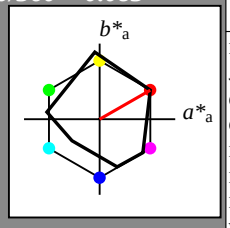
Input: Colorimetric Reflective System MRS18

for hue *h** = *lab*h* = 30/360 = 0.083
*lab*tch* and *lab*nch*

D65: hue R
LCH*Ma: 50 77 30
olv*Ma: 1.0 0.0 0.0

triangle lightness *t**



MRS18; adapted (a) CIELAB data

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

%Gamut
u*rel = 91
%Regularity
g*H,rel = 41
g*C,rel = 52

***relative* Inform. Technology (IT)**

*olvi3**	1.0	1.0	1.0	(1.0)
*cmyn3**	0.0	0.0	0.0	(0.0)
*olvi4**	1.0	1.0	1.0	1.0
*cmyn4**	0.0	0.0	0.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	95.41	−0.97	4.75
*LAB*LABa*	95.41	0.0	0.0
*LAB*TCHa*	99.99	0.01	–

relative* CIELAB *lab*

*lab*lab*	1.0	0.0	0.0
*lab*tch*	1.0	0.0	–
*lab*nch*	0.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	1.0	0.0	0.0
*lab*tce*	1.0	0.0	–
*lab*ncE*	0.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.5	0.5	0.5	(1.0)
*cmyn3**	0.5	0.5	0.5	(0.0)
*olvi4**	1.0	1.0	1.0	0.5
*cmyn4**	0.0	0.0	0.0	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	56.71	−0.23	2.14
*LAB*LABa*	56.71	0.0	0.0
*LAB*TCHa*	50.0	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.5	0.0	0.0
*lab*tch*	0.5	0.0	–
*lab*nch*	0.5	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.5	0.0	0.0
*lab*tce*	0.5	0.0	–
*lab*ncE*	0.5	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.0	0.0	0.0	(1.0)
*cmyn3**	1.0	1.0	1.0	(0.0)
*olvi4**	1.0	1.0	1.0	0.0
*cmyn4**	0.0	0.0	0.0	1.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	18.02	0.5	−0.46
*LAB*LABa*	18.02	0.0	0.0
*LAB*TCHa*	0.01	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.0	0.0	0.0
*lab*tch*	0.0	0.0	–
*lab*nch*	1.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.0	0.0	0.0
*lab*tce*	0.0	0.0	–
*lab*ncE*	1.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	1.0	0.5	0.5	(1.0)
*cmyn3**	0.0	0.5	0.5	(0.0)
*olvi4**	1.0	0.5	0.5	1.0
*cmyn4**	0.0	0.5	0.5	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	72.52	32.93	22.4
*LAB*LABa*	72.52	33.47	19.18
*LAB*TCHa*	75.0	38.58	29.82

relative* CIELAB *lab*

*lab*lab*	0.704	0.434	0.249
*lab*tch*	0.75	0.5	0.083
*lab*nch*	0.0	0.5	0.083

***relative* Natural Colour (NC)**

*lab*lrj*	0.704	0.496	0.06
*lab*tce*	0.75	0.5	0.019
*lab*ncE*	0.0	0.5	r07j

***relative* Inform. Technology (IT)**

*olvi3**	0.5	0.0	0.0	(1.0)
*cmyn3**	0.5	1.0	1.0	(0.0)
*olvi4**	1.0	0.5	0.5	0.5
*cmyn4**	0.0	0.5	0.5	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	33.82	33.67	19.79
*LAB*LABa*	33.82	33.47	19.18
*LAB*TCHa*	25.01	38.58	29.82

relative* CIELAB *lab*

*lab*lab*	0.204	0.434	0.249
*lab*tch*	0.25	0.5	0.083
*lab*nch*	0.5	0.5	0.083

***relative* Natural Colour (NC)**

*lab*lrj*	0.204	0.496	0.06
*lab*tce*	0.25	0.5	0.019
*lab*ncE*	0.5	0.5	r07j

***relative* Inform. Technology (IT)**

*olvi3**	1.0	0.0	0.0	(1.0)
*cmyn3**	0.0	1.0	1.0	(0.0)
*olvi4**	1.0	0.0	0.0	1.0
*cmyn4**	0.0	1.0	1.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	49.63	66.84	40.03
*LAB*LABa*	49.63	66.95	38.36
*LAB*TCHa*	50.0	77.16	29.82

relative* CIELAB *lab*

*lab*lab*	0.409	0.867	0.497
*lab*tch*	0.5	1.0	0.083
*lab*nch*	0.0	1.0	0.083

***relative* Natural Colour (NC)**

*lab*lrj*	0.409	0.993	0.119
*lab*tce*	0.5	1.0	0.019
*lab*ncE*	0.0	1.0	r07j

*n** = 0,00

blackness *n**

0,25 0,50 *n** = 0,50 0,75 1,00

chromaticness *c**

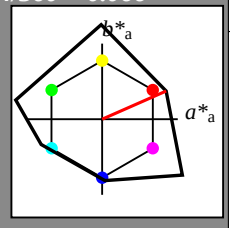
*n** = 1,0

Output: Colorimetric Reflective System NCS11

for hue *h** = *lab*h* = 24/360 = 0.066
*lab*tch* and *lab*nch*

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

triangle lightness *t**



NCS11; adapted (a) CIELAB data

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

%Gamut
u*rel = 149
%Regularity
g*H,rel = 46
g*C,rel = 65

***relative* Inform. Technology (IT)**

*olvi3**	1.0	1.0	1.0	(1.0)
*cmyn3**	0.0	0.0	0.0	(0.0)
*olvi4**	1.0	1.0	1.0	1.0
*cmyn4**	0.0	0.0	0.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	95.41	0.0	−0.01
*LAB*LABa*	95.41	0.0	0.0
*LAB*TCHa*	99.99	0.01	–

relative* CIELAB *lab*

*lab*lab*	1.0	0.0	0.0
*lab*tch*	1.0	0.0	–
*lab*nch*	0.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	1.0	0.0	0.0
*lab*tce*	1.0	0.0	–
*lab*ncE*	0.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.5	0.5	0.5	(1.0)
*cmyn3**	0.5	0.5	0.5	(0.0)
*olvi4**	1.0	1.0	1.0	0.5
*cmyn4**	0.0	0.0	0.0	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	53.21	0.04	0.0
*LAB*LABa*	53.21	0.0	0.0
*LAB*TCHa*	50.0	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.5	0.0	0.0
*lab*tch*	0.5	0.0	–
*lab*nch*	0.5	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.5	0.0	0.0
*lab*tce*	0.5	0.0	–
*lab*ncE*	0.5	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.0	0.0	0.0	(1.0)
*cmyn3**	1.0	1.0	1.0	(0.0)
*olvi4**	1.0	1.0	1.0	0.0
*cmyn4**	0.0	0.0	0.0	1.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	11.01	0.07	0.01
*LAB*LABa*	11.01	0.0	0.0
*LAB*TCHa*	0.01	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.0	0.0	0.0
*lab*tch*	0.0	0.0	–
*lab*nch*	1.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.0	0.0	0.0
*lab*tce*	0.0	0.0	–
*lab*ncE*	1.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	1.0	0.5	0.5	(1.0)
*cmyn3**	0.0	0.5	0.5	(0.0)
*olvi4**	1.0	0.5	0.5	1.0
*cmyn4**	0.0	0.5	0.5	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	71.27	42.34	18.63
*LAB*LABa*	71.27	42.31	18.62
*LAB*TCHa*	75.0	46.23	23.75

relative* CIELAB *lab*

*lab*lab*	0.714	0.458	0.201
*lab*tch*	0.75	0.5	0.066
*lab*nch*	0.0	0.5	0.066

***relative* Natural Colour (NC)**

*lab*lrj*	0.714	0.5	−0.011
*lab*tce*	0.75	0.5	0.996
*lab*ncE*	0.0	0.5	b98r

***relative* Inform. Technology (IT)**

*olvi3**	0.5	0.0	0.0	(1.0)
*cmyn3**	0.5	1.0	1.0	(0.0)
*olvi4**	1.0	0.5	0.5	0.5
*cmyn4**	0.0	0.5	0.5	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	29.07	42.38	18.64
*LAB*LABa*	29.07	42.31	18.62
*LAB*TCHa*	25.01	46.23	23.75

relative* CIELAB *lab*

*lab*lab*	0.214	0.458	0.201
*lab*tch*	0.25	0.5	0.066
*lab*nch*	0.5	0.5	0.066

***relative* Natural Colour (NC)**

*lab*lrj*	0.214	0.5	−0.011
*lab*tce*	0.25	0.5	0.996
*lab*ncE*	0.5	0.5	b98r

***relative* Inform. Technology (IT)**

*olvi3**	1.0	0.0	0.0	(1.0)
*cmyn3**	0.0	1.0	1.0	(0.0)
*olvi4**	1.0	0.0	0.0	1.0
*cmyn4**	0.0	1.0	1.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	47.15	84.68	37.26
*LAB*LABa*	47.15	84.63	37.24
*LAB*TCHa*	50.0	92.46	23.75

relative* CIELAB *lab*

*lab*lab*	0.428	0.915	0.403
*lab*tch*	0.5	1.0	0.066
*lab*nch*	0.0	1.0	0.066

***relative* Natural Colour (NC)**

*lab*lrj*	0.428	1.0	−0.023
*lab*tce*	0.5	1.0	0.996
*lab*ncE*	0.0	1.0	b98r

*n** = 0,00

blackness *n**

0,25 0,50 *n** = 0,50 0,75 1,00

chromaticness *c**

*n** = 1,0

UE130−7, 3 step scales for constant CIELAB hue 30/360 = 0.083 (left)

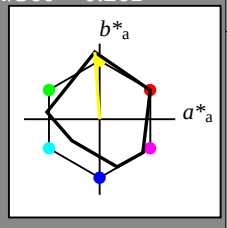
3 step scales for constant CIELAB hue 24/360 = 0.066 (right)

BAM-test chart UE13; Colorimetric systems MRS18 & NCS11a input: *cmy0* setcmykcolor*
D65: 2 coordinate data of 3 step colour scales for 10 hues output: *olv* setrgbcolor / w* setgray*

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

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

triangle lightness *t**



MRS18; adapted (a) CIELAB data

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

%Gamut
u*rel = 91
%Regularity
g*H,rel = 41
g*C,rel = 52

***relative* Inform. Technology (IT)**

*olvi3**	1.0	1.0	1.0	(1.0)
*cmyn3**	0.0	0.0	0.0	(0.0)
*olvi4**	1.0	1.0	1.0	1.0
*cmyn4**	0.0	0.0	0.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	95.41	−0.97	4.75
*LAB*LABa*	95.41	0.0	0.0
*LAB*TCHa*	99.99	0.01	–

relative* CIELAB *lab*

*lab*lab*	1.0	0.0	0.0
*lab*tch*	1.0	0.0	–
*lab*nch*	0.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	1.0	0.0	0.0
*lab*tce*	1.0	0.0	–
*lab*ncE*	0.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.5	0.5	0.5	(1.0)
*cmyn3**	0.5	0.5	0.5	(0.0)
*olvi4**	1.0	1.0	1.0	0.5
*cmyn4**	0.0	0.0	0.0	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	56.71	−0.23	2.14
*LAB*LABa*	56.71	0.0	0.0
*LAB*TCHa*	50.0	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.5	0.0	0.0
*lab*tch*	0.5	0.0	–
*lab*nch*	0.5	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.5	0.0	0.0
*lab*tce*	0.5	0.0	–
*lab*ncE*	0.5	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.0	0.0	0.0	(1.0)
*cmyn3**	1.0	1.0	1.0	(0.0)
*olvi4**	1.0	1.0	1.0	0.0
*cmyn4**	0.0	0.0	0.0	1.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	18.02	0.5	−0.46
*LAB*LABa*	18.02	0.0	0.0
*LAB*TCHa*	0.01	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.0	0.0	0.0
*lab*tch*	0.0	0.0	–
*lab*nch*	1.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.0	0.0	0.0
*lab*tce*	0.0	0.0	–
*lab*ncE*	1.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	1.0	1.0	0.5	(1.0)
*cmyn3**	0.0	0.0	0.5	(0.0)
*olvi4**	1.0	1.0	0.5	1.0
*cmyn4**	0.0	0.0	0.5	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	93.05	−4.11	48.97
*LAB*LABa*	93.05	−3.17	44.37
*LAB*TCHa*	75.0	44.48	94.1

relative* CIELAB *lab*

*lab*lab*	0.969	−0.035	0.499
*lab*tch*	0.75	0.5	0.261
*lab*nch*	0.0	0.5	0.261

***relative* Natural Colour (NC)**

*lab*lrj*	0.969	−0.023	0.499
*lab*tce*	0.75	0.5	0.258
*lab*ncE*	0.0	0.5	j03g

***relative* Inform. Technology (IT)**

*olvi3**	0.5	0.5	0.0	(1.0)
*cmyn3**	0.5	0.5	1.0	(0.0)
*olvi4**	1.0	1.0	0.5	0.5
*cmyn4**	0.0	0.0	0.5	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	54.35	−3.37	46.36
*LAB*LABa*	54.35	−3.17	44.37
*LAB*TCHa*	25.01	44.48	94.1

relative* CIELAB *lab*

*lab*lab*	0.47	−0.035	0.499
*lab*tch*	0.25	0.5	0.261
*lab*nch*	0.5	0.5	0.261

***relative* Natural Colour (NC)**

*lab*lrj*	0.47	−0.023	0.499
*lab*tce*	0.25	0.5	0.258
*lab*ncE*	0.5	0.5	j03g

***relative* Inform. Technology (IT)**

*olvi3**	1.0	1.0	0.0	(1.0)
*cmyn3**	0.0	0.0	1.0	(0.0)
*olvi4**	1.0	1.0	0.0	1.0
*cmyn4**	0.0	0.0	0.0	1.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	90.69	−7.25	93.17
*LAB*LABa*	90.69	−6.36	88.73
*LAB*TCHa*	50.0	88.96	94.1

relative* CIELAB *lab*

*lab*lab*	0.939	−0.071	0.997
*lab*tch*	0.5	1.0	0.261
*lab*nch*	0.0	1.0	0.261

***relative* Natural Colour (NC)**

*lab*lrj*	0.939	−0.048	0.999
*lab*tce*	0.5	1.0	0.258
*lab*ncE*	0.0	1.0	j03g

*n** = 0,00

blackness *n**

*n** = 1,0

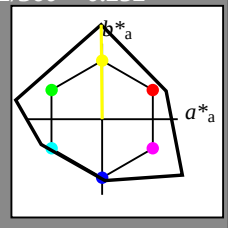
0,25 0,50 *n** = 0,50 0,75 1,00

chromaticness *c**

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

D65: hue J
LCH*Ma: 91 125 91
olv*Ma: 1.0 1.0 0.0

triangle lightness *t**



NCS11; adapted (a) CIELAB data

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

%Gamut
u*rel = 149
%Regularity
g*H,rel = 46
g*C,rel = 65

***relative* Inform. Technology (IT)**

*olvi3**	1.0	1.0	1.0	(1.0)
*cmyn3**	0.0	0.0	0.0	(0.0)
*olvi4**	1.0	1.0	1.0	1.0
*cmyn4**	0.0	0.0	0.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	95.41	0.0	−0.01
*LAB*LABa*	95.41	0.0	0.0
*LAB*TCHa*	99.99	0.01	–

relative* CIELAB *lab*

*lab*lab*	1.0	0.0	0.0
*lab*tch*	1.0	0.0	–
*lab*nch*	0.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	1.0	0.0	0.0
*lab*tce*	1.0	0.0	–
*lab*ncE*	0.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.5	0.5	0.5	(1.0)
*cmyn3**	0.5	0.5	0.5	(0.0)
*olvi4**	1.0	1.0	1.0	0.5
*cmyn4**	0.0	0.0	0.0	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	53.21	0.04	0.0
*LAB*LABa*	53.21	0.0	0.0
*LAB*TCHa*	50.0	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.5	0.0	0.0
*lab*tch*	0.5	0.0	–
*lab*nch*	0.5	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.5	0.0	0.0
*lab*tce*	0.5	0.0	–
*lab*ncE*	0.5	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.0	0.0	0.0	(1.0)
*cmyn3**	1.0	1.0	1.0	(0.0)
*olvi4**	1.0	1.0	1.0	0.0
*cmyn4**	0.0	0.0	0.0	1.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	11.01	0.07	0.01
*LAB*LABa*	11.01	0.0	0.0
*LAB*TCHa*	0.01	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.0	0.0	0.0
*lab*tch*	0.0	0.0	–
*lab*nch*	1.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.0	0.0	0.0
*lab*tce*	0.0	0.0	–
*lab*ncE*	1.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	1.0	1.0	0.5	(1.0)
*cmyn3**	0.0	0.0	0.5	(0.0)
*olvi4**	1.0	1.0	0.5	1.0
*cmyn4**	0.0	0.0	0.5	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	93.38	−0.62	62.5
*LAB*LABa*	93.38	−0.63	62.5
*LAB*TCHa*	75.0	62.5	90.59

relative* CIELAB *lab*

*lab*lab*	0.976	−0.004	0.5
*lab*tch*	0.75	0.5	0.252
*lab*nch*	0.0	0.5	0.252

***relative* Natural Colour (NC)**

*lab*lrj*	0.976	0.02	0.499
*lab*tce*	0.75	0.5	0.243
*lab*ncE*	0.0	0.5	r97j

***relative* Inform. Technology (IT)**

*olvi3**	0.5	0.5	0.0	(1.0)
*cmyn3**	0.5	0.5	1.0	(0.0)
*olvi4**	1.0	1.0	0.5	0.5
*cmyn4**	0.0	0.0	0.5	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	51.18	−0.59	62.51
*LAB*LABa*	51.18	−0.63	62.5
*LAB*TCHa*	25.01	62.5	90.59

relative* CIELAB *lab*

*lab*lab*	0.476	−0.004	0.5
*lab*tch*	0.25	0.5	0.252
*lab*nch*	0.5	0.5	0.252

***relative* Natural Colour (NC)**

*lab*lrj*	0.476	0.02	0.499
*lab*tce*	0.25	0.5	0.243
*lab*ncE*	0.5	0.5	r97j

***relative* Inform. Technology (IT)**

*olvi3**	1.0	1.0	0.0	(1.0)
*cmyn3**	0.0	0.0	1.0	(0.0)
*olvi4**	1.0	1.0	0.0	1.0
*cmyn4**	0.0	0.0	0.0	1.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	91.36	−1.26	125.0
*LAB*LABa*	91.36	−1.27	125.0
*LAB*TCHa*	50.0	125.01	90.59

relative* CIELAB *lab*

*lab*lab*	0.952	−0.009	1.0
*lab*tch*	0.5	1.0	0.252
*lab*nch*	0.0	1.0	0.252

***relative* Natural Colour (NC)**

*lab*lrj*	0.952	0.041	0.999
*lab*tce*	0.5	1.0	0.243
*lab*ncE*	0.0	1.0	r97j

*n** = 0,00

blackness *n**

*n** = 1,0

0,25 0,50 *n** = 0,50 0,75 1,00

chromaticness *c**

UE130−7, 3 step scales for constant CIELAB hue 94/360 = 0.261 (left)

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

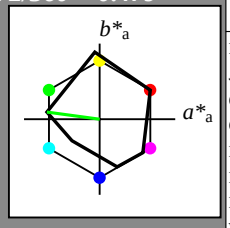
BAM-test chart UE13; Colorimetric systems MRS18 & NCS11a input: *cmy0* setcmykcolor*
D65: 2 coordinate data of 3 step colour scales for 10 hues output: *olv* setrgbcolor / w* setgray*

Input: Colorimetric Reflective System MRS18

for hue *h** = *lab*h* = 172/360 = 0.479
*lab*tch* and *lab*nch*

D65: hue G
LCH*Ma: 52 70 172
olv*Ma: 0.0 1.0 0.0

triangle lightness *t**



%Gamut
u*rel = 91
%Regularity
g*H,rel = 41
g*C,rel = 52

MRS18; adapted (a) CIELAB data

	L*=L*a	a*a	b*a	C*ab,a	h*ab,a
RMa	49.63	66.96	38.37	77.18	30
JMa	90.7	−6.36	88.75	88.98	94
GMa	52.11	−69.73	9.44	70.37	172
G50BMa	45.03	−36.57	−28.47	46.36	218
BMa	36.65	23.19	−63.05	67.18	290
B50RMa	34.94	57.17	−44.26	72.31	322
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.66	26.98	64.56	25
JCIE	81.26	−2.17	67.76	67.79	92
GCIE	52.23	−42.26	11.75	43.87	164
BCIE	30.57	1.15	−46.84	46.87	271

***relative* Inform. Technology (IT)**

*olvi3**	1.0	1.0	1.0	(1.0)
*cmyn3**	0.0	0.0	0.0	(0.0)
*olvi4**	1.0	1.0	1.0	1.0
*cmyn4**	0.0	0.0	0.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	95.41	−0.97	4.75
*LAB*LABa*	95.41	0.0	0.0
*LAB*TCHa*	99.99	0.01	–

relative* CIELAB *lab*

*lab*lab*	1.0	0.0	0.0
*lab*tch*	1.0	0.0	–
*lab*nch*	0.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	1.0	0.0	0.0
*lab*tce*	1.0	0.0	–
*lab*ncE*	0.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.5	0.5	0.5	(1.0)
*cmyn3**	0.5	0.5	0.5	(0.0)
*olvi4**	1.0	1.0	1.0	0.5
*cmyn4**	0.0	0.0	0.0	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	56.71	−0.23	2.14
*LAB*LABa*	56.71	0.0	0.0
*LAB*TCHa*	50.0	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.5	0.0	0.0
*lab*tch*	0.5	0.0	–
*lab*nch*	0.5	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.5	0.0	0.0
*lab*tce*	0.5	0.0	–
*lab*ncE*	0.5	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.0	0.0	0.0	(1.0)
*cmyn3**	1.0	1.0	1.0	(0.0)
*olvi4**	1.0	1.0	1.0	0.0
*cmyn4**	0.0	0.0	0.0	1.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	18.02	0.5	−0.46
*LAB*LABa*	18.02	0.0	0.0
*LAB*TCHa*	0.01	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.0	0.0	0.0
*lab*tch*	0.0	0.0	–
*lab*nch*	1.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.0	0.0	0.0
*lab*tce*	0.0	0.0	–
*lab*ncE*	1.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.5	1.0	0.5	(1.0)
*cmyn3**	0.5	0.0	0.5	(0.0)
*olvi4**	0.5	1.0	0.5	1.0
*cmyn4**	0.5	0.0	0.5	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	73.75	−35.42	8.02
*LAB*LABa*	73.75	−34.85	4.72
*LAB*TCHa*	75.0	35.18	172.29

relative* CIELAB *lab*

*lab*lab*	0.72	−0.494	0.067
*lab*tch*	0.75	0.5	0.479
*lab*nch*	0.0	0.5	0.479

***relative* Natural Colour (NC)**

*lab*lrj*	0.72	−0.496	−0.056
*lab*tce*	0.75	0.5	0.518
*lab*ncE*	0.0	0.5	g07b

***relative* Inform. Technology (IT)**

*olvi3**	0.0	0.5	0.0	(1.0)
*cmyn3**	1.0	0.5	1.0	(0.0)
*olvi4**	0.5	1.0	0.5	0.5
*cmyn4**	0.5	0.0	0.5	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	35.06	−34.67	5.41
*LAB*LABa*	35.06	−34.85	4.72
*LAB*TCHa*	25.01	35.18	172.29

relative* CIELAB *lab*

*lab*lab*	0.22	−0.494	0.067
*lab*tch*	0.25	0.5	0.479
*lab*nch*	0.5	0.5	0.479

***relative* Natural Colour (NC)**

*lab*lrj*	0.22	−0.496	−0.056
*lab*tce*	0.25	0.5	0.518
*lab*ncE*	0.5	0.5	g07b

***relative* Inform. Technology (IT)**

*olvi3**	0.0	1.0	0.0	(1.0)
*cmyn3**	1.0	0.0	1.0	(0.0)
*olvi4**	0.0	1.0	0.0	1.0
*cmyn4**	1.0	0.0	1.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	52.11	−69.86	11.28
*LAB*LABa*	52.11	−69.71	9.44
*LAB*TCHa*	50.0	70.36	172.29

relative* CIELAB *lab*

*lab*lab*	0.441	−0.99	0.134
*lab*tch*	0.5	1.0	0.479
*lab*nch*	0.0	1.0	0.479

***relative* Natural Colour (NC)**

*lab*lrj*	0.441	−0.992	−0.114
*lab*tce*	0.5	1.0	0.518
*lab*ncE*	0.0	1.0	g07b

*n** = 0,00

blackness *n**

*n** = 1,0

0,25 0,50 *n** = 0,50 0,75 1,00

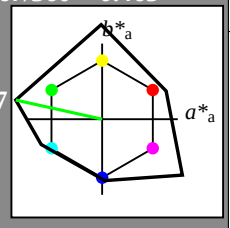
chromaticness *c**

Output: Colorimetric Reflective System NCS11

for hue *h** = *lab*h* = 167/360 = 0.465
*lab*tch* and *lab*nch*

D65: hue G
LCH*Ma: 63 117 167
olv*Ma: 0.0 1.0 0.0

triangle lightness *t**



%Gamut
u*rel = 149
%Regularity
g*H,rel = 46
g*C,rel = 65

NCS11; adapted (a) CIELAB data

	L*=L*a	a*a	b*a	C*ab,a	h*ab,a
RMa	47.15	84.64	37.25	92.48	24
JMa	91.37	−1.27	125.03	125.03	91
GMa	63.07	−114.28	25.35	117.06	167
G50BMa	59.47	−80.6	−33.45	87.28	203
BMa	49.01	3.65	−81.19	81.28	273
B50RMa	44.06	106.09	−73.93	129.32	325
NMa	10.99	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.69	27.98	65.01	25
JCIE	81.26	−2.9	71.56	71.62	92
GCIE	52.23	−42.45	13.59	44.59	162
BCIE	30.57	1.35	−46.48	46.51	272

***relative* Inform. Technology (IT)**

*olvi3**	1.0	1.0	1.0	(1.0)
*cmyn3**	0.0	0.0	0.0	(0.0)
*olvi4**	1.0	1.0	1.0	1.0
*cmyn4**	0.0	0.0	0.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	95.41	0.0	−0.01
*LAB*LABa*	95.41	0.0	0.0
*LAB*TCHa*	99.99	0.01	–

relative* CIELAB *lab*

*lab*lab*	1.0	0.0	0.0
*lab*tch*	1.0	0.0	–
*lab*nch*	0.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	1.0	0.0	0.0
*lab*tce*	1.0	0.0	–
*lab*ncE*	0.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.5	0.5	0.5	(1.0)
*cmyn3**	0.5	0.5	0.5	(0.0)
*olvi4**	1.0	1.0	1.0	0.5
*cmyn4**	0.0	0.0	0.0	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	53.21	0.04	0.0
*LAB*LABa*	53.21	0.0	0.0
*LAB*TCHa*	50.0	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.5	0.0	0.0
*lab*tch*	0.5	0.0	–
*lab*nch*	0.5	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.5	0.0	0.0
*lab*tce*	0.5	0.0	–
*lab*ncE*	0.5	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.0	0.0	0.0	(1.0)
*cmyn3**	1.0	1.0	1.0	(0.0)
*olvi4**	1.0	1.0	1.0	0.0
*cmyn4**	0.0	0.0	0.0	1.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	11.01	0.07	0.01
*LAB*LABa*	11.01	0.0	0.0
*LAB*TCHa*	0.01	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.0	0.0	0.0
*lab*tch*	0.0	0.0	–
*lab*nch*	1.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.0	0.0	0.0
*lab*tce*	0.0	0.0	–
*lab*ncE*	1.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.5	1.0	0.5	(1.0)
*cmyn3**	0.5	0.0	0.5	(0.0)
*olvi4**	0.5	1.0	0.5	1.0
*cmyn4**	0.5	0.0	0.5	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	79.24	−57.1	12.67
*LAB*LABa*	79.24	−57.12	12.67
*LAB*TCHa*	75.0	58.52	167.5

relative* CIELAB *lab*

*lab*lab*	0.808	−0.487	0.108
*lab*tch*	0.75	0.5	0.465
*lab*nch*	0.0	0.5	0.465

***relative* Natural Colour (NC)**

*lab*lrj*	0.808	−0.497	−0.037
*lab*tce*	0.75	0.5	0.512
*lab*ncE*	0.0	0.5	g04b

***relative* Inform. Technology (IT)**

*olvi3**	0.0	0.5	0.0	(1.0)
*cmyn3**	1.0	0.5	1.0	(0.0)
*olvi4**	0.5	1.0	0.5	0.5
*cmyn4**	0.5	0.0	0.5	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	37.04	−57.07	12.69
*LAB*LABa*	37.04	−57.12	12.67
*LAB*TCHa*	25.01	58.52	167.5

relative* CIELAB *lab*

*lab*lab*	0.309	−0.487	0.108
*lab*tch*	0.25	0.5	0.465
*lab*nch*	0.5	0.5	0.465

***relative* Natural Colour (NC)**

*lab*lrj*	0.309	−0.497	−0.037
*lab*tce*	0.25	0.5	0.512
*lab*ncE*	0.5	0.5	g04b

***relative* Inform. Technology (IT)**

*olvi3**	0.0	1.0	0.0	(1.0)
*cmyn3**	1.0	0.0	1.0	(0.0)
*olvi4**	0.0	1.0	0.0	1.0
*cmyn4**	1.0	0.0	1.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	63.07	−114.22	25.35
*LAB*LABa*	63.07	−114.25	25.34
*LAB*TCHa*	50.0	117.04	167.5

relative* CIELAB *lab*

*lab*lab*	0.617	−0.975	0.216
*lab*tch*	0.5	1.0	0.465
*lab*nch*	0.0	1.0	0.465

***relative* Natural Colour (NC)**

*lab*lrj*	0.617	−0.996	−0.074
*lab*tce*	0.5	1.0	0.512
*lab*ncE*	0.0	1.0	g04b

*n** = 0,00

blackness *n**

*n** = 1,0

0,25 0,50 *n** = 0,50 0,75 1,00

chromaticness *c**

UE130−7, 3 step scales for constant CIELAB hue 172/360 = 0.479 (left)

3 step scales for constant CIELAB hue 167/360 = 0.465 (right)

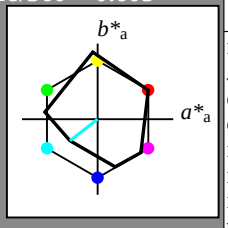
BAM-test chart UE13; Colorimetric systems MRS18 & NCS11a input: *cmy0* setcmykcolor*
D65: 2 coordinate data of 3 step colour scales for 10 hues output: *olv* setrgbcolor / w* setgray*

Input: Colorimetric Reflective System MRS18

for hue *h** = *lab*h* = 218/360 = 0.605
*lab*tch* and *lab*nch*

D65: hue G50B
LCH*Ma: 45 46 218
olv*Ma: 0.0 1.0 1.0

triangle lightness *t**



MRS18; adapted (a) CIELAB data

	L*=L*a	a*a	b*a	C*ab,a	h*ab,a
RMa	49.63	66.96	38.37	77.18	30
JMa	90.7	−6.36	88.75	88.98	94
GMa	52.11	−69.73	9.44	70.37	172
G50BMa	45.03	−36.57	−28.47	46.36	218
BMa	36.65	23.19	−63.05	67.18	290
B50RMa	34.94	57.17	−44.26	72.31	322
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.66	26.98	64.56	25
JCIE	81.26	−2.17	67.76	67.79	92
GCIE	52.23	−42.26	11.75	43.87	164
BCIE	30.57	1.15	−46.84	46.87	271

%Gamut
u*rel = 91
%Regularity
g*H,rel = 41
g*C,rel = 52

***relative* Inform. Technology (IT)**

*olvi3**	1.0	1.0	1.0	(1.0)
*cmyn3**	0.0	0.0	0.0	(0.0)
*olvi4**	1.0	1.0	1.0	1.0
*cmyn4**	0.0	0.0	0.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	95.41	−0.97	4.75
*LAB*LABa*	95.41	0.0	0.0
*LAB*TCHa*	99.99	0.01	–

relative* CIELAB *lab*

*lab*lab*	1.0	0.0	0.0
*lab*tch*	1.0	0.0	–
*lab*nch*	0.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	1.0	0.0	0.0
*lab*tce*	1.0	0.0	–
*lab*ncE*	0.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.5	0.5	0.5	(1.0)
*cmyn3**	0.5	0.5	0.5	(0.0)
*olvi4**	1.0	1.0	1.0	0.5
*cmyn4**	0.0	0.0	0.0	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	56.71	−0.23	2.14
*LAB*LABa*	56.71	0.0	0.0
*LAB*TCHa*	50.0	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.5	0.0	0.0
*lab*tch*	0.5	0.0	–
*lab*nch*	0.5	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.5	0.0	0.0
*lab*tce*	0.5	0.0	–
*lab*ncE*	0.5	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.0	0.0	0.0	(1.0)
*cmyn3**	1.0	1.0	1.0	(0.0)
*olvi4**	1.0	1.0	1.0	0.0
*cmyn4**	0.0	0.0	0.0	1.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	18.02	0.5	−0.46
*LAB*LABa*	18.02	0.0	0.0
*LAB*TCHa*	0.01	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.0	0.0	0.0
*lab*tch*	0.0	0.0	–
*lab*nch*	1.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.0	0.0	0.0
*lab*tce*	0.0	0.0	–
*lab*ncE*	1.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.5	1.0	1.0	(1.0)
*cmyn3**	0.5	0.0	0.0	(0.0)
*olvi4**	0.5	1.0	1.0	1.0
*cmyn4**	0.5	0.0	0.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	70.21	−18.77	−11.17
*LAB*LABa*	70.21	−18.27	−14.23
*LAB*TCHa*	75.0	23.17	217.91

relative* CIELAB *lab*

*lab*lab*	0.674	−0.393	−0.306
*lab*tch*	0.75	0.5	0.605
*lab*nch*	0.0	0.5	0.605

***relative* Natural Colour (NC)**

*lab*lrj*	0.674	−0.353	−0.352
*lab*tce*	0.75	0.5	0.625
*lab*ncE*	0.0	0.5	g49b

***relative* Inform. Technology (IT)**

*olvi3**	0.0	0.5	0.5	(1.0)
*cmyn3**	1.0	0.5	0.5	(0.0)
*olvi4**	0.5	1.0	1.0	0.5
*cmyn4**	0.5	0.0	0.0	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	31.52	−18.03	−13.78
*LAB*LABa*	31.52	−18.27	−14.23
*LAB*TCHa*	25.01	23.17	217.91

relative* CIELAB *lab*

*lab*lab*	0.175	−0.393	−0.306
*lab*tch*	0.25	0.5	0.605
*lab*nch*	0.5	0.5	0.605

***relative* Natural Colour (NC)**

*lab*lrj*	0.175	−0.353	−0.352
*lab*tce*	0.25	0.5	0.625
*lab*ncE*	0.5	0.5	g49b

***relative* Inform. Technology (IT)**

*olvi3**	0.0	1.0	1.0	(1.0)
*cmyn3**	1.0	0.0	0.0	(0.0)
*olvi4**	0.0	1.0	1.0	1.0
*cmyn4**	1.0	0.0	0.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	45.03	−36.57	−27.11
*LAB*LABa*	45.03	−36.56	−28.47
*LAB*TCHa*	50.0	46.35	217.91

relative* CIELAB *lab*

*lab*lab*	0.349	−0.788	−0.613
*lab*tch*	0.5	1.0	0.605
*lab*nch*	0.0	1.0	0.605

***relative* Natural Colour (NC)**

*lab*lrj*	0.349	−0.706	−0.706
*lab*tce*	0.5	1.0	0.625
*lab*ncE*	0.0	1.0	g49b

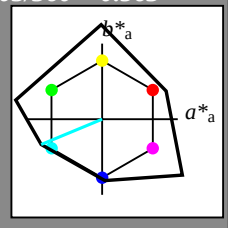
n* = 0,00
blackness *n**
0,25 0,50 n* = 0,50 0,75 1,00
chromaticness *c**
n* = 1,0

Output: Colorimetric Reflective System NCS11

for hue *h** = *lab*h* = 203/360 = 0.563
*lab*tch* and *lab*nch*

D65: hue G50B
LCH*Ma: 59 87 203
olv*Ma: 0.0 1.0 1.0

triangle lightness *t**



NCS11; adapted (a) CIELAB data

	L*=L*a	a*a	b*a	C*ab,a	h*ab,a
RMa	47.15	84.64	37.25	92.48	24
JMa	91.37	−1.27	125.03	125.03	91
GMa	63.07	−114.28	25.35	117.06	167
G50BMa	59.47	−80.6	−33.45	87.28	203
BMa	49.01	3.65	−81.19	81.28	273
B50RMa	44.06	106.09	−73.93	129.32	325
NMa	10.99	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.69	27.98	65.01	25
JCIE	81.26	−2.9	71.56	71.62	92
GCIE	52.23	−42.45	13.59	44.59	162
BCIE	30.57	1.35	−46.48	46.51	272

%Gamut
u*rel = 149
%Regularity
g*H,rel = 46
g*C,rel = 65

***relative* Inform. Technology (IT)**

*olvi3**	1.0	1.0	(1.0)
*cmyn3**	0.0	0.0	(0.0)
*olvi4**	1.0	1.0	1.0
*cmyn4**	0.0	0.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	95.41	0.0	−0.01
*LAB*LABa*	95.41	0.0	0.0
*LAB*TCHa*	99.99	0.01	–

relative* CIELAB *lab*

*lab*lab*	1.0	0.0	0.0
*lab*tch*	1.0	0.0	–
*lab*nch*	0.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	1.0	0.0	0.0
*lab*tce*	1.0	0.0	–
*lab*ncE*	0.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.5	0.5	0.5	(1.0)
*cmyn3**	0.5	0.5	0.5	(0.0)
*olvi4**	1.0	1.0	1.0	0.5
*cmyn4**	0.0	0.0	0.0	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	53.21	0.04	0.0
*LAB*LABa*	53.21	0.0	0.0
*LAB*TCHa*	50.0	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.5	0.0	0.0
*lab*tch*	0.5	0.0	–
*lab*nch*	0.5	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.5	0.0	0.0
*lab*tce*	0.5	0.0	–
*lab*ncE*	0.5	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.0	0.0	0.0	(1.0)
*cmyn3**	1.0	1.0	1.0	(0.0)
*olvi4**	1.0	1.0	1.0	0.0
*cmyn4**	0.0	0.0	0.0	1.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	11.01	0.07	0.01
*LAB*LABa*	11.01	0.0	0.0
*LAB*TCHa*	0.01	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.0	0.0	0.0
*lab*tch*	0.0	0.0	–
*lab*nch*	1.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.0	0.0	0.0
*lab*tce*	0.0	0.0	–
*lab*ncE*	1.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.5	1.0	1.0	(1.0)
*cmyn3**	0.5	0.0	0.0	(0.0)
*olvi4**	0.5	1.0	1.0	1.0
*cmyn4**	0.5	0.0	0.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	77.43	−40.26	−16.71
*LAB*LABa*	77.43	−40.29	−16.72
*LAB*TCHa*	75.0	43.63	202.54

relative* CIELAB *lab*

*lab*lab*	0.787	−0.461	−0.191
*lab*tch*	0.75	0.5	0.563
*lab*nch*	0.0	0.5	0.563

***relative* Natural Colour (NC)**

*lab*lrj*	0.787	−0.418	−0.272
*lab*tce*	0.75	0.5	0.592
*lab*ncE*	0.0	0.5	g36b

***relative* Inform. Technology (IT)**

*olvi3**	0.0	0.5	0.5	(1.0)
*cmyn3**	1.0	0.5	0.5	(0.0)
*olvi4**	0.5	1.0	1.0	0.5
*cmyn4**	0.5	0.0	0.0	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	35.23	−40.23	−16.7
*LAB*LABa*	35.23	−40.29	−16.72
*LAB*TCHa*	25.01	43.63	202.54

relative* CIELAB *lab*

*lab*lab*	0.287	−0.461	−0.191
*lab*tch*	0.25	0.5	0.563
*lab*nch*	0.5	0.5	0.563

***relative* Natural Colour (NC)**

*lab*lrj*	0.287	−0.418	−0.272
*lab*tce*	0.25	0.5	0.592
*lab*ncE*	0.5	0.5	g36b

***relative* Inform. Technology (IT)**

*olvi3**	0.0	1.0	1.0	(1.0)
*cmyn3**	1.0	0.0	0.0	(0.0)
*olvi4**	0.0	1.0	1.0	1.0
*cmyn4**	1.0	0.0	0.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	59.47	−80.55	−33.44
*LAB*LABa*	59.47	−80.59	−33.44
*LAB*TCHa*	50.0	87.26	202.54

relative* CIELAB *lab*

*lab*lab*	0.574	−0.922	−0.382
*lab*tch*	0.5	1.0	0.563
*lab*nch*	0.0	1.0	0.563

***relative* Natural Colour (NC)**

*lab*lrj*	0.574	−0.836	−0.546
*lab*tce*	0.5	1.0	0.592
*lab*ncE*	0.0	1.0	g36b

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

UE130−7, 3 step scales for constant CIELAB hue 218/360 = 0.605 (left)
3 step scales for constant CIELAB hue 203/360 = 0.563 (right)

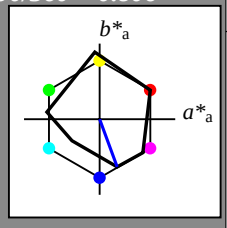
BAM-test chart UE13; Colorimetric systems MRS18 & NCS11a input: *cmy0* setcmykcolor*
D65: 2 coordinate data of 3 step colour scales for 10 hues output: *olv* setrgbcolor / w* setgray*

Input: Colorimetric Reflective System MRS18

for hue *h** = *lab*h* = 290/360 = 0.806
*lab*tch* and *lab*nch*

D65: hue B
LCH*Ma: 37 67 290
olv*Ma: 0.0 0.0 1.0

triangle lightness *t**



MRS18; adapted (a) CIELAB data

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

%Gamut
u^*_{rel} = 91
%Regularity
$g^*_{H,rel}$ = 41
$g^*_{C,rel}$ = 52

***relative* Inform. Technology (IT)**

*olvi3**	1.0	1.0	1.0	(1.0)
*cmyn3**	0.0	0.0	0.0	(0.0)
*olvi4**	1.0	1.0	1.0	1.0
*cmyn4**	0.0	0.0	0.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	95.41	−0.97	4.75
*LAB*LABa*	95.41	0.0	0.0
*LAB*TCHa*	99.99	0.01	–

relative* CIELAB *lab*

*lab*lab*	1.0	0.0	0.0
*lab*tch*	1.0	0.0	–
*lab*nch*	0.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	1.0	0.0	0.0
*lab*tce*	1.0	0.0	–
*lab*ncE*	0.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.5	0.5	0.5	(1.0)
*cmyn3**	0.5	0.5	0.5	(0.0)
*olvi4**	1.0	1.0	1.0	0.5
*cmyn4**	0.0	0.0	0.0	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	56.71	−0.23	2.14
*LAB*LABa*	56.71	0.0	0.0
*LAB*TCHa*	50.0	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.5	0.0	0.0
*lab*tch*	0.5	0.0	–
*lab*nch*	0.5	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.5	0.0	0.0
*lab*tce*	0.5	0.0	–
*lab*ncE*	0.5	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.0	0.0	0.0	(1.0)
*cmyn3**	1.0	1.0	1.0	(0.0)
*olvi4**	1.0	1.0	1.0	0.0
*cmyn4**	0.0	0.0	0.0	1.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	18.02	0.5	−0.46
*LAB*LABa*	18.02	0.0	0.0
*LAB*TCHa*	0.01	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.0	0.0	0.0
*lab*tch*	0.0	0.0	–
*lab*nch*	1.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.0	0.0	0.0
*lab*tce*	0.0	0.0	–
*lab*ncE*	1.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.5	0.5	1.0	(1.0)
*cmyn3**	0.5	0.5	0.0	(0.0)
*olvi4**	0.5	0.5	1.0	1.0
*cmyn4**	0.5	0.5	0.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	66.03	11.17	−28.74
*LAB*LABa*	66.03	11.59	−31.51
*LAB*TCHa*	75.0	33.59	290.19

relative* CIELAB *lab*

*lab*lab*	0.62	0.173	−0.468
*lab*tch*	0.75	0.5	0.806
*lab*nch*	0.0	0.5	0.806

***relative* Natural Colour (NC)**

*lab*lrj*	0.62	0.129	−0.482
*lab*tce*	0.75	0.5	0.791
*lab*ncE*	0.0	0.5	b16r

***relative* Inform. Technology (IT)**

*olvi3**	0.0	0.0	0.5	(1.0)
*cmyn3**	1.0	1.0	0.5	(0.0)
*olvi4**	0.5	0.5	1.0	0.5
*cmyn4**	0.5	0.5	0.0	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	27.34	11.92	−31.35
*LAB*LABa*	27.34	11.59	−31.51
*LAB*TCHa*	25.01	33.59	290.19

relative* CIELAB *lab*

*lab*lab*	0.12	0.173	−0.468
*lab*tch*	0.25	0.5	0.806
*lab*nch*	0.5	0.5	0.806

***relative* Natural Colour (NC)**

*lab*lrj*	0.12	0.129	−0.482
*lab*tce*	0.25	0.5	0.791
*lab*ncE*	0.5	0.5	b16r

***relative* Inform. Technology (IT)**

*olvi3**	0.0	0.0	1.0	(1.0)
*cmyn3**	1.0	1.0	0.0	(0.0)
*olvi4**	0.0	0.0	1.0	1.0
*cmyn4**	1.0	1.0	0.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	36.65	23.33	−62.24
*LAB*LABa*	36.65	23.18	−63.03
*LAB*TCHa*	50.0	67.17	290.19

relative* CIELAB *lab*

*lab*lab*	0.241	0.345	−0.937
*lab*tch*	0.5	1.0	0.806
*lab*nch*	0.0	1.0	0.806

***relative* Natural Colour (NC)**

*lab*lrj*	0.241	0.257	−0.965
*lab*tce*	0.5	1.0	0.791
*lab*ncE*	0.0	1.0	b16r

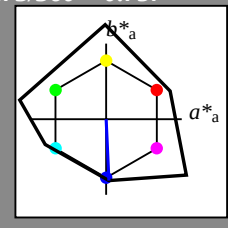
*n** = 0,00
blackness *n**
0,25 0,50 *n** = 0,50 0,75 1,00
chromaticness *c**
*n** = 1,0

Output: Colorimetric Reflective System NCS11

for hue *h** = *lab*h* = 273/360 = 0.757
*lab*tch* and *lab*nch*

D65: hue B
LCH*Ma: 49 81 273
olv*Ma: 0.0 0.0 1.0

triangle lightness *t**



NCS11; adapted (a) CIELAB data

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

%Gamut
u^*_{rel} = 149
%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65

***relative* Inform. Technology (IT)**

*olvi3**	0.0	0.0	1.0	(1.0)
*cmyn3**	0.0	0.0	0.0	(0.0)
*olvi4**	1.0	1.0	1.0	1.0
*cmyn4**	0.0	0.0	0.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	95.41	0.0	−0.01
*LAB*LABa*	95.41	0.0	0.0
*LAB*TCHa*	99.99	0.01	–

relative* CIELAB *lab*

*lab*lab*	1.0	0.0	0.0
*lab*tch*	1.0	0.0	–
*lab*nch*	0.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	1.0	0.0	0.0
*lab*tce*	1.0	0.0	–
*lab*ncE*	0.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.5	0.5	0.5	(1.0)
*cmyn3**	0.5	0.5	0.5	(0.0)
*olvi4**	1.0	1.0	1.0	0.5
*cmyn4**	0.0	0.0	0.0	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	53.21	0.04	0.0
*LAB*LABa*	53.21	0.0	0.0
*LAB*TCHa*	50.0	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.5	0.0	0.0
*lab*tch*	0.5	0.0	–
*lab*nch*	0.5	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.5	0.0	0.0
*lab*tce*	0.5	0.0	–
*lab*ncE*	0.5	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.0	0.0	0.0	(1.0)
*cmyn3**	1.0	1.0	1.0	(0.0)
*olvi4**	1.0	1.0	1.0	0.0
*cmyn4**	0.0	0.0	0.0	1.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	11.01	0.07	0.01
*LAB*LABa*	11.01	0.0	0.0
*LAB*TCHa*	0.01	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.0	0.0	0.0
*lab*tch*	0.0	0.0	–
*lab*nch*	1.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.0	0.0	0.0
*lab*tce*	0.0	0.0	–
*lab*ncE*	1.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.5	0.5	1.0	(1.0)
*cmyn3**	0.5	0.5	0.0	(0.0)
*olvi4**	0.5	0.5	1.0	1.0
*cmyn4**	0.5	0.5	0.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	72.21	1.85	−40.58
*LAB*LABa*	72.21	1.82	−40.58
*LAB*TCHa*	75.0	40.63	272.57

relative* CIELAB *lab*

*lab*lab*	0.725	0.022	−0.498
*lab*tch*	0.75	0.5	0.757
*lab*nch*	0.0	0.5	0.757

***relative* Natural Colour (NC)**

*lab*lrj*	0.725	0.006	−0.499
*lab*tce*	0.75	0.5	0.752
*lab*ncE*	0.0	0.5	b00r

***relative* Inform. Technology (IT)**

*olvi3**	0.0	0.0	0.5	(1.0)
*cmyn3**	1.0	1.0	0.5	(0.0)
*olvi4**	0.5	0.5	1.0	0.5
*cmyn4**	0.5	0.5	0.0	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	30.01	1.89	−40.56
*LAB*LABa*	30.01	1.82	−40.58
*LAB*TCHa*	25.01	40.63	272.57

relative* CIELAB *lab*

*lab*lab*	0.225	0.022	−0.498
*lab*tch*	0.25	0.5	0.757
*lab*nch*	0.5	0.5	0.757

***relative* Natural Colour (NC)**

*lab*lrj*	0.225	0.006	−0.499
*lab*tce*	0.25	0.5	0.752
*lab*ncE*	0.5	0.5	b00r

***relative* Inform. Technology (IT)**

*olvi3**	0.0	0.0	1.0	(1.0)
*cmyn3**	1.0	1.0	0.0	(0.0)
*olvi4**	0.0	0.0	1.0	1.0
*cmyn4**	1.0	1.0	0.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	49.02	3.7	−81.16
*LAB*LABa*	49.02	3.65	−81.18
*LAB*TCHa*	50.0	81.27	272.57

relative* CIELAB *lab*

*lab*lab*	0.45	0.045	−0.998
*lab*tch*	0.5	1.0	0.757
*lab*nch*	0.0	1.0	0.757

***relative* Natural Colour (NC)**

*lab*lrj*	0.45	0.013	−0.999
*lab*tce*	0.5	1.0	0.752
*lab*ncE*	0.0	1.0	b00r

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

UE130−7, 3 step scales for constant CIELAB hue 290/360 = 0.806 (left)
3 step scales for constant CIELAB hue 273/360 = 0.757 (right)

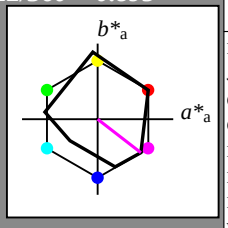
BAM-test chart UE13; Colorimetric systems MRS18 & NCS11a input: *cmy0* setcmykcolor*
D65: 2 coordinate data of 3 step colour scales for 10 hues output: *olv* setrgbcolor / w* setgray*

Input: Colorimetric Reflective System MRS18

for hue *h** = *lab*h* = 322/360 = 0.895
*lab*tch* and *lab*nch*

D65: hue B50R
LCH*Ma: 35 72 322
olv*Ma: 1.0 0.0 1.0

triangle lightness *t**



MRS18; adapted (a) CIELAB data

	*L**=*L**a	*a**a	*b**a	*C**ab,a	*h**ab,a
RMa	49.63	66.96	38.37	77.18	30
JMa	90.7	−6.36	88.75	88.98	94
GMa	52.11	−69.73	9.44	70.37	172
G50BMa	45.03	−36.57	−28.47	46.36	218
BMa	36.65	23.19	−63.05	67.18	290
B50RMa	34.94	57.17	−44.26	72.31	322
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.66	26.98	64.56	25
JCIE	81.26	−2.17	67.76	67.79	92
GCIE	52.23	−42.26	11.75	43.87	164
BCIE	30.57	1.15	−46.84	46.87	271

%Gamut
u*rel = 91
%Regularity
g*H,rel = 41
g*C,rel = 52

***relative* Inform. Technology (IT)**

*olvi3**	1.0	1.0	1.0	(1.0)
*cmyn3**	0.0	0.0	0.0	(0.0)
*olvi4**	1.0	1.0	1.0	1.0
*cmyn4**	0.0	0.0	0.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	95.41	−0.97	4.75
*LAB*LABa*	95.41	0.0	0.0
*LAB*TCHa*	99.99	0.01	–

relative* CIELAB *lab*

*lab*lab*	1.0	0.0	0.0
*lab*tch*	1.0	0.0	–
*lab*nch*	0.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	1.0	0.0	0.0
*lab*tce*	1.0	0.0	–
*lab*ncE*	0.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.5	0.5	0.5	(1.0)
*cmyn3**	0.5	0.5	0.5	(0.0)
*olvi4**	1.0	1.0	1.0	0.5
*cmyn4**	0.0	0.0	0.0	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	56.71	−0.23	2.14
*LAB*LABa*	56.71	0.0	0.0
*LAB*TCHa*	50.0	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.5	0.0	0.0
*lab*tch*	0.5	0.0	–
*lab*nch*	0.5	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.5	0.0	0.0
*lab*tce*	0.5	0.0	–
*lab*ncE*	0.5	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.0	0.0	0.0	(1.0)
*cmyn3**	1.0	1.0	1.0	(0.0)
*olvi4**	1.0	1.0	1.0	0.0
*cmyn4**	0.0	0.0	0.0	1.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	18.02	0.5	−0.46
*LAB*LABa*	18.02	0.0	0.0
*LAB*TCHa*	0.01	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.0	0.0	0.0
*lab*tch*	0.0	0.0	–
*lab*nch*	1.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.0	0.0	0.0
*lab*tce*	0.0	0.0	–
*lab*ncE*	1.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	1.0	0.5	1.0	(1.0)
*cmyn3**	0.0	0.5	0.0	(0.0)
*olvi4**	1.0	0.5	1.0	1.0
*cmyn4**	0.0	0.5	0.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	65.17	28.18	−19.4
*LAB*LABa*	65.17	28.58	−22.12
*LAB*TCHa*	75.0	36.15	322.25

relative* CIELAB *lab*

*lab*lab*	0.609	0.395	−0.305
*lab*tch*	0.75	0.5	0.895
*lab*nch*	0.0	0.5	0.895

***relative* Natural Colour (NC)**

*lab*lrj*	0.609	0.324	−0.38
*lab*tce*	0.75	0.5	0.862
*lab*ncE*	0.0	0.5	b44r

***relative* Inform. Technology (IT)**

*olvi3**	0.5	0.0	0.5	(1.0)
*cmyn3**	0.5	1.0	0.5	(0.0)
*olvi4**	1.0	0.5	1.0	0.5
*cmyn4**	0.0	0.5	0.0	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	26.48	28.92	−22.01
*LAB*LABa*	26.48	28.58	−22.12
*LAB*TCHa*	25.01	36.15	322.25

relative* CIELAB *lab*

*lab*lab*	0.109	0.395	−0.305
*lab*tch*	0.25	0.5	0.895
*lab*nch*	0.5	0.5	0.895

***relative* Natural Colour (NC)**

*lab*lrj*	0.109	0.324	−0.38
*lab*tce*	0.25	0.5	0.862
*lab*ncE*	0.5	0.5	b44r

***relative* Inform. Technology (IT)**

*olvi3**	1.0	0.0	1.0	(1.0)
*cmyn3**	0.0	1.0	0.0	(0.0)
*olvi4**	1.0	0.0	1.0	1.0
*cmyn4**	0.0	1.0	0.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	34.95	57.34	−43.57
*LAB*LABa*	34.95	57.16	−44.25
*LAB*TCHa*	50.0	72.29	322.25

relative* CIELAB *lab*

*lab*lab*	0.219	0.791	−0.611
*lab*tch*	0.5	1.0	0.895
*lab*nch*	0.0	1.0	0.895

***relative* Natural Colour (NC)**

*lab*lrj*	0.219	0.648	−0.76
*lab*tce*	0.5	1.0	0.862
*lab*ncE*	0.0	1.0	b44r

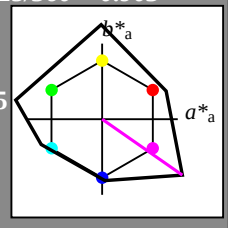
n* = 0,00
blackness *n**
0,25 0,50 n* = 0,50 0,75 1,00
chromaticness *c**
n* = 1,0

Output: Colorimetric Reflective System NCS11

for hue *h** = *lab*h* = 325/360 = 0.903
*lab*tch* and *lab*nch*

D65: hue B50R
LCH*Ma: 44 129 325
olv*Ma: 1.0 0.0 1.0

triangle lightness *t**



NCS11; adapted (a) CIELAB data

	*L**=*L**a	*a**a	*b**a	*C**ab,a	*h**ab,a
RMa	47.15	84.64	37.25	92.48	24
JMa	91.37	−1.27	125.03	125.03	91
GMa	63.07	−114.28	25.35	117.06	167
G50BMa	59.47	−80.6	−33.45	87.28	203
BMa	49.01	3.65	−81.19	81.28	273
B50RMa	44.06	106.09	−73.93	129.32	325
NMa	10.99	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.69	27.98	65.01	25
JCIE	81.26	−2.9	71.56	71.62	92
GCIE	52.23	−42.45	13.59	44.59	162
BCIE	30.57	1.35	−46.48	46.51	272

%Gamut
u*rel = 149
%Regularity
g*H,rel = 46
g*C,rel = 65

***relative* Inform. Technology (IT)**

*olvi3**	1.0	1.0	1.0	(1.0)
*cmyn3**	0.0	0.0	0.0	(0.0)
*olvi4**	1.0	1.0	1.0	1.0
*cmyn4**	0.0	0.0	0.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	95.41	0.0	−0.01
*LAB*LABa*	95.41	0.0	0.0
*LAB*TCHa*	99.99	0.01	–

relative* CIELAB *lab*

*lab*lab*	1.0	0.0	0.0
*lab*tch*	1.0	0.0	–
*lab*nch*	0.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	1.0	0.0	0.0
*lab*tce*	1.0	0.0	–
*lab*ncE*	0.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.5	0.5	0.5	(1.0)
*cmyn3**	0.5	0.5	0.5	(0.0)
*olvi4**	1.0	1.0	1.0	0.5
*cmyn4**	0.0	0.0	0.0	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	53.21	0.04	0.0
*LAB*LABa*	53.21	0.0	0.0
*LAB*TCHa*	50.0	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.5	0.0	0.0
*lab*tch*	0.5	0.0	–
*lab*nch*	0.5	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.5	0.0	0.0
*lab*tce*	0.5	0.0	–
*lab*ncE*	0.5	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.0	0.0	0.0	(1.0)
*cmyn3**	1.0	1.0	1.0	(0.0)
*olvi4**	1.0	1.0	1.0	0.0
*cmyn4**	0.0	0.0	0.0	1.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	11.01	0.07	0.01
*LAB*LABa*	11.01	0.0	0.0
*LAB*TCHa*	0.01	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.0	0.0	0.0
*lab*tch*	0.0	0.0	–
*lab*nch*	1.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.0	0.0	0.0
*lab*tce*	0.0	0.0	–
*lab*ncE*	1.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	1.0	0.5	1.0	(1.0)
*cmyn3**	0.0	0.5	0.0	(0.0)
*olvi4**	1.0	0.5	1.0	1.0
*cmyn4**	0.0	0.5	0.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	69.73	53.06	−36.95
*LAB*LABa*	69.73	53.03	−36.95
*LAB*TCHa*	75.0	64.65	325.12

relative* CIELAB *lab*

*lab*lab*	0.696	0.41	−0.285
*lab*tch*	0.75	0.5	0.903
*lab*nch*	0.0	0.5	0.903

***relative* Natural Colour (NC)**

*lab*lrj*	0.696	0.336	−0.369
*lab*tce*	0.75	0.5	0.867
*lab*ncE*	0.0	0.5	b46r

***relative* Inform. Technology (IT)**

*olvi3**	0.5	0.0	0.5	(1.0)
*cmyn3**	0.5	1.0	0.5	(0.0)
*olvi4**	1.0	0.5	1.0	0.5
*cmyn4**	0.0	0.5	0.0	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	27.53	53.1	−36.94
*LAB*LABa*	27.53	53.03	−36.95
*LAB*TCHa*	25.01	64.65	325.12

relative* CIELAB *lab*

*lab*lab*	0.196	0.41	−0.285
*lab*tch*	0.25	0.5	0.903
*lab*nch*	0.5	0.5	0.903

***relative* Natural Colour (NC)**

*lab*lrj*	0.196	0.336	−0.369
*lab*tce*	0.25	0.5	0.867
*lab*ncE*	0.5	0.5	b46r

***relative* Inform. Technology (IT)**

*olvi3**	1.0	0.0	1.0	(1.0)
*cmyn3**	0.0	1.0	0.0	(0.0)
*olvi4**	1.0	0.0	1.0	1.0
*cmyn4**	0.0	1.0	0.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	44.06	106.12	−73.91
*LAB*LABa*	44.06	106.07	−73.92
*LAB*TCHa*	50.0	129.29	325.12

relative* CIELAB *lab*

*lab*lab*	0.392	0.82	−0.571
*lab*tch*	0.5	1.0	0.903
*lab*nch*	0.0	1.0	0.903

***relative* Natural Colour (NC)**

*lab*lrj*	0.392	0.673	−0.739
*lab*tce*	0.5	1.0	0.867
*lab*ncE*	0.0	1.0	b46r

***relative* Inform. Technology (IT)**

*olvi3**	0.0	0.0	0.0	(1.0)
*cmyn3**	1.0	1.0	1.0	(0.0)
*olvi4**	1.0	1.0	1.0	0.0
*cmyn4**	0.0	0.0	0.0	1.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	11.01	0.07	0.01
*LAB*LABa*	11.01	0.0	0.0
*LAB*TCHa*	0.01	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.0	0.0	0.0
*lab*tch*	0.0	0.0	–
*lab*nch*	1.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.0	0.0	0.0
*lab*tce*	0.0	0.0	–
*lab*ncE*	1.0	0.0	–

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

UE130−7, 3 step scales for constant CIELAB hue 322/360 = 0.895 (left)
3 step scales for constant CIELAB hue 325/360 = 0.903 (right)

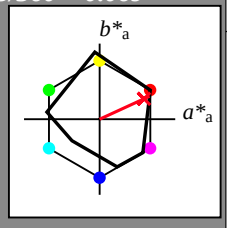
BAM-test chart UE13; Colorimetric systems MRS18 & NCS11a input: *cmy0* setcmykcolor*
D65: 2 coordinate data of 3 step colour scales for 10 hues output: *olv* setrgbcolor / w* setgray*

Input: Colorimetric Reflective System MRS18

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

D65: hue R
LCH*Ma: 48 73 25
olv*Ma: 1.0 0.0 0.1

triangle lightness *t**



MRS18; adapted (a) CIELAB data

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

%Gamut
u^*_{rel} = 91
%Regularity
$g^*_{H,rel}$ = 41
$g^*_{C,rel}$ = 52

***relative* Inform. Technology (IT)**

*olvi3**	1.0	1.0	1.0	(1.0)
*cmyn3**	0.0	0.0	0.0	(0.0)
*olvi4**	1.0	1.0	1.0	1.0
*cmyn4**	0.0	0.0	0.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	95.41	−0.97	4.75
*LAB*LABa*	95.41	0.0	0.0
*LAB*TCHa*	99.99	0.01	–

relative* CIELAB *lab*

*lab*lab*	1.0	0.0	0.0
*lab*tch*	1.0	0.0	–
*lab*nch*	0.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	1.0	0.0	0.0
*lab*tce*	1.0	0.0	–
*lab*ncE*	0.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.5	0.5	0.5	(1.0)
*cmyn3**	0.5	0.5	0.5	(0.0)
*olvi4**	1.0	1.0	1.0	0.5
*cmyn4**	0.0	0.0	0.0	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	56.71	−0.23	2.14
*LAB*LABa*	56.71	0.0	0.0
*LAB*TCHa*	50.0	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.5	0.0	0.0
*lab*tch*	0.5	0.0	–
*lab*nch*	0.5	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.5	0.0	0.0
*lab*tce*	0.5	0.0	–
*lab*ncE*	0.5	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.0	0.0	0.0	(1.0)
*cmyn3**	1.0	1.0	1.0	(0.0)
*olvi4**	1.0	1.0	1.0	0.0
*cmyn4**	0.0	0.0	0.0	1.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	18.02	0.5	−0.46
*LAB*LABa*	18.02	0.0	0.0
*LAB*TCHa*	0.01	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.0	0.0	0.0
*lab*tch*	0.0	0.0	–
*lab*nch*	1.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.0	0.0	0.0
*lab*tce*	0.0	0.0	–
*lab*ncE*	1.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	1.0	0.5	0.548	(1.0)
*cmyn3**	0.0	0.5	0.452	(0.0)
*olvi4**	1.0	0.5	0.549	1.0
*cmyn4**	0.0	0.5	0.451	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	71.8	32.47	18.34
*LAB*LABa*	71.8	33.0	15.17
*LAB*TCHa*	75.0	36.32	24.7

relative* CIELAB *lab*

*lab*lab*	0.695	0.454	0.209
*lab*tch*	0.75	0.5	0.069
*lab*nch*	0.0	0.5	0.069

***relative* Natural Colour (NC)**

*lab*lrj*	0.695	0.5	0.0
*lab*tce*	0.75	0.5	1.0
*lab*ncE*	0.0	0.5	b99r

***relative* Inform. Technology (IT)**

*olvi3**	0.5	0.0	0.048	(1.0)
*cmyn3**	0.5	1.0	0.952	(0.0)
*olvi4**	1.0	0.5	0.548	0.5
*cmyn4**	0.0	0.5	0.452	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	33.11	33.21	15.74
*LAB*LABa*	33.11	33.0	15.18
*LAB*TCHa*	25.01	36.33	24.71

relative* CIELAB *lab*

*lab*lab*	0.195	0.454	0.209
*lab*tch*	0.25	0.5	0.069
*lab*nch*	0.5	0.5	0.069

***relative* Natural Colour (NC)**

*lab*lrj*	0.195	0.5	0.0
*lab*tce*	0.25	0.5	0.0
*lab*ncE*	0.5	0.5	r00j

***relative* Inform. Technology (IT)**

*olvi3**	1.0	0.0	0.097	(1.0)
*cmyn3**	0.0	1.0	0.903	(0.0)
*olvi4**	1.0	0.0	0.097	1.0
*cmyn4**	0.0	1.0	0.903	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	48.21	65.92	31.93
*LAB*LABa*	48.21	66.0	30.36
*LAB*TCHa*	50.0	72.65	24.7

relative* CIELAB *lab*

*lab*lab*	0.39	0.908	0.418
*lab*tch*	0.5	1.0	0.069
*lab*nch*	0.0	1.0	0.069

***relative* Natural Colour (NC)**

*lab*lrj*	0.39	1.0	0.0
*lab*tce*	0.5	1.0	0.0
*lab*ncE*	0.0	1.0	r00j

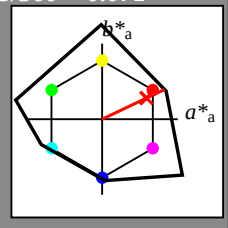
$n^* = 0{,}00$
blackness n^*
0,25
0,50
$n^* = 0{,}50$
0,75
1,00
chromaticness c^*
$n^* = 1{,}0$

Output: Colorimetric Reflective System NCS11

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

D65: hue R
LCH*Ma: 48 91 25
olv*Ma: 1.0 0.02 0.0

triangle lightness *t**



NCS11; adapted (a) CIELAB data

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

%Gamut
u^*_{rel} = 149
%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65

***relative* Inform. Technology (IT)**

*olvi3**	1.0	1.0	1.0	(1.0)
*cmyn3**	0.0	0.0	0.0	(0.0)
*olvi4**	1.0	1.0	1.0	1.0
*cmyn4**	0.0	0.0	0.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	95.41	0.0	−0.01
*LAB*LABa*	95.41	0.0	0.0
*LAB*TCHa*	99.99	0.01	–

relative* CIELAB *lab*

*lab*lab*	1.0	0.0	0.0
*lab*tch*	1.0	0.0	–
*lab*nch*	0.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	1.0	0.0	0.0
*lab*tce*	1.0	0.0	–
*lab*ncE*	0.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.5	0.5	0.5	(1.0)
*cmyn3**	0.5	0.5	0.5	(0.0)
*olvi4**	1.0	1.0	1.0	0.5
*cmyn4**	0.0	0.0	0.0	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	53.21	0.04	0.0
*LAB*LABa*	53.21	0.0	0.0
*LAB*TCHa*	50.0	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.5	0.0	0.0
*lab*tch*	0.5	0.0	–
*lab*nch*	0.5	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.5	0.0	0.0
*lab*tce*	0.5	0.0	–
*lab*ncE*	0.5	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.0	0.0	0.0	(1.0)
*cmyn3**	1.0	1.0	1.0	(0.0)
*olvi4**	1.0	1.0	1.0	0.0
*cmyn4**	0.0	0.0	0.0	1.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	11.01	0.07	0.01
*LAB*LABa*	11.01	0.0	0.0
*LAB*TCHa*	0.01	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.0	0.0	0.0
*lab*tch*	0.0	0.0	–
*lab*nch*	1.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.0	0.0	0.0
*lab*tce*	0.0	0.0	–
*lab*ncE*	1.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.5	0.512	0.5	(1.0)
*cmyn3**	0.0	0.488	0.5	(0.0)
*olvi4**	1.0	0.512	0.5	1.0
*cmyn4**	0.0	0.488	0.5	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	71.81	41.31	19.68
*LAB*LABa*	71.81	41.28	19.68
*LAB*TCHa*	75.0	45.73	25.49

relative* CIELAB *lab*

*lab*lab*	0.72	0.451	0.215
*lab*tch*	0.75	0.5	0.071
*lab*nch*	0.0	0.5	0.071

***relative* Natural Colour (NC)**

*lab*lrj*	0.72	0.5	0.0
*lab*tce*	0.75	0.5	0.0
*lab*ncE*	0.0	0.5	r00j

***relative* Inform. Technology (IT)**

*olvi3**	0.5	0.012	0.0	(1.0)
*cmyn3**	0.5	0.988	1.0	(0.0)
*olvi4**	1.0	0.512	0.5	0.5
*cmyn4**	0.0	0.488	0.5	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	29.6	41.35	19.69
*LAB*LABa*	29.6	41.29	19.67
*LAB*TCHa*	25.01	45.73	25.47

relative* CIELAB *lab*

*lab*lab*	0.22	0.451	0.215
*lab*tch*	0.25	0.5	0.071
*lab*nch*	0.5	0.5	0.071

***relative* Natural Colour (NC)**

*lab*lrj*	0.22	0.5	0.0
*lab*tce*	0.25	0.5	1.0
*lab*ncE*	0.5	0.5	b99r

***relative* Inform. Technology (IT)**

*olvi3**	1.0	0.024	0.0	(1.0)
*cmyn3**	0.0	0.976	1.0	(0.0)
*olvi4**	1.0	0.024	0.0	1.0
*cmyn4**	0.0	0.976	1.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	48.21	82.61	39.36
*LAB*LABa*	48.21	82.57	39.35
*LAB*TCHa*	50.0	91.46	25.48

relative* CIELAB *lab*

*lab*lab*	0.441	0.903	0.43
*lab*tch*	0.5	1.0	0.071
*lab*nch*	0.0	1.0	0.071

***relative* Natural Colour (NC)**

*lab*lrj*	0.441	1.0	0.0
*lab*tce*	0.5	1.0	1.0
*lab*ncE*	0.0	1.0	b99r

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

UE130−7, 3 step scales for constant CIELAB hue 25/360 = 0.069 (left)
3 step scales for constant CIELAB hue 25/360 = 0.071 (right)

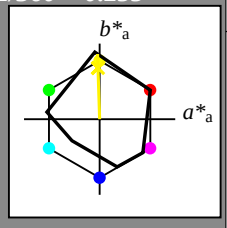
BAM-test chart UE13; Colorimetric systems MRS18 & NCS11a input: *cmy0* setcmykcolor*
D65: 2 coordinate data of 3 step colour scales for 10 hues output: *olv* setrgbcolor / w* setgray*

Input: Colorimetric Reflective System MRS18

for hue *h** = *lab*h* = 92/360 = 0.255
*lab*tch* and *lab*nch*

D65: hue J
LCH*Ma: 89 86 92
olv*Ma: 1.0 0.95 0.0

triangle lightness *t**



MRS18; adapted (a) CIELAB data

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

%Gamut
u*rel = 91
%Regularity
g*H,rel = 41
g*C,rel = 52

***relative* Inform. Technology (IT)**

*olvi3**	1.0	1.0	1.0	(1.0)
*cmyn3**	0.0	0.0	0.0	(0.0)
*olvi4**	1.0	1.0	1.0	1.0
*cmyn4**	0.0	0.0	0.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	95.41	−0.97	4.75
*LAB*LABa*	95.41	0.0	0.0
*LAB*TCHa*	99.99	0.01	–

relative* CIELAB *lab*

*lab*lab*	1.0	0.0	0.0
*lab*tch*	1.0	0.0	–
*lab*nch*	0.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	1.0	0.0	0.0
*lab*tce*	1.0	0.0	–
*lab*ncE*	0.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.5	0.5	0.5	(1.0)
*cmyn3**	0.5	0.5	0.5	(0.0)
*olvi4**	1.0	1.0	1.0	0.5
*cmyn4**	0.0	0.0	0.0	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	56.71	−0.23	2.14
*LAB*LABa*	56.71	0.0	0.0
*LAB*TCHa*	50.0	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.5	0.0	0.0
*lab*tch*	0.5	0.0	–
*lab*nch*	0.5	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.5	0.0	0.0
*lab*tce*	0.5	0.0	–
*lab*ncE*	0.5	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.0	0.0	0.0	(1.0)
*cmyn3**	1.0	1.0	1.0	(0.0)
*olvi4**	1.0	1.0	1.0	0.0
*cmyn4**	0.0	0.0	0.0	1.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	18.02	0.5	−0.46
*LAB*LABa*	18.02	0.0	0.0
*LAB*TCHa*	0.01	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.0	0.0	0.0
*lab*tch*	0.0	0.0	–
*lab*nch*	1.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.0	0.0	0.0
*lab*tce*	0.0	0.0	–
*lab*ncE*	1.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	1.0	0.976	0.5	(1.0)
*cmyn3**	0.0	0.024	0.5	(0.0)
*olvi4**	1.0	0.976	0.5	1.0
*cmyn4**	0.0	0.024	0.5	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	92.04	−2.3	47.67
*LAB*LABa*	92.04	−1.39	43.14
*LAB*TCHa*	75.0	43.16	91.85

relative* CIELAB *lab*

*lab*lab*	0.957	−0.015	0.5
*lab*tch*	0.75	0.5	0.255
*lab*nch*	0.0	0.5	0.255

***relative* Natural Colour (NC)**

*lab*lrj*	0.957	0.0	0.5
*lab*tce*	0.75	0.5	0.25
*lab*ncE*	0.0	0.5	j00g

***relative* Inform. Technology (IT)**

*olvi3**	0.5	0.476	0.0	(1.0)
*cmyn3**	0.5	0.524	1.0	(0.0)
*olvi4**	1.0	0.976	0.5	0.5
*cmyn4**	0.0	0.024	0.5	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	53.35	−1.55	45.05
*LAB*LABa*	53.35	−1.38	43.13
*LAB*TCHa*	25.01	43.16	91.84

relative* CIELAB *lab*

*lab*lab*	0.457	−0.015	0.5
*lab*tch*	0.25	0.5	0.255
*lab*nch*	0.5	0.5	0.255

***relative* Natural Colour (NC)**

*lab*lrj*	0.457	0.0	0.5
*lab*tce*	0.25	0.5	0.25
*lab*ncE*	0.5	0.5	r99j

***relative* Inform. Technology (IT)**

*olvi3**	1.0	0.951	0.0	(1.0)
*cmyn3**	0.0	0.049	1.0	(0.0)
*olvi4**	1.0	0.951	0.0	1.0
*cmyn4**	0.0	0.049	1.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	88.68	−3.62	90.58
*LAB*LABa*	88.68	−2.77	86.27
*LAB*TCHa*	50.0	86.32	91.85

relative* CIELAB *lab*

*lab*lab*	0.913	−0.031	0.999
*lab*tch*	0.5	1.0	0.255
*lab*nch*	0.0	1.0	0.255

***relative* Natural Colour (NC)**

*lab*lrj*	0.913	0.0	1.0
*lab*tce*	0.5	1.0	0.25
*lab*ncE*	0.0	1.0	j00g

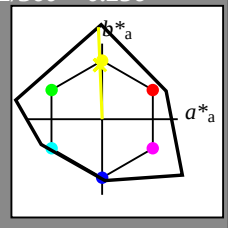
n* = 0,00
blackness *n**
0,25 0,50 n* = 0,50 0,75 1,00
chromaticness *c**
n* = 1,0

Output: Colorimetric Reflective System NCS11

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

D65: hue J
LCH*Ma: 90 122 92
olv*Ma: 0.97 1.0 0.0

triangle lightness *t**



NCS11; adapted (a) CIELAB data

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

%Gamut
u*rel = 149
%Regularity
g*H,rel = 46
g*C,rel = 65

***relative* Inform. Technology (IT)**

*olvi3**	1.0	1.0	1.0	(1.0)
*cmyn3**	0.0	0.0	0.0	(0.0)
*olvi4**	1.0	1.0	1.0	1.0
*cmyn4**	0.0	0.0	0.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	95.41	0.0	−0.01
*LAB*LABa*	95.41	0.0	0.0
*LAB*TCHa*	99.99	0.01	–

relative* CIELAB *lab*

*lab*lab*	1.0	0.0	0.0
*lab*tch*	1.0	0.0	–
*lab*nch*	0.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	1.0	0.0	0.0
*lab*tce*	1.0	0.0	–
*lab*ncE*	0.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.5	0.5	0.5	(1.0)
*cmyn3**	0.5	0.5	0.5	(0.0)
*olvi4**	1.0	1.0	1.0	0.5
*cmyn4**	0.0	0.0	0.0	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	53.21	0.04	0.0
*LAB*LABa*	53.21	0.0	0.0
*LAB*TCHa*	50.0	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.5	0.0	0.0
*lab*tch*	0.5	0.0	–
*lab*nch*	0.5	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.5	0.0	0.0
*lab*tce*	0.5	0.0	–
*lab*ncE*	0.5	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.0	0.0	0.0	(1.0)
*cmyn3**	1.0	1.0	1.0	(0.0)
*olvi4**	1.0	1.0	1.0	0.0
*cmyn4**	0.0	0.0	0.0	1.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	11.01	0.07	0.01
*LAB*LABa*	11.01	0.0	0.0
*LAB*TCHa*	0.01	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.0	0.0	0.0
*lab*tch*	0.0	0.0	–
*lab*nch*	1.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.0	0.0	0.0
*lab*tce*	0.0	0.0	–
*lab*ncE*	1.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.984	1.0	0.5	(1.0)
*cmyn3**	0.016	0.0	0.5	(0.0)
*olvi4**	0.984	1.0	0.5	1.0
*cmyn4**	0.016	0.0	0.5	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	92.92	−2.44	60.89
*LAB*LABa*	92.92	−2.46	60.89
*LAB*TCHa*	75.0	60.94	92.32

relative* CIELAB *lab*

*lab*lab*	0.971	−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*	0.971	0.0	0.5
*lab*tce*	0.75	0.5	0.25
*lab*ncE*	0.0	0.5	r99j

***relative* Inform. Technology (IT)**

*olvi3**	0.484	0.5	0.0	(1.0)
*cmyn3**	0.516	0.5	1.0	(0.0)
*olvi4**	0.984	1.0	0.5	0.5
*cmyn4**	0.016	0.0	0.5	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	50.72	−2.42	60.89
*LAB*LABa*	50.72	−2.47	60.88
*LAB*TCHa*	25.01	60.93	92.33

relative* CIELAB *lab*

*lab*lab*	0.471	−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*	0.471	0.0	0.5
*lab*tce*	0.25	0.5	0.25
*lab*ncE*	0.5	0.5	j00g

***relative* Inform. Technology (IT)**

*olvi3**	0.967	1.0	0.0	(1.0)
*cmyn3**	0.033	0.0	1.0	(0.0)
*olvi4**	0.968	1.0	0.0	1.0
*cmyn4**	0.032	0.0	1.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	90.45	−4.92	121.77
*LAB*LABa*	90.45	−4.93	121.77
*LAB*TCHa*	50.0	121.87	92.32

relative* CIELAB *lab*

*lab*lab*	0.941	−0.04	0.999
*lab*tch*	0.5	1.0	0.256
*lab*nch*	0.0	1.0	0.256

***relative* Natural Colour (NC)**

*lab*lrj*	0.941	0.0	1.0
*lab*tce*	0.5	1.0	0.25
*lab*ncE*	0.0	1.0	r99j

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

UE130−7, 3 step scales for constant CIELAB hue 92/360 = 0.255 (left)
3 step scales for constant CIELAB hue 92/360 = 0.256 (right)

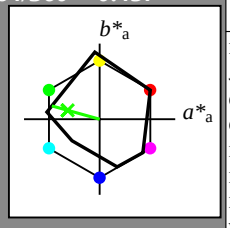
BAM-test chart UE13; Colorimetric systems MRS18 & NCS11a input: *cmy0* setcmykcolor*
D65: 2 coordinate data of 3 step colour scales for 10 hues output: *olv* setrgbcolor / w* setgray*

Input: Colorimetric Reflective System MRS18

for hue *h** = *lab*h* = 164/360 = 0.457
*lab*tch* and *lab*nch*

D65: hue G
LCH*Ma: 56 66 164
olv*Ma: 0.1 1.0 0.0

triangle lightness *t**



MRS18; adapted (a) CIELAB data

	L*=L*a	a*a	b*a	C*ab,a	h*ab,a
RMa	49.63	66.96	38.37	77.18	30
JMa	90.7	−6.36	88.75	88.98	94
GMa	52.11	−69.73	9.44	70.37	172
G50BMa	45.03	−36.57	−28.47	46.36	218
BMa	36.65	23.19	−63.05	67.18	290
B50RMa	34.94	57.17	−44.26	72.31	322
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.66	26.98	64.56	25
JCIE	81.26	−2.17	67.76	67.79	92
GCIE	52.23	−42.26	11.75	43.87	164
BCIE	30.57	1.15	−46.84	46.87	271

%Gamut
u*rel = 91
%Regularity
g*H,rel = 41
g*C,rel = 52

***relative* Inform. Technology (IT)**

*olvi3**	1.0	1.0	1.0	(1.0)
*cmyn3**	0.0	0.0	0.0	(0.0)
*olvi4**	1.0	1.0	1.0	1.0
*cmyn4**	0.0	0.0	0.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	95.41	−0.97	4.75
*LAB*LABa*	95.41	0.0	0.0
*LAB*TCHa*	99.99	0.01	–

relative* CIELAB *lab*

*lab*lab*	1.0	0.0	0.0
*lab*tch*	1.0	0.0	–
*lab*nch*	0.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	1.0	0.0	0.0
*lab*tce*	1.0	0.0	–
*lab*ncE*	0.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.5	0.5	0.5	(1.0)
*cmyn3**	0.5	0.5	0.5	(0.0)
*olvi4**	1.0	1.0	1.0	0.5
*cmyn4**	0.0	0.0	0.0	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	56.71	−0.23	2.14
*LAB*LABa*	56.71	0.0	0.0
*LAB*TCHa*	50.0	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.5	0.0	0.0
*lab*tch*	0.5	0.0	–
*lab*nch*	0.5	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.5	0.0	0.0
*lab*tce*	0.5	0.0	–
*lab*ncE*	0.5	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.0	0.0	0.0	(1.0)
*cmyn3**	1.0	1.0	1.0	(0.0)
*olvi4**	1.0	1.0	1.0	0.0
*cmyn4**	0.0	0.0	0.0	1.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	18.02	0.5	−0.46
*LAB*LABa*	18.02	0.0	0.0
*LAB*TCHa*	0.01	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.0	0.0	0.0
*lab*tch*	0.0	0.0	–
*lab*nch*	1.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.0	0.0	0.0
*lab*tce*	0.0	0.0	–
*lab*ncE*	1.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.551	1.0	0.5	(1.0)
*cmyn3**	0.449	0.0	0.5	(0.0)
*olvi4**	0.551	1.0	0.5	1.0
*cmyn4**	0.449	0.0	0.5	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	75.74	−32.2	12.22
*LAB*LABa*	75.74	−31.6	8.79
*LAB*TCHa*	75.0	32.81	164.46

relative* CIELAB *lab*

*lab*lab*	0.746	−0.481	0.134
*lab*tch*	0.75	0.5	0.457
*lab*nch*	0.0	0.5	0.457

***relative* Natural Colour (NC)**

*lab*lrj*	0.746	−0.499	0.0
*lab*tce*	0.75	0.5	0.5
*lab*ncE*	0.0	0.5	j99g

***relative* Inform. Technology (IT)**

*olvi3**	0.051	0.5	0.0	(1.0)
*cmyn3**	0.949	0.5	1.0	(0.0)
*olvi4**	0.551	1.0	0.5	0.5
*cmyn4**	0.449	0.0	0.5	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	37.04	−31.47	9.6
*LAB*LABa*	37.04	−31.6	8.78
*LAB*TCHa*	25.01	32.81	164.47

relative* CIELAB *lab*

*lab*lab*	0.246	−0.481	0.134
*lab*tch*	0.25	0.5	0.457
*lab*nch*	0.5	0.5	0.457

***relative* Natural Colour (NC)**

*lab*lrj*	0.246	−0.499	0.0
*lab*tce*	0.25	0.5	0.5
*lab*ncE*	0.5	0.5	g00b

***relative* Inform. Technology (IT)**

*olvi3**	0.103	1.0	0.0	(1.0)
*cmyn3**	0.897	0.0	1.0	(0.0)
*olvi4**	0.103	1.0	0.0	1.0
*cmyn4**	0.897	0.0	1.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	56.07	−63.44	19.68
*LAB*LABa*	56.07	−63.21	17.58
*LAB*TCHa*	50.0	65.62	164.46

relative* CIELAB *lab*

*lab*lab*	0.492	−0.962	0.268
*lab*tch*	0.5	1.0	0.457
*lab*nch*	0.0	1.0	0.457

***relative* Natural Colour (NC)**

*lab*lrj*	0.492	−0.999	0.0
*lab*tce*	0.5	1.0	0.5
*lab*ncE*	0.0	1.0	g00b

*n** = 0,00

blackness *n**

*n** = 0,50

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

chromaticness *c**

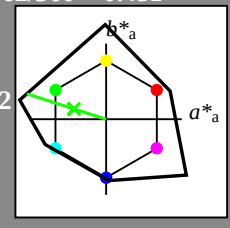
*n** = 1,0

Output: Colorimetric Reflective System NCS11

for hue *h** = *lab*h* = 162/360 = 0.451
*lab*tch* and *lab*nch*

D65: hue G
LCH*Ma: 65 110 162
olv*Ma: 0.08 1.0 0.0

triangle lightness *t**



NCS11; adapted (a) CIELAB data

	L*=L*a	a*a	b*a	C*ab,a	h*ab,a
RMa	47.15	84.64	37.25	92.48	24
JMa	91.37	−1.27	125.03	125.03	91
GMa	63.07	−114.28	25.35	117.06	167
G50BMa	59.47	−80.6	−33.45	87.28	203
BMa	49.01	3.65	−81.19	81.28	273
B50RMa	44.06	106.09	−73.93	129.32	325
NMa	10.99	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.69	27.98	65.01	25
JCIE	81.26	−2.9	71.56	71.62	92
GCIE	52.23	−42.45	13.59	44.59	162
BCIE	30.57	1.35	−46.48	46.51	272

%Gamut
u*rel = 149
%Regularity
g*H,rel = 46
g*C,rel = 65

***relative* Inform. Technology (IT)**

*olvi3**	1.0	1.0	1.0	(1.0)
*cmyn3**	0.0	0.0	0.0	(0.0)
*olvi4**	1.0	1.0	1.0	1.0
*cmyn4**	0.0	0.0	0.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	95.41	0.0	−0.01
*LAB*LABa*	95.41	0.0	0.0
*LAB*TCHa*	99.99	0.01	–

relative* CIELAB *lab*

*lab*lab*	1.0	0.0	0.0
*lab*tch*	1.0	0.0	–
*lab*nch*	0.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	1.0	0.0	0.0
*lab*tce*	1.0	0.0	–
*lab*ncE*	0.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.5	0.5	0.5	(1.0)
*cmyn3**	0.5	0.5	0.5	(0.0)
*olvi4**	1.0	1.0	1.0	0.5
*cmyn4**	0.0	0.0	0.0	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	53.21	0.04	0.0
*LAB*LABa*	53.21	0.0	0.0
*LAB*TCHa*	50.0	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.5	0.0	0.0
*lab*tch*	0.5	0.0	–
*lab*nch*	0.5	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.5	0.0	0.0
*lab*tce*	0.5	0.0	–
*lab*ncE*	0.5	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.0	0.0	0.0	(1.0)
*cmyn3**	1.0	1.0	1.0	(0.0)
*olvi4**	1.0	1.0	1.0	0.0
*cmyn4**	0.0	0.0	0.0	1.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	11.01	0.07	0.01
*LAB*LABa*	11.01	0.0	0.0
*LAB*TCHa*	0.01	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.0	0.0	0.0
*lab*tch*	0.0	0.0	–
*lab*nch*	1.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.0	0.0	0.0
*lab*tce*	0.0	0.0	–
*lab*ncE*	1.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.541	1.0	0.5	(1.0)
*cmyn3**	0.459	0.0	0.5	(0.0)
*olvi4**	0.541	1.0	0.5	1.0
*cmyn4**	0.459	0.0	0.5	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	80.4	−52.43	16.79
*LAB*LABa*	80.4	−52.45	16.79
*LAB*TCHa*	75.0	55.08	162.25

relative* CIELAB *lab*

*lab*lab*	0.822	−0.475	0.152
*lab*tch*	0.75	0.5	0.451
*lab*nch*	0.0	0.5	0.451

***relative* Natural Colour (NC)**

*lab*lrj*	0.822	−0.499	0.0
*lab*tce*	0.75	0.5	0.5
*lab*ncE*	0.0	0.5	j99g

***relative* Inform. Technology (IT)**

*olvi3**	0.041	0.5	0.0	(1.0)
*cmyn3**	0.959	0.5	1.0	(0.0)
*olvi4**	0.541	1.0	0.5	0.5
*cmyn4**	0.459	0.0	0.5	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	38.2	−52.41	16.8
*LAB*LABa*	38.2	−52.46	16.78
*LAB*TCHa*	25.01	55.09	162.27

relative* CIELAB *lab*

*lab*lab*	0.322	−0.475	0.152
*lab*tch*	0.25	0.5	0.451
*lab*nch*	0.5	0.5	0.451

***relative* Natural Colour (NC)**

*lab*lrj*	0.322	−0.499	0.0
*lab*tce*	0.25	0.5	0.5
*lab*ncE*	0.5	0.5	g00b

***relative* Inform. Technology (IT)**

*olvi3**	0.083	1.0	0.0	(1.0)
*cmyn3**	0.917	0.0	1.0	(0.0)
*olvi4**	0.083	1.0	0.0	1.0
*cmyn4**	0.917	0.0	1.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	65.41	−104.89	33.58
*LAB*LABa*	65.41	−104.92	33.57
*LAB*TCHa*	50.0	110.17	162.26

relative* CIELAB *lab*

*lab*lab*	0.645	−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*	0.645	−0.999	0.0
*lab*tce*	0.5	1.0	0.5
*lab*ncE*	0.0	1.0	g00b

*n** = 0,00

blackness *n**

*n** = 0,50

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

chromaticness *c**

*n** = 1,0

UE130−7, 3 step scales for constant CIELAB hue 164/360 = 0.457 (left)

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

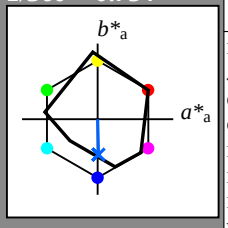
BAM-test chart UE13; Colorimetric systems MRS18 & NCS11a input: *cmy0* setcmykcolor*
D65: 2 coordinate data of 3 step colour scales for 10 hues output: *olv* setrgbcolor / w* setgray*

Input: Colorimetric Reflective System MRS18

for hue $h^* = lab^*h = 271/360 = 0.754$
*lab*tch* and *lab*nch*

D65: hue B
LCH*Ma: 40 50 271
olv*Ma: 0.0 0.37 1.0

triangle lightness *t**



MRS18; adapted (a) CIELAB data

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

%Gamut
u^*_{rel} = 91
%Regularity
$g^*_{H,rel}$ = 41
$g^*_{C,rel}$ = 52

***relative* Inform. Technology (IT)**

*olvi3**	1.0	1.0	1.0	(1.0)
*cmyn3**	0.0	0.0	0.0	(0.0)
*olvi4**	1.0	1.0	1.0	1.0
*cmyn4**	0.0	0.0	0.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	95.41	−0.97	4.75
*LAB*LABa*	95.41	0.0	0.0
*LAB*TCHa*	99.99	0.01	–

relative* CIELAB *lab*

*lab*lab*	1.0	0.0	0.0
*lab*tch*	1.0	0.0	–
*lab*nch*	0.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	1.0	0.0	0.0
*lab*tce*	1.0	0.0	–
*lab*ncE*	0.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.5	0.5	0.5	(1.0)
*cmyn3**	0.5	0.5	0.5	(0.0)
*olvi4**	1.0	1.0	1.0	0.5
*cmyn4**	0.0	0.0	0.0	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	56.71	−0.23	2.14
*LAB*LABa*	56.71	0.0	0.0
*LAB*TCHa*	50.0	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.5	0.0	0.0
*lab*tch*	0.5	0.0	–
*lab*nch*	0.5	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.5	0.0	0.0
*lab*tce*	0.5	0.0	–
*lab*ncE*	0.5	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.0	0.0	0.0	(1.0)
*cmyn3**	1.0	1.0	1.0	(0.0)
*olvi4**	1.0	1.0	1.0	0.0
*cmyn4**	0.0	0.0	0.0	1.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	18.02	0.5	−0.46
*LAB*LABa*	18.02	0.0	0.0
*LAB*TCHa*	0.01	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.0	0.0	0.0
*lab*tch*	0.0	0.0	–
*lab*nch*	1.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.0	0.0	0.0
*lab*tce*	0.0	0.0	–
*lab*ncE*	1.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.5	0.684	1.0	(1.0)
*cmyn3**	0.5	0.316	0.0	(0.0)
*olvi4**	0.5	0.684	1.0	1.0
*cmyn4**	0.5	0.316	0.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	67.57	0.17	−22.28
*LAB*LABa*	67.57	0.61	−25.16
*LAB*TCHa*	75.0	25.18	271.4

relative* CIELAB *lab*

*lab*lab*	0.64	0.012	−0.499
*lab*tch*	0.75	0.5	0.754
*lab*nch*	0.0	0.5	0.754

***relative* Natural Colour (NC)**

*lab*lrj*	0.64	0.0	−0.499
*lab*tce*	0.75	0.5	0.75
*lab*ncE*	0.0	0.5	g99b

***relative* Inform. Technology (IT)**

*olvi3**	0.0	0.184	0.5	(1.0)
*cmyn3**	1.0	0.816	0.5	(0.0)
*olvi4**	0.5	0.684	1.0	0.5
*cmyn4**	0.5	0.316	0.0	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	28.87	0.92	−24.9
*LAB*LABa*	28.87	0.62	−25.16
*LAB*TCHa*	25.01	25.18	271.41

relative* CIELAB *lab*

*lab*lab*	0.14	0.012	−0.499
*lab*tch*	0.25	0.5	0.754
*lab*nch*	0.5	0.5	0.754

***relative* Natural Colour (NC)**

*lab*lrj*	0.14	0.0	−0.499
*lab*tce*	0.25	0.5	0.75
*lab*ncE*	0.5	0.5	b00r

***relative* Inform. Technology (IT)**

*olvi3**	0.0	0.367	1.0	(1.0)
*cmyn3**	1.0	0.633	0.0	(0.0)
*olvi4**	0.0	0.367	1.0	1.0
*cmyn4**	1.0	0.633	0.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	39.73	1.32	−49.33
*LAB*LABa*	39.73	1.23	−50.34
*LAB*TCHa*	50.0	50.36	271.41

relative* CIELAB *lab*

*lab*lab*	0.281	0.025	−0.998
*lab*tch*	0.5	1.0	0.754
*lab*nch*	0.0	1.0	0.754

***relative* Natural Colour (NC)**

*lab*lrj*	0.281	0.0	−0.999
*lab*tce*	0.5	1.0	0.75
*lab*ncE*	0.0	1.0	b00r

$n^* = 0{,}00$

blackness n^*

0,25 0,50 $n^* = 0{,}50$ 0,75 1,00

chromaticness c^*

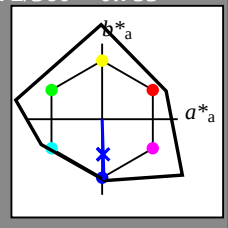
$n^* = 1{,}0$

Output: Colorimetric Reflective System NCS11

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

D65: hue B
LCH*Ma: 49 80 272
olv*Ma: 0.0 0.02 1.0

triangle lightness *t**



NCS11; adapted (a) CIELAB data

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

%Gamut
u^*_{rel} = 149
%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65

***relative* Inform. Technology (IT)**

*olvi3**	1.0	1.0	1.0	(1.0)
*cmyn3**	0.0	0.0	0.0	(0.0)
*olvi4**	1.0	1.0	1.0	1.0
*cmyn4**	0.0	0.0	0.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	95.41	0.0	−0.01
*LAB*LABa*	95.41	0.0	0.0
*LAB*TCHa*	99.99	0.01	–

relative* CIELAB *lab*

*lab*lab*	1.0	0.0	0.0
*lab*tch*	1.0	0.0	–
*lab*nch*	0.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	1.0	0.0	0.0
*lab*tce*	1.0	0.0	–
*lab*ncE*	0.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.5	0.5	0.5	(1.0)
*cmyn3**	0.5	0.5	0.5	(0.0)
*olvi4**	1.0	1.0	1.0	0.5
*cmyn4**	0.0	0.0	0.0	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	53.21	0.04	0.0
*LAB*LABa*	53.21	0.0	0.0
*LAB*TCHa*	50.0	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.5	0.0	0.0
*lab*tch*	0.5	0.0	–
*lab*nch*	0.5	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.5	0.0	0.0
*lab*tce*	0.5	0.0	–
*lab*ncE*	0.5	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.0	0.0	0.0	(1.0)
*cmyn3**	1.0	1.0	1.0	(0.0)
*olvi4**	1.0	1.0	1.0	0.0
*cmyn4**	0.0	0.0	0.0	1.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	11.01	0.07	0.01
*LAB*LABa*	11.01	0.0	0.0
*LAB*TCHa*	0.01	0.01	–

relative* CIELAB *lab*

*lab*lab*	0.0	0.0	0.0
*lab*tch*	0.0	0.0	–
*lab*nch*	1.0	0.0	–

***relative* Natural Colour (NC)**

*lab*lrj*	0.0	0.0	0.0
*lab*tce*	0.0	0.0	–
*lab*ncE*	1.0	0.0	–

***relative* Inform. Technology (IT)**

*olvi3**	0.5	0.508	1.0	(1.0)
*cmyn3**	0.5	0.492	0.0	(0.0)
*olvi4**	0.5	0.508	1.0	1.0
*cmyn4**	0.5	0.492	0.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	72.29	1.2	−40.21
*LAB*LABa*	72.29	1.17	−40.21
*LAB*TCHa*	75.0	40.24	271.66

relative* CIELAB *lab*

*lab*lab*	0.726	0.014	−0.499
*lab*tch*	0.75	0.5	0.755
*lab*nch*	0.0	0.5	0.755

***relative* Natural Colour (NC)**

*lab*lrj*	0.726	0.0	−0.499
*lab*tce*	0.75	0.5	0.75
*lab*ncE*	0.0	0.5	g99b

***relative* Inform. Technology (IT)**

*olvi3**	0.0	0.008	0.5	(1.0)
*cmyn3**	1.0	0.992	0.5	(0.0)
*olvi4**	0.5	0.508	1.0	0.5
*cmyn4**	0.5	0.492	0.0	0.5

***standard* and *adapted* CIELAB**

*LAB*LAB*	30.09	1.24	−40.2
*LAB*LABa*	30.09	1.18	−40.21
*LAB*TCHa*	25.01	40.24	271.67

relative* CIELAB *lab*

*lab*lab*	0.226	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*	0.226	0.0	−0.499
*lab*tce*	0.25	0.5	0.75
*lab*ncE*	0.5	0.5	b00r

***relative* Inform. Technology (IT)**

*olvi3**	0.0	0.016	1.0	(1.0)
*cmyn3**	1.0	0.984	0.0	(0.0)
*olvi4**	0.0	0.016	1.0	1.0
*cmyn4**	1.0	0.984	0.0	0.0

***standard* and *adapted* CIELAB**

*LAB*LAB*	49.18	2.39	−80.42
*LAB*LABa*	49.18	2.34	−80.43
*LAB*TCHa*	50.0	80.48	271.67

relative* CIELAB *lab*

*lab*lab*	0.452	0.029	−0.998
*lab*tch*	0.5	1.0	0.755
*lab*nch*	0.0	1.0	0.755

***relative* Natural Colour (NC)**

*lab*lrj*	0.452	0.0	−0.999
*lab*tce*	0.5	1.0	0.75
*lab*ncE*	0.0	1.0	b00r

$n^* = 0{,}00$

blackness n^*

0,25 0,50 $n^* = 0{,}50$ 0,75 1,00

chromaticness c^*

$n^* = 1{,}0$

UE130−7, 3 step scales for constant CIELAB hue 271/360 = 0.754 (left)

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

BAM-test chart UE13; Colorimetric systems MRS18 & NCS11a input: *cmy0* setcmykcolor*
D65: 2 coordinate data of 3 step colour scales for 10 hues output: *olv* setrgbcolor / w* setgray*