

Input: Colorimetric Natural Reflective System CNS18

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

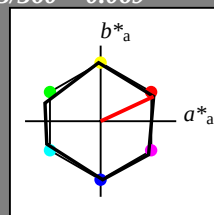
lab^*tch and lab^*nch

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

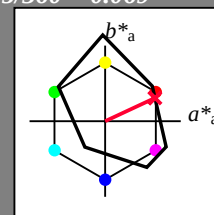
lab^*tch and lab^*nch

D65: hue R

LCH*Ma: 33 73 25

olv*Ma: 1.0 0.0 0.2

triangle lightness t^*



%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

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
 $LAB^*LAB = 91.97 \ -0.17 \ -5.11$
 $LAB^*LABa = 91.97 \ 0.0 \ 0.0$
 $LAB^*TCHa = 99.99 \ 0.01 \ -$

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)
 $olvi3^* = 0.5 \ 0.5 \ 0.5 \ (1.0)$
 $cmyn3^* = 0.5 \ 0.5 \ 0.5 \ (0.0)$
 $olvi4^* = 1.0 \ 1.0 \ 1.0 \ 0.5$
 $cmyn4^* = 0.0 \ 0.0 \ 0.0 \ 0.5$

standard and adapted CIELAB
 $LAB^*LAB = 49.11 \ -0.89 \ -3.42$
 $LAB^*LABa = 49.11 \ 0.0 \ 0.0$
 $LAB^*TCHa = 50.0 \ 0.01 \ -$

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)
 $olvi3^* = 0.0 \ 0.0 \ 0.0 \ (1.0)$
 $cmyn3^* = 1.0 \ 1.0 \ 1.0 \ (0.0)$
 $olvi4^* = 1.0 \ 1.0 \ 1.0 \ 0.0$
 $cmyn4^* = 0.0 \ 0.0 \ 0.0 \ 1.0$

standard and adapted CIELAB
 $LAB^*LAB = 6.26 \ -1.62 \ -1.73$
 $LAB^*LABa = 6.26 \ 0.0 \ 0.0$
 $LAB^*TCHa = 0.01 \ 0.01 \ -$

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)
 $olvi3^* = 1.0 \ 0.5 \ 0.598 \ (1.0)$
 $cmyn3^* = 0.0 \ 0.5 \ 0.402 \ (0.0)$
 $olvi4^* = 1.0 \ 0.5 \ 0.598 \ 1.0$
 $cmyn4^* = 0.0 \ 0.5 \ 0.402 \ 0.0$

standard and adapted CIELAB
 $LAB^*LAB = 62.46 \ 32.27 \ 11.42$
 $LAB^*LABa = 62.46 \ 32.95 \ 15.36$
 $LAB^*TCHa = 75.0 \ 36.36 \ 25.0$

relative CIELAB lab*
 $lab^*lab = 0.656 \ 0.453 \ 0.211$
 $lab^*tch = 0.75 \ 0.5 \ 0.069$
 $lab^*nch = 0.0 \ 0.5 \ 0.069$

relative Natural Colour (NC)
 $lab^*lrj = 0.656 \ 0.5 \ -0.016$
 $lab^*tce = 0.75 \ 0.5 \ 0.995$
 $lab^*nce = 0.0 \ 0.5 \ 0.97r$

relative Inform. Technology (IT)
 $olvi3^* = 0.5 \ 0.0 \ 0.098 \ (1.0)$
 $cmyn3^* = 0.5 \ 1.0 \ 0.902 \ (0.0)$
 $olvi4^* = 1.0 \ 0.5 \ 0.598 \ 0.5$
 $cmyn4^* = 0.0 \ 0.5 \ 0.402 \ 0.5$

standard and adapted CIELAB
 $LAB^*LAB = 19.6 \ 31.55 \ 13.12$
 $LAB^*LABa = 19.6 \ 32.95 \ 15.37$
 $LAB^*TCHa = 25.01 \ 36.36 \ 25.01$

relative CIELAB lab*
 $lab^*lab = 0.156 \ 0.453 \ 0.211$
 $lab^*tch = 0.25 \ 0.5 \ 0.069$
 $lab^*nch = 0.5 \ 0.5 \ 0.069$

relative Natural Colour (NC)
 $lab^*lrj = 0.156 \ 0.5 \ -0.016$
 $lab^*tce = 0.25 \ 0.5 \ 0.995$
 $lab^*nce = 0.5 \ 0.5 \ 0.97r$

relative Inform. Technology (IT)
 $olvi3^* = 1.0 \ 0.0 \ 0.196 \ (1.0)$
 $cmyn3^* = 0.0 \ 1.0 \ 0.804 \ (0.0)$
 $olvi4^* = 1.0 \ 0.0 \ 0.196 \ 1.0$
 $cmyn4^* = 0.0 \ 1.0 \ 0.804 \ 0.0$

standard and adapted CIELAB
 $LAB^*LAB = 32.95 \ 64.73 \ 27.95$
 $LAB^*LABa = 32.95 \ 65.91 \ 30.74$
 $LAB^*TCHa = 50.0 \ 72.72 \ 25.0$

relative CIELAB lab*
 $lab^*lab = 0.311 \ 0.906 \ 0.423$
 $lab^*tch = 0.5 \ 1.0 \ 0.069$
 $lab^*nch = 0.0 \ 1.0 \ 0.069$

relative Natural Colour (NC)
 $lab^*lrj = 0.311 \ 0.999 \ -0.033$
 $lab^*tce = 0.5 \ 1.0 \ 0.995$
 $lab^*nce = 0.0 \ 1.0 \ 0.97r$

BAM-test chart VE30; Colorimetric systems CNS18 & FRS06

D65: 3 step colour scales and coordinate data for 10 hues

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

input: olv* setrgbcolor

output: no change compared to input

Input: Colorimetric Natural Reflective System CNS18

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

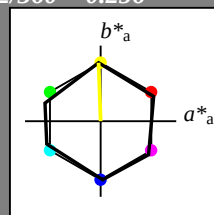
lab^*tch and lab^*nch

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

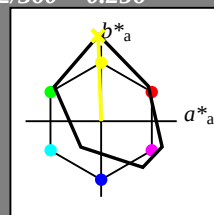
lab^*tch and lab^*nch

D65: hue J

LCH*Ma: 82 113 92

olv*Ma: 0.99 1.0 0.0

triangle lightness t^*



%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

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
 $LAB^*LAB = 91.97 \ -0.17 \ -5.11$
 $LAB^*LABa = 91.97 \ 0.0 \ 0.0$
 $LAB^*TCHa = 99.99 \ 0.01 \ -$

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)
 $olvi3^* = 0.5 \ 0.5 \ 0.5 \ (1.0)$
 $cmyn3^* = 0.5 \ 0.5 \ 0.5 \ (0.0)$
 $olvi4^* = 1.0 \ 1.0 \ 1.0 \ 0.5$
 $cmyn4^* = 0.0 \ 0.0 \ 0.0 \ 0.5$

standard and adapted CIELAB
 $LAB^*LAB = 49.11 \ -0.89 \ -3.42$
 $LAB^*LABa = 49.11 \ 0.0 \ 0.0$
 $LAB^*TCHa = 50.0 \ 0.01 \ -$

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)
 $olvi3^* = 0.0 \ 0.0 \ 0.0 \ (1.0)$
 $cmyn3^* = 1.0 \ 1.0 \ 1.0 \ (0.0)$
 $olvi4^* = 1.0 \ 1.0 \ 1.0 \ 0.0$
 $cmyn4^* = 0.0 \ 0.0 \ 0.0 \ 1.0$

standard and adapted CIELAB
 $LAB^*LAB = 6.26 \ -1.62 \ -1.73$
 $LAB^*LABa = 6.26 \ 0.0 \ 0.0$
 $LAB^*TCHa = 0.01 \ 0.01 \ -$

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)
 $olvi3^* = 0.993 \ 1.0 \ 0.5 \ (1.0)$
 $cmyn3^* = 0.007 \ 0.0 \ 0.5 \ (0.0)$
 $olvi4^* = 0.993 \ 1.0 \ 0.5 \ 1.0$
 $cmyn4^* = 0.007 \ 0.0 \ 0.5 \ 0.0$

standard and adapted CIELAB
 $LAB^*LAB = 87.06 \ -2.22 \ 51.62$
 $LAB^*LABa = 87.06 \ -1.96 \ 56.54$
 $LAB^*TCHa = 75.0 \ 56.57 \ 91.99$

relative CIELAB lab*
 $lab^*lab = 0.943 \ -0.016 \ 0.5$
 $lab^*tch = 0.75 \ 0.5 \ 0.256$
 $lab^*nch = 0.0 \ 0.5 \ 0.256$

relative Natural Colour (NC)
 $lab^*lrj = 0.943 \ 0.0 \ 0.5$
 $lab^*tce = 0.75 \ 0.5 \ 0.25$
 $lab^*nce = 0.0 \ 0.5 \ j00g$

relative Inform. Technology (IT)
 $olvi3^* = 0.493 \ 0.5 \ 0.0 \ (1.0)$
 $cmyn3^* = 0.507 \ 0.5 \ 1.0 \ (0.0)$
 $olvi4^* = 0.993 \ 1.0 \ 0.5 \ 0.5$
 $cmyn4^* = 0.007 \ 0.0 \ 0.5 \ 0.5$

standard and adapted CIELAB
 $LAB^*LAB = 44.2 \ -2.95 \ 53.3$
 $LAB^*LABa = 44.2 \ -1.96 \ 56.53$
 $LAB^*TCHa = 25.01 \ 56.57 \ 92.0$

relative CIELAB lab*
 $lab^*lab = 0.443 \ -0.016 \ 0.5$
 $lab^*tch = 0.25 \ 0.5 \ 0.256$
 $lab^*nch = 0.5 \ 0.5 \ 0.256$

relative Natural Colour (NC)
 $lab^*lrj = 0.443 \ 0.0 \ 0.5$
 $lab^*tce = 0.25 \ 0.5 \ 0.25$
 $lab^*nce = 0.5 \ 0.5 \ j00g$

relative Inform. Technology (IT)
 $olvi3^* = 0.987 \ 1.0 \ 0.0 \ (1.0)$
 $cmyn3^* = 0.013 \ 0.0 \ 1.0 \ (0.0)$
 $olvi4^* = 0.987 \ 1.0 \ 0.0 \ 1.0$
 $cmyn4^* = 0.013 \ 0.0 \ 1.0 \ 0.0$

standard and adapted CIELAB
 $LAB^*LAB = 82.16 \ -4.28 \ 108.35$
 $LAB^*LABa = 82.16 \ -3.93 \ 113.07$
 $LAB^*TCHa = 50.0 \ 113.14 \ 92.0$

relative CIELAB lab*
 $lab^*lab = 0.885 \ -0.034 \ 0.999$
 $lab^*tch = 0.5 \ 1.0 \ 0.256$
 $lab^*nch = 0.0 \ 1.0 \ 0.256$

relative Natural Colour (NC)
 $lab^*lrj = 0.885 \ -0.001 \ 1.0$
 $lab^*tce = 0.5 \ 1.0 \ 0.25$
 $lab^*nce = 0.0 \ 1.0 \ j00g$

blackness n^*
chromaticness c^*

$n^* = 1.0$

blackness n^*
chromaticness c^*

$n^* = 1.0$

VE300-7, 3 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

BAM-test chart VE30; Colorimetric systems CNS18 & FRS06

D65: 3 step colour scales and coordinate data for 10 hues

input: olv* setrgbcolor

output: no change compared to input

Input: Colorimetric Natural Reflective System CNS18

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

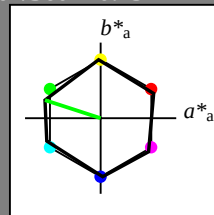
lab^*tch and lab^*nch

D65: hue G

LCH*Ma: 57 77 162

olv*Ma: 0.0 1.0 0.0

triangle lightness t^*



%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 $h^* = lab^*h = 162/360 = 0.45$

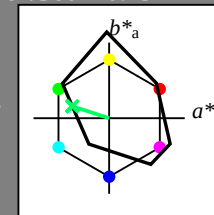
lab^*tch and lab^*nch

D65: hue G

LCH*Ma: 43 51 162

olv*Ma: 0.0 1.0 0.37

triangle lightness t^*



%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

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 91.97 -0.17 -5.11
LAB*LABa 91.97 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* 0.5 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 49.11 -0.89 -3.42
LAB*LABa 49.11 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* 0.0 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 6.26 -1.62 -1.73
LAB*LABa 6.26 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* 0.5 1.0 0.687 (1.0)
cmyn3* 0.5 0.0 0.313 (0.0)
olvi4* 0.5 1.0 0.688 1.0
cmyn4* 0.5 0.0 0.312 0.0
standard and adapted CIELAB
LAB*LAB 67.28 -24.92 3.77
LAB*LABa 67.28 -24.33 7.9
LAB*TCHa 75.0 25.59 162.01

relative CIELAB lab*
lab*lab 0.712 -0.474 0.154
lab*tch 0.75 0.5 0.45
lab*nch 0.0 0.5 0.45

relative Natural Colour (NC)
lab*lrj 0.712 -0.498 -0.029
lab*tce 0.75 0.5 0.51
lab*nce 0.0 0.5 g03b

relative Inform. Technology (IT)
olvi3* 0.0 0.5 0.187 (1.0)
cmyn3* 1.0 0.5 0.813 (0.0)
olvi4* 0.5 1.0 0.687 0.5
cmyn4* 0.5 0.0 0.313 0.5
standard and adapted CIELAB
LAB*LAB 24.42 -25.65 5.47
LAB*LABa 24.42 -24.33 7.91
LAB*TCHa 25.01 25.59 161.99

relative CIELAB lab*
lab*lab 0.212 -0.474 0.155
lab*tch 0.25 0.5 0.45
lab*nch 0.5 0.5 0.45

relative Natural Colour (NC)
lab*lrj 0.212 -0.498 -0.029
lab*tce 0.25 0.5 0.51
lab*nce 0.5 0.5 g03b

relative Inform. Technology (IT)
olvi3* 0.0 1.0 0.375 (1.0)
cmyn3* 1.0 0.0 0.625 (0.0)
olvi4* 0.0 1.0 0.375 1.0
cmyn4* 1.0 0.0 0.625 0.0
standard and adapted CIELAB
LAB*LAB 42.59 -49.68 12.65
LAB*LABa 42.59 -48.66 15.82
LAB*TCHa 50.0 51.18 162.0

relative CIELAB lab*
lab*lab 0.424 -0.95 0.309
lab*tch 0.5 1.0 0.45
lab*nch 0.0 1.0 0.45

relative Natural Colour (NC)
lab*lrj 0.424 -0.997 -0.059
lab*tce 0.5 1.0 0.51
lab*nce 0.0 1.0 g03b

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 6.26 -1.62 -1.73
LAB*LABa 6.26 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* 0.0 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 6.26 -1.62 -1.73
LAB*LABa 6.26 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 -

Input: Colorimetric Natural Reflective System CNS18

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

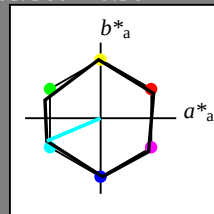
lab^*tch and lab^*nch

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

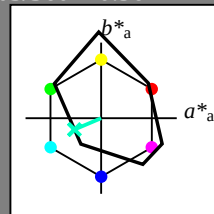
lab^*tch and lab^*nch

D65: hue G50B

LCH*Ma: 46 38 203

olv*Ma: 0.0 1.0 0.76

triangle lightness t^*



%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

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 91.97 -0.17 -5.11
LAB*LABa 91.97 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* 0.5 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 49.11 -0.89 -3.42
LAB*LABa 49.11 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* 0.0 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 6.26 -1.62 -1.73
LAB*LABa 6.26 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* 0.5 1.0 0.88 (1.0)
cmyn3* 0.5 0.0 0.12 (0.0)
olvi4* 0.5 1.0 0.88 1.0
cmyn4* 0.5 0.0 0.12 0.0

standard and adapted CIELAB
LAB*LAB 68.9 -18.17 -11.67
LAB*LABa 68.9 -17.6 -7.47
LAB*TCHa 75.0 19.13 203.02

relative CIELAB lab*
lab*lab 0.731 -0.459 -0.194
lab*tch 0.75 0.5 0.564
lab*nch 0.0 0.5 0.564

relative Natural Colour (NC)
lab*lrj 0.731 -0.407 -0.288
lab*tce 0.75 0.5 0.598
lab*nce 0.0 0.5 g39b

relative Inform. Technology (IT)
olvi3* 0.0 0.5 0.38 (1.0)
cmyn3* 1.0 0.5 0.62 (0.0)
olvi4* 0.5 1.0 0.88 0.5
cmyn4* 0.5 0.0 0.12 0.5

standard and adapted CIELAB
LAB*LAB 26.04 -18.9 -9.98
LAB*LABa 26.04 -17.6 -7.46
LAB*TCHa 25.01 19.13 202.99

relative CIELAB lab*
lab*lab 0.231 -0.459 -0.194
lab*tch 0.25 0.5 0.564
lab*nch 0.5 0.5 0.564

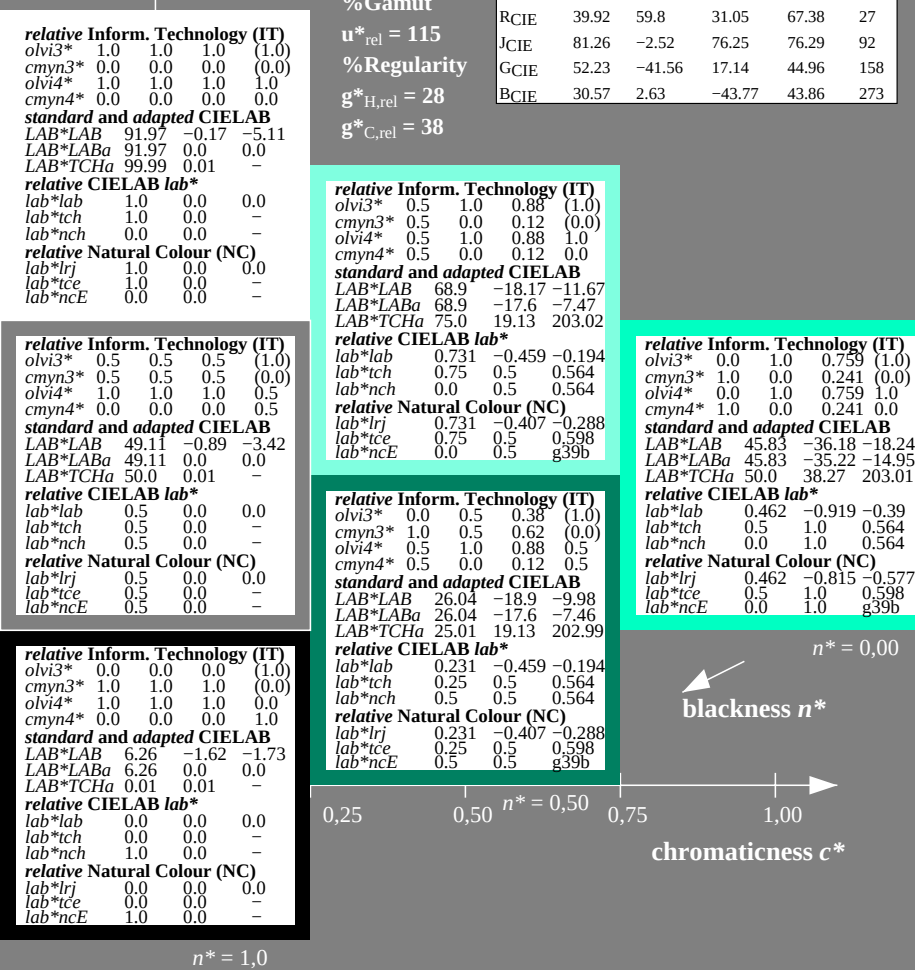
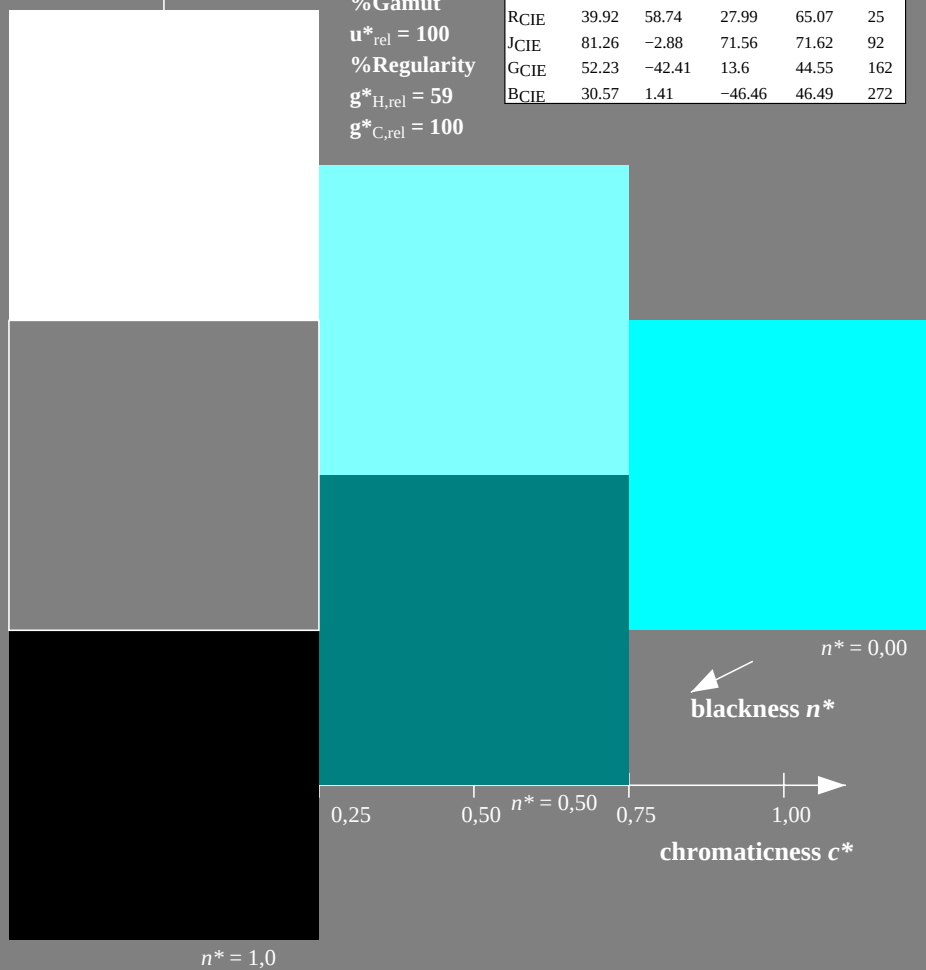
relative Natural Colour (NC)
lab*lrj 0.231 -0.407 -0.288
lab*tce 0.25 0.5 0.598
lab*nce 0.5 0.5 g39b

relative Inform. Technology (IT)
olvi3* 0.0 1.0 0.759 (1.0)
cmyn3* 1.0 0.0 0.241 (0.0)
olvi4* 0.0 1.0 0.759 1.0
cmyn4* 1.0 0.0 0.241 0.0

standard and adapted CIELAB
LAB*LAB 45.83 -36.18 -18.24
LAB*LABa 45.83 -35.22 -14.95
LAB*TCHa 50.0 38.27 203.01

relative CIELAB lab*
lab*lab 0.462 -0.919 -0.39
lab*tch 0.5 1.0 0.564
lab*nch 0.0 1.0 0.564

relative Natural Colour (NC)
lab*lrj 0.462 -0.815 -0.577
lab*tce 0.5 1.0 0.598
lab*nce 0.0 1.0 g39b



VE300-7, 3 step scales for constant CIELAB hue 203/360 = 0.564 (left)

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

BAM-test chart VE30; Colorimetric systems CNS18 & FRS06

D65: 3 step colour scales and coordinate data for 10 hues

input: olv* setrgbcolor

output: no change compared to input

Input: Colorimetric Natural Reflective System CNS18

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

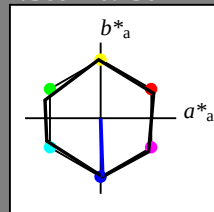
lab^*tch and lab^*nch

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

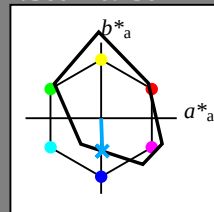
lab^*tch and lab^*nch

D65: hue B

LCH*Ma: 35 44 272

olv*Ma: 0.0 0.65 1.0

triangle lightness t^*



%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

relative Inform. Technology (IT)
olv3* 1.0 1.0 1.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olv4* 1.0 1.0 1.0 1.0
cmyn4* 0.0 0.0 0.0 0.0

standard and adapted CIELAB
LAB*LAB 91.97 -0.17 -5.11
LAB*LABa 91.97 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)
olv3* 0.5 0.5 0.5 (1.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olv4* 1.0 1.0 1.0 0.5
cmyn4* 0.0 0.0 0.0 0.5

standard and adapted CIELAB
LAB*LAB 49.11 -0.89 -3.42
LAB*LABa 49.11 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)
olv3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olv4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 6.26 -1.62 -1.73
LAB*LABa 6.26 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)
olv3* 0.5 0.827 1.0 (1.0)
cmyn3* 0.5 0.173 0.0 (0.0)
olv4* 0.5 0.827 1.0 1.0
cmyn4* 0.5 0.173 0.0 0.0

standard and adapted CIELAB
LAB*LAB 63.4 0.09 -25.72
LAB*LABa 63.4 0.75 -21.74
LAB*TCHa 75.0 21.76 271.99

relative CIELAB lab*
lab*lab 0.667 0.017 -0.499
lab*tch 0.75 0.5 0.756
lab*nch 0.0 0.5 0.756

relative Natural Colour (NC)
lab*lrj 0.667 -0.009 -0.499
lab*tce 0.75 0.5 0.747
lab*nce 0.0 0.5 g98b

relative Inform. Technology (IT)
olv3* 0.0 0.327 0.5 (1.0)
cmyn3* 1.0 0.673 0.5 (0.0)
olv4* 0.5 0.827 1.0 0.5
cmyn4* 0.5 0.173 0.0 0.5

standard and adapted CIELAB
LAB*LAB 20.54 -0.62 -24.03
LAB*LABa 20.54 0.76 -21.74
LAB*TCHa 25.01 21.76 272.01

relative CIELAB lab*
lab*lab 0.167 0.018 -0.499
lab*tch 0.25 0.5 0.756
lab*nch 0.5 0.5 0.756

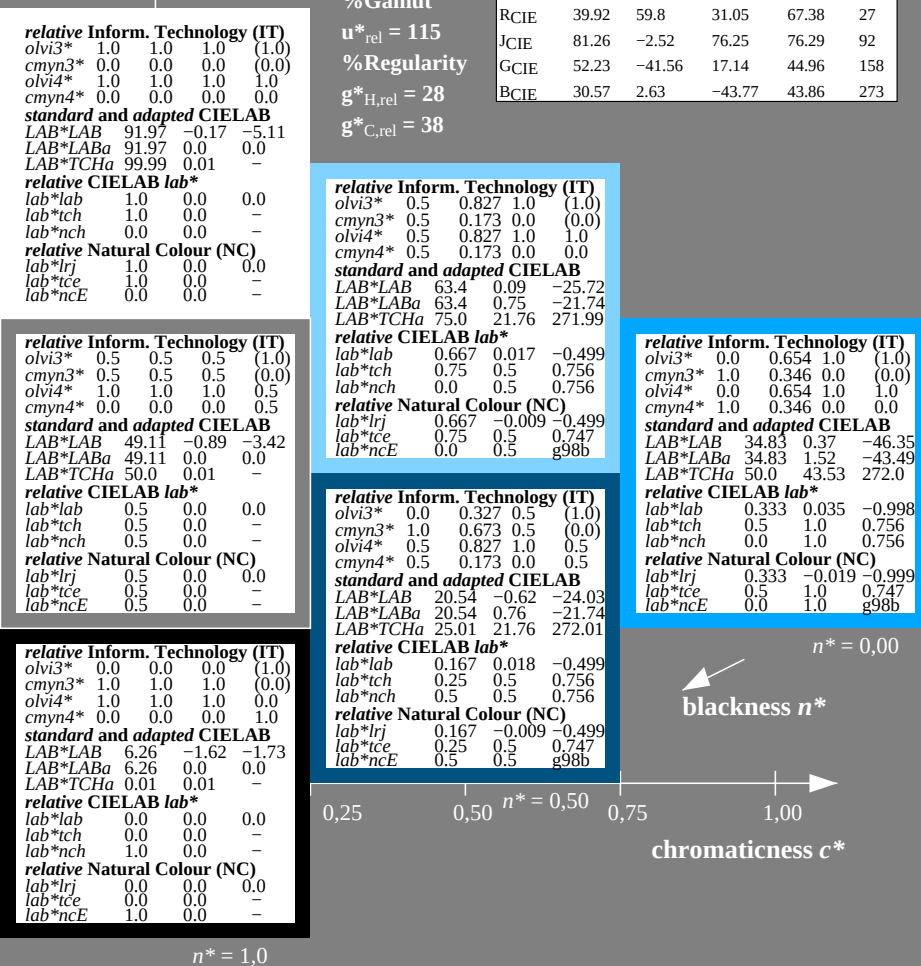
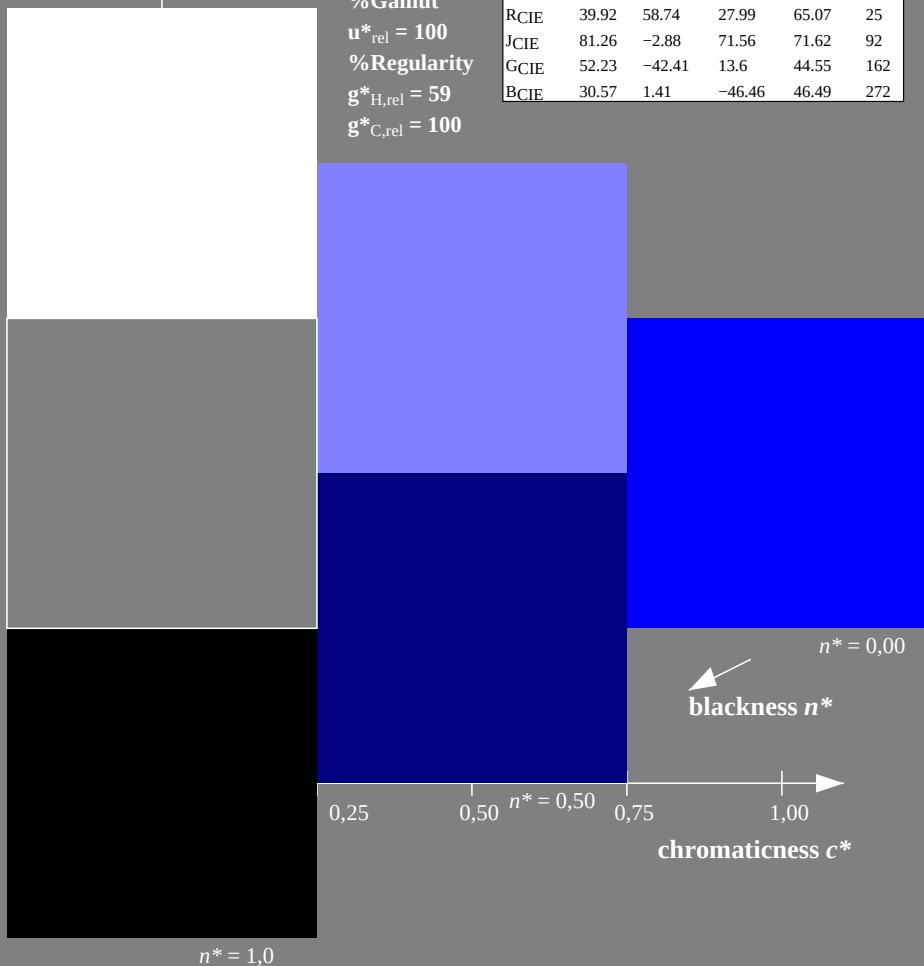
relative Natural Colour (NC)
lab*lrj 0.167 -0.009 -0.499
lab*tce 0.25 0.5 0.747
lab*nce 0.5 0.5 g98b

relative Inform. Technology (IT)
olv3* 0.0 0.654 1.0 (1.0)
cmyn3* 1.0 0.346 0.0 (0.0)
olv4* 0.0 0.654 1.0 1.0
cmyn4* 1.0 0.346 0.0 0.0

standard and adapted CIELAB
LAB*LAB 34.83 0.37 -46.35
LAB*LABa 34.83 1.52 -43.49
LAB*TCHa 50.0 43.53 272.0

relative CIELAB lab*
lab*lab 0.333 0.035 -0.998
lab*tch 0.5 1.0 0.756
lab*nch 0.0 1.0 0.756

relative Natural Colour (NC)
lab*lrj 0.333 -0.019 -0.999
lab*tce 0.5 1.0 0.747
lab*nce 0.0 1.0 g98b



VE300-7, 3 step scales for constant CIELAB hue 272/360 = 0.756 (left)

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

BAM-test chart VE30; Colorimetric systems CNS18 & FRS06

D65: 3 step colour scales and coordinate data for 10 hues

input: olv* setrgbcolor

output: no change compared to input

Input: Colorimetric Natural Reflective System CNS18

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

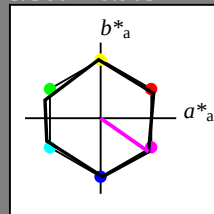
lab^*tch and lab^*nch

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

Output: Colorimetric Printer Reflective System FRS06

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

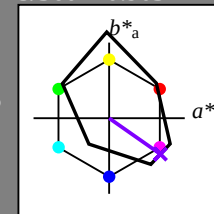
lab^*tch and lab^*nch

D65: hue B50R

LCH*Ma: 22 83 325

olv*Ma: 0.5 0.0 1.0

triangle lightness t^*



%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

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 91.97 -0.17 -5.11
LAB*LABa 91.97 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* 0.5 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 49.11 -0.89 -3.42
LAB*LABa 49.11 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* 0.0 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 6.26 -1.62 -1.73
LAB*LABa 6.26 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* 0.749 0.5 1.0 (1.0)
cmyn3* 0.251 0.5 0.0 (0.0)
olvi4* 0.749 0.5 1.0 1.0
cmyn4* 0.251 0.5 0.0 0.0

standard and adapted CIELAB
LAB*LAB 57.13 33.16 -27.48
LAB*LABa 57.13 33.93 -23.74
LAB*TCHa 75.0 41.42 325.0

relative CIELAB lab*
lab*lab 0.594 0.41 -0.286
lab*tch 0.75 0.5 0.903
lab*nch 0.0 0.5 0.903

relative Natural Colour (NC)
lab*lrj 0.594 0.326 -0.378
lab*tce 0.75 0.5 0.863
lab*nce 0.0 0.5 b45r

relative Inform. Technology (IT)
olvi3* 0.249 0.0 0.5 (1.0)
cmyn3* 0.751 1.0 0.5 (0.0)
olvi4* 0.749 0.5 1.0 0.5
cmyn4* 0.251 0.5 0.0 0.5

standard and adapted CIELAB
LAB*LAB 14.28 32.43 -25.79
LAB*LABa 14.28 33.92 -23.75
LAB*TCHa 25.01 41.42 325.0

relative CIELAB lab*
lab*lab 0.094 0.409 -0.286
lab*tch 0.25 0.5 0.903
lab*nch 0.5 0.5 0.903

relative Natural Colour (NC)
lab*lrj 0.094 0.326 -0.378
lab*tce 0.25 0.5 0.863
lab*nce 0.5 0.5 b45r

relative Inform. Technology (IT)
olvi3* 0.499 0.0 1.0 (1.0)
cmyn3* 0.501 1.0 0.0 (0.0)
olvi4* 0.499 0.0 1.0 1.0
cmyn4* 0.501 1.0 0.0 0.0

standard and adapted CIELAB
LAB*LAB 22.3 66.49 -49.86
LAB*LABa 22.3 67.85 -47.5
LAB*TCHa 50.0 82.83 325.0

relative CIELAB lab*
lab*lab 0.187 0.819 -0.572
lab*tch 0.5 1.0 0.903
lab*nch 0.0 1.0 0.903

relative Natural Colour (NC)
lab*lrj 0.187 0.652 -0.757
lab*tce 0.5 1.0 0.863
lab*nce 0.0 1.0 b45r

BAM-test chart VE30; Colorimetric systems CNS18 & FRS06

D65: 3 step colour scales and coordinate data for 10 hues

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

input: olv* setrgbcolor

output: no change compared to input

Input: Colorimetric Natural Reflective System CNS18

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

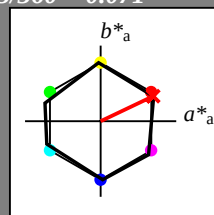
lab^*tch and lab^*nch

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

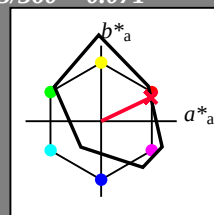
lab^*tch and lab^*nch

D65: hue R

LCH*Ma: 33 73 25

olv*Ma: 1.0 0.0 0.19

triangle lightness t^*



%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

relative Inform. Technology (IT)
olv3* 1.0 1.0 1.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olv4* 1.0 1.0 1.0 1.0
cmyn4* 0.0 0.0 0.0 0.0

standard and adapted CIELAB
LAB*LAB 91.97 -0.17 -5.11
LAB*LABa 91.97 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)
olv3* 0.5 0.5 0.5 (1.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olv4* 1.0 1.0 1.0 0.5
cmyn4* 0.0 0.0 0.0 0.5

standard and adapted CIELAB
LAB*LAB 49.11 -0.89 -3.42
LAB*LABa 49.11 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)
olv3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olv4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 6.26 -1.62 -1.73
LAB*LABa 6.26 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)
olv3* 1.0 0.5 0.594 (1.0)
cmyn3* 0.0 0.5 0.406 (0.0)
olv4* 1.0 0.5 0.594 1.0
cmyn4* 0.0 0.5 0.406 0.0

standard and adapted CIELAB
LAB*LAB 62.45 32.21 11.72
LAB*LABa 62.45 32.88 15.67
LAB*TCHa 75.0 36.43 25.48

relative CIELAB lab*
lab*lab 0.656 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 0.656 0.5 -0.013
lab*tce 0.75 0.5 0.996
lab*nce 0.0 0.5 b98r

relative Inform. Technology (IT)
olv3* 0.5 0.0 0.094 (1.0)
cmyn3* 0.5 1.0 0.906 (0.0)
olv4* 1.0 0.5 0.594 0.5
cmyn4* 0.0 0.5 0.406 0.5

standard and adapted CIELAB
LAB*LAB 19.6 31.48 13.42
LAB*LABa 19.6 32.88 15.68
LAB*TCHa 25.01 36.43 25.49

relative CIELAB lab*
lab*lab 0.156 0.451 0.215
lab*tch 0.25 0.5 0.071
lab*nch 0.5 0.5 0.071

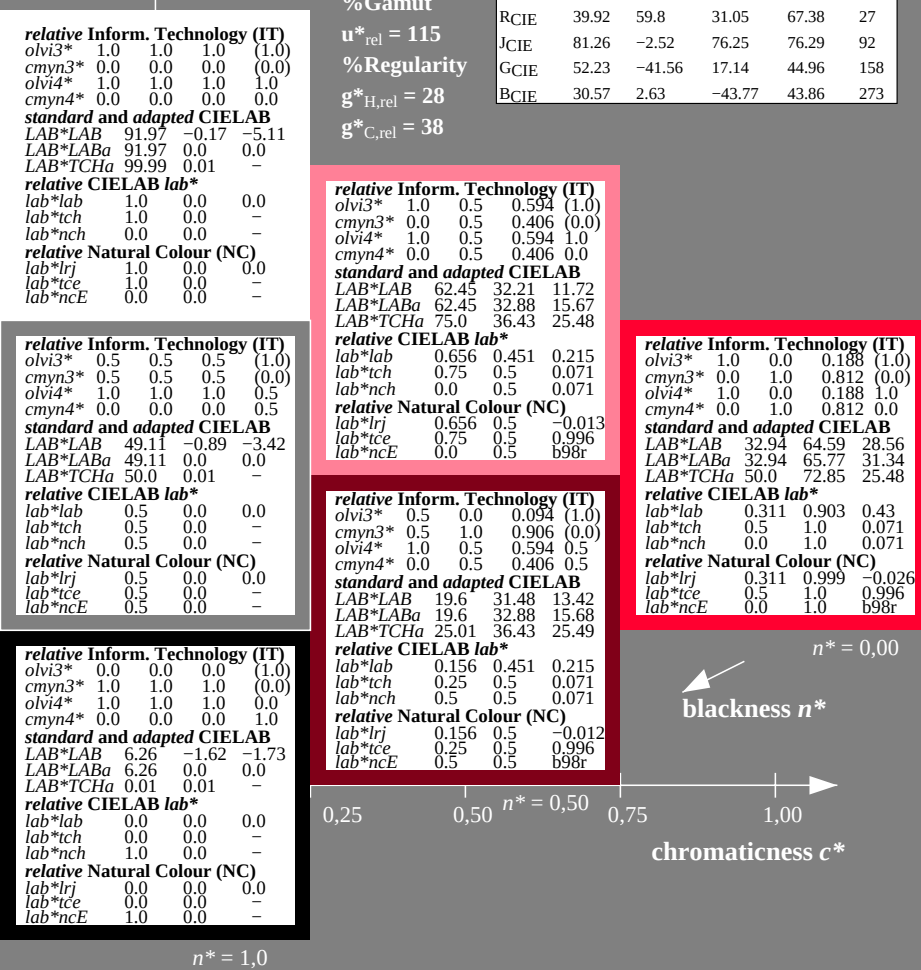
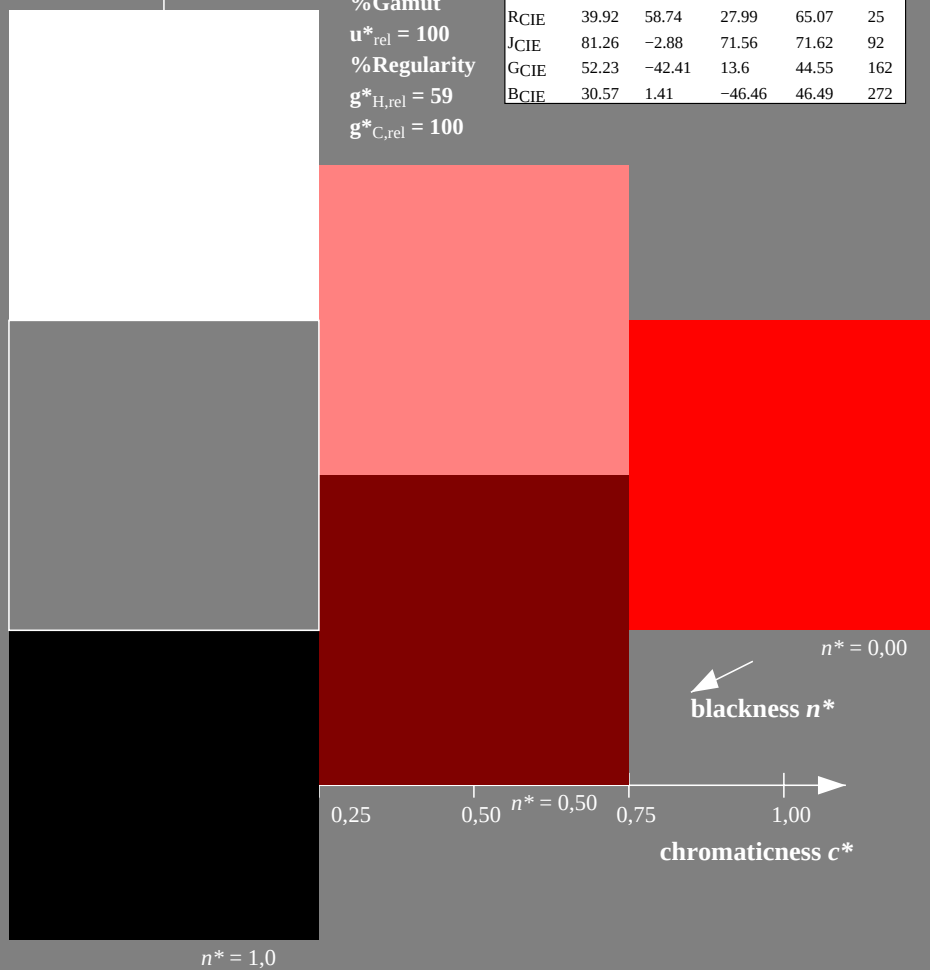
relative Natural Colour (NC)
lab*lrj 0.156 0.5 -0.012
lab*tce 0.25 0.5 0.996
lab*nce 0.5 0.5 b98r

relative Inform. Technology (IT)
olv3* 1.0 0.0 0.188 (1.0)
cmyn3* 0.0 1.0 0.812 (0.0)
olv4* 1.0 0.0 0.188 1.0
cmyn4* 0.0 1.0 0.812 0.0

standard and adapted CIELAB
LAB*LAB 32.94 64.59 28.56
LAB*LABa 32.94 65.77 31.34
LAB*TCHa 50.0 72.85 25.48

relative CIELAB lab*
lab*lab 0.311 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 0.311 0.999 -0.026
lab*tce 0.5 1.0 0.996
lab*nce 0.0 1.0 b98r



VE300-7, 3 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

BAM-test chart VE30; Colorimetric systems CNS18 & FRS06

D65: 3 step colour scales and coordinate data for 10 hues

input: olv* setrgbcolor

output: no change compared to input

Input: Colorimetric Natural Reflective System CNS18

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

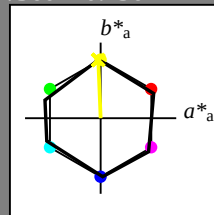
lab^*tch and lab^*nch

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

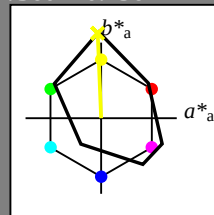
lab^*tch and lab^*nch

D65: hue J

LCH*Ma: 82 112 92

olv*Ma: 0.98 1.0 0.0

triangle lightness t^*



%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

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 91.97 -0.17 -5.11
LAB*LABa 91.97 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* 0.5 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 49.11 -0.89 -3.42
LAB*LABa 49.11 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* 0.0 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 6.26 -1.62 -1.73
LAB*LABa 6.26 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* 0.988 1.0 0.5 (1.0)
cmyn3* 0.012 0.0 0.5 (0.0)
olvi4* 0.988 1.0 0.5 1.0
cmyn4* 0.012 0.0 0.5 0.0

standard and adapted CIELAB
LAB*LAB 86.84 -2.52 51.29
LAB*LABa 86.84 -2.25 56.19
LAB*TCHa 75.0 56.24 92.31

relative CIELAB lab*
lab*lab 0.94 -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 0.94 -0.004 0.5
lab*tce 0.75 0.5 0.252
lab*nce 0.0 0.5 j00g

relative Inform. Technology (IT)
olvi3* 0.488 0.5 0.0 (1.0)
cmyn3* 0.512 0.5 1.0 (0.0)
olvi4* 0.988 1.0 0.5 0.5
cmyn4* 0.012 0.0 0.5 0.5

standard and adapted CIELAB
LAB*LAB 43.99 -3.25 52.97
LAB*LABa 43.99 -2.26 56.19
LAB*TCHa 25.01 56.23 92.31

relative CIELAB lab*
lab*lab 0.44 -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 0.44 -0.004 0.5
lab*tce 0.25 0.5 0.252
lab*nce 0.5 0.5 j00g

relative Inform. Technology (IT)
olvi3* 0.977 1.0 0.0 (1.0)
cmyn3* 0.023 0.0 1.0 (0.0)
olvi4* 0.977 1.0 0.0 1.0
cmyn4* 0.023 0.0 1.0 0.0

standard and adapted CIELAB
LAB*LAB 81.72 -4.88 107.68
LAB*LABa 81.72 -4.52 112.38
LAB*TCHa 50.0 112.47 92.31

relative CIELAB lab*
lab*lab 0.88 -0.039 0.999
lab*tch 0.5 1.0 0.256
lab*nch 0.0 1.0 0.256

relative Natural Colour (NC)
lab*lrj 0.88 -0.009 1.0
lab*tce 0.5 1.0 0.252
lab*nce 0.0 1.0 j00g

0,25 0,50 0,75 1,00
chromaticness c^*

blackness n^*

$n^* = 0,00$

$n^* = 0,50$

$n^* = 1,0$

VE300-7, 3 step scales for constant CIELAB hue 92/360 = 0.256 (left)

BAM-test chart VE30; Colorimetric systems CNS18 & FRS06

D65: 3 step colour scales and coordinate data for 10 hues

3 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 $h^* = lab^*h = 162/360 = 0.451$

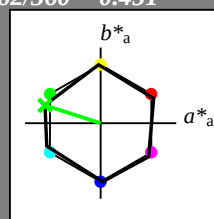
lab^*tch and lab^*nch

D65: hue G

LCH*Ma: 57 77 162

olv*Ma: 0.0 1.0 0.01

triangle lightness t^*



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

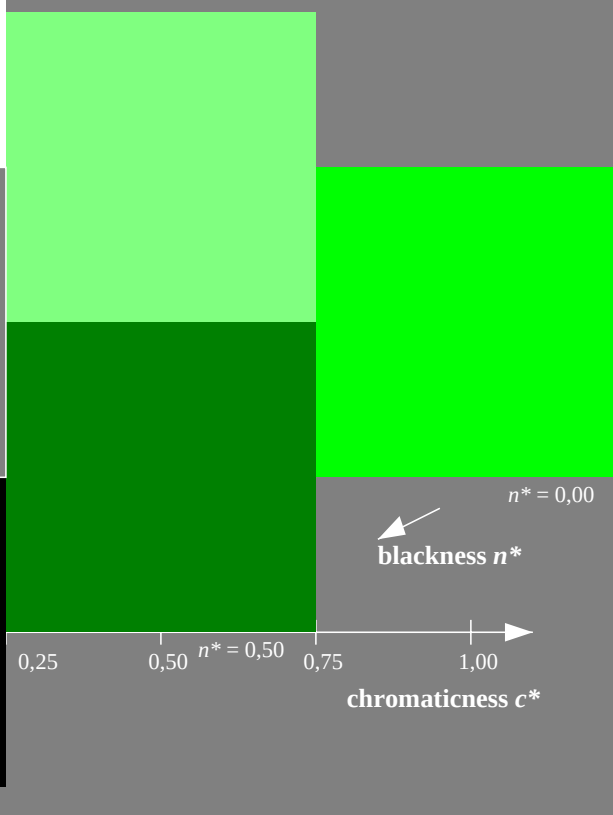
%Gamut

$u^*_{rel} = 100$

%Regularity

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

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



Output: Colorimetric Printer Reflective System FRS06

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

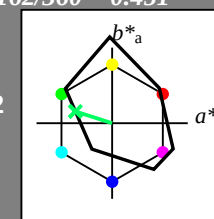
lab^*tch and lab^*nch

D65: hue G

LCH*Ma: 43 51 162

olv*Ma: 0.0 1.0 0.38

triangle lightness t^*



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

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

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

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	91.97	-0.17	-5.11		
LAB*LABa	91.97	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*	0.5	1.0	0.689	(1.0)	
cmyn3*	0.5	0.0	0.311	(0.0)	
olvi4*	0.5	1.0	0.689	1.0	
cmyn4*	0.5	0.0	0.311	0.0	
standard and adapted CIELAB					
LAB*LAB	67.29	-24.87	3.65		
LAB*LABa	67.29	-24.27	7.78		
LAB*TCHa	75.0	25.5	162.23		
relative CIELAB lab*					
lab*lab	0.712	-0.475	0.153		
lab*tch	0.75	0.5	0.451		
lab*nch	0.0	0.5	0.451		
relative Natural Colour (NC)					
lab*lrj	0.712	-0.498	-0.03		
lab*tce	0.75	0.5	0.51		
lab*nce	0.0	0.5	g04b		

relative Inform. Technology (IT)					
olvi3*	0.0	1.0	0.378	(1.0)	
cmyn3*	1.0	0.0	0.622	(0.0)	
olvi4*	0.0	1.0	0.378	1.0	
cmyn4*	1.0	0.0	0.622	0.0	
standard and adapted CIELAB					
LAB*LAB	42.62	-49.57	12.41		
LAB*LABa	42.62	-48.56	15.57		
LAB*TCHa	50.0	51.0	162.22		
relative CIELAB lab*					
lab*lab	0.424	-0.951	0.305		
lab*tch	0.5	1.0	0.451		
lab*nch	0.0	1.0	0.451		
relative Natural Colour (NC)					
lab*lrj	0.424	-0.997	-0.062		
lab*tce	0.5	1.0	0.51		
lab*nce	0.0	1.0	g04b		

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	49.11	-0.89	-3.42		
LAB*LABa	49.11	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*	0.0	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	6.26	-1.62	-1.73		
LAB*LABa	6.26	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*	0.0	0.5	0.189	(1.0)	
cmyn3*	1.0	0.5	0.811	(0.0)	
olvi4*	0.5	1.0	0.689	0.5	
cmyn4*	0.5	0.0	0.311	0.5	
standard and adapted CIELAB					
LAB*LAB	24.44	-25.6	5.34		
LAB*LABa	24.44	-24.28	7.79		
LAB*TCHa	25.01	25.5	162.21		
relative CIELAB lab*					
lab*lab	0.212	-0.475	0.153		
lab*tch	0.25	0.5	0.451		
lab*nch	0.5	0.5	0.451		
relative Natural Colour (NC)					
lab*lrj	0.212	-0.498	-0.03		
lab*tce	0.25	0.5	0.51		
lab*nce	0.5	0.5	g03b		

relative Inform. Technology (IT)					
olvi3*	0.0	1.0	0.378	(1.0)	
cmyn3*	1.0	0.0	0.622	(0.0)	
olvi4*	0.0	1.0	0.378	1.0	
cmyn4*	1.0	0.0	0.622	0.0	
standard and adapted CIELAB					
LAB*LAB	42.62	-49.57	12.41		
LAB*LABa	42.62	-48.56	15.57		
LAB*TCHa	50.0	51.0	162.22		
relative CIELAB lab*					
lab*lab	0.424	-0.951	0.305		
lab*tch	0.5	1.0	0.451		
lab*nch	0.0	1.0	0.451		
relative Natural Colour (NC)					
lab*lrj	0.424	-0.997	-0.062		
lab*tce	0.5	1.0	0.51		
lab*nce	0.0	1.0	g04b		

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

input: olv* setrgbcolor

output: no change compared to input

BAM-test chart VE30; Colorimetric systems CNS18 & FRS06

D65: 3 step colour scales and coordinate data for 10 hues

Input: Colorimetric Natural Reflective System CNS18

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

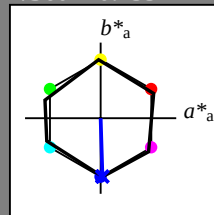
lab^*tch and lab^*nch

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

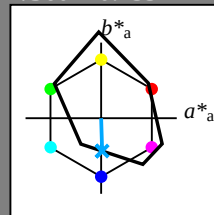
lab^*tch and lab^*nch

D65: hue B

LCH*Ma: 35 43 272

olv*Ma: 0.0 0.66 1.0

triangle lightness t^*



%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

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 91.97 -0.17 -5.11
LAB*LABa 91.97 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* 0.5 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 49.11 -0.89 -3.42
LAB*LABa 49.11 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* 0.0 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 6.26 -1.62 -1.73
LAB*LABa 6.26 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* 0.5 0.828 1.0 (1.0)
cmyn3* 0.5 0.172 0.0 (0.0)
olvi4* 0.5 0.828 1.0 1.0
cmyn4* 0.5 0.172 0.0 0.0

standard and adapted CIELAB
LAB*LAB 63.44 0.0 -25.69
LAB*LABa 63.44 0.65 -21.71
LAB*TCHa 75.0 21.73 271.72

relative CIELAB lab*
lab*lab 0.667 0.015 -0.499
lab*tch 0.75 0.5 0.755
lab*nch 0.0 0.5 0.755

relative Natural Colour (NC)
lab*lrj 0.667 -0.011 -0.499
lab*tce 0.75 0.5 0.746
lab*nce 0.0 0.5 g98b

relative Inform. Technology (IT)
olvi3* 0.0 0.328 0.5 (1.0)
cmyn3* 1.0 0.672 0.5 (0.0)
olvi4* 0.5 0.828 1.0 0.5
cmyn4* 0.5 0.172 0.0 0.5

standard and adapted CIELAB
LAB*LAB 20.59 -0.72 -24.0
LAB*LABa 20.59 0.66 -21.71
LAB*TCHa 25.01 21.73 271.75

relative CIELAB lab*
lab*lab 0.167 0.015 -0.499
lab*tch 0.25 0.5 0.755
lab*nch 0.5 0.5 0.755

relative Natural Colour (NC)
lab*lrj 0.167 -0.01 -0.499
lab*tce 0.25 0.5 0.746
lab*nce 0.5 0.5 g98b

relative Inform. Technology (IT)
olvi3* 0.0 0.657 1.0 (1.0)
cmyn3* 1.0 0.343 0.0 (0.0)
olvi4* 0.0 0.657 1.0 1.0
cmyn4* 1.0 0.343 0.0 0.0

standard and adapted CIELAB
LAB*LAB 34.92 0.17 -46.28
LAB*LABa 34.92 1.32 -43.42
LAB*TCHa 50.0 43.45 271.73

relative CIELAB lab*
lab*lab 0.334 0.03 -0.998
lab*tch 0.5 1.0 0.755
lab*nch 0.0 1.0 0.755

relative Natural Colour (NC)
lab*lrj 0.334 -0.022 -0.999
lab*tce 0.5 1.0 0.746
lab*nce 0.0 1.0 g98b

relative Inform. Technology (IT)
olvi3* 0.0 0.328 0.5 (1.0)
cmyn3* 1.0 0.672 0.5 (0.0)
olvi4* 0.5 0.828 1.0 0.5
cmyn4* 0.5 0.172 0.0 0.5

standard and adapted CIELAB
LAB*LAB 20.59 -0.72 -24.0
LAB*LABa 20.59 0.66 -21.71
LAB*TCHa 25.01 21.73 271.75

relative CIELAB lab*
lab*lab 0.167 0.015 -0.499
lab*tch 0.25 0.5 0.755
lab*nch 0.5 0.5 0.755

relative Natural Colour (NC)
lab*lrj 0.167 -0.01 -0.499
lab*tce 0.25 0.5 0.746
lab*nce 0.5 0.5 g98b

relative Inform. Technology (IT)
olvi3* 0.0 0.657 1.0 (1.0)
cmyn3* 1.0 0.343 0.0 (0.0)
olvi4* 0.0 0.657 1.0 1.0
cmyn4* 1.0 0.343 0.0 0.0

standard and adapted CIELAB
LAB*LAB 34.92 0.17 -46.28
LAB*LABa 34.92 1.32 -43.42
LAB*TCHa 50.0 43.45 271.73

relative CIELAB lab*
lab*lab 0.334 0.03 -0.998
lab*tch 0.5 1.0 0.755
lab*nch 0.0 1.0 0.755

relative Natural Colour (NC)
lab*lrj 0.334 -0.022 -0.999
lab*tce 0.5 1.0 0.746
lab*nce 0.0 1.0 g98b

VE300-7, 3 step scales for constant CIELAB hue 272/360 = 0.755 (left)

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

BAM-test chart VE30; Colorimetric systems CNS18 & FRS06

D65: 3 step colour scales and coordinate data for 10 hues

input: olv* setrgbcolor

output: no change compared to input