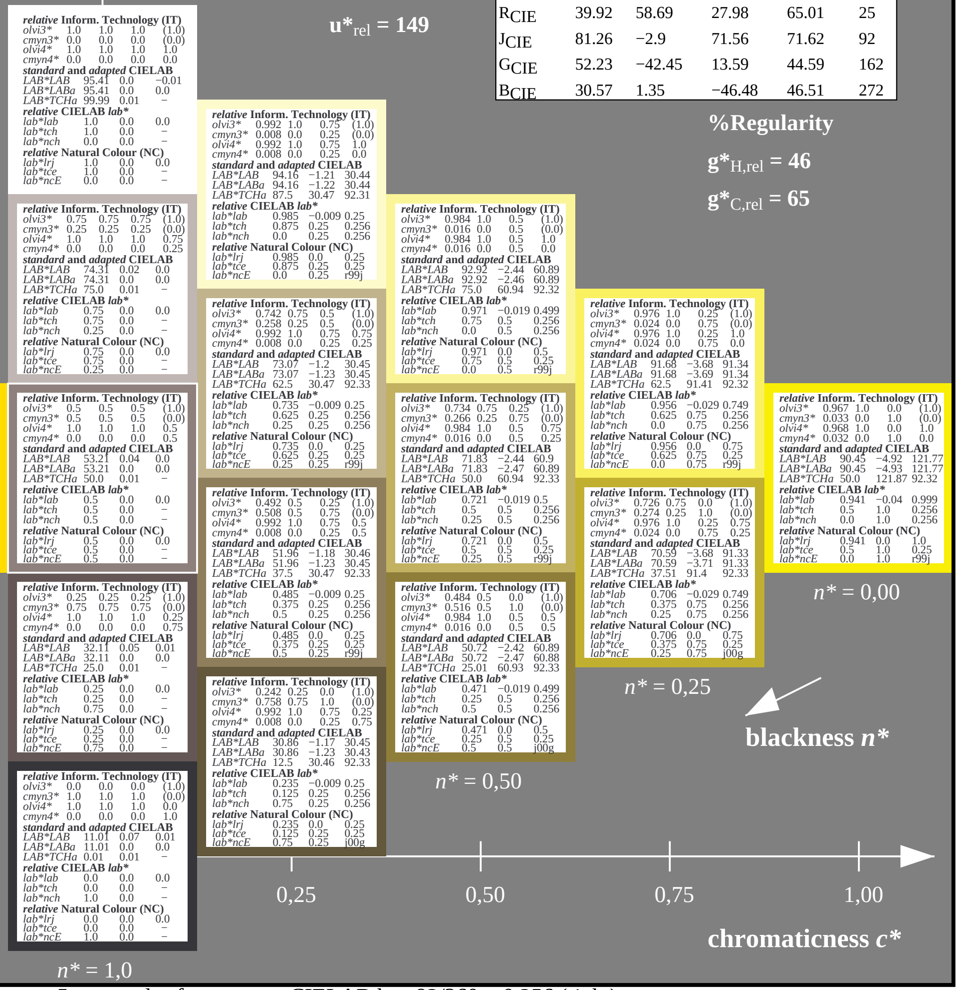
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

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

Input: Colorimetric Reflective System MRS18a

for hue *h = *lab*h* = 92/360 = 0.256***

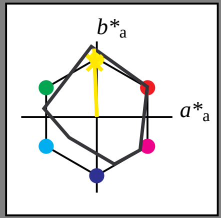
lab*tch* and *lab*nch

D65: hue J

LCH*Ma: 89 91 92

rgb*Ma: 1.0 0.95 0.0

triangle lightness *t**



%Gamut

u*rel = 92

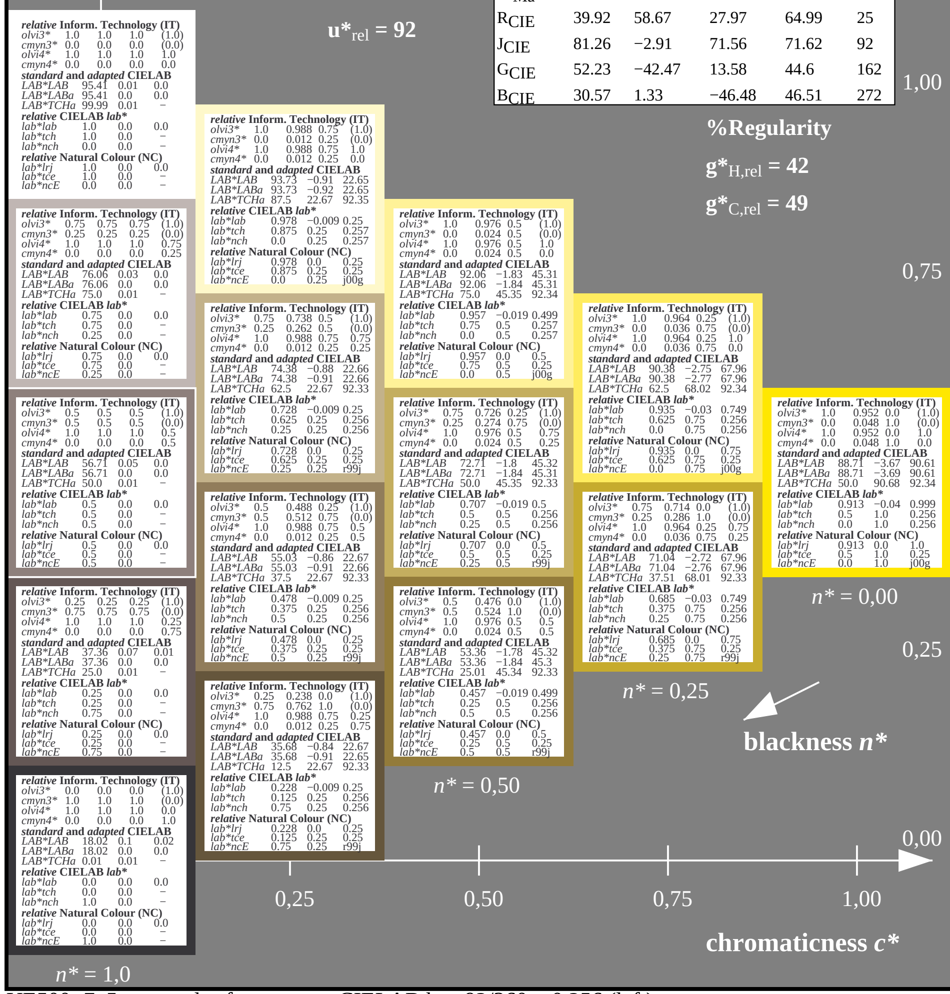
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

g*H,rel = 42

g*C,rel = 49



Output: Colorimetric Reflective System ORS18

for hue *h = *lab*h* = 92/360 = 0.255***

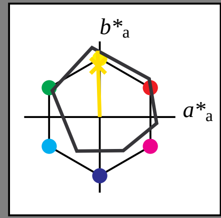
lab*tch* and *lab*nch

D65: hue J

LCH*Ma: 86 88 92

rgb*Ma: 1.0 0.9 0.0

triangle lightness *t**



%Gamut

u*rel = 93

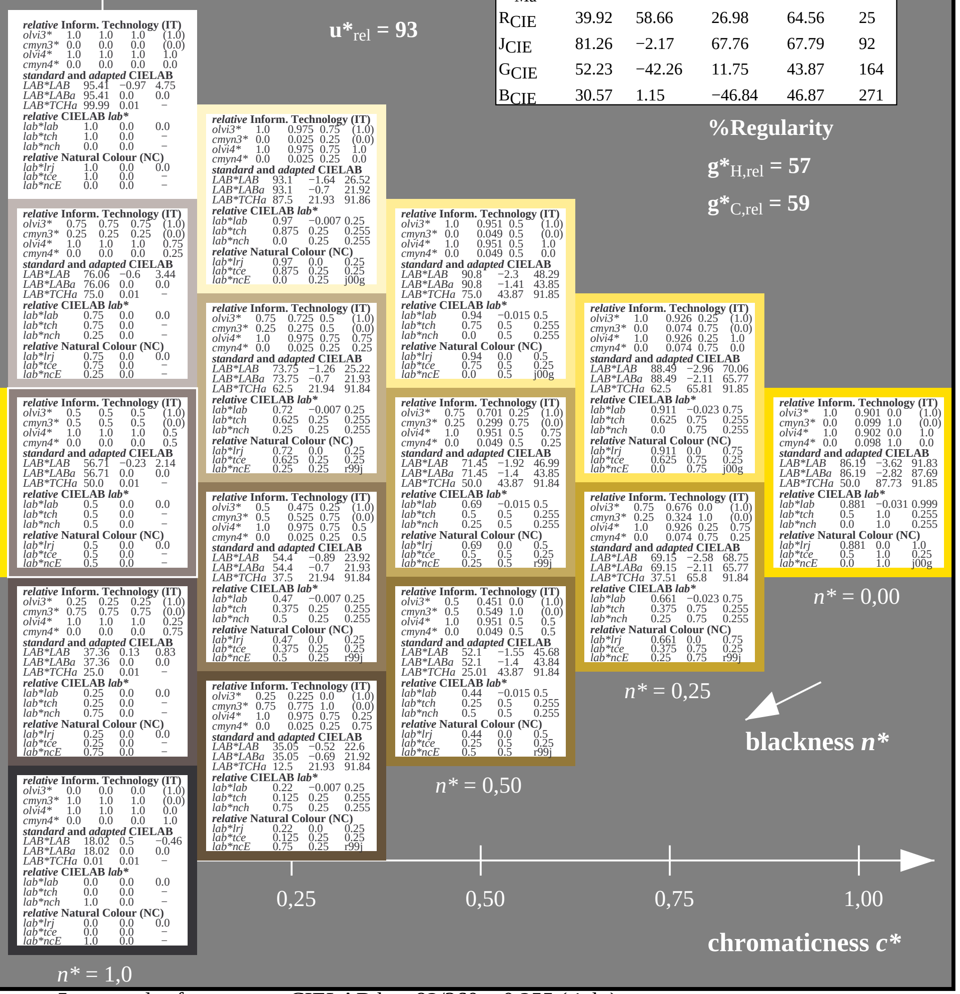
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

g*H,rel = 57

g*C,rel = 59



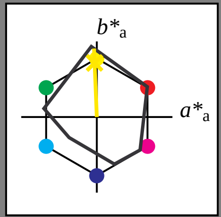
UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 92/360 = 0.256$
*lab*tch and lab*nch*

D65: hue J
LCH*Ma: 89 91 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness t^*



%Gamut

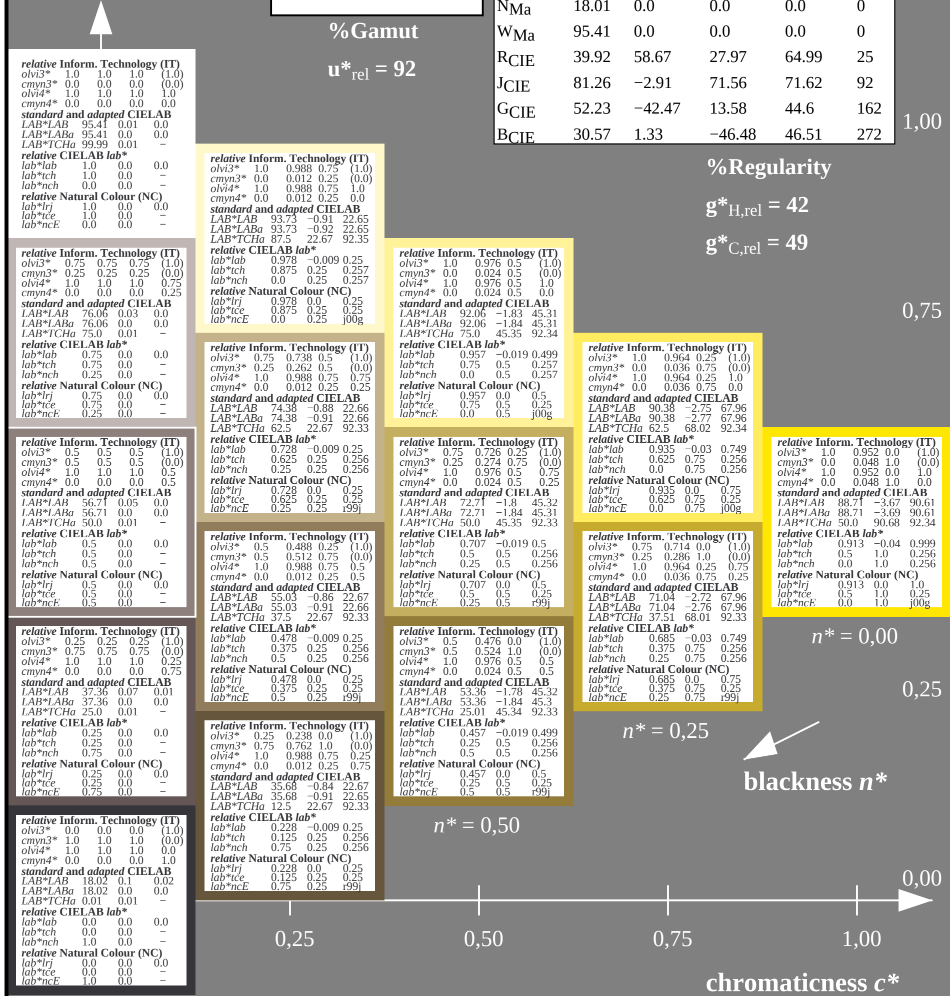
u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

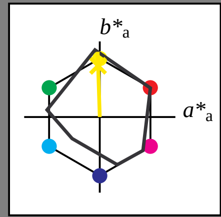
$g^*_{C,rel}$ = 49



Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
*lab*tch and lab*nch*

D65: hue J
LCH*Ma: 89 86 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness t^*



%Gamut

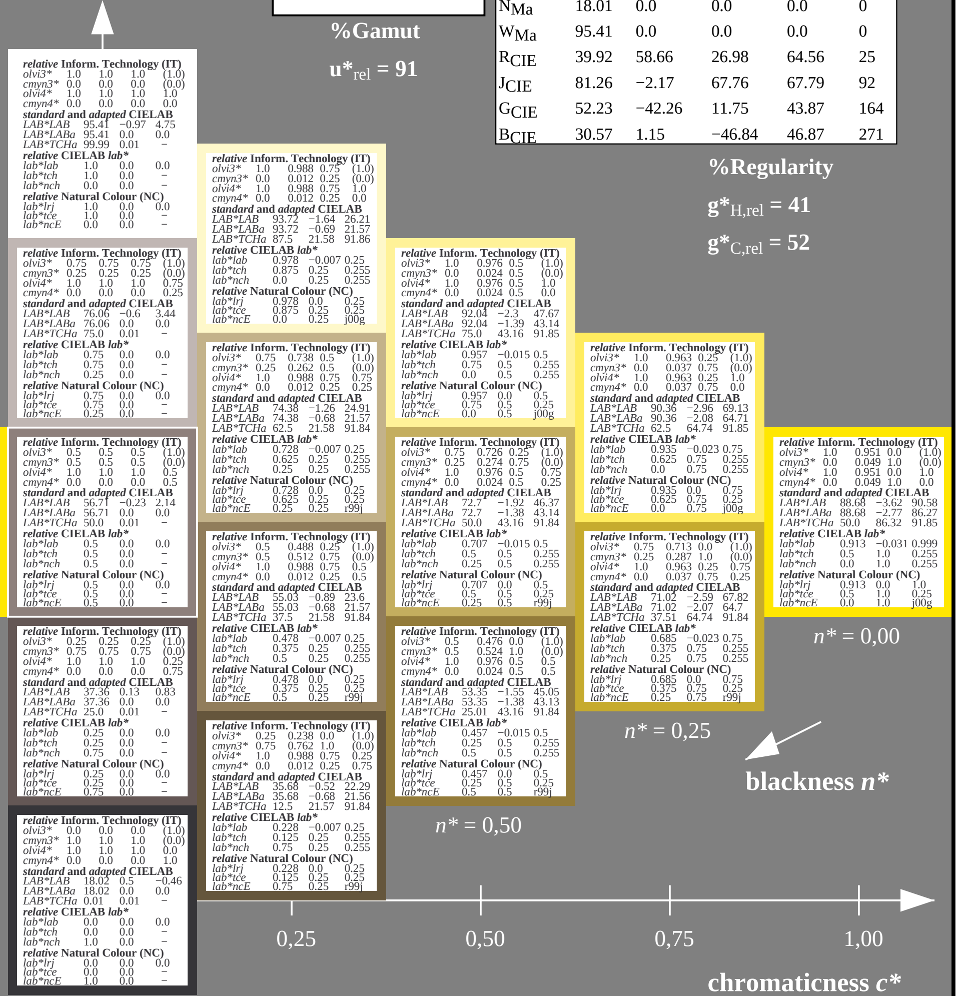
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



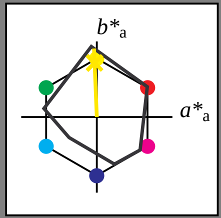
UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 91 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness t^*



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

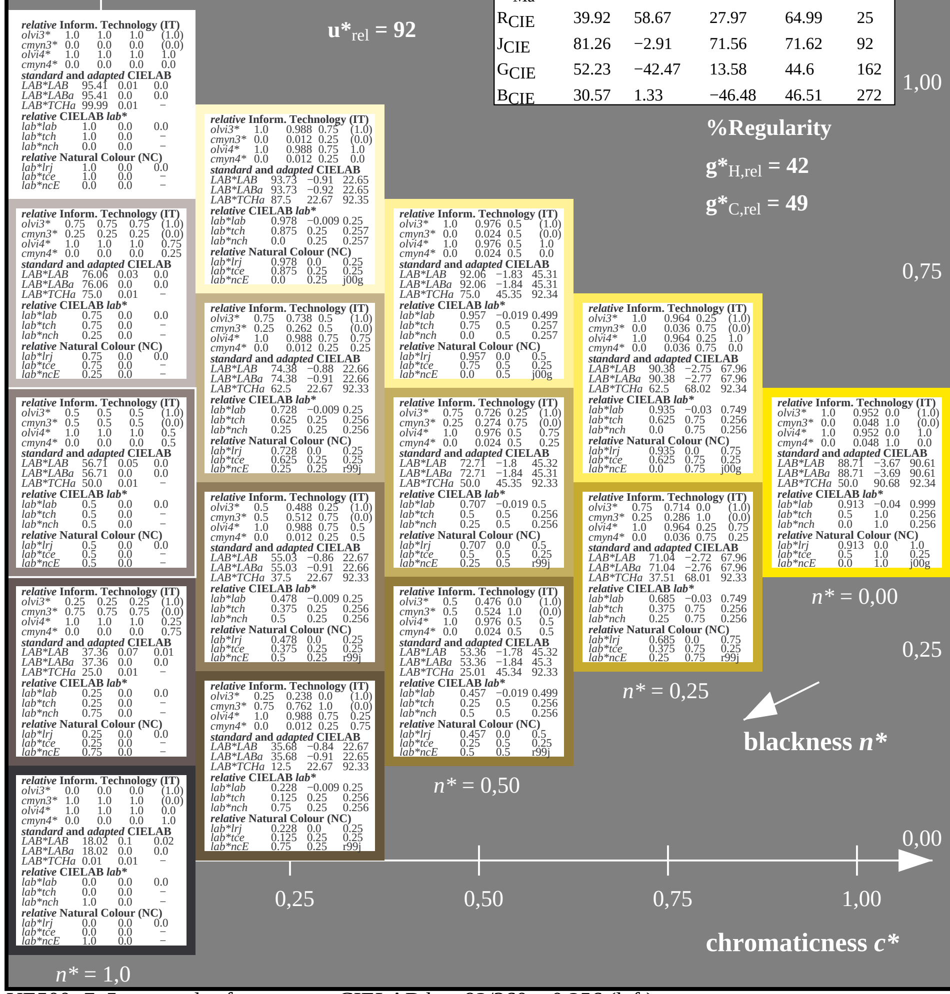
%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

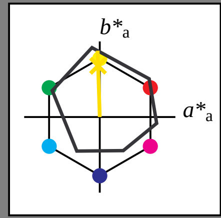
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness t^*



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

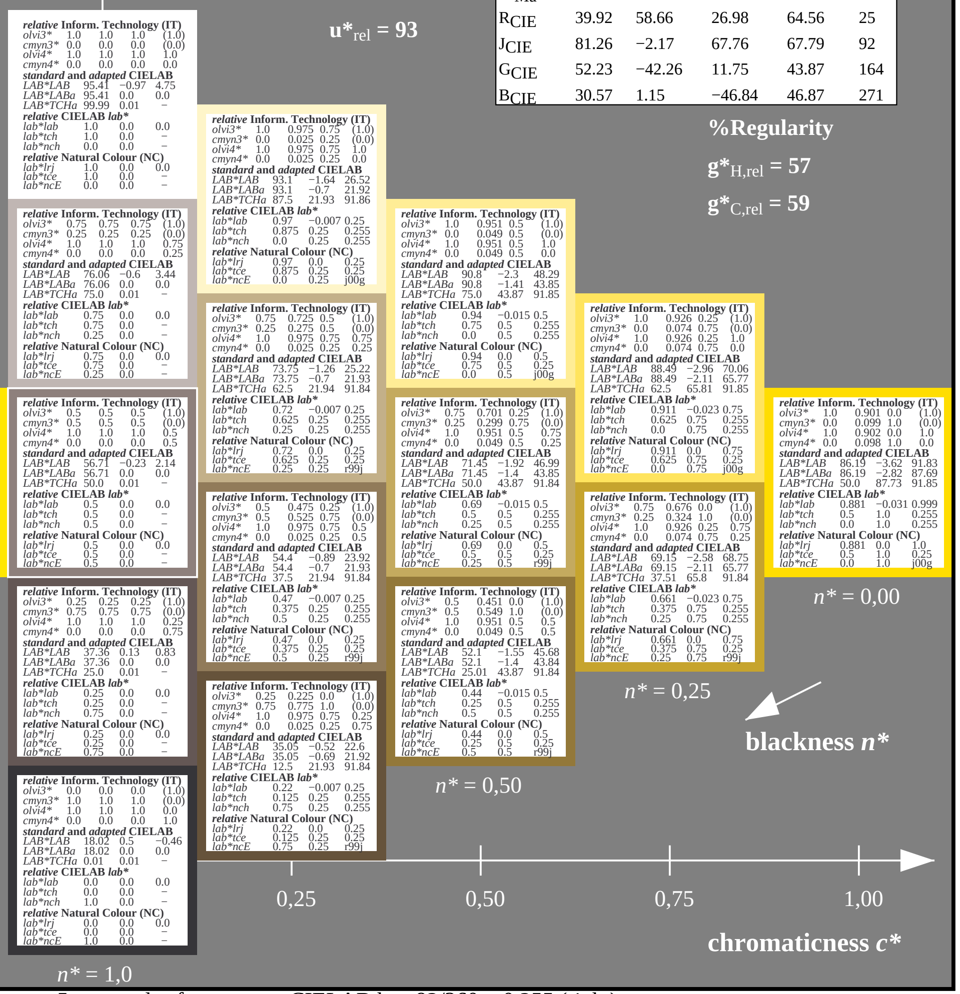
%Gamut

$u^*_{rel} = 93$

%Regularity

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

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



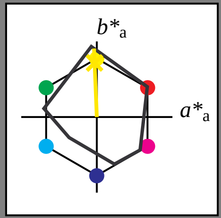
UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System MRS18a
for hue *h = *lab*h* = 92/360 = 0.256**
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 91 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness *t**



%Gamut

u^*_{rel} = 92

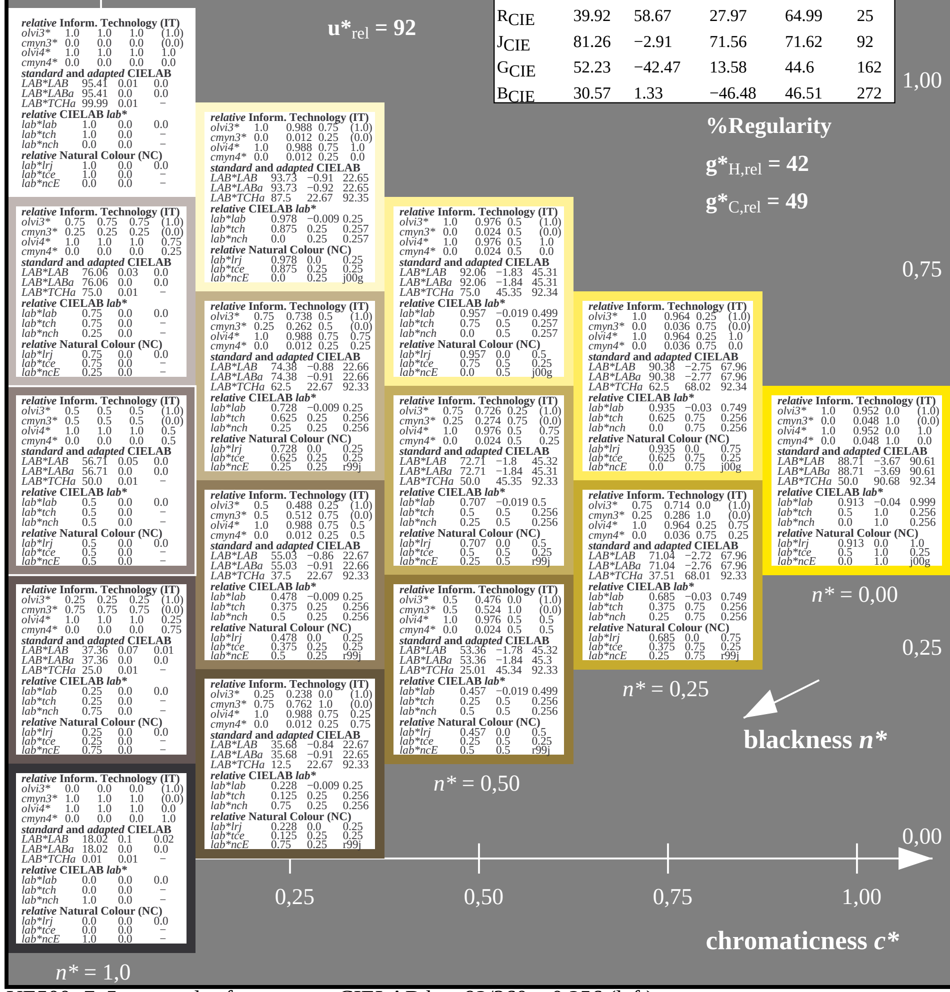
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

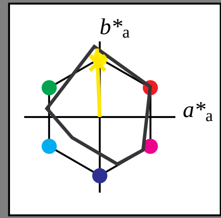
$g^*_{C,rel}$ = 49



Output: Colorimetric Reflective System MRS18a
for hue *h = *lab*h* = 92/360 = 0.256**
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 91 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness *t**



%Gamut

u^*_{rel} = 92

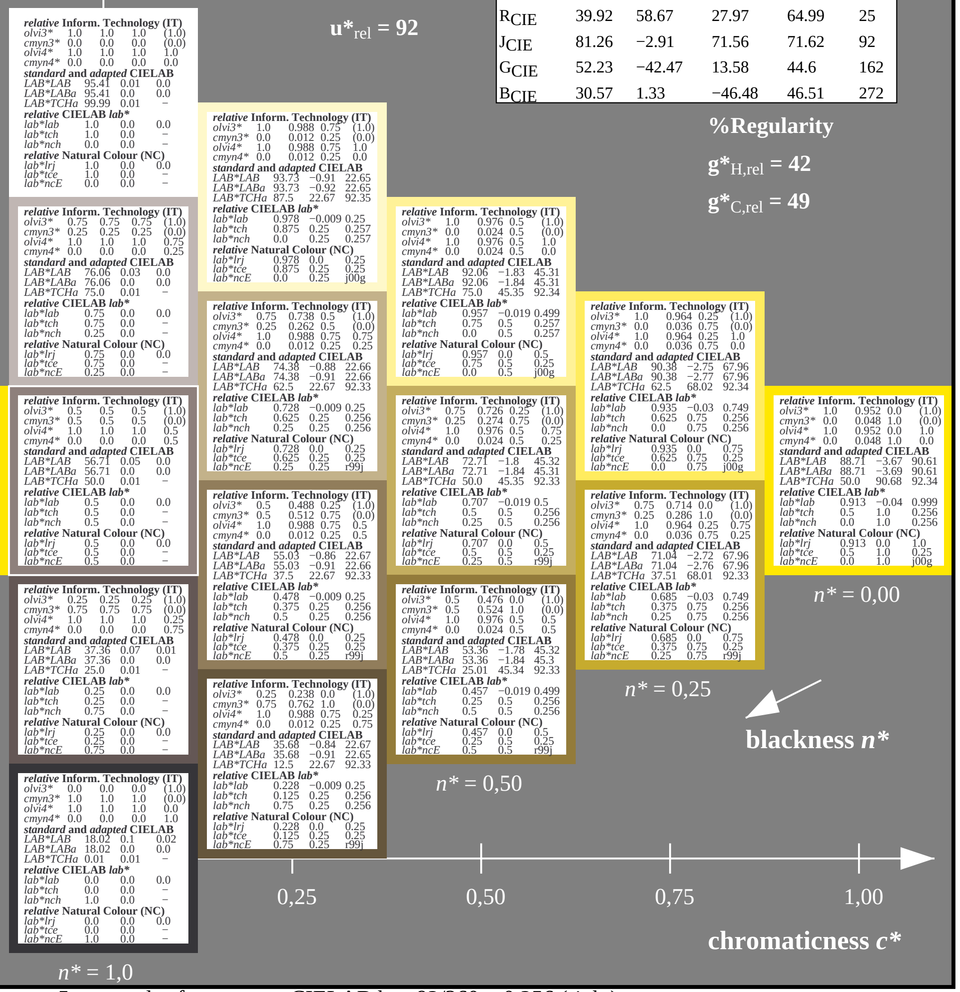
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

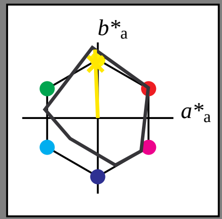


UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 91 92
rgb*Ma: 1.0 0.95 0.0
triangle lightness t^*

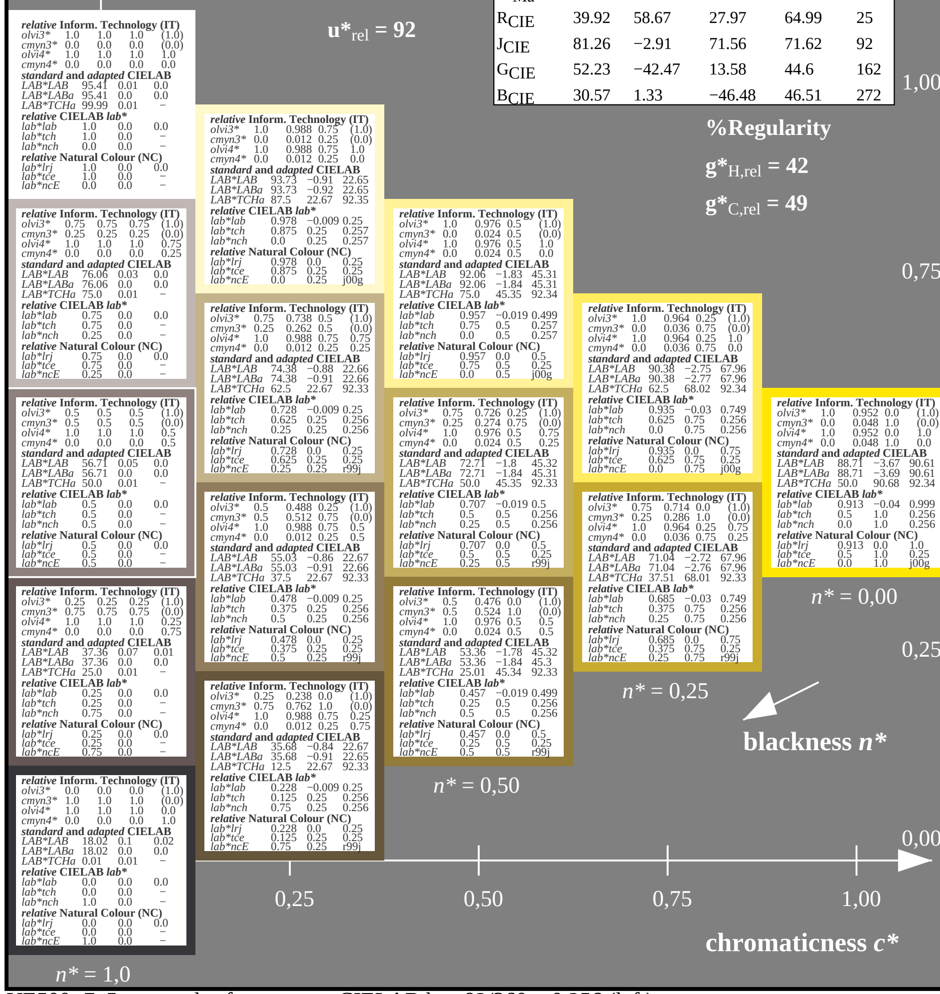


%Gamut
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data

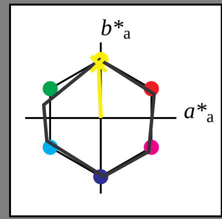
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 76 92
rgb*Ma: 0.98 1.0 0.0
triangle lightness t^*

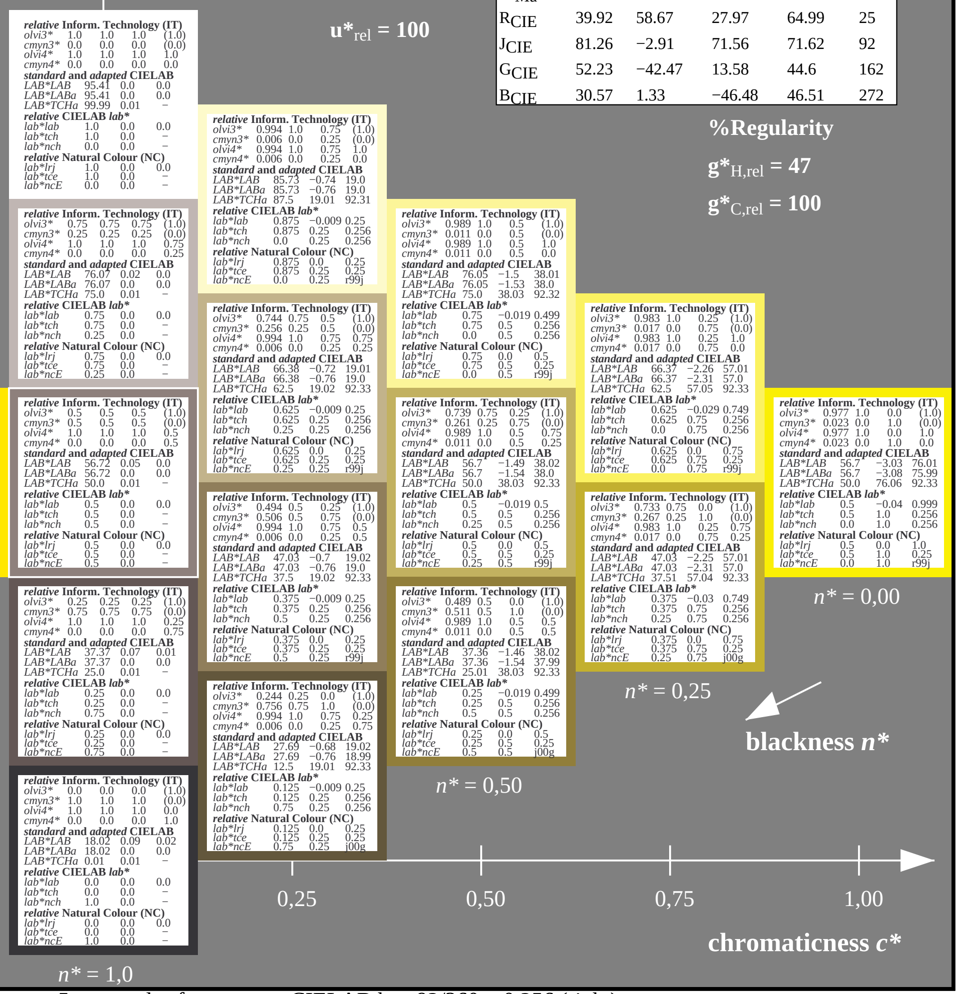


%Gamut
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 92/360 = 0.256$

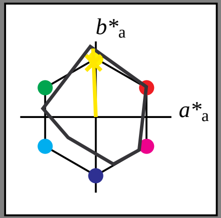
lab*tch* and *lab*nch

D65: hue J

LCH*Ma: 89 91 92

rgb*Ma: 1.0 0.95 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 92

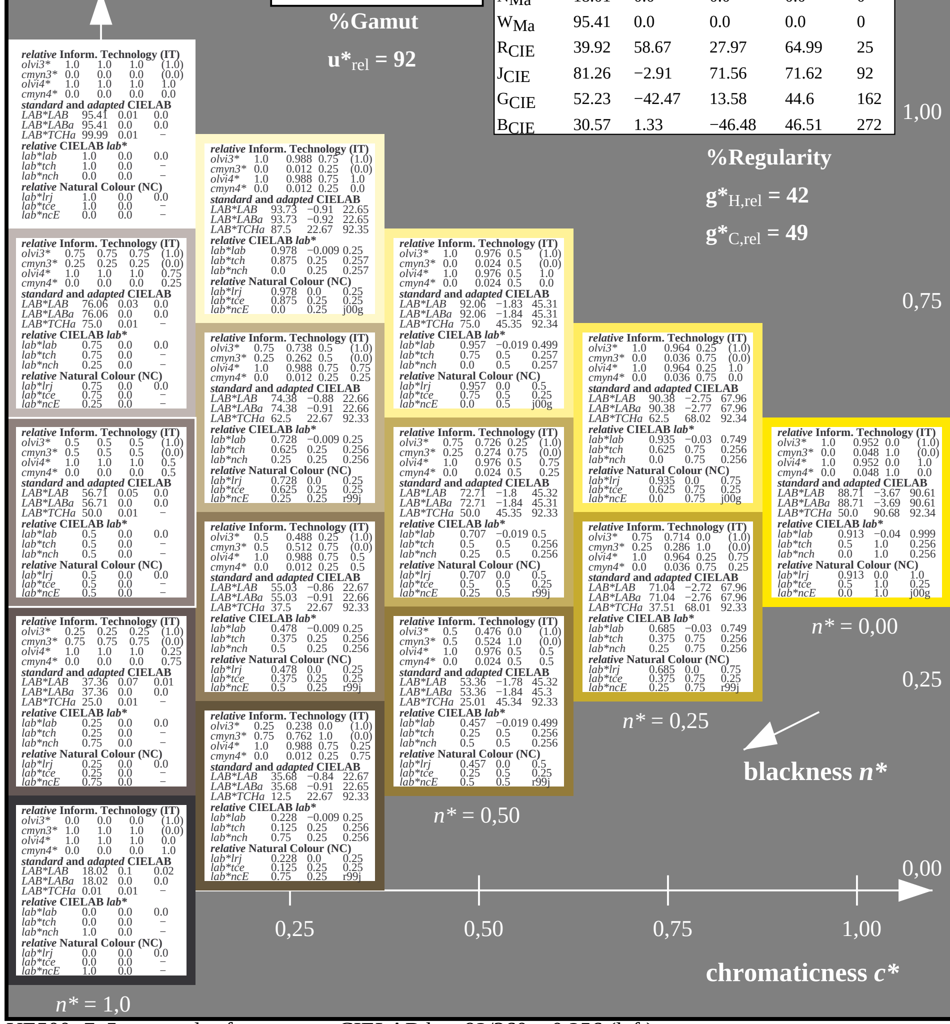
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 92/360 = 0.256$

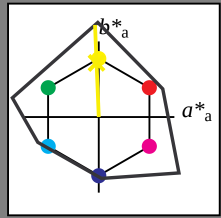
lab*tch* and *lab*nch

D65: hue J

LCH*Ma: 90 122 92

rgb*Ma: 0.97 1.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 136

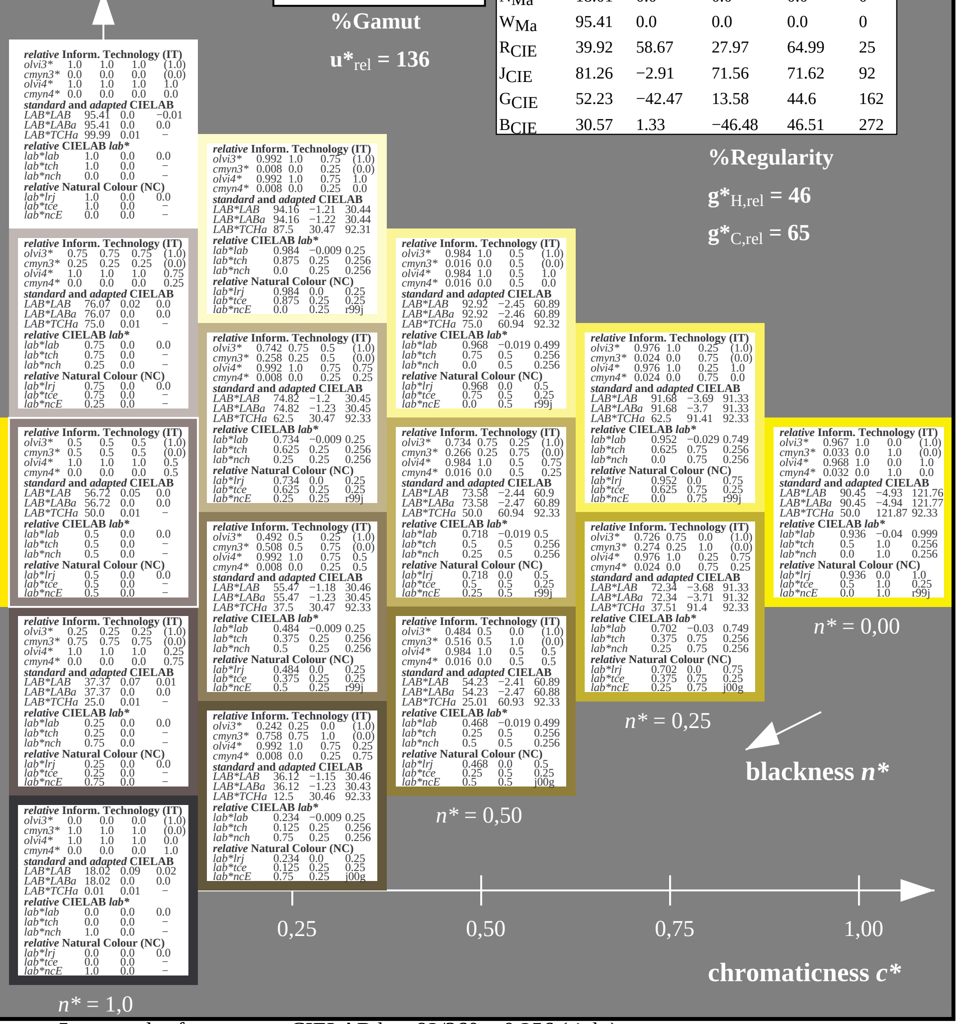
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System MRS18a

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

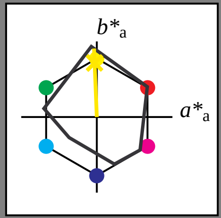
*lab*tch* and *lab*nch*

D65: hue J

LCH*Ma: 89 91 92

rgb*Ma: 1.0 0.95 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 92$

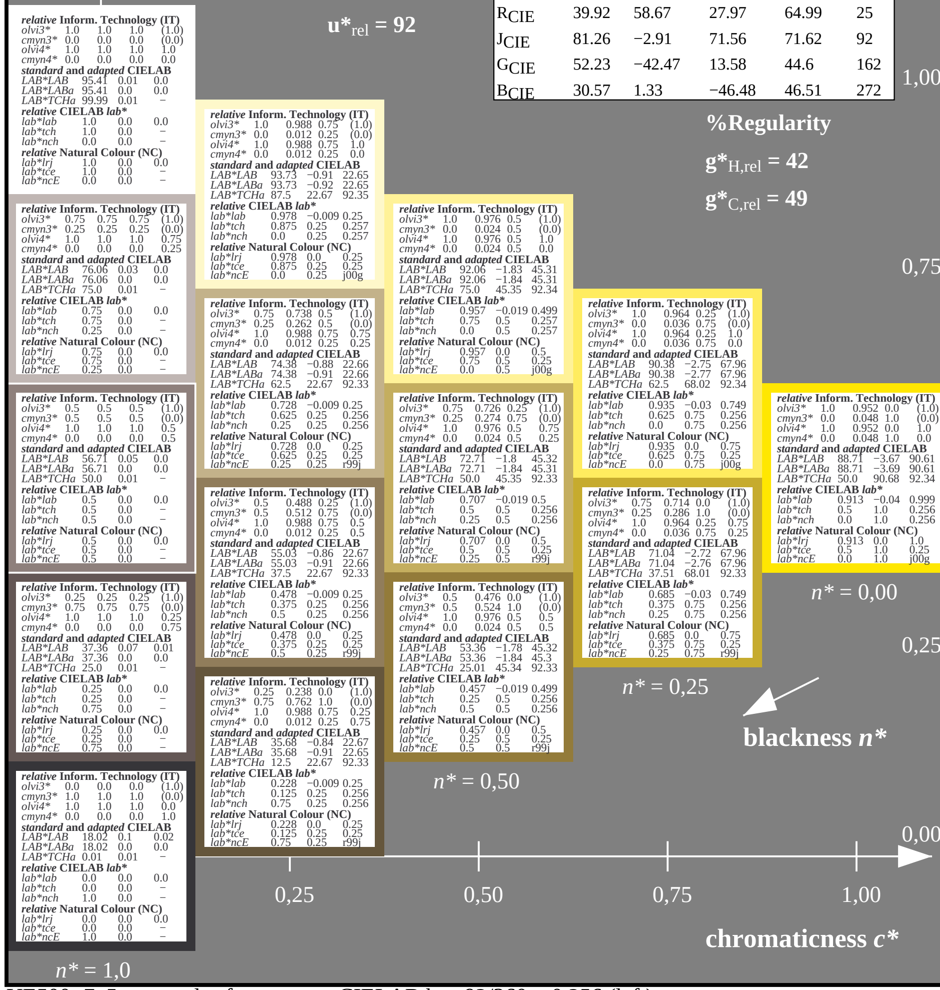
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System NRS11

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

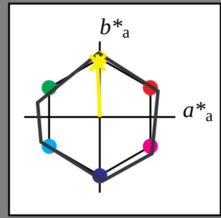
*lab*tch* and *lab*nch*

D65: hue J

LCH*Ma: 53 83 92

rgb*Ma: 0.98 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 119$

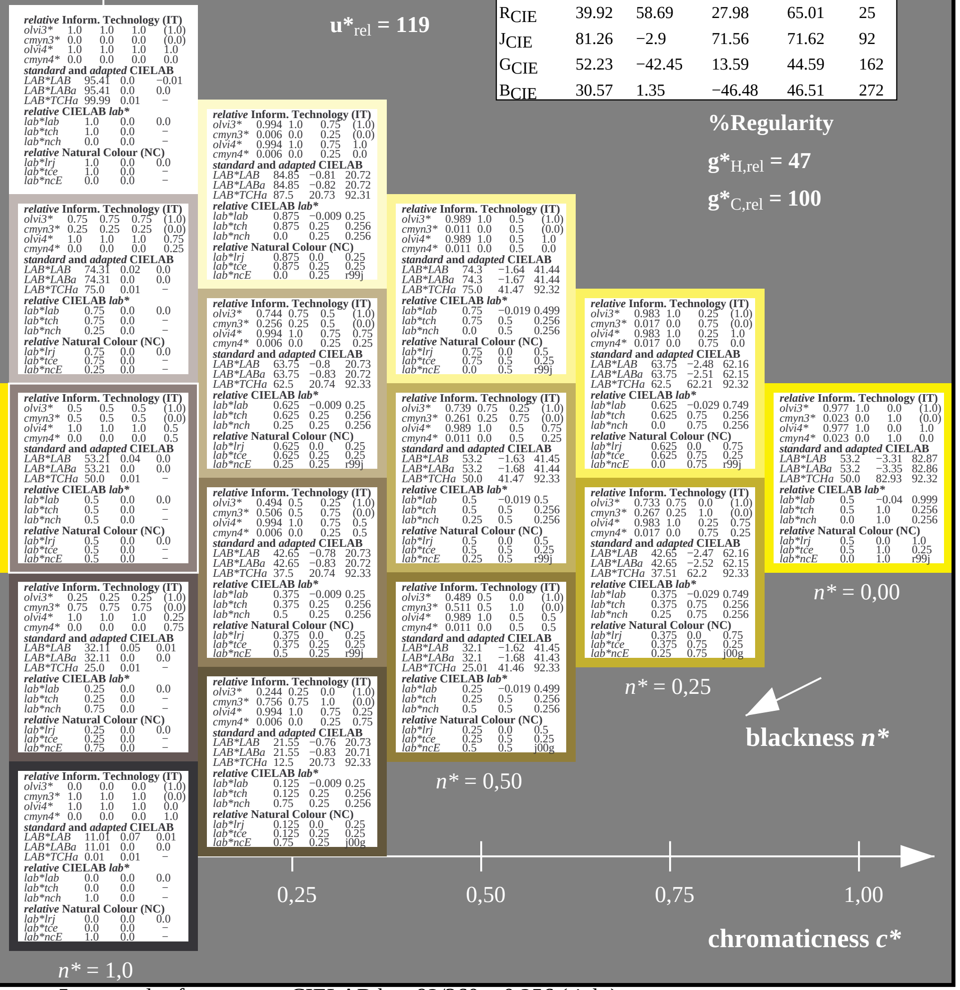
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System MRS18a

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

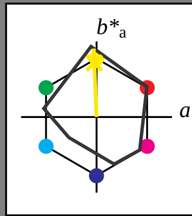
*lab*tch* and *lab*nch*

D65: hue J

LCH*Ma: 89 91 92

rgb*Ma: 1.0 0.95 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 92$

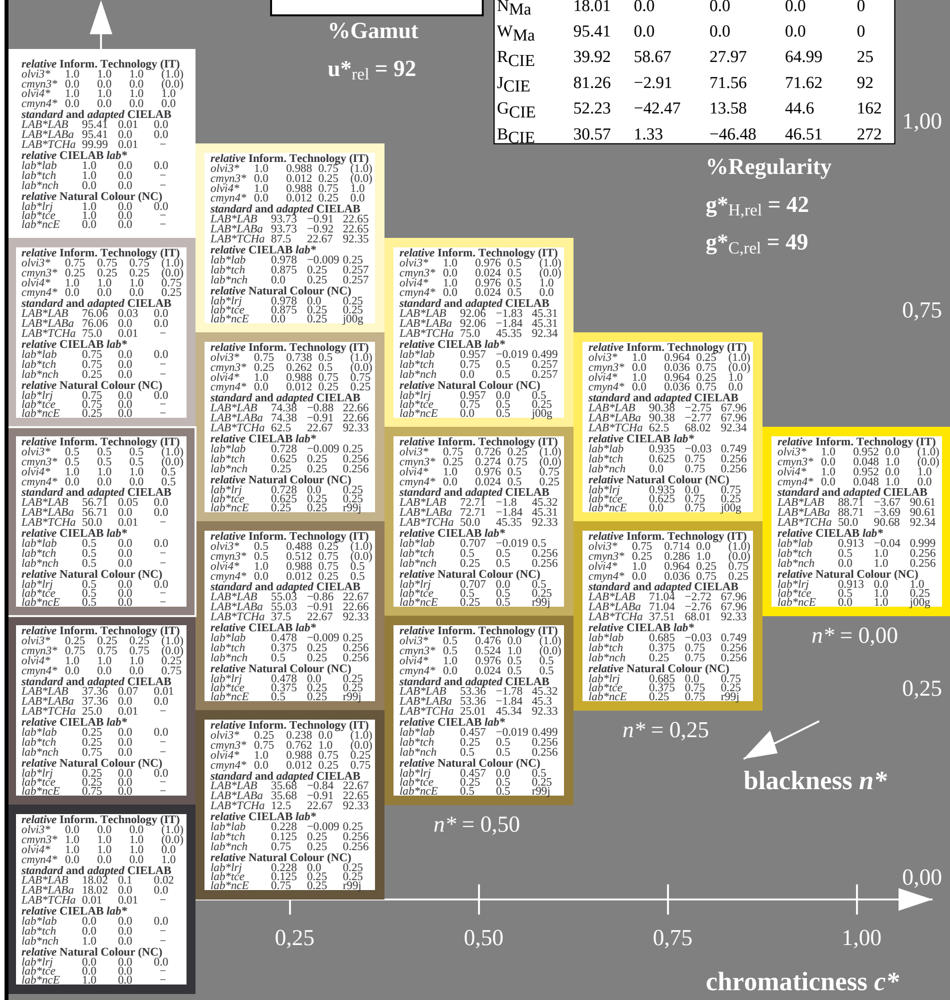
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System NCS11

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

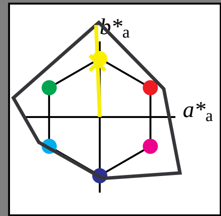
*lab*tch* and *lab*nch*

D65: hue J

LCH*Ma: 90 122 92

rgb*Ma: 0.97 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 149$

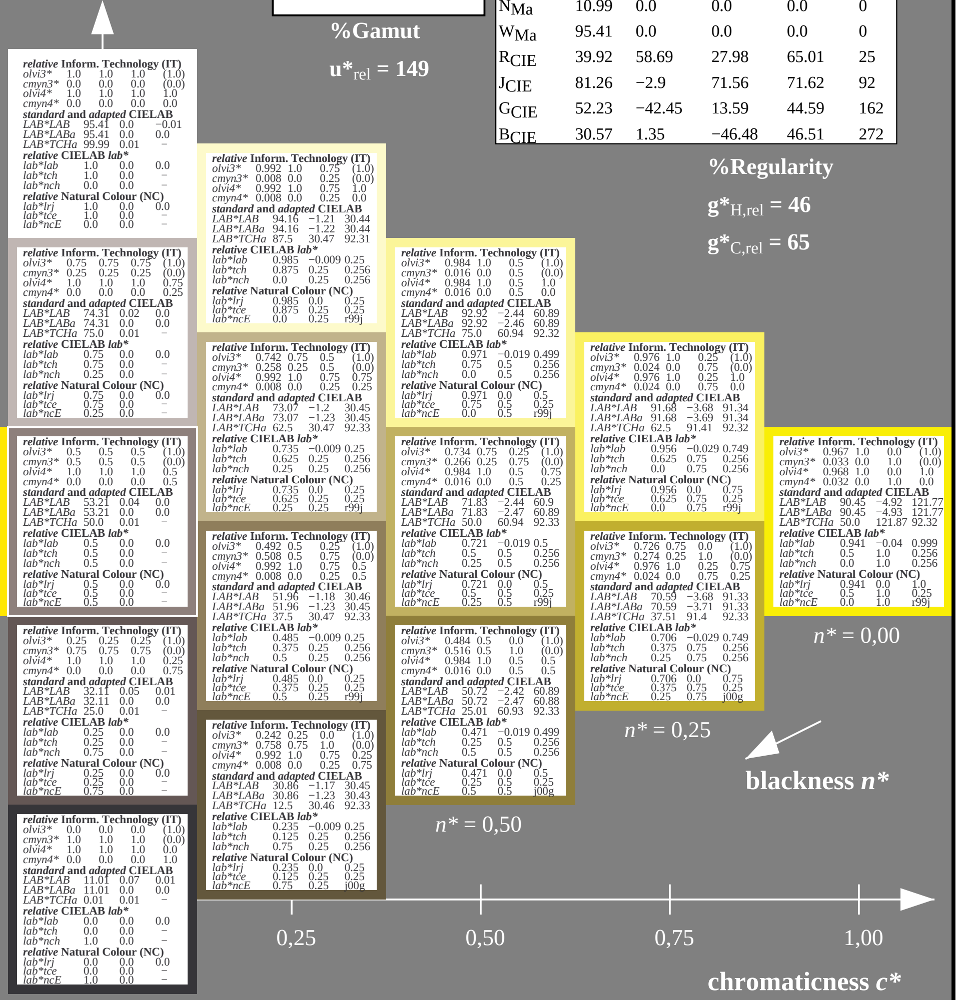
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



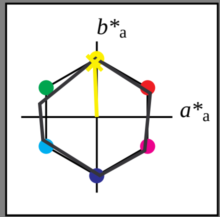
UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System NRS18
for hue *h = *lab*h* = 92/360 = 0.256**
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 76 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness *t*



%Gamut

$u^*_{rel} = 100$

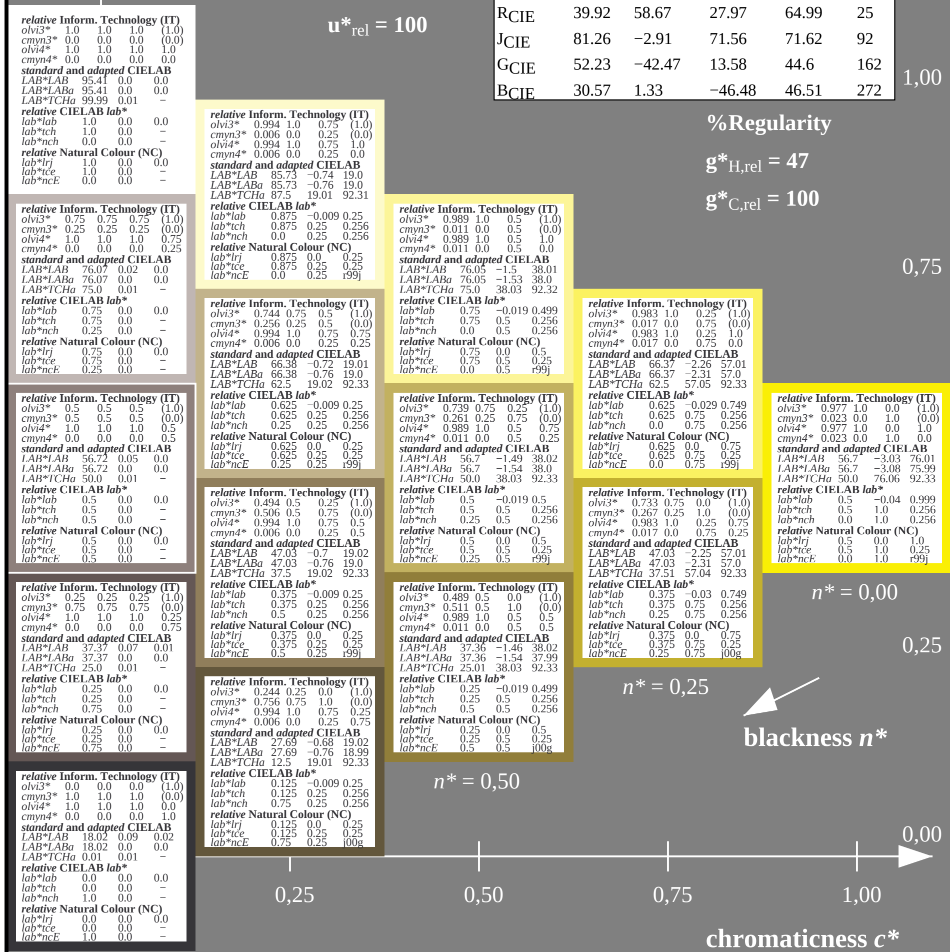
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

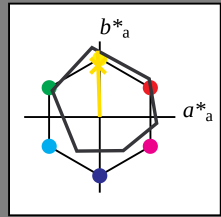
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System ORS18
for hue *h = *lab*h* = 92/360 = 0.255**
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness *t*



%Gamut

$u^*_{rel} = 93$

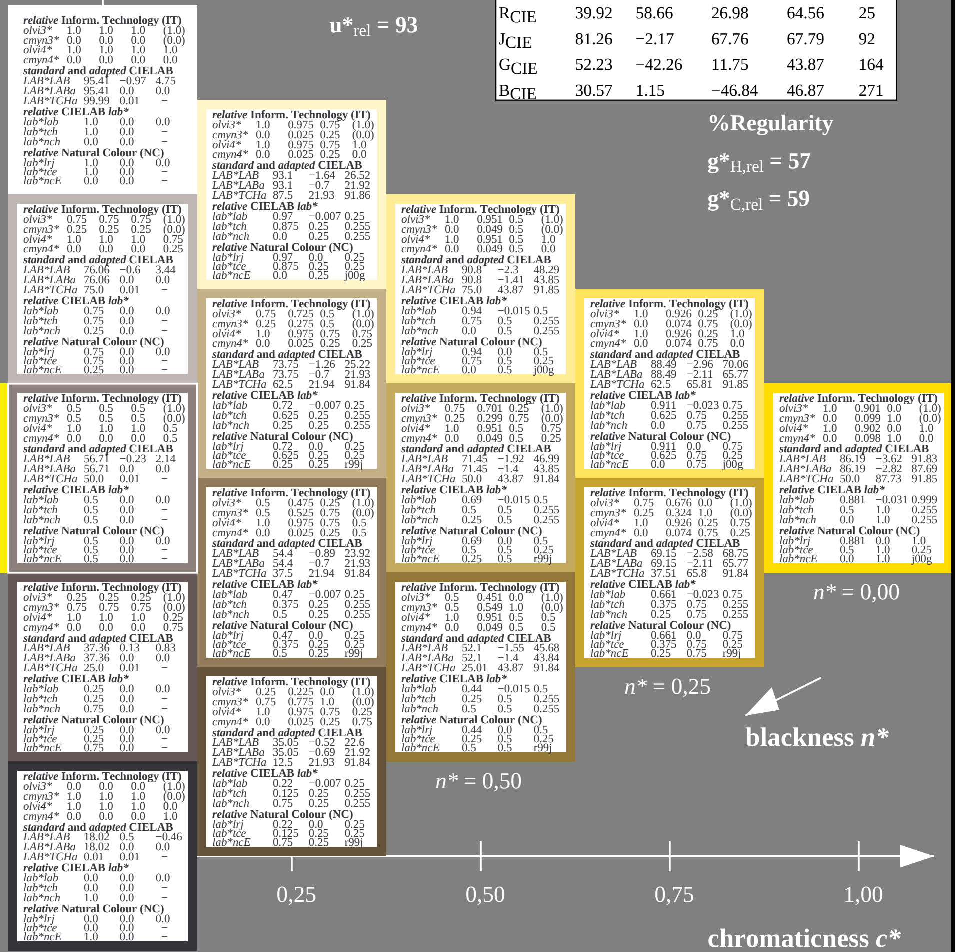
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



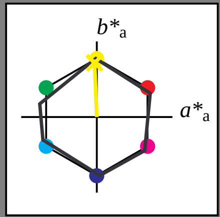
UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System NRS18
for hue *h = *lab*h* = 92/360 = 0.256**
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 76 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness *t*



%Gamut

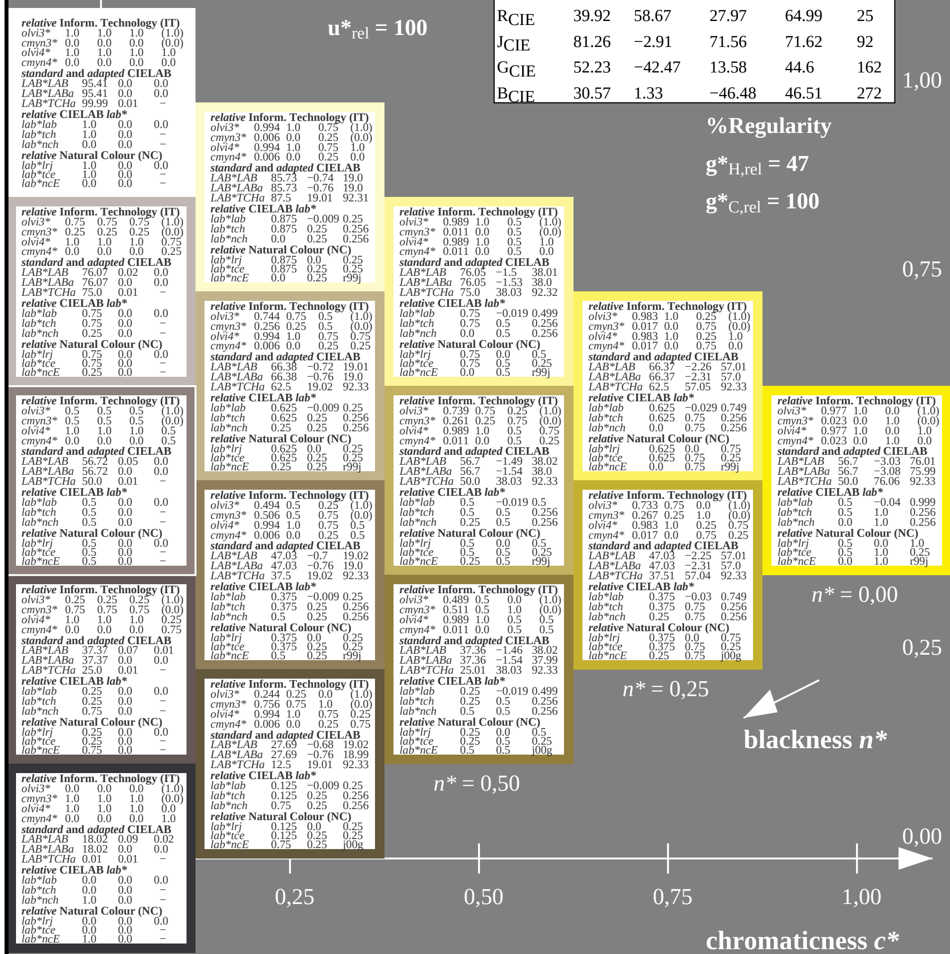
u^*_{rel} = 100

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

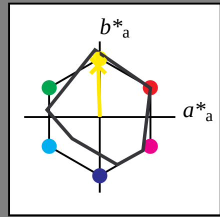
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System MRS18
for hue *h = *lab*h* = 92/360 = 0.255**
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 86 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness *t*



%Gamut

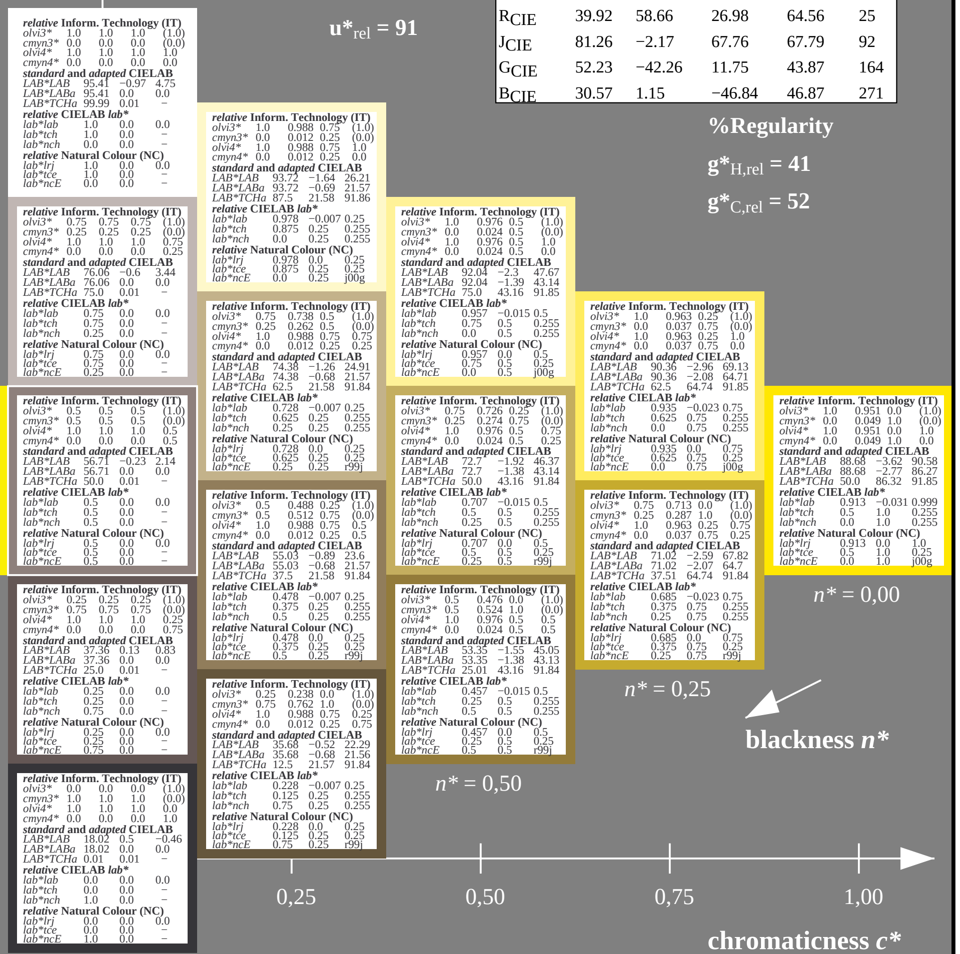
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

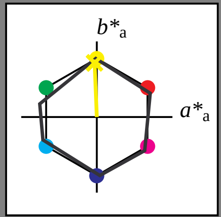


UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 92/360 = 0.256$
*lab*tch and lab*nch*

D65: hue J
LCH*Ma: 57 76 92
rgb*Ma: 0.98 1.0 0.0
triangle lightness t^*

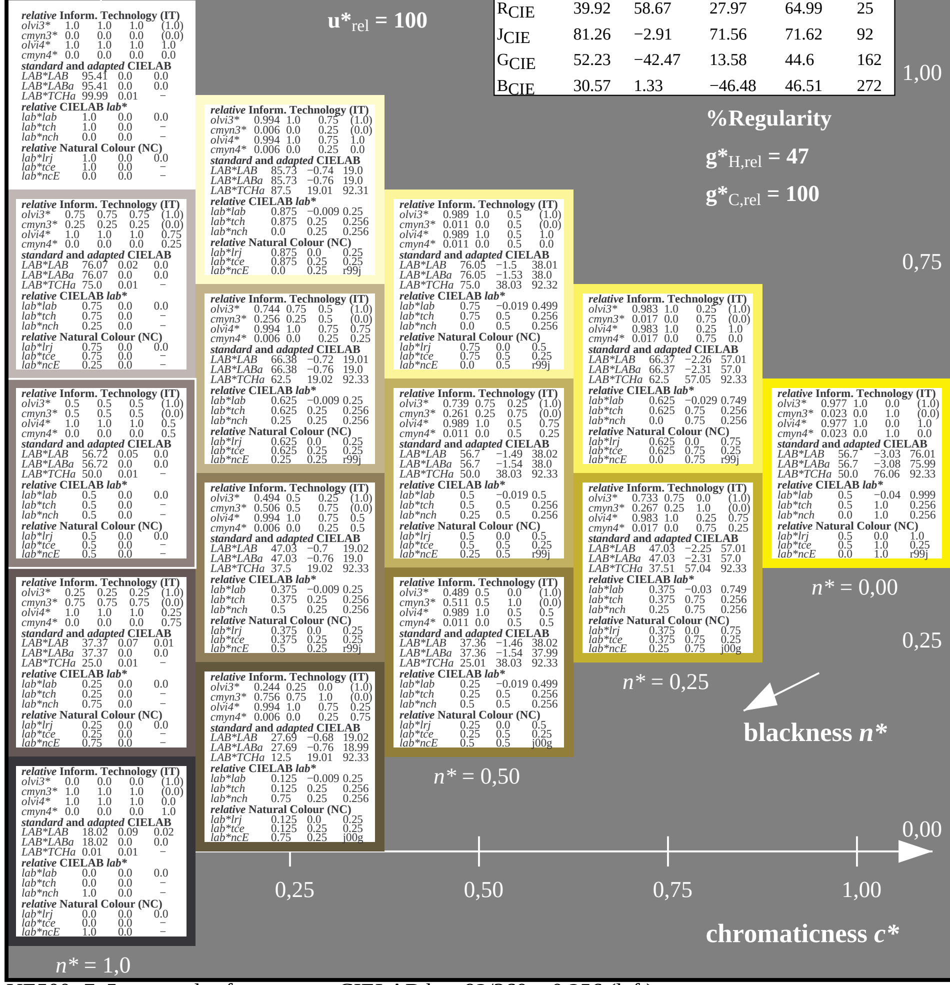


%Gamut
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data

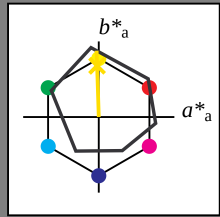
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
*lab*tch and lab*nch*

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0
triangle lightness t^*

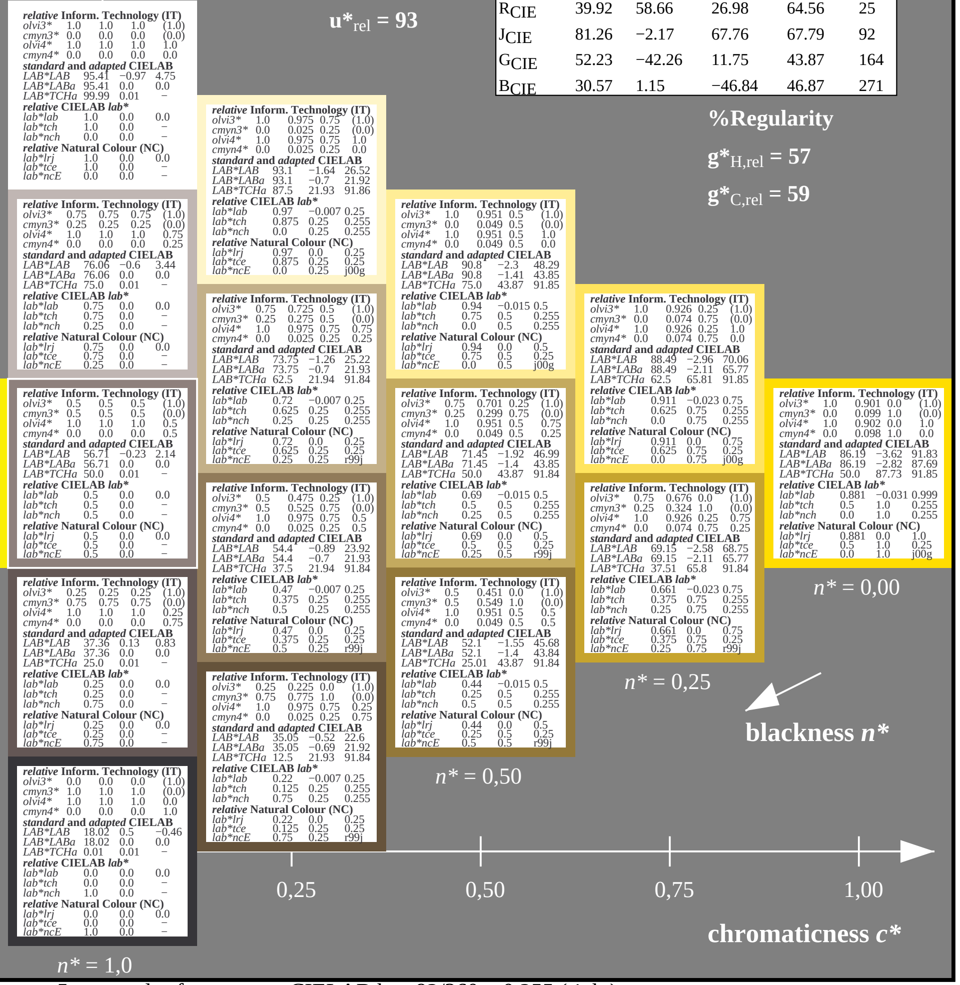


%Gamut
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System NRS18

for hue *h = *lab*h* = 92/360 = 0.256**

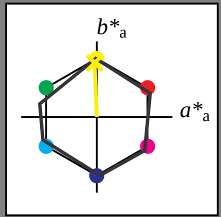
lab*tch* and *lab*nch

D65: hue J

LCH*Ma: 57 76 92

rgb*Ma: 0.98 1.0 0.0

triangle lightness *t*



%Gamut

u^*_{rel} = 100

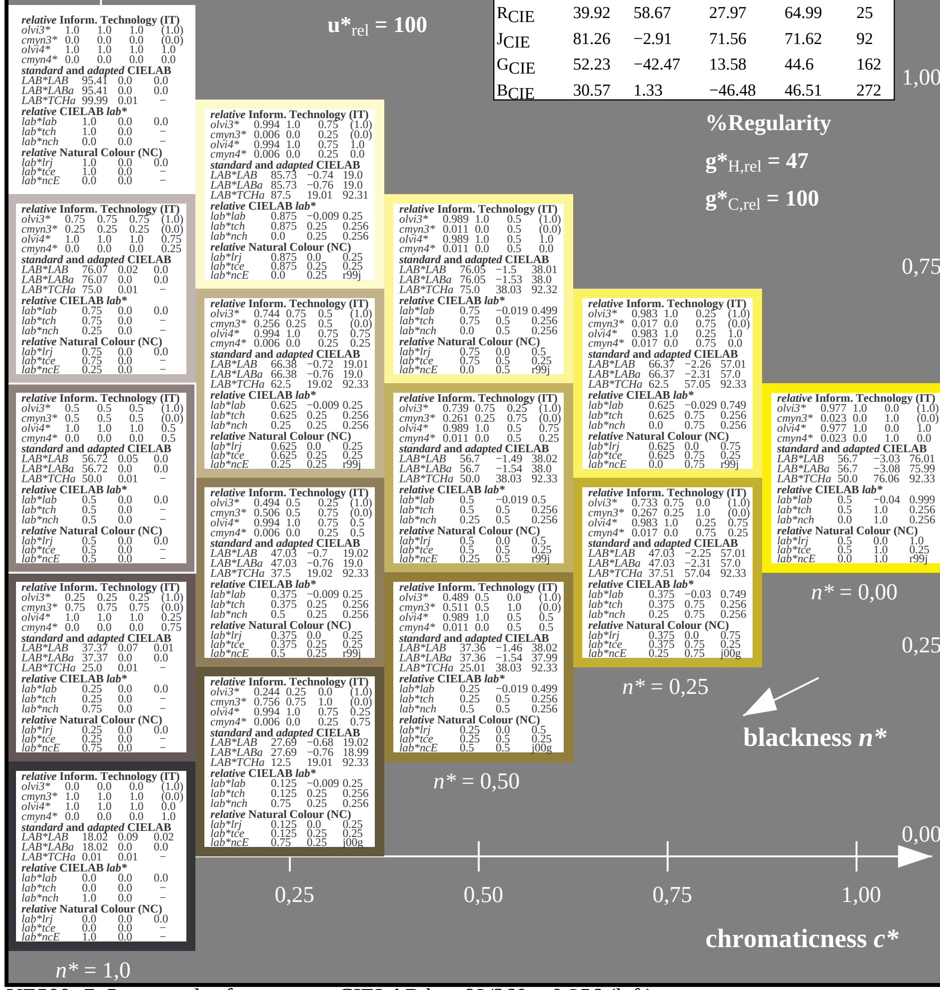
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System MRS18a

for hue *h = *lab*h* = 92/360 = 0.256**

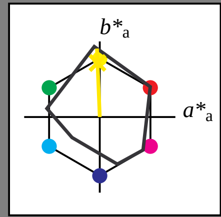
lab*tch* and *lab*nch

D65: hue J

LCH*Ma: 89 91 92

rgb*Ma: 1.0 0.95 0.0

triangle lightness *t*



%Gamut

u^*_{rel} = 92

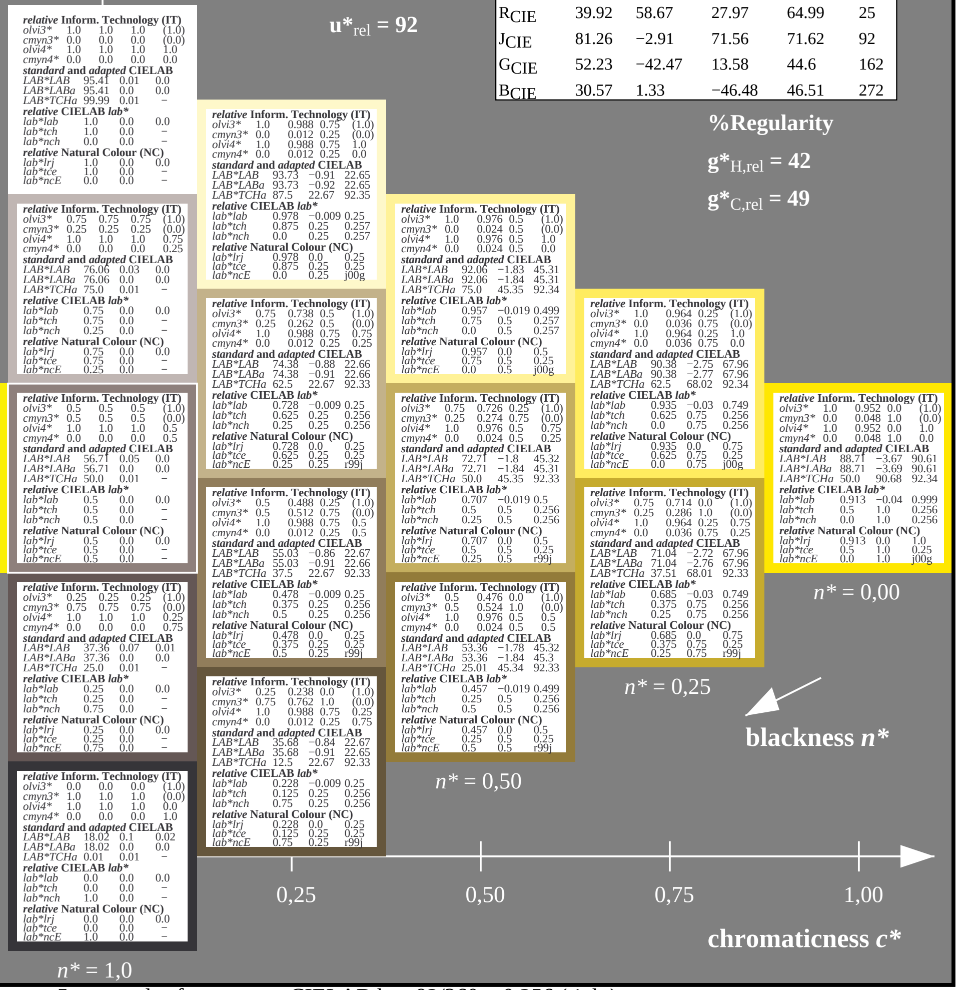
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

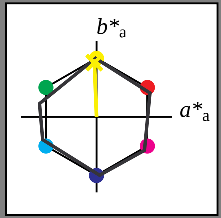


UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System NRS18
for hue *h = *lab*h* = 92/360 = 0.256**
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 76 92
rgb*Ma: 0.98 1.0 0.0
triangle lightness *t*



%Gamut

u^*_{rel} = 100

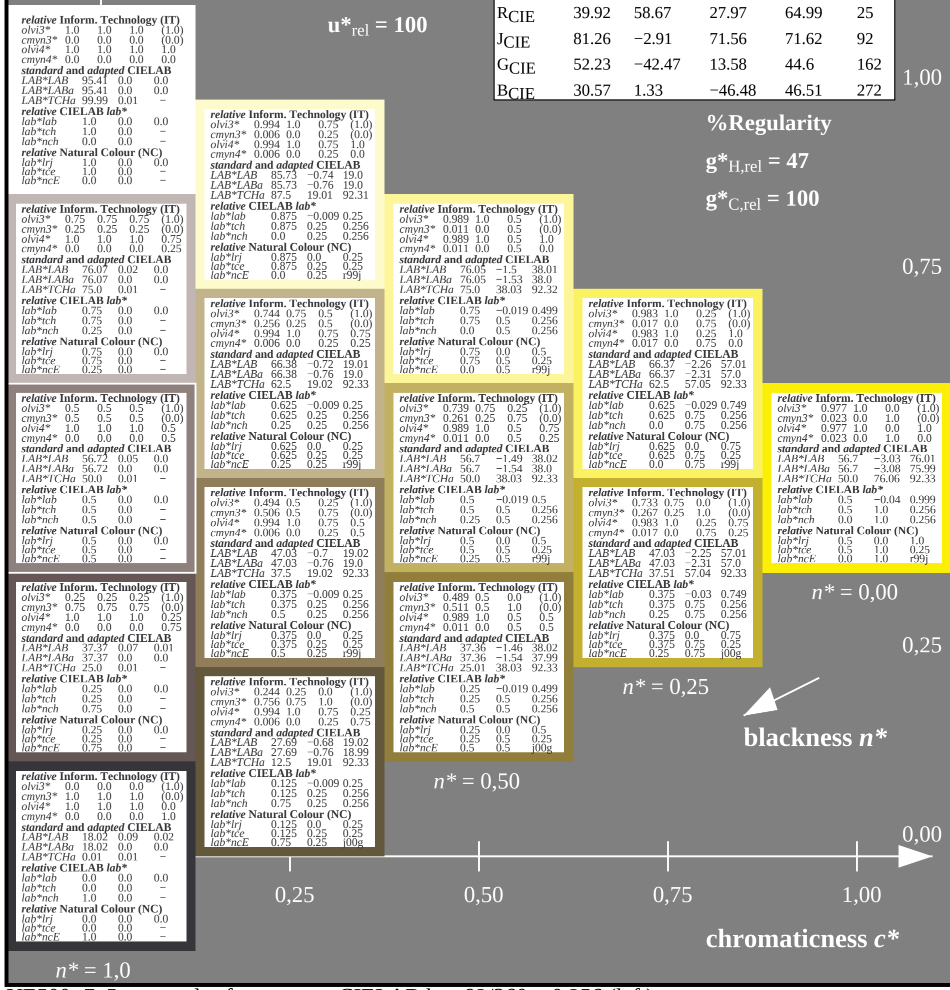
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

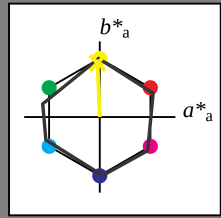
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NRS18
for hue *h = *lab*h* = 92/360 = 0.256**
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 76 92
rgb*Ma: 0.98 1.0 0.0
triangle lightness *t*



%Gamut

u^*_{rel} = 100

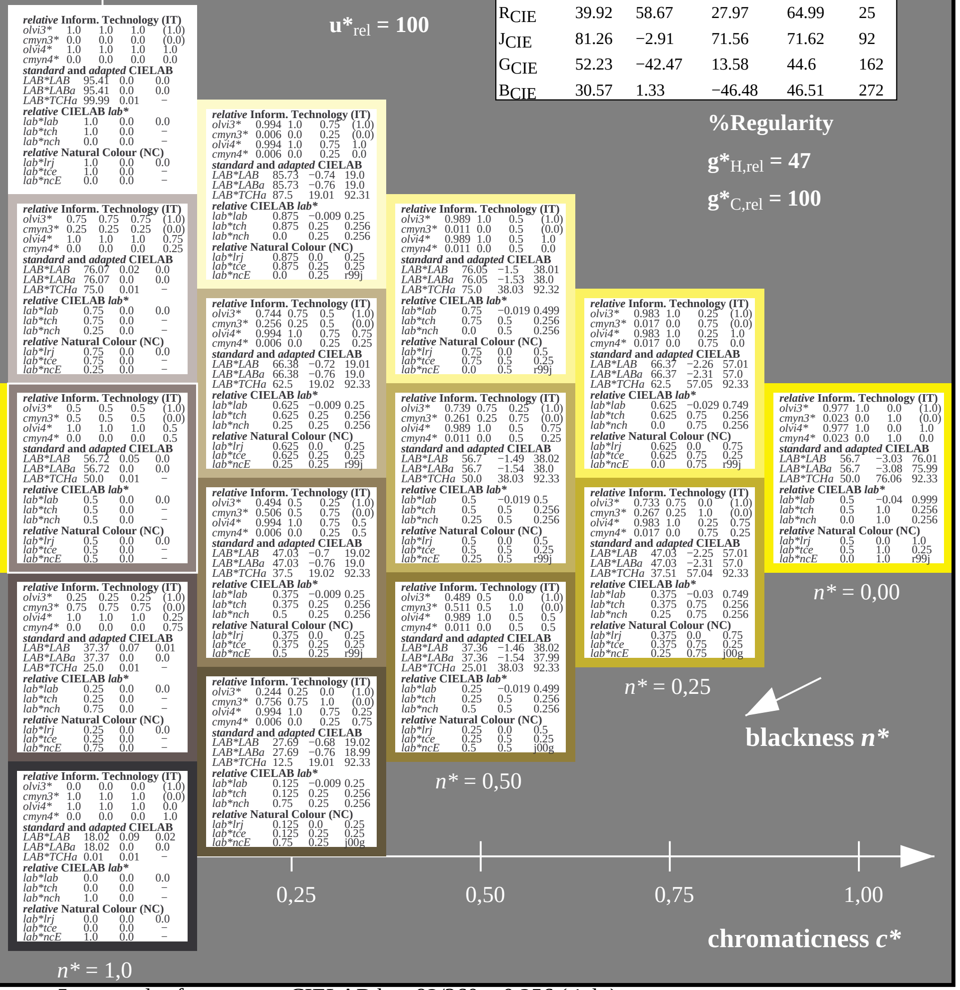
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



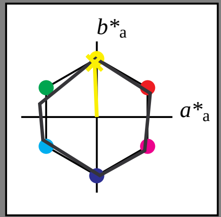
UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System NRS18
for hue *h = *lab*h* = 92/360 = 0.256**
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 76 92
rgb*Ma: 0.98 1.0 0.0

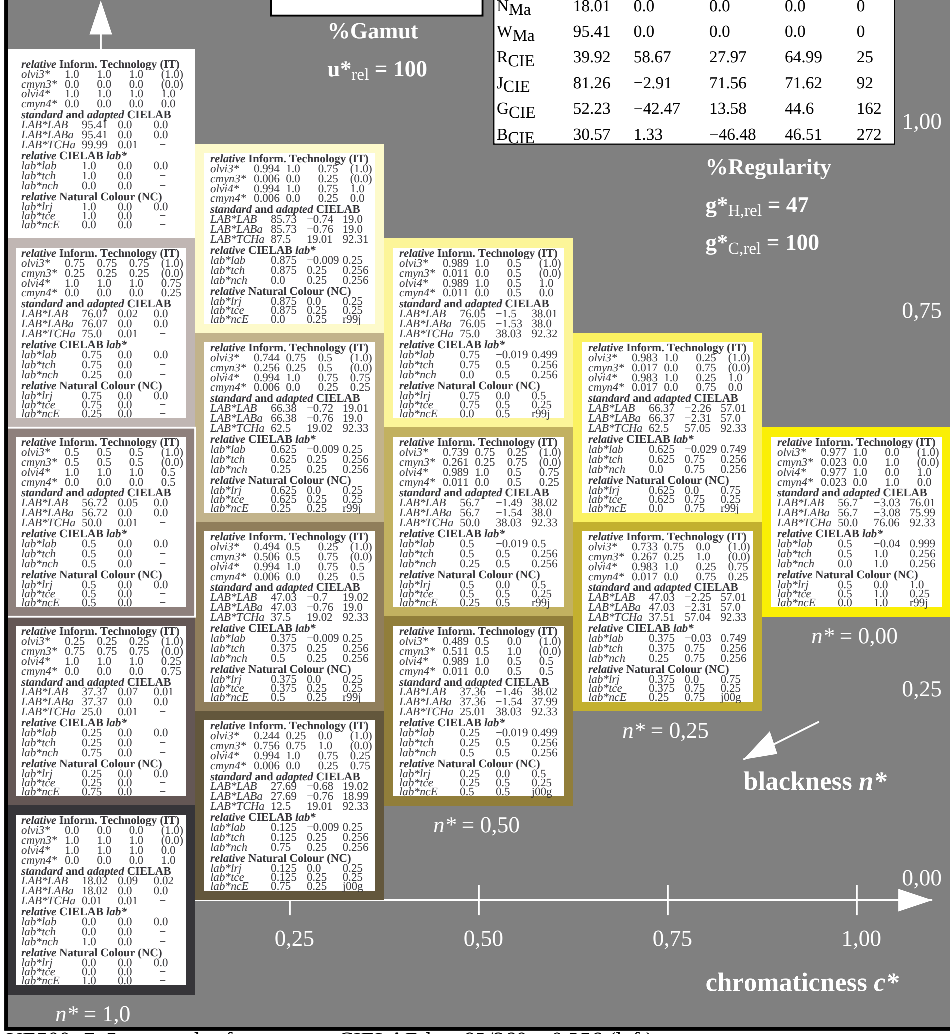
triangle lightness *t**



%Gamut
u^*_{rel} = 100

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

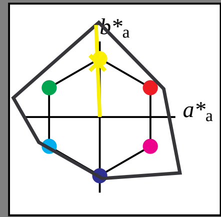
%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NCS18
for hue *h = *lab*h* = 92/360 = 0.256**
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

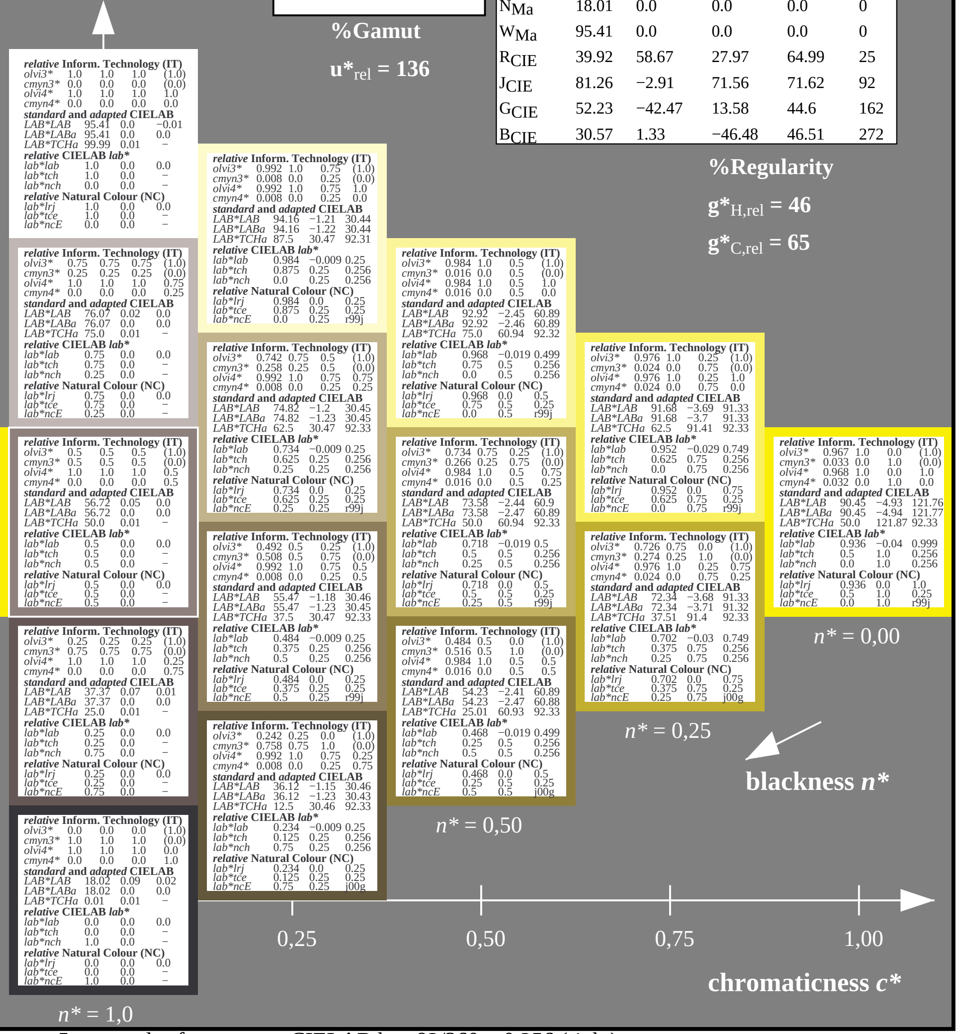
triangle lightness *t**



%Gamut
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



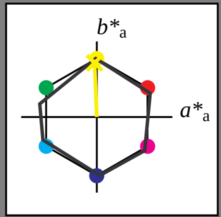
UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System NRS18
for hue *h = *lab*h* = 92/360 = 0.256**
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 76 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness *t**



%Gamut

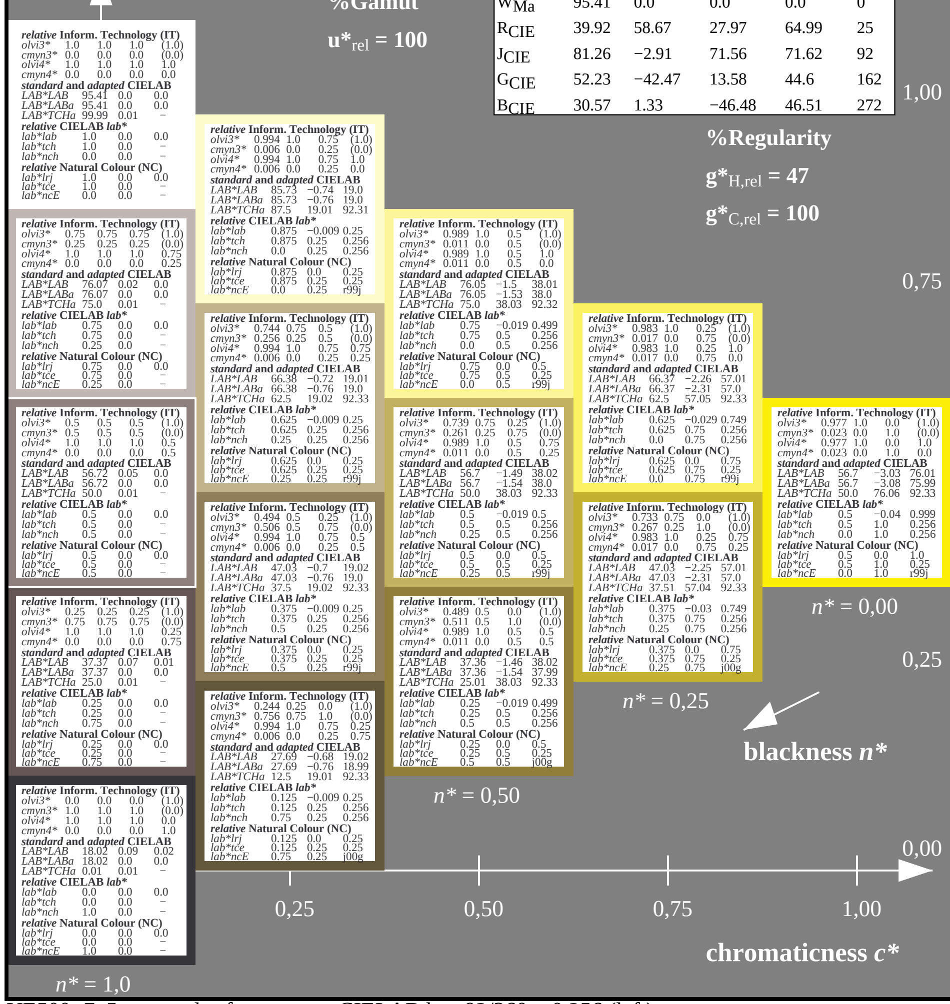
u^*_{rel} = 100

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

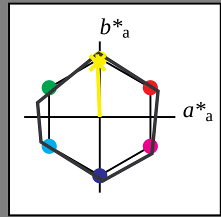
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NRS11
for hue *h = *lab*h* = 92/360 = 0.256**
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 83 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness *t**



%Gamut

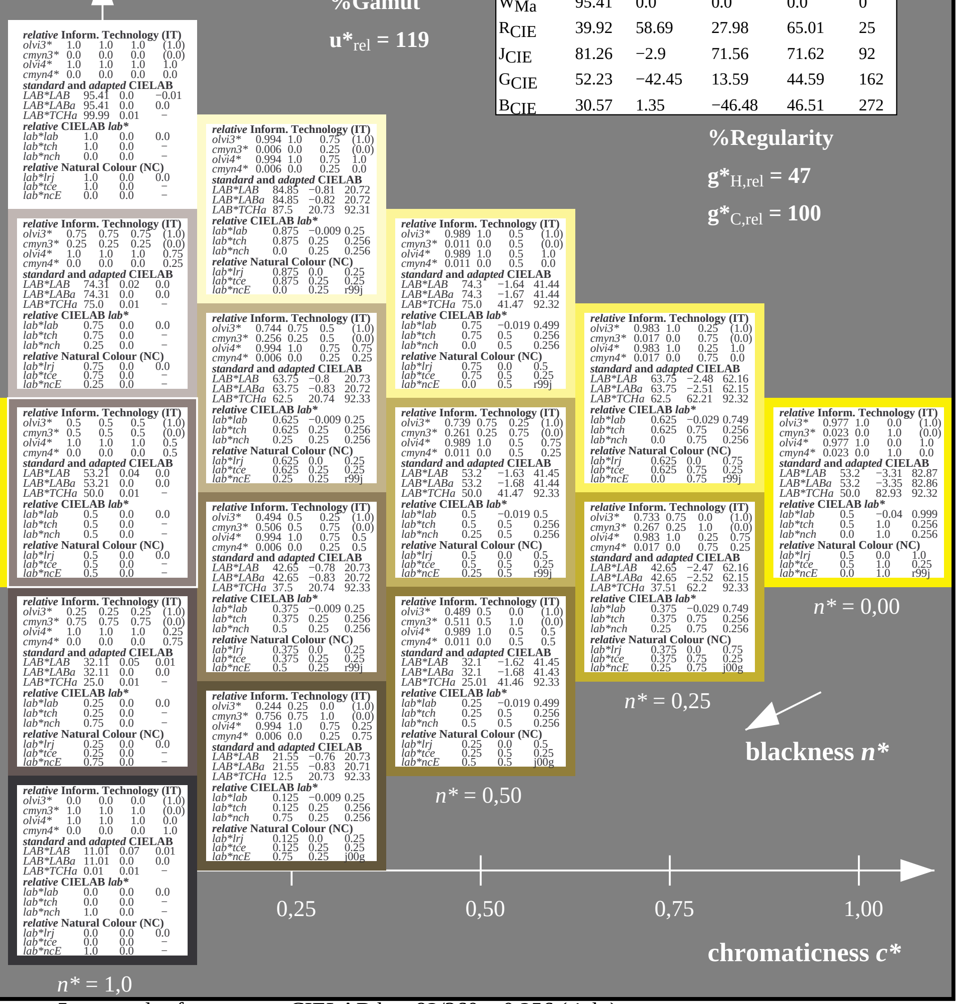
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



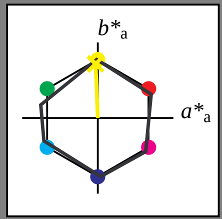
UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch and lab*nch

D65: hue J
LCH*Ma: 57 76 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness t^*

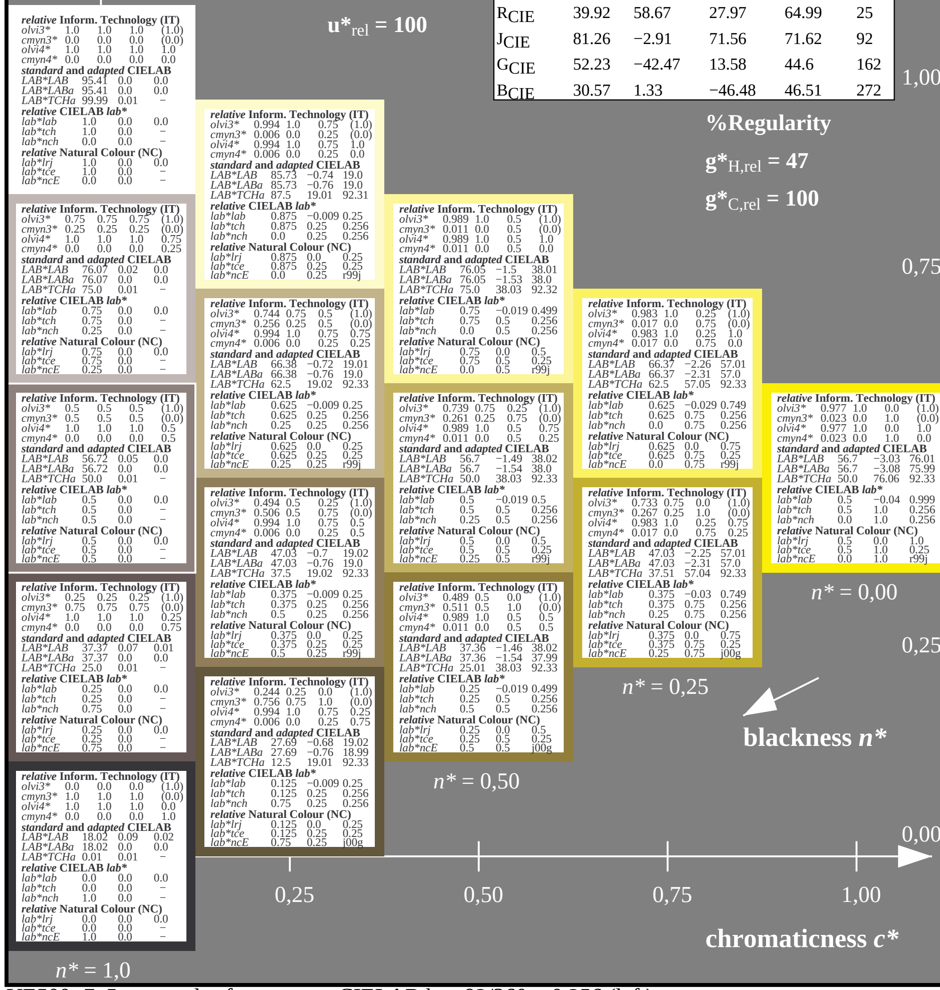


%Gamut
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

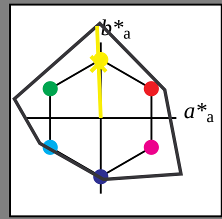
%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch and lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness t^*

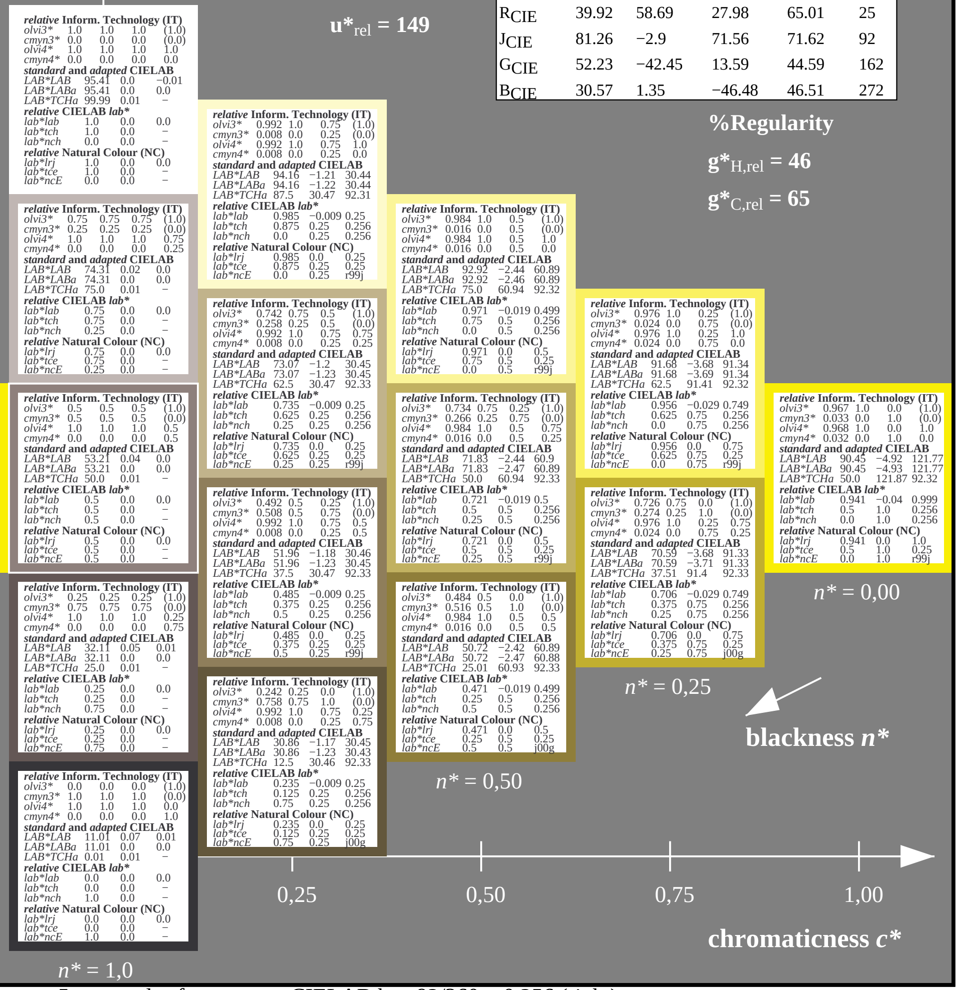


%Gamut
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$

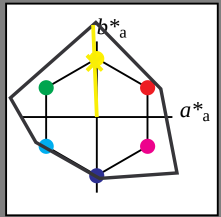


UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0
triangle lightness t^*

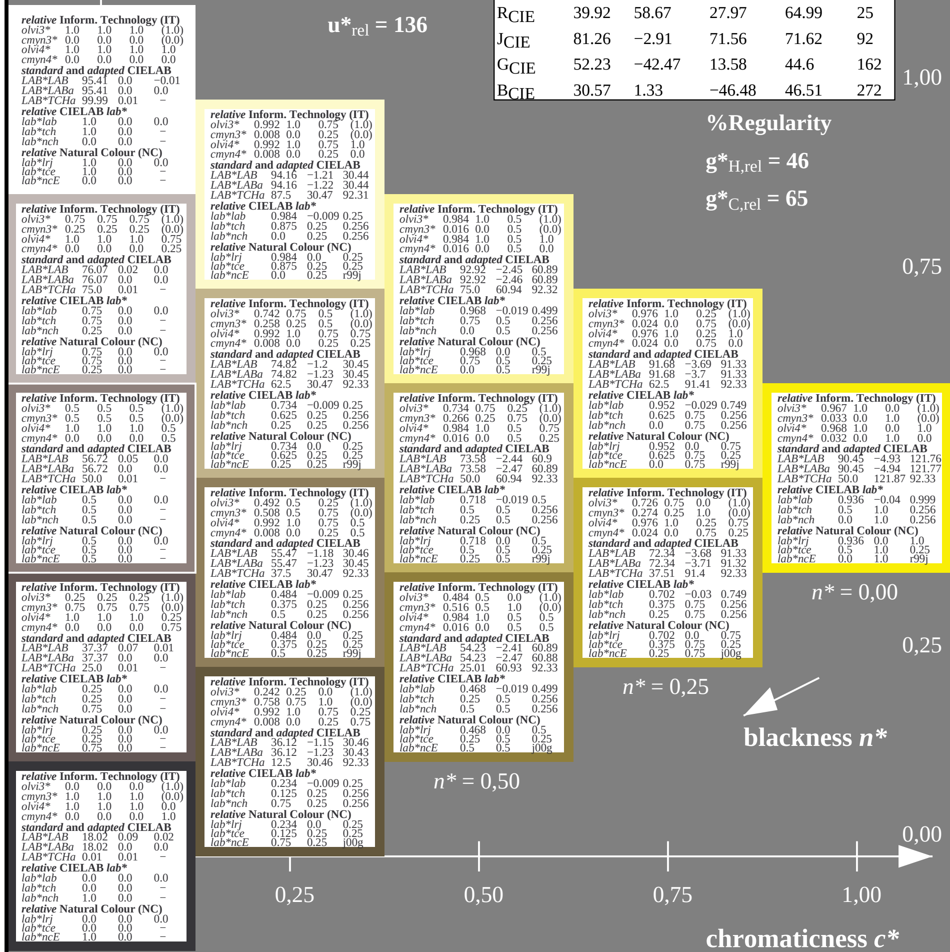


%Gamut
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

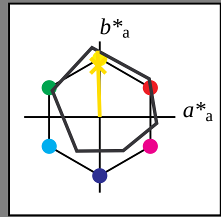
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0
triangle lightness t^*

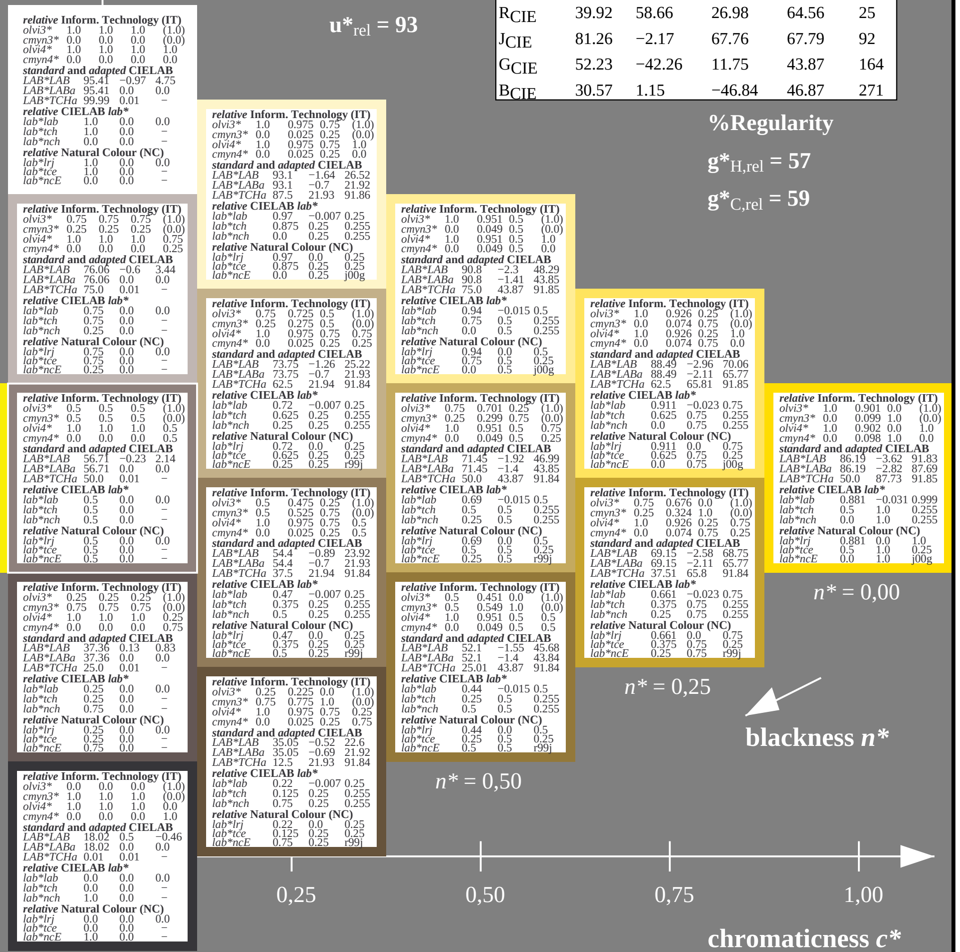


%Gamut
u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel}$ = 57
$g^*_{C,rel}$ = 59

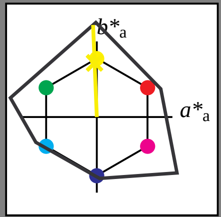


UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System NCS18
for hue *h = *lab*h* = 92/360 = 0.256**
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0
triangle lightness *t**



%Gamut

u*rel = 136

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

g*H,rel = 46

g*C,rel = 65

1,00
0,75
0,25
0,00

relative Inform. Technology (IT)
olvi3* 1.0 1.0 1.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 1.0 1.0 1.0
cmyn4* 0.0 0.0 0.0 0.0
standard and adapted CIELAB
LAB*LAB 95.41 0.0 −0.01
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* 0.75 0.75 0.75 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 1.0 1.0 1.0 0.75
cmyn4* 0.0 0.0 0.0 0.25
standard and adapted CIELAB
LAB*LAB 76.07 0.02 0.0
LAB*LABa 76.07 0.0 0.0
LAB*TCHa 75.0 0.01 –
relative CIELAB lab*
lab*lab 0.75 0.0 0.0
lab*tch 0.75 0.0 –
lab*nch 0.25 0.0 –
relative Natural Colour (NC)
lab*lrj 0.75 0.0 0.0
lab*tce 0.75 0.0 –
lab*ncE 0.25 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 56.72 0.05 0.0
LAB*LABa 56.72 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* 0.25 0.25 0.25 (1.0)
cmyn3* 0.75 0.75 0.75 (0.0)
olvi4* 1.0 1.0 1.0 0.25
cmyn4* 0.0 0.0 0.0 0.75
standard and adapted CIELAB
LAB*LAB 37.37 0.07 0.01
LAB*LABa 37.37 0.0 0.0
LAB*TCHa 25.0 0.01 –
relative CIELAB lab*
lab*lab 0.25 0.0 0.0
lab*tch 0.25 0.0 –
lab*nch 0.75 0.0 –
relative Natural Colour (NC)
lab*lrj 0.25 0.0 0.0
lab*tce 0.25 0.0 –
lab*ncE 0.75 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 0.09 0.02
LAB*LABa 18.02 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* 0.992 1.0 0.75 (1.0)
cmyn3* 0.008 0.0 0.25 (0.0)
olvi4* 0.992 1.0 0.75 1.0
cmyn4* 0.008 0.0 0.25 0.0
standard and adapted CIELAB
LAB*LAB 94.16 −1.21 30.44
LAB*LABa 94.16 −1.22 30.44
LAB*TCHa 87.5 30.47 92.31
relative CIELAB lab*
lab*lab 0.984 −0.009 0.25
lab*tch 0.875 0.25 0.256
lab*nch 0.0 0.25 0.256
relative Natural Colour (NC)
lab*lrj 0.984 0.0 0.25
lab*tce 0.875 0.25 0.25
lab*ncE 0.0 0.25 r99j

relative Inform. Technology (IT)
olvi3* 0.742 0.75 0.5 (1.0)
cmyn3* 0.258 0.25 0.5 (0.0)
olvi4* 0.992 1.0 0.75 0.75
cmyn4* 0.008 0.0 0.25 0.25
standard and adapted CIELAB
LAB*LAB 74.82 −1.2 30.45
LAB*LABa 74.82 −1.23 30.45
LAB*TCHa 62.5 30.47 92.33
relative CIELAB lab*
lab*lab 0.734 −0.009 0.25
lab*tch 0.625 0.25 0.256
lab*nch 0.25 0.25 0.256
relative Natural Colour (NC)
lab*lrj 0.734 0.0 0.25
lab*tce 0.625 0.25 0.25
lab*ncE 0.25 0.25 r99j

relative Inform. Technology (IT)
olvi3* 0.492 0.5 0.25 (1.0)
cmyn3* 0.508 0.5 0.75 (0.0)
olvi4* 0.992 1.0 0.75 0.5
cmyn4* 0.008 0.0 0.25 0.5
standard and adapted CIELAB
LAB*LAB 55.47 −1.18 30.46
LAB*LABa 55.47 −1.23 30.45
LAB*TCHa 37.5 30.47 92.33
relative CIELAB lab*
lab*lab 0.484 −0.009 0.25
lab*tch 0.375 0.25 0.256
lab*nch 0.5 0.25 0.256
relative Natural Colour (NC)
lab*lrj 0.484 0.0 0.25
lab*tce 0.375 0.25 0.25
lab*ncE 0.5 0.25 r99j

relative Inform. Technology (IT)
olvi3* 0.242 0.25 0.0 (1.0)
cmyn3* 0.758 0.75 1.0 (0.0)
olvi4* 0.992 1.0 0.75 0.25
cmyn4* 0.008 0.0 0.25 0.75
standard and adapted CIELAB
LAB*LAB 36.12 −1.15 30.46
LAB*LABa 36.12 −1.23 30.43
LAB*TCHa 12.5 30.46 92.33
relative CIELAB lab*
lab*lab 0.234 −0.009 0.25
lab*tch 0.125 0.25 0.256
lab*nch 0.75 0.25 0.256
relative Natural Colour (NC)
lab*lrj 0.234 0.0 0.25
lab*tce 0.125 0.25 0.25
lab*ncE 0.75 0.25 j00g

relative Inform. Technology (IT)
olvi3* 0.984 1.0 0.5 (1.0)
cmyn3* 0.016 0.0 0.5 (0.0)
olvi4* 0.984 1.0 0.5 1.0
cmyn4* 0.016 0.0 0.5 0.0
standard and adapted CIELAB
LAB*LAB 92.92 −2.45 60.89
LAB*LABa 92.92 −2.46 60.89
LAB*TCHa 75.0 60.94 92.32
relative CIELAB lab*
lab*lab 0.968 −0.019 0.499
lab*tch 0.75 0.5 0.256
lab*nch 0.0 0.5 0.256
relative Natural Colour (NC)
lab*lrj 0.968 0.0 0.5
lab*tce 0.75 0.5 0.5
lab*ncE 0.0 0.5 r99j

relative Inform. Technology (IT)
olvi3* 0.734 0.75 0.25 (1.0)
cmyn3* 0.266 0.25 0.75 (0.0)
olvi4* 0.984 1.0 0.5 0.75
cmyn4* 0.016 0.0 0.5 0.25
standard and adapted CIELAB
LAB*LAB 73.58 −2.44 60.9
LAB*LABa 73.58 −2.47 60.89
LAB*TCHa 50.0 60.94 92.33
relative CIELAB lab*
lab*lab 0.718 −0.019 0.5
lab*tch 0.5 0.5 0.256
lab*nch 0.25 0.5 0.256
relative Natural Colour (NC)
lab*lrj 0.718 0.0 0.5
lab*tce 0.5 0.5 0.5
lab*ncE 0.25 0.5 r99j

relative Inform. Technology (IT)
olvi3* 0.484 0.5 0.0 (1.0)
cmyn3* 0.516 0.5 1.0 (0.0)
olvi4* 0.984 1.0 0.5 0.5
cmyn4* 0.016 0.0 0.5 0.5
standard and adapted CIELAB
LAB*LAB 54.23 −2.41 60.89
LAB*LABa 54.23 −2.47 60.88
LAB*TCHa 25.01 60.93 92.33
relative CIELAB lab*
lab*lab 0.468 −0.019 0.499
lab*tch 0.25 0.5 0.256
lab*nch 0.5 0.5 0.256
relative Natural Colour (NC)
lab*lrj 0.468 0.0 0.5
lab*tce 0.25 0.5 0.5
lab*ncE 0.5 0.5 j00g

relative Inform. Technology (IT)
olvi3* 0.976 1.0 0.25 (1.0)
cmyn3* 0.024 0.0 0.75 (0.0)
olvi4* 0.976 1.0 0.25 1.0
cmyn4* 0.024 0.0 0.75 0.0
standard and adapted CIELAB
LAB*LAB 91.68 −3.69 91.33
LAB*LABa 91.68 −3.7 91.33
LAB*TCHa 62.5 91.41 92.33
relative CIELAB lab*
lab*lab 0.952 −0.029 0.749
lab*tch 0.625 0.75 0.256
lab*nch 0.0 0.75 0.256
relative Natural Colour (NC)
lab*lrj 0.952 0.0 0.75
lab*tce 0.625 0.75 0.75
lab*ncE 0.0 0.75 r99j

relative Inform. Technology (IT)
olvi3* 0.726 0.75 0.0 (1.0)
cmyn3* 0.274 0.25 1.0 (0.0)
olvi4* 0.976 1.0 0.25 0.75
cmyn4* 0.024 0.0 0.75 0.25
standard and adapted CIELAB
LAB*LAB 72.34 −3.68 91.33
LAB*LABa 72.34 −3.71 91.32
LAB*TCHa 37.51 91.4 92.33
relative CIELAB lab*
lab*lab 0.702 −0.03 0.749
lab*tch 0.375 0.75 0.256
lab*nch 0.25 0.75 0.256
relative Natural Colour (NC)
lab*lrj 0.702 0.0 0.75
lab*tce 0.375 0.75 0.75
lab*ncE 0.25 0.75 j00g

relative Inform. Technology (IT)
olvi3* 0.967 1.0 0.0 (1.0)
cmyn3* 0.033 0.0 1.0 (0.0)
olvi4* 0.968 1.0 0.0 1.0
cmyn4* 0.032 0.0 1.0 0.0
standard and adapted CIELAB
LAB*LAB 90.45 −4.93 121.76
LAB*LABa 90.45 −4.94 121.77
LAB*TCHa 50.0 121.87 92.33
relative CIELAB lab*
lab*lab 0.936 −0.04 0.999
lab*tch 0.5 1.0 0.256
lab*nch 0.0 1.0 0.256
relative Natural Colour (NC)
lab*lrj 0.936 0.0 1.0
lab*tce 0.5 1.0 1.0
lab*ncE 0.0 1.0 r99j

*n** = 0,00

*n** = 0,25

*n** = 0,50

blackness *n**

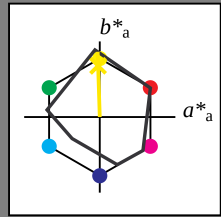
0,25 0,50 0,75 1,00

chromaticness *c**

*n** = 1,0

Output: Colorimetric Reflective System MRS18
for hue *h = *lab*h* = 92/360 = 0.255**
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 86 92
rgb*Ma: 1.0 0.95 0.0
triangle lightness *t**



%Gamut

u*rel = 91

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

g*H,rel = 41

g*C,rel = 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*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* 0.75 0.75 0.75 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 1.0 1.0 1.0 0.75
cmyn4* 0.0 0.0 0.0 0.25
standard and adapted CIELAB
LAB*LAB 76.06 −0.6 3.44
LAB*LABa 76.06 0.0 0.0
LAB*TCHa 75.0 0.01 –
relative CIELAB lab*
lab*lab 0.75 0.0 0.0
lab*tch 0.75 0.0 –
lab*nch 0.25 0.0 –
relative Natural Colour (NC)
lab*lrj 0.75 0.0 0.0
lab*tce 0.75 0.0 –
lab*ncE 0.25 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*LABa 56.71 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* 0.25 0.25 0.25 (1.0)
cmyn3* 0.75 0.75 0.75 (0.0)
olvi4* 1.0 1.0 1.0 0.25
cmyn4* 0.0 0.0 0.0 0.75
standard and adapted CIELAB
LAB*LAB 37.36 0.13 0.83
LAB*LABa 37.36 0.0 0.0
LAB*TCHa 25.0 0.01 –
relative CIELAB lab*
lab*lab 0.25 0.0 0.0
lab*tch 0.25 0.0 –
lab*nch 0.75 0.0 –
relative Natural Colour (NC)
lab*lrj 0.25 0.0 0.0
lab*tce 0.25 0.0 –
lab*ncE 0.75 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*LABa 18.02 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 0.988 0.75 (1.0)
cmyn3* 0.0 0.012 0.25 (0.0)
olvi4* 1.0 0.988 0.75 1.0
cmyn4* 0.0 0.012 0.25 0.0
standard and adapted CIELAB
LAB*LAB 93.72 −1.64 26.21
LAB*LABa 93.72 −0.69 21.57
LAB*TCHa 87.5 21.58 91.86
relative CIELAB lab*
lab*lab 0.978 −0.007 0.25
lab*tch 0.875 0.25 0.255
lab*nch 0.0 0.25 0.255
relative Natural Colour (NC)
lab*lrj 0.978 0.0 0.25
lab*tce 0.875 0.25 0.25
lab*ncE 0.0 0.25 j00g

relative Inform. Technology (IT)
olvi3* 0.75 0.738 0.5 (1.0)
cmyn3* 0.25 0.262 0.5 (0.0)
olvi4* 1.0 0.988 0.75 0.75
cmyn4* 0.0 0.012 0.25 0.25
standard and adapted CIELAB
LAB*LAB 74.38 −1.26 24.91
LAB*LABa 74.38 −0.68 21.57
LAB*TCHa 62.5 21.58 91.84
relative CIELAB lab*
lab*lab 0.728 −0.007 0.25
lab*tch 0.625 0.25 0.255
lab*nch 0.25 0.25 0.255
relative Natural Colour (NC)
lab*lrj 0.728 0.0 0.25
lab*tce 0.625 0.25 0.25
lab*ncE 0.25 0.25 r99j

relative Inform. Technology (IT)
olvi3* 0.5 0.488 0.25 (1.0)
cmyn3* 0.5 0.512 0.75 (0.0)
olvi4* 1.0 0.988 0.75 0.5
cmyn4* 0.0 0.012 0.25 0.5
standard and adapted CIELAB
LAB*LAB 55.03 −0.89 23.6
LAB*LABa 55.03 −0.68 21.57
LAB*TCHa 37.5 21.58 91.84
relative CIELAB lab*
lab*lab 0.478 −0.007 0.25
lab*tch 0.375 0.25 0.255
lab*nch 0.5 0.25 0.255
relative Natural Colour (NC)
lab*lrj 0.478 0.0 0.25
lab*tce 0.375 0.25 0.25
lab*ncE 0.5 0.25 r99j

relative Inform. Technology (IT)
olvi3* 0.25 0.238 0.0 (1.0)
cmyn3* 0.75 0.762 1.0 (0.0)
olvi4* 1.0 0.988 0.75 0.25
cmyn4* 0.0 0.012 0.25 0.75
standard and adapted CIELAB
LAB*LAB 35.68 −0.52 22.29
LAB*LABa 35.68 −0.68 21.56
LAB*TCHa 12.5 21.57 91.84
relative CIELAB lab*
lab*lab 0.228 −0.007 0.25
lab*tch 0.125 0.25 0.255
lab*nch 0.75 0.25 0.255
relative Natural Colour (NC)
lab*lrj 0.228 0.0 0.25
lab*tce 0.125 0.25 0.25
lab*ncE 0.75 0.25 r99j

relative Inform. Technology (IT)
olvi3* 1.0 0.976 0.5 (1.0)
cmyn3* 0.0 0.024 0.5 (0.0)
olvi4* 1.0 0.976 0.5 1.0
cmyn4* 0.0 0.024 0.5 0.0
standard and adapted CIELAB
LAB*LAB 92.04 −2.3 47.67
LAB*LABa 92.04 −1.39 43.14
LAB*TCHa 75.0 43.16 91.85
relative CIELAB lab*
lab*lab 0.957 −0.015 0.5
lab*tch 0.75 0.5 0.255
lab*nch 0.0 0.5 0.255
relative Natural Colour (NC)
lab*lrj 0.957 0.0 0.5
lab*tce 0.75 0.5 0.5
lab*ncE 0.0 0.5 j00g

relative Inform. Technology (IT)
olvi3* 0.75 0.726 0.25 (1.0)
cmyn3* 0.25 0.274 0.75 (0.0)
olvi4* 1.0 0.976 0.5 0.75
cmyn4* 0.0 0.024 0.5 0.25
standard and adapted CIELAB
LAB*LAB 72.7 −1.92 46.37
LAB*LABa 72.7 −1.38 43.14
LAB*TCHa 50.0 43.16 91.84
relative CIELAB lab*
lab*lab 0.707 −0.015 0.5
lab*tch 0.5 0.5 0.255
lab*nch 0.25 0.5 0.255
relative Natural Colour (NC)
lab*lrj 0.707 0.0 0.5
lab*tce 0.5 0.5 0.5
lab*ncE 0.25 0.5 r99j

relative Inform. Technology (IT)
olvi3* 0.5 0.476 0.0 (1.0)
cmyn3* 0.5 0.524 1.0 (0.0)
olvi4* 1.0 0.976 0.5 0.5
cmyn4* 0.0 0.024 0.5 0.5
standard and adapted CIELAB
LAB*LAB 53.35 −1.55 45.05
LAB*LABa 53.35 −1.38 43.13
LAB*TCHa 25.01 43.16 91.84
relative CIELAB lab*
lab*lab 0.457 −0.015 0.5
lab*tch 0.25 0.5 0.255
lab*nch 0.5 0.5 0.255
relative Natural Colour (NC)
lab*lrj 0.457 0.0 0.5
lab*tce 0.25 0.5 0.5
lab*ncE 0.5 0.5 r99j

relative Inform. Technology (IT)
olvi3* 1.0 0.963 0.25 (1.0)
cmyn3* 0.0 0.037 0.75 (0.0)
olvi4* 1.0 0.963 0.25 1.0
cmyn4* 0.0 0.037 0.75 0.0
standard and adapted CIELAB
LAB*LAB 90.36 −2.96 69.13
LAB*LABa 90.36 −2.08 64.71
LAB*TCHa 62.5 64.74 91.85
relative CIELAB lab*
lab*lab 0.935 −0.023 0.75
lab*tch 0.625 0.75 0.255
lab*nch 0.0 0.75 0.255
relative Natural Colour (NC)
lab*lrj 0.935 0.0 0.75
lab*tce 0.625 0.75 0.75
lab*ncE 0.0 0.75 j00g

relative Inform. Technology (IT)
olvi3* 0.75 0.713 0.0 (1.0)
cmyn3* 0.25 0.287 1.0 (0.0)
olvi4* 1.0 0.963 0.25 0.75
cmyn4* 0.0 0.037 0.75 0.25
standard and adapted CIELAB
LAB*LAB 71.02 −2.59 67.82
LAB*LABa 71.02 −2.07 64.7
LAB*TCHa 37.51 64.74 91.84
relative CIELAB lab*
lab*lab 0.685 −0.023 0.75
lab*tch 0.375 0.75 0.255
lab*nch 0.25 0.75 0.255
relative Natural Colour (NC)
lab*lrj 0.685 0.0 0.75
lab*tce 0.375 0.75 0.75
lab*ncE 0.25 0.75 r99j

relative Inform. Technology (IT)
olvi3* 1.0 0.951 0.0 (1.0)
cmyn3* 0.0 0.049 1.0 (0.0)
olvi4* 1.0 0.951 0.0 1.0
cmyn4* 0.0 0.049 1.0 0.0
standard and adapted CIELAB
LAB*LAB 88.68 −3.62 90.58
LAB*LABa 88.68 −2.77 86.27
LAB*TCHa 50.0 86.32 91.85
relative CIELAB lab*
lab*lab 0.913 −0.031 0.999
lab*tch 0.5 1.0 0.255
lab*nch 0.0 1.0 0.255
relative Natural Colour (NC)
lab*lrj 0.913 0.0 1.0
lab*tce 0.5 1.0 1.0
lab*ncE 0.0 1.0 j00g

*n** = 0,00

*n** = 0,25

*n** = 0,50

blackness *n**

0,25 0,50 0,75 1,00

chromaticness *c**

*n** = 1,0

UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System NCS18

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

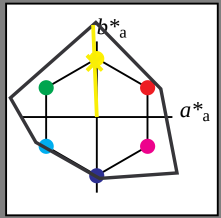
*lab*tch* and *lab*nch*

D65: hue J

LCH*Ma: 90 122 92

rgb*Ma: 0.97 1.0 0.0

triangle lightness t^*



%Gamut

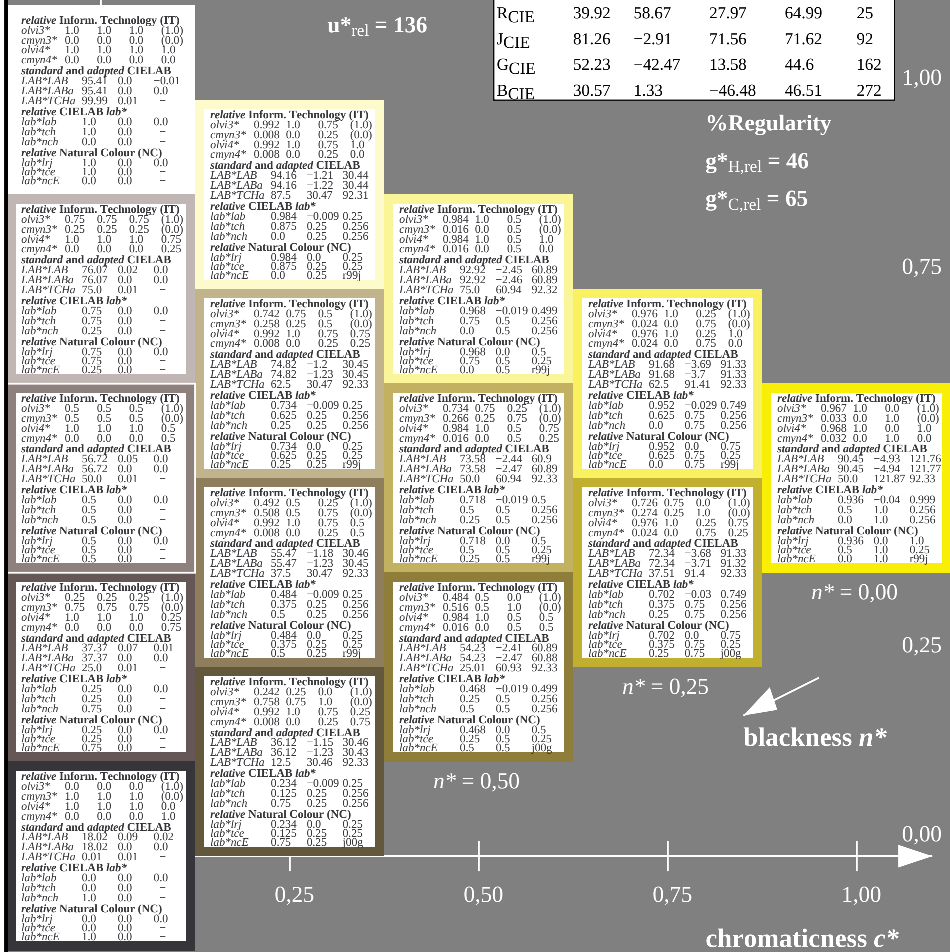
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System TRS18

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

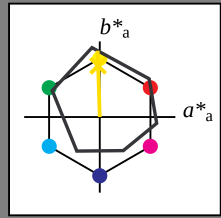
*lab*tch* and *lab*nch*

D65: hue J

LCH*Ma: 86 88 92

rgb*Ma: 1.0 0.9 0.0

triangle lightness t^*



%Gamut

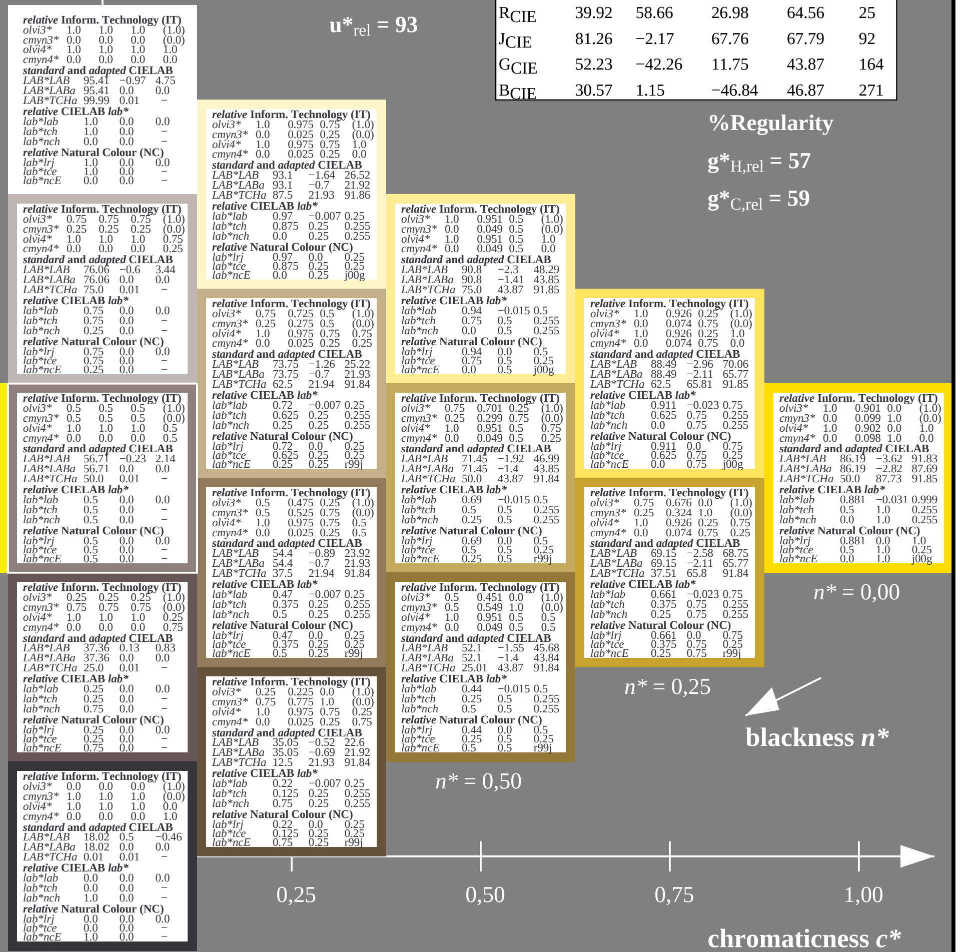
u^*_{rel} = 93

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System NCS18

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

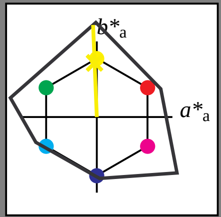
*lab*tch* and *lab*nch*

D65: hue J

LCH*Ma: 90 122 92

rgb*Ma: 0.97 1.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 136

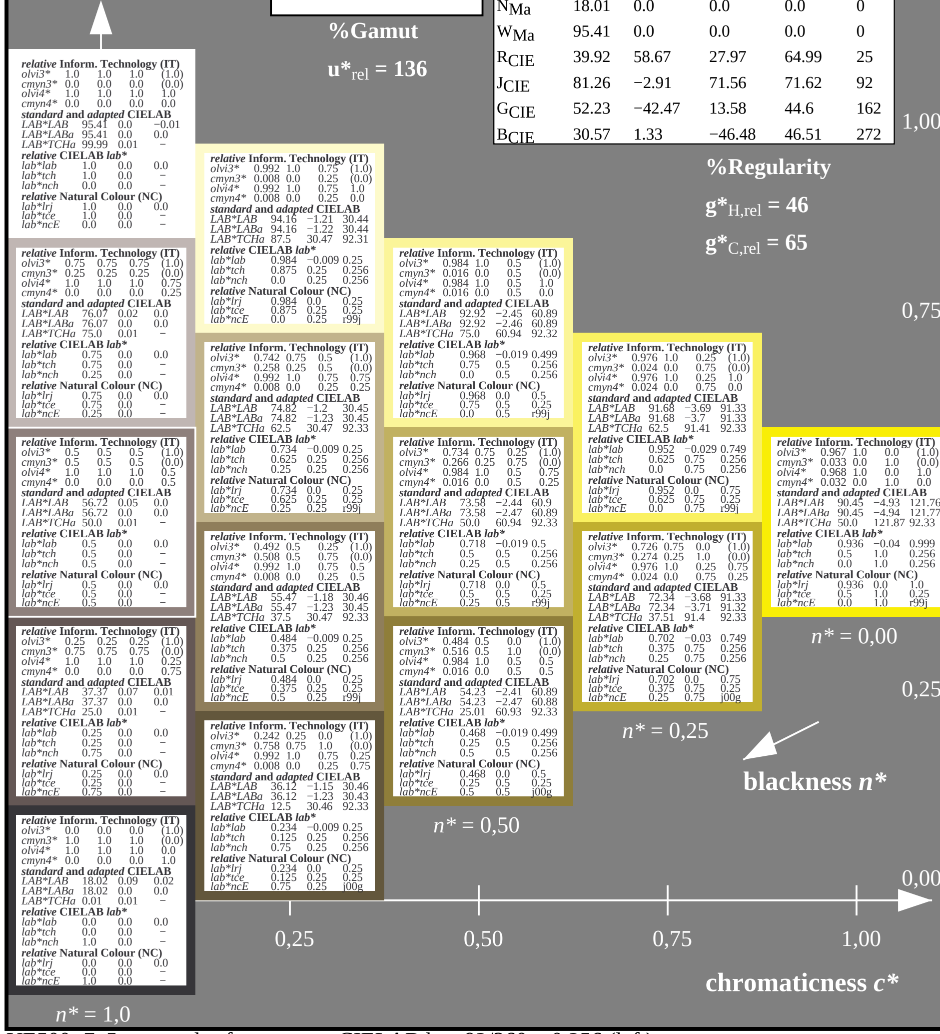
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System MRS18a

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

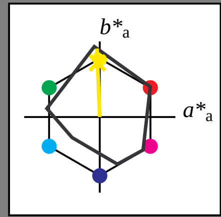
*lab*tch* and *lab*nch*

D65: hue J

LCH*Ma: 89 91 92

rgb*Ma: 1.0 0.95 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 92

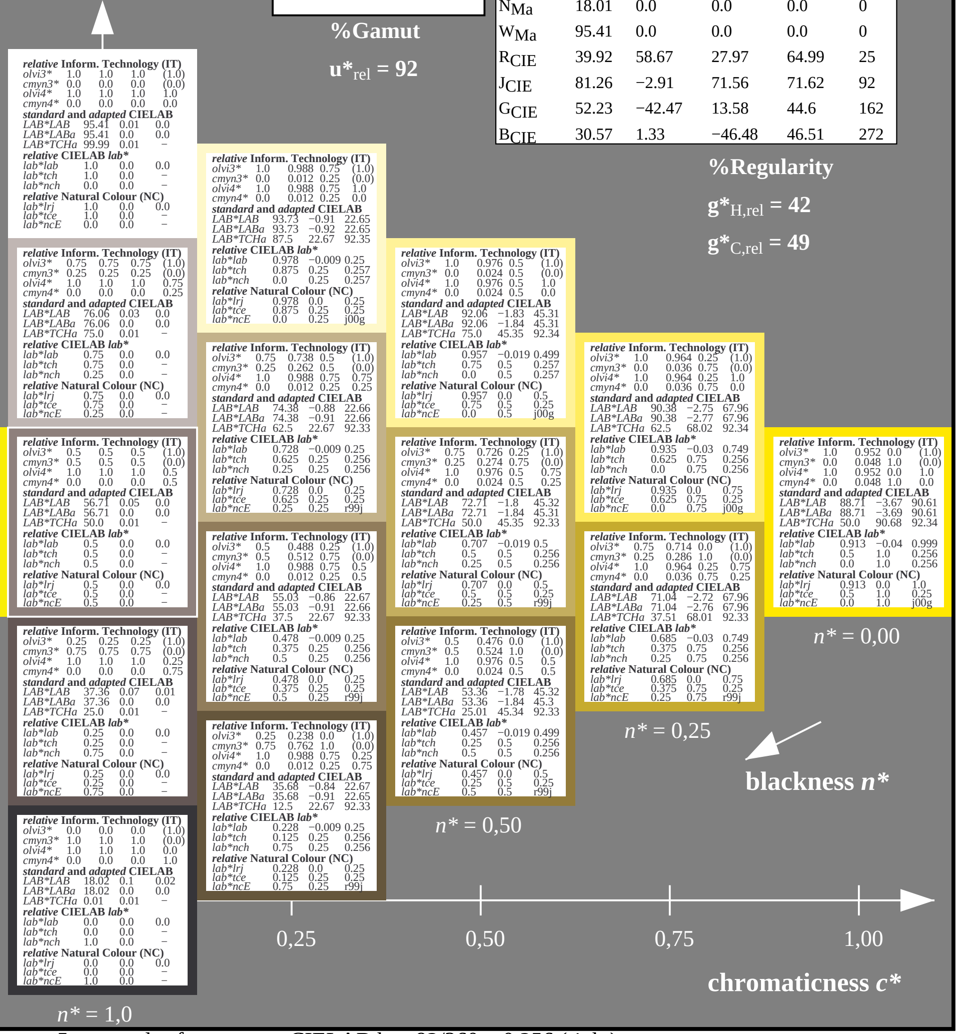
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System NCS18

for hue *h* = lab*h = 92/360 = 0.256*

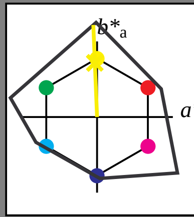
lab*tch and lab*nch

D65: hue J

LCH*Ma: 90 122 92

rgb*Ma: 0.97 1.0 0.0

triangle lightness *t**



%Gamut

u^*_{rel} = 136

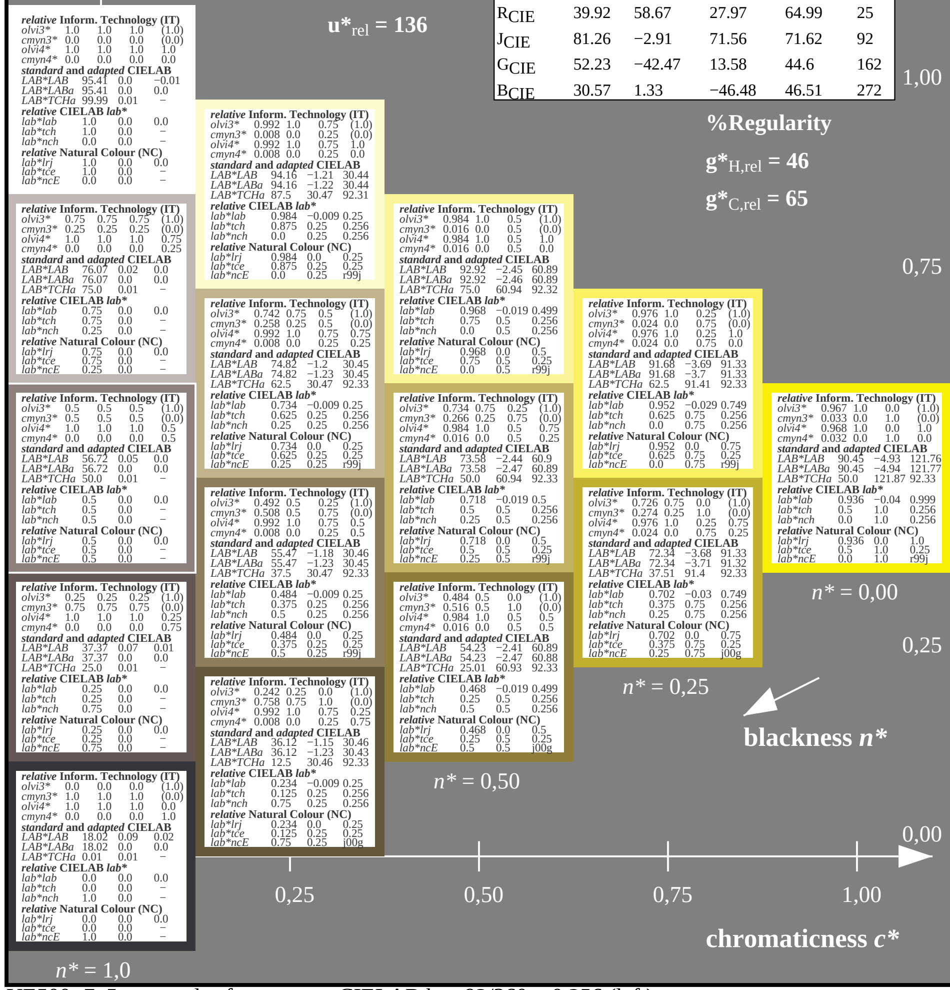
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NRS18

for hue *h* = lab*h = 92/360 = 0.256*

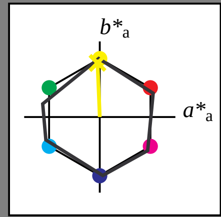
lab*tch and lab*nch

D65: hue J

LCH*Ma: 57 76 92

rgb*Ma: 0.98 1.0 0.0

triangle lightness *t**



%Gamut

u^*_{rel} = 100

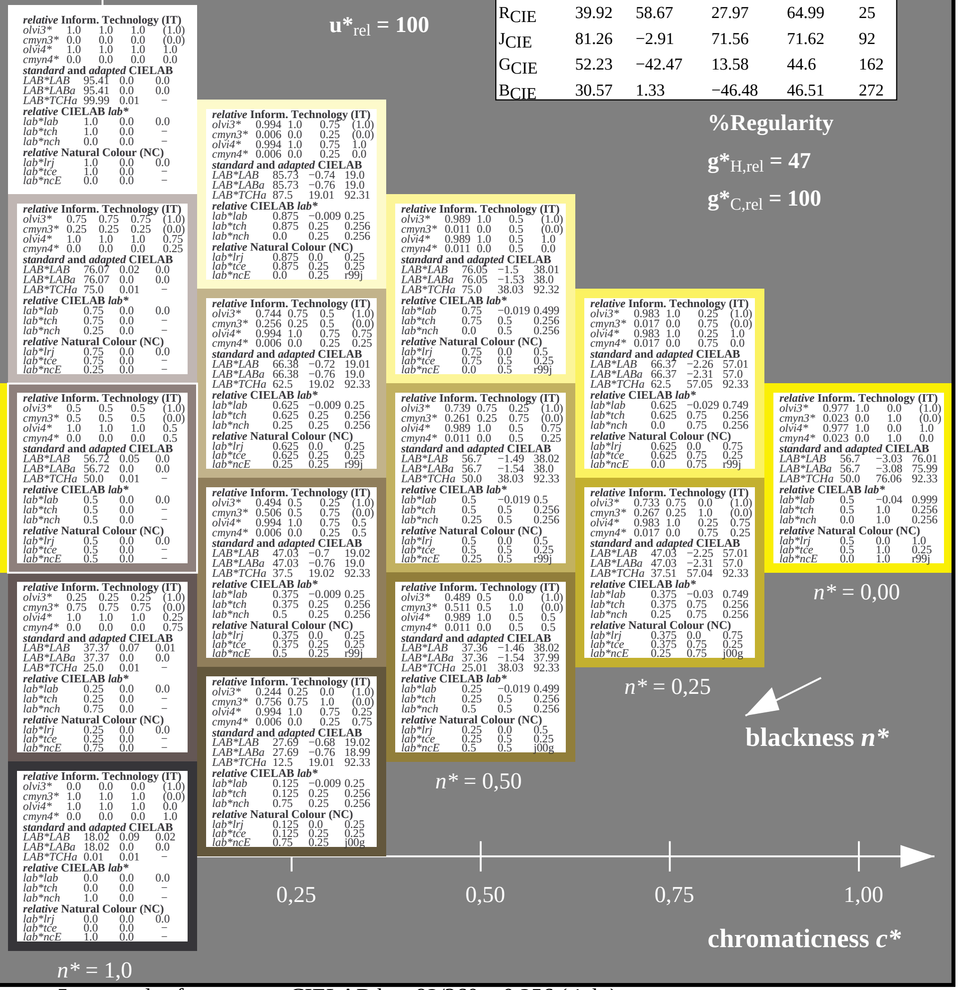
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

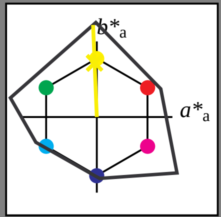


UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

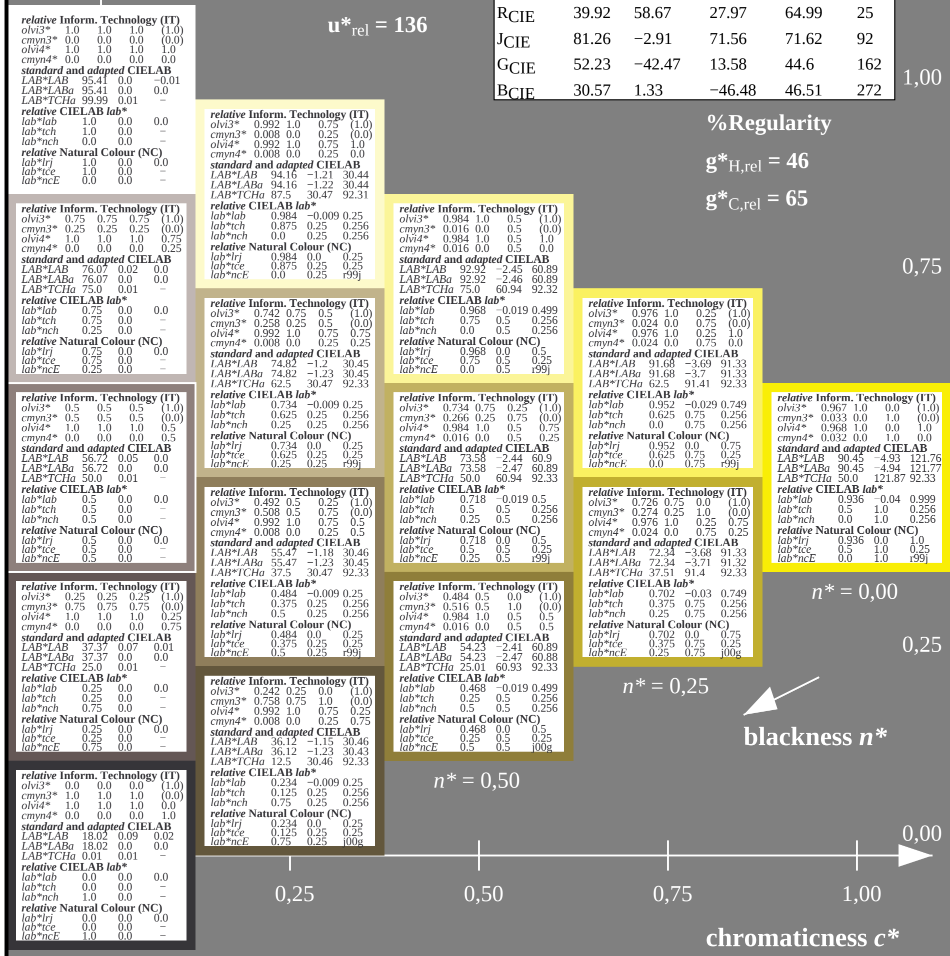
D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 136$

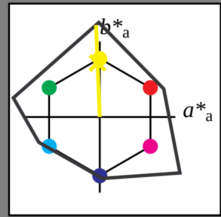
NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

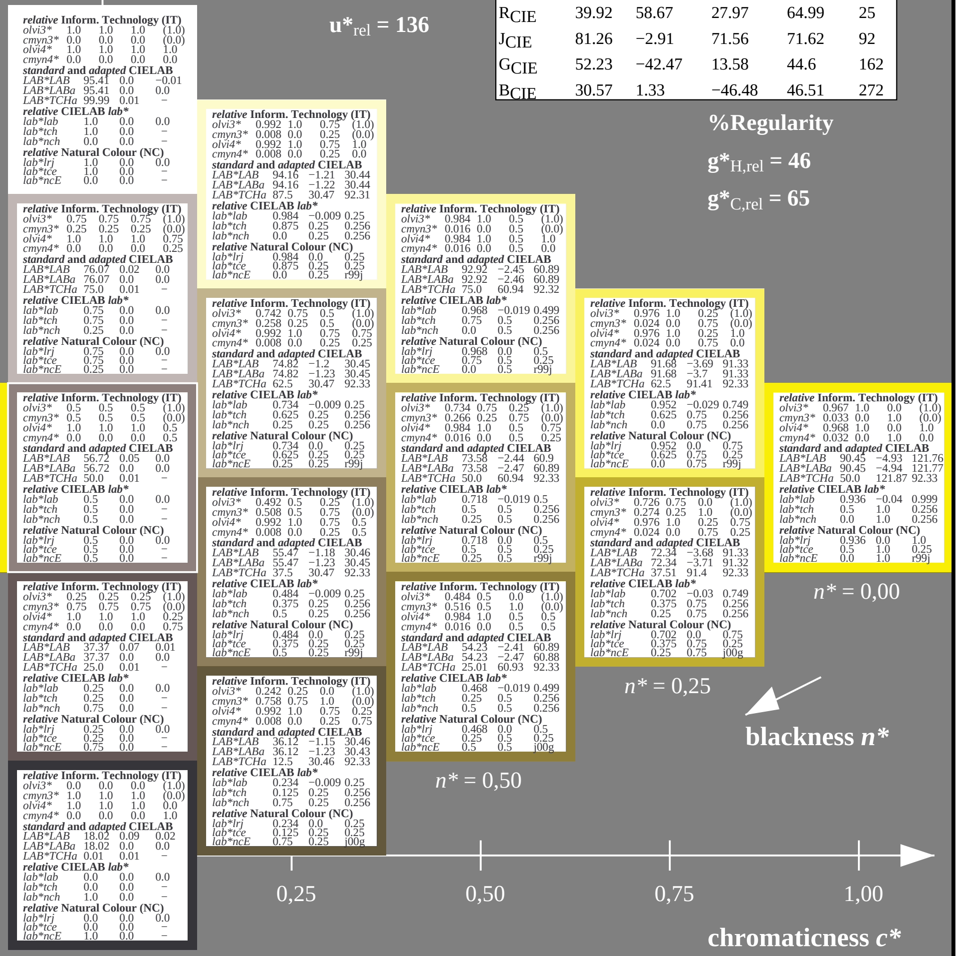
D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System NCS18

for hue *h* = lab*h* = 92/360 = 0.256

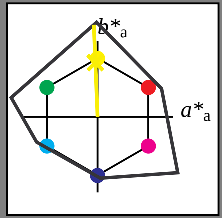
lab*tch* and *lab*nch

D65: hue J

LCH*Ma: 90 122 92

rgb*Ma: 0.97 1.0 0.0

triangle lightness *t*



%Gamut

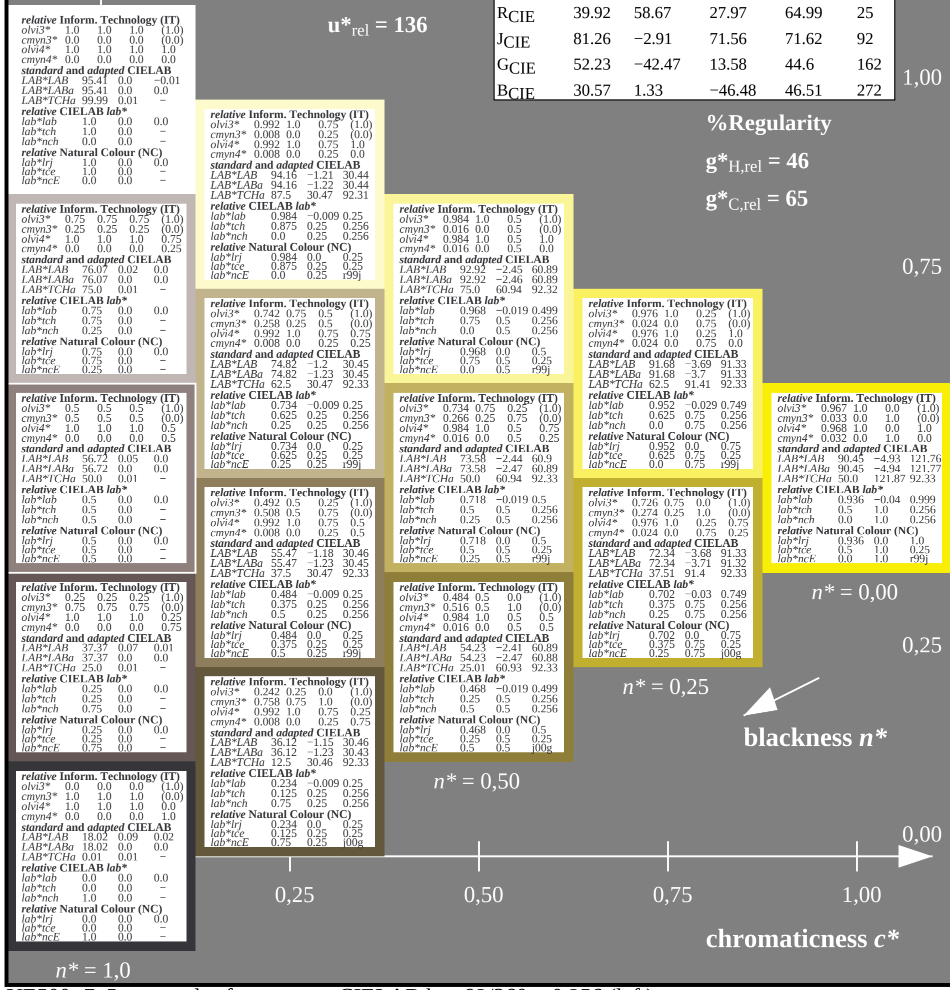
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NRS11

for hue *h* = lab*h* = 92/360 = 0.256

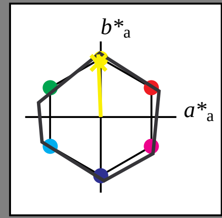
lab*tch* and *lab*nch

D65: hue J

LCH*Ma: 53 83 92

rgb*Ma: 0.98 1.0 0.0

triangle lightness *t*



%Gamut

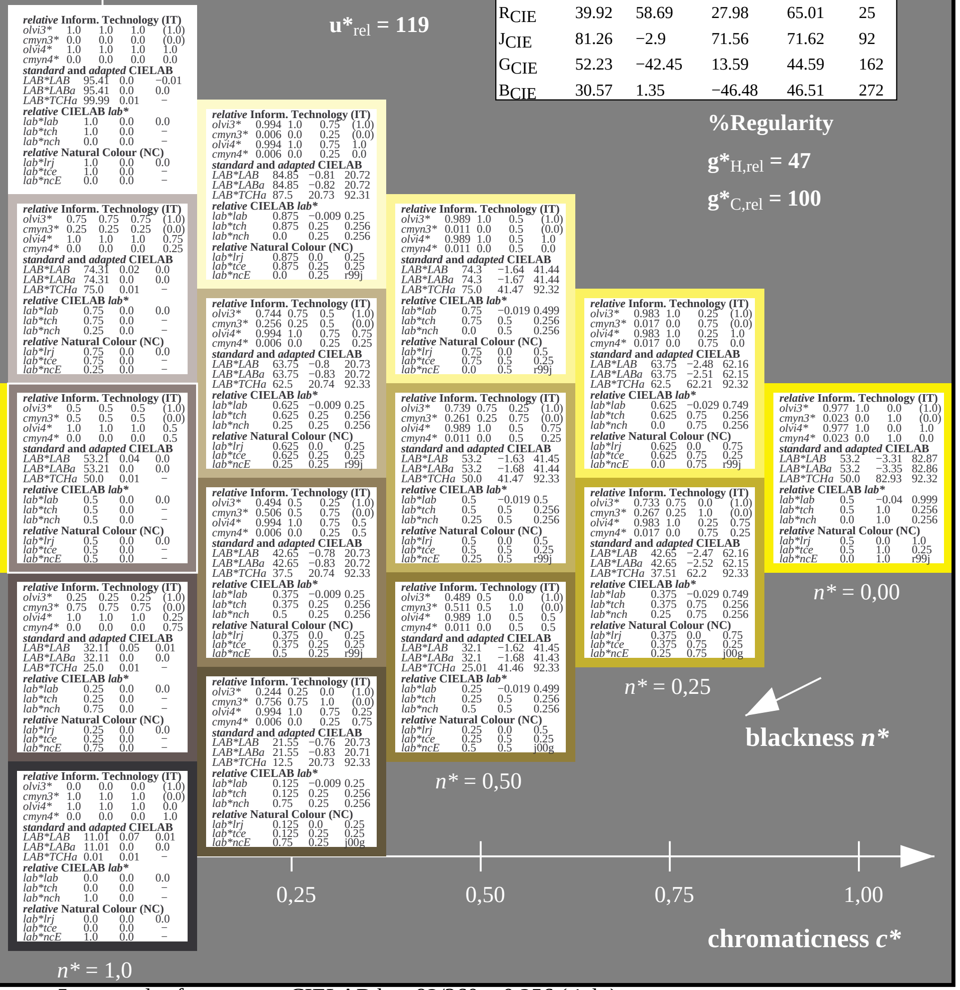
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

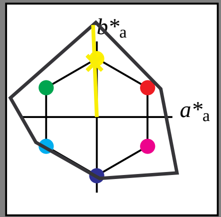


UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

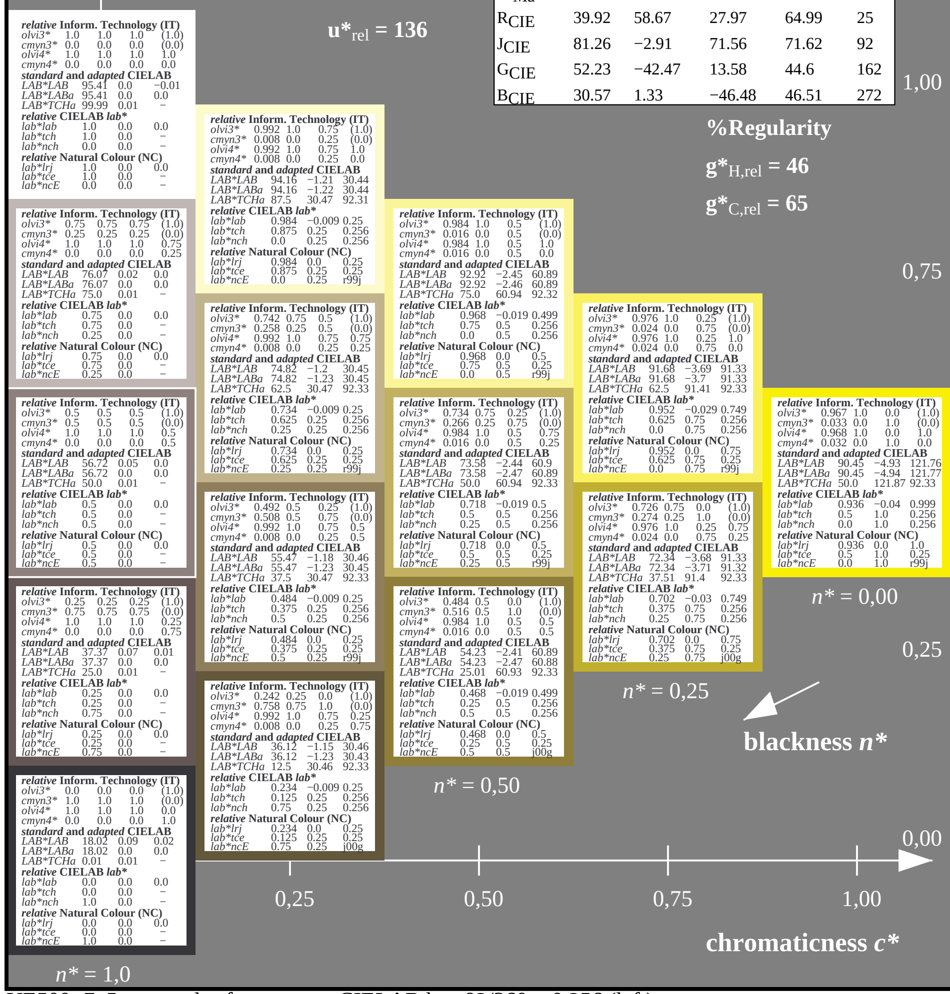
D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 136$

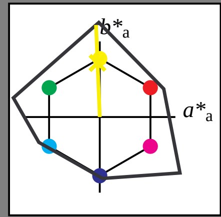
NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

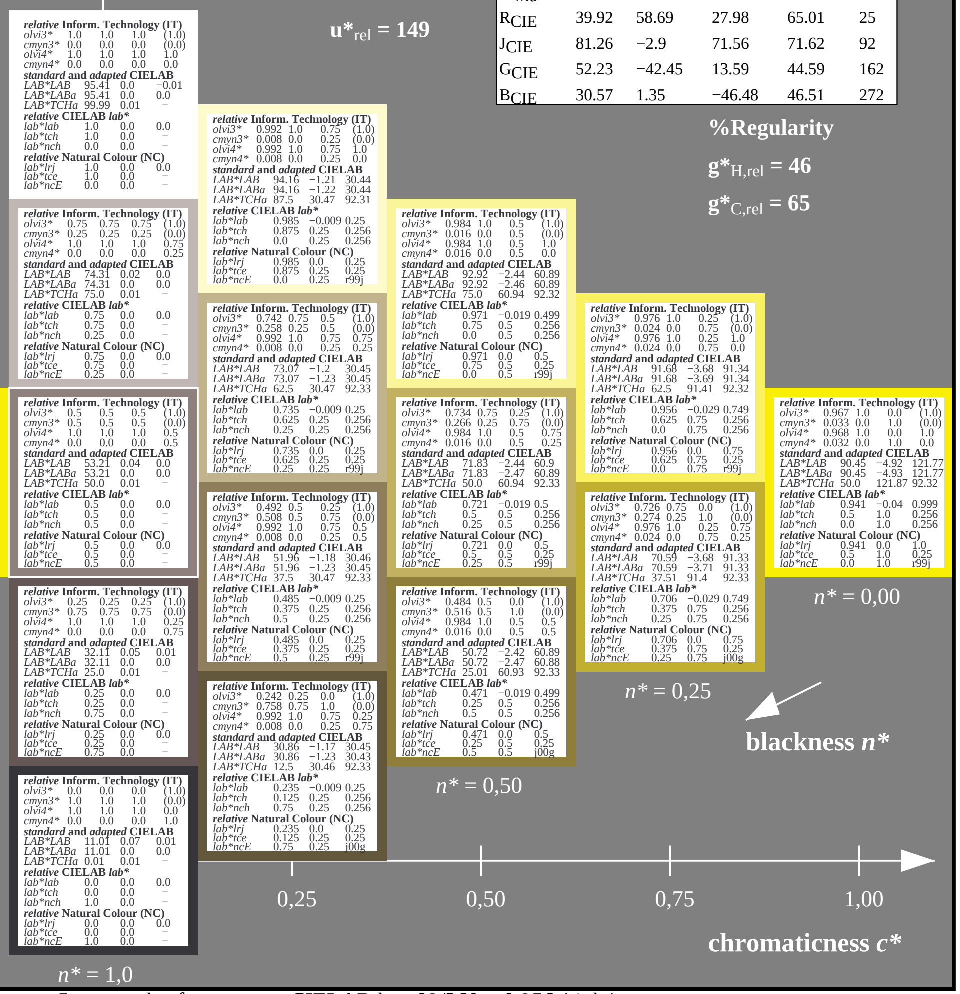
D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System NRS11

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

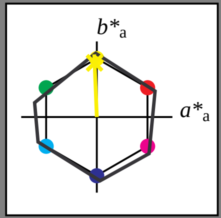
*lab*tch* and *lab*nch*

D65: hue J

LCH*Ma: 53 83 92

rgb*Ma: 0.98 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 119$

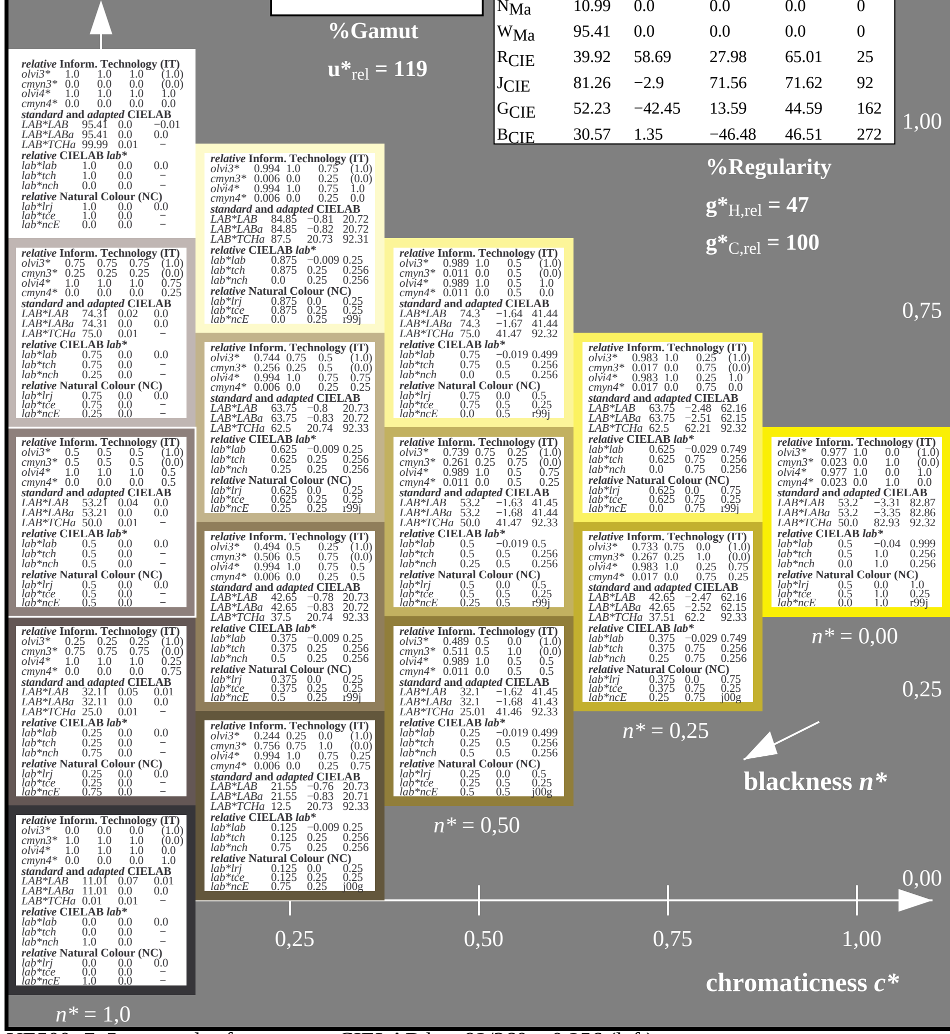
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System ORS18

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

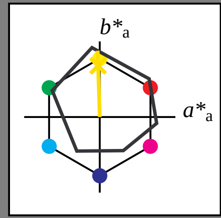
*lab*tch* and *lab*nch*

D65: hue J

LCH*Ma: 86 88 92

rgb*Ma: 1.0 0.9 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

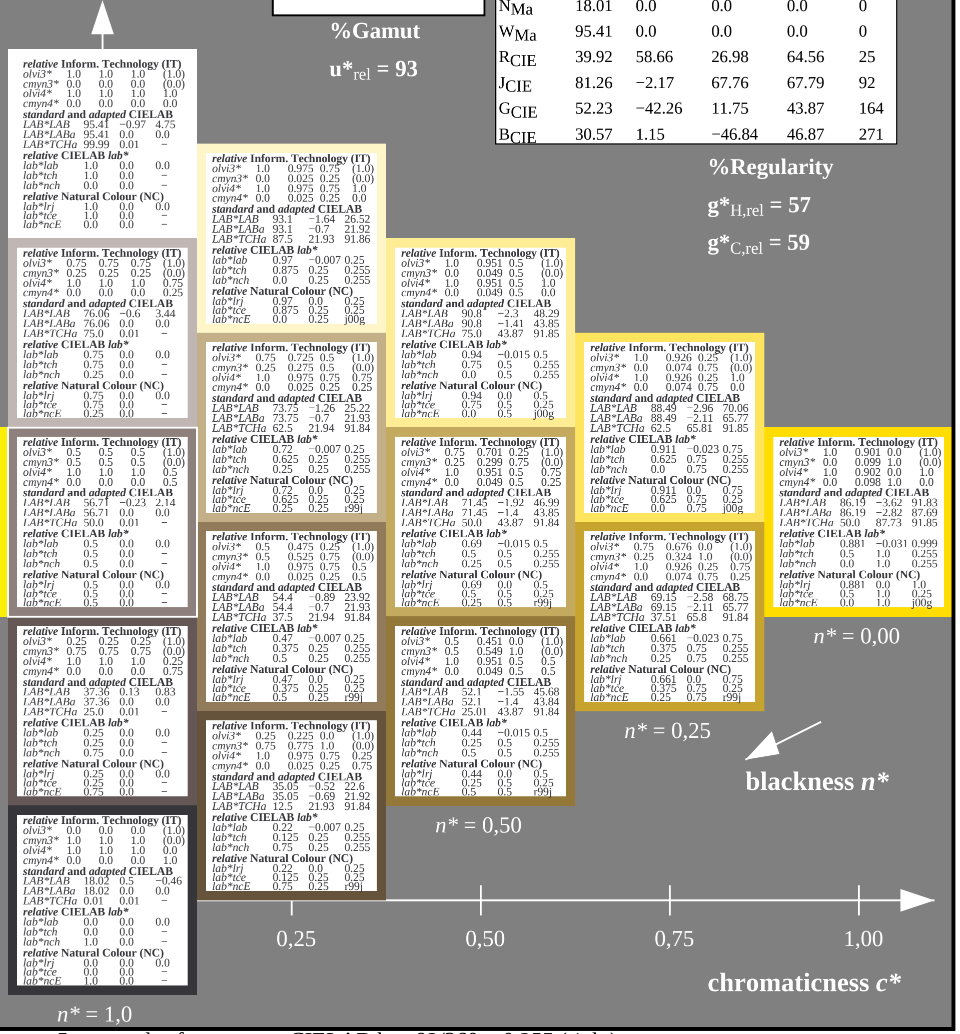
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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

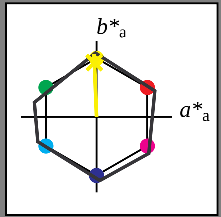


UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 92/360 = 0.256$
*lab*tch* and *lab*nch*

D65: hue J
LCH*Ma: 53 83 92
rgb*Ma: 0.98 1.0 0.0
triangle lightness t^*

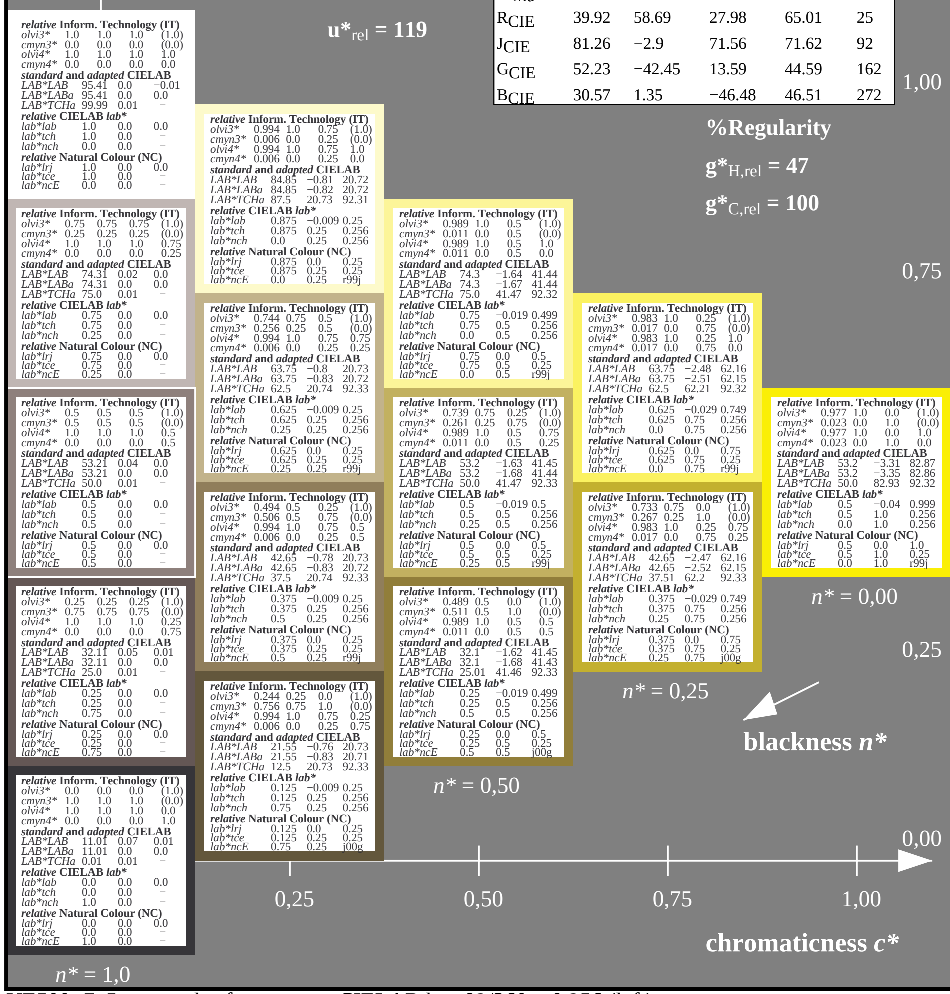


%Gamut
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

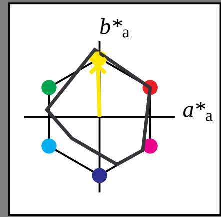
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
*lab*tch* and *lab*nch*

D65: hue J
LCH*Ma: 89 86 92
rgb*Ma: 1.0 0.95 0.0
triangle lightness t^*

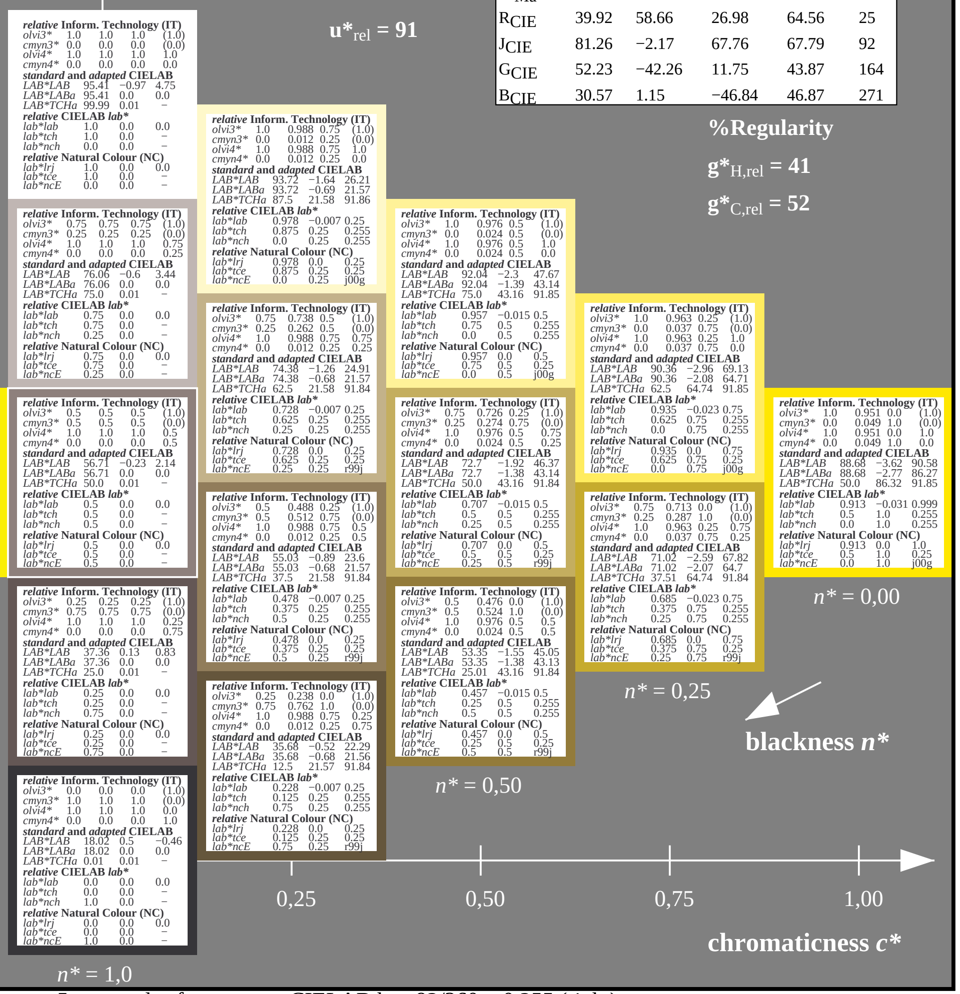


%Gamut
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

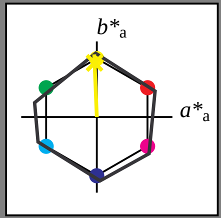
%Regularity
$g^*_{H,rel}$ = 41
$g^*_{C,rel}$ = 52



UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)   5 step scales for constant CIELAB hue 92/360 = 0.255 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

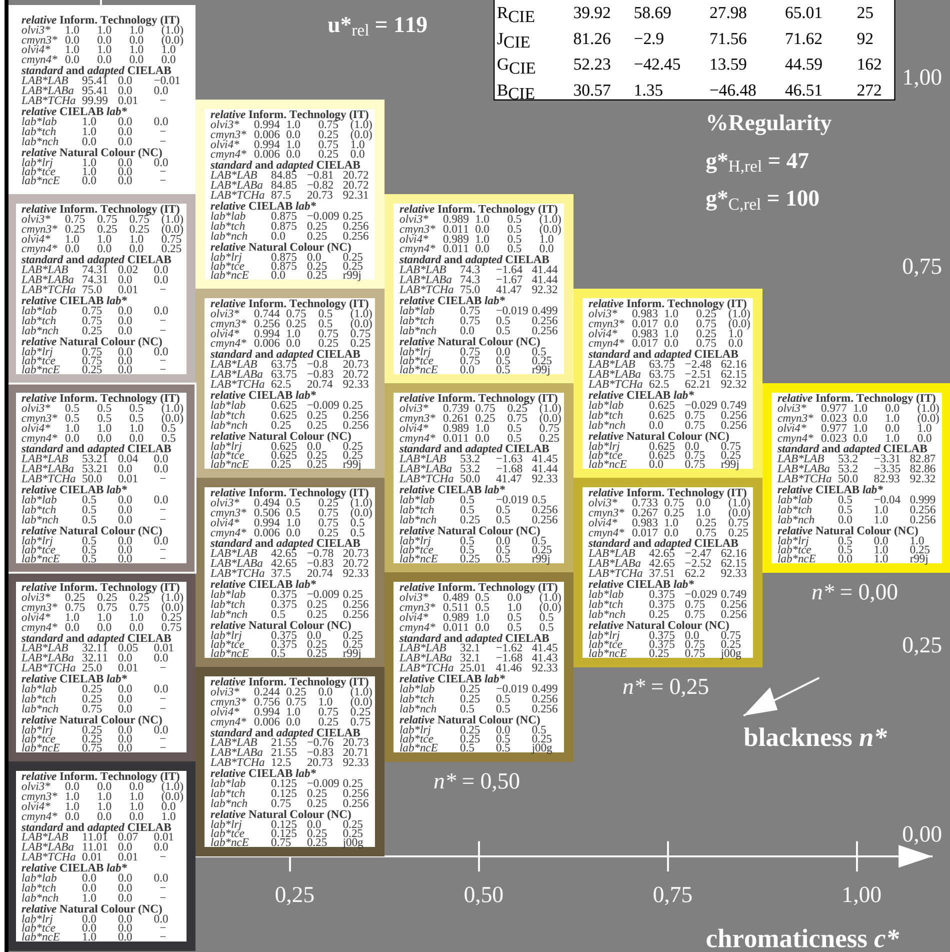
D65: hue J
LCH*Ma: 53 83 92
rgb*Ma: 0.98 1.0 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 119$

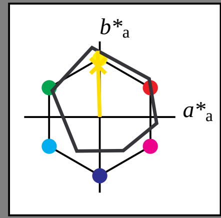
NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

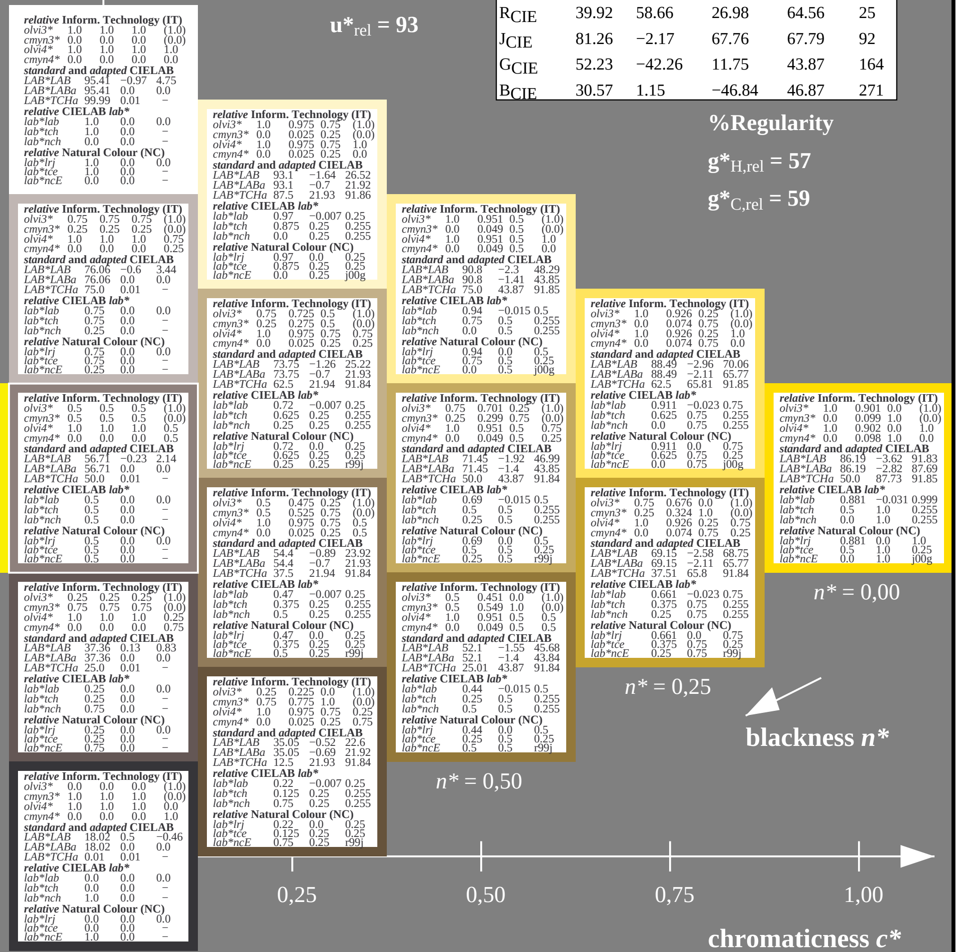
D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$

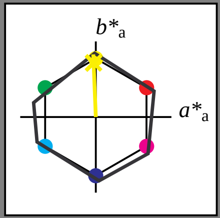


UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 92/360 = 0.256$
*lab*tch* and *lab*nch*

D65: hue J
LCH*Ma: 53 83 92
rgb*Ma: 0.98 1.0 0.0
triangle lightness t^*

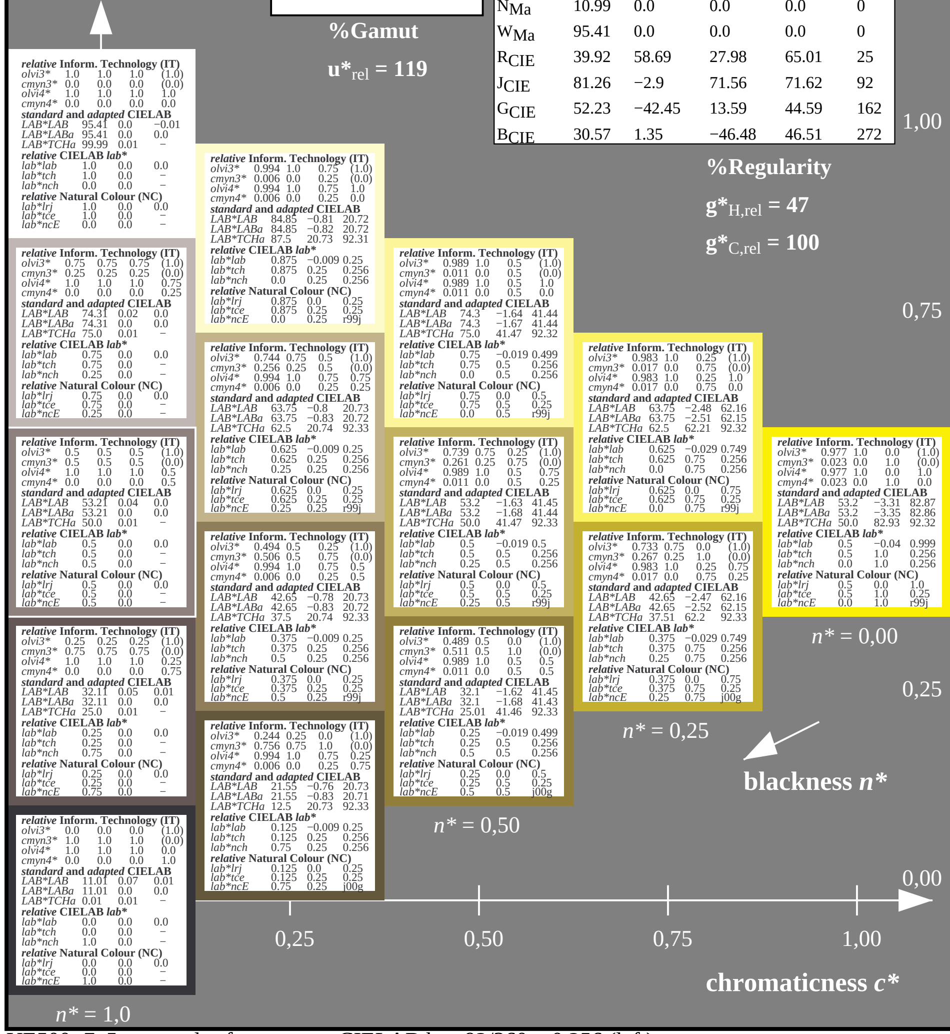


%Gamut
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data

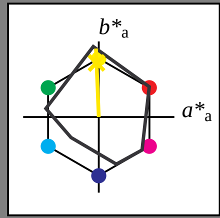
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 92/360 = 0.256$
*lab*tch* and *lab*nch*

D65: hue J
LCH*Ma: 89 91 92
rgb*Ma: 1.0 0.95 0.0
triangle lightness t^*

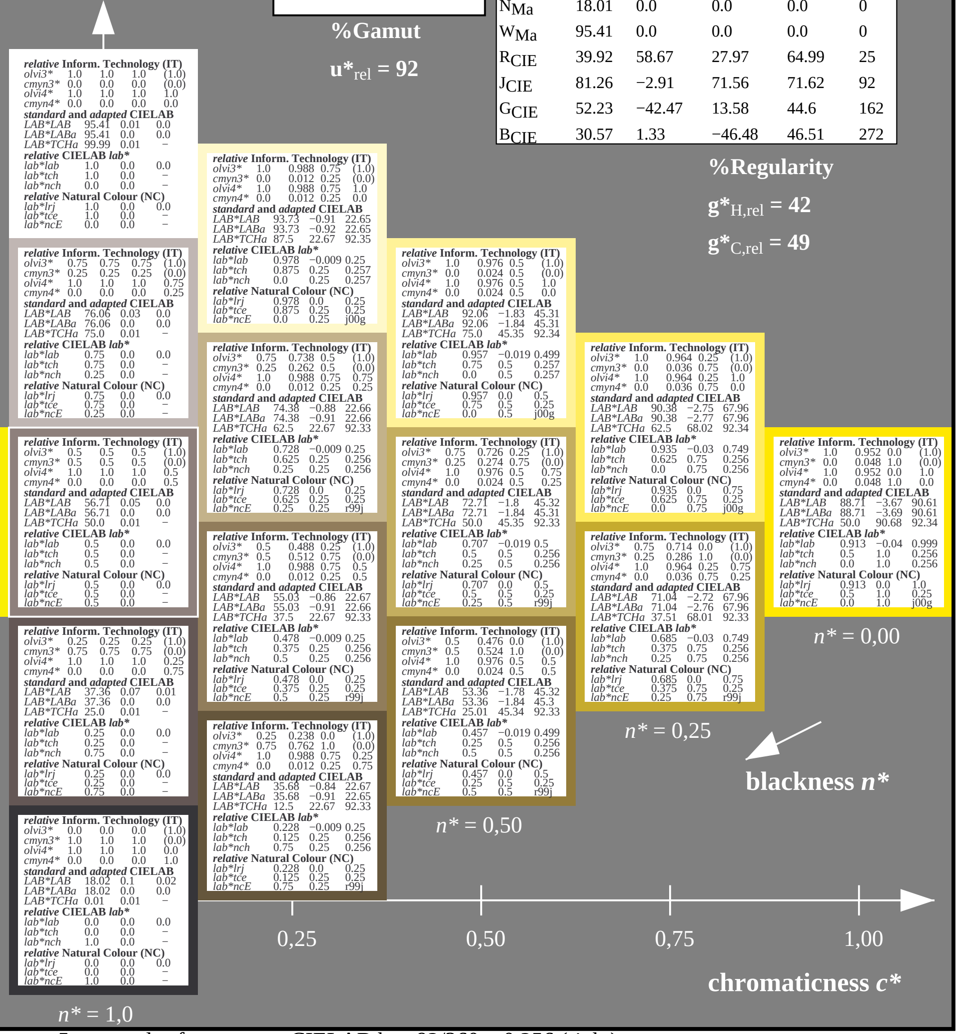


%Gamut
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$



UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System NRS11

for hue *h** = *lab*h* = *92/360* = *0.256*

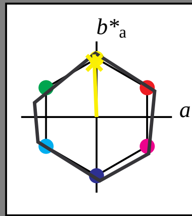
*lab*tch* and *lab*nch*

D65: hue J

LCH*Ma: 53 83 92

rgb*Ma: 0.98 1.0 0.0

triangle lightness *t**



%Gamut

u*rel = 119

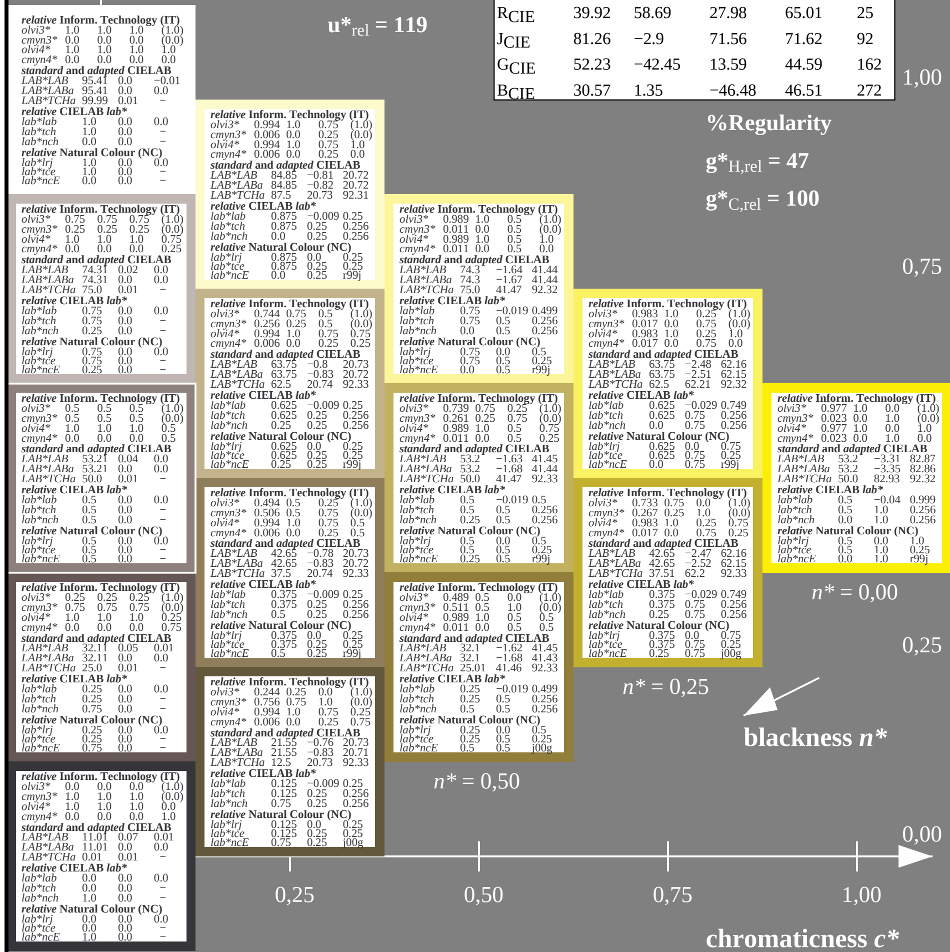
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

g*H,rel = 47

g*C,rel = 100



Output: Colorimetric Reflective System NRS18

for hue *h** = *lab*h* = *92/360* = *0.256*

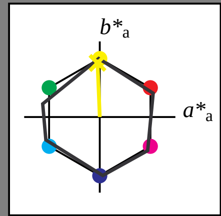
*lab*tch* and *lab*nch*

D65: hue J

LCH*Ma: 57 76 92

rgb*Ma: 0.98 1.0 0.0

triangle lightness *t**



%Gamut

u*rel = 100

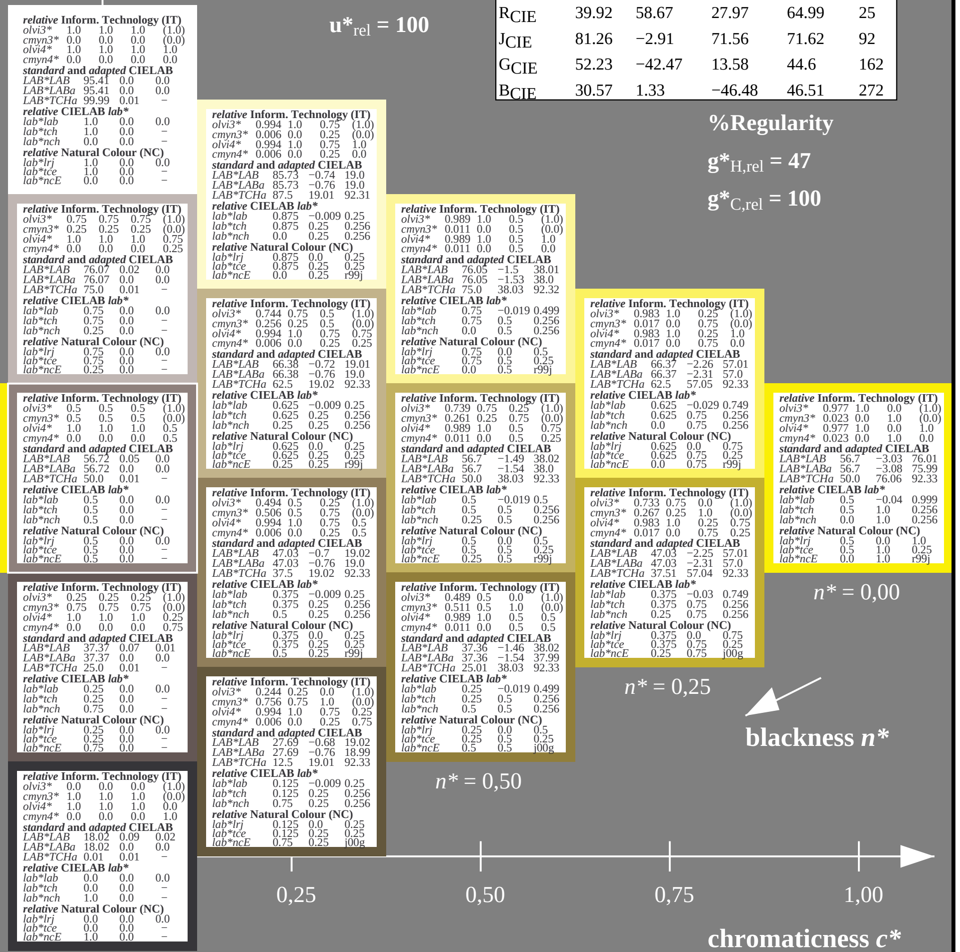
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

g*H,rel = 47

g*C,rel = 100



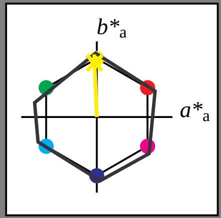
UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 83 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness t^*

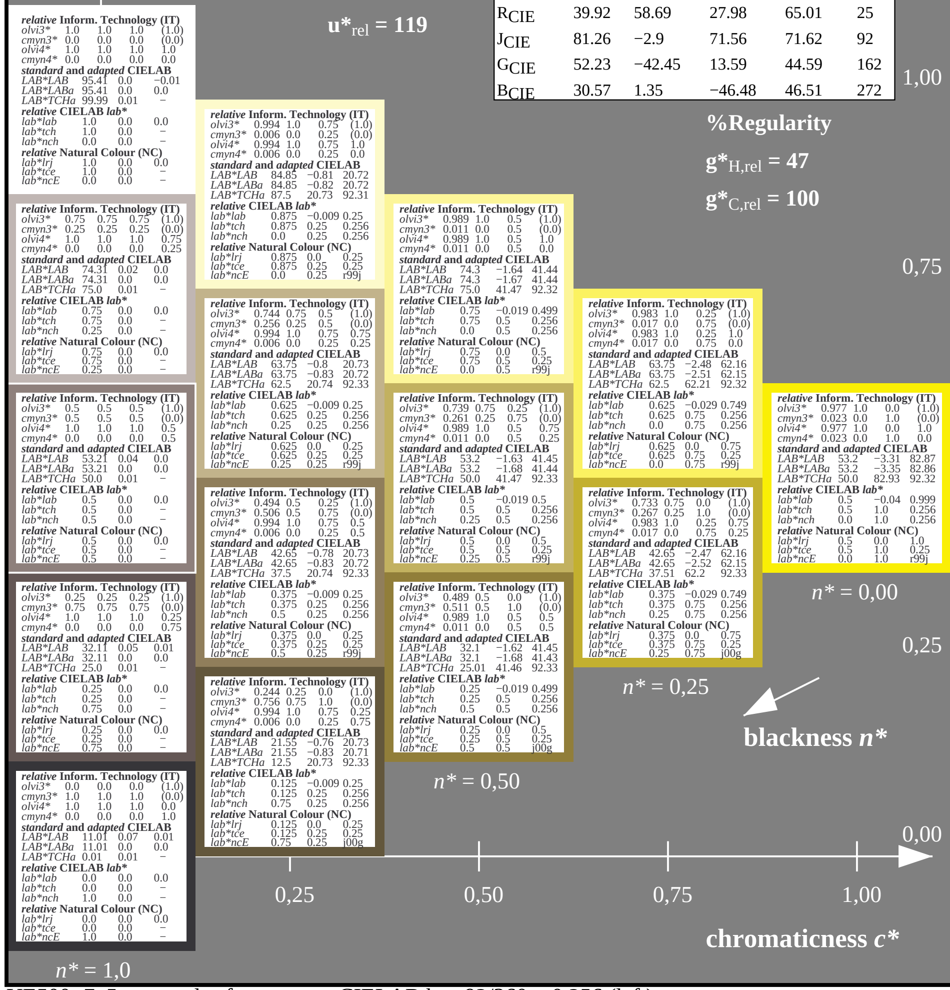


NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut
$u^*_{rel} = 119$

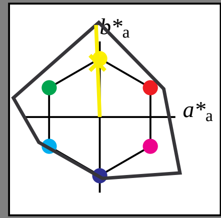
%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness t^*

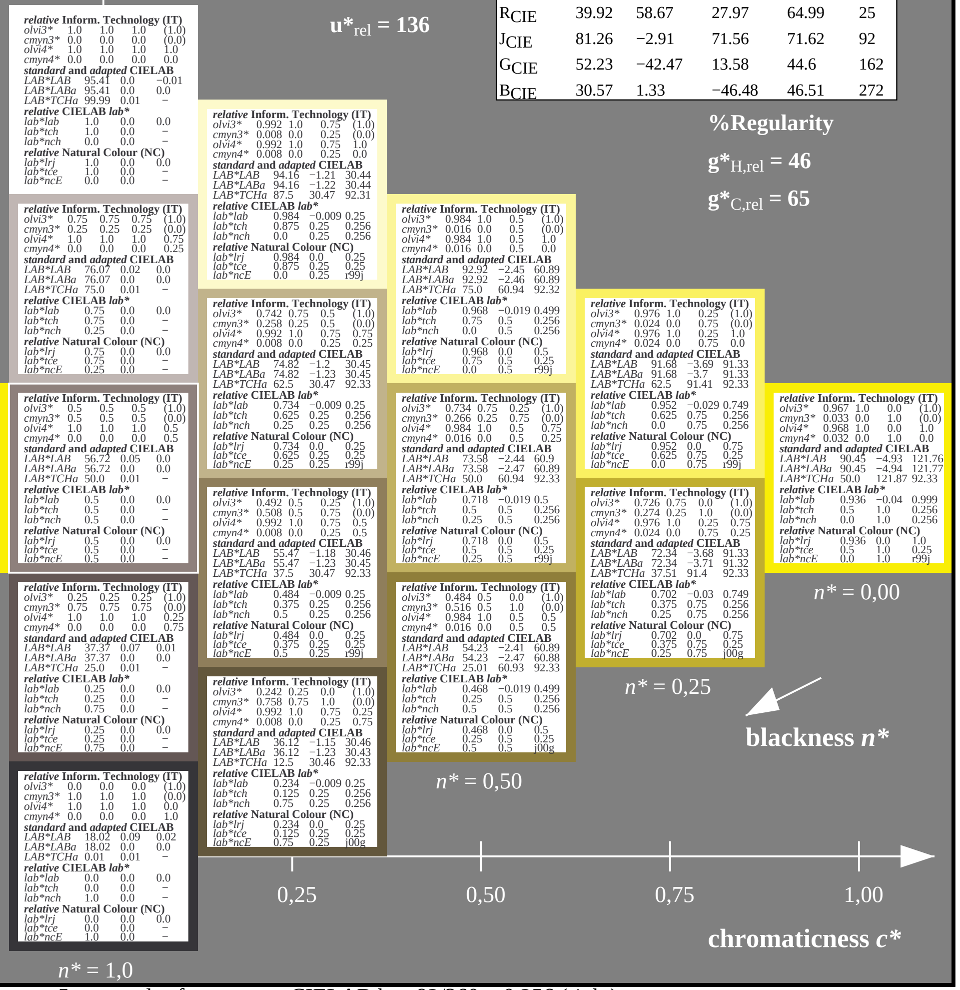


NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut
$u^*_{rel} = 136$

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



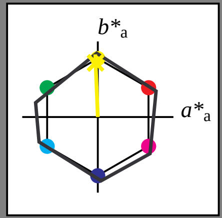
UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System NRS11
for hue *h* = lab*h* = 92/360 = 0.256
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 83 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness *t*



%Gamut

u^*_{rel} = 119

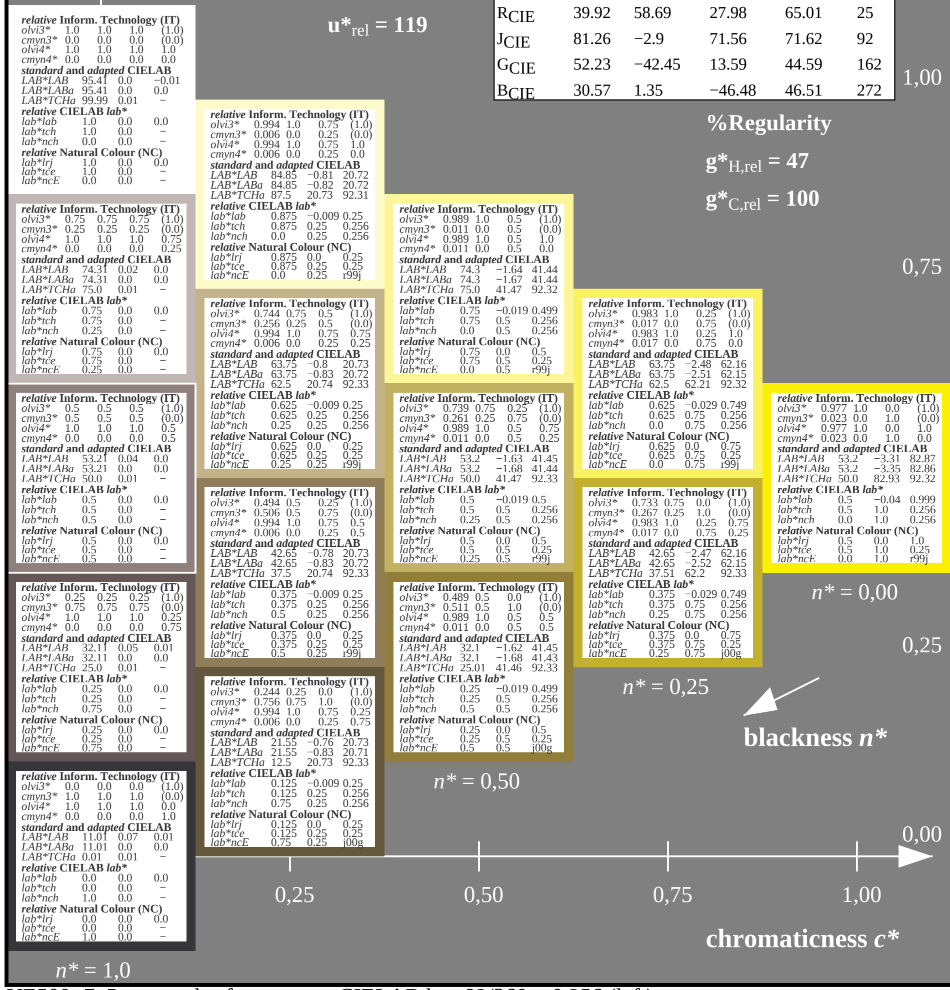
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

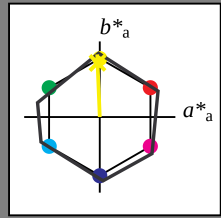
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NRS11
for hue *h* = lab*h* = 92/360 = 0.256
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 83 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness *t*



%Gamut

u^*_{rel} = 119

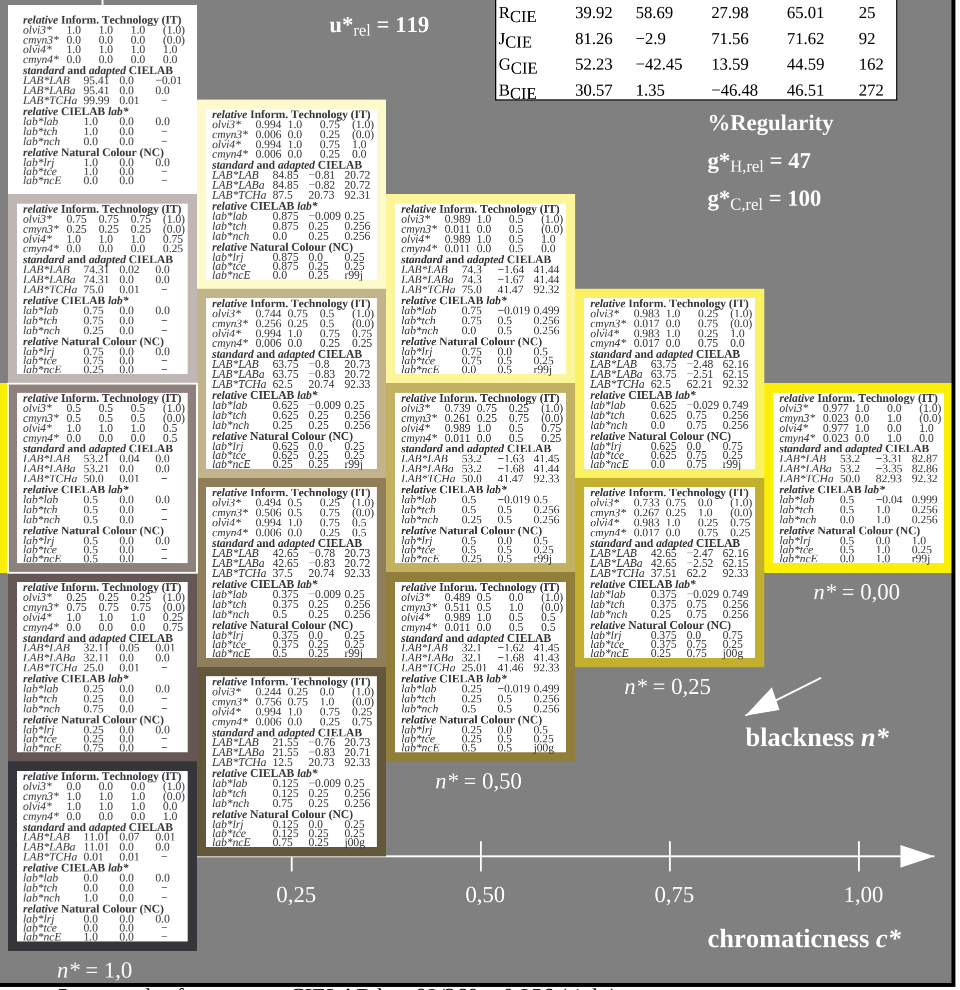
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System NRS11

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

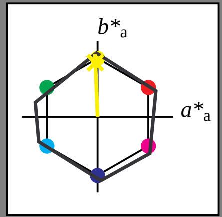
lab^*tch and lab^*nch

D65: hue J

LCH*Ma: 53 83 92

rgb*Ma: 0.98 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 119$

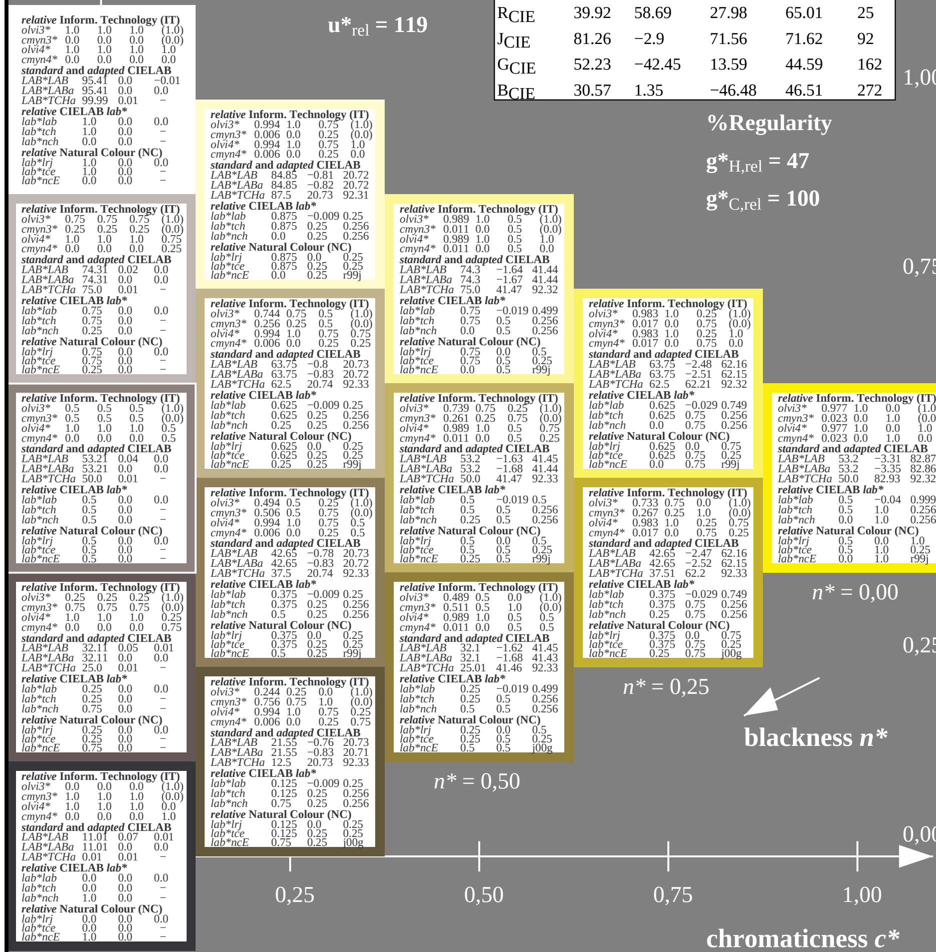
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System NCS11

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

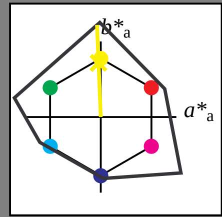
lab^*tch and lab^*nch

D65: hue J

LCH*Ma: 90 122 92

rgb*Ma: 0.97 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 149$

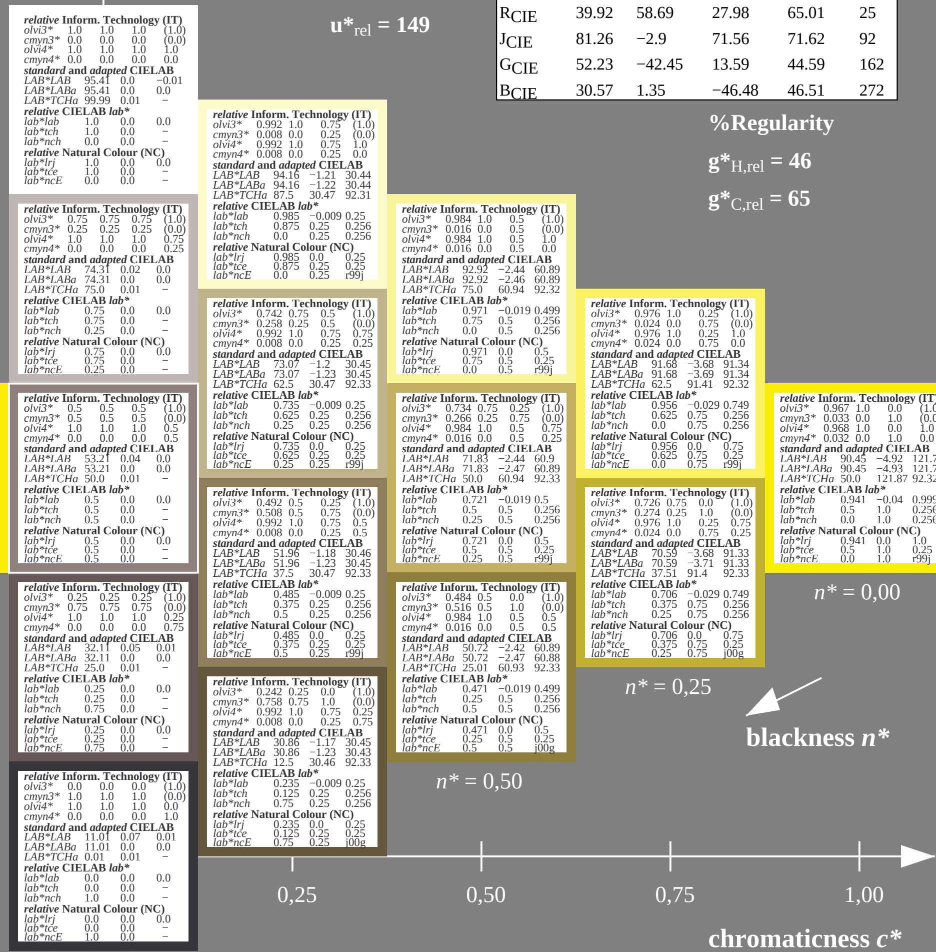
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System NCS11

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

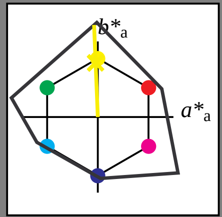
*lab*tch* and *lab*nch*

D65: hue J

LCH*Ma: 90 122 92

rgb*Ma: 0.97 1.0 0.0

triangle lightness t^*



%Gamut

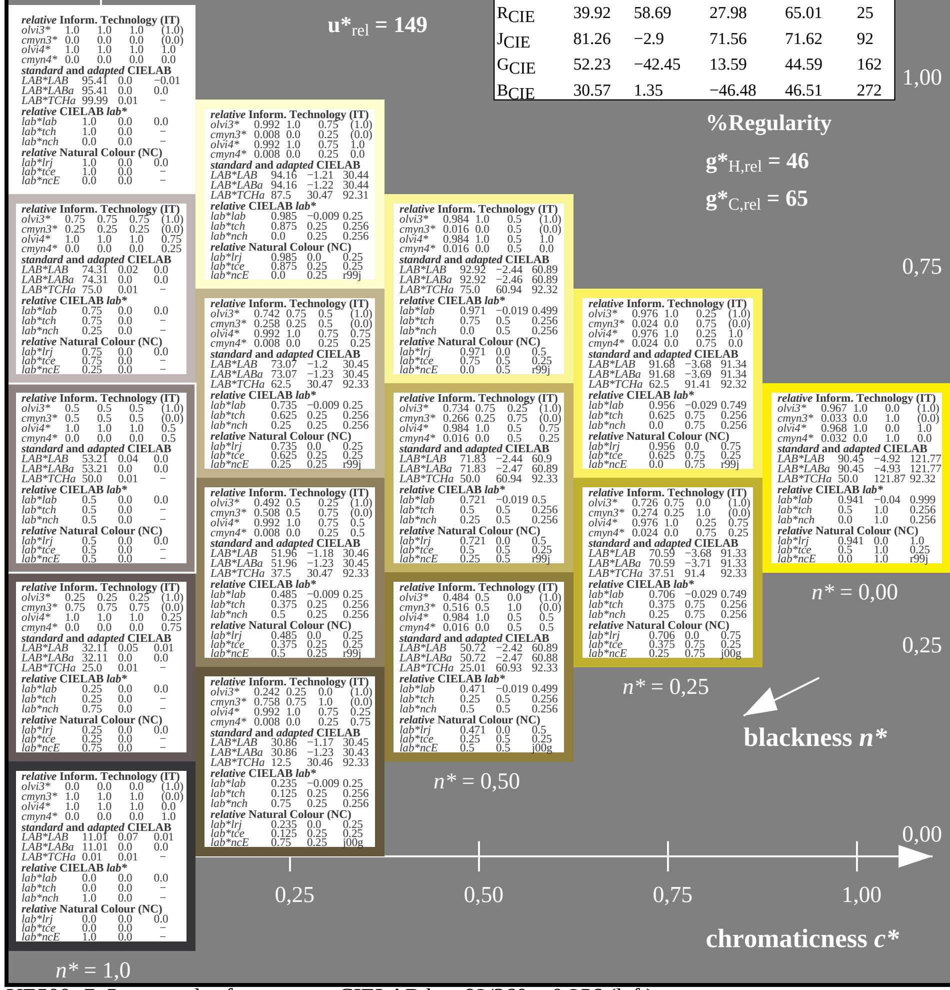
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System ORS18

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

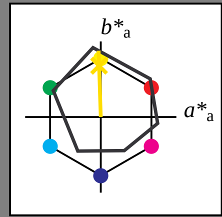
*lab*tch* and *lab*nch*

D65: hue J

LCH*Ma: 86 88 92

rgb*Ma: 1.0 0.9 0.0

triangle lightness t^*



%Gamut

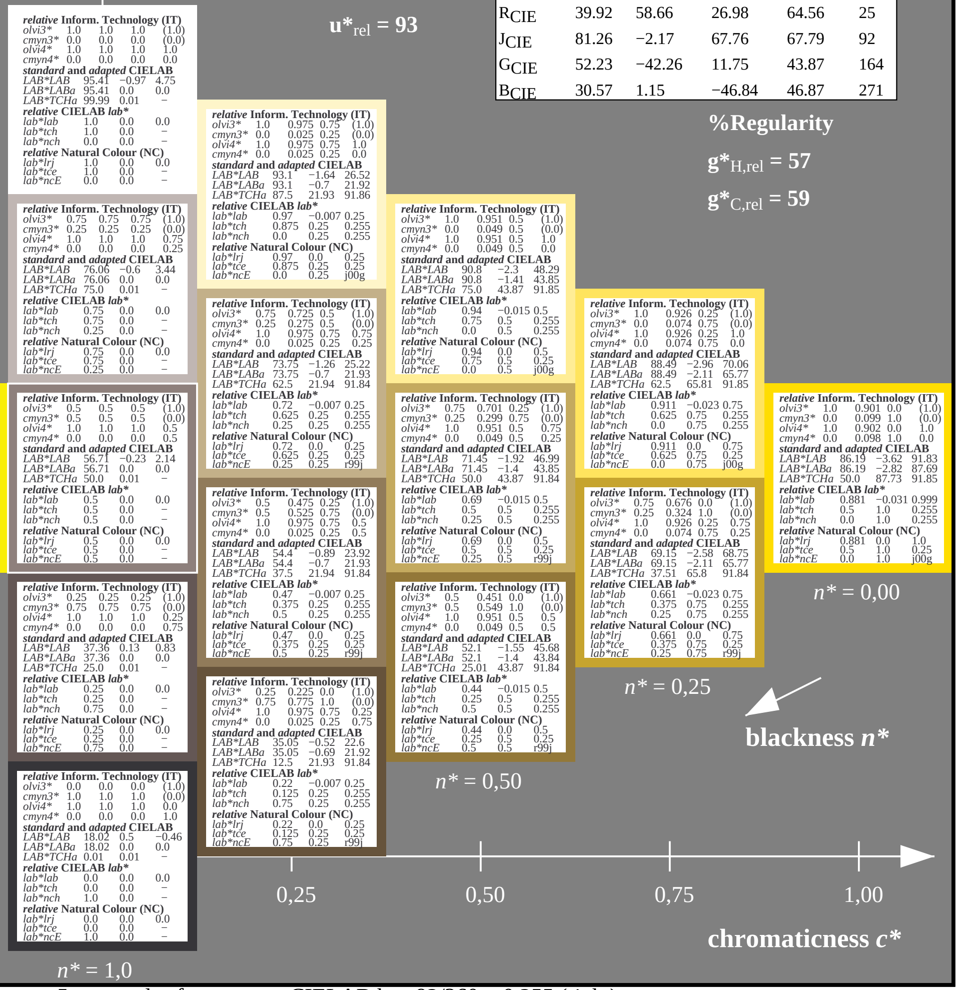
$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



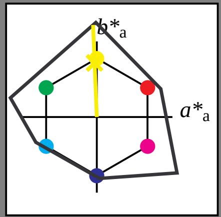
UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System NCS11
for hue *h = *lab*h* = 92/360 = 0.256**
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness *t**



%Gamut

u*rel = 149

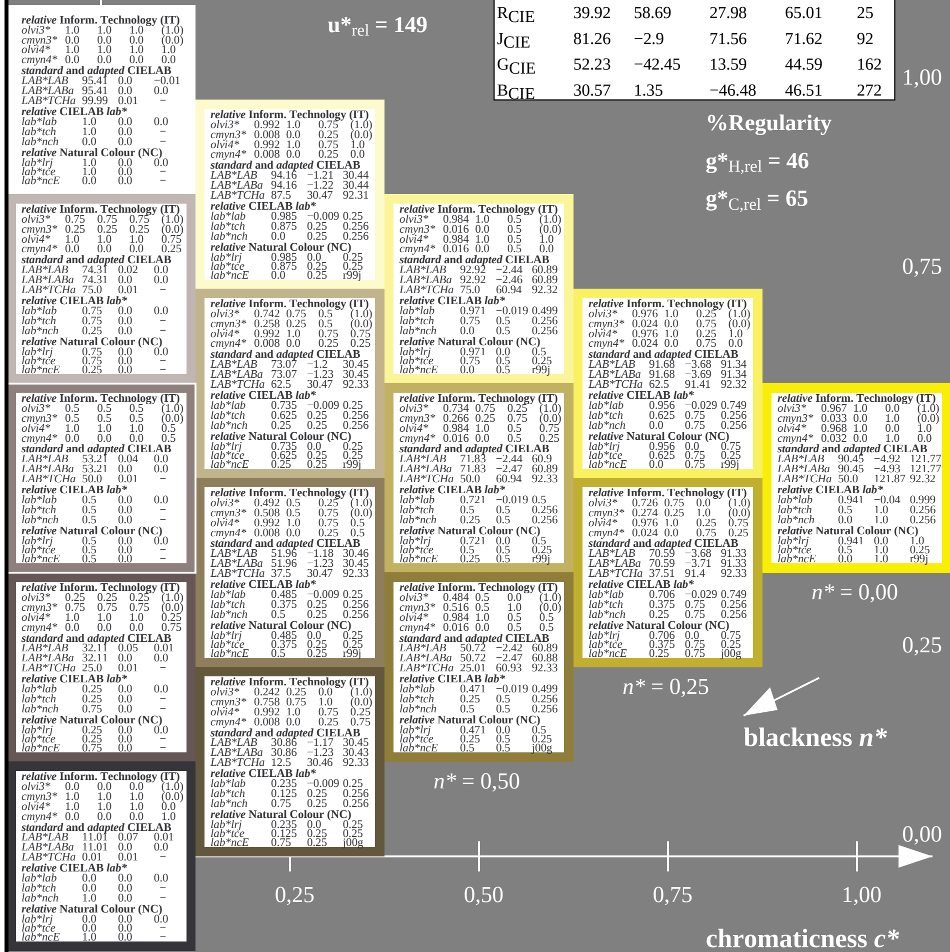
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

g*H,rel = 46

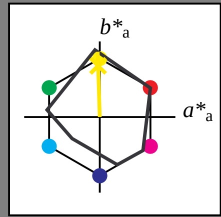
g*C,rel = 65



Output: Colorimetric Reflective System MRS18
for hue *h = *lab*h* = 92/360 = 0.255**
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 86 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness *t**



%Gamut

u*rel = 91

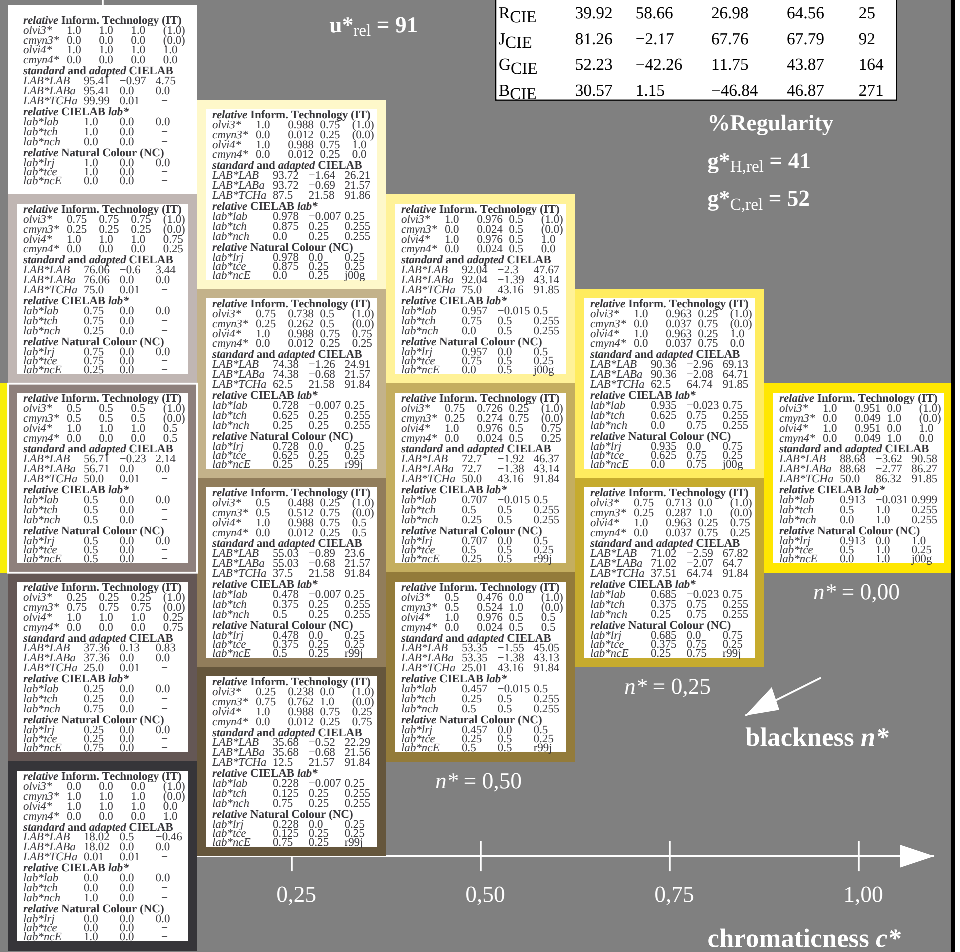
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

g*H,rel = 41

g*C,rel = 52



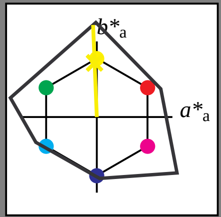
UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab^*tch and lab^*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness t^*



%Gamut

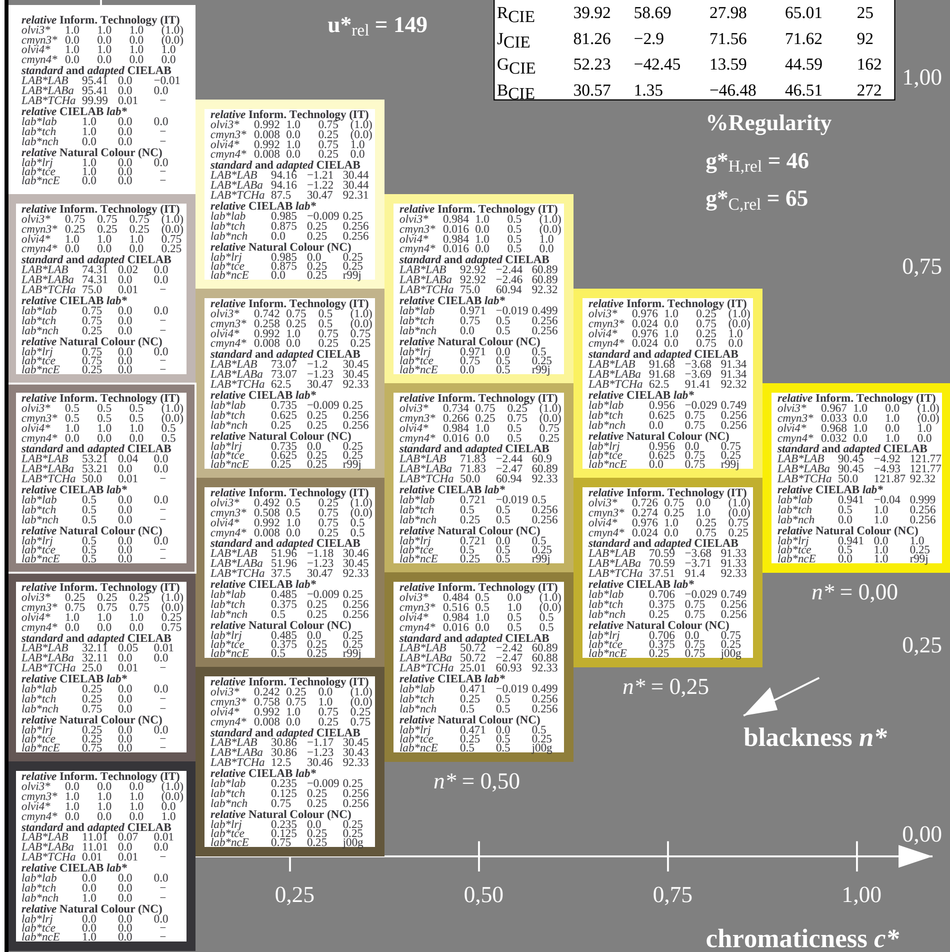
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

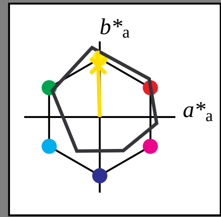
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab^*tch and lab^*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness t^*



%Gamut

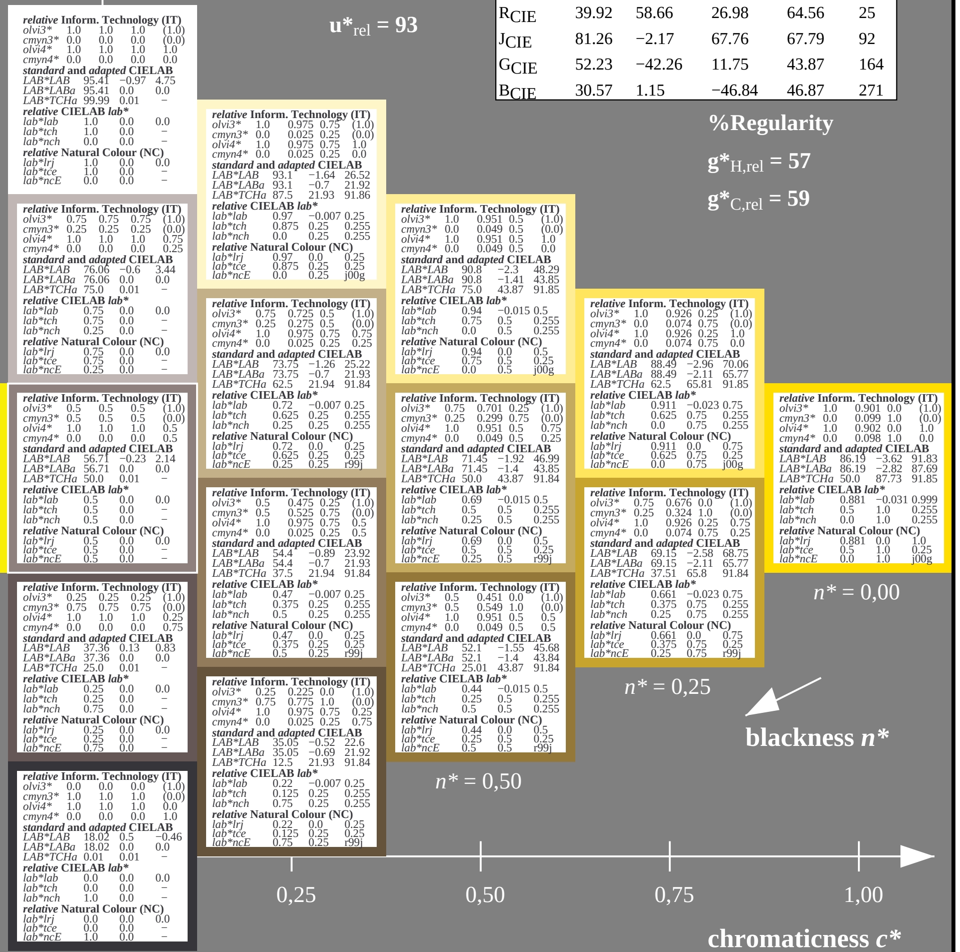
u^*_{rel} = 93

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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

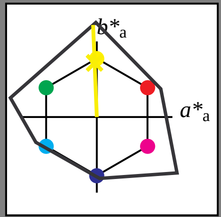


UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 92/360 = 0.256$
*lab*tch and lab*nch*

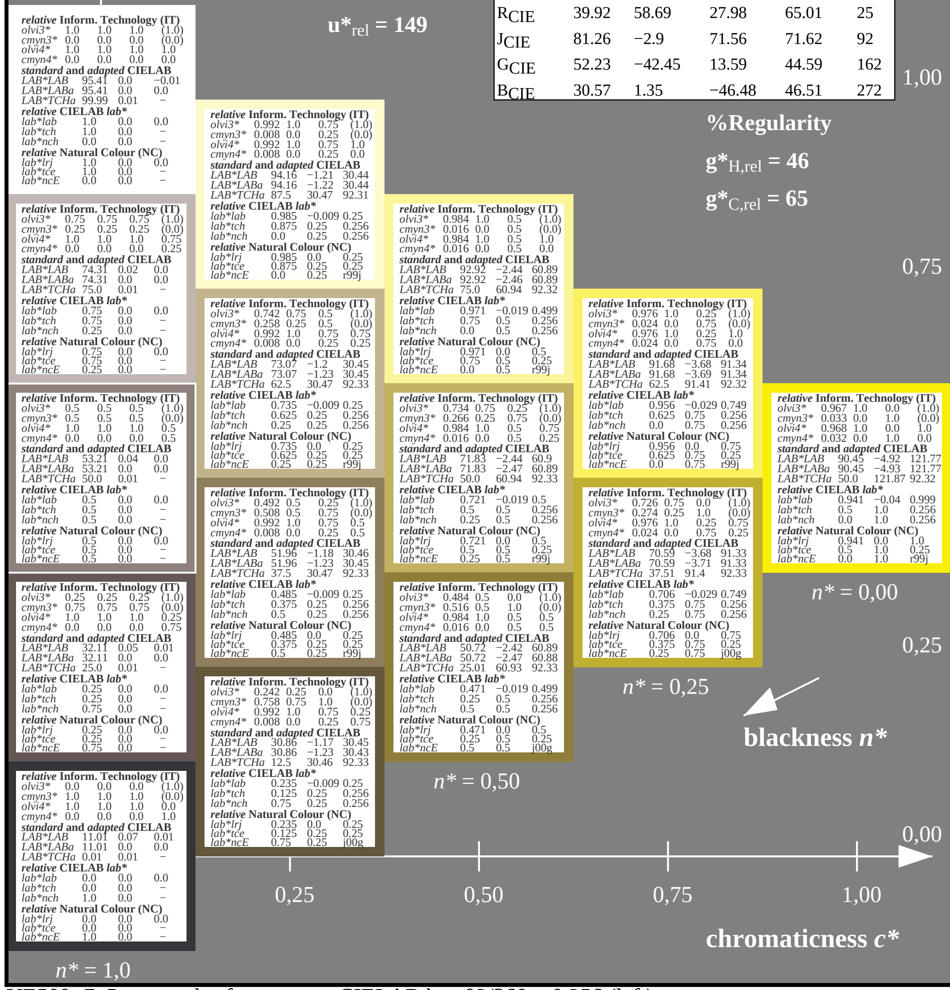
D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 149$

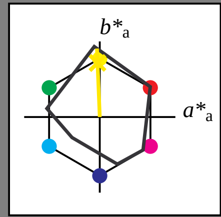
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 92/360 = 0.256$
*lab*tch and lab*nch*

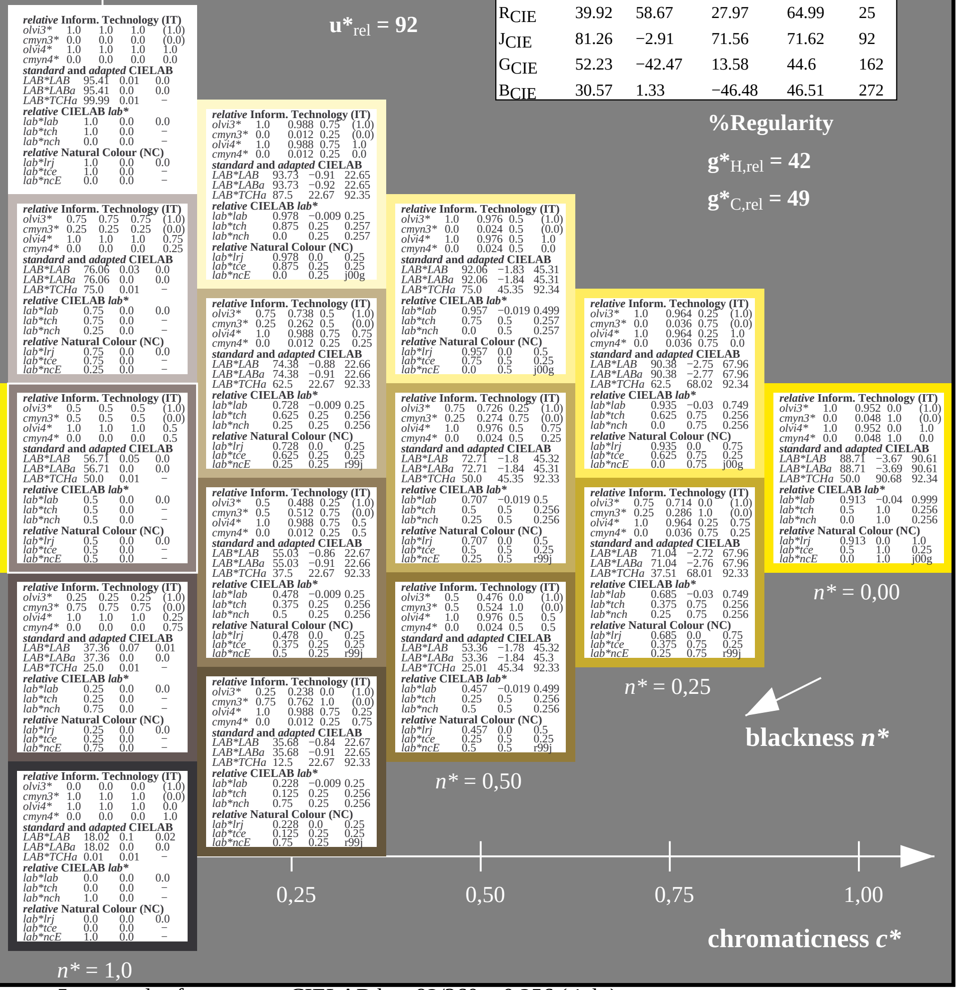
D65: hue J
LCH*Ma: 89 91 92
rgb*Ma: 1.0 0.95 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

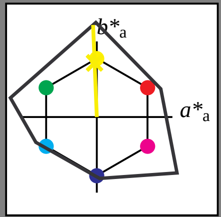


UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch and lab*nch

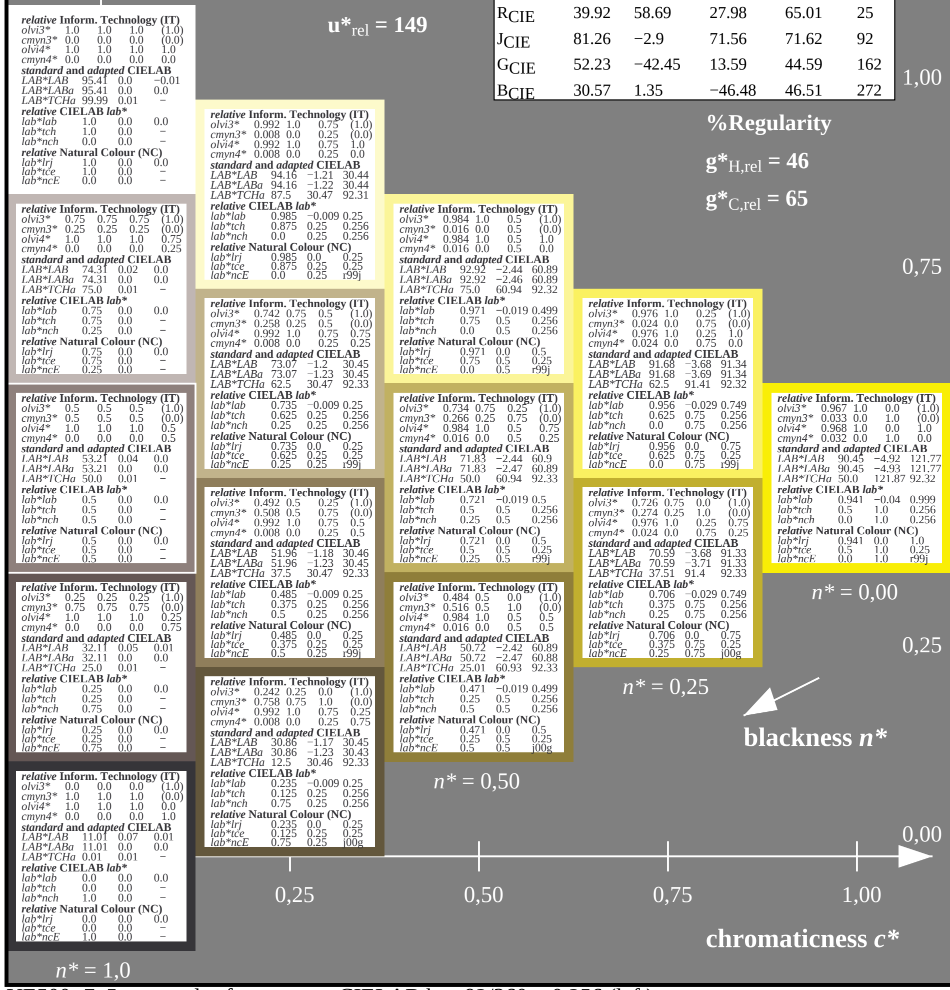
D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0
triangle lightness t^*



NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

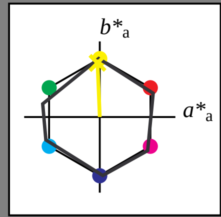
%Gamut
$u^*_{rel} = 149$

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch and lab*nch

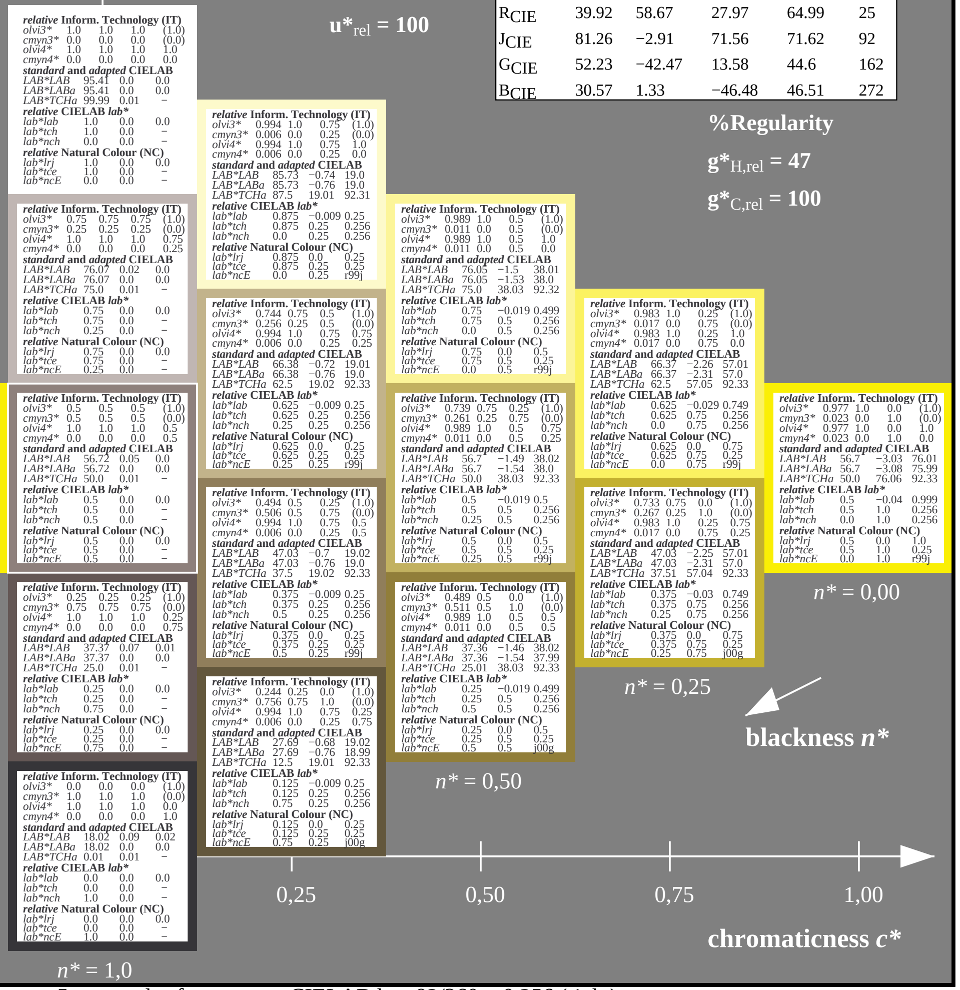
D65: hue J
LCH*Ma: 57 76 92
rgb*Ma: 0.98 1.0 0.0
triangle lightness t^*



NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut
$u^*_{rel} = 100$

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



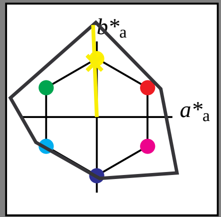
UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 149

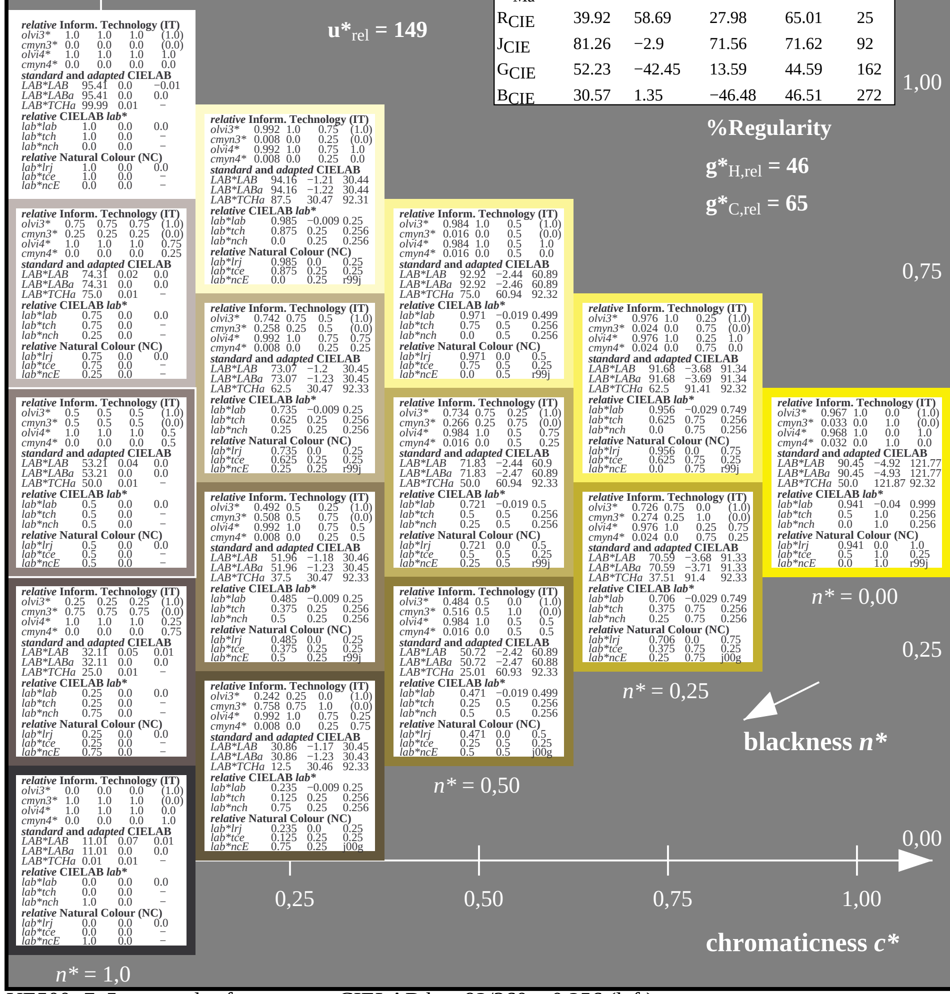
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

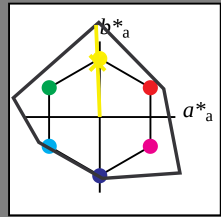
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 136

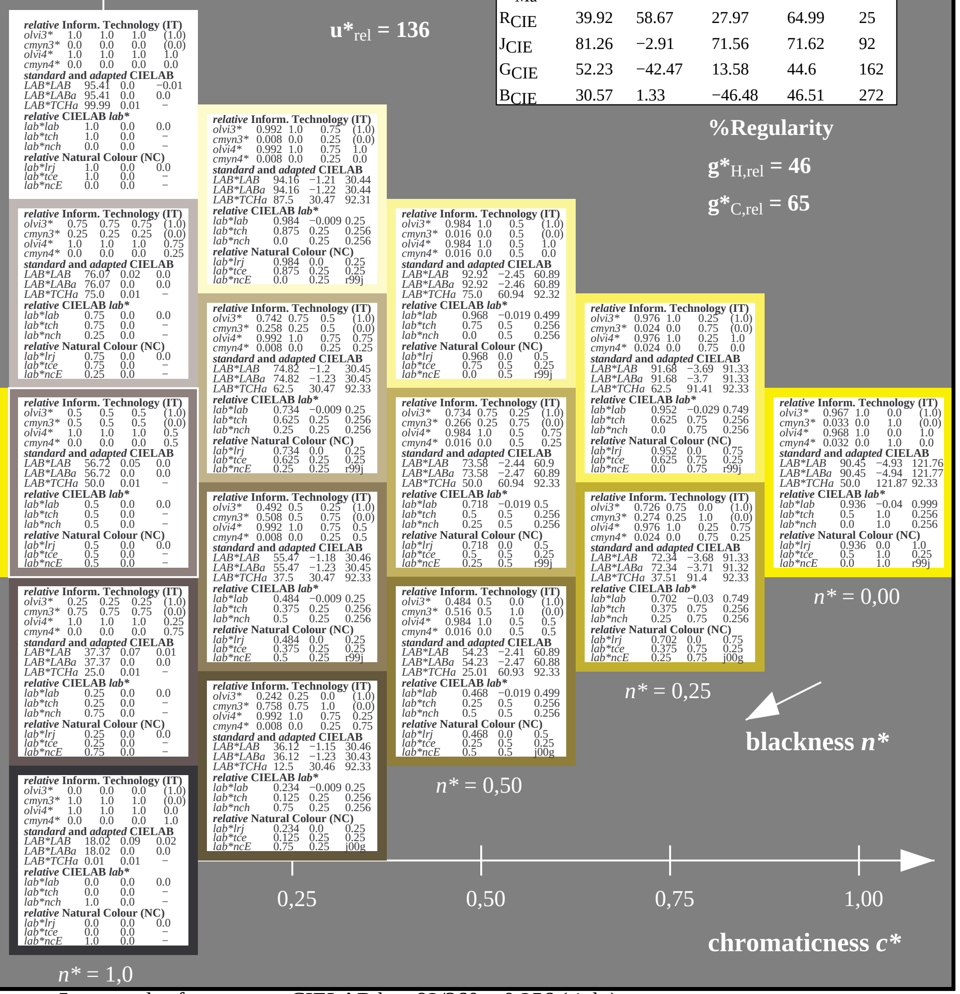
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

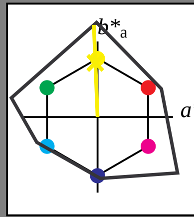


UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System NCS11
for hue *h = *lab*h* = 92/360 = 0.256**
lab*tch* and *lab*nch

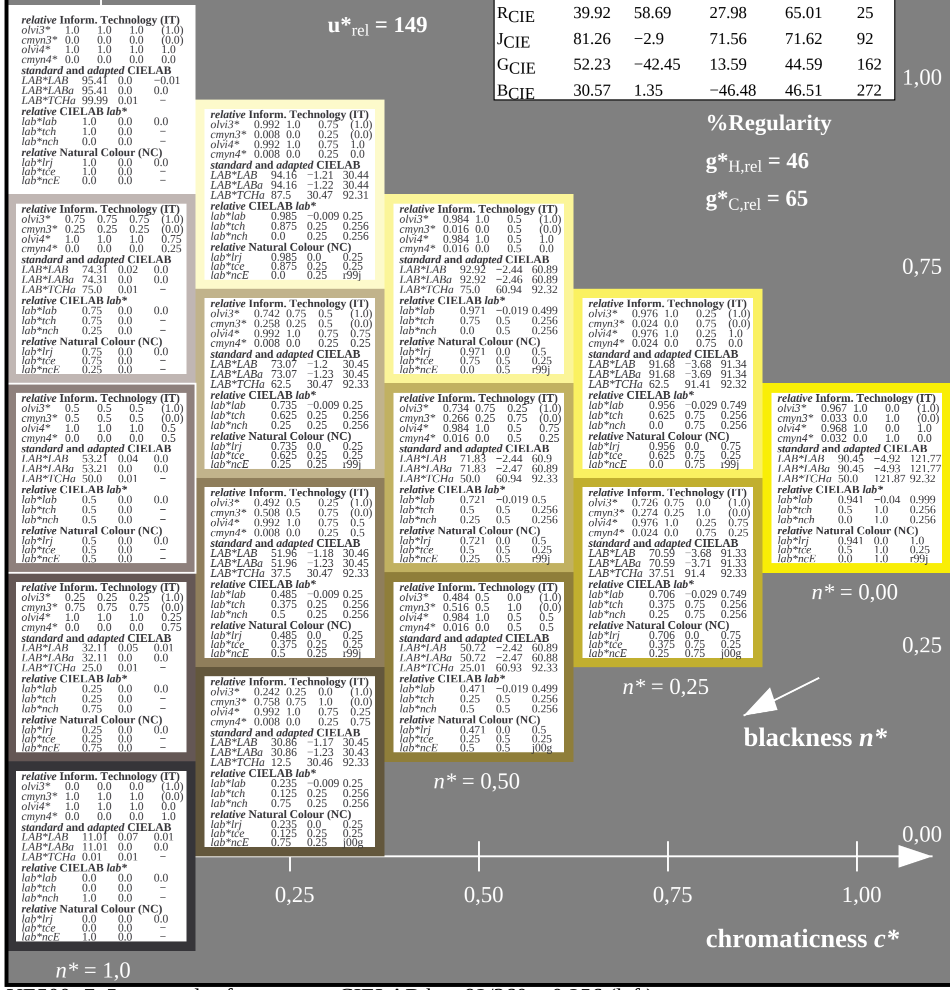
D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0
triangle lightness *t**



%Gamut
u^*_{rel} = 149

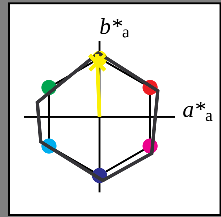
NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NRS11
for hue *h = *lab*h* = 92/360 = 0.256**
lab*tch* and *lab*nch

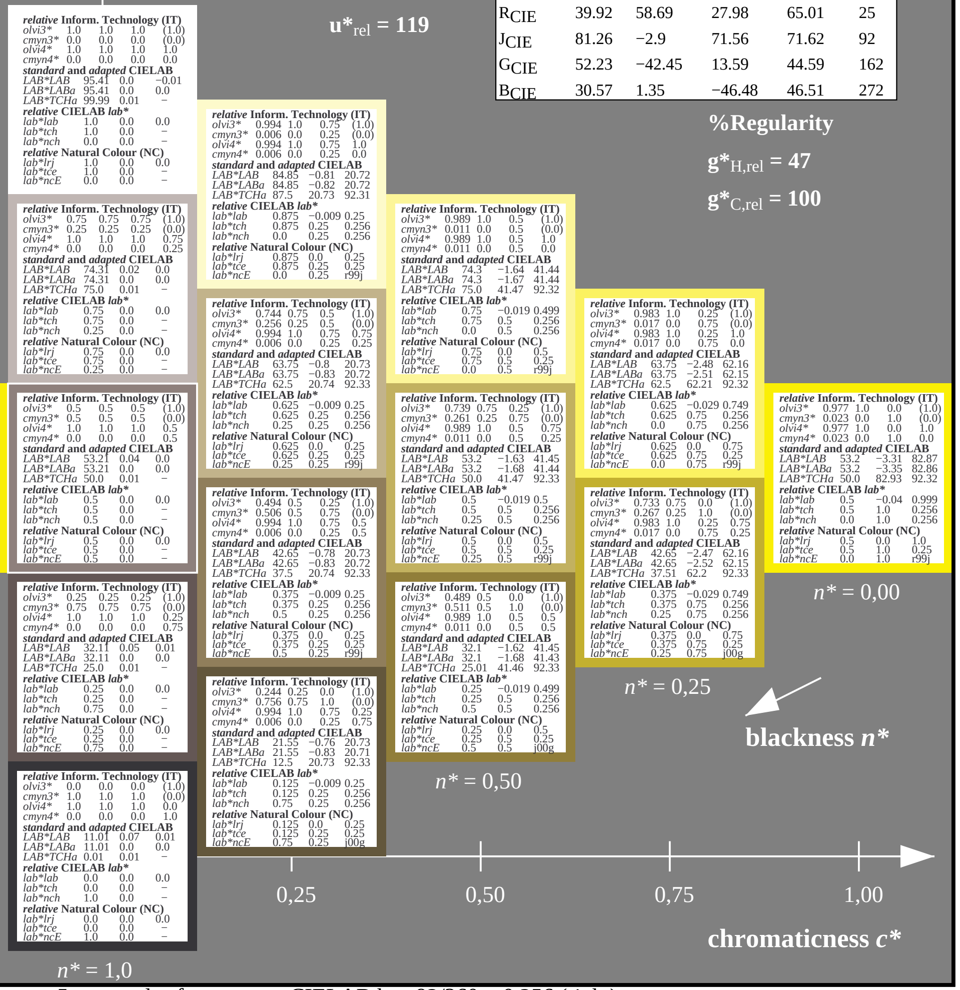
D65: hue J
LCH*Ma: 53 83 92
rgb*Ma: 0.98 1.0 0.0
triangle lightness *t**



%Gamut
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100

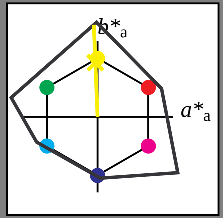


UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

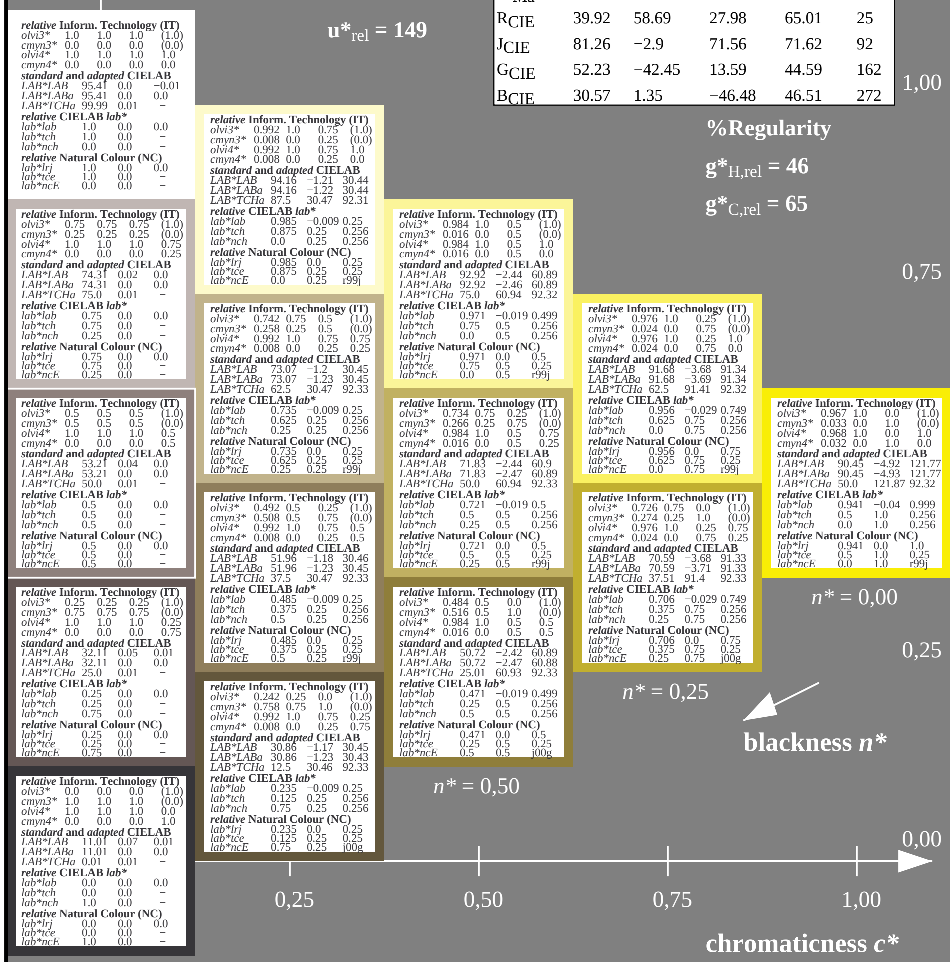
D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 149$

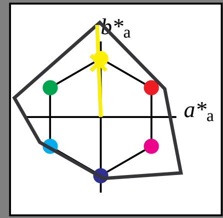
NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

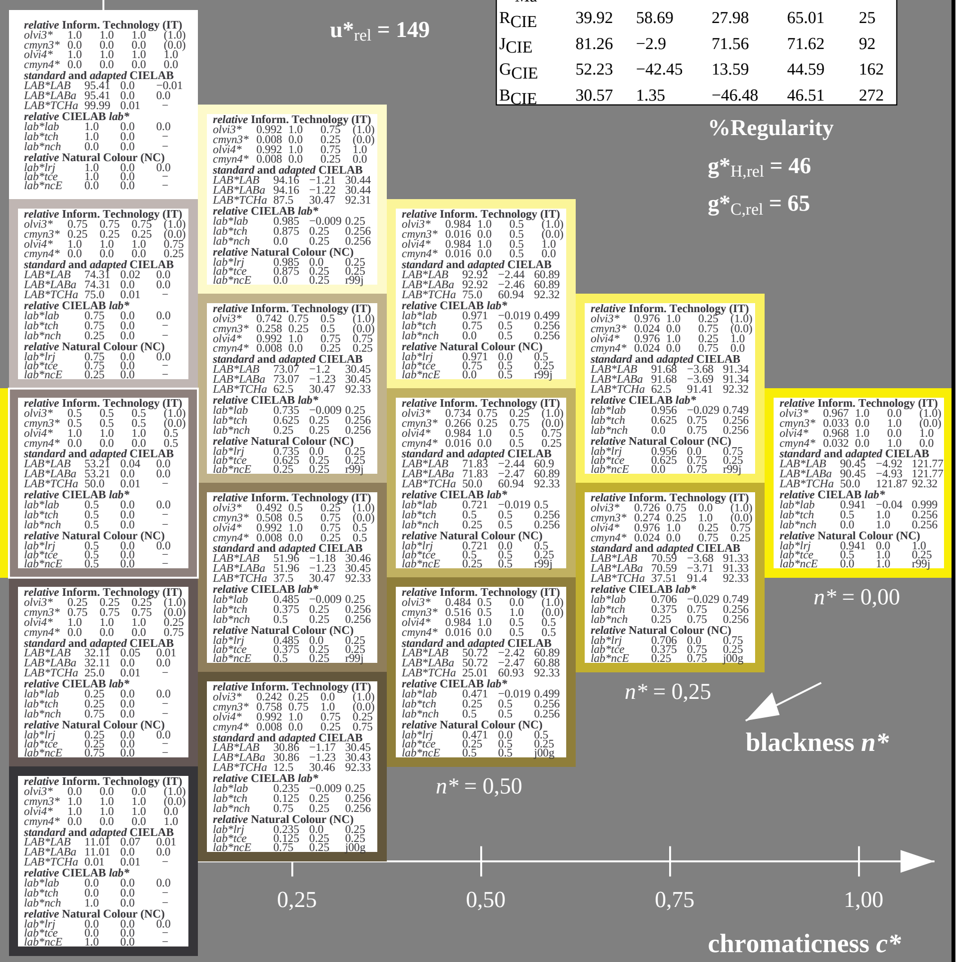
D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



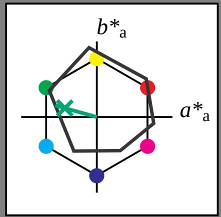
UE500−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness t^*

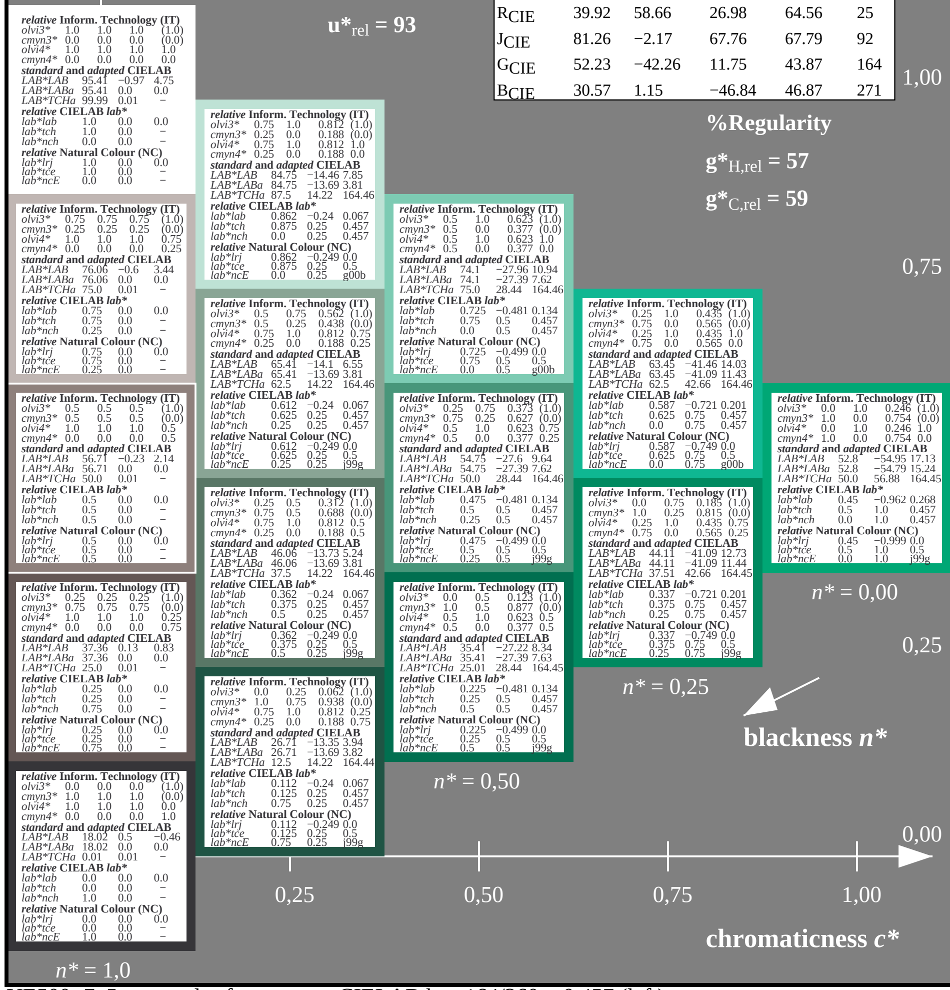


%Gamut
$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

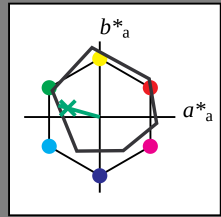
%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness t^*

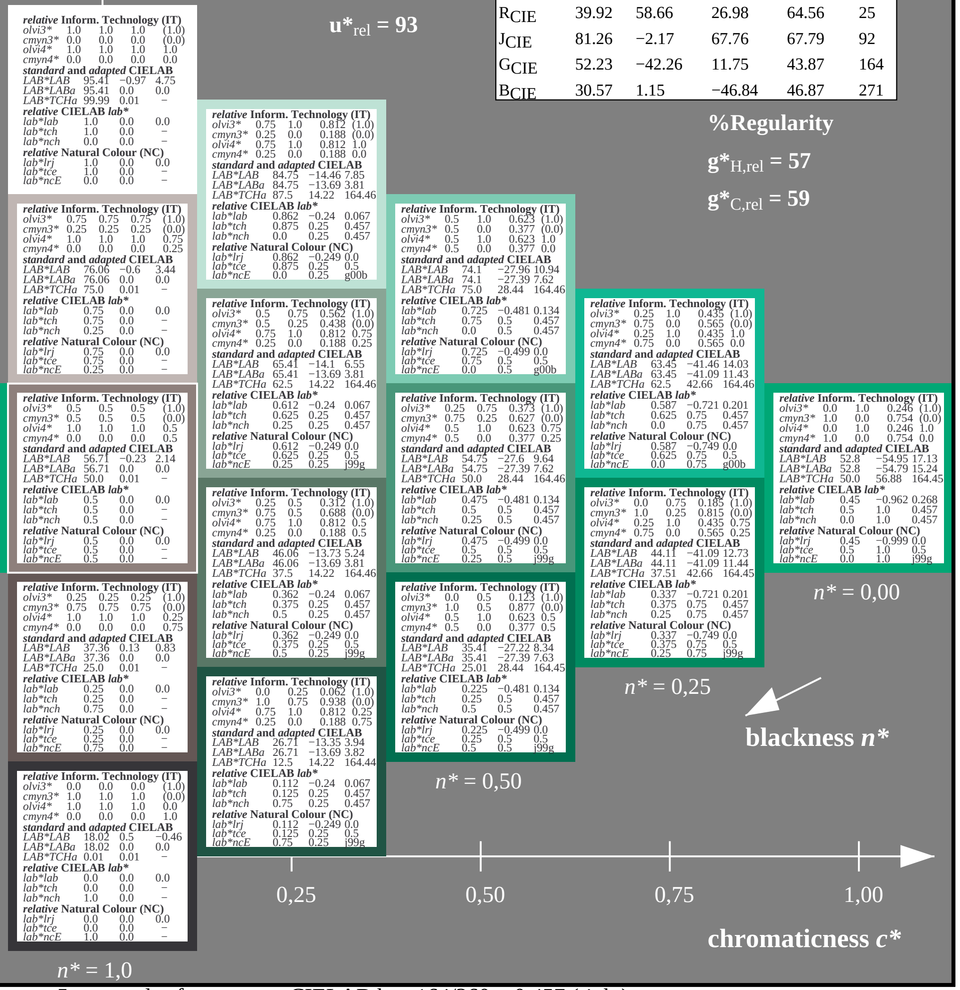


%Gamut
$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



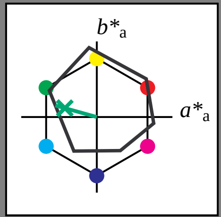
UE500−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

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

Input: Colorimetric Reflective System ORS18
for hue *h = *lab*h* = 164/360 = 0.457**
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness *t**



%Gamut

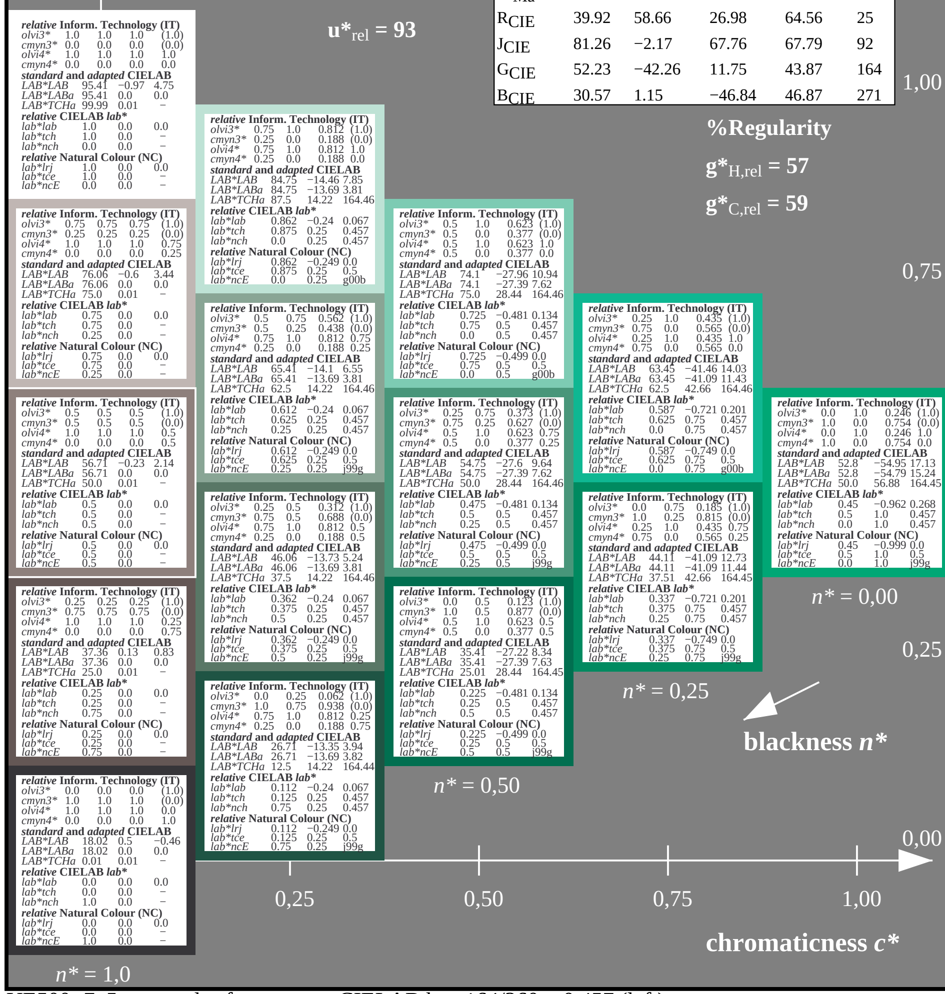
u^*_{rel} = 93

ORS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

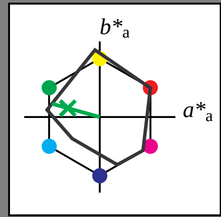
$g^*_{C,rel}$ = 59



Output: Colorimetric Reflective System MRS18
for hue *h = *lab*h* = 164/360 = 0.457**
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 56 66 164
rgb*Ma: 0.1 1.0 0.0

triangle lightness *t**



%Gamut

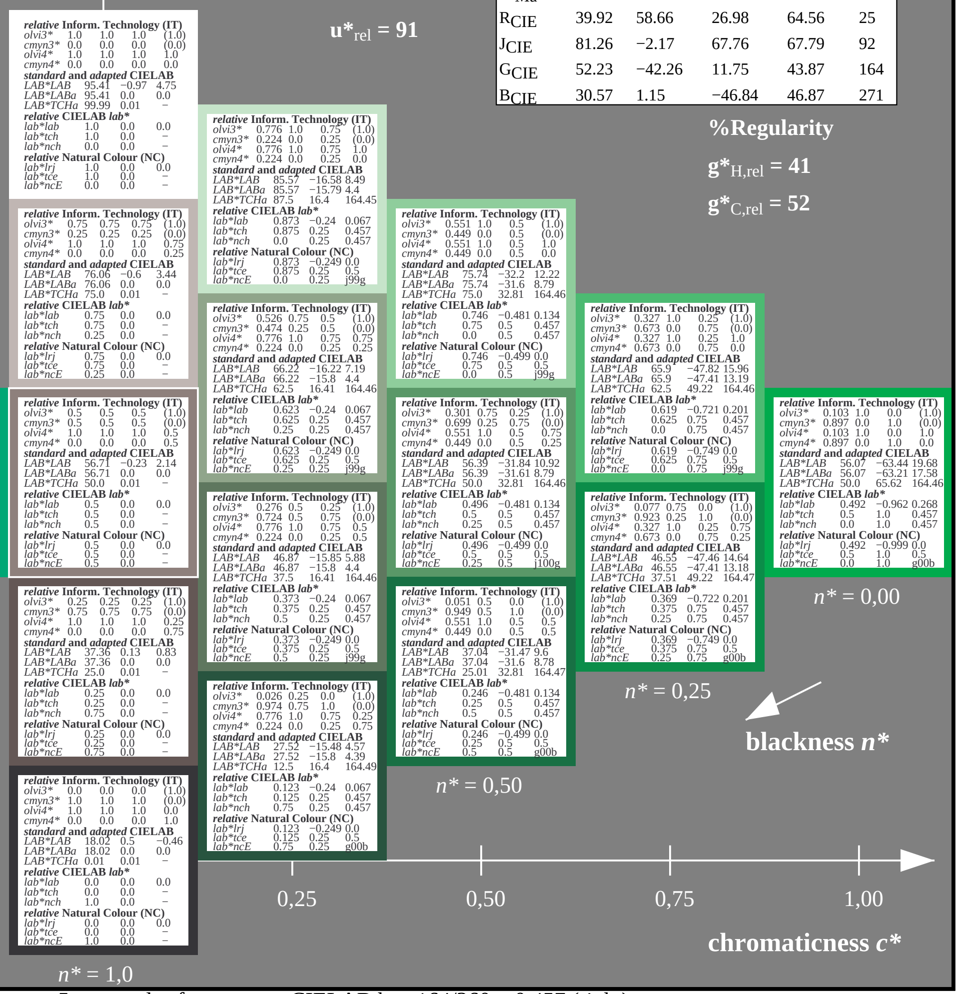
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



UE500−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

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

Input: Colorimetric Reflective System ORS18

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

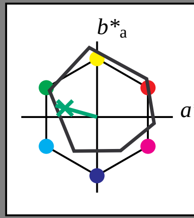
*lab*tch* and *lab*nch*

D65: hue G

LCH*Ma: 53 57 164

rgb*Ma: 0.0 1.0 0.25

triangle lightness t^*

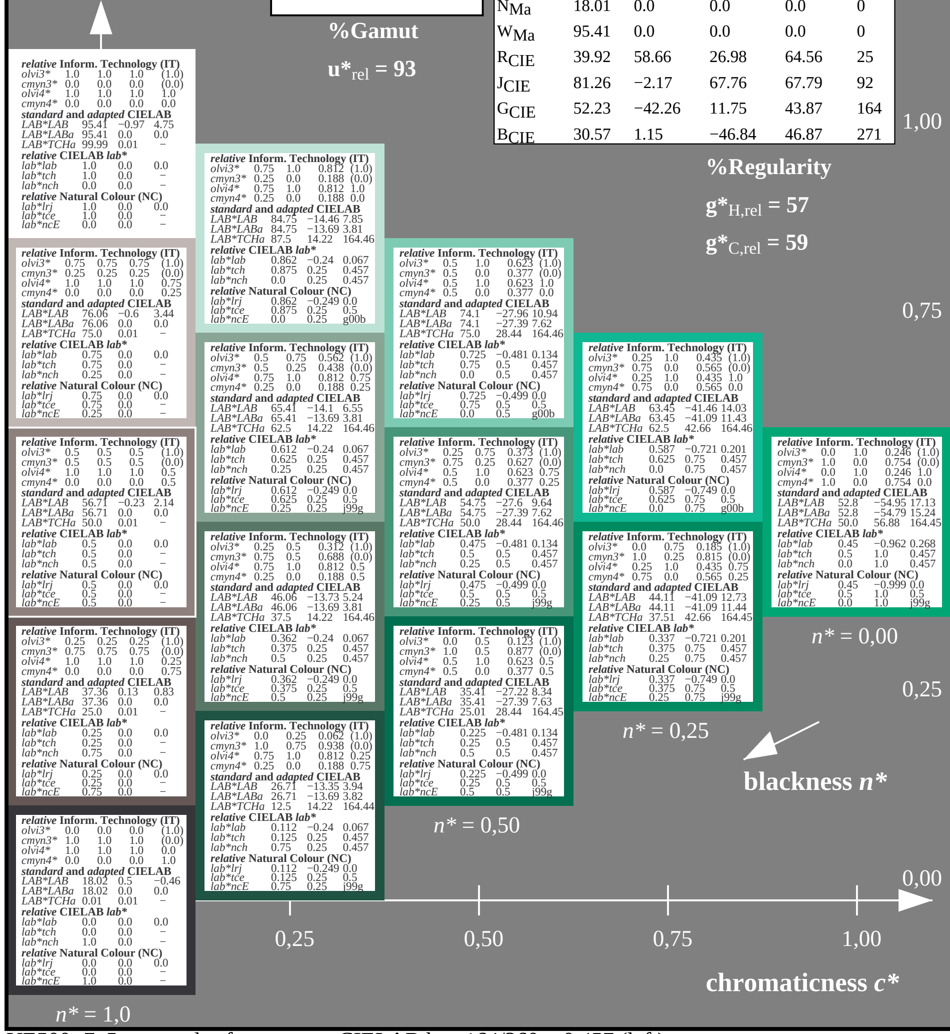


%Gamut

$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



UE500−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

Output: Colorimetric Reflective System TRS18

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

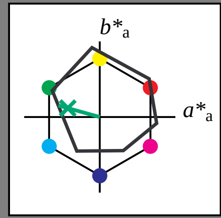
*lab*tch* and *lab*nch*

D65: hue G

LCH*Ma: 53 57 164

rgb*Ma: 0.0 1.0 0.25

triangle lightness t^*

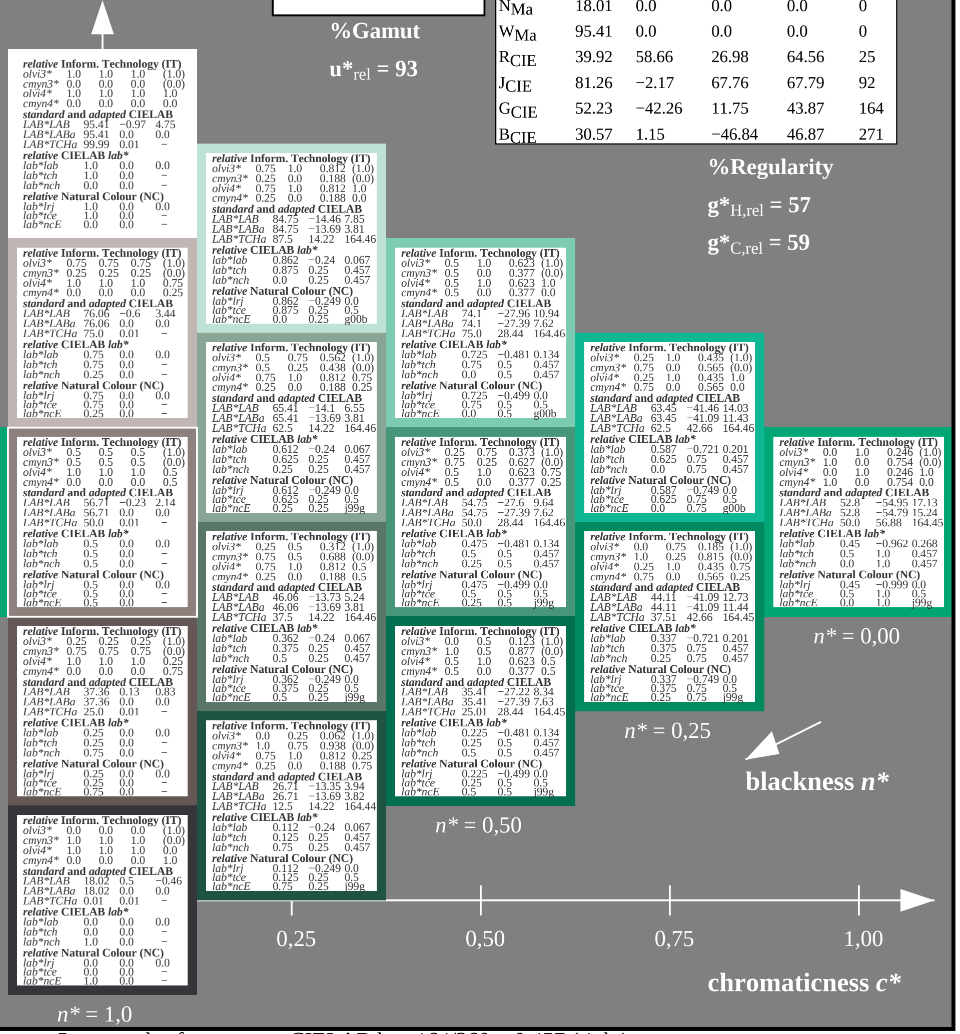


%Gamut

$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



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

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 164/360 = 0.457$

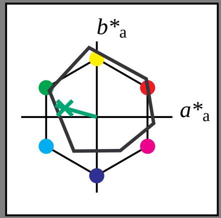
*lab*tch* and *lab*nch*

D65: hue G

LCH*Ma: 53 57 164

rgb*Ma: 0.0 1.0 0.25

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

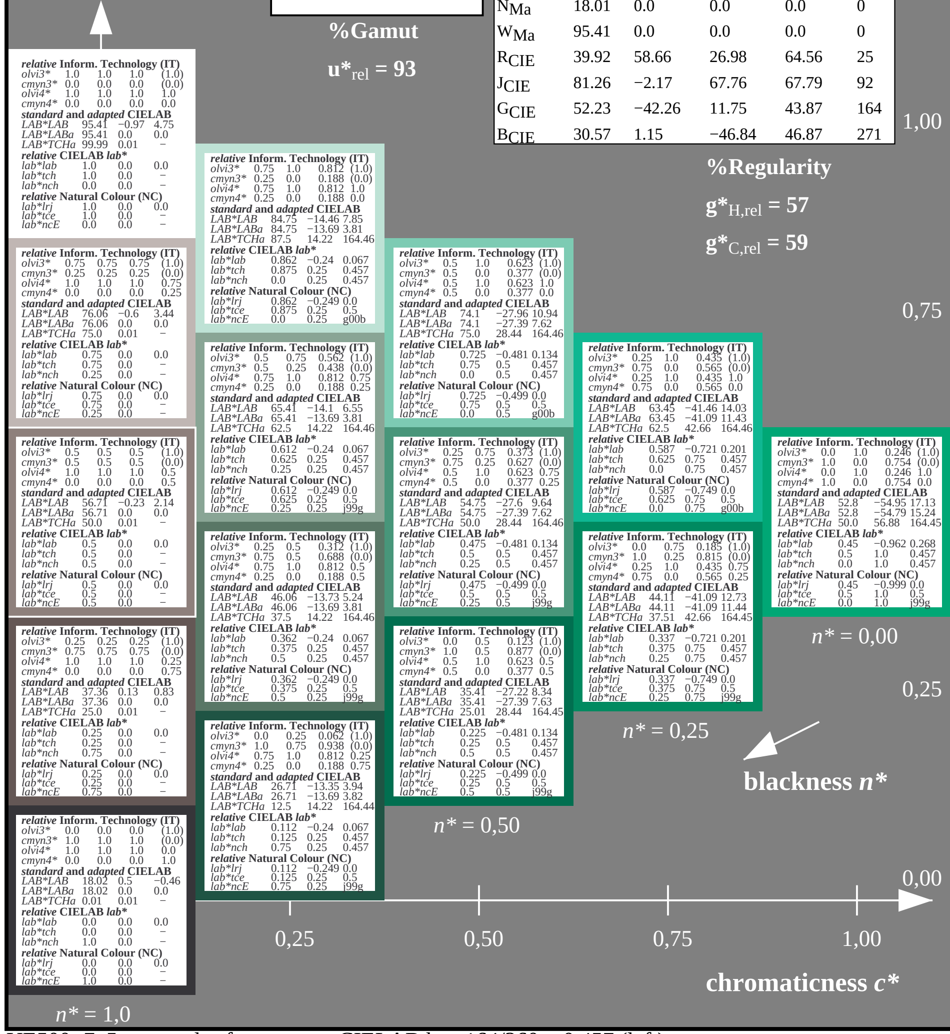
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 162/360 = 0.451$

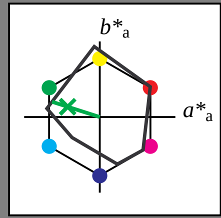
*lab*tch* and *lab*nch*

D65: hue G

LCH*Ma: 56 66 162

rgb*Ma: 0.11 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 92$

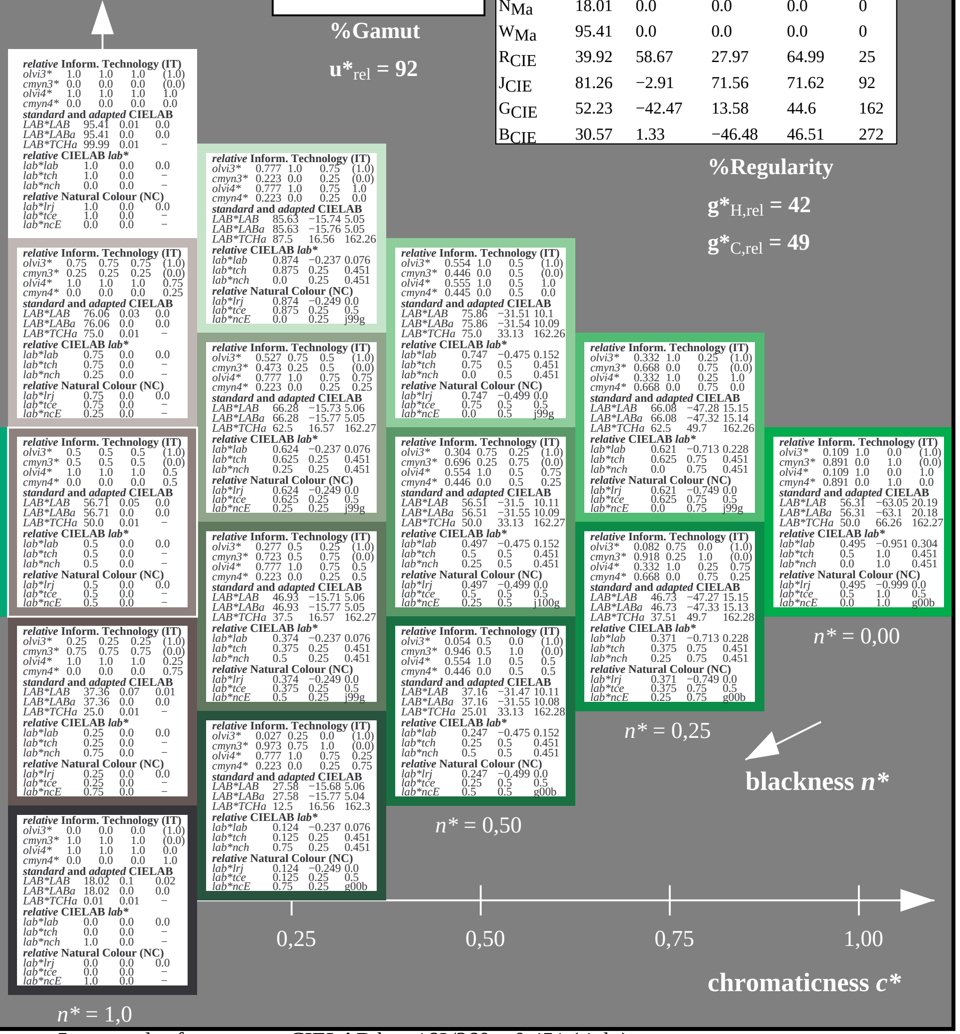
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



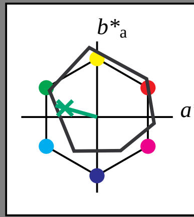
UE500−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

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

Input: Colorimetric Reflective System ORS18
for hue *h = *lab*h* = 164/360 = 0.457**
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness *t**



%Gamut

u^*_{rel} = 93

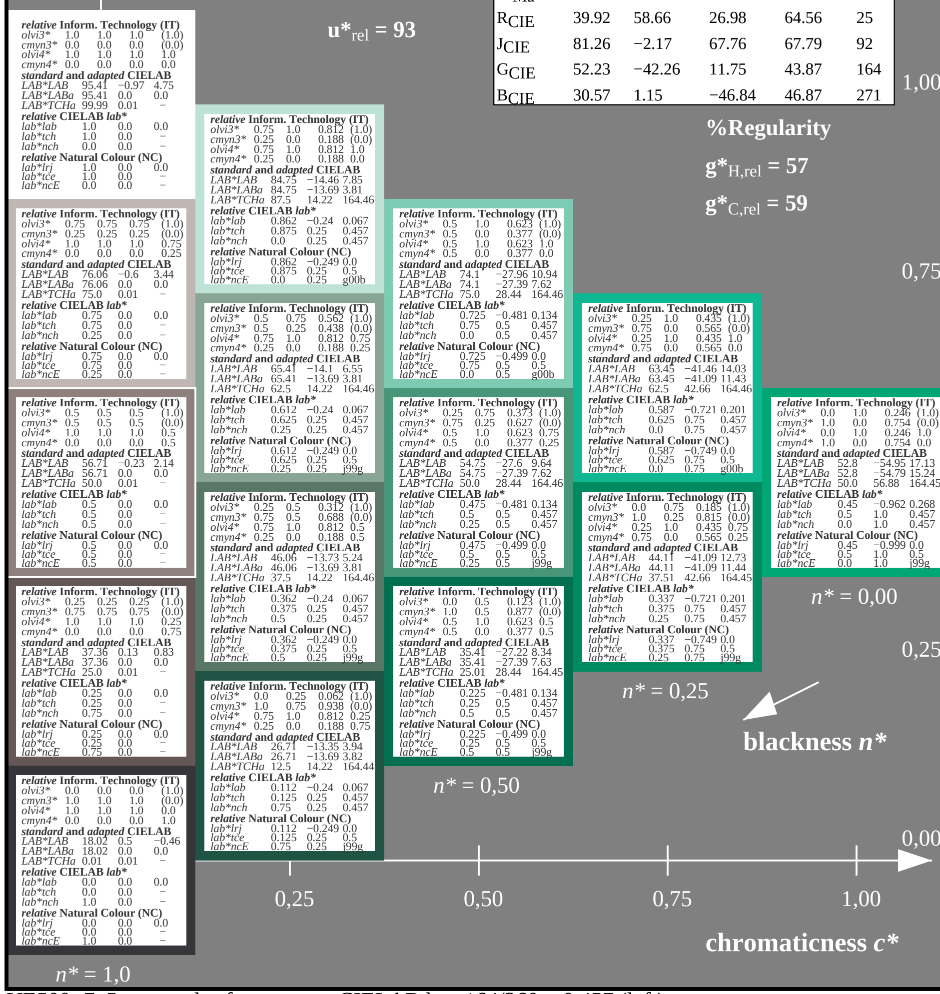
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

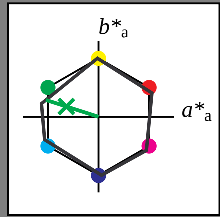
$g^*_{C,rel}$ = 59



Output: Colorimetric Reflective System NRS18
for hue *h = *lab*h* = 162/360 = 0.451**
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 73 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness *t**



%Gamut

u^*_{rel} = 100

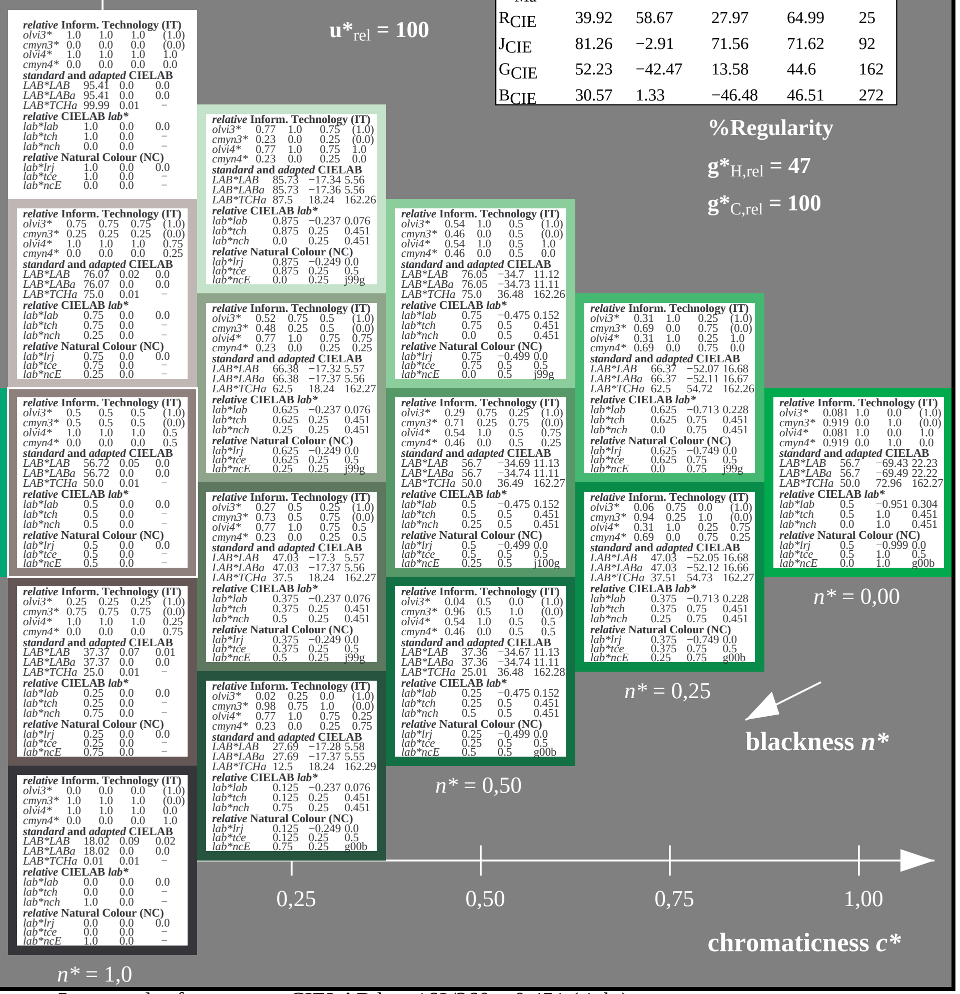
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



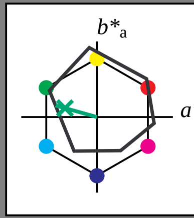
UE500−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

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

Input: Colorimetric Reflective System ORS18
for hue *h = *lab*h* = 164/360 = 0.457**
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness *t*



%Gamut

u^*_{rel} = 93

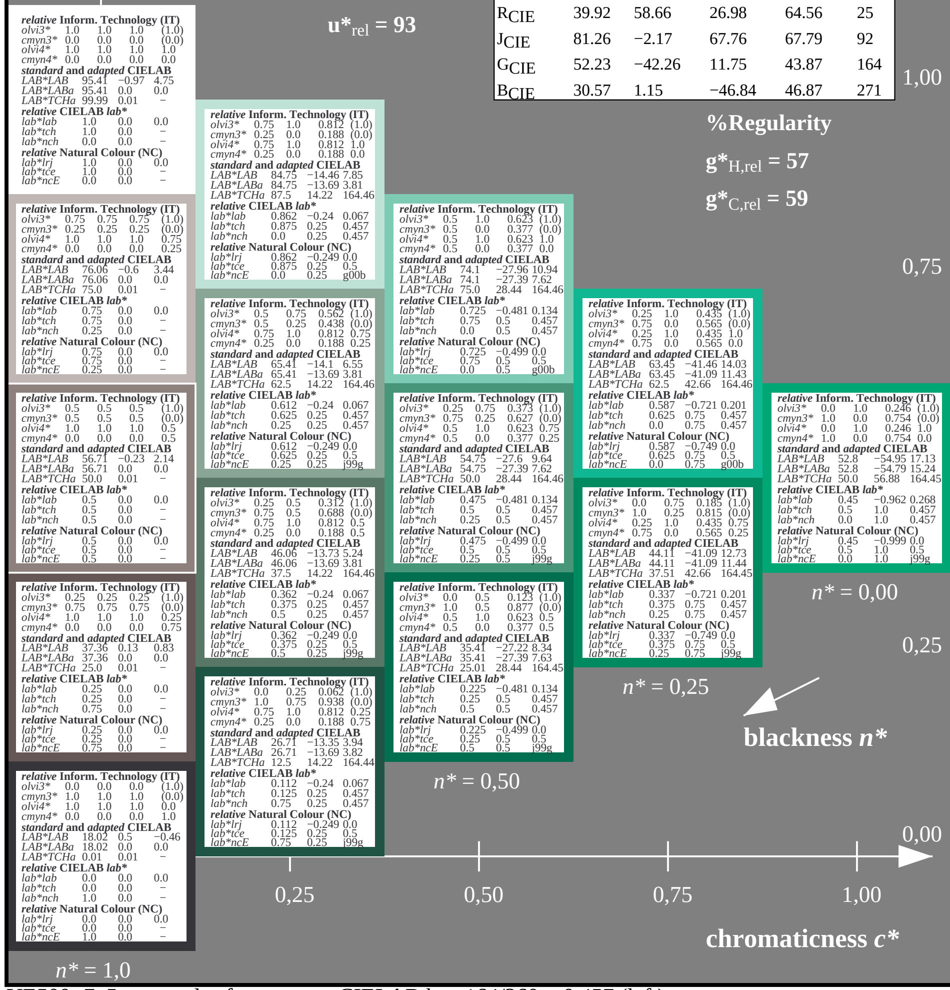
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

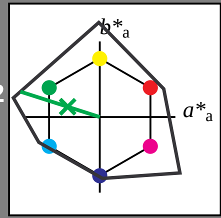
$g^*_{C,rel}$ = 59



Output: Colorimetric Reflective System NCS18
for hue *h = *lab*h* = 162/360 = 0.451**
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness *t*



%Gamut

u^*_{rel} = 136

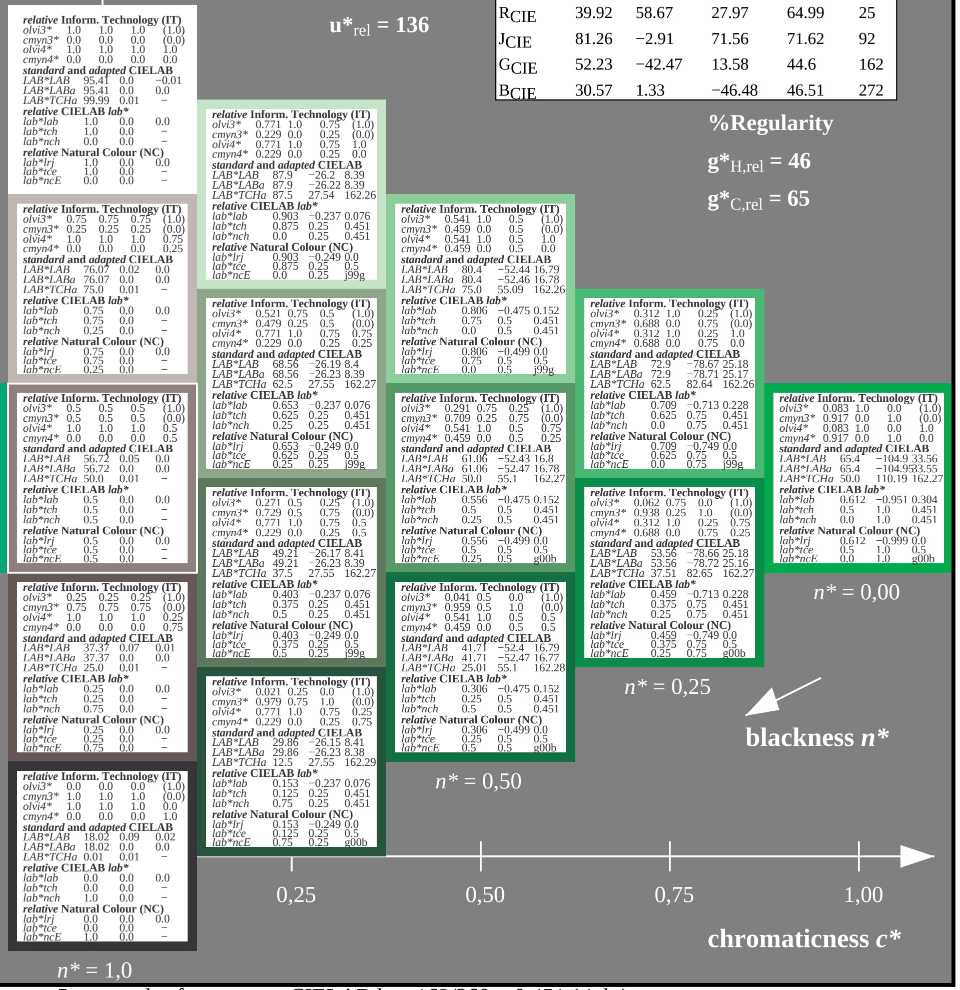
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



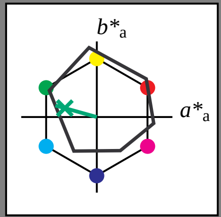
UE500−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

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

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 164/360 = 0.457$
*lab*tch and lab*nch*

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness t^*

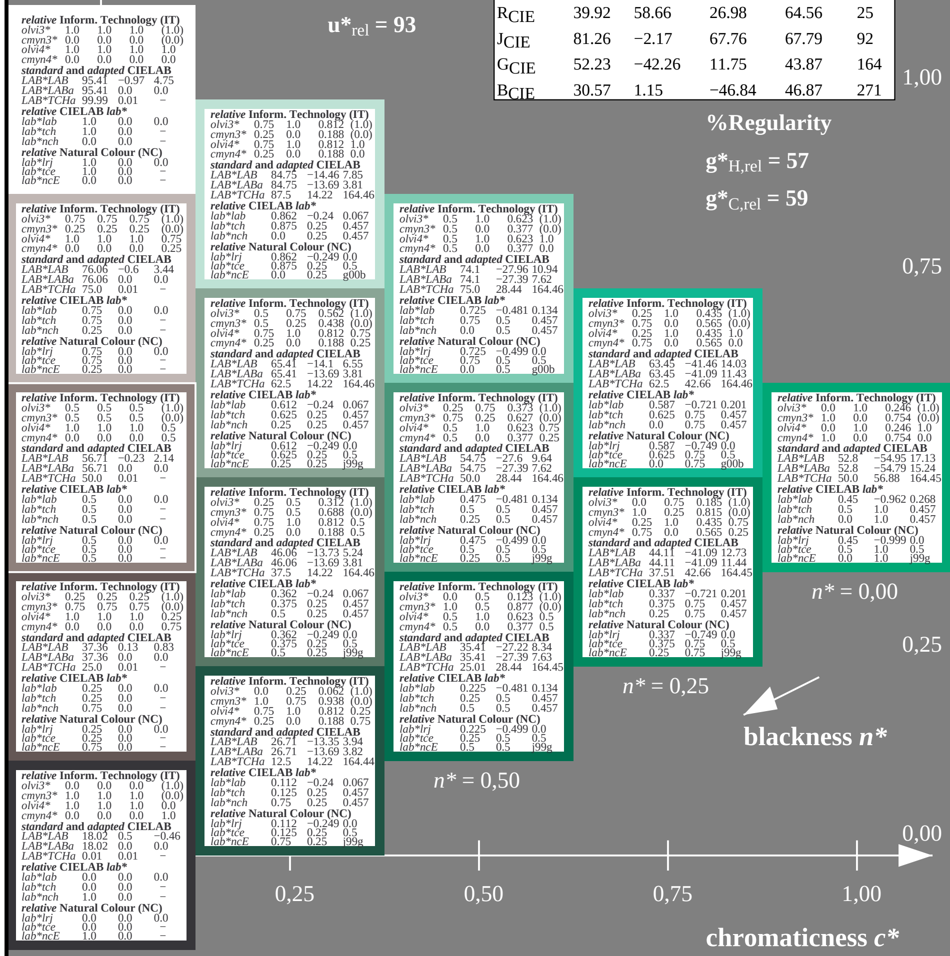


%Gamut
u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

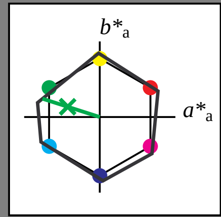
%Regularity
$g^*_{H,rel}$ = 57
$g^*_{C,rel}$ = 59



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 162/360 = 0.451$
*lab*tch and lab*nch*

D65: hue G
LCH*Ma: 53 80 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness t^*

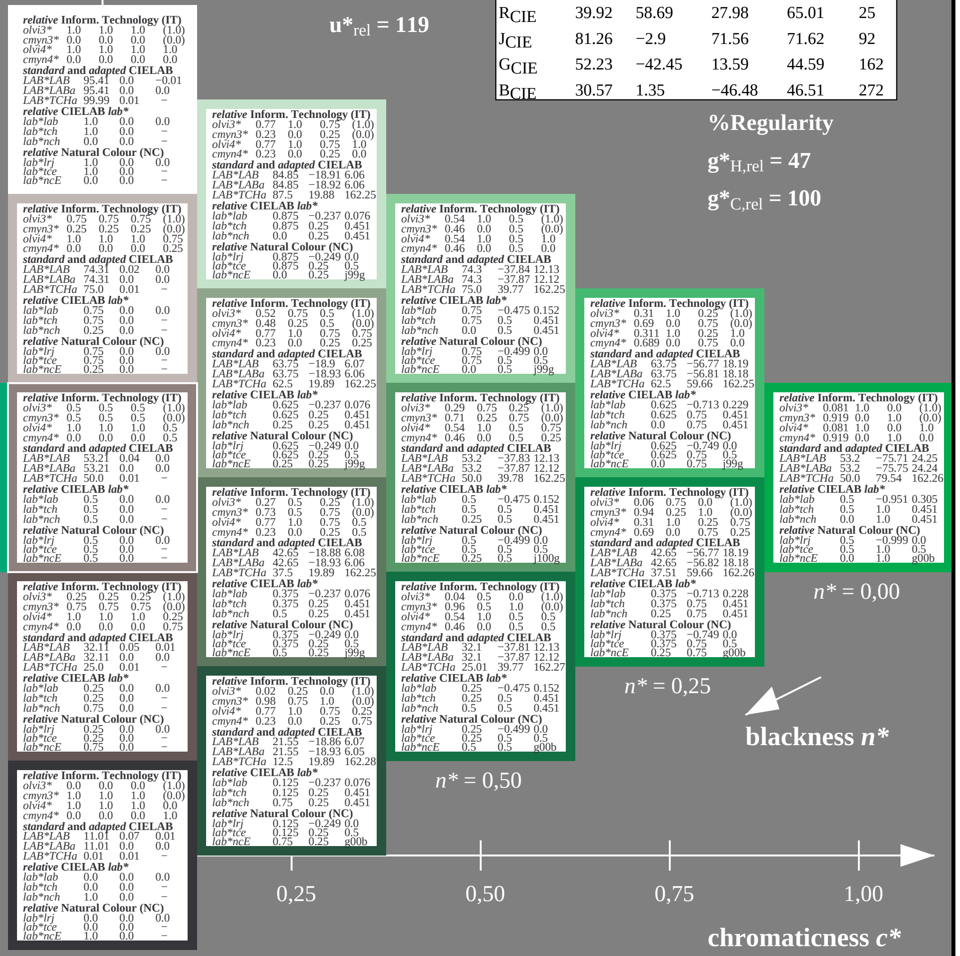


%Gamut
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100

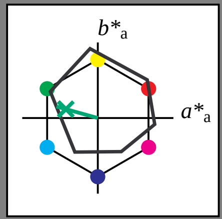


UE500−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

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

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 164/360 = 0.457$
*lab*tch and lab*nch*

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25
triangle lightness t^*

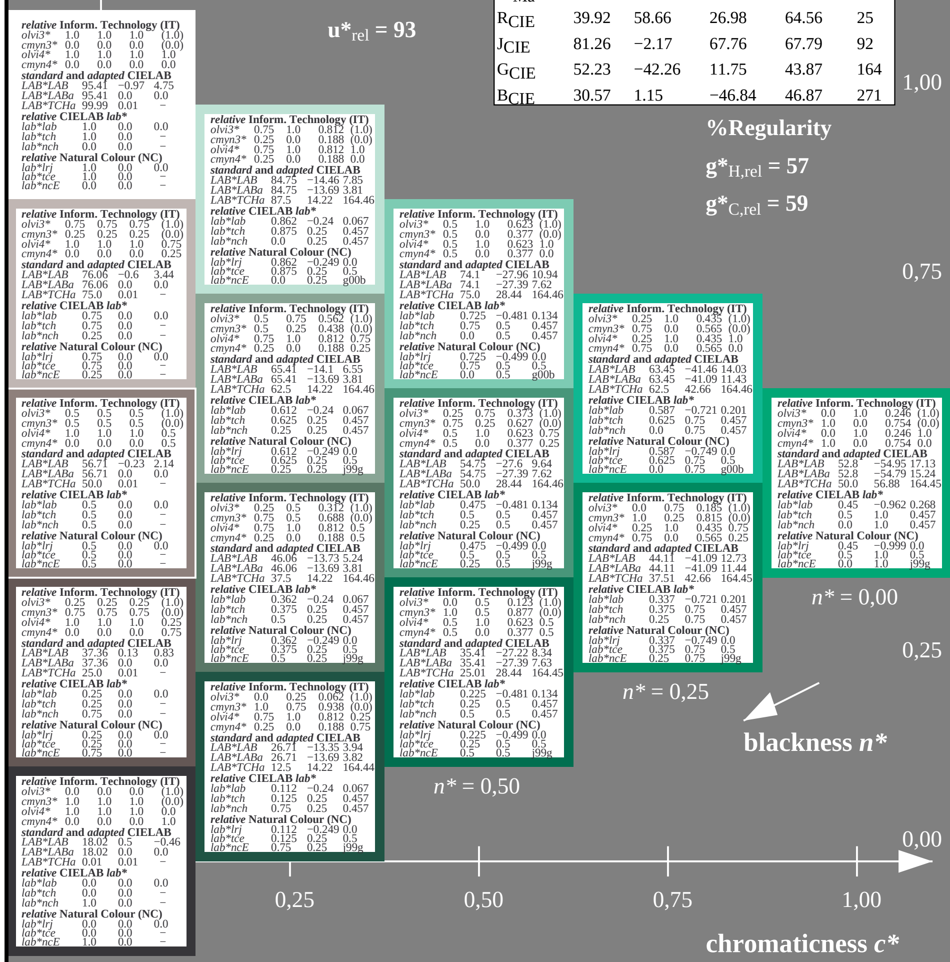


%Gamut
$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data

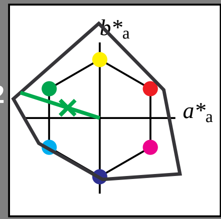
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 162/360 = 0.451$
*lab*tch and lab*nch*

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0
triangle lightness t^*

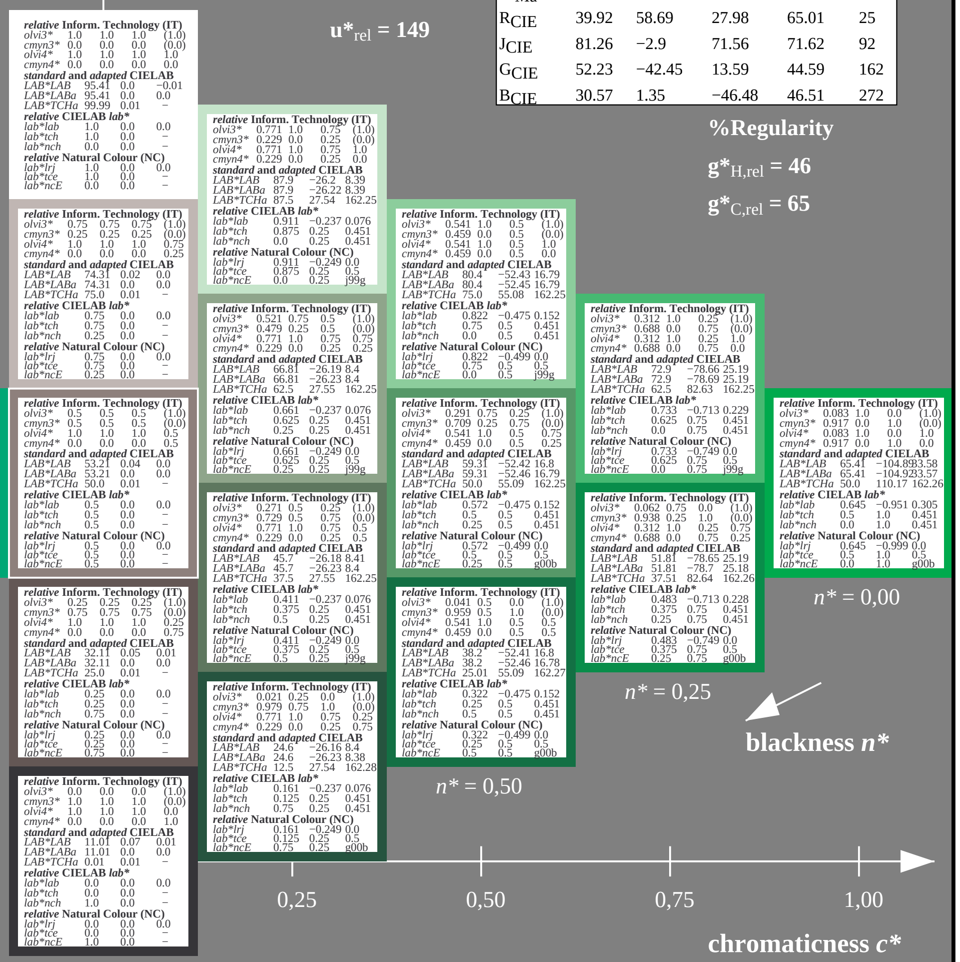


%Gamut
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$

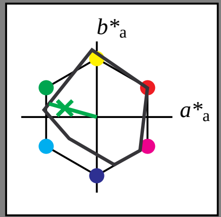


UE500−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

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

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
*lab*tch* and *lab*nch*

D65: hue G
LCH*Ma: 56 66 164
rgb*Ma: 0.1 1.0 0.0
triangle lightness t^*

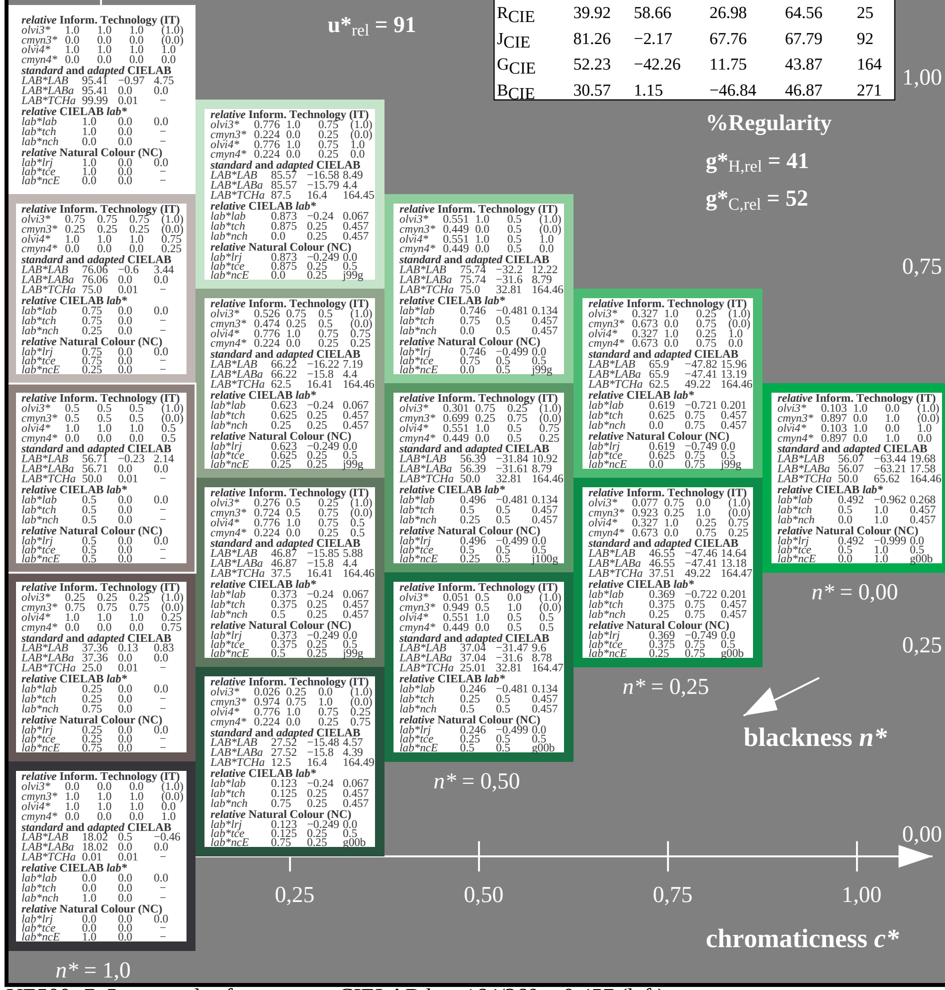


%Gamut
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data

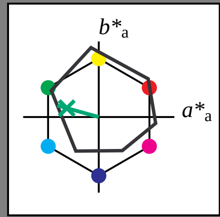
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 41$
$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 164/360 = 0.457$
*lab*tch* and *lab*nch*

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25
triangle lightness t^*

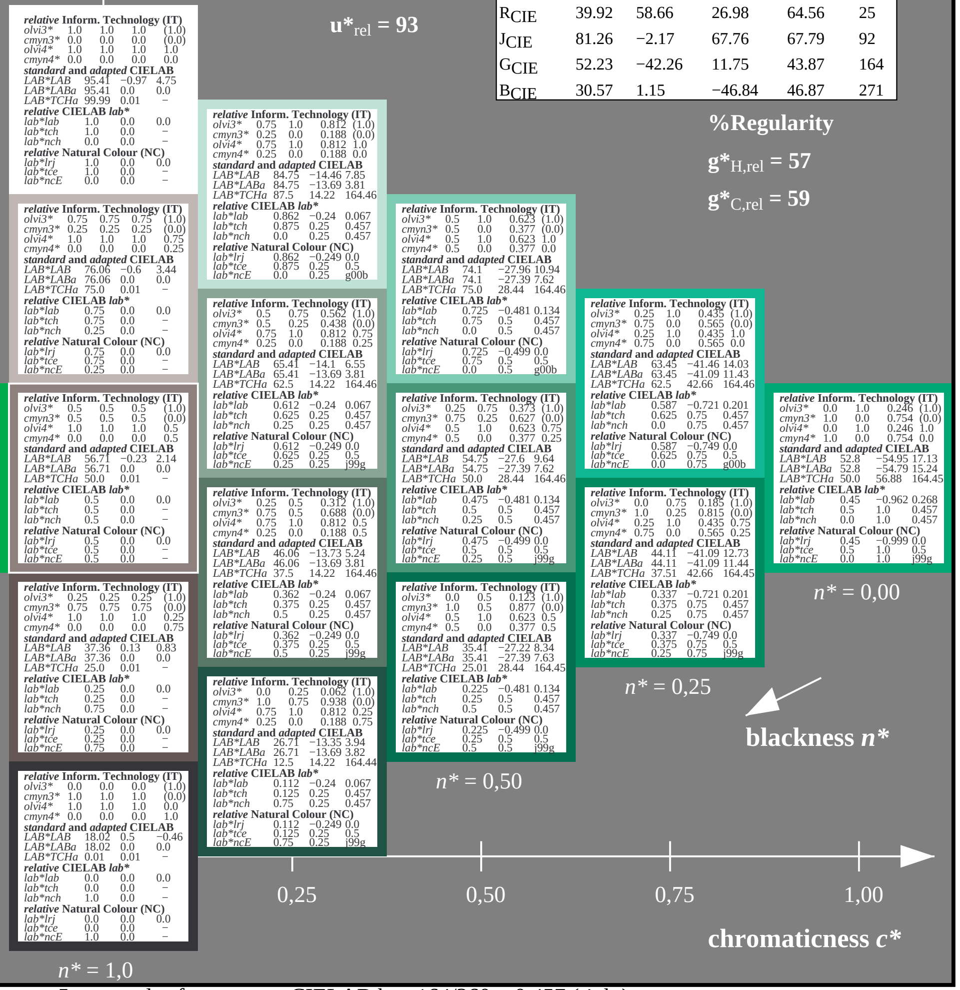


%Gamut
$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data

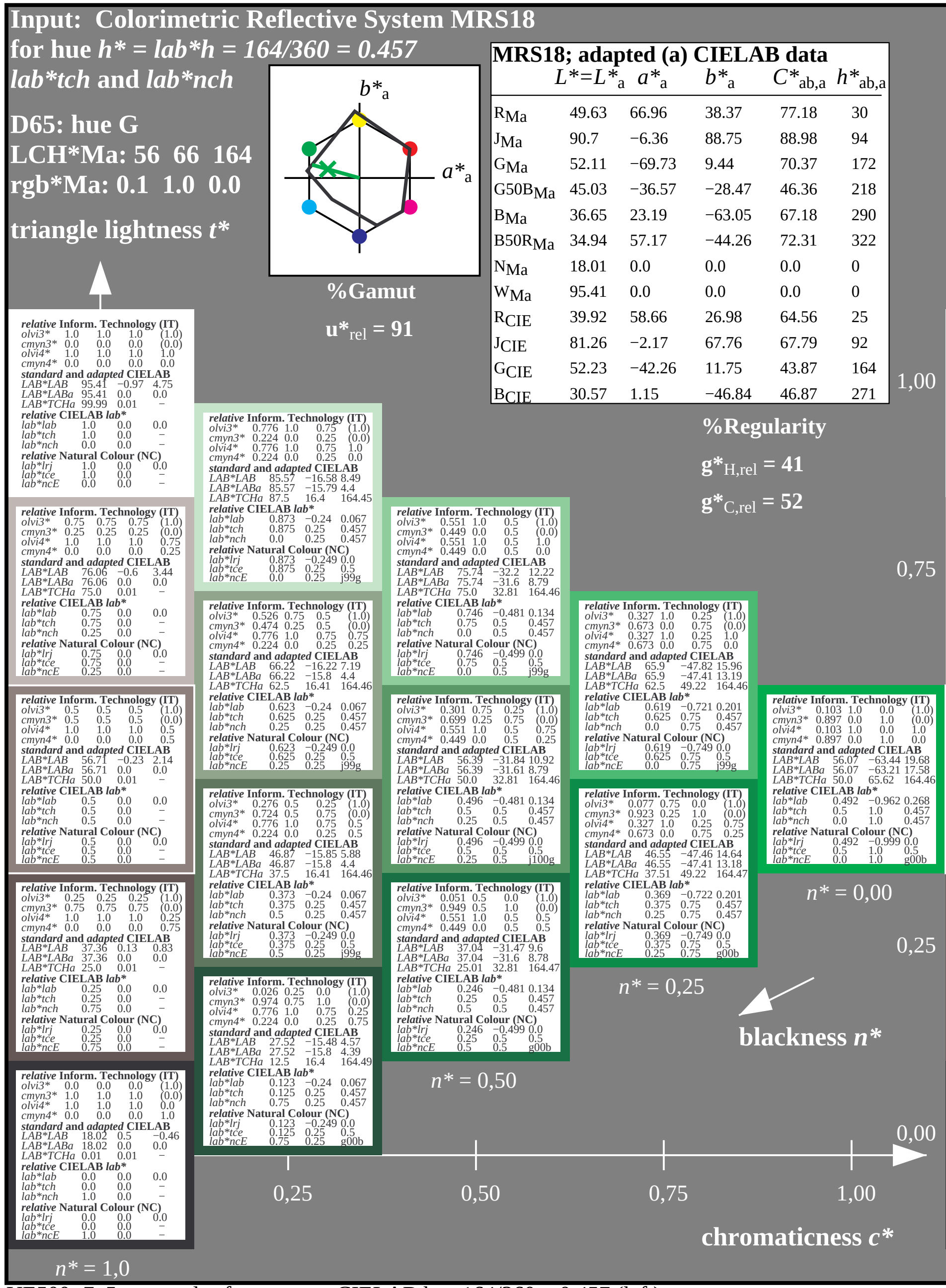
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



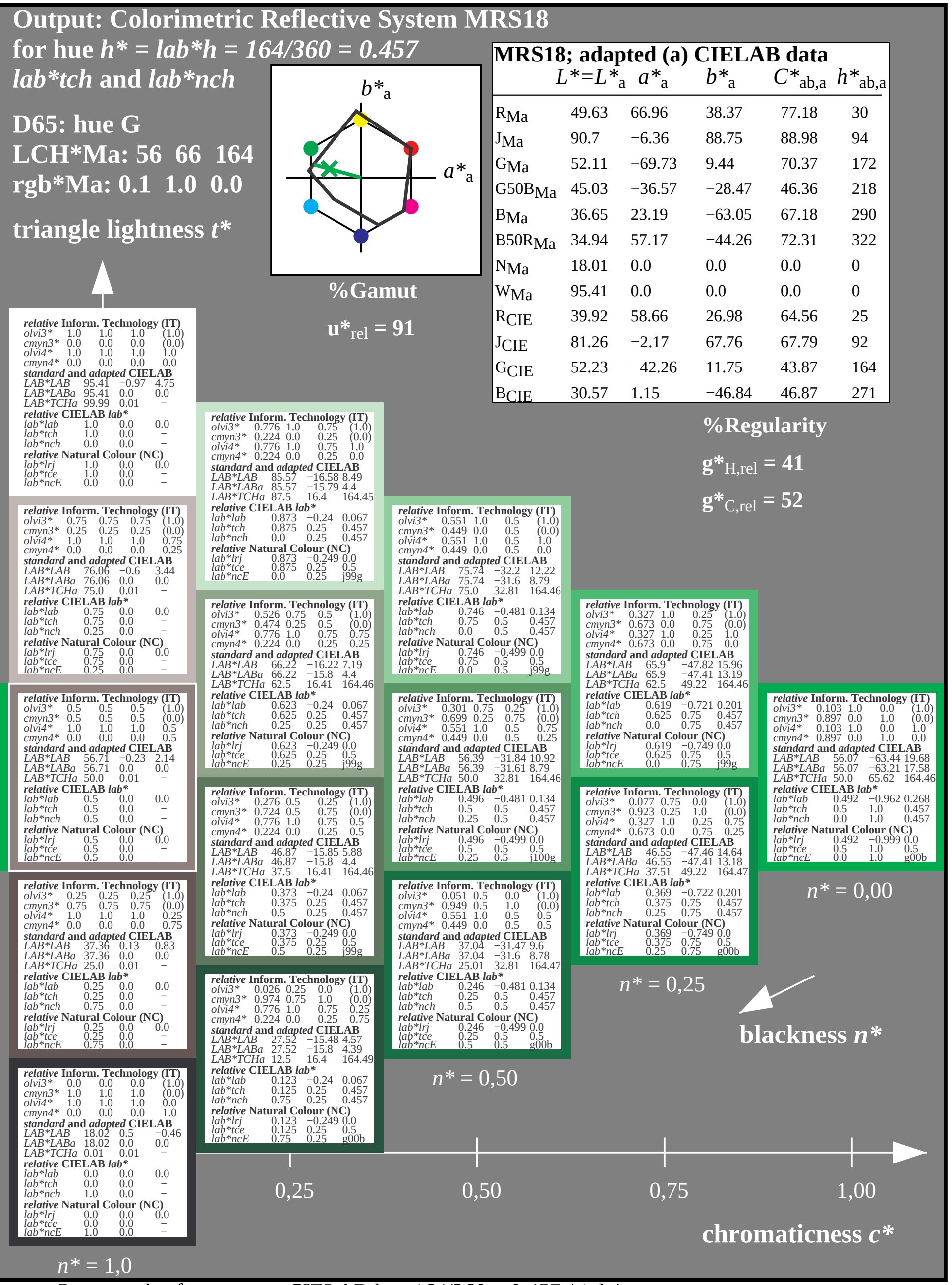
UE500−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

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



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

UE500−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

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

Input: Colorimetric Reflective System MRS18

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

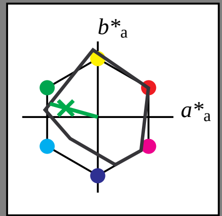
*lab*tch* and *lab*nch*

D65: hue G

LCH*Ma: 56 66 164

rgb*Ma: 0.1 1.0 0.0

triangle lightness t^*



%Gamut

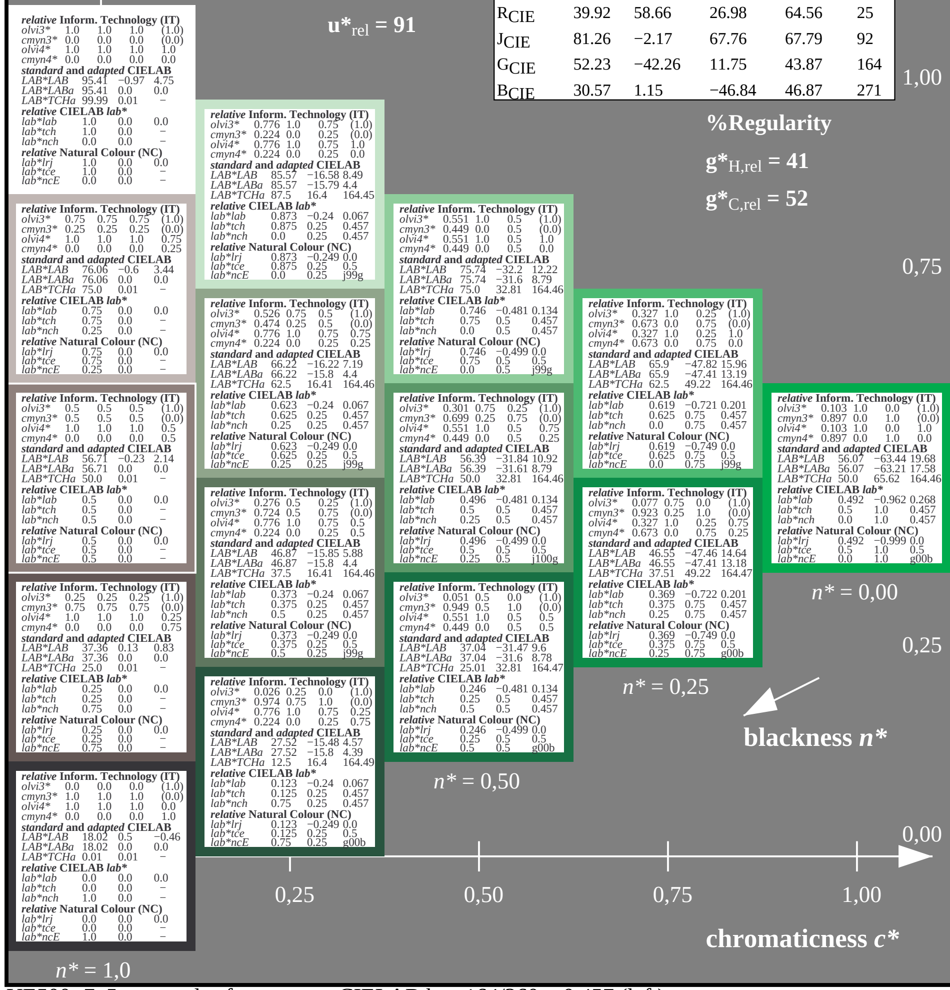
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System TRS18

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

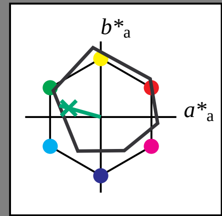
*lab*tch* and *lab*nch*

D65: hue G

LCH*Ma: 53 57 164

rgb*Ma: 0.0 1.0 0.25

triangle lightness t^*



%Gamut

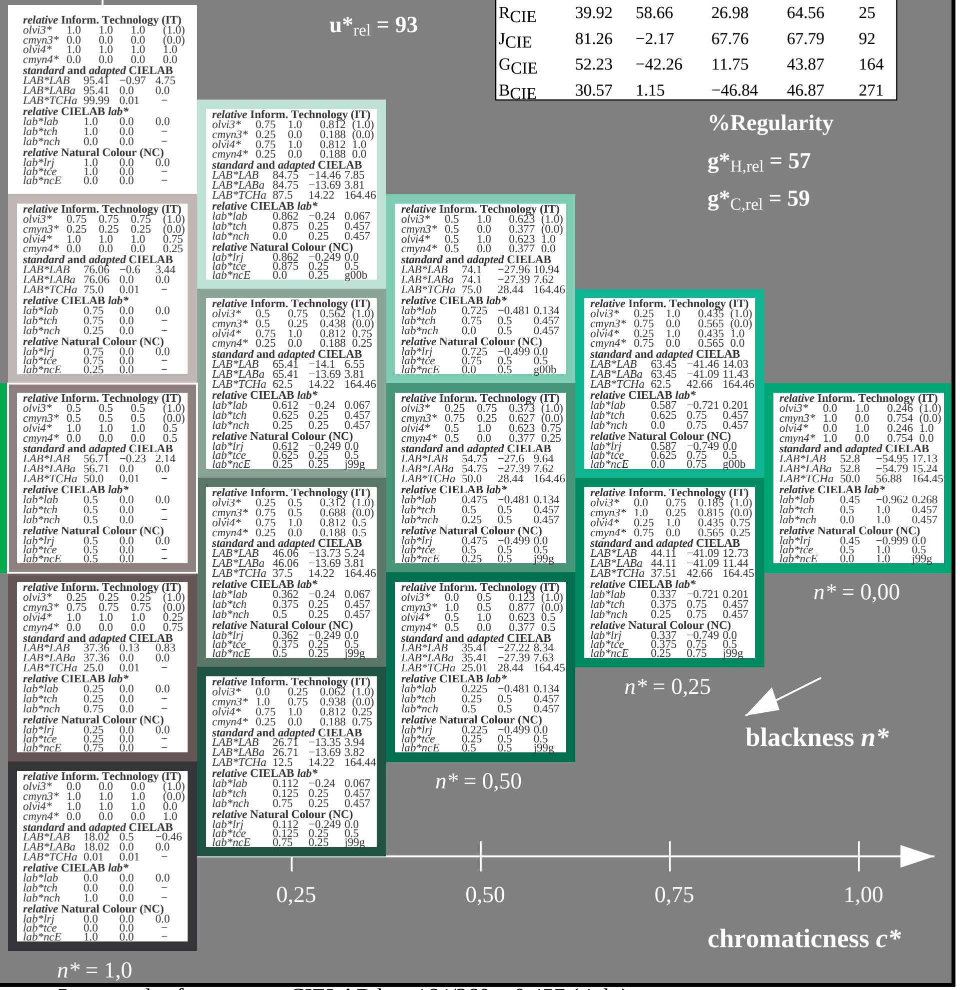
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



UE500−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

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

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 164/360 = 0.457$

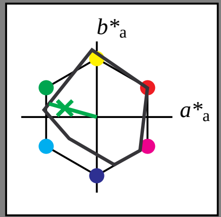
lab*tch* and *lab*nch

D65: hue G

LCH*Ma: 56 66 164

rgb*Ma: 0.1 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 91$

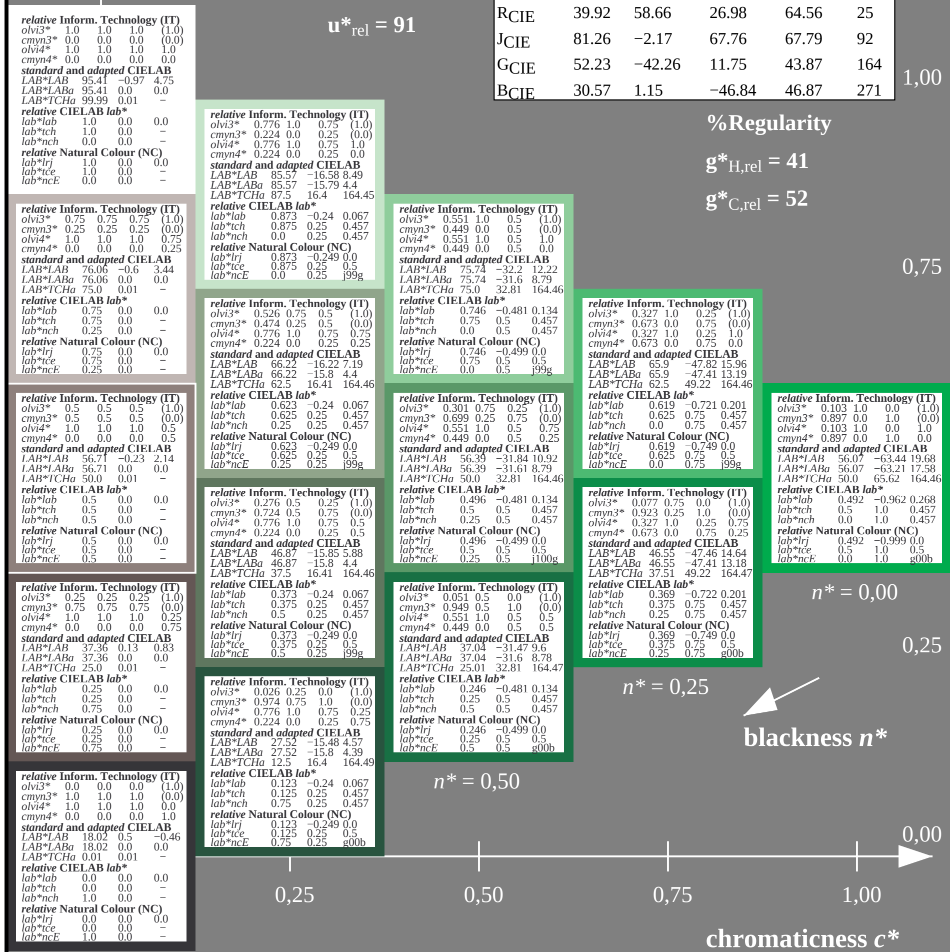
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 162/360 = 0.451$

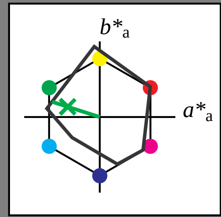
lab*tch* and *lab*nch

D65: hue G

LCH*Ma: 56 66 162

rgb*Ma: 0.11 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 92$

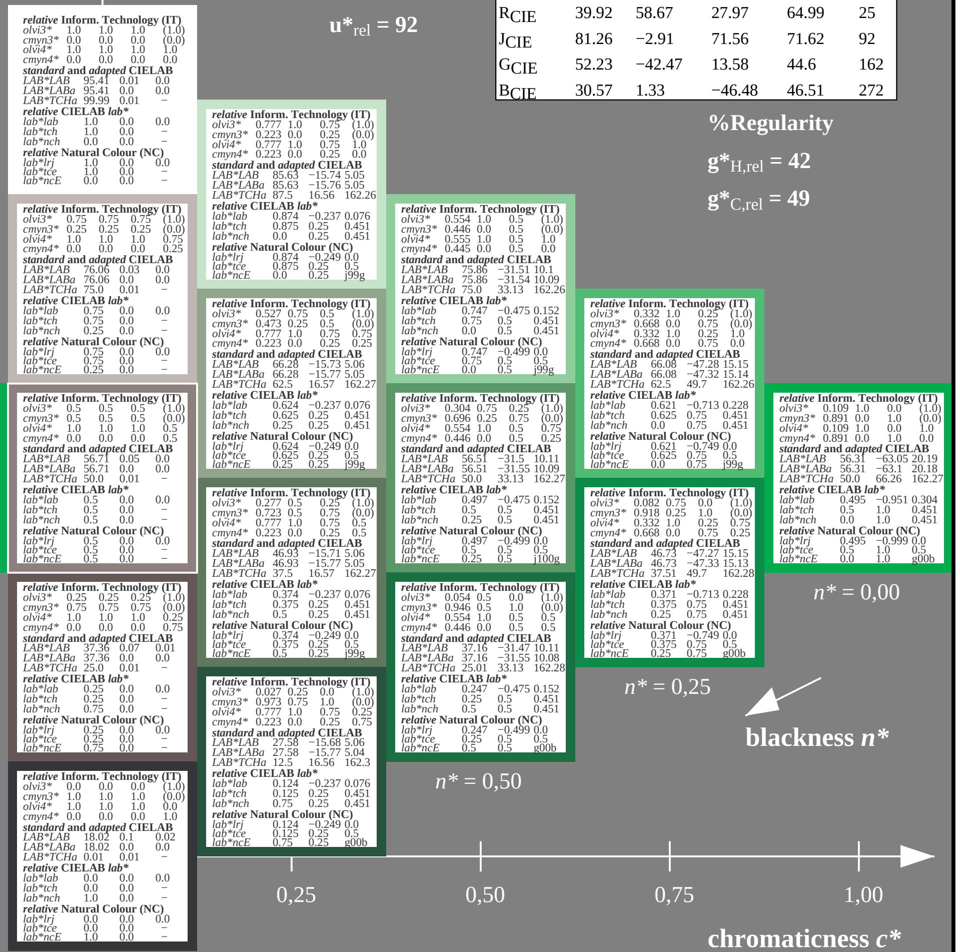
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

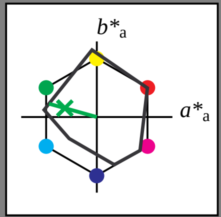


UE500−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

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

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h$ = 164/360 = 0.457
*lab*tch and lab*nch*

D65: hue G
LCH*Ma: 56 66 164
rgb*Ma: 0.1 1.0 0.0
triangle lightness t*

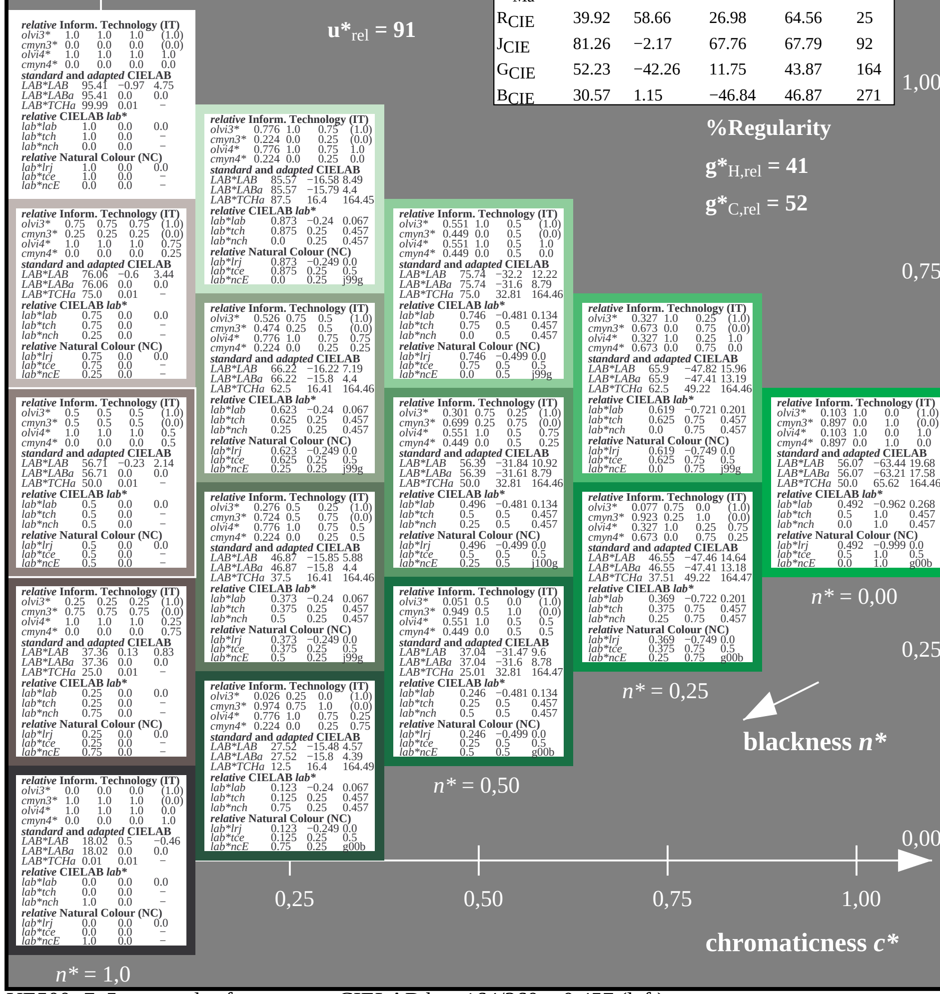


%Gamut
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

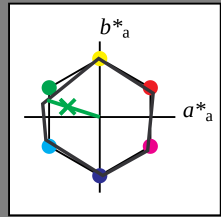
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel}$ = 41
$g^*_{C,rel}$ = 52



Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h$ = 162/360 = 0.451
*lab*tch and lab*nch*

D65: hue G
LCH*Ma: 57 73 162
rgb*Ma: 0.08 1.0 0.0
triangle lightness t*

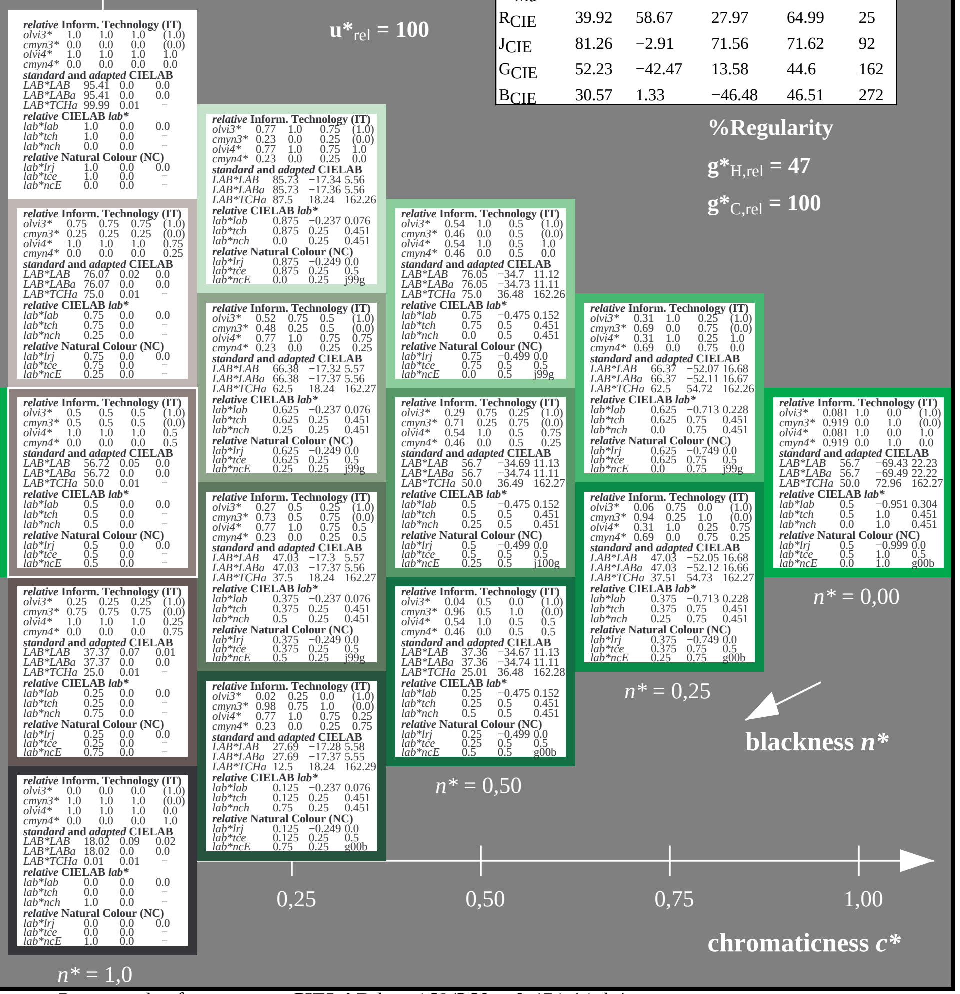


%Gamut
u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100

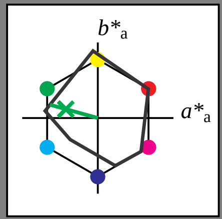


UE500−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

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

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
*lab*tch and lab*nch*

D65: hue G
LCH*Ma: 56 66 164
rgb*Ma: 0.1 1.0 0.0
triangle lightness t^*

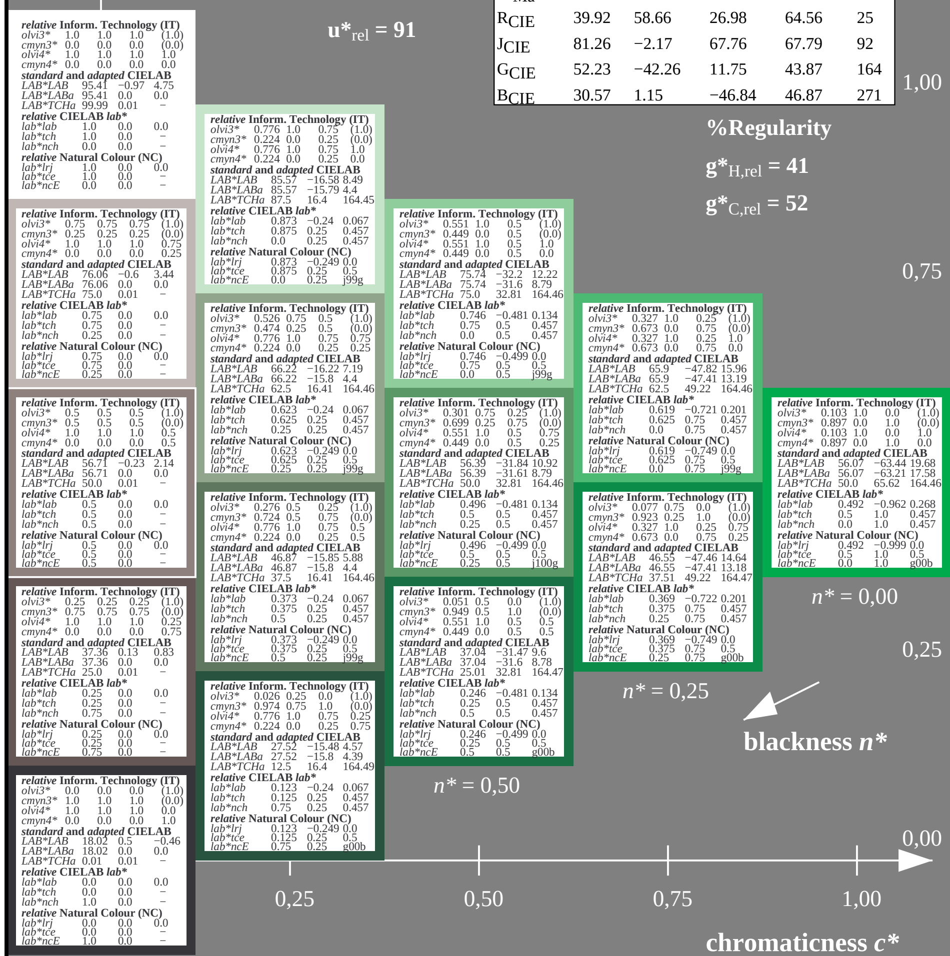


%Gamut
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data

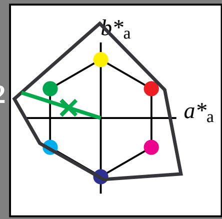
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 41$
$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 162/360 = 0.451$
*lab*tch and lab*nch*

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0
triangle lightness t^*

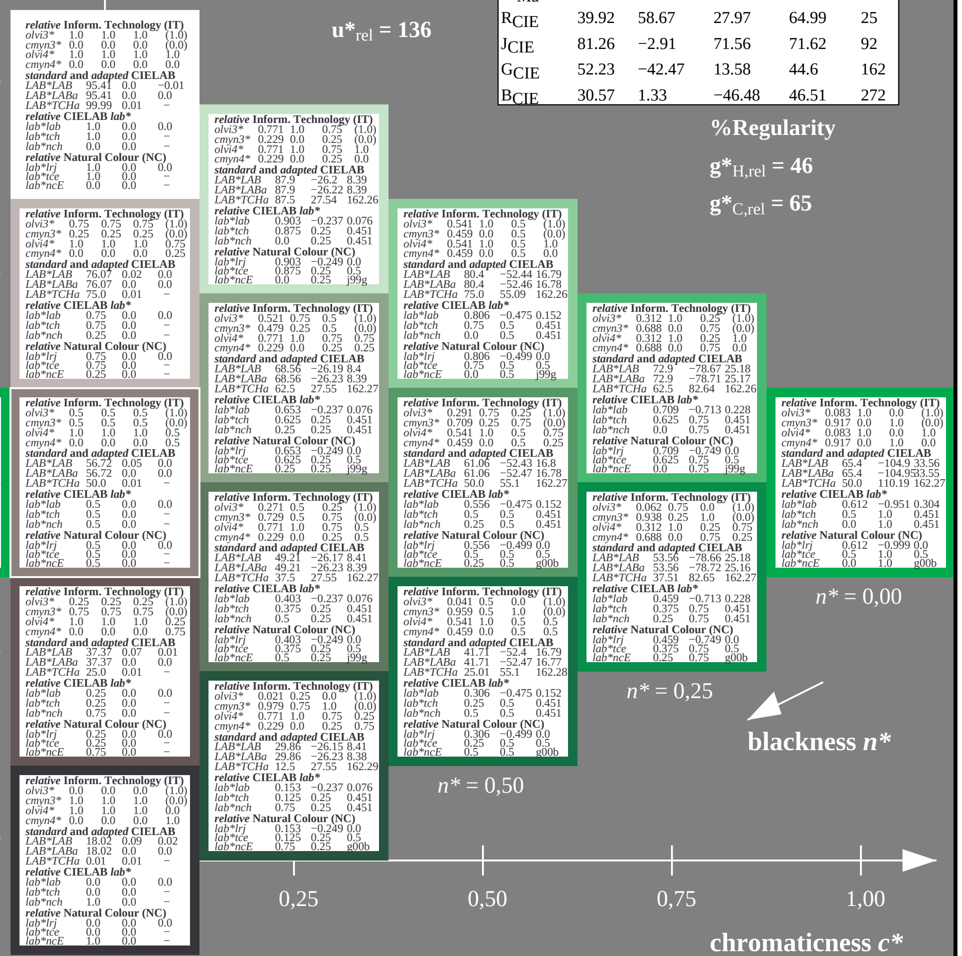


%Gamut
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



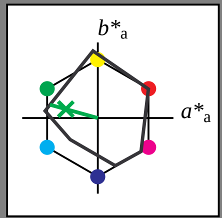
UE500−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

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

Input: Colorimetric Reflective System MRS18
for hue *h = *lab*h* = 164/360 = 0.457**
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 56 66 164
rgb*Ma: 0.1 1.0 0.0

triangle lightness *t**



%Gamut

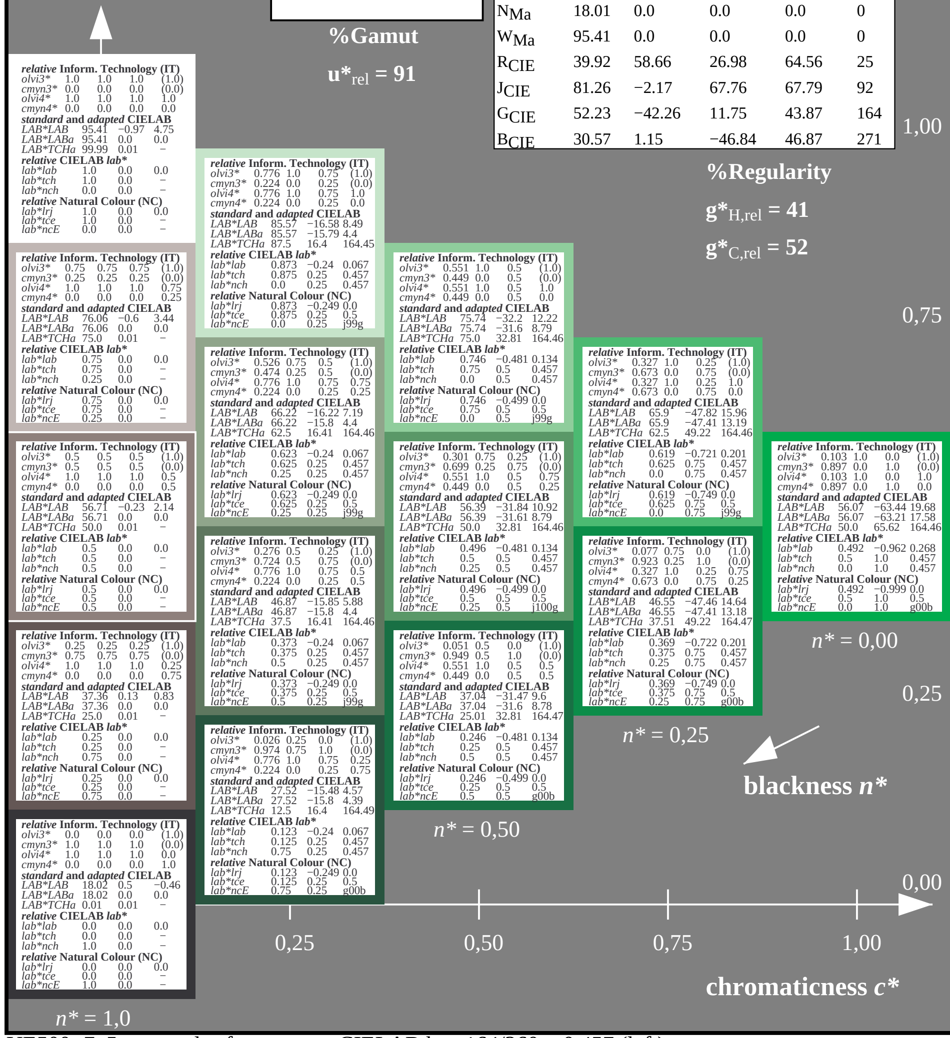
u*rel = 91

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
GMa	52.11	−69.73	9.44	70.37	172
G50BMa	45.03	−36.57	−28.47	46.36	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

%Regularity

g*H,rel = 41

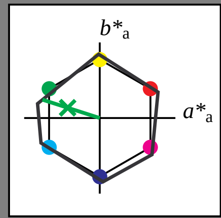
g*C,rel = 52



Output: Colorimetric Reflective System NRS11
for hue *h = *lab*h* = 162/360 = 0.451**
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 80 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness *t**



%Gamut

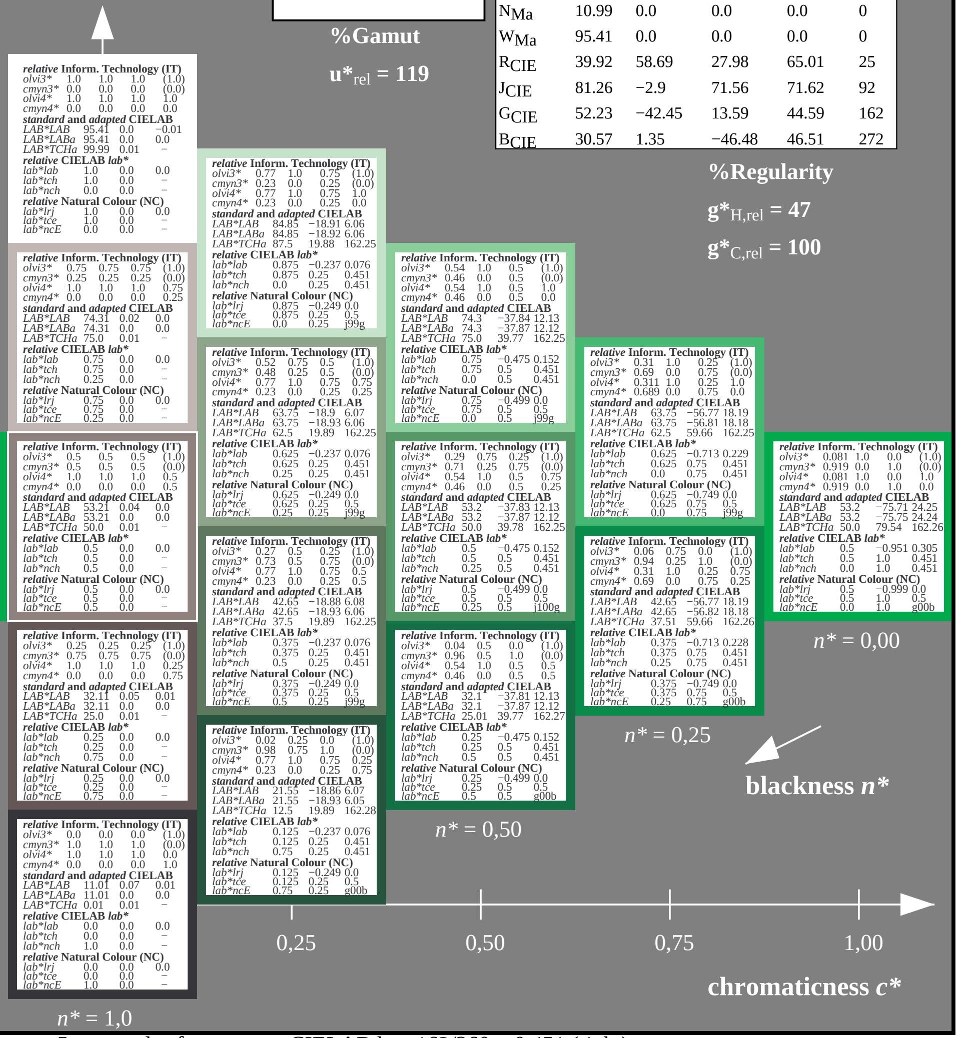
u*rel = 119

NRS11; adapted (a) CIELAB data	L*=L*a	a*a	b*a	C*ab,a	h*ab,a
RMa	53.2	77.06	34.32	84.36	24
JMa	53.2	−1.51	84.38	84.39	91
GMa	53.2	−82.27	18.98	84.44	167
G50BMa	53.2	−77.72	−32.98	84.44	203
BMa	53.2	4.37	−84.28	84.41	273
B50RMa	53.2	69.09	−48.41	84.37	325
NMa	10.99	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.69	27.98	65.01	25
JCIE	81.26	−2.9	71.56	71.62	92
GCIE	52.23	−42.45	13.59	44.59	162
BCIE	30.57	1.35	−46.48	46.51	272

%Regularity

g*H,rel = 47

g*C,rel = 100

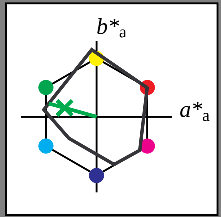


UE500−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

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

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch and lab*nch

D65: hue G
LCH*Ma: 56 66 164
rgb*Ma: 0.1 1.0 0.0
triangle lightness t^*

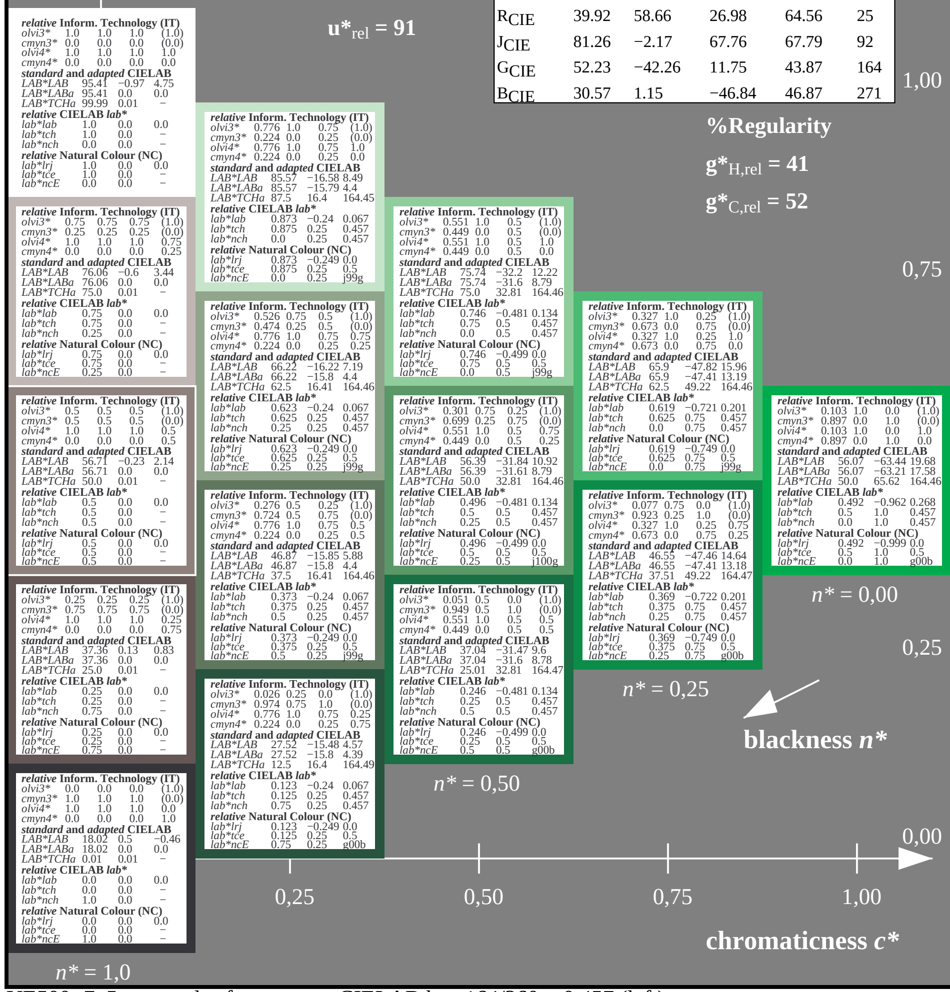


%Gamut
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data

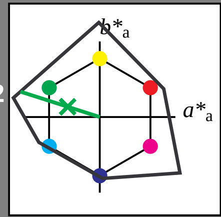
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 41$
$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch and lab*nch

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0
triangle lightness t^*

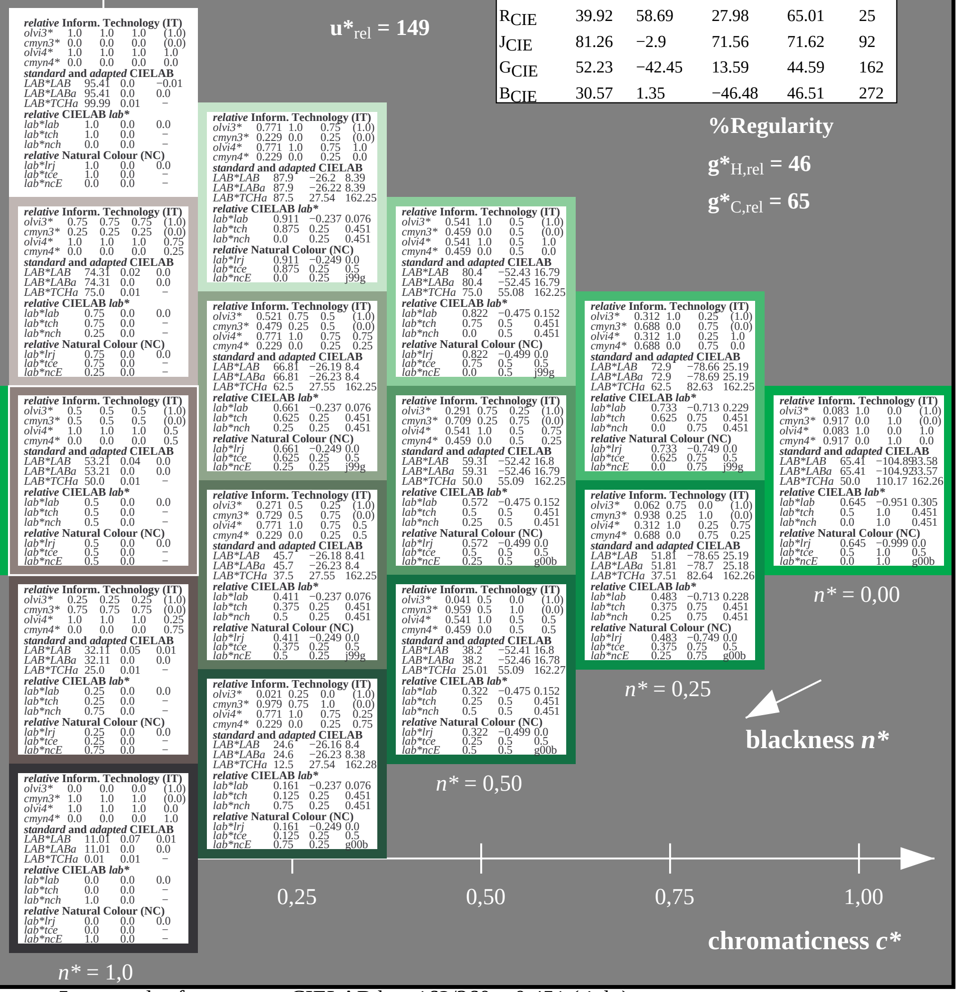


%Gamut
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



UE500−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left) 5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System TRS18

for hue *h* = lab*h* = 164/360 = 0.457

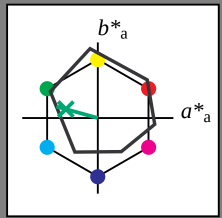
lab*tch* and *lab*nch

D65: hue G

LCH*Ma: 53 57 164

rgb*Ma: 0.0 1.0 0.25

triangle lightness *t*



%Gamut

u^*_{rel} = 93

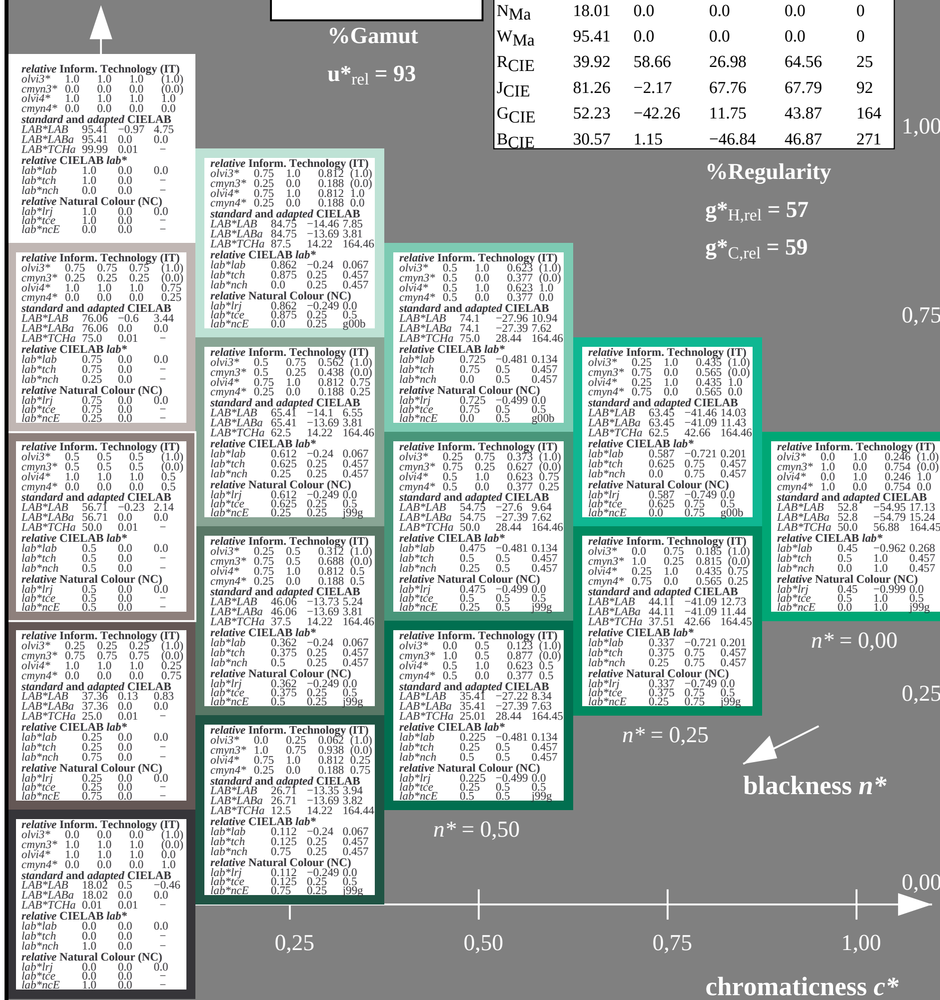
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



UE500−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

Output: Colorimetric Reflective System ORS18

for hue *h* = lab*h* = 164/360 = 0.457

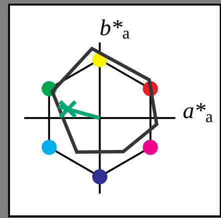
lab*tch* and *lab*nch

D65: hue G

LCH*Ma: 53 57 164

rgb*Ma: 0.0 1.0 0.25

triangle lightness *t*



%Gamut

u^*_{rel} = 93

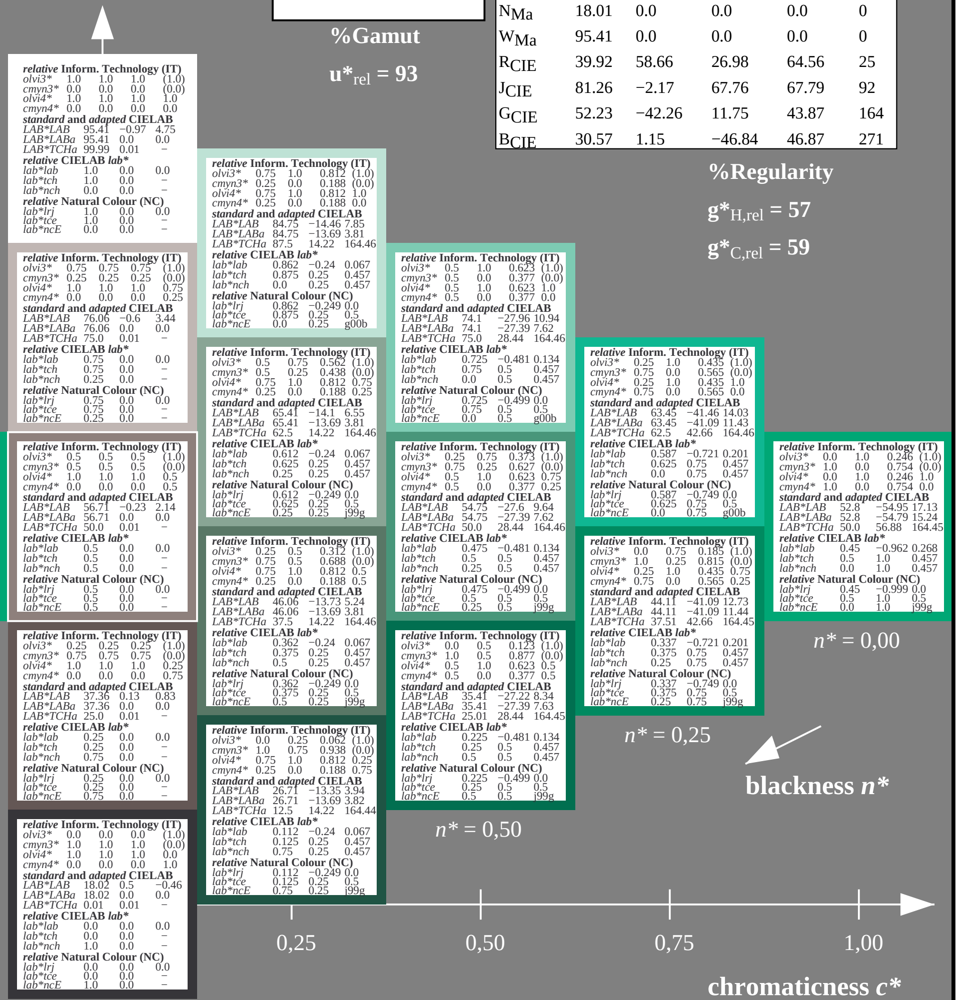
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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

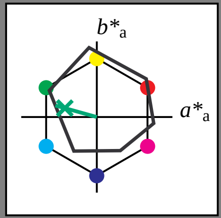


5 step scales for constant CIELAB hue 164/360 = 0.457 (right)

Input: Colorimetric Reflective System TRS18
for hue *h** = *lab*h* = 164/360 = 0.457
*lab*tch* and *lab*nch*

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness *t**



%Gamut

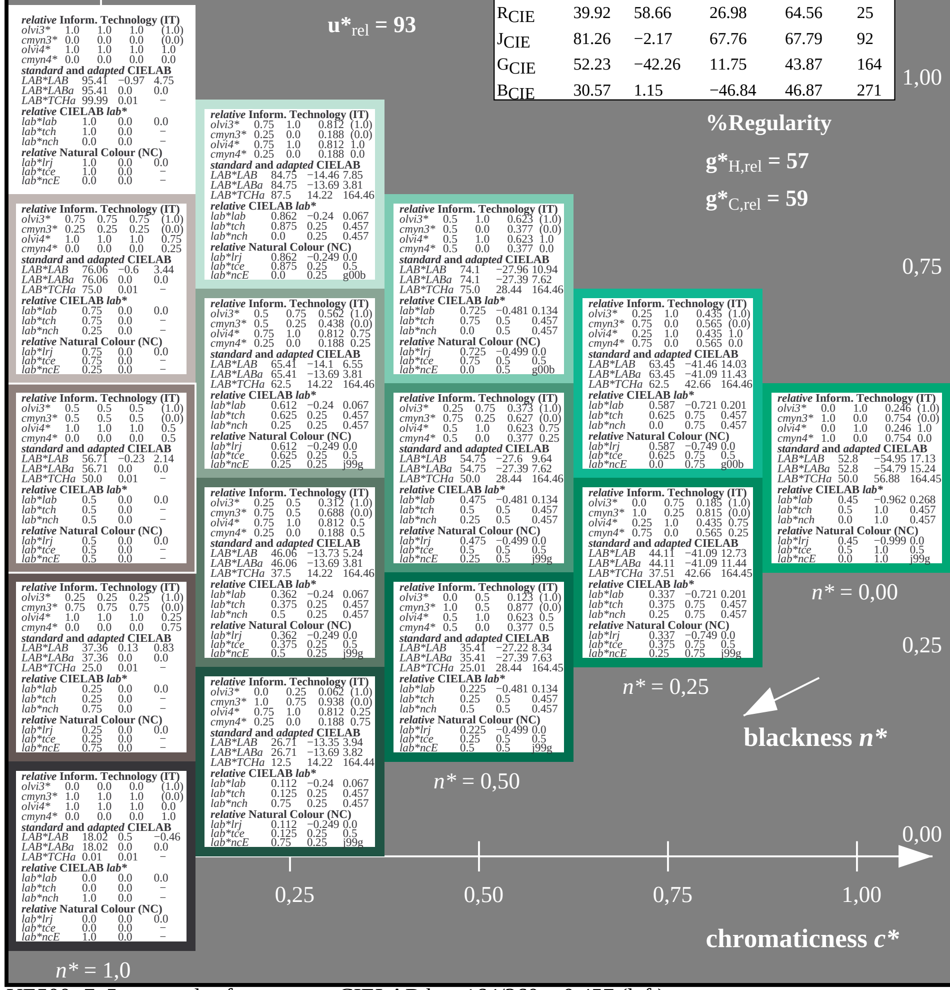
u^*_{rel} = 93

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

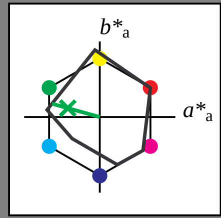
$g^*_{C,rel}$ = 59



Output: Colorimetric Reflective System MRS18
for hue *h** = *lab*h* = 164/360 = 0.457
*lab*tch* and *lab*nch*

D65: hue G
LCH*Ma: 56 66 164
rgb*Ma: 0.1 1.0 0.0

triangle lightness *t**



%Gamut

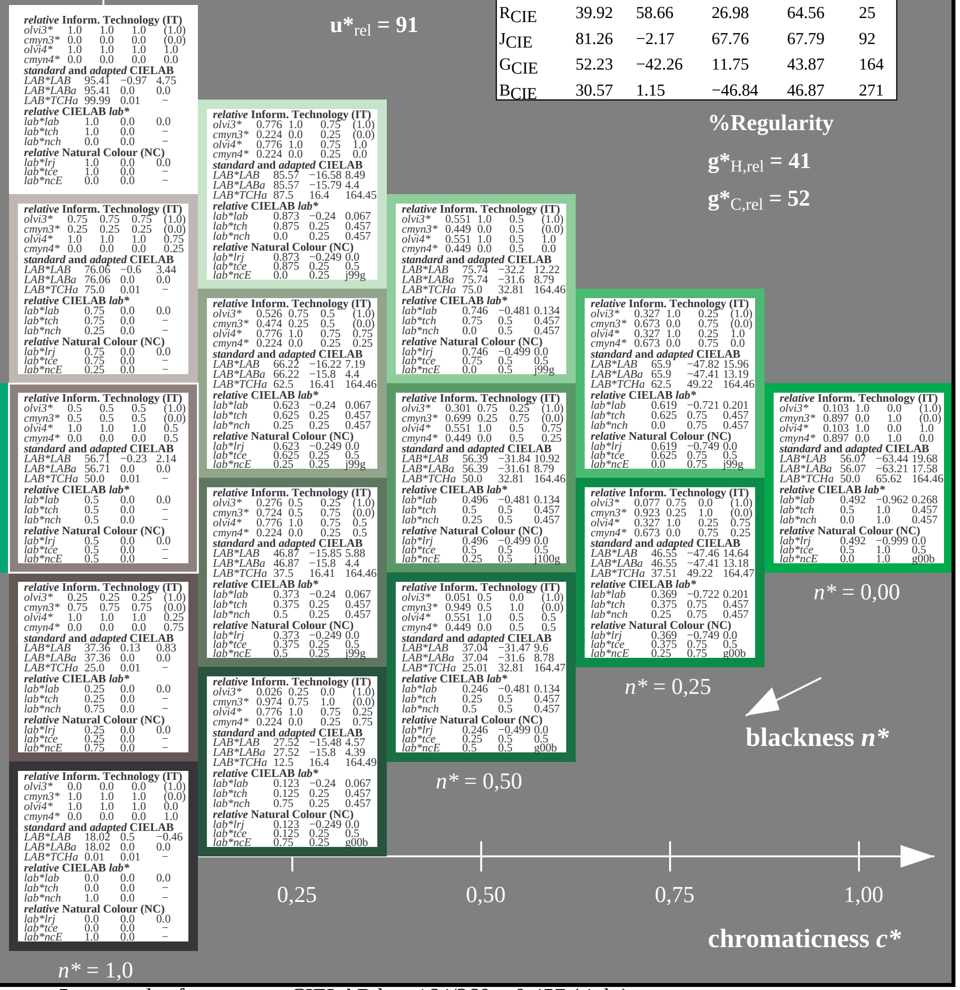
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



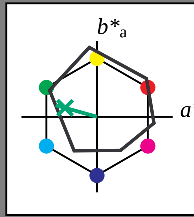
UE500−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

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

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness t^*



%Gamut

u^*_{rel} = 93

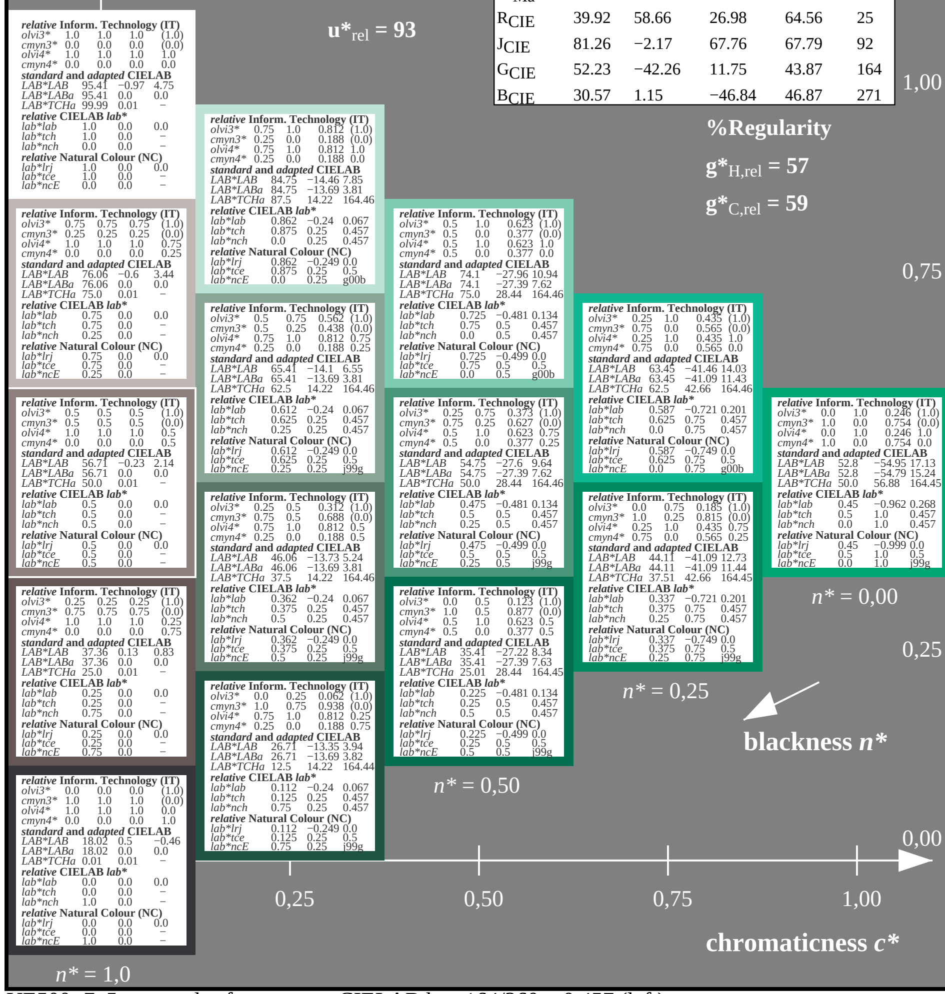
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

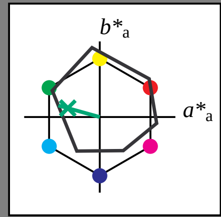
$g^*_{C,rel}$ = 59



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness t^*



%Gamut

u^*_{rel} = 93

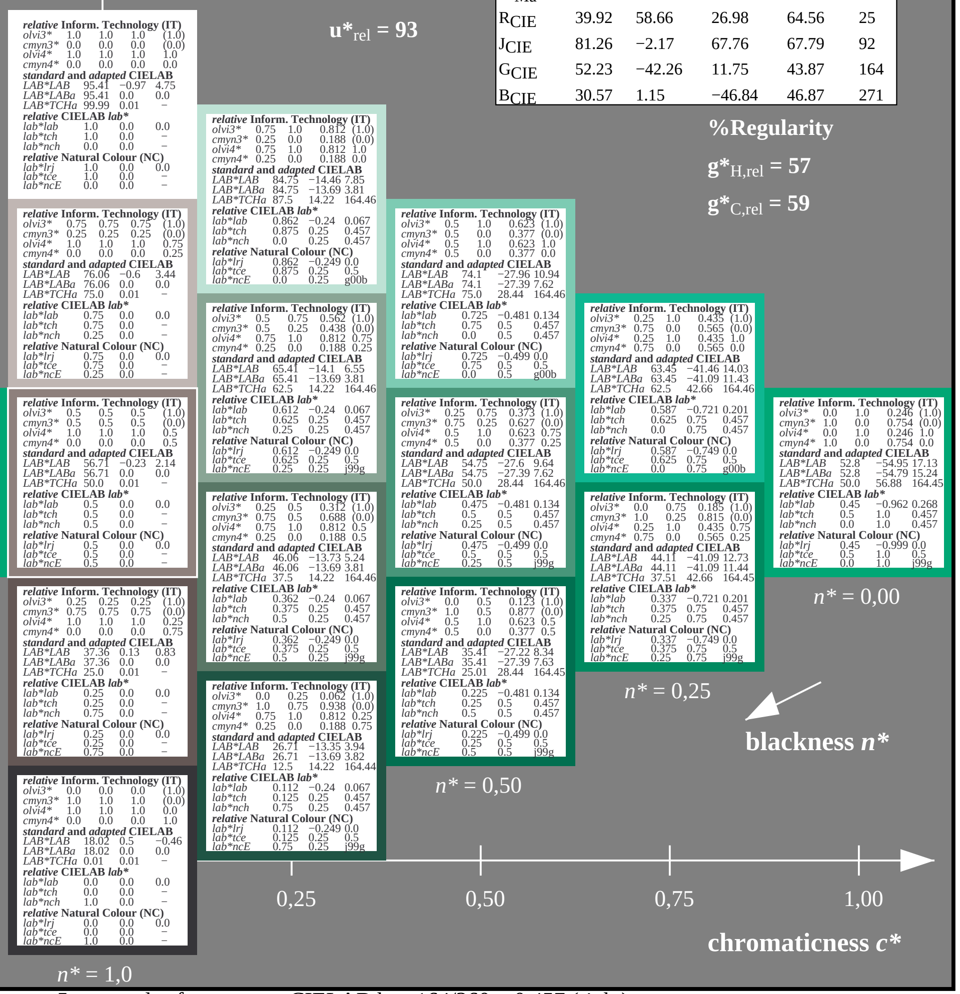
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



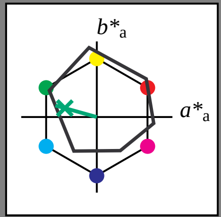
UE500−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

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

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h$ = 164/360 = 0.457
*lab*tch and lab*nch*

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness t^*



%Gamut

u^*_{rel} = 93

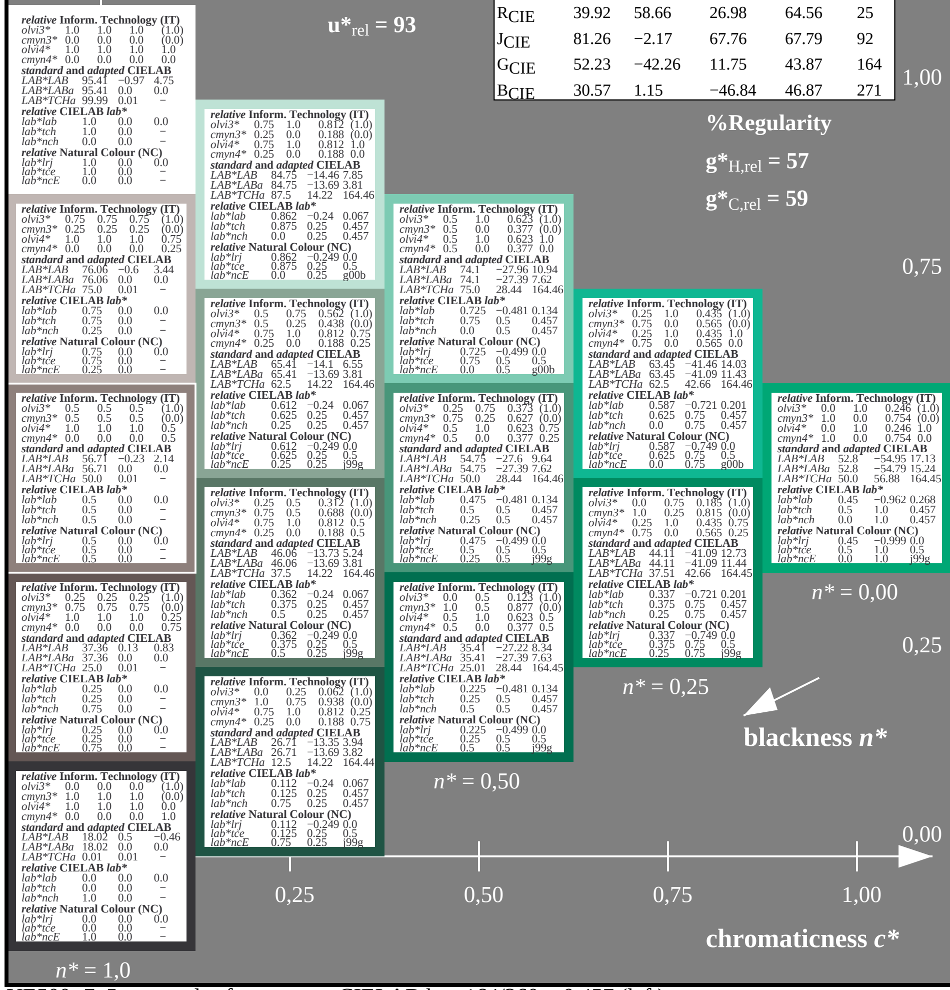
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

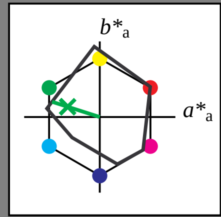
$g^*_{C,rel}$ = 59



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h$ = 162/360 = 0.451
*lab*tch and lab*nch*

D65: hue G
LCH*Ma: 56 66 162
rgb*Ma: 0.11 1.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 92

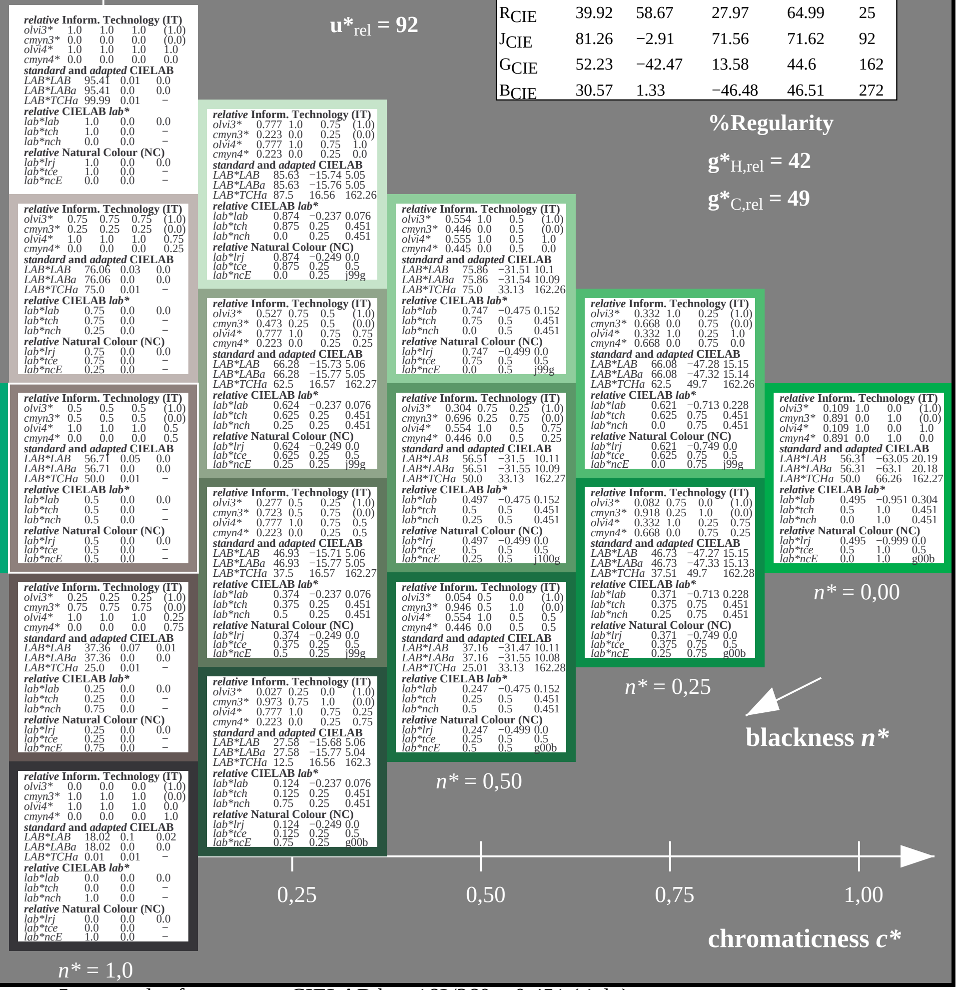
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

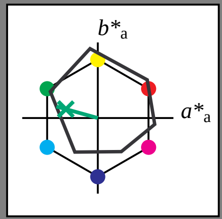


UE500−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

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

Input: Colorimetric Reflective System TRS18
for hue *h = *lab*h* = 164/360 = 0.457**
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25
triangle lightness *t*

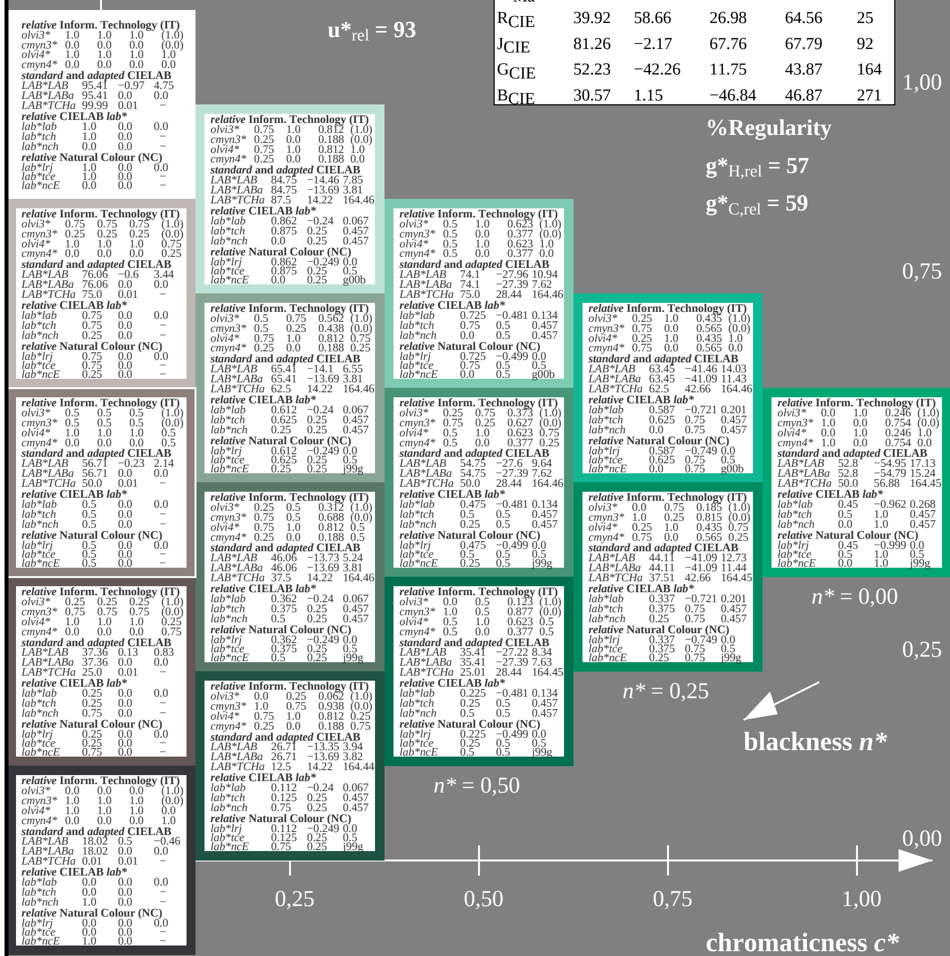


%Gamut
u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

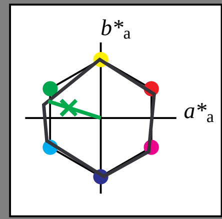
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel}$ = 57
$g^*_{C,rel}$ = 59



Output: Colorimetric Reflective System NRS18
for hue *h = *lab*h* = 162/360 = 0.451**
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 73 162
rgb*Ma: 0.08 1.0 0.0
triangle lightness *t*

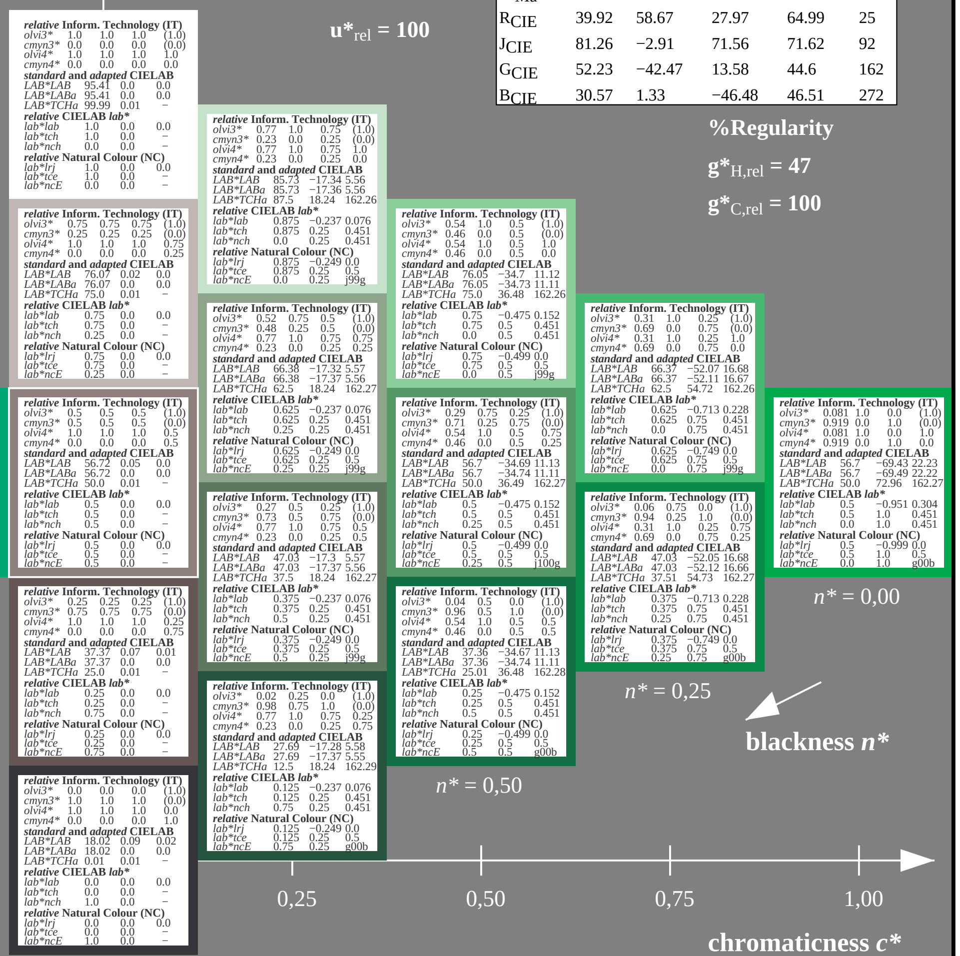


%Gamut
u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100



UE500−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

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

Input: Colorimetric Reflective System TRS18

for hue h = lab*h = 164/360 = 0.457*

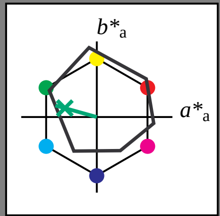
*lab*tch and lab*nch*

D65: hue G

LCH*Ma: 53 57 164

rgb*Ma: 0.0 1.0 0.25

triangle lightness *t*



%Gamut

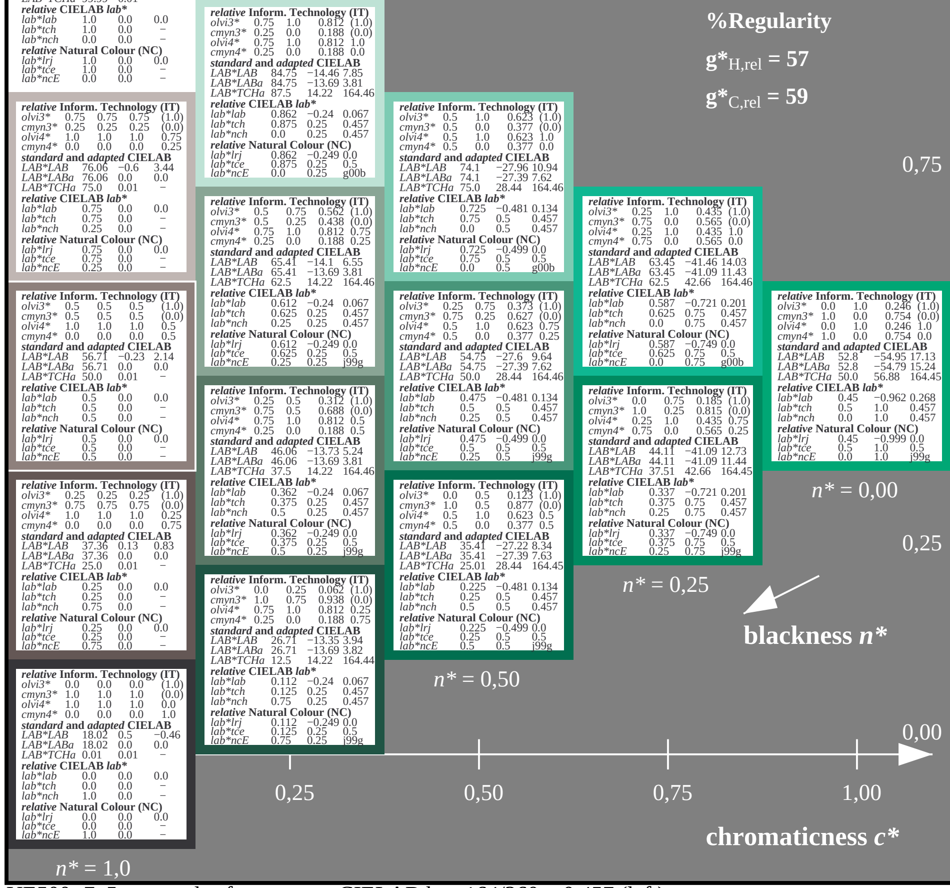
u^*_{rel} = 93

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



Output: Colorimetric Reflective System NCS18

for hue h = lab*h = 162/360 = 0.451*

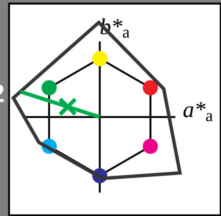
*lab*tch and lab*nch*

D65: hue G

LCH*Ma: 65 110 162

rgb*Ma: 0.08 1.0 0.0

triangle lightness *t*



%Gamut

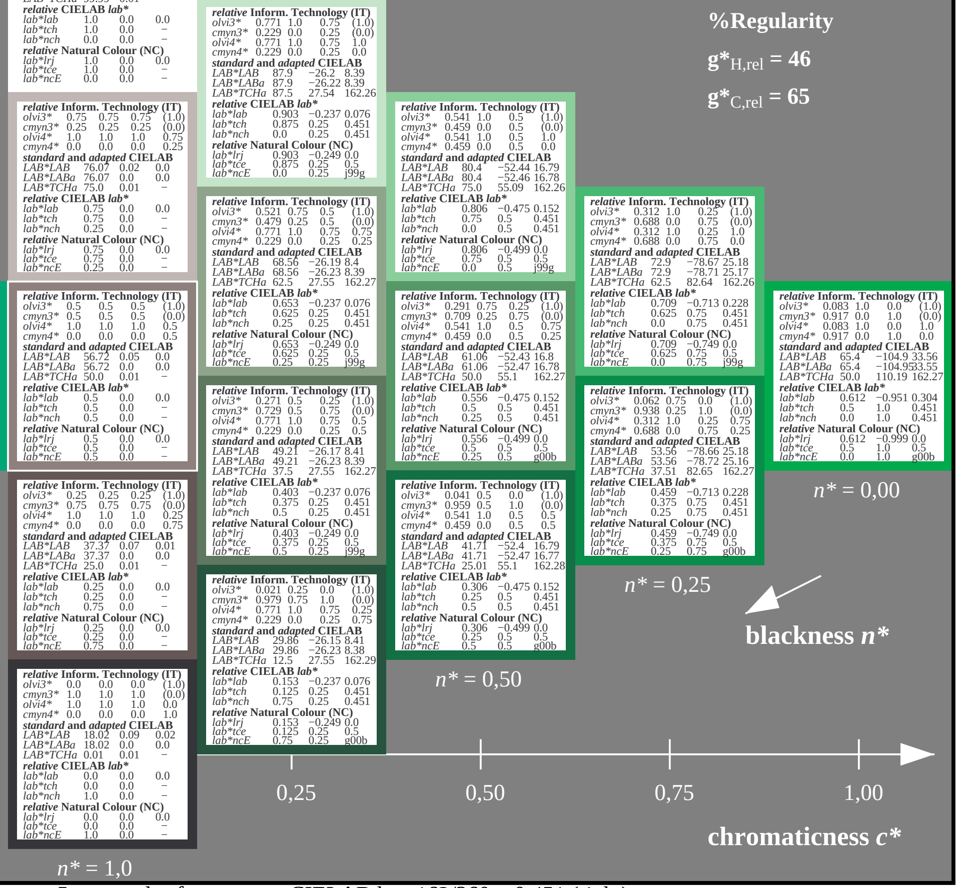
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



UE500−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

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

Input: Colorimetric Reflective System TRS18

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

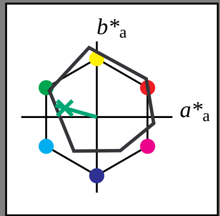
lab*tch* and *lab*nch

D65: hue G

LCH*Ma: 53 57 164

rgb*Ma: 0.0 1.0 0.25

triangle lightness t^*

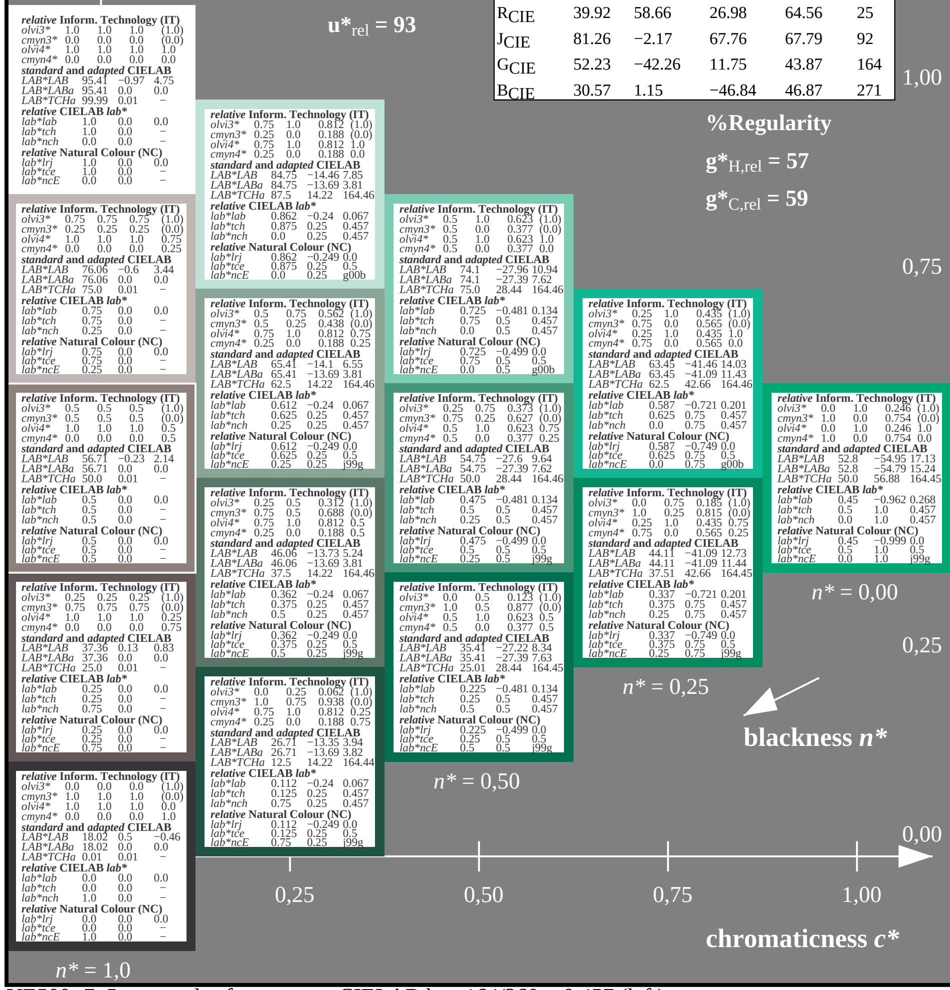


%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



Output: Colorimetric Reflective System NRS11

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

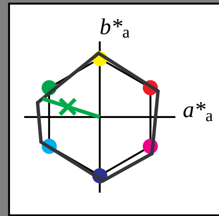
lab*tch* and *lab*nch

D65: hue G

LCH*Ma: 53 80 162

rgb*Ma: 0.08 1.0 0.0

triangle lightness t^*

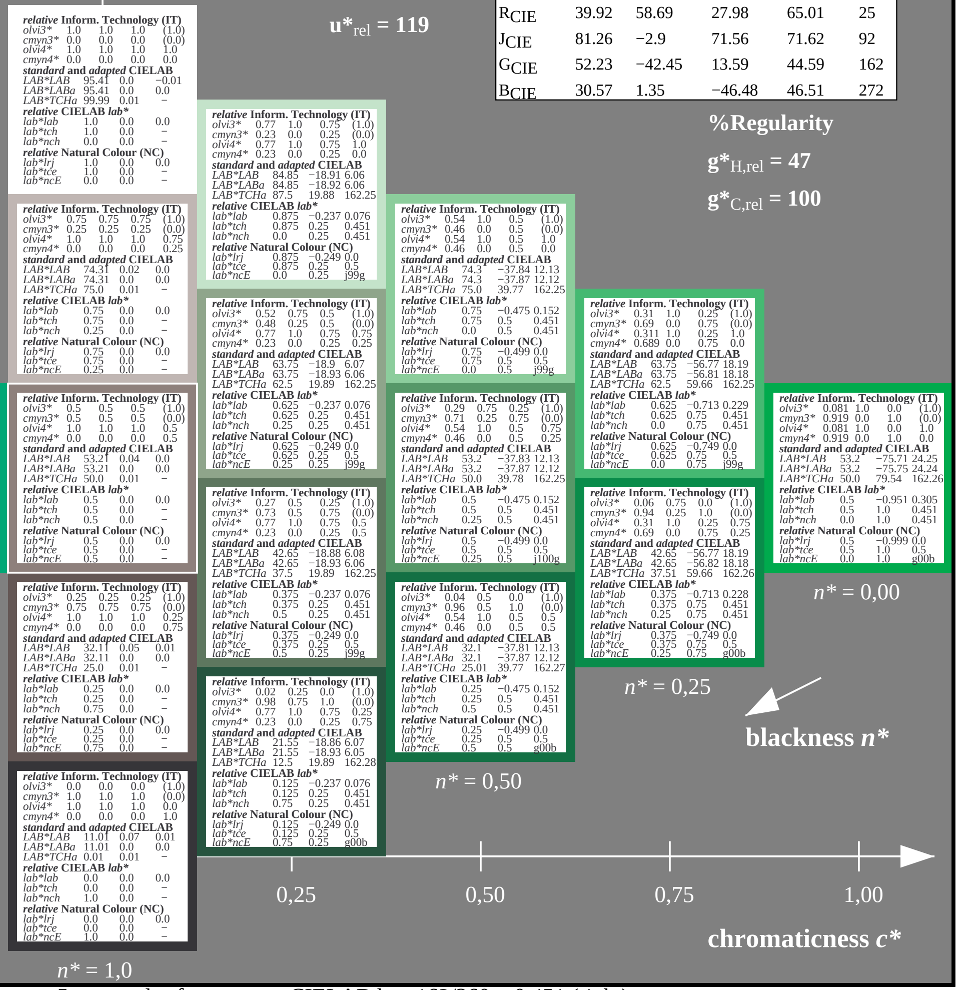


%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272



UE500−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

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

Input: Colorimetric Reflective System TRS18

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

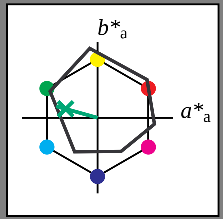
lab*tch* and *lab*nch

D65: hue G

LCH*Ma: 53 57 164

rgb*Ma: 0.0 1.0 0.25

triangle lightness t^*



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

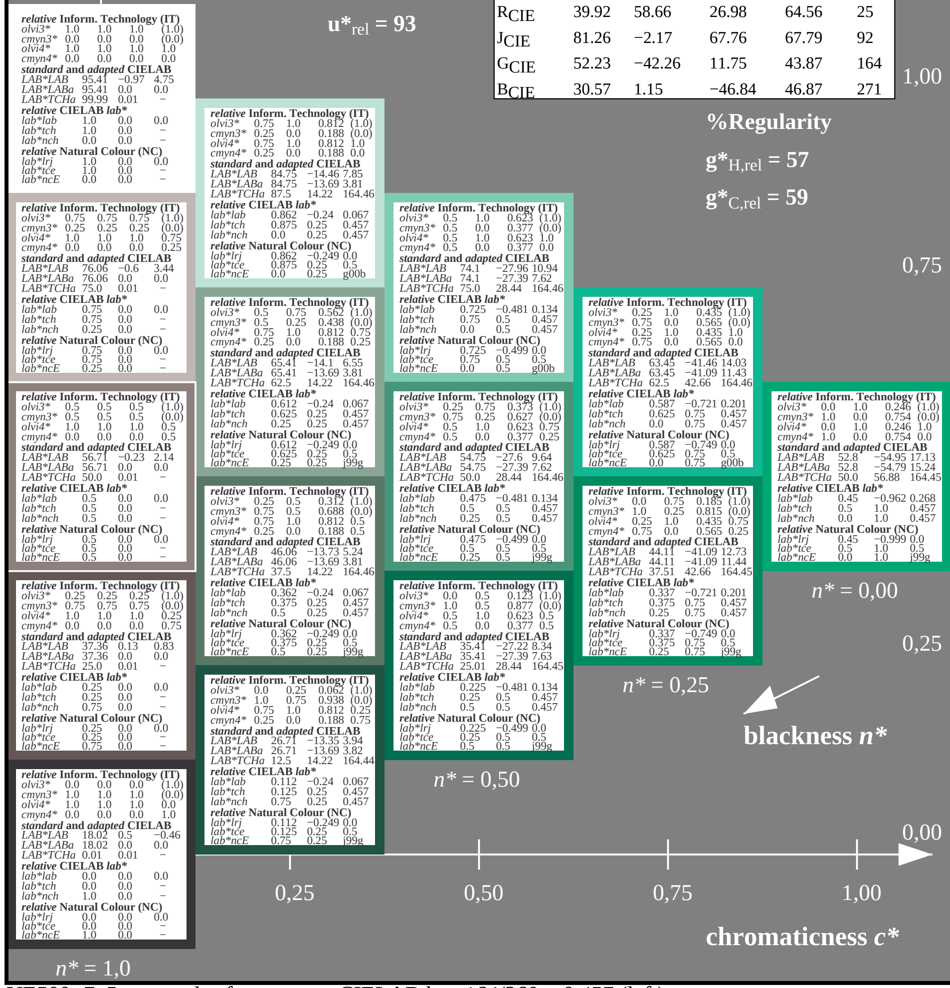
%Gamut

$u^*_{rel} = 93$

%Regularity

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

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



Output: Colorimetric Reflective System NCS11

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

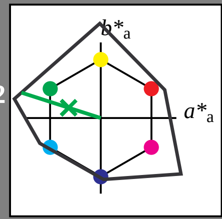
lab*tch* and *lab*nch

D65: hue G

LCH*Ma: 65 110 162

rgb*Ma: 0.08 1.0 0.0

triangle lightness t^*



NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

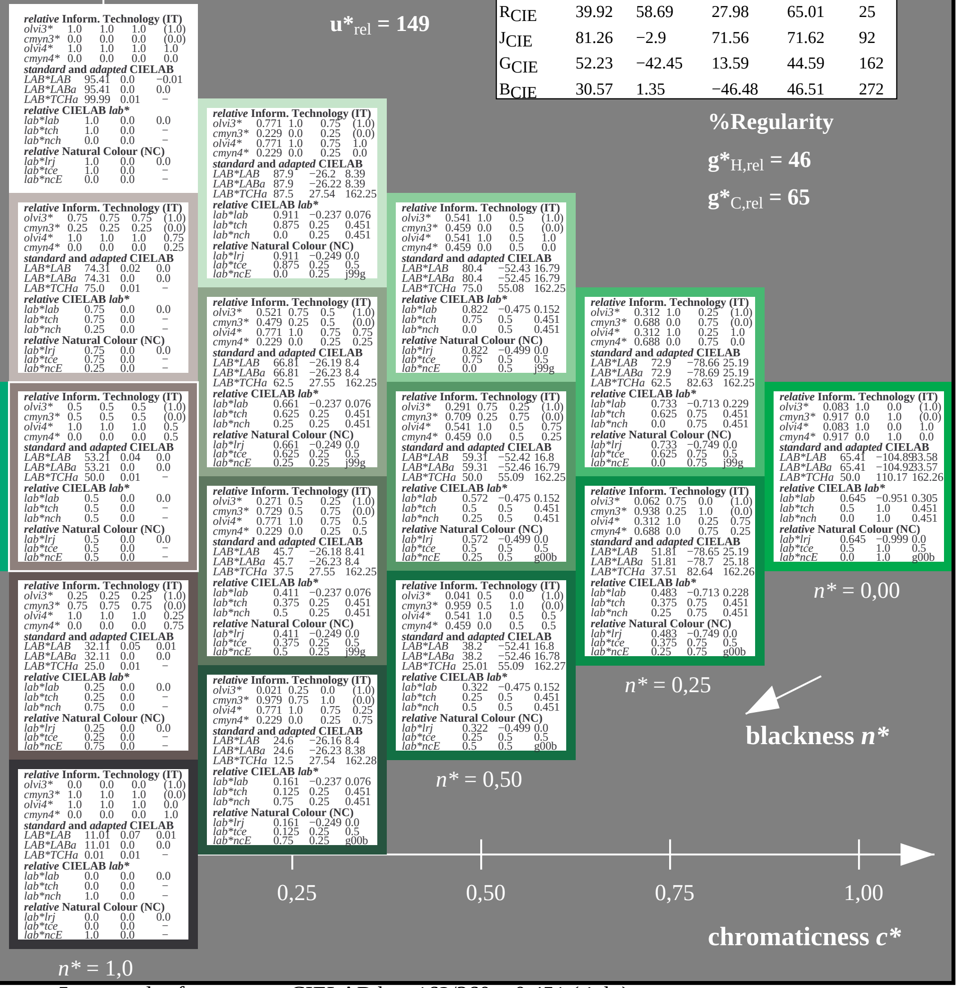
%Gamut

$u^*_{rel} = 149$

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



UE500−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

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

Input: Colorimetric Reflective System MRS18a

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

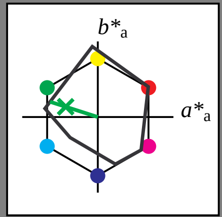
lab^*tch and lab^*nch

D65: hue G

LCH*Ma: 56 66 162

rgb*Ma: 0.11 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 92$

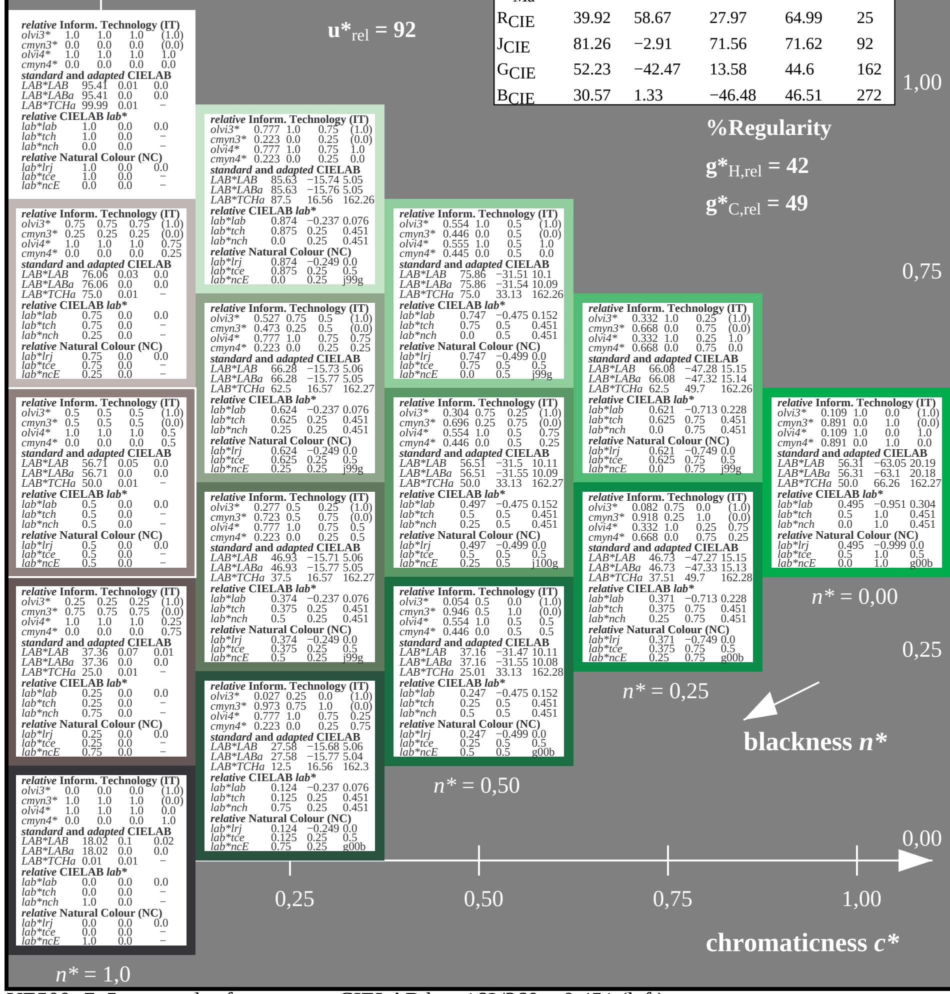
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System ORS18

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

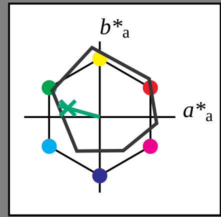
lab^*tch and lab^*nch

D65: hue G

LCH*Ma: 53 57 164

rgb*Ma: 0.0 1.0 0.25

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

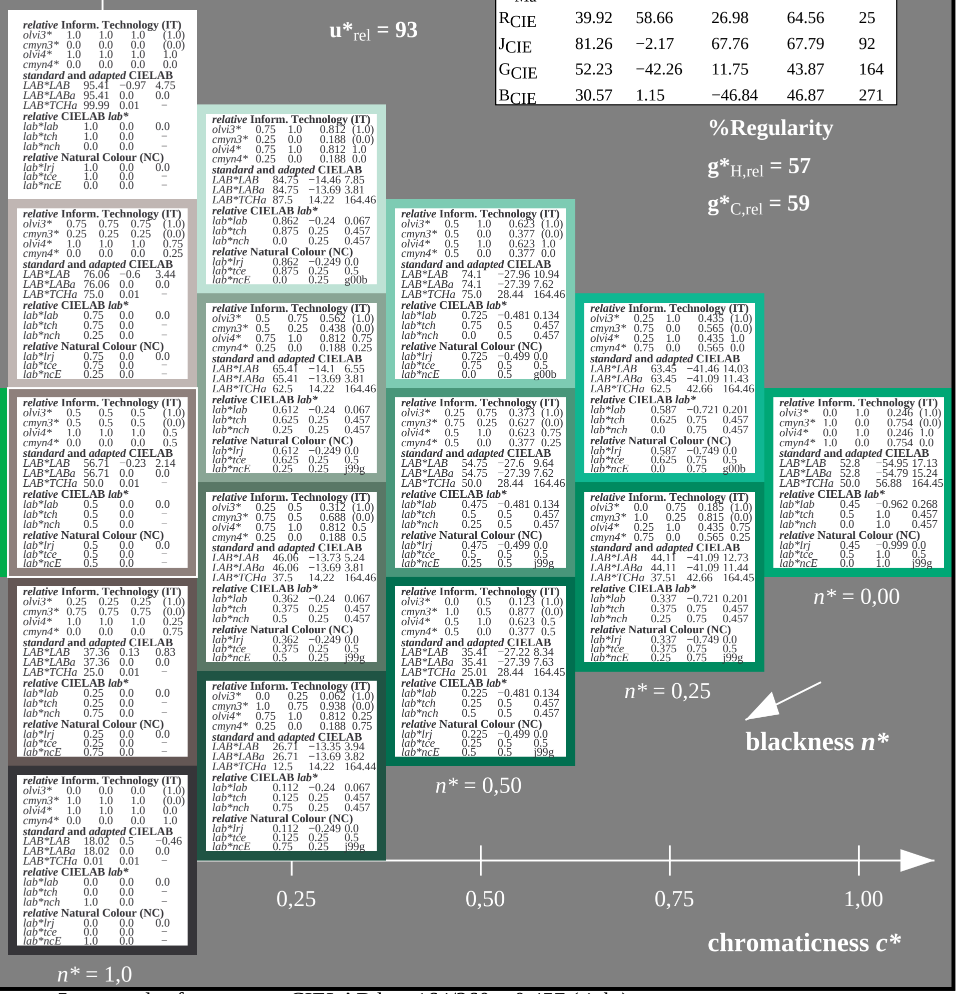
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

Input: Colorimetric Reflective System MRS18a

for hue *h** = *lab*h* = 162/360 = 0.451

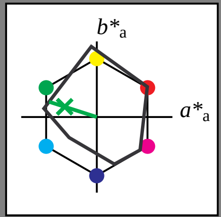
*lab*tch* and *lab*nch*

D65: hue G

LCH*Ma: 56 66 162

rgb*Ma: 0.11 1.0 0.0

triangle lightness *t**



%Gamut

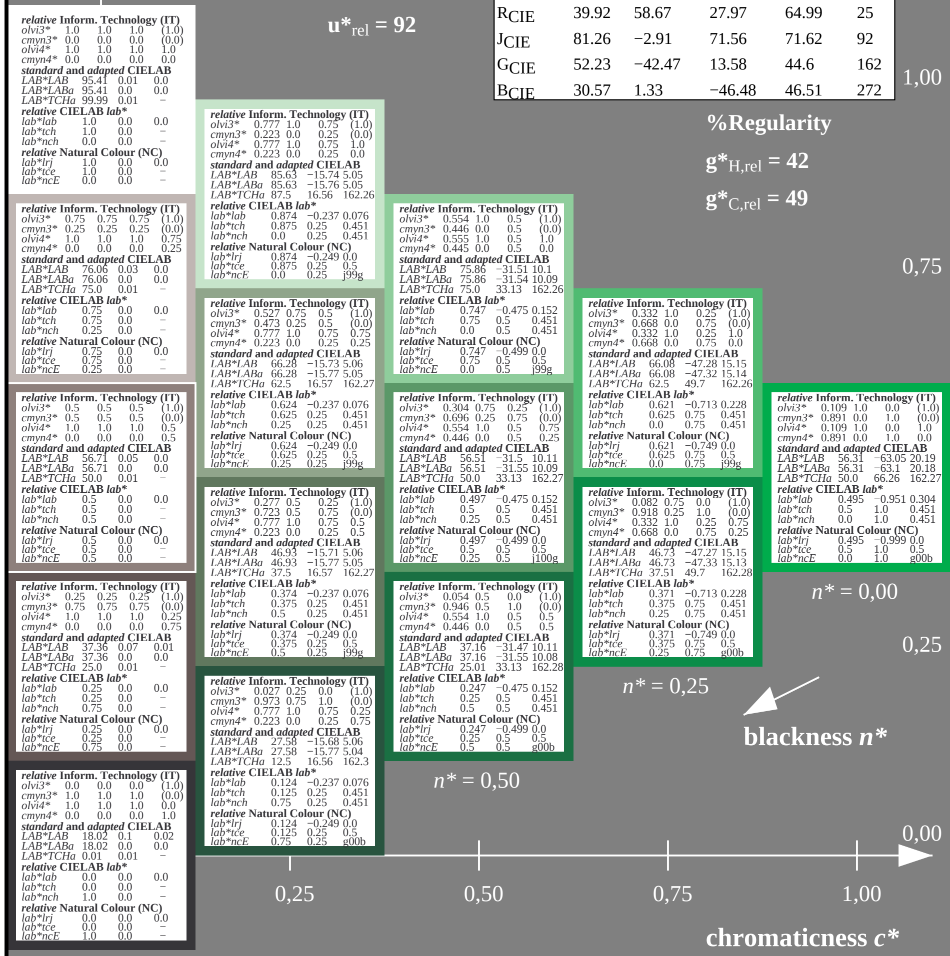
u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



Output: Colorimetric Reflective System MRS18

for hue *h** = *lab*h* = 164/360 = 0.457

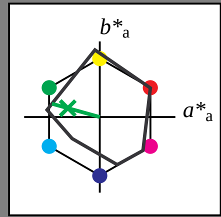
*lab*tch* and *lab*nch*

D65: hue G

LCH*Ma: 56 66 164

rgb*Ma: 0.1 1.0 0.0

triangle lightness *t**



%Gamut

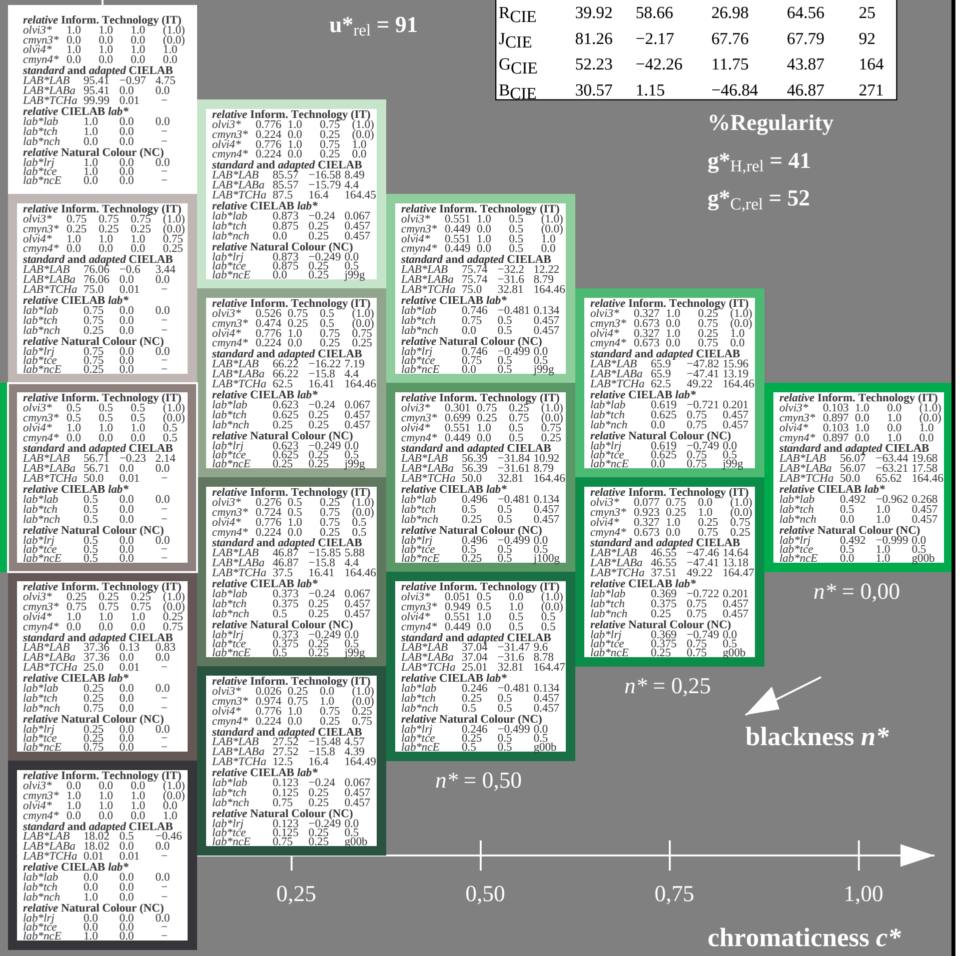
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

Input: Colorimetric Reflective System MRS18a

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

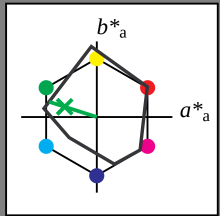
*lab*tch and lab*nch*

D65: hue G

LCH*Ma: 56 66 162

rgb*Ma: 0.11 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 92$

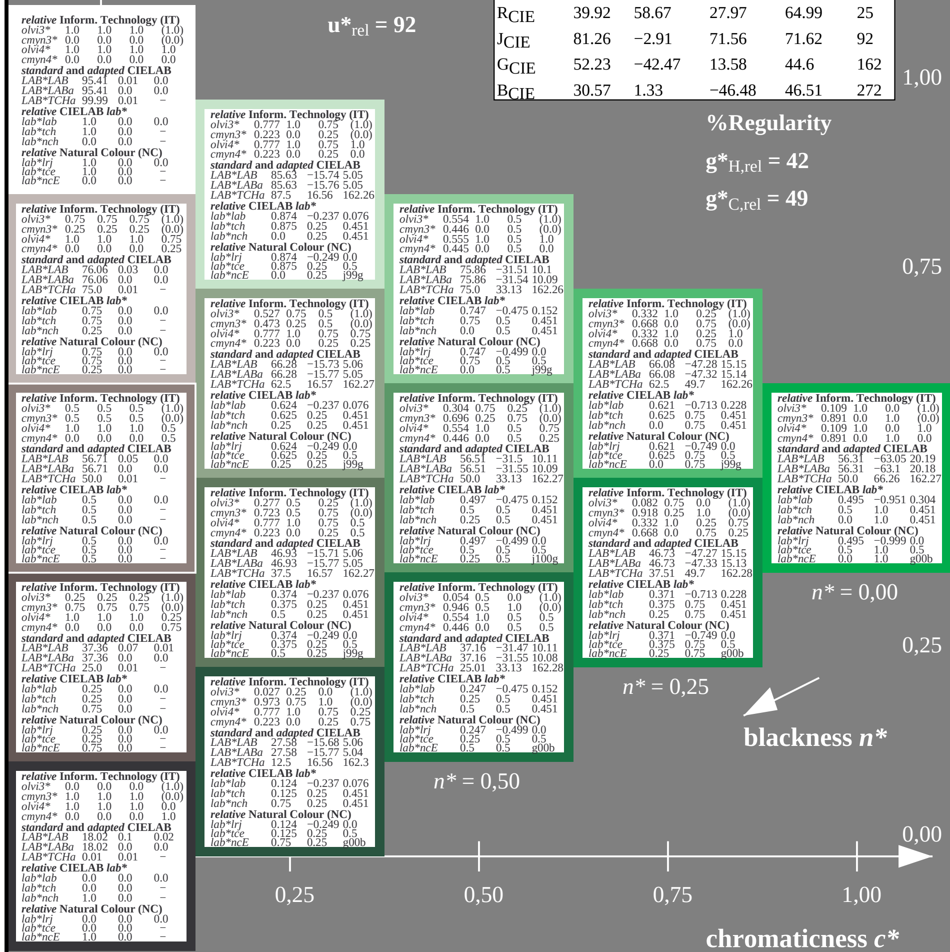
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System TRS18

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

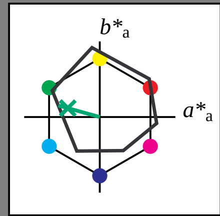
*lab*tch and lab*nch*

D65: hue G

LCH*Ma: 53 57 164

rgb*Ma: 0.0 1.0 0.25

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

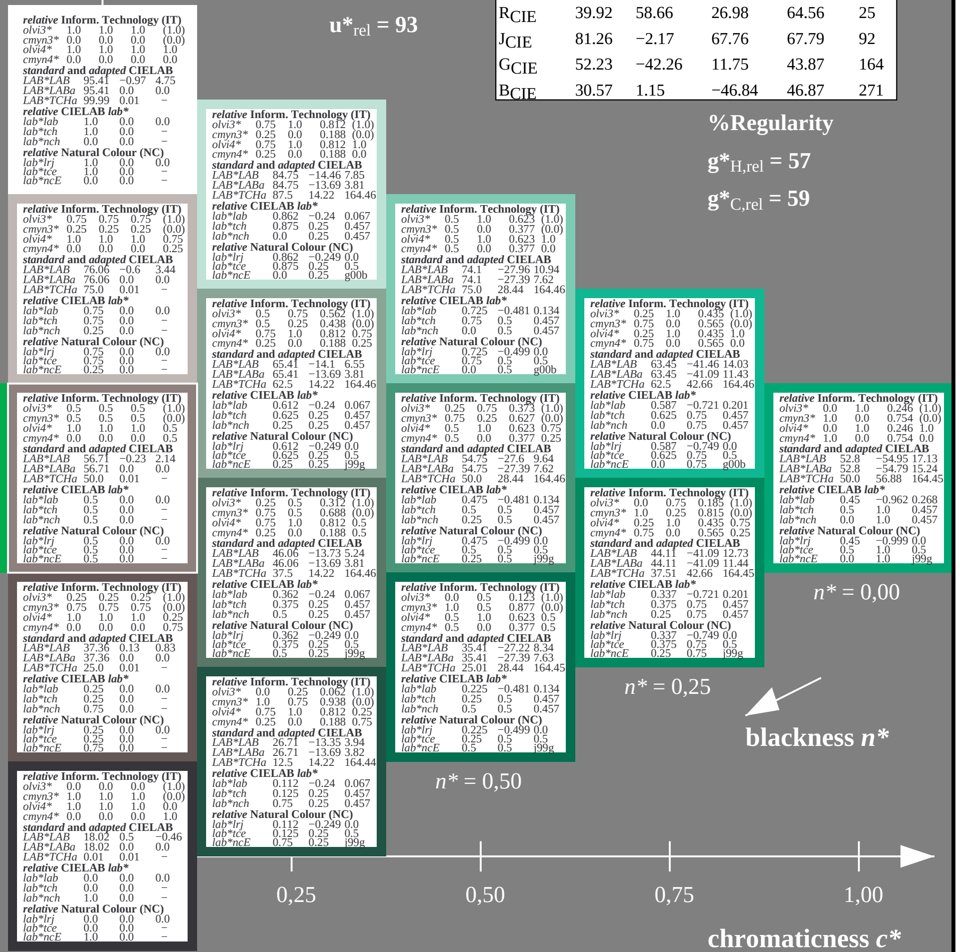
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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

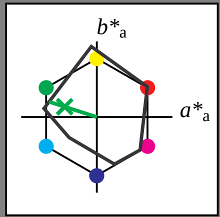


UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 162/360 = 0.451$
lab^*tch and lab^*nch

D65: hue G
LCH*Ma: 56 66 162
rgb*Ma: 0.11 1.0 0.0
triangle lightness t^*

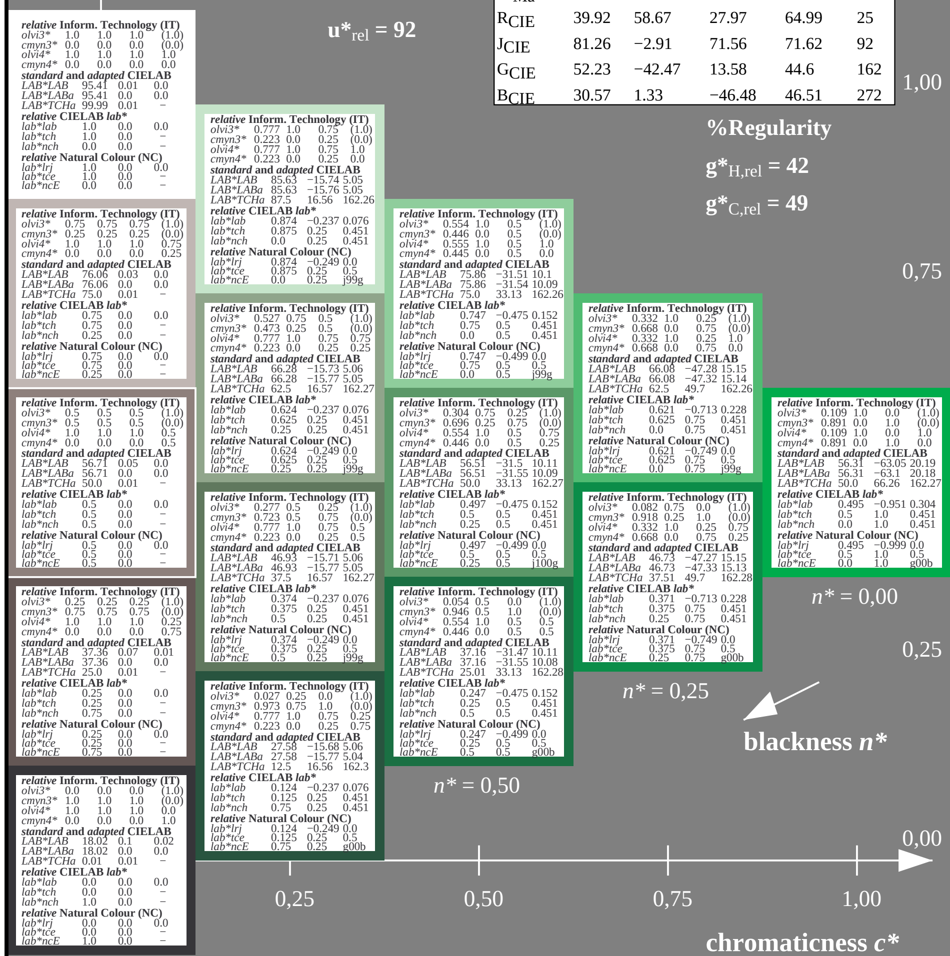


%Gamut
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data

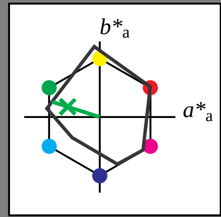
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 162/360 = 0.451$
lab^*tch and lab^*nch

D65: hue G
LCH*Ma: 56 66 162
rgb*Ma: 0.11 1.0 0.0
triangle lightness t^*

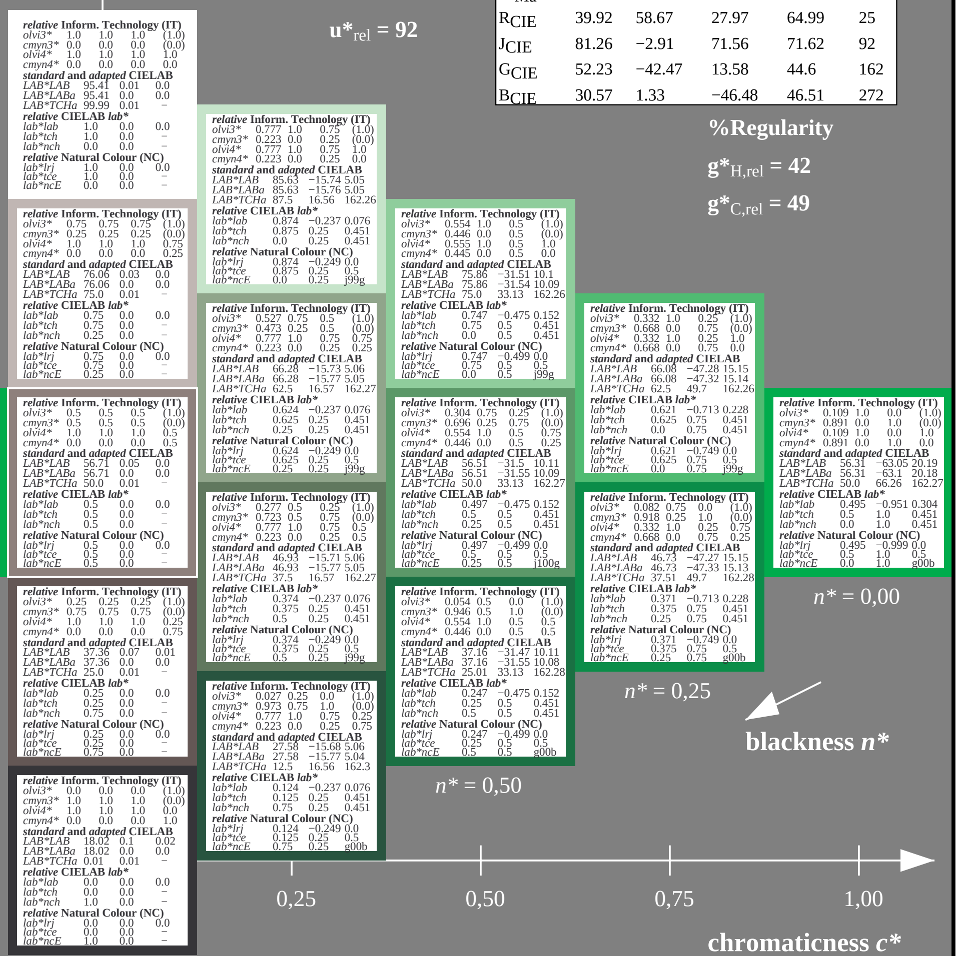


%Gamut
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$



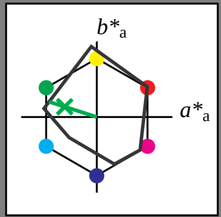
UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

Input: Colorimetric Reflective System MRS18a
for hue *h = *lab*h* = 162/360 = 0.451**
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 56 66 162
rgb*Ma: 0.11 1.0 0.0

triangle lightness *t*



%Gamut

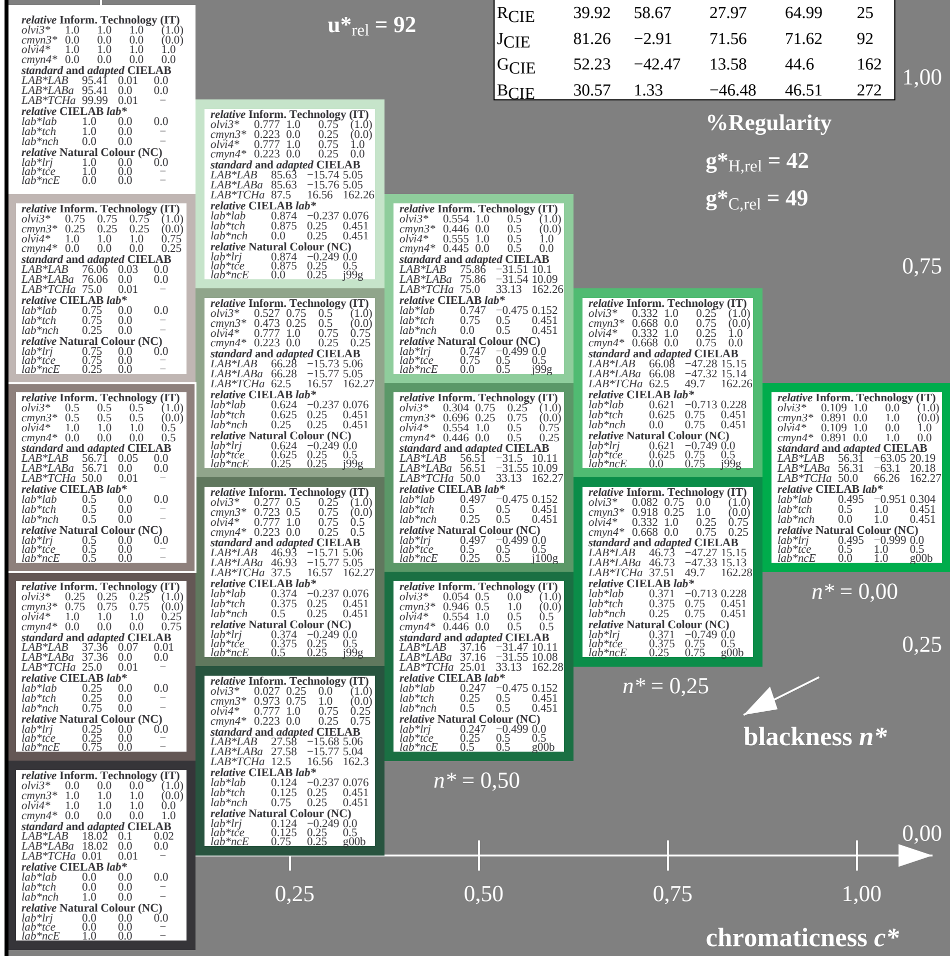
u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

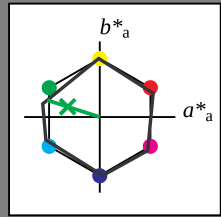
$g^*_{C,rel}$ = 49



Output: Colorimetric Reflective System NRS18
for hue *h = *lab*h* = 162/360 = 0.451**
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 73 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness *t*



%Gamut

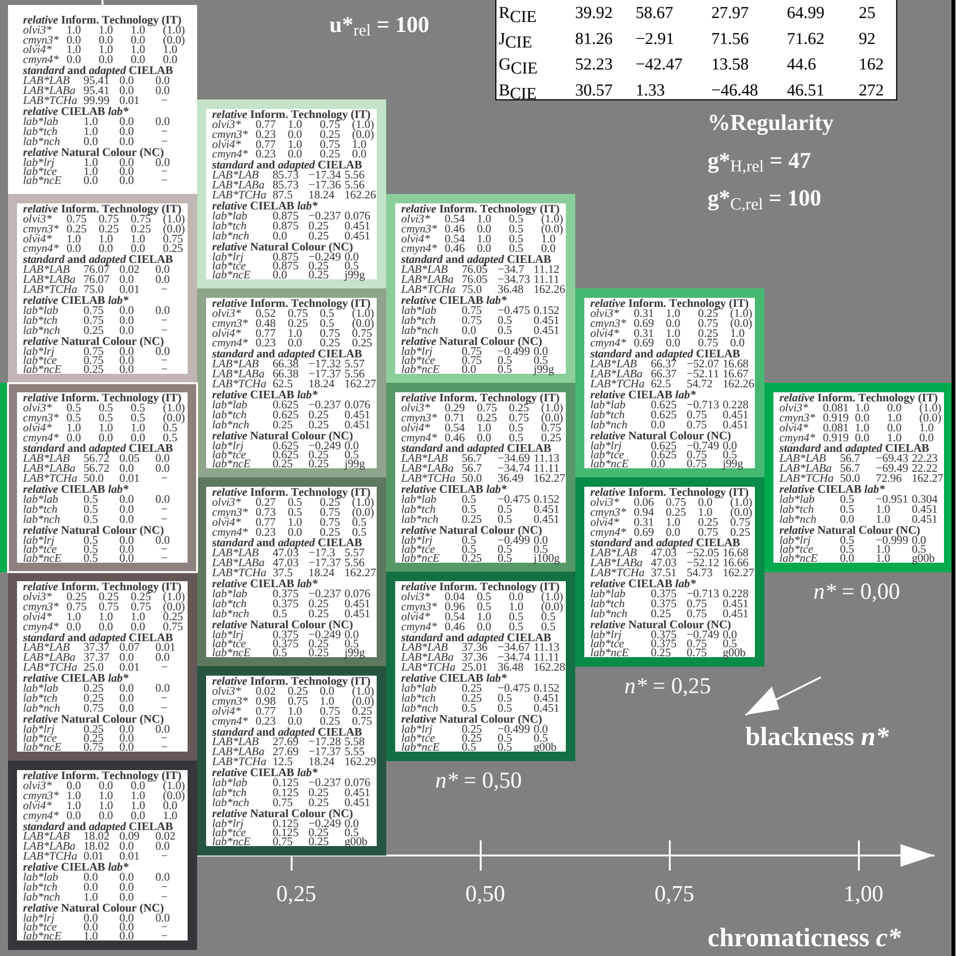
u^*_{rel} = 100

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

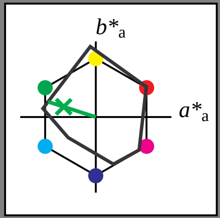


UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 162/360 = 0.451$
*lab*tch and lab*nch*

D65: hue G
LCH*Ma: 56 66 162
rgb*Ma: 0.11 1.0 0.0
triangle lightness t^*

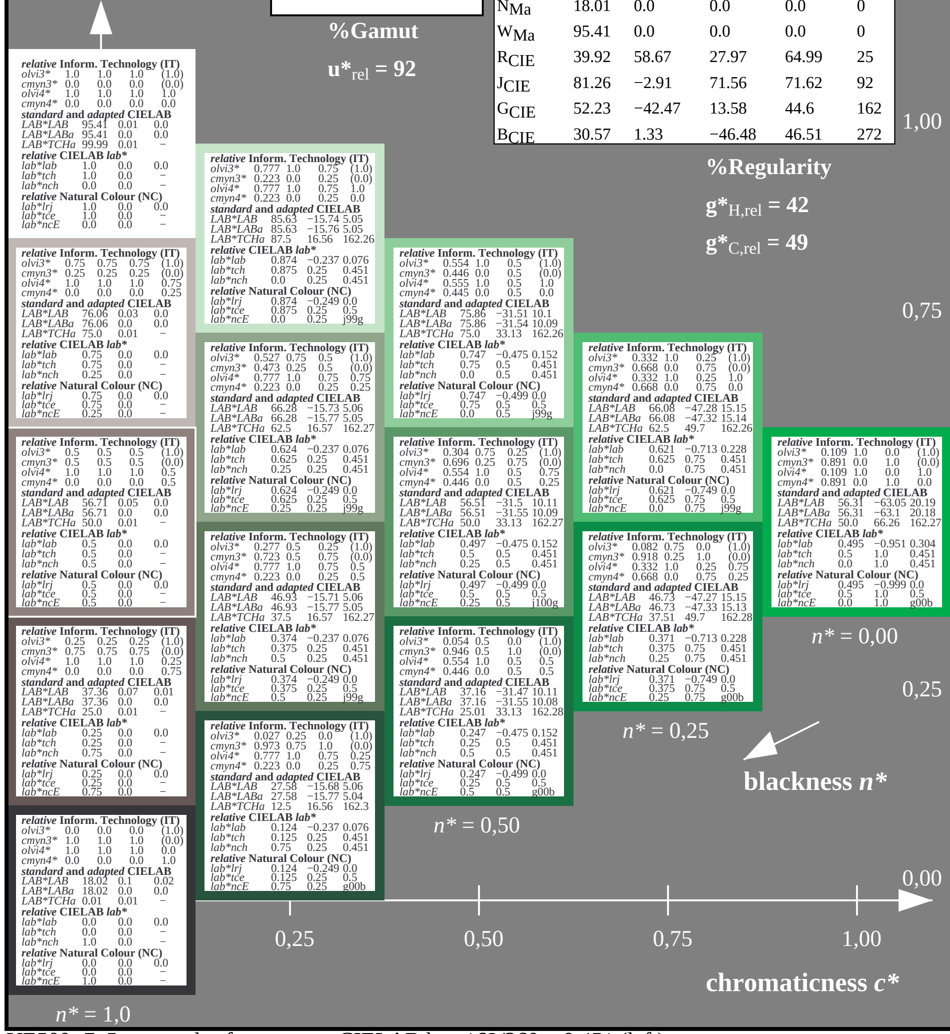


%Gamut
u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

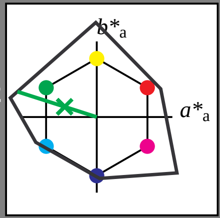
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 42
$g^*_{C,rel}$ = 49



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 162/360 = 0.451$
*lab*tch and lab*nch*

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0
triangle lightness t^*

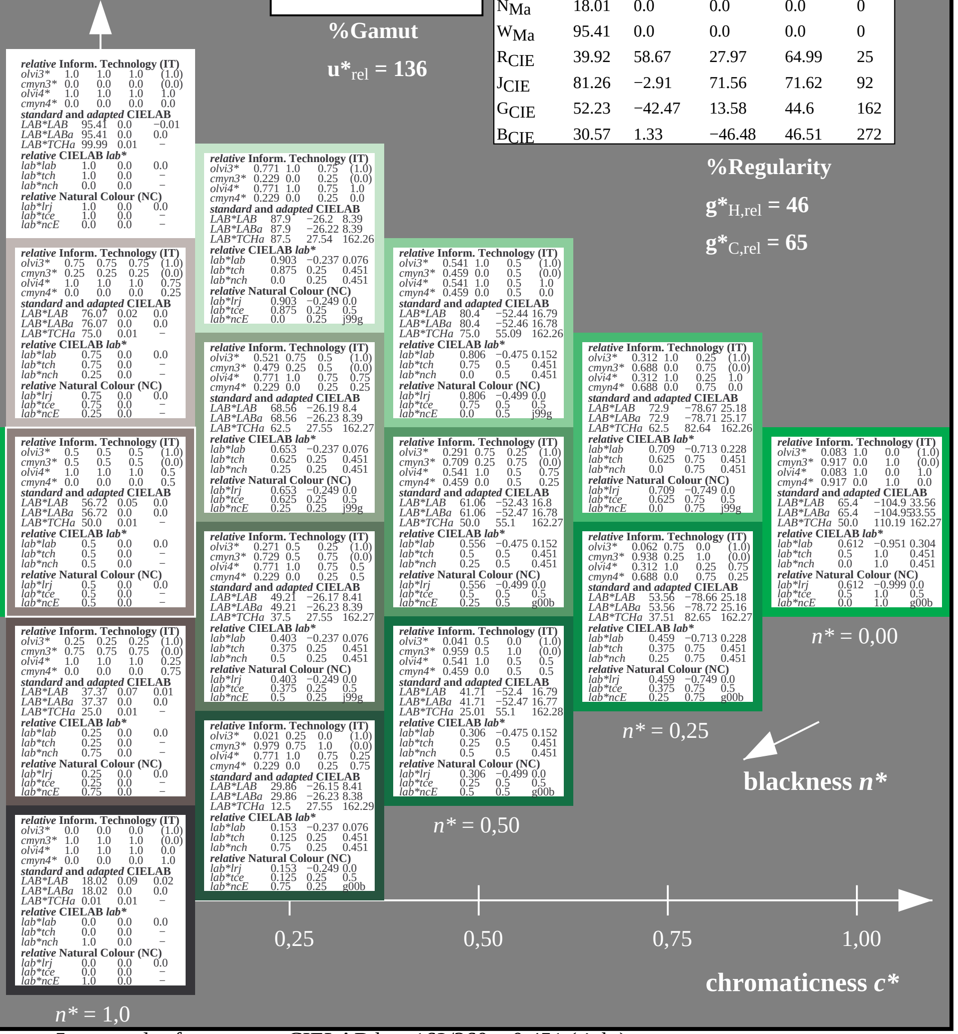


%Gamut
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



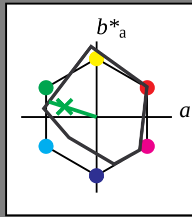
UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 162/360 = 0.451$
lab^*tch and lab^*nch

D65: hue G
LCH*Ma: 56 66 162
rgb*Ma: 0.11 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 92$

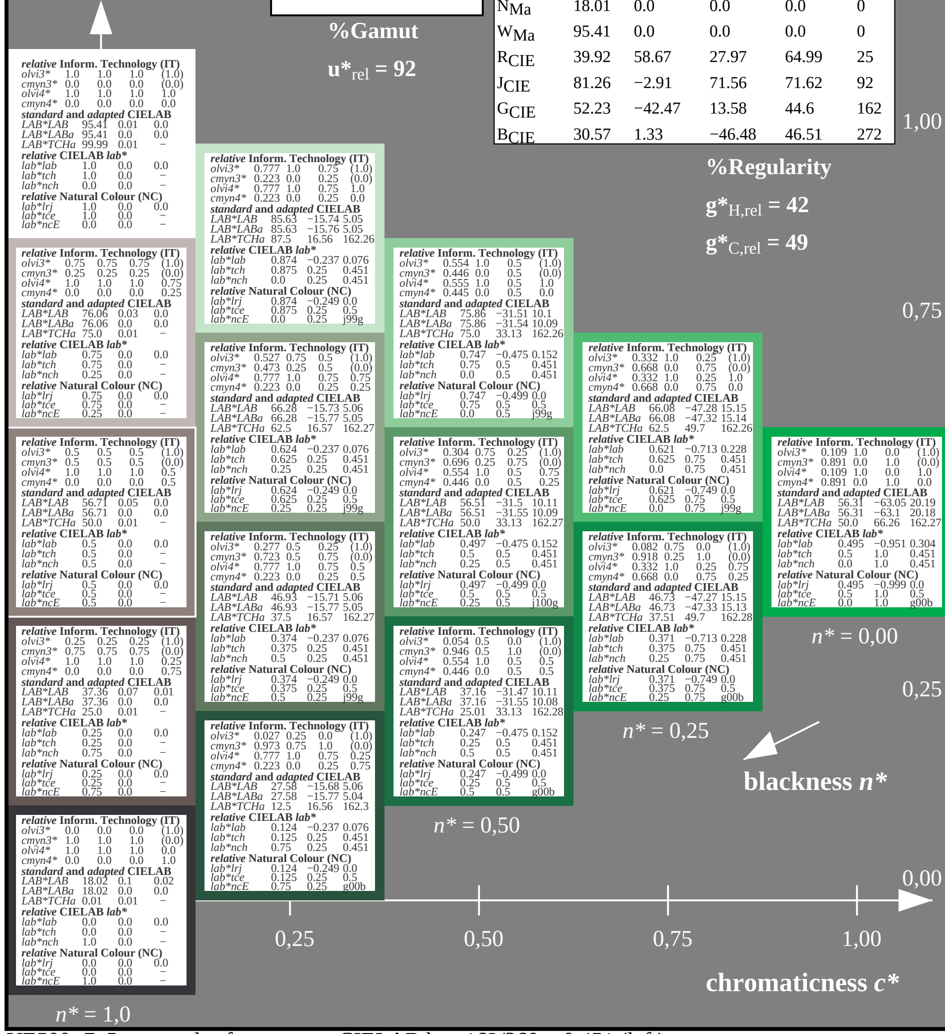
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

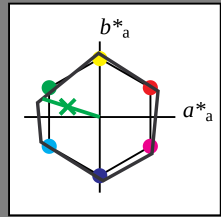
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab^*tch and lab^*nch

D65: hue G
LCH*Ma: 53 80 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 119$

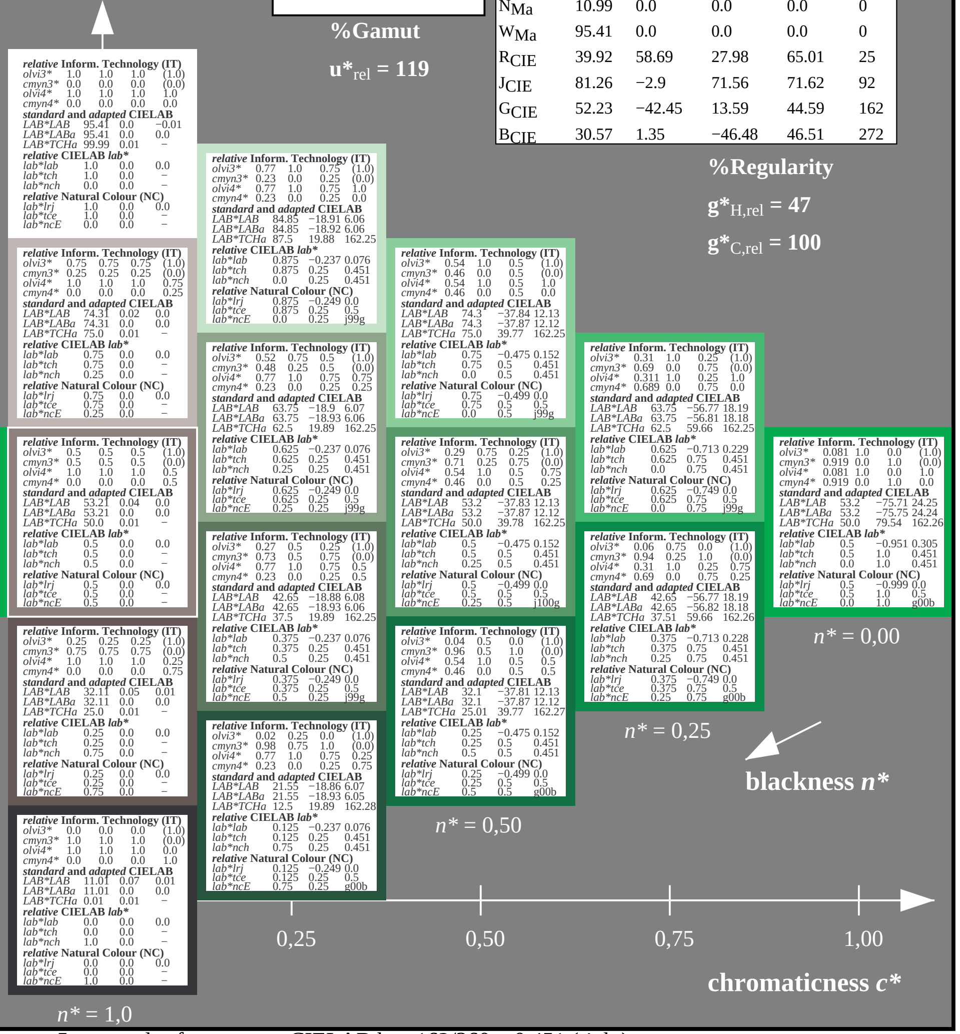
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

Input: Colorimetric Reflective System MRS18a

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

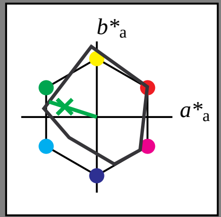
*lab*tch* and *lab*nch*

D65: hue G

LCH*Ma: 56 66 162

rgb*Ma: 0.11 1.0 0.0

triangle lightness t^*



%Gamut

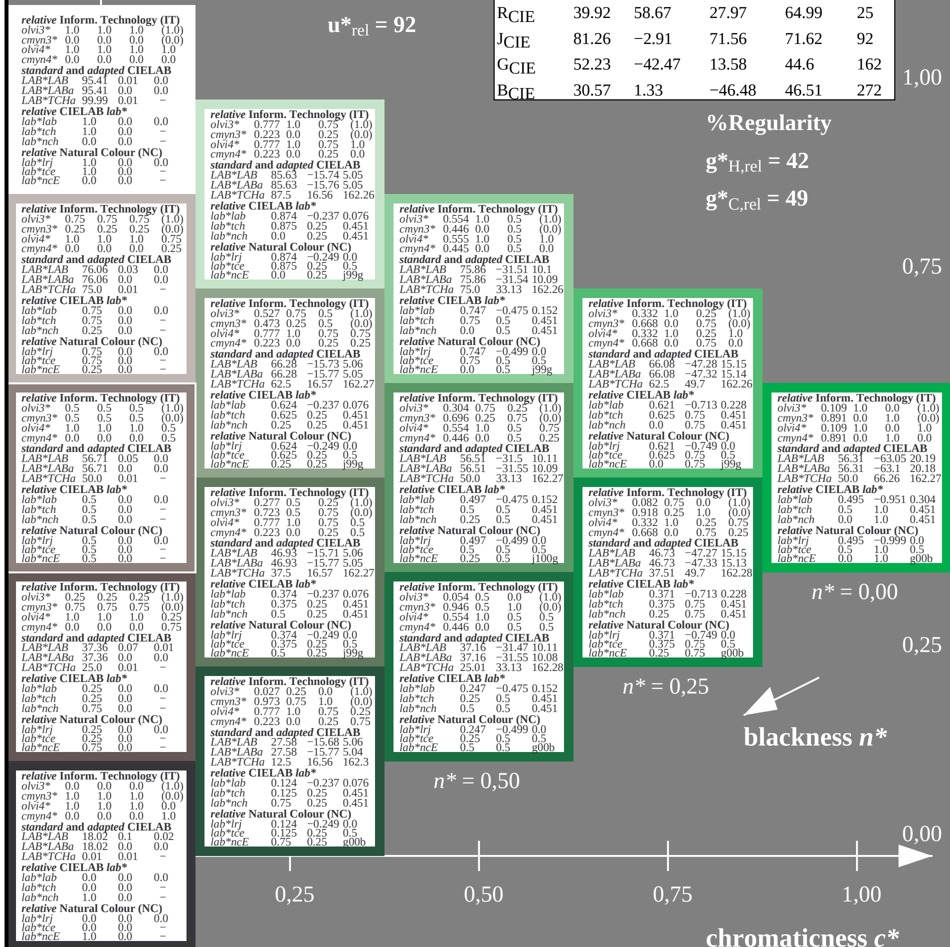
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System NCS11

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

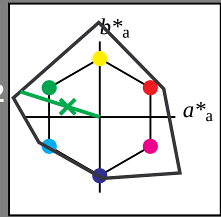
*lab*tch* and *lab*nch*

D65: hue G

LCH*Ma: 65 110 162

rgb*Ma: 0.08 1.0 0.0

triangle lightness t^*



%Gamut

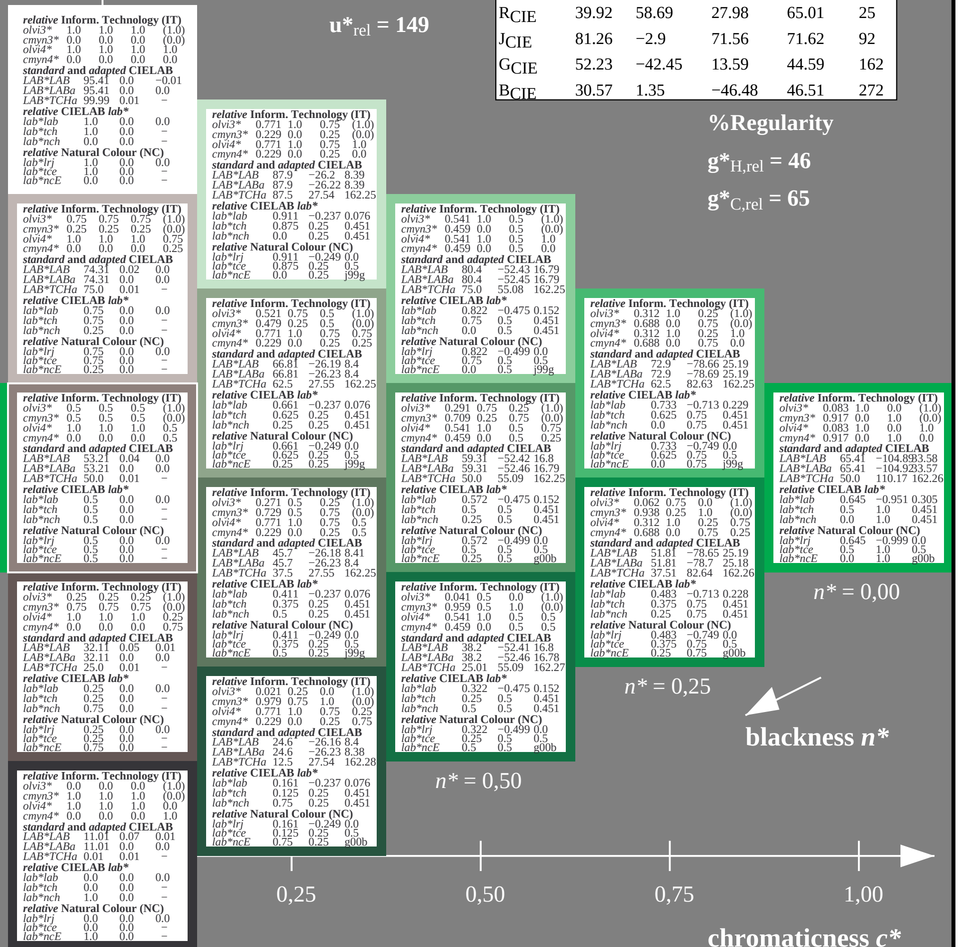
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$

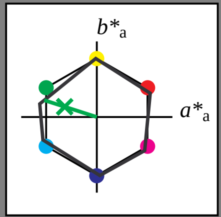


UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h$ = 162/360 = 0.451
lab^*tch and lab^*nch

D65: hue G
LCH*Ma: 57 73 162
rgb*Ma: 0.08 1.0 0.0
triangle lightness t^*

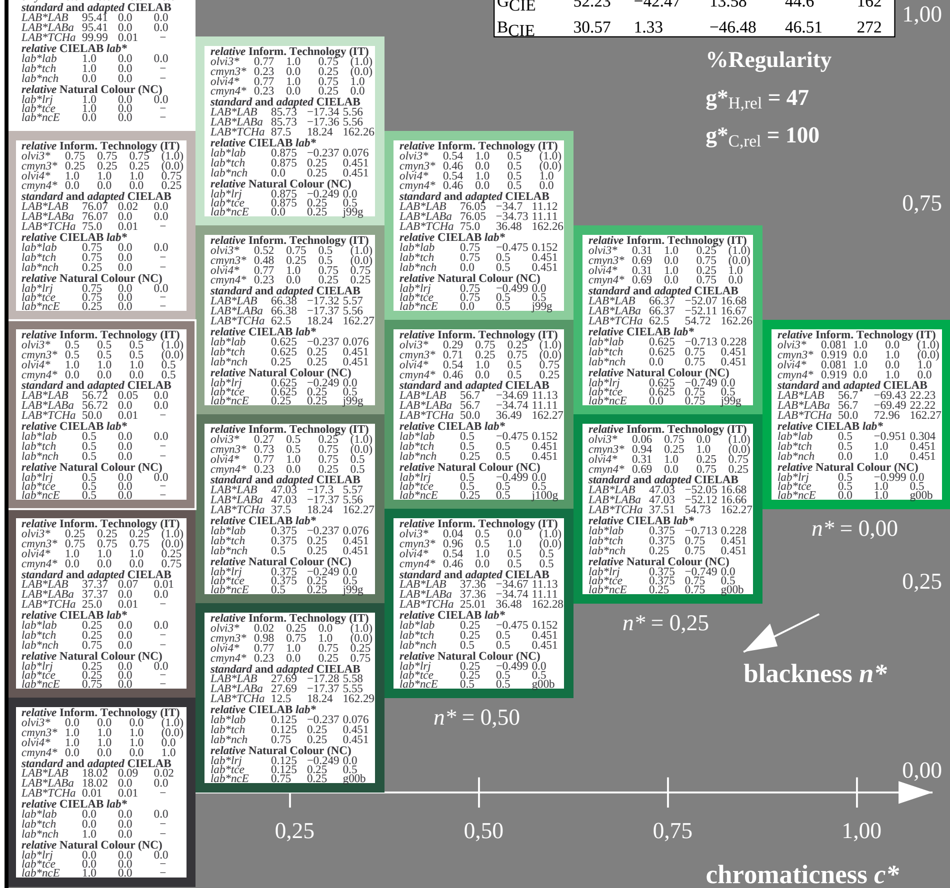


NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

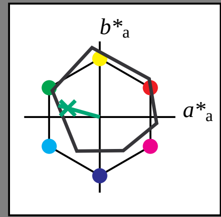
%Gamut
u^*_{rel} = 100

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h$ = 164/360 = 0.457
lab^*tch and lab^*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25
triangle lightness t^*

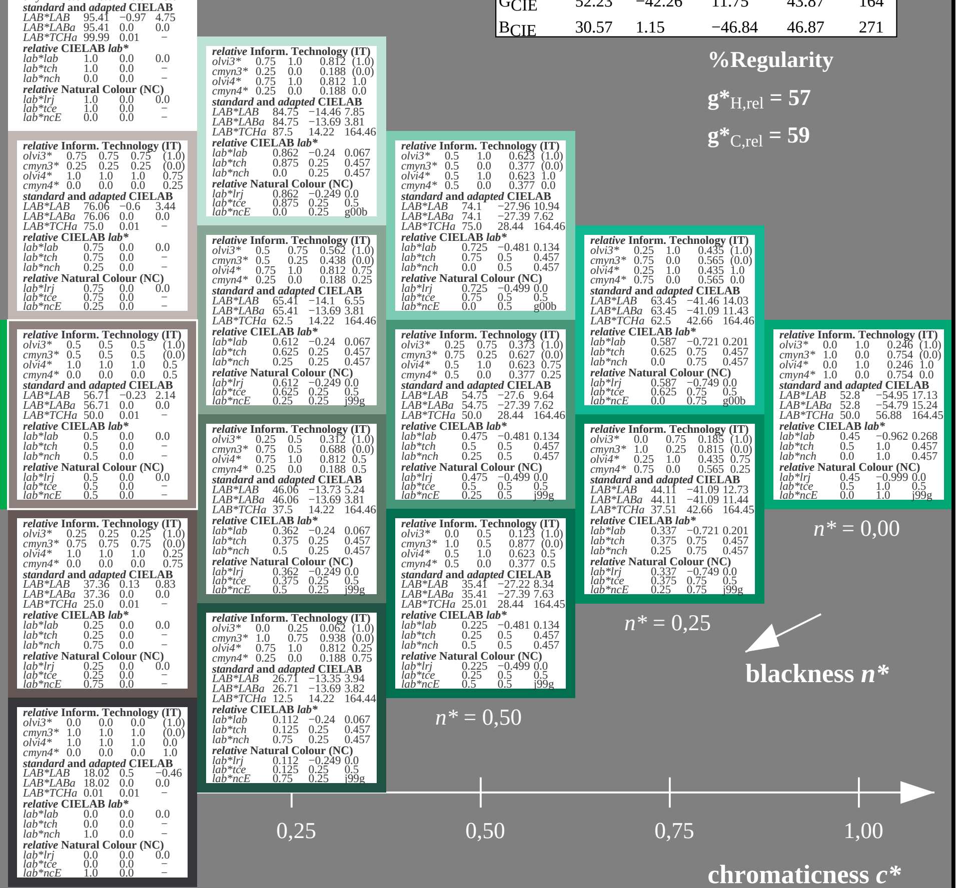


ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut
u^*_{rel} = 93

%Regularity
$g^*_{H,rel}$ = 57
$g^*_{C,rel}$ = 59



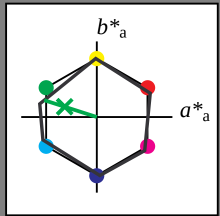
UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 73 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness t^*



%Gamut

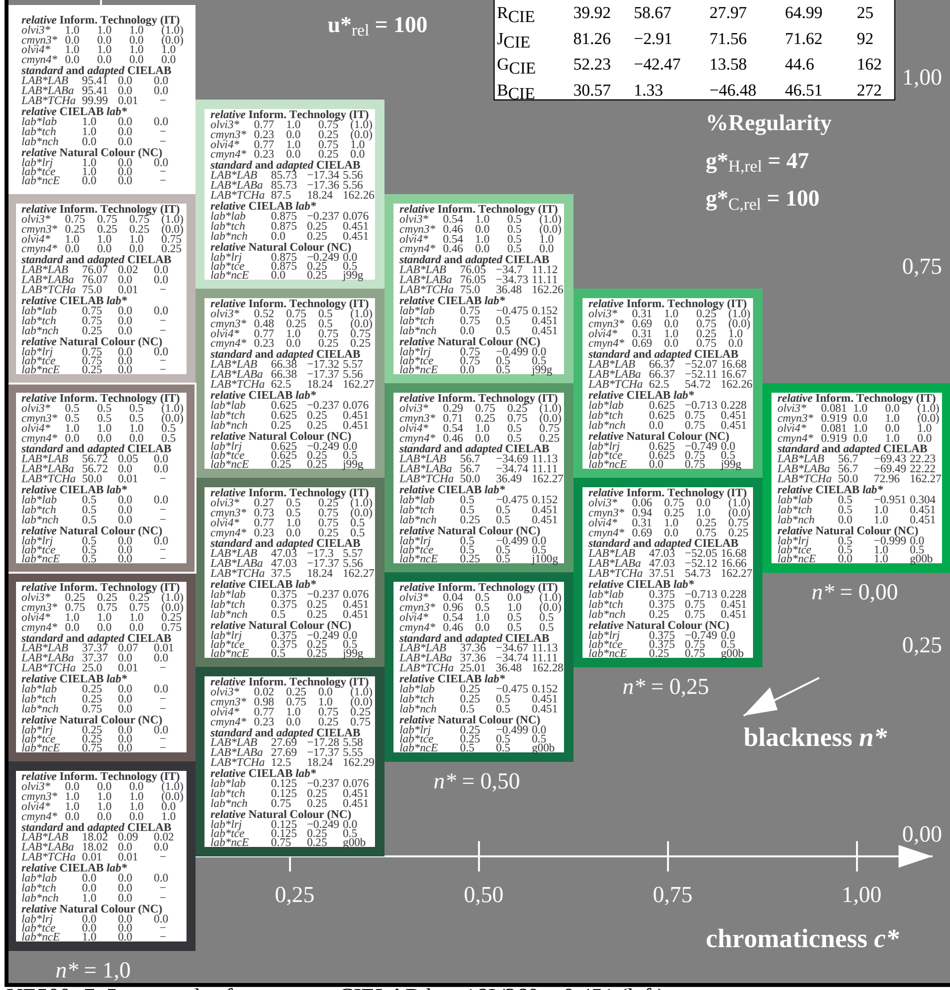
u^*_{rel} = 100

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

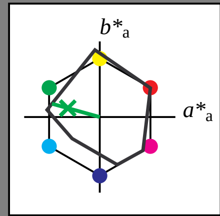
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 56 66 164
rgb*Ma: 0.1 1.0 0.0

triangle lightness t^*



%Gamut

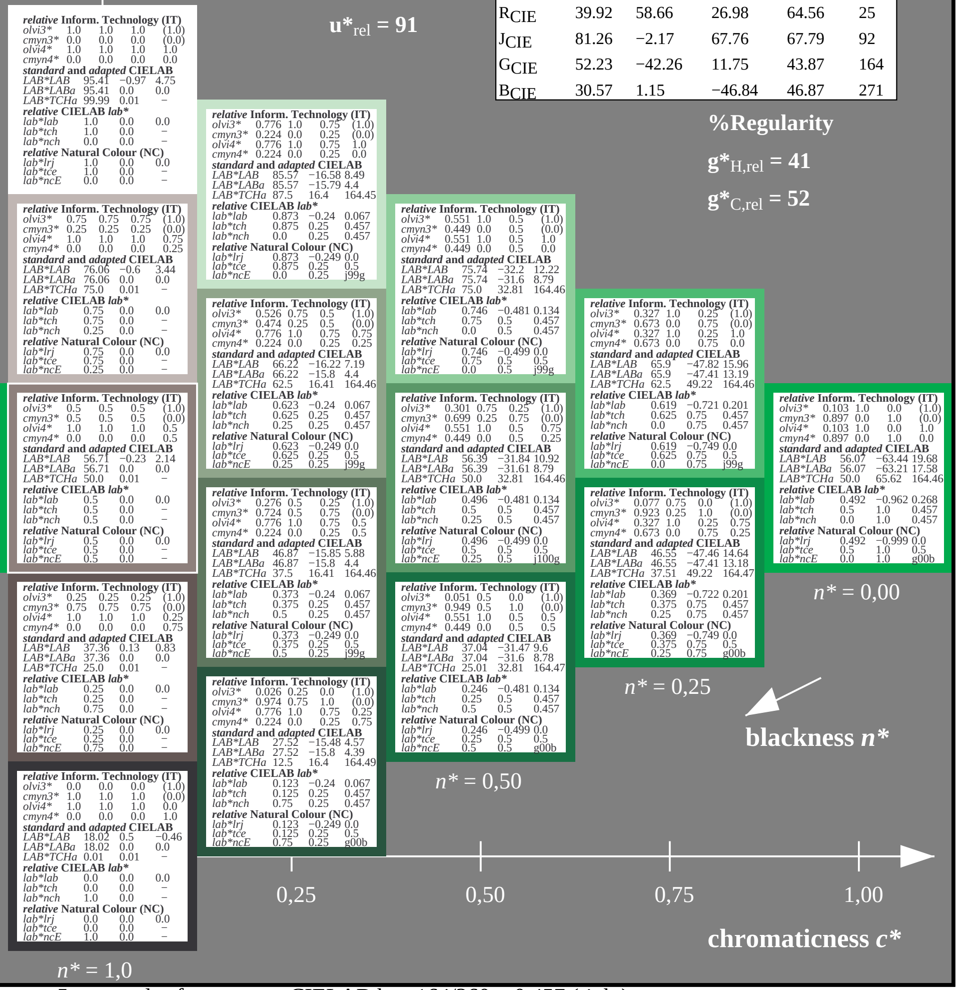
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

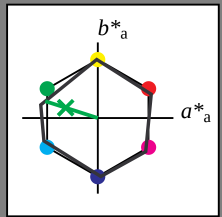


UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 162/360 = 0.451$
*lab*tch and lab*nch*

D65: hue G
LCH*Ma: 57 73 162
rgb*Ma: 0.08 1.0 0.0
triangle lightness t^*

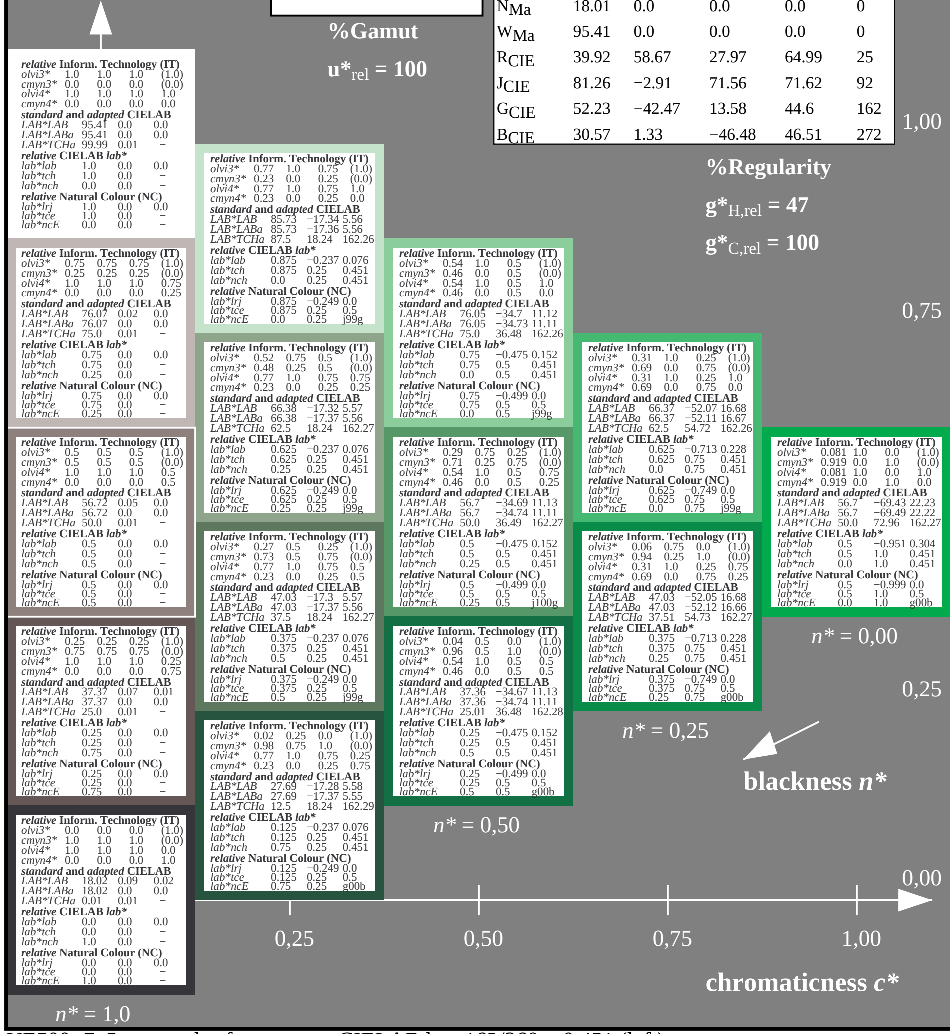


%Gamut
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data

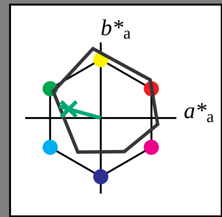
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
*lab*tch and lab*nch*

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25
triangle lightness t^*

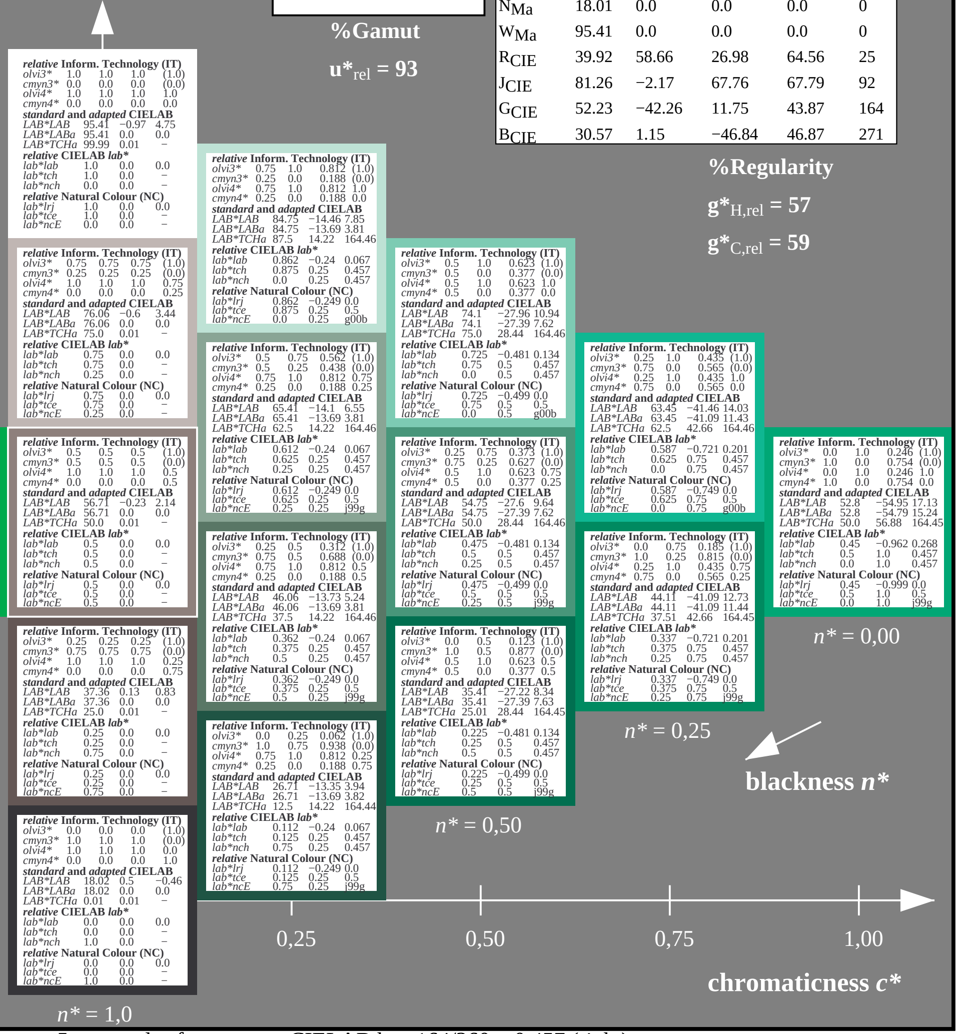


%Gamut
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$

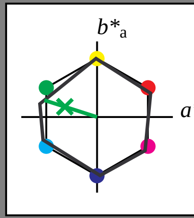


UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left) 5 step scales for constant CIELAB hue 164/360 = 0.457 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 73 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness t^*

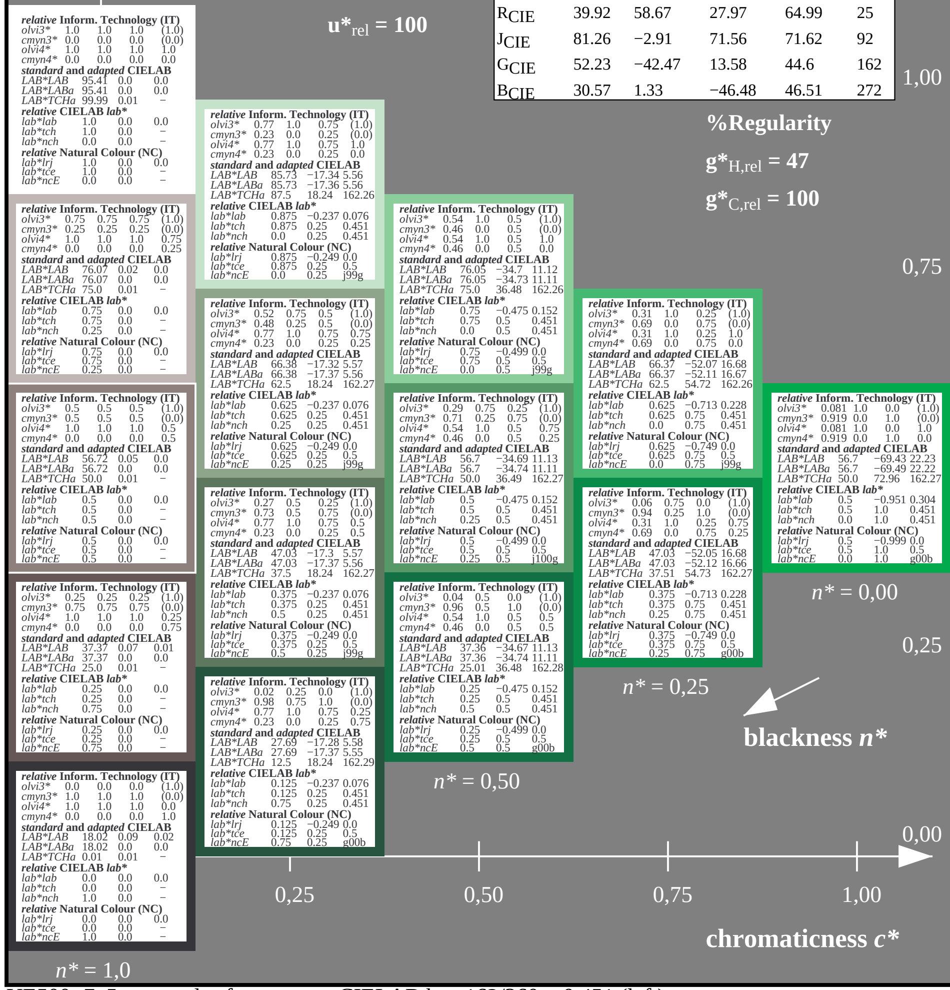


%Gamut
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

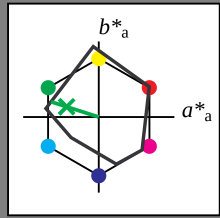
%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 56 66 162
rgb*Ma: 0.11 1.0 0.0

triangle lightness t^*

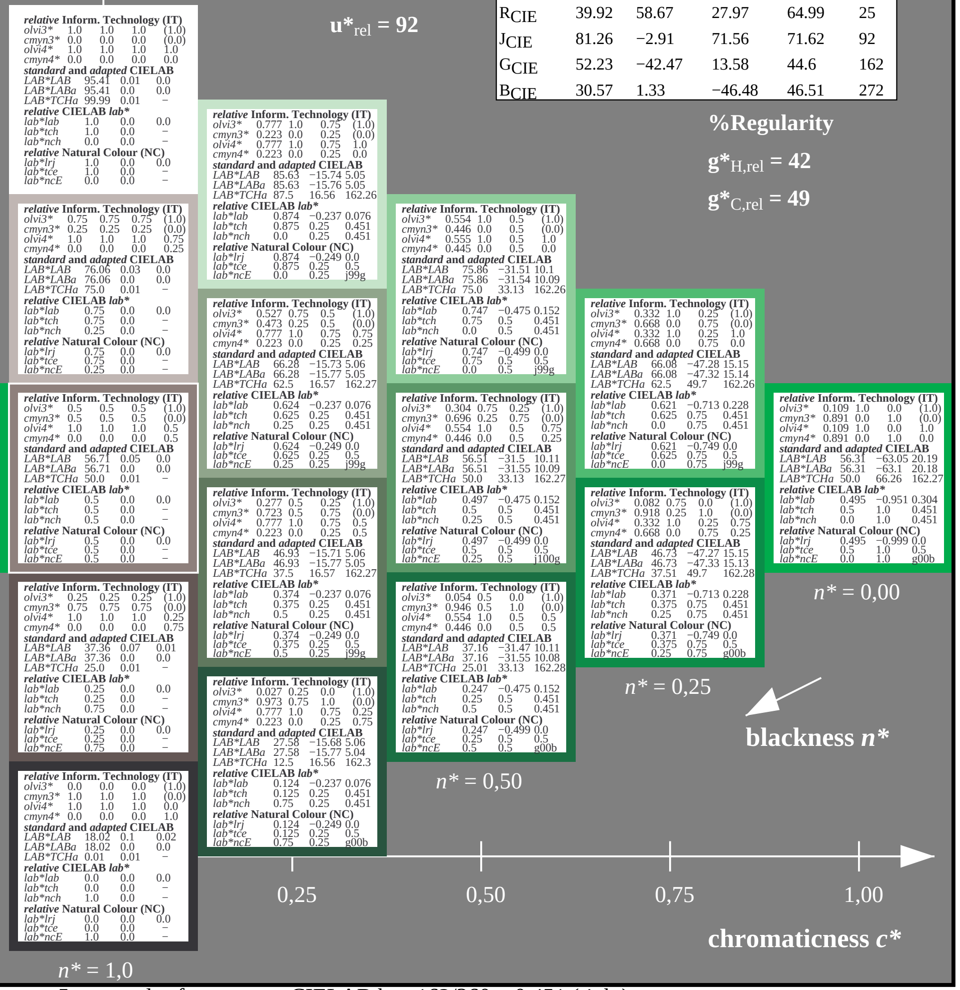


%Gamut
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$



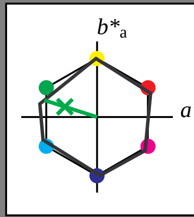
UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab^*tch and lab^*nch

D65: hue G
LCH*Ma: 57 73 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 100$

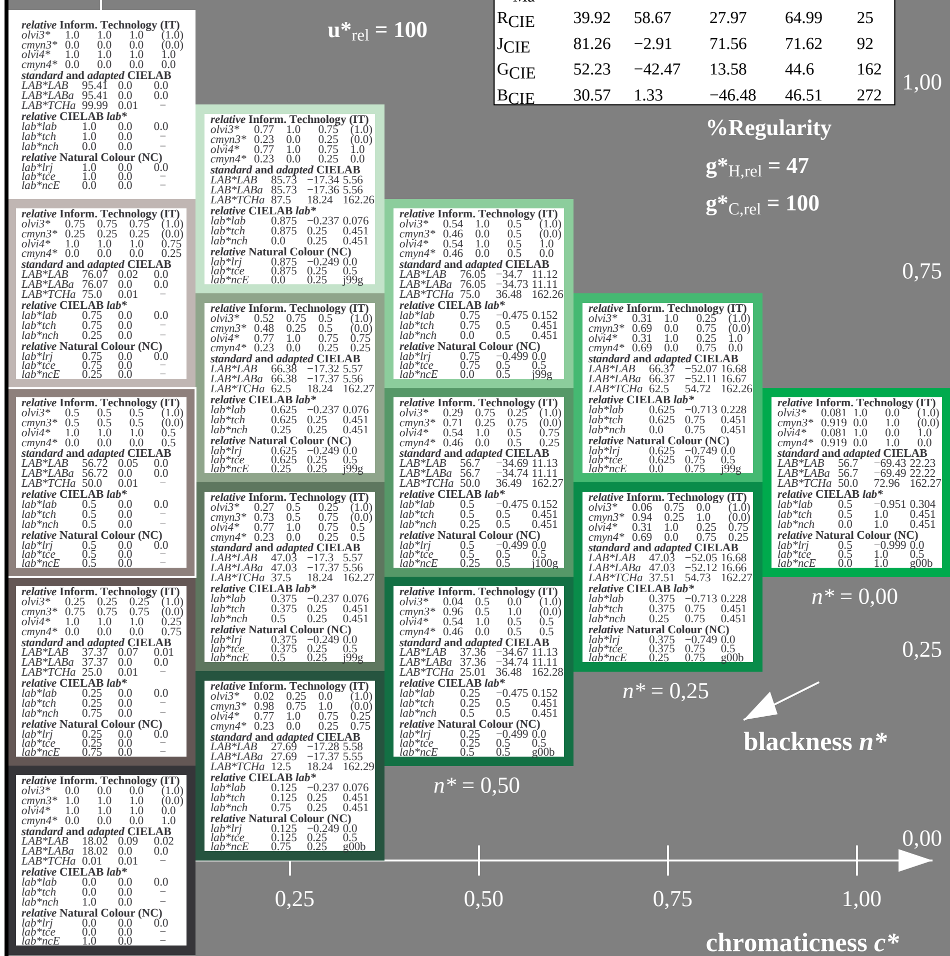
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

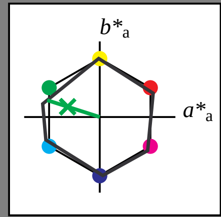
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab^*tch and lab^*nch

D65: hue G
LCH*Ma: 57 73 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 100$

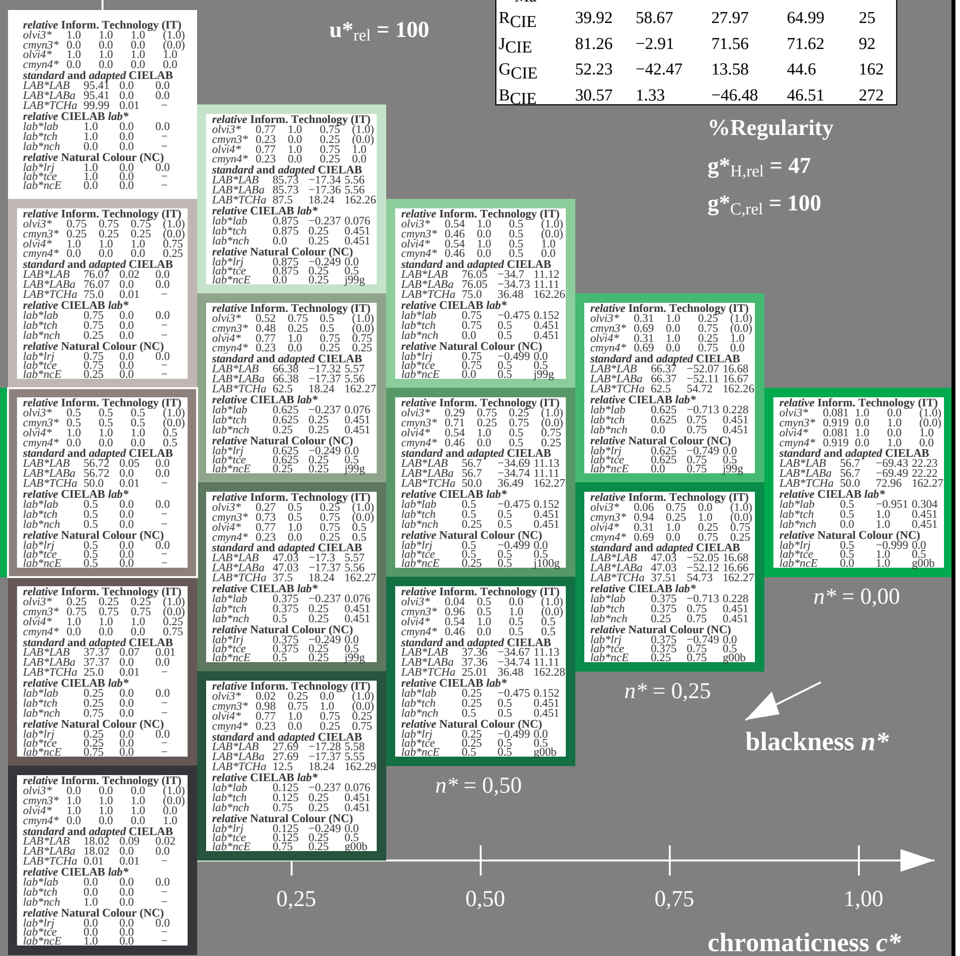
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

Input: Colorimetric Reflective System NRS18

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

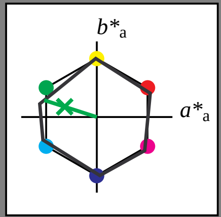
lab*tch* and *lab*nch

D65: hue G

LCH*Ma: 57 73 162

rgb*Ma: 0.08 1.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 100

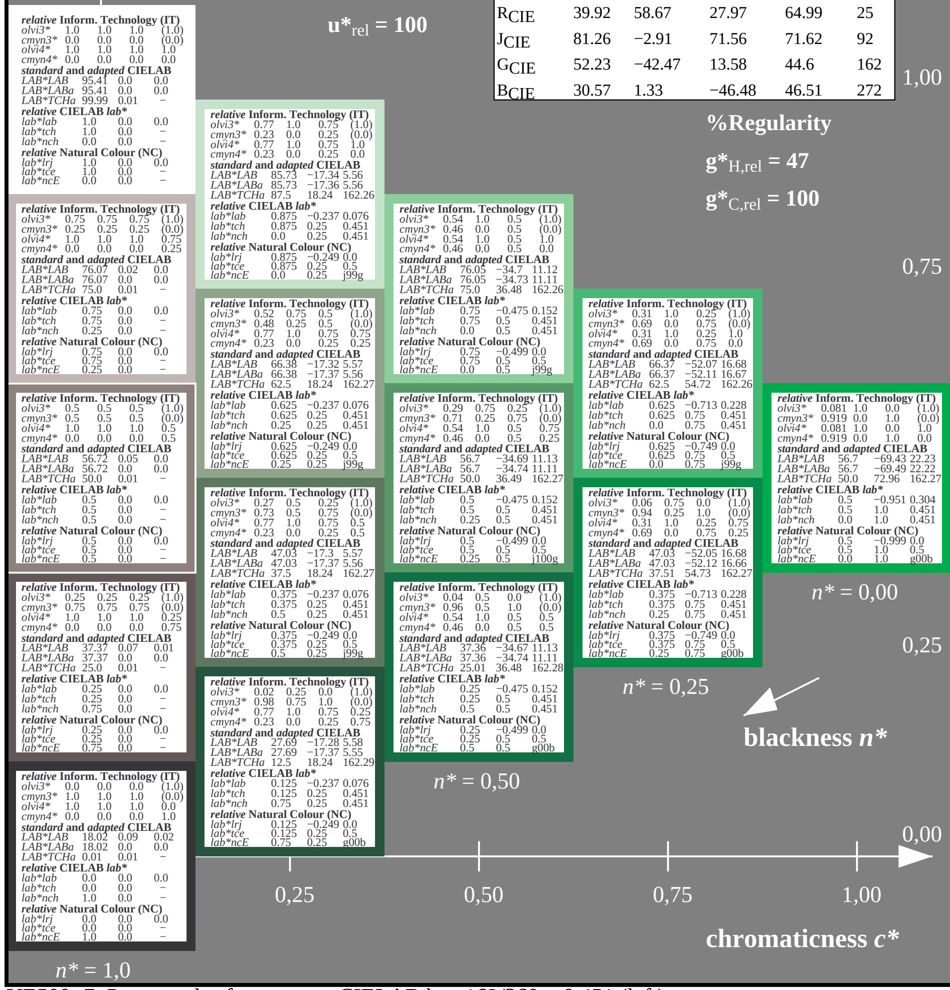
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NCS18

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

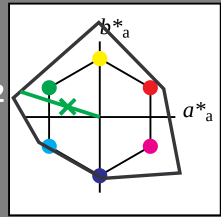
lab*tch* and *lab*nch

D65: hue G

LCH*Ma: 65 110 162

rgb*Ma: 0.08 1.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 136

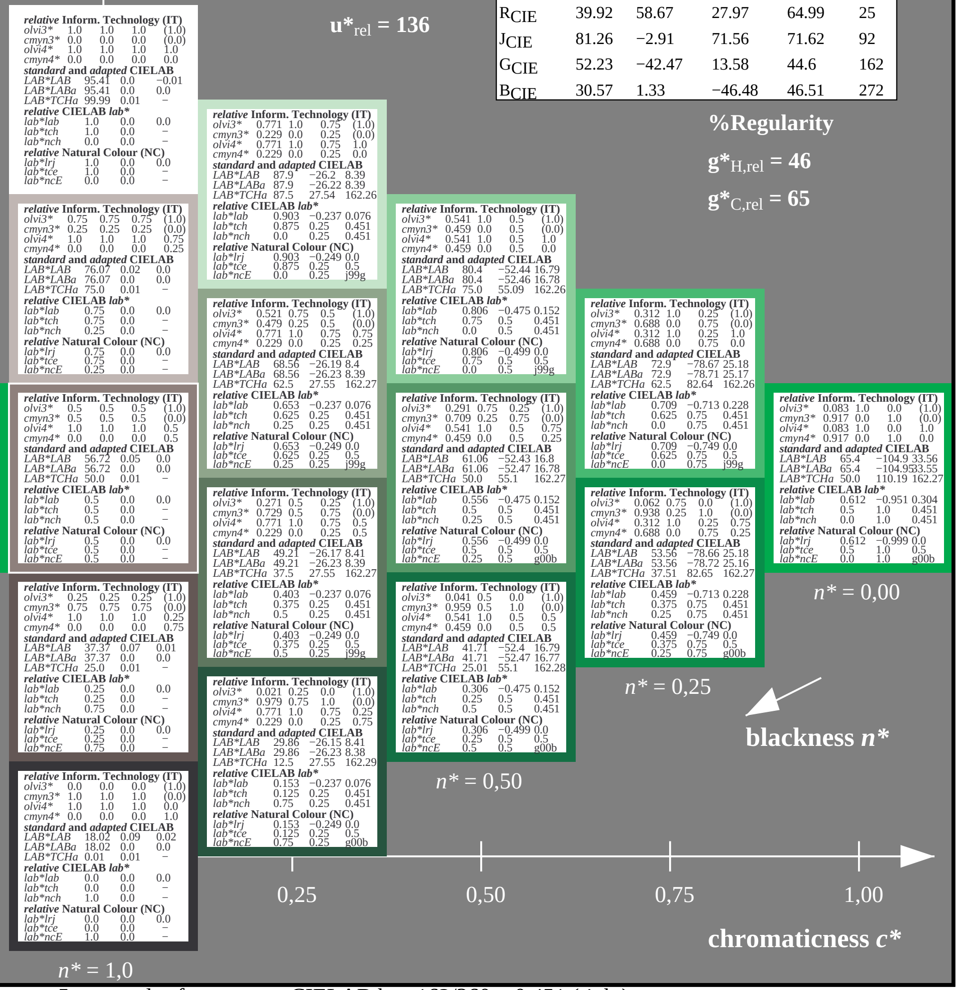
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

Input: Colorimetric Reflective System NRS18

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

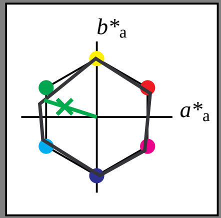
lab*tch* and *lab*nch

D65: hue G

LCH*Ma: 57 73 162

rgb*Ma: 0.08 1.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 100

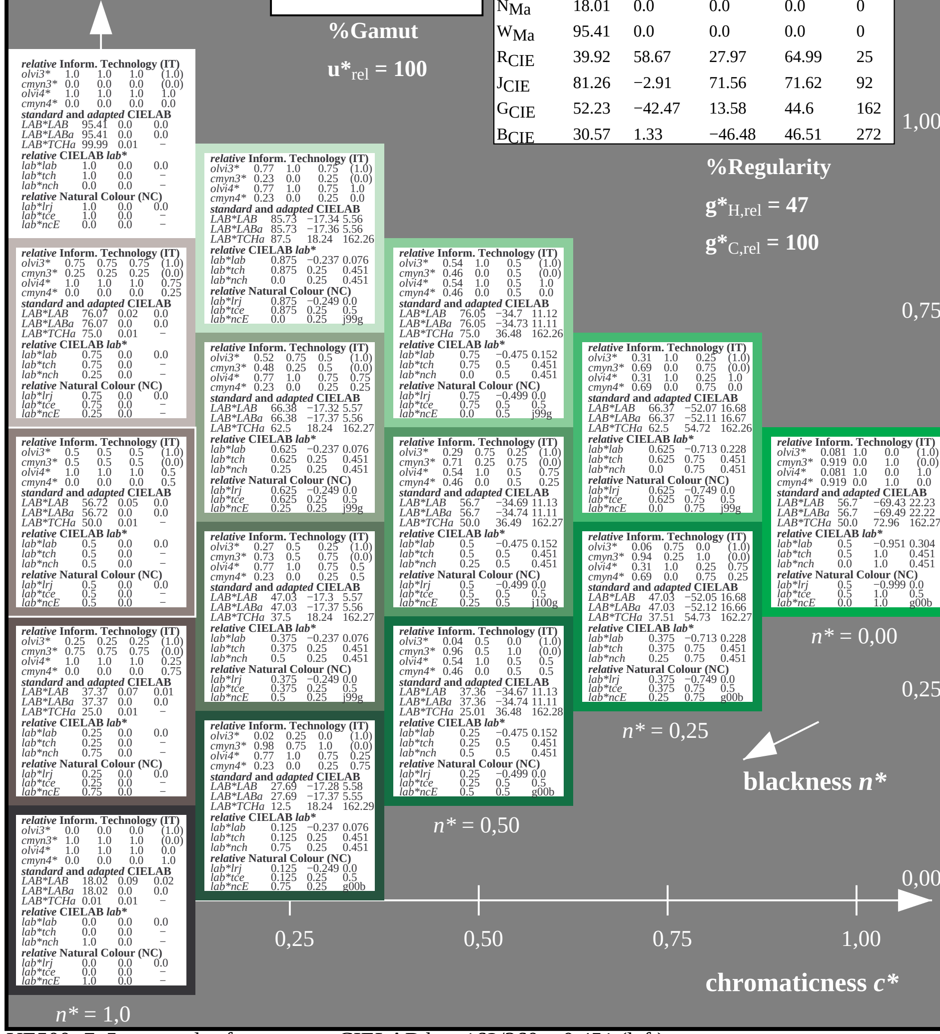
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NRS11

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

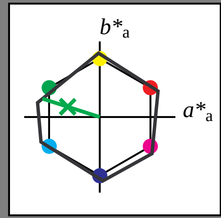
lab*tch* and *lab*nch

D65: hue G

LCH*Ma: 53 80 162

rgb*Ma: 0.08 1.0 0.0

triangle lightness t^*



%Gamut

u^*_{rel} = 119

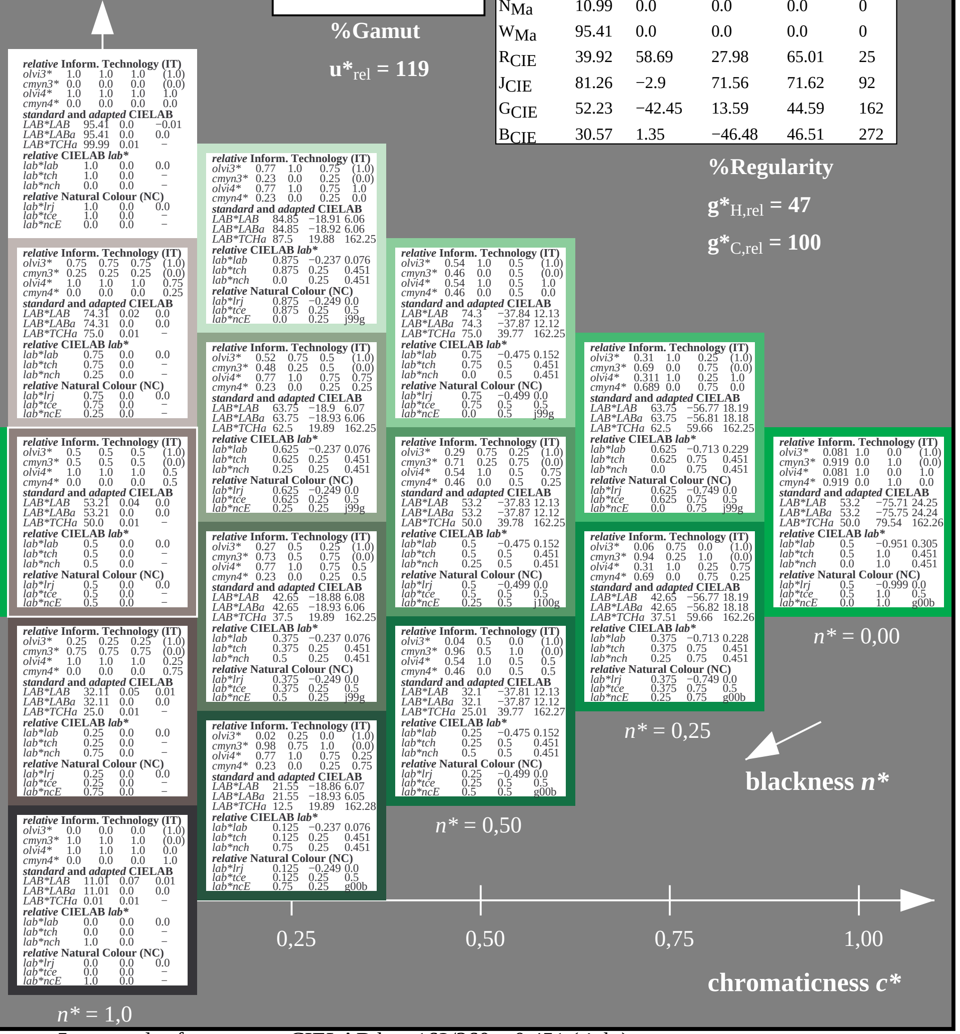
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

Input: Colorimetric Reflective System NRS18

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

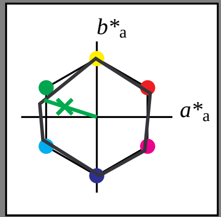
lab*tch* and *lab*nch

D65: hue G

LCH*Ma: 57 73 162

rgb*Ma: 0.08 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 100$

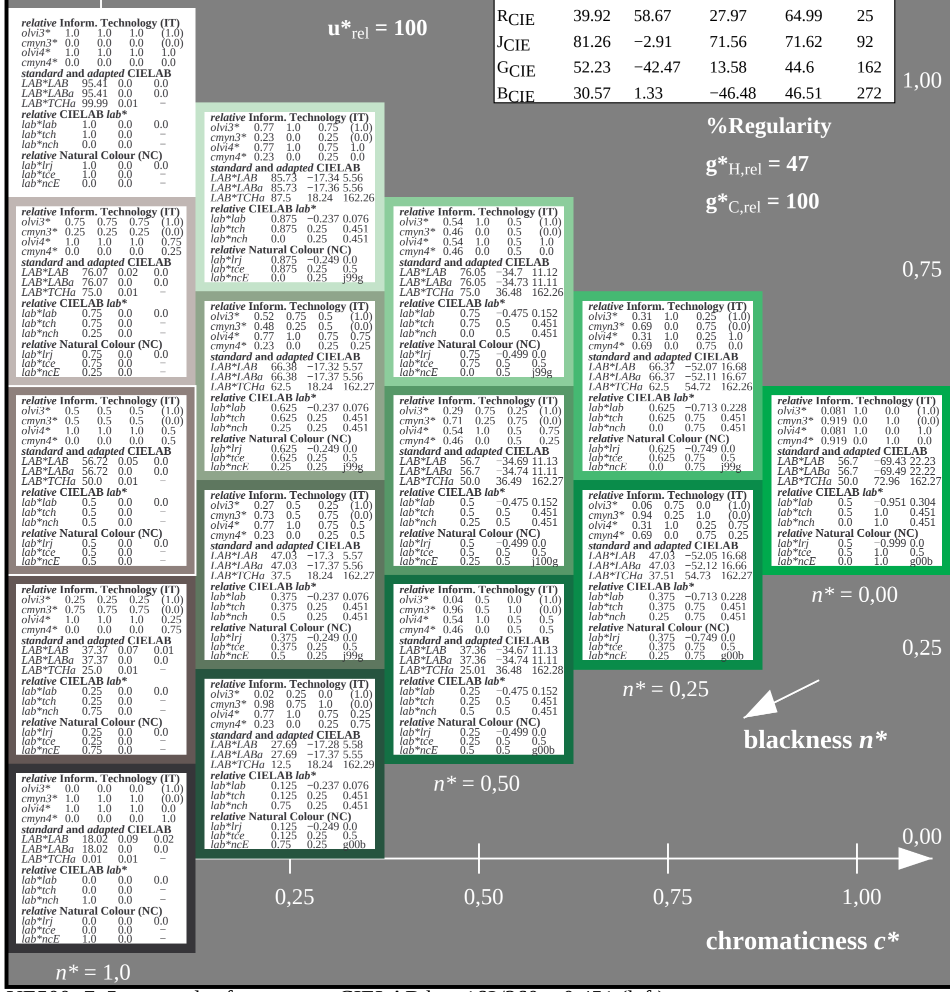
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System NCS11

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

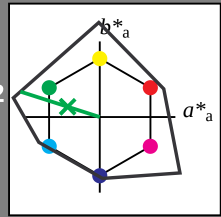
lab*tch* and *lab*nch

D65: hue G

LCH*Ma: 65 110 162

rgb*Ma: 0.08 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 149$

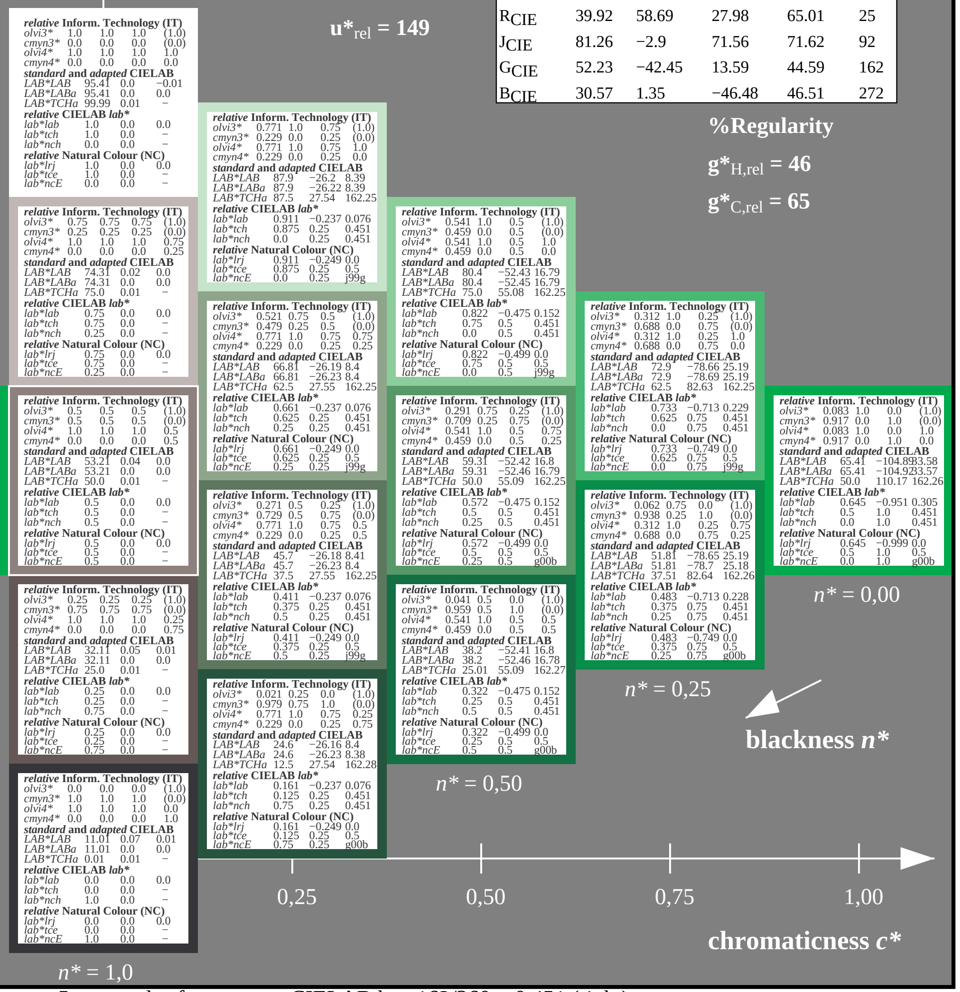
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

Input: Colorimetric Reflective System NCS18

for hue *h = *lab*h* = 162/360 = 0.451**

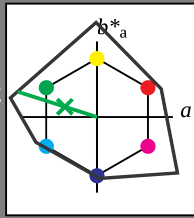
lab*tch* and *lab*nch

D65: hue G

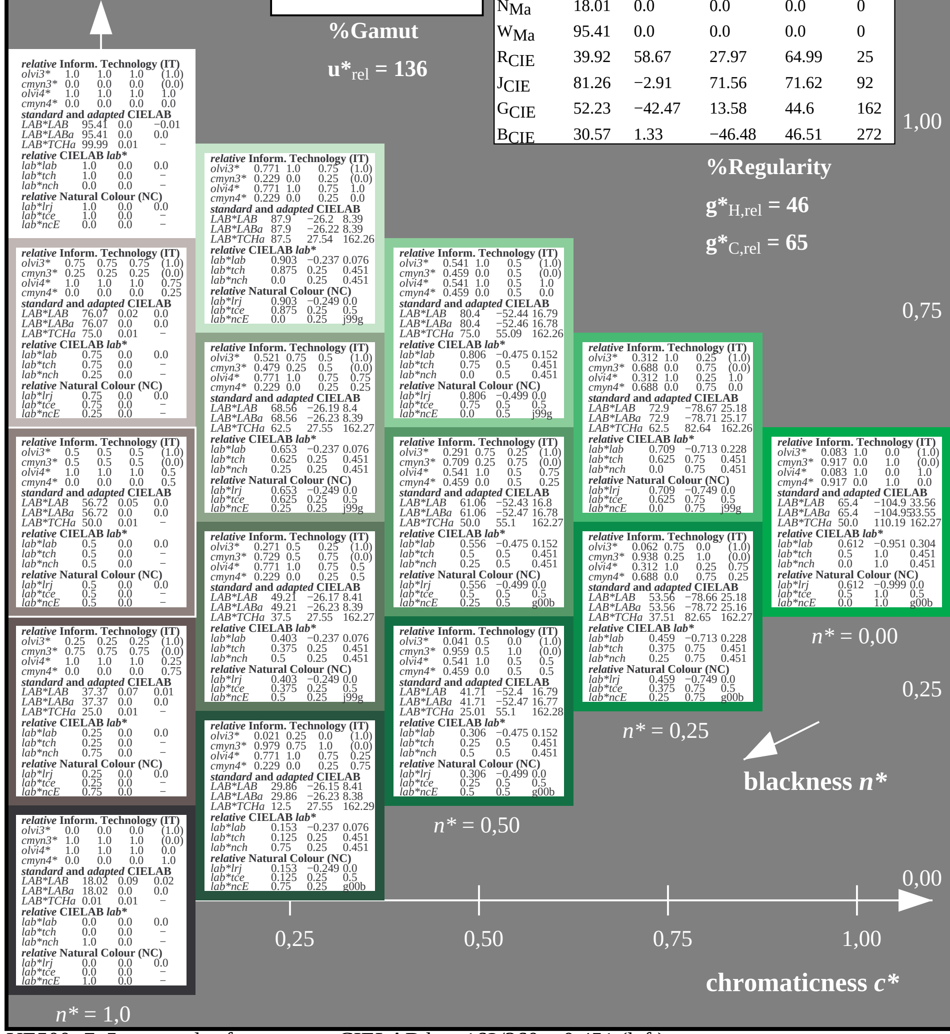
LCH*Ma: 65 110 162

rgb*Ma: 0.08 1.0 0.0

triangle lightness *t*



NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272



Output: Colorimetric Reflective System ORS18

for hue *h = *lab*h* = 164/360 = 0.457**

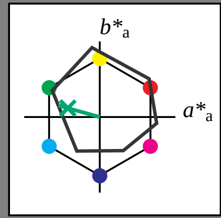
lab*tch* and *lab*nch

D65: hue G

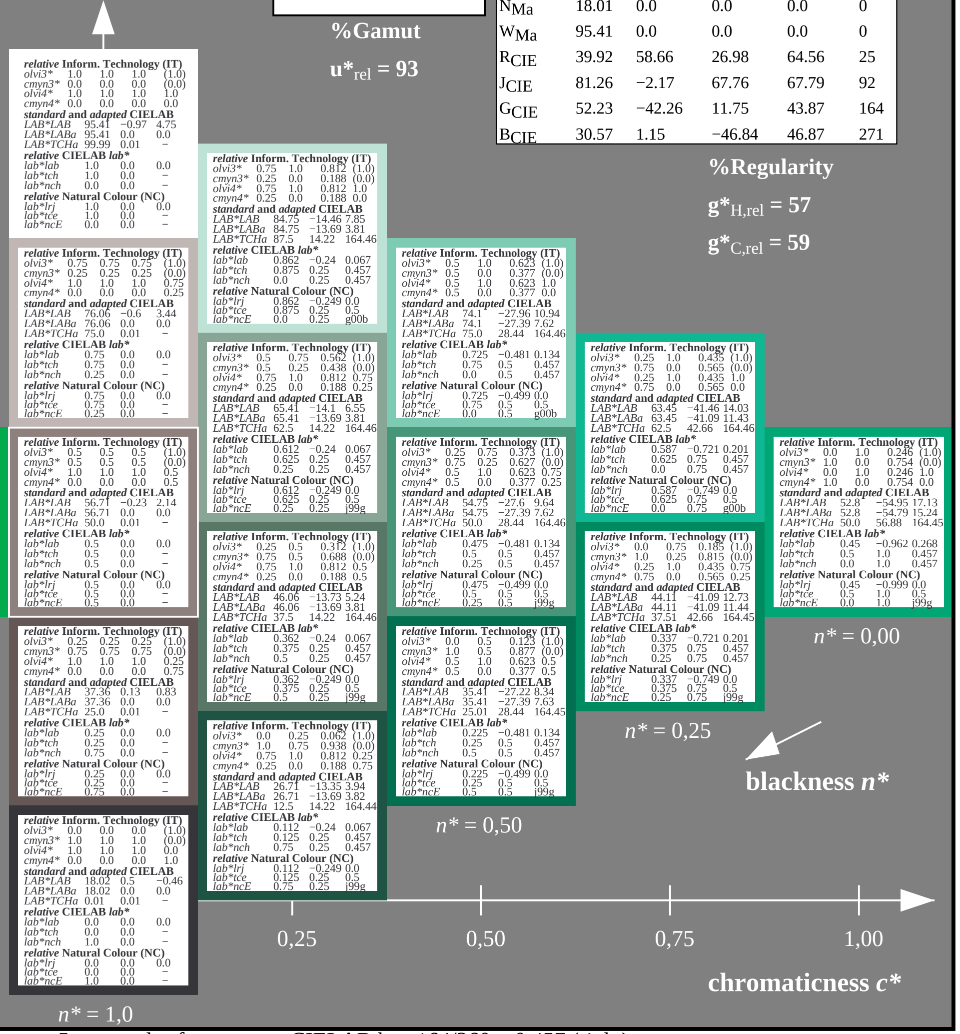
LCH*Ma: 53 57 164

rgb*Ma: 0.0 1.0 0.25

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	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

Input: Colorimetric Reflective System NCS18

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

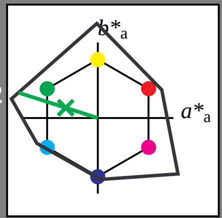
lab*tch* and *lab*nch

D65: hue G

LCH*Ma: 65 110 162

rgb*Ma: 0.08 1.0 0.0

triangle lightness t^*



%Gamut

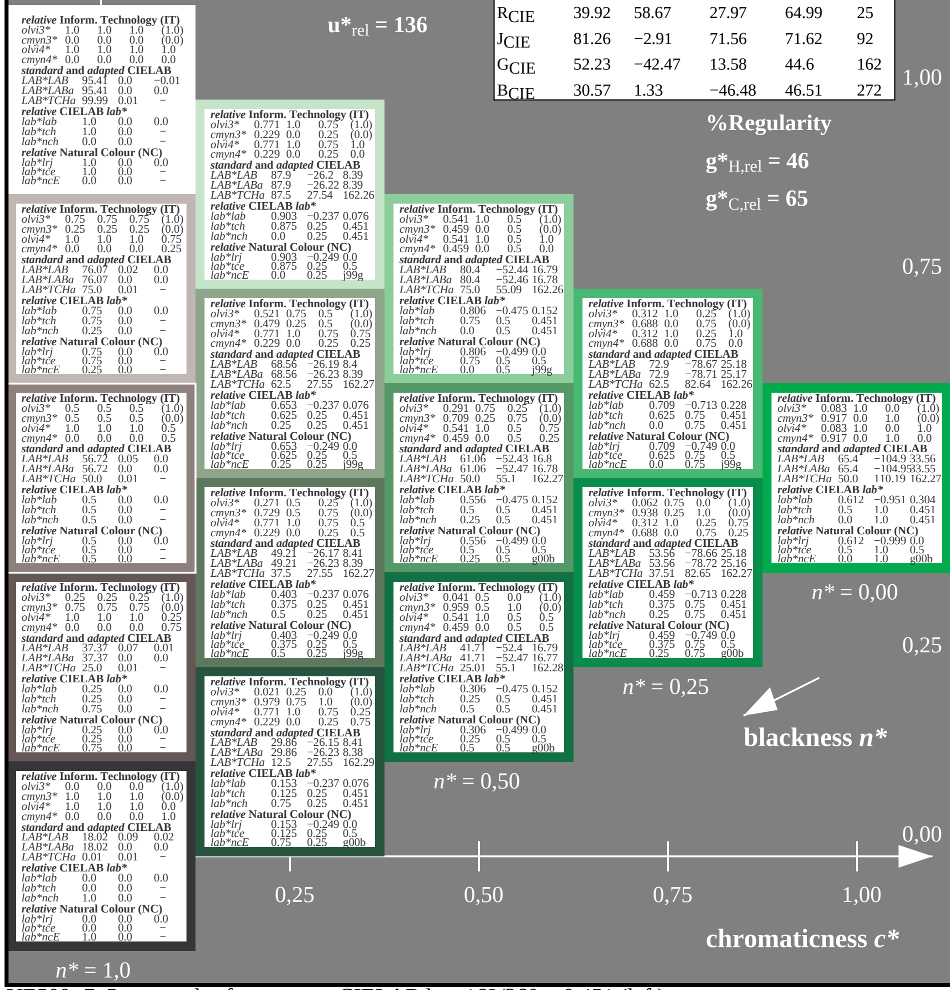
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System MRS18

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

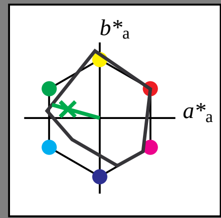
lab*tch* and *lab*nch

D65: hue G

LCH*Ma: 56 66 164

rgb*Ma: 0.1 1.0 0.0

triangle lightness t^*



%Gamut

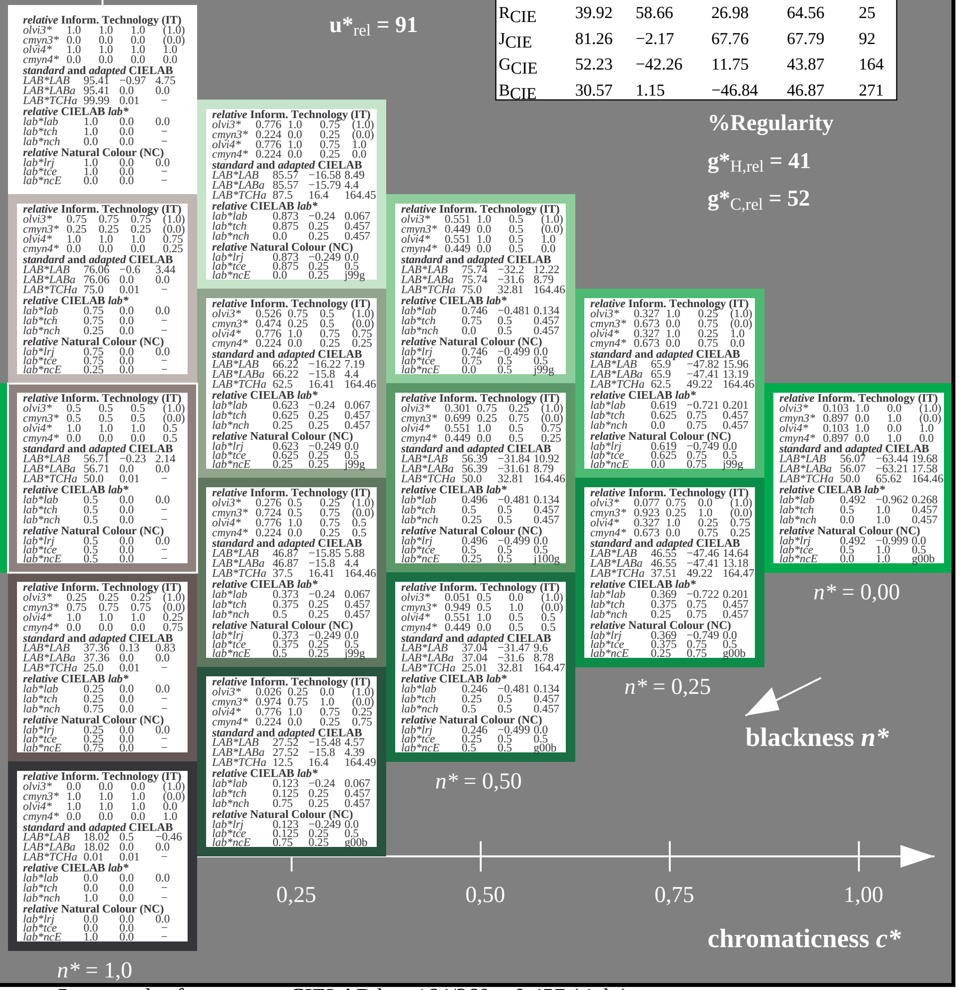
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

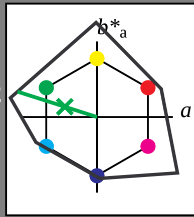


UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch and lab*nch

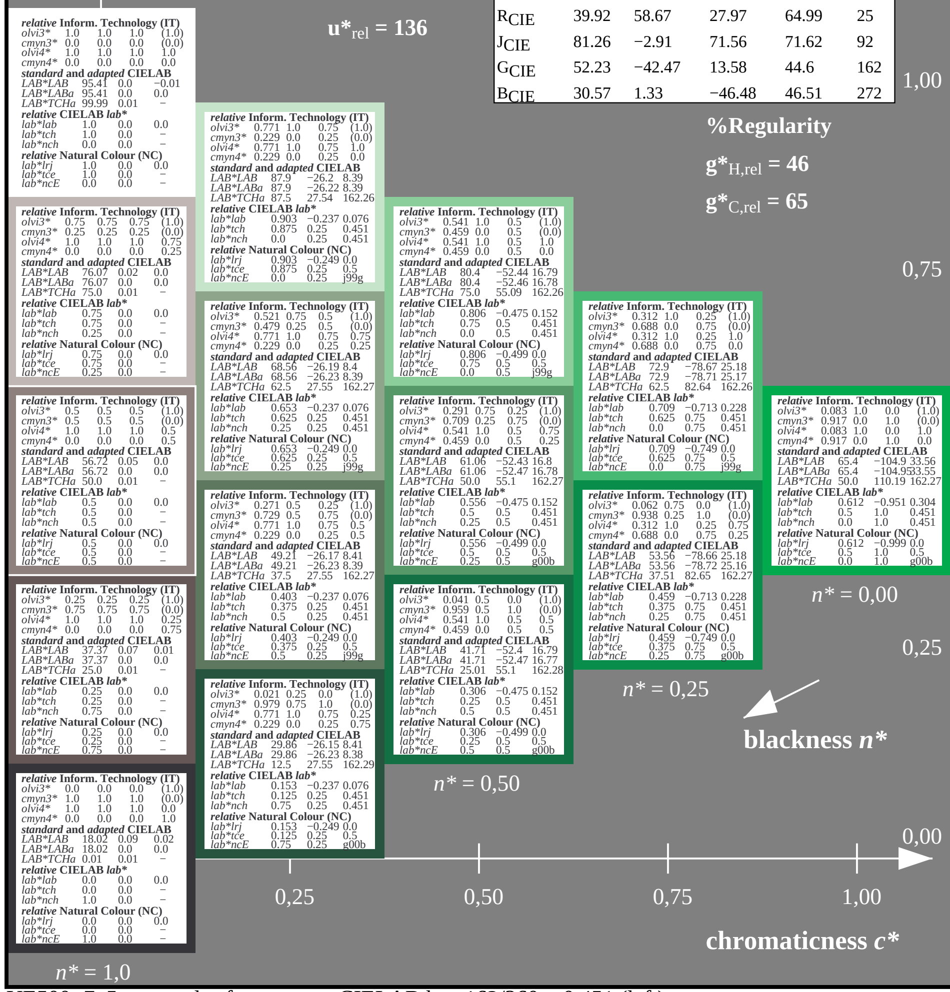
D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 136$

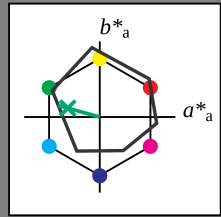
NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch and lab*nch

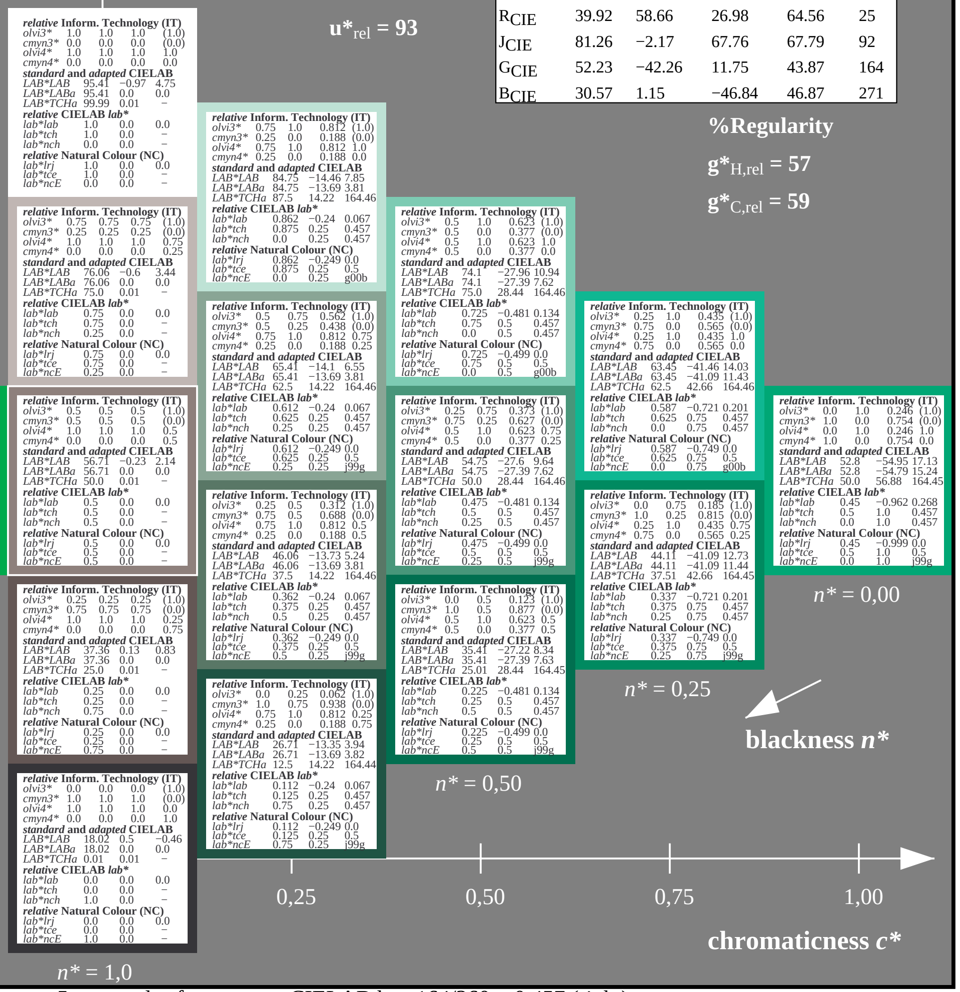
D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25
triangle lightness t^*



%Gamut
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$

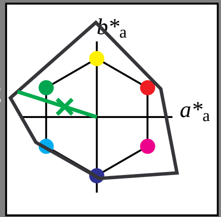


UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 162/360 = 0.451$
*lab*tch and lab*nch*

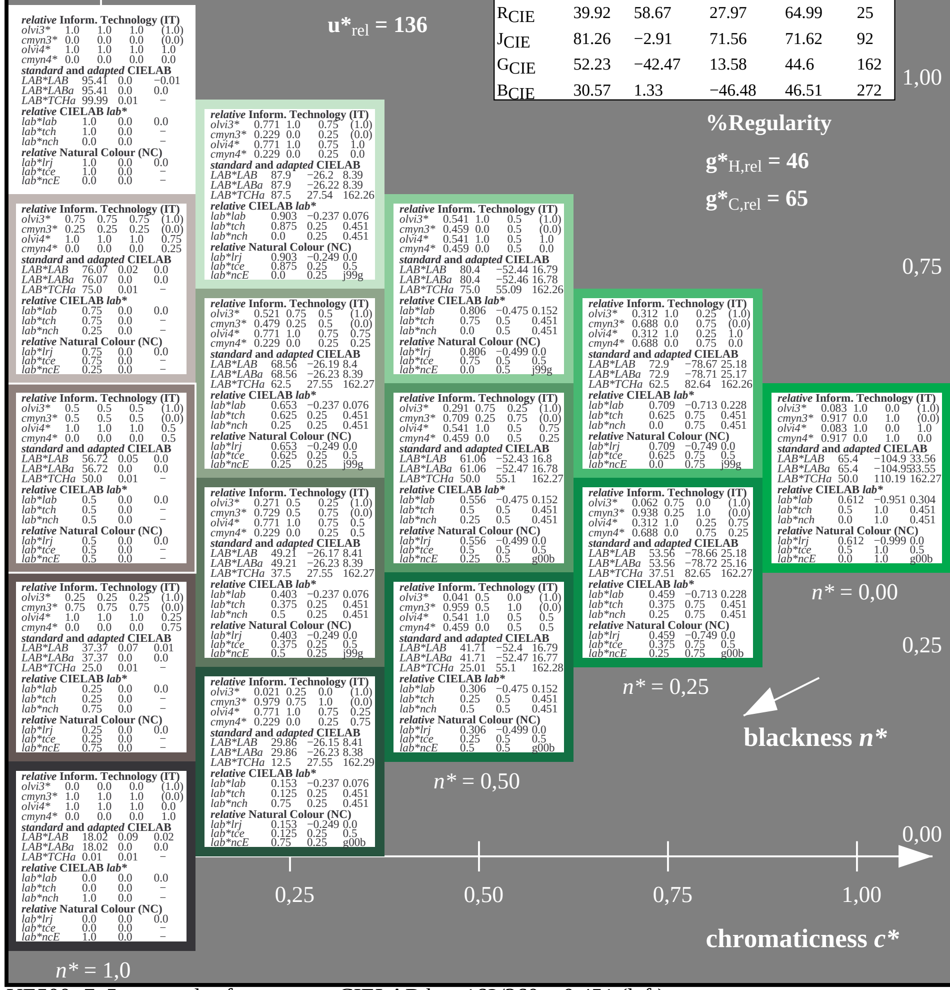
D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0
triangle lightness *t**



%Gamut
$u^*_{rel} = 136$

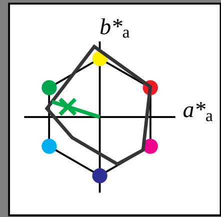
NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 162/360 = 0.451$
*lab*tch and lab*nch*

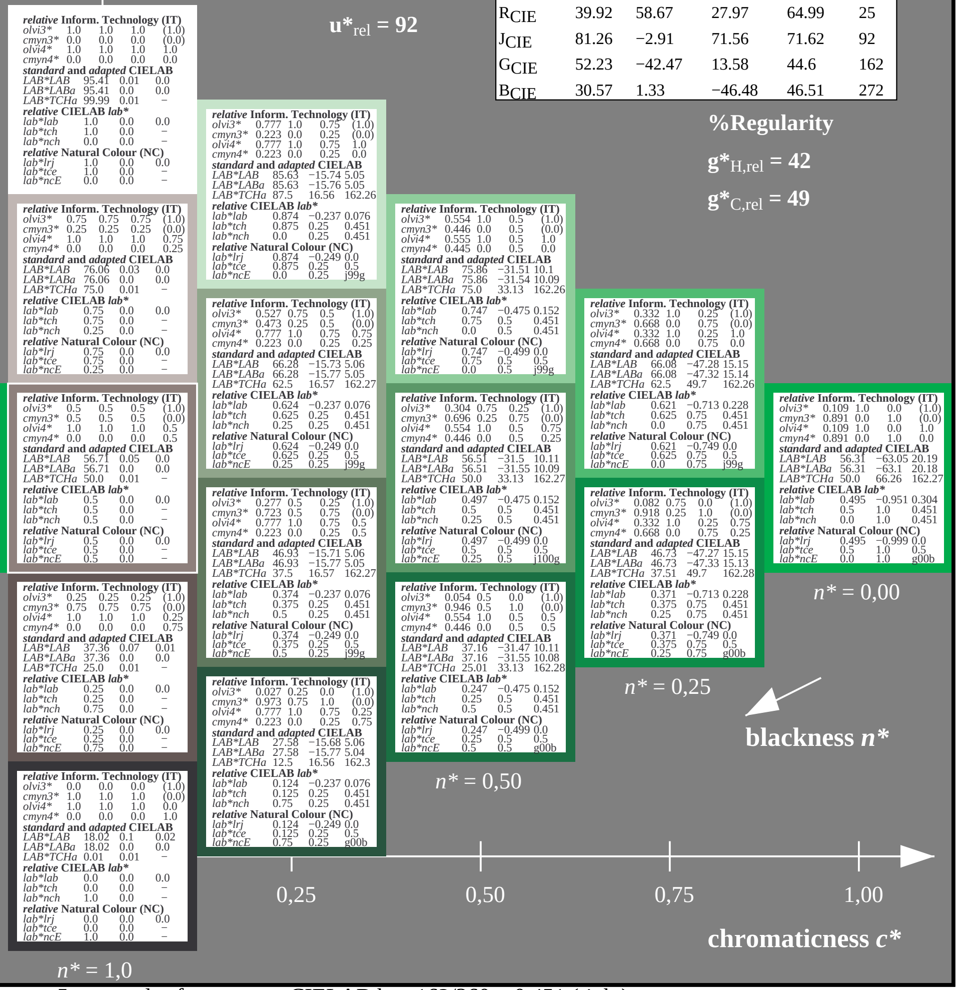
D65: hue G
LCH*Ma: 56 66 162
rgb*Ma: 0.11 1.0 0.0
triangle lightness *t**



%Gamut
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$

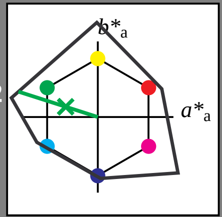


UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 162/360 = 0.451$
*lab*tch* and *lab*nch*

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0
triangle lightness t^*

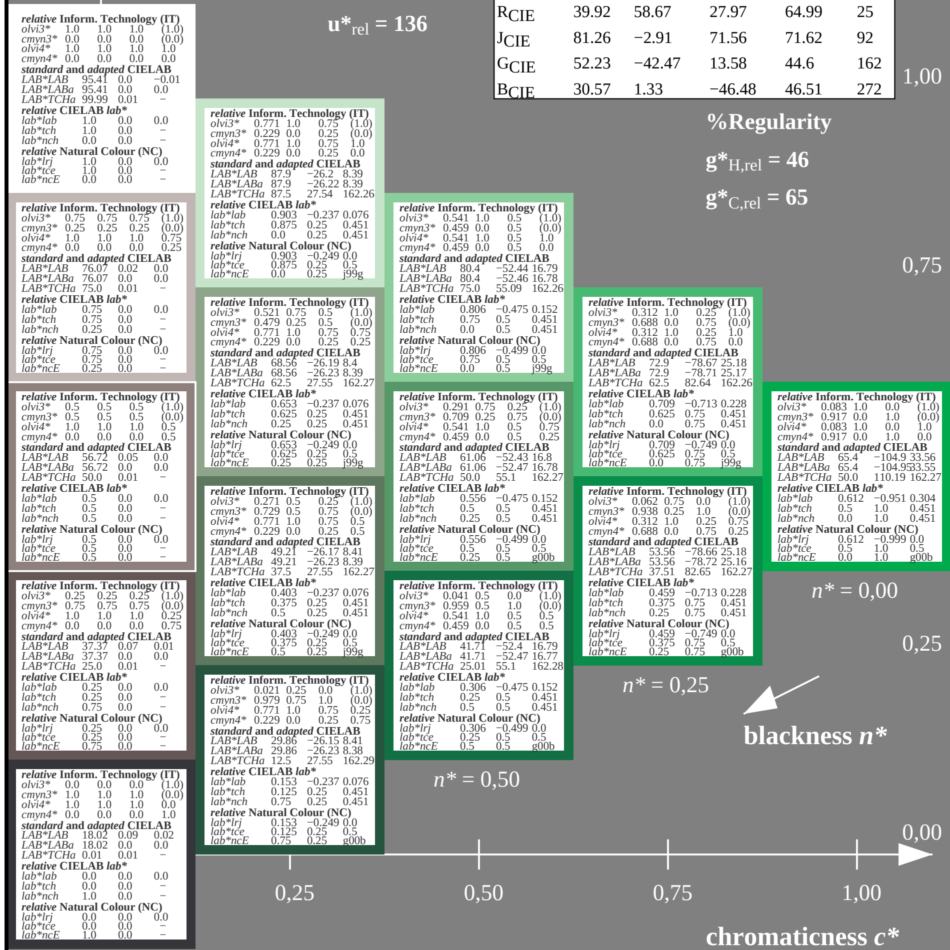


%Gamut
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

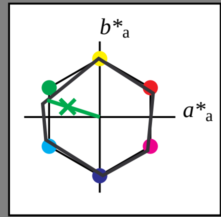
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 162/360 = 0.451$
*lab*tch* and *lab*nch*

D65: hue G
LCH*Ma: 57 73 162
rgb*Ma: 0.08 1.0 0.0
triangle lightness t^*

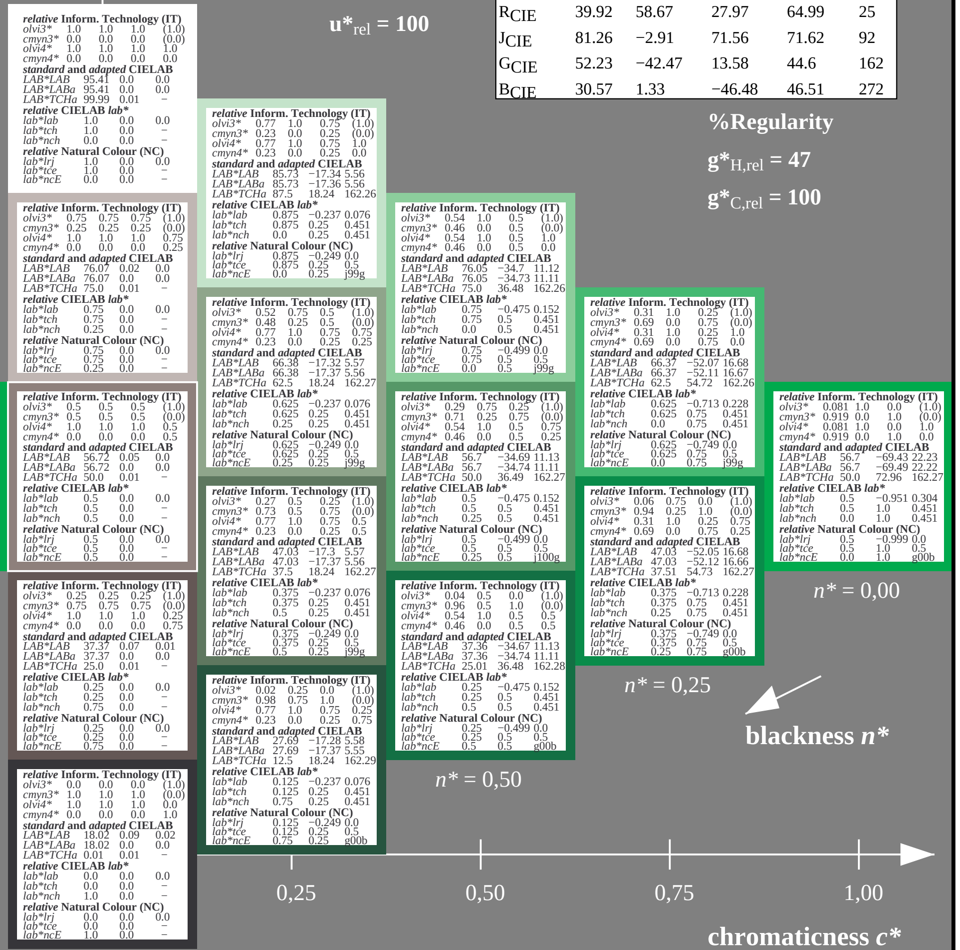


%Gamut
u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100

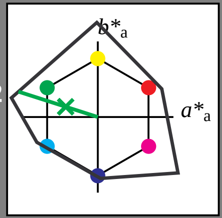


UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 162/360 = 0.451$
*lab*tch* and *lab*nch*

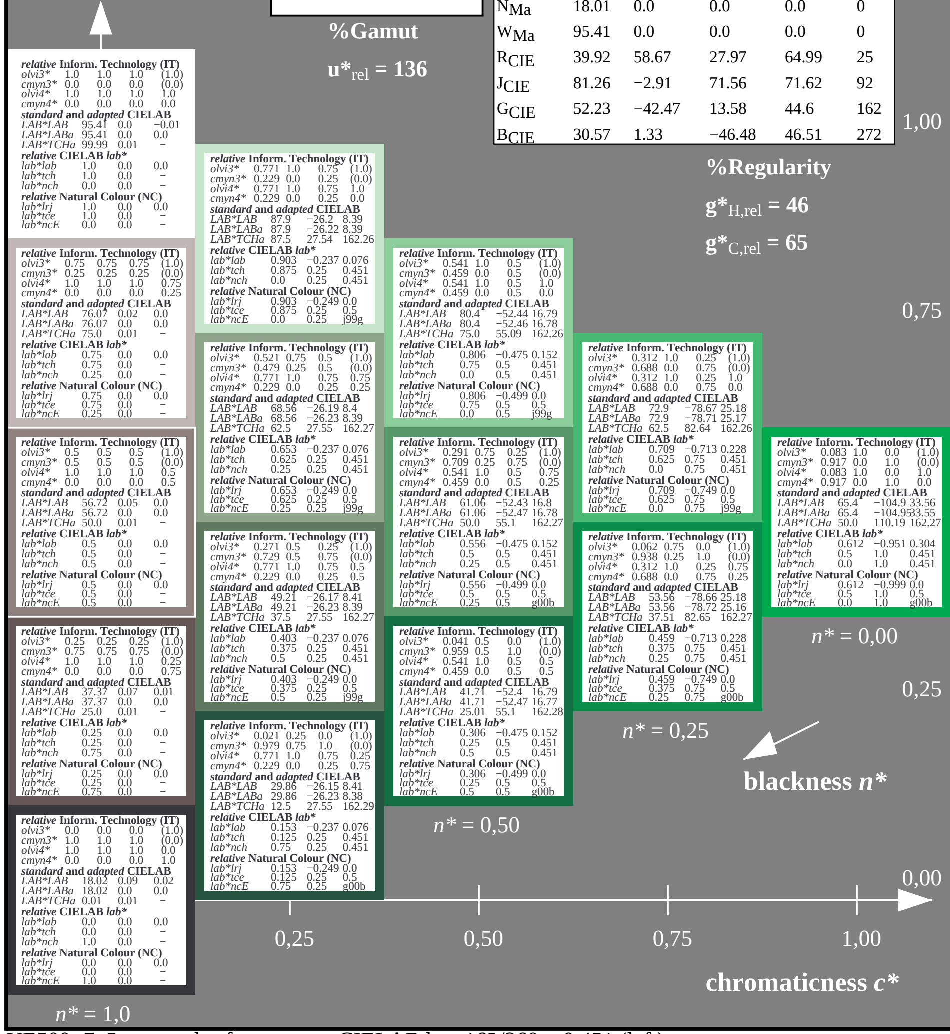
D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 136$

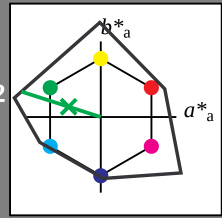
NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 162/360 = 0.451$
*lab*tch* and *lab*nch*

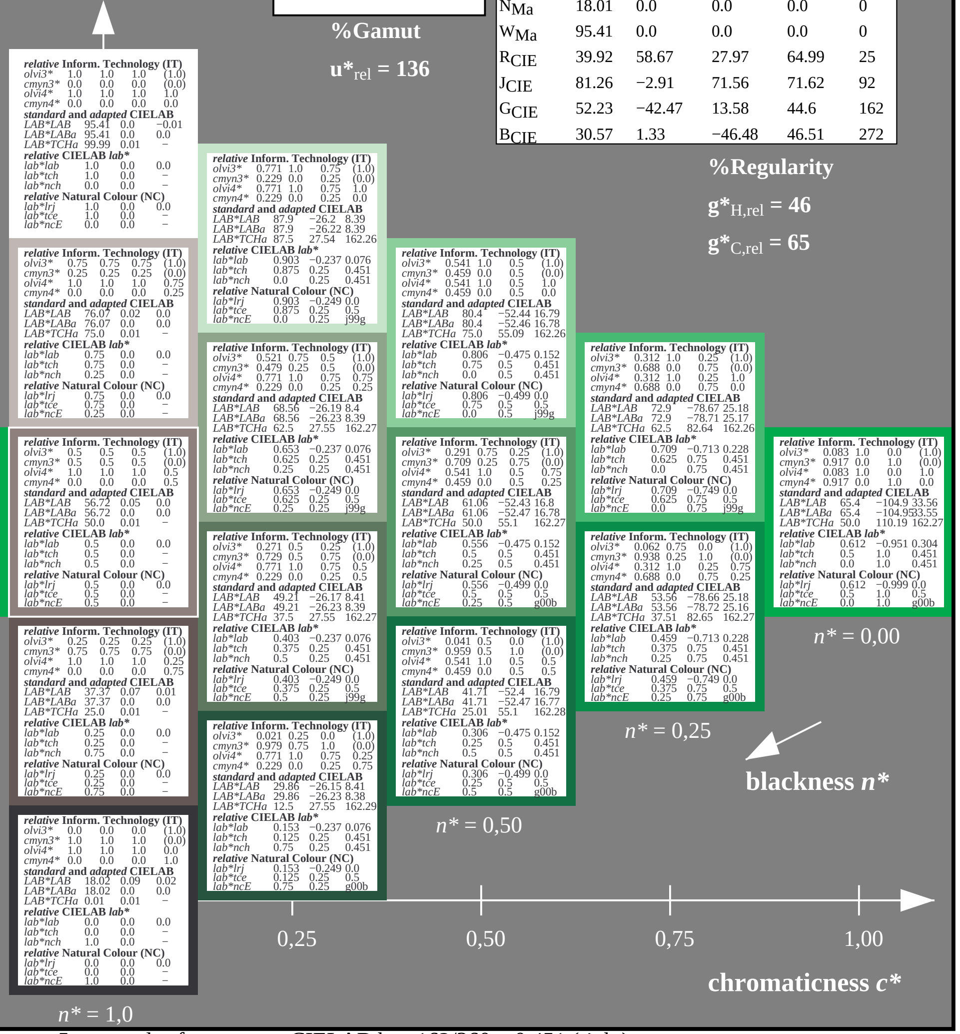
D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



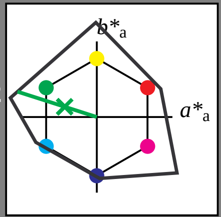
UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness t^*

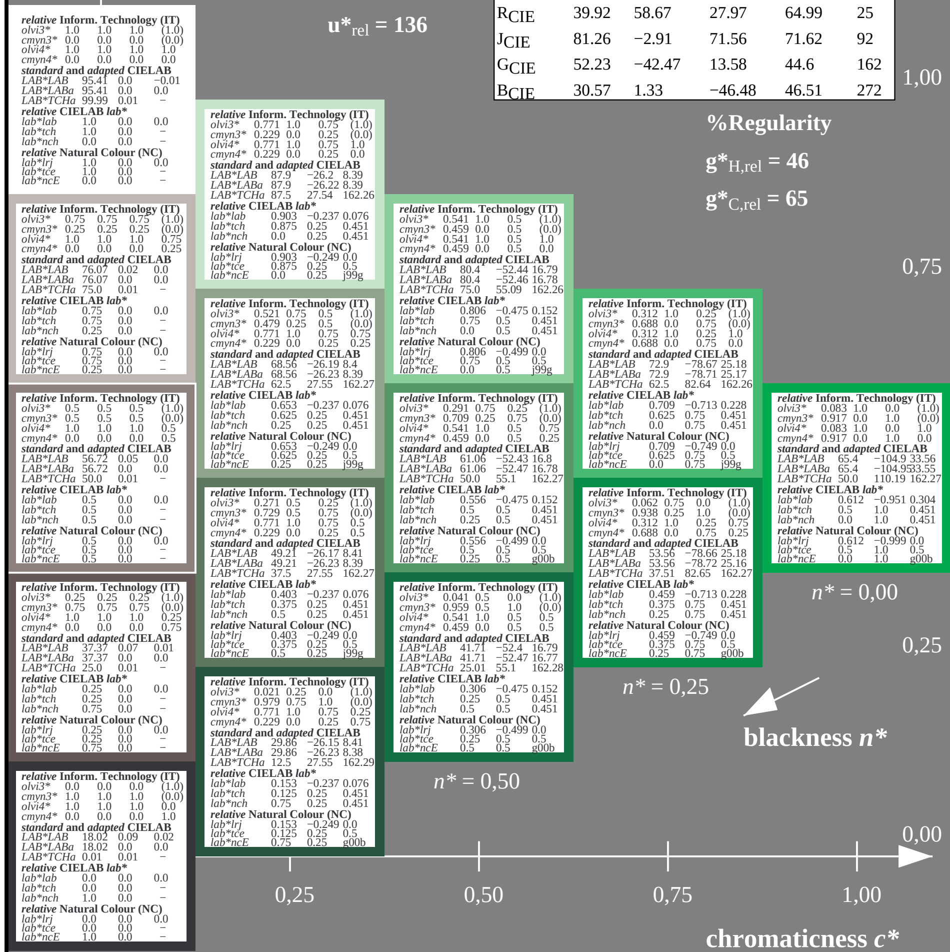


%Gamut
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

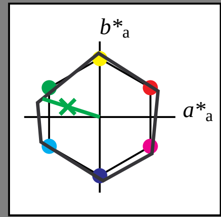
%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 80 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness t^*

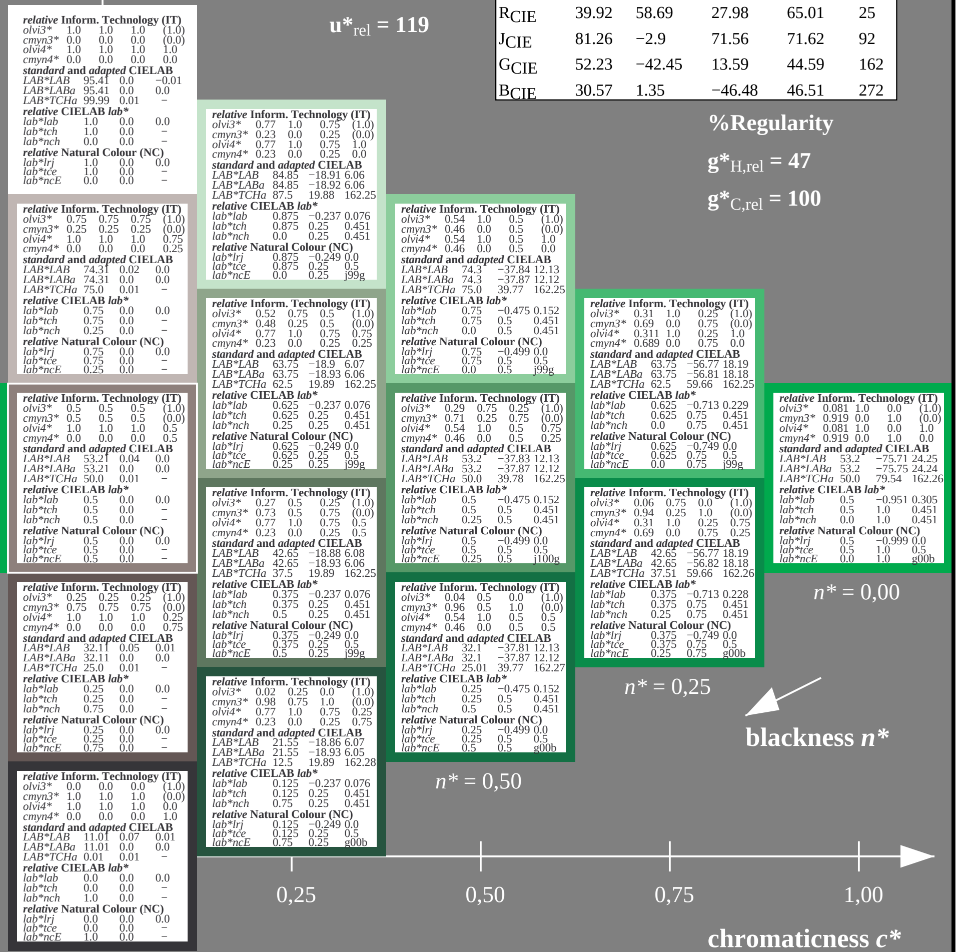


%Gamut
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100

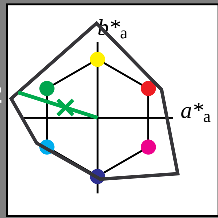


UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab^*tch and lab^*nch

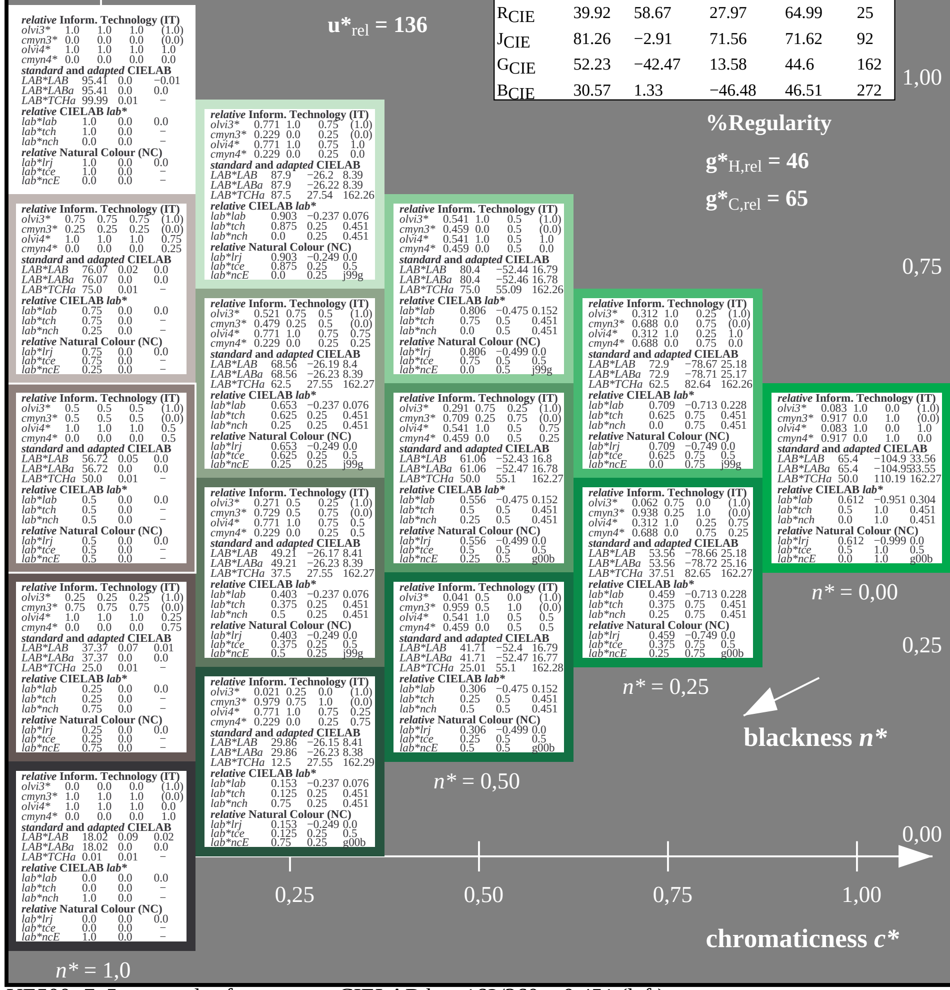
D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 136$

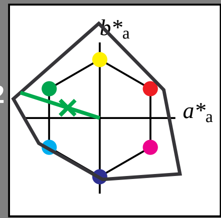
NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab^*tch and lab^*nch

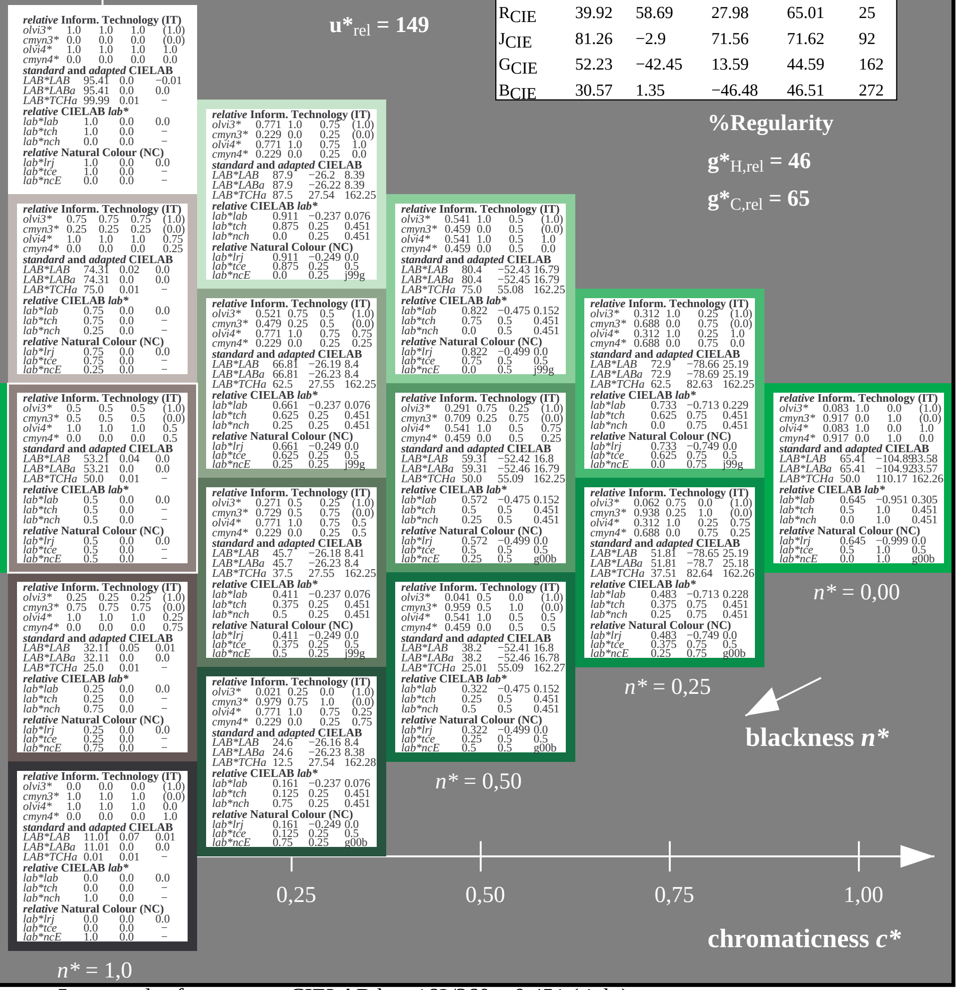
D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



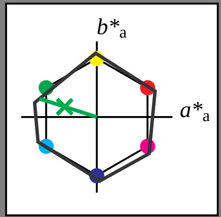
UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 80 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness t^*

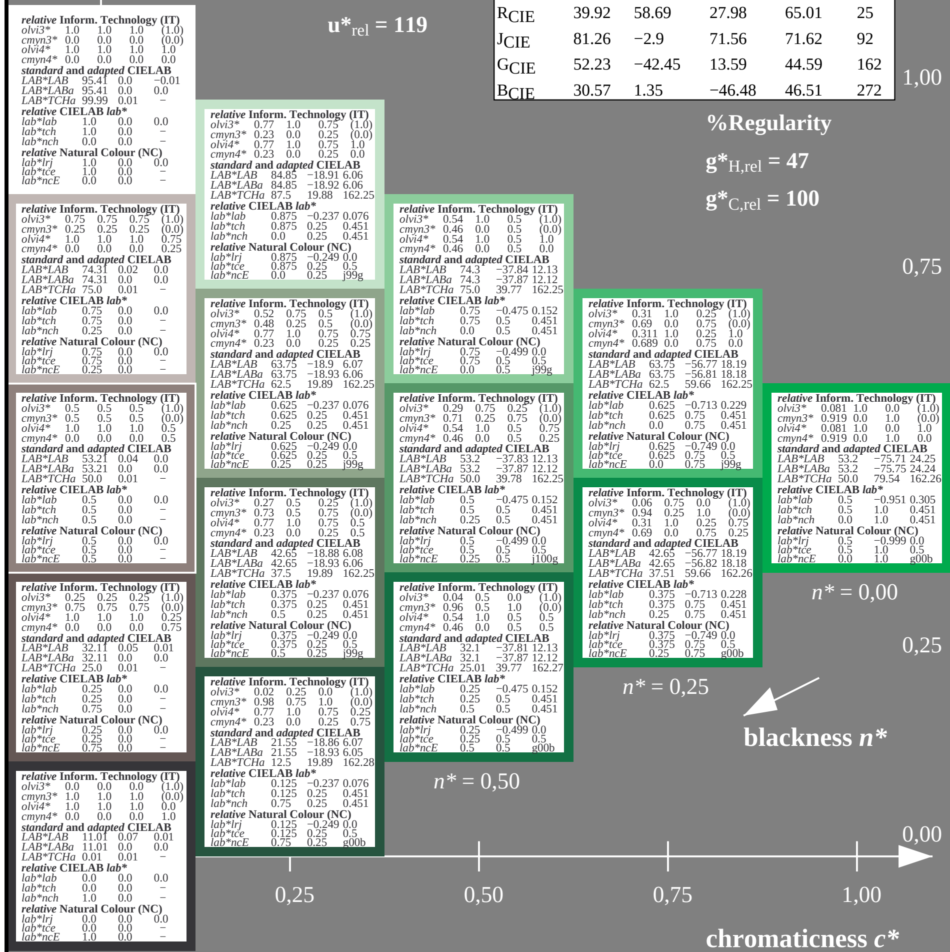


%Gamut
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

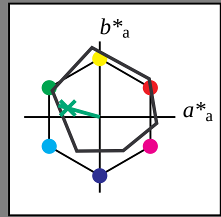
%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness t^*

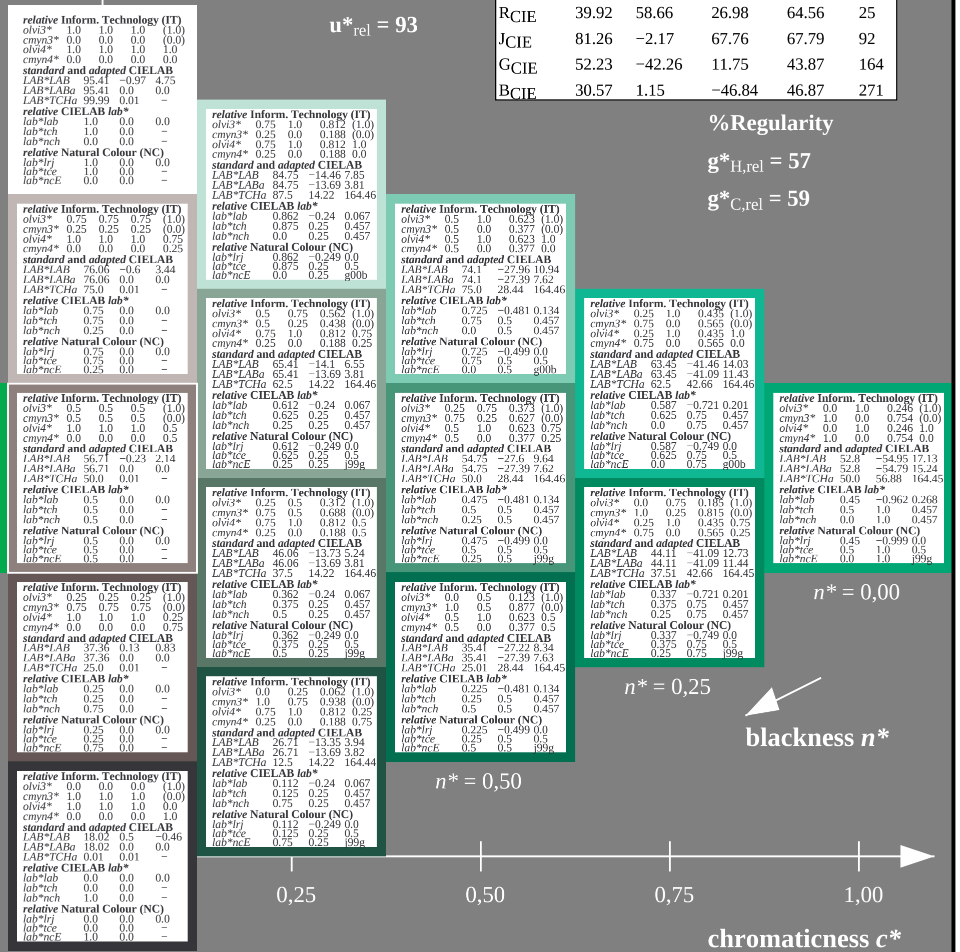


%Gamut
$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

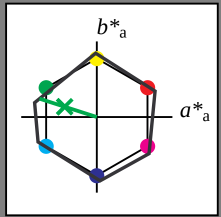
%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)   5 step scales for constant CIELAB hue 164/360 = 0.457 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 162/360 = 0.451$
*lab*tch* and *lab*nch*

D65: hue G
LCH*Ma: 53 80 162
rgb*Ma: 0.08 1.0 0.0
triangle lightness t^*

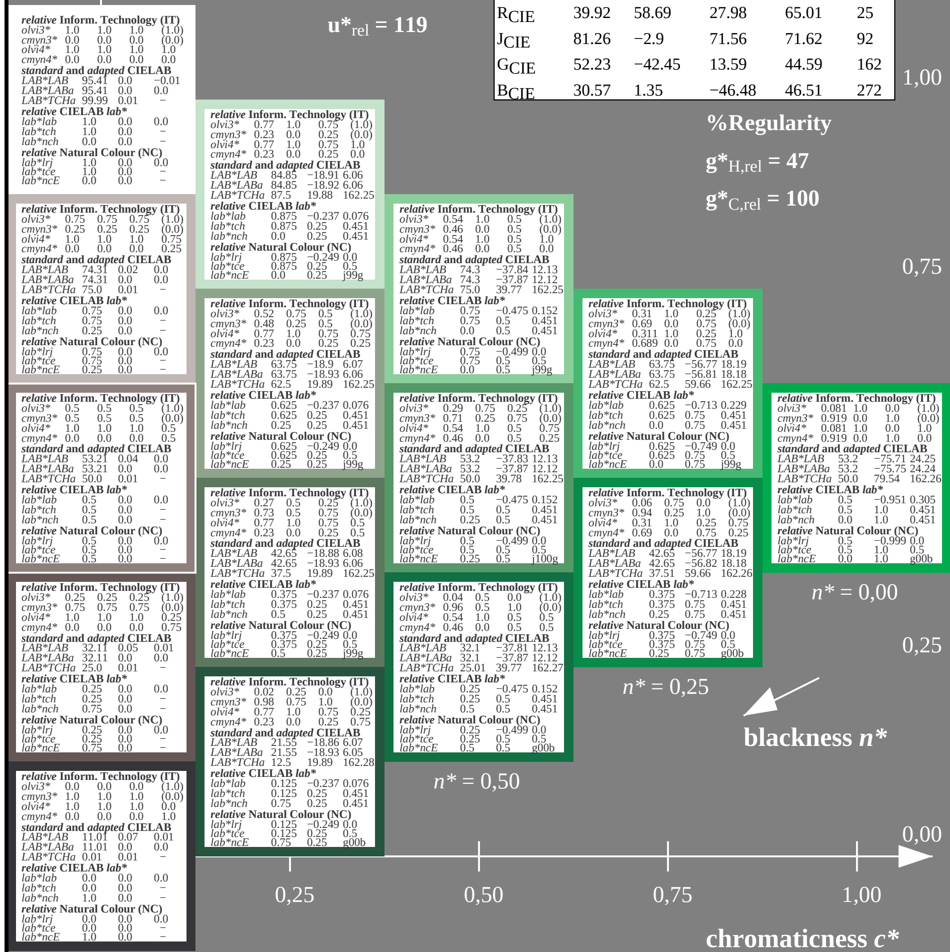


%Gamut
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data

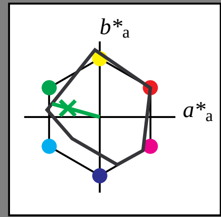
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
*lab*tch* and *lab*nch*

D65: hue G
LCH*Ma: 56 66 164
rgb*Ma: 0.1 1.0 0.0
triangle lightness t^*

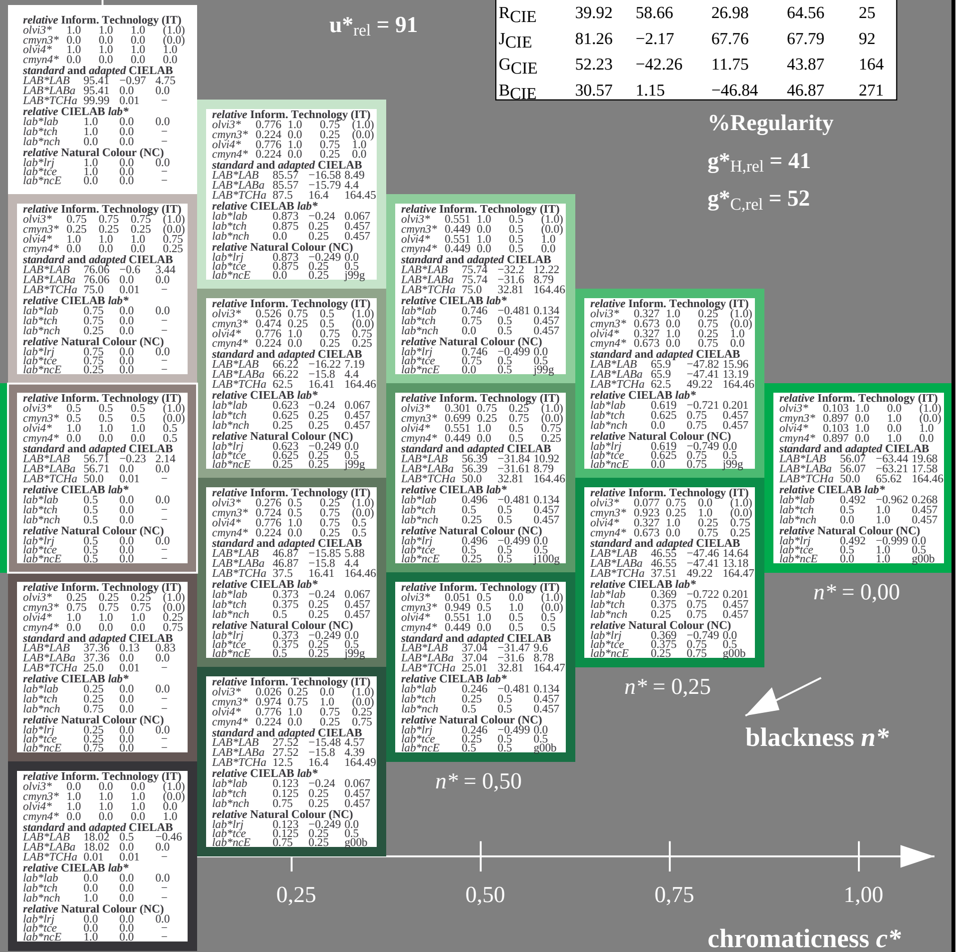


%Gamut
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 41$
$g^*_{C,rel} = 52$



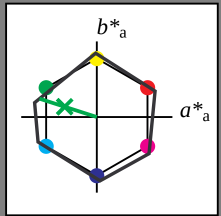
UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

Input: Colorimetric Reflective System NRS11
for hue *h = *lab*h* = 162/360 = 0.451**
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 80 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness *t**



%Gamut

u^*_{rel} = 119

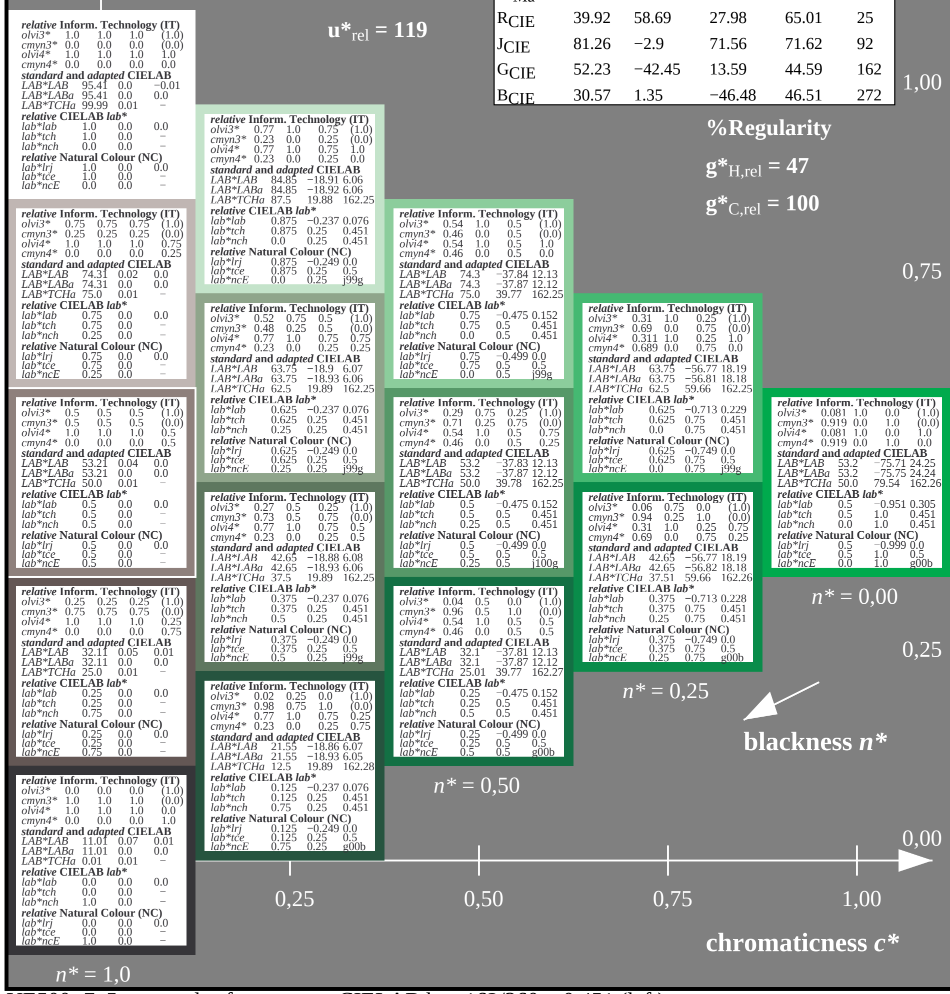
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

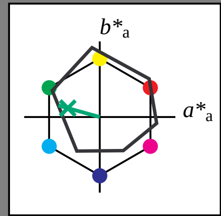
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System TRS18
for hue *h = *lab*h* = 164/360 = 0.457**
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness *t**



%Gamut

u^*_{rel} = 93

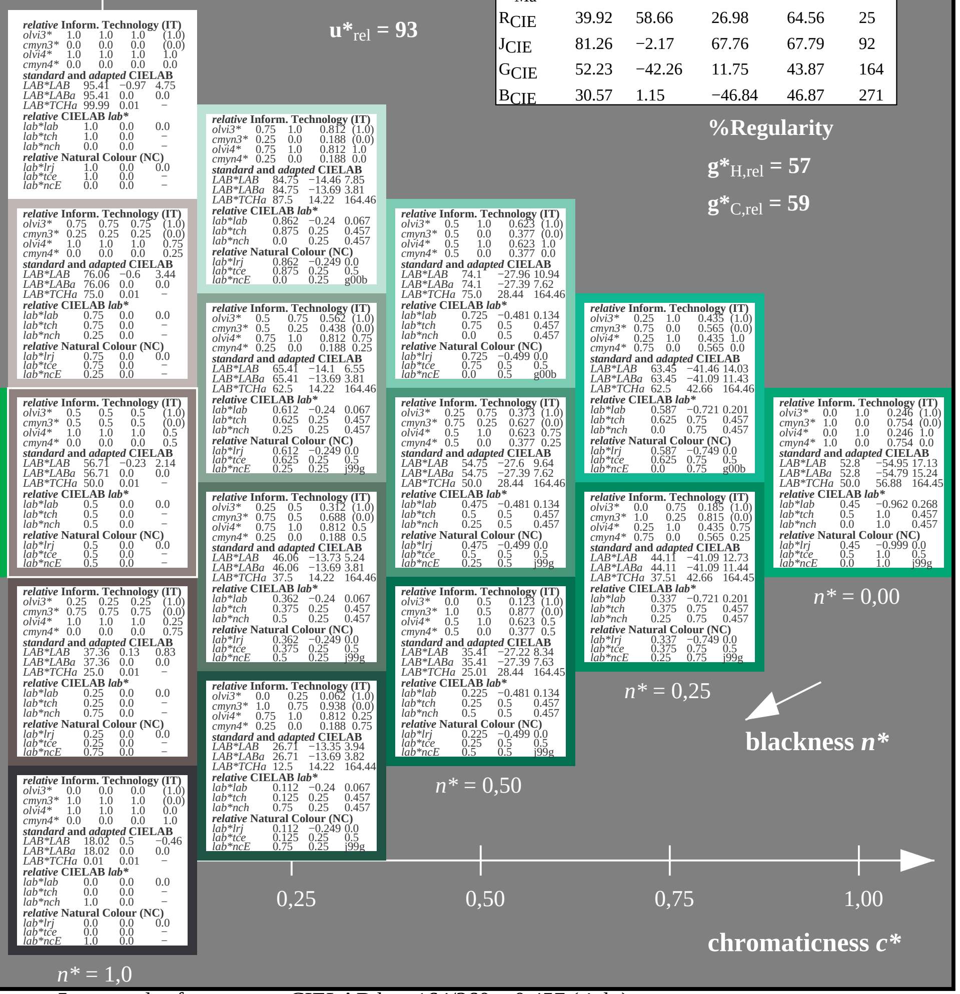
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



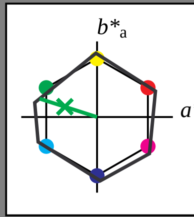
UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch and lab*nch

D65: hue G
LCH*Ma: 53 80 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 119$

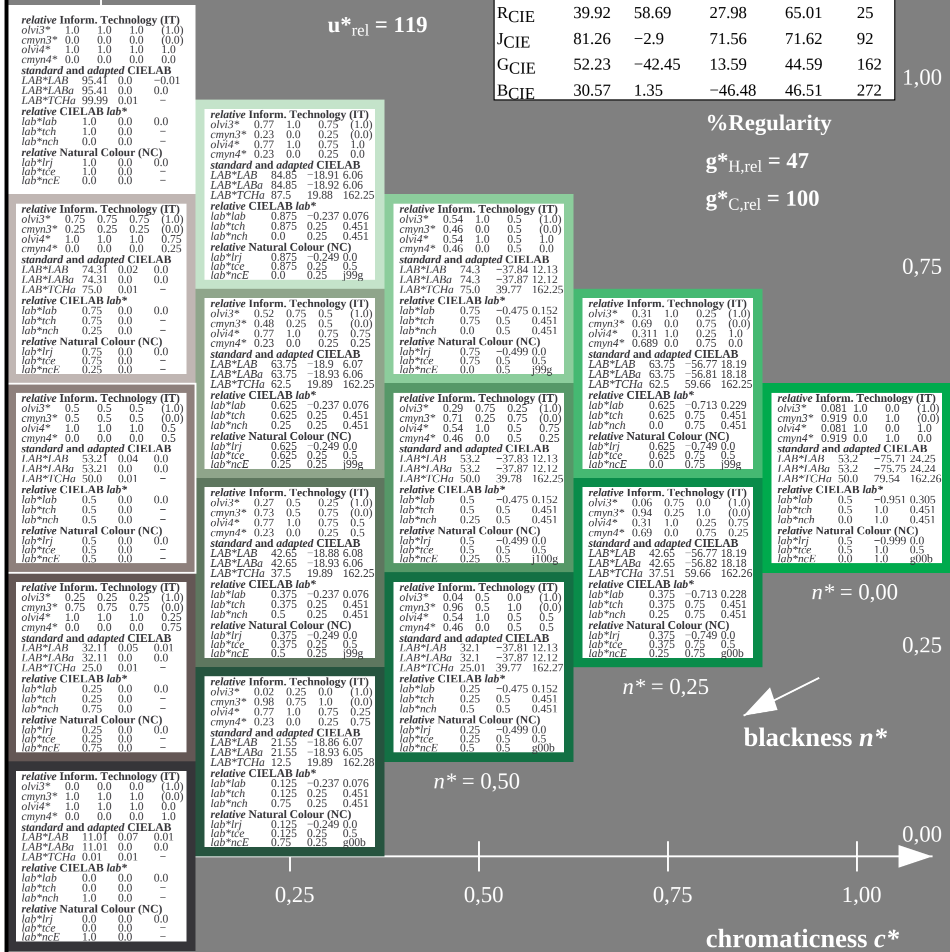
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

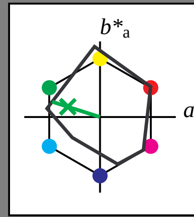
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch and lab*nch

D65: hue G
LCH*Ma: 56 66 162
rgb*Ma: 0.11 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 92$

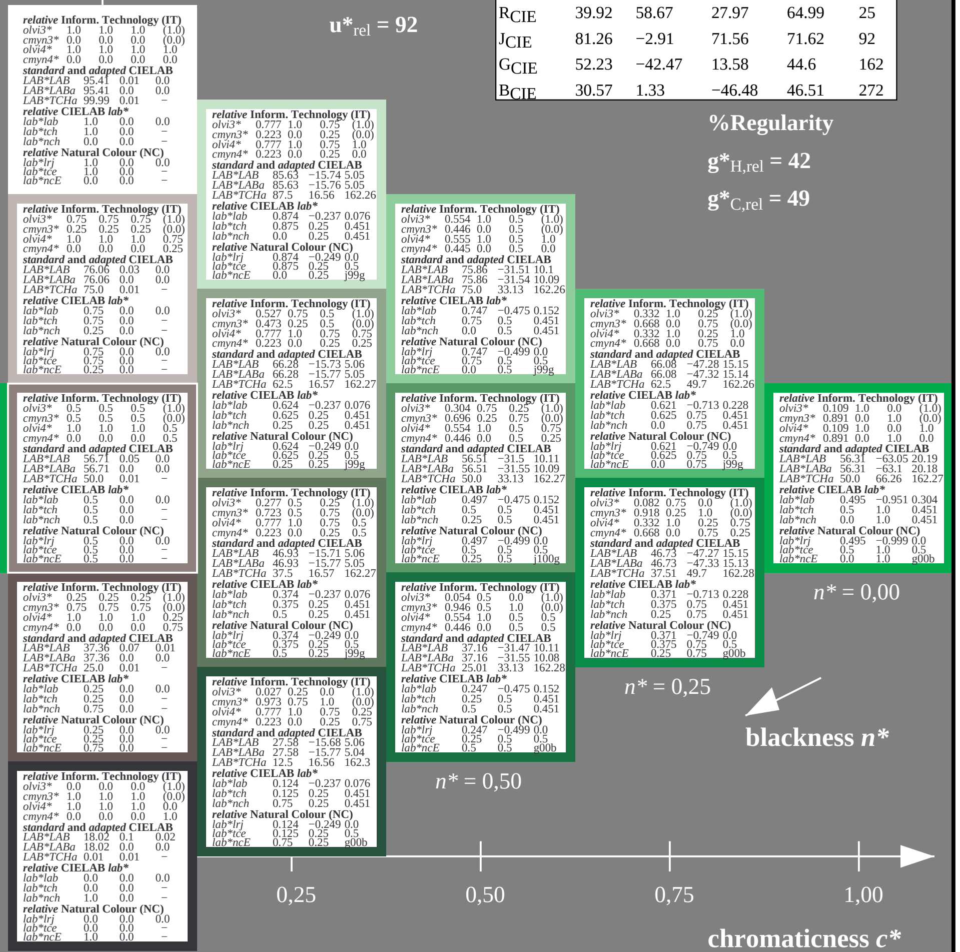
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



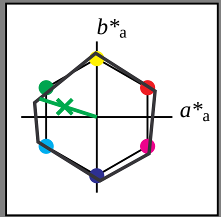
UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 162/360 = 0.451$
*lab*tch* and *lab*nch*

D65: hue G
LCH*Ma: 53 80 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness t^*

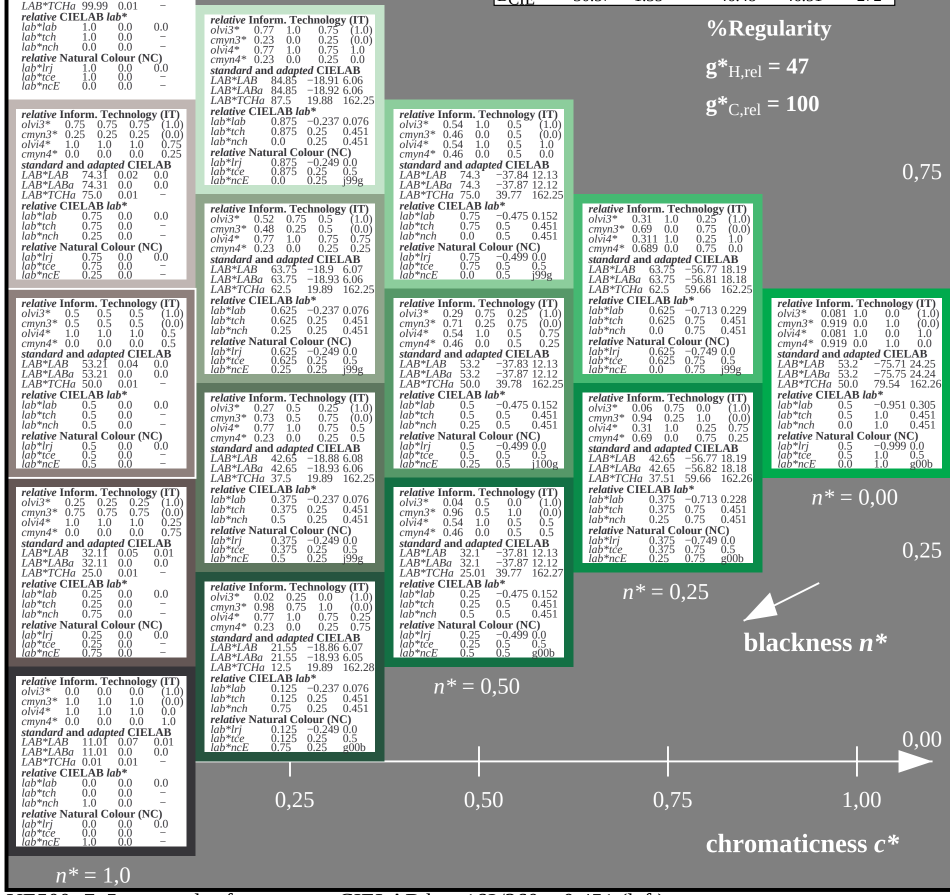


%Gamut
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

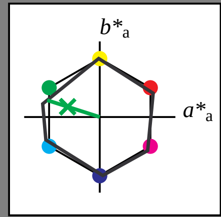
%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 162/360 = 0.451$
*lab*tch* and *lab*nch*

D65: hue G
LCH*Ma: 57 73 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness t^*

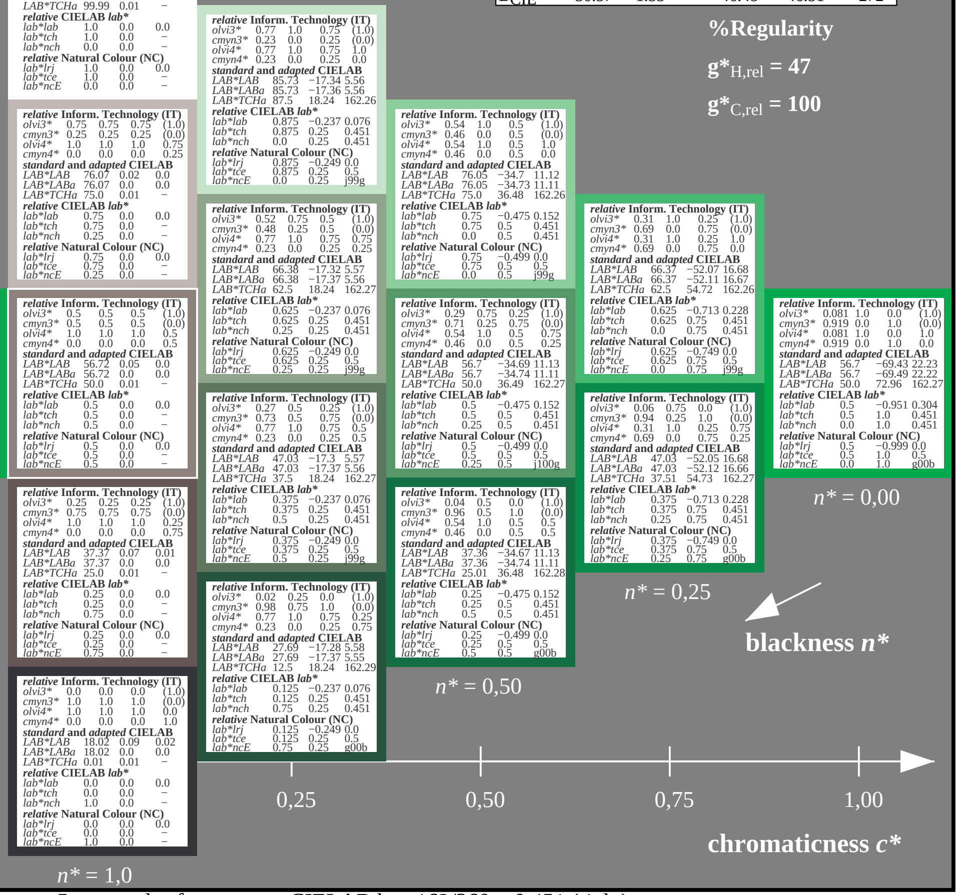


%Gamut
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$

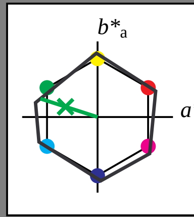


UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

Input: Colorimetric Reflective System NRS11
for hue *h** = *lab*h* = 162/360 = 0.451
*lab*tch* and *lab*nch*

D65: hue G
LCH*Ma: 53 80 162
rgb*Ma: 0.08 1.0 0.0
triangle lightness *t*

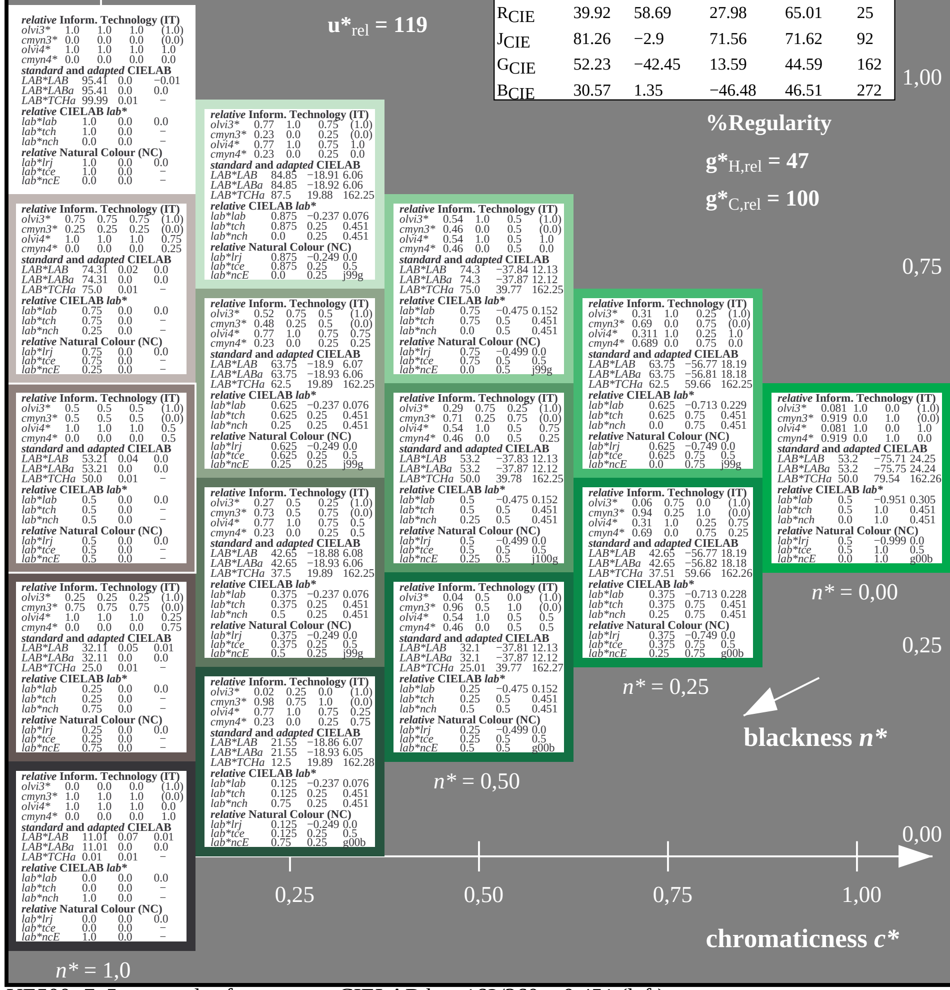


%Gamut
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

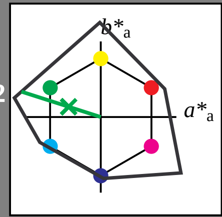
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NCS18
for hue *h** = *lab*h* = 162/360 = 0.451
*lab*tch* and *lab*nch*

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0
triangle lightness *t*

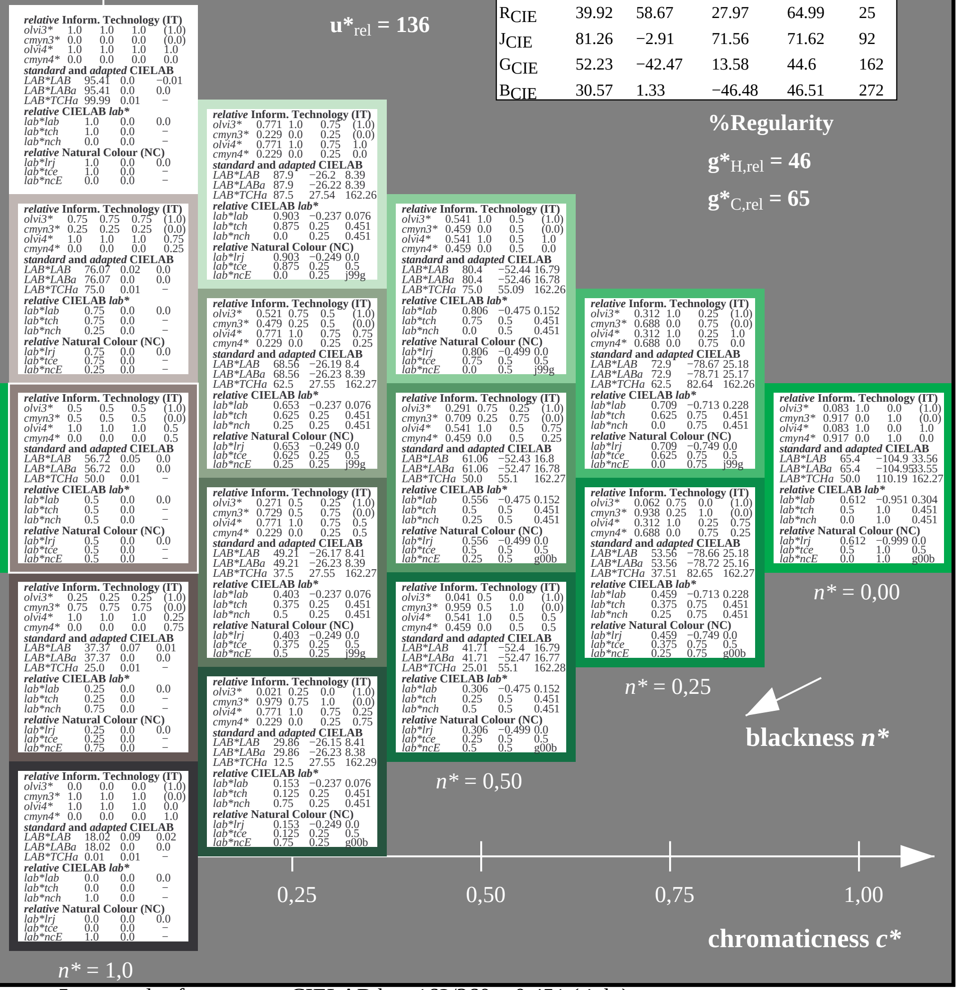


%Gamut
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



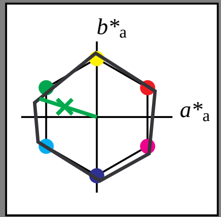
UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab^*tch and lab^*nch

D65: hue G
LCH*Ma: 53 80 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness t^*

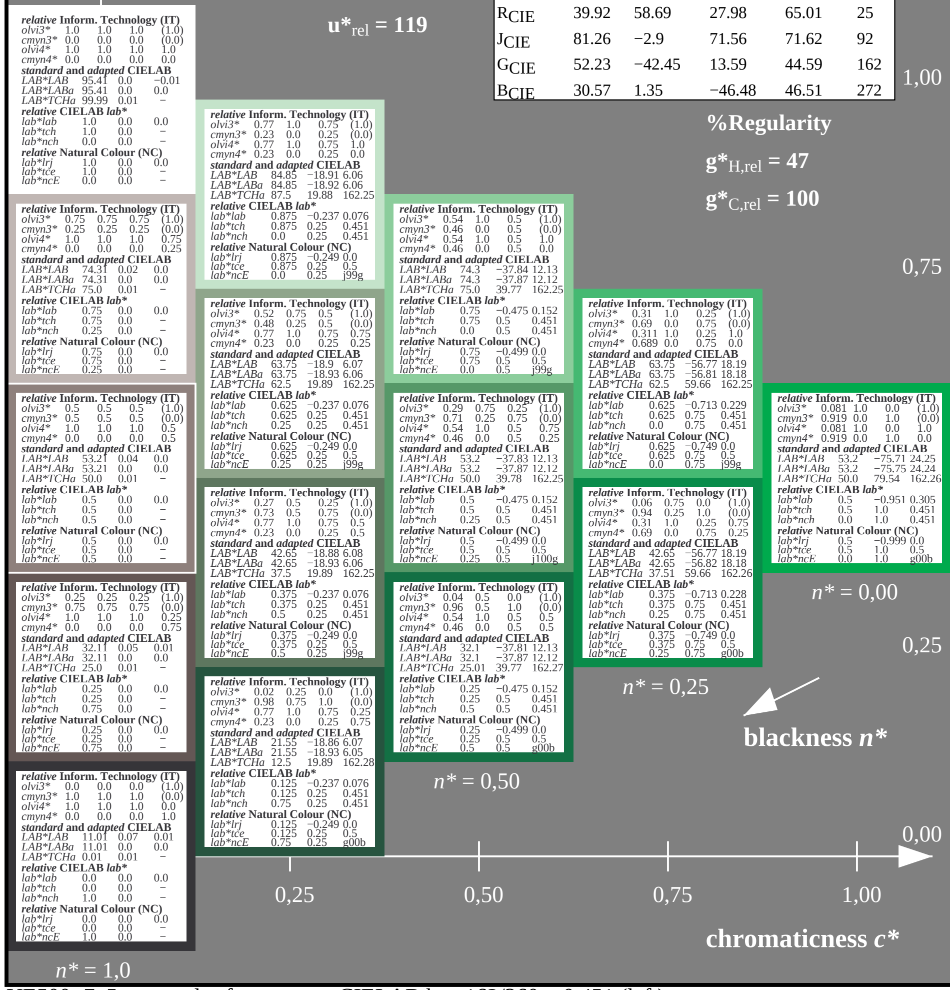


%Gamut
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

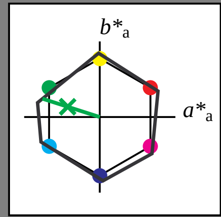
%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab^*tch and lab^*nch

D65: hue G
LCH*Ma: 53 80 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness t^*

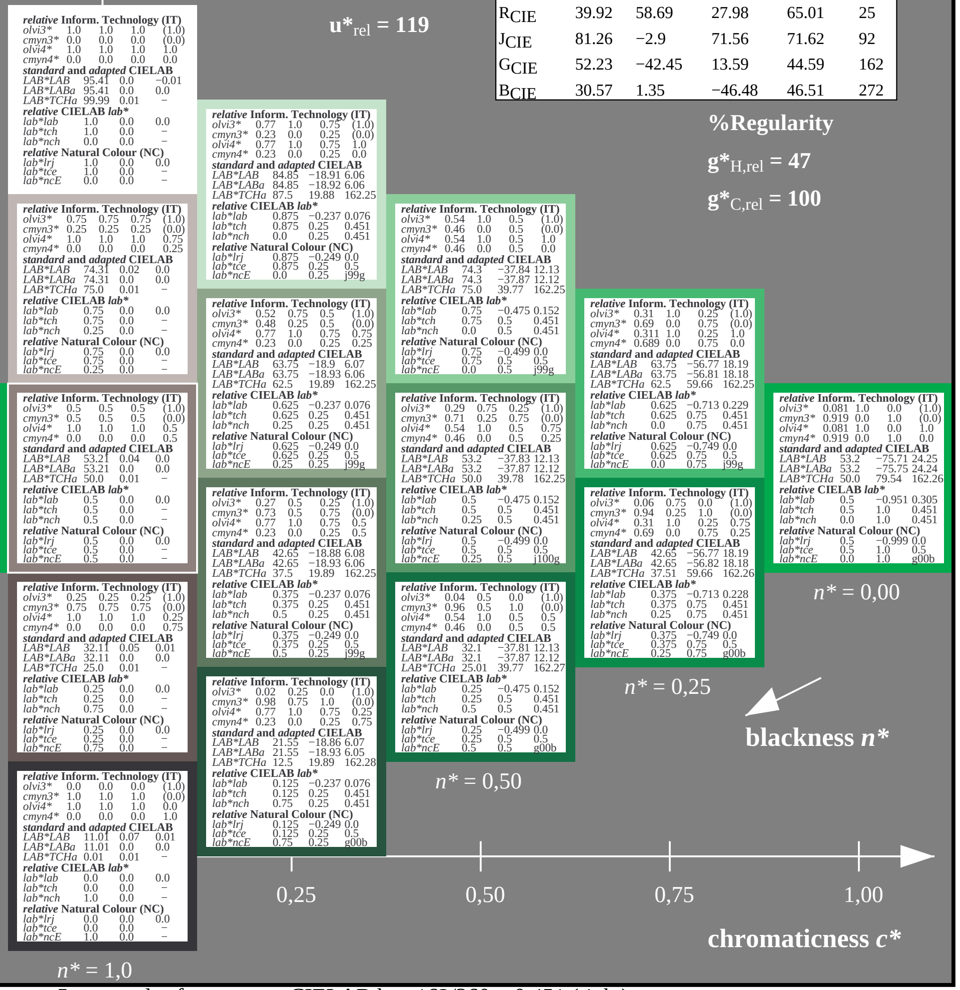


%Gamut
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100



UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

Input: Colorimetric Reflective System NRS11

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

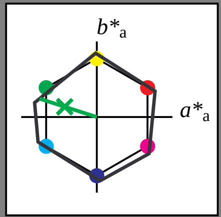
lab*tch* and *lab*nch

D65: hue G

LCH*Ma: 53 80 162

rgb*Ma: 0.08 1.0 0.0

triangle lightness t^*



%Gamut

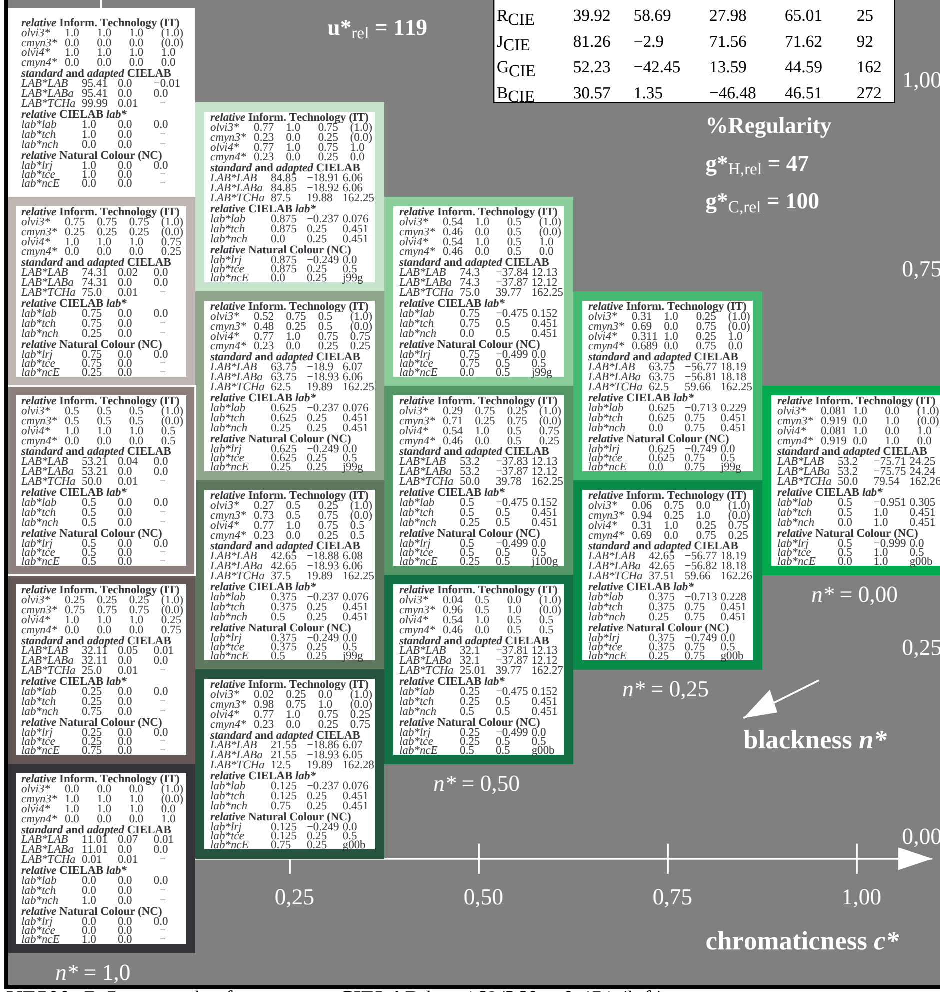
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NCS11

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

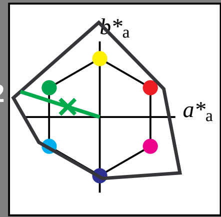
lab*tch* and *lab*nch

D65: hue G

LCH*Ma: 65 110 162

rgb*Ma: 0.08 1.0 0.0

triangle lightness t^*



%Gamut

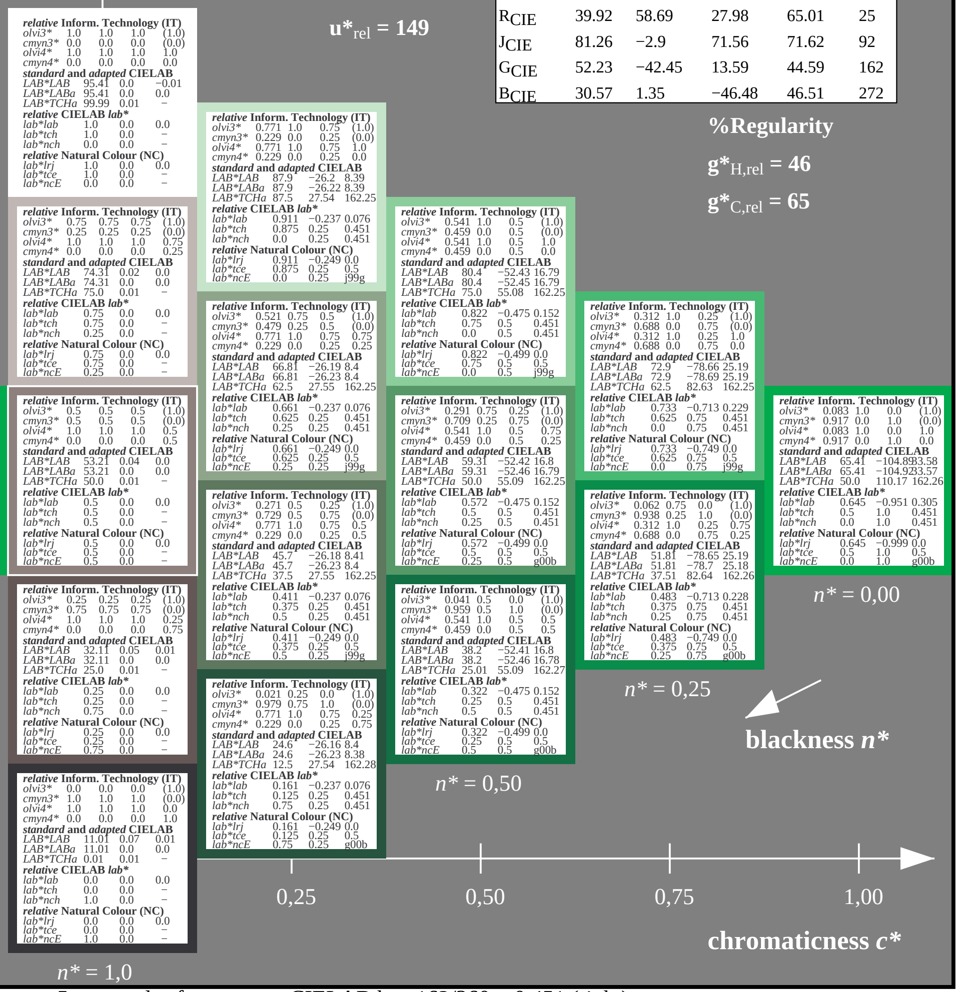
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

Input: Colorimetric Reflective System NCS11

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

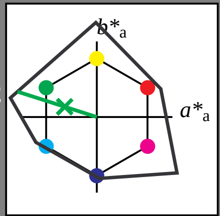
lab*tch* and *lab*nch

D65: hue G

LCH*Ma: 65 110 162

rgb*Ma: 0.08 1.0 0.0

triangle lightness t^*



%Gamut

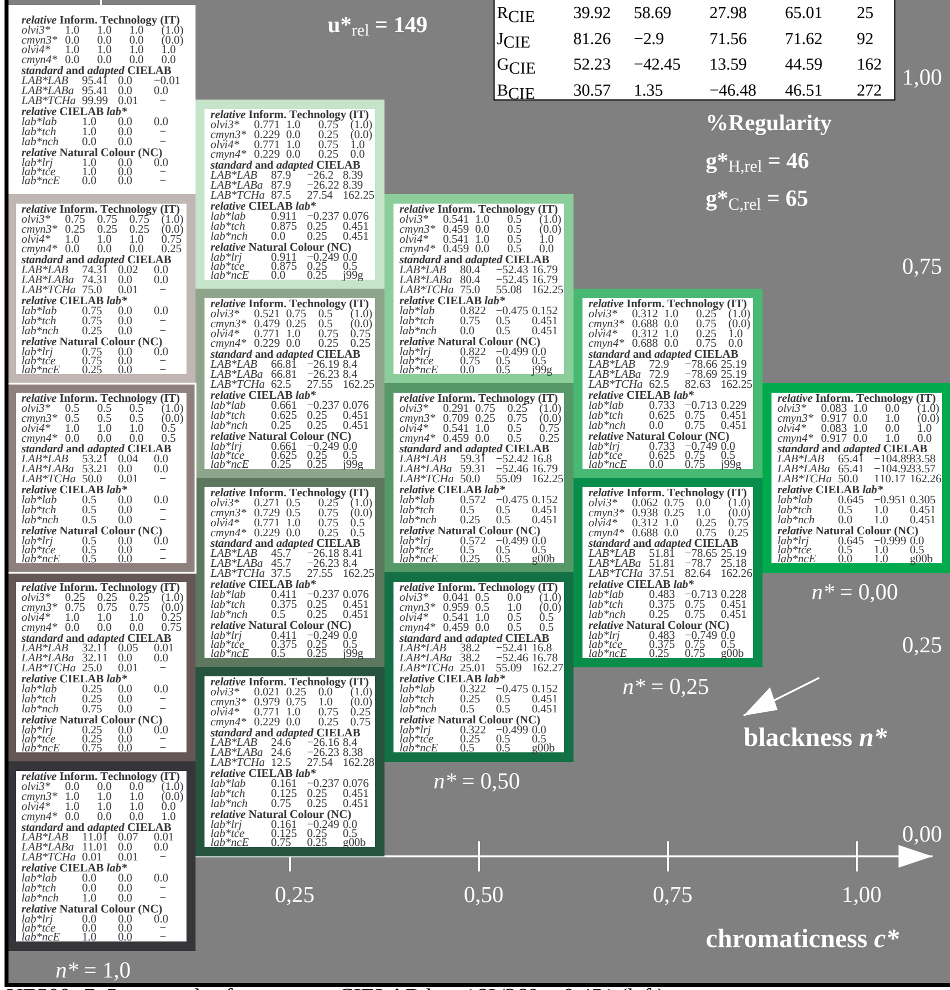
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System ORS18

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

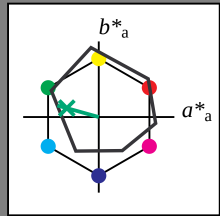
lab*tch* and *lab*nch

D65: hue G

LCH*Ma: 53 57 164

rgb*Ma: 0.0 1.0 0.25

triangle lightness t^*



%Gamut

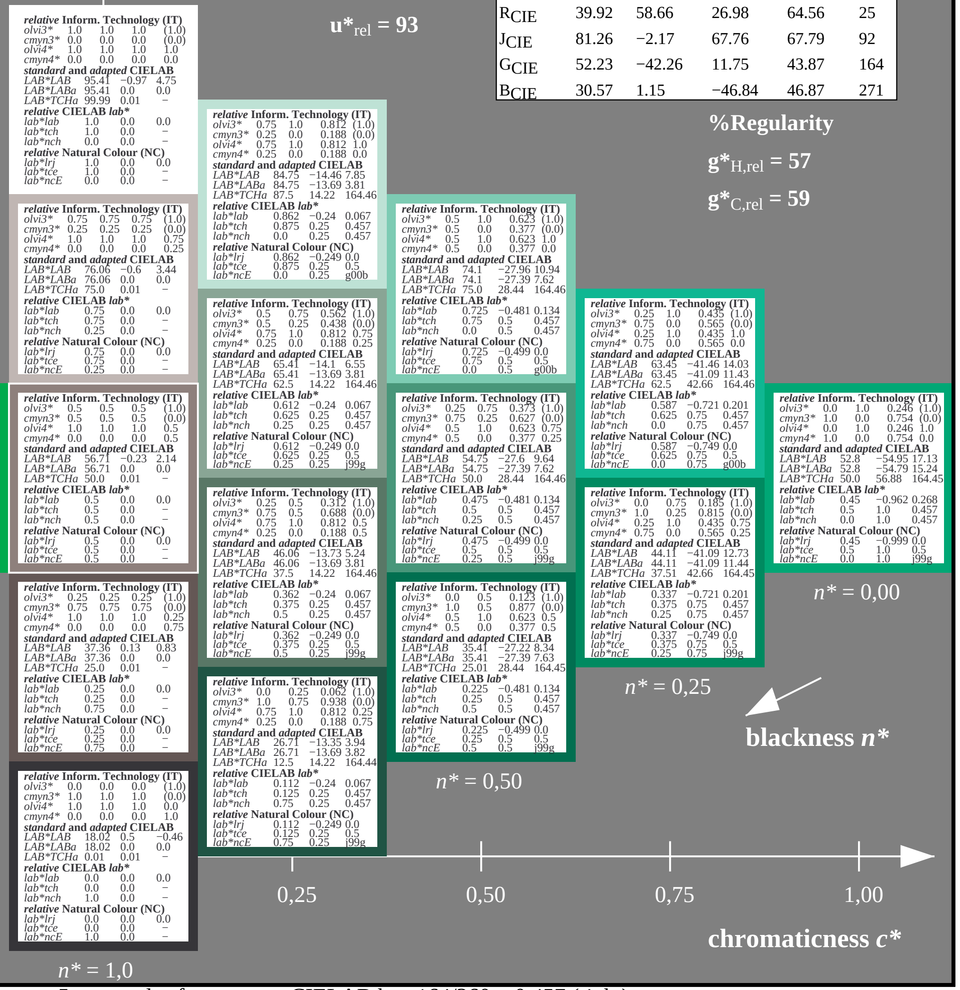
u^*_{rel} = 93

ORS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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

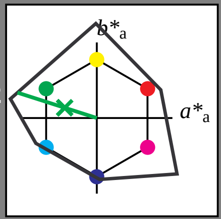


UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

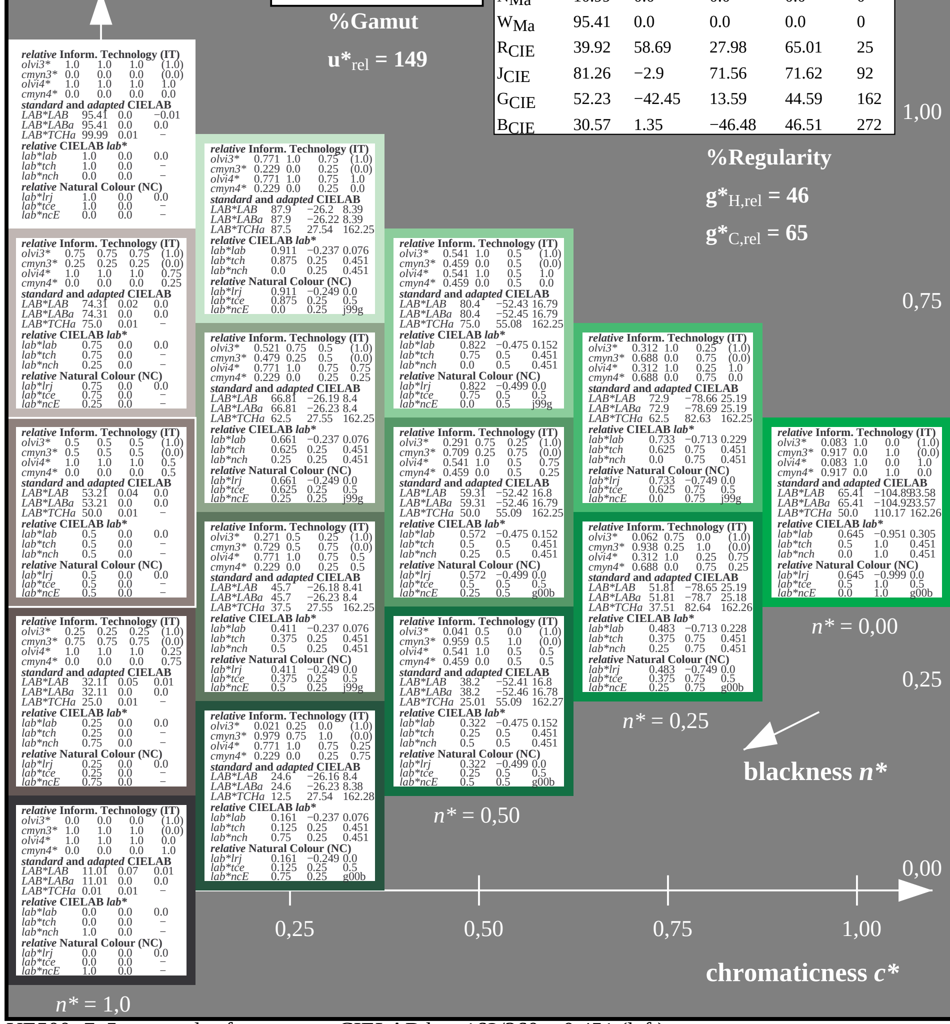
D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0
triangle lightness t^*



%Gamut
u^*_{rel} = 149

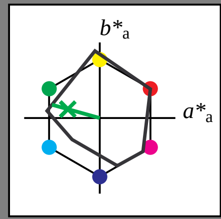
NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

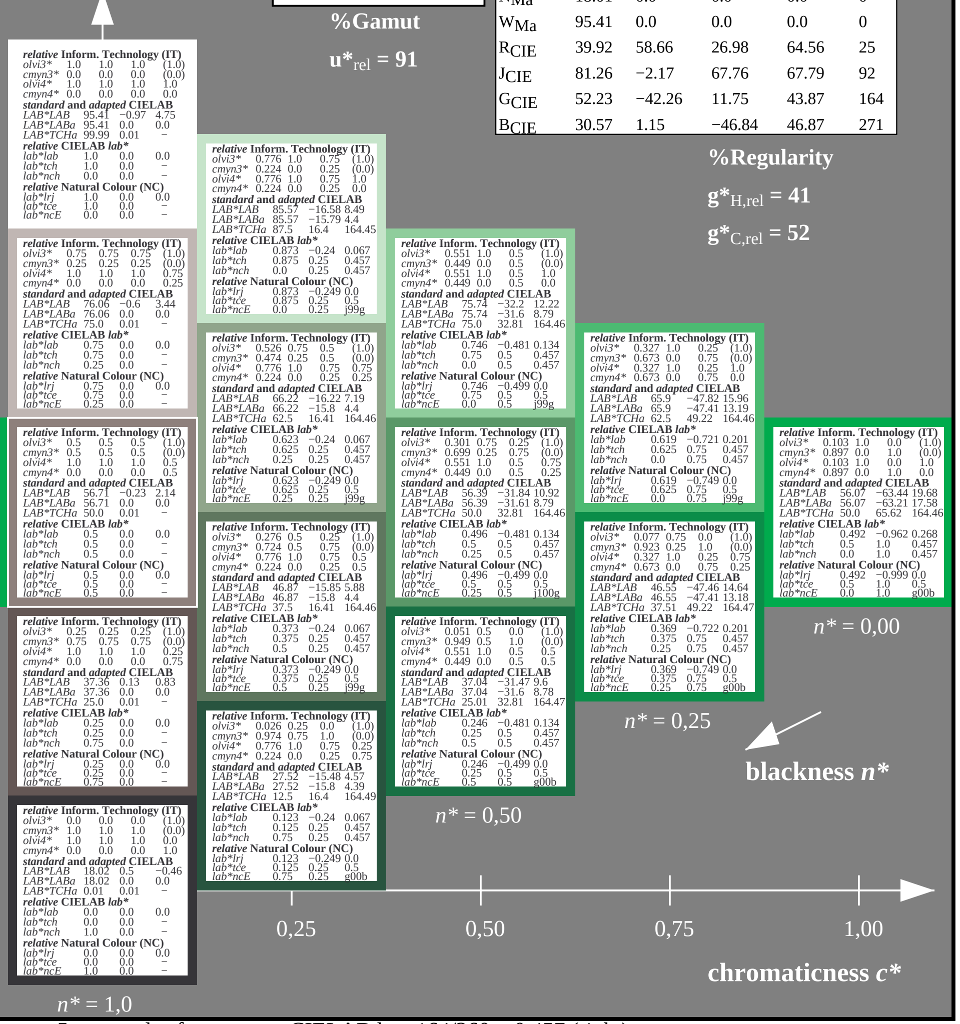
D65: hue G
LCH*Ma: 56 66 164
rgb*Ma: 0.1 1.0 0.0
triangle lightness t^*



%Gamut
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel}$ = 41
$g^*_{C,rel}$ = 52

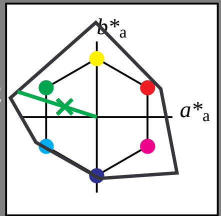


UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch and lab*nch

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0
triangle lightness t^*

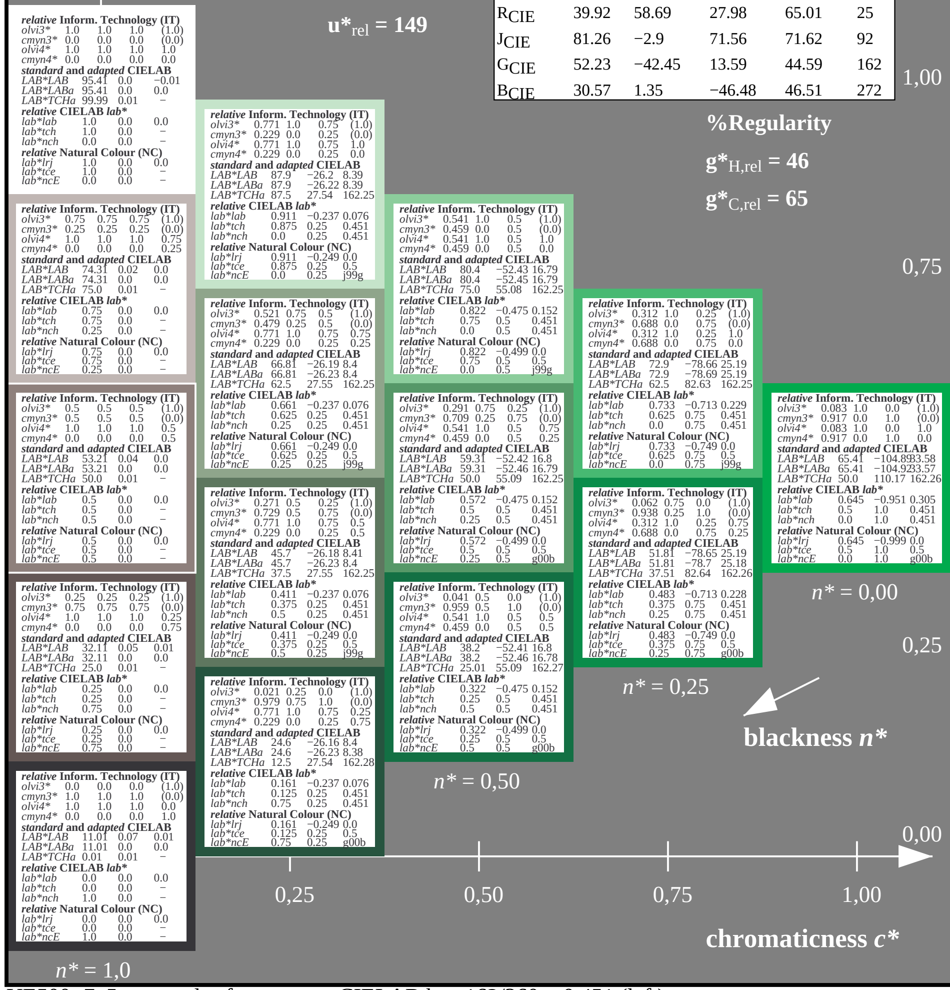


%Gamut
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

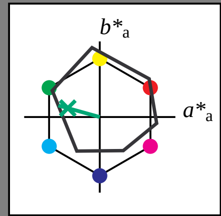
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch and lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25
triangle lightness t^*

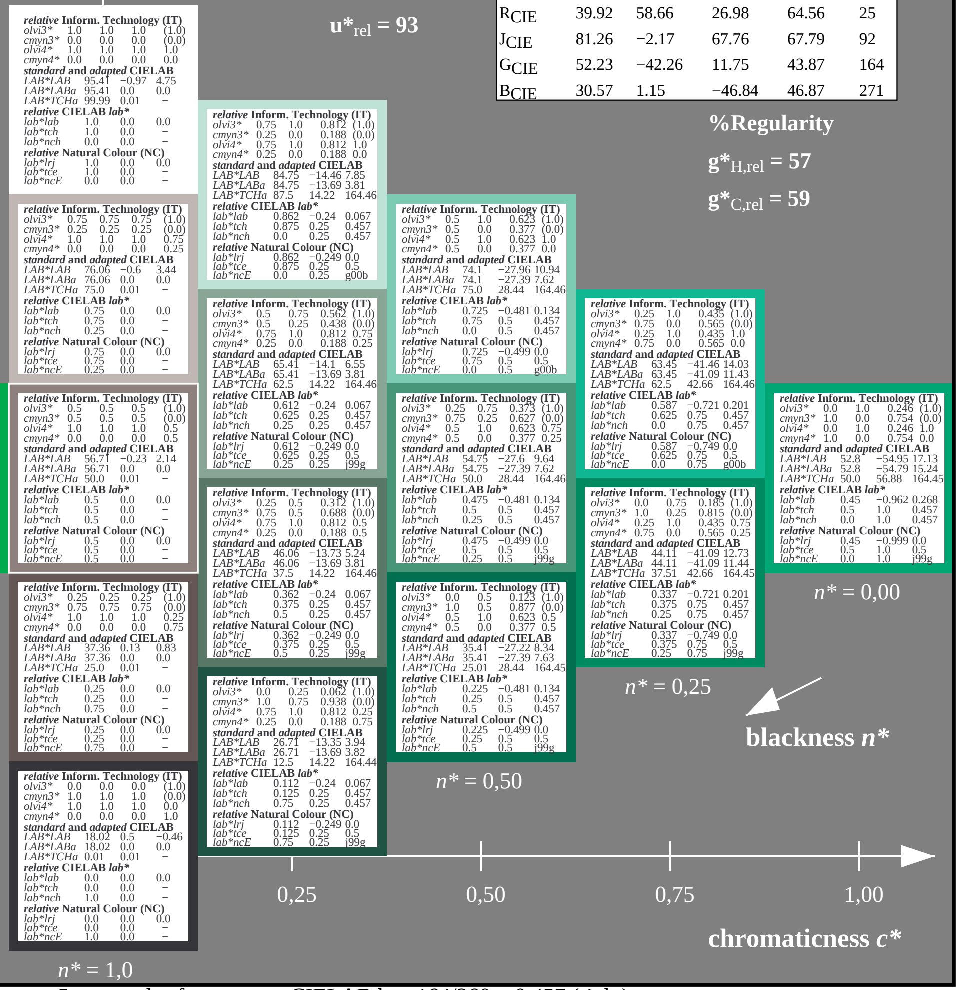


%Gamut
u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel}$ = 57
$g^*_{C,rel}$ = 59



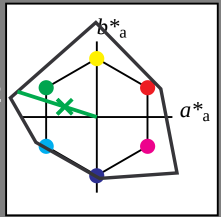
UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness t^*

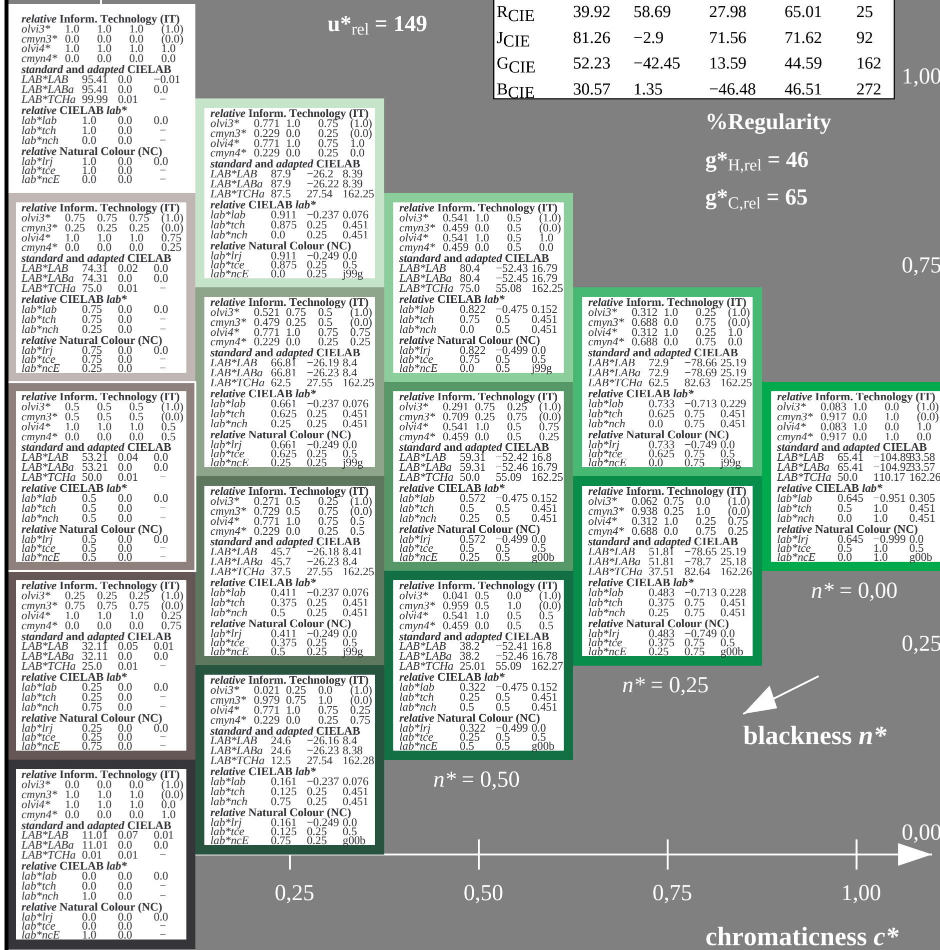


NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut
$u^*_{rel} = 149$

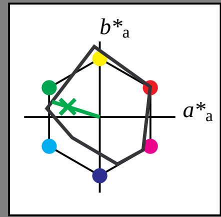
%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 56 66 162
rgb*Ma: 0.11 1.0 0.0

triangle lightness t^*

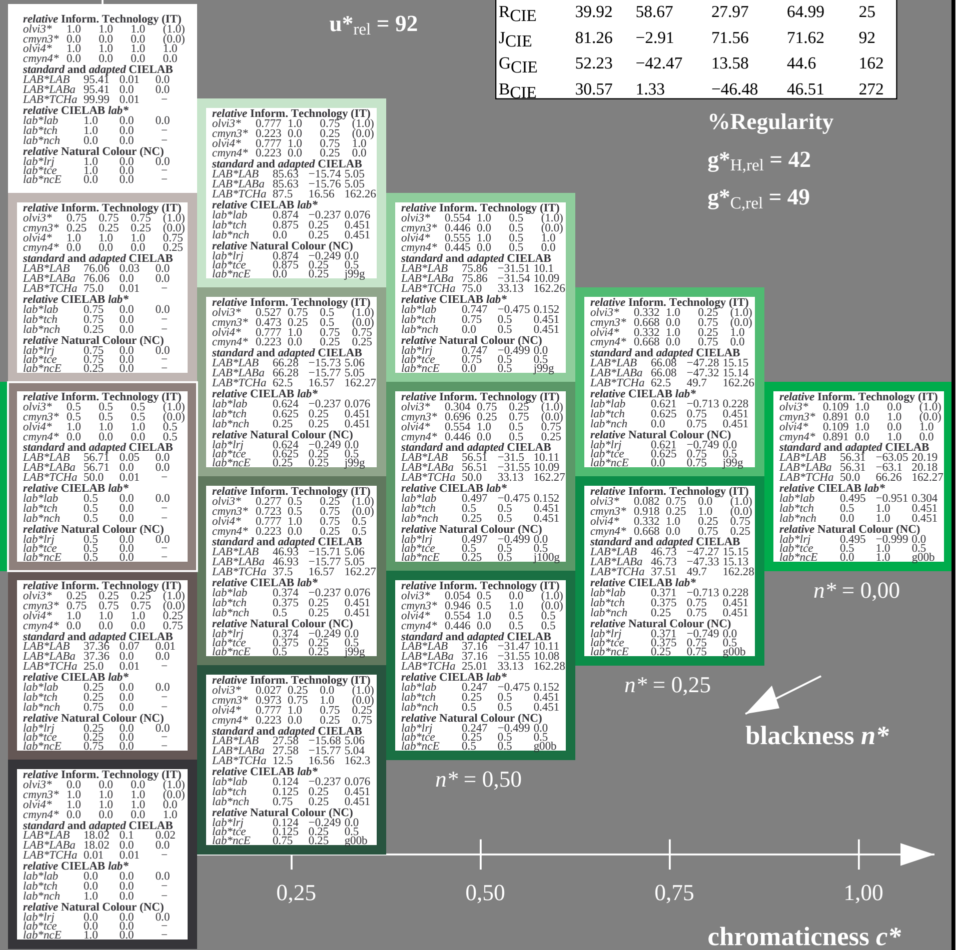


MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut
$u^*_{rel} = 92$

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$

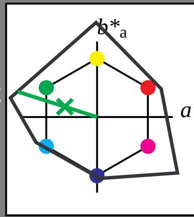


UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 162/360 = 0.451$
*lab*tch and lab*nch*

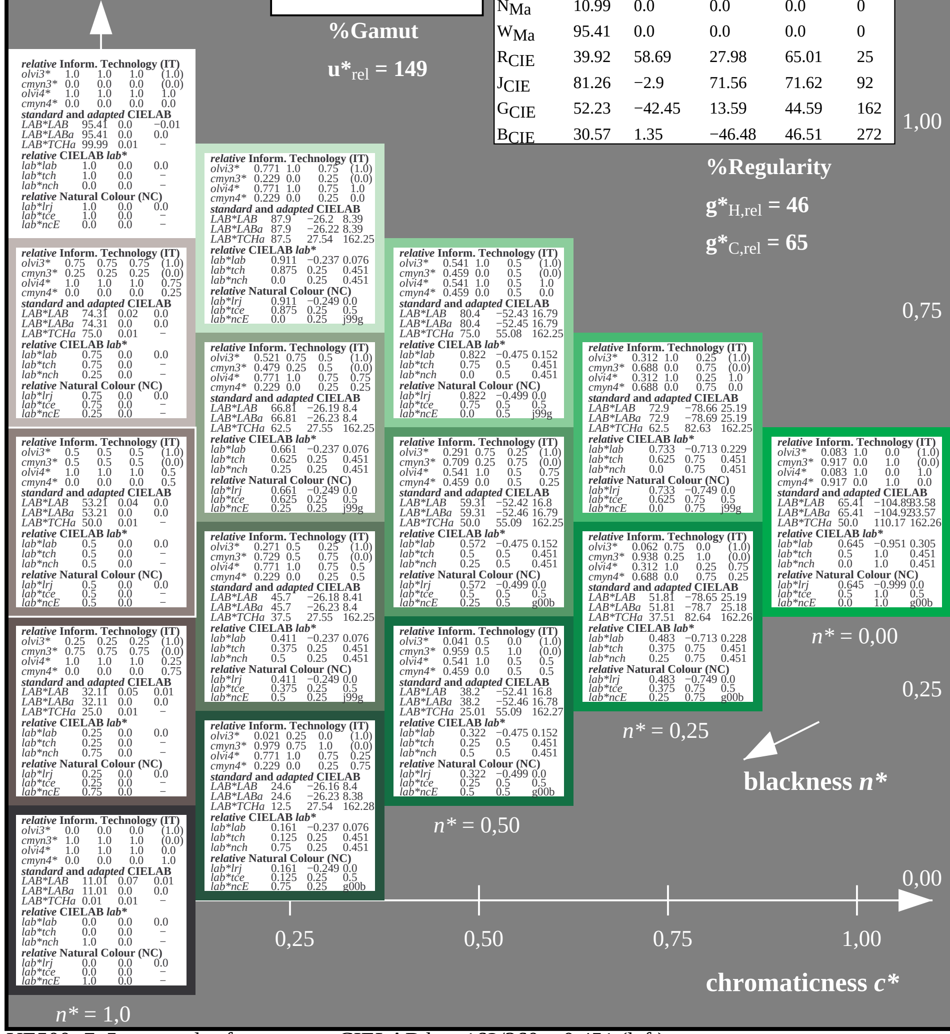
D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0
triangle lightness t^*



%Gamut
u^*_{rel} = 149

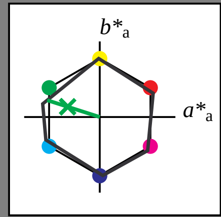
NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 162/360 = 0.451$
*lab*tch and lab*nch*

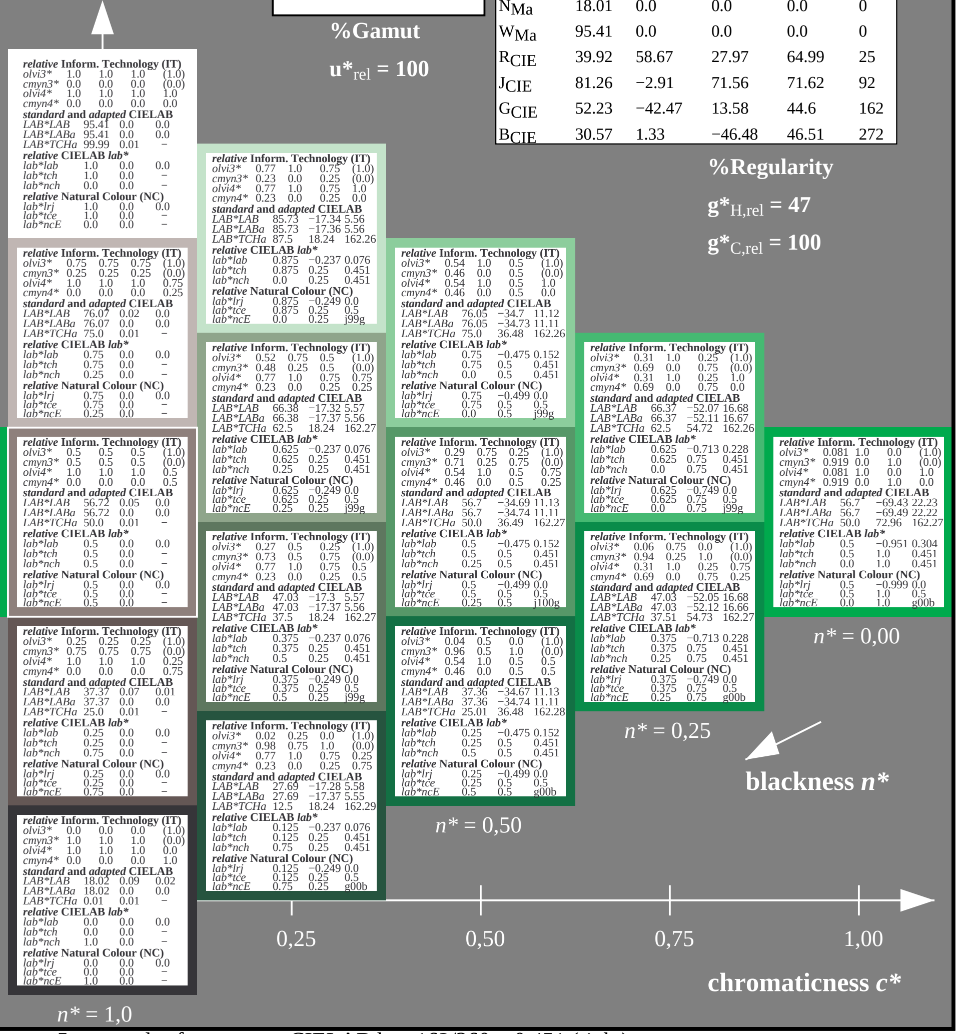
D65: hue G
LCH*Ma: 57 73 162
rgb*Ma: 0.08 1.0 0.0
triangle lightness t^*



%Gamut
u^*_{rel} = 100

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100

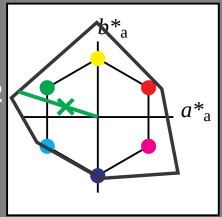


UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch and lab*nch

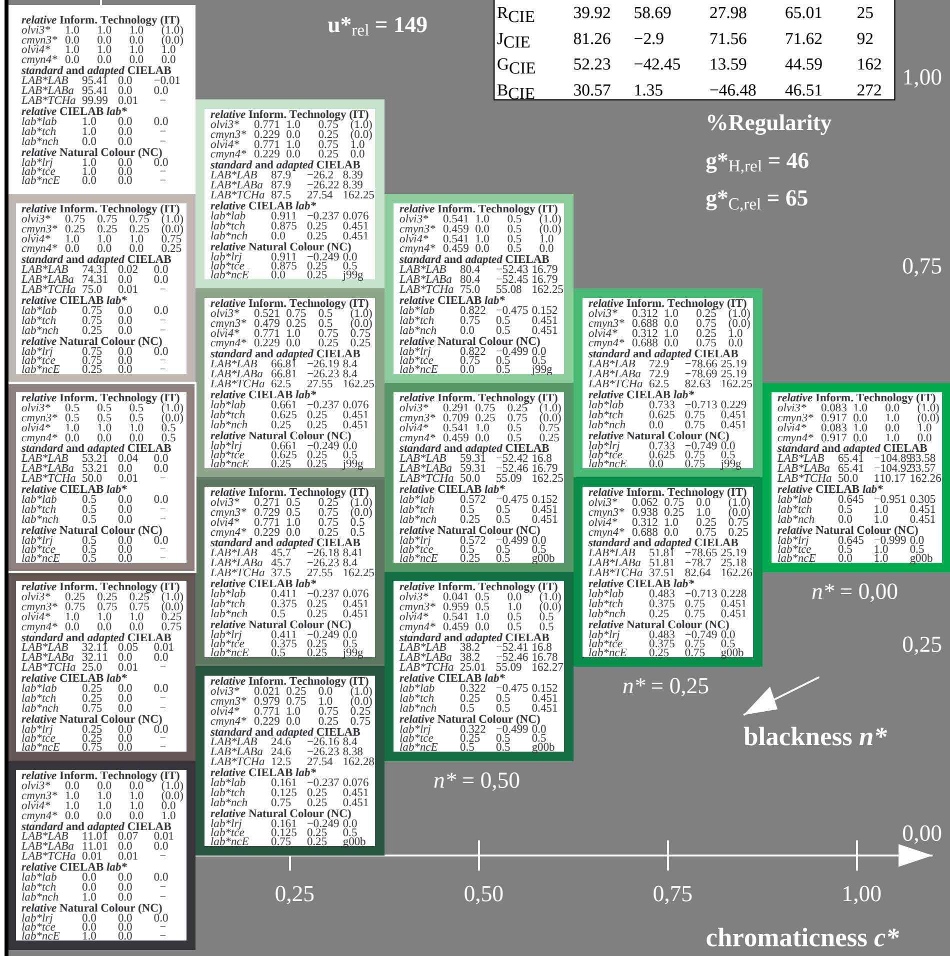
D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0
triangle lightness t^*



%Gamut
u^*_{rel} = 149

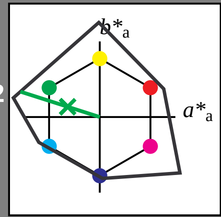
NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch and lab*nch

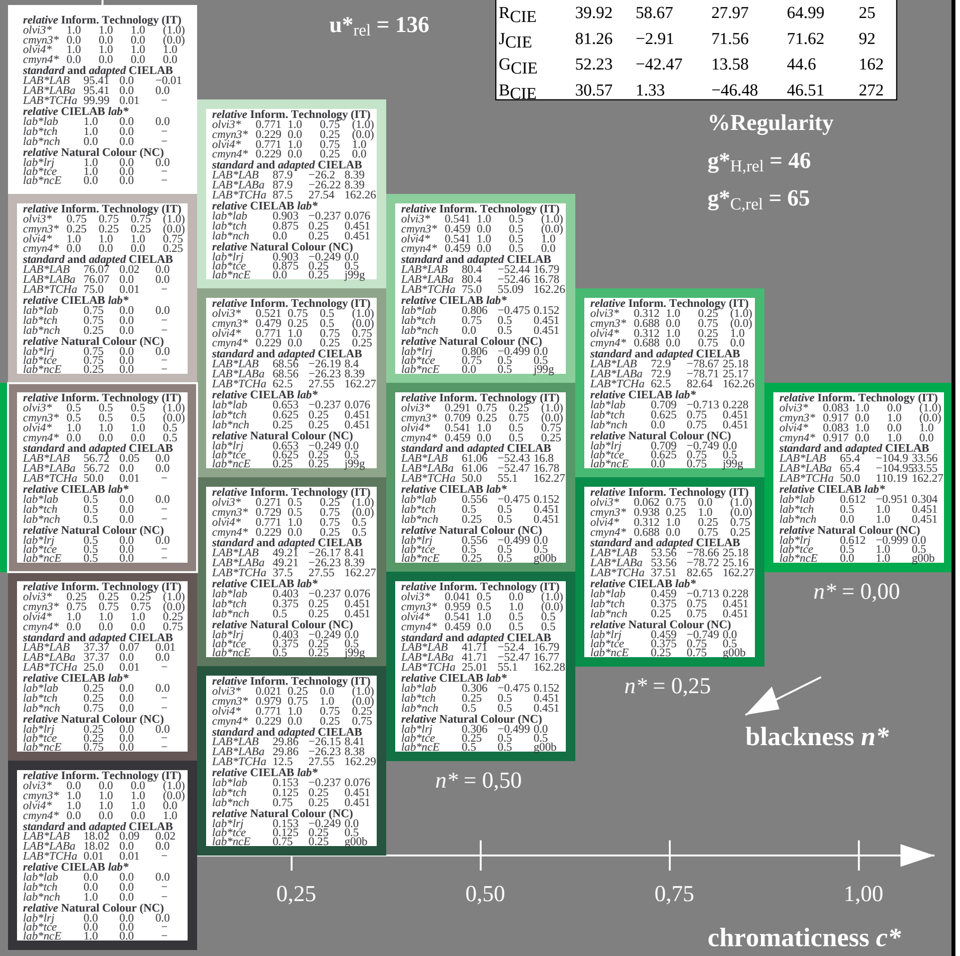
D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0
triangle lightness t^*



%Gamut
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



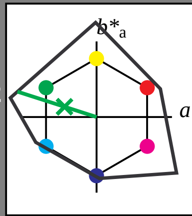
UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

Input: Colorimetric Reflective System NCS11
for hue *h = *lab*h* = 162/360 = 0.451**
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness *t*

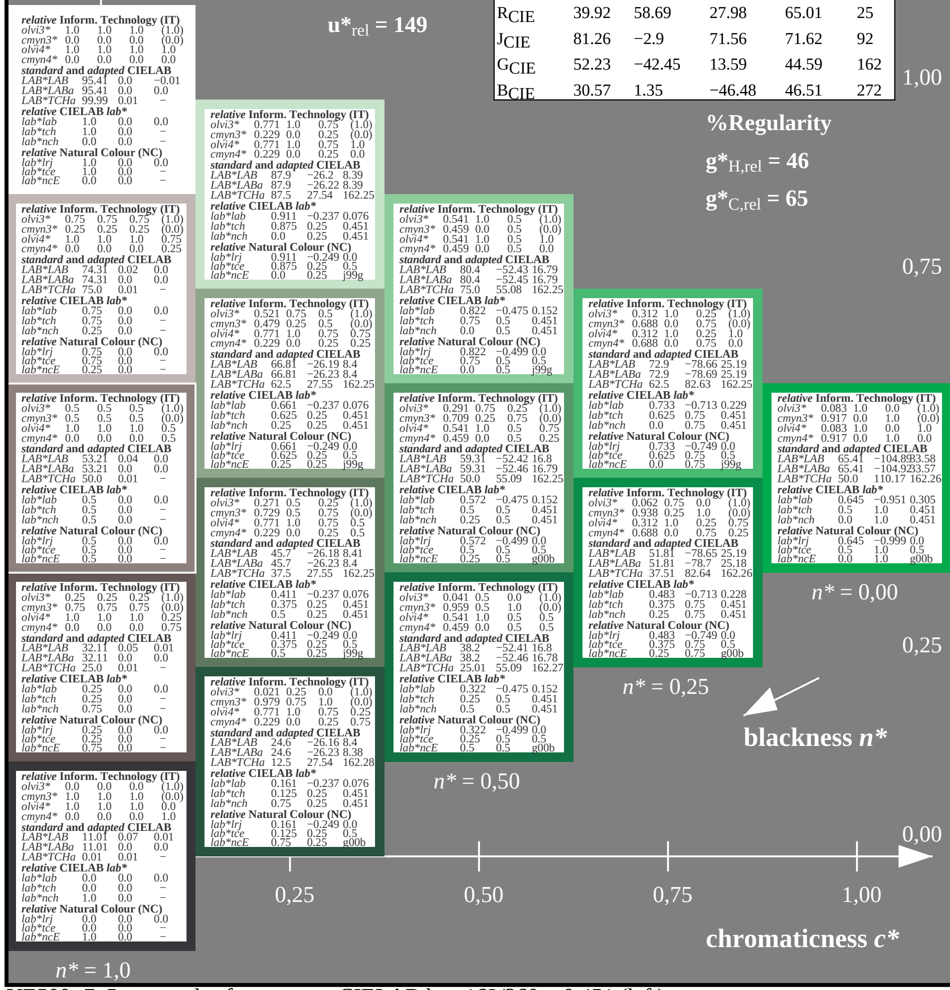


NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut
u^*_{rel} = 149

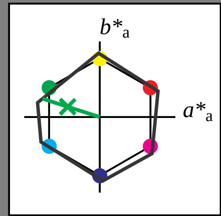
%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NRS11
for hue *h = *lab*h* = 162/360 = 0.451**
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 80 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness *t*

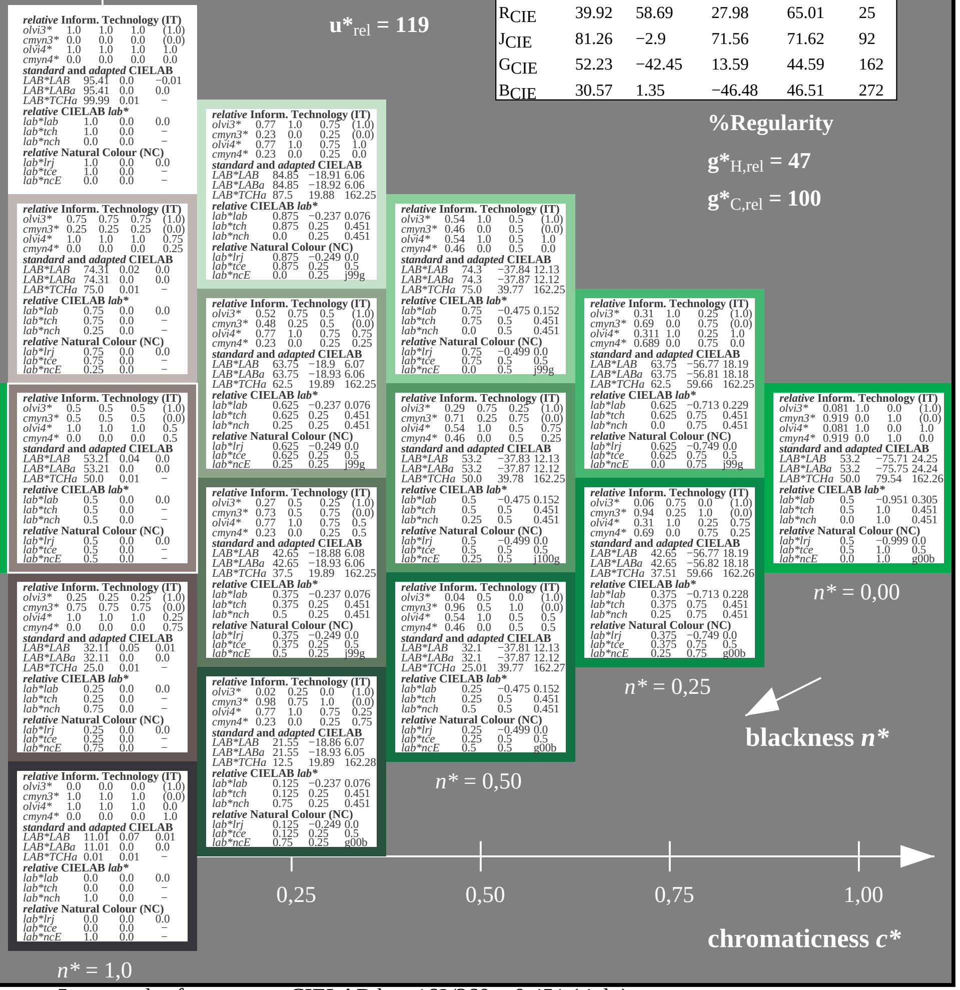


NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut
u^*_{rel} = 119

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100



UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

Input: Colorimetric Reflective System NCS11

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

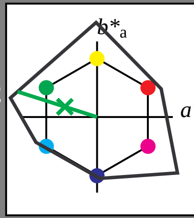
lab^*tch and lab^*nch

D65: hue G

LCH*Ma: 65 110 162

rgb*Ma: 0.08 1.0 0.0

triangle lightness t^*



%Gamut

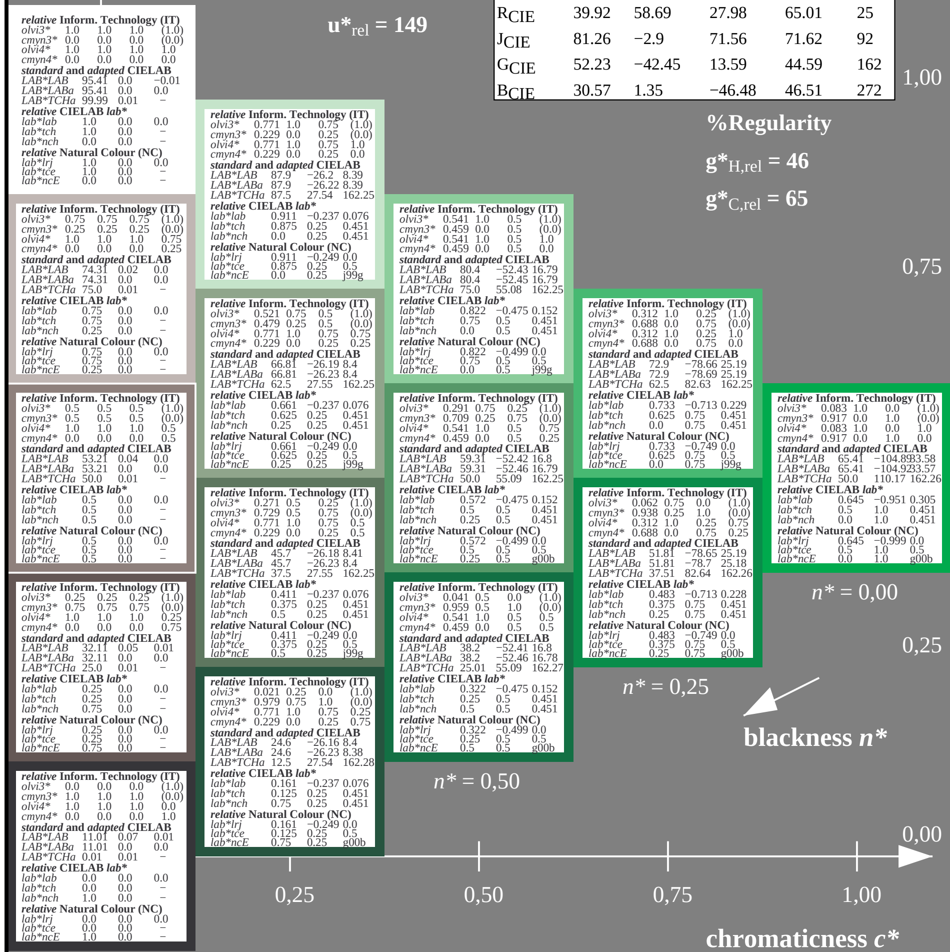
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System NCS11

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

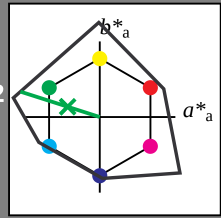
lab^*tch and lab^*nch

D65: hue G

LCH*Ma: 65 110 162

rgb*Ma: 0.08 1.0 0.0

triangle lightness t^*



%Gamut

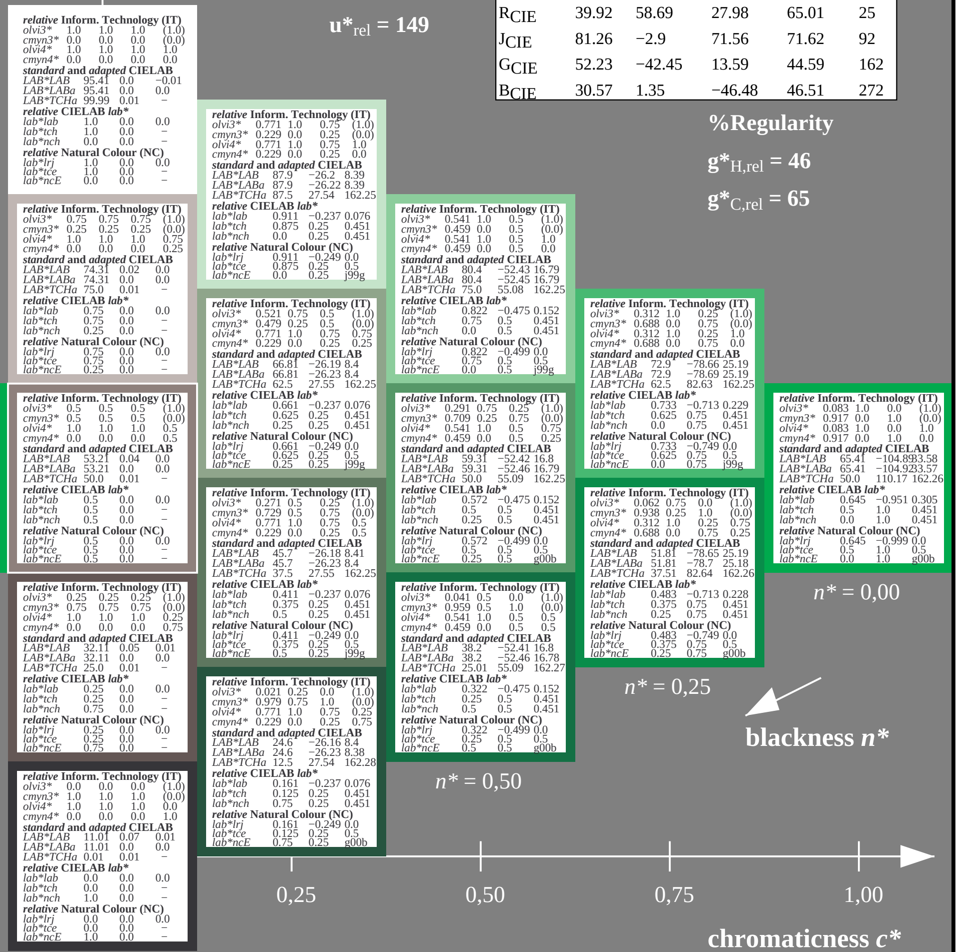
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$

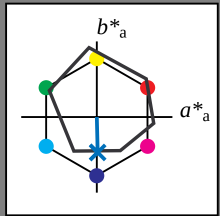


UE500−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 271/360 = 0.754$
*lab*tch* and *lab*nch*

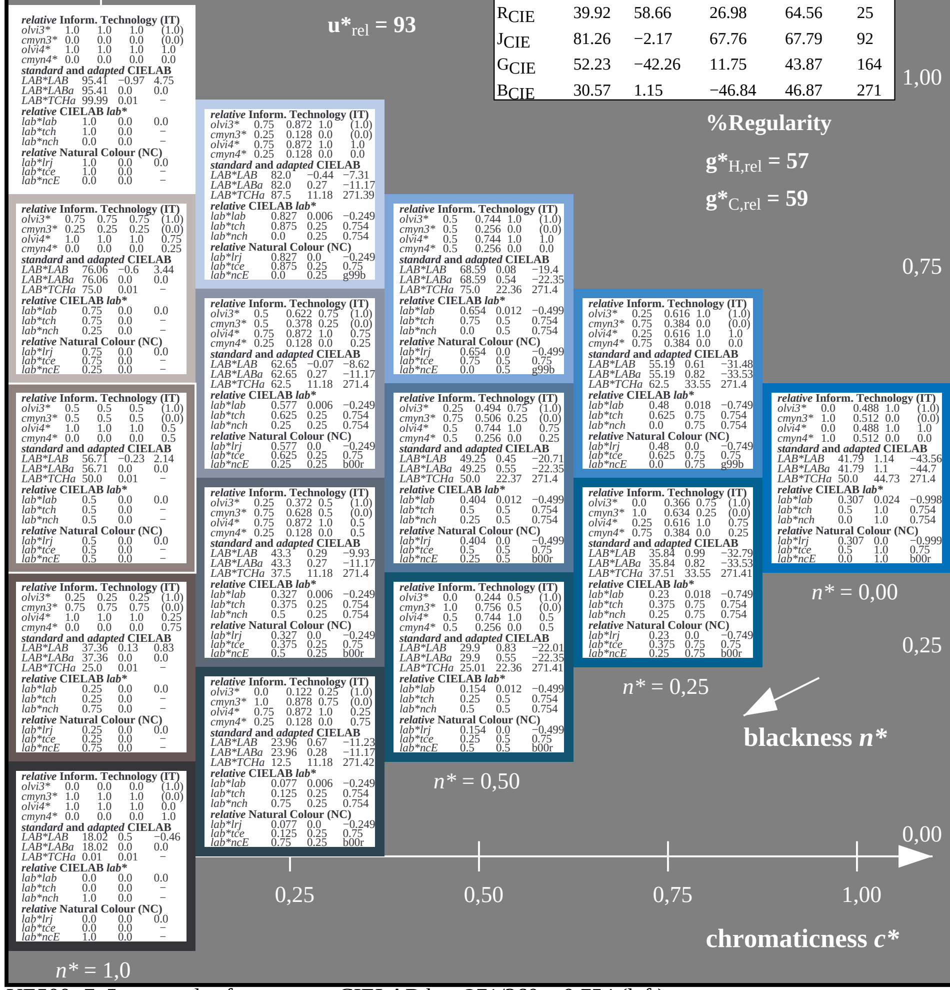
D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 93$

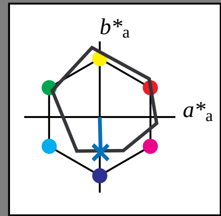
ORS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 271/360 = 0.754$
*lab*tch* and *lab*nch*

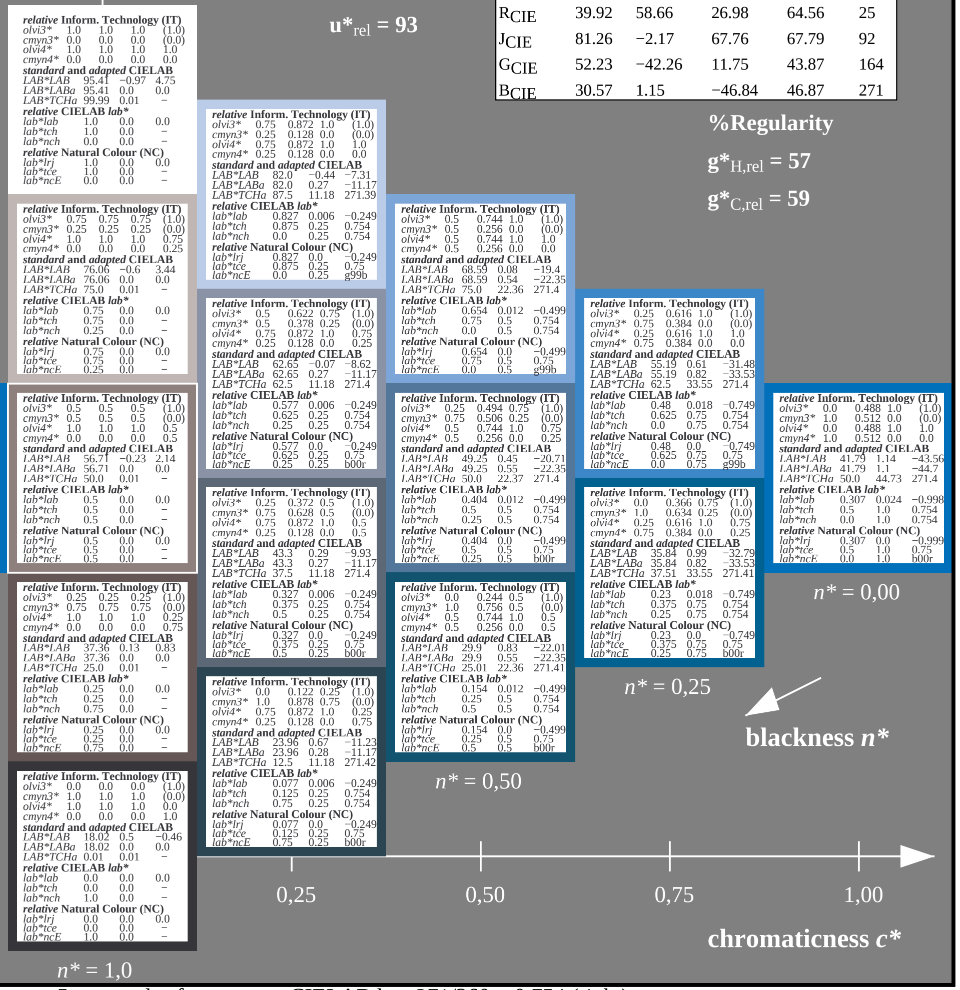
D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



UE500−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

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

Input: Colorimetric Reflective System ORS18

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

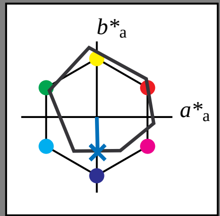
*lab*tch* and *lab*nch*

D65: hue B

LCH*Ma: 42 45 271

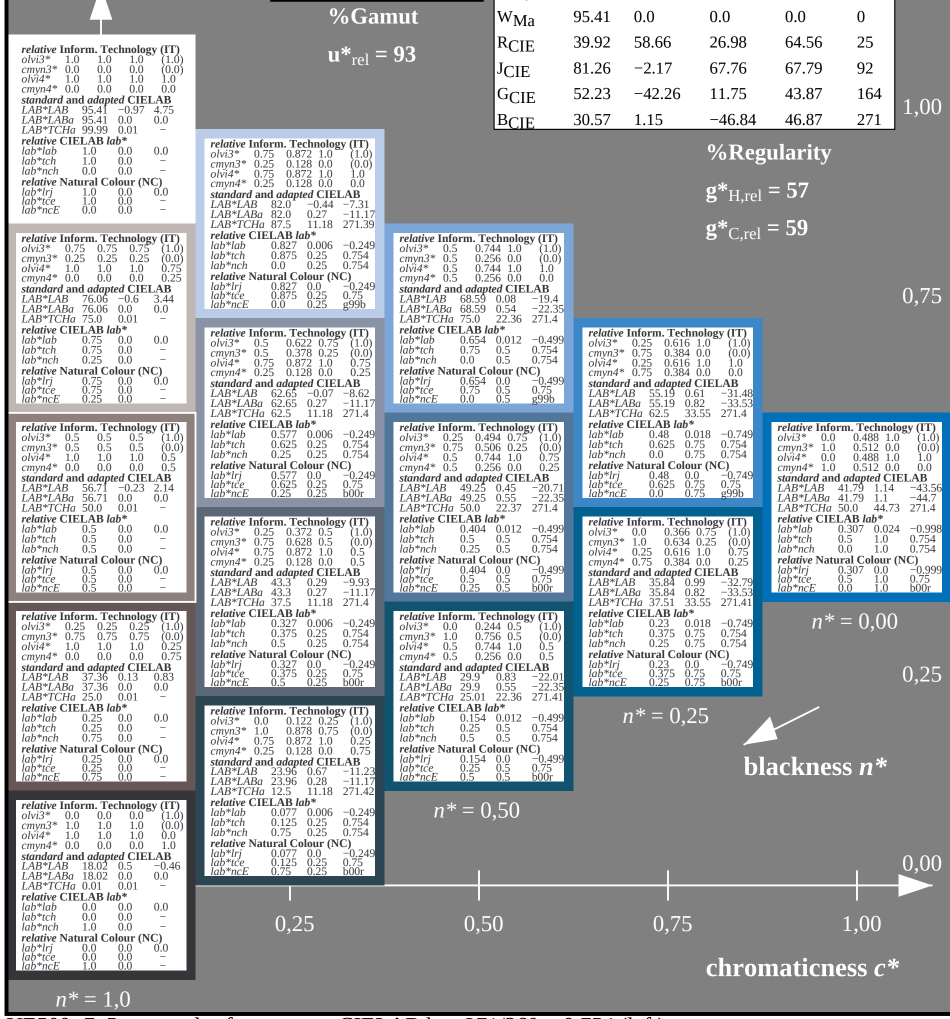
rgb*Ma: 0.0 0.49 1.0

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	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



Output: Colorimetric Reflective System MRS18

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

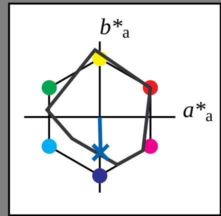
*lab*tch* and *lab*nch*

D65: hue B

LCH*Ma: 40 50 271

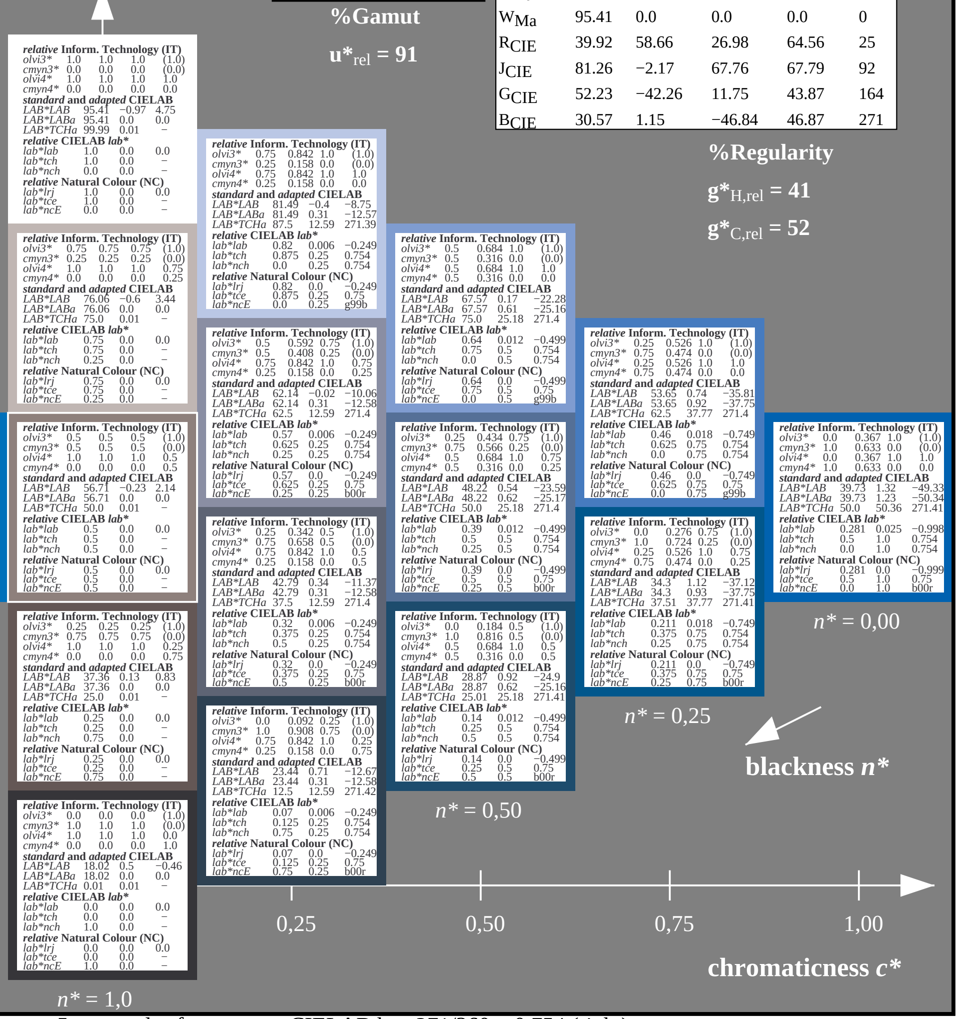
rgb*Ma: 0.0 0.37 1.0

triangle lightness t^*



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



UE500−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

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

Input: Colorimetric Reflective System ORS18

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

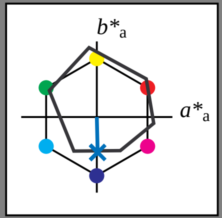
lab^*tch and lab^*nch

D65: hue B

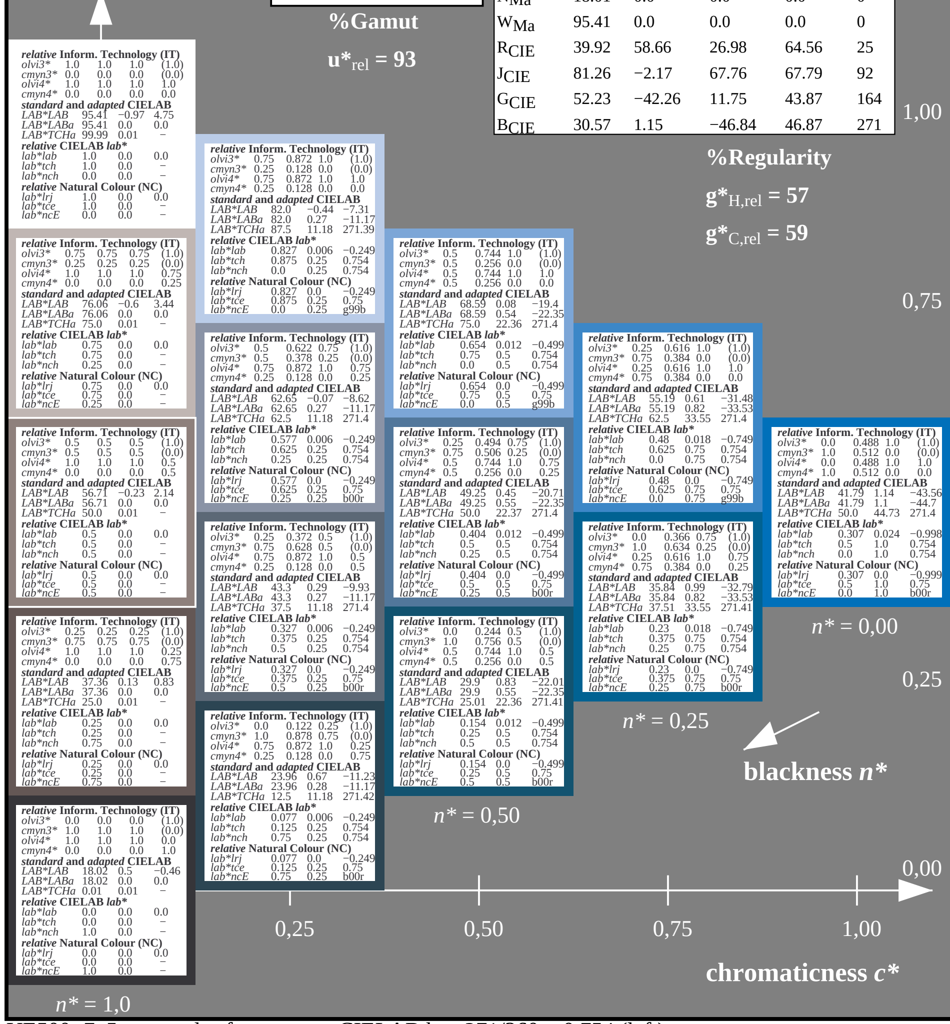
LCH*Ma: 42 45 271

rgb*Ma: 0.0 0.49 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	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



Output: Colorimetric Reflective System TRS18

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

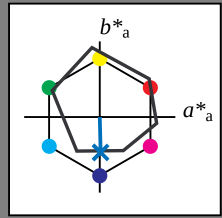
lab^*tch and lab^*nch

D65: hue B

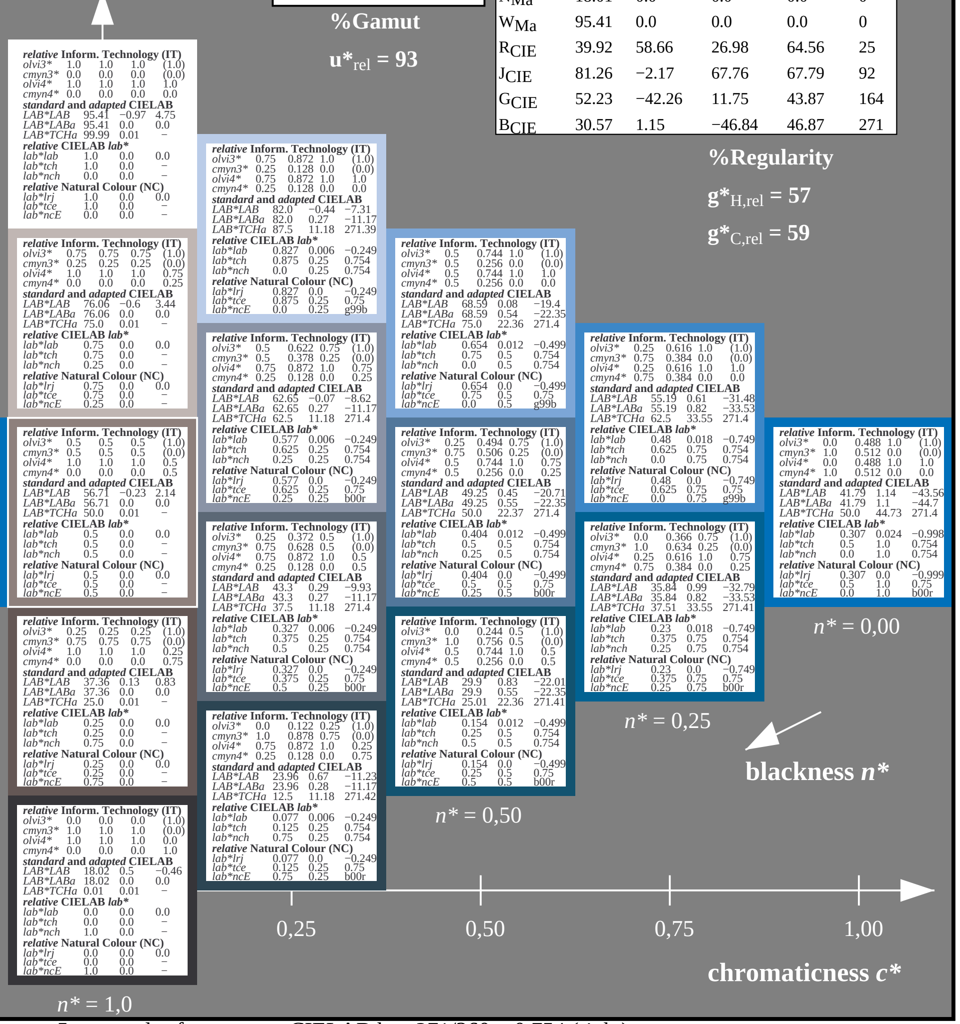
LCH*Ma: 42 45 271

rgb*Ma: 0.0 0.49 1.0

triangle lightness t^*



TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



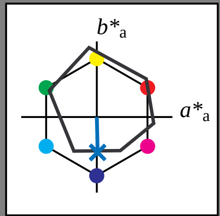
UE500−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

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

Input: Colorimetric Reflective System ORS18
for hue *h = *lab*h* = 271/360 = 0.754**
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness *t*



%Gamut

u^*_{rel} = 93

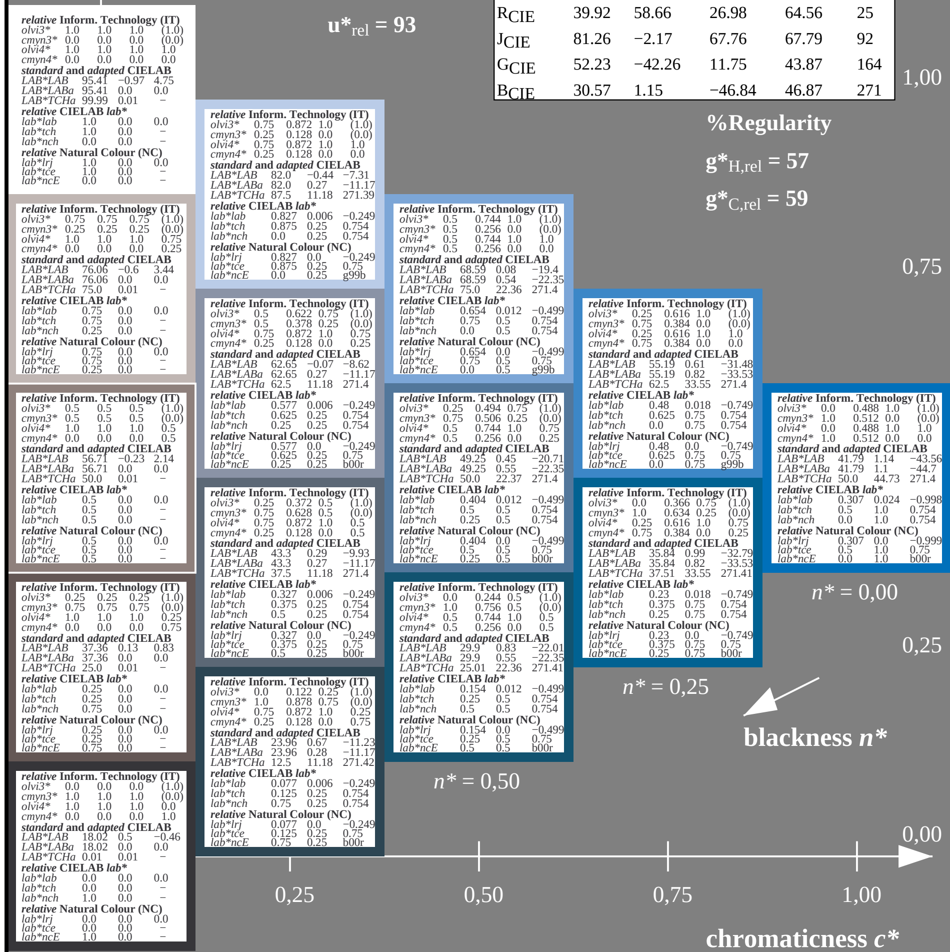
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

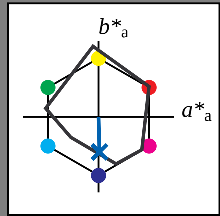
$g^*_{C,rel}$ = 59



Output: Colorimetric Reflective System MRS18a
for hue *h = *lab*h* = 272/360 = 0.755**
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 40 49 272
rgb*Ma: 0.0 0.36 1.0

triangle lightness *t*



%Gamut

u^*_{rel} = 92

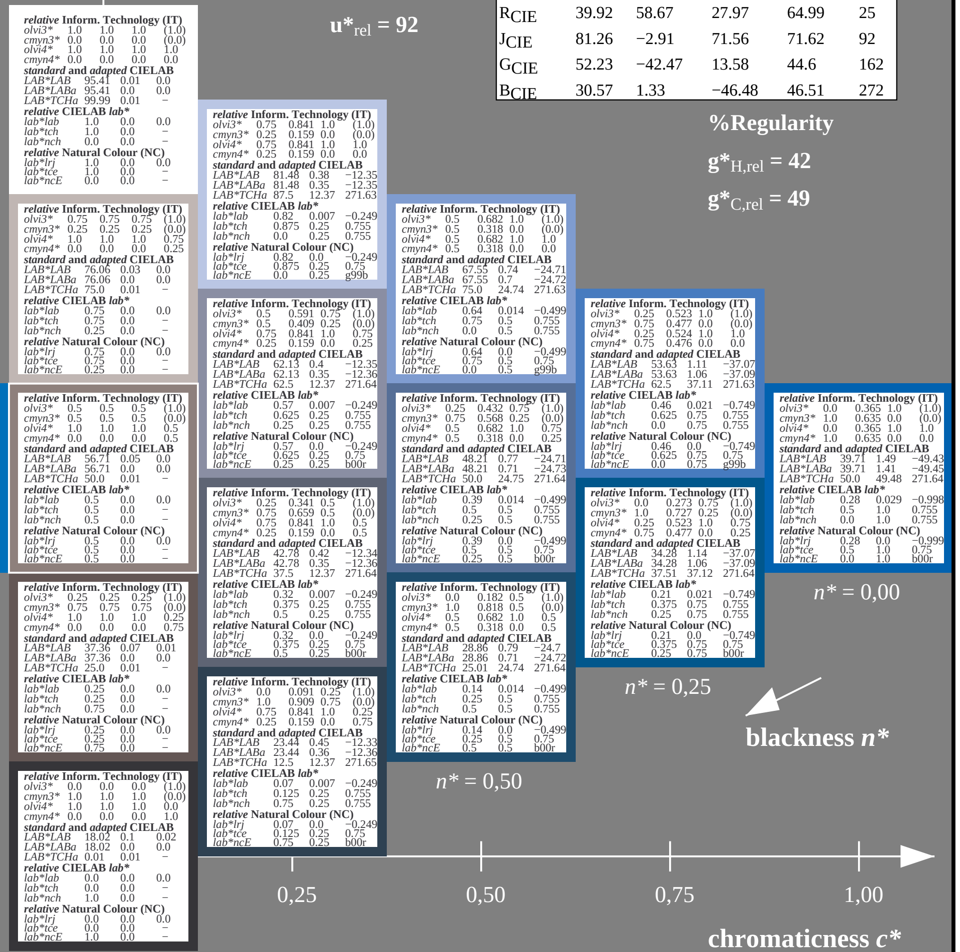
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



UE500−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

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

Input: Colorimetric Reflective System ORS18

for hue h = lab*h = 271/360 = 0.754*

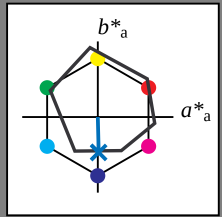
*lab*tch and lab*nch*

D65: hue B

LCH*Ma: 42 45 271

rgb*Ma: 0.0 0.49 1.0

triangle lightness t*



%Gamut

u*rel = 93

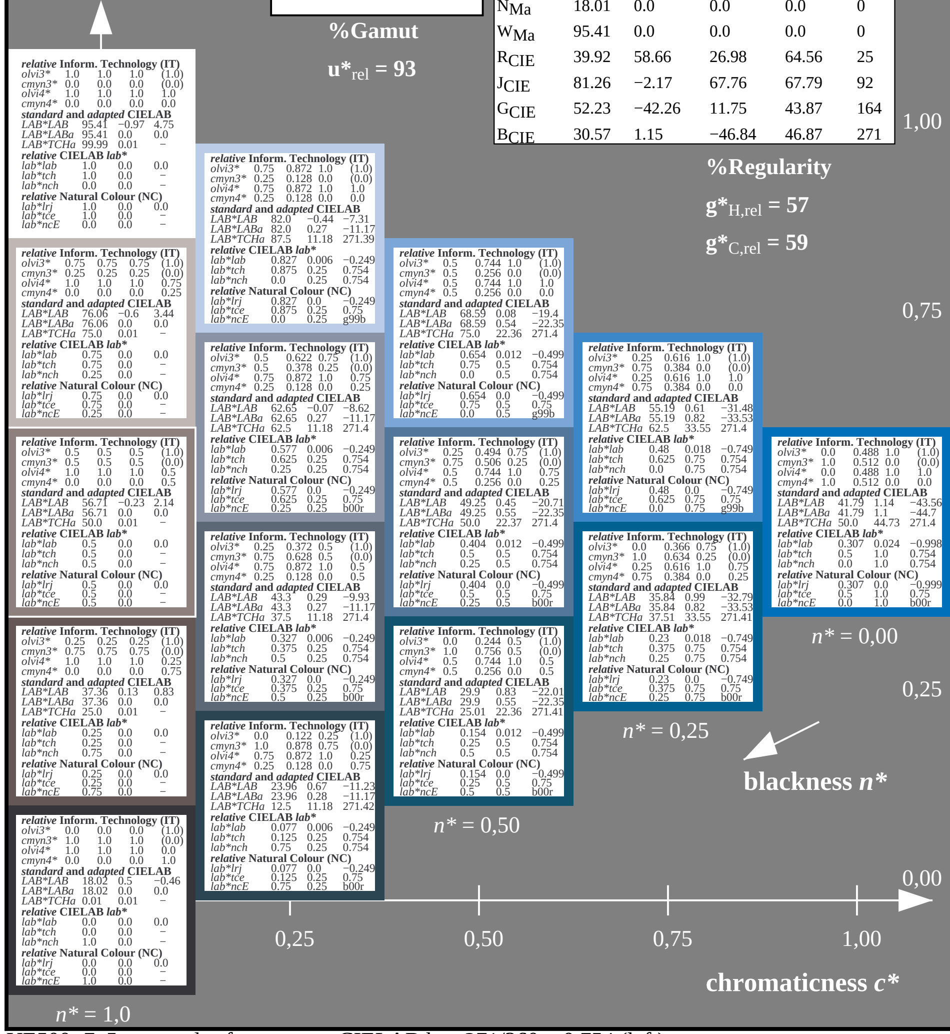
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

g*H,rel = 57

g*C,rel = 59



Output: Colorimetric Reflective System NRS18

for hue h = lab*h = 272/360 = 0.755*

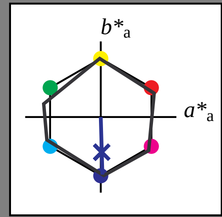
*lab*tch and lab*nch*

D65: hue B

LCH*Ma: 57 76 272

rgb*Ma: 0.0 0.02 1.0

triangle lightness t*



%Gamut

u*rel = 100

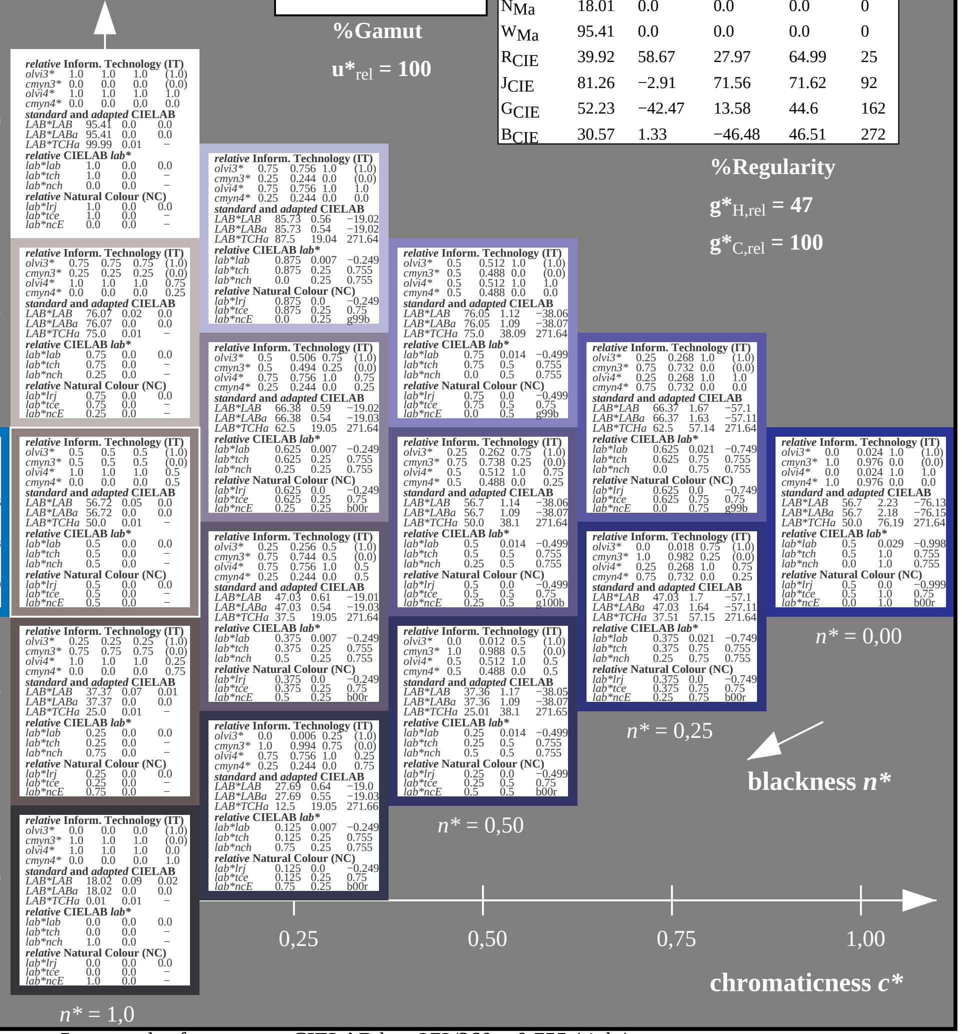
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

g*H,rel = 47

g*C,rel = 100



UE500−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

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

Input: Colorimetric Reflective System ORS18

for hue h = lab*h = 271/360 = 0.754*

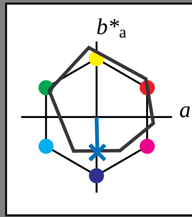
*lab*tch and lab*nch*

D65: hue B

LCH*Ma: 42 45 271

rgb*Ma: 0.0 0.49 1.0

triangle lightness t*



%Gamut

u*rel = 93

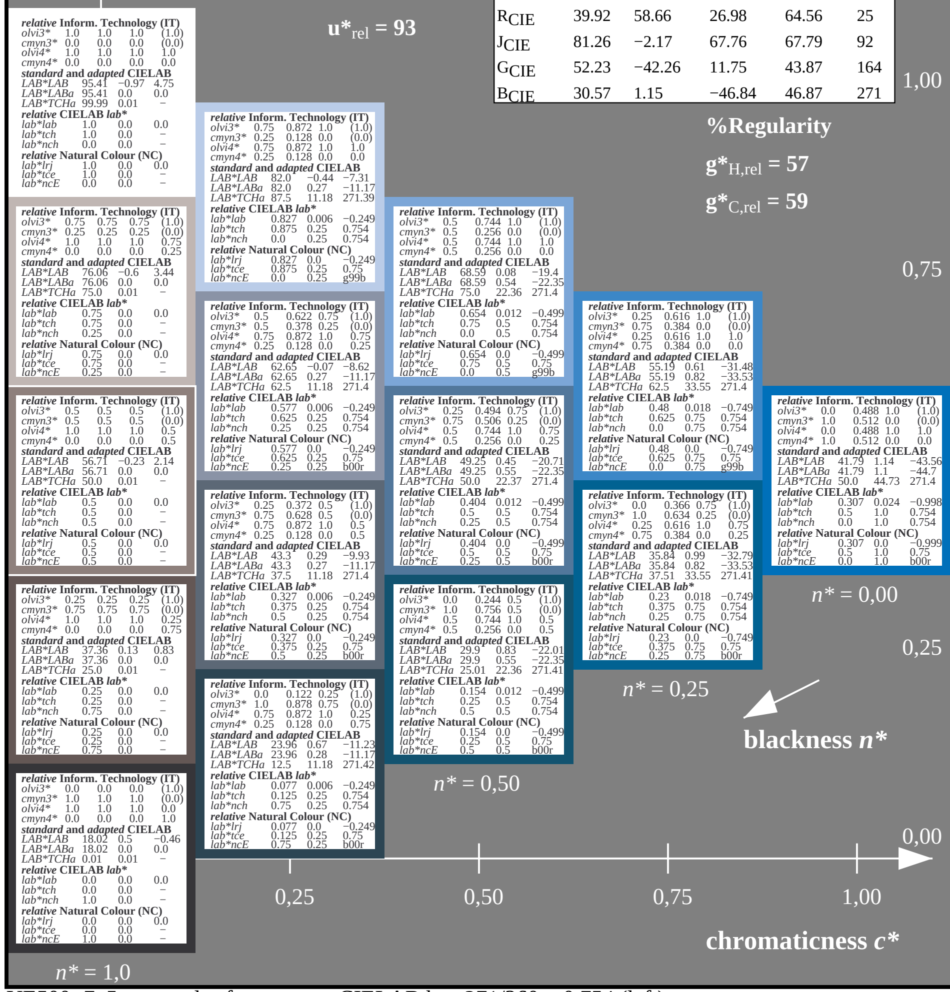
ORS18; adapted (a) CIELAB data

	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

%Regularity

g*H,rel = 57

g*C,rel = 59



Output: Colorimetric Reflective System NCS18

for hue h = lab*h = 272/360 = 0.755*

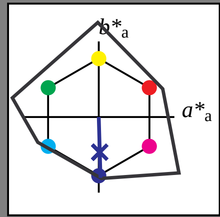
*lab*tch and lab*nch*

D65: hue B

LCH*Ma: 49 80 272

rgb*Ma: 0.0 0.02 1.0

triangle lightness t*



%Gamut

u*rel = 136

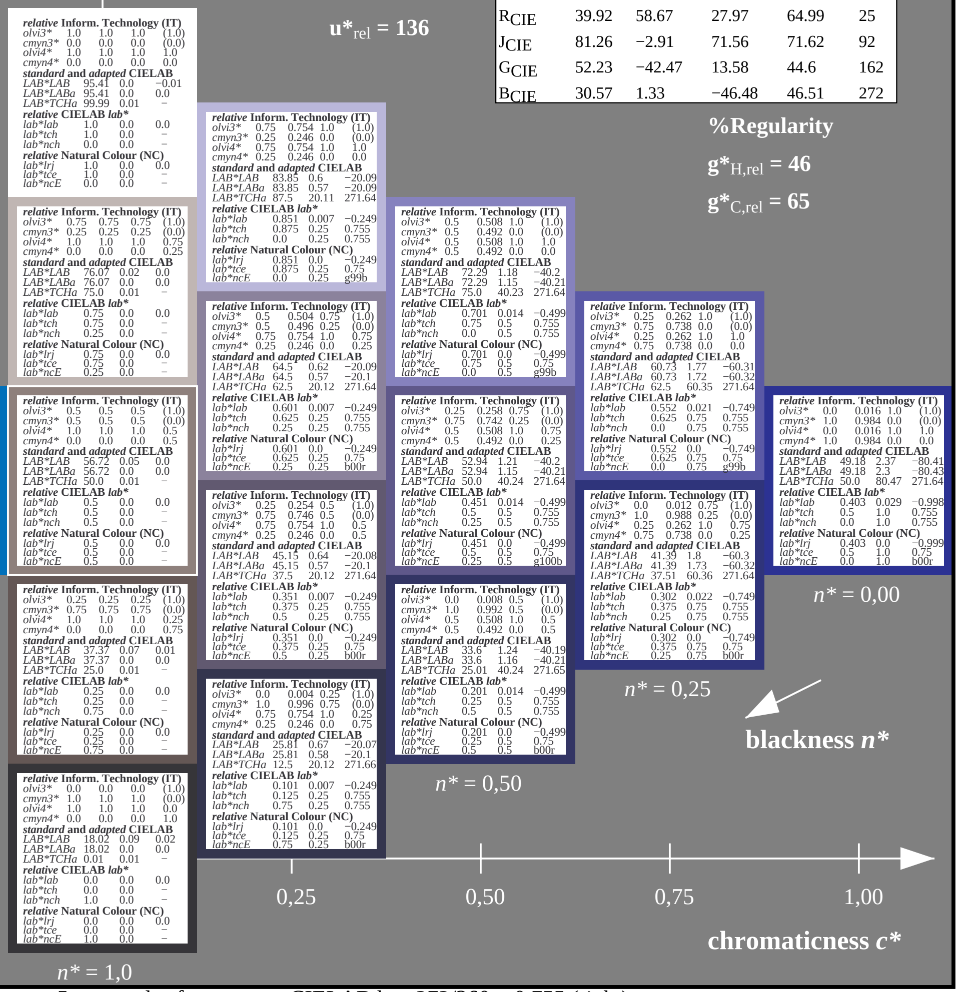
NCS18; adapted (a) CIELAB data

	L*=L*a	a*a	b*a	C*ab,a	h*ab,a
RMa	47.15	84.63	37.24	92.46	24
JMa	91.37	−1.27	125.03	125.03	91
GMa	63.07	−114.29	25.34	117.07	167
G50BMa	59.47	−80.61	−33.45	87.29	203
BMa	49.01	3.63	−81.2	81.29	273
B50RMa	44.06	106.07	−73.94	129.31	325
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.67	27.97	64.99	25
JCIE	81.26	−2.91	71.56	71.62	92
GCIE	52.23	−42.47	13.58	44.6	162
BCIE	30.57	1.33	−46.48	46.51	272

%Regularity

g*H,rel = 46

g*C,rel = 65



UE500−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

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

Input: Colorimetric Reflective System ORS18

for hue h = lab*h = 271/360 = 0.754*

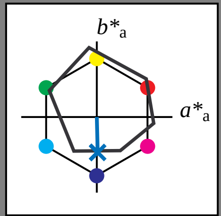
*lab*tch and lab*nch*

D65: hue B

LCH*Ma: 42 45 271

rgb*Ma: 0.0 0.49 1.0

triangle lightness *t**



%Gamut

u^*_{rel} = 93

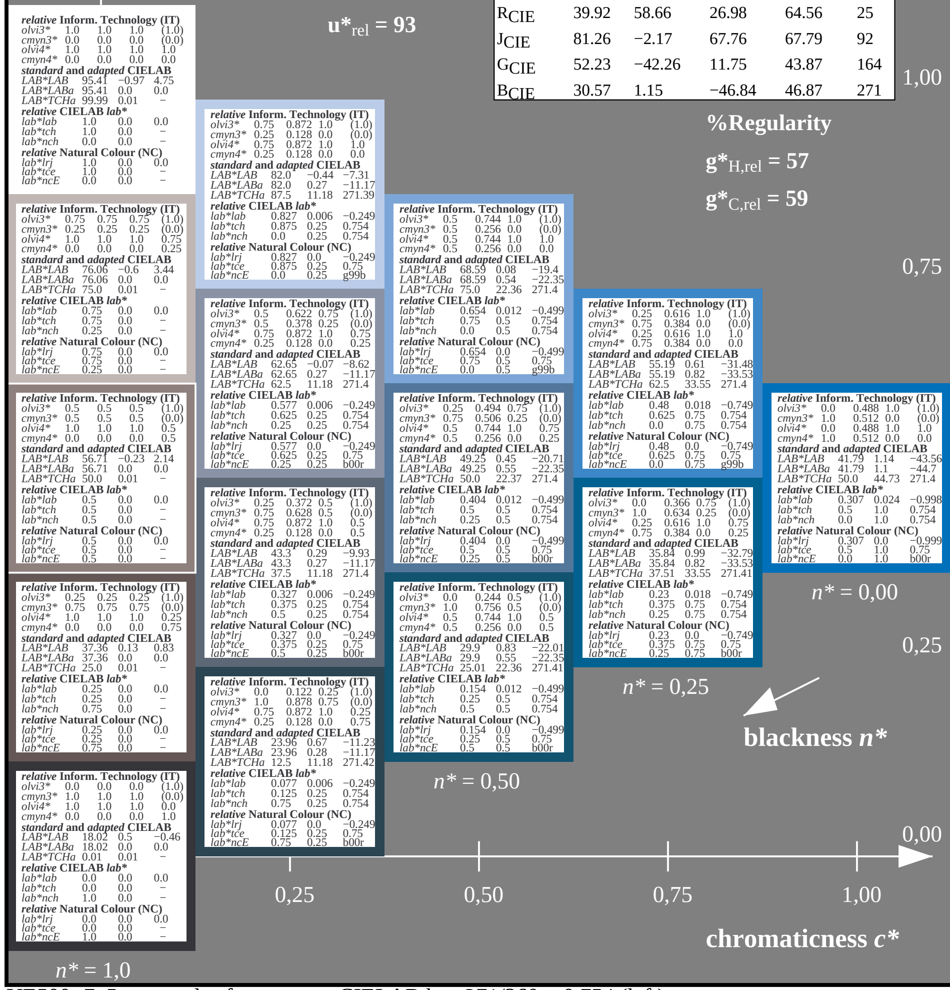
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



Output: Colorimetric Reflective System NRS11

for hue h = lab*h = 272/360 = 0.755*

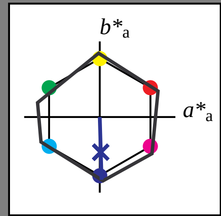
*lab*tch and lab*nch*

D65: hue B

LCH*Ma: 53 83 272

rgb*Ma: 0.0 0.02 1.0

triangle lightness *t**



%Gamut

u^*_{rel} = 119

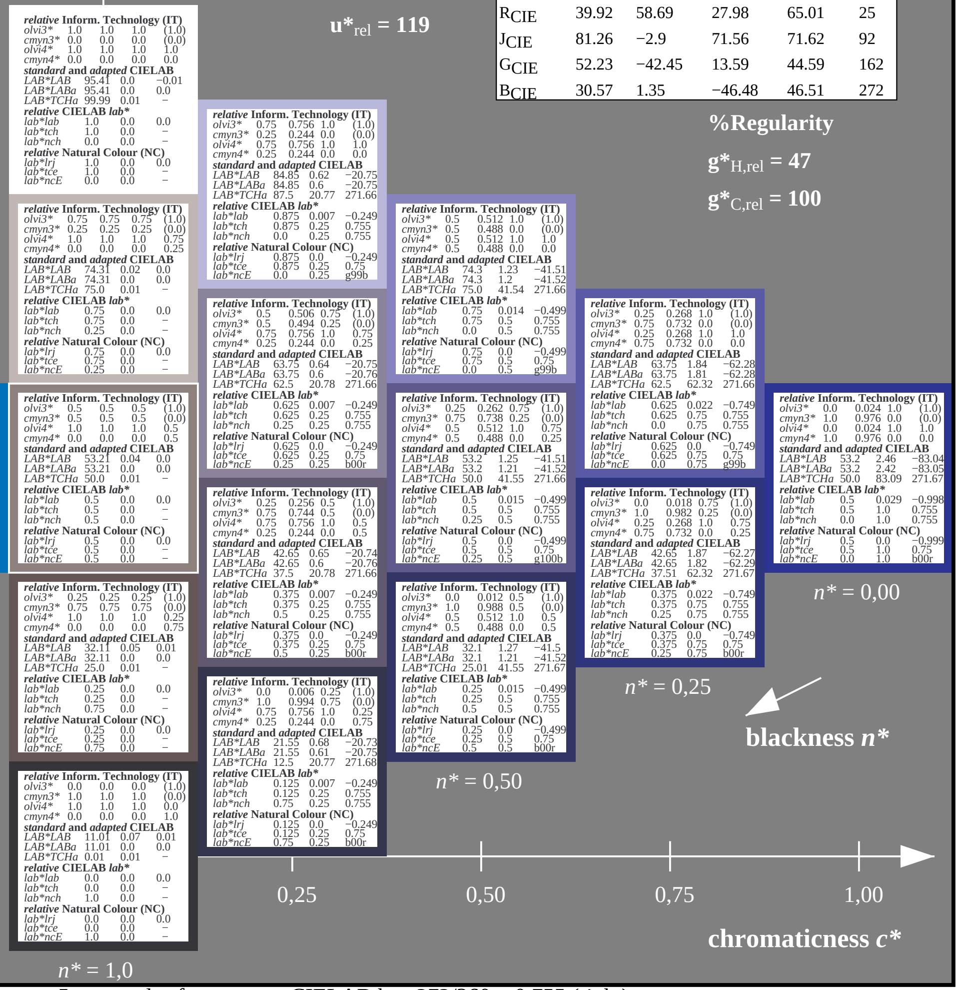
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



UE500−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

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

Input: Colorimetric Reflective System ORS18

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

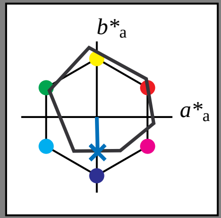
lab*tch* and *lab*nch

D65: hue B

LCH*Ma: 42 45 271

rgb*Ma: 0.0 0.49 1.0

triangle lightness t^*



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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

1,00 0,75 0,50 0,25 0,00

n^* = 0,00 n^* = 0,25 n^* = 0,50 n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NCS11

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

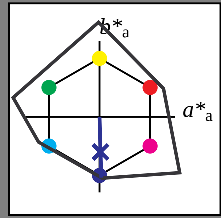
lab*tch* and *lab*nch

D65: hue B

LCH*Ma: 49 80 272

rgb*Ma: 0.0 0.02 1.0

triangle lightness t^*



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

n^* = 0,00 n^* = 0,25 n^* = 0,50 n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

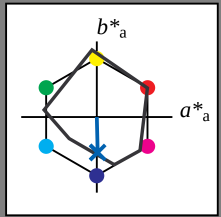
chromaticness c^*

UE500−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

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

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 40 50 271
rgb*Ma: 0.0 0.37 1.0
triangle lightness t^*

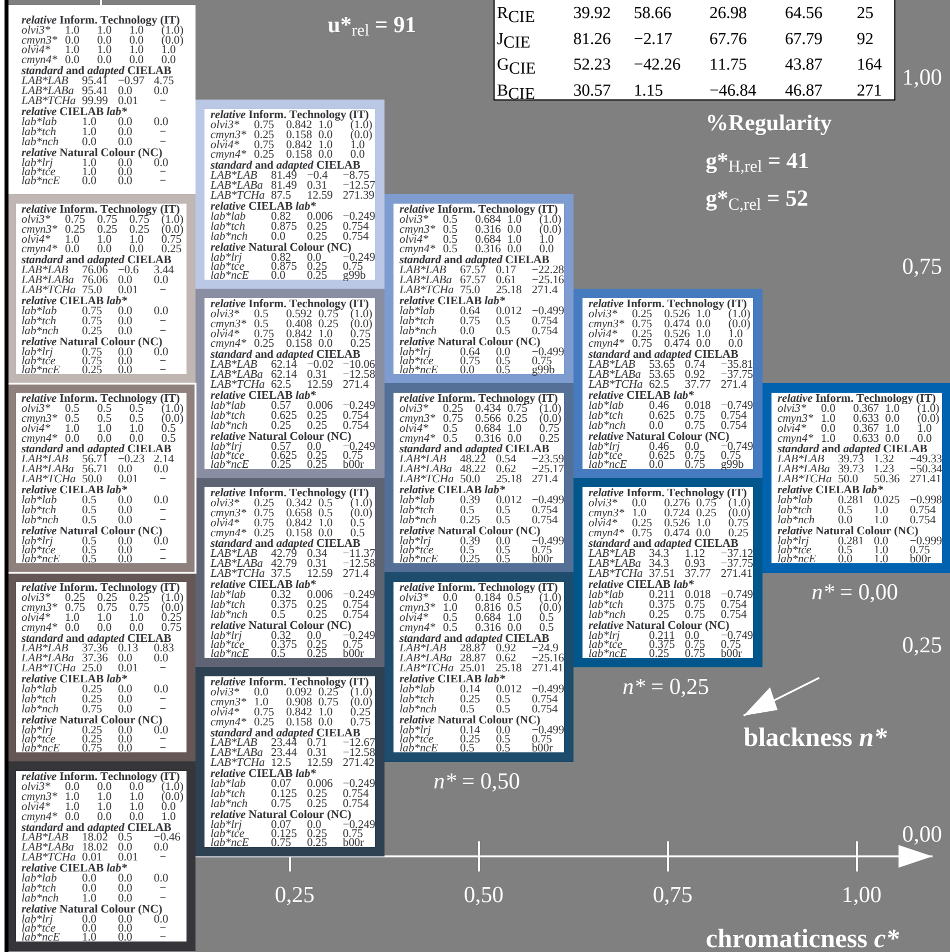


%Gamut
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data

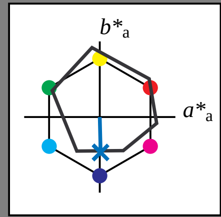
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 41$
$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0
triangle lightness t^*

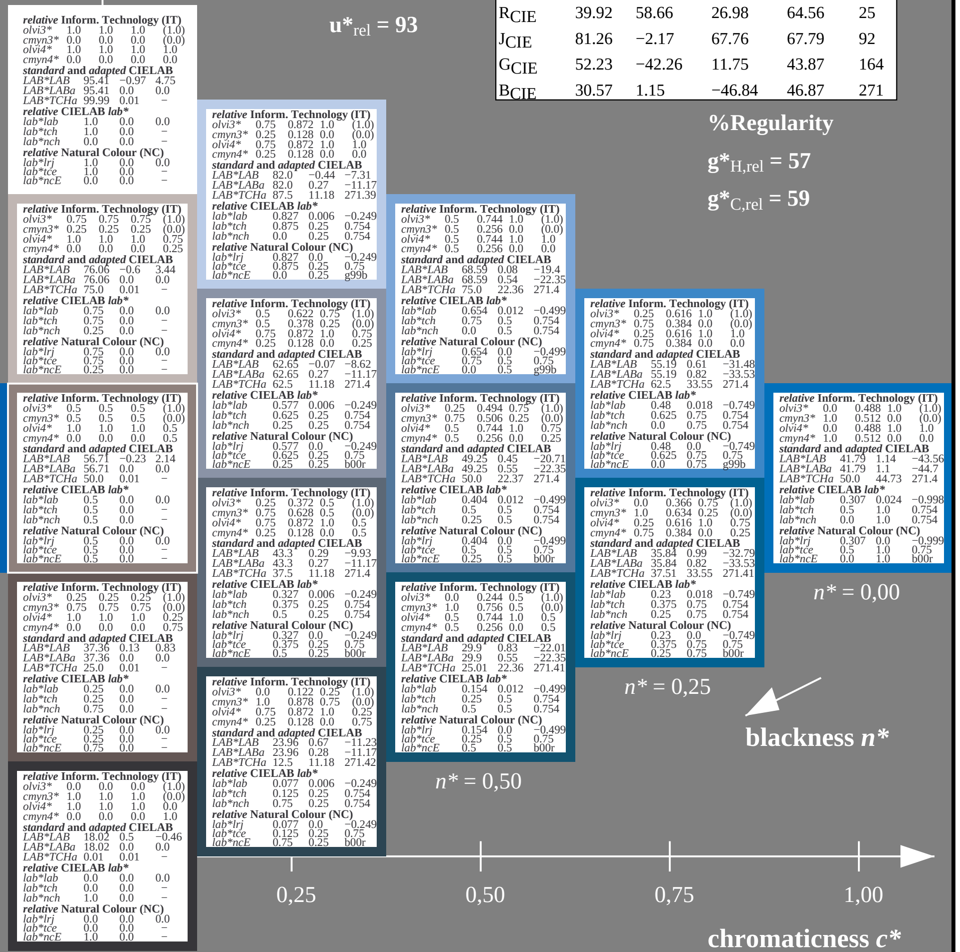


%Gamut
$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



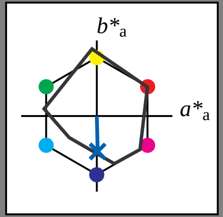
UE500−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

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

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab^*tch and lab^*nch

D65: hue B
LCH*Ma: 40 50 271
rgb*Ma: 0.0 0.37 1.0

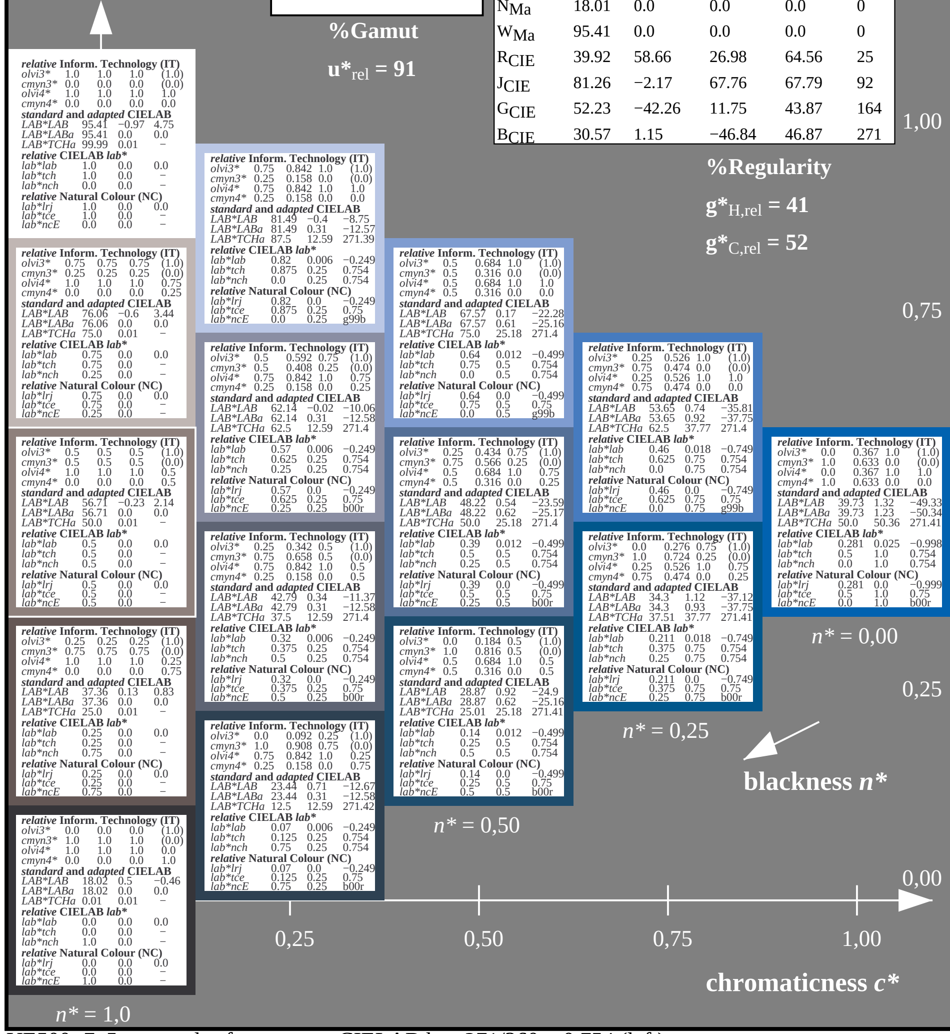
triangle lightness t^*



MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut
$u^*_{rel} = 91$

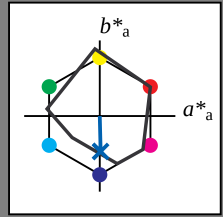
%Regularity
$g^*_{H,rel} = 41$
$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab^*tch and lab^*nch

D65: hue B
LCH*Ma: 40 50 271
rgb*Ma: 0.0 0.37 1.0

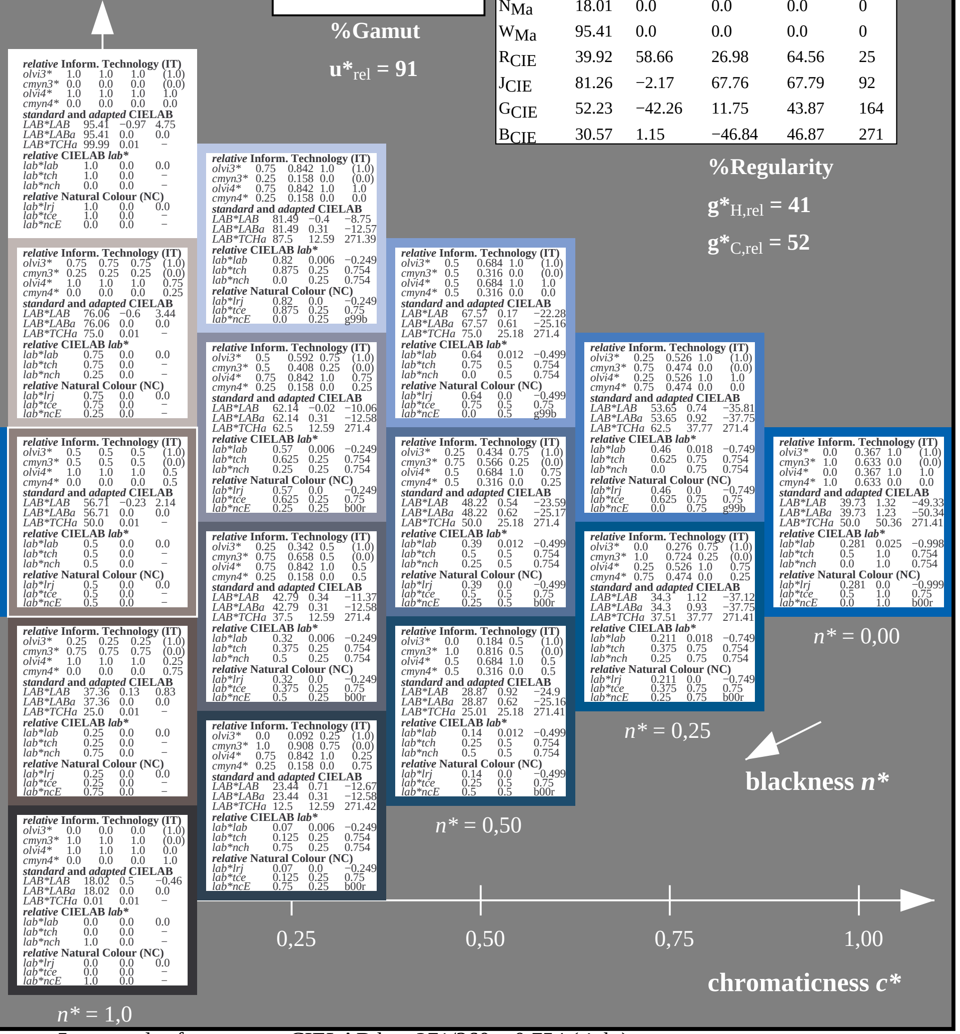
triangle lightness t^*



MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut
$u^*_{rel} = 91$

%Regularity
$g^*_{H,rel} = 41$
$g^*_{C,rel} = 52$



UE500−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

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

Input: Colorimetric Reflective System MRS18

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

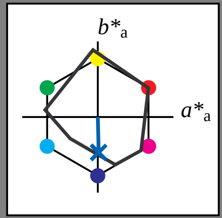
*lab*tch* and *lab*nch*

D65: hue B

LCH*Ma: 40 50 271

rgb*Ma: 0.0 0.37 1.0

triangle lightness t^*

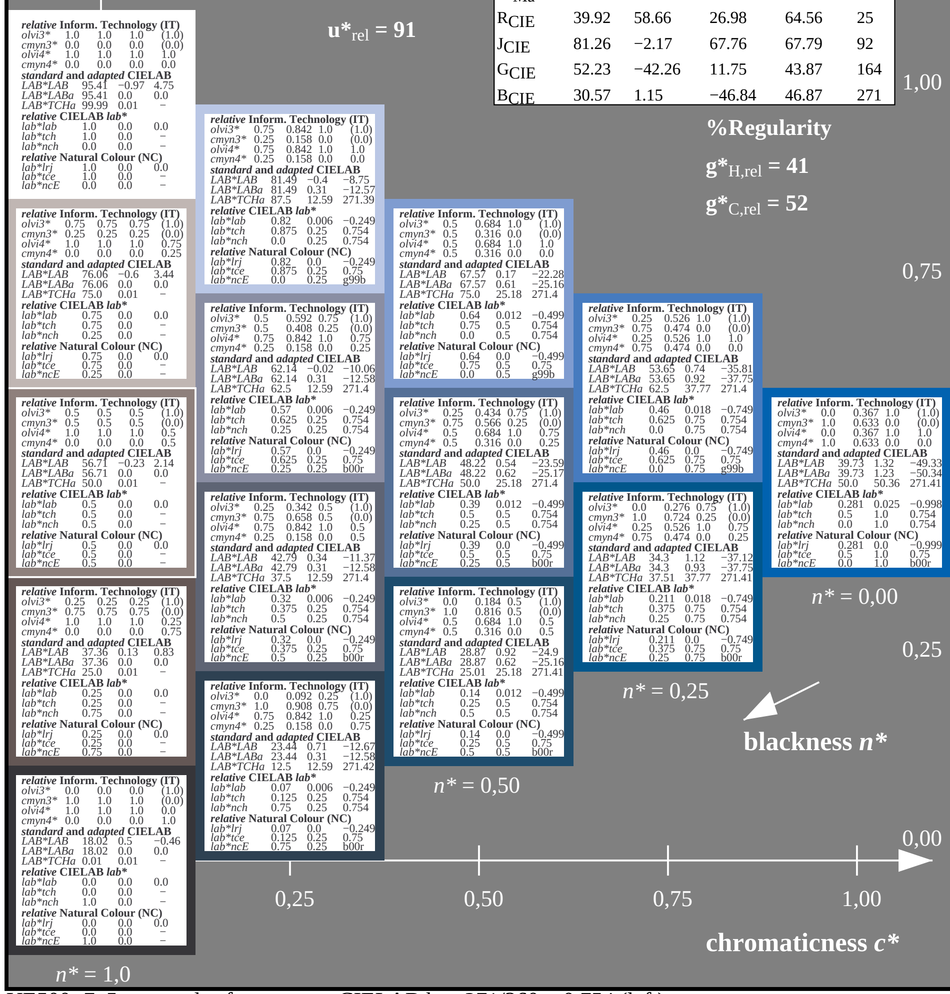


%Gamut

$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



Output: Colorimetric Reflective System TRS18

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

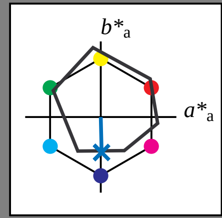
*lab*tch* and *lab*nch*

D65: hue B

LCH*Ma: 42 45 271

rgb*Ma: 0.0 0.49 1.0

triangle lightness t^*

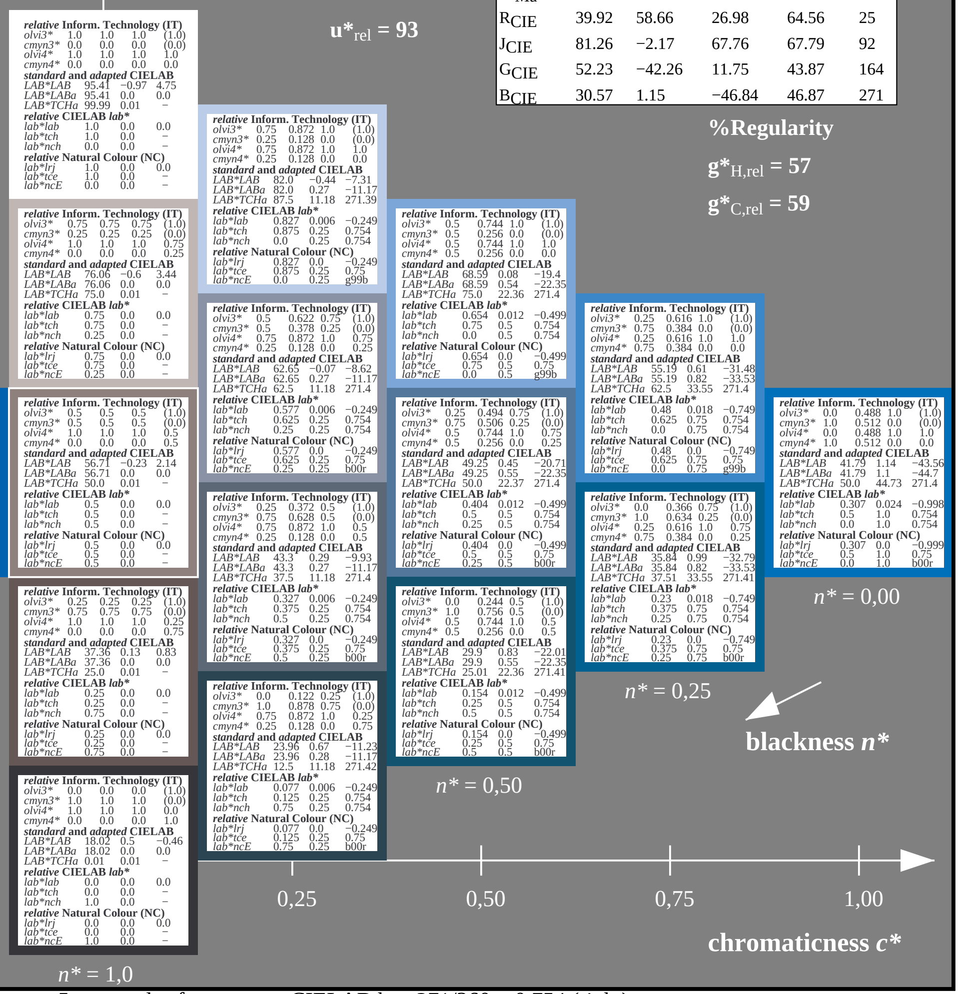


%Gamut

$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



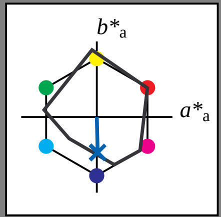
UE500−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

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

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
*lab*tch and lab*nch*

D65: hue B
LCH*Ma: 40 50 271
rgb*Ma: 0.0 0.37 1.0

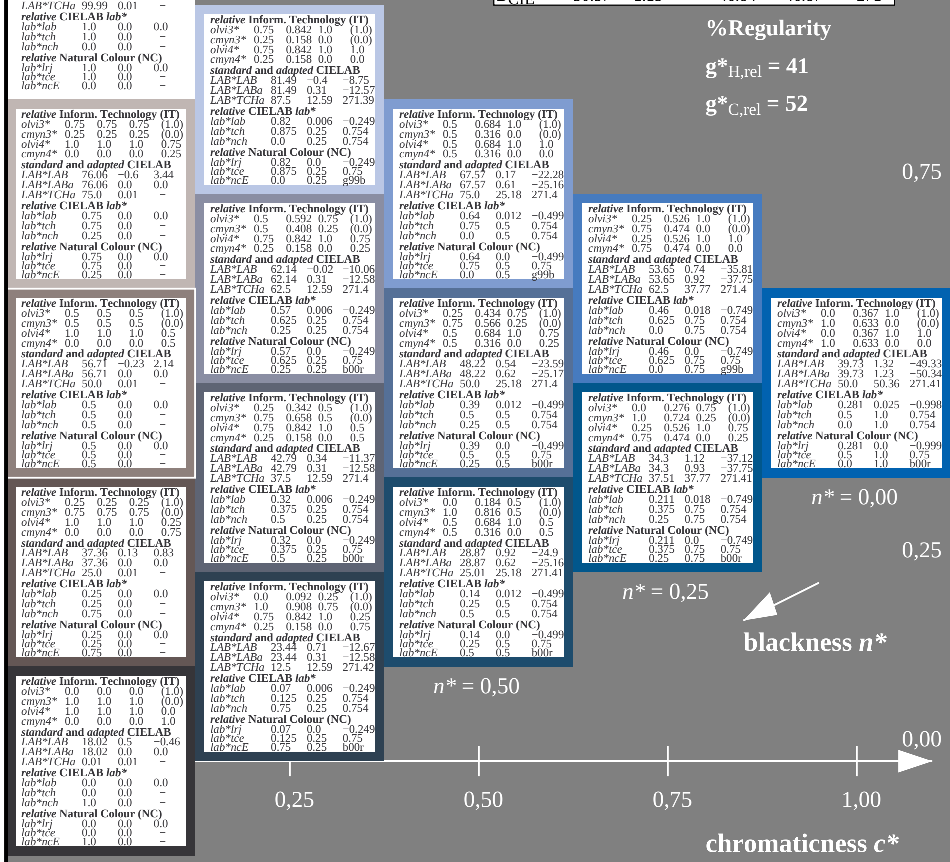
triangle lightness t^*



%Gamut
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

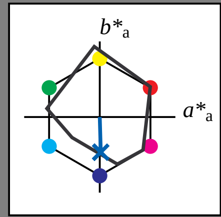
%Regularity
$g^*_{H,rel} = 41$
$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 272/360 = 0.755$
*lab*tch and lab*nch*

D65: hue B
LCH*Ma: 40 49 272
rgb*Ma: 0.0 0.36 1.0

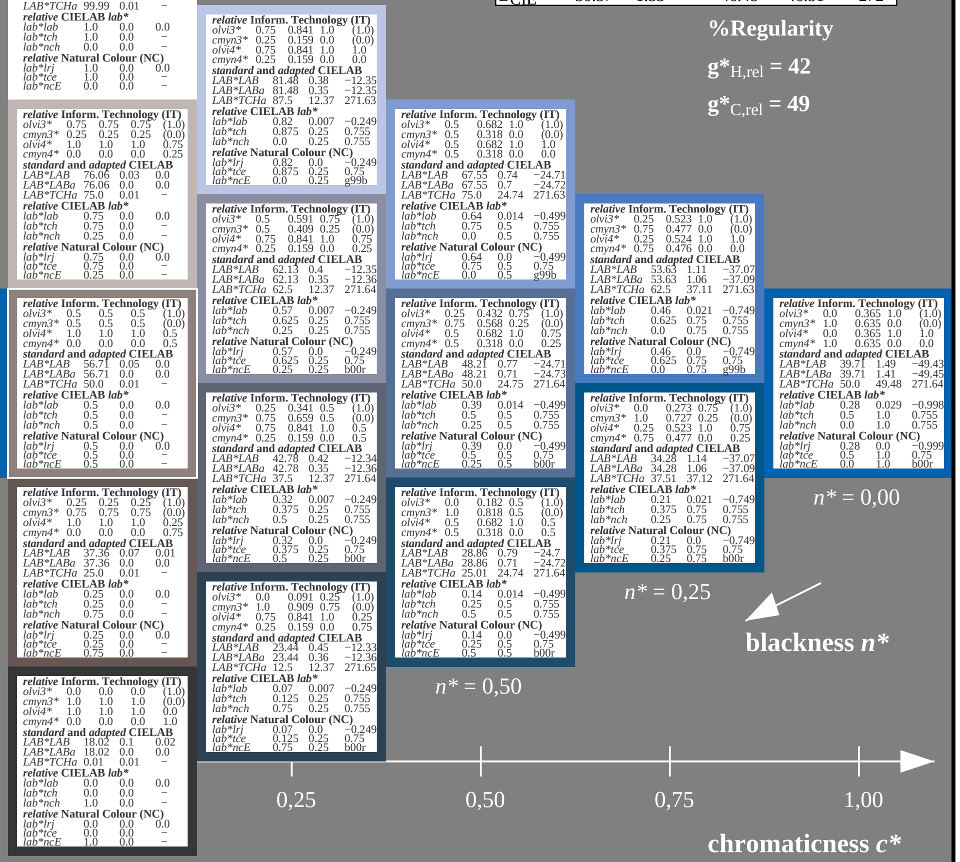
triangle lightness t^*



%Gamut
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$

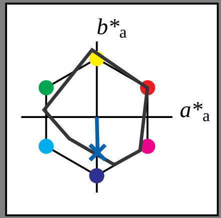


UE500−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

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

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch and lab*nch

D65: hue B
LCH*Ma: 40 50 271
rgb*Ma: 0.0 0.37 1.0
triangle lightness t^*

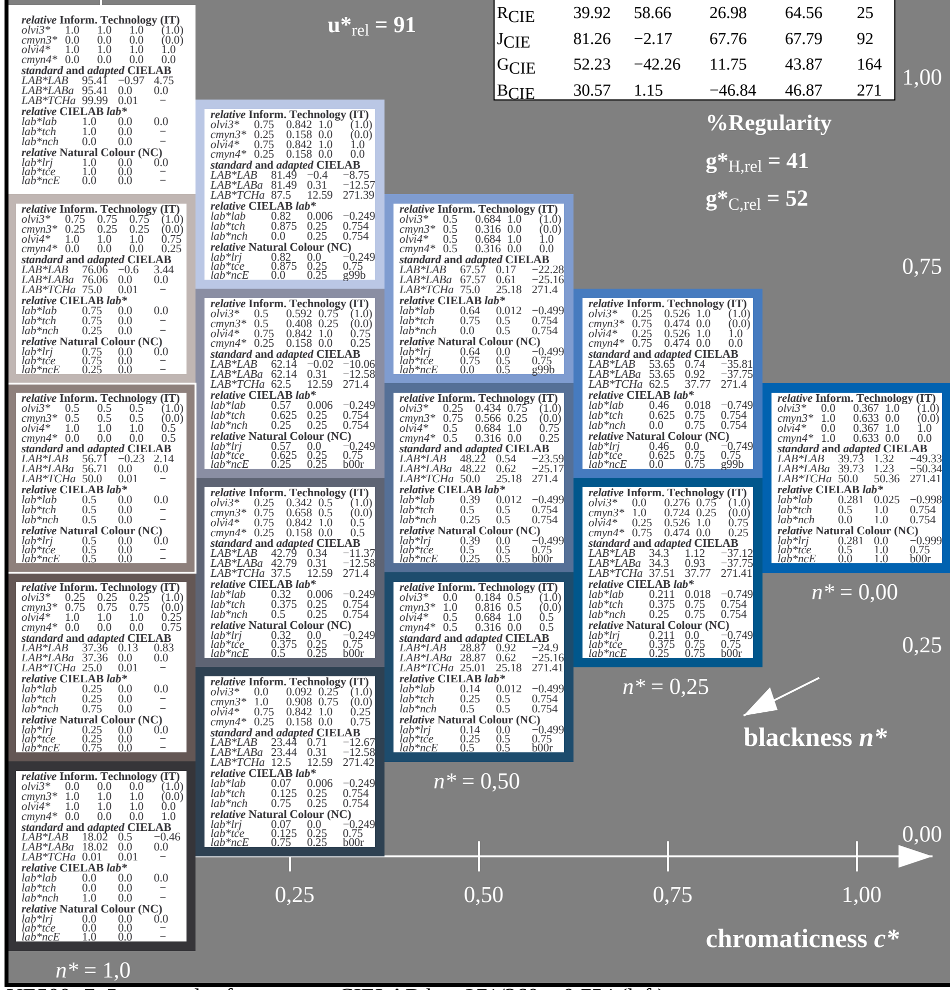


%Gamut
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data

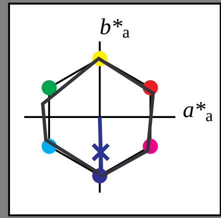
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 41$
$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch and lab*nch

D65: hue B
LCH*Ma: 57 76 272
rgb*Ma: 0.0 0.02 1.0
triangle lightness t^*

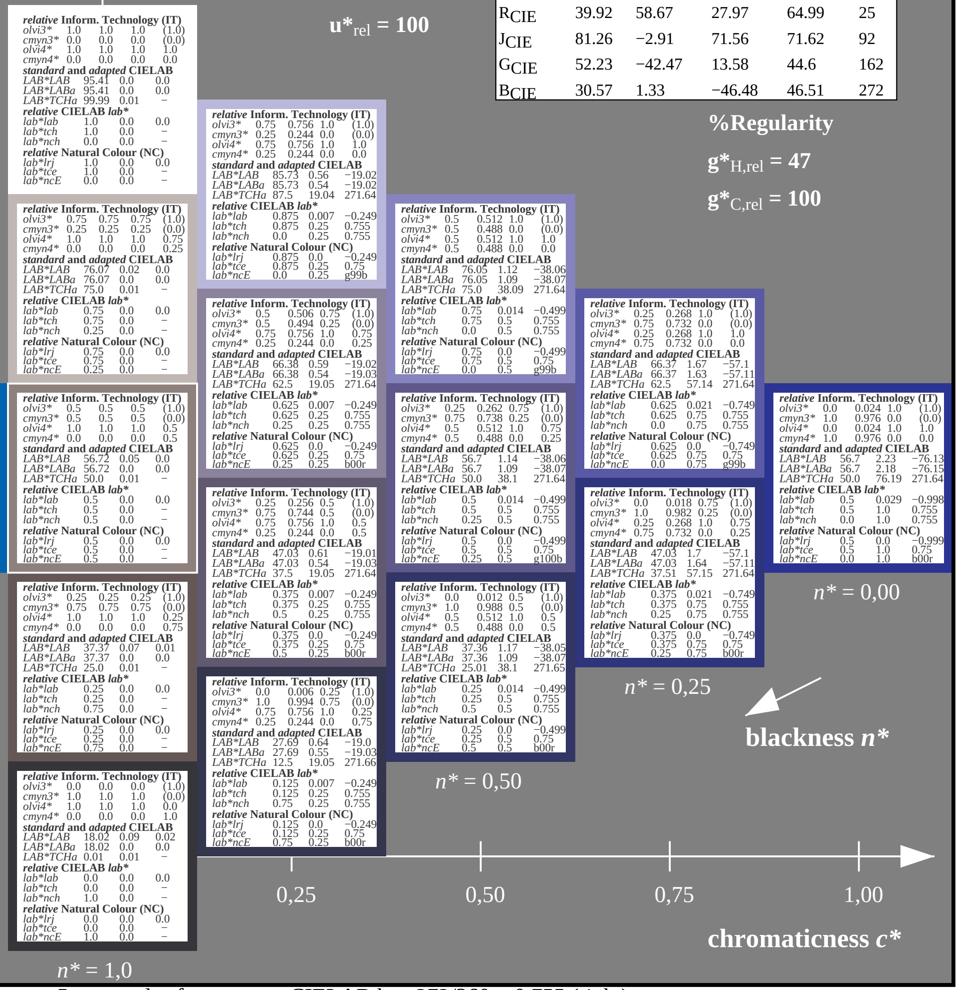


%Gamut
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



UE500−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

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

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 271/360 = 0.754$

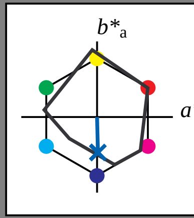
lab*tch and lab*nch

D65: hue B

LCH*Ma: 40 50 271

rgb*Ma: 0.0 0.37 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 91$

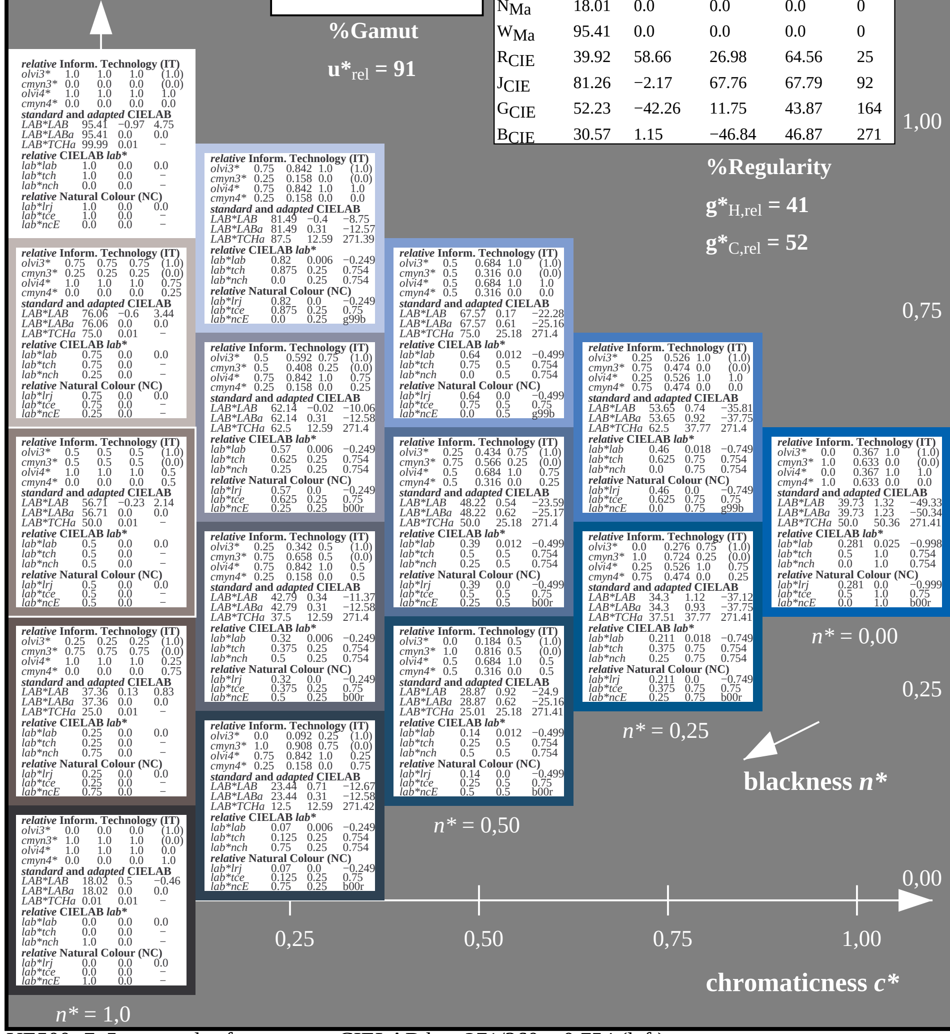
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 272/360 = 0.755$

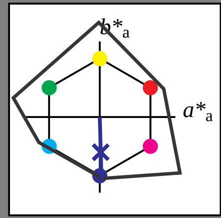
lab*tch and lab*nch

D65: hue B

LCH*Ma: 49 80 272

rgb*Ma: 0.0 0.02 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 136$

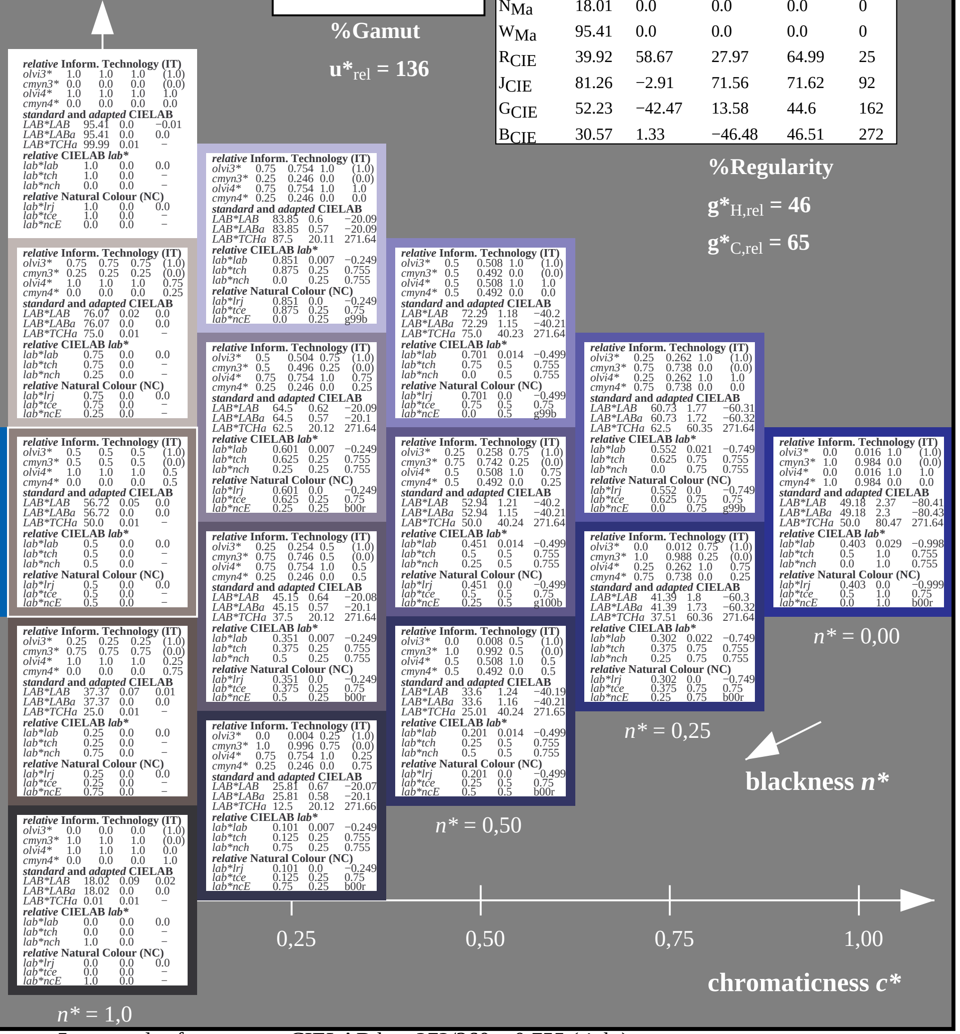
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$

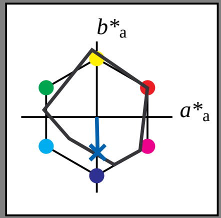


UE500−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

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

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
*lab*tch and lab*nch*

D65: hue B
LCH*Ma: 40 50 271
rgb*Ma: 0.0 0.37 1.0
triangle lightness t^*

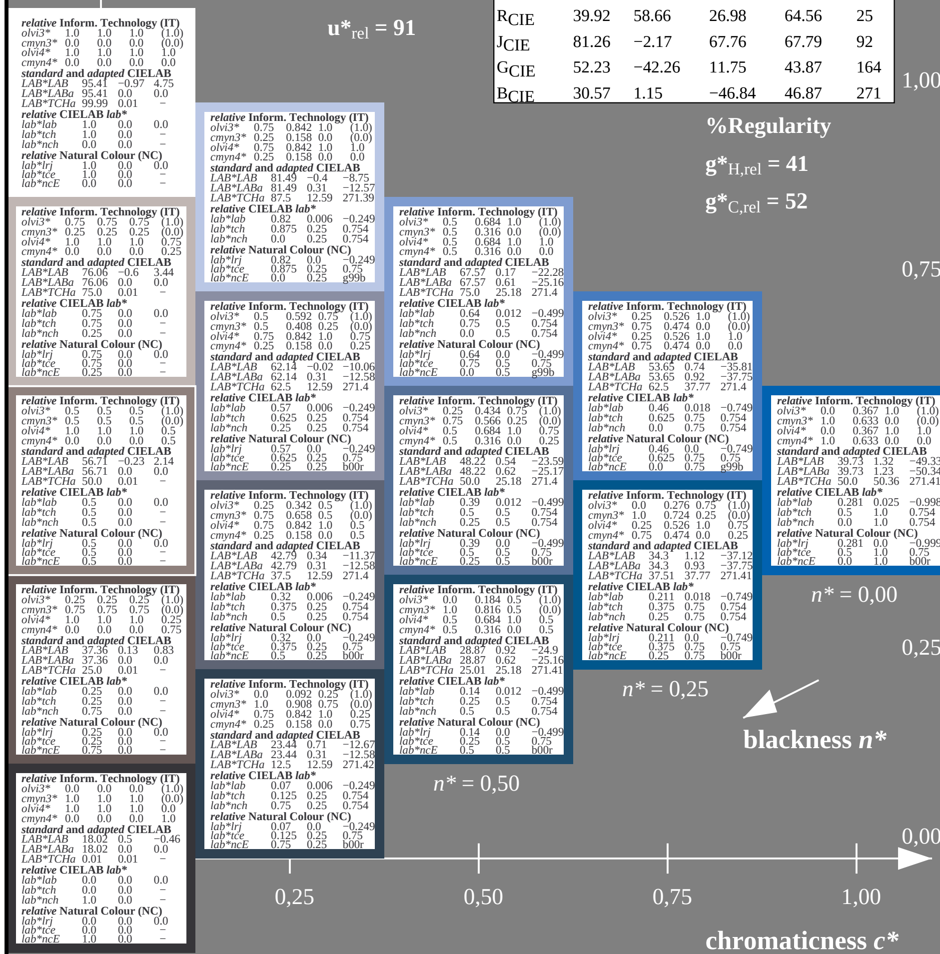


%Gamut
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

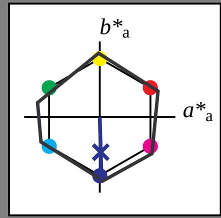
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel}$ = 41
$g^*_{C,rel}$ = 52



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 272/360 = 0.755$
*lab*tch and lab*nch*

D65: hue B
LCH*Ma: 53 83 272
rgb*Ma: 0.0 0.02 1.0
triangle lightness t^*

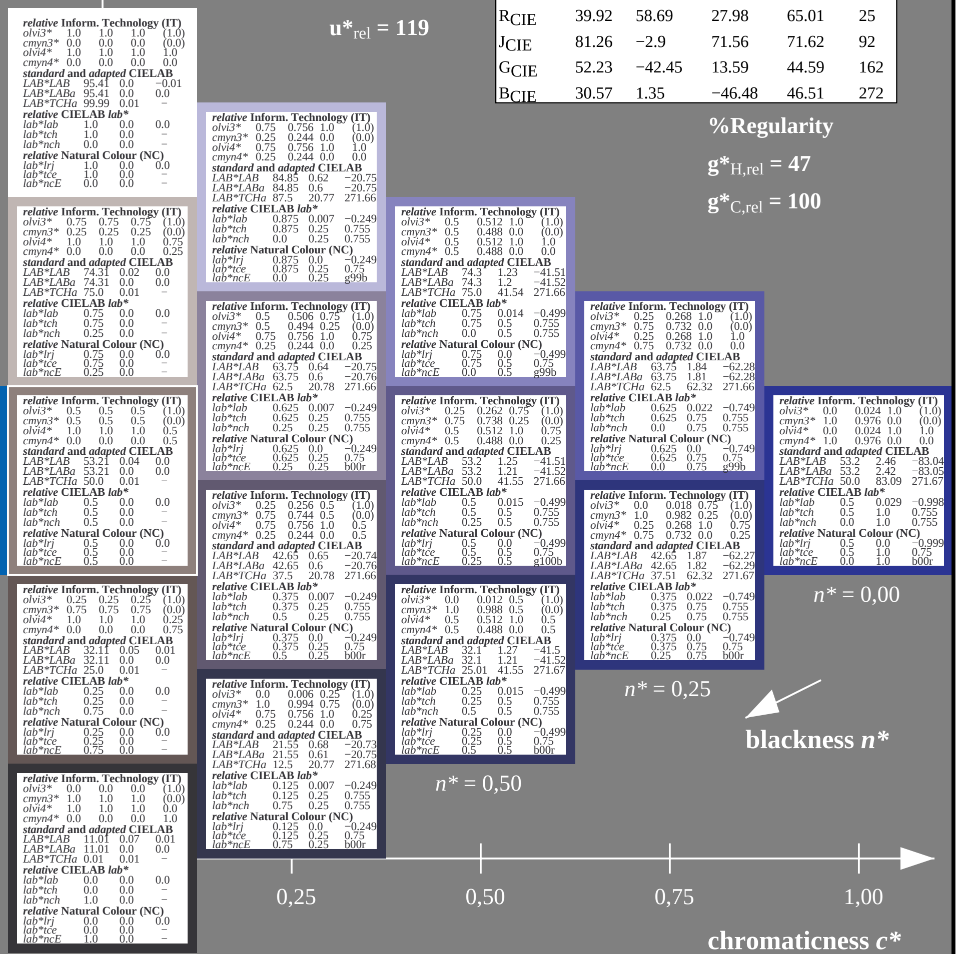


%Gamut
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100



UE500−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

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

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 271/360 = 0.754$

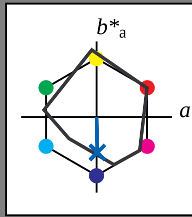
*lab*tch and lab*nch*

D65: hue B

LCH*Ma: 40 50 271

rgb*Ma: 0.0 0.37 1.0

triangle lightness t^*



%Gamut

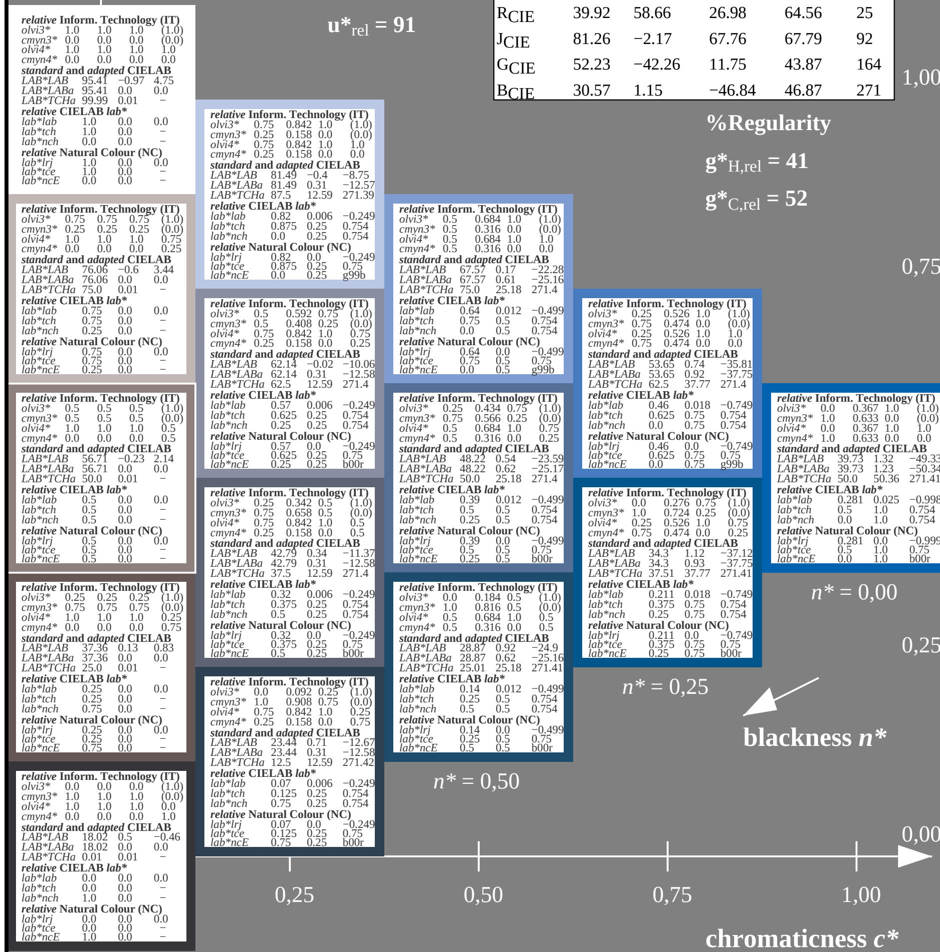
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 272/360 = 0.755$

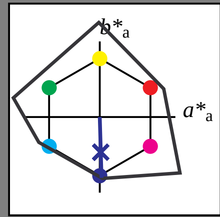
*lab*tch and lab*nch*

D65: hue B

LCH*Ma: 49 80 272

rgb*Ma: 0.0 0.02 1.0

triangle lightness t^*



%Gamut

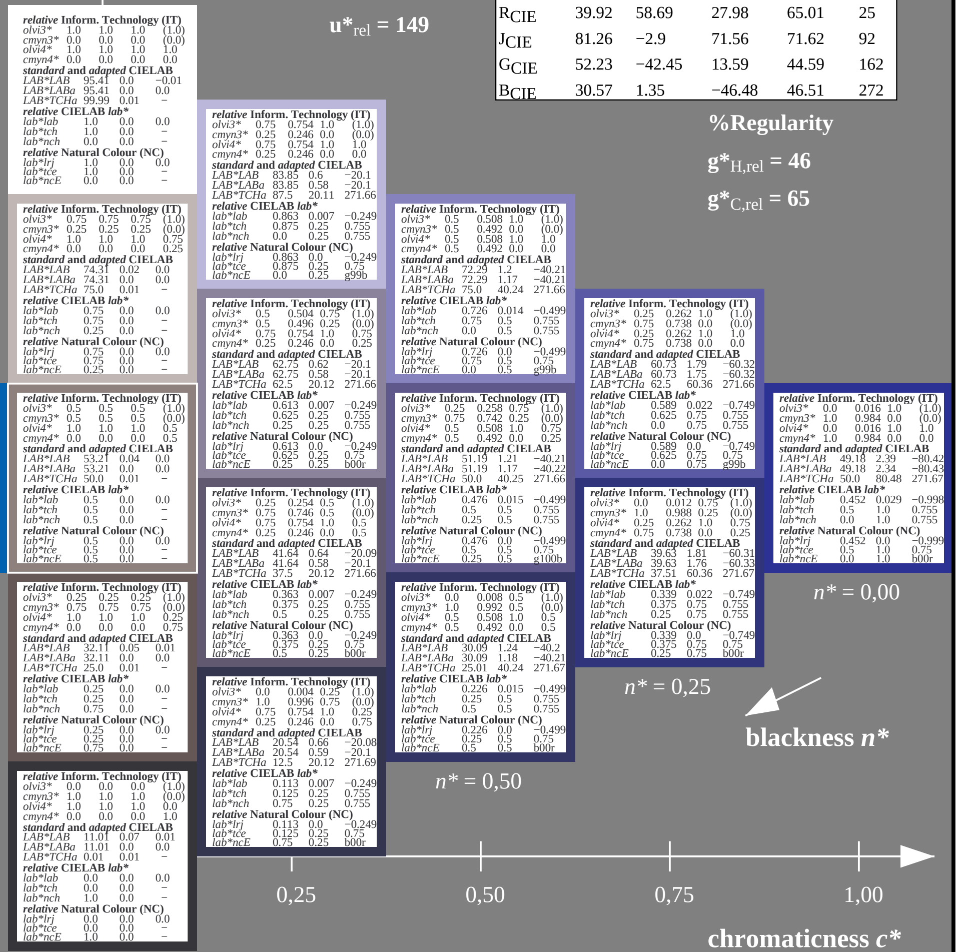
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



UE500−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

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

Input: Colorimetric Reflective System TRS18

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

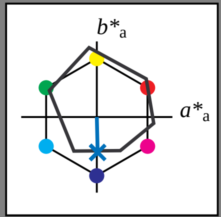
lab^*tch and lab^*nch

D65: hue B

LCH*Ma: 42 45 271

rgb*Ma: 0.0 0.49 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

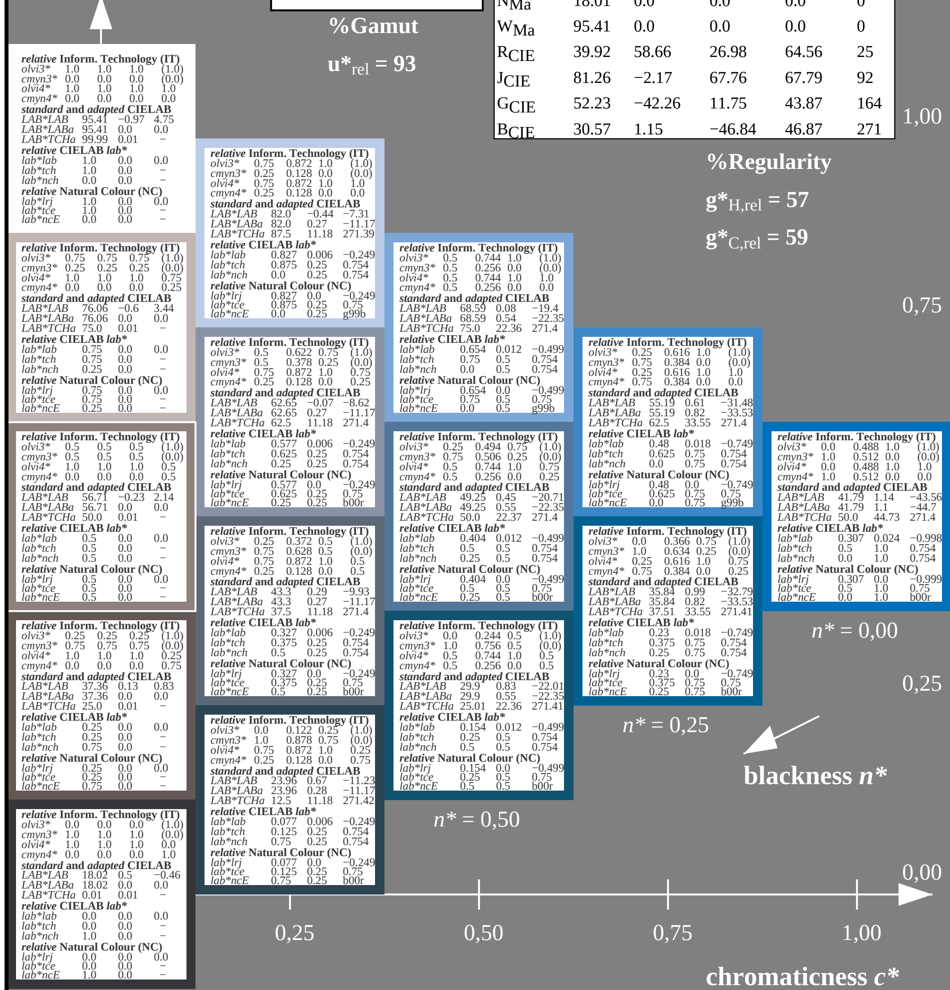
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



Output: Colorimetric Reflective System ORS18

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

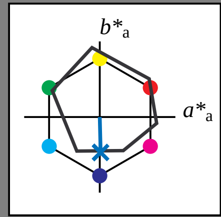
lab^*tch and lab^*nch

D65: hue B

LCH*Ma: 42 45 271

rgb*Ma: 0.0 0.49 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

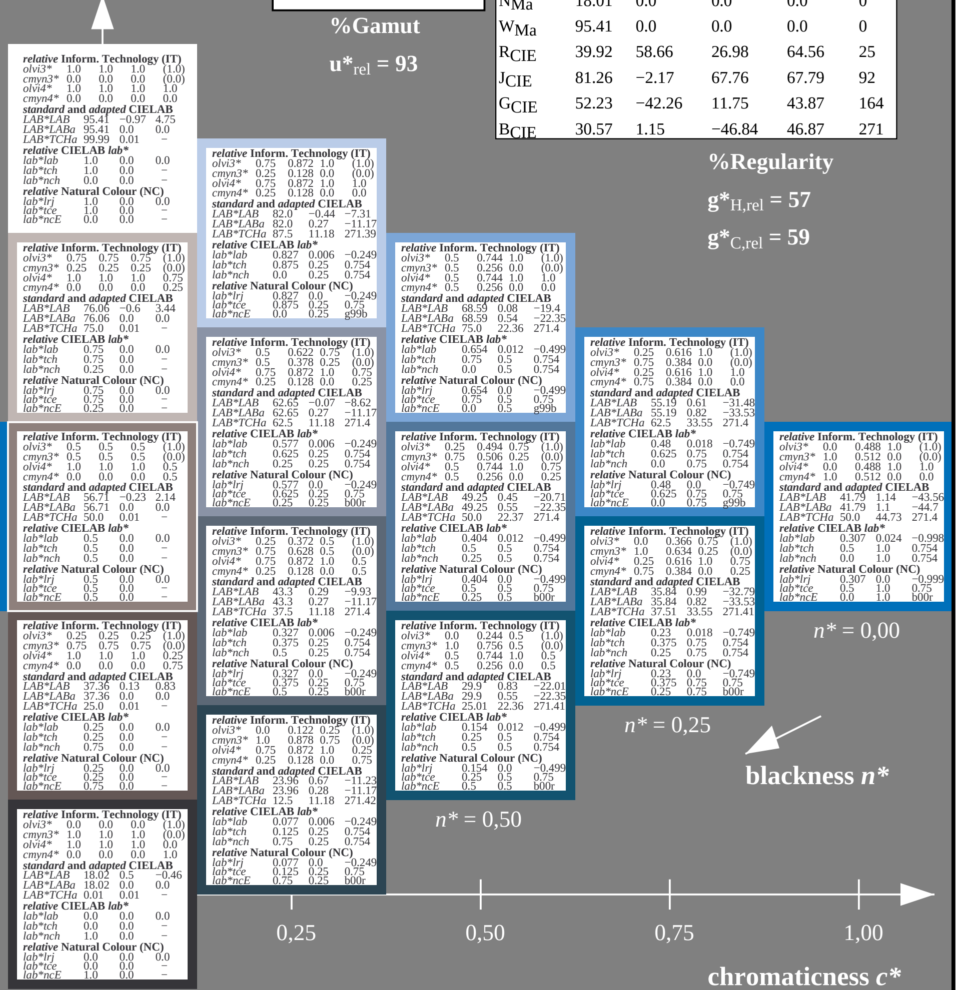
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



UE500−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

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

Input: Colorimetric Reflective System TRS18

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

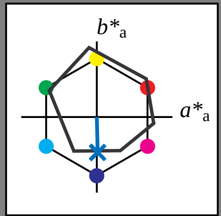
lab*tch and lab*nch

D65: hue B

LCH*Ma: 42 45 271

rgb*Ma: 0.0 0.49 1.0

triangle lightness t^*



%Gamut

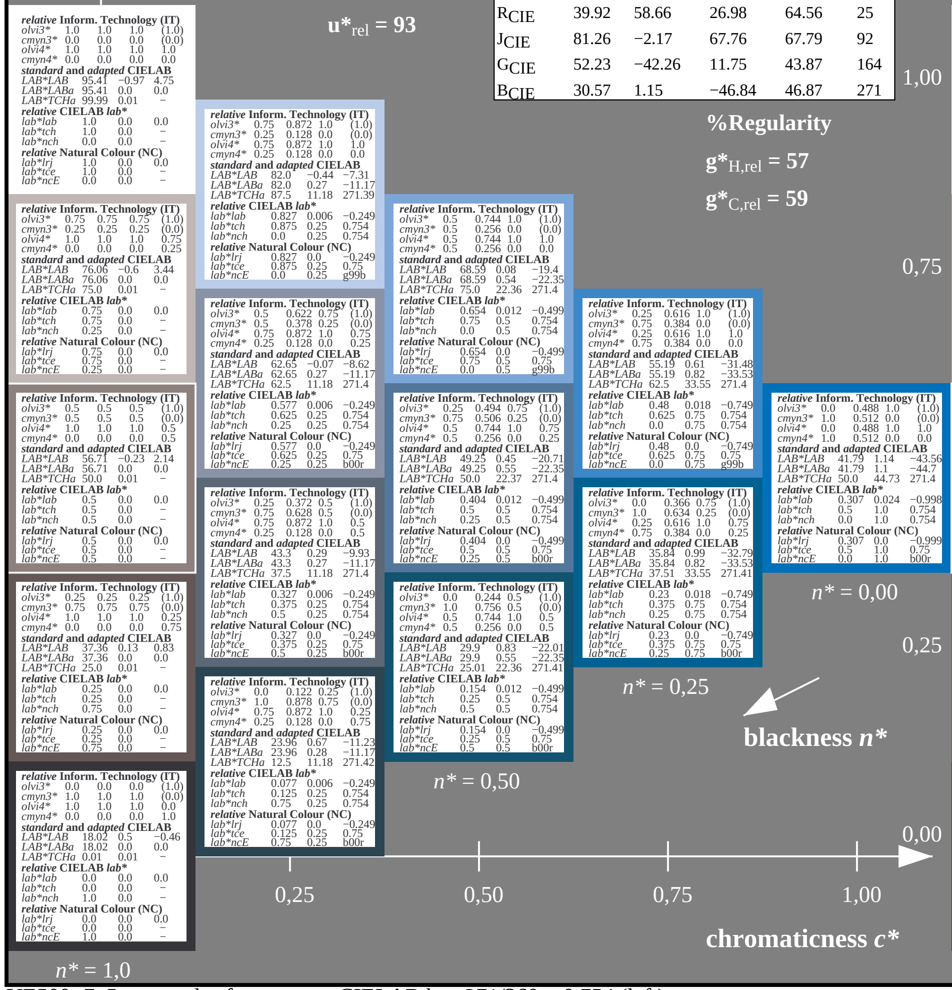
u^*_{rel} = 93

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



Output: Colorimetric Reflective System MRS18

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

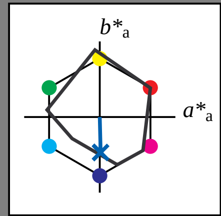
lab*tch and lab*nch

D65: hue B

LCH*Ma: 40 50 271

rgb*Ma: 0.0 0.37 1.0

triangle lightness t^*



%Gamut

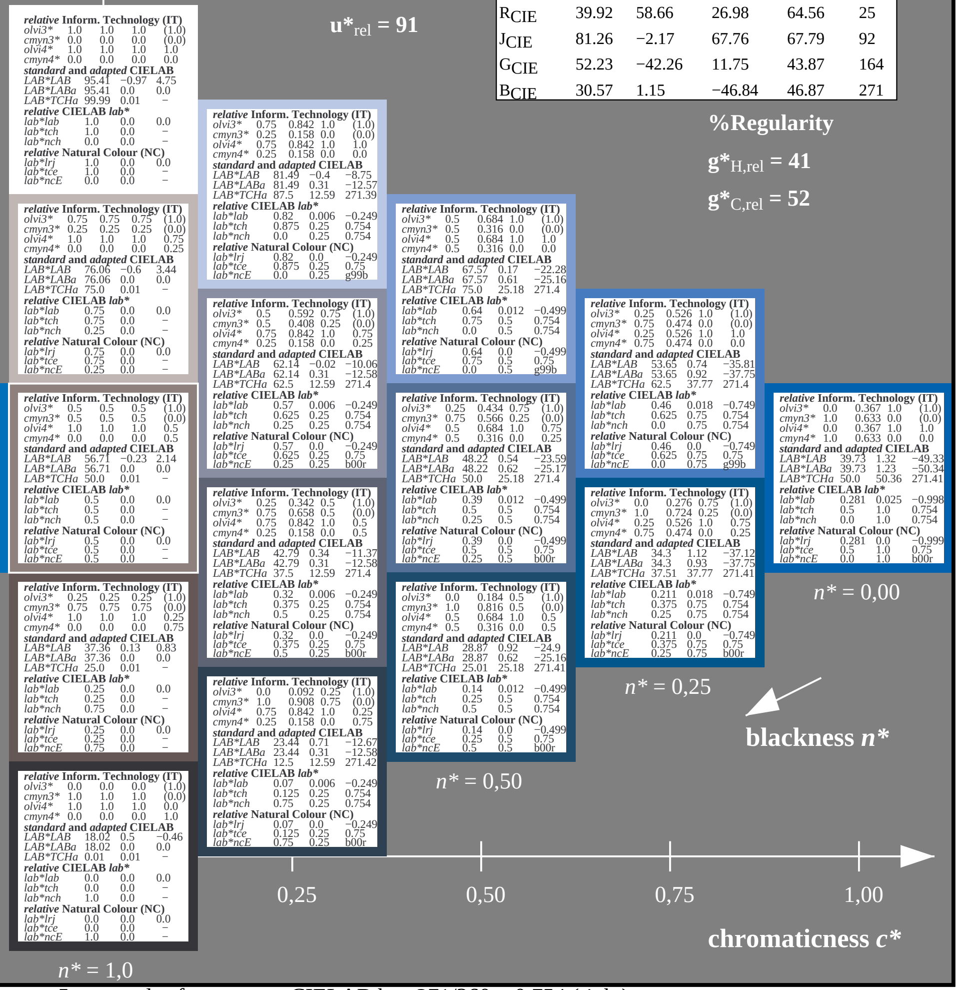
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



UE500−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

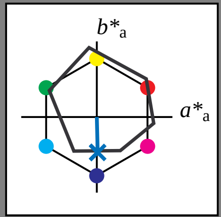
5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 271/360 = 0.754$

*lab*tch and lab*nch*

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness t^*



%Gamut

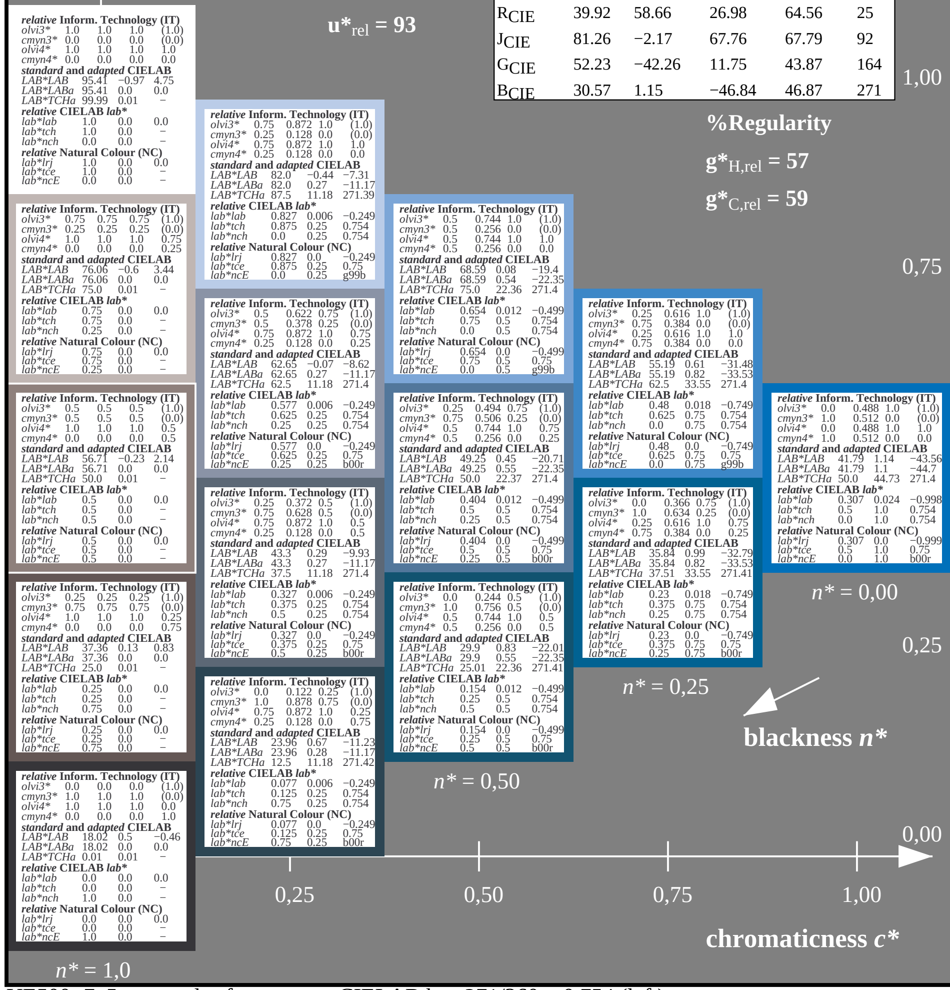
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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

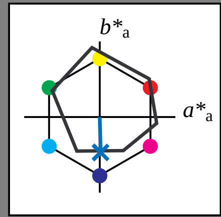


Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 271/360 = 0.754$

*lab*tch and lab*nch*

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness t^*



%Gamut

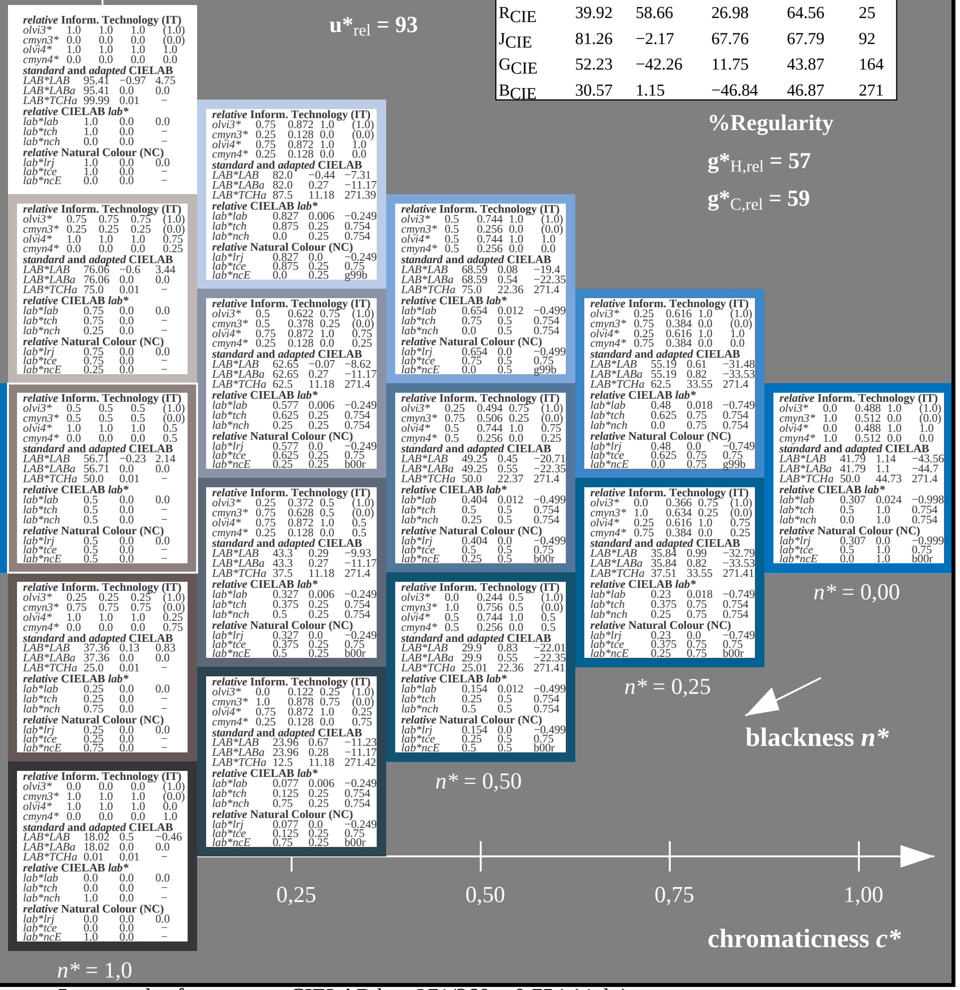
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



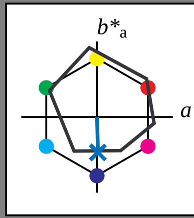
UE500−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

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

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
*lab*tch and lab*nch*

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness t^*



%Gamut

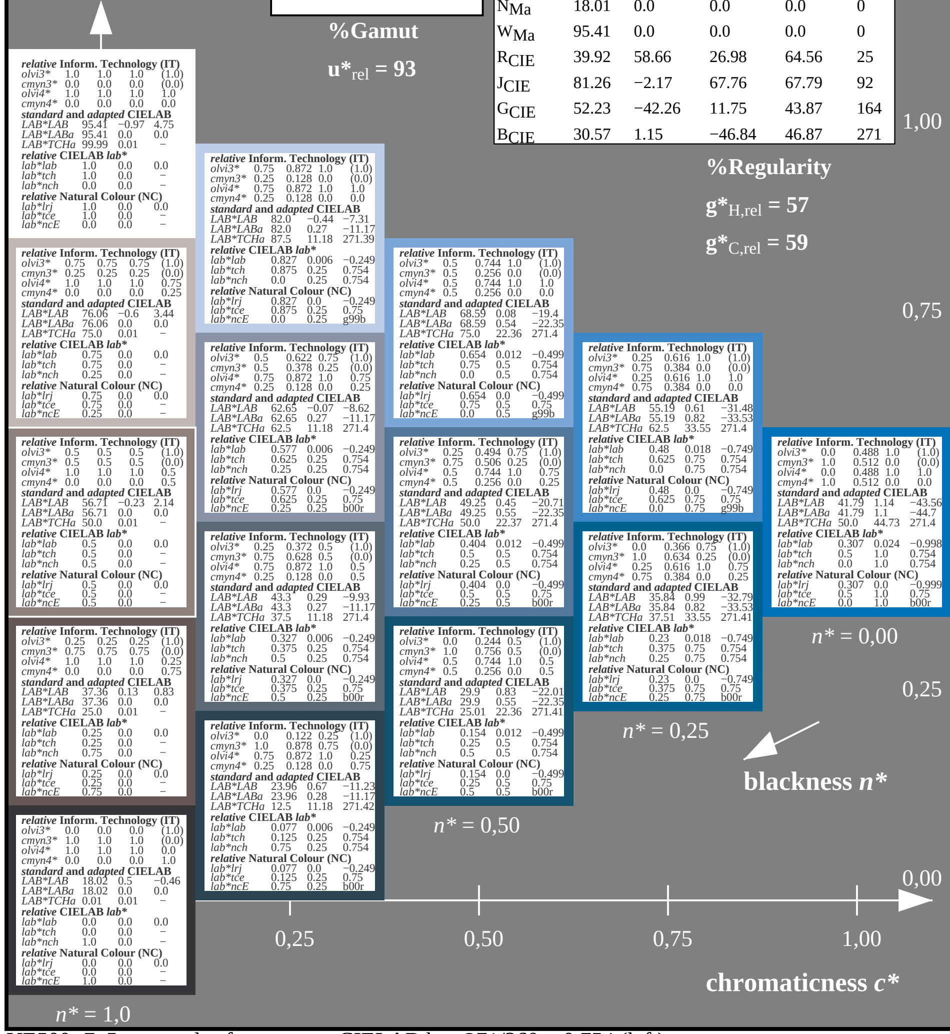
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

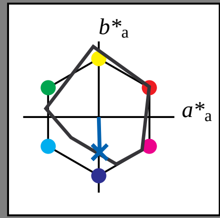
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 272/360 = 0.755$
*lab*tch and lab*nch*

D65: hue B
LCH*Ma: 40 49 272
rgb*Ma: 0.0 0.36 1.0

triangle lightness t^*



%Gamut

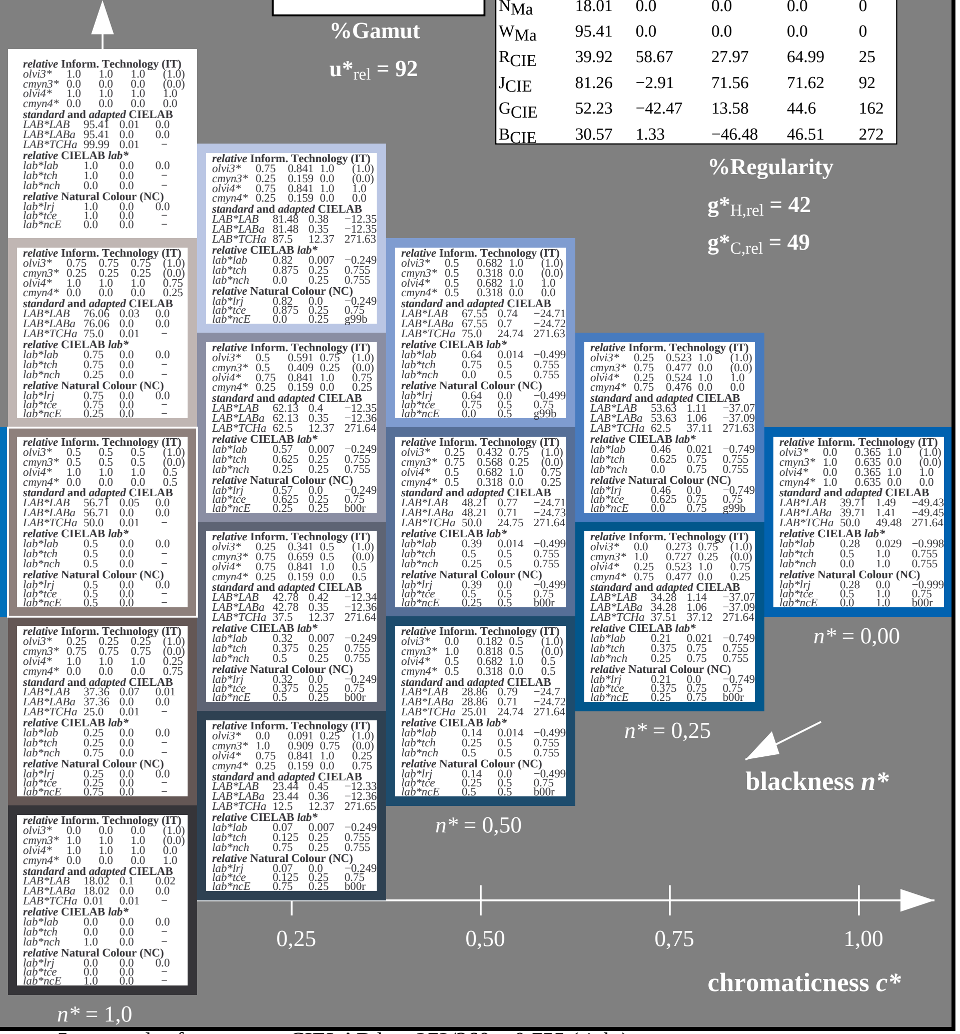
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



UE500−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

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

Input: Colorimetric Reflective System TRS18

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

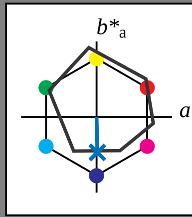
lab*tch and lab*nch

D65: hue B

LCH*Ma: 42 45 271

rgb*Ma: 0.0 0.49 1.0

triangle lightness t^*



%Gamut

u^*_{rel} = 93

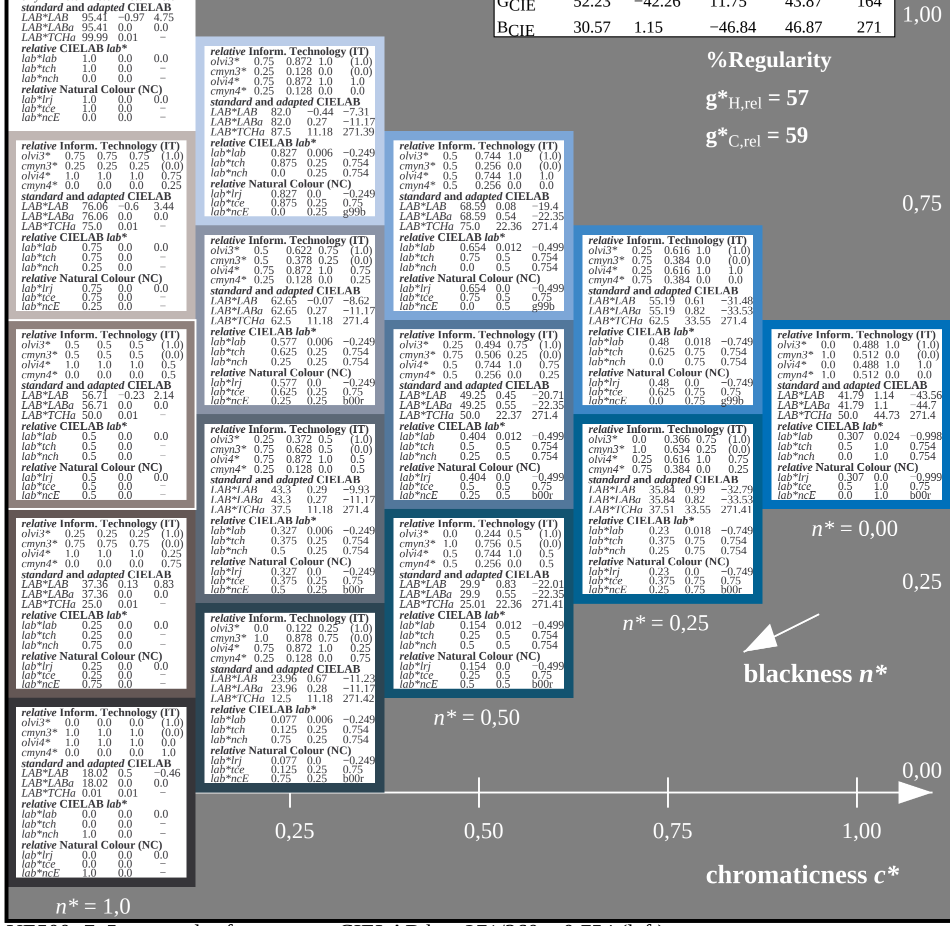
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



Output: Colorimetric Reflective System NRS18

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

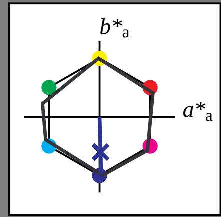
lab*tch and lab*nch

D65: hue B

LCH*Ma: 57 76 272

rgb*Ma: 0.0 0.02 1.0

triangle lightness t^*



%Gamut

u^*_{rel} = 100

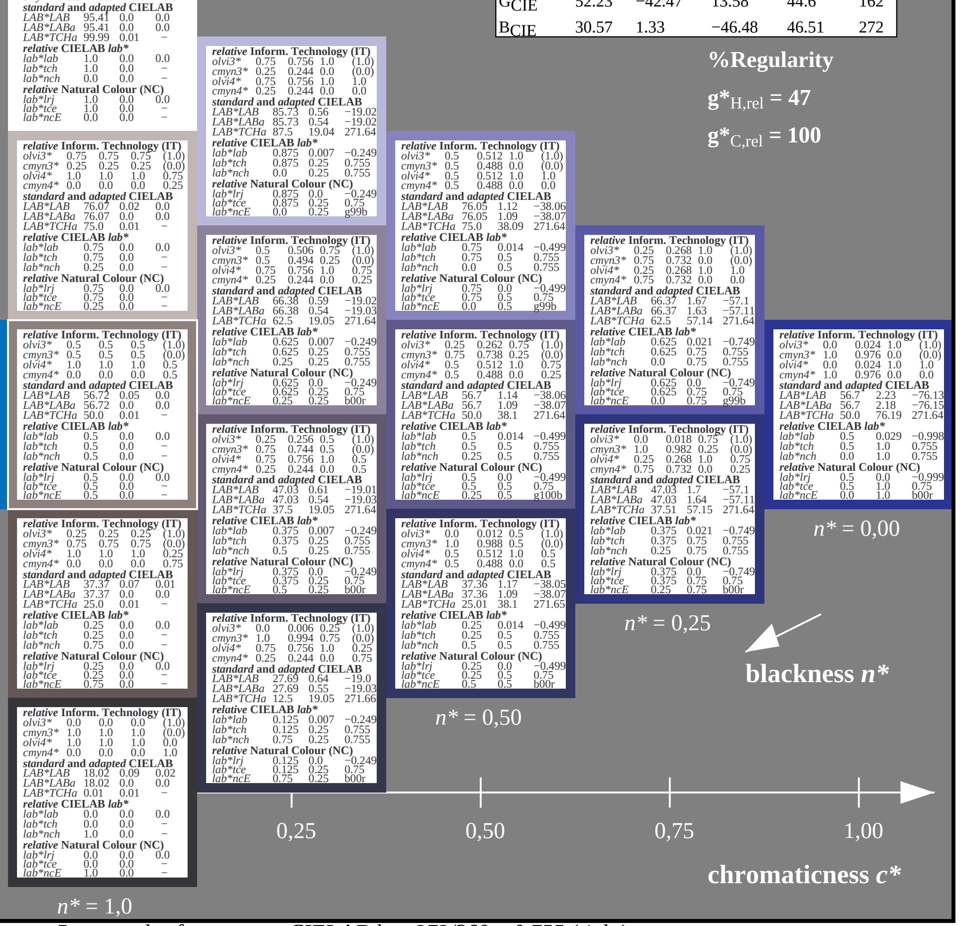
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

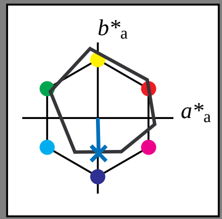


UE500−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

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

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
*lab*tch and lab*nch*

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0
triangle lightness t^*

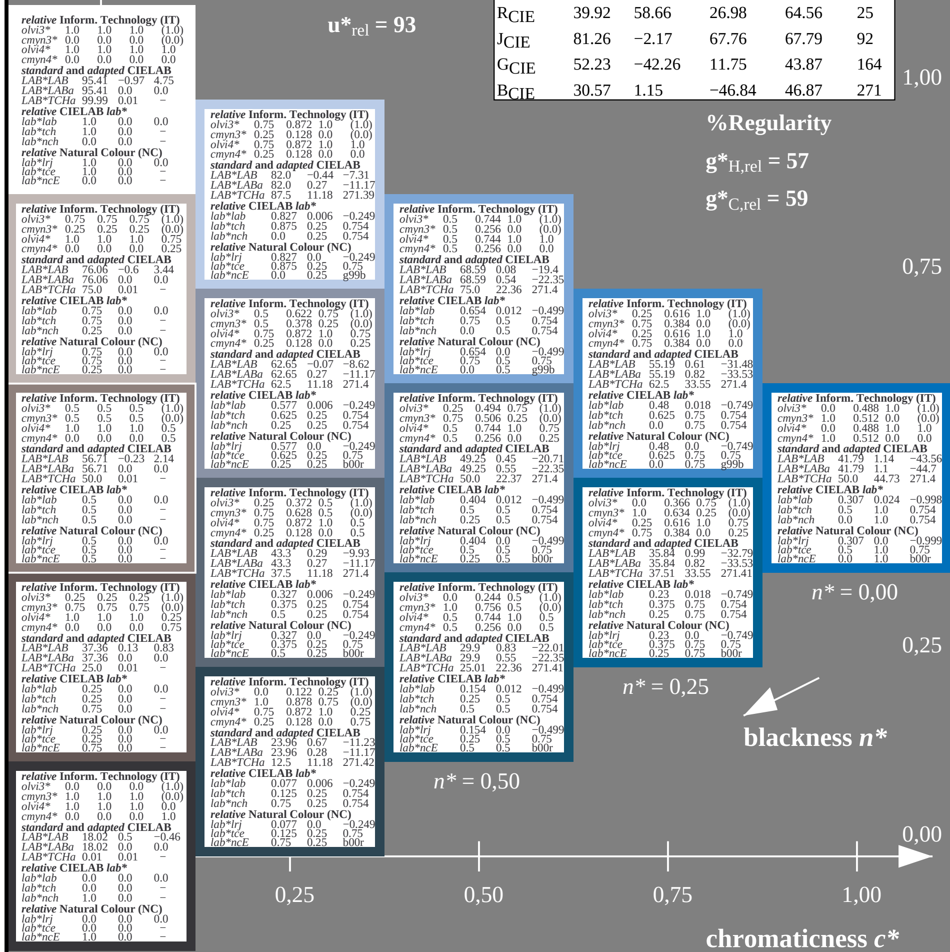


%Gamut
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data

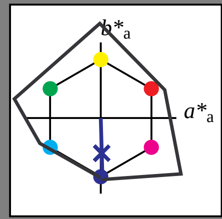
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 272/360 = 0.755$
*lab*tch and lab*nch*

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0
triangle lightness t^*

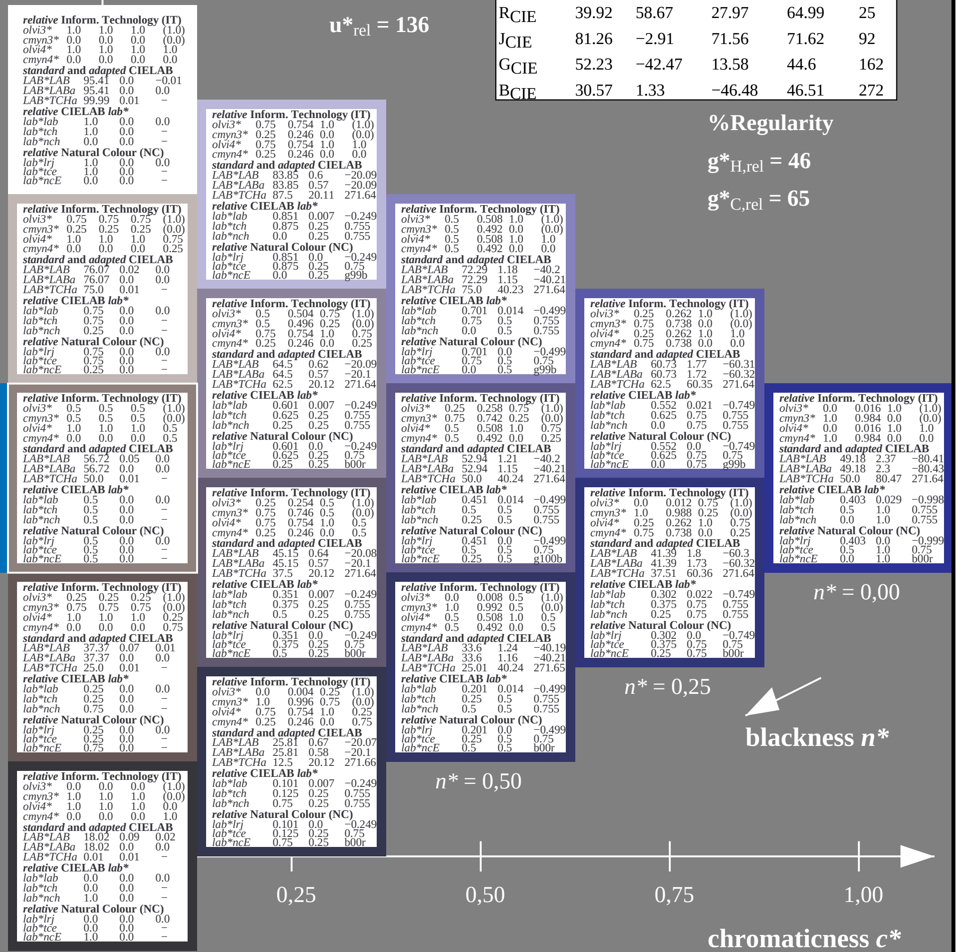


%Gamut
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$

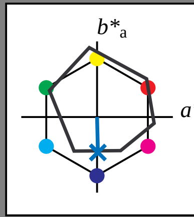


UE500−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

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

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
*lab*tch and lab*nch*

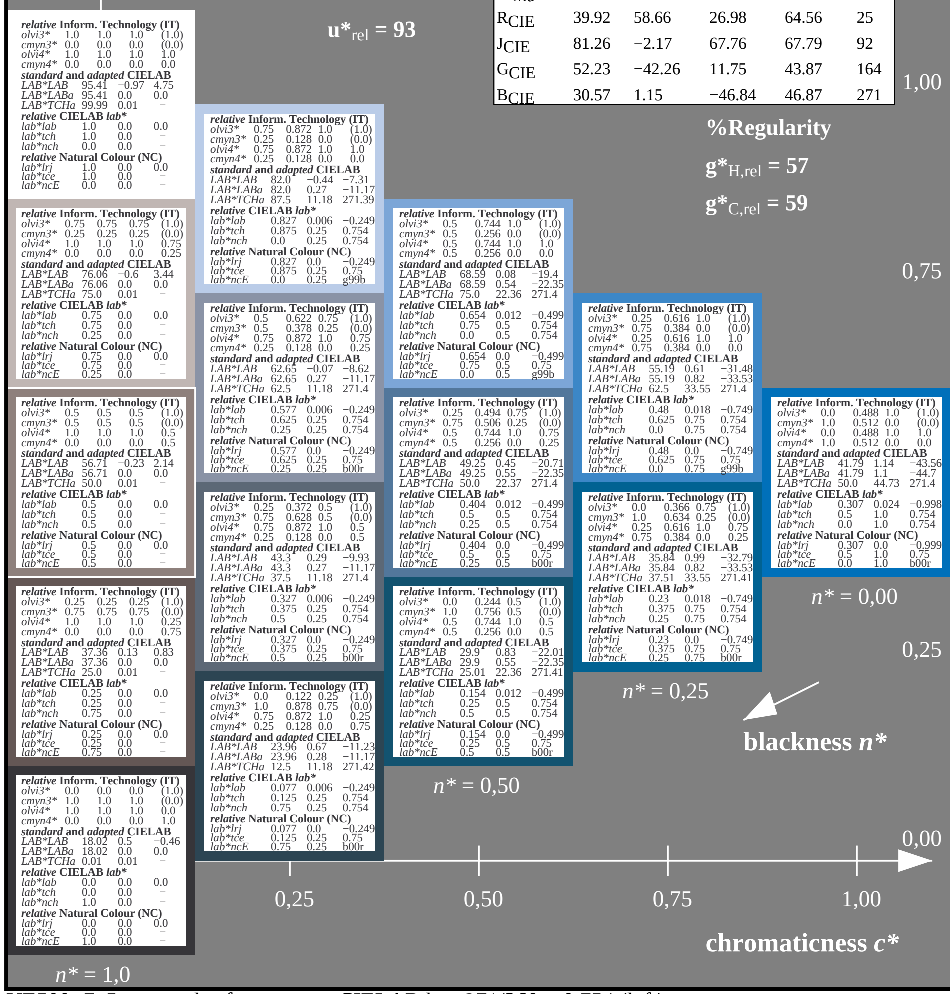
D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0
triangle lightness t^*



%Gamut
u^*_{rel} = 93

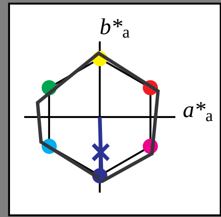
TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel}$ = 57
$g^*_{C,rel}$ = 59



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 272/360 = 0.755$
*lab*tch and lab*nch*

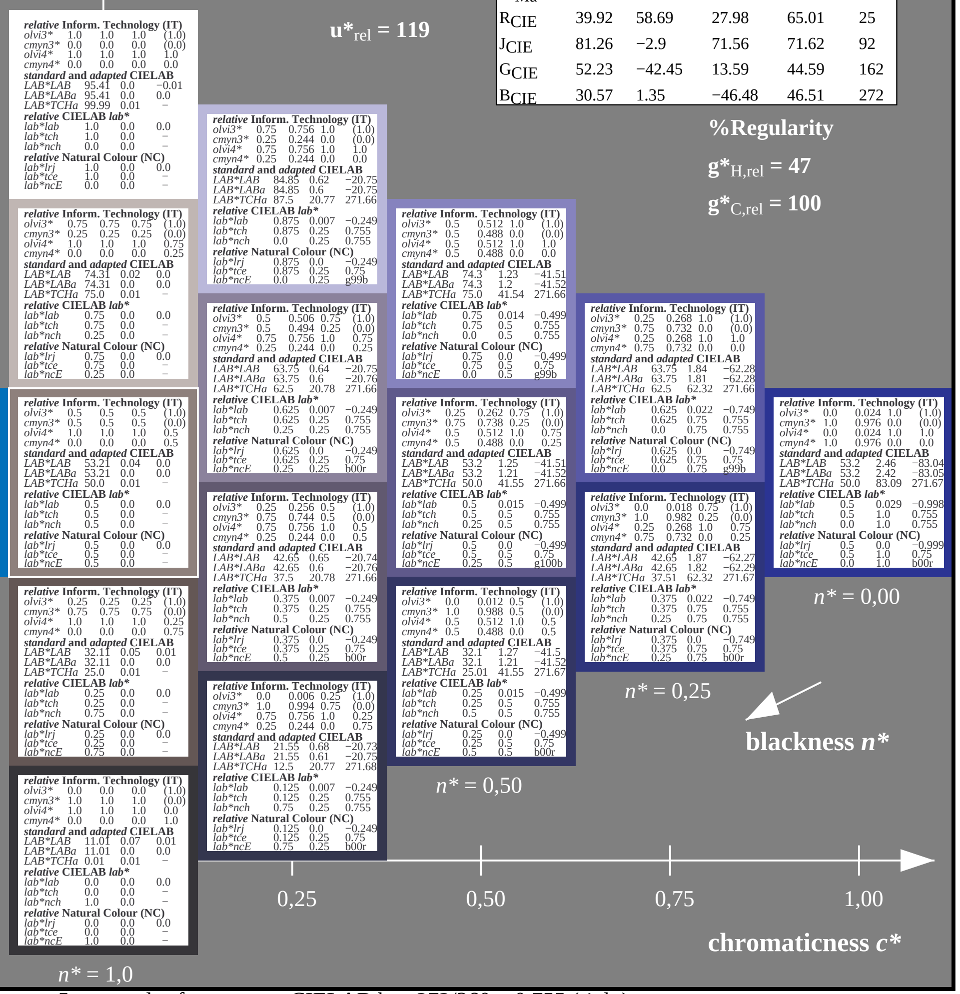
D65: hue B
LCH*Ma: 53 83 272
rgb*Ma: 0.0 0.02 1.0
triangle lightness t^*



%Gamut
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100

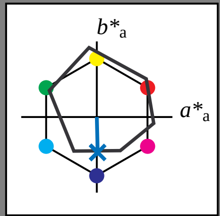


UE500−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

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

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

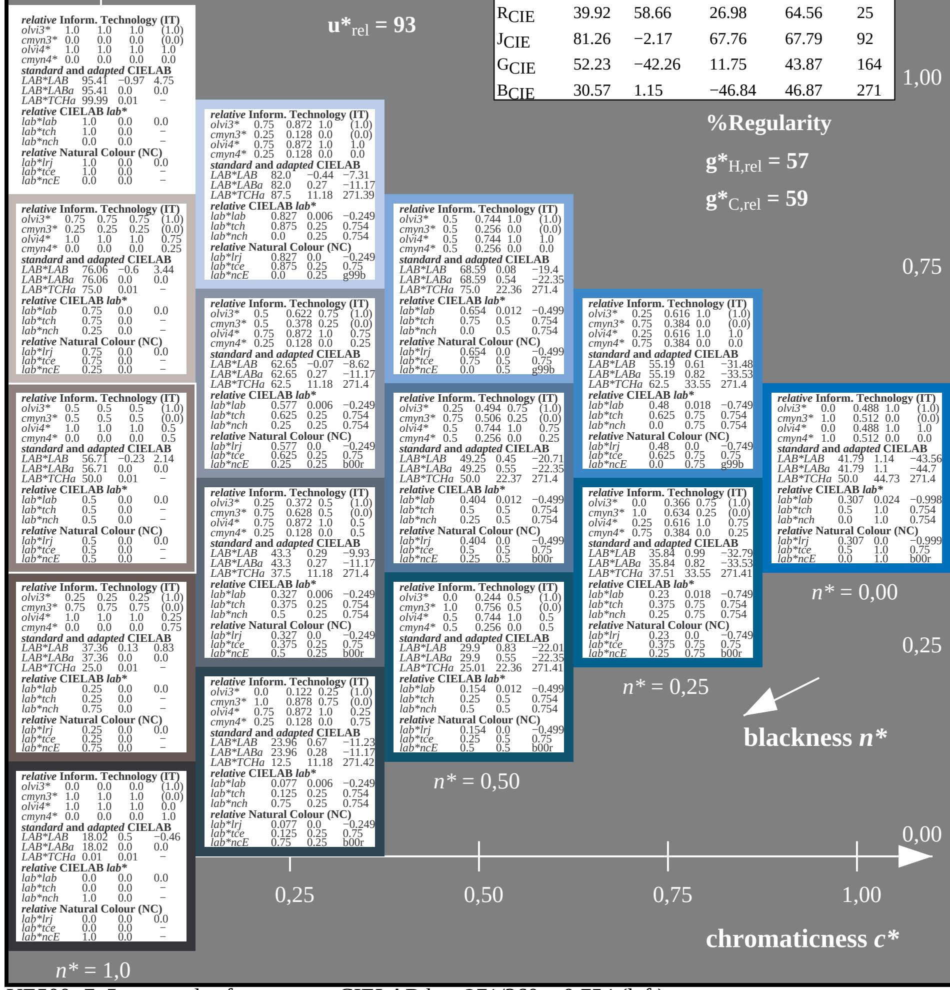
D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 93$

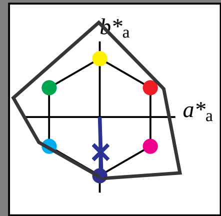
TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

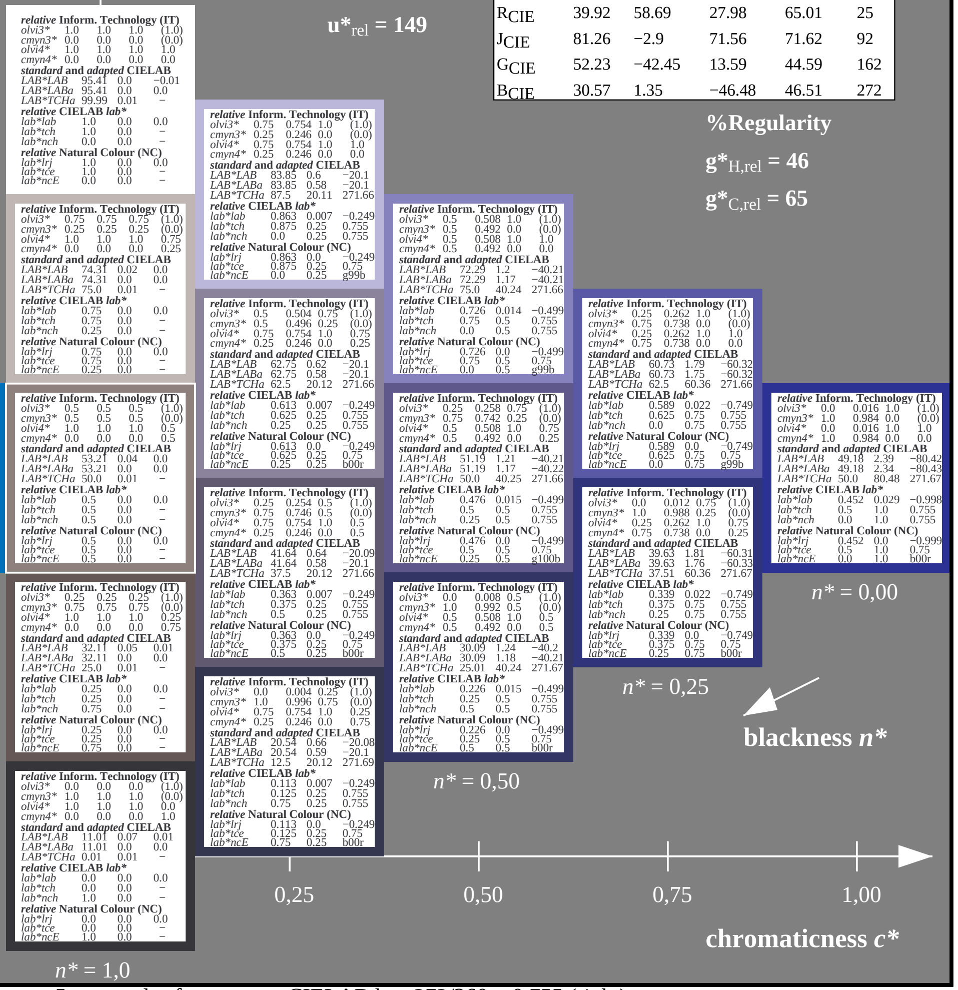
D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

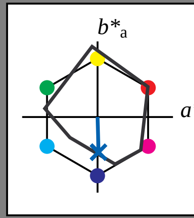
%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



UE500−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)
5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 272/360 = 0.755$
*lab*tch and lab*nch*

D65: hue B
LCH*Ma: 40 49 272
rgb*Ma: 0.0 0.36 1.0
triangle lightness t^*

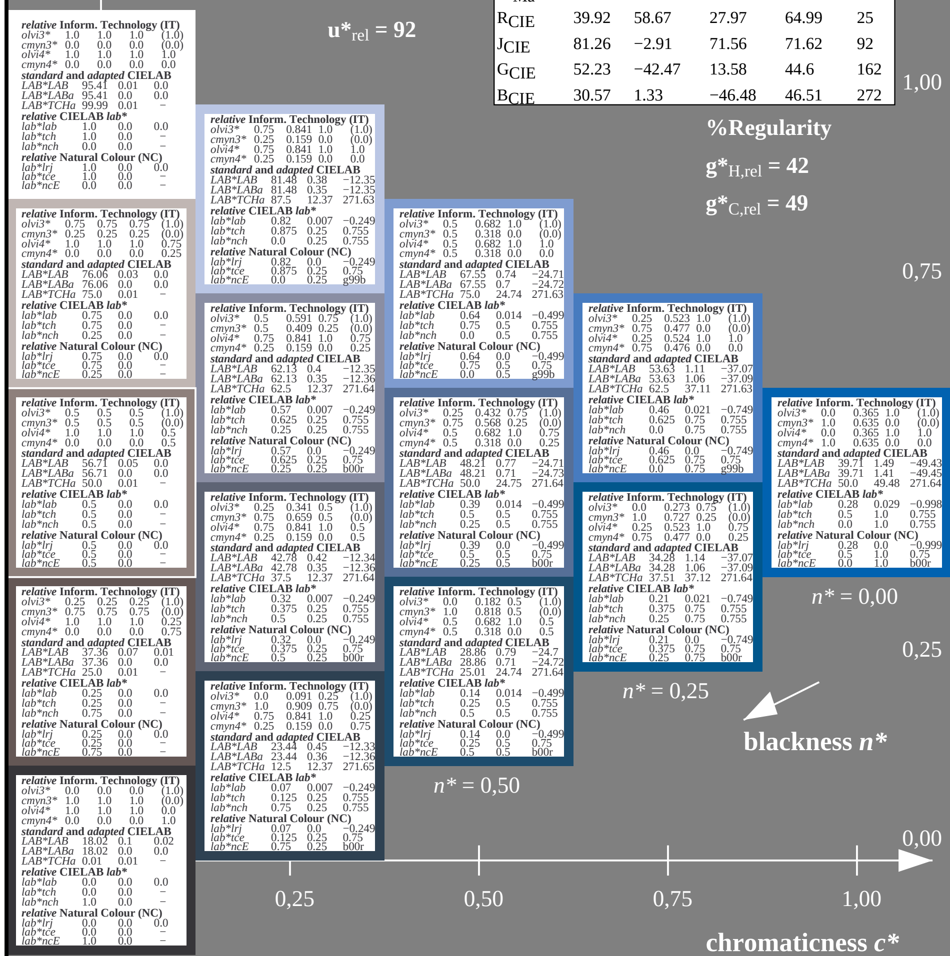


%Gamut
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data

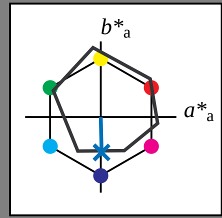
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 271/360 = 0.754$
*lab*tch and lab*nch*

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0
triangle lightness t^*

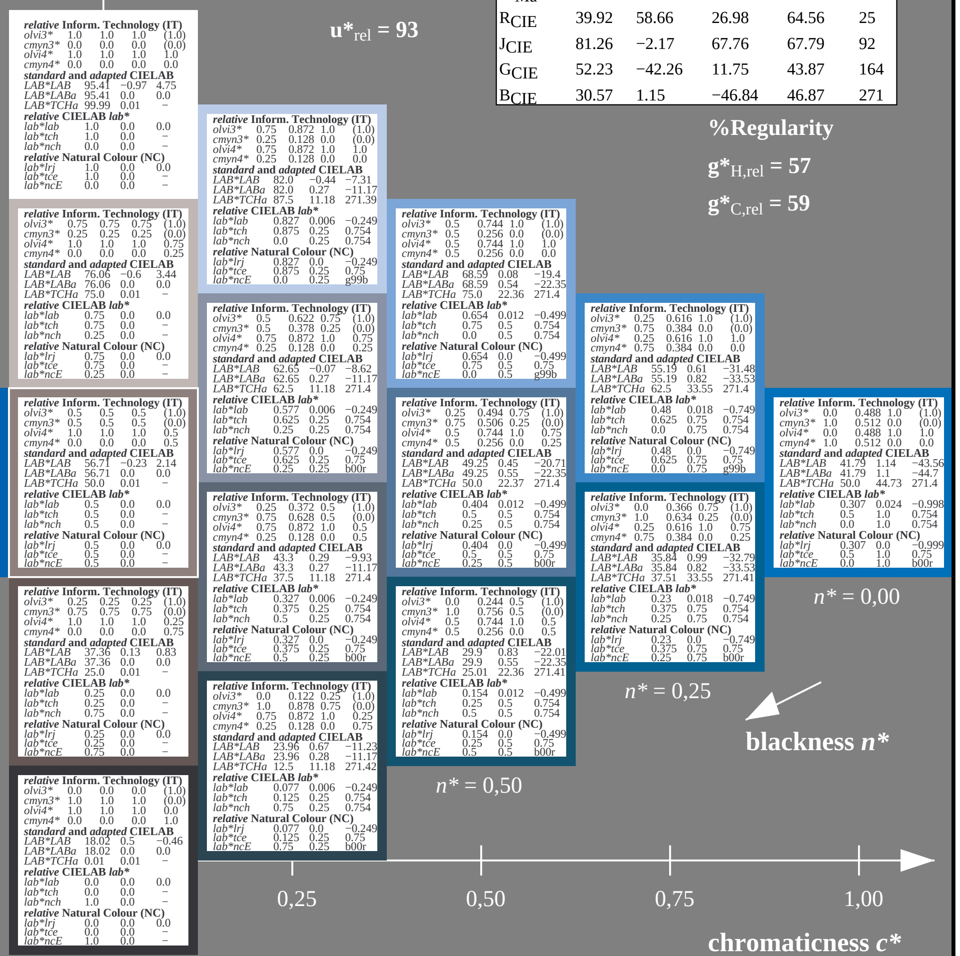


%Gamut
$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



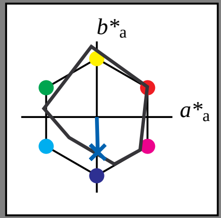
UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

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

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 272/360 = 0.755$
*lab*tch* and *lab*nch*

D65: hue B
LCH*Ma: 40 49 272
rgb*Ma: 0.0 0.36 1.0

triangle lightness t^*



%Gamut
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$

1,00 0,75 0,25 0,00

$n^* = 0,00$ $n^* = 0,25$ $n^* = 0,50$ $n^* = 1,0$

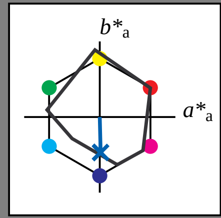
blackness n^*

0,25 0,50 0,75 1,00
chromaticness c^*

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
*lab*tch* and *lab*nch*

D65: hue B
LCH*Ma: 40 50 271
rgb*Ma: 0.0 0.37 1.0

triangle lightness t^*



%Gamut
$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 41$
$g^*_{C,rel} = 52$

$n^* = 0,00$ $n^* = 0,25$ $n^* = 0,50$ $n^* = 1,0$

blackness n^*

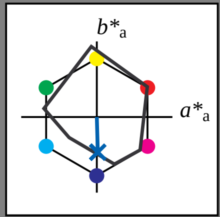
0,25 0,50 0,75 1,00
chromaticness c^*

UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)   5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 272/360 = 0.755$
lab^*tch and lab^*nch

D65: hue B
LCH*Ma: 40 49 272
rgb*Ma: 0.0 0.36 1.0

triangle lightness t^*



%Gamut

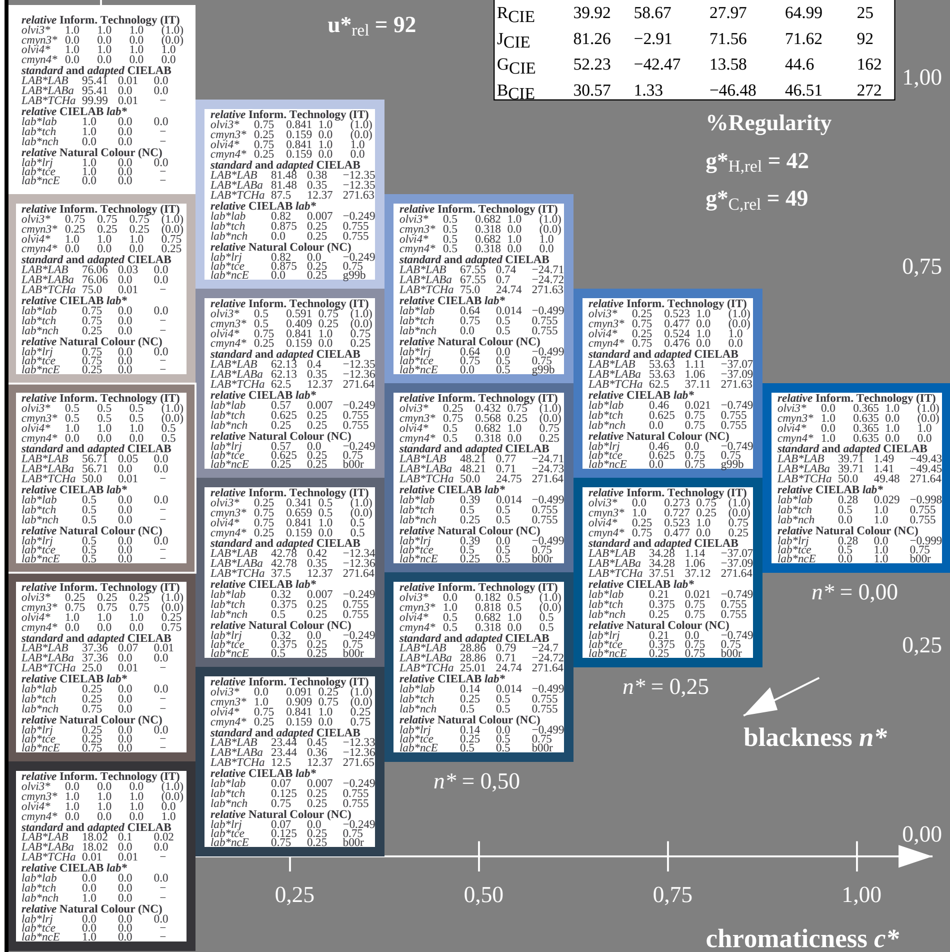
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

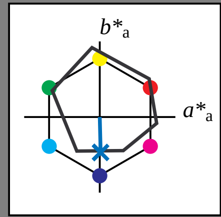
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab^*tch and lab^*nch

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness t^*



%Gamut

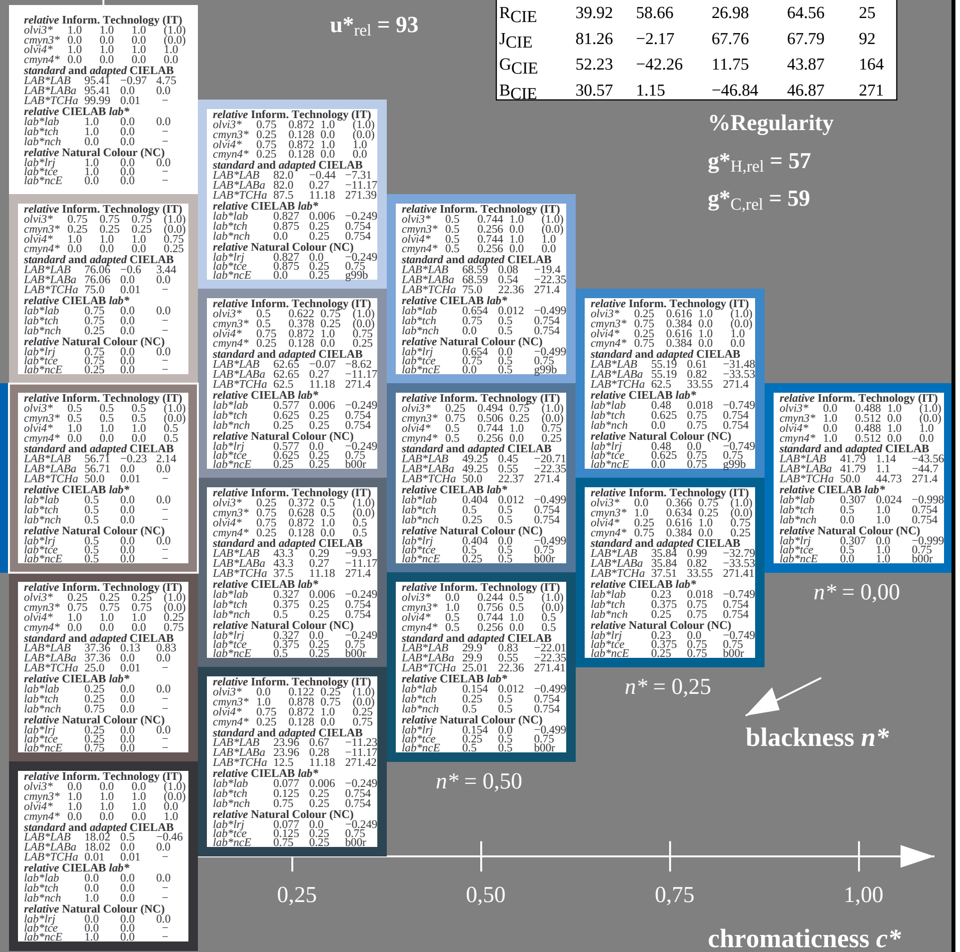
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

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

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



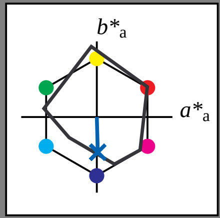
UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

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

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch and lab*nch

D65: hue B
LCH*Ma: 40 49 272
rgb*Ma: 0.0 0.36 1.0

triangle lightness t^*

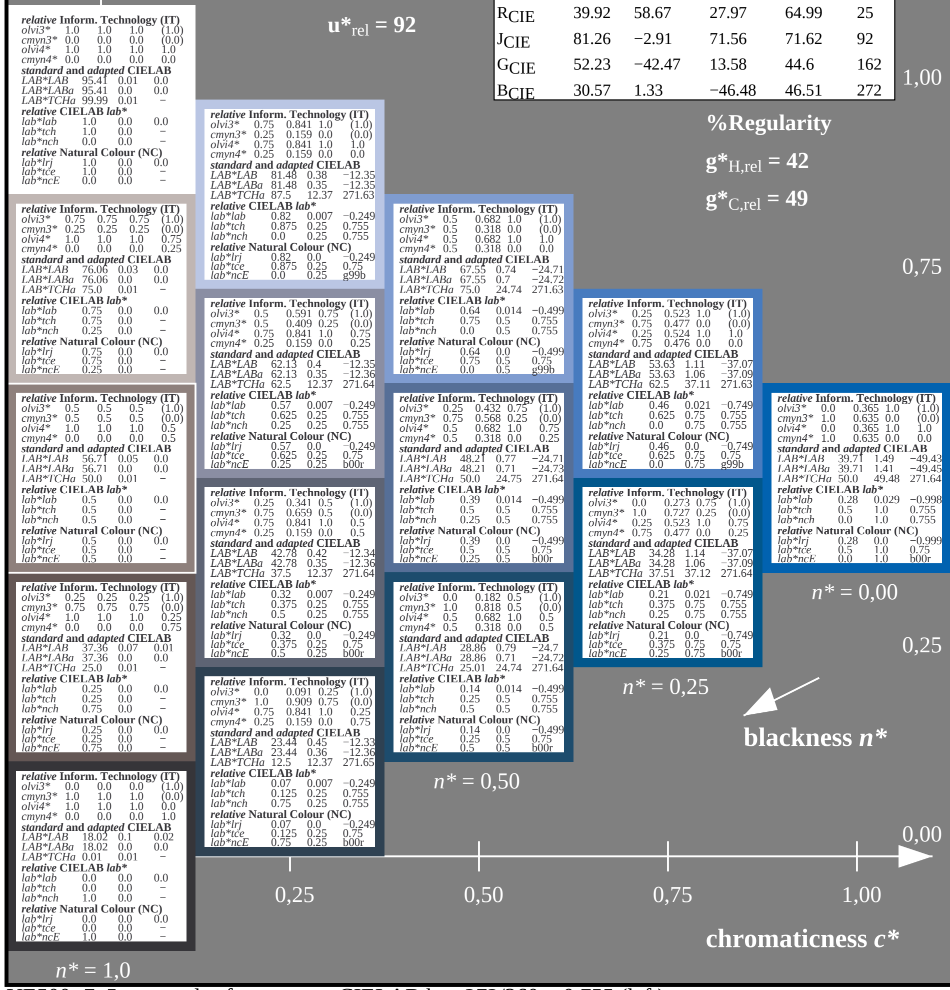


MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut
$u^*_{rel} = 92$

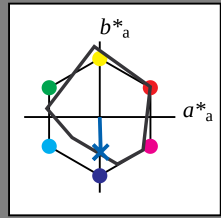
%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch and lab*nch

D65: hue B
LCH*Ma: 40 49 272
rgb*Ma: 0.0 0.36 1.0

triangle lightness t^*

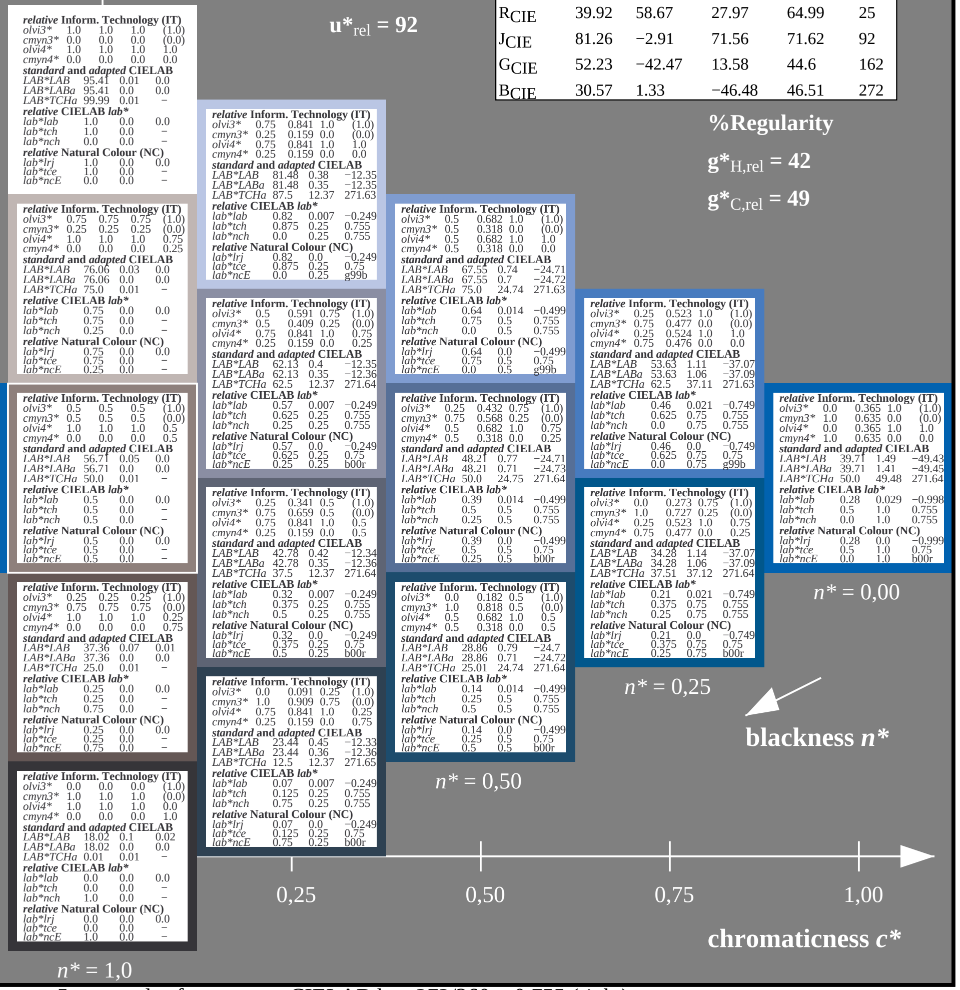


MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut
$u^*_{rel} = 92$

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$

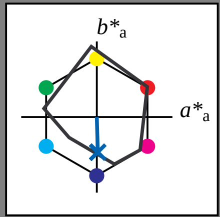


UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

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

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 272/360 = 0.755$
*lab*tch and lab*nch*

D65: hue B
LCH*Ma: 40 49 272
rgb*Ma: 0.0 0.36 1.0
triangle lightness t^*

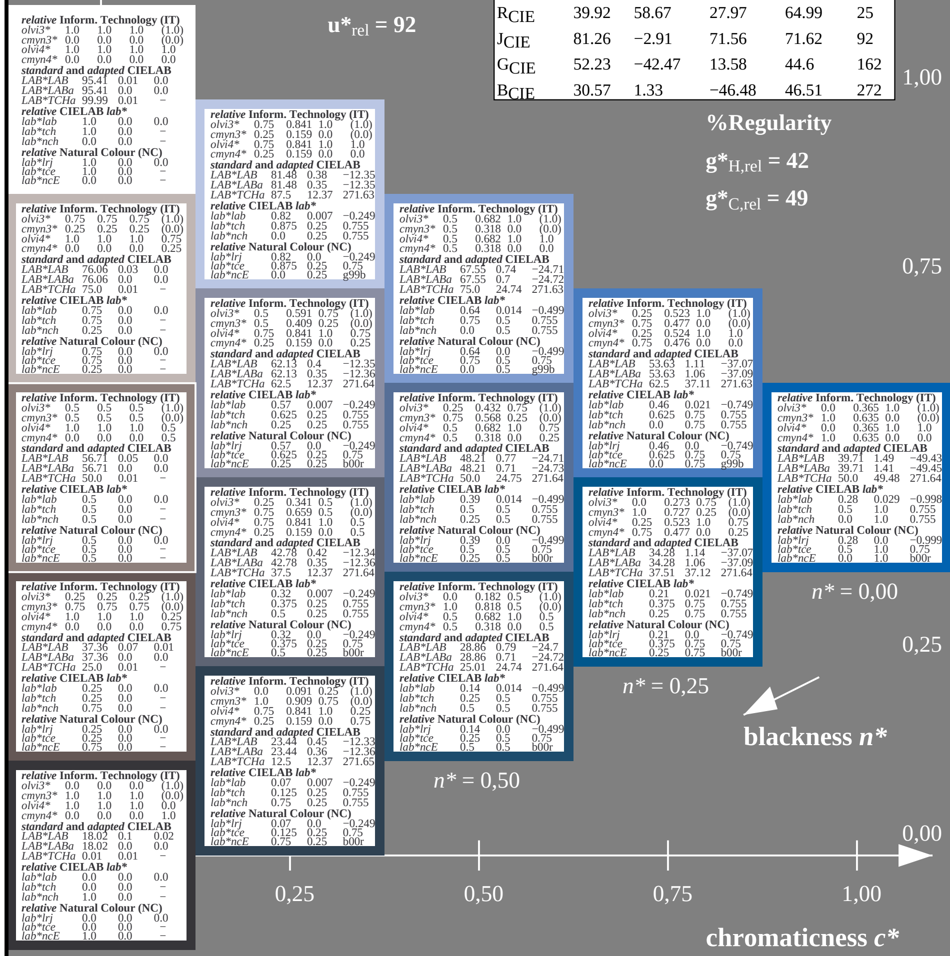


%Gamut
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data

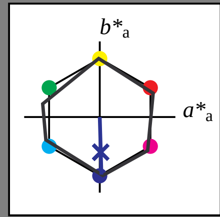
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 272/360 = 0.755$
*lab*tch and lab*nch*

D65: hue B
LCH*Ma: 57 76 272
rgb*Ma: 0.0 0.02 1.0
triangle lightness t^*

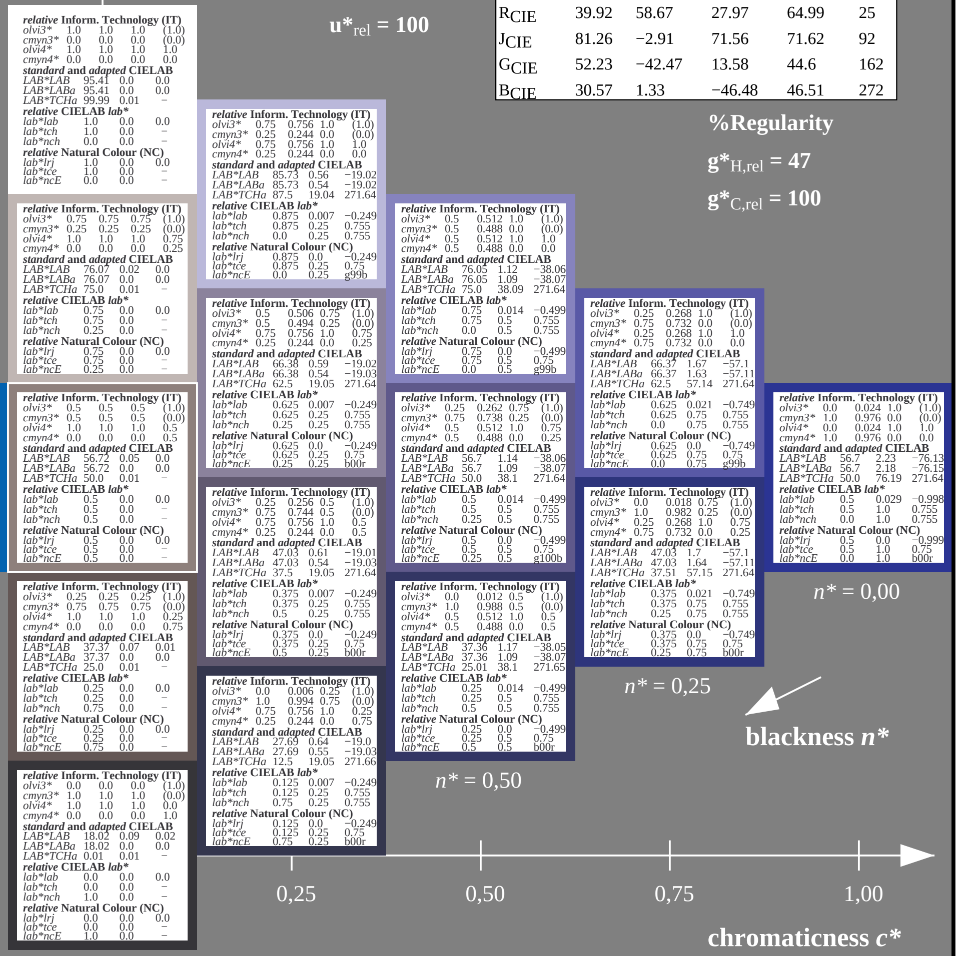


%Gamut
$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$

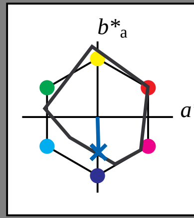


UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

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

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 272/360 = 0.755$
*lab*tch and lab*nch*

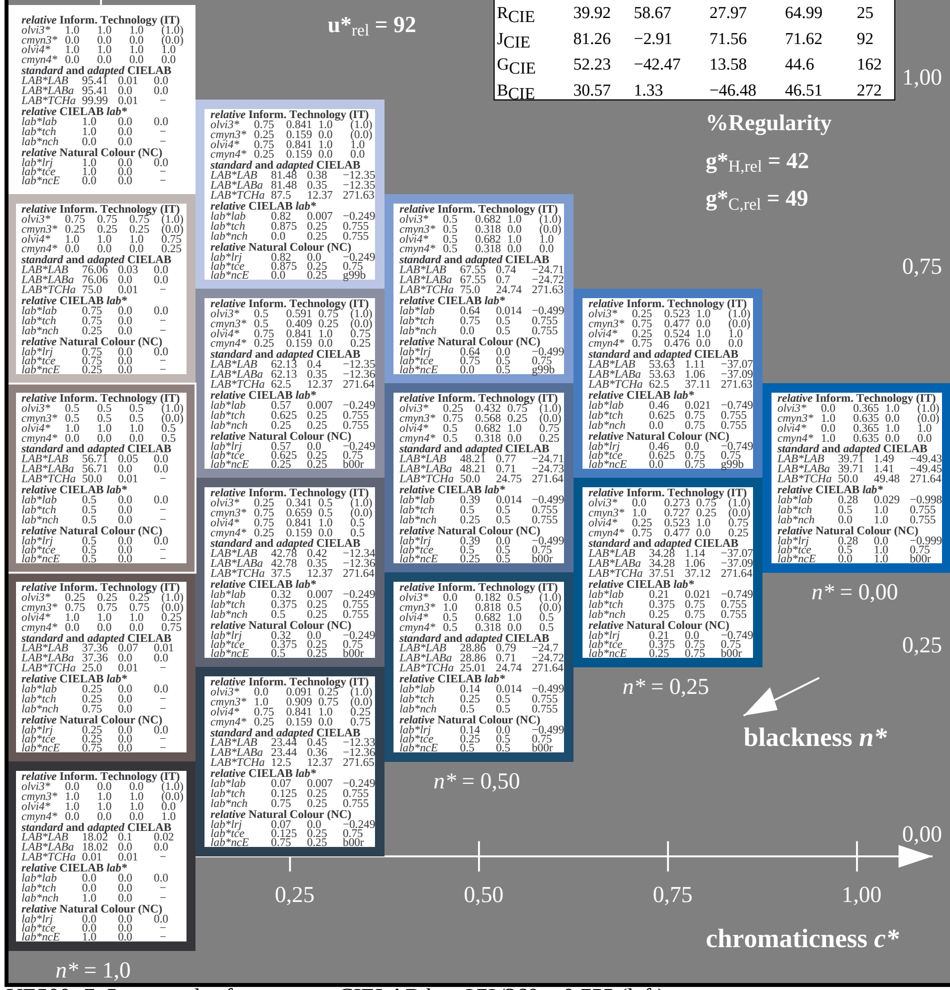
D65: hue B
LCH*Ma: 40 49 272
rgb*Ma: 0.0 0.36 1.0
triangle lightness t^*



MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

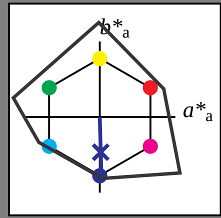
%Gamut
$u^*_{rel} = 92$

%Regularity
$g^*_{H,rel} = 42$
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 272/360 = 0.755$
*lab*tch and lab*nch*

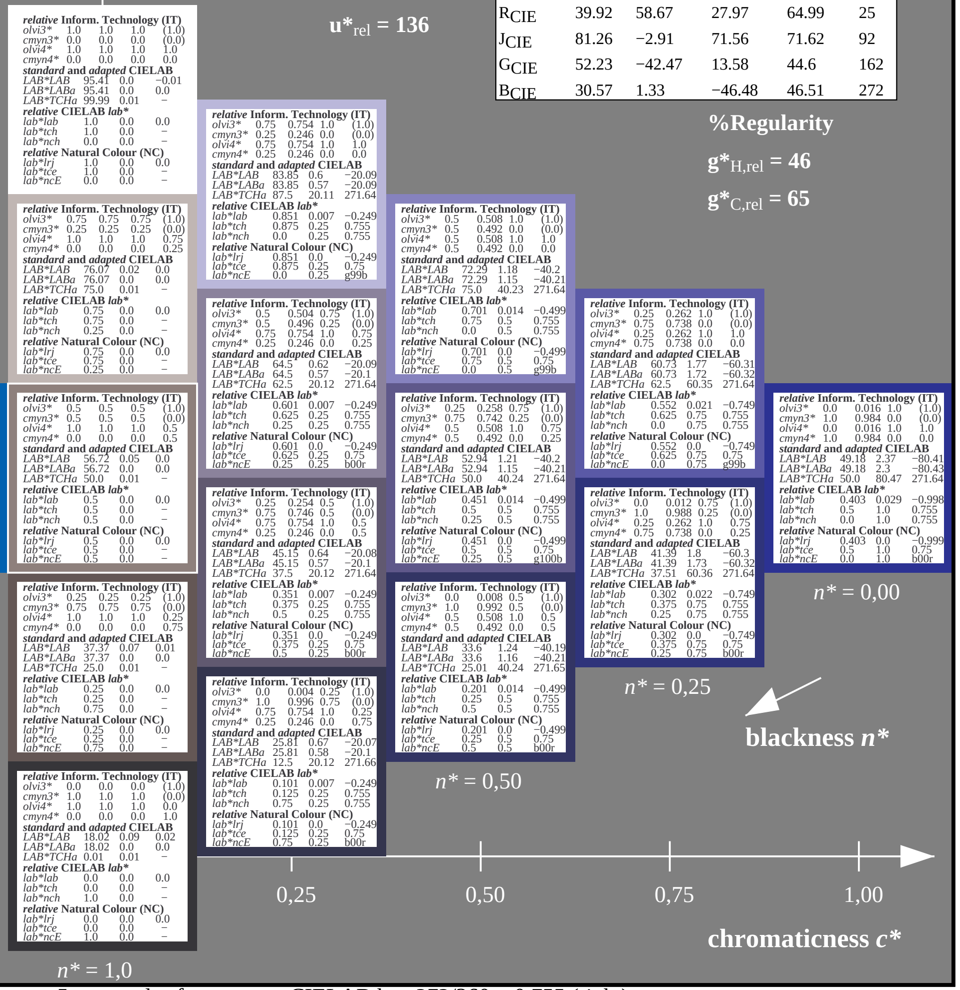
D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0
triangle lightness t^*



NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut
$u^*_{rel} = 136$

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



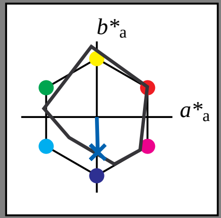
UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

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

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 272/360 = 0.755$
lab^*tch and lab^*nch

D65: hue B
LCH*Ma: 40 49 272
rgb*Ma: 0.0 0.36 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 92$

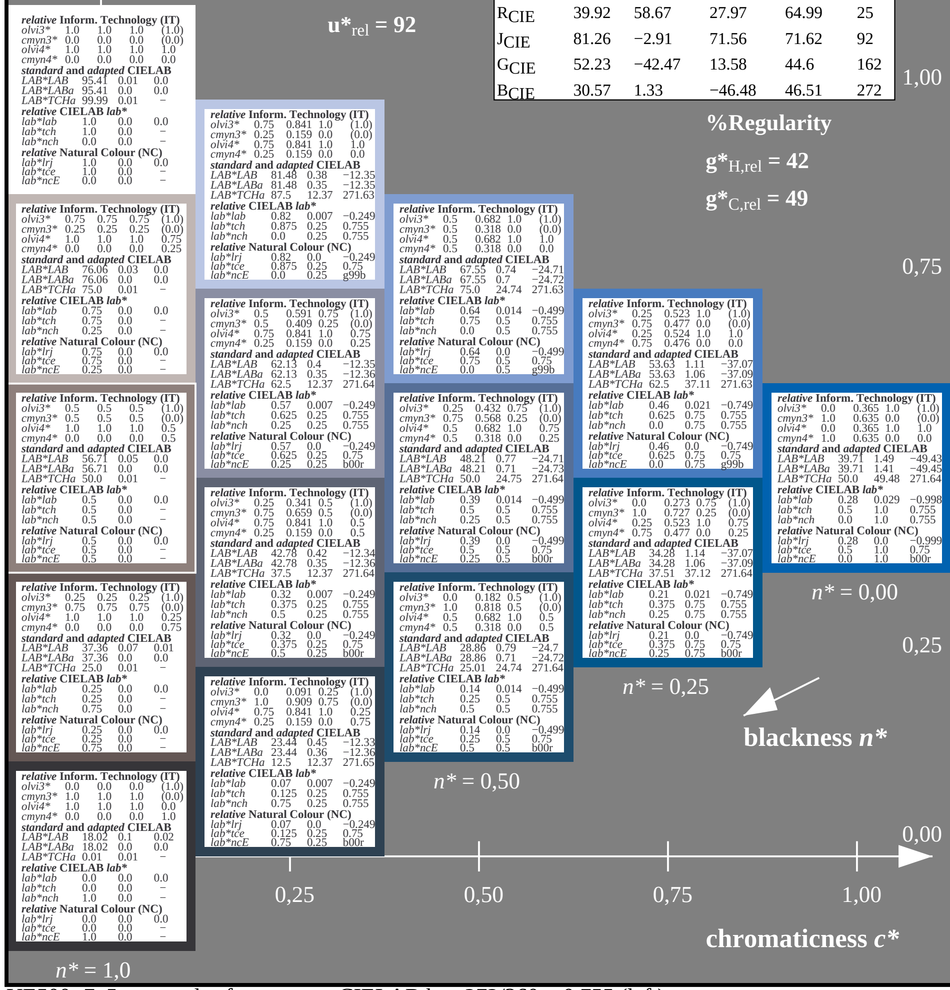
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

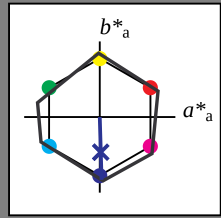
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab^*tch and lab^*nch

D65: hue B
LCH*Ma: 53 83 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 119$

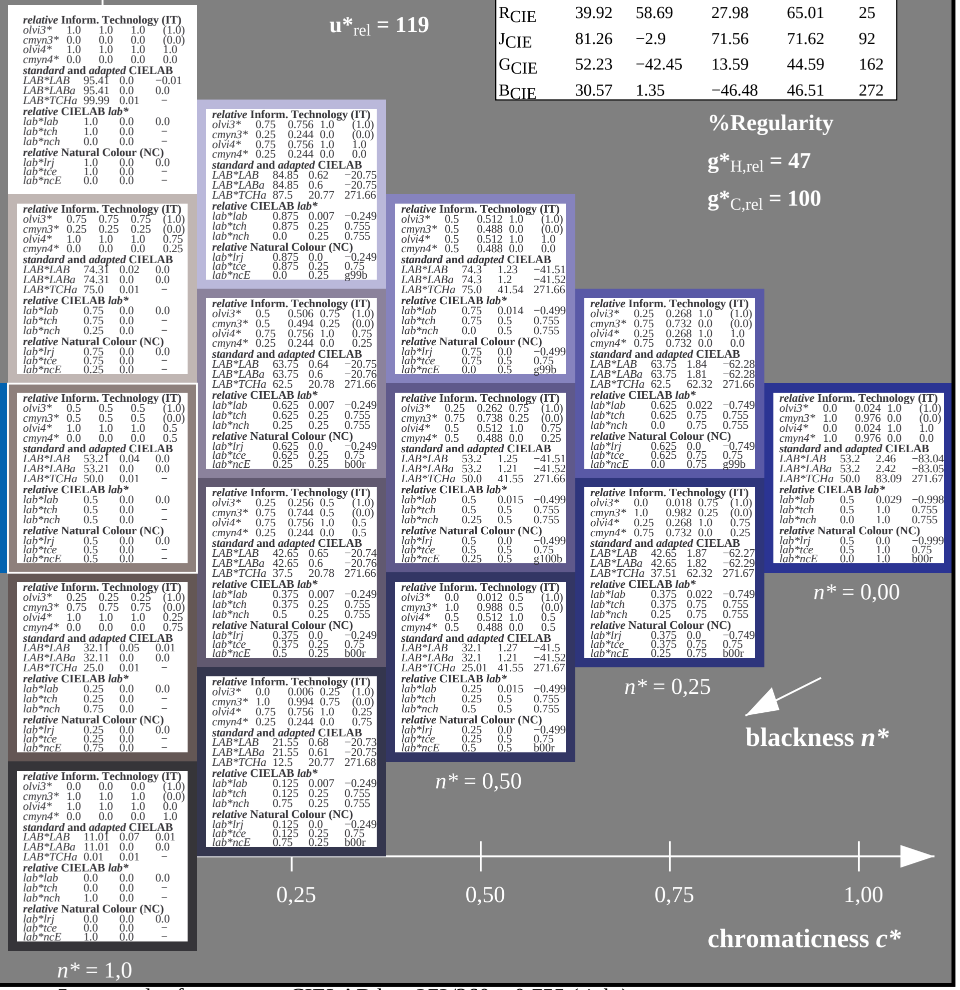
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System MRS18a

for hue $h^* = lab^*h = 272/360 = 0.755$

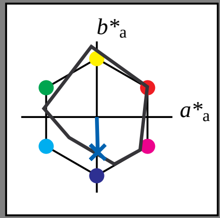
*lab*tch* and *lab*nch*

D65: hue B

LCH*Ma: 40 49 272

rgb*Ma: 0.0 0.36 1.0

triangle lightness t^*

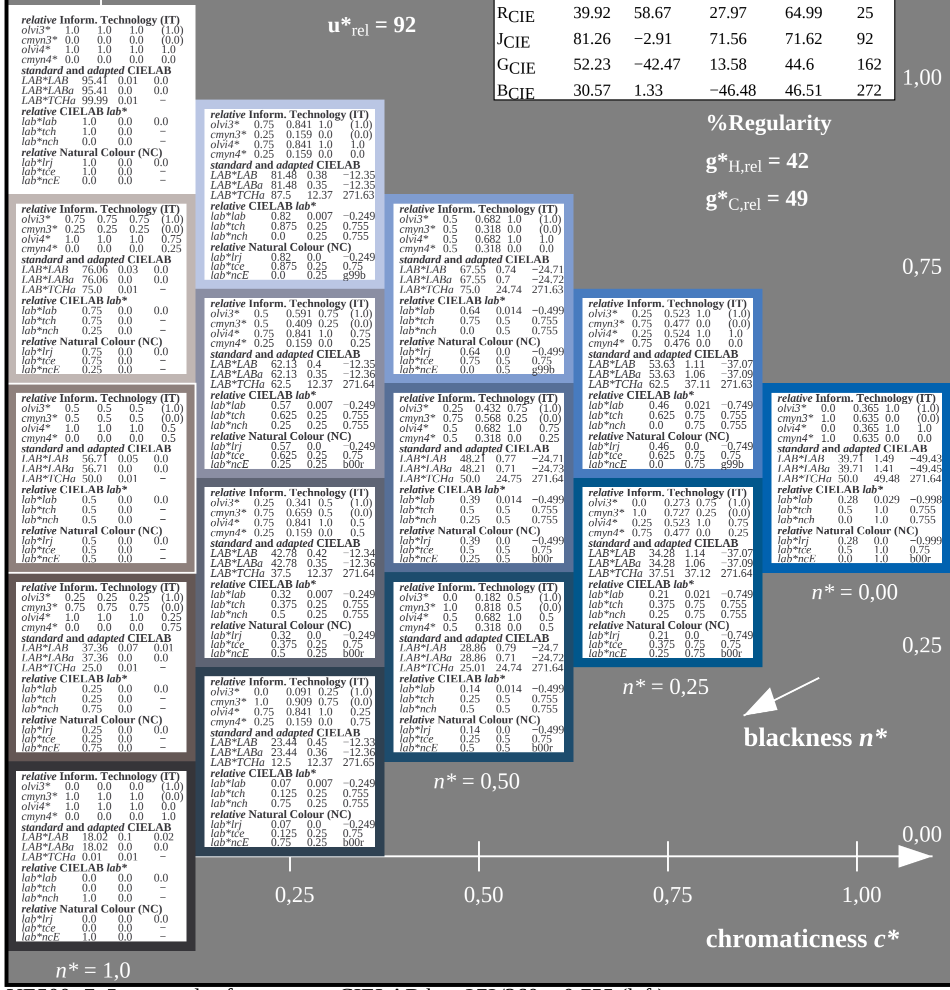


%Gamut

$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272



Output: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 272/360 = 0.755$

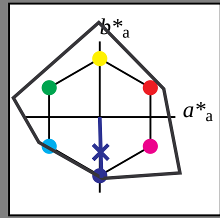
*lab*tch* and *lab*nch*

D65: hue B

LCH*Ma: 49 80 272

rgb*Ma: 0.0 0.02 1.0

triangle lightness t^*

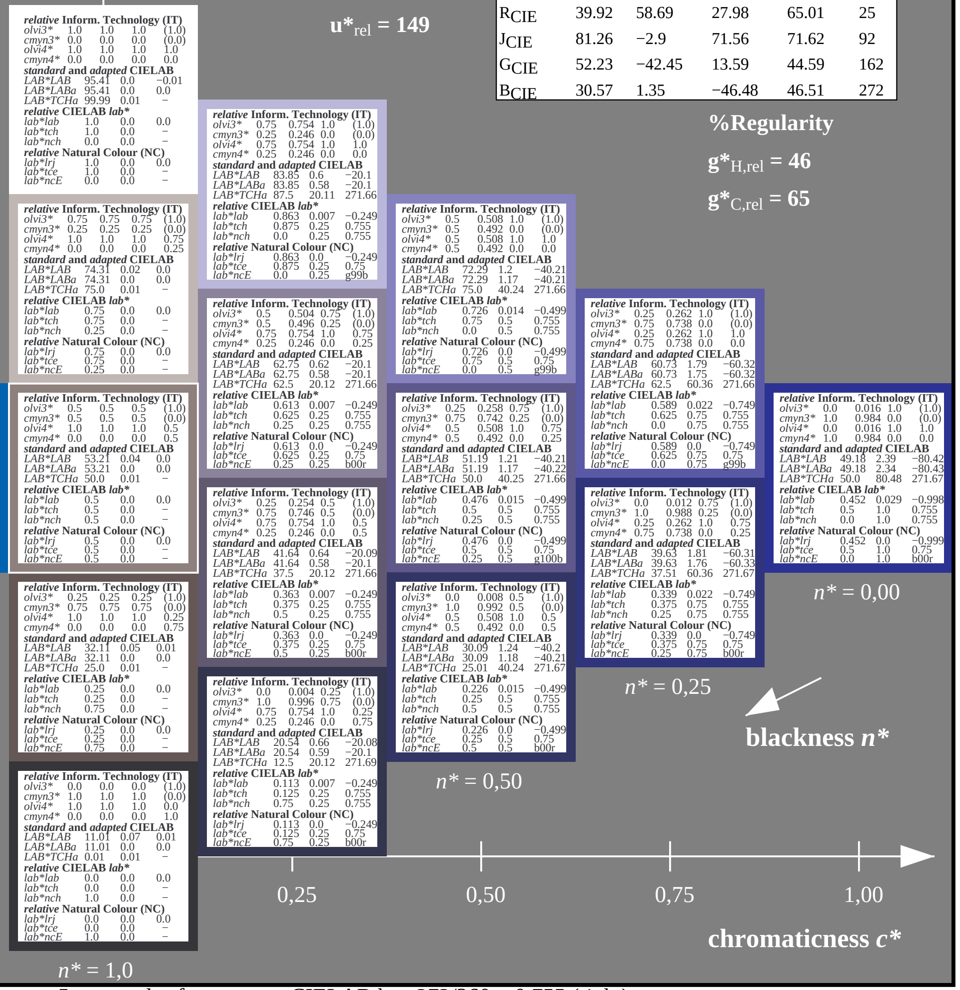


%Gamut

$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272



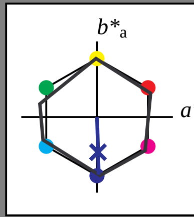
UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NRS18
for hue *h = *lab*h* = 272/360 = 0.755**
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 76 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness *t*



%Gamut

u^*_{rel} = 100

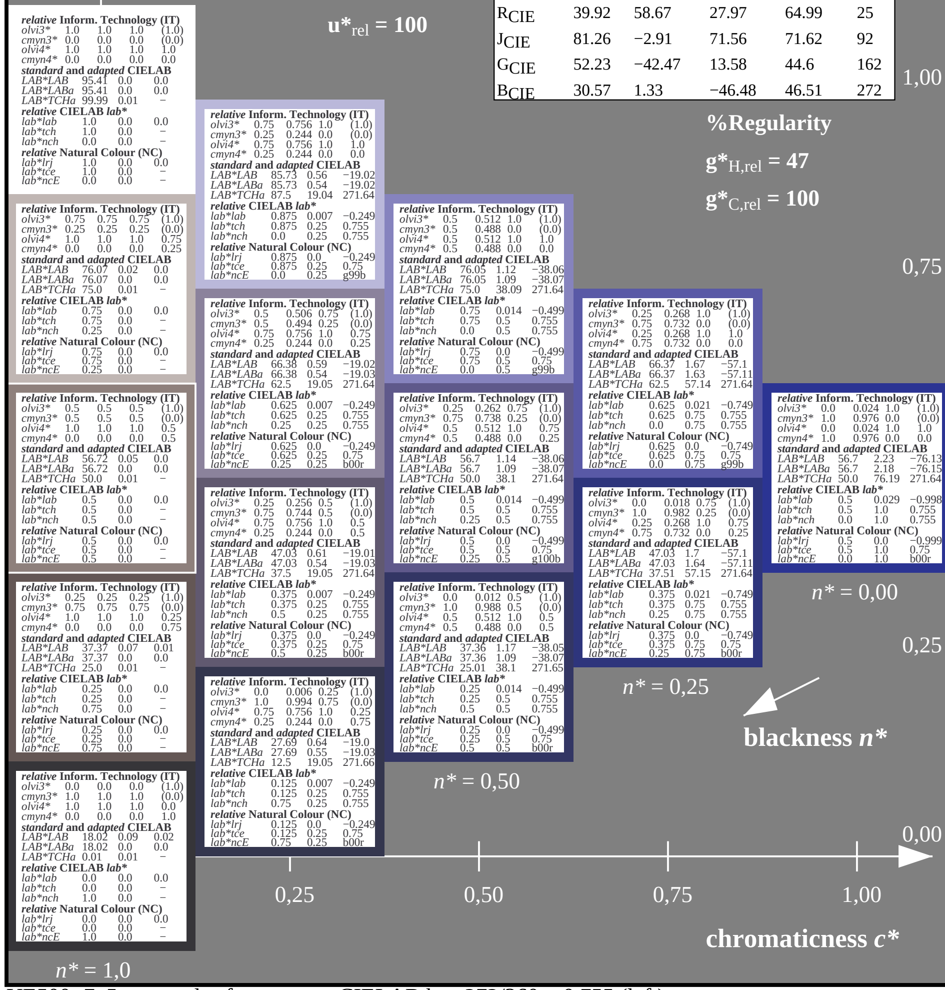
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

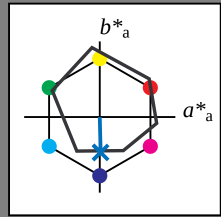
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System ORS18
for hue *h = *lab*h* = 271/360 = 0.754**
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness *t*



%Gamut

u^*_{rel} = 93

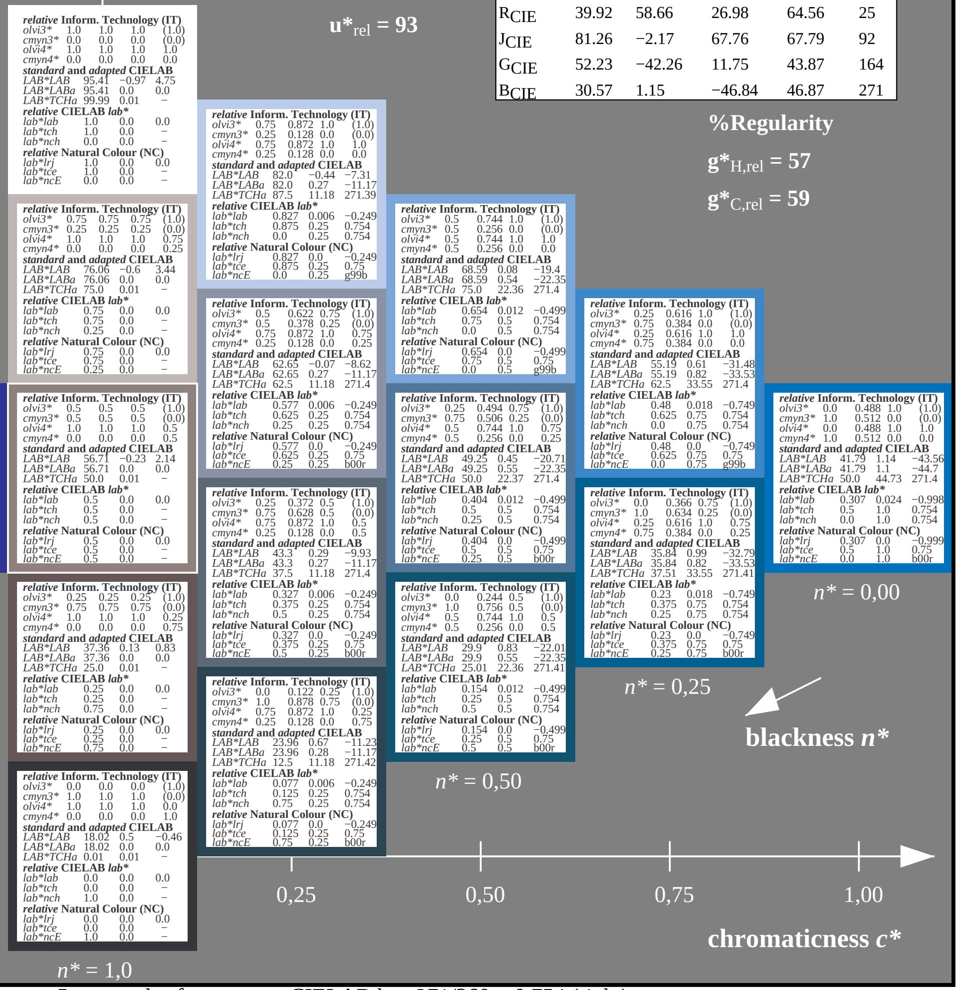
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)
5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

Input: Colorimetric Reflective System NRS18

for hue $h^* = lab^*h = 272/360 = 0.755$

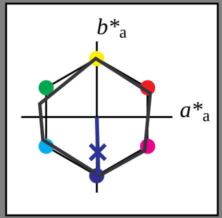
lab*tch* and *lab*nch

D65: hue B

LCH*Ma: 57 76 272

rgb*Ma: 0.0 0.02 1.0

triangle lightness t^*

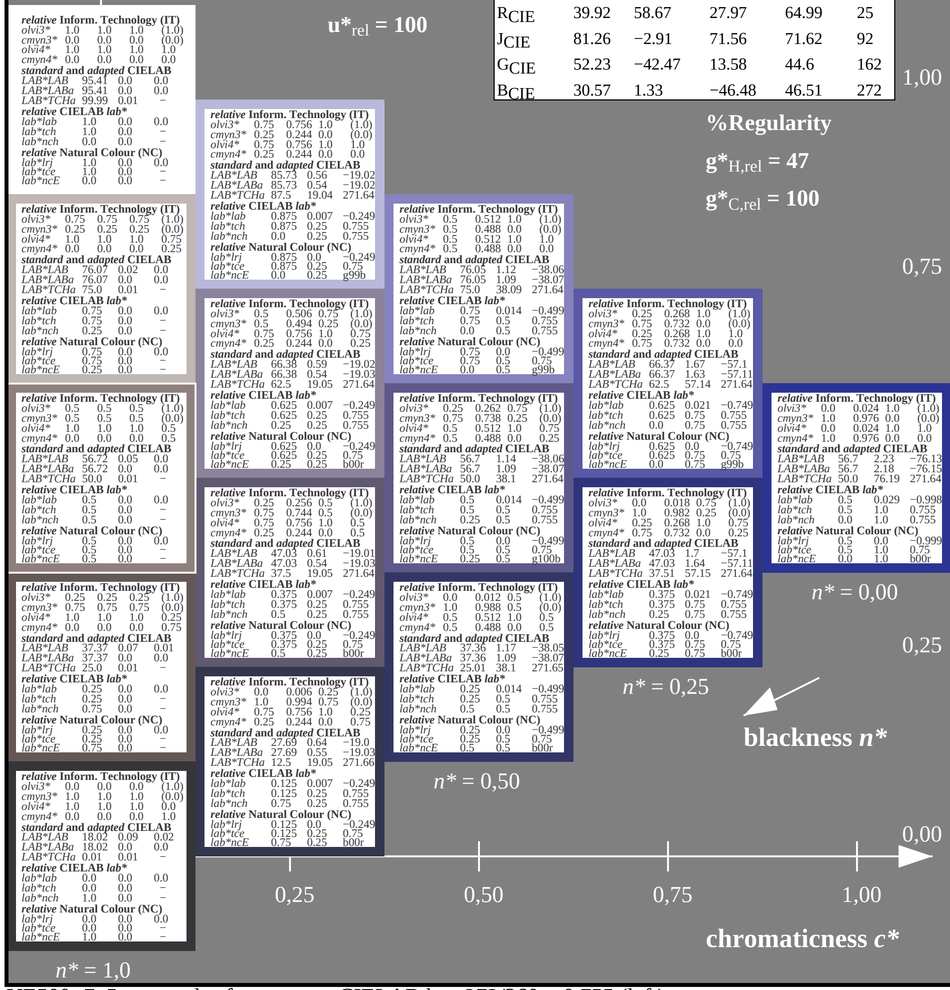


%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272



Output: Colorimetric Reflective System MRS18

for hue $h^* = lab^*h = 271/360 = 0.754$

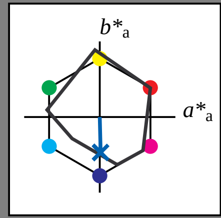
lab*tch* and *lab*nch

D65: hue B

LCH*Ma: 40 50 271

rgb*Ma: 0.0 0.37 1.0

triangle lightness t^*

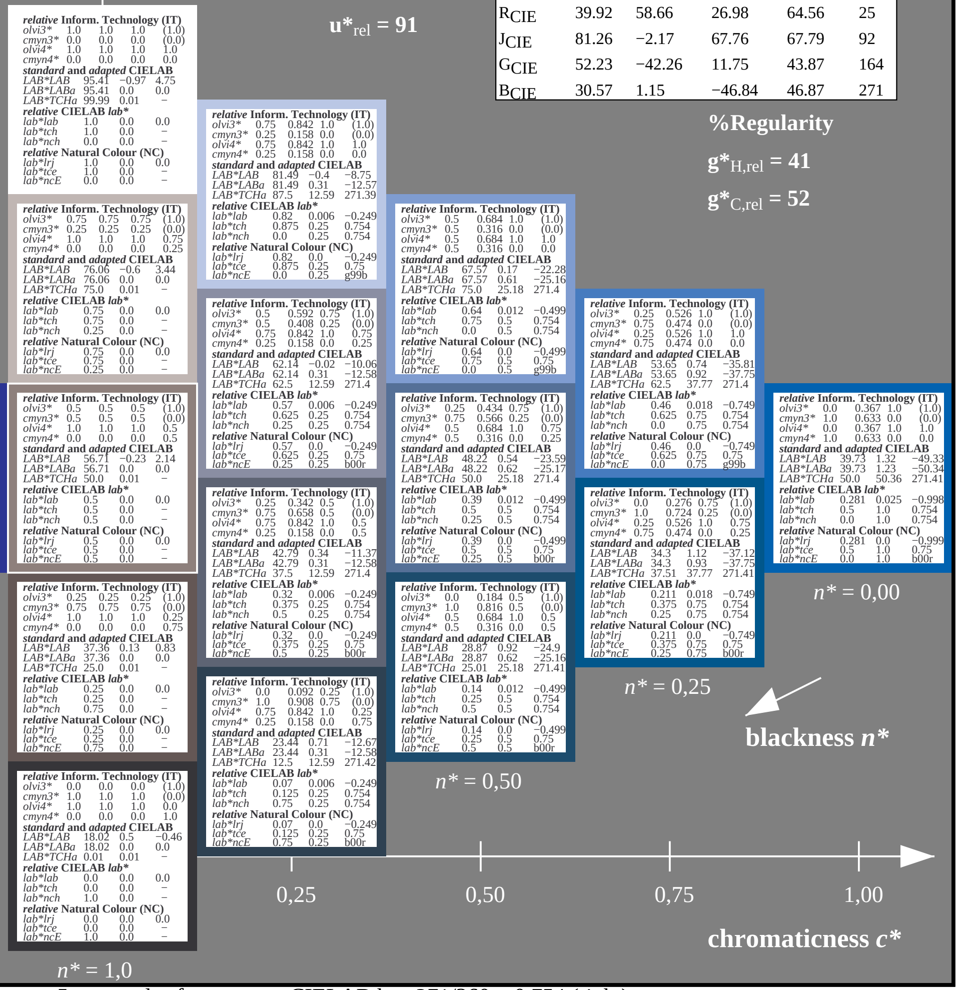


%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

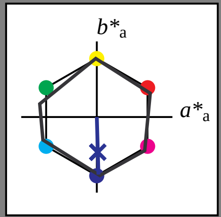
Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 272/360 = 0.755$
*lab*tch* and *lab*nch*

D65: hue B

LCH*Ma: 57 76 272

rgb*Ma: 0.0 0.02 1.0

triangle lightness t^*



%Gamut

u^*_{rel} = 100

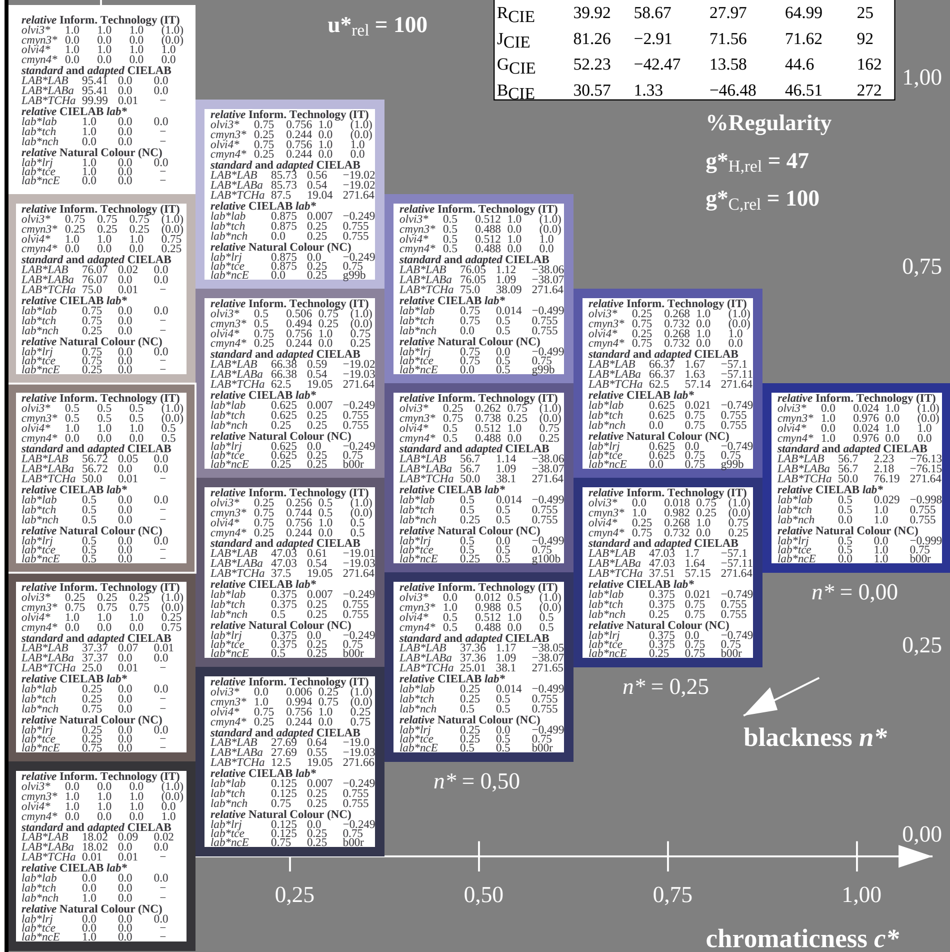
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



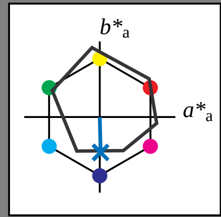
Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
*lab*tch* and *lab*nch*

D65: hue B

LCH*Ma: 42 45 271

rgb*Ma: 0.0 0.49 1.0

triangle lightness t^*



%Gamut

u^*_{rel} = 93

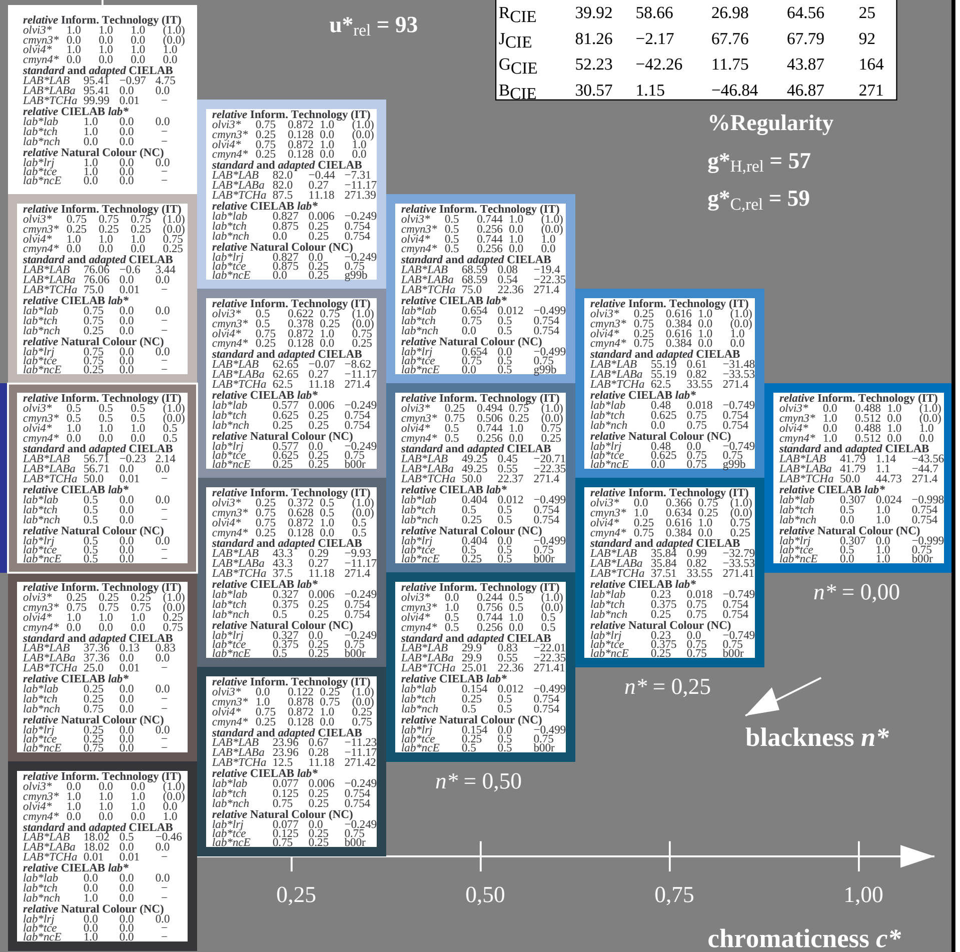
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

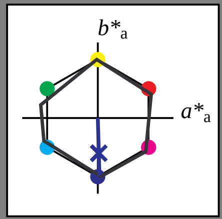


UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h$ = 272/360 = 0.755
lab*tch and lab*nch

D65: hue B
LCH*Ma: 57 76 272
rgb*Ma: 0.0 0.02 1.0
triangle lightness t^*

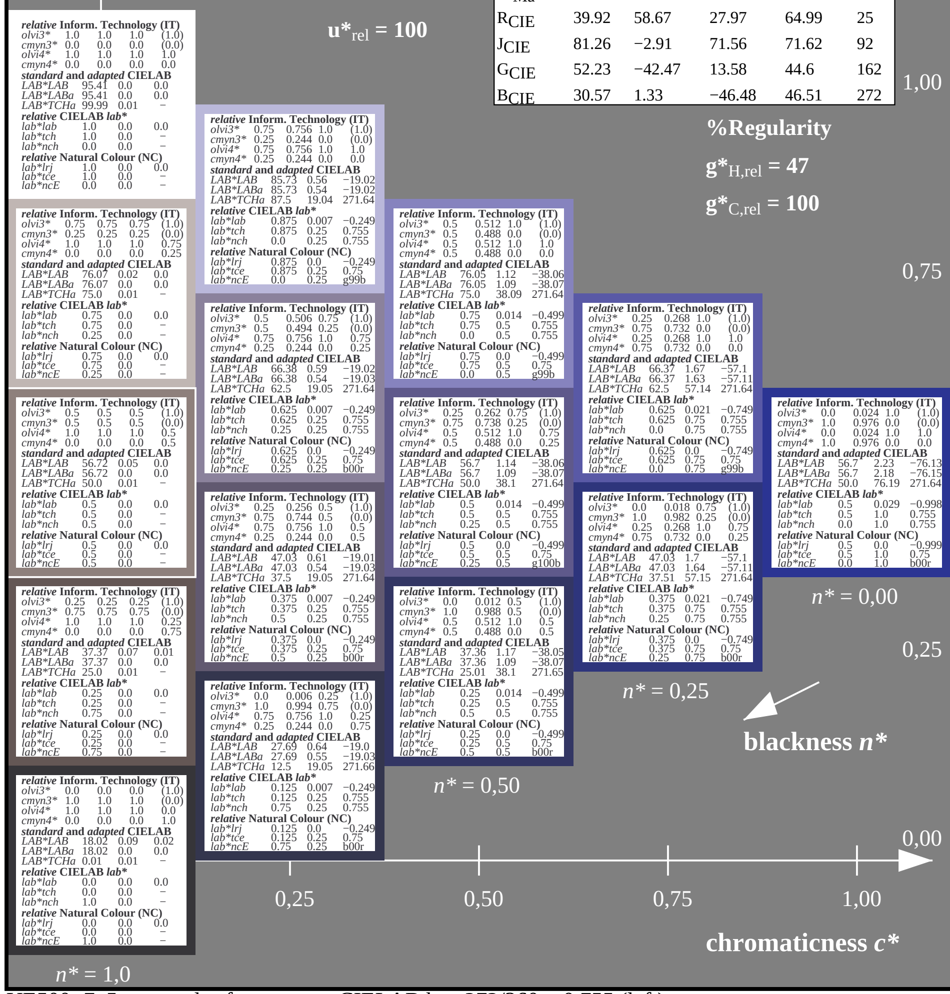


%Gamut
u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

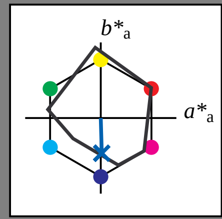
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h$ = 272/360 = 0.755
lab*tch and lab*nch

D65: hue B
LCH*Ma: 40 49 272
rgb*Ma: 0.0 0.36 1.0
triangle lightness t^*

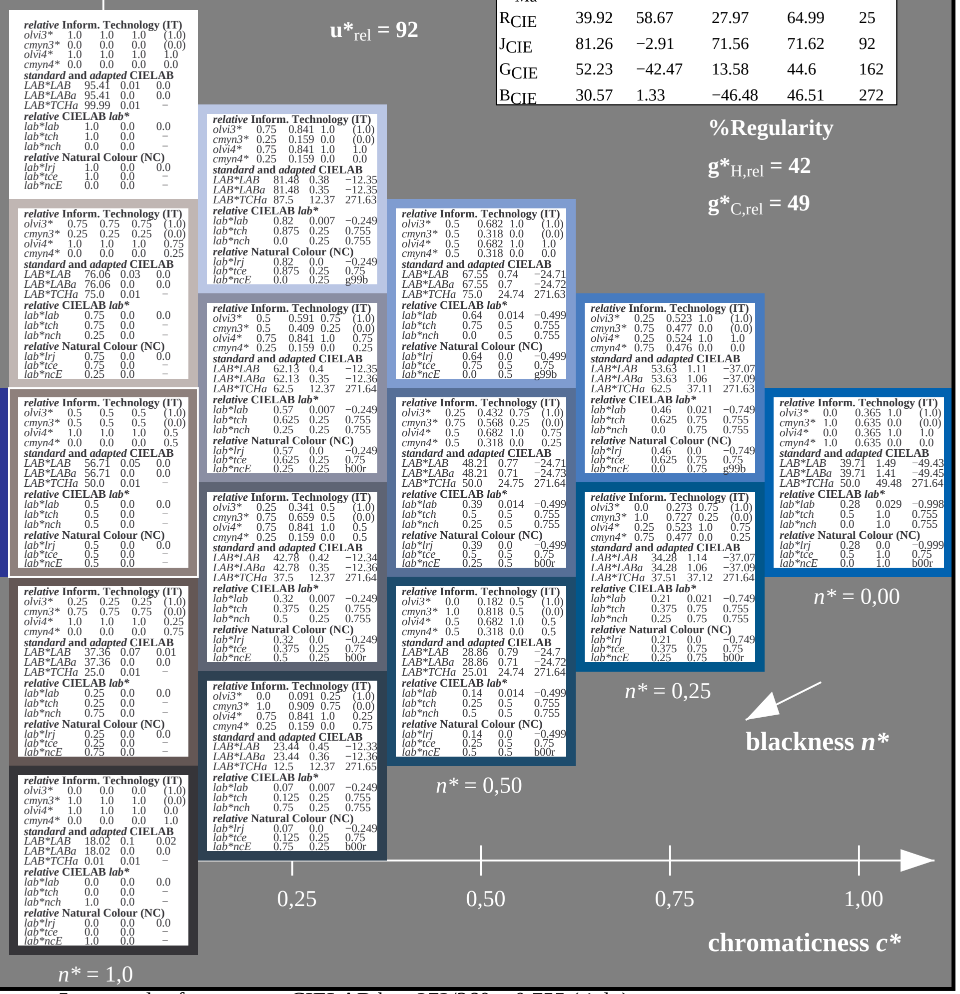


%Gamut
u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 42
$g^*_{C,rel}$ = 49



UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 272/360 = 0.755$

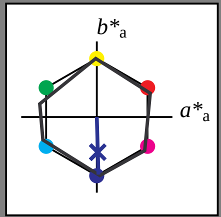
*lab*tch* and *lab*nch*

D65: hue B

LCH*Ma: 57 76 272

rgb*Ma: 0.0 0.02 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 100$

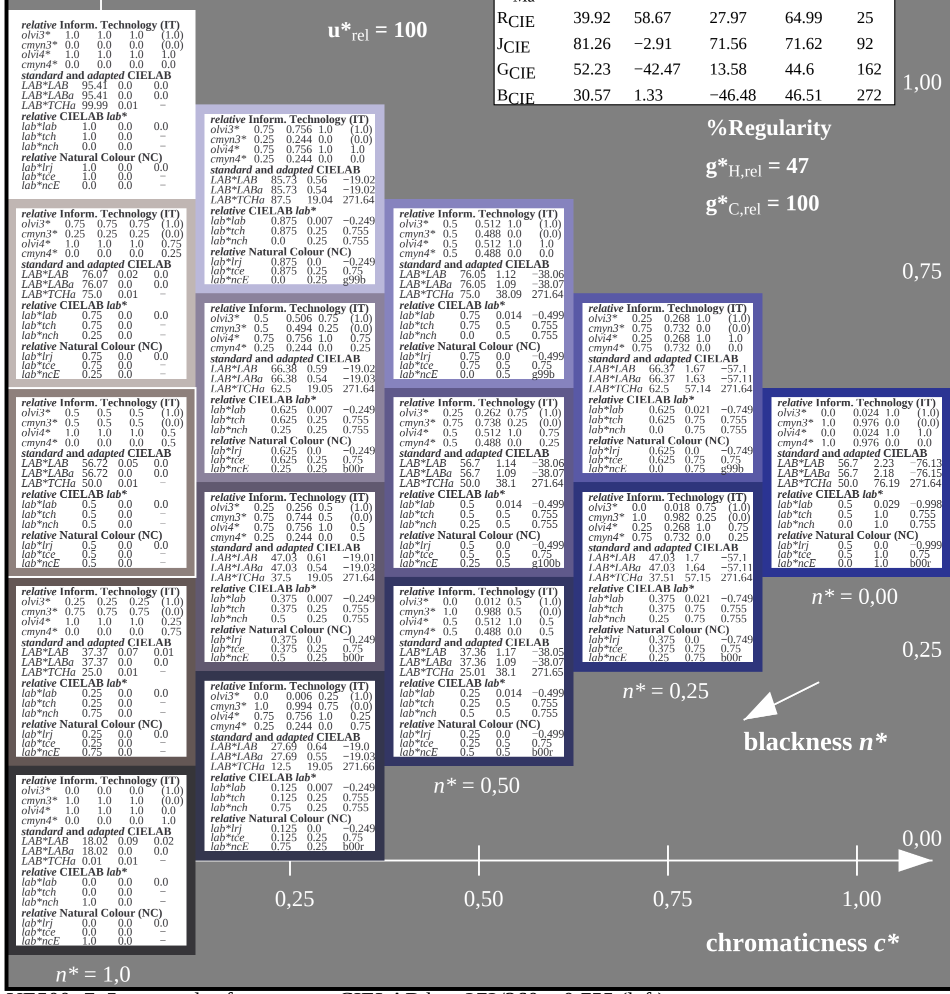
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 272/360 = 0.755$

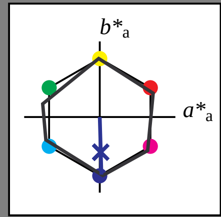
*lab*tch* and *lab*nch*

D65: hue B

LCH*Ma: 57 76 272

rgb*Ma: 0.0 0.02 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 100$

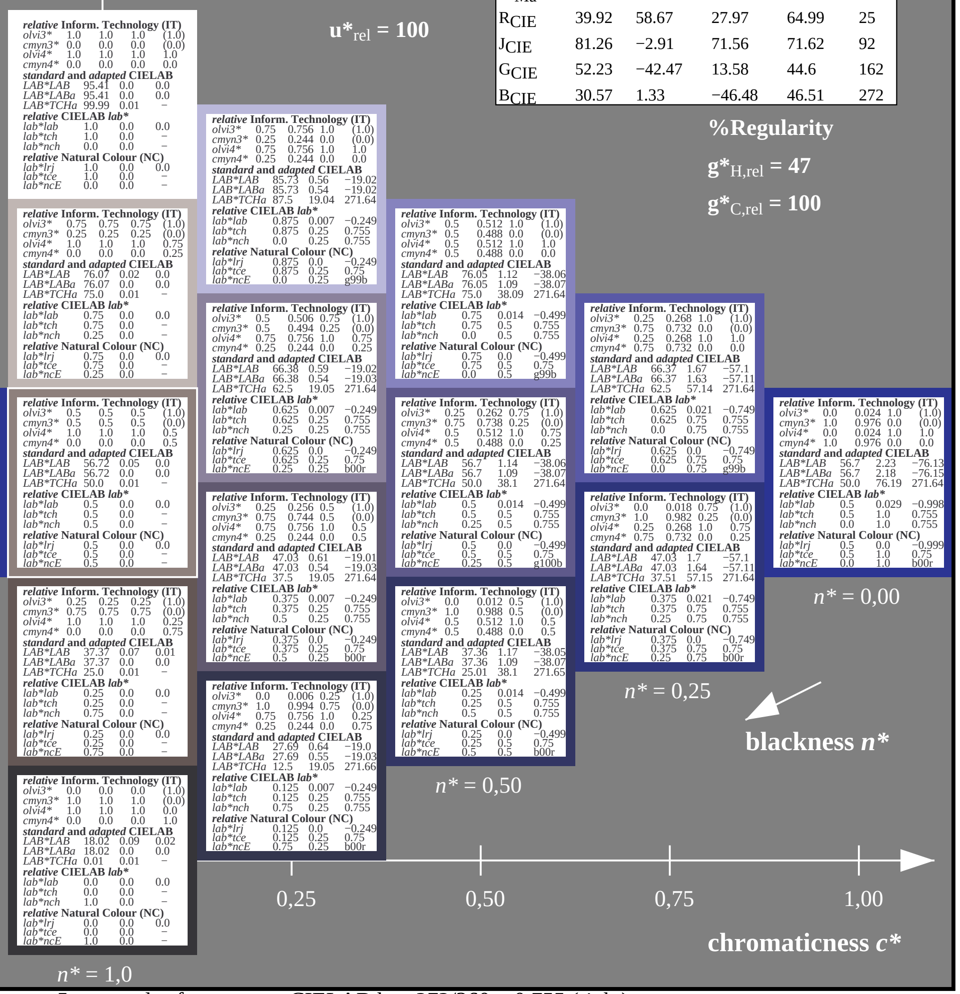
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NRS18

for hue $h^* = lab^*h = 272/360 = 0.755$

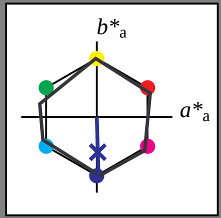
lab^*tch and lab^*nch

D65: hue B

LCH*Ma: 57 76 272

rgb*Ma: 0.0 0.02 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 100$

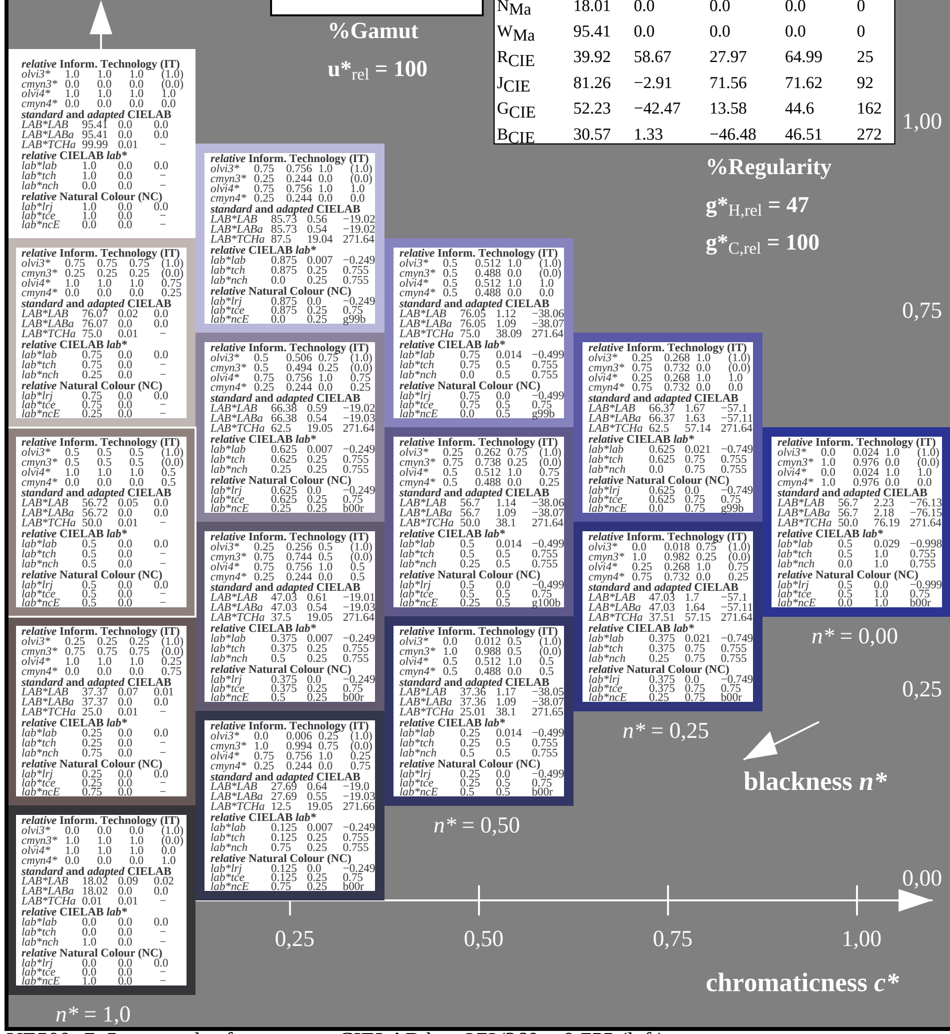
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System NCS18

for hue $h^* = lab^*h = 272/360 = 0.755$

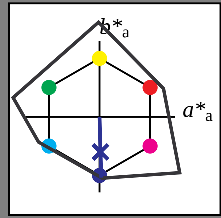
lab^*tch and lab^*nch

D65: hue B

LCH*Ma: 49 80 272

rgb*Ma: 0.0 0.02 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 136$

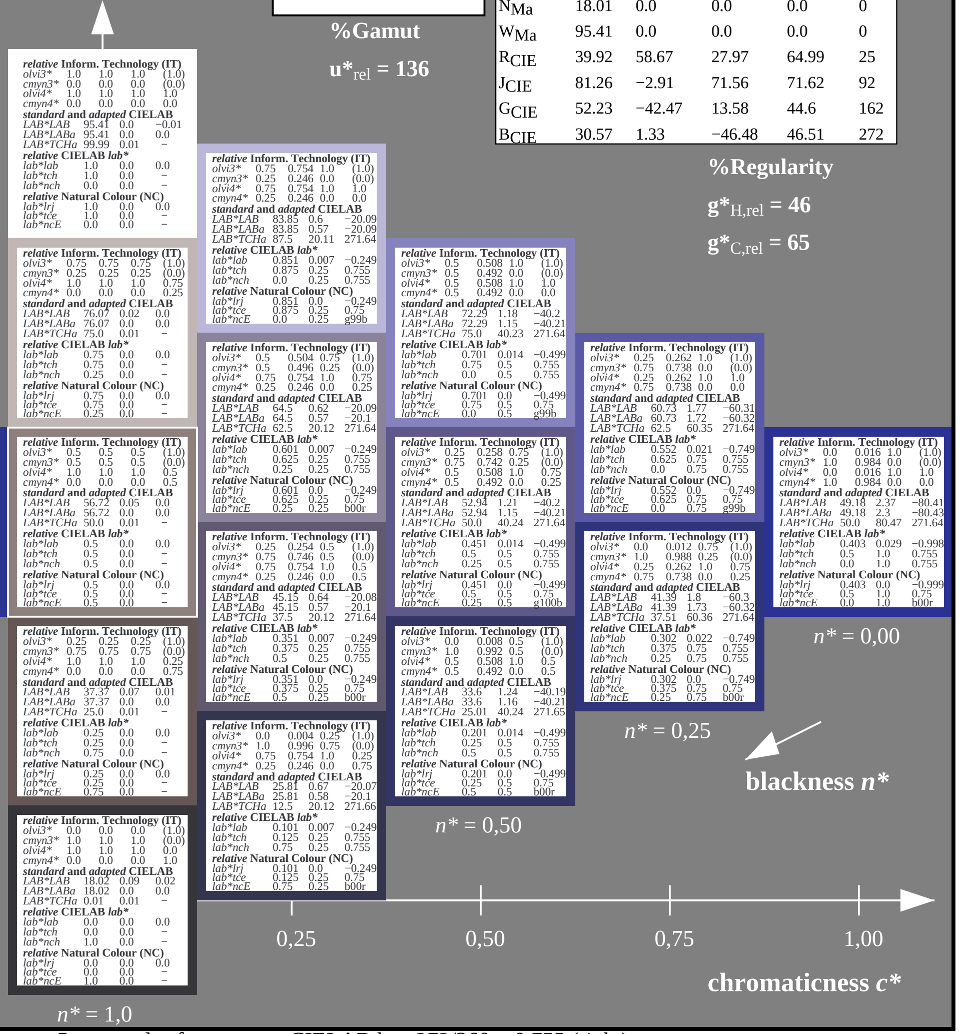
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NRS18

for hue $h^* = lab^*h = 272/360 = 0.755$

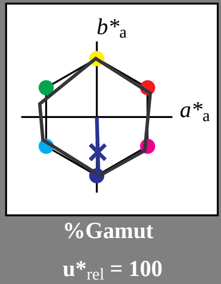
lab^*tch and lab^*nch

D65: hue B

LCH*Ma: 57 76 272

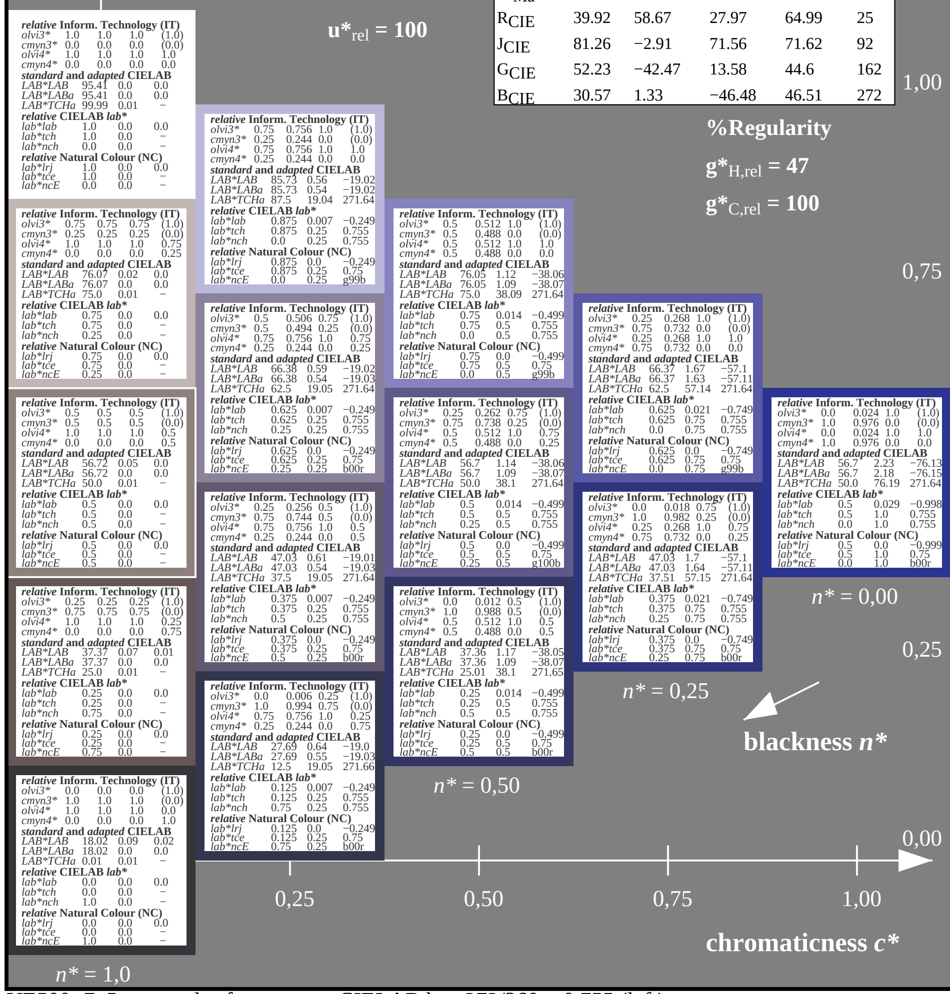
rgb*Ma: 0.0 0.02 1.0

triangle lightness t^*



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272



Output: Colorimetric Reflective System NRS11

for hue $h^* = lab^*h = 272/360 = 0.755$

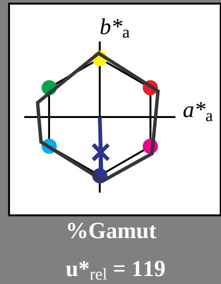
lab^*tch and lab^*nch

D65: hue B

LCH*Ma: 53 83 272

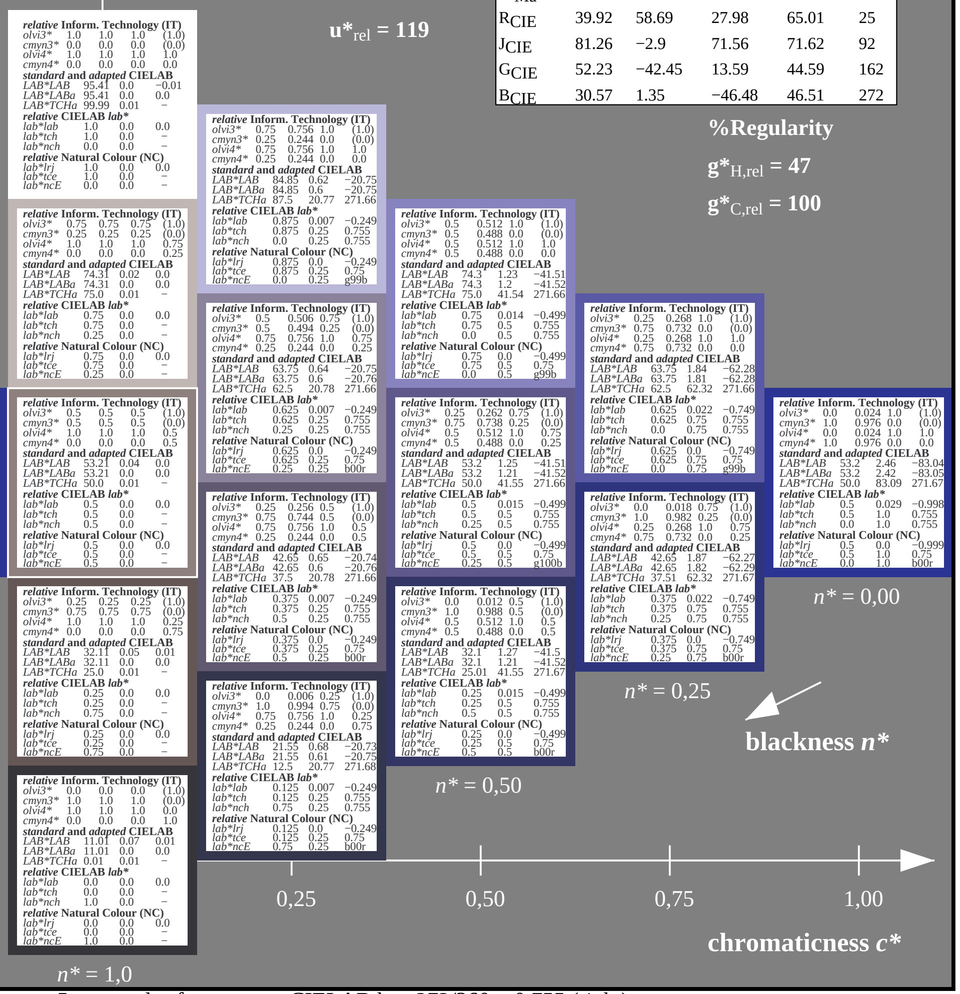
rgb*Ma: 0.0 0.02 1.0

triangle lightness t^*



NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272



UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NRS18

for hue *h = *lab*h* = 272/360 = 0.755**

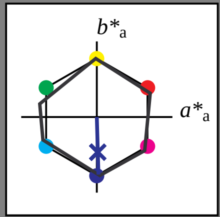
lab*tch* and *lab*nch

D65: hue B

LCH*Ma: 57 76 272

rgb*Ma: 0.0 0.02 1.0

triangle lightness *t*



%Gamut

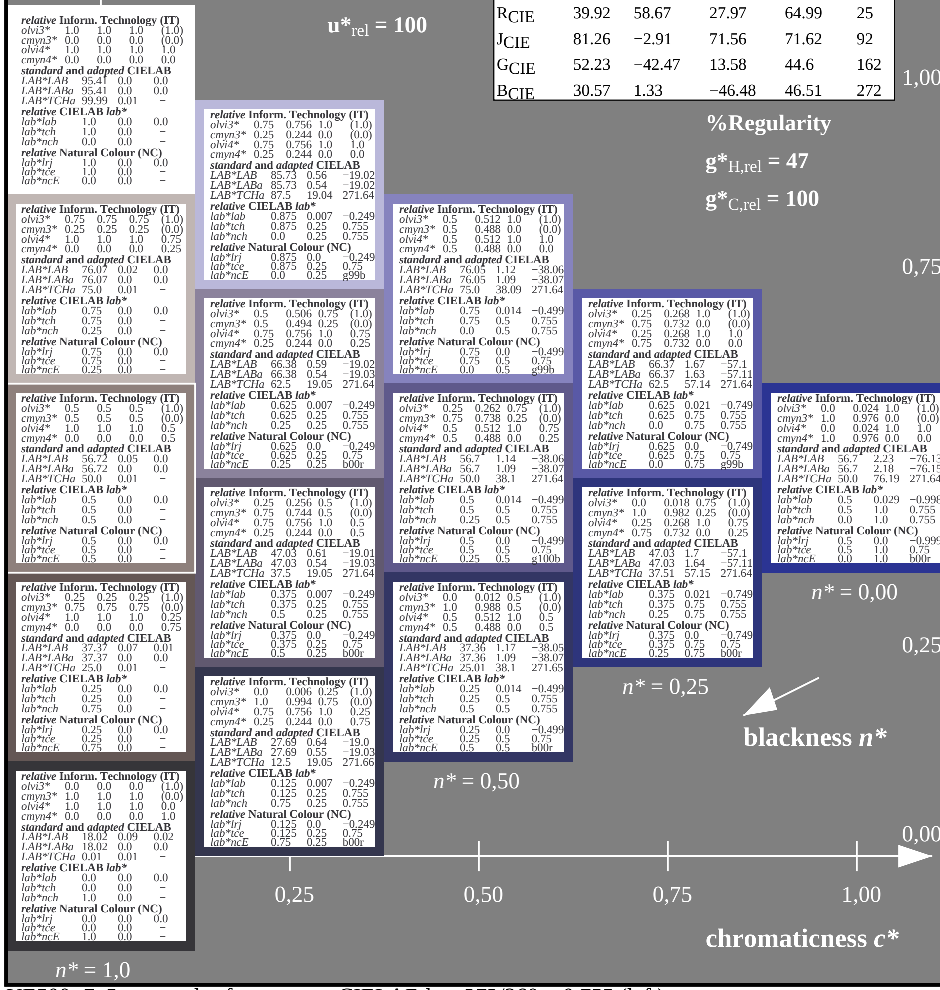
u^*_{rel} = 100

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NCS11

for hue *h = *lab*h* = 272/360 = 0.755**

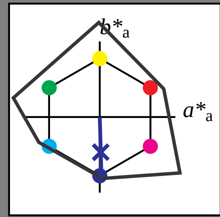
lab*tch* and *lab*nch

D65: hue B

LCH*Ma: 49 80 272

rgb*Ma: 0.0 0.02 1.0

triangle lightness *t*



%Gamut

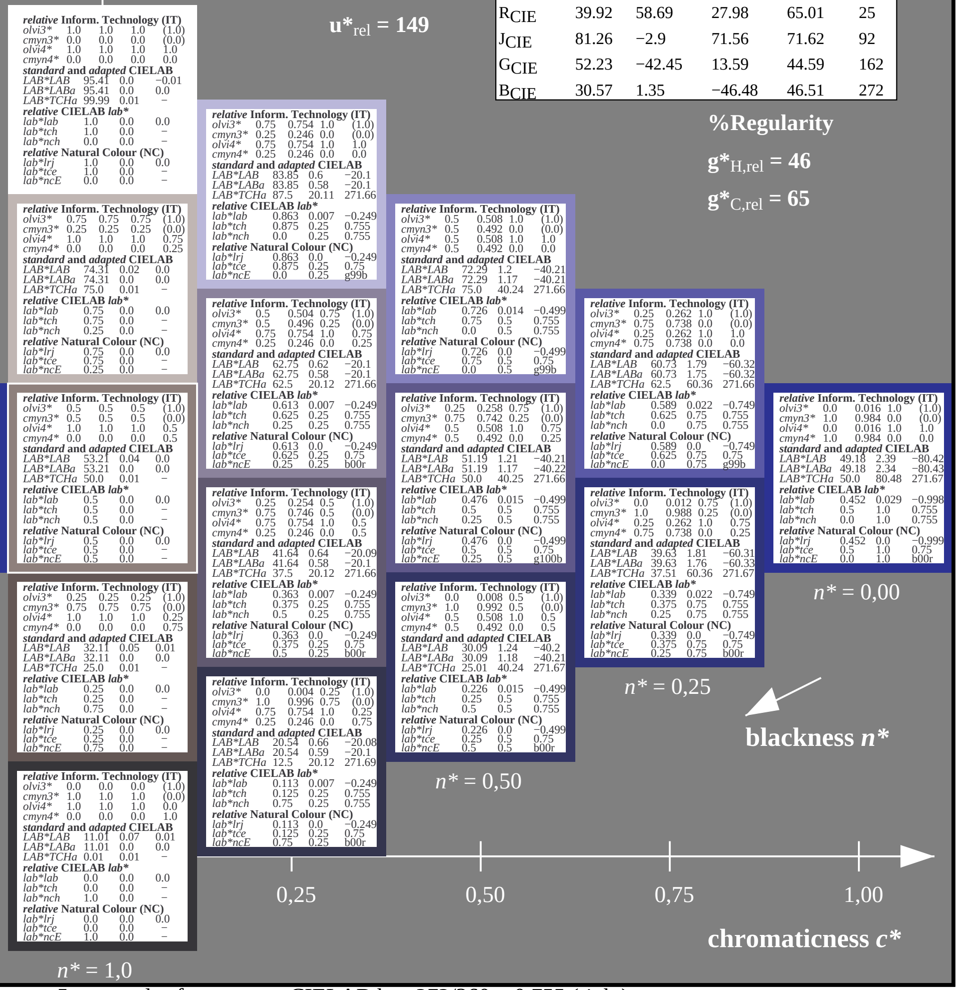
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

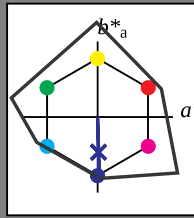


UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0
triangle lightness t^*

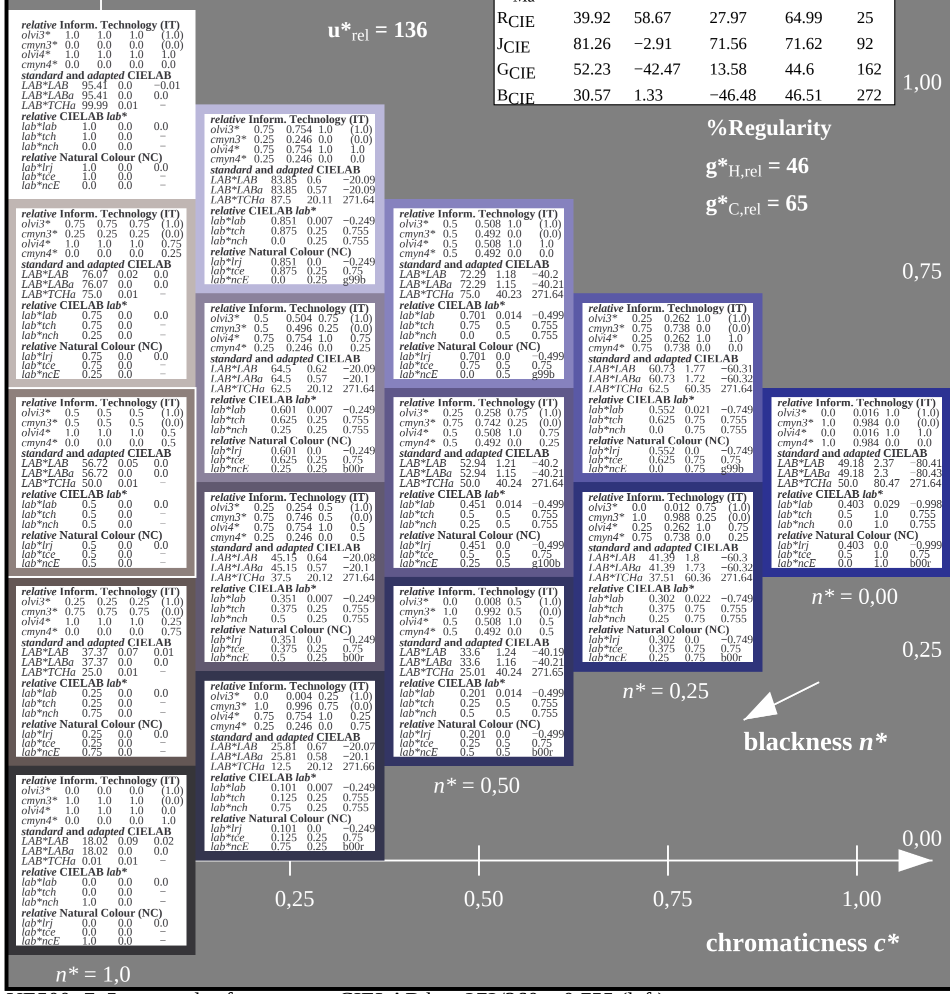


%Gamut
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

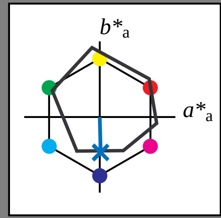
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0
triangle lightness t^*

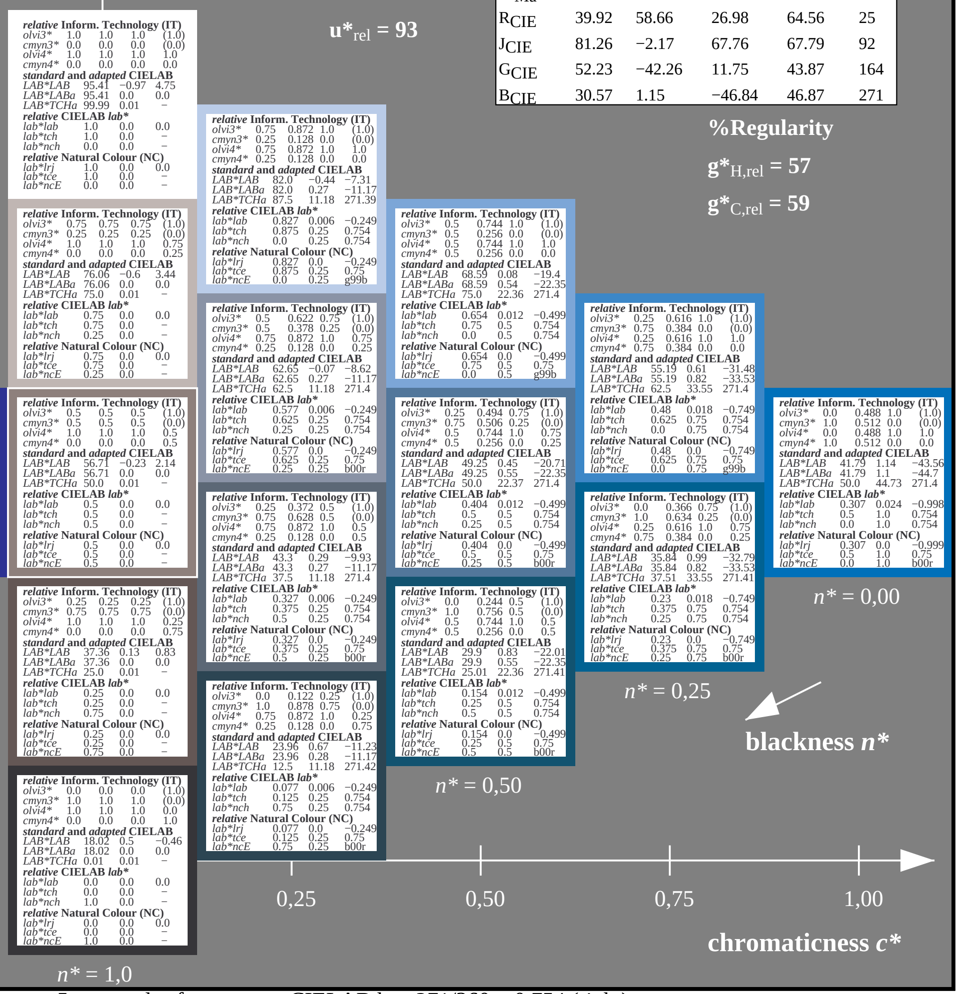


%Gamut
u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel}$ = 57
$g^*_{C,rel}$ = 59



UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 272/360 = 0.755$

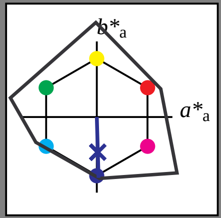
lab*tch and lab*nch

D65: hue B

LCH*Ma: 49 80 272

rgb*Ma: 0.0 0.02 1.0

triangle lightness t^*



%Gamut

u^*_{rel} = 136

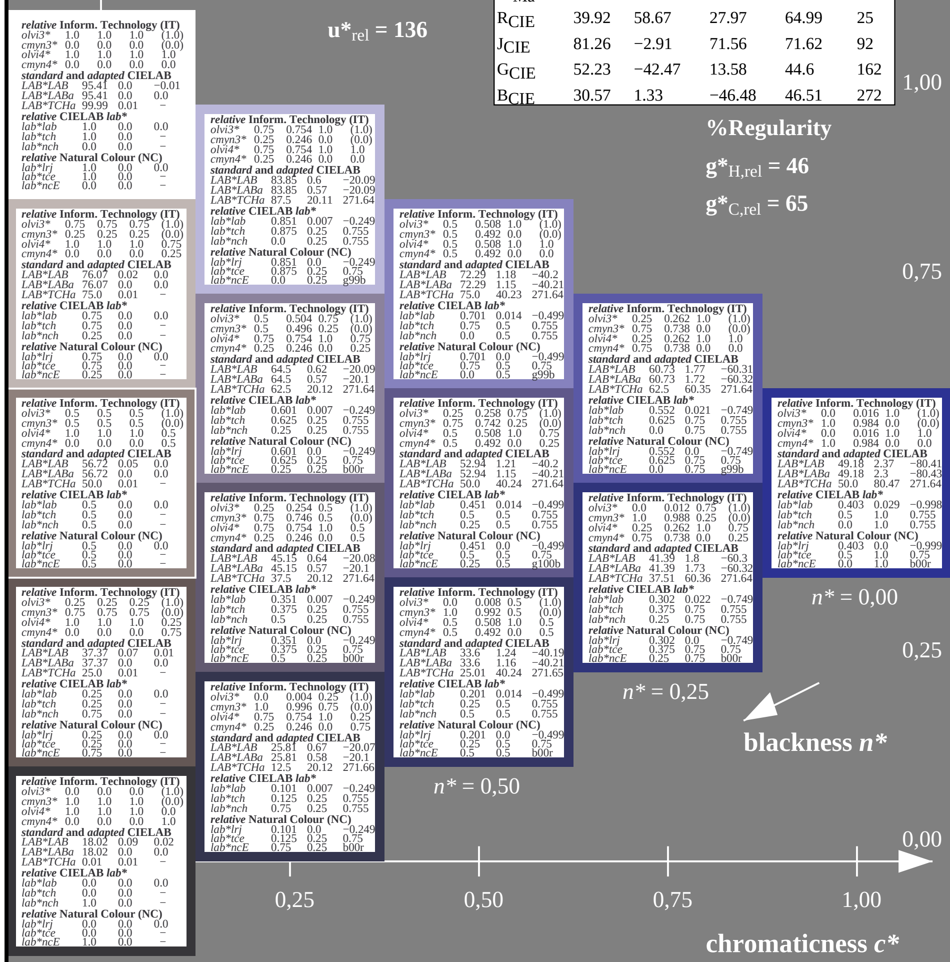
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 271/360 = 0.754$

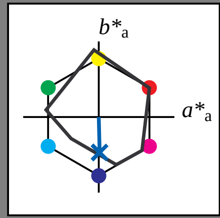
lab*tch and lab*nch

D65: hue B

LCH*Ma: 40 50 271

rgb*Ma: 0.0 0.37 1.0

triangle lightness t^*



%Gamut

u^*_{rel} = 91

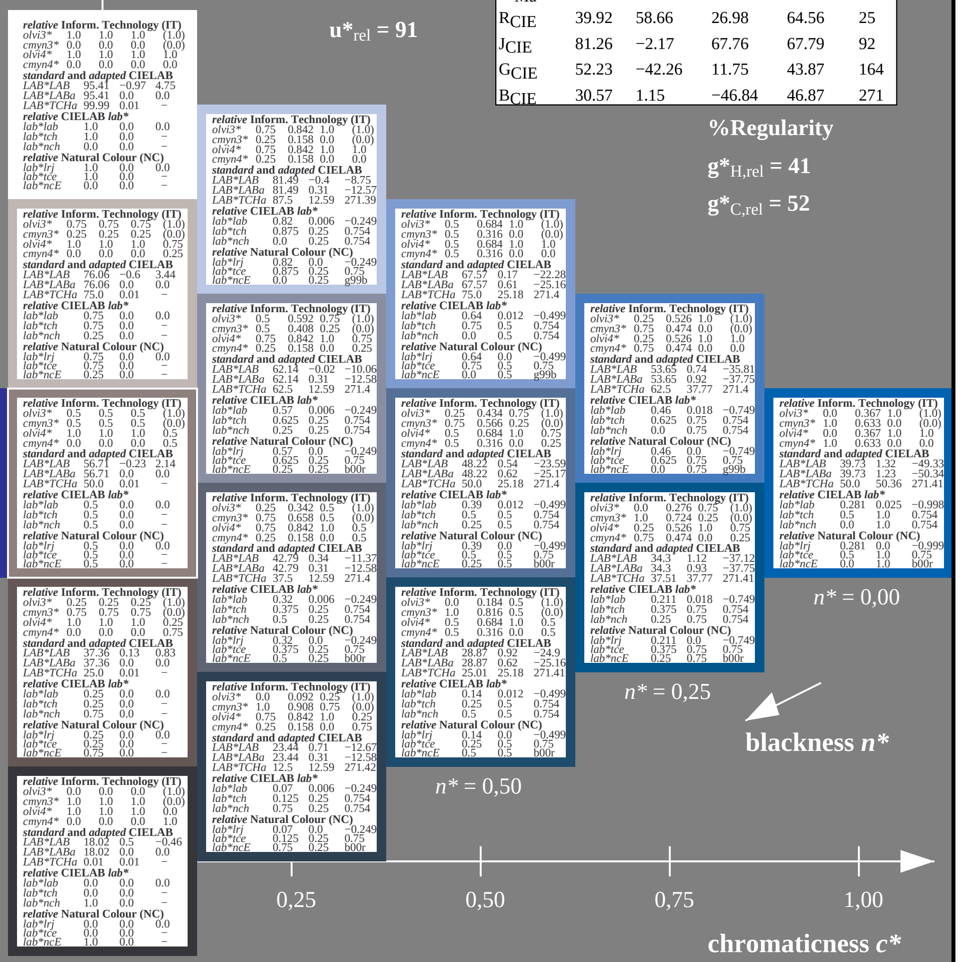
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

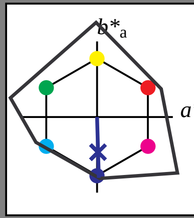


UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 272/360 = 0.755$
*lab*tch and lab*nch*

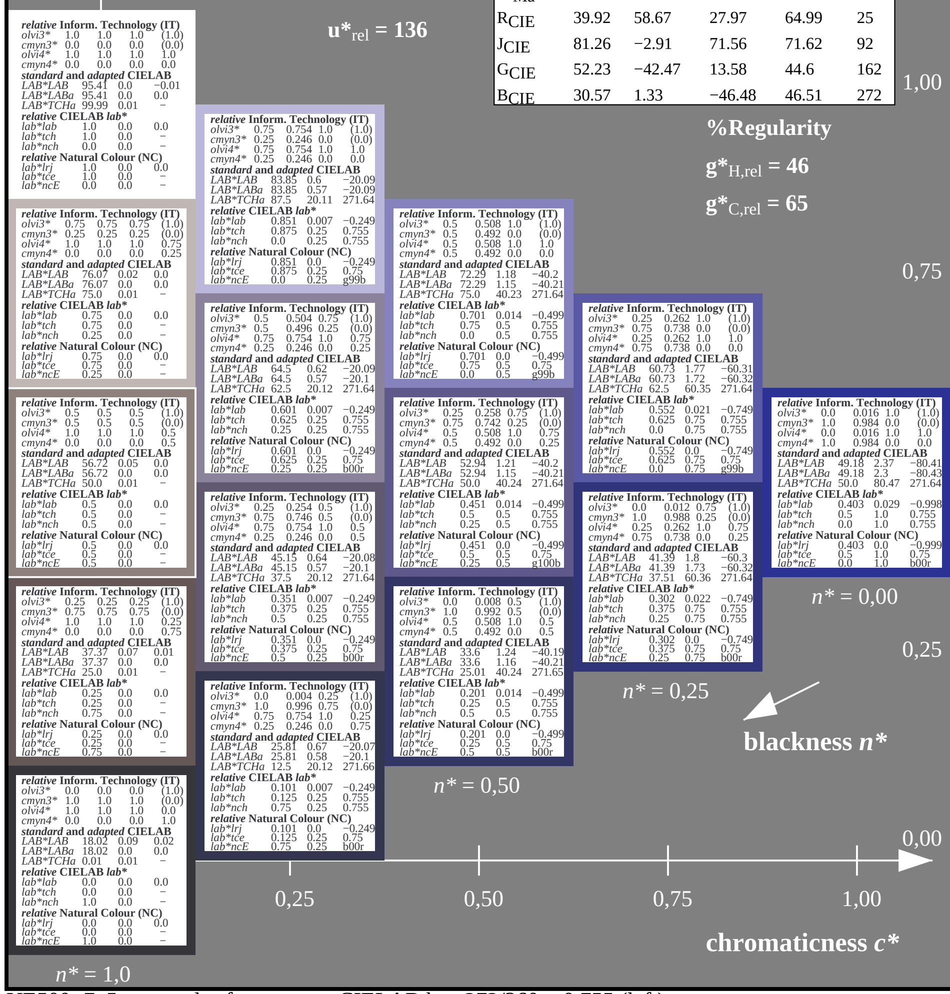
D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 136$

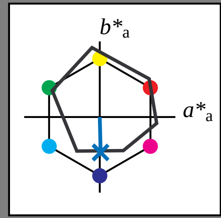
NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
*lab*tch and lab*nch*

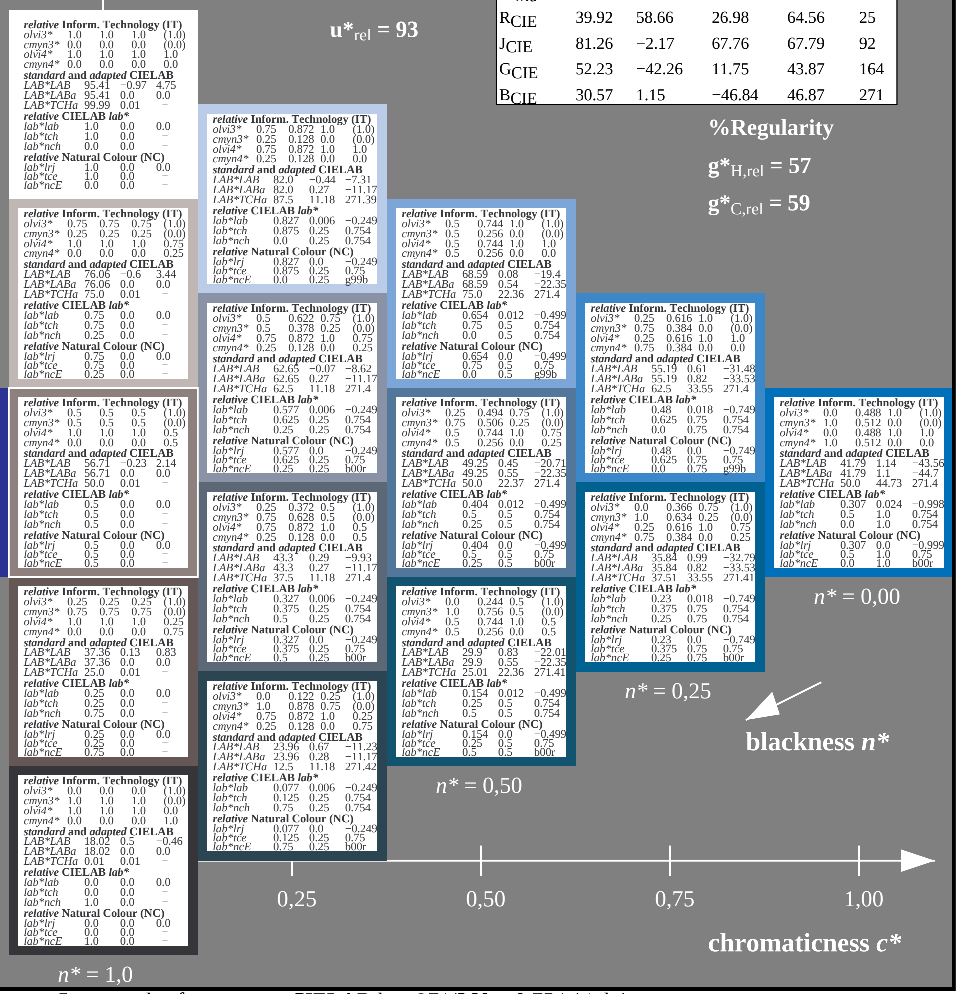
D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel} = 57$
$g^*_{C,rel} = 59$



UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

Input: Colorimetric Reflective System NCS18

for hue $h^* = lab^*h = 272/360 = 0.755$

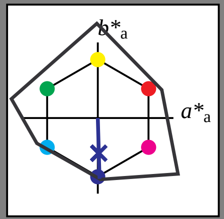
lab^*tch and lab^*nch

D65: hue B

LCH*Ma: 49 80 272

rgb*Ma: 0.0 0.02 1.0

triangle lightness t^*



%Gamut

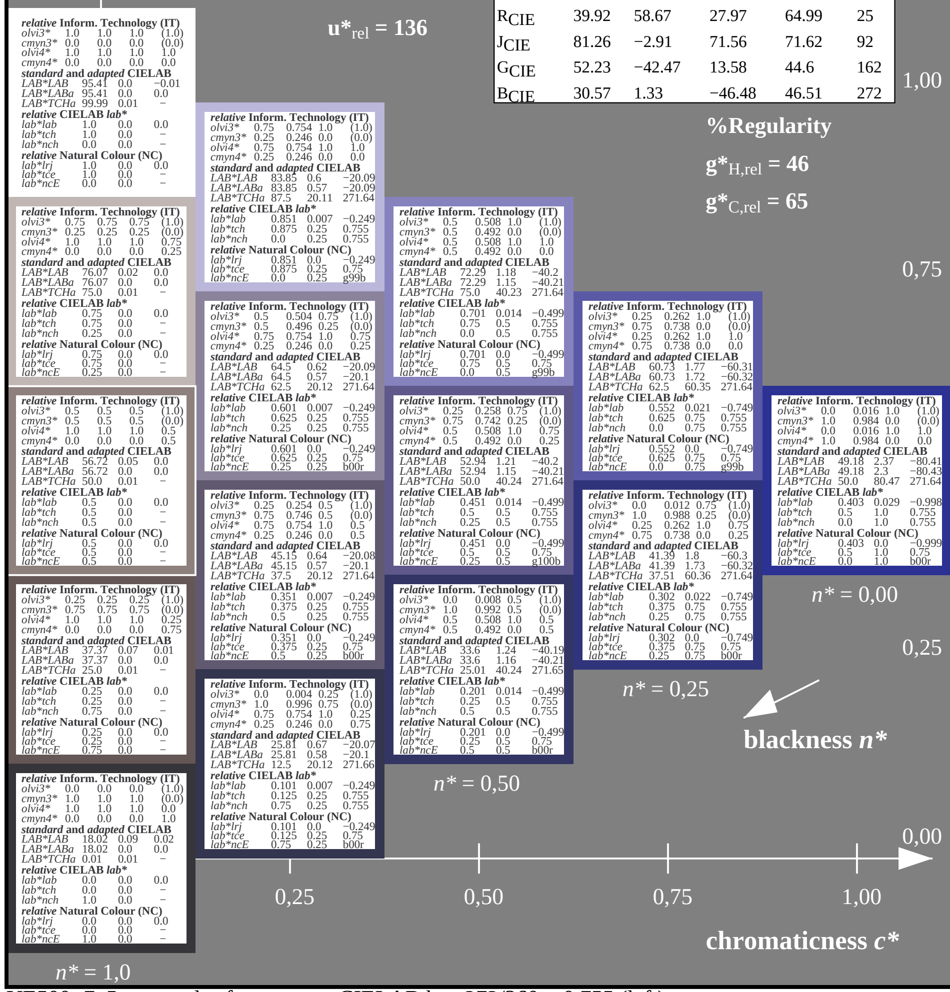
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System MRS18a

for hue $h^* = lab^*h = 272/360 = 0.755$

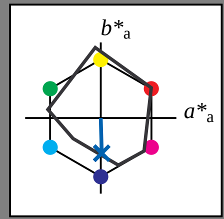
lab^*tch and lab^*nch

D65: hue B

LCH*Ma: 40 49 272

rgb*Ma: 0.0 0.36 1.0

triangle lightness t^*



%Gamut

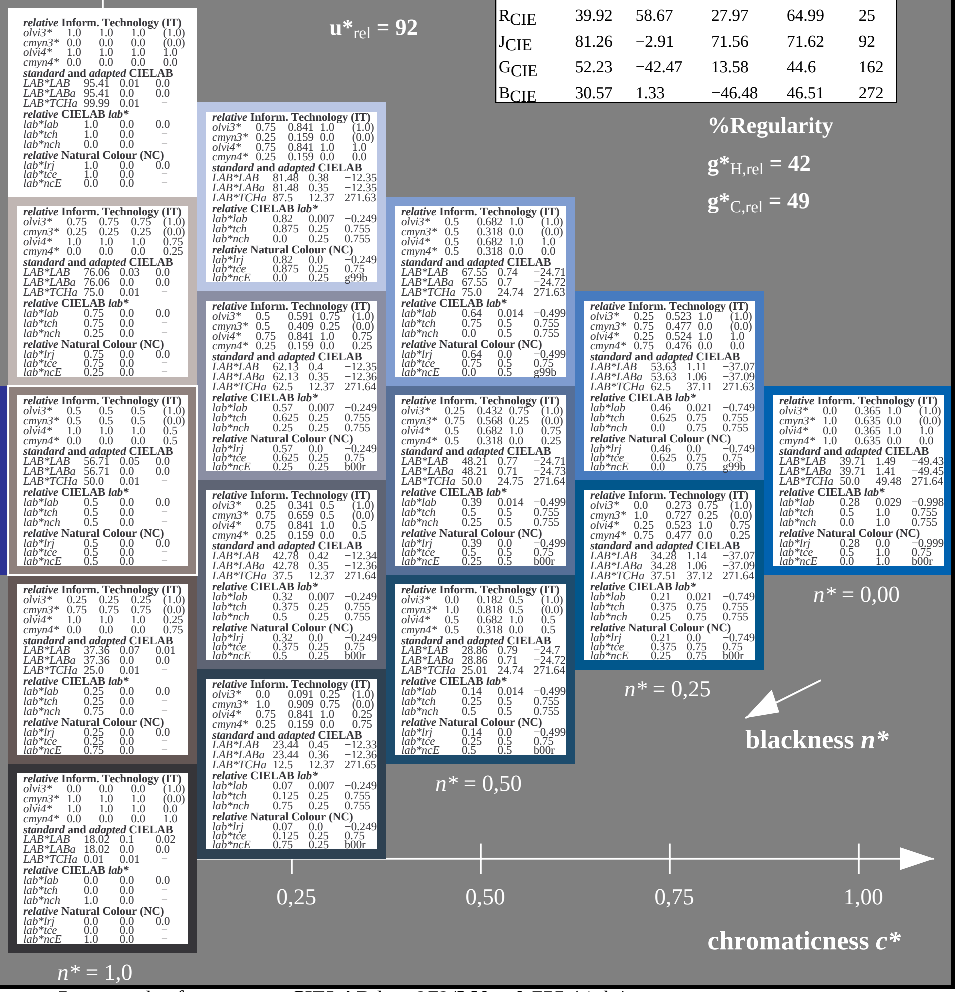
$u^*_{rel} = 92$

MRS18a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NCS18

for hue $h^* = lab^*h = 272/360 = 0.755$

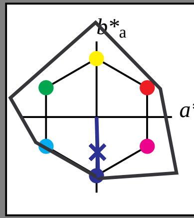
*lab*tch* and *lab*nch*

D65: hue B

LCH*Ma: 49 80 272

rgb*Ma: 0.0 0.02 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 136$

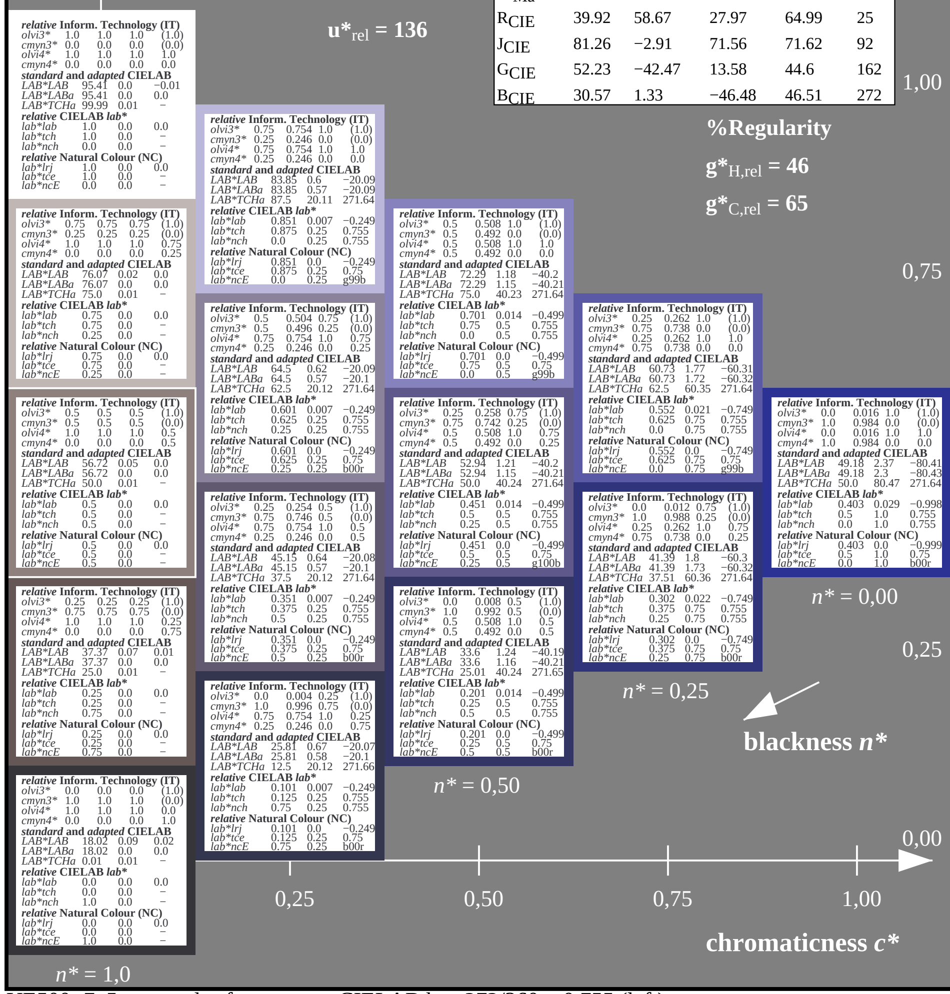
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System NRS18

for hue $h^* = lab^*h = 272/360 = 0.755$

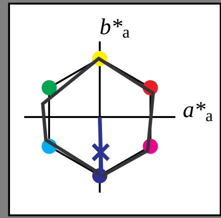
*lab*tch* and *lab*nch*

D65: hue B

LCH*Ma: 57 76 272

rgb*Ma: 0.0 0.02 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 100$

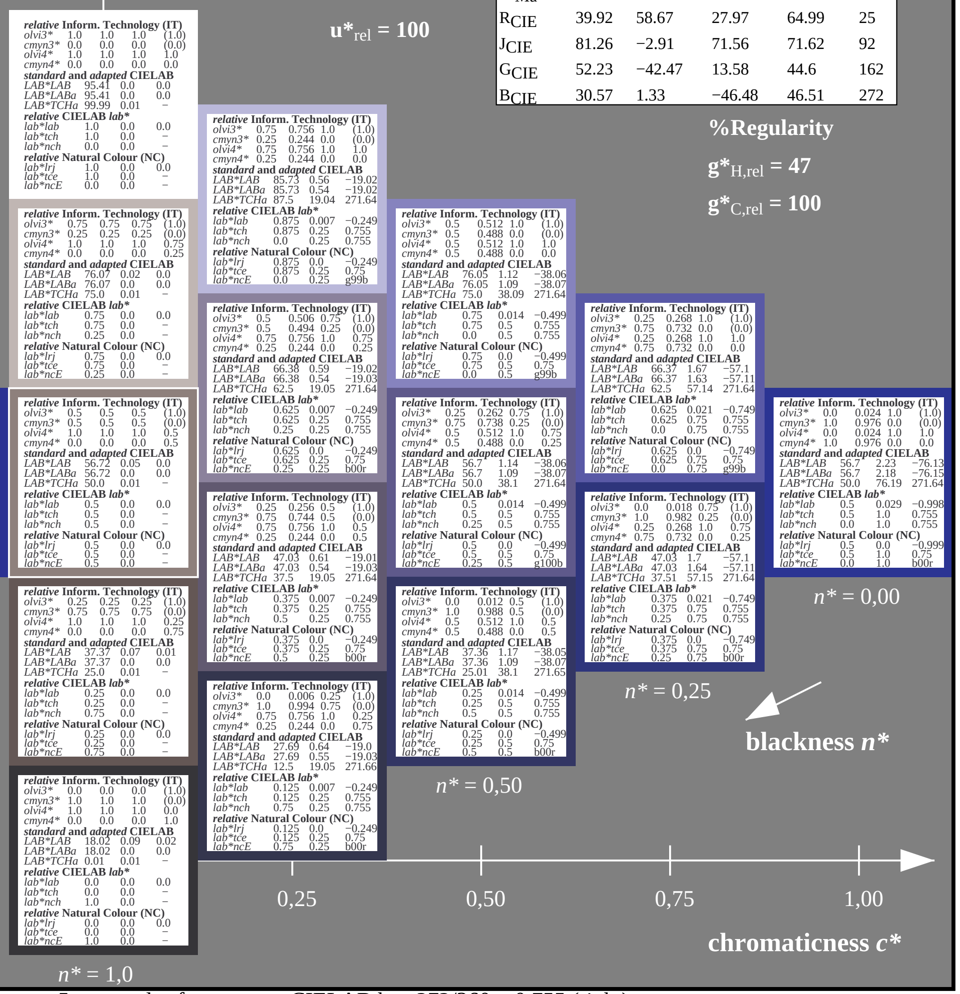
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



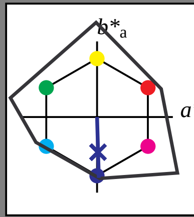
UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 136$

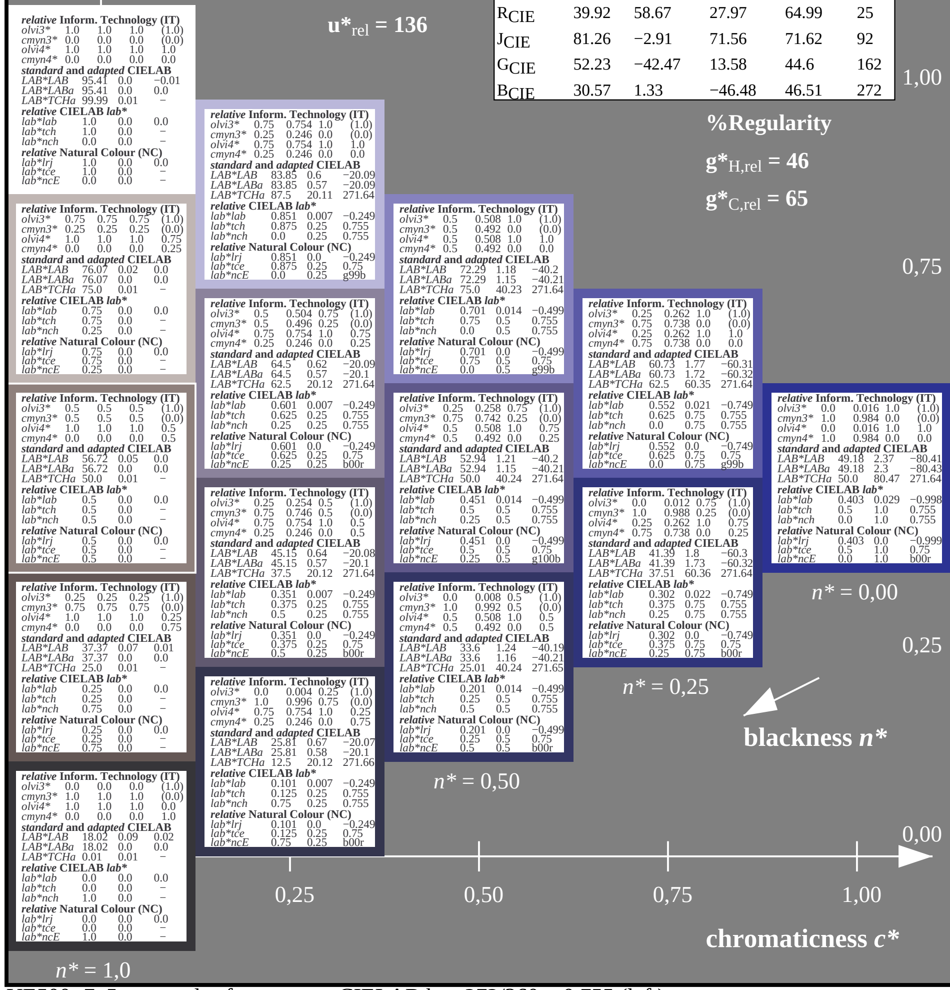
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

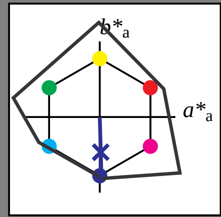
$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 136$

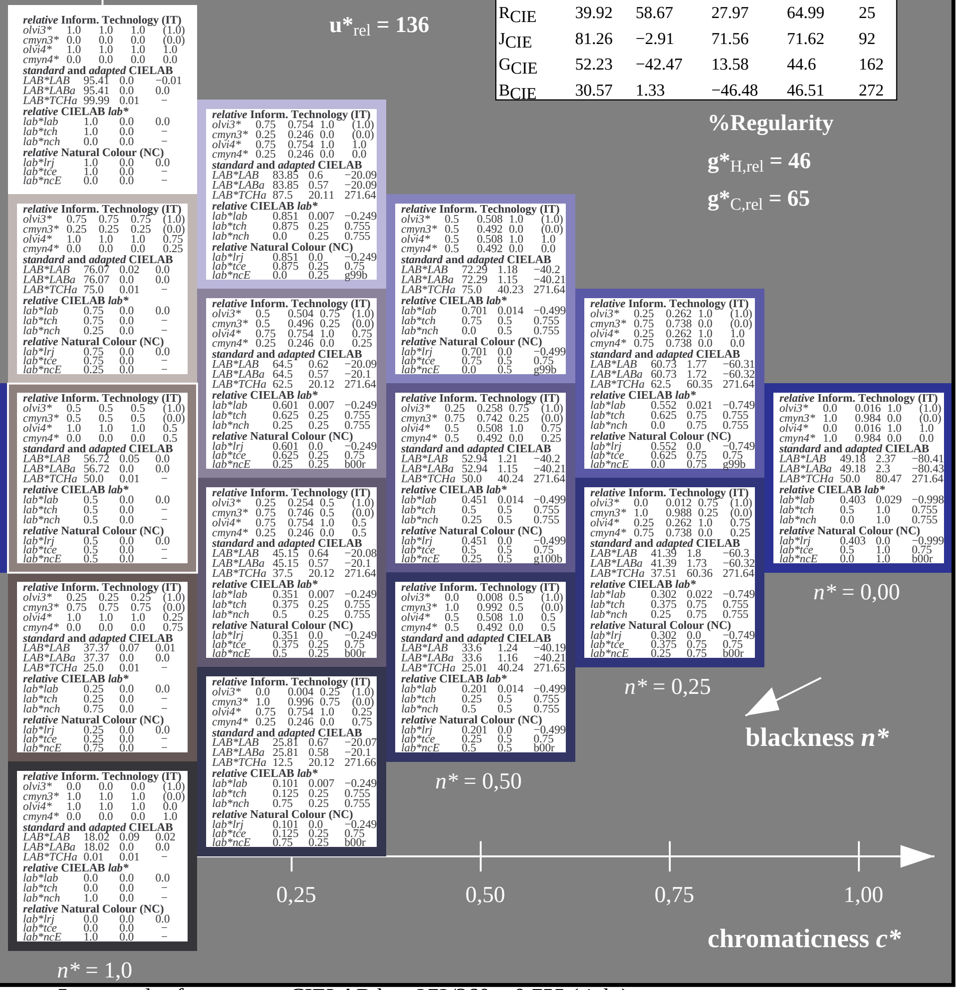
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NCS18

for hue $h^* = lab^*h = 272/360 = 0.755$

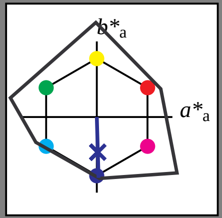
*lab*tch and lab*nch*

D65: hue B

LCH*Ma: 49 80 272

rgb*Ma: 0.0 0.02 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 136$

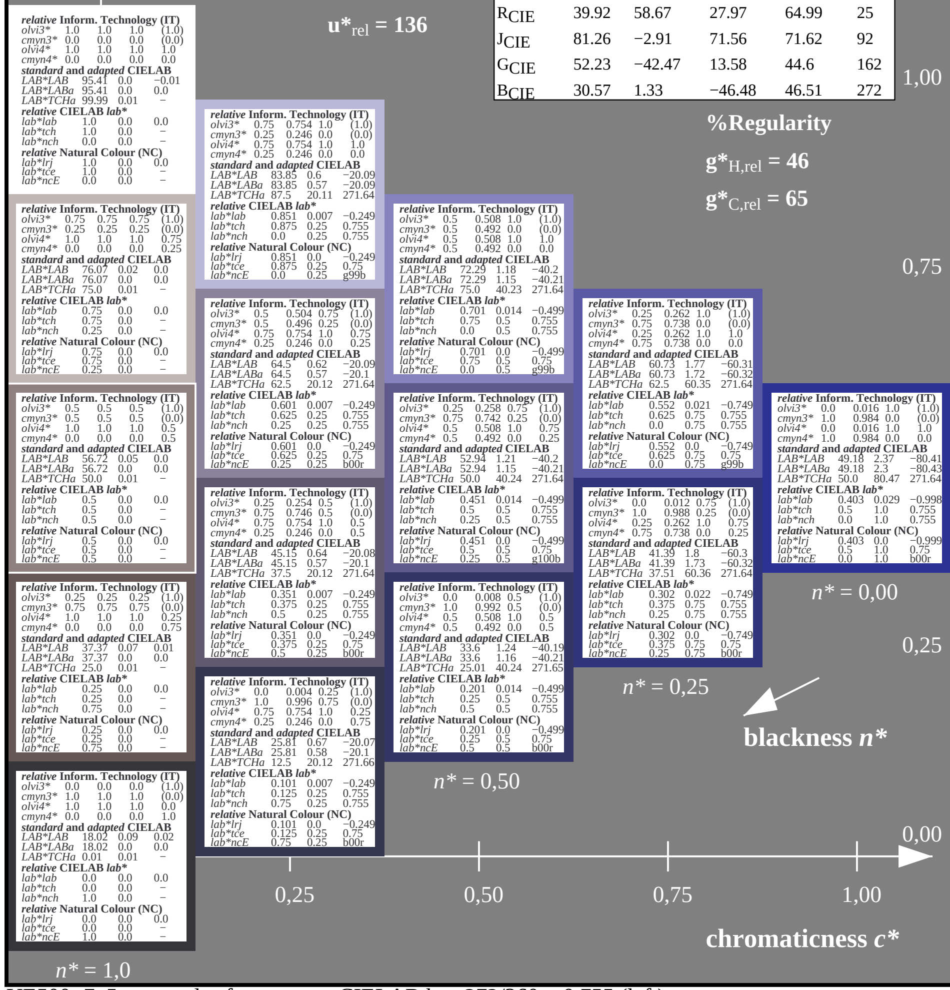
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System NRS11

for hue $h^* = lab^*h = 272/360 = 0.755$

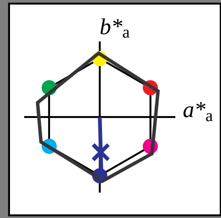
*lab*tch and lab*nch*

D65: hue B

LCH*Ma: 53 83 272

rgb*Ma: 0.0 0.02 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 119$

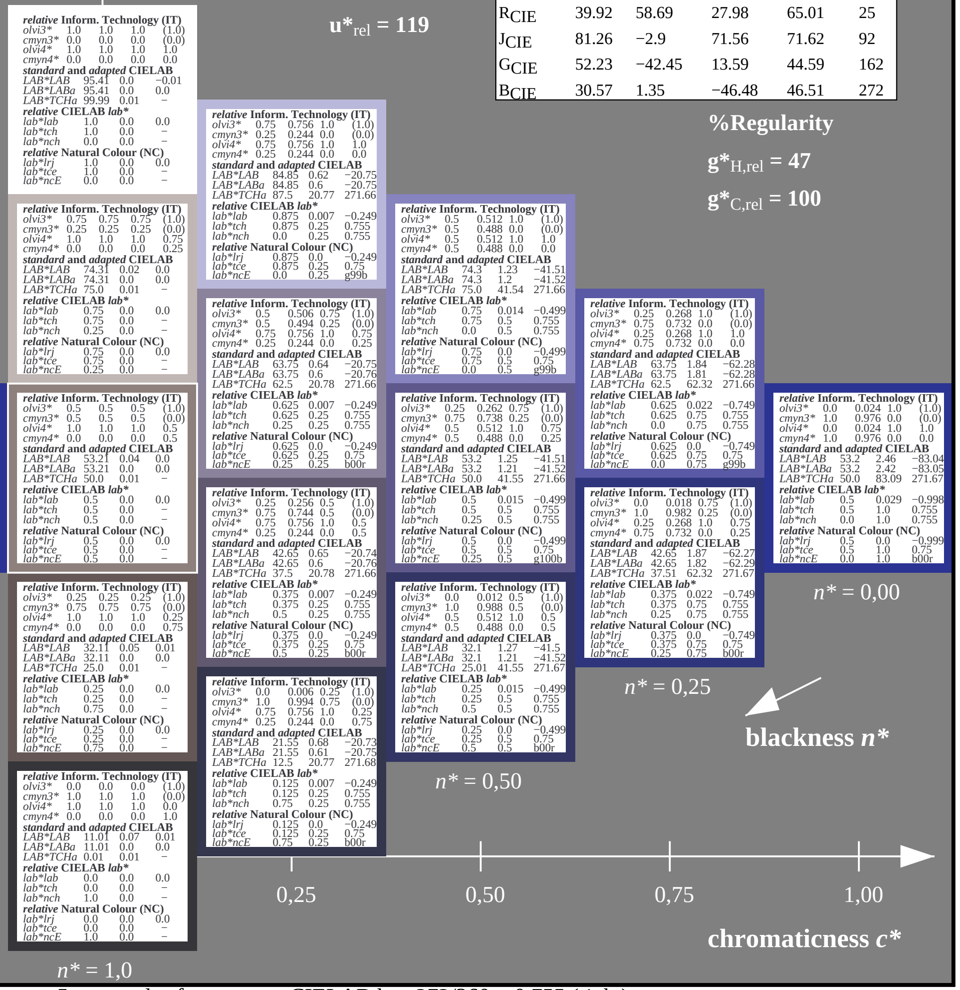
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



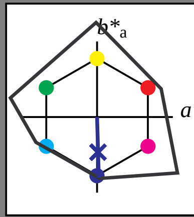
UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 136$

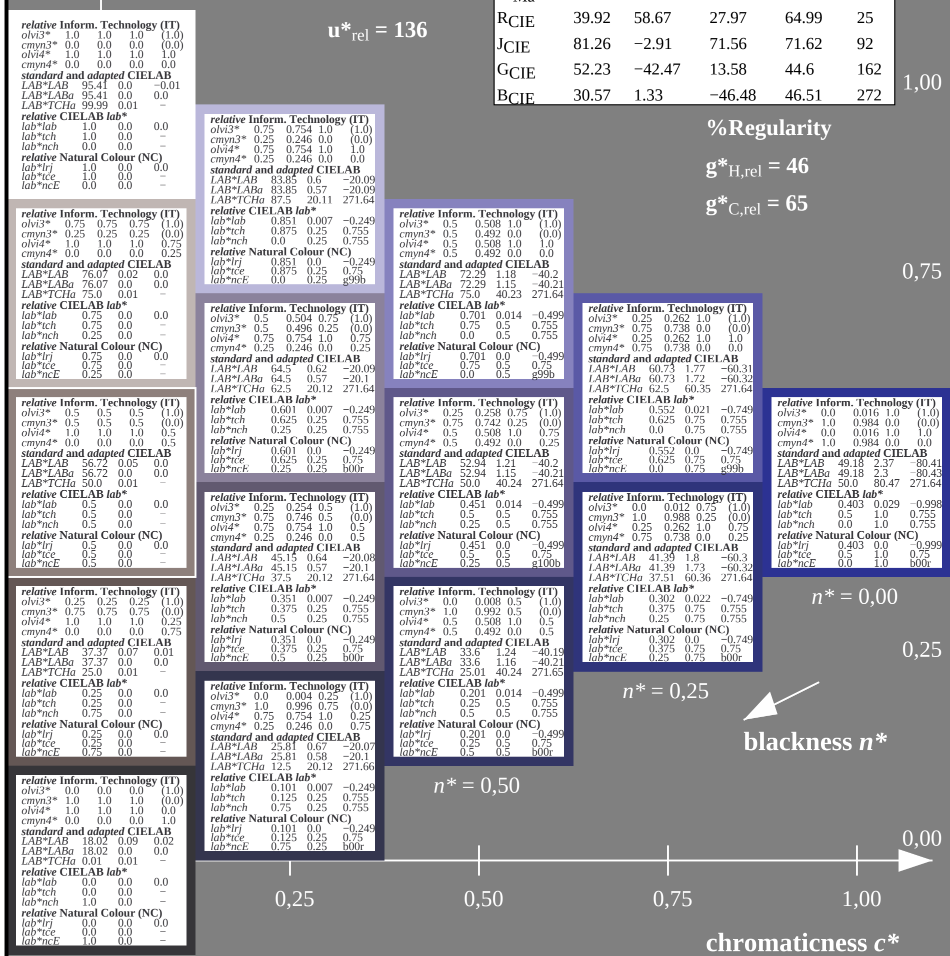
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

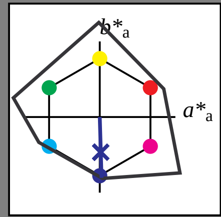
$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 149$

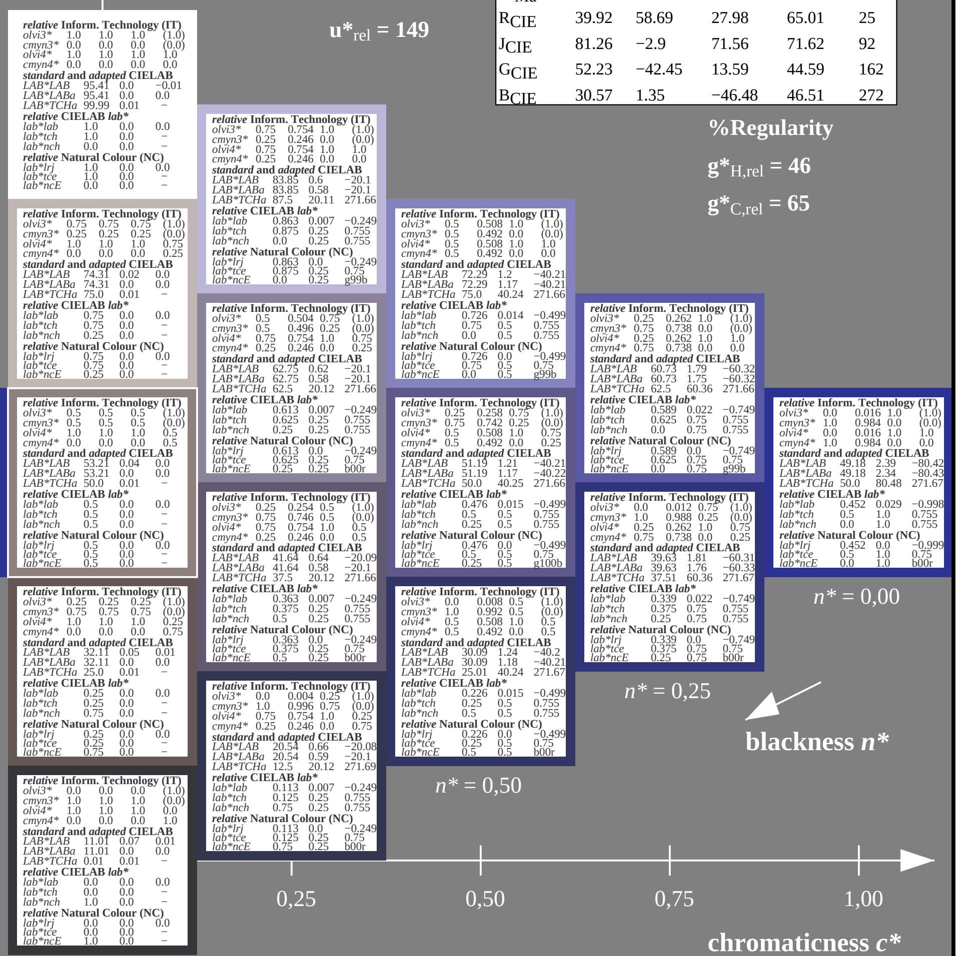
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NRS11

for hue $h^* = lab^*h = 272/360 = 0.755$

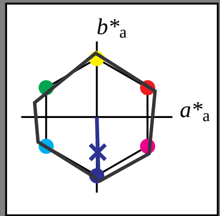
*lab*tch* and *lab*nch*

D65: hue B

LCH*Ma: 53 83 272

rgb*Ma: 0.0 0.02 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 119$

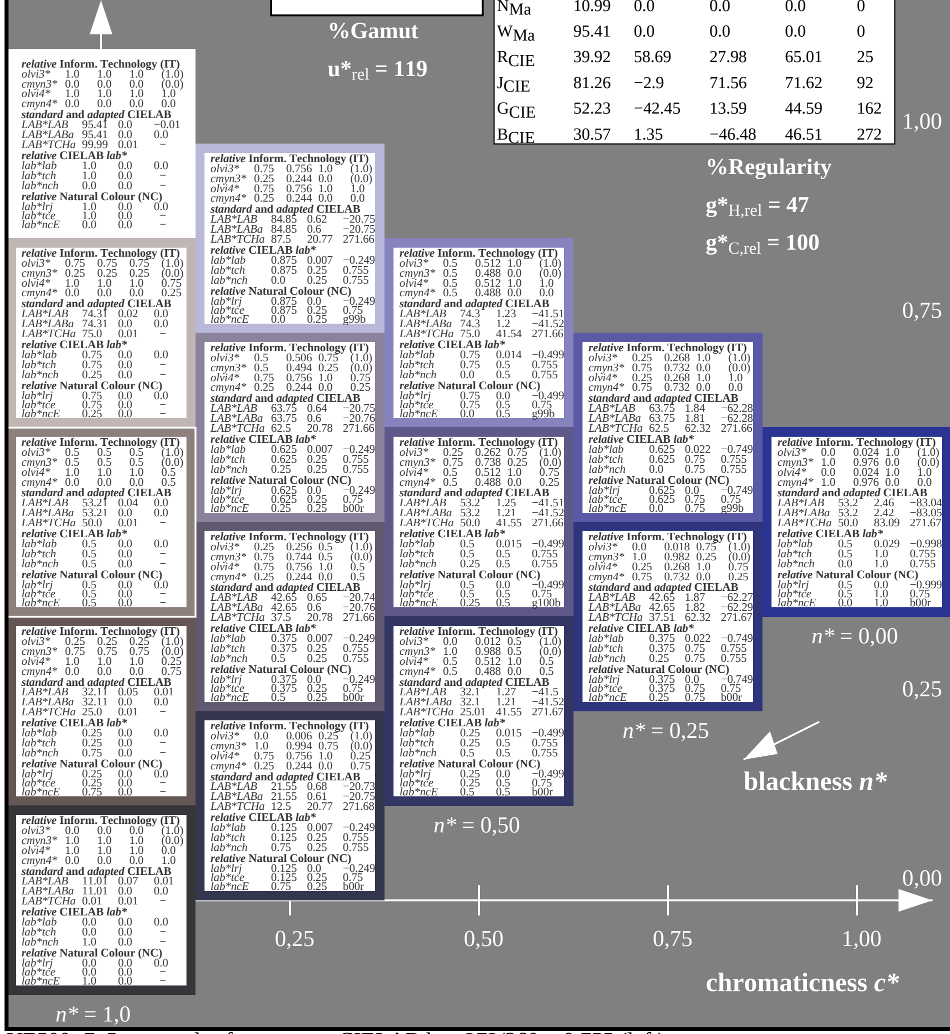
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System ORS18

for hue $h^* = lab^*h = 271/360 = 0.754$

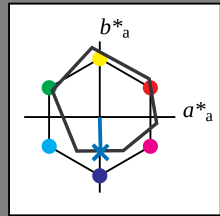
*lab*tch* and *lab*nch*

D65: hue B

LCH*Ma: 42 45 271

rgb*Ma: 0.0 0.49 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

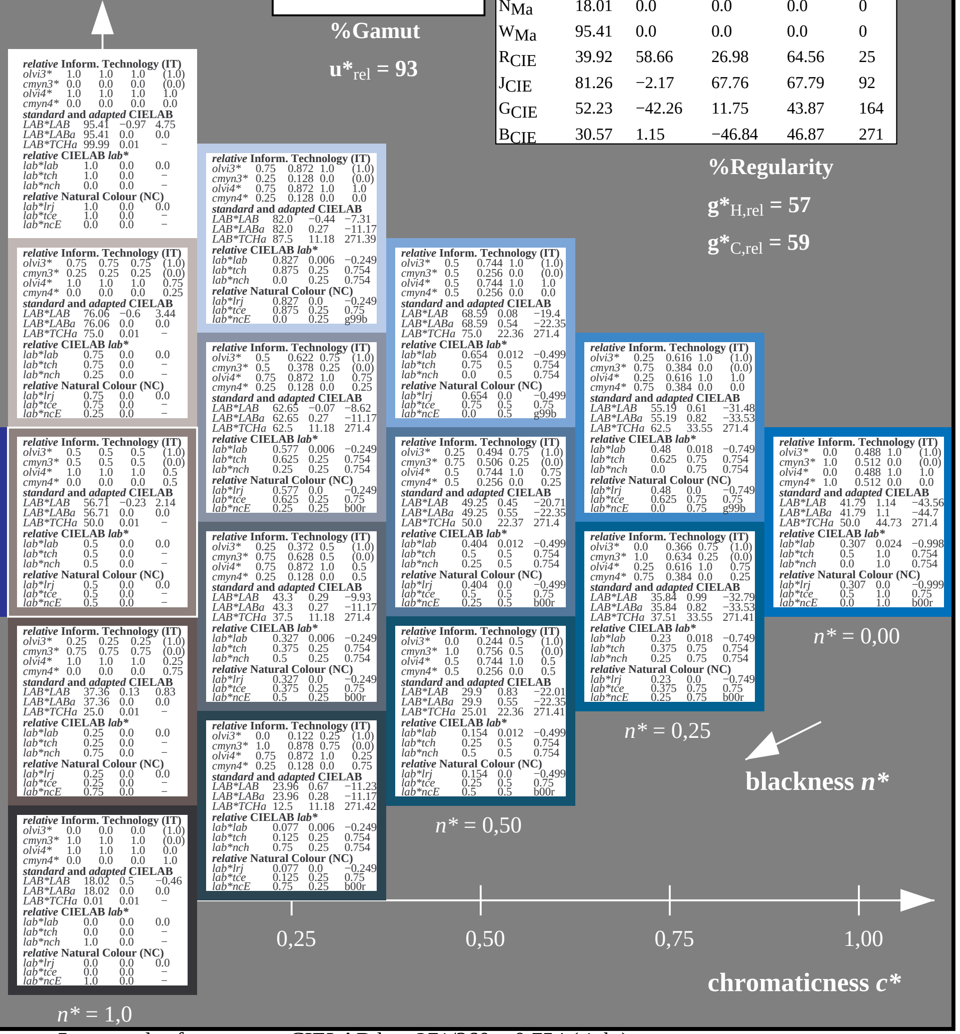
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

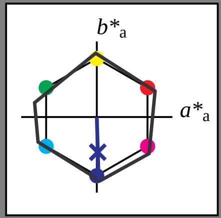


UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 83 272
rgb*Ma: 0.0 0.02 1.0
triangle lightness t^*

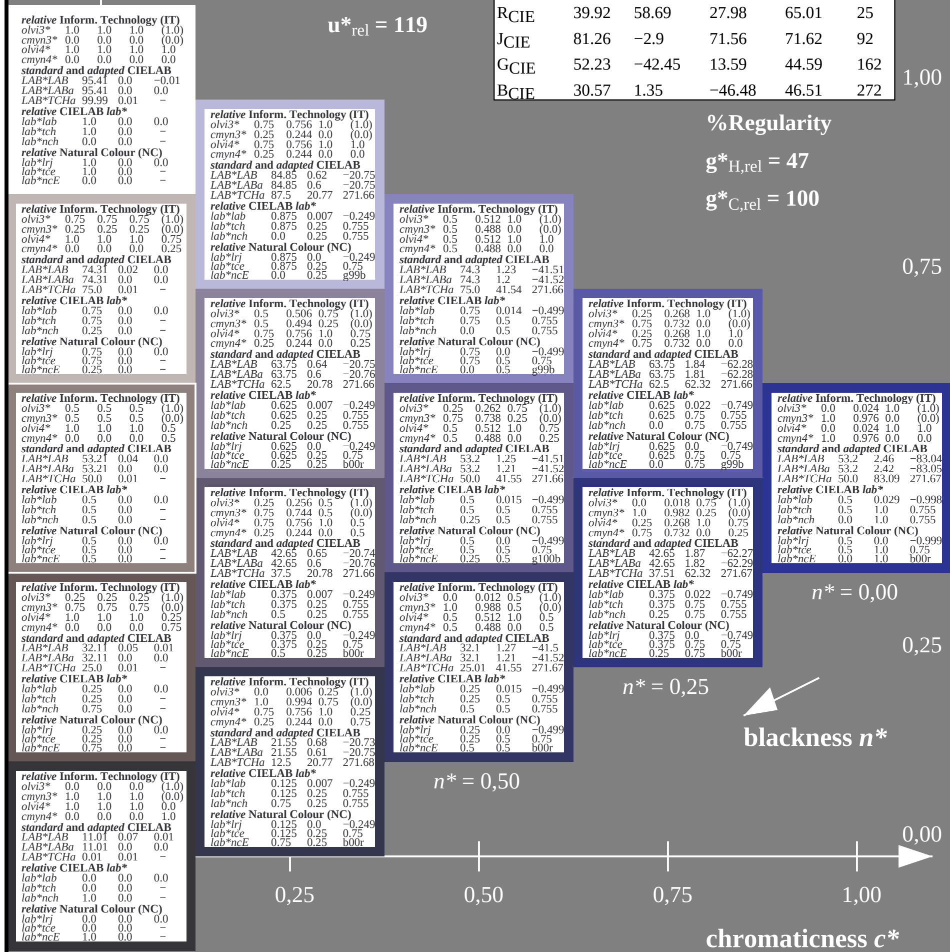


%Gamut
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

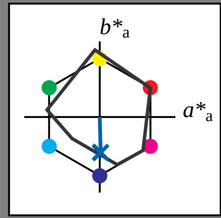
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 40 50 271
rgb*Ma: 0.0 0.37 1.0
triangle lightness t^*

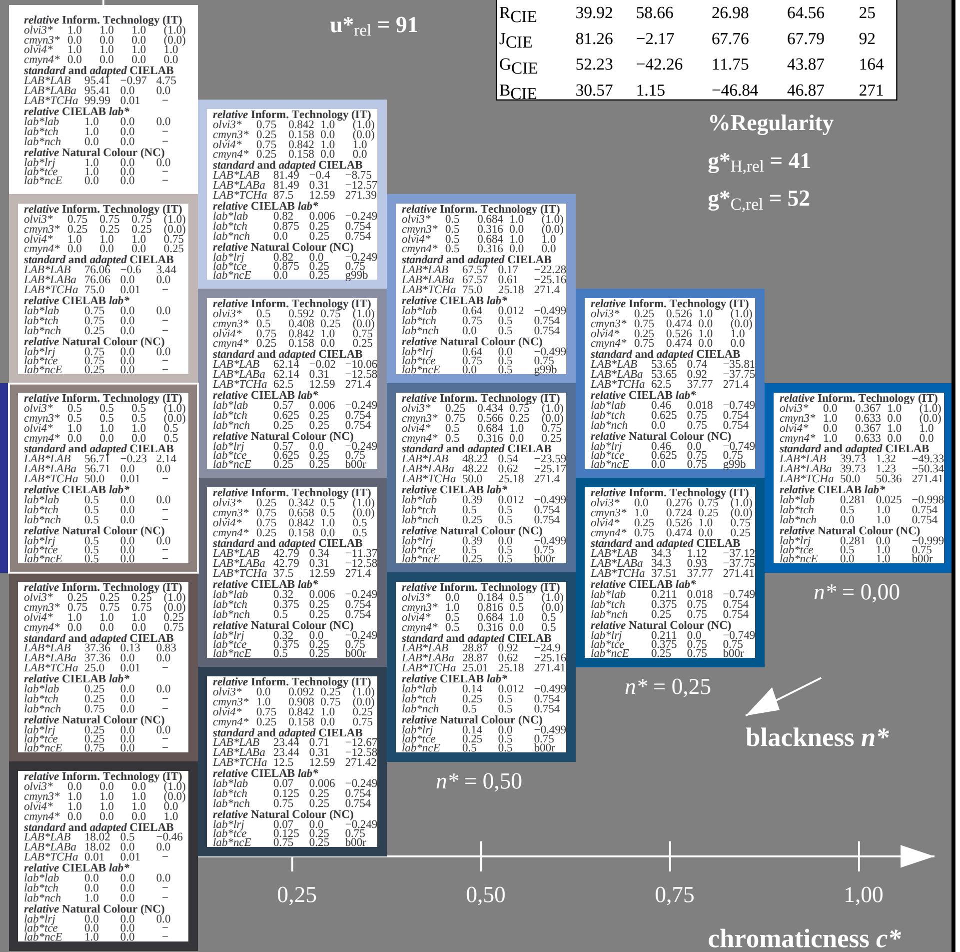


%Gamut
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel}$ = 41
$g^*_{C,rel}$ = 52



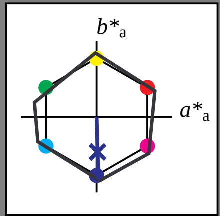
UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 83 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness t^*



%Gamut

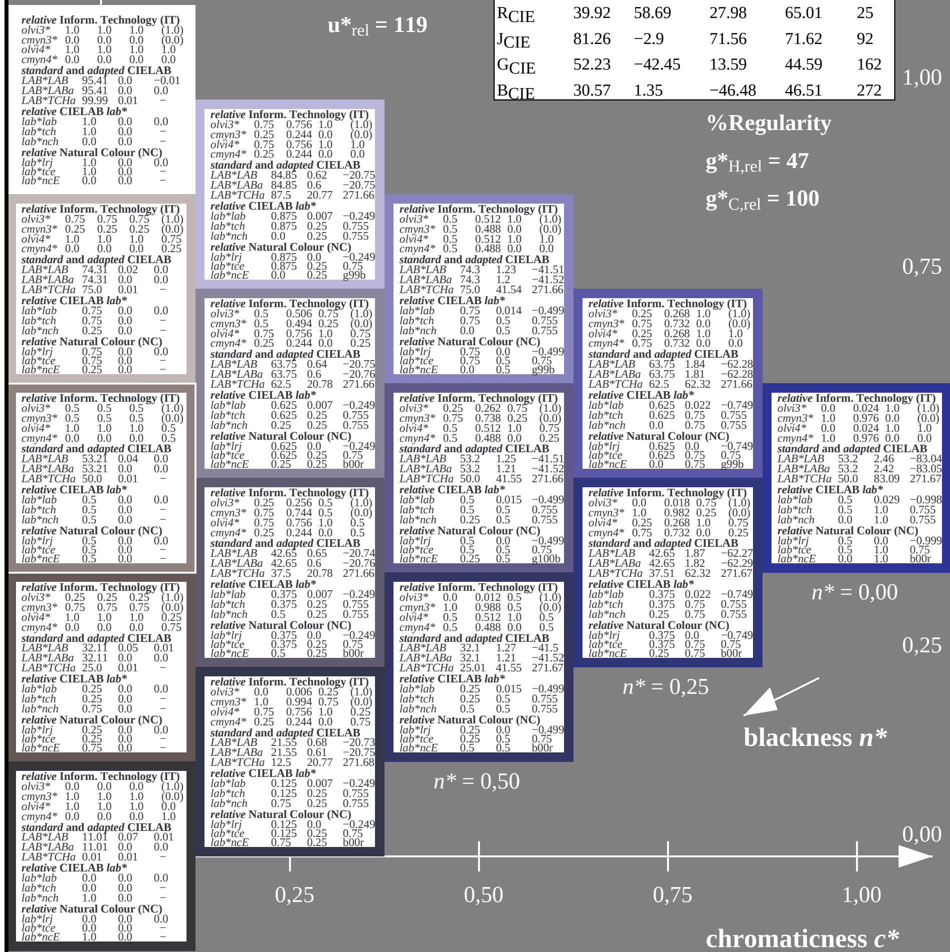
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

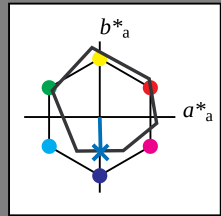
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness t^*



%Gamut

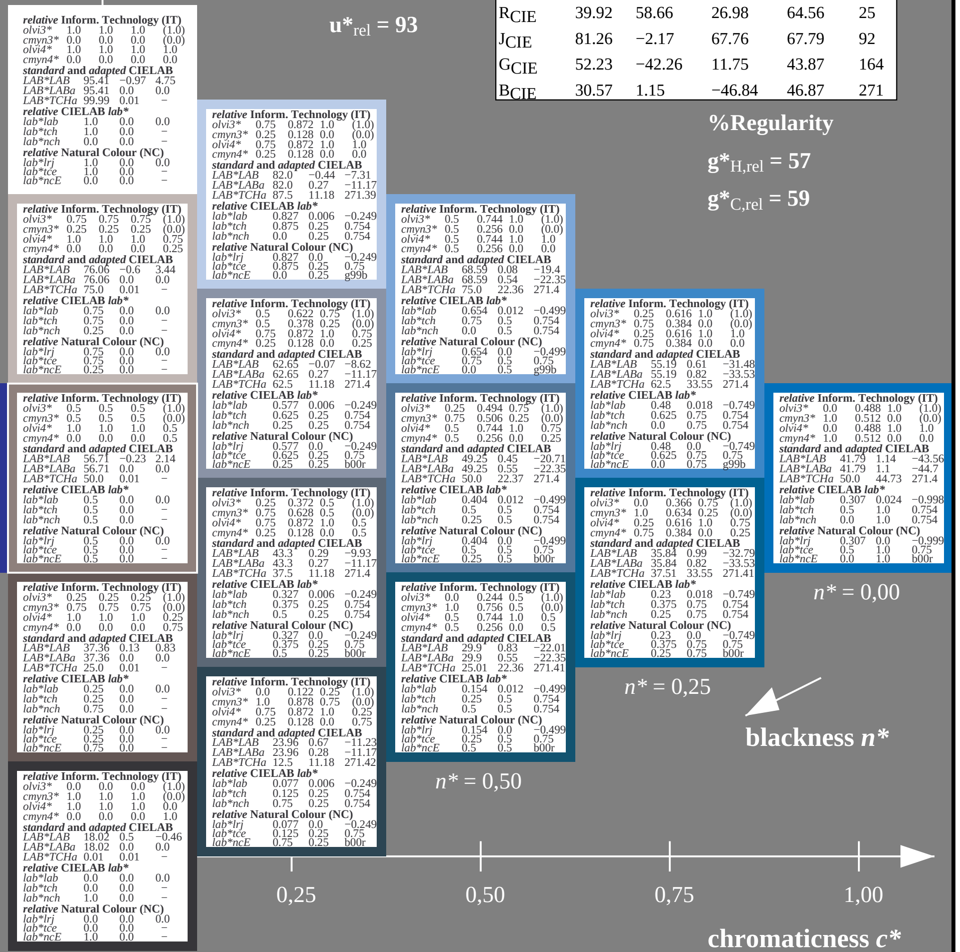
u^*_{rel} = 93

TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

Input: Colorimetric Reflective System NRS11

for hue $h^* = lab^*h = 272/360 = 0.755$

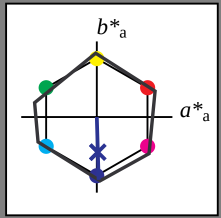
*lab*tch* and *lab*nch*

D65: hue B

LCH*Ma: 53 83 272

rgb*Ma: 0.0 0.02 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 119$

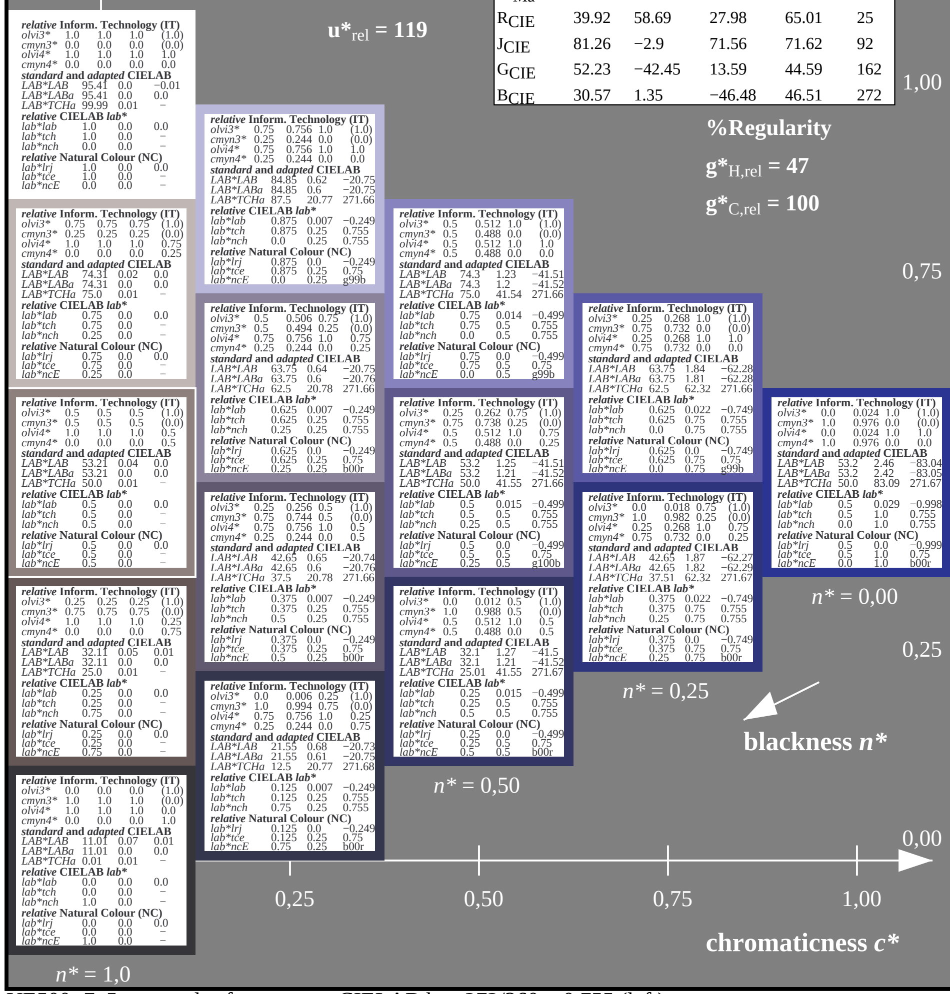
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System MRS18a

for hue $h^* = lab^*h = 272/360 = 0.755$

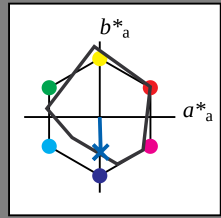
*lab*tch* and *lab*nch*

D65: hue B

LCH*Ma: 40 49 272

rgb*Ma: 0.0 0.36 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 92$

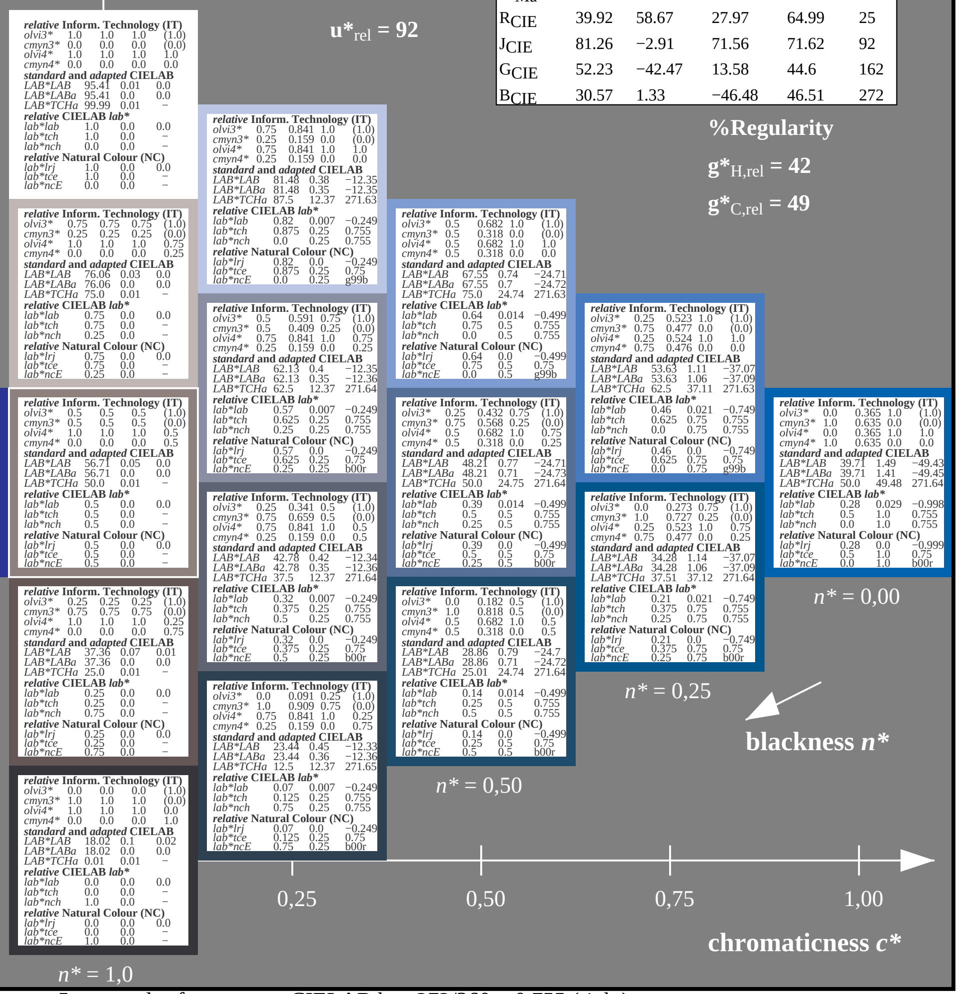
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



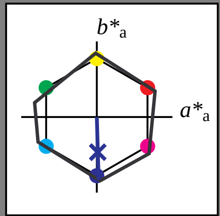
UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h$ = 272/360 = 0.755
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 83 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness t^*



%Gamut

u^*_{rel} = 119

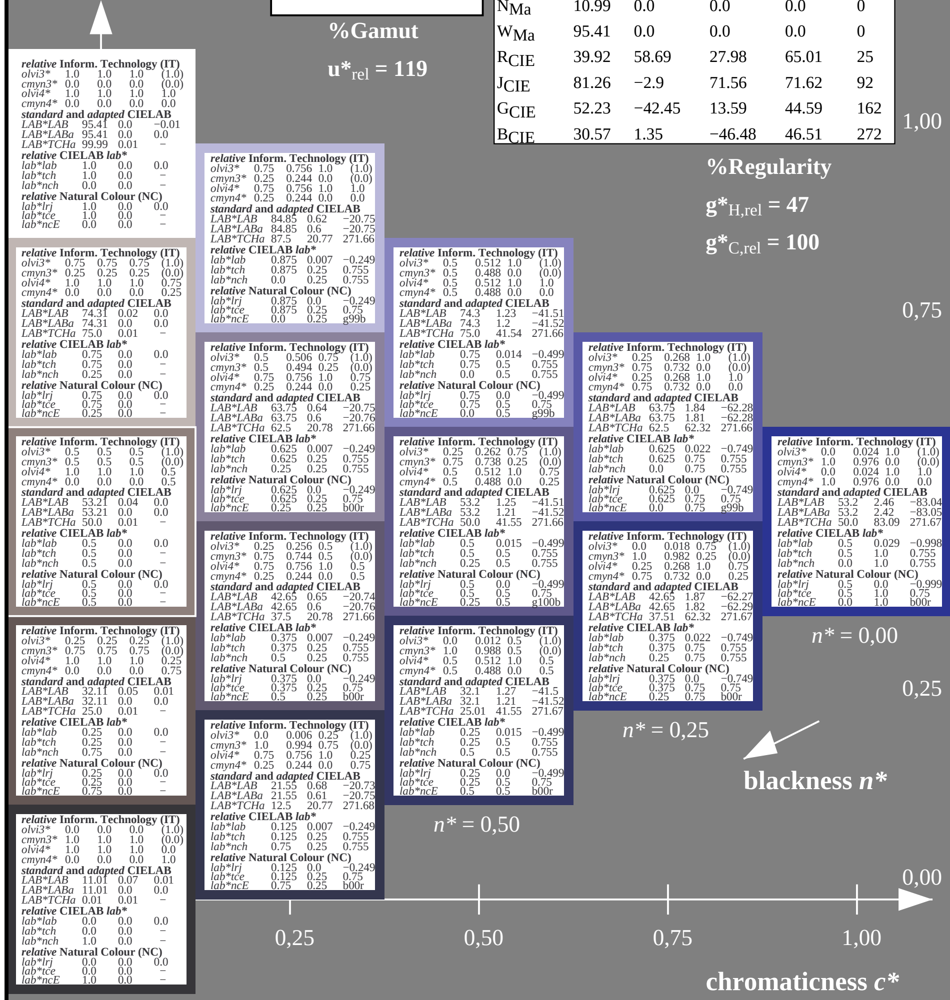
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

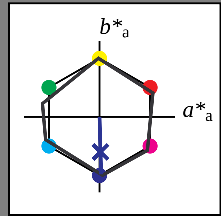
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h$ = 272/360 = 0.755
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 76 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness t^*



%Gamut

u^*_{rel} = 100

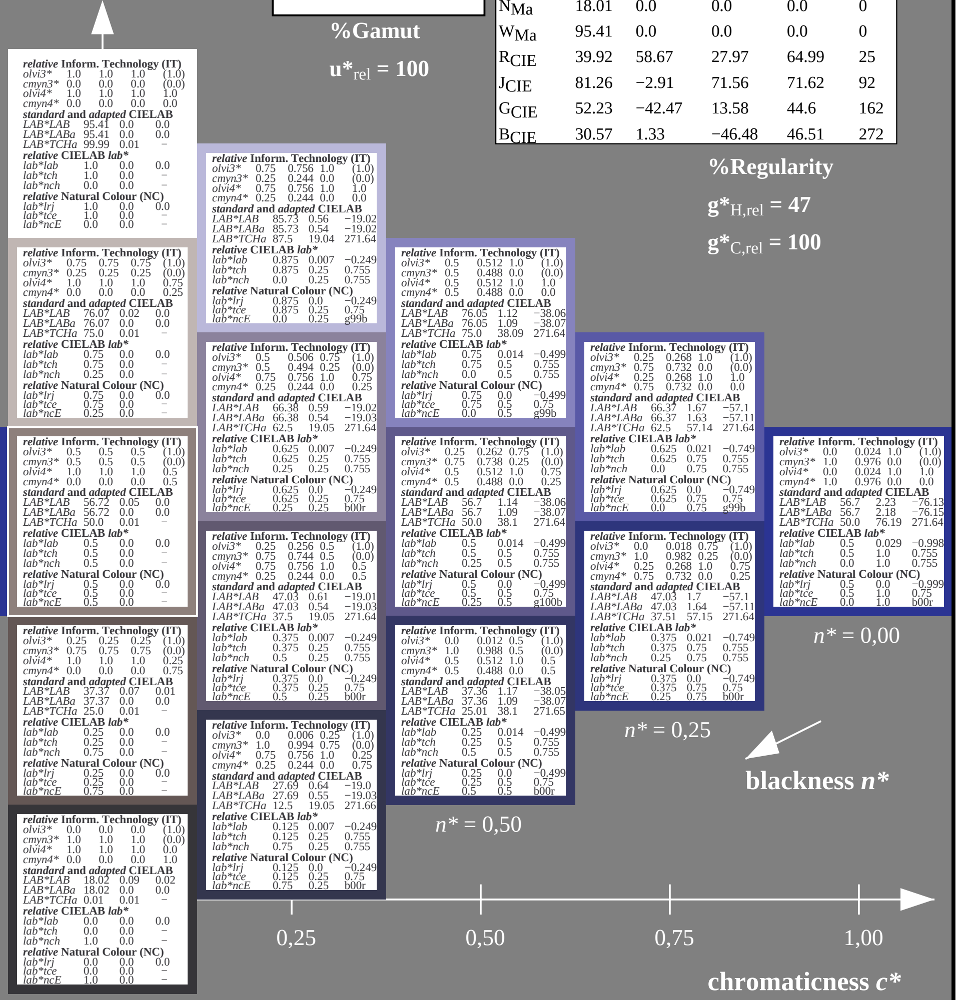
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

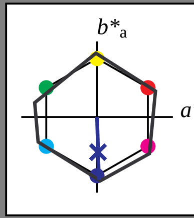


UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NRS11
for hue *h** **=** *lab*h* **= 272/360 = 0.755**
*lab*tch* **and** *lab*nch*

D65: hue B
LCH*Ma: 53 83 272
rgb*Ma: 0.0 0.02 1.0
triangle lightness *t**



%Gamut

u*rel = 119

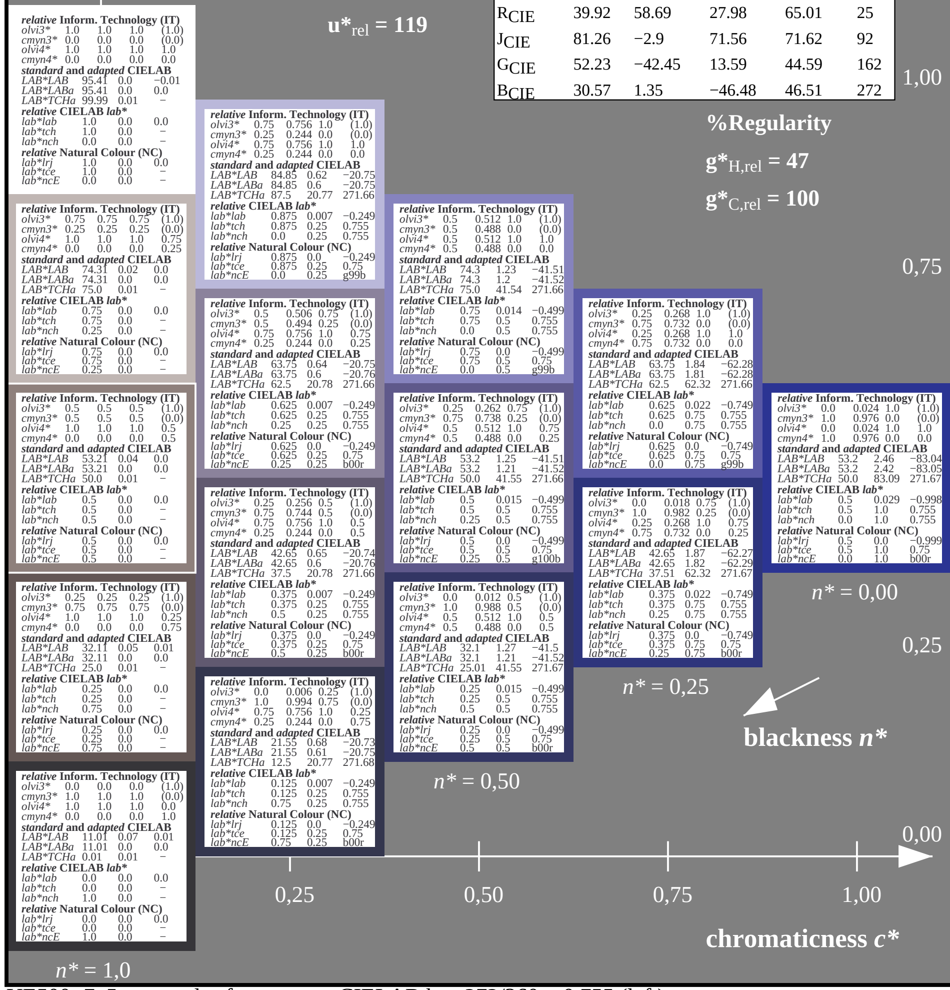
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

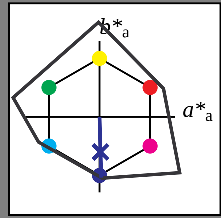
g*H,rel = 47

g*C,rel = 100



Output: Colorimetric Reflective System NCS18
for hue *h** **=** *lab*h* **= 272/360 = 0.755**
*lab*tch* **and** *lab*nch*

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0
triangle lightness *t**



%Gamut

u*rel = 136

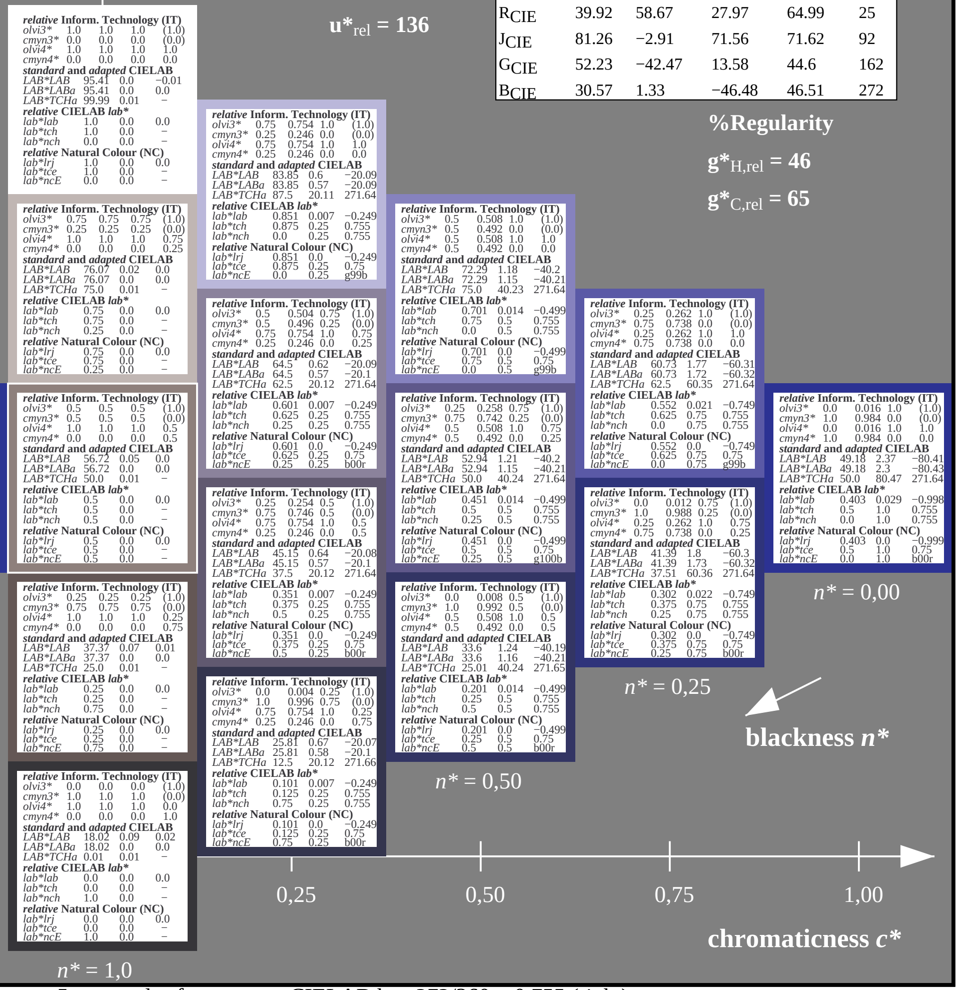
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

g*H,rel = 46

g*C,rel = 65



UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NRS11

for hue *h* = lab*h* = 272/360 = 0.755

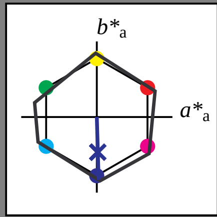
lab*tch* and *lab*nch

D65: hue B

LCH*Ma: 53 83 272

rgb*Ma: 0.0 0.02 1.0

triangle lightness *t*



%Gamut

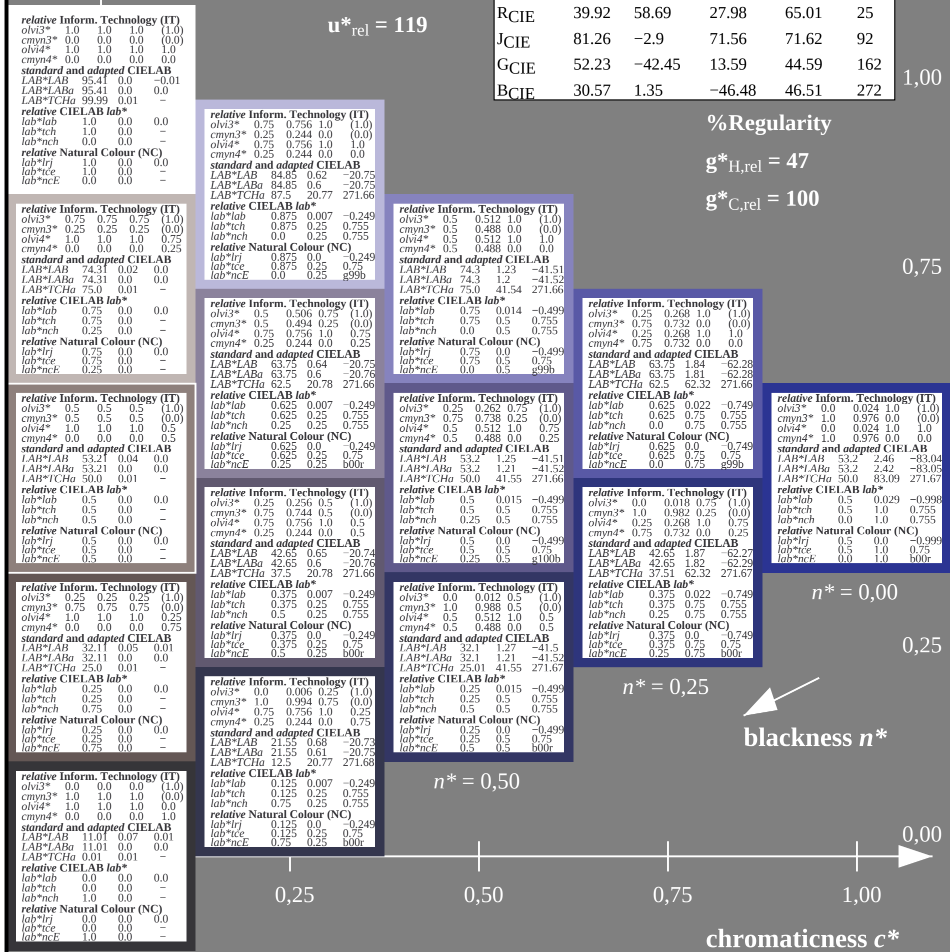
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NRS11

for hue *h* = lab*h* = 272/360 = 0.755

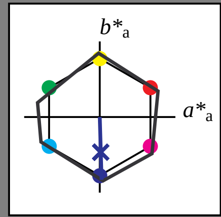
lab*tch* and *lab*nch

D65: hue B

LCH*Ma: 53 83 272

rgb*Ma: 0.0 0.02 1.0

triangle lightness *t*



%Gamut

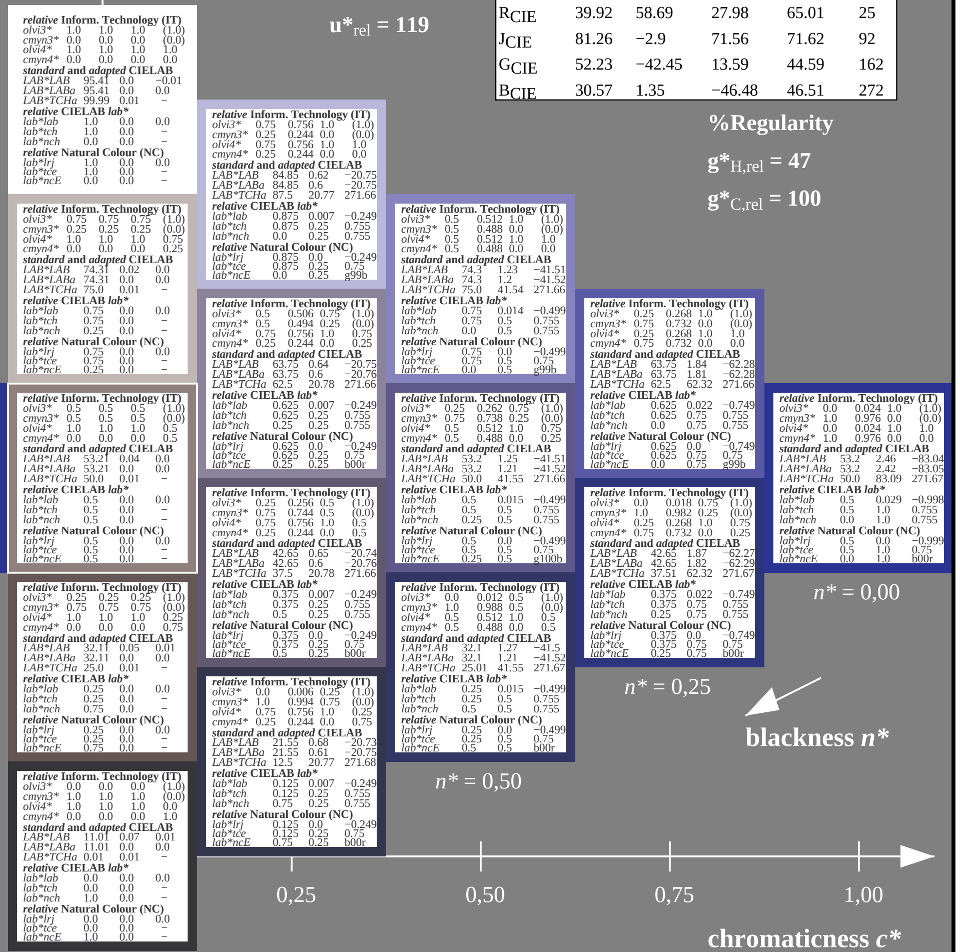
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

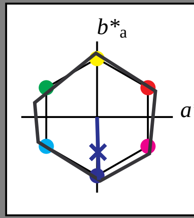


UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 272/360 = 0.755$
*lab*tch and lab*nch*

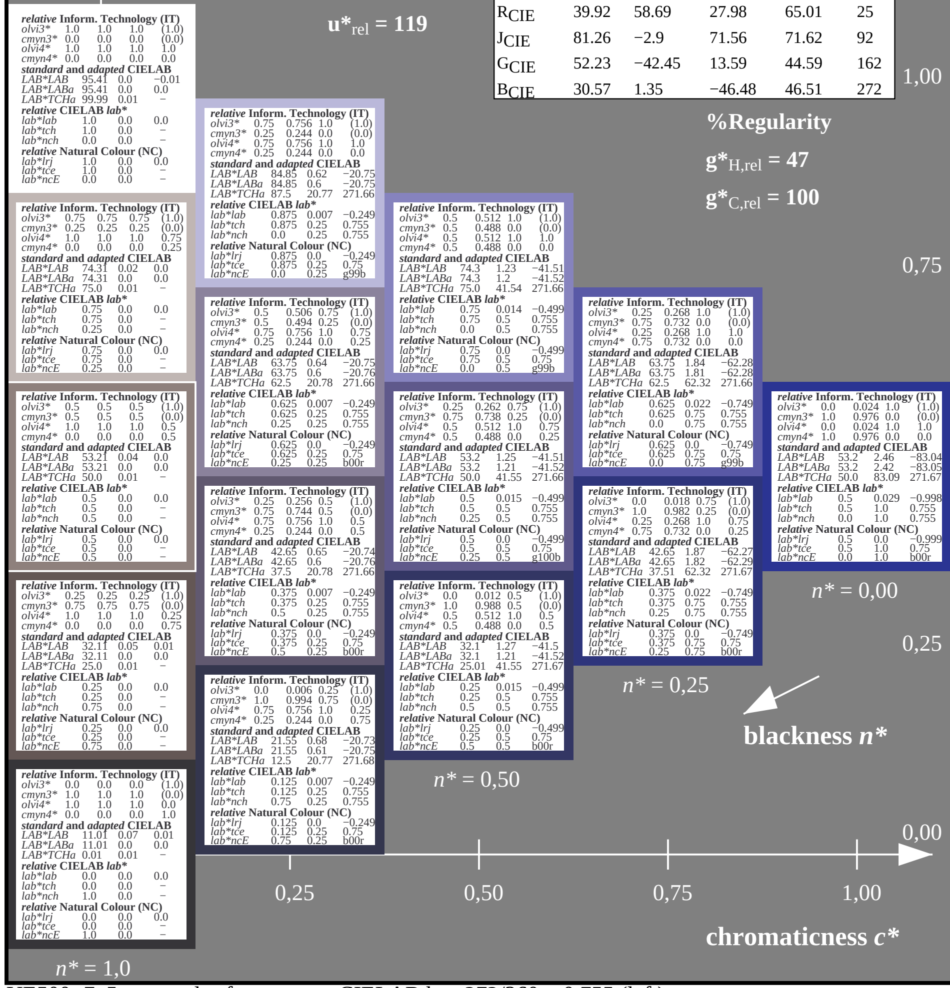
D65: hue B
LCH*Ma: 53 83 272
rgb*Ma: 0.0 0.02 1.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 119$

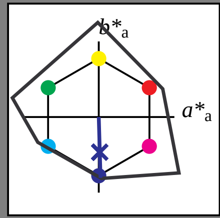
NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 47$
$g^*_{C,rel} = 100$



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 272/360 = 0.755$
*lab*tch and lab*nch*

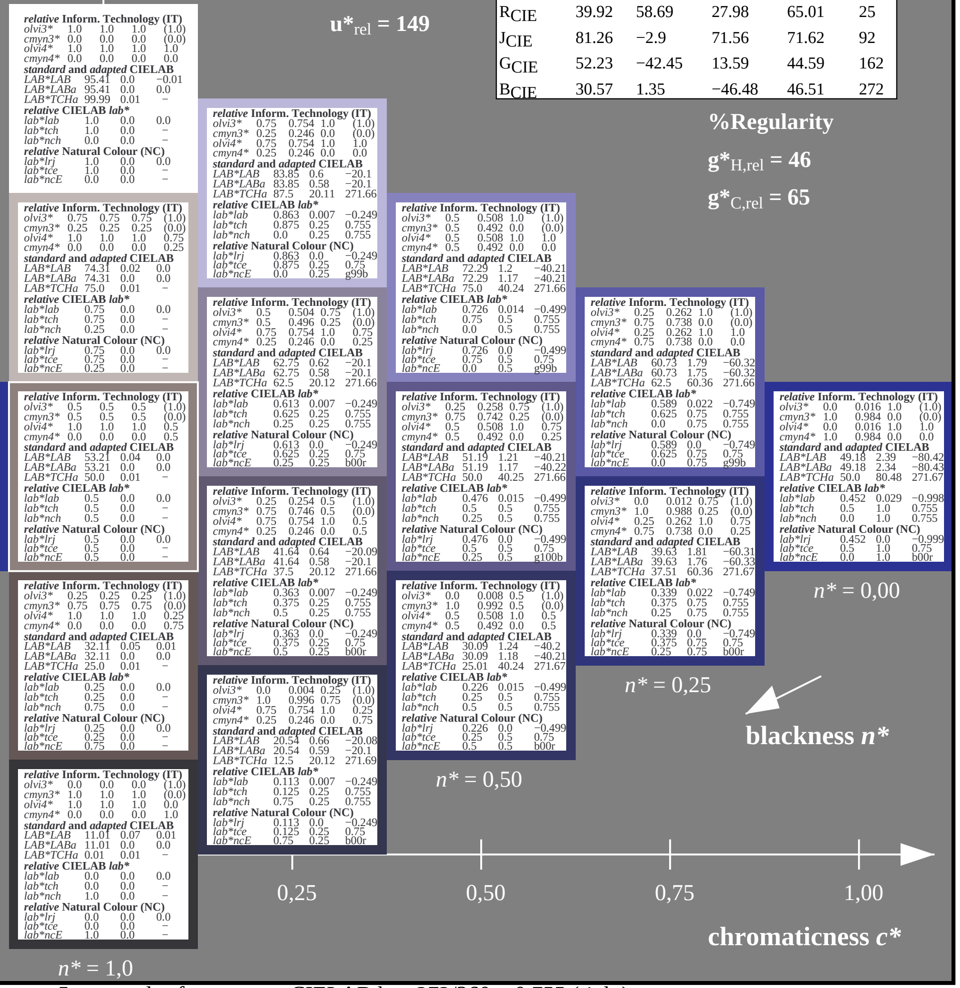
D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0
triangle lightness t^*



%Gamut
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel} = 46$
$g^*_{C,rel} = 65$



UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 272/360 = 0.755$

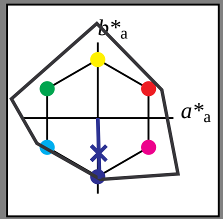
lab*tch* and *lab*nch

D65: hue B

LCH*Ma: 49 80 272

rgb*Ma: 0.0 0.02 1.0

triangle lightness t^*



%Gamut

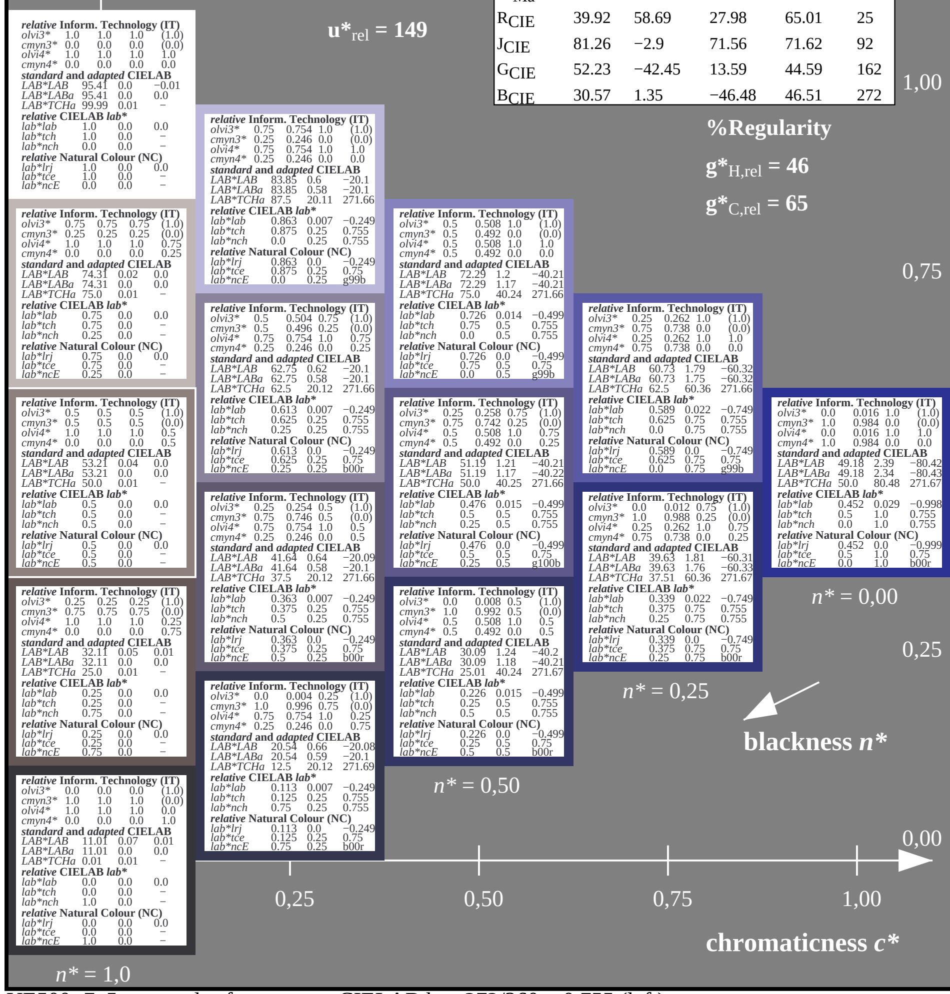
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System ORS18

for hue $h^* = lab^*h = 271/360 = 0.754$

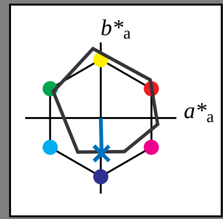
lab*tch* and *lab*nch

D65: hue B

LCH*Ma: 42 45 271

rgb*Ma: 0.0 0.49 1.0

triangle lightness t^*



%Gamut

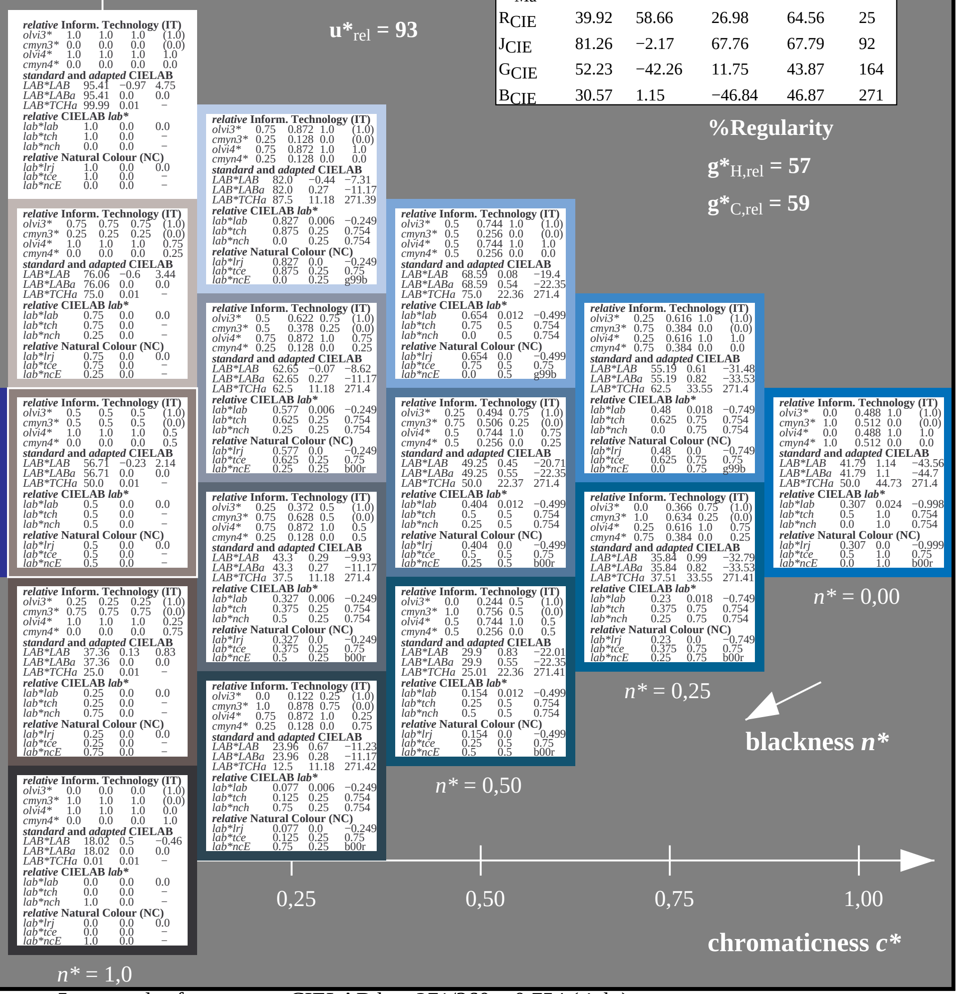
u^*_{rel} = 93

ORS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

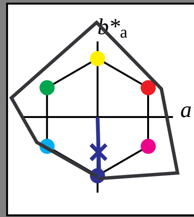


UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

Input: Colorimetric Reflective System NCS11
for hue *h** = *lab*h* = 272/360 = 0.755
*lab*tch and lab*nch*

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0
triangle lightness *t**

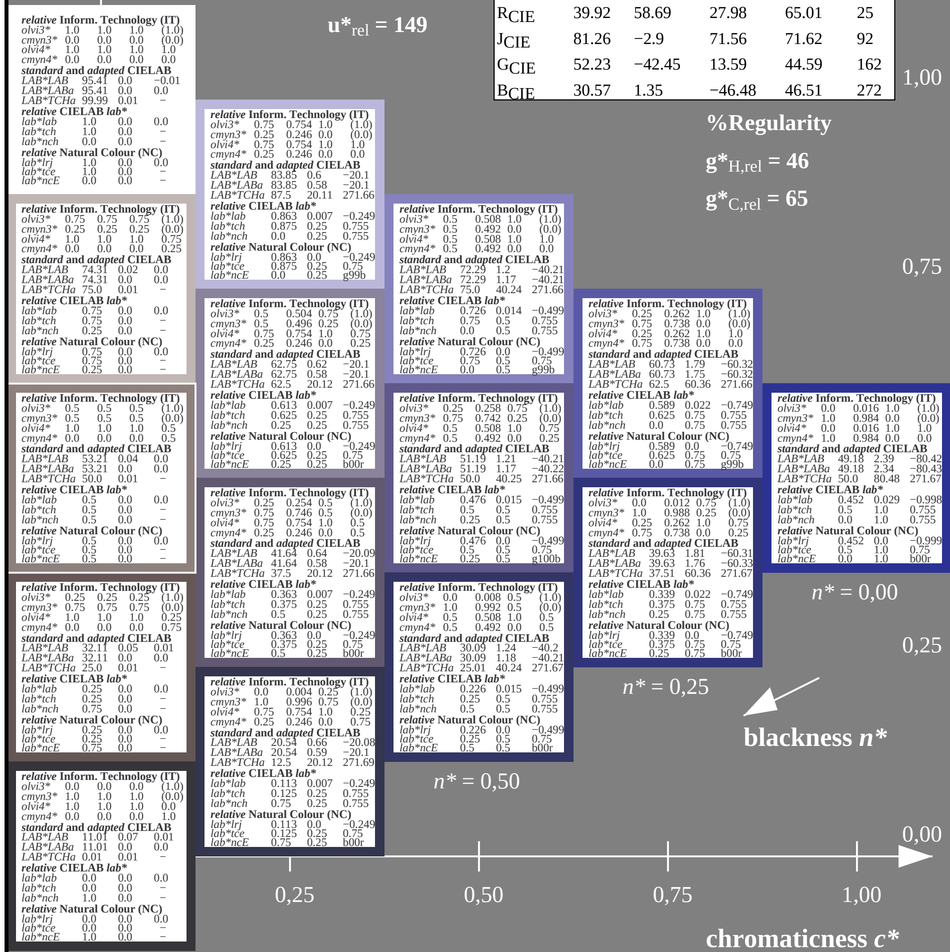


%Gamut
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

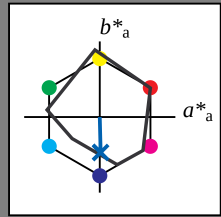
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System MRS18
for hue *h** = *lab*h* = 271/360 = 0.754
*lab*tch and lab*nch*

D65: hue B
LCH*Ma: 40 50 271
rgb*Ma: 0.0 0.37 1.0
triangle lightness *t**

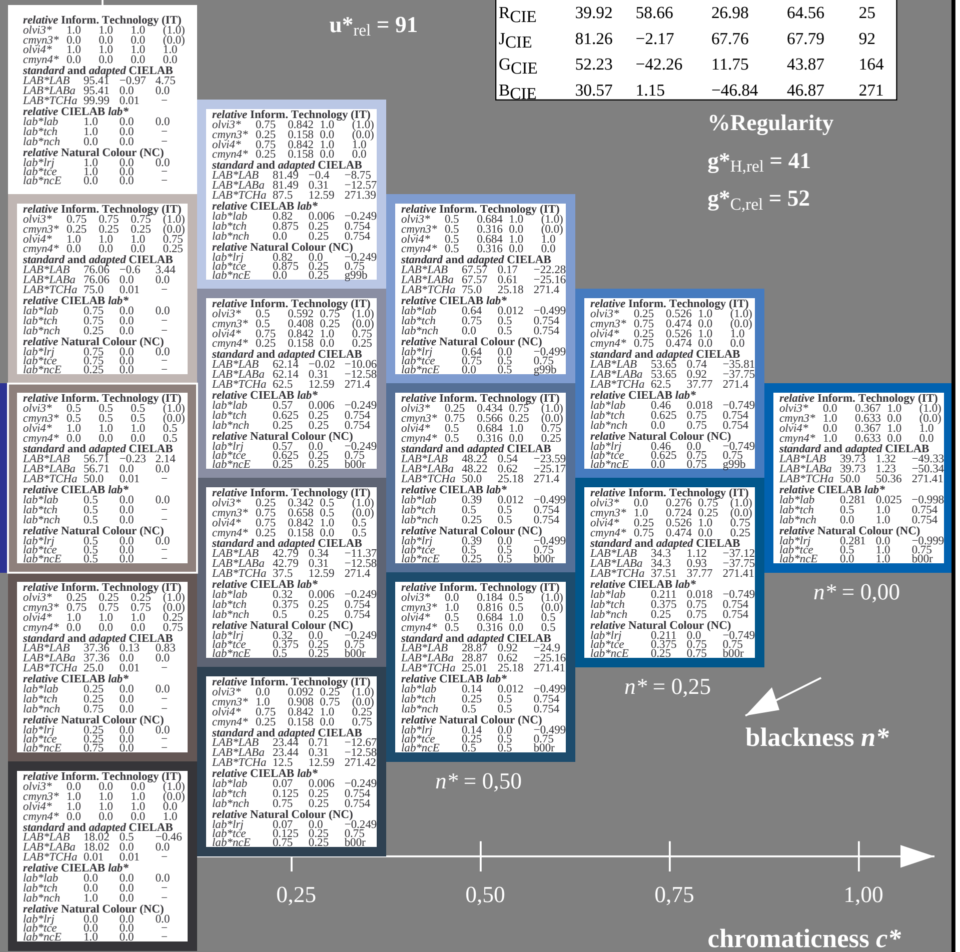


%Gamut
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel}$ = 41
$g^*_{C,rel}$ = 52



UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

Input: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 272/360 = 0.755$

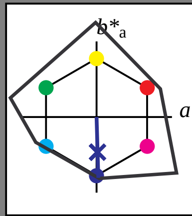
lab*tch* and *lab*nch

D65: hue B

LCH*Ma: 49 80 272

rgb*Ma: 0.0 0.02 1.0

triangle lightness t^*



NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

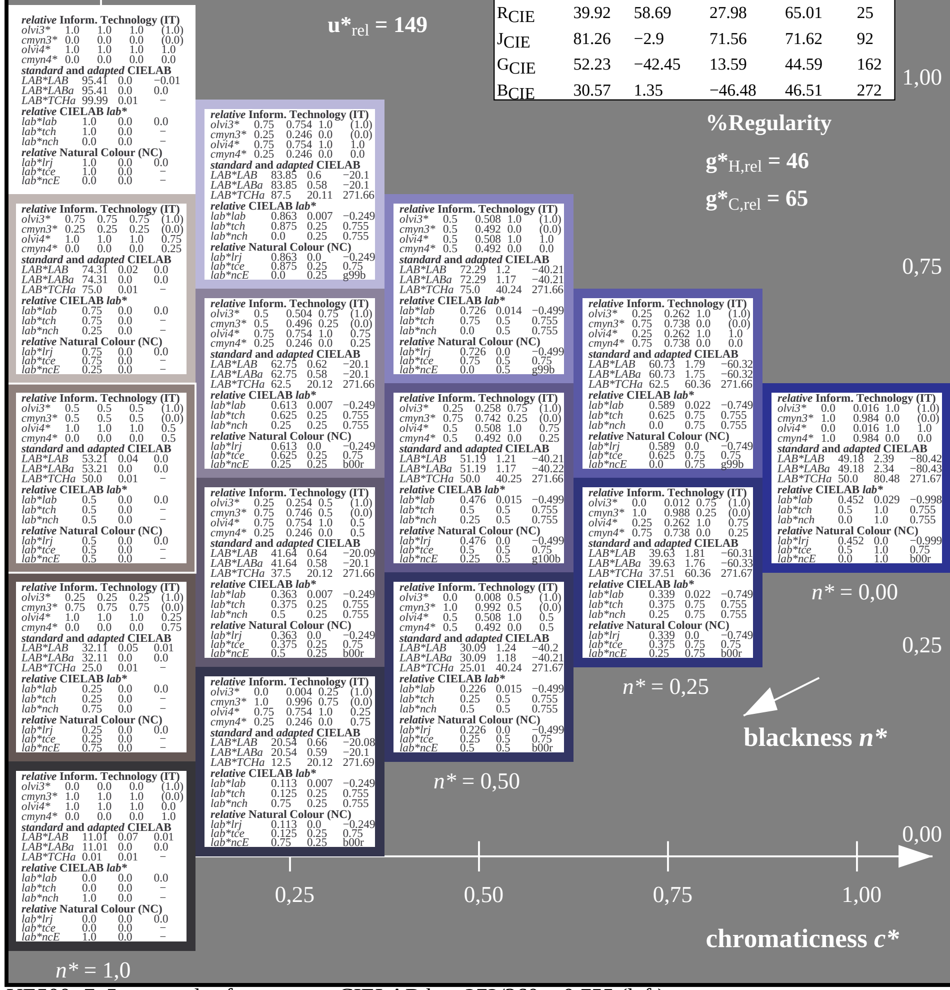
%Gamut

$u^*_{rel} = 149$

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System TRS18

for hue $h^* = lab^*h = 271/360 = 0.754$

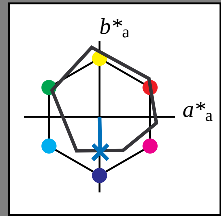
lab*tch* and *lab*nch

D65: hue B

LCH*Ma: 42 45 271

rgb*Ma: 0.0 0.49 1.0

triangle lightness t^*



TRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

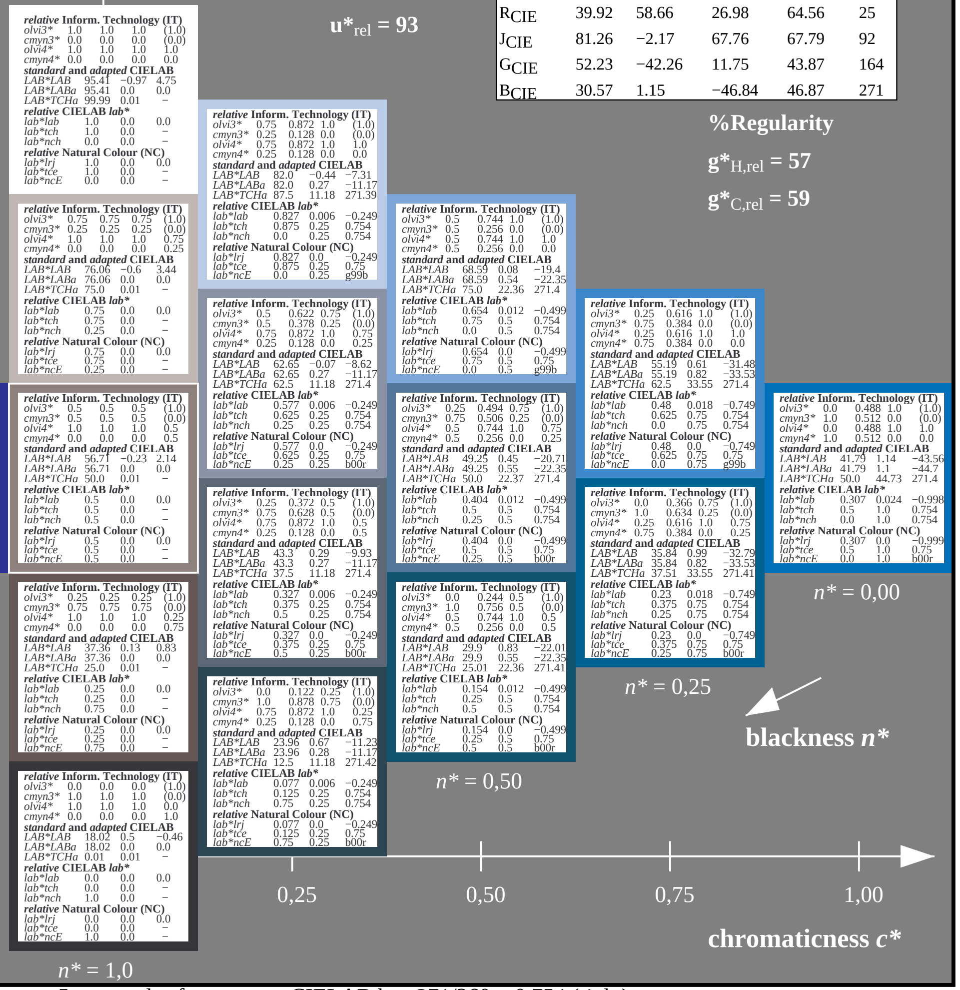
%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

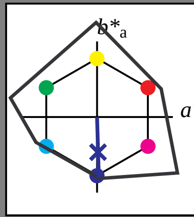


UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

Input: Colorimetric Reflective System NCS11
for hue *h = *lab*h* = 272/360 = 0.755**
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0
triangle lightness *t*

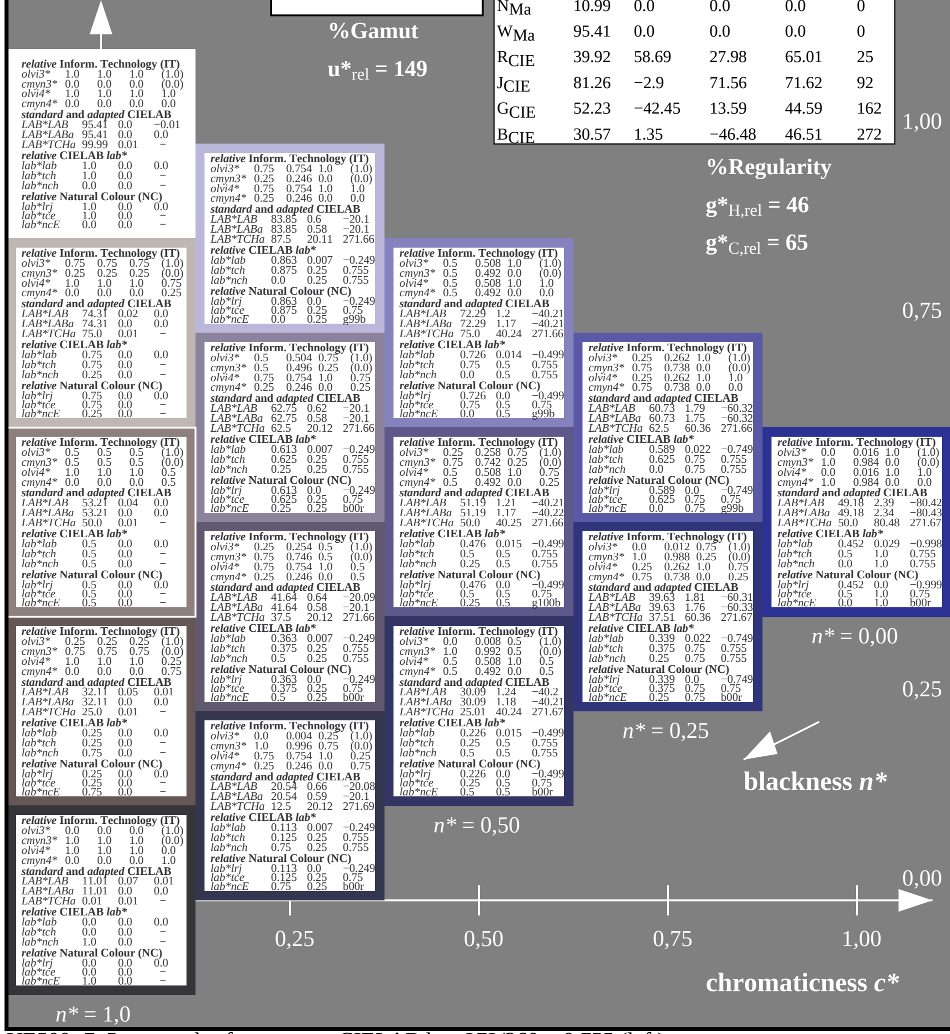


%Gamut

u^*_{rel} = 149

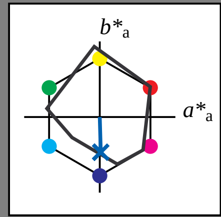
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272



Output: Colorimetric Reflective System MRS18a
for hue *h = *lab*h* = 272/360 = 0.755**
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 40 49 272
rgb*Ma: 0.0 0.36 1.0
triangle lightness *t*

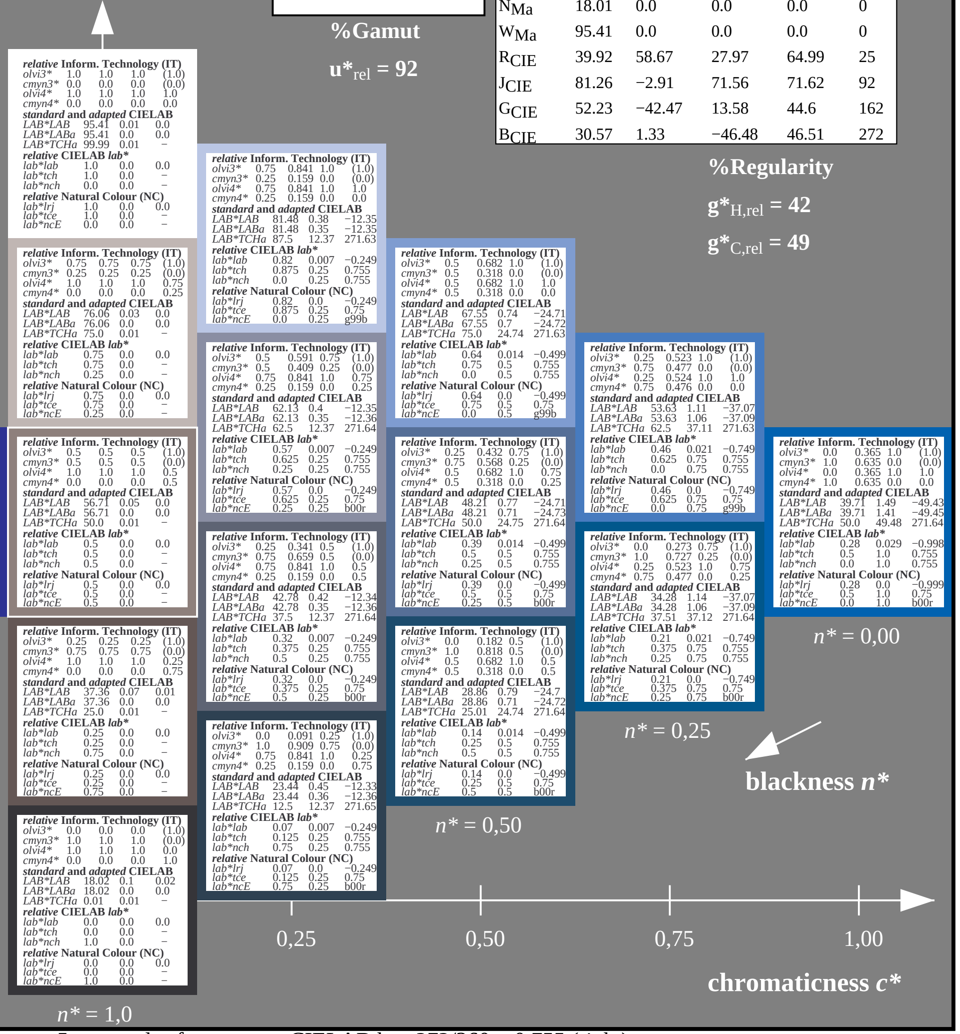


%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

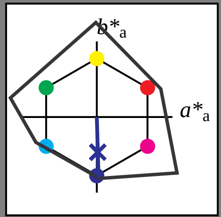


UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch and lab*nch

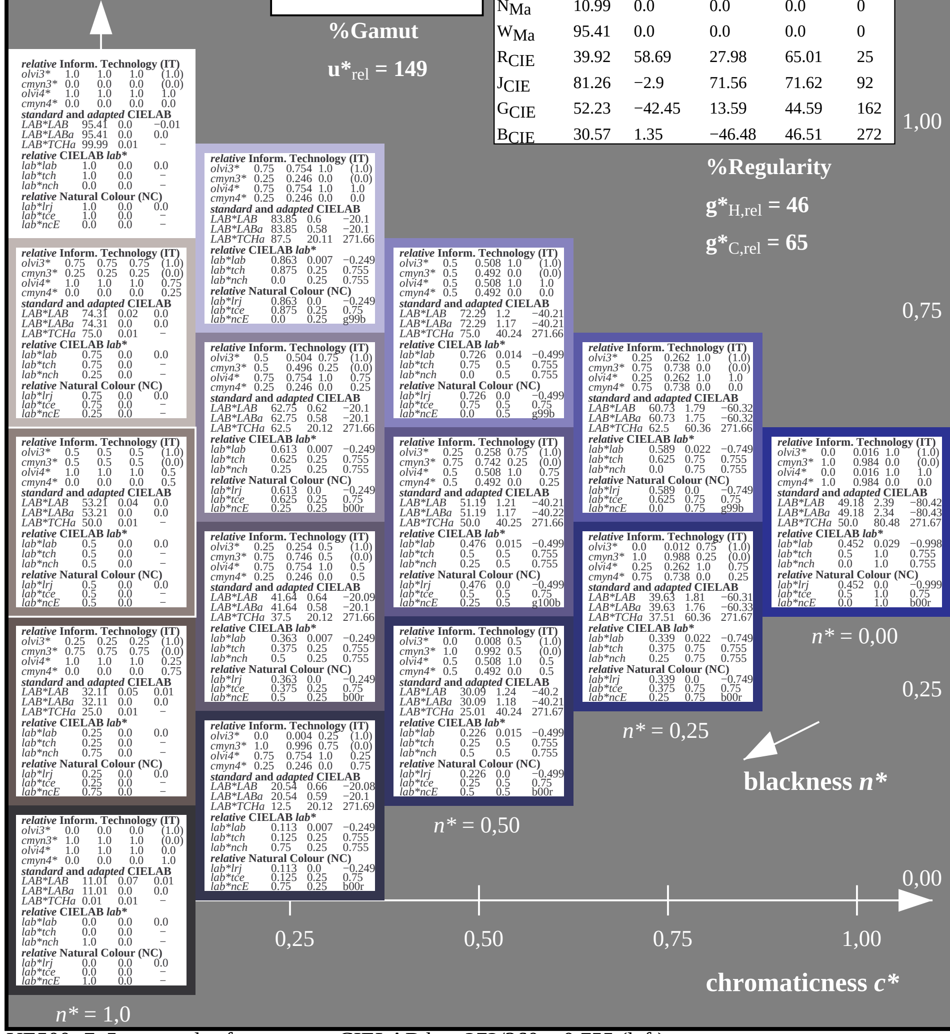
D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0
triangle lightness t^*



%Gamut
u^*_{rel} = 149

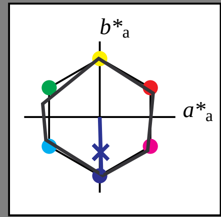
NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch and lab*nch

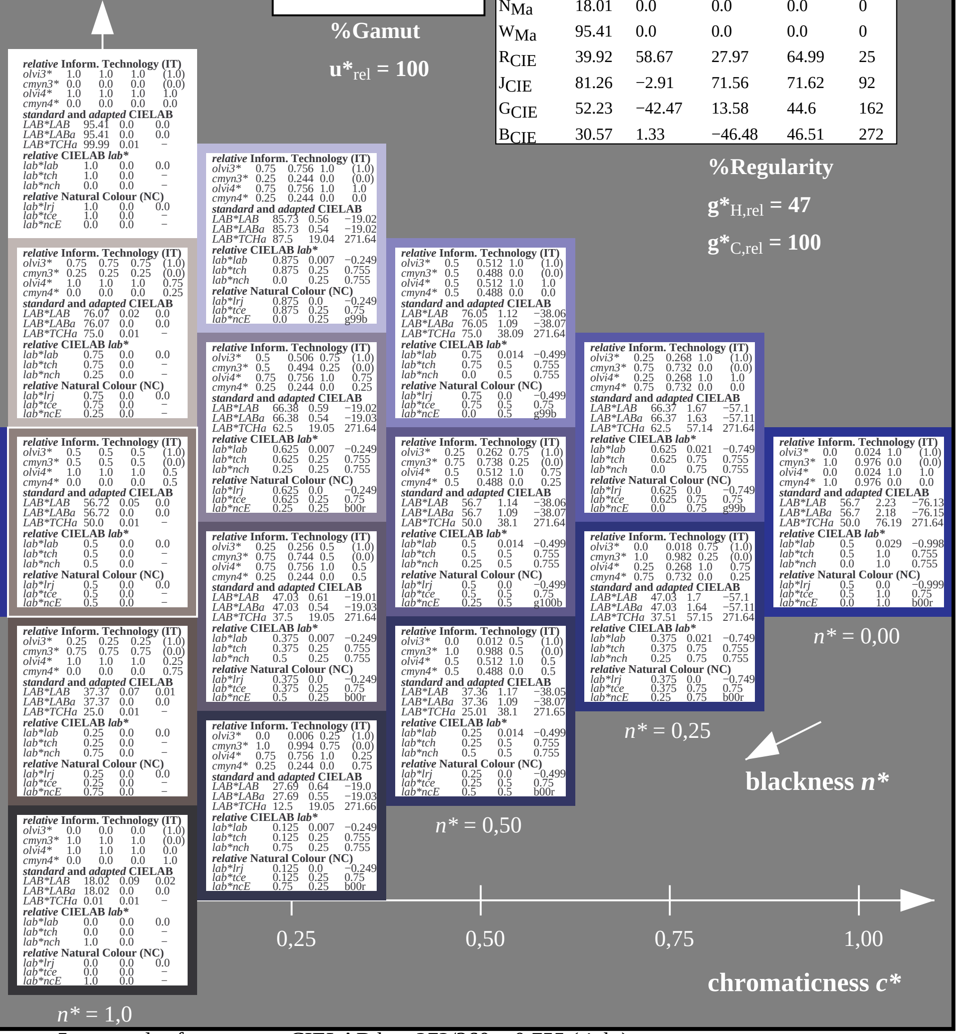
D65: hue B
LCH*Ma: 57 76 272
rgb*Ma: 0.0 0.02 1.0
triangle lightness t^*



%Gamut
u^*_{rel} = 100

NRS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100



UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 272/360 = 0.755$

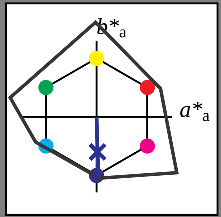
*lab*tch and lab*nch*

D65: hue B

LCH*Ma: 49 80 272

rgb*Ma: 0.0 0.02 1.0

triangle lightness t^*



%Gamut

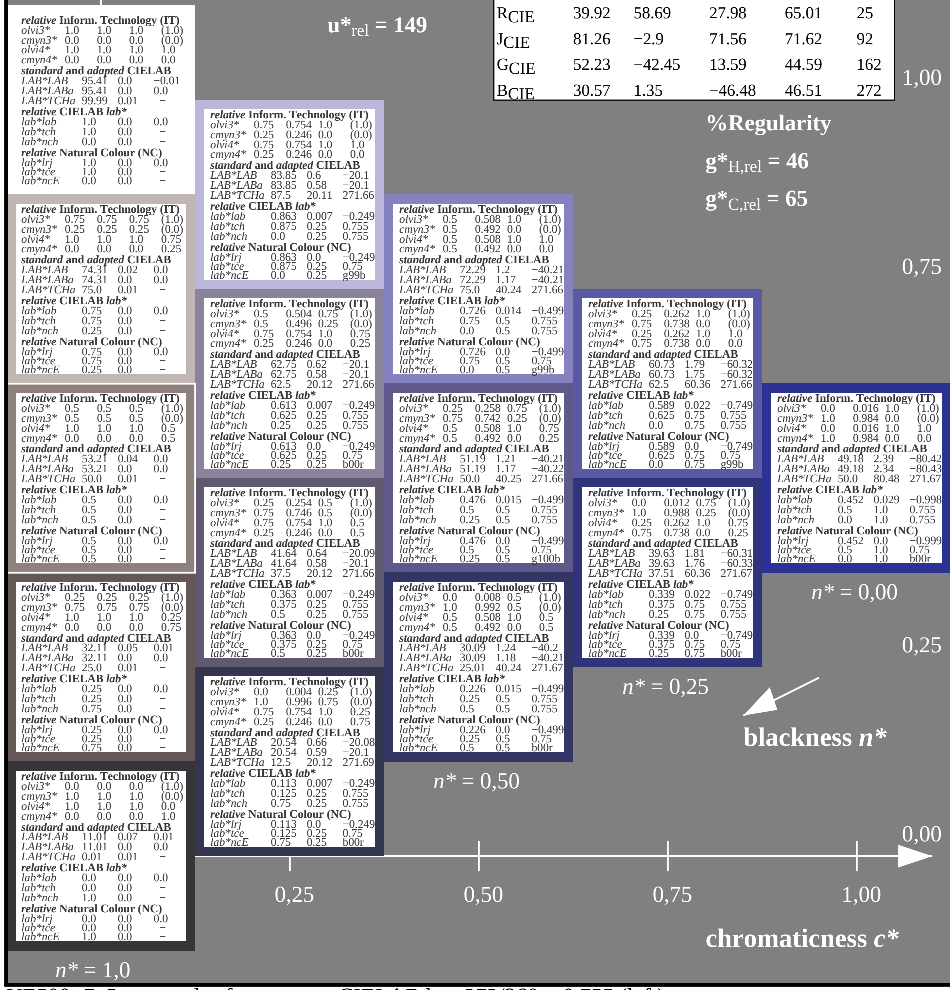
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

Output: Colorimetric Reflective System NCS18

for hue $h^* = lab^*h = 272/360 = 0.755$

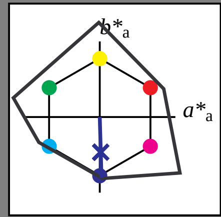
*lab*tch and lab*nch*

D65: hue B

LCH*Ma: 49 80 272

rgb*Ma: 0.0 0.02 1.0

triangle lightness t^*



%Gamut

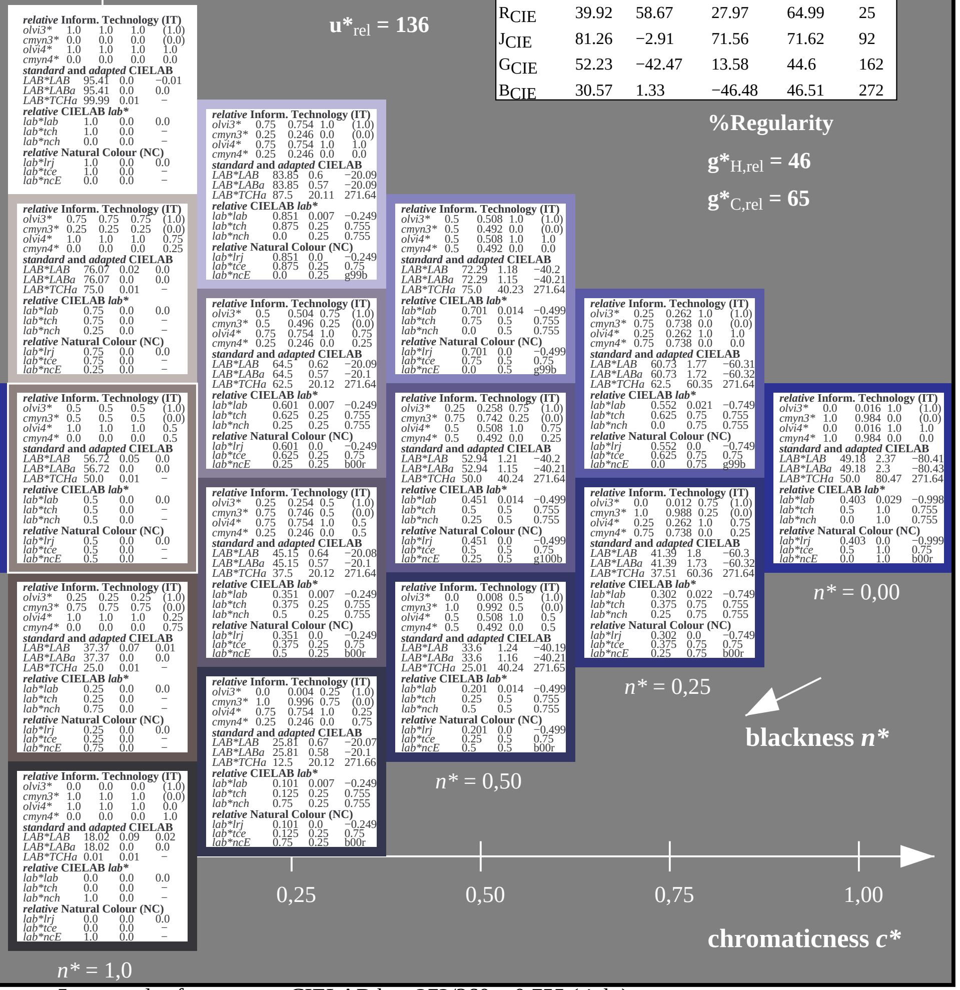
$u^*_{rel} = 136$

NCS18; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 272/360 = 0.755$

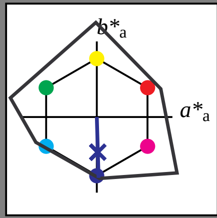
*lab*tch and lab*nch*

D65: hue B

LCH*Ma: 49 80 272

rgb*Ma: 0.0 0.02 1.0

triangle lightness t^*



%Gamut

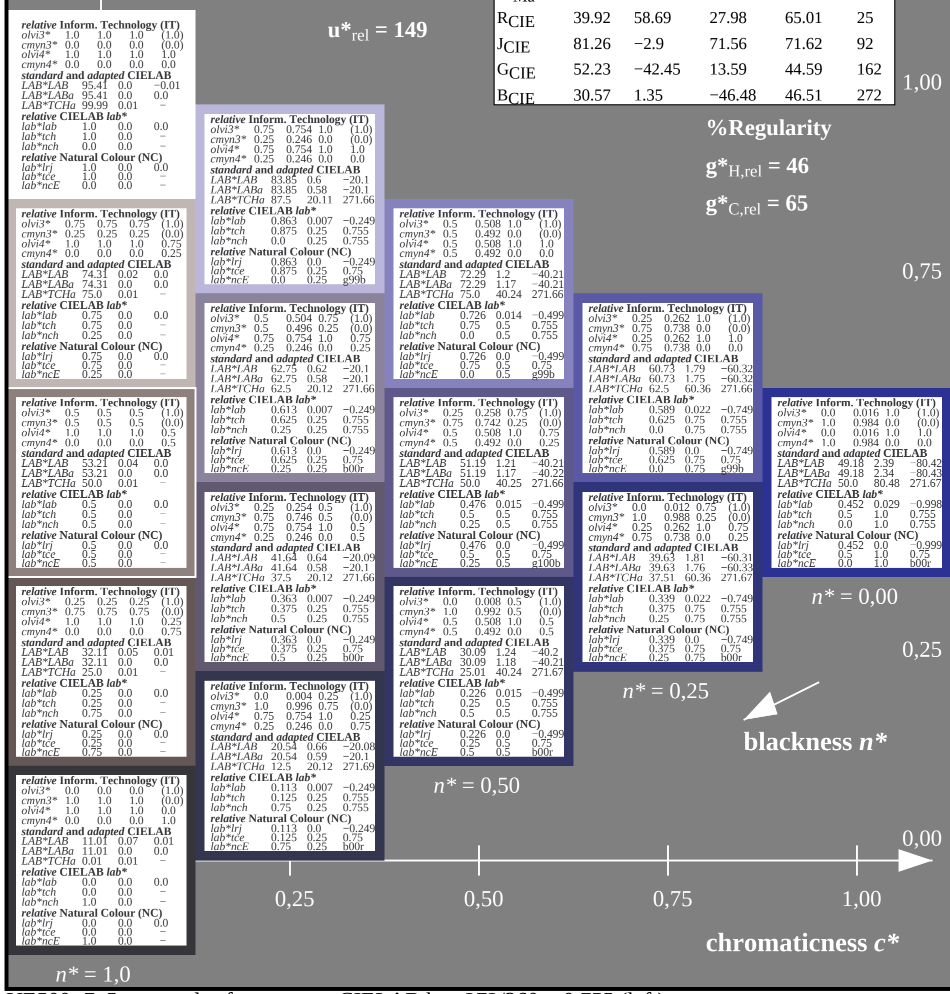
$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$



Output: Colorimetric Reflective System NRS11

for hue $h^* = lab^*h = 272/360 = 0.755$

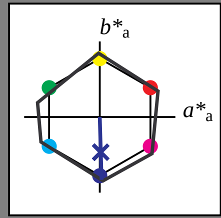
*lab*tch and lab*nch*

D65: hue B

LCH*Ma: 53 83 272

rgb*Ma: 0.0 0.02 1.0

triangle lightness t^*



%Gamut

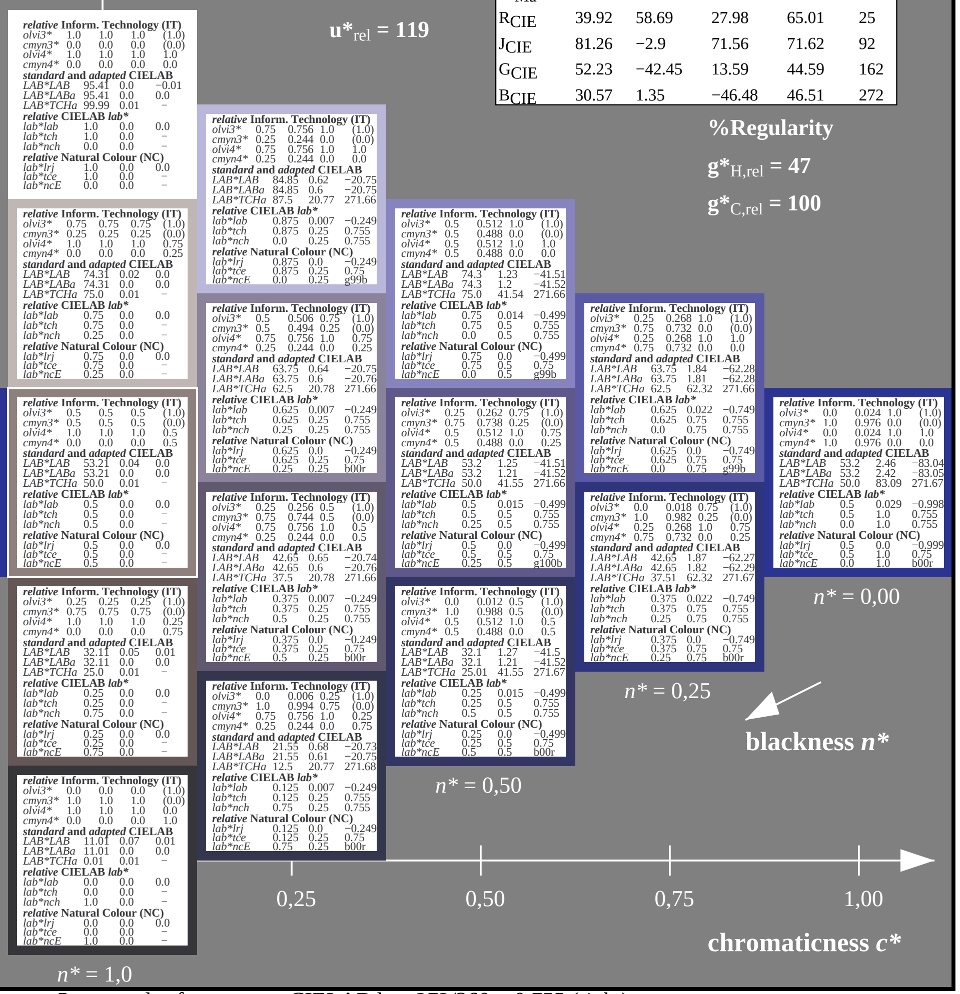
$u^*_{rel} = 119$

NRS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

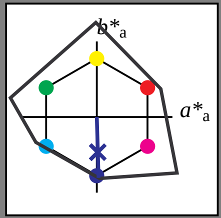


UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

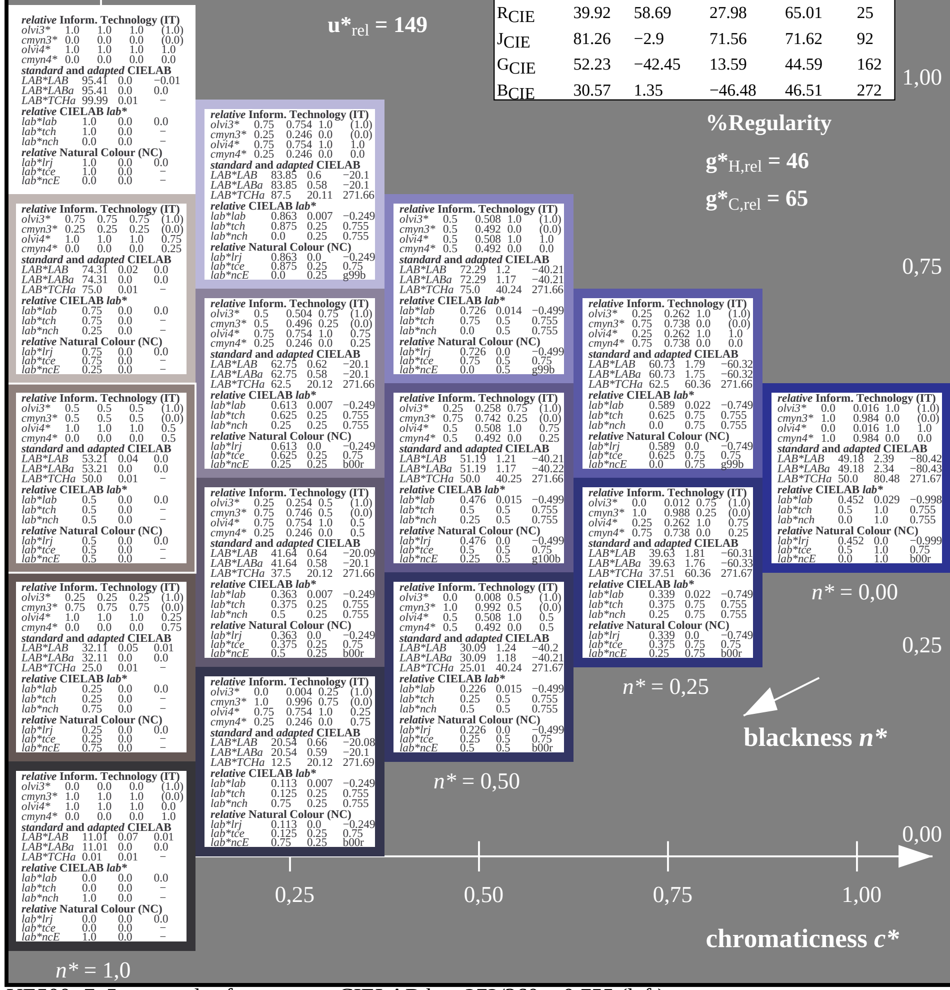
D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0
triangle lightness t^*



%Gamut
u^*_{rel} = 149

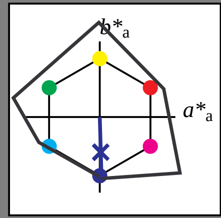
NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

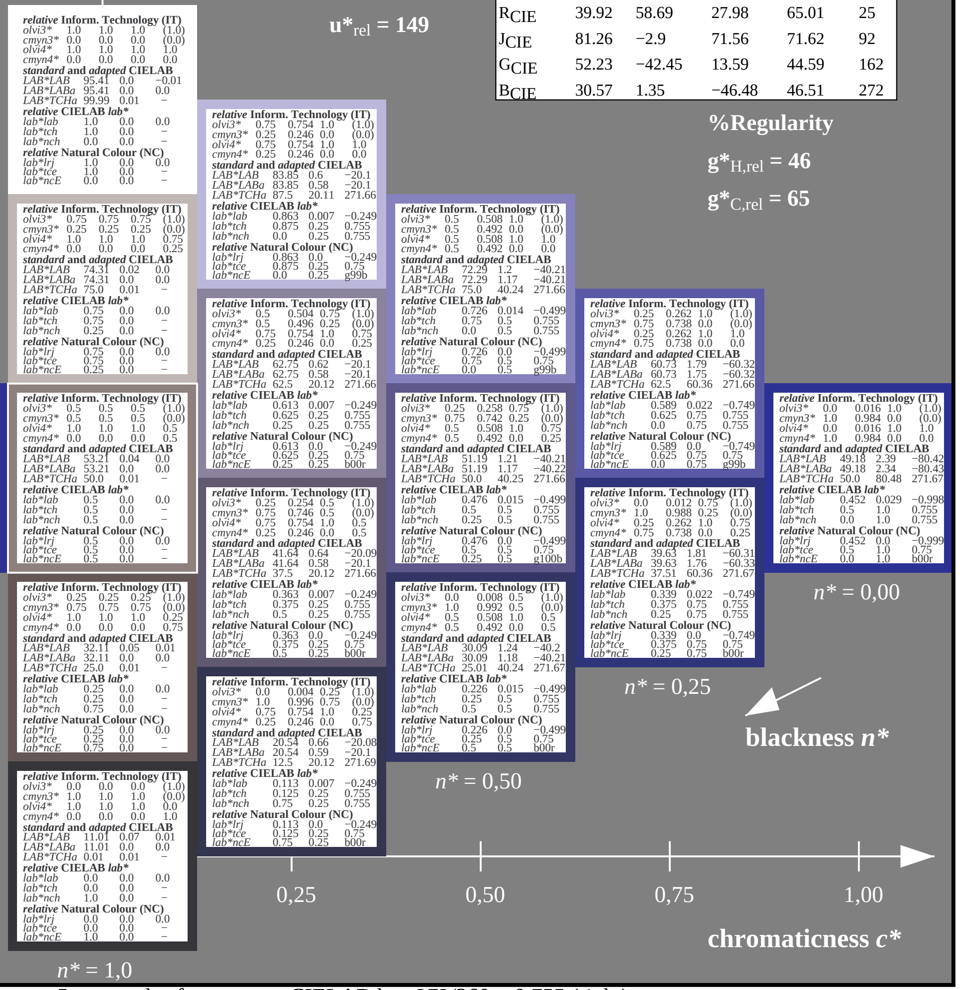
D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0
triangle lightness t^*



%Gamut
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



UE500−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)