

Input: Colorimetric Natural Reflective System CNS18

for hue $h^* = lab^*h = 25/360 = 0.069$

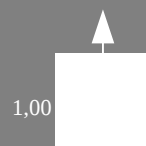
lab^*tch and lab^*nch

D65: hue R

LCH*Ma: 57 77 25

olv*Ma: 1.0 0.0 0.0

triangle lightness t^*



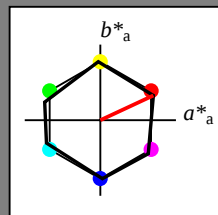
% Gamut

$u^*_{rel} = 100$

% Regularity

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

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



CNS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	56.7	70.15	32.71	77.4	25
JMa	56.7	-2.69	77.35	77.4	92
GMa	56.7	-73.6	23.92	77.4	162
G50BMa	56.7	-71.24	-30.23	77.4	203
BMa	56.7	2.7	-77.34	77.4	272
B50RMa	56.7	63.4	-44.38	77.4	325
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

Output: Colorimetric Printer Reflective System FRS06

for hue $h^* = lab^*h = 25/360 = 0.069$

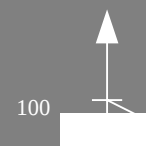
LAB^*LCH , LAB^*NCH

D65: hue R

LCH*Ma: 33 73 25

olv*Ma: 1.0 0.0 0.2

CIELAB lightness L^*



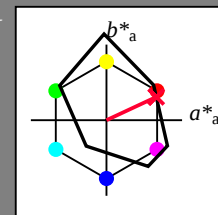
% Gamut

$u^*_{rel} = 115$

% Regularity

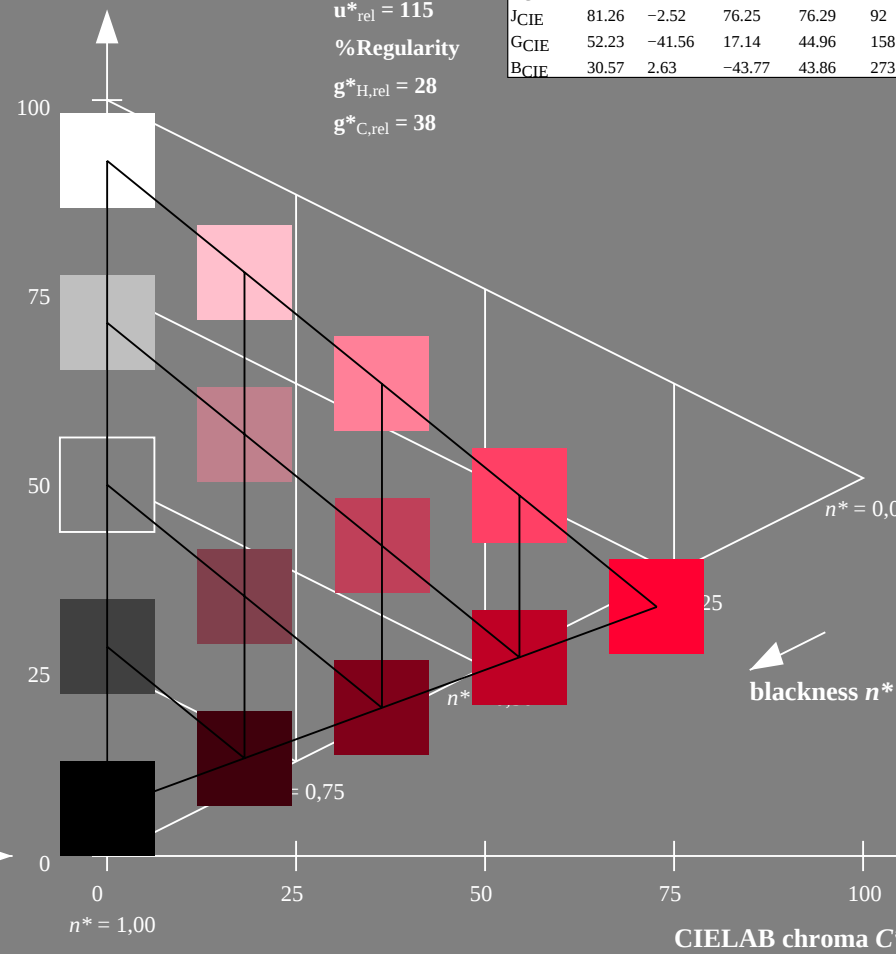
$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$



FRS06; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	32.57	62.32	46.49	77.75	37
YMa	82.73	-3.16	113.99	114.03	92
LMa	39.43	-61.79	45.84	76.95	143
CMa	47.86	-26.79	-34.24	43.49	232
VMa	10.16	55.12	-61.03	82.24	312
MMa	34.5	80.68	-33.92	87.52	337
NMa	6.25	0.0	0.0	0.0	0
WMa	91.97	0.0	0.0	0.0	0
RCIE	39.92	59.8	31.05	67.38	27
JCIE	81.26	-2.52	76.25	76.29	92
GCIE	52.23	-41.56	17.14	44.96	158
BCIE	30.57	2.63	-43.77	43.86	273



VE320-7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

5 step scales for constant CIELAB hue 25/360 = 0.069 (right)

BAM-test chart VE32; Colorimetric systems NRS18 & FRS06

D65: Coordinate systems of 5 step colour scales for 10 hues

input: olv* setrgbcolor

output: no change compared to input

Input: Colorimetric Natural Reflective System CNS18

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

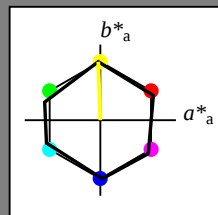
lab^*tch and lab^*nch

D65: hue J

LCH*Ma: 57 77 92

olv*Ma: 1.0 1.0 0.0

triangle lightness t^*



% Gamut

$u^*_{rel} = 100$

% Regularity

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

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

CNS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	56.7	70.15	32.71	77.4	25
JMa	56.7	-2.69	77.35	77.4	92
GMa	56.7	-73.6	23.92	77.4	162
G50BMa	56.7	-71.24	-30.23	77.4	203
BMa	56.7	2.7	-77.34	77.4	272
B50RMa	56.7	63.4	-44.38	77.4	325
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

Output: Colorimetric Printer Reflective System FRS06

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

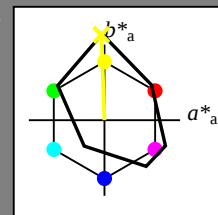
LAB^*LCH , LAB^*NCH

D65: hue J

LCH*Ma: 82 113 92

olv*Ma: 0.99 1.0 0.0

CIELAB lightness L^*



% Gamut

$u^*_{rel} = 115$

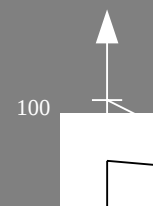
% Regularity

$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$

FRS06; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	32.57	62.32	46.49	77.75	37
YMa	82.73	-3.16	113.99	114.03	92
LMa	39.43	-61.79	45.84	76.95	143
CMa	47.86	-26.79	-34.24	43.49	232
VMa	10.16	55.12	-61.03	82.24	312
MMa	34.5	80.68	-33.92	87.52	337
NMa	6.25	0.0	0.0	0.0	0
WMa	91.97	0.0	0.0	0.0	0
RCIE	39.92	59.8	31.05	67.38	27
JCIE	81.26	-2.52	76.25	76.29	92
GCIE	52.23	-41.56	17.14	44.96	158
BCIE	30.57	2.63	-43.77	43.86	273



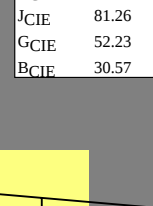
% Gamut

$u^*_{rel} = 115$

% Regularity

$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$



% Gamut

$u^*_{rel} = 115$

% Regularity

$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$

VE320-7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

BAM-test chart VE32; Colorimetric systems NRS18 & FRS06

D65: Coordinate systems of 5 step colour scales for 10 hues

input: olv* setrgbcolor

output: no change compared to input

Input: Colorimetric Natural Reflective System CNS18

for hue $h^* = lab^*h = 162/360 = 0.45$

lab^*tch and lab^*nch

D65: hue G

LCH*Ma: 57 77 162

olv*Ma: 0.0 1.0 0.0

triangle lightness t^*

1,00

0,75

0,50

0,25

0,00

0,25

0,50

0,75

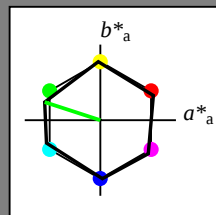
1,00

0,25

0,50

0,75

1,00



% Gamut

$u^*_{rel} = 100$

% Regularity

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

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

CNS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	56.7	70.15	32.71	77.4	25
JMa	56.7	-2.69	77.35	77.4	92
GMa	56.7	-73.6	23.92	77.4	162
G50BMa	56.7	-71.24	-30.23	77.4	203
BMa	56.7	2.7	-77.34	77.4	272
B50RMa	56.7	63.4	-44.38	77.4	325
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

Output: Colorimetric Printer Reflective System FRS06

for hue $h^* = lab^*h = 162/360 = 0.45$

LAB^*LCH , LAB^*NCH

D65: hue G

LCH*Ma: 43 51 162

olv*Ma: 0.0 1.0 0.37

CIELAB lightness L^*

100

75

50

25

0

0

25

50

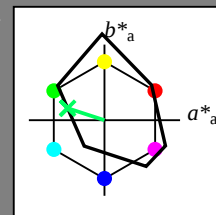
75

100

0

25

50



% Gamut

$u^*_{rel} = 115$

% Regularity

$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$

FRS06; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	32.57	62.32	46.49	77.75	37
YMa	82.73	-3.16	113.99	114.03	92
LMa	39.43	-61.79	45.84	76.95	143
CMa	47.86	-26.79	-34.24	43.49	232
VMa	10.16	55.12	-61.03	82.24	312
MMa	34.5	80.68	-33.92	87.52	337
NMa	6.25	0.0	0.0	0.0	0
WMa	91.97	0.0	0.0	0.0	0
RCIE	39.92	59.8	31.05	67.38	27
JCIE	81.26	-2.52	76.25	76.29	92
GCIE	52.23	-41.56	17.14	44.96	158
BCIE	30.57	2.63	-43.77	43.86	273

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 0,75$

blackness n^*

blackness n^*

chromaticness c^*

CIELAB chroma C^*_{ab}

VE320-7, 5 step scales for constant CIELAB hue 162/360 = 0.45 (left)

5 step scales for constant CIELAB hue 162/360 = 0.45 (right)

BAM-test chart VE32; Colorimetric systems NRS18 & FRS06

D65: Coordinate systems of 5 step colour scales for 10 hues

input: olv* setrgbcolor

output: no change compared to input

Input: Colorimetric Natural Reflective System CNS18

for hue $h^* = lab^*h = 203/360 = 0.564$

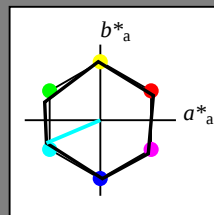
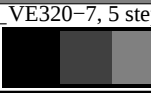
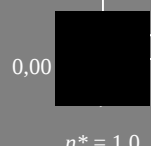
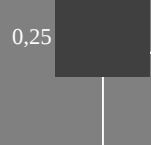
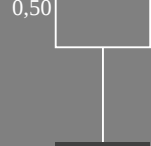
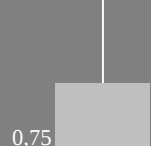
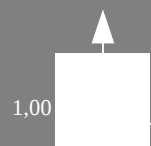
lab^*tch and lab^*nch

D65: hue G50B

LCH*Ma: 57 77 203

olv*Ma: 0.0 1.0 1.0

triangle lightness t^*



% Gamut

$u^*_{rel} = 100$

% Regularity

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

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

CNS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	56.7	70.15	32.71	77.4	25
JMa	56.7	-2.69	77.35	77.4	92
GMa	56.7	-73.6	23.92	77.4	162
G50B _{Ma}	56.7	-71.24	-30.23	77.4	203
B _{Ma}	56.7	2.7	-77.34	77.4	272
B50R _{Ma}	56.7	63.4	-44.38	77.4	325
N _{Ma}	18.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

Output: Colorimetric Printer Reflective System FRS06

for hue $h^* = lab^*h = 203/360 = 0.564$

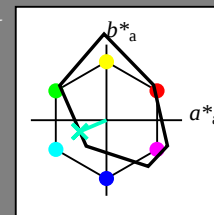
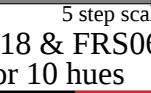
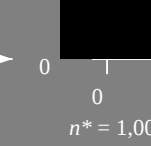
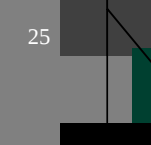
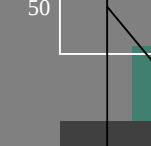
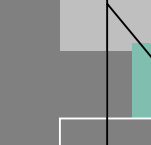
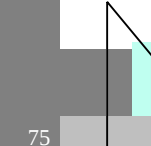
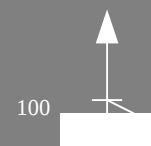
LAB^*LCH , LAB^*NCH

D65: hue G50B

LCH*Ma: 46 38 203

olv*Ma: 0.0 1.0 0.76

CIELAB lightness L^*



% Gamut

$u^*_{rel} = 115$

% Regularity

$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$

FRS06; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	32.57	62.32	46.49	77.75	37
YMa	82.73	-3.16	113.99	114.03	92
LMa	39.43	-61.79	45.84	76.95	143
CMa	47.86	-26.79	-34.24	43.49	232
V _{Ma}	10.16	55.12	-61.03	82.24	312
M _{Ma}	34.5	80.68	-33.92	87.52	337
N _{Ma}	6.25	0.0	0.0	0.0	0
W _{Ma}	91.97	0.0	0.0	0.0	0
RCIE	39.92	59.8	31.05	67.38	27
JCIE	81.26	-2.52	76.25	76.29	92
GCIE	52.23	-41.56	17.14	44.96	158
BCIE	30.57	2.63	-43.77	43.86	273

5 step scales for constant CIELAB hue 203/360 = 0.564 (right)

input: olv* setrgbcolor

output: no change compared to input

BAM-test chart VE32; Colorimetric systems NRS18 & FRS06

D65: Coordinate systems of 5 step colour scales for 10 hues

Input: Colorimetric Natural Reflective System CNS18

for hue $h^* = lab^*h = 272/360 = 0.756$

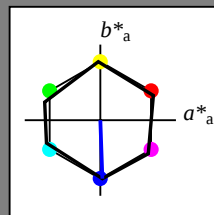
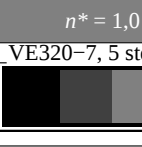
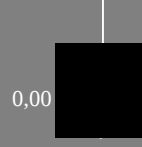
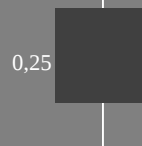
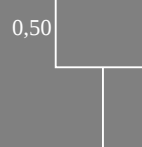
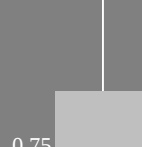
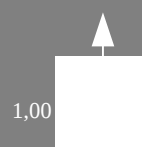
lab^*tch and lab^*nch

D65: hue B

LCH*Ma: 57 77 272

olv*Ma: 0.0 0.0 1.0

triangle lightness t^*



% Gamut

$u^*_{rel} = 100$

% Regularity

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

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

CNS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	56.7	70.15	32.71	77.4	25
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GMa	56.7	-73.6	23.92	77.4	162
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BMa	56.7	2.7	-77.34	77.4	272
B50RMa	56.7	63.4	-44.38	77.4	325
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

Output: Colorimetric Printer Reflective System FRS06

for hue $h^* = lab^*h = 272/360 = 0.756$

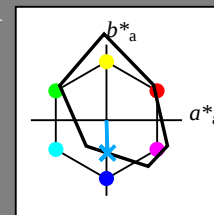
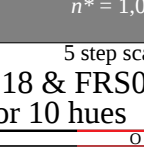
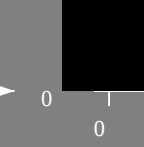
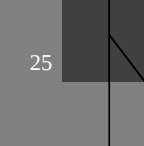
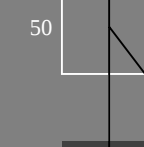
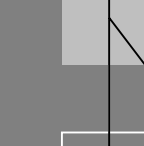
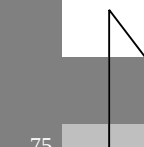
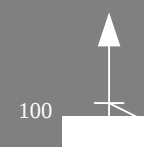
LAB^*LCH , LAB^*NCH

D65: hue B

LCH*Ma: 35 44 272

olv*Ma: 0.0 0.65 1.0

CIELAB lightness L^*



% Gamut

$u^*_{rel} = 115$

% Regularity

$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$

FRS06; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	32.57	62.32	46.49	77.75	37
YMa	82.73	-3.16	113.99	114.03	92
LMa	39.43	-61.79	45.84	76.95	143
CMa	47.86	-26.79	-34.24	43.49	232
VMa	10.16	55.12	-61.03	82.24	312
MMa	34.5	80.68	-33.92	87.52	337
NMa	6.25	0.0	0.0	0.0	0
WMa	91.97	0.0	0.0	0.0	0
RCIE	39.92	59.8	31.05	67.38	27
JCIE	81.26	-2.52	76.25	76.29	92
GCIE	52.23	-41.56	17.14	44.96	158
BCIE	30.57	2.63	-43.77	43.86	273

5 step scales for constant CIELAB hue $272/360 = 0.756$ (right)

VE320-7, 5 step scales for constant CIELAB hue $272/360 = 0.756$ (left)

BAM-test chart VE32; Colorimetric systems NRS18 & FRS06

D65: Coordinate systems of 5 step colour scales for 10 hues

input: olv* setrgbcolor

output: no change compared to input

Input: Colorimetric Natural Reflective System CNS18

for hue $h^* = lab^*h = 325/360 = 0.903$

lab^*tch and lab^*nch

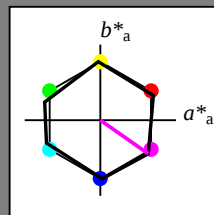
D65: hue B50R

LCH*Ma: 57 77 325

olv*Ma: 1.0 0.0 1.0

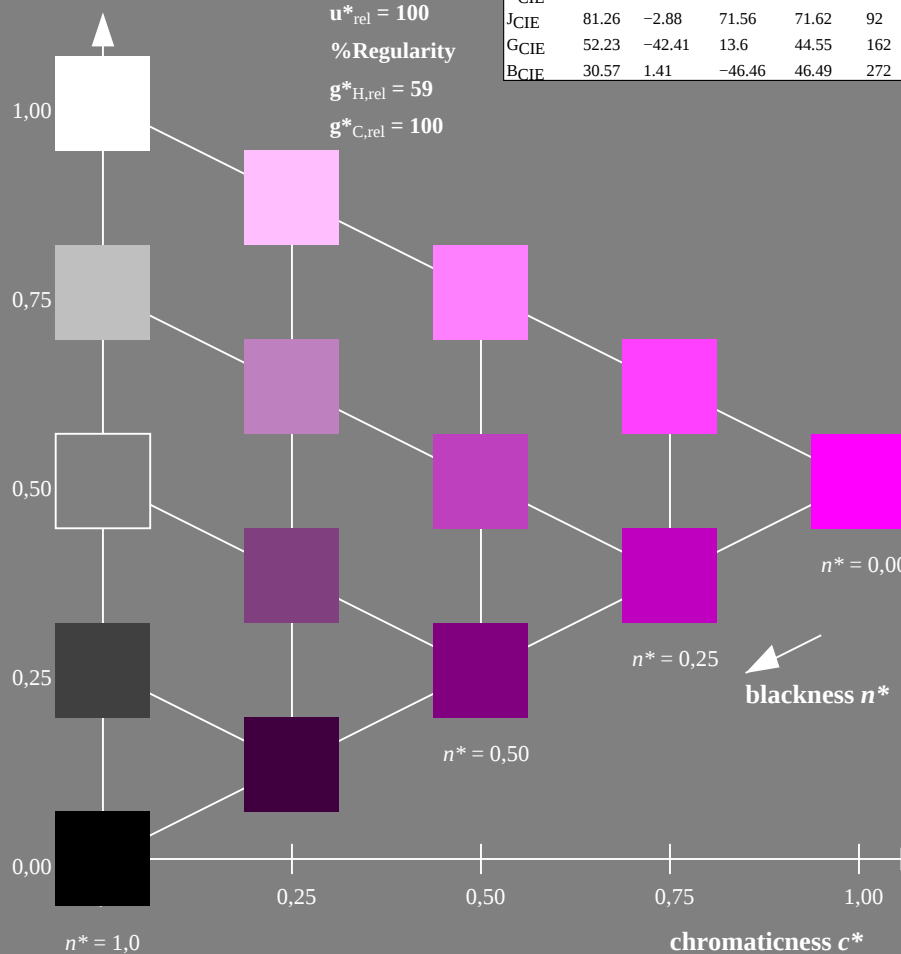
triangle lightness t^*

%Gamut
 $u^*_{rel} = 100$
%Regularity
 $g^*_{H,rel} = 59$
 $g^*_{C,rel} = 100$



CNS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	56.7	70.15	32.71	77.4	25
JMa	56.7	-2.69	77.35	77.4	92
GMa	56.7	-73.6	23.92	77.4	162
G50BMa	56.7	-71.24	-30.23	77.4	203
BMa	56.7	2.7	-77.34	77.4	272
B50RMa	56.7	63.4	-44.38	77.4	325
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272



VE320-7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

Output: Colorimetric Printer Reflective System FRS06

for hue $h^* = lab^*h = 325/360 = 0.903$

LAB^*LCH , LAB^*NCH

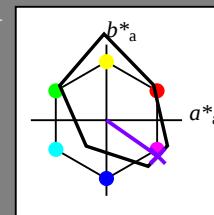
D65: hue B50R

LCH*Ma: 22 83 325

olv*Ma: 0.5 0.0 1.0

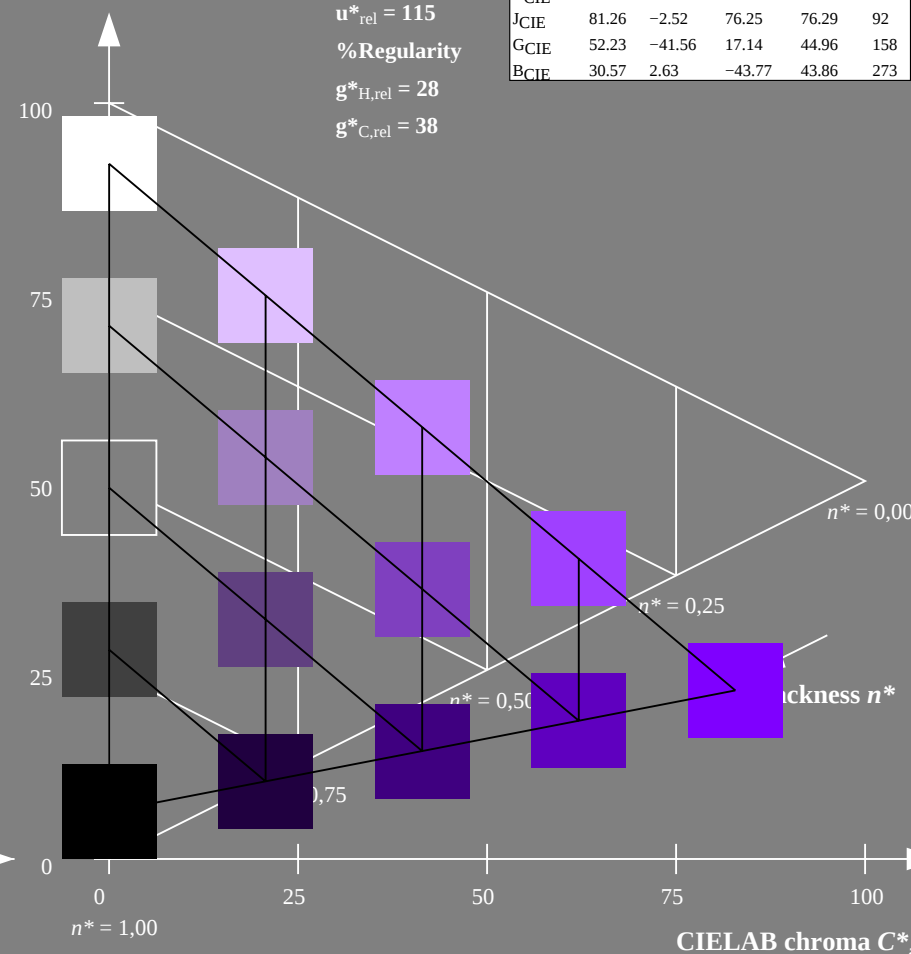
CIELAB lightness L^*

%Gamut
 $u^*_{rel} = 115$
%Regularity
 $g^*_{H,rel} = 28$
 $g^*_{C,rel} = 38$



FRS06; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	32.57	62.32	46.49	77.75	37
YMa	82.73	-3.16	113.99	114.03	92
LMa	39.43	-61.79	45.84	76.95	143
CMa	47.86	-26.79	-34.24	43.49	232
VMa	10.16	55.12	-61.03	82.24	312
MMa	34.5	80.68	-33.92	87.52	337
NMa	6.25	0.0	0.0	0.0	0
WMa	91.97	0.0	0.0	0.0	0
RCIE	39.92	59.8	31.05	67.38	27
JCIE	81.26	-2.52	76.25	76.29	92
GCIE	52.23	-41.56	17.14	44.96	158
BCIE	30.57	2.63	-43.77	43.86	273



5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

BAM-test chart VE32; Colorimetric systems NRS18 & FRS06

D65: Coordinate systems of 5 step colour scales for 10 hues

input: olv* setrgbcolor

output: no change compared to input

Input: Colorimetric Natural Reflective System CNS18

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

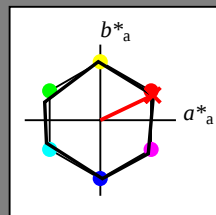
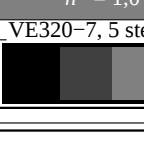
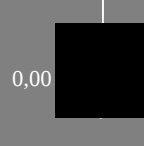
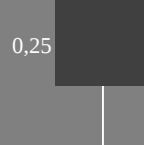
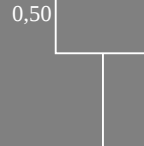
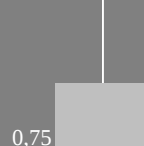
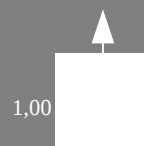
lab^*tch and lab^*nch

D65: hue R

LCH*Ma: 57 77 25

olv*Ma: 1.0 0.01 0.0

triangle lightness t^*



% Gamut

$u^*_{rel} = 100$

% Regularity

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

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

CNS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	56.7	70.15	32.71	77.4	25
JMa	56.7	-2.69	77.35	77.4	92
GMa	56.7	-73.6	23.92	77.4	162
G50BMa	56.7	-71.24	-30.23	77.4	203
BMa	56.7	2.7	-77.34	77.4	272
B50RMa	56.7	63.4	-44.38	77.4	325
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

Output: Colorimetric Printer Reflective System FRS06

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

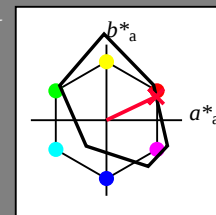
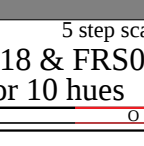
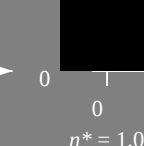
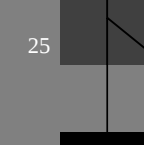
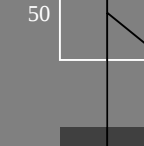
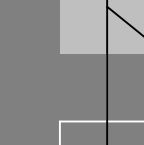
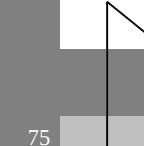
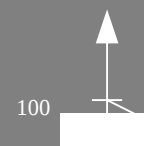
LAB^*LCH , LAB^*NCH

D65: hue R

LCH*Ma: 33 73 25

olv*Ma: 1.0 0.0 0.19

CIELAB lightness L^*



% Gamut

$u^*_{rel} = 115$

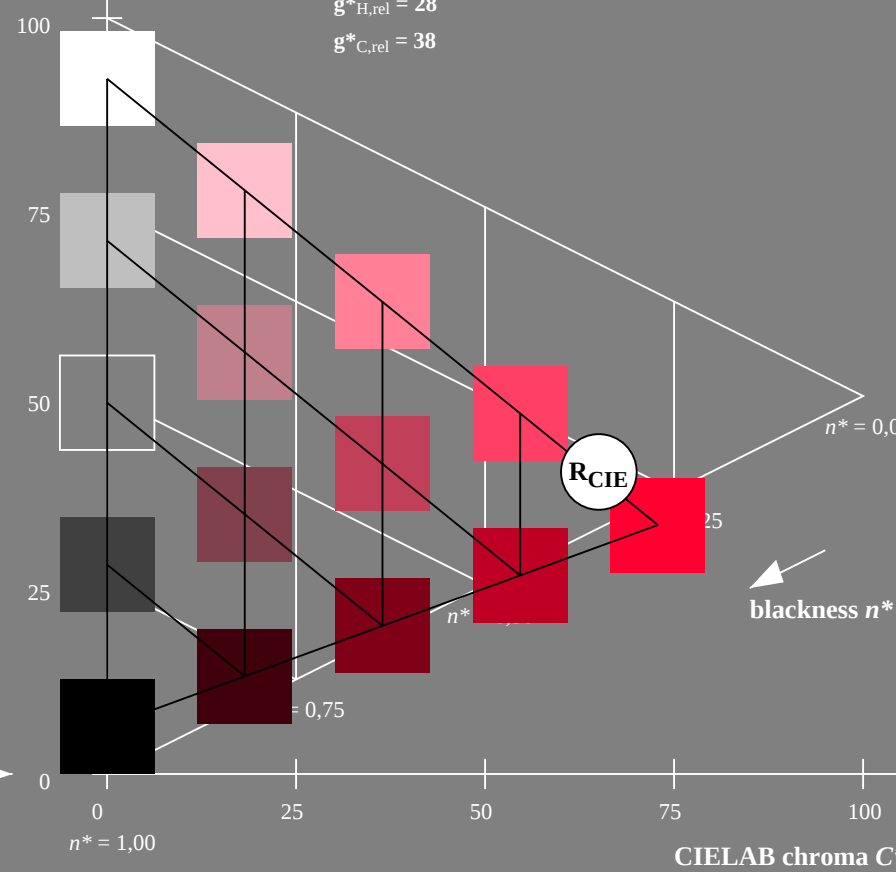
% Regularity

$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$

FRS06; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	32.57	62.32	46.49	77.75	37
YMa	82.73	-3.16	113.99	114.03	92
LMa	39.43	-61.79	45.84	76.95	143
CMa	47.86	-26.79	-34.24	43.49	232
VMa	10.16	55.12	-61.03	82.24	312
MMa	34.5	80.68	-33.92	87.52	337
NMa	6.25	0.0	0.0	0.0	0
WMa	91.97	0.0	0.0	0.0	0
RCIE	39.92	59.8	31.05	67.38	27
JCIE	81.26	-2.52	76.25	76.29	92
GCIE	52.23	-41.56	17.14	44.96	158
BCIE	30.57	2.63	-43.77	43.86	273



VE320-7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

BAM-test chart VE32; Colorimetric systems NRS18 & FRS06

D65: Coordinate systems of 5 step colour scales for 10 hues

input: olv* setrgbcolor

output: no change compared to input

Input: Colorimetric Natural Reflective System CNS18

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

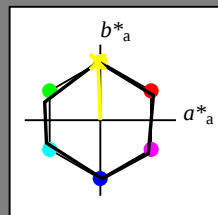
lab^*tch and lab^*nch

D65: hue J

LCH*Ma: 57 77 92

olv*Ma: 0.99 1.0 0.0

triangle lightness t^*



% Gamut

$u^*_{rel} = 100$

% Regularity

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

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

CNS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	56.7	70.15	32.71	77.4	25
JMa	56.7	-2.69	77.35	77.4	92
GMa	56.7	-73.6	23.92	77.4	162
G50BMa	56.7	-71.24	-30.23	77.4	203
BMa	56.7	2.7	-77.34	77.4	272
B50RMa	56.7	63.4	-44.38	77.4	325
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

Output: Colorimetric Printer Reflective System FRS06

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

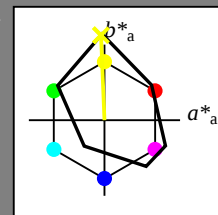
LAB^*LCH , LAB^*NCH

D65: hue J

LCH*Ma: 82 112 92

olv*Ma: 0.98 1.0 0.0

CIELAB lightness L^*



% Gamut

$u^*_{rel} = 115$

% Regularity

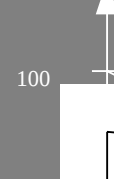
$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$

FRS06; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	32.57	62.32	46.49	77.75	37
YMa	82.73	-3.16	113.99	114.03	92
LMa	39.43	-61.79	45.84	76.95	143
CMa	47.86	-26.79	-34.24	43.49	232
VMa	10.16	55.12	-61.03	82.24	312
MMa	34.5	80.68	-33.92	87.52	337
NMa	6.25	0.0	0.0	0.0	0
WMa	91.97	0.0	0.0	0.0	0
RCIE	39.92	59.8	31.05	67.38	27
JCIE	81.26	-2.52	76.25	76.29	92
GCIE	52.23	-41.56	17.14	44.96	158
BCIE	30.57	2.63	-43.77	43.86	273

triangle lightness t^*



% Gamut

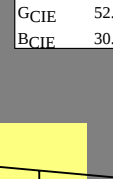
$u^*_{rel} = 115$

% Regularity

$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$

triangle lightness t^*



VE320-7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)



BAM-test chart VE32; Colorimetric systems NRS18 & FRS06

D65: Coordinate systems of 5 step colour scales for 10 hues

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

input: olv* setrgbcolor

output: no change compared to input



Input: Colorimetric Natural Reflective System CNS18

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

lab^*tch and lab^*nch

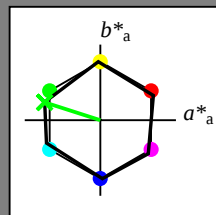
D65: hue G

LCH*Ma: 57 77 162

olv*Ma: 0.0 1.0 0.01

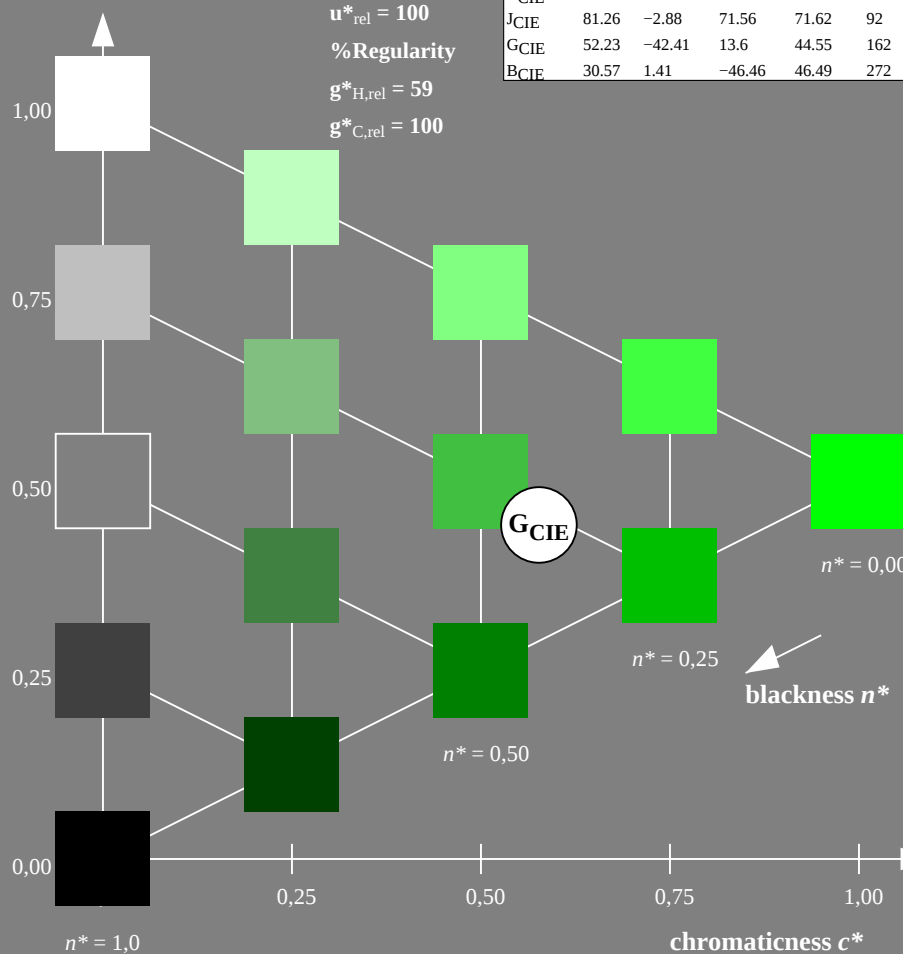
triangle lightness t^*

%Gamut
 $u^*_{rel} = 100$
%Regularity
 $g^*_{H,rel} = 59$
 $g^*_{C,rel} = 100$



CNS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	56.7	70.15	32.71	77.4	25
JMa	56.7	-2.69	77.35	77.4	92
GMa	56.7	-73.6	23.92	77.4	162
G50BMa	56.7	-71.24	-30.23	77.4	203
BMa	56.7	2.7	-77.34	77.4	272
B50RMa	56.7	63.4	-44.38	77.4	325
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272



VE320-7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

Output: Colorimetric Printer Reflective System FRS06

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

LAB^*LCH , LAB^*NCH

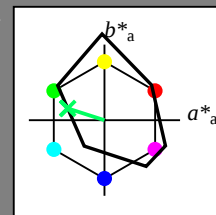
D65: hue G

LCH*Ma: 43 51 162

olv*Ma: 0.0 1.0 0.38

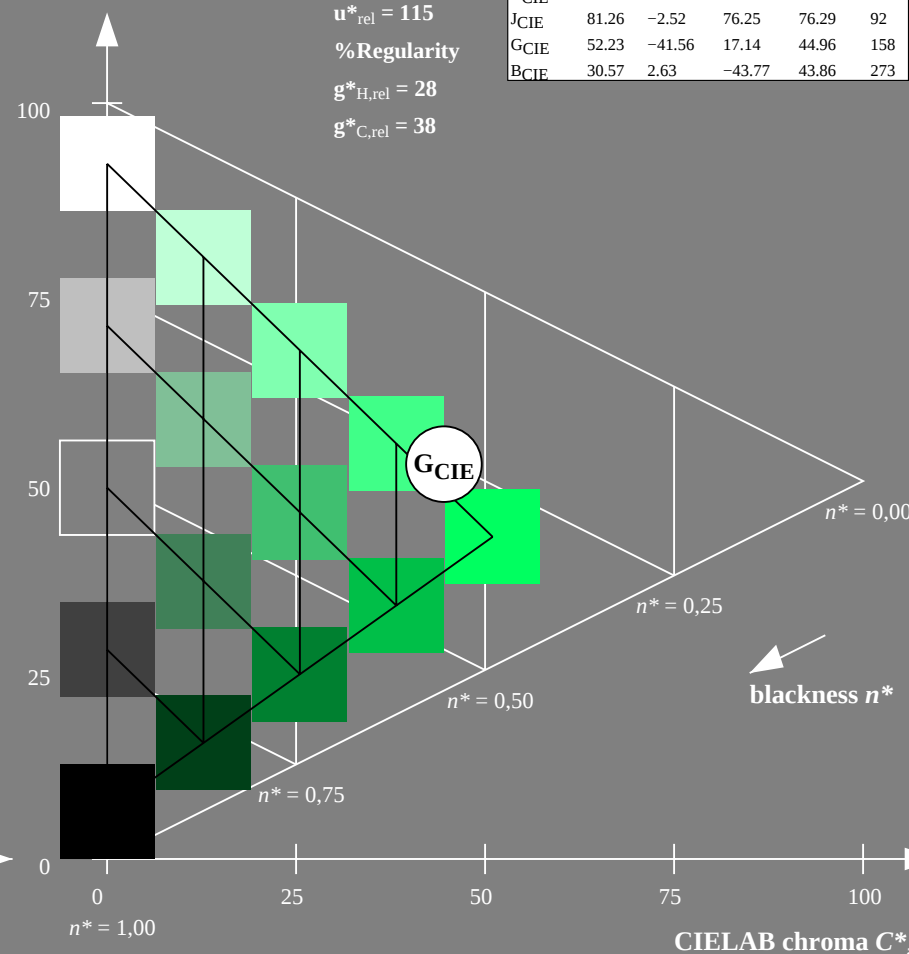
CIELAB lightness L^*

%Gamut
 $u^*_{rel} = 115$
%Regularity
 $g^*_{H,rel} = 28$
 $g^*_{C,rel} = 38$



FRS06; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	32.57	62.32	46.49	77.75	37
YMa	82.73	-3.16	113.99	114.03	92
LMa	39.43	-61.79	45.84	76.95	143
CMa	47.86	-26.79	-34.24	43.49	232
VMa	10.16	55.12	-61.03	82.24	312
MMa	34.5	80.68	-33.92	87.52	337
NMa	6.25	0.0	0.0	0.0	0
WMa	91.97	0.0	0.0	0.0	0
RCIE	39.92	59.8	31.05	67.38	27
JCIE	81.26	-2.52	76.25	76.29	92
GCIE	52.23	-41.56	17.14	44.96	158
BCIE	30.57	2.63	-43.77	43.86	273



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

BAM-test chart VE32; Colorimetric systems NRS18 & FRS06

D65: Coordinate systems of 5 step colour scales for 10 hues

input: olv* setrgbcolor

output: no change compared to input

Input: Colorimetric Natural Reflective System CNS18

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

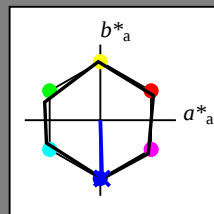
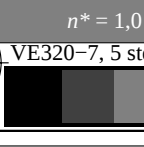
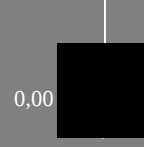
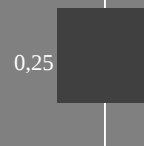
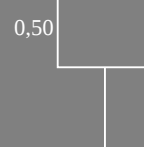
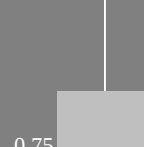
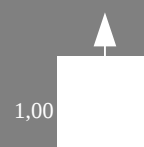
lab^*tch and lab^*nch

D65: hue B

LCH*Ma: 57 77 272

olv*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut
 $u^*_{rel} = 100$
%Regularity
 $g^*_{H,rel} = 59$
 $g^*_{C,rel} = 100$

CNS18; adapted (a) CIELAB data					
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	56.7	70.15	32.71	77.4	25
JMa	56.7	-2.69	77.35	77.4	92
GMa	56.7	-73.6	23.92	77.4	162
G50BMa	56.7	-71.24	-30.23	77.4	203
BMa	56.7	2.7	-77.34	77.4	272
B50RMa	56.7	63.4	-44.38	77.4	325
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

Output: Colorimetric Printer Reflective System FRS06

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

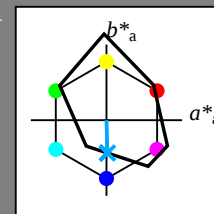
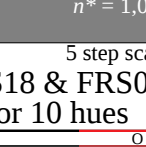
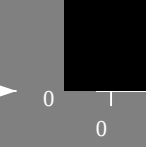
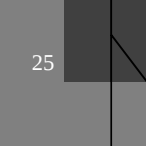
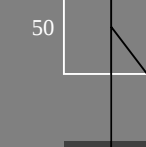
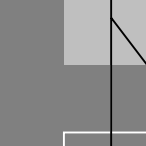
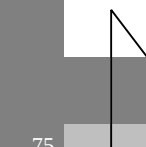
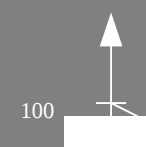
LAB^*LCH , LAB^*NCH

D65: hue B

LCH*Ma: 35 43 272

olv*Ma: 0.0 0.66 1.0

CIELAB lightness L^*



%Gamut
 $u^*_{rel} = 115$
%Regularity
 $g^*_{H,rel} = 28$
 $g^*_{C,rel} = 38$

FRS06; adapted (a) CIELAB data					
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	32.57	62.32	46.49	77.75	37
YMa	82.73	-3.16	113.99	114.03	92
LMa	39.43	-61.79	45.84	76.95	143
CMa	47.86	-26.79	-34.24	43.49	232
VMa	10.16	55.12	-61.03	82.24	312
MMa	34.5	80.68	-33.92	87.52	337
NMa	6.25	0.0	0.0	0.0	0
WMa	91.97	0.0	0.0	0.0	0
RCIE	39.92	59.8	31.05	67.38	27
JCIE	81.26	-2.52	76.25	76.29	92
GCIE	52.23	-41.56	17.14	44.96	158
BCIE	30.57	2.63	-43.77	43.86	273

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

VE320-7, 5 step scales for constant CIELAB hue $272/360 = 0.755$ (left)

BAM-test chart VE32; Colorimetric systems NRS18 & FRS06

D65: Coordinate systems of 5 step colour scales for 10 hues

input: olv* setrgbcolor

output: no change compared to input