

Input: Colorimetric Offset Reflective System ORS18a

for hue $h^* = lab^*h = 36/360 = 0.1$

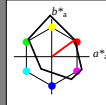
lab^*tch and lab^*nch

D65: hue O

LCH*Ma: 35 76 36

olv*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 109$

%Regularity

$g^*_{H,rel} = 30$

$g^*_{C,rel} = 39$

ORS18a; adapted (a) CIELAB data					
$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$	
O _{Ma} 35.32	60.99	44.6	75.56	36	
Y _{Ma} 83.65	-4.11	108.86	108.94	92	
L _{Ma} 43.49	-61.66	46.73	77.37	143	
C _{Ma} 52.18	-28.14	-32.36	42.9	229	
V _{Ma} 13.71	52.15	-59.7	79.28	311	
M _{Ma} 37.69	79.56	-33.73	86.42	337	
N _{Ma} 8.99	0.0	0.0	0.0	0	
W _{Ma} 92.16	0.0	0.0	0.0	0	
R _{CIE} 39.92	58.74	27.99	65.07	25	
J _{CIE} 81.26	-2.88	71.56	71.62	92	
G _{CIE} 52.23	-42.41	13.6	44.55	162	
B _{CIE} 30.57	1.41	-46.46	46.49	272	

Output: Colorimetric Offset Reflective System ORS18a

for hue $h^* = lab^*h = 36/360 = 0.1$

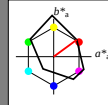
lab^*tch and lab^*nch

D65: hue O

LCH*Ma: 35 76 36

olv*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

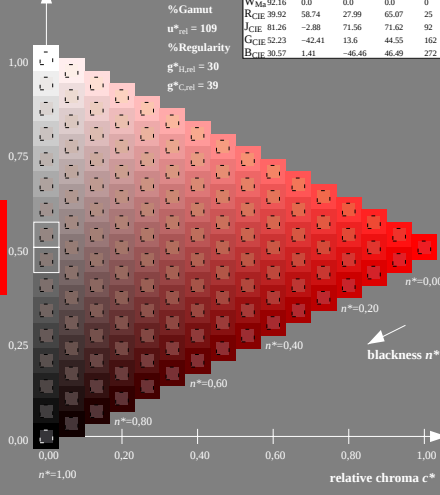
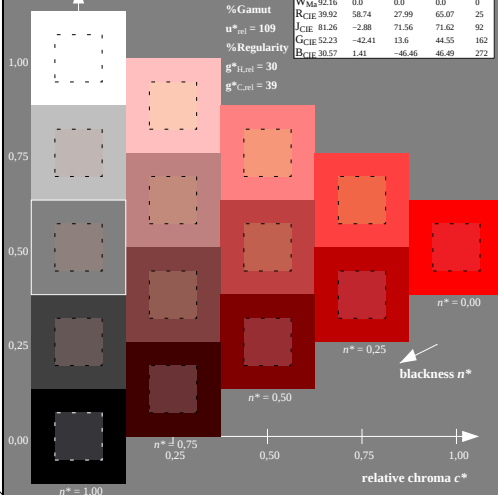
$u^*_{rel} = 109$

%Regularity

$g^*_{H,rel} = 30$

$g^*_{C,rel} = 39$

ORS18a; adapted (a) CIELAB data					
$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$	
O _{Ma} 35.32	60.99	44.6	75.56	36	
Y _{Ma} 83.65	-4.11	108.86	108.94	92	
L _{Ma} 43.49	-61.66	46.73	77.37	143	
C _{Ma} 52.18	-28.14	-32.36	42.9	229	
V _{Ma} 13.71	52.15	-59.7	79.28	311	
M _{Ma} 37.69	79.56	-33.73	86.42	337	
N _{Ma} 8.99	0.0	0.0	0.0	0	
W _{Ma} 92.16	0.0	0.0	0.0	0	
R _{CIE} 39.92	58.74	27.99	65.07	25	
J _{CIE} 81.26	-2.88	71.56	71.62	92	
G _{CIE} 52.23	-42.41	13.6	44.55	162	
B _{CIE} 30.57	1.41	-46.46	46.49	272	



De640-7N, 5 step scales for constant CIELAB hue 36/360 = 0.1 (left)

16 step scales for constant CIELAB hue 36/360 = 0.1 (right)

De64: Test chart 1 according to DIN 33872-4, Hue O, Page 1/1 Input: *cmY0-center, rgb-background*
Equality for two colour definitions, ORS18a
output: no change compared to input

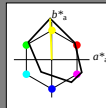
Input: Colorimetric Offset Reflective System ORS18a

for hue $h^* = lab^*h = 92/360 = 0.256$ lab^*tch and lab^*nch

D65: hue Y

LCH*Ma: 84 109 92

olv*Ma: 1.0 1.0 0.0

triangle lightness t^* 

%Gamut

 $u^*_{rel} = 109$

%Regularity

 $g^*_{H,rel} = 30$ $g^*_{C,rel} = 39$

ORS18a; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{M3}	35.32	60.99	44.6	75.56	36
Y_{M3}	83.65	-4.11	108.86	108.94	92
L_{M3}	43.49	-61.66	46.73	77.37	143
C_{M3}	52.18	-28.14	-32.36	42.9	229
V_{M3}	13.71	52.15	-59.7	79.28	311
M_{M3}	37.69	79.56	-33.73	86.42	337
N_{M3}	8.99	0.0	0.0	0.0	0
W_{M3}	92.16	0.0	0.0	0.0	0
R_{CIE}	39.92	58.74	27.99	65.07	25
J_{CIE}	81.26	-2.88	71.56	71.62	92
G_{CIE}	52.23	-42.41	13.6	44.55	162
B_{CIE}	30.57	1.41	-46.46	46.49	272

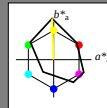
Output: Colorimetric Offset Reflective System ORS18a

for hue $h^* = lab^*h = 92/360 = 0.256$ lab^*tch and lab^*nch

D65: hue Y

LCH*Ma: 84 109 92

olv*Ma: 1.0 1.0 0.0

triangle lightness t^* 

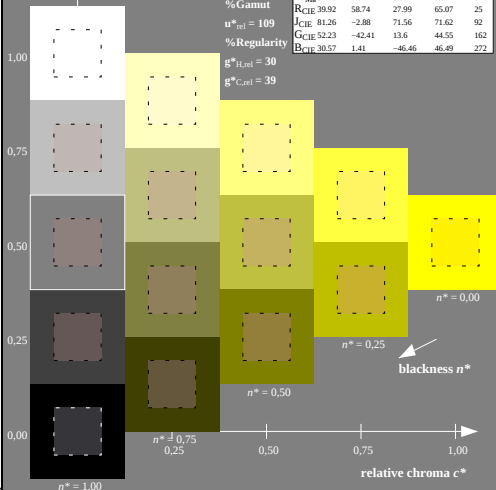
%Gamut

 $u^*_{rel} = 109$

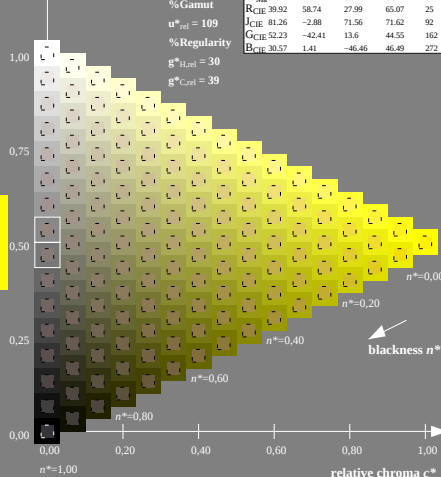
%Regularity

 $g^*_{H,rel} = 30$ $g^*_{C,rel} = 39$

ORS18a; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{M3}	35.32	60.99	44.6	75.56	36
Y_{M3}	83.65	-4.11	108.86	108.94	92
L_{M3}	43.49	-61.66	46.73	77.37	143
C_{M3}	52.18	-28.14	-32.36	42.9	229
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M_{M3}	37.69	79.56	-33.73	86.42	337
N_{M3}	8.99	0.0	0.0	0.0	0
W_{M3}	92.16	0.0	0.0	0.0	0
R_{CIE}	39.92	58.74	27.99	65.07	25
J_{CIE}	81.26	-2.88	71.56	71.62	92
G_{CIE}	52.23	-42.41	13.6	44.55	162
B_{CIE}	30.57	1.41	-46.46	46.49	272



De640-7N, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

De64: Test chart 1 according to DIN 33872-4, Hue Y, Page 2/1
Equality for two colour definitions, ORS18a

16 step scales for constant CIELAB hue 92/360 = 0.256 (right)

De64: Test chart 1 according to DIN 33872-4, Hue Y, Page 2/1
Input: cmy0-center, rgb-background
output: no change compared to input

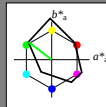
Input: Colorimetric Offset Reflective System ORS18a

for hue $h^* = lab^*h = 143/360 = 0.397$ lab^*tch and lab^*nch

D65: hue L

LCH*Ma: 43 77 143

olv*Ma: 0.0 1.0 0.0

triangle lightness t^* 

%Gamut

 $u^*_{rel} = 109$

%Regularity

 $g^*_{H,rel} = 30$ $g^*_{C,rel} = 39$

ORS18a; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{M3}	35.32	60.99	44.6	75.56	36
Y_{M3}	83.65	-4.11	108.86	108.94	92
L_{M3}	43.49	-61.66	46.73	77.37	143
C_{M3}	52.18	-28.14	-32.36	42.9	229
V_{M3}	13.71	52.15	-59.7	79.28	311
M_{M3}	37.69	79.56	-33.73	86.42	337
N_{M3}	8.99	0.0	0.0	0.0	0
W_{M3}	92.16	0.0	0.0	0.0	0
R_{CIE}	39.92	58.74	27.99	65.07	25
J_{CIE}	81.26	-2.88	71.56	71.62	92
G_{CIE}	52.23	-42.41	13.6	44.55	162
B_{CIE}	30.57	1.41	-46.46	46.49	272

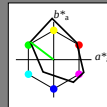
Output: Colorimetric Offset Reflective System ORS18a

for hue $h^* = lab^*h = 143/360 = 0.397$ lab^*tch and lab^*nch

D65: hue L

LCH*Ma: 43 77 143

olv*Ma: 0.0 1.0 0.0

triangle lightness t^* 

%Gamut

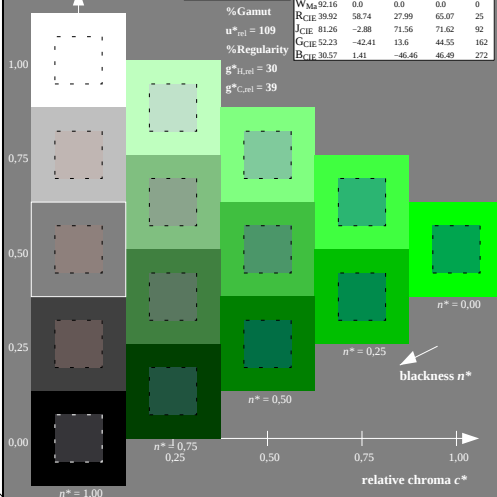
 $u^*_{rel} = 109$

%Regularity

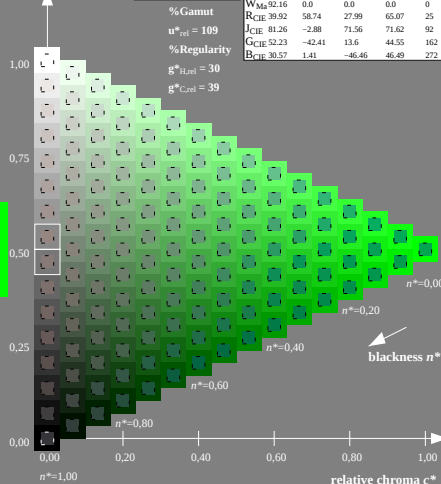
 $g^*_{H,rel} = 30$ $g^*_{C,rel} = 39$

ORS18a; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{M3}	35.32	60.99	44.6	75.56	36
Y_{M3}	83.65	-4.11	108.86	108.94	92
L_{M3}	43.49	-61.66	46.73	77.37	143
C_{M3}	52.18	-28.14	-32.36	42.9	229
V_{M3}	13.71	52.15	-59.7	79.28	311
M_{M3}	37.69	79.56	-33.73	86.42	337
N_{M3}	8.99	0.0	0.0	0.0	0
W_{M3}	92.16	0.0	0.0	0.0	0
R_{CIE}	39.92	58.74	27.99	65.07	25
J_{CIE}	81.26	-2.88	71.56	71.62	92
G_{CIE}	52.23	-42.41	13.6	44.55	162
B_{CIE}	30.57	1.41	-46.46	46.49	272



De64-0-N, 5 step scales for constant CIELAB hue 143/360 = 0.397 (left)



De64-0-N, 16 step scales for constant CIELAB hue 143/360 = 0.397 (right)

De64: Test chart 1 according to DIN 33872-4, Hue L, Page 3/1 input: *cmy0-center, rgb-background*
 Equality for two colour definitions, ORS18a
 output: no change compared to input

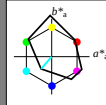
Input: Colorimetric Offset Reflective System ORS18a

for hue $h^* = lab^*h = 229/360 = 0.636$ lab^*tch and lab^*nch

D65: hue C

LCH*Ma: 52 43 229

olv*Ma: 0.0 1.0 1.0

triangle lightness t^* 

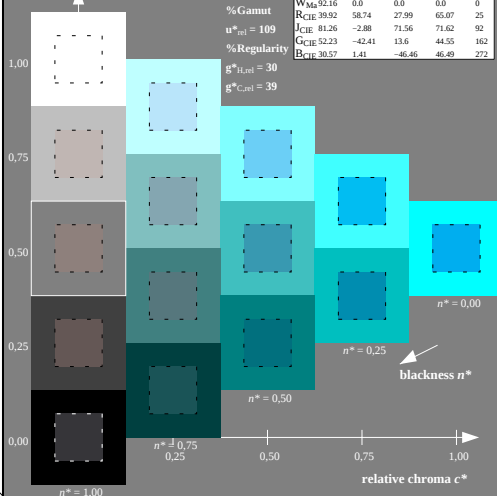
%Gamut

 $u^*_{rel} = 109$

%Regularity

 $g^*_{H,rel} = 30$ $g^*_{C,rel} = 39$

ORS18a; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.32	60.99	44.6	75.56	36
Y_{Ma}	83.65	-4.11	108.86	108.94	92
L_{Ma}	43.49	-61.66	46.73	77.37	143
C_{Ma}	52.18	-28.14	-32.36	42.9	229
V_{Ma}	13.71	52.15	-59.7	79.28	311
M_{Ma}	37.69	79.56	-33.73	86.42	337
N_{Ma}	8.99	0.0	0.0	0.0	0
W_{Ma}	92.16	0.0	0.0	0.0	0
R_{CIE}	39.92	58.74	27.99	65.07	25
J_{CIE}	81.26	-2.88	71.56	71.62	92
G_{CIE}	52.23	-42.41	13.6	44.55	162
B_{CIE}	30.57	1.41	-46.46	46.49	272



De640-7N, 5 step scales for constant CIELAB hue 229/360 = 0.636 (left)

De64: Test chart 1 according to DIN 33872-4, Hue C, Page 4/1
Equality for two colour definitions, ORS18a

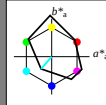
Output: Colorimetric Offset Reflective System ORS18a

for hue $h^* = lab^*h = 229/360 = 0.636$ lab^*tch and lab^*nch

D65: hue C

LCH*Ma: 52 43 229

olv*Ma: 0.0 1.0 1.0

triangle lightness t^* 

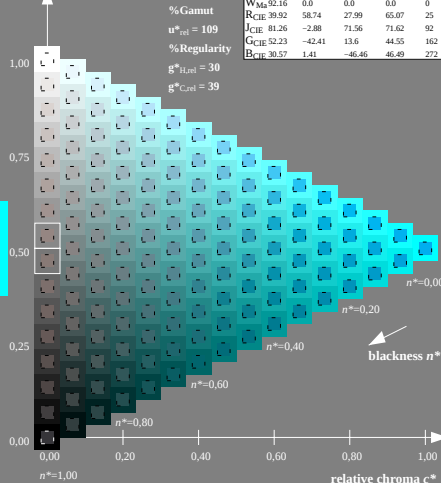
%Gamut

 $u^*_{rel} = 109$

%Regularity

 $g^*_{H,rel} = 30$ $g^*_{C,rel} = 39$

ORS18a; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.32	60.99	44.6	75.56	36
Y_{Ma}	83.65	-4.11	108.86	108.94	92
L_{Ma}	43.49	-61.66	46.73	77.37	143
C_{Ma}	52.18	-28.14	-32.36	42.9	229
V_{Ma}	13.71	52.15	-59.7	79.28	311
M_{Ma}	37.69	79.56	-33.73	86.42	337
N_{Ma}	8.99	0.0	0.0	0.0	0
W_{Ma}	92.16	0.0	0.0	0.0	0
R_{CIE}	39.92	58.74	27.99	65.07	25
J_{CIE}	81.26	-2.88	71.56	71.62	92
G_{CIE}	52.23	-42.41	13.6	44.55	162
B_{CIE}	30.57	1.41	-46.46	46.49	272



16 step scales for constant CIELAB hue 229/360 = 0.636 (right)

De64: Test chart 1 according to DIN 33872-4, Hue C, Page 4/1
input: cmy0-center, rgb-background
output: no change compared to input

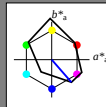
Input: Colorimetric Offset Reflective System ORS18a

for hue $h^* = lab^*h = 311/360 = 0.864$ lab^*tch and lab^*nch

D65: hue V

LCH*Ma: 14 79 311

olv*Ma: 0.0 0.0 1.0

triangle lightness t^* 

%Gamut

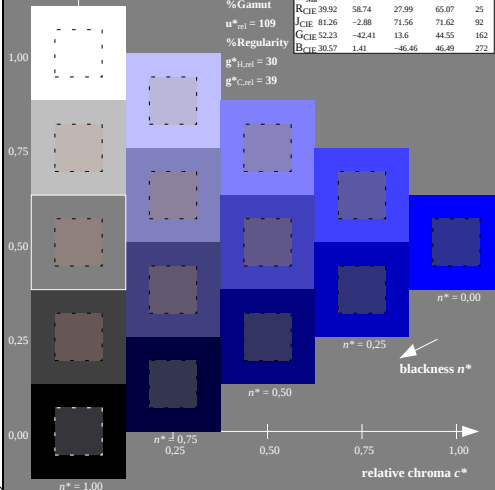
 $u^*_{rel} = 109$

%Regularity

 $g^*_{H,rel} = 30$ $g^*_{C,rel} = 39$

ORS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{M4}	35.32	60.99	44.6	75.56	36
Y_{M4}	83.65	-4.11	108.86	108.94	92
L_{M4}	43.49	-61.66	46.73	77.37	143
C_{M4}	52.18	-28.14	-32.36	42.9	229
V_{M4}	13.71	52.15	-59.7	79.28	311
M_{M4}	37.69	79.56	-33.73	86.42	337
N_{M4}	8.99	0.0	0.0	0.0	0
W_{M4}	92.16	0.0	0.0	0.0	0
R_{CIE}	39.92	58.74	27.99	65.07	25
J_{CIE}	81.26	-2.88	71.56	71.62	92
G_{CIE}	52.23	-42.41	13.6	44.55	162
B_{CIE}	30.57	1.41	-46.46	46.49	272



De640-7N, 5 step scales for constant CIELAB hue 311/360 = 0.864 (left)

De64: Test chart 1 according to DIN 33872-4, Hue V, Page 5/1
Equality for two colour definitions, ORS18a

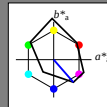
Output: Colorimetric Offset Reflective System ORS18a

for hue $h^* = lab^*h = 311/360 = 0.864$ lab^*tch and lab^*nch

D65: hue V

LCH*Ma: 14 79 311

olv*Ma: 0.0 0.0 1.0

triangle lightness t^* 

%Gamut

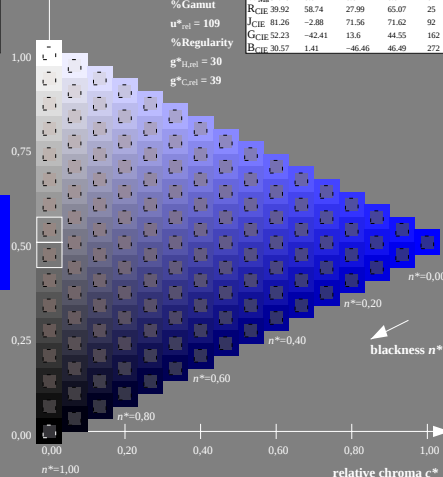
 $u^*_{rel} = 109$

%Regularity

 $g^*_{H,rel} = 30$ $g^*_{C,rel} = 39$

ORS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{M4}	35.32	60.99	44.6	75.56	36
Y_{M4}	83.65	-4.11	108.86	108.94	92
L_{M4}	43.49	-61.66	46.73	77.37	143
C_{M4}	52.18	-28.14	-32.36	42.9	229
V_{M4}	13.71	52.15	-59.7	79.28	311
M_{M4}	37.69	79.56	-33.73	86.42	337
N_{M4}	8.99	0.0	0.0	0.0	0
W_{M4}	92.16	0.0	0.0	0.0	0
R_{CIE}	39.92	58.74	27.99	65.07	25
J_{CIE}	81.26	-2.88	71.56	71.62	92
G_{CIE}	52.23	-42.41	13.6	44.55	162
B_{CIE}	30.57	1.41	-46.46	46.49	272



16 step scales for constant CIELAB hue 311/360 = 0.864 (right)

De64: Test chart 1 according to DIN 33872-4, Hue V, Page 5/1
Input: *cmY0-center, rgb-background*
output: no change compared to input

Input: Colorimetric Offset Reflective System ORS18a

for hue $h^* = lab^*h = 337/360 = 0.936$

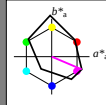
lab^*tch and lab^*nch

D65: hue M

LCH*Ma: 38 86 337

ol*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 109$

%Regularity

$g^*_{H,rel} = 30$

$g^*_{C,rel} = 39$

ORS18a; adapted (a) CIELAB data						
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$	
O_{M64}	35.32	60.99	44.6	75.56	36	
Y_{M64}	83.65	-4.11	108.86	108.94	92	
L_{M64}	43.49	-61.66	46.73	77.37	143	
C_{M64}	52.18	-28.14	-32.36	42.9	229	
V_{M64}	13.71	52.15	-59.7	79.28	311	
M_{M64}	37.69	79.56	-33.73	86.42	337	
N_{M64}	8.99	0.0	0.0	0.0	0	
W_{M64}	92.16	0.0	0.0	0.0	0	
R_{CIE}	39.92	58.74	27.99	65.07	25	
J_{CIE}	81.26	-2.88	71.56	71.62	92	
G_{CIE}	52.23	-42.41	13.6	44.55	162	
B_{CIE}	30.57	1.41	-46.46	46.49	272	

Output: Colorimetric Offset Reflective System ORS18a

for hue $h^* = lab^*h = 337/360 = 0.936$

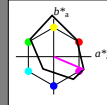
lab^*tch and lab^*nch

D65: hue M

LCH*Ma: 38 86 337

ol*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

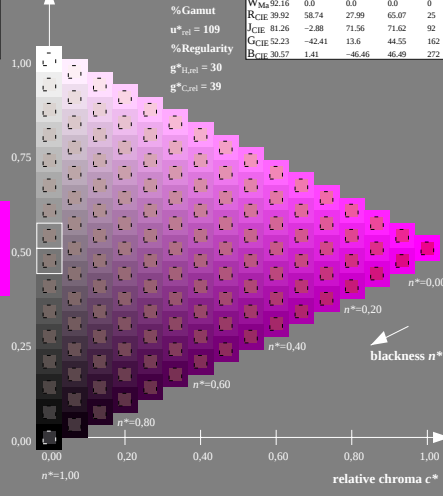
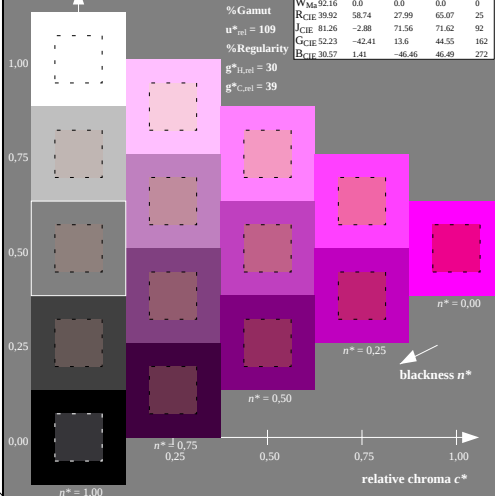
$u^*_{rel} = 109$

%Regularity

$g^*_{H,rel} = 30$

$g^*_{C,rel} = 39$

ORS18a; adapted (a) CIELAB data						
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$	
O_{M64}	35.32	60.99	44.6	75.56	36	
Y_{M64}	83.65	-4.11	108.86	108.94	92	
L_{M64}	43.49	-61.66	46.73	77.37	143	
C_{M64}	52.18	-28.14	-32.36	42.9	229	
V_{M64}	13.71	52.15	-59.7	79.28	311	
M_{M64}	37.69	79.56	-33.73	86.42	337	
N_{M64}	8.99	0.0	0.0	0.0	0	
W_{M64}	92.16	0.0	0.0	0.0	0	
R_{CIE}	39.92	58.74	27.99	65.07	25	
J_{CIE}	81.26	-2.88	71.56	71.62	92	
G_{CIE}	52.23	-42.41	13.6	44.55	162	
B_{CIE}	30.57	1.41	-46.46	46.49	272	



De640-7N, 5 step scales for constant CIELAB hue 337/360 = 0.936 (left)

16 step scales for constant CIELAB hue 337/360 = 0.936 (right)

De64: Test chart 1 according to DIN 33872-4, Hue M, Page 6/1 input: *cmY0-center, rgb-background*
Equality for two colour definitions, ORS18a output: no change compared to input

Input: Colorimetric Offset Reflective System ORS18a

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

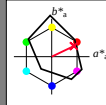
lab^*tch and lab^*nch

D65: hue R

LCH*Ma: 36 71 25

olv*Ma: 1.0 0.0 0.18

triangle lightness t^*



%Gamut

$u^*_{rel} = 109$

%Regularity

$g^*_{H,rel} = 30$

$g^*_{C,rel} = 39$

ORS18a; adapted (a) CIELAB data					
$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$	
O _{Ma} 35.32	60.99	44.6	75.56	36	
Y _{Ma} 83.65	-4.11	108.86	108.94	92	
L _{Ma} 43.49	-61.66	46.73	77.37	143	
C _{Ma} 52.18	-28.14	-32.36	42.9	229	
V _{Ma} 13.71	52.15	-59.7	79.28	311	
M _{Ma} 37.69	79.56	-33.73	86.42	337	
N _{Ma} 8.99	0.0	0.0	0.0	0	
W _{Ma} 92.16	0.0	0.0	0.0	0	
R _{CIE} 39.92	58.74	27.99	65.07	25	
J _{CIE} 81.26	-2.88	71.56	71.62	92	
G _{CIE} 52.23	-42.41	13.6	44.55	162	
B _{CIE} 30.57	1.41	-46.46	46.49	272	

Output: Colorimetric Offset Reflective System ORS18a

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

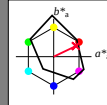
lab^*tch and lab^*nch

D65: hue R

LCH*Ma: 36 71 25

olv*Ma: 1.0 0.0 0.18

triangle lightness t^*



%Gamut

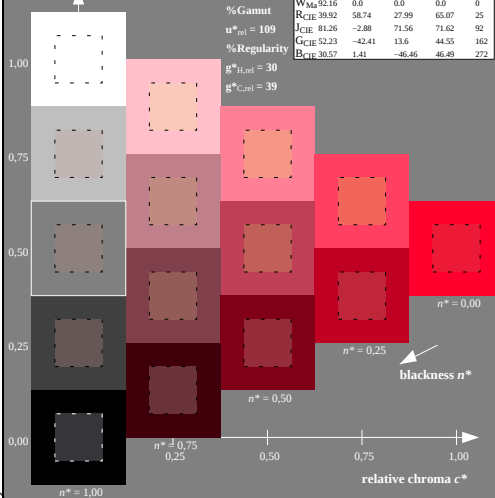
$u^*_{rel} = 109$

%Regularity

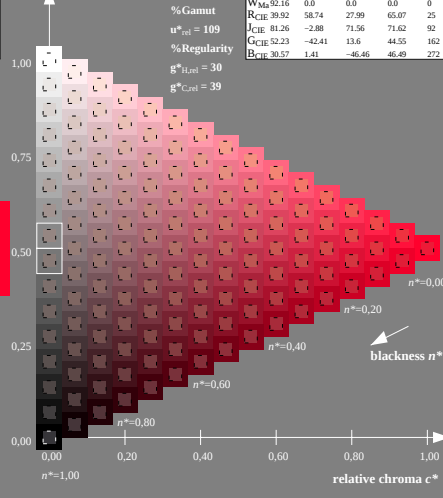
$g^*_{H,rel} = 30$

$g^*_{C,rel} = 39$

ORS18a; adapted (a) CIELAB data					
$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$	
O _{Ma} 35.32	60.99	44.6	75.56	36	
Y _{Ma} 83.65	-4.11	108.86	108.94	92	
L _{Ma} 43.49	-61.66	46.73	77.37	143	
C _{Ma} 52.18	-28.14	-32.36	42.9	229	
V _{Ma} 13.71	52.15	-59.7	79.28	311	
M _{Ma} 37.69	79.56	-33.73	86.42	337	
N _{Ma} 8.99	0.0	0.0	0.0	0	
W _{Ma} 92.16	0.0	0.0	0.0	0	
R _{CIE} 39.92	58.74	27.99	65.07	25	
J _{CIE} 81.26	-2.88	71.56	71.62	92	
G _{CIE} 52.23	-42.41	13.6	44.55	162	
B _{CIE} 30.57	1.41	-46.46	46.49	272	



De640-7N, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)



16 step scales for constant CIELAB hue 25/360 = 0.071 (right)

De64: Test chart 1 according to DIN 33872-4, Hue R, Page 7/1 Input: cmy0-center, rgb-background
Equality for two colour definitions, ORS18a
output: no change compared to input

Input: Colorimetric Offset Reflective System ORS18a

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

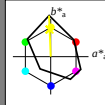
lab^*tch and lab^*nch

D65: hue J

LCH*Ma: 83 109 92

ol*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 109$

%Regularity

$g^*_{H,rel} = 30$

$g^*_{C,rel} = 39$

ORS18a; adapted (a) CIELAB data	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{M3}	35.32	60.99	44.6	75.56	36
Y_{M3}	83.65	-4.11	108.86	108.94	92
L_{M3}	43.49	-61.66	46.73	77.37	143
C_{M3}	52.18	-28.14	-32.36	42.9	229
V_{M3}	13.71	52.15	-59.7	79.28	311
M_{M3}	37.69	79.56	-33.73	86.42	337
N_{M3}	8.99	0.0	0.0	0.0	0
W_{M3}	92.16	0.0	0.0	0.0	0
R_{CIE}	39.92	58.74	27.99	65.07	25
J_{CIE}	81.26	-2.88	71.56	71.62	92
G_{CIE}	52.23	-42.41	13.6	44.55	162
B_{CIE}	30.57	1.41	-46.46	46.49	272

Output: Colorimetric Offset Reflective System ORS18a

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

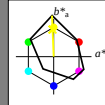
lab^*tch and lab^*nch

D65: hue J

LCH*Ma: 83 109 92

ol*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

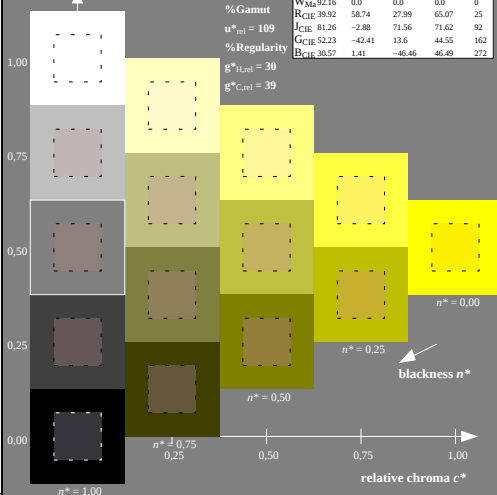
$u^*_{rel} = 109$

%Regularity

$g^*_{H,rel} = 30$

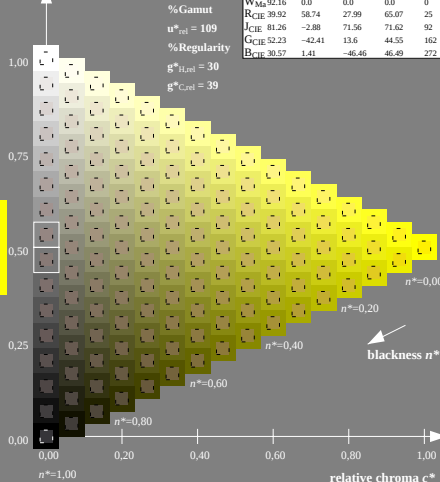
$g^*_{C,rel} = 39$

ORS18a; adapted (a) CIELAB data	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{M3}	35.32	60.99	44.6	75.56	36
Y_{M3}	83.65	-4.11	108.86	108.94	92
L_{M3}	43.49	-61.66	46.73	77.37	143
C_{M3}	52.18	-28.14	-32.36	42.9	229
V_{M3}	13.71	52.15	-59.7	79.28	311
M_{M3}	37.69	79.56	-33.73	86.42	337
N_{M3}	8.99	0.0	0.0	0.0	0
W_{M3}	92.16	0.0	0.0	0.0	0
R_{CIE}	39.92	58.74	27.99	65.07	25
J_{CIE}	81.26	-2.88	71.56	71.62	92
G_{CIE}	52.23	-42.41	13.6	44.55	162
B_{CIE}	30.57	1.41	-46.46	46.49	272



De640-7N, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

De64: Test chart 1 according to DIN 33872-4, Hue J, Page 8/11input: *cmy0-center, rgb-background*
Equality for two colour definitions, ORS18a



16 step scales for constant CIELAB hue 92/360 = 0.256 (right)

De64: Test chart 1 according to DIN 33872-4, Hue J, Page 8/11input: *cmy0-center, rgb-background*
output: no change compared to input

Input: Colorimetric Offset Reflective System ORS18a

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

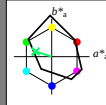
lab^*tch and lab^*nch

D65: hue G

LCH*Ma: 47 51 162

olv*Ma: 0.0 1.0 0.39

triangle lightness t^*



%Gamut

$u^*_{rel} = 109$

%Regularity

$g^*_{H,rel} = 30$

$g^*_{C,rel} = 39$

ORS18a; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{M0}	35.32	60.99	44.6	75.56	36
Y_{M0}	83.65	-4.11	108.86	108.94	92
L_{M0}	43.49	-61.66	46.73	77.37	143
C_{M0}	52.18	-28.14	-32.36	42.9	229
V_{M0}	13.71	52.15	-59.7	79.28	311
M_{M0}	37.69	79.56	-33.73	86.42	337
N_{M0}	8.99	0.0	0.0	0.0	0
W_{M0}	92.16	0.0	0.0	0.0	0
R_{CIE}	39.92	58.74	27.99	65.07	25
J_{CIE}	81.26	-2.88	71.56	71.62	92
G_{CIE}	52.23	-42.41	13.6	44.55	162
B_{CIE}	30.57	1.41	-46.46	46.49	272

Output: Colorimetric Offset Reflective System ORS18a

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

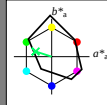
lab^*tch and lab^*nch

D65: hue G

LCH*Ma: 47 51 162

olv*Ma: 0.0 1.0 0.39

triangle lightness t^*



%Gamut

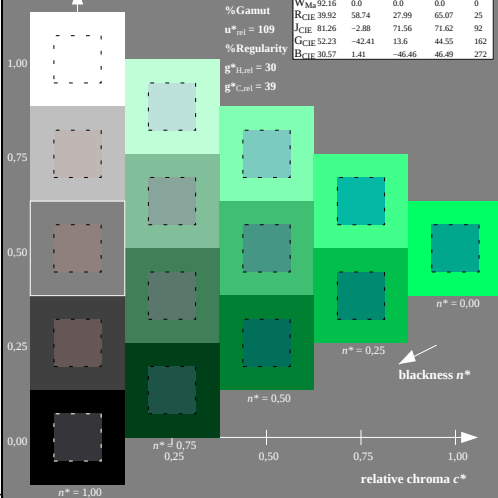
$u^*_{rel} = 109$

%Regularity

$g^*_{H,rel} = 30$

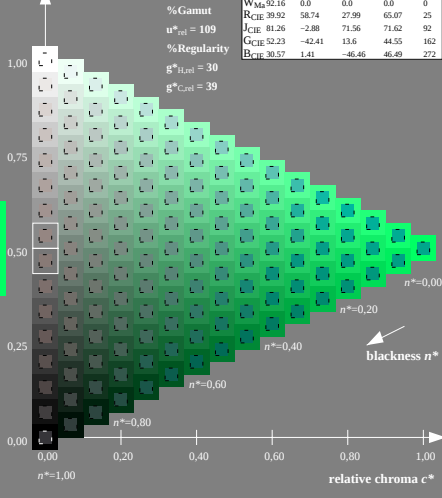
$g^*_{C,rel} = 39$

ORS18a; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{M0}	35.32	60.99	44.6	75.56	36
Y_{M0}	83.65	-4.11	108.86	108.94	92
L_{M0}	43.49	-61.66	46.73	77.37	143
C_{M0}	52.18	-28.14	-32.36	42.9	229
V_{M0}	13.71	52.15	-59.7	79.28	311
M_{M0}	37.69	79.56	-33.73	86.42	337
N_{M0}	8.99	0.0	0.0	0.0	0
W_{M0}	92.16	0.0	0.0	0.0	0
R_{CIE}	39.92	58.74	27.99	65.07	25
J_{CIE}	81.26	-2.88	71.56	71.62	92
G_{CIE}	52.23	-42.41	13.6	44.55	162
B_{CIE}	30.57	1.41	-46.46	46.49	272



De640-7N, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

De64: Test chart 1 according to DIN 33872-4, Hue G, Page 9/1 Input: *cmY0-center, rgb-background*
Equality for two colour definitions, ORS18a



16 step scales for constant CIELAB hue 162/360 = 0.451 (right)

De64: Test chart 1 according to DIN 33872-4, Hue G, Page 9/1 Input: *cmY0-center, rgb-background*
output: no change compared to input

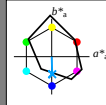
Input: Colorimetric Offset Reflective System ORS18a

for hue $h^* = lab^*h = 272/360 = 0.755$ lab^*tch and lab^*nch

D65: hue B

LCH*Ma: 38 42 272

olv*Ma: 0.0 0.63 1.0

triangle lightness t^* 

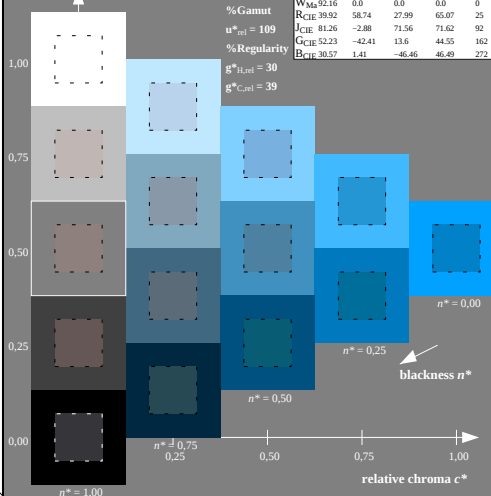
%Gamut

 $u^*_{rel} = 109$

%Regularity

 $g^*_{H,rel} = 30$ $g^*_{C,rel} = 39$

ORS18a; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.32	60.99	44.6	75.56	36
Y_{Ma}	83.65	-4.11	108.86	108.94	92
L_{Ma}	43.49	-61.66	46.73	77.37	143
C_{Ma}	52.18	-28.14	-32.36	42.9	229
V_{Ma}	13.71	52.15	-59.7	79.28	311
M_{Ma}	37.69	79.56	-33.73	86.42	337
N_{Ma}	8.99	0.0	0.0	0.0	0
W_{Ma}	92.16	0.0	0.0	0.0	0
R_{CIE}	39.92	58.74	27.99	65.07	25
J_{CIE}	81.26	-2.88	71.56	71.62	92
G_{CIE}	52.23	-42.41	13.6	44.55	162
B_{CIE}	30.57	1.41	-46.46	46.49	272



De640-7N, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

De64: Test chart 1 according to DIN 33872-4, Hue B, Page 10/11
Equality for two colour definitions, ORS18a

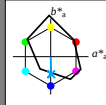
Output: Colorimetric Offset Reflective System ORS18a

for hue $h^* = lab^*h = 272/360 = 0.755$ lab^*tch and lab^*nch

D65: hue B

LCH*Ma: 38 42 272

olv*Ma: 0.0 0.63 1.0

triangle lightness t^* 

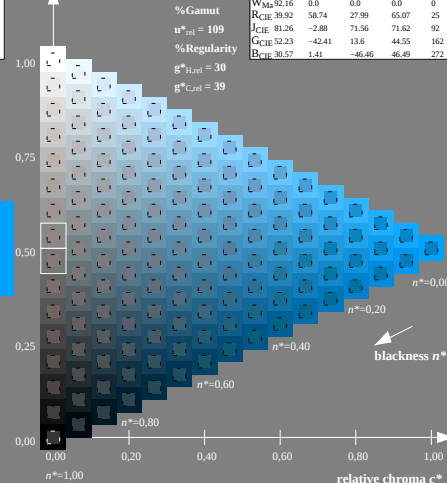
%Gamut

 $u^*_{rel} = 109$

%Regularity

 $g^*_{H,rel} = 30$ $g^*_{C,rel} = 39$

ORS18a; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.32	60.99	44.6	75.56	36
Y_{Ma}	83.65	-4.11	108.86	108.94	92
L_{Ma}	43.49	-61.66	46.73	77.37	143
C_{Ma}	52.18	-28.14	-32.36	42.9	229
V_{Ma}	13.71	52.15	-59.7	79.28	311
M_{Ma}	37.69	79.56	-33.73	86.42	337
N_{Ma}	8.99	0.0	0.0	0.0	0
W_{Ma}	92.16	0.0	0.0	0.0	0
R_{CIE}	39.92	58.74	27.99	65.07	25
J_{CIE}	81.26	-2.88	71.56	71.62	92
G_{CIE}	52.23	-42.41	13.6	44.55	162
B_{CIE}	30.57	1.41	-46.46	46.49	272



16 step scales for constant CIELAB hue 272/360 = 0.755 (right)

input: cmy0-center, rgb-background
output: no change compared to input